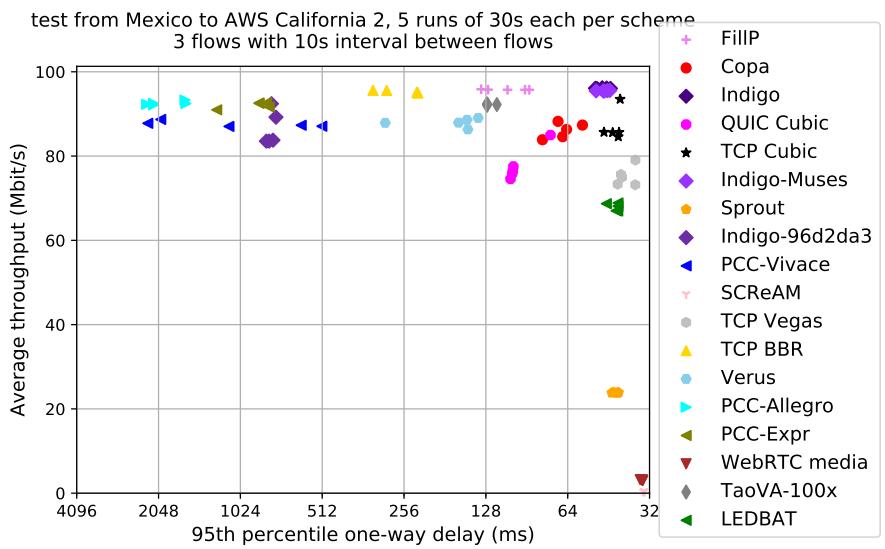
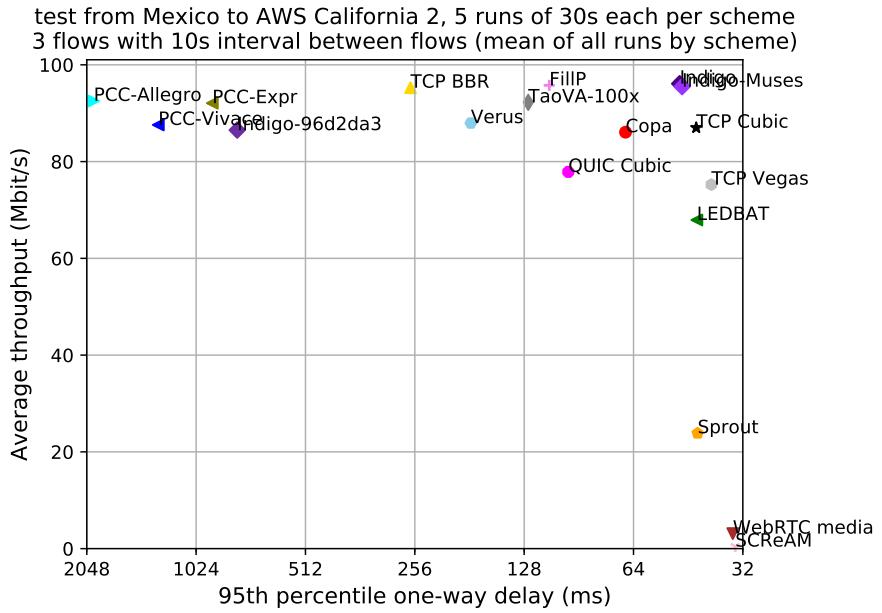


Pantheon Report

Generated at 2018-10-10 06:26:18 (UTC).
Data path: Mexico on `em1` (*remote*) → AWS California 2 on `ens5` (*local*).
Repeated the test of 18 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 4.15.0-1023-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 @ 2e19c0464530faa92c63f8217c9971438a26a3be  
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6  
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4  
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d  
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95  
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf  
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a  
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



4

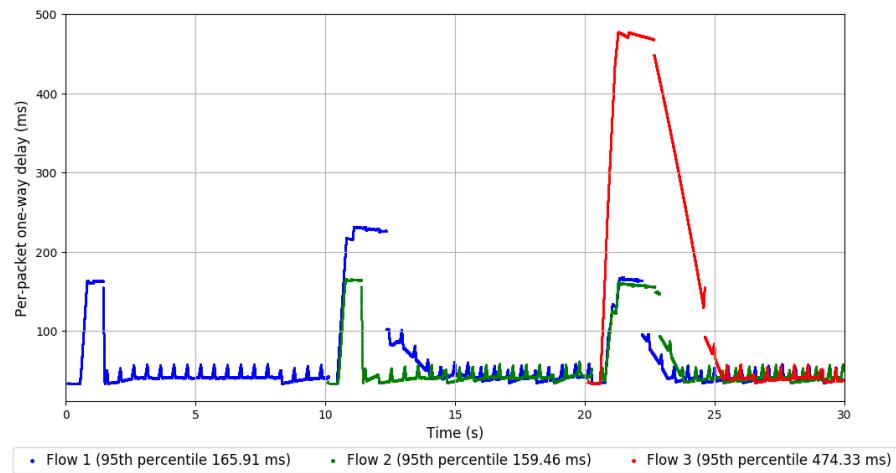
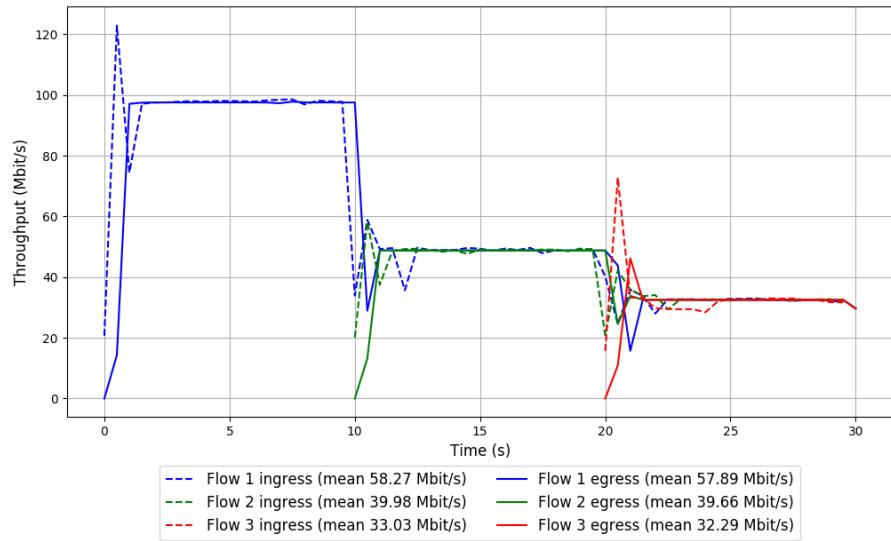
| scheme | # runs | mean avg tput (Mbit/s) | | | mean 95th-%ile delay (ms) | | | mean loss rate (%) | | |
|----------------|--------|------------------------|--------|--------|---------------------------|--------|--------|--------------------|--------|--------|
| | | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 |
| TCP BBR | 5 | 58.01 | 37.46 | 37.27 | 189.63 | 247.81 | 467.66 | 0.79 | 1.41 | 3.10 |
| Copa | 5 | 52.69 | 36.23 | 27.98 | 94.39 | 44.71 | 47.50 | 0.18 | 0.26 | 0.79 |
| TCP Cubic | 5 | 49.91 | 39.00 | 33.65 | 45.57 | 41.29 | 47.12 | 0.16 | 0.29 | 0.69 |
| FillP | 5 | 57.65 | 38.57 | 37.76 | 91.52 | 115.16 | 144.72 | 0.80 | 0.81 | 1.12 |
| Indigo | 5 | 57.53 | 40.19 | 36.26 | 48.70 | 48.53 | 45.25 | 0.21 | 0.41 | 0.75 |
| Indigo-96d2da3 | 5 | 51.98 | 35.77 | 32.59 | 754.09 | 817.27 | 756.88 | 3.21 | 4.27 | 7.10 |
| LEDBAT | 5 | 40.15 | 30.23 | 23.17 | 42.57 | 44.49 | 40.40 | 0.16 | 0.29 | 1.08 |
| Indigo-Muses | 5 | 59.33 | 36.18 | 36.71 | 46.51 | 47.58 | 48.34 | 0.14 | 0.29 | 0.73 |
| PCC-Allegro | 5 | 57.20 | 39.46 | 27.76 | 2002.64 | 957.37 | 413.03 | 17.23 | 10.29 | 4.43 |
| PCC-Expr | 5 | 57.16 | 39.77 | 25.82 | 868.06 | 698.17 | 102.32 | 31.58 | 8.17 | 1.29 |
| QUIC Cubic | 5 | 44.50 | 37.21 | 26.25 | 84.25 | 109.06 | 135.71 | 0.26 | 0.48 | 1.03 |
| SCReAM | 5 | 0.21 | 0.21 | 0.22 | 33.57 | 33.56 | 33.54 | 0.16 | 0.32 | 0.71 |
| Sprout | 5 | 12.07 | 11.95 | 11.69 | 42.48 | 42.80 | 42.65 | 0.20 | 0.30 | 0.72 |
| TaoVA-100x | 5 | 55.22 | 40.65 | 29.94 | 122.57 | 123.71 | 136.62 | 0.65 | 1.60 | 3.92 |
| TCP Vegas | 5 | 38.98 | 38.38 | 32.39 | 45.77 | 36.19 | 46.84 | 0.21 | 0.31 | 0.71 |
| Verus | 5 | 54.62 | 36.36 | 27.73 | 141.22 | 325.51 | 251.67 | 0.32 | 0.61 | 1.68 |
| PCC-Vivace | 5 | 57.27 | 33.08 | 25.32 | 1185.55 | 553.06 | 207.13 | 3.96 | 3.15 | 2.10 |
| WebRTC media | 5 | 1.74 | 0.98 | 0.39 | 34.08 | 34.14 | 34.09 | 0.09 | 0.21 | 0.93 |

Run 1: Statistics of TCP BBR

```
Start at: 2018-10-10 04:24:47
End at: 2018-10-10 04:25:17
Local clock offset: 6.598 ms
Remote clock offset: -4.375 ms

# Below is generated by plot.py at 2018-10-10 06:15:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.98 Mbit/s
95th percentile per-packet one-way delay: 228.510 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 57.89 Mbit/s
95th percentile per-packet one-way delay: 165.912 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 39.66 Mbit/s
95th percentile per-packet one-way delay: 159.461 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 32.29 Mbit/s
95th percentile per-packet one-way delay: 474.330 ms
Loss rate: 2.86%
```

Run 1: Report of TCP BBR — Data Link

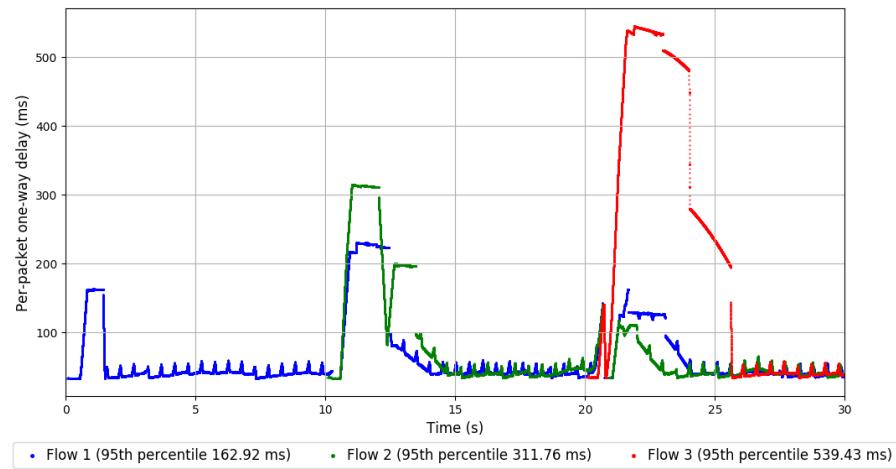
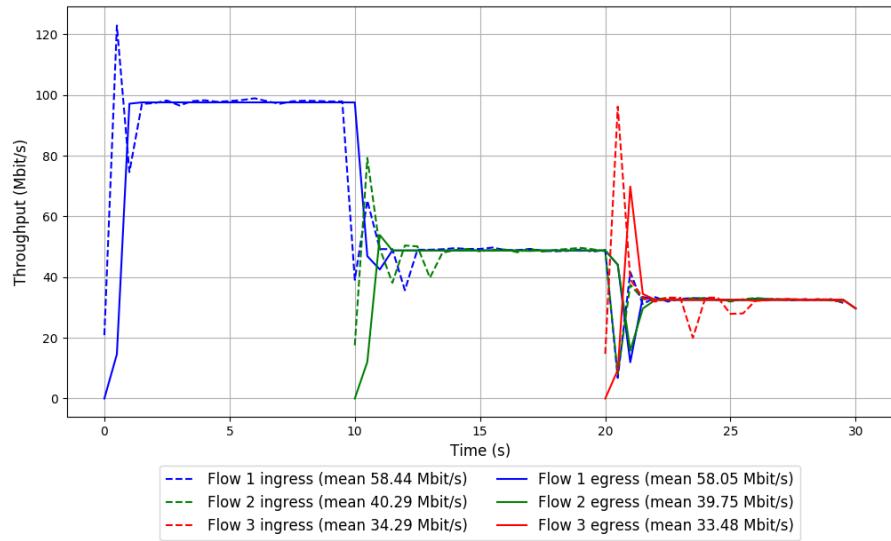


Run 2: Statistics of TCP BBR

```
Start at: 2018-10-10 04:49:43
End at: 2018-10-10 04:50:13
Local clock offset: 2.324 ms
Remote clock offset: -3.609 ms

# Below is generated by plot.py at 2018-10-10 06:15:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.58 Mbit/s
95th percentile per-packet one-way delay: 296.602 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 58.05 Mbit/s
95th percentile per-packet one-way delay: 162.918 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 39.75 Mbit/s
95th percentile per-packet one-way delay: 311.757 ms
Loss rate: 1.65%
-- Flow 3:
Average throughput: 33.48 Mbit/s
95th percentile per-packet one-way delay: 539.426 ms
Loss rate: 2.99%
```

Run 2: Report of TCP BBR — Data Link

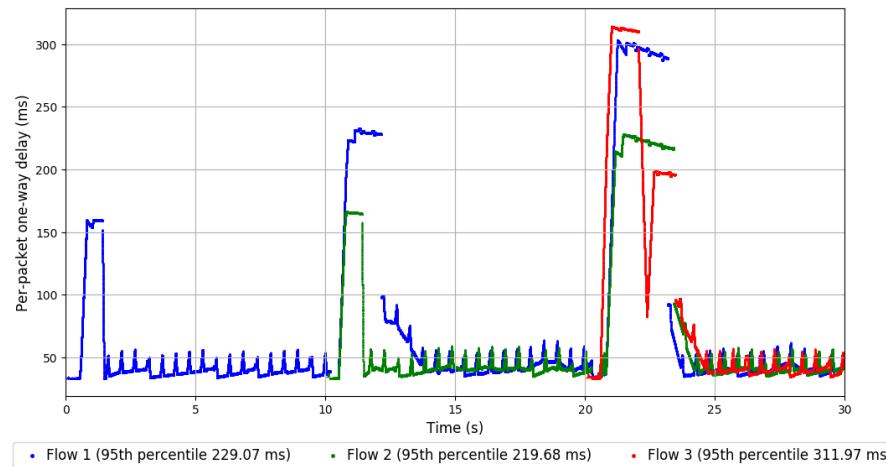
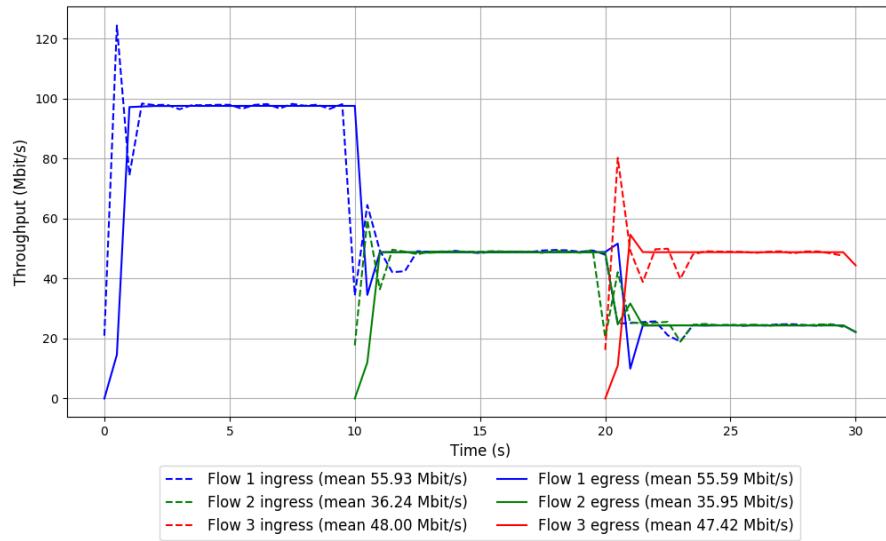


Run 3: Statistics of TCP BBR

```
Start at: 2018-10-10 05:14:34
End at: 2018-10-10 05:15:04
Local clock offset: 1.876 ms
Remote clock offset: -2.974 ms

# Below is generated by plot.py at 2018-10-10 06:15:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.20 Mbit/s
95th percentile per-packet one-way delay: 229.249 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 55.59 Mbit/s
95th percentile per-packet one-way delay: 229.075 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 35.95 Mbit/s
95th percentile per-packet one-way delay: 219.676 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 47.42 Mbit/s
95th percentile per-packet one-way delay: 311.966 ms
Loss rate: 1.88%
```

Run 3: Report of TCP BBR — Data Link

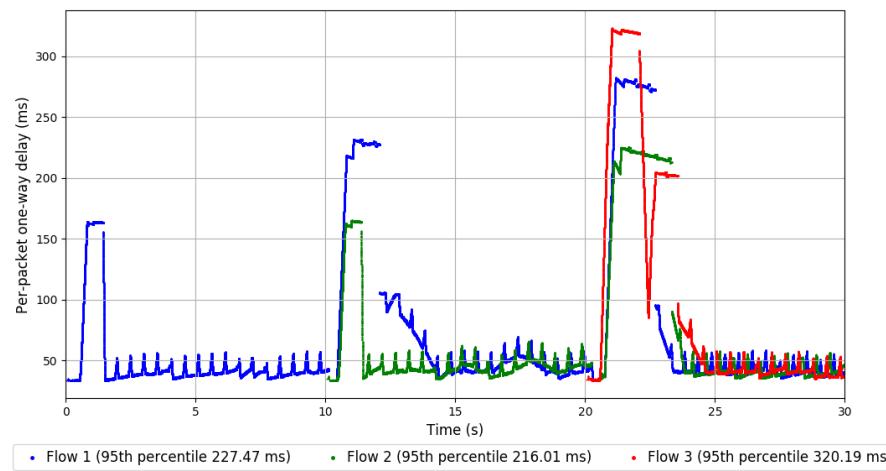
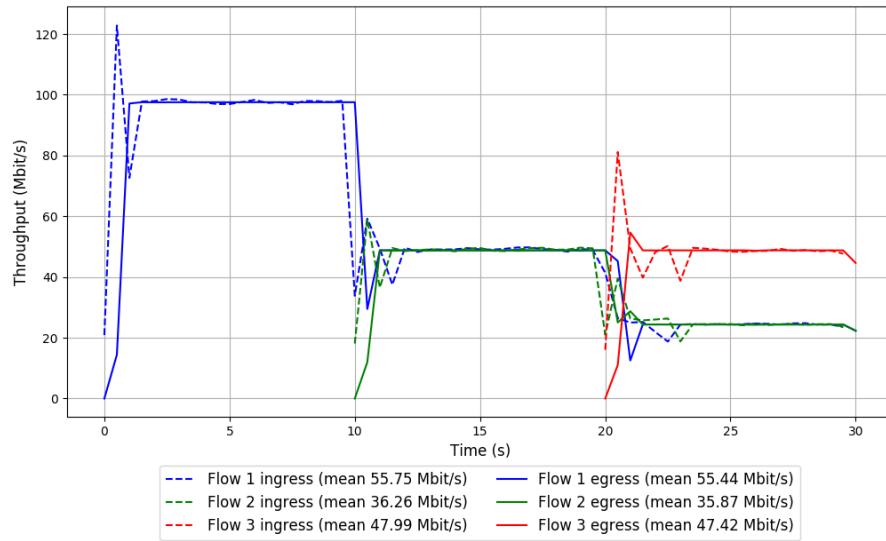


Run 4: Statistics of TCP BBR

```
Start at: 2018-10-10 05:39:20
End at: 2018-10-10 05:39:50
Local clock offset: 3.463 ms
Remote clock offset: -2.769 ms

# Below is generated by plot.py at 2018-10-10 06:15:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.00 Mbit/s
95th percentile per-packet one-way delay: 227.835 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 55.44 Mbit/s
95th percentile per-packet one-way delay: 227.472 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 35.87 Mbit/s
95th percentile per-packet one-way delay: 216.015 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 47.42 Mbit/s
95th percentile per-packet one-way delay: 320.188 ms
Loss rate: 1.83%
```

Run 4: Report of TCP BBR — Data Link

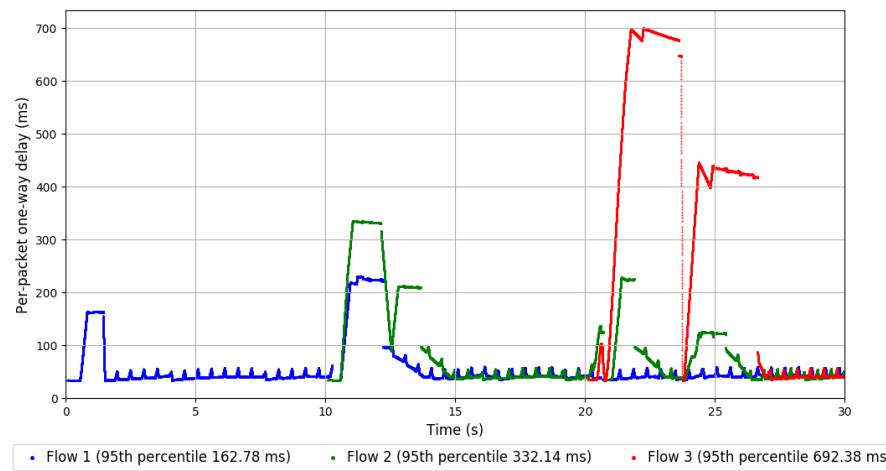
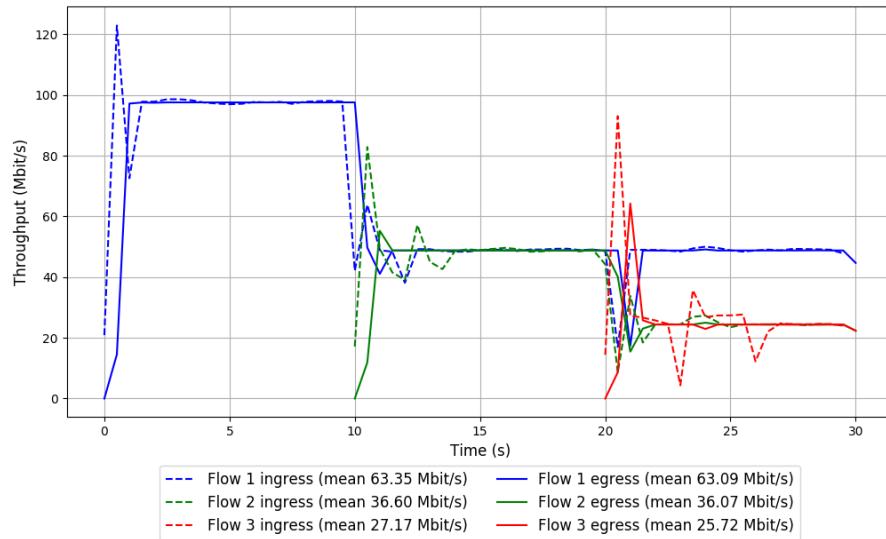


Run 5: Statistics of TCP BBR

```
Start at: 2018-10-10 06:04:26
End at: 2018-10-10 06:04:57
Local clock offset: 3.465 ms
Remote clock offset: -2.276 ms

# Below is generated by plot.py at 2018-10-10 06:15:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.60 Mbit/s
95th percentile per-packet one-way delay: 333.028 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 63.09 Mbit/s
95th percentile per-packet one-way delay: 162.785 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 36.07 Mbit/s
95th percentile per-packet one-way delay: 332.140 ms
Loss rate: 1.75%
-- Flow 3:
Average throughput: 25.72 Mbit/s
95th percentile per-packet one-way delay: 692.382 ms
Loss rate: 5.95%
```

Run 5: Report of TCP BBR — Data Link

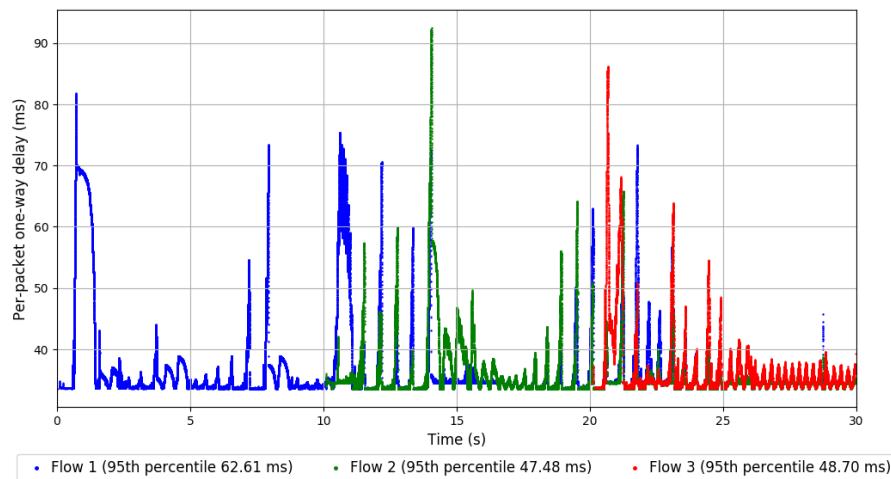
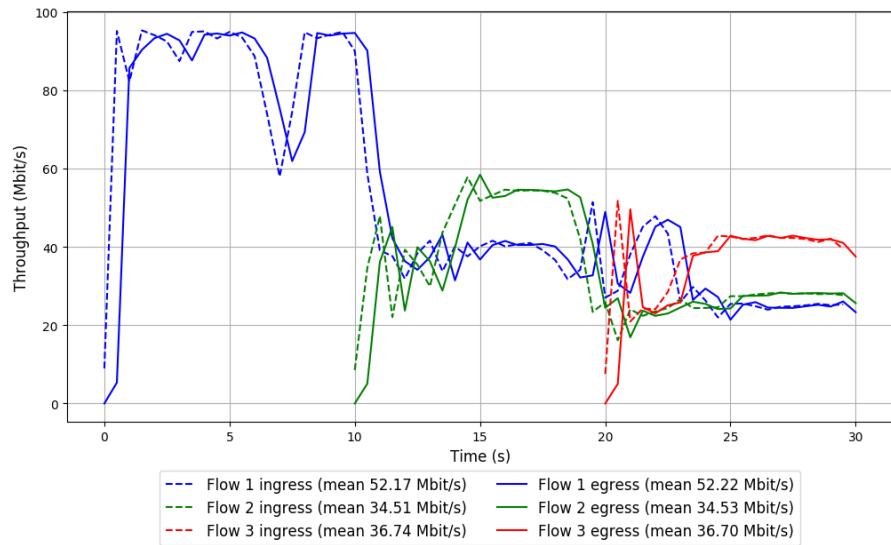


Run 1: Statistics of Copa

```
Start at: 2018-10-10 04:17:27
End at: 2018-10-10 04:17:57
Local clock offset: 6.108 ms
Remote clock offset: -4.594 ms

# Below is generated by plot.py at 2018-10-10 06:16:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.36 Mbit/s
95th percentile per-packet one-way delay: 56.487 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 52.22 Mbit/s
95th percentile per-packet one-way delay: 62.611 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 34.53 Mbit/s
95th percentile per-packet one-way delay: 47.485 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 36.70 Mbit/s
95th percentile per-packet one-way delay: 48.704 ms
Loss rate: 0.74%
```

Run 1: Report of Copa — Data Link

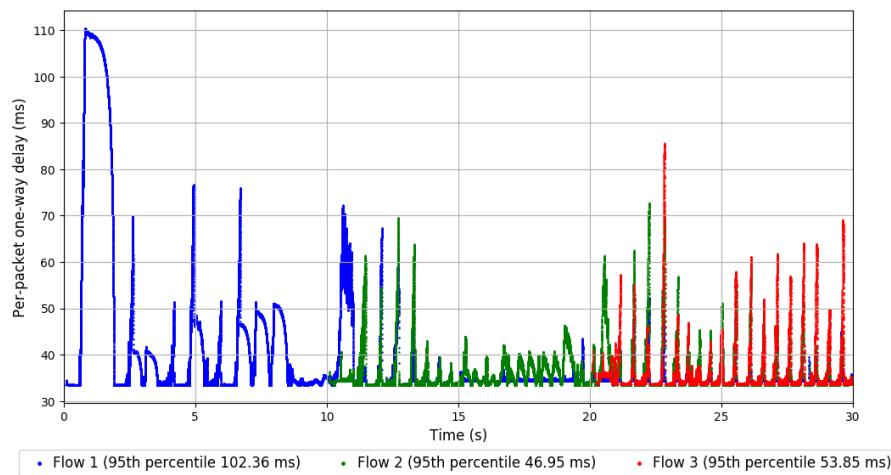
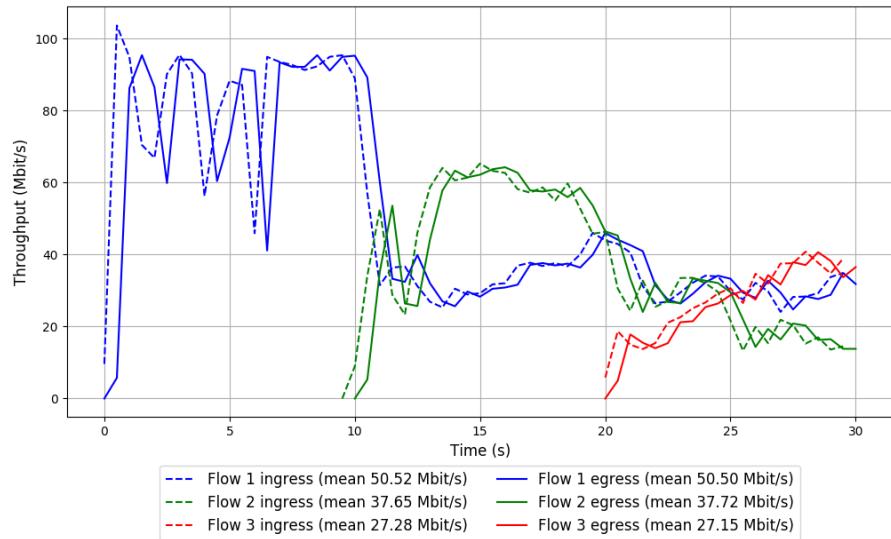


Run 2: Statistics of Copa

```
Start at: 2018-10-10 04:42:38
End at: 2018-10-10 04:43:08
Local clock offset: 2.767 ms
Remote clock offset: -3.825 ms

# Below is generated by plot.py at 2018-10-10 06:16:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.59 Mbit/s
95th percentile per-packet one-way delay: 66.774 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 50.50 Mbit/s
95th percentile per-packet one-way delay: 102.365 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 37.72 Mbit/s
95th percentile per-packet one-way delay: 46.951 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 27.15 Mbit/s
95th percentile per-packet one-way delay: 53.851 ms
Loss rate: 1.11%
```

Run 2: Report of Copa — Data Link

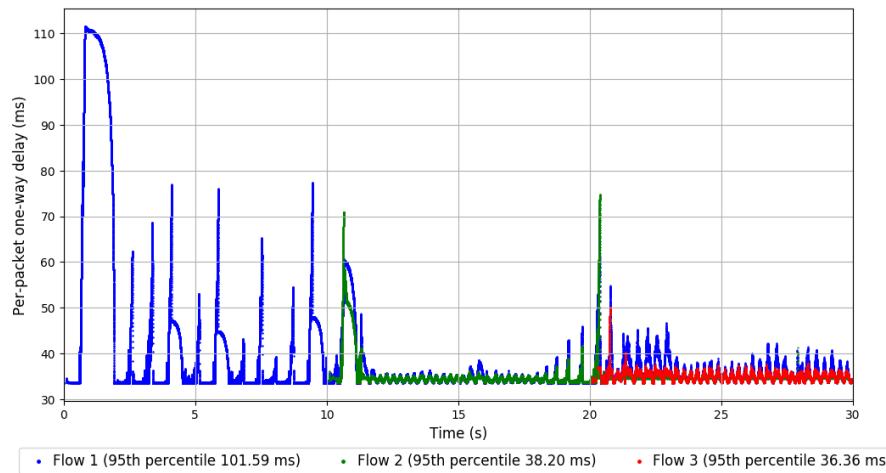
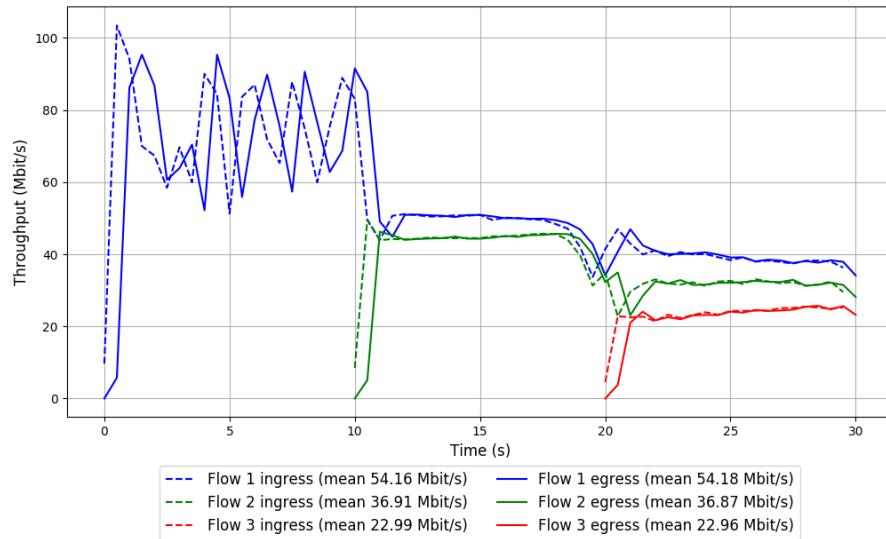


Run 3: Statistics of Copa

```
Start at: 2018-10-10 05:07:33
End at: 2018-10-10 05:08:03
Local clock offset: 1.953 ms
Remote clock offset: -3.374 ms

# Below is generated by plot.py at 2018-10-10 06:16:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.32 Mbit/s
95th percentile per-packet one-way delay: 64.619 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 54.18 Mbit/s
95th percentile per-packet one-way delay: 101.593 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 36.87 Mbit/s
95th percentile per-packet one-way delay: 38.197 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 22.96 Mbit/s
95th percentile per-packet one-way delay: 36.363 ms
Loss rate: 0.74%
```

Run 3: Report of Copa — Data Link

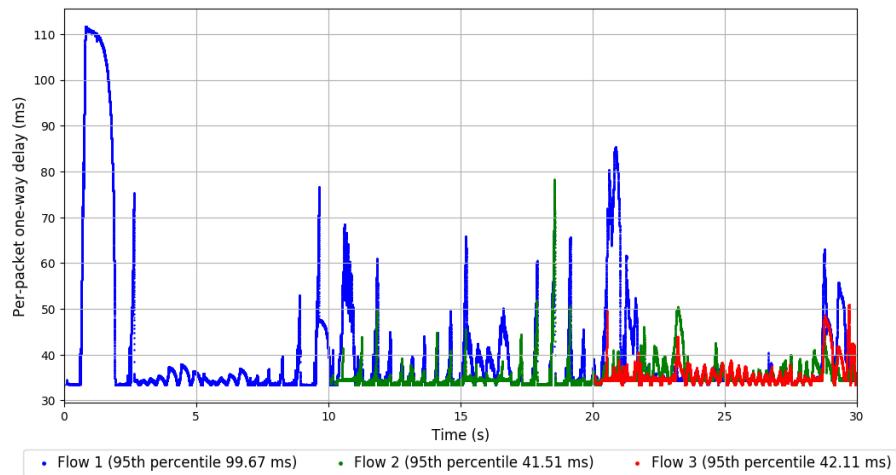
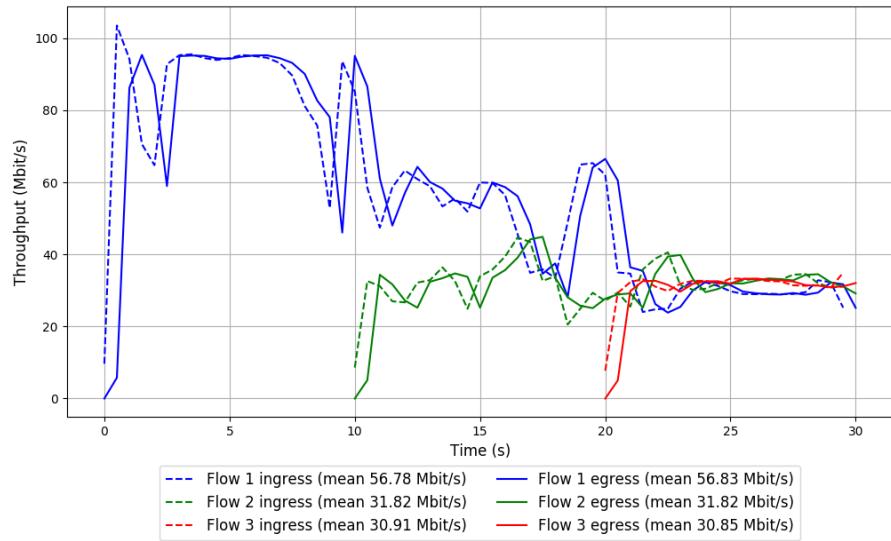


Run 4: Statistics of Copa

```
Start at: 2018-10-10 05:32:20
End at: 2018-10-10 05:32:50
Local clock offset: 2.9 ms
Remote clock offset: -2.865 ms

# Below is generated by plot.py at 2018-10-10 06:17:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.24 Mbit/s
95th percentile per-packet one-way delay: 69.475 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 56.83 Mbit/s
95th percentile per-packet one-way delay: 99.672 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 31.82 Mbit/s
95th percentile per-packet one-way delay: 41.506 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 30.85 Mbit/s
95th percentile per-packet one-way delay: 42.110 ms
Loss rate: 0.83%
```

Run 4: Report of Copa — Data Link

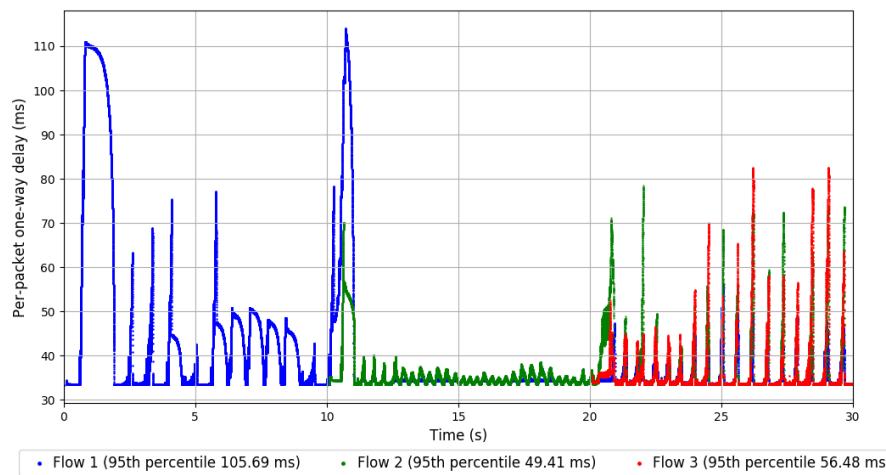
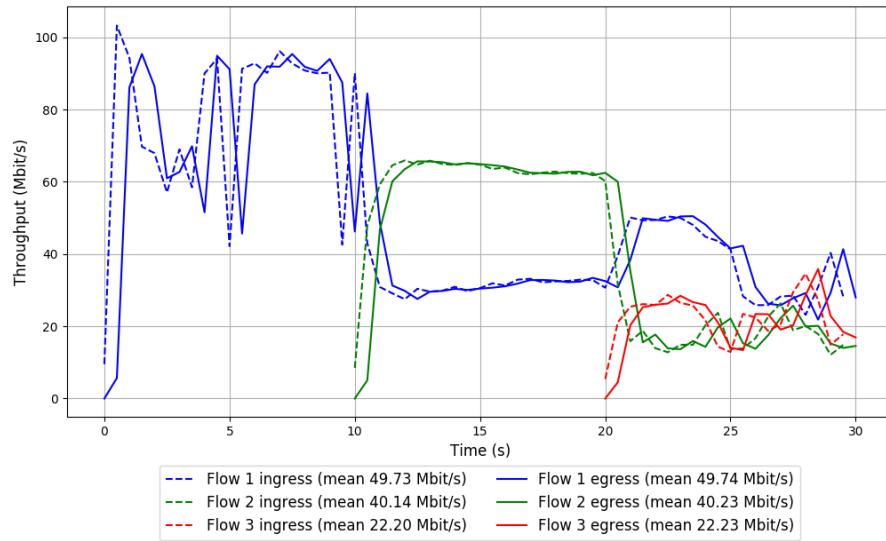


Run 5: Statistics of Copa

```
Start at: 2018-10-10 05:57:27
End at: 2018-10-10 05:57:57
Local clock offset: 3.829 ms
Remote clock offset: -2.36 ms

# Below is generated by plot.py at 2018-10-10 06:17:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.87 Mbit/s
95th percentile per-packet one-way delay: 79.262 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 49.74 Mbit/s
95th percentile per-packet one-way delay: 105.695 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 40.23 Mbit/s
95th percentile per-packet one-way delay: 49.405 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 22.23 Mbit/s
95th percentile per-packet one-way delay: 56.484 ms
Loss rate: 0.54%
```

Run 5: Report of Copa — Data Link

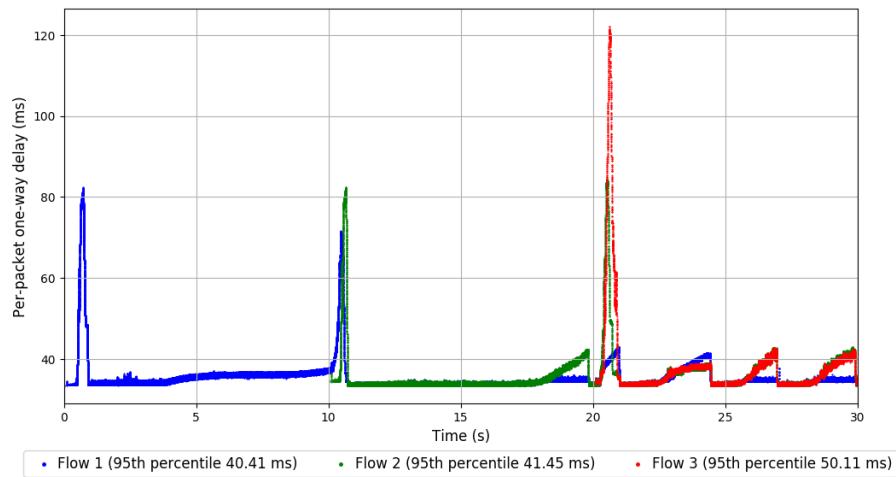
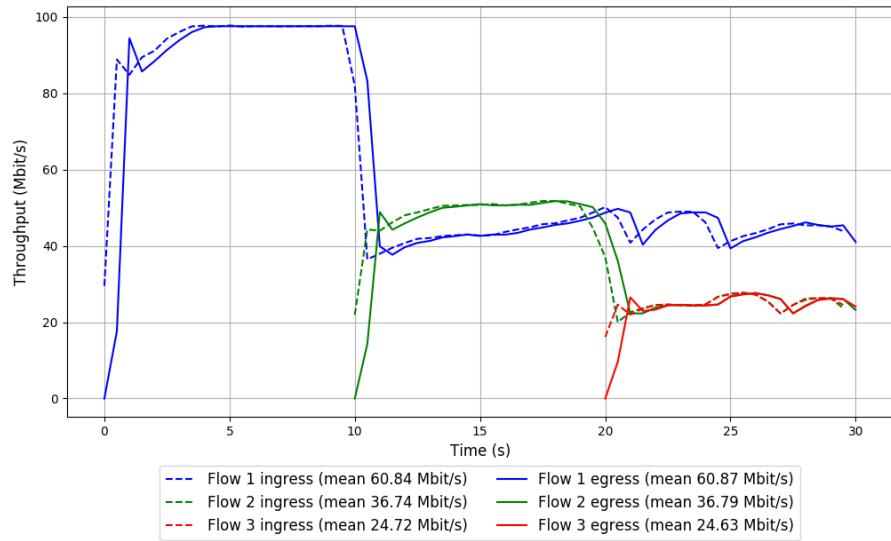


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-10-10 04:09:13
End at: 2018-10-10 04:09:43
Local clock offset: 5.351 ms
Remote clock offset: -4.761 ms

# Below is generated by plot.py at 2018-10-10 06:17:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.51 Mbit/s
95th percentile per-packet one-way delay: 41.055 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 60.87 Mbit/s
95th percentile per-packet one-way delay: 40.409 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 36.79 Mbit/s
95th percentile per-packet one-way delay: 41.453 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 24.63 Mbit/s
95th percentile per-packet one-way delay: 50.113 ms
Loss rate: 1.00%
```

Run 1: Report of TCP Cubic — Data Link

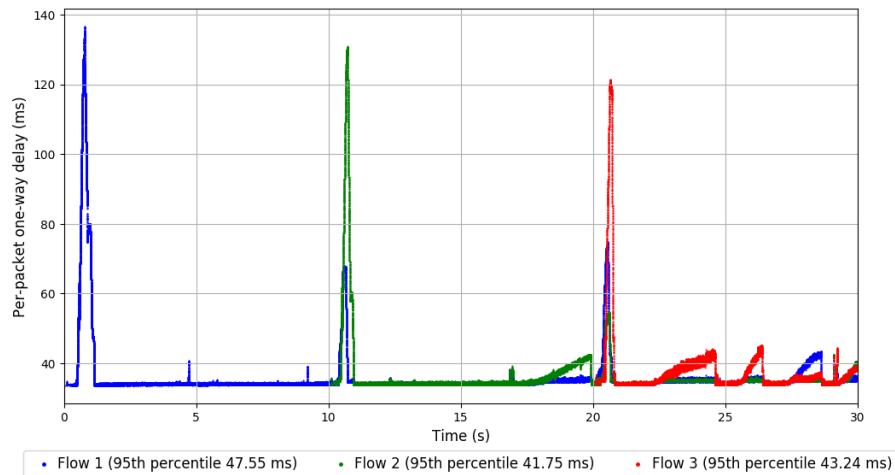
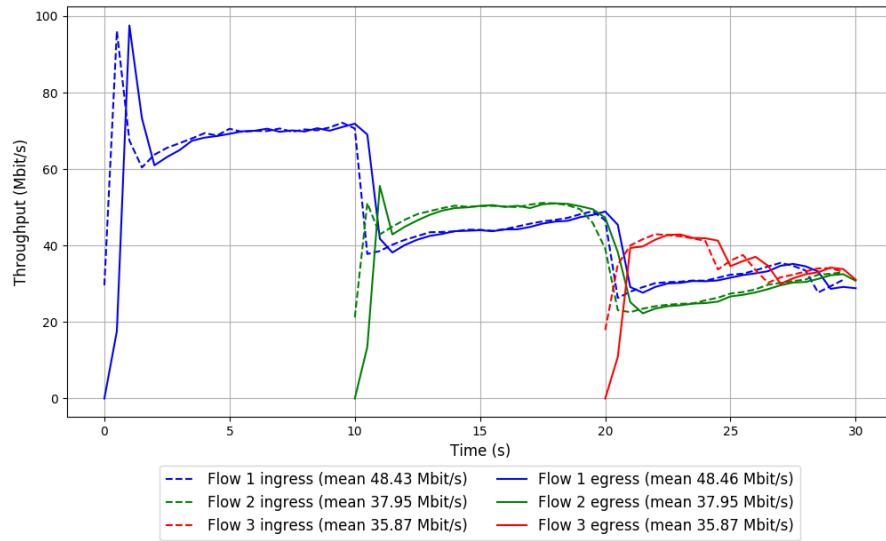


Run 2: Statistics of TCP Cubic

```
Start at: 2018-10-10 04:34:28
End at: 2018-10-10 04:34:58
Local clock offset: 3.776 ms
Remote clock offset: -4.23 ms

# Below is generated by plot.py at 2018-10-10 06:17:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.59 Mbit/s
95th percentile per-packet one-way delay: 43.739 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 48.46 Mbit/s
95th percentile per-packet one-way delay: 47.552 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 37.95 Mbit/s
95th percentile per-packet one-way delay: 41.754 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 35.87 Mbit/s
95th percentile per-packet one-way delay: 43.236 ms
Loss rate: 0.65%
```

Run 2: Report of TCP Cubic — Data Link

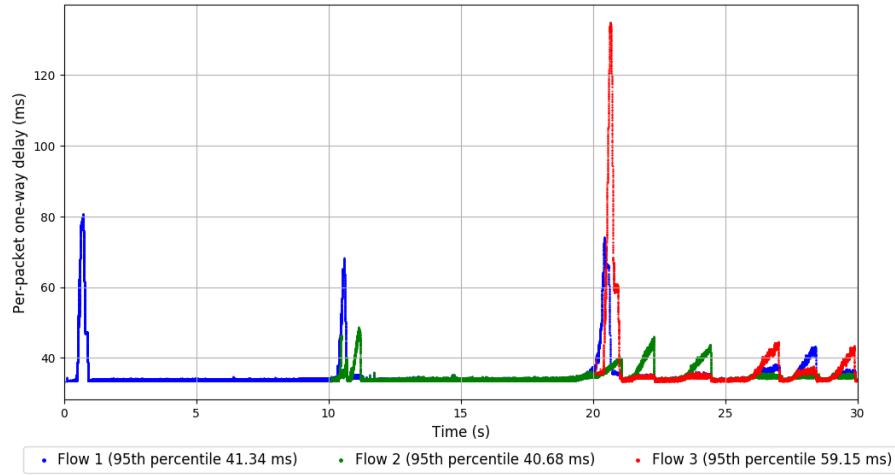
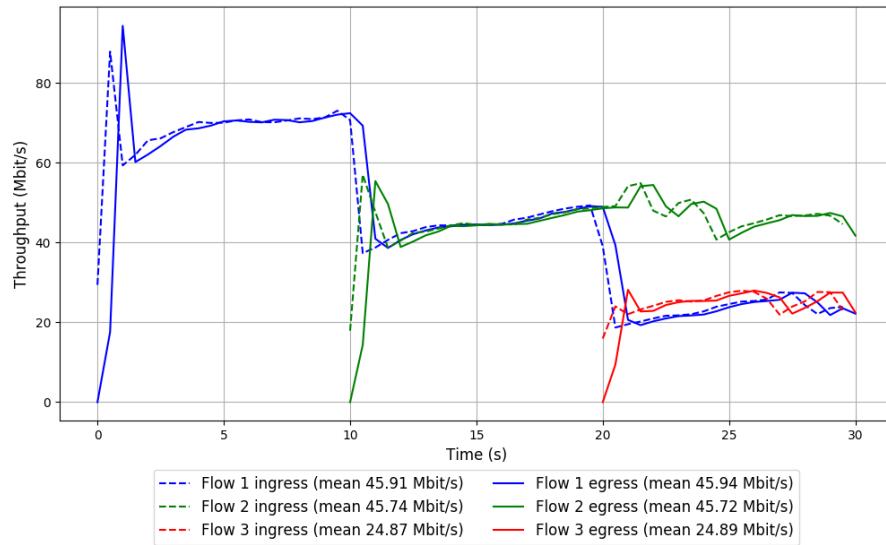


Run 3: Statistics of TCP Cubic

```
Start at: 2018-10-10 04:59:24
End at: 2018-10-10 04:59:54
Local clock offset: 2.068 ms
Remote clock offset: -3.449 ms

# Below is generated by plot.py at 2018-10-10 06:17:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.61 Mbit/s
95th percentile per-packet one-way delay: 41.715 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 45.94 Mbit/s
95th percentile per-packet one-way delay: 41.341 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 45.72 Mbit/s
95th percentile per-packet one-way delay: 40.682 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 24.89 Mbit/s
95th percentile per-packet one-way delay: 59.154 ms
Loss rate: 0.60%
```

Run 3: Report of TCP Cubic — Data Link

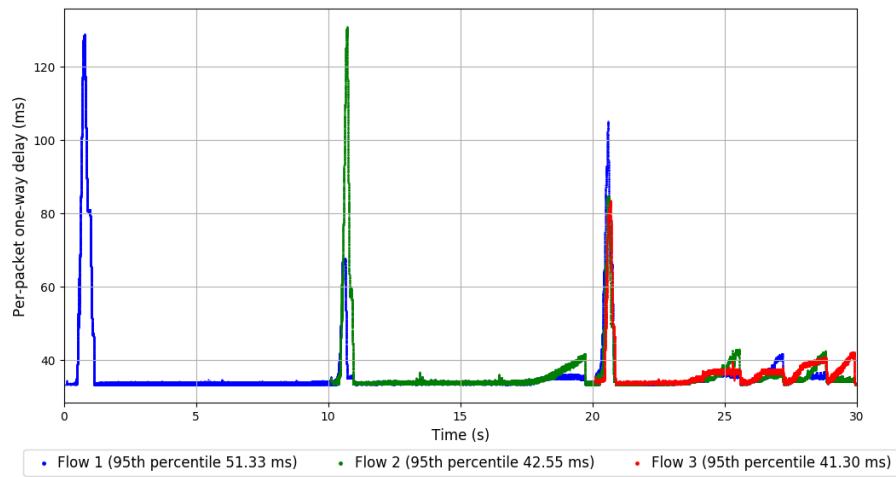
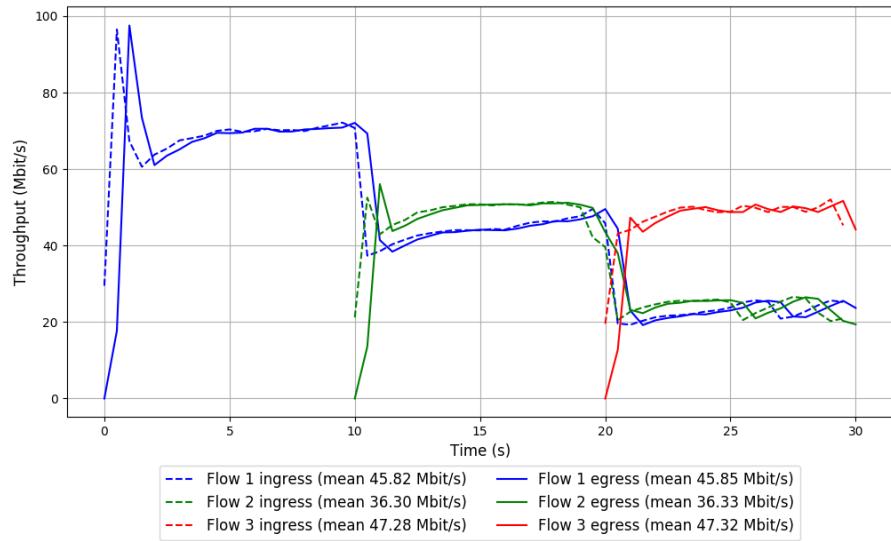


Run 4: Statistics of TCP Cubic

```
Start at: 2018-10-10 05:24:13
End at: 2018-10-10 05:24:43
Local clock offset: 1.725 ms
Remote clock offset: -2.835 ms

# Below is generated by plot.py at 2018-10-10 06:17:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.67 Mbit/s
95th percentile per-packet one-way delay: 47.071 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 45.85 Mbit/s
95th percentile per-packet one-way delay: 51.326 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 36.33 Mbit/s
95th percentile per-packet one-way delay: 42.555 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 47.32 Mbit/s
95th percentile per-packet one-way delay: 41.301 ms
Loss rate: 0.55%
```

Run 4: Report of TCP Cubic — Data Link

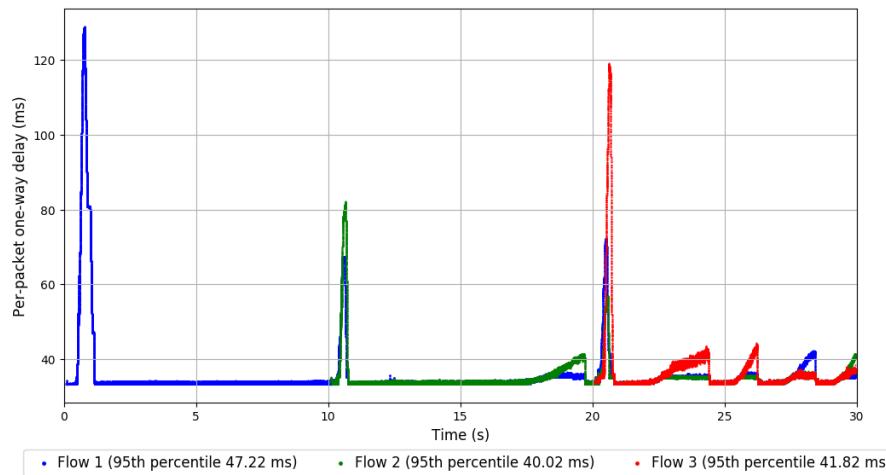
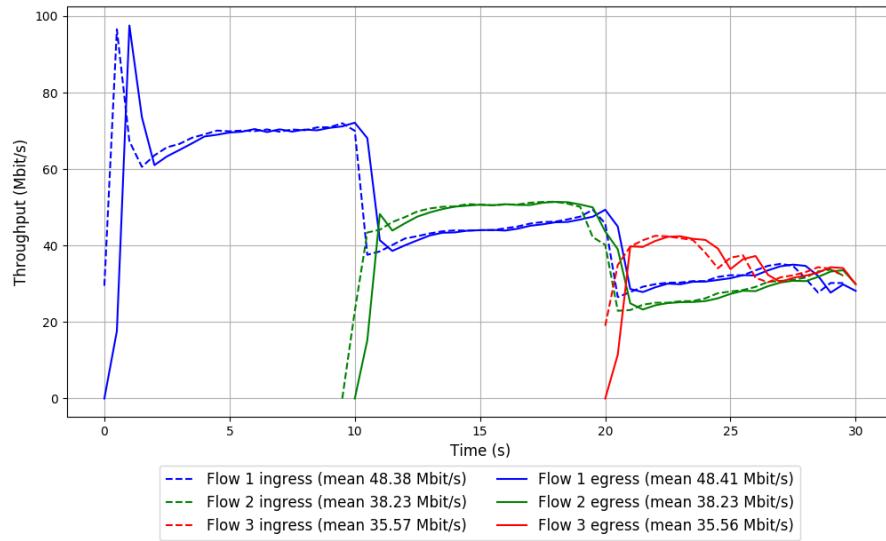


Run 5: Statistics of TCP Cubic

```
Start at: 2018-10-10 05:49:12
End at: 2018-10-10 05:49:42
Local clock offset: 3.891 ms
Remote clock offset: -2.482 ms

# Below is generated by plot.py at 2018-10-10 06:17:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.64 Mbit/s
95th percentile per-packet one-way delay: 41.444 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 48.41 Mbit/s
95th percentile per-packet one-way delay: 47.223 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 38.23 Mbit/s
95th percentile per-packet one-way delay: 40.015 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 35.56 Mbit/s
95th percentile per-packet one-way delay: 41.820 ms
Loss rate: 0.65%
```

Run 5: Report of TCP Cubic — Data Link

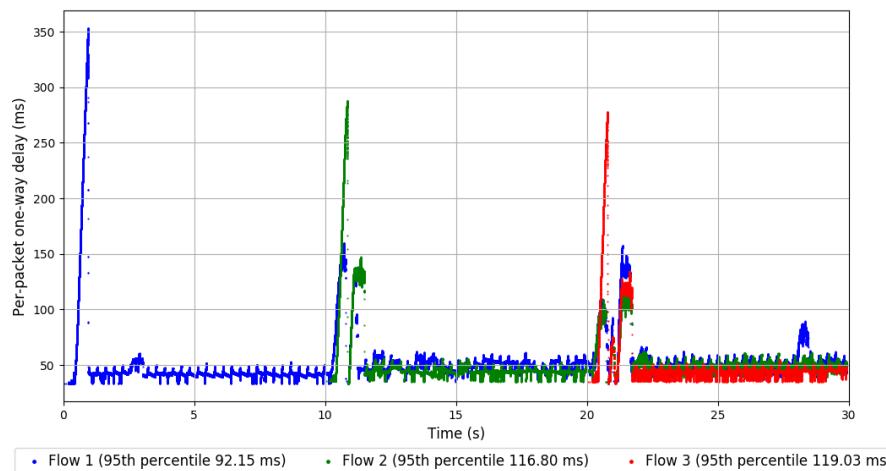
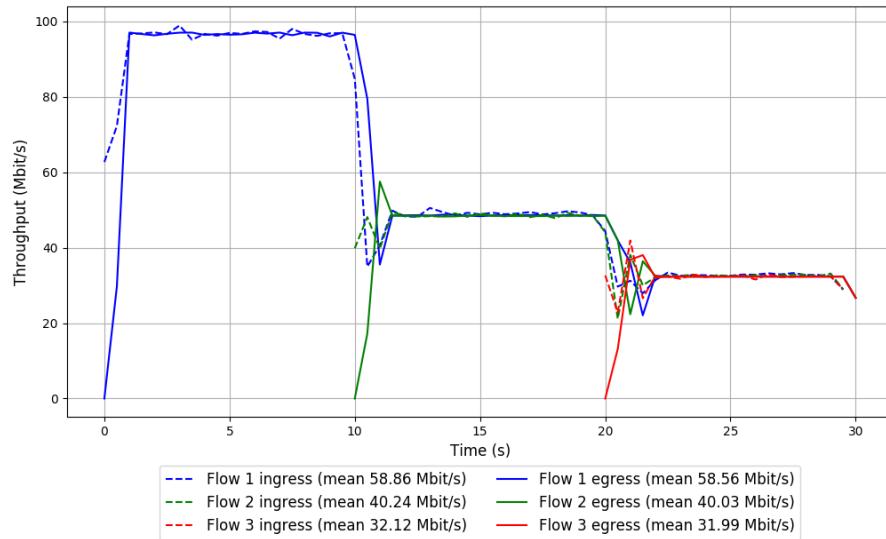


```
Run 1: Statistics of FillP

Start at: 2018-10-10 04:21:54
End at: 2018-10-10 04:22:24
Local clock offset: 6.408 ms
Remote clock offset: -4.384 ms

# Below is generated by plot.py at 2018-10-10 06:17:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.74 Mbit/s
95th percentile per-packet one-way delay: 106.535 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 58.56 Mbit/s
95th percentile per-packet one-way delay: 92.148 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 40.03 Mbit/s
95th percentile per-packet one-way delay: 116.797 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 31.99 Mbit/s
95th percentile per-packet one-way delay: 119.026 ms
Loss rate: 1.04%
```

Run 1: Report of FillP — Data Link

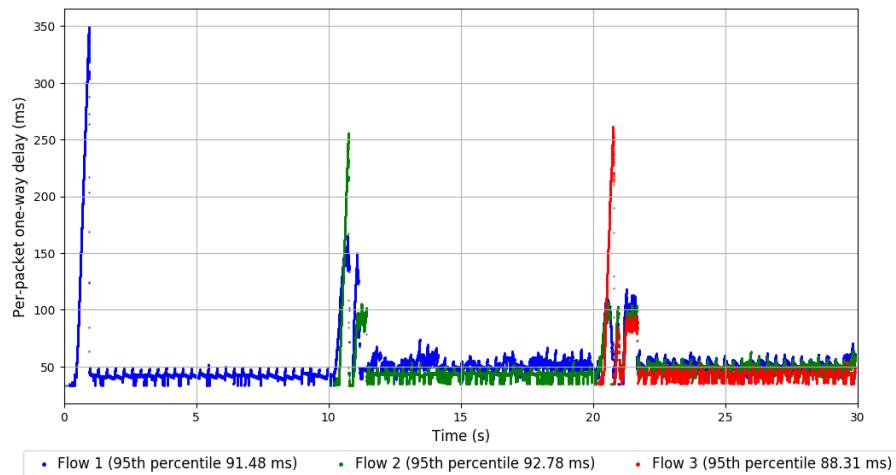
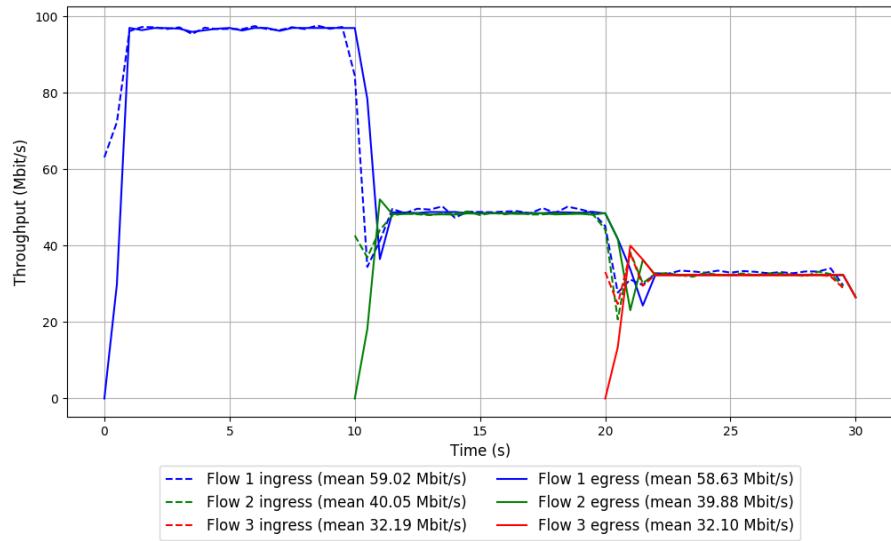


Run 2: Statistics of FillP

```
Start at: 2018-10-10 04:46:53
End at: 2018-10-10 04:47:23
Local clock offset: 2.478 ms
Remote clock offset: -3.824 ms

# Below is generated by plot.py at 2018-10-10 06:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.74 Mbit/s
95th percentile per-packet one-way delay: 91.890 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 58.63 Mbit/s
95th percentile per-packet one-way delay: 91.478 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 39.88 Mbit/s
95th percentile per-packet one-way delay: 92.785 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 32.10 Mbit/s
95th percentile per-packet one-way delay: 88.311 ms
Loss rate: 0.94%
```

Run 2: Report of FillP — Data Link

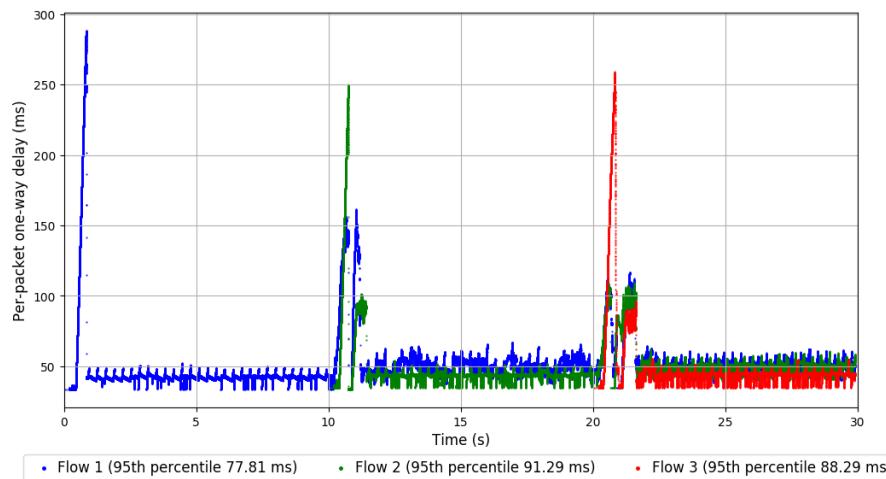
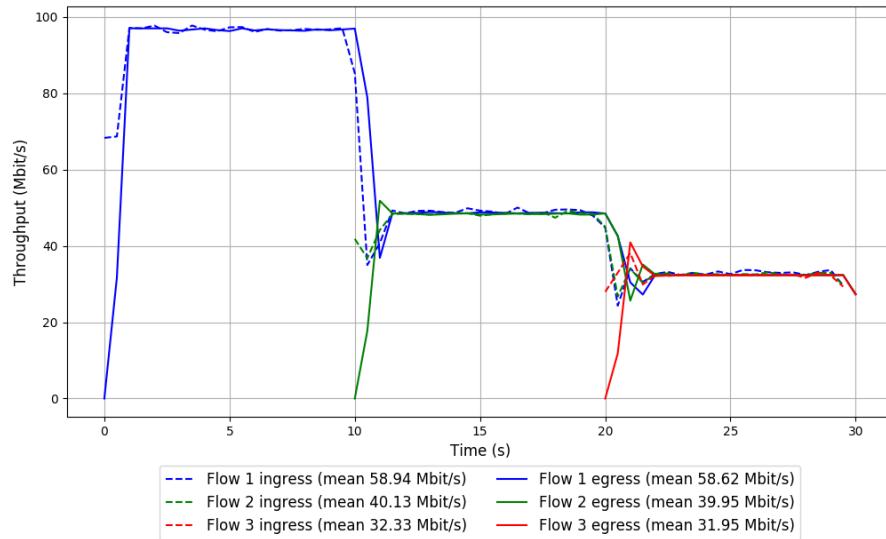


Run 3: Statistics of FillP

```
Start at: 2018-10-10 05:11:46
End at: 2018-10-10 05:12:16
Local clock offset: 1.893 ms
Remote clock offset: -3.301 ms

# Below is generated by plot.py at 2018-10-10 06:17:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.74 Mbit/s
95th percentile per-packet one-way delay: 88.605 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 58.62 Mbit/s
95th percentile per-packet one-way delay: 77.806 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 39.95 Mbit/s
95th percentile per-packet one-way delay: 91.288 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 31.95 Mbit/s
95th percentile per-packet one-way delay: 88.293 ms
Loss rate: 1.80%
```

Run 3: Report of FillP — Data Link

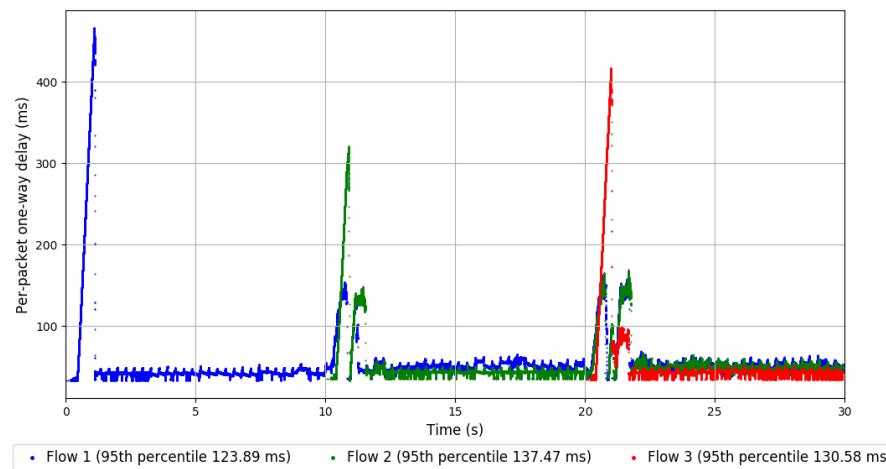
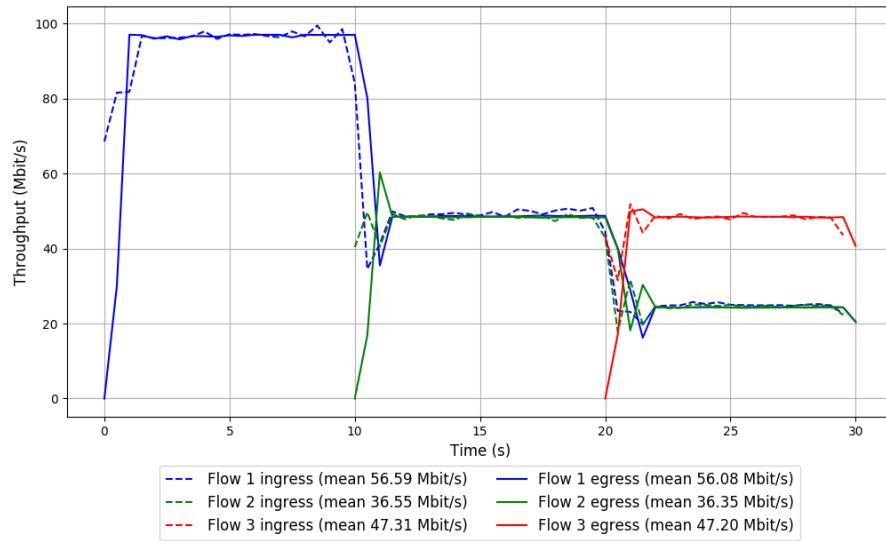


Run 4: Statistics of FillP

```
Start at: 2018-10-10 05:36:32
End at: 2018-10-10 05:37:02
Local clock offset: 3.288 ms
Remote clock offset: -2.663 ms

# Below is generated by plot.py at 2018-10-10 06:17:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.85 Mbit/s
95th percentile per-packet one-way delay: 133.193 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 56.08 Mbit/s
95th percentile per-packet one-way delay: 123.886 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 36.35 Mbit/s
95th percentile per-packet one-way delay: 137.466 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 47.20 Mbit/s
95th percentile per-packet one-way delay: 130.579 ms
Loss rate: 0.89%
```

Run 4: Report of FillP — Data Link

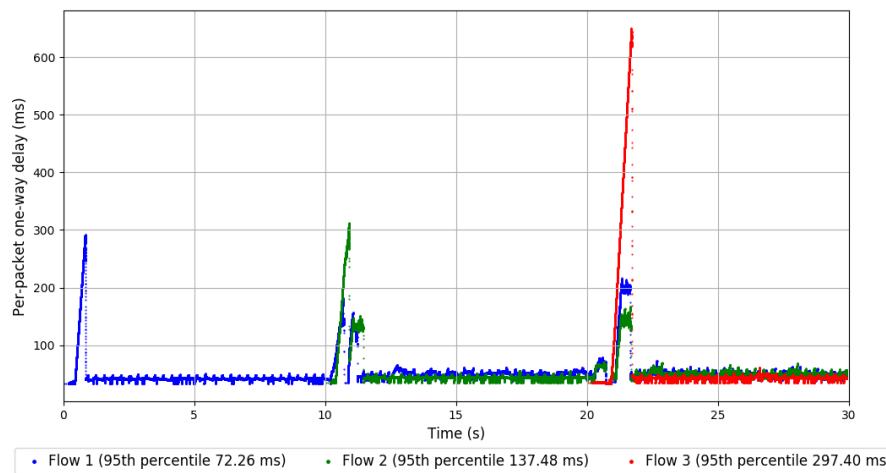
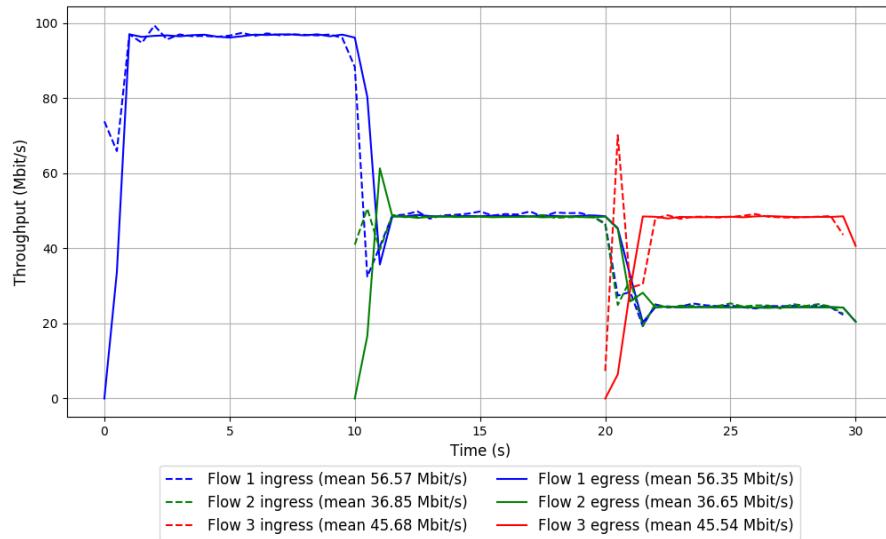


Run 5: Statistics of FillP

```
Start at: 2018-10-10 06:01:38
End at: 2018-10-10 06:02:08
Local clock offset: 3.58 ms
Remote clock offset: -2.404 ms

# Below is generated by plot.py at 2018-10-10 06:18:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.76 Mbit/s
95th percentile per-packet one-way delay: 125.617 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 56.35 Mbit/s
95th percentile per-packet one-way delay: 72.257 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 36.65 Mbit/s
95th percentile per-packet one-way delay: 137.484 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 45.54 Mbit/s
95th percentile per-packet one-way delay: 297.397 ms
Loss rate: 0.95%
```

Run 5: Report of FillP — Data Link

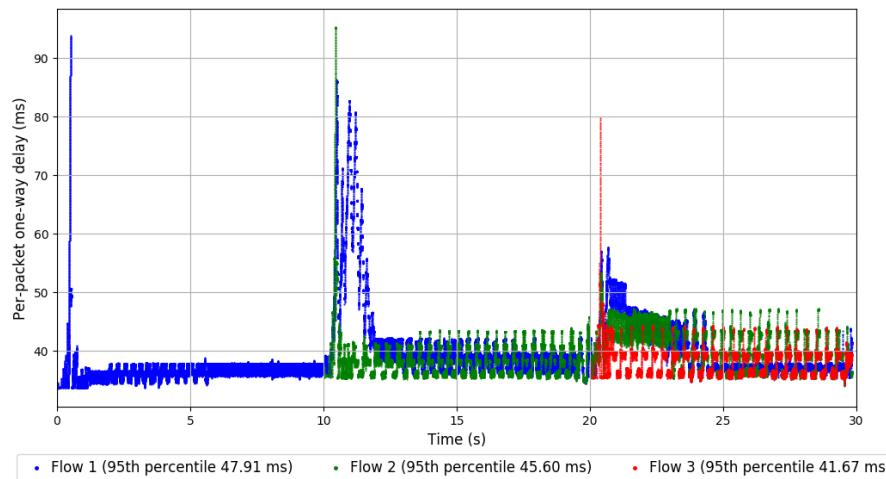
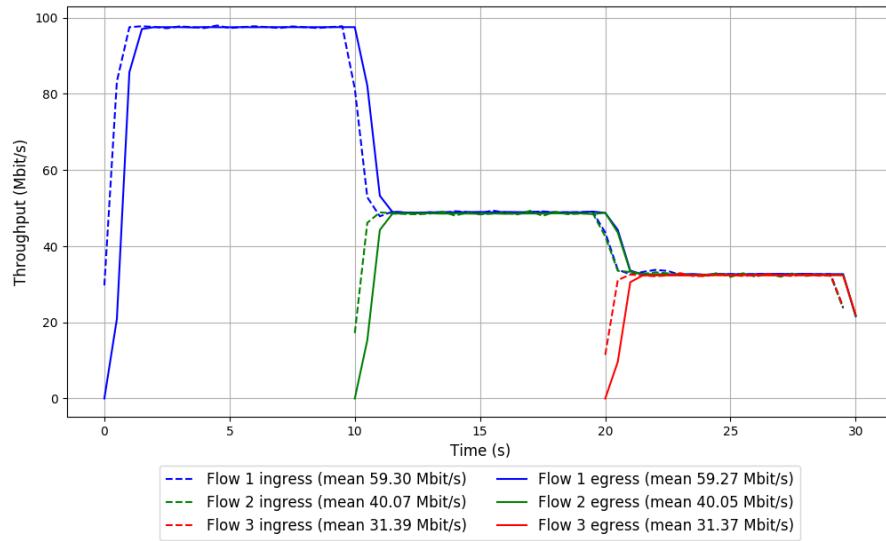


Run 1: Statistics of Indigo

```
Start at: 2018-10-10 04:31:41
End at: 2018-10-10 04:32:11
Local clock offset: 4.3 ms
Remote clock offset: -4.203 ms

# Below is generated by plot.py at 2018-10-10 06:18:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.14 Mbit/s
95th percentile per-packet one-way delay: 46.020 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 59.27 Mbit/s
95th percentile per-packet one-way delay: 47.913 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 40.05 Mbit/s
95th percentile per-packet one-way delay: 45.603 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 31.37 Mbit/s
95th percentile per-packet one-way delay: 41.668 ms
Loss rate: 0.73%
```

Run 1: Report of Indigo — Data Link

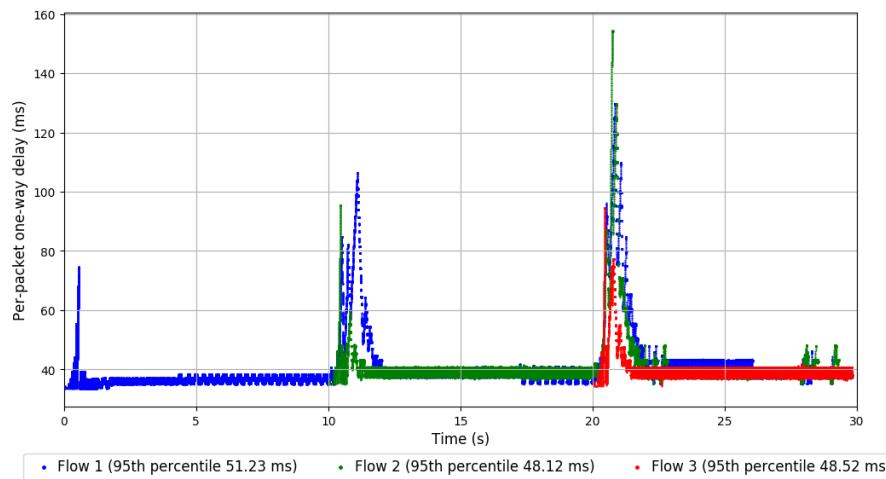
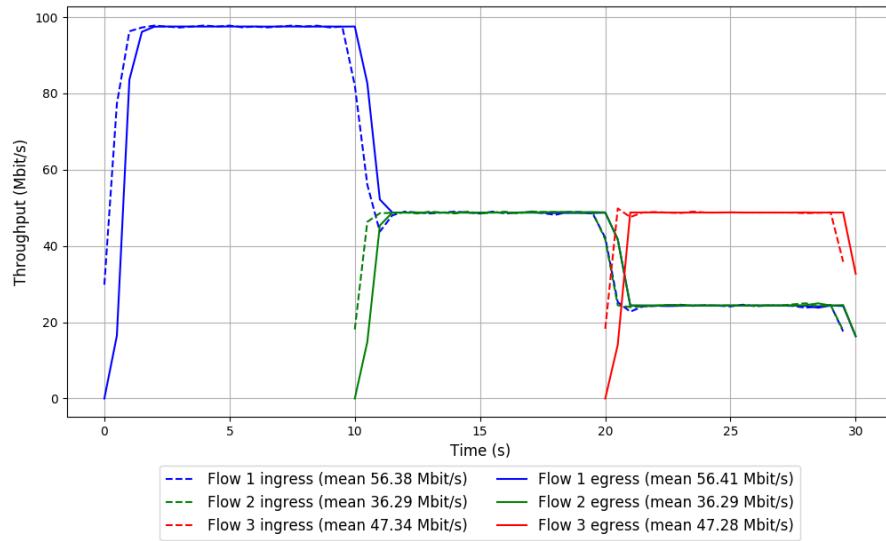


Run 2: Statistics of Indigo

```
Start at: 2018-10-10 04:56:38
End at: 2018-10-10 04:57:08
Local clock offset: 2.101 ms
Remote clock offset: -3.59 ms

# Below is generated by plot.py at 2018-10-10 06:18:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.02 Mbit/s
95th percentile per-packet one-way delay: 49.908 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 56.41 Mbit/s
95th percentile per-packet one-way delay: 51.233 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 36.29 Mbit/s
95th percentile per-packet one-way delay: 48.122 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 47.28 Mbit/s
95th percentile per-packet one-way delay: 48.515 ms
Loss rate: 0.77%
```

Run 2: Report of Indigo — Data Link

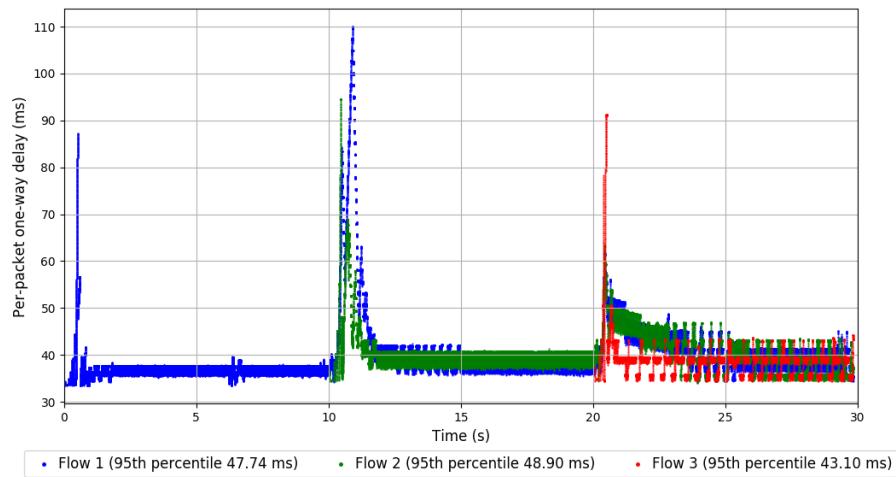
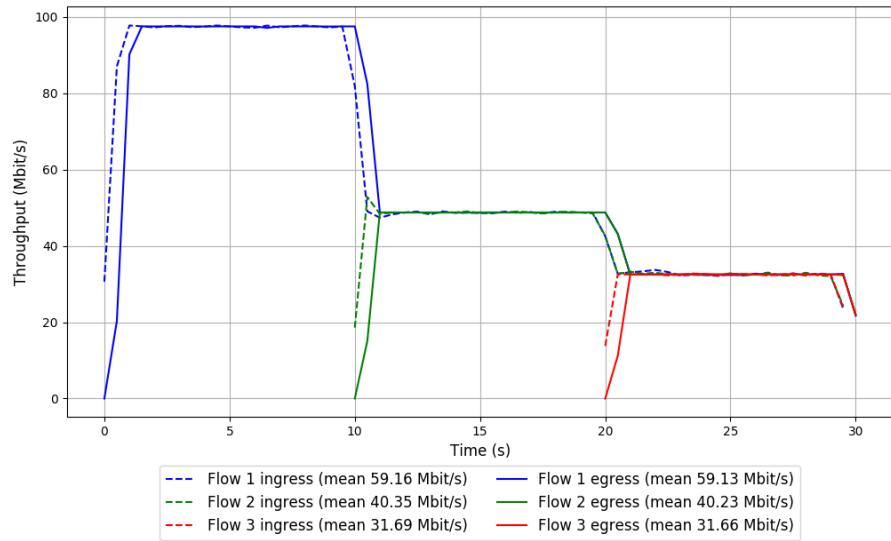


Run 3: Statistics of Indigo

```
Start at: 2018-10-10 05:21:26
End at: 2018-10-10 05:21:56
Local clock offset: 1.774 ms
Remote clock offset: -3.008 ms

# Below is generated by plot.py at 2018-10-10 06:18:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.21 Mbit/s
95th percentile per-packet one-way delay: 47.766 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 59.13 Mbit/s
95th percentile per-packet one-way delay: 47.739 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 40.23 Mbit/s
95th percentile per-packet one-way delay: 48.902 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 31.66 Mbit/s
95th percentile per-packet one-way delay: 43.105 ms
Loss rate: 0.73%
```

Run 3: Report of Indigo — Data Link

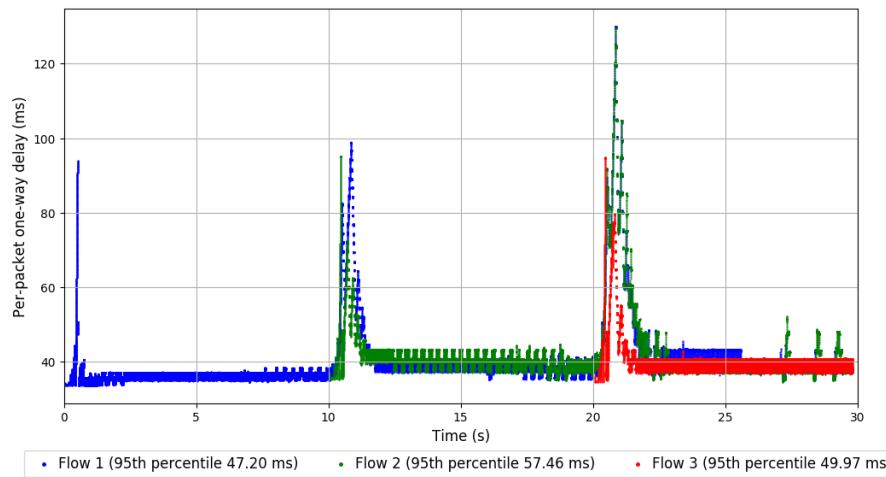
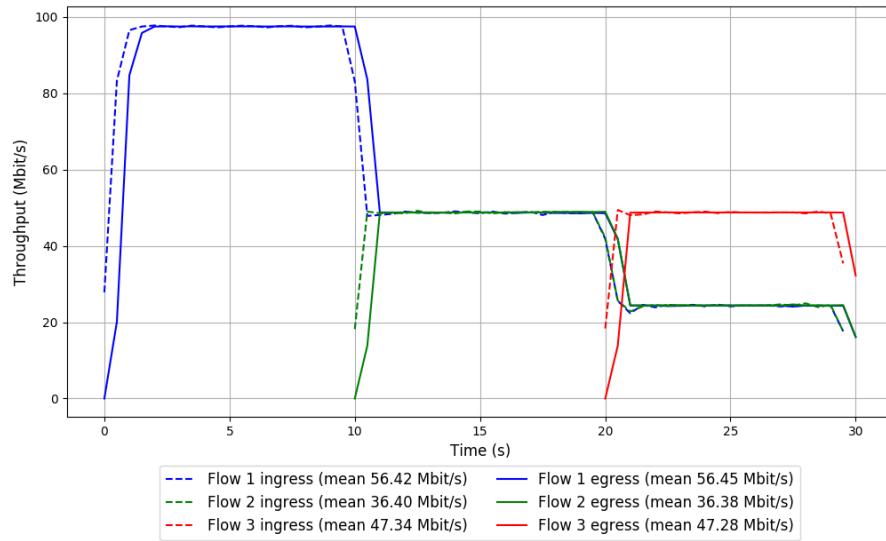


Run 4: Statistics of Indigo

```
Start at: 2018-10-10 05:46:15
End at: 2018-10-10 05:46:45
Local clock offset: 3.77 ms
Remote clock offset: -2.799 ms

# Below is generated by plot.py at 2018-10-10 06:18:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.10 Mbit/s
95th percentile per-packet one-way delay: 50.598 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 56.45 Mbit/s
95th percentile per-packet one-way delay: 47.202 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 36.38 Mbit/s
95th percentile per-packet one-way delay: 57.461 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 47.28 Mbit/s
95th percentile per-packet one-way delay: 49.974 ms
Loss rate: 0.77%
```

Run 4: Report of Indigo — Data Link

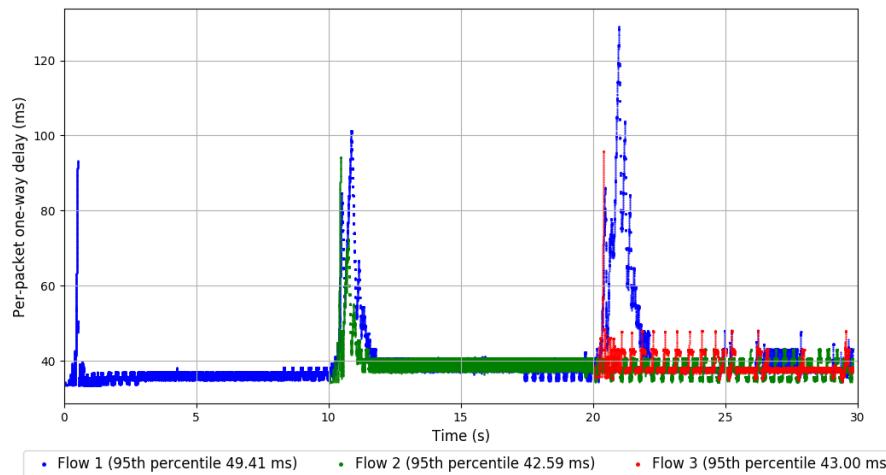
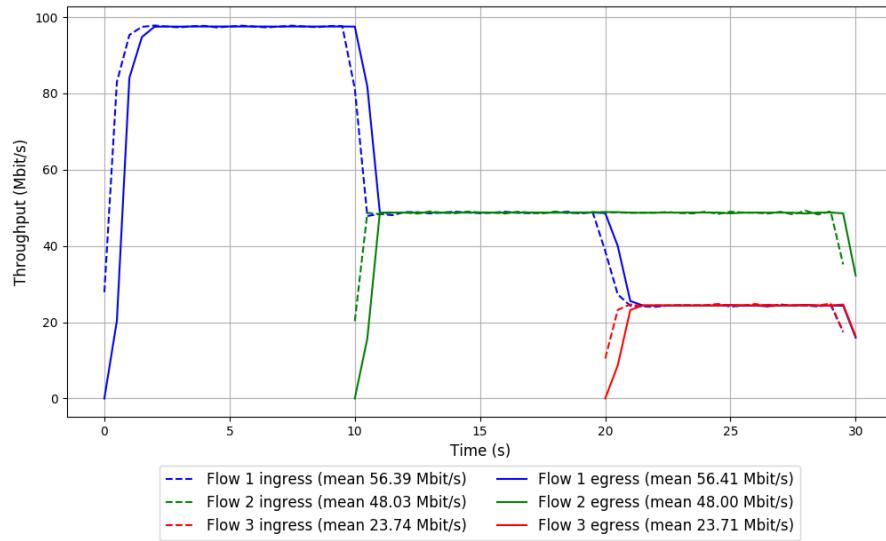


Run 5: Statistics of Indigo

```
Start at: 2018-10-10 06:11:34
End at: 2018-10-10 06:12:04
Local clock offset: 3.305 ms
Remote clock offset: -2.363 ms

# Below is generated by plot.py at 2018-10-10 06:18:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.06 Mbit/s
95th percentile per-packet one-way delay: 44.567 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 56.41 Mbit/s
95th percentile per-packet one-way delay: 49.413 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 48.00 Mbit/s
95th percentile per-packet one-way delay: 42.585 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 23.71 Mbit/s
95th percentile per-packet one-way delay: 42.999 ms
Loss rate: 0.77%
```

Run 5: Report of Indigo — Data Link

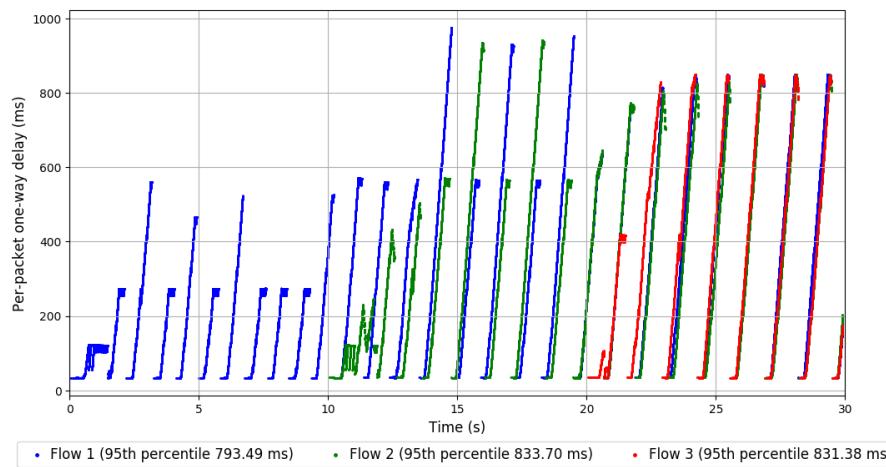
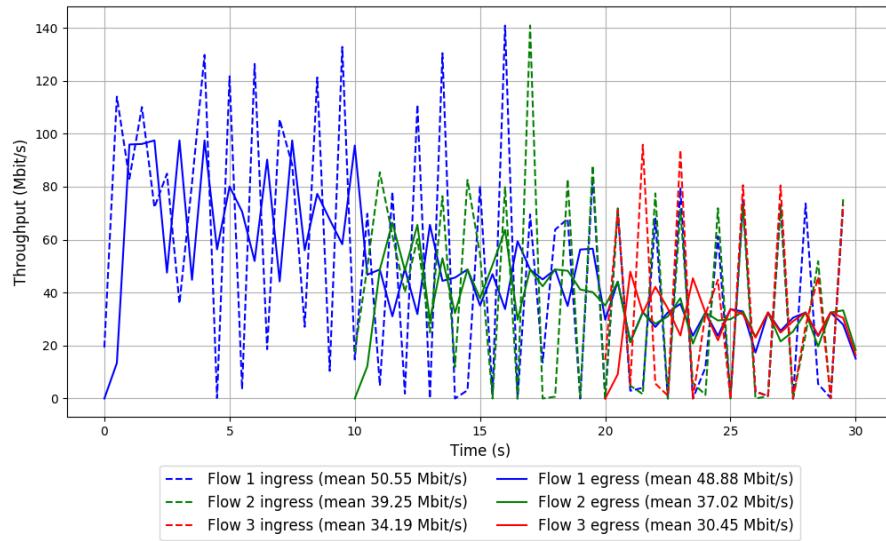


```
Run 1: Statistics of Indigo-96d2da3
```

```
Start at: 2018-10-10 04:19:01
End at: 2018-10-10 04:19:31
Local clock offset: 6.22 ms
Remote clock offset: -4.659 ms

# Below is generated by plot.py at 2018-10-10 06:18:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.54 Mbit/s
95th percentile per-packet one-way delay: 821.939 ms
Loss rate: 5.10%
-- Flow 1:
Average throughput: 48.88 Mbit/s
95th percentile per-packet one-way delay: 793.489 ms
Loss rate: 3.39%
-- Flow 2:
Average throughput: 37.02 Mbit/s
95th percentile per-packet one-way delay: 833.701 ms
Loss rate: 5.78%
-- Flow 3:
Average throughput: 30.45 Mbit/s
95th percentile per-packet one-way delay: 831.385 ms
Loss rate: 11.14%
```

Run 1: Report of Indigo-96d2da3 — Data Link

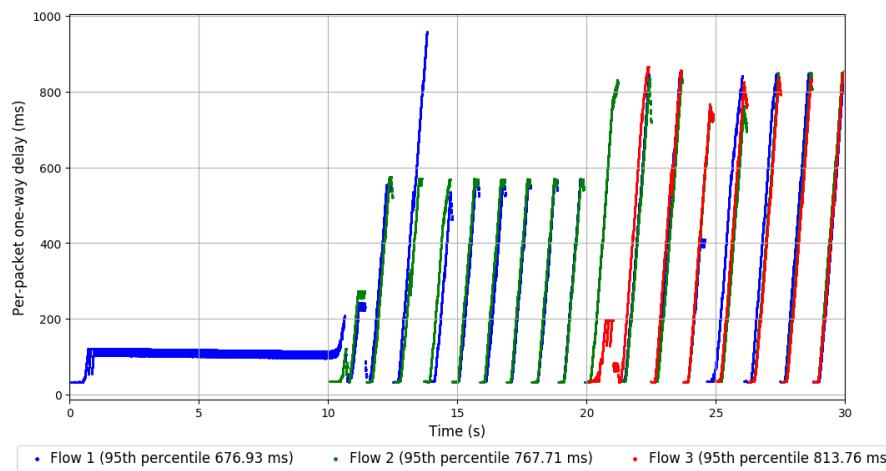
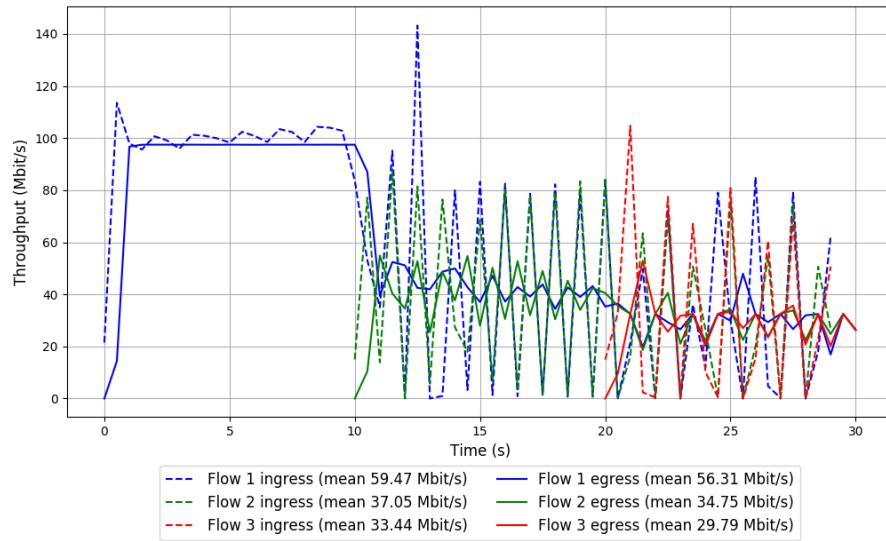


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-10-10 04:44:05
End at: 2018-10-10 04:44:35
Local clock offset: 2.652 ms
Remote clock offset: -3.993 ms

# Below is generated by plot.py at 2018-10-10 06:18:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.23 Mbit/s
95th percentile per-packet one-way delay: 757.482 ms
Loss rate: 3.25%
-- Flow 1:
Average throughput: 56.31 Mbit/s
95th percentile per-packet one-way delay: 676.931 ms
Loss rate: 3.36%
-- Flow 2:
Average throughput: 34.75 Mbit/s
95th percentile per-packet one-way delay: 767.706 ms
Loss rate: 2.80%
-- Flow 3:
Average throughput: 29.79 Mbit/s
95th percentile per-packet one-way delay: 813.764 ms
Loss rate: 3.65%
```

Run 2: Report of Indigo-96d2da3 — Data Link

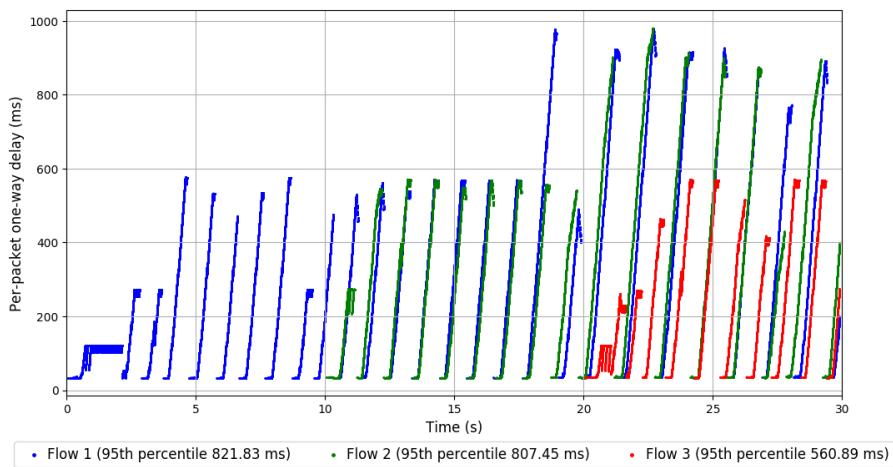
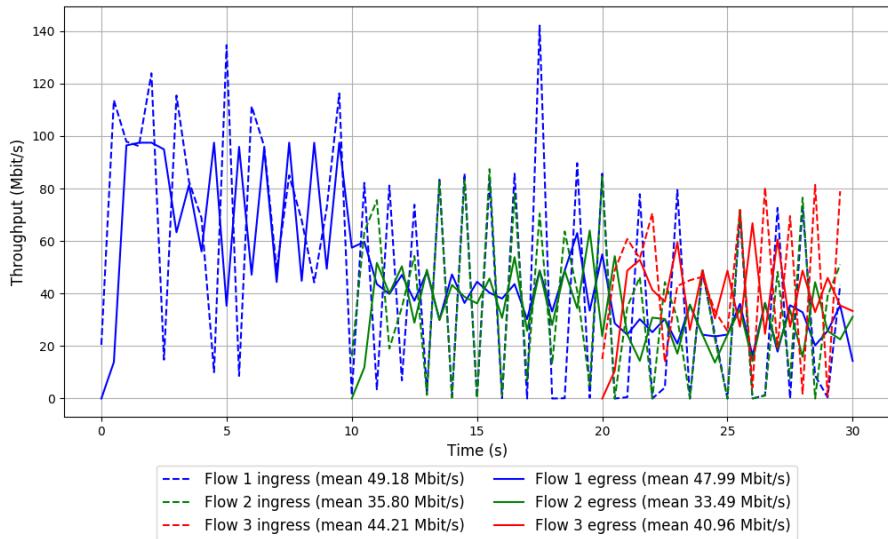


Run 3: Statistics of Indigo-96d2da3

```
Start at: 2018-10-10 05:09:00
End at: 2018-10-10 05:09:30
Local clock offset: 1.939 ms
Remote clock offset: -3.079 ms

# Below is generated by plot.py at 2018-10-10 06:19:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.77 Mbit/s
95th percentile per-packet one-way delay: 776.803 ms
Loss rate: 4.01%
-- Flow 1:
Average throughput: 47.99 Mbit/s
95th percentile per-packet one-way delay: 821.827 ms
Loss rate: 2.55%
-- Flow 2:
Average throughput: 33.49 Mbit/s
95th percentile per-packet one-way delay: 807.448 ms
Loss rate: 5.44%
-- Flow 3:
Average throughput: 40.96 Mbit/s
95th percentile per-packet one-way delay: 560.890 ms
Loss rate: 6.65%
```

Run 3: Report of Indigo-96d2da3 — Data Link

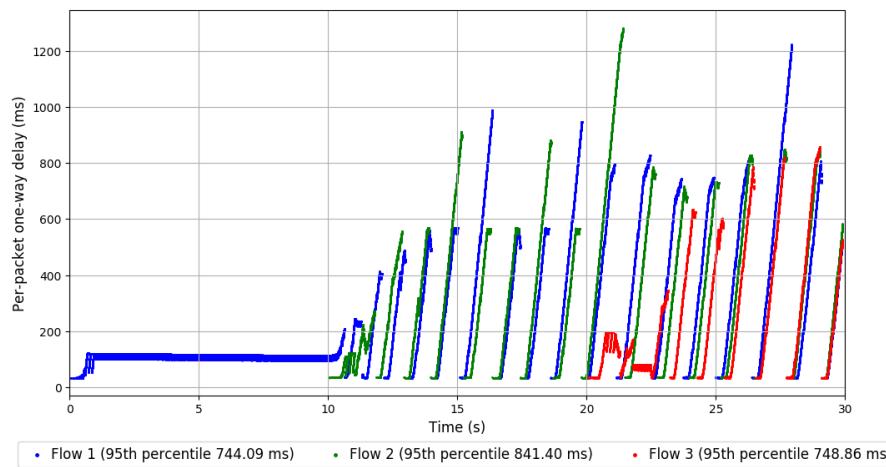
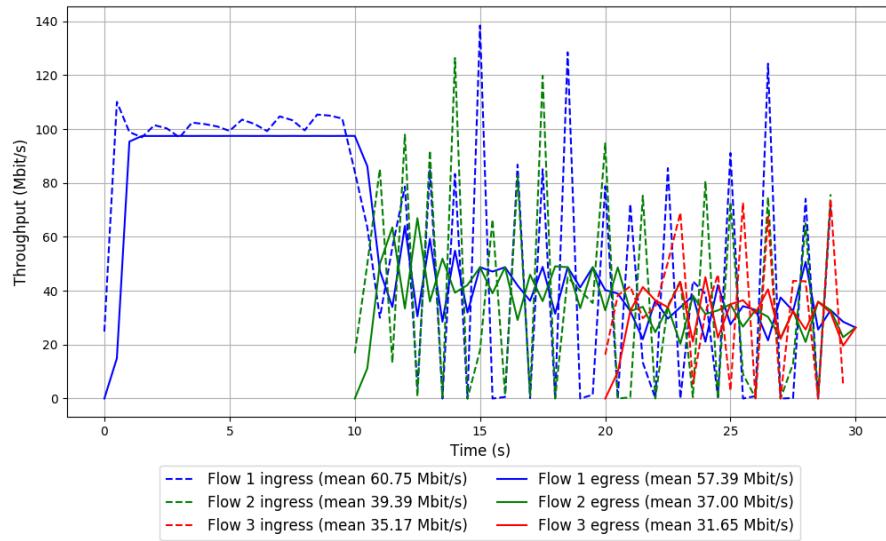


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-10-10 05:33:45
End at: 2018-10-10 05:34:15
Local clock offset: 3.045 ms
Remote clock offset: -2.898 ms

# Below is generated by plot.py at 2018-10-10 06:19:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.43 Mbit/s
95th percentile per-packet one-way delay: 786.936 ms
Loss rate: 4.56%
-- Flow 1:
Average throughput: 57.39 Mbit/s
95th percentile per-packet one-way delay: 744.092 ms
Loss rate: 4.27%
-- Flow 2:
Average throughput: 37.00 Mbit/s
95th percentile per-packet one-way delay: 841.402 ms
Loss rate: 4.10%
-- Flow 3:
Average throughput: 31.65 Mbit/s
95th percentile per-packet one-way delay: 748.860 ms
Loss rate: 7.16%
```

Run 4: Report of Indigo-96d2da3 — Data Link

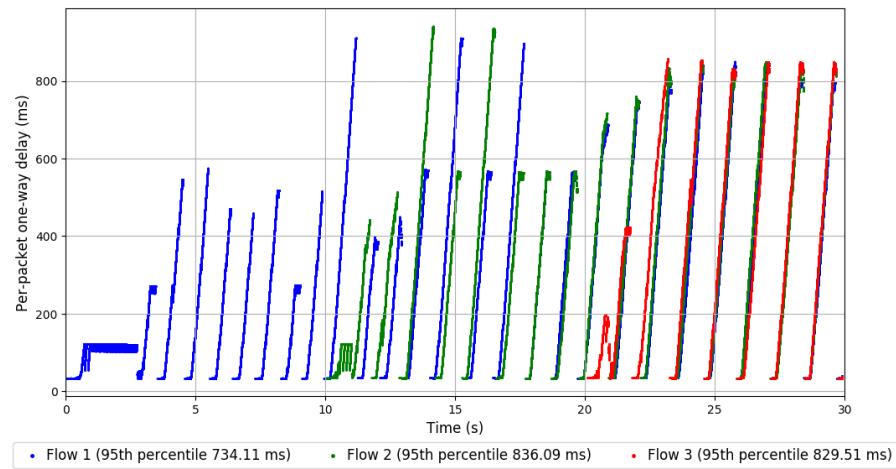
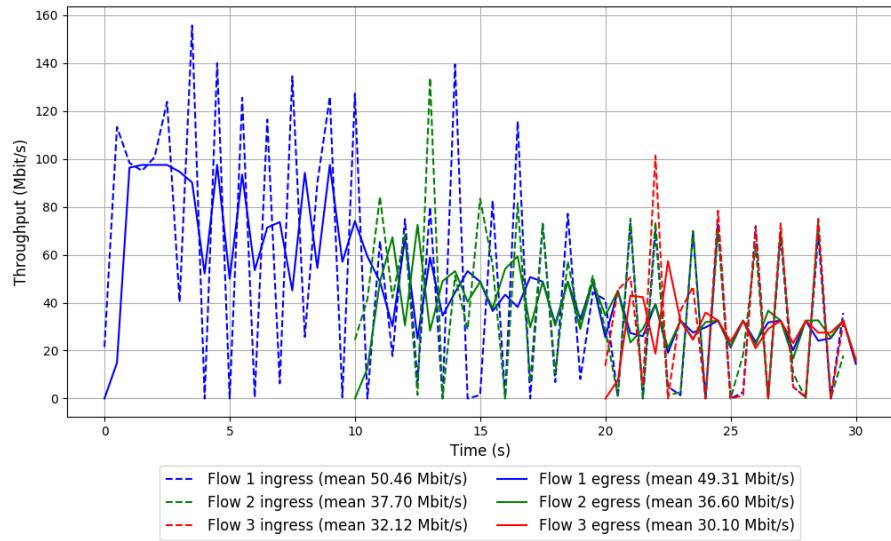


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-10-10 05:58:53
End at: 2018-10-10 05:59:23
Local clock offset: 3.732 ms
Remote clock offset: -2.346 ms

# Below is generated by plot.py at 2018-10-10 06:19:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.55 Mbit/s
95th percentile per-packet one-way delay: 803.153 ms
Loss rate: 3.25%
-- Flow 1:
Average throughput: 49.31 Mbit/s
95th percentile per-packet one-way delay: 734.112 ms
Loss rate: 2.49%
-- Flow 2:
Average throughput: 36.60 Mbit/s
95th percentile per-packet one-way delay: 836.092 ms
Loss rate: 3.24%
-- Flow 3:
Average throughput: 30.10 Mbit/s
95th percentile per-packet one-way delay: 829.506 ms
Loss rate: 6.92%
```

Run 5: Report of Indigo-96d2da3 — Data Link

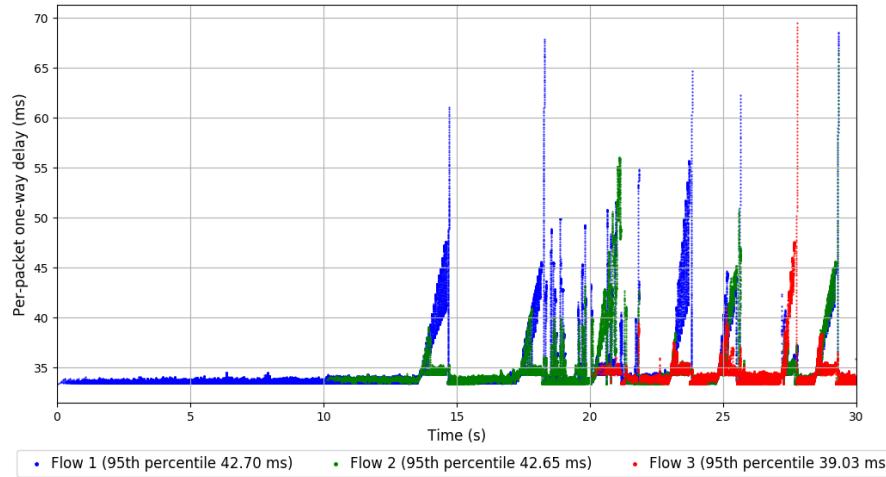
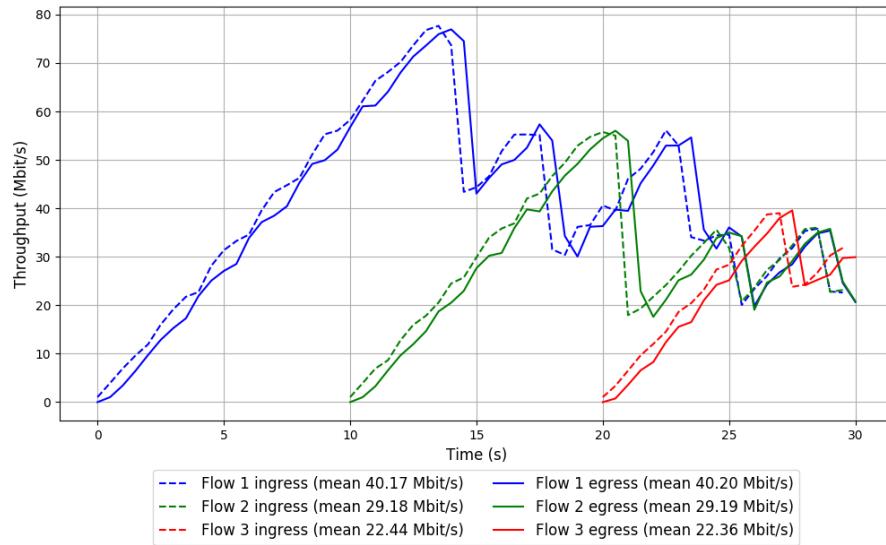


Run 1: Statistics of LEDBAT

```
Start at: 2018-10-10 04:14:39
End at: 2018-10-10 04:15:09
Local clock offset: 5.876 ms
Remote clock offset: -4.521 ms

# Below is generated by plot.py at 2018-10-10 06:19:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.02 Mbit/s
95th percentile per-packet one-way delay: 42.501 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 40.20 Mbit/s
95th percentile per-packet one-way delay: 42.697 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 29.19 Mbit/s
95th percentile per-packet one-way delay: 42.648 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 22.36 Mbit/s
95th percentile per-packet one-way delay: 39.028 ms
Loss rate: 1.00%
```

Run 1: Report of LEDBAT — Data Link

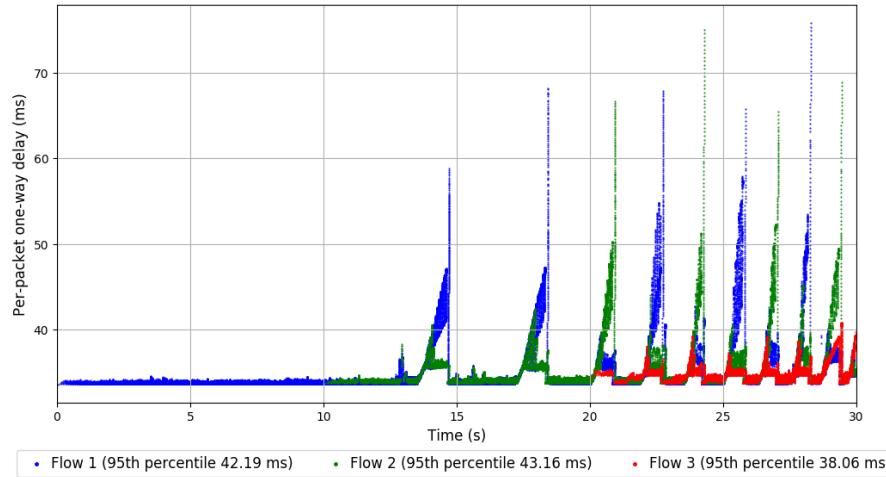
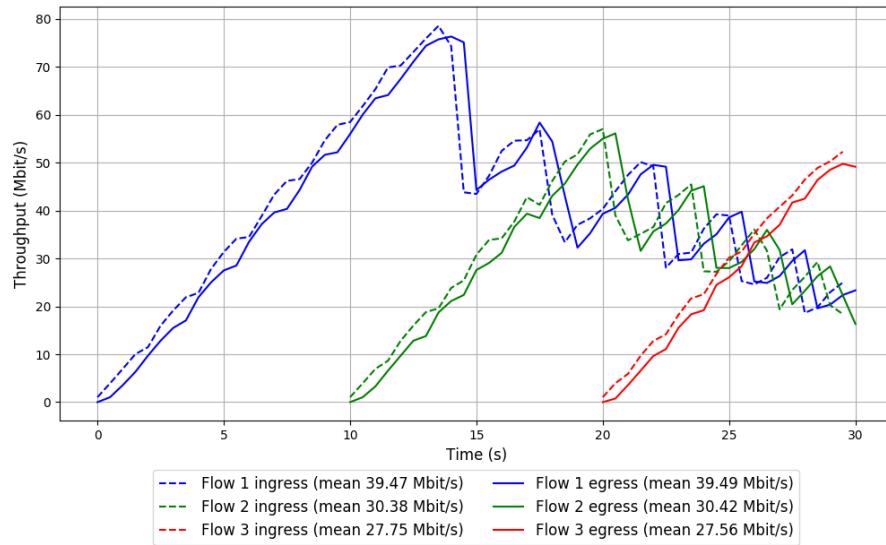


Run 2: Statistics of LEDBAT

```
Start at: 2018-10-10 04:39:53
End at: 2018-10-10 04:40:23
Local clock offset: 3.018 ms
Remote clock offset: -4.082 ms

# Below is generated by plot.py at 2018-10-10 06:19:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.87 Mbit/s
95th percentile per-packet one-way delay: 41.821 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 39.49 Mbit/s
95th percentile per-packet one-way delay: 42.187 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 30.42 Mbit/s
95th percentile per-packet one-way delay: 43.162 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 27.56 Mbit/s
95th percentile per-packet one-way delay: 38.063 ms
Loss rate: 1.30%
```

Run 2: Report of LEDBAT — Data Link

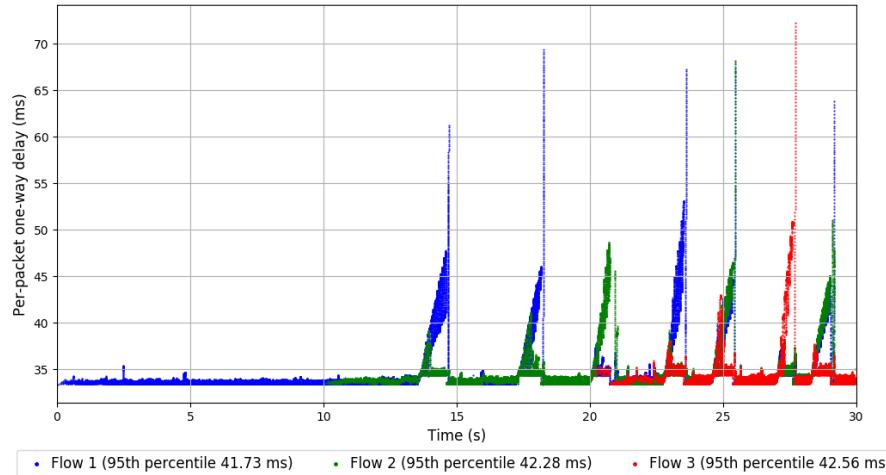
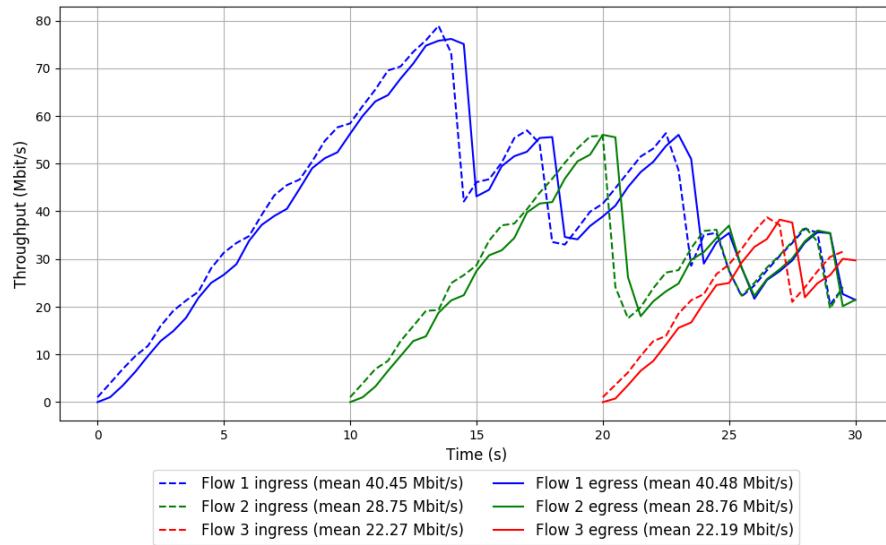


Run 3: Statistics of LEDBAT

```
Start at: 2018-10-10 05:04:48
End at: 2018-10-10 05:05:18
Local clock offset: 1.99 ms
Remote clock offset: -3.25 ms

# Below is generated by plot.py at 2018-10-10 06:19:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.96 Mbit/s
95th percentile per-packet one-way delay: 41.905 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 40.48 Mbit/s
95th percentile per-packet one-way delay: 41.728 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 28.76 Mbit/s
95th percentile per-packet one-way delay: 42.278 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 22.19 Mbit/s
95th percentile per-packet one-way delay: 42.564 ms
Loss rate: 1.00%
```

Run 3: Report of LEDBAT — Data Link

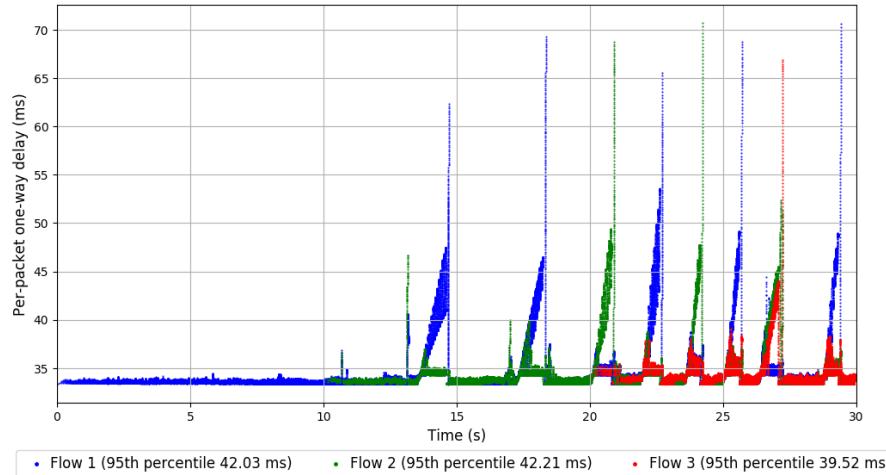
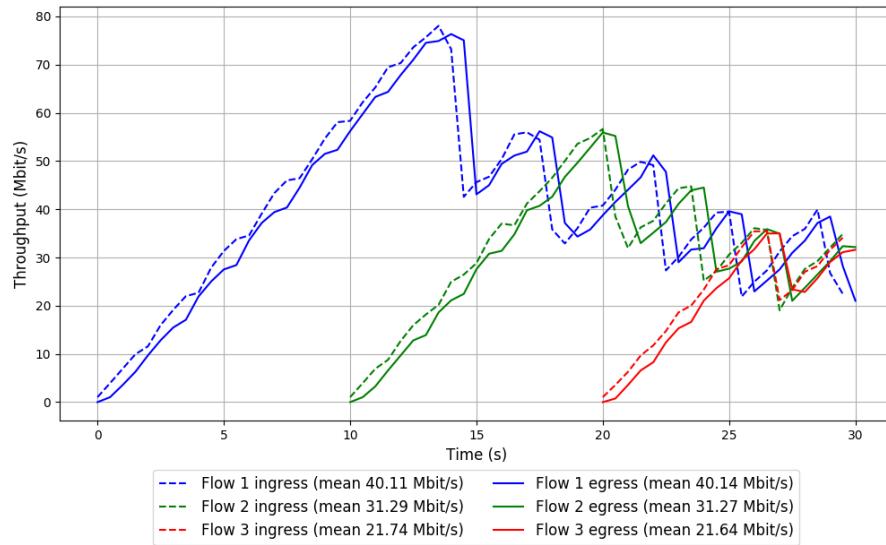


Run 4: Statistics of LEDBAT

```
Start at: 2018-10-10 05:29:36
End at: 2018-10-10 05:30:06
Local clock offset: 2.55 ms
Remote clock offset: -2.789 ms

# Below is generated by plot.py at 2018-10-10 06:19:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.10 Mbit/s
95th percentile per-packet one-way delay: 41.828 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 40.14 Mbit/s
95th percentile per-packet one-way delay: 42.031 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 31.27 Mbit/s
95th percentile per-packet one-way delay: 42.214 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 21.64 Mbit/s
95th percentile per-packet one-way delay: 39.518 ms
Loss rate: 1.08%
```

Run 4: Report of LEDBAT — Data Link

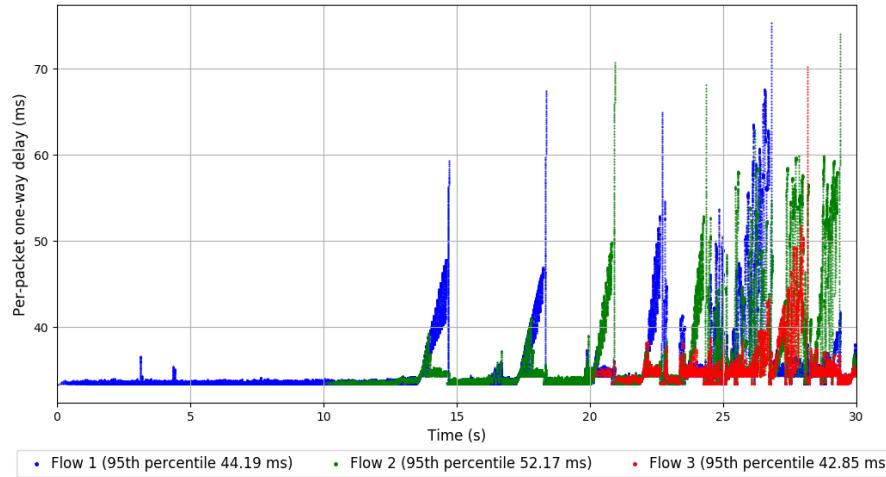
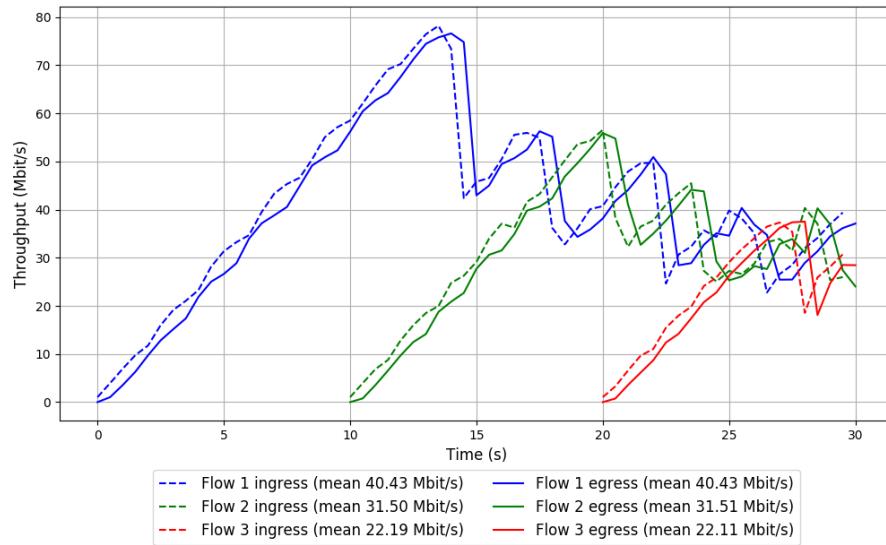


Run 5: Statistics of LEDBAT

```
Start at: 2018-10-10 05:54:43
End at: 2018-10-10 05:55:13
Local clock offset: 4.029 ms
Remote clock offset: -2.355 ms

# Below is generated by plot.py at 2018-10-10 06:19:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.70 Mbit/s
95th percentile per-packet one-way delay: 46.165 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 40.43 Mbit/s
95th percentile per-packet one-way delay: 44.194 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 31.51 Mbit/s
95th percentile per-packet one-way delay: 52.167 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 22.11 Mbit/s
95th percentile per-packet one-way delay: 42.847 ms
Loss rate: 1.00%
```

Run 5: Report of LEDBAT — Data Link

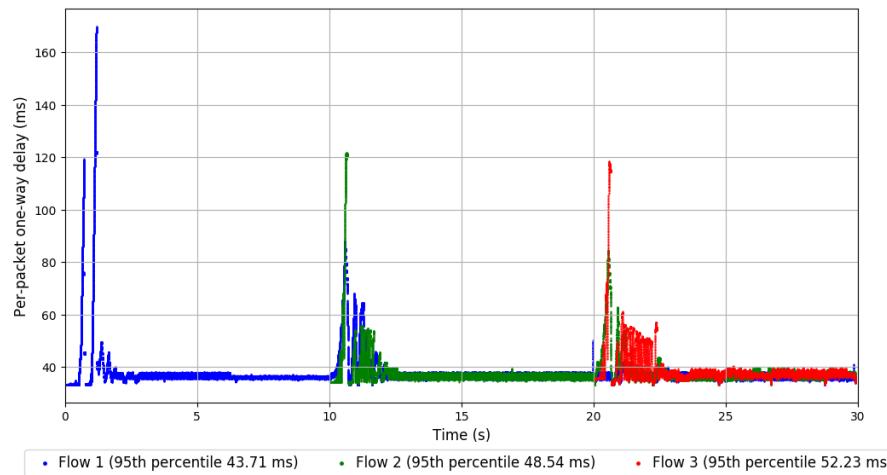
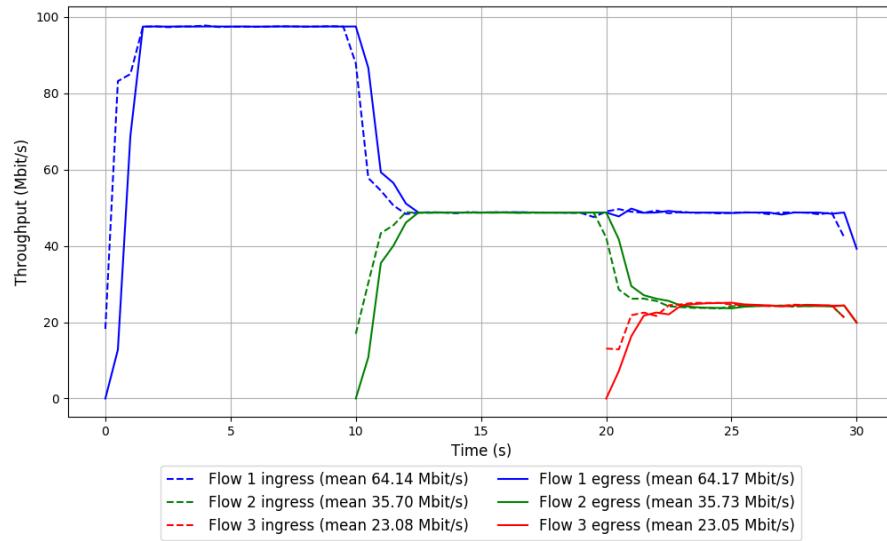


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-10-10 04:07:50
End at: 2018-10-10 04:08:20
Local clock offset: 5.21 ms
Remote clock offset: -4.57 ms

# Below is generated by plot.py at 2018-10-10 06:20:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 45.760 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 64.17 Mbit/s
95th percentile per-packet one-way delay: 43.710 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 35.73 Mbit/s
95th percentile per-packet one-way delay: 48.541 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 23.05 Mbit/s
95th percentile per-packet one-way delay: 52.235 ms
Loss rate: 0.77%
```

Run 1: Report of Indigo-Muses — Data Link

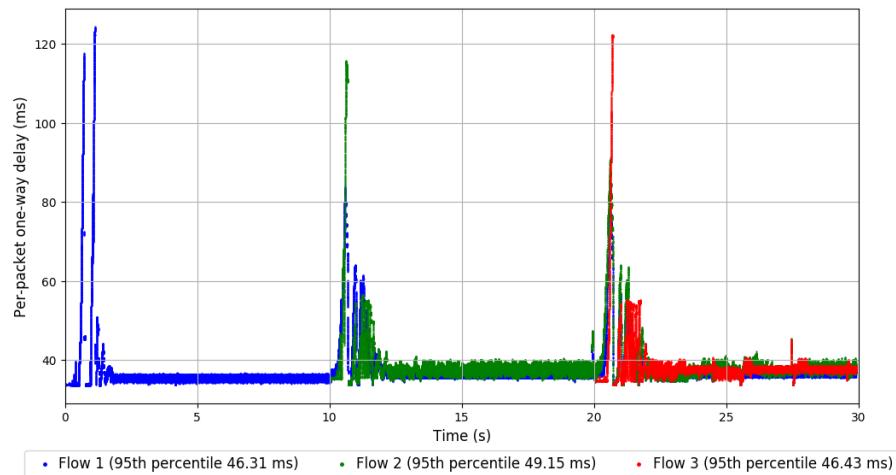
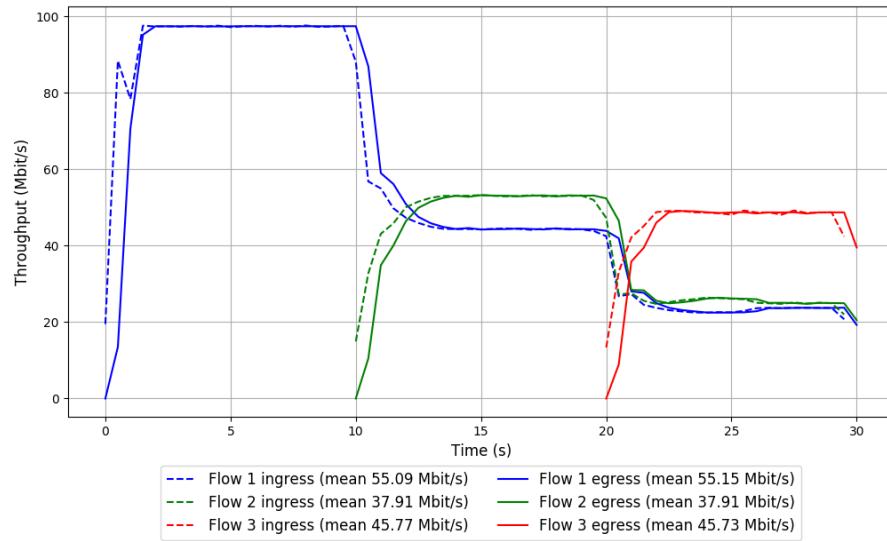


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-10-10 04:33:05
End at: 2018-10-10 04:33:35
Local clock offset: 4.026 ms
Remote clock offset: -4.247 ms

# Below is generated by plot.py at 2018-10-10 06:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.43 Mbit/s
95th percentile per-packet one-way delay: 46.978 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 55.15 Mbit/s
95th percentile per-packet one-way delay: 46.306 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 37.91 Mbit/s
95th percentile per-packet one-way delay: 49.145 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 45.73 Mbit/s
95th percentile per-packet one-way delay: 46.431 ms
Loss rate: 0.72%
```

Run 2: Report of Indigo-Muses — Data Link

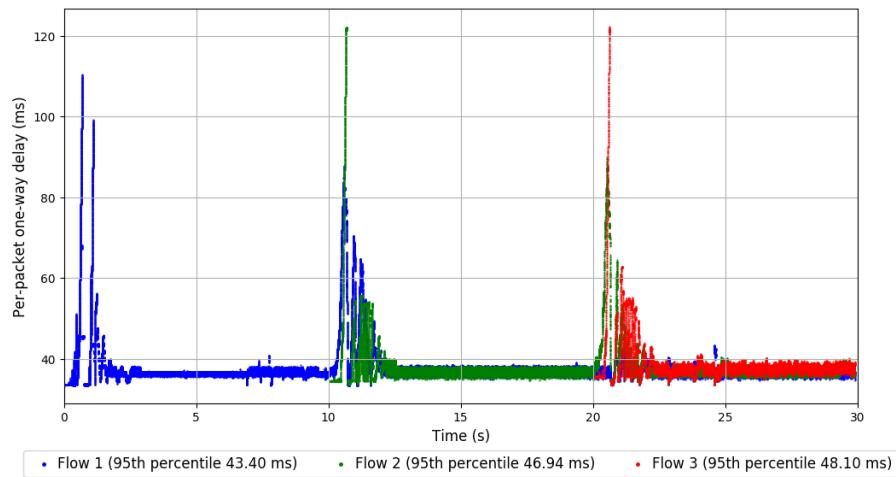
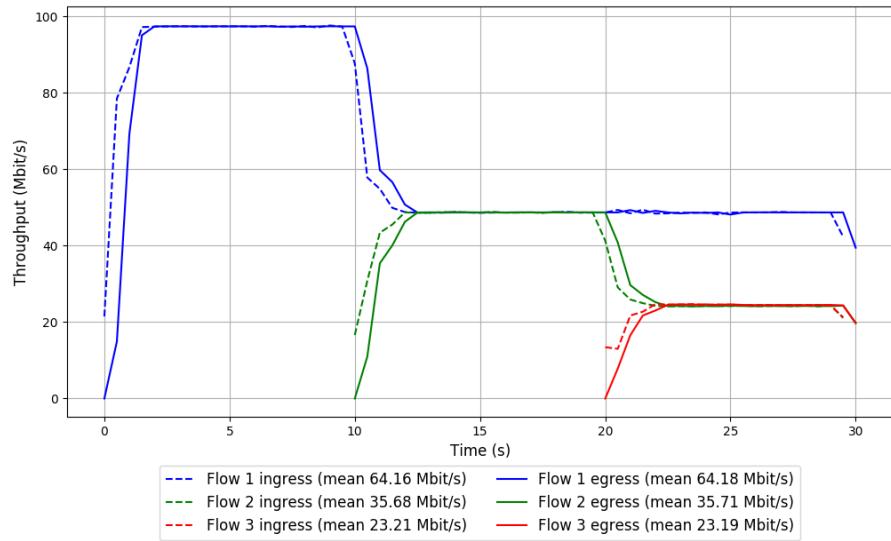


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-10-10 04:58:02
End at: 2018-10-10 04:58:32
Local clock offset: 2.096 ms
Remote clock offset: -3.533 ms

# Below is generated by plot.py at 2018-10-10 06:20:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.58 Mbit/s
95th percentile per-packet one-way delay: 44.811 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 64.18 Mbit/s
95th percentile per-packet one-way delay: 43.403 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 35.71 Mbit/s
95th percentile per-packet one-way delay: 46.939 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 23.19 Mbit/s
95th percentile per-packet one-way delay: 48.096 ms
Loss rate: 0.71%
```

Run 3: Report of Indigo-Muses — Data Link

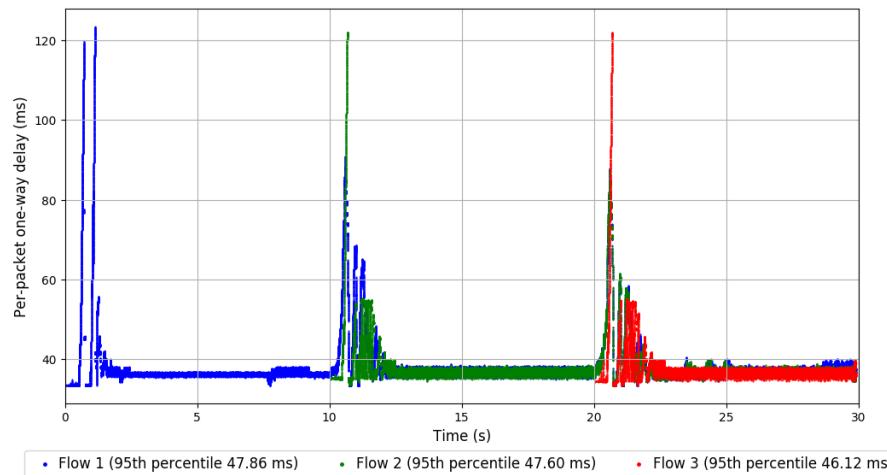
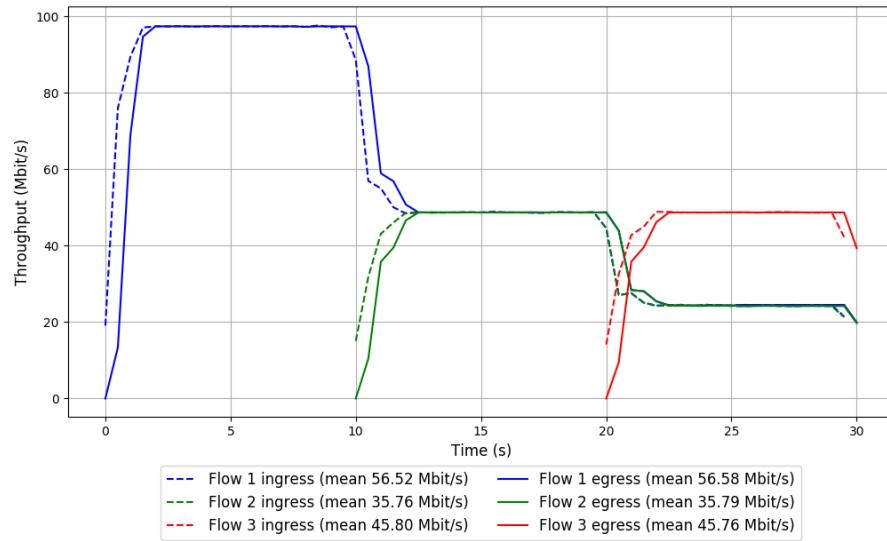


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-10-10 05:22:50
End at: 2018-10-10 05:23:20
Local clock offset: 1.76 ms
Remote clock offset: -2.875 ms

# Below is generated by plot.py at 2018-10-10 06:20:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.45 Mbit/s
95th percentile per-packet one-way delay: 47.324 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 56.58 Mbit/s
95th percentile per-packet one-way delay: 47.857 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 35.79 Mbit/s
95th percentile per-packet one-way delay: 47.597 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 45.76 Mbit/s
95th percentile per-packet one-way delay: 46.123 ms
Loss rate: 0.72%
```

Run 4: Report of Indigo-Muses — Data Link

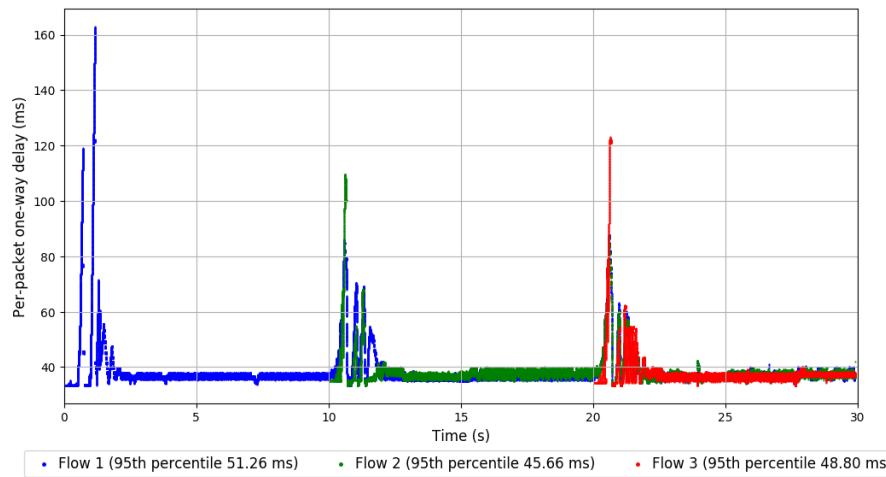
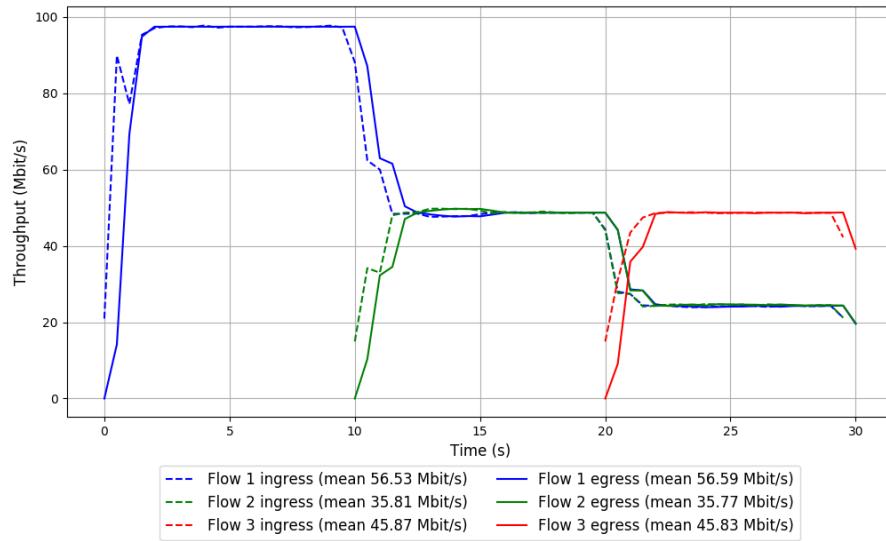


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-10-10 05:47:40
End at: 2018-10-10 05:48:10
Local clock offset: 3.851 ms
Remote clock offset: -2.519 ms

# Below is generated by plot.py at 2018-10-10 06:20:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.47 Mbit/s
95th percentile per-packet one-way delay: 50.308 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 56.59 Mbit/s
95th percentile per-packet one-way delay: 51.256 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 35.77 Mbit/s
95th percentile per-packet one-way delay: 45.657 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 45.83 Mbit/s
95th percentile per-packet one-way delay: 48.801 ms
Loss rate: 0.73%
```

Run 5: Report of Indigo-Muses — Data Link

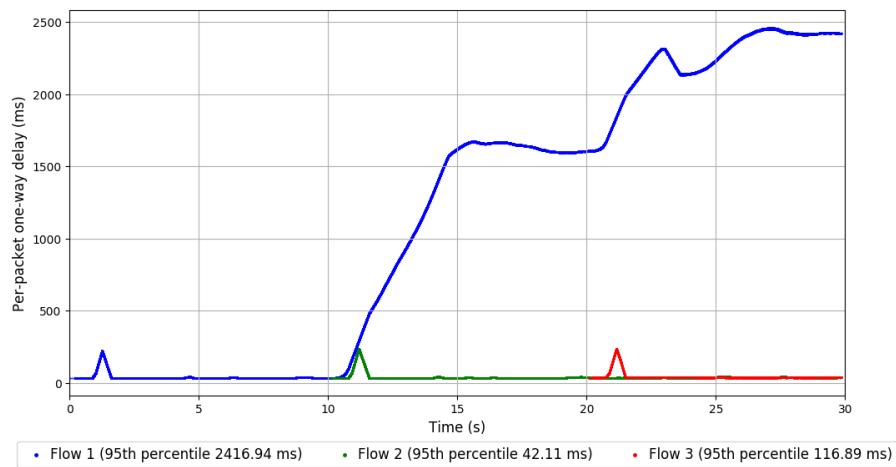
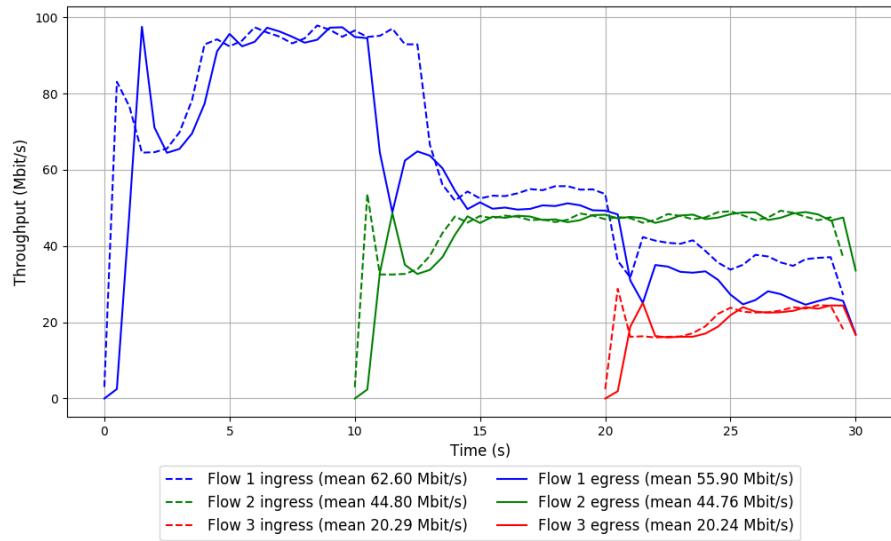


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-10-10 04:27:34
End at: 2018-10-10 04:28:04
Local clock offset: 5.574 ms
Remote clock offset: -4.262 ms

# Below is generated by plot.py at 2018-10-10 06:20:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.27 Mbit/s
95th percentile per-packet one-way delay: 2263.887 ms
Loss rate: 7.06%
-- Flow 1:
Average throughput: 55.90 Mbit/s
95th percentile per-packet one-way delay: 2416.944 ms
Loss rate: 10.88%
-- Flow 2:
Average throughput: 44.76 Mbit/s
95th percentile per-packet one-way delay: 42.110 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 20.24 Mbit/s
95th percentile per-packet one-way delay: 116.895 ms
Loss rate: 0.91%
```

Run 1: Report of PCC-Allegro — Data Link

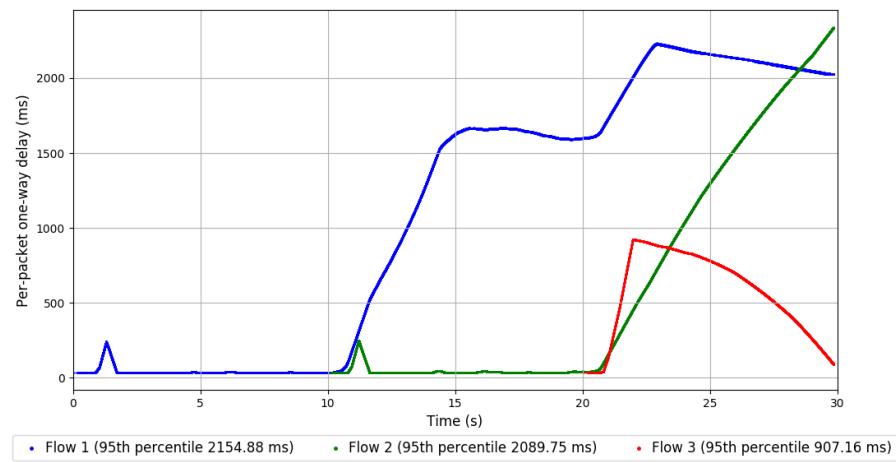
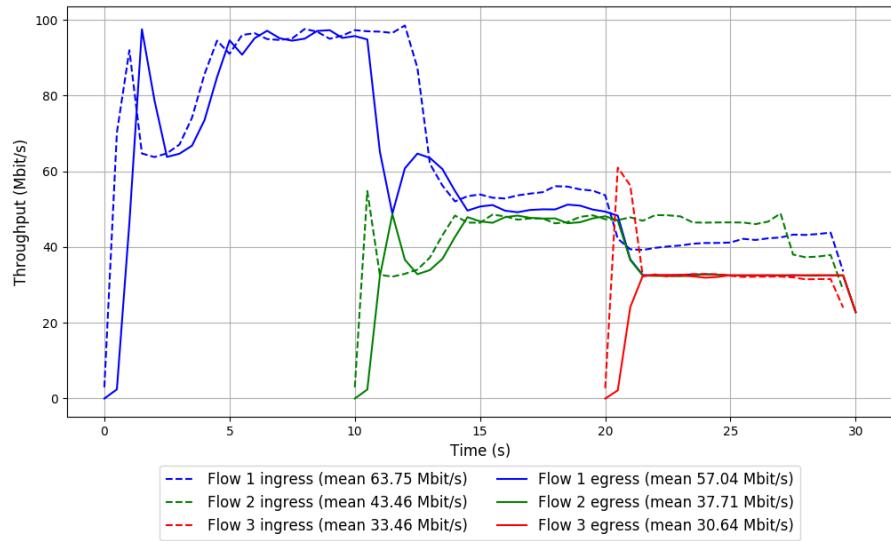


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-10-10 04:52:30
End at: 2018-10-10 04:53:00
Local clock offset: 2.382 ms
Remote clock offset: -3.625 ms

# Below is generated by plot.py at 2018-10-10 06:20:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.15 Mbit/s
95th percentile per-packet one-way delay: 2138.134 ms
Loss rate: 11.30%
-- Flow 1:
Average throughput: 57.04 Mbit/s
95th percentile per-packet one-way delay: 2154.878 ms
Loss rate: 10.70%
-- Flow 2:
Average throughput: 37.71 Mbit/s
95th percentile per-packet one-way delay: 2089.748 ms
Loss rate: 13.50%
-- Flow 3:
Average throughput: 30.64 Mbit/s
95th percentile per-packet one-way delay: 907.161 ms
Loss rate: 8.99%
```

Run 2: Report of PCC-Allegro — Data Link

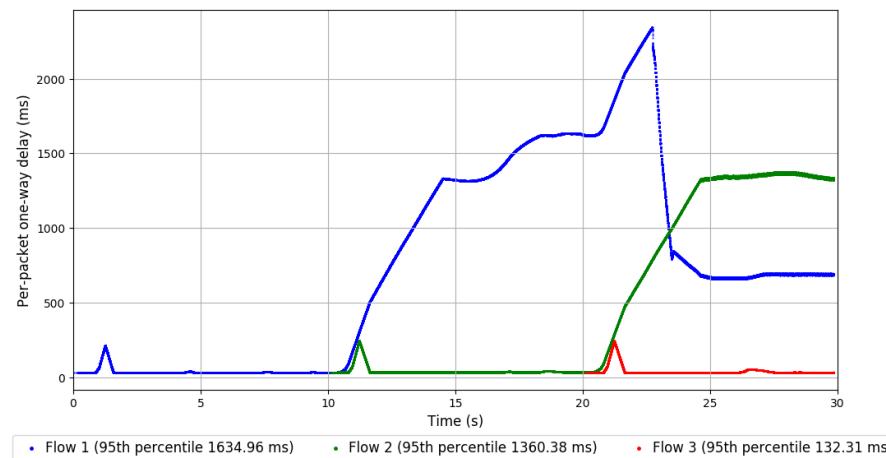
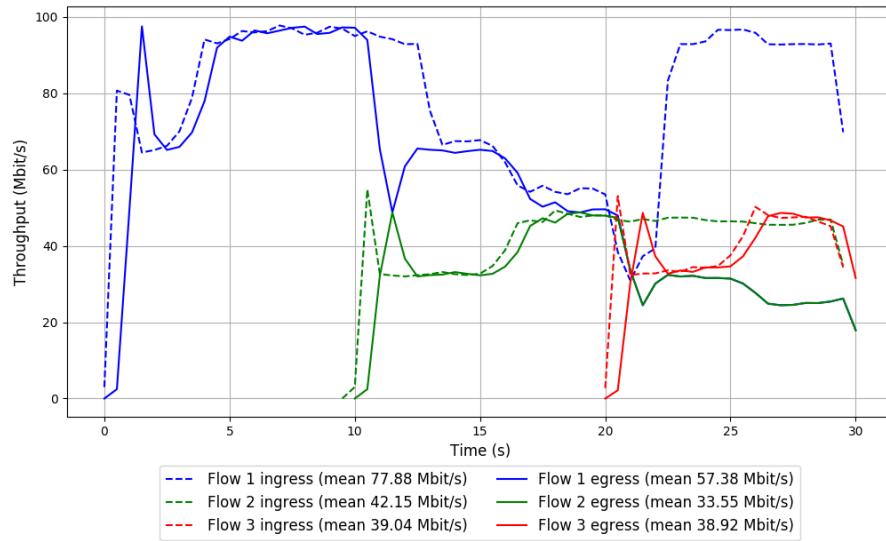


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-10-10 05:17:19
End at: 2018-10-10 05:17:49
Local clock offset: 1.847 ms
Remote clock offset: -2.912 ms

# Below is generated by plot.py at 2018-10-10 06:20:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.47 Mbit/s
95th percentile per-packet one-way delay: 1623.336 ms
Loss rate: 22.33%
-- Flow 1:
Average throughput: 57.38 Mbit/s
95th percentile per-packet one-way delay: 1634.964 ms
Loss rate: 26.48%
-- Flow 2:
Average throughput: 33.55 Mbit/s
95th percentile per-packet one-way delay: 1360.382 ms
Loss rate: 20.65%
-- Flow 3:
Average throughput: 38.92 Mbit/s
95th percentile per-packet one-way delay: 132.314 ms
Loss rate: 0.91%
```

Run 3: Report of PCC-Allegro — Data Link

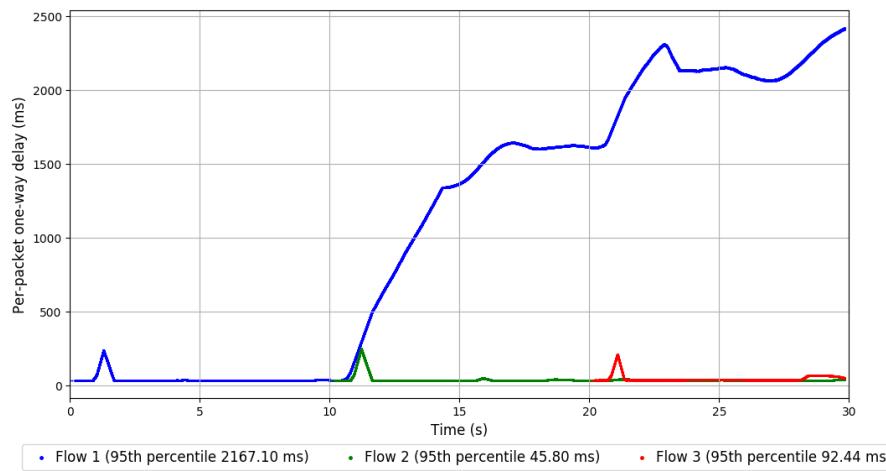
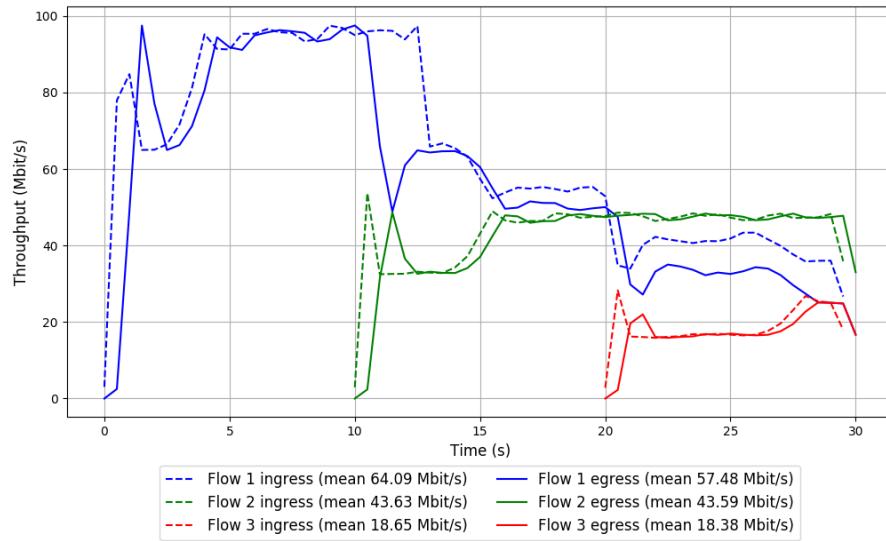


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-10-10 05:42:06
End at: 2018-10-10 05:42:36
Local clock offset: 3.587 ms
Remote clock offset: -2.471 ms

# Below is generated by plot.py at 2018-10-10 06:21:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.48 Mbit/s
95th percentile per-packet one-way delay: 2137.370 ms
Loss rate: 7.03%
-- Flow 1:
Average throughput: 57.48 Mbit/s
95th percentile per-packet one-way delay: 2167.102 ms
Loss rate: 10.50%
-- Flow 2:
Average throughput: 43.59 Mbit/s
95th percentile per-packet one-way delay: 45.800 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 18.38 Mbit/s
95th percentile per-packet one-way delay: 92.438 ms
Loss rate: 2.09%
```

Run 4: Report of PCC-Allegro — Data Link

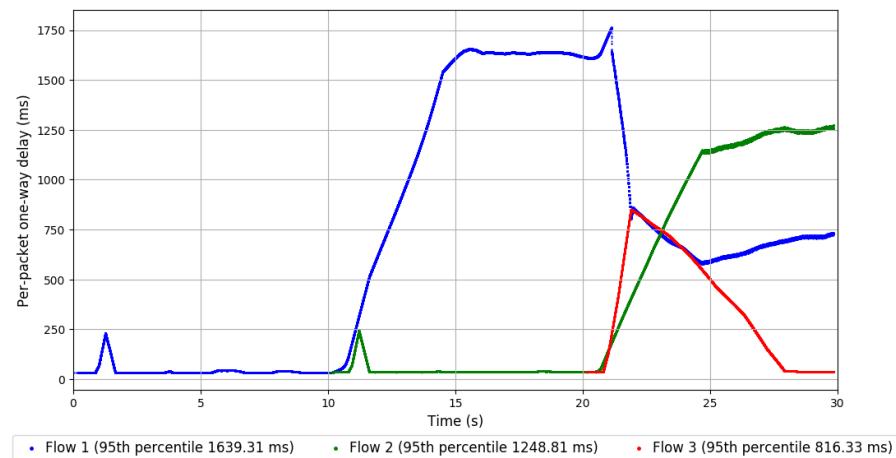
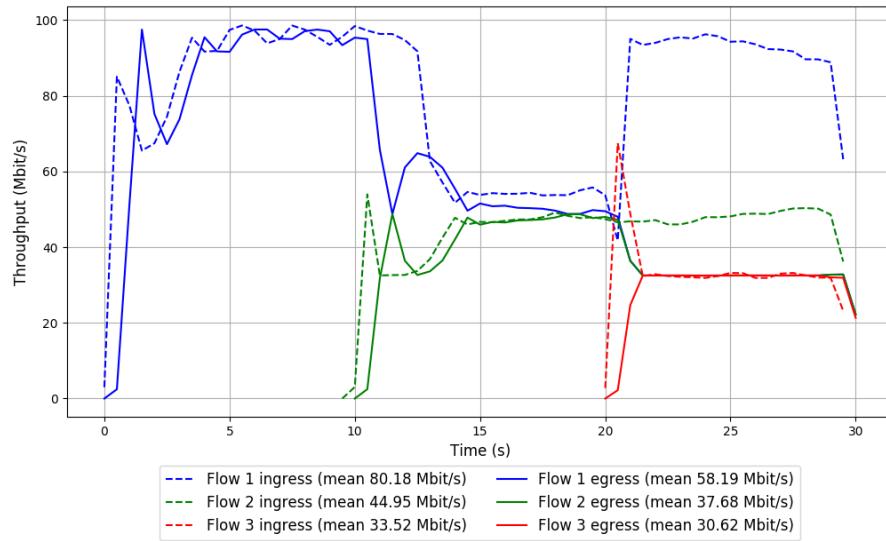


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-10-10 06:07:16
End at: 2018-10-10 06:07:46
Local clock offset: 3.378 ms
Remote clock offset: -2.429 ms

# Below is generated by plot.py at 2018-10-10 06:21:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.29 Mbit/s
95th percentile per-packet one-way delay: 1637.051 ms
Loss rate: 23.16%
-- Flow 1:
Average throughput: 58.19 Mbit/s
95th percentile per-packet one-way delay: 1639.309 ms
Loss rate: 27.58%
-- Flow 2:
Average throughput: 37.68 Mbit/s
95th percentile per-packet one-way delay: 1248.811 ms
Loss rate: 16.45%
-- Flow 3:
Average throughput: 30.62 Mbit/s
95th percentile per-packet one-way delay: 816.325 ms
Loss rate: 9.26%
```

Run 5: Report of PCC-Allegro — Data Link

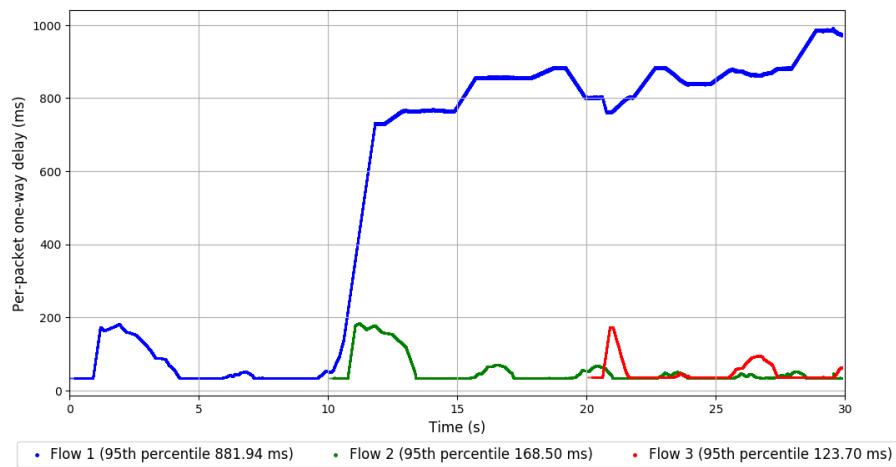
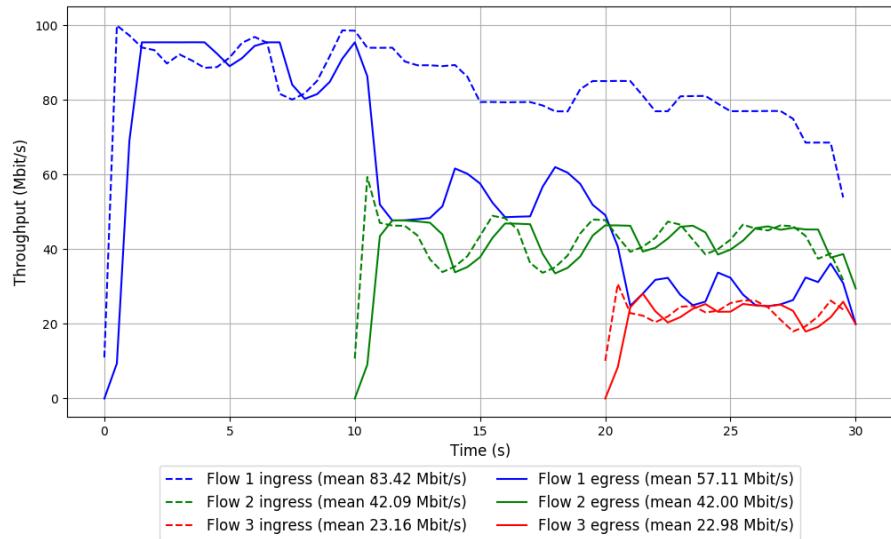


Run 1: Statistics of PCC-Expr

```
Start at: 2018-10-10 04:30:14
End at: 2018-10-10 04:30:44
Local clock offset: 4.709 ms
Remote clock offset: -4.148 ms

# Below is generated by plot.py at 2018-10-10 06:22:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.57 Mbit/s
95th percentile per-packet one-way delay: 874.685 ms
Loss rate: 22.42%
-- Flow 1:
Average throughput: 57.11 Mbit/s
95th percentile per-packet one-way delay: 881.937 ms
Loss rate: 31.69%
-- Flow 2:
Average throughput: 42.00 Mbit/s
95th percentile per-packet one-way delay: 168.500 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 22.98 Mbit/s
95th percentile per-packet one-way delay: 123.699 ms
Loss rate: 1.41%
```

Run 1: Report of PCC-Expr — Data Link

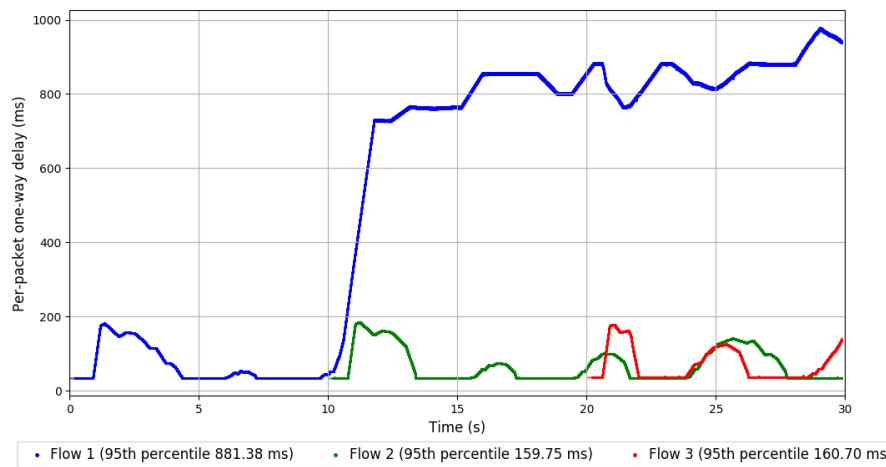
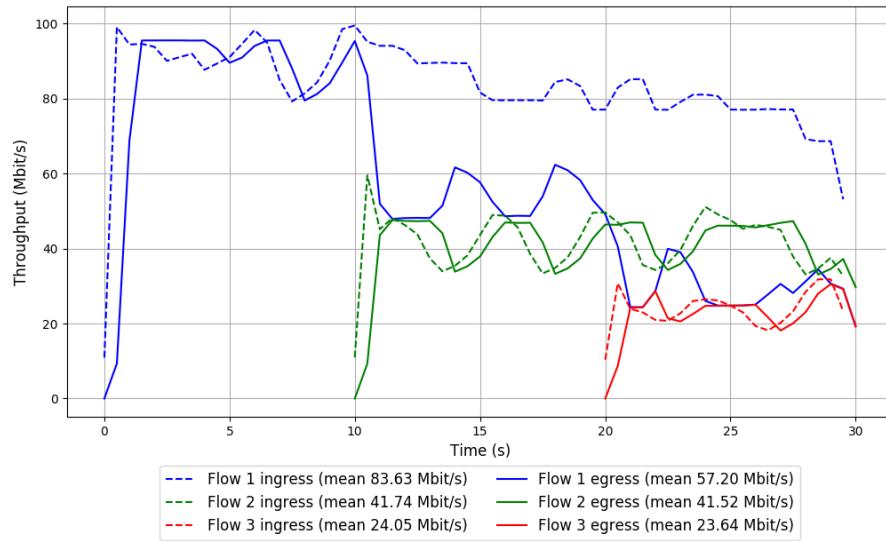


Run 2: Statistics of PCC-Expr

```
Start at: 2018-10-10 04:55:10
End at: 2018-10-10 04:55:40
Local clock offset: 2.131 ms
Remote clock offset: -3.574 ms

# Below is generated by plot.py at 2018-10-10 06:22:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.55 Mbit/s
95th percentile per-packet one-way delay: 875.010 ms
Loss rate: 22.61%
-- Flow 1:
Average throughput: 57.20 Mbit/s
95th percentile per-packet one-way delay: 881.378 ms
Loss rate: 31.76%
-- Flow 2:
Average throughput: 41.52 Mbit/s
95th percentile per-packet one-way delay: 159.754 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 23.64 Mbit/s
95th percentile per-packet one-way delay: 160.698 ms
Loss rate: 2.34%
```

Run 2: Report of PCC-Expr — Data Link

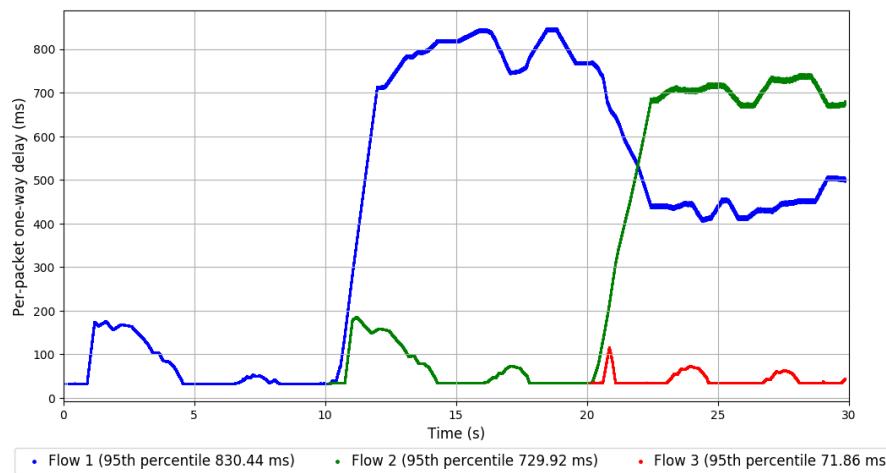
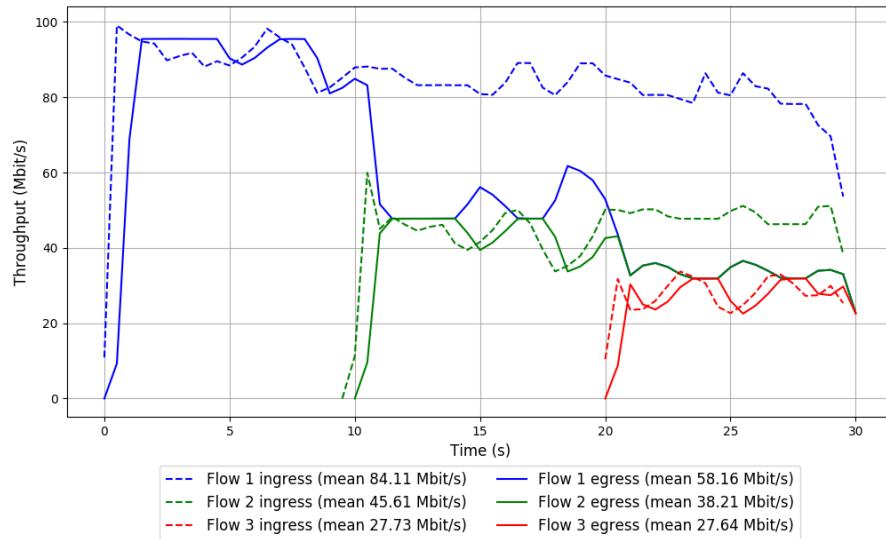


Run 3: Statistics of PCC-Expr

```
Start at: 2018-10-10 05:20:00
End at: 2018-10-10 05:20:30
Local clock offset: 1.785 ms
Remote clock offset: -3.001 ms

# Below is generated by plot.py at 2018-10-10 06:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.65 Mbit/s
95th percentile per-packet one-way delay: 819.465 ms
Loss rate: 25.22%
-- Flow 1:
Average throughput: 58.16 Mbit/s
95th percentile per-packet one-way delay: 830.437 ms
Loss rate: 31.00%
-- Flow 2:
Average throughput: 38.21 Mbit/s
95th percentile per-packet one-way delay: 729.923 ms
Loss rate: 16.49%
-- Flow 3:
Average throughput: 27.64 Mbit/s
95th percentile per-packet one-way delay: 71.858 ms
Loss rate: 0.99%
```

Run 3: Report of PCC-Expr — Data Link

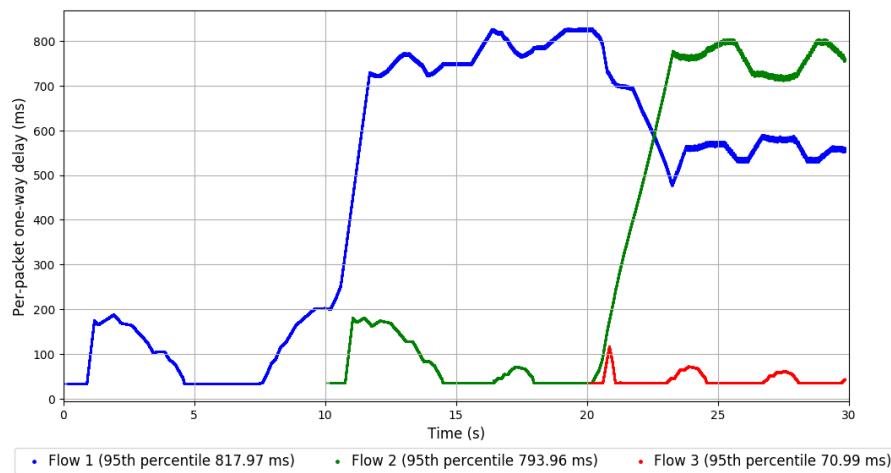
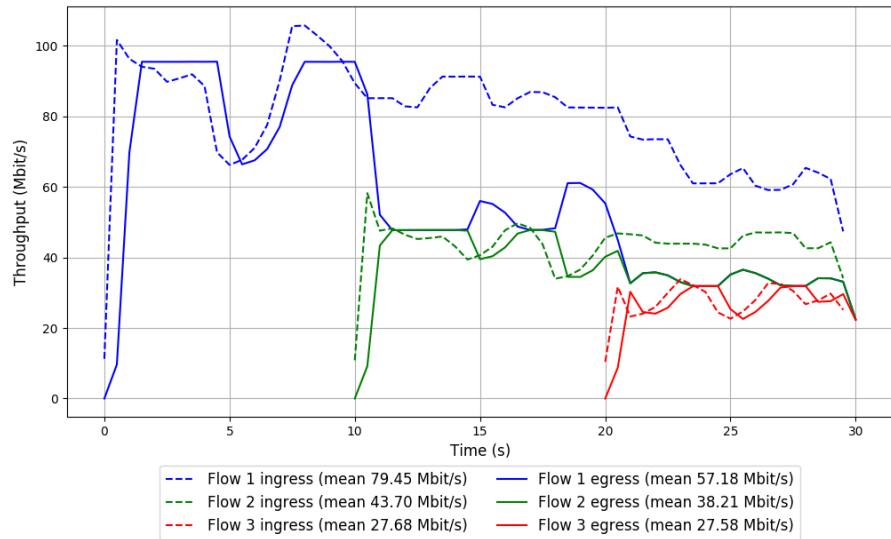


Run 4: Statistics of PCC-Expr

```
Start at: 2018-10-10 05:44:46
End at: 2018-10-10 05:45:16
Local clock offset: 3.716 ms
Remote clock offset: -2.729 ms

# Below is generated by plot.py at 2018-10-10 06:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.65 Mbit/s
95th percentile per-packet one-way delay: 802.209 ms
Loss rate: 22.28%
-- Flow 1:
Average throughput: 57.18 Mbit/s
95th percentile per-packet one-way delay: 817.968 ms
Loss rate: 28.17%
-- Flow 2:
Average throughput: 38.21 Mbit/s
95th percentile per-packet one-way delay: 793.955 ms
Loss rate: 12.85%
-- Flow 3:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 70.992 ms
Loss rate: 1.04%
```

Run 4: Report of PCC-Expr — Data Link

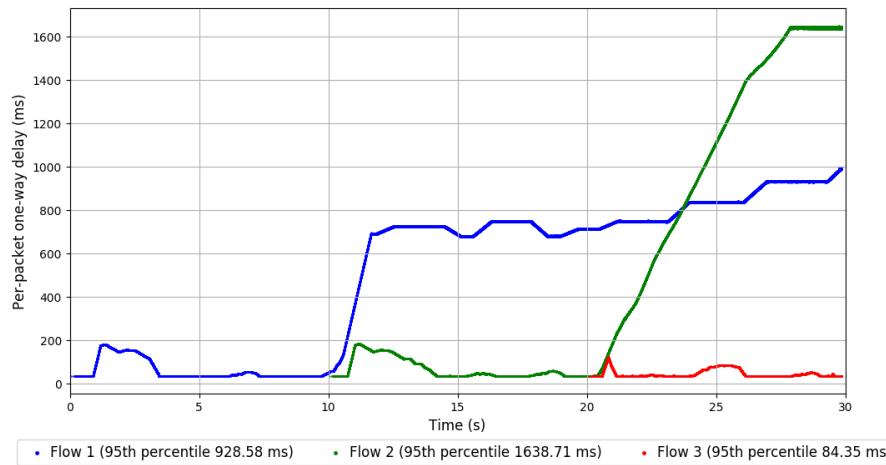
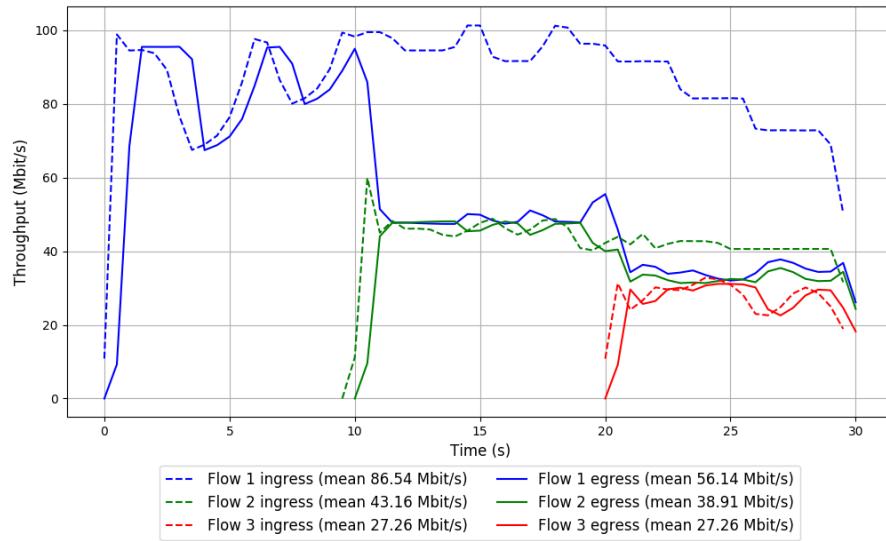


Run 5: Statistics of PCC-Expr

```
Start at: 2018-10-10 06:10:02
End at: 2018-10-10 06:10:32
Local clock offset: 3.329 ms
Remote clock offset: -2.608 ms

# Below is generated by plot.py at 2018-10-10 06:22:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.97 Mbit/s
95th percentile per-packet one-way delay: 1251.481 ms
Loss rate: 26.95%
-- Flow 1:
Average throughput: 56.14 Mbit/s
95th percentile per-packet one-way delay: 928.575 ms
Loss rate: 35.27%
-- Flow 2:
Average throughput: 38.91 Mbit/s
95th percentile per-packet one-way delay: 1638.706 ms
Loss rate: 10.14%
-- Flow 3:
Average throughput: 27.26 Mbit/s
95th percentile per-packet one-way delay: 84.348 ms
Loss rate: 0.65%
```

Run 5: Report of PCC-Expr — Data Link

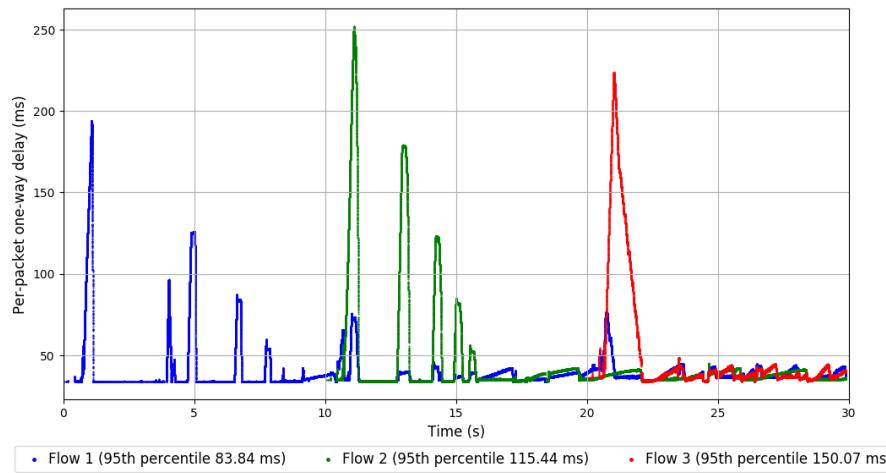
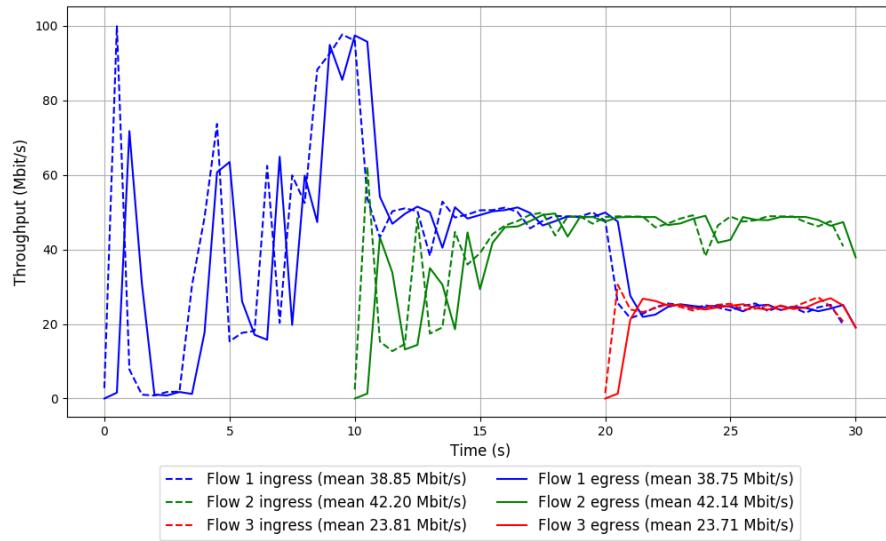


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-10-10 04:26:11
End at: 2018-10-10 04:26:41
Local clock offset: 6.137 ms
Remote clock offset: -4.284 ms

# Below is generated by plot.py at 2018-10-10 06:22:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.58 Mbit/s
95th percentile per-packet one-way delay: 103.907 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 38.75 Mbit/s
95th percentile per-packet one-way delay: 83.843 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 42.14 Mbit/s
95th percentile per-packet one-way delay: 115.442 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 23.71 Mbit/s
95th percentile per-packet one-way delay: 150.068 ms
Loss rate: 1.03%
```

Run 1: Report of QUIC Cubic — Data Link

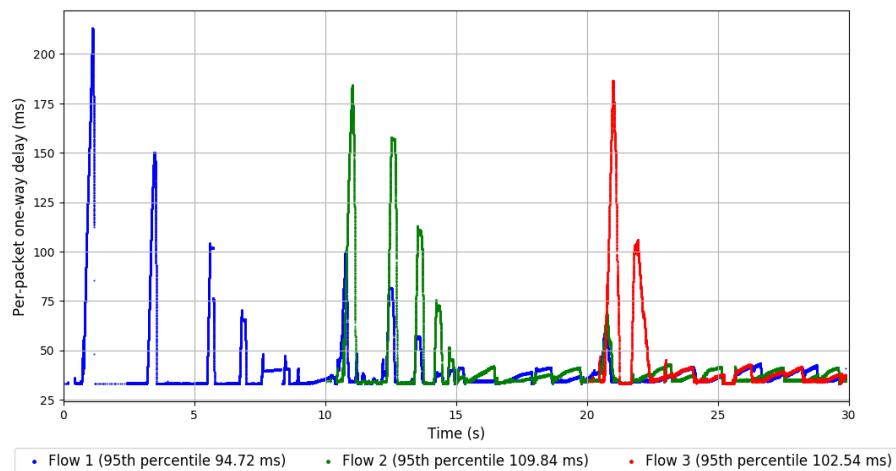
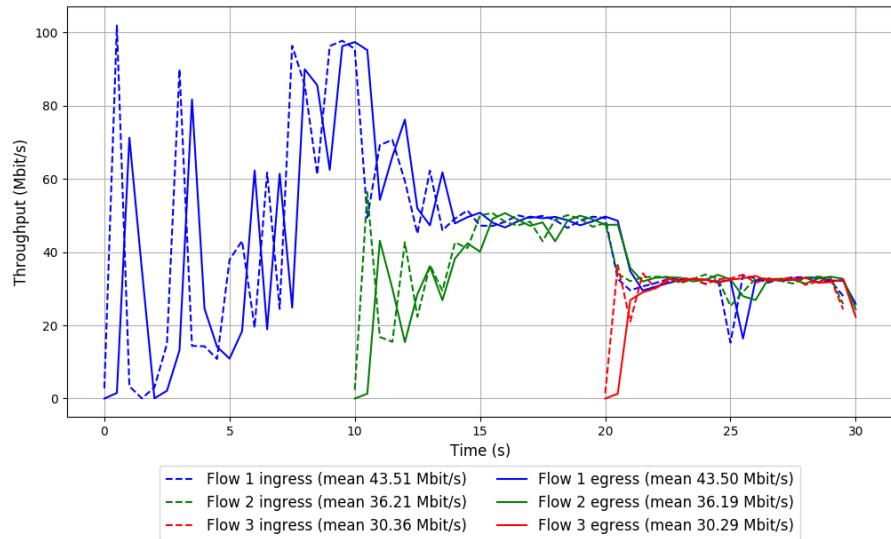


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-10-10 04:51:08
End at: 2018-10-10 04:51:38
Local clock offset: 2.121 ms
Remote clock offset: -3.632 ms

# Below is generated by plot.py at 2018-10-10 06:22:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.54 Mbit/s
95th percentile per-packet one-way delay: 101.405 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 43.50 Mbit/s
95th percentile per-packet one-way delay: 94.724 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 36.19 Mbit/s
95th percentile per-packet one-way delay: 109.837 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 30.29 Mbit/s
95th percentile per-packet one-way delay: 102.537 ms
Loss rate: 0.90%
```

Run 2: Report of QUIC Cubic — Data Link

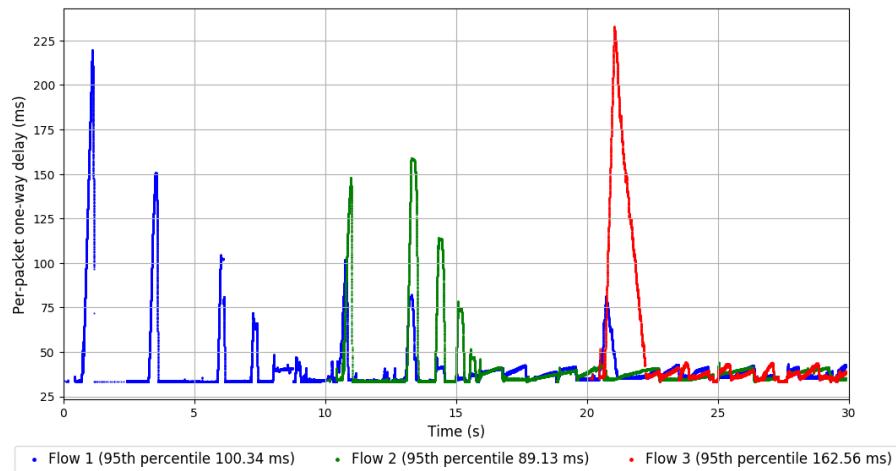
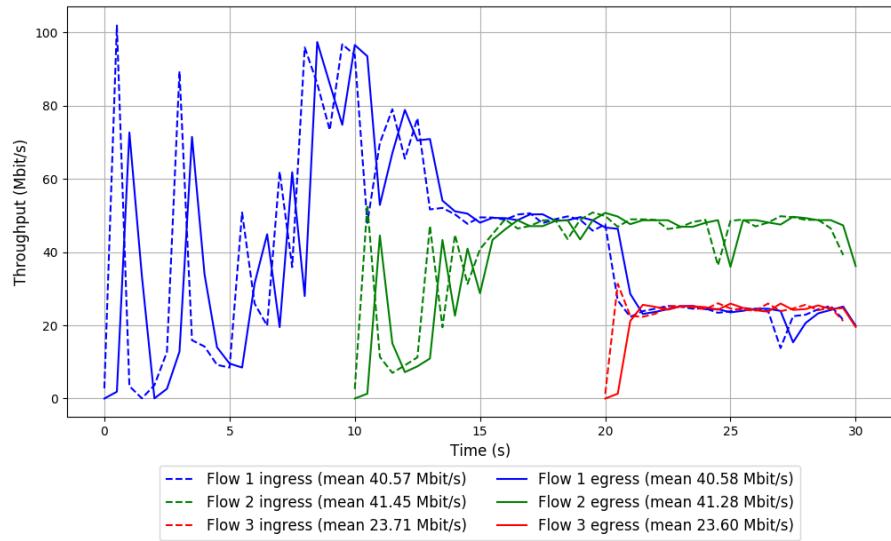


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-10-10 05:15:57
End at: 2018-10-10 05:16:27
Local clock offset: 1.836 ms
Remote clock offset: -3.102 ms

# Below is generated by plot.py at 2018-10-10 06:22:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.79 Mbit/s
95th percentile per-packet one-way delay: 102.424 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 40.58 Mbit/s
95th percentile per-packet one-way delay: 100.344 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 41.28 Mbit/s
95th percentile per-packet one-way delay: 89.132 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 23.60 Mbit/s
95th percentile per-packet one-way delay: 162.555 ms
Loss rate: 1.12%
```

Run 3: Report of QUIC Cubic — Data Link

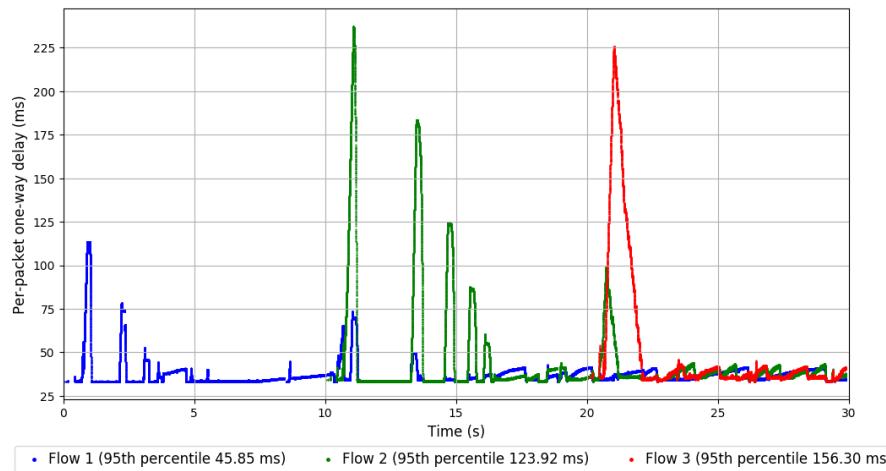
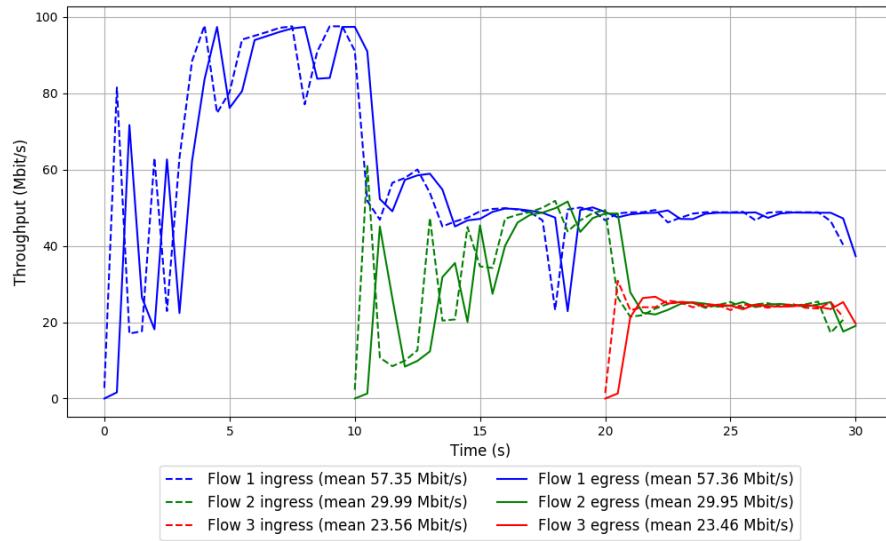


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-10-10 05:40:44
End at: 2018-10-10 05:41:14
Local clock offset: 3.533 ms
Remote clock offset: -2.563 ms

# Below is generated by plot.py at 2018-10-10 06:23:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.99 Mbit/s
95th percentile per-packet one-way delay: 74.040 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 57.36 Mbit/s
95th percentile per-packet one-way delay: 45.852 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 29.95 Mbit/s
95th percentile per-packet one-way delay: 123.925 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 23.46 Mbit/s
95th percentile per-packet one-way delay: 156.304 ms
Loss rate: 1.07%
```

Run 4: Report of QUIC Cubic — Data Link

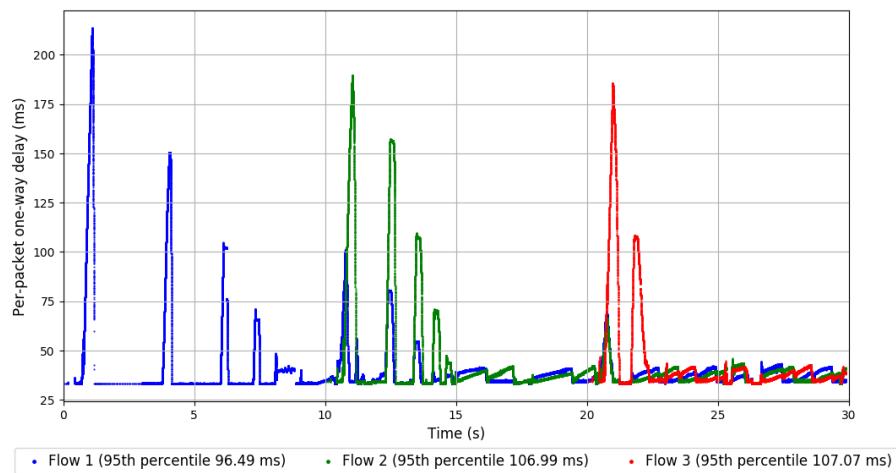
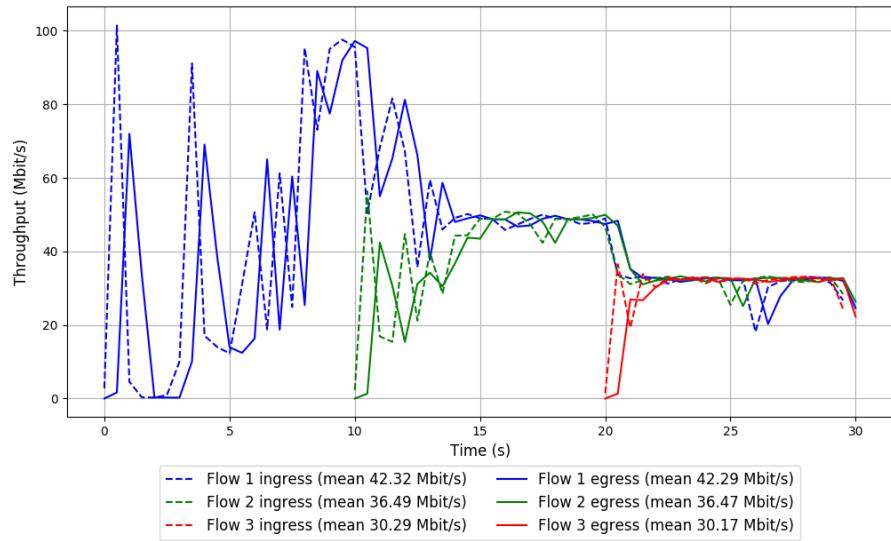


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-10-10 06:05:51
End at: 2018-10-10 06:06:21
Local clock offset: 3.43 ms
Remote clock offset: -2.351 ms

# Below is generated by plot.py at 2018-10-10 06:23:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.46 Mbit/s
95th percentile per-packet one-way delay: 101.929 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 42.29 Mbit/s
95th percentile per-packet one-way delay: 96.487 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 36.47 Mbit/s
95th percentile per-packet one-way delay: 106.988 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 30.17 Mbit/s
95th percentile per-packet one-way delay: 107.071 ms
Loss rate: 1.05%
```

Run 5: Report of QUIC Cubic — Data Link

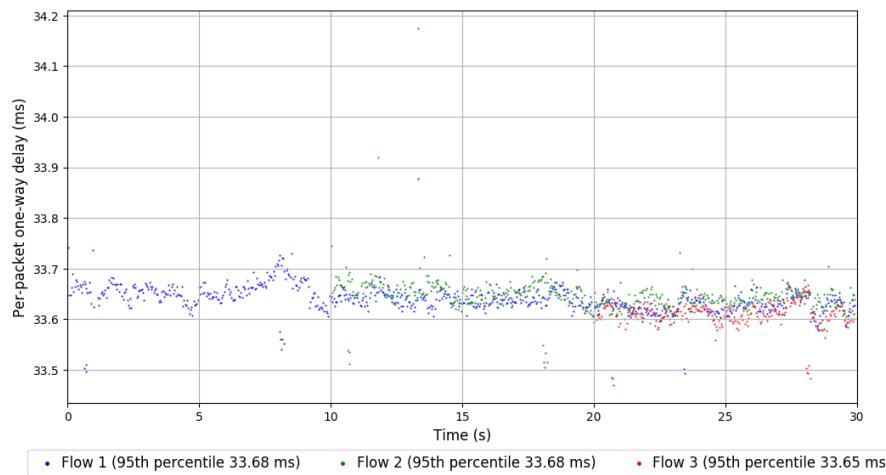
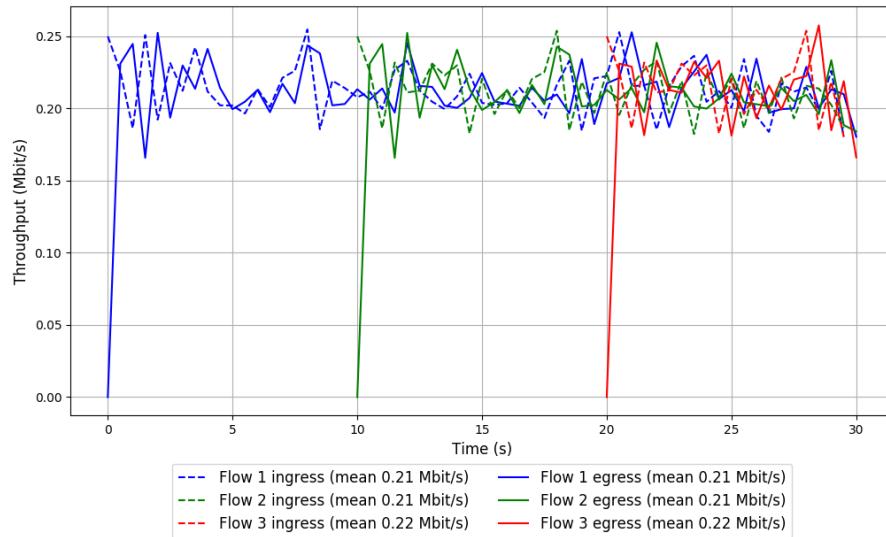


```
Run 1: Statistics of SCReAM

Start at: 2018-10-10 04:13:21
End at: 2018-10-10 04:13:51
Local clock offset: 5.762 ms
Remote clock offset: -4.712 ms

# Below is generated by plot.py at 2018-10-10 06:23:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.677 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.678 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.680 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.647 ms
Loss rate: 0.71%
```

Run 1: Report of SCReAM — Data Link

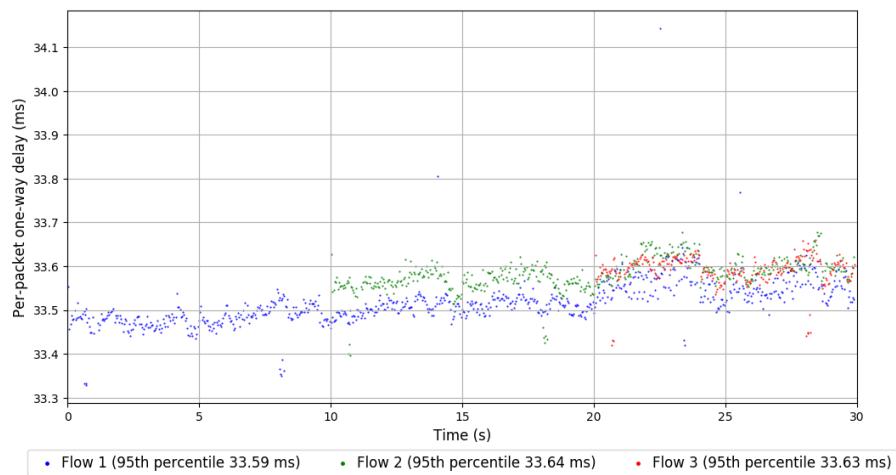
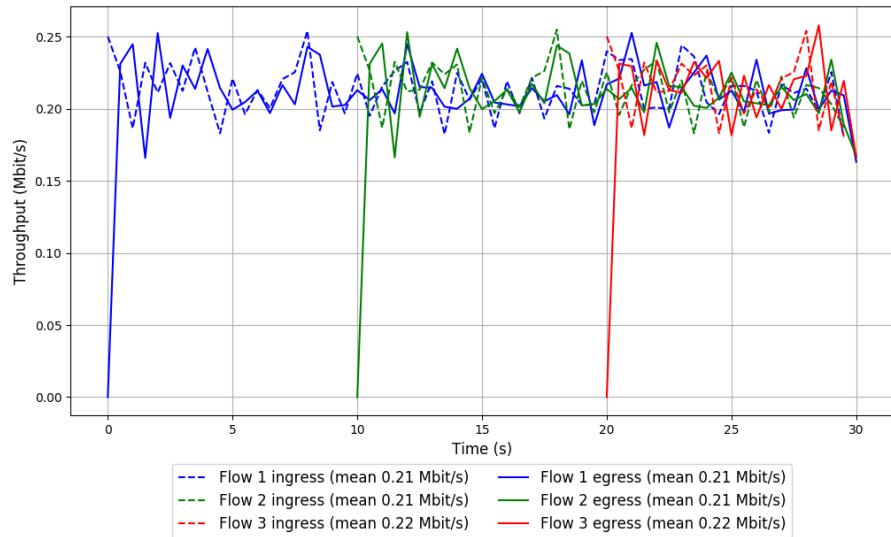


Run 2: Statistics of SCReAM

```
Start at: 2018-10-10 04:38:35
End at: 2018-10-10 04:39:05
Local clock offset: 3.13 ms
Remote clock offset: -3.906 ms

# Below is generated by plot.py at 2018-10-10 06:23:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.626 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.593 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.644 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.628 ms
Loss rate: 0.71%
```

Run 2: Report of SCReAM — Data Link

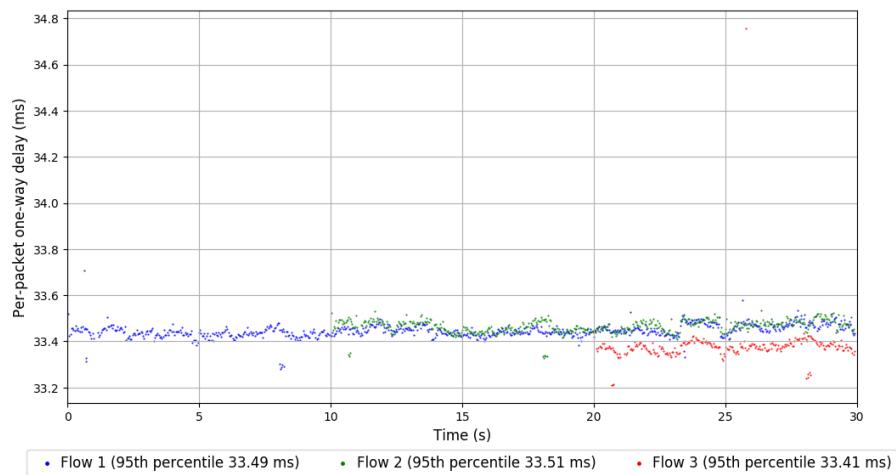
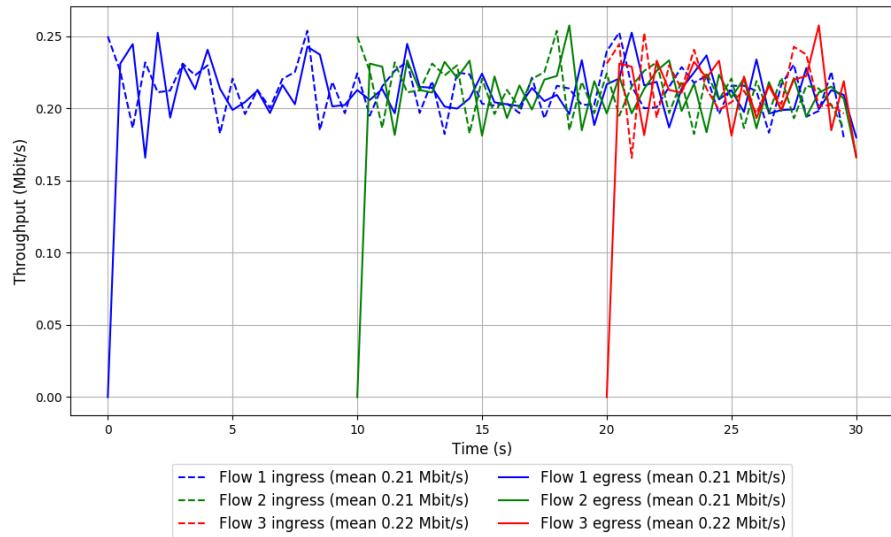


Run 3: Statistics of SCReAM

```
Start at: 2018-10-10 05:03:30
End at: 2018-10-10 05:04:00
Local clock offset: 2.023 ms
Remote clock offset: -3.187 ms

# Below is generated by plot.py at 2018-10-10 06:23:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.497 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.488 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.506 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.413 ms
Loss rate: 0.71%
```

Run 3: Report of SCReAM — Data Link

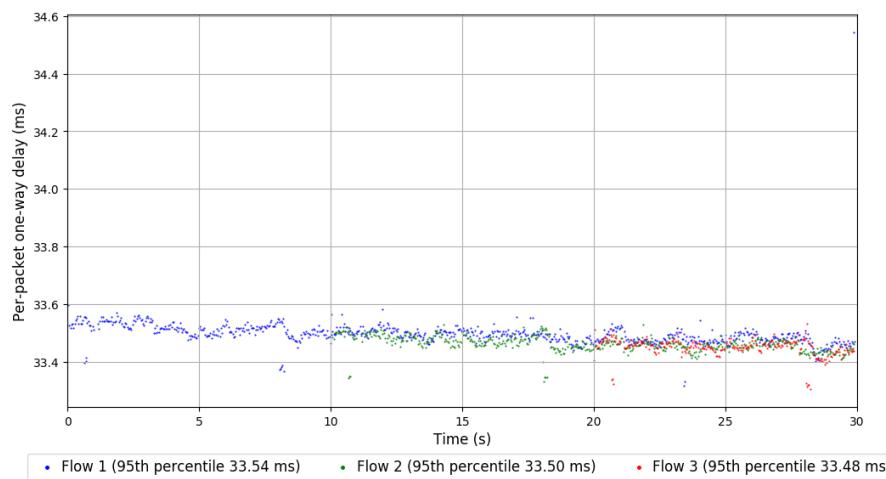
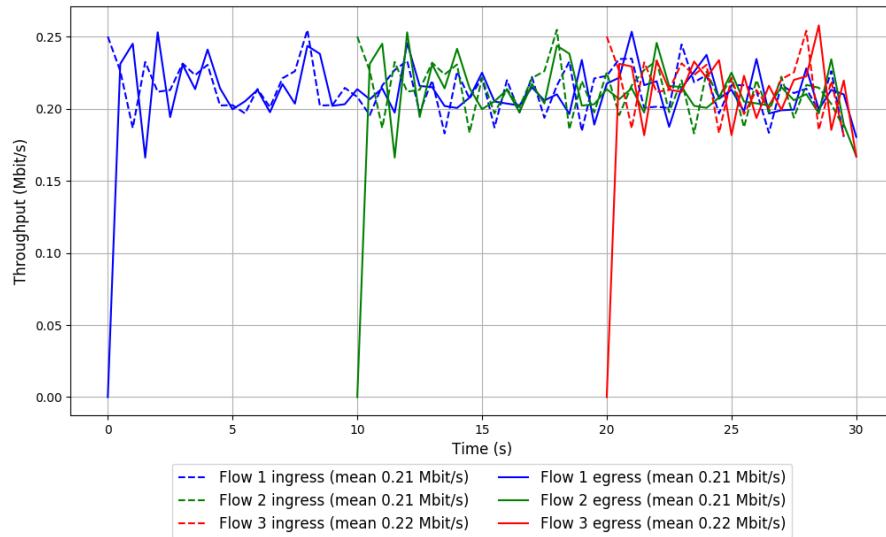


Run 4: Statistics of SCReAM

```
Start at: 2018-10-10 05:28:18
End at: 2018-10-10 05:28:48
Local clock offset: 2.346 ms
Remote clock offset: -2.934 ms

# Below is generated by plot.py at 2018-10-10 06:23:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.533 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.543 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.504 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.485 ms
Loss rate: 0.71%
```

Run 4: Report of SCReAM — Data Link

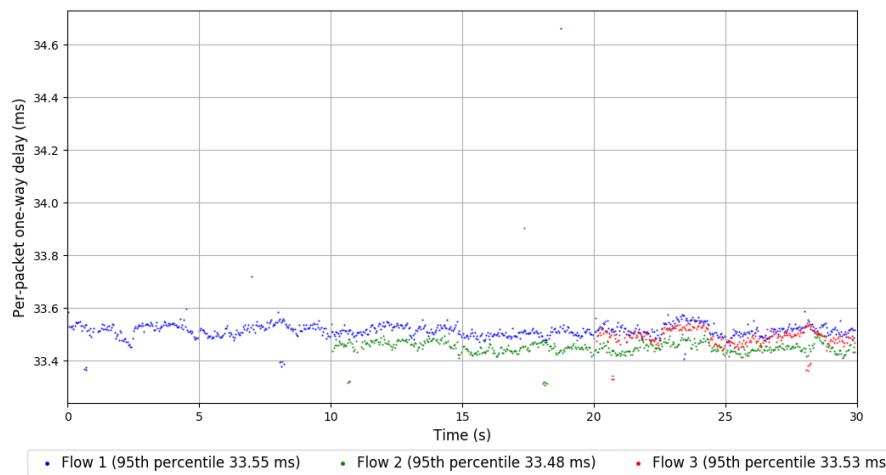
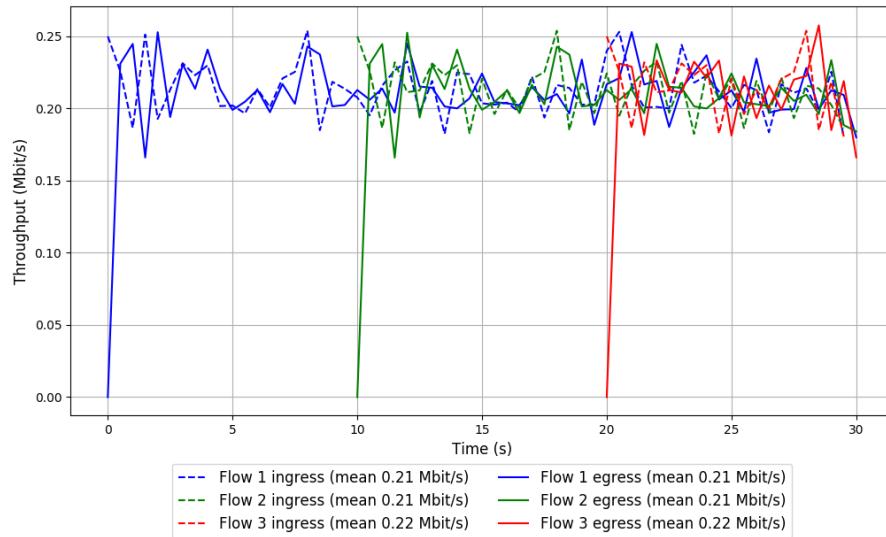


Run 5: Statistics of SCReAM

```
Start at: 2018-10-10 05:53:25
End at: 2018-10-10 05:53:55
Local clock offset: 3.997 ms
Remote clock offset: -2.493 ms

# Below is generated by plot.py at 2018-10-10 06:23:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.545 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.552 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.484 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.534 ms
Loss rate: 0.71%
```

Run 5: Report of SCReAM — Data Link

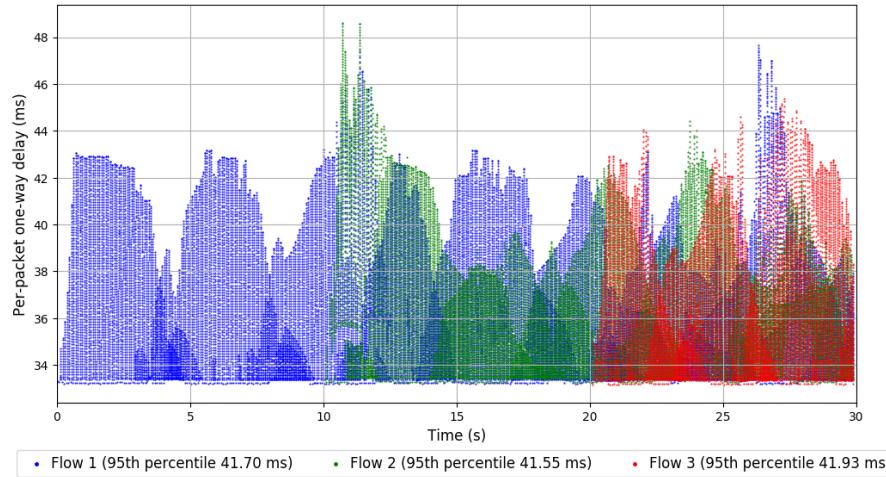
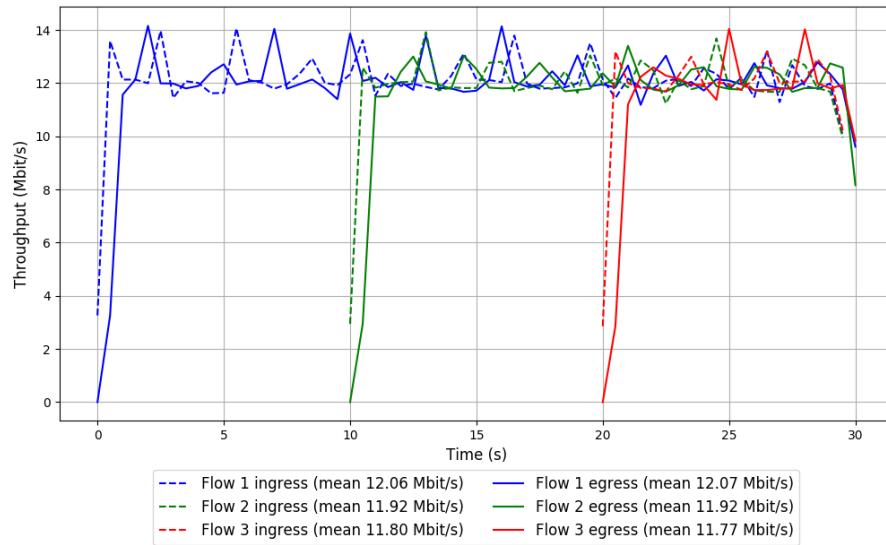


Run 1: Statistics of Sprout

```
Start at: 2018-10-10 04:12:02
End at: 2018-10-10 04:12:32
Local clock offset: 5.643 ms
Remote clock offset: -4.53 ms

# Below is generated by plot.py at 2018-10-10 06:23:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.86 Mbit/s
95th percentile per-packet one-way delay: 41.706 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 12.07 Mbit/s
95th percentile per-packet one-way delay: 41.697 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 11.92 Mbit/s
95th percentile per-packet one-way delay: 41.550 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 41.929 ms
Loss rate: 0.83%
```

Run 1: Report of Sprout — Data Link

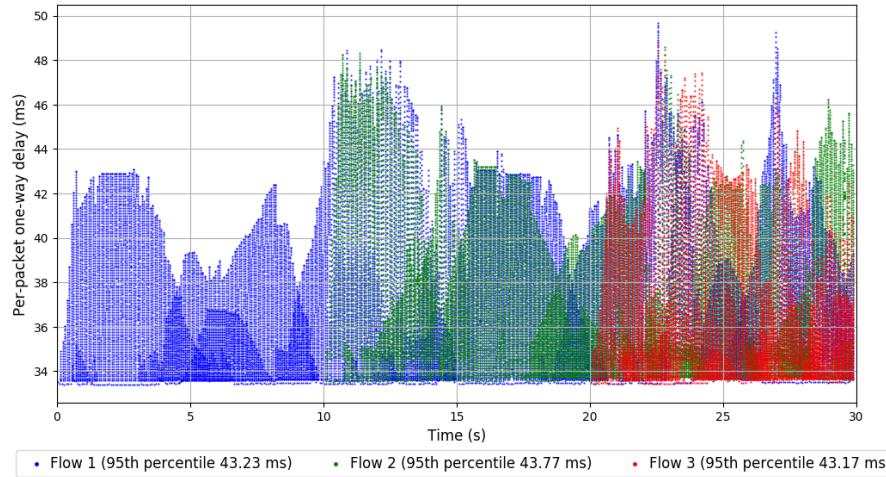
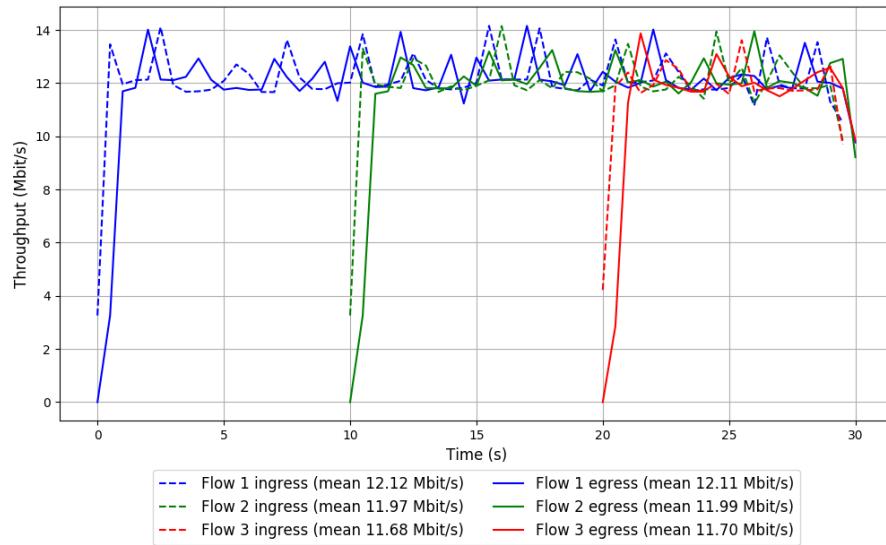


Run 2: Statistics of Sprout

```
Start at: 2018-10-10 04:37:16
End at: 2018-10-10 04:37:46
Local clock offset: 3.322 ms
Remote clock offset: -4.009 ms

# Below is generated by plot.py at 2018-10-10 06:23:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.94 Mbit/s
95th percentile per-packet one-way delay: 43.407 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 12.11 Mbit/s
95th percentile per-packet one-way delay: 43.225 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 11.99 Mbit/s
95th percentile per-packet one-way delay: 43.769 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 11.70 Mbit/s
95th percentile per-packet one-way delay: 43.168 ms
Loss rate: 0.32%
```

Run 2: Report of Sprout — Data Link

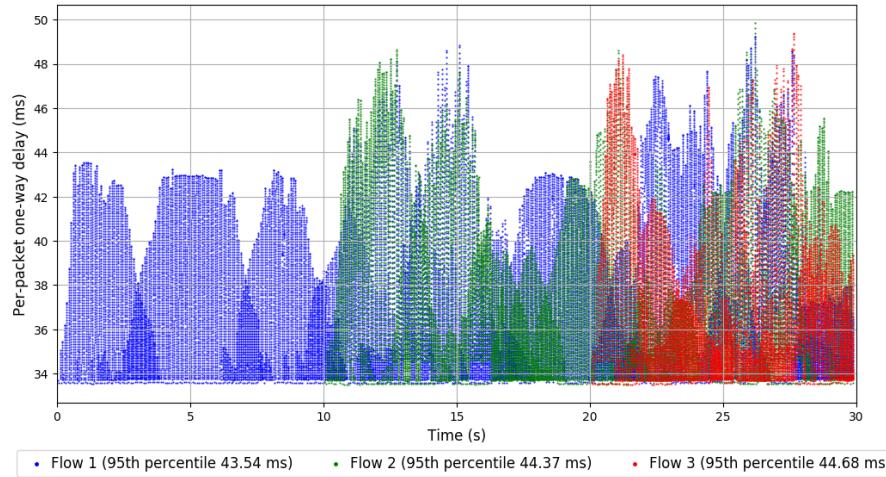
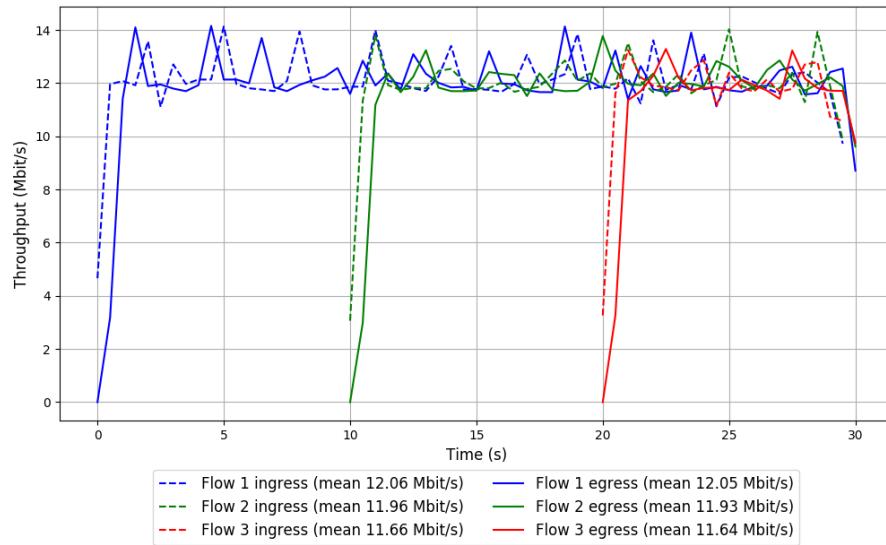


Run 3: Statistics of Sprout

```
Start at: 2018-10-10 05:02:11
End at: 2018-10-10 05:02:41
Local clock offset: 2.031 ms
Remote clock offset: -3.578 ms

# Below is generated by plot.py at 2018-10-10 06:23:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.81 Mbit/s
95th percentile per-packet one-way delay: 44.037 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 12.05 Mbit/s
95th percentile per-packet one-way delay: 43.536 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 11.93 Mbit/s
95th percentile per-packet one-way delay: 44.368 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 11.64 Mbit/s
95th percentile per-packet one-way delay: 44.679 ms
Loss rate: 0.78%
```

Run 3: Report of Sprout — Data Link

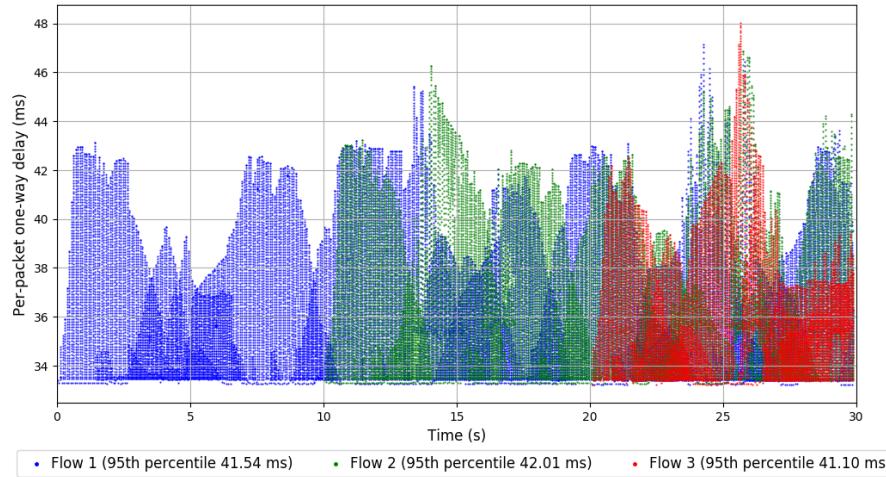
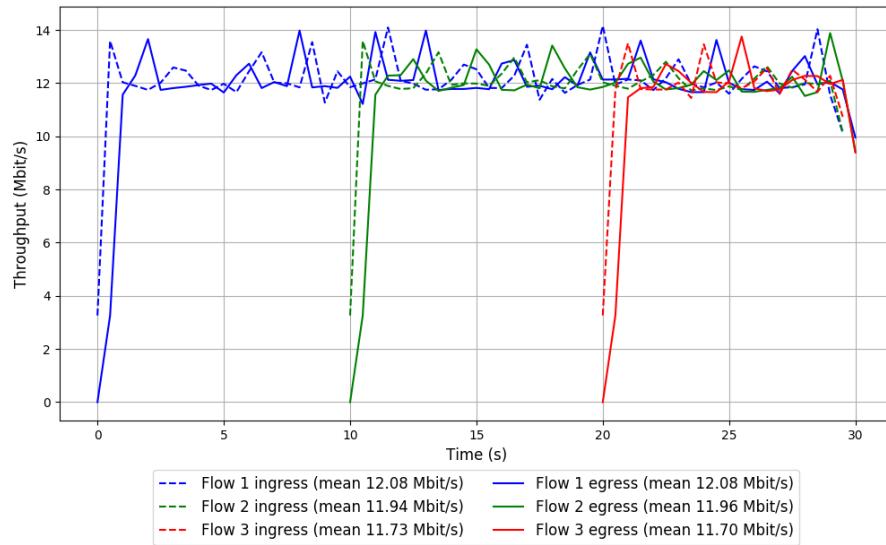


Run 4: Statistics of Sprout

```
Start at: 2018-10-10 05:26:59
End at: 2018-10-10 05:27:29
Local clock offset: 2.137 ms
Remote clock offset: -2.831 ms

# Below is generated by plot.py at 2018-10-10 06:23:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.87 Mbit/s
95th percentile per-packet one-way delay: 41.664 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 12.08 Mbit/s
95th percentile per-packet one-way delay: 41.536 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 11.96 Mbit/s
95th percentile per-packet one-way delay: 42.007 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 11.70 Mbit/s
95th percentile per-packet one-way delay: 41.105 ms
Loss rate: 0.84%
```

Run 4: Report of Sprout — Data Link

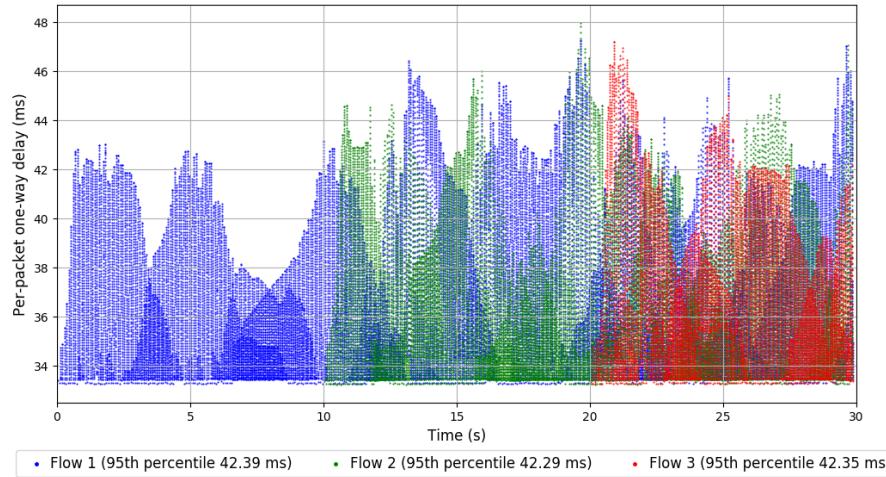
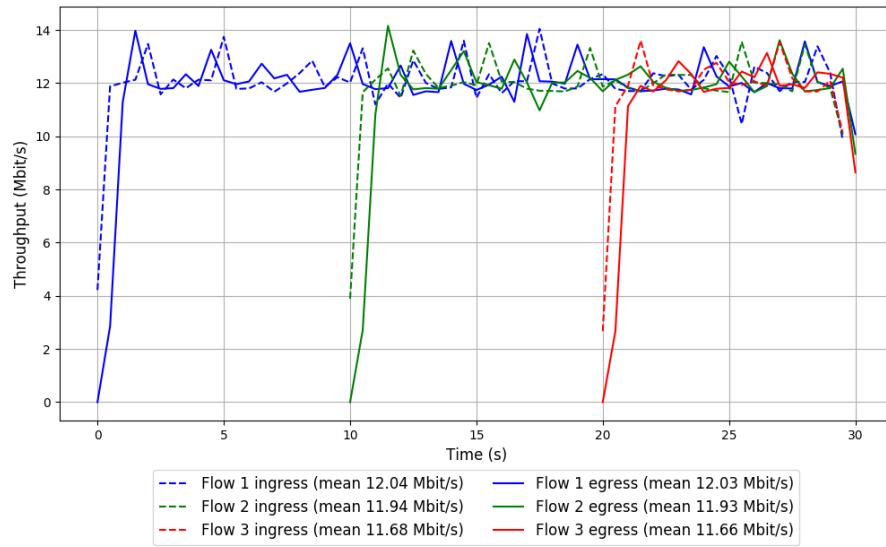


Run 5: Statistics of Sprout

```
Start at: 2018-10-10 05:52:06
End at: 2018-10-10 05:52:36
Local clock offset: 3.953 ms
Remote clock offset: -2.446 ms

# Below is generated by plot.py at 2018-10-10 06:23:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.79 Mbit/s
95th percentile per-packet one-way delay: 42.344 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 12.03 Mbit/s
95th percentile per-packet one-way delay: 42.386 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 11.93 Mbit/s
95th percentile per-packet one-way delay: 42.288 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 42.353 ms
Loss rate: 0.84%
```

Run 5: Report of Sprout — Data Link

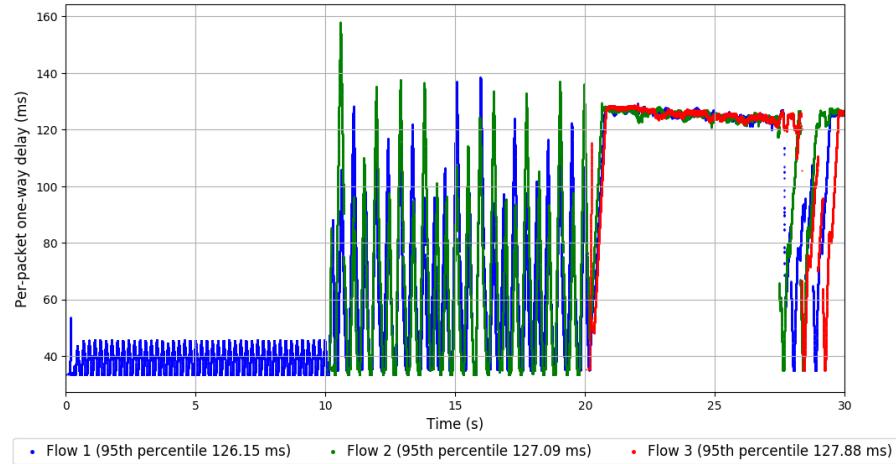
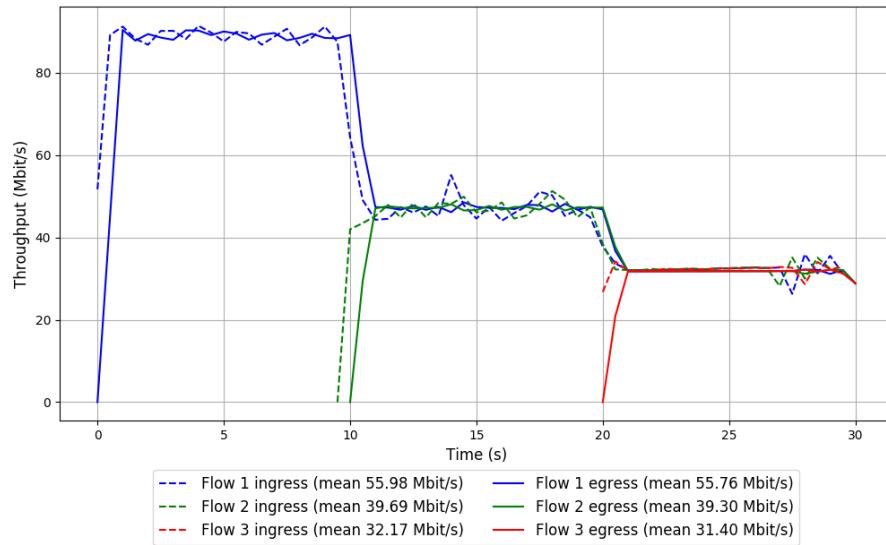


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-10-10 04:23:18
End at: 2018-10-10 04:23:48
Local clock offset: 6.509 ms
Remote clock offset: -4.508 ms

# Below is generated by plot.py at 2018-10-10 06:24:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.34 Mbit/s
95th percentile per-packet one-way delay: 126.970 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 55.76 Mbit/s
95th percentile per-packet one-way delay: 126.146 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 39.30 Mbit/s
95th percentile per-packet one-way delay: 127.094 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 31.40 Mbit/s
95th percentile per-packet one-way delay: 127.878 ms
Loss rate: 3.01%
```

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

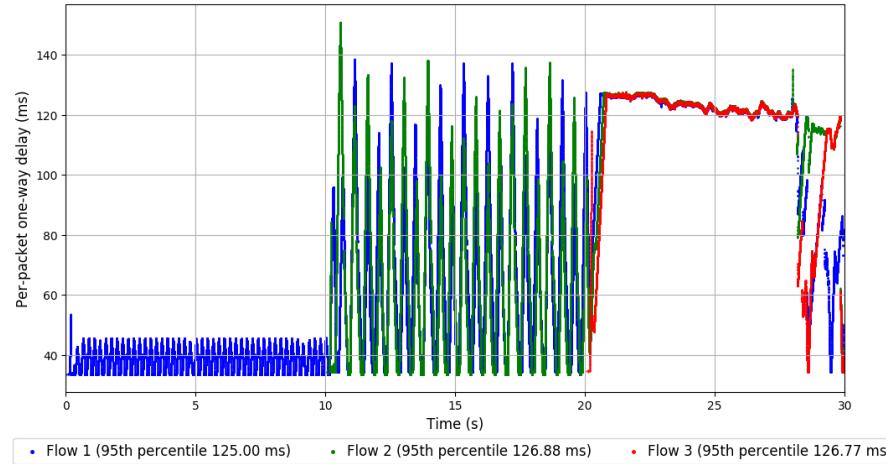
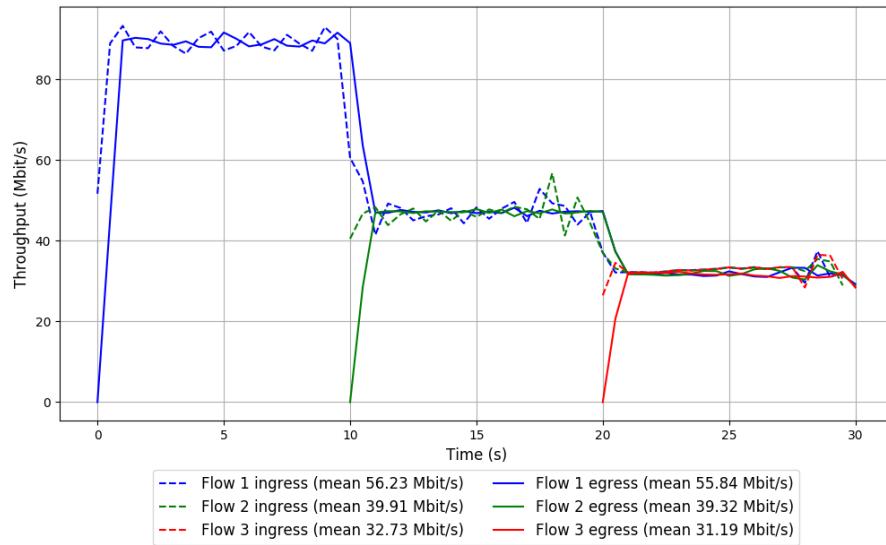


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-10-10 04:48:16
End at: 2018-10-10 04:48:46
Local clock offset: 2.391 ms
Remote clock offset: -3.797 ms

# Below is generated by plot.py at 2018-10-10 06:24:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.34 Mbit/s
95th percentile per-packet one-way delay: 126.469 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 55.84 Mbit/s
95th percentile per-packet one-way delay: 124.995 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 39.32 Mbit/s
95th percentile per-packet one-way delay: 126.877 ms
Loss rate: 1.80%
-- Flow 3:
Average throughput: 31.19 Mbit/s
95th percentile per-packet one-way delay: 126.769 ms
Loss rate: 5.31%
```

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

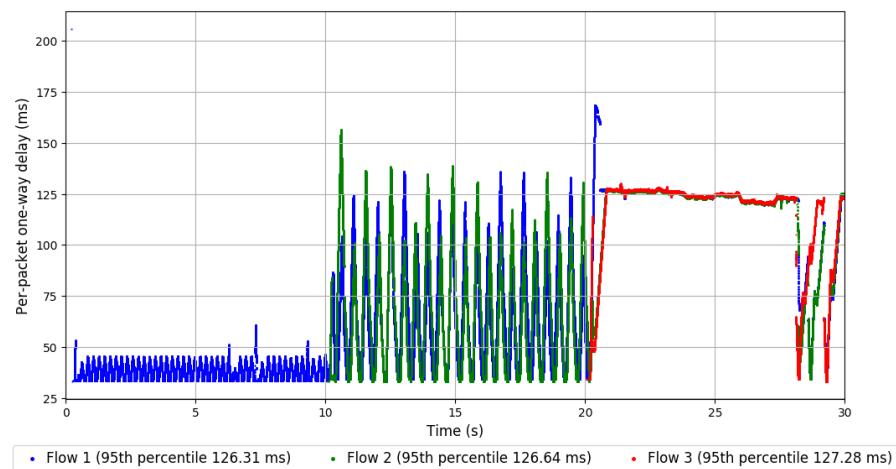
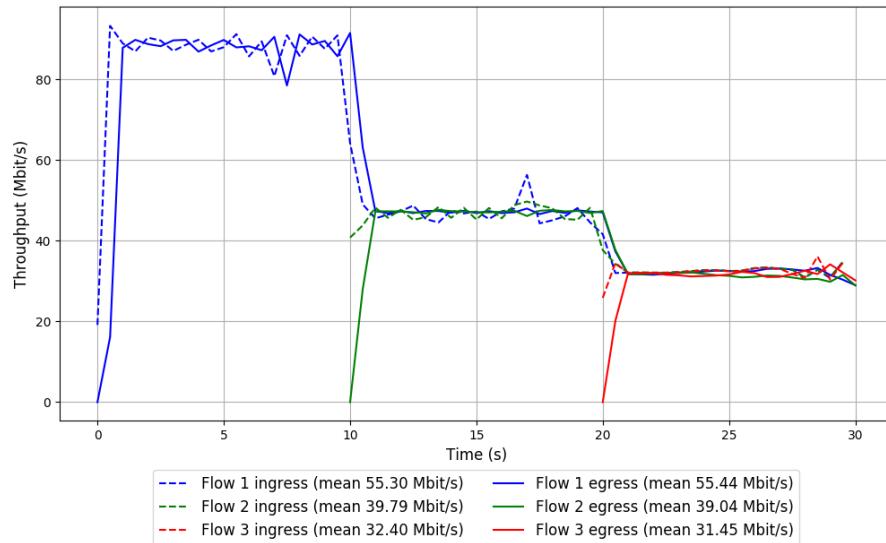


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-10-10 05:13:08
End at: 2018-10-10 05:13:38
Local clock offset: 1.884 ms
Remote clock offset: -2.994 ms

# Below is generated by plot.py at 2018-10-10 06:24:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.05 Mbit/s
95th percentile per-packet one-way delay: 126.735 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 55.44 Mbit/s
95th percentile per-packet one-way delay: 126.310 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 39.04 Mbit/s
95th percentile per-packet one-way delay: 126.638 ms
Loss rate: 2.19%
-- Flow 3:
Average throughput: 31.45 Mbit/s
95th percentile per-packet one-way delay: 127.282 ms
Loss rate: 3.54%
```

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

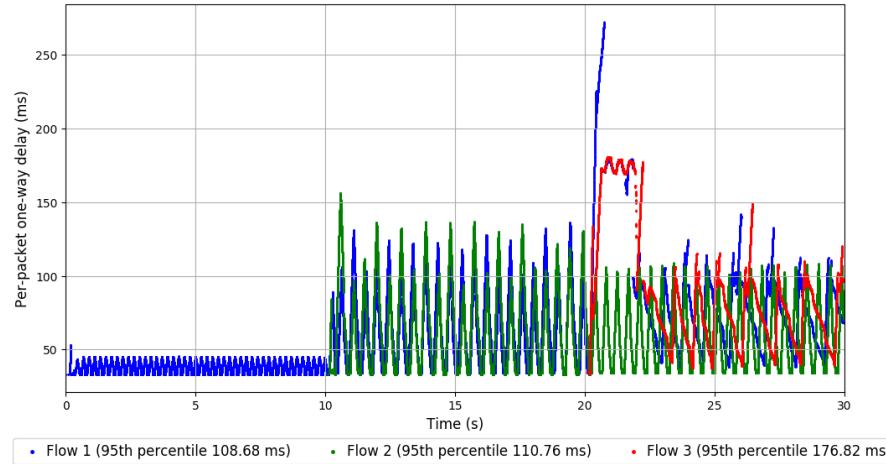
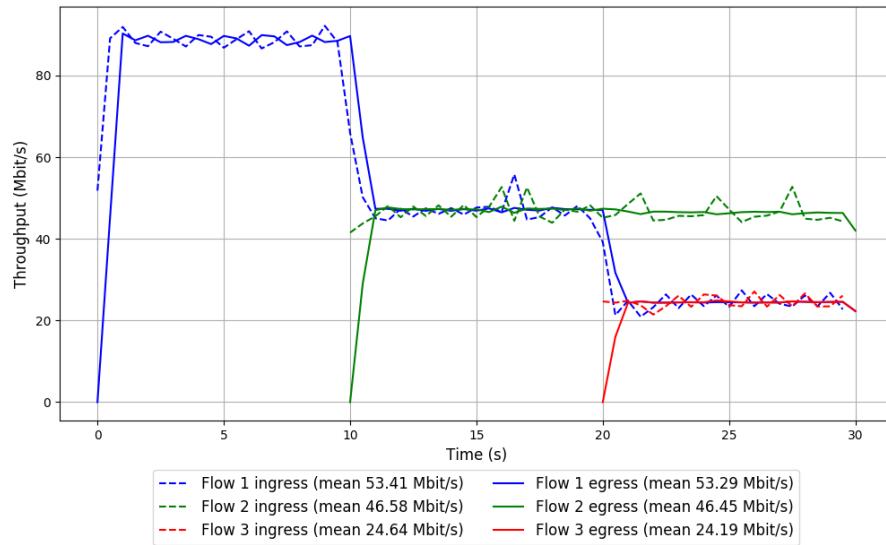


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-10-10 05:37:54
End at: 2018-10-10 05:38:24
Local clock offset: 3.36 ms
Remote clock offset: -2.578 ms

# Below is generated by plot.py at 2018-10-10 06:25:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.23 Mbit/s
95th percentile per-packet one-way delay: 116.605 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 53.29 Mbit/s
95th percentile per-packet one-way delay: 108.684 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 46.45 Mbit/s
95th percentile per-packet one-way delay: 110.762 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 24.19 Mbit/s
95th percentile per-packet one-way delay: 176.818 ms
Loss rate: 2.45%
```

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

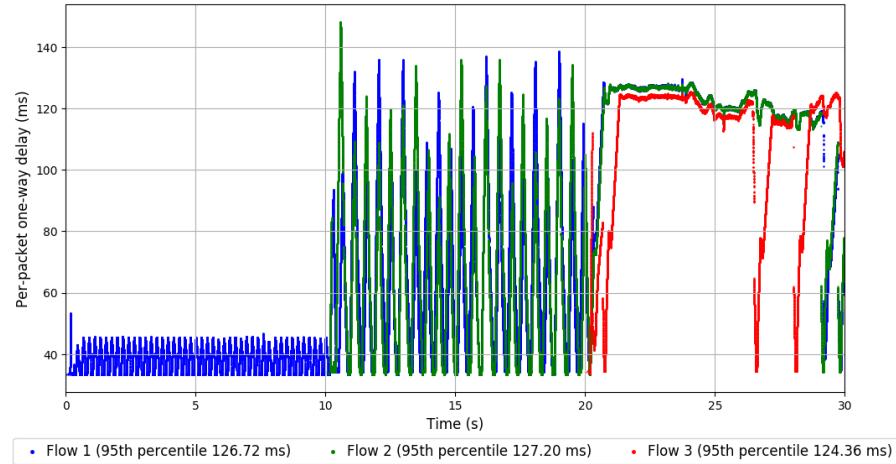
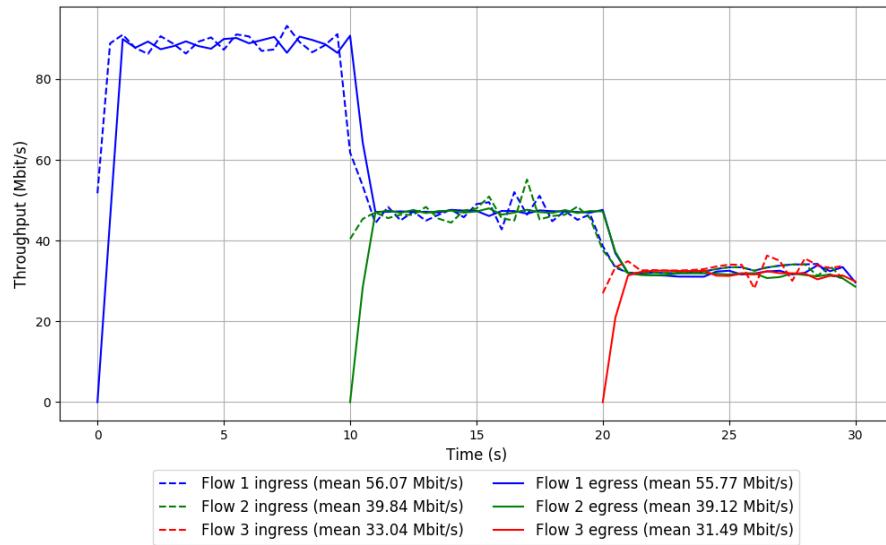


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-10-10 06:03:00
End at: 2018-10-10 06:03:30
Local clock offset: 3.502 ms
Remote clock offset: -2.415 ms

# Below is generated by plot.py at 2018-10-10 06:25:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.24 Mbit/s
95th percentile per-packet one-way delay: 126.911 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 55.77 Mbit/s
95th percentile per-packet one-way delay: 126.716 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 39.12 Mbit/s
95th percentile per-packet one-way delay: 127.199 ms
Loss rate: 2.11%
-- Flow 3:
Average throughput: 31.49 Mbit/s
95th percentile per-packet one-way delay: 124.365 ms
Loss rate: 5.28%
```

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

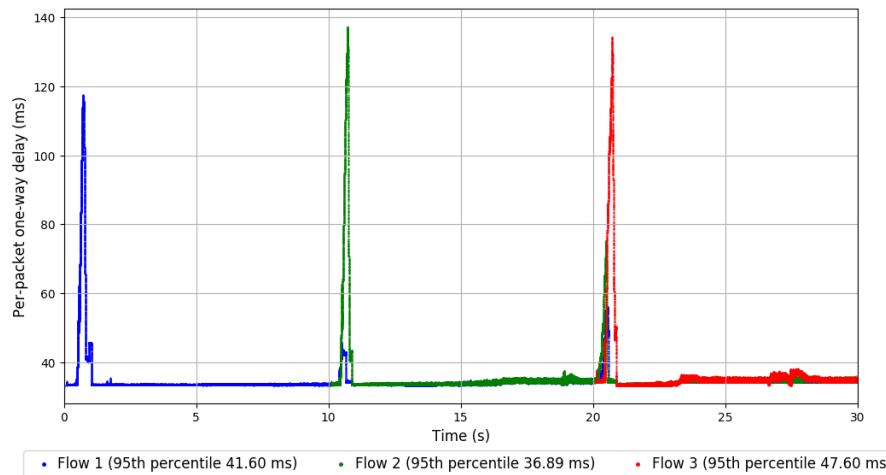
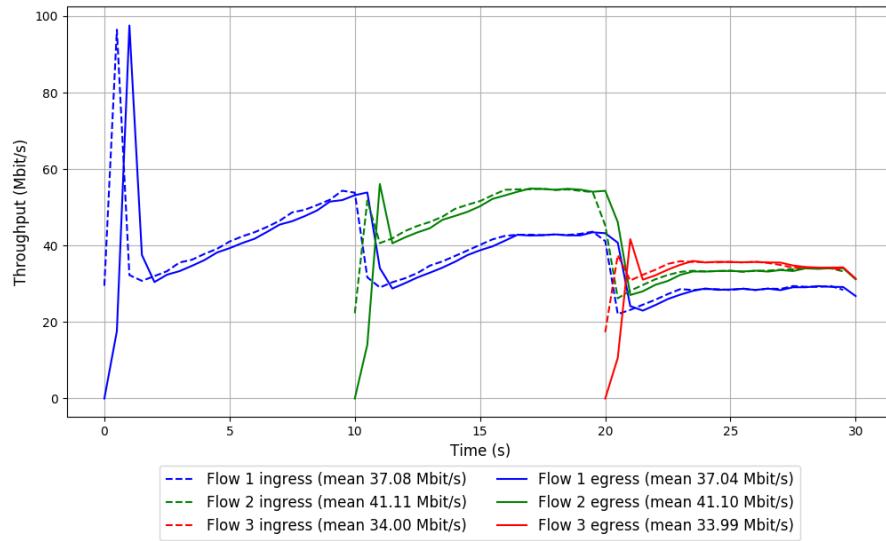


Run 1: Statistics of TCP Vegas

```
Start at: 2018-10-10 04:16:03
End at: 2018-10-10 04:16:33
Local clock offset: 6.002 ms
Remote clock offset: -4.496 ms

# Below is generated by plot.py at 2018-10-10 06:25:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.64 Mbit/s
95th percentile per-packet one-way delay: 40.760 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 37.04 Mbit/s
95th percentile per-packet one-way delay: 41.598 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 41.10 Mbit/s
95th percentile per-packet one-way delay: 36.894 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 33.99 Mbit/s
95th percentile per-packet one-way delay: 47.604 ms
Loss rate: 0.69%
```

Run 1: Report of TCP Vegas — Data Link

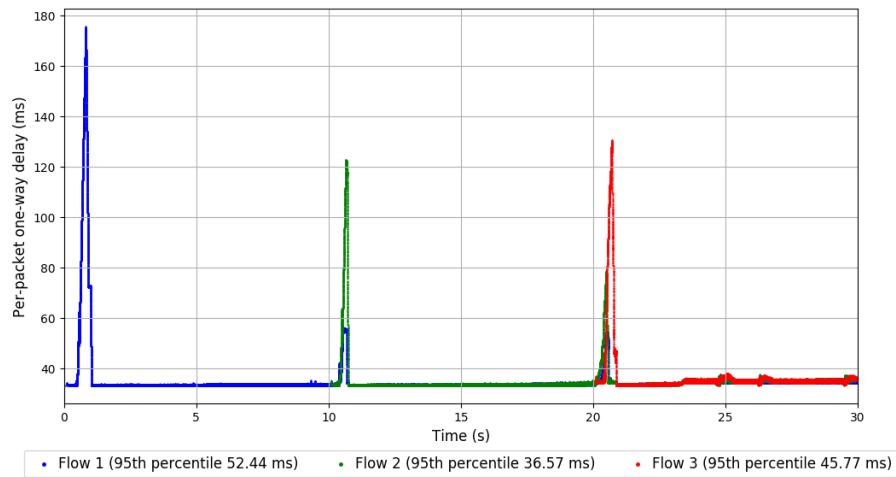
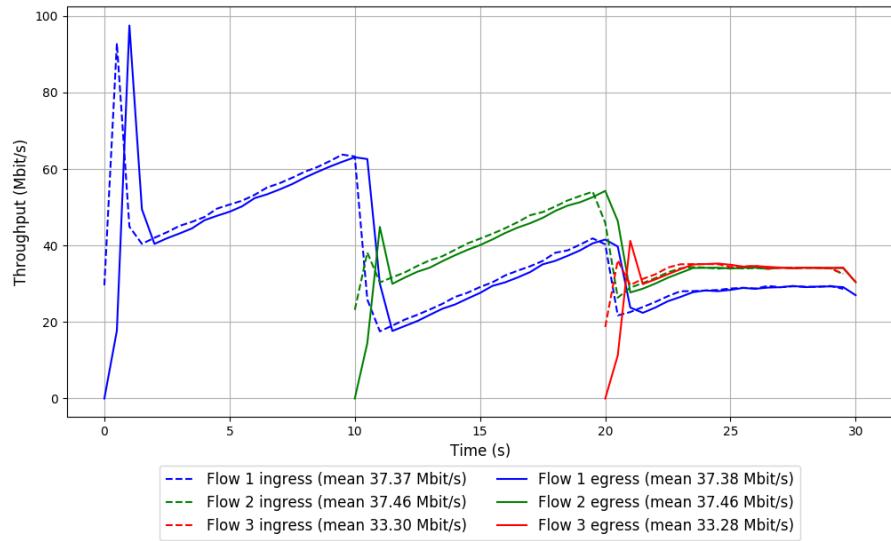


Run 2: Statistics of TCP Vegas

```
Start at: 2018-10-10 04:41:16
End at: 2018-10-10 04:41:46
Local clock offset: 2.857 ms
Remote clock offset: -3.863 ms

# Below is generated by plot.py at 2018-10-10 06:25:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.33 Mbit/s
95th percentile per-packet one-way delay: 41.920 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 37.38 Mbit/s
95th percentile per-packet one-way delay: 52.435 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 37.46 Mbit/s
95th percentile per-packet one-way delay: 36.571 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 33.28 Mbit/s
95th percentile per-packet one-way delay: 45.774 ms
Loss rate: 0.70%
```

Run 2: Report of TCP Vegas — Data Link

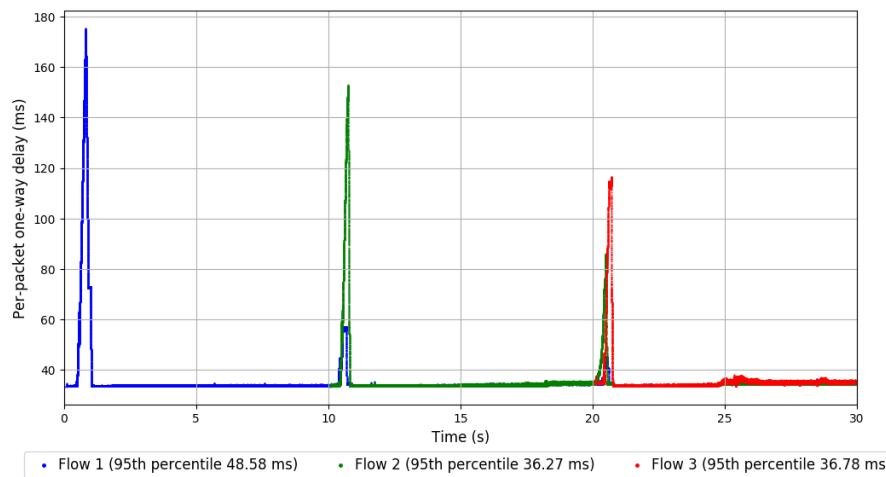
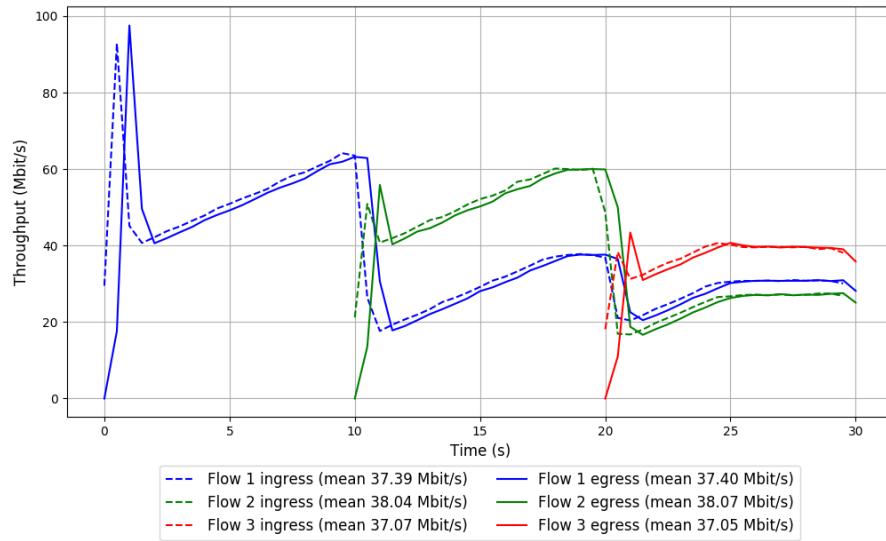


Run 3: Statistics of TCP Vegas

```
Start at: 2018-10-10 05:06:11
End at: 2018-10-10 05:06:41
Local clock offset: 1.969 ms
Remote clock offset: -3.262 ms

# Below is generated by plot.py at 2018-10-10 06:25:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.98 Mbit/s
95th percentile per-packet one-way delay: 40.413 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 37.40 Mbit/s
95th percentile per-packet one-way delay: 48.579 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 38.07 Mbit/s
95th percentile per-packet one-way delay: 36.266 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 37.05 Mbit/s
95th percentile per-packet one-way delay: 36.778 ms
Loss rate: 0.71%
```

Run 3: Report of TCP Vegas — Data Link

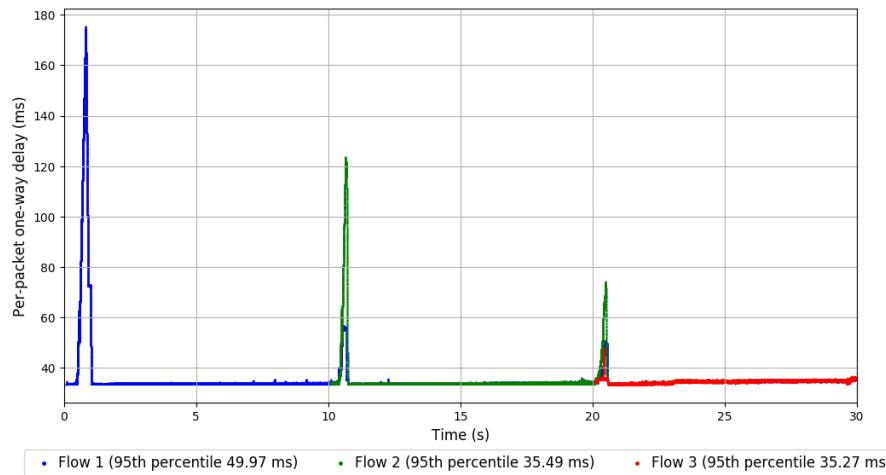
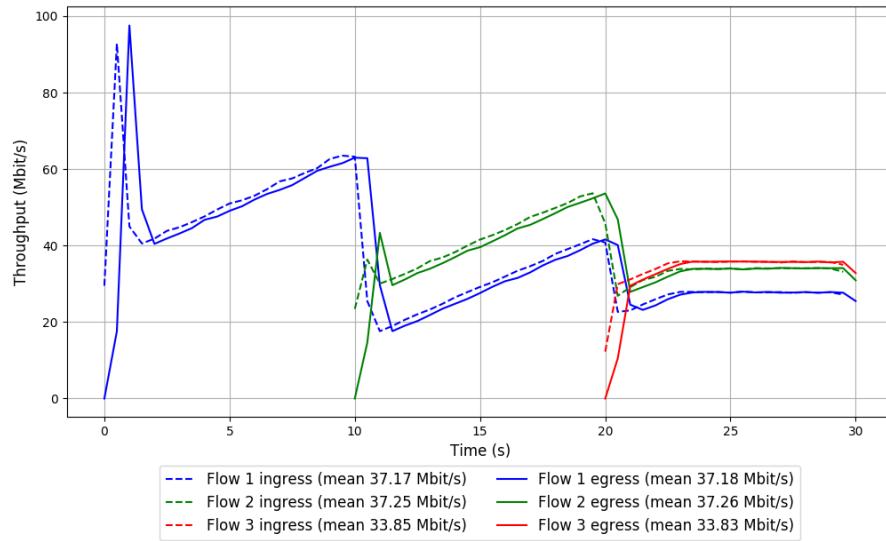


Run 4: Statistics of TCP Vegas

```
Start at: 2018-10-10 05:30:58
End at: 2018-10-10 05:31:28
Local clock offset: 2.753 ms
Remote clock offset: -2.864 ms

# Below is generated by plot.py at 2018-10-10 06:25:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.18 Mbit/s
95th percentile per-packet one-way delay: 36.118 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 37.18 Mbit/s
95th percentile per-packet one-way delay: 49.969 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 37.26 Mbit/s
95th percentile per-packet one-way delay: 35.494 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 33.83 Mbit/s
95th percentile per-packet one-way delay: 35.273 ms
Loss rate: 0.69%
```

Run 4: Report of TCP Vegas — Data Link

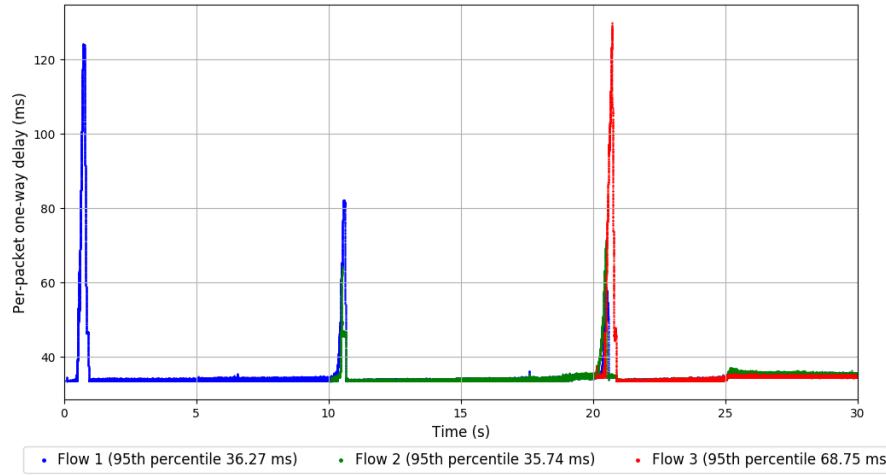
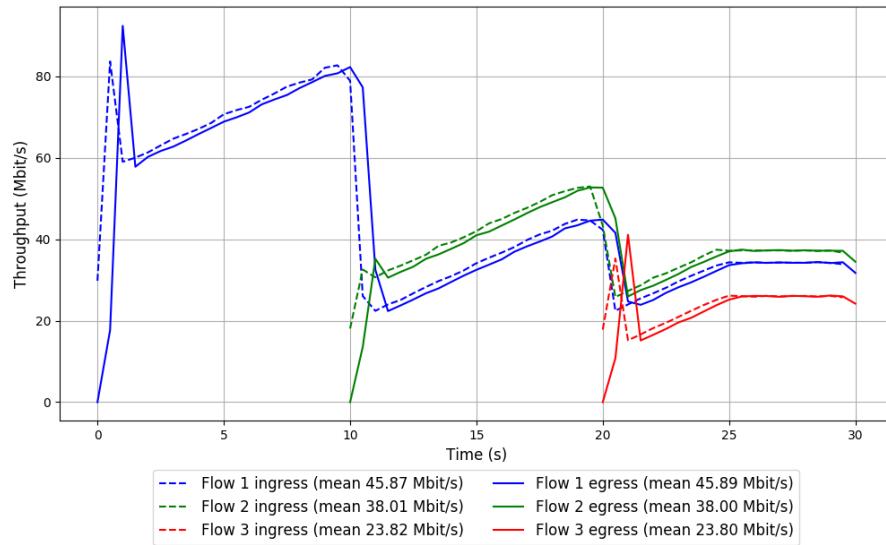


Run 5: Statistics of TCP Vegas

```
Start at: 2018-10-10 05:56:05
End at: 2018-10-10 05:56:35
Local clock offset: 3.943 ms
Remote clock offset: -2.404 ms

# Below is generated by plot.py at 2018-10-10 06:25:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.05 Mbit/s
95th percentile per-packet one-way delay: 36.084 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 45.89 Mbit/s
95th percentile per-packet one-way delay: 36.270 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 38.00 Mbit/s
95th percentile per-packet one-way delay: 35.740 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 23.80 Mbit/s
95th percentile per-packet one-way delay: 68.748 ms
Loss rate: 0.76%
```

Run 5: Report of TCP Vegas — Data Link

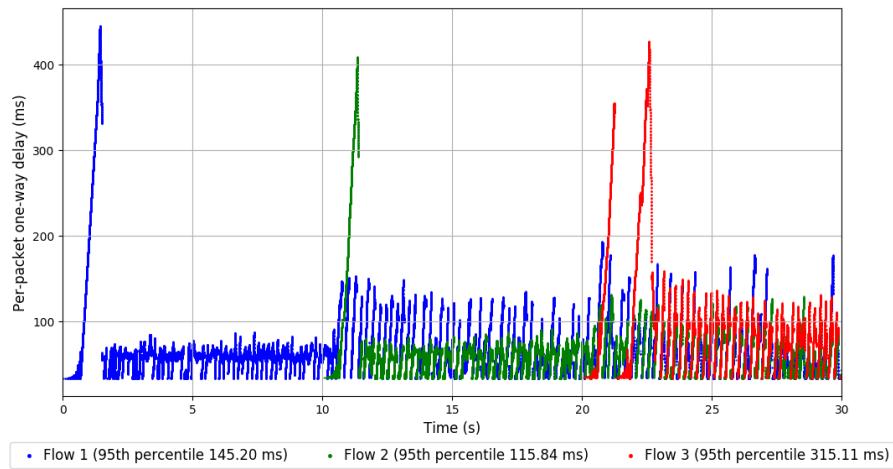
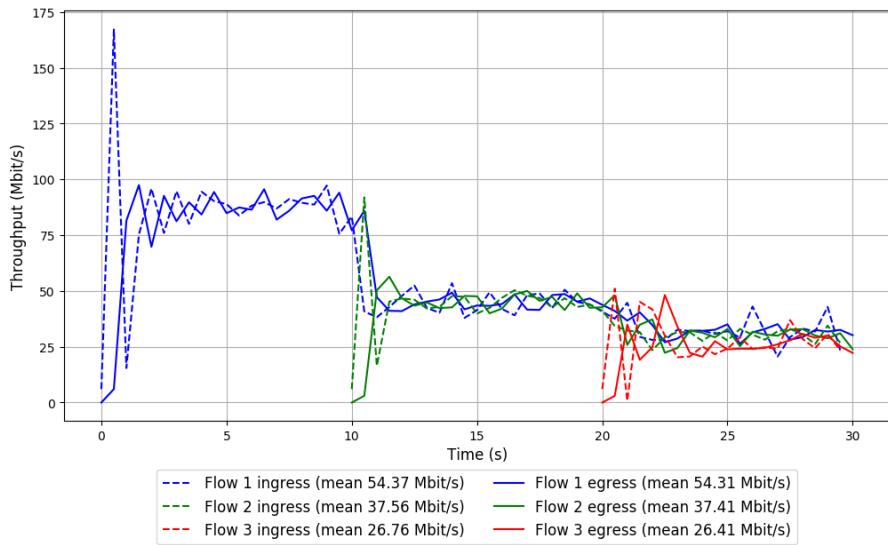


Run 1: Statistics of Verus

```
Start at: 2018-10-10 04:10:37
End at: 2018-10-10 04:11:07
Local clock offset: 5.513 ms
Remote clock offset: -4.432 ms

# Below is generated by plot.py at 2018-10-10 06:25:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.92 Mbit/s
95th percentile per-packet one-way delay: 161.334 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 54.31 Mbit/s
95th percentile per-packet one-way delay: 145.203 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 37.41 Mbit/s
95th percentile per-packet one-way delay: 115.838 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 26.41 Mbit/s
95th percentile per-packet one-way delay: 315.111 ms
Loss rate: 1.96%
```

Run 1: Report of Verus — Data Link

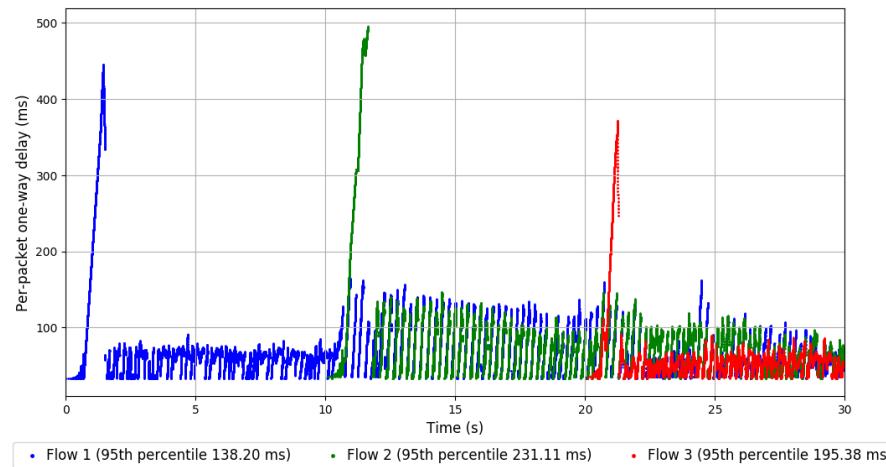
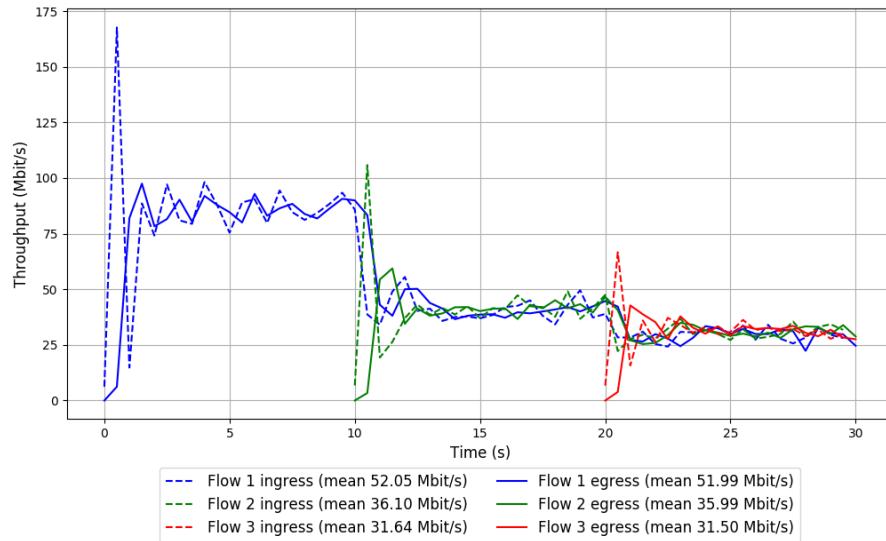


Run 2: Statistics of Verus

```
Start at: 2018-10-10 04:35:51
End at: 2018-10-10 04:36:21
Local clock offset: 3.516 ms
Remote clock offset: -3.962 ms

# Below is generated by plot.py at 2018-10-10 06:25:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.33 Mbit/s
95th percentile per-packet one-way delay: 149.123 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 51.99 Mbit/s
95th percentile per-packet one-way delay: 138.200 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 35.99 Mbit/s
95th percentile per-packet one-way delay: 231.107 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 31.50 Mbit/s
95th percentile per-packet one-way delay: 195.381 ms
Loss rate: 1.06%
```

Run 2: Report of Verus — Data Link

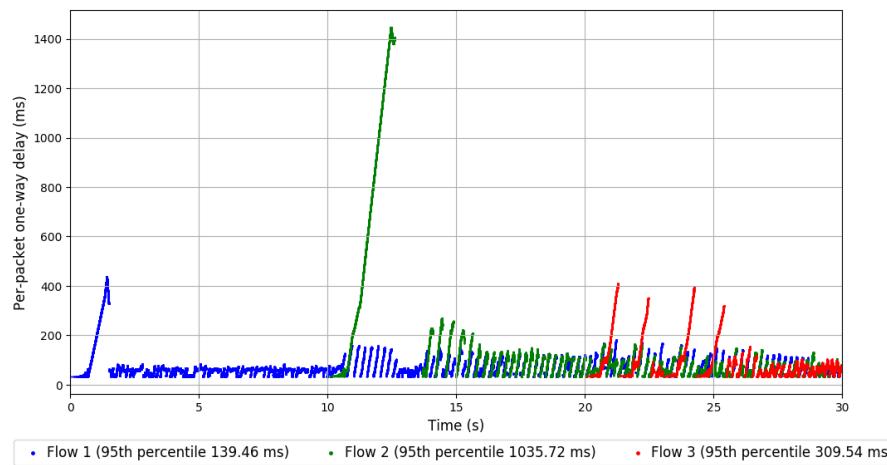
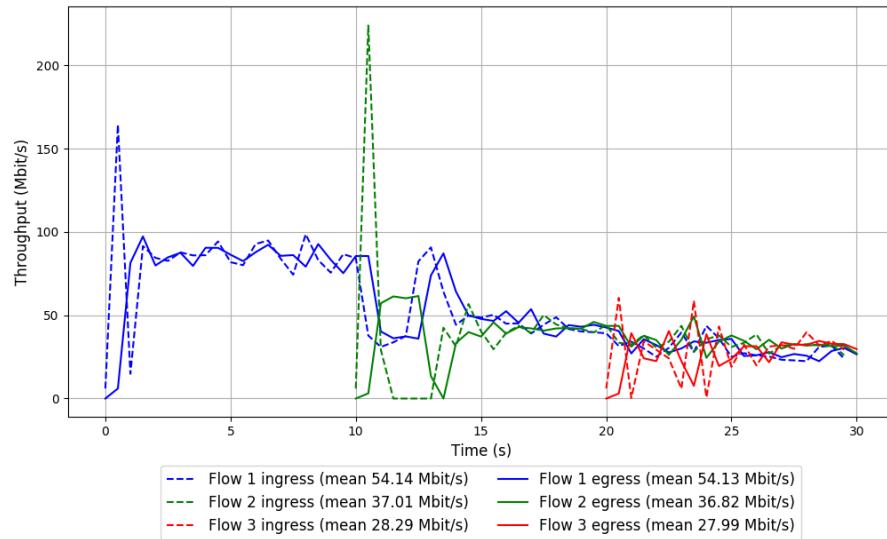


Run 3: Statistics of Verus

```
Start at: 2018-10-10 05:00:47
End at: 2018-10-10 05:01:17
Local clock offset: 2.055 ms
Remote clock offset: -3.349 ms

# Below is generated by plot.py at 2018-10-10 06:25:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.89 Mbit/s
95th percentile per-packet one-way delay: 300.260 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 54.13 Mbit/s
95th percentile per-packet one-way delay: 139.460 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 36.82 Mbit/s
95th percentile per-packet one-way delay: 1035.718 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 27.99 Mbit/s
95th percentile per-packet one-way delay: 309.540 ms
Loss rate: 1.66%
```

Run 3: Report of Verus — Data Link

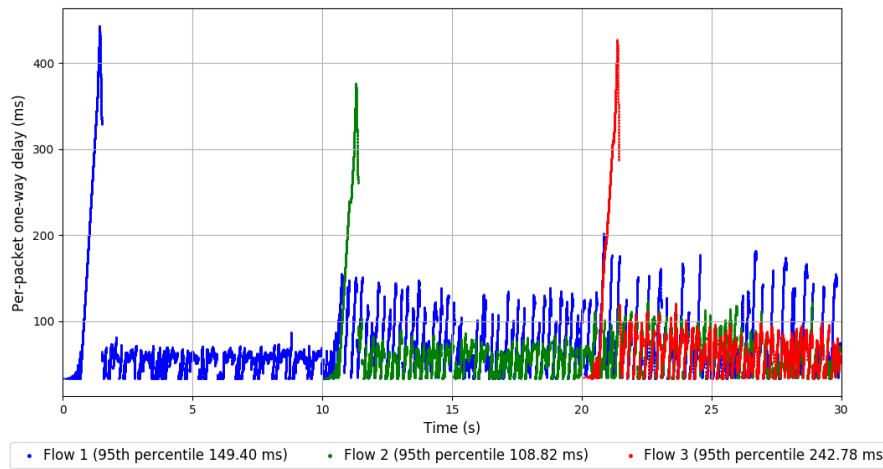
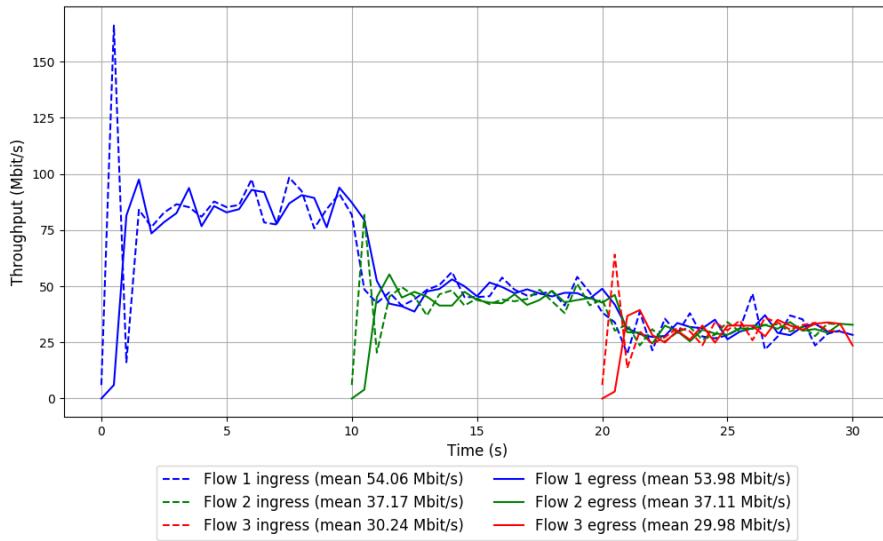


Run 4: Statistics of Verus

```
Start at: 2018-10-10 05:25:35
End at: 2018-10-10 05:26:05
Local clock offset: 1.865 ms
Remote clock offset: -2.877 ms

# Below is generated by plot.py at 2018-10-10 06:25:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.60 Mbit/s
95th percentile per-packet one-way delay: 150.127 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 53.98 Mbit/s
95th percentile per-packet one-way delay: 149.398 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 37.11 Mbit/s
95th percentile per-packet one-way delay: 108.821 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 29.98 Mbit/s
95th percentile per-packet one-way delay: 242.781 ms
Loss rate: 1.49%
```

Run 4: Report of Verus — Data Link

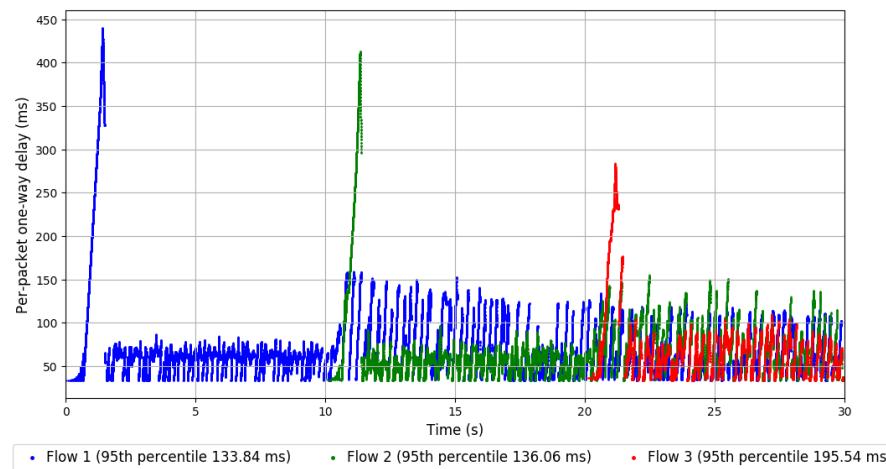
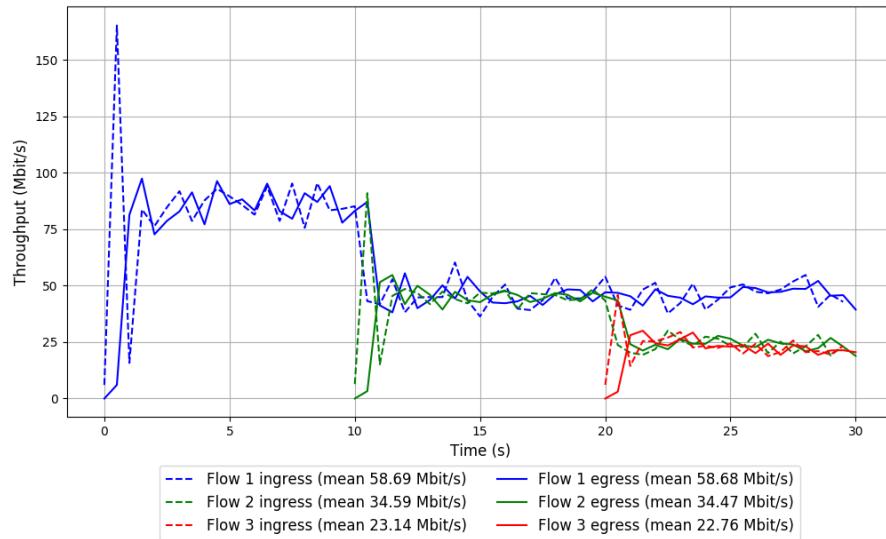


Run 5: Statistics of Verus

```
Start at: 2018-10-10 05:50:41
End at: 2018-10-10 05:51:11
Local clock offset: 3.923 ms
Remote clock offset: -2.727 ms

# Below is generated by plot.py at 2018-10-10 06:25:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.05 Mbit/s
95th percentile per-packet one-way delay: 136.610 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 58.68 Mbit/s
95th percentile per-packet one-way delay: 133.838 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 34.47 Mbit/s
95th percentile per-packet one-way delay: 136.060 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 22.76 Mbit/s
95th percentile per-packet one-way delay: 195.544 ms
Loss rate: 2.25%
```

Run 5: Report of Verus — Data Link

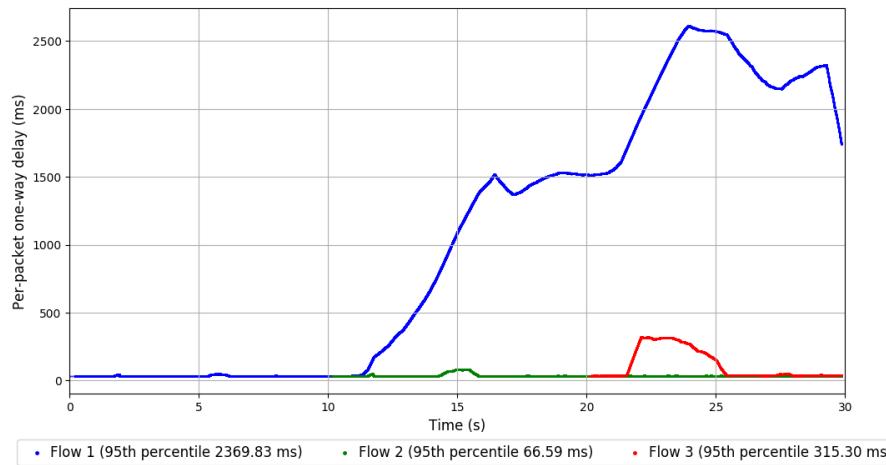
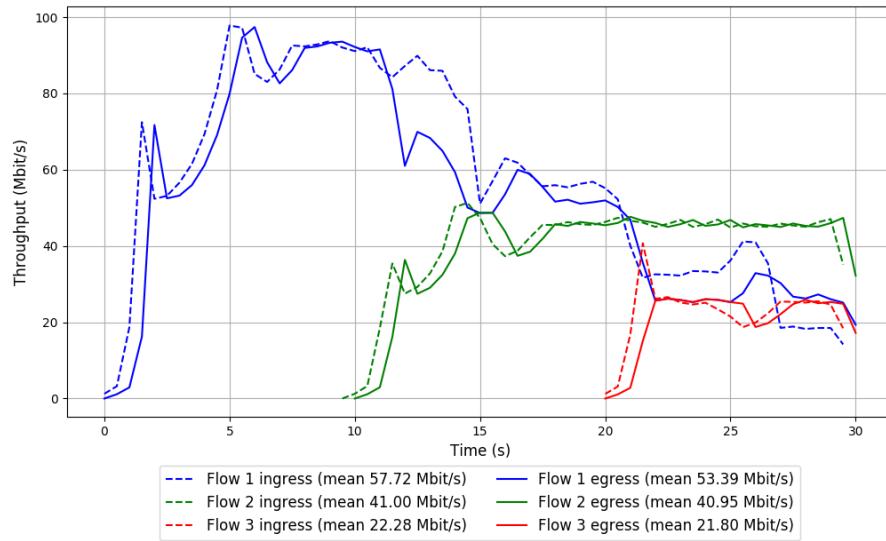


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-10-10 04:20:26
End at: 2018-10-10 04:20:56
Local clock offset: 6.319 ms
Remote clock offset: -4.386 ms

# Below is generated by plot.py at 2018-10-10 06:26:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.77 Mbit/s
95th percentile per-packet one-way delay: 2243.390 ms
Loss rate: 5.17%
-- Flow 1:
Average throughput: 53.39 Mbit/s
95th percentile per-packet one-way delay: 2369.832 ms
Loss rate: 7.70%
-- Flow 2:
Average throughput: 40.95 Mbit/s
95th percentile per-packet one-way delay: 66.595 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 21.80 Mbit/s
95th percentile per-packet one-way delay: 315.301 ms
Loss rate: 2.80%
```

Run 1: Report of PCC-Vivace — Data Link

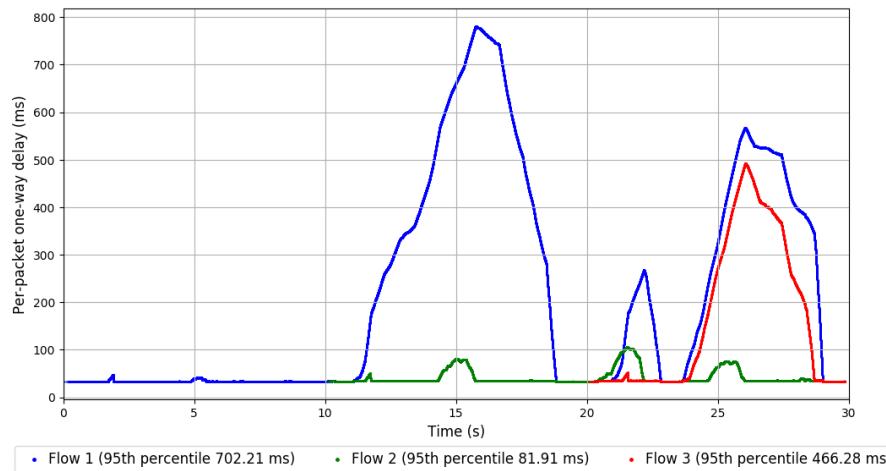
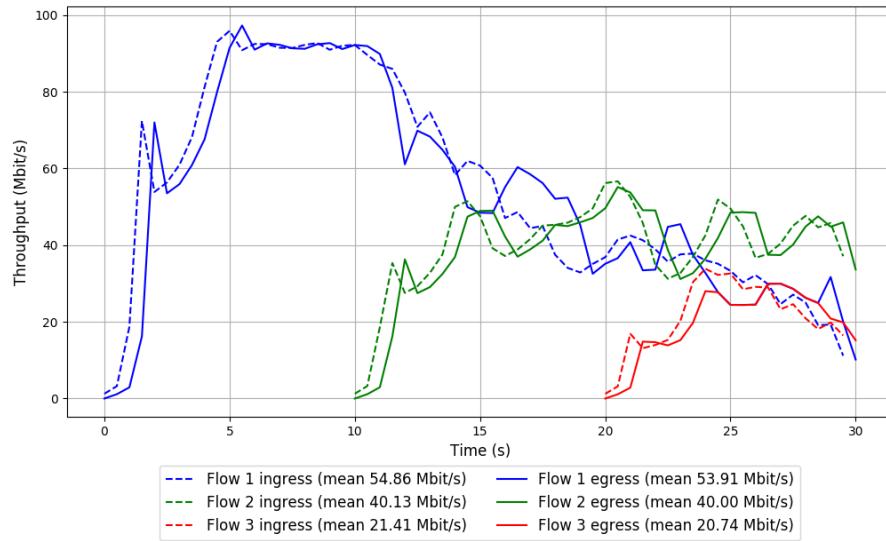


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-10-10 04:45:28
End at: 2018-10-10 04:45:58
Local clock offset: 2.554 ms
Remote clock offset: -3.801 ms

# Below is generated by plot.py at 2018-10-10 06:26:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.31 Mbit/s
95th percentile per-packet one-way delay: 611.975 ms
Loss rate: 1.69%
-- Flow 1:
Average throughput: 53.91 Mbit/s
95th percentile per-packet one-way delay: 702.207 ms
Loss rate: 1.94%
-- Flow 2:
Average throughput: 40.00 Mbit/s
95th percentile per-packet one-way delay: 81.906 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 20.74 Mbit/s
95th percentile per-packet one-way delay: 466.277 ms
Loss rate: 3.76%
```

Run 2: Report of PCC-Vivace — Data Link

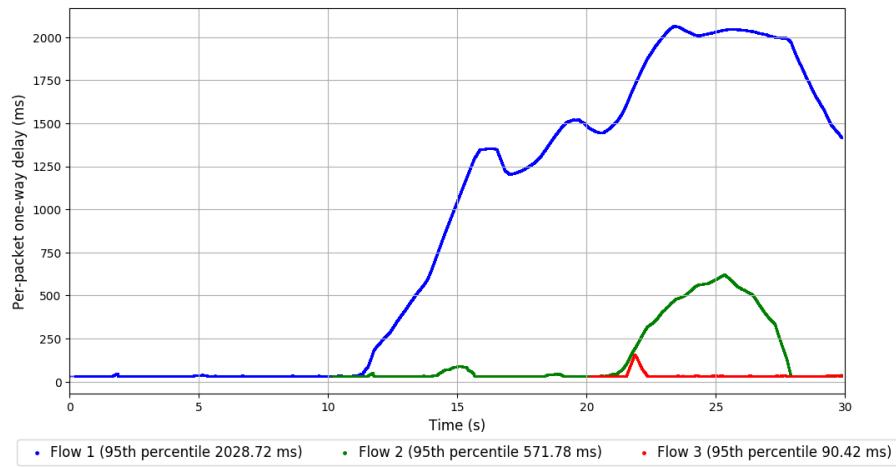
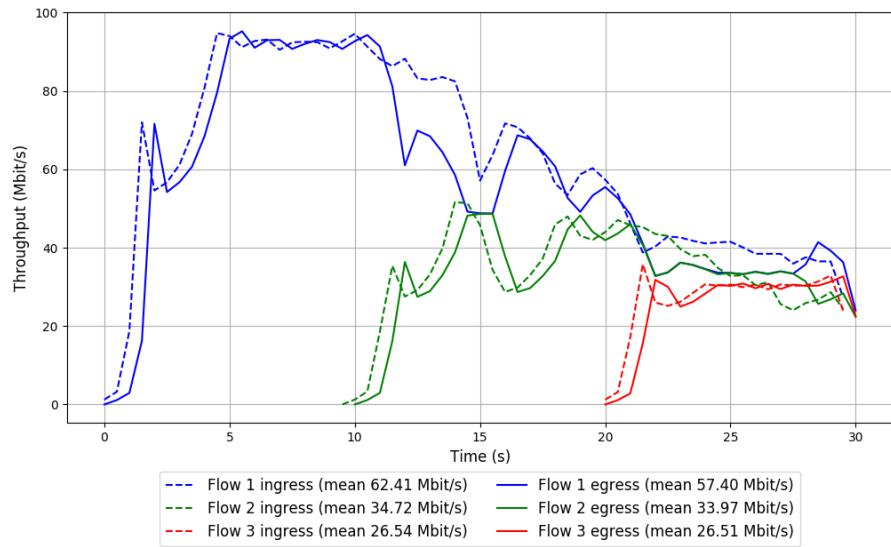


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-10-10 05:10:22
End at: 2018-10-10 05:10:52
Local clock offset: 1.902 ms
Remote clock offset: -3.221 ms

# Below is generated by plot.py at 2018-10-10 06:26:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.70 Mbit/s
95th percentile per-packet one-way delay: 2010.793 ms
Loss rate: 6.11%
-- Flow 1:
Average throughput: 57.40 Mbit/s
95th percentile per-packet one-way delay: 2028.717 ms
Loss rate: 8.21%
-- Flow 2:
Average throughput: 33.97 Mbit/s
95th percentile per-packet one-way delay: 571.777 ms
Loss rate: 2.46%
-- Flow 3:
Average throughput: 26.51 Mbit/s
95th percentile per-packet one-way delay: 90.422 ms
Loss rate: 0.80%
```

Run 3: Report of PCC-Vivace — Data Link

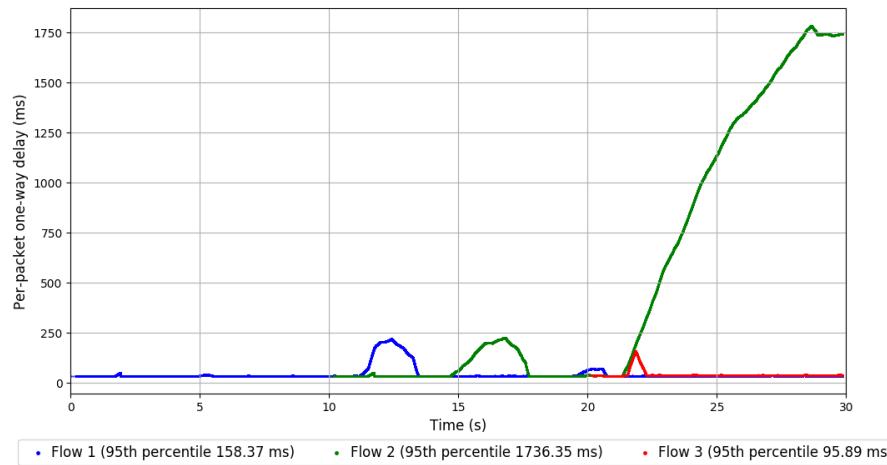
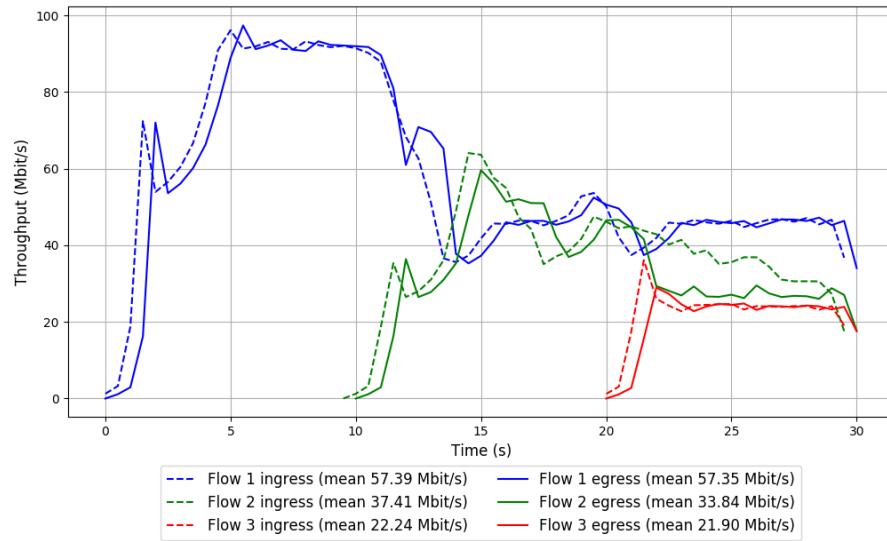


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-10-10 05:35:08
End at: 2018-10-10 05:35:38
Local clock offset: 3.183 ms
Remote clock offset: -2.845 ms

# Below is generated by plot.py at 2018-10-10 06:26:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.04 Mbit/s
95th percentile per-packet one-way delay: 1128.562 ms
Loss rate: 3.10%
-- Flow 1:
Average throughput: 57.35 Mbit/s
95th percentile per-packet one-way delay: 158.369 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 33.84 Mbit/s
95th percentile per-packet one-way delay: 1736.354 ms
Loss rate: 9.85%
-- Flow 3:
Average throughput: 21.90 Mbit/s
95th percentile per-packet one-way delay: 95.888 ms
Loss rate: 2.18%
```

Run 4: Report of PCC-Vivace — Data Link

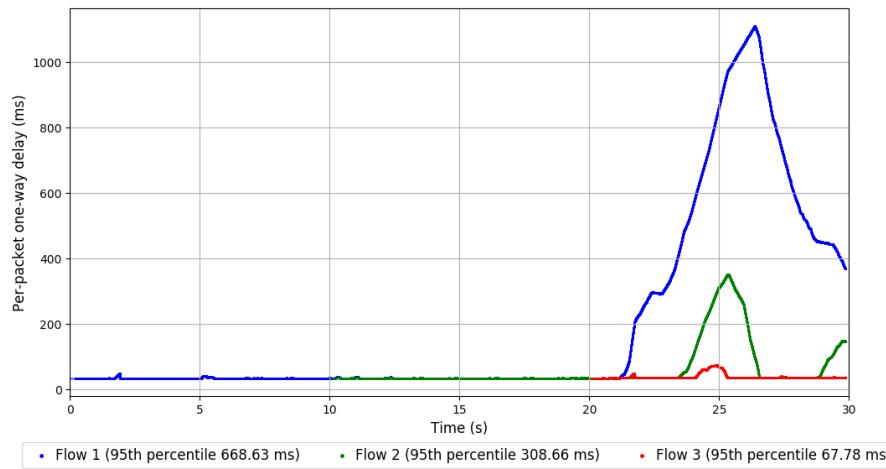
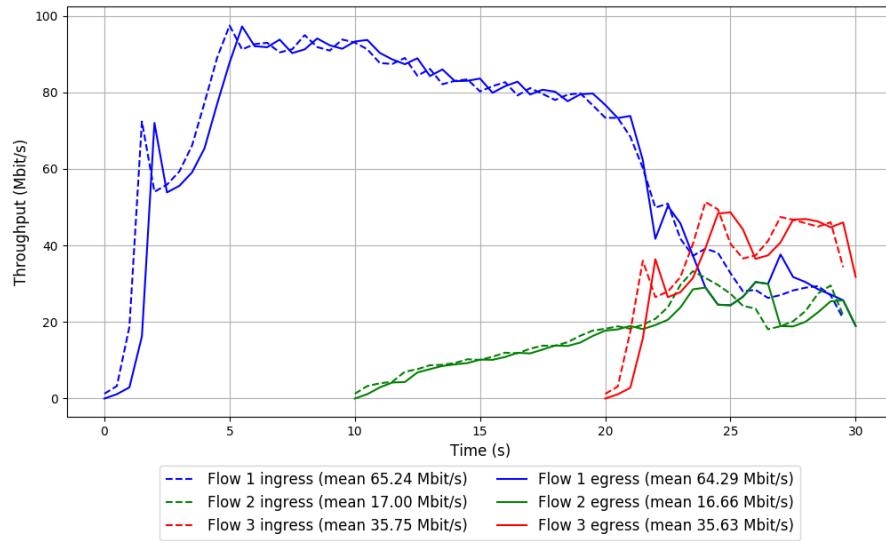


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-10-10 06:00:15
End at: 2018-10-10 06:00:45
Local clock offset: 3.659 ms
Remote clock offset: -2.413 ms

# Below is generated by plot.py at 2018-10-10 06:26:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.08 Mbit/s
95th percentile per-packet one-way delay: 513.669 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 64.29 Mbit/s
95th percentile per-packet one-way delay: 668.634 ms
Loss rate: 1.67%
-- Flow 2:
Average throughput: 16.66 Mbit/s
95th percentile per-packet one-way delay: 308.658 ms
Loss rate: 2.35%
-- Flow 3:
Average throughput: 35.63 Mbit/s
95th percentile per-packet one-way delay: 67.778 ms
Loss rate: 0.94%
```

Run 5: Report of PCC-Vivace — Data Link

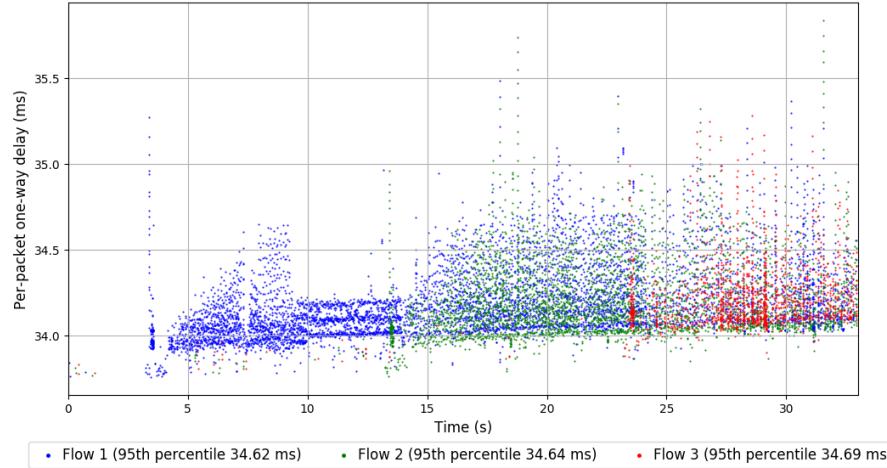
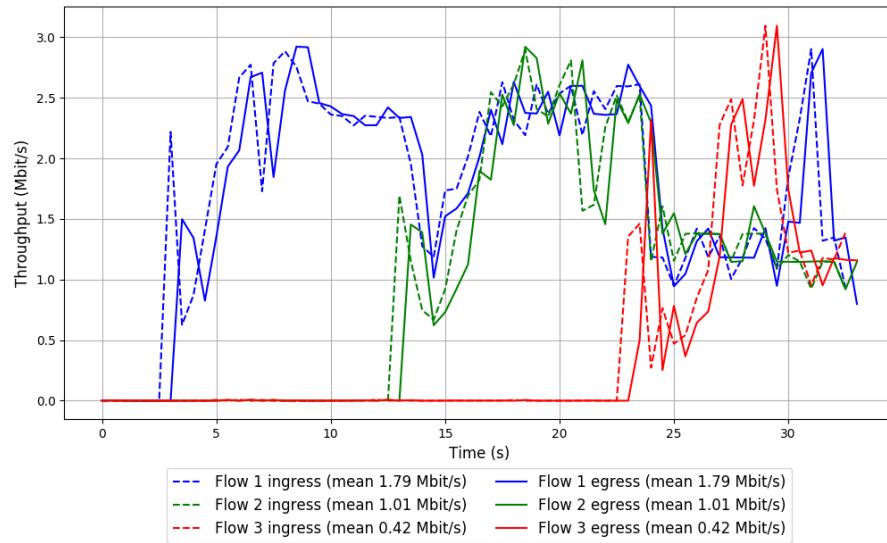


```
Run 1: Statistics of WebRTC media

Start at: 2018-10-10 04:28:56
End at: 2018-10-10 04:29:26
Local clock offset: 5.102 ms
Remote clock offset: -4.439 ms

# Below is generated by plot.py at 2018-10-10 06:26:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.21 Mbit/s
95th percentile per-packet one-way delay: 34.631 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 34.618 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 34.637 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 34.685 ms
Loss rate: 0.84%
```

Run 1: Report of WebRTC media — Data Link

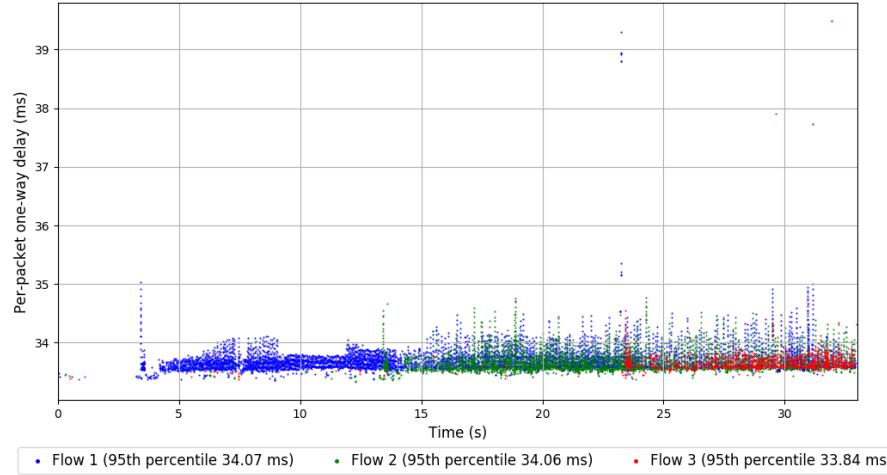
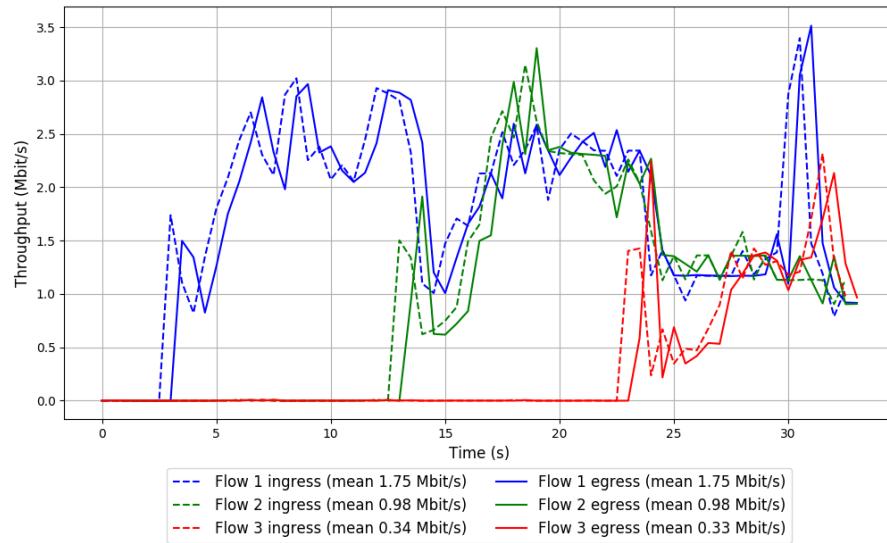


Run 2: Statistics of WebRTC media

```
Start at: 2018-10-10 04:53:52
End at: 2018-10-10 04:54:22
Local clock offset: 2.178 ms
Remote clock offset: -3.642 ms

# Below is generated by plot.py at 2018-10-10 06:26:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.05 Mbit/s
95th percentile per-packet one-way delay: 34.054 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 34.072 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 34.065 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 33.843 ms
Loss rate: 0.99%
```

Run 2: Report of WebRTC media — Data Link

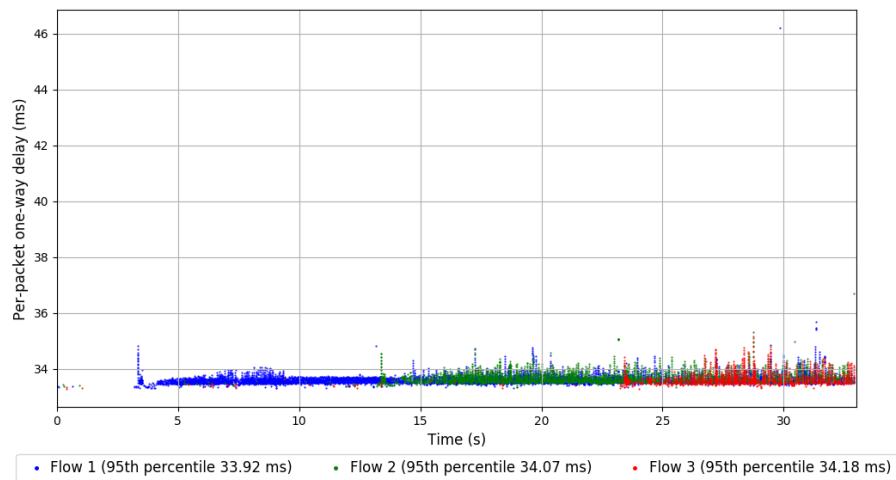
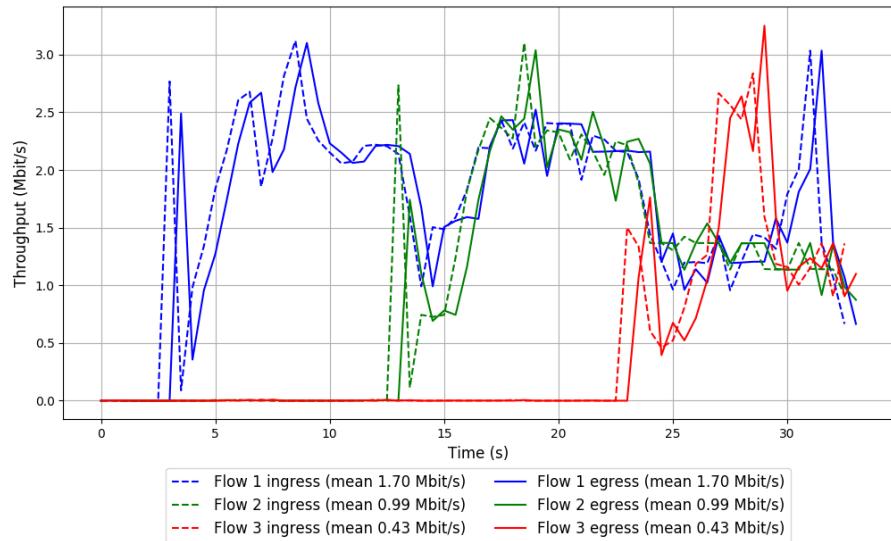


Run 3: Statistics of WebRTC media

```
Start at: 2018-10-10 05:18:42
End at: 2018-10-10 05:19:12
Local clock offset: 1.808 ms
Remote clock offset: -2.992 ms

# Below is generated by plot.py at 2018-10-10 06:26:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 34.021 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 33.919 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 34.067 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 34.183 ms
Loss rate: 0.95%
```

Run 3: Report of WebRTC media — Data Link

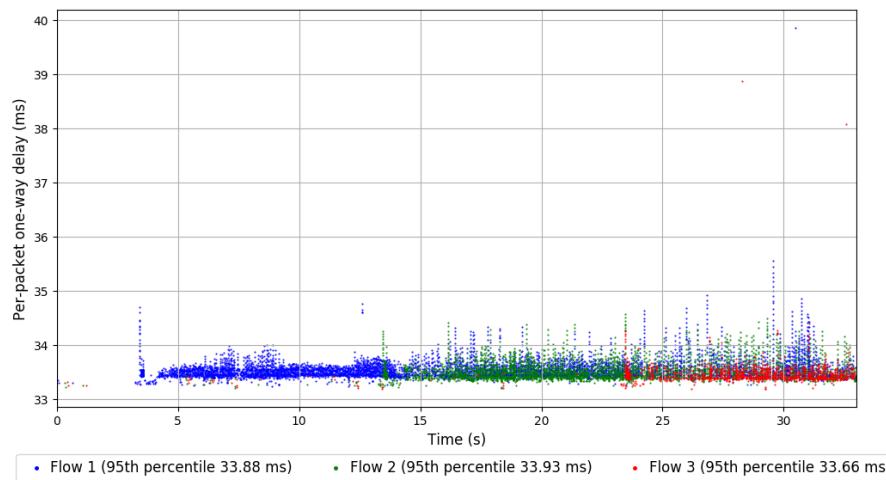
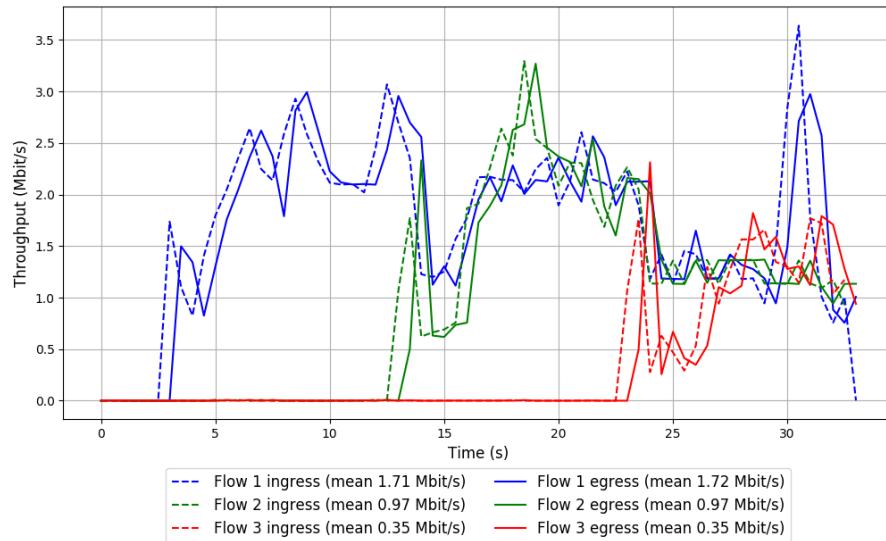


Run 4: Statistics of WebRTC media

```
Start at: 2018-10-10 05:43:28
End at: 2018-10-10 05:43:58
Local clock offset: 3.654 ms
Remote clock offset: -2.564 ms

# Below is generated by plot.py at 2018-10-10 06:26:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 33.884 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 33.878 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 33.927 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 33.655 ms
Loss rate: 1.02%
```

Run 4: Report of WebRTC media — Data Link



```
Run 5: Statistics of WebRTC media

Start at: 2018-10-10 06:08:43
End at: 2018-10-10 06:09:13
Local clock offset: 3.355 ms
Remote clock offset: -2.419 ms

# Below is generated by plot.py at 2018-10-10 06:26:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.12 Mbit/s
95th percentile per-packet one-way delay: 33.966 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 33.890 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 34.011 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 34.087 ms
Loss rate: 0.84%
```

Run 5: Report of WebRTC media — Data Link

