

Pantheon Report

Generated at 2019-04-24 02:36:55 (UTC).

Data path: AWS Brazil 2 on `ens5` (*local*) → Colombia on `p4p1` (*remote*).

Repeated the test of 21 congestion control schemes 5 times.

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

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

System info:

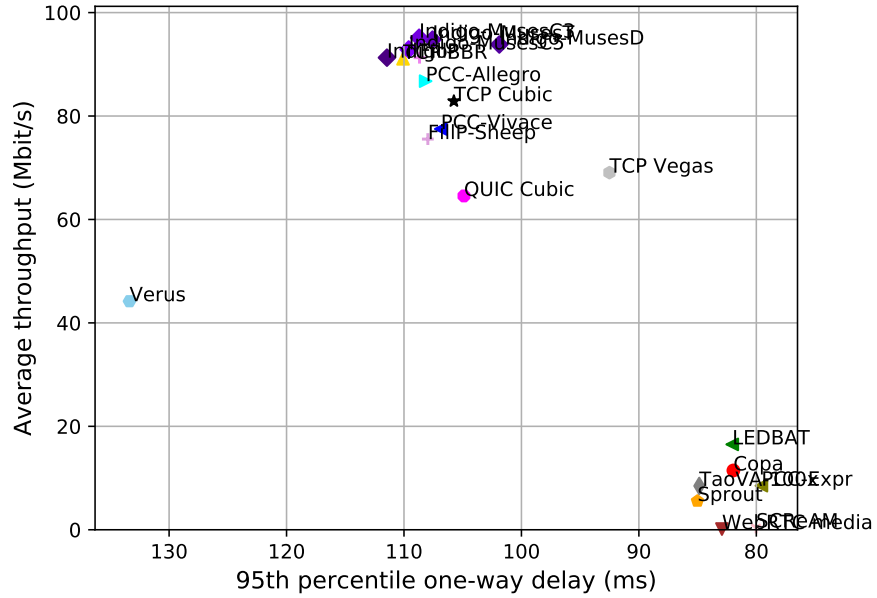
```
Linux 4.15.0-1034-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

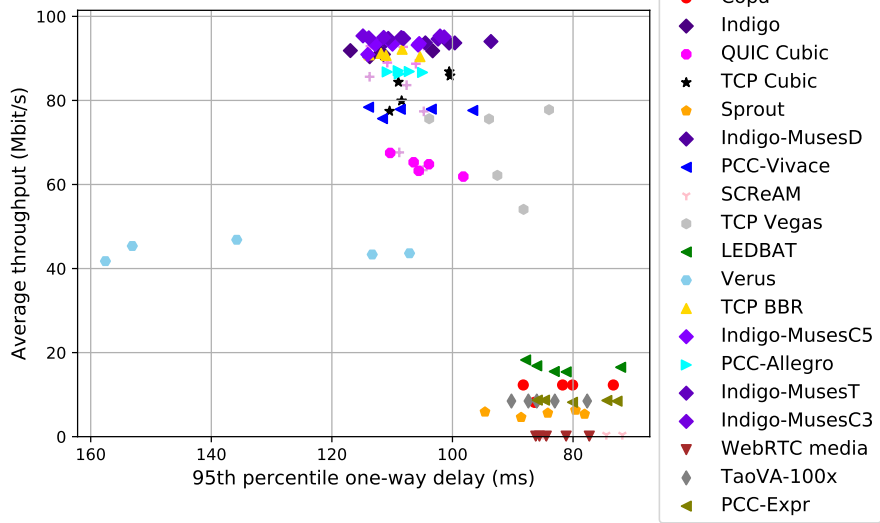
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from AWS Brazil 2 to Colombia, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS Brazil 2 to Colombia, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows



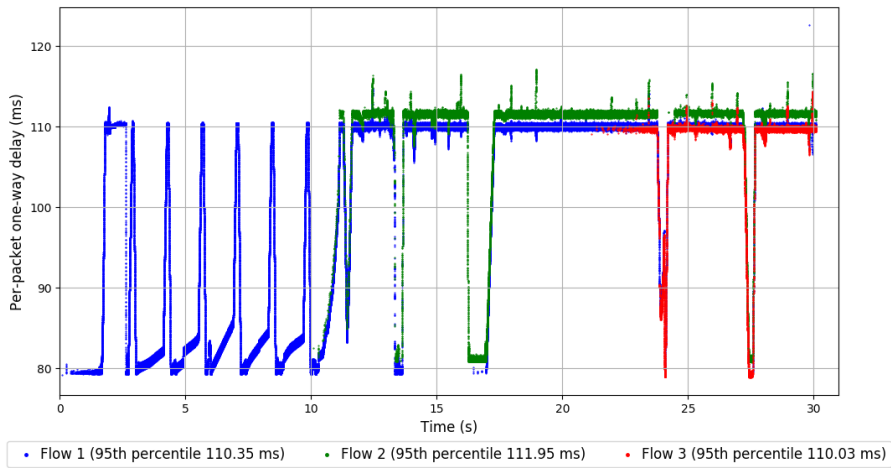
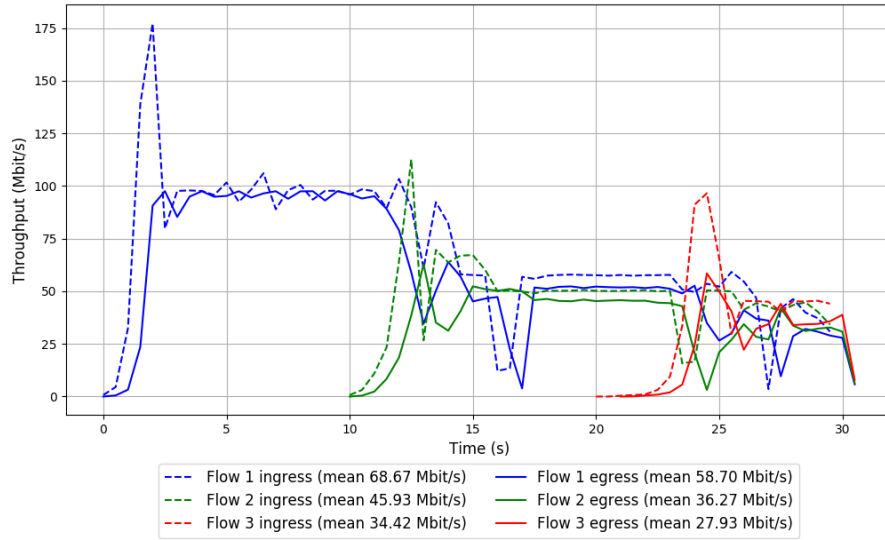
| scheme | # runs | mean avg tput (Mbit/s) | | | mean 95th-%ile delay (ms) | | | mean loss rate (%) | | |
|----------------|--------|------------------------|--------|--------|---------------------------|--------|--------|--------------------|--------|--------|
| | | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 |
| TCP BBR | 5 | 55.51 | 38.97 | 29.43 | 108.98 | 109.56 | 108.72 | 12.84 | 19.62 | 23.73 |
| Copa | 5 | 6.98 | 5.81 | 1.87 | 82.10 | 80.73 | 80.78 | 79.79 | 76.47 | 83.29 |
| TCP Cubic | 5 | 48.70 | 36.92 | 28.79 | 106.01 | 99.83 | 97.68 | 1.63 | 0.62 | 0.66 |
| FillP | 5 | 48.32 | 50.56 | 28.19 | 107.05 | 108.53 | 109.08 | 12.38 | 21.57 | 21.68 |
| FillP-Sheep | 5 | 17.72 | 76.33 | 21.28 | 106.33 | 108.21 | 107.43 | 13.20 | 5.67 | 15.51 |
| Indigo | 5 | 63.28 | 27.57 | 30.90 | 110.60 | 110.98 | 110.44 | 12.41 | 32.89 | 69.79 |
| Indigo-MusesC3 | 5 | 48.79 | 53.49 | 38.55 | 106.75 | 109.00 | 108.39 | 1.04 | 1.99 | 2.44 |
| Indigo-MusesC5 | 5 | 63.98 | 39.16 | 11.40 | 109.26 | 109.69 | 109.99 | 2.27 | 5.28 | 3.68 |
| Indigo-MusesD | 5 | 61.10 | 37.60 | 27.73 | 100.17 | 101.34 | 103.28 | 0.71 | 0.43 | 1.74 |
| Indigo-MusesT | 5 | 56.99 | 49.09 | 19.70 | 106.55 | 107.34 | 107.40 | 3.86 | 3.69 | 4.94 |
| LEDBAT | 5 | 10.70 | 6.92 | 3.63 | 82.00 | 81.96 | 81.76 | 0.01 | 0.01 | 0.01 |
| PCC-Allegro | 5 | 77.52 | 9.78 | 8.22 | 108.16 | 107.29 | 106.98 | 3.07 | 5.06 | 5.08 |
| PCC-Expr | 5 | 0.01 | 10.24 | 5.18 | 78.66 | 79.12 | 79.33 | 85.71 | 53.96 | 33.20 |
| QUIC Cubic | 5 | 41.15 | 28.81 | 13.10 | 105.39 | 103.07 | 95.86 | 0.89 | 0.56 | 0.38 |
| SCReAM | 5 | 0.22 | 0.22 | 0.22 | 79.45 | 78.89 | 79.36 | 0.00 | 0.00 | 0.00 |
| Sprout | 5 | 2.90 | 2.73 | 2.58 | 83.66 | 85.90 | 85.41 | 0.00 | 0.00 | 0.00 |
| TaoVA-100x | 5 | 0.00 | 10.08 | 5.29 | 79.05 | 88.06 | 78.96 | 95.92 | 27.10 | 21.40 |
| TCP Vegas | 5 | 32.56 | 41.62 | 26.34 | 91.23 | 91.08 | 99.54 | 1.28 | 0.94 | 1.86 |
| Verus | 5 | 21.14 | 28.46 | 13.56 | 119.32 | 127.47 | 149.15 | 30.80 | 51.17 | 60.38 |
| PCC-Vivace | 5 | 65.68 | 12.95 | 9.71 | 107.18 | 105.47 | 106.66 | 0.32 | 0.61 | 0.85 |
| WebRTC media | 5 | 0.05 | 0.05 | 0.05 | 82.49 | 82.65 | 82.19 | 0.00 | 0.00 | 0.00 |

Run 1: Statistics of TCP BBR

Start at: 2019-04-24 00:18:41
End at: 2019-04-24 00:19:11
Local clock offset: -2.67 ms
Remote clock offset: -3.317 ms

```
# Below is generated by plot.py at 2019-04-24 02:27:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.20 Mbit/s
95th percentile per-packet one-way delay: 111.833 ms
Loss rate: 17.55%
-- Flow 1:
Average throughput: 58.70 Mbit/s
95th percentile per-packet one-way delay: 110.351 ms
Loss rate: 14.43%
-- Flow 2:
Average throughput: 36.27 Mbit/s
95th percentile per-packet one-way delay: 111.951 ms
Loss rate: 20.93%
-- Flow 3:
Average throughput: 27.93 Mbit/s
95th percentile per-packet one-way delay: 110.034 ms
Loss rate: 27.22%
```

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-04-24 00:45:37

End at: 2019-04-24 00:46:07

Local clock offset: -3.331 ms

Remote clock offset: 0.258 ms

Below is generated by plot.py at 2019-04-24 02:27:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.69 Mbit/s

95th percentile per-packet one-way delay: 111.014 ms

Loss rate: 17.13%

-- Flow 1:

Average throughput: 52.48 Mbit/s

95th percentile per-packet one-way delay: 110.996 ms

Loss rate: 12.57%

-- Flow 2:

Average throughput: 42.46 Mbit/s

95th percentile per-packet one-way delay: 110.954 ms

Loss rate: 22.05%

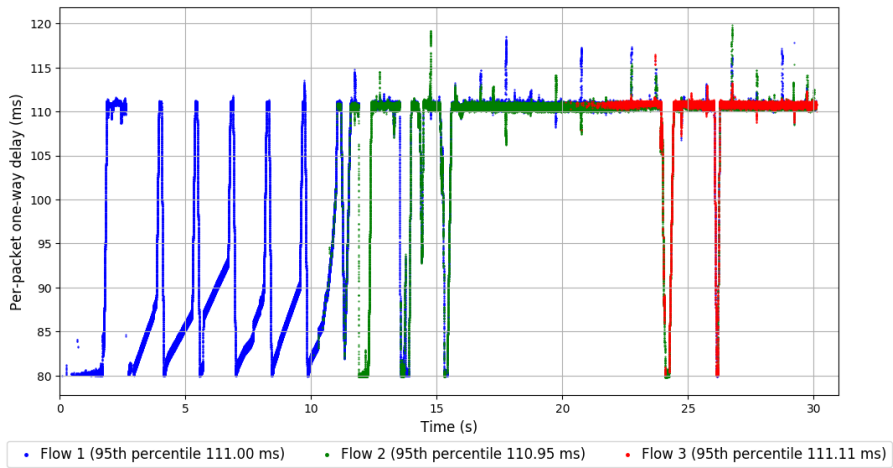
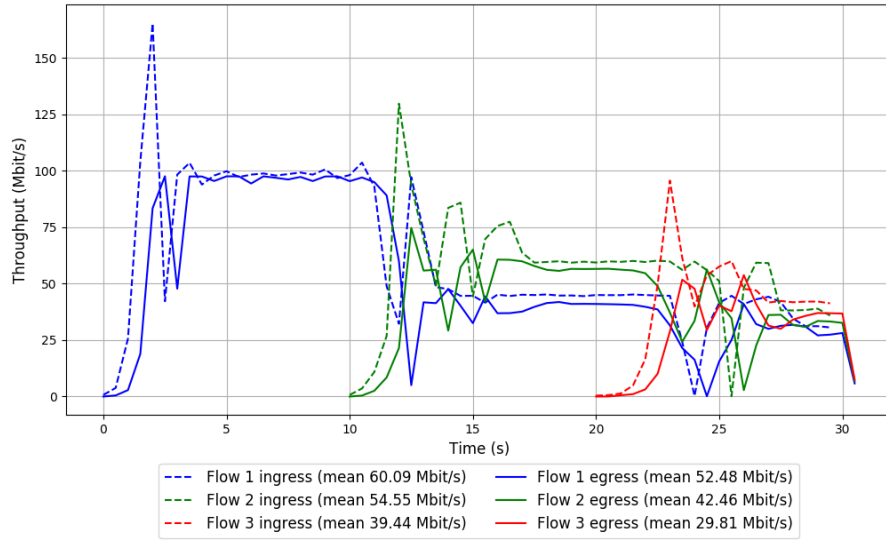
-- Flow 3:

Average throughput: 29.81 Mbit/s

95th percentile per-packet one-way delay: 111.108 ms

Loss rate: 24.43%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-04-24 01:12:33

End at: 2019-04-24 01:13:03

Local clock offset: -4.043 ms

Remote clock offset: 4.454 ms

Below is generated by plot.py at 2019-04-24 02:27:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.86 Mbit/s

95th percentile per-packet one-way delay: 113.824 ms

Loss rate: 14.41%

-- Flow 1:

Average throughput: 55.54 Mbit/s

95th percentile per-packet one-way delay: 112.227 ms

Loss rate: 12.06%

-- Flow 2:

Average throughput: 36.71 Mbit/s

95th percentile per-packet one-way delay: 112.758 ms

Loss rate: 17.38%

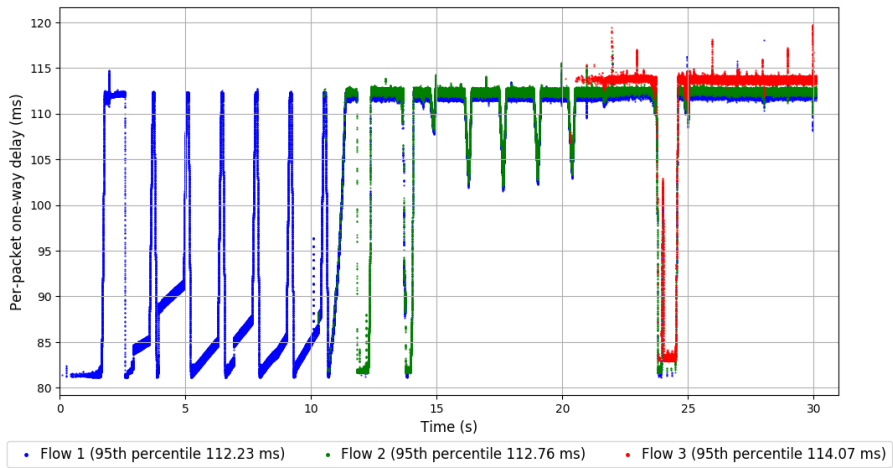
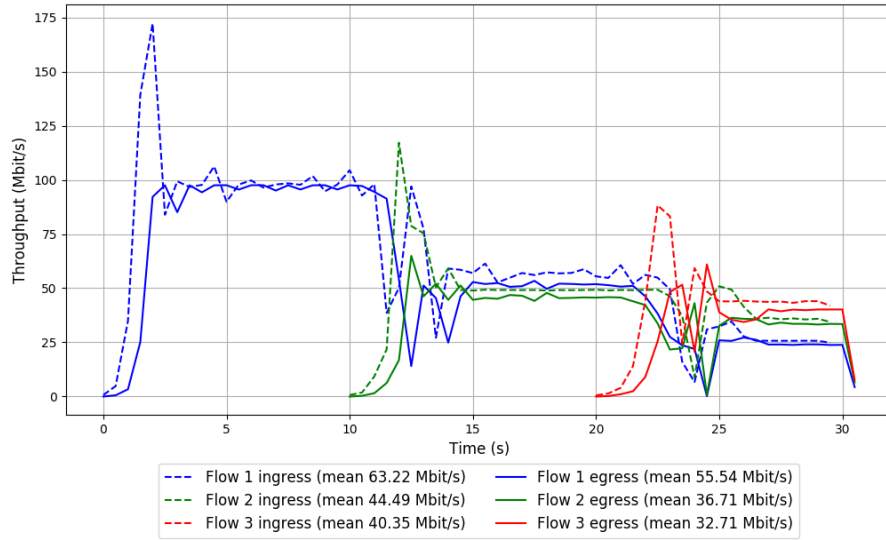
-- Flow 3:

Average throughput: 32.71 Mbit/s

95th percentile per-packet one-way delay: 114.072 ms

Loss rate: 18.93%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-04-24 01:39:39
End at: 2019-04-24 01:40:09
Local clock offset: -3.681 ms
Remote clock offset: -6.063 ms

Below is generated by plot.py at 2019-04-24 02:27:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.42 Mbit/s
95th percentile per-packet one-way delay: 105.391 ms
Loss rate: 14.62%

-- Flow 1:

Average throughput: 55.38 Mbit/s
95th percentile per-packet one-way delay: 105.442 ms
Loss rate: 12.29%

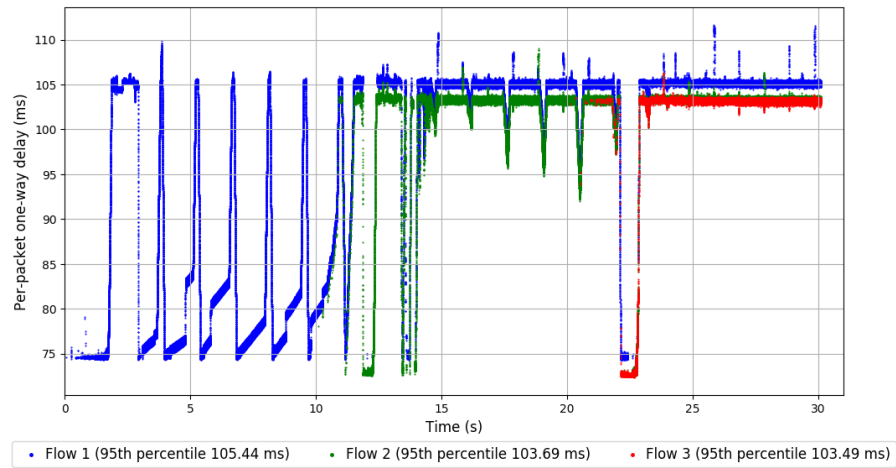
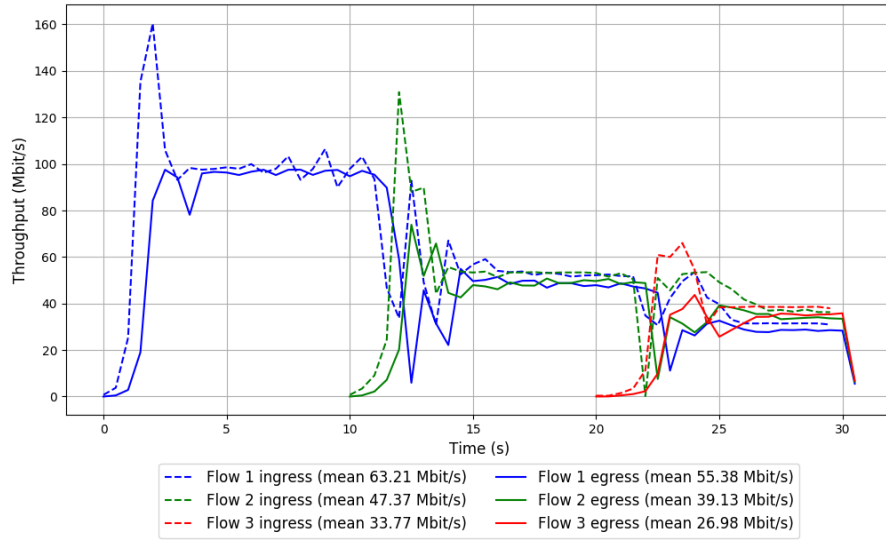
-- Flow 2:

Average throughput: 39.13 Mbit/s
95th percentile per-packet one-way delay: 103.694 ms
Loss rate: 17.31%

-- Flow 3:

Average throughput: 26.98 Mbit/s
95th percentile per-packet one-way delay: 103.486 ms
Loss rate: 20.12%

Run 4: Report of TCP BBR — Data Link

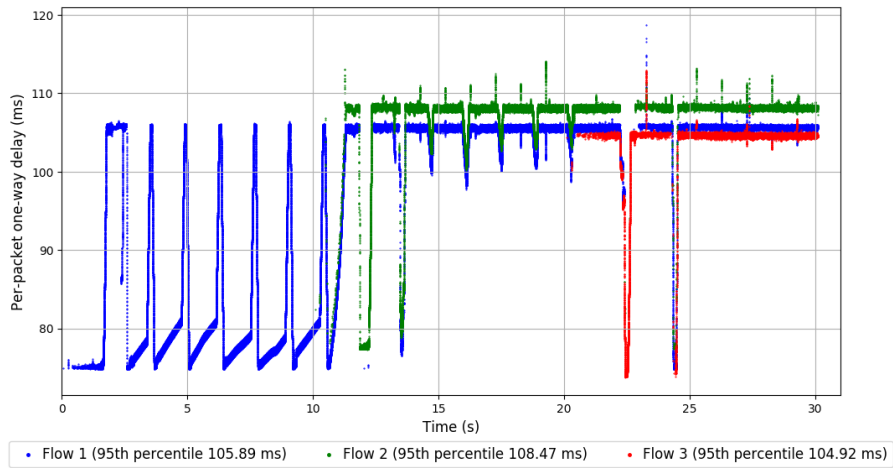
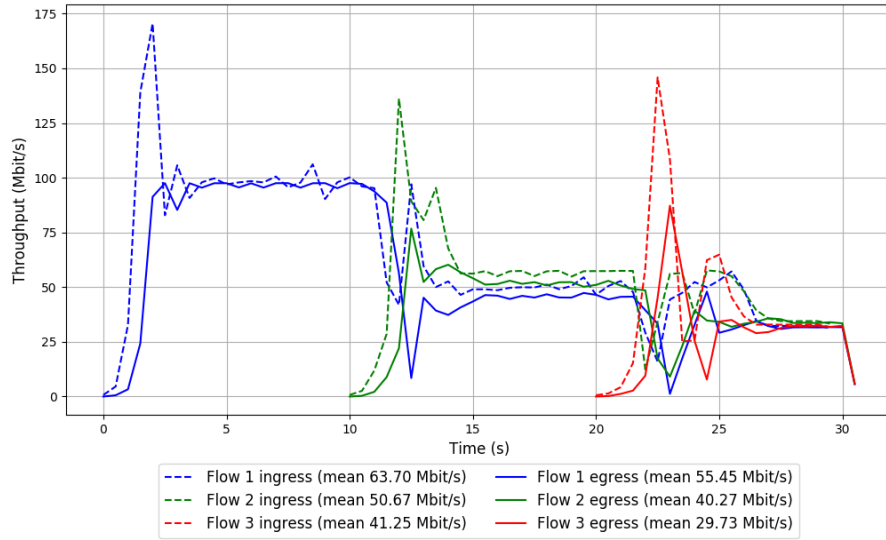


Run 5: Statistics of TCP BBR

Start at: 2019-04-24 02:06:25
End at: 2019-04-24 02:06:55
Local clock offset: -2.702 ms
Remote clock offset: -3.254 ms

```
# Below is generated by plot.py at 2019-04-24 02:27:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.18 Mbit/s
95th percentile per-packet one-way delay: 108.345 ms
Loss rate: 17.02%
-- Flow 1:
Average throughput: 55.45 Mbit/s
95th percentile per-packet one-way delay: 105.885 ms
Loss rate: 12.87%
-- Flow 2:
Average throughput: 40.27 Mbit/s
95th percentile per-packet one-way delay: 108.467 ms
Loss rate: 20.42%
-- Flow 3:
Average throughput: 29.73 Mbit/s
95th percentile per-packet one-way delay: 104.921 ms
Loss rate: 27.93%
```

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-04-24 00:10:56

End at: 2019-04-24 00:11:26

Local clock offset: -2.451 ms

Remote clock offset: 2.945 ms

Below is generated by plot.py at 2019-04-24 02:27:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.16 Mbit/s

95th percentile per-packet one-way delay: 86.386 ms

Loss rate: 75.93%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 86.279 ms

Loss rate: 97.92%

-- Flow 2:

Average throughput: 9.35 Mbit/s

95th percentile per-packet one-way delay: 86.701 ms

Loss rate: 74.73%

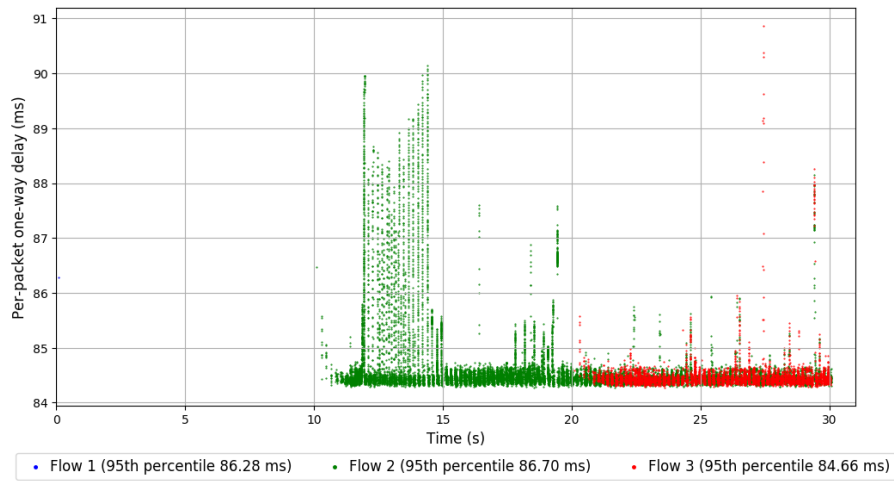
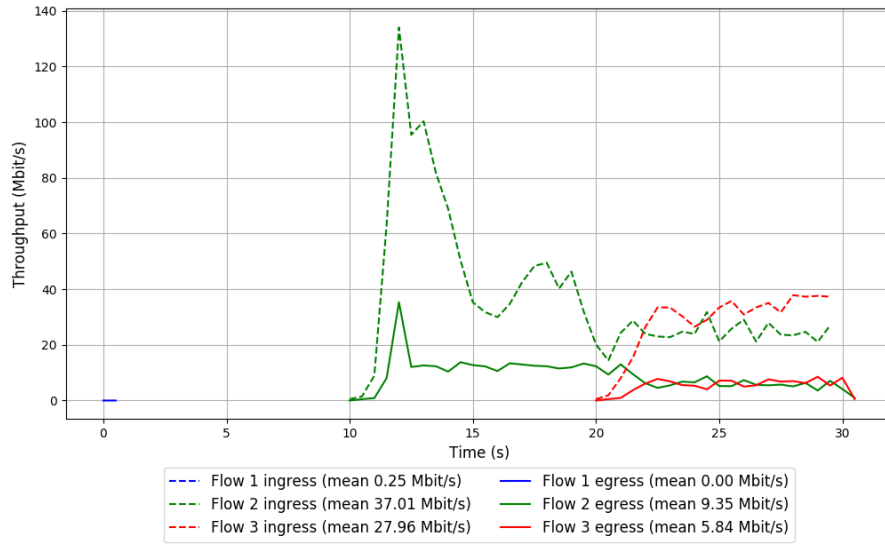
-- Flow 3:

Average throughput: 5.84 Mbit/s

95th percentile per-packet one-way delay: 84.660 ms

Loss rate: 79.12%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-04-24 00:37:43
End at: 2019-04-24 00:38:13
Local clock offset: -4.055 ms
Remote clock offset: -1.259 ms

Below is generated by plot.py at 2019-04-24 02:27:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.30 Mbit/s
95th percentile per-packet one-way delay: 81.734 ms
Loss rate: 77.09%

-- Flow 1:

Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 81.699 ms
Loss rate: 76.03%

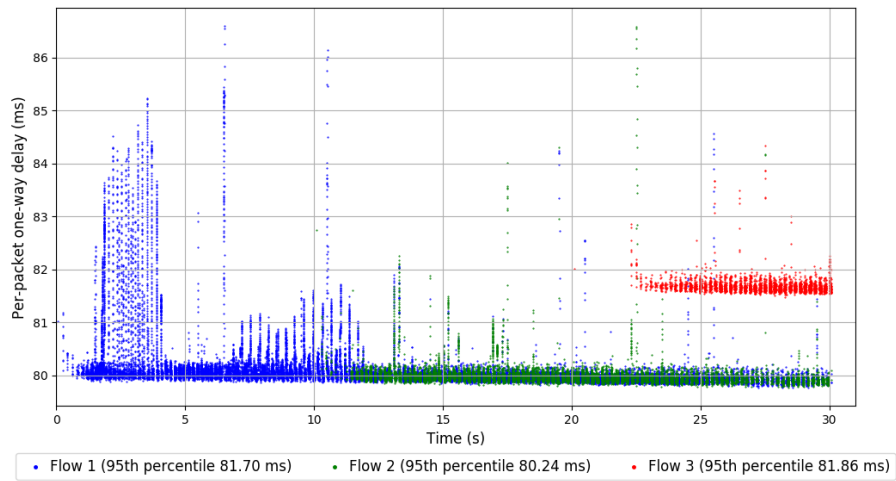
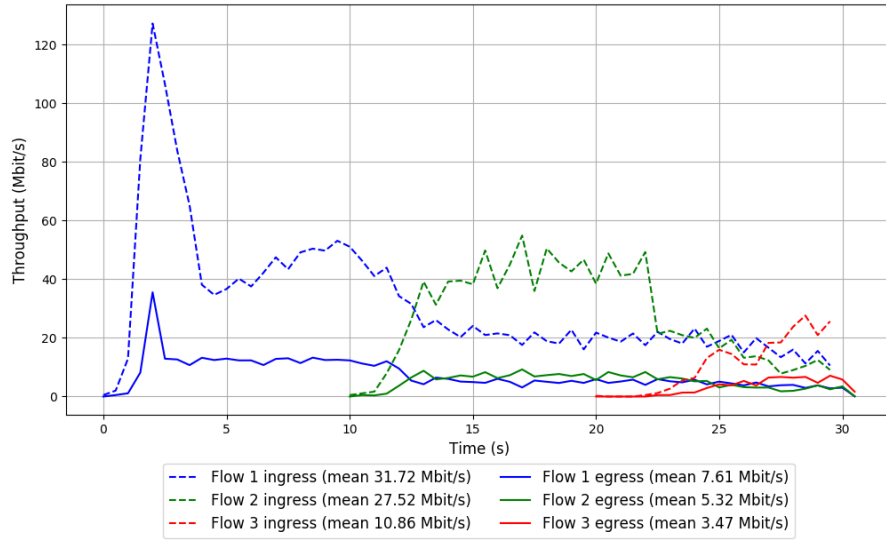
-- Flow 2:

Average throughput: 5.32 Mbit/s
95th percentile per-packet one-way delay: 80.240 ms
Loss rate: 80.69%

-- Flow 3:

Average throughput: 3.47 Mbit/s
95th percentile per-packet one-way delay: 81.863 ms
Loss rate: 68.05%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-04-24 01:04:38

End at: 2019-04-24 01:05:08

Local clock offset: -4.683 ms

Remote clock offset: 7.142 ms

Below is generated by plot.py at 2019-04-24 02:27:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.30 Mbit/s

95th percentile per-packet one-way delay: 88.257 ms

Loss rate: 75.55%

-- Flow 1:

Average throughput: 8.96 Mbit/s

95th percentile per-packet one-way delay: 88.553 ms

Loss rate: 75.32%

-- Flow 2:

Average throughput: 5.02 Mbit/s

95th percentile per-packet one-way delay: 87.176 ms

Loss rate: 76.11%

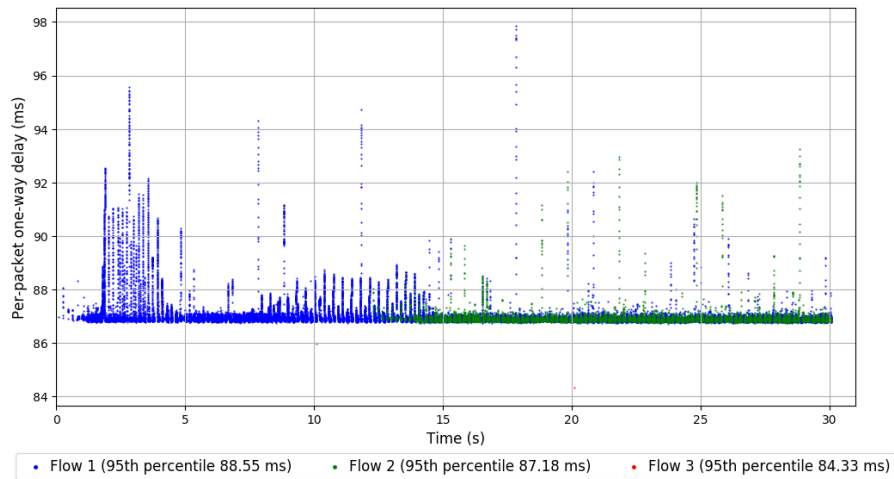
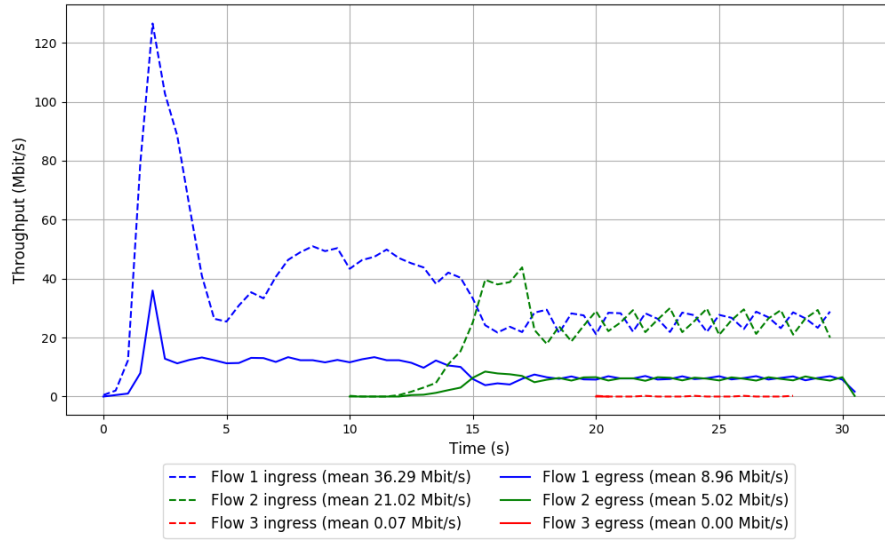
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 84.330 ms

Loss rate: 99.83%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-04-24 01:31:54
End at: 2019-04-24 01:32:24
Local clock offset: -3.79 ms
Remote clock offset: -1.274 ms

Below is generated by plot.py at 2019-04-24 02:27:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.29 Mbit/s
95th percentile per-packet one-way delay: 80.071 ms
Loss rate: 72.62%

-- Flow 1:

Average throughput: 8.37 Mbit/s
95th percentile per-packet one-way delay: 80.555 ms
Loss rate: 73.23%

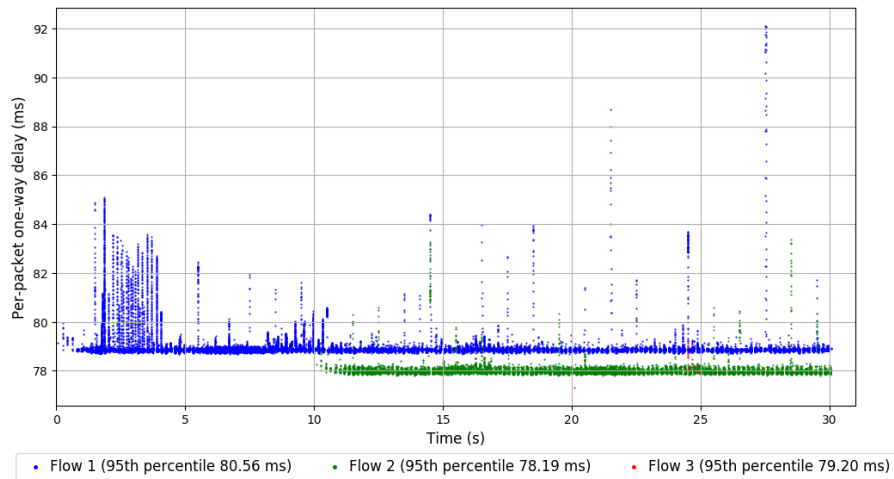
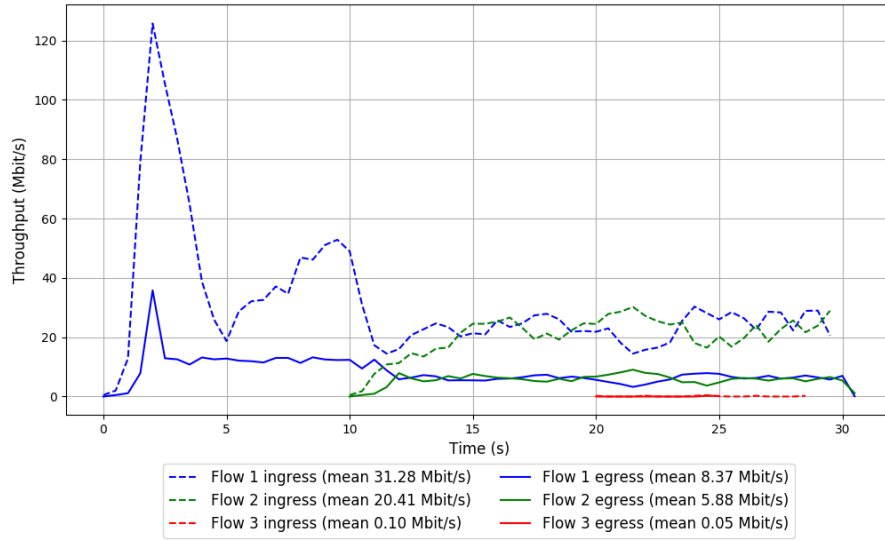
-- Flow 2:

Average throughput: 5.88 Mbit/s
95th percentile per-packet one-way delay: 78.186 ms
Loss rate: 71.20%

-- Flow 3:

Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 79.204 ms
Loss rate: 74.24%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-04-24 01:58:41
End at: 2019-04-24 01:59:11
Local clock offset: -2.757 ms
Remote clock offset: -6.885 ms

Below is generated by plot.py at 2019-04-24 02:27:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.30 Mbit/s
95th percentile per-packet one-way delay: 73.317 ms
Loss rate: 77.14%

-- Flow 1:

Average throughput: 9.98 Mbit/s
95th percentile per-packet one-way delay: 73.416 ms
Loss rate: 76.47%

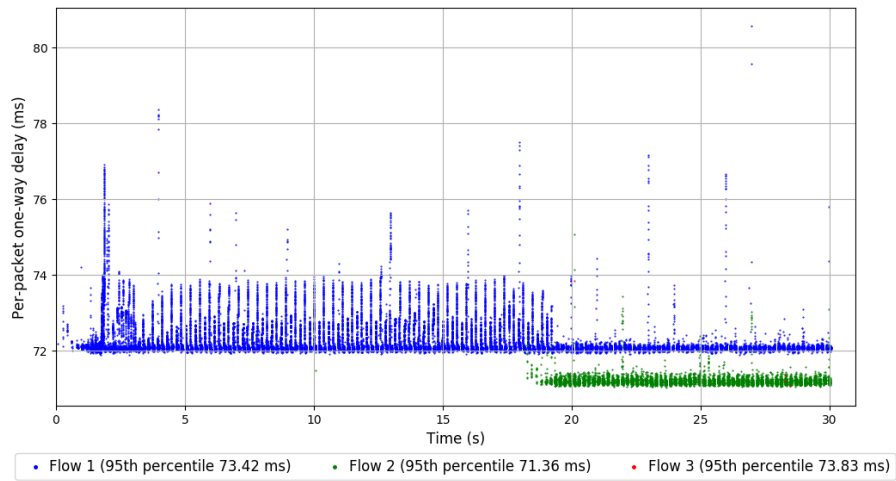
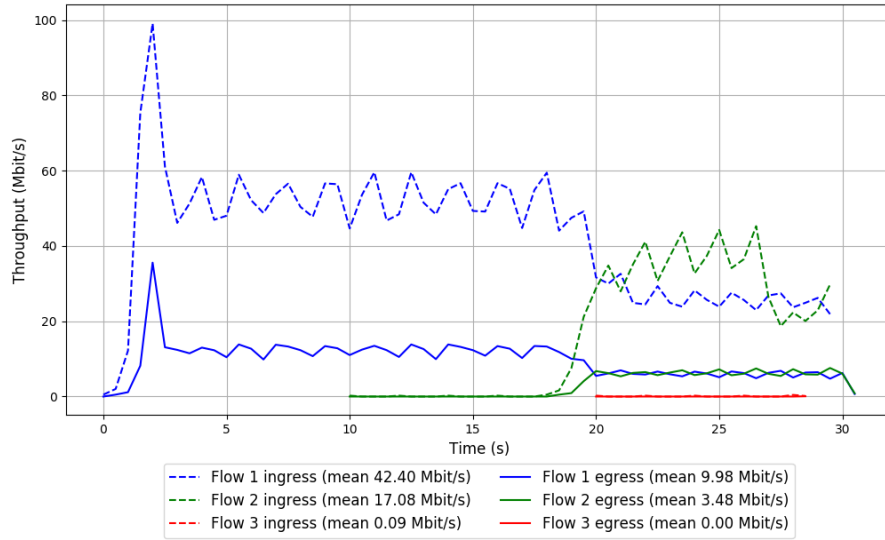
-- Flow 2:

Average throughput: 3.48 Mbit/s
95th percentile per-packet one-way delay: 71.364 ms
Loss rate: 79.61%

-- Flow 3:

Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 73.834 ms
Loss rate: 95.19%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-04-24 00:31:20
End at: 2019-04-24 00:31:50
Local clock offset: -3.145 ms
Remote clock offset: -2.258 ms

Below is generated by plot.py at 2019-04-24 02:27:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.90 Mbit/s
95th percentile per-packet one-way delay: 108.437 ms
Loss rate: 0.89%

-- Flow 1:

Average throughput: 56.57 Mbit/s
95th percentile per-packet one-way delay: 106.993 ms
Loss rate: 0.90%

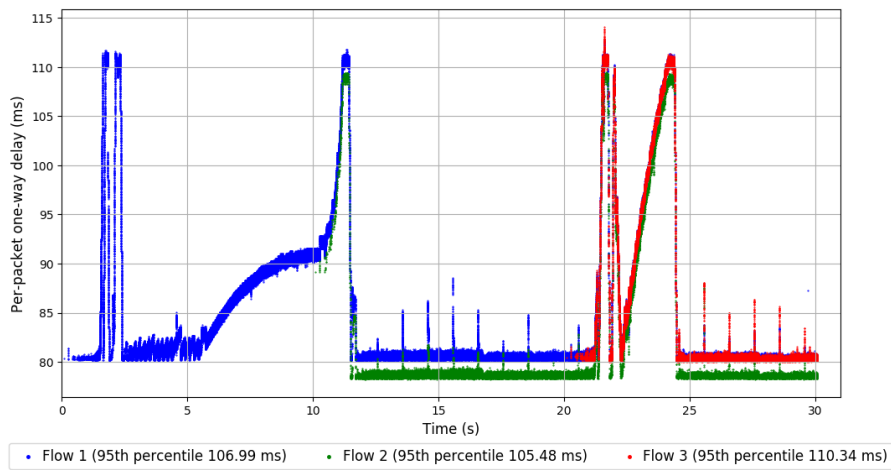
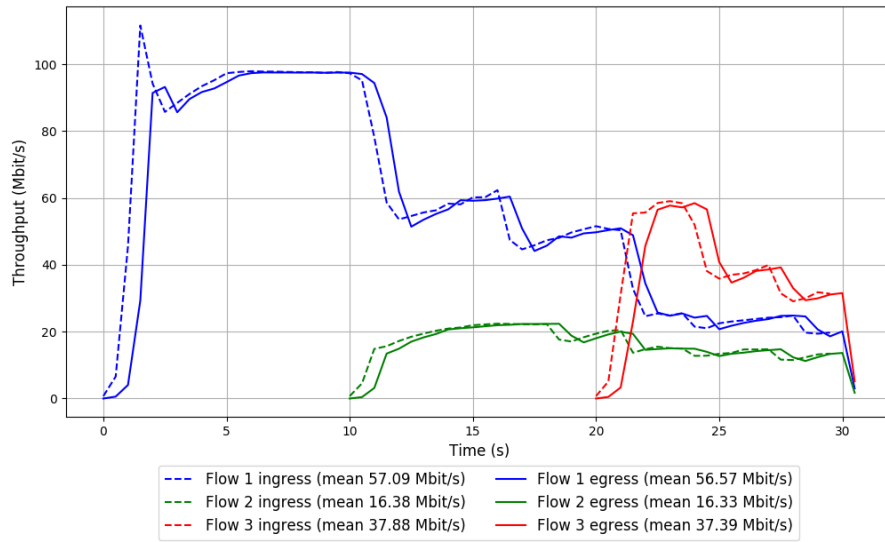
-- Flow 2:

Average throughput: 16.33 Mbit/s
95th percentile per-packet one-way delay: 105.485 ms
Loss rate: 0.34%

-- Flow 3:

Average throughput: 37.39 Mbit/s
95th percentile per-packet one-way delay: 110.345 ms
Loss rate: 1.29%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-04-24 00:58:15

End at: 2019-04-24 00:58:45

Local clock offset: -3.78 ms

Remote clock offset: 0.44 ms

Below is generated by plot.py at 2019-04-24 02:27:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.36 Mbit/s

95th percentile per-packet one-way delay: 108.968 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 45.71 Mbit/s

95th percentile per-packet one-way delay: 109.206 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 48.90 Mbit/s

95th percentile per-packet one-way delay: 108.954 ms

Loss rate: 0.55%

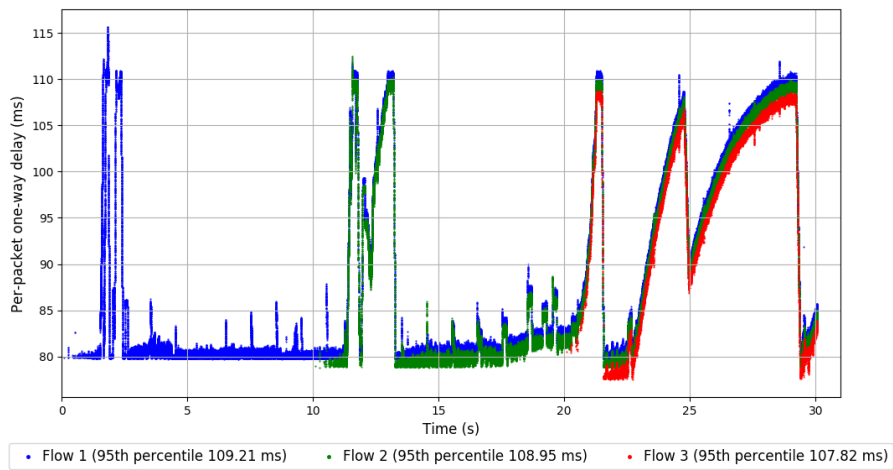
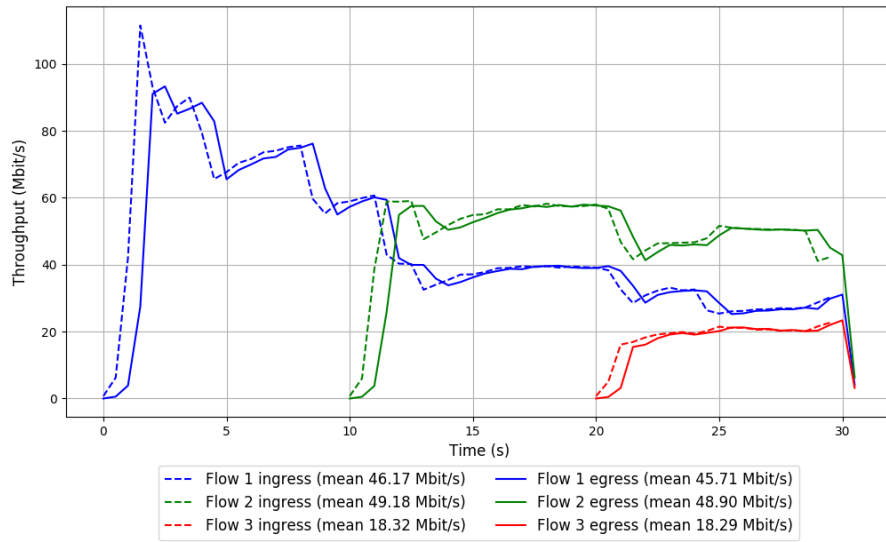
-- Flow 3:

Average throughput: 18.29 Mbit/s

95th percentile per-packet one-way delay: 107.824 ms

Loss rate: 0.16%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-04-24 01:25:11

End at: 2019-04-24 01:25:41

Local clock offset: -3.247 ms

Remote clock offset: 0.949 ms

Below is generated by plot.py at 2019-04-24 02:27:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.45 Mbit/s

95th percentile per-packet one-way delay: 110.429 ms

Loss rate: 1.73%

-- Flow 1:

Average throughput: 32.56 Mbit/s

95th percentile per-packet one-way delay: 111.830 ms

Loss rate: 2.84%

-- Flow 2:

Average throughput: 58.95 Mbit/s

95th percentile per-packet one-way delay: 103.469 ms

Loss rate: 1.01%

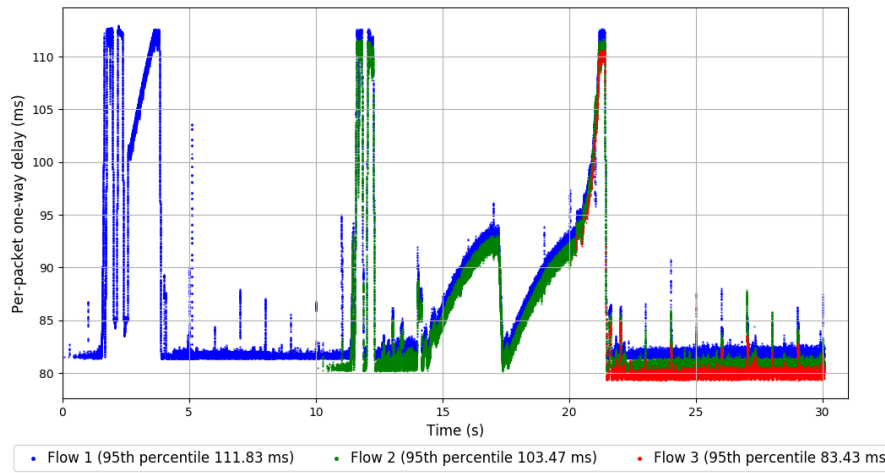
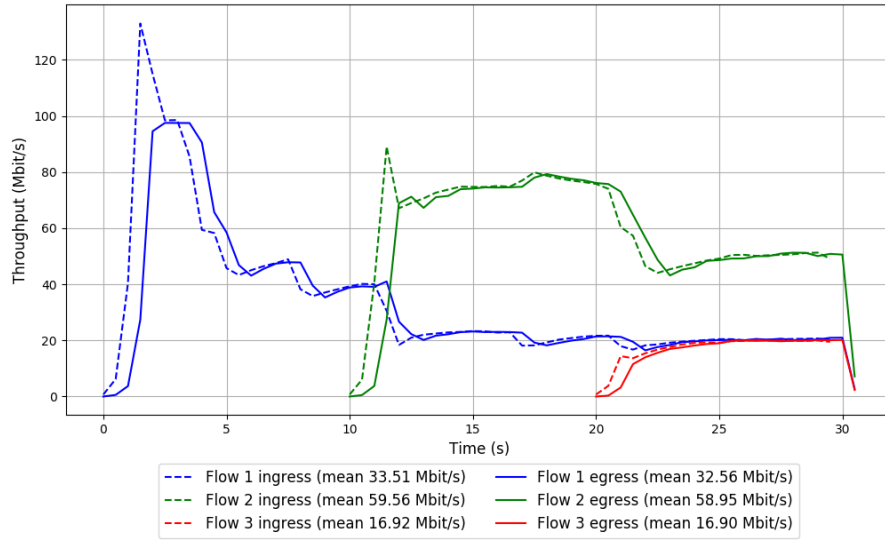
-- Flow 3:

Average throughput: 16.90 Mbit/s

95th percentile per-packet one-way delay: 83.434 ms

Loss rate: 0.21%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-04-24 01:52:16

End at: 2019-04-24 01:52:46

Local clock offset: -3.568 ms

Remote clock offset: -2.36 ms

Below is generated by plot.py at 2019-04-24 02:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.83 Mbit/s

95th percentile per-packet one-way delay: 100.534 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 60.06 Mbit/s

95th percentile per-packet one-way delay: 101.452 ms

Loss rate: 1.58%

-- Flow 2:

Average throughput: 27.43 Mbit/s

95th percentile per-packet one-way delay: 82.473 ms

Loss rate: 0.33%

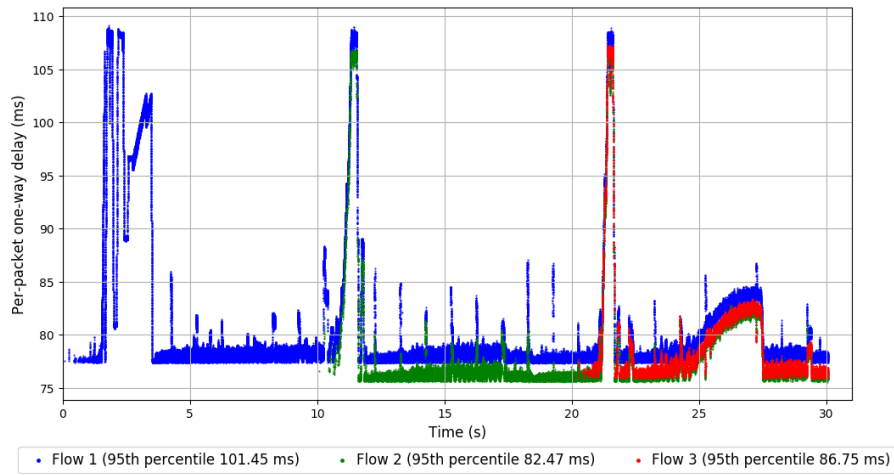
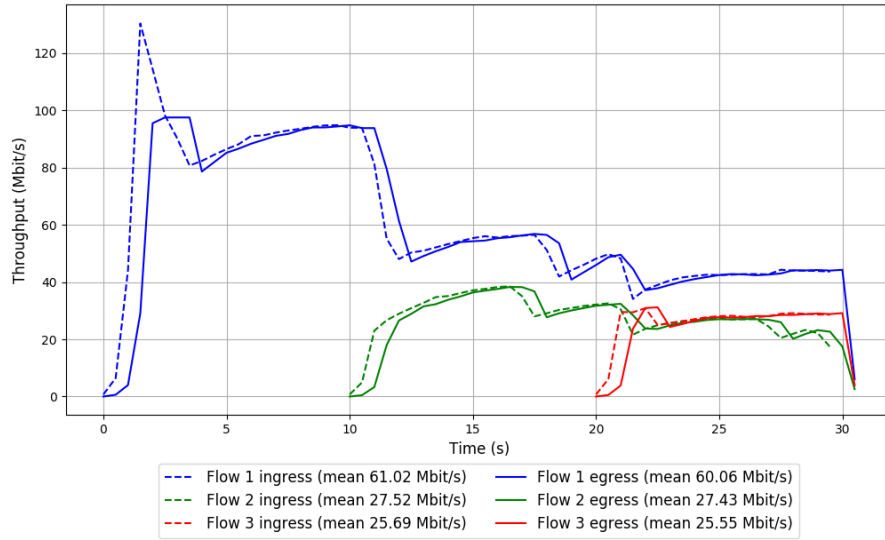
-- Flow 3:

Average throughput: 25.55 Mbit/s

95th percentile per-packet one-way delay: 86.745 ms

Loss rate: 0.54%

Run 4: Report of TCP Cubic — Data Link

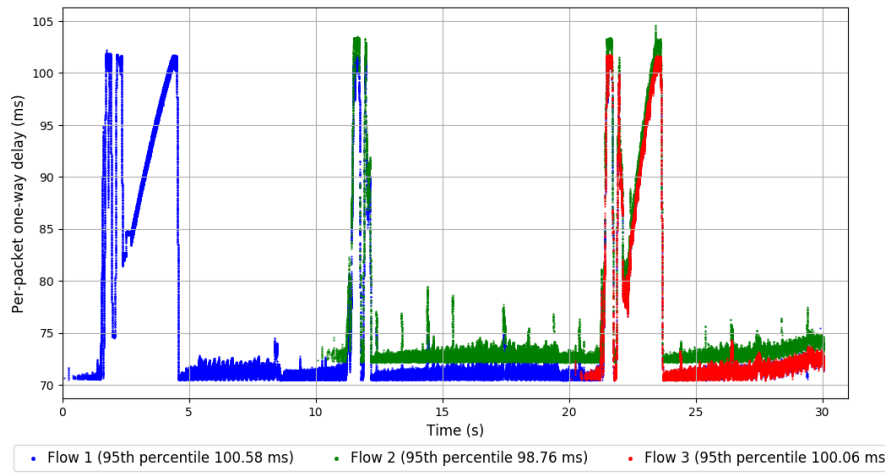
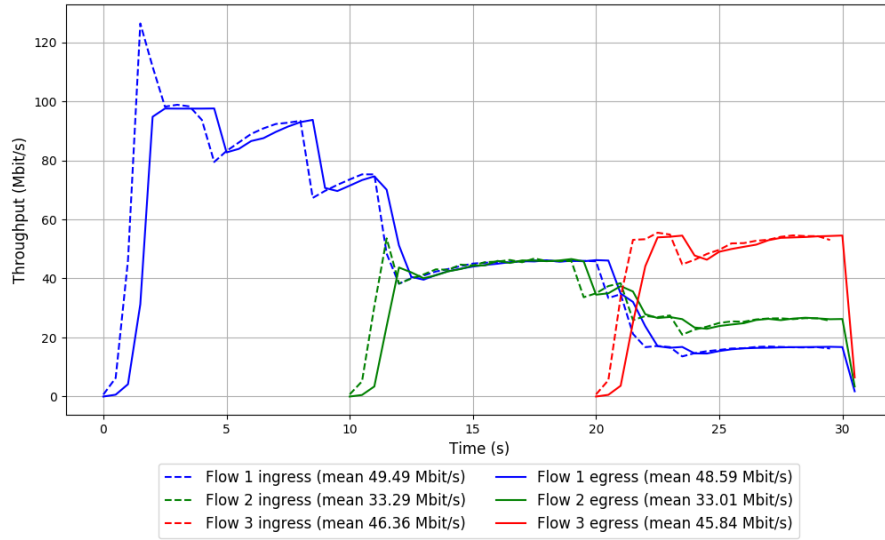


Run 5: Statistics of TCP Cubic

Start at: 2019-04-24 02:19:09
End at: 2019-04-24 02:19:39
Local clock offset: -3.731 ms
Remote clock offset: -6.939 ms

```
# Below is generated by plot.py at 2019-04-24 02:28:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.85 Mbit/s
95th percentile per-packet one-way delay: 100.394 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 48.59 Mbit/s
95th percentile per-packet one-way delay: 100.585 ms
Loss rate: 1.82%
-- Flow 2:
Average throughput: 33.01 Mbit/s
95th percentile per-packet one-way delay: 98.762 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 45.84 Mbit/s
95th percentile per-packet one-way delay: 100.055 ms
Loss rate: 1.11%
```

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-04-24 00:30:02

End at: 2019-04-24 00:30:32

Local clock offset: -3.886 ms

Remote clock offset: -3.4 ms

Below is generated by plot.py at 2019-04-24 02:29:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.75 Mbit/s

95th percentile per-packet one-way delay: 108.180 ms

Loss rate: 19.46%

-- Flow 1:

Average throughput: 56.65 Mbit/s

95th percentile per-packet one-way delay: 107.742 ms

Loss rate: 15.67%

-- Flow 2:

Average throughput: 41.47 Mbit/s

95th percentile per-packet one-way delay: 108.459 ms

Loss rate: 25.23%

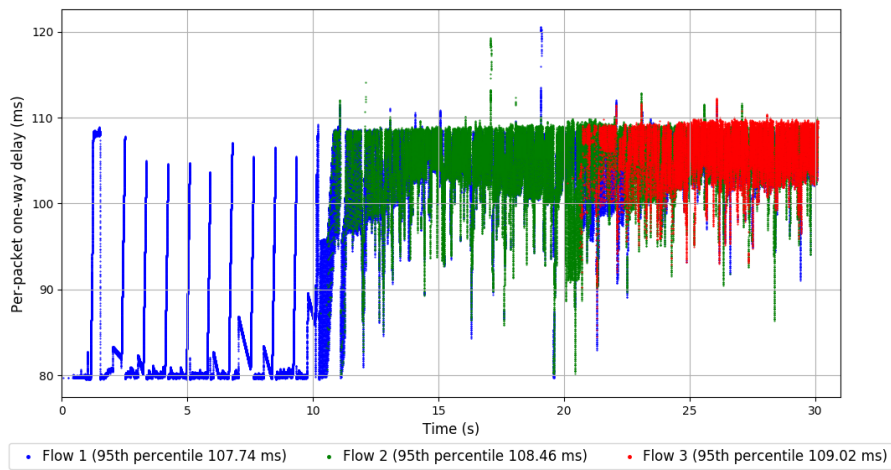
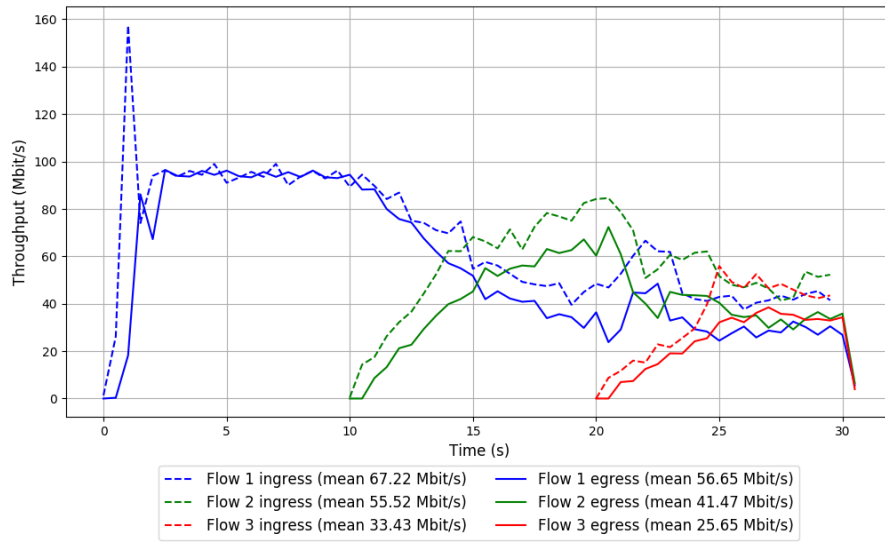
-- Flow 3:

Average throughput: 25.65 Mbit/s

95th percentile per-packet one-way delay: 109.017 ms

Loss rate: 23.22%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-04-24 00:56:58

End at: 2019-04-24 00:57:28

Local clock offset: -3.814 ms

Remote clock offset: 4.242 ms

Below is generated by plot.py at 2019-04-24 02:29:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.99 Mbit/s

95th percentile per-packet one-way delay: 110.810 ms

Loss rate: 12.86%

-- Flow 1:

Average throughput: 29.43 Mbit/s

95th percentile per-packet one-way delay: 104.079 ms

Loss rate: 5.30%

-- Flow 2:

Average throughput: 66.60 Mbit/s

95th percentile per-packet one-way delay: 110.842 ms

Loss rate: 16.49%

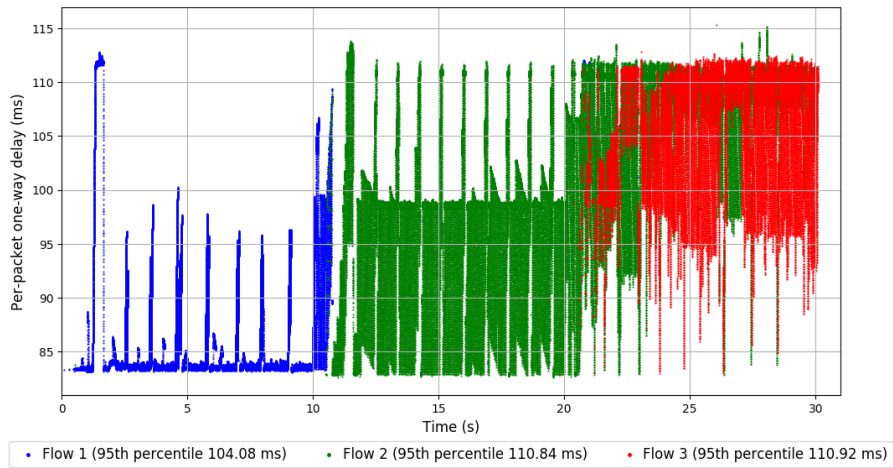
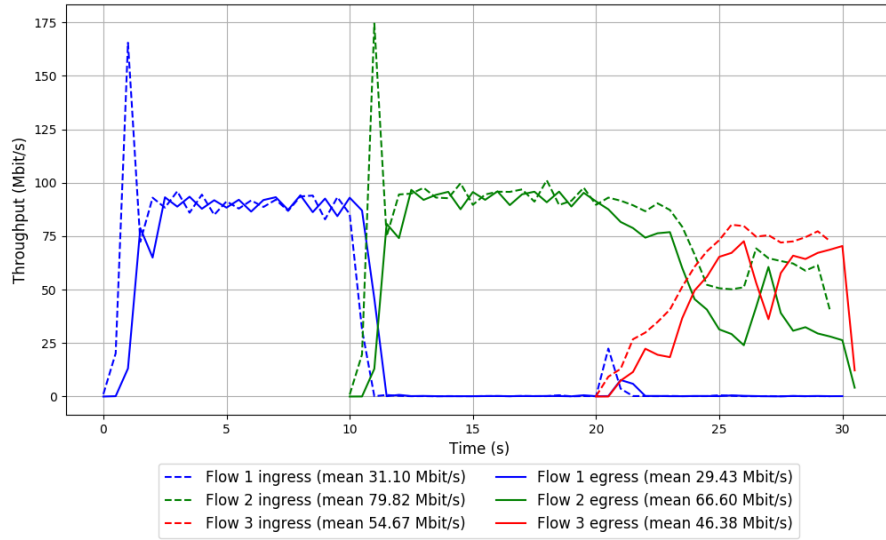
-- Flow 3:

Average throughput: 46.38 Mbit/s

95th percentile per-packet one-way delay: 110.923 ms

Loss rate: 15.13%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-04-24 01:23:52

End at: 2019-04-24 01:24:22

Local clock offset: -4.072 ms

Remote clock offset: 5.836 ms

Below is generated by plot.py at 2019-04-24 02:29:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.91 Mbit/s

95th percentile per-packet one-way delay: 113.609 ms

Loss rate: 19.18%

-- Flow 1:

Average throughput: 55.76 Mbit/s

95th percentile per-packet one-way delay: 112.079 ms

Loss rate: 16.80%

-- Flow 2:

Average throughput: 43.95 Mbit/s

95th percentile per-packet one-way delay: 114.020 ms

Loss rate: 23.65%

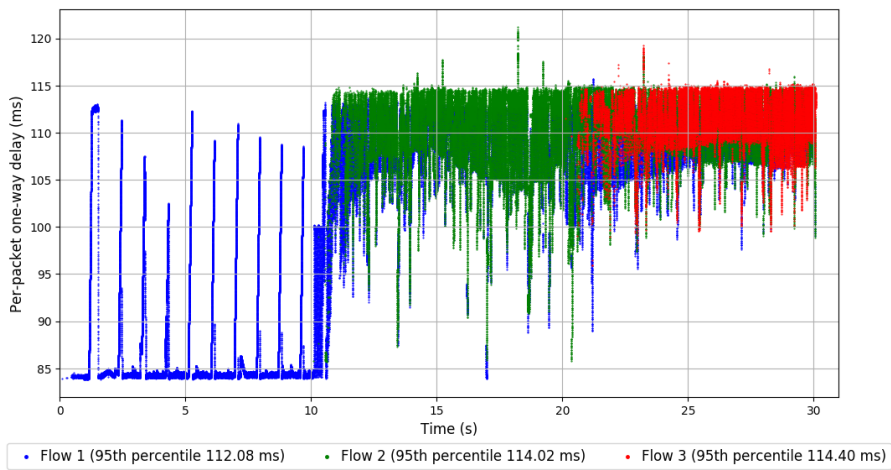
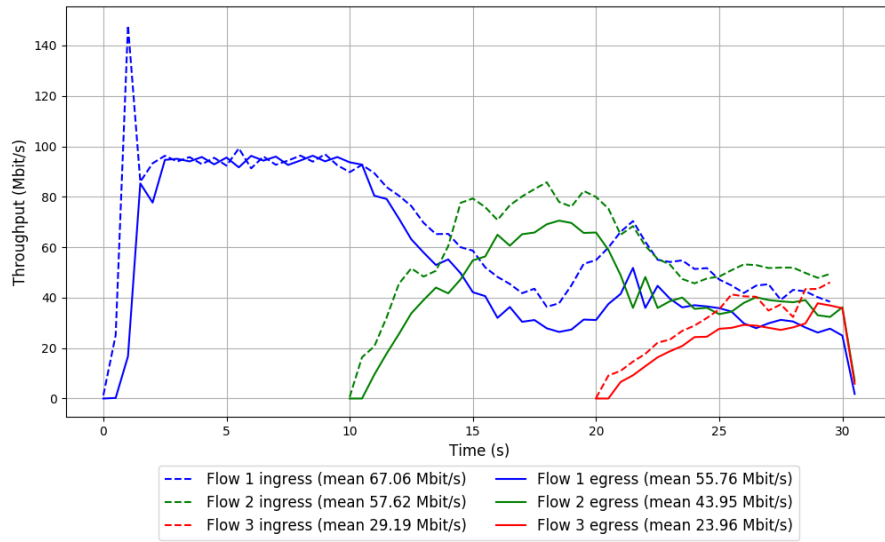
-- Flow 3:

Average throughput: 23.96 Mbit/s

95th percentile per-packet one-way delay: 114.396 ms

Loss rate: 17.91%

Run 3: Report of FillP — Data Link

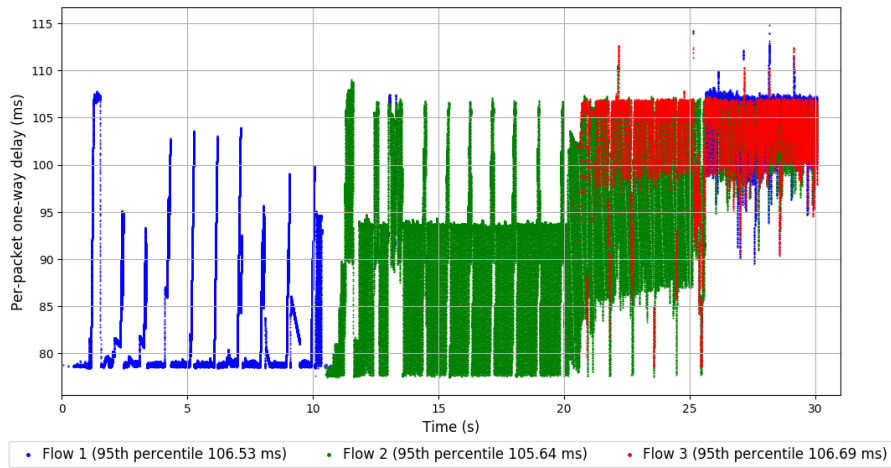
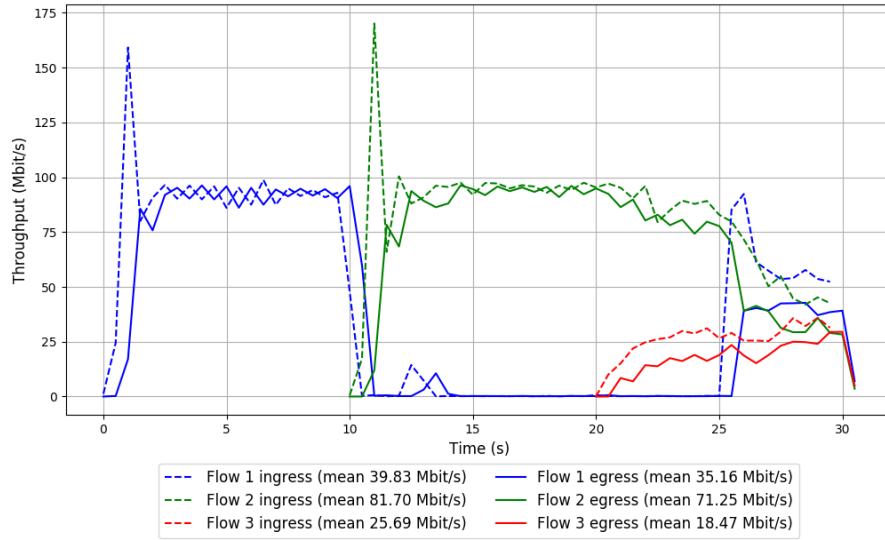


Run 4: Statistics of FillP

Start at: 2019-04-24 01:50:58
End at: 2019-04-24 01:51:29
Local clock offset: -3.577 ms
Remote clock offset: -2.344 ms

```
# Below is generated by plot.py at 2019-04-24 02:29:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.73 Mbit/s
95th percentile per-packet one-way delay: 106.066 ms
Loss rate: 13.54%
-- Flow 1:
Average throughput: 35.16 Mbit/s
95th percentile per-packet one-way delay: 106.531 ms
Loss rate: 11.63%
-- Flow 2:
Average throughput: 71.25 Mbit/s
95th percentile per-packet one-way delay: 105.636 ms
Loss rate: 12.68%
-- Flow 3:
Average throughput: 18.47 Mbit/s
95th percentile per-packet one-way delay: 106.691 ms
Loss rate: 27.98%
```

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-04-24 02:17:51

End at: 2019-04-24 02:18:21

Local clock offset: -3.628 ms

Remote clock offset: -1.9 ms

Below is generated by plot.py at 2019-04-24 02:29:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.03 Mbit/s

95th percentile per-packet one-way delay: 104.719 ms

Loss rate: 17.95%

-- Flow 1:

Average throughput: 64.62 Mbit/s

95th percentile per-packet one-way delay: 104.835 ms

Loss rate: 12.49%

-- Flow 2:

Average throughput: 29.53 Mbit/s

95th percentile per-packet one-way delay: 103.700 ms

Loss rate: 29.78%

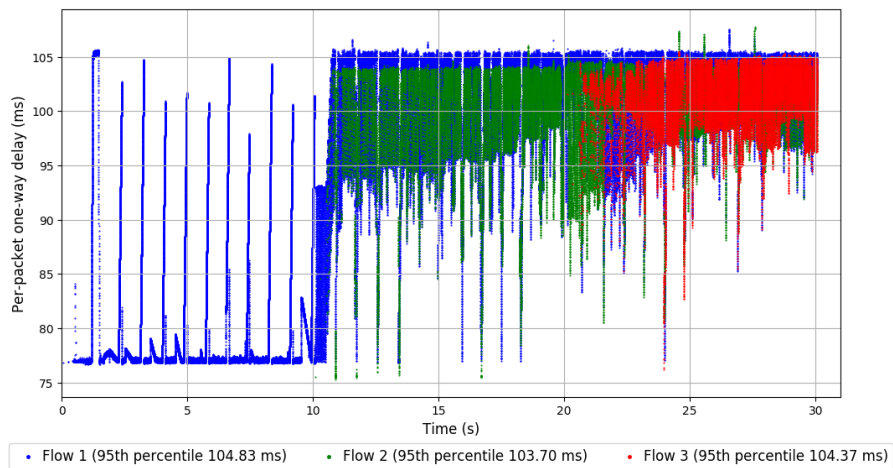
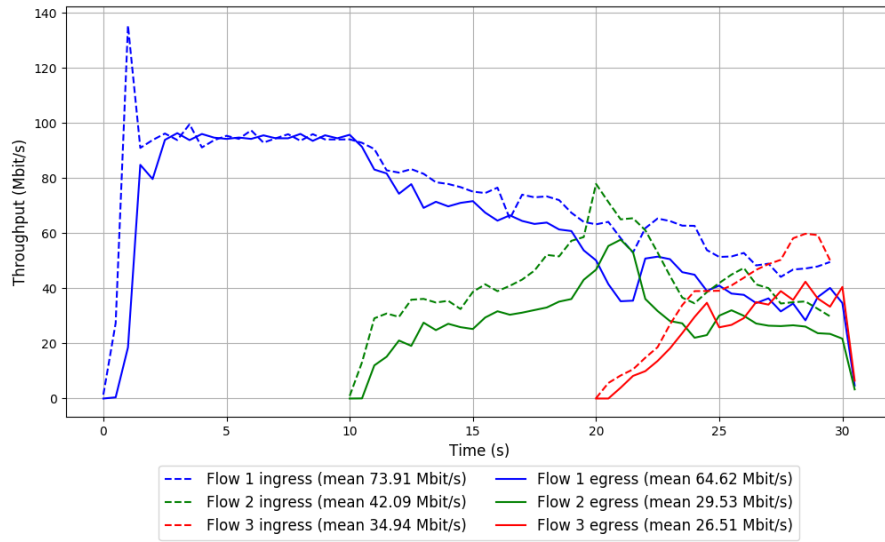
-- Flow 3:

Average throughput: 26.51 Mbit/s

95th percentile per-packet one-way delay: 104.373 ms

Loss rate: 24.14%

Run 5: Report of FillP — Data Link

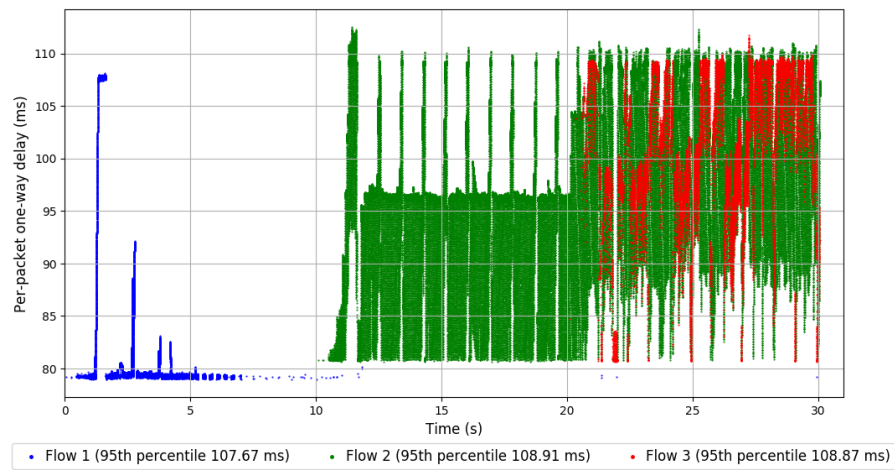
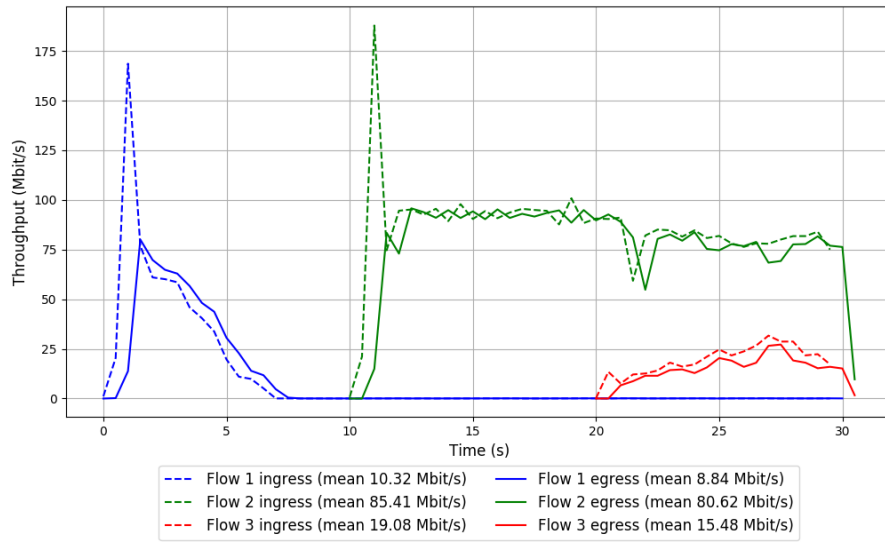


Run 1: Statistics of FillP-Sheep

Start at: 2019-04-24 00:24:58
End at: 2019-04-24 00:25:28
Local clock offset: -3.743 ms
Remote clock offset: -2.349 ms

```
# Below is generated by plot.py at 2019-04-24 02:29:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.63 Mbit/s
95th percentile per-packet one-way delay: 108.823 ms
Loss rate: 7.86%
-- Flow 1:
Average throughput: 8.84 Mbit/s
95th percentile per-packet one-way delay: 107.666 ms
Loss rate: 14.31%
-- Flow 2:
Average throughput: 80.62 Mbit/s
95th percentile per-packet one-way delay: 108.912 ms
Loss rate: 5.48%
-- Flow 3:
Average throughput: 15.48 Mbit/s
95th percentile per-packet one-way delay: 108.868 ms
Loss rate: 18.78%
```

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-04-24 00:51:55

End at: 2019-04-24 00:52:25

Local clock offset: -4.375 ms

Remote clock offset: 4.962 ms

Below is generated by plot.py at 2019-04-24 02:29:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.63 Mbit/s

95th percentile per-packet one-way delay: 113.740 ms

Loss rate: 6.20%

-- Flow 1:

Average throughput: 28.24 Mbit/s

95th percentile per-packet one-way delay: 112.849 ms

Loss rate: 5.75%

-- Flow 2:

Average throughput: 77.97 Mbit/s

95th percentile per-packet one-way delay: 113.897 ms

Loss rate: 4.58%

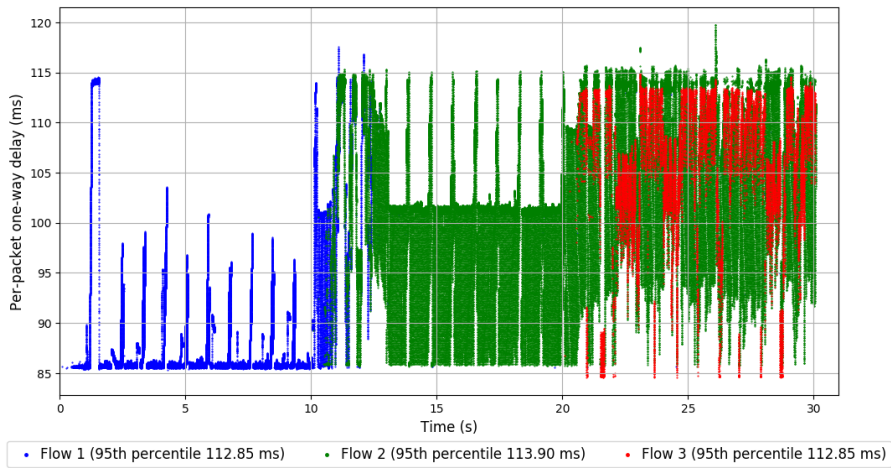
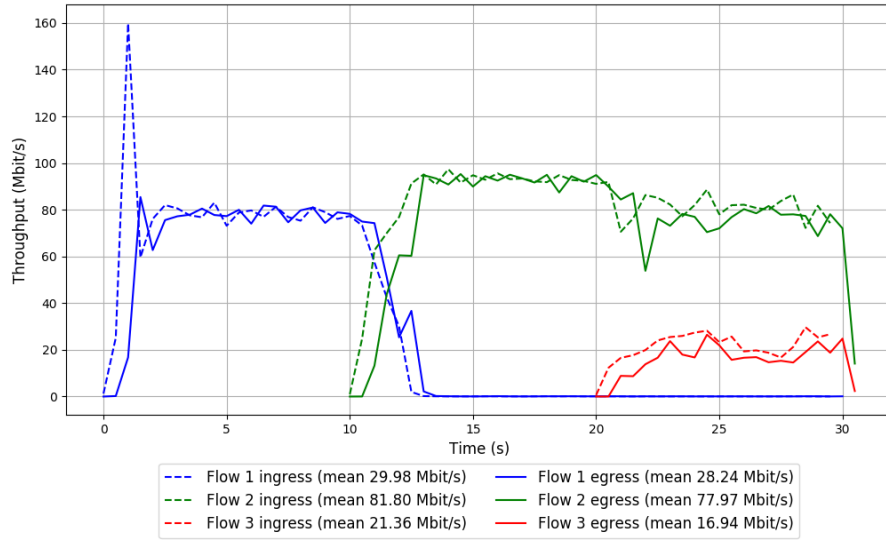
-- Flow 3:

Average throughput: 16.94 Mbit/s

95th percentile per-packet one-way delay: 112.849 ms

Loss rate: 20.57%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-04-24 01:18:50

End at: 2019-04-24 01:19:20

Local clock offset: -4.431 ms

Remote clock offset: 0.018 ms

Below is generated by plot.py at 2019-04-24 02:29:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.64 Mbit/s

95th percentile per-packet one-way delay: 107.608 ms

Loss rate: 4.92%

-- Flow 1:

Average throughput: 28.58 Mbit/s

95th percentile per-packet one-way delay: 105.782 ms

Loss rate: 6.46%

-- Flow 2:

Average throughput: 76.88 Mbit/s

95th percentile per-packet one-way delay: 108.008 ms

Loss rate: 3.45%

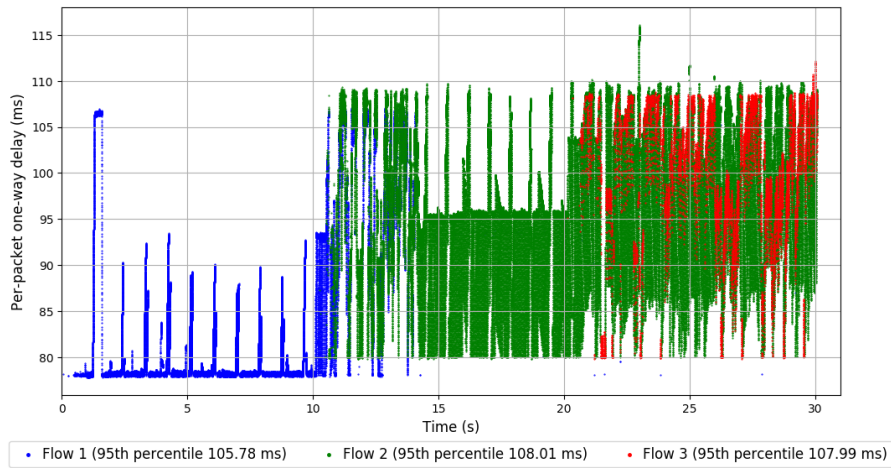
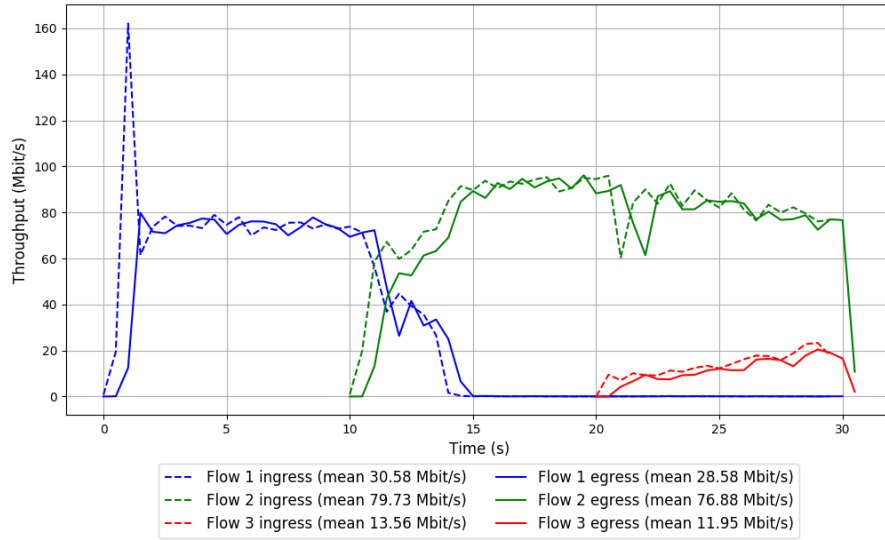
-- Flow 3:

Average throughput: 11.95 Mbit/s

95th percentile per-packet one-way delay: 107.989 ms

Loss rate: 11.78%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-04-24 01:45:56

End at: 2019-04-24 01:46:26

Local clock offset: -3.631 ms

Remote clock offset: -3.59 ms

Below is generated by plot.py at 2019-04-24 02:29:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 63.41 Mbit/s

95th percentile per-packet one-way delay: 104.918 ms

Loss rate: 8.40%

-- Flow 1:

Average throughput: 4.93 Mbit/s

95th percentile per-packet one-way delay: 105.014 ms

Loss rate: 33.02%

-- Flow 2:

Average throughput: 81.31 Mbit/s

95th percentile per-packet one-way delay: 104.876 ms

Loss rate: 4.56%

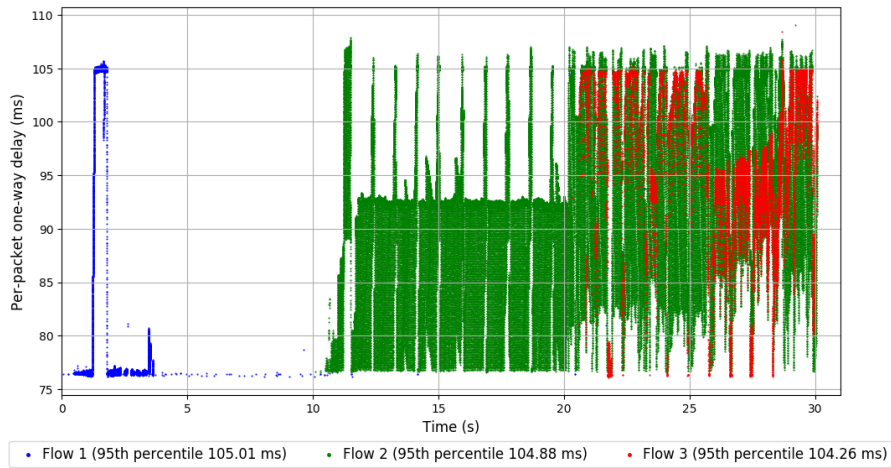
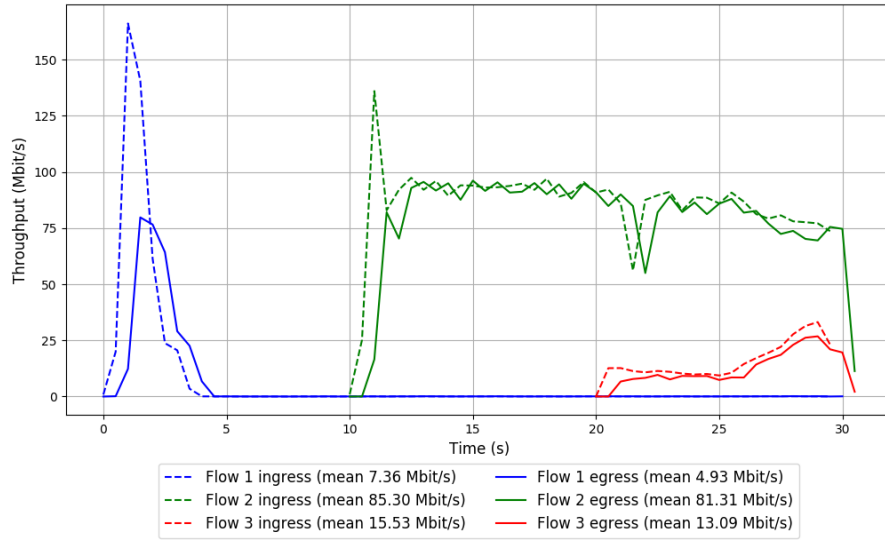
-- Flow 3:

Average throughput: 13.09 Mbit/s

95th percentile per-packet one-way delay: 104.263 ms

Loss rate: 15.65%

Run 4: Report of FillP-Sheep — Data Link

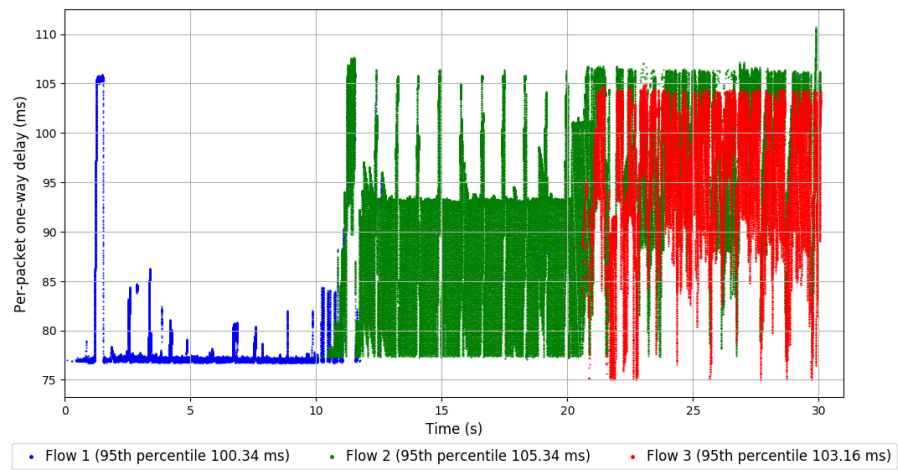
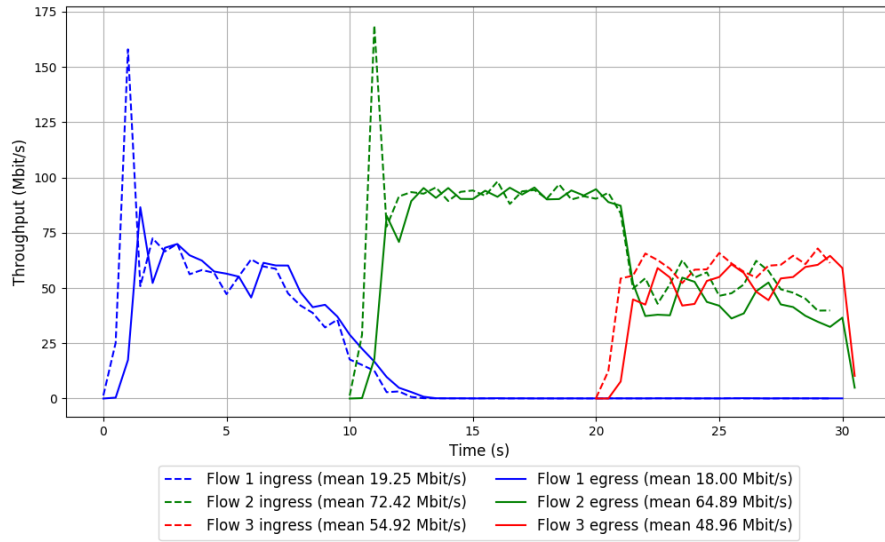


Run 5: Statistics of FillP-Sheep

Start at: 2019-04-24 02:12:48
End at: 2019-04-24 02:13:18
Local clock offset: -3.444 ms
Remote clock offset: -2.437 ms

```
# Below is generated by plot.py at 2019-04-24 02:30:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.39 Mbit/s
95th percentile per-packet one-way delay: 104.754 ms
Loss rate: 9.53%
-- Flow 1:
Average throughput: 18.00 Mbit/s
95th percentile per-packet one-way delay: 100.337 ms
Loss rate: 6.44%
-- Flow 2:
Average throughput: 64.89 Mbit/s
95th percentile per-packet one-way delay: 105.337 ms
Loss rate: 10.29%
-- Flow 3:
Average throughput: 48.96 Mbit/s
95th percentile per-packet one-way delay: 103.161 ms
Loss rate: 10.75%
```

Run 5: Report of FillP-Sheep — Data Link

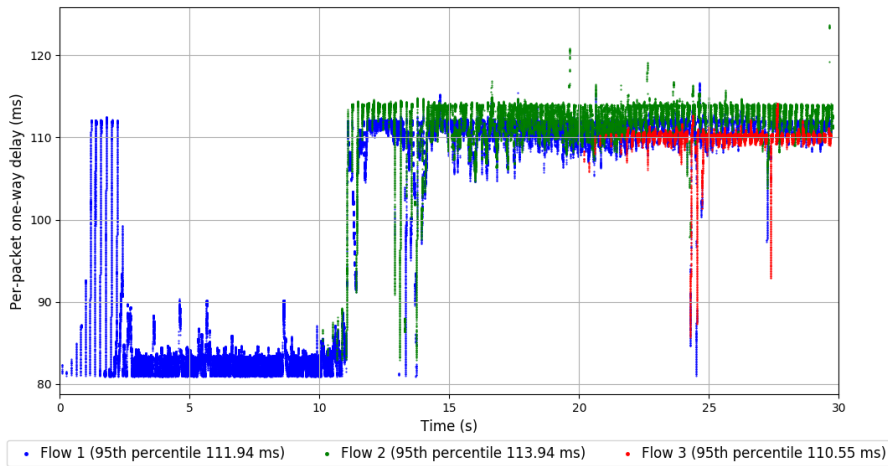
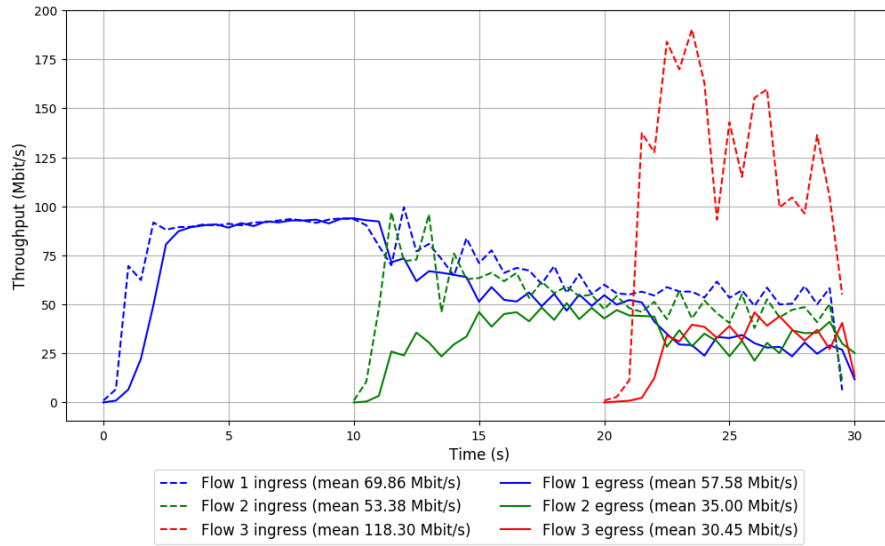


Run 1: Statistics of Indigo

Start at: 2019-04-24 00:12:11
End at: 2019-04-24 00:12:41
Local clock offset: -3.212 ms
Remote clock offset: -2.108 ms

```
# Below is generated by plot.py at 2019-04-24 02:30:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.40 Mbit/s
95th percentile per-packet one-way delay: 113.730 ms
Loss rate: 36.72%
-- Flow 1:
Average throughput: 57.58 Mbit/s
95th percentile per-packet one-way delay: 111.938 ms
Loss rate: 17.49%
-- Flow 2:
Average throughput: 35.00 Mbit/s
95th percentile per-packet one-way delay: 113.943 ms
Loss rate: 34.35%
-- Flow 3:
Average throughput: 30.45 Mbit/s
95th percentile per-packet one-way delay: 110.549 ms
Loss rate: 74.25%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-04-24 00:38:58

End at: 2019-04-24 00:39:28

Local clock offset: -3.241 ms

Remote clock offset: 4.338 ms

Below is generated by plot.py at 2019-04-24 02:30:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.85 Mbit/s

95th percentile per-packet one-way delay: 116.934 ms

Loss rate: 23.41%

-- Flow 1:

Average throughput: 68.10 Mbit/s

95th percentile per-packet one-way delay: 114.806 ms

Loss rate: 7.17%

-- Flow 2:

Average throughput: 23.79 Mbit/s

95th percentile per-packet one-way delay: 116.315 ms

Loss rate: 38.92%

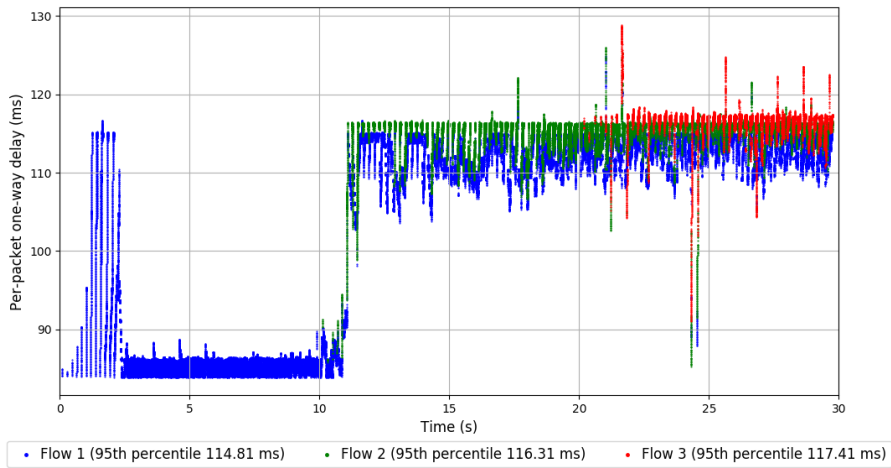
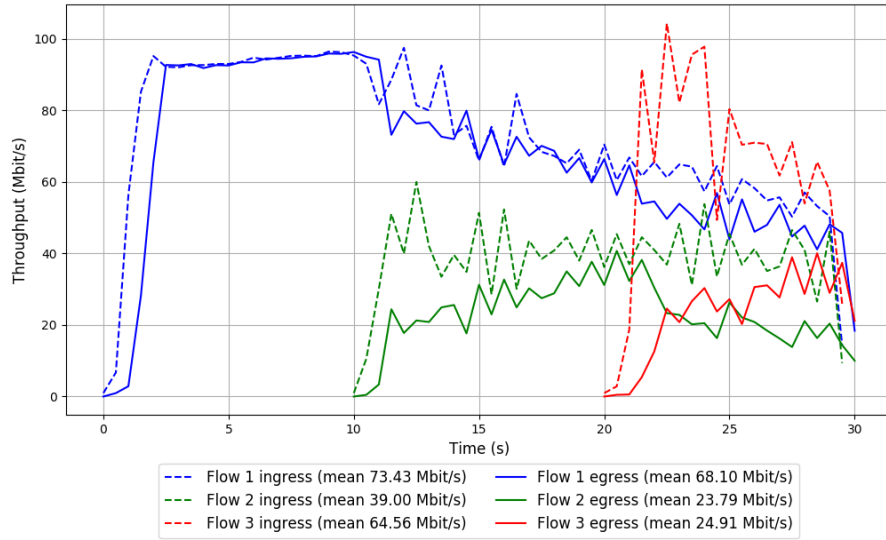
-- Flow 3:

Average throughput: 24.91 Mbit/s

95th percentile per-packet one-way delay: 117.414 ms

Loss rate: 61.42%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-04-24 01:05:52

End at: 2019-04-24 01:06:22

Local clock offset: -4.719 ms

Remote clock offset: 2.066 ms

Below is generated by plot.py at 2019-04-24 02:30:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.42 Mbit/s

95th percentile per-packet one-way delay: 111.863 ms

Loss rate: 32.79%

-- Flow 1:

Average throughput: 64.33 Mbit/s

95th percentile per-packet one-way delay: 111.838 ms

Loss rate: 13.21%

-- Flow 2:

Average throughput: 26.70 Mbit/s

95th percentile per-packet one-way delay: 111.246 ms

Loss rate: 31.73%

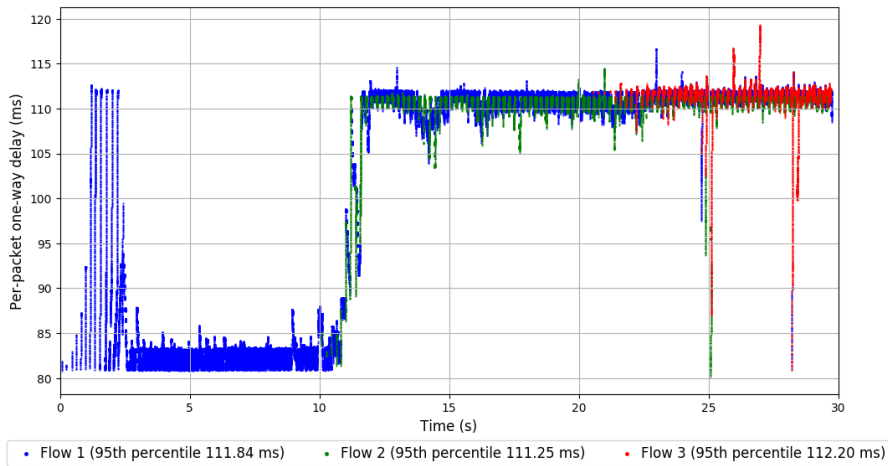
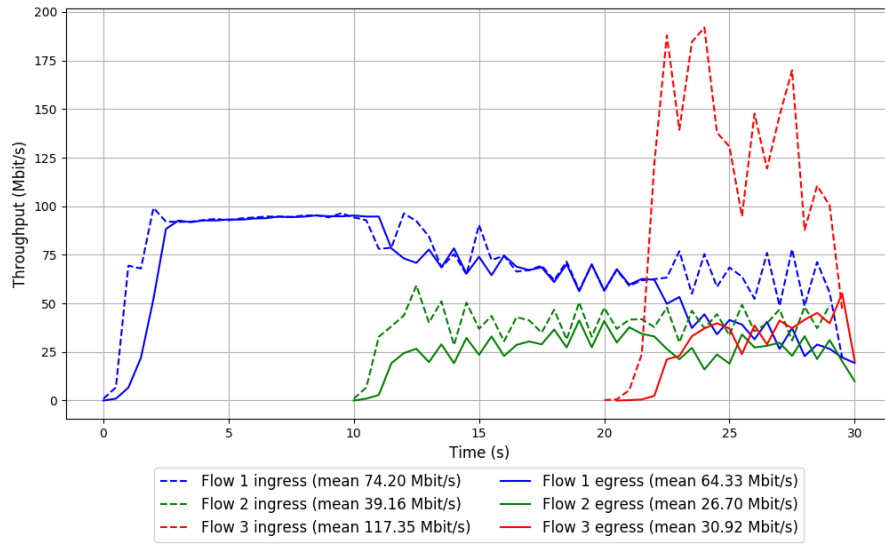
-- Flow 3:

Average throughput: 30.92 Mbit/s

95th percentile per-packet one-way delay: 112.203 ms

Loss rate: 73.65%

Run 3: Report of Indigo — Data Link

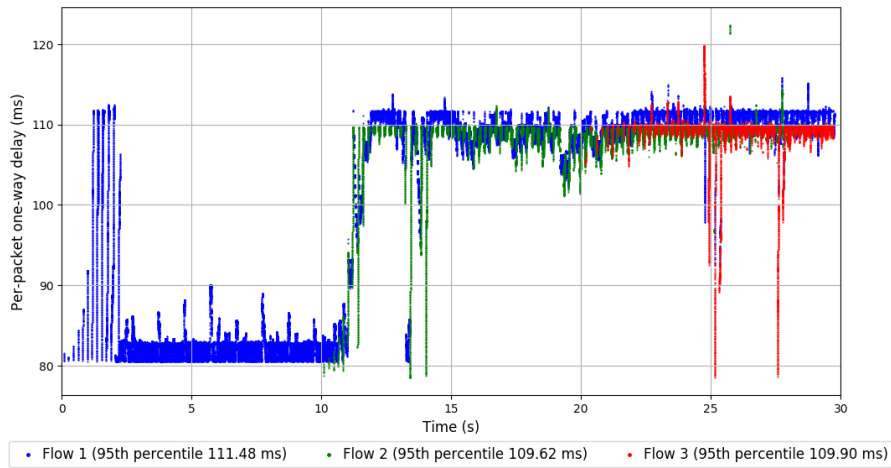
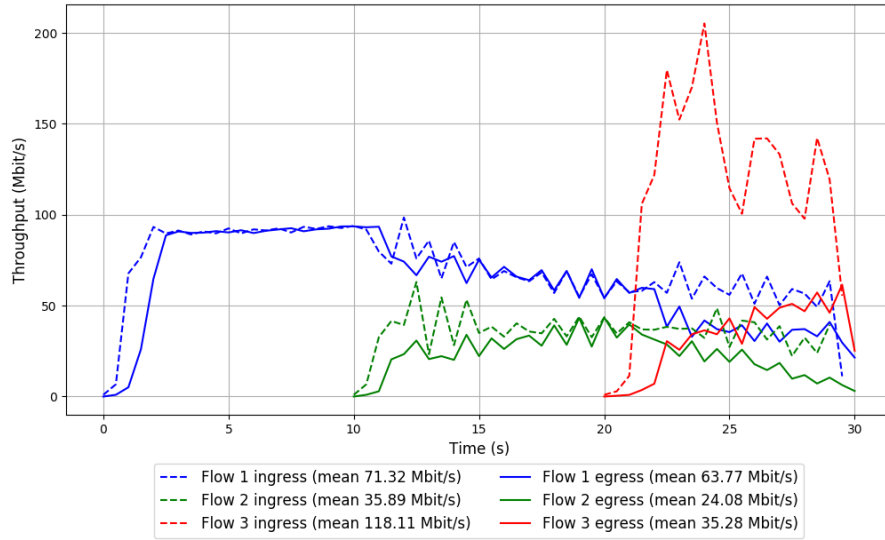


Run 4: Statistics of Indigo

Start at: 2019-04-24 01:33:09
End at: 2019-04-24 01:33:39
Local clock offset: -3.838 ms
Remote clock offset: -1.465 ms

```
# Below is generated by plot.py at 2019-04-24 02:30:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.95 Mbit/s
95th percentile per-packet one-way delay: 111.455 ms
Loss rate: 31.51%
-- Flow 1:
Average throughput: 63.77 Mbit/s
95th percentile per-packet one-way delay: 111.482 ms
Loss rate: 10.50%
-- Flow 2:
Average throughput: 24.08 Mbit/s
95th percentile per-packet one-way delay: 109.618 ms
Loss rate: 32.81%
-- Flow 3:
Average throughput: 35.28 Mbit/s
95th percentile per-packet one-way delay: 109.898 ms
Loss rate: 70.11%
```

Run 4: Report of Indigo — Data Link

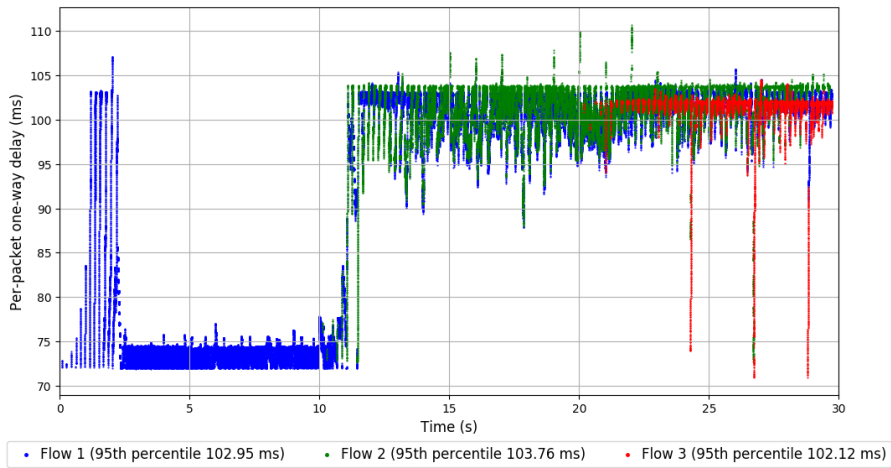
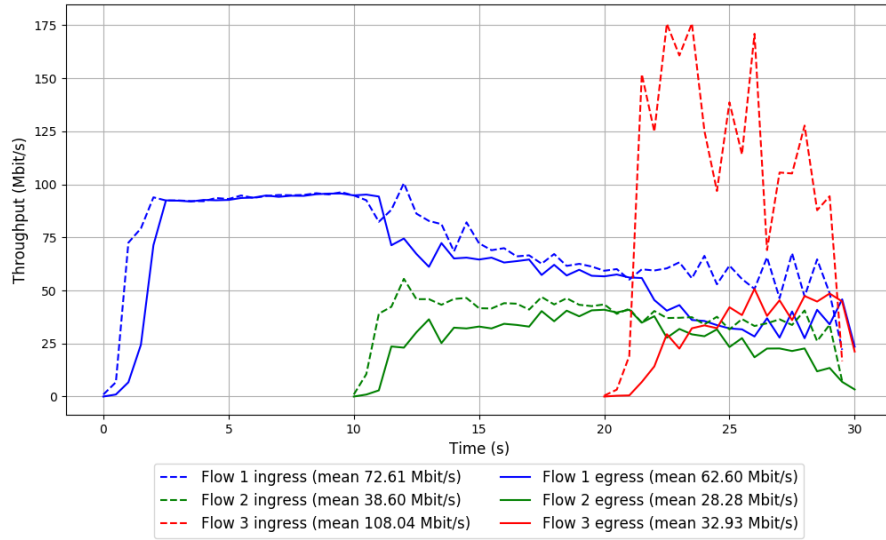


Run 5: Statistics of Indigo

Start at: 2019-04-24 01:59:55
End at: 2019-04-24 02:00:25
Local clock offset: -2.731 ms
Remote clock offset: -6.115 ms

```
# Below is generated by plot.py at 2019-04-24 02:31:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.80 Mbit/s
95th percentile per-packet one-way delay: 103.283 ms
Loss rate: 30.80%
-- Flow 1:
Average throughput: 62.60 Mbit/s
95th percentile per-packet one-way delay: 102.946 ms
Loss rate: 13.69%
-- Flow 2:
Average throughput: 28.28 Mbit/s
95th percentile per-packet one-way delay: 103.763 ms
Loss rate: 26.62%
-- Flow 3:
Average throughput: 32.93 Mbit/s
95th percentile per-packet one-way delay: 102.119 ms
Loss rate: 69.52%
```

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-04-24 00:13:31

End at: 2019-04-24 00:14:01

Local clock offset: -3.197 ms

Remote clock offset: 1.741 ms

Below is generated by plot.py at 2019-04-24 02:31:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.36 Mbit/s

95th percentile per-packet one-way delay: 114.845 ms

Loss rate: 1.72%

-- Flow 1:

Average throughput: 49.33 Mbit/s

95th percentile per-packet one-way delay: 112.961 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 48.29 Mbit/s

95th percentile per-packet one-way delay: 114.997 ms

Loss rate: 2.12%

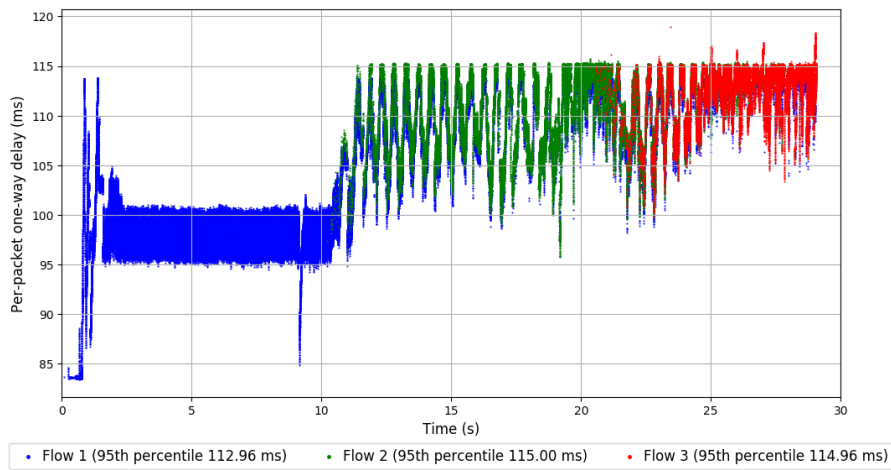
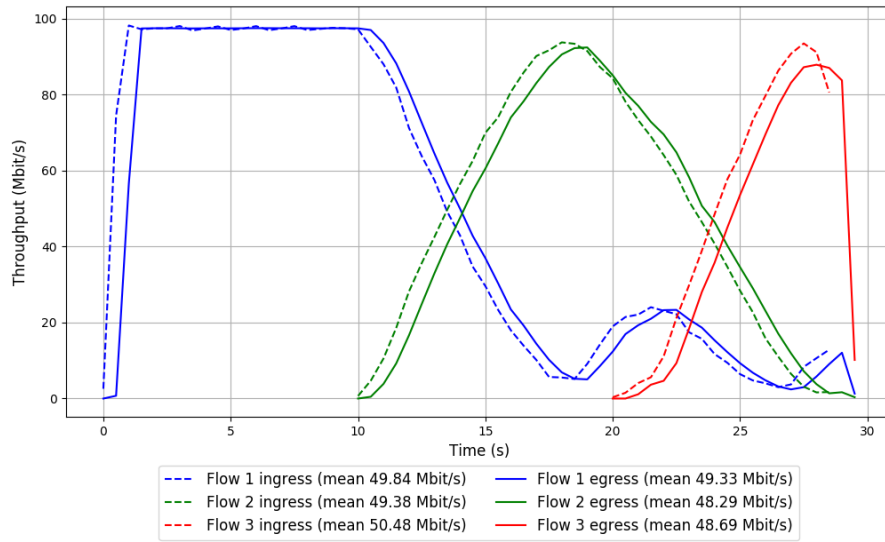
-- Flow 3:

Average throughput: 48.69 Mbit/s

95th percentile per-packet one-way delay: 114.959 ms

Loss rate: 3.55%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-04-24 00:40:17

End at: 2019-04-24 00:40:47

Local clock offset: -3.257 ms

Remote clock offset: 3.179 ms

Below is generated by plot.py at 2019-04-24 02:31:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.90 Mbit/s

95th percentile per-packet one-way delay: 113.877 ms

Loss rate: 3.40%

-- Flow 1:

Average throughput: 46.61 Mbit/s

95th percentile per-packet one-way delay: 111.949 ms

Loss rate: 2.16%

-- Flow 2:

Average throughput: 53.55 Mbit/s

95th percentile per-packet one-way delay: 113.995 ms

Loss rate: 4.69%

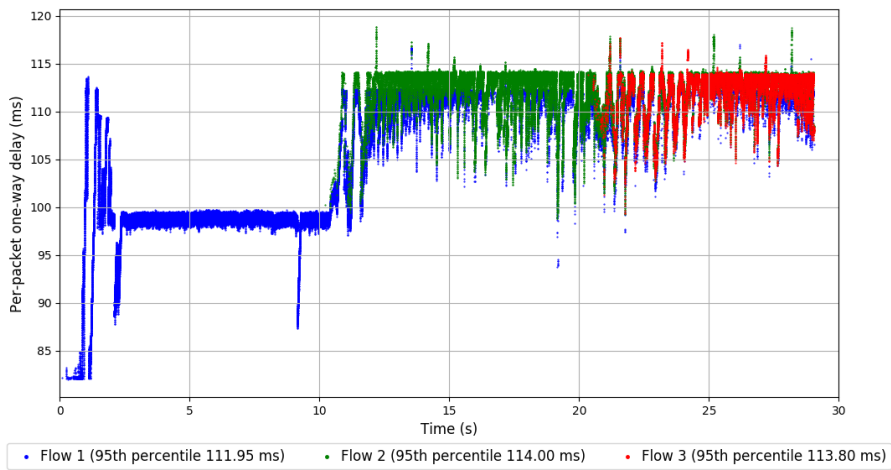
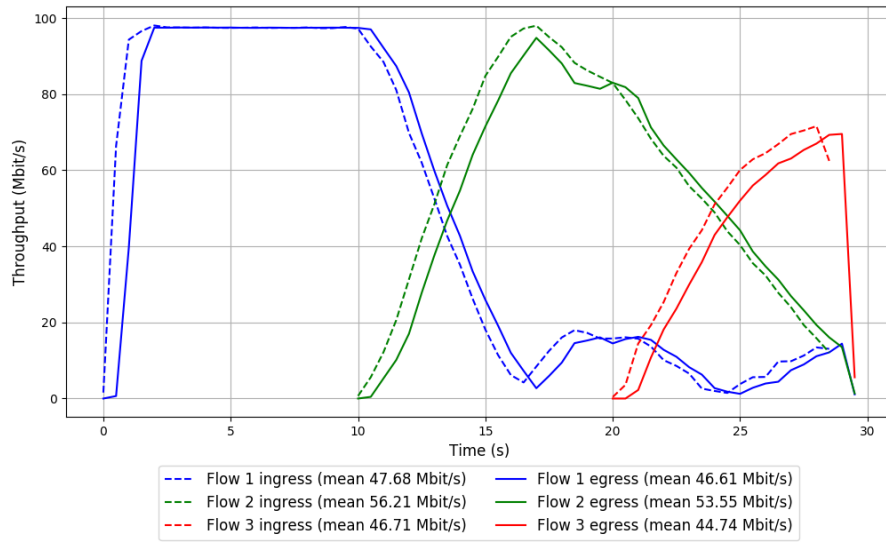
-- Flow 3:

Average throughput: 44.74 Mbit/s

95th percentile per-packet one-way delay: 113.799 ms

Loss rate: 4.27%

Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2019-04-24 01:07:12

End at: 2019-04-24 01:07:42

Local clock offset: -4.725 ms

Remote clock offset: 4.941 ms

Below is generated by plot.py at 2019-04-24 02:31:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.99 Mbit/s

95th percentile per-packet one-way delay: 111.408 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 50.48 Mbit/s

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

Loss rate: 0.85%

-- Flow 2:

Average throughput: 52.31 Mbit/s

95th percentile per-packet one-way delay: 111.488 ms

Loss rate: 1.02%

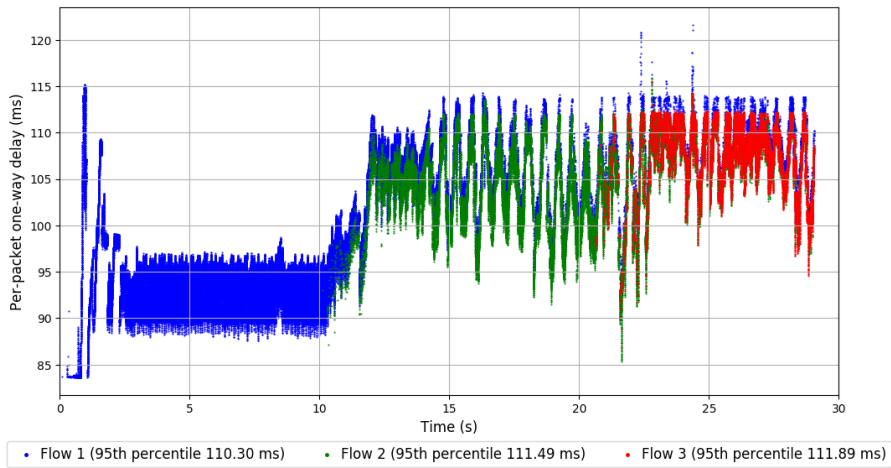
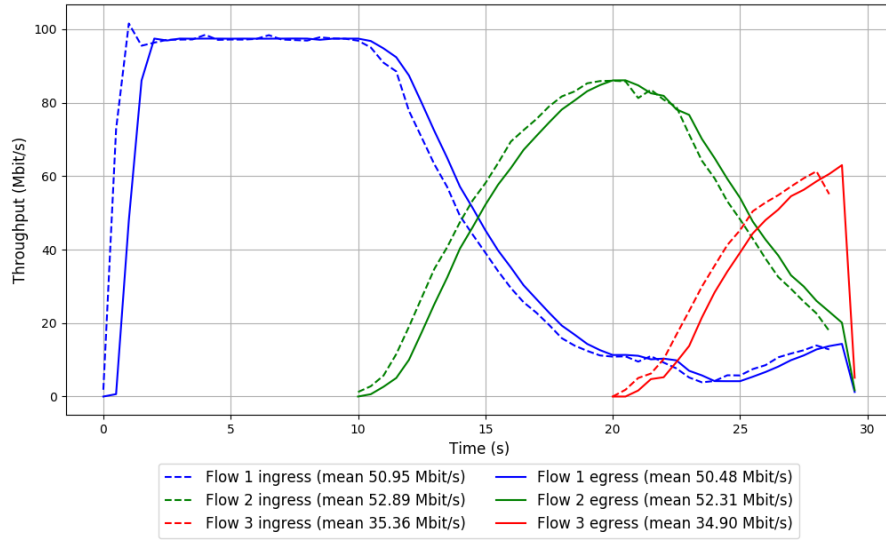
-- Flow 3:

Average throughput: 34.90 Mbit/s

95th percentile per-packet one-way delay: 111.889 ms

Loss rate: 1.20%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-04-24 01:34:29

End at: 2019-04-24 01:34:59

Local clock offset: -2.985 ms

Remote clock offset: -7.48 ms

Below is generated by plot.py at 2019-04-24 02:31:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.34 Mbit/s

95th percentile per-packet one-way delay: 102.053 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 50.02 Mbit/s

95th percentile per-packet one-way delay: 99.334 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 58.27 Mbit/s

95th percentile per-packet one-way delay: 102.655 ms

Loss rate: 1.28%

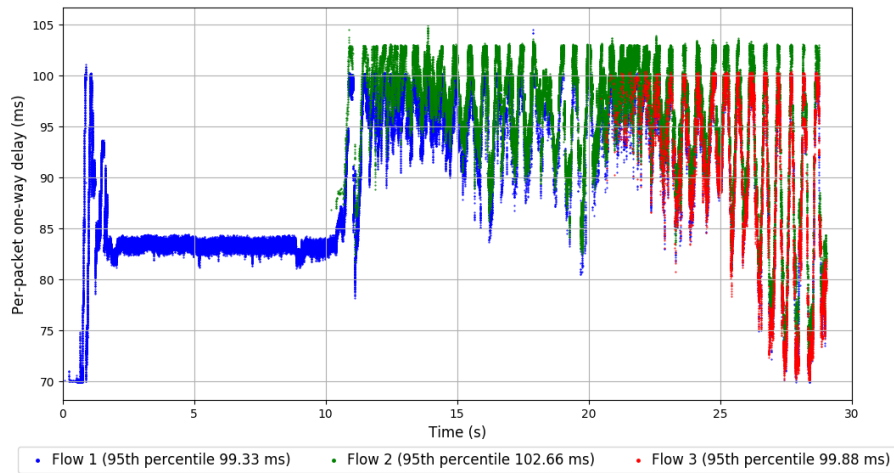
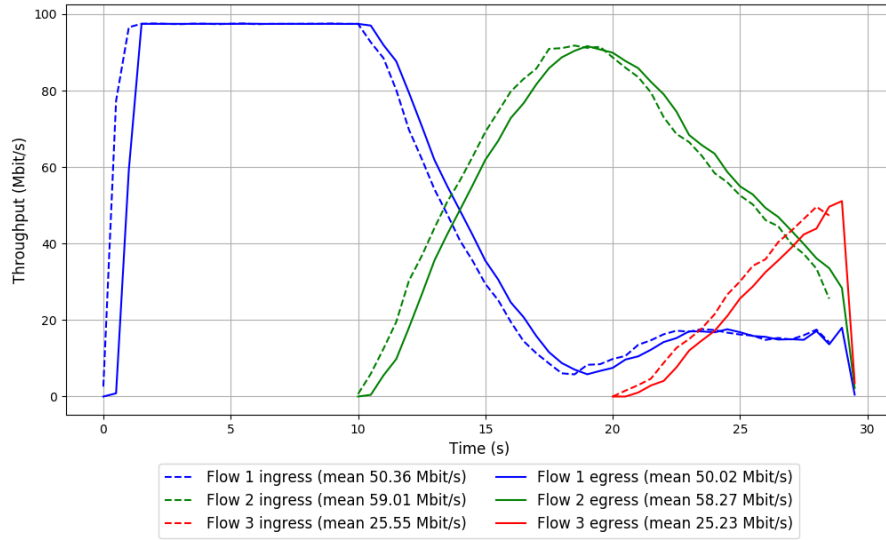
-- Flow 3:

Average throughput: 25.23 Mbit/s

95th percentile per-packet one-way delay: 99.883 ms

Loss rate: 1.46%

Run 4: Report of Indigo-MusesC3 — Data Link

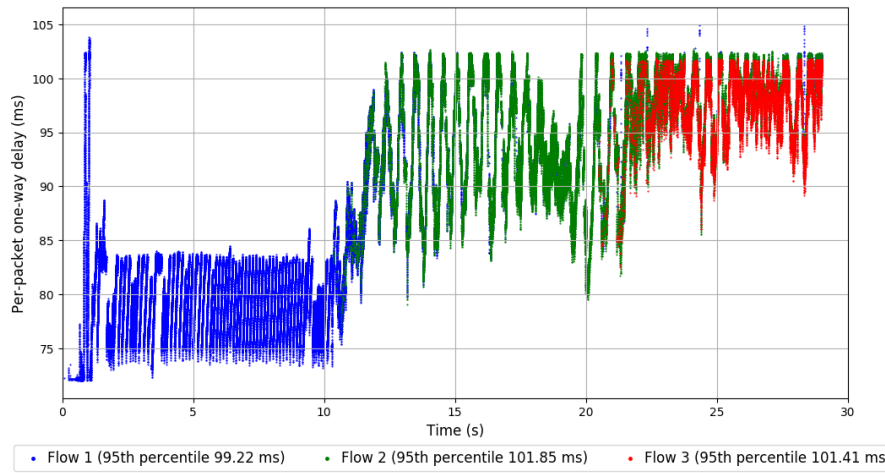
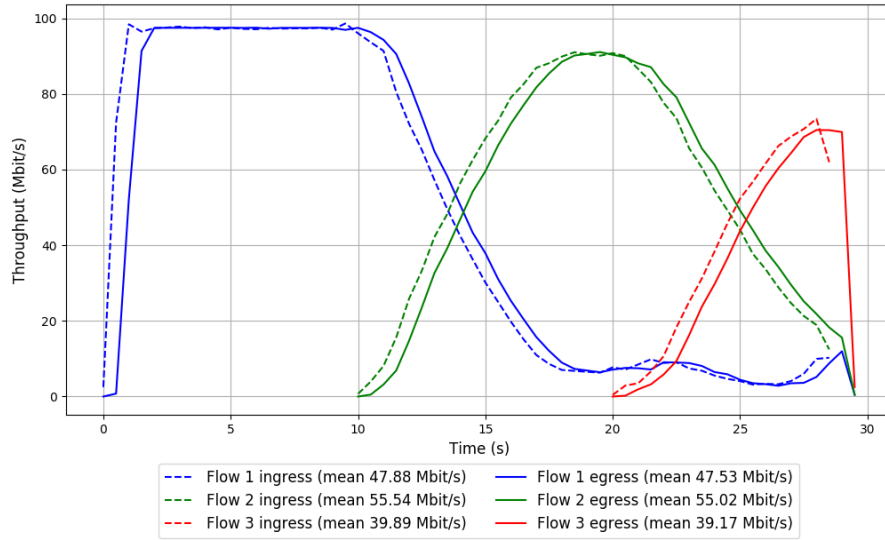


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-04-24 02:01:15
End at: 2019-04-24 02:01:45
Local clock offset: -2.746 ms
Remote clock offset: -6.793 ms

```
# Below is generated by plot.py at 2019-04-24 02:31:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.11 Mbit/s
95th percentile per-packet one-way delay: 101.369 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 47.53 Mbit/s
95th percentile per-packet one-way delay: 99.220 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 55.02 Mbit/s
95th percentile per-packet one-way delay: 101.850 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 39.17 Mbit/s
95th percentile per-packet one-way delay: 101.414 ms
Loss rate: 1.70%
```

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-04-24 00:35:09

End at: 2019-04-24 00:35:39

Local clock offset: -4.027 ms

Remote clock offset: 1.822 ms

Below is generated by plot.py at 2019-04-24 02:31:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.94 Mbit/s

95th percentile per-packet one-way delay: 114.041 ms

Loss rate: 3.89%

-- Flow 1:

Average throughput: 62.34 Mbit/s

95th percentile per-packet one-way delay: 114.380 ms

Loss rate: 3.07%

-- Flow 2:

Average throughput: 39.25 Mbit/s

95th percentile per-packet one-way delay: 112.810 ms

Loss rate: 6.18%

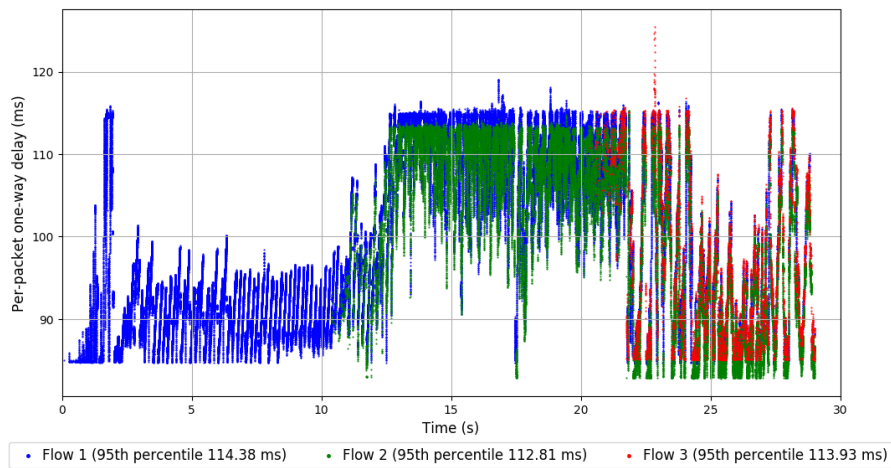
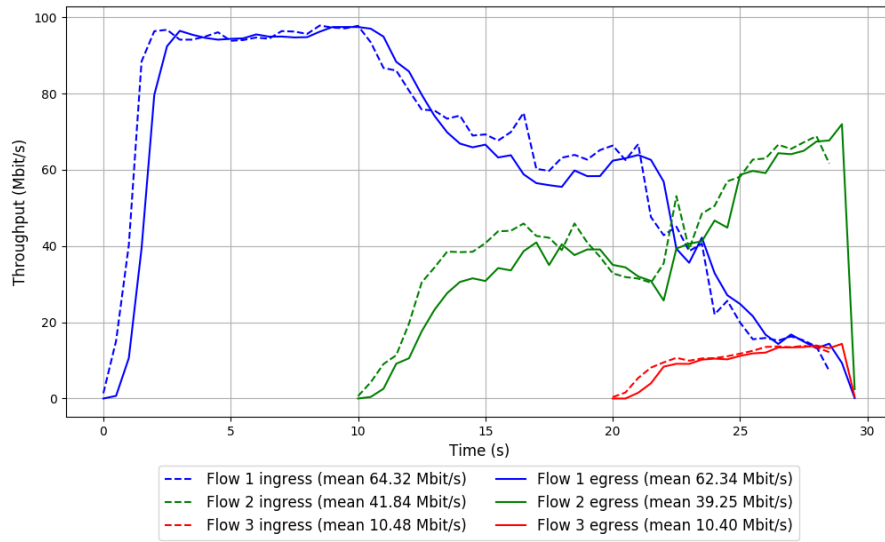
-- Flow 3:

Average throughput: 10.40 Mbit/s

95th percentile per-packet one-way delay: 113.930 ms

Loss rate: 0.97%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-04-24 01:02:03

End at: 2019-04-24 01:02:33

Local clock offset: -4.643 ms

Remote clock offset: 0.454 ms

Below is generated by plot.py at 2019-04-24 02:31:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.38 Mbit/s

95th percentile per-packet one-way delay: 109.951 ms

Loss rate: 3.56%

-- Flow 1:

Average throughput: 73.02 Mbit/s

95th percentile per-packet one-way delay: 110.125 ms

Loss rate: 2.59%

-- Flow 2:

Average throughput: 26.54 Mbit/s

95th percentile per-packet one-way delay: 109.511 ms

Loss rate: 7.41%

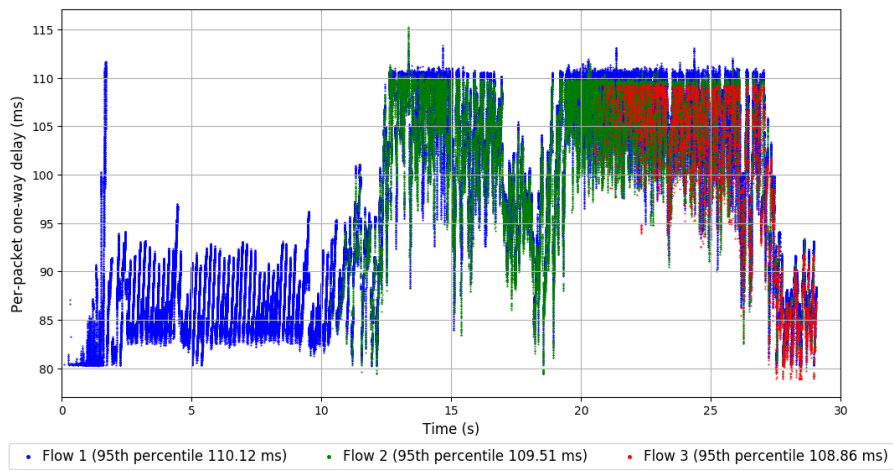
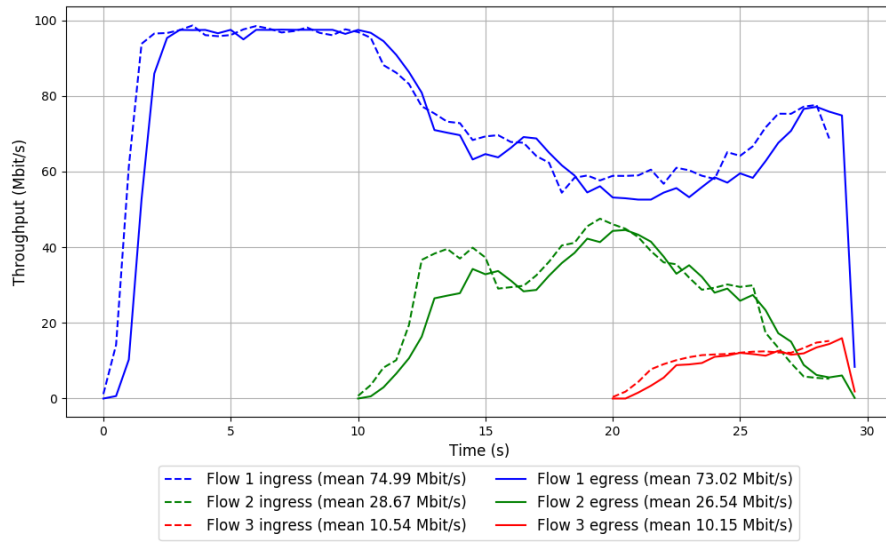
-- Flow 3:

Average throughput: 10.15 Mbit/s

95th percentile per-packet one-way delay: 108.861 ms

Loss rate: 3.76%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-04-24 01:28:59

End at: 2019-04-24 01:29:29

Local clock offset: -3.103 ms

Remote clock offset: 4.946 ms

Below is generated by plot.py at 2019-04-24 02:32:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.32 Mbit/s

95th percentile per-packet one-way delay: 112.816 ms

Loss rate: 2.66%

-- Flow 1:

Average throughput: 70.74 Mbit/s

95th percentile per-packet one-way delay: 112.188 ms

Loss rate: 1.92%

-- Flow 2:

Average throughput: 30.30 Mbit/s

95th percentile per-packet one-way delay: 114.714 ms

Loss rate: 5.07%

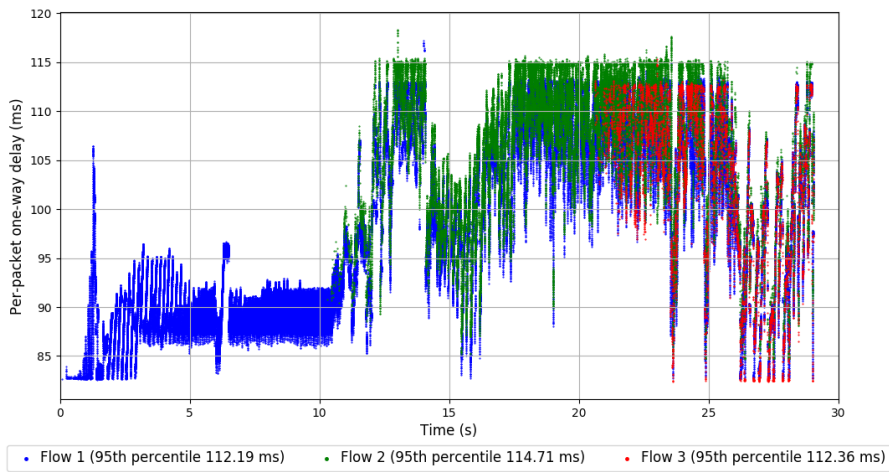
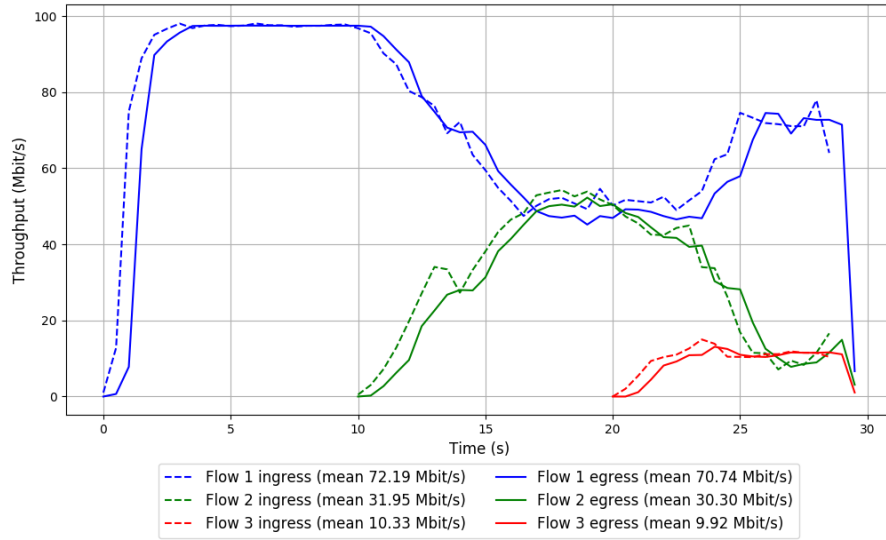
-- Flow 3:

Average throughput: 9.92 Mbit/s

95th percentile per-packet one-way delay: 112.359 ms

Loss rate: 3.98%

Run 3: Report of Indigo-MusesC5 — Data Link

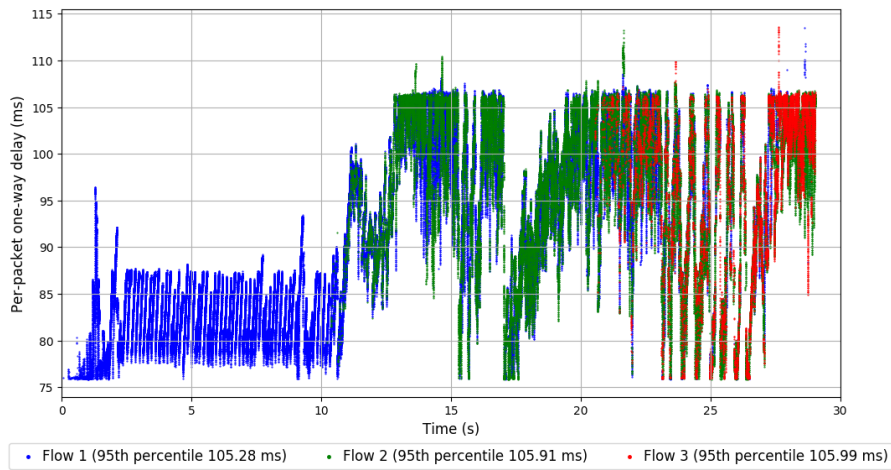
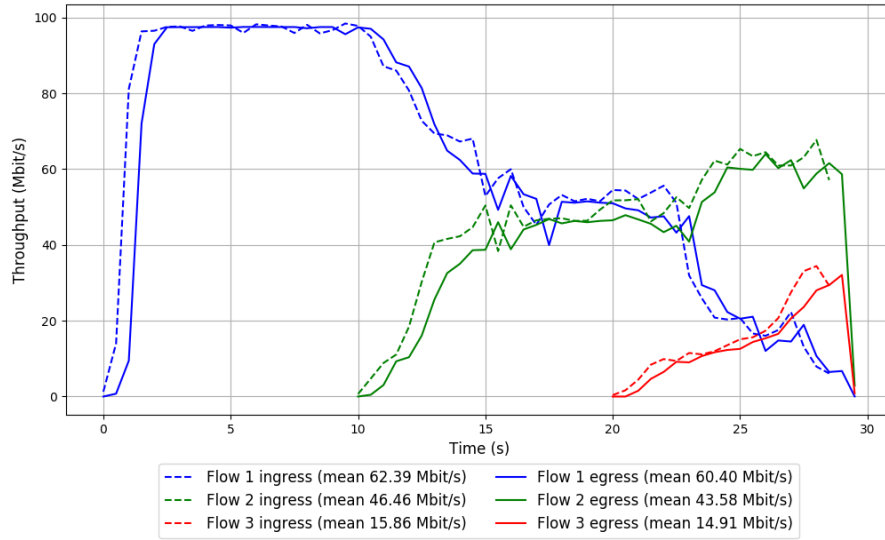


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-04-24 01:56:05
End at: 2019-04-24 01:56:35
Local clock offset: -2.763 ms
Remote clock offset: -3.023 ms

```
# Below is generated by plot.py at 2019-04-24 02:32:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.17 Mbit/s
95th percentile per-packet one-way delay: 105.700 ms
Loss rate: 4.16%
-- Flow 1:
Average throughput: 60.40 Mbit/s
95th percentile per-packet one-way delay: 105.283 ms
Loss rate: 3.11%
-- Flow 2:
Average throughput: 43.58 Mbit/s
95th percentile per-packet one-way delay: 105.910 ms
Loss rate: 6.06%
-- Flow 3:
Average throughput: 14.91 Mbit/s
95th percentile per-packet one-way delay: 105.989 ms
Loss rate: 5.93%
```

Run 4: Report of Indigo-MusesC5 — Data Link

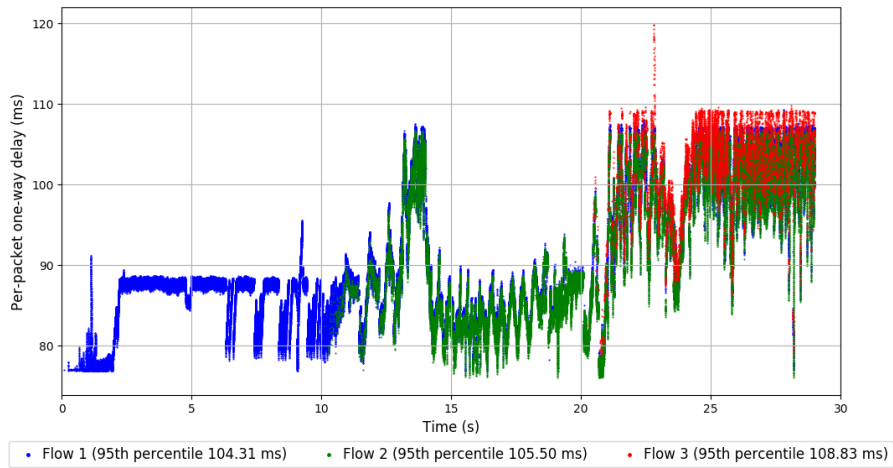
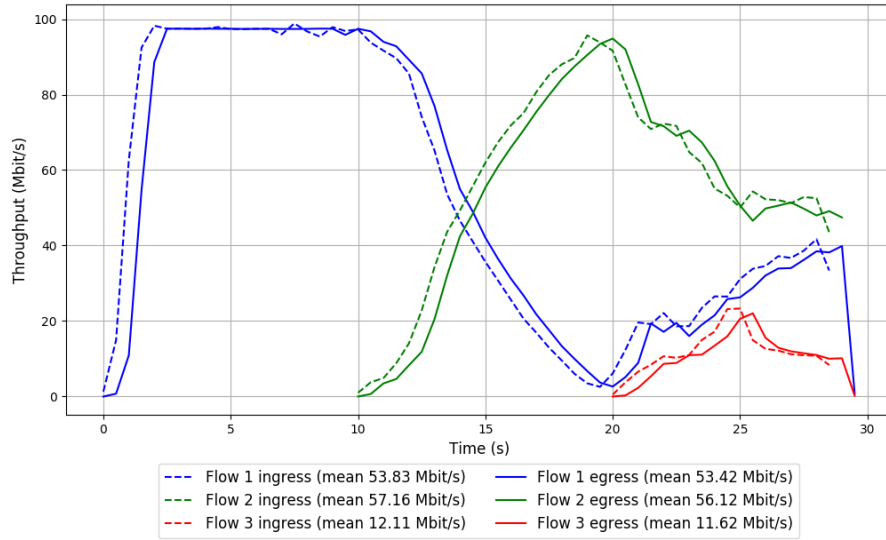


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-04-24 02:22:58
End at: 2019-04-24 02:23:28
Local clock offset: -3.891 ms
Remote clock offset: -1.374 ms

```
# Below is generated by plot.py at 2019-04-24 02:32:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.54 Mbit/s
95th percentile per-packet one-way delay: 105.509 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 53.42 Mbit/s
95th percentile per-packet one-way delay: 104.306 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 56.12 Mbit/s
95th percentile per-packet one-way delay: 105.505 ms
Loss rate: 1.69%
-- Flow 3:
Average throughput: 11.62 Mbit/s
95th percentile per-packet one-way delay: 108.825 ms
Loss rate: 3.78%
```

Run 5: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2019-04-24 00:21:13

End at: 2019-04-24 00:21:43

Local clock offset: -2.815 ms

Remote clock offset: 2.753 ms

Below is generated by plot.py at 2019-04-24 02:32:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.70 Mbit/s

95th percentile per-packet one-way delay: 104.493 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 54.75 Mbit/s

95th percentile per-packet one-way delay: 103.805 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 46.78 Mbit/s

95th percentile per-packet one-way delay: 104.369 ms

Loss rate: 0.02%

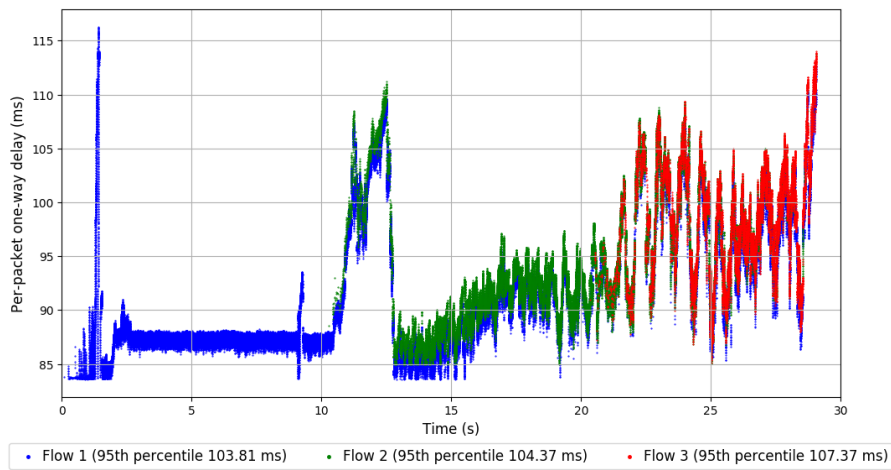
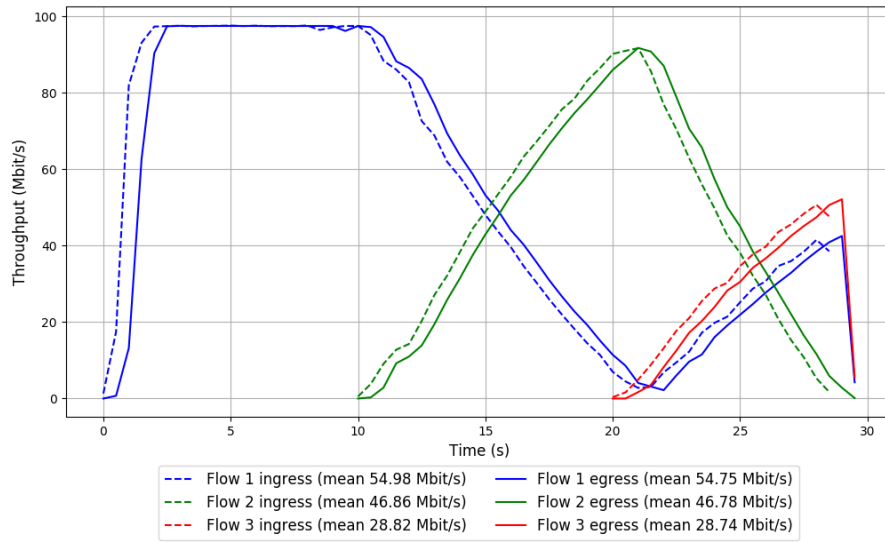
-- Flow 3:

Average throughput: 28.74 Mbit/s

95th percentile per-packet one-way delay: 107.370 ms

Loss rate: 0.02%

Run 1: Report of Indigo-MusesD — Data Link

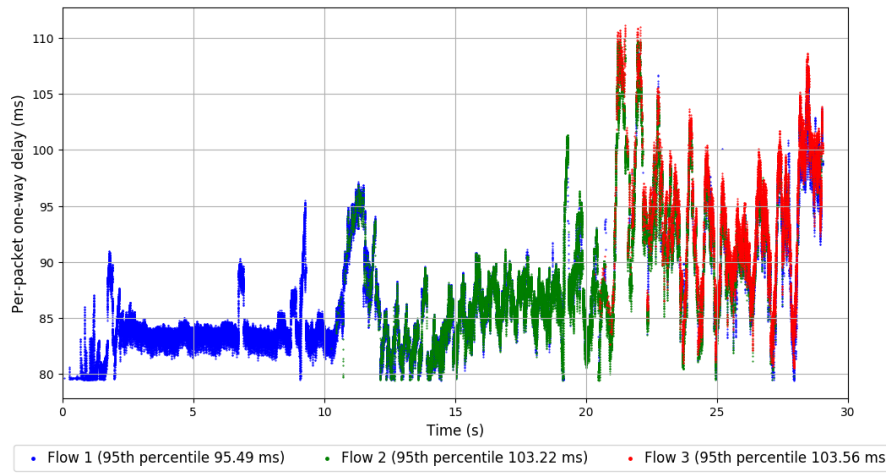
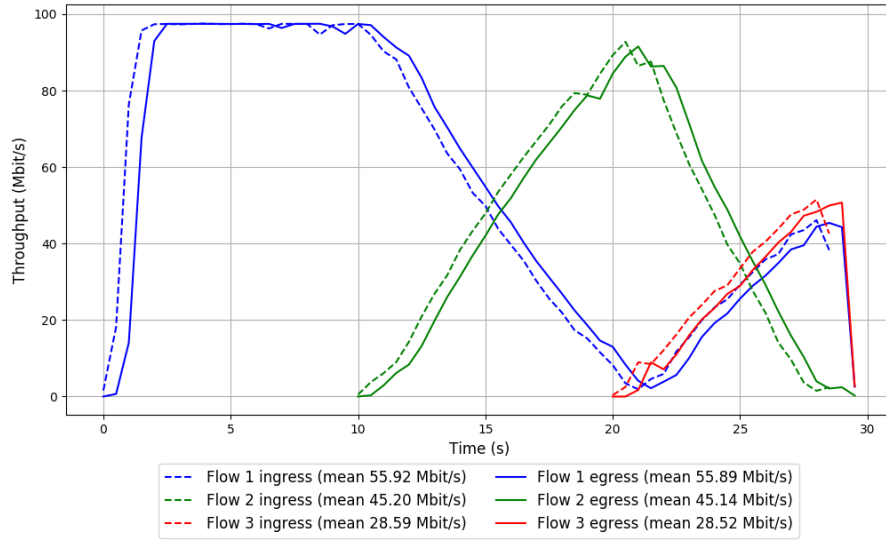


Run 2: Statistics of Indigo-MusesD

Start at: 2019-04-24 00:48:09
End at: 2019-04-24 00:48:39
Local clock offset: -4.313 ms
Remote clock offset: -0.692 ms

```
# Below is generated by plot.py at 2019-04-24 02:32:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.68 Mbit/s
95th percentile per-packet one-way delay: 99.614 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 55.89 Mbit/s
95th percentile per-packet one-way delay: 95.489 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.14 Mbit/s
95th percentile per-packet one-way delay: 103.223 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 28.52 Mbit/s
95th percentile per-packet one-way delay: 103.557 ms
Loss rate: 0.13%
```

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-04-24 01:15:05

End at: 2019-04-24 01:15:35

Local clock offset: -4.834 ms

Remote clock offset: 1.339 ms

Below is generated by plot.py at 2019-04-24 02:32:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.10 Mbit/s

95th percentile per-packet one-way delay: 111.133 ms

Loss rate: 2.96%

-- Flow 1:

Average throughput: 82.62 Mbit/s

95th percentile per-packet one-way delay: 109.482 ms

Loss rate: 2.48%

-- Flow 2:

Average throughput: 6.21 Mbit/s

95th percentile per-packet one-way delay: 110.172 ms

Loss rate: 1.97%

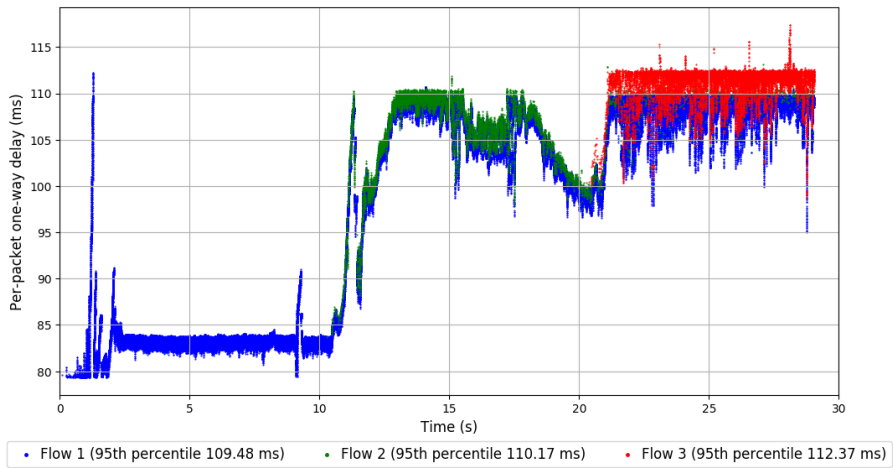
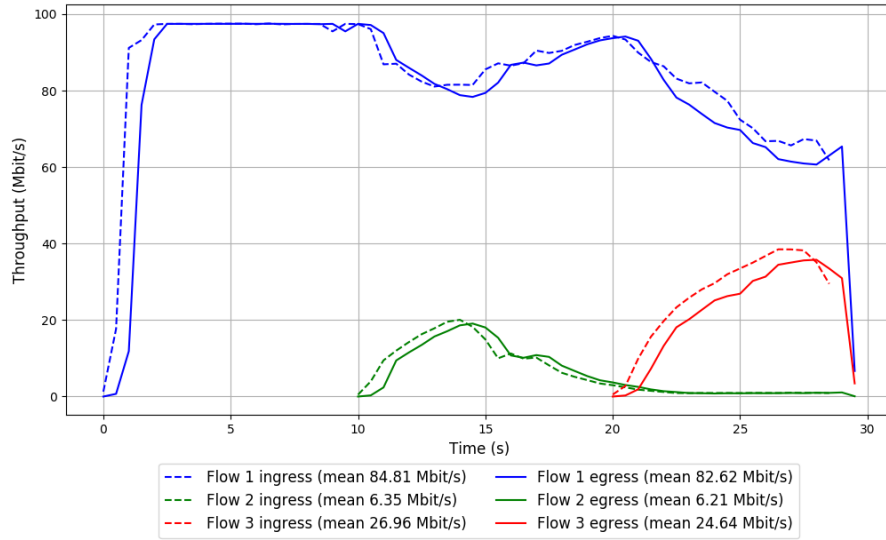
-- Flow 3:

Average throughput: 24.64 Mbit/s

95th percentile per-packet one-way delay: 112.369 ms

Loss rate: 8.50%

Run 3: Report of Indigo-MusesD — Data Link

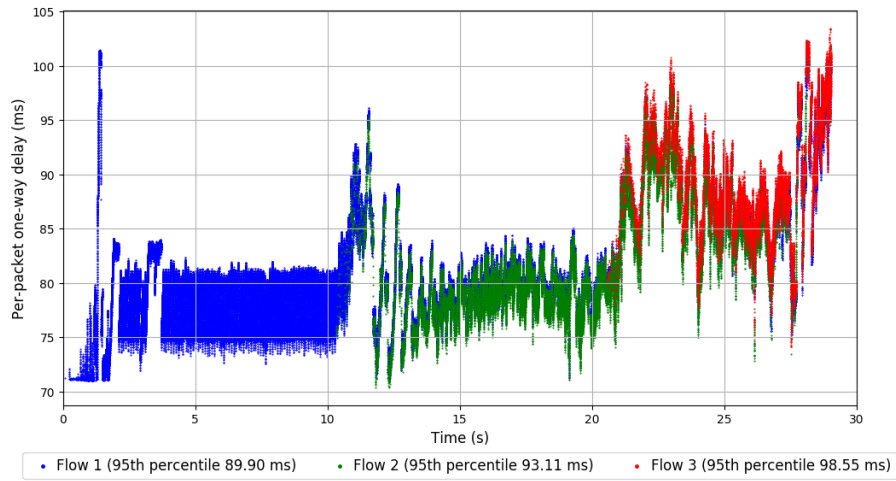
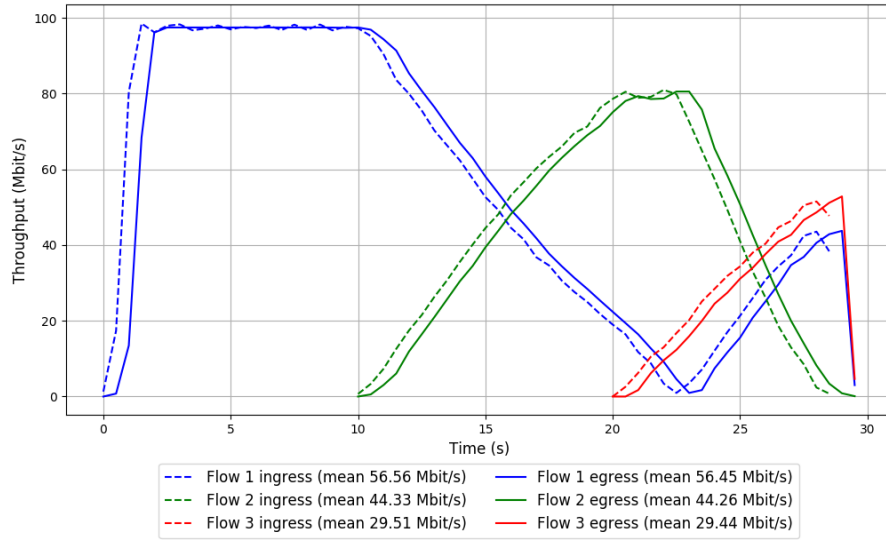


Run 4: Statistics of Indigo-MusesD

Start at: 2019-04-24 01:42:11
End at: 2019-04-24 01:42:41
Local clock offset: -2.934 ms
Remote clock offset: -7.324 ms

```
# Below is generated by plot.py at 2019-04-24 02:32:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.03 Mbit/s
95th percentile per-packet one-way delay: 93.617 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 56.45 Mbit/s
95th percentile per-packet one-way delay: 89.902 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 44.26 Mbit/s
95th percentile per-packet one-way delay: 93.112 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 29.44 Mbit/s
95th percentile per-packet one-way delay: 98.547 ms
Loss rate: 0.07%
```

Run 4: Report of Indigo-MusesD — Data Link

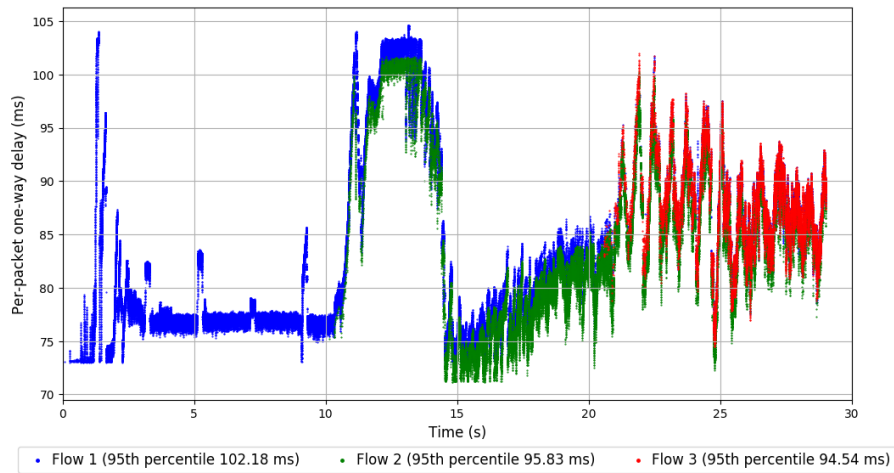
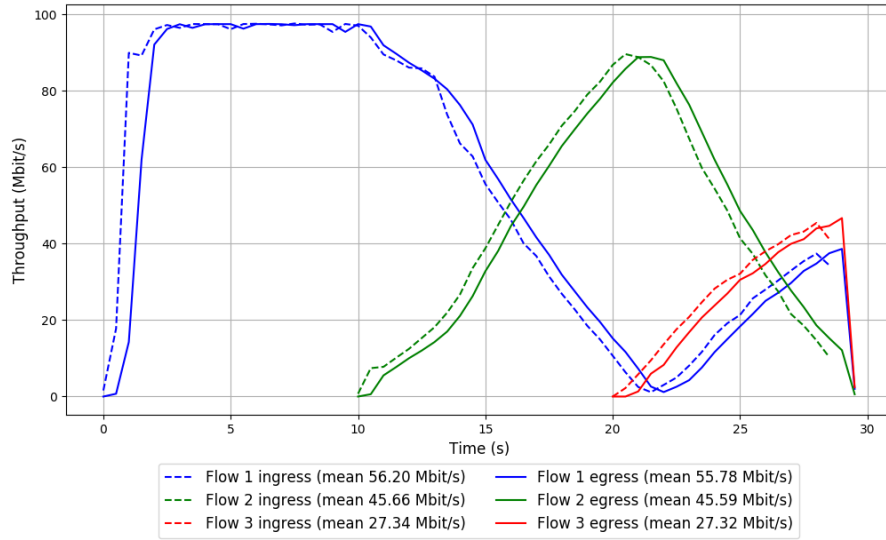


Run 5: Statistics of Indigo-MusesD

Start at: 2019-04-24 02:08:57
End at: 2019-04-24 02:09:27
Local clock offset: -2.698 ms
Remote clock offset: -6.738 ms

```
# Below is generated by plot.py at 2019-04-24 02:33:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.64 Mbit/s
95th percentile per-packet one-way delay: 100.561 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 55.78 Mbit/s
95th percentile per-packet one-way delay: 102.180 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 45.59 Mbit/s
95th percentile per-packet one-way delay: 95.827 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 27.32 Mbit/s
95th percentile per-packet one-way delay: 94.544 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo-MusesD — Data Link

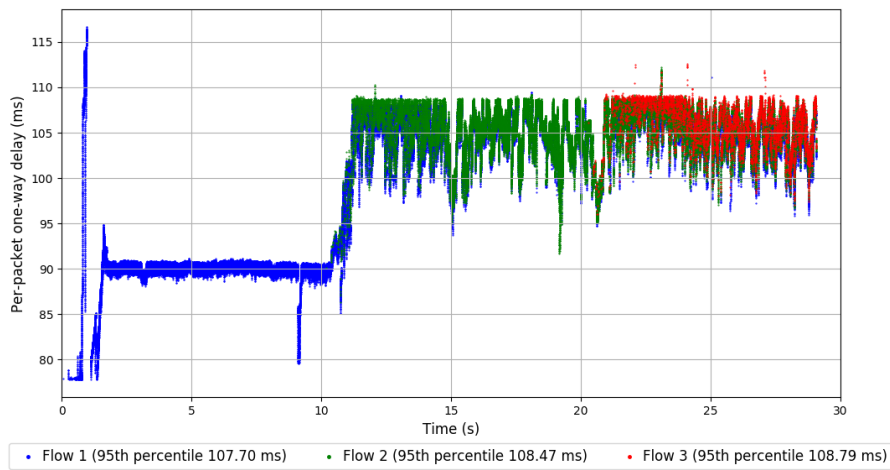
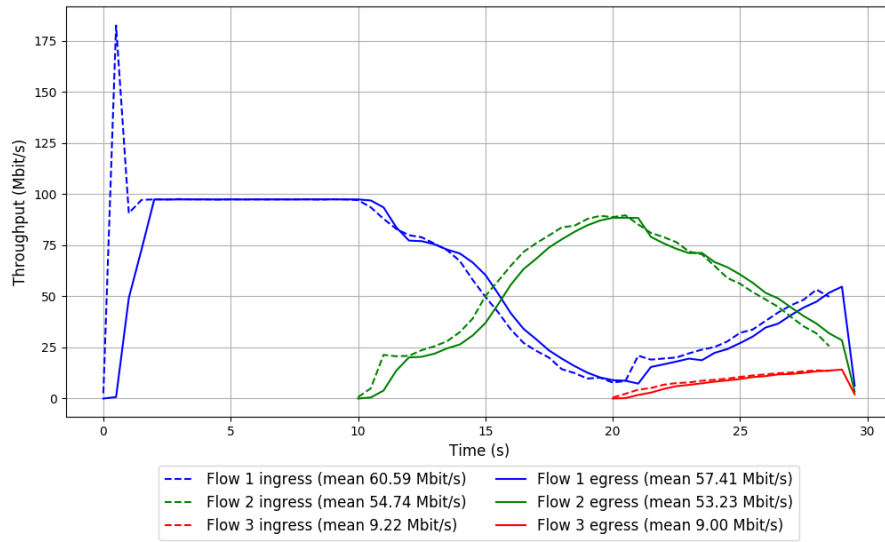


Run 1: Statistics of Indigo-MuseST

Start at: 2019-04-24 00:17:23
End at: 2019-04-24 00:17:53
Local clock offset: -2.594 ms
Remote clock offset: -3.391 ms

```
# Below is generated by plot.py at 2019-04-24 02:33:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.79 Mbit/s
95th percentile per-packet one-way delay: 108.240 ms
Loss rate: 4.20%
-- Flow 1:
Average throughput: 57.41 Mbit/s
95th percentile per-packet one-way delay: 107.698 ms
Loss rate: 5.16%
-- Flow 2:
Average throughput: 53.23 Mbit/s
95th percentile per-packet one-way delay: 108.470 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 108.792 ms
Loss rate: 2.50%
```

Run 1: Report of Indigo-MusesT — Data Link

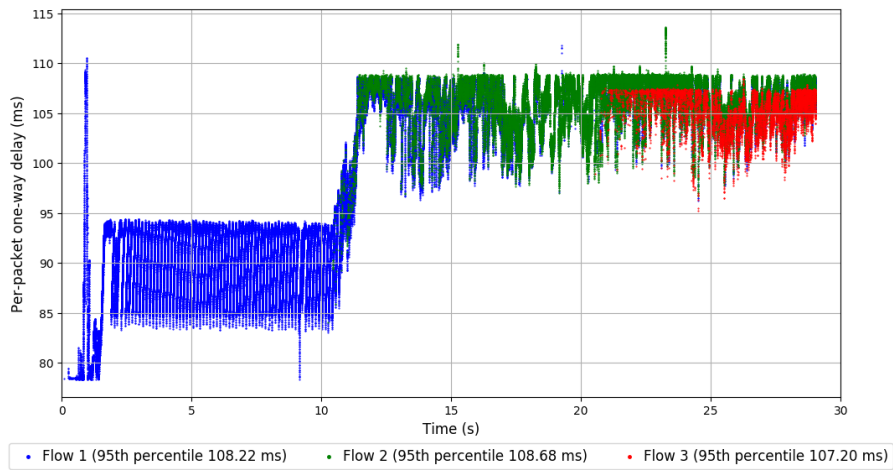
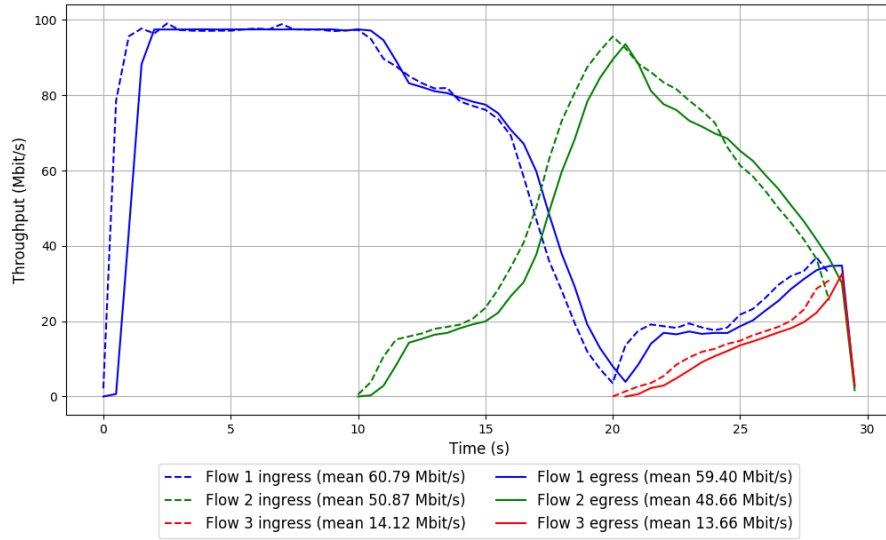


Run 2: Statistics of Indigo-MuseST

Start at: 2019-04-24 00:44:18
End at: 2019-04-24 00:44:48
Local clock offset: -3.296 ms
Remote clock offset: -0.928 ms

```
# Below is generated by plot.py at 2019-04-24 02:33:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.95 Mbit/s
95th percentile per-packet one-way delay: 108.493 ms
Loss rate: 2.92%
-- Flow 1:
Average throughput: 59.40 Mbit/s
95th percentile per-packet one-way delay: 108.217 ms
Loss rate: 2.19%
-- Flow 2:
Average throughput: 48.66 Mbit/s
95th percentile per-packet one-way delay: 108.677 ms
Loss rate: 4.23%
-- Flow 3:
Average throughput: 13.66 Mbit/s
95th percentile per-packet one-way delay: 107.204 ms
Loss rate: 3.13%
```

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MuseST

Start at: 2019-04-24 01:11:14

End at: 2019-04-24 01:11:44

Local clock offset: -4.021 ms

Remote clock offset: 1.869 ms

Below is generated by plot.py at 2019-04-24 02:33:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.77 Mbit/s

95th percentile per-packet one-way delay: 110.652 ms

Loss rate: 4.97%

-- Flow 1:

Average throughput: 55.48 Mbit/s

95th percentile per-packet one-way delay: 109.539 ms

Loss rate: 2.92%

-- Flow 2:

Average throughput: 36.32 Mbit/s

95th percentile per-packet one-way delay: 108.646 ms

Loss rate: 4.23%

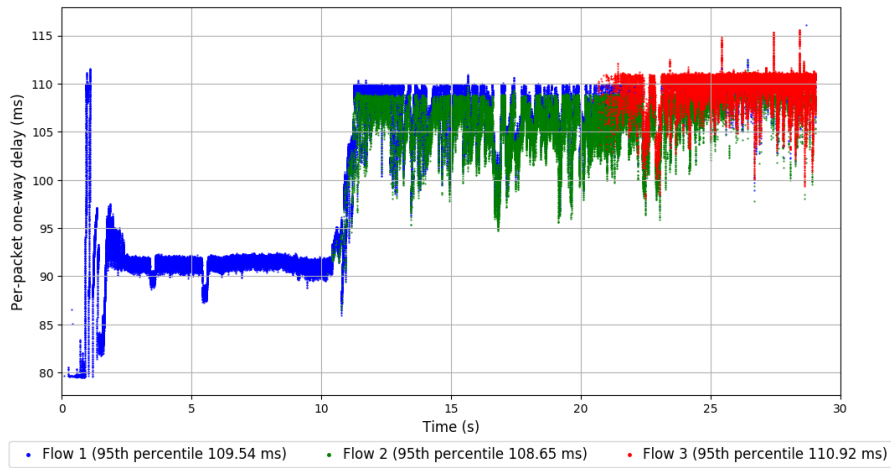
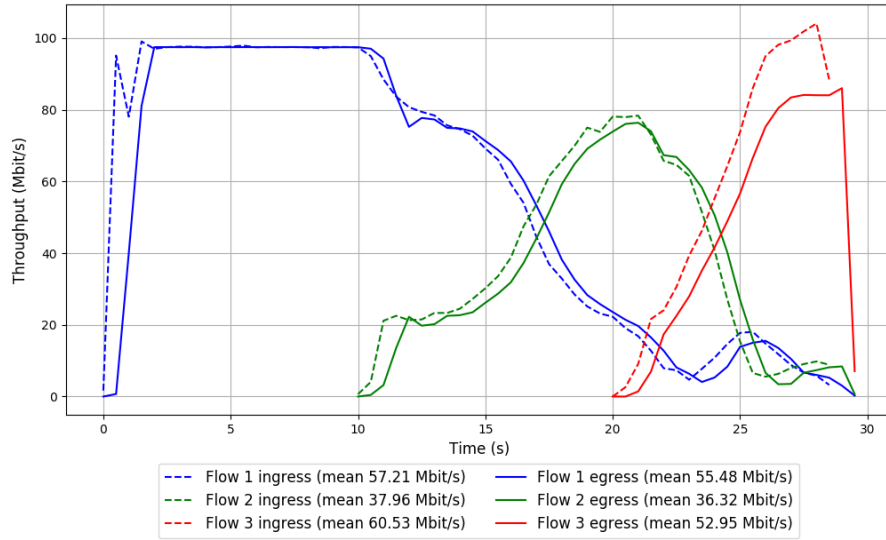
-- Flow 3:

Average throughput: 52.95 Mbit/s

95th percentile per-packet one-way delay: 110.920 ms

Loss rate: 12.53%

Run 3: Report of Indigo-MusesT — Data Link

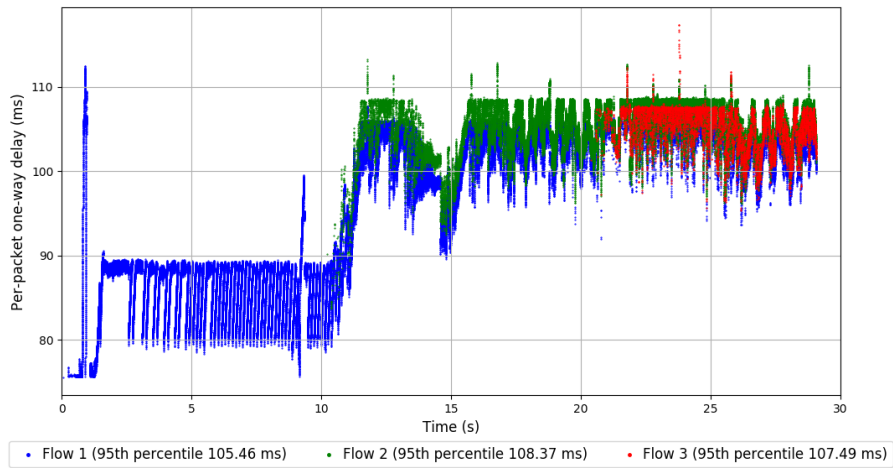
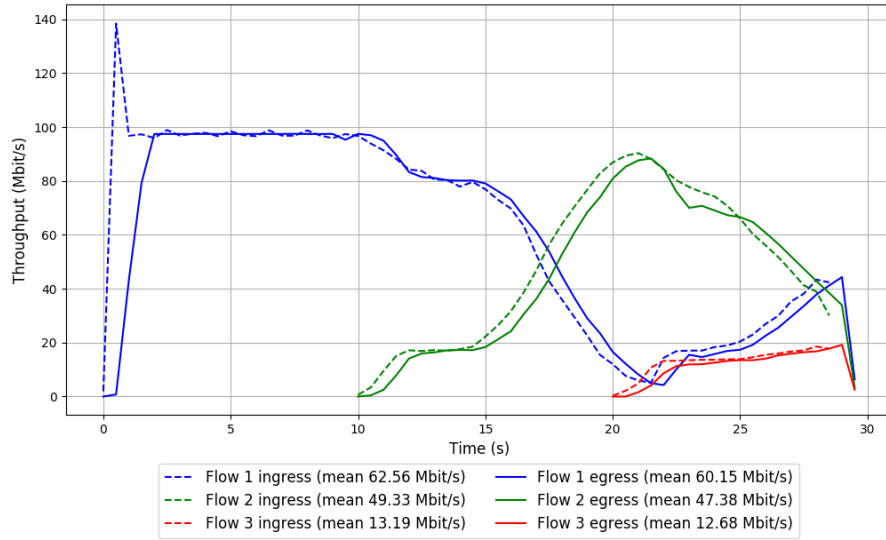


Run 4: Statistics of Indigo-MuseST

Start at: 2019-04-24 01:38:21
End at: 2019-04-24 01:38:51
Local clock offset: -3.755 ms
Remote clock offset: -2.717 ms

```
# Below is generated by plot.py at 2019-04-24 02:33:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.75 Mbit/s
95th percentile per-packet one-way delay: 108.104 ms
Loss rate: 3.82%
-- Flow 1:
Average throughput: 60.15 Mbit/s
95th percentile per-packet one-way delay: 105.457 ms
Loss rate: 3.76%
-- Flow 2:
Average throughput: 47.38 Mbit/s
95th percentile per-packet one-way delay: 108.366 ms
Loss rate: 3.91%
-- Flow 3:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 107.488 ms
Loss rate: 3.89%
```

Run 4: Report of Indigo-MusesT — Data Link

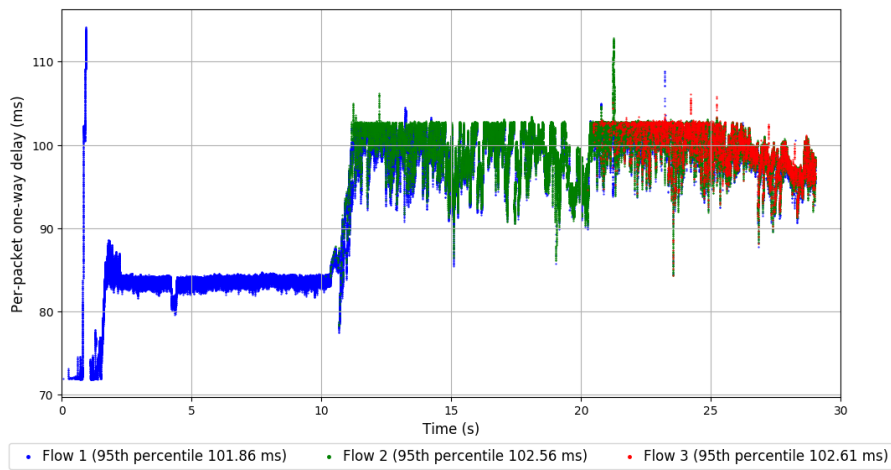
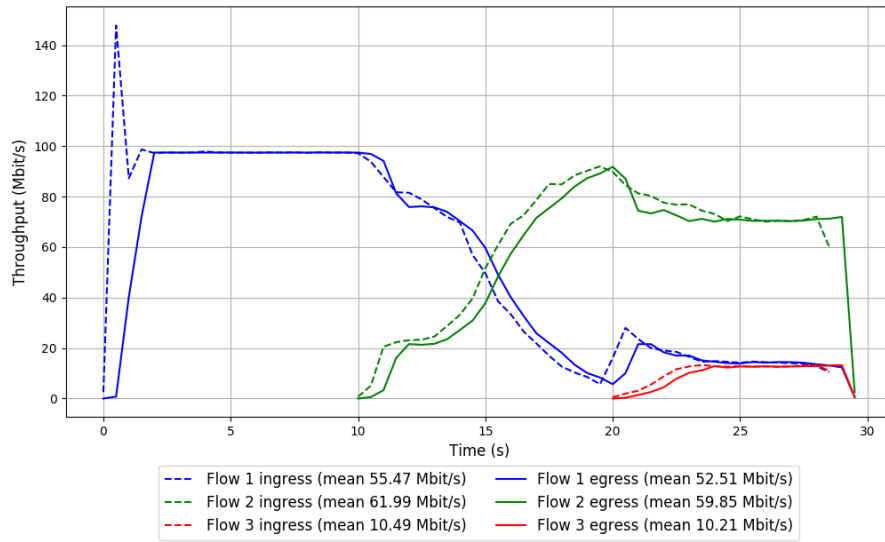


Run 5: Statistics of Indigo-MuseST

Start at: 2019-04-24 02:05:07
End at: 2019-04-24 02:05:37
Local clock offset: -3.488 ms
Remote clock offset: -6.978 ms

```
# Below is generated by plot.py at 2019-04-24 02:33:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.59 Mbit/s
95th percentile per-packet one-way delay: 102.393 ms
Loss rate: 4.41%
-- Flow 1:
Average throughput: 52.51 Mbit/s
95th percentile per-packet one-way delay: 101.863 ms
Loss rate: 5.27%
-- Flow 2:
Average throughput: 59.85 Mbit/s
95th percentile per-packet one-way delay: 102.558 ms
Loss rate: 3.38%
-- Flow 3:
Average throughput: 10.21 Mbit/s
95th percentile per-packet one-way delay: 102.609 ms
Loss rate: 2.66%
```

Run 5: Report of Indigo-MusesT — Data Link



Run 1: Statistics of LEDBAT

Start at: 2019-04-24 00:28:47

End at: 2019-04-24 00:29:17

Local clock offset: -3.855 ms

Remote clock offset: 2.537 ms

Below is generated by plot.py at 2019-04-24 02:33:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.25 Mbit/s

95th percentile per-packet one-way delay: 87.867 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 11.78 Mbit/s

95th percentile per-packet one-way delay: 88.186 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 7.97 Mbit/s

95th percentile per-packet one-way delay: 86.850 ms

Loss rate: 0.00%

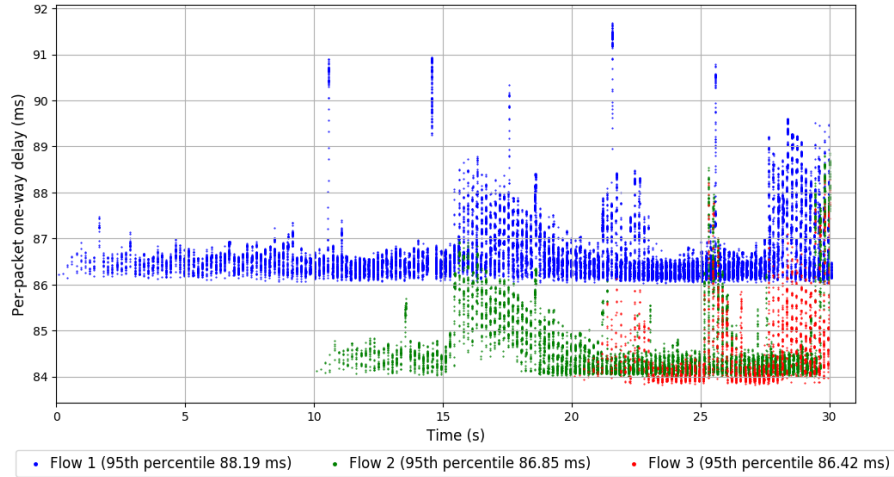
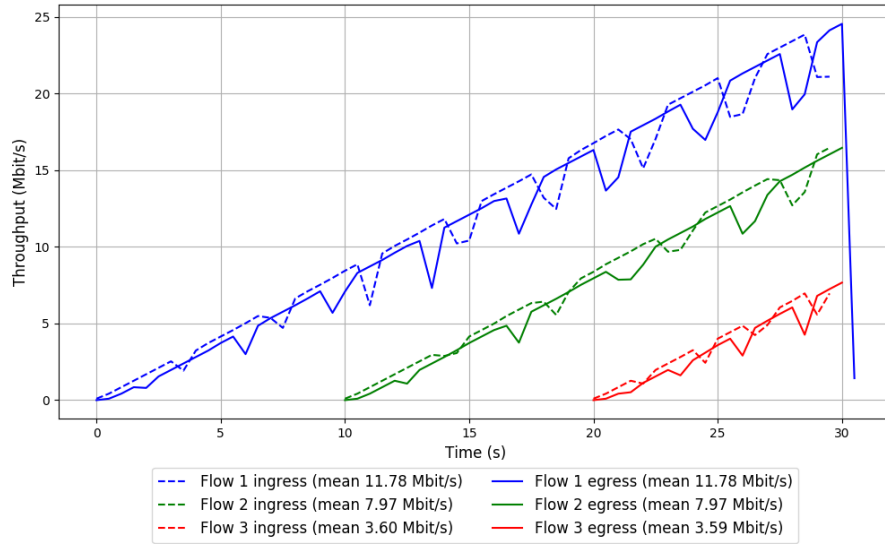
-- Flow 3:

Average throughput: 3.59 Mbit/s

95th percentile per-packet one-way delay: 86.420 ms

Loss rate: 0.00%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-04-24 00:55:43

End at: 2019-04-24 00:56:13

Local clock offset: -3.707 ms

Remote clock offset: 1.304 ms

Below is generated by plot.py at 2019-04-24 02:33:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.50 Mbit/s

95th percentile per-packet one-way delay: 83.120 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 11.07 Mbit/s

95th percentile per-packet one-way delay: 82.512 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 4.78 Mbit/s

95th percentile per-packet one-way delay: 83.973 ms

Loss rate: 0.06%

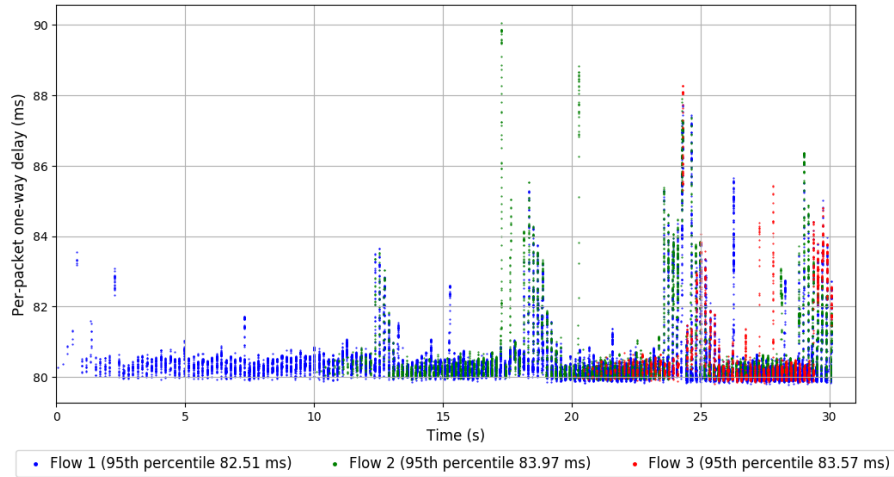
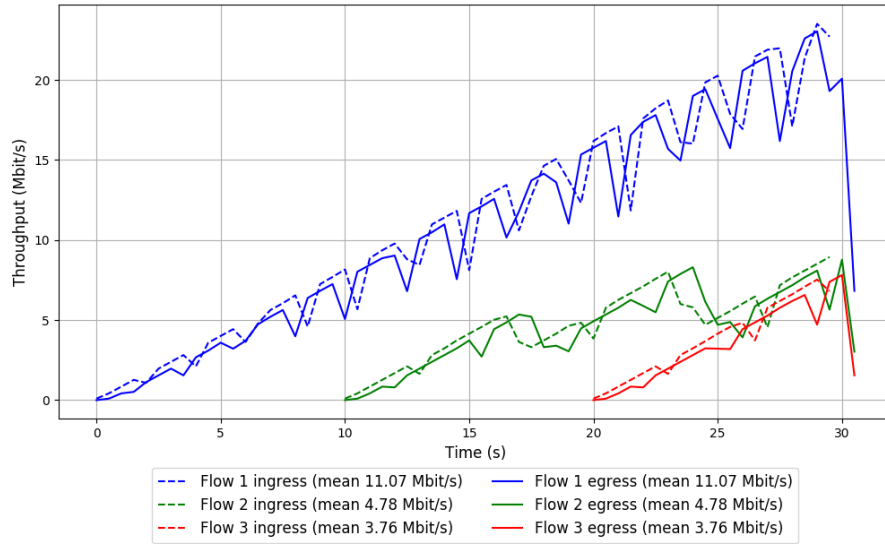
-- Flow 3:

Average throughput: 3.76 Mbit/s

95th percentile per-packet one-way delay: 83.567 ms

Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-04-24 01:22:38

End at: 2019-04-24 01:23:08

Local clock offset: -3.373 ms

Remote clock offset: 5.048 ms

Below is generated by plot.py at 2019-04-24 02:33:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.86 Mbit/s

95th percentile per-packet one-way delay: 86.019 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 11.85 Mbit/s

95th percentile per-packet one-way delay: 85.801 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 5.83 Mbit/s

95th percentile per-packet one-way delay: 86.545 ms

Loss rate: 0.01%

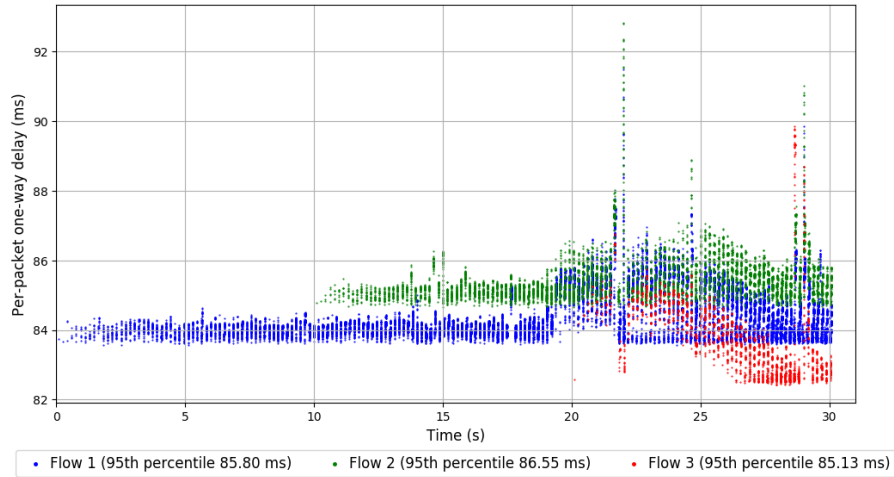
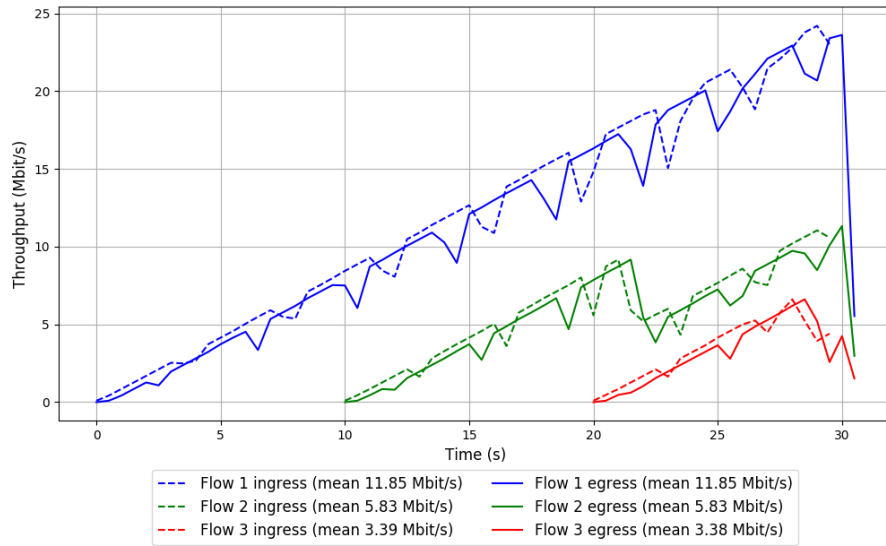
-- Flow 3:

Average throughput: 3.38 Mbit/s

95th percentile per-packet one-way delay: 85.131 ms

Loss rate: 0.03%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-04-24 01:49:44
End at: 2019-04-24 01:50:14
Local clock offset: -2.819 ms
Remote clock offset: -5.914 ms

Below is generated by plot.py at 2019-04-24 02:33:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.50 Mbit/s
95th percentile per-packet one-way delay: 72.105 ms
Loss rate: 0.02%

-- Flow 1:

Average throughput: 9.86 Mbit/s
95th percentile per-packet one-way delay: 72.104 ms
Loss rate: 0.04%

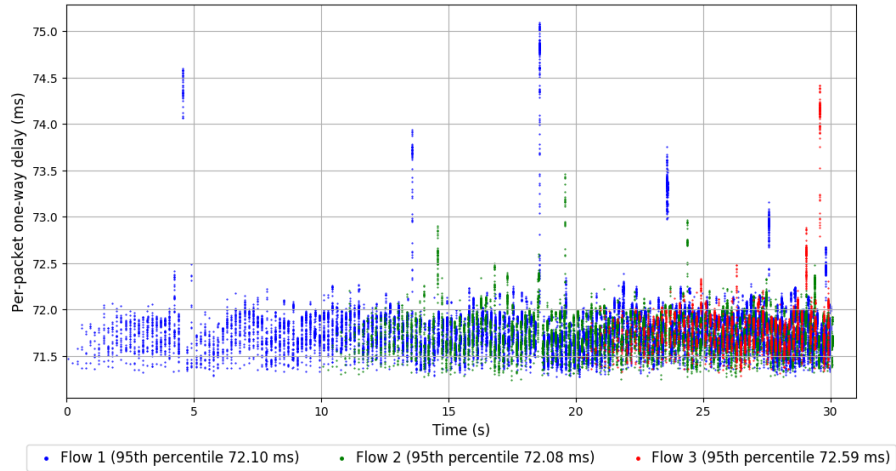
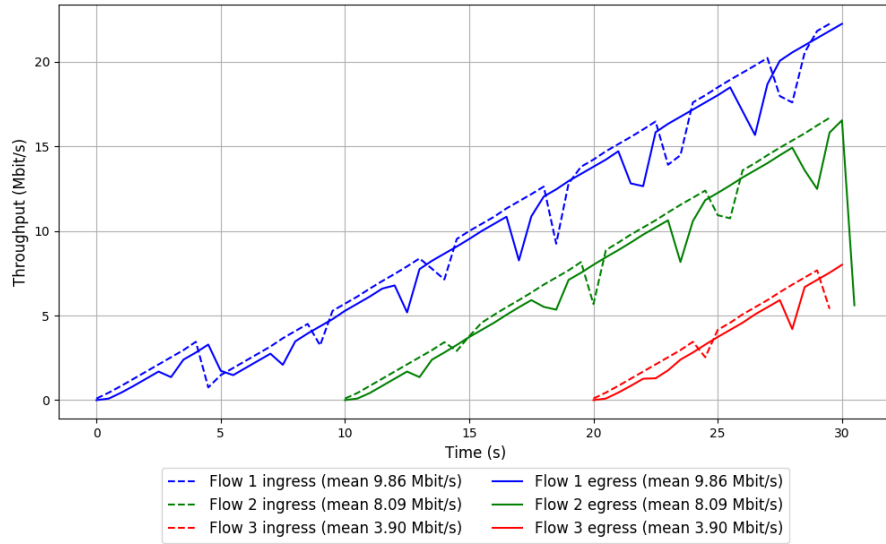
-- Flow 2:

Average throughput: 8.09 Mbit/s
95th percentile per-packet one-way delay: 72.077 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 72.590 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-04-24 02:16:37
End at: 2019-04-24 02:17:07
Local clock offset: -3.544 ms
Remote clock offset: -1.488 ms

Below is generated by plot.py at 2019-04-24 02:33:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.41 Mbit/s
95th percentile per-packet one-way delay: 81.142 ms
Loss rate: 0.02%

-- Flow 1:

Average throughput: 8.95 Mbit/s
95th percentile per-packet one-way delay: 81.421 ms
Loss rate: 0.02%

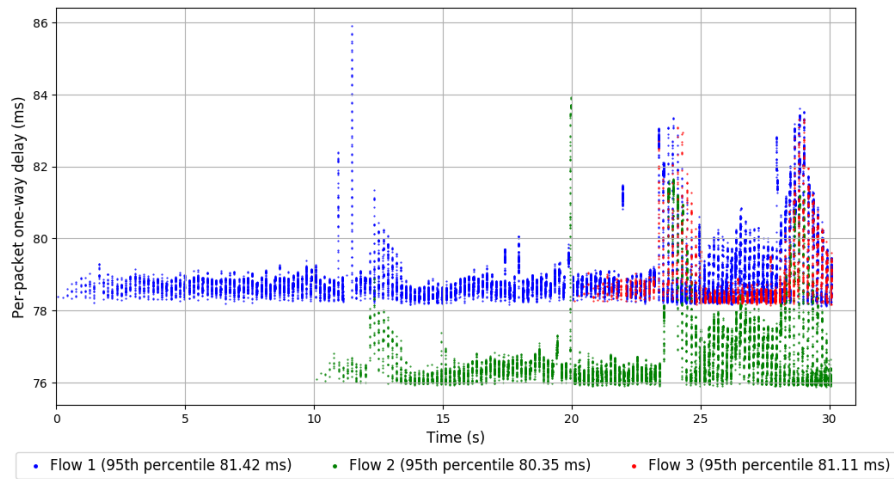
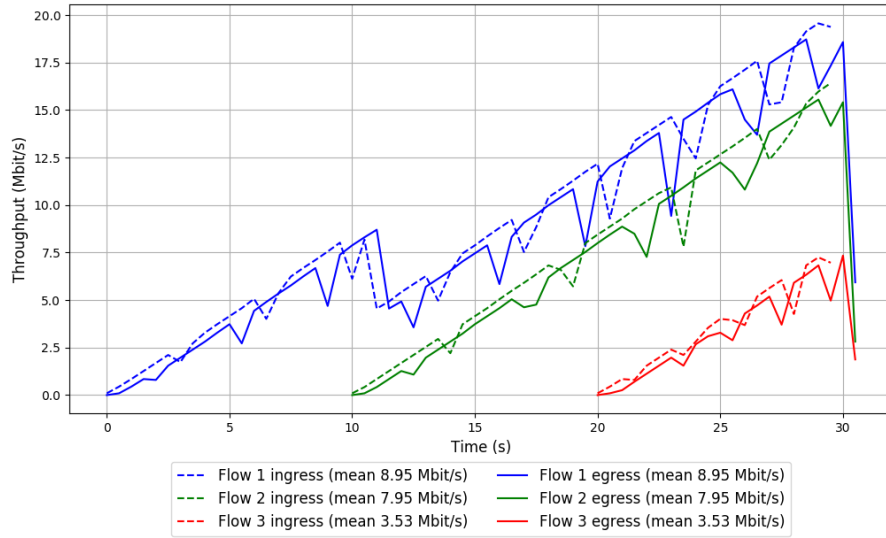
-- Flow 2:

Average throughput: 7.95 Mbit/s
95th percentile per-packet one-way delay: 80.351 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 81.108 ms
Loss rate: 0.03%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-04-24 00:36:27
End at: 2019-04-24 00:36:57
Local clock offset: -4.039 ms
Remote clock offset: -3.054 ms

Below is generated by plot.py at 2019-04-24 02:34:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.79 Mbit/s
95th percentile per-packet one-way delay: 110.825 ms
Loss rate: 3.17%

-- Flow 1:

Average throughput: 79.20 Mbit/s
95th percentile per-packet one-way delay: 110.830 ms
Loss rate: 2.99%

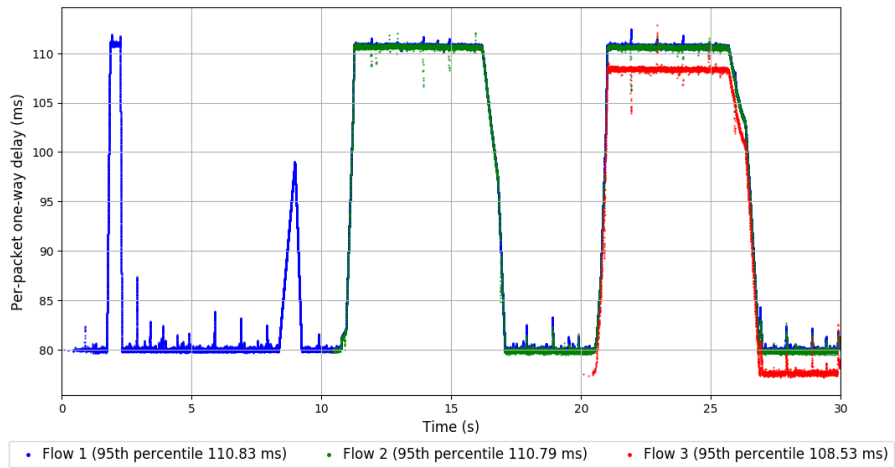
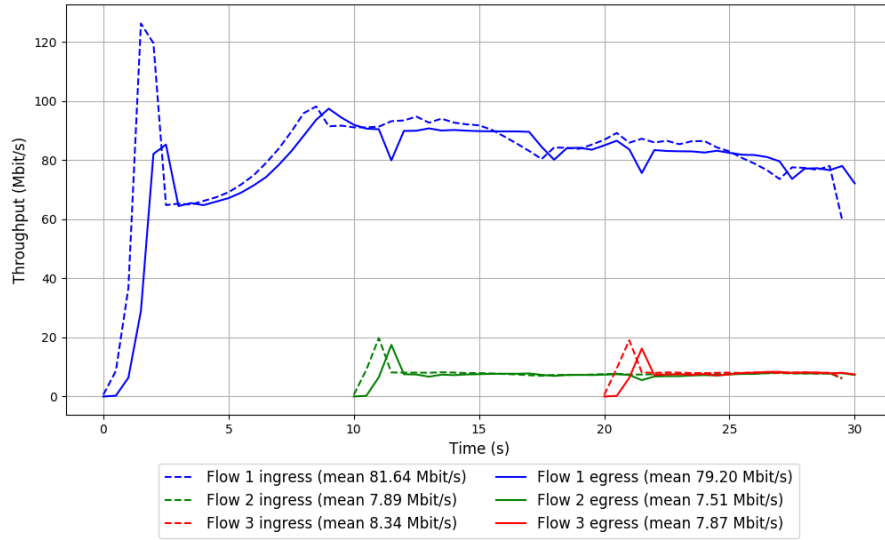
-- Flow 2:

Average throughput: 7.51 Mbit/s
95th percentile per-packet one-way delay: 110.789 ms
Loss rate: 4.76%

-- Flow 3:

Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 108.532 ms
Loss rate: 5.58%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-04-24 01:03:21

End at: 2019-04-24 01:03:51

Local clock offset: -3.882 ms

Remote clock offset: 0.793 ms

Below is generated by plot.py at 2019-04-24 02:34:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.08 Mbit/s

95th percentile per-packet one-way delay: 109.001 ms

Loss rate: 3.00%

-- Flow 1:

Average throughput: 79.20 Mbit/s

95th percentile per-packet one-way delay: 108.993 ms

Loss rate: 2.80%

-- Flow 2:

Average throughput: 7.77 Mbit/s

95th percentile per-packet one-way delay: 108.878 ms

Loss rate: 5.07%

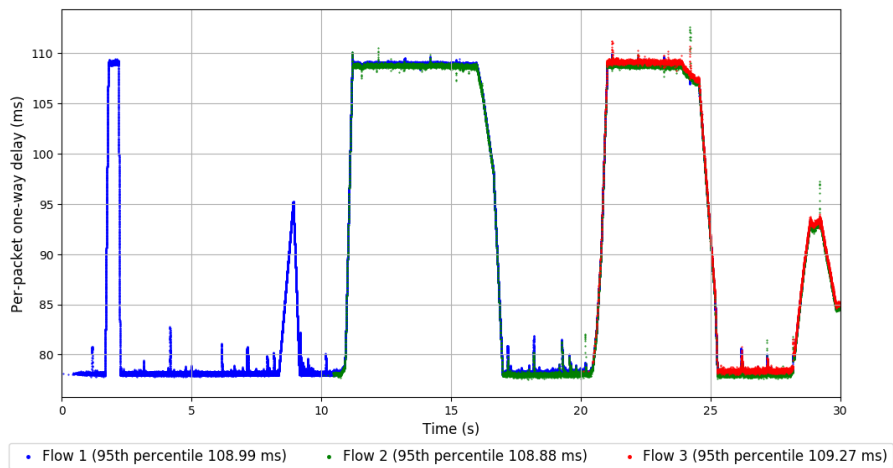
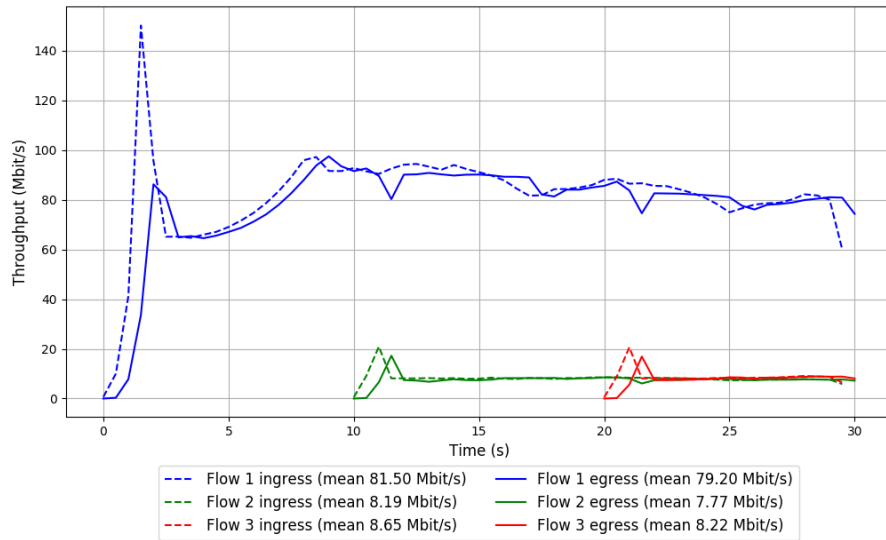
-- Flow 3:

Average throughput: 8.22 Mbit/s

95th percentile per-packet one-way delay: 109.272 ms

Loss rate: 4.83%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-04-24 01:30:37

End at: 2019-04-24 01:31:07

Local clock offset: -3.062 ms

Remote clock offset: -2.63 ms

Below is generated by plot.py at 2019-04-24 02:34:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.32 Mbit/s

95th percentile per-packet one-way delay: 108.828 ms

Loss rate: 3.57%

-- Flow 1:

Average throughput: 72.64 Mbit/s

95th percentile per-packet one-way delay: 108.845 ms

Loss rate: 3.42%

-- Flow 2:

Average throughput: 16.57 Mbit/s

95th percentile per-packet one-way delay: 107.847 ms

Loss rate: 4.63%

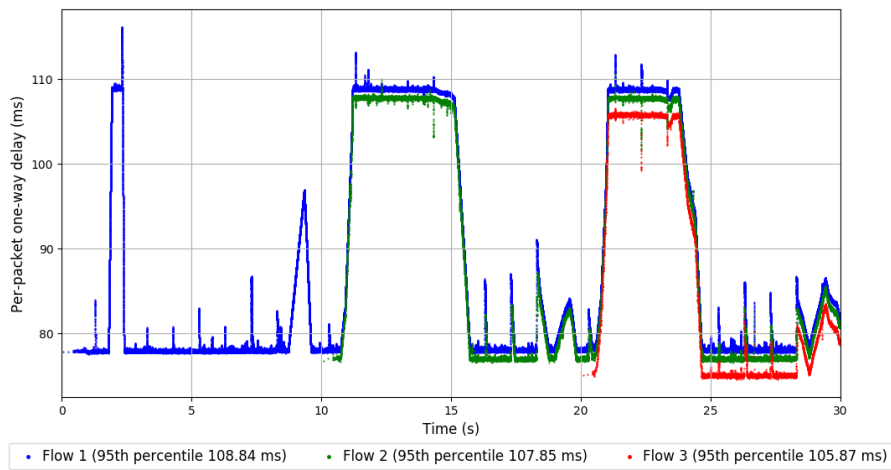
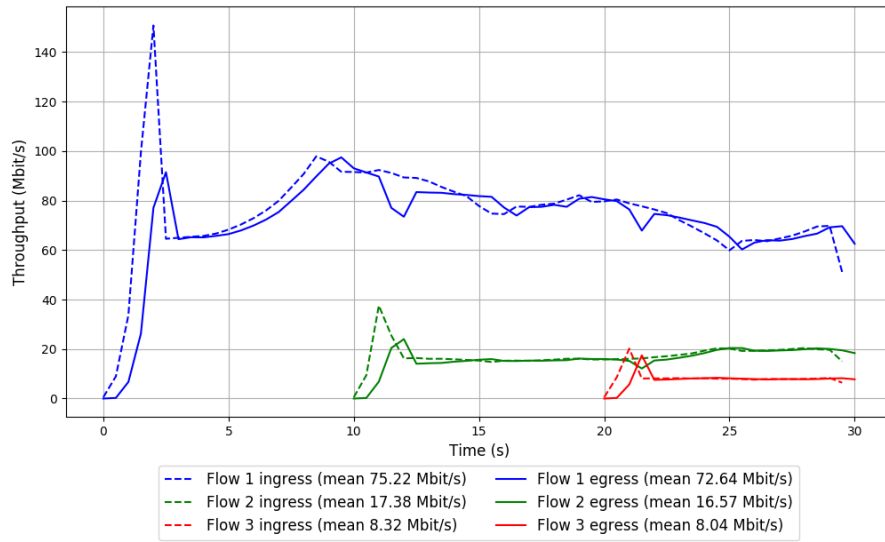
-- Flow 3:

Average throughput: 8.04 Mbit/s

95th percentile per-packet one-way delay: 105.869 ms

Loss rate: 3.43%

Run 3: Report of PCC-Allegro — Data Link

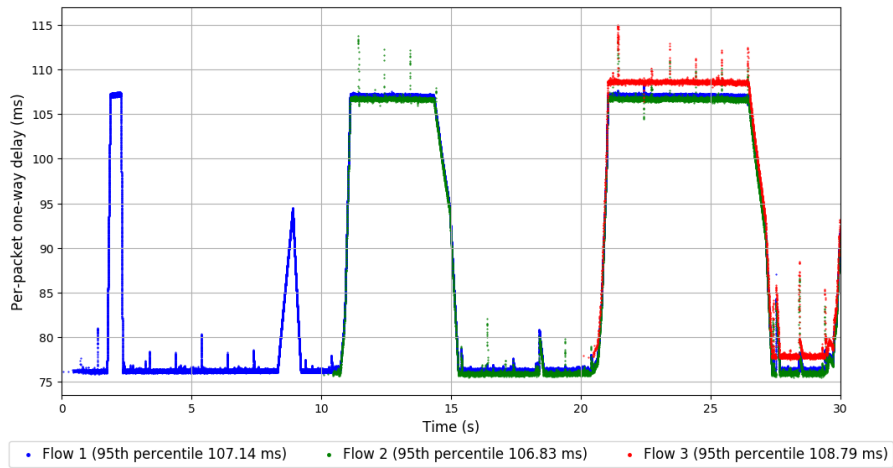
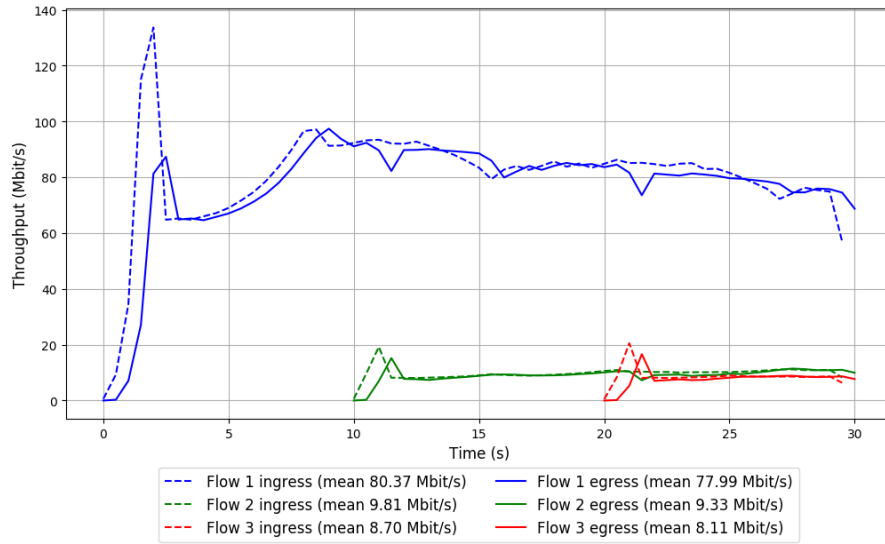


Run 4: Statistics of PCC-Allegro

Start at: 2019-04-24 01:57:23
End at: 2019-04-24 01:57:53
Local clock offset: -2.791 ms
Remote clock offset: -3.138 ms

```
# Below is generated by plot.py at 2019-04-24 02:34:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.87 Mbit/s
95th percentile per-packet one-way delay: 107.165 ms
Loss rate: 3.16%
-- Flow 1:
Average throughput: 77.99 Mbit/s
95th percentile per-packet one-way delay: 107.143 ms
Loss rate: 2.91%
-- Flow 2:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 106.834 ms
Loss rate: 4.82%
-- Flow 3:
Average throughput: 8.11 Mbit/s
95th percentile per-packet one-way delay: 108.789 ms
Loss rate: 6.62%
```

Run 4: Report of PCC-Allegro — Data Link

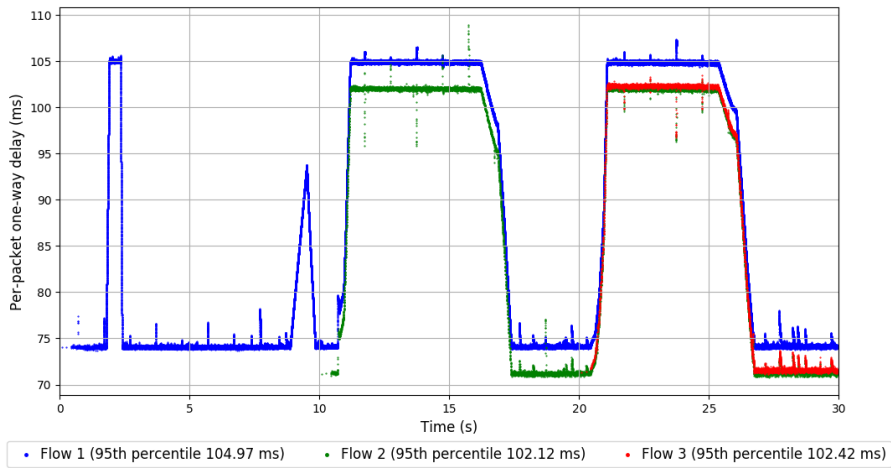
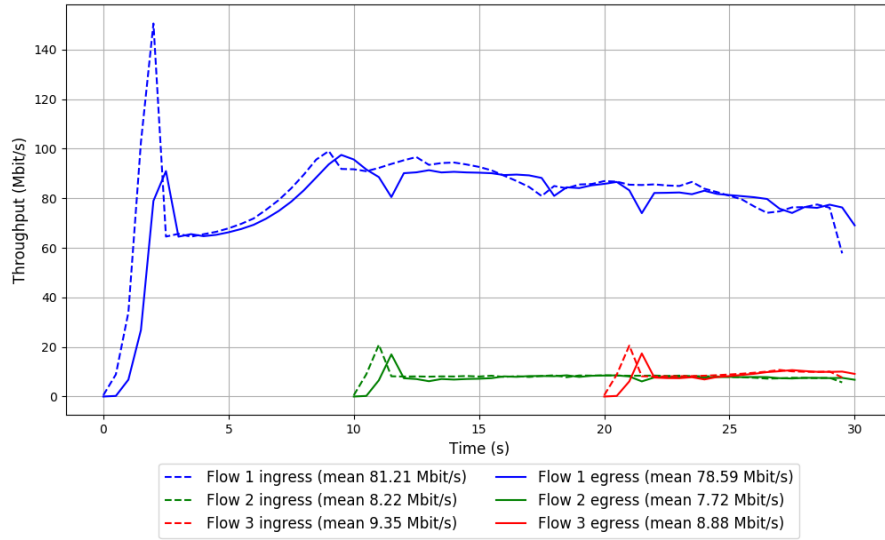


Run 5: Statistics of PCC-Allegro

Start at: 2019-04-24 02:24:16
End at: 2019-04-24 02:24:46
Local clock offset: -3.175 ms
Remote clock offset: -5.517 ms

```
# Below is generated by plot.py at 2019-04-24 02:34:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.66 Mbit/s
95th percentile per-packet one-way delay: 104.962 ms
Loss rate: 3.45%
-- Flow 1:
Average throughput: 78.59 Mbit/s
95th percentile per-packet one-way delay: 104.968 ms
Loss rate: 3.22%
-- Flow 2:
Average throughput: 7.72 Mbit/s
95th percentile per-packet one-way delay: 102.116 ms
Loss rate: 6.03%
-- Flow 3:
Average throughput: 8.88 Mbit/s
95th percentile per-packet one-way delay: 102.417 ms
Loss rate: 4.96%
```

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2019-04-24 00:33:55

End at: 2019-04-24 00:34:25

Local clock offset: -3.95 ms

Remote clock offset: 1.707 ms

Below is generated by plot.py at 2019-04-24 02:34:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.69 Mbit/s

95th percentile per-packet one-way delay: 85.928 ms

Loss rate: 50.85%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 83.419 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 8.92 Mbit/s

95th percentile per-packet one-way delay: 85.954 ms

Loss rate: 57.73%

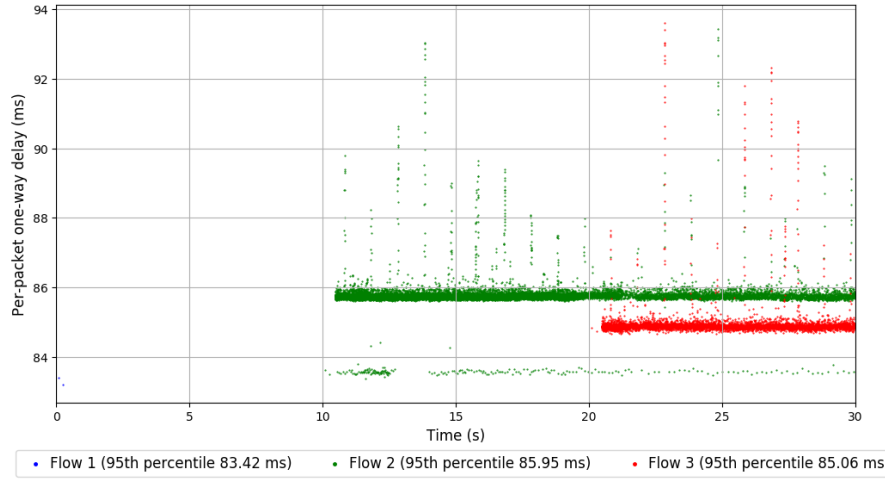
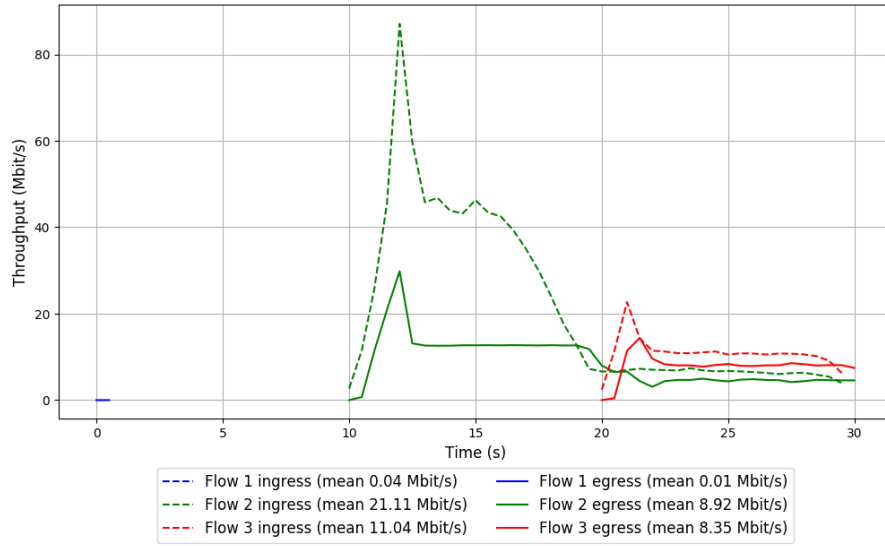
-- Flow 3:

Average throughput: 8.35 Mbit/s

95th percentile per-packet one-way delay: 85.063 ms

Loss rate: 24.34%

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-04-24 01:00:49

End at: 2019-04-24 01:01:19

Local clock offset: -3.841 ms

Remote clock offset: 1.544 ms

Below is generated by plot.py at 2019-04-24 02:34:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.19 Mbit/s

95th percentile per-packet one-way delay: 80.093 ms

Loss rate: 60.64%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 79.937 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 10.70 Mbit/s

95th percentile per-packet one-way delay: 80.095 ms

Loss rate: 62.78%

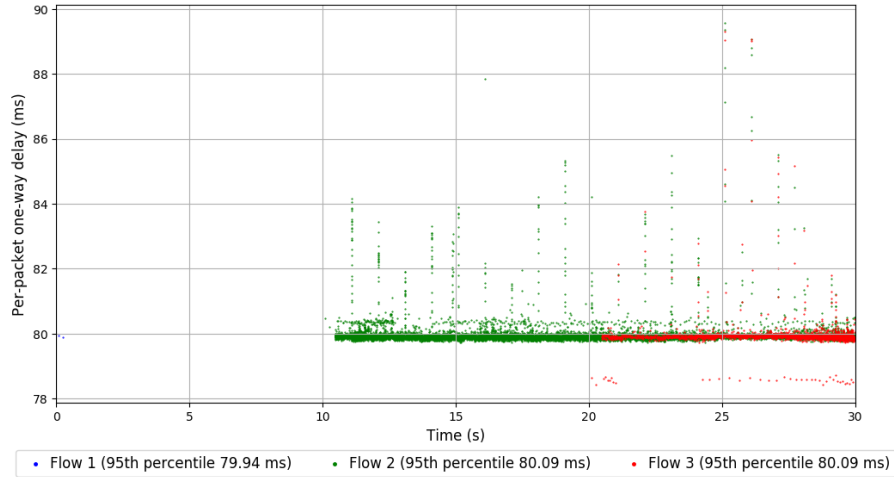
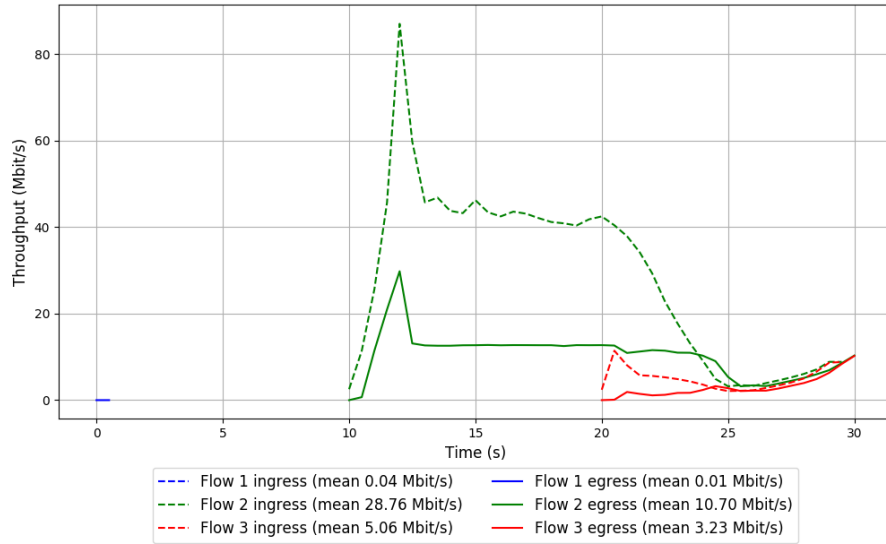
-- Flow 3:

Average throughput: 3.23 Mbit/s

95th percentile per-packet one-way delay: 80.088 ms

Loss rate: 36.16%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-04-24 01:27:45

End at: 2019-04-24 01:28:15

Local clock offset: -3.972 ms

Remote clock offset: 4.549 ms

Below is generated by plot.py at 2019-04-24 02:34:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.69 Mbit/s

95th percentile per-packet one-way delay: 84.730 ms

Loss rate: 41.62%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 83.502 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 12.45 Mbit/s

95th percentile per-packet one-way delay: 84.072 ms

Loss rate: 39.19%

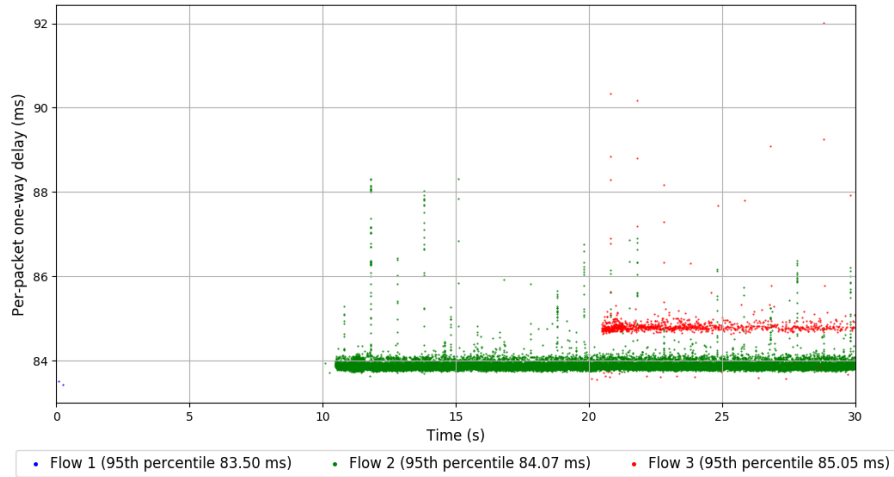
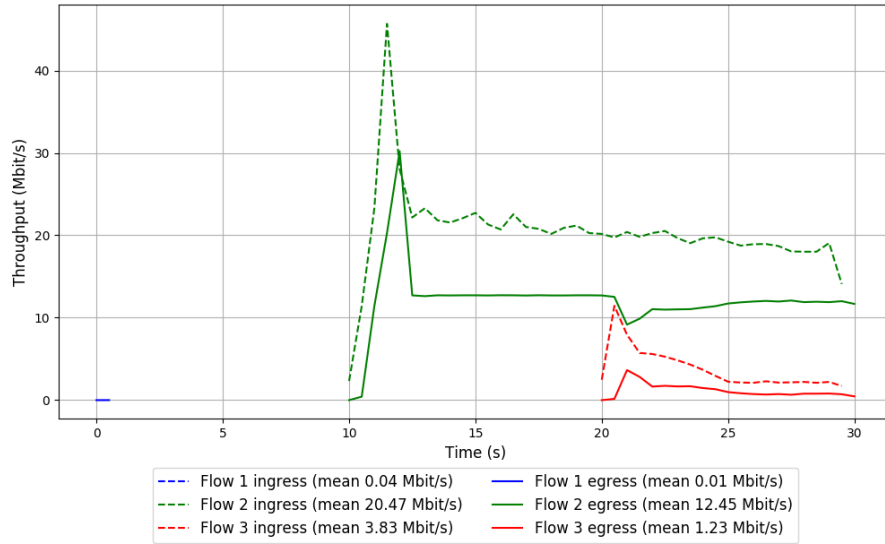
-- Flow 3:

Average throughput: 1.23 Mbit/s

95th percentile per-packet one-way delay: 85.045 ms

Loss rate: 67.80%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-04-24 01:54:51
End at: 2019-04-24 01:55:21
Local clock offset: -3.628 ms
Remote clock offset: -6.439 ms

Below is generated by plot.py at 2019-04-24 02:34:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.61 Mbit/s
95th percentile per-packet one-way delay: 74.395 ms
Loss rate: 49.42%

-- Flow 1:

Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 75.135 ms
Loss rate: 85.71%

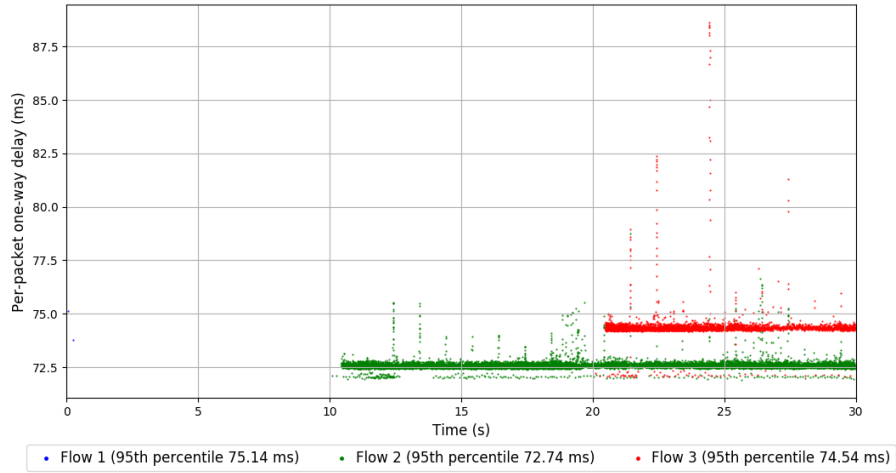
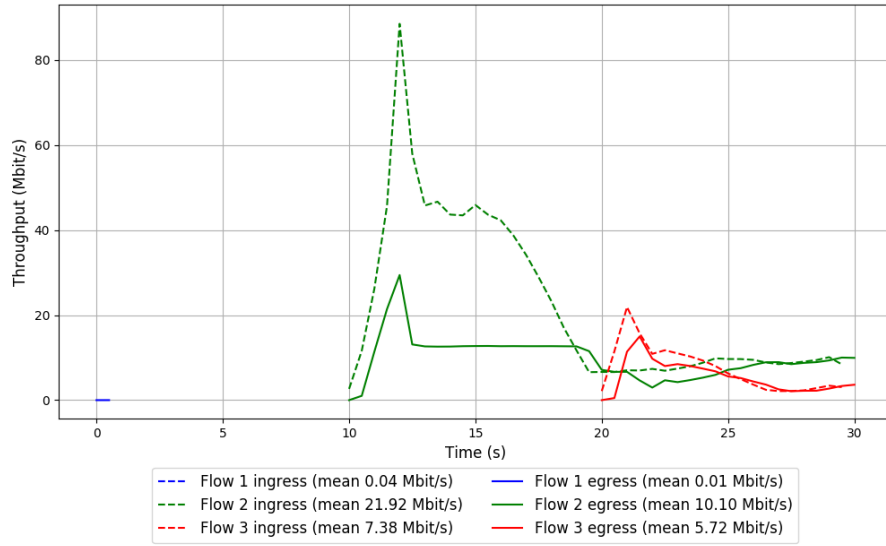
-- Flow 2:

Average throughput: 10.10 Mbit/s
95th percentile per-packet one-way delay: 72.744 ms
Loss rate: 53.91%

-- Flow 3:

Average throughput: 5.72 Mbit/s
95th percentile per-packet one-way delay: 74.539 ms
Loss rate: 22.48%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-04-24 02:21:44
End at: 2019-04-24 02:22:14
Local clock offset: -3.913 ms
Remote clock offset: -6.759 ms

Below is generated by plot.py at 2019-04-24 02:34:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.44 Mbit/s

95th percentile per-packet one-way delay: 72.703 ms

Loss rate: 49.12%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 71.304 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 9.03 Mbit/s

95th percentile per-packet one-way delay: 72.727 ms

Loss rate: 56.21%

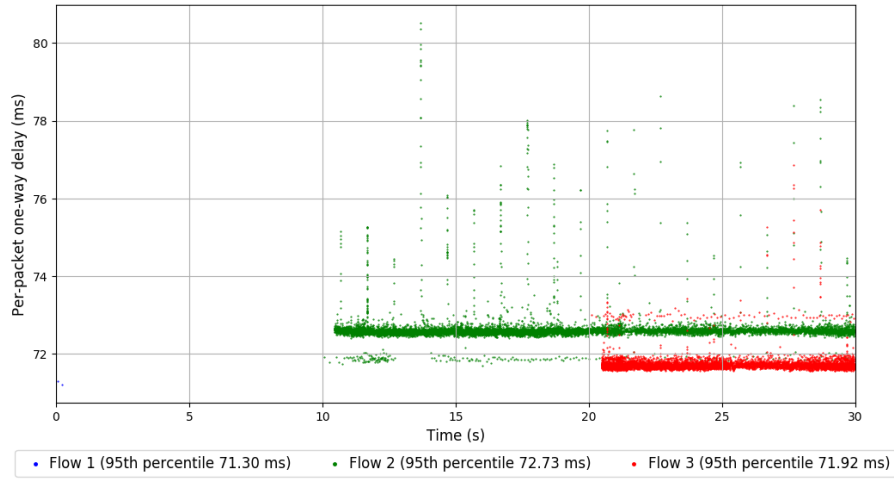
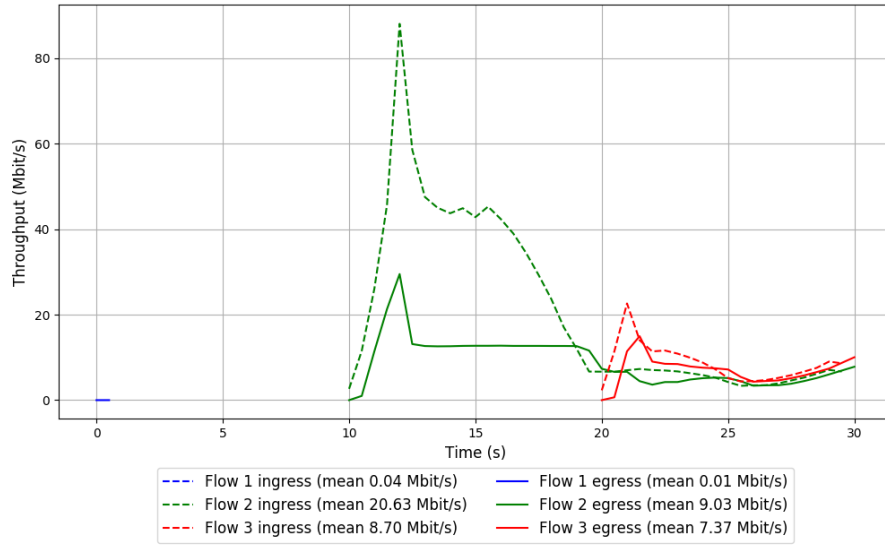
-- Flow 3:

Average throughput: 7.37 Mbit/s

95th percentile per-packet one-way delay: 71.916 ms

Loss rate: 15.24%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-04-24 00:32:38
End at: 2019-04-24 00:33:08
Local clock offset: -3.137 ms
Remote clock offset: -2.284 ms

Below is generated by plot.py at 2019-04-24 02:34:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.81 Mbit/s
95th percentile per-packet one-way delay: 103.907 ms
Loss rate: 0.54%

-- Flow 1:

Average throughput: 48.44 Mbit/s
95th percentile per-packet one-way delay: 104.108 ms
Loss rate: 0.64%

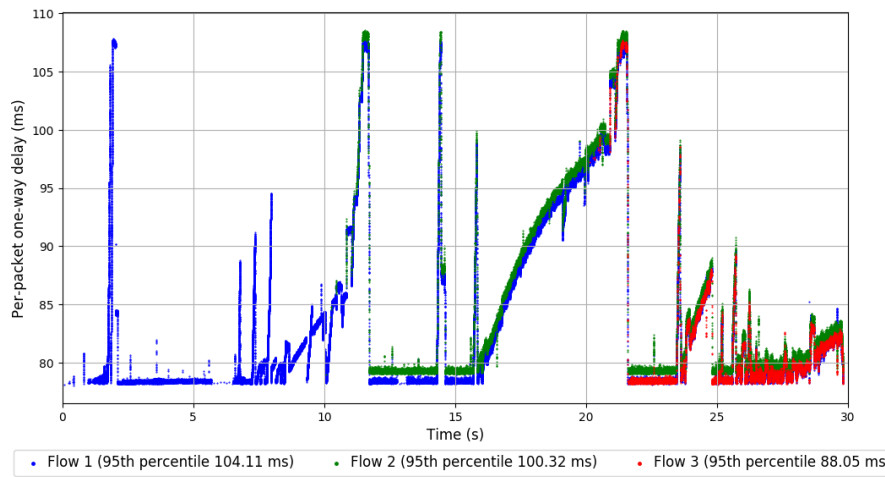
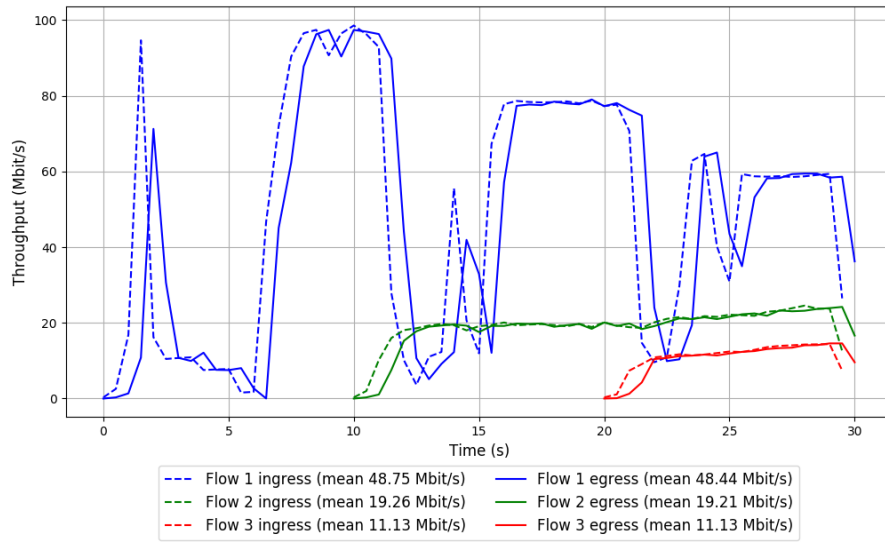
-- Flow 2:

Average throughput: 19.21 Mbit/s
95th percentile per-packet one-way delay: 100.317 ms
Loss rate: 0.27%

-- Flow 3:

Average throughput: 11.13 Mbit/s
95th percentile per-packet one-way delay: 88.050 ms
Loss rate: 0.20%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-04-24 00:59:33

End at: 2019-04-24 01:00:03

Local clock offset: -3.813 ms

Remote clock offset: 4.668 ms

Below is generated by plot.py at 2019-04-24 02:35:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.51 Mbit/s

95th percentile per-packet one-way delay: 110.330 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 41.55 Mbit/s

95th percentile per-packet one-way delay: 109.629 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 37.40 Mbit/s

95th percentile per-packet one-way delay: 111.520 ms

Loss rate: 0.54%

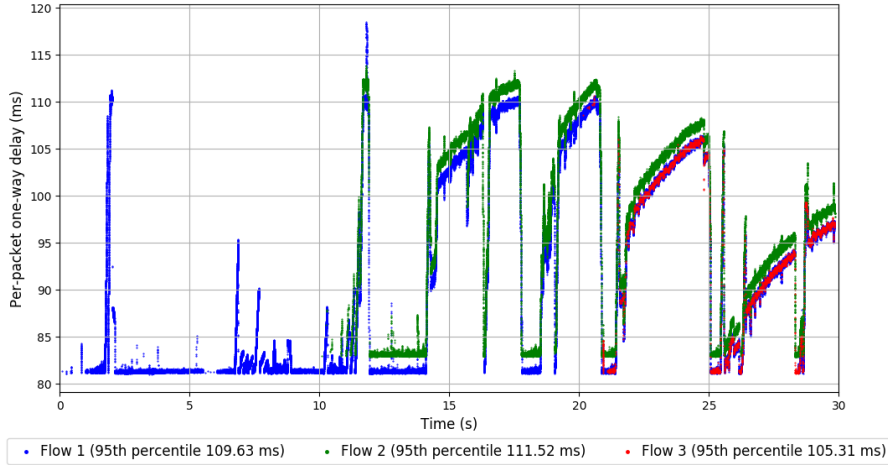
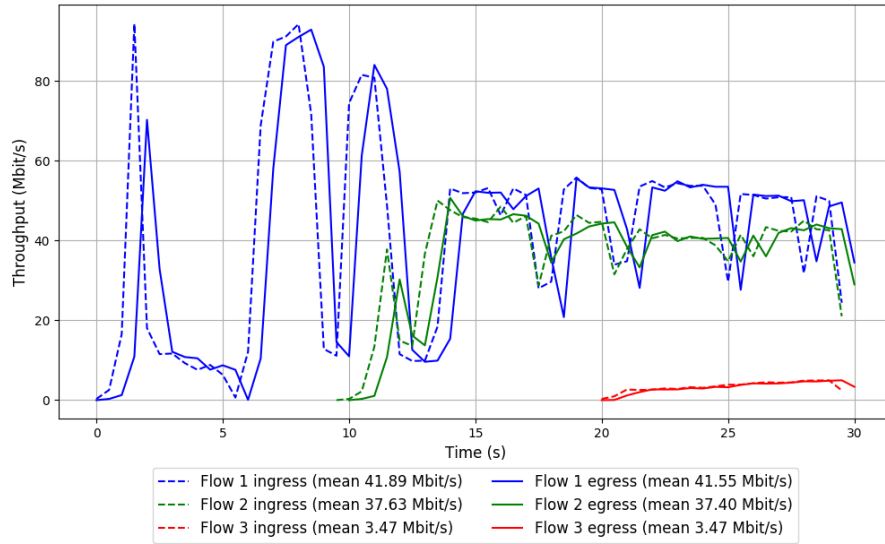
-- Flow 3:

Average throughput: 3.47 Mbit/s

95th percentile per-packet one-way delay: 105.313 ms

Loss rate: 0.07%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-04-24 01:26:28

End at: 2019-04-24 01:26:58

Local clock offset: -3.968 ms

Remote clock offset: 4.66 ms

Below is generated by plot.py at 2019-04-24 02:35:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.28 Mbit/s

95th percentile per-packet one-way delay: 106.440 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 34.33 Mbit/s

95th percentile per-packet one-way delay: 107.655 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 34.44 Mbit/s

95th percentile per-packet one-way delay: 104.883 ms

Loss rate: 0.74%

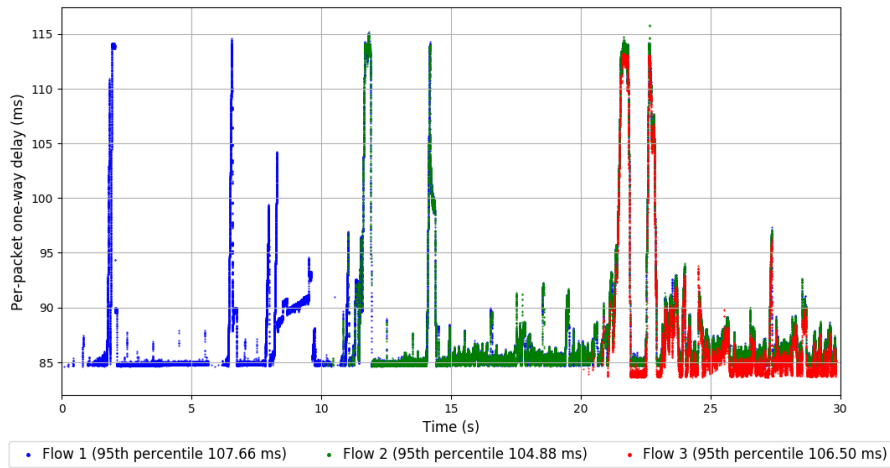
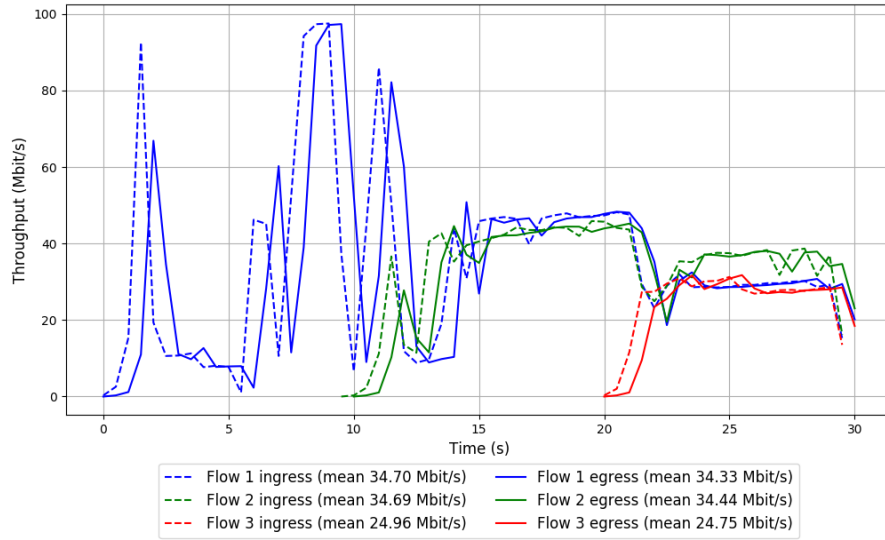
-- Flow 3:

Average throughput: 24.75 Mbit/s

95th percentile per-packet one-way delay: 106.500 ms

Loss rate: 0.85%

Run 3: Report of QUIC Cubic — Data Link

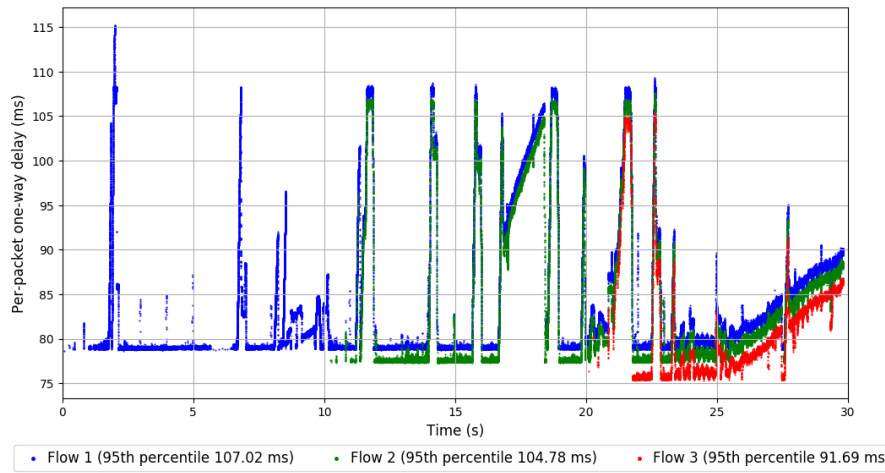
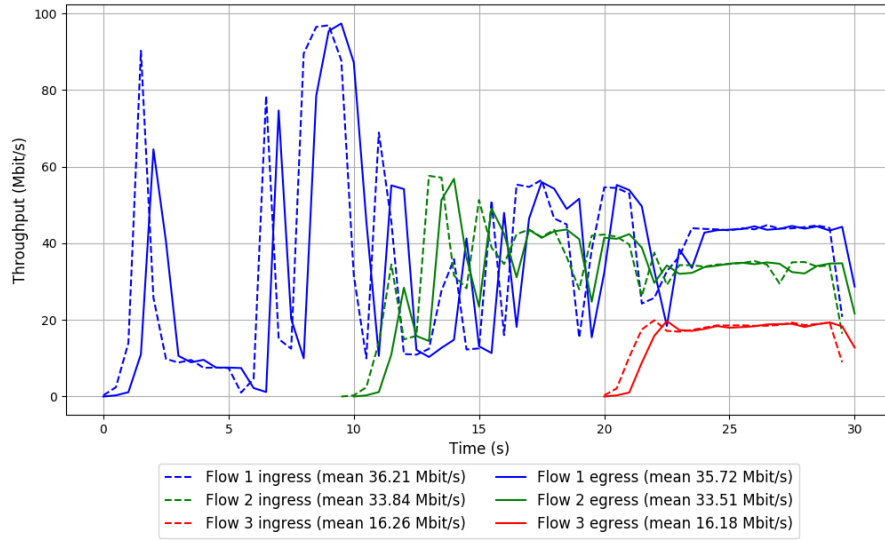


Run 4: Statistics of QUIC Cubic

Start at: 2019-04-24 01:53:34
End at: 2019-04-24 01:54:04
Local clock offset: -2.867 ms
Remote clock offset: -2.094 ms

```
# Below is generated by plot.py at 2019-04-24 02:35:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.25 Mbit/s
95th percentile per-packet one-way delay: 105.596 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 35.72 Mbit/s
95th percentile per-packet one-way delay: 107.022 ms
Loss rate: 1.32%
-- Flow 2:
Average throughput: 33.51 Mbit/s
95th percentile per-packet one-way delay: 104.781 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 16.18 Mbit/s
95th percentile per-packet one-way delay: 91.693 ms
Loss rate: 0.38%
```

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-04-24 02:20:27
End at: 2019-04-24 02:20:57
Local clock offset: -3.791 ms
Remote clock offset: -6.894 ms

Below is generated by plot.py at 2019-04-24 02:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 61.88 Mbit/s
95th percentile per-packet one-way delay: 98.199 ms
Loss rate: 0.58%

-- Flow 1:

Average throughput: 45.71 Mbit/s
95th percentile per-packet one-way delay: 98.552 ms
Loss rate: 0.69%

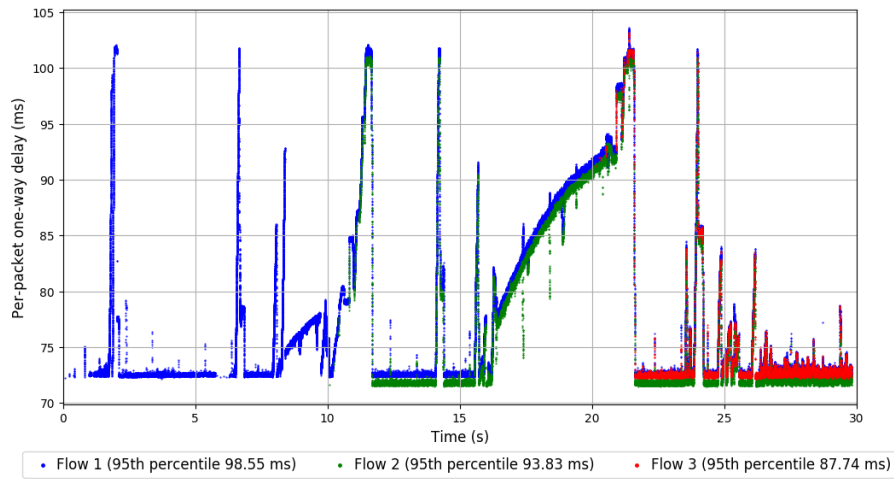
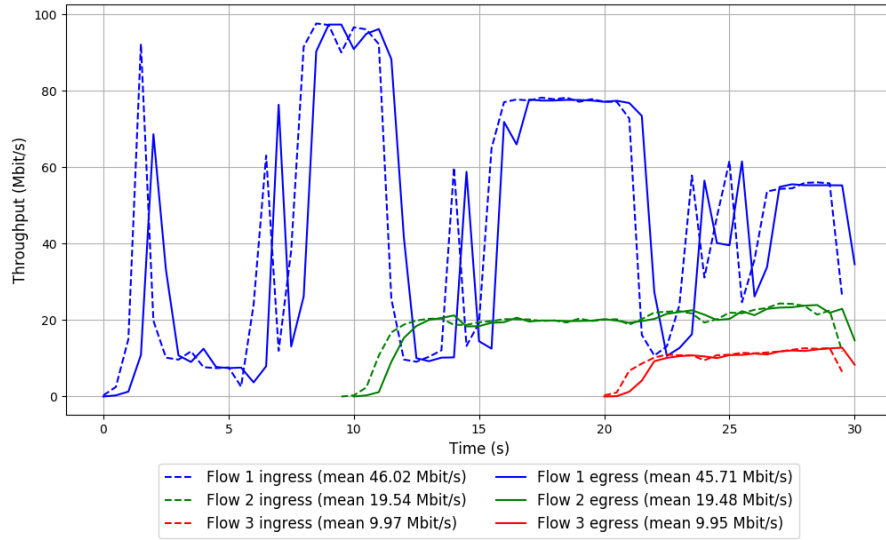
-- Flow 2:

Average throughput: 19.48 Mbit/s
95th percentile per-packet one-way delay: 93.831 ms
Loss rate: 0.28%

-- Flow 3:

Average throughput: 9.95 Mbit/s
95th percentile per-packet one-way delay: 87.740 ms
Loss rate: 0.39%

Run 5: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2019-04-24 00:26:15

End at: 2019-04-24 00:26:45

Local clock offset: -2.993 ms

Remote clock offset: 1.517 ms

Below is generated by plot.py at 2019-04-24 02:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 84.490 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.728 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.078 ms

Loss rate: 0.00%

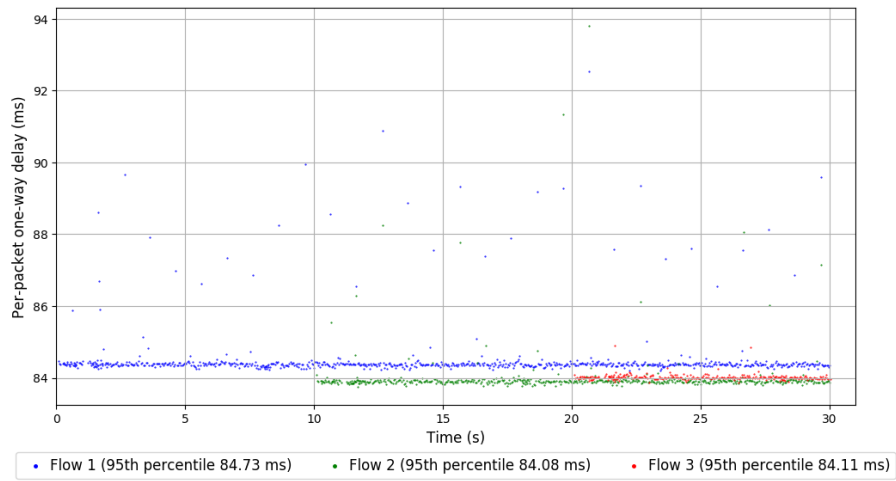
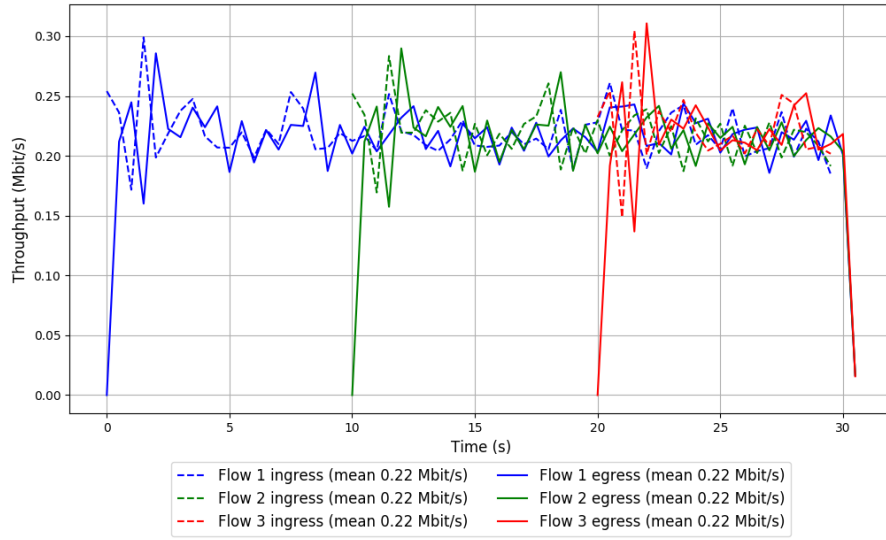
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.107 ms

Loss rate: 0.00%

Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-04-24 00:53:12

End at: 2019-04-24 00:53:42

Local clock offset: -3.648 ms

Remote clock offset: 4.852 ms

Below is generated by plot.py at 2019-04-24 02:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 84.918 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.001 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.949 ms

Loss rate: 0.00%

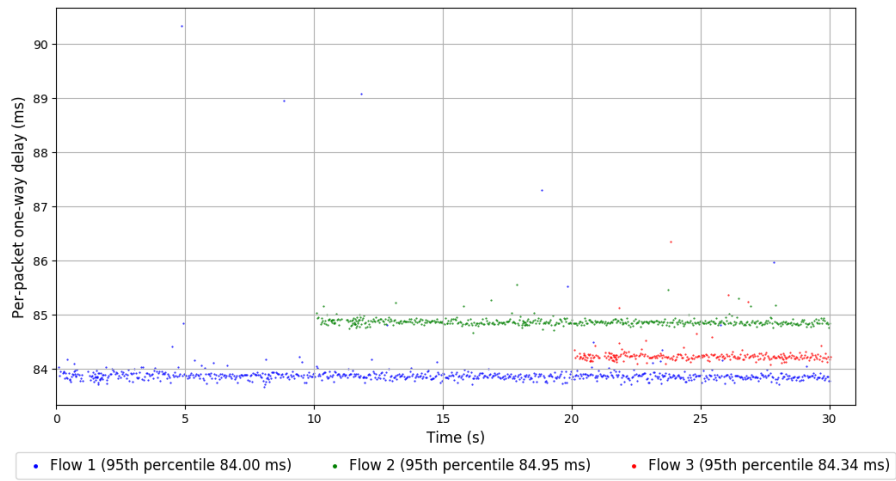
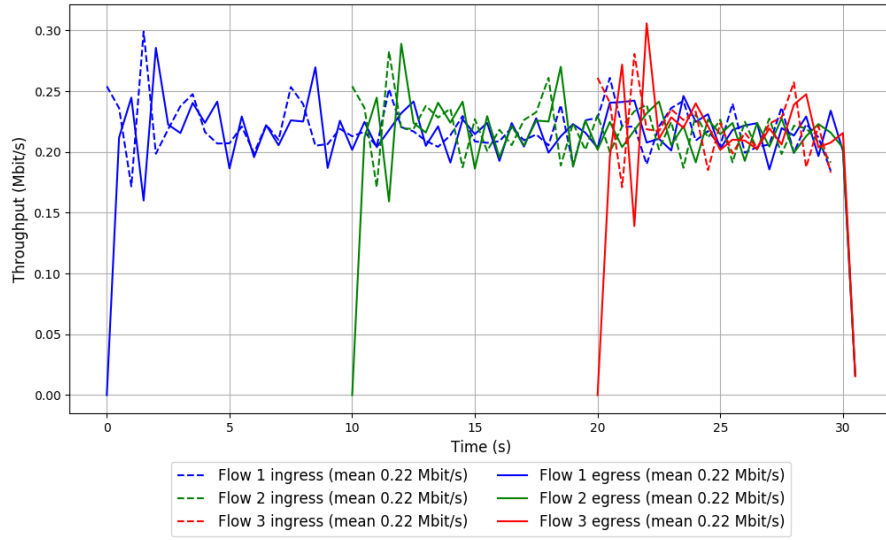
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.345 ms

Loss rate: 0.00%

Run 2: Report of SCReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2019-04-24 01:20:07

End at: 2019-04-24 01:20:37

Local clock offset: -4.394 ms

Remote clock offset: 4.907 ms

Below is generated by plot.py at 2019-04-24 02:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 84.394 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 83.818 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 83.335 ms

Loss rate: 0.00%

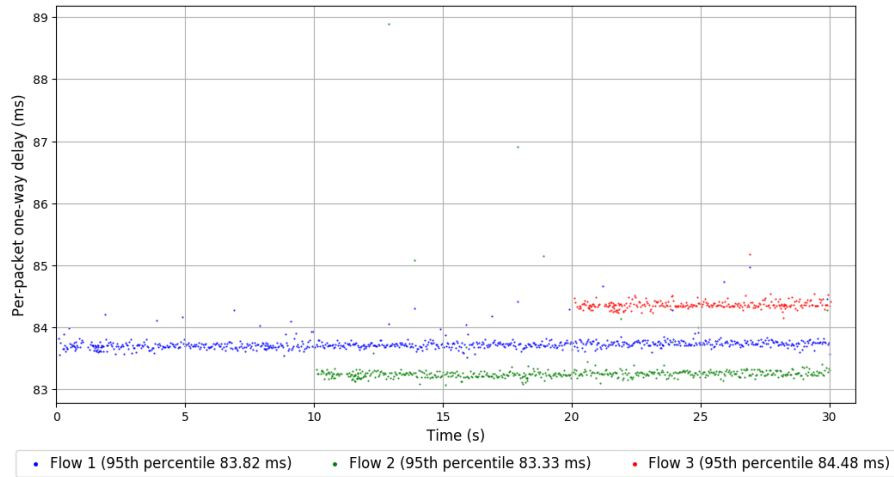
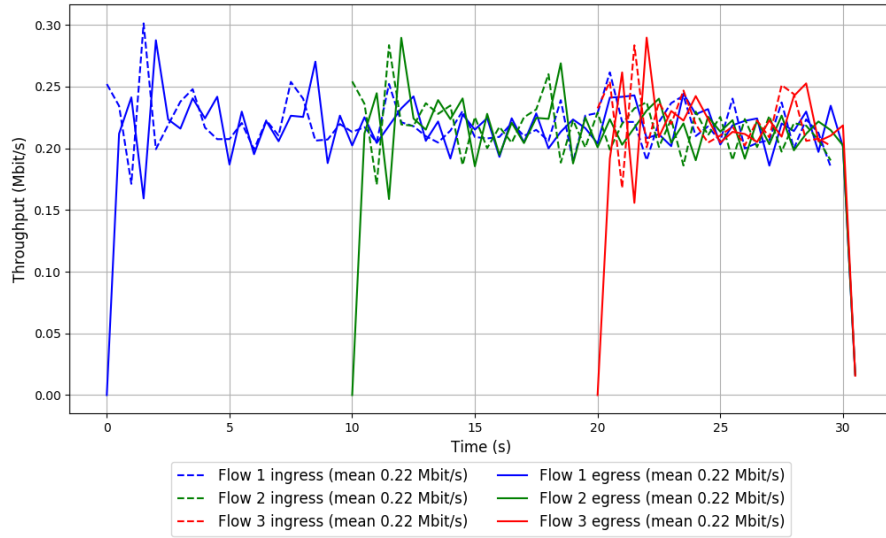
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.478 ms

Loss rate: 0.00%

Run 3: Report of SCReAM — Data Link

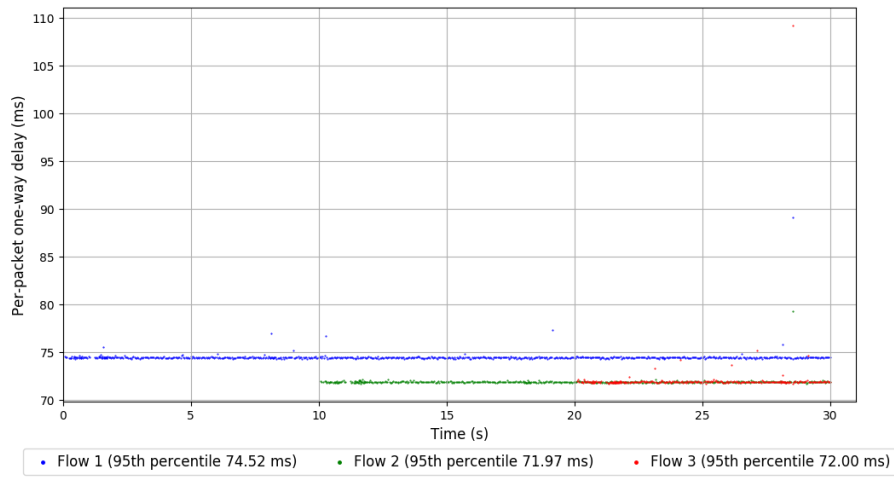
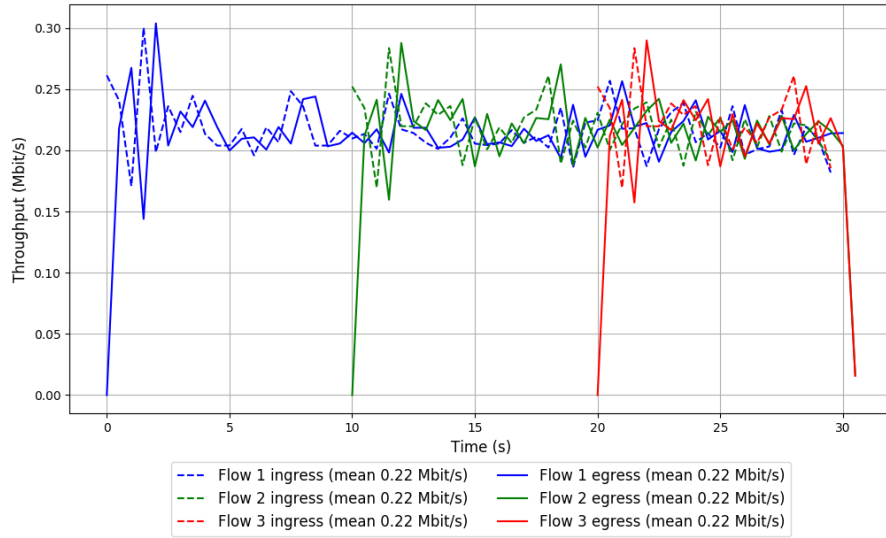


Run 4: Statistics of SCReAM

Start at: 2019-04-24 01:47:12
End at: 2019-04-24 01:47:42
Local clock offset: -3.601 ms
Remote clock offset: -7.458 ms

```
# Below is generated by plot.py at 2019-04-24 02:35:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 74.481 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 74.518 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 71.970 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 72.002 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

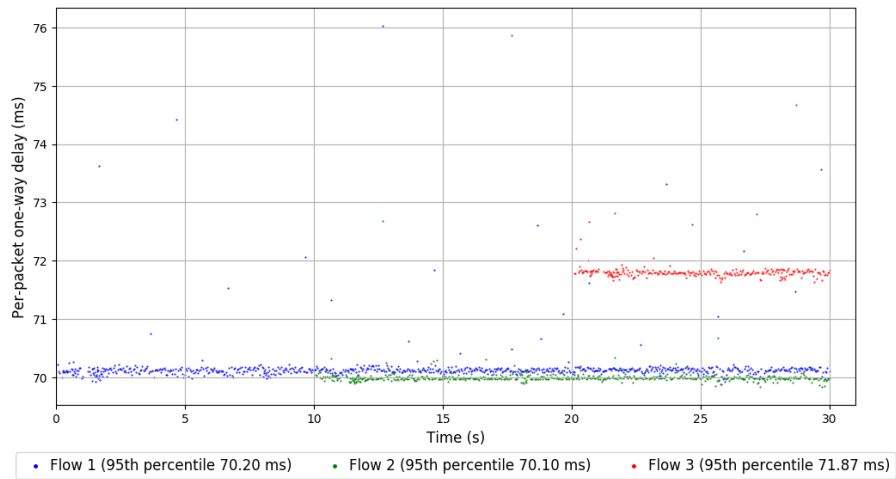
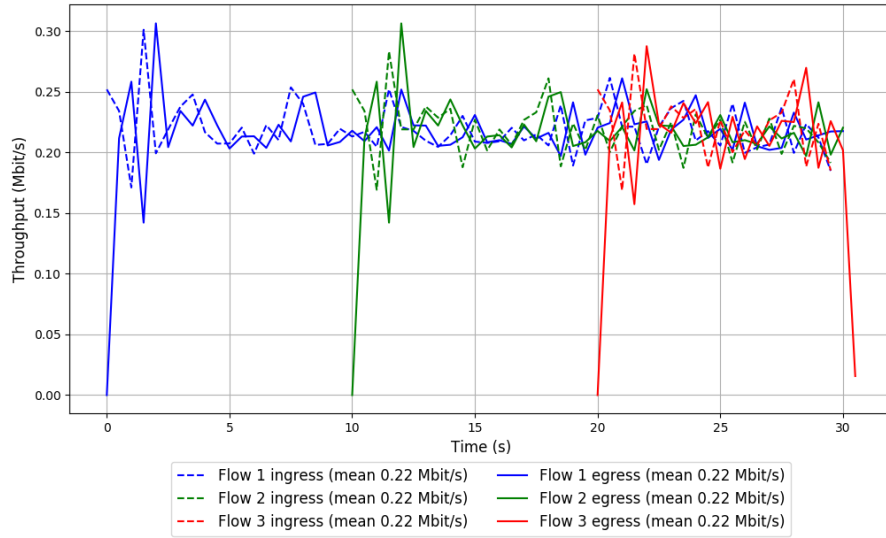


Run 5: Statistics of SCReAM

Start at: 2019-04-24 02:14:05
End at: 2019-04-24 02:14:35
Local clock offset: -2.674 ms
Remote clock offset: -6.968 ms

```
# Below is generated by plot.py at 2019-04-24 02:35:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 71.824 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 70.200 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 70.097 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 71.870 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-04-24 00:23:45
End at: 2019-04-24 00:24:15
Local clock offset: -2.922 ms
Remote clock offset: -2.234 ms

Below is generated by plot.py at 2019-04-24 02:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.62 Mbit/s

95th percentile per-packet one-way delay: 84.186 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.93 Mbit/s

95th percentile per-packet one-way delay: 83.394 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 83.844 ms

Loss rate: 0.00%

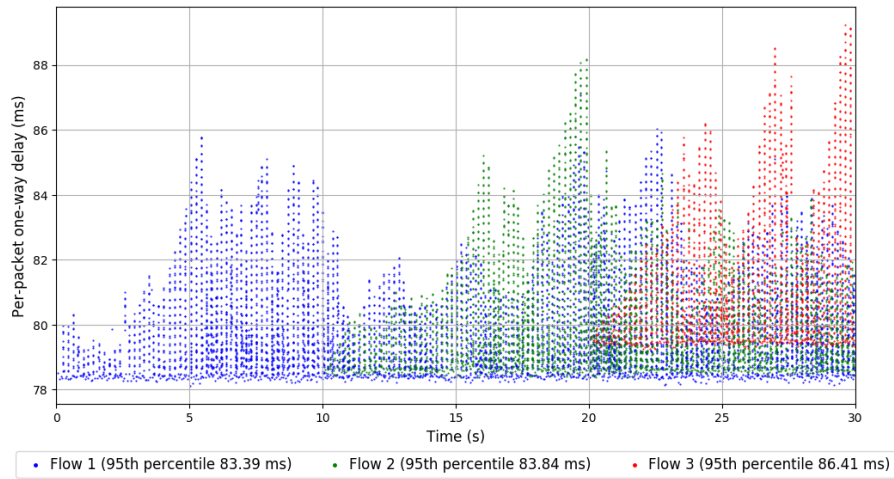
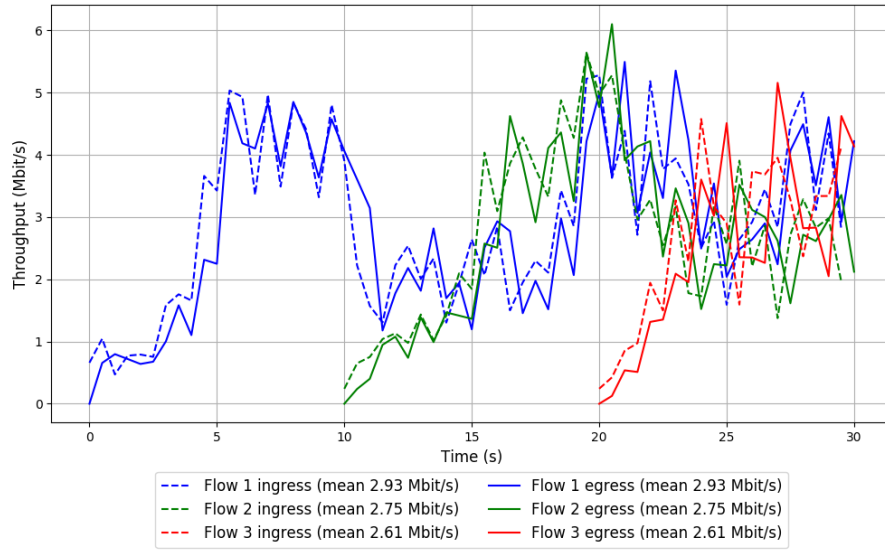
-- Flow 3:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 86.414 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-04-24 00:50:41

End at: 2019-04-24 00:51:11

Local clock offset: -4.334 ms

Remote clock offset: 4.882 ms

Below is generated by plot.py at 2019-04-24 02:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.61 Mbit/s

95th percentile per-packet one-way delay: 88.610 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 87.978 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.62 Mbit/s

95th percentile per-packet one-way delay: 87.600 ms

Loss rate: 0.00%

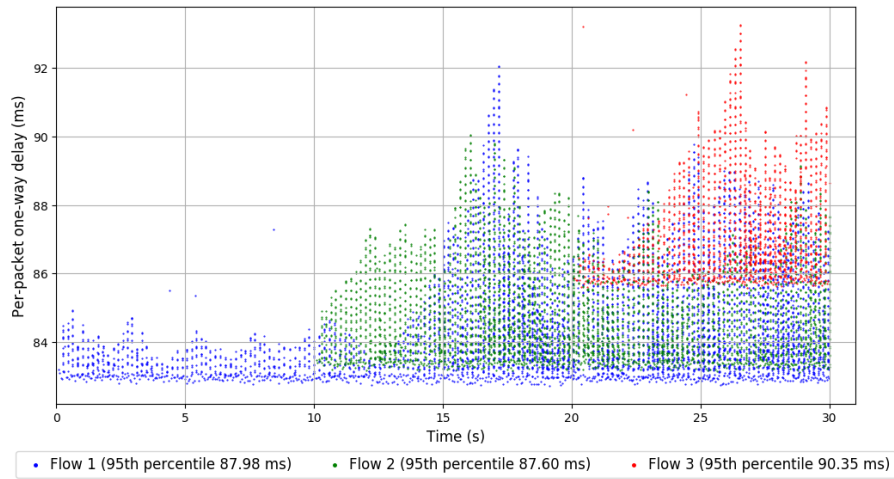
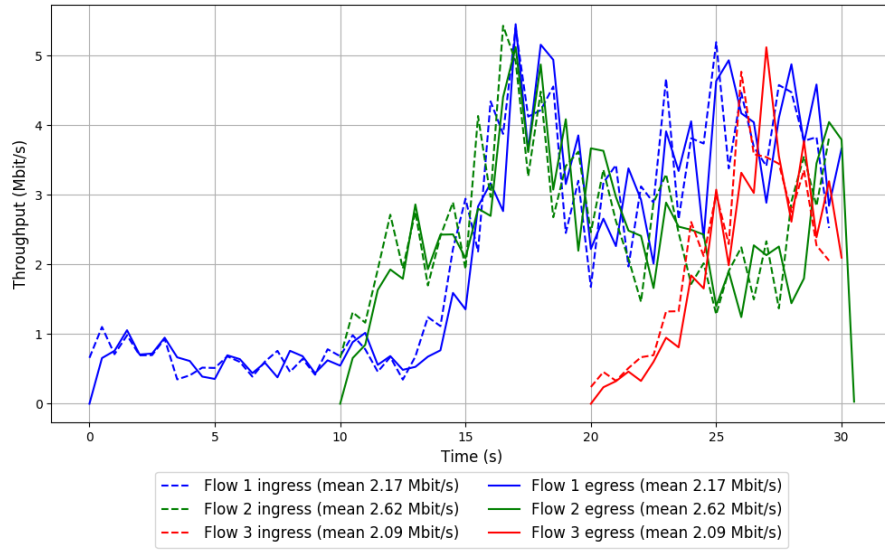
-- Flow 3:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 90.354 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-04-24 01:17:36

End at: 2019-04-24 01:18:06

Local clock offset: -3.786 ms

Remote clock offset: 6.192 ms

Below is generated by plot.py at 2019-04-24 02:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.89 Mbit/s

95th percentile per-packet one-way delay: 94.605 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 3.53 Mbit/s

95th percentile per-packet one-way delay: 93.253 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.75 Mbit/s

95th percentile per-packet one-way delay: 99.201 ms

Loss rate: 0.00%

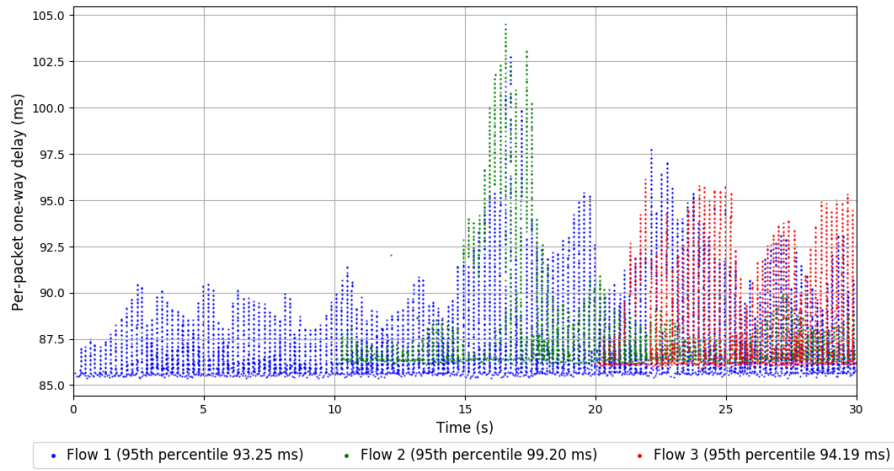
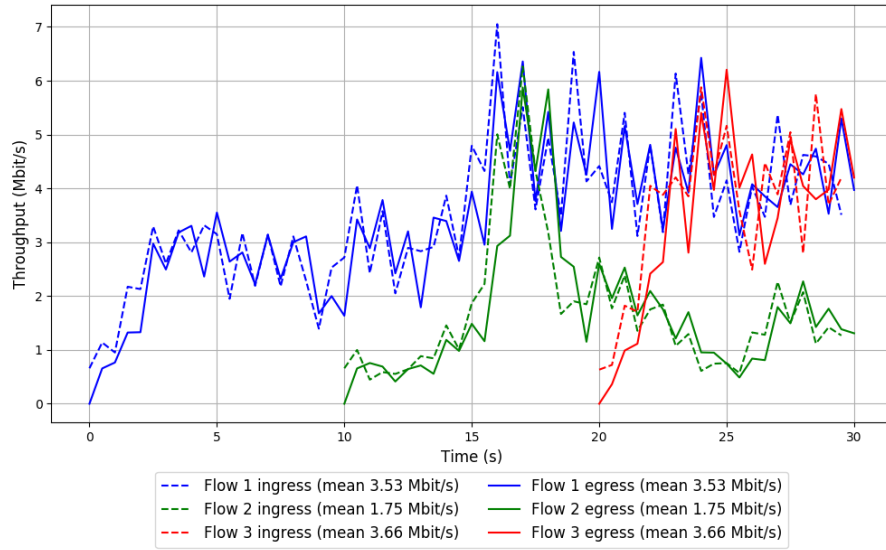
-- Flow 3:

Average throughput: 3.66 Mbit/s

95th percentile per-packet one-way delay: 94.187 ms

Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2019-04-24 01:44:42
End at: 2019-04-24 01:45:12
Local clock offset: -2.854 ms
Remote clock offset: -7.135 ms

Below is generated by plot.py at 2019-04-24 02:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.33 Mbit/s

95th percentile per-packet one-way delay: 79.598 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.90 Mbit/s

95th percentile per-packet one-way delay: 75.437 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 3.92 Mbit/s

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

Loss rate: 0.00%

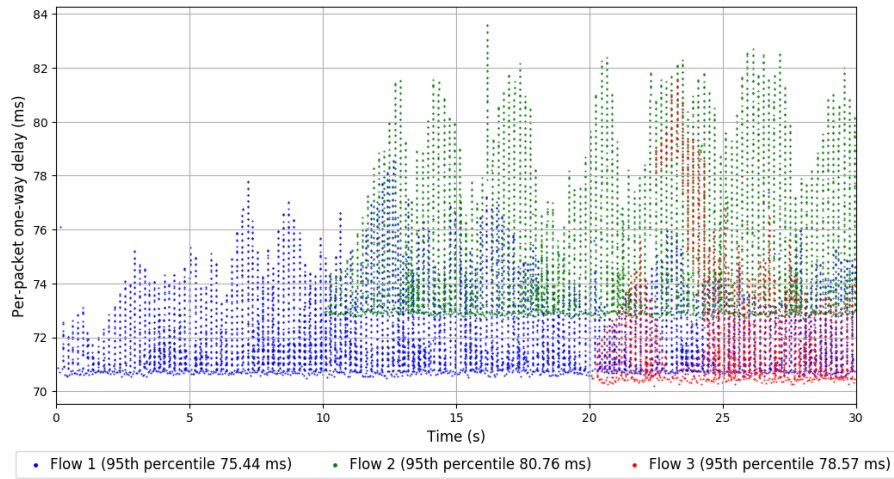
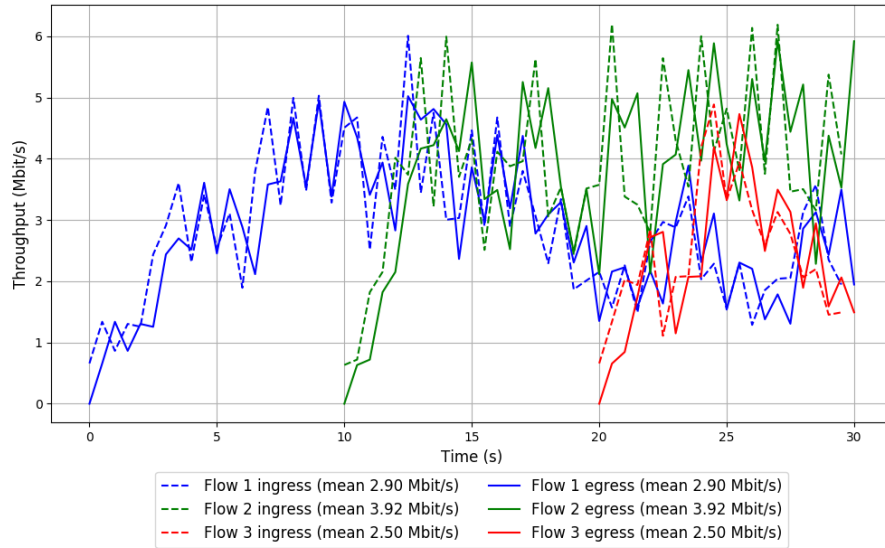
-- Flow 3:

Average throughput: 2.50 Mbit/s

95th percentile per-packet one-way delay: 78.566 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

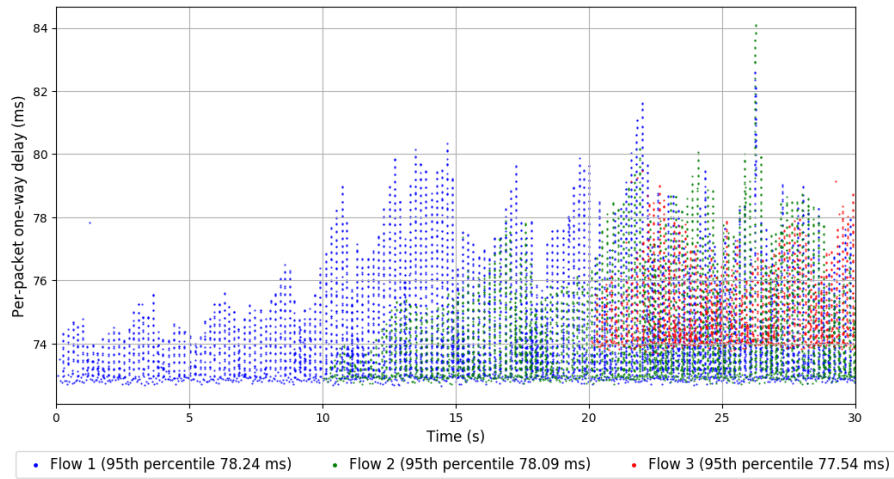
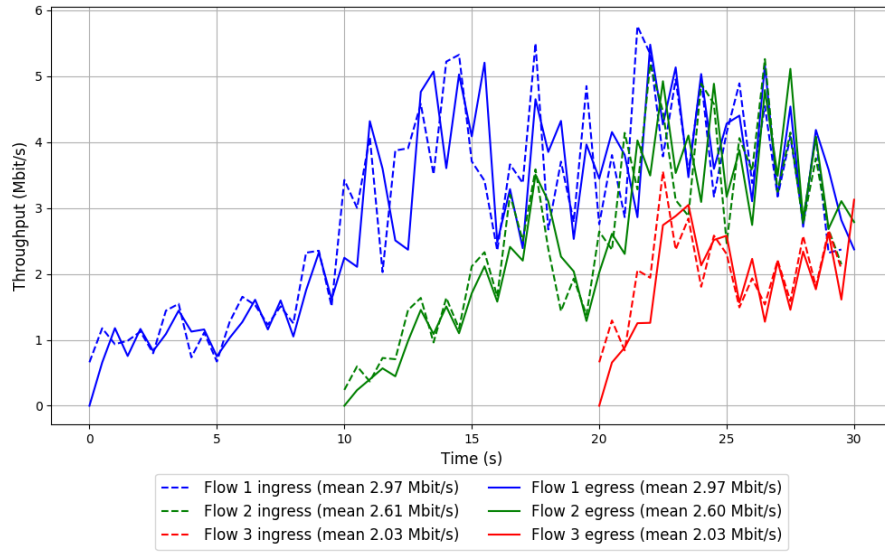


Run 5: Statistics of Sprout

Start at: 2019-04-24 02:11:34
End at: 2019-04-24 02:12:04
Local clock offset: -3.511 ms
Remote clock offset: -6.663 ms

```
# Below is generated by plot.py at 2019-04-24 02:35:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.37 Mbit/s
95th percentile per-packet one-way delay: 78.083 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 78.244 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.60 Mbit/s
95th percentile per-packet one-way delay: 78.093 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 77.540 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-04-24 00:22:31

End at: 2019-04-24 00:23:01

Local clock offset: -3.718 ms

Remote clock offset: 1.913 ms

Below is generated by plot.py at 2019-04-24 02:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.48 Mbit/s

95th percentile per-packet one-way delay: 90.217 ms

Loss rate: 30.94%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 85.202 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.90 Mbit/s

95th percentile per-packet one-way delay: 93.860 ms

Loss rate: 32.91%

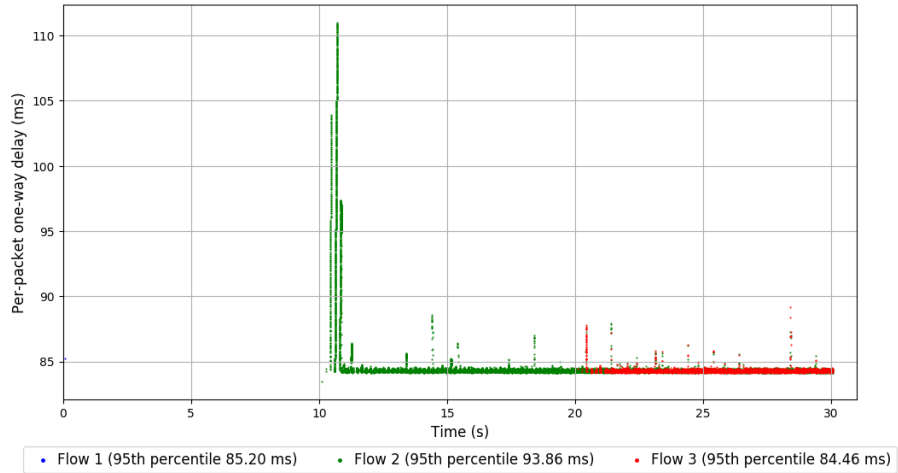
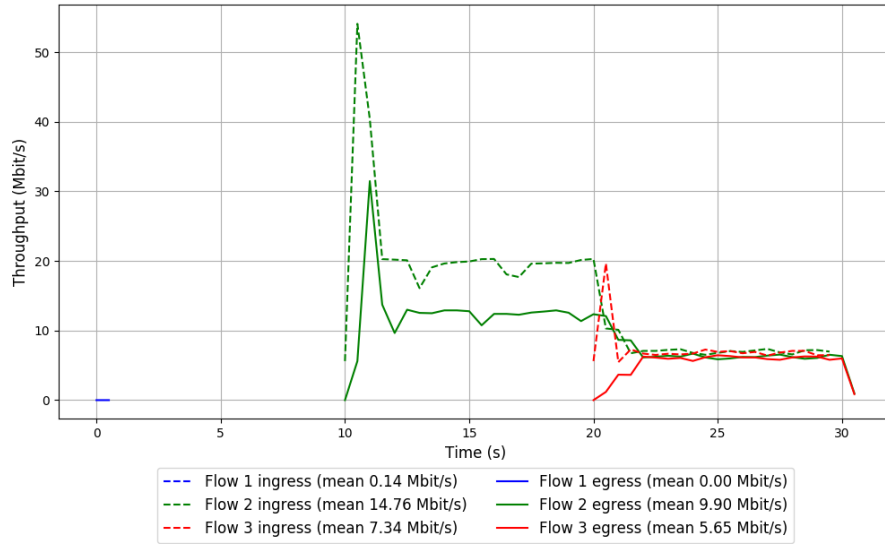
-- Flow 3:

Average throughput: 5.65 Mbit/s

95th percentile per-packet one-way delay: 84.456 ms

Loss rate: 22.97%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-04-24 00:49:27

End at: 2019-04-24 00:49:57

Local clock offset: -3.544 ms

Remote clock offset: 0.634 ms

Below is generated by plot.py at 2019-04-24 02:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.48 Mbit/s

95th percentile per-packet one-way delay: 86.014 ms

Loss rate: 20.54%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 79.567 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 10.45 Mbit/s

95th percentile per-packet one-way delay: 88.739 ms

Loss rate: 21.67%

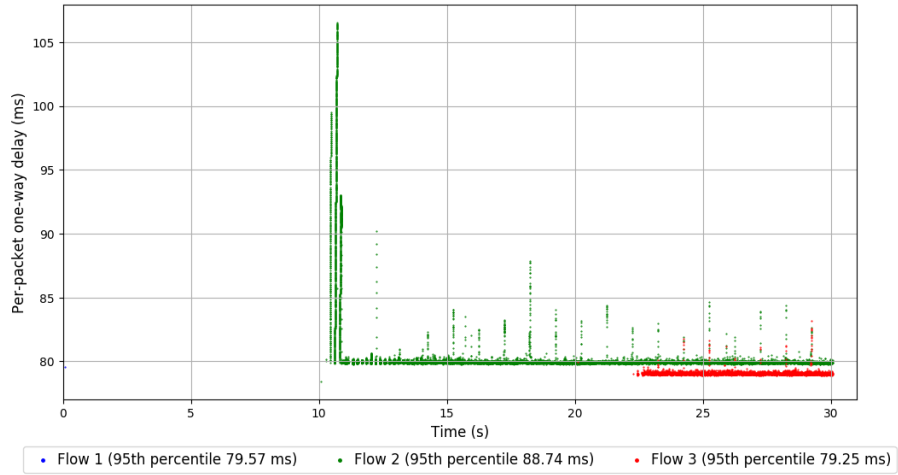
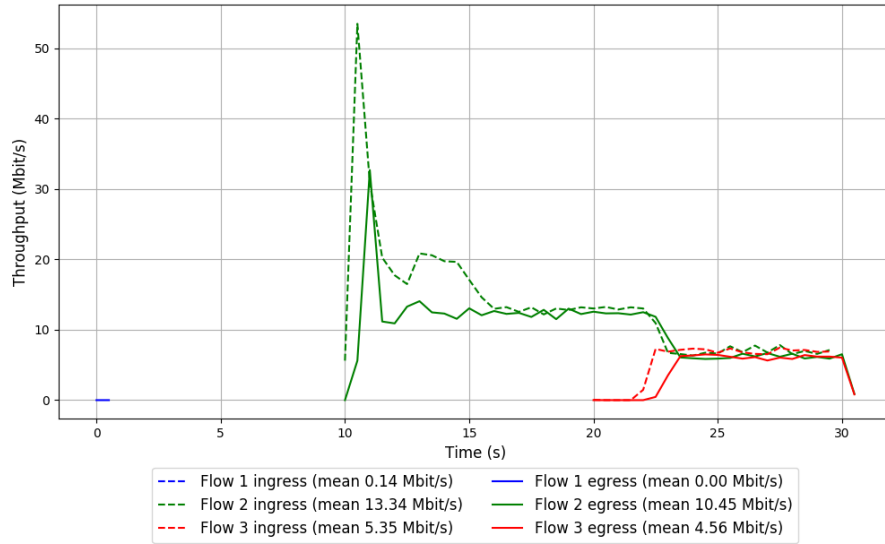
-- Flow 3:

Average throughput: 4.56 Mbit/s

95th percentile per-packet one-way delay: 79.255 ms

Loss rate: 14.86%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-04-24 01:16:23

End at: 2019-04-24 01:16:53

Local clock offset: -3.933 ms

Remote clock offset: 1.223 ms

Below is generated by plot.py at 2019-04-24 02:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.48 Mbit/s

95th percentile per-packet one-way delay: 87.409 ms

Loss rate: 31.23%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 81.181 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.78 Mbit/s

95th percentile per-packet one-way delay: 90.987 ms

Loss rate: 32.68%

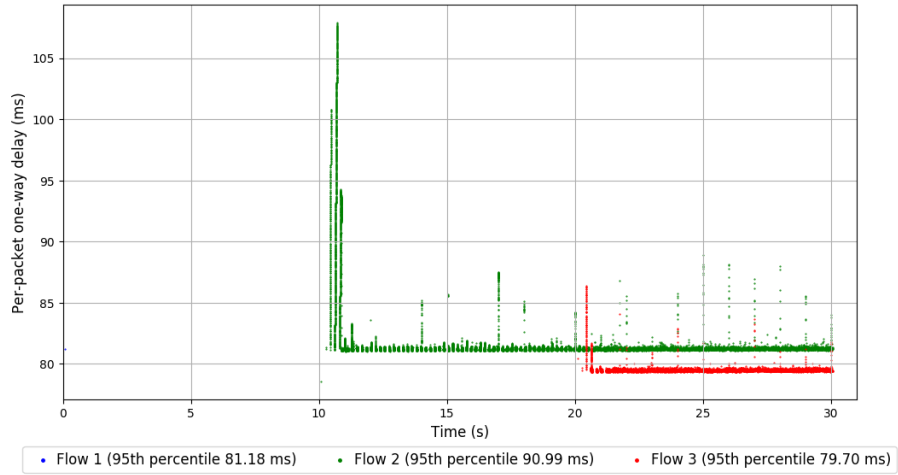
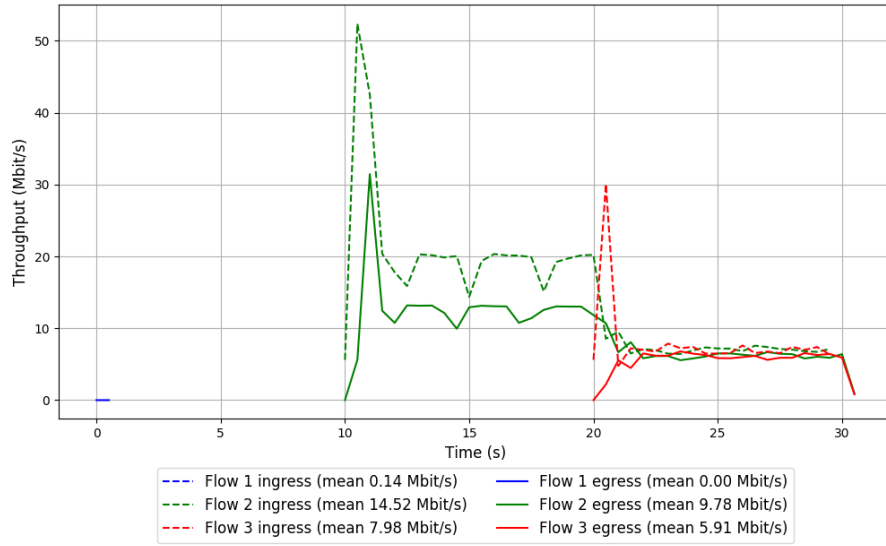
-- Flow 3:

Average throughput: 5.91 Mbit/s

95th percentile per-packet one-way delay: 79.703 ms

Loss rate: 25.92%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-04-24 01:43:29
End at: 2019-04-24 01:43:59
Local clock offset: -3.642 ms
Remote clock offset: -7.572 ms

Below is generated by plot.py at 2019-04-24 02:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 77.648 ms
Loss rate: 15.71%

-- Flow 1:

Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 71.234 ms
Loss rate: 95.92%

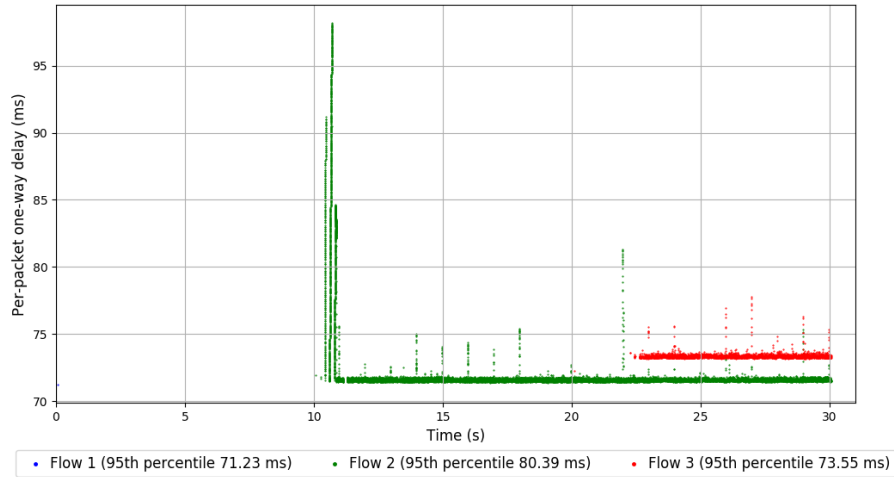
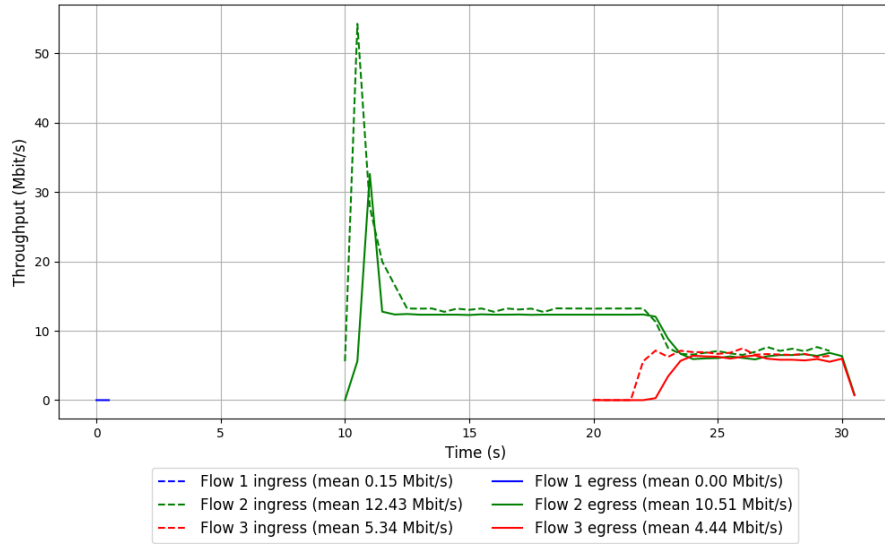
-- Flow 2:

Average throughput: 10.51 Mbit/s
95th percentile per-packet one-way delay: 80.387 ms
Loss rate: 15.44%

-- Flow 3:

Average throughput: 4.44 Mbit/s
95th percentile per-packet one-way delay: 73.549 ms
Loss rate: 16.90%

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-04-24 02:10:15
End at: 2019-04-24 02:10:46
Local clock offset: -3.472 ms
Remote clock offset: -1.994 ms

Below is generated by plot.py at 2019-04-24 02:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 83.023 ms
Loss rate: 31.43%

-- Flow 1:

Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 78.055 ms
Loss rate: 95.92%

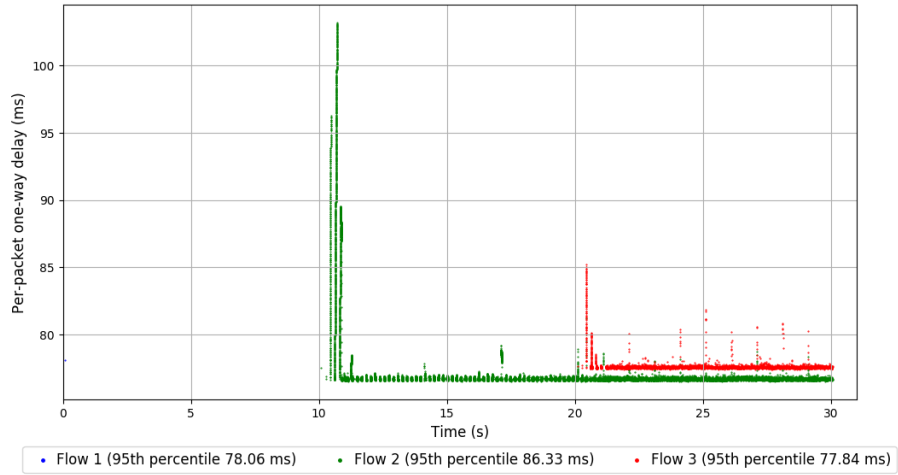
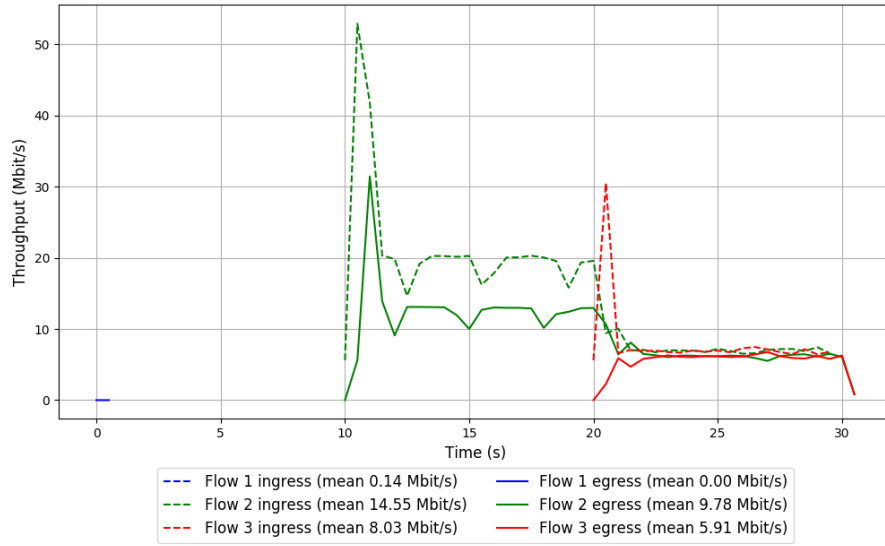
-- Flow 2:

Average throughput: 9.78 Mbit/s
95th percentile per-packet one-way delay: 86.330 ms
Loss rate: 32.82%

-- Flow 3:

Average throughput: 5.91 Mbit/s
95th percentile per-packet one-way delay: 77.838 ms
Loss rate: 26.35%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-04-24 00:16:05
End at: 2019-04-24 00:16:35
Local clock offset: -2.487 ms
Remote clock offset: -3.343 ms

Below is generated by plot.py at 2019-04-24 02:35:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.65 Mbit/s
95th percentile per-packet one-way delay: 103.858 ms
Loss rate: 1.30%

-- Flow 1:

Average throughput: 27.00 Mbit/s
95th percentile per-packet one-way delay: 104.886 ms
Loss rate: 2.55%

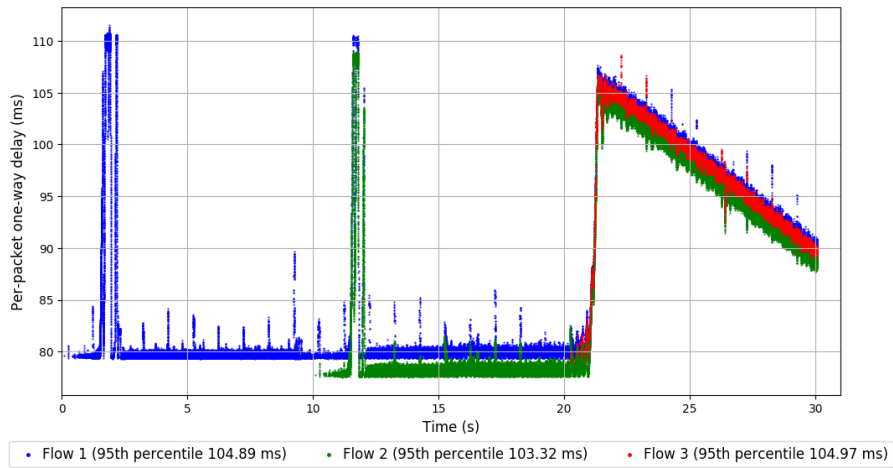
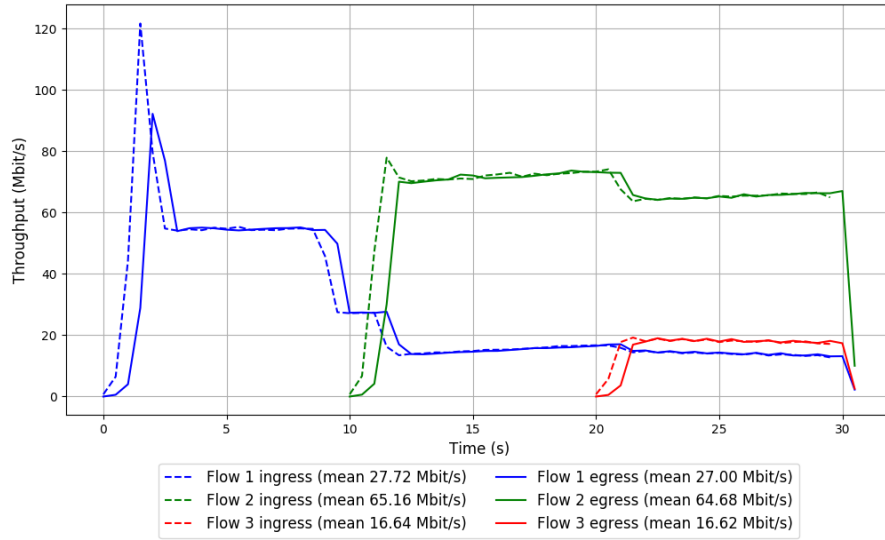
-- Flow 2:

Average throughput: 64.68 Mbit/s
95th percentile per-packet one-way delay: 103.318 ms
Loss rate: 0.67%

-- Flow 3:

Average throughput: 16.62 Mbit/s
95th percentile per-packet one-way delay: 104.972 ms
Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-04-24 00:43:01

End at: 2019-04-24 00:43:31

Local clock offset: -3.297 ms

Remote clock offset: 2.727 ms

Below is generated by plot.py at 2019-04-24 02:35:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 62.17 Mbit/s

95th percentile per-packet one-way delay: 92.554 ms

Loss rate: 1.60%

-- Flow 1:

Average throughput: 23.08 Mbit/s

95th percentile per-packet one-way delay: 90.548 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 42.52 Mbit/s

95th percentile per-packet one-way delay: 88.298 ms

Loss rate: 1.27%

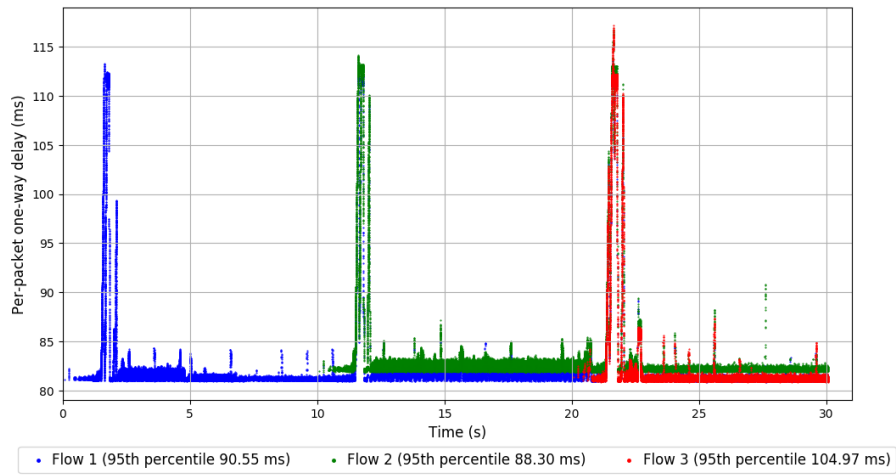
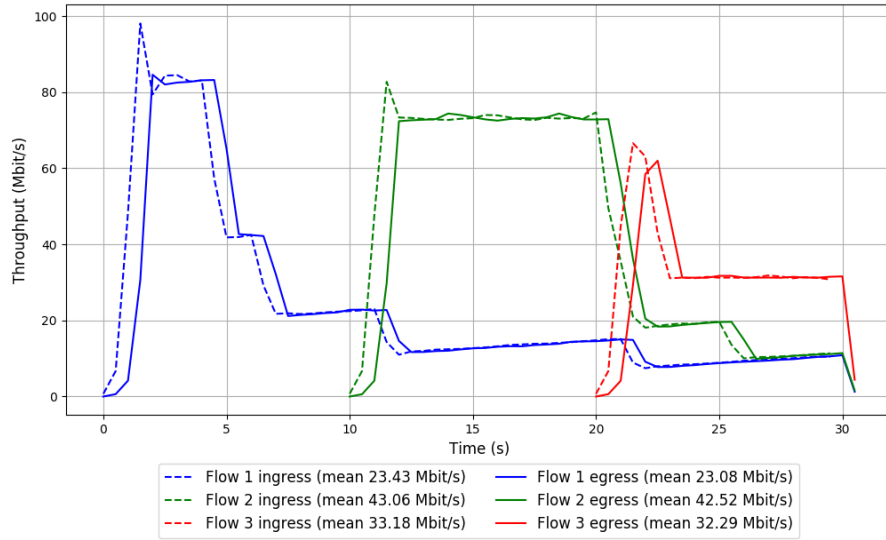
-- Flow 3:

Average throughput: 32.29 Mbit/s

95th percentile per-packet one-way delay: 104.970 ms

Loss rate: 2.68%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-04-24 01:09:56

End at: 2019-04-24 01:10:26

Local clock offset: -3.991 ms

Remote clock offset: 7.148 ms

Below is generated by plot.py at 2019-04-24 02:35:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.59 Mbit/s

95th percentile per-packet one-way delay: 93.937 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 44.43 Mbit/s

95th percentile per-packet one-way delay: 94.069 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 18.43 Mbit/s

95th percentile per-packet one-way delay: 92.270 ms

Loss rate: 0.51%

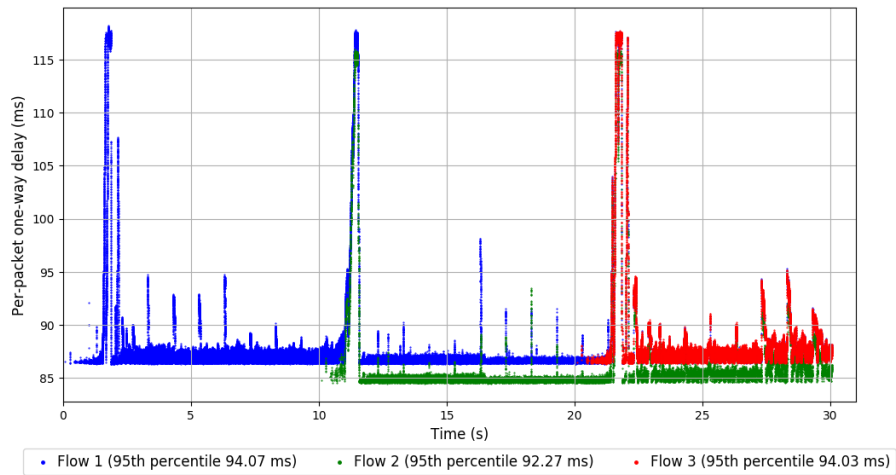
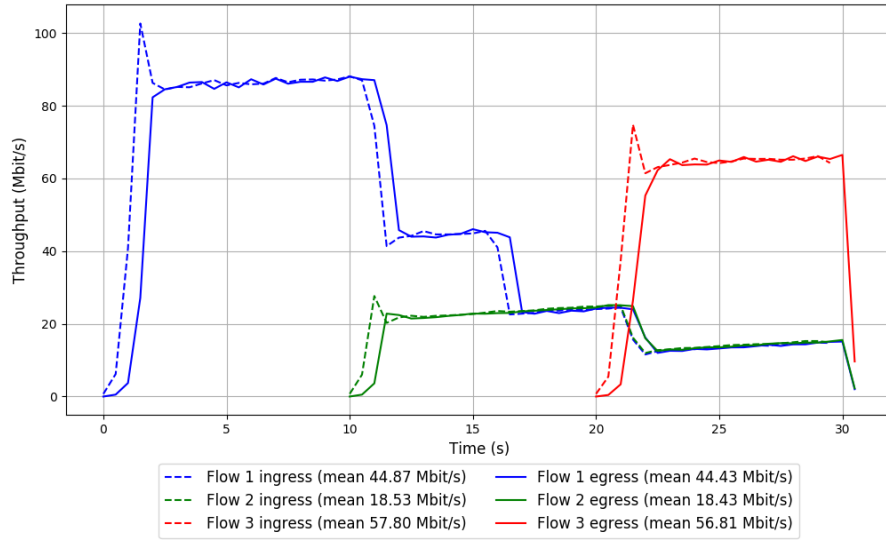
-- Flow 3:

Average throughput: 56.81 Mbit/s

95th percentile per-packet one-way delay: 94.028 ms

Loss rate: 1.71%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-04-24 01:37:04
End at: 2019-04-24 01:37:34
Local clock offset: -3.708 ms
Remote clock offset: -6.382 ms

Below is generated by plot.py at 2019-04-24 02:36:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.78 Mbit/s
95th percentile per-packet one-way delay: 83.983 ms
Loss rate: 0.91%

-- Flow 1:

Average throughput: 40.95 Mbit/s
95th percentile per-packet one-way delay: 84.153 ms
Loss rate: 0.97%

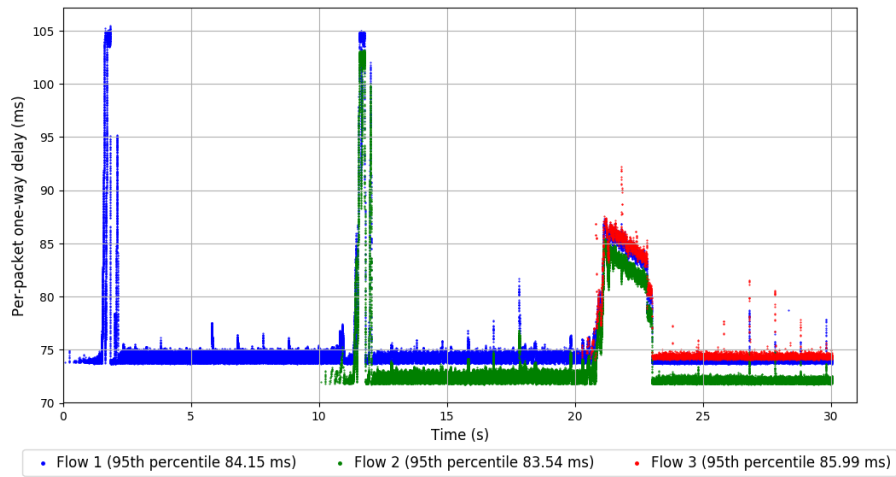
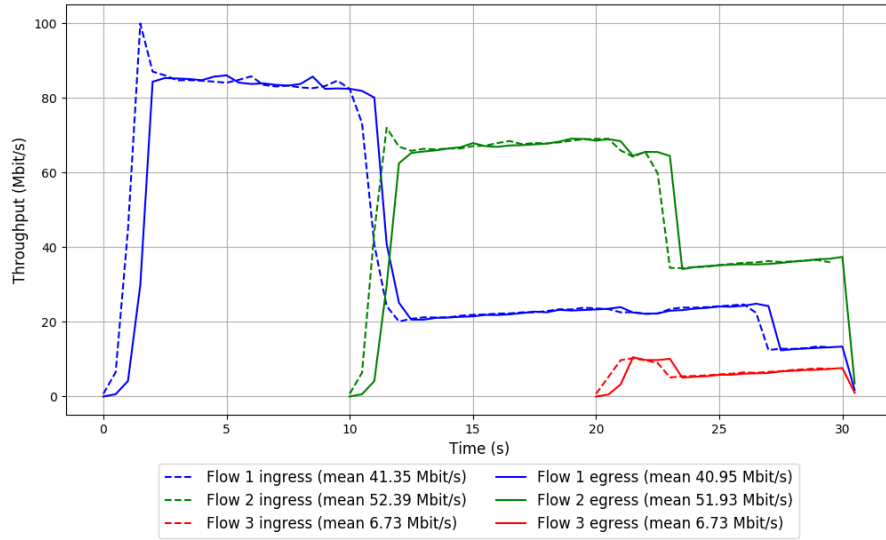
-- Flow 2:

Average throughput: 51.93 Mbit/s
95th percentile per-packet one-way delay: 83.541 ms
Loss rate: 0.88%

-- Flow 3:

Average throughput: 6.73 Mbit/s
95th percentile per-packet one-way delay: 85.992 ms
Loss rate: 0.02%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-04-24 02:03:51
End at: 2019-04-24 02:04:21
Local clock offset: -3.498 ms
Remote clock offset: -3.456 ms

Below is generated by plot.py at 2019-04-24 02:36:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 54.08 Mbit/s
95th percentile per-packet one-way delay: 88.209 ms
Loss rate: 1.32%

-- Flow 1:

Average throughput: 27.34 Mbit/s
95th percentile per-packet one-way delay: 82.513 ms
Loss rate: 0.39%

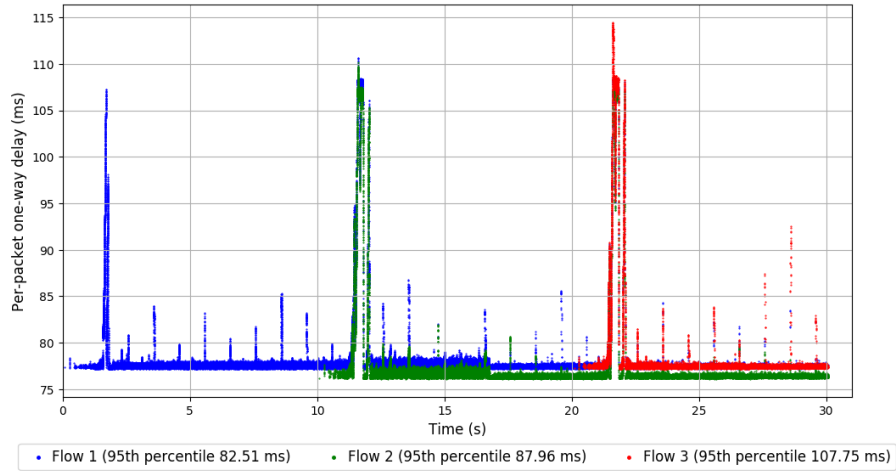
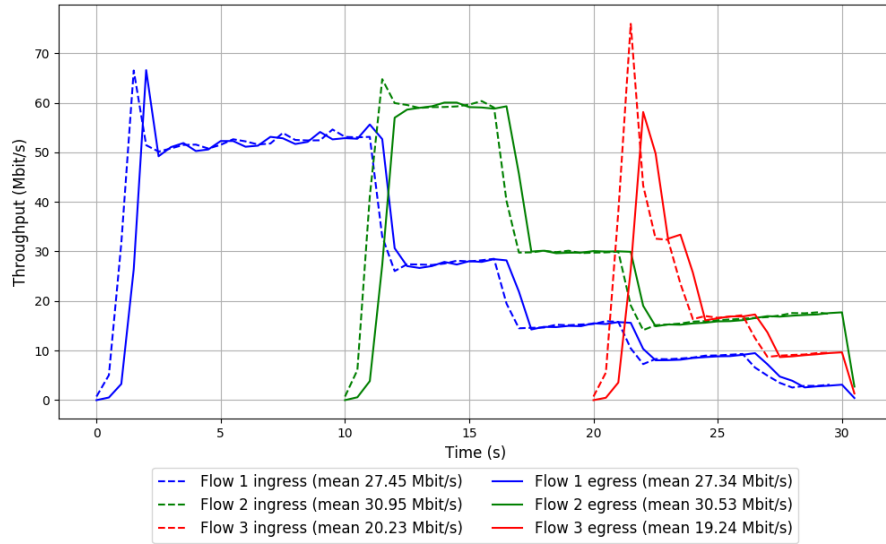
-- Flow 2:

Average throughput: 30.53 Mbit/s
95th percentile per-packet one-way delay: 87.963 ms
Loss rate: 1.37%

-- Flow 3:

Average throughput: 19.24 Mbit/s
95th percentile per-packet one-way delay: 107.755 ms
Loss rate: 4.91%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-04-24 00:14:49

End at: 2019-04-24 00:15:19

Local clock offset: -3.195 ms

Remote clock offset: 0.582 ms

Below is generated by plot.py at 2019-04-24 02:36:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 43.34 Mbit/s

95th percentile per-packet one-way delay: 113.309 ms

Loss rate: 12.37%

-- Flow 1:

Average throughput: 20.88 Mbit/s

95th percentile per-packet one-way delay: 112.270 ms

Loss rate: 9.65%

-- Flow 2:

Average throughput: 24.33 Mbit/s

95th percentile per-packet one-way delay: 114.558 ms

Loss rate: 15.04%

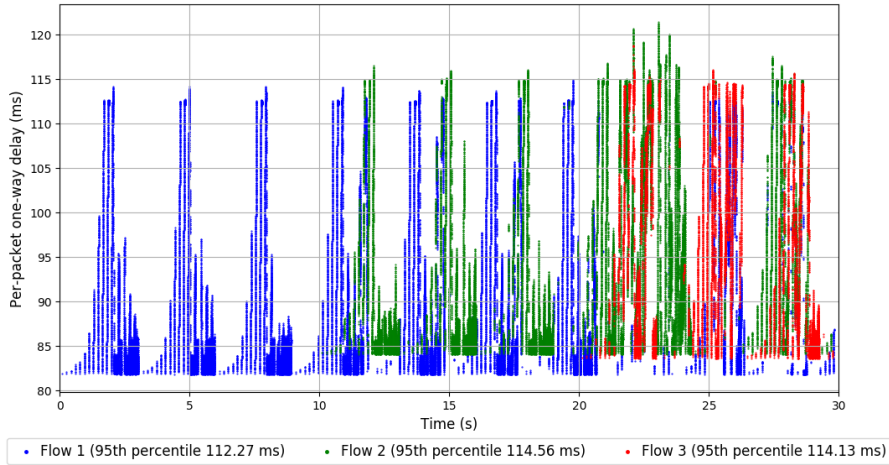
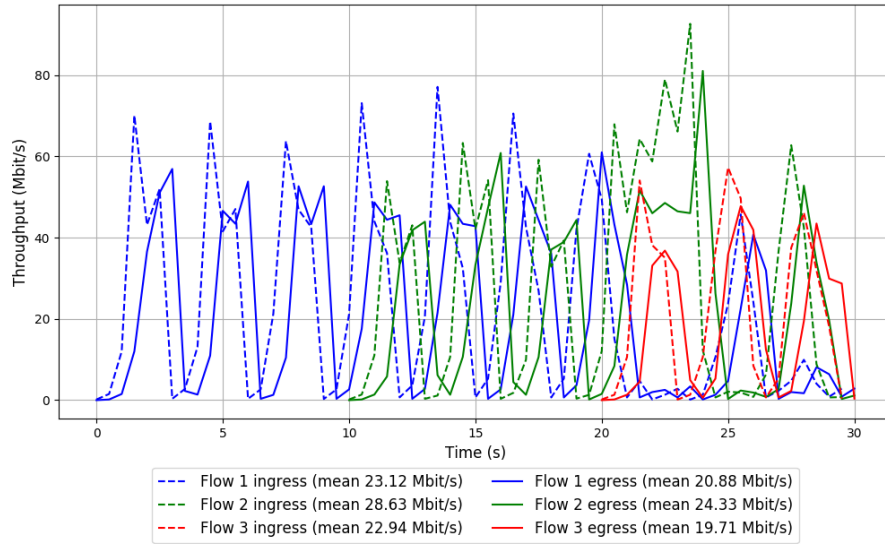
-- Flow 3:

Average throughput: 19.71 Mbit/s

95th percentile per-packet one-way delay: 114.126 ms

Loss rate: 14.05%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-04-24 00:41:36

End at: 2019-04-24 00:42:06

Local clock offset: -4.032 ms

Remote clock offset: 3.326 ms

Below is generated by plot.py at 2019-04-24 02:36:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 45.36 Mbit/s

95th percentile per-packet one-way delay: 153.102 ms

Loss rate: 67.77%

-- Flow 1:

Average throughput: 29.63 Mbit/s

95th percentile per-packet one-way delay: 146.528 ms

Loss rate: 67.95%

-- Flow 2:

Average throughput: 15.11 Mbit/s

95th percentile per-packet one-way delay: 113.474 ms

Loss rate: 27.96%

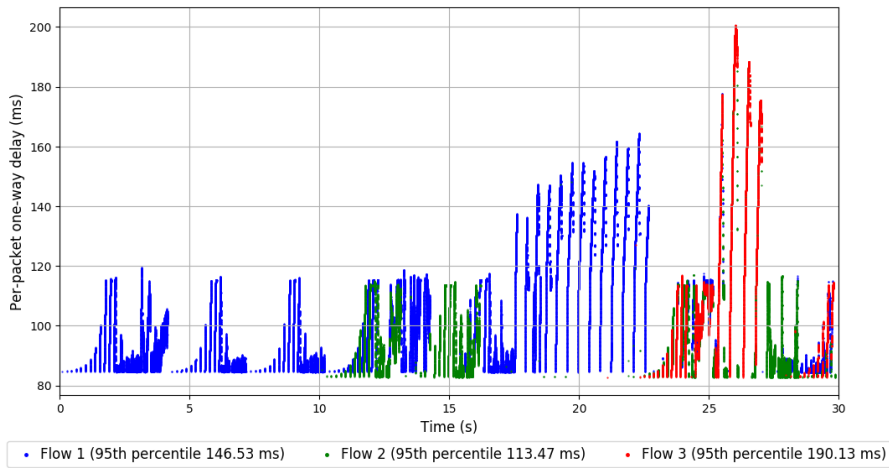
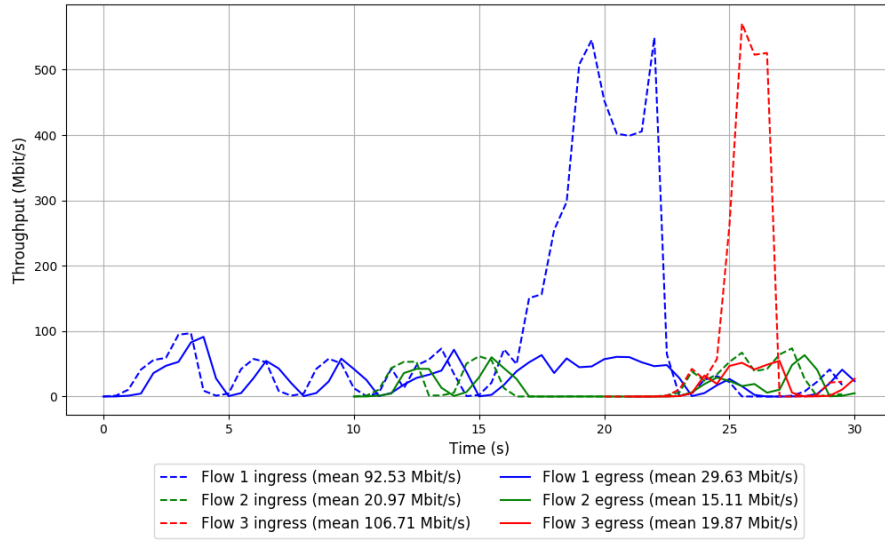
-- Flow 3:

Average throughput: 19.87 Mbit/s

95th percentile per-packet one-way delay: 190.130 ms

Loss rate: 83.25%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-04-24 01:08:31

End at: 2019-04-24 01:09:01

Local clock offset: -4.045 ms

Remote clock offset: 6.307 ms

Below is generated by plot.py at 2019-04-24 02:36:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 46.85 Mbit/s

95th percentile per-packet one-way delay: 135.779 ms

Loss rate: 70.71%

-- Flow 1:

Average throughput: 18.92 Mbit/s

95th percentile per-packet one-way delay: 125.287 ms

Loss rate: 48.95%

-- Flow 2:

Average throughput: 35.37 Mbit/s

95th percentile per-packet one-way delay: 142.477 ms

Loss rate: 76.97%

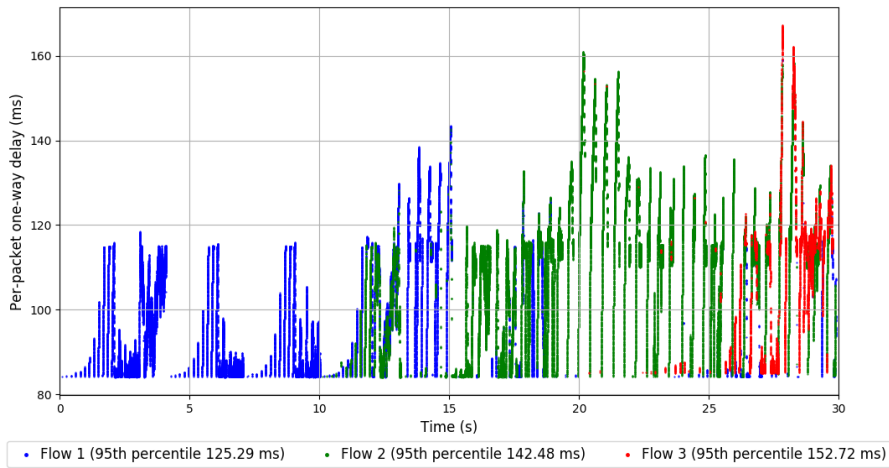
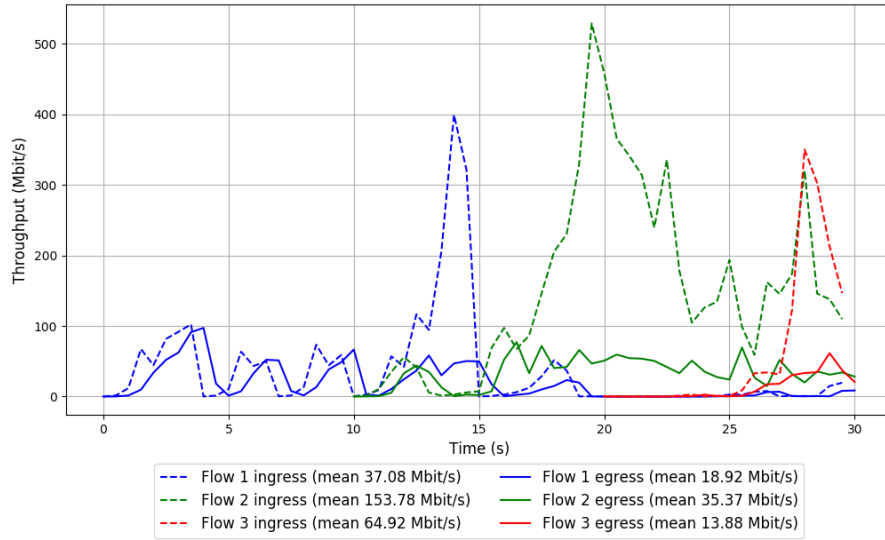
-- Flow 3:

Average throughput: 13.88 Mbit/s

95th percentile per-packet one-way delay: 152.717 ms

Loss rate: 78.71%

Run 3: Report of Verus — Data Link

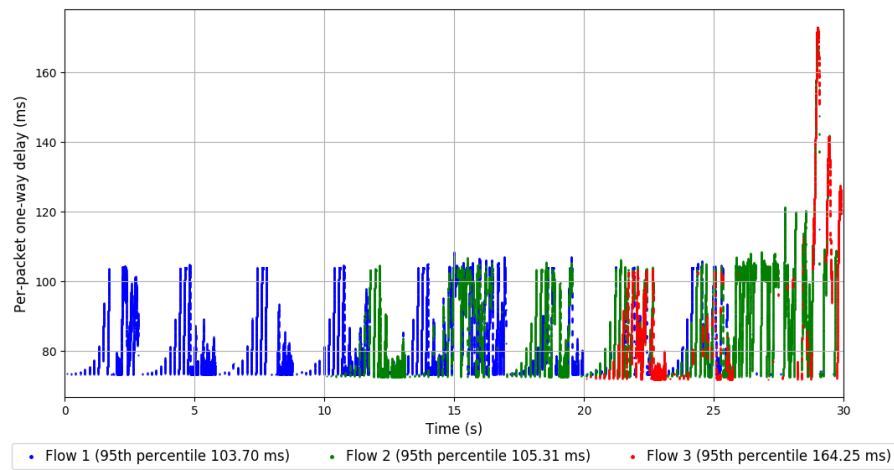
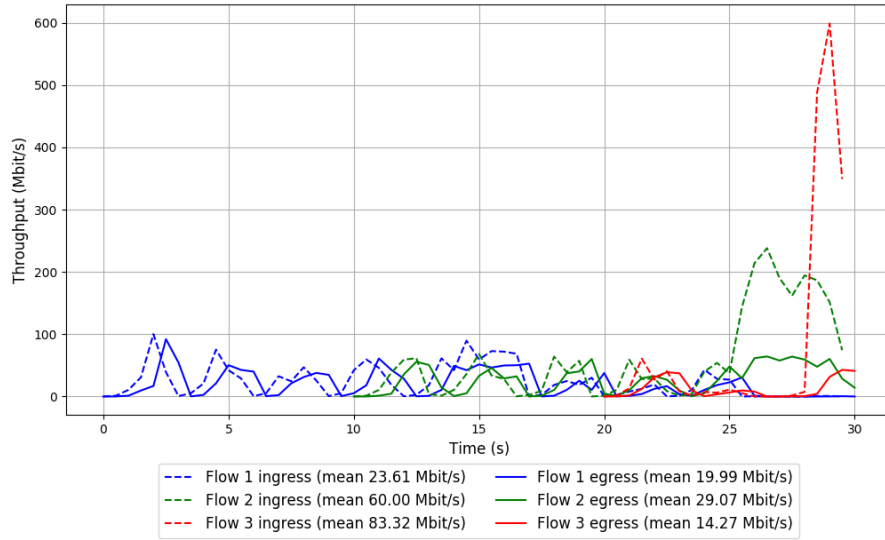


Run 4: Statistics of Verus

Start at: 2019-04-24 01:35:47
End at: 2019-04-24 01:36:17
Local clock offset: -2.993 ms
Remote clock offset: -6.057 ms

```
# Below is generated by plot.py at 2019-04-24 02:36:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.63 Mbit/s
95th percentile per-packet one-way delay: 107.119 ms
Loss rate: 51.68%
-- Flow 1:
Average throughput: 19.99 Mbit/s
95th percentile per-packet one-way delay: 103.698 ms
Loss rate: 15.81%
-- Flow 2:
Average throughput: 29.07 Mbit/s
95th percentile per-packet one-way delay: 105.315 ms
Loss rate: 51.54%
-- Flow 3:
Average throughput: 14.27 Mbit/s
95th percentile per-packet one-way delay: 164.254 ms
Loss rate: 82.79%
```

Run 4: Report of Verus — Data Link

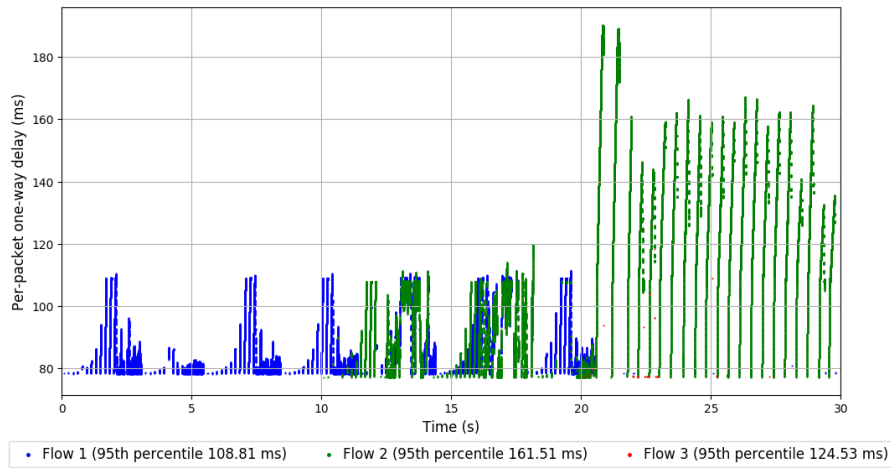
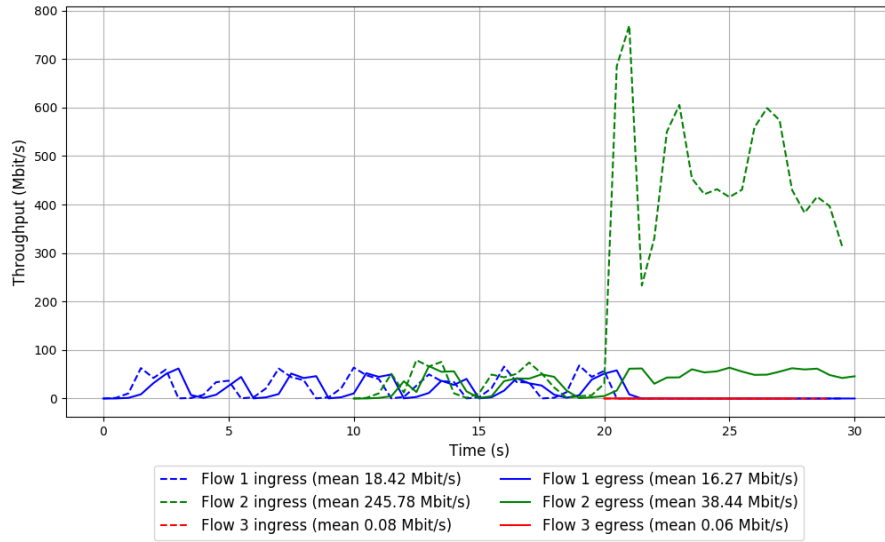


Run 5: Statistics of Verus

Start at: 2019-04-24 02:02:33
End at: 2019-04-24 02:03:03
Local clock offset: -2.734 ms
Remote clock offset: -1.602 ms

```
# Below is generated by plot.py at 2019-04-24 02:36:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.76 Mbit/s
95th percentile per-packet one-way delay: 157.558 ms
Loss rate: 76.92%
-- Flow 1:
Average throughput: 16.27 Mbit/s
95th percentile per-packet one-way delay: 108.808 ms
Loss rate: 11.63%
-- Flow 2:
Average throughput: 38.44 Mbit/s
95th percentile per-packet one-way delay: 161.506 ms
Loss rate: 84.32%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 124.525 ms
Loss rate: 43.08%
```

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-04-24 00:27:28

End at: 2019-04-24 00:27:58

Local clock offset: -3.044 ms

Remote clock offset: 1.93 ms

Below is generated by plot.py at 2019-04-24 02:36:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.39 Mbit/s

95th percentile per-packet one-way delay: 113.922 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 64.63 Mbit/s

95th percentile per-packet one-way delay: 113.904 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 14.26 Mbit/s

95th percentile per-packet one-way delay: 114.356 ms

Loss rate: 1.10%

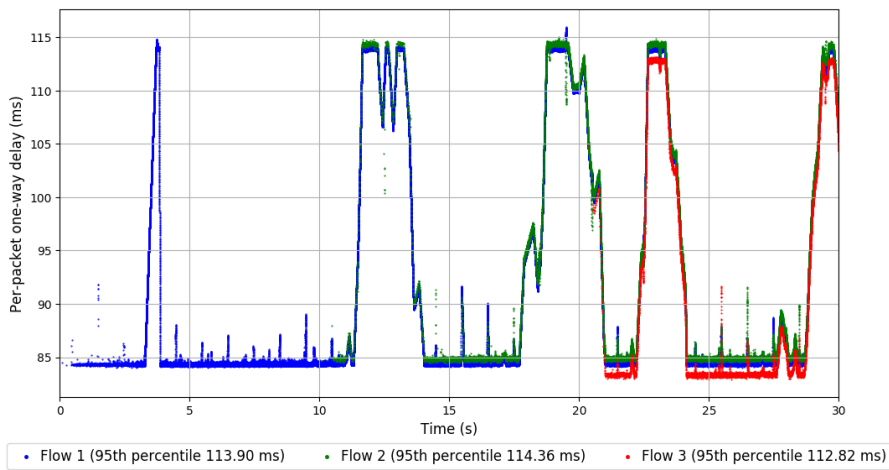
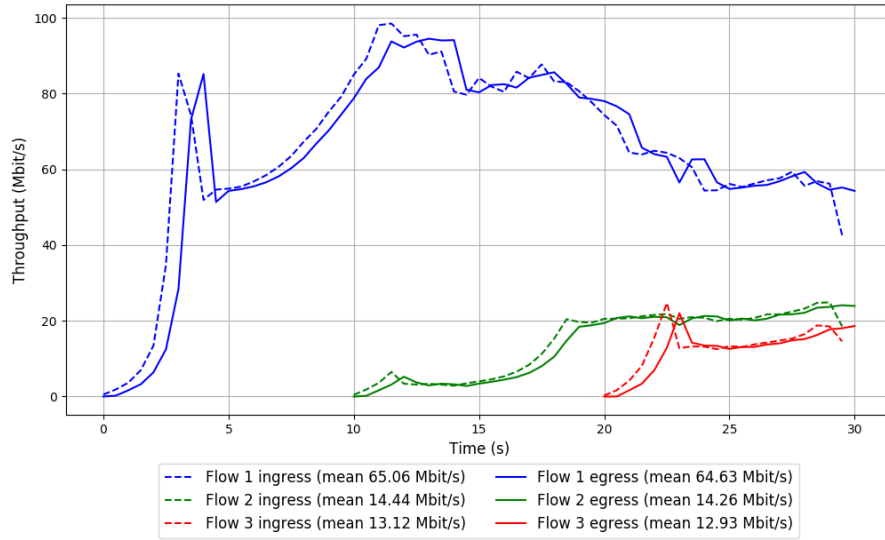
-- Flow 3:

Average throughput: 12.93 Mbit/s

95th percentile per-packet one-way delay: 112.818 ms

Loss rate: 1.48%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-04-24 00:54:24

End at: 2019-04-24 00:54:54

Local clock offset: -4.444 ms

Remote clock offset: 4.124 ms

Below is generated by plot.py at 2019-04-24 02:36:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.67 Mbit/s

95th percentile per-packet one-way delay: 111.608 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 60.35 Mbit/s

95th percentile per-packet one-way delay: 112.229 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 15.98 Mbit/s

95th percentile per-packet one-way delay: 111.506 ms

Loss rate: 0.82%

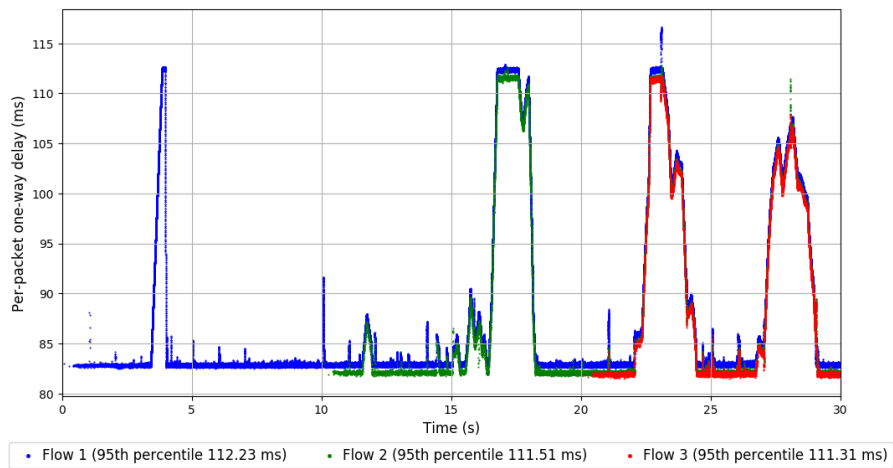
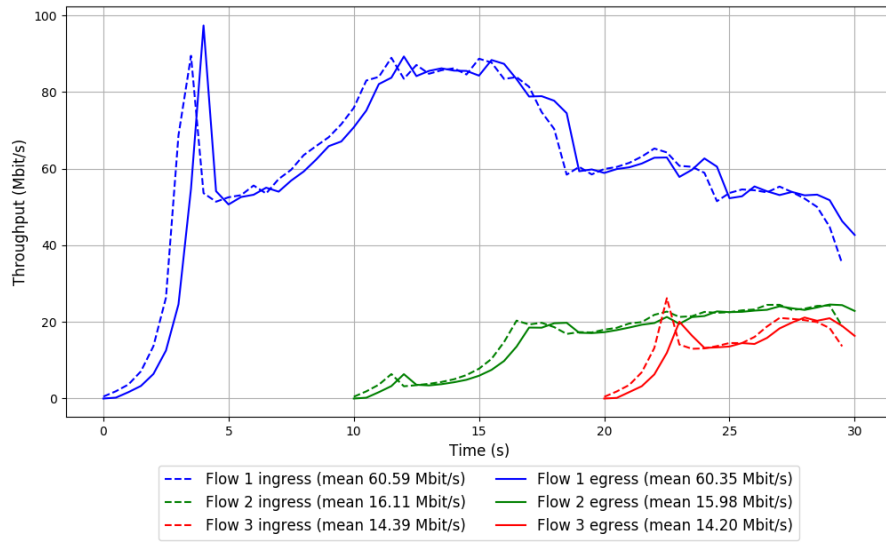
-- Flow 3:

Average throughput: 14.20 Mbit/s

95th percentile per-packet one-way delay: 111.310 ms

Loss rate: 1.32%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-04-24 01:21:19

End at: 2019-04-24 01:21:49

Local clock offset: -3.465 ms

Remote clock offset: -0.19 ms

Below is generated by plot.py at 2019-04-24 02:36:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.90 Mbit/s

95th percentile per-packet one-way delay: 108.654 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 70.99 Mbit/s

95th percentile per-packet one-way delay: 108.969 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 8.33 Mbit/s

95th percentile per-packet one-way delay: 106.843 ms

Loss rate: 0.49%

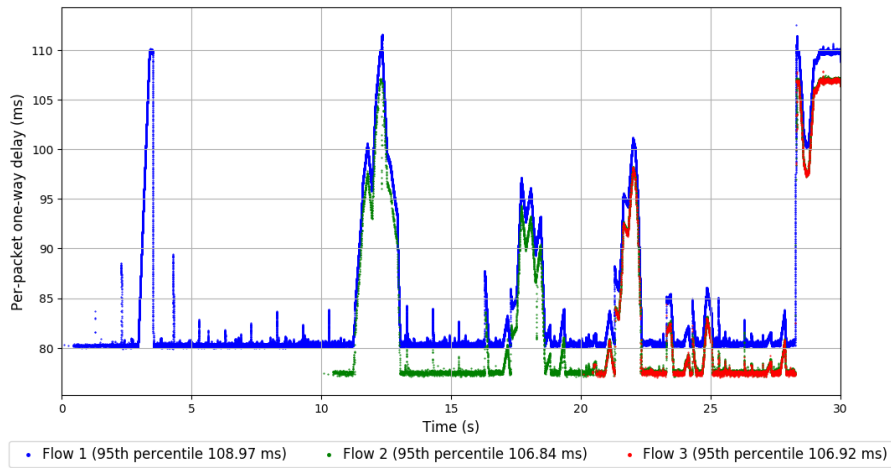
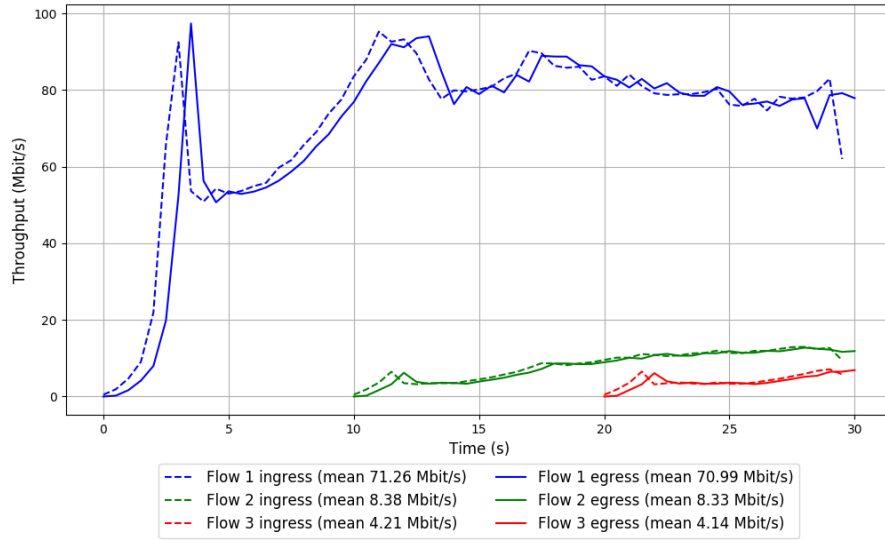
-- Flow 3:

Average throughput: 4.14 Mbit/s

95th percentile per-packet one-way delay: 106.916 ms

Loss rate: 1.38%

Run 3: Report of PCC-Vivace — Data Link

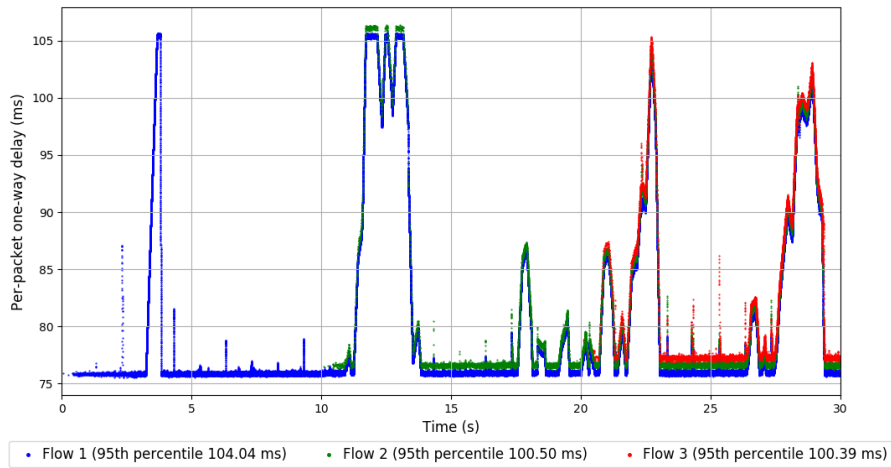
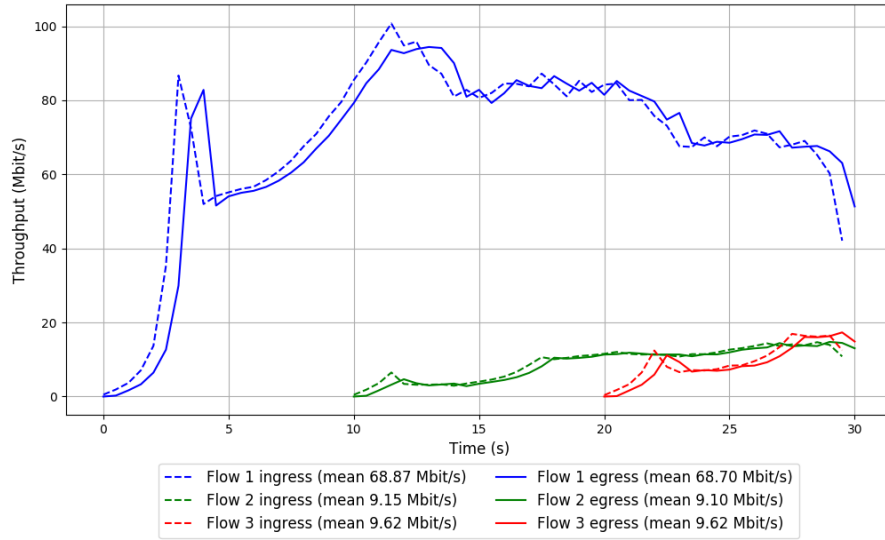


Run 4: Statistics of PCC-Vivace

Start at: 2019-04-24 01:48:25
End at: 2019-04-24 01:48:55
Local clock offset: -2.837 ms
Remote clock offset: -2.032 ms

```
# Below is generated by plot.py at 2019-04-24 02:36:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.92 Mbit/s
95th percentile per-packet one-way delay: 103.514 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 68.70 Mbit/s
95th percentile per-packet one-way delay: 104.042 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 9.10 Mbit/s
95th percentile per-packet one-way delay: 100.496 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 9.62 Mbit/s
95th percentile per-packet one-way delay: 100.387 ms
Loss rate: 0.00%
```

Run 4: Report of PCC-Vivace — Data Link

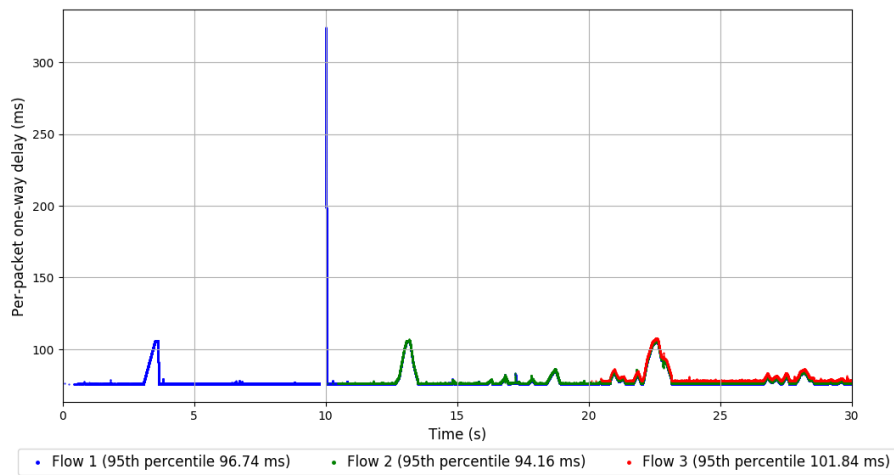
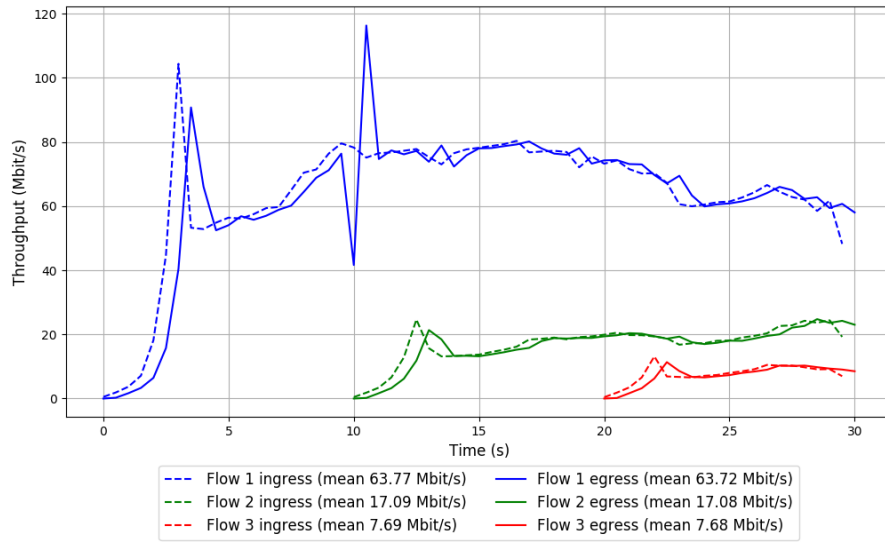


Run 5: Statistics of PCC-Vivace

Start at: 2019-04-24 02:15:18
End at: 2019-04-24 02:15:48
Local clock offset: -2.685 ms
Remote clock offset: -0.881 ms

```
# Below is generated by plot.py at 2019-04-24 02:36:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.61 Mbit/s
95th percentile per-packet one-way delay: 96.637 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 63.72 Mbit/s
95th percentile per-packet one-way delay: 96.742 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 17.08 Mbit/s
95th percentile per-packet one-way delay: 94.162 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 7.68 Mbit/s
95th percentile per-packet one-way delay: 101.844 ms
Loss rate: 0.06%
```

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2019-04-24 00:20:01

End at: 2019-04-24 00:20:31

Local clock offset: -3.524 ms

Remote clock offset: 1.855 ms

Below is generated by plot.py at 2019-04-24 02:36:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 85.573 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 84.262 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 85.915 ms

Loss rate: 0.00%

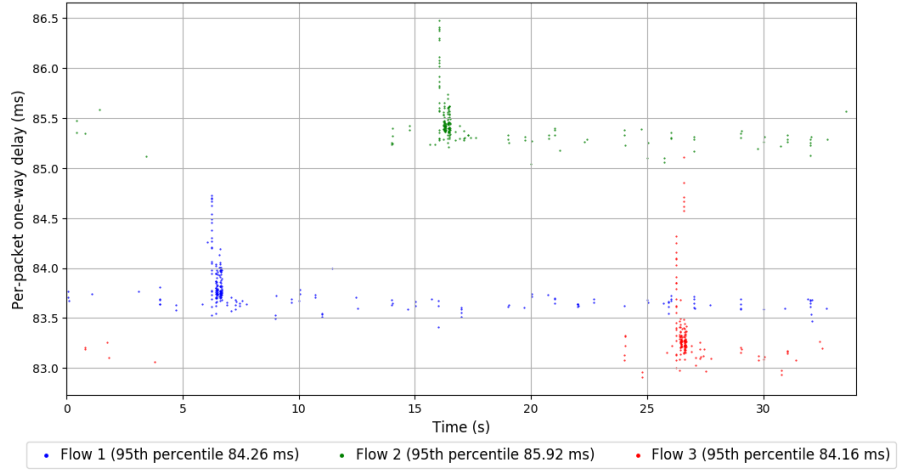
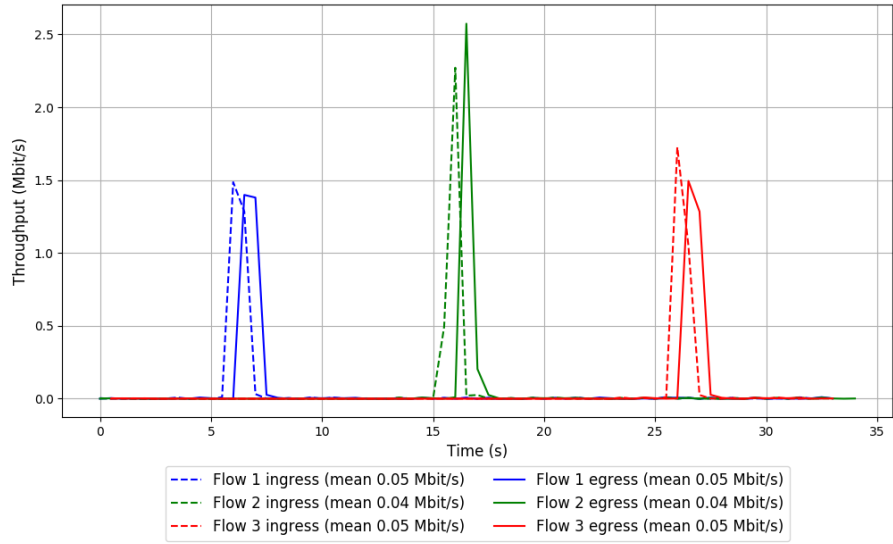
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 84.162 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-04-24 00:46:56

End at: 2019-04-24 00:47:26

Local clock offset: -4.169 ms

Remote clock offset: 5.342 ms

Below is generated by plot.py at 2019-04-24 02:36:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 86.190 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 85.579 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 86.661 ms

Loss rate: 0.00%

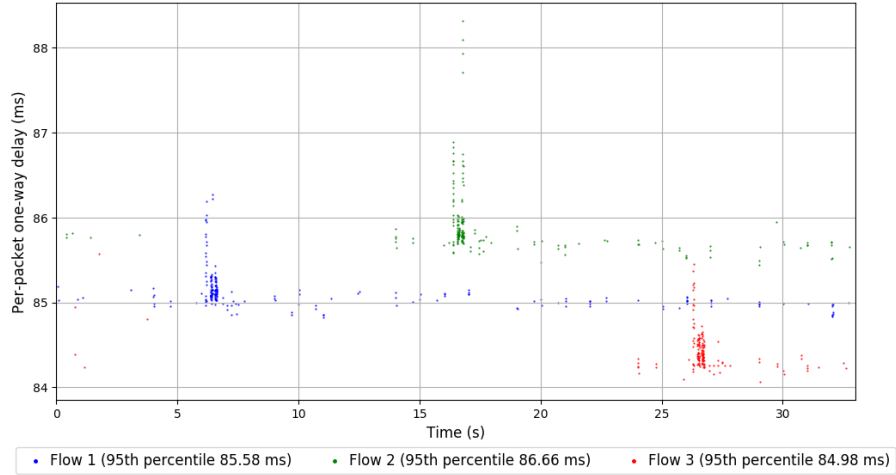
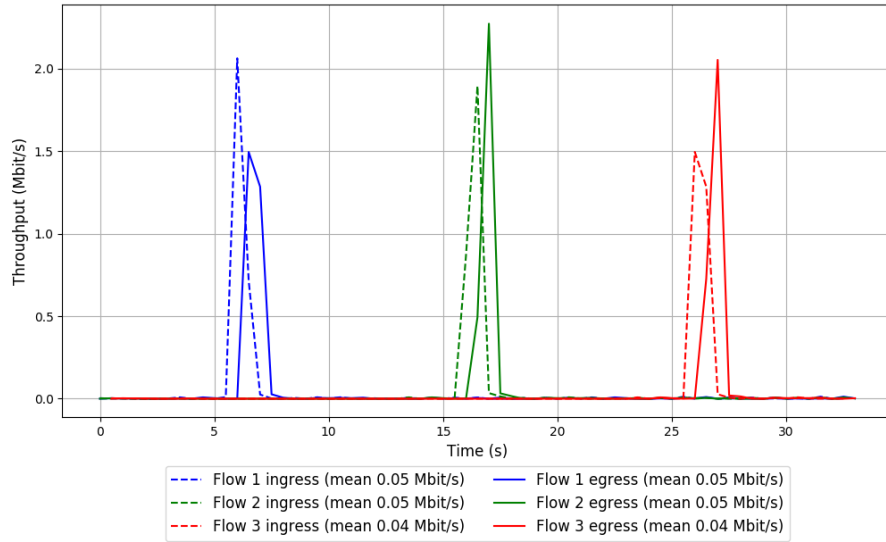
-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 84.979 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-04-24 01:13:52

End at: 2019-04-24 01:14:22

Local clock offset: -4.07 ms

Remote clock offset: 5.494 ms

Below is generated by plot.py at 2019-04-24 02:36:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 84.435 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 83.185 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 83.175 ms

Loss rate: 0.00%

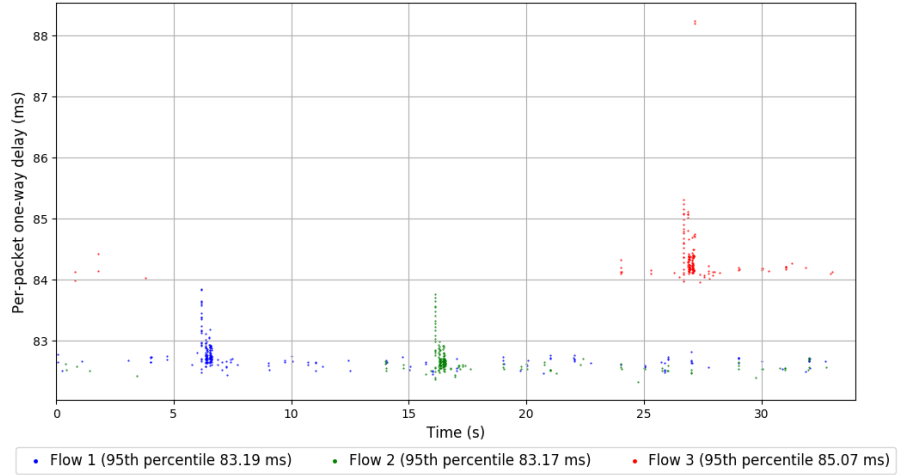
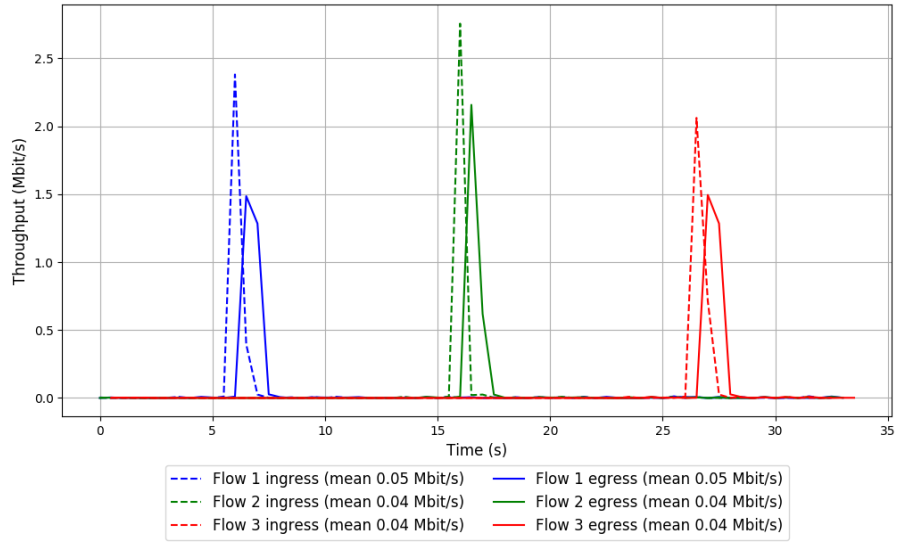
-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 85.074 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-04-24 01:40:58

End at: 2019-04-24 01:41:28

Local clock offset: -2.953 ms

Remote clock offset: -2.39 ms

Below is generated by plot.py at 2019-04-24 02:36:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 81.144 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 81.167 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 80.675 ms

Loss rate: 0.00%

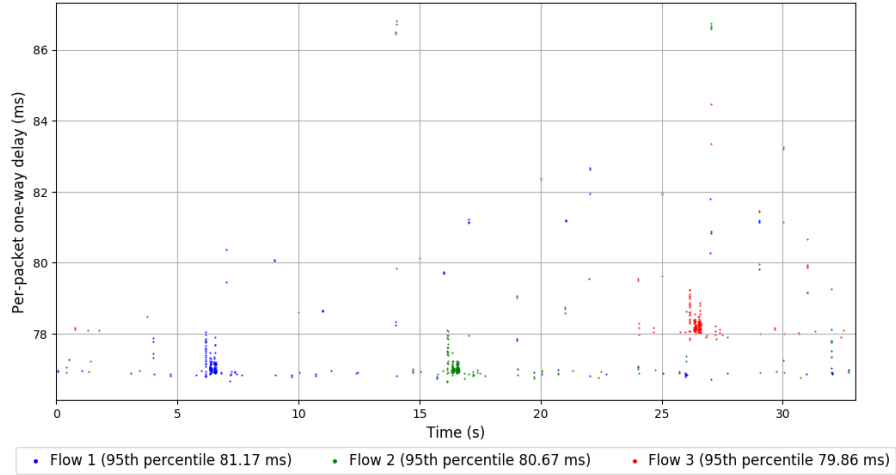
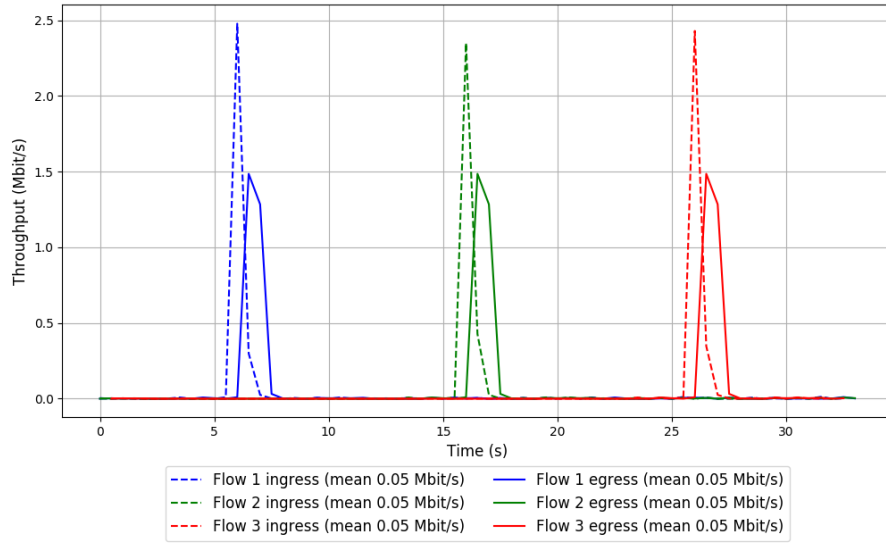
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 79.856 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-04-24 02:07:45
End at: 2019-04-24 02:08:15
Local clock offset: -2.759 ms
Remote clock offset: -3.006 ms

```
# Below is generated by plot.py at 2019-04-24 02:36:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 77.300 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 78.269 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 76.824 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 76.883 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

