

Pantheon Report

Generated at 2019-05-30 03:50:49 (UTC).

Data path: AWS California 1 on `ens5` (*local*) → Stanford on `eno1` (*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 `time.stanford.edu` and have been applied to correct the timestamps in logs.

System info:

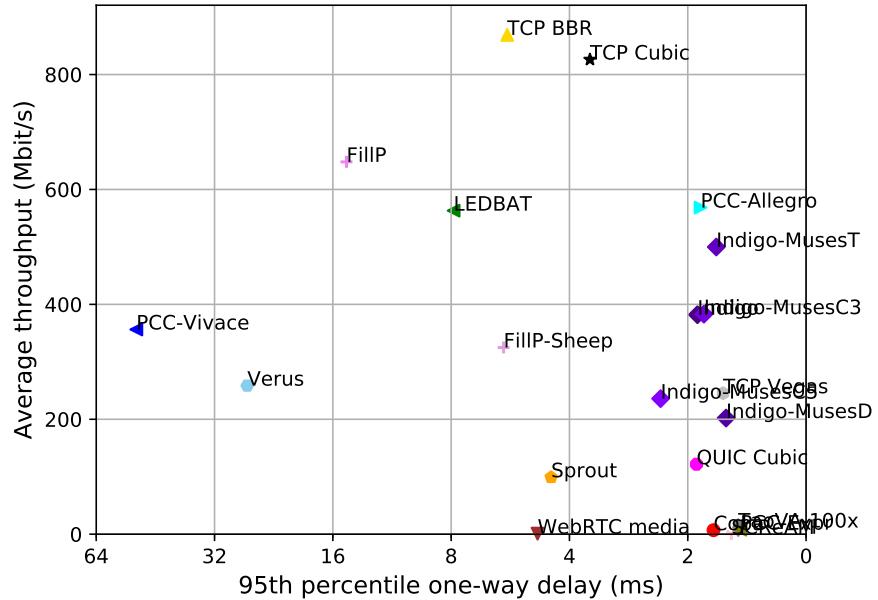
```
Linux 4.15.0-1035-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

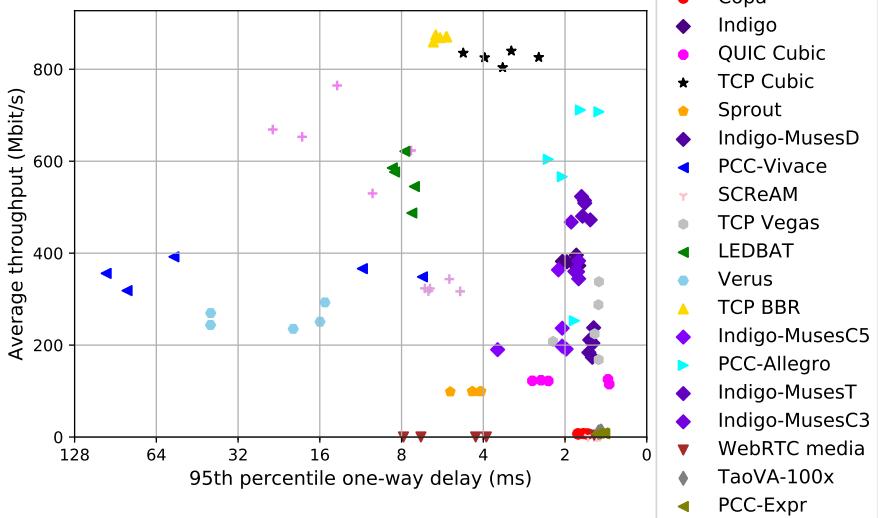
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fce56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-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 California 1 to Stanford, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS California 1 to Stanford, 5 runs of 30s each per scheme
3 flows with 10s interval between flows



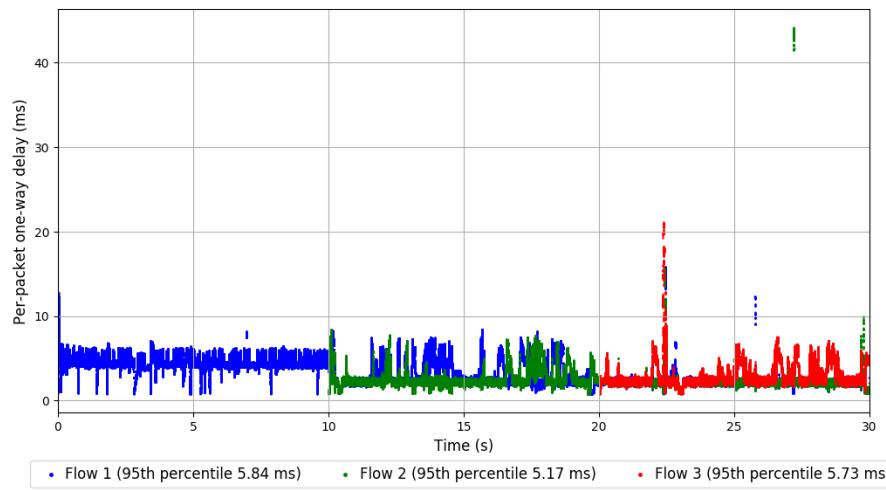
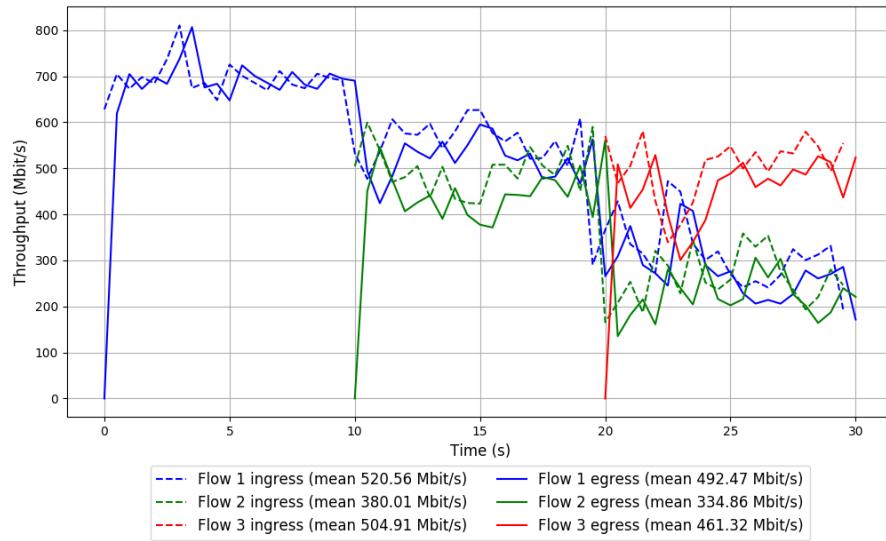
| scheme | # runs | mean avg tput (Mbit/s) | | | mean 95th-%ile delay (ms) | | | mean loss rate (%) | | |
|----------------|--------|------------------------|--------|--------|---------------------------|--------|--------|--------------------|--------|--------|
| | | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 |
| TCP BBR | 5 | 488.44 | 390.22 | 372.11 | 5.57 | 6.03 | 5.01 | 5.48 | 9.39 | 10.58 |
| Copa | 5 | 0.00 | 7.36 | 7.26 | 1.17 | 1.49 | 1.82 | 98.17 | 51.60 | 49.58 |
| TCP Cubic | 5 | 478.53 | 378.51 | 286.96 | 3.79 | 2.32 | 3.03 | 0.15 | 0.15 | 0.16 |
| FillP | 5 | 428.00 | 211.25 | 239.65 | 15.67 | 4.66 | 8.29 | 10.27 | 13.05 | 16.46 |
| FillP-Sheep | 5 | 291.42 | 37.08 | 27.31 | 6.35 | 2.10 | 2.49 | 3.11 | 4.35 | 8.42 |
| Indigo | 5 | 199.08 | 187.24 | 181.53 | 1.64 | 1.89 | 2.13 | 0.03 | 0.05 | 0.07 |
| Indigo-MusesC3 | 5 | 171.99 | 211.02 | 248.15 | 1.56 | 1.88 | 1.81 | 0.08 | 0.09 | 0.18 |
| Indigo-MusesC5 | 5 | 102.04 | 104.05 | 212.38 | 1.61 | 2.69 | 2.08 | 0.14 | 0.25 | 0.18 |
| Indigo-MusesD | 5 | 108.11 | 103.05 | 88.78 | 1.32 | 1.38 | 1.42 | 0.04 | 0.04 | 0.04 |
| Indigo-MusesT | 5 | 288.13 | 234.29 | 203.89 | 1.46 | 1.52 | 1.74 | 0.07 | 0.09 | 0.15 |
| LEDBAT | 5 | 315.24 | 253.37 | 262.62 | 8.21 | 7.03 | 6.94 | 0.18 | 0.33 | 0.28 |
| PCC-Allegro | 5 | 397.51 | 220.54 | 73.69 | 1.70 | 1.72 | 1.74 | 0.27 | 0.35 | 0.43 |
| PCC-Expr | 5 | 0.77 | 8.65 | 6.45 | 1.13 | 1.12 | 1.09 | 85.71 | 25.29 | 26.87 |
| QUIC Cubic | 5 | 66.57 | 57.83 | 51.07 | 1.23 | 1.12 | 3.96 | 0.01 | 0.01 | 0.02 |
| SCReAM | 5 | 0.21 | 0.22 | 0.22 | 1.27 | 1.26 | 1.25 | 0.03 | 0.00 | 0.00 |
| Sprout | 5 | 49.72 | 49.60 | 49.48 | 4.44 | 4.38 | 4.60 | 0.31 | 0.37 | 0.26 |
| TaoVA-100x | 5 | 5.53 | 7.36 | 3.99 | 1.19 | 1.12 | 1.12 | 60.27 | 62.47 | 74.58 |
| TCP Vegas | 5 | 57.07 | 155.34 | 254.84 | 1.23 | 1.77 | 1.23 | 0.03 | 0.03 | 0.03 |
| Verus | 5 | 141.80 | 118.21 | 116.95 | 14.65 | 26.61 | 45.35 | 2.96 | 4.16 | 7.00 |
| PCC-Vivace | 5 | 183.19 | 174.79 | 172.07 | 44.75 | 25.98 | 25.08 | 0.54 | 0.69 | 0.29 |
| WebRTC media | 5 | 0.46 | 0.32 | 0.16 | 2.55 | 6.13 | 3.39 | 0.00 | 0.00 | 0.00 |

Run 1: Statistics of TCP BBR

```
Start at: 2019-05-30 00:50:24
End at: 2019-05-30 00:50:54
Local clock offset: 5.097 ms
Remote clock offset: 0.449 ms

# Below is generated by plot.py at 2019-05-30 03:11:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 868.81 Mbit/s
95th percentile per-packet one-way delay: 5.771 ms
Loss rate: 7.71%
-- Flow 1:
Average throughput: 492.47 Mbit/s
95th percentile per-packet one-way delay: 5.841 ms
Loss rate: 5.39%
-- Flow 2:
Average throughput: 334.86 Mbit/s
95th percentile per-packet one-way delay: 5.167 ms
Loss rate: 11.88%
-- Flow 3:
Average throughput: 461.32 Mbit/s
95th percentile per-packet one-way delay: 5.728 ms
Loss rate: 8.63%
```

Run 1: Report of TCP BBR — Data Link

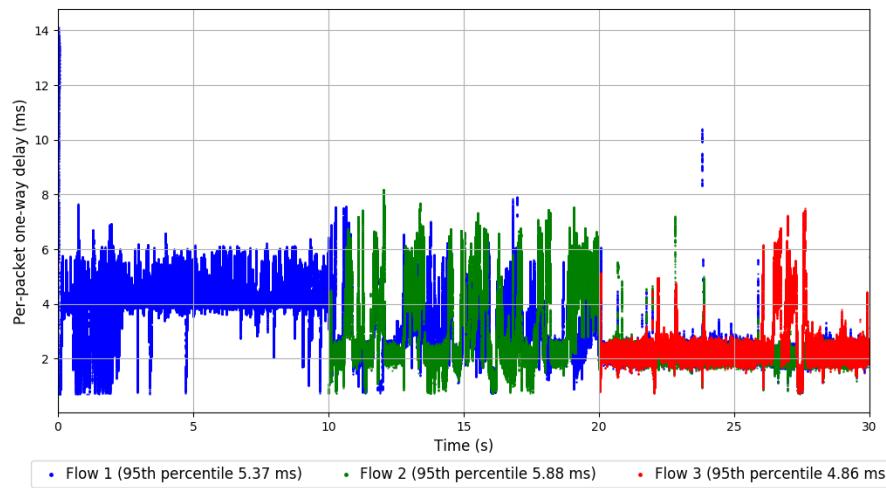
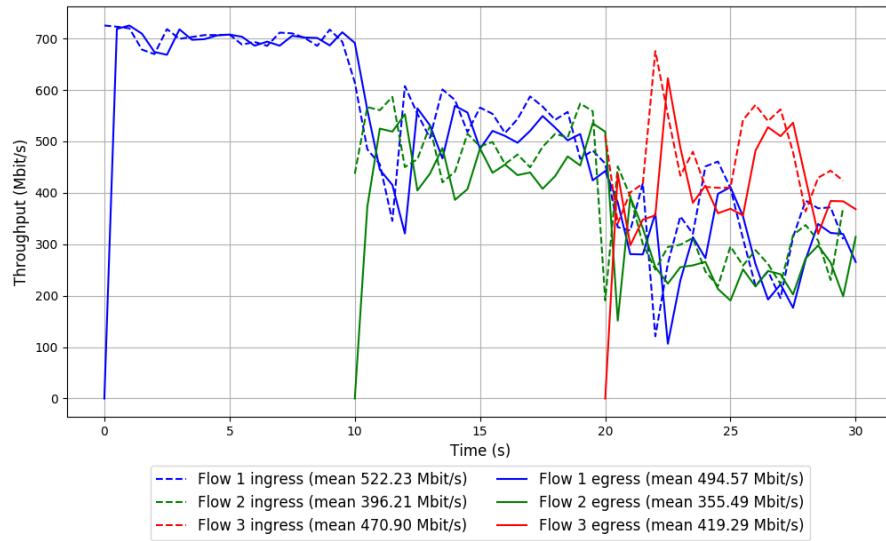


Run 2: Statistics of TCP BBR

```
Start at: 2019-05-30 01:20:10
End at: 2019-05-30 01:20:40
Local clock offset: 5.513 ms
Remote clock offset: 0.603 ms

# Below is generated by plot.py at 2019-05-30 03:11:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 870.81 Mbit/s
95th percentile per-packet one-way delay: 5.481 ms
Loss rate: 7.62%
-- Flow 1:
Average throughput: 494.57 Mbit/s
95th percentile per-packet one-way delay: 5.373 ms
Loss rate: 5.29%
-- Flow 2:
Average throughput: 355.49 Mbit/s
95th percentile per-packet one-way delay: 5.884 ms
Loss rate: 10.27%
-- Flow 3:
Average throughput: 419.29 Mbit/s
95th percentile per-packet one-way delay: 4.856 ms
Loss rate: 10.93%
```

Run 2: Report of TCP BBR — Data Link

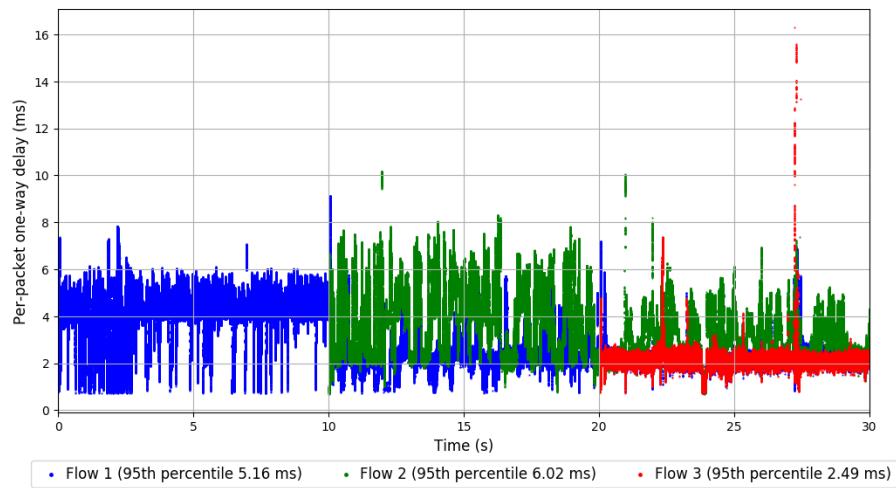
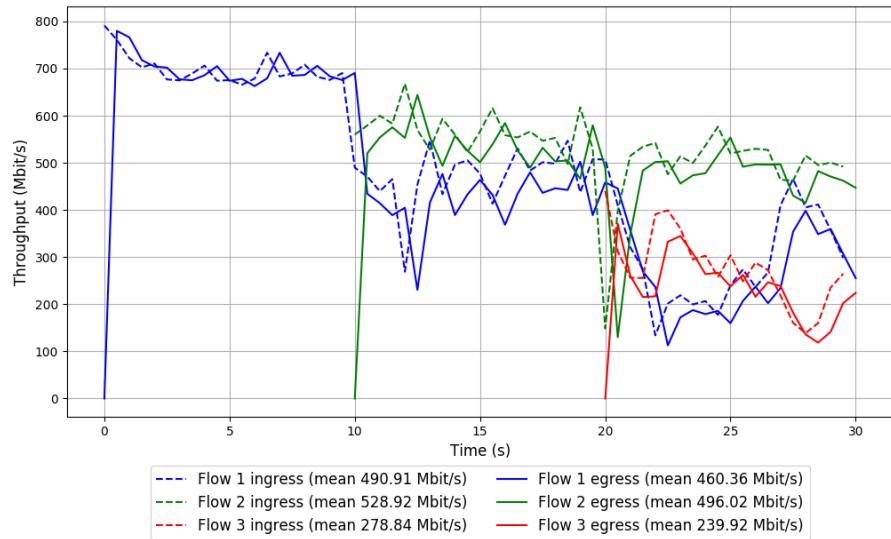


Run 3: Statistics of TCP BBR

```
Start at: 2019-05-30 01:50:10
End at: 2019-05-30 01:50:40
Local clock offset: 5.692 ms
Remote clock offset: 0.305 ms

# Below is generated by plot.py at 2019-05-30 03:11:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 870.63 Mbit/s
95th percentile per-packet one-way delay: 5.451 ms
Loss rate: 6.98%
-- Flow 1:
Average throughput: 460.36 Mbit/s
95th percentile per-packet one-way delay: 5.161 ms
Loss rate: 6.22%
-- Flow 2:
Average throughput: 496.02 Mbit/s
95th percentile per-packet one-way delay: 6.022 ms
Loss rate: 6.21%
-- Flow 3:
Average throughput: 239.92 Mbit/s
95th percentile per-packet one-way delay: 2.488 ms
Loss rate: 13.95%
```

Run 3: Report of TCP BBR — Data Link

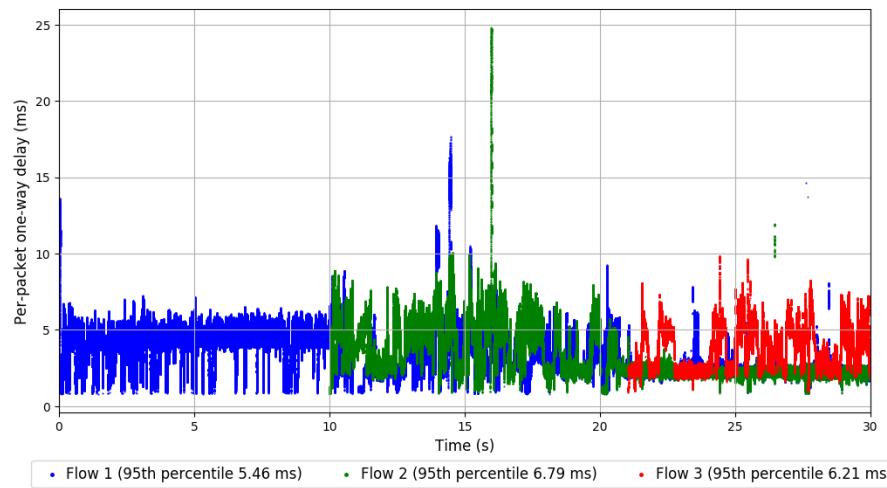
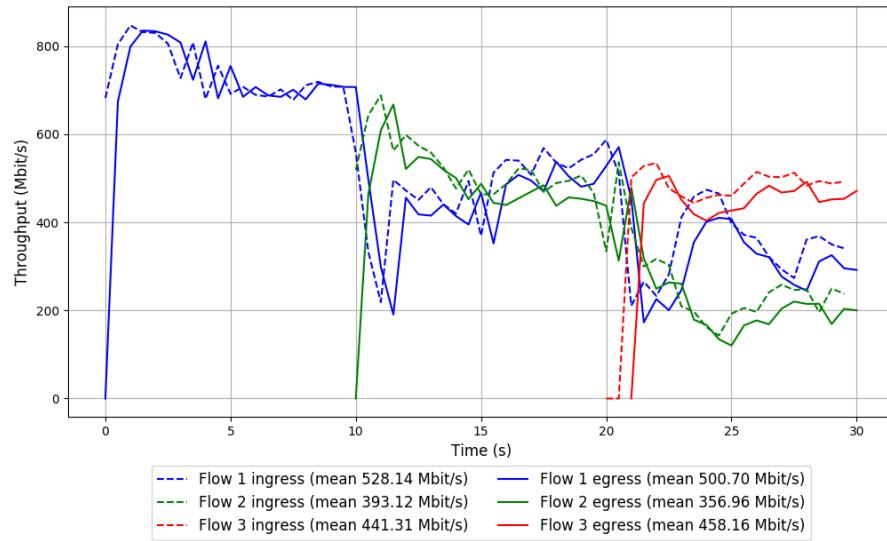


Run 4: Statistics of TCP BBR

```
Start at: 2019-05-30 02:19:56
End at: 2019-05-30 02:20:26
Local clock offset: 6.04 ms
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2019-05-30 03:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 875.25 Mbit/s
95th percentile per-packet one-way delay: 5.986 ms
Loss rate: 6.57%
-- Flow 1:
Average throughput: 500.70 Mbit/s
95th percentile per-packet one-way delay: 5.461 ms
Loss rate: 5.19%
-- Flow 2:
Average throughput: 356.96 Mbit/s
95th percentile per-packet one-way delay: 6.790 ms
Loss rate: 9.20%
-- Flow 3:
Average throughput: 458.16 Mbit/s
95th percentile per-packet one-way delay: 6.208 ms
Loss rate: 6.84%
```

Run 4: Report of TCP BBR — Data Link

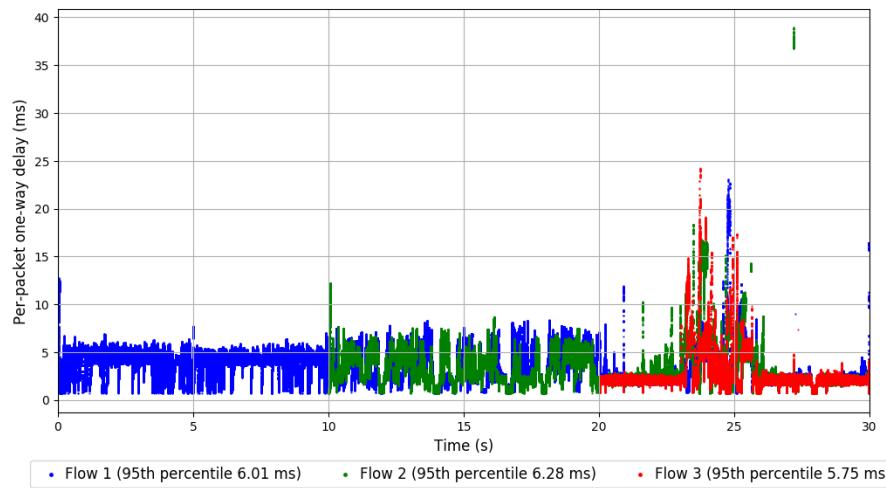
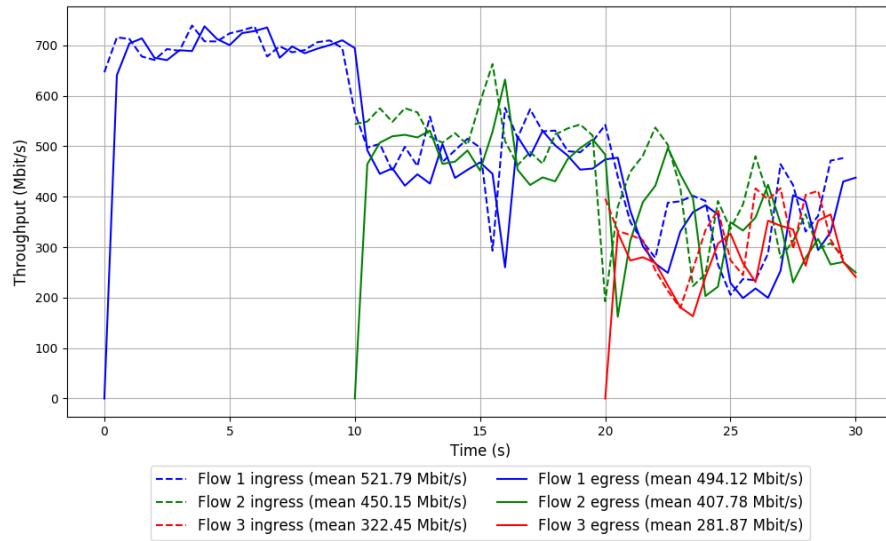


Run 5: Statistics of TCP BBR

```
Start at: 2019-05-30 02:49:47
End at: 2019-05-30 02:50:17
Local clock offset: 5.743 ms
Remote clock offset: 0.335 ms

# Below is generated by plot.py at 2019-05-30 03:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 859.42 Mbit/s
95th percentile per-packet one-way delay: 6.108 ms
Loss rate: 7.46%
-- Flow 1:
Average throughput: 494.12 Mbit/s
95th percentile per-packet one-way delay: 6.015 ms
Loss rate: 5.30%
-- Flow 2:
Average throughput: 407.78 Mbit/s
95th percentile per-packet one-way delay: 6.278 ms
Loss rate: 9.41%
-- Flow 3:
Average throughput: 281.87 Mbit/s
95th percentile per-packet one-way delay: 5.749 ms
Loss rate: 12.57%
```

Run 5: Report of TCP BBR — Data Link

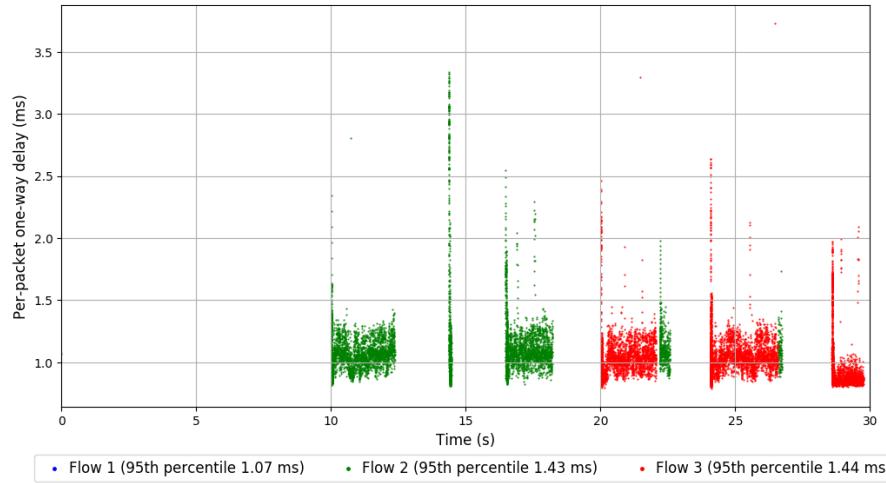
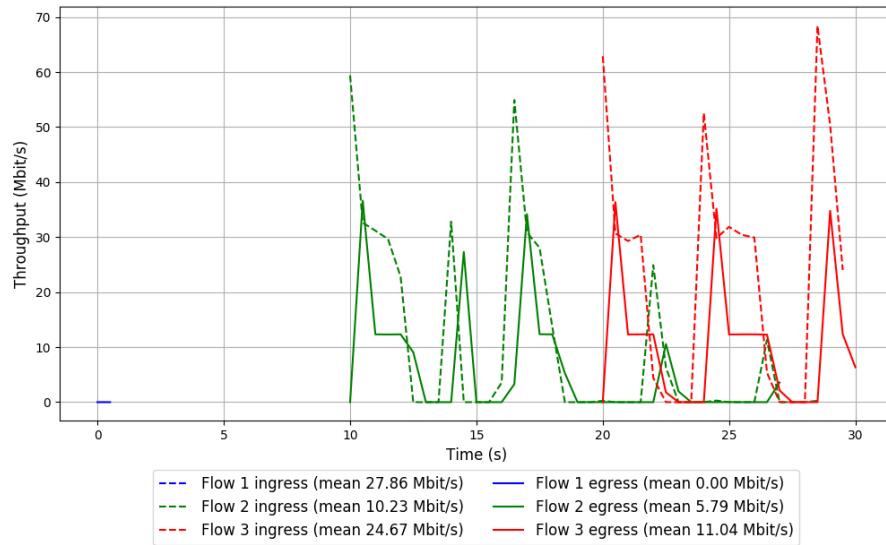


Run 1: Statistics of Copa

```
Start at: 2019-05-30 00:45:12
End at: 2019-05-30 00:45:42
Local clock offset: 5.044 ms
Remote clock offset: 0.548 ms

# Below is generated by plot.py at 2019-05-30 03:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.86 Mbit/s
95th percentile per-packet one-way delay: 1.433 ms
Loss rate: 52.69%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.066 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 5.79 Mbit/s
95th percentile per-packet one-way delay: 1.426 ms
Loss rate: 49.47%
-- Flow 3:
Average throughput: 11.04 Mbit/s
95th percentile per-packet one-way delay: 1.441 ms
Loss rate: 55.24%
```

Run 1: Report of Copa — Data Link

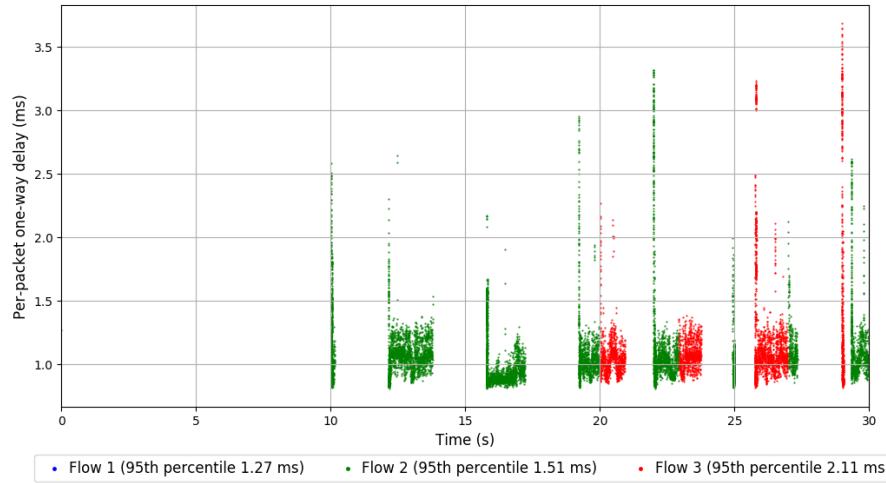
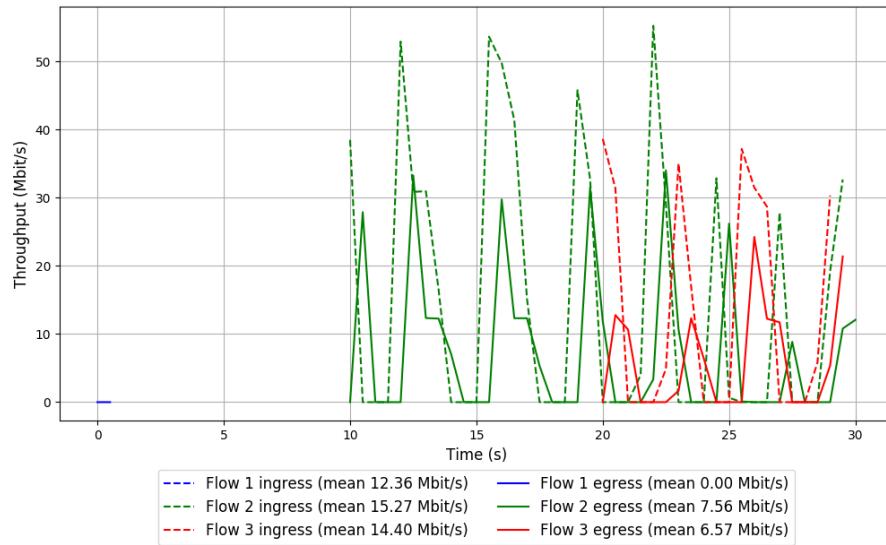


Run 2: Statistics of Copa

```
Start at: 2019-05-30 01:14:55
End at: 2019-05-30 01:15:25
Local clock offset: 5.383 ms
Remote clock offset: 0.76 ms

# Below is generated by plot.py at 2019-05-30 03:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.02 Mbit/s
95th percentile per-packet one-way delay: 1.689 ms
Loss rate: 51.66%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.270 ms
Loss rate: 97.24%
-- Flow 2:
Average throughput: 7.56 Mbit/s
95th percentile per-packet one-way delay: 1.509 ms
Loss rate: 50.49%
-- Flow 3:
Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 2.112 ms
Loss rate: 54.38%
```

Run 2: Report of Copa — Data Link

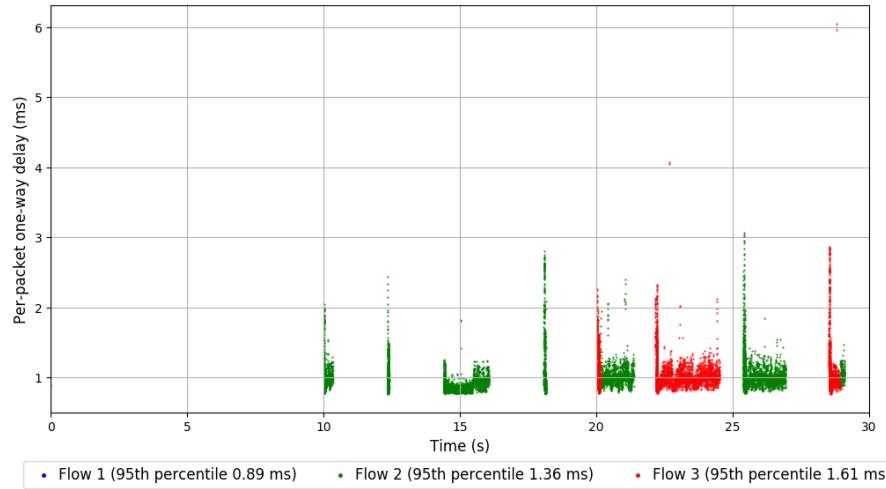
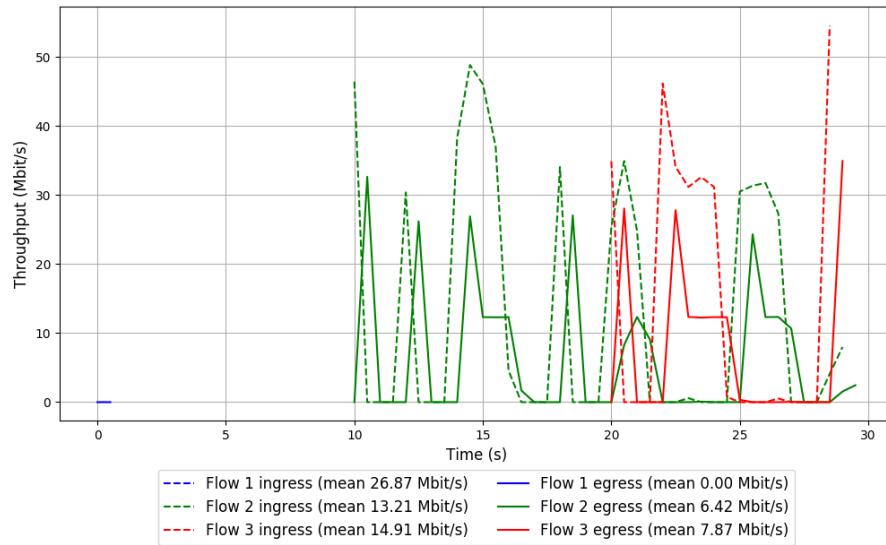


Run 3: Statistics of Copa

```
Start at: 2019-05-30 01:44:57
End at: 2019-05-30 01:45:27
Local clock offset: 5.666 ms
Remote clock offset: 0.368 ms

# Below is generated by plot.py at 2019-05-30 03:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.62 Mbit/s
95th percentile per-packet one-way delay: 1.476 ms
Loss rate: 49.99%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 0.887 ms
Loss rate: 98.33%
-- Flow 2:
Average throughput: 6.42 Mbit/s
95th percentile per-packet one-way delay: 1.359 ms
Loss rate: 51.45%
-- Flow 3:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 1.610 ms
Loss rate: 47.21%
```

Run 3: Report of Copa — Data Link

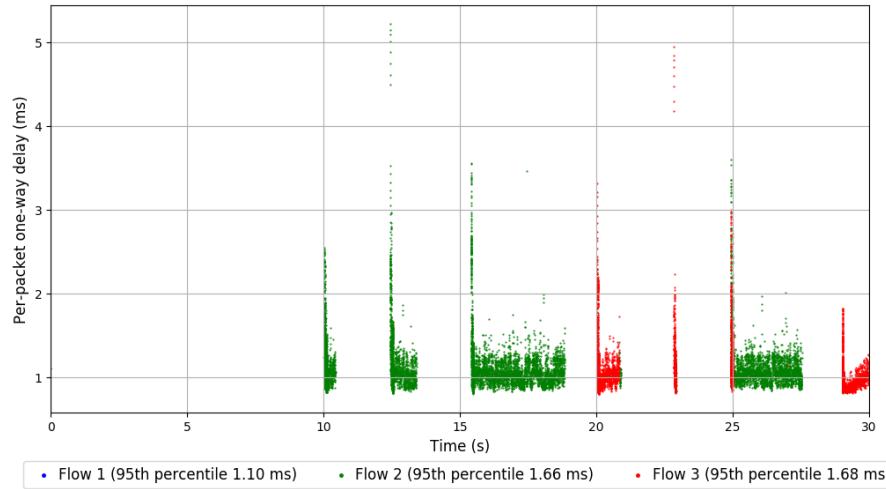
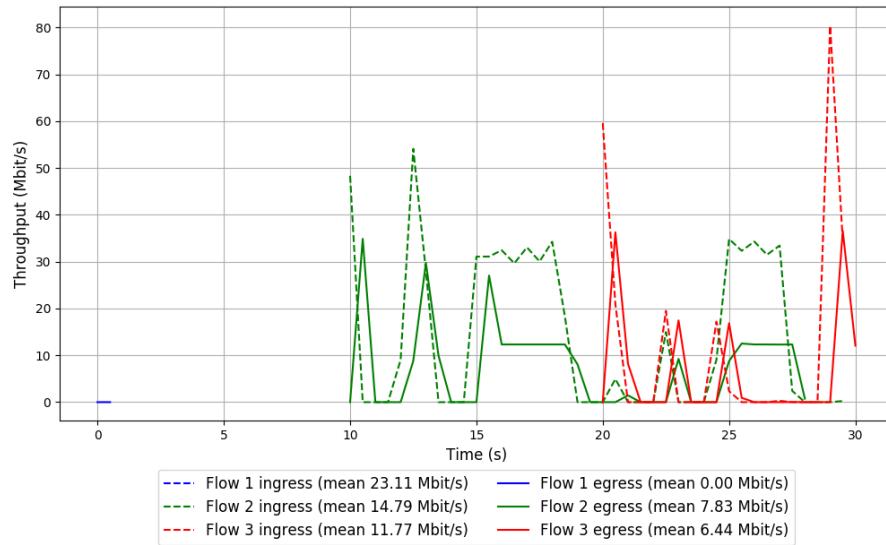


Run 4: Statistics of Copa

```
Start at: 2019-05-30 02:14:43
End at: 2019-05-30 02:15:13
Local clock offset: 5.967 ms
Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2019-05-30 03:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.71 Mbit/s
95th percentile per-packet one-way delay: 1.672 ms
Loss rate: 50.41%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.100 ms
Loss rate: 98.33%
-- Flow 2:
Average throughput: 7.83 Mbit/s
95th percentile per-packet one-way delay: 1.663 ms
Loss rate: 52.48%
-- Flow 3:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 1.678 ms
Loss rate: 45.30%
```

Run 4: Report of Copa — Data Link

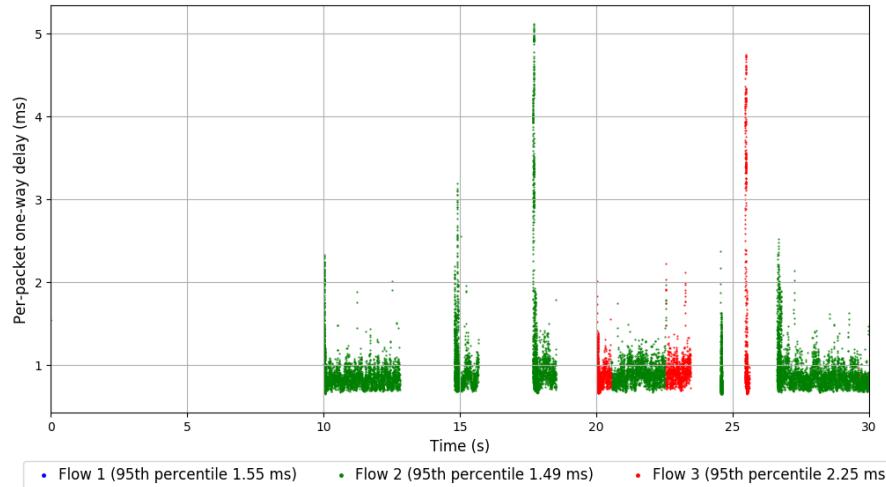
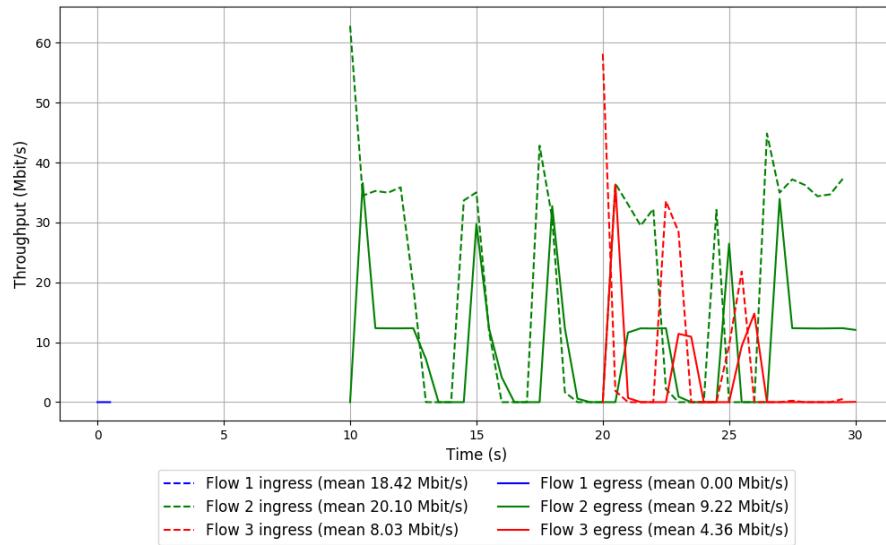


Run 5: Statistics of Copa

```
Start at: 2019-05-30 02:44:34
End at: 2019-05-30 02:45:04
Local clock offset: 5.863 ms
Remote clock offset: 0.307 ms

# Below is generated by plot.py at 2019-05-30 03:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.54 Mbit/s
95th percentile per-packet one-way delay: 1.554 ms
Loss rate: 52.79%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.547 ms
Loss rate: 98.33%
-- Flow 2:
Average throughput: 9.22 Mbit/s
95th percentile per-packet one-way delay: 1.491 ms
Loss rate: 54.13%
-- Flow 3:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 2.247 ms
Loss rate: 45.77%
```

Run 5: Report of Copa — Data Link

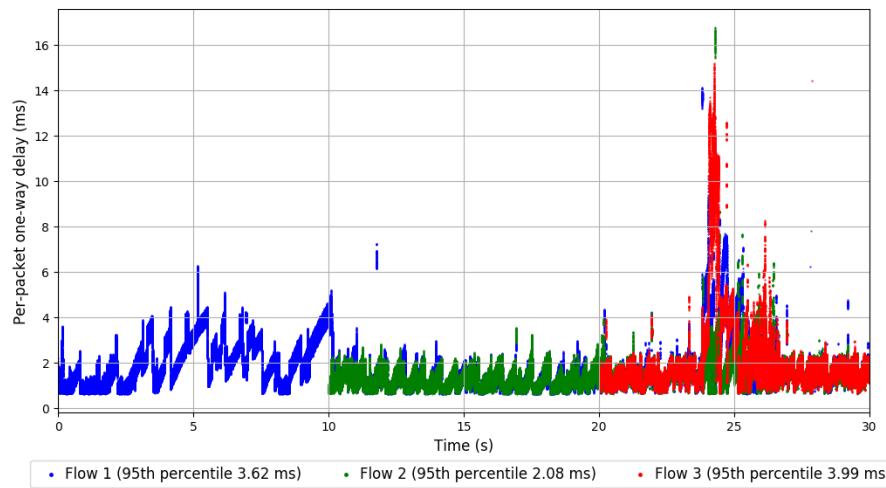
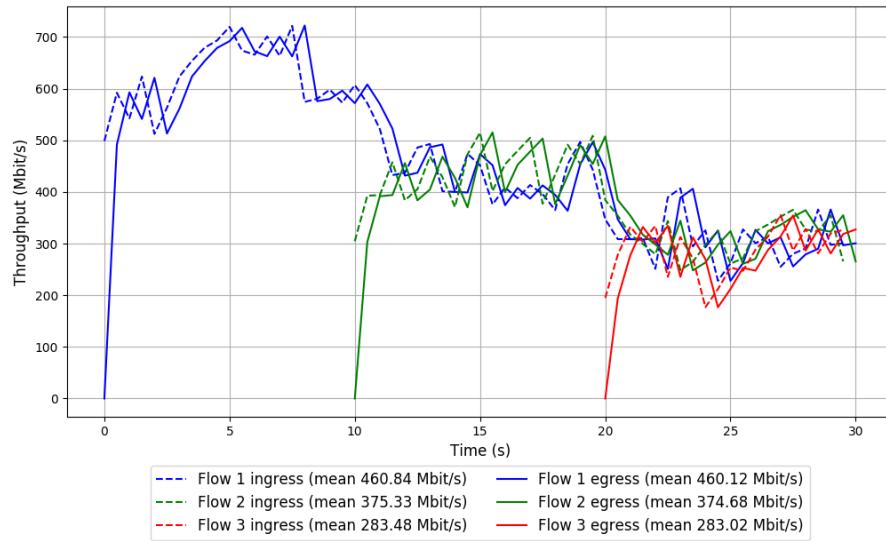


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2019-05-30 00:26:47
End at: 2019-05-30 00:27:17
Local clock offset: 5.002 ms
Remote clock offset: 0.103 ms

# Below is generated by plot.py at 2019-05-30 03:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 803.84 Mbit/s
95th percentile per-packet one-way delay: 3.394 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 460.12 Mbit/s
95th percentile per-packet one-way delay: 3.624 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 374.68 Mbit/s
95th percentile per-packet one-way delay: 2.081 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 283.02 Mbit/s
95th percentile per-packet one-way delay: 3.994 ms
Loss rate: 0.16%
```

Run 1: Report of TCP Cubic — Data Link

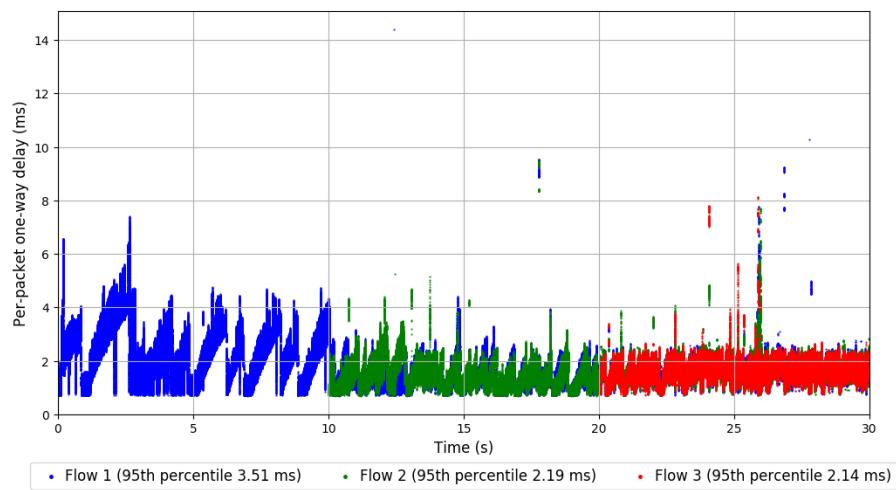
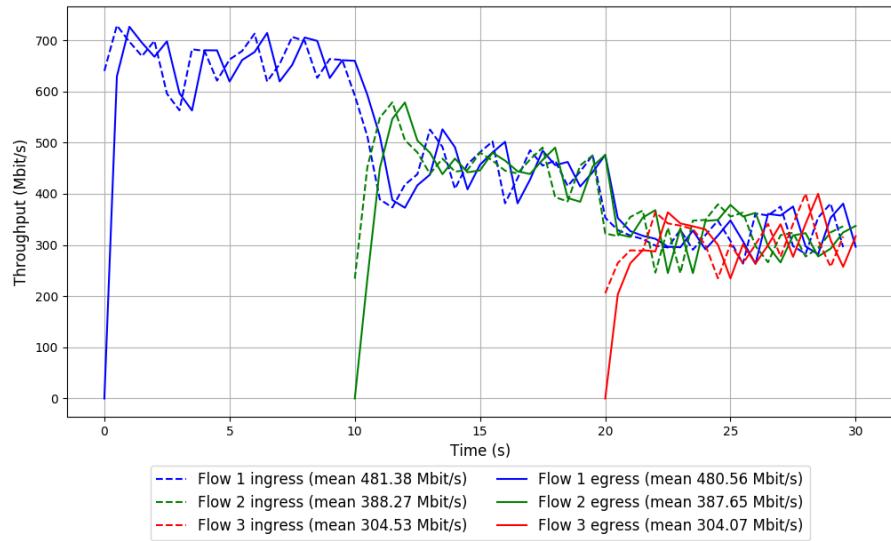


Run 2: Statistics of TCP Cubic

```
Start at: 2019-05-30 00:56:38
End at: 2019-05-30 00:57:08
Local clock offset: 5.121 ms
Remote clock offset: 0.428 ms

# Below is generated by plot.py at 2019-05-30 03:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 839.85 Mbit/s
95th percentile per-packet one-way delay: 3.153 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 480.56 Mbit/s
95th percentile per-packet one-way delay: 3.509 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 387.65 Mbit/s
95th percentile per-packet one-way delay: 2.185 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 304.07 Mbit/s
95th percentile per-packet one-way delay: 2.138 ms
Loss rate: 0.14%
```

Run 2: Report of TCP Cubic — Data Link

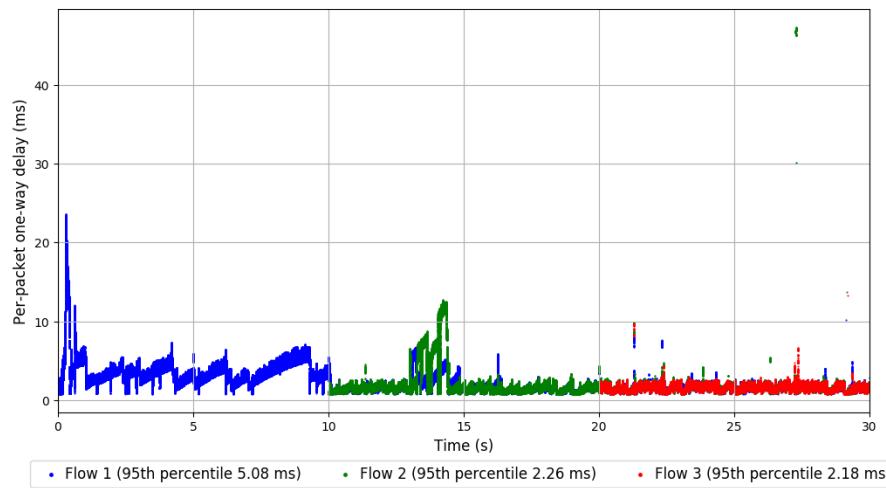
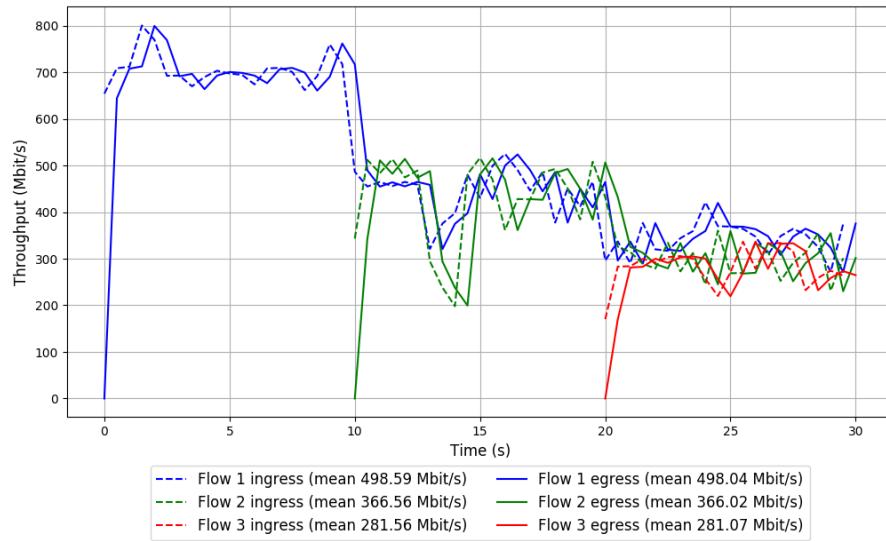


Run 3: Statistics of TCP Cubic

```
Start at: 2019-05-30 01:26:27
End at: 2019-05-30 01:26:57
Local clock offset: 5.517 ms
Remote clock offset: 0.42 ms

# Below is generated by plot.py at 2019-05-30 03:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 835.27 Mbit/s
95th percentile per-packet one-way delay: 4.740 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 498.04 Mbit/s
95th percentile per-packet one-way delay: 5.080 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 366.02 Mbit/s
95th percentile per-packet one-way delay: 2.263 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 281.07 Mbit/s
95th percentile per-packet one-way delay: 2.180 ms
Loss rate: 0.17%
```

Run 3: Report of TCP Cubic — Data Link

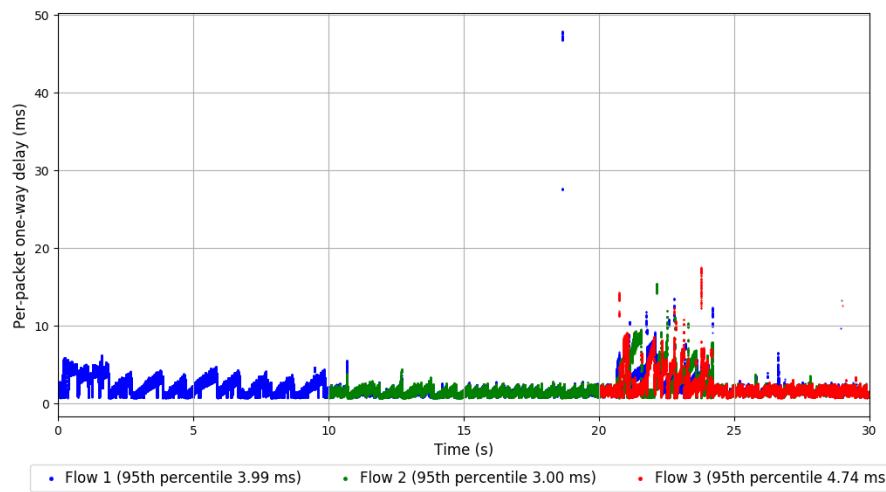
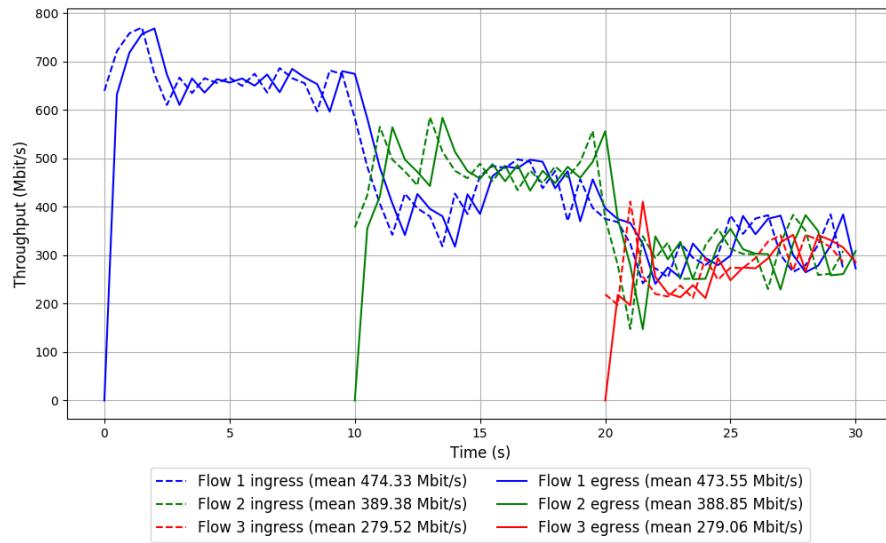


Run 4: Statistics of TCP Cubic

```
Start at: 2019-05-30 01:56:20
End at: 2019-05-30 01:56:50
Local clock offset: 5.755 ms
Remote clock offset: 0.26 ms

# Below is generated by plot.py at 2019-05-30 03:19:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 825.32 Mbit/s
95th percentile per-packet one-way delay: 3.953 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 473.55 Mbit/s
95th percentile per-packet one-way delay: 3.994 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 388.85 Mbit/s
95th percentile per-packet one-way delay: 2.998 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 279.06 Mbit/s
95th percentile per-packet one-way delay: 4.744 ms
Loss rate: 0.16%
```

Run 4: Report of TCP Cubic — Data Link

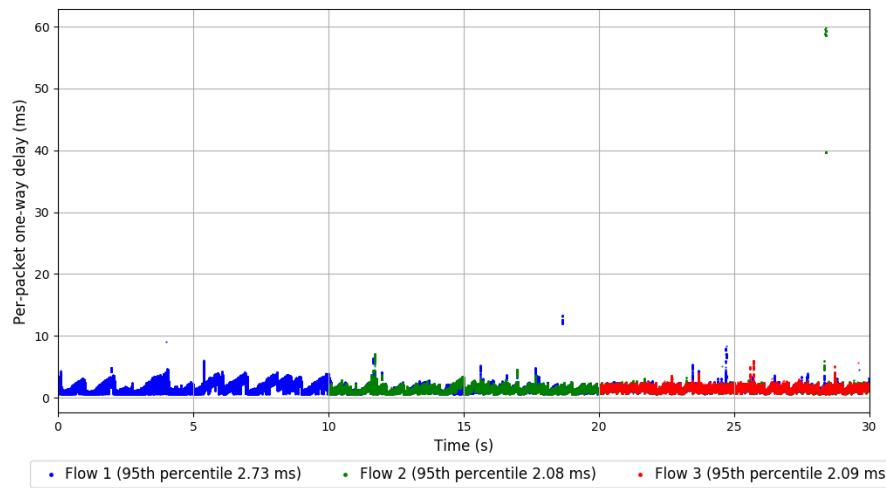
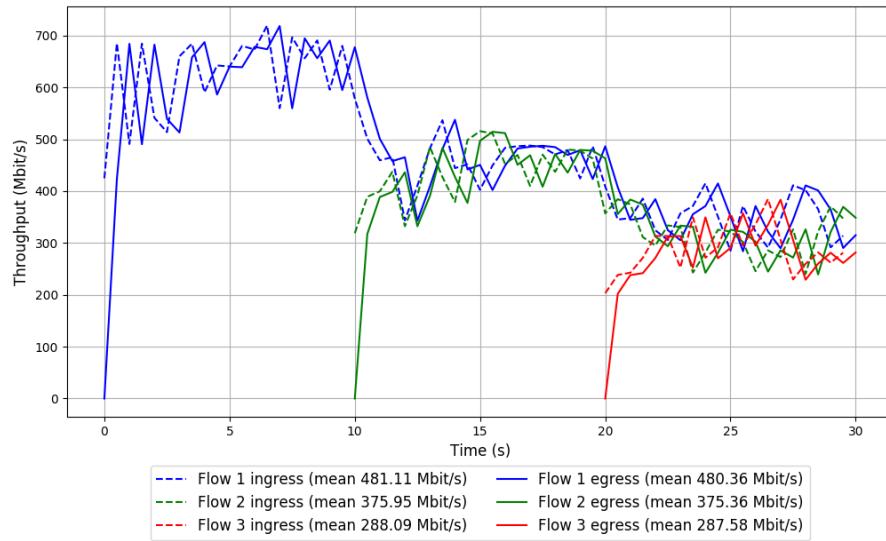


Run 5: Statistics of TCP Cubic

```
Start at: 2019-05-30 02:26:07
End at: 2019-05-30 02:26:37
Local clock offset: 6.137 ms
Remote clock offset: -0.139 ms

# Below is generated by plot.py at 2019-05-30 03:19:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 825.99 Mbit/s
95th percentile per-packet one-way delay: 2.499 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 480.36 Mbit/s
95th percentile per-packet one-way delay: 2.735 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 375.36 Mbit/s
95th percentile per-packet one-way delay: 2.084 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 287.58 Mbit/s
95th percentile per-packet one-way delay: 2.089 ms
Loss rate: 0.16%
```

Run 5: Report of TCP Cubic — Data Link

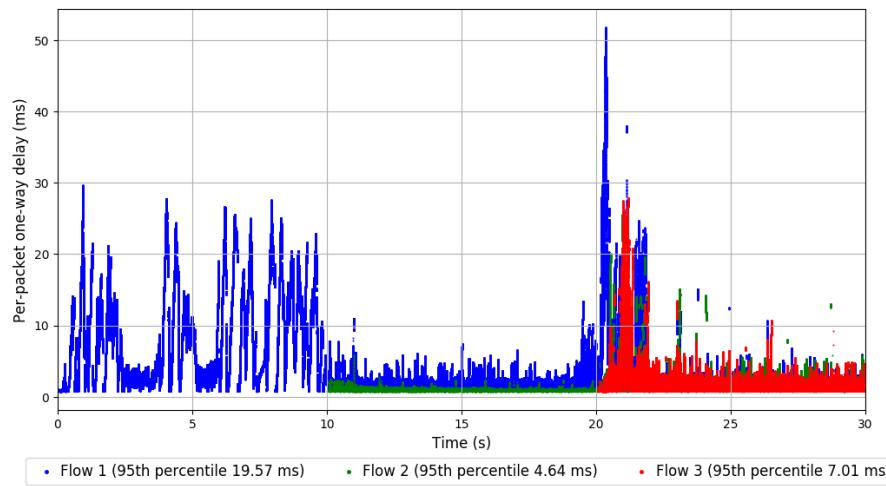
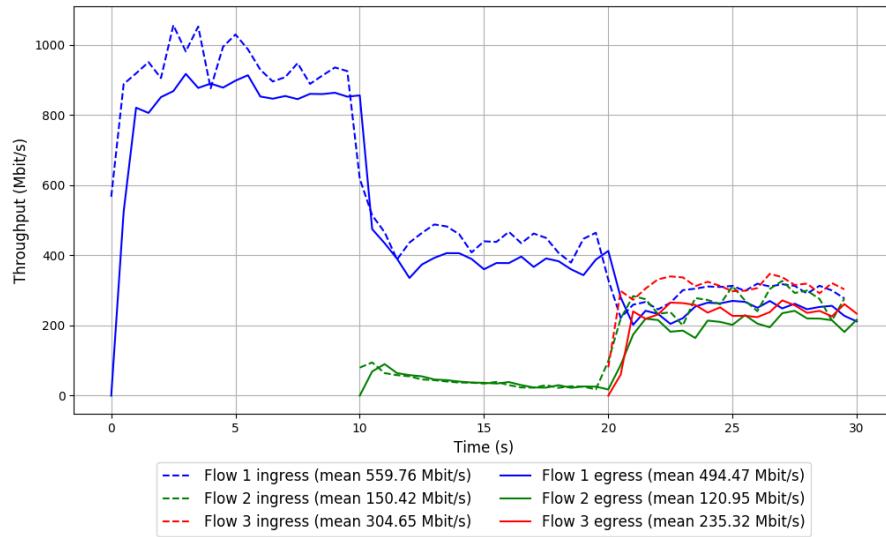


```
Run 1: Statistics of FillP

Start at: 2019-05-30 00:38:21
End at: 2019-05-30 00:38:51
Local clock offset: 4.931 ms
Remote clock offset: 0.432 ms

# Below is generated by plot.py at 2019-05-30 03:20:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 653.02 Mbit/s
95th percentile per-packet one-way delay: 18.583 ms
Loss rate: 14.19%
-- Flow 1:
Average throughput: 494.47 Mbit/s
95th percentile per-packet one-way delay: 19.574 ms
Loss rate: 11.66%
-- Flow 2:
Average throughput: 120.95 Mbit/s
95th percentile per-packet one-way delay: 4.644 ms
Loss rate: 19.60%
-- Flow 3:
Average throughput: 235.32 Mbit/s
95th percentile per-packet one-way delay: 7.011 ms
Loss rate: 22.85%
```

Run 1: Report of FillP — Data Link

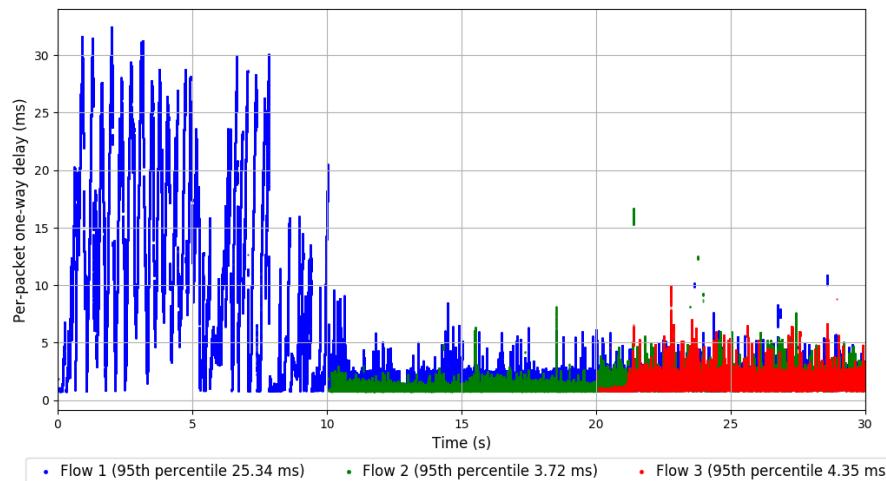
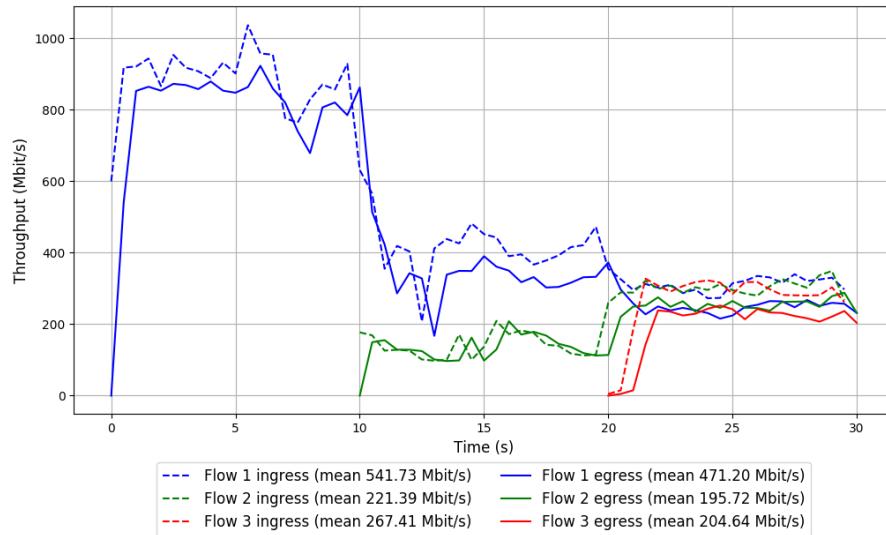


Run 2: Statistics of FillP

```
Start at: 2019-05-30 01:08:03
End at: 2019-05-30 01:08:33
Local clock offset: 5.181 ms
Remote clock offset: 0.659 ms

# Below is generated by plot.py at 2019-05-30 03:20:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 668.95 Mbit/s
95th percentile per-packet one-way delay: 23.843 ms
Loss rate: 13.94%
-- Flow 1:
Average throughput: 471.20 Mbit/s
95th percentile per-packet one-way delay: 25.343 ms
Loss rate: 13.02%
-- Flow 2:
Average throughput: 195.72 Mbit/s
95th percentile per-packet one-way delay: 3.720 ms
Loss rate: 11.60%
-- Flow 3:
Average throughput: 204.64 Mbit/s
95th percentile per-packet one-way delay: 4.351 ms
Loss rate: 23.48%
```

Run 2: Report of FillP — Data Link

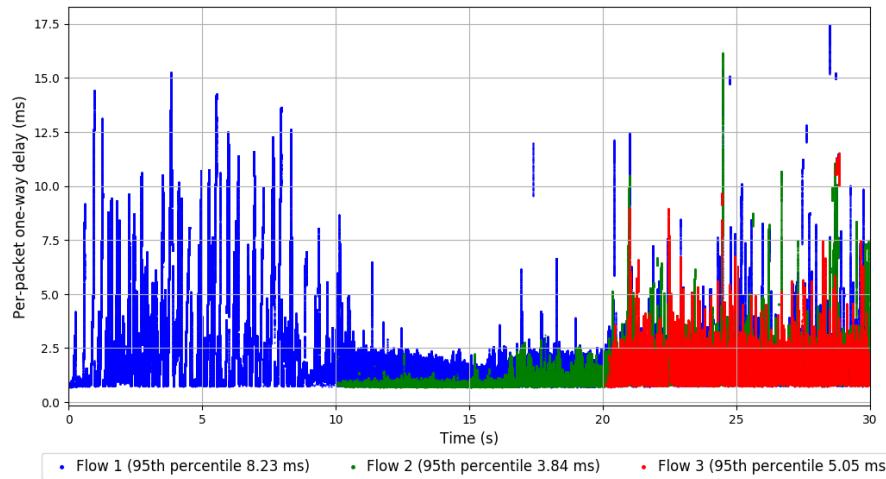
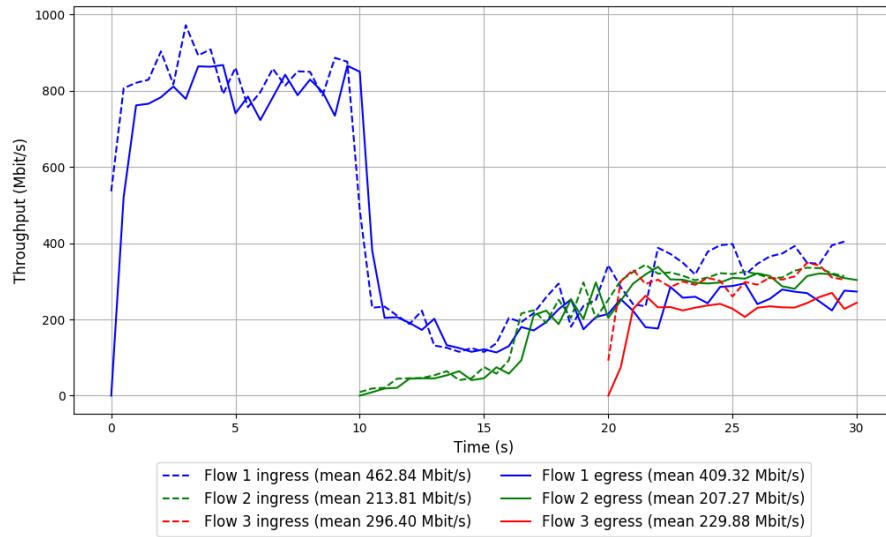


Run 3: Statistics of FillP

```
Start at: 2019-05-30 01:38:02
End at: 2019-05-30 01:38:32
Local clock offset: 5.609 ms
Remote clock offset: 0.339 ms

# Below is generated by plot.py at 2019-05-30 03:20:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 623.29 Mbit/s
95th percentile per-packet one-way delay: 7.381 ms
Loss rate: 11.36%
-- Flow 1:
Average throughput: 409.32 Mbit/s
95th percentile per-packet one-way delay: 8.228 ms
Loss rate: 11.56%
-- Flow 2:
Average throughput: 207.27 Mbit/s
95th percentile per-packet one-way delay: 3.843 ms
Loss rate: 3.06%
-- Flow 3:
Average throughput: 229.88 Mbit/s
95th percentile per-packet one-way delay: 5.048 ms
Loss rate: 22.44%
```

Run 3: Report of FillP — Data Link

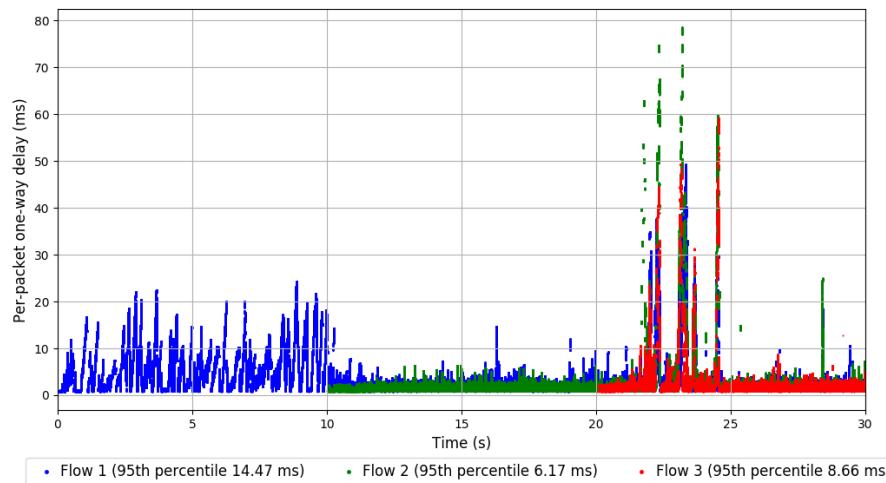
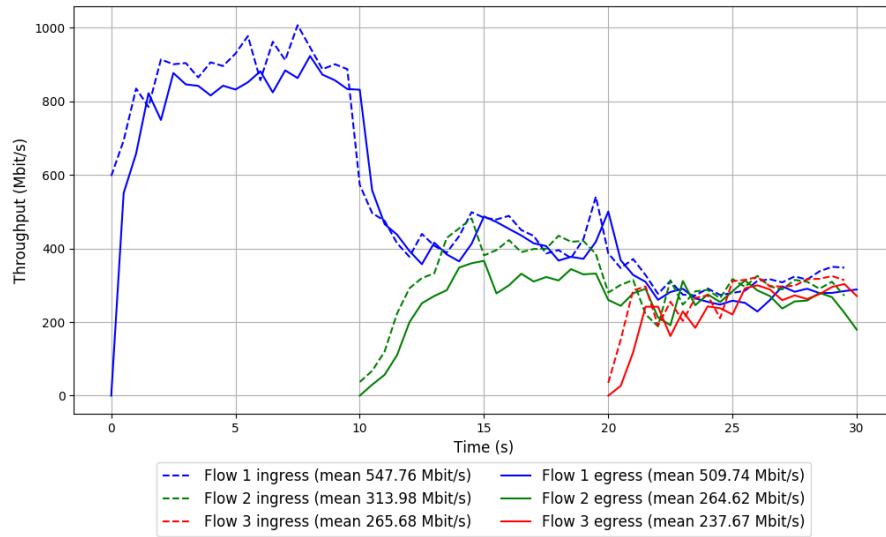


```
Run 4: Statistics of FillP
```

```
Start at: 2019-05-30 02:07:49
End at: 2019-05-30 02:08:19
Local clock offset: 5.731 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2019-05-30 03:21:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 764.71 Mbit/s
95th percentile per-packet one-way delay: 13.812 ms
Loss rate: 9.48%
-- Flow 1:
Average throughput: 509.74 Mbit/s
95th percentile per-packet one-way delay: 14.468 ms
Loss rate: 6.94%
-- Flow 2:
Average throughput: 264.62 Mbit/s
95th percentile per-packet one-way delay: 6.169 ms
Loss rate: 15.69%
-- Flow 3:
Average throughput: 237.67 Mbit/s
95th percentile per-packet one-way delay: 8.658 ms
Loss rate: 10.53%
```

Run 4: Report of FillP — Data Link

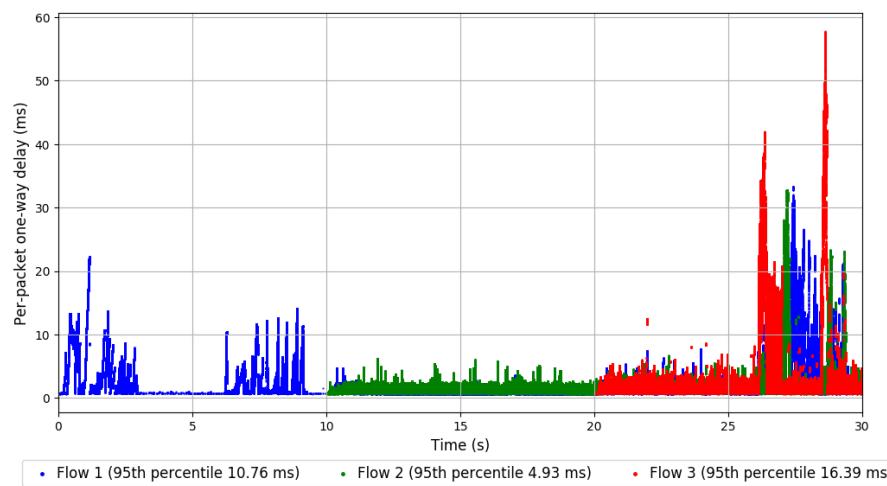
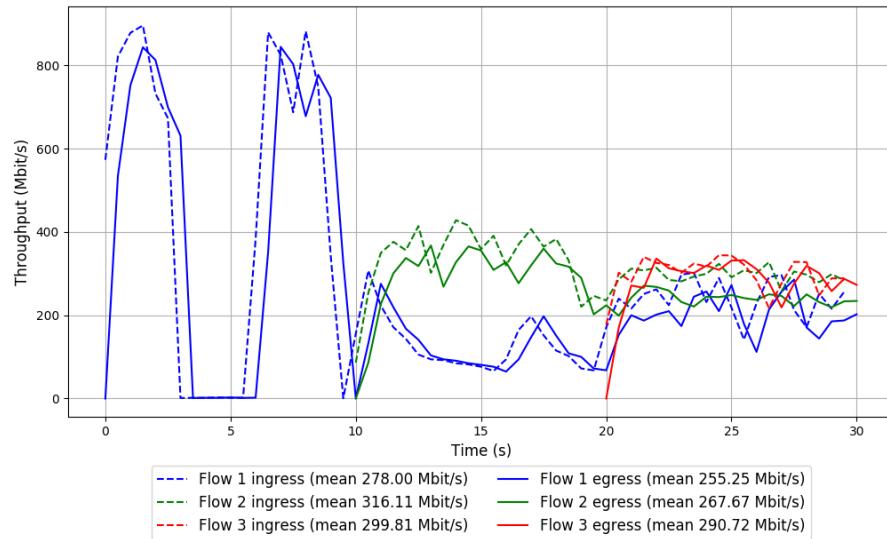


```
Run 5: Statistics of FillP
```

```
Start at: 2019-05-30 02:37:44
End at: 2019-05-30 02:38:14
Local clock offset: 6.24 ms
Remote clock offset: 0.314 ms

# Below is generated by plot.py at 2019-05-30 03:21:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 529.92 Mbit/s
95th percentile per-packet one-way delay: 10.231 ms
Loss rate: 9.86%
-- Flow 1:
Average throughput: 255.25 Mbit/s
95th percentile per-packet one-way delay: 10.760 ms
Loss rate: 8.18%
-- Flow 2:
Average throughput: 267.67 Mbit/s
95th percentile per-packet one-way delay: 4.926 ms
Loss rate: 15.31%
-- Flow 3:
Average throughput: 290.72 Mbit/s
95th percentile per-packet one-way delay: 16.394 ms
Loss rate: 3.01%
```

Run 5: Report of FillP — Data Link

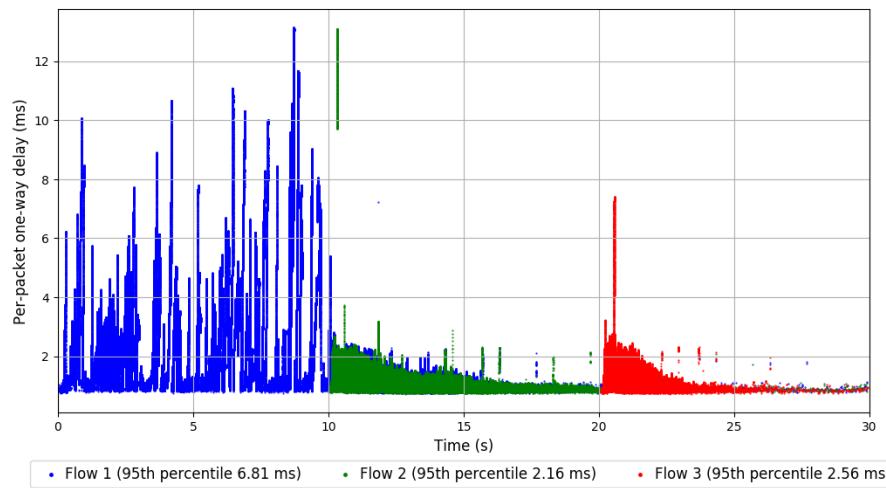
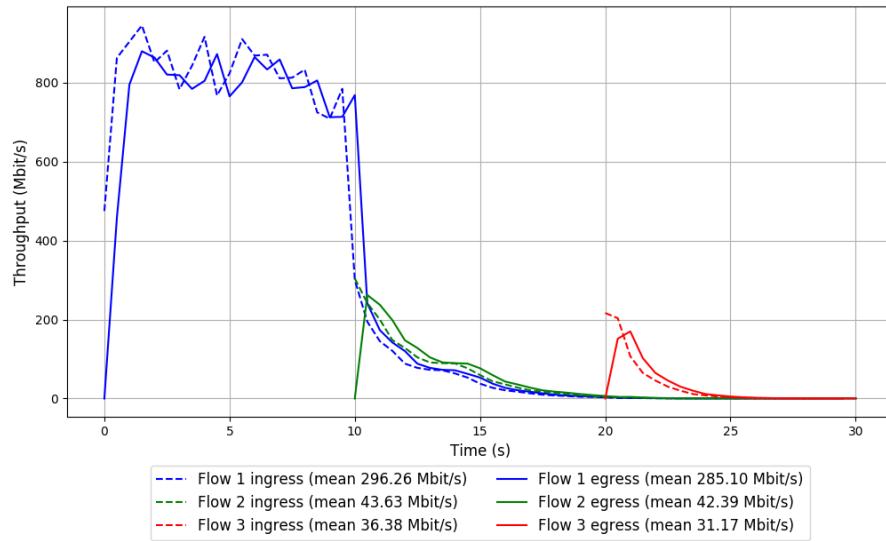


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2019-05-30 00:34:03
End at: 2019-05-30 00:34:33
Local clock offset: 4.93 ms
Remote clock offset: 0.353 ms

# Below is generated by plot.py at 2019-05-30 03:21:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 323.40 Mbit/s
95th percentile per-packet one-way delay: 6.565 ms
Loss rate: 4.06%
-- Flow 1:
Average throughput: 285.10 Mbit/s
95th percentile per-packet one-way delay: 6.810 ms
Loss rate: 3.77%
-- Flow 2:
Average throughput: 42.39 Mbit/s
95th percentile per-packet one-way delay: 2.156 ms
Loss rate: 2.84%
-- Flow 3:
Average throughput: 31.17 Mbit/s
95th percentile per-packet one-way delay: 2.561 ms
Loss rate: 14.32%
```

Run 1: Report of FillP-Sheep — Data Link

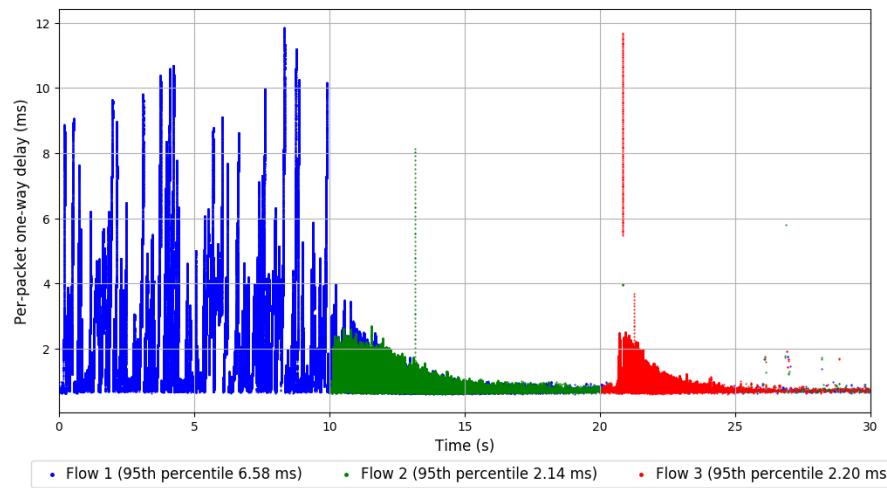
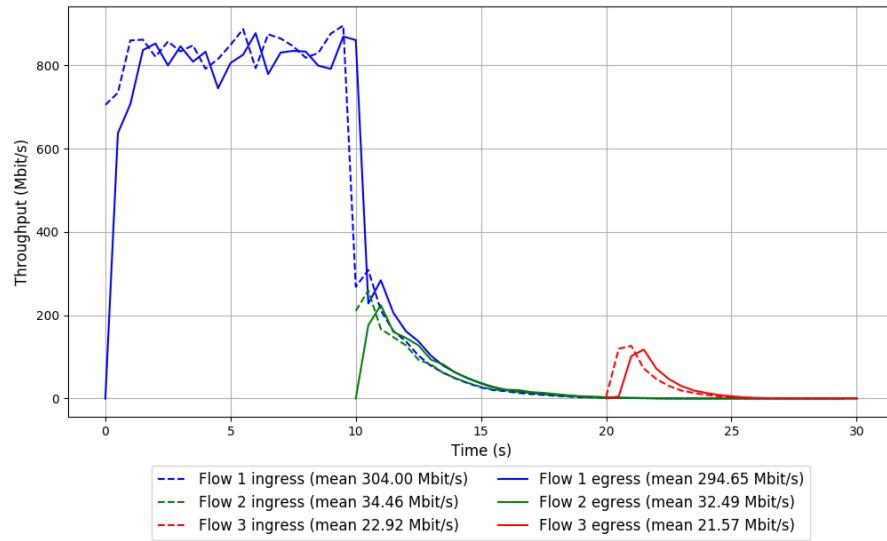


Run 2: Statistics of FillP-Sheep

```
Start at: 2019-05-30 01:03:46
End at: 2019-05-30 01:04:16
Local clock offset: 5.14 ms
Remote clock offset: 0.472 ms

# Below is generated by plot.py at 2019-05-30 03:21:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 323.22 Mbit/s
95th percentile per-packet one-way delay: 6.285 ms
Loss rate: 3.32%
-- Flow 1:
Average throughput: 294.65 Mbit/s
95th percentile per-packet one-way delay: 6.582 ms
Loss rate: 3.08%
-- Flow 2:
Average throughput: 32.49 Mbit/s
95th percentile per-packet one-way delay: 2.139 ms
Loss rate: 5.71%
-- Flow 3:
Average throughput: 21.57 Mbit/s
95th percentile per-packet one-way delay: 2.202 ms
Loss rate: 5.89%
```

Run 2: Report of FillP-Sheep — Data Link

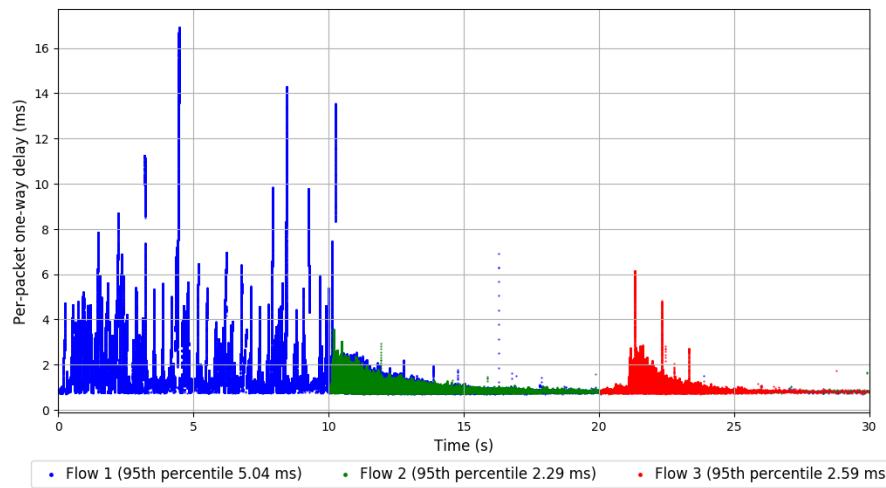
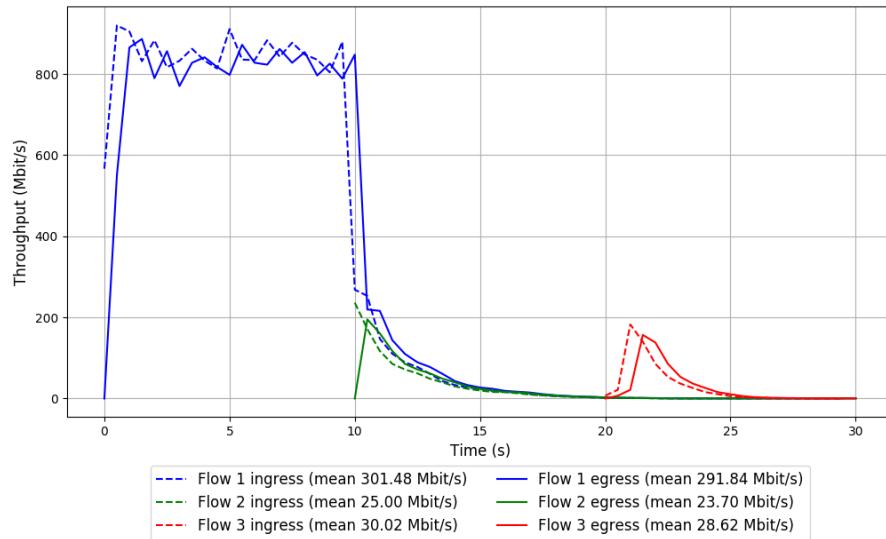


Run 3: Statistics of FillP-Sheep

```
Start at: 2019-05-30 01:33:44
End at: 2019-05-30 01:34:14
Local clock offset: 5.605 ms
Remote clock offset: 0.383 ms

# Below is generated by plot.py at 2019-05-30 03:22:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.87 Mbit/s
95th percentile per-packet one-way delay: 4.867 ms
Loss rate: 3.34%
-- Flow 1:
Average throughput: 291.84 Mbit/s
95th percentile per-packet one-way delay: 5.044 ms
Loss rate: 3.20%
-- Flow 2:
Average throughput: 23.70 Mbit/s
95th percentile per-packet one-way delay: 2.288 ms
Loss rate: 5.17%
-- Flow 3:
Average throughput: 28.62 Mbit/s
95th percentile per-packet one-way delay: 2.592 ms
Loss rate: 4.67%
```

Run 3: Report of FillP-Sheep — Data Link

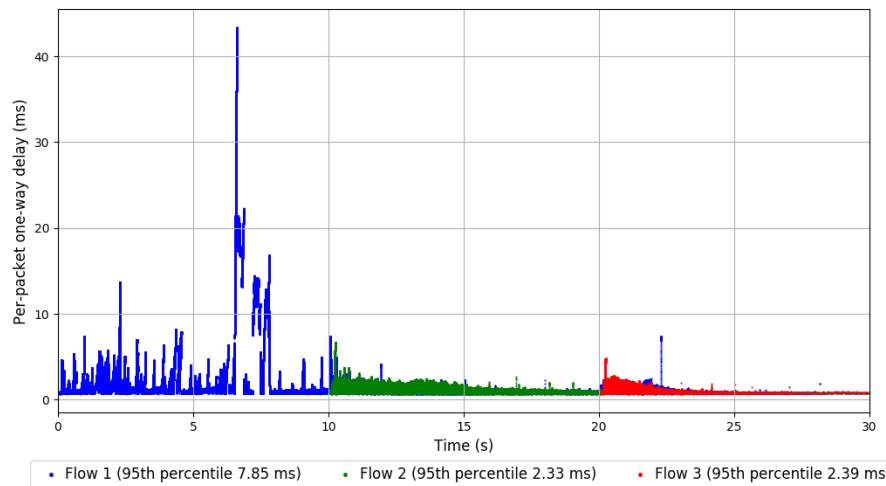
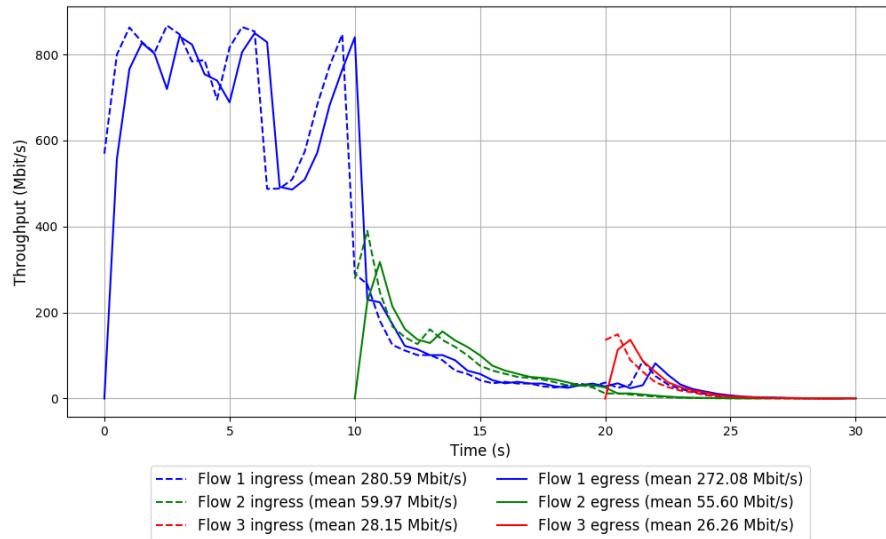


Run 4: Statistics of FillP-Sheep

```
Start at: 2019-05-30 02:03:34
End at: 2019-05-30 02:04:04
Local clock offset: 5.728 ms
Remote clock offset: 0.069 ms

# Below is generated by plot.py at 2019-05-30 03:23:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.59 Mbit/s
95th percentile per-packet one-way delay: 6.370 ms
Loss rate: 3.65%
-- Flow 1:
Average throughput: 272.08 Mbit/s
95th percentile per-packet one-way delay: 7.847 ms
Loss rate: 3.03%
-- Flow 2:
Average throughput: 55.60 Mbit/s
95th percentile per-packet one-way delay: 2.329 ms
Loss rate: 7.29%
-- Flow 3:
Average throughput: 26.26 Mbit/s
95th percentile per-packet one-way delay: 2.388 ms
Loss rate: 6.71%
```

Run 4: Report of FillP-Sheep — Data Link

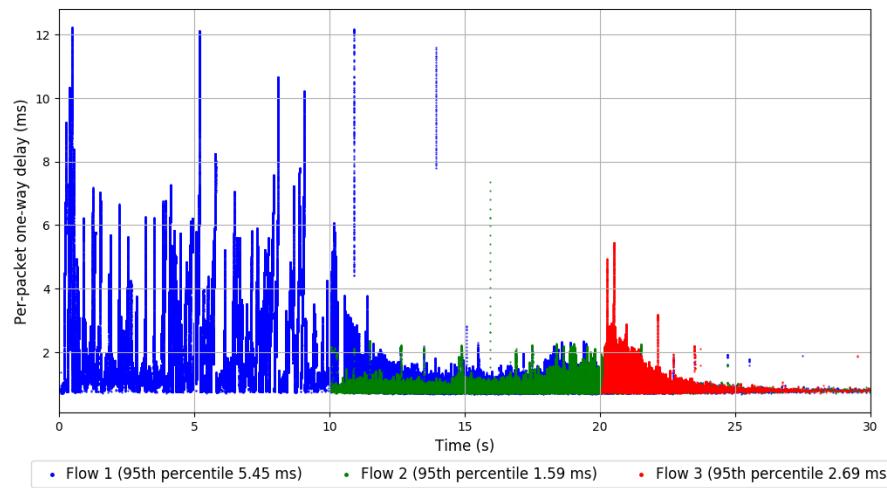
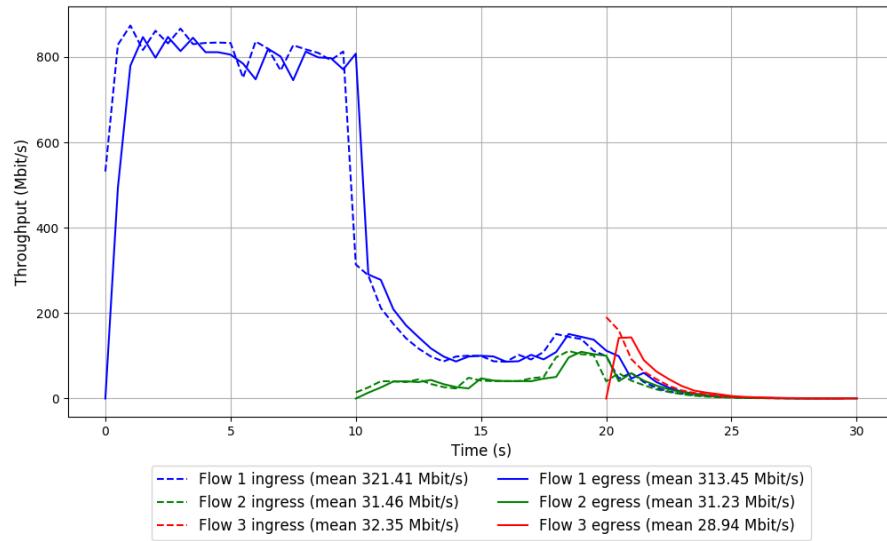


Run 5: Statistics of FillP-Sheep

```
Start at: 2019-05-30 02:33:31
End at: 2019-05-30 02:34:01
Local clock offset: 6.165 ms
Remote clock offset: 0.193 ms

# Below is generated by plot.py at 2019-05-30 03:24:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 343.59 Mbit/s
95th percentile per-packet one-way delay: 5.333 ms
Loss rate: 2.62%
-- Flow 1:
Average throughput: 313.45 Mbit/s
95th percentile per-packet one-way delay: 5.453 ms
Loss rate: 2.48%
-- Flow 2:
Average throughput: 31.23 Mbit/s
95th percentile per-packet one-way delay: 1.594 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 28.94 Mbit/s
95th percentile per-packet one-way delay: 2.688 ms
Loss rate: 10.53%
```

Run 5: Report of FillP-Sheep — Data Link

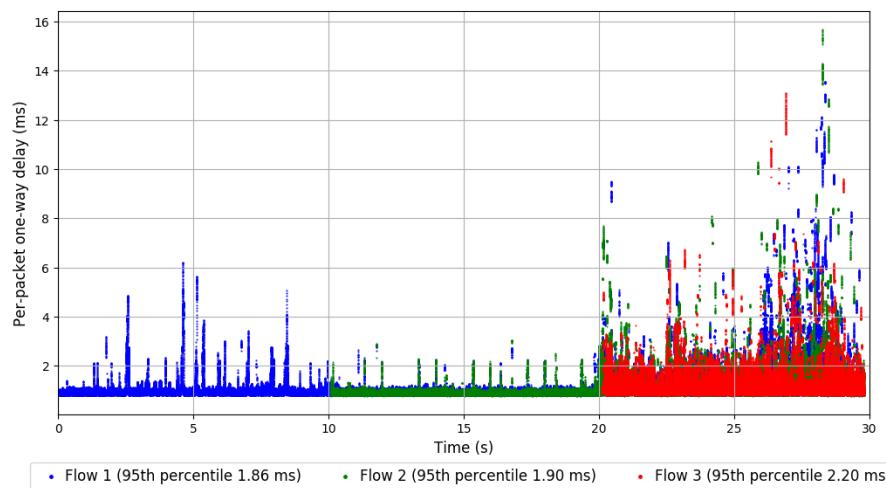
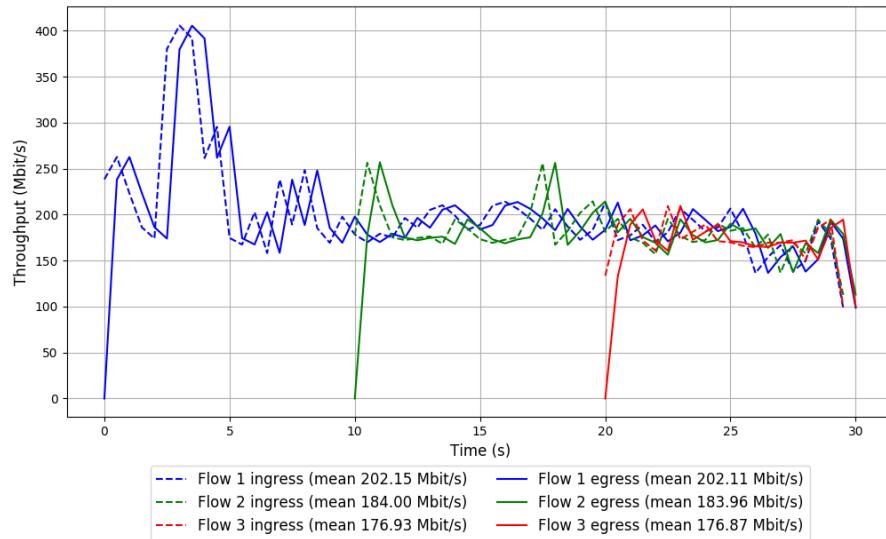


Run 1: Statistics of Indigo

```
Start at: 2019-05-30 00:52:14
End at: 2019-05-30 00:52:44
Local clock offset: 5.115 ms
Remote clock offset: 0.501 ms

# Below is generated by plot.py at 2019-05-30 03:24:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 381.22 Mbit/s
95th percentile per-packet one-way delay: 1.953 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 202.11 Mbit/s
95th percentile per-packet one-way delay: 1.859 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 183.96 Mbit/s
95th percentile per-packet one-way delay: 1.903 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 176.87 Mbit/s
95th percentile per-packet one-way delay: 2.198 ms
Loss rate: 0.04%
```

Run 1: Report of Indigo — Data Link

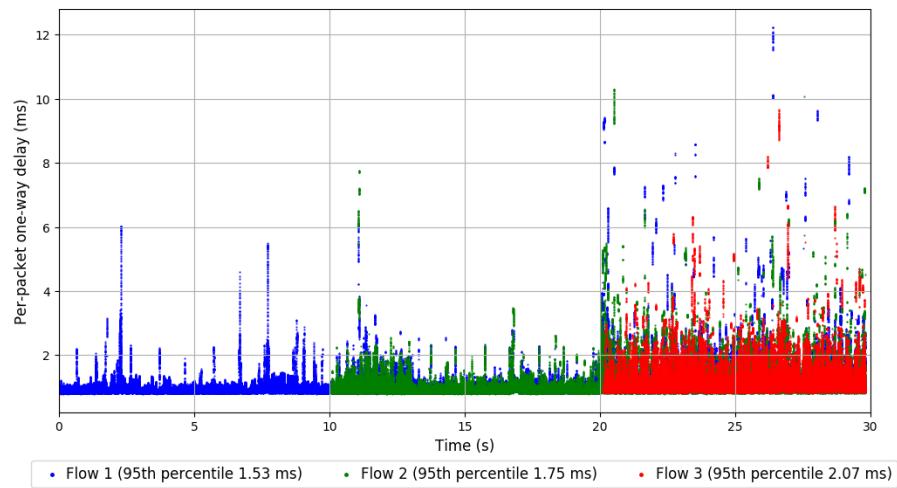
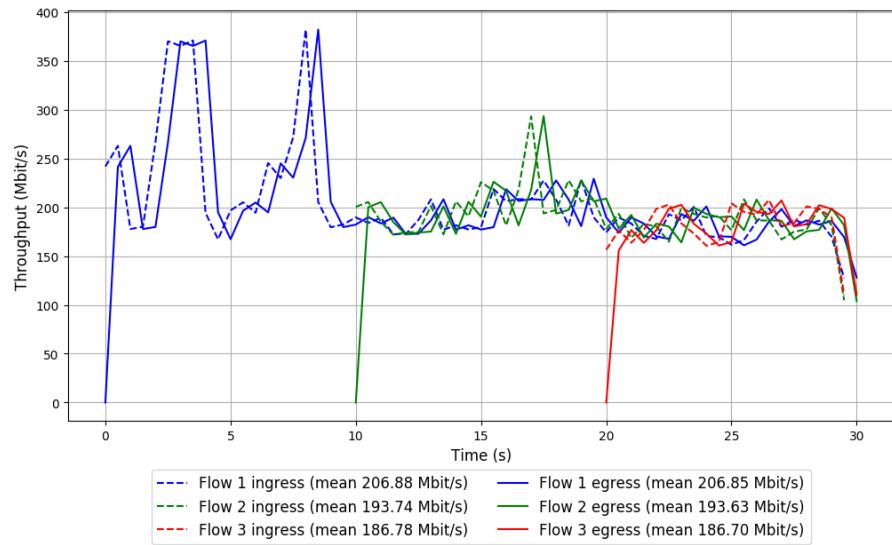


Run 2: Statistics of Indigo

```
Start at: 2019-05-30 01:22:00
End at: 2019-05-30 01:22:30
Local clock offset: 5.503 ms
Remote clock offset: 0.597 ms

# Below is generated by plot.py at 2019-05-30 03:24:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.83 Mbit/s
95th percentile per-packet one-way delay: 1.723 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 206.85 Mbit/s
95th percentile per-packet one-way delay: 1.529 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 193.63 Mbit/s
95th percentile per-packet one-way delay: 1.745 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 186.70 Mbit/s
95th percentile per-packet one-way delay: 2.069 ms
Loss rate: 0.04%
```

Run 2: Report of Indigo — Data Link

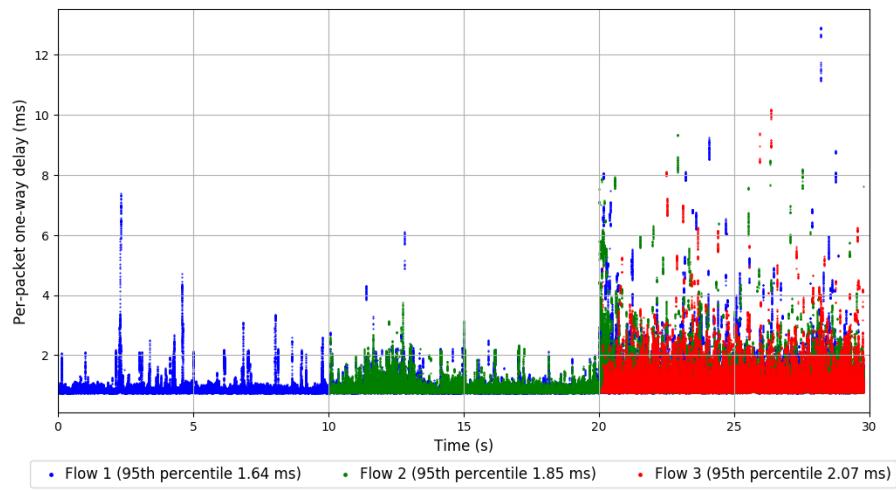
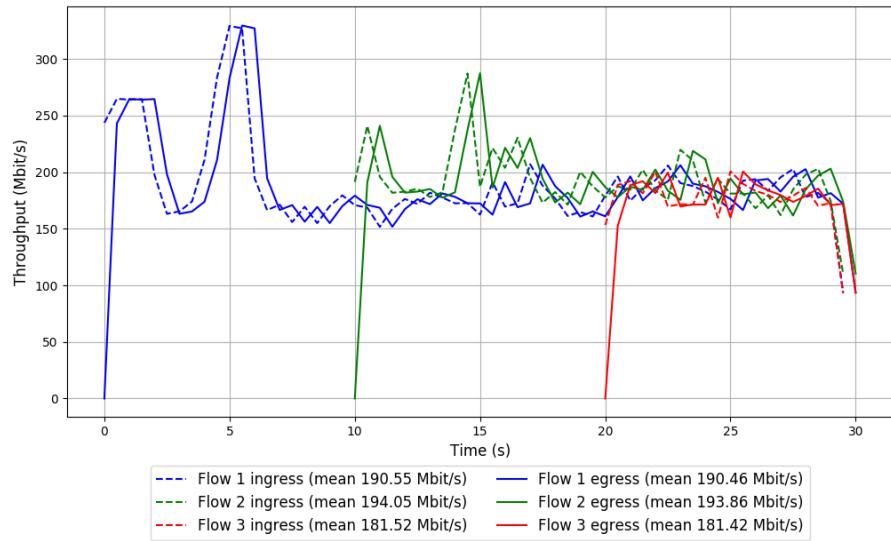


Run 3: Statistics of Indigo

```
Start at: 2019-05-30 01:51:59
End at: 2019-05-30 01:52:29
Local clock offset: 5.726 ms
Remote clock offset: 0.416 ms

# Below is generated by plot.py at 2019-05-30 03:24:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 377.94 Mbit/s
95th percentile per-packet one-way delay: 1.800 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 190.46 Mbit/s
95th percentile per-packet one-way delay: 1.636 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 193.86 Mbit/s
95th percentile per-packet one-way delay: 1.846 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 181.42 Mbit/s
95th percentile per-packet one-way delay: 2.066 ms
Loss rate: 0.06%
```

Run 3: Report of Indigo — Data Link

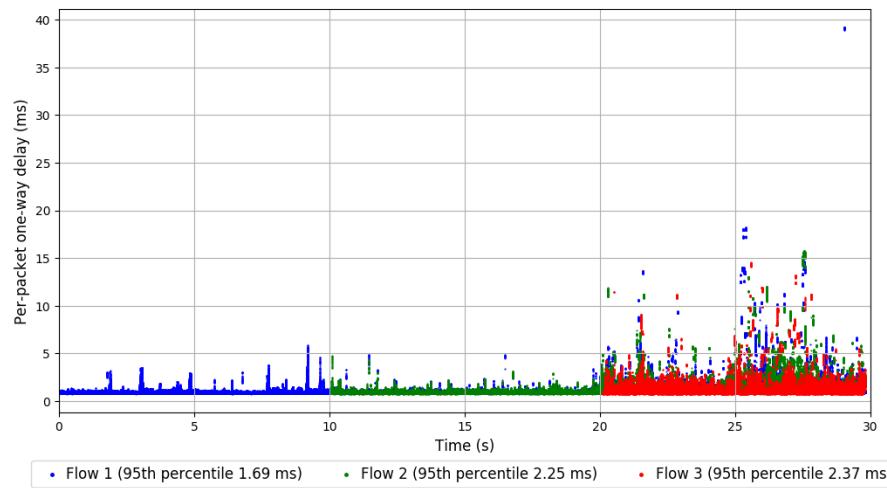
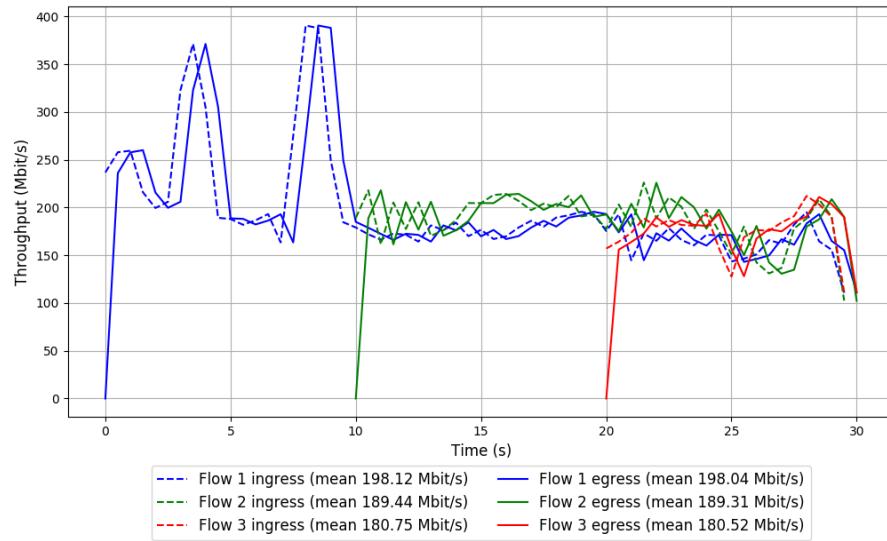


Run 4: Statistics of Indigo

```
Start at: 2019-05-30 02:21:45
End at: 2019-05-30 02:22:15
Local clock offset: 6.047 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2019-05-30 03:24:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 382.18 Mbit/s
95th percentile per-packet one-way delay: 2.045 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 198.04 Mbit/s
95th percentile per-packet one-way delay: 1.685 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 189.31 Mbit/s
95th percentile per-packet one-way delay: 2.253 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 180.52 Mbit/s
95th percentile per-packet one-way delay: 2.371 ms
Loss rate: 0.12%
```

Run 4: Report of Indigo — Data Link

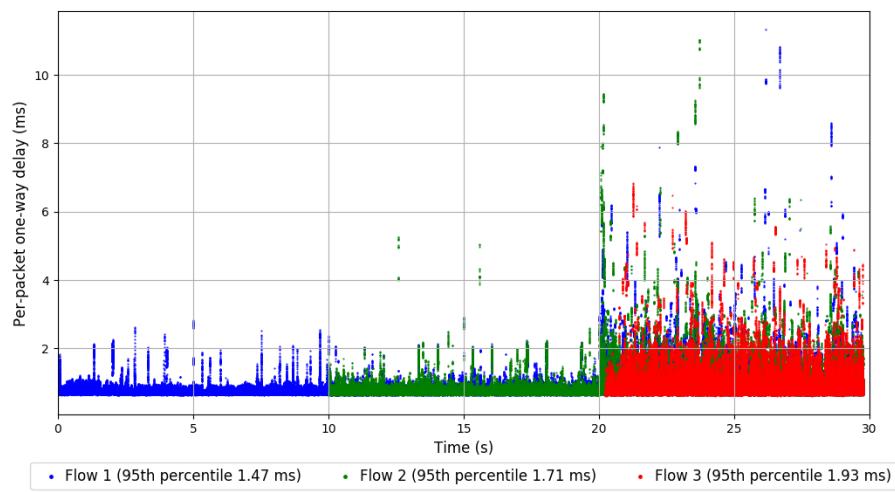
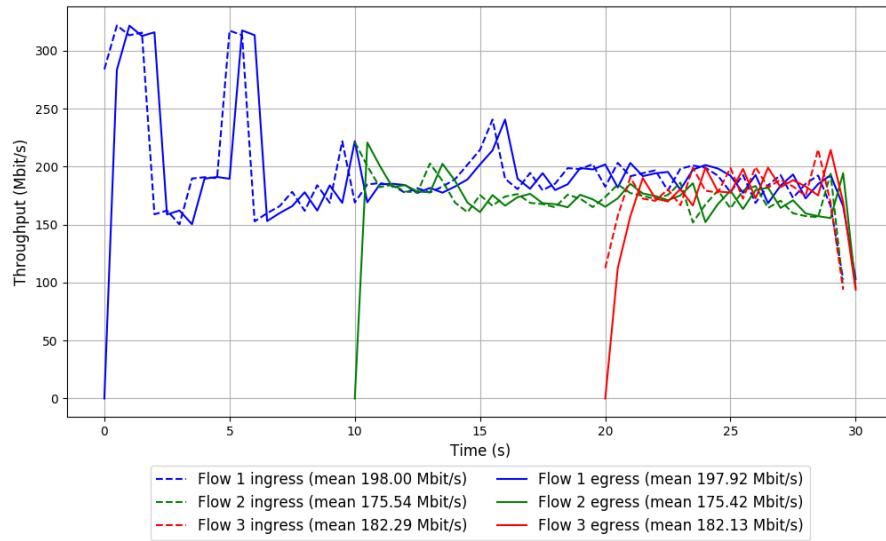


Run 5: Statistics of Indigo

```
Start at: 2019-05-30 02:51:36
End at: 2019-05-30 02:52:06
Local clock offset: 5.682 ms
Remote clock offset: 0.271 ms

# Below is generated by plot.py at 2019-05-30 03:26:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 372.80 Mbit/s
95th percentile per-packet one-way delay: 1.663 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 197.92 Mbit/s
95th percentile per-packet one-way delay: 1.467 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 175.42 Mbit/s
95th percentile per-packet one-way delay: 1.709 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 182.13 Mbit/s
95th percentile per-packet one-way delay: 1.933 ms
Loss rate: 0.09%
```

Run 5: Report of Indigo — Data Link

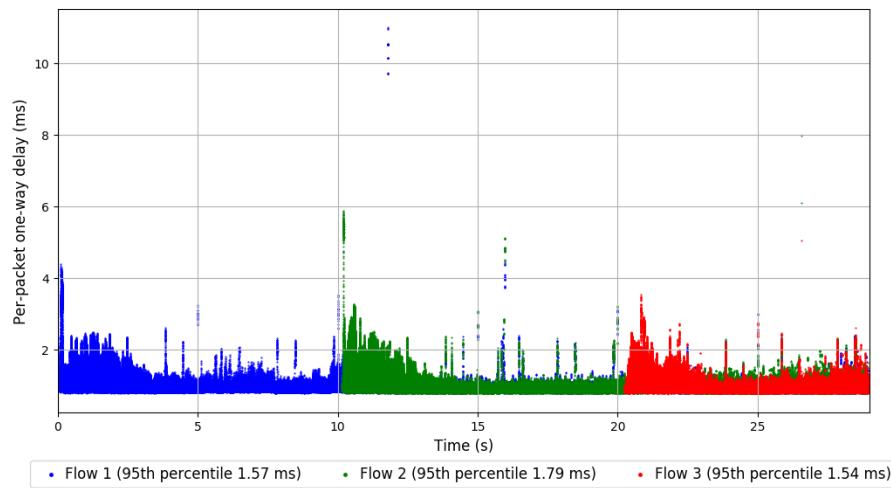
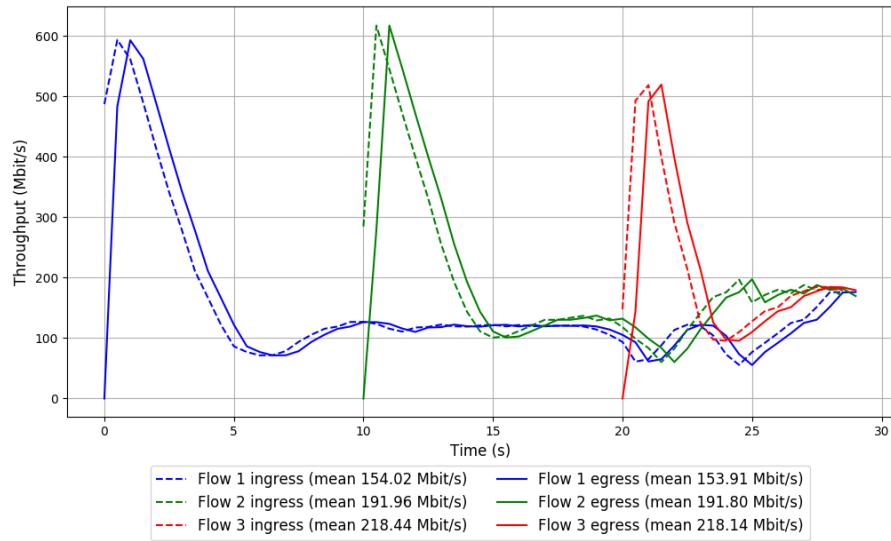


Run 1: Statistics of Indigo-MusesC3

```
Start at: 2019-05-30 00:32:38
End at: 2019-05-30 00:33:08
Local clock offset: 4.937 ms
Remote clock offset: 0.321 ms

# Below is generated by plot.py at 2019-05-30 03:26:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 344.28 Mbit/s
95th percentile per-packet one-way delay: 1.666 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 153.91 Mbit/s
95th percentile per-packet one-way delay: 1.571 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 191.80 Mbit/s
95th percentile per-packet one-way delay: 1.795 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 218.14 Mbit/s
95th percentile per-packet one-way delay: 1.545 ms
Loss rate: 0.13%
```

Run 1: Report of Indigo-MusesC3 — Data Link

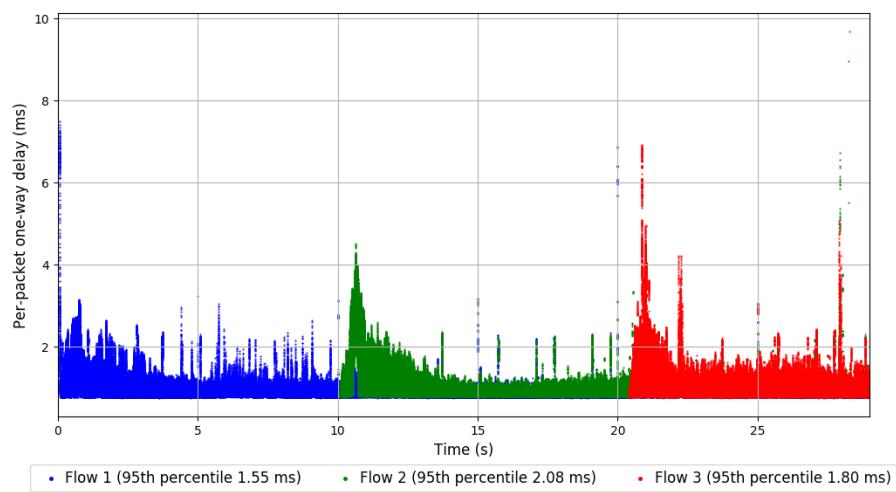
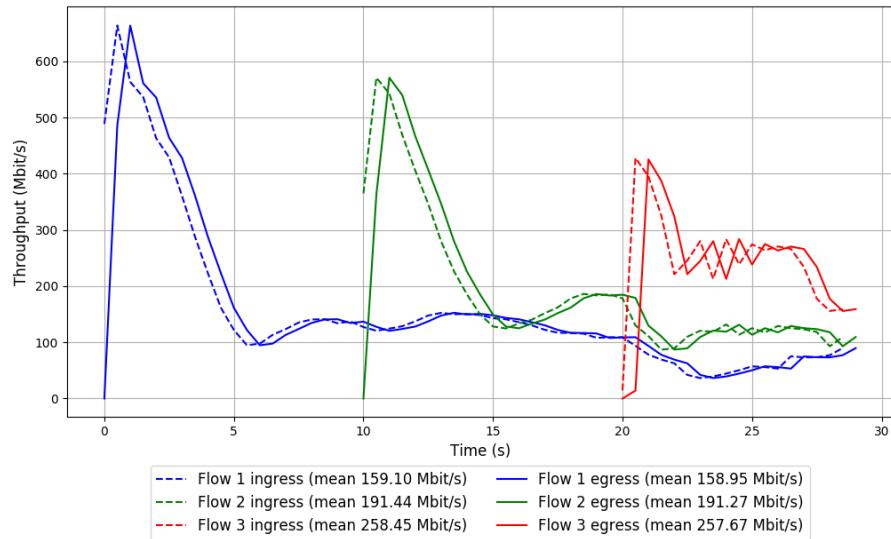


Run 2: Statistics of Indigo-MusesC3

```
Start at: 2019-05-30 01:02:20
End at: 2019-05-30 01:02:50
Local clock offset: 5.128 ms
Remote clock offset: 0.54 ms

# Below is generated by plot.py at 2019-05-30 03:27:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 360.30 Mbit/s
95th percentile per-packet one-way delay: 1.760 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 158.95 Mbit/s
95th percentile per-packet one-way delay: 1.554 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 191.27 Mbit/s
95th percentile per-packet one-way delay: 2.084 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 257.67 Mbit/s
95th percentile per-packet one-way delay: 1.799 ms
Loss rate: 0.30%
```

Run 2: Report of Indigo-MusesC3 — Data Link

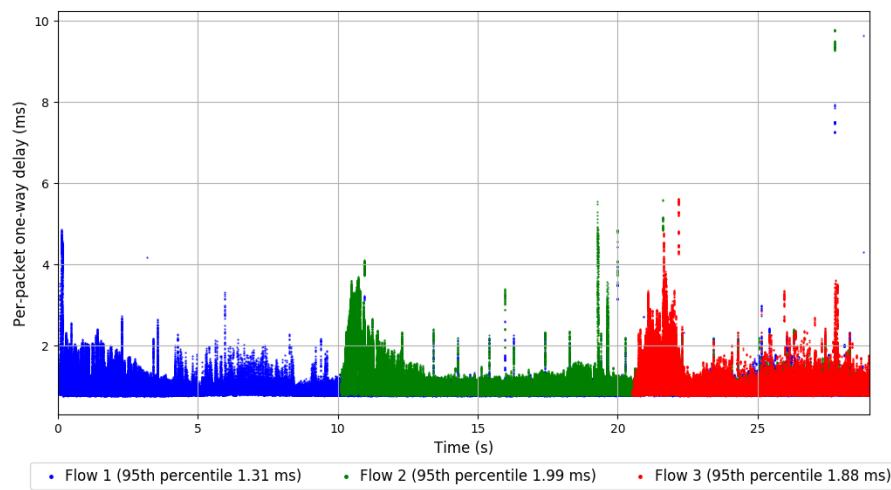
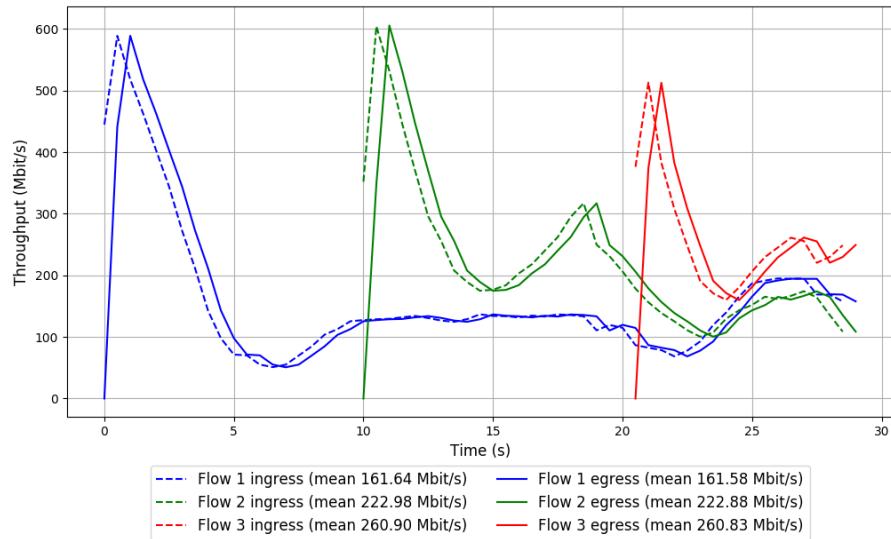


Run 3: Statistics of Indigo-MusesC3

```
Start at: 2019-05-30 01:32:18
End at: 2019-05-30 01:32:48
Local clock offset: 5.608 ms
Remote clock offset: 0.388 ms

# Below is generated by plot.py at 2019-05-30 03:28:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.23 Mbit/s
95th percentile per-packet one-way delay: 1.667 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 161.58 Mbit/s
95th percentile per-packet one-way delay: 1.315 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 222.88 Mbit/s
95th percentile per-packet one-way delay: 1.986 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 260.83 Mbit/s
95th percentile per-packet one-way delay: 1.876 ms
Loss rate: 0.03%
```

Run 3: Report of Indigo-MusesC3 — Data Link

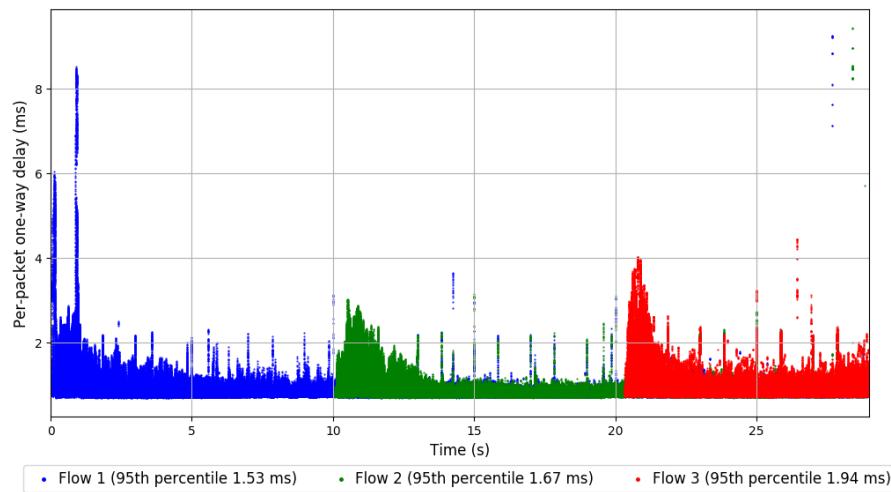
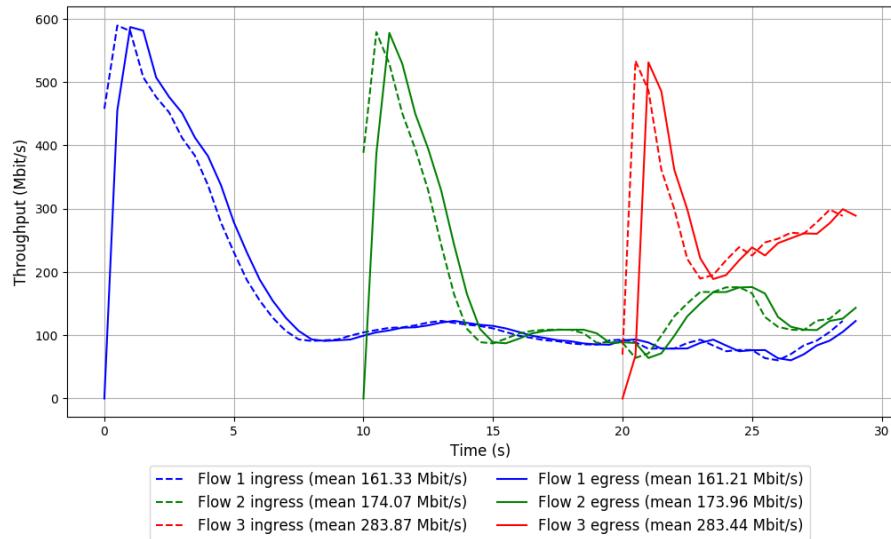


Run 4: Statistics of Indigo-MusesC3

```
Start at: 2019-05-30 02:02:08
End at: 2019-05-30 02:02:38
Local clock offset: 5.72 ms
Remote clock offset: 0.046 ms

# Below is generated by plot.py at 2019-05-30 03:28:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 359.60 Mbit/s
95th percentile per-packet one-way delay: 1.692 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 161.21 Mbit/s
95th percentile per-packet one-way delay: 1.531 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 173.96 Mbit/s
95th percentile per-packet one-way delay: 1.665 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 283.44 Mbit/s
95th percentile per-packet one-way delay: 1.940 ms
Loss rate: 0.17%
```

Run 4: Report of Indigo-MusesC3 — Data Link

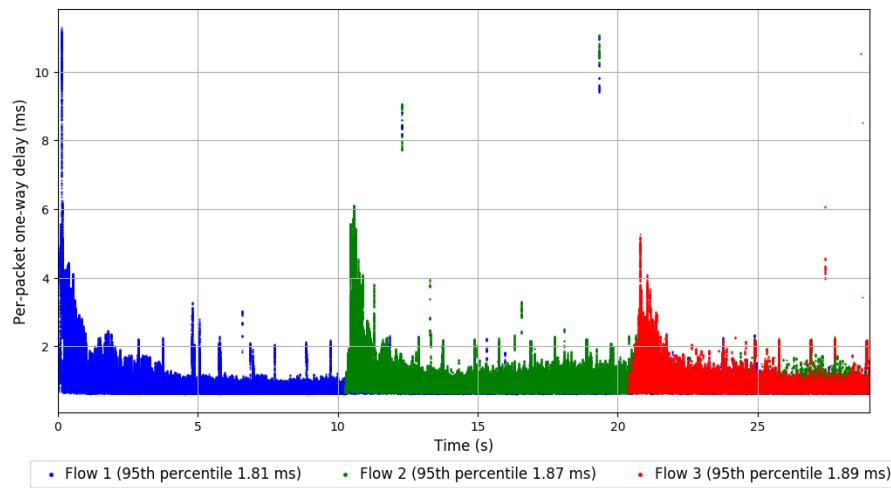
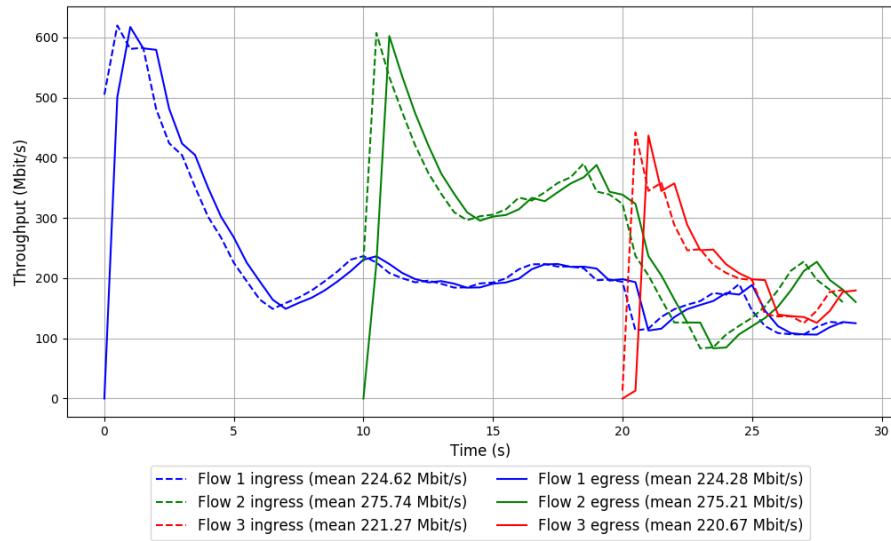


Run 5: Statistics of Indigo-MusesC3

```
Start at: 2019-05-30 02:32:02
End at: 2019-05-30 02:32:32
Local clock offset: 6.175 ms
Remote clock offset: 0.061 ms

# Below is generated by plot.py at 2019-05-30 03:29:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 467.61 Mbit/s
95th percentile per-packet one-way delay: 1.849 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 224.28 Mbit/s
95th percentile per-packet one-way delay: 1.812 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 275.21 Mbit/s
95th percentile per-packet one-way delay: 1.873 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 220.67 Mbit/s
95th percentile per-packet one-way delay: 1.892 ms
Loss rate: 0.27%
```

Run 5: Report of Indigo-MusesC3 — Data Link

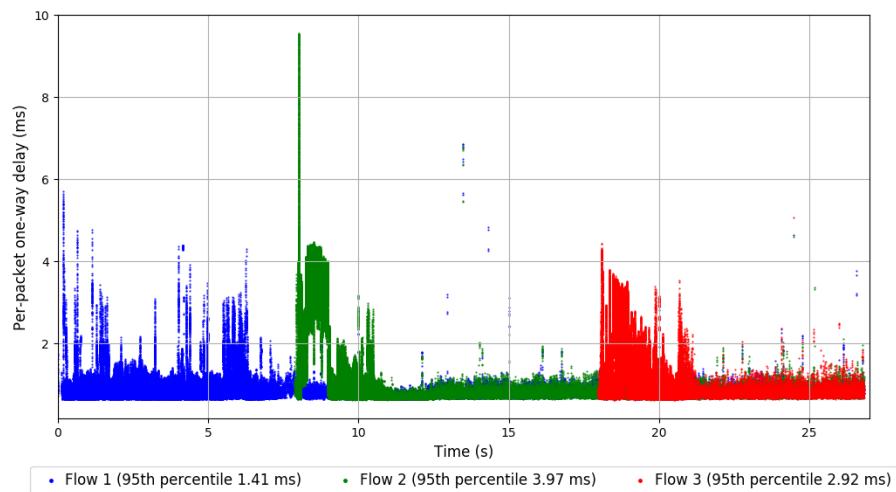
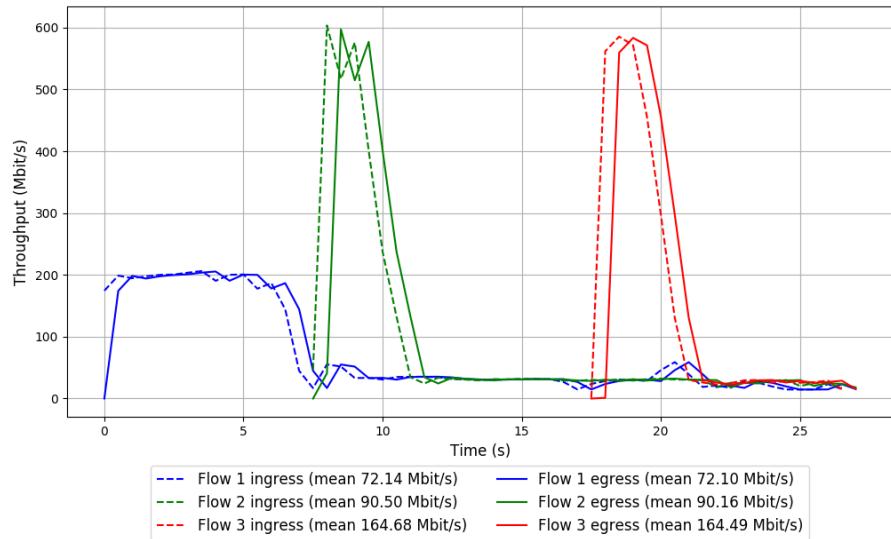


Run 1: Statistics of Indigo-MusesC5

```
Start at: 2019-05-30 00:25:27
End at: 2019-05-30 00:25:57
Local clock offset: 5.049 ms
Remote clock offset: 0.115 ms

# Below is generated by plot.py at 2019-05-30 03:29:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 190.09 Mbit/s
95th percentile per-packet one-way delay: 3.542 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 72.10 Mbit/s
95th percentile per-packet one-way delay: 1.409 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 90.16 Mbit/s
95th percentile per-packet one-way delay: 3.967 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 164.49 Mbit/s
95th percentile per-packet one-way delay: 2.921 ms
Loss rate: 0.12%
```

Run 1: Report of Indigo-MusesC5 — Data Link

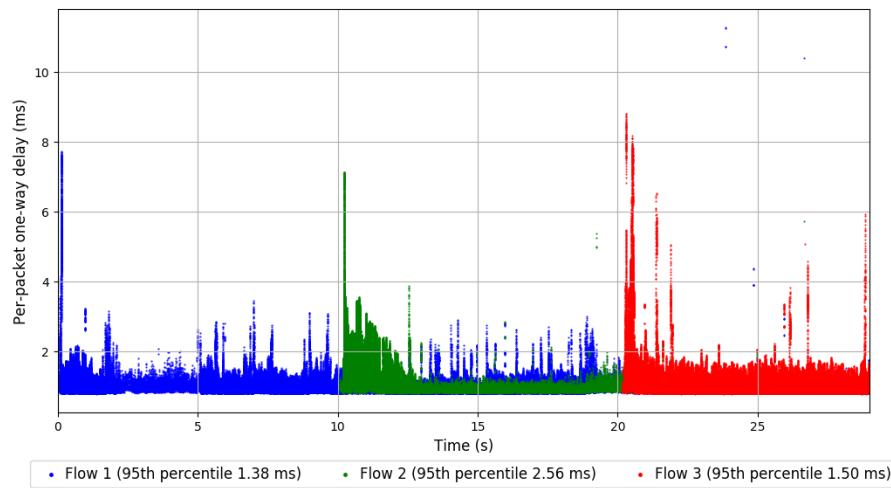
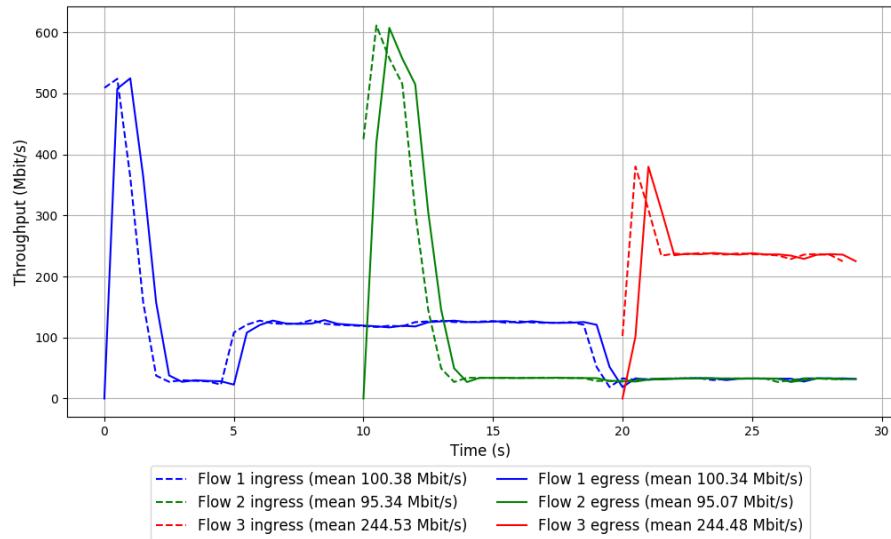


Run 2: Statistics of Indigo-MusesC5

```
Start at: 2019-05-30 00:55:16
End at: 2019-05-30 00:55:46
Local clock offset: 5.1 ms
Remote clock offset: 0.492 ms

# Below is generated by plot.py at 2019-05-30 03:29:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 236.78 Mbit/s
95th percentile per-packet one-way delay: 2.048 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 100.34 Mbit/s
95th percentile per-packet one-way delay: 1.376 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 95.07 Mbit/s
95th percentile per-packet one-way delay: 2.558 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 244.48 Mbit/s
95th percentile per-packet one-way delay: 1.501 ms
Loss rate: 0.02%
```

Run 2: Report of Indigo-MusesC5 — Data Link

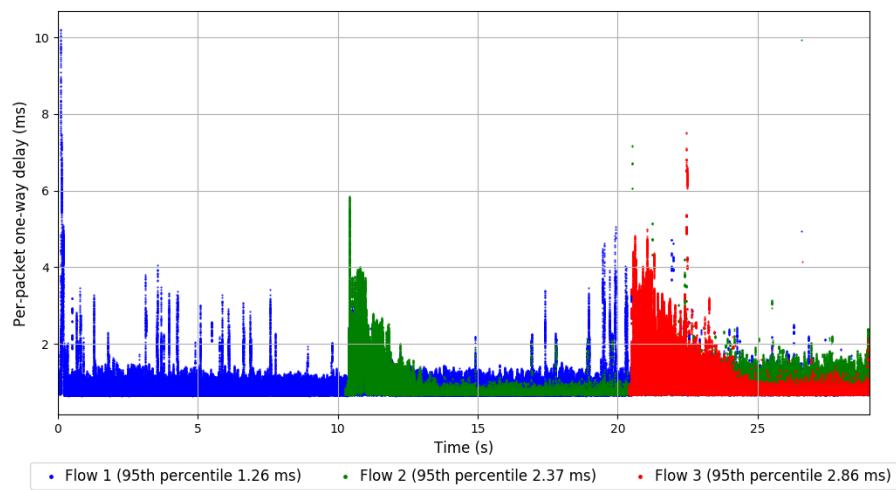
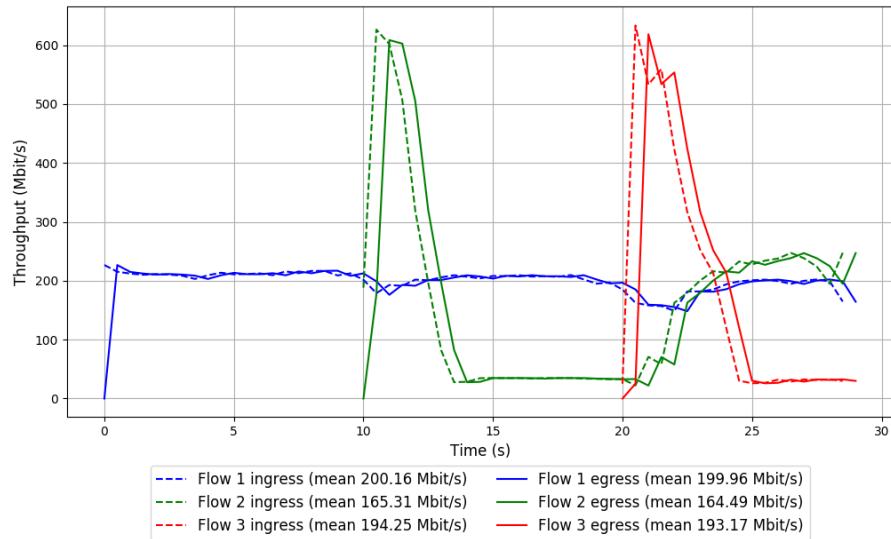


Run 3: Statistics of Indigo-MusesC5

```
Start at: 2019-05-30 01:25:02
End at: 2019-05-30 01:25:32
Local clock offset: 5.536 ms
Remote clock offset: 0.366 ms

# Below is generated by plot.py at 2019-05-30 03:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 363.66 Mbit/s
95th percentile per-packet one-way delay: 2.115 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 199.96 Mbit/s
95th percentile per-packet one-way delay: 1.260 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 164.49 Mbit/s
95th percentile per-packet one-way delay: 2.369 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 193.17 Mbit/s
95th percentile per-packet one-way delay: 2.859 ms
Loss rate: 0.55%
```

Run 3: Report of Indigo-MusesC5 — Data Link

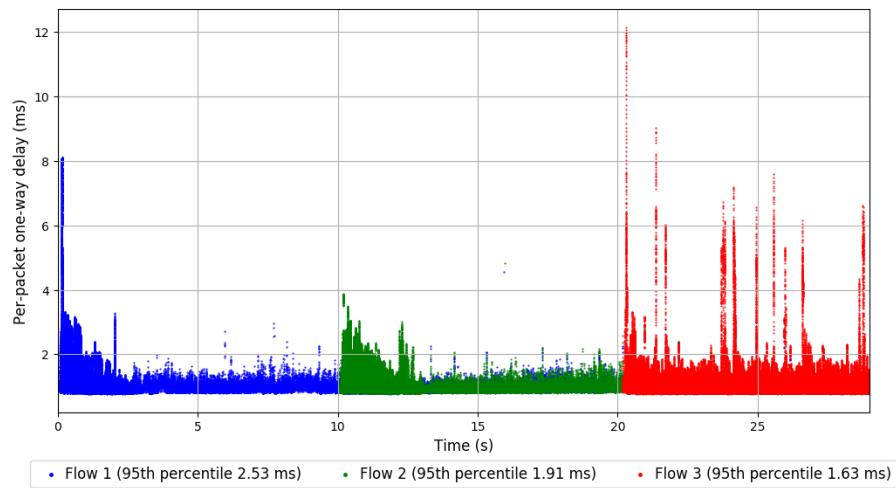
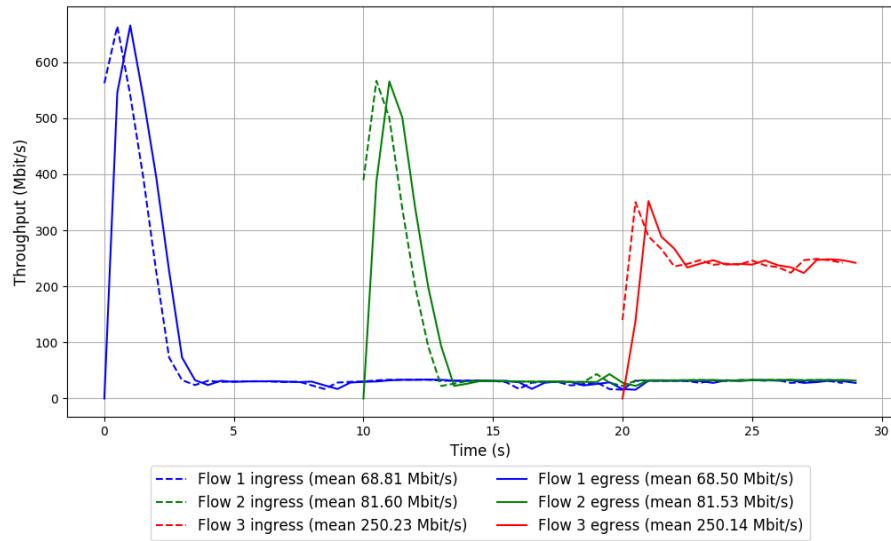


Run 4: Statistics of Indigo-MusesC5

```
Start at: 2019-05-30 01:54:59
End at: 2019-05-30 01:55:29
Local clock offset: 5.727 ms
Remote clock offset: 0.326 ms

# Below is generated by plot.py at 2019-05-30 03:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 197.81 Mbit/s
95th percentile per-packet one-way delay: 2.049 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 68.50 Mbit/s
95th percentile per-packet one-way delay: 2.529 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 81.53 Mbit/s
95th percentile per-packet one-way delay: 1.908 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 250.14 Mbit/s
95th percentile per-packet one-way delay: 1.632 ms
Loss rate: 0.04%
```

Run 4: Report of Indigo-MusesC5 — Data Link

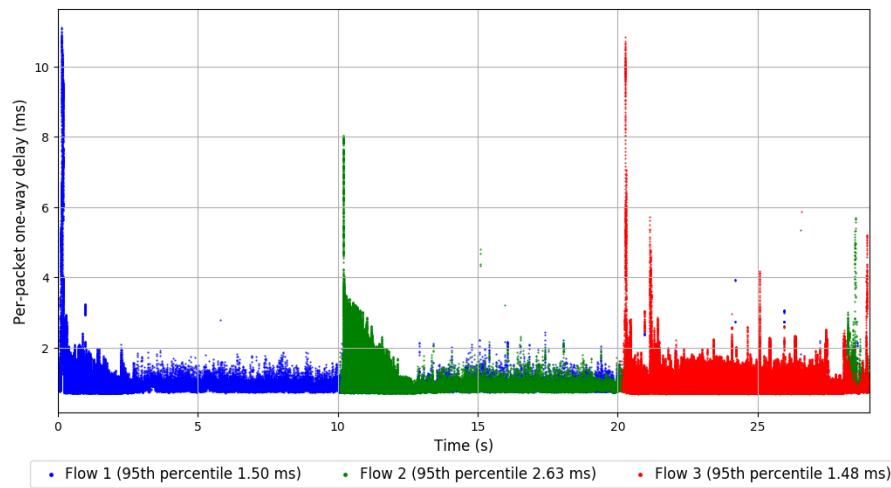
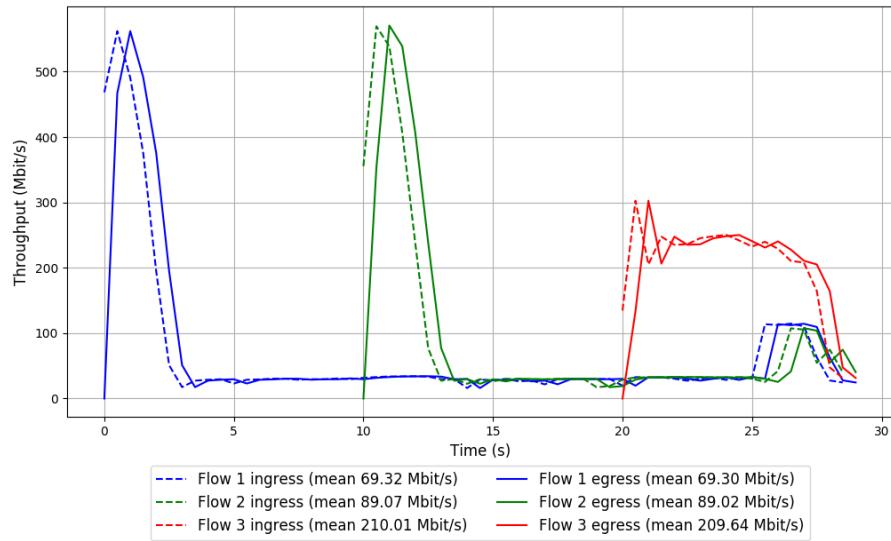


Run 5: Statistics of Indigo-MusesC5

```
Start at: 2019-05-30 02:24:47
End at: 2019-05-30 02:25:17
Local clock offset: 6.116 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2019-05-30 03:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 191.24 Mbit/s
95th percentile per-packet one-way delay: 1.972 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 69.30 Mbit/s
95th percentile per-packet one-way delay: 1.500 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 89.02 Mbit/s
95th percentile per-packet one-way delay: 2.626 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 209.64 Mbit/s
95th percentile per-packet one-way delay: 1.484 ms
Loss rate: 0.18%
```

Run 5: Report of Indigo-MusesC5 — Data Link

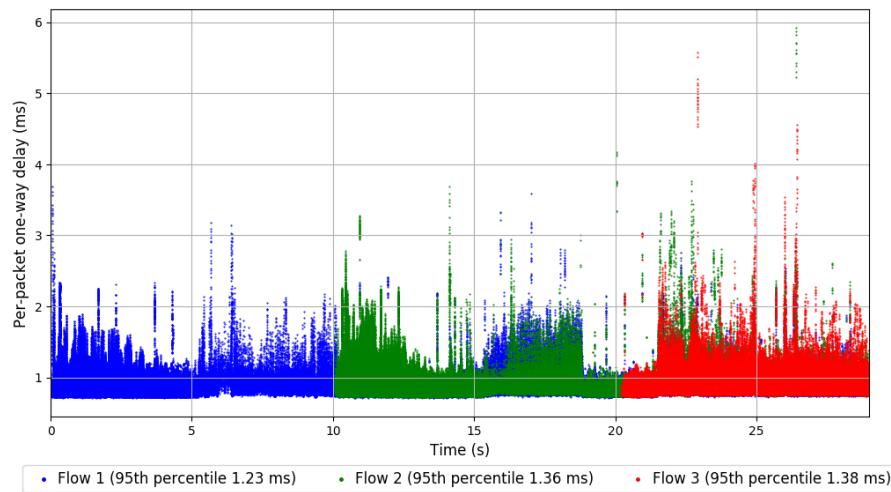
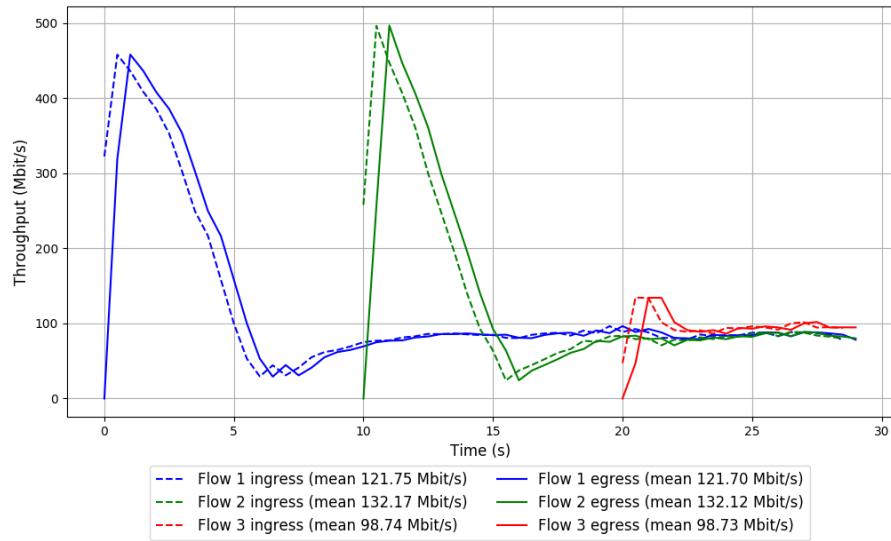


Run 1: Statistics of Indigo-MusesD

```
Start at: 2019-05-30 00:43:51
End at: 2019-05-30 00:44:21
Local clock offset: 5.024 ms
Remote clock offset: 0.522 ms

# Below is generated by plot.py at 2019-05-30 03:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 237.85 Mbit/s
95th percentile per-packet one-way delay: 1.300 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 121.70 Mbit/s
95th percentile per-packet one-way delay: 1.225 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 132.12 Mbit/s
95th percentile per-packet one-way delay: 1.363 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 98.73 Mbit/s
95th percentile per-packet one-way delay: 1.384 ms
Loss rate: 0.01%
```

Run 1: Report of Indigo-MusesD — Data Link

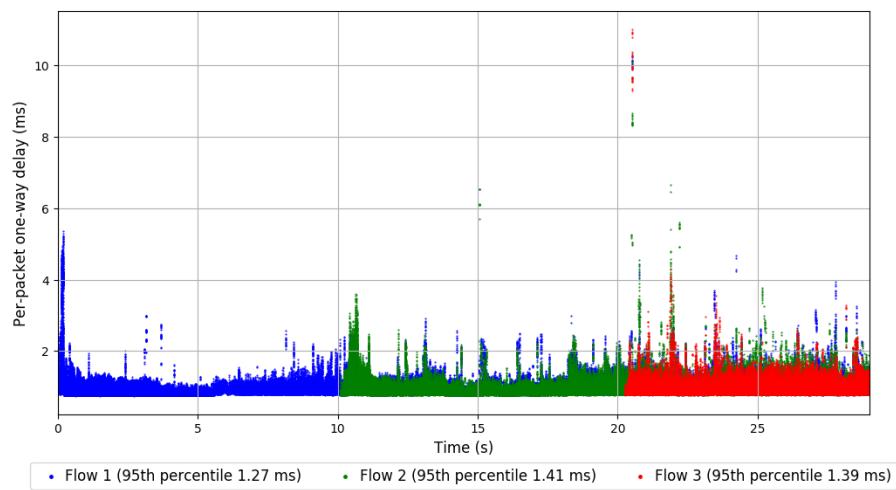
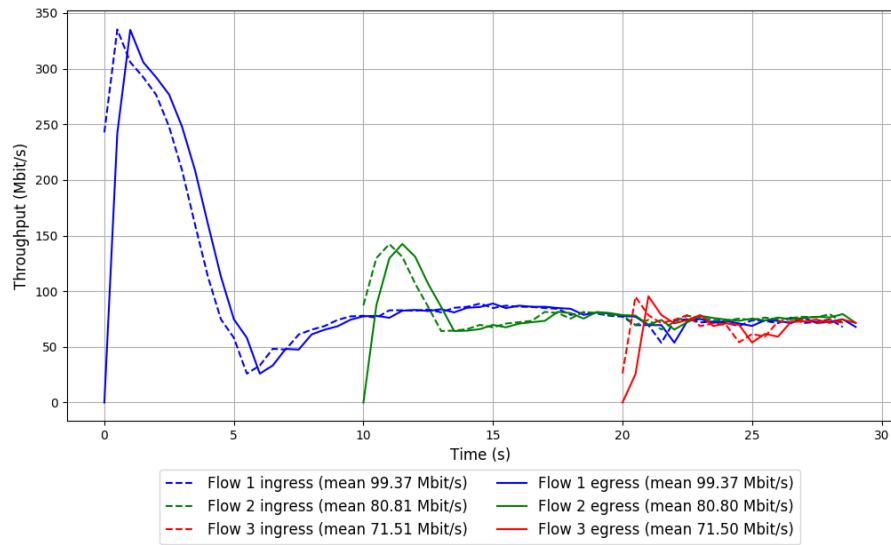


Run 2: Statistics of Indigo-MusesD

```
Start at: 2019-05-30 01:13:36
End at: 2019-05-30 01:14:06
Local clock offset: 5.343 ms
Remote clock offset: 0.708 ms

# Below is generated by plot.py at 2019-05-30 03:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 173.52 Mbit/s
95th percentile per-packet one-way delay: 1.333 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 99.37 Mbit/s
95th percentile per-packet one-way delay: 1.271 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 80.80 Mbit/s
95th percentile per-packet one-way delay: 1.411 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 71.50 Mbit/s
95th percentile per-packet one-way delay: 1.385 ms
Loss rate: 0.01%
```

Run 2: Report of Indigo-MusesD — Data Link

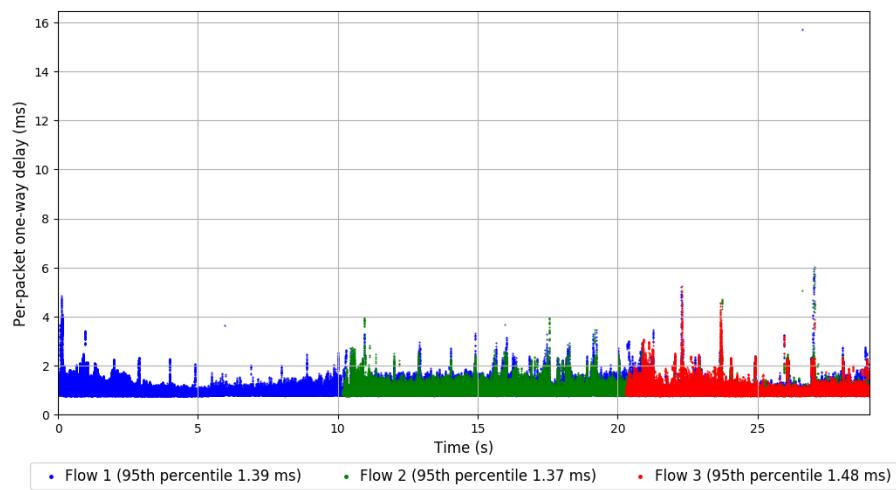
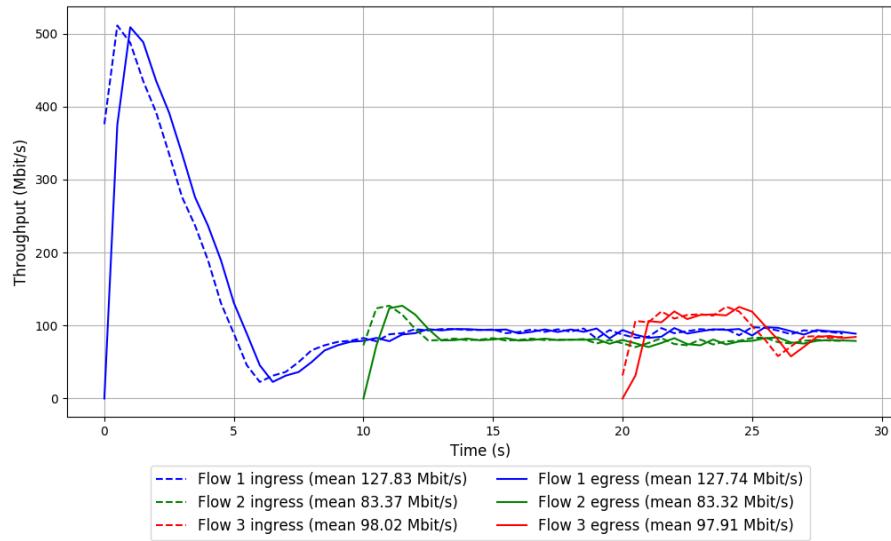


Run 3: Statistics of Indigo-MusesD

```
Start at: 2019-05-30 01:43:36
End at: 2019-05-30 01:44:06
Local clock offset: 5.667 ms
Remote clock offset: 0.394 ms

# Below is generated by plot.py at 2019-05-30 03:30:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 211.29 Mbit/s
95th percentile per-packet one-way delay: 1.395 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 127.74 Mbit/s
95th percentile per-packet one-way delay: 1.394 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 83.32 Mbit/s
95th percentile per-packet one-way delay: 1.368 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 97.91 Mbit/s
95th percentile per-packet one-way delay: 1.482 ms
Loss rate: 0.11%
```

Run 3: Report of Indigo-MusesD — Data Link

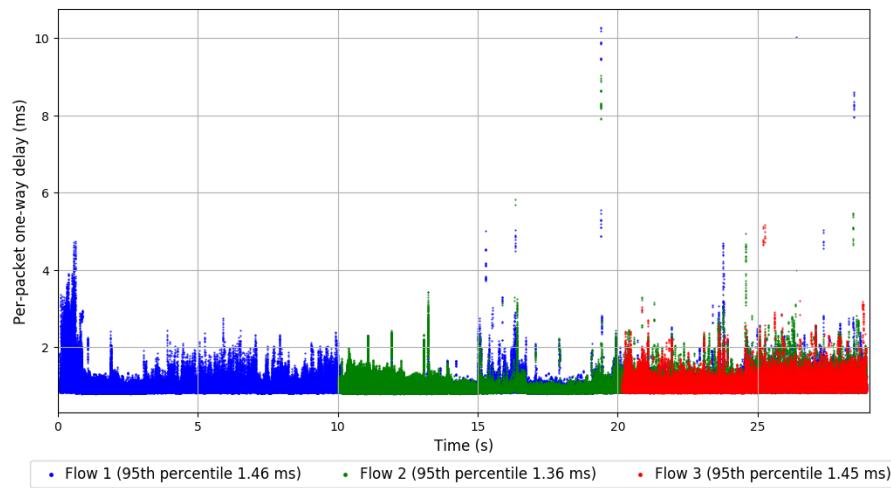
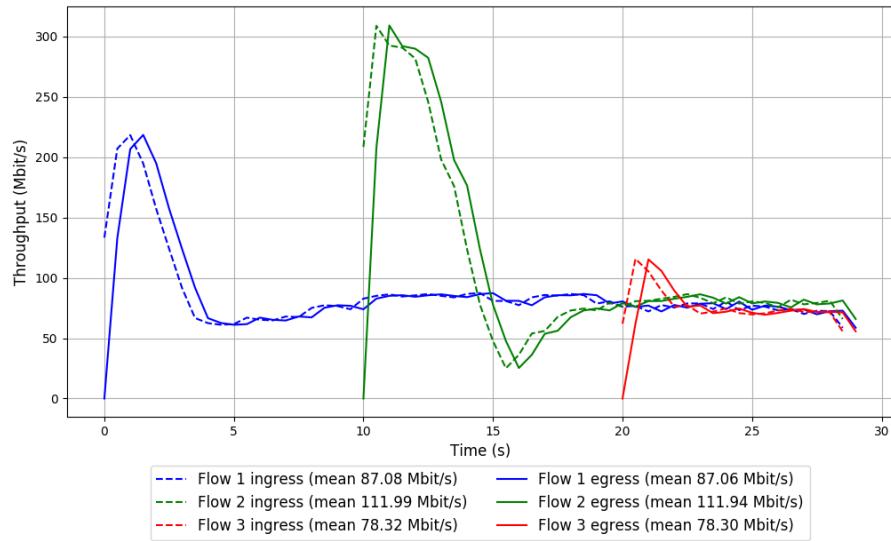


Run 4: Statistics of Indigo-MusesD

```
Start at: 2019-05-30 02:13:22
End at: 2019-05-30 02:13:52
Local clock offset: 5.896 ms
Remote clock offset: 0.041 ms

# Below is generated by plot.py at 2019-05-30 03:30:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 183.94 Mbit/s
95th percentile per-packet one-way delay: 1.417 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 87.06 Mbit/s
95th percentile per-packet one-way delay: 1.459 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 111.94 Mbit/s
95th percentile per-packet one-way delay: 1.364 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 78.30 Mbit/s
95th percentile per-packet one-way delay: 1.446 ms
Loss rate: 0.02%
```

Run 4: Report of Indigo-MusesD — Data Link

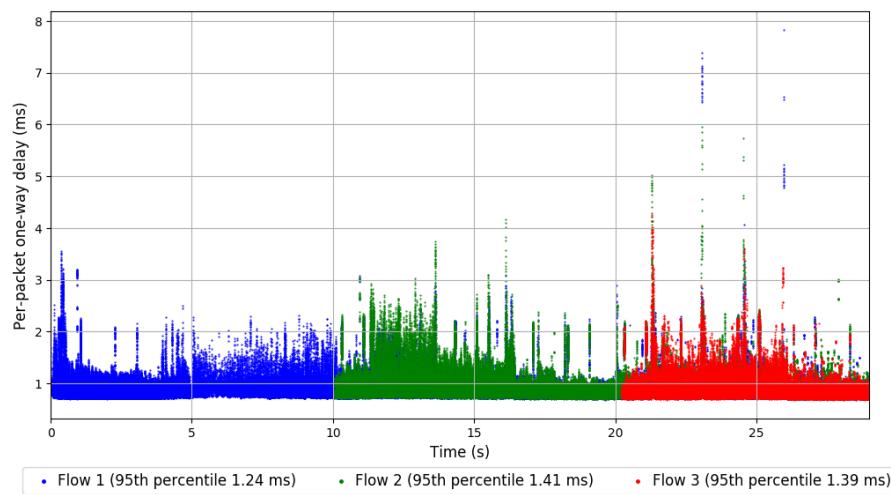
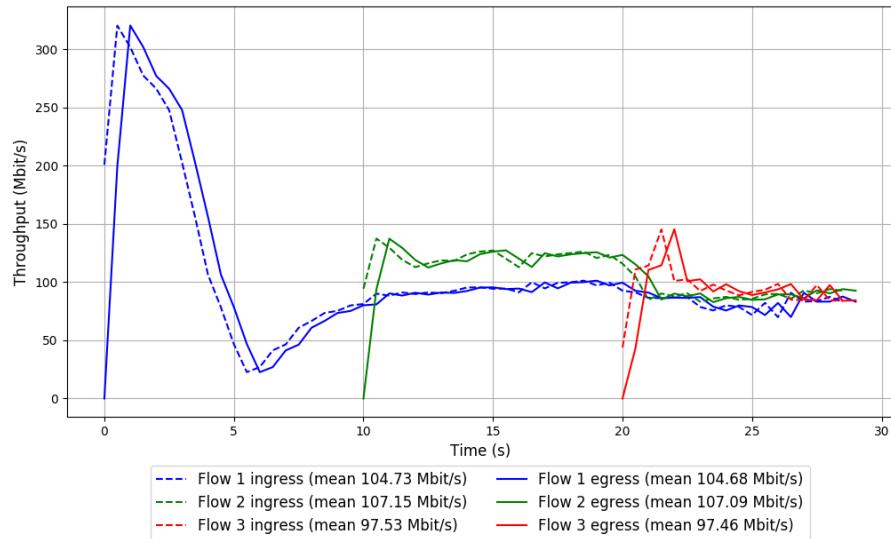


Run 5: Statistics of Indigo-MusesD

```
Start at: 2019-05-30 02:43:13
End at: 2019-05-30 02:43:43
Local clock offset: 5.936 ms
Remote clock offset: 0.377 ms

# Below is generated by plot.py at 2019-05-30 03:31:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 204.09 Mbit/s
95th percentile per-packet one-way delay: 1.318 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 104.68 Mbit/s
95th percentile per-packet one-way delay: 1.242 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 107.09 Mbit/s
95th percentile per-packet one-way delay: 1.412 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 1.390 ms
Loss rate: 0.07%
```

Run 5: Report of Indigo-MusesD — Data Link

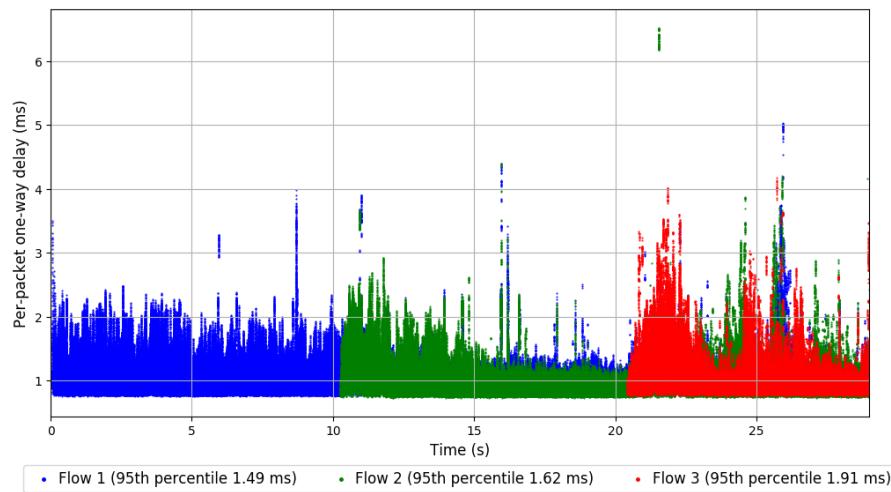
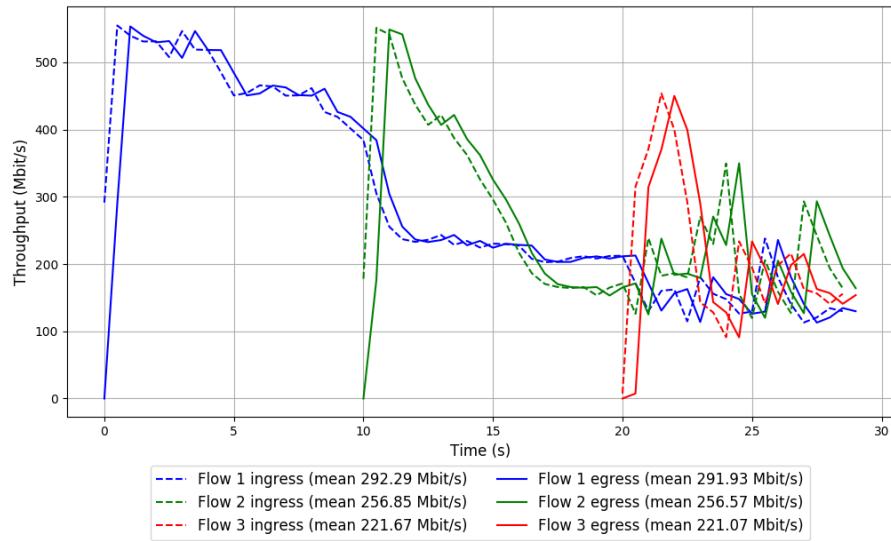


Run 1: Statistics of Indigo-MusesT

```
Start at: 2019-05-30 00:53:45
End at: 2019-05-30 00:54:15
Local clock offset: 5.128 ms
Remote clock offset: 0.467 ms

# Below is generated by plot.py at 2019-05-30 03:34:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 523.25 Mbit/s
95th percentile per-packet one-way delay: 1.596 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 291.93 Mbit/s
95th percentile per-packet one-way delay: 1.492 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 256.57 Mbit/s
95th percentile per-packet one-way delay: 1.619 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 221.07 Mbit/s
95th percentile per-packet one-way delay: 1.905 ms
Loss rate: 0.26%
```

Run 1: Report of Indigo-MusesT — Data Link

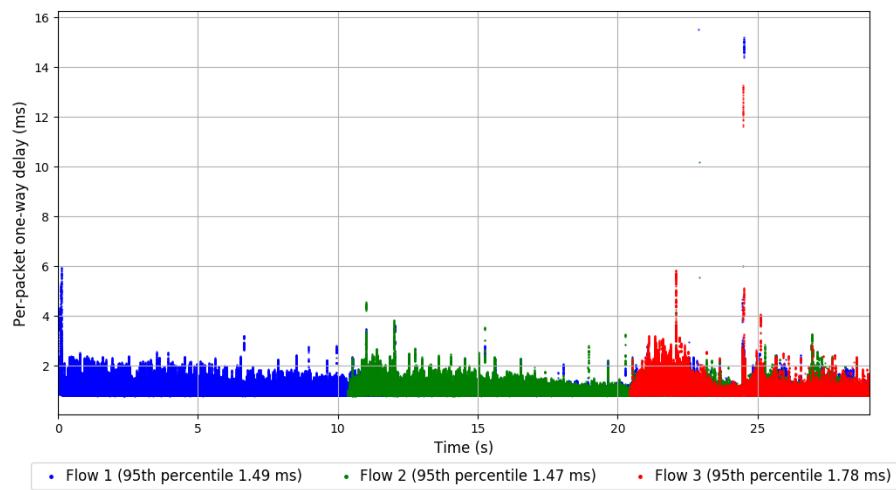
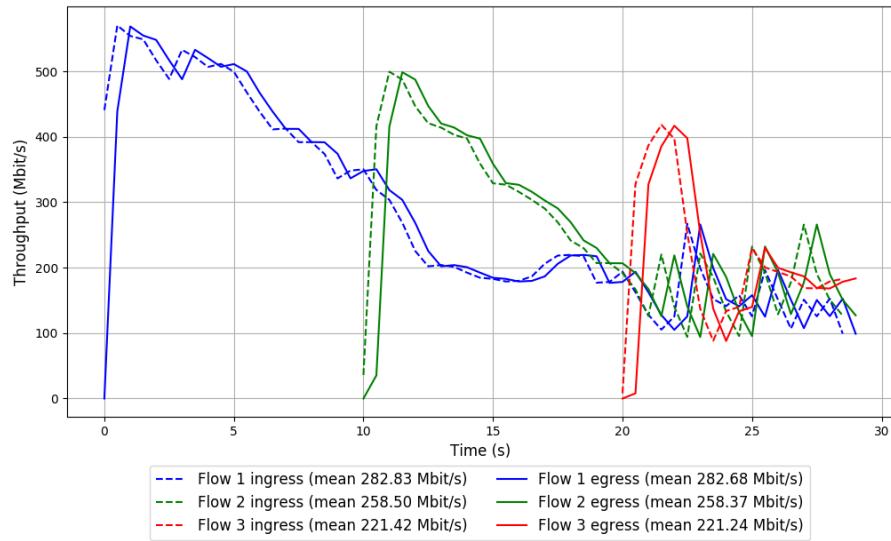


Run 2: Statistics of Indigo-MusesT

```
Start at: 2019-05-30 01:23:31
End at: 2019-05-30 01:24:01
Local clock offset: 5.512 ms
Remote clock offset: 0.516 ms

# Below is generated by plot.py at 2019-05-30 03:35:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 514.31 Mbit/s
95th percentile per-packet one-way delay: 1.524 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 282.68 Mbit/s
95th percentile per-packet one-way delay: 1.493 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 258.37 Mbit/s
95th percentile per-packet one-way delay: 1.469 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 221.24 Mbit/s
95th percentile per-packet one-way delay: 1.782 ms
Loss rate: 0.08%
```

Run 2: Report of Indigo-MusesT — Data Link

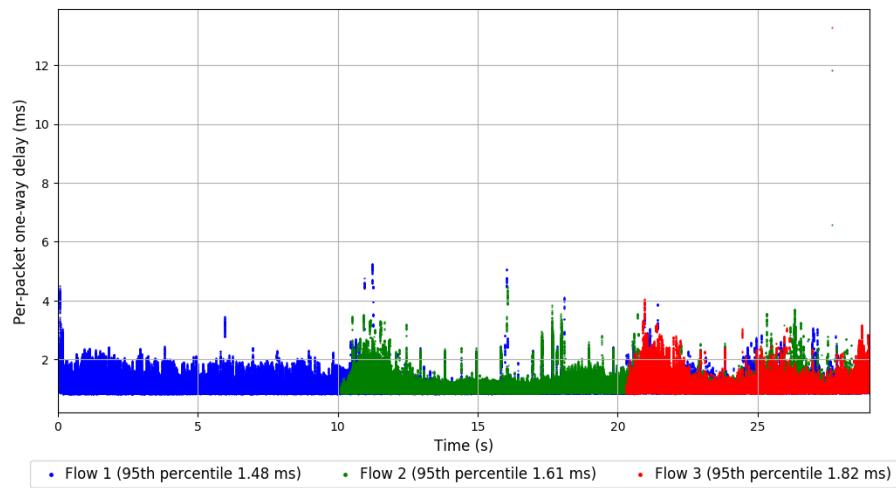
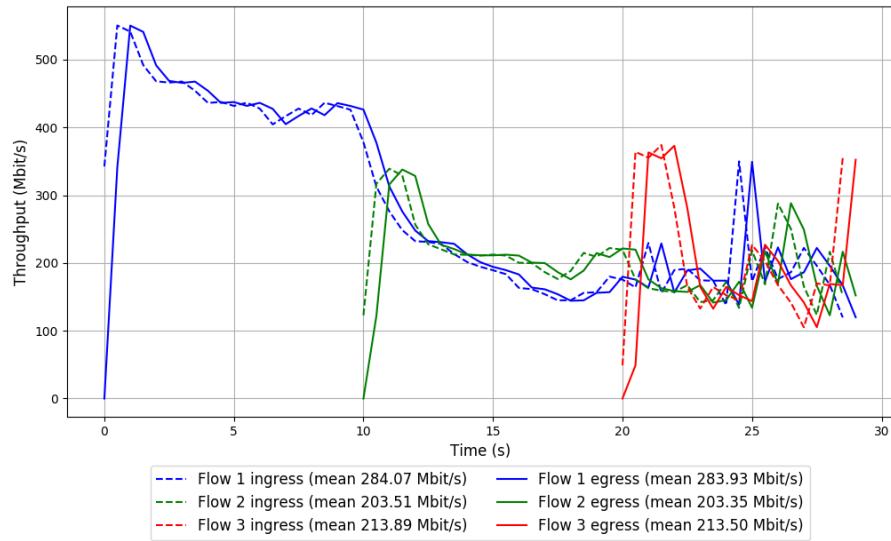


Run 3: Statistics of Indigo-MusesT

```
Start at: 2019-05-30 01:53:29
End at: 2019-05-30 01:53:59
Local clock offset: 5.7 ms
Remote clock offset: 0.402 ms

# Below is generated by plot.py at 2019-05-30 03:35:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 480.39 Mbit/s
95th percentile per-packet one-way delay: 1.571 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 283.93 Mbit/s
95th percentile per-packet one-way delay: 1.478 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 203.35 Mbit/s
95th percentile per-packet one-way delay: 1.611 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 213.50 Mbit/s
95th percentile per-packet one-way delay: 1.825 ms
Loss rate: 0.18%
```

Run 3: Report of Indigo-MusesT — Data Link

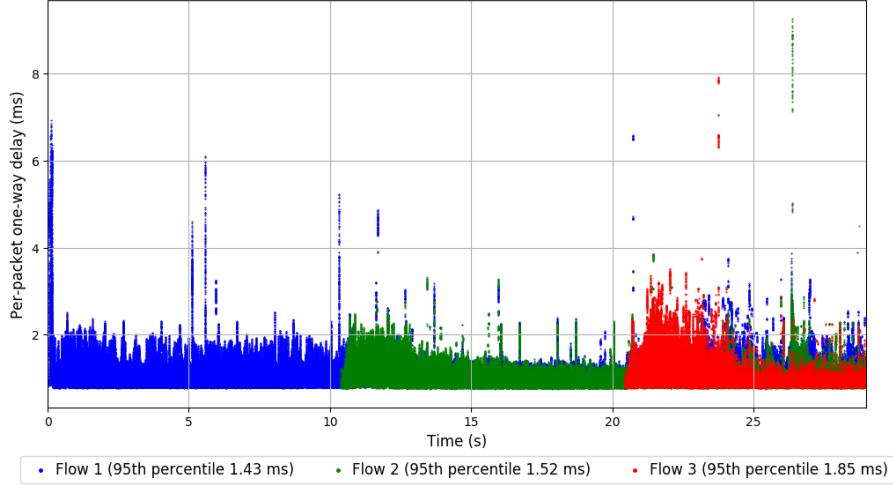
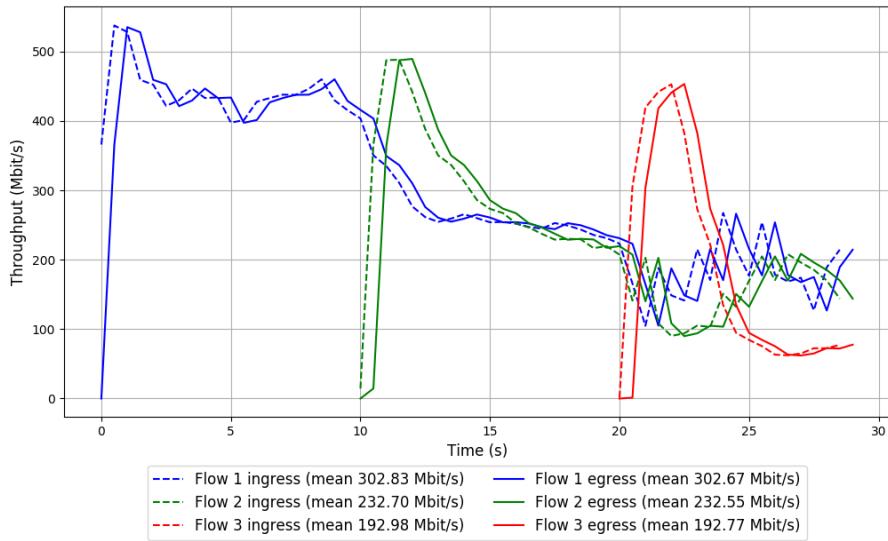


Run 4: Statistics of Indigo-MusesT

```
Start at: 2019-05-30 02:23:16
End at: 2019-05-30 02:23:46
Local clock offset: 6.082 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2019-05-30 03:35:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 508.75 Mbit/s
95th percentile per-packet one-way delay: 1.517 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 302.67 Mbit/s
95th percentile per-packet one-way delay: 1.433 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 232.55 Mbit/s
95th percentile per-packet one-way delay: 1.516 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 192.77 Mbit/s
95th percentile per-packet one-way delay: 1.851 ms
Loss rate: 0.11%
```

Run 4: Report of Indigo-MusesT — Data Link

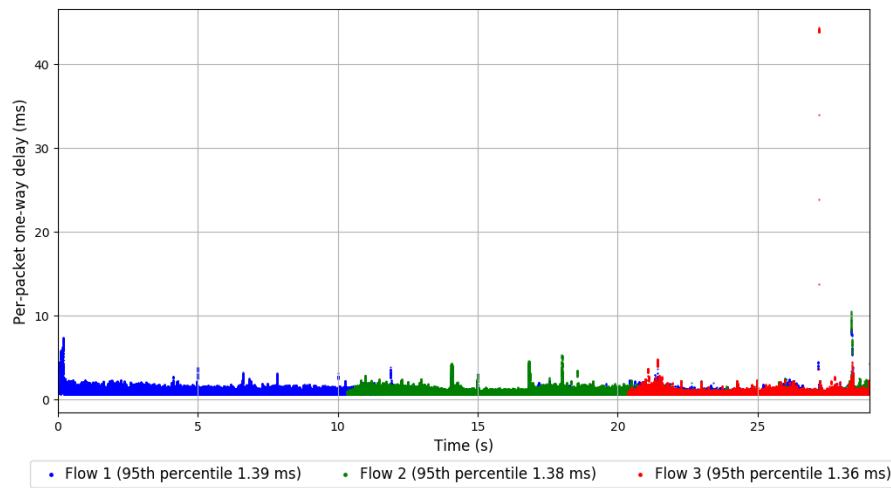
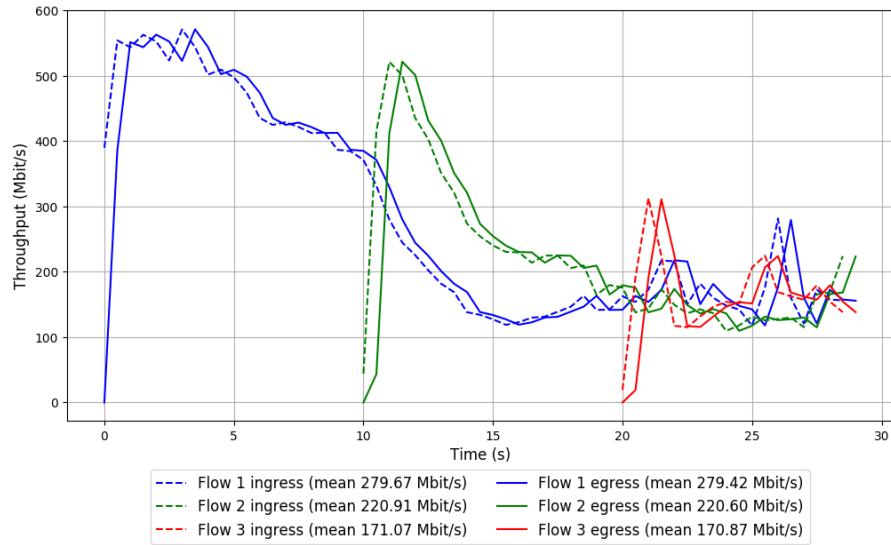


Run 5: Statistics of Indigo-MusesT

```
Start at: 2019-05-30 02:53:06
End at: 2019-05-30 02:53:36
Local clock offset: 5.652 ms
Remote clock offset: 0.321 ms

# Below is generated by plot.py at 2019-05-30 03:35:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 472.44 Mbit/s
95th percentile per-packet one-way delay: 1.383 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 279.42 Mbit/s
95th percentile per-packet one-way delay: 1.389 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 220.60 Mbit/s
95th percentile per-packet one-way delay: 1.380 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 170.87 Mbit/s
95th percentile per-packet one-way delay: 1.360 ms
Loss rate: 0.11%
```

Run 5: Report of Indigo-MusesT — Data Link

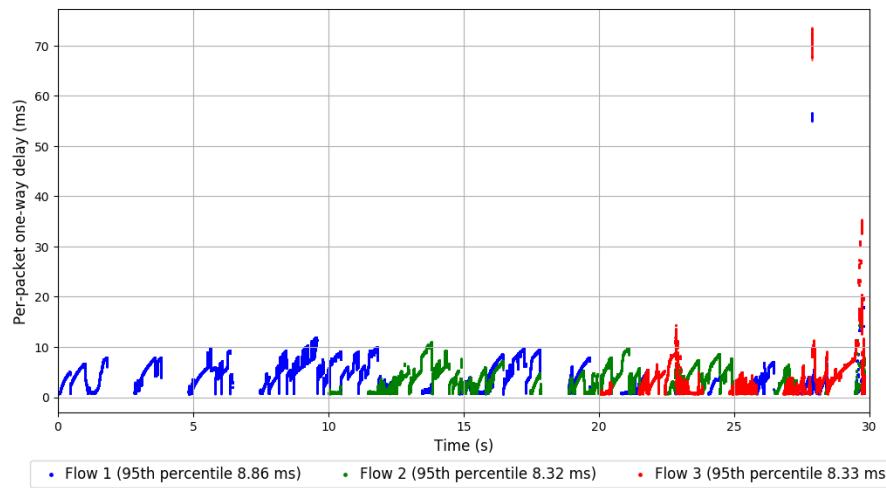
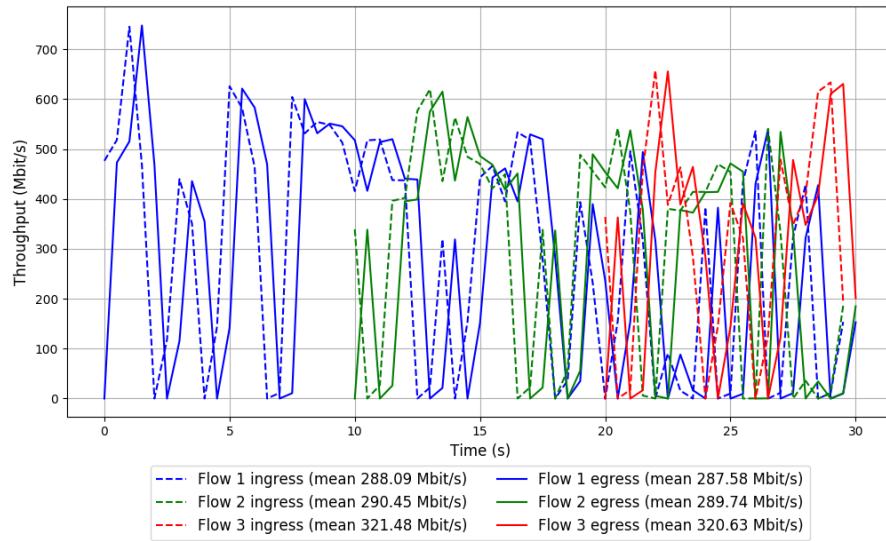


Run 1: Statistics of LEDBAT

```
Start at: 2019-05-30 00:36:41
End at: 2019-05-30 00:37:11
Local clock offset: 4.928 ms
Remote clock offset: 0.323 ms

# Below is generated by plot.py at 2019-05-30 03:37:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 585.40 Mbit/s
95th percentile per-packet one-way delay: 8.654 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 287.58 Mbit/s
95th percentile per-packet one-way delay: 8.861 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 289.74 Mbit/s
95th percentile per-packet one-way delay: 8.319 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 320.63 Mbit/s
95th percentile per-packet one-way delay: 8.334 ms
Loss rate: 0.25%
```

Run 1: Report of LEDBAT — Data Link

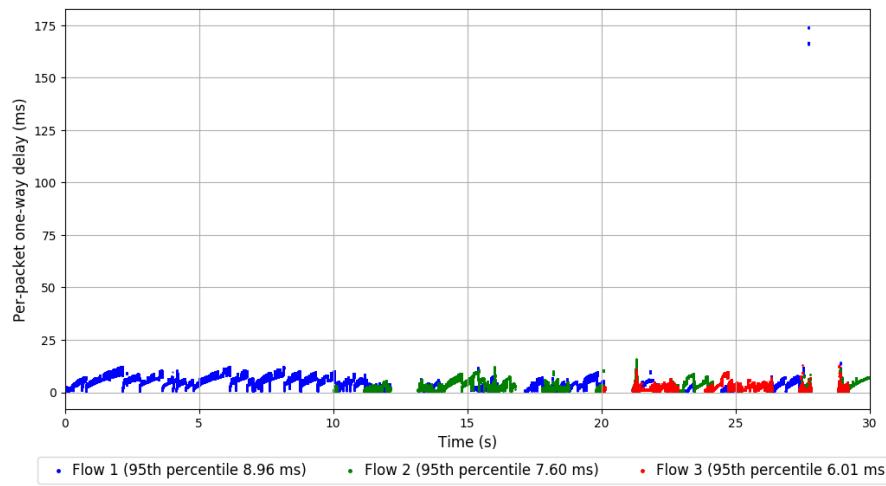
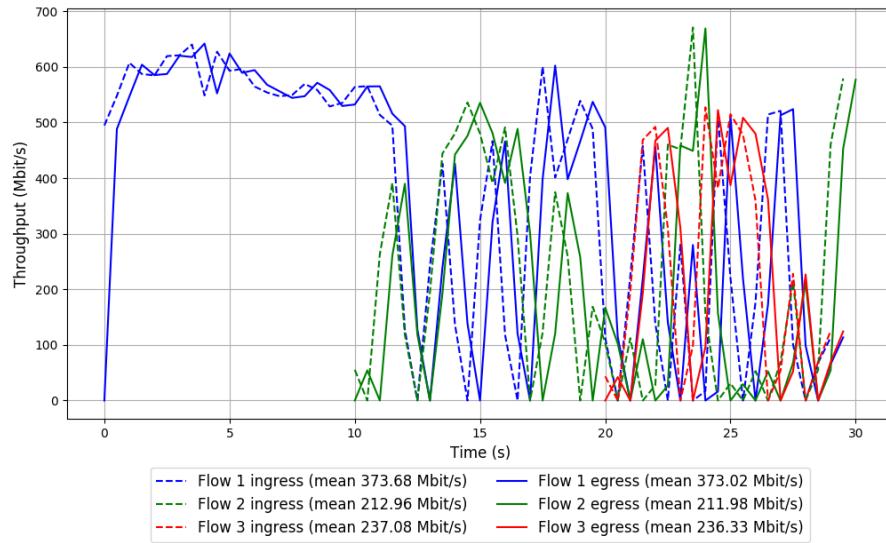


Run 2: Statistics of LEDBAT

```
Start at: 2019-05-30 01:06:24
End at: 2019-05-30 01:06:54
Local clock offset: 5.13 ms
Remote clock offset: 0.585 ms

# Below is generated by plot.py at 2019-05-30 03:37:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 576.48 Mbit/s
95th percentile per-packet one-way delay: 8.491 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 373.02 Mbit/s
95th percentile per-packet one-way delay: 8.958 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 211.98 Mbit/s
95th percentile per-packet one-way delay: 7.597 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 236.33 Mbit/s
95th percentile per-packet one-way delay: 6.010 ms
Loss rate: 0.32%
```

Run 2: Report of LEDBAT — Data Link

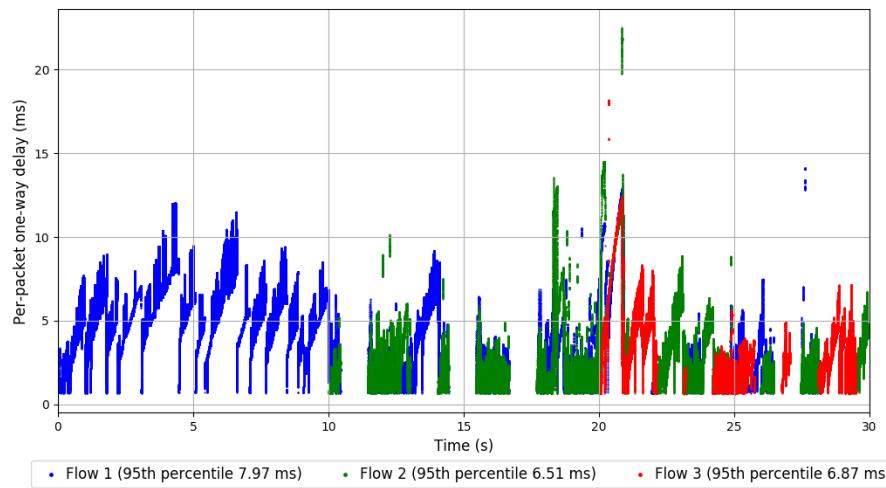
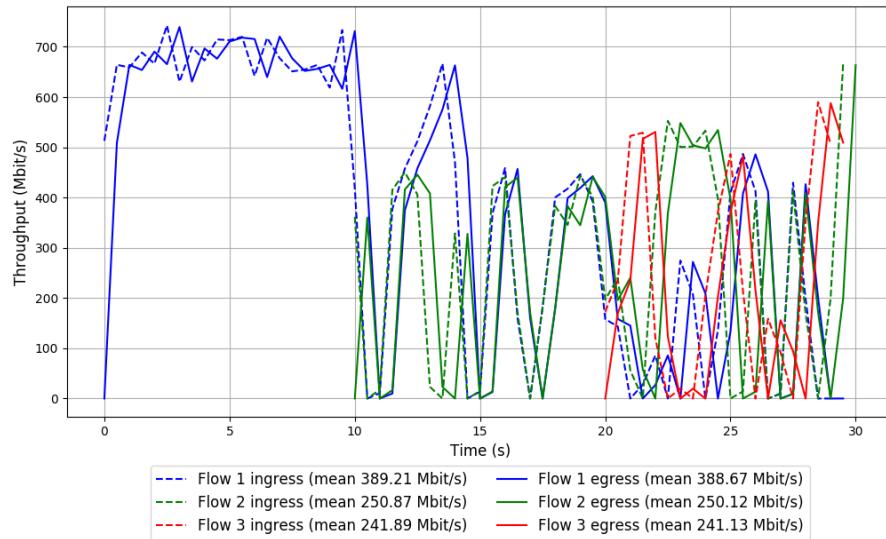


Run 3: Statistics of LEDBAT

```
Start at: 2019-05-30 01:36:22
End at: 2019-05-30 01:36:52
Local clock offset: 5.582 ms
Remote clock offset: 0.229 ms

# Below is generated by plot.py at 2019-05-30 03:38:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 621.46 Mbit/s
95th percentile per-packet one-way delay: 7.783 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 388.67 Mbit/s
95th percentile per-packet one-way delay: 7.972 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 250.12 Mbit/s
95th percentile per-packet one-way delay: 6.511 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 241.13 Mbit/s
95th percentile per-packet one-way delay: 6.869 ms
Loss rate: 0.31%
```

Run 3: Report of LEDBAT — Data Link

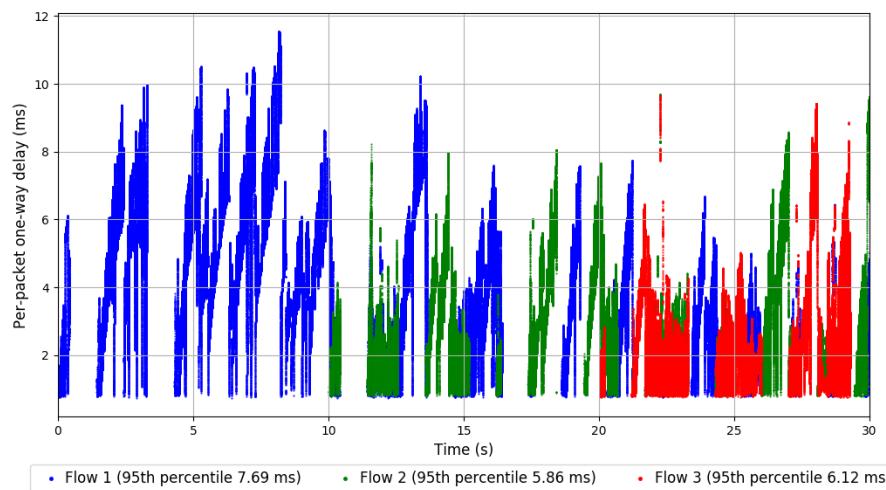
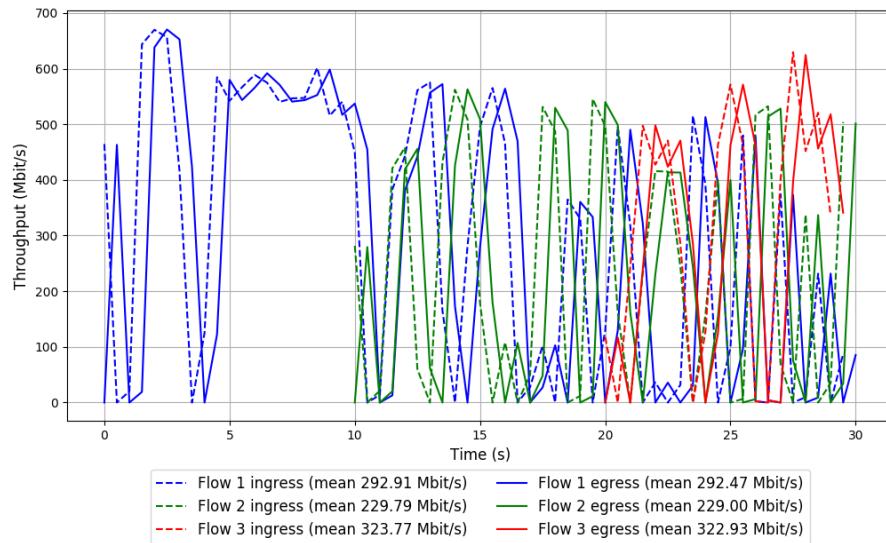


Run 4: Statistics of LEDBAT

```
Start at: 2019-05-30 02:06:12
End at: 2019-05-30 02:06:42
Local clock offset: 5.744 ms
Remote clock offset: 0.09 ms

# Below is generated by plot.py at 2019-05-30 03:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 544.93 Mbit/s
95th percentile per-packet one-way delay: 7.177 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 292.47 Mbit/s
95th percentile per-packet one-way delay: 7.693 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 229.00 Mbit/s
95th percentile per-packet one-way delay: 5.864 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 322.93 Mbit/s
95th percentile per-packet one-way delay: 6.124 ms
Loss rate: 0.24%
```

Run 4: Report of LEDBAT — Data Link

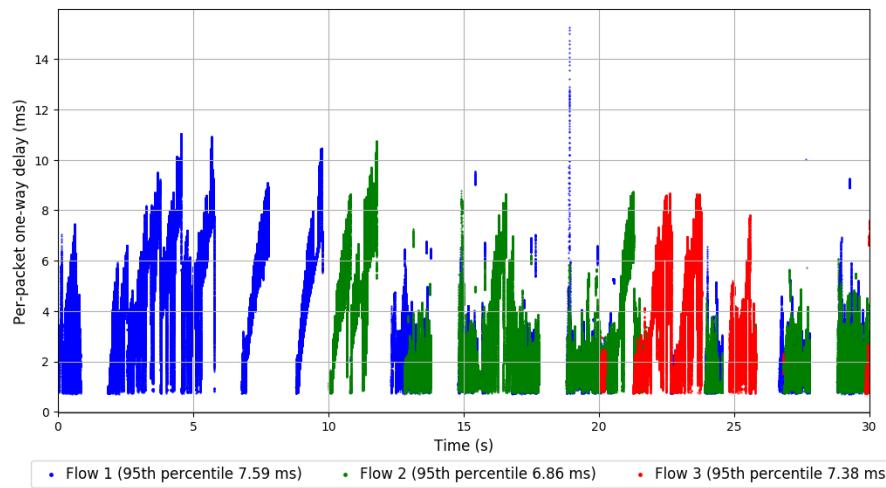
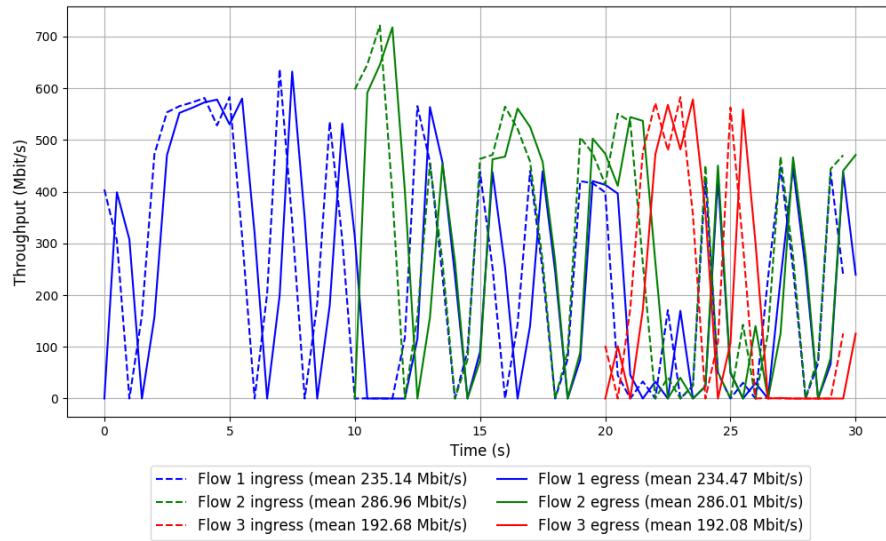


Run 5: Statistics of LEDBAT

```
Start at: 2019-05-30 02:36:10
End at: 2019-05-30 02:36:40
Local clock offset: 6.218 ms
Remote clock offset: 0.251 ms

# Below is generated by plot.py at 2019-05-30 03:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 487.24 Mbit/s
95th percentile per-packet one-way delay: 7.334 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 234.47 Mbit/s
95th percentile per-packet one-way delay: 7.587 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 286.01 Mbit/s
95th percentile per-packet one-way delay: 6.859 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 192.08 Mbit/s
95th percentile per-packet one-way delay: 7.380 ms
Loss rate: 0.30%
```

Run 5: Report of LEDBAT — Data Link

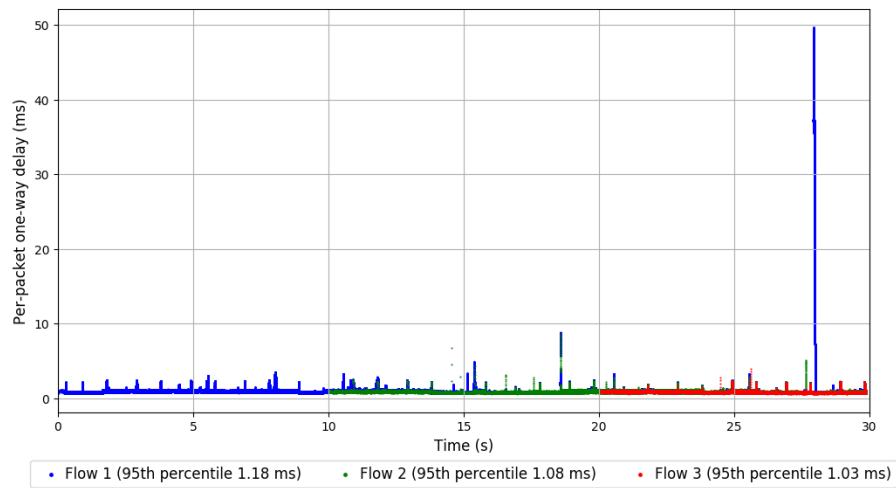
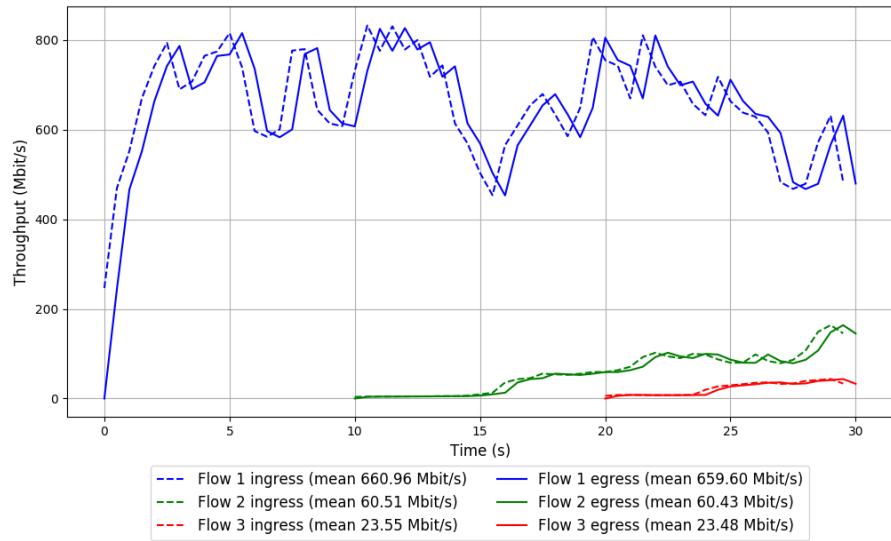


```
Run 1: Statistics of PCC-Allegro

Start at: 2019-05-30 00:28:27
End at: 2019-05-30 00:28:57
Local clock offset: 4.992 ms
Remote clock offset: 0.151 ms

# Below is generated by plot.py at 2019-05-30 03:44:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 707.53 Mbit/s
95th percentile per-packet one-way delay: 1.171 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 659.60 Mbit/s
95th percentile per-packet one-way delay: 1.179 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 60.43 Mbit/s
95th percentile per-packet one-way delay: 1.083 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 23.48 Mbit/s
95th percentile per-packet one-way delay: 1.028 ms
Loss rate: 0.29%
```

Run 1: Report of PCC-Allegro — Data Link

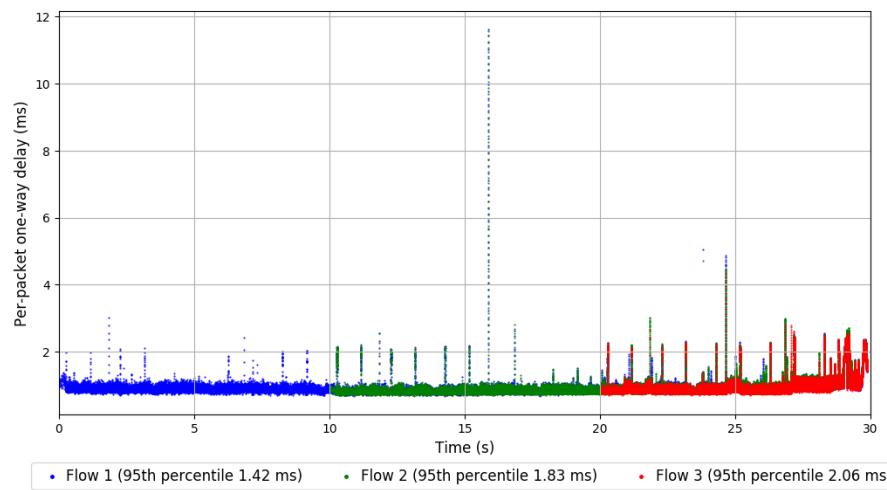
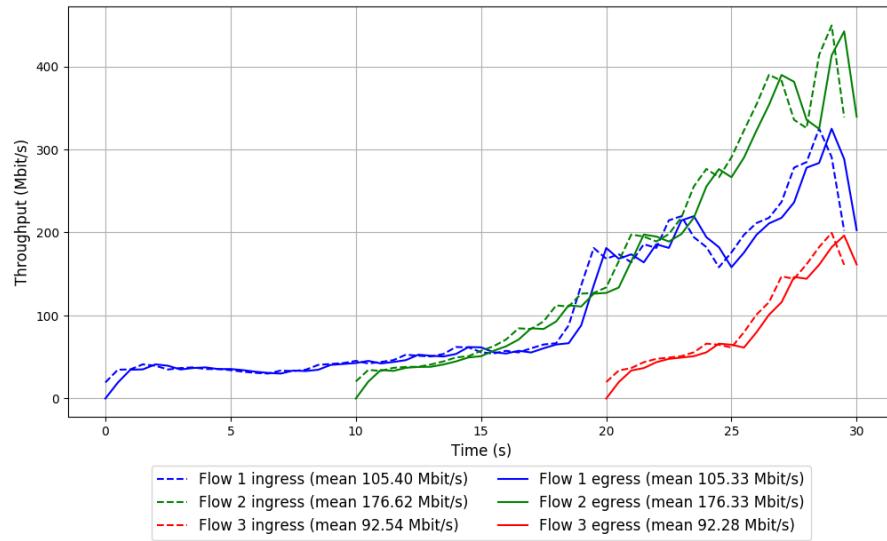


Run 2: Statistics of PCC-Allegro

```
Start at: 2019-05-30 00:58:20
End at: 2019-05-30 00:58:50
Local clock offset: 5.125 ms
Remote clock offset: 0.504 ms

# Below is generated by plot.py at 2019-05-30 03:44:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 253.00 Mbit/s
95th percentile per-packet one-way delay: 1.771 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 105.33 Mbit/s
95th percentile per-packet one-way delay: 1.417 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 176.33 Mbit/s
95th percentile per-packet one-way delay: 1.829 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 92.28 Mbit/s
95th percentile per-packet one-way delay: 2.055 ms
Loss rate: 0.28%
```

Run 2: Report of PCC-Allegro — Data Link

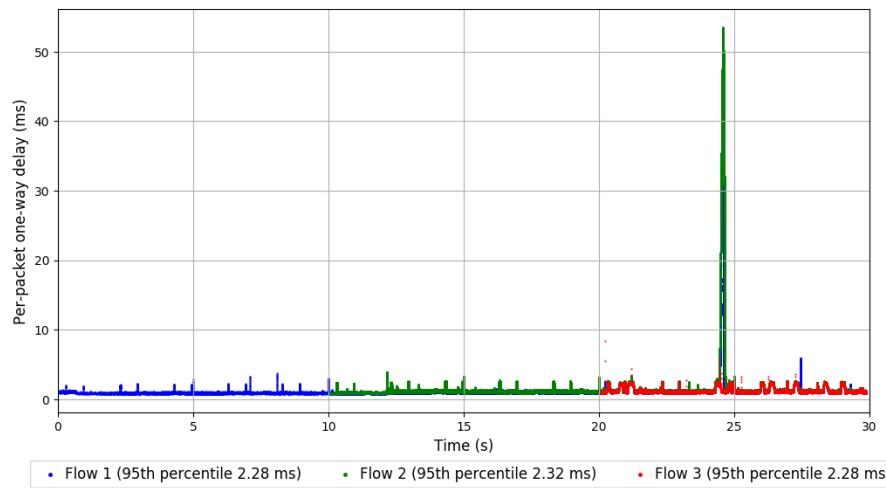
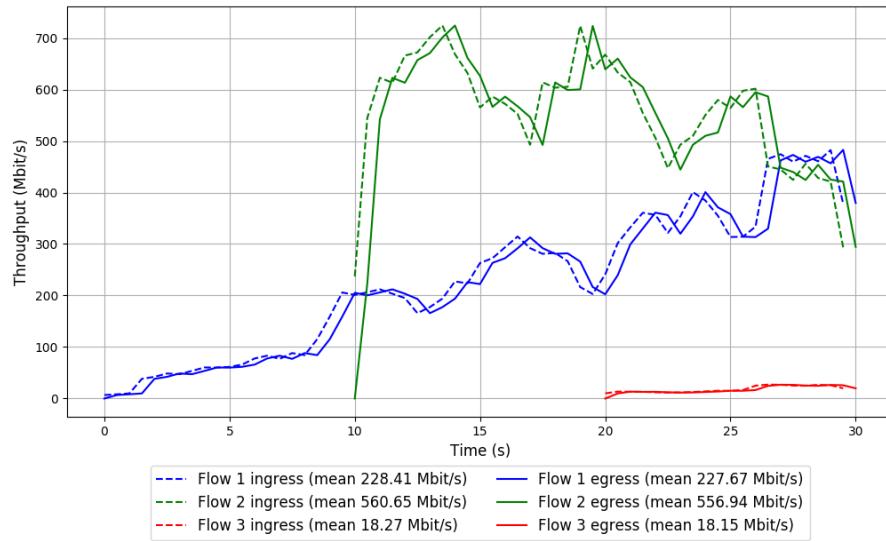


Run 3: Statistics of PCC-Allegro

```
Start at: 2019-05-30 01:28:10
End at: 2019-05-30 01:28:40
Local clock offset: 5.584 ms
Remote clock offset: 0.452 ms

# Below is generated by plot.py at 2019-05-30 03:44:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 604.00 Mbit/s
95th percentile per-packet one-way delay: 2.305 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 227.67 Mbit/s
95th percentile per-packet one-way delay: 2.283 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 556.94 Mbit/s
95th percentile per-packet one-way delay: 2.317 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 18.15 Mbit/s
95th percentile per-packet one-way delay: 2.283 ms
Loss rate: 0.65%
```

Run 3: Report of PCC-Allegro — Data Link

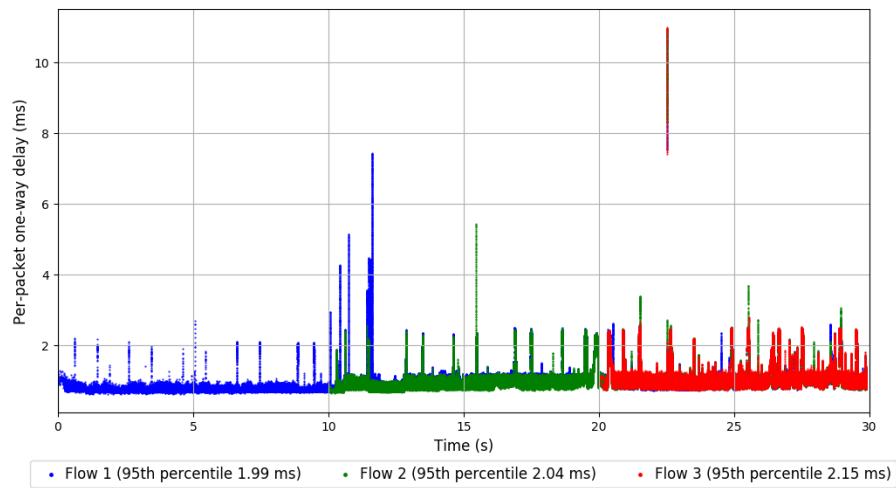
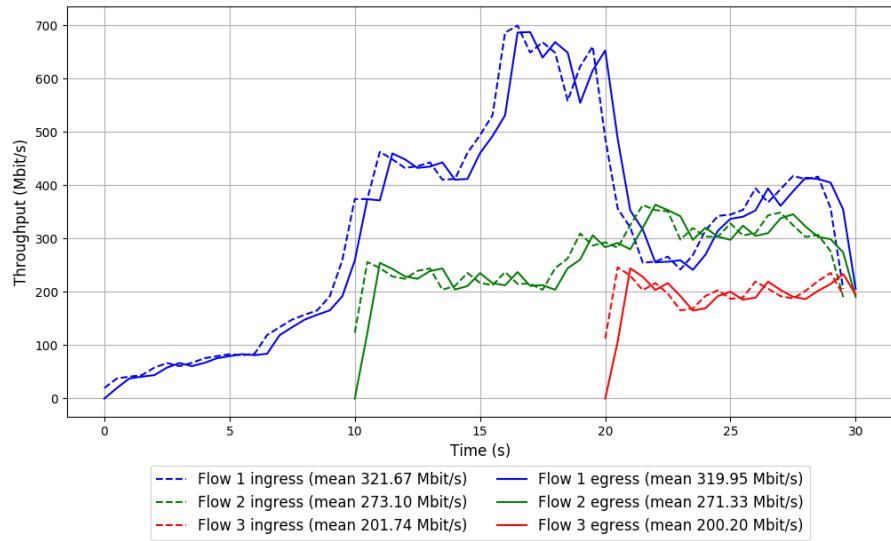


Run 4: Statistics of PCC-Allegro

```
Start at: 2019-05-30 01:58:01
End at: 2019-05-30 01:58:31
Local clock offset: 5.725 ms
Remote clock offset: 0.138 ms

# Below is generated by plot.py at 2019-05-30 03:44:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 566.31 Mbit/s
95th percentile per-packet one-way delay: 2.047 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 319.95 Mbit/s
95th percentile per-packet one-way delay: 1.991 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 271.33 Mbit/s
95th percentile per-packet one-way delay: 2.036 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 200.20 Mbit/s
95th percentile per-packet one-way delay: 2.151 ms
Loss rate: 0.77%
```

Run 4: Report of PCC-Allegro — Data Link

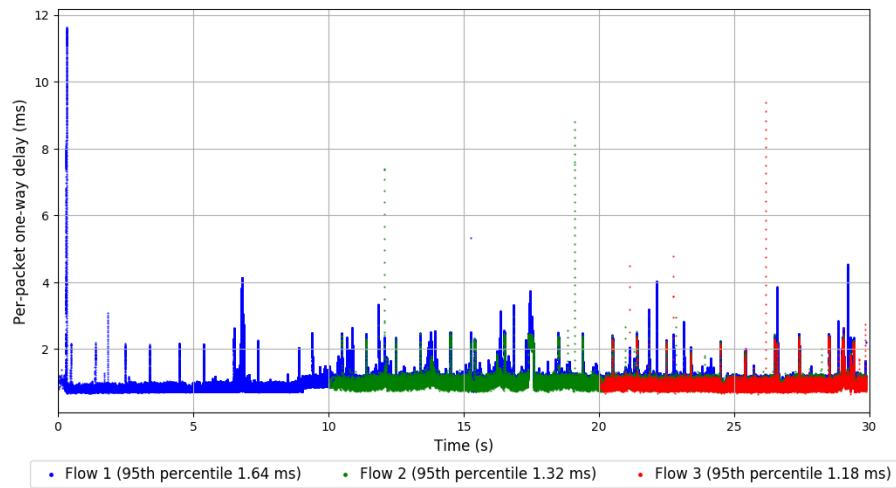
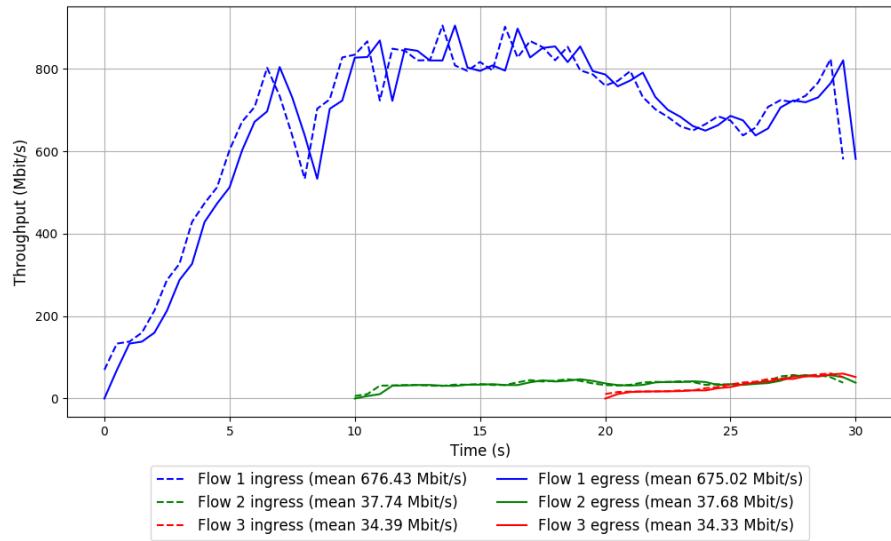


Run 5: Statistics of PCC-Allegro

```
Start at: 2019-05-30 02:27:49
End at: 2019-05-30 02:28:19
Local clock offset: 6.127 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 711.40 Mbit/s
95th percentile per-packet one-way delay: 1.623 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 675.02 Mbit/s
95th percentile per-packet one-way delay: 1.636 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 37.68 Mbit/s
95th percentile per-packet one-way delay: 1.325 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 34.33 Mbit/s
95th percentile per-packet one-way delay: 1.179 ms
Loss rate: 0.17%
```

Run 5: Report of PCC-Allegro — Data Link

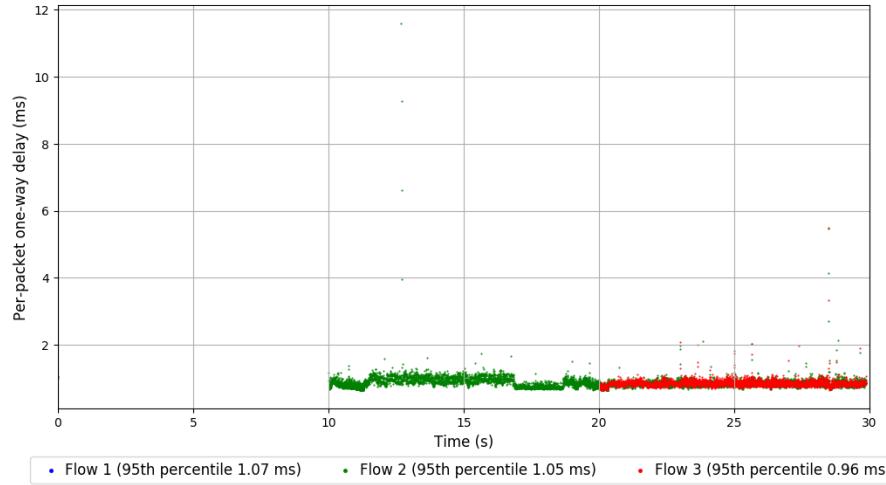
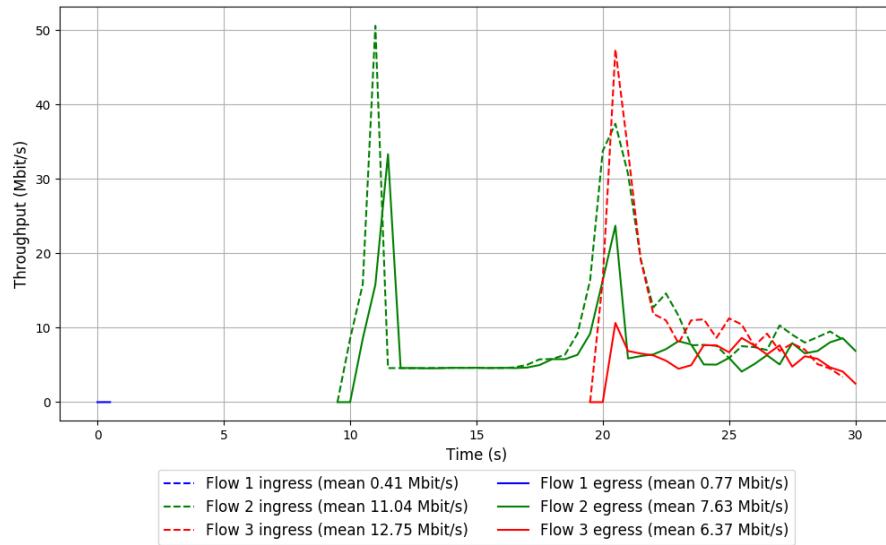


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2019-05-30 00:31:23
End at: 2019-05-30 00:31:53
Local clock offset: 4.988 ms
Remote clock offset: 0.189 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.18 Mbit/s
95th percentile per-packet one-way delay: 1.028 ms
Loss rate: 37.85%
-- Flow 1:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 1.068 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 7.63 Mbit/s
95th percentile per-packet one-way delay: 1.051 ms
Loss rate: 30.85%
-- Flow 3:
Average throughput: 6.37 Mbit/s
95th percentile per-packet one-way delay: 0.962 ms
Loss rate: 50.05%
```

Run 1: Report of PCC-Expr — Data Link

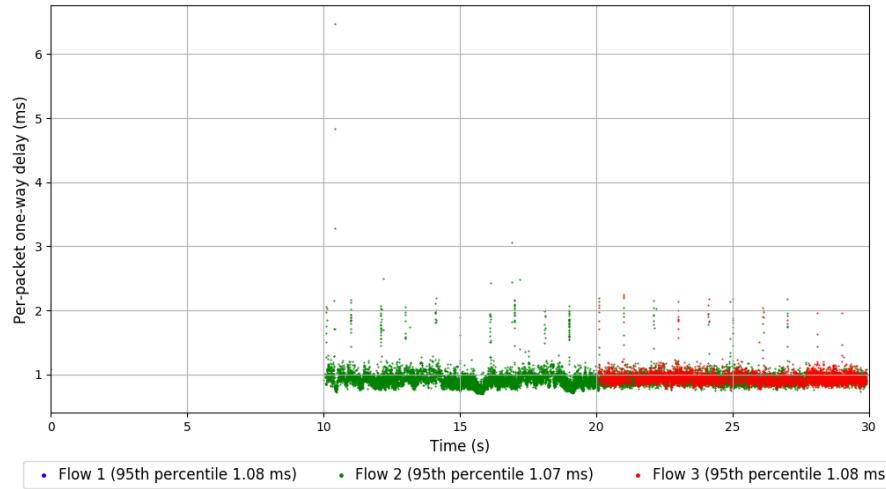
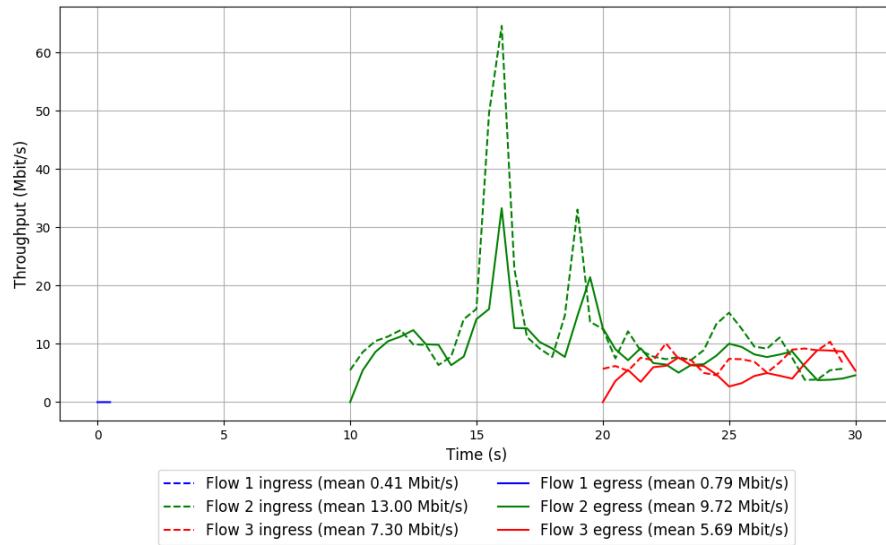


Run 2: Statistics of PCC-Expr

```
Start at: 2019-05-30 01:01:06
End at: 2019-05-30 01:01:36
Local clock offset: 5.138 ms
Remote clock offset: 0.476 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.34 Mbit/s
95th percentile per-packet one-way delay: 1.071 ms
Loss rate: 24.57%
-- Flow 1:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 1.079 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.72 Mbit/s
95th percentile per-packet one-way delay: 1.070 ms
Loss rate: 25.24%
-- Flow 3:
Average throughput: 5.69 Mbit/s
95th percentile per-packet one-way delay: 1.078 ms
Loss rate: 22.14%
```

Run 2: Report of PCC-Expr — Data Link

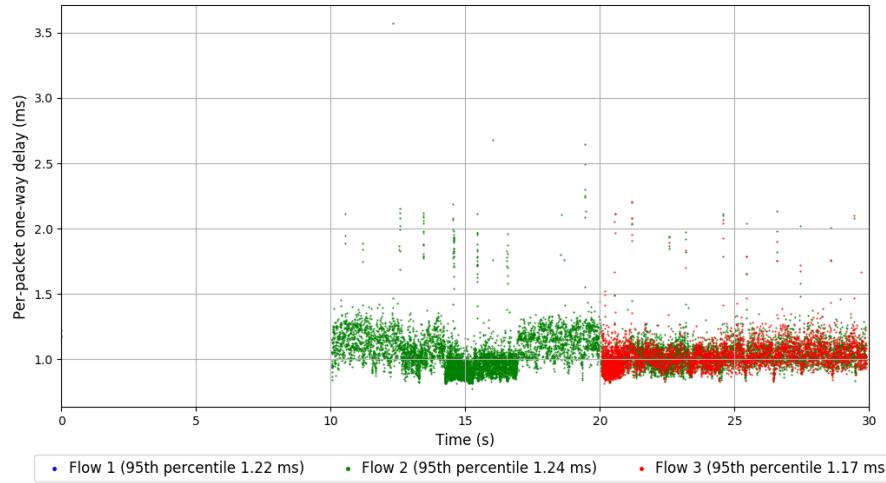
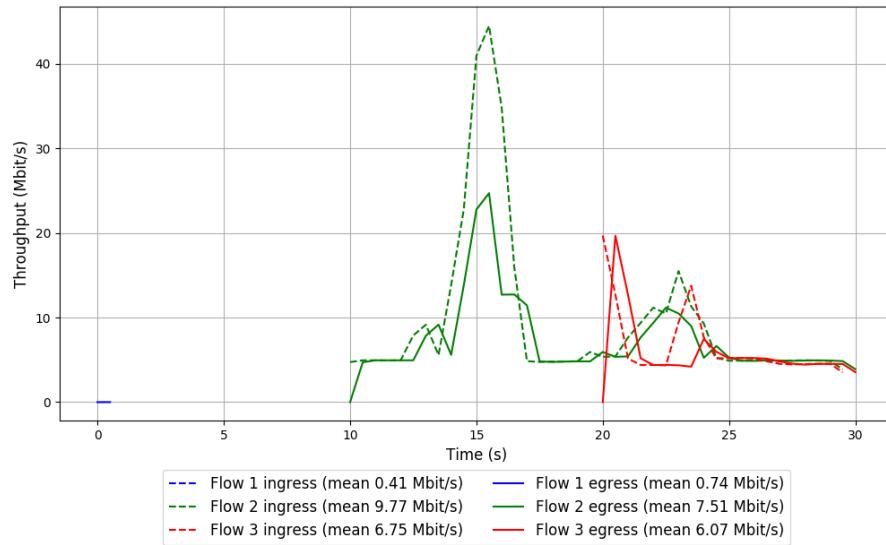


Run 3: Statistics of PCC-Expr

```
Start at: 2019-05-30 01:31:03
End at: 2019-05-30 01:31:33
Local clock offset: 5.585 ms
Remote clock offset: 0.399 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.00 Mbit/s
95th percentile per-packet one-way delay: 1.230 ms
Loss rate: 19.76%
-- Flow 1:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 1.223 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 7.51 Mbit/s
95th percentile per-packet one-way delay: 1.243 ms
Loss rate: 23.12%
-- Flow 3:
Average throughput: 6.07 Mbit/s
95th percentile per-packet one-way delay: 1.174 ms
Loss rate: 9.95%
```

Run 3: Report of PCC-Expr — Data Link

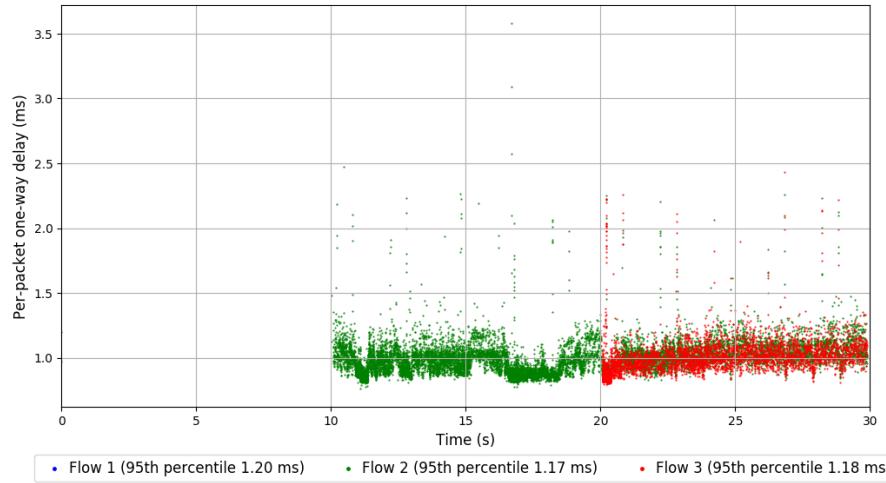
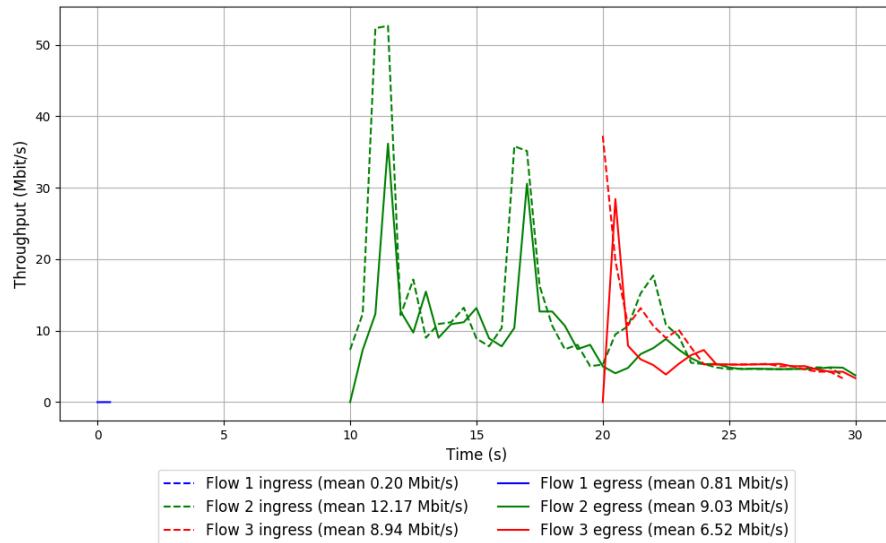


Run 4: Statistics of PCC-Expr

```
Start at: 2019-05-30 02:00:54
End at: 2019-05-30 02:01:24
Local clock offset: 5.734 ms
Remote clock offset: 0.179 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.16 Mbit/s
95th percentile per-packet one-way delay: 1.169 ms
Loss rate: 26.13%
-- Flow 1:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 1.199 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.03 Mbit/s
95th percentile per-packet one-way delay: 1.166 ms
Loss rate: 25.78%
-- Flow 3:
Average throughput: 6.52 Mbit/s
95th percentile per-packet one-way delay: 1.177 ms
Loss rate: 27.07%
```

Run 4: Report of PCC-Expr — Data Link

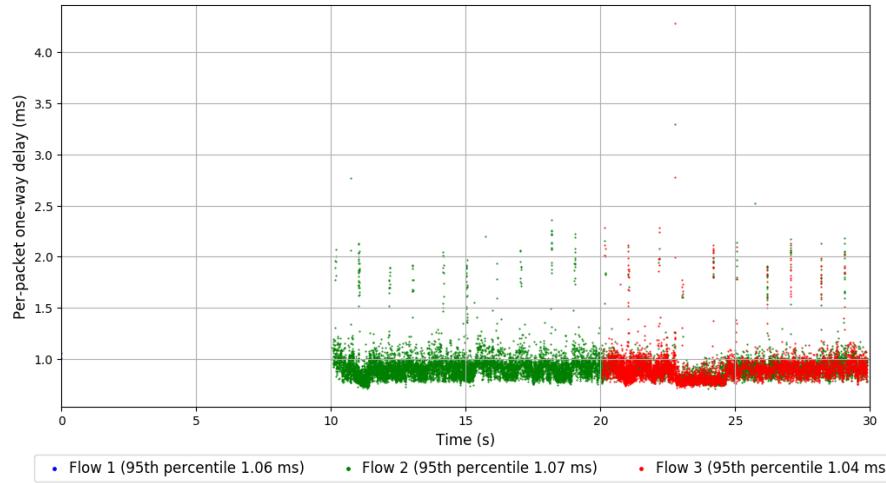
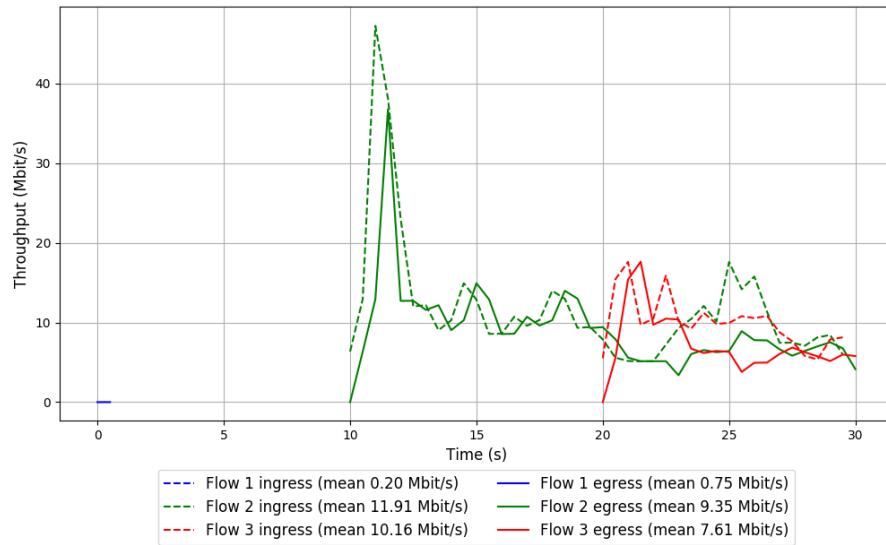


Run 5: Statistics of PCC-Expr

```
Start at: 2019-05-30 02:30:47
End at: 2019-05-30 02:31:17
Local clock offset: 6.15 ms
Remote clock offset: 0.08 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.74 Mbit/s
95th percentile per-packet one-way delay: 1.065 ms
Loss rate: 22.57%
-- Flow 1:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 1.060 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.35 Mbit/s
95th percentile per-packet one-way delay: 1.071 ms
Loss rate: 21.48%
-- Flow 3:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 1.043 ms
Loss rate: 25.15%
```

Run 5: Report of PCC-Expr — Data Link

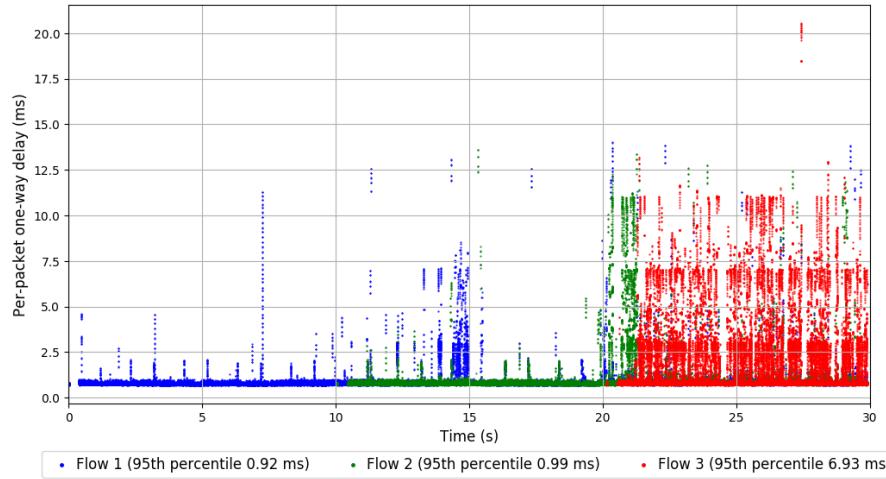
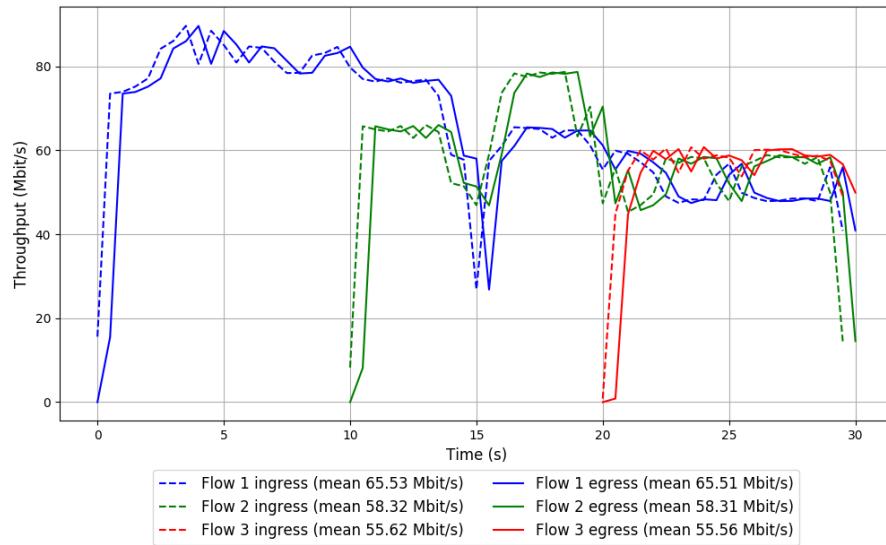


```
Run 1: Statistics of QUIC Cubic

Start at: 2019-05-30 00:39:56
End at: 2019-05-30 00:40:26
Local clock offset: 5.023 ms
Remote clock offset: 0.443 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 122.38 Mbit/s
95th percentile per-packet one-way delay: 2.638 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 65.51 Mbit/s
95th percentile per-packet one-way delay: 0.917 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 58.31 Mbit/s
95th percentile per-packet one-way delay: 0.995 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 55.56 Mbit/s
95th percentile per-packet one-way delay: 6.929 ms
Loss rate: 0.05%
```

Run 1: Report of QUIC Cubic — Data Link

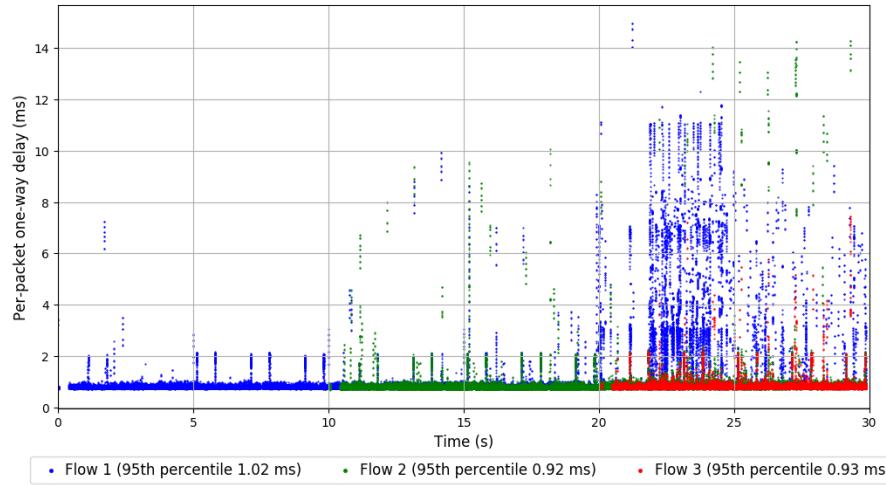
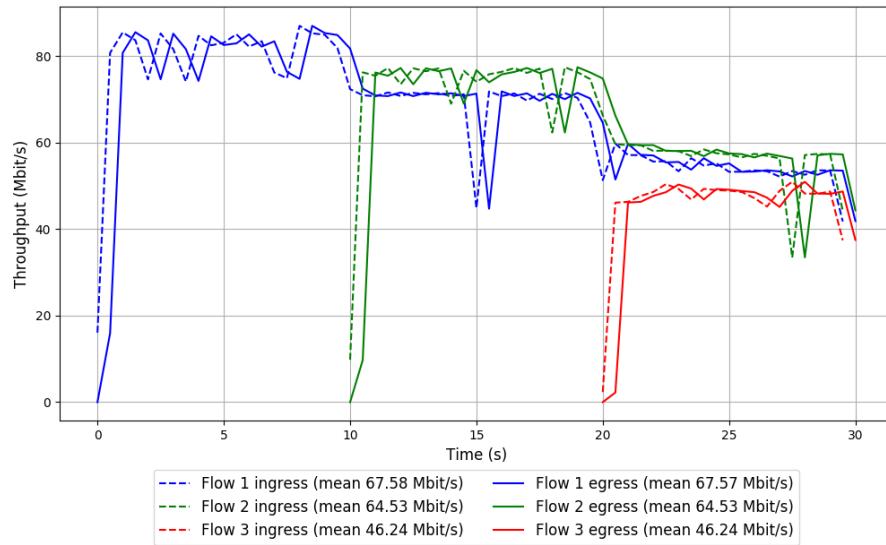


Run 2: Statistics of QUIC Cubic

```
Start at: 2019-05-30 01:09:39
End at: 2019-05-30 01:10:09
Local clock offset: 5.23 ms
Remote clock offset: 0.605 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 125.63 Mbit/s
95th percentile per-packet one-way delay: 0.949 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 67.57 Mbit/s
95th percentile per-packet one-way delay: 1.024 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 64.53 Mbit/s
95th percentile per-packet one-way delay: 0.921 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 46.24 Mbit/s
95th percentile per-packet one-way delay: 0.927 ms
Loss rate: 0.01%
```

Run 2: Report of QUIC Cubic — Data Link

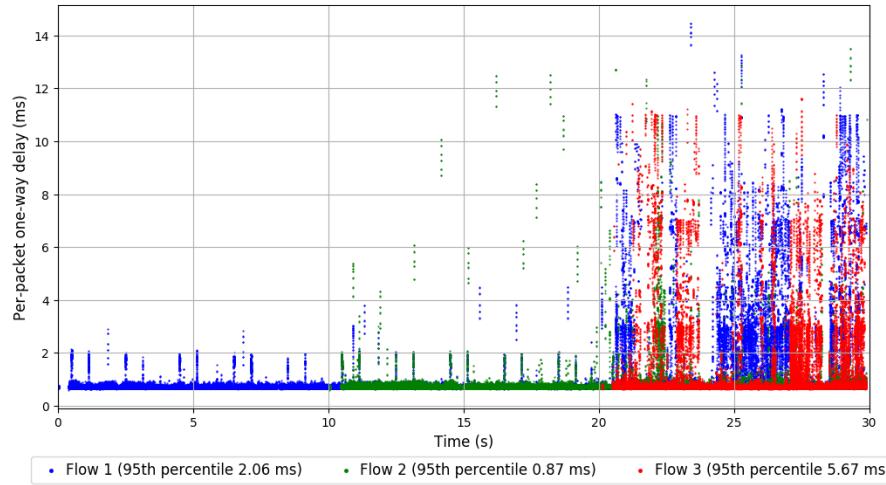
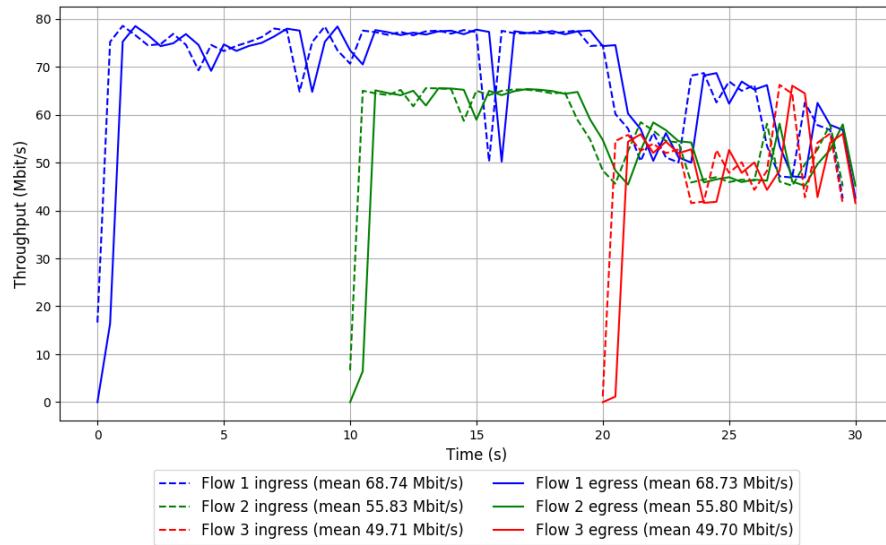


Run 3: Statistics of QUIC Cubic

```
Start at: 2019-05-30 01:39:36
End at: 2019-05-30 01:40:06
Local clock offset: 5.635 ms
Remote clock offset: 0.26 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 122.07 Mbit/s
95th percentile per-packet one-way delay: 2.304 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 68.73 Mbit/s
95th percentile per-packet one-way delay: 2.061 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 55.80 Mbit/s
95th percentile per-packet one-way delay: 0.869 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.70 Mbit/s
95th percentile per-packet one-way delay: 5.668 ms
Loss rate: 0.00%
```

Run 3: Report of QUIC Cubic — Data Link

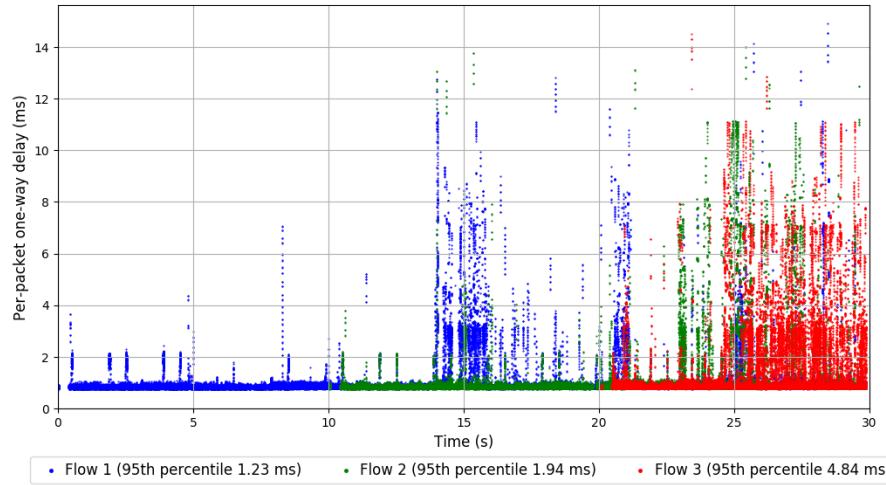
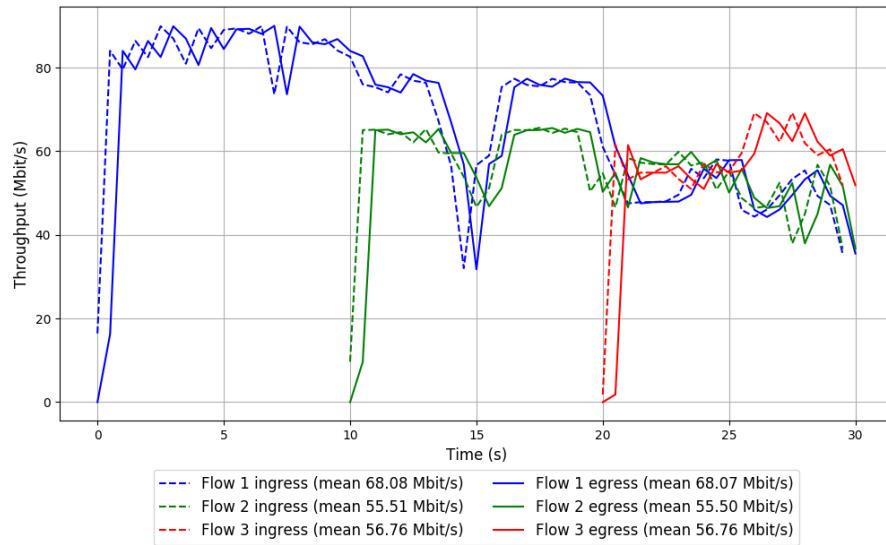


Run 4: Statistics of QUIC Cubic

```
Start at: 2019-05-30 02:09:26
End at: 2019-05-30 02:09:56
Local clock offset: 5.804 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 123.59 Mbit/s
95th percentile per-packet one-way delay: 2.451 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 68.07 Mbit/s
95th percentile per-packet one-way delay: 1.230 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 55.50 Mbit/s
95th percentile per-packet one-way delay: 1.937 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 56.76 Mbit/s
95th percentile per-packet one-way delay: 4.838 ms
Loss rate: 0.01%
```

Run 4: Report of QUIC Cubic — Data Link

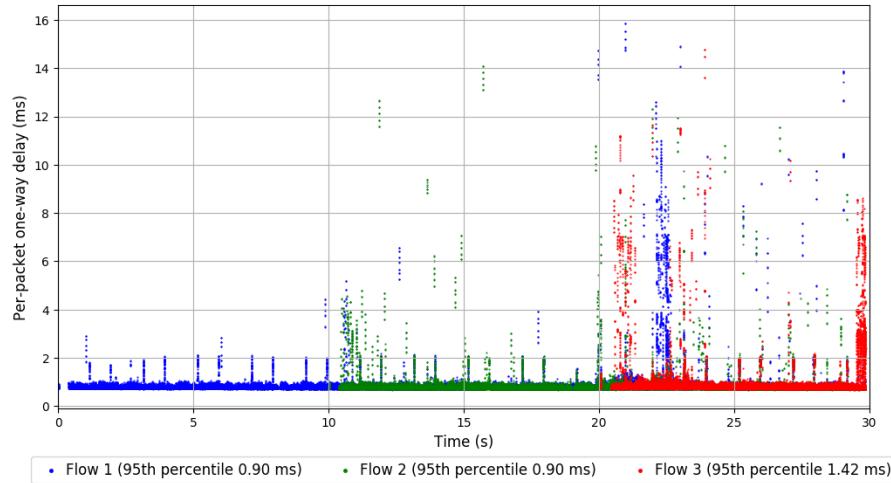
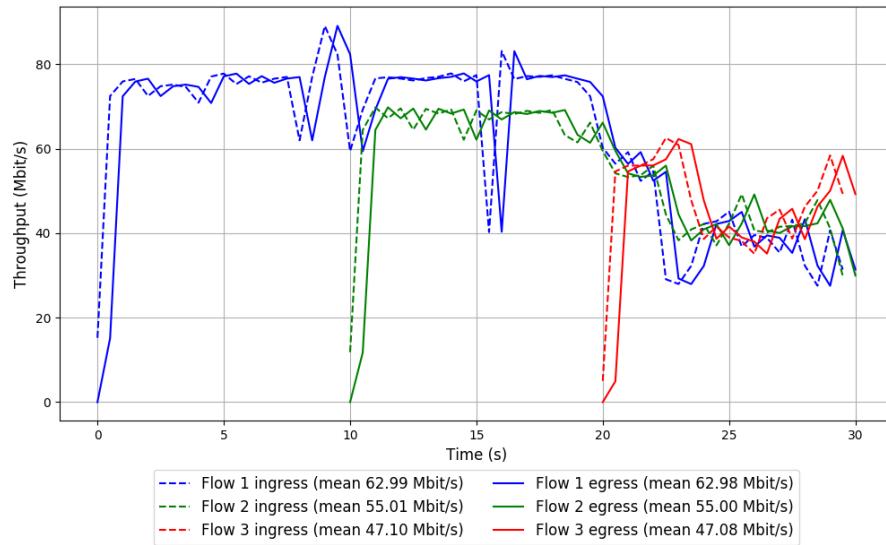


Run 5: Statistics of QUIC Cubic

```
Start at: 2019-05-30 02:39:15
End at: 2019-05-30 02:39:45
Local clock offset: 6.108 ms
Remote clock offset: 0.318 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 115.04 Mbit/s
95th percentile per-packet one-way delay: 0.918 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 62.98 Mbit/s
95th percentile per-packet one-way delay: 0.902 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 55.00 Mbit/s
95th percentile per-packet one-way delay: 0.900 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 47.08 Mbit/s
95th percentile per-packet one-way delay: 1.417 ms
Loss rate: 0.04%
```

Run 5: Report of QUIC Cubic — Data Link

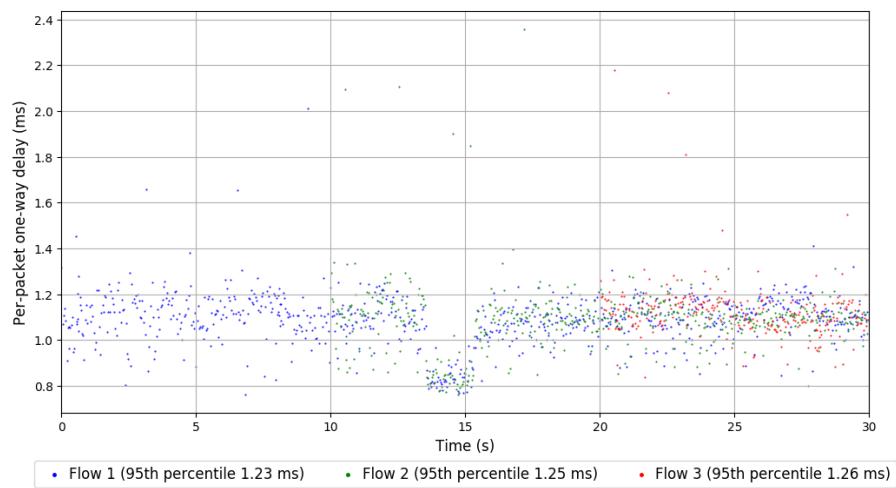
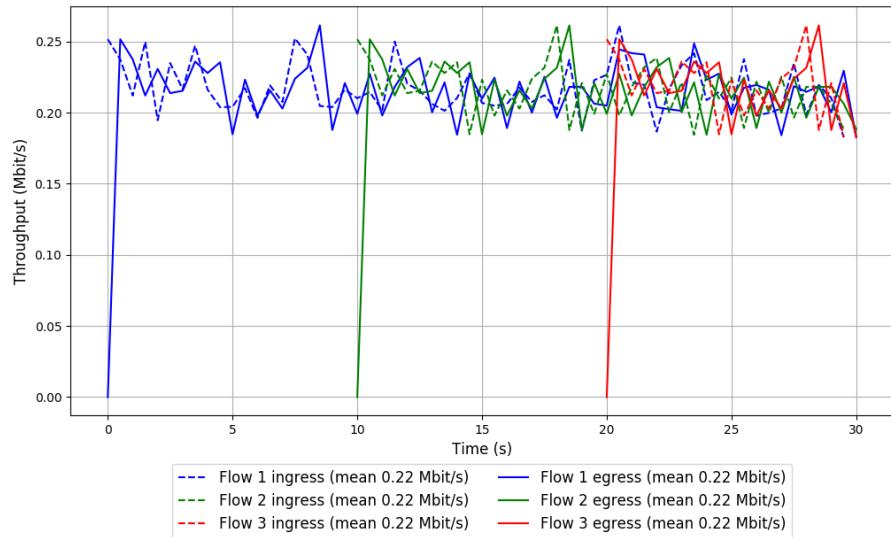


```
Run 1: Statistics of SCReAM
```

```
Start at: 2019-05-30 00:46:27
End at: 2019-05-30 00:46:57
Local clock offset: 5.052 ms
Remote clock offset: 0.432 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.235 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.228 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.245 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.263 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

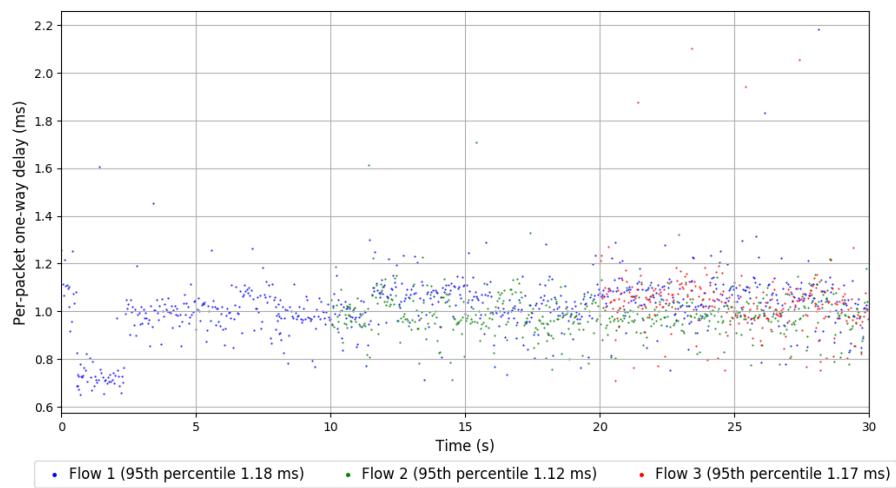
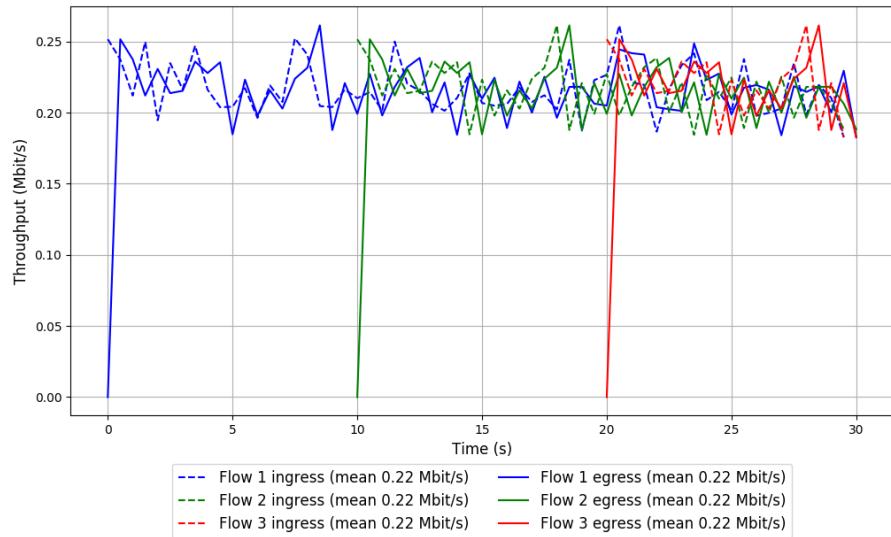


Run 2: Statistics of SCReAM

```
Start at: 2019-05-30 01:16:10
End at: 2019-05-30 01:16:40
Local clock offset: 5.433 ms
Remote clock offset: 0.637 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.147 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.183 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.117 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.170 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

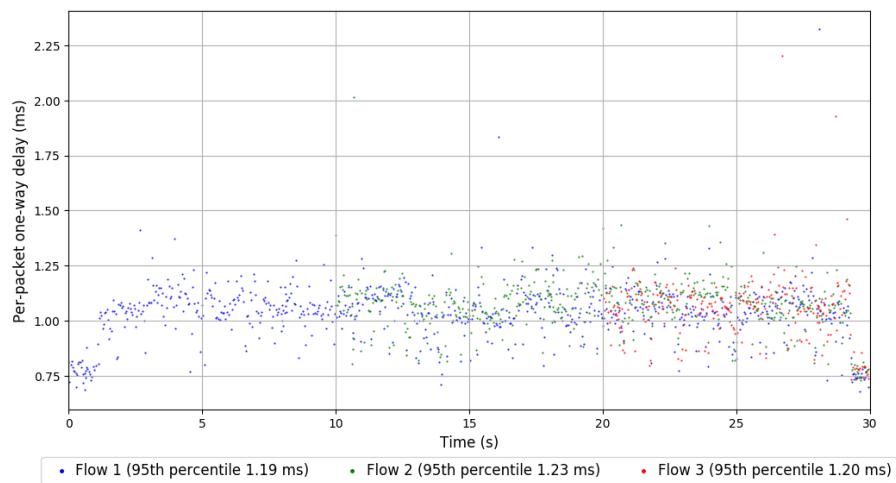
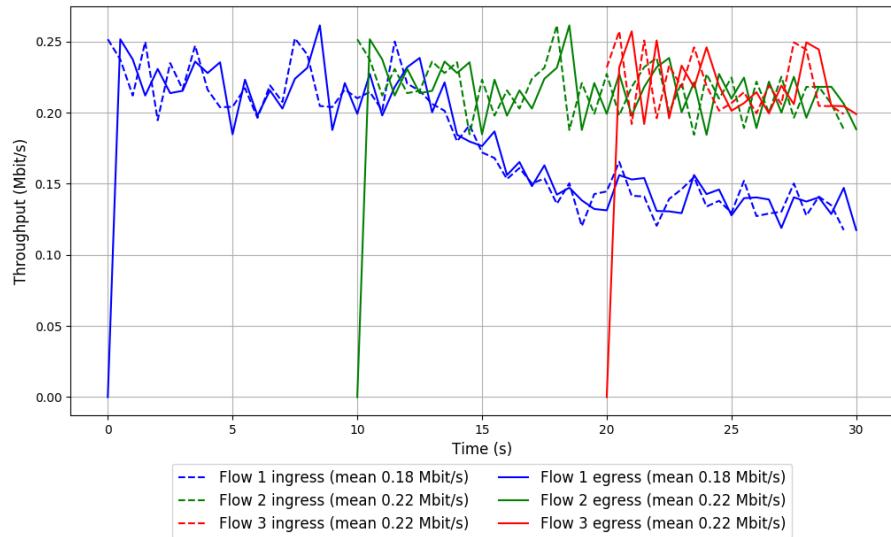


Run 3: Statistics of SCReAM

```
Start at: 2019-05-30 01:46:11
End at: 2019-05-30 01:46:41
Local clock offset: 5.673 ms
Remote clock offset: 0.302 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 1.208 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 1.189 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.232 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.199 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

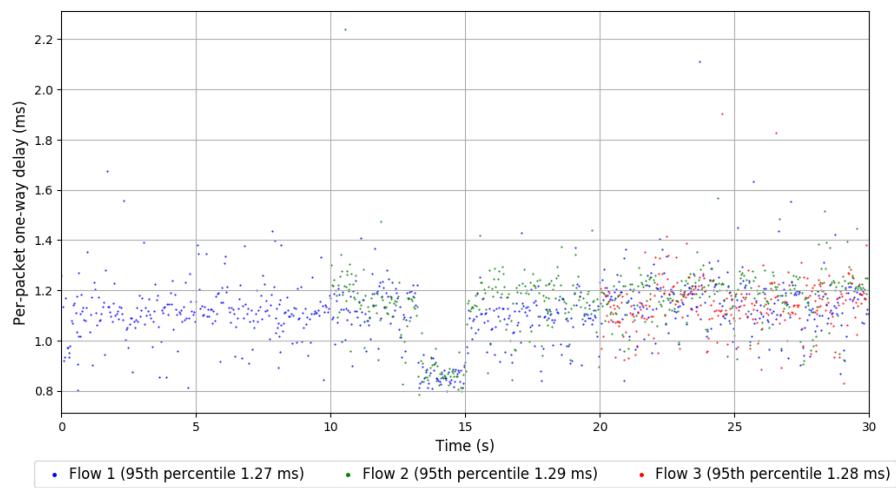
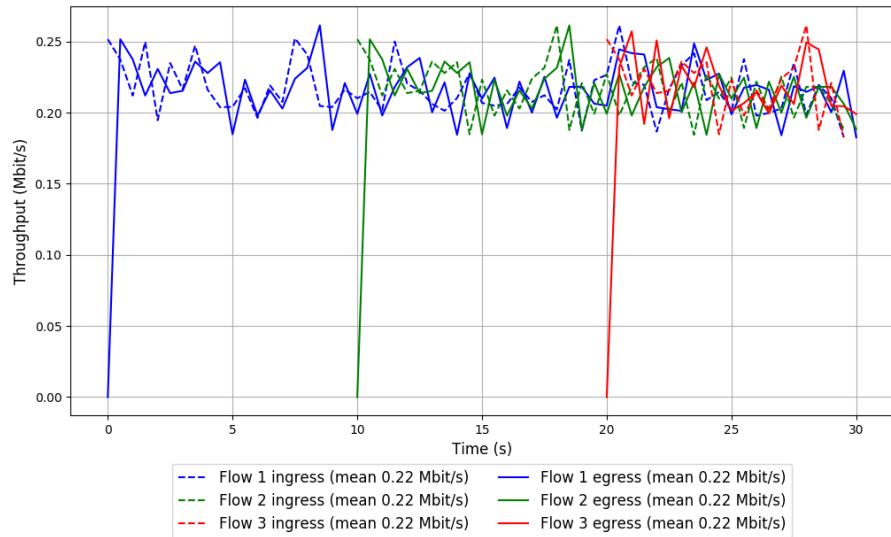


Run 4: Statistics of SCReAM

```
Start at: 2019-05-30 02:15:57
End at: 2019-05-30 02:16:27
Local clock offset: 5.999 ms
Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.284 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.273 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.286 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.281 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

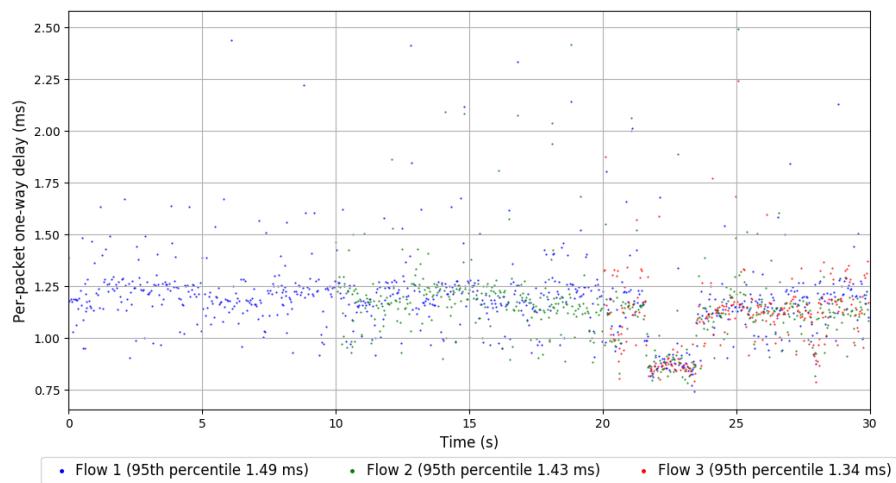
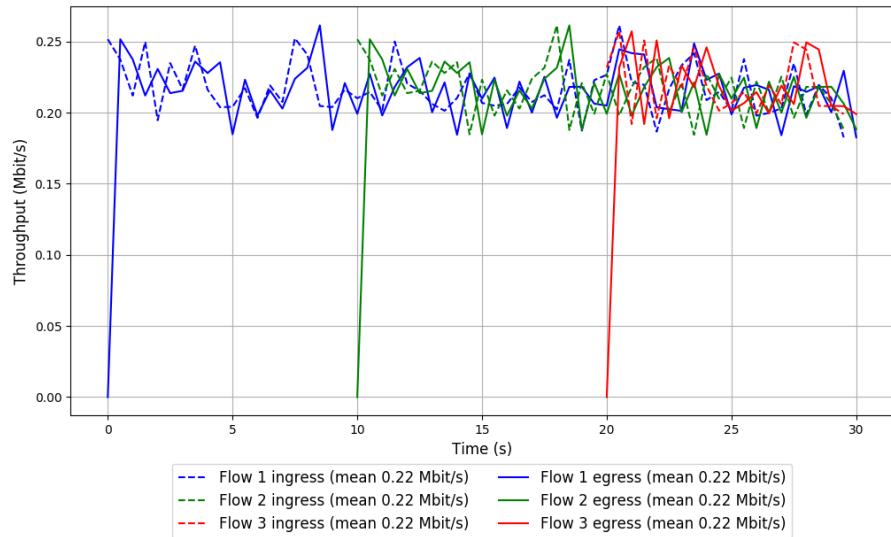


Run 5: Statistics of SCReAM

```
Start at: 2019-05-30 02:45:49
End at: 2019-05-30 02:46:19
Local clock offset: 5.811 ms
Remote clock offset: 0.444 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.439 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.491 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.425 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.337 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

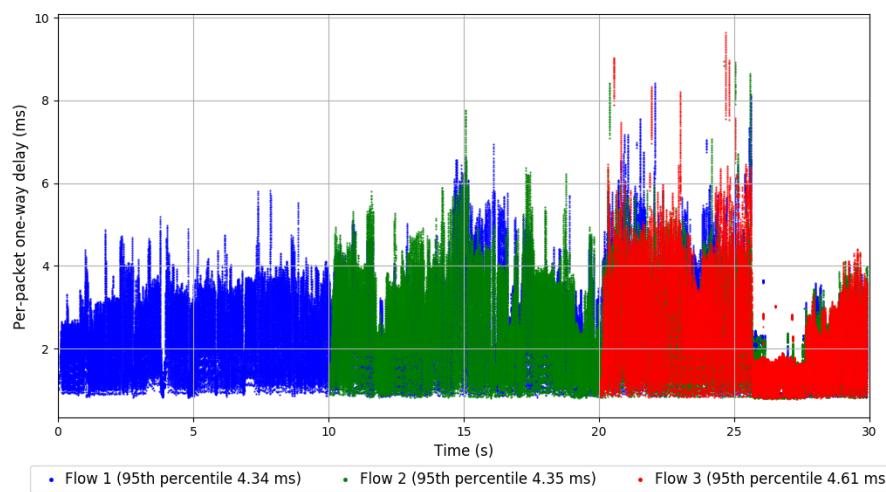
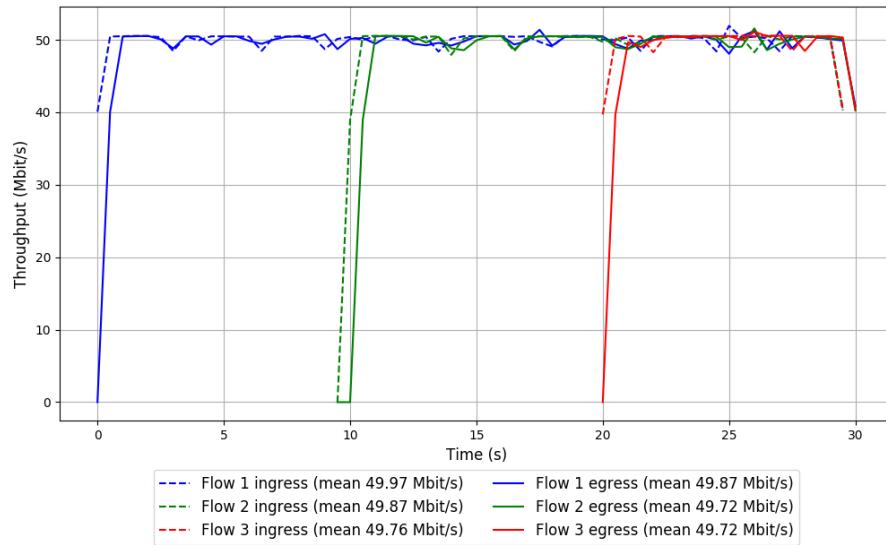


Run 1: Statistics of Sprout

```
Start at: 2019-05-30 00:41:15
End at: 2019-05-30 00:41:45
Local clock offset: 5.008 ms
Remote clock offset: 0.543 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.42 Mbit/s
95th percentile per-packet one-way delay: 4.395 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 49.87 Mbit/s
95th percentile per-packet one-way delay: 4.339 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 49.72 Mbit/s
95th percentile per-packet one-way delay: 4.354 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 49.72 Mbit/s
95th percentile per-packet one-way delay: 4.614 ms
Loss rate: 0.06%
```

Run 1: Report of Sprout — Data Link

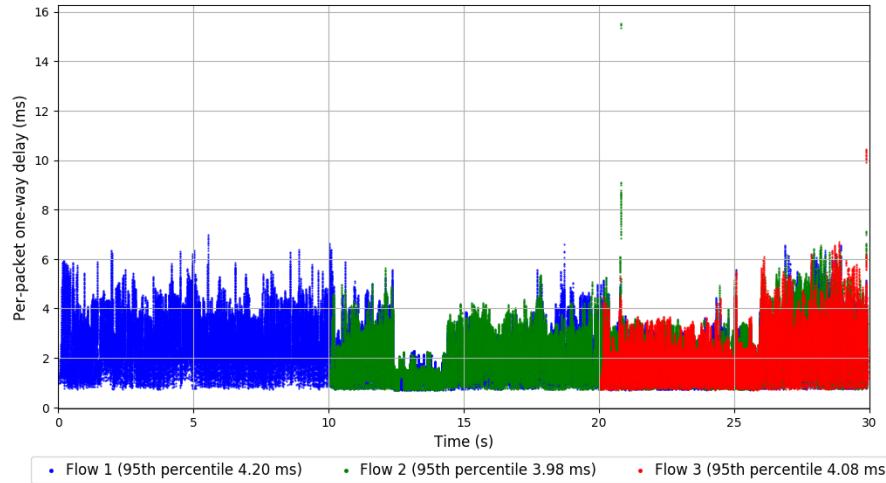
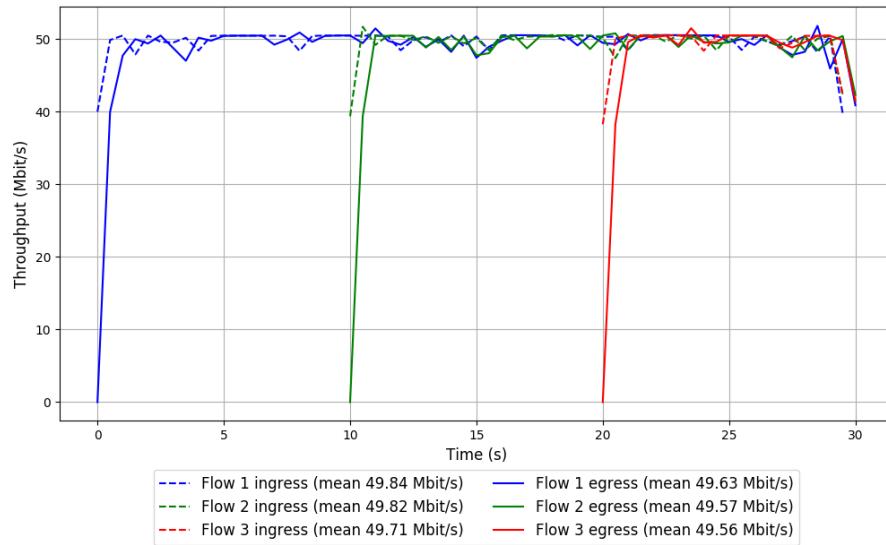


Run 2: Statistics of Sprout

```
Start at: 2019-05-30 01:10:58
End at: 2019-05-30 01:11:28
Local clock offset: 5.302 ms
Remote clock offset: 0.605 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 98.98 Mbit/s
95th percentile per-packet one-way delay: 4.122 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 49.63 Mbit/s
95th percentile per-packet one-way delay: 4.204 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 49.57 Mbit/s
95th percentile per-packet one-way delay: 3.977 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 49.56 Mbit/s
95th percentile per-packet one-way delay: 4.076 ms
Loss rate: 0.29%
```

Run 2: Report of Sprout — Data Link

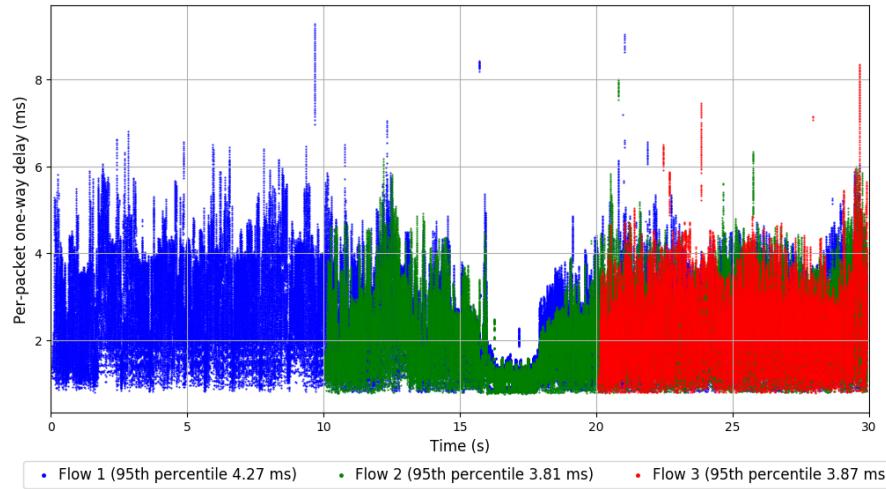
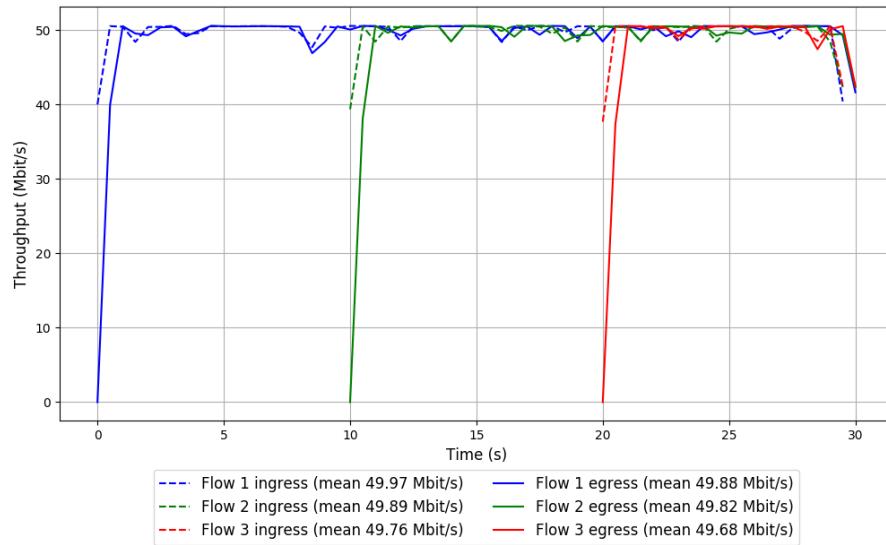


Run 3: Statistics of Sprout

```
Start at: 2019-05-30 01:40:54
End at: 2019-05-30 01:41:24
Local clock offset: 5.643 ms
Remote clock offset: 0.374 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.44 Mbit/s
95th percentile per-packet one-way delay: 4.076 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 49.88 Mbit/s
95th percentile per-packet one-way delay: 4.266 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 49.82 Mbit/s
95th percentile per-packet one-way delay: 3.805 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 49.68 Mbit/s
95th percentile per-packet one-way delay: 3.865 ms
Loss rate: 0.13%
```

Run 3: Report of Sprout — Data Link

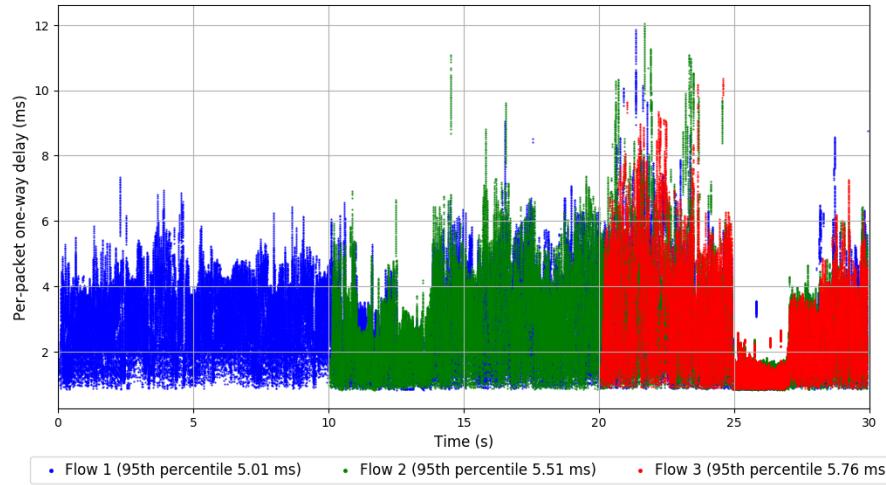
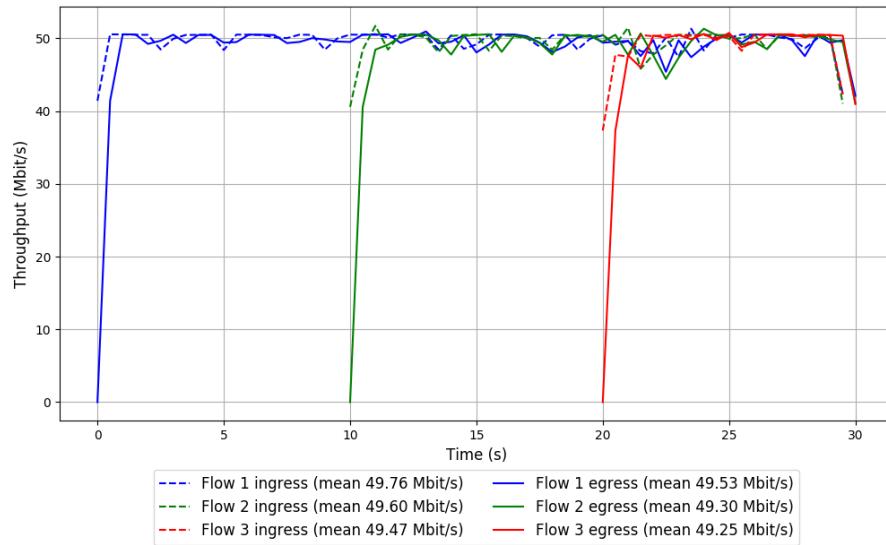


Run 4: Statistics of Sprout

```
Start at: 2019-05-30 02:10:45
End at: 2019-05-30 02:11:15
Local clock offset: 5.822 ms
Remote clock offset: 0.06 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 98.62 Mbit/s
95th percentile per-packet one-way delay: 5.291 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 49.53 Mbit/s
95th percentile per-packet one-way delay: 5.011 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 49.30 Mbit/s
95th percentile per-packet one-way delay: 5.507 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 49.25 Mbit/s
95th percentile per-packet one-way delay: 5.756 ms
Loss rate: 0.43%
```

Run 4: Report of Sprout — Data Link

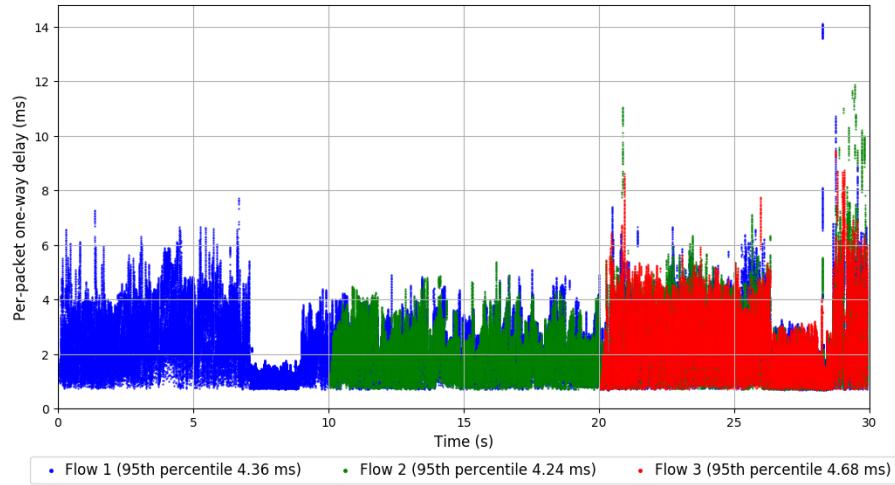
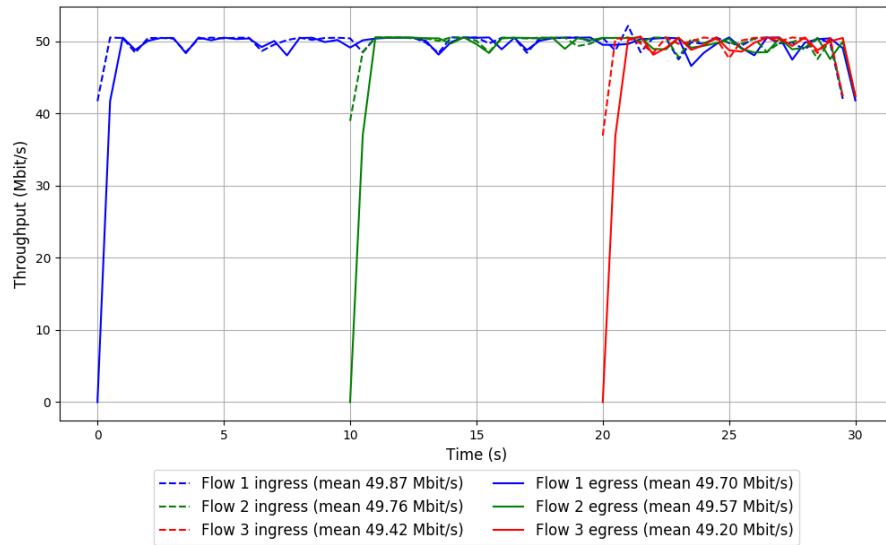


Run 5: Statistics of Sprout

```
Start at: 2019-05-30 02:40:33
End at: 2019-05-30 02:41:03
Local clock offset: 6.036 ms
Remote clock offset: 0.3 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 98.96 Mbit/s
95th percentile per-packet one-way delay: 4.383 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 49.70 Mbit/s
95th percentile per-packet one-way delay: 4.358 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 49.57 Mbit/s
95th percentile per-packet one-way delay: 4.238 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 49.20 Mbit/s
95th percentile per-packet one-way delay: 4.676 ms
Loss rate: 0.40%
```

Run 5: Report of Sprout — Data Link

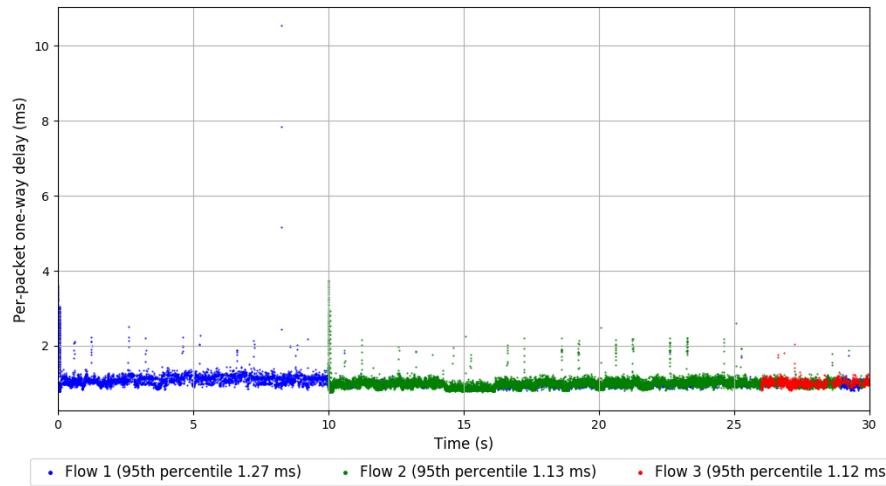
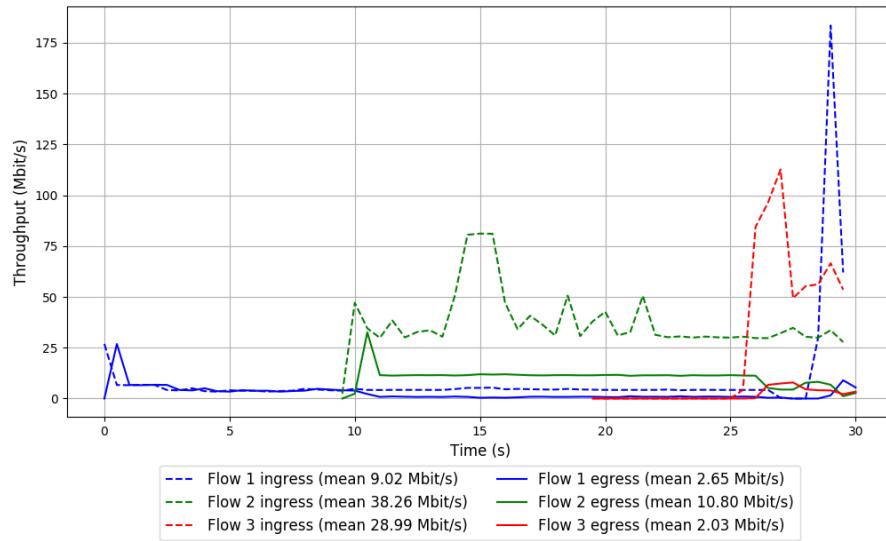


Run 1: Statistics of TaoVA-100x

```
Start at: 2019-05-30 00:35:26
End at: 2019-05-30 00:35:56
Local clock offset: 4.943 ms
Remote clock offset: 0.357 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.52 Mbit/s
95th percentile per-packet one-way delay: 1.183 ms
Loss rate: 76.19%
-- Flow 1:
Average throughput: 2.65 Mbit/s
95th percentile per-packet one-way delay: 1.270 ms
Loss rate: 70.65%
-- Flow 2:
Average throughput: 10.80 Mbit/s
95th percentile per-packet one-way delay: 1.127 ms
Loss rate: 71.78%
-- Flow 3:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 1.124 ms
Loss rate: 93.01%
```

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

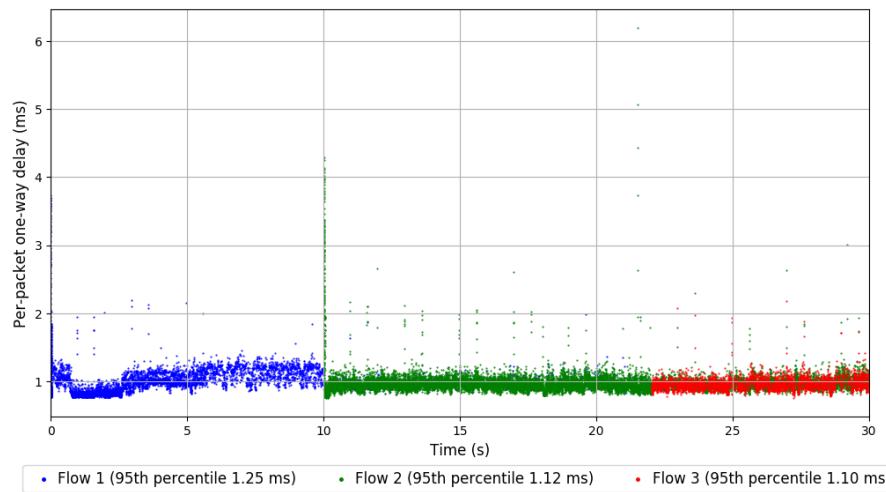
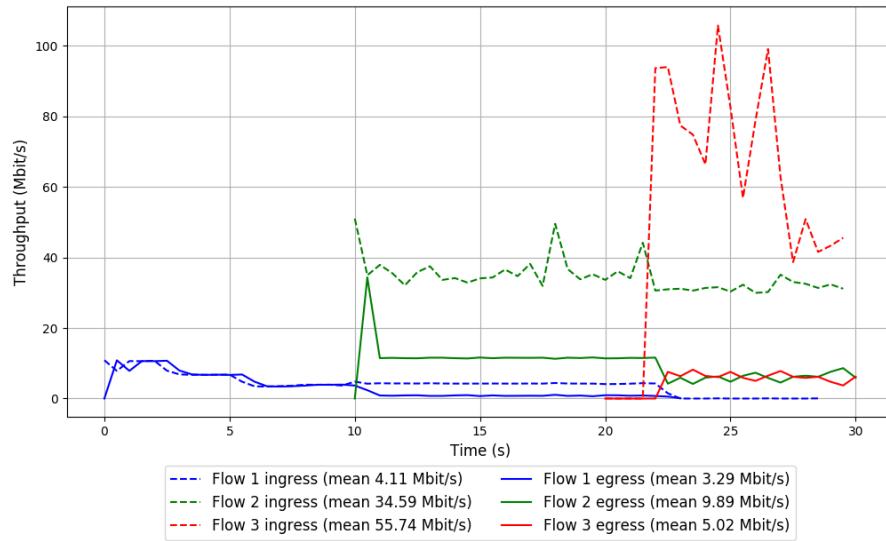


Run 2: Statistics of TaoVA-100x

```
Start at: 2019-05-30 01:05:10
End at: 2019-05-30 01:05:40
Local clock offset: 5.133 ms
Remote clock offset: 0.553 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.73 Mbit/s
95th percentile per-packet one-way delay: 1.175 ms
Loss rate: 76.42%
-- Flow 1:
Average throughput: 3.29 Mbit/s
95th percentile per-packet one-way delay: 1.251 ms
Loss rate: 36.80%
-- Flow 2:
Average throughput: 9.89 Mbit/s
95th percentile per-packet one-way delay: 1.116 ms
Loss rate: 71.43%
-- Flow 3:
Average throughput: 5.02 Mbit/s
95th percentile per-packet one-way delay: 1.102 ms
Loss rate: 91.00%
```

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

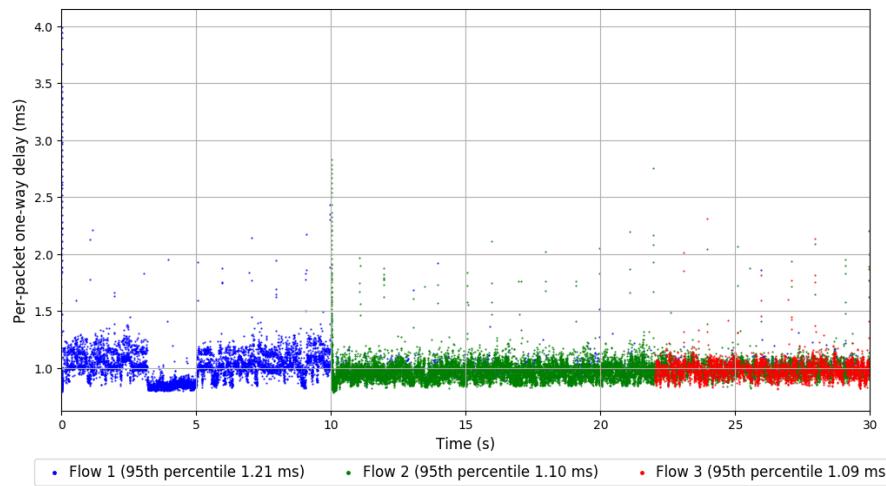
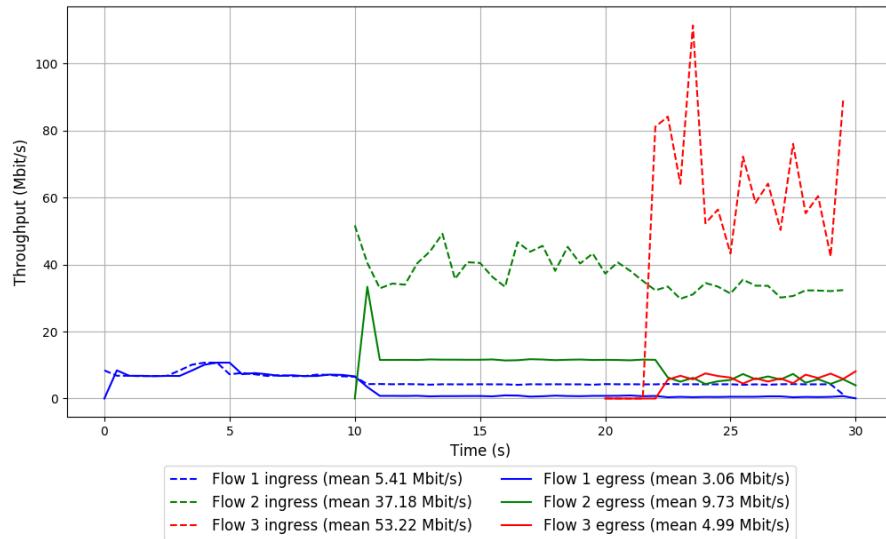


Run 3: Statistics of TaoVA-100x

```
Start at: 2019-05-30 01:35:07
End at: 2019-05-30 01:35:37
Local clock offset: 5.58 ms
Remote clock offset: 0.357 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.16 Mbit/s
95th percentile per-packet one-way delay: 1.141 ms
Loss rate: 76.67%
-- Flow 1:
Average throughput: 3.06 Mbit/s
95th percentile per-packet one-way delay: 1.210 ms
Loss rate: 43.65%
-- Flow 2:
Average throughput: 9.73 Mbit/s
95th percentile per-packet one-way delay: 1.096 ms
Loss rate: 73.83%
-- Flow 3:
Average throughput: 4.99 Mbit/s
95th percentile per-packet one-way delay: 1.088 ms
Loss rate: 90.62%
```

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

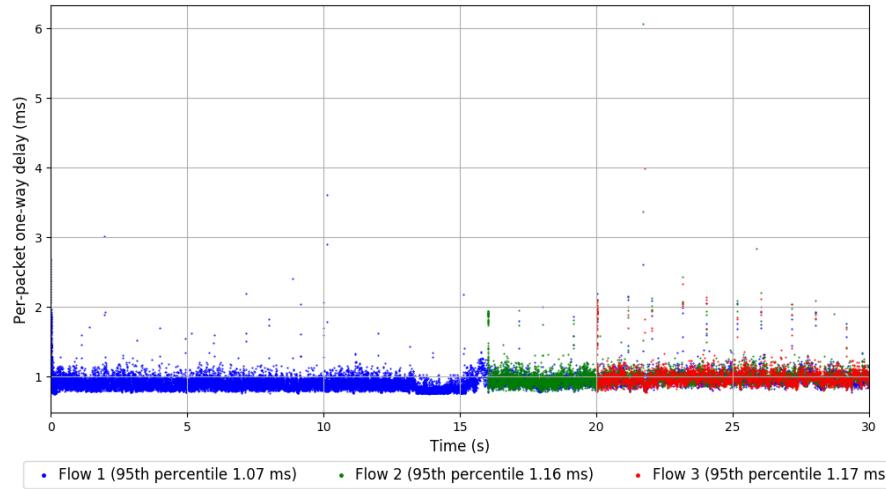
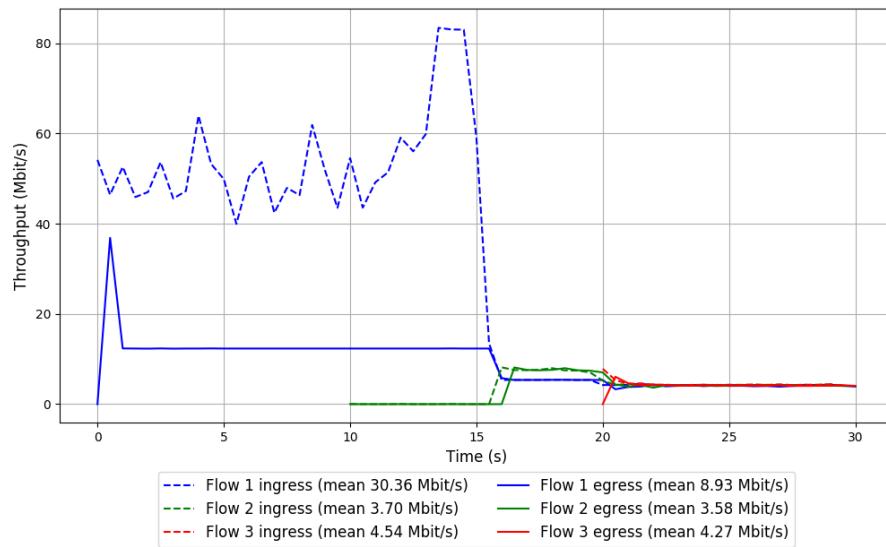


Run 4: Statistics of TaoVA-100x

```
Start at: 2019-05-30 02:04:57
End at: 2019-05-30 02:05:27
Local clock offset: 5.716 ms
Remote clock offset: 0.041 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 1.109 ms
Loss rate: 62.91%
-- Flow 1:
Average throughput: 8.93 Mbit/s
95th percentile per-packet one-way delay: 1.073 ms
Loss rate: 70.60%
-- Flow 2:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 1.155 ms
Loss rate: 3.08%
-- Flow 3:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 1.166 ms
Loss rate: 5.88%
```

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

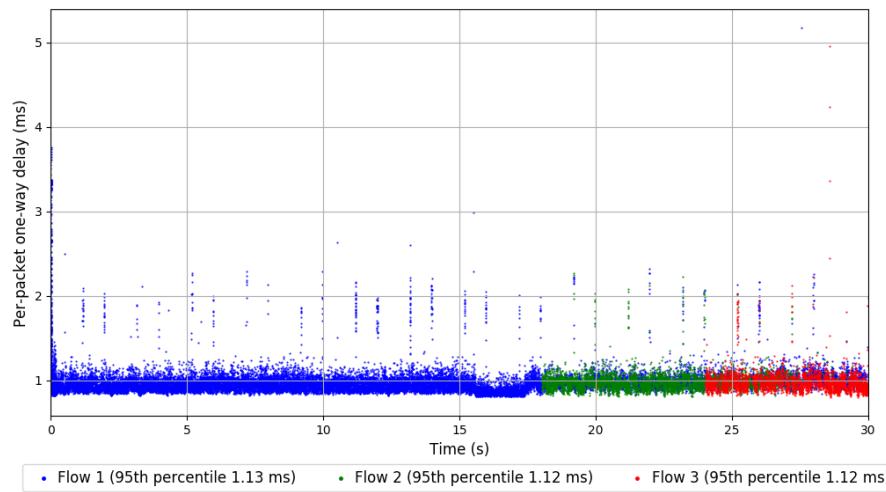
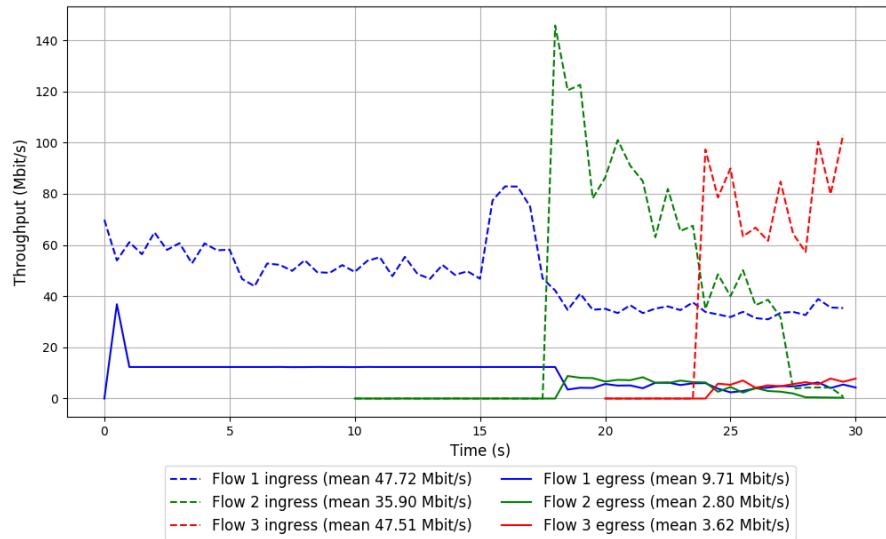


Run 5: Statistics of TaoVA-100x

```
Start at: 2019-05-30 02:34:55
End at: 2019-05-30 02:35:25
Local clock offset: 6.18 ms
Remote clock offset: 0.241 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 1.130 ms
Loss rate: 85.36%
-- Flow 1:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 1.134 ms
Loss rate: 79.66%
-- Flow 2:
Average throughput: 2.80 Mbit/s
95th percentile per-packet one-way delay: 1.117 ms
Loss rate: 92.24%
-- Flow 3:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 1.124 ms
Loss rate: 92.38%
```

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

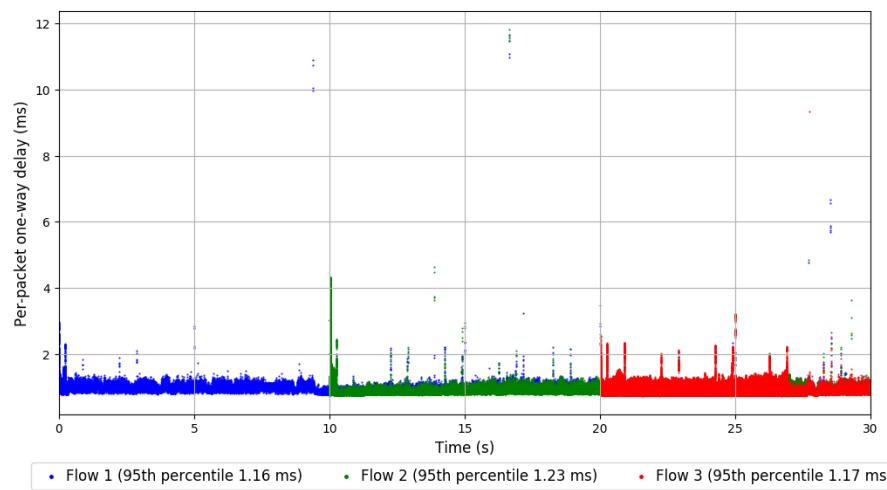
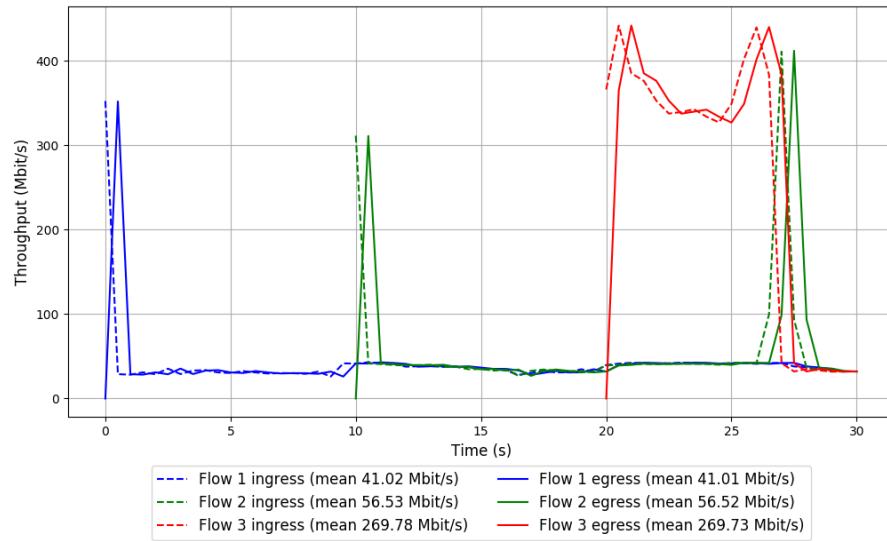


Run 1: Statistics of TCP Vegas

```
Start at: 2019-05-30 00:42:31
End at: 2019-05-30 00:43:01
Local clock offset: 5.002 ms
Remote clock offset: 0.528 ms

# Below is generated by plot.py at 2019-05-30 03:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 168.35 Mbit/s
95th percentile per-packet one-way delay: 1.176 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 41.01 Mbit/s
95th percentile per-packet one-way delay: 1.164 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 56.52 Mbit/s
95th percentile per-packet one-way delay: 1.233 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 269.73 Mbit/s
95th percentile per-packet one-way delay: 1.170 ms
Loss rate: 0.02%
```

Run 1: Report of TCP Vegas — Data Link

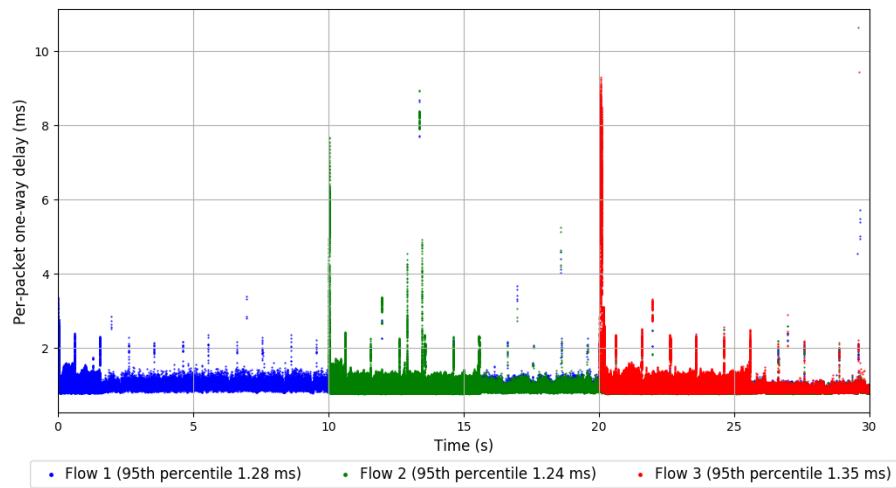
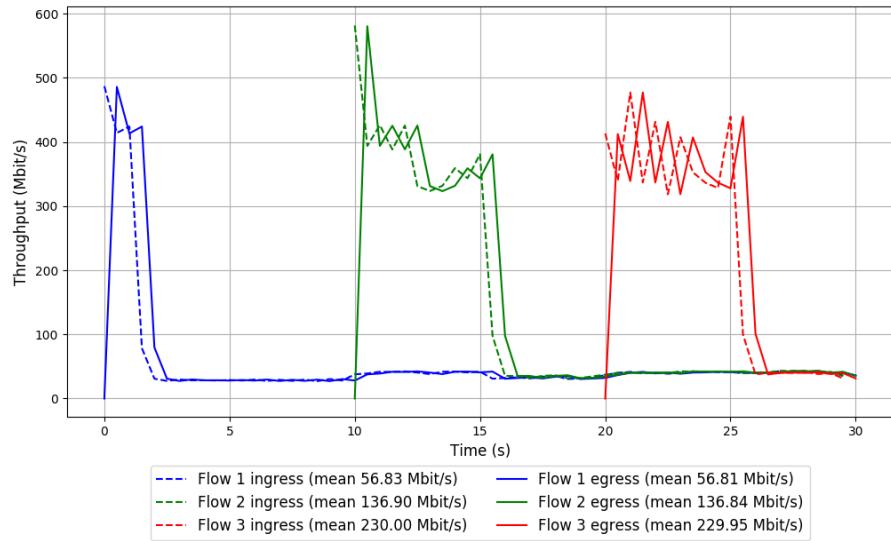


Run 2: Statistics of TCP Vegas

```
Start at: 2019-05-30 01:12:14
End at: 2019-05-30 01:12:44
Local clock offset: 5.319 ms
Remote clock offset: 0.71 ms

# Below is generated by plot.py at 2019-05-30 03:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 224.50 Mbit/s
95th percentile per-packet one-way delay: 1.276 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 56.81 Mbit/s
95th percentile per-packet one-way delay: 1.276 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 136.84 Mbit/s
95th percentile per-packet one-way delay: 1.240 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 229.95 Mbit/s
95th percentile per-packet one-way delay: 1.347 ms
Loss rate: 0.02%
```

Run 2: Report of TCP Vegas — Data Link

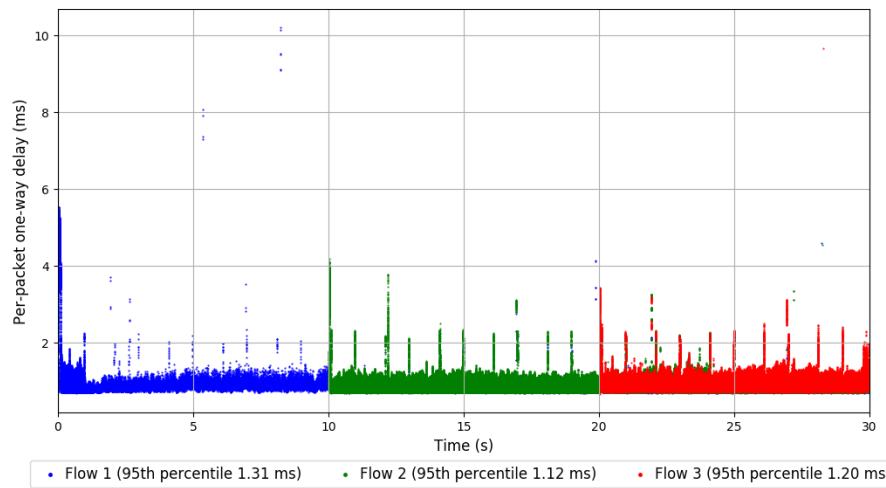
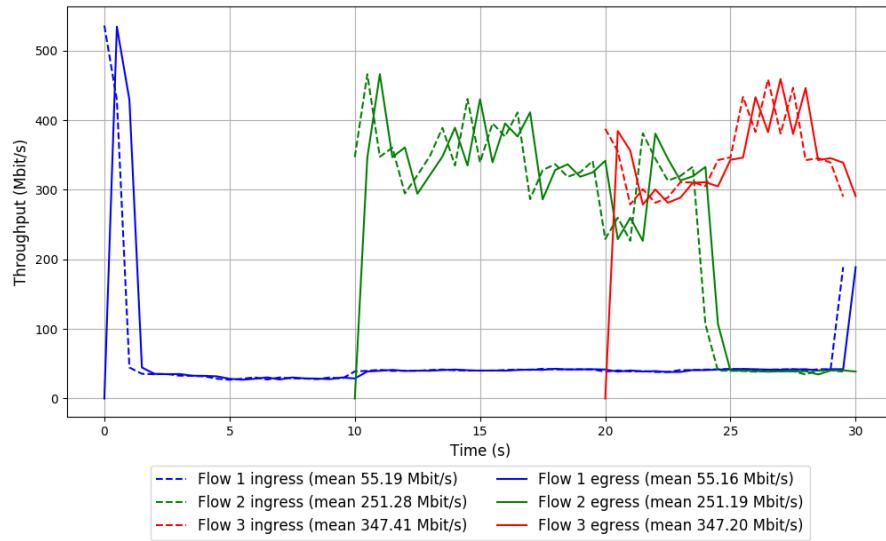


Run 3: Statistics of TCP Vegas

```
Start at: 2019-05-30 01:42:11
End at: 2019-05-30 01:42:41
Local clock offset: 5.64 ms
Remote clock offset: 0.31 ms

# Below is generated by plot.py at 2019-05-30 03:47:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 337.92 Mbit/s
95th percentile per-packet one-way delay: 1.170 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 55.16 Mbit/s
95th percentile per-packet one-way delay: 1.307 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 251.19 Mbit/s
95th percentile per-packet one-way delay: 1.116 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 347.20 Mbit/s
95th percentile per-packet one-way delay: 1.200 ms
Loss rate: 0.06%
```

Run 3: Report of TCP Vegas — Data Link

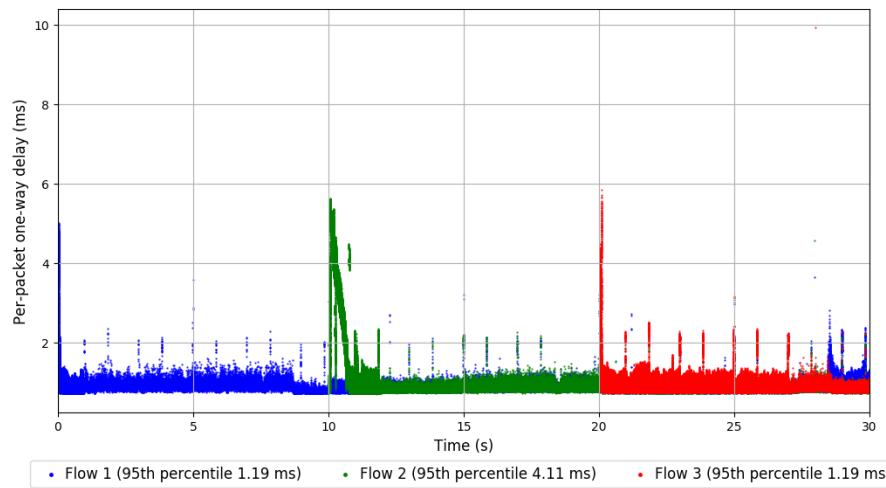
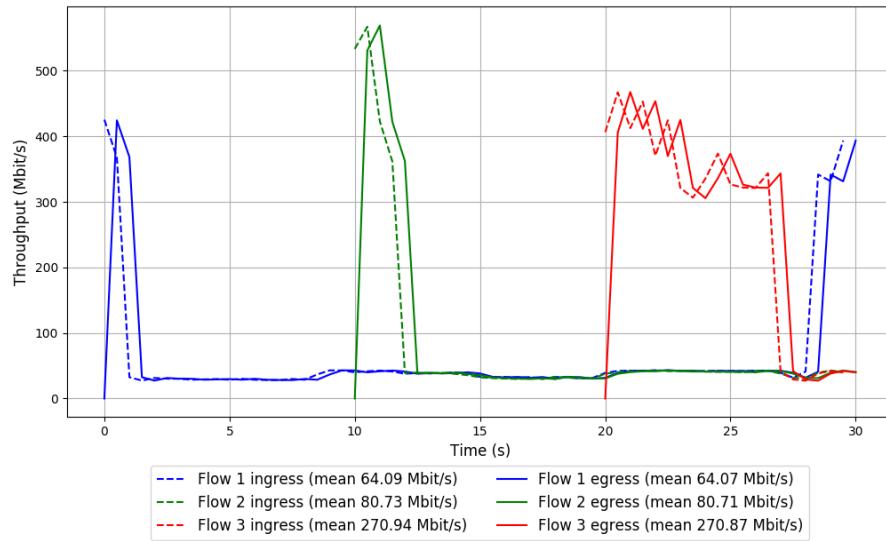


Run 4: Statistics of TCP Vegas

```
Start at: 2019-05-30 02:12:02
End at: 2019-05-30 02:12:32
Local clock offset: 5.856 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2019-05-30 03:47:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 207.90 Mbit/s
95th percentile per-packet one-way delay: 2.214 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 64.07 Mbit/s
95th percentile per-packet one-way delay: 1.194 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 80.71 Mbit/s
95th percentile per-packet one-way delay: 4.105 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 270.87 Mbit/s
95th percentile per-packet one-way delay: 1.191 ms
Loss rate: 0.02%
```

Run 4: Report of TCP Vegas — Data Link

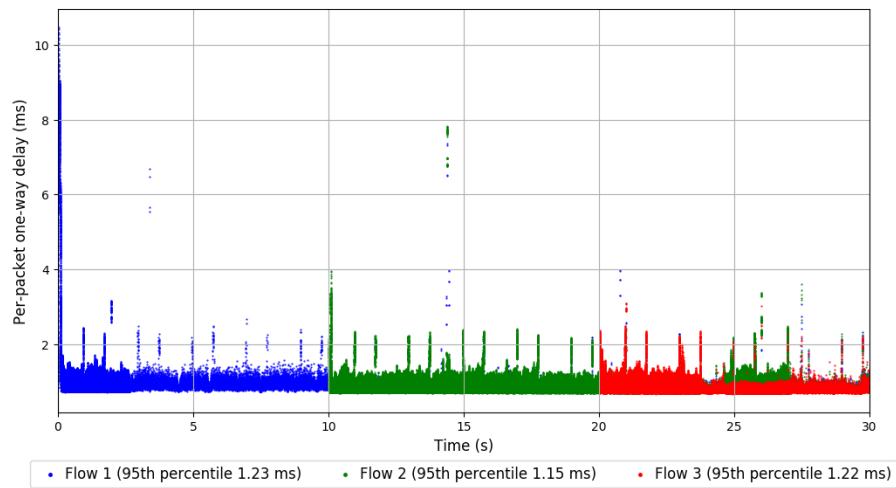
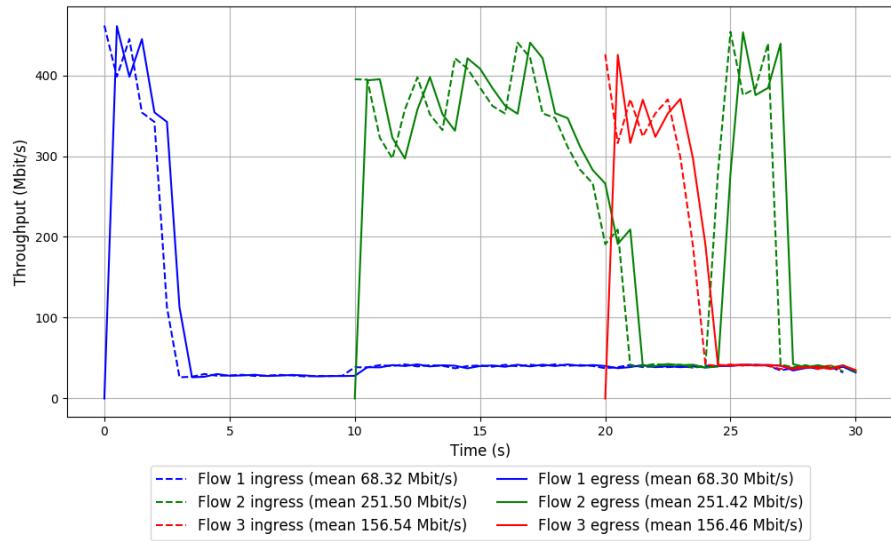


Run 5: Statistics of TCP Vegas

```
Start at: 2019-05-30 02:41:49
End at: 2019-05-30 02:42:19
Local clock offset: 5.985 ms
Remote clock offset: 0.372 ms

# Below is generated by plot.py at 2019-05-30 03:47:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 287.83 Mbit/s
95th percentile per-packet one-way delay: 1.183 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 68.30 Mbit/s
95th percentile per-packet one-way delay: 1.225 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 251.42 Mbit/s
95th percentile per-packet one-way delay: 1.153 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 156.46 Mbit/s
95th percentile per-packet one-way delay: 1.219 ms
Loss rate: 0.05%
```

Run 5: Report of TCP Vegas — Data Link

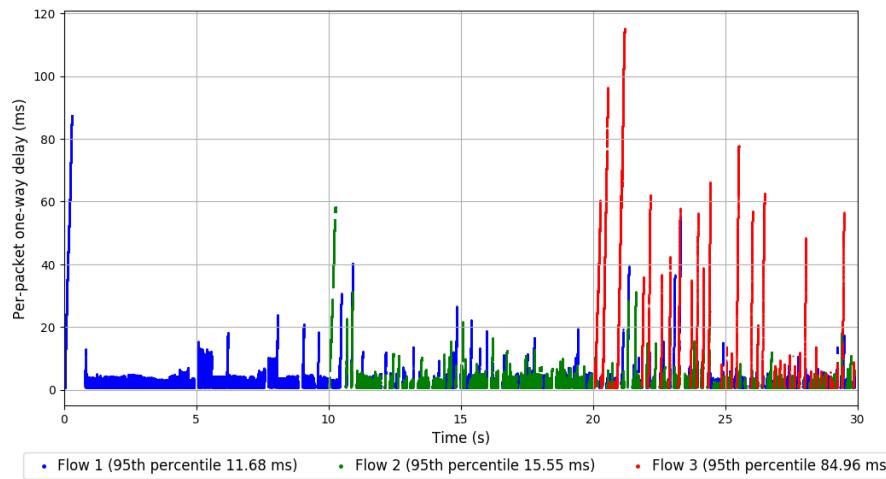
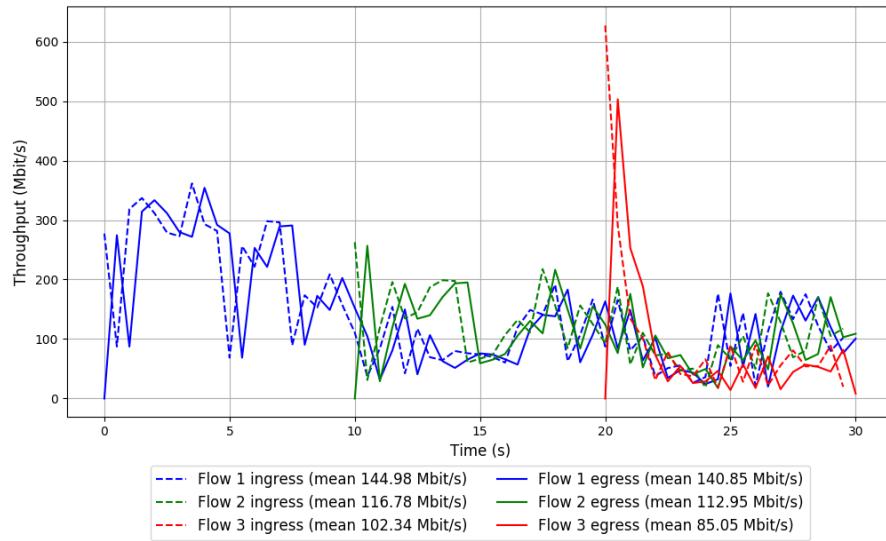


Run 1: Statistics of Verus

```
Start at: 2019-05-30 00:29:58
End at: 2019-05-30 00:30:28
Local clock offset: 4.99 ms
Remote clock offset: 0.257 ms

# Below is generated by plot.py at 2019-05-30 03:47:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 243.82 Mbit/s
95th percentile per-packet one-way delay: 40.414 ms
Loss rate: 4.81%
-- Flow 1:
Average throughput: 140.85 Mbit/s
95th percentile per-packet one-way delay: 11.683 ms
Loss rate: 2.85%
-- Flow 2:
Average throughput: 112.95 Mbit/s
95th percentile per-packet one-way delay: 15.551 ms
Loss rate: 3.25%
-- Flow 3:
Average throughput: 85.05 Mbit/s
95th percentile per-packet one-way delay: 84.964 ms
Loss rate: 16.86%
```

Run 1: Report of Verus — Data Link

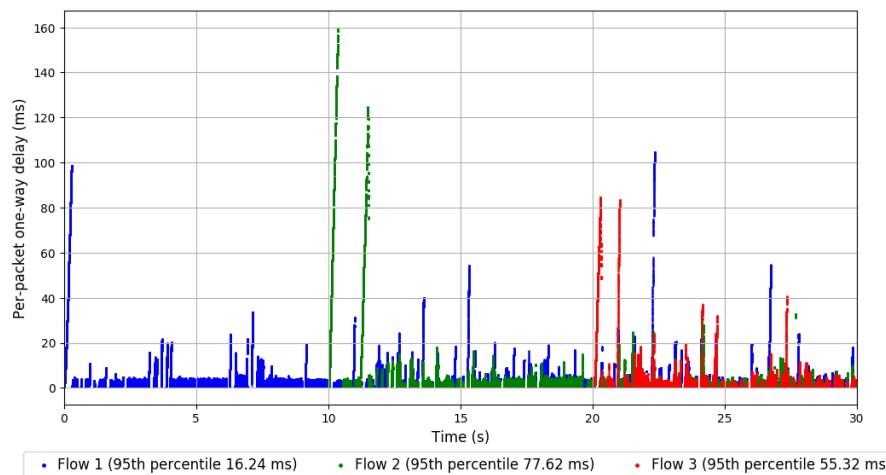
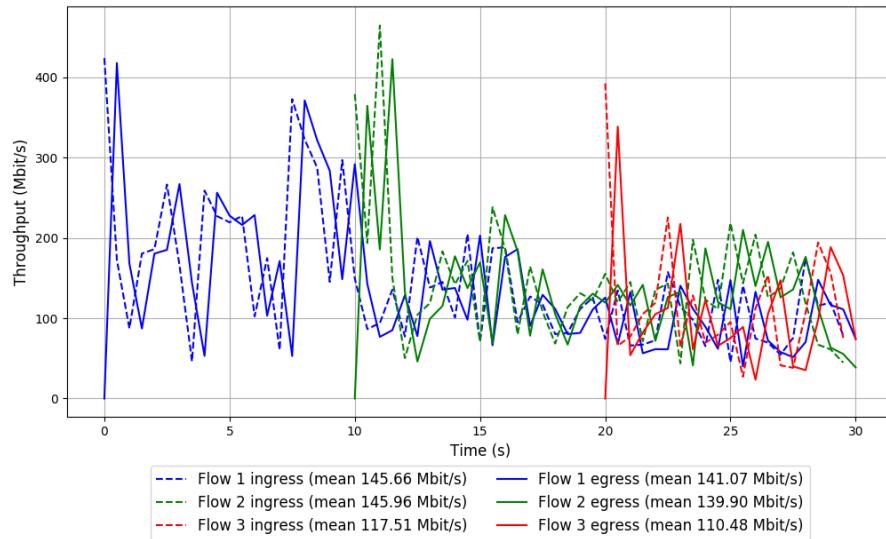


Run 2: Statistics of Verus

```
Start at: 2019-05-30 00:59:40
End at: 2019-05-30 01:00:10
Local clock offset: 5.137 ms
Remote clock offset: 0.389 ms

# Below is generated by plot.py at 2019-05-30 03:47:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 269.76 Mbit/s
95th percentile per-packet one-way delay: 40.358 ms
Loss rate: 3.85%
-- Flow 1:
Average throughput: 141.07 Mbit/s
95th percentile per-packet one-way delay: 16.241 ms
Loss rate: 3.09%
-- Flow 2:
Average throughput: 139.90 Mbit/s
95th percentile per-packet one-way delay: 77.620 ms
Loss rate: 4.14%
-- Flow 3:
Average throughput: 110.48 Mbit/s
95th percentile per-packet one-way delay: 55.320 ms
Loss rate: 5.95%
```

Run 2: Report of Verus — Data Link

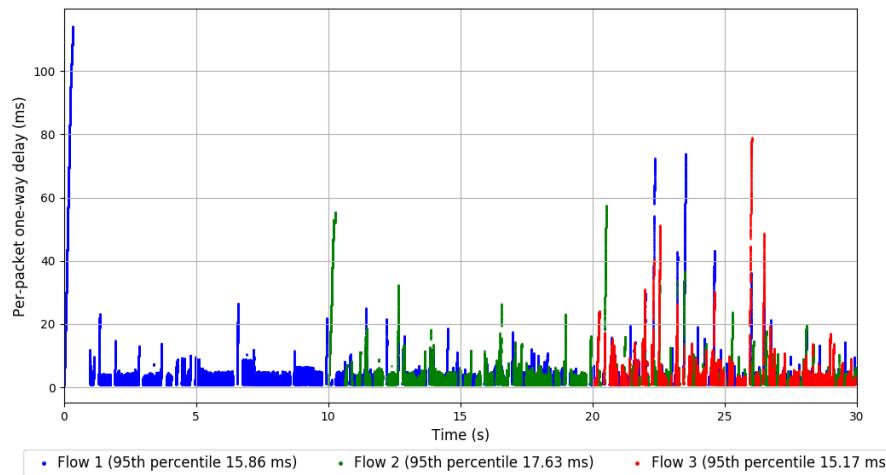
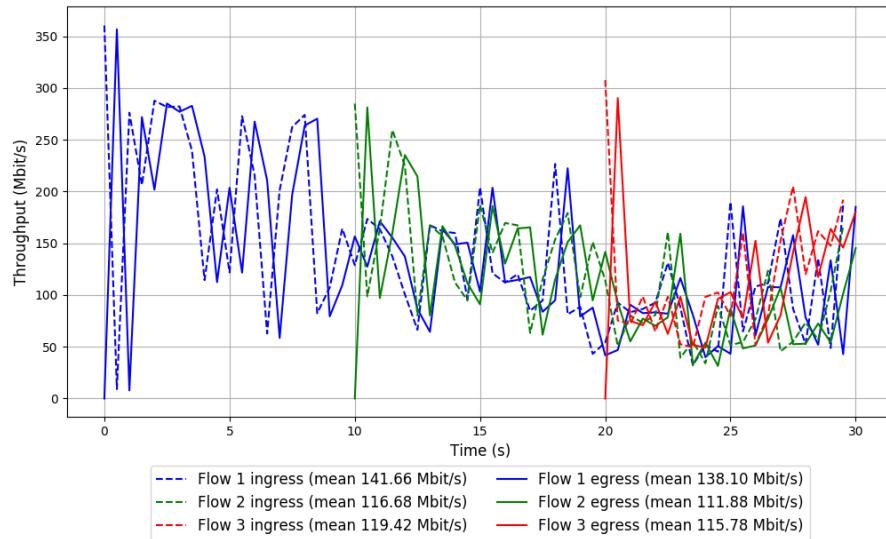


Run 3: Statistics of Verus

```
Start at: 2019-05-30 01:29:38
End at: 2019-05-30 01:30:08
Local clock offset: 5.572 ms
Remote clock offset: 0.395 ms

# Below is generated by plot.py at 2019-05-30 03:48:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 250.78 Mbit/s
95th percentile per-packet one-way delay: 15.971 ms
Loss rate: 3.05%
-- Flow 1:
Average throughput: 138.10 Mbit/s
95th percentile per-packet one-way delay: 15.860 ms
Loss rate: 2.48%
-- Flow 2:
Average throughput: 111.88 Mbit/s
95th percentile per-packet one-way delay: 17.630 ms
Loss rate: 4.09%
-- Flow 3:
Average throughput: 115.78 Mbit/s
95th percentile per-packet one-way delay: 15.174 ms
Loss rate: 3.05%
```

Run 3: Report of Verus — Data Link

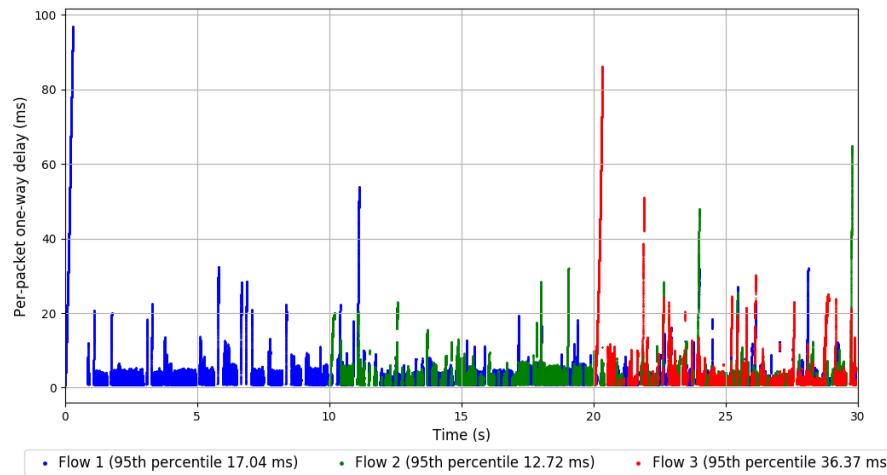
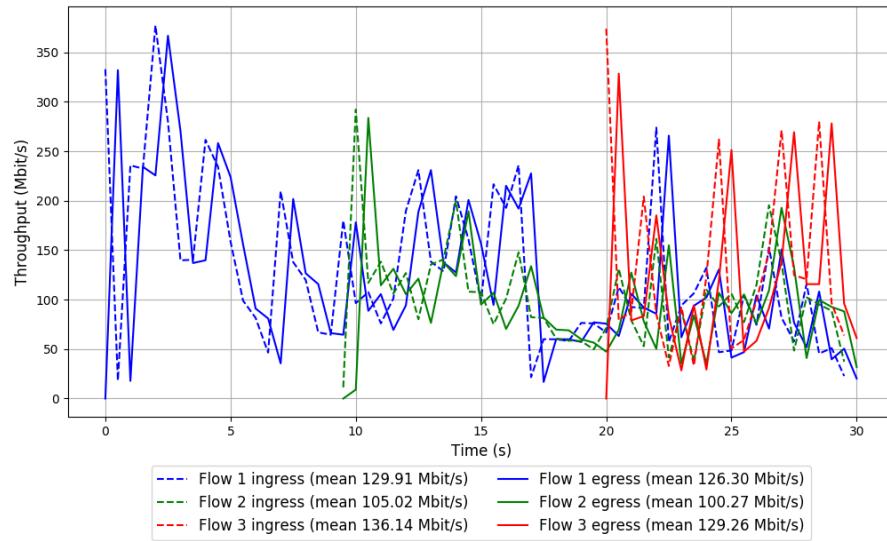


Run 4: Statistics of Verus

```
Start at: 2019-05-30 01:59:29
End at: 2019-05-30 01:59:59
Local clock offset: 5.703 ms
Remote clock offset: 0.222 ms

# Below is generated by plot.py at 2019-05-30 03:48:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 235.34 Mbit/s
95th percentile per-packet one-way delay: 20.045 ms
Loss rate: 3.60%
-- Flow 1:
Average throughput: 126.30 Mbit/s
95th percentile per-packet one-way delay: 17.041 ms
Loss rate: 2.77%
-- Flow 2:
Average throughput: 100.27 Mbit/s
95th percentile per-packet one-way delay: 12.717 ms
Loss rate: 4.22%
-- Flow 3:
Average throughput: 129.26 Mbit/s
95th percentile per-packet one-way delay: 36.365 ms
Loss rate: 5.02%
```

Run 4: Report of Verus — Data Link

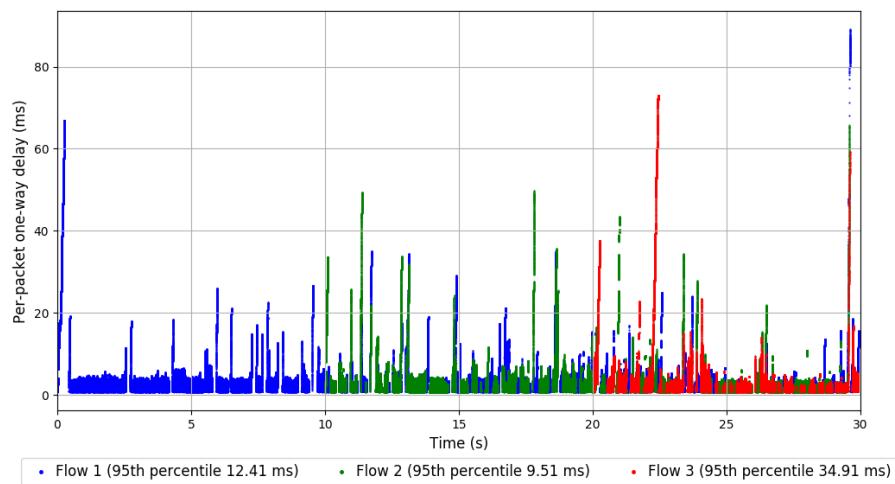
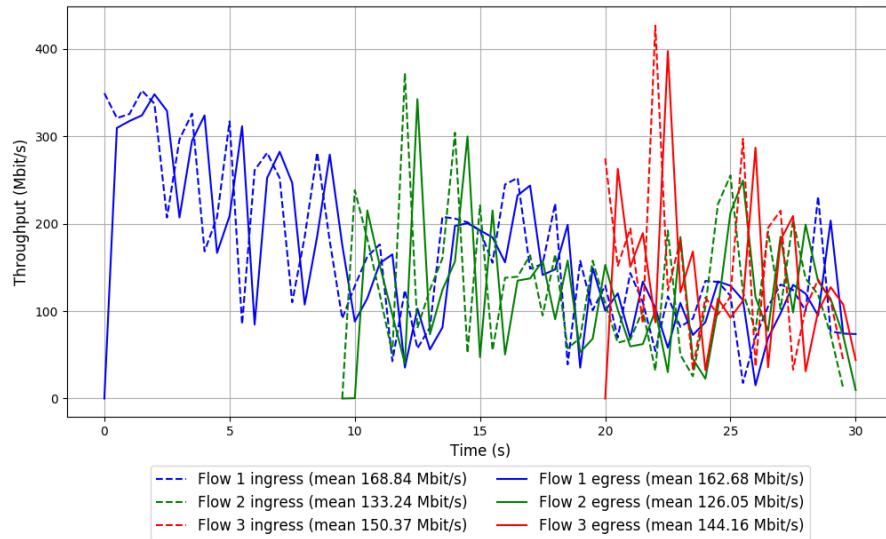


Run 5: Statistics of Verus

```
Start at: 2019-05-30 02:29:20
End at: 2019-05-30 02:29:50
Local clock offset: 6.134 ms
Remote clock offset: 0.069 ms

# Below is generated by plot.py at 2019-05-30 03:49:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 292.86 Mbit/s
95th percentile per-packet one-way delay: 15.315 ms
Loss rate: 4.11%
-- Flow 1:
Average throughput: 162.68 Mbit/s
95th percentile per-packet one-way delay: 12.413 ms
Loss rate: 3.60%
-- Flow 2:
Average throughput: 126.05 Mbit/s
95th percentile per-packet one-way delay: 9.513 ms
Loss rate: 5.09%
-- Flow 3:
Average throughput: 144.16 Mbit/s
95th percentile per-packet one-way delay: 34.911 ms
Loss rate: 4.12%
```

Run 5: Report of Verus — Data Link

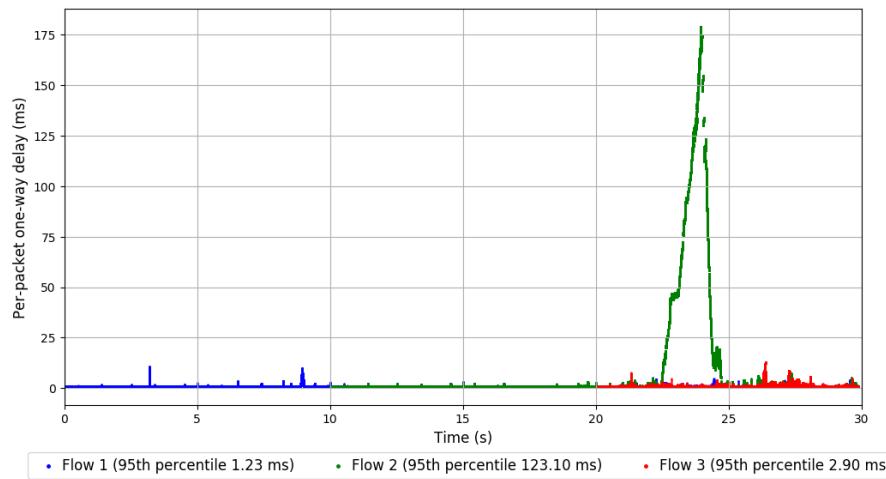
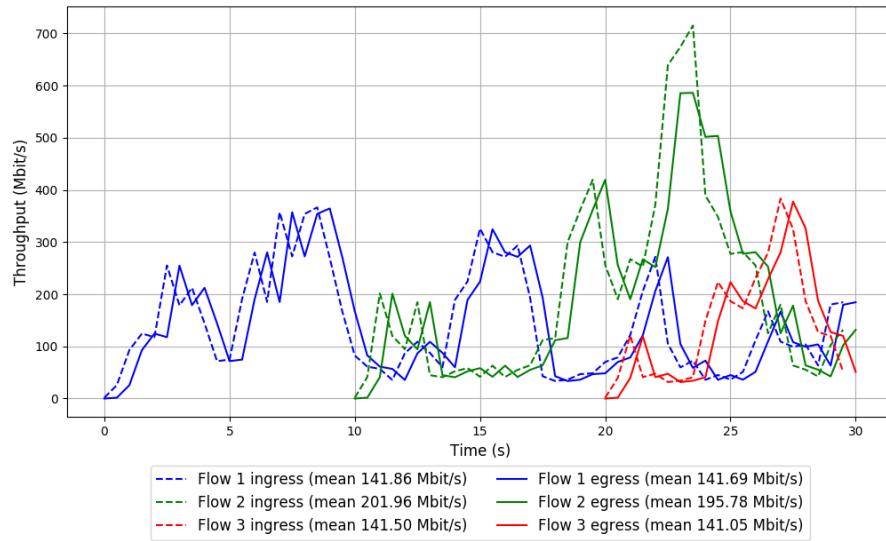


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2019-05-30 00:47:41
End at: 2019-05-30 00:48:11
Local clock offset: 5.091 ms
Remote clock offset: 0.428 ms

# Below is generated by plot.py at 2019-05-30 03:49:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 318.50 Mbit/s
95th percentile per-packet one-way delay: 82.059 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 141.69 Mbit/s
95th percentile per-packet one-way delay: 1.225 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 195.78 Mbit/s
95th percentile per-packet one-way delay: 123.098 ms
Loss rate: 3.06%
-- Flow 3:
Average throughput: 141.05 Mbit/s
95th percentile per-packet one-way delay: 2.899 ms
Loss rate: 0.32%
```

Run 1: Report of PCC-Vivace — Data Link

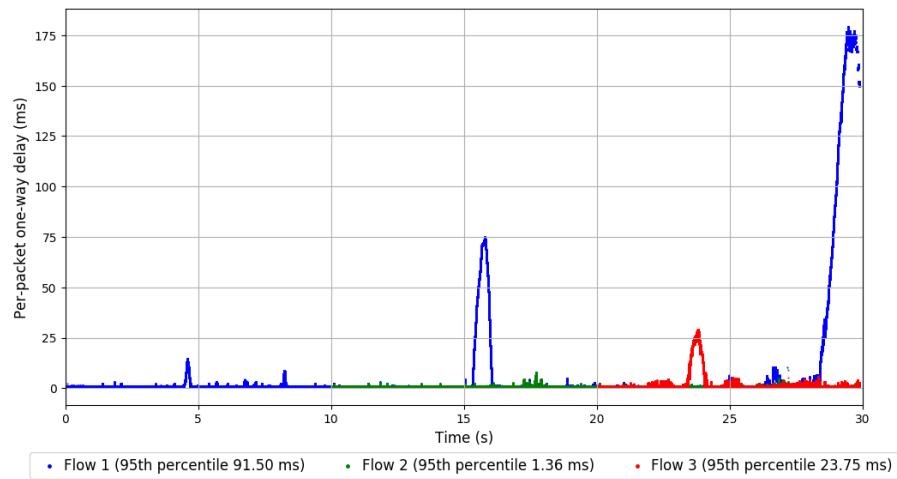
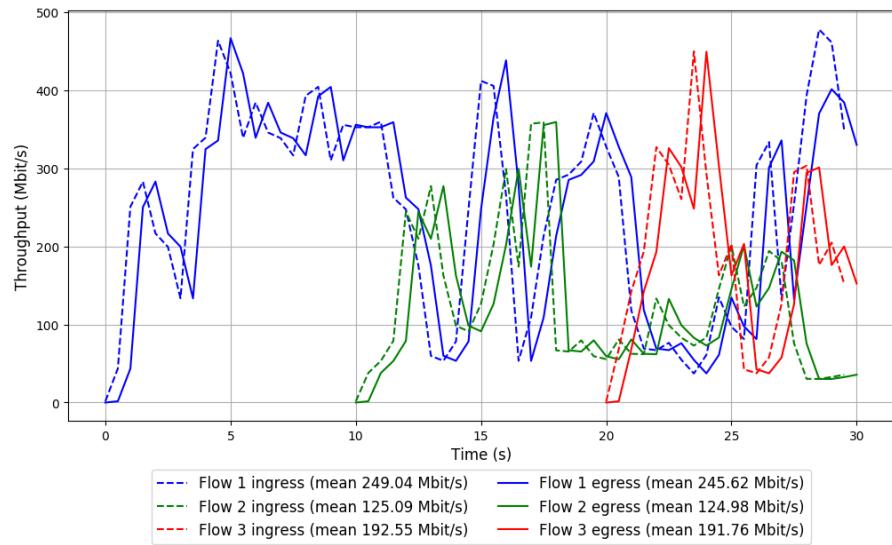


Run 2: Statistics of PCC-Vivace

```
Start at: 2019-05-30 01:17:24
End at: 2019-05-30 01:17:54
Local clock offset: 5.445 ms
Remote clock offset: 0.746 ms

# Below is generated by plot.py at 2019-05-30 03:50:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.08 Mbit/s
95th percentile per-packet one-way delay: 55.148 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 245.62 Mbit/s
95th percentile per-packet one-way delay: 91.499 ms
Loss rate: 1.37%
-- Flow 2:
Average throughput: 124.98 Mbit/s
95th percentile per-packet one-way delay: 1.361 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 191.76 Mbit/s
95th percentile per-packet one-way delay: 23.755 ms
Loss rate: 0.41%
```

Run 2: Report of PCC-Vivace — Data Link

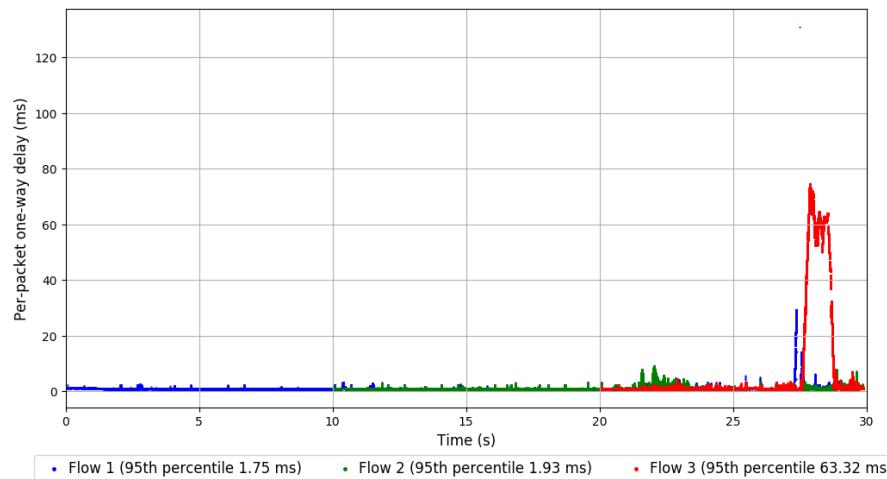
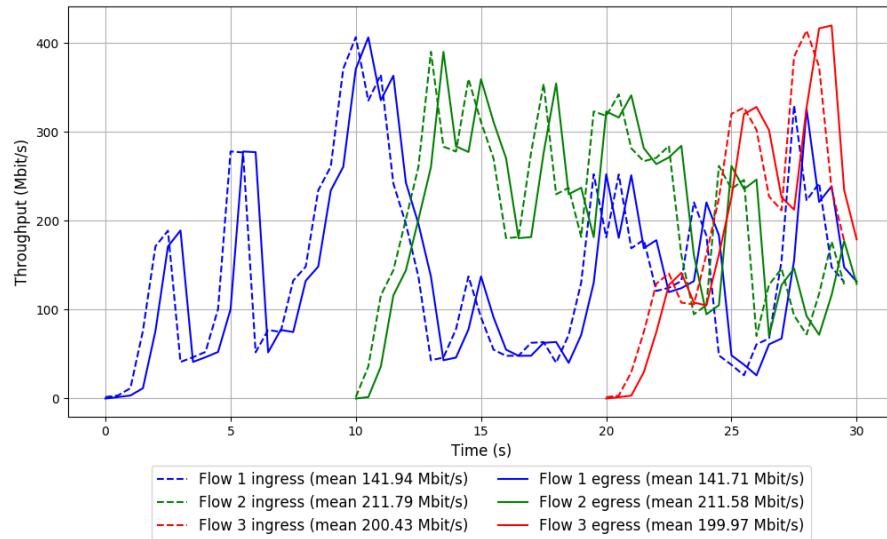


Run 3: Statistics of PCC-Vivace

```
Start at: 2019-05-30 01:47:25
End at: 2019-05-30 01:47:55
Local clock offset: 5.674 ms
Remote clock offset: 0.433 ms

# Below is generated by plot.py at 2019-05-30 03:50:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 348.45 Mbit/s
95th percentile per-packet one-way delay: 6.702 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 141.71 Mbit/s
95th percentile per-packet one-way delay: 1.748 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 211.58 Mbit/s
95th percentile per-packet one-way delay: 1.928 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 199.97 Mbit/s
95th percentile per-packet one-way delay: 63.323 ms
Loss rate: 0.23%
```

Run 3: Report of PCC-Vivace — Data Link

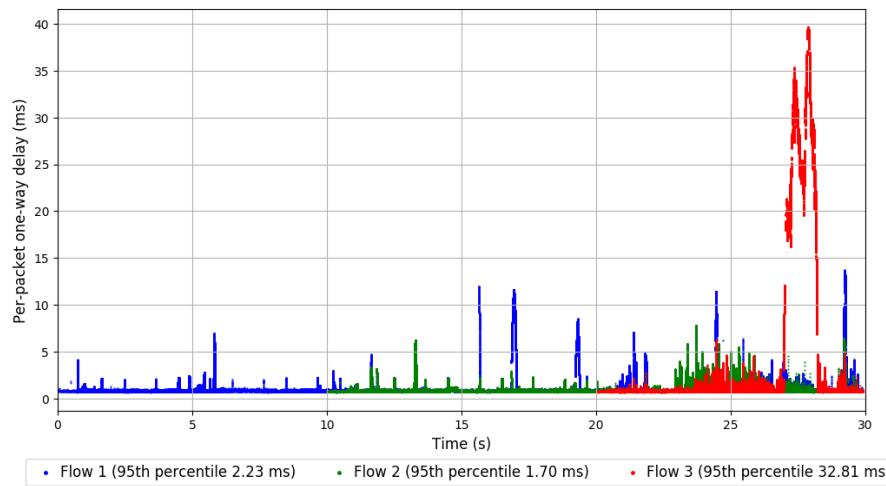
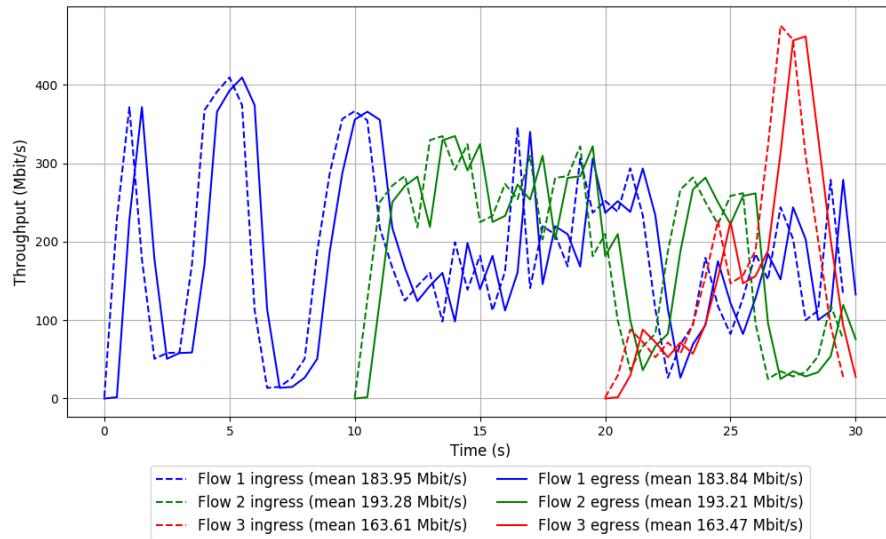


Run 4: Statistics of PCC-Vivace

```
Start at: 2019-05-30 02:17:11
End at: 2019-05-30 02:17:41
Local clock offset: 5.974 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-05-30 03:50:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 366.29 Mbit/s
95th percentile per-packet one-way delay: 11.155 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 183.84 Mbit/s
95th percentile per-packet one-way delay: 2.235 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 193.21 Mbit/s
95th percentile per-packet one-way delay: 1.703 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 163.47 Mbit/s
95th percentile per-packet one-way delay: 32.809 ms
Loss rate: 0.09%
```

Run 4: Report of PCC-Vivace — Data Link

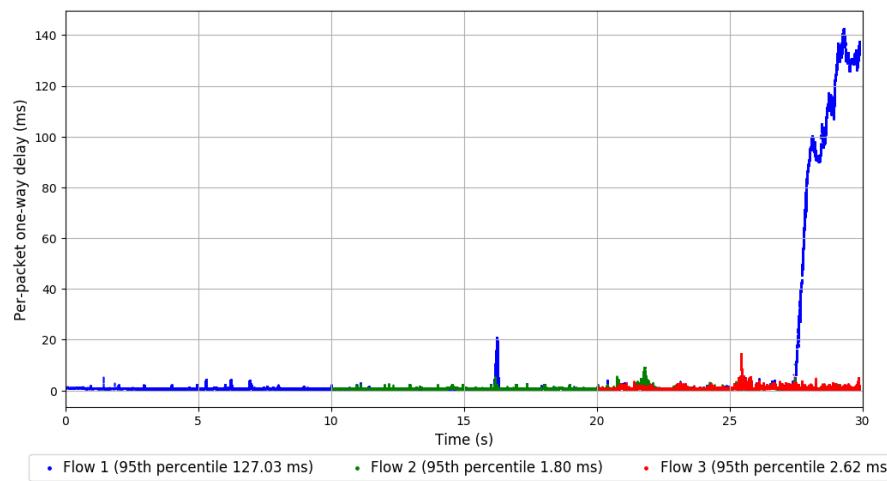
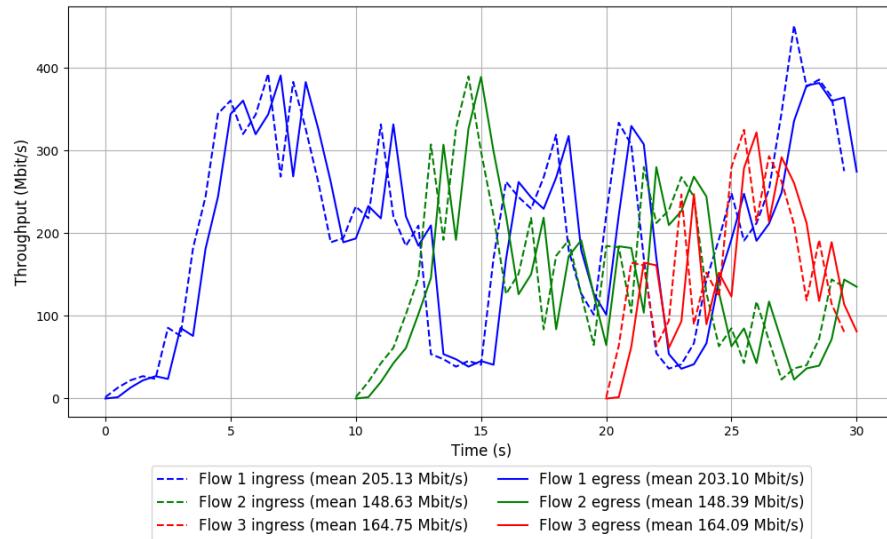


Run 5: Statistics of PCC-Vivace

```
Start at: 2019-05-30 02:47:03
End at: 2019-05-30 02:47:33
Local clock offset: 5.787 ms
Remote clock offset: 0.363 ms

# Below is generated by plot.py at 2019-05-30 03:50:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 356.01 Mbit/s
95th percentile per-packet one-way delay: 97.988 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 203.10 Mbit/s
95th percentile per-packet one-way delay: 127.028 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 148.39 Mbit/s
95th percentile per-packet one-way delay: 1.801 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 164.09 Mbit/s
95th percentile per-packet one-way delay: 2.624 ms
Loss rate: 0.40%
```

Run 5: Report of PCC-Vivace — Data Link

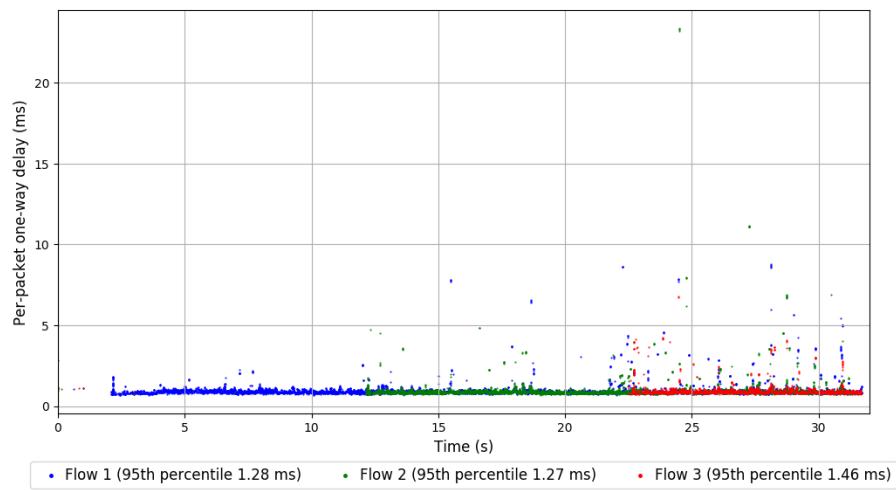
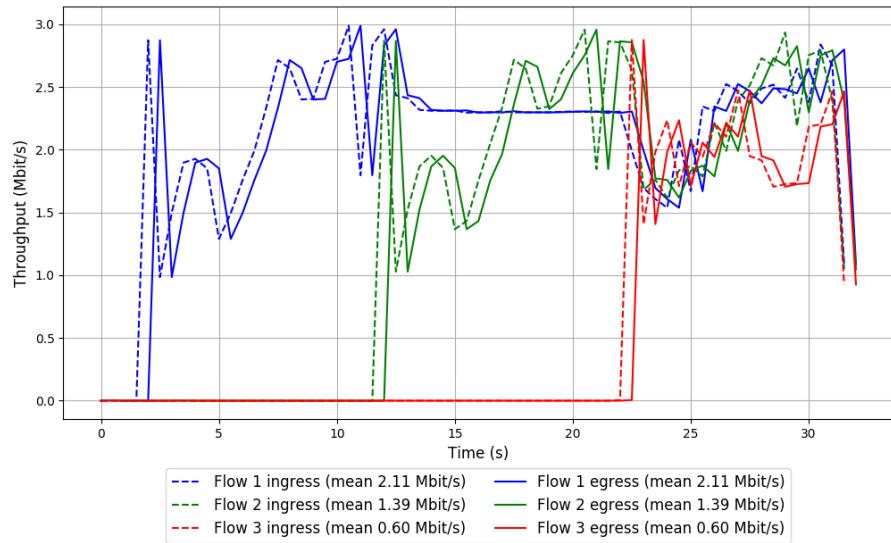


```
Run 1: Statistics of WebRTC media

Start at: 2019-05-30 00:49:10
End at: 2019-05-30 00:49:40
Local clock offset: 5.106 ms
Remote clock offset: 0.43 ms

# Below is generated by plot.py at 2019-05-30 03:50:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 1.288 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 1.279 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 1.270 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 1.462 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

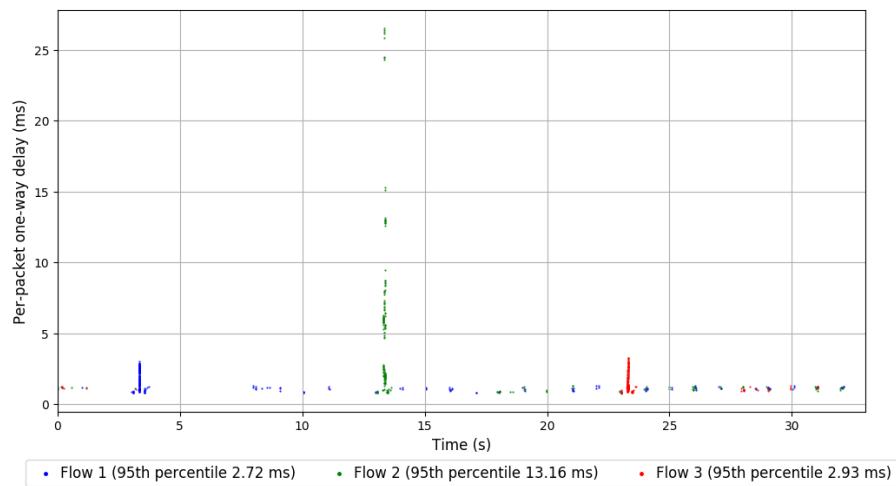
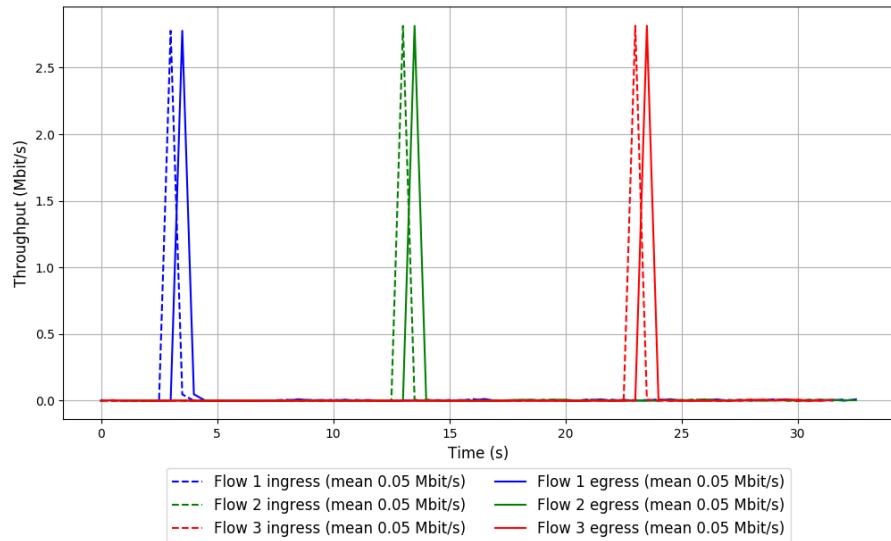


Run 2: Statistics of WebRTC media

```
Start at: 2019-05-30 01:18:56
End at: 2019-05-30 01:19:26
Local clock offset: 5.481 ms
Remote clock offset: 0.779 ms

# Below is generated by plot.py at 2019-05-30 03:50:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 7.871 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.723 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 13.165 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.933 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

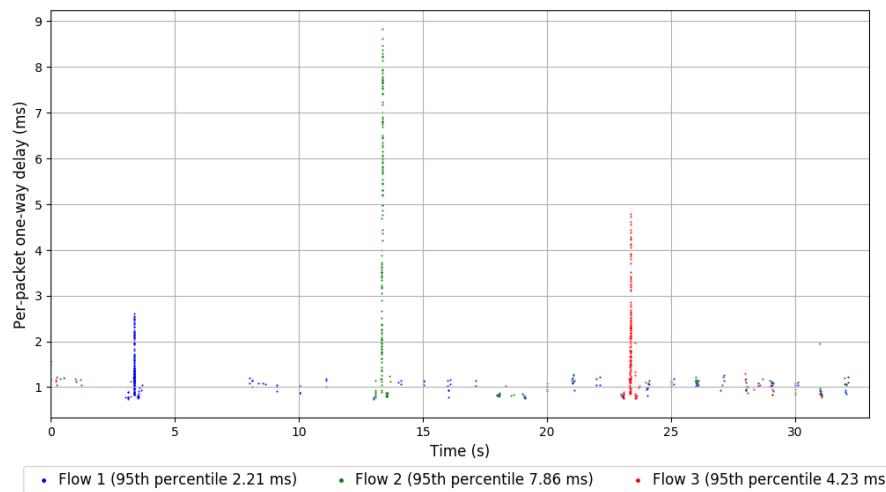
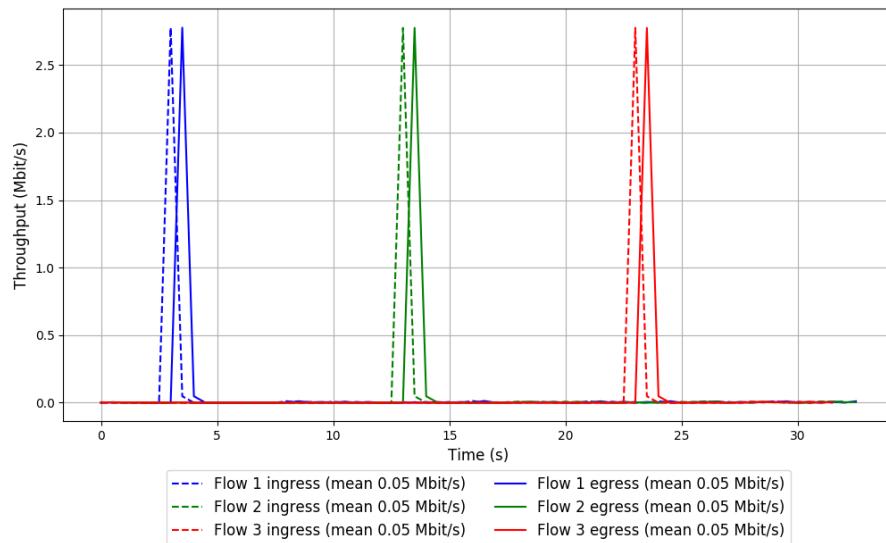


Run 3: Statistics of WebRTC media

```
Start at: 2019-05-30 01:48:56
End at: 2019-05-30 01:49:26
Local clock offset: 5.688 ms
Remote clock offset: 0.39 ms

# Below is generated by plot.py at 2019-05-30 03:50:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 6.788 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.212 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.855 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.227 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

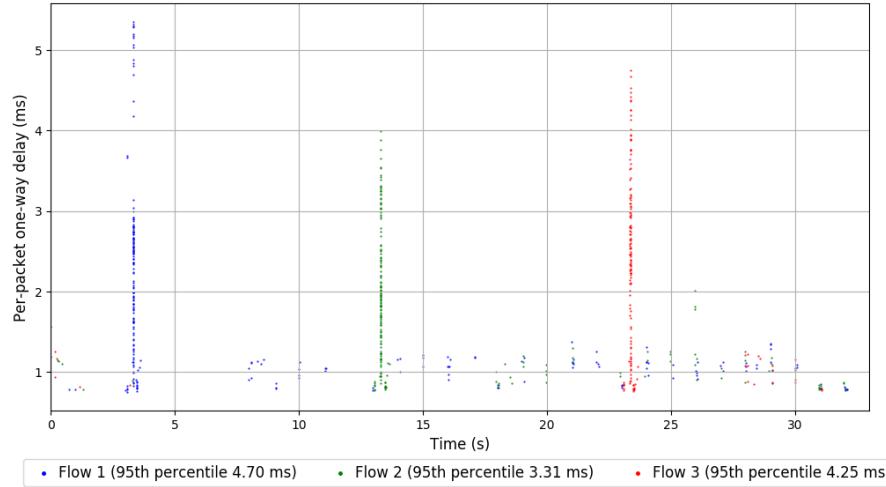
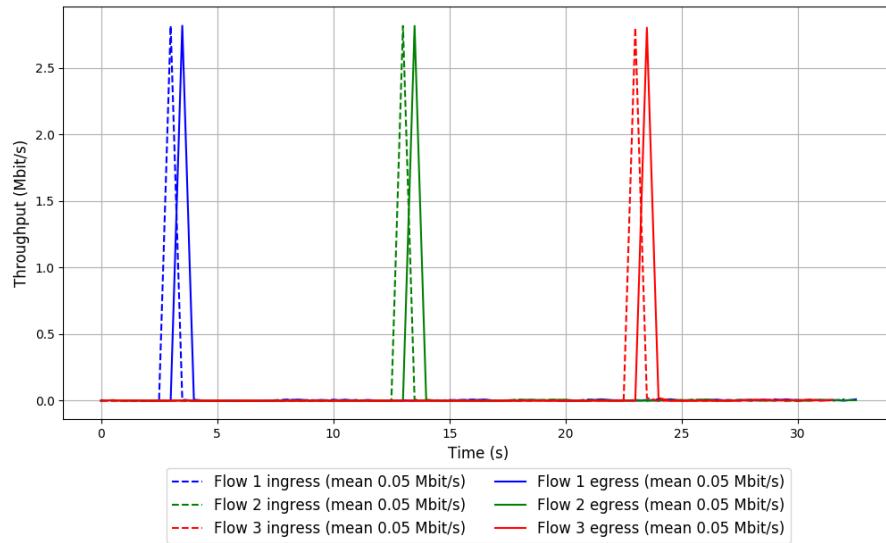


Run 4: Statistics of WebRTC media

```
Start at: 2019-05-30 02:18:42
End at: 2019-05-30 02:19:12
Local clock offset: 6.031 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2019-05-30 03:50:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 3.897 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.697 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.307 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.250 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2019-05-30 02:48:33
End at: 2019-05-30 02:49:03
Local clock offset: 5.742 ms
Remote clock offset: 0.364 ms

# Below is generated by plot.py at 2019-05-30 03:50:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 4.268 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.816 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 5.032 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.081 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

