

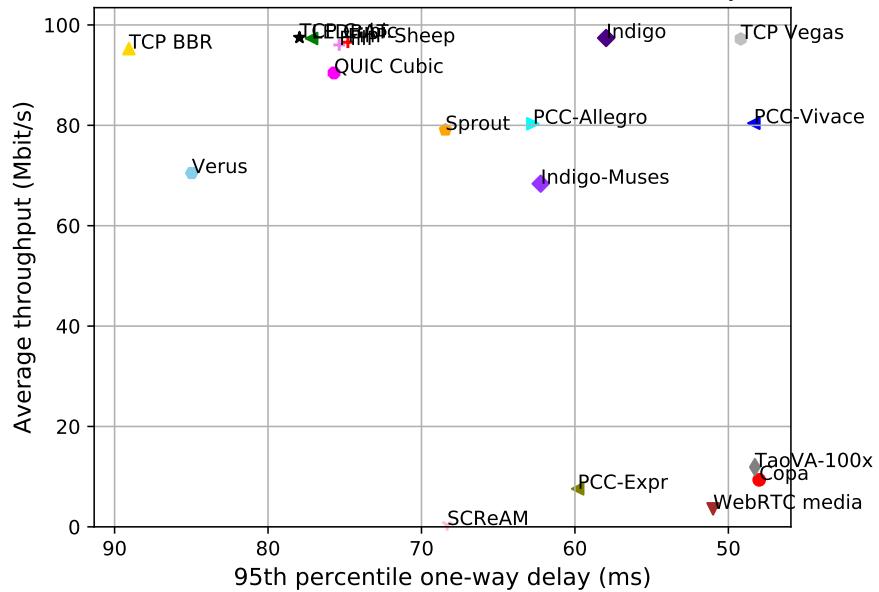
Pantheon Report

Generated at 2018-09-07 16:27:32 (UTC).
Data path: AWS Brazil 1 on `ens5` (*local*) → Brazil on `p4p1` (*remote*).
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 `gps.ntp.br` and have been applied to correct the timestamps in logs.

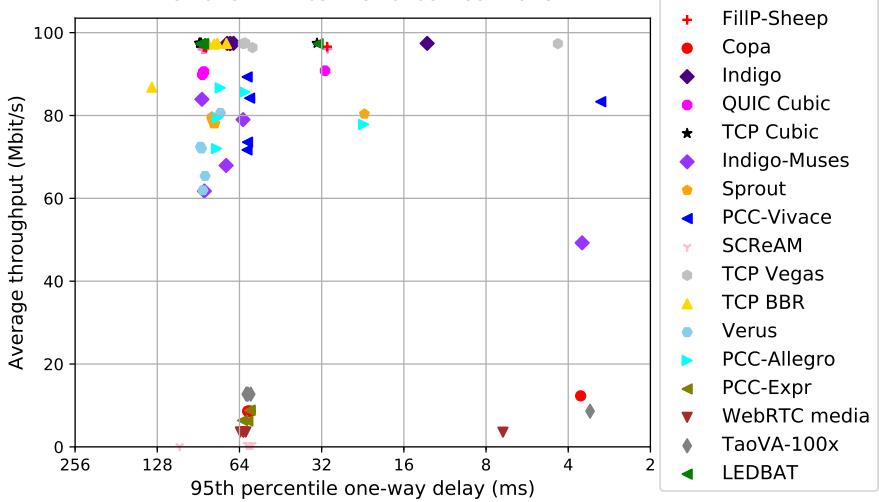
```
System info:  
Linux 4.15.0-1020-aws  
net.core.default_qdisc = fq  
net.core.rmem_default = 16777216  
net.core.rmem_max = 536870912  
net.core.wmem_default = 16777216  
net.core.wmem_max = 536870912  
net.ipv4.tcp_rmem = 4096 16777216 536870912  
net.ipv4.tcp_wmem = 4096 16777216 536870912  
net.ipv4.tcp_mem = 536870912 536870912 536870912  
  
Git summary:  
branch: muses @ e0a9b05ad97d268013b7cc9a9c95637b593a1b4c  
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834  
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe  
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4  
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d  
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf  
third_party/muses @ 7631aea3923a3598767c87765ae5103aca0678d3  
third_party/pantheon-tunnel @ cbfce6db5ff5740dafe1771f813cd646339e1952  
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1  
M receiver/src/buffer.h  
M receiver/src/core.cpp  
M sender/src/buffer.h  
M sender/src/core.cpp  
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab  
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42  
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2  
M src/ScreamClient  
M src/ScreamServer  
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26  
M src/examples/cellsim.cc  
M src/examples/sproutbt2.cc  
M src/network/sproutconn.cc  
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494  
M src/verus.hpp
```

```
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from AWS Brazil 1 to Brazil, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



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



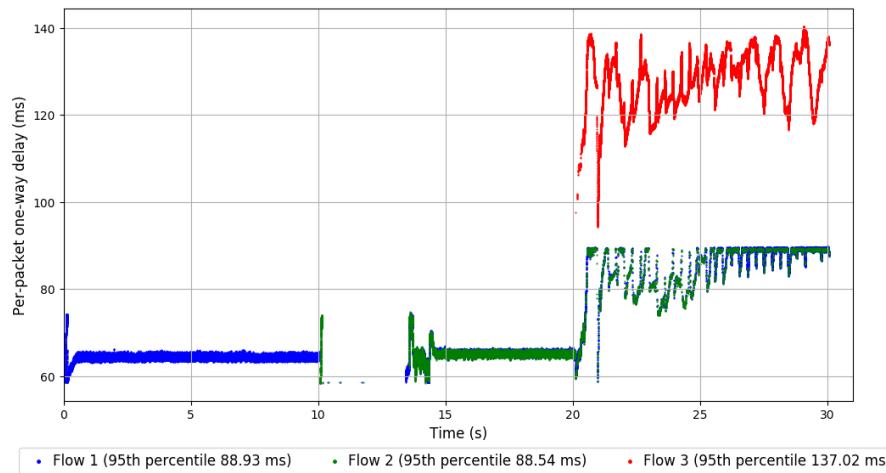
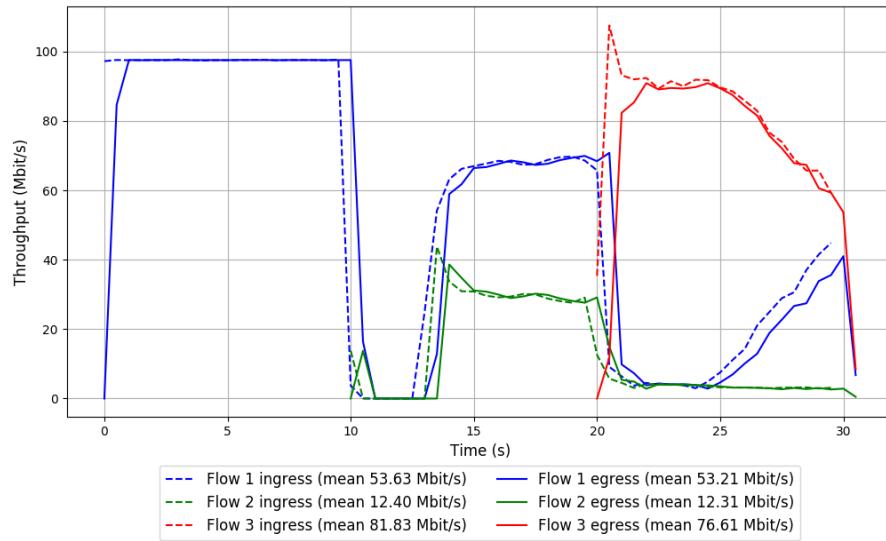
| scheme | # runs | mean avg tput (Mbit/s) | | | mean 95th-%ile delay (ms) | | | mean loss rate (%) | | |
|--------------|--------|------------------------|--------|--------|---------------------------|--------|--------|--------------------|--------|--------|
| | | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 |
| TCP BBR | 5 | 63.84 | 33.10 | 28.23 | 79.66 | 79.39 | 93.08 | 0.14 | 0.13 | 1.38 |
| Copa | 5 | 1.05 | 12.07 | 1.02 | 47.68 | 47.99 | 47.94 | 92.29 | 67.93 | 87.87 |
| TCP Cubic | 5 | 64.87 | 34.90 | 28.22 | 78.08 | 76.70 | 77.42 | 0.04 | 0.04 | 0.08 |
| FillP | 5 | 51.09 | 48.93 | 37.55 | 74.56 | 76.00 | 75.04 | 11.20 | 20.75 | 25.67 |
| FillP-Sheep | 5 | 62.23 | 38.92 | 25.46 | 74.18 | 74.27 | 74.30 | 15.45 | 29.26 | 32.70 |
| Indigo | 5 | 45.78 | 45.26 | 66.27 | 56.20 | 57.99 | 57.84 | 0.00 | 0.00 | 0.00 |
| LEDBAT | 5 | 65.52 | 32.08 | 31.41 | 76.98 | 76.77 | 77.44 | 0.03 | 0.11 | 0.09 |
| Indigo-Muses | 5 | 27.77 | 42.94 | 36.43 | 56.82 | 60.60 | 62.40 | 0.01 | 3.05 | 4.27 |
| PCC-Allegro | 5 | 62.62 | 20.86 | 11.58 | 61.54 | 65.79 | 66.22 | 0.08 | 0.11 | 0.07 |
| PCC-Expr | 4 | 0.72 | 7.96 | 6.89 | 57.55 | 60.77 | 58.36 | 85.71 | 24.68 | 17.71 |
| QUIC Cubic | 5 | 57.96 | 35.10 | 27.84 | 75.30 | 75.35 | 75.79 | 0.15 | 0.20 | 0.30 |
| SCReAM | 5 | 0.20 | 0.18 | 0.18 | 59.75 | 68.14 | 69.69 | 0.00 | 0.00 | 0.38 |
| Sprout | 5 | 43.65 | 38.10 | 30.56 | 66.75 | 68.43 | 70.18 | 0.00 | 0.00 | 0.00 |
| TaoVA-100x | 5 | 7.50 | 5.65 | 6.47 | 46.93 | 49.80 | 47.95 | 88.32 | 92.29 | 90.25 |
| TCP Vegas | 5 | 51.22 | 42.81 | 52.54 | 50.15 | 49.69 | 48.64 | 0.00 | 0.00 | 0.00 |
| Verus | 5 | 41.04 | 31.94 | 25.04 | 83.80 | 85.85 | 84.84 | 13.17 | 17.92 | 29.92 |
| PCC-Vivace | 5 | 49.91 | 34.27 | 23.36 | 47.88 | 48.48 | 49.40 | 0.00 | 0.00 | 0.00 |
| WebRTC media | 5 | 1.95 | 1.27 | 0.37 | 50.96 | 50.51 | 51.76 | 0.01 | 0.00 | 0.02 |

Run 1: Statistics of TCP BBR

```
Start at: 2018-09-07 14:29:05
End at: 2018-09-07 14:29:35
Local clock offset: -63.359 ms
Remote clock offset: -0.167 ms

# Below is generated by plot.py at 2018-09-07 16:18:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.84 Mbit/s
95th percentile per-packet one-way delay: 134.010 ms
Loss rate: 2.44%
-- Flow 1:
Average throughput: 53.21 Mbit/s
95th percentile per-packet one-way delay: 88.927 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 12.31 Mbit/s
95th percentile per-packet one-way delay: 88.539 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 76.61 Mbit/s
95th percentile per-packet one-way delay: 137.021 ms
Loss rate: 6.46%
```

Run 1: Report of TCP BBR — Data Link

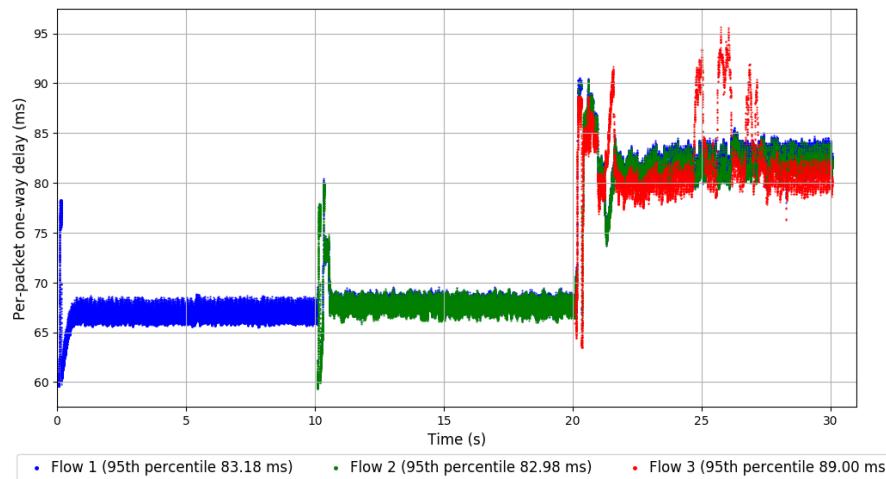
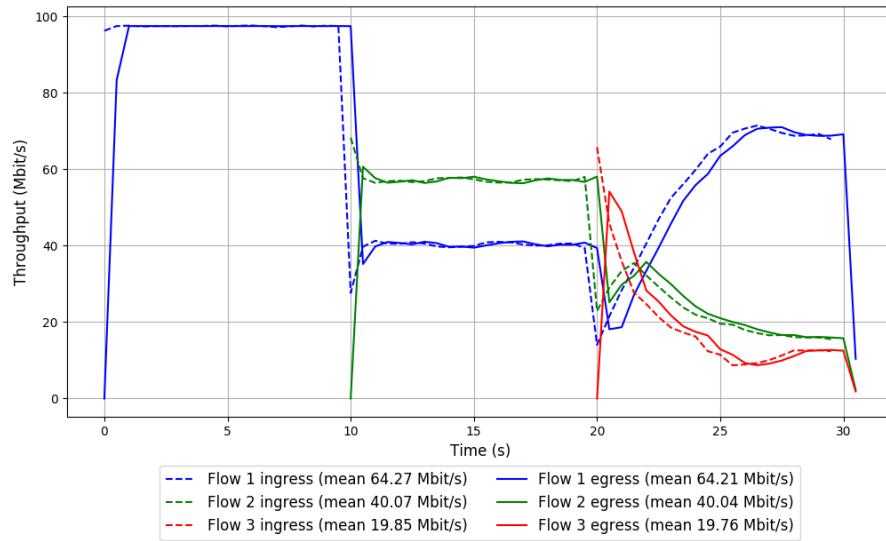


Run 2: Statistics of TCP BBR

```
Start at: 2018-09-07 14:54:29
End at: 2018-09-07 14:54:59
Local clock offset: -67.296 ms
Remote clock offset: 0.031 ms

# Below is generated by plot.py at 2018-09-07 16:18:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 83.510 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 64.21 Mbit/s
95th percentile per-packet one-way delay: 83.176 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 40.04 Mbit/s
95th percentile per-packet one-way delay: 82.983 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 19.76 Mbit/s
95th percentile per-packet one-way delay: 89.002 ms
Loss rate: 0.32%
```

Run 2: Report of TCP BBR — Data Link

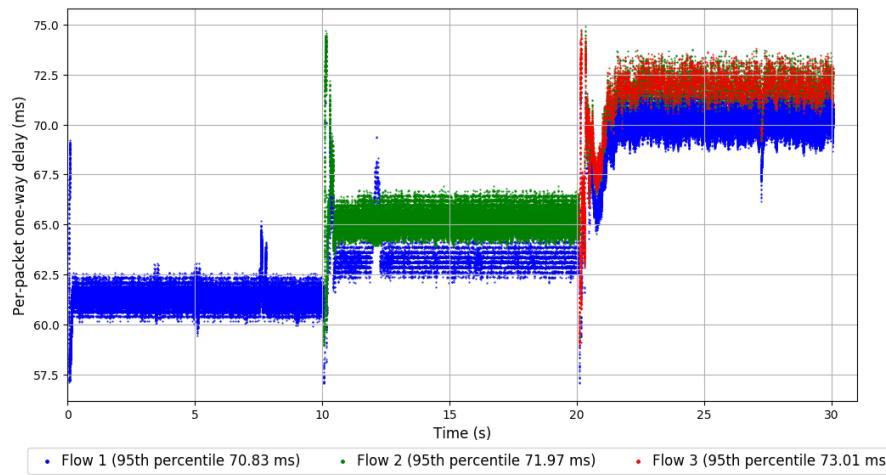
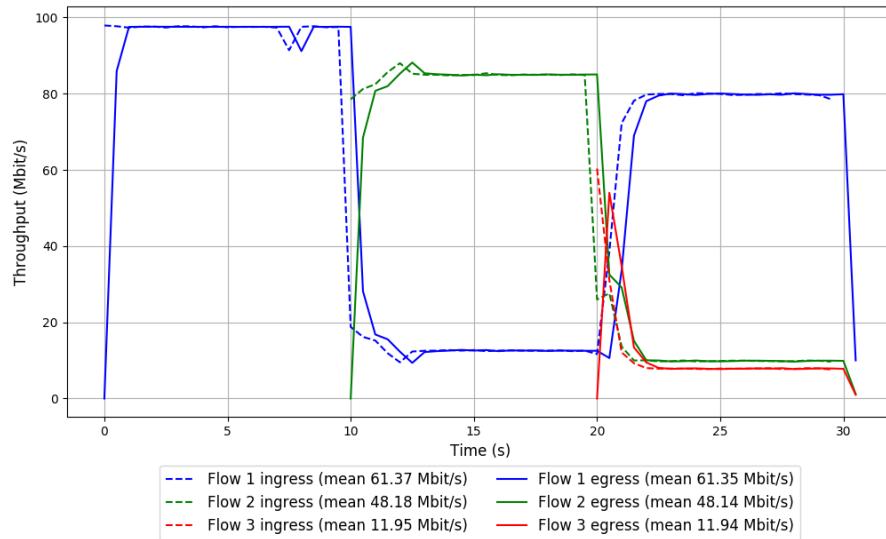


Run 3: Statistics of TCP BBR

```
Start at: 2018-09-07 15:14:59
End at: 2018-09-07 15:15:29
Local clock offset: -69.037 ms
Remote clock offset: 0.06 ms

# Below is generated by plot.py at 2018-09-07 16:18:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 71.456 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.35 Mbit/s
95th percentile per-packet one-way delay: 70.825 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 48.14 Mbit/s
95th percentile per-packet one-way delay: 71.967 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.94 Mbit/s
95th percentile per-packet one-way delay: 73.014 ms
Loss rate: 0.00%
```

Run 3: Report of TCP BBR — Data Link

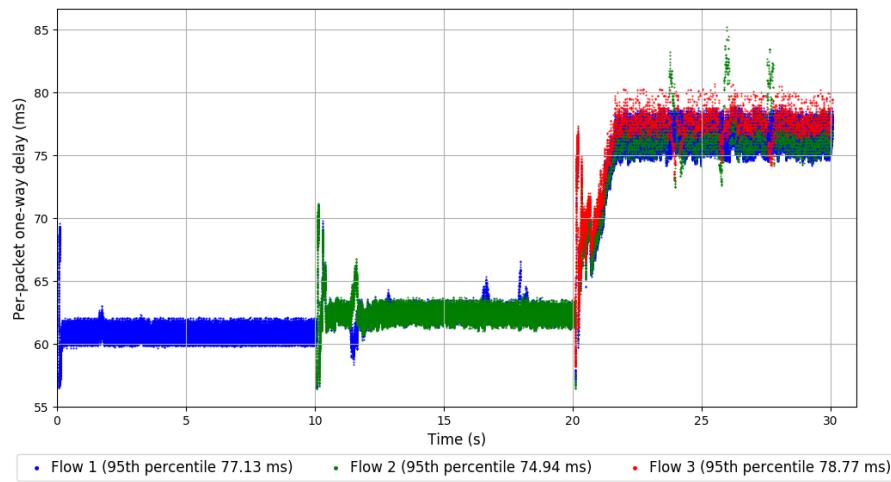
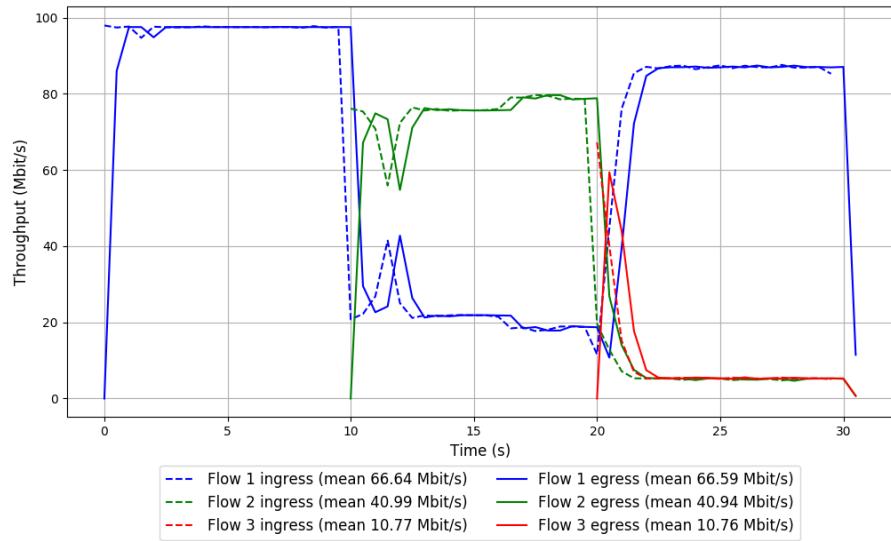


Run 4: Statistics of TCP BBR

```
Start at: 2018-09-07 15:35:28
End at: 2018-09-07 15:35:58
Local clock offset: -69.932 ms
Remote clock offset: -0.009 ms

# Below is generated by plot.py at 2018-09-07 16:18:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 77.101 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 66.59 Mbit/s
95th percentile per-packet one-way delay: 77.126 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.94 Mbit/s
95th percentile per-packet one-way delay: 74.937 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.76 Mbit/s
95th percentile per-packet one-way delay: 78.773 ms
Loss rate: 0.00%
```

Run 4: Report of TCP BBR — Data Link

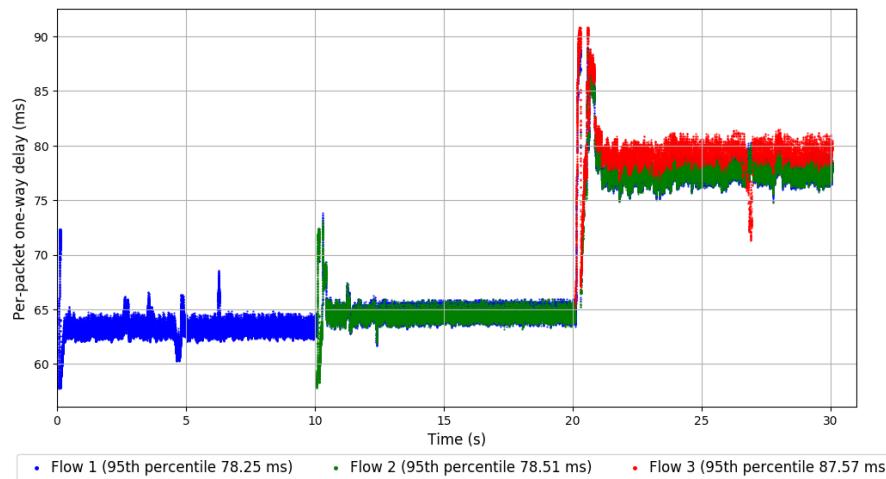
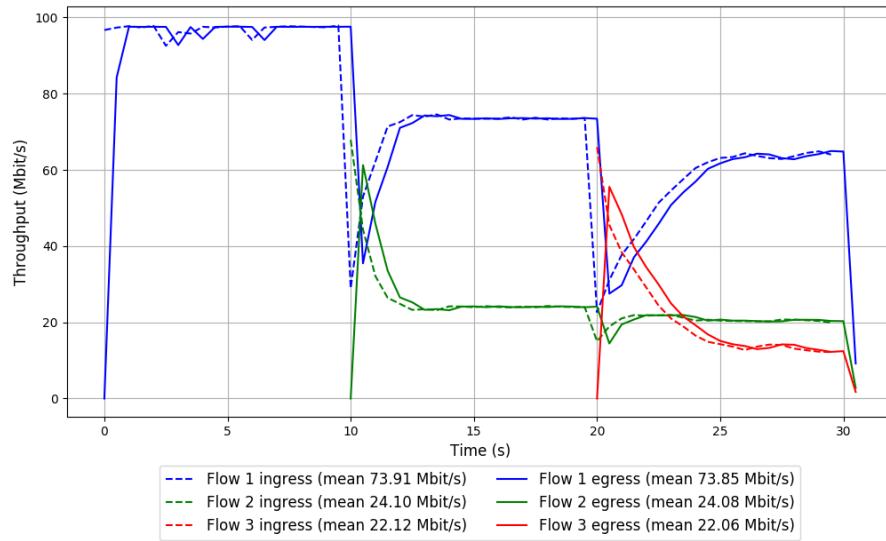


Run 5: Statistics of TCP BBR

```
Start at: 2018-09-07 15:55:58
End at: 2018-09-07 15:56:28
Local clock offset: -64.218 ms
Remote clock offset: 0.075 ms

# Below is generated by plot.py at 2018-09-07 16:18:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.24 Mbit/s
95th percentile per-packet one-way delay: 79.252 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 73.85 Mbit/s
95th percentile per-packet one-way delay: 78.245 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 24.08 Mbit/s
95th percentile per-packet one-way delay: 78.507 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 22.06 Mbit/s
95th percentile per-packet one-way delay: 87.570 ms
Loss rate: 0.14%
```

Run 5: Report of TCP BBR — Data Link

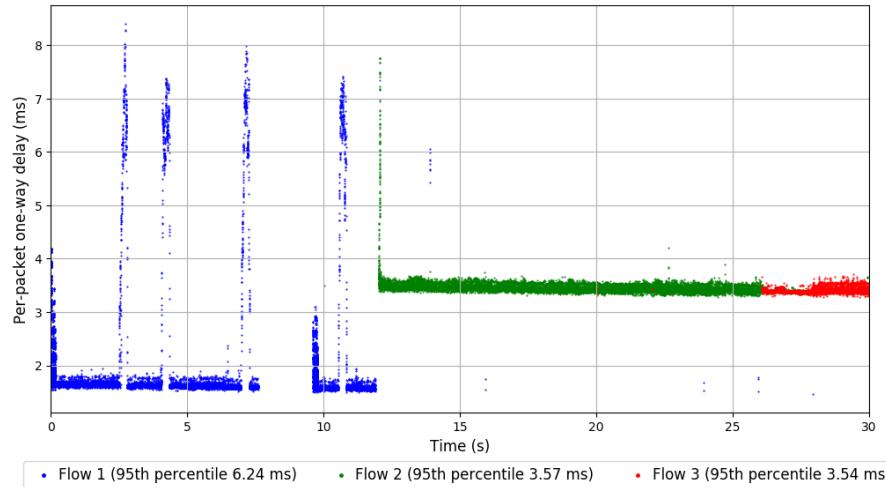
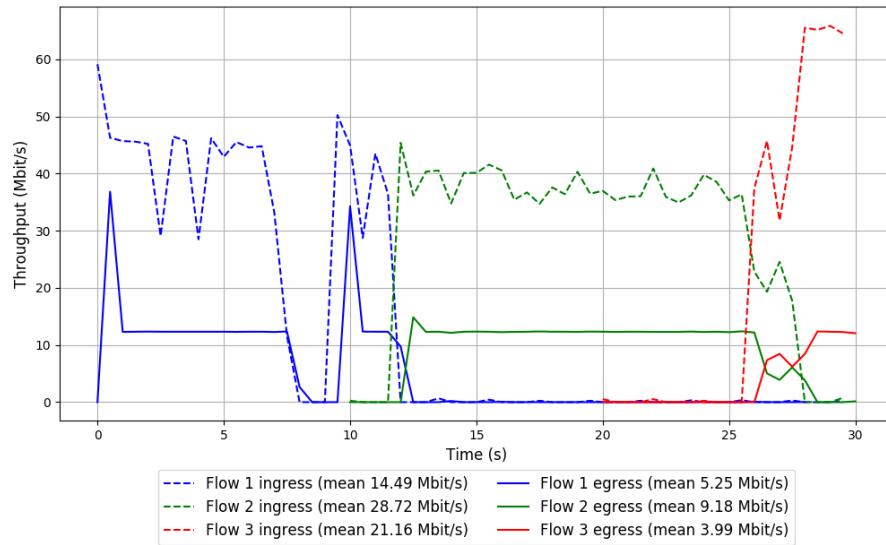


Run 1: Statistics of Copa

```
Start at: 2018-09-07 14:46:27
End at: 2018-09-07 14:46:57
Local clock offset: -9.113 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2018-09-07 16:18:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.32 Mbit/s
95th percentile per-packet one-way delay: 3.602 ms
Loss rate: 69.64%
-- Flow 1:
Average throughput: 5.25 Mbit/s
95th percentile per-packet one-way delay: 6.240 ms
Loss rate: 66.17%
-- Flow 2:
Average throughput: 9.18 Mbit/s
95th percentile per-packet one-way delay: 3.573 ms
Loss rate: 68.03%
-- Flow 3:
Average throughput: 3.99 Mbit/s
95th percentile per-packet one-way delay: 3.543 ms
Loss rate: 81.14%
```

Run 1: Report of Copa — Data Link

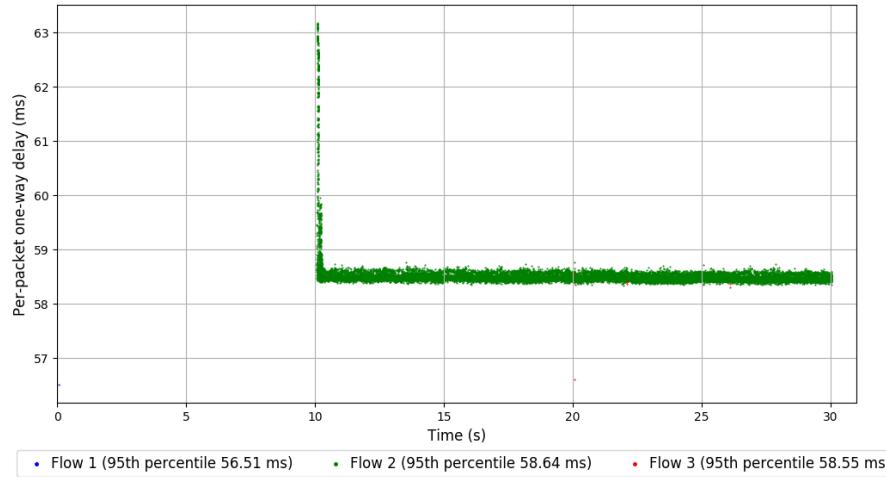
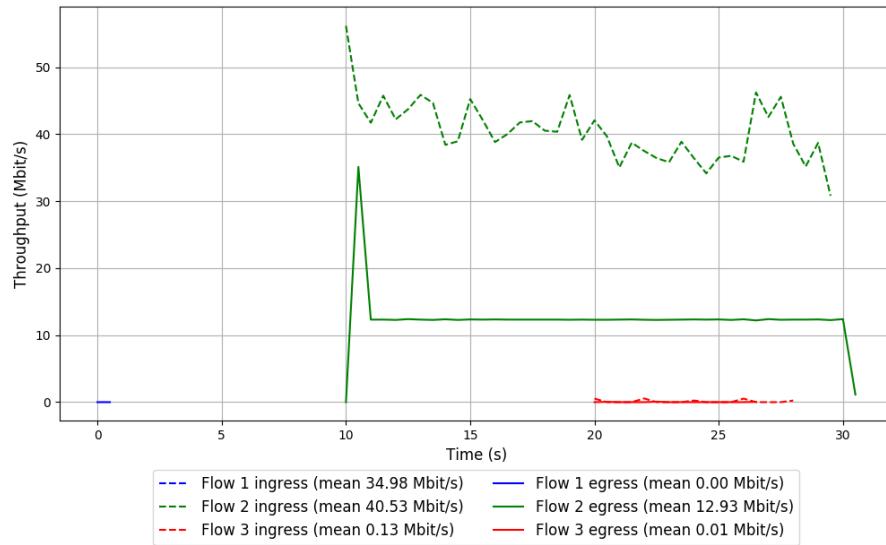


Run 2: Statistics of Copa

```
Start at: 2018-09-07 15:06:57
End at: 2018-09-07 15:07:27
Local clock offset: -67.79 ms
Remote clock offset: 0.06 ms

# Below is generated by plot.py at 2018-09-07 16:18:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 58.637 ms
Loss rate: 68.13%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 56.505 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 12.93 Mbit/s
95th percentile per-packet one-way delay: 58.637 ms
Loss rate: 68.09%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 58.552 ms
Loss rate: 91.86%
```

Run 2: Report of Copa — Data Link

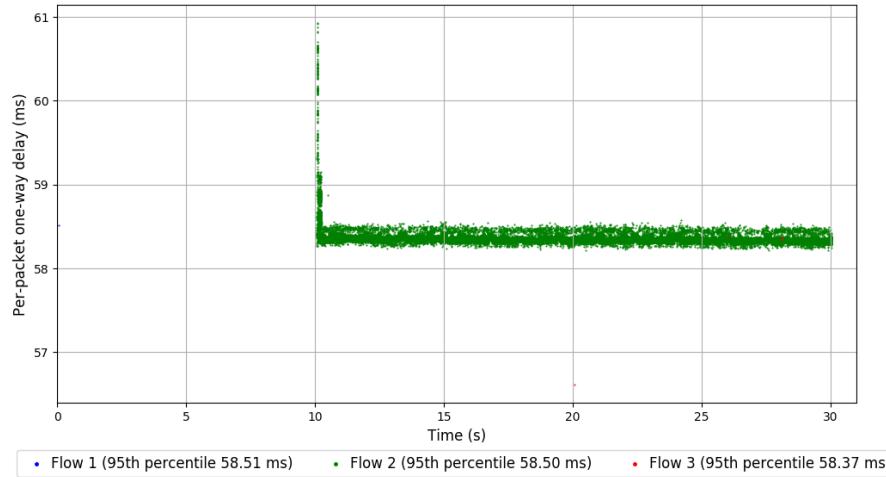
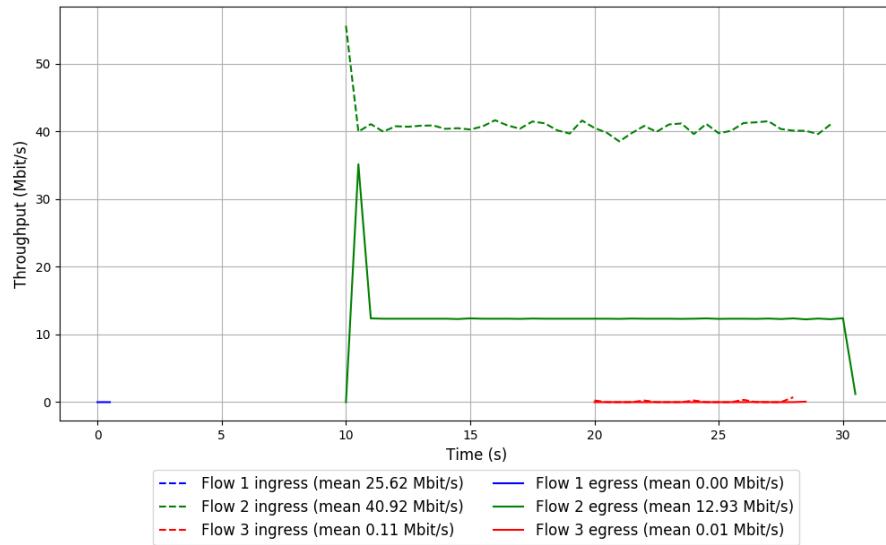


Run 3: Statistics of Copa

```
Start at: 2018-09-07 15:27:26
End at: 2018-09-07 15:27:56
Local clock offset: -69.405 ms
Remote clock offset: 0.061 ms

# Below is generated by plot.py at 2018-09-07 16:18:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 58.502 ms
Loss rate: 68.42%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 58.510 ms
Loss rate: 99.06%
-- Flow 2:
Average throughput: 12.93 Mbit/s
95th percentile per-packet one-way delay: 58.502 ms
Loss rate: 68.39%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 58.369 ms
Loss rate: 94.49%
```

Run 3: Report of Copa — Data Link

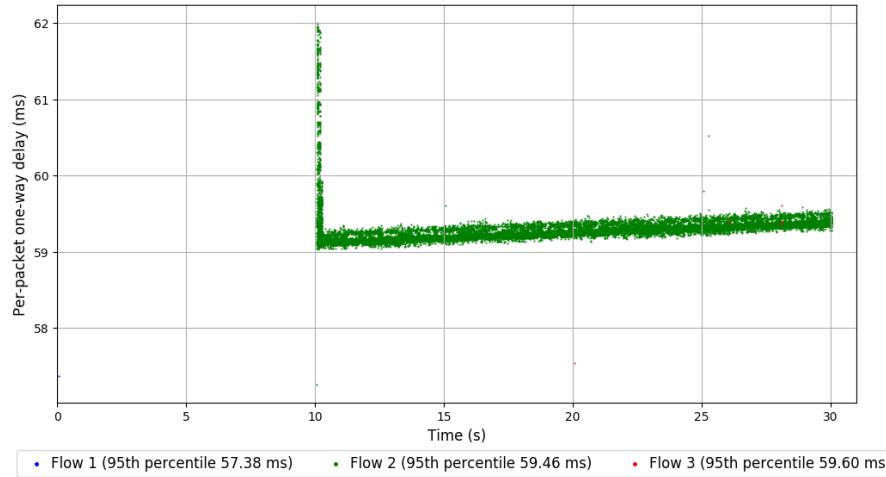
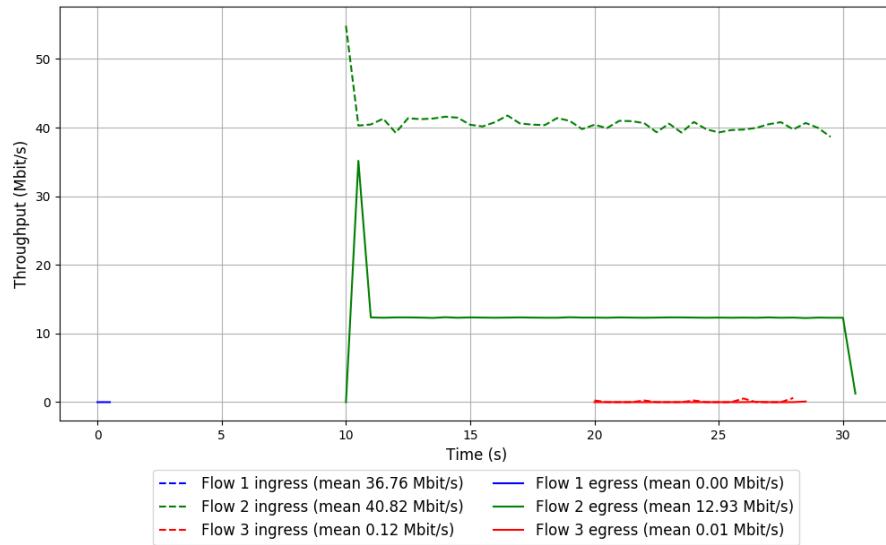


Run 4: Statistics of Copa

```
Start at: 2018-09-07 15:47:57
End at: 2018-09-07 15:48:27
Local clock offset: -68.015 ms
Remote clock offset: 0.12 ms

# Below is generated by plot.py at 2018-09-07 16:18:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 59.464 ms
Loss rate: 68.35%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 57.375 ms
Loss rate: 98.80%
-- Flow 2:
Average throughput: 12.93 Mbit/s
95th percentile per-packet one-way delay: 59.463 ms
Loss rate: 68.32%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 59.605 ms
Loss rate: 92.11%
```

Run 4: Report of Copa — Data Link

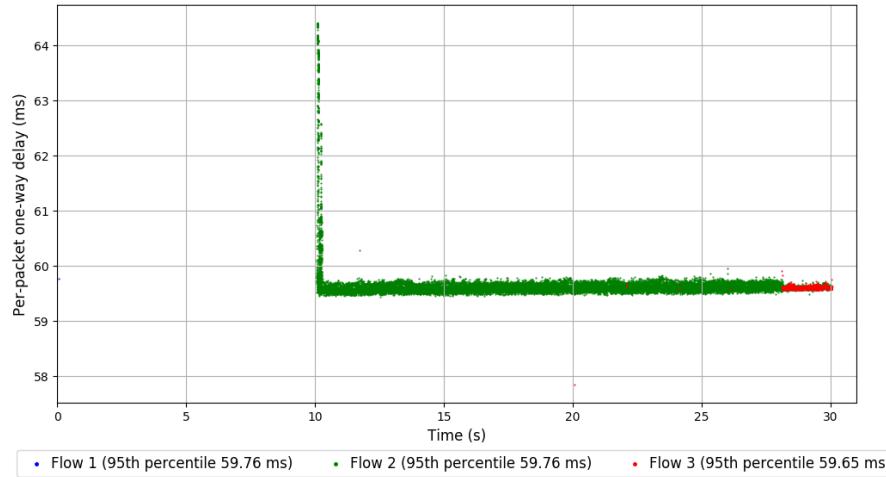
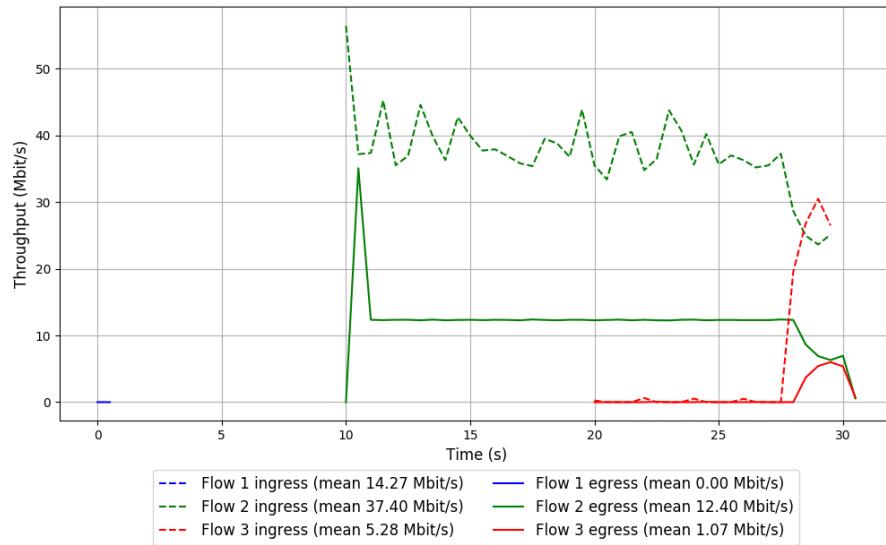


Run 5: Statistics of Copa

```
Start at: 2018-09-07 16:08:26
End at: 2018-09-07 16:08:56
Local clock offset: -61.082 ms
Remote clock offset: 0.112 ms

# Below is generated by plot.py at 2018-09-07 16:18:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 59.752 ms
Loss rate: 67.69%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 59.762 ms
Loss rate: 98.80%
-- Flow 2:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 59.758 ms
Loss rate: 66.84%
-- Flow 3:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 59.653 ms
Loss rate: 79.76%
```

Run 5: Report of Copa — Data Link

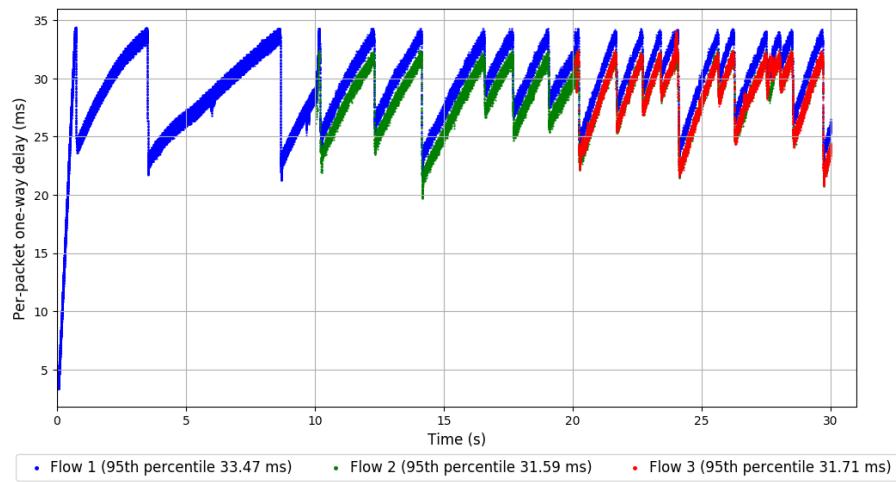
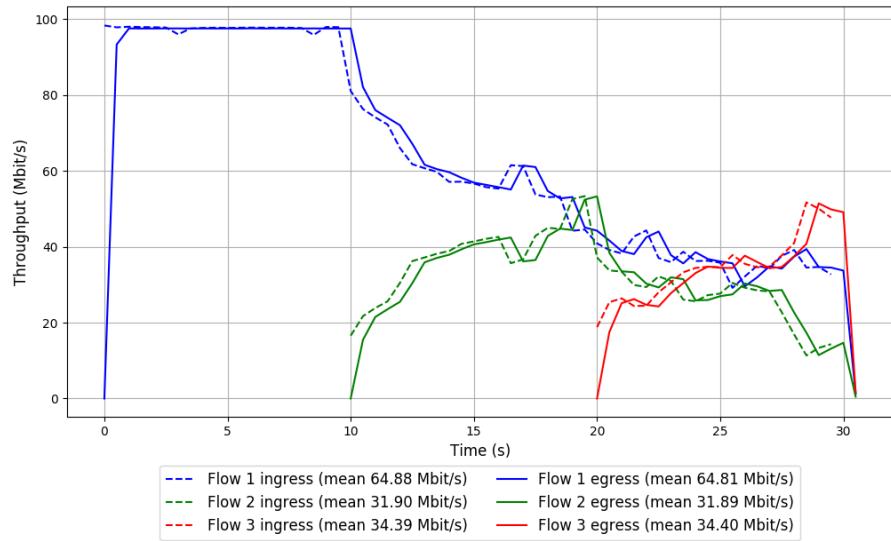


```
Run 1: Statistics of TCP Cubic

Start at: 2018-09-07 14:51:02
End at: 2018-09-07 14:51:32
Local clock offset: -10.353 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2018-09-07 16:18:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 33.274 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 64.81 Mbit/s
95th percentile per-packet one-way delay: 33.471 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 31.89 Mbit/s
95th percentile per-packet one-way delay: 31.591 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 34.40 Mbit/s
95th percentile per-packet one-way delay: 31.707 ms
Loss rate: 0.04%
```

Run 1: Report of TCP Cubic — Data Link

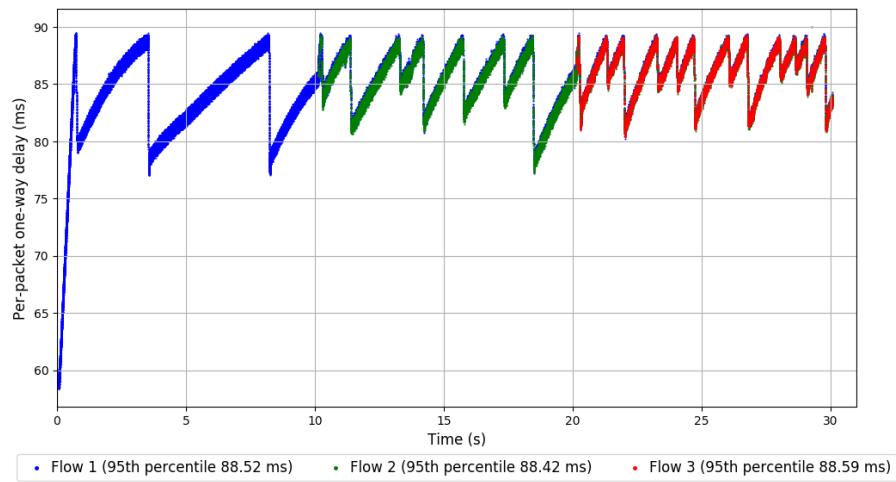
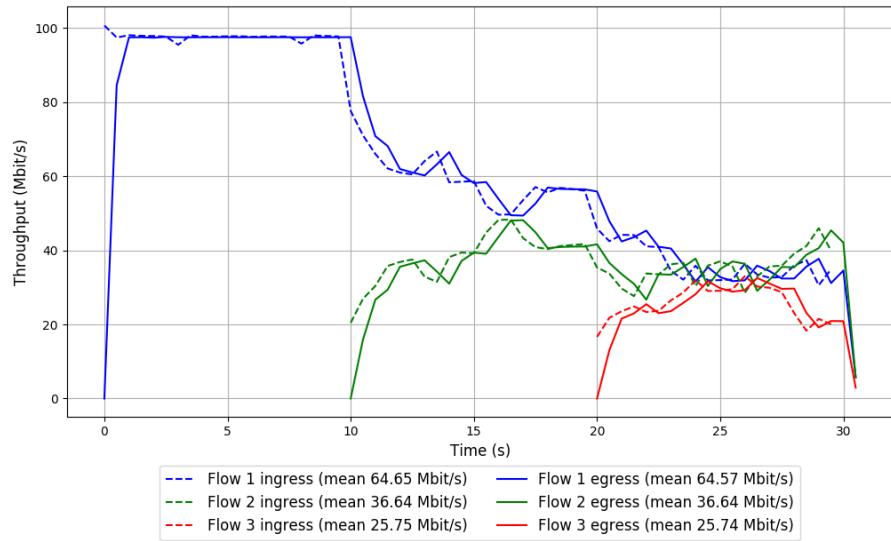


Run 2: Statistics of TCP Cubic

```
Start at: 2018-09-07 15:11:32
End at: 2018-09-07 15:12:02
Local clock offset: -68.144 ms
Remote clock offset: 0.064 ms

# Below is generated by plot.py at 2018-09-07 16:18:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 88.513 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 64.57 Mbit/s
95th percentile per-packet one-way delay: 88.516 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 36.64 Mbit/s
95th percentile per-packet one-way delay: 88.418 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 25.74 Mbit/s
95th percentile per-packet one-way delay: 88.589 ms
Loss rate: 0.05%
```

Run 2: Report of TCP Cubic — Data Link

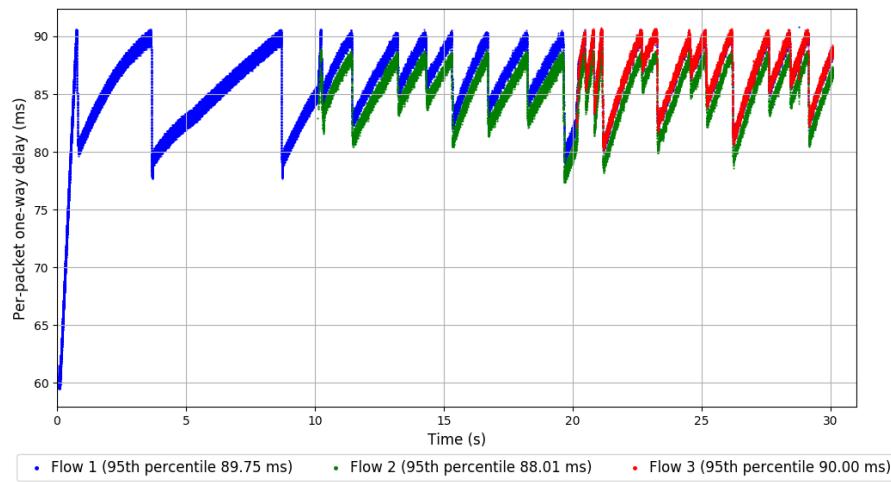
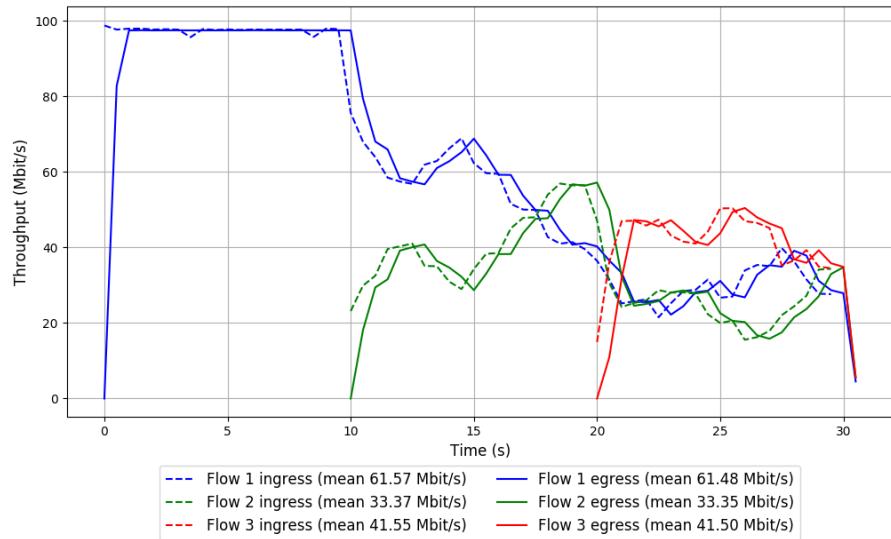


Run 3: Statistics of TCP Cubic

```
Start at: 2018-09-07 15:32:01
End at: 2018-09-07 15:32:31
Local clock offset: -70.962 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2018-09-07 16:18:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 89.619 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 61.48 Mbit/s
95th percentile per-packet one-way delay: 89.749 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 33.35 Mbit/s
95th percentile per-packet one-way delay: 88.013 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 41.50 Mbit/s
95th percentile per-packet one-way delay: 90.005 ms
Loss rate: 0.05%
```

Run 3: Report of TCP Cubic — Data Link

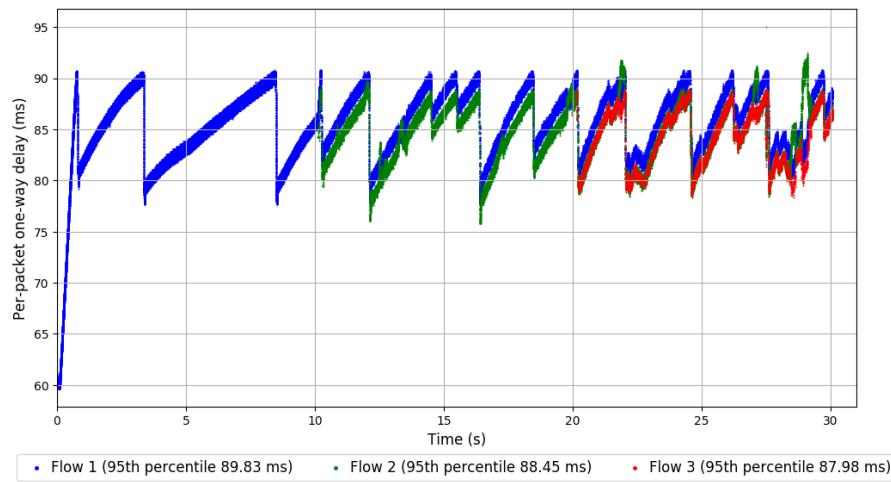
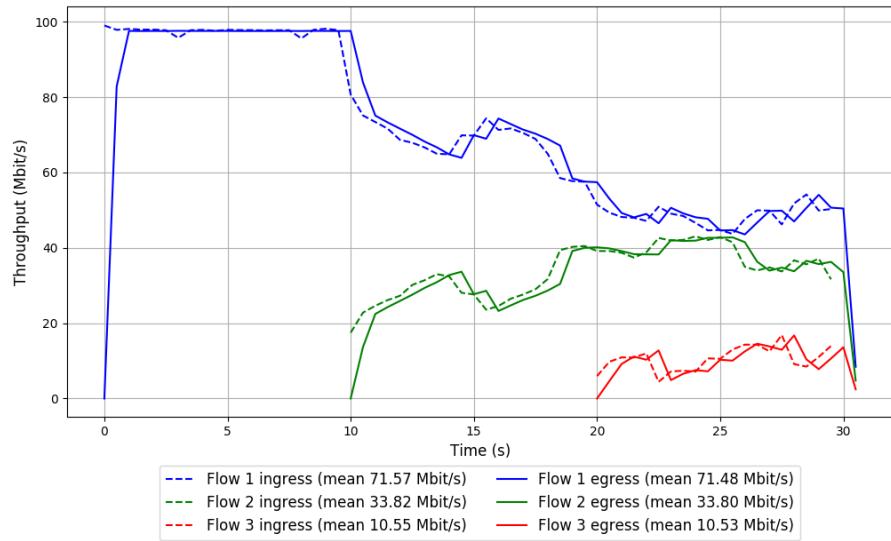


Run 4: Statistics of TCP Cubic

```
Start at: 2018-09-07 15:52:32
End at: 2018-09-07 15:53:02
Local clock offset: -65.621 ms
Remote clock offset: 0.12 ms

# Below is generated by plot.py at 2018-09-07 16:19:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 89.715 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 71.48 Mbit/s
95th percentile per-packet one-way delay: 89.829 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 33.80 Mbit/s
95th percentile per-packet one-way delay: 88.446 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 10.53 Mbit/s
95th percentile per-packet one-way delay: 87.982 ms
Loss rate: 0.19%
```

Run 4: Report of TCP Cubic — Data Link

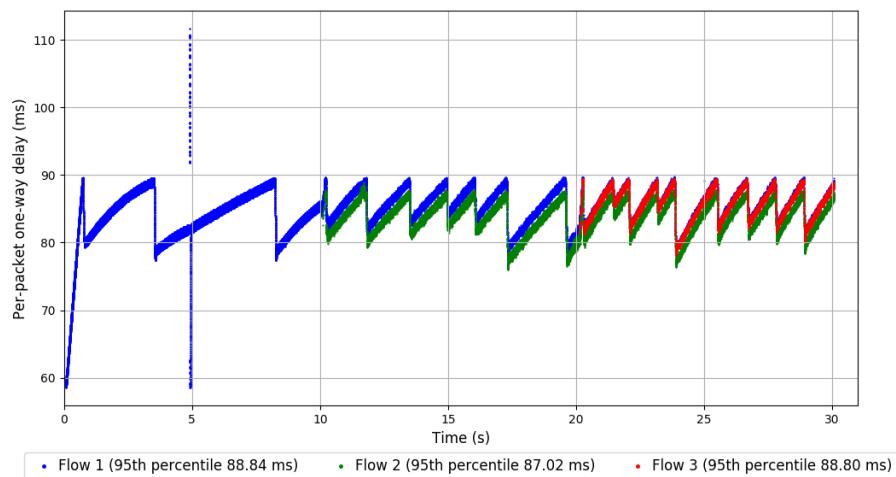
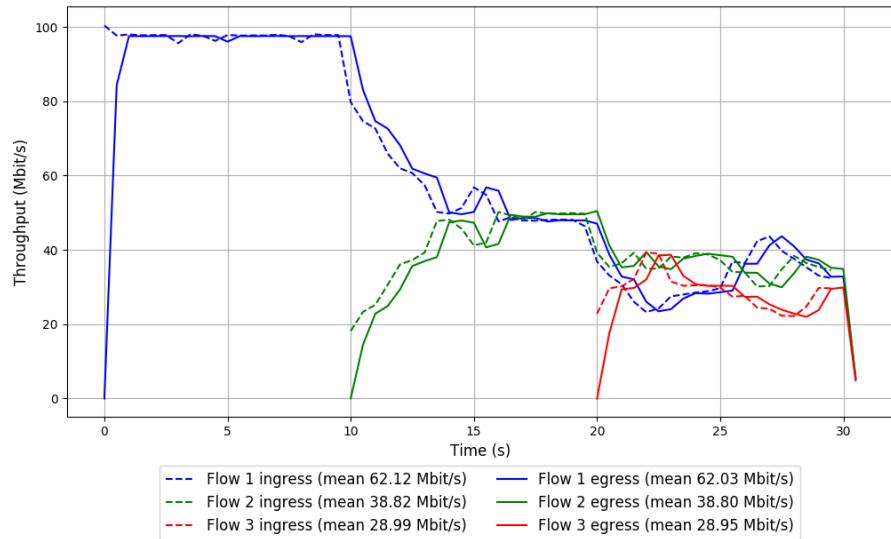


Run 5: Statistics of TCP Cubic

```
Start at: 2018-09-07 16:13:01
End at: 2018-09-07 16:13:31
Local clock offset: -59.453 ms
Remote clock offset: 0.032 ms

# Below is generated by plot.py at 2018-09-07 16:19:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 88.636 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 62.03 Mbit/s
95th percentile per-packet one-way delay: 88.836 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 38.80 Mbit/s
95th percentile per-packet one-way delay: 87.021 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 28.95 Mbit/s
95th percentile per-packet one-way delay: 88.798 ms
Loss rate: 0.07%
```

Run 5: Report of TCP Cubic — Data Link

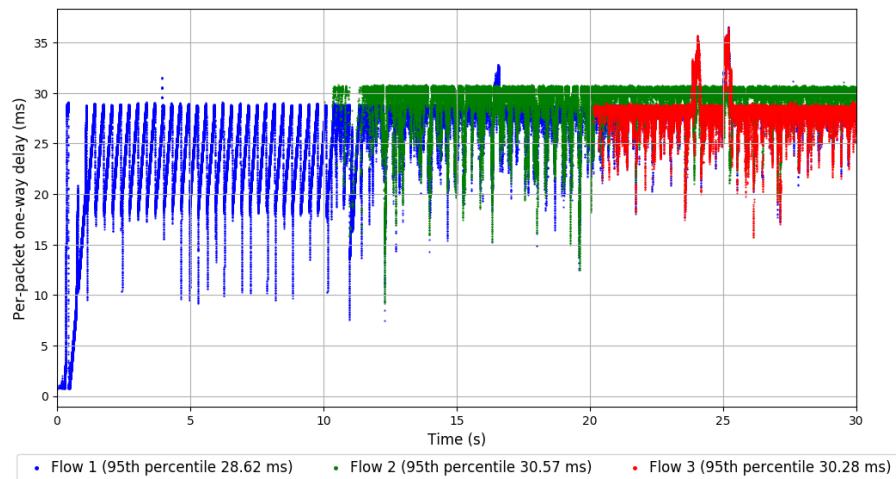
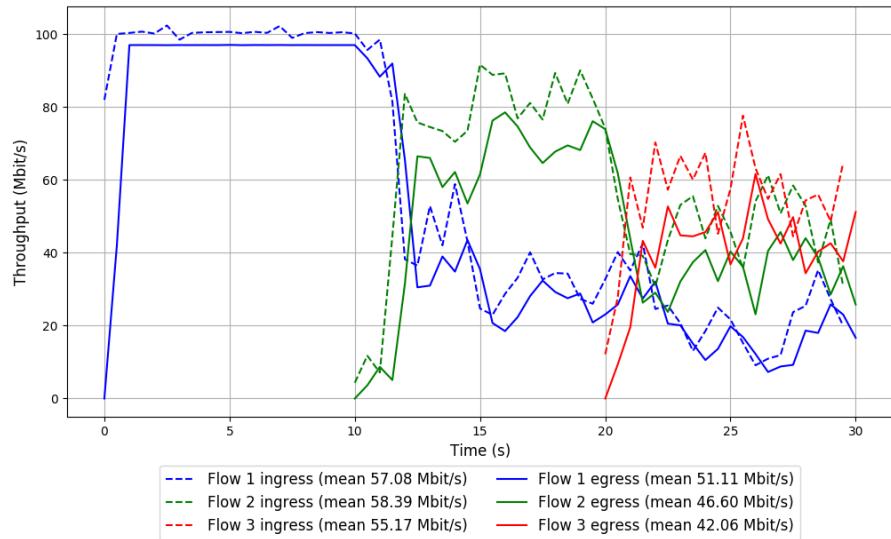


```
Run 1: Statistics of FillP

Start at: 2018-09-07 14:49:53
End at: 2018-09-07 14:50:23
Local clock offset: -9.377 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2018-09-07 16:19:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.06 Mbit/s
95th percentile per-packet one-way delay: 30.445 ms
Loss rate: 15.85%
-- Flow 1:
Average throughput: 51.11 Mbit/s
95th percentile per-packet one-way delay: 28.618 ms
Loss rate: 10.38%
-- Flow 2:
Average throughput: 46.60 Mbit/s
95th percentile per-packet one-way delay: 30.573 ms
Loss rate: 20.18%
-- Flow 3:
Average throughput: 42.06 Mbit/s
95th percentile per-packet one-way delay: 30.278 ms
Loss rate: 23.72%
```

Run 1: Report of FillP — Data Link

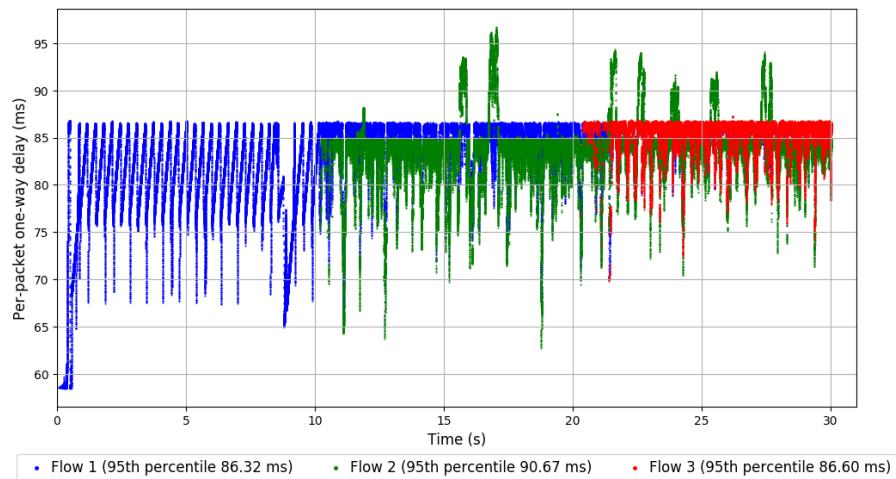
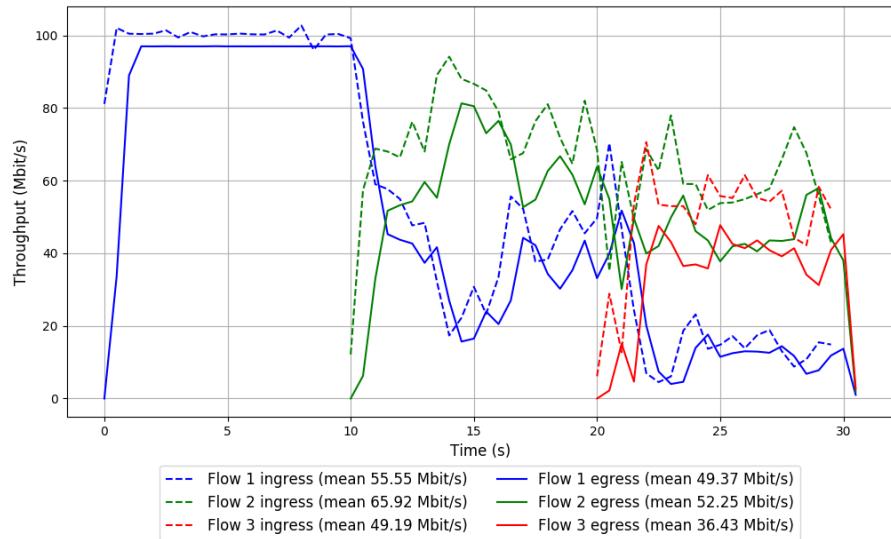


Run 2: Statistics of FillP

```
Start at: 2018-09-07 15:10:23
End at: 2018-09-07 15:10:53
Local clock offset: -68.379 ms
Remote clock offset: -0.021 ms

# Below is generated by plot.py at 2018-09-07 16:20:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.98 Mbit/s
95th percentile per-packet one-way delay: 86.526 ms
Loss rate: 17.02%
-- Flow 1:
Average throughput: 49.37 Mbit/s
95th percentile per-packet one-way delay: 86.323 ms
Loss rate: 11.05%
-- Flow 2:
Average throughput: 52.25 Mbit/s
95th percentile per-packet one-way delay: 90.667 ms
Loss rate: 20.74%
-- Flow 3:
Average throughput: 36.43 Mbit/s
95th percentile per-packet one-way delay: 86.604 ms
Loss rate: 27.36%
```

Run 2: Report of FillP — Data Link

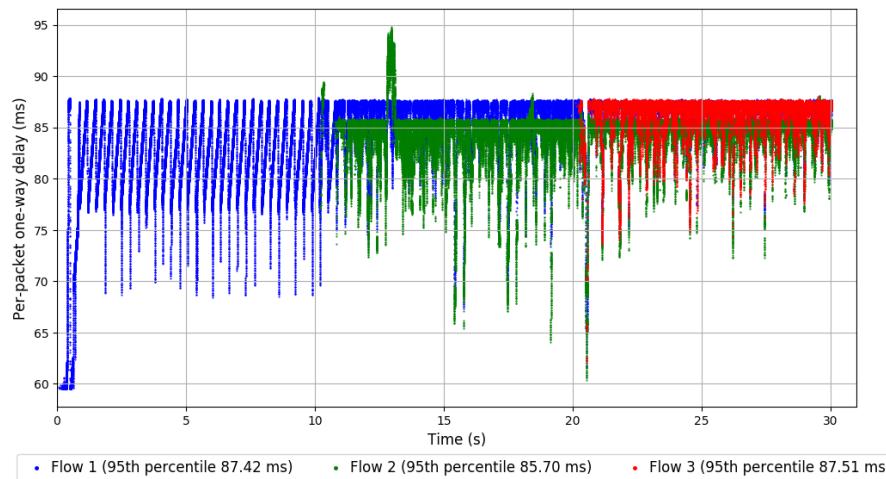
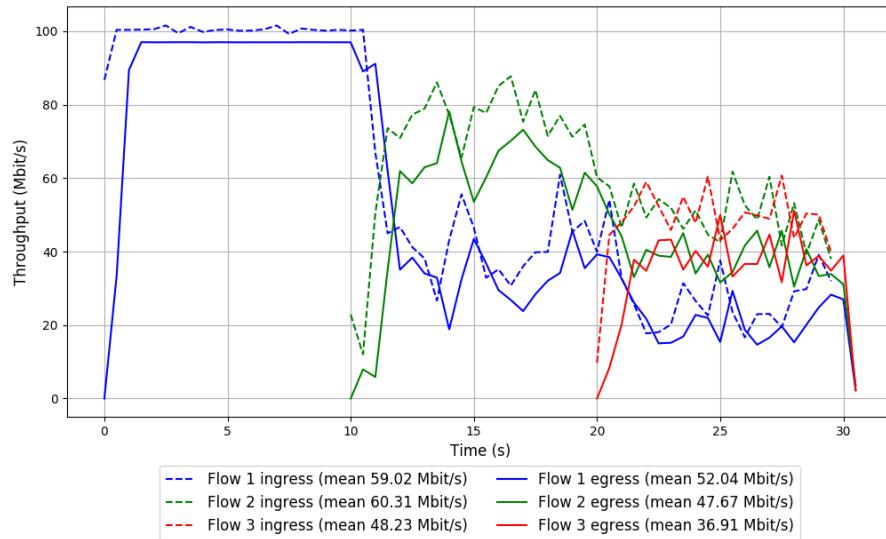


Run 3: Statistics of FillP

```
Start at: 2018-09-07 15:30:52
End at: 2018-09-07 15:31:22
Local clock offset: -70.809 ms
Remote clock offset: -0.022 ms

# Below is generated by plot.py at 2018-09-07 16:20:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.98 Mbit/s
95th percentile per-packet one-way delay: 87.414 ms
Loss rate: 16.59%
-- Flow 1:
Average throughput: 52.04 Mbit/s
95th percentile per-packet one-way delay: 87.420 ms
Loss rate: 11.75%
-- Flow 2:
Average throughput: 47.67 Mbit/s
95th percentile per-packet one-way delay: 85.703 ms
Loss rate: 20.96%
-- Flow 3:
Average throughput: 36.91 Mbit/s
95th percentile per-packet one-way delay: 87.512 ms
Loss rate: 23.46%
```

Run 3: Report of FillP — Data Link

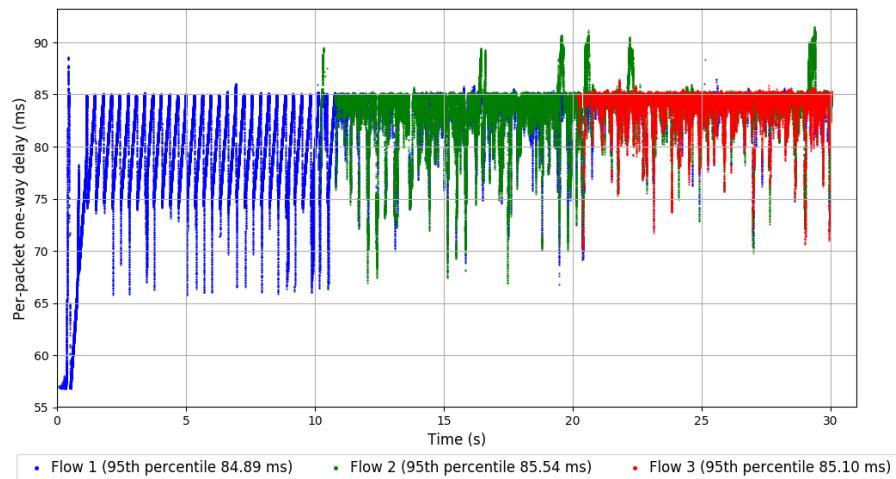
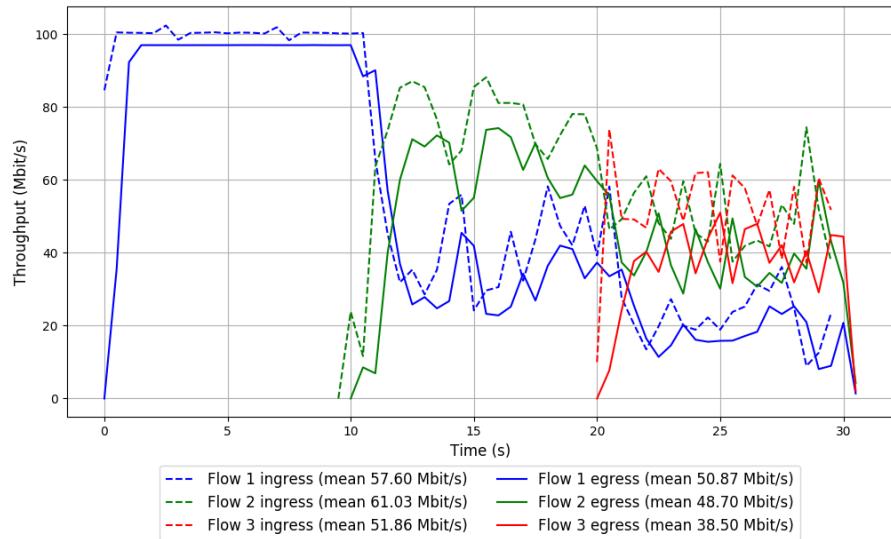


Run 4: Statistics of FillP

```
Start at: 2018-09-07 15:51:22
End at: 2018-09-07 15:51:52
Local clock offset: -65.435 ms
Remote clock offset: 0.028 ms

# Below is generated by plot.py at 2018-09-07 16:20:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.06 Mbit/s
95th percentile per-packet one-way delay: 85.038 ms
Loss rate: 16.74%
-- Flow 1:
Average throughput: 50.87 Mbit/s
95th percentile per-packet one-way delay: 84.891 ms
Loss rate: 11.60%
-- Flow 2:
Average throughput: 48.70 Mbit/s
95th percentile per-packet one-way delay: 85.544 ms
Loss rate: 20.19%
-- Flow 3:
Average throughput: 38.50 Mbit/s
95th percentile per-packet one-way delay: 85.103 ms
Loss rate: 25.77%
```

Run 4: Report of FillP — Data Link

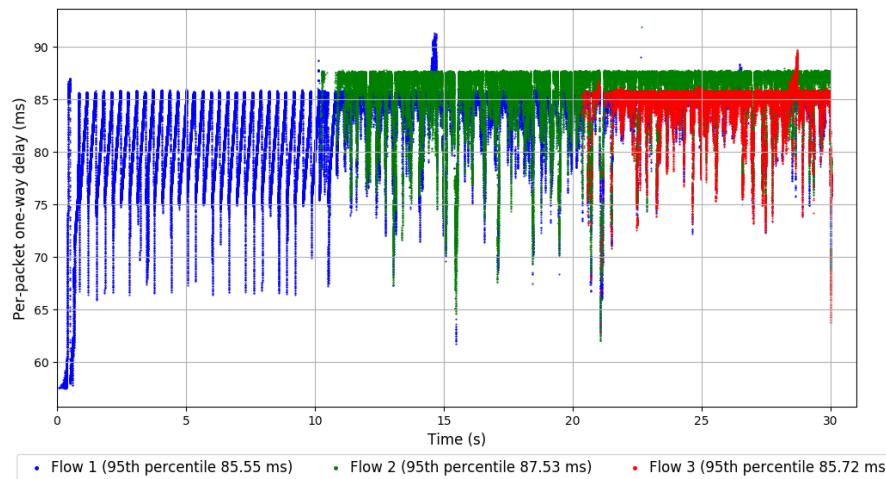
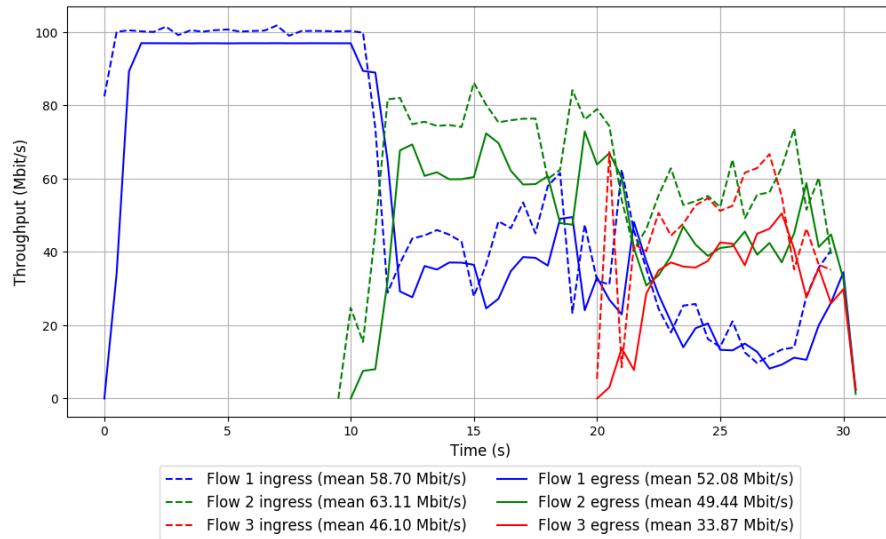


Run 5: Statistics of FillP

```
Start at: 2018-09-07 16:11:51
End at: 2018-09-07 16:12:21
Local clock offset: -60.514 ms
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2018-09-07 16:20:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 87.387 ms
Loss rate: 17.23%
-- Flow 1:
Average throughput: 52.08 Mbit/s
95th percentile per-packet one-way delay: 85.548 ms
Loss rate: 11.23%
-- Flow 2:
Average throughput: 49.44 Mbit/s
95th percentile per-packet one-way delay: 87.527 ms
Loss rate: 21.67%
-- Flow 3:
Average throughput: 33.87 Mbit/s
95th percentile per-packet one-way delay: 85.725 ms
Loss rate: 28.05%
```

Run 5: Report of FillP — Data Link

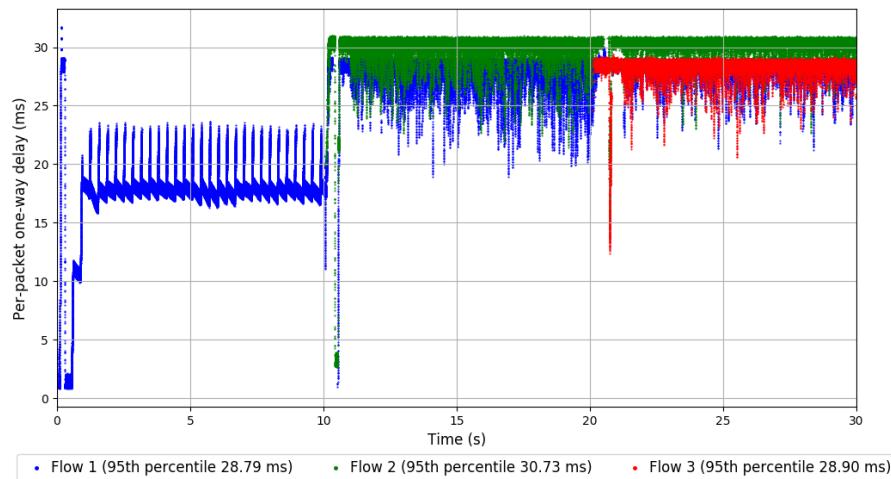
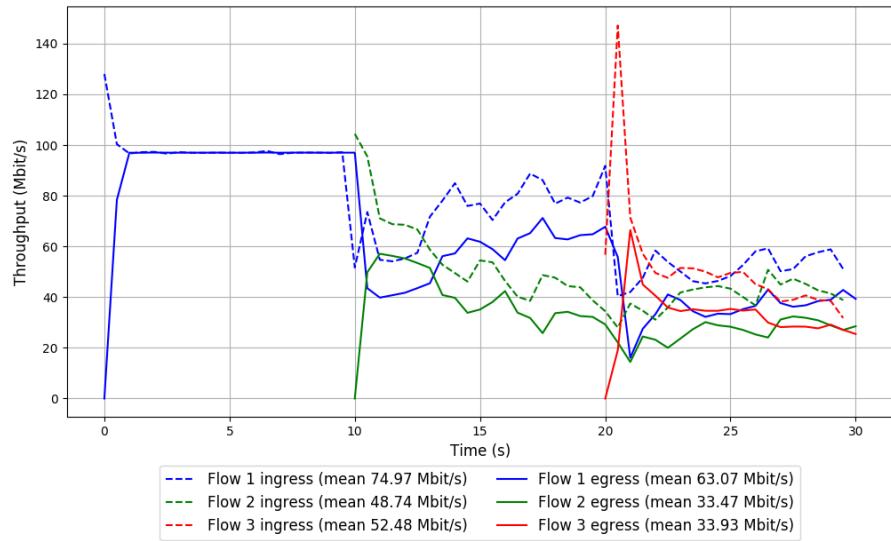


Run 1: Statistics of FillP-Sheep

```
Start at: 2018-09-07 14:43:02
End at: 2018-09-07 14:43:32
Local clock offset: -7.697 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-09-07 16:20:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.61 Mbit/s
95th percentile per-packet one-way delay: 30.552 ms
Loss rate: 22.56%
-- Flow 1:
Average throughput: 63.07 Mbit/s
95th percentile per-packet one-way delay: 28.785 ms
Loss rate: 15.80%
-- Flow 2:
Average throughput: 33.47 Mbit/s
95th percentile per-packet one-way delay: 30.732 ms
Loss rate: 31.28%
-- Flow 3:
Average throughput: 33.93 Mbit/s
95th percentile per-packet one-way delay: 28.897 ms
Loss rate: 35.37%
```

Run 1: Report of FillP-Sheep — Data Link

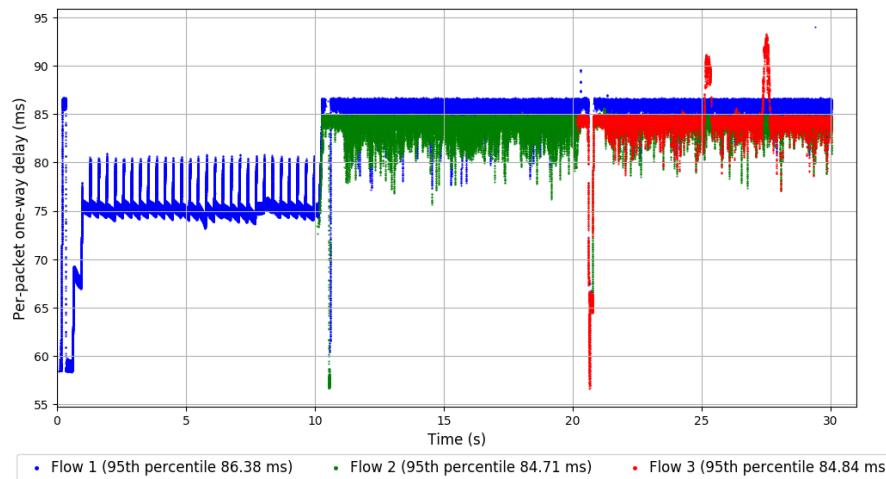
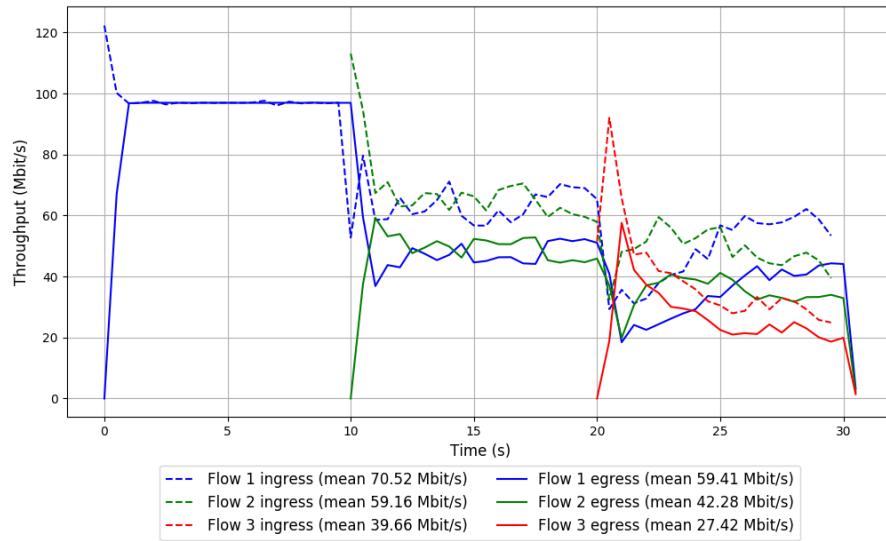


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-09-07 15:03:31
End at: 2018-09-07 15:04:01
Local clock offset: -67.668 ms
Remote clock offset: 0.024 ms

# Below is generated by plot.py at 2018-09-07 16:21:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.63 Mbit/s
95th percentile per-packet one-way delay: 86.316 ms
Loss rate: 21.41%
-- Flow 1:
Average throughput: 59.41 Mbit/s
95th percentile per-packet one-way delay: 86.381 ms
Loss rate: 15.68%
-- Flow 2:
Average throughput: 42.28 Mbit/s
95th percentile per-packet one-way delay: 84.708 ms
Loss rate: 28.50%
-- Flow 3:
Average throughput: 27.42 Mbit/s
95th percentile per-packet one-way delay: 84.841 ms
Loss rate: 30.86%
```

Run 2: Report of FillP-Sheep — Data Link

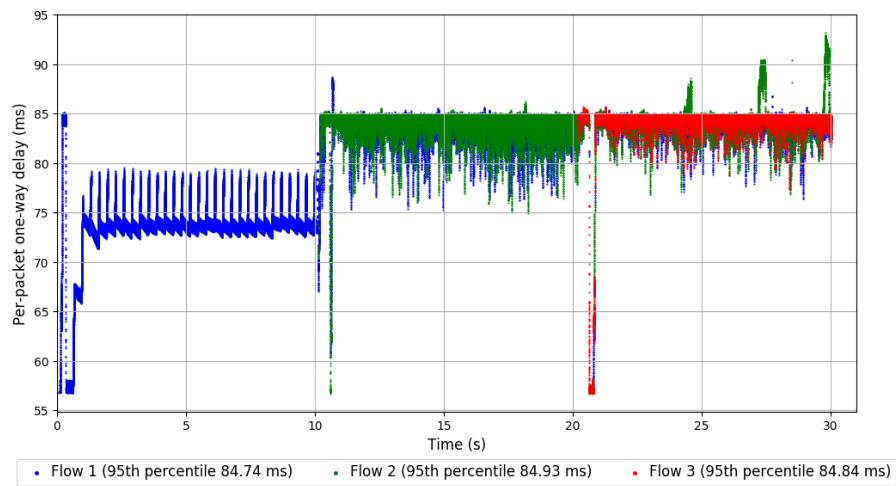
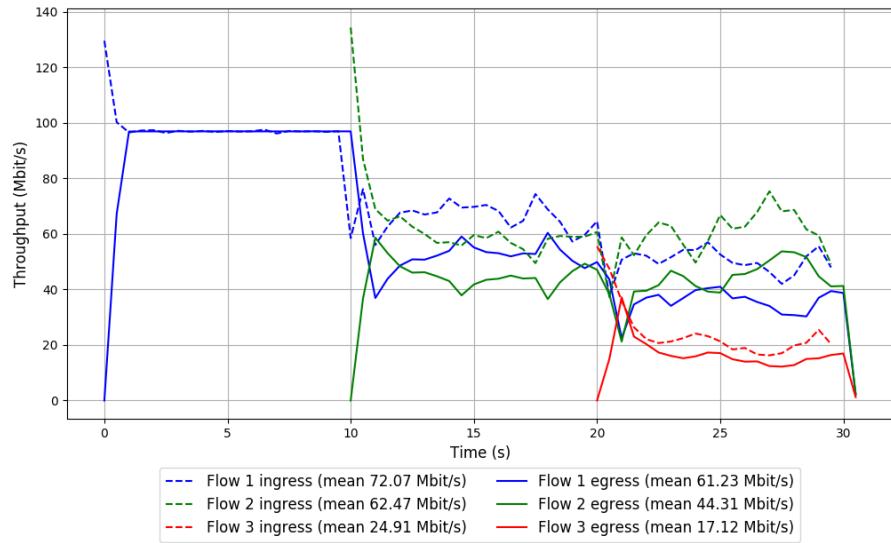


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-09-07 15:24:00
End at: 2018-09-07 15:24:30
Local clock offset: -69.385 ms
Remote clock offset: 0.123 ms

# Below is generated by plot.py at 2018-09-07 16:21:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.37 Mbit/s
95th percentile per-packet one-way delay: 84.820 ms
Loss rate: 20.87%
-- Flow 1:
Average throughput: 61.23 Mbit/s
95th percentile per-packet one-way delay: 84.739 ms
Loss rate: 14.97%
-- Flow 2:
Average throughput: 44.31 Mbit/s
95th percentile per-packet one-way delay: 84.933 ms
Loss rate: 29.03%
-- Flow 3:
Average throughput: 17.12 Mbit/s
95th percentile per-packet one-way delay: 84.840 ms
Loss rate: 31.30%
```

Run 3: Report of FillP-Sheep — Data Link

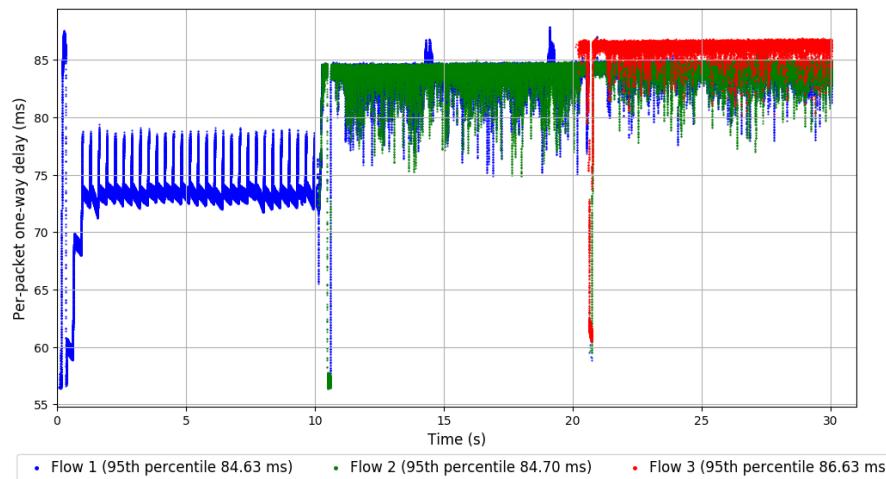
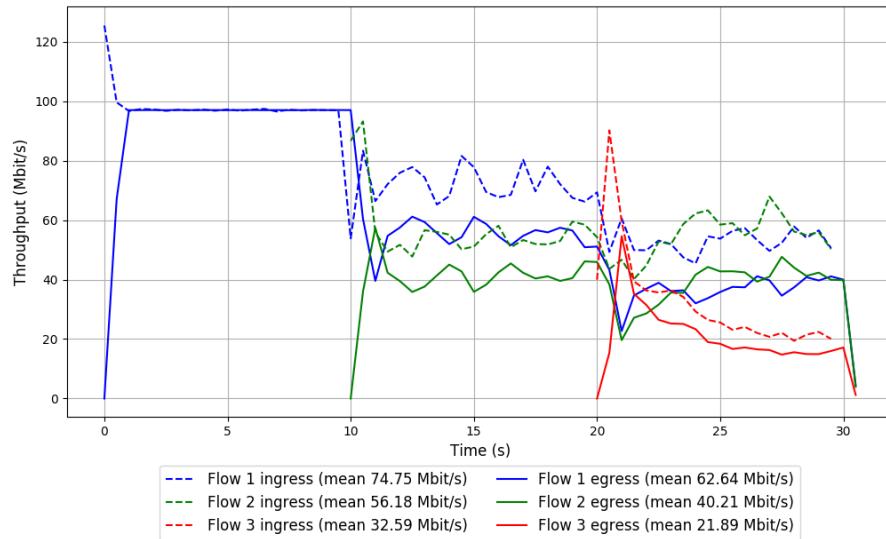


Run 4: Statistics of FillP-Sheep

```
Start at: 2018-09-07 15:44:31
End at: 2018-09-07 15:45:01
Local clock offset: -70.478 ms
Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2018-09-07 16:21:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.65 Mbit/s
95th percentile per-packet one-way delay: 85.951 ms
Loss rate: 21.31%
-- Flow 1:
Average throughput: 62.64 Mbit/s
95th percentile per-packet one-way delay: 84.634 ms
Loss rate: 16.12%
-- Flow 2:
Average throughput: 40.21 Mbit/s
95th percentile per-packet one-way delay: 84.698 ms
Loss rate: 28.37%
-- Flow 3:
Average throughput: 21.89 Mbit/s
95th percentile per-packet one-way delay: 86.632 ms
Loss rate: 32.84%
```

Run 4: Report of FillP-Sheep — Data Link

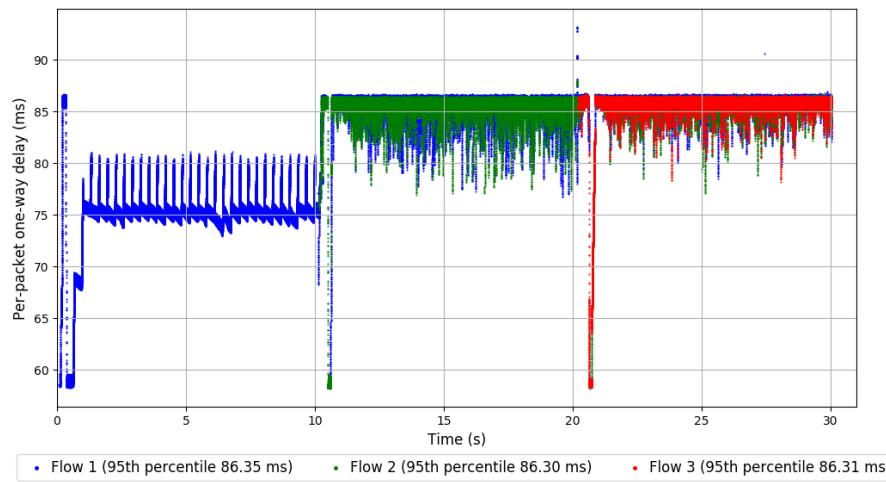
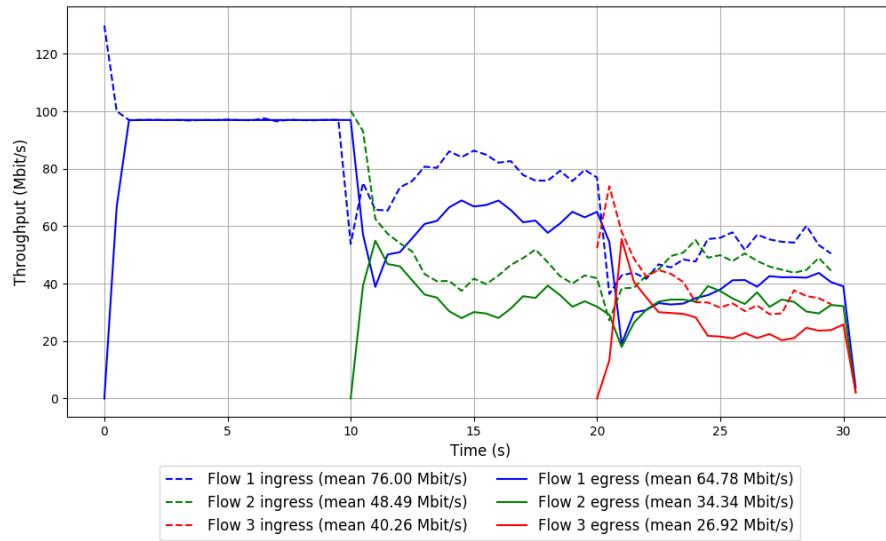


Run 5: Statistics of FillP-Sheep

```
Start at: 2018-09-07 16:04:59
End at: 2018-09-07 16:05:29
Local clock offset: -60.599 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2018-09-07 16:21:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.53 Mbit/s
95th percentile per-packet one-way delay: 86.336 ms
Loss rate: 20.55%
-- Flow 1:
Average throughput: 64.78 Mbit/s
95th percentile per-packet one-way delay: 86.354 ms
Loss rate: 14.69%
-- Flow 2:
Average throughput: 34.34 Mbit/s
95th percentile per-packet one-way delay: 86.297 ms
Loss rate: 29.14%
-- Flow 3:
Average throughput: 26.92 Mbit/s
95th percentile per-packet one-way delay: 86.308 ms
Loss rate: 33.13%
```

Run 5: Report of FillP-Sheep — Data Link

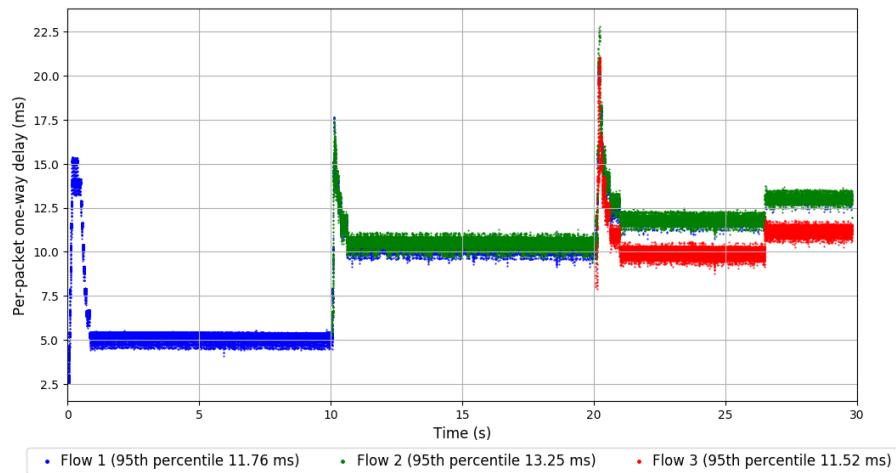
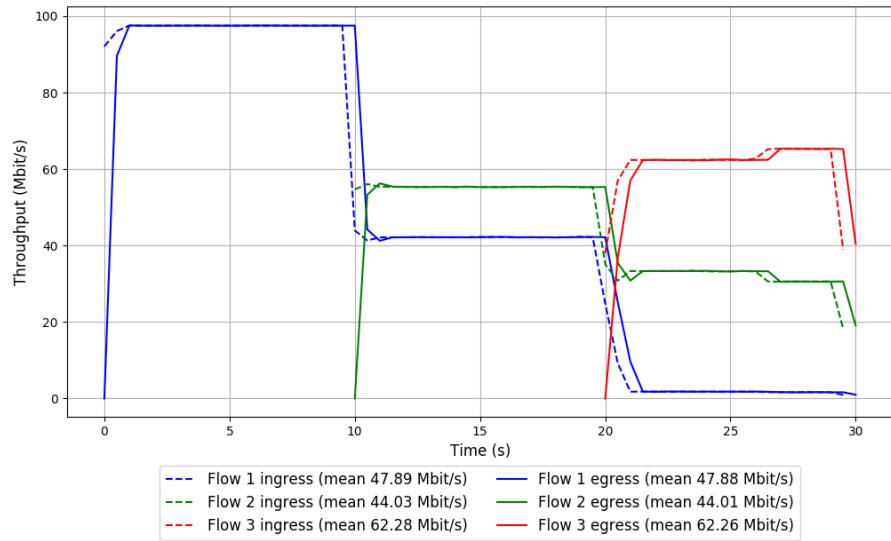


Run 1: Statistics of Indigo

```
Start at: 2018-09-07 14:48:43
End at: 2018-09-07 14:49:13
Local clock offset: -9.035 ms
Remote clock offset: 0.057 ms

# Below is generated by plot.py at 2018-09-07 16:21:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.41 Mbit/s
95th percentile per-packet one-way delay: 13.144 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.88 Mbit/s
95th percentile per-packet one-way delay: 11.761 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 44.01 Mbit/s
95th percentile per-packet one-way delay: 13.247 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.26 Mbit/s
95th percentile per-packet one-way delay: 11.521 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link

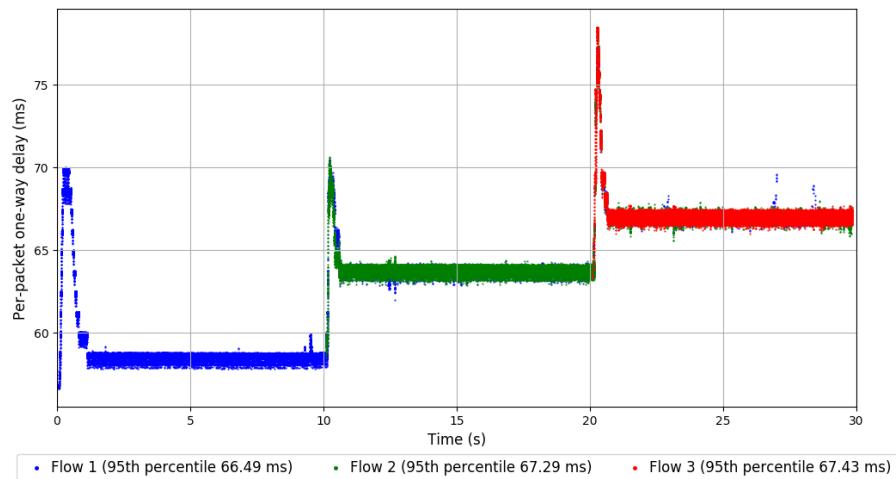
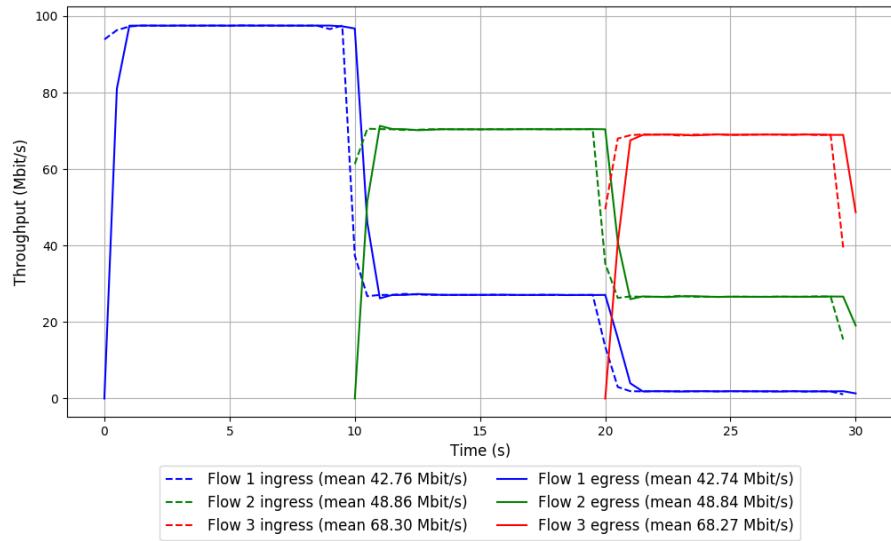


Run 2: Statistics of Indigo

```
Start at: 2018-09-07 15:09:12
End at: 2018-09-07 15:09:42
Local clock offset: -68.064 ms
Remote clock offset: 0.112 ms

# Below is generated by plot.py at 2018-09-07 16:21:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 67.317 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.74 Mbit/s
95th percentile per-packet one-way delay: 66.491 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 48.84 Mbit/s
95th percentile per-packet one-way delay: 67.293 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 68.27 Mbit/s
95th percentile per-packet one-way delay: 67.429 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo — Data Link

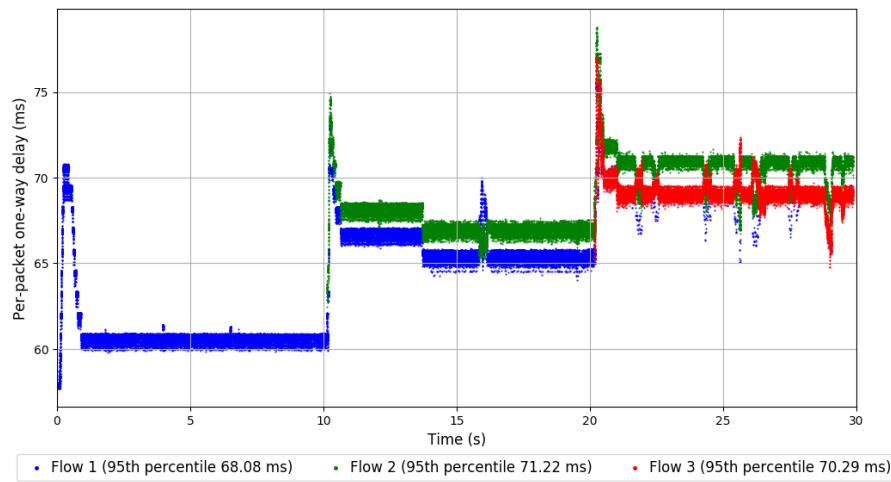
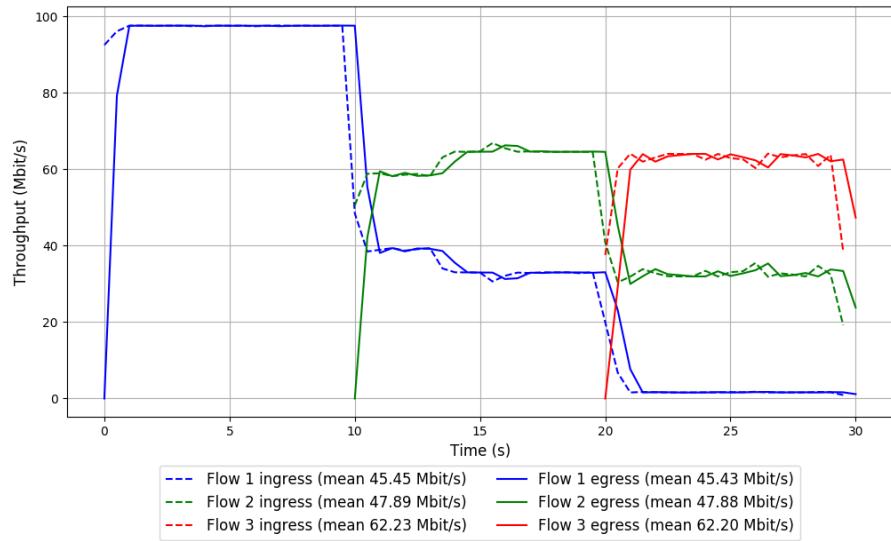


Run 3: Statistics of Indigo

```
Start at: 2018-09-07 15:29:41
End at: 2018-09-07 15:30:11
Local clock offset: -70.732 ms
Remote clock offset: 0.062 ms

# Below is generated by plot.py at 2018-09-07 16:21:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.41 Mbit/s
95th percentile per-packet one-way delay: 70.982 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.43 Mbit/s
95th percentile per-packet one-way delay: 68.080 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 47.88 Mbit/s
95th percentile per-packet one-way delay: 71.223 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.20 Mbit/s
95th percentile per-packet one-way delay: 70.291 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo — Data Link

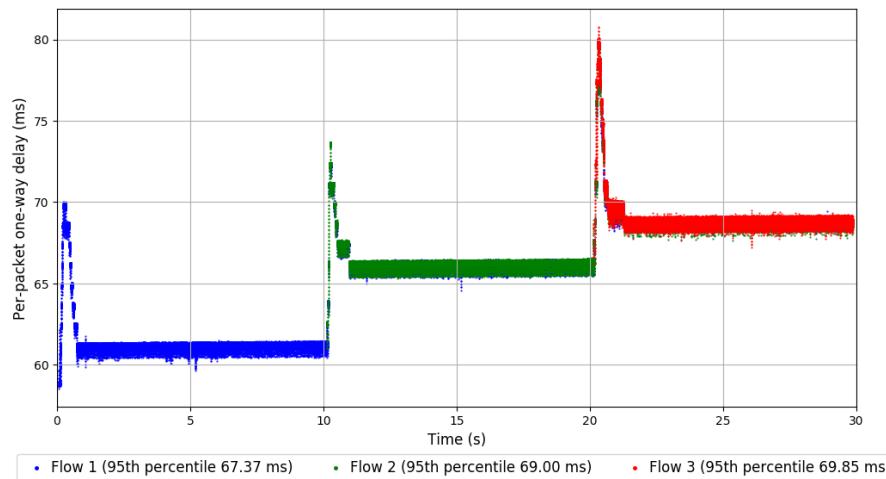
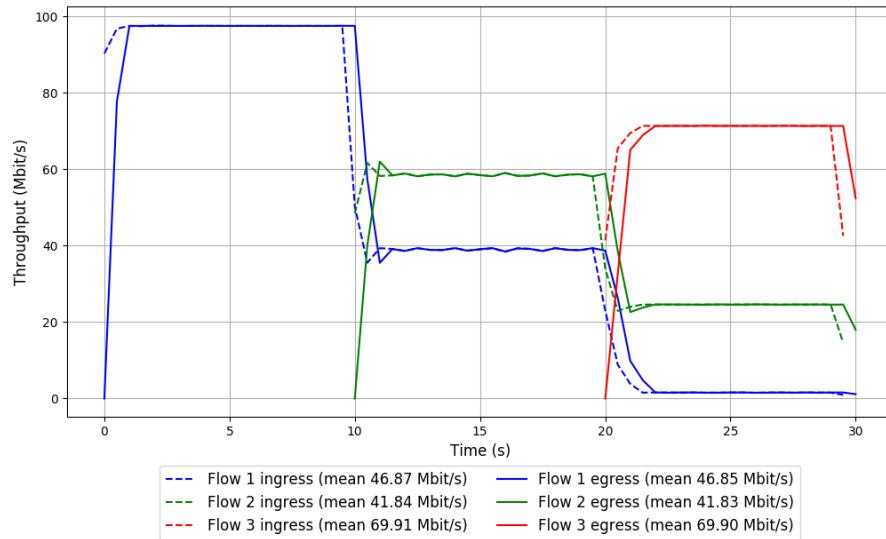


Run 4: Statistics of Indigo

```
Start at: 2018-09-07 15:50:12
End at: 2018-09-07 15:50:42
Local clock offset: -66.128 ms
Remote clock offset: 0.012 ms

# Below is generated by plot.py at 2018-09-07 16:21:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 69.096 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.85 Mbit/s
95th percentile per-packet one-way delay: 67.374 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.83 Mbit/s
95th percentile per-packet one-way delay: 68.995 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 69.90 Mbit/s
95th percentile per-packet one-way delay: 69.846 ms
Loss rate: 0.00%
```

Run 4: Report of Indigo — Data Link

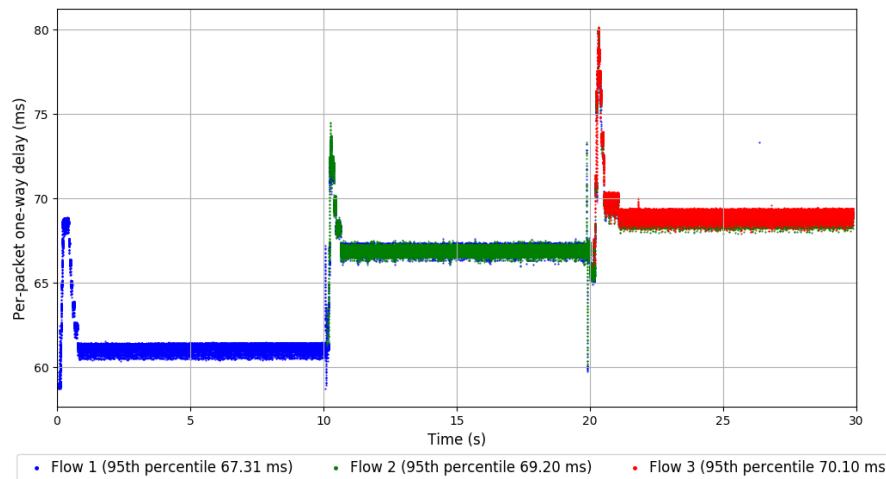
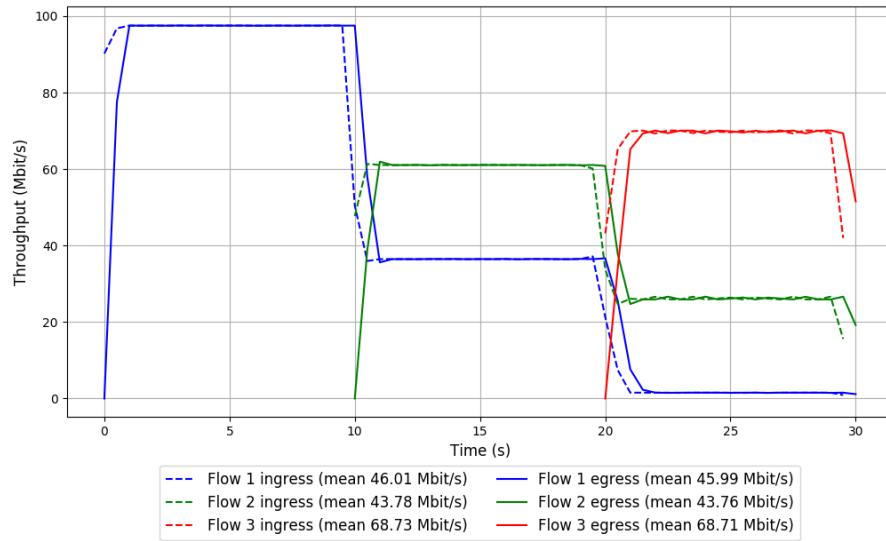


Run 5: Statistics of Indigo

```
Start at: 2018-09-07 16:10:41
End at: 2018-09-07 16:11:11
Local clock offset: -59.902 ms
Remote clock offset: 0.098 ms

# Below is generated by plot.py at 2018-09-07 16:22:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 69.298 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.99 Mbit/s
95th percentile per-packet one-way delay: 67.311 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.76 Mbit/s
95th percentile per-packet one-way delay: 69.203 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 68.71 Mbit/s
95th percentile per-packet one-way delay: 70.098 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo — Data Link

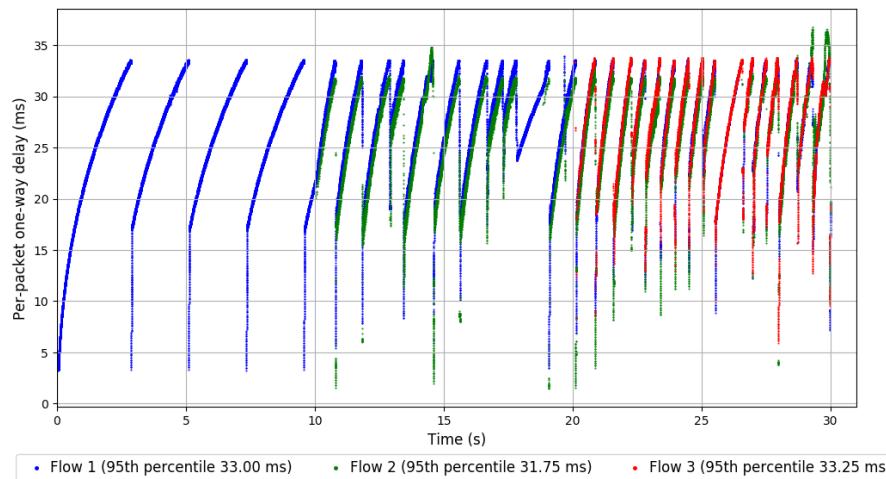
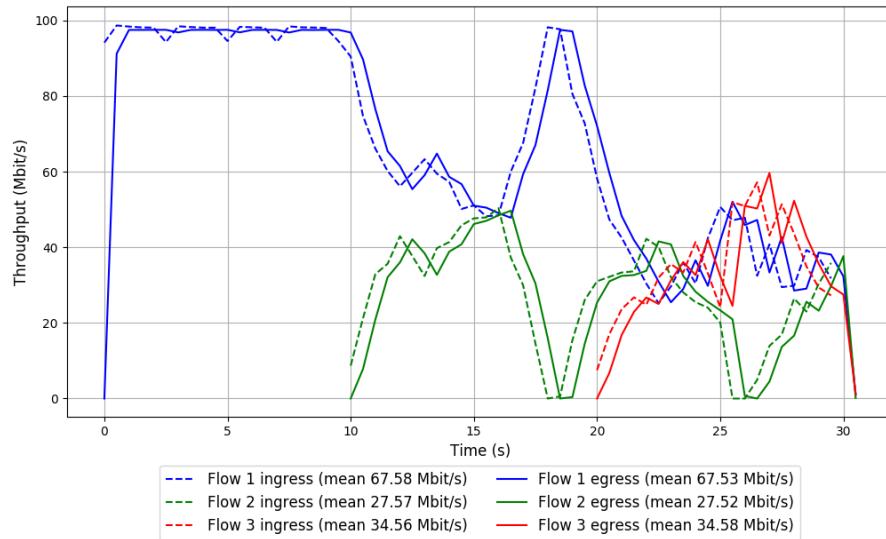


Run 1: Statistics of LEDBAT

```
Start at: 2018-09-07 14:39:38
End at: 2018-09-07 14:40:08
Local clock offset: -8.36 ms
Remote clock offset: -0.179 ms

# Below is generated by plot.py at 2018-09-07 16:22:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 32.996 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 67.53 Mbit/s
95th percentile per-packet one-way delay: 33.003 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 27.52 Mbit/s
95th percentile per-packet one-way delay: 31.749 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 34.58 Mbit/s
95th percentile per-packet one-way delay: 33.248 ms
Loss rate: 0.08%
```

Run 1: Report of LEDBAT — Data Link

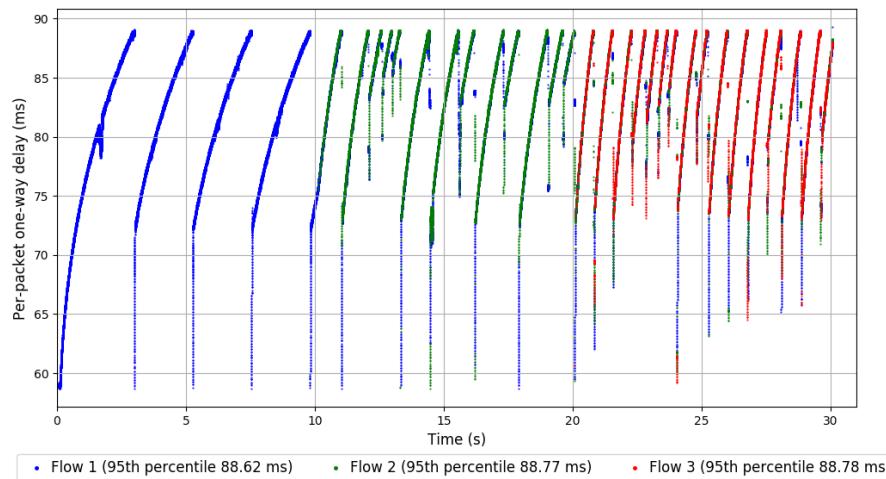
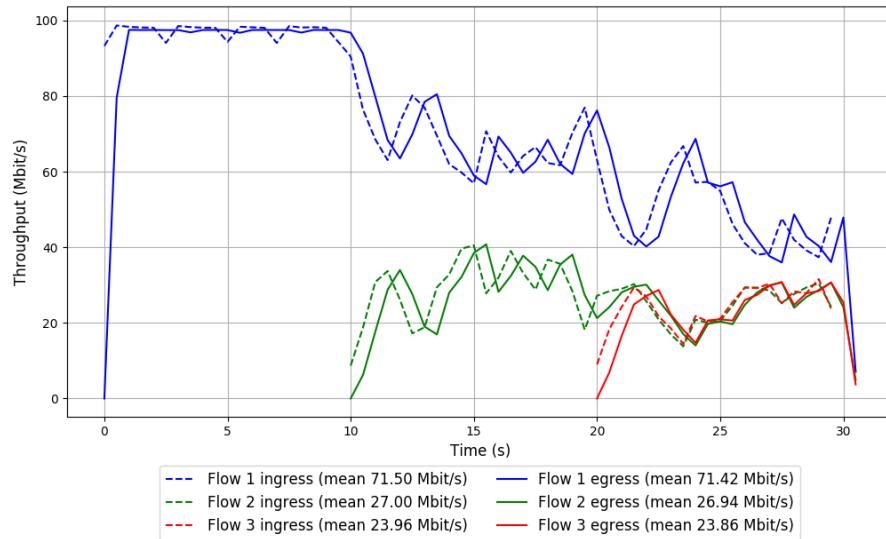


Run 2: Statistics of LEDBAT

```
Start at: 2018-09-07 15:00:06
End at: 2018-09-07 15:00:36
Local clock offset: -67.215 ms
Remote clock offset: 0.153 ms

# Below is generated by plot.py at 2018-09-07 16:22:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.29 Mbit/s
95th percentile per-packet one-way delay: 88.649 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 71.42 Mbit/s
95th percentile per-packet one-way delay: 88.624 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 26.94 Mbit/s
95th percentile per-packet one-way delay: 88.768 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 23.86 Mbit/s
95th percentile per-packet one-way delay: 88.781 ms
Loss rate: 0.15%
```

Run 2: Report of LEDBAT — Data Link

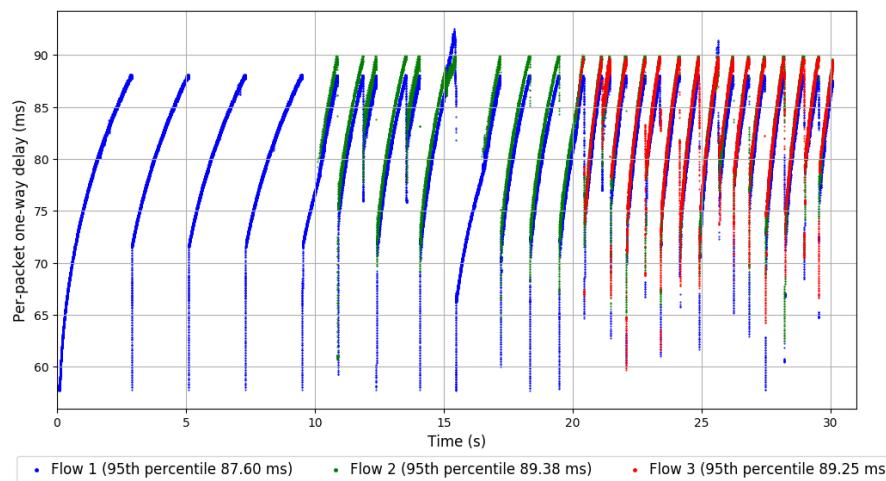
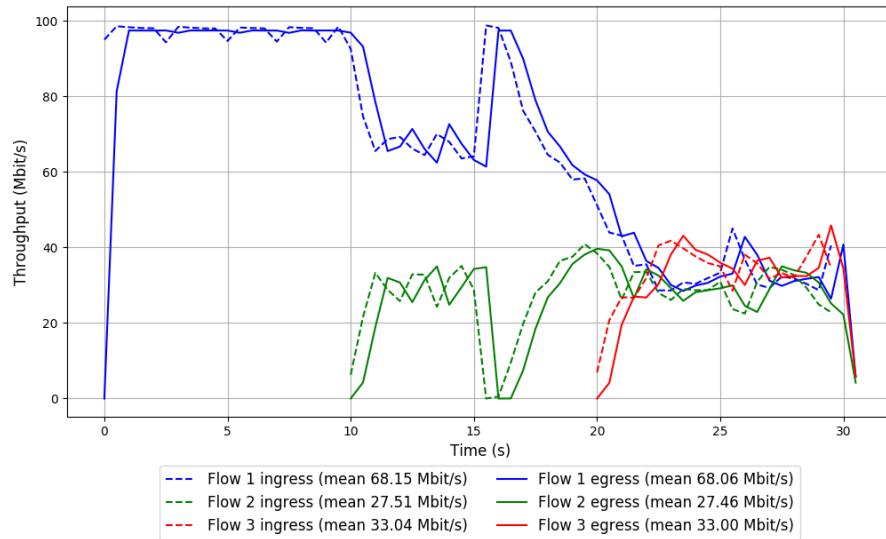


Run 3: Statistics of LEDBAT

```
Start at: 2018-09-07 15:20:36
End at: 2018-09-07 15:21:06
Local clock offset: -70.076 ms
Remote clock offset: 0.135 ms

# Below is generated by plot.py at 2018-09-07 16:22:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.30 Mbit/s
95th percentile per-packet one-way delay: 88.529 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 68.06 Mbit/s
95th percentile per-packet one-way delay: 87.603 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 27.46 Mbit/s
95th percentile per-packet one-way delay: 89.384 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 33.00 Mbit/s
95th percentile per-packet one-way delay: 89.246 ms
Loss rate: 0.06%
```

Run 3: Report of LEDBAT — Data Link

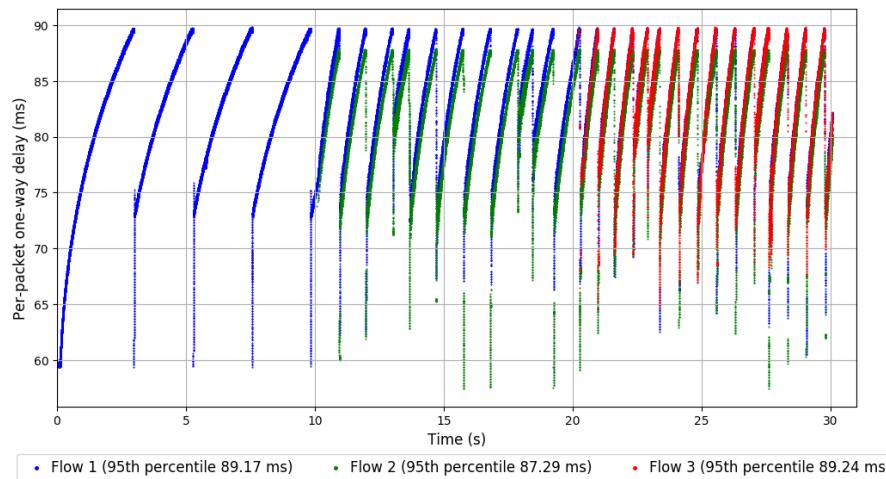
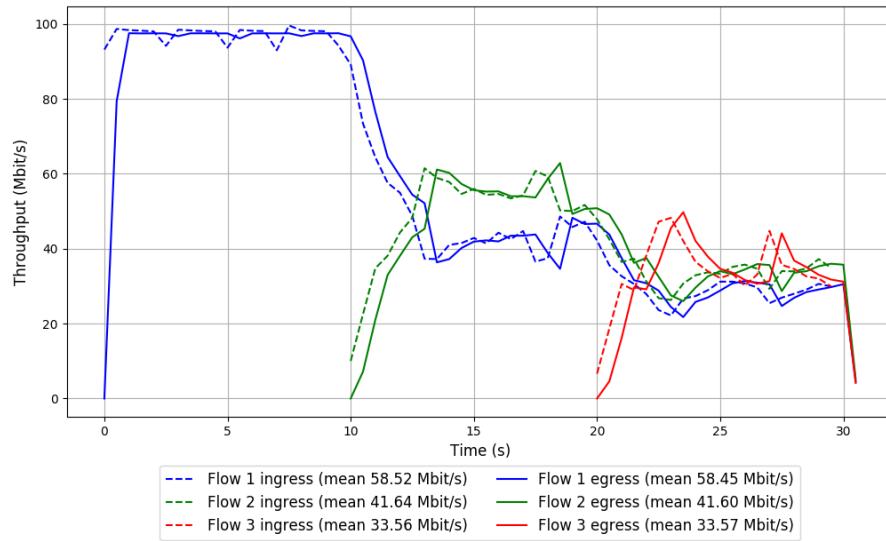


Run 4: Statistics of LEDBAT

```
Start at: 2018-09-07 15:41:07
End at: 2018-09-07 15:41:37
Local clock offset: -71.276 ms
Remote clock offset: 0.099 ms

# Below is generated by plot.py at 2018-09-07 16:22:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.29 Mbit/s
95th percentile per-packet one-way delay: 89.000 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 58.45 Mbit/s
95th percentile per-packet one-way delay: 89.166 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 41.60 Mbit/s
95th percentile per-packet one-way delay: 87.287 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 33.57 Mbit/s
95th percentile per-packet one-way delay: 89.244 ms
Loss rate: 0.06%
```

Run 4: Report of LEDBAT — Data Link

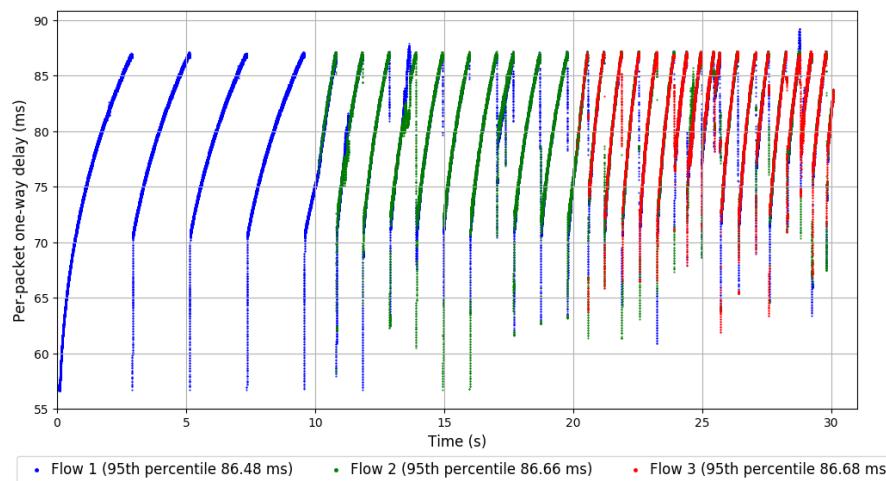
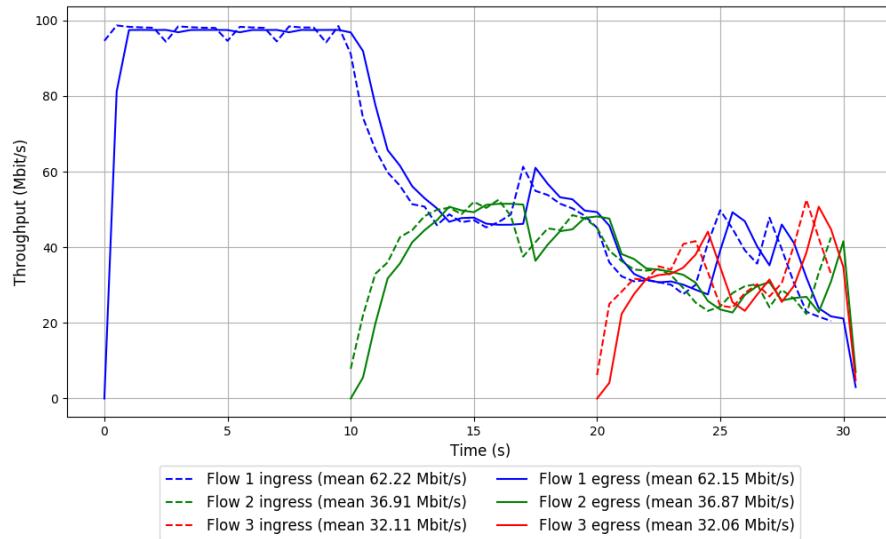


Run 5: Statistics of LEDBAT

```
Start at: 2018-09-07 16:01:35
End at: 2018-09-07 16:02:05
Local clock offset: -61.477 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2018-09-07 16:22:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.34 Mbit/s
95th percentile per-packet one-way delay: 86.627 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 62.15 Mbit/s
95th percentile per-packet one-way delay: 86.483 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 36.87 Mbit/s
95th percentile per-packet one-way delay: 86.657 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 32.06 Mbit/s
95th percentile per-packet one-way delay: 86.678 ms
Loss rate: 0.12%
```

Run 5: Report of LEDBAT — Data Link

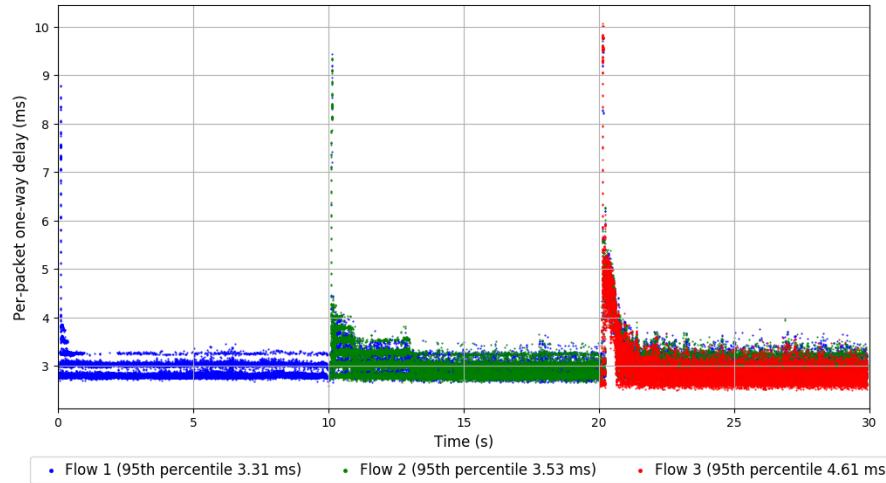
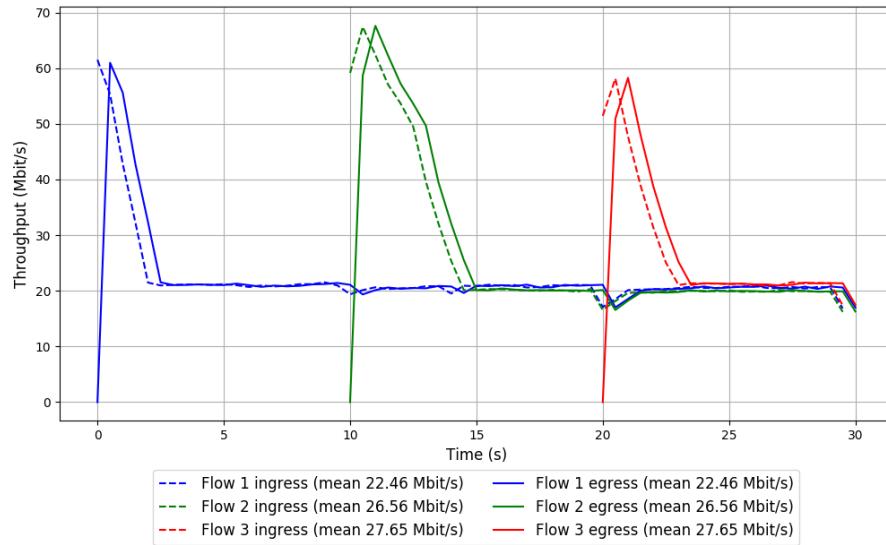


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-09-07 14:37:21
End at: 2018-09-07 14:37:51
Local clock offset: -7.664 ms
Remote clock offset: -0.207 ms

# Below is generated by plot.py at 2018-09-07 16:22:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.26 Mbit/s
95th percentile per-packet one-way delay: 3.558 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 22.46 Mbit/s
95th percentile per-packet one-way delay: 3.315 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.56 Mbit/s
95th percentile per-packet one-way delay: 3.534 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.65 Mbit/s
95th percentile per-packet one-way delay: 4.612 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-Muses — Data Link

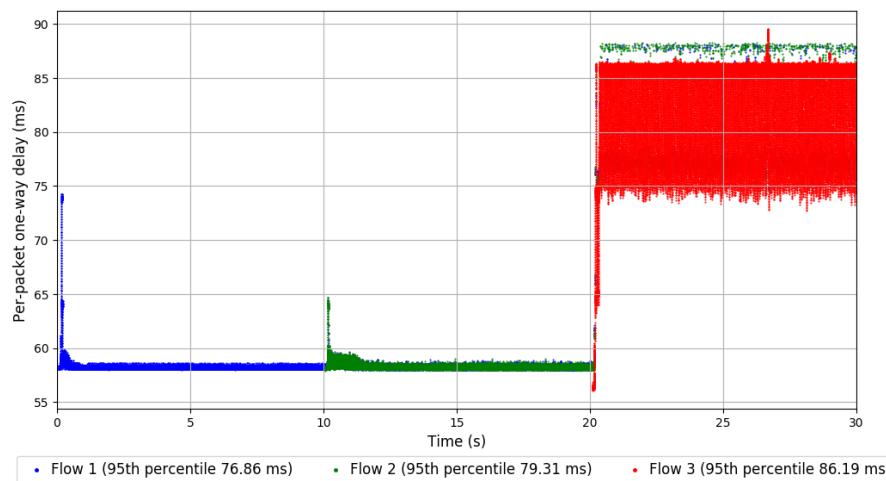
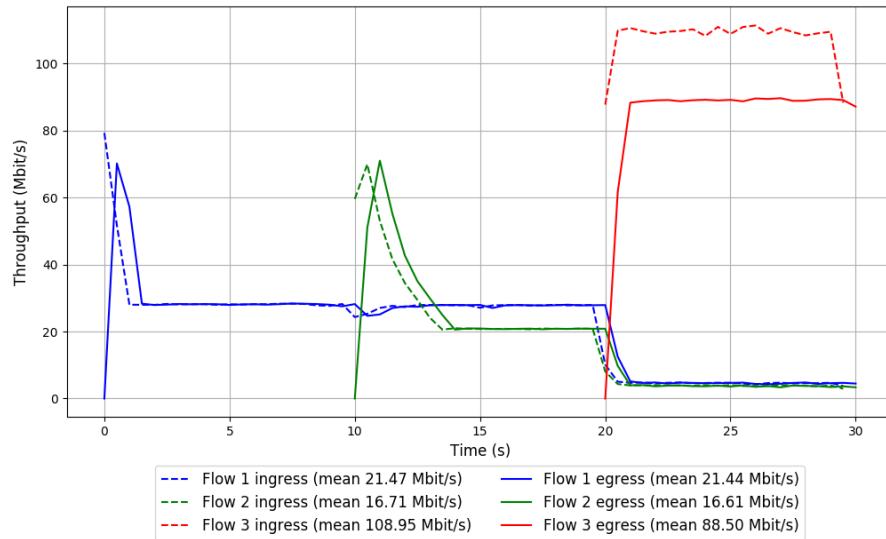


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-09-07 14:57:49
End at: 2018-09-07 14:58:19
Local clock offset: -66.328 ms
Remote clock offset: 0.083 ms

# Below is generated by plot.py at 2018-09-07 16:22:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.76 Mbit/s
95th percentile per-packet one-way delay: 86.064 ms
Loss rate: 9.82%
-- Flow 1:
Average throughput: 21.44 Mbit/s
95th percentile per-packet one-way delay: 76.864 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 16.61 Mbit/s
95th percentile per-packet one-way delay: 79.315 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 88.50 Mbit/s
95th percentile per-packet one-way delay: 86.191 ms
Loss rate: 18.53%
```

Run 2: Report of Indigo-Muses — Data Link

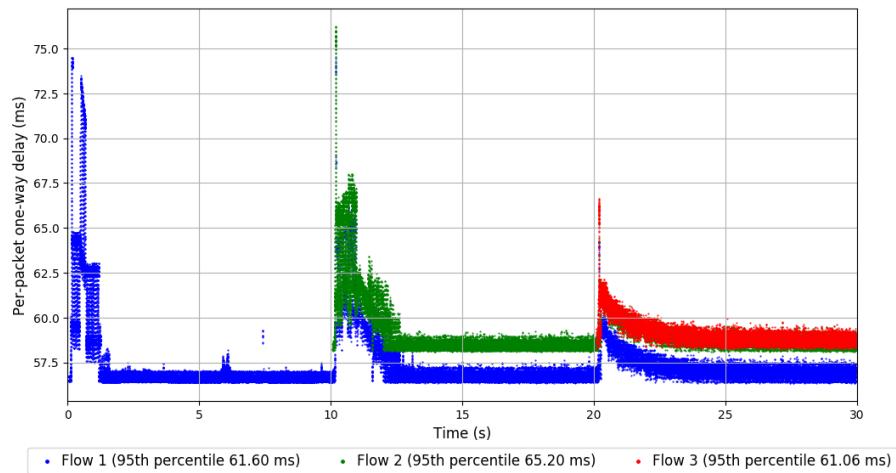
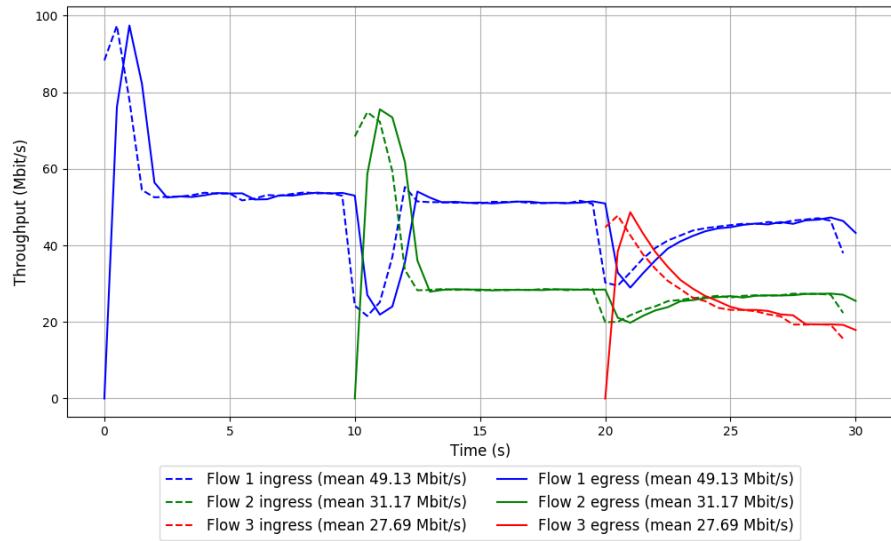


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-09-07 15:18:19
End at: 2018-09-07 15:18:49
Local clock offset: -68.75 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2018-09-07 16:23:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.00 Mbit/s
95th percentile per-packet one-way delay: 62.096 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.13 Mbit/s
95th percentile per-packet one-way delay: 61.602 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.17 Mbit/s
95th percentile per-packet one-way delay: 65.196 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.69 Mbit/s
95th percentile per-packet one-way delay: 61.058 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo-Muses — Data Link

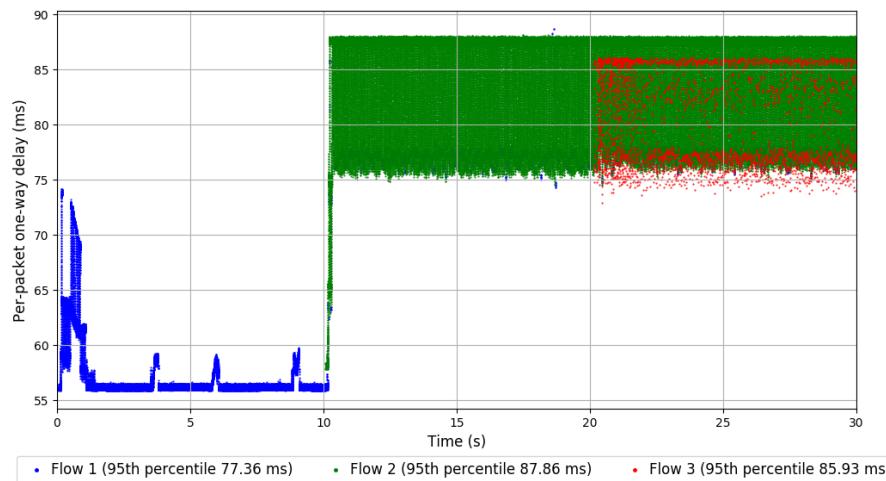
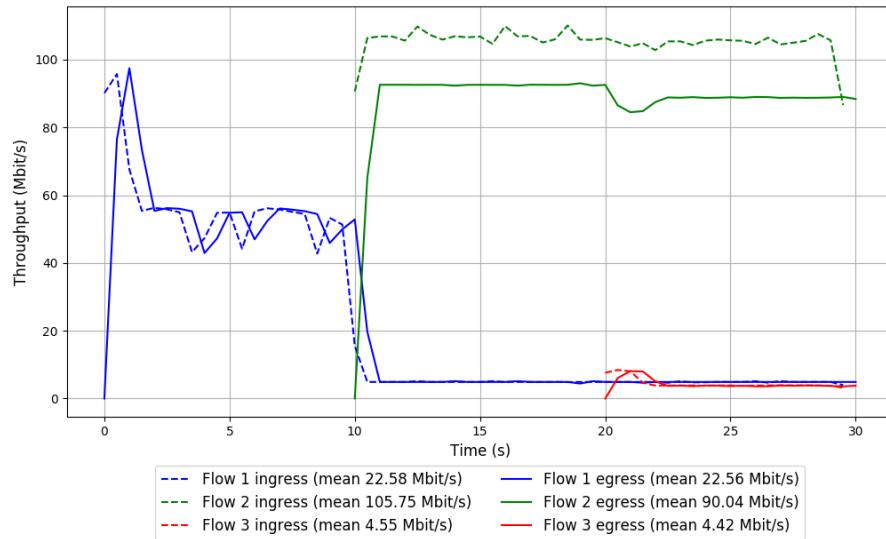


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-09-07 15:38:49
End at: 2018-09-07 15:39:19
Local clock offset: -69.626 ms
Remote clock offset: 0.012 ms

# Below is generated by plot.py at 2018-09-07 16:23:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.91 Mbit/s
95th percentile per-packet one-way delay: 87.822 ms
Loss rate: 11.02%
-- Flow 1:
Average throughput: 22.56 Mbit/s
95th percentile per-packet one-way delay: 77.357 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 90.04 Mbit/s
95th percentile per-packet one-way delay: 87.857 ms
Loss rate: 14.73%
-- Flow 3:
Average throughput: 4.42 Mbit/s
95th percentile per-packet one-way delay: 85.927 ms
Loss rate: 2.83%
```

Run 4: Report of Indigo-Muses — Data Link

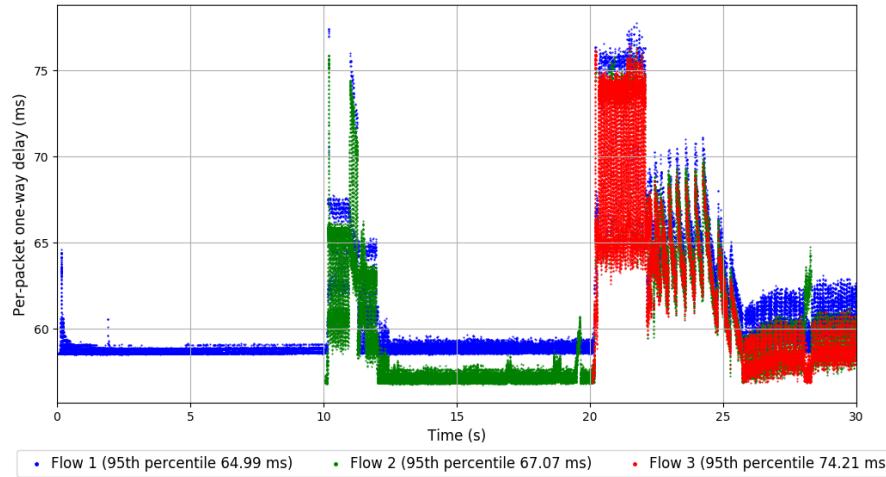
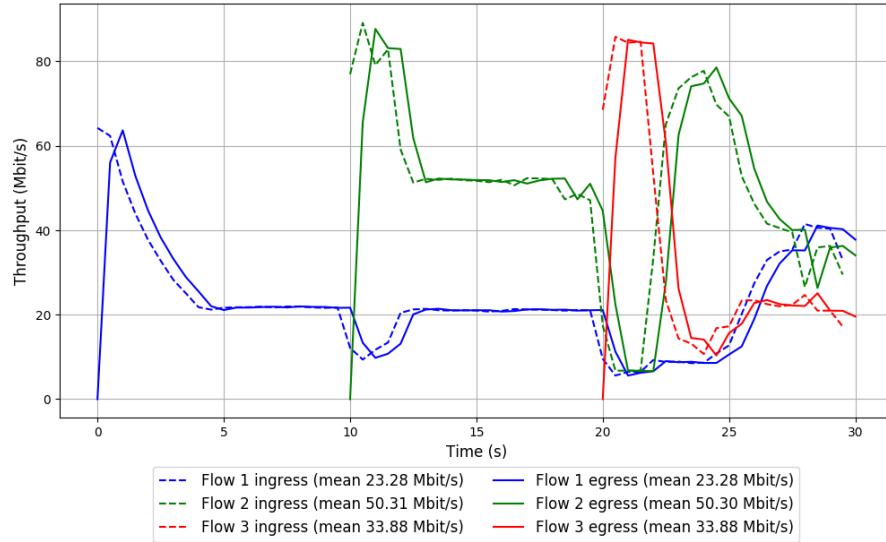


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-09-07 15:59:18
End at: 2018-09-07 15:59:48
Local clock offset: -62.166 ms
Remote clock offset: 0.046 ms

# Below is generated by plot.py at 2018-09-07 16:23:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.93 Mbit/s
95th percentile per-packet one-way delay: 71.621 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.28 Mbit/s
95th percentile per-packet one-way delay: 64.986 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.30 Mbit/s
95th percentile per-packet one-way delay: 67.074 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.88 Mbit/s
95th percentile per-packet one-way delay: 74.214 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo-Muses — Data Link

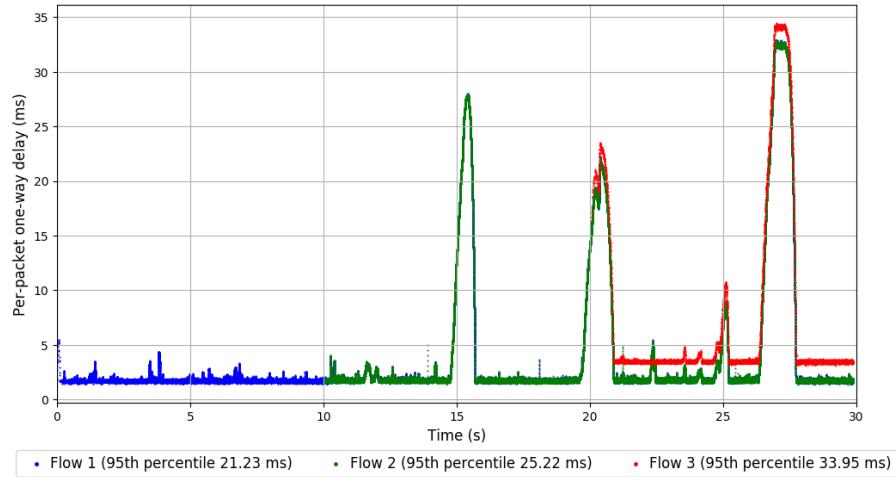
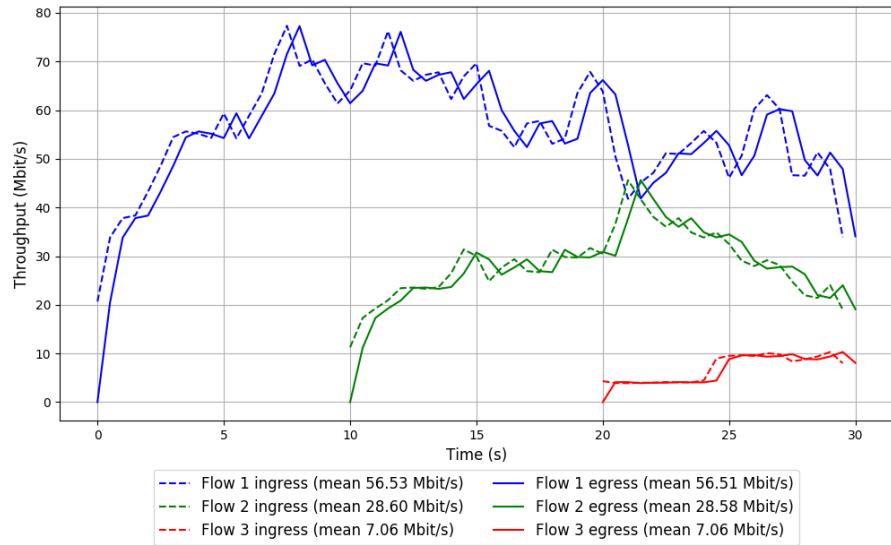


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-09-07 14:40:49
End at: 2018-09-07 14:41:19
Local clock offset: -8.381 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2018-09-07 16:23:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.84 Mbit/s
95th percentile per-packet one-way delay: 22.446 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 56.51 Mbit/s
95th percentile per-packet one-way delay: 21.225 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 28.58 Mbit/s
95th percentile per-packet one-way delay: 25.222 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 7.06 Mbit/s
95th percentile per-packet one-way delay: 33.948 ms
Loss rate: 0.16%
```

Run 1: Report of PCC-Allegro — Data Link

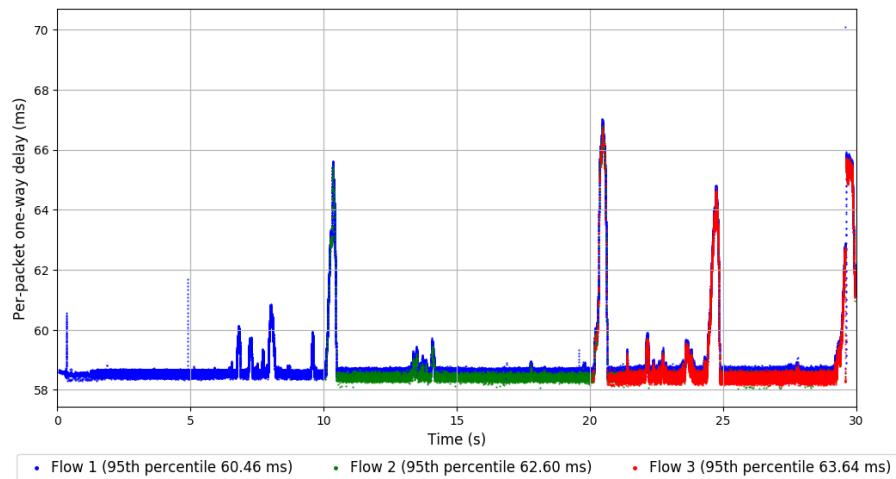
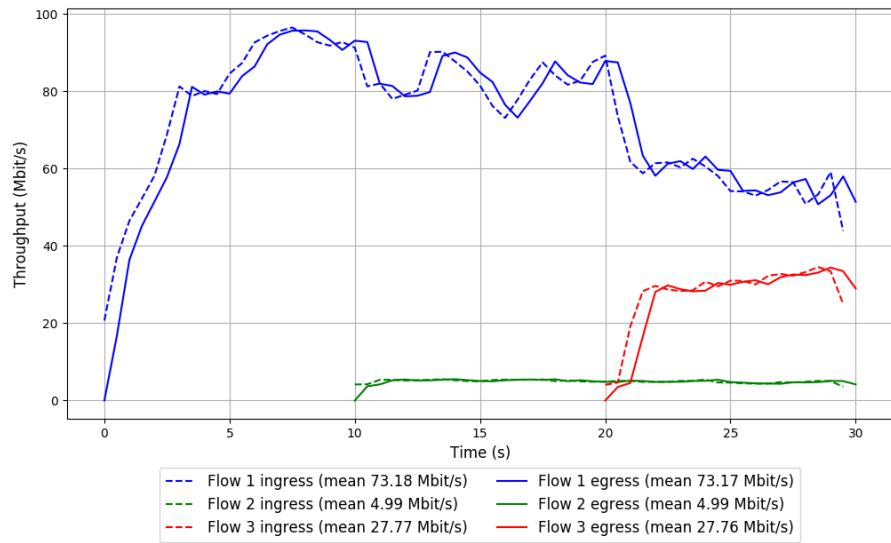


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-09-07 15:01:17
End at: 2018-09-07 15:01:47
Local clock offset: -67.181 ms
Remote clock offset: 0.096 ms

# Below is generated by plot.py at 2018-09-07 16:23:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.65 Mbit/s
95th percentile per-packet one-way delay: 61.242 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 73.17 Mbit/s
95th percentile per-packet one-way delay: 60.464 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.99 Mbit/s
95th percentile per-packet one-way delay: 62.599 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.76 Mbit/s
95th percentile per-packet one-way delay: 63.643 ms
Loss rate: 0.00%
```

Run 2: Report of PCC-Allegro — Data Link

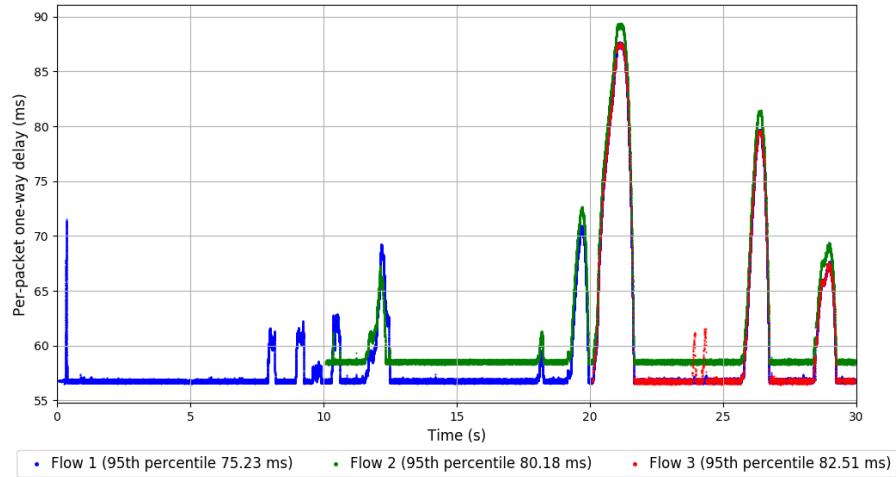
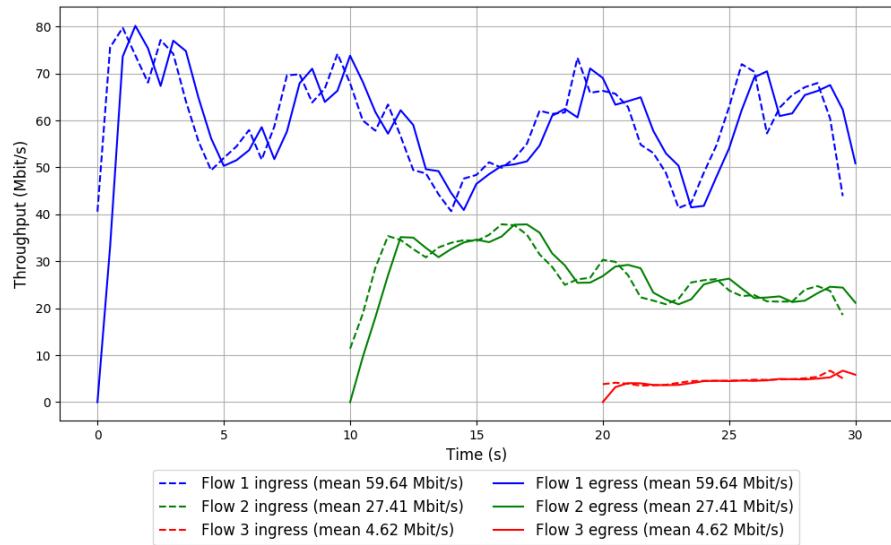


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-09-07 15:21:47
End at: 2018-09-07 15:22:17
Local clock offset: -69.065 ms
Remote clock offset: 0.139 ms

# Below is generated by plot.py at 2018-09-07 16:23:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.38 Mbit/s
95th percentile per-packet one-way delay: 77.164 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.64 Mbit/s
95th percentile per-packet one-way delay: 75.226 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.41 Mbit/s
95th percentile per-packet one-way delay: 80.181 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.62 Mbit/s
95th percentile per-packet one-way delay: 82.506 ms
Loss rate: 0.05%
```

Run 3: Report of PCC-Allegro — Data Link

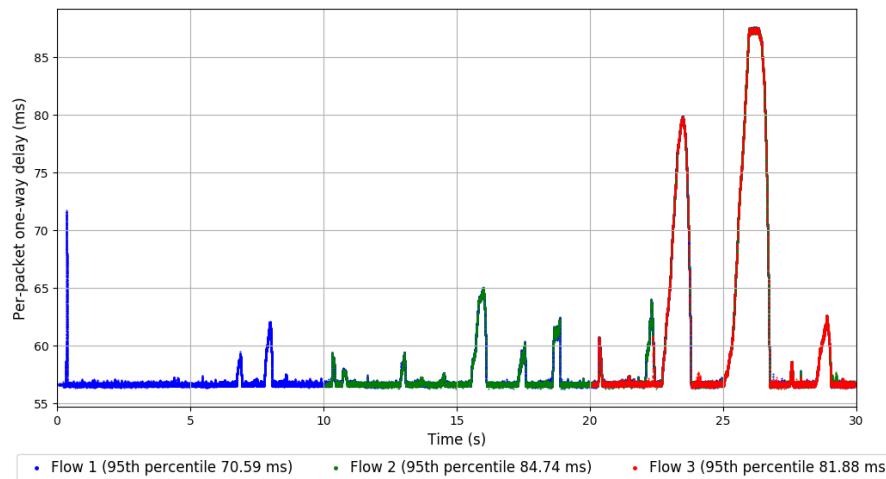
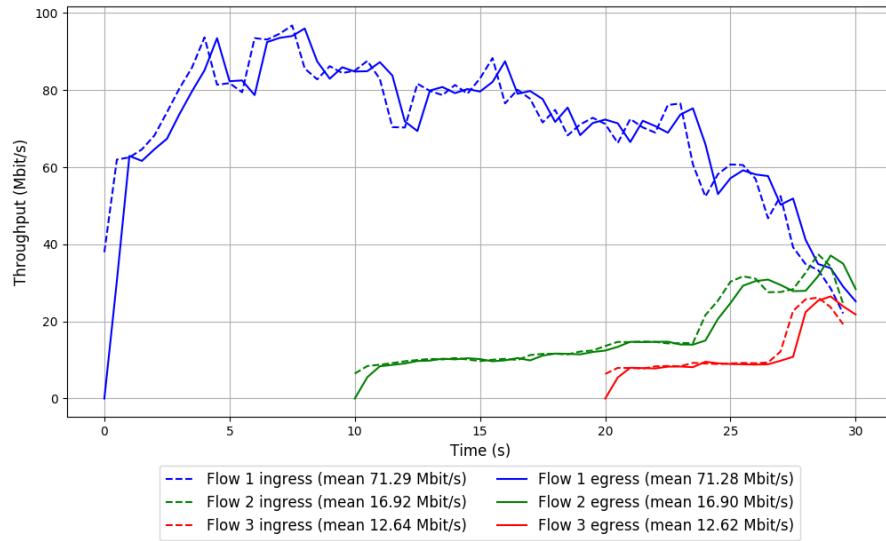


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-09-07 15:42:18
End at: 2018-09-07 15:42:48
Local clock offset: -70.491 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2018-09-07 16:23:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.68 Mbit/s
95th percentile per-packet one-way delay: 75.273 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 71.28 Mbit/s
95th percentile per-packet one-way delay: 70.586 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 16.90 Mbit/s
95th percentile per-packet one-way delay: 84.737 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 12.62 Mbit/s
95th percentile per-packet one-way delay: 81.881 ms
Loss rate: 0.16%
```

Run 4: Report of PCC-Allegro — Data Link

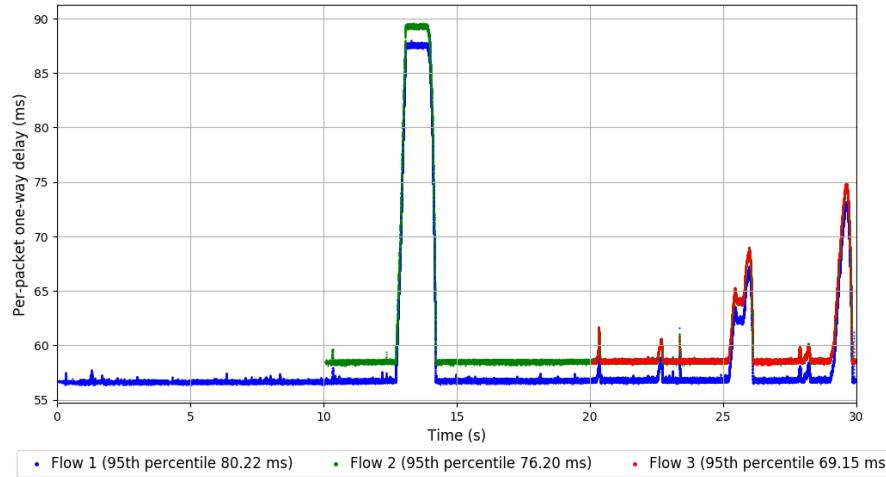
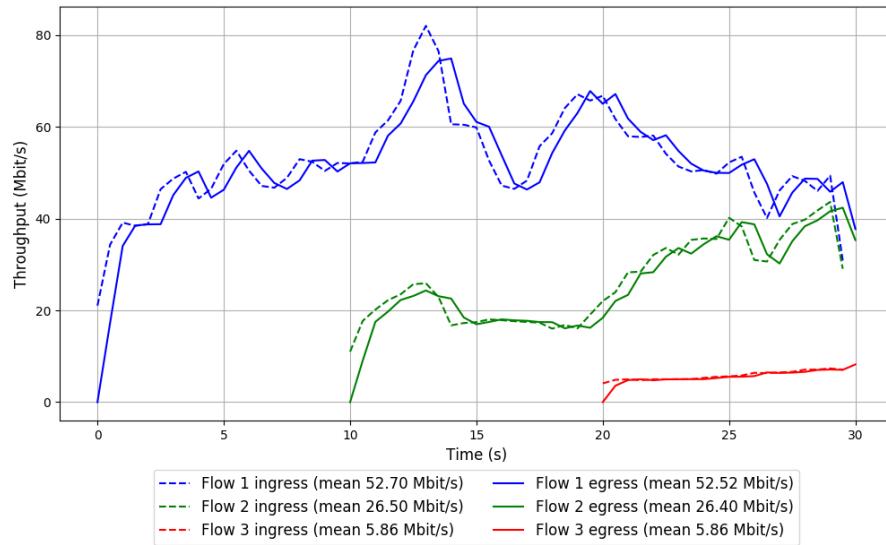


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-09-07 16:02:46
End at: 2018-09-07 16:03:16
Local clock offset: -61.129 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2018-09-07 16:23:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.01 Mbit/s
95th percentile per-packet one-way delay: 77.560 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 52.52 Mbit/s
95th percentile per-packet one-way delay: 80.224 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 26.40 Mbit/s
95th percentile per-packet one-way delay: 76.196 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 5.86 Mbit/s
95th percentile per-packet one-way delay: 69.146 ms
Loss rate: 0.00%
```

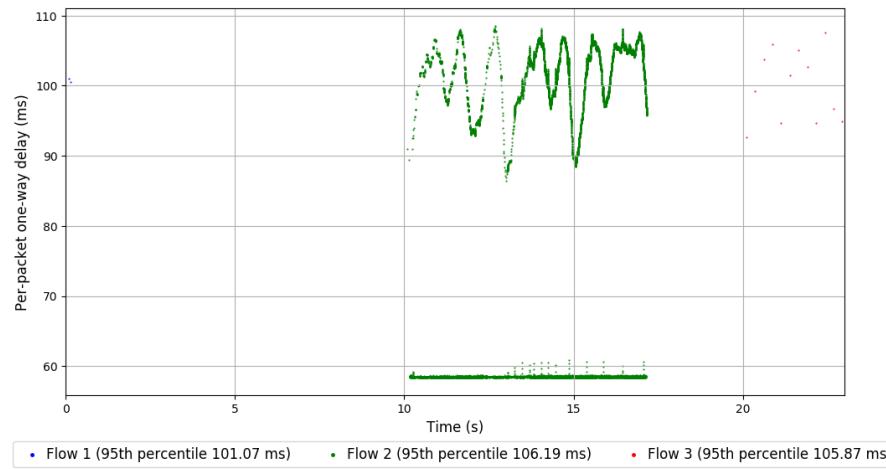
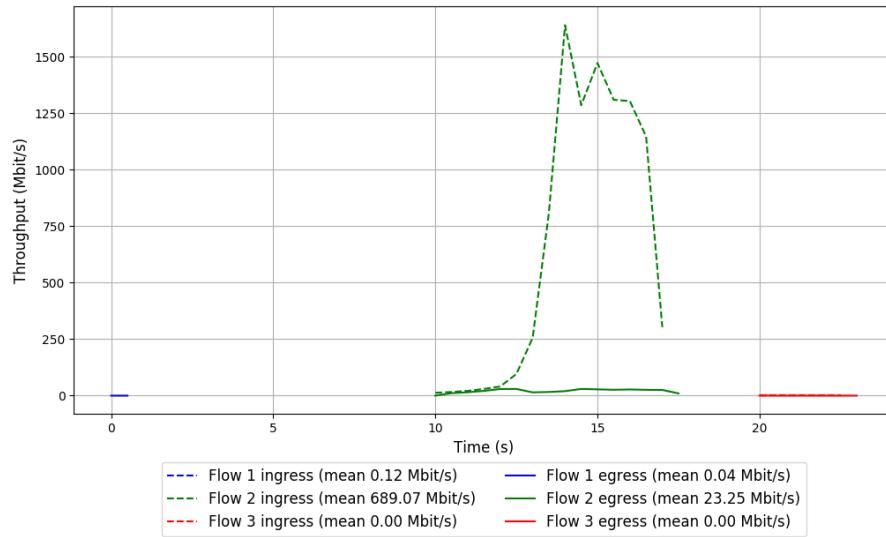
Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2018-09-07 14:32:21
End at: 2018-09-07 14:32:51
Local clock offset: -63.409 ms
Remote clock offset: -0.218 ms

Run 1: Report of PCC-Expr — Data Link

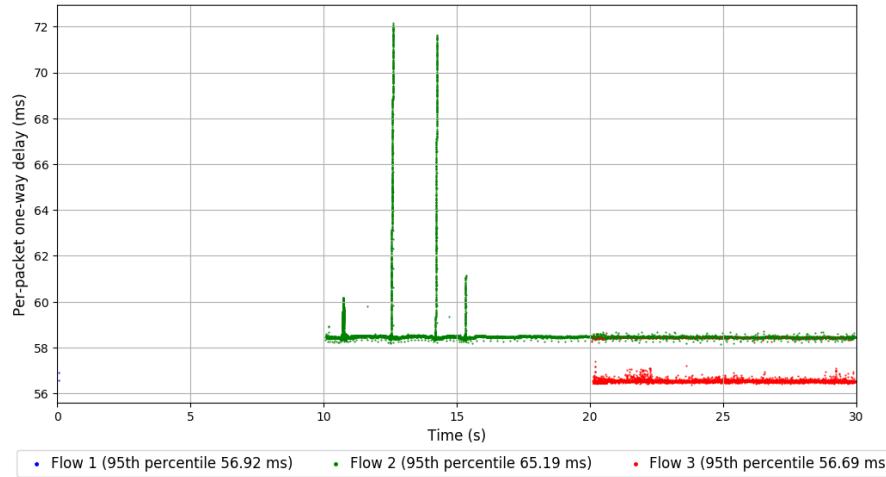
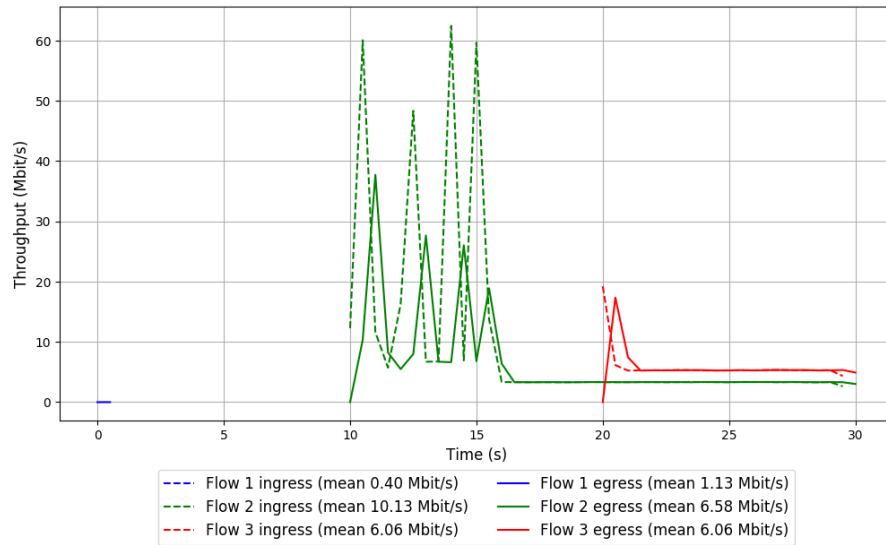


Run 2: Statistics of PCC-Expr

```
Start at: 2018-09-07 14:56:44
End at: 2018-09-07 14:57:14
Local clock offset: -66.559 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2018-09-07 16:23:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.38 Mbit/s
95th percentile per-packet one-way delay: 62.365 ms
Loss rate: 27.04%
-- Flow 1:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 56.918 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 6.58 Mbit/s
95th percentile per-packet one-way delay: 65.187 ms
Loss rate: 35.07%
-- Flow 3:
Average throughput: 6.06 Mbit/s
95th percentile per-packet one-way delay: 56.687 ms
Loss rate: 0.00%
```

Run 2: Report of PCC-Expr — Data Link

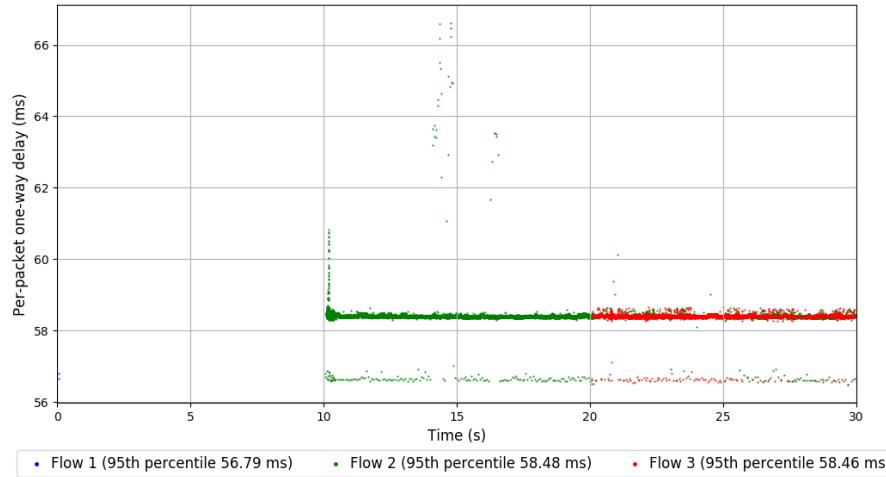
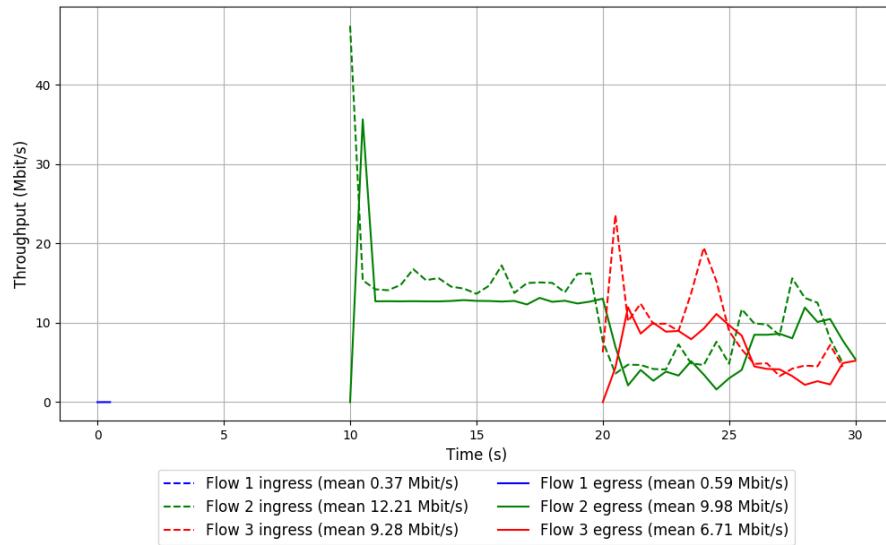


Run 3: Statistics of PCC-Expr

```
Start at: 2018-09-07 15:17:13
End at: 2018-09-07 15:17:43
Local clock offset: -68.657 ms
Remote clock offset: 0.144 ms

# Below is generated by plot.py at 2018-09-07 16:23:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.86 Mbit/s
95th percentile per-packet one-way delay: 58.473 ms
Loss rate: 20.81%
-- Flow 1:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 56.792 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.98 Mbit/s
95th percentile per-packet one-way delay: 58.476 ms
Loss rate: 18.20%
-- Flow 3:
Average throughput: 6.71 Mbit/s
95th percentile per-packet one-way delay: 58.463 ms
Loss rate: 27.71%
```

Run 3: Report of PCC-Expr — Data Link

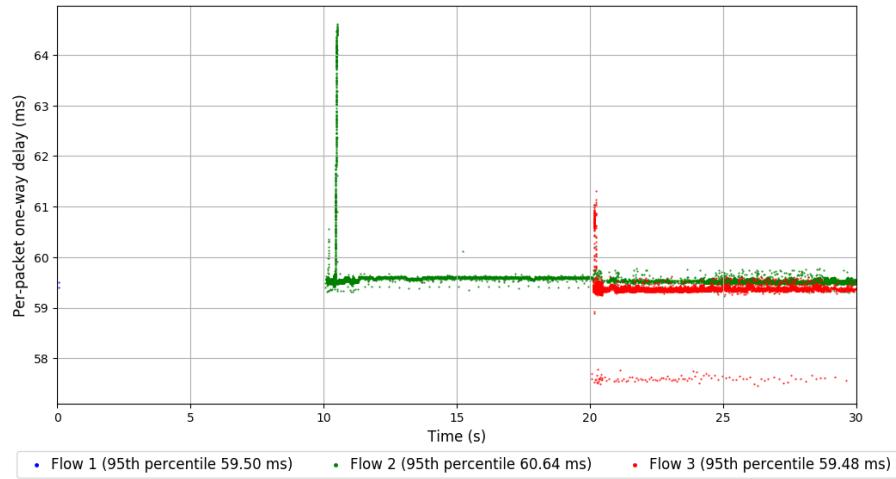
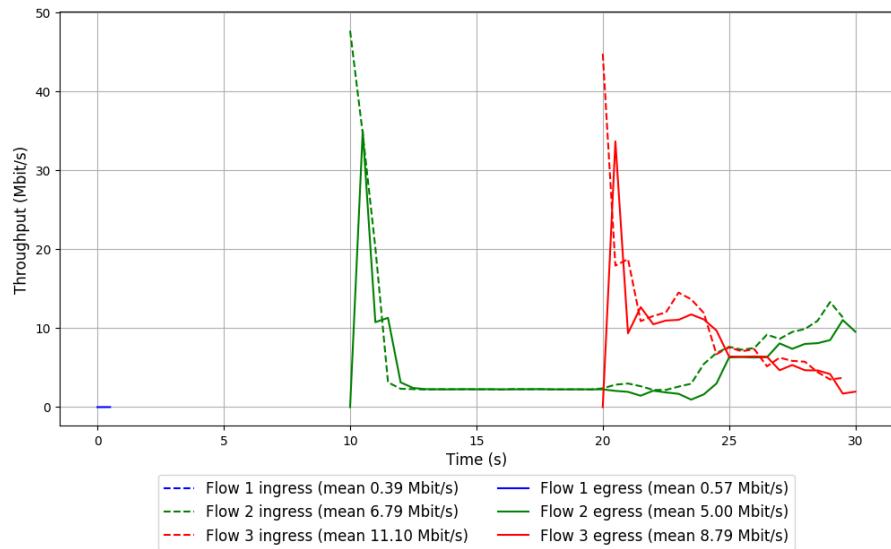


Run 4: Statistics of PCC-Expr

```
Start at: 2018-09-07 15:37:43
End at: 2018-09-07 15:38:13
Local clock offset: -71.065 ms
Remote clock offset: 0.13 ms

# Below is generated by plot.py at 2018-09-07 16:23:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.23 Mbit/s
95th percentile per-packet one-way delay: 59.658 ms
Loss rate: 23.90%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 59.498 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 5.00 Mbit/s
95th percentile per-packet one-way delay: 60.640 ms
Loss rate: 26.35%
-- Flow 3:
Average throughput: 8.79 Mbit/s
95th percentile per-packet one-way delay: 59.482 ms
Loss rate: 20.87%
```

Run 4: Report of PCC-Expr — Data Link

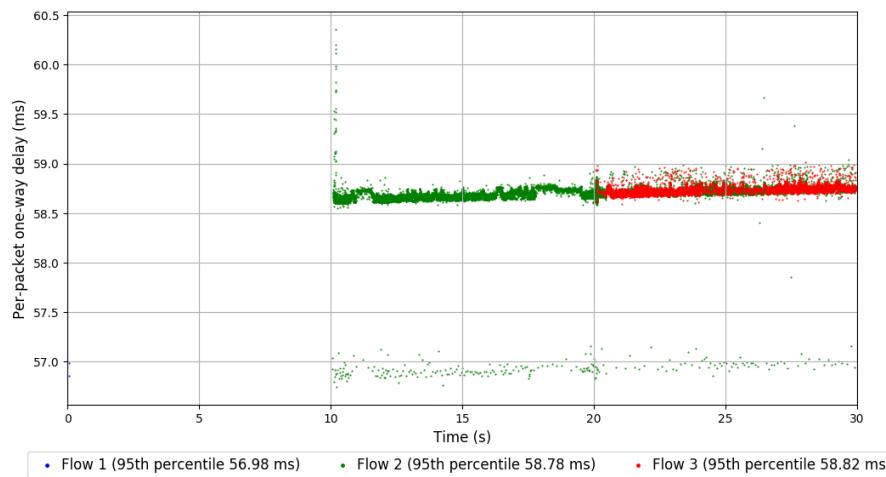
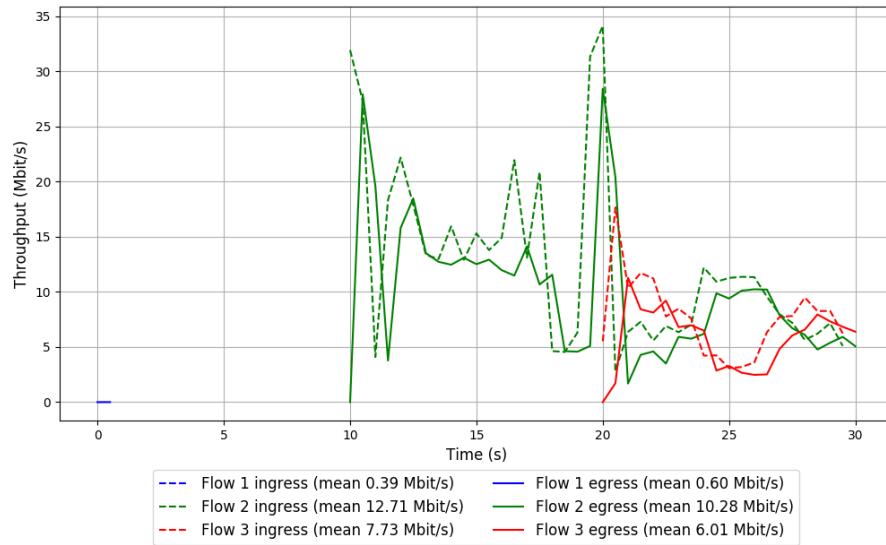


Run 5: Statistics of PCC-Expr

```
Start at: 2018-09-07 15:58:12
End at: 2018-09-07 15:58:42
Local clock offset: -62.485 ms
Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2018-09-07 16:23:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.83 Mbit/s
95th percentile per-packet one-way delay: 58.789 ms
Loss rate: 19.84%
-- Flow 1:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 56.984 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.28 Mbit/s
95th percentile per-packet one-way delay: 58.776 ms
Loss rate: 19.11%
-- Flow 3:
Average throughput: 6.01 Mbit/s
95th percentile per-packet one-way delay: 58.823 ms
Loss rate: 22.26%
```

Run 5: Report of PCC-Expr — Data Link

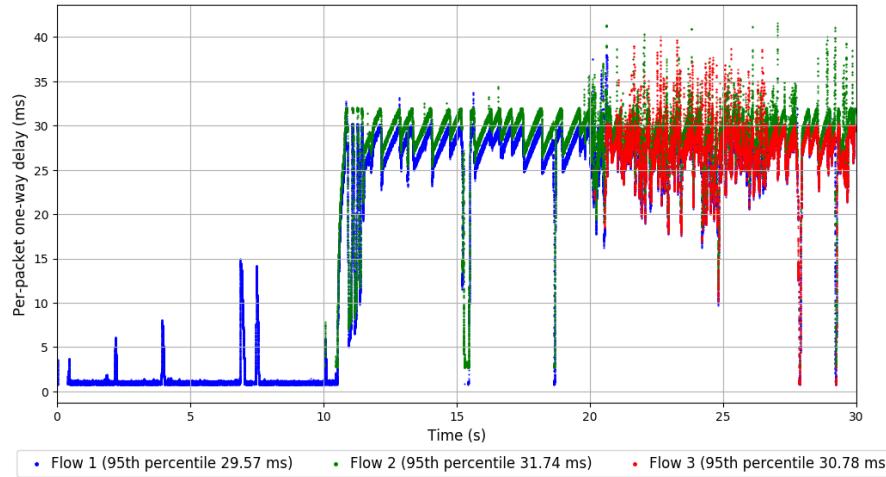
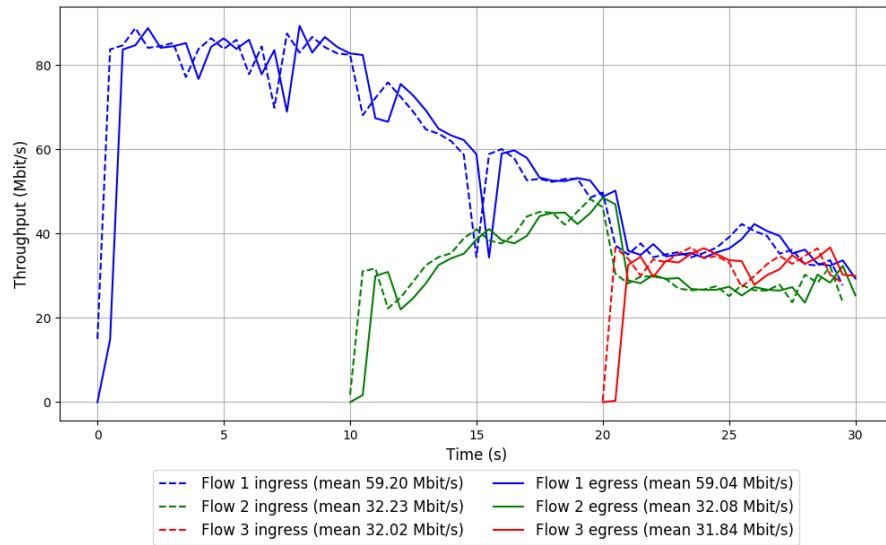


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-09-07 14:44:11
End at: 2018-09-07 14:44:41
Local clock offset: -7.702 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2018-09-07 16:24:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.82 Mbit/s
95th percentile per-packet one-way delay: 31.100 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 59.04 Mbit/s
95th percentile per-packet one-way delay: 29.566 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 32.08 Mbit/s
95th percentile per-packet one-way delay: 31.744 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 31.84 Mbit/s
95th percentile per-packet one-way delay: 30.776 ms
Loss rate: 0.50%
```

Run 1: Report of QUIC Cubic — Data Link

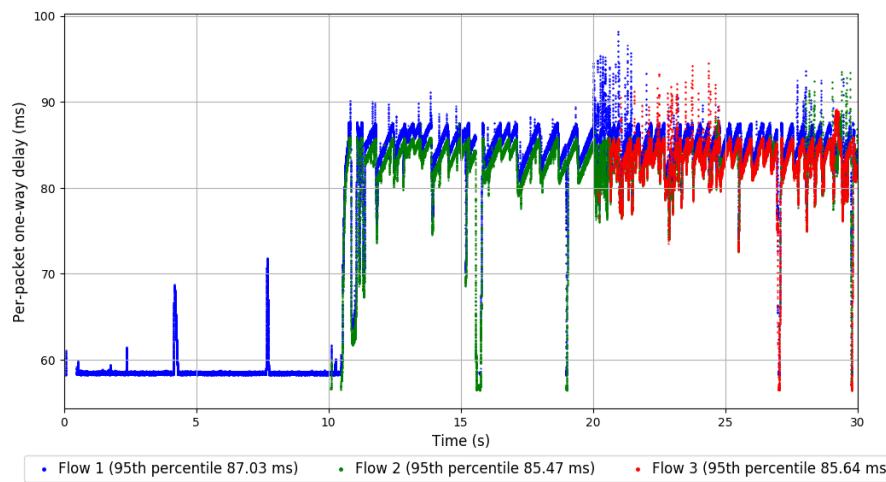
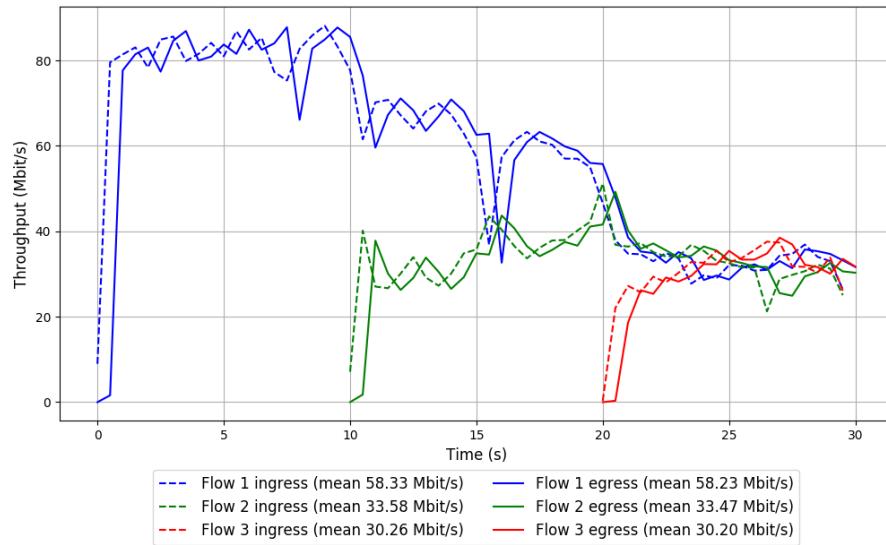


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-09-07 15:04:40
End at: 2018-09-07 15:05:10
Local clock offset: -67.636 ms
Remote clock offset: 0.027 ms

# Below is generated by plot.py at 2018-09-07 16:24:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.42 Mbit/s
95th percentile per-packet one-way delay: 86.891 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 58.23 Mbit/s
95th percentile per-packet one-way delay: 87.032 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 33.47 Mbit/s
95th percentile per-packet one-way delay: 85.470 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 30.20 Mbit/s
95th percentile per-packet one-way delay: 85.636 ms
Loss rate: 0.19%
```

Run 2: Report of QUIC Cubic — Data Link

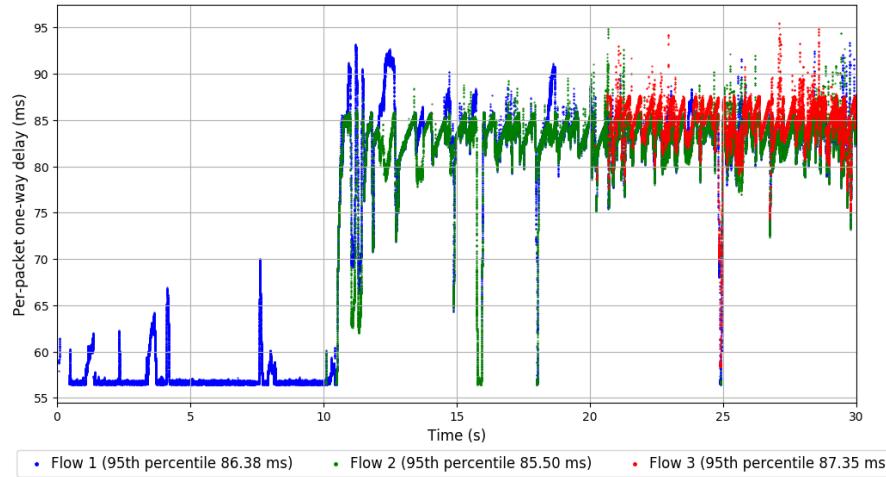
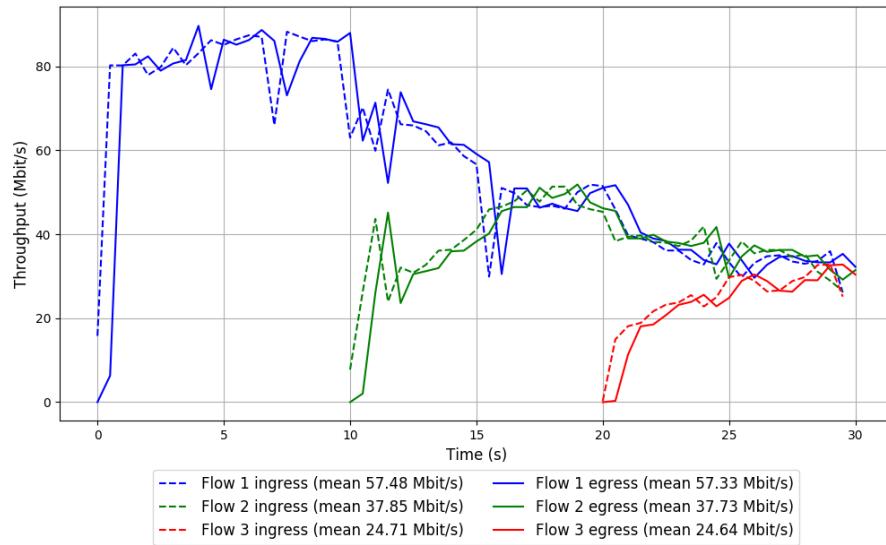


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-09-07 15:25:10
End at: 2018-09-07 15:25:40
Local clock offset: -69.156 ms
Remote clock offset: 0.135 ms

# Below is generated by plot.py at 2018-09-07 16:24:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.52 Mbit/s
95th percentile per-packet one-way delay: 86.678 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 57.33 Mbit/s
95th percentile per-packet one-way delay: 86.381 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 37.73 Mbit/s
95th percentile per-packet one-way delay: 85.497 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 24.64 Mbit/s
95th percentile per-packet one-way delay: 87.354 ms
Loss rate: 0.25%
```

Run 3: Report of QUIC Cubic — Data Link

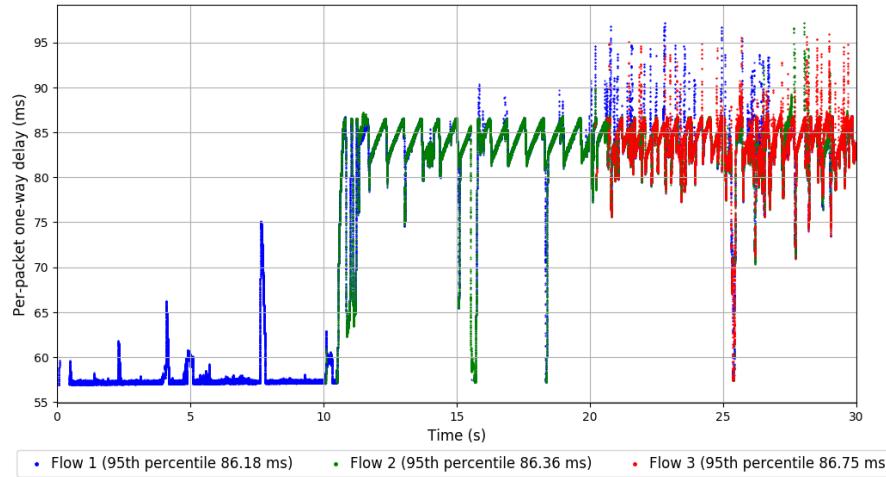
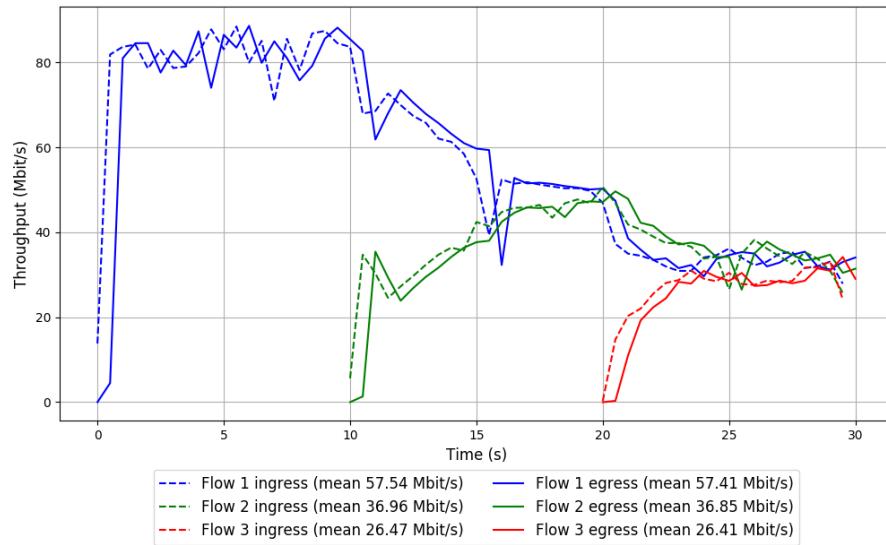


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-09-07 15:45:41
End at: 2018-09-07 15:46:11
Local clock offset: -70.023 ms
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2018-09-07 16:24:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.60 Mbit/s
95th percentile per-packet one-way delay: 86.301 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 57.41 Mbit/s
95th percentile per-packet one-way delay: 86.183 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 36.85 Mbit/s
95th percentile per-packet one-way delay: 86.356 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 26.41 Mbit/s
95th percentile per-packet one-way delay: 86.748 ms
Loss rate: 0.28%
```

Run 4: Report of QUIC Cubic — Data Link

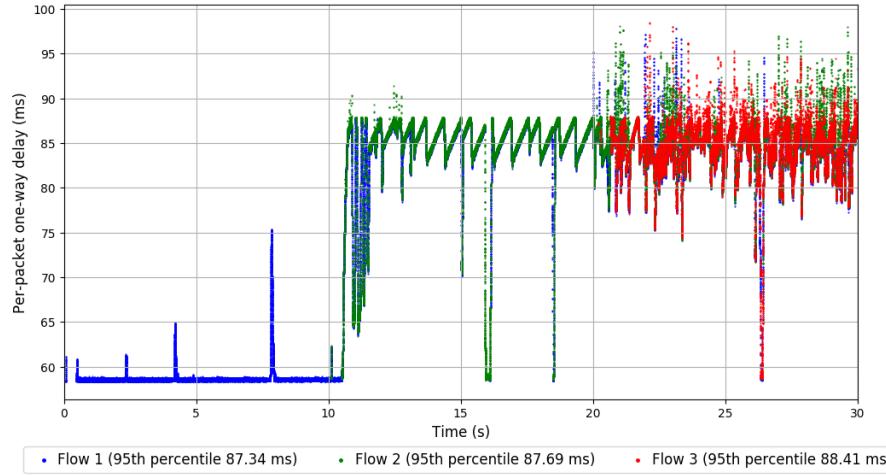
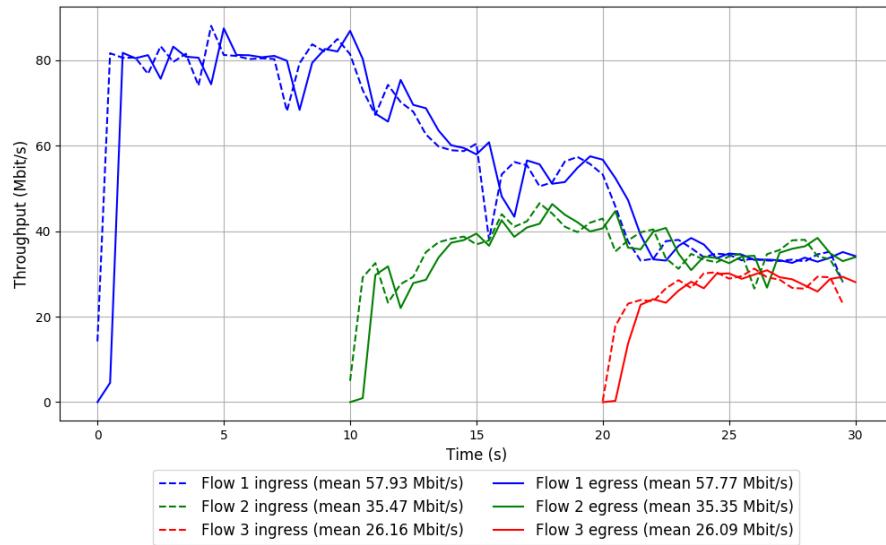


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-09-07 16:06:08
End at: 2018-09-07 16:06:38
Local clock offset: -60.551 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2018-09-07 16:24:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.84 Mbit/s
95th percentile per-packet one-way delay: 87.527 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 57.77 Mbit/s
95th percentile per-packet one-way delay: 87.341 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 35.35 Mbit/s
95th percentile per-packet one-way delay: 87.690 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 26.09 Mbit/s
95th percentile per-packet one-way delay: 88.412 ms
Loss rate: 0.26%
```

Run 5: Report of QUIC Cubic — Data Link

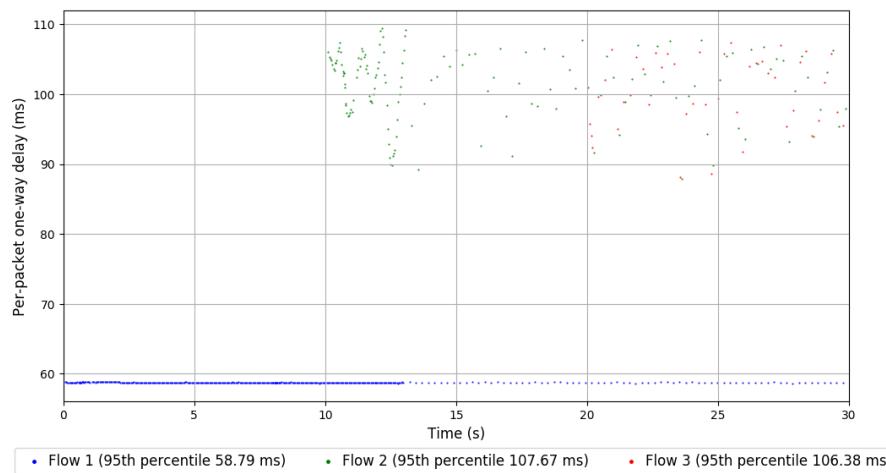
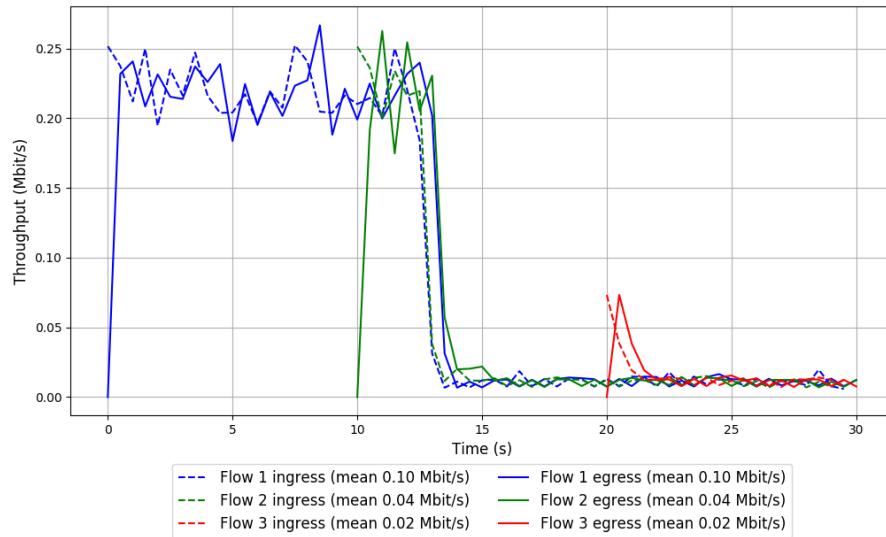


```
Run 1: Statistics of SCReAM

Start at: 2018-09-07 14:30:14
End at: 2018-09-07 14:30:44
Local clock offset: -63.47 ms
Remote clock offset: -0.178 ms

# Below is generated by plot.py at 2018-09-07 16:24:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 106.029 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 58.788 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 107.666 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 106.382 ms
Loss rate: 1.91%
```

Run 1: Report of SCReAM — Data Link

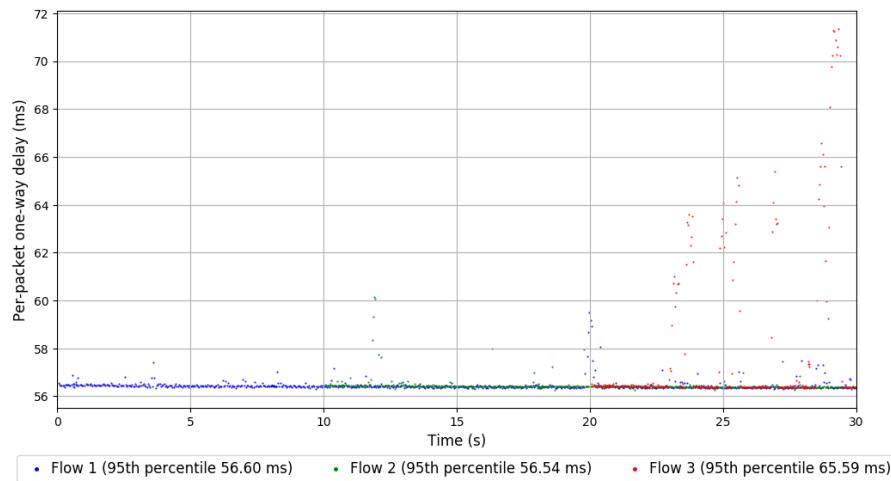
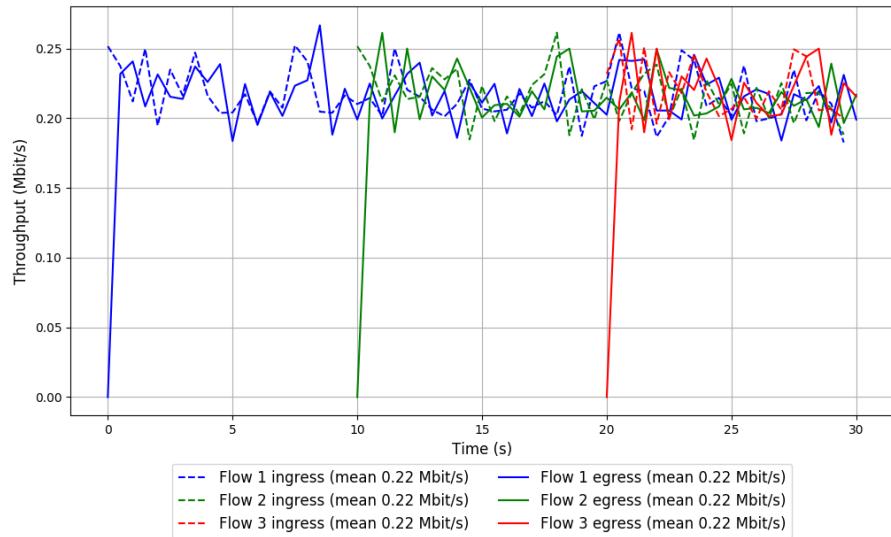


Run 2: Statistics of SCReAM

```
Start at: 2018-09-07 14:55:38
End at: 2018-09-07 14:56:08
Local clock offset: -66.216 ms
Remote clock offset: 0.044 ms

# Below is generated by plot.py at 2018-09-07 16:24:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 57.434 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.598 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.536 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 65.595 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

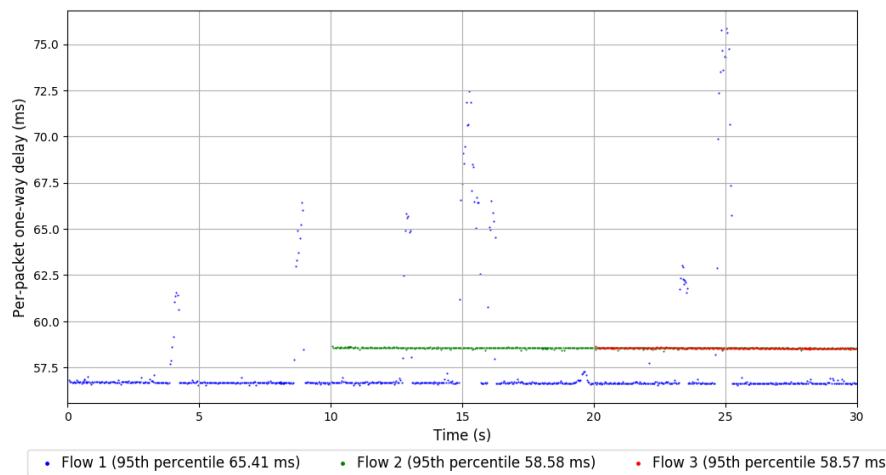
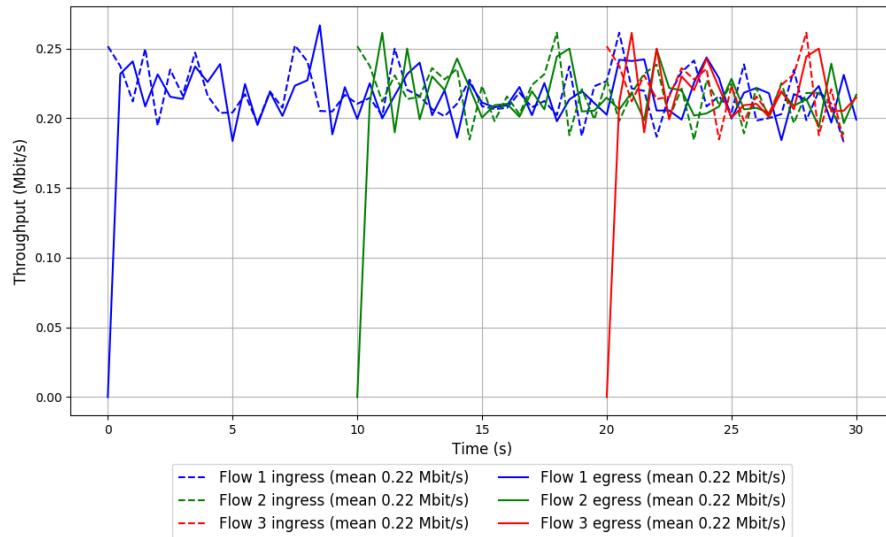


Run 3: Statistics of SCReAM

```
Start at: 2018-09-07 15:16:08
End at: 2018-09-07 15:16:38
Local clock offset: -68.577 ms
Remote clock offset: 0.122 ms

# Below is generated by plot.py at 2018-09-07 16:24:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 58.607 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 65.412 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.583 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.569 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

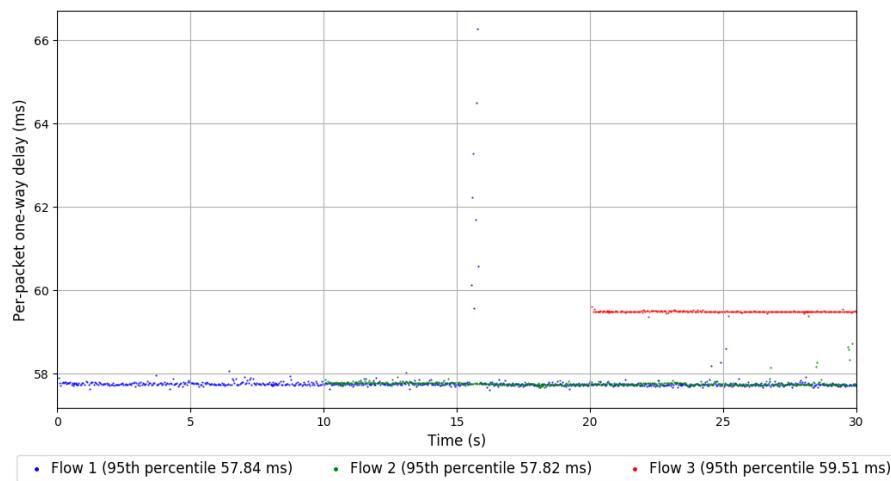
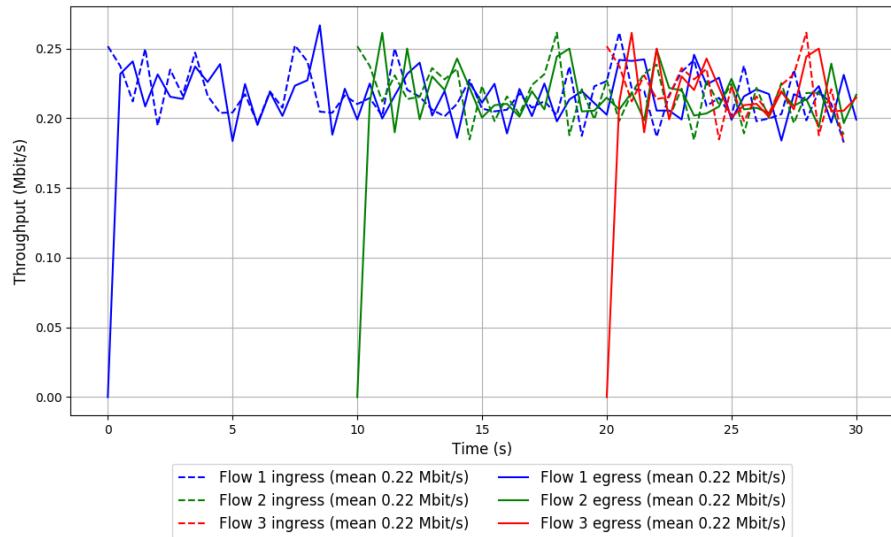


Run 4: Statistics of SCReAM

```
Start at: 2018-09-07 15:36:38
End at: 2018-09-07 15:37:08
Local clock offset: -71.261 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2018-09-07 16:24:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 59.496 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.843 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.821 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.507 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

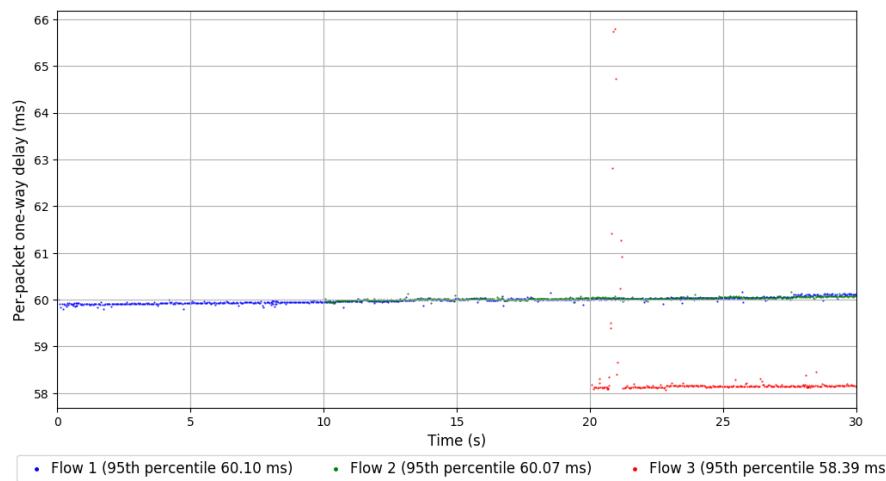
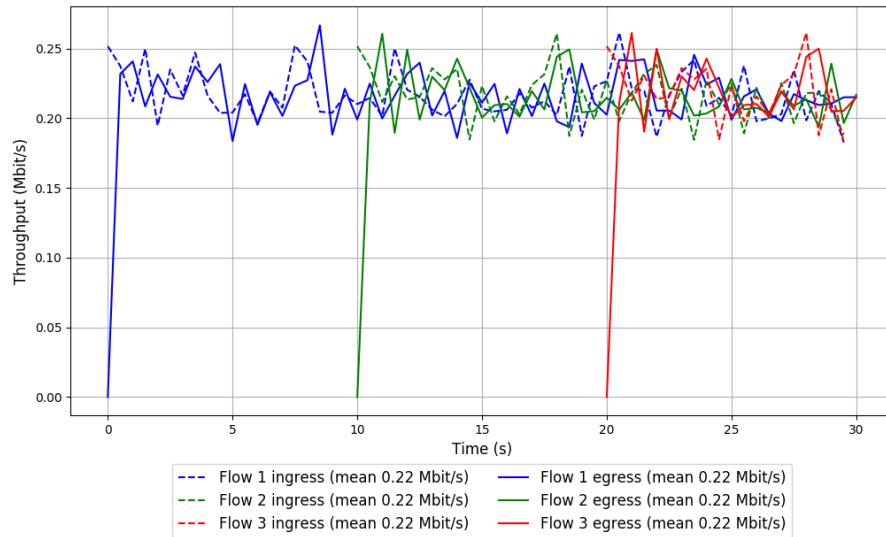


Run 5: Statistics of SCReAM

```
Start at: 2018-09-07 15:57:07
End at: 2018-09-07 15:57:37
Local clock offset: -63.902 ms
Remote clock offset: 0.113 ms

# Below is generated by plot.py at 2018-09-07 16:24:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 60.073 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.101 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.070 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.387 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

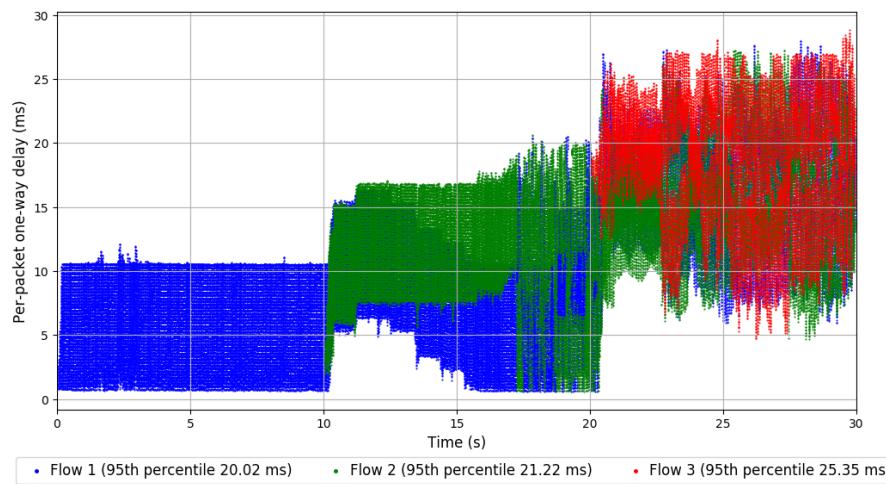
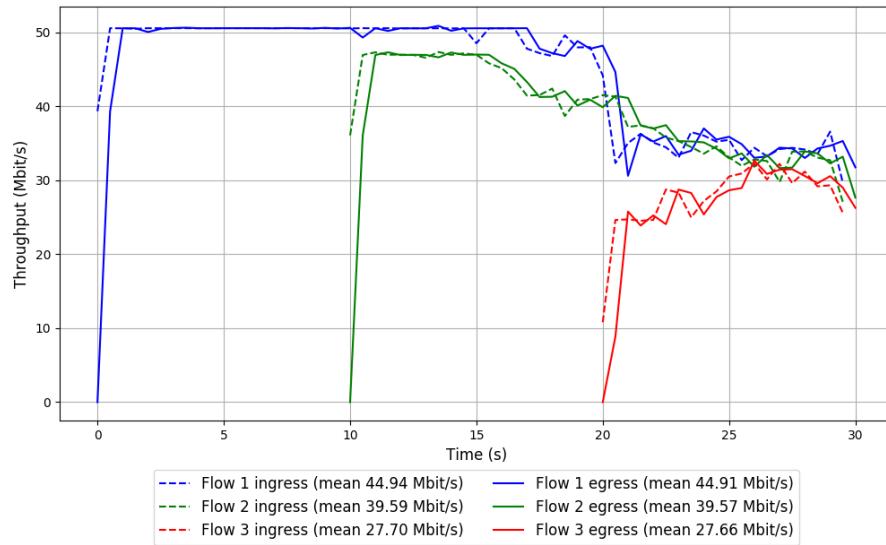


Run 1: Statistics of Sprout

```
Start at: 2018-09-07 14:53:21
End at: 2018-09-07 14:53:51
Local clock offset: -10.154 ms
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2018-09-07 16:24:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.37 Mbit/s
95th percentile per-packet one-way delay: 22.311 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.91 Mbit/s
95th percentile per-packet one-way delay: 20.025 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.57 Mbit/s
95th percentile per-packet one-way delay: 21.222 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.66 Mbit/s
95th percentile per-packet one-way delay: 25.352 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

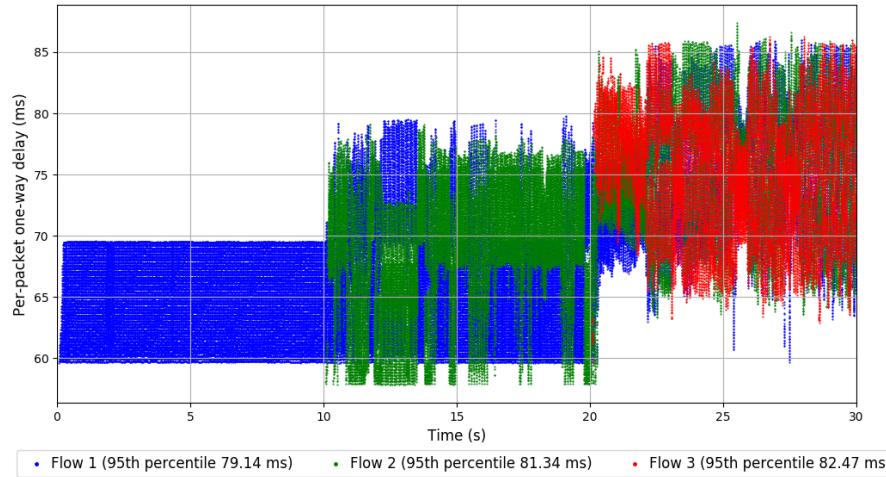
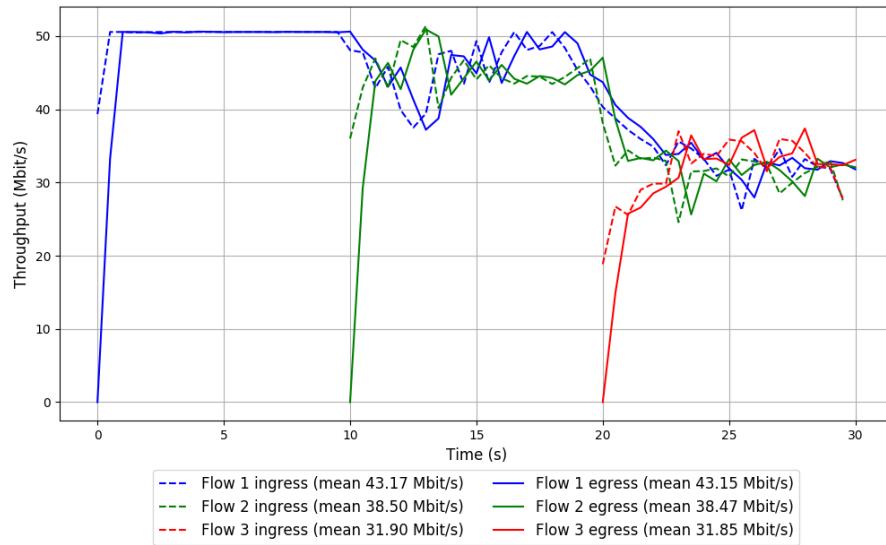


Run 2: Statistics of Sprout

```
Start at: 2018-09-07 15:13:51
End at: 2018-09-07 15:14:21
Local clock offset: -69.756 ms
Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2018-09-07 16:24:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.26 Mbit/s
95th percentile per-packet one-way delay: 80.944 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.15 Mbit/s
95th percentile per-packet one-way delay: 79.139 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.47 Mbit/s
95th percentile per-packet one-way delay: 81.345 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.85 Mbit/s
95th percentile per-packet one-way delay: 82.468 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

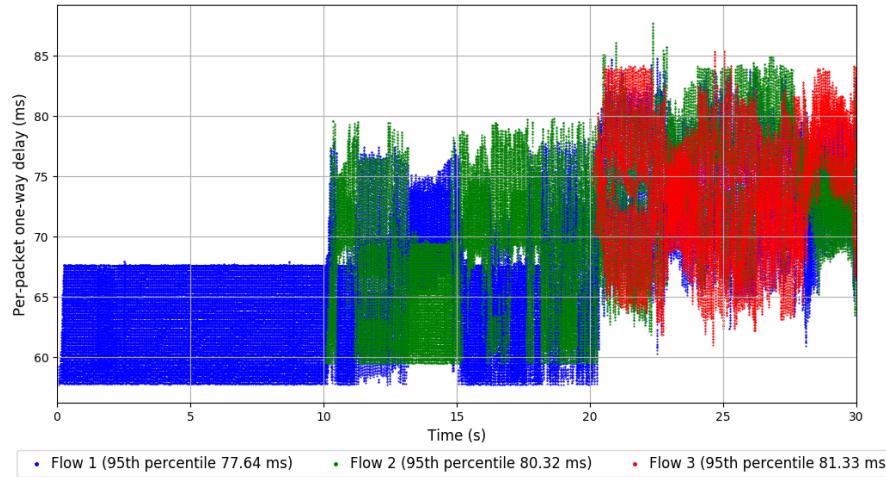
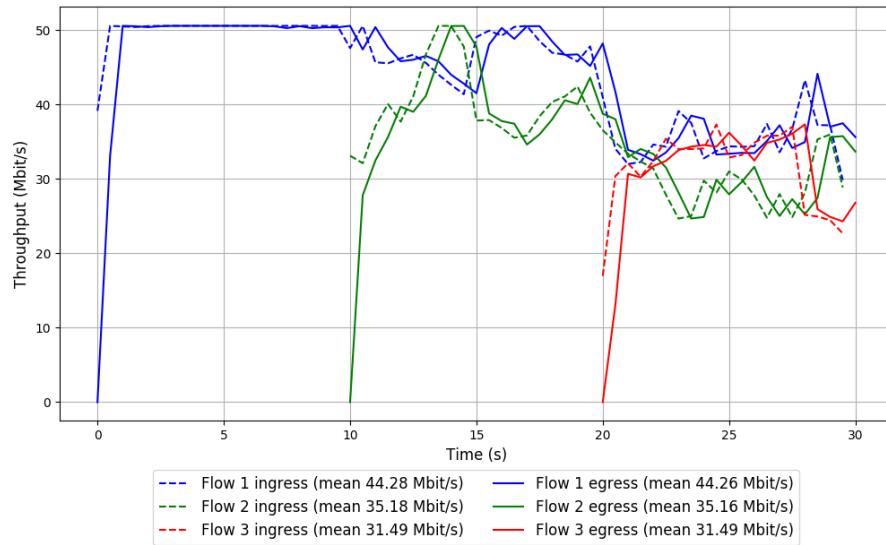


Run 3: Statistics of Sprout

```
Start at: 2018-09-07 15:34:21
End at: 2018-09-07 15:34:51
Local clock offset: -71.114 ms
Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2018-09-07 16:24:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.05 Mbit/s
95th percentile per-packet one-way delay: 79.550 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.26 Mbit/s
95th percentile per-packet one-way delay: 77.637 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.16 Mbit/s
95th percentile per-packet one-way delay: 80.321 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.49 Mbit/s
95th percentile per-packet one-way delay: 81.334 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

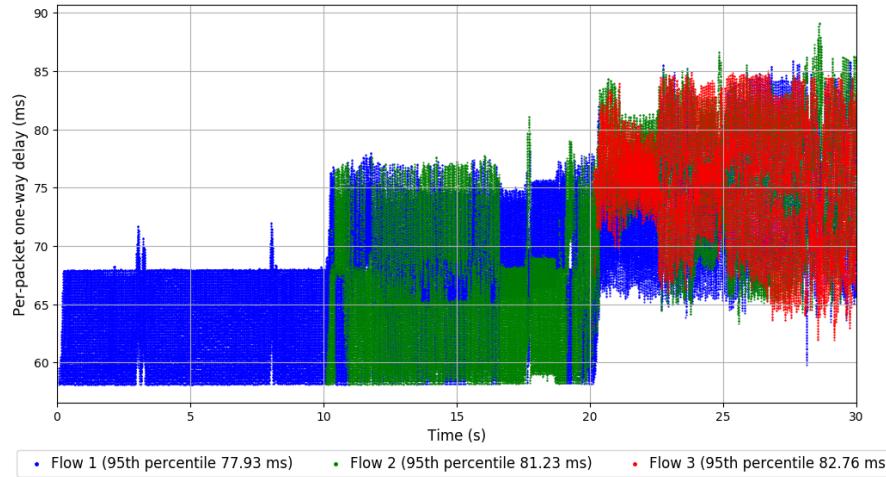
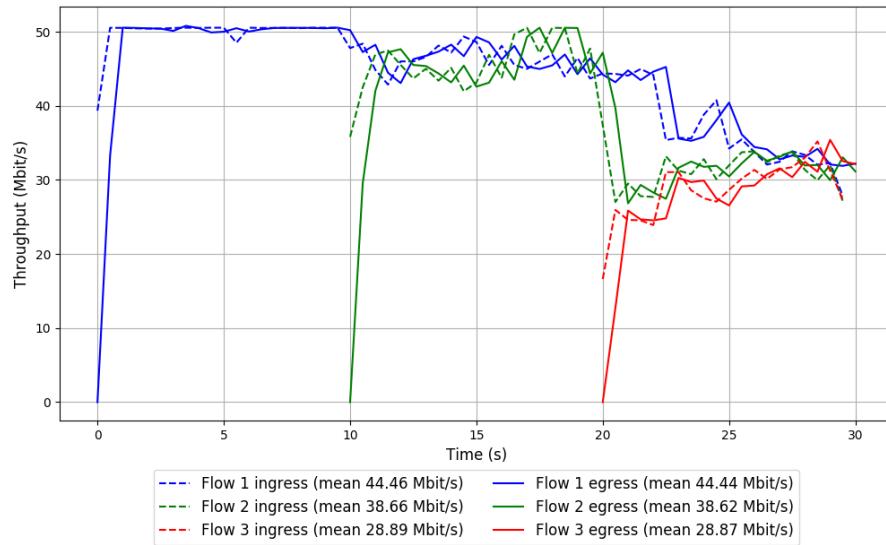


Run 4: Statistics of Sprout

```
Start at: 2018-09-07 15:54:50
End at: 2018-09-07 15:55:20
Local clock offset: -64.924 ms
Remote clock offset: 0.113 ms

# Below is generated by plot.py at 2018-09-07 16:25:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.68 Mbit/s
95th percentile per-packet one-way delay: 80.729 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.44 Mbit/s
95th percentile per-packet one-way delay: 77.931 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.62 Mbit/s
95th percentile per-packet one-way delay: 81.226 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 28.87 Mbit/s
95th percentile per-packet one-way delay: 82.760 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

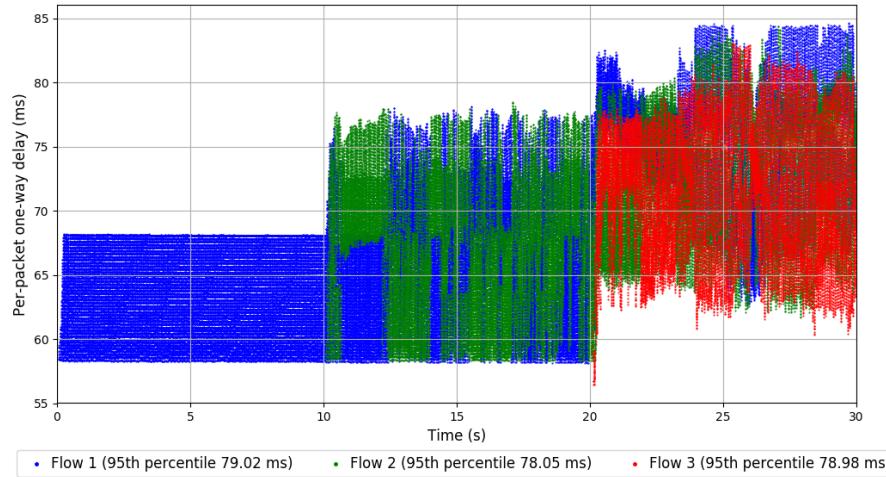
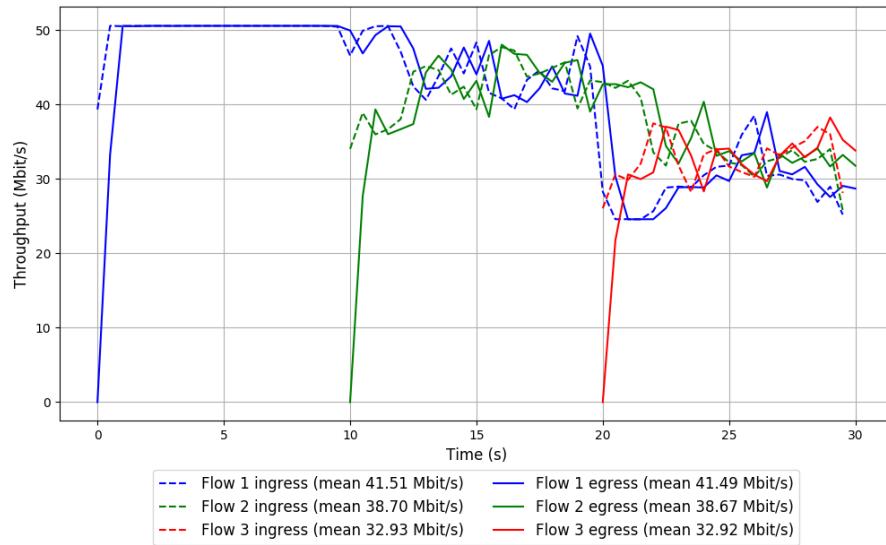


Run 5: Statistics of Sprout

```
Start at: 2018-09-07 16:15:19
End at: 2018-09-07 16:15:49
Local clock offset: -59.203 ms
Remote clock offset: 0.146 ms

# Below is generated by plot.py at 2018-09-07 16:25:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.08 Mbit/s
95th percentile per-packet one-way delay: 78.685 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.49 Mbit/s
95th percentile per-packet one-way delay: 79.018 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.67 Mbit/s
95th percentile per-packet one-way delay: 78.053 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.92 Mbit/s
95th percentile per-packet one-way delay: 78.978 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

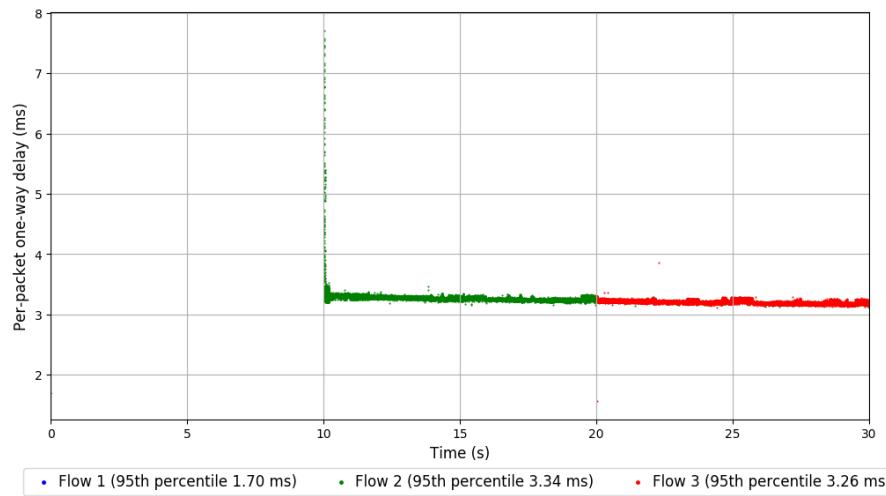
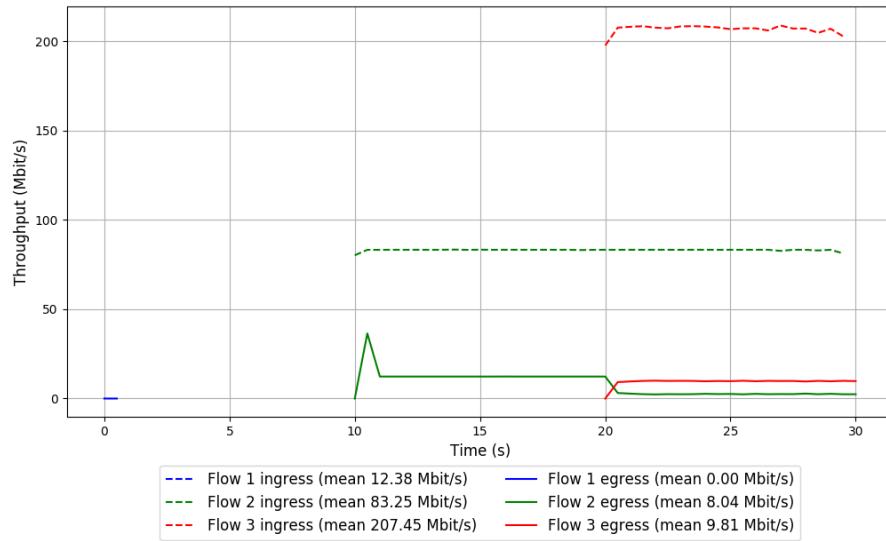


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-09-07 14:45:20
End at: 2018-09-07 14:45:50
Local clock offset: -8.659 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2018-09-07 16:25:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 3.328 ms
Loss rate: 93.07%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.698 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 8.04 Mbit/s
95th percentile per-packet one-way delay: 3.341 ms
Loss rate: 90.34%
-- Flow 3:
Average throughput: 9.81 Mbit/s
95th percentile per-packet one-way delay: 3.261 ms
Loss rate: 95.27%
```

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

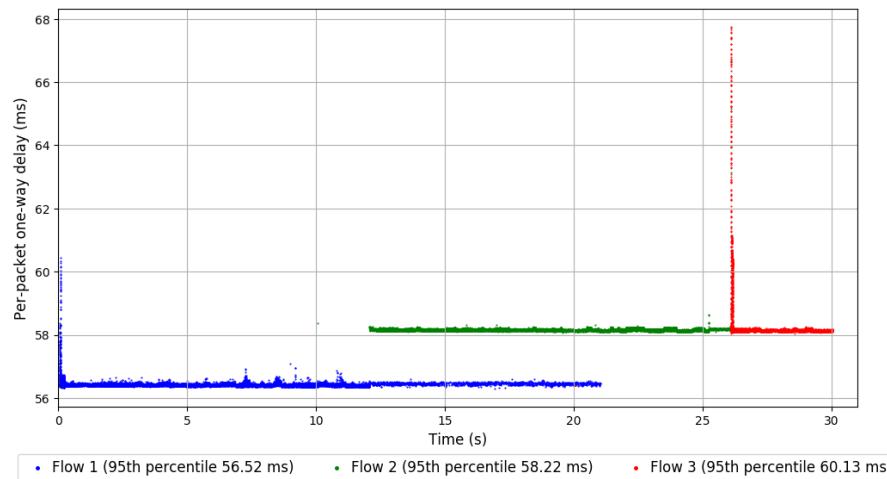
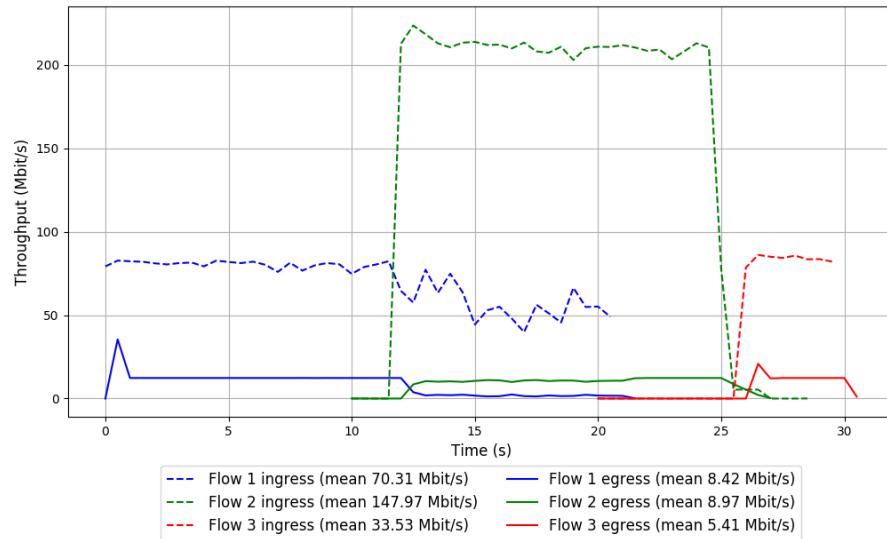


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-09-07 15:05:49
End at: 2018-09-07 15:06:19
Local clock offset: -67.544 ms
Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2018-09-07 16:25:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 58.207 ms
Loss rate: 91.70%
-- Flow 1:
Average throughput: 8.42 Mbit/s
95th percentile per-packet one-way delay: 56.516 ms
Loss rate: 88.03%
-- Flow 2:
Average throughput: 8.97 Mbit/s
95th percentile per-packet one-way delay: 58.217 ms
Loss rate: 94.58%
-- Flow 3:
Average throughput: 5.41 Mbit/s
95th percentile per-packet one-way delay: 60.129 ms
Loss rate: 83.86%
```

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

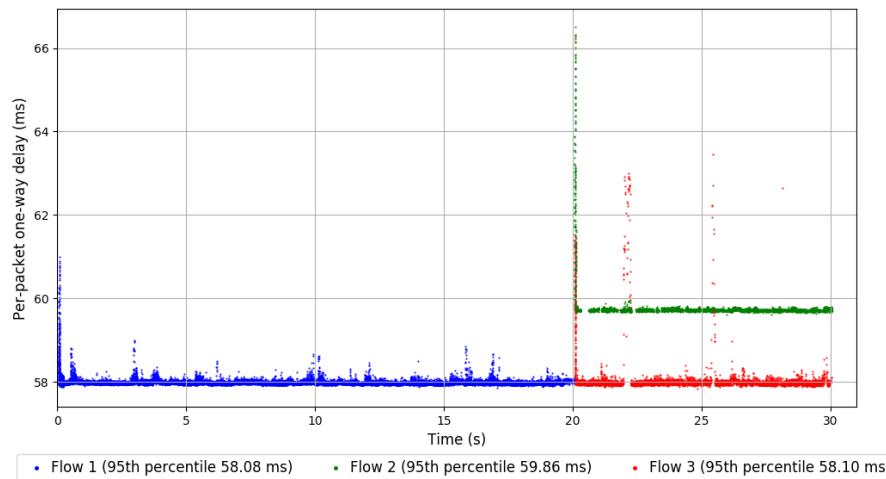
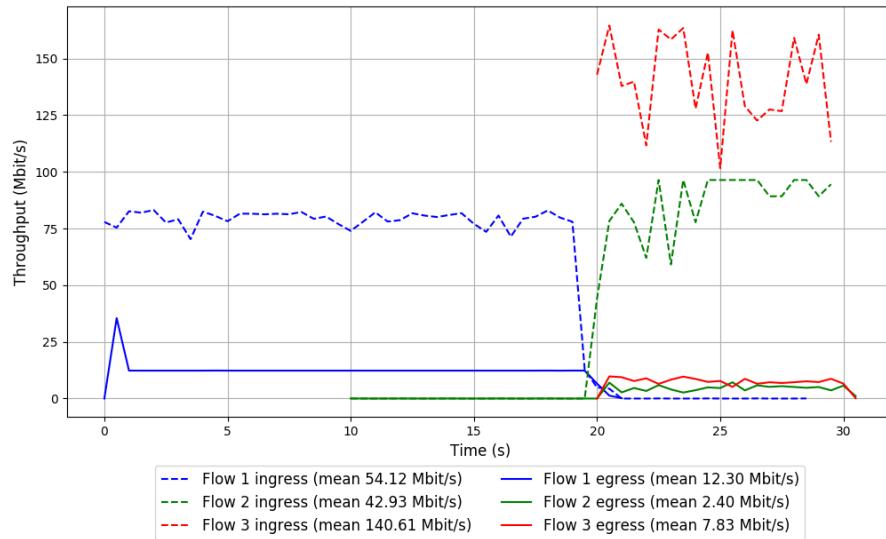


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-09-07 15:26:19
End at: 2018-09-07 15:26:49
Local clock offset: -70.648 ms
Remote clock offset: 0.116 ms

# Below is generated by plot.py at 2018-09-07 16:25:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 59.727 ms
Loss rate: 90.00%
-- Flow 1:
Average throughput: 12.30 Mbit/s
95th percentile per-packet one-way delay: 58.084 ms
Loss rate: 83.58%
-- Flow 2:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 59.858 ms
Loss rate: 94.40%
-- Flow 3:
Average throughput: 7.83 Mbit/s
95th percentile per-packet one-way delay: 58.099 ms
Loss rate: 94.44%
```

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

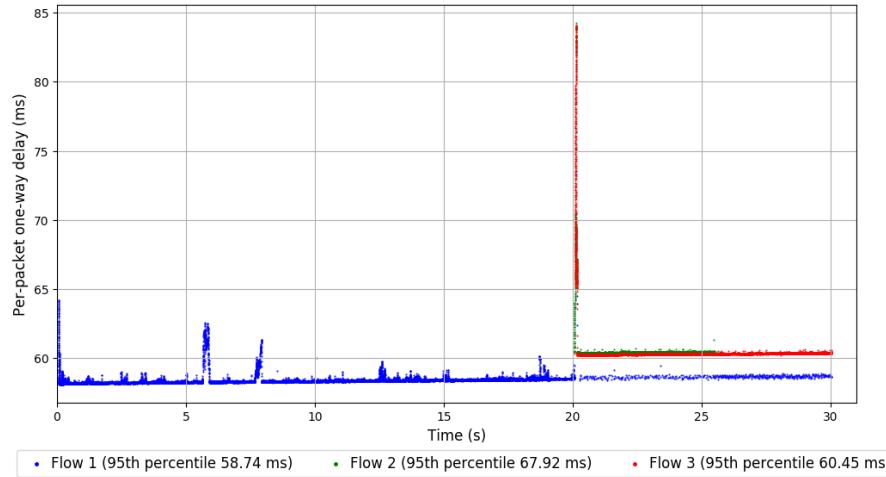
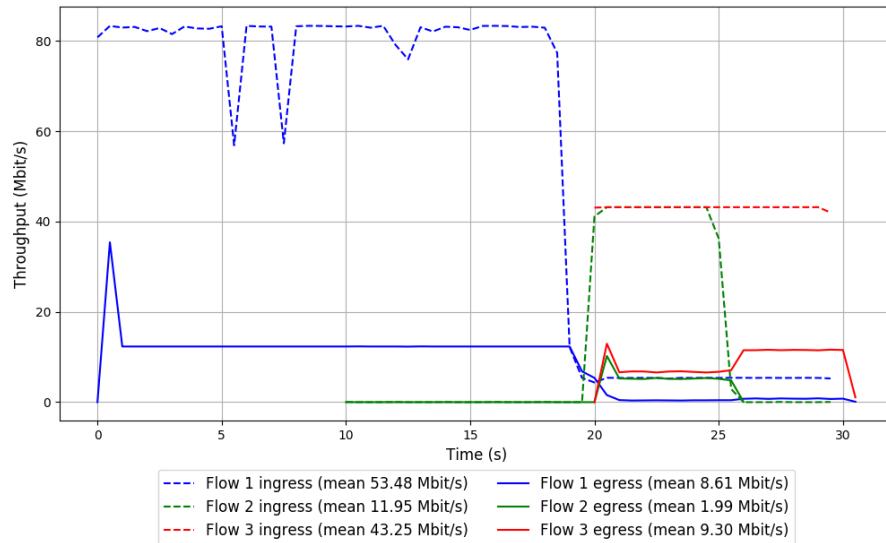


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-09-07 15:46:50
End at: 2018-09-07 15:47:20
Local clock offset: -69.94 ms
Remote clock offset: 0.096 ms

# Below is generated by plot.py at 2018-09-07 16:25:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 60.456 ms
Loss rate: 83.18%
-- Flow 1:
Average throughput: 8.61 Mbit/s
95th percentile per-packet one-way delay: 58.743 ms
Loss rate: 83.91%
-- Flow 2:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 67.918 ms
Loss rate: 86.78%
-- Flow 3:
Average throughput: 9.30 Mbit/s
95th percentile per-packet one-way delay: 60.451 ms
Loss rate: 78.50%
```

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

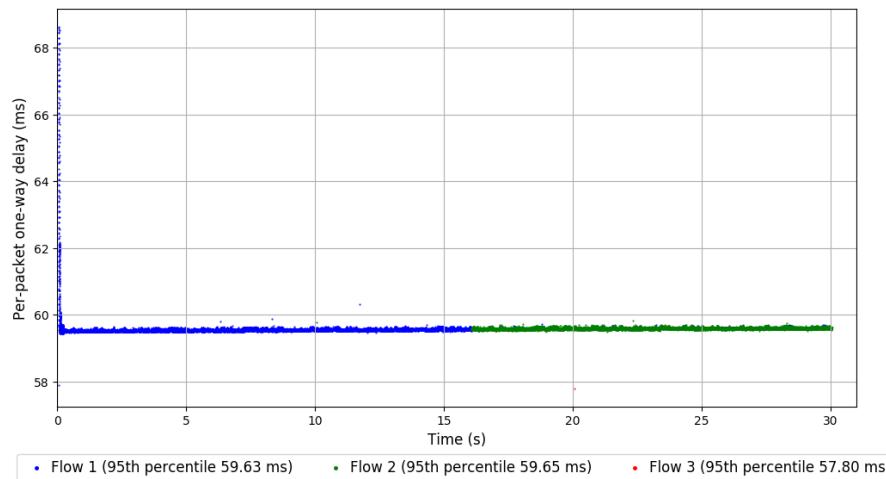
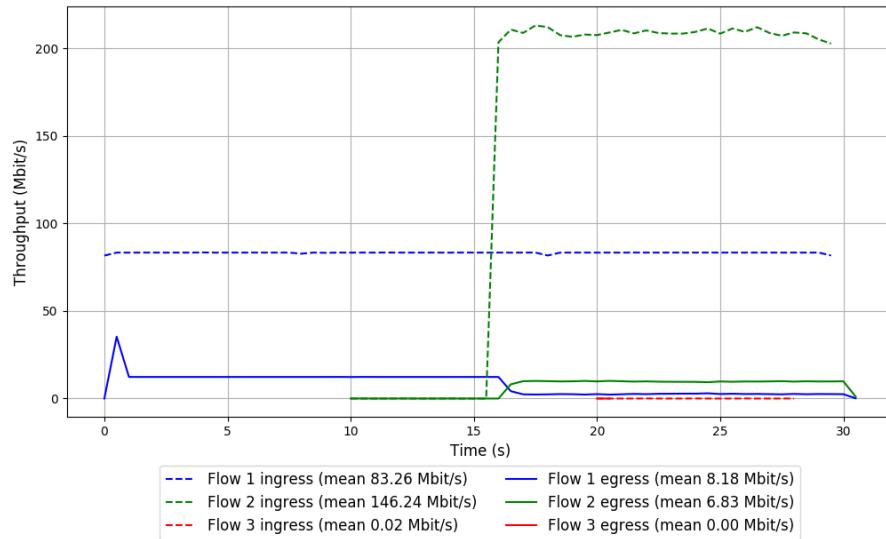


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-09-07 16:07:18
End at: 2018-09-07 16:07:48
Local clock offset: -61.286 ms
Remote clock offset: 0.095 ms

# Below is generated by plot.py at 2018-09-07 16:25:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 59.644 ms
Loss rate: 92.95%
-- Flow 1:
Average throughput: 8.18 Mbit/s
95th percentile per-packet one-way delay: 59.631 ms
Loss rate: 90.18%
-- Flow 2:
Average throughput: 6.83 Mbit/s
95th percentile per-packet one-way delay: 59.653 ms
Loss rate: 95.33%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 57.798 ms
Loss rate: 99.16%
```

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

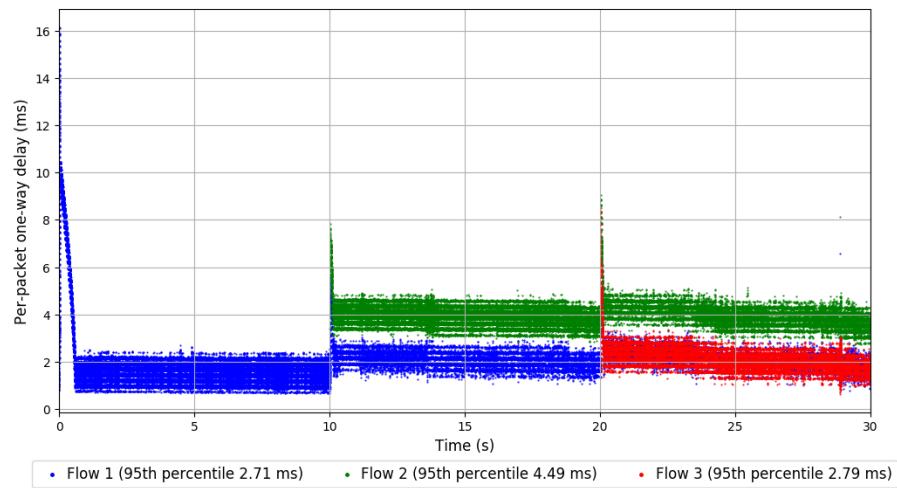
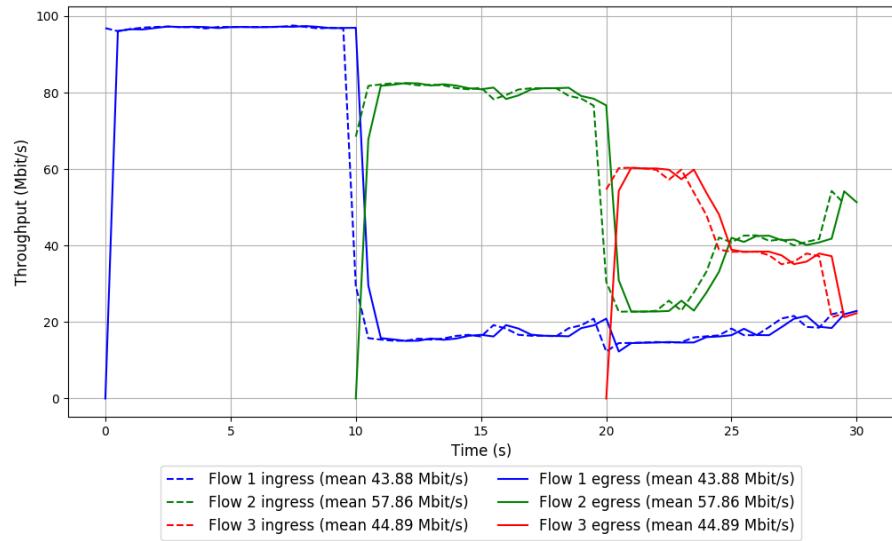


Run 1: Statistics of TCP Vegas

```
Start at: 2018-09-07 14:47:34
End at: 2018-09-07 14:48:04
Local clock offset: -8.702 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2018-09-07 16:25:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.35 Mbit/s
95th percentile per-packet one-way delay: 4.366 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.88 Mbit/s
95th percentile per-packet one-way delay: 2.712 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 57.86 Mbit/s
95th percentile per-packet one-way delay: 4.494 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 44.89 Mbit/s
95th percentile per-packet one-way delay: 2.790 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Vegas — Data Link

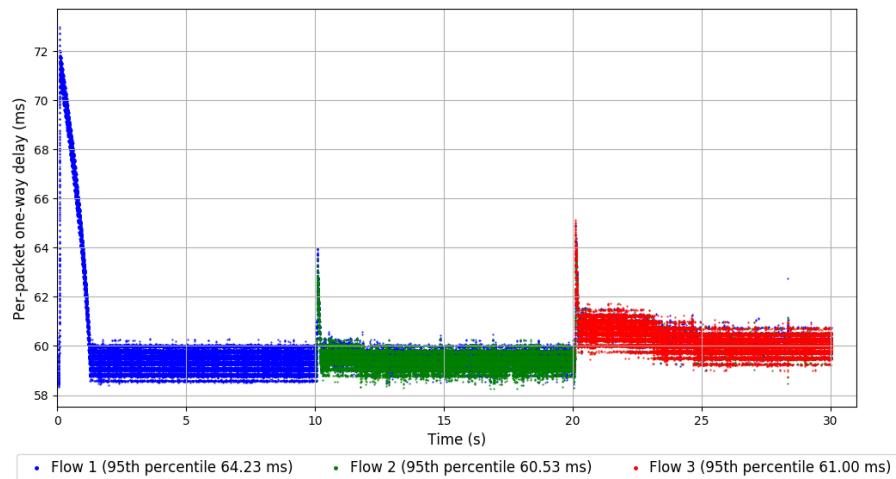
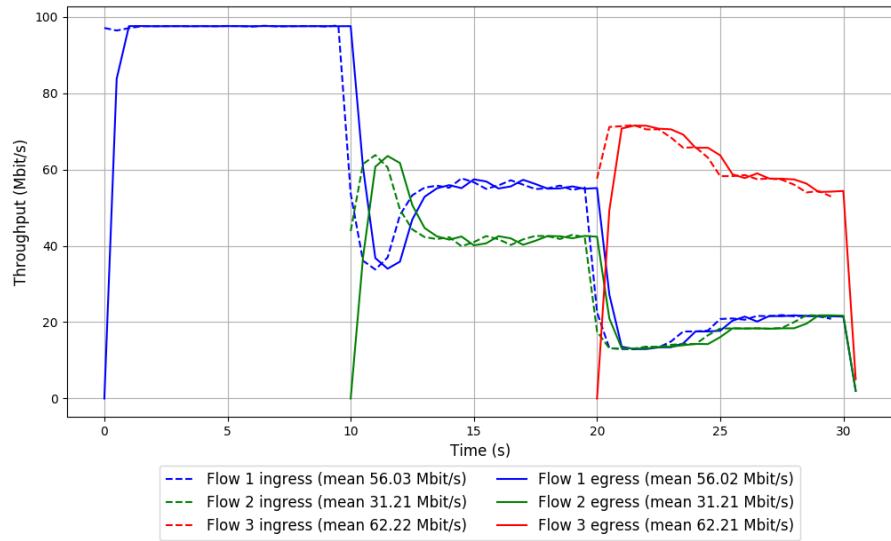


Run 2: Statistics of TCP Vegas

```
Start at: 2018-09-07 15:08:03
End at: 2018-09-07 15:08:33
Local clock offset: -67.838 ms
Remote clock offset: 0.072 ms

# Below is generated by plot.py at 2018-09-07 16:26:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.49 Mbit/s
95th percentile per-packet one-way delay: 61.101 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.02 Mbit/s
95th percentile per-packet one-way delay: 64.229 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.21 Mbit/s
95th percentile per-packet one-way delay: 60.531 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.21 Mbit/s
95th percentile per-packet one-way delay: 60.998 ms
Loss rate: 0.00%
```

Run 2: Report of TCP Vegas — Data Link

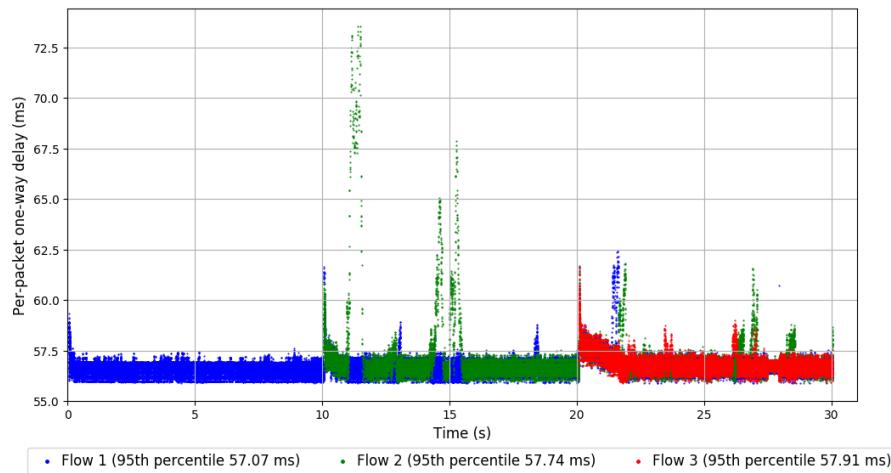
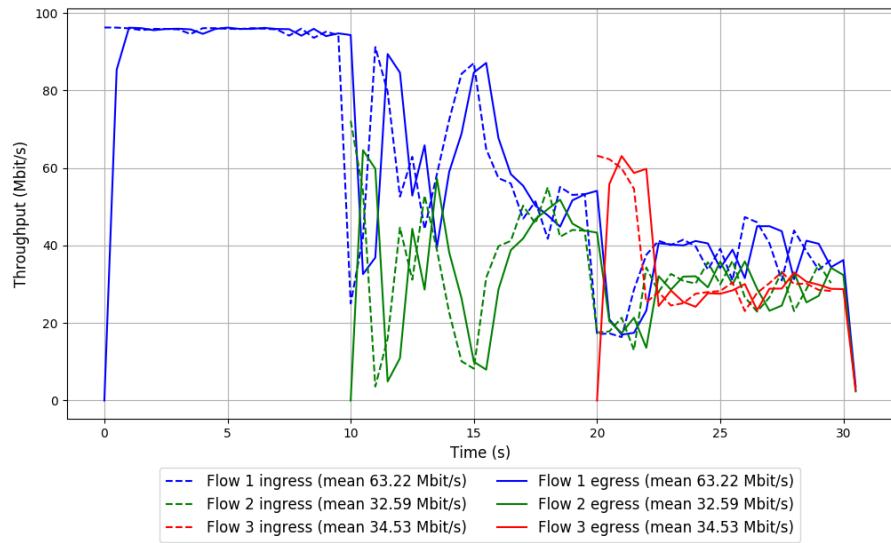


Run 3: Statistics of TCP Vegas

```
Start at: 2018-09-07 15:28:32
End at: 2018-09-07 15:29:02
Local clock offset: -68.86 ms
Remote clock offset: 0.139 ms

# Below is generated by plot.py at 2018-09-07 16:26:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.40 Mbit/s
95th percentile per-packet one-way delay: 57.348 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.22 Mbit/s
95th percentile per-packet one-way delay: 57.067 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.59 Mbit/s
95th percentile per-packet one-way delay: 57.737 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.53 Mbit/s
95th percentile per-packet one-way delay: 57.915 ms
Loss rate: 0.00%
```

Run 3: Report of TCP Vegas — Data Link

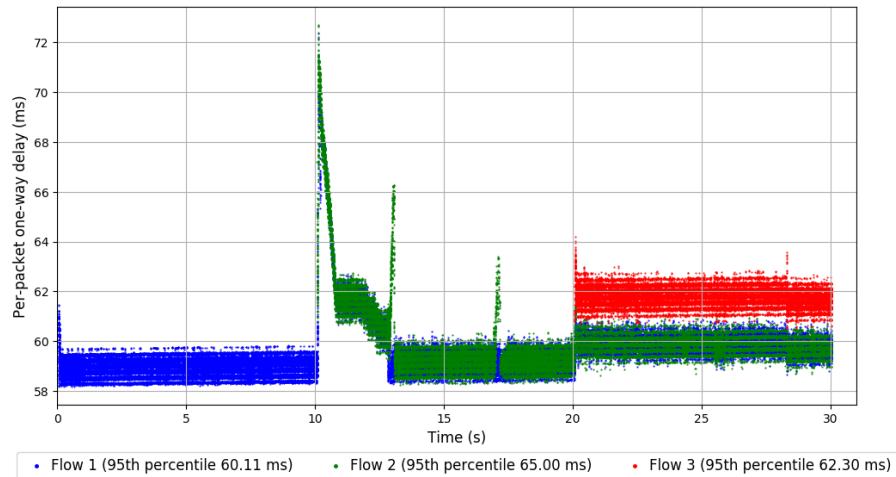
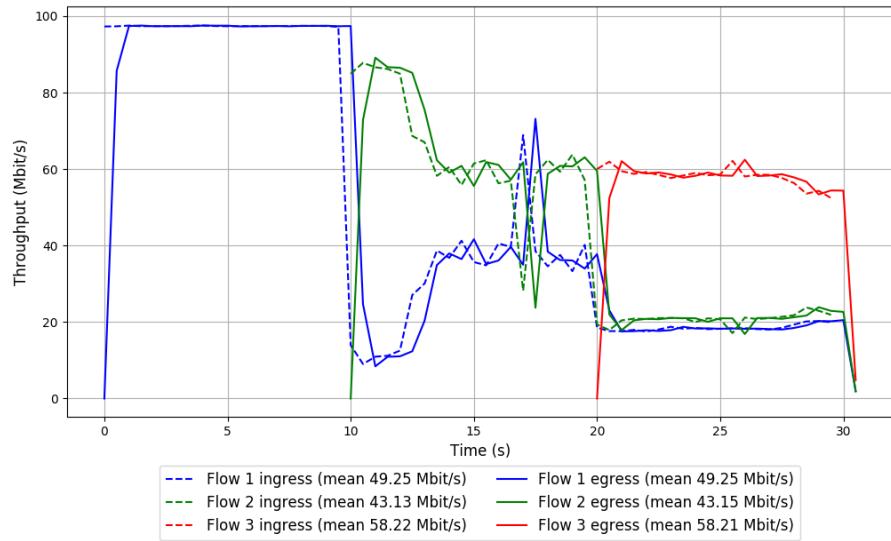


Run 4: Statistics of TCP Vegas

```
Start at: 2018-09-07 15:49:03
End at: 2018-09-07 15:49:33
Local clock offset: -68.192 ms
Remote clock offset: 0.105 ms

# Below is generated by plot.py at 2018-09-07 16:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.34 Mbit/s
95th percentile per-packet one-way delay: 62.207 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.25 Mbit/s
95th percentile per-packet one-way delay: 60.113 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.15 Mbit/s
95th percentile per-packet one-way delay: 64.999 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 58.21 Mbit/s
95th percentile per-packet one-way delay: 62.299 ms
Loss rate: 0.00%
```

Run 4: Report of TCP Vegas — Data Link

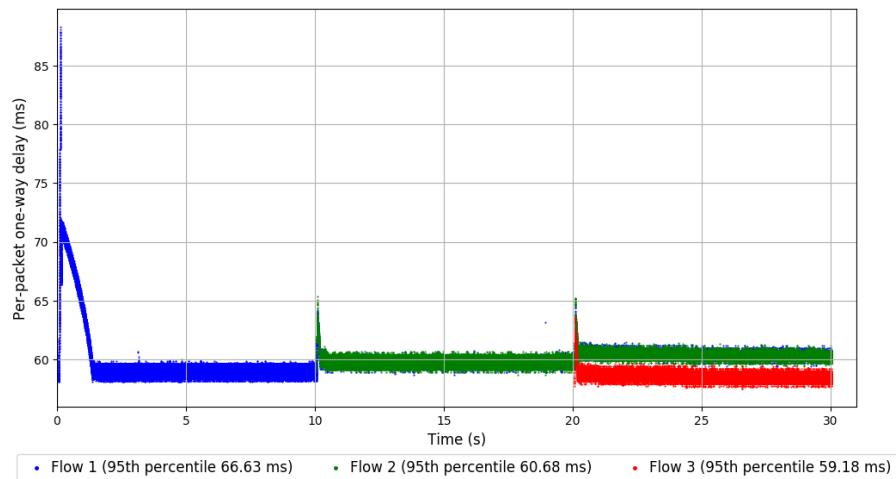
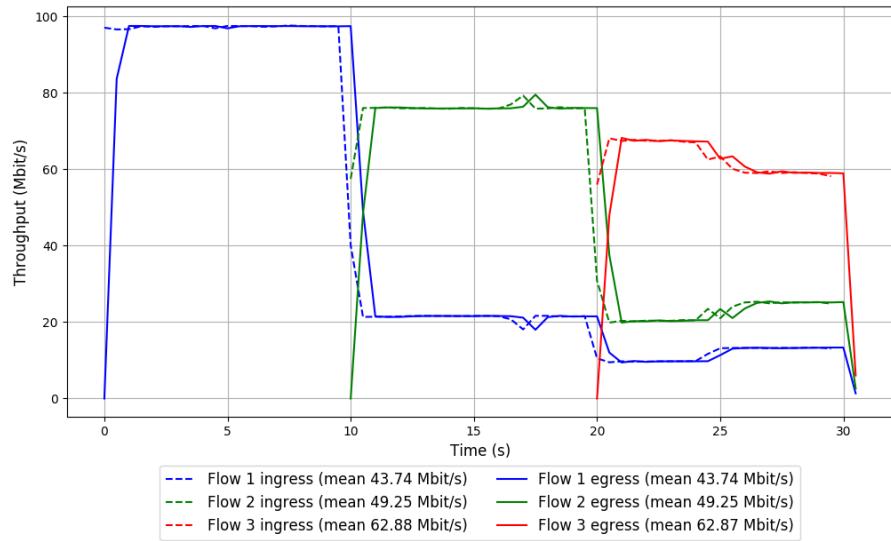


Run 5: Statistics of TCP Vegas

```
Start at: 2018-09-07 16:09:32
End at: 2018-09-07 16:10:02
Local clock offset: -59.403 ms
Remote clock offset: 0.104 ms

# Below is generated by plot.py at 2018-09-07 16:26:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 60.942 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.74 Mbit/s
95th percentile per-packet one-way delay: 66.631 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.25 Mbit/s
95th percentile per-packet one-way delay: 60.681 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.87 Mbit/s
95th percentile per-packet one-way delay: 59.176 ms
Loss rate: 0.00%
```

Run 5: Report of TCP Vegas — Data Link

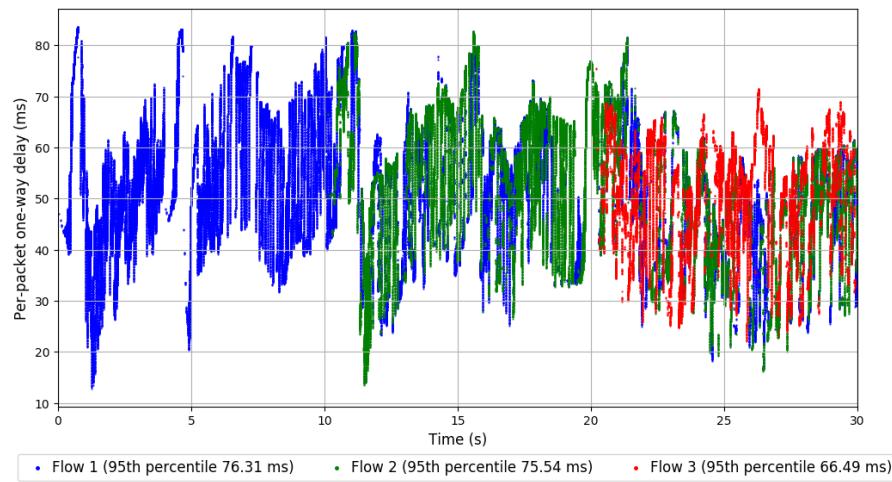
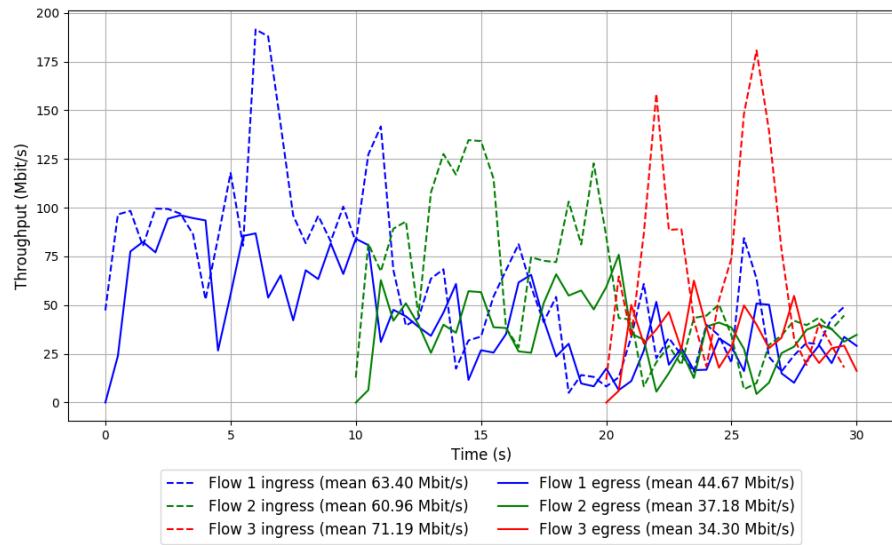


Run 1: Statistics of Verus

```
Start at: 2018-09-07 14:38:28
End at: 2018-09-07 14:38:58
Local clock offset: -8.416 ms
Remote clock offset: -0.157 ms

# Below is generated by plot.py at 2018-09-07 16:26:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.64 Mbit/s
95th percentile per-packet one-way delay: 75.146 ms
Loss rate: 36.73%
-- Flow 1:
Average throughput: 44.67 Mbit/s
95th percentile per-packet one-way delay: 76.314 ms
Loss rate: 29.58%
-- Flow 2:
Average throughput: 37.18 Mbit/s
95th percentile per-packet one-way delay: 75.538 ms
Loss rate: 38.99%
-- Flow 3:
Average throughput: 34.30 Mbit/s
95th percentile per-packet one-way delay: 66.486 ms
Loss rate: 52.13%
```

Run 1: Report of Verus — Data Link

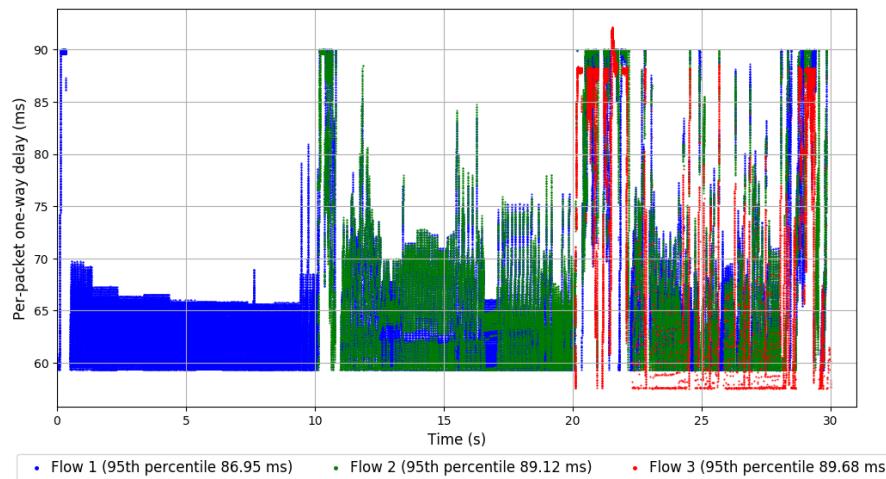
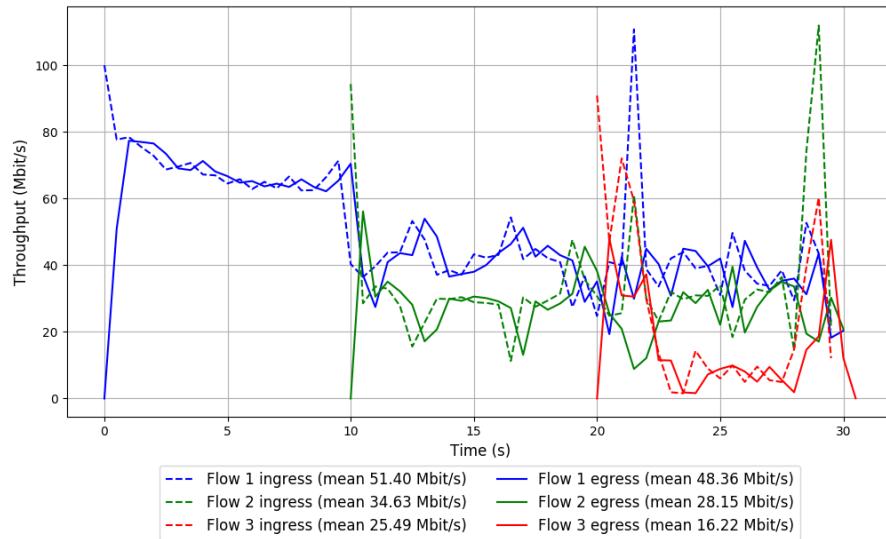


Run 2: Statistics of Verus

```
Start at: 2018-09-07 14:58:57
End at: 2018-09-07 14:59:27
Local clock offset: -68.041 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-09-07 16:26:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.05 Mbit/s
95th percentile per-packet one-way delay: 88.205 ms
Loss rate: 12.51%
-- Flow 1:
Average throughput: 48.36 Mbit/s
95th percentile per-packet one-way delay: 86.955 ms
Loss rate: 5.83%
-- Flow 2:
Average throughput: 28.15 Mbit/s
95th percentile per-packet one-way delay: 89.123 ms
Loss rate: 18.61%
-- Flow 3:
Average throughput: 16.22 Mbit/s
95th percentile per-packet one-way delay: 89.681 ms
Loss rate: 36.41%
```

Run 2: Report of Verus — Data Link

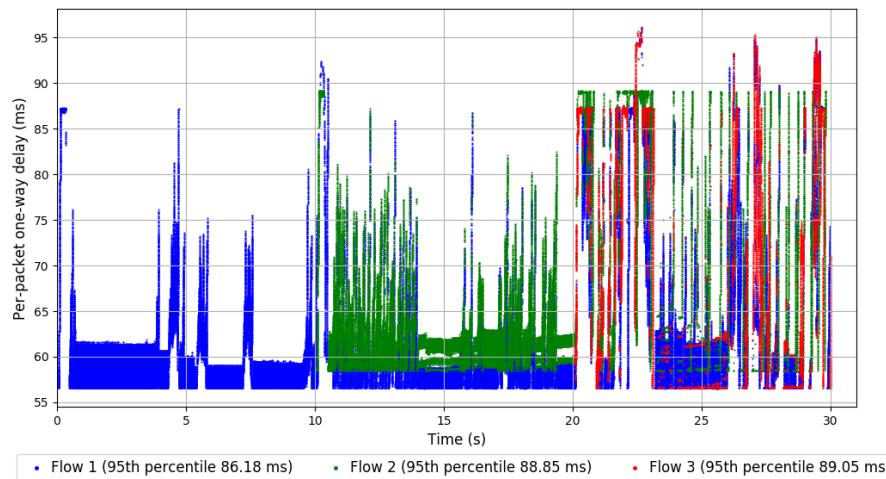
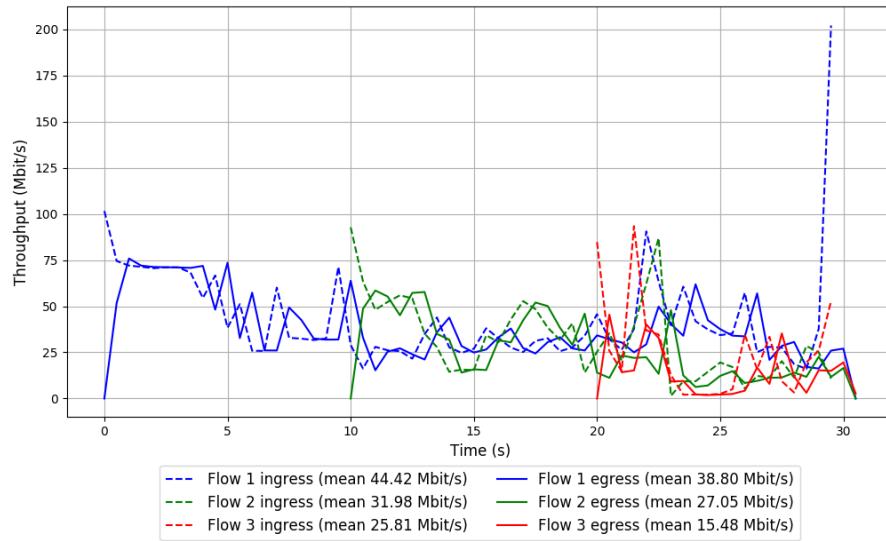


Run 3: Statistics of Verus

```
Start at: 2018-09-07 15:19:28
End at: 2018-09-07 15:19:58
Local clock offset: -68.915 ms
Remote clock offset: 0.025 ms

# Below is generated by plot.py at 2018-09-07 16:26:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.94 Mbit/s
95th percentile per-packet one-way delay: 87.113 ms
Loss rate: 16.54%
-- Flow 1:
Average throughput: 38.80 Mbit/s
95th percentile per-packet one-way delay: 86.182 ms
Loss rate: 12.61%
-- Flow 2:
Average throughput: 27.05 Mbit/s
95th percentile per-packet one-way delay: 88.848 ms
Loss rate: 15.34%
-- Flow 3:
Average throughput: 15.48 Mbit/s
95th percentile per-packet one-way delay: 89.046 ms
Loss rate: 39.96%
```

Run 3: Report of Verus — Data Link

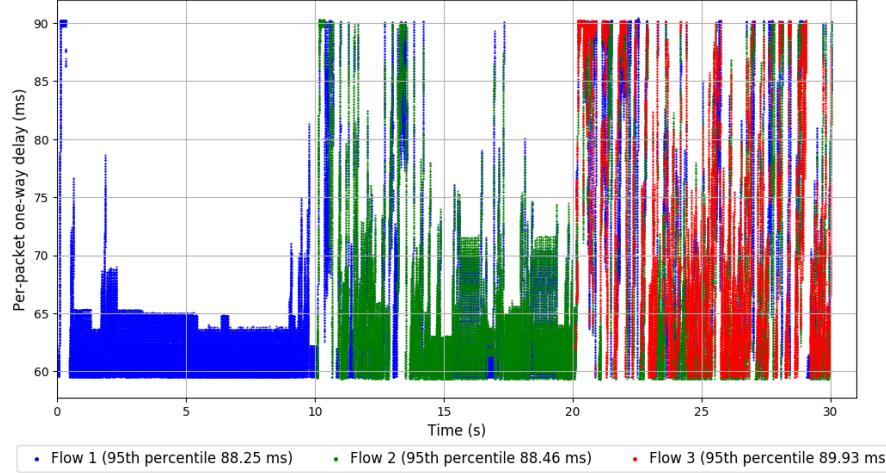
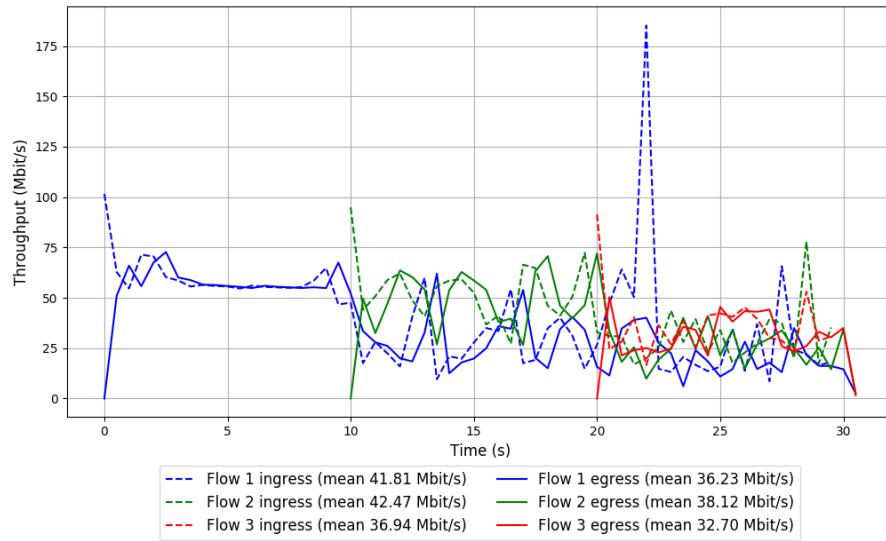


Run 4: Statistics of Verus

```
Start at: 2018-09-07 15:39:58
End at: 2018-09-07 15:40:28
Local clock offset: -71.406 ms
Remote clock offset: 0.012 ms

# Below is generated by plot.py at 2018-09-07 16:26:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.44 Mbit/s
95th percentile per-packet one-way delay: 88.867 ms
Loss rate: 11.89%
-- Flow 1:
Average throughput: 36.23 Mbit/s
95th percentile per-packet one-way delay: 88.253 ms
Loss rate: 13.27%
-- Flow 2:
Average throughput: 38.12 Mbit/s
95th percentile per-packet one-way delay: 88.462 ms
Loss rate: 10.12%
-- Flow 3:
Average throughput: 32.70 Mbit/s
95th percentile per-packet one-way delay: 89.929 ms
Loss rate: 11.26%
```

Run 4: Report of Verus — Data Link

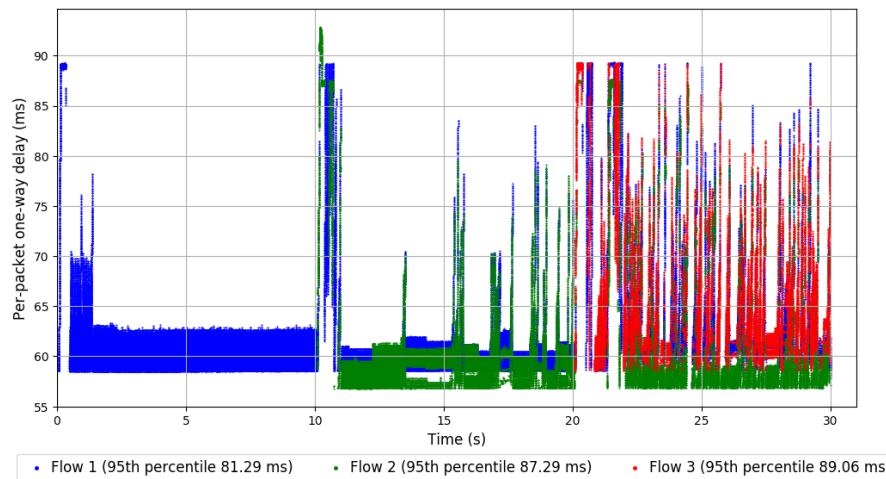
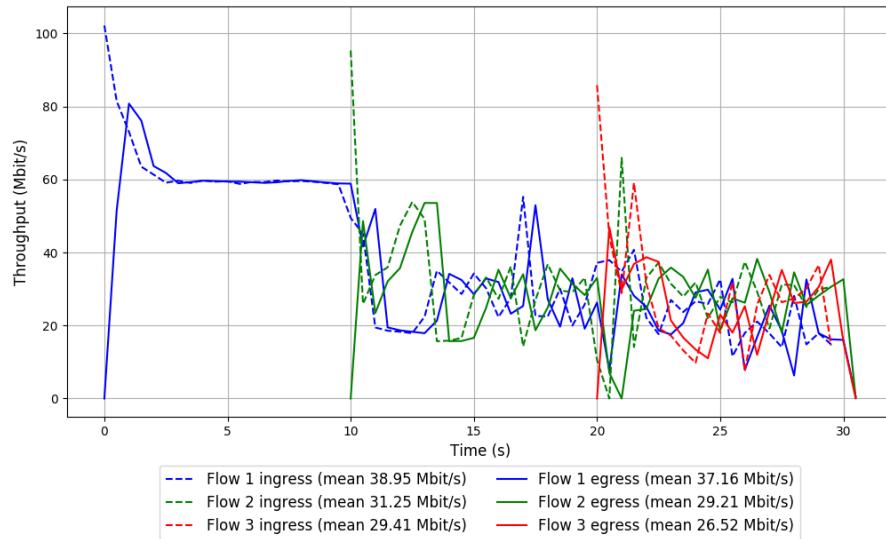


Run 5: Statistics of Verus

```
Start at: 2018-09-07 16:00:26
End at: 2018-09-07 16:00:56
Local clock offset: -61.878 ms
Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2018-09-07 16:27:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.40 Mbit/s
95th percentile per-packet one-way delay: 85.524 ms
Loss rate: 5.91%
-- Flow 1:
Average throughput: 37.16 Mbit/s
95th percentile per-packet one-way delay: 81.292 ms
Loss rate: 4.58%
-- Flow 2:
Average throughput: 29.21 Mbit/s
95th percentile per-packet one-way delay: 87.291 ms
Loss rate: 6.53%
-- Flow 3:
Average throughput: 26.52 Mbit/s
95th percentile per-packet one-way delay: 89.063 ms
Loss rate: 9.86%
```

Run 5: Report of Verus — Data Link

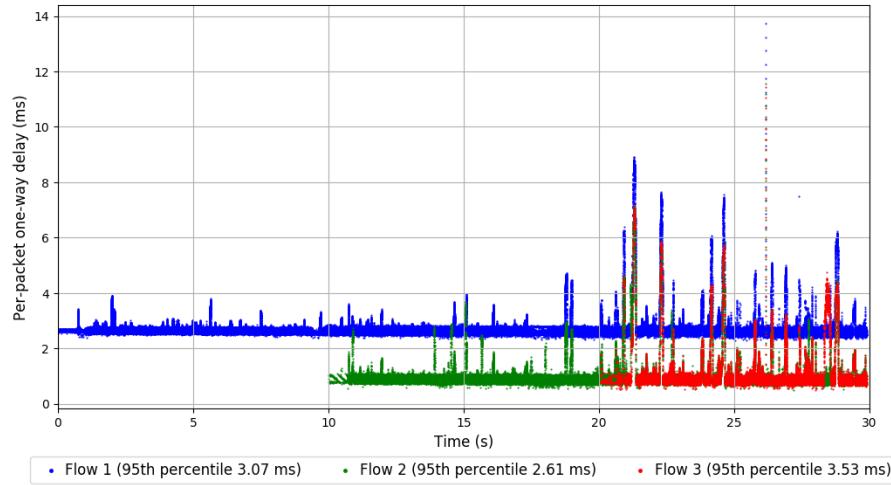
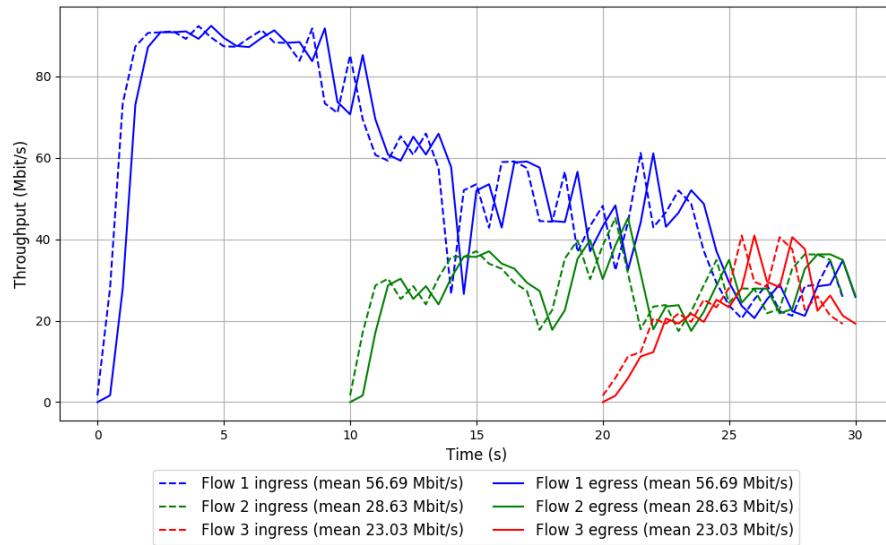


Run 1: Statistics of PCC-Vivace

```
Start at: 2018-09-07 14:52:11
End at: 2018-09-07 14:52:41
Local clock offset: -9.937 ms
Remote clock offset: 0.092 ms

# Below is generated by plot.py at 2018-09-07 16:27:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.33 Mbit/s
95th percentile per-packet one-way delay: 3.041 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.69 Mbit/s
95th percentile per-packet one-way delay: 3.072 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.63 Mbit/s
95th percentile per-packet one-way delay: 2.608 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 23.03 Mbit/s
95th percentile per-packet one-way delay: 3.526 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Vivace — Data Link

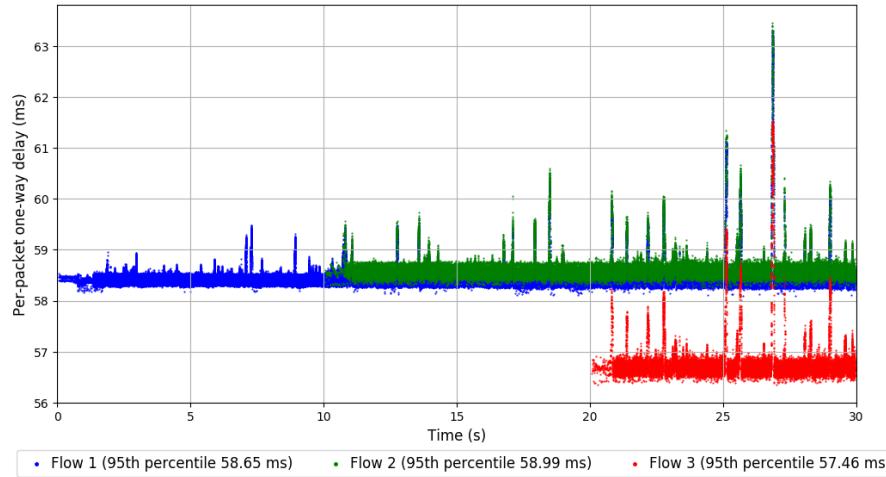
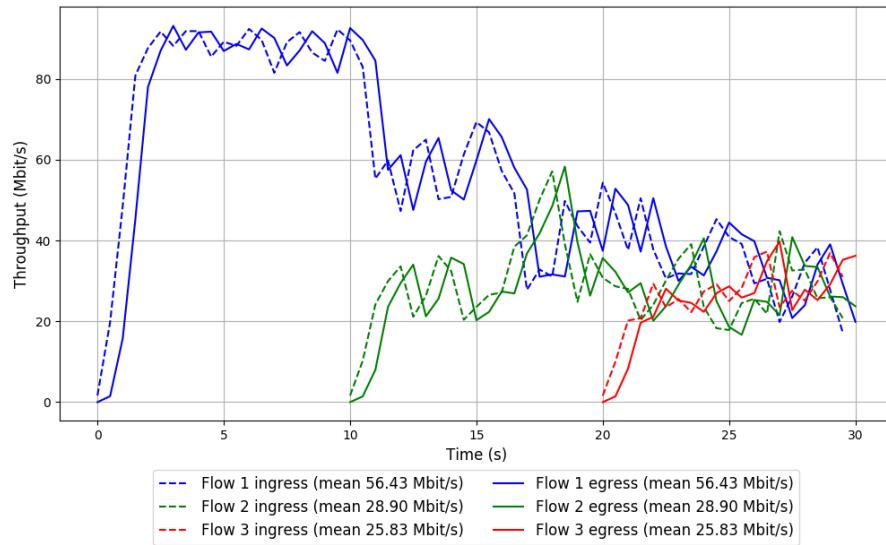


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-09-07 15:12:41
End at: 2018-09-07 15:13:11
Local clock offset: -68.365 ms
Remote clock offset: 0.063 ms

# Below is generated by plot.py at 2018-09-07 16:27:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.18 Mbit/s
95th percentile per-packet one-way delay: 58.750 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.43 Mbit/s
95th percentile per-packet one-way delay: 58.651 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.90 Mbit/s
95th percentile per-packet one-way delay: 58.987 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 25.83 Mbit/s
95th percentile per-packet one-way delay: 57.464 ms
Loss rate: 0.00%
```

Run 2: Report of PCC-Vivace — Data Link

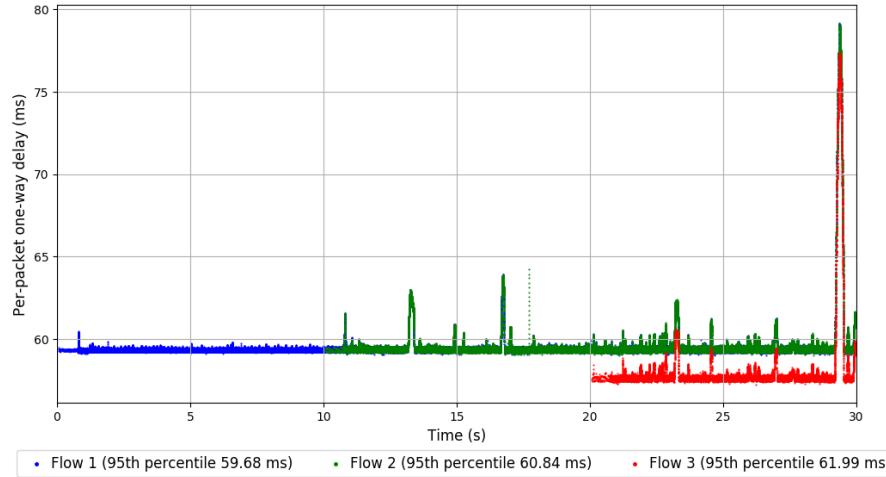
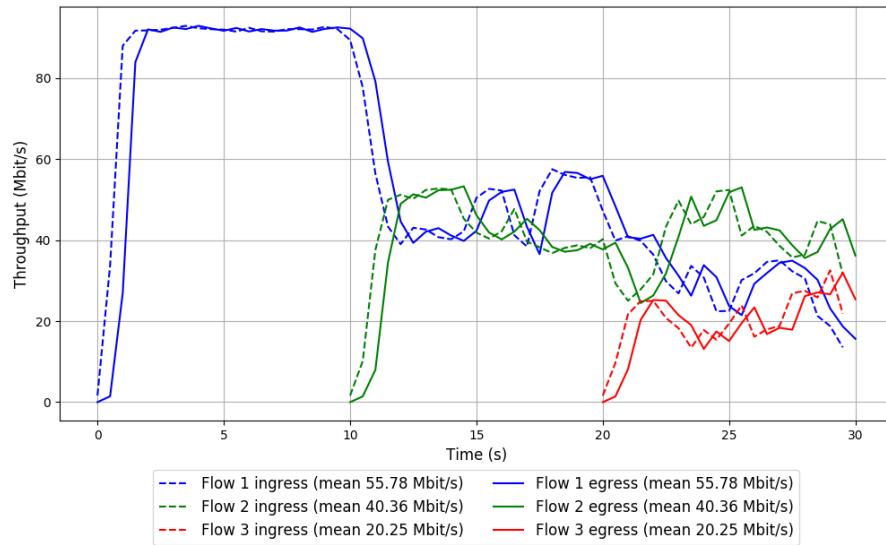


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-09-07 15:33:11
End at: 2018-09-07 15:33:41
Local clock offset: -70.796 ms
Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2018-09-07 16:27:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.30 Mbit/s
95th percentile per-packet one-way delay: 60.015 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.78 Mbit/s
95th percentile per-packet one-way delay: 59.681 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.36 Mbit/s
95th percentile per-packet one-way delay: 60.838 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.25 Mbit/s
95th percentile per-packet one-way delay: 61.986 ms
Loss rate: 0.00%
```

Run 3: Report of PCC-Vivace — Data Link

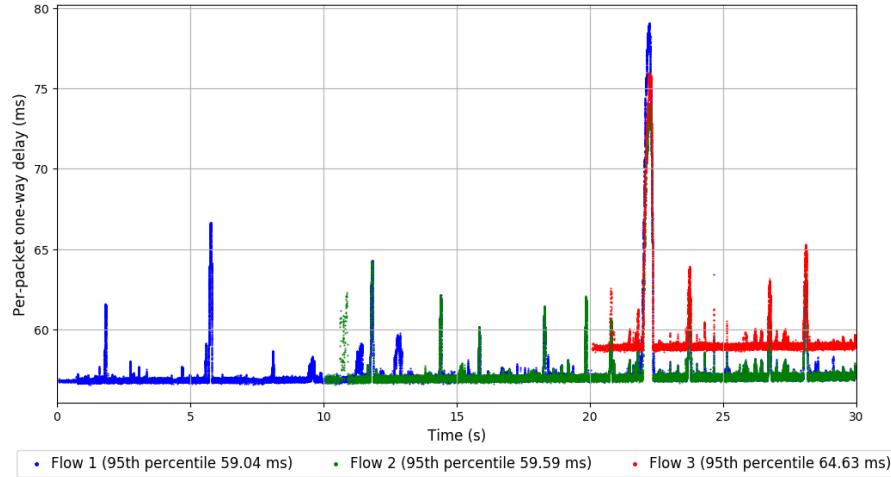
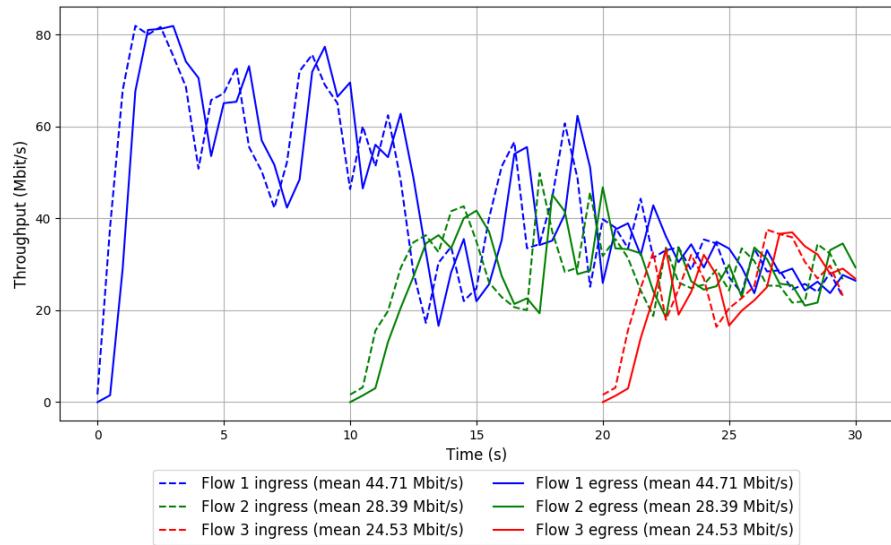


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-09-07 15:53:41
End at: 2018-09-07 15:54:11
Local clock offset: -64.193 ms
Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2018-09-07 16:27:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.69 Mbit/s
95th percentile per-packet one-way delay: 60.079 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.71 Mbit/s
95th percentile per-packet one-way delay: 59.044 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.39 Mbit/s
95th percentile per-packet one-way delay: 59.585 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.53 Mbit/s
95th percentile per-packet one-way delay: 64.628 ms
Loss rate: 0.00%
```

Run 4: Report of PCC-Vivace — Data Link

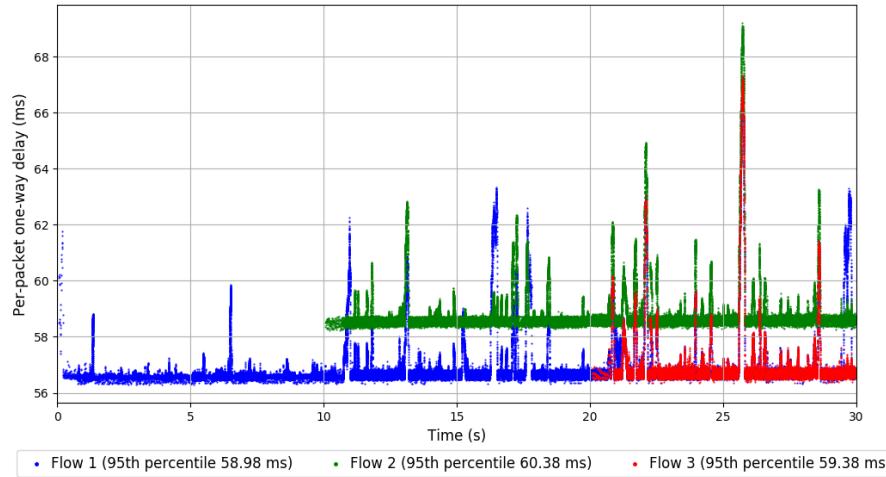
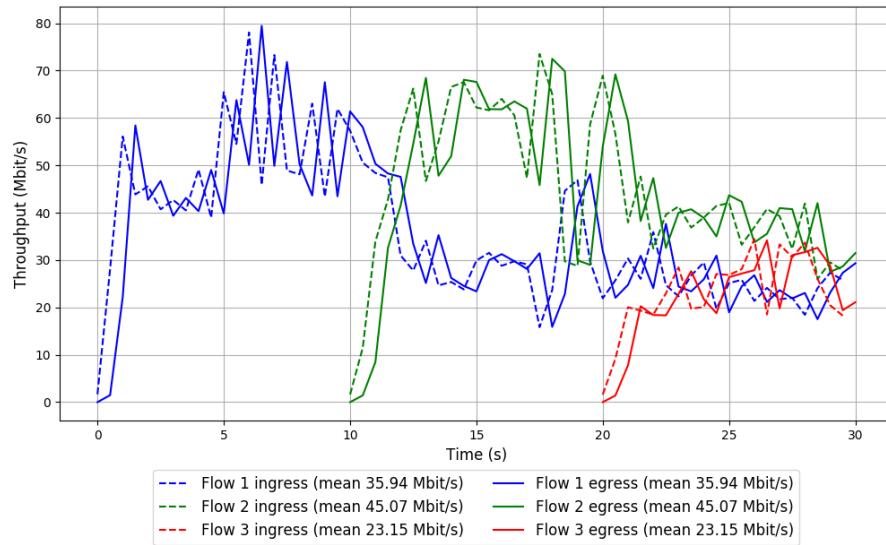


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-09-07 16:14:10
End at: 2018-09-07 16:14:40
Local clock offset: -59.096 ms
Remote clock offset: 0.067 ms

# Below is generated by plot.py at 2018-09-07 16:27:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.56 Mbit/s
95th percentile per-packet one-way delay: 59.820 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 35.94 Mbit/s
95th percentile per-packet one-way delay: 58.976 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.07 Mbit/s
95th percentile per-packet one-way delay: 60.377 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 23.15 Mbit/s
95th percentile per-packet one-way delay: 59.376 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Vivace — Data Link

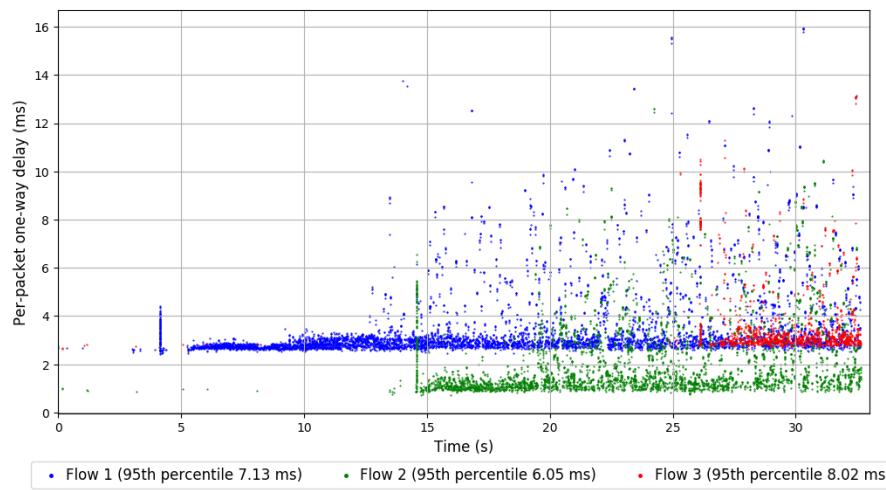
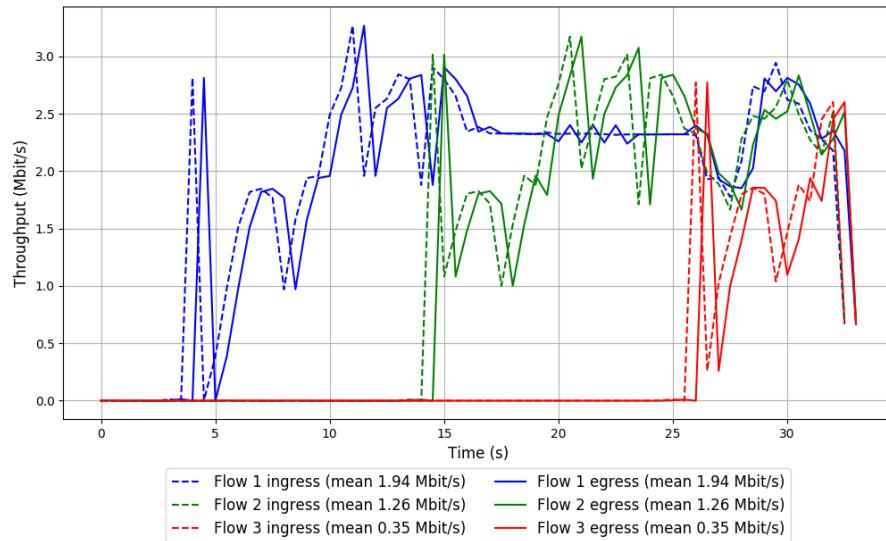


```
Run 1: Statistics of WebRTC media

Start at: 2018-09-07 14:41:56
End at: 2018-09-07 14:42:26
Local clock offset: -7.61 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2018-09-07 16:27:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 6.936 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 7.131 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 6.054 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 8.021 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

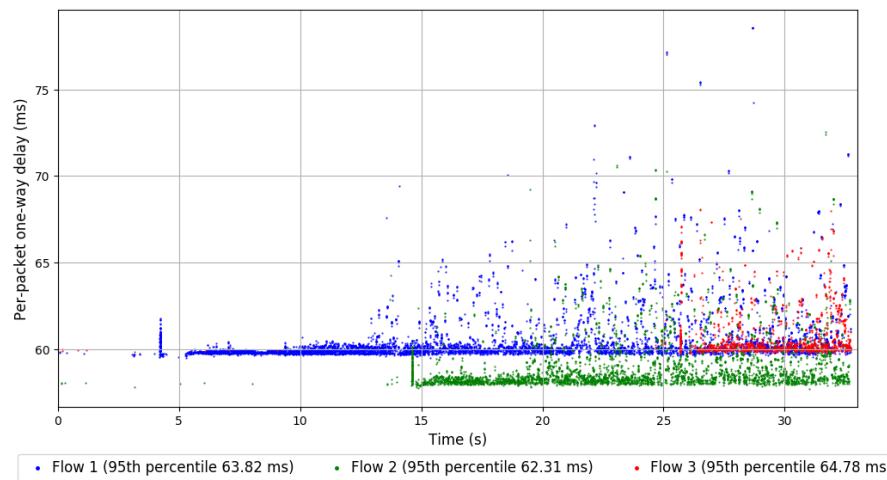
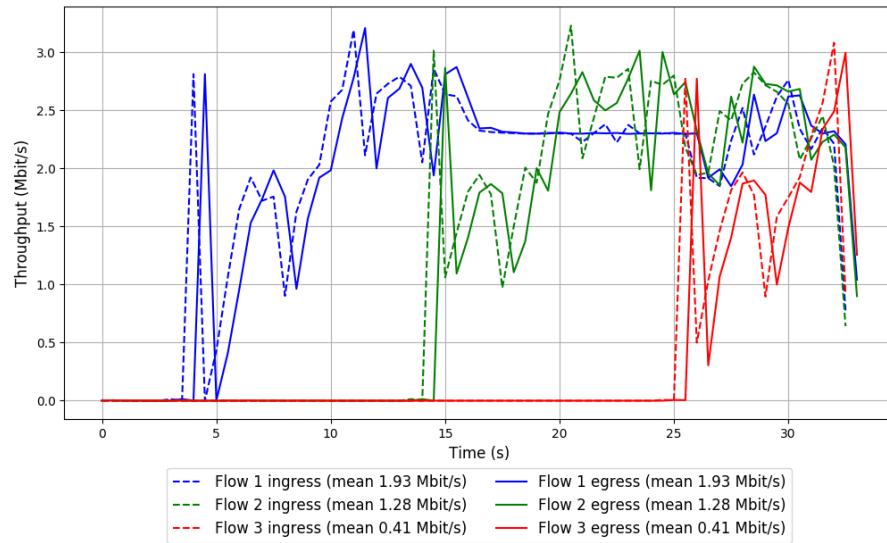


Run 2: Statistics of WebRTC media

```
Start at: 2018-09-07 15:02:25
End at: 2018-09-07 15:02:55
Local clock offset: -68.621 ms
Remote clock offset: 0.114 ms

# Below is generated by plot.py at 2018-09-07 16:27:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.60 Mbit/s
95th percentile per-packet one-way delay: 63.527 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 63.824 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 62.315 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 64.778 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

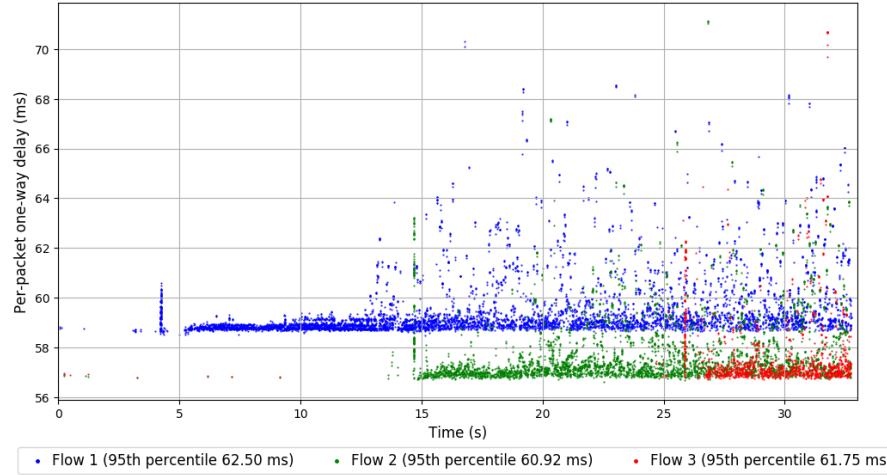
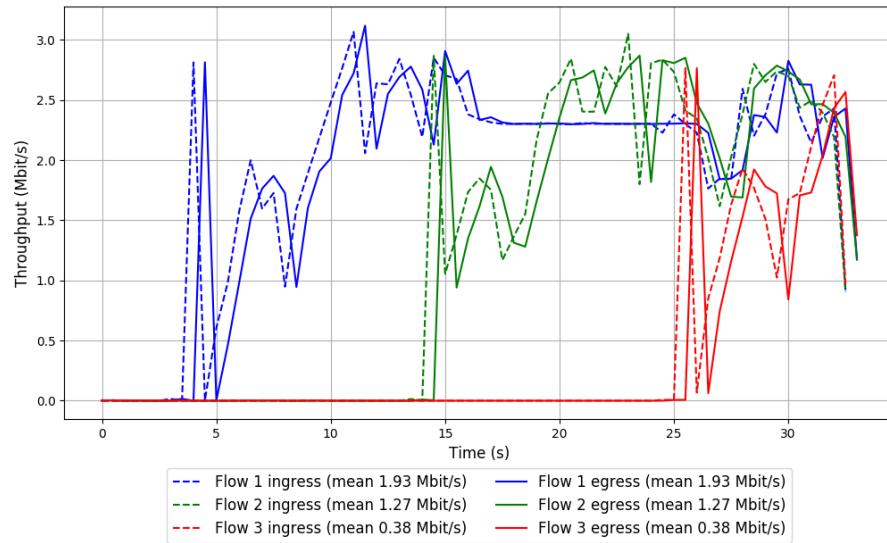


Run 3: Statistics of WebRTC media

```
Start at: 2018-09-07 15:22:55
End at: 2018-09-07 15:23:25
Local clock offset: -69.292 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2018-09-07 16:27:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 61.898 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 62.500 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.27 Mbit/s
95th percentile per-packet one-way delay: 60.923 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 61.751 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

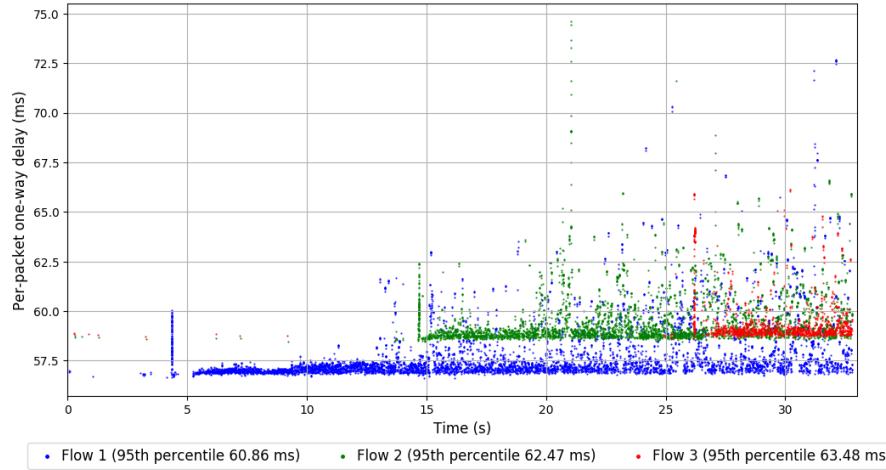
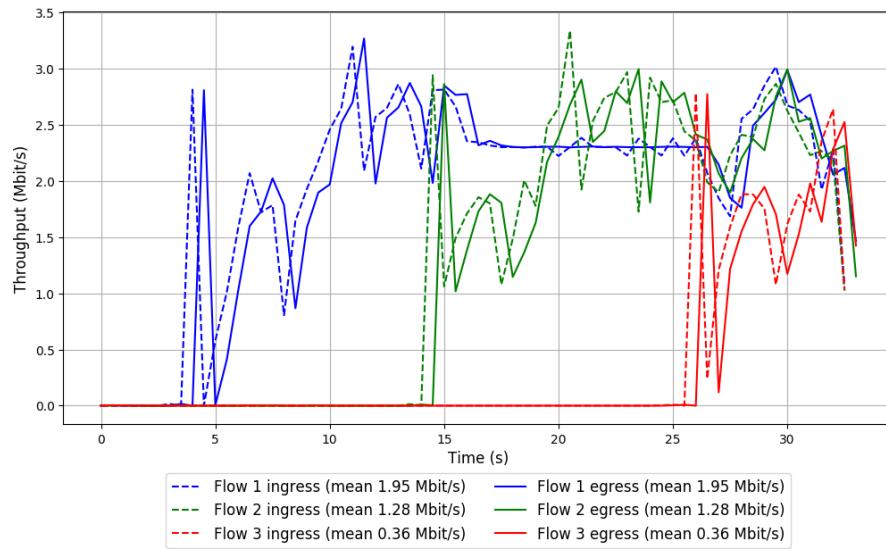


Run 4: Statistics of WebRTC media

```
Start at: 2018-09-07 15:43:26
End at: 2018-09-07 15:43:56
Local clock offset: -70.71 ms
Remote clock offset: 0.078 ms

# Below is generated by plot.py at 2018-09-07 16:27:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 61.960 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 60.862 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 62.467 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 63.480 ms
Loss rate: 0.08%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-09-07 16:03:53
End at: 2018-09-07 16:04:23
Local clock offset: -60.804 ms
Remote clock offset: 0.093 ms

# Below is generated by plot.py at 2018-09-07 16:27:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.60 Mbit/s
95th percentile per-packet one-way delay: 60.661 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 60.487 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 60.811 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 60.794 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

