

## Pantheon Report

Generated at 2017-08-12 18:26:40 (UTC).

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

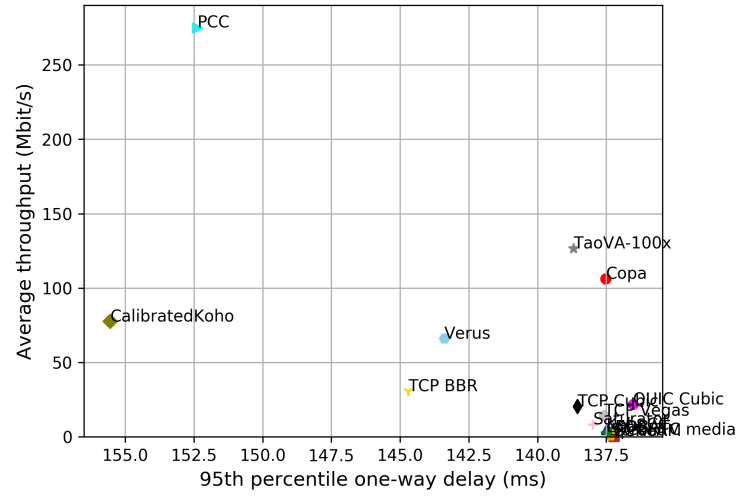
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

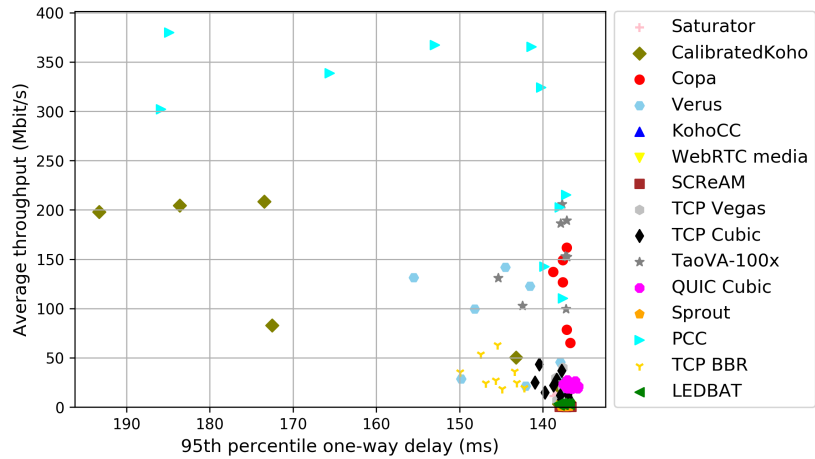
Git summary:

```
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-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeab30b267cde681
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 London 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 London 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     | 11.89                  | 22.92  | 11.07  | 139.70                    | 143.21 | 140.17 | 27.01              | 13.33  | 32.01  |
| CalibratedKoho | 10     | 63.80                  | 18.27  | 5.27   | 151.84                    | 141.77 | 138.21 | 43.34              | 50.74  | 34.92  |
| Copa           | 7      | 75.28                  | 33.65  | 27.51  | 137.35                    | 137.68 | 137.67 | 9.08               | 15.75  | 0.00   |
| TCP Cubic      | 10     | 6.41                   | 14.94  | 12.62  | 137.36                    | 138.14 | 138.67 | 2.35               | 1.75   | 5.44   |
| KohoCC         | 10     | 2.98                   | 1.55   | 2.93   | 137.47                    | 137.37 | 137.31 | 28.76              | 60.75  | 23.81  |
| LEDBAT         | 10     | 1.77                   | 1.74   | 1.21   | 137.45                    | 137.48 | 137.58 | 1.86               | 1.52   | 0.86   |
| PCC            | 10     | 209.17                 | 76.68  | 45.86  | 154.74                    | 138.00 | 137.26 | 19.15              | 17.39  | 8.63   |
| QUIC Cubic     | 10     | 0.04                   | 26.17  | 14.11  | 136.82                    | 136.26 | 136.29 | 0.00               | 0.00   | 0.01   |
| Saturator      | 9      | 4.42                   | 5.62   | 5.58   | 137.90                    | 137.99 | 138.03 | 35.29              | 23.83  | 24.19  |
| SCReAM         | 10     | 0.25                   | 0.22   | 0.22   | 646.00                    | 136.84 | 136.66 | 0.00               | 0.02   | 0.00   |
| Sprout         | 10     | 0.40                   | 0.41   | 0.44   | 137.26                    | 137.27 | 137.24 | 0.00               | 0.00   | 0.00   |
| TaoVA-100x     | 10     | 103.09                 | 46.05  | 21.06  | 138.97                    | 136.91 | 137.65 | 0.78               | 26.25  | 1.53   |
| TCP Vegas      | 9      | 8.25                   | 6.20   | 5.42   | 137.37                    | 137.83 | 137.37 | 1.25               | 1.98   | 4.68   |
| Verus          | 10     | 39.73                  | 28.19  | 24.60  | 144.07                    | 140.50 | 140.84 | 37.46              | 46.02  | 37.77  |
| WebRTC media   | 9      | 0.20                   | 1.19   | 0.18   | 137.39                    | 136.84 | 137.71 | 0.00               | 0.01   | 0.00   |

Run 1: Statistics of TCP BBR

Start at: 2017-08-12 15:00:05

End at: 2017-08-12 15:00:35

# Below is generated by plot.py at 2017-08-12 18:09:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 24.68 Mbit/s

95th percentile per-packet one-way delay: 143.134 ms

Loss rate: 18.96%

-- Flow 1:

Average throughput: 3.06 Mbit/s

95th percentile per-packet one-way delay: 137.502 ms

Loss rate: 43.41%

-- Flow 2:

Average throughput: 29.70 Mbit/s

95th percentile per-packet one-way delay: 143.733 ms

Loss rate: 8.80%

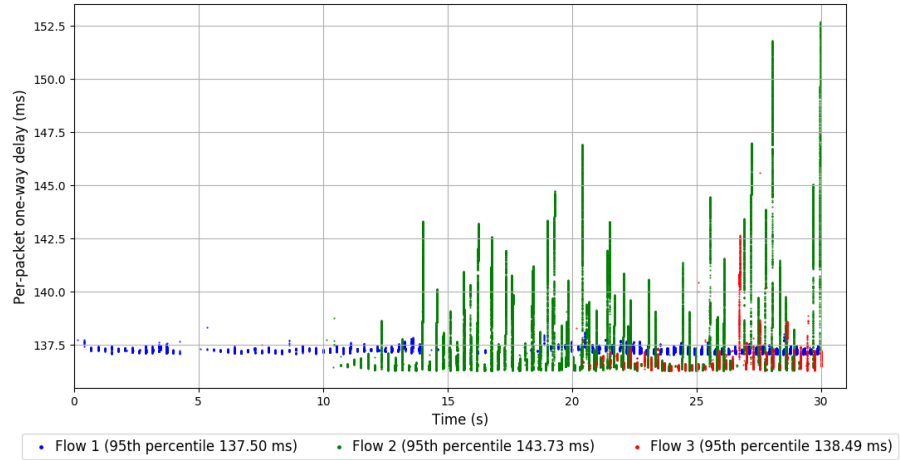
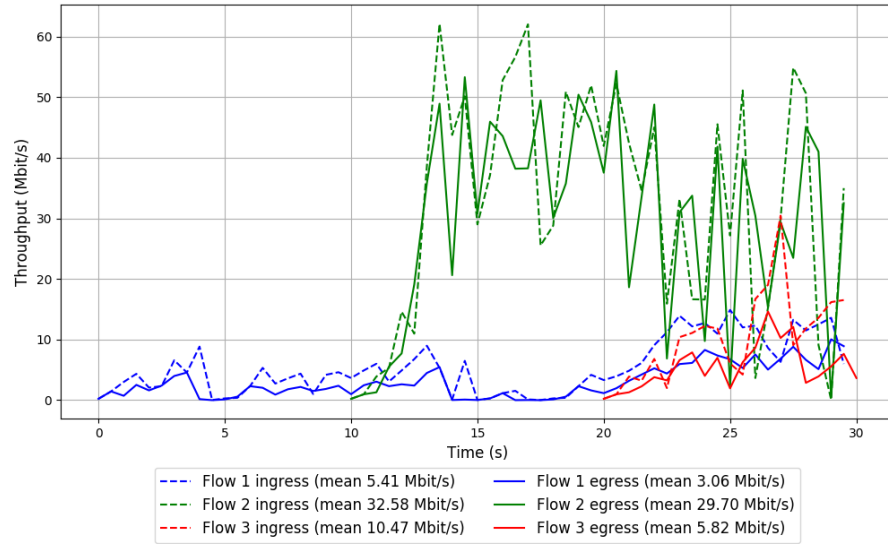
-- Flow 3:

Average throughput: 5.82 Mbit/s

95th percentile per-packet one-way delay: 138.494 ms

Loss rate: 44.38%

# Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-08-12 15:13:25

End at: 2017-08-12 15:13:55

# Below is generated by plot.py at 2017-08-12 18:09:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 35.59 Mbit/s

95th percentile per-packet one-way delay: 149.955 ms

Loss rate: 8.99%

-- Flow 1:

Average throughput: 2.95 Mbit/s

95th percentile per-packet one-way delay: 136.852 ms

Loss rate: 36.54%

-- Flow 2:

Average throughput: 35.40 Mbit/s

95th percentile per-packet one-way delay: 150.388 ms

Loss rate: 5.58%

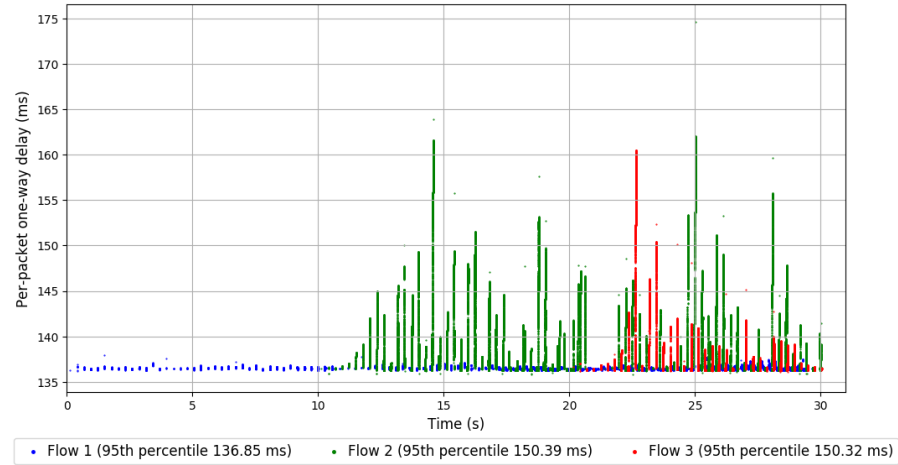
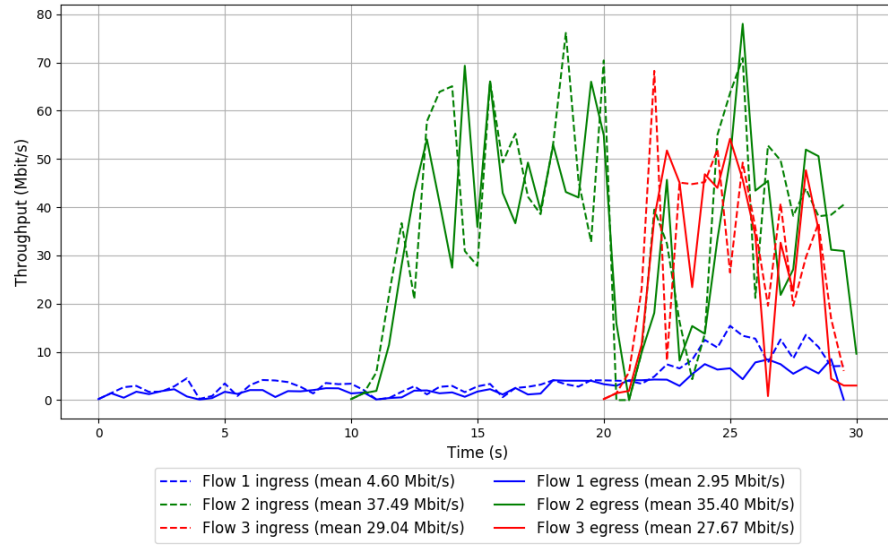
-- Flow 3:

Average throughput: 27.67 Mbit/s

95th percentile per-packet one-way delay: 150.322 ms

Loss rate: 4.71%

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



Run 3: Statistics of TCP BBR

Start at: 2017-08-12 15:27:17

End at: 2017-08-12 15:27:47

# Below is generated by plot.py at 2017-08-12 18:09:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 36.07 Mbit/s

95th percentile per-packet one-way delay: 143.380 ms

Loss rate: 7.39%

-- Flow 1:

Average throughput: 33.41 Mbit/s

95th percentile per-packet one-way delay: 143.489 ms

Loss rate: 2.12%

-- Flow 2:

Average throughput: 3.26 Mbit/s

95th percentile per-packet one-way delay: 136.799 ms

Loss rate: 42.01%

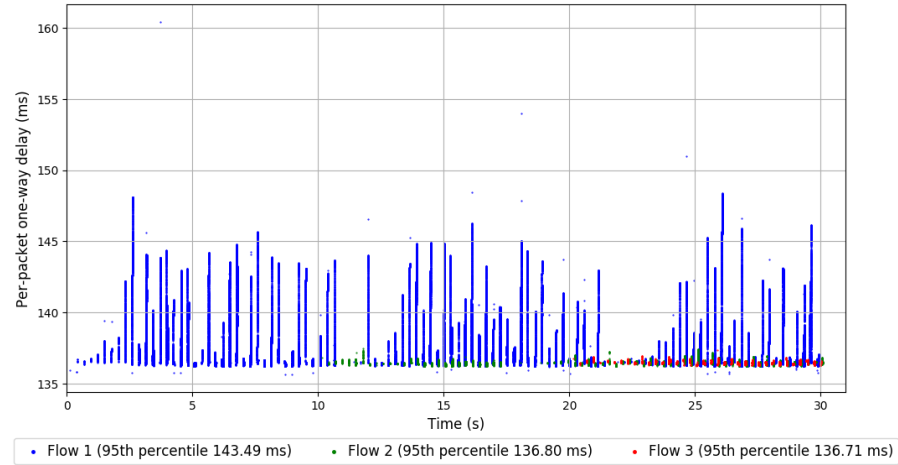
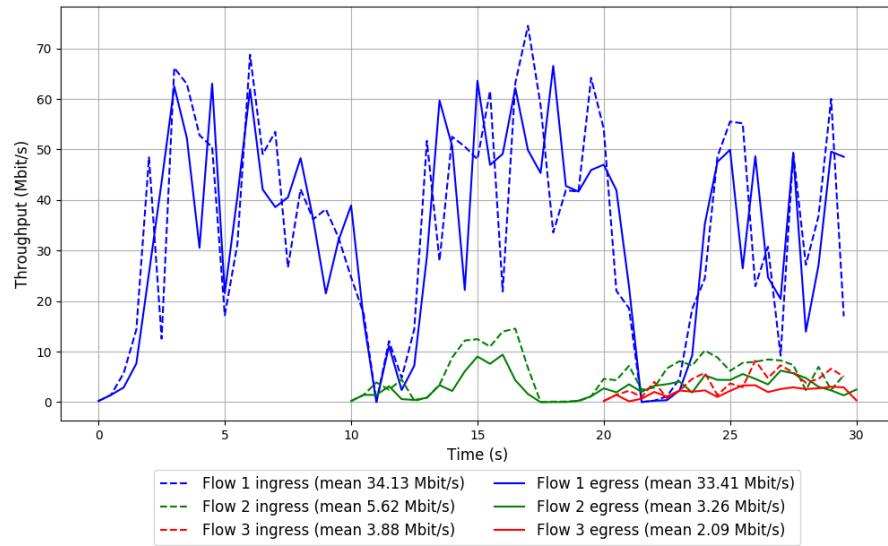
-- Flow 3:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 136.711 ms

Loss rate: 46.01%

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



Run 4: Statistics of TCP BBR

Start at: 2017-08-12 15:40:27

End at: 2017-08-12 15:40:57

# Below is generated by plot.py at 2017-08-12 18:09:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 24.31 Mbit/s

95th percentile per-packet one-way delay: 146.874 ms

Loss rate: 4.33%

-- Flow 1:

Average throughput: 0.99 Mbit/s

95th percentile per-packet one-way delay: 137.757 ms

Loss rate: 30.21%

-- Flow 2:

Average throughput: 34.71 Mbit/s

95th percentile per-packet one-way delay: 147.030 ms

Loss rate: 2.09%

-- Flow 3:

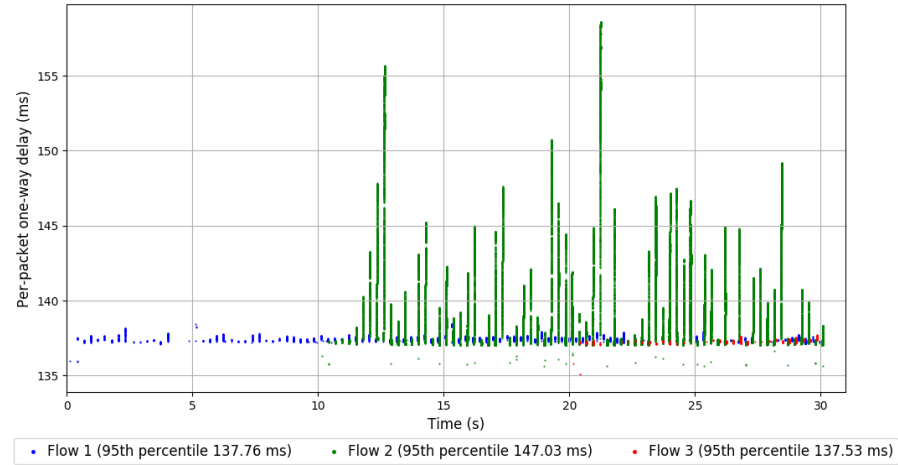
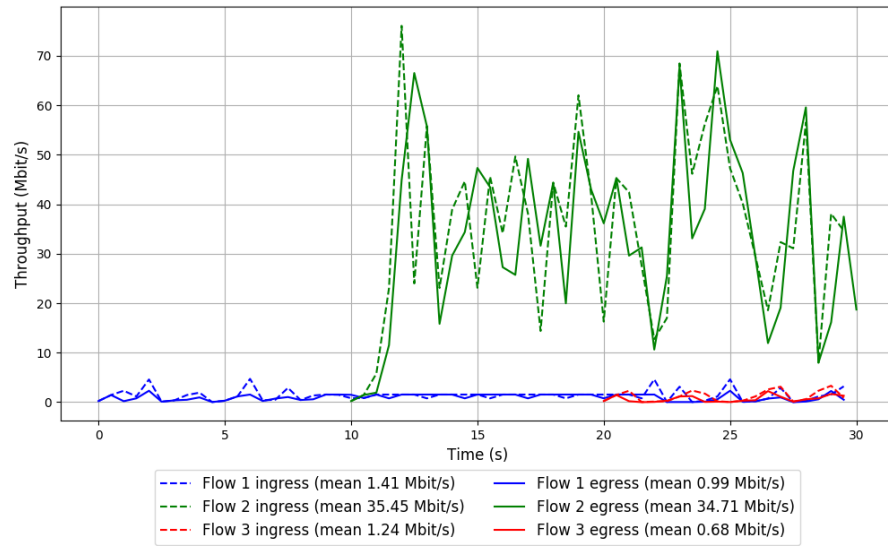
Average throughput: 0.68 Mbit/s

95th percentile per-packet one-way delay: 137.525 ms

Loss rate: 45.30%



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



Run 5: Statistics of TCP BBR

Start at: 2017-08-12 15:54:01

End at: 2017-08-12 15:54:31

# Below is generated by plot.py at 2017-08-12 18:09:40

# Datalink statistics

-- Total of 3 flows:

Average throughput: 63.17 Mbit/s

95th percentile per-packet one-way delay: 145.466 ms

Loss rate: 5.24%

-- Flow 1:

Average throughput: 40.65 Mbit/s

95th percentile per-packet one-way delay: 145.567 ms

Loss rate: 4.59%

-- Flow 2:

Average throughput: 33.81 Mbit/s

95th percentile per-packet one-way delay: 145.363 ms

Loss rate: 5.66%

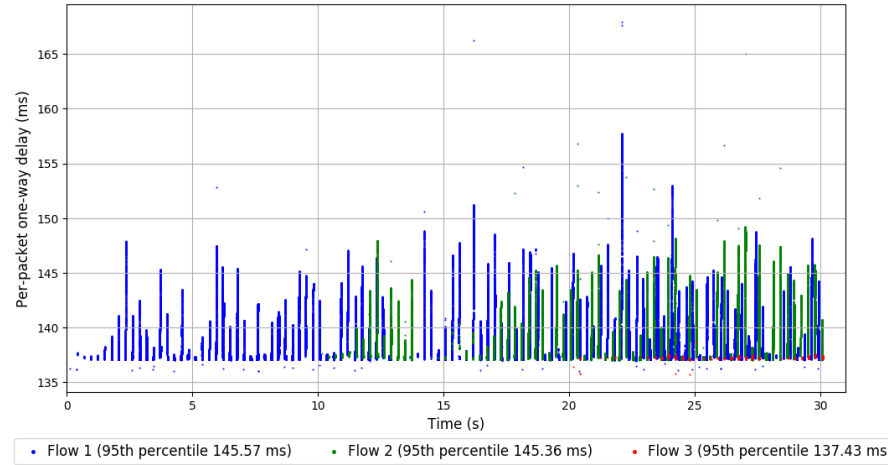
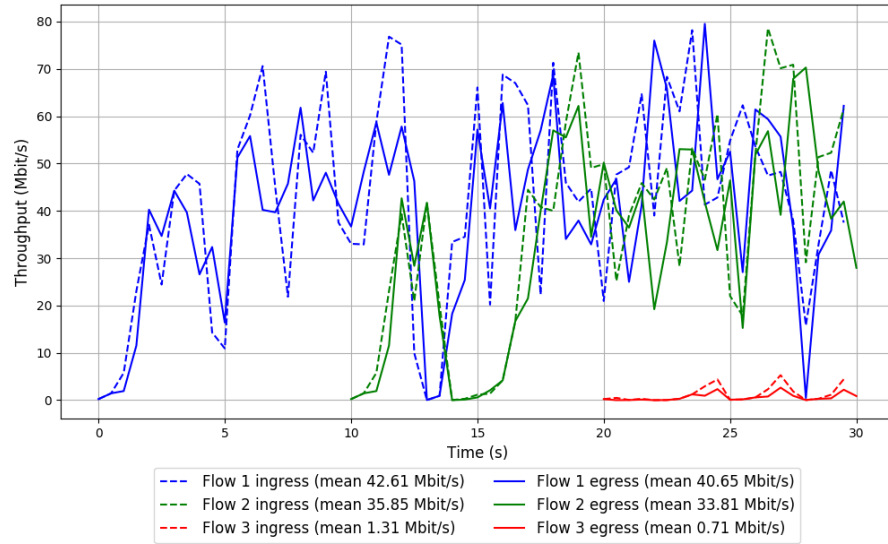
-- Flow 3:

Average throughput: 0.71 Mbit/s

95th percentile per-packet one-way delay: 137.429 ms

Loss rate: 45.69%

# Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-08-12 16:07:12

End at: 2017-08-12 16:07:42

# Below is generated by plot.py at 2017-08-12 18:09:40

# Datalink statistics

-- Total of 3 flows:

Average throughput: 19.60 Mbit/s

95th percentile per-packet one-way delay: 142.240 ms

Loss rate: 11.70%

-- Flow 1:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 136.683 ms

Loss rate: 15.92%

-- Flow 2:

Average throughput: 7.10 Mbit/s

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

Loss rate: 23.32%

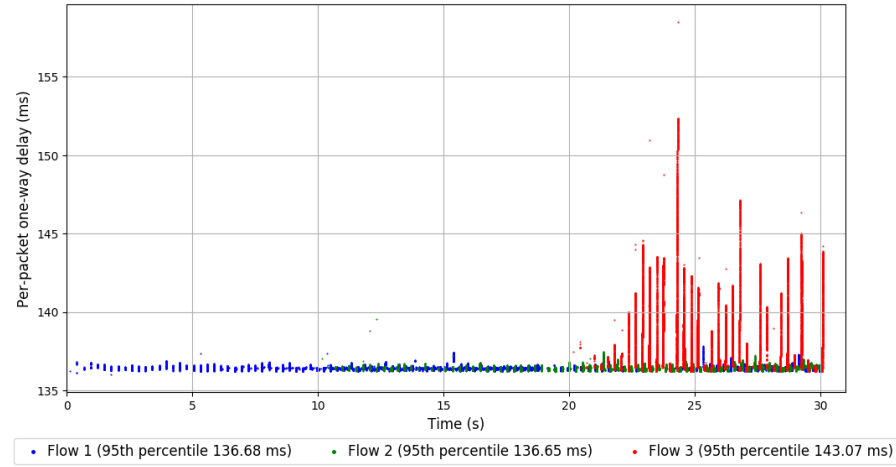
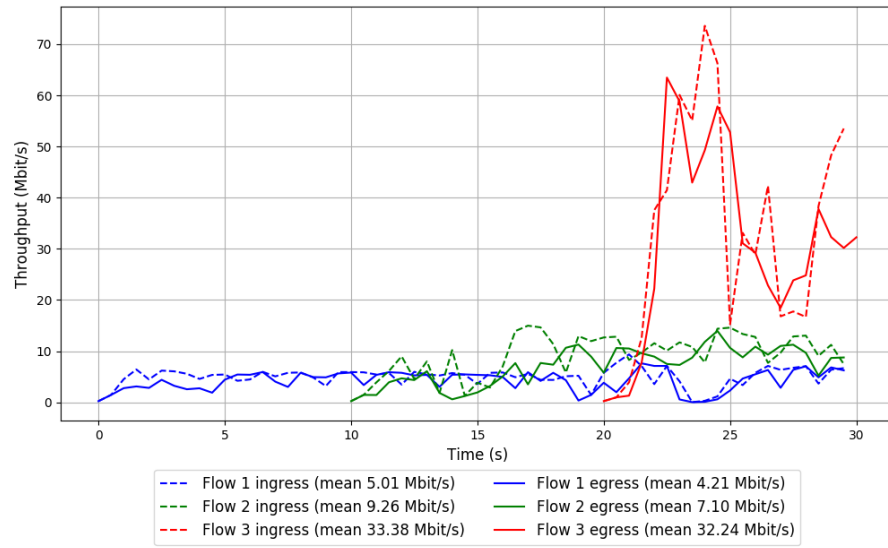
-- Flow 3:

Average throughput: 32.24 Mbit/s

95th percentile per-packet one-way delay: 143.070 ms

Loss rate: 3.35%

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



Run 7: Statistics of TCP BBR

Start at: 2017-08-12 16:20:57

End at: 2017-08-12 16:21:27

# Below is generated by plot.py at 2017-08-12 18:09:43

# Datalink statistics

-- Total of 3 flows:

Average throughput: 53.71 Mbit/s

95th percentile per-packet one-way delay: 147.465 ms

Loss rate: 6.82%

-- Flow 1:

Average throughput: 26.94 Mbit/s

95th percentile per-packet one-way delay: 145.033 ms

Loss rate: 8.75%

-- Flow 2:

Average throughput: 40.33 Mbit/s

95th percentile per-packet one-way delay: 149.851 ms

Loss rate: 4.26%

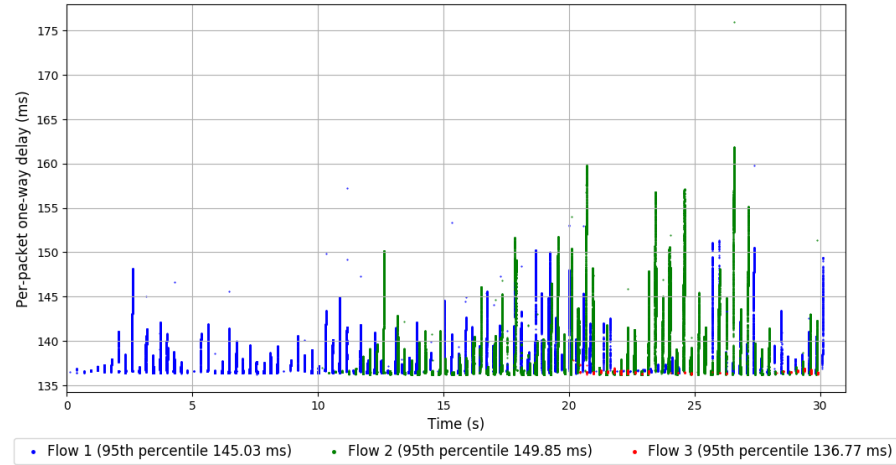
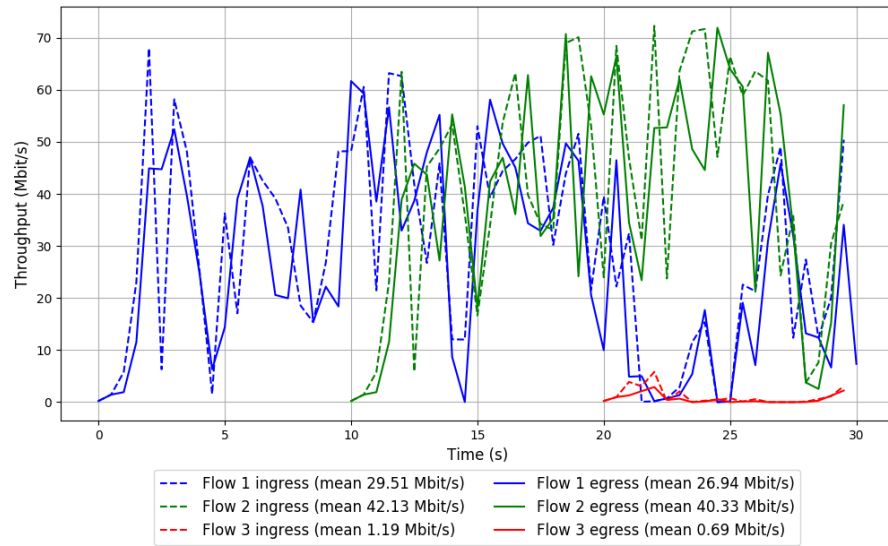
-- Flow 3:

Average throughput: 0.69 Mbit/s

95th percentile per-packet one-way delay: 136.773 ms

Loss rate: 42.28%

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



Run 8: Statistics of TCP BBR

Start at: 2017-08-12 16:34:29

End at: 2017-08-12 16:34:59

# Below is generated by plot.py at 2017-08-12 18:09:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 27.35 Mbit/s

95th percentile per-packet one-way delay: 145.659 ms

Loss rate: 8.31%

-- Flow 1:

Average throughput: 0.65 Mbit/s

95th percentile per-packet one-way delay: 137.506 ms

Loss rate: 52.94%

-- Flow 2:

Average throughput: 39.78 Mbit/s

95th percentile per-packet one-way delay: 145.719 ms

Loss rate: 5.61%

-- Flow 3:

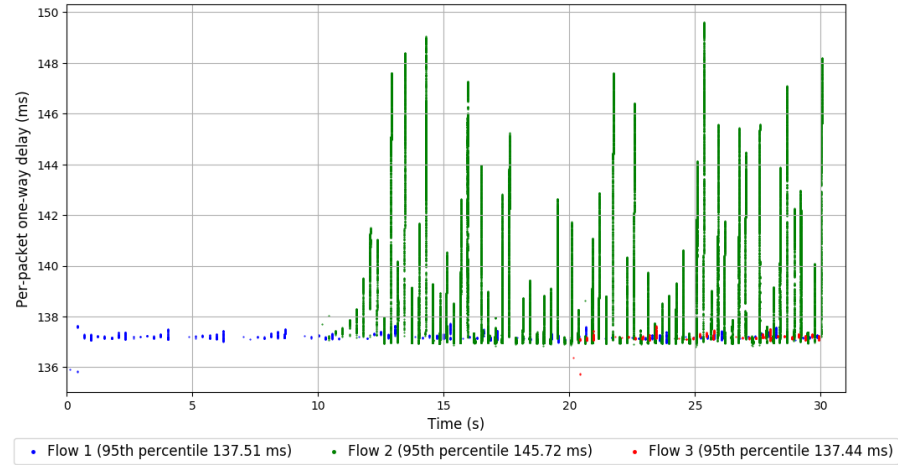
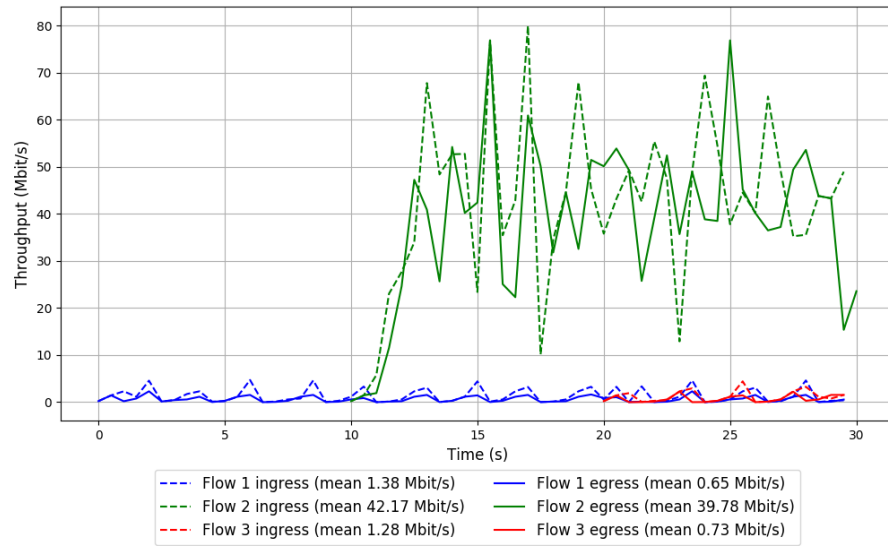
Average throughput: 0.73 Mbit/s

95th percentile per-packet one-way delay: 137.443 ms

Loss rate: 42.88%



# Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-08-12 16:47:32

End at: 2017-08-12 16:48:02

# Below is generated by plot.py at 2017-08-12 18:09:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.10 Mbit/s

95th percentile per-packet one-way delay: 138.013 ms

Loss rate: 33.68%

-- Flow 1:

Average throughput: 3.13 Mbit/s

95th percentile per-packet one-way delay: 138.060 ms

Loss rate: 36.03%

-- Flow 2:

Average throughput: 1.11 Mbit/s

95th percentile per-packet one-way delay: 137.925 ms

Loss rate: 15.16%

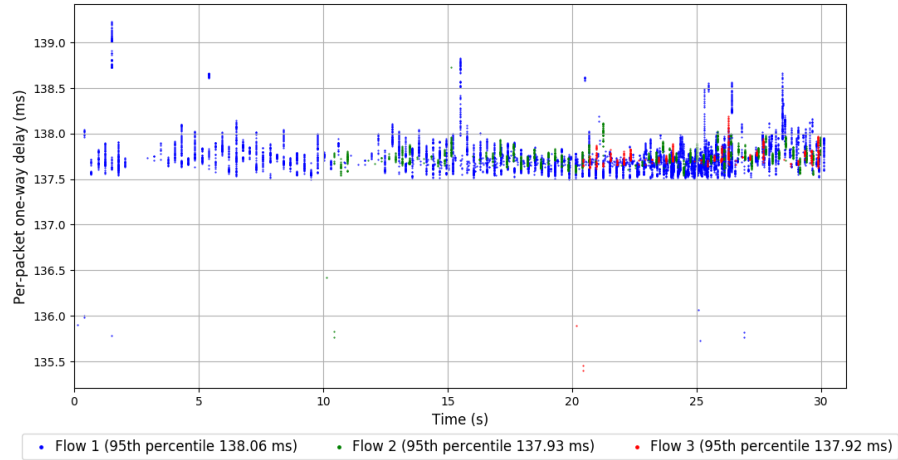
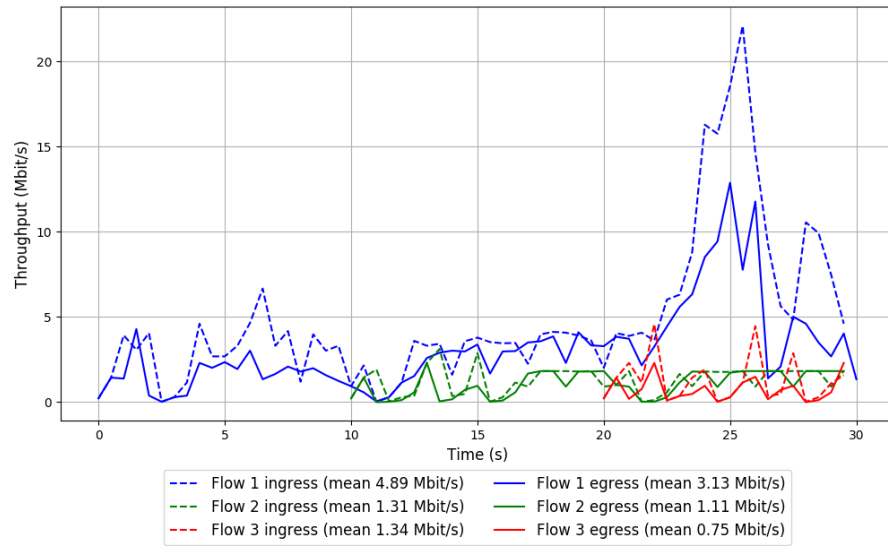
-- Flow 3:

Average throughput: 0.75 Mbit/s

95th percentile per-packet one-way delay: 137.920 ms

Loss rate: 44.12%

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



Run 10: Statistics of TCP BBR

Start at: 2017-08-12 17:00:35

End at: 2017-08-12 17:01:05

# Below is generated by plot.py at 2017-08-12 18:09:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 18.41 Mbit/s

95th percentile per-packet one-way delay: 144.904 ms

Loss rate: 13.17%

-- Flow 1:

Average throughput: 2.92 Mbit/s

95th percentile per-packet one-way delay: 138.579 ms

Loss rate: 39.57%

-- Flow 2:

Average throughput: 4.02 Mbit/s

95th percentile per-packet one-way delay: 138.679 ms

Loss rate: 20.86%

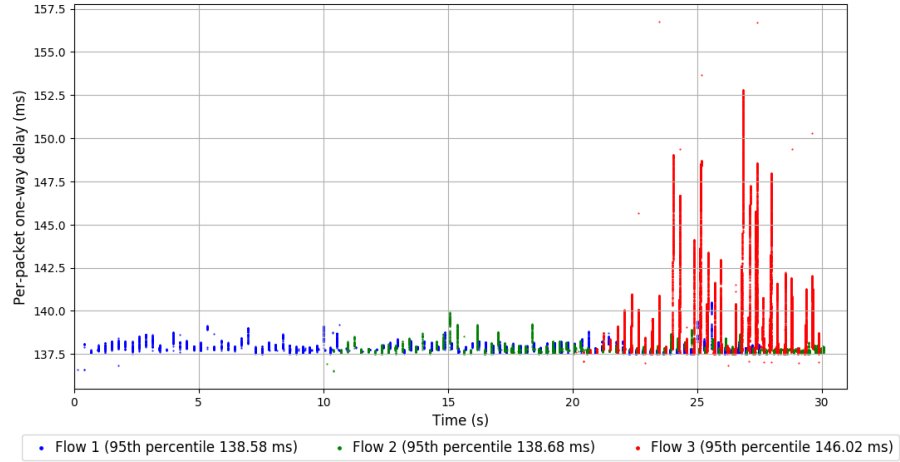
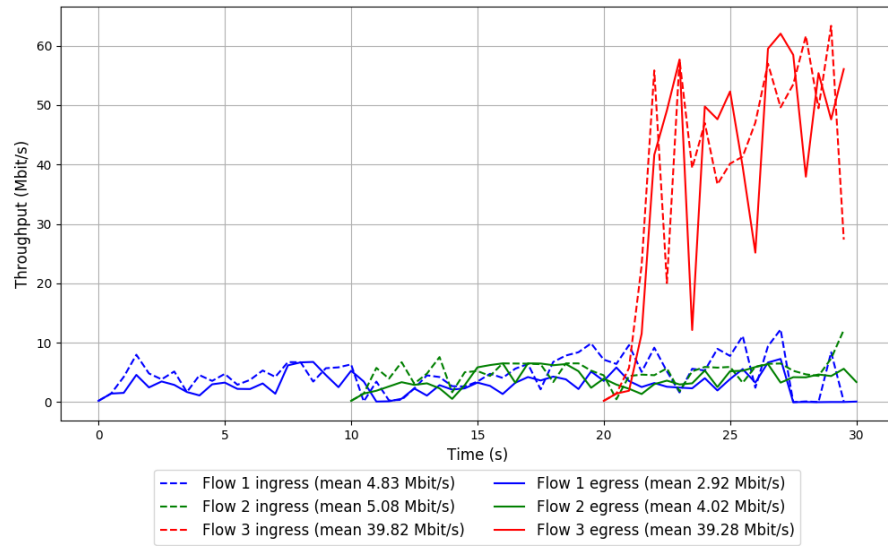
-- Flow 3:

Average throughput: 39.28 Mbit/s

95th percentile per-packet one-way delay: 146.016 ms

Loss rate: 1.35%

# Run 10: Report of TCP BBR — Data Link

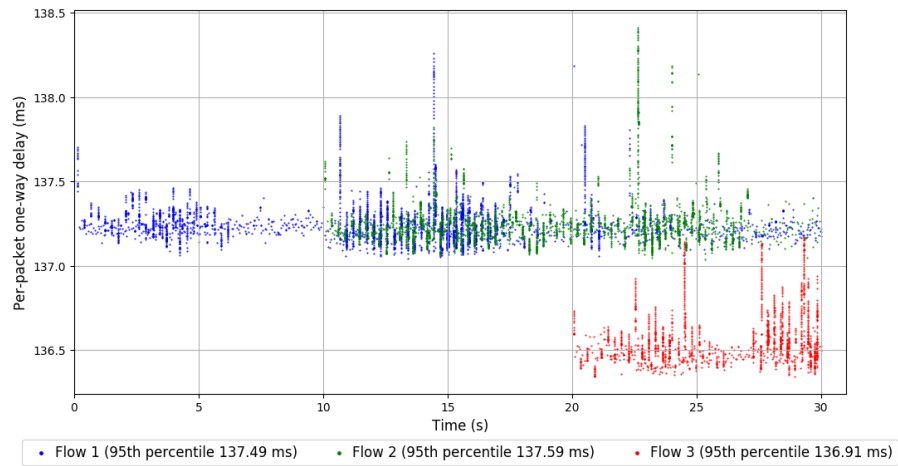
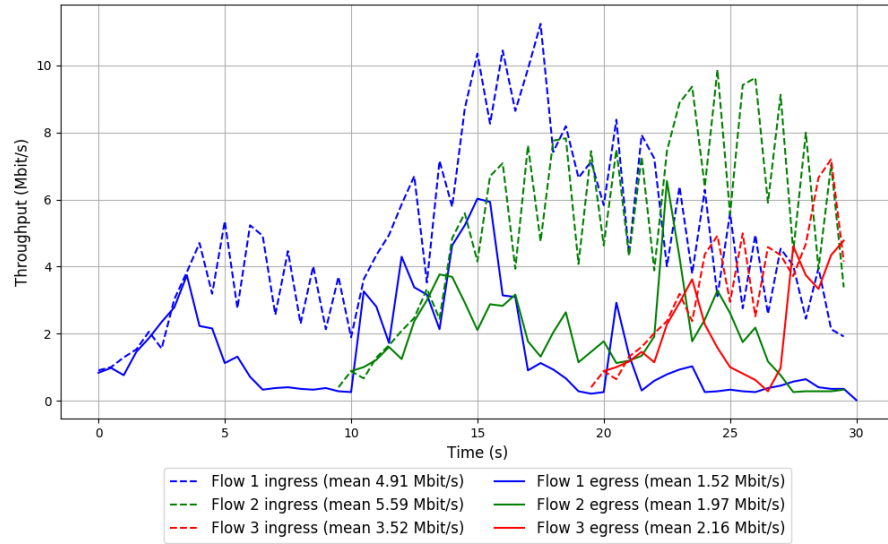


```
Run 1: Statistics of CalibratedKoho

Start at: 2017-08-12 14:58:25
End at: 2017-08-12 14:58:55

# Below is generated by plot.py at 2017-08-12 18:09:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 137.491 ms
Loss rate: 63.73%
-- Flow 1:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 137.490 ms
Loss rate: 68.99%
-- Flow 2:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 137.592 ms
Loss rate: 64.67%
-- Flow 3:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 136.914 ms
Loss rate: 38.62%
```

## Run 1: Report of CalibratedKoho — Data Link



Run 2: Statistics of CalibratedKoho

Start at: 2017-08-12 15:11:43

End at: 2017-08-12 15:12:13

# Below is generated by plot.py at 2017-08-12 18:09:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 19.63 Mbit/s

95th percentile per-packet one-way delay: 137.951 ms

Loss rate: 57.60%

-- Flow 1:

Average throughput: 14.28 Mbit/s

95th percentile per-packet one-way delay: 137.351 ms

Loss rate: 62.82%

-- Flow 2:

Average throughput: 1.96 Mbit/s

95th percentile per-packet one-way delay: 136.764 ms

Loss rate: 66.34%

-- Flow 3:

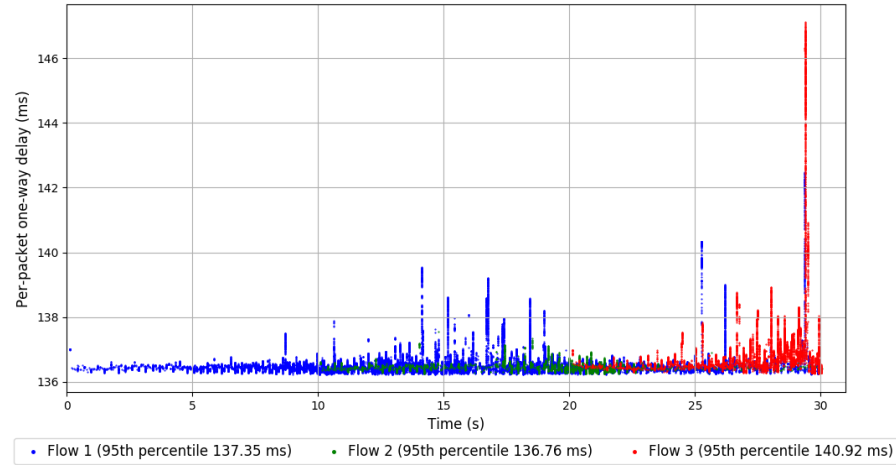
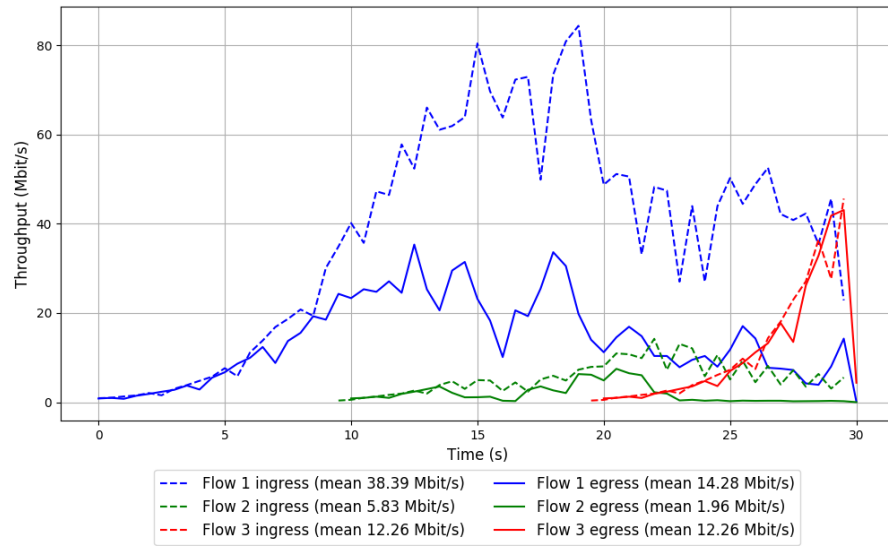
Average throughput: 12.26 Mbit/s

95th percentile per-packet one-way delay: 140.922 ms

Loss rate: 0.00%



## Run 2: Report of CalibratedKoho — Data Link



Run 3: Statistics of CalibratedKoho

Start at: 2017-08-12 15:25:19

End at: 2017-08-12 15:25:49

# Below is generated by plot.py at 2017-08-12 18:10:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 208.40 Mbit/s

95th percentile per-packet one-way delay: 173.473 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 204.61 Mbit/s

95th percentile per-packet one-way delay: 173.583 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 0.69 Mbit/s

95th percentile per-packet one-way delay: 136.618 ms

Loss rate: 65.93%

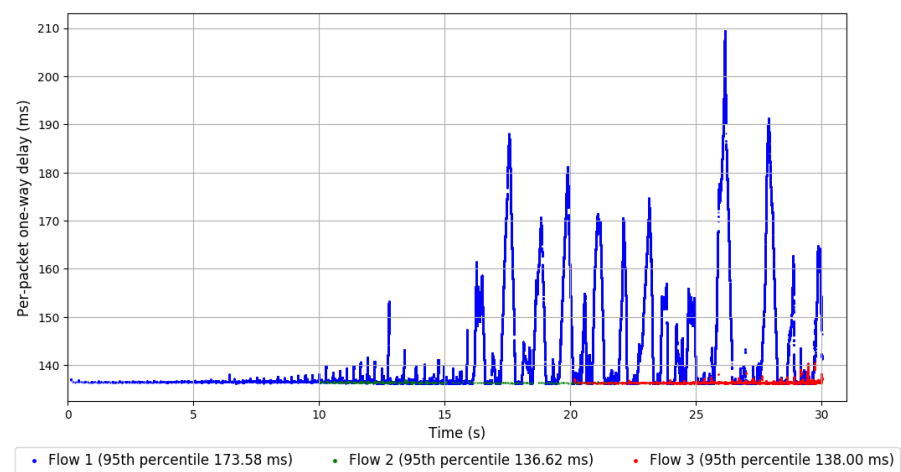
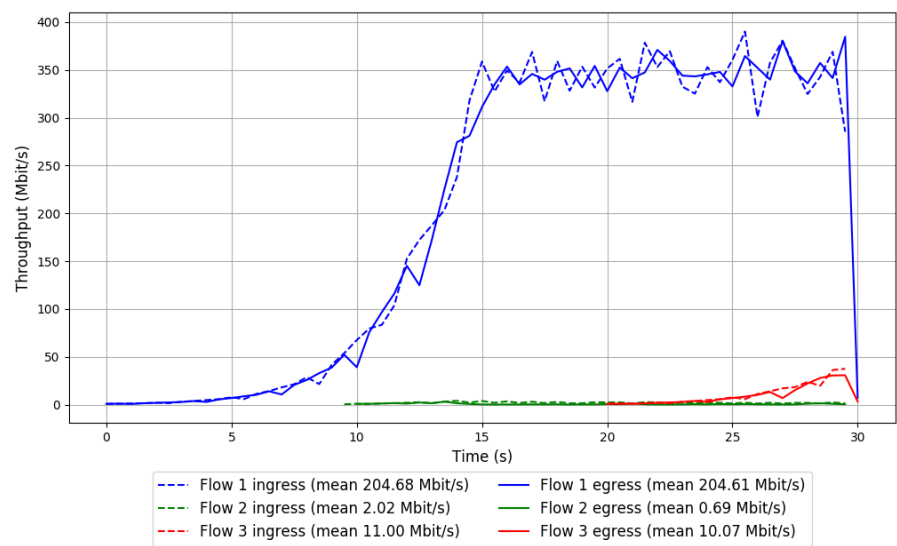
-- Flow 3:

Average throughput: 10.07 Mbit/s

95th percentile per-packet one-way delay: 137.999 ms

Loss rate: 8.47%

Run 3: Report of CalibratedKoho — Data Link



Run 4: Statistics of CalibratedKoho

Start at: 2017-08-12 15:38:46

End at: 2017-08-12 15:39:16

# Below is generated by plot.py at 2017-08-12 18:10:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.58 Mbit/s

95th percentile per-packet one-way delay: 137.810 ms

Loss rate: 63.64%

-- Flow 1:

Average throughput: 1.12 Mbit/s

95th percentile per-packet one-way delay: 137.887 ms

Loss rate: 67.60%

-- Flow 2:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 137.745 ms

Loss rate: 61.03%

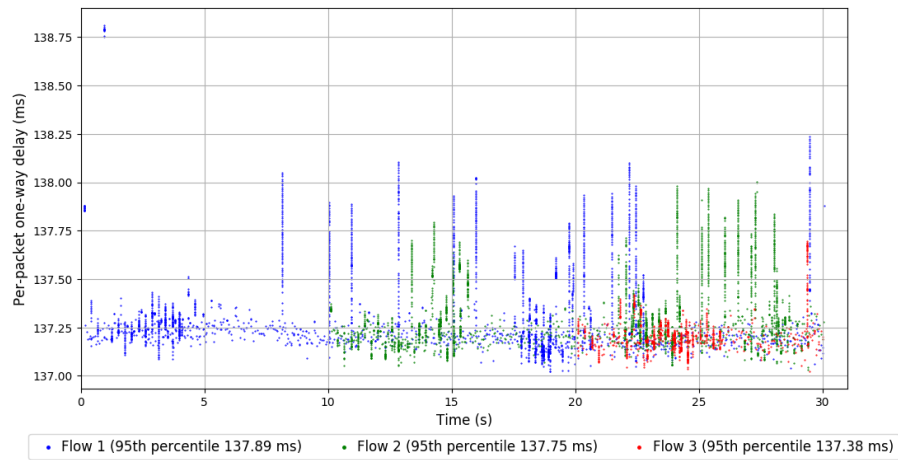
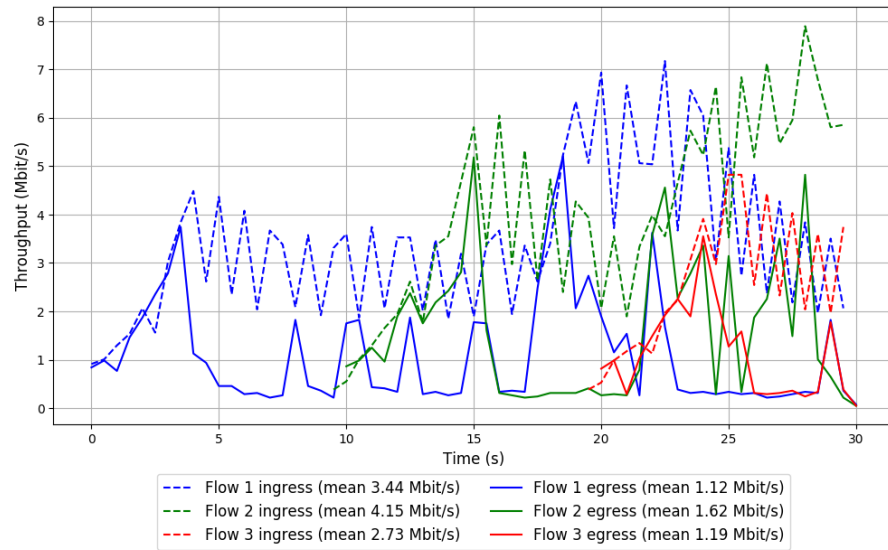
-- Flow 3:

Average throughput: 1.19 Mbit/s

95th percentile per-packet one-way delay: 137.385 ms

Loss rate: 56.53%

# Run 4: Report of CalibratedKoho — Data Link



Run 5: Statistics of CalibratedKoho

Start at: 2017-08-12 15:52:04

End at: 2017-08-12 15:52:34

# Below is generated by plot.py at 2017-08-12 18:10:40

# Datalink statistics

-- Total of 3 flows:

Average throughput: 198.01 Mbit/s

95th percentile per-packet one-way delay: 193.299 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 197.74 Mbit/s

95th percentile per-packet one-way delay: 193.334 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 137.852 ms

Loss rate: 61.39%

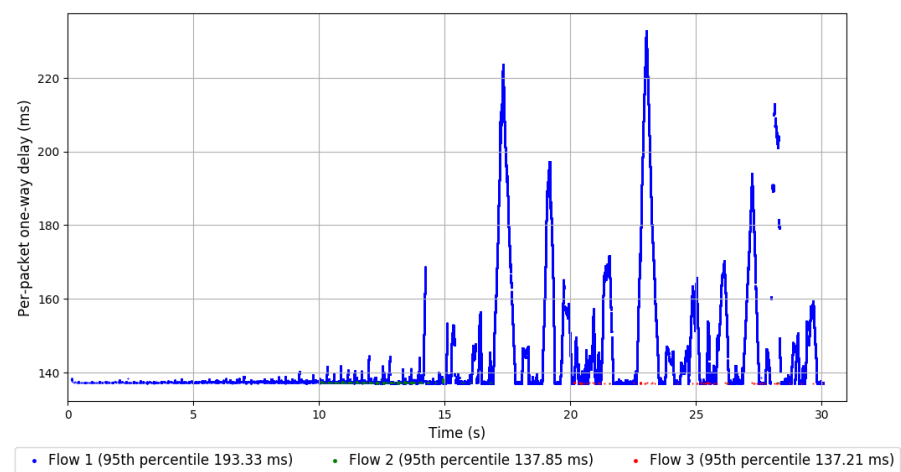
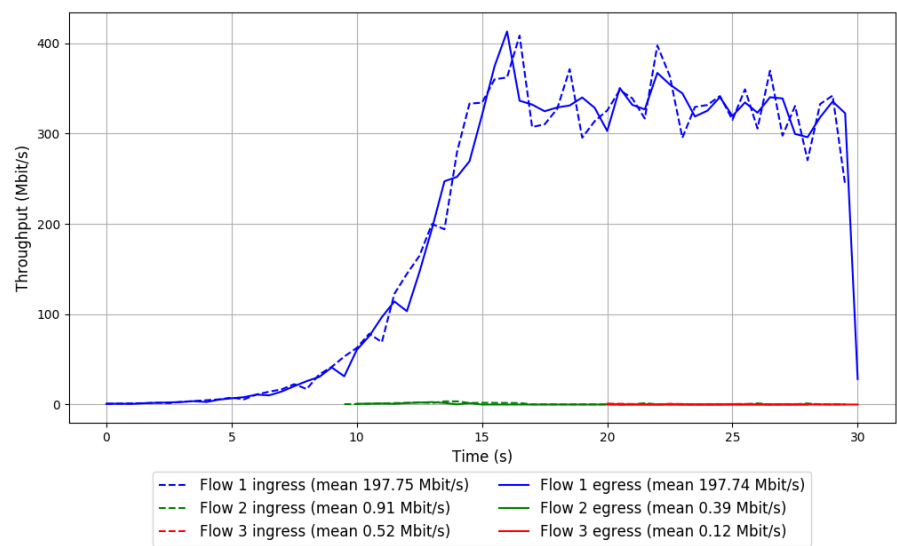
-- Flow 3:

Average throughput: 0.12 Mbit/s

95th percentile per-packet one-way delay: 137.214 ms

Loss rate: 76.69%

Run 5: Report of CalibratedKoho — Data Link



Run 6: Statistics of CalibratedKoho

Start at: 2017-08-12 16:05:25

End at: 2017-08-12 16:05:55

# Below is generated by plot.py at 2017-08-12 18:10:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 50.23 Mbit/s

95th percentile per-packet one-way delay: 143.227 ms

Loss rate: 35.13%

-- Flow 1:

Average throughput: 19.60 Mbit/s

95th percentile per-packet one-way delay: 141.018 ms

Loss rate: 37.90%

-- Flow 2:

Average throughput: 40.56 Mbit/s

95th percentile per-packet one-way delay: 144.703 ms

Loss rate: 36.10%

-- Flow 3:

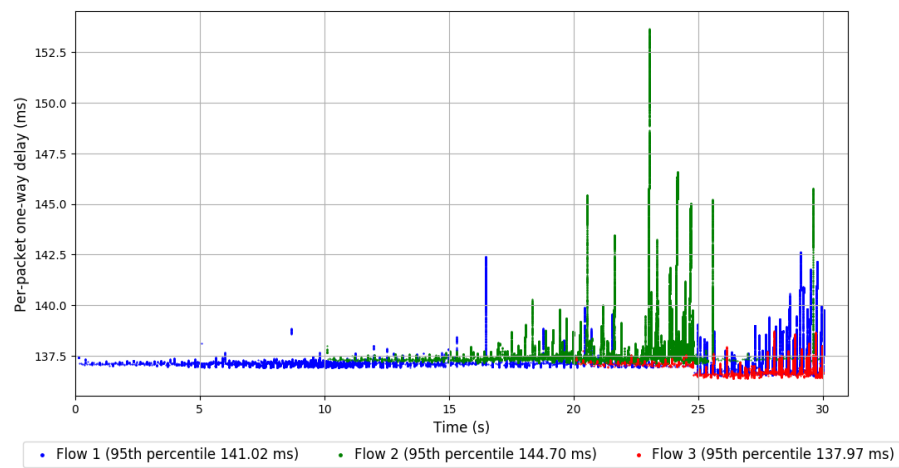
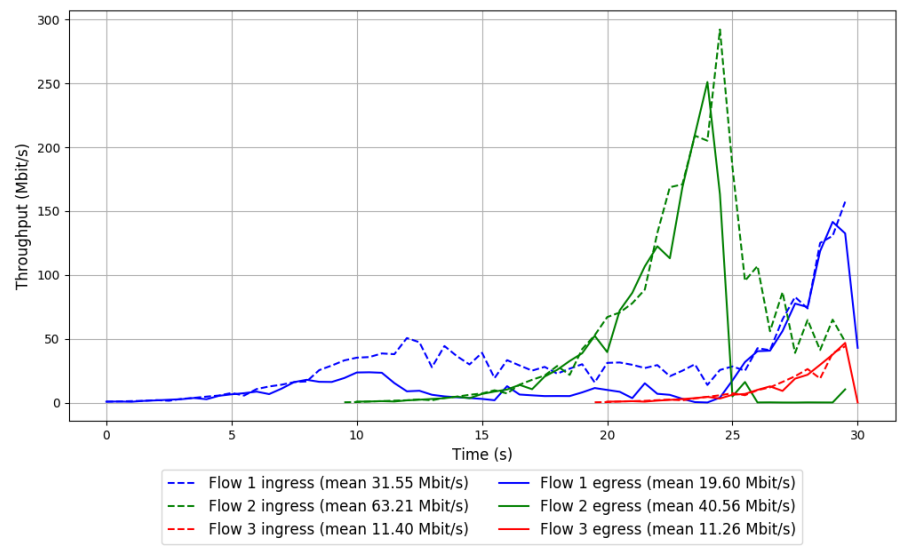
Average throughput: 11.26 Mbit/s

95th percentile per-packet one-way delay: 137.968 ms

Loss rate: 1.23%



Run 6: Report of CalibratedKoho — Data Link



Run 7: Statistics of CalibratedKoho

Start at: 2017-08-12 16:18:58

End at: 2017-08-12 16:19:28

# Below is generated by plot.py at 2017-08-12 18:11:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 204.47 Mbit/s

95th percentile per-packet one-way delay: 183.615 ms

Loss rate: 2.15%

-- Flow 1:

Average throughput: 195.46 Mbit/s

95th percentile per-packet one-way delay: 184.303 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 13.35 Mbit/s

95th percentile per-packet one-way delay: 137.372 ms

Loss rate: 32.51%

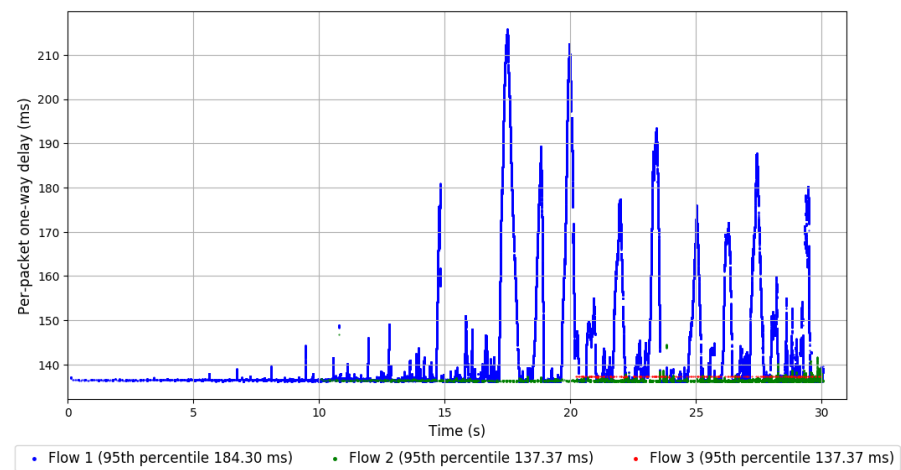
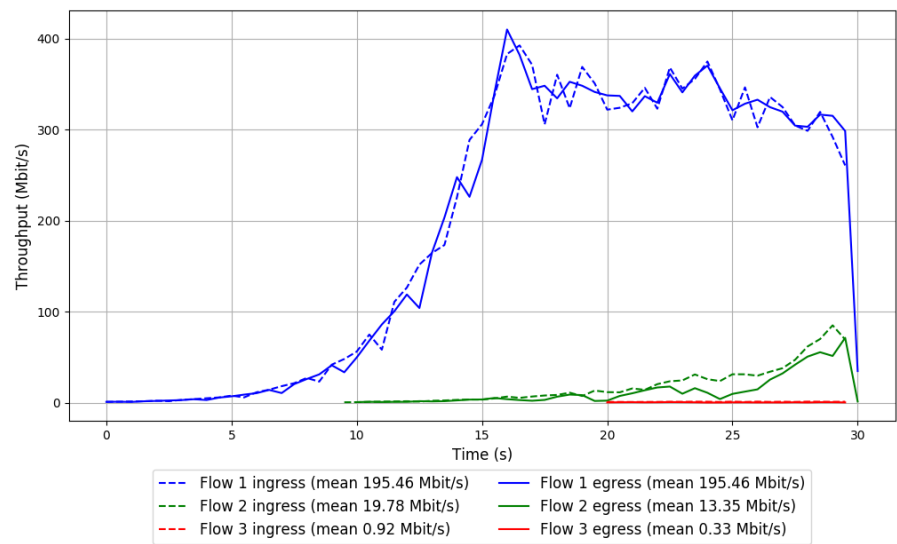
-- Flow 3:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 137.373 ms

Loss rate: 64.72%

Run 7: Report of CalibratedKoho — Data Link



Run 8: Statistics of CalibratedKoho

Start at: 2017-08-12 16:32:41

End at: 2017-08-12 16:33:11

# Below is generated by plot.py at 2017-08-12 18:11:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 82.86 Mbit/s

95th percentile per-packet one-way delay: 172.498 ms

Loss rate: 2.72%

-- Flow 1:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 137.276 ms

Loss rate: 68.02%

-- Flow 2:

Average throughput: 117.06 Mbit/s

95th percentile per-packet one-way delay: 173.122 ms

Loss rate: 0.64%

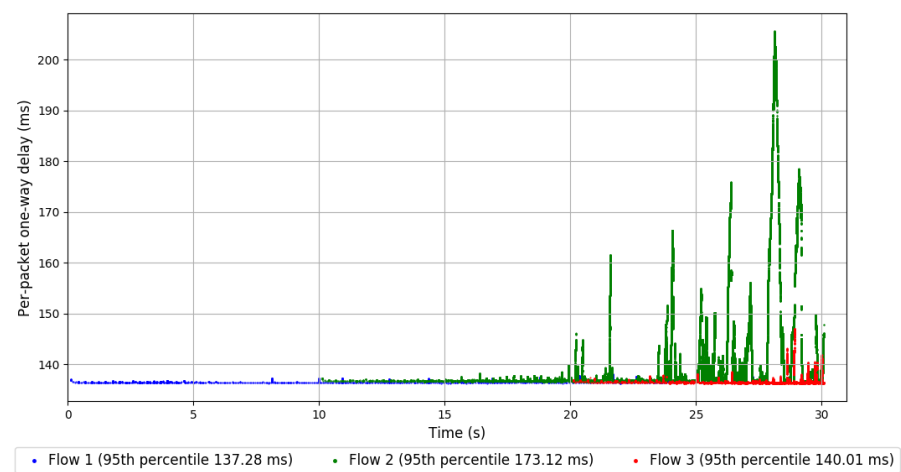
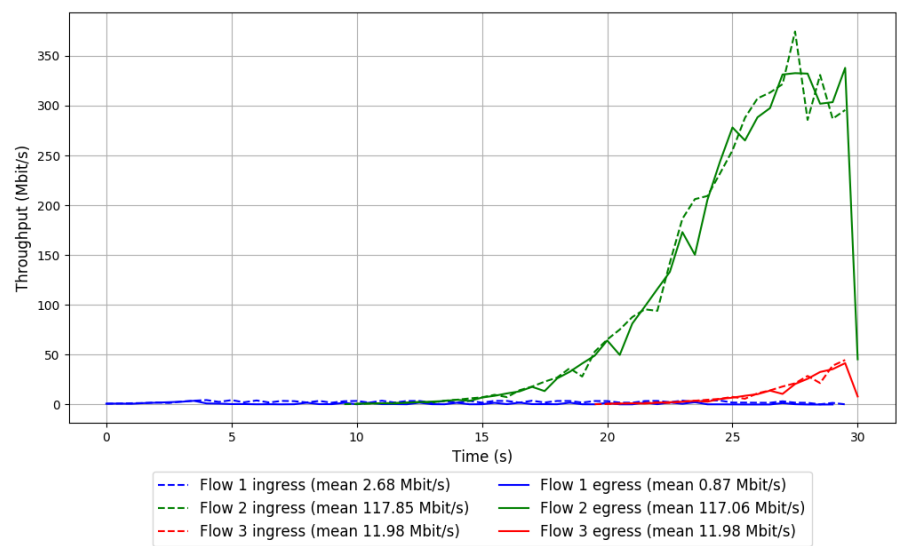
-- Flow 3:

Average throughput: 11.98 Mbit/s

95th percentile per-packet one-way delay: 140.006 ms

Loss rate: 0.00%

Run 8: Report of CalibratedKoho — Data Link



Run 9: Statistics of CalibratedKoho

Start at: 2017-08-12 16:45:52

End at: 2017-08-12 16:46:22

# Below is generated by plot.py at 2017-08-12 18:11:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.07 Mbit/s

95th percentile per-packet one-way delay: 138.021 ms

Loss rate: 59.73%

-- Flow 1:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 137.962 ms

Loss rate: 64.05%

-- Flow 2:

Average throughput: 2.85 Mbit/s

95th percentile per-packet one-way delay: 138.044 ms

Loss rate: 55.52%

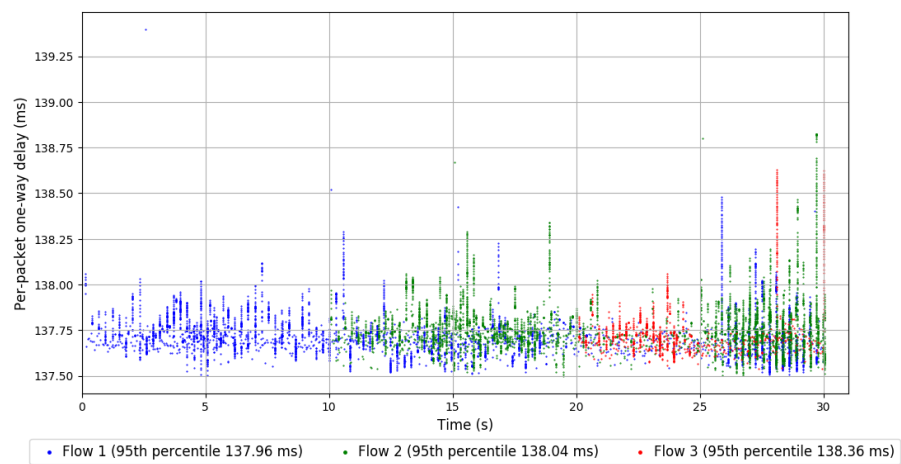
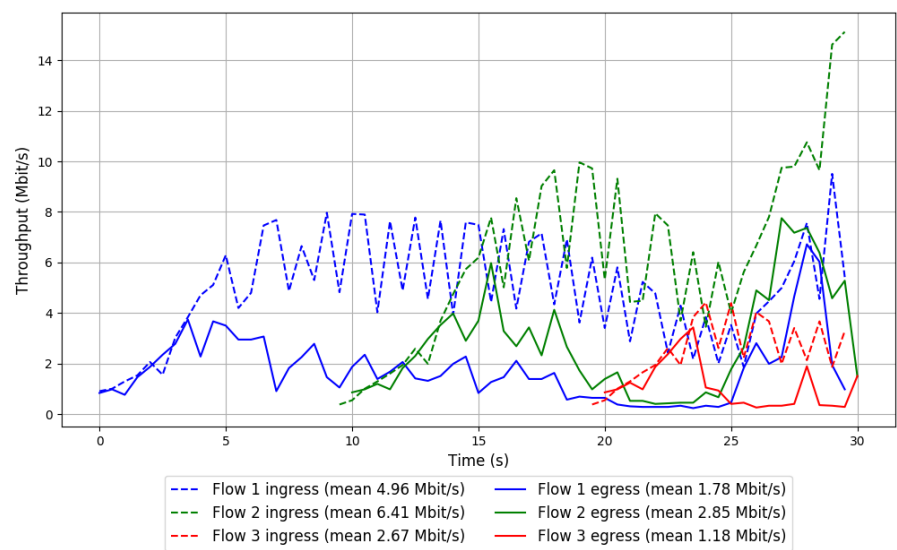
-- Flow 3:

Average throughput: 1.18 Mbit/s

95th percentile per-packet one-way delay: 138.361 ms

Loss rate: 55.96%

Run 9: Report of CalibratedKoho — Data Link



Run 10: Statistics of CalibratedKoho

Start at: 2017-08-12 16:58:52

End at: 2017-08-12 16:59:22

# Below is generated by plot.py at 2017-08-12 18:11:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 138.086 ms

Loss rate: 60.94%

-- Flow 1:

Average throughput: 1.06 Mbit/s

95th percentile per-packet one-way delay: 138.211 ms

Loss rate: 63.98%

-- Flow 2:

Average throughput: 2.20 Mbit/s

95th percentile per-packet one-way delay: 137.925 ms

Loss rate: 63.32%

-- Flow 3:

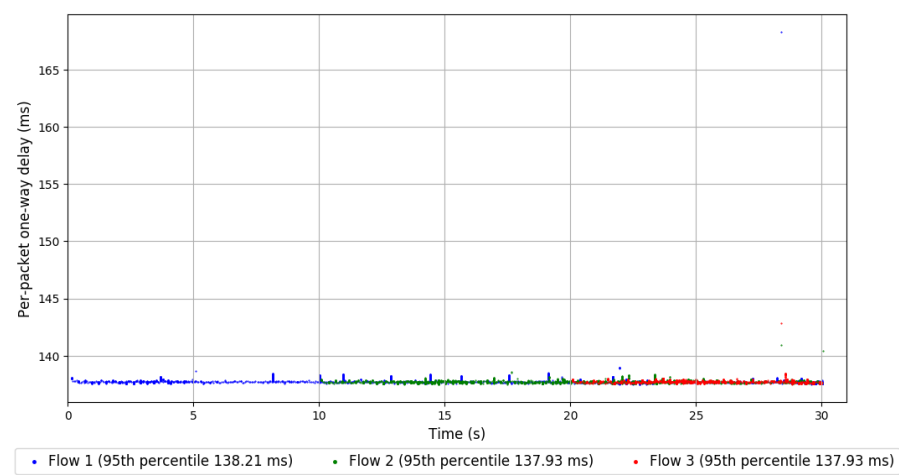
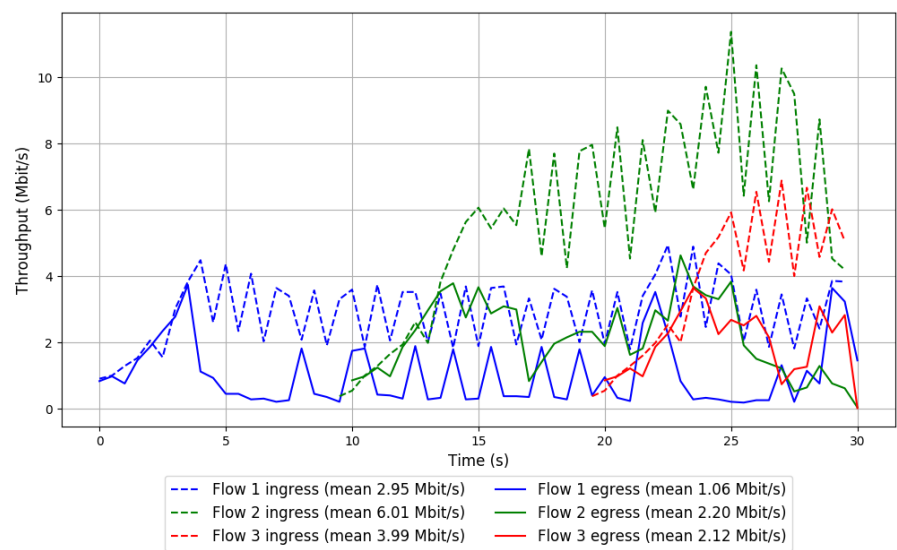
Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 137.931 ms

Loss rate: 46.96%



Run 10: Report of CalibratedKoho — Data Link

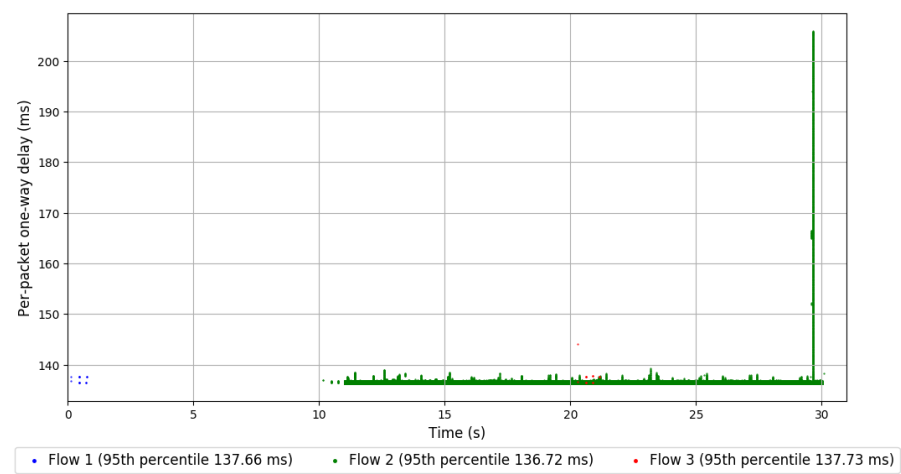
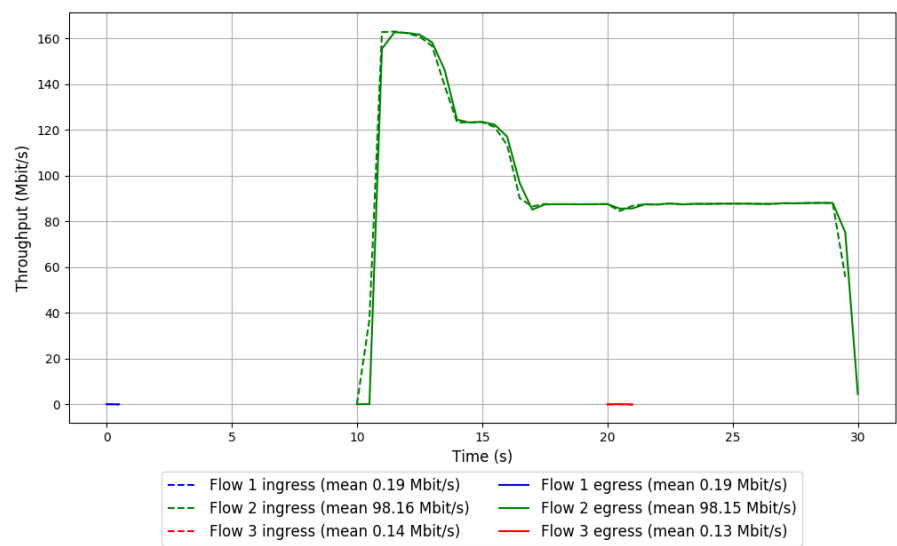


```
Run 1: Statistics of Copa

Start at: 2017-08-12 15:04:39
End at: 2017-08-12 15:05:09

# Below is generated by plot.py at 2017-08-12 18:11:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.38 Mbit/s
95th percentile per-packet one-way delay: 136.716 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 137.656 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 98.15 Mbit/s
95th percentile per-packet one-way delay: 136.716 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 137.732 ms
Loss rate: 0.00%
```

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-08-12 15:18:05

End at: 2017-08-12 15:18:35

# Below is generated by plot.py at 2017-08-12 18:12:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 137.25 Mbit/s

95th percentile per-packet one-way delay: 138.791 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 80.08 Mbit/s

95th percentile per-packet one-way delay: 136.349 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 57.17 Mbit/s

95th percentile per-packet one-way delay: 141.543 ms

Loss rate: 0.00%

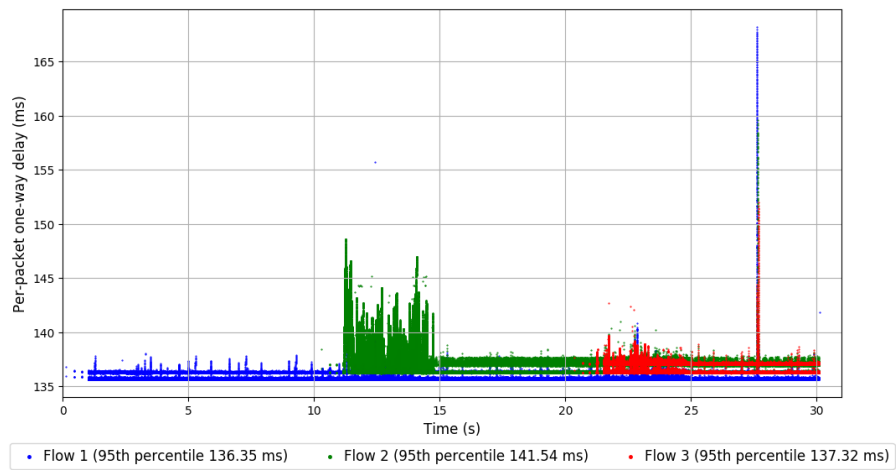
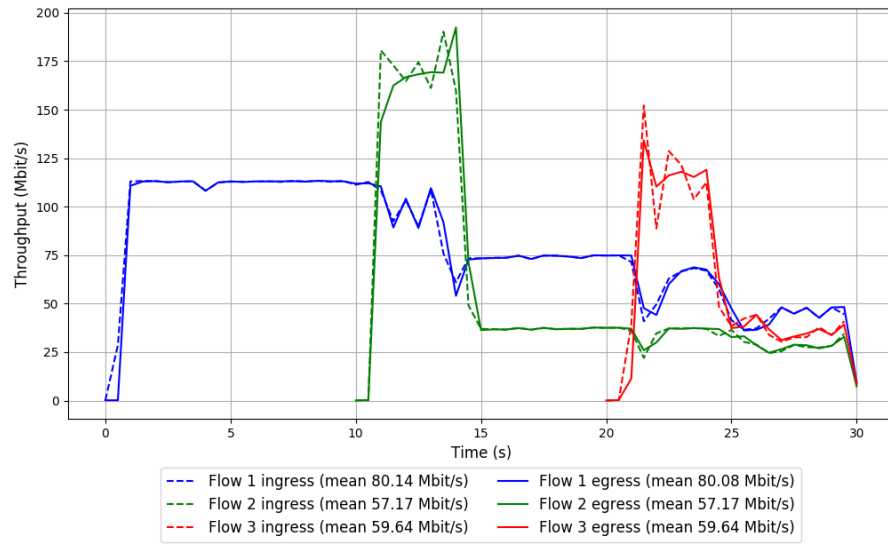
-- Flow 3:

Average throughput: 59.64 Mbit/s

95th percentile per-packet one-way delay: 137.320 ms

Loss rate: 0.00%

## Run 2: Report of Copa — Data Link

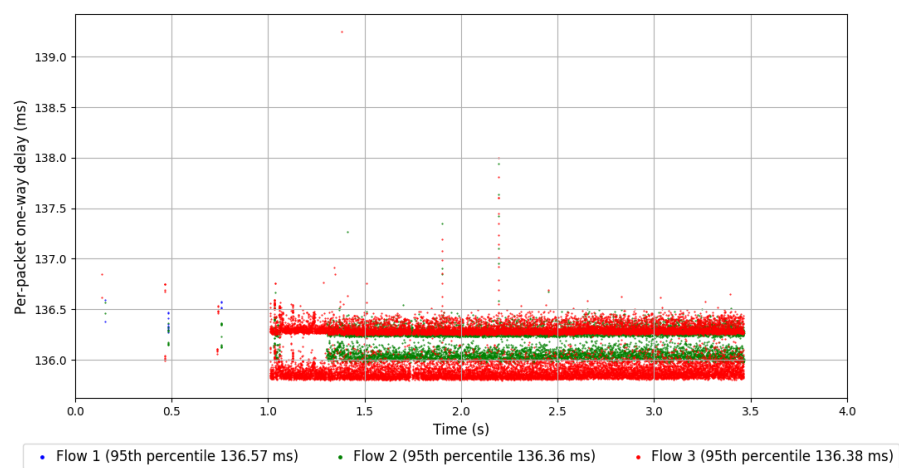
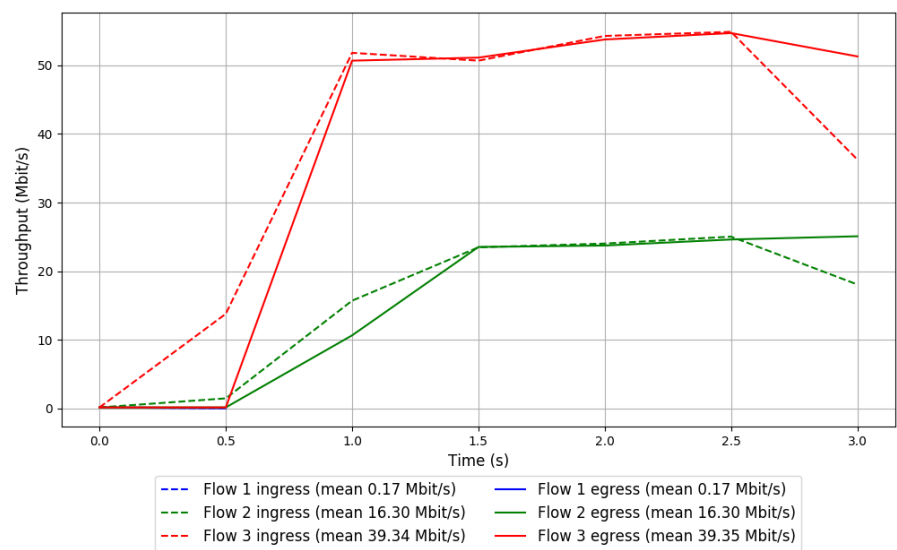


Run 3: Statistics of Copa

Start at: 2017-08-12 15:32:01

End at: 2017-08-12 15:32:31

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-08-12 15:44:54

End at: 2017-08-12 15:45:24

# Below is generated by plot.py at 2017-08-12 18:12:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 161.86 Mbit/s

95th percentile per-packet one-way delay: 137.129 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 115.53 Mbit/s

95th percentile per-packet one-way delay: 137.130 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 69.80 Mbit/s

95th percentile per-packet one-way delay: 137.129 ms

Loss rate: 0.17%

-- Flow 3:

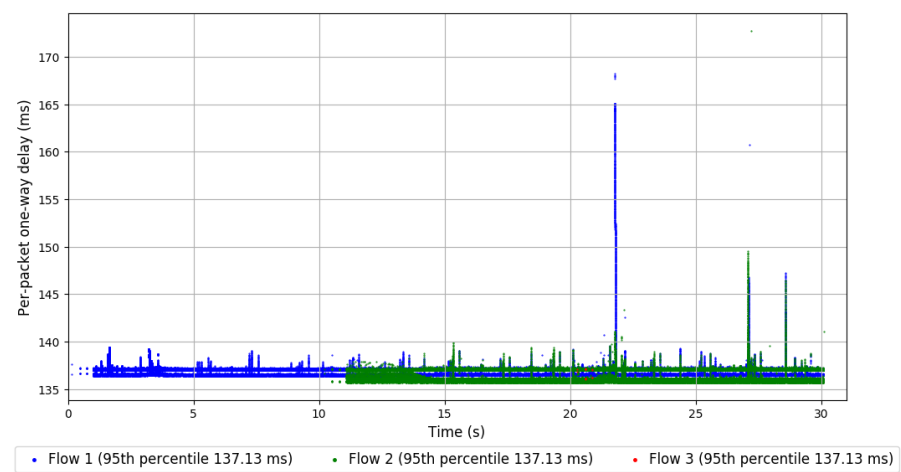
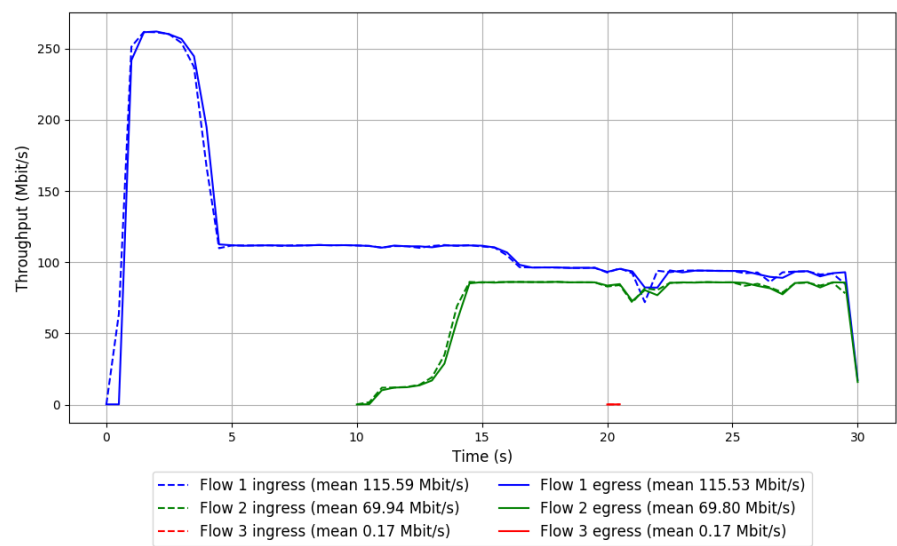
Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 137.130 ms

Loss rate: 0.00%



Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-08-12 15:58:20

End at: 2017-08-12 15:58:50

# Below is generated by plot.py at 2017-08-12 18:13:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 78.41 Mbit/s

95th percentile per-packet one-way delay: 137.139 ms

Loss rate: 56.50%

-- Flow 1:

Average throughput: 58.82 Mbit/s

95th percentile per-packet one-way delay: 137.135 ms

Loss rate: 63.39%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 137.210 ms

Loss rate: 10.26%

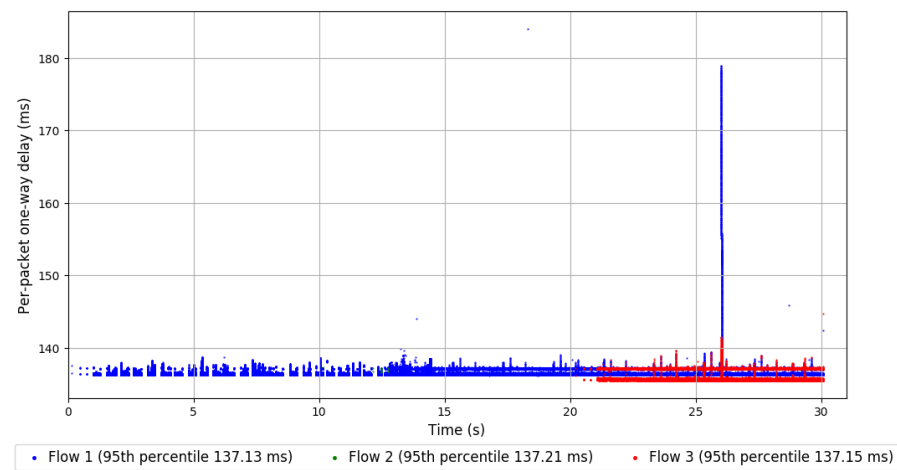
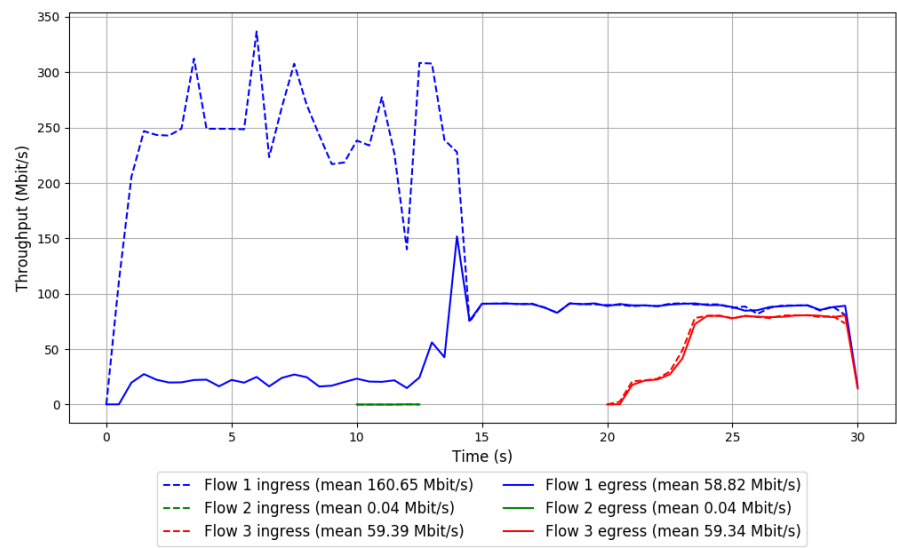
-- Flow 3:

Average throughput: 59.34 Mbit/s

95th percentile per-packet one-way delay: 137.145 ms

Loss rate: 0.01%

Run 5: Report of Copa — Data Link

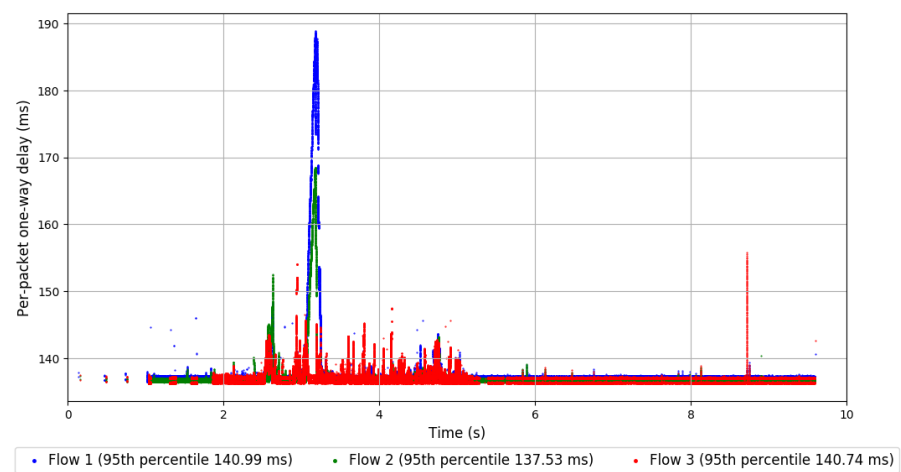
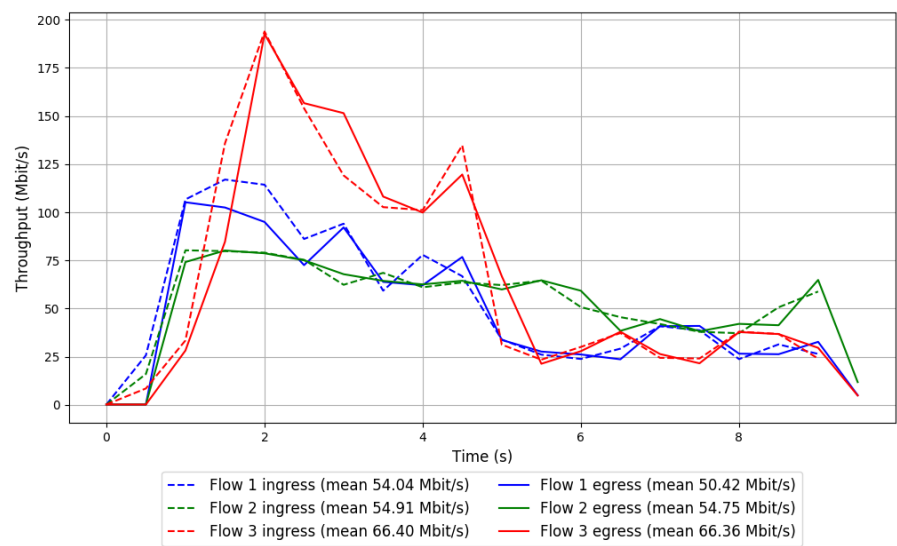


Run 6: Statistics of Copa

Start at: 2017-08-12 16:11:57

End at: 2017-08-12 16:12:27

Run 6: Report of Copa — Data Link

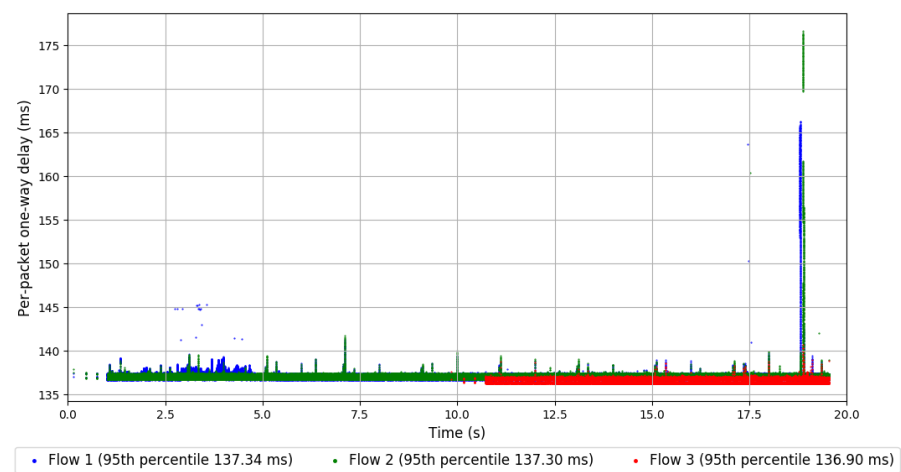
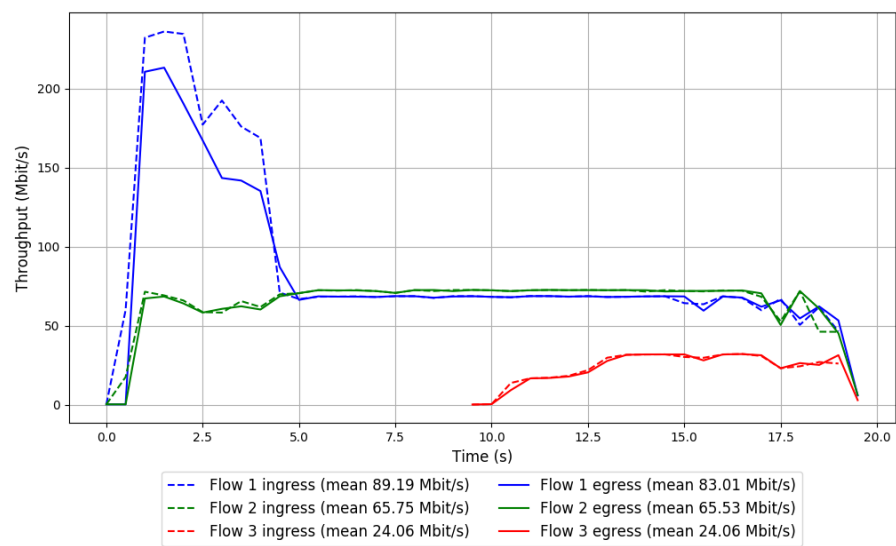


Run 7: Statistics of Copa

Start at: 2017-08-12 16:25:32

End at: 2017-08-12 16:26:02

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-08-12 16:38:54

End at: 2017-08-12 16:39:24

# Below is generated by plot.py at 2017-08-12 18:13:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 25.34 Mbit/s

95th percentile per-packet one-way delay: 137.600 ms

Loss rate: 64.84%

-- Flow 1:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 137.920 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 10.19 Mbit/s

95th percentile per-packet one-way delay: 135.801 ms

Loss rate: 90.62%

-- Flow 3:

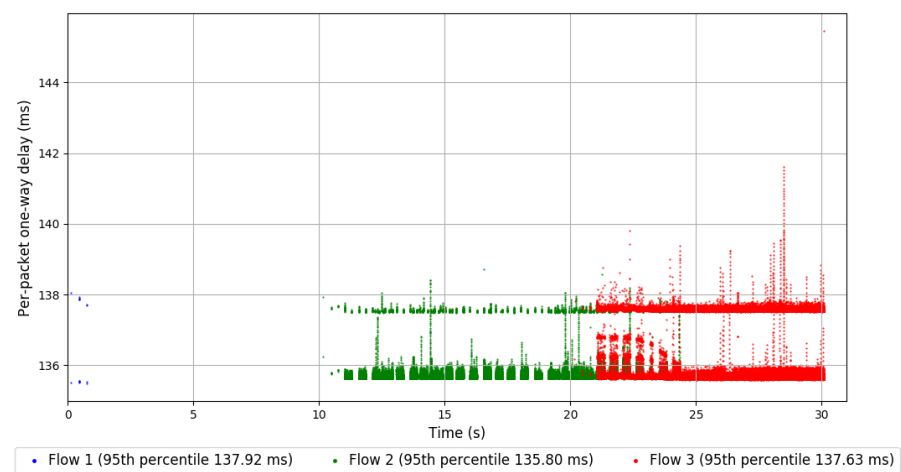
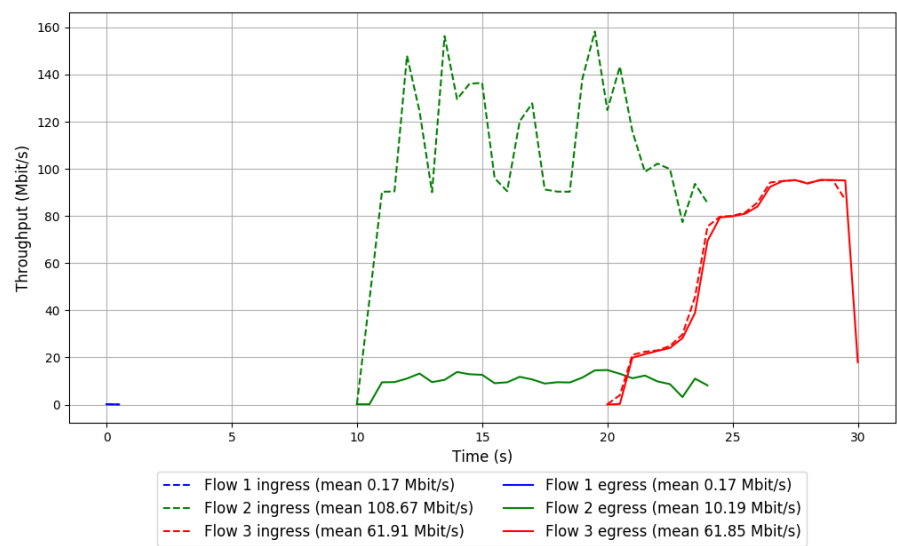
Average throughput: 61.85 Mbit/s

95th percentile per-packet one-way delay: 137.630 ms

Loss rate: 0.00%



Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-08-12 16:51:50

End at: 2017-08-12 16:52:20

# Below is generated by plot.py at 2017-08-12 18:14:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 149.03 Mbit/s

95th percentile per-packet one-way delay: 137.616 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 145.34 Mbit/s

95th percentile per-packet one-way delay: 137.609 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 137.654 ms

Loss rate: 9.23%

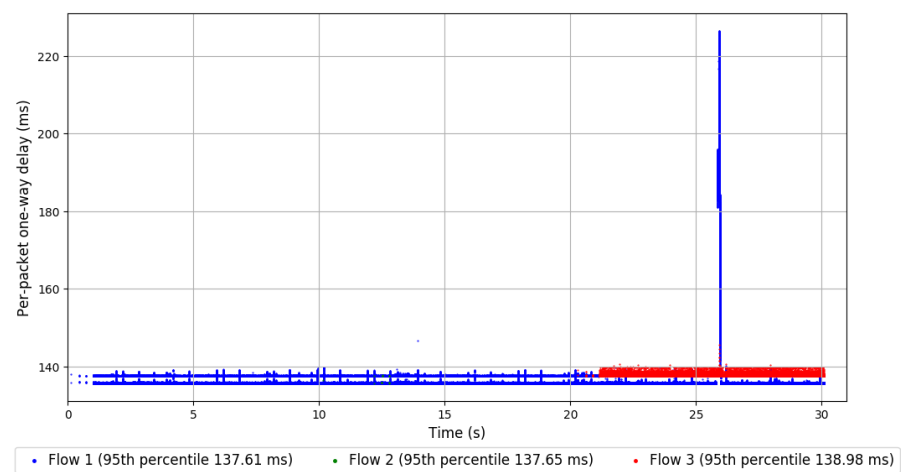
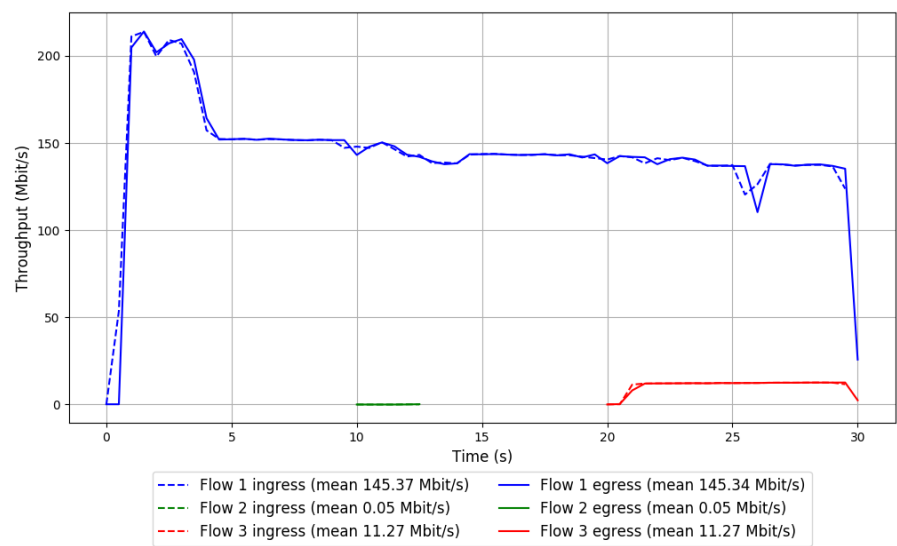
-- Flow 3:

Average throughput: 11.27 Mbit/s

95th percentile per-packet one-way delay: 138.979 ms

Loss rate: 0.00%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-08-12 17:05:07

End at: 2017-08-12 17:05:37

# Below is generated by plot.py at 2017-08-12 18:14:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 126.87 Mbit/s

95th percentile per-packet one-way delay: 137.624 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 126.86 Mbit/s

95th percentile per-packet one-way delay: 137.624 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 137.674 ms

Loss rate: 0.00%

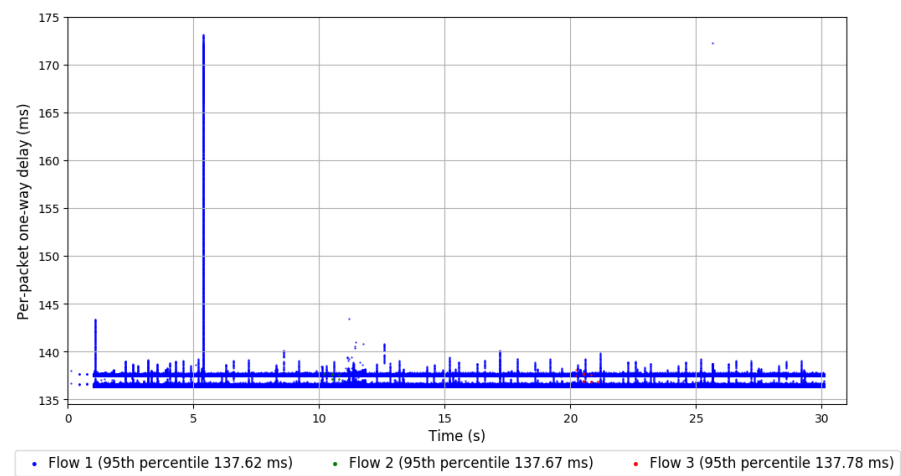
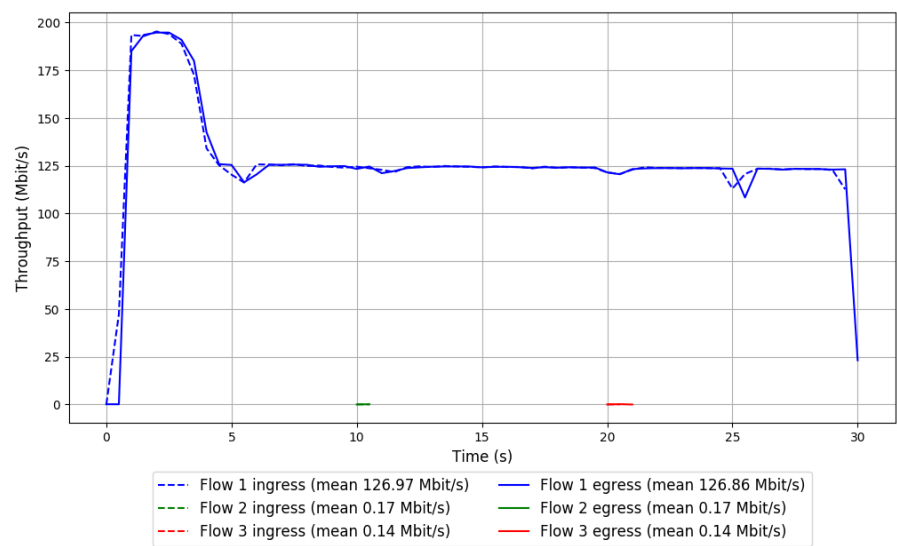
-- Flow 3:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 137.785 ms

Loss rate: 0.00%

Run 10: Report of Copa — Data Link

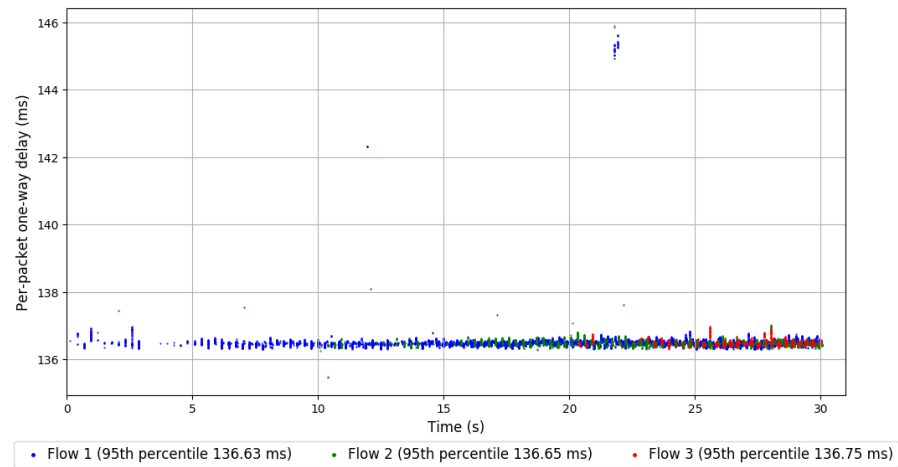
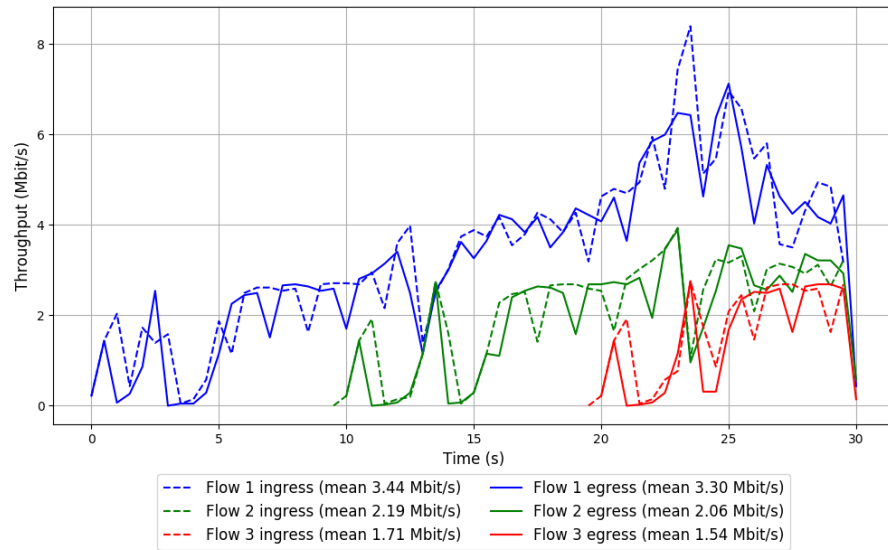


```
Run 1: Statistics of TCP Cubic

Start at: 2017-08-12 14:59:15
End at: 2017-08-12 14:59:45

# Below is generated by plot.py at 2017-08-12 18:14:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.18 Mbit/s
95th percentile per-packet one-way delay: 136.643 ms
Loss rate: 5.27%
-- Flow 1:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 136.632 ms
Loss rate: 4.09%
-- Flow 2:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 136.646 ms
Loss rate: 6.28%
-- Flow 3:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 136.752 ms
Loss rate: 9.83%
```

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



Run 2: Statistics of TCP Cubic

Start at: 2017-08-12 15:12:34

End at: 2017-08-12 15:13:04

# Below is generated by plot.py at 2017-08-12 18:14:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.00 Mbit/s

95th percentile per-packet one-way delay: 137.896 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 2.93 Mbit/s

95th percentile per-packet one-way delay: 136.922 ms

Loss rate: 2.17%

-- Flow 2:

Average throughput: 12.48 Mbit/s

95th percentile per-packet one-way delay: 138.458 ms

Loss rate: 0.76%

-- Flow 3:

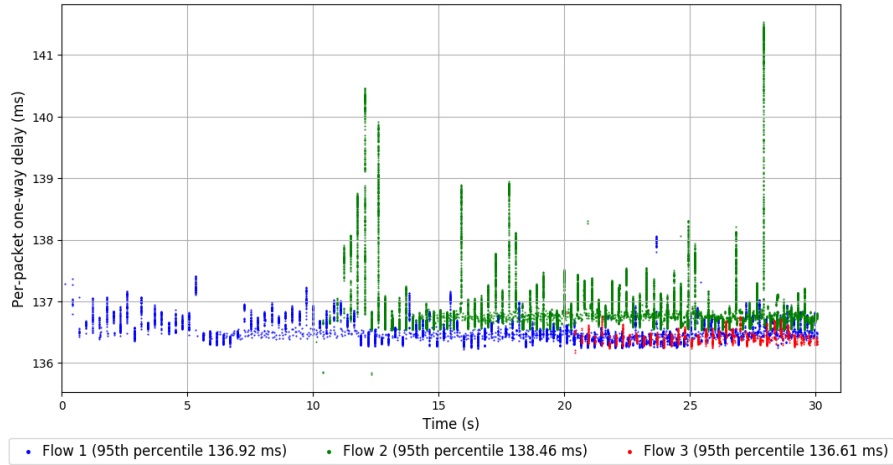
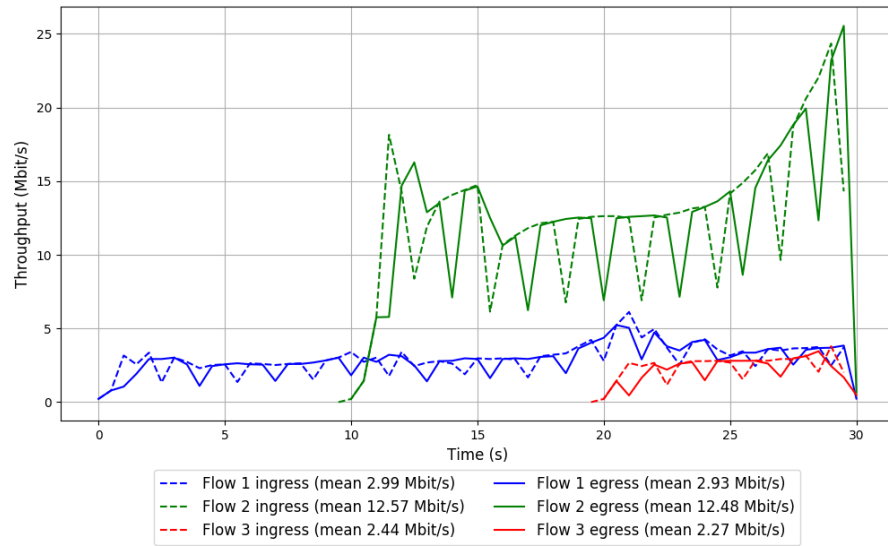
Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 136.612 ms

Loss rate: 6.89%



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



Run 3: Statistics of TCP Cubic

Start at: 2017-08-12 15:26:26

End at: 2017-08-12 15:26:56

# Below is generated by plot.py at 2017-08-12 18:14:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.55 Mbit/s

95th percentile per-packet one-way delay: 137.033 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 9.73 Mbit/s

95th percentile per-packet one-way delay: 137.110 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 3.38 Mbit/s

95th percentile per-packet one-way delay: 136.610 ms

Loss rate: 1.75%

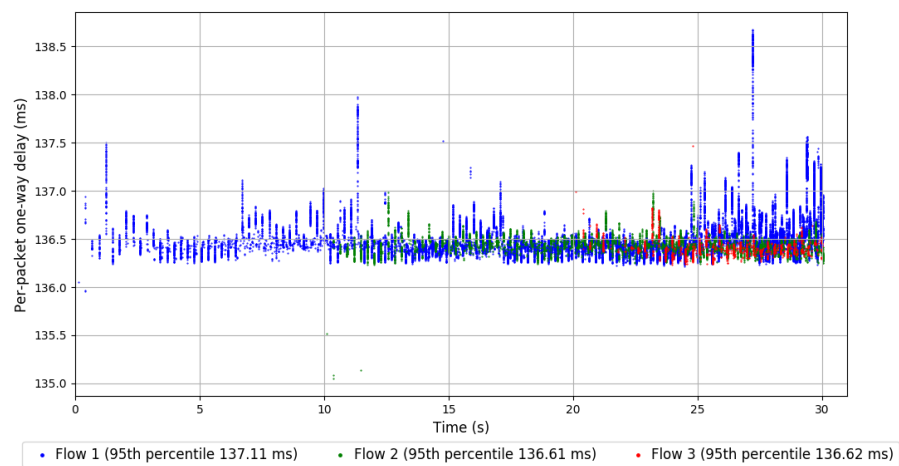
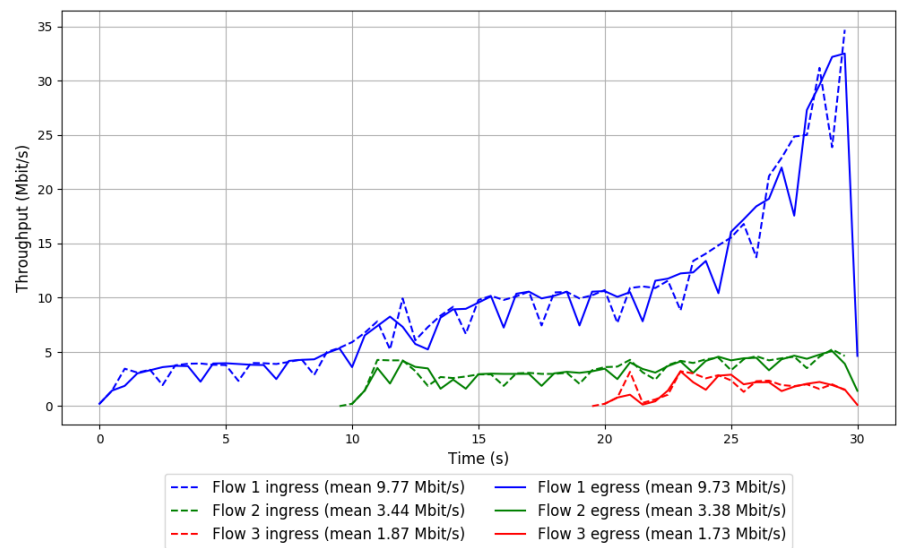
-- Flow 3:

Average throughput: 1.73 Mbit/s

95th percentile per-packet one-way delay: 136.622 ms

Loss rate: 7.57%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-08-12 15:39:36

End at: 2017-08-12 15:40:06

# Below is generated by plot.py at 2017-08-12 18:14:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 14.76 Mbit/s

95th percentile per-packet one-way delay: 139.778 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 137.532 ms

Loss rate: 2.51%

-- Flow 2:

Average throughput: 1.98 Mbit/s

95th percentile per-packet one-way delay: 137.440 ms

Loss rate: 4.49%

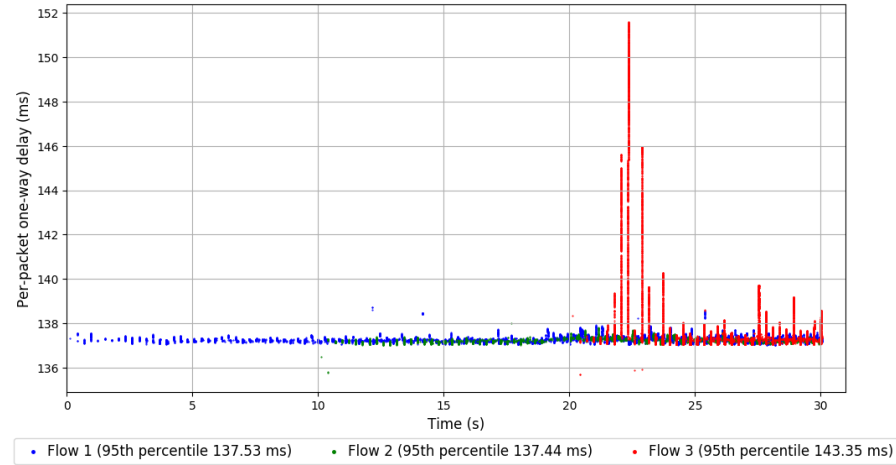
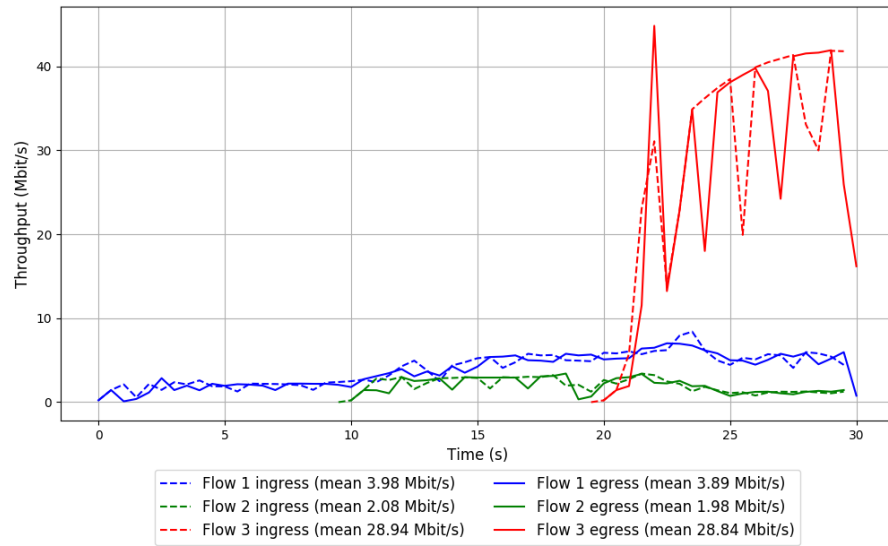
-- Flow 3:

Average throughput: 28.84 Mbit/s

95th percentile per-packet one-way delay: 143.348 ms

Loss rate: 0.37%

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



Run 5: Statistics of TCP Cubic

Start at: 2017-08-12 15:53:09

End at: 2017-08-12 15:53:39

# Below is generated by plot.py at 2017-08-12 18:14:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 25.18 Mbit/s

95th percentile per-packet one-way delay: 140.959 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 137.432 ms

Loss rate: 3.99%

-- Flow 2:

Average throughput: 33.89 Mbit/s

95th percentile per-packet one-way delay: 141.170 ms

Loss rate: 1.02%

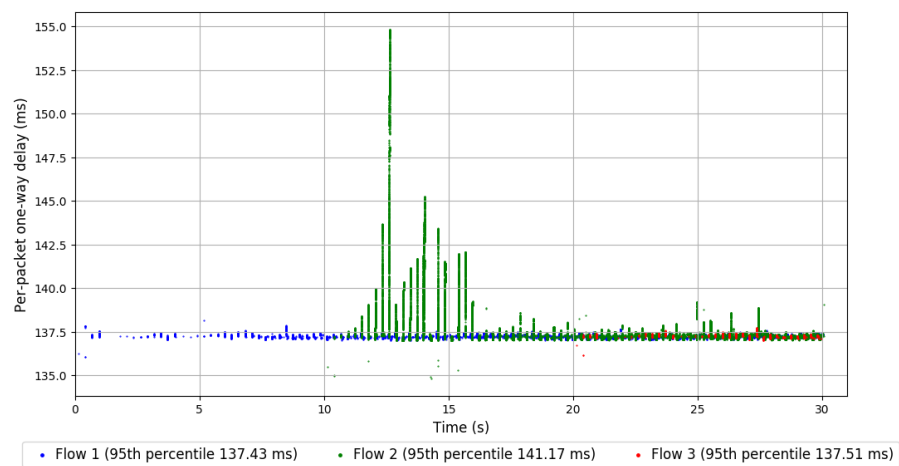
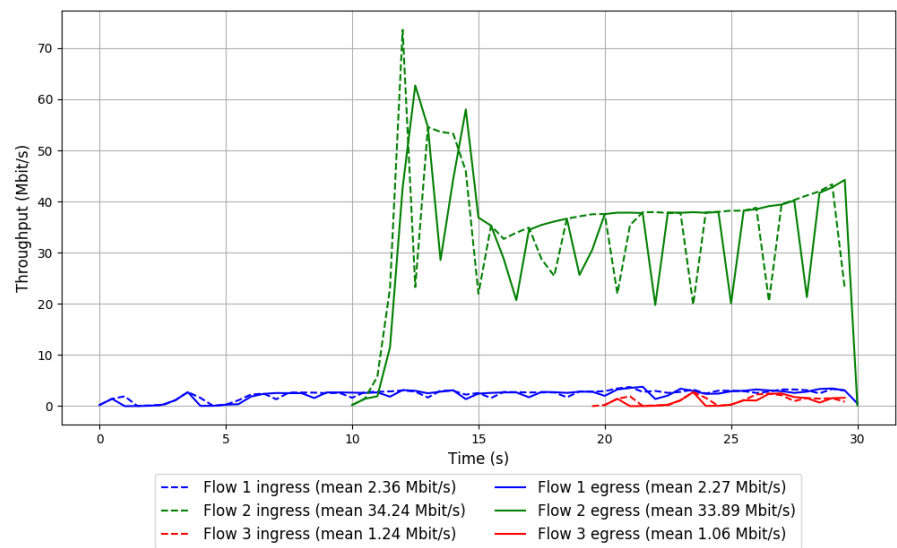
-- Flow 3:

Average throughput: 1.06 Mbit/s

95th percentile per-packet one-way delay: 137.510 ms

Loss rate: 14.62%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-08-12 16:06:19

End at: 2017-08-12 16:06:49

# Below is generated by plot.py at 2017-08-12 18:14:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 36.96 Mbit/s

95th percentile per-packet one-way delay: 137.733 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 25.24 Mbit/s

95th percentile per-packet one-way delay: 137.837 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 11.48 Mbit/s

95th percentile per-packet one-way delay: 137.274 ms

Loss rate: 0.90%

-- Flow 3:

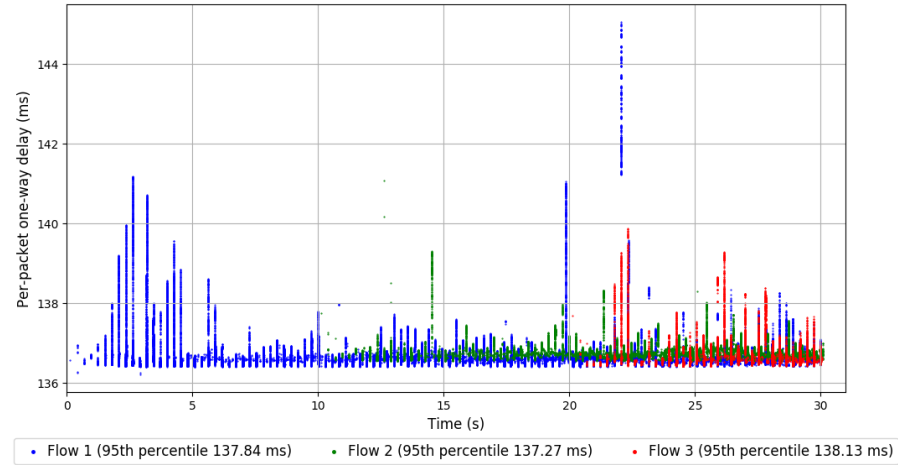
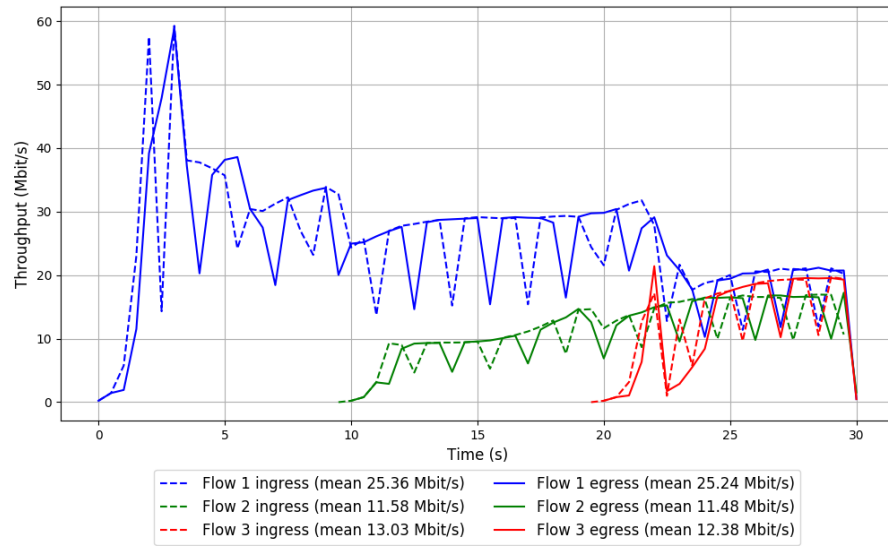
Average throughput: 12.38 Mbit/s

95th percentile per-packet one-way delay: 138.128 ms

Loss rate: 5.25%



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



Run 7: Statistics of TCP Cubic

Start at: 2017-08-12 16:20:04

End at: 2017-08-12 16:20:34

# Below is generated by plot.py at 2017-08-12 18:14:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 27.91 Mbit/s

95th percentile per-packet one-way delay: 138.364 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 9.35 Mbit/s

95th percentile per-packet one-way delay: 137.013 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 10.48 Mbit/s

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

Loss rate: 0.03%

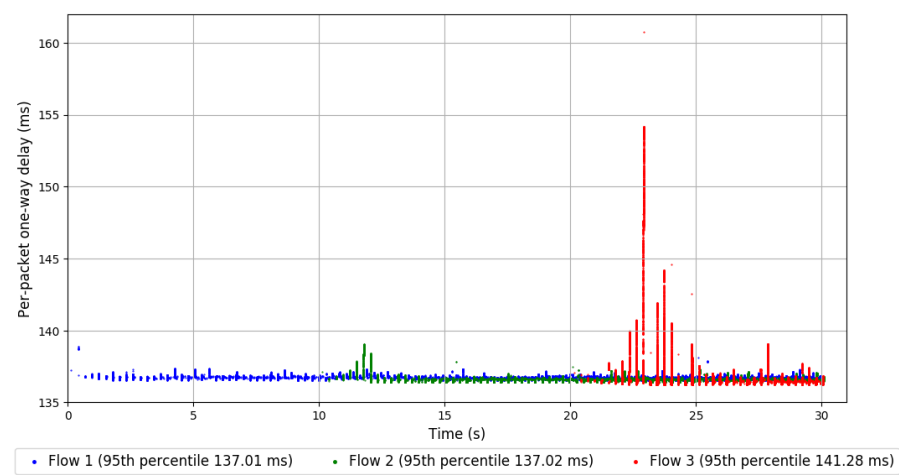
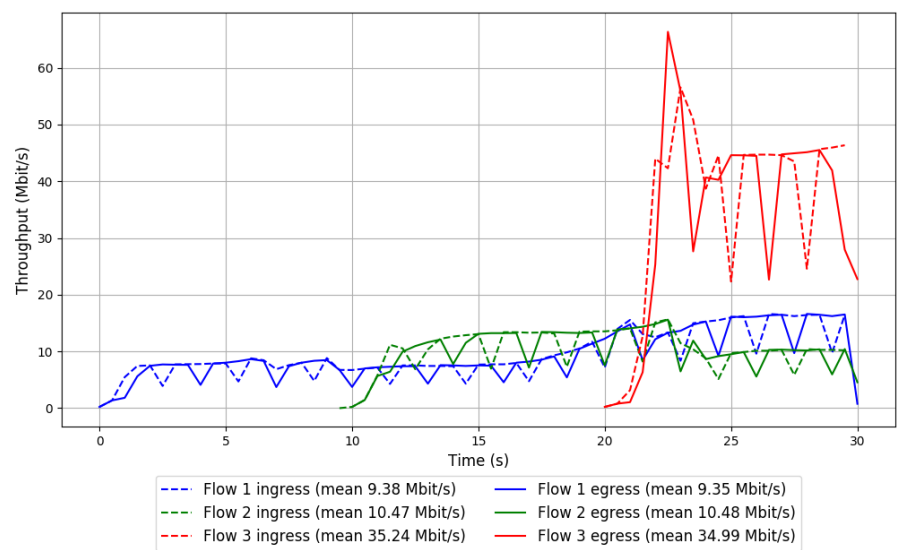
-- Flow 3:

Average throughput: 34.99 Mbit/s

95th percentile per-packet one-way delay: 141.284 ms

Loss rate: 1.00%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-08-12 16:33:38

End at: 2017-08-12 16:34:08

# Below is generated by plot.py at 2017-08-12 18:14:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 22.18 Mbit/s

95th percentile per-packet one-way delay: 138.735 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 1.69 Mbit/s

95th percentile per-packet one-way delay: 137.221 ms

Loss rate: 4.55%

-- Flow 2:

Average throughput: 30.09 Mbit/s

95th percentile per-packet one-way delay: 138.938 ms

Loss rate: 0.33%

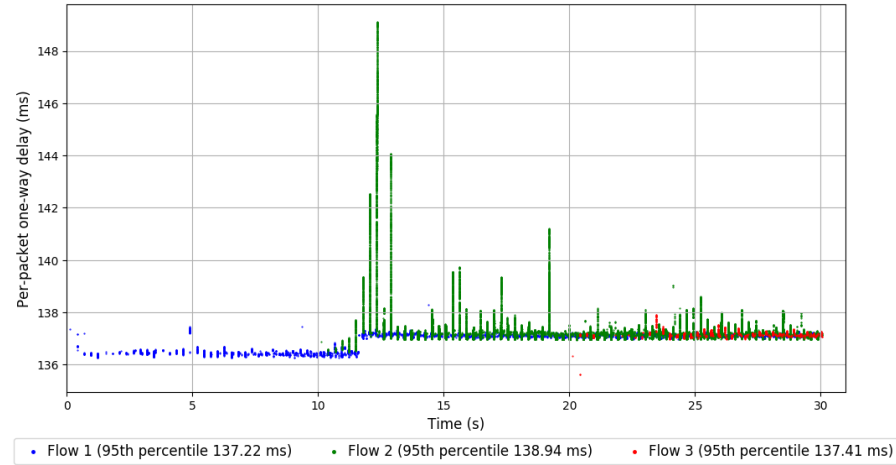
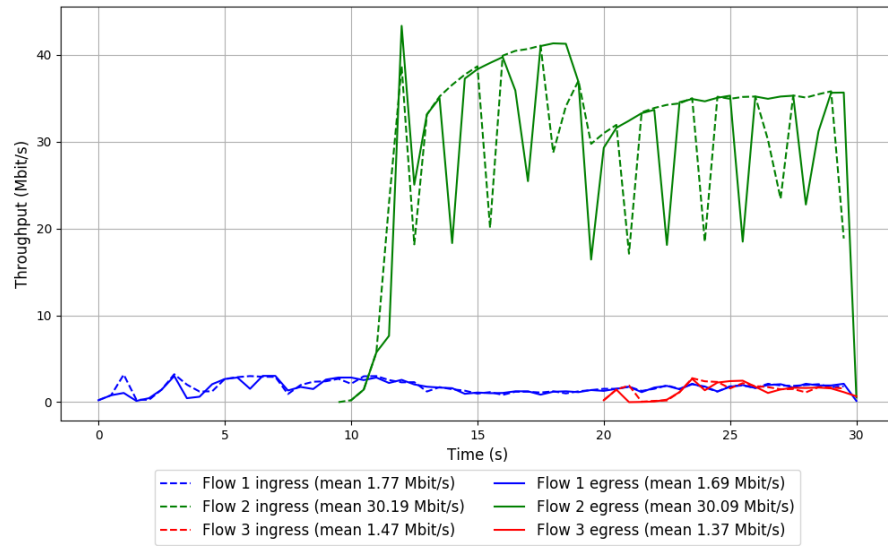
-- Flow 3:

Average throughput: 1.37 Mbit/s

95th percentile per-packet one-way delay: 137.406 ms

Loss rate: 6.85%

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



Run 9: Statistics of TCP Cubic

Start at: 2017-08-12 16:46:42

End at: 2017-08-12 16:47:12

# Below is generated by plot.py at 2017-08-12 18:14:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 5.27 Mbit/s

95th percentile per-packet one-way delay: 137.958 ms

Loss rate: 2.05%

-- Flow 1:

Average throughput: 2.76 Mbit/s

95th percentile per-packet one-way delay: 138.012 ms

Loss rate: 2.41%

-- Flow 2:

Average throughput: 3.20 Mbit/s

95th percentile per-packet one-way delay: 137.893 ms

Loss rate: 1.64%

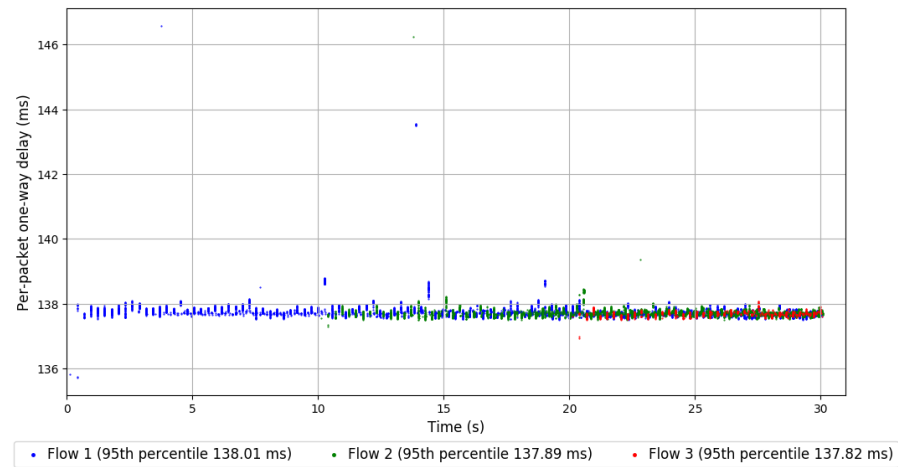
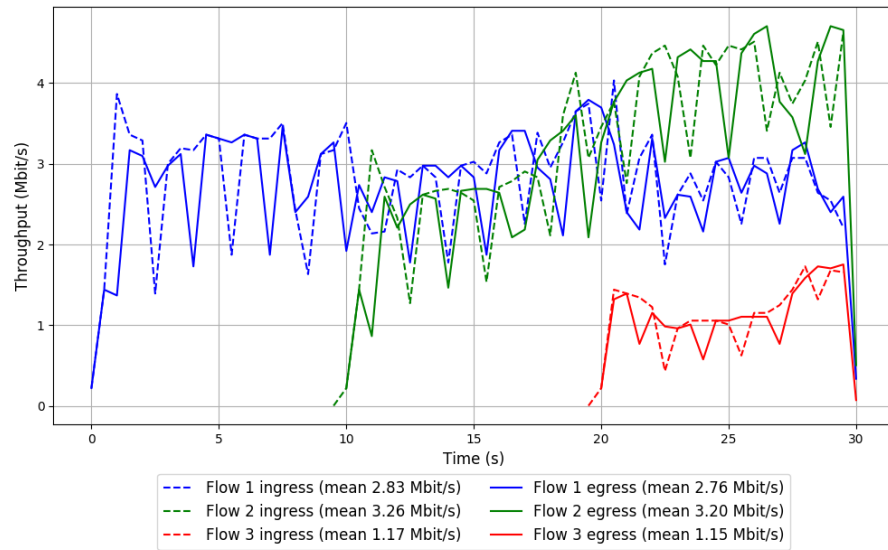
-- Flow 3:

Average throughput: 1.15 Mbit/s

95th percentile per-packet one-way delay: 137.816 ms

Loss rate: 1.66%

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



Run 10: Statistics of TCP Cubic

Start at: 2017-08-12 16:59:42

End at: 2017-08-12 17:00:12

# Below is generated by plot.py at 2017-08-12 18:14:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 43.42 Mbit/s

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

Loss rate: 0.48%

-- Flow 1:

Average throughput: 2.93 Mbit/s

95th percentile per-packet one-way delay: 137.934 ms

Loss rate: 2.46%

-- Flow 2:

Average throughput: 40.40 Mbit/s

95th percentile per-packet one-way delay: 139.993 ms

Loss rate: 0.31%

-- Flow 3:

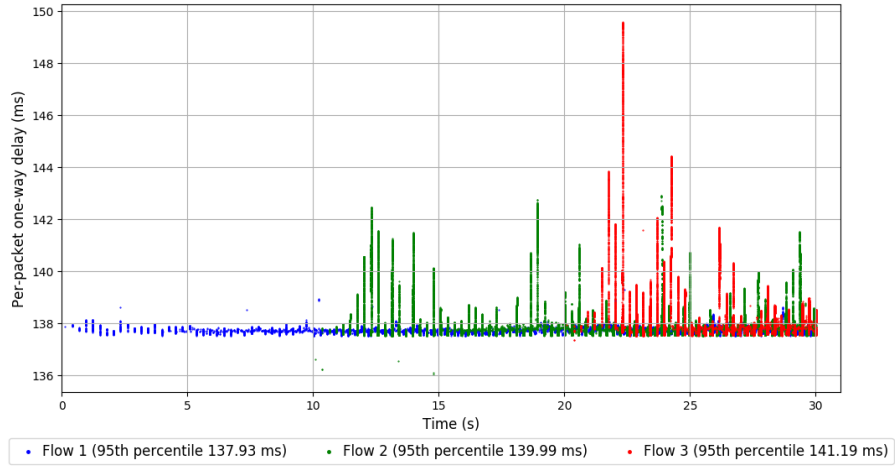
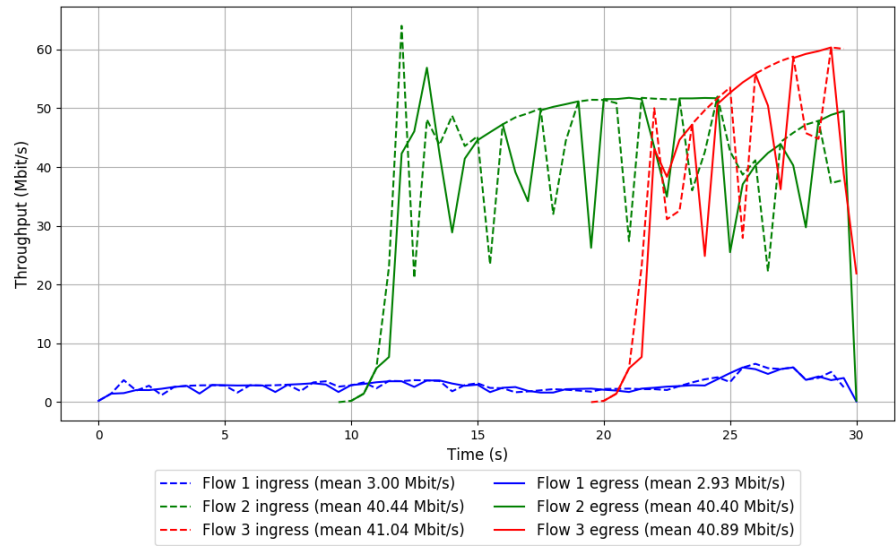
Average throughput: 40.89 Mbit/s

95th percentile per-packet one-way delay: 141.190 ms

Loss rate: 0.37%



# Run 10: Report of TCP Cubic — Data Link

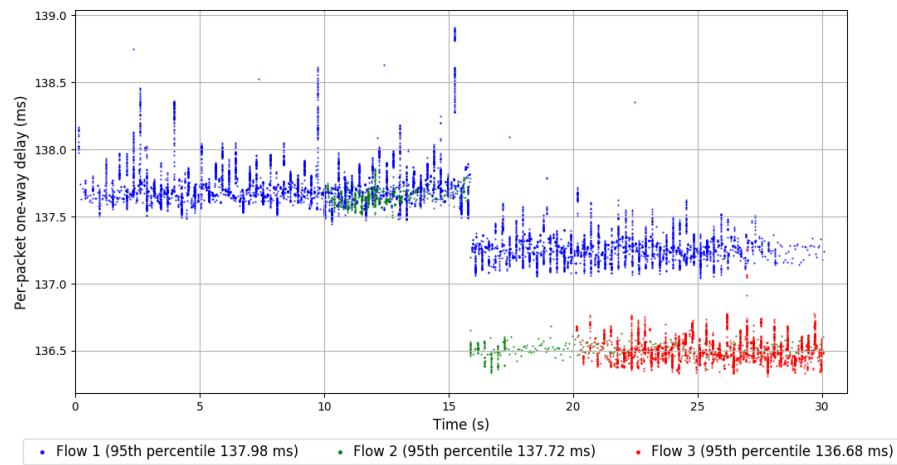
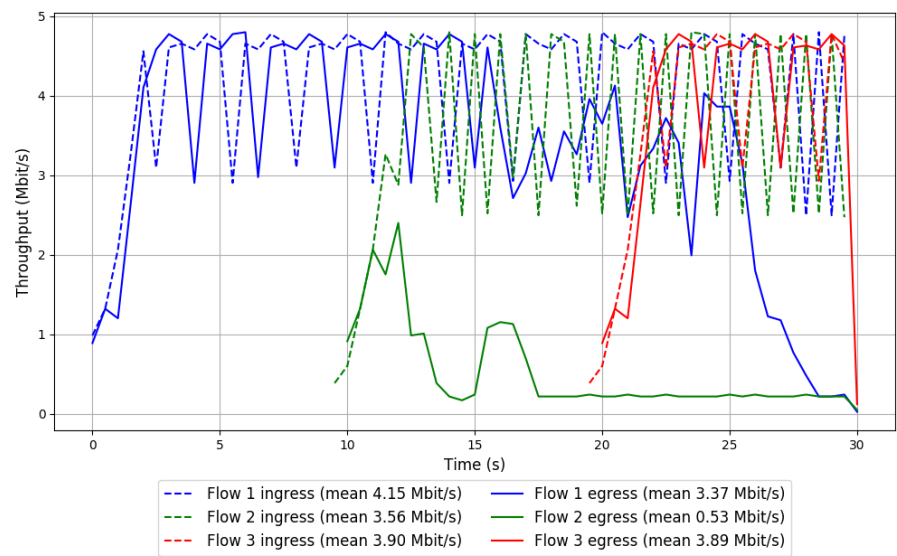


```
Run 1: Statistics of KohoCC

Start at: 2017-08-12 14:56:43
End at: 2017-08-12 14:57:13

# Below is generated by plot.py at 2017-08-12 18:14:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.01 Mbit/s
95th percentile per-packet one-way delay: 137.926 ms
Loss rate: 35.90%
-- Flow 1:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 137.981 ms
Loss rate: 18.90%
-- Flow 2:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 137.723 ms
Loss rate: 85.13%
-- Flow 3:
Average throughput: 3.89 Mbit/s
95th percentile per-packet one-way delay: 136.684 ms
Loss rate: 0.09%
```

Run 1: Report of KohoCC — Data Link

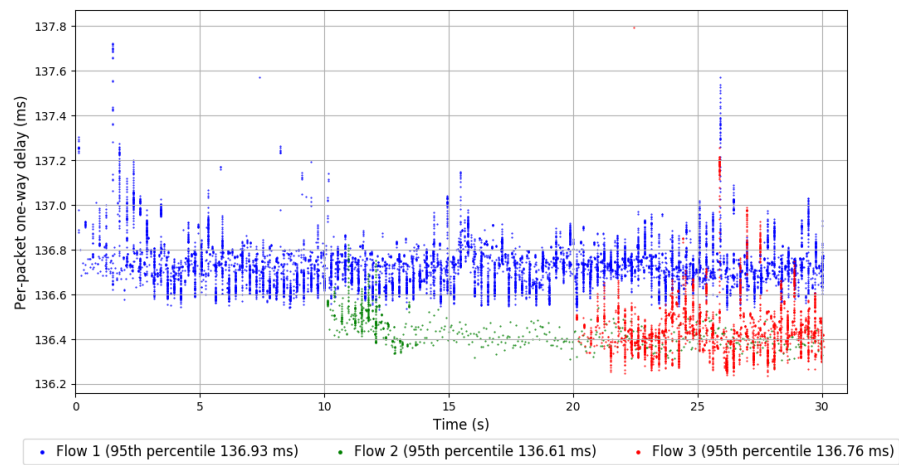
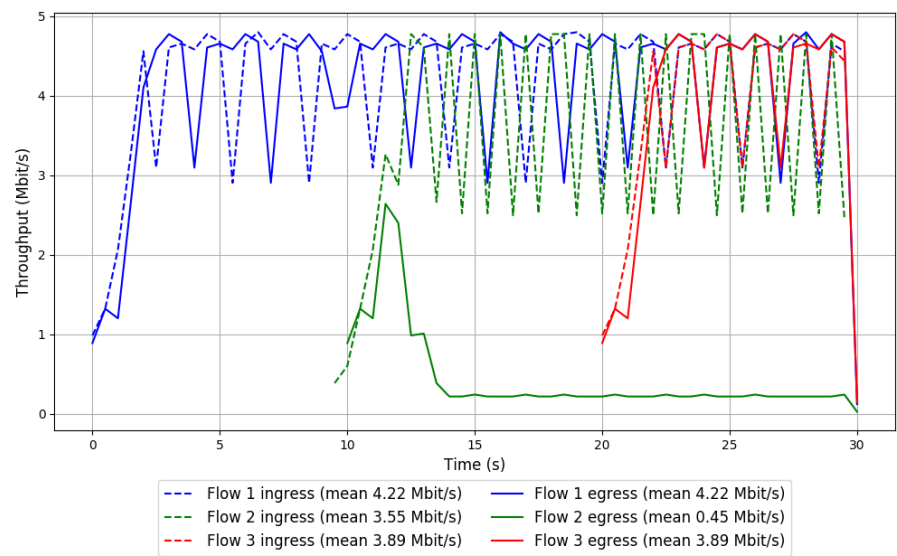


```
Run 2: Statistics of KohoCC

Start at: 2017-08-12 15:10:00
End at: 2017-08-12 15:10:30

# Below is generated by plot.py at 2017-08-12 18:14:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.80 Mbit/s
95th percentile per-packet one-way delay: 136.912 ms
Loss rate: 26.24%
-- Flow 1:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 136.931 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 136.606 ms
Loss rate: 87.30%
-- Flow 3:
Average throughput: 3.89 Mbit/s
95th percentile per-packet one-way delay: 136.759 ms
Loss rate: 0.00%
```

Run 2: Report of KohoCC — Data Link



Run 3: Statistics of KohoCC

Start at: 2017-08-12 15:23:36

End at: 2017-08-12 15:24:06

# Below is generated by plot.py at 2017-08-12 18:14:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 7.71 Mbit/s

95th percentile per-packet one-way delay: 136.827 ms

Loss rate: 6.79%

-- Flow 1:

Average throughput: 4.22 Mbit/s

95th percentile per-packet one-way delay: 136.657 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 3.31 Mbit/s

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

Loss rate: 20.30%

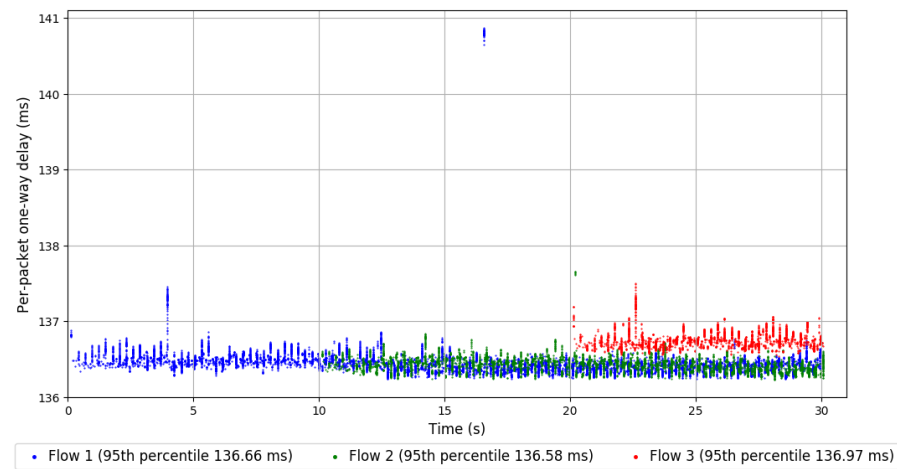
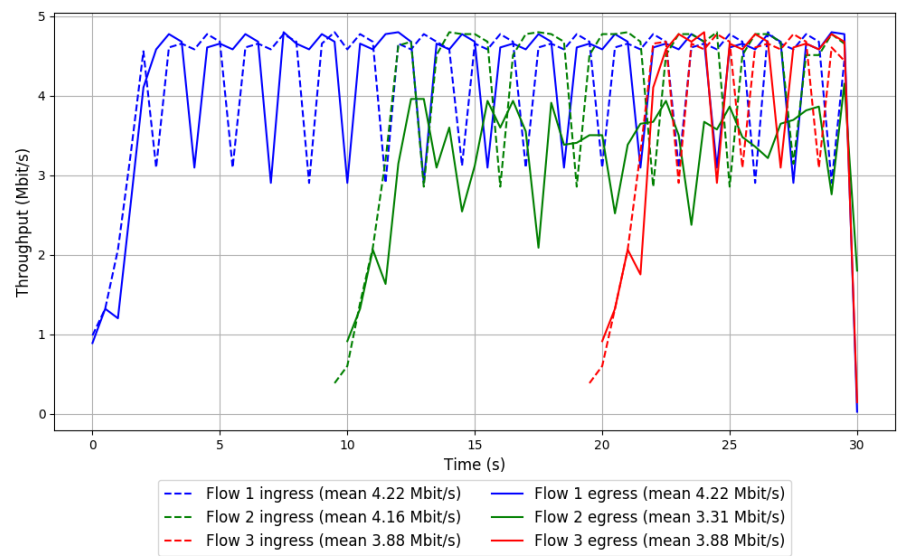
-- Flow 3:

Average throughput: 3.88 Mbit/s

95th percentile per-packet one-way delay: 136.967 ms

Loss rate: 0.00%

Run 3: Report of KohoCC — Data Link



Run 4: Statistics of KohoCC

Start at: 2017-08-12 15:37:06

End at: 2017-08-12 15:37:36

# Below is generated by plot.py at 2017-08-12 18:14:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.91 Mbit/s

95th percentile per-packet one-way delay: 137.450 ms

Loss rate: 87.21%

-- Flow 1:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 137.639 ms

Loss rate: 89.65%

-- Flow 2:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 137.353 ms

Loss rate: 88.28%

-- Flow 3:

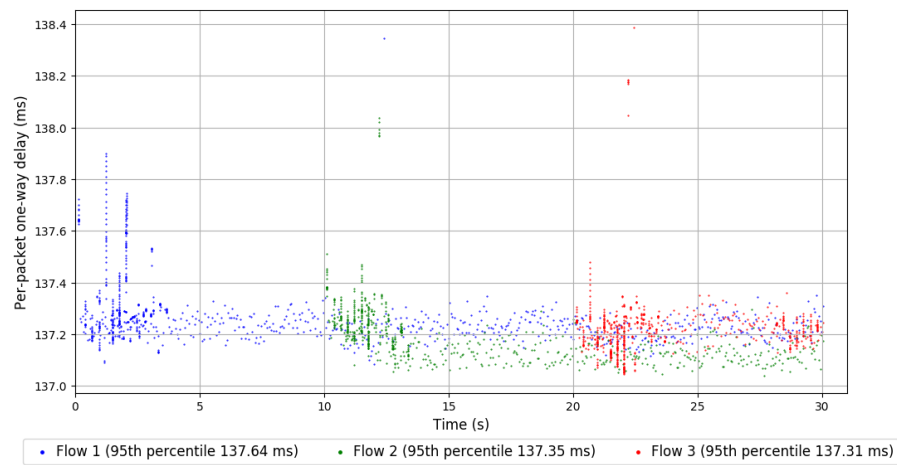
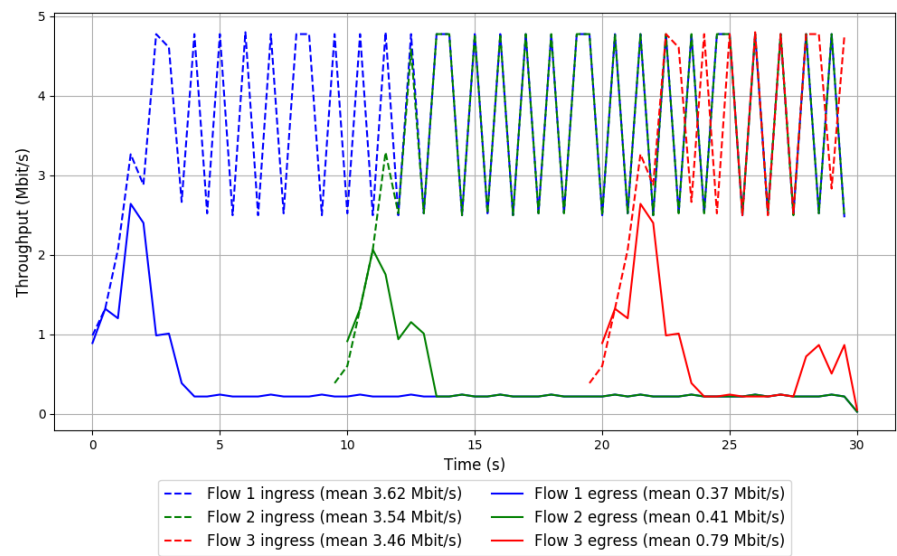
Average throughput: 0.79 Mbit/s

95th percentile per-packet one-way delay: 137.313 ms

Loss rate: 77.34%



Run 4: Report of KohoCC — Data Link



Run 5: Statistics of KohoCC

Start at: 2017-08-12 15:50:22

End at: 2017-08-12 15:50:52

# Below is generated by plot.py at 2017-08-12 18:14:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 7.25 Mbit/s

95th percentile per-packet one-way delay: 137.635 ms

Loss rate: 11.67%

-- Flow 1:

Average throughput: 4.22 Mbit/s

95th percentile per-packet one-way delay: 137.683 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.63 Mbit/s

95th percentile per-packet one-way delay: 137.516 ms

Loss rate: 35.37%

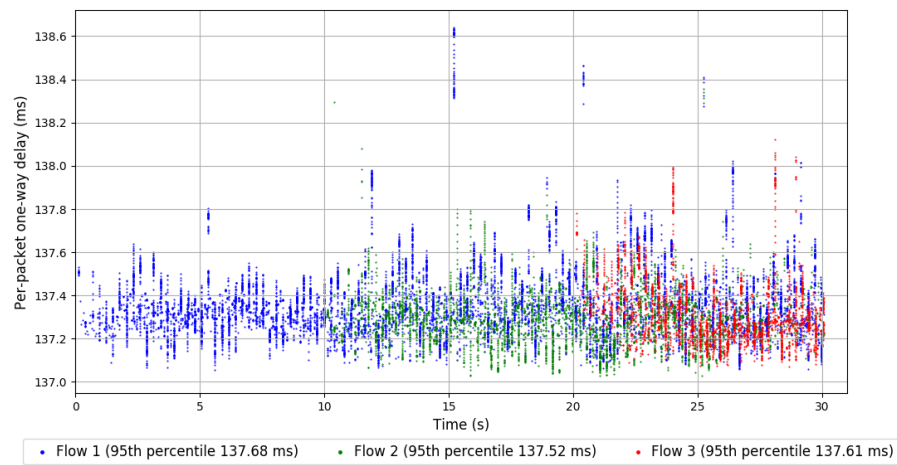
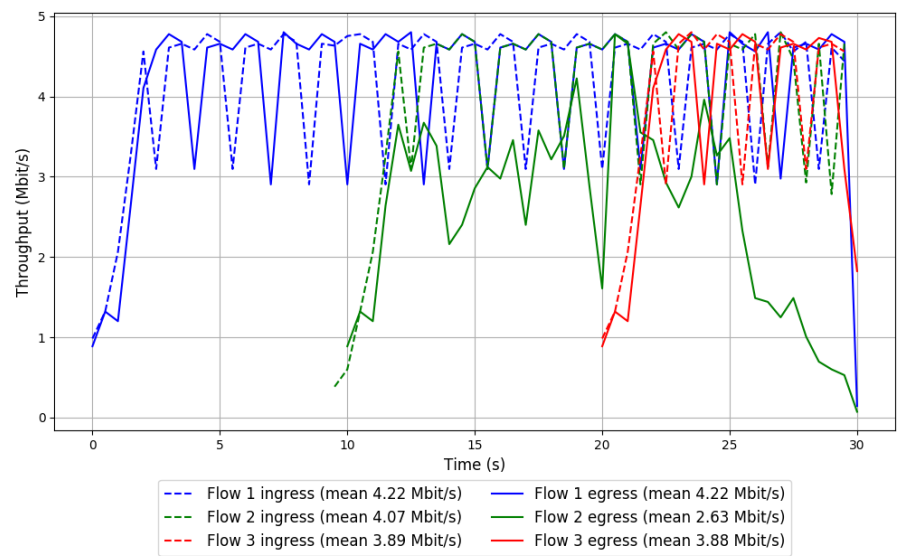
-- Flow 3:

Average throughput: 3.88 Mbit/s

95th percentile per-packet one-way delay: 137.609 ms

Loss rate: 0.06%

Run 5: Report of KohoCC — Data Link



Run 6: Statistics of KohoCC

Start at: 2017-08-12 16:03:44

End at: 2017-08-12 16:04:14

# Below is generated by plot.py at 2017-08-12 18:14:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 137.442 ms

Loss rate: 71.79%

-- Flow 1:

Average throughput: 0.39 Mbit/s

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

Loss rate: 89.08%

-- Flow 2:

Average throughput: 0.56 Mbit/s

95th percentile per-packet one-way delay: 137.244 ms

Loss rate: 84.40%

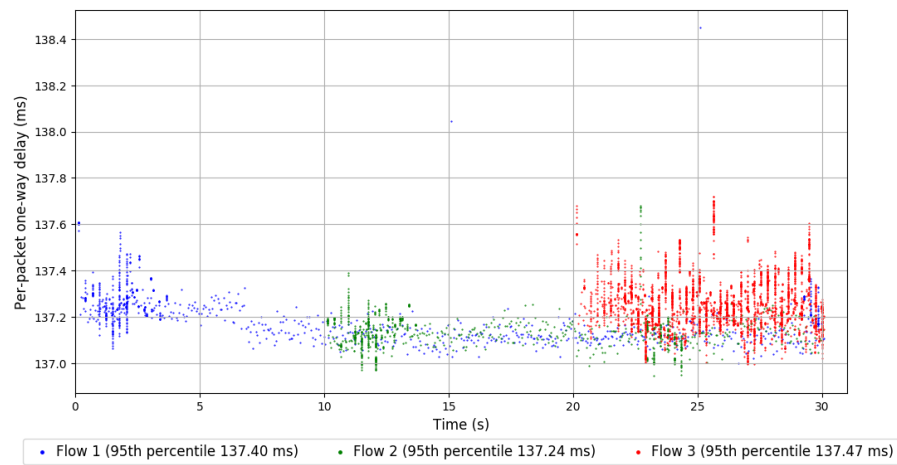
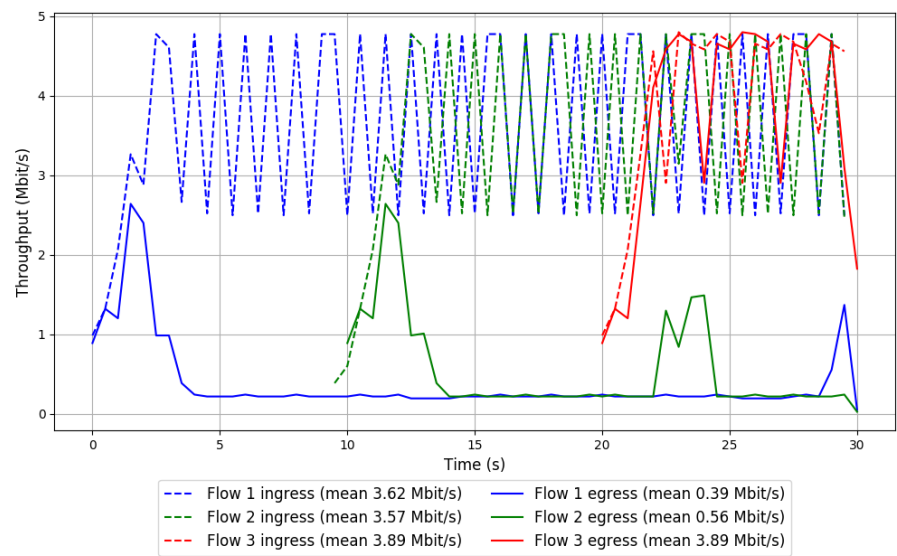
-- Flow 3:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 137.475 ms

Loss rate: 0.00%

Run 6: Report of KohoCC — Data Link

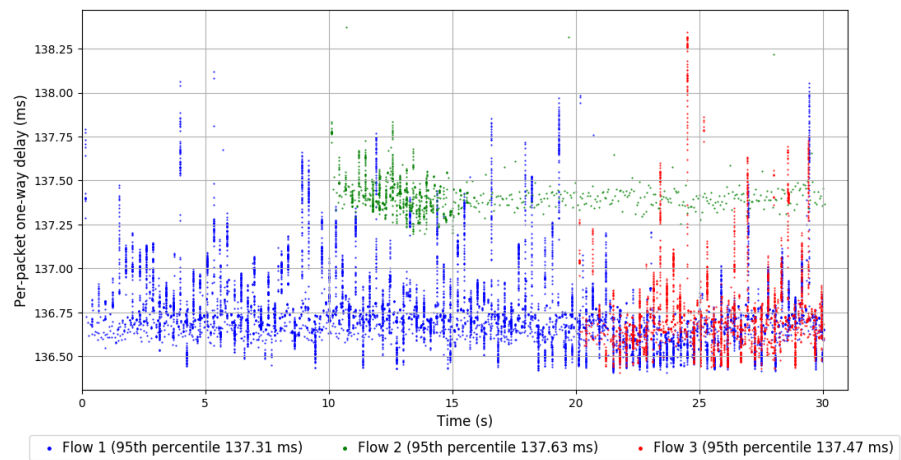
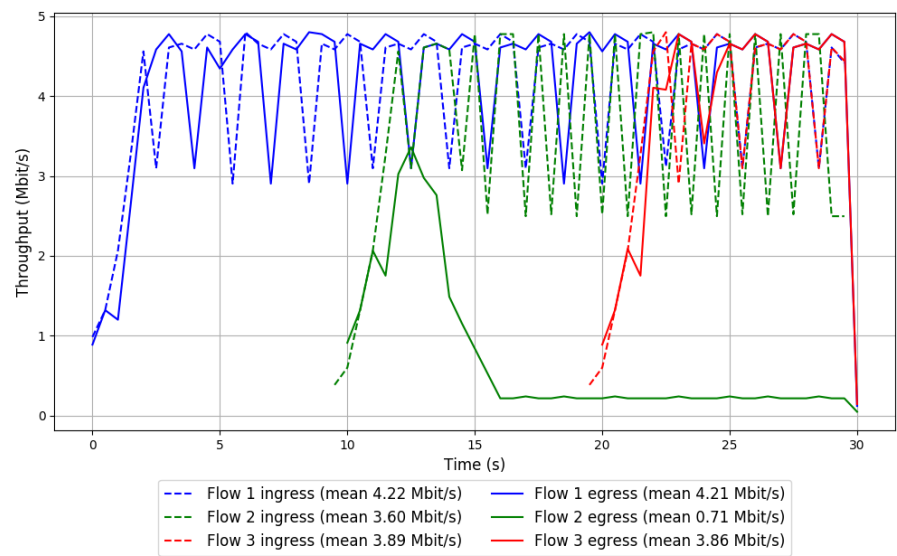


```
Run 7: Statistics of KohoCC

Start at: 2017-08-12 16:17:16
End at: 2017-08-12 16:17:46

# Below is generated by plot.py at 2017-08-12 18:14:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.96 Mbit/s
95th percentile per-packet one-way delay: 137.471 ms
Loss rate: 24.57%
-- Flow 1:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 137.309 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 137.628 ms
Loss rate: 80.21%
-- Flow 3:
Average throughput: 3.86 Mbit/s
95th percentile per-packet one-way delay: 137.475 ms
Loss rate: 0.65%
```

Run 7: Report of KohoCC — Data Link



Run 8: Statistics of KohoCC

Start at: 2017-08-12 16:30:59

End at: 2017-08-12 16:31:29

# Below is generated by plot.py at 2017-08-12 18:14:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.27 Mbit/s

95th percentile per-packet one-way delay: 137.261 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 137.281 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 4.16 Mbit/s

95th percentile per-packet one-way delay: 137.244 ms

Loss rate: 0.00%

-- Flow 3:

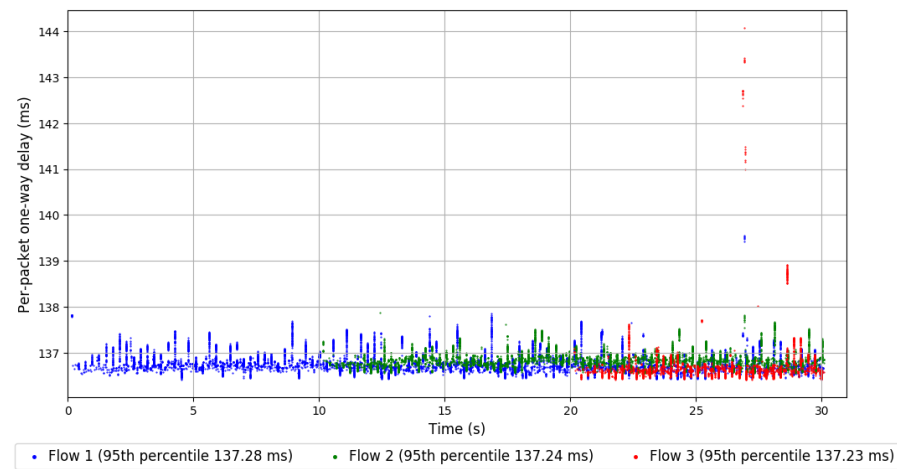
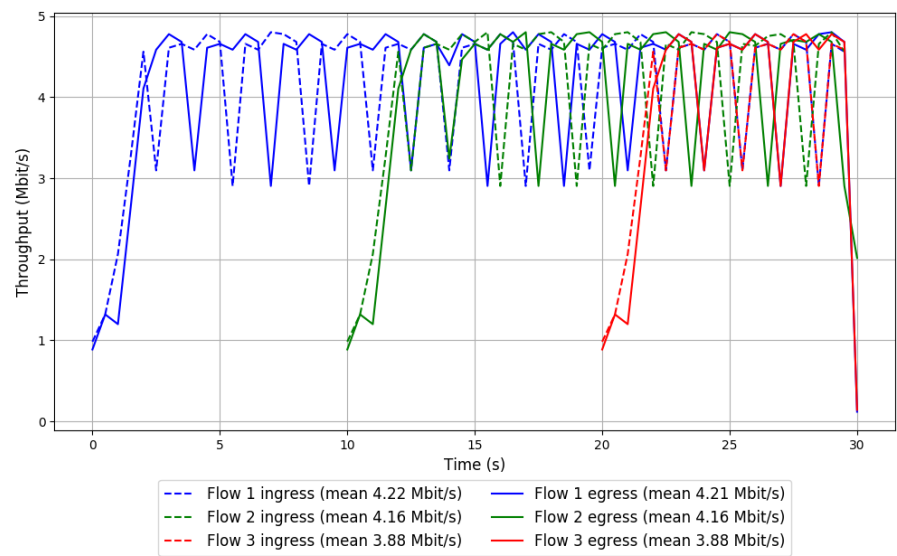
Average throughput: 3.88 Mbit/s

95th percentile per-packet one-way delay: 137.234 ms

Loss rate: 0.00%



Run 8: Report of KohoCC — Data Link



Run 9: Statistics of KohoCC

Start at: 2017-08-12 16:44:11

End at: 2017-08-12 16:44:41

# Below is generated by plot.py at 2017-08-12 18:15:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.80 Mbit/s

95th percentile per-packet one-way delay: 138.009 ms

Loss rate: 37.54%

-- Flow 1:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 138.024 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.55 Mbit/s

95th percentile per-packet one-way delay: 137.845 ms

Loss rate: 84.55%

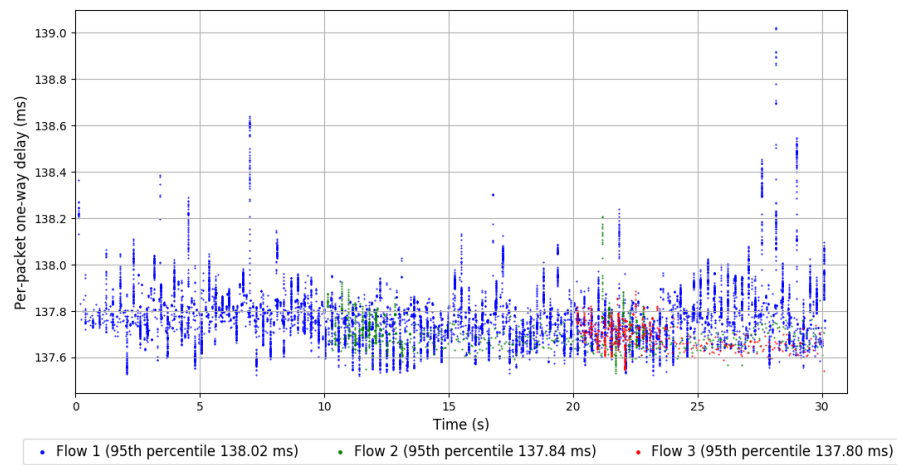
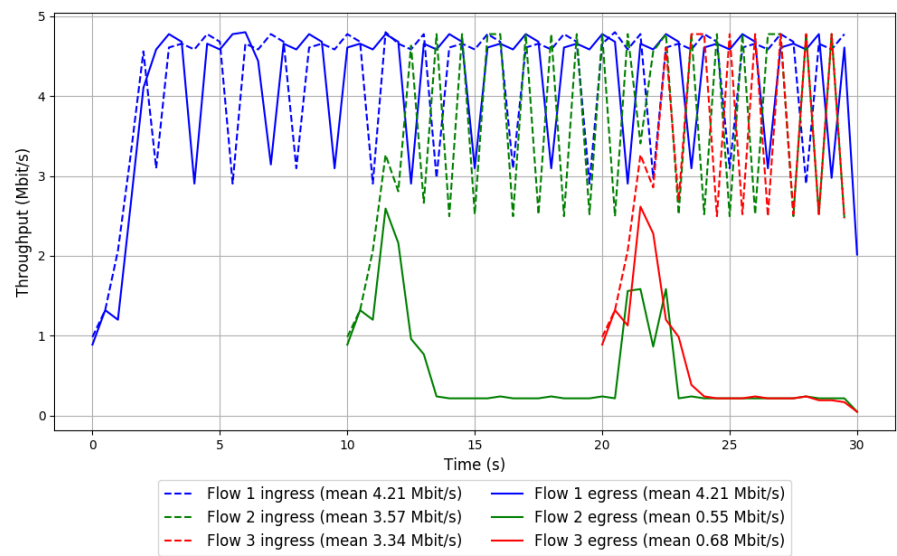
-- Flow 3:

Average throughput: 0.68 Mbit/s

95th percentile per-packet one-way delay: 137.800 ms

Loss rate: 79.75%

Run 9: Report of KohoCC — Data Link

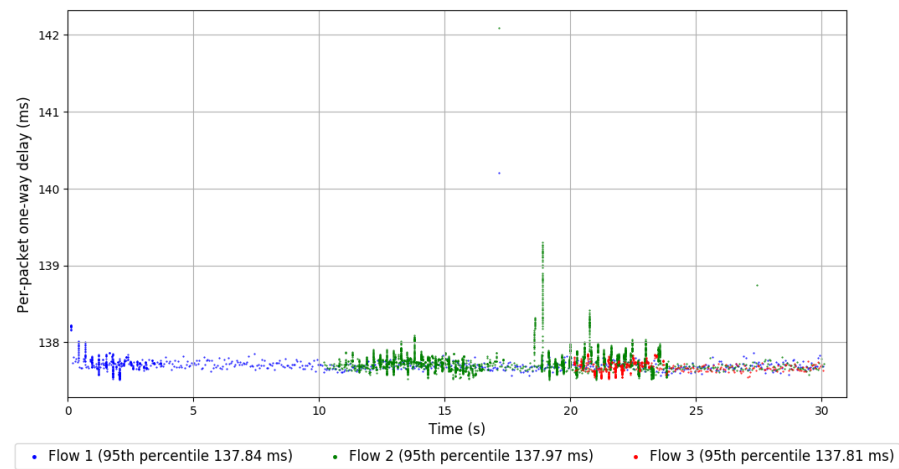
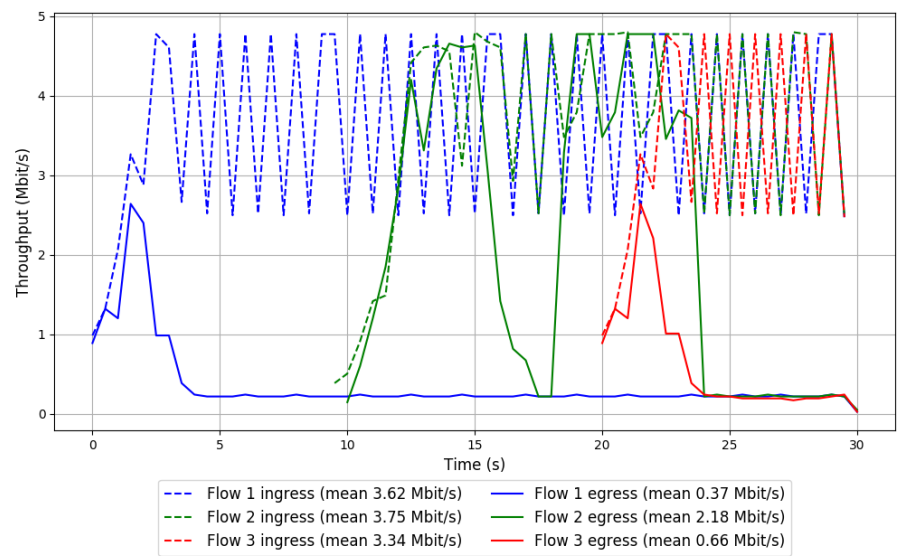


```
Run 10: Statistics of KohoCC

Start at: 2017-08-12 16:57:10
End at: 2017-08-12 16:57:40

# Below is generated by plot.py at 2017-08-12 18:15:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 137.935 ms
Loss rate: 71.69%
-- Flow 1:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 137.839 ms
Loss rate: 89.67%
-- Flow 2:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 137.969 ms
Loss rate: 41.96%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 137.812 ms
Loss rate: 80.17%
```

Run 10: Report of KohoCC — Data Link

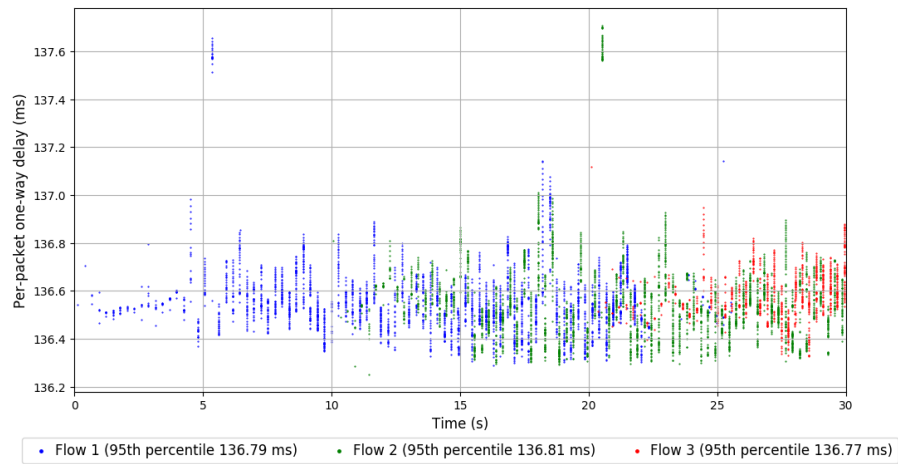
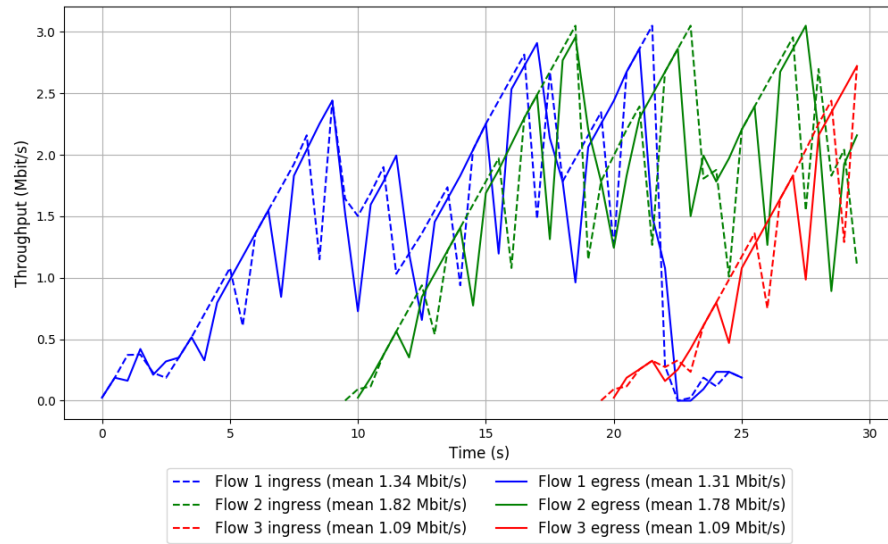


```
Run 1: Statistics of LEDBAT

Start at: 2017-08-12 15:03:49
End at: 2017-08-12 15:04:19

# Below is generated by plot.py at 2017-08-12 18:15:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.66 Mbit/s
95th percentile per-packet one-way delay: 136.791 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 136.786 ms
Loss rate: 2.18%
-- Flow 2:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 136.807 ms
Loss rate: 2.09%
-- Flow 3:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 136.771 ms
Loss rate: 0.00%
```

## Run 1: Report of LEDBAT — Data Link



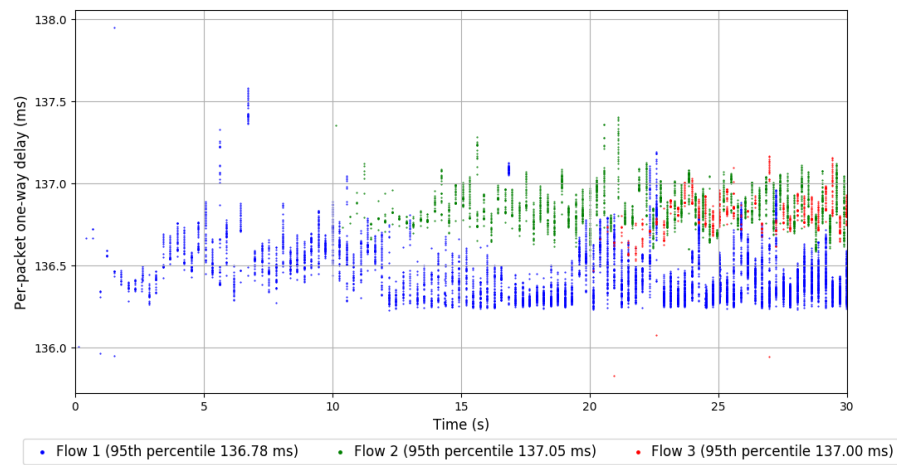
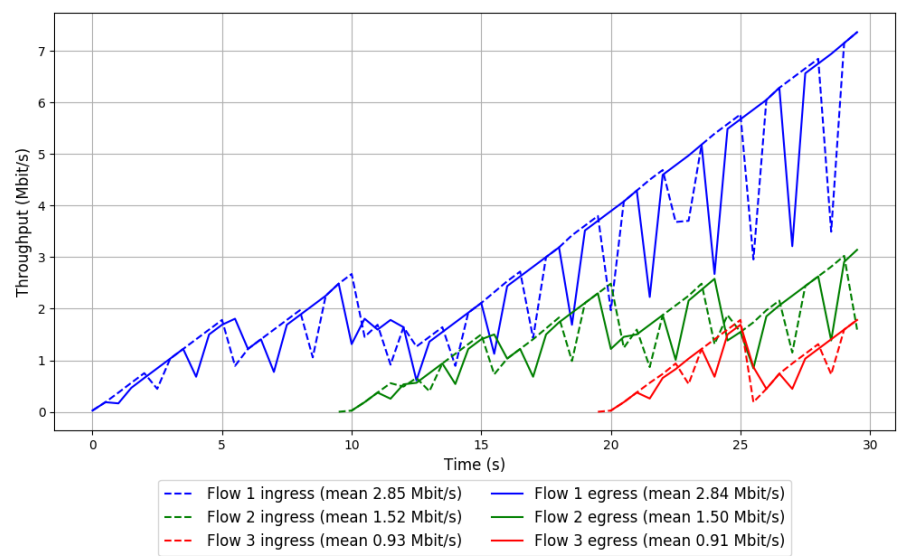
```
Run 2: Statistics of LEDBAT

Start at: 2017-08-12 15:17:15
End at: 2017-08-12 15:17:45

# Below is generated by plot.py at 2017-08-12 18:15:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.13 Mbit/s
95th percentile per-packet one-way delay: 136.994 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 136.781 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 137.054 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 137.005 ms
Loss rate: 1.29%
```



Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-08-12 15:31:12

End at: 2017-08-12 15:31:42

# Below is generated by plot.py at 2017-08-12 18:15:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 137.318 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 137.247 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 137.011 ms

Loss rate: 0.00%

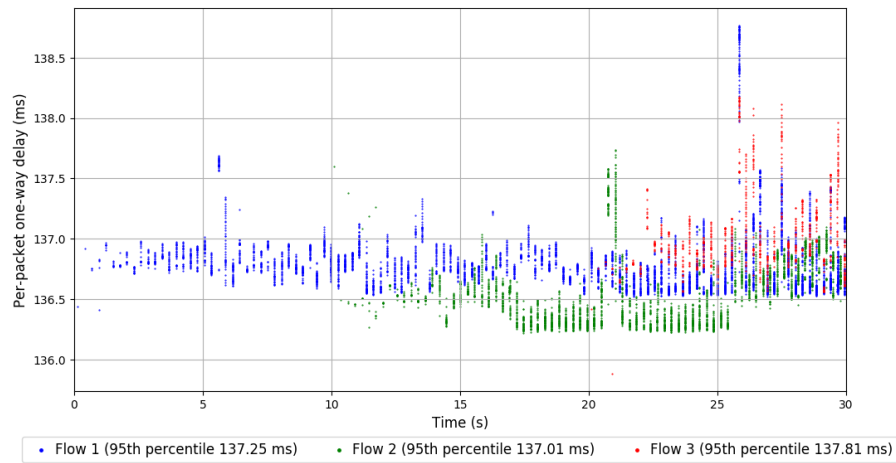
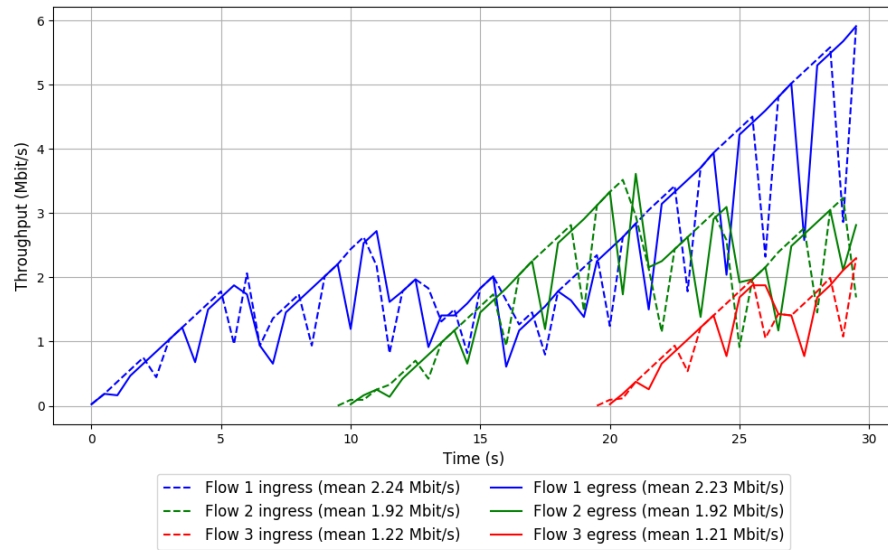
-- Flow 3:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 137.813 ms

Loss rate: 0.78%

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



Run 4: Statistics of LEDBAT

Start at: 2017-08-12 15:44:05

End at: 2017-08-12 15:44:35

# Below is generated by plot.py at 2017-08-12 18:15:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.57 Mbit/s

95th percentile per-packet one-way delay: 137.512 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 137.545 ms

Loss rate: 4.85%

-- Flow 2:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 137.430 ms

Loss rate: 0.33%

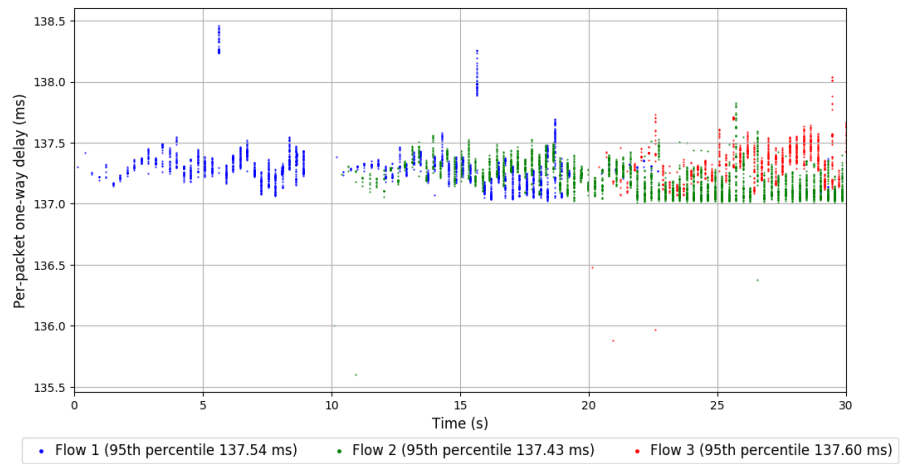
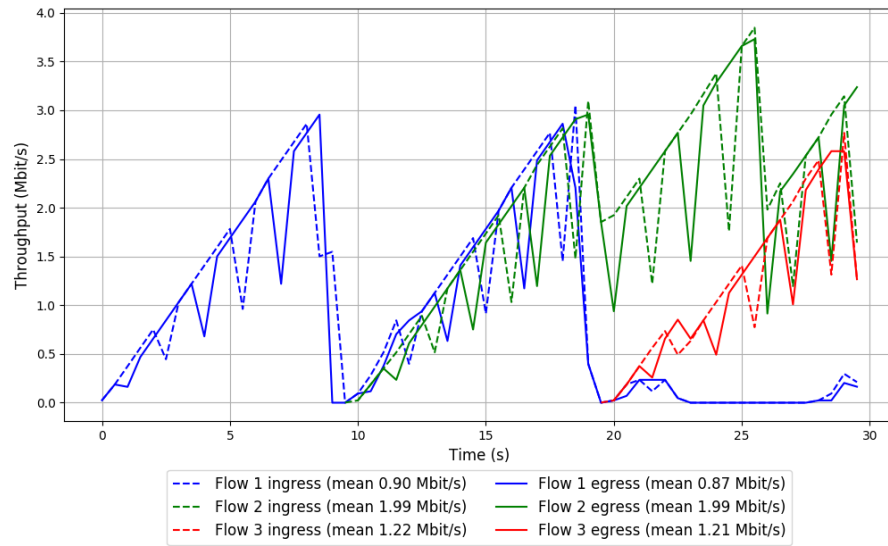
-- Flow 3:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 137.605 ms

Loss rate: 0.78%

# Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-08-12 15:57:31

End at: 2017-08-12 15:58:01

# Below is generated by plot.py at 2017-08-12 18:15:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.65 Mbit/s

95th percentile per-packet one-way delay: 137.601 ms

Loss rate: 3.25%

-- Flow 1:

Average throughput: 1.44 Mbit/s

95th percentile per-packet one-way delay: 137.539 ms

Loss rate: 2.53%

-- Flow 2:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 137.600 ms

Loss rate: 6.00%

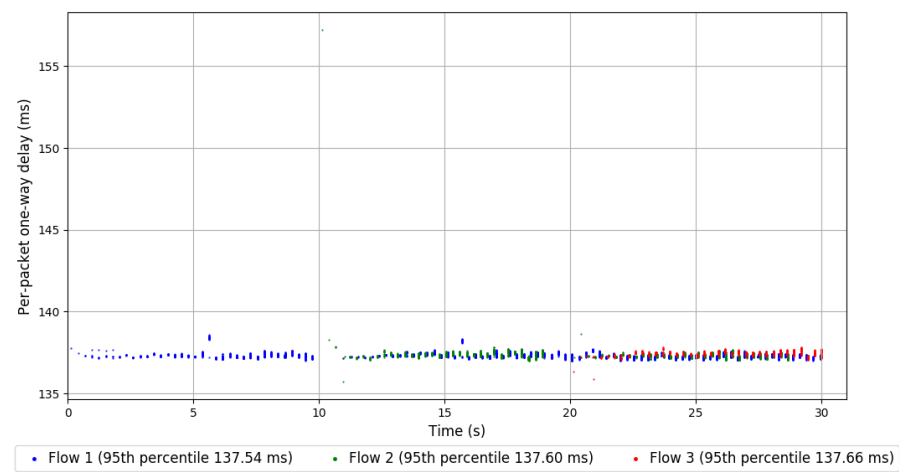
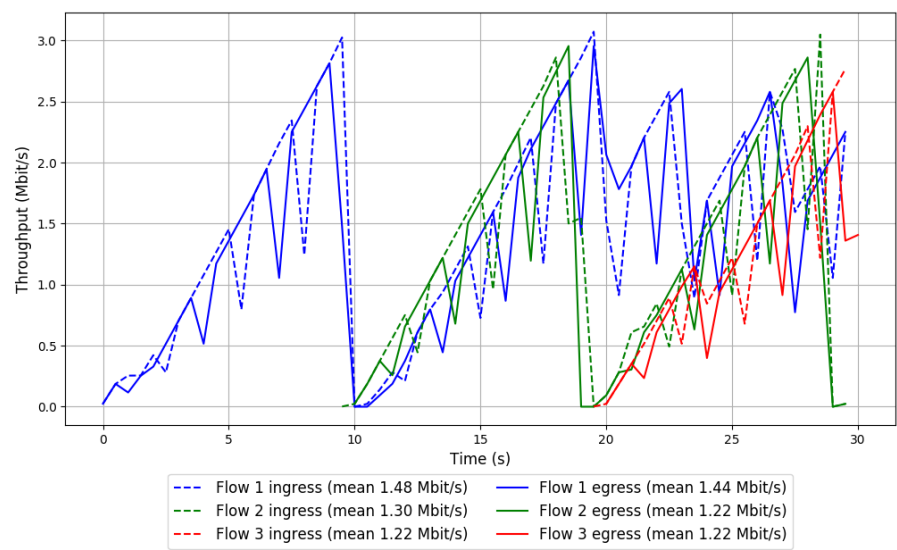
-- Flow 3:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 137.664 ms

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-08-12 16:11:08

End at: 2017-08-12 16:11:38

# Below is generated by plot.py at 2017-08-12 18:15:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.17 Mbit/s

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

Loss rate: 0.23%

-- Flow 1:

Average throughput: 2.46 Mbit/s

95th percentile per-packet one-way delay: 136.988 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 136.930 ms

Loss rate: 0.42%

-- Flow 3:

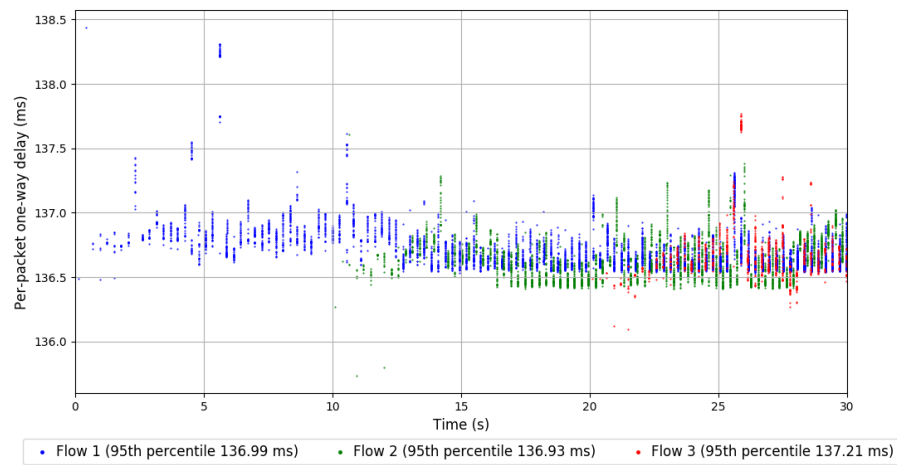
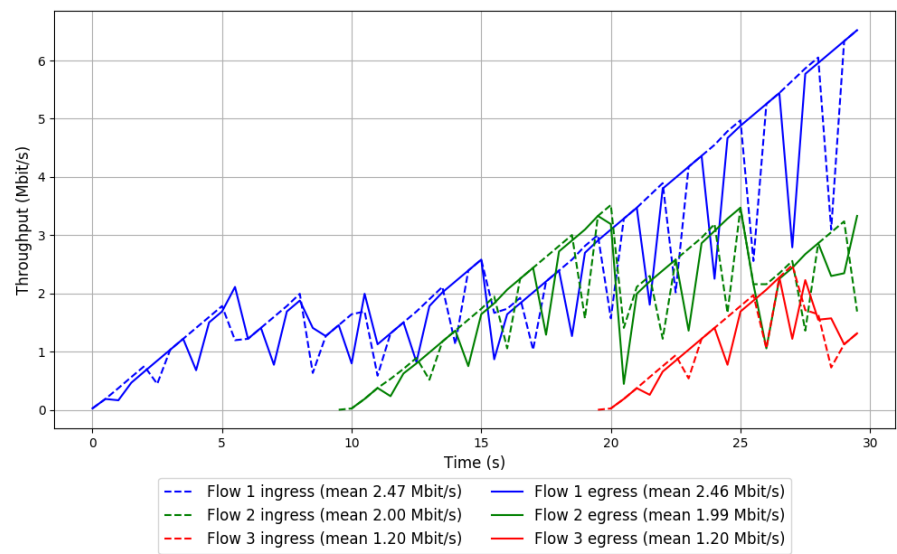
Average throughput: 1.20 Mbit/s

95th percentile per-packet one-way delay: 137.209 ms

Loss rate: 0.00%



Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2017-08-12 16:24:42

End at: 2017-08-12 16:25:12

# Below is generated by plot.py at 2017-08-12 18:15:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.27 Mbit/s

95th percentile per-packet one-way delay: 137.698 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 2.53 Mbit/s

95th percentile per-packet one-way delay: 137.502 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 137.906 ms

Loss rate: 0.03%

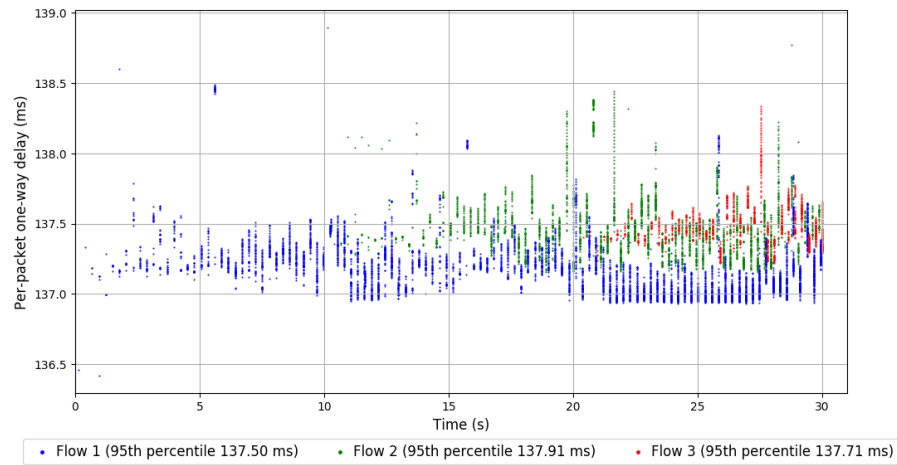
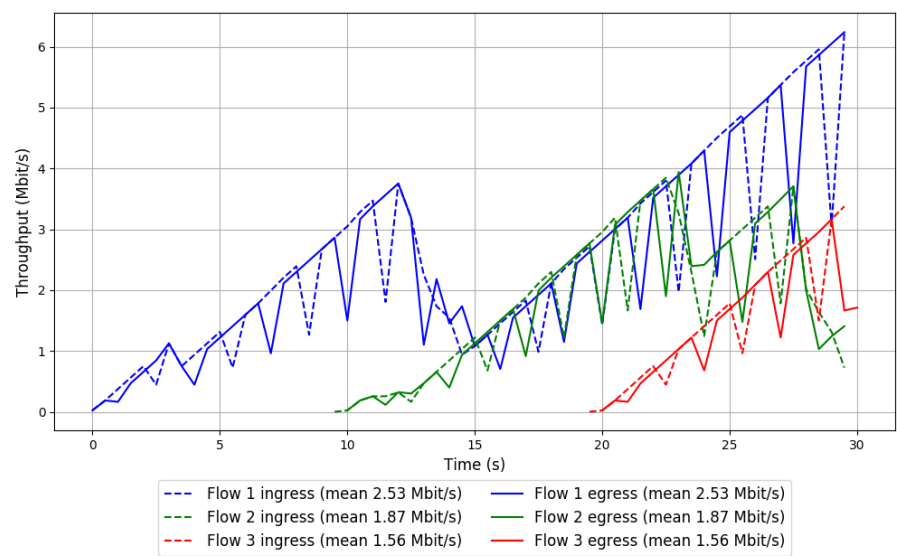
-- Flow 3:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 137.712 ms

Loss rate: 0.00%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-08-12 16:38:04

End at: 2017-08-12 16:38:34

# Below is generated by plot.py at 2017-08-12 18:15:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.93 Mbit/s

95th percentile per-packet one-way delay: 137.961 ms

Loss rate: 2.45%

-- Flow 1:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 137.965 ms

Loss rate: 4.66%

-- Flow 2:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 137.963 ms

Loss rate: 0.82%

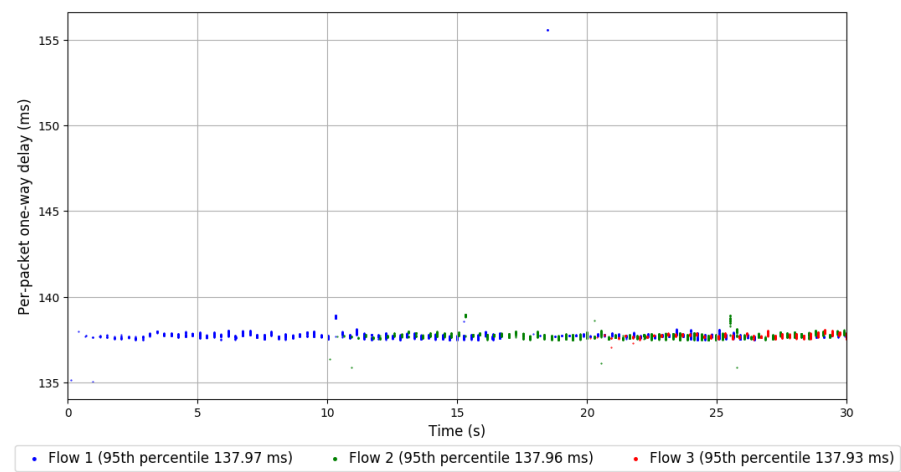
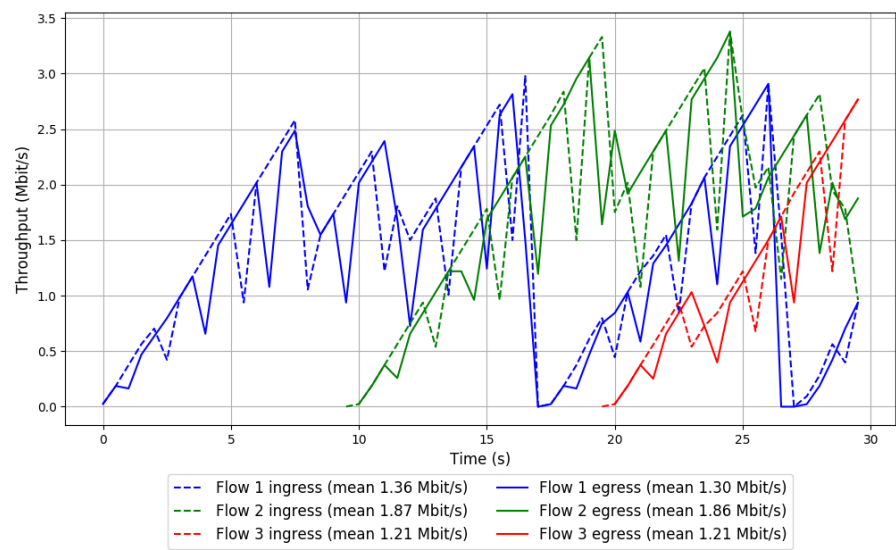
-- Flow 3:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 137.934 ms

Loss rate: 0.00%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-08-12 16:51:00

End at: 2017-08-12 16:51:30

# Below is generated by plot.py at 2017-08-12 18:15:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.59 Mbit/s

95th percentile per-packet one-way delay: 138.125 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 1.80 Mbit/s

95th percentile per-packet one-way delay: 138.186 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 138.049 ms

Loss rate: 0.66%

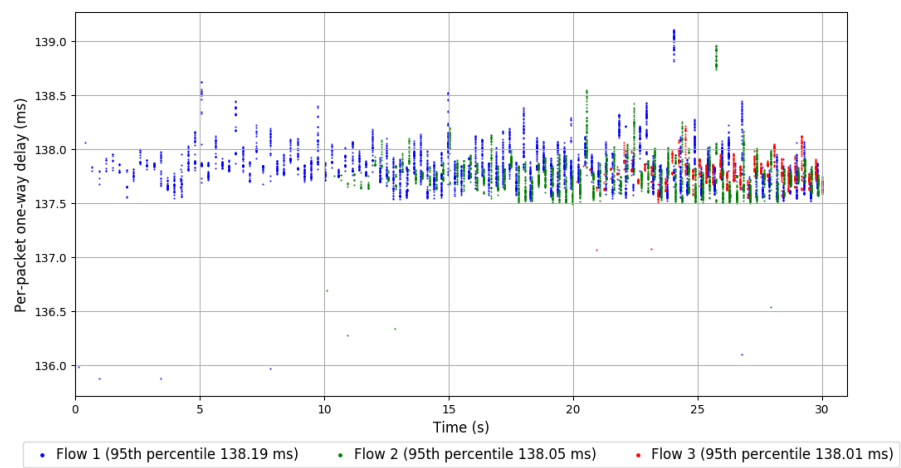
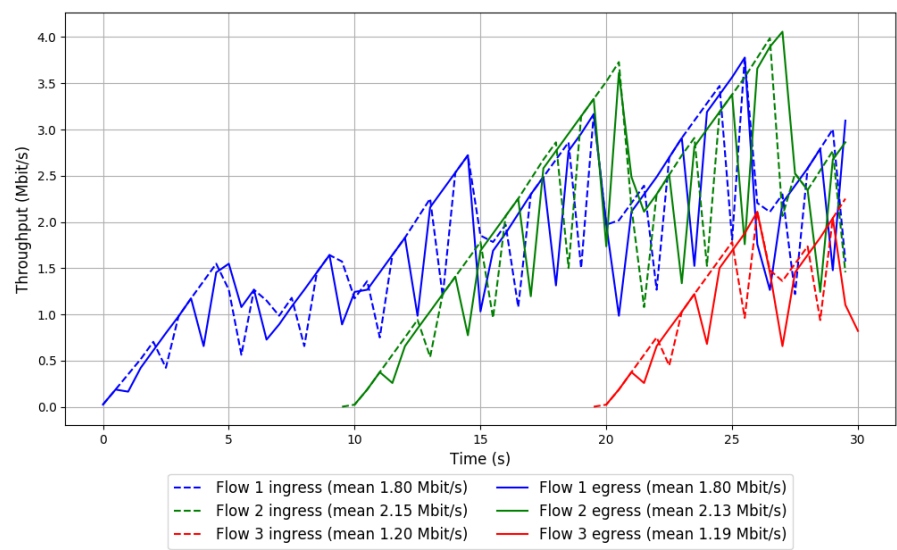
-- Flow 3:

Average throughput: 1.19 Mbit/s

95th percentile per-packet one-way delay: 138.015 ms

Loss rate: 1.48%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2017-08-12 17:04:18

End at: 2017-08-12 17:04:48

# Below is generated by plot.py at 2017-08-12 18:15:11

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 138.010 ms

Loss rate: 3.47%

-- Flow 1:

Average throughput: 0.96 Mbit/s

95th percentile per-packet one-way delay: 137.991 ms

Loss rate: 3.13%

-- Flow 2:

Average throughput: 1.17 Mbit/s

95th percentile per-packet one-way delay: 138.025 ms

Loss rate: 3.47%

-- Flow 3:

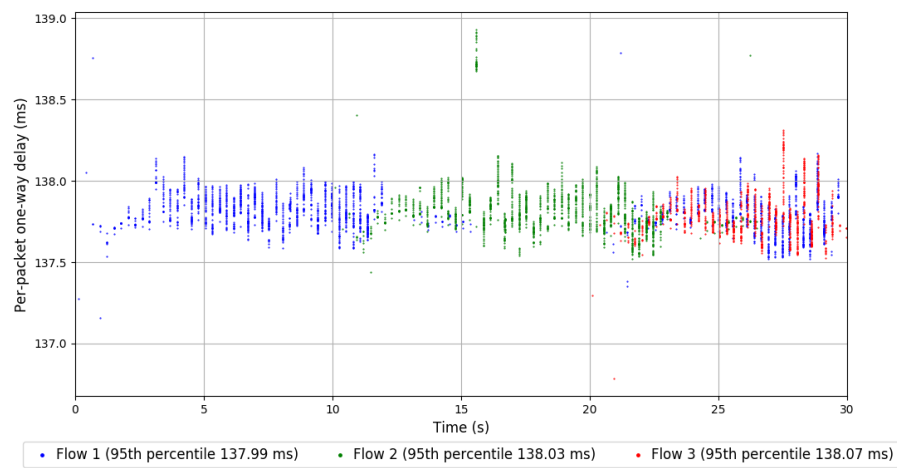
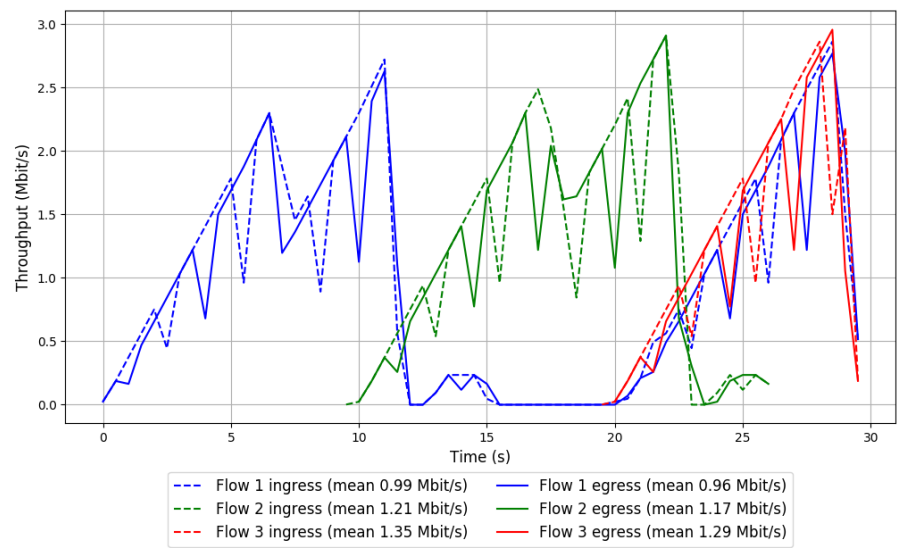
Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 138.069 ms

Loss rate: 4.24%



Run 10: Report of LEDBAT — Data Link

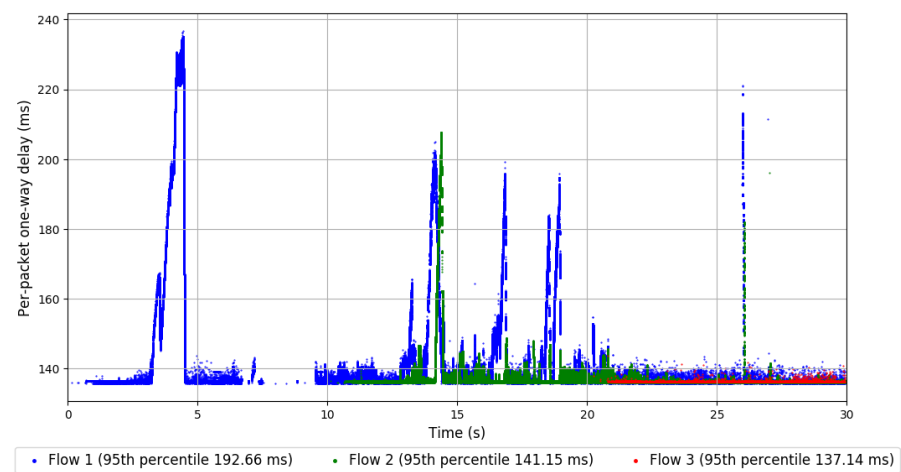
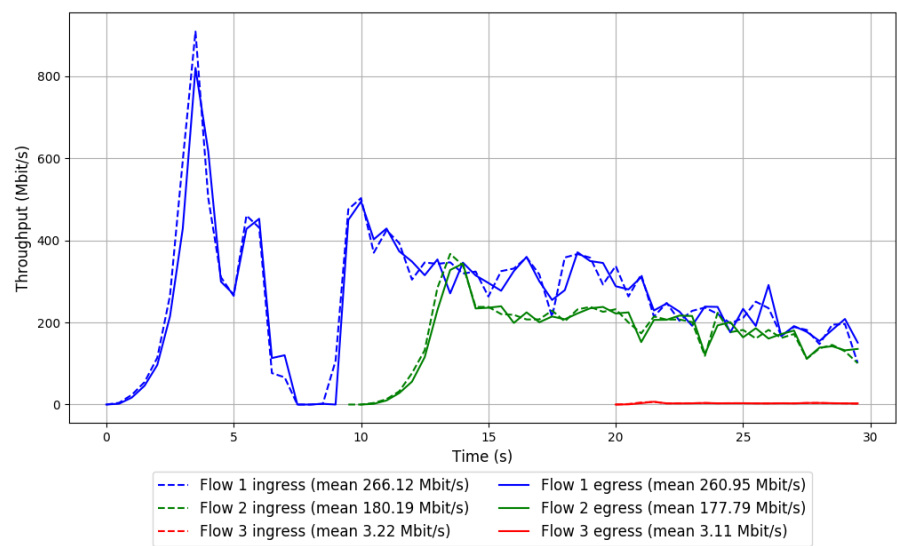


```
Run 1: Statistics of PCC

Start at: 2017-08-12 15:06:25
End at: 2017-08-12 15:06:55

# Below is generated by plot.py at 2017-08-12 18:16:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 380.17 Mbit/s
95th percentile per-packet one-way delay: 184.878 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 260.95 Mbit/s
95th percentile per-packet one-way delay: 192.660 ms
Loss rate: 1.94%
-- Flow 2:
Average throughput: 177.79 Mbit/s
95th percentile per-packet one-way delay: 141.152 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 137.140 ms
Loss rate: 3.57%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2017-08-12 15:20:00

End at: 2017-08-12 15:20:30

# Below is generated by plot.py at 2017-08-12 18:16:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 365.63 Mbit/s

95th percentile per-packet one-way delay: 141.402 ms

Loss rate: 3.95%

-- Flow 1:

Average throughput: 258.73 Mbit/s

95th percentile per-packet one-way delay: 152.535 ms

Loss rate: 5.46%

-- Flow 2:

Average throughput: 160.14 Mbit/s

95th percentile per-packet one-way delay: 138.213 ms

Loss rate: 0.02%

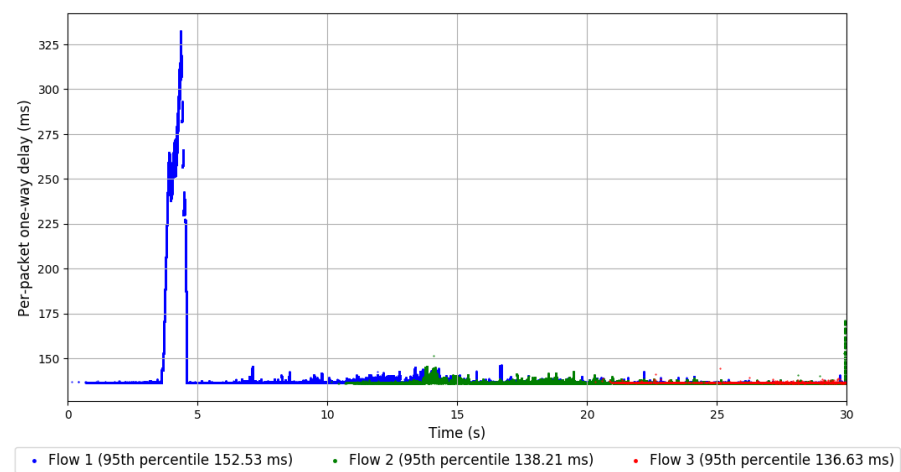
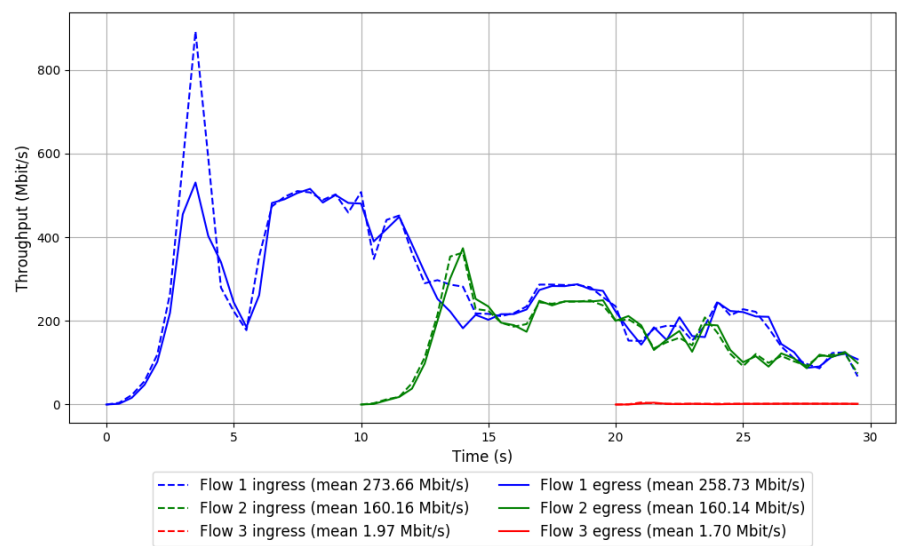
-- Flow 3:

Average throughput: 1.70 Mbit/s

95th percentile per-packet one-way delay: 136.631 ms

Loss rate: 13.86%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-08-12 15:33:40

End at: 2017-08-12 15:34:10

# Below is generated by plot.py at 2017-08-12 18:17:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 142.66 Mbit/s

95th percentile per-packet one-way delay: 139.841 ms

Loss rate: 21.51%

-- Flow 1:

Average throughput: 118.56 Mbit/s

95th percentile per-packet one-way delay: 140.677 ms

Loss rate: 21.53%

-- Flow 2:

Average throughput: 2.39 Mbit/s

95th percentile per-packet one-way delay: 137.137 ms

Loss rate: 9.01%

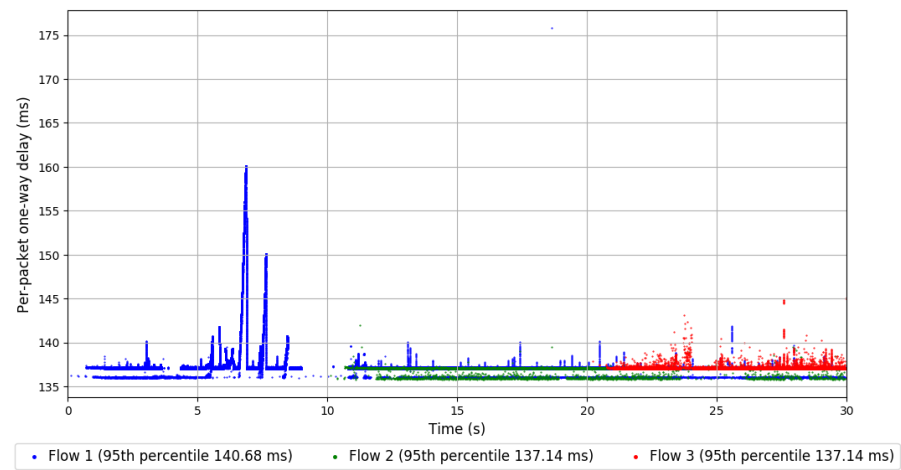
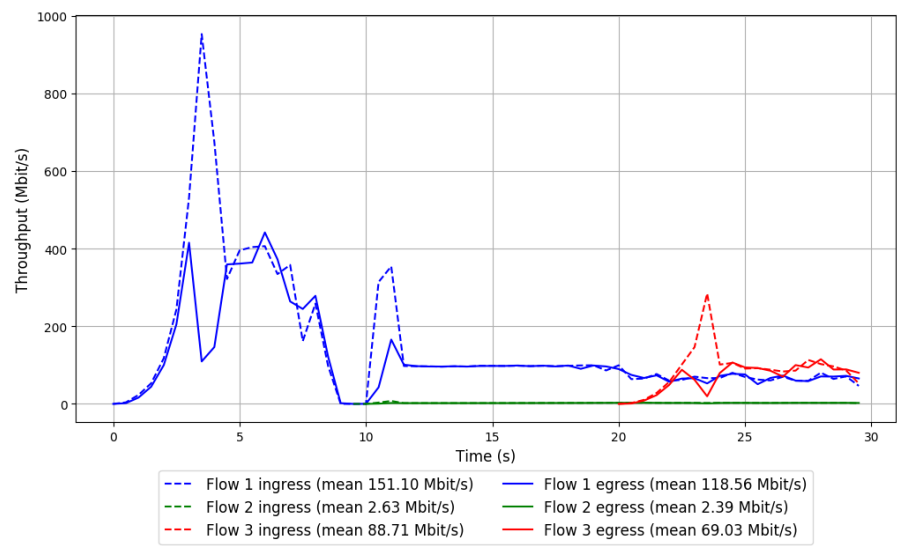
-- Flow 3:

Average throughput: 69.03 Mbit/s

95th percentile per-packet one-way delay: 137.139 ms

Loss rate: 22.13%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-08-12 15:46:53

End at: 2017-08-12 15:47:23

# Below is generated by plot.py at 2017-08-12 18:17:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 302.07 Mbit/s

95th percentile per-packet one-way delay: 185.886 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 300.78 Mbit/s

95th percentile per-packet one-way delay: 187.271 ms

Loss rate: 1.68%

-- Flow 2:

Average throughput: 1.08 Mbit/s

95th percentile per-packet one-way delay: 137.211 ms

Loss rate: 47.89%

-- Flow 3:

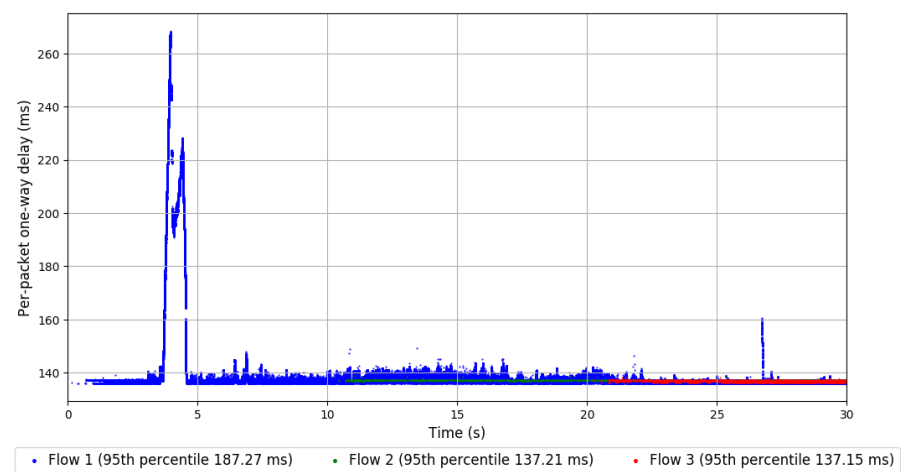
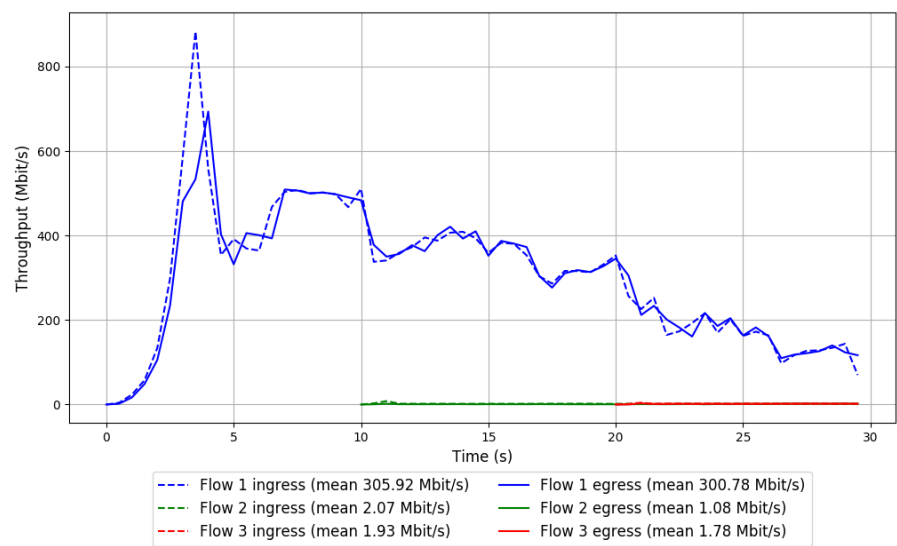
Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 137.149 ms

Loss rate: 7.95%



Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-08-12 16:00:14

End at: 2017-08-12 16:00:44

# Below is generated by plot.py at 2017-08-12 18:17:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 215.47 Mbit/s

95th percentile per-packet one-way delay: 137.210 ms

Loss rate: 35.98%

-- Flow 1:

Average throughput: 76.17 Mbit/s

95th percentile per-packet one-way delay: 137.161 ms

Loss rate: 57.28%

-- Flow 2:

Average throughput: 162.62 Mbit/s

95th percentile per-packet one-way delay: 137.179 ms

Loss rate: 8.97%

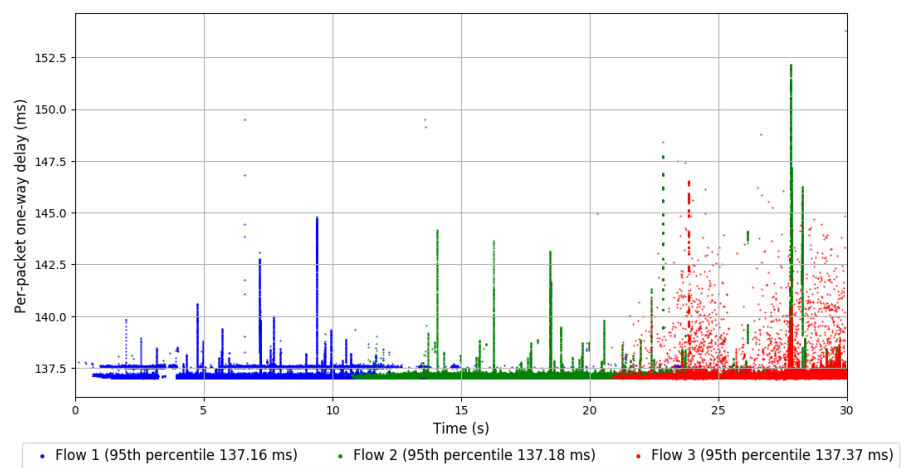
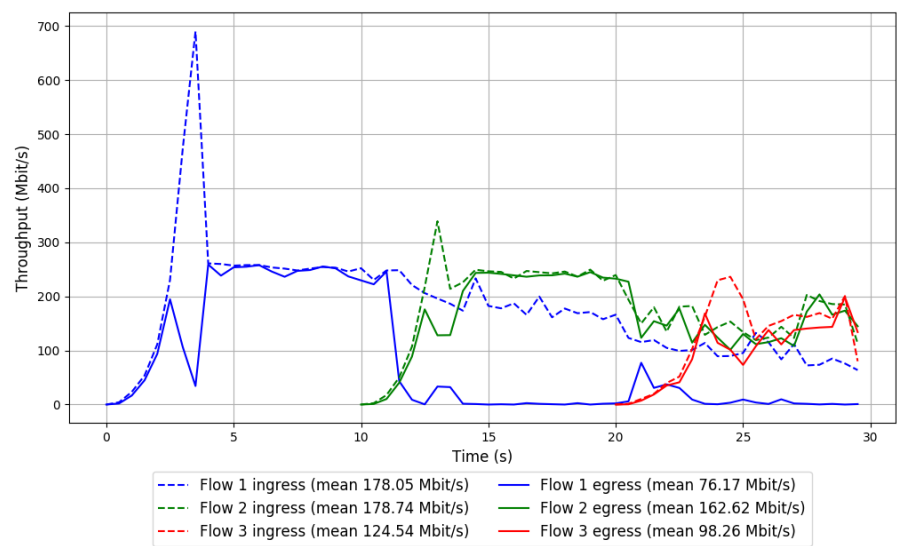
-- Flow 3:

Average throughput: 98.26 Mbit/s

95th percentile per-packet one-way delay: 137.366 ms

Loss rate: 21.17%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-08-12 16:13:43

End at: 2017-08-12 16:14:13

# Below is generated by plot.py at 2017-08-12 18:18:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 338.80 Mbit/s

95th percentile per-packet one-way delay: 165.611 ms

Loss rate: 2.45%

-- Flow 1:

Average throughput: 337.08 Mbit/s

95th percentile per-packet one-way delay: 165.764 ms

Loss rate: 2.41%

-- Flow 2:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 136.779 ms

Loss rate: 11.43%

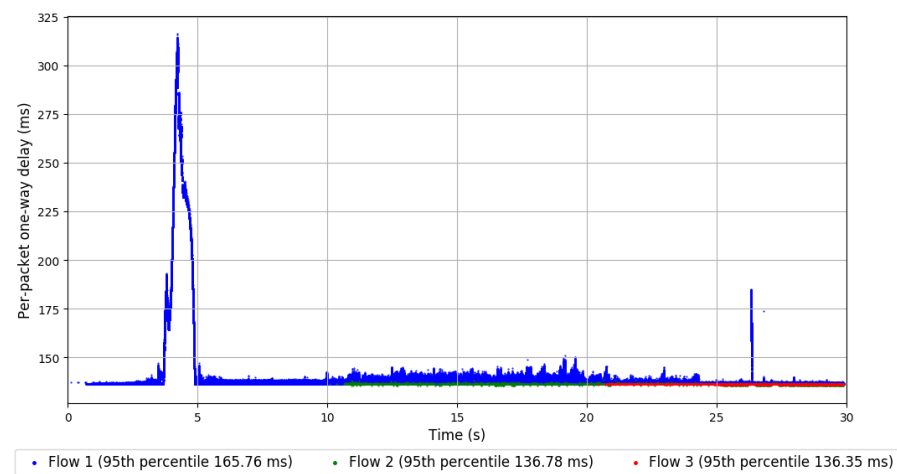
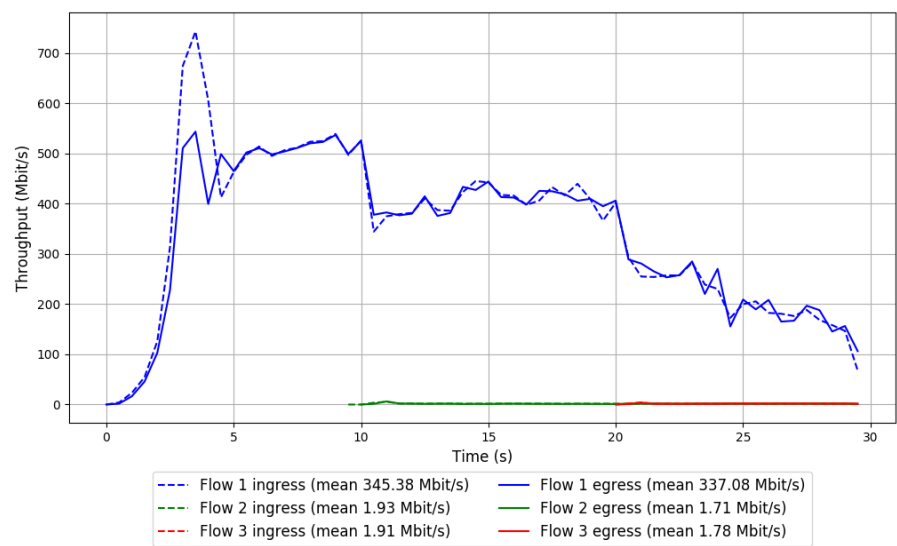
-- Flow 3:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 136.349 ms

Loss rate: 6.48%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-08-12 16:27:25

End at: 2017-08-12 16:27:55

# Below is generated by plot.py at 2017-08-12 18:19:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 367.38 Mbit/s

95th percentile per-packet one-way delay: 153.006 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 359.43 Mbit/s

95th percentile per-packet one-way delay: 153.948 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 137.637 ms

Loss rate: 40.41%

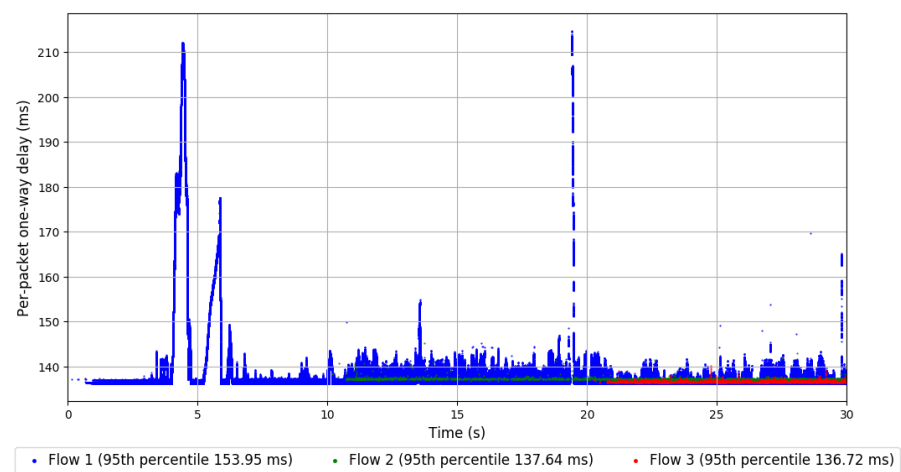
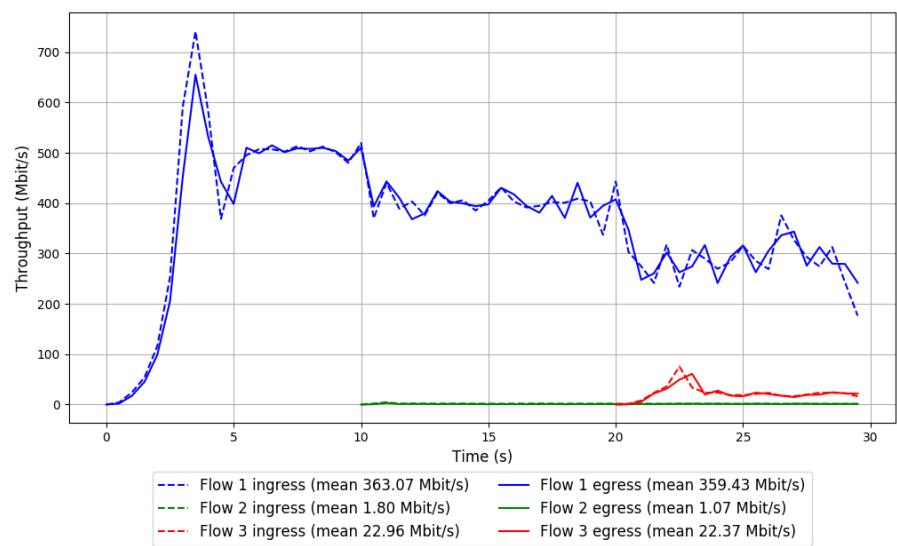
-- Flow 3:

Average throughput: 22.37 Mbit/s

95th percentile per-packet one-way delay: 136.724 ms

Loss rate: 2.56%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-08-12 16:40:38

End at: 2017-08-12 16:41:08

# Below is generated by plot.py at 2017-08-12 18:19:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 324.22 Mbit/s

95th percentile per-packet one-way delay: 140.247 ms

Loss rate: 17.59%

-- Flow 1:

Average throughput: 201.31 Mbit/s

95th percentile per-packet one-way delay: 141.890 ms

Loss rate: 25.38%

-- Flow 2:

Average throughput: 165.75 Mbit/s

95th percentile per-packet one-way delay: 139.264 ms

Loss rate: 0.01%

-- Flow 3:

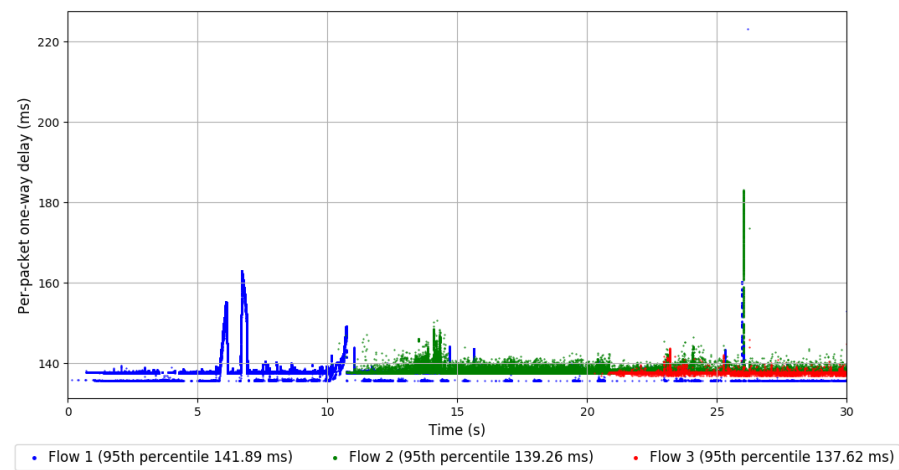
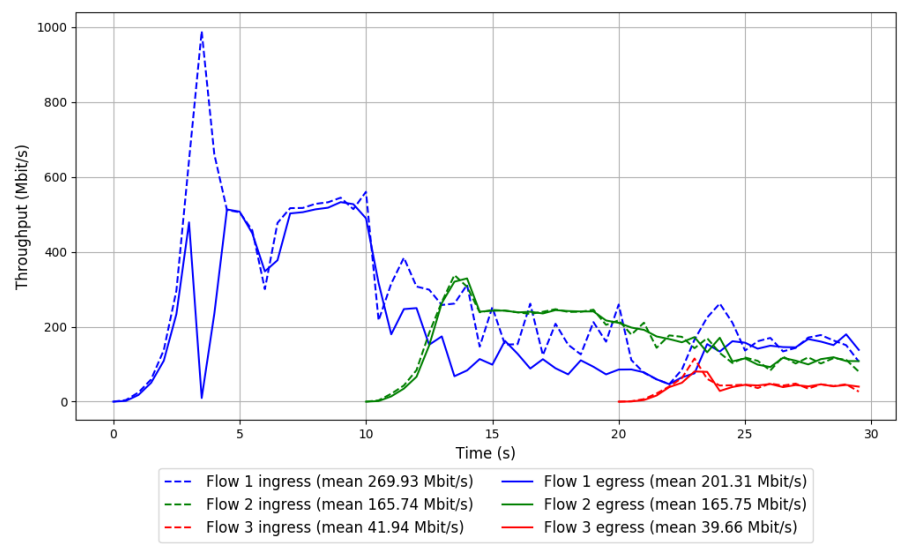
Average throughput: 39.66 Mbit/s

95th percentile per-packet one-way delay: 137.621 ms

Loss rate: 5.36%



Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-08-12 16:53:46

End at: 2017-08-12 16:54:16

# Below is generated by plot.py at 2017-08-12 18:19:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 110.45 Mbit/s

95th percentile per-packet one-way delay: 137.609 ms

Loss rate: 24.98%

-- Flow 1:

Average throughput: 81.71 Mbit/s

95th percentile per-packet one-way delay: 137.609 ms

Loss rate: 29.15%

-- Flow 2:

Average throughput: 5.02 Mbit/s

95th percentile per-packet one-way delay: 137.613 ms

Loss rate: 40.75%

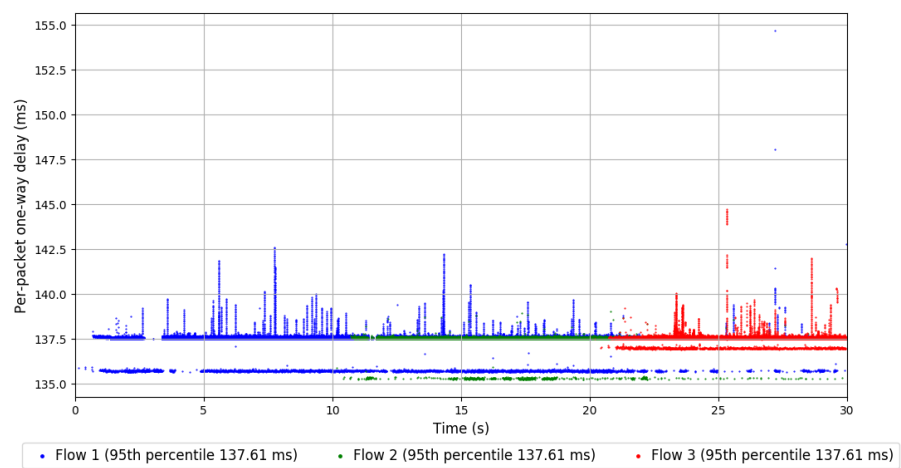
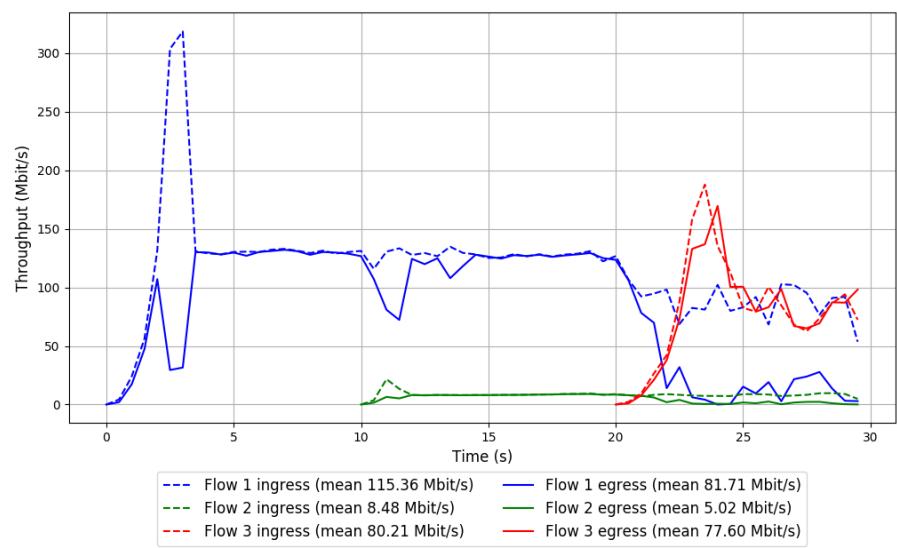
-- Flow 3:

Average throughput: 77.60 Mbit/s

95th percentile per-packet one-way delay: 137.608 ms

Loss rate: 3.25%

Run 9: Report of PCC — Data Link



Run 10: Statistics of PCC

Start at: 2017-08-12 17:07:00

End at: 2017-08-12 17:07:30

# Below is generated by plot.py at 2017-08-12 18:20:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 202.86 Mbit/s

95th percentile per-packet one-way delay: 137.982 ms

Loss rate: 31.00%

-- Flow 1:

Average throughput: 96.98 Mbit/s

95th percentile per-packet one-way delay: 137.838 ms

Loss rate: 45.66%

-- Flow 2:

Average throughput: 89.26 Mbit/s

95th percentile per-packet one-way delay: 137.832 ms

Loss rate: 14.04%

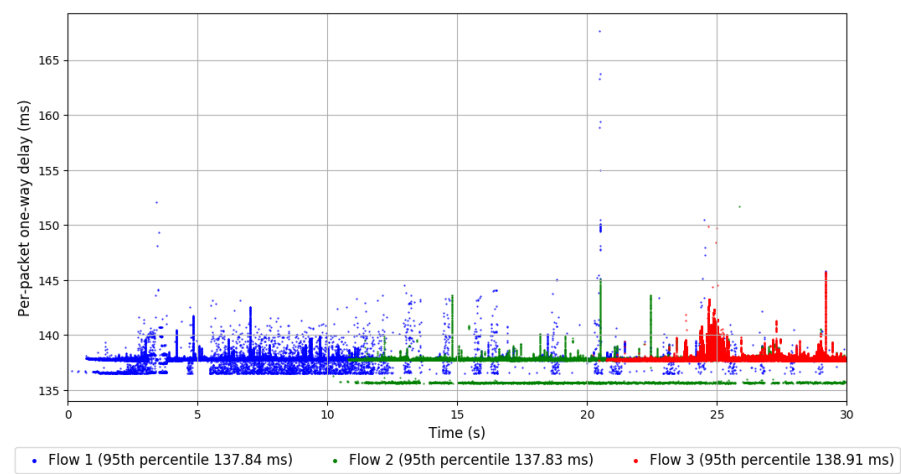
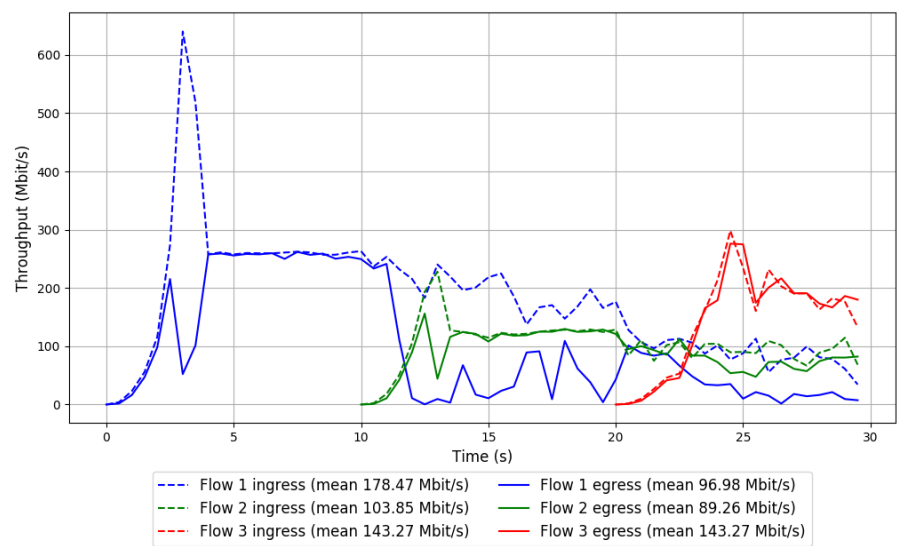
-- Flow 3:

Average throughput: 143.27 Mbit/s

95th percentile per-packet one-way delay: 138.907 ms

Loss rate: 0.01%

Run 10: Report of PCC — Data Link

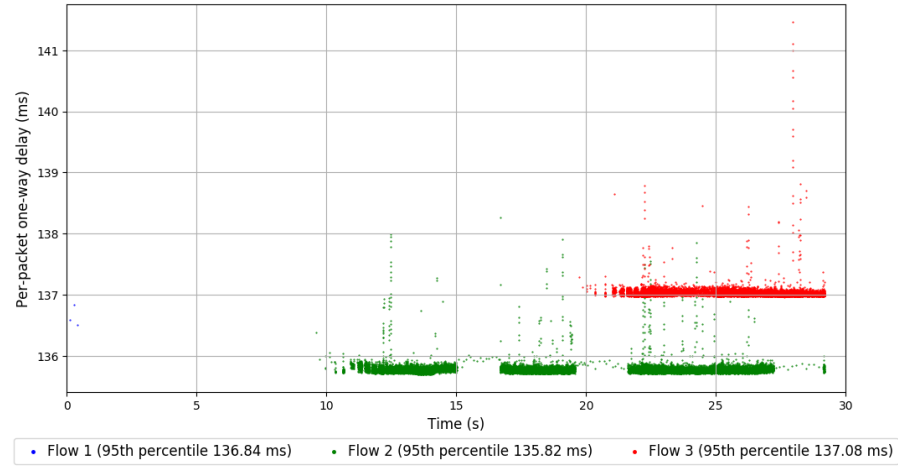
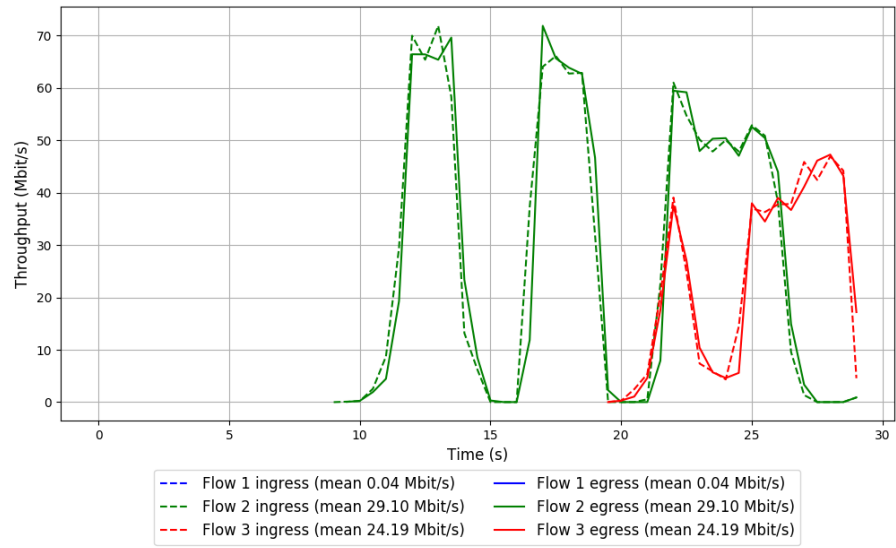


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-08-12 14:57:33
End at: 2017-08-12 14:58:03

# Below is generated by plot.py at 2017-08-12 18:20:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.49 Mbit/s
95th percentile per-packet one-way delay: 137.041 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 136.835 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 29.10 Mbit/s
95th percentile per-packet one-way delay: 135.819 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.19 Mbit/s
95th percentile per-packet one-way delay: 137.081 ms
Loss rate: 0.00%
```

# Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-08-12 15:10:50

End at: 2017-08-12 15:11:20

# Below is generated by plot.py at 2017-08-12 18:20:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 22.69 Mbit/s

95th percentile per-packet one-way delay: 136.336 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 139.214 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.13 Mbit/s

95th percentile per-packet one-way delay: 136.184 ms

Loss rate: 0.00%

-- Flow 3:

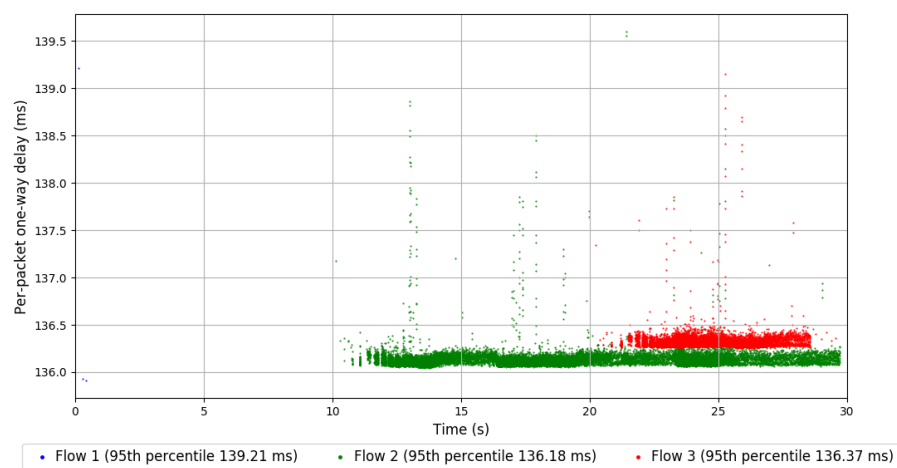
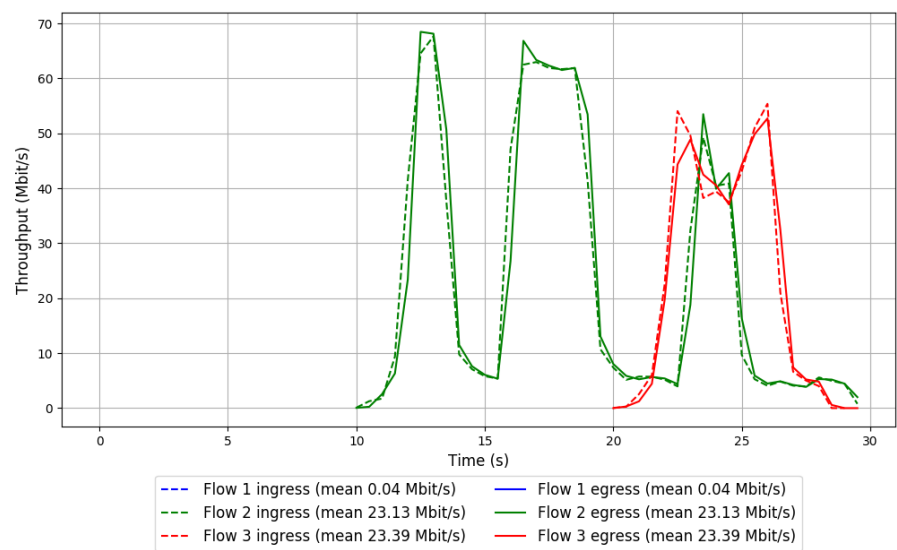
Average throughput: 23.39 Mbit/s

95th percentile per-packet one-way delay: 136.371 ms

Loss rate: 0.00%



Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-08-12 15:24:26

End at: 2017-08-12 15:24:56

# Below is generated by plot.py at 2017-08-12 18:20:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 26.30 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 137.511 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 31.19 Mbit/s

95th percentile per-packet one-way delay: 135.784 ms

Loss rate: 0.00%

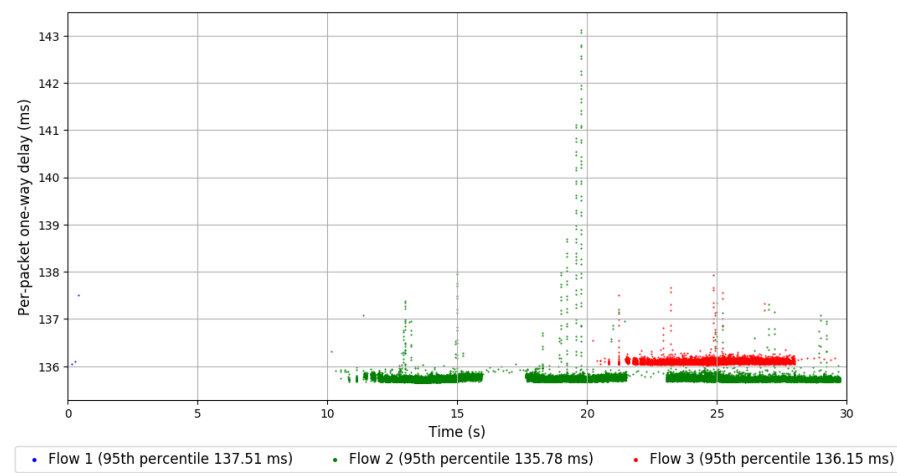
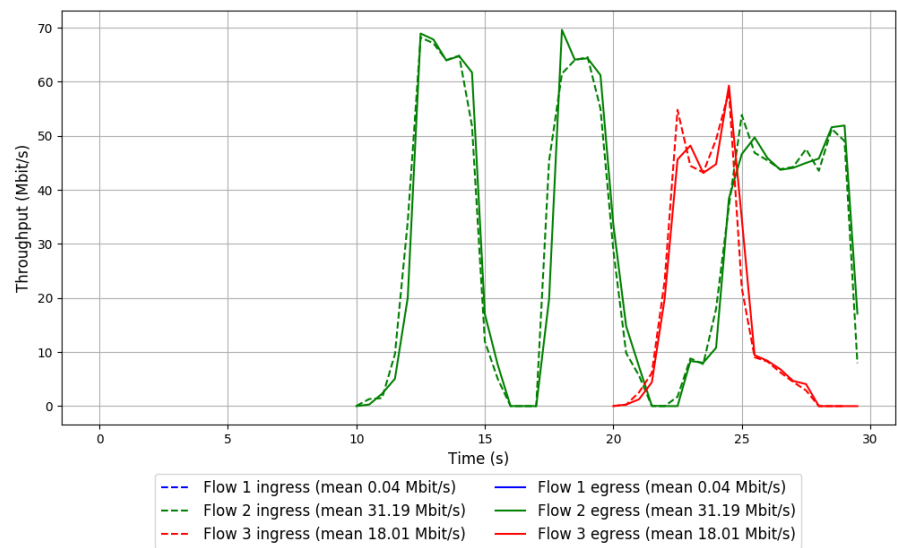
-- Flow 3:

Average throughput: 18.01 Mbit/s

95th percentile per-packet one-way delay: 136.146 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-08-12 15:37:54

End at: 2017-08-12 15:38:24

# Below is generated by plot.py at 2017-08-12 18:20:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 19.27 Mbit/s

95th percentile per-packet one-way delay: 137.155 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 136.206 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.21 Mbit/s

95th percentile per-packet one-way delay: 136.435 ms

Loss rate: 0.00%

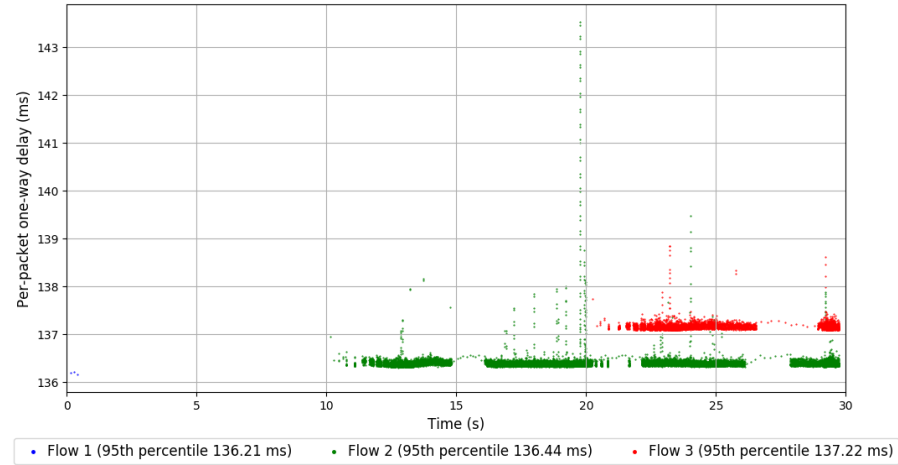
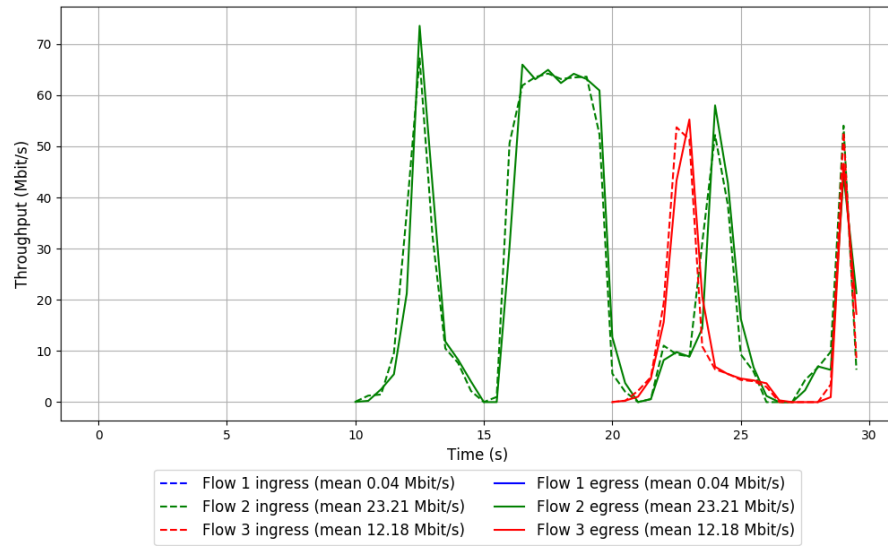
-- Flow 3:

Average throughput: 12.18 Mbit/s

95th percentile per-packet one-way delay: 137.221 ms

Loss rate: 0.00%

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



Run 5: Statistics of QUIC Cubic

Start at: 2017-08-12 15:51:12

End at: 2017-08-12 15:51:42

# Below is generated by plot.py at 2017-08-12 18:20:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 20.94 Mbit/s

95th percentile per-packet one-way delay: 135.736 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 0.04 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 25.59 Mbit/s

95th percentile per-packet one-way delay: 135.743 ms

Loss rate: 0.00%

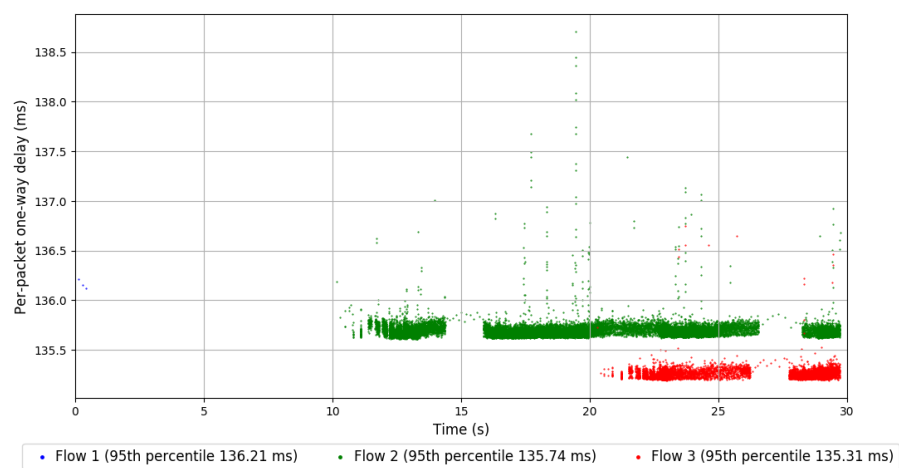
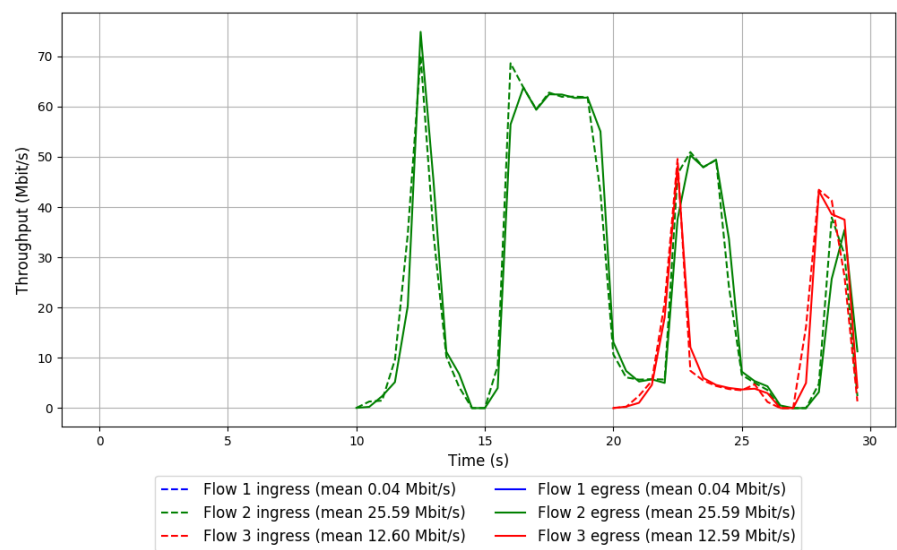
-- Flow 3:

Average throughput: 12.59 Mbit/s

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

Loss rate: 0.03%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-08-12 16:04:33

End at: 2017-08-12 16:05:03

# Below is generated by plot.py at 2017-08-12 18:20:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 23.38 Mbit/s

95th percentile per-packet one-way delay: 137.554 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 137.974 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 30.98 Mbit/s

95th percentile per-packet one-way delay: 137.558 ms

Loss rate: 0.00%

-- Flow 3:

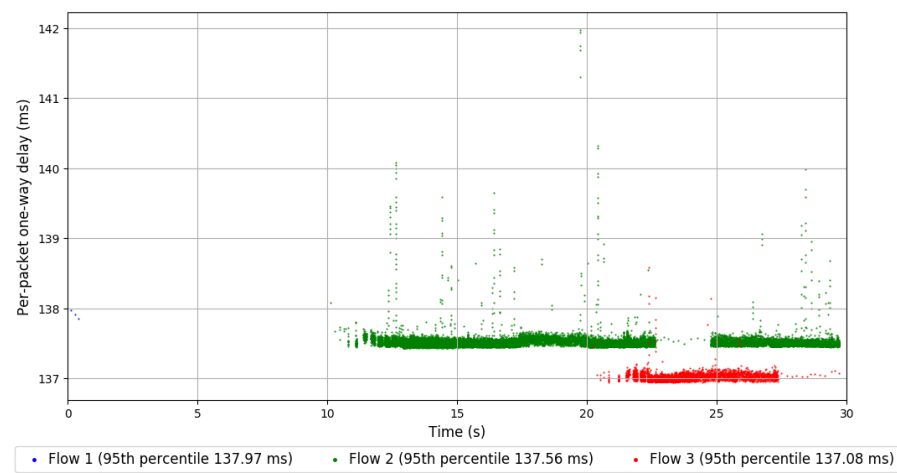
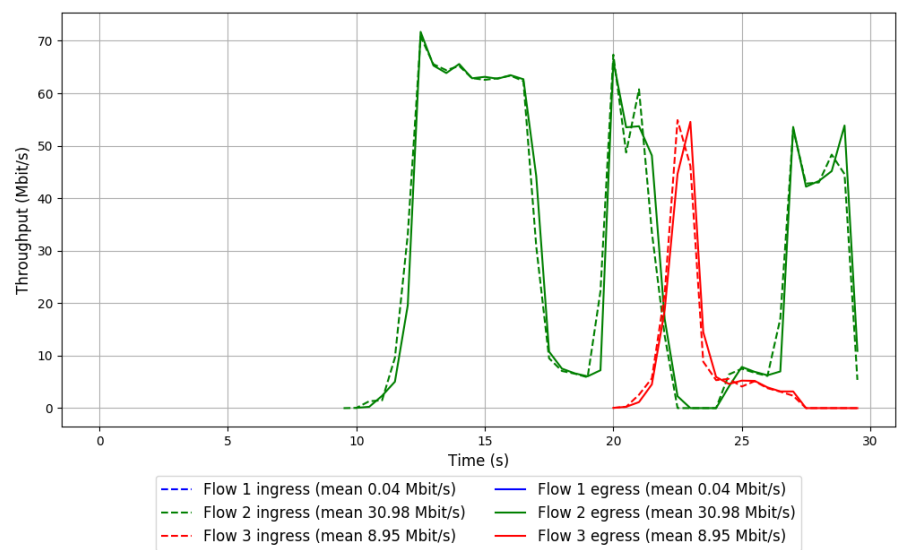
Average throughput: 8.95 Mbit/s

95th percentile per-packet one-way delay: 137.076 ms

Loss rate: 0.00%



Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-08-12 16:18:06

End at: 2017-08-12 16:18:36

# Below is generated by plot.py at 2017-08-12 18:20:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 18.71 Mbit/s

95th percentile per-packet one-way delay: 136.973 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 136.026 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 22.40 Mbit/s

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

Loss rate: 0.00%

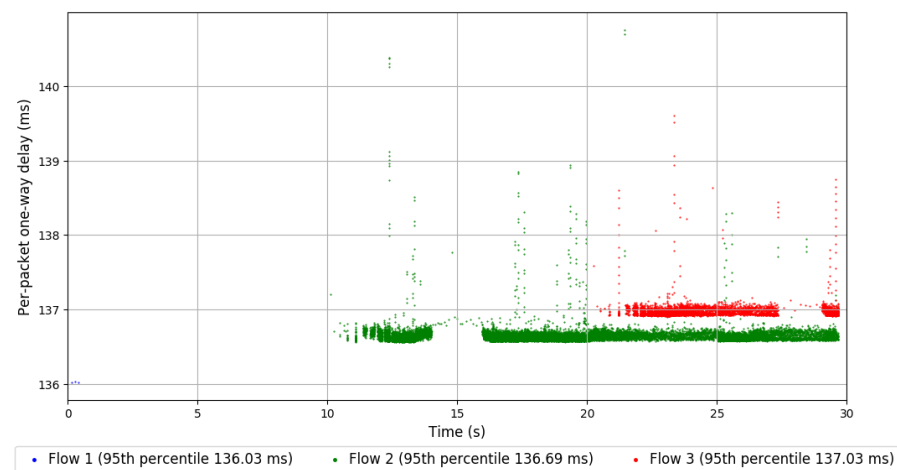
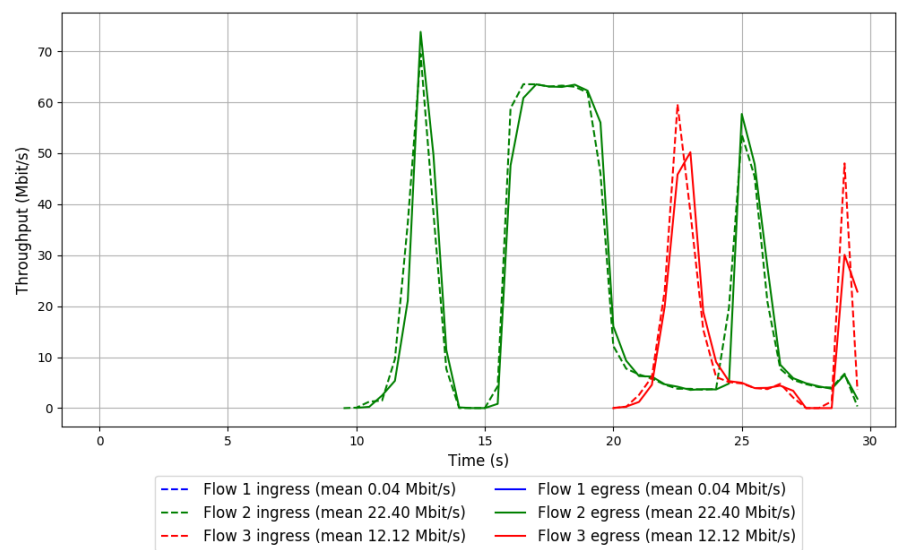
-- Flow 3:

Average throughput: 12.12 Mbit/s

95th percentile per-packet one-way delay: 137.030 ms

Loss rate: 0.00%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-08-12 16:31:49

End at: 2017-08-12 16:32:19

# Below is generated by plot.py at 2017-08-12 18:20:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 22.52 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 135.848 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 28.34 Mbit/s

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

Loss rate: 0.00%

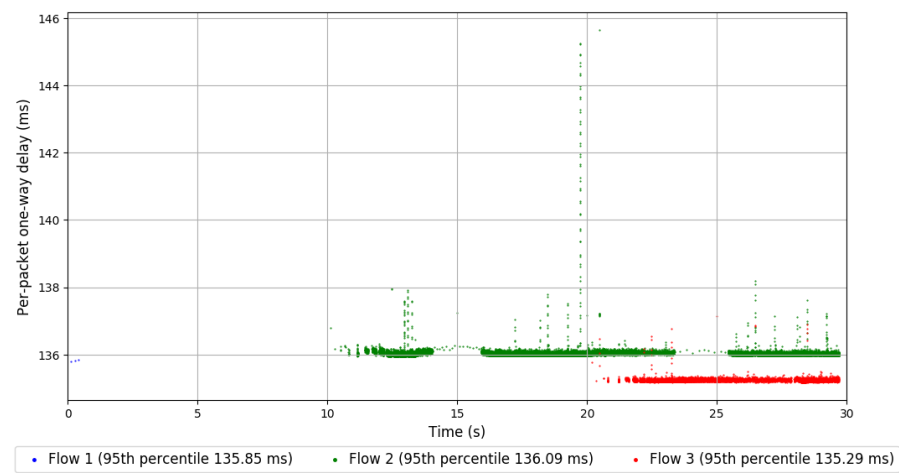
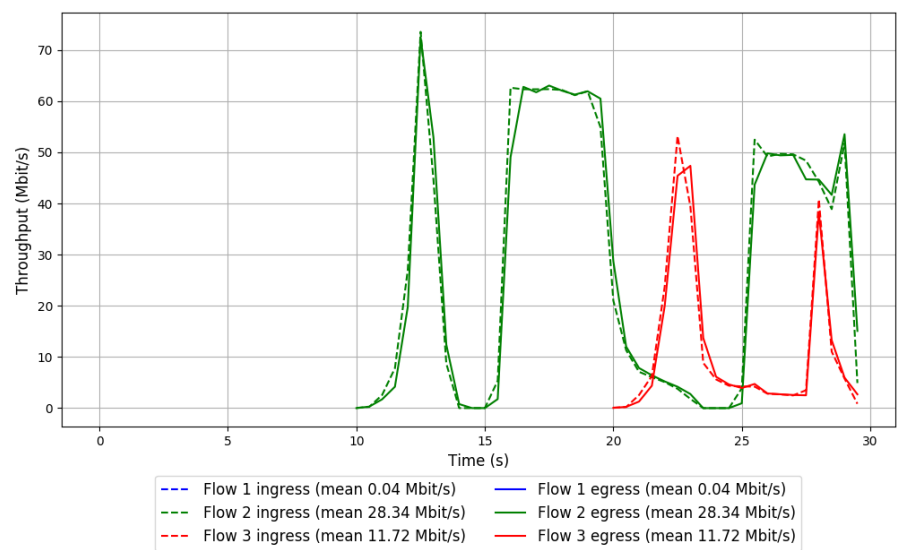
-- Flow 3:

Average throughput: 11.72 Mbit/s

95th percentile per-packet one-way delay: 135.291 ms

Loss rate: 0.02%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-08-12 16:45:00

End at: 2017-08-12 16:45:30

# Below is generated by plot.py at 2017-08-12 18:20:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 18.91 Mbit/s

95th percentile per-packet one-way delay: 135.809 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 136.557 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 26.08 Mbit/s

95th percentile per-packet one-way delay: 135.812 ms

Loss rate: 0.00%

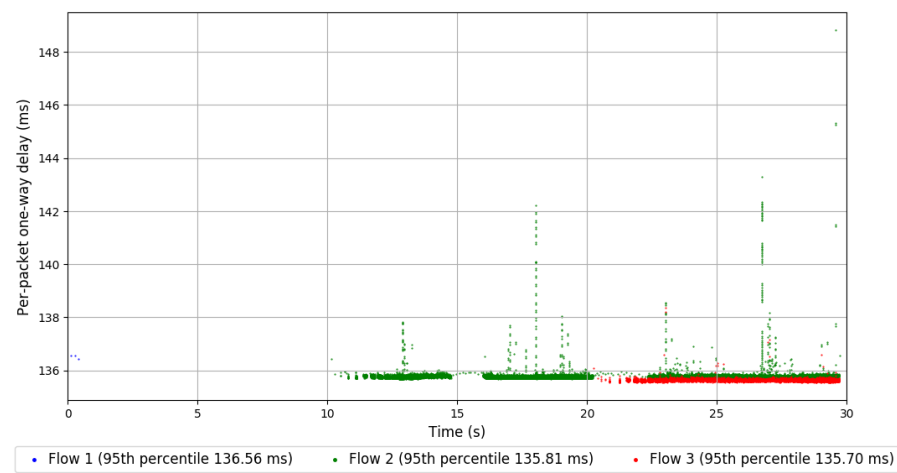
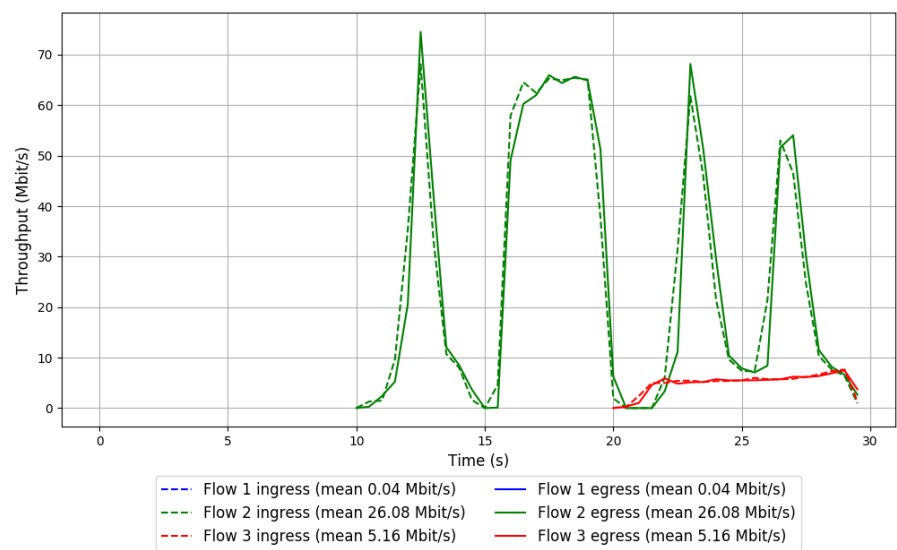
-- Flow 3:

Average throughput: 5.16 Mbit/s

95th percentile per-packet one-way delay: 135.702 ms

Loss rate: 0.05%

Run 9: Report of QUIC Cubic — Data Link



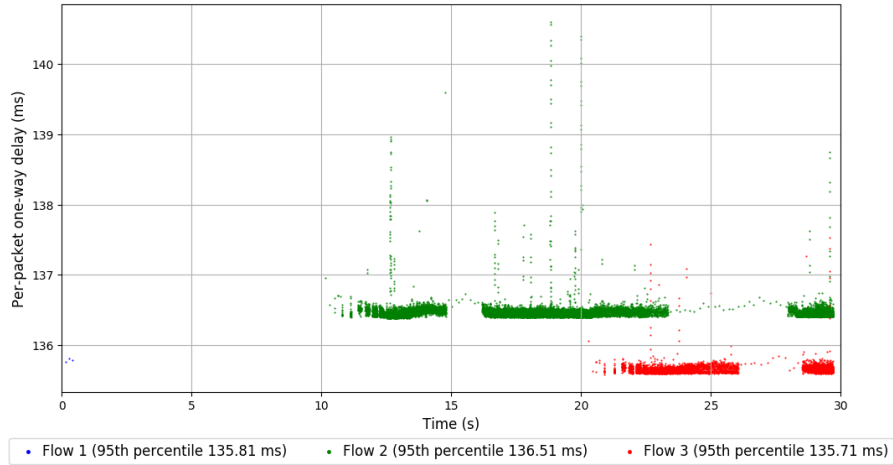
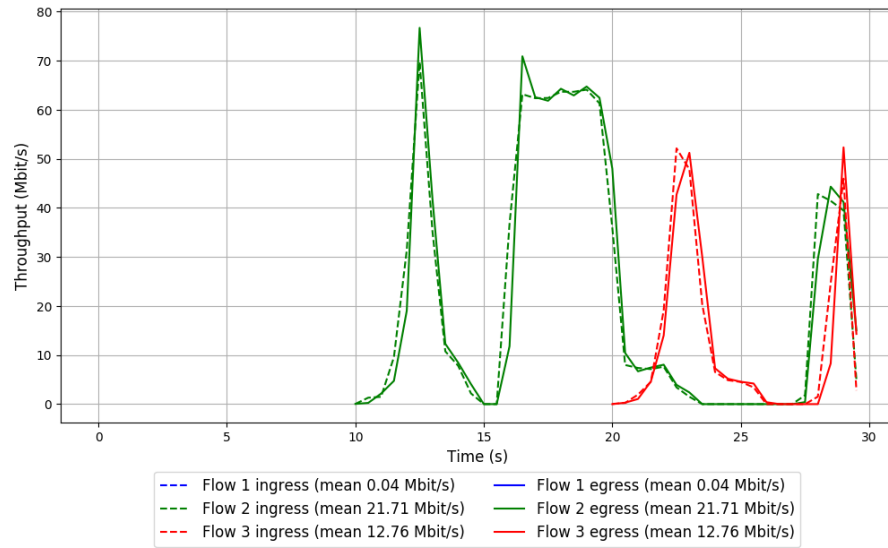
```
Run 10: Statistics of QUIC Cubic

Start at: 2017-08-12 16:58:00
End at: 2017-08-12 16:58:30

# Below is generated by plot.py at 2017-08-12 18:20:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.43 Mbit/s
95th percentile per-packet one-way delay: 136.507 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 135.815 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.71 Mbit/s
95th percentile per-packet one-way delay: 136.515 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.76 Mbit/s
95th percentile per-packet one-way delay: 135.710 ms
Loss rate: 0.02%
```



# Run 10: Report of QUIC Cubic — Data Link



Run 1: Statistics of Saturator

Start at: 2017-08-12 14:55:53

End at: 2017-08-12 14:56:23

# Below is generated by plot.py at 2017-08-12 18:20:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 5.55 Mbit/s

95th percentile per-packet one-way delay: 138.159 ms

Loss rate: 3.93%

-- Flow 1:

Average throughput: 2.62 Mbit/s

95th percentile per-packet one-way delay: 138.125 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 8.21 Mbit/s

95th percentile per-packet one-way delay: 138.137 ms

Loss rate: 2.03%

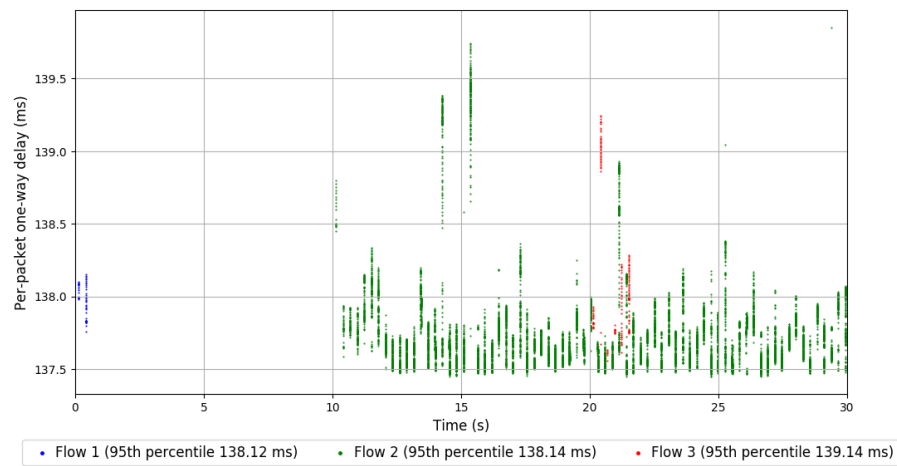
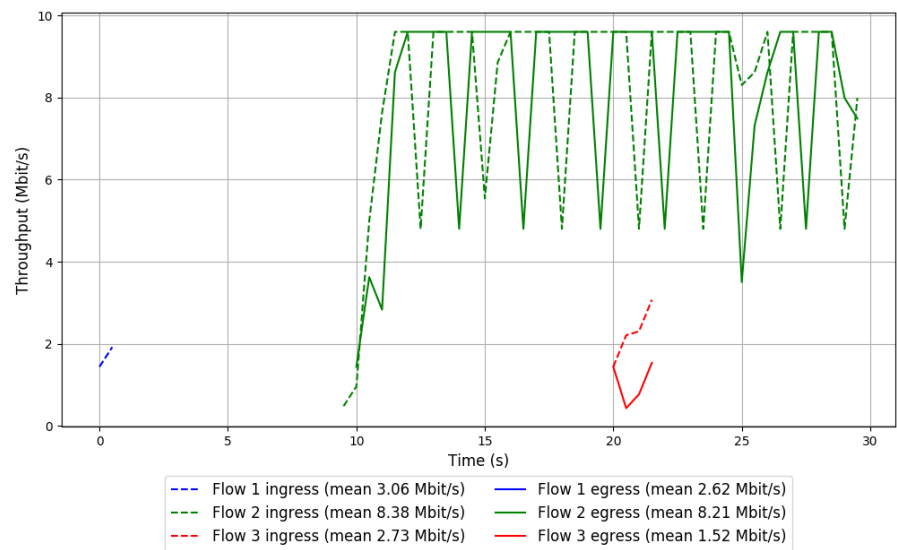
-- Flow 3:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 139.138 ms

Loss rate: 53.72%

Run 1: Report of Saturator — Data Link



Run 2: Statistics of Saturator

Start at: 2017-08-12 15:09:10

End at: 2017-08-12 15:09:40

# Below is generated by plot.py at 2017-08-12 18:20:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.41 Mbit/s

95th percentile per-packet one-way delay: 137.223 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 2.62 Mbit/s

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

Loss rate: 57.14%

-- Flow 2:

Average throughput: 8.52 Mbit/s

95th percentile per-packet one-way delay: 137.194 ms

Loss rate: 0.36%

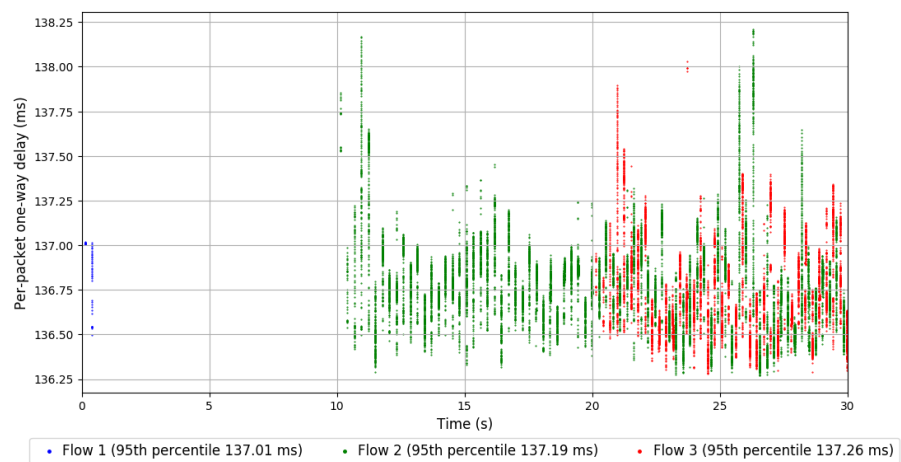
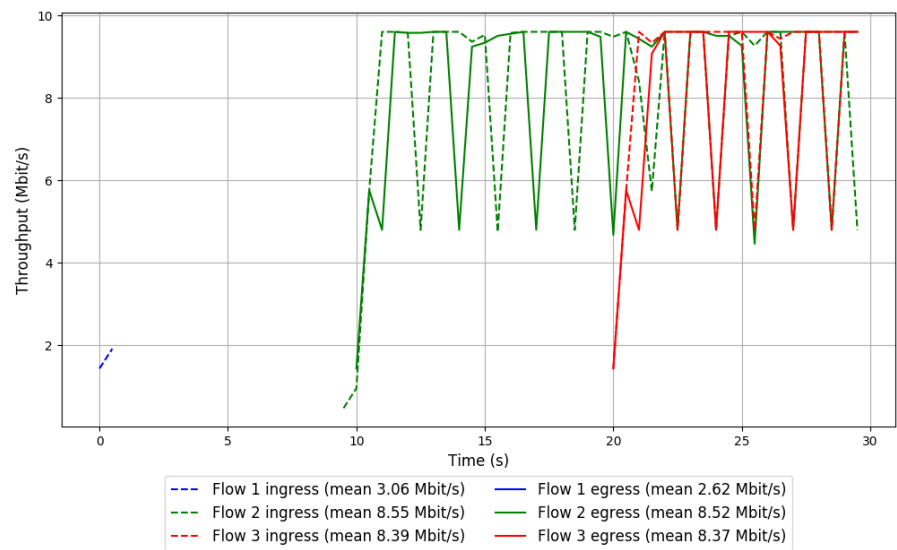
-- Flow 3:

Average throughput: 8.37 Mbit/s

95th percentile per-packet one-way delay: 137.258 ms

Loss rate: 0.26%

Run 2: Report of Saturator — Data Link



Run 3: Statistics of Saturator

Start at: 2017-08-12 15:22:45

End at: 2017-08-12 15:23:15

# Below is generated by plot.py at 2017-08-12 18:20:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 14.31 Mbit/s

95th percentile per-packet one-way delay: 137.333 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 8.59 Mbit/s

95th percentile per-packet one-way delay: 137.312 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 8.57 Mbit/s

95th percentile per-packet one-way delay: 137.380 ms

Loss rate: 0.31%

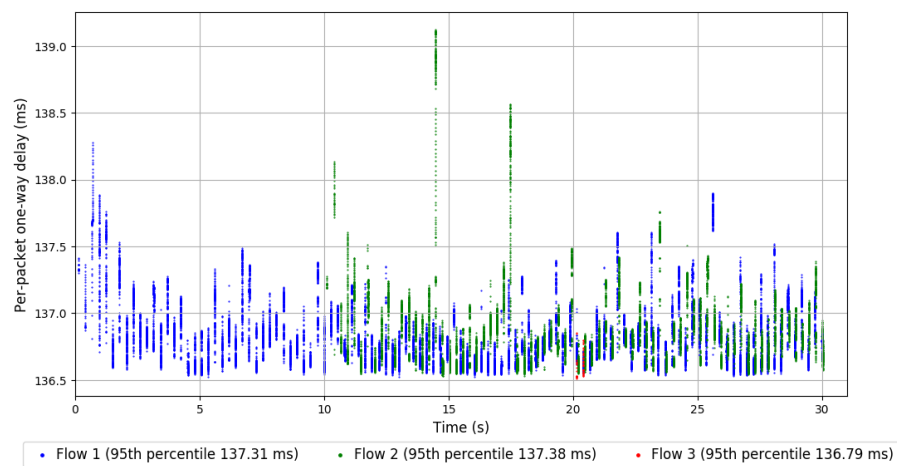
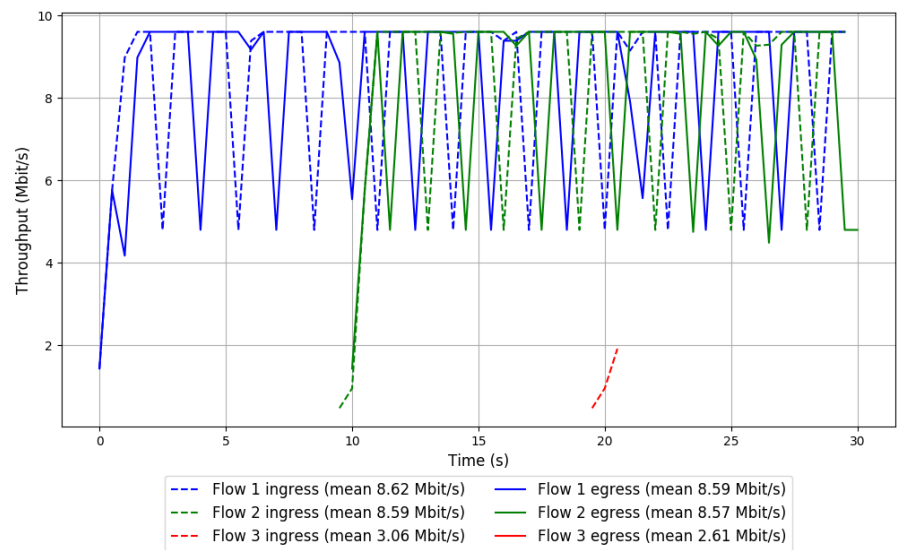
-- Flow 3:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 136.795 ms

Loss rate: 57.14%

Run 3: Report of Saturator — Data Link



Run 4: Statistics of Saturator

Start at: 2017-08-12 15:36:16

End at: 2017-08-12 15:36:46

# Below is generated by plot.py at 2017-08-12 18:20:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.45 Mbit/s

95th percentile per-packet one-way delay: 138.205 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 137.720 ms

Loss rate: 55.08%

-- Flow 2:

Average throughput: 8.55 Mbit/s

95th percentile per-packet one-way delay: 138.308 ms

Loss rate: 0.23%

-- Flow 3:

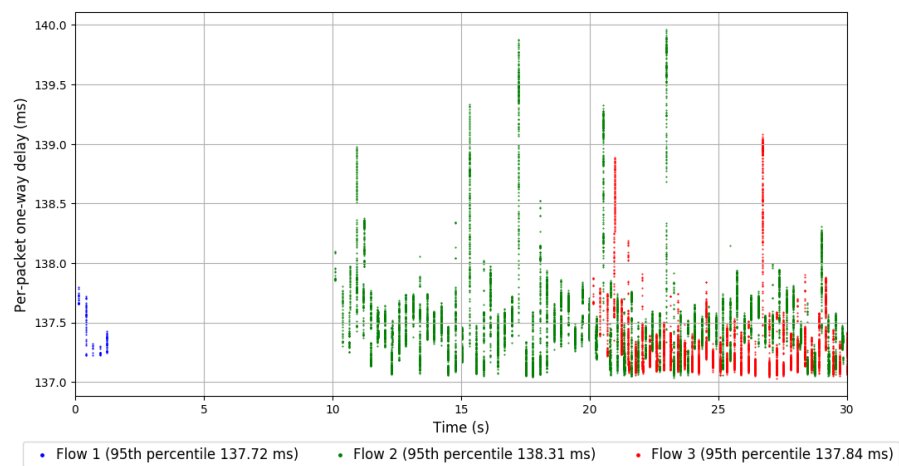
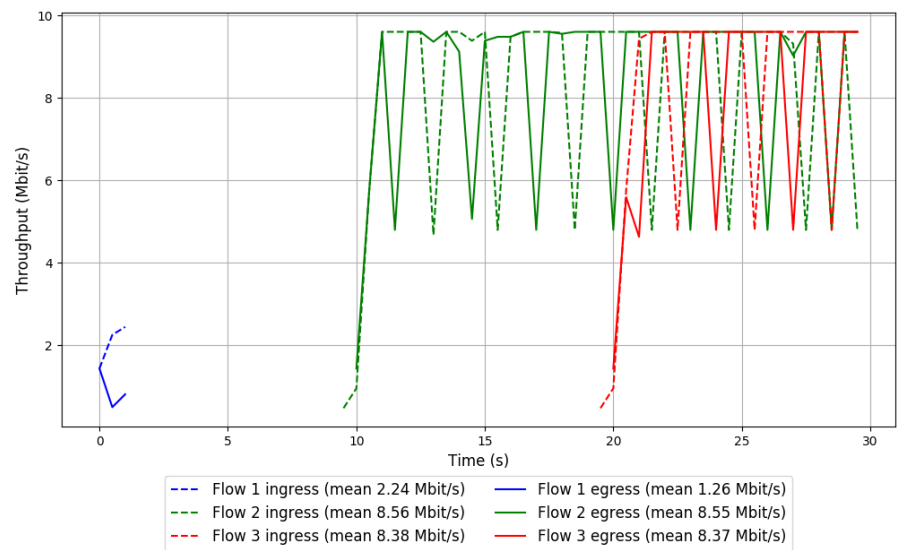
Average throughput: 8.37 Mbit/s

95th percentile per-packet one-way delay: 137.835 ms

Loss rate: 0.10%



Run 4: Report of Saturator — Data Link

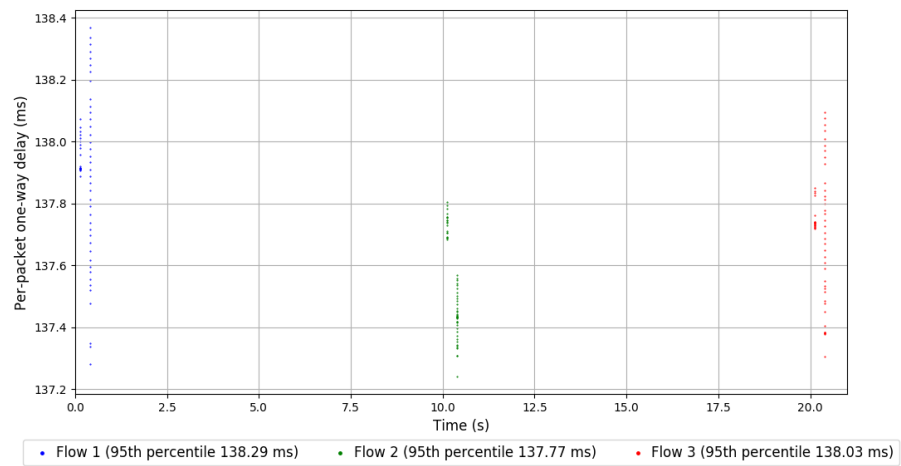
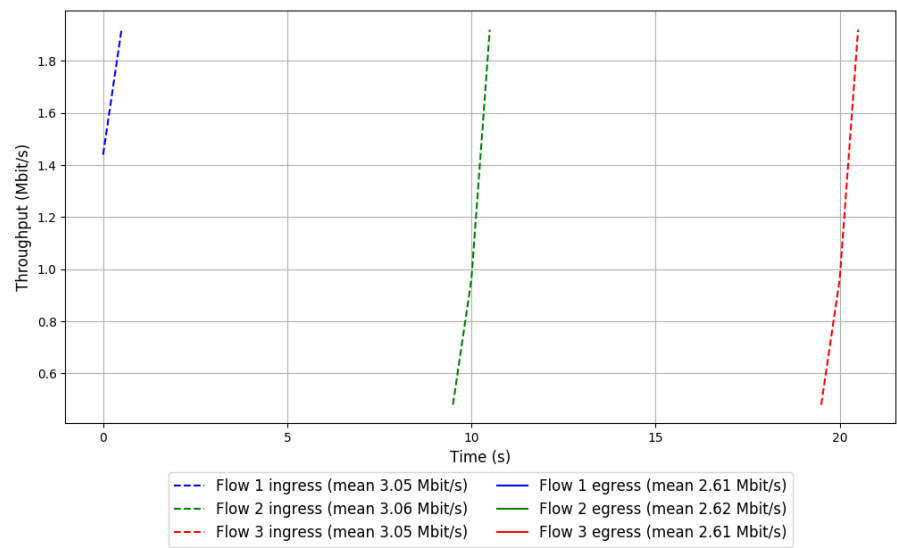


Run 5: Statistics of Saturator

Start at: 2017-08-12 15:49:33

End at: 2017-08-12 15:50:03

Run 5: Report of Saturator — Data Link



Run 6: Statistics of Saturator

Start at: 2017-08-12 16:02:54

End at: 2017-08-12 16:03:24

# Below is generated by plot.py at 2017-08-12 18:20:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.77 Mbit/s

95th percentile per-packet one-way delay: 137.754 ms

Loss rate: 49.25%

-- Flow 1:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 137.725 ms

Loss rate: 48.98%

-- Flow 2:

Average throughput: 2.60 Mbit/s

95th percentile per-packet one-way delay: 138.989 ms

Loss rate: 57.14%

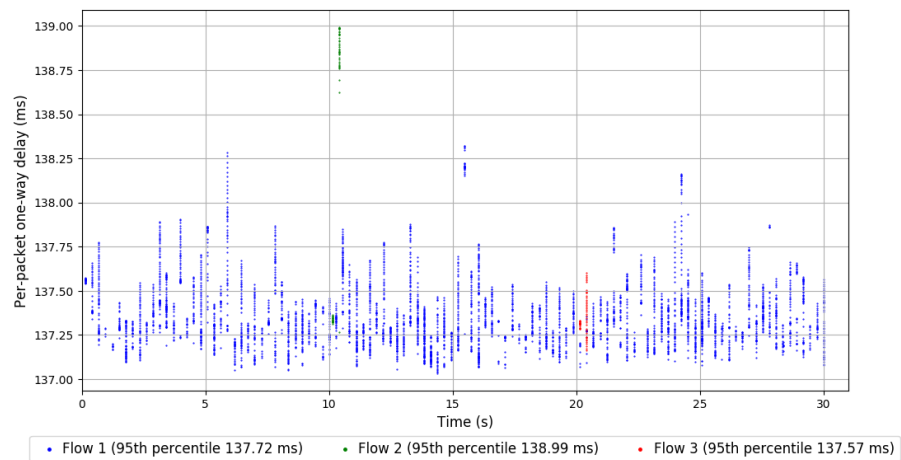
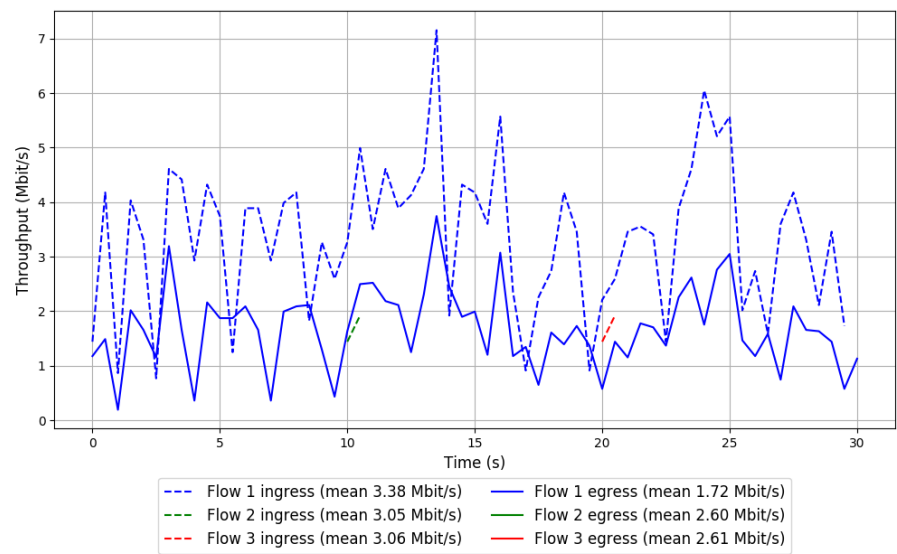
-- Flow 3:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 137.570 ms

Loss rate: 57.14%

Run 6: Report of Saturator — Data Link



Run 7: Statistics of Saturator

Start at: 2017-08-12 16:16:25

End at: 2017-08-12 16:16:55

# Below is generated by plot.py at 2017-08-12 18:20:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.32 Mbit/s

95th percentile per-packet one-way delay: 138.372 ms

Loss rate: 6.66%

-- Flow 1:

Average throughput: 8.58 Mbit/s

95th percentile per-packet one-way delay: 138.419 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 2.59 Mbit/s

95th percentile per-packet one-way delay: 137.626 ms

Loss rate: 46.26%

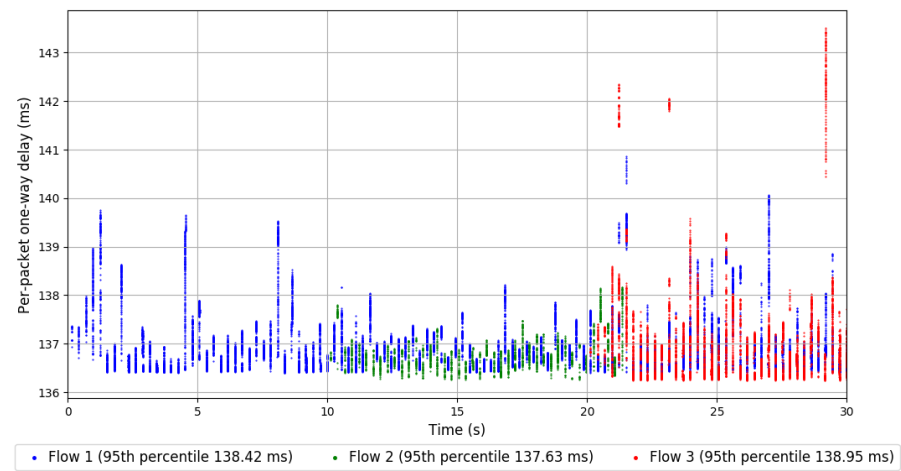
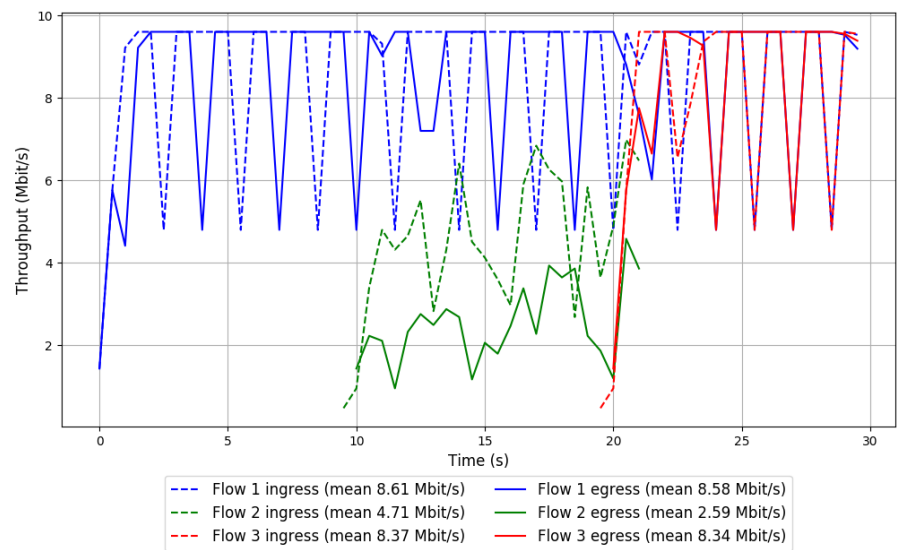
-- Flow 3:

Average throughput: 8.34 Mbit/s

95th percentile per-packet one-way delay: 138.948 ms

Loss rate: 0.28%

Run 7: Report of Saturator — Data Link



Run 8: Statistics of Saturator

Start at: 2017-08-12 16:30:09

End at: 2017-08-12 16:30:39

# Below is generated by plot.py at 2017-08-12 18:20:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 11.42 Mbit/s

95th percentile per-packet one-way delay: 137.963 ms

Loss rate: 16.32%

-- Flow 1:

Average throughput: 3.11 Mbit/s

95th percentile per-packet one-way delay: 137.623 ms

Loss rate: 41.47%

-- Flow 2:

Average throughput: 8.42 Mbit/s

95th percentile per-packet one-way delay: 137.952 ms

Loss rate: 0.57%

-- Flow 3:

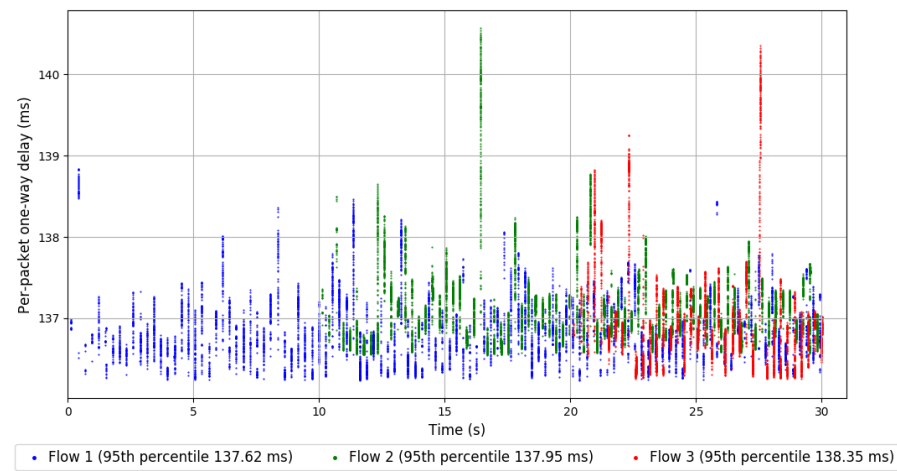
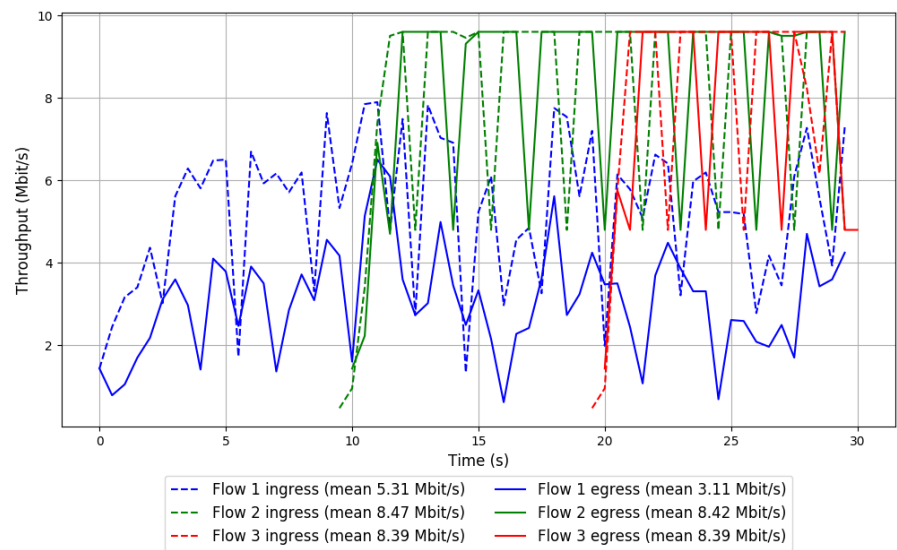
Average throughput: 8.39 Mbit/s

95th percentile per-packet one-way delay: 138.353 ms

Loss rate: 0.00%



Run 8: Report of Saturator — Data Link



Run 9: Statistics of Saturator

Start at: 2017-08-12 16:43:22

End at: 2017-08-12 16:43:52

# Below is generated by plot.py at 2017-08-12 18:20:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.62 Mbit/s

95th percentile per-packet one-way delay: 138.166 ms

Loss rate: 49.87%

-- Flow 1:

Average throughput: 2.62 Mbit/s

95th percentile per-packet one-way delay: 138.245 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 1.49 Mbit/s

95th percentile per-packet one-way delay: 138.206 ms

Loss rate: 53.40%

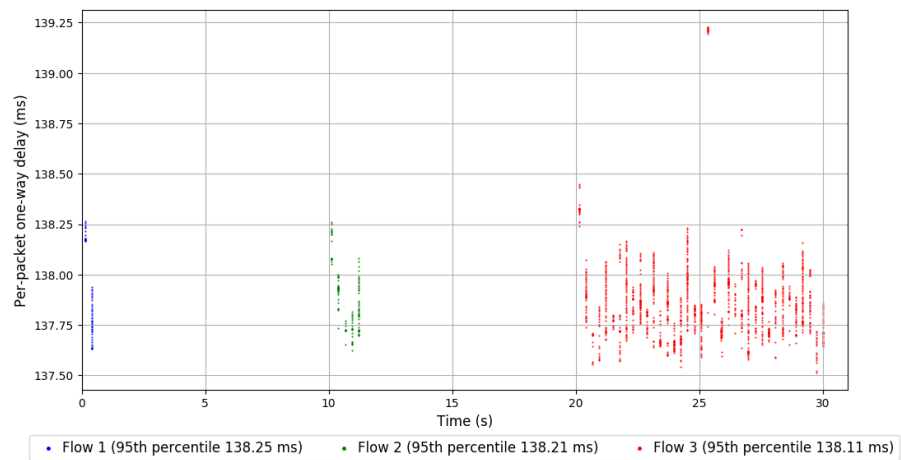
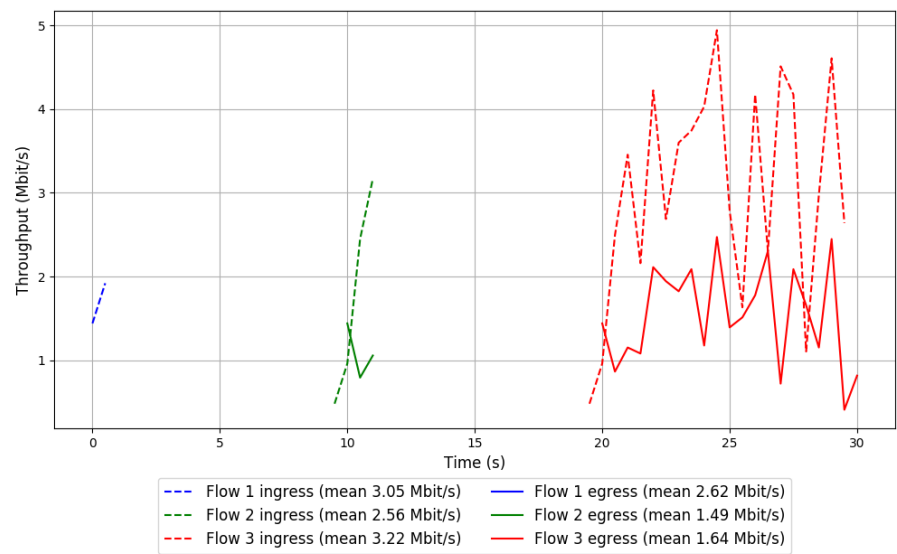
-- Flow 3:

Average throughput: 1.64 Mbit/s

95th percentile per-packet one-way delay: 138.111 ms

Loss rate: 49.10%

Run 9: Report of Saturator — Data Link



Run 10: Statistics of Saturator

Start at: 2017-08-12 16:56:20

End at: 2017-08-12 16:56:50

# Below is generated by plot.py at 2017-08-12 18:20:40

# Datalink statistics

-- Total of 3 flows:

Average throughput: 11.43 Mbit/s

95th percentile per-packet one-way delay: 138.692 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 8.65 Mbit/s

95th percentile per-packet one-way delay: 138.940 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 1.61 Mbit/s

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

Loss rate: 54.13%

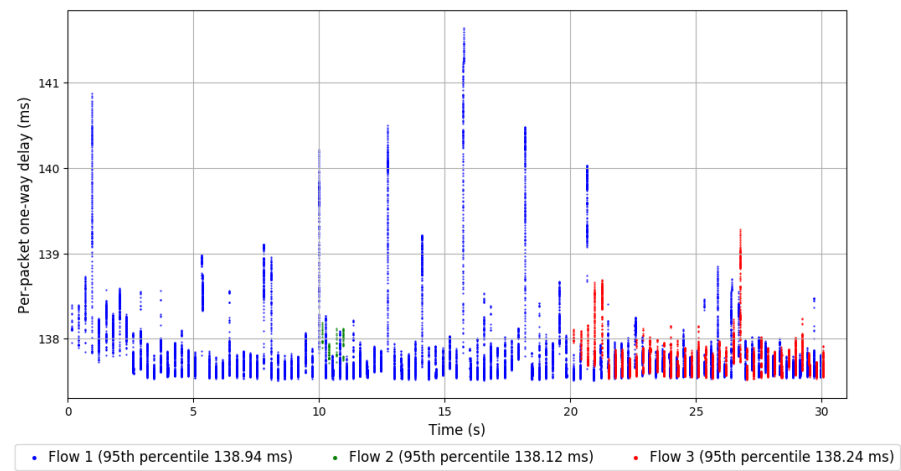
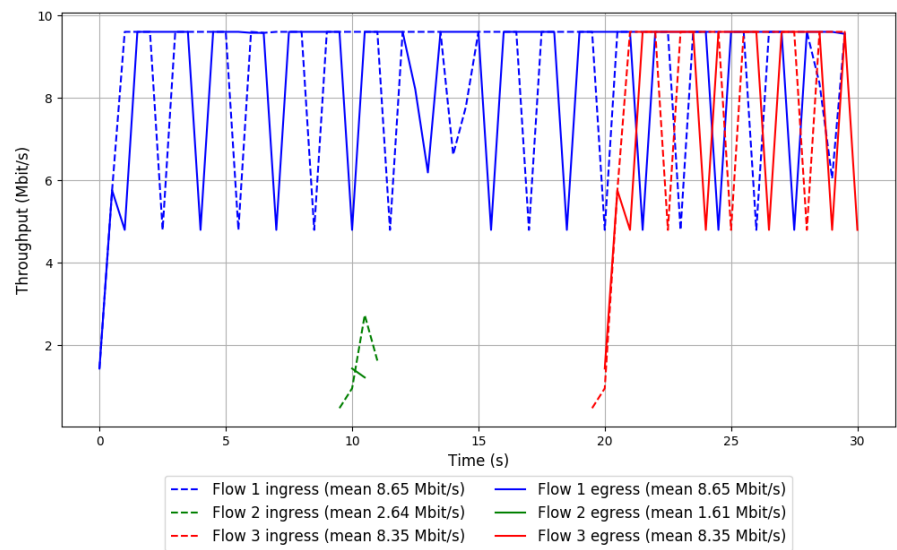
-- Flow 3:

Average throughput: 8.35 Mbit/s

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

Loss rate: 0.00%

Run 10: Report of Saturator — Data Link

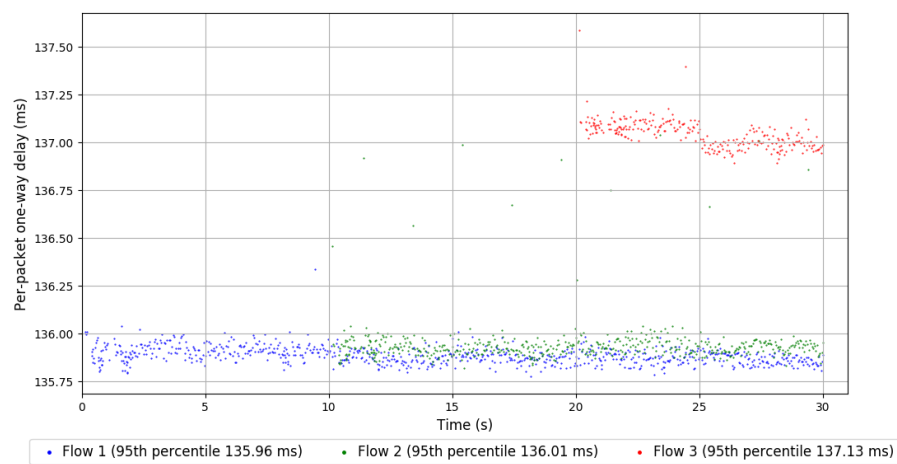
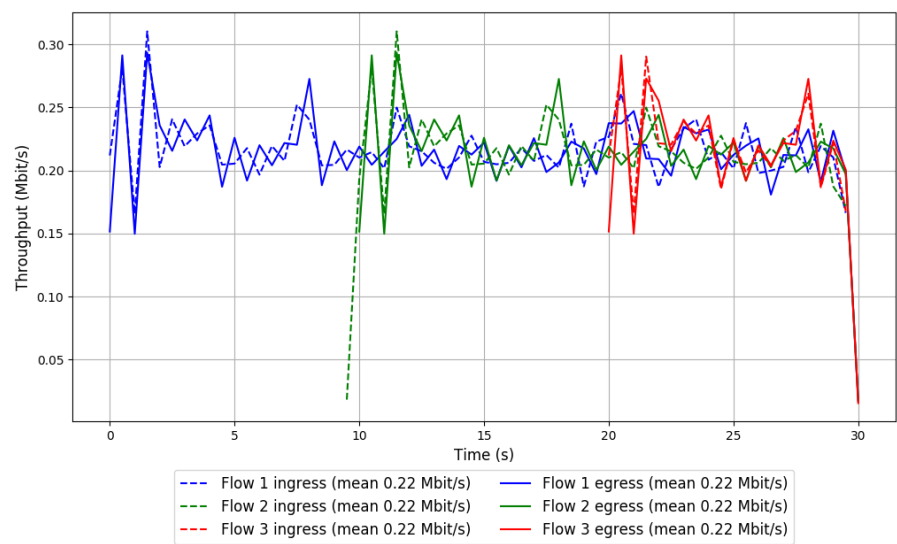


```
Run 1: Statistics of SReAM

Start at: 2017-08-12 14:55:04
End at: 2017-08-12 14:55:34

# Below is generated by plot.py at 2017-08-12 18:20:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 137.081 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.964 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.012 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.130 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link



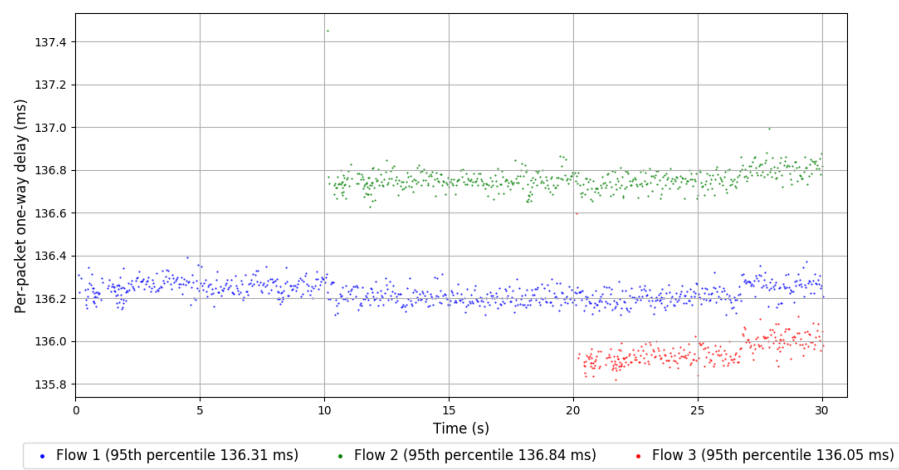
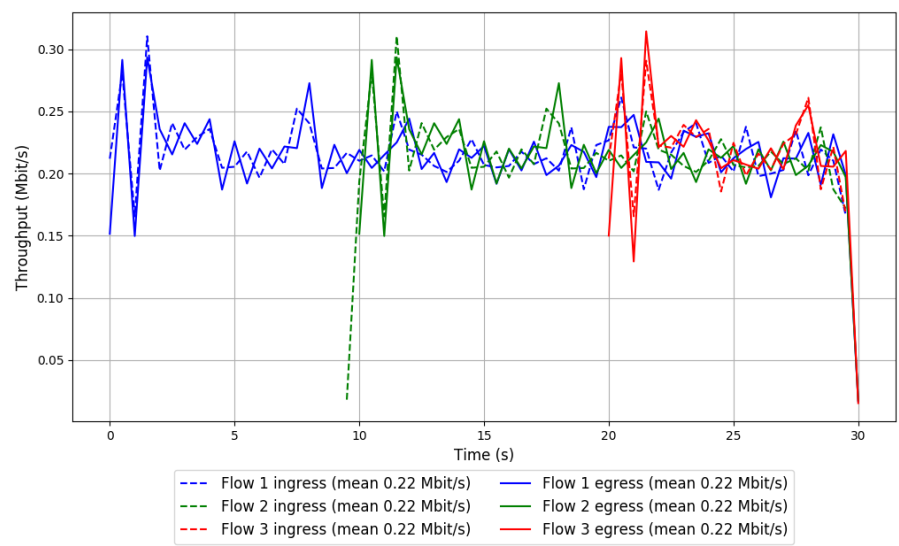
```
Run 2: Statistics of SReAM

Start at: 2017-08-12 15:08:21
End at: 2017-08-12 15:08:51

# Below is generated by plot.py at 2017-08-12 18:20:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 136.799 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.306 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.835 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.052 ms
Loss rate: 0.00%
```



Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2017-08-12 15:21:57

End at: 2017-08-12 15:22:27

# Below is generated by plot.py at 2017-08-12 18:20:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 137.216 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.236 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.863 ms

Loss rate: 0.00%

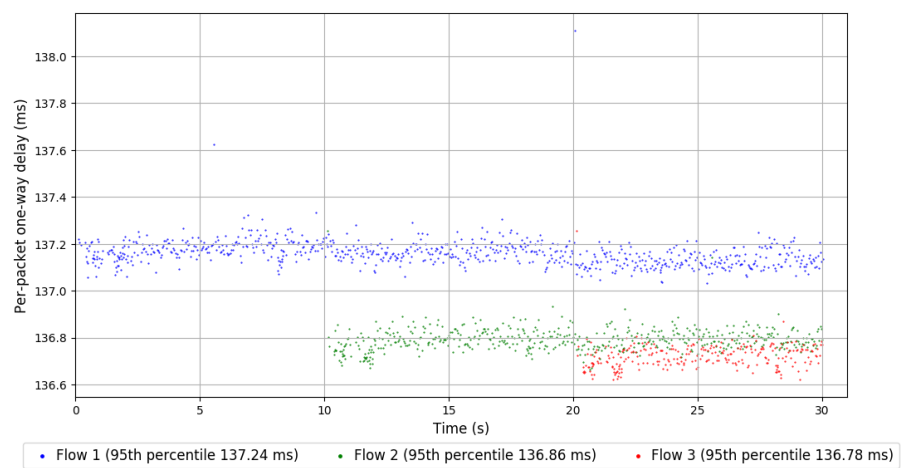
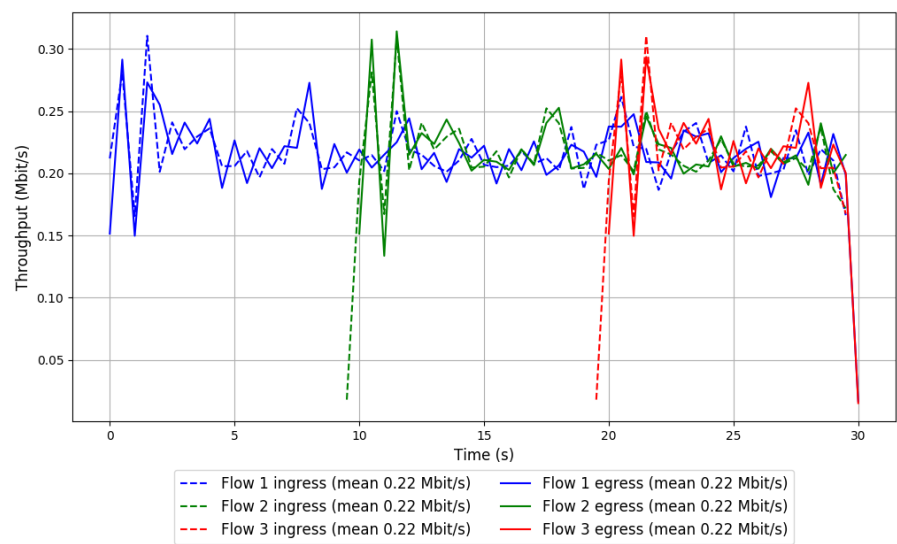
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.781 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SReAM

Start at: 2017-08-12 15:35:27

End at: 2017-08-12 15:35:57

# Below is generated by plot.py at 2017-08-12 18:20:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 137.322 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.334 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.319 ms

Loss rate: 0.00%

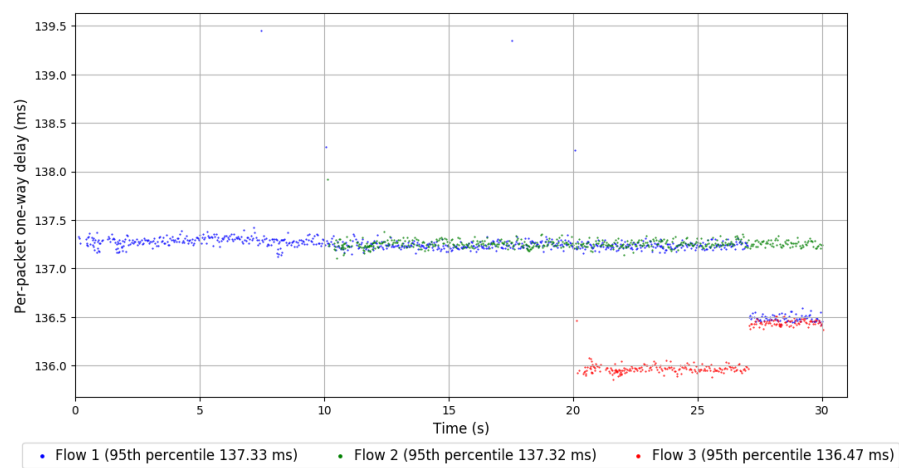
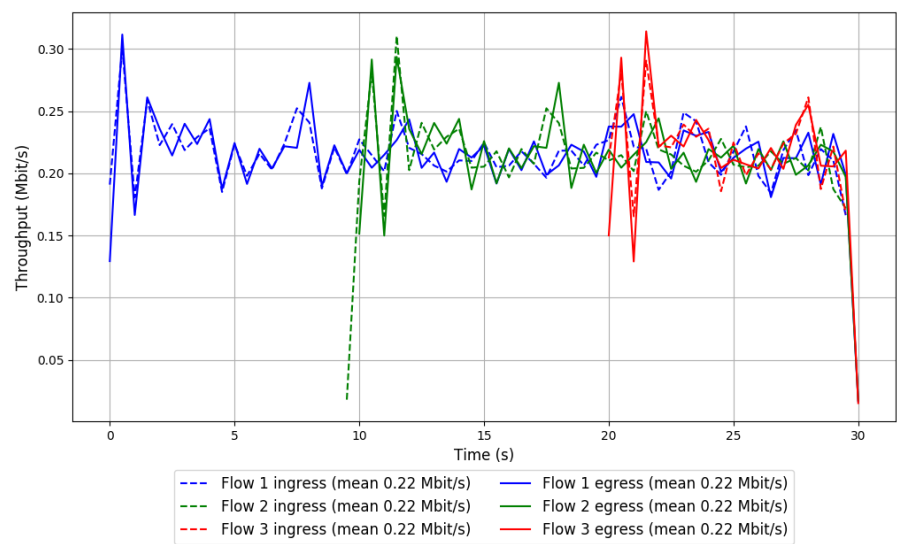
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.468 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2017-08-12 15:48:44

End at: 2017-08-12 15:49:14

# Below is generated by plot.py at 2017-08-12 18:20:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 136.571 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.584 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.256 ms

Loss rate: 0.00%

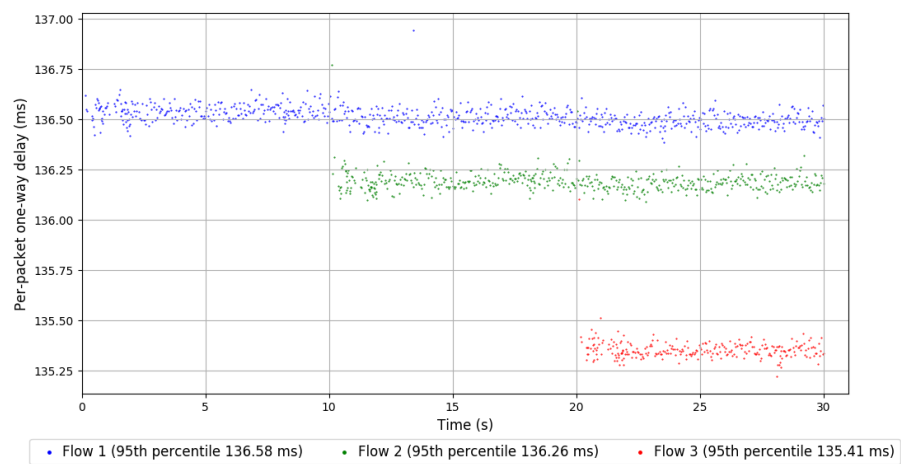
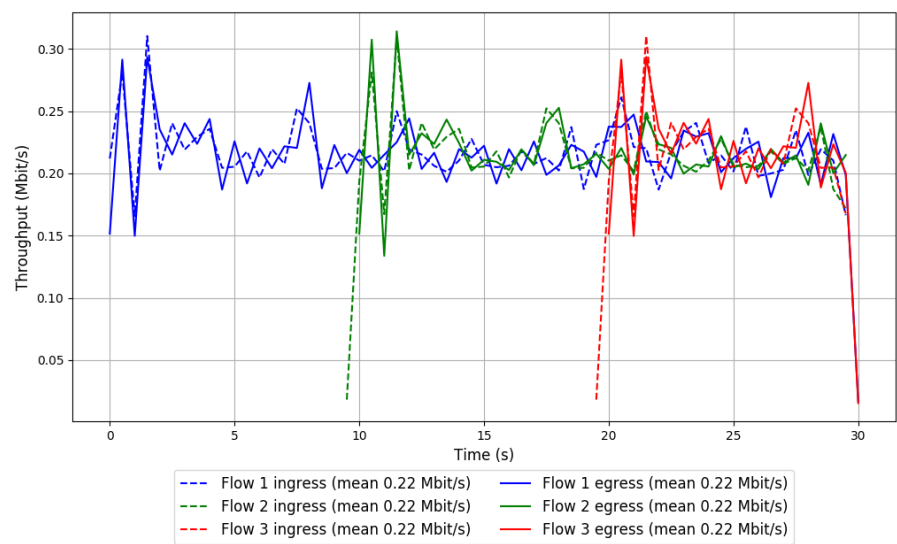
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.412 ms

Loss rate: 0.00%

Run 5: Report of SCSReAM — Data Link



Run 6: Statistics of SReAM

Start at: 2017-08-12 16:02:06

End at: 2017-08-12 16:02:36

# Below is generated by plot.py at 2017-08-12 18:20:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 137.988 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 137.366 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 138.017 ms

Loss rate: 0.00%

-- Flow 3:

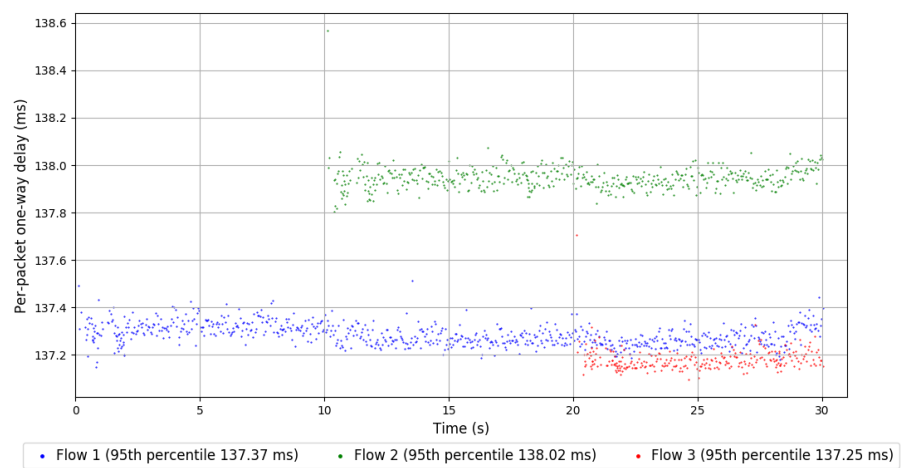
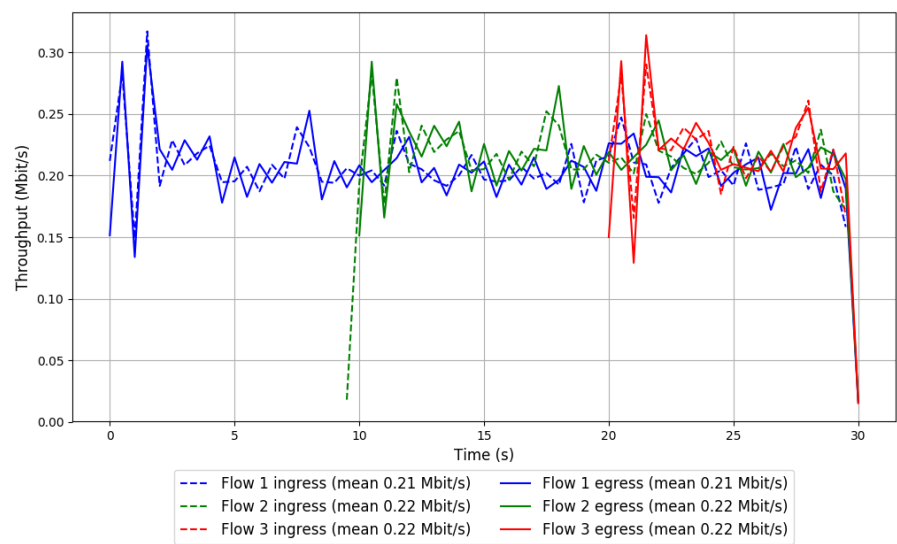
Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.246 ms

Loss rate: 0.00%



Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2017-08-12 16:15:37

End at: 2017-08-12 16:16:07

# Below is generated by plot.py at 2017-08-12 18:20:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 137.236 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.532 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.260 ms

Loss rate: 0.00%

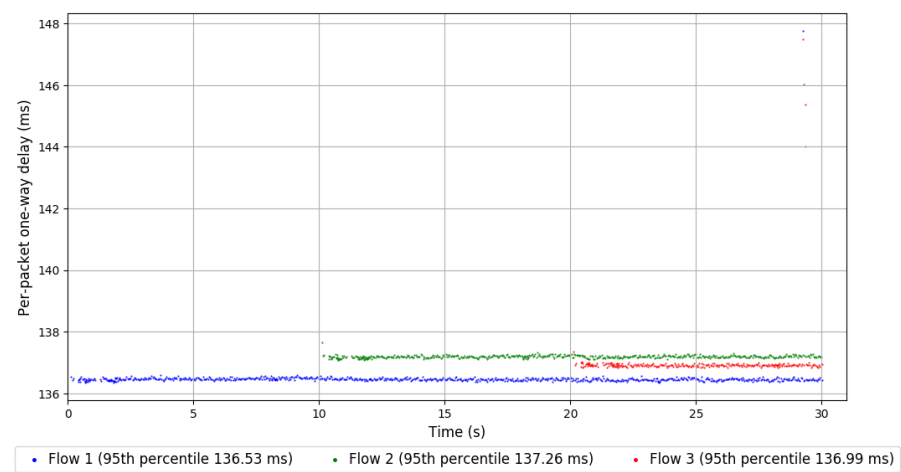
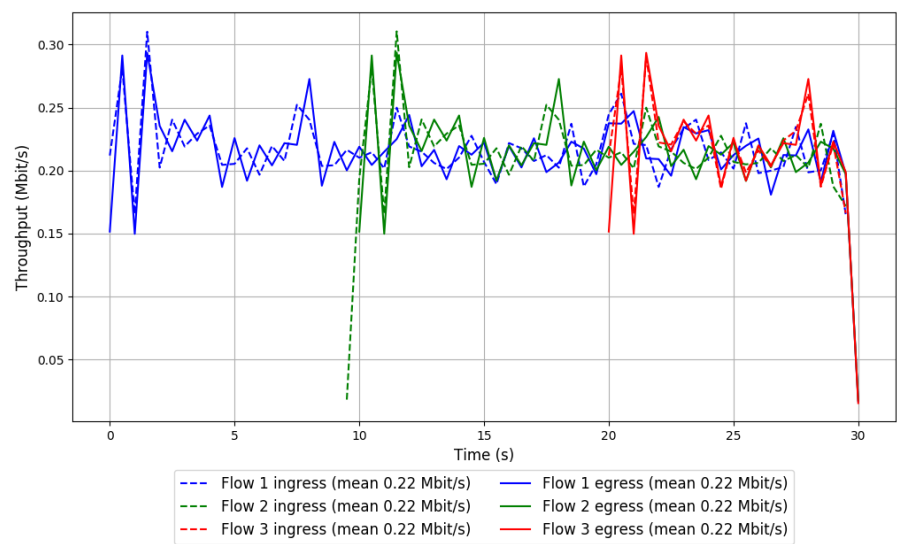
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.985 ms

Loss rate: 0.00%

Run 7: Report of SCSReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2017-08-12 16:29:20

End at: 2017-08-12 16:29:50

# Below is generated by plot.py at 2017-08-12 18:20:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 137.757 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.072 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.182 ms

Loss rate: 0.00%

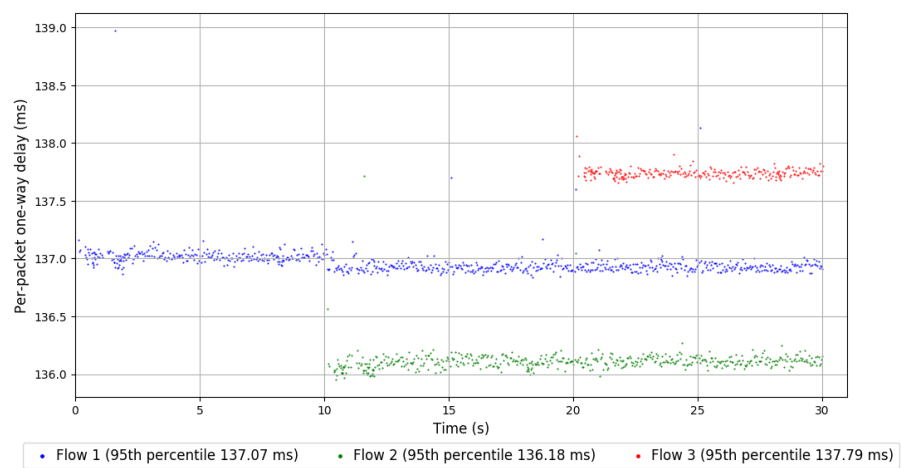
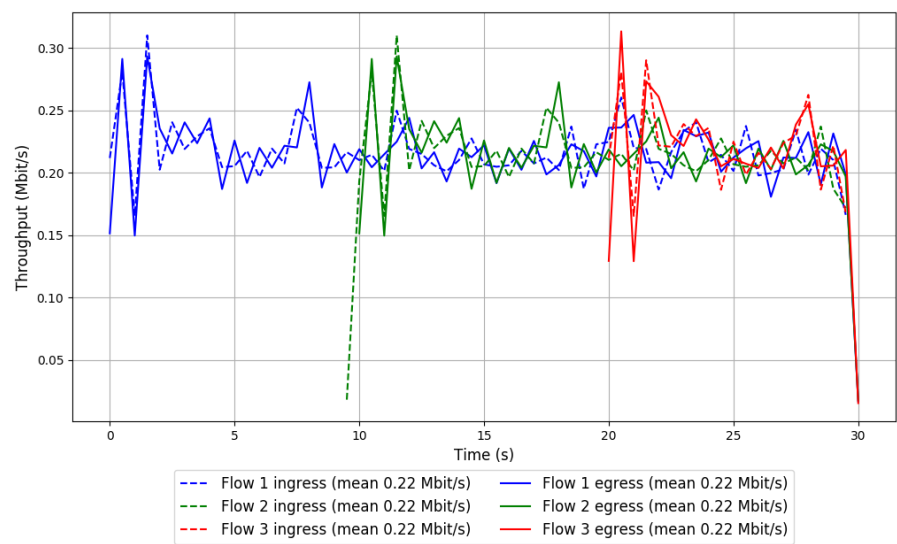
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.795 ms

Loss rate: 0.00%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2017-08-12 16:42:34

End at: 2017-08-12 16:43:04

# Below is generated by plot.py at 2017-08-12 18:20:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.27 Mbit/s

95th percentile per-packet one-way delay: 137.181 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 5228.404 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.171 ms

Loss rate: 0.00%

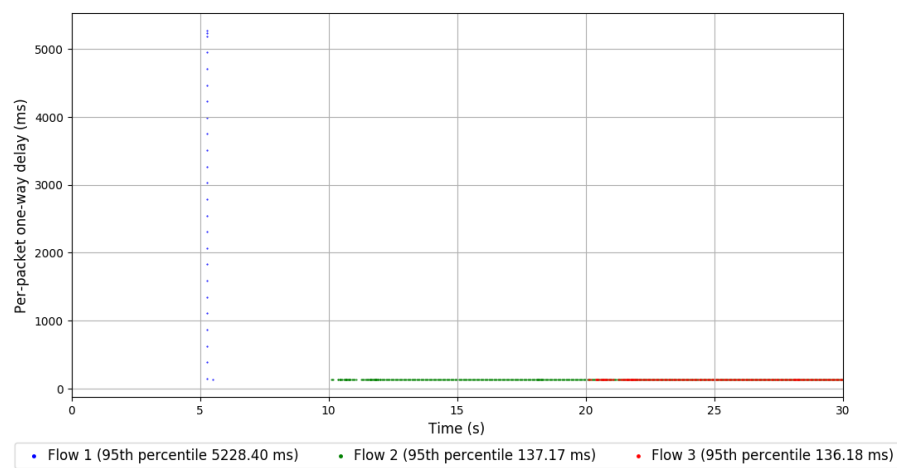
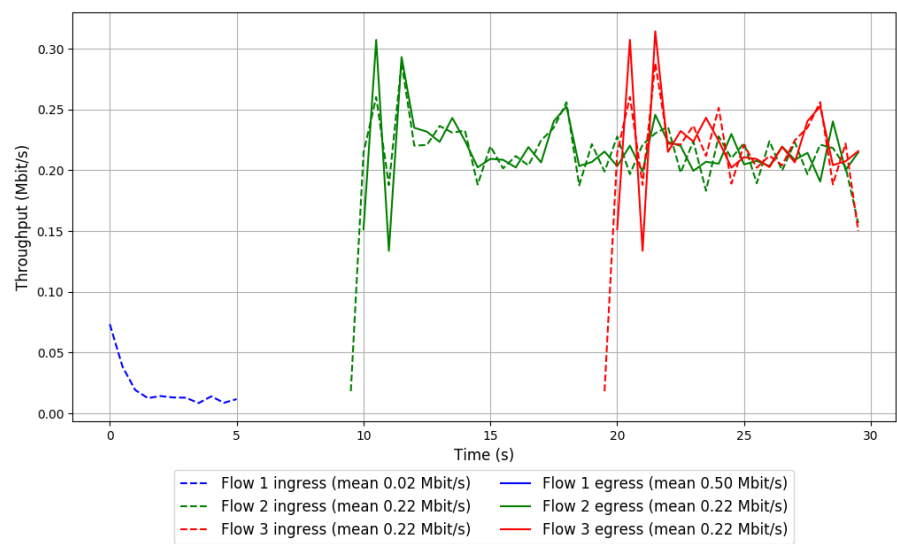
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.183 ms

Loss rate: 0.00%

Run 9: Report of SReAM — Data Link



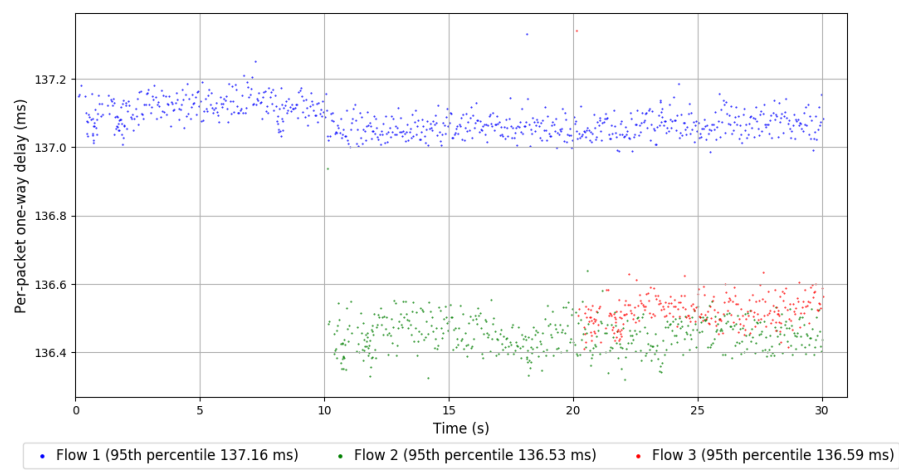
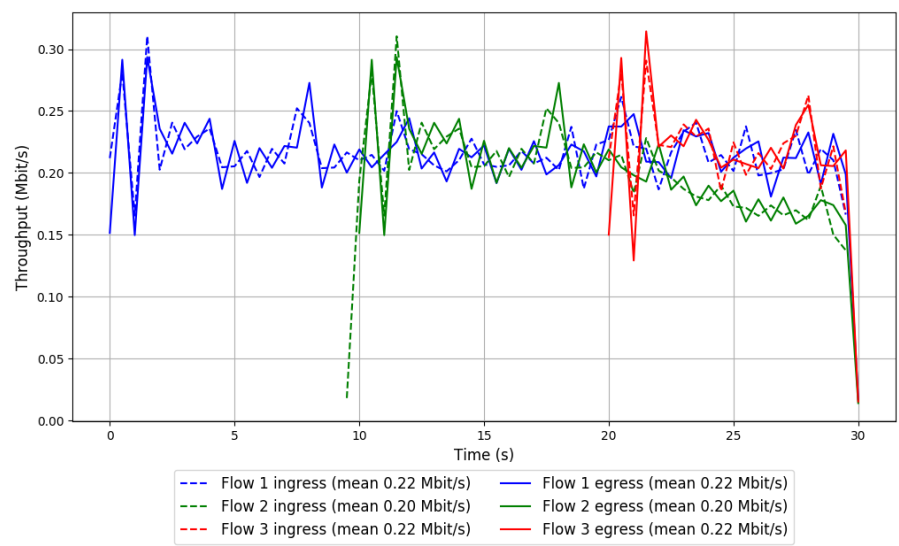
```
Run 10: Statistics of SReAM

Start at: 2017-08-12 16:55:31
End at: 2017-08-12 16:56:01

# Below is generated by plot.py at 2017-08-12 18:20:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 137.139 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.155 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 136.530 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.591 ms
Loss rate: 0.00%
```



Run 10: Report of SCReAM — Data Link

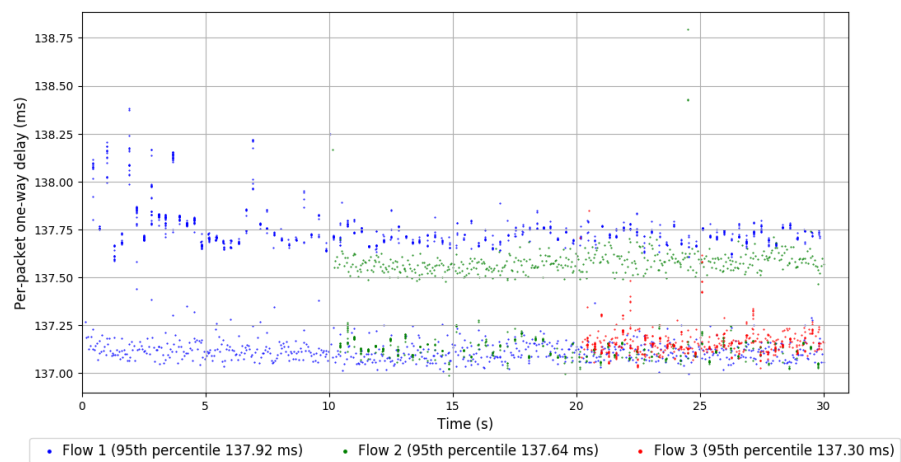
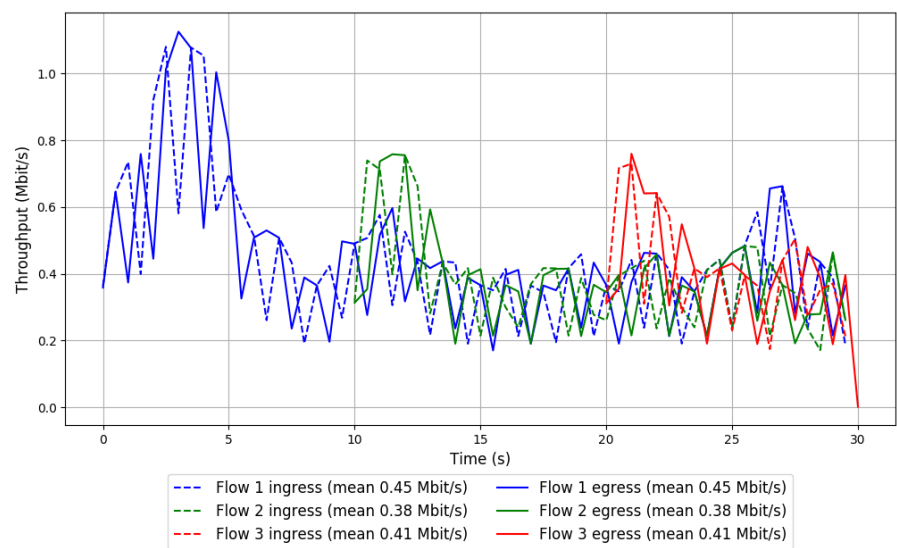


```
Run 1: Statistics of Sprout

Start at: 2017-08-12 14:54:15
End at: 2017-08-12 14:54:45

# Below is generated by plot.py at 2017-08-12 18:20:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 137.819 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 137.922 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 137.642 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 137.301 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-08-12 15:07:33

End at: 2017-08-12 15:08:03

# Below is generated by plot.py at 2017-08-12 18:20:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 137.199 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 136.827 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 137.231 ms

Loss rate: 0.00%

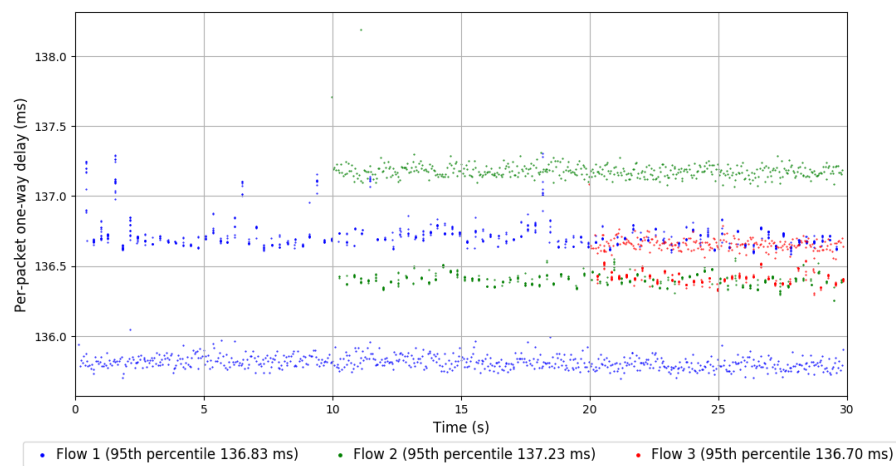
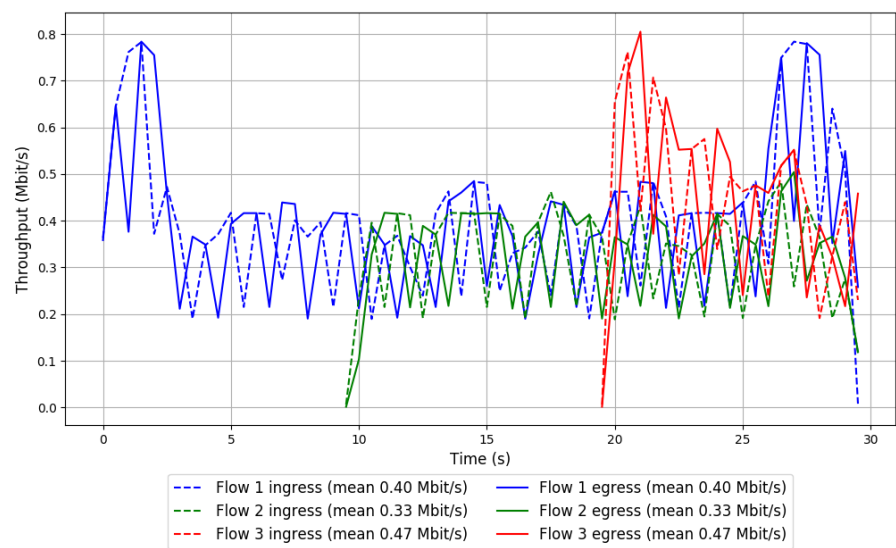
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 136.701 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-08-12 15:21:08

End at: 2017-08-12 15:21:38

# Below is generated by plot.py at 2017-08-12 18:20:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.93 Mbit/s

95th percentile per-packet one-way delay: 137.075 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 136.700 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 136.573 ms

Loss rate: 0.00%

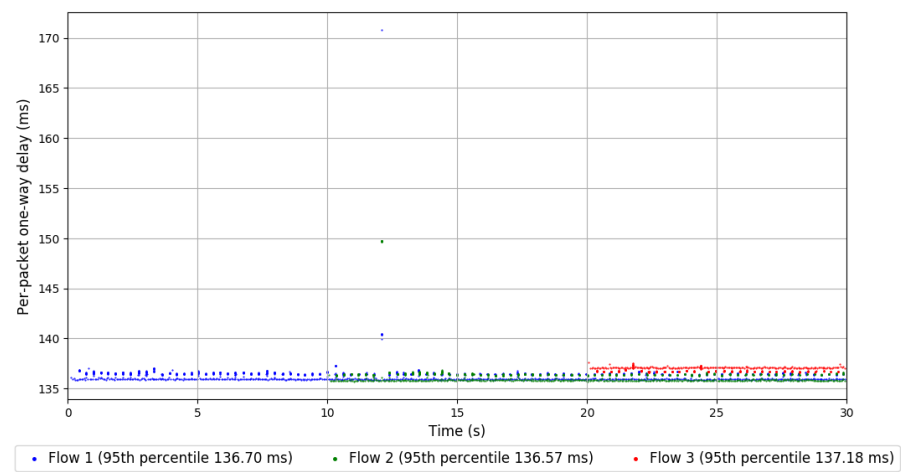
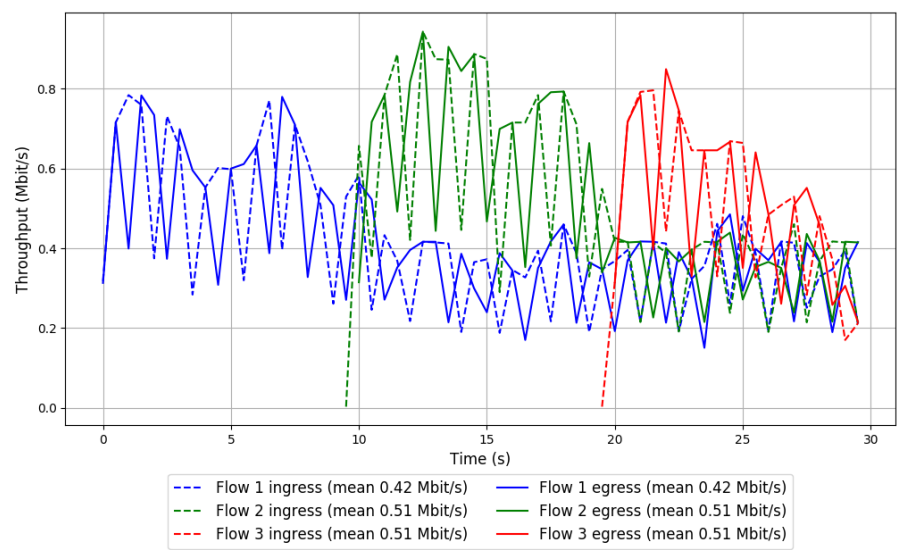
-- Flow 3:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 137.176 ms

Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-08-12 15:34:38

End at: 2017-08-12 15:35:08

# Below is generated by plot.py at 2017-08-12 18:20:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 137.269 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 137.242 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 137.275 ms

Loss rate: 0.00%

-- Flow 3:

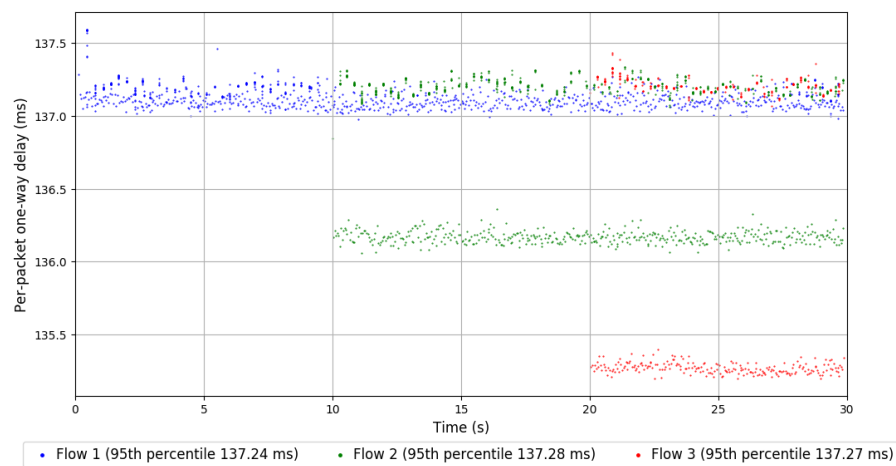
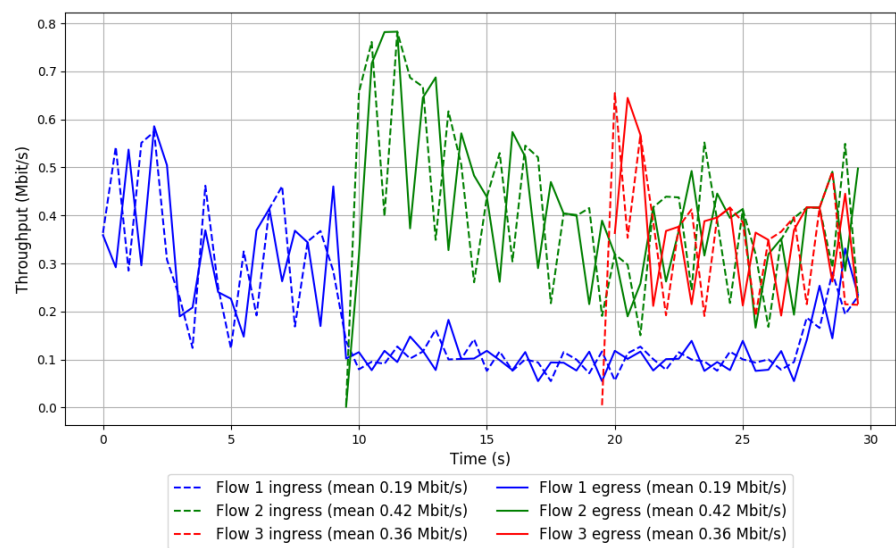
Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 137.271 ms

Loss rate: 0.00%



Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-08-12 15:47:56

End at: 2017-08-12 15:48:26

# Below is generated by plot.py at 2017-08-12 18:20:52

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 137.356 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 137.374 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 137.365 ms

Loss rate: 0.00%

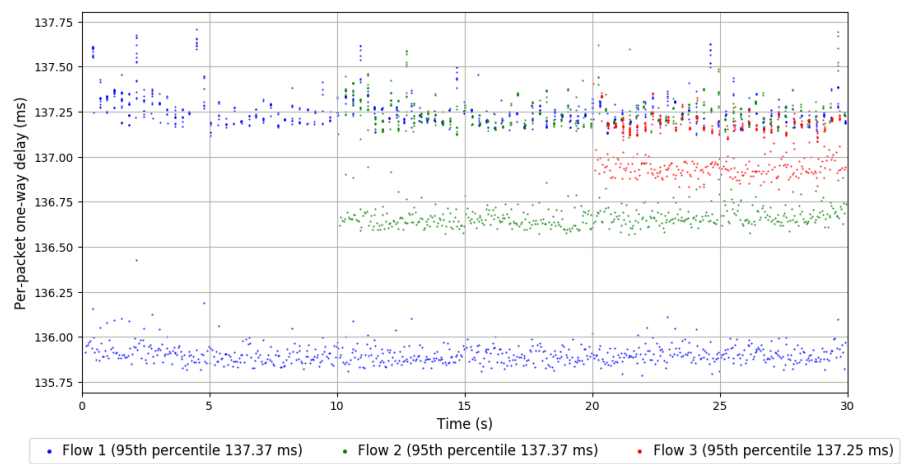
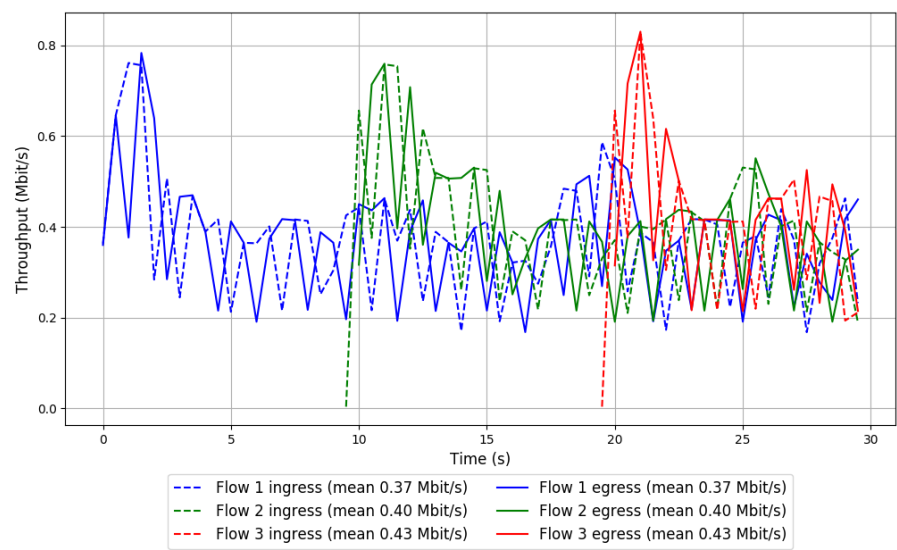
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 137.253 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-08-12 16:01:17

End at: 2017-08-12 16:01:47

# Below is generated by plot.py at 2017-08-12 18:20:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.85 Mbit/s

95th percentile per-packet one-way delay: 137.437 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 137.479 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 137.440 ms

Loss rate: 0.01%

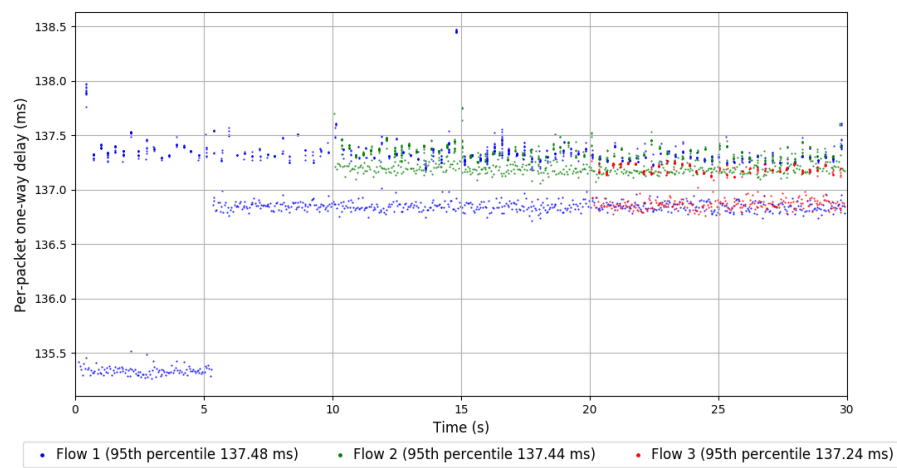
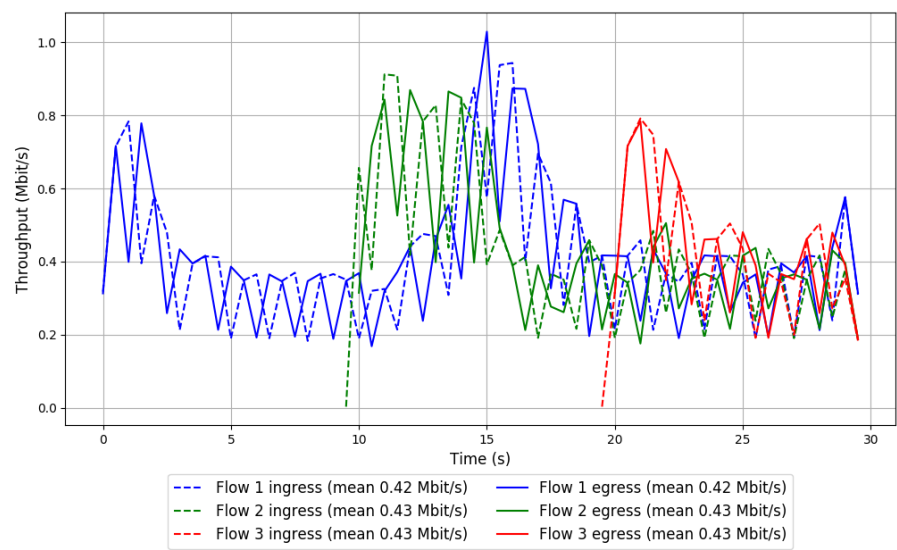
-- Flow 3:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.00%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-08-12 16:14:48

End at: 2017-08-12 16:15:18

# Below is generated by plot.py at 2017-08-12 18:20:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.91 Mbit/s

95th percentile per-packet one-way delay: 137.068 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.52 Mbit/s

95th percentile per-packet one-way delay: 136.724 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 137.036 ms

Loss rate: 0.00%

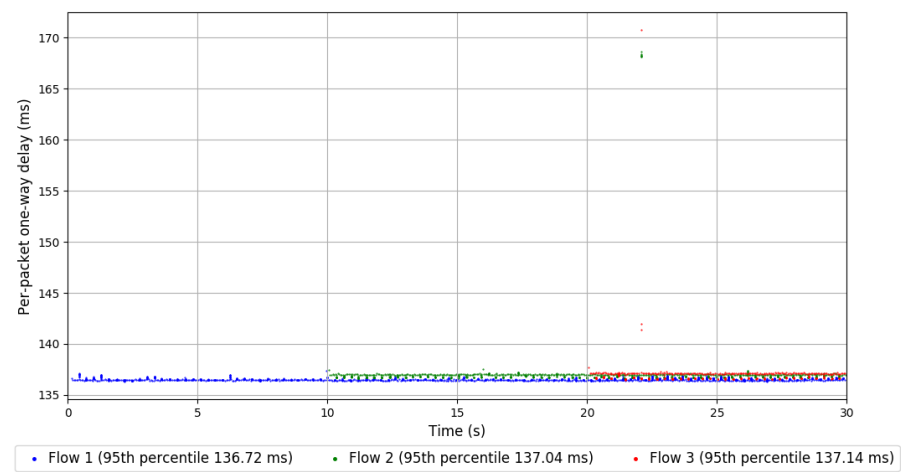
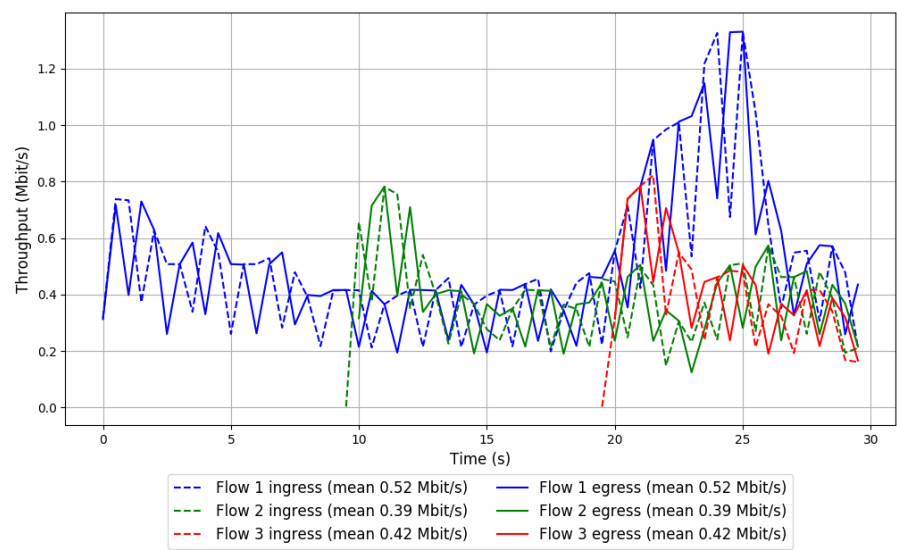
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 137.136 ms

Loss rate: 0.00%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-08-12 16:28:32

End at: 2017-08-12 16:29:02

# Below is generated by plot.py at 2017-08-12 18:20:55

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.93 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 136.846 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.47 Mbit/s

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

Loss rate: 0.00%

-- Flow 3:

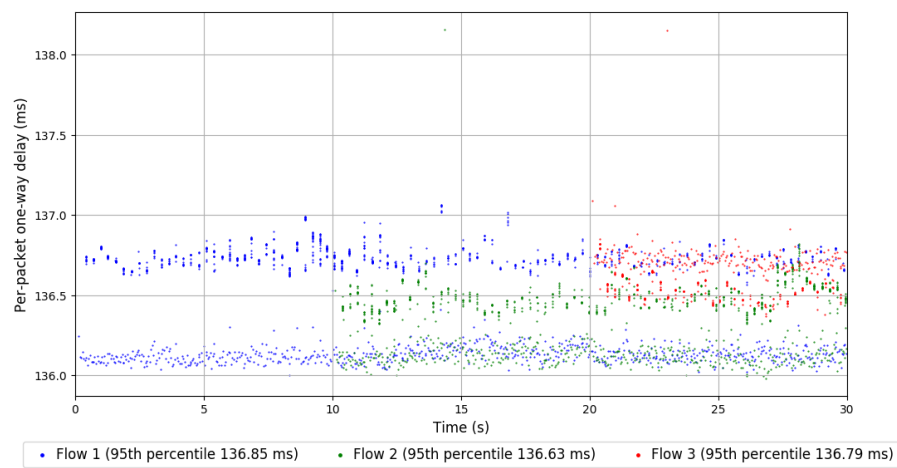
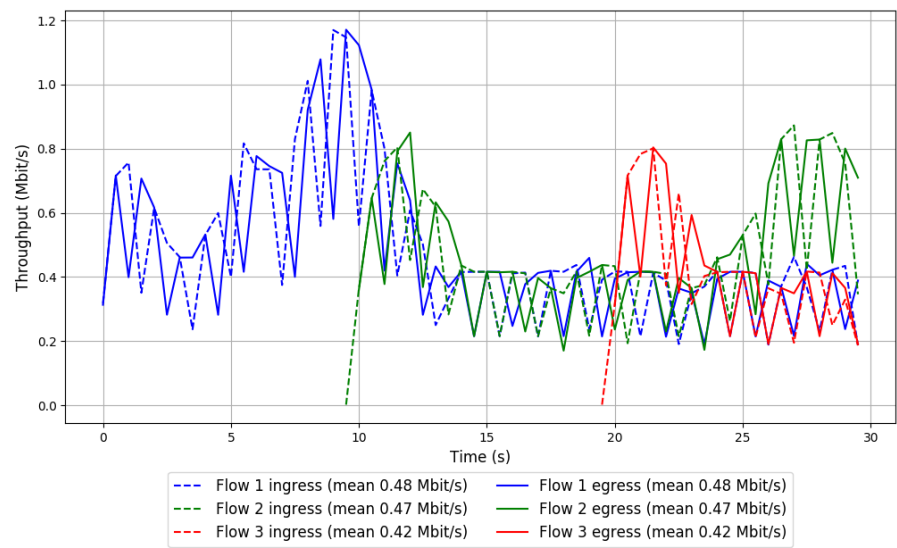
Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 136.787 ms

Loss rate: 0.00%



Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-08-12 16:41:45

End at: 2017-08-12 16:42:15

# Below is generated by plot.py at 2017-08-12 18:20:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 137.781 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 137.757 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 137.746 ms

Loss rate: 0.00%

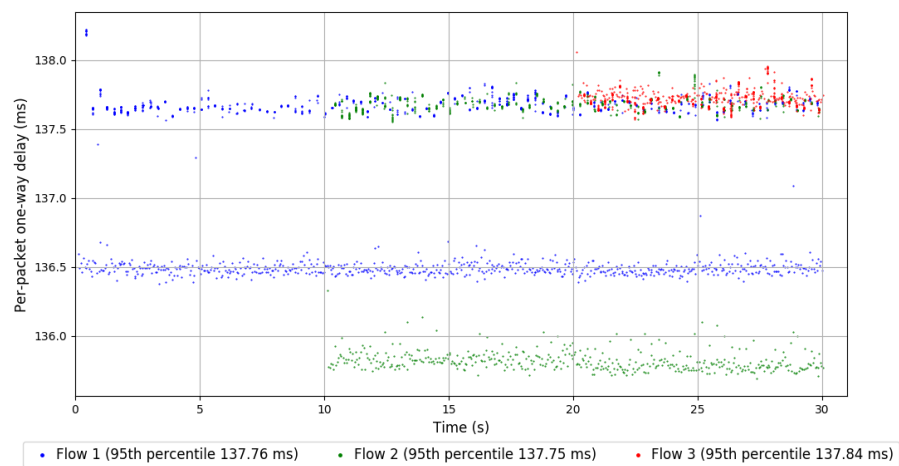
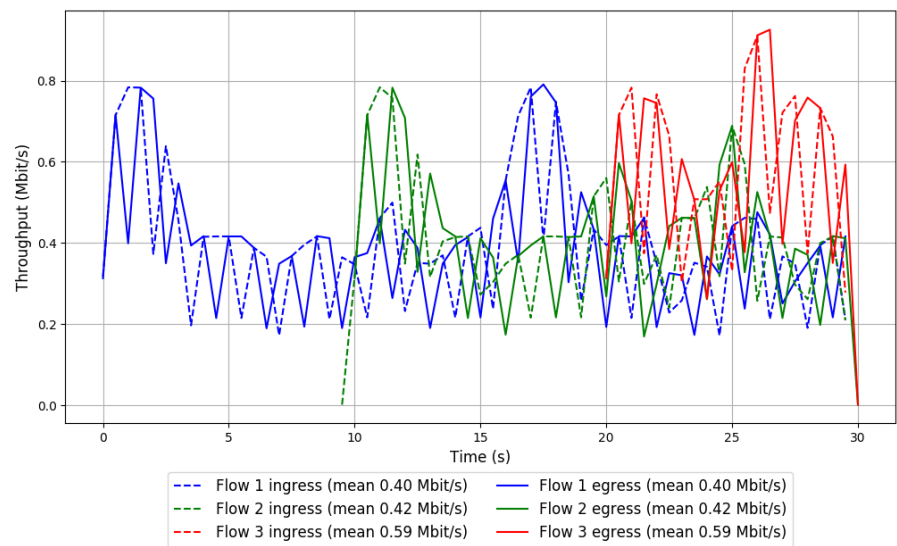
-- Flow 3:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 137.842 ms

Loss rate: 0.00%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-08-12 16:54:42

End at: 2017-08-12 16:55:12

# Below is generated by plot.py at 2017-08-12 18:20:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.76 Mbit/s

95th percentile per-packet one-way delay: 137.748 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 137.746 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 137.761 ms

Loss rate: 0.00%

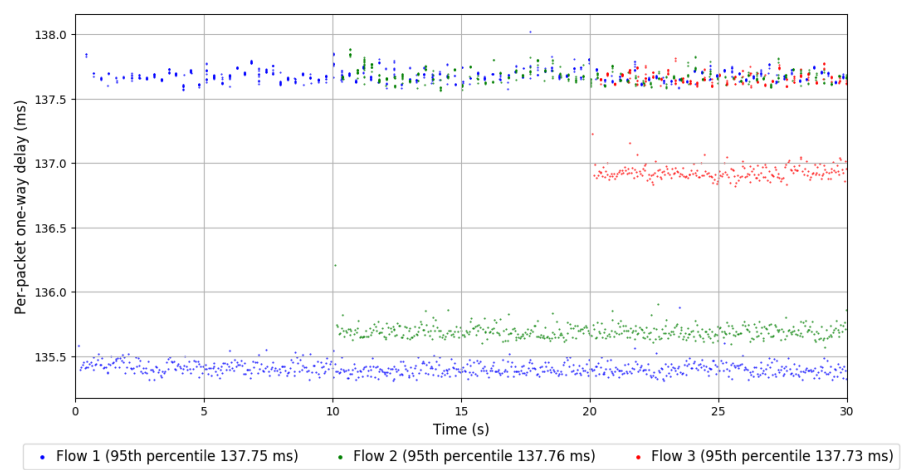
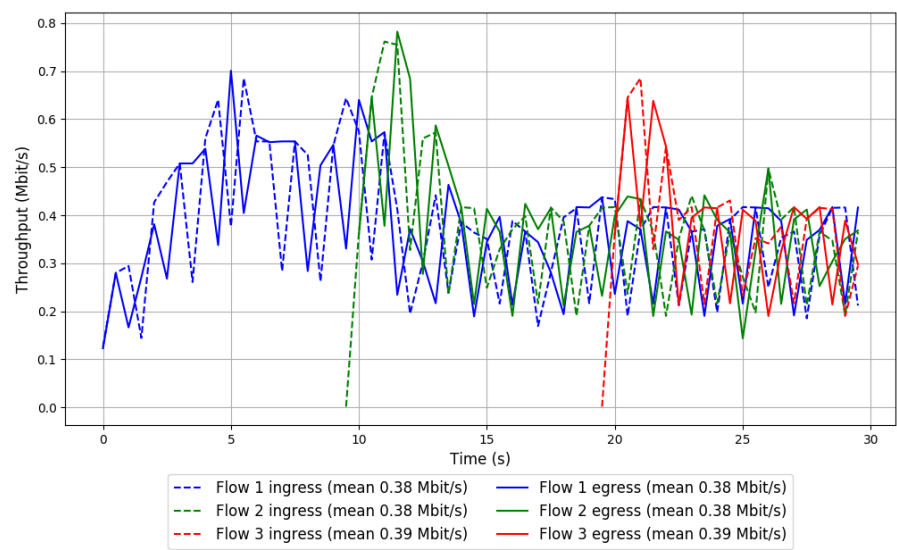
-- Flow 3:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 137.730 ms

Loss rate: 0.00%

Run 10: Report of Sprout — Data Link

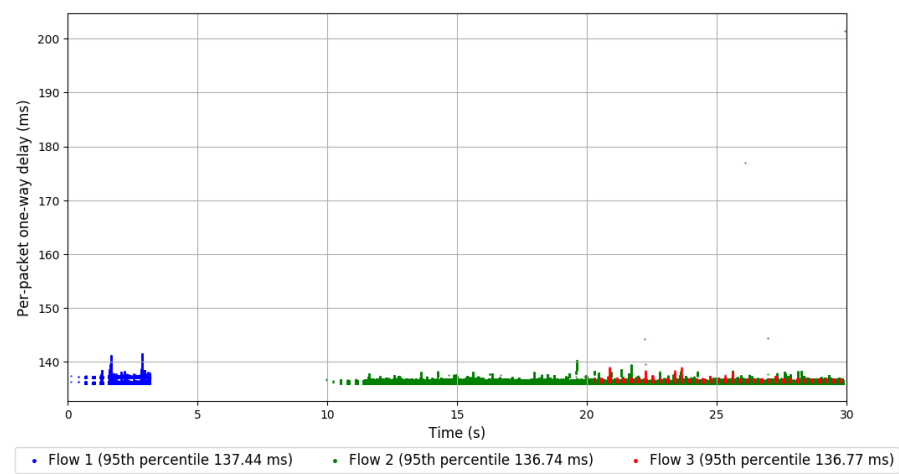
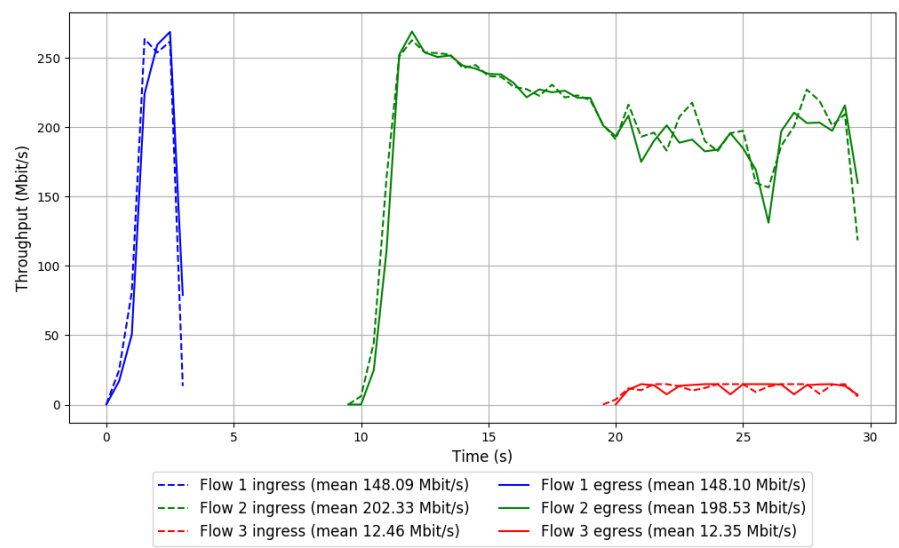


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-08-12 15:00:56
End at: 2017-08-12 15:01:26

# Below is generated by plot.py at 2017-08-12 18:21:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 152.26 Mbit/s
95th percentile per-packet one-way delay: 137.100 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 148.10 Mbit/s
95th percentile per-packet one-way delay: 137.435 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 198.53 Mbit/s
95th percentile per-packet one-way delay: 136.744 ms
Loss rate: 1.73%
-- Flow 3:
Average throughput: 12.35 Mbit/s
95th percentile per-packet one-way delay: 136.771 ms
Loss rate: 0.88%
```

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



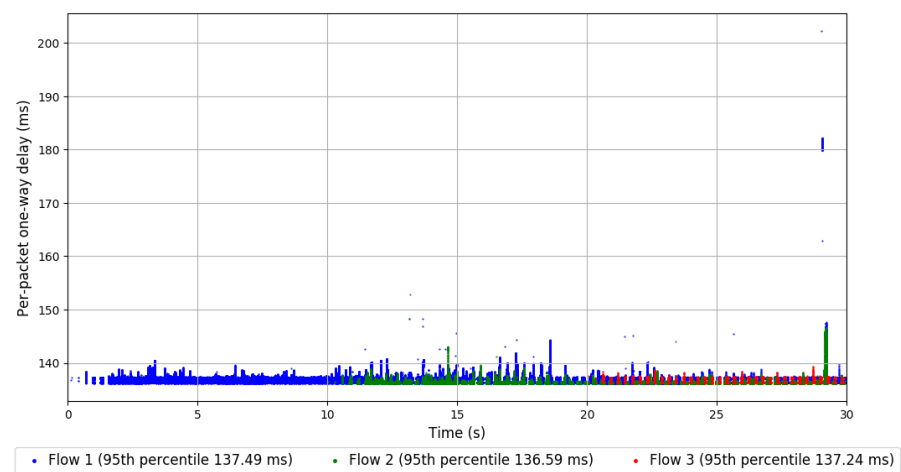
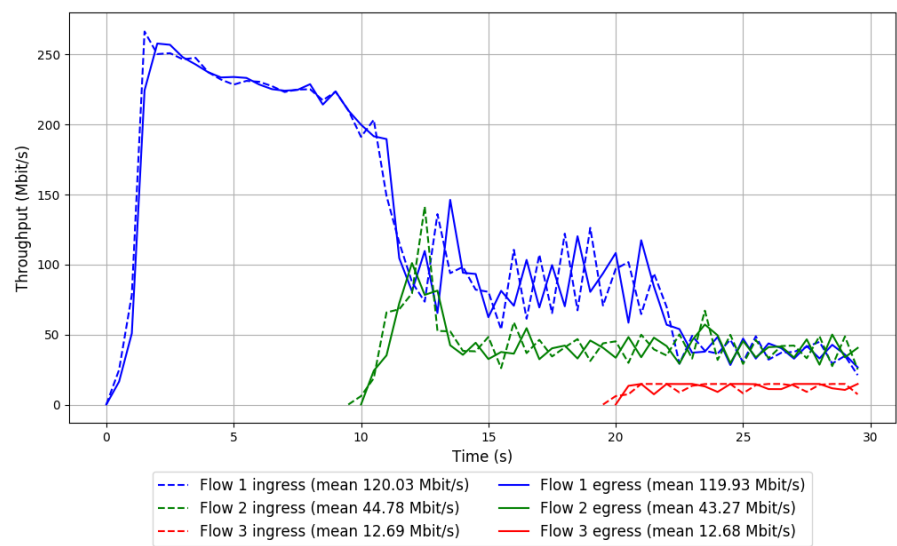
```
Run 2: Statistics of TaoVA-100x

Start at: 2017-08-12 15:14:17
End at: 2017-08-12 15:14:47

# Below is generated by plot.py at 2017-08-12 18:21:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 152.96 Mbit/s
95th percentile per-packet one-way delay: 137.334 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 119.93 Mbit/s
95th percentile per-packet one-way delay: 137.488 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 43.27 Mbit/s
95th percentile per-packet one-way delay: 136.591 ms
Loss rate: 3.37%
-- Flow 3:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 137.241 ms
Loss rate: 0.02%
```



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



Run 3: Statistics of TaoVA-100x

Start at: 2017-08-12 15:28:09

End at: 2017-08-12 15:28:39

# Below is generated by plot.py at 2017-08-12 18:22:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 189.21 Mbit/s

95th percentile per-packet one-way delay: 137.140 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 175.49 Mbit/s

95th percentile per-packet one-way delay: 136.738 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 136.401 ms

Loss rate: 90.92%

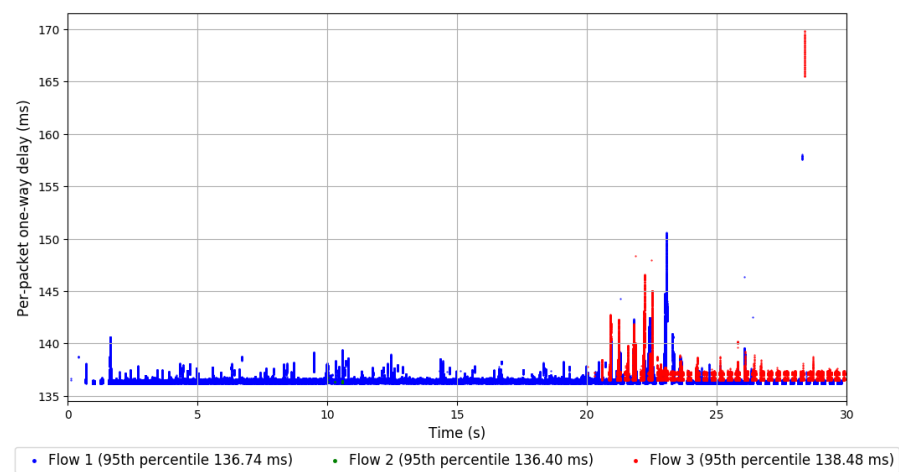
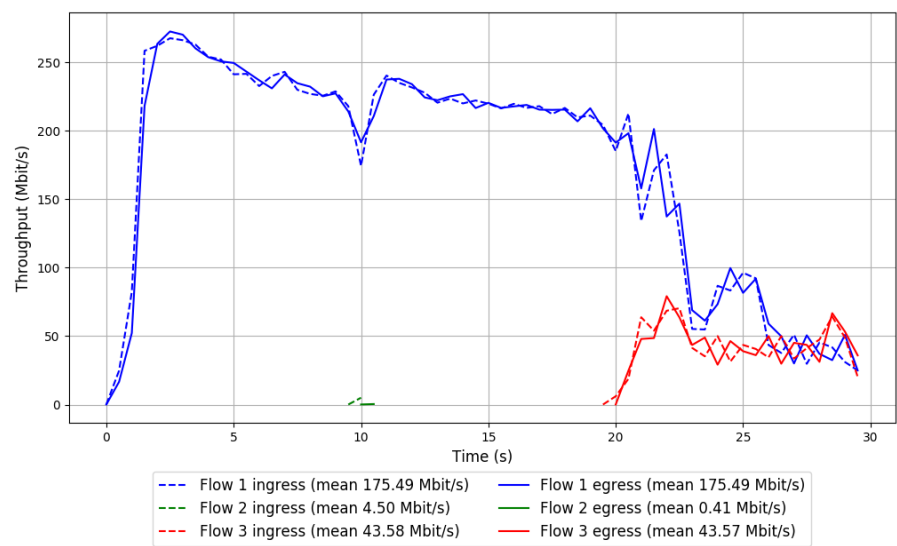
-- Flow 3:

Average throughput: 43.57 Mbit/s

95th percentile per-packet one-way delay: 138.483 ms

Loss rate: 0.11%

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

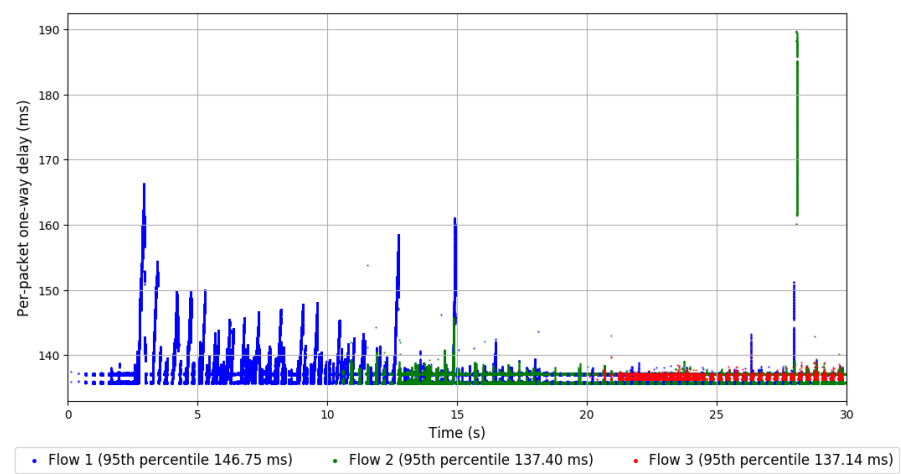
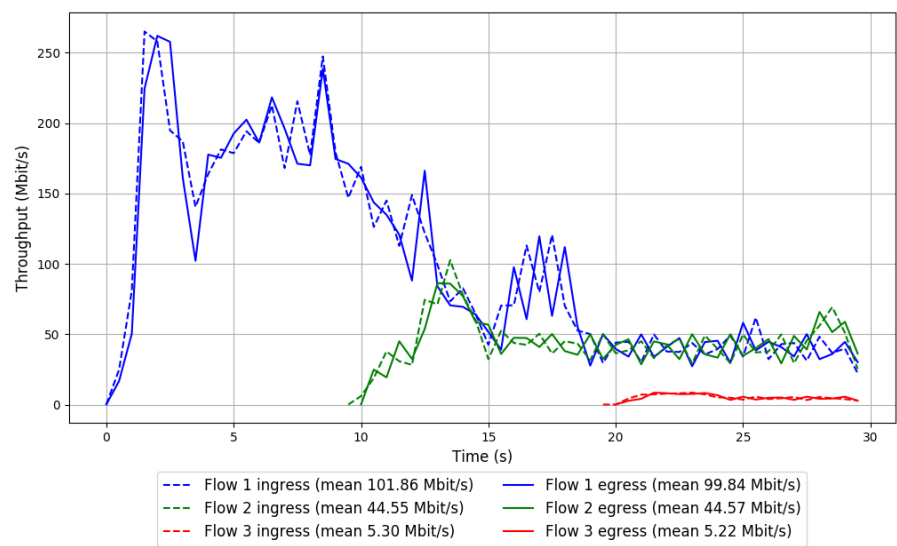


```
Run 4: Statistics of TaoVA-100x

Start at: 2017-08-12 15:41:18
End at: 2017-08-12 15:41:48

# Below is generated by plot.py at 2017-08-12 18:22:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 130.92 Mbit/s
95th percentile per-packet one-way delay: 145.383 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 99.84 Mbit/s
95th percentile per-packet one-way delay: 146.745 ms
Loss rate: 1.98%
-- Flow 2:
Average throughput: 44.57 Mbit/s
95th percentile per-packet one-way delay: 137.398 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.22 Mbit/s
95th percentile per-packet one-way delay: 137.144 ms
Loss rate: 1.63%
```

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



Run 5: Statistics of TaoVA-100x

Start at: 2017-08-12 15:54:56

End at: 2017-08-12 15:55:26

# Below is generated by plot.py at 2017-08-12 18:22:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 20.46 Mbit/s

95th percentile per-packet one-way delay: 137.169 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 7.64 Mbit/s

95th percentile per-packet one-way delay: 137.169 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 12.95 Mbit/s

95th percentile per-packet one-way delay: 137.171 ms

Loss rate: 0.00%

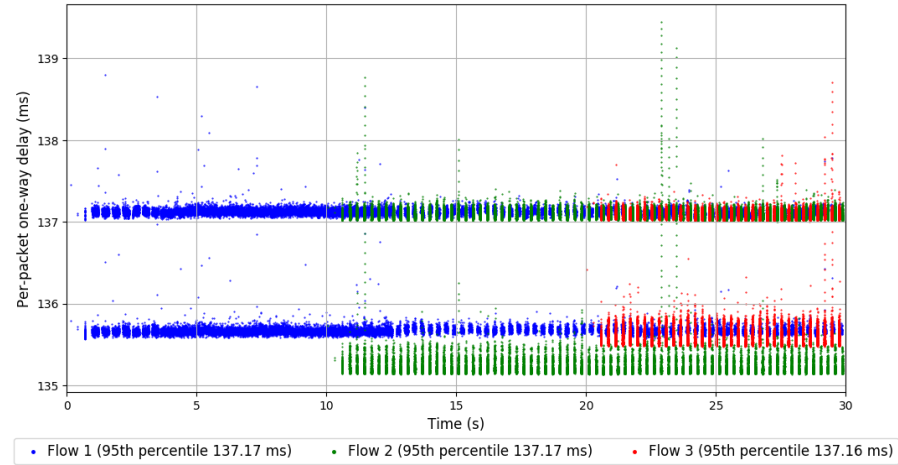
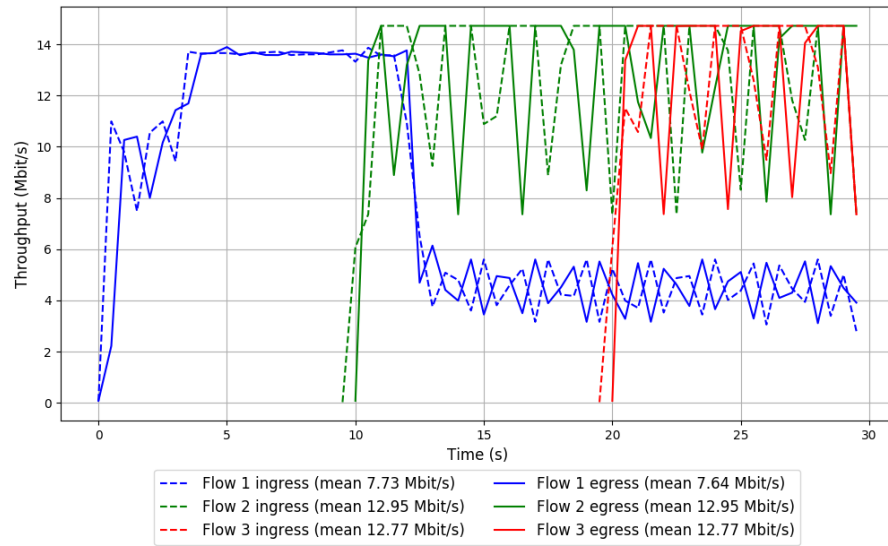
-- Flow 3:

Average throughput: 12.77 Mbit/s

95th percentile per-packet one-way delay: 137.160 ms

Loss rate: 0.00%

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



Run 6: Statistics of TaoVA-100x

Start at: 2017-08-12 16:08:03

End at: 2017-08-12 16:08:33

# Below is generated by plot.py at 2017-08-12 18:24:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 206.09 Mbit/s

95th percentile per-packet one-way delay: 137.700 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 192.72 Mbit/s

95th percentile per-packet one-way delay: 137.686 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 137.345 ms

Loss rate: 69.26%

-- Flow 3:

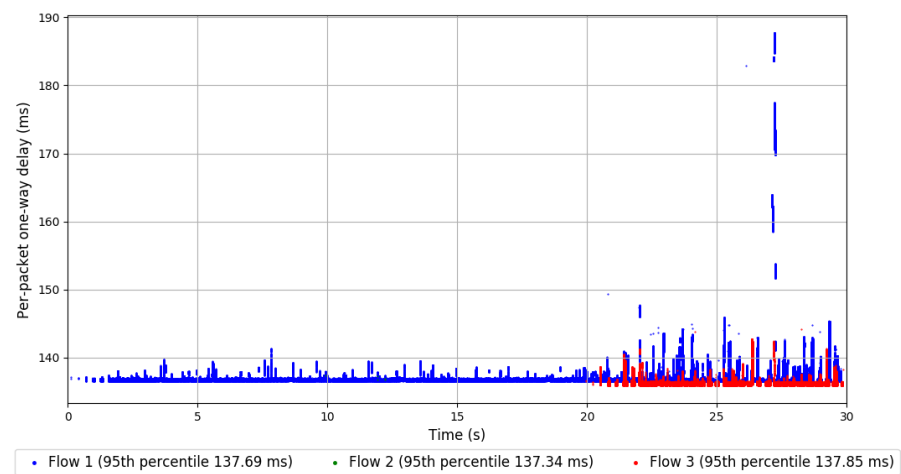
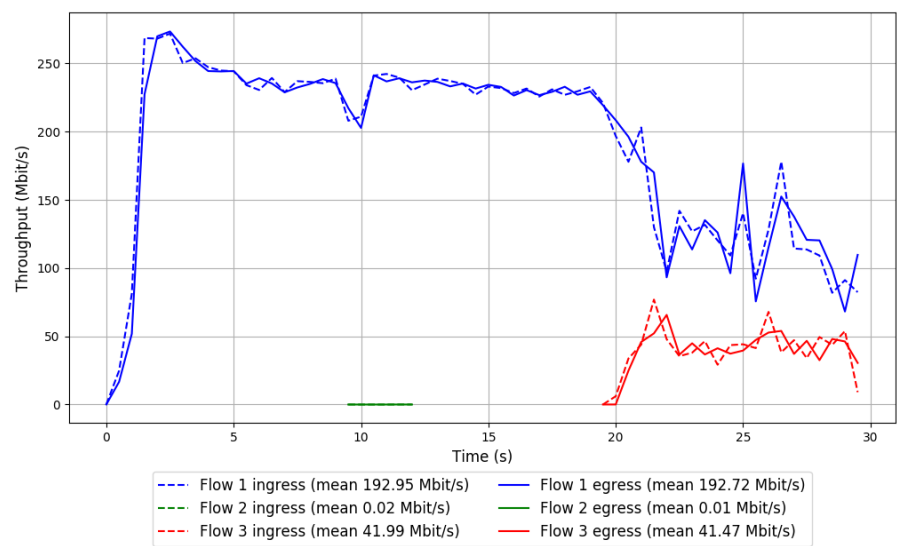
Average throughput: 41.47 Mbit/s

95th percentile per-packet one-way delay: 137.853 ms

Loss rate: 1.23%



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



Run 7: Statistics of TaoVA-100x

Start at: 2017-08-12 16:21:50

End at: 2017-08-12 16:22:20

# Below is generated by plot.py at 2017-08-12 18:24:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 102.91 Mbit/s

95th percentile per-packet one-way delay: 142.438 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 79.32 Mbit/s

95th percentile per-packet one-way delay: 143.897 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 12.42 Mbit/s

95th percentile per-packet one-way delay: 137.205 ms

Loss rate: 0.00%

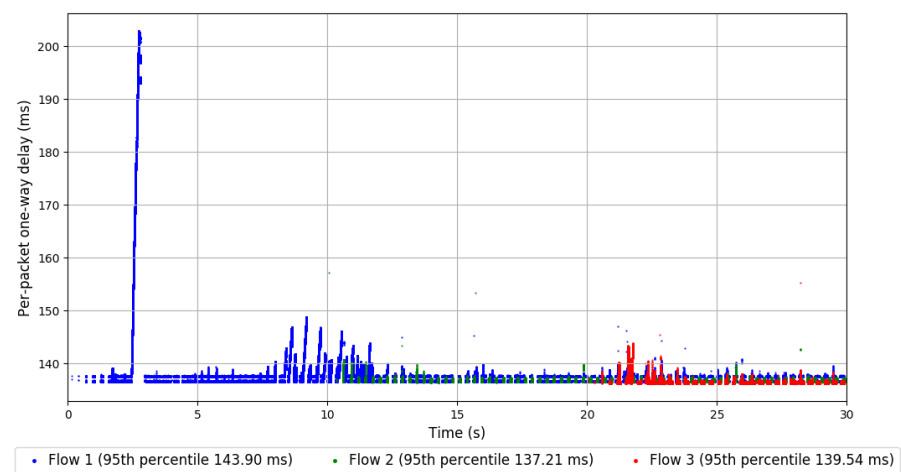
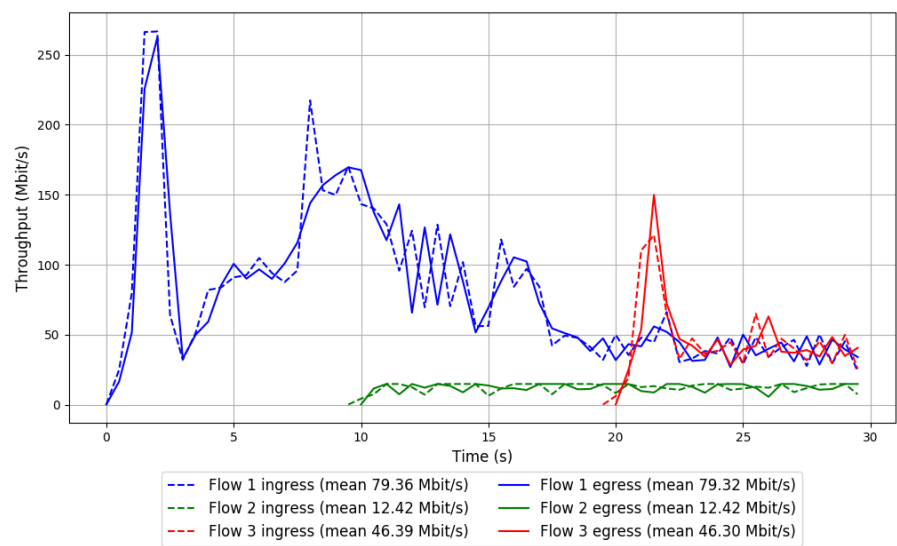
-- Flow 3:

Average throughput: 46.30 Mbit/s

95th percentile per-packet one-way delay: 139.539 ms

Loss rate: 0.20%

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



Run 8: Statistics of TaoVA-100x

Start at: 2017-08-12 16:35:21

End at: 2017-08-12 16:35:51

# Below is generated by plot.py at 2017-08-12 18:24:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 99.52 Mbit/s

95th percentile per-packet one-way delay: 137.220 ms

Loss rate: 3.62%

-- Flow 1:

Average throughput: 12.52 Mbit/s

95th percentile per-packet one-way delay: 137.066 ms

Loss rate: 2.42%

-- Flow 2:

Average throughput: 135.78 Mbit/s

95th percentile per-packet one-way delay: 137.228 ms

Loss rate: 3.85%

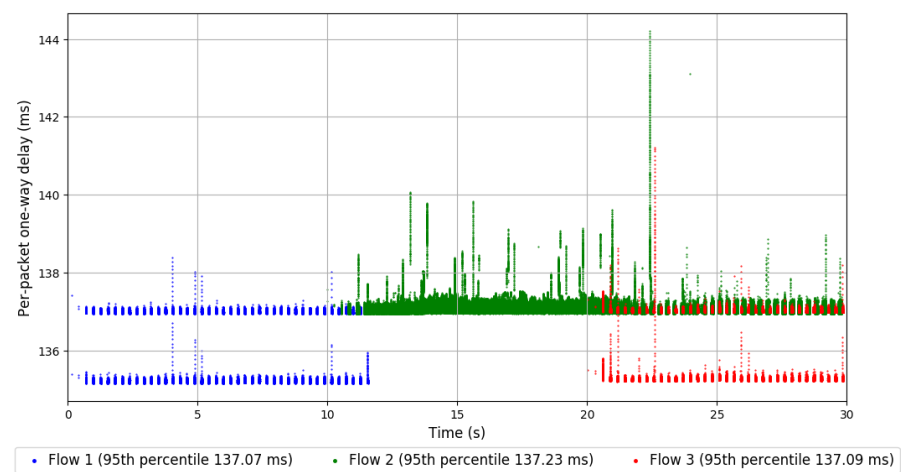
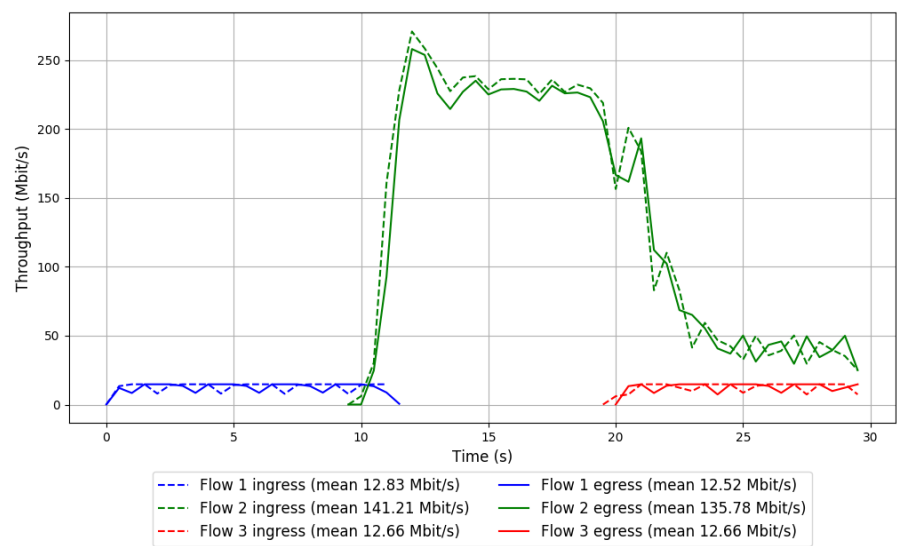
-- Flow 3:

Average throughput: 12.66 Mbit/s

95th percentile per-packet one-way delay: 137.090 ms

Loss rate: 0.00%

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



Run 9: Statistics of TaoVA-100x

Start at: 2017-08-12 16:48:22

End at: 2017-08-12 16:48:52

# Below is generated by plot.py at 2017-08-12 18:24:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 25.24 Mbit/s

95th percentile per-packet one-way delay: 137.623 ms

Loss rate: 2.36%

-- Flow 1:

Average throughput: 12.76 Mbit/s

95th percentile per-packet one-way delay: 137.625 ms

Loss rate: 2.00%

-- Flow 2:

Average throughput: 12.56 Mbit/s

95th percentile per-packet one-way delay: 137.623 ms

Loss rate: 2.95%

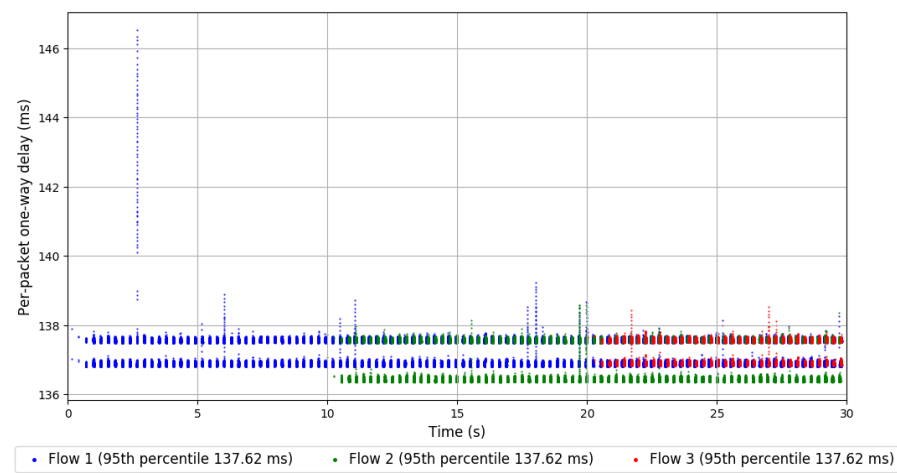
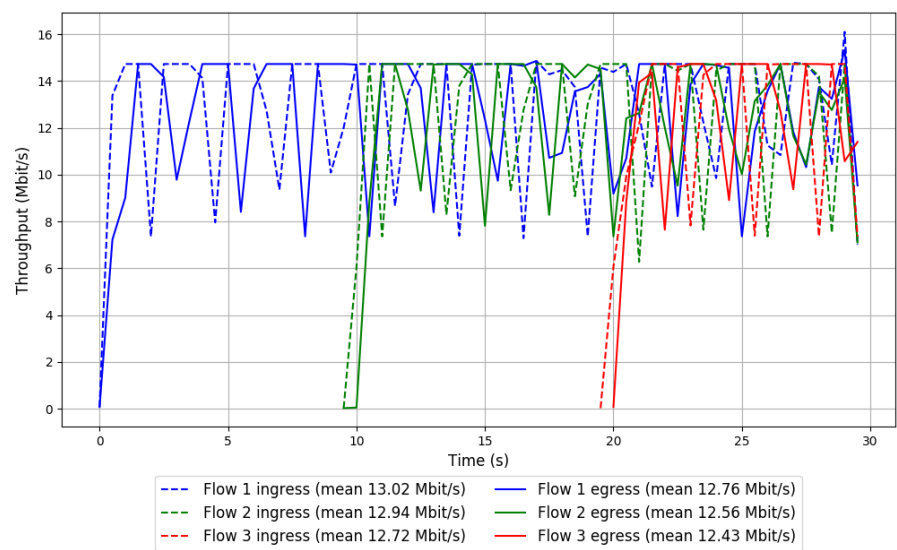
-- Flow 3:

Average throughput: 12.43 Mbit/s

95th percentile per-packet one-way delay: 137.618 ms

Loss rate: 2.29%

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



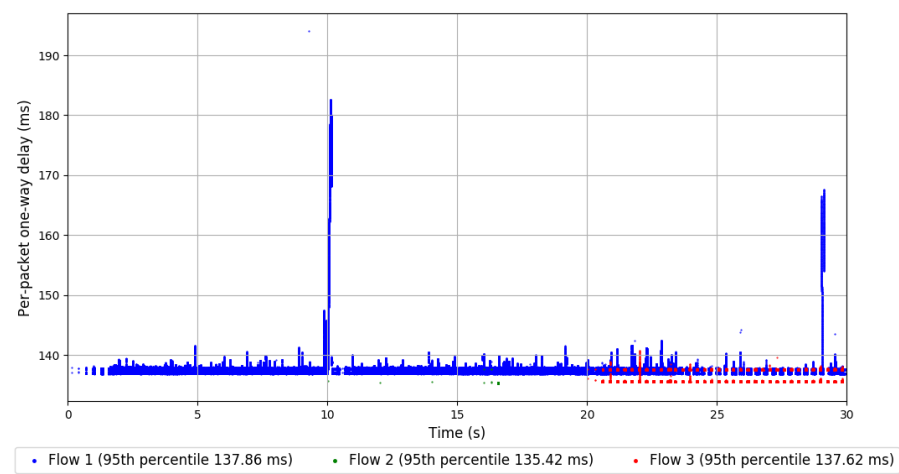
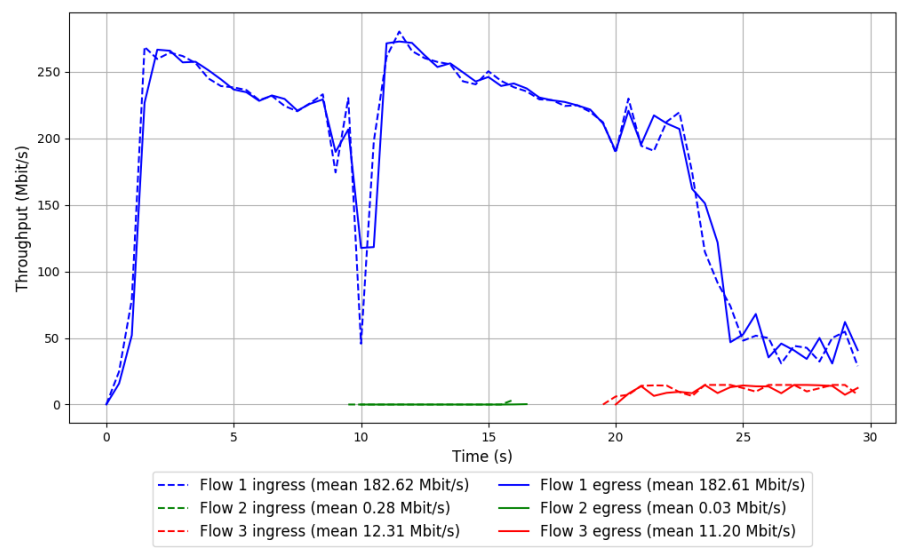
```
Run 10: Statistics of TaoVA-100x

Start at: 2017-08-12 17:01:26
End at: 2017-08-12 17:01:56

# Below is generated by plot.py at 2017-08-12 18:25:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 186.31 Mbit/s
95th percentile per-packet one-way delay: 137.857 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 182.61 Mbit/s
95th percentile per-packet one-way delay: 137.864 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 135.419 ms
Loss rate: 90.42%
-- Flow 3:
Average throughput: 11.20 Mbit/s
95th percentile per-packet one-way delay: 137.623 ms
Loss rate: 8.97%
```



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



Run 1: Statistics of TCP Vegas

Start at: 2017-08-12 15:02:04

End at: 2017-08-12 15:02:34

# Below is generated by plot.py at 2017-08-12 18:25:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 20.81 Mbit/s

95th percentile per-packet one-way delay: 137.642 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 19.40 Mbit/s

95th percentile per-packet one-way delay: 137.716 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 136.625 ms

Loss rate: 4.51%

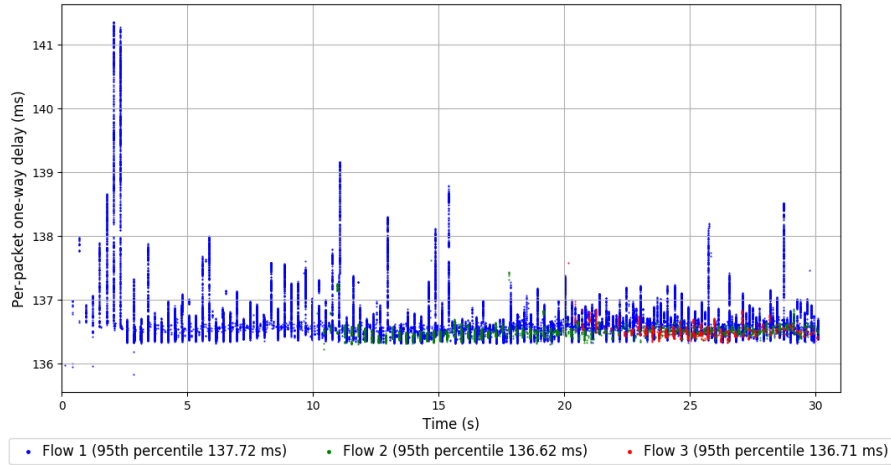
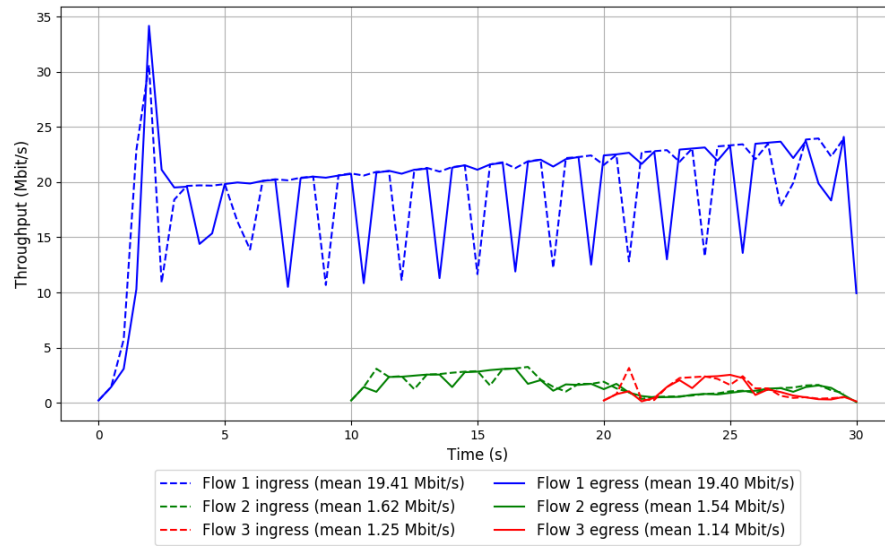
-- Flow 3:

Average throughput: 1.14 Mbit/s

95th percentile per-packet one-way delay: 136.707 ms

Loss rate: 9.70%

# Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-08-12 15:15:25

End at: 2017-08-12 15:15:55

# Below is generated by plot.py at 2017-08-12 18:25:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 40.17 Mbit/s

95th percentile per-packet one-way delay: 137.611 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 21.00 Mbit/s

95th percentile per-packet one-way delay: 137.227 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 17.68 Mbit/s

95th percentile per-packet one-way delay: 141.668 ms

Loss rate: 1.67%

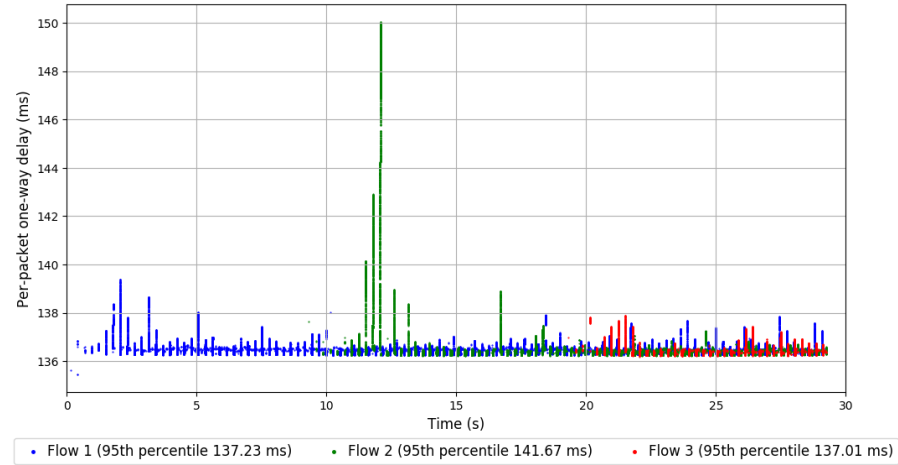
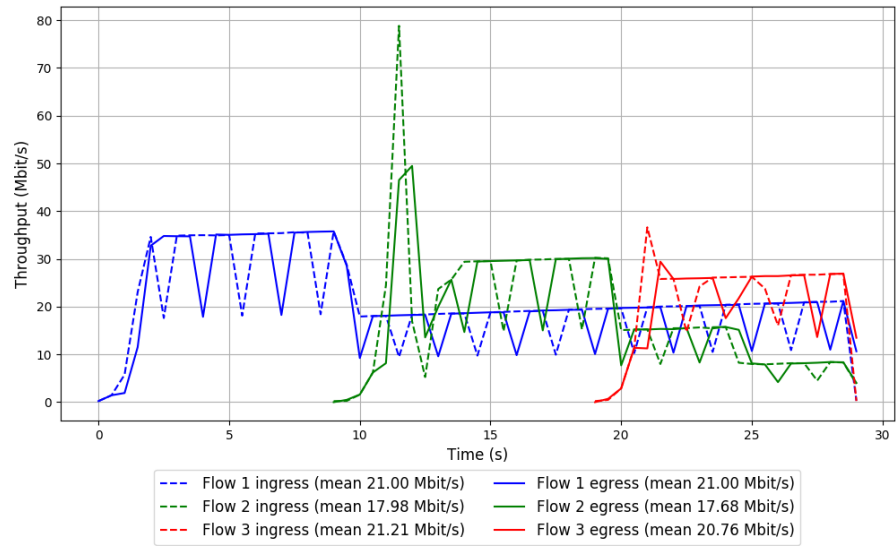
-- Flow 3:

Average throughput: 20.76 Mbit/s

95th percentile per-packet one-way delay: 137.010 ms

Loss rate: 2.12%

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



Run 3: Statistics of TCP Vegas

Start at: 2017-08-12 15:29:20

End at: 2017-08-12 15:29:50

# Below is generated by plot.py at 2017-08-12 18:25:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.92 Mbit/s

95th percentile per-packet one-way delay: 136.974 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 136.824 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 6.43 Mbit/s

95th percentile per-packet one-way delay: 137.054 ms

Loss rate: 0.48%

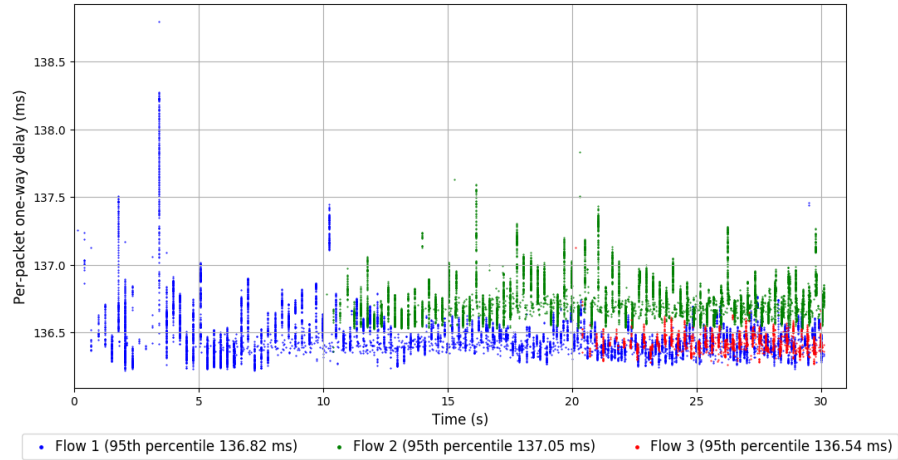
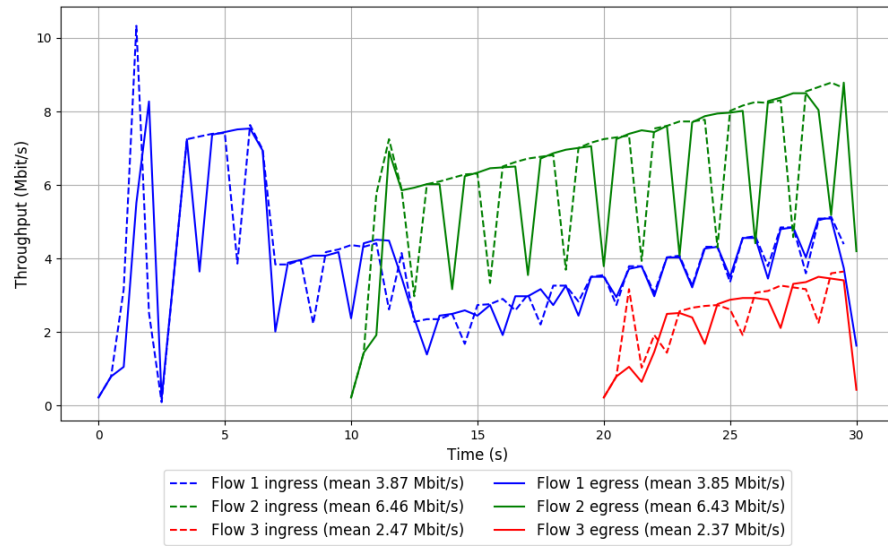
-- Flow 3:

Average throughput: 2.37 Mbit/s

95th percentile per-packet one-way delay: 136.536 ms

Loss rate: 3.86%

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



Run 4: Statistics of TCP Vegas

Start at: 2017-08-12 15:42:23

End at: 2017-08-12 15:42:53

# Below is generated by plot.py at 2017-08-12 18:25:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 137.299 ms

Loss rate: 4.03%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 137.314 ms

Loss rate: 3.79%

-- Flow 2:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 137.278 ms

Loss rate: 3.59%

-- Flow 3:

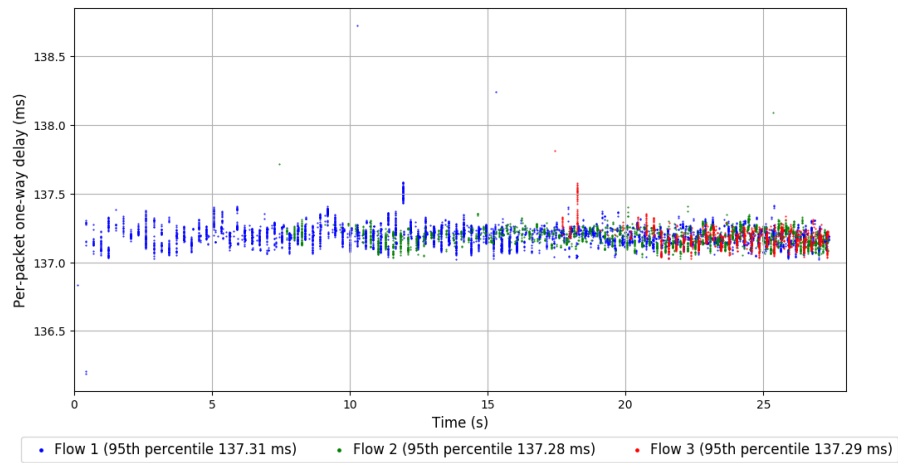
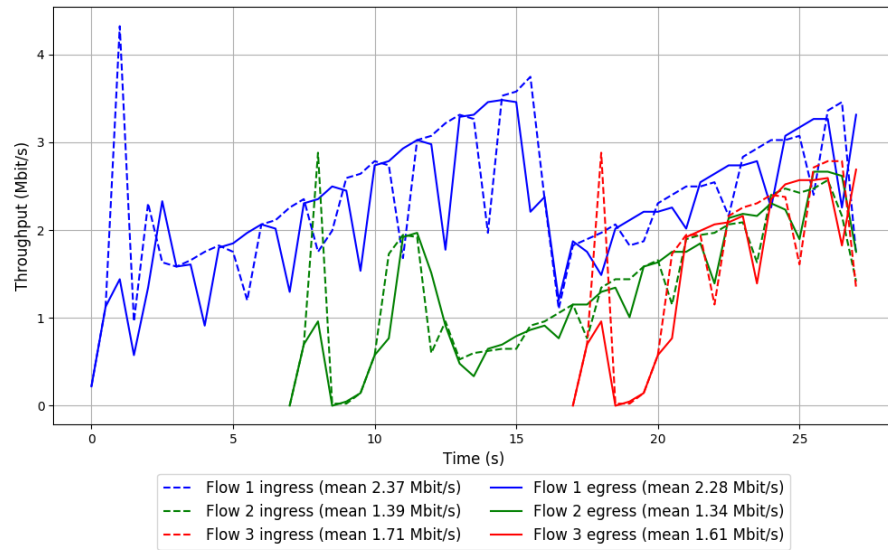
Average throughput: 1.61 Mbit/s

95th percentile per-packet one-way delay: 137.286 ms

Loss rate: 5.67%



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

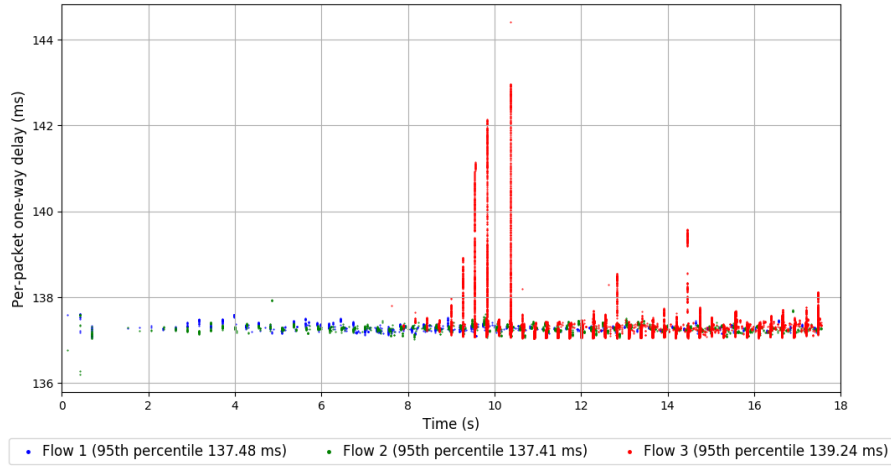
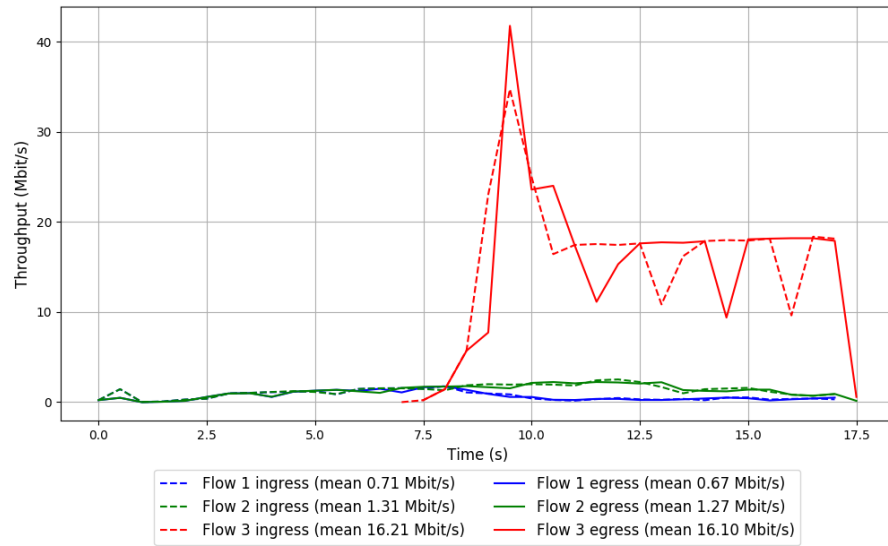


Run 5: Statistics of TCP Vegas

Start at: 2017-08-12 15:55:48

End at: 2017-08-12 15:56:18

# Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-08-12 16:09:16

End at: 2017-08-12 16:09:46

# Below is generated by plot.py at 2017-08-12 18:25:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 7.52 Mbit/s

95th percentile per-packet one-way delay: 137.289 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 2.32 Mbit/s

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

Loss rate: 1.01%

-- Flow 2:

Average throughput: 7.08 Mbit/s

95th percentile per-packet one-way delay: 137.061 ms

Loss rate: 0.29%

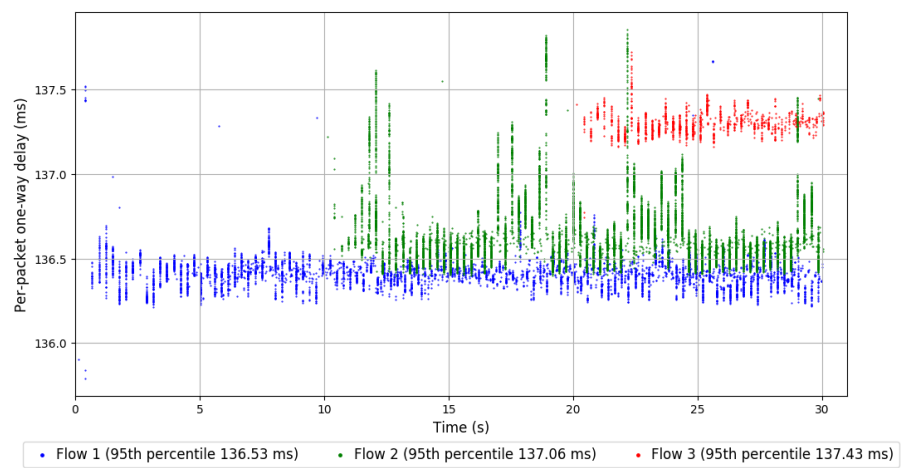
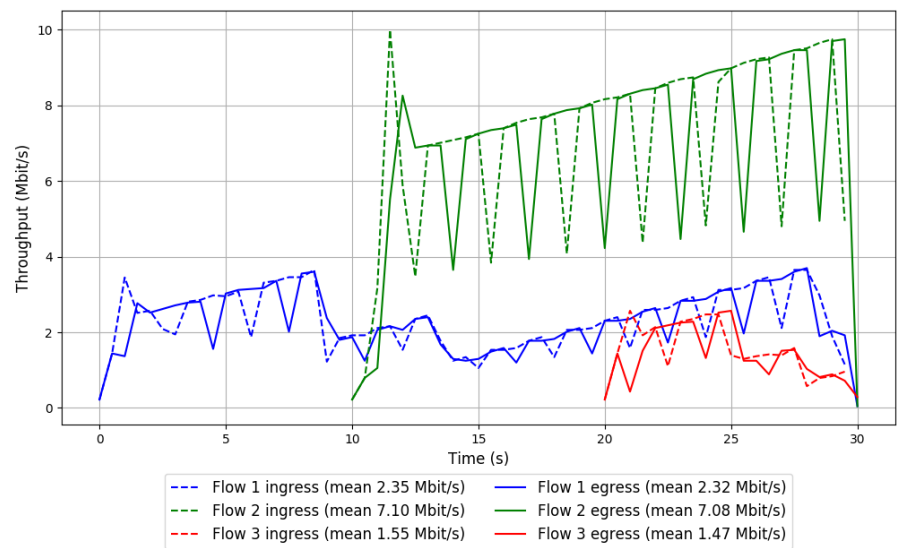
-- Flow 3:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 137.426 ms

Loss rate: 5.10%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-08-12 16:22:53

End at: 2017-08-12 16:23:23

# Below is generated by plot.py at 2017-08-12 18:25:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 6.43 Mbit/s

95th percentile per-packet one-way delay: 136.900 ms

Loss rate: 2.08%

-- Flow 1:

Average throughput: 2.26 Mbit/s

95th percentile per-packet one-way delay: 136.599 ms

Loss rate: 2.12%

-- Flow 2:

Average throughput: 2.30 Mbit/s

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

Loss rate: 1.47%

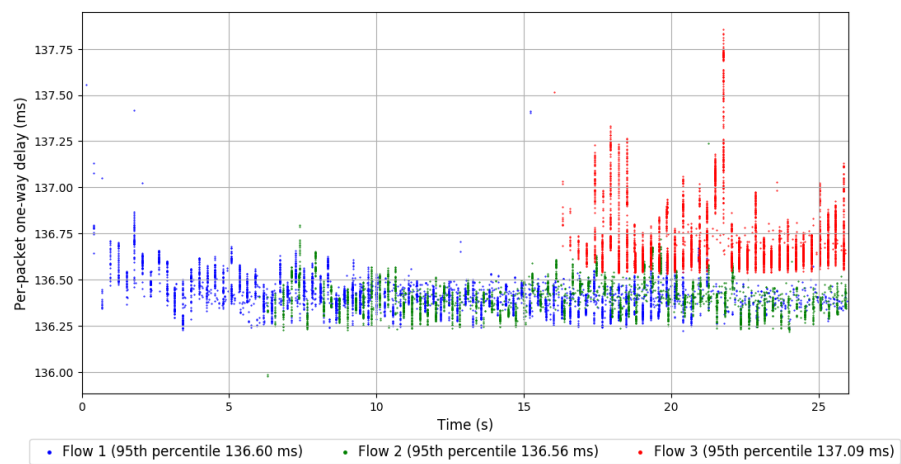
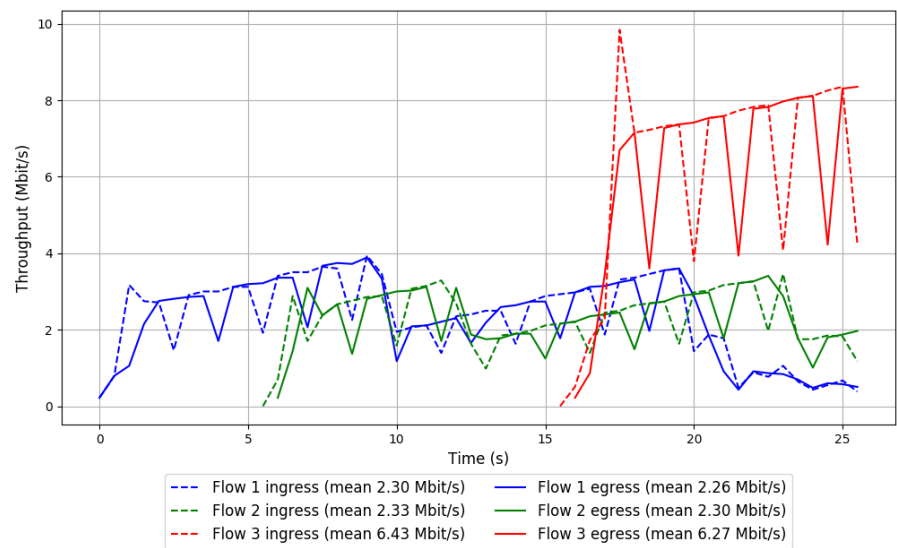
-- Flow 3:

Average throughput: 6.27 Mbit/s

95th percentile per-packet one-way delay: 137.089 ms

Loss rate: 2.48%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-08-12 16:36:23

End at: 2017-08-12 16:36:53

# Below is generated by plot.py at 2017-08-12 18:25:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.76 Mbit/s

95th percentile per-packet one-way delay: 137.822 ms

Loss rate: 2.51%

-- Flow 1:

Average throughput: 2.45 Mbit/s

95th percentile per-packet one-way delay: 137.828 ms

Loss rate: 1.42%

-- Flow 2:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 137.832 ms

Loss rate: 2.82%

-- Flow 3:

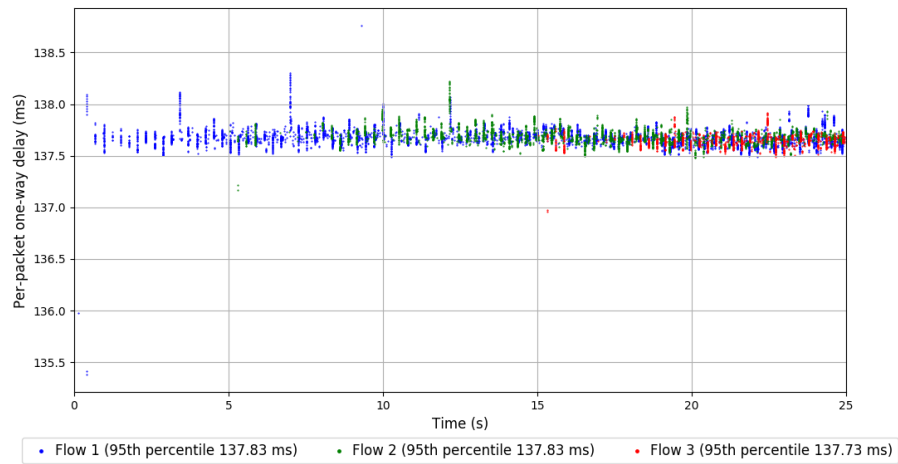
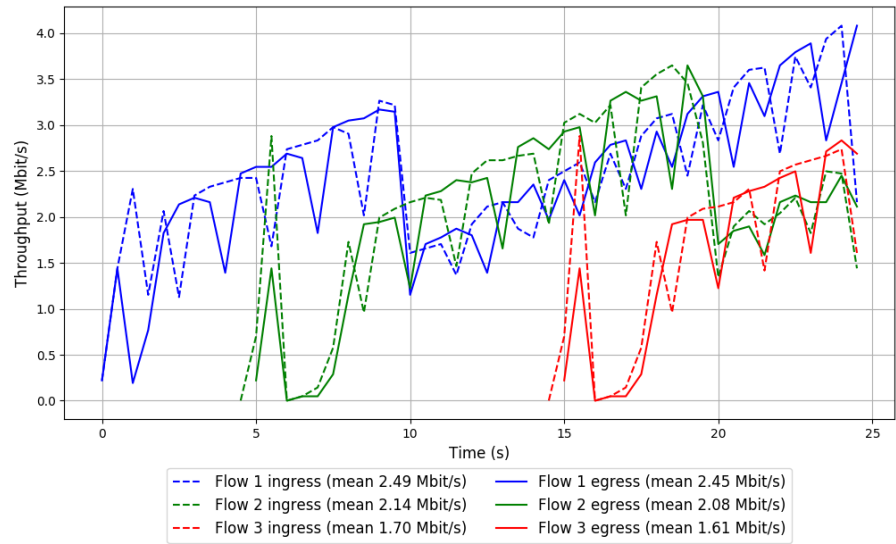
Average throughput: 1.61 Mbit/s

95th percentile per-packet one-way delay: 137.730 ms

Loss rate: 5.75%



# Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-08-12 16:49:14

End at: 2017-08-12 16:49:44

# Below is generated by plot.py at 2017-08-12 18:25:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 29.68 Mbit/s

95th percentile per-packet one-way delay: 138.461 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 19.04 Mbit/s

95th percentile per-packet one-way delay: 138.430 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 15.38 Mbit/s

95th percentile per-packet one-way delay: 138.594 ms

Loss rate: 0.42%

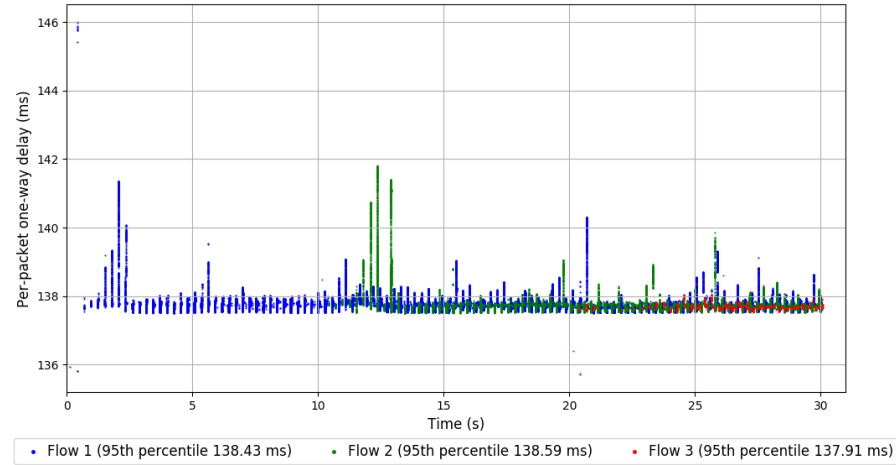
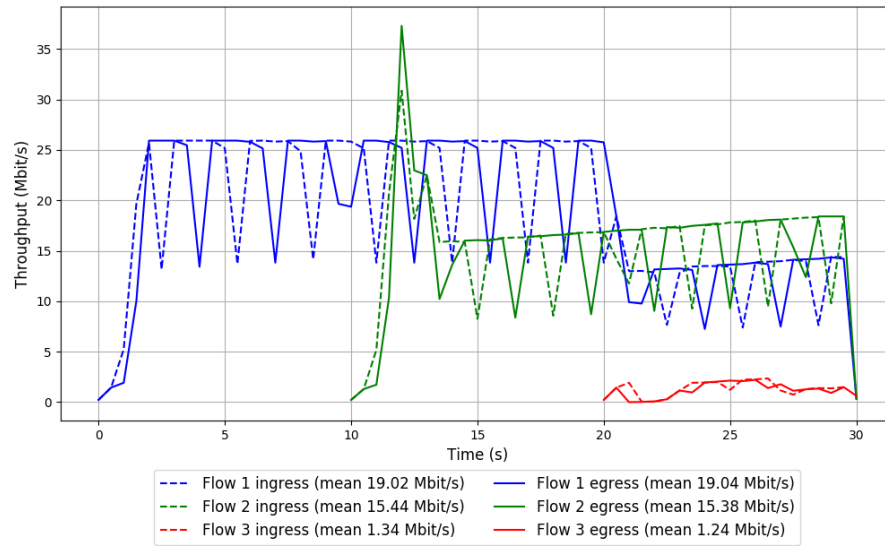
-- Flow 3:

Average throughput: 1.24 Mbit/s

95th percentile per-packet one-way delay: 137.912 ms

Loss rate: 7.43%

# Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-08-12 17:02:37

End at: 2017-08-12 17:03:07

# Below is generated by plot.py at 2017-08-12 18:25:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 7.00 Mbit/s

95th percentile per-packet one-way delay: 138.347 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 1.61 Mbit/s

95th percentile per-packet one-way delay: 137.845 ms

Loss rate: 2.09%

-- Flow 2:

Average throughput: 1.97 Mbit/s

95th percentile per-packet one-way delay: 137.807 ms

Loss rate: 2.57%

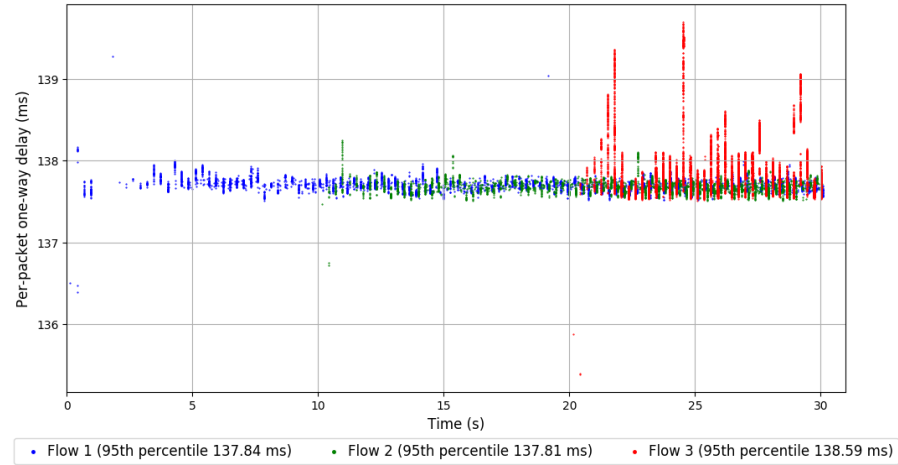
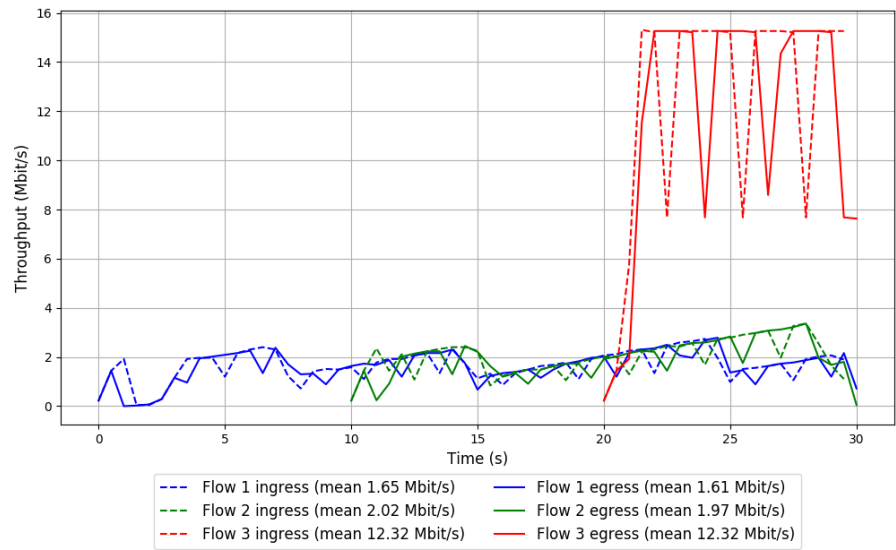
-- Flow 3:

Average throughput: 12.32 Mbit/s

95th percentile per-packet one-way delay: 138.594 ms

Loss rate: 0.00%

# Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2017-08-12 15:02:55

End at: 2017-08-12 15:03:25

# Below is generated by plot.py at 2017-08-12 18:25:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 45.49 Mbit/s

95th percentile per-packet one-way delay: 137.930 ms

Loss rate: 48.77%

-- Flow 1:

Average throughput: 21.54 Mbit/s

95th percentile per-packet one-way delay: 138.561 ms

Loss rate: 46.90%

-- Flow 2:

Average throughput: 12.31 Mbit/s

95th percentile per-packet one-way delay: 137.983 ms

Loss rate: 66.74%

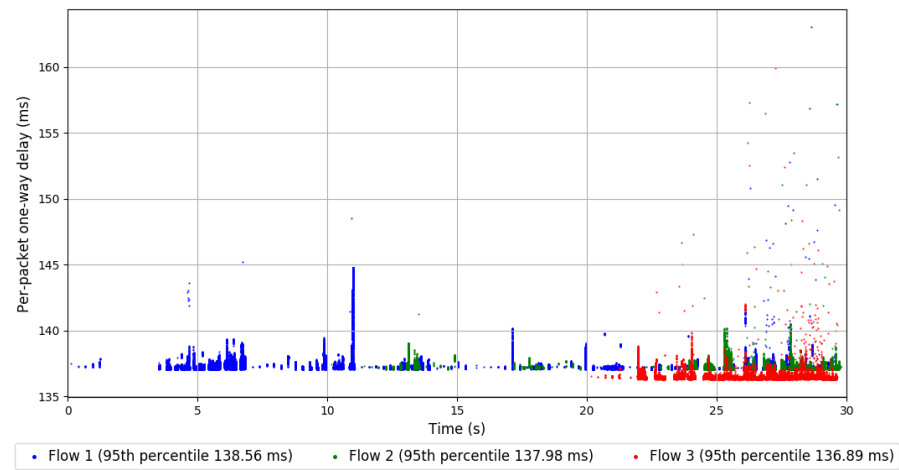
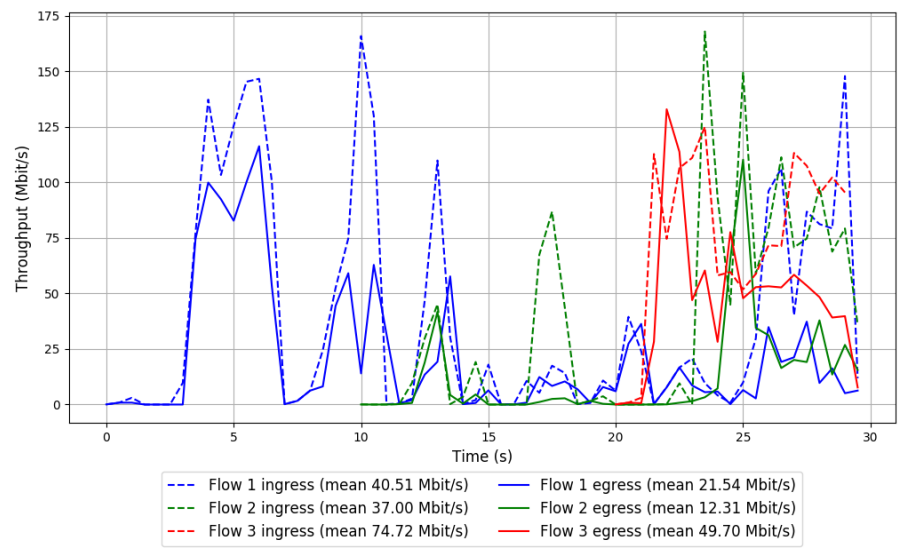
-- Flow 3:

Average throughput: 49.70 Mbit/s

95th percentile per-packet one-way delay: 136.891 ms

Loss rate: 33.51%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-08-12 15:16:17

End at: 2017-08-12 15:16:47

# Below is generated by plot.py at 2017-08-12 18:25:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 99.43 Mbit/s

95th percentile per-packet one-way delay: 148.207 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 52.22 Mbit/s

95th percentile per-packet one-way delay: 153.207 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 59.72 Mbit/s

95th percentile per-packet one-way delay: 143.986 ms

Loss rate: 0.39%

-- Flow 3:

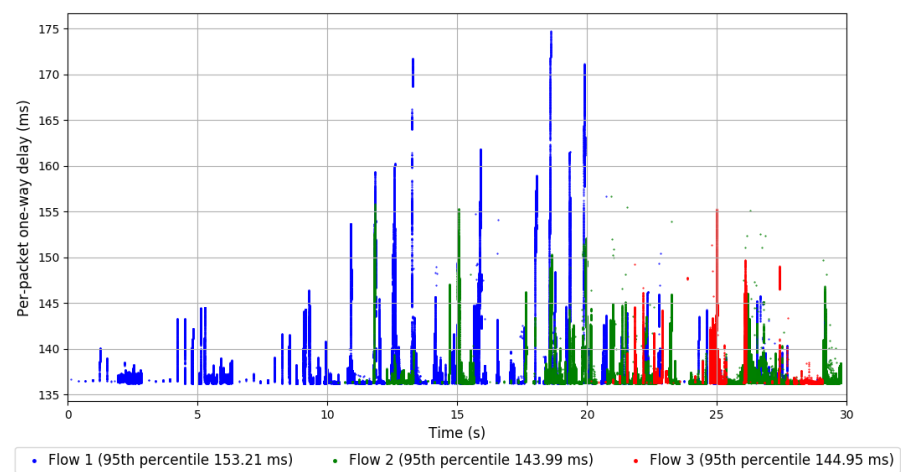
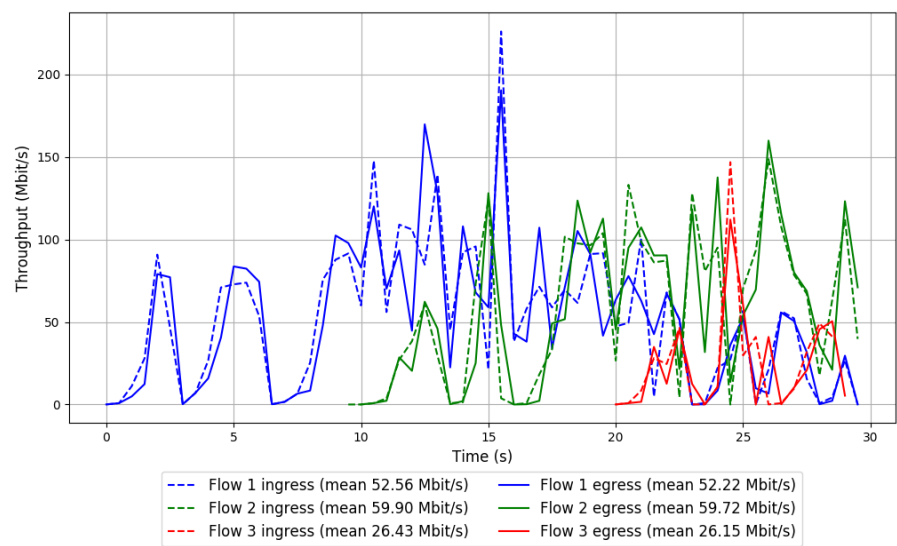
Average throughput: 26.15 Mbit/s

95th percentile per-packet one-way delay: 144.947 ms

Loss rate: 1.04%



Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-08-12 15:30:11

End at: 2017-08-12 15:30:41

# Below is generated by plot.py at 2017-08-12 18:25:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 131.47 Mbit/s

95th percentile per-packet one-way delay: 155.535 ms

Loss rate: 1.85%

-- Flow 1:

Average throughput: 84.44 Mbit/s

95th percentile per-packet one-way delay: 157.535 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 50.59 Mbit/s

95th percentile per-packet one-way delay: 145.442 ms

Loss rate: 0.13%

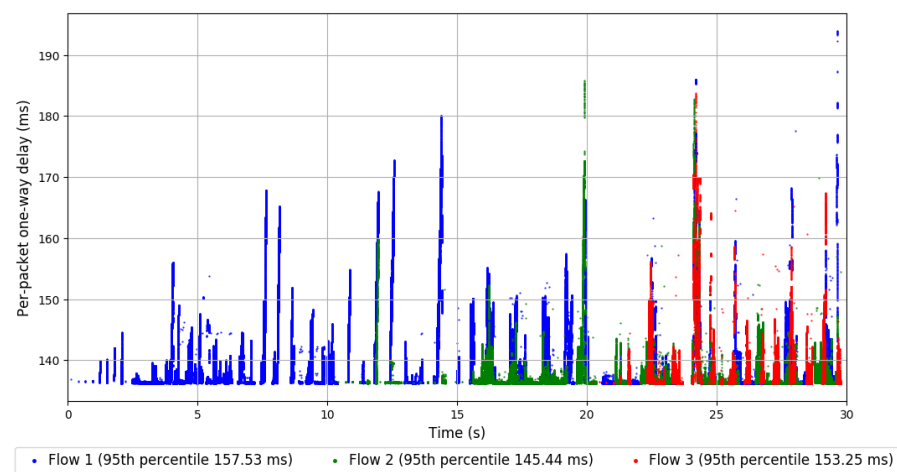
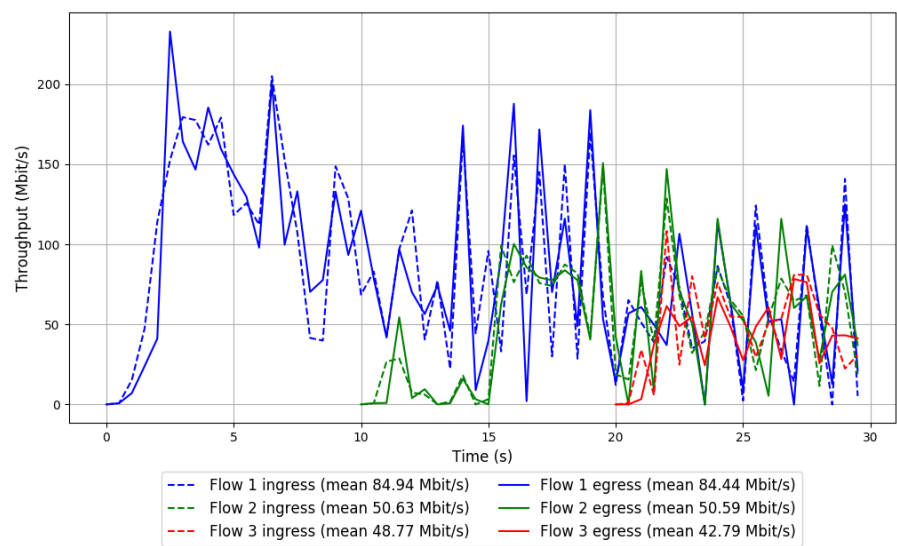
-- Flow 3:

Average throughput: 42.79 Mbit/s

95th percentile per-packet one-way delay: 153.252 ms

Loss rate: 12.27%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-08-12 15:43:12

End at: 2017-08-12 15:43:42

# Below is generated by plot.py at 2017-08-12 18:25:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 29.14 Mbit/s

95th percentile per-packet one-way delay: 138.274 ms

Loss rate: 59.08%

-- Flow 1:

Average throughput: 4.91 Mbit/s

95th percentile per-packet one-way delay: 137.765 ms

Loss rate: 64.08%

-- Flow 2:

Average throughput: 30.54 Mbit/s

95th percentile per-packet one-way delay: 138.831 ms

Loss rate: 52.05%

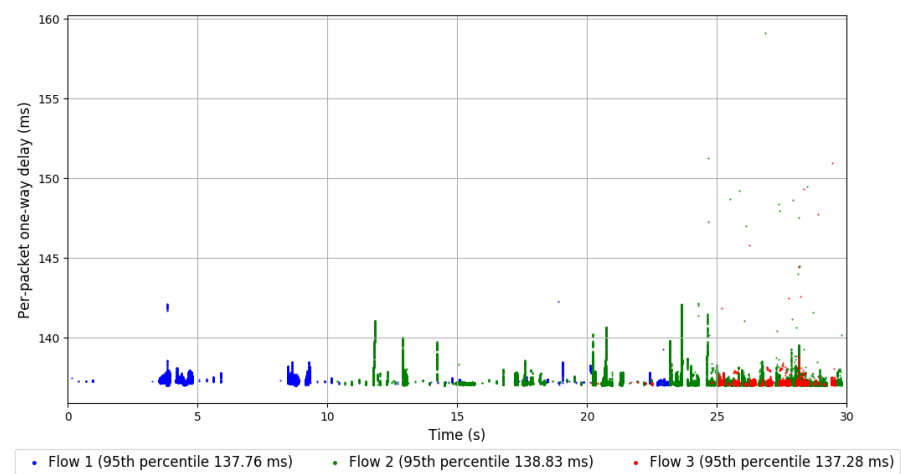
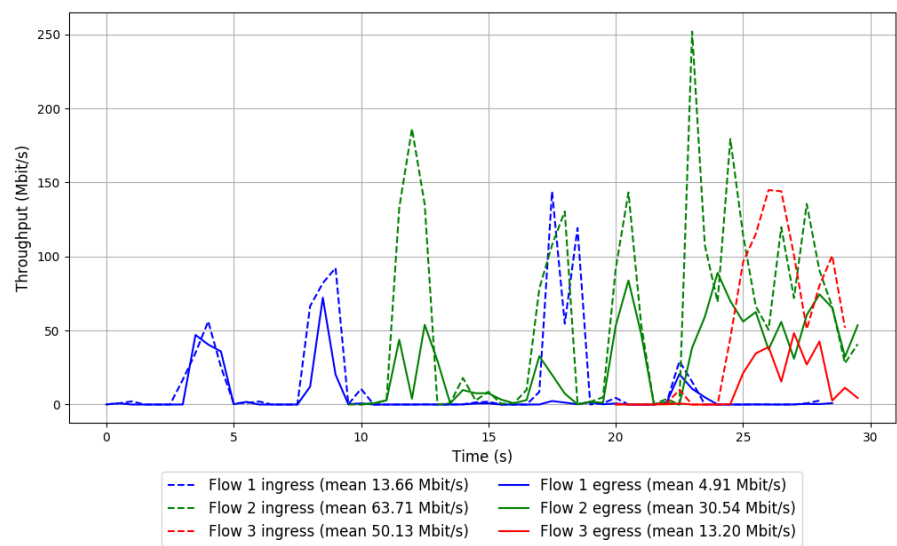
-- Flow 3:

Average throughput: 13.20 Mbit/s

95th percentile per-packet one-way delay: 137.275 ms

Loss rate: 73.67%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-08-12 15:56:38

End at: 2017-08-12 15:57:08

# Below is generated by plot.py at 2017-08-12 18:25:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 28.71 Mbit/s

95th percentile per-packet one-way delay: 149.821 ms

Loss rate: 72.48%

-- Flow 1:

Average throughput: 25.54 Mbit/s

95th percentile per-packet one-way delay: 152.980 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 5.01 Mbit/s

95th percentile per-packet one-way delay: 137.314 ms

Loss rate: 95.78%

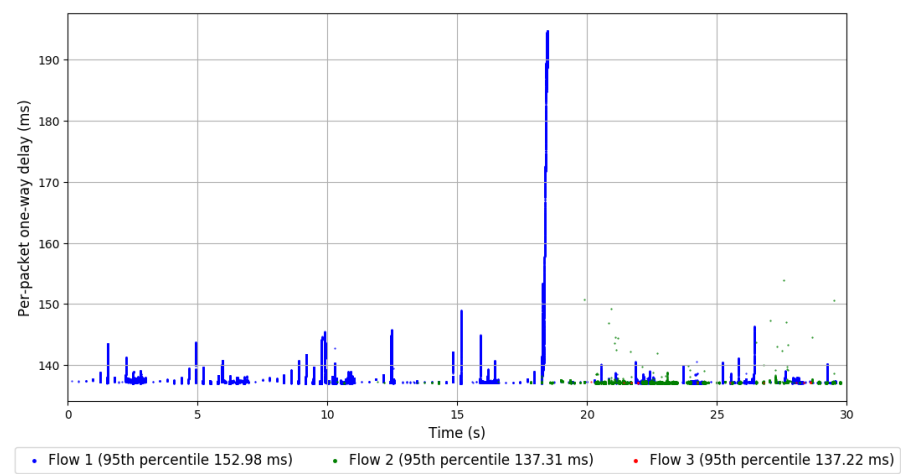
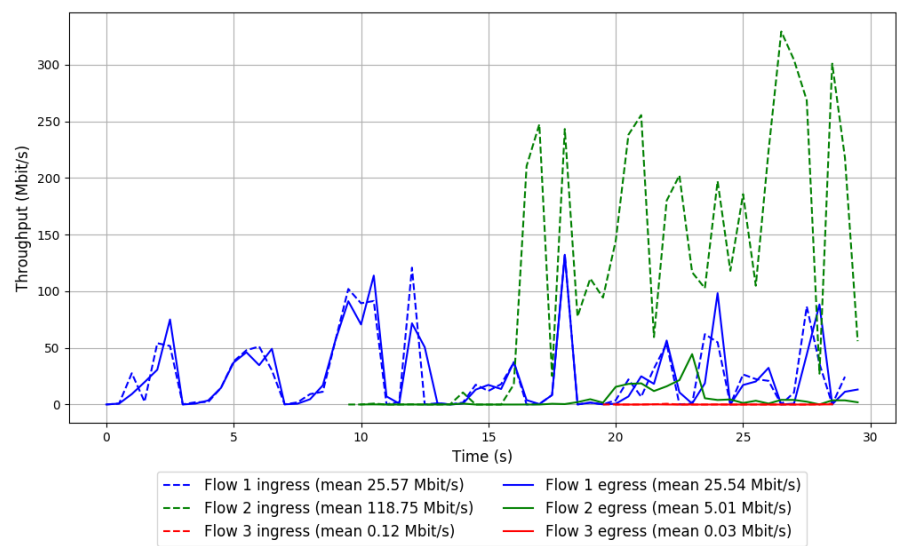
-- Flow 3:

Average throughput: 0.03 Mbit/s

95th percentile per-packet one-way delay: 137.215 ms

Loss rate: 75.82%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-08-12 16:10:06

End at: 2017-08-12 16:10:36

# Below is generated by plot.py at 2017-08-12 18:26:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 141.86 Mbit/s

95th percentile per-packet one-way delay: 144.515 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 96.59 Mbit/s

95th percentile per-packet one-way delay: 144.255 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 45.79 Mbit/s

95th percentile per-packet one-way delay: 146.913 ms

Loss rate: 1.63%

-- Flow 3:

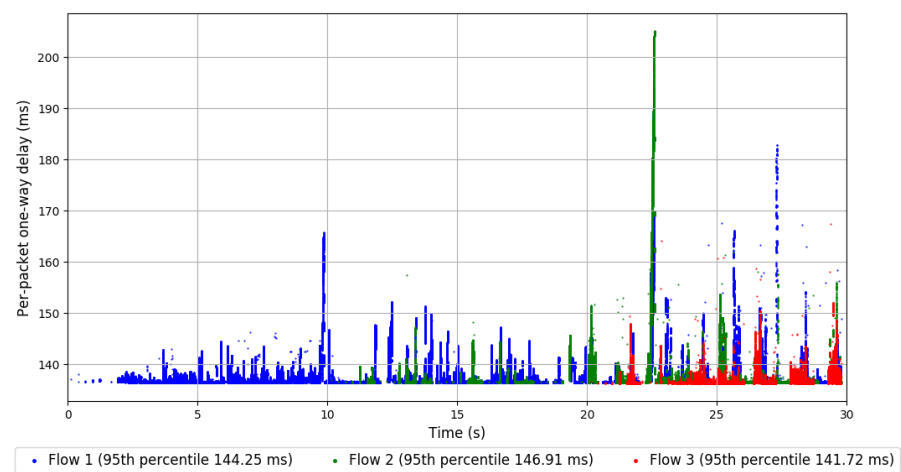
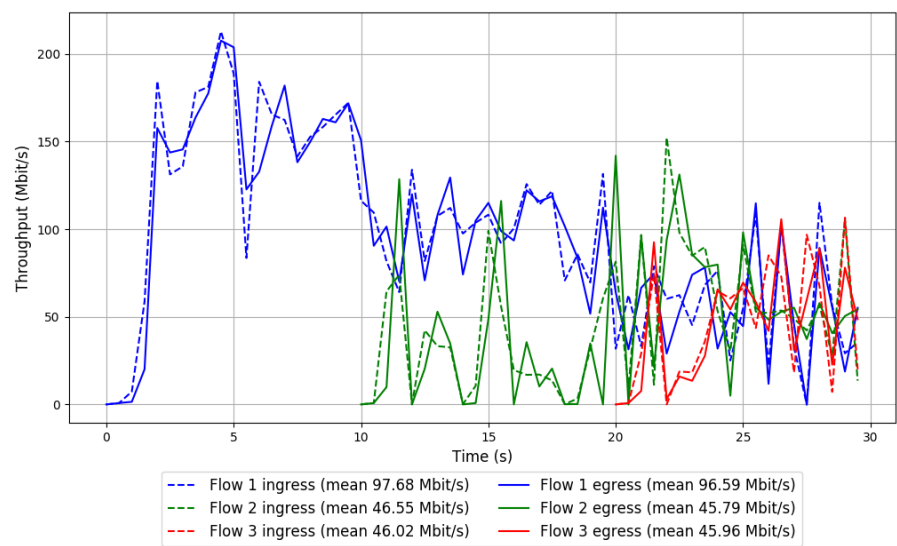
Average throughput: 45.96 Mbit/s

95th percentile per-packet one-way delay: 141.715 ms

Loss rate: 0.08%



Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-08-12 16:23:42

End at: 2017-08-12 16:24:12

# Below is generated by plot.py at 2017-08-12 18:26:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 122.91 Mbit/s

95th percentile per-packet one-way delay: 141.537 ms

Loss rate: 5.85%

-- Flow 1:

Average throughput: 87.43 Mbit/s

95th percentile per-packet one-way delay: 142.743 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 45.47 Mbit/s

95th percentile per-packet one-way delay: 140.453 ms

Loss rate: 1.75%

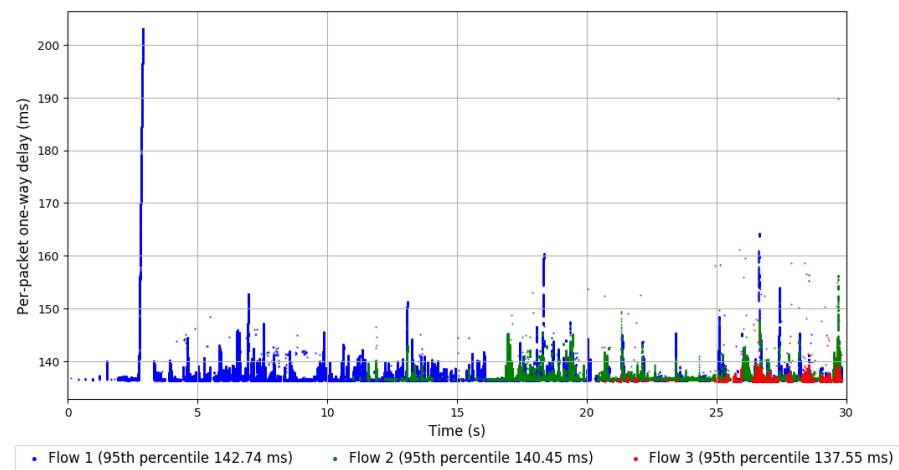
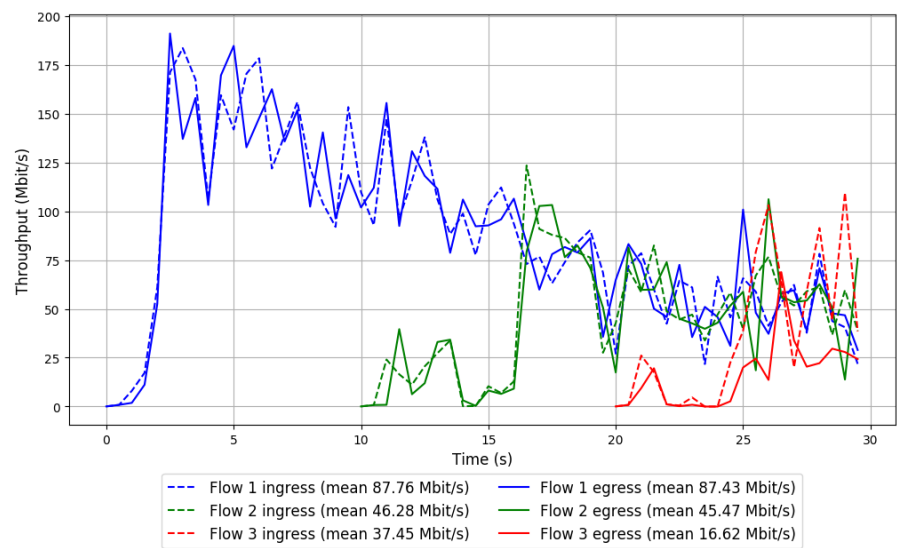
-- Flow 3:

Average throughput: 16.62 Mbit/s

95th percentile per-packet one-way delay: 137.546 ms

Loss rate: 55.63%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-08-12 16:37:12

End at: 2017-08-12 16:37:42

# Below is generated by plot.py at 2017-08-12 18:26:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.76 Mbit/s

95th percentile per-packet one-way delay: 137.797 ms

Loss rate: 88.65%

-- Flow 1:

Average throughput: 10.94 Mbit/s

95th percentile per-packet one-way delay: 137.783 ms

Loss rate: 89.57%

-- Flow 2:

Average throughput: 3.38 Mbit/s

95th percentile per-packet one-way delay: 137.858 ms

Loss rate: 76.14%

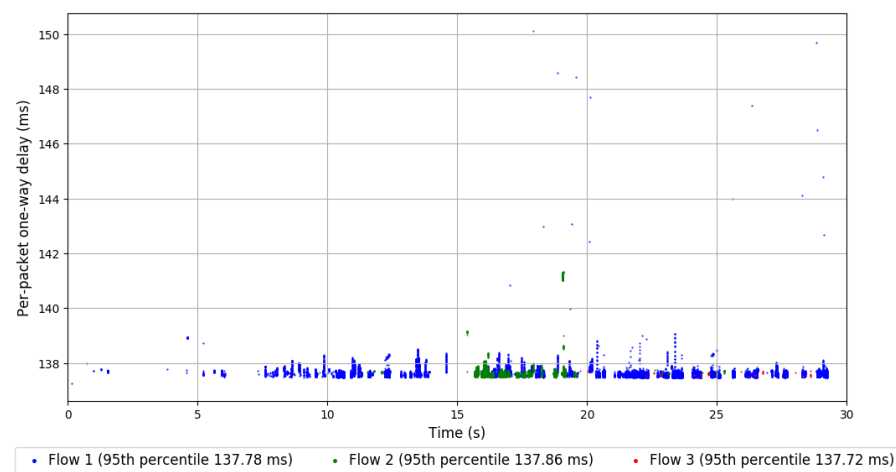
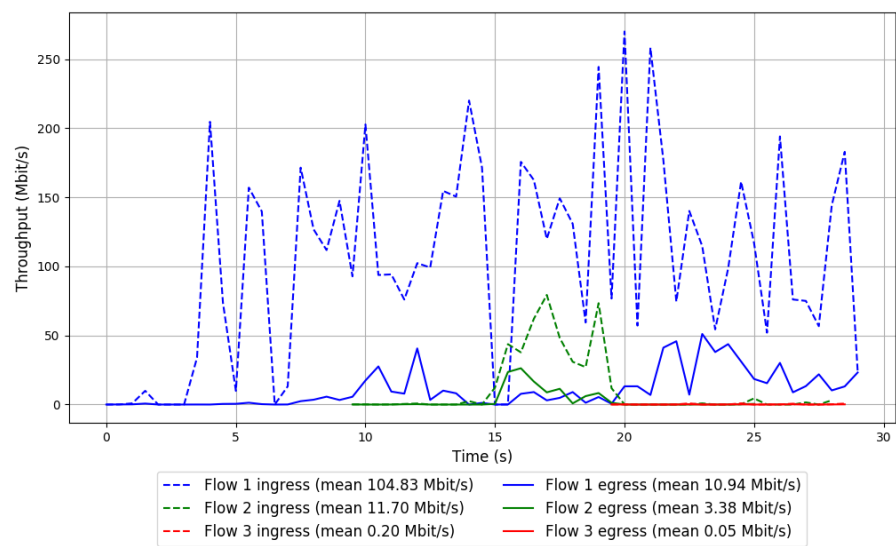
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 137.718 ms

Loss rate: 74.68%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2017-08-12 16:50:06

End at: 2017-08-12 16:50:36

# Below is generated by plot.py at 2017-08-12 18:26:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 28.25 Mbit/s

95th percentile per-packet one-way delay: 138.201 ms

Loss rate: 79.65%

-- Flow 1:

Average throughput: 7.18 Mbit/s

95th percentile per-packet one-way delay: 137.992 ms

Loss rate: 88.69%

-- Flow 2:

Average throughput: 28.93 Mbit/s

95th percentile per-packet one-way delay: 138.227 ms

Loss rate: 73.23%

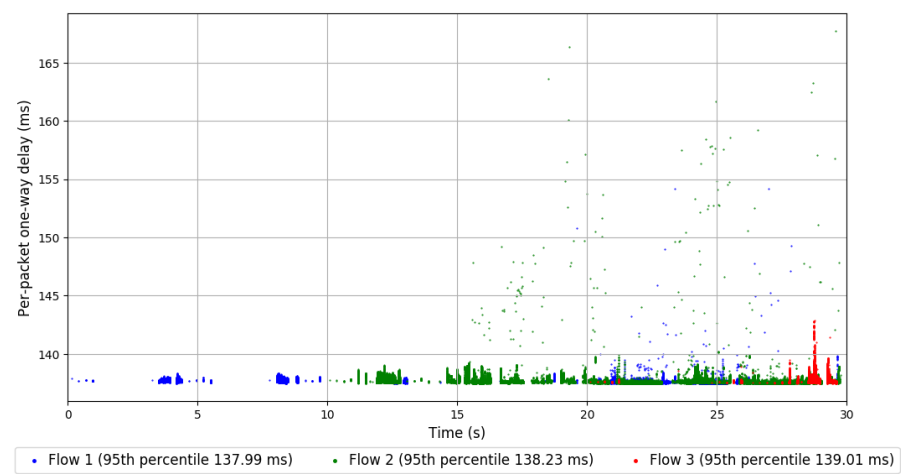
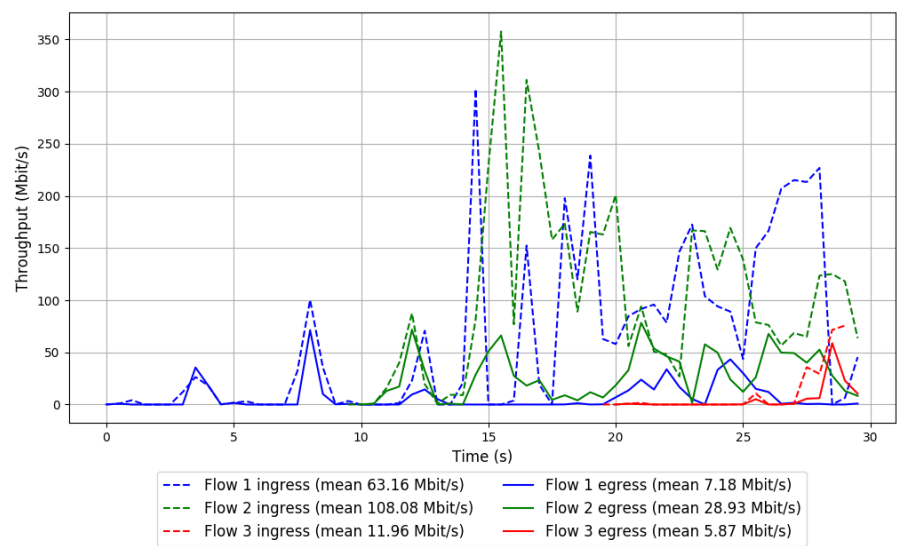
-- Flow 3:

Average throughput: 5.87 Mbit/s

95th percentile per-packet one-way delay: 139.007 ms

Loss rate: 50.88%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-08-12 17:03:26

End at: 2017-08-12 17:03:56

# Below is generated by plot.py at 2017-08-12 18:26:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 21.51 Mbit/s

95th percentile per-packet one-way delay: 142.064 ms

Loss rate: 60.07%

-- Flow 1:

Average throughput: 6.55 Mbit/s

95th percentile per-packet one-way delay: 137.831 ms

Loss rate: 82.49%

-- Flow 2:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 138.022 ms

Loss rate: 92.37%

-- Flow 3:

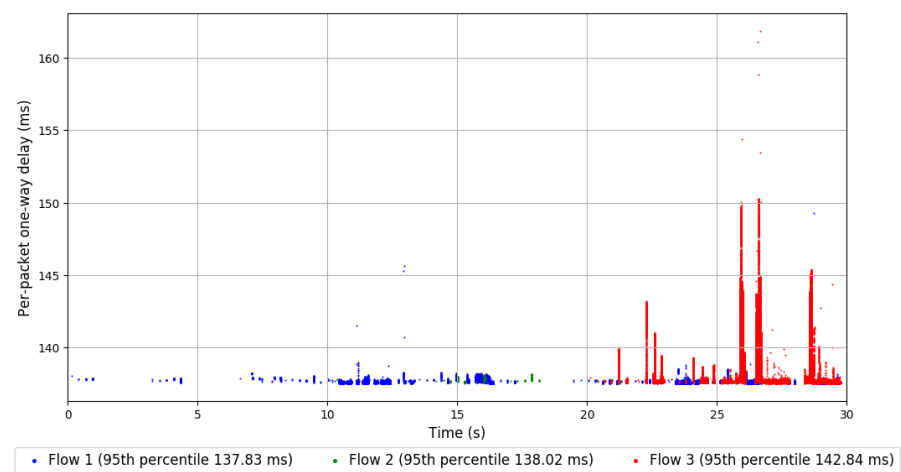
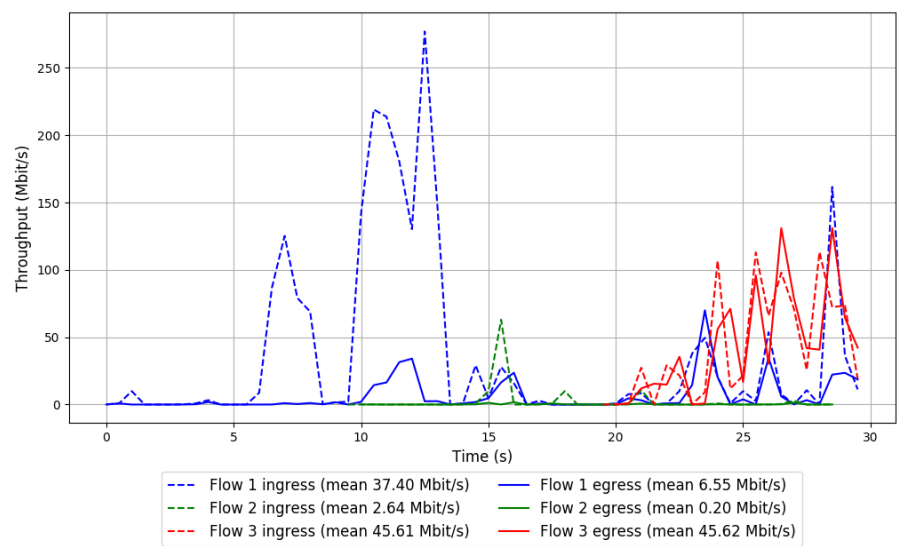
Average throughput: 45.62 Mbit/s

95th percentile per-packet one-way delay: 142.844 ms

Loss rate: 0.10%



Run 10: Report of Verus — Data Link



Run 1: Statistics of WebRTC media

Start at: 2017-08-12 15:05:35

End at: 2017-08-12 15:06:05

# Below is generated by plot.py at 2017-08-12 18:26:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.53 Mbit/s

95th percentile per-packet one-way delay: 136.934 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 1.37 Mbit/s

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

Loss rate: 0.03%

-- Flow 2:

Average throughput: 1.01 Mbit/s

95th percentile per-packet one-way delay: 136.813 ms

Loss rate: 0.00%

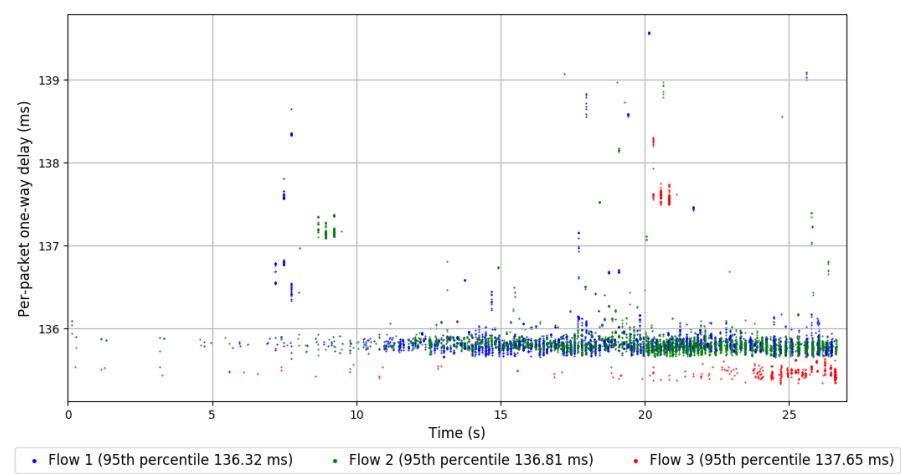
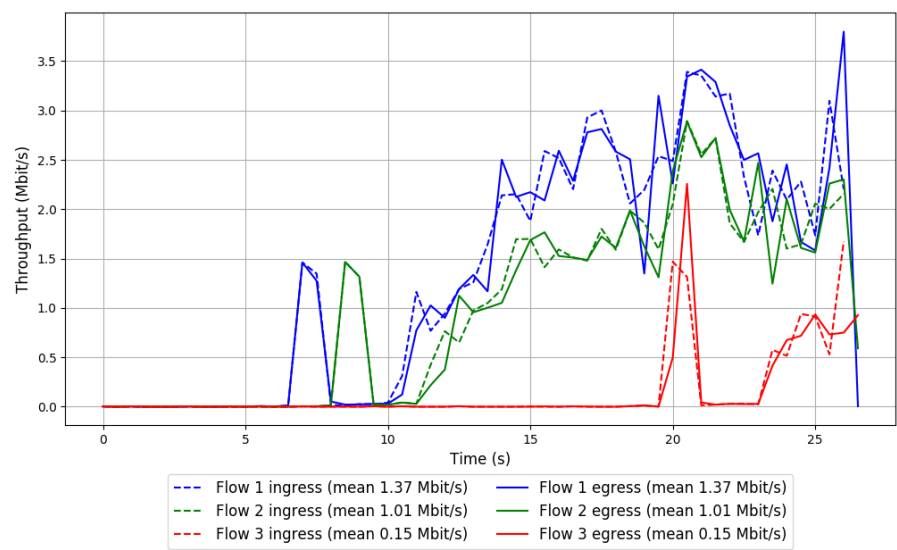
-- Flow 3:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 137.654 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-08-12 15:19:11

End at: 2017-08-12 15:19:41

# Below is generated by plot.py at 2017-08-12 18:26:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 137.112 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 137.279 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.16 Mbit/s

95th percentile per-packet one-way delay: 136.613 ms

Loss rate: 0.00%

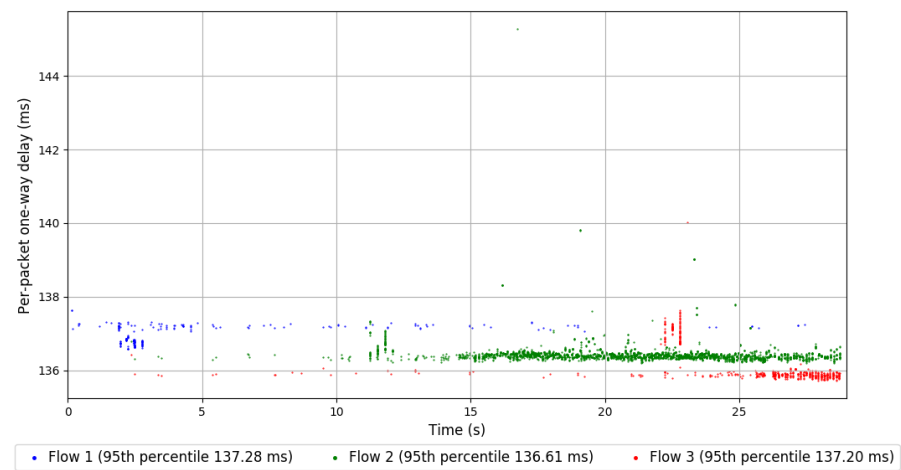
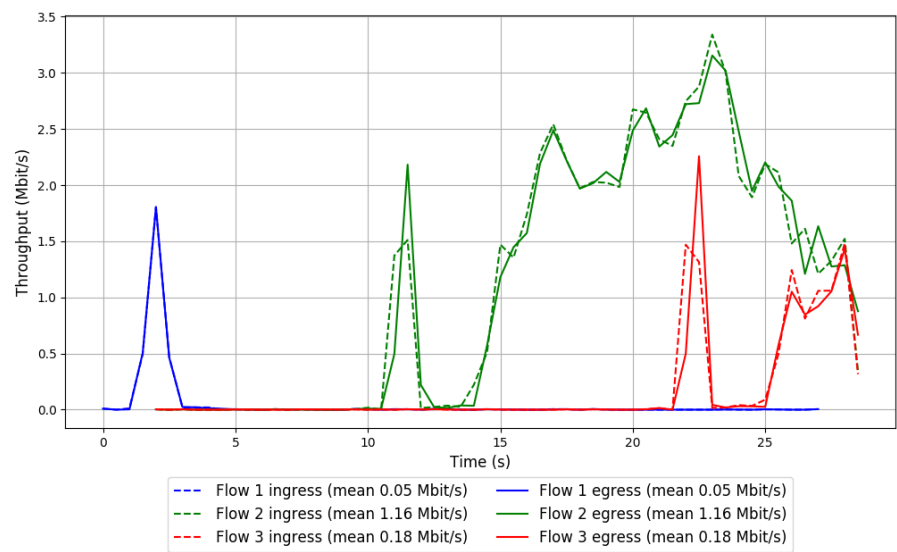
-- Flow 3:

Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 137.203 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-08-12 15:32:51

End at: 2017-08-12 15:33:21

# Below is generated by plot.py at 2017-08-12 18:26:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.36 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 136.710 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 136.527 ms

Loss rate: 0.00%

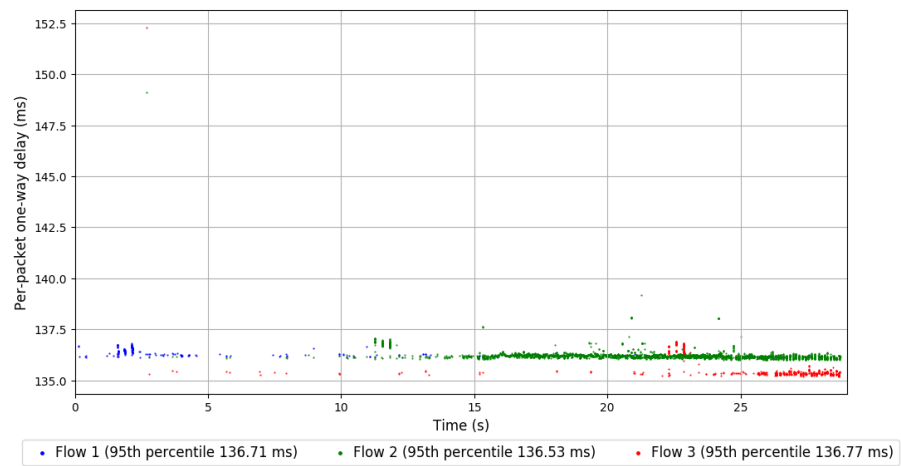
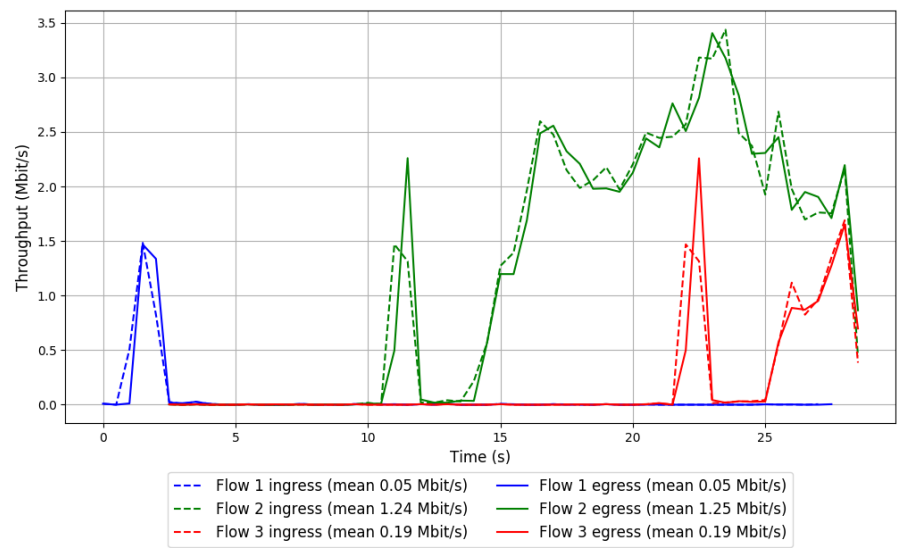
-- Flow 3:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 136.773 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-08-12 15:46:03

End at: 2017-08-12 15:46:33

# Below is generated by plot.py at 2017-08-12 18:26:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 137.291 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 137.500 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.23 Mbit/s

95th percentile per-packet one-way delay: 136.729 ms

Loss rate: 0.00%

-- Flow 3:

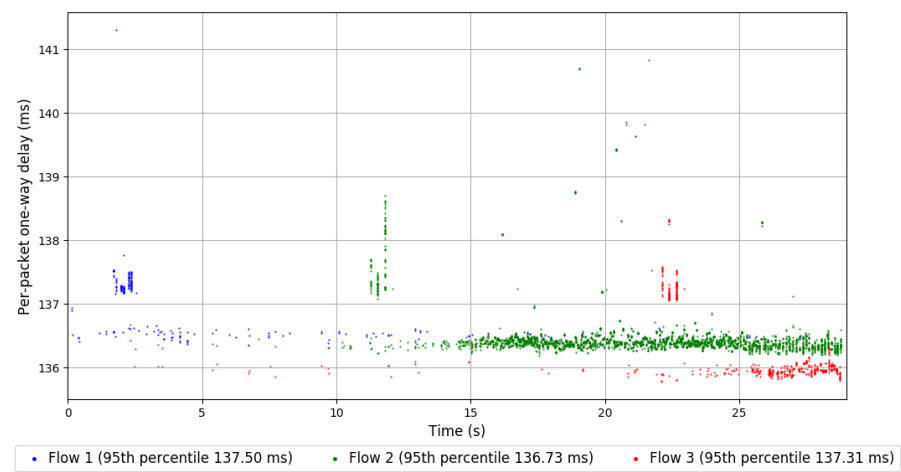
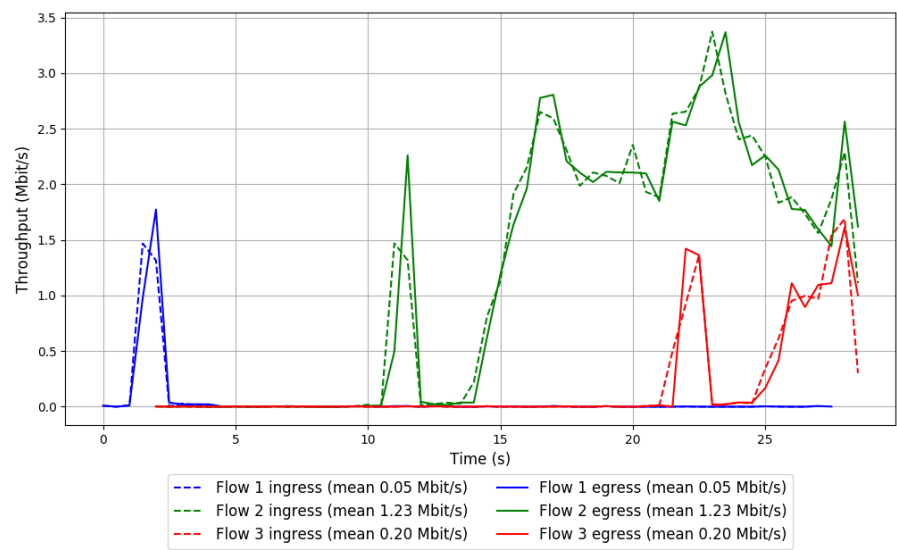
Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 137.310 ms

Loss rate: 0.00%



Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-08-12 15:59:25

End at: 2017-08-12 15:59:55

# Below is generated by plot.py at 2017-08-12 18:26:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 137.311 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 137.700 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 136.061 ms

Loss rate: 0.03%

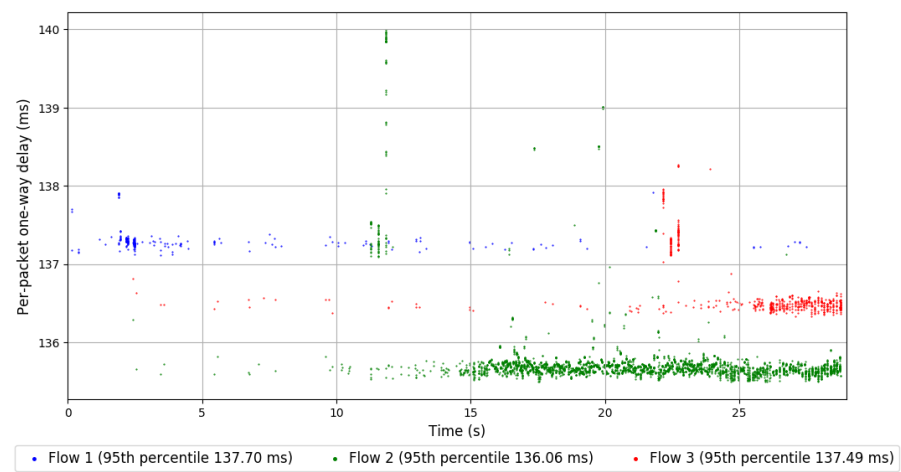
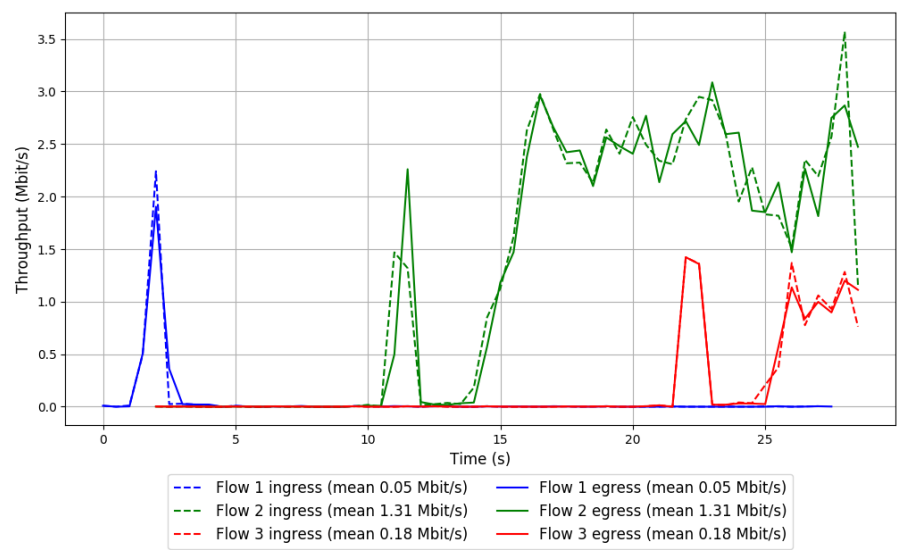
-- Flow 3:

Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 137.485 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-08-12 16:12:54

End at: 2017-08-12 16:13:24

# Below is generated by plot.py at 2017-08-12 18:26:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 137.264 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 137.287 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 137.194 ms

Loss rate: 0.00%

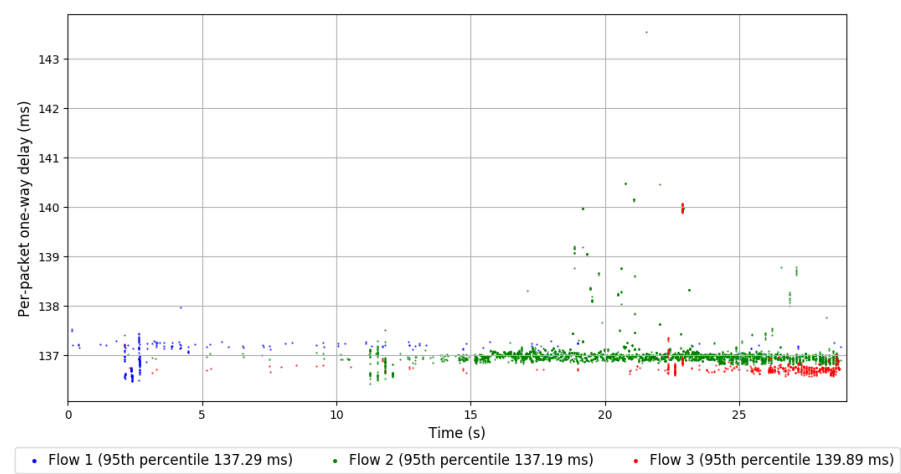
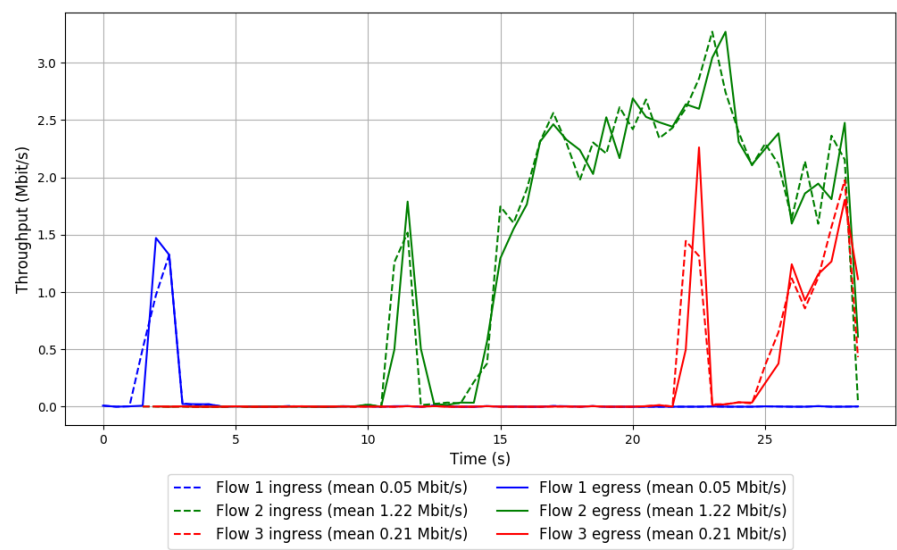
-- Flow 3:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 139.893 ms

Loss rate: 0.00%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-08-12 16:26:36

End at: 2017-08-12 16:27:06

# Below is generated by plot.py at 2017-08-12 18:26:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 137.412 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 137.622 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.19 Mbit/s

95th percentile per-packet one-way delay: 137.372 ms

Loss rate: 0.03%

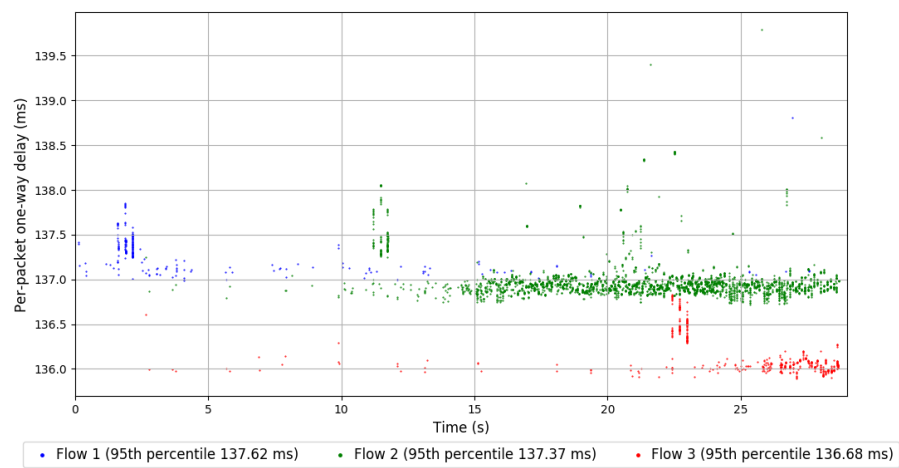
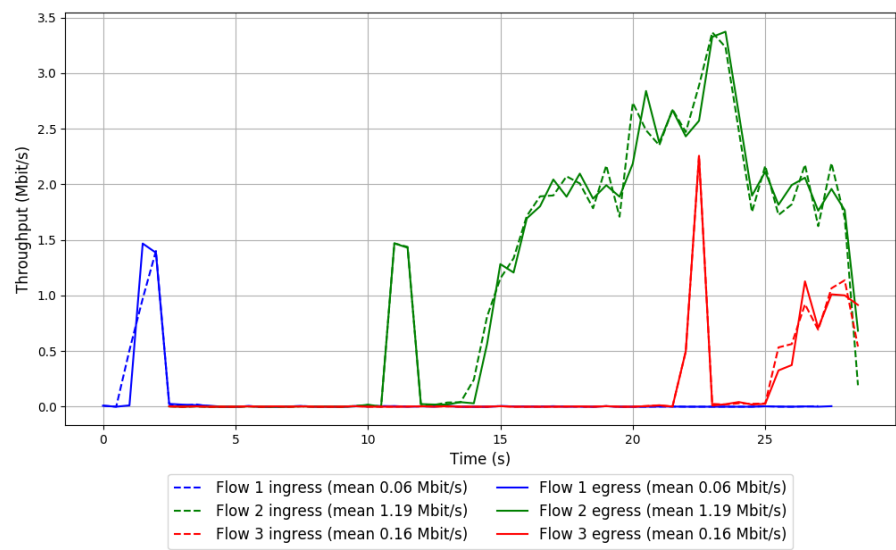
-- Flow 3:

Average throughput: 0.16 Mbit/s

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

Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link



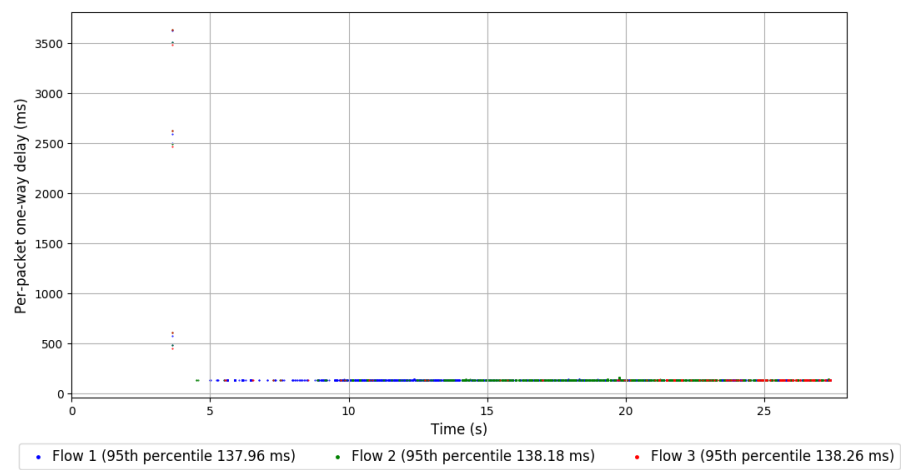
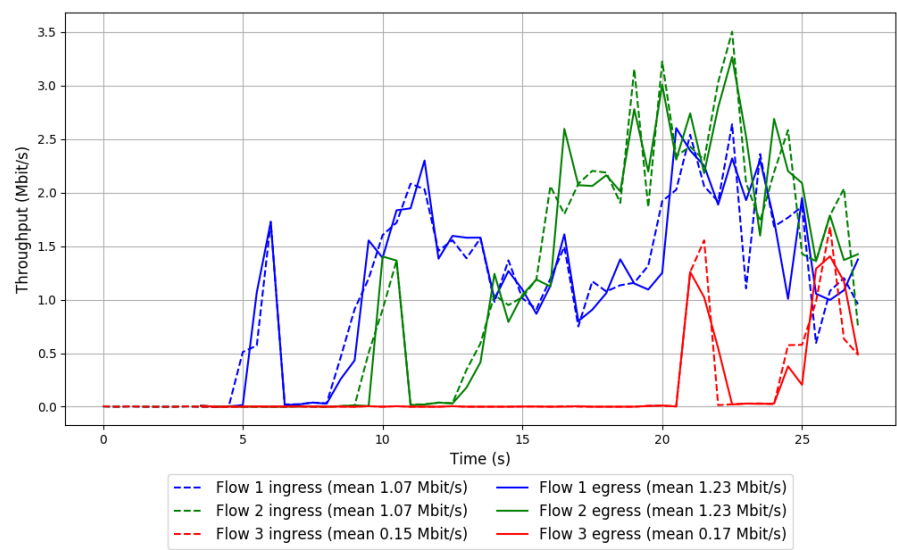
Run 8: Statistics of WebRTC media

Start at: 2017-08-12 16:39:49

End at: 2017-08-12 16:40:19



Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-08-12 16:52:57

End at: 2017-08-12 16:53:27

# Below is generated by plot.py at 2017-08-12 18:26:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 137.689 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 137.825 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.24 Mbit/s

95th percentile per-packet one-way delay: 137.491 ms

Loss rate: 0.00%

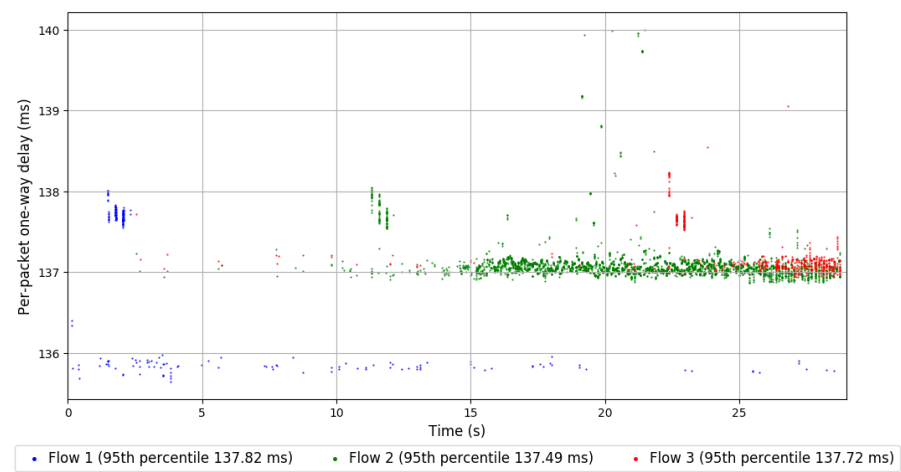
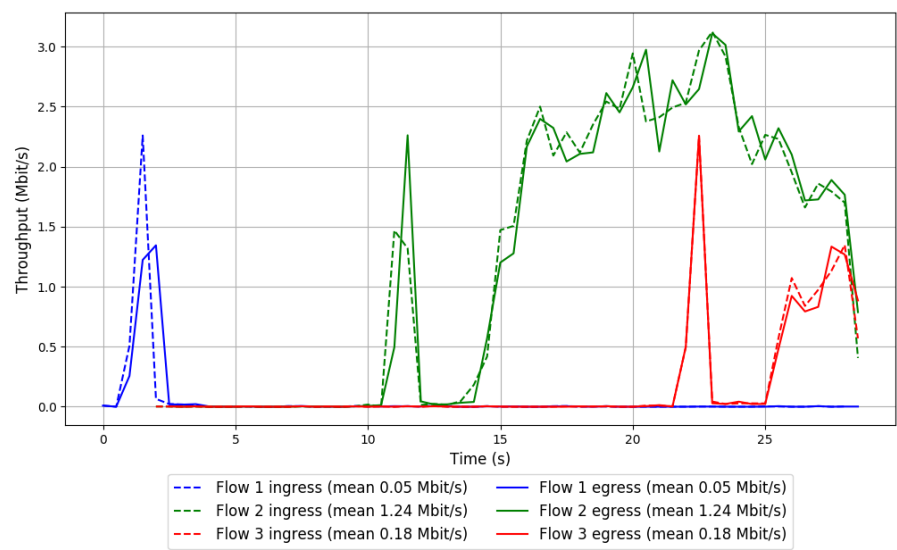
-- Flow 3:

Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 137.717 ms

Loss rate: 0.00%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-08-12 17:06:11

End at: 2017-08-12 17:06:41

# Below is generated by plot.py at 2017-08-12 18:26:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 137.983 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 138.258 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.13 Mbit/s

95th percentile per-packet one-way delay: 136.772 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 138.668 ms

Loss rate: 0.00%

Run 10: Report of WebRTC media — Data Link

