

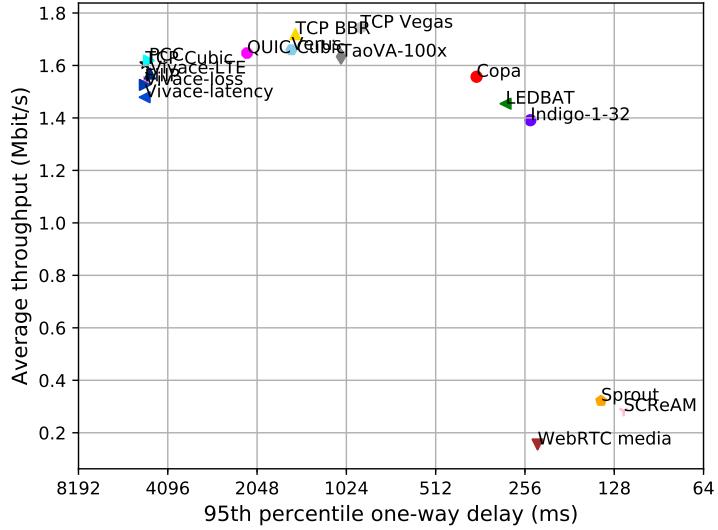
Pantheon Report

Generated at 2018-04-10 08:59:15 (UTC).
Data path: AWS Brazil 2 Ethernet (*local*) → Colombia ppp0 (*remote*).
Repeated the test of 17 congestion control schemes 3 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).
Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo_fast**).
NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

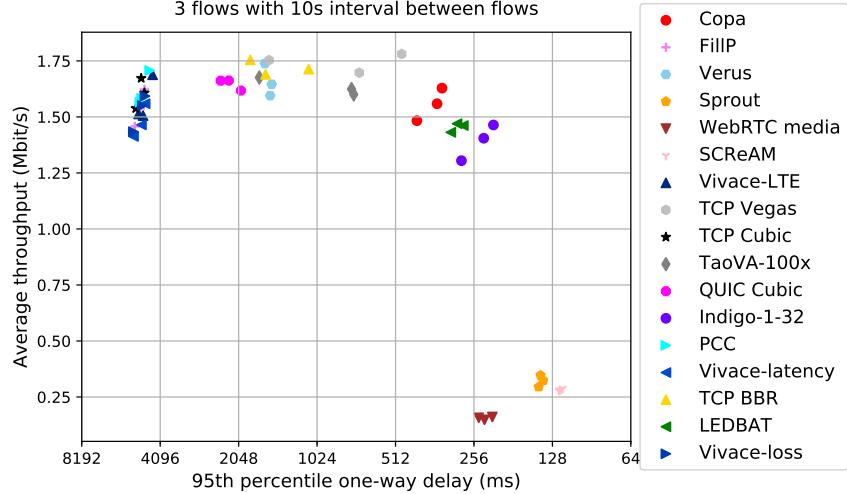
Git summary:

```
branch: master @ eb420b5be9bafcc22cf68b99ff5a2000462fc59
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bfff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822eee5d0031620f4bebf38aedc5581
```

test from AWS Brazil 2 Ethernet to Colombia ppp0, 3 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS Brazil 2 Ethernet to Colombia ppp0, 3 runs of 30s each per scheme
3 flows with 10s interval between flows



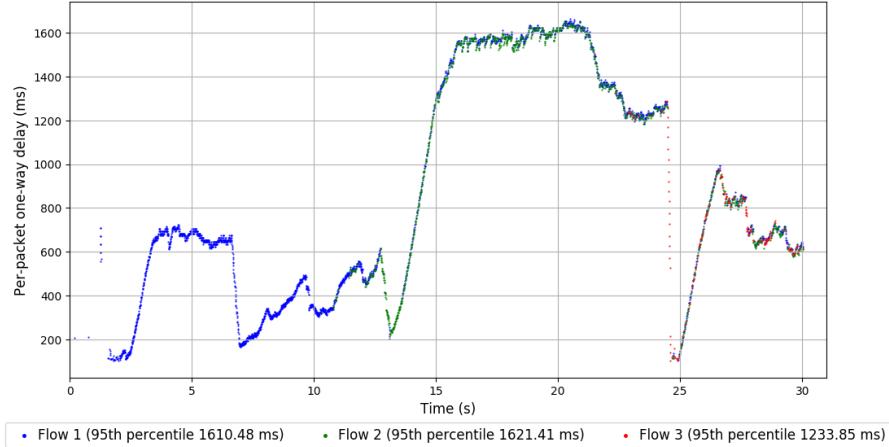
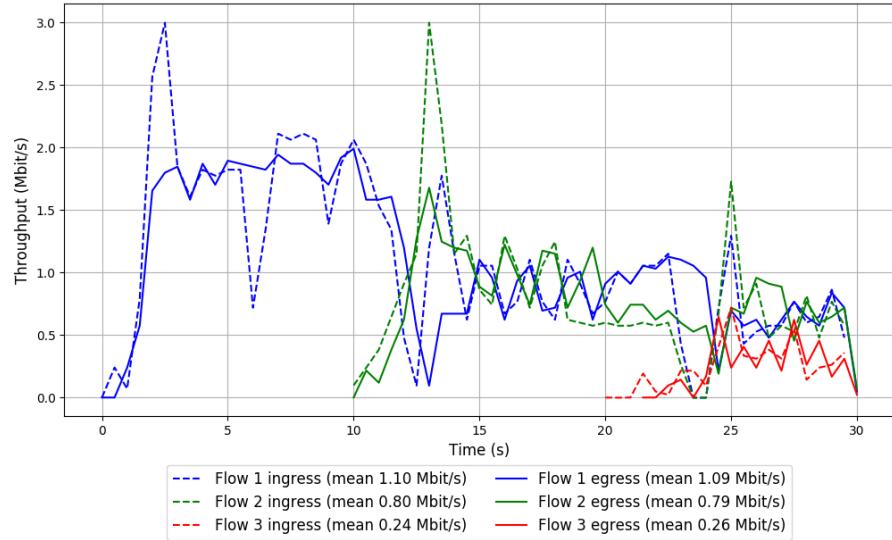
| scheme | # runs | mean avg tput (Mbit/s) | | | mean 95th-%ile delay (ms) | | | mean loss rate (%) | | |
|----------------|--------|------------------------|--------|--------|---------------------------|---------|---------|--------------------|--------|--------|
| | | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 |
| TCP BBR | 3 | 1.08 | 0.78 | 0.42 | 1511.28 | 1533.75 | 1177.67 | 1.21 | 2.19 | 7.99 |
| TCP Cubic | 3 | 1.57 | 0.06 | 0.00 | 4876.06 | 4872.95 | 4883.92 | 17.34 | 29.70 | 61.91 |
| LEDBAT | 3 | 1.02 | 0.46 | 0.41 | 293.98 | 310.88 | 310.70 | 0.27 | 0.87 | 2.94 |
| PCC | 3 | 1.62 | 0.00 | 0.00 | 4739.76 | 4581.05 | 4667.27 | 72.76 | 1.87 | 27.68 |
| QUIC Cubic | 3 | 1.33 | 0.42 | 0.13 | 2137.94 | 2300.55 | 2296.85 | 5.55 | 14.65 | 33.78 |
| SCReAM | 3 | 0.08 | 0.21 | 0.18 | 113.52 | 126.90 | 125.50 | 0.09 | 0.00 | 0.00 |
| WebRTC media | 3 | 0.06 | 0.06 | 0.05 | 221.68 | 233.45 | 245.63 | 0.00 | 0.00 | 0.00 |
| Sprout | 3 | 0.16 | 0.16 | 0.17 | 151.67 | 134.84 | 144.71 | 0.00 | 0.00 | 0.00 |
| TaoVA-100x | 3 | 0.95 | 0.72 | 0.63 | 711.63 | 1069.60 | 1247.08 | 1.07 | 2.17 | 6.41 |
| TCP Vegas | 3 | 1.19 | 0.54 | 0.65 | 895.11 | 925.26 | 935.27 | 1.41 | 2.90 | 7.30 |
| Verus | 3 | 1.65 | 0.01 | 0.01 | 1567.61 | 1599.41 | 1543.06 | 2.47 | 4.69 | 6.36 |
| Copa | 3 | 0.96 | 0.65 | 0.49 | 359.56 | 384.70 | 434.54 | 0.22 | 0.59 | 1.44 |
| FillP | 3 | 1.31 | 0.44 | 0.00 | 4876.27 | 4922.25 | 4893.78 | 28.94 | 85.99 | 86.80 |
| Indigo-1-32 | 3 | 0.83 | 0.56 | 0.60 | 231.96 | 282.15 | 268.08 | 0.03 | 0.03 | 0.35 |
| Vivace-latency | 3 | 0.87 | 0.92 | 0.00 | 4892.37 | 4910.17 | 4933.52 | 34.44 | 44.28 | 40.42 |
| Vivace-loss | 3 | 1.40 | 0.20 | 0.00 | 4885.11 | 4947.44 | 4639.45 | 34.29 | 36.89 | 21.74 |
| Vivace-LTE | 3 | 0.95 | 0.95 | 0.00 | 4683.38 | 4722.89 | 4676.52 | 30.29 | 43.32 | 34.44 |

Run 1: Statistics of TCP BBR

```
Start at: 2018-04-10 07:52:47
End at: 2018-04-10 07:53:17
Local clock offset: -7.13 ms
Remote clock offset: 2.73 ms

# Below is generated by plot.py at 2018-04-10 08:58:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 1614.034 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 1610.478 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 1621.411 ms
Loss rate: 2.03%
-- Flow 3:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 1233.851 ms
Loss rate: 7.45%
```

Run 1: Report of TCP BBR — Data Link

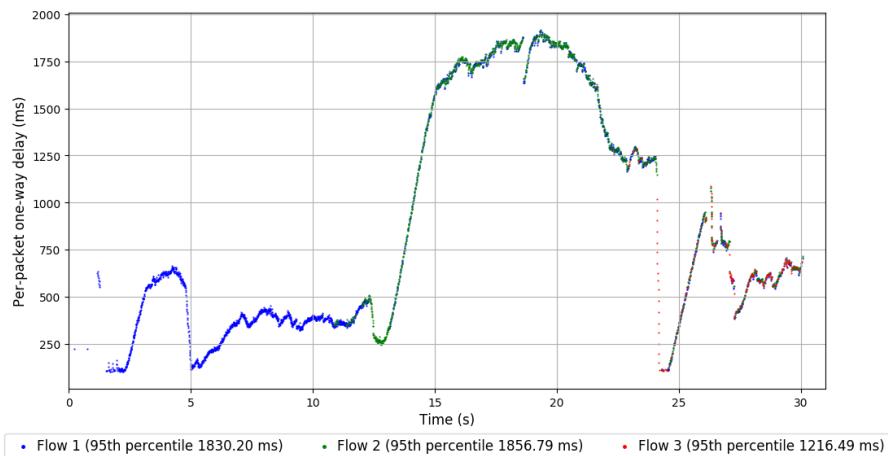
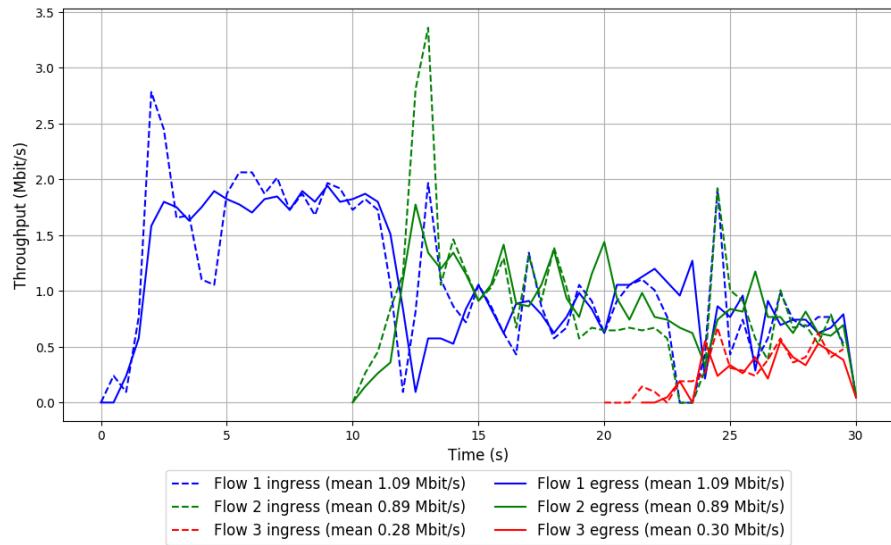


Run 2: Statistics of TCP BBR

```
Start at: 2018-04-10 08:15:25
End at: 2018-04-10 08:15:55
Local clock offset: -6.456 ms
Remote clock offset: 8.425 ms

# Below is generated by plot.py at 2018-04-10 08:58:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 1846.568 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 1830.203 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 1856.788 ms
Loss rate: 1.82%
-- Flow 3:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 1216.489 ms
Loss rate: 11.90%
```

Run 2: Report of TCP BBR — Data Link

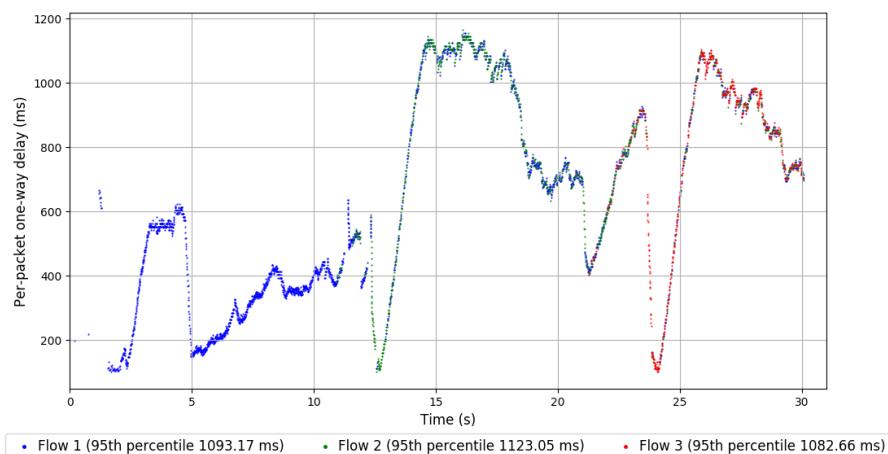
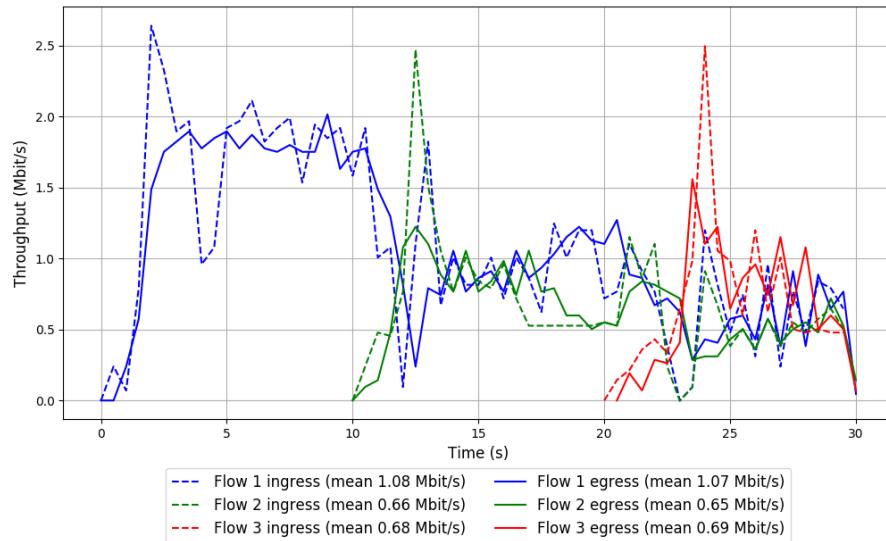


Run 3: Statistics of TCP BBR

```
Start at: 2018-04-10 08:38:02
End at: 2018-04-10 08:38:32
Local clock offset: -6.463 ms
Remote clock offset: 7.547 ms

# Below is generated by plot.py at 2018-04-10 08:58:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 1103.124 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 1093.167 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 1123.050 ms
Loss rate: 2.73%
-- Flow 3:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 1082.665 ms
Loss rate: 4.61%
```

Run 3: Report of TCP BBR — Data Link

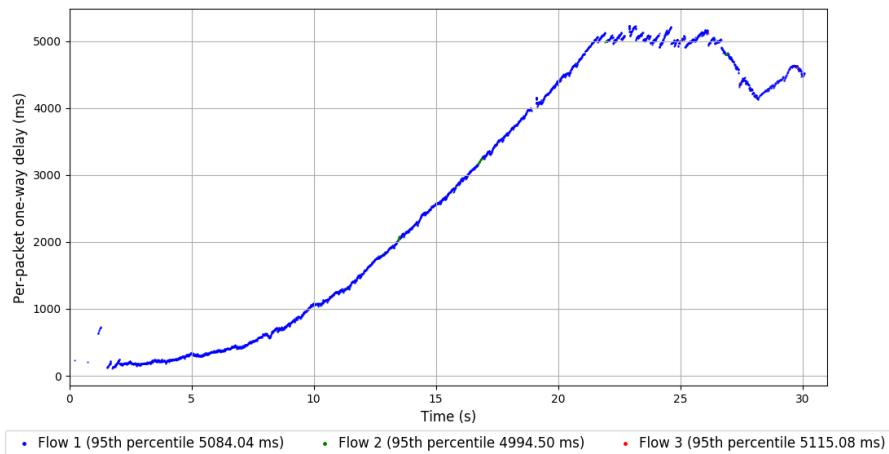
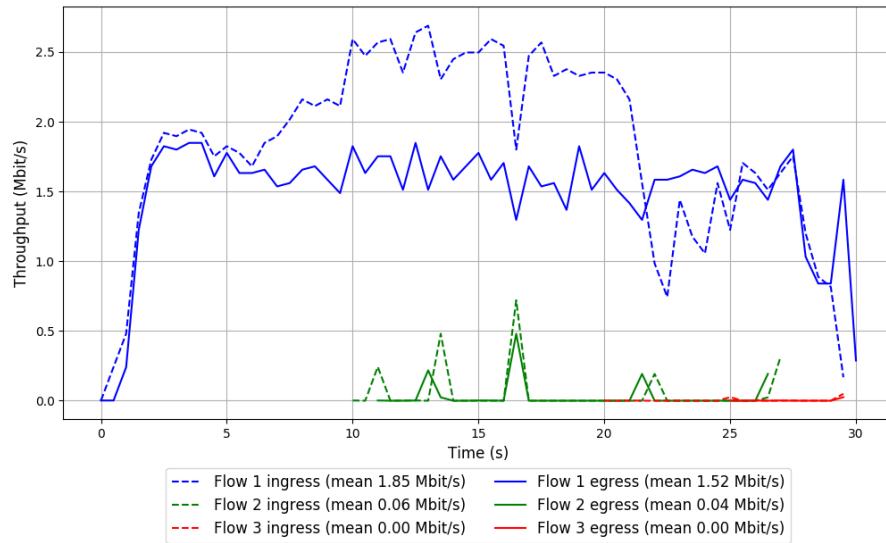


Run 1: Statistics of TCP Cubic

```
Start at: 2018-04-10 08:01:34
End at: 2018-04-10 08:02:04
Local clock offset: -6.772 ms
Remote clock offset: 8.324 ms

# Below is generated by plot.py at 2018-04-10 08:58:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 5084.029 ms
Loss rate: 17.85%
-- Flow 1:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 5084.041 ms
Loss rate: 17.35%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 4994.499 ms
Loss rate: 43.74%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5115.077 ms
Loss rate: 63.50%
```

Run 1: Report of TCP Cubic — Data Link

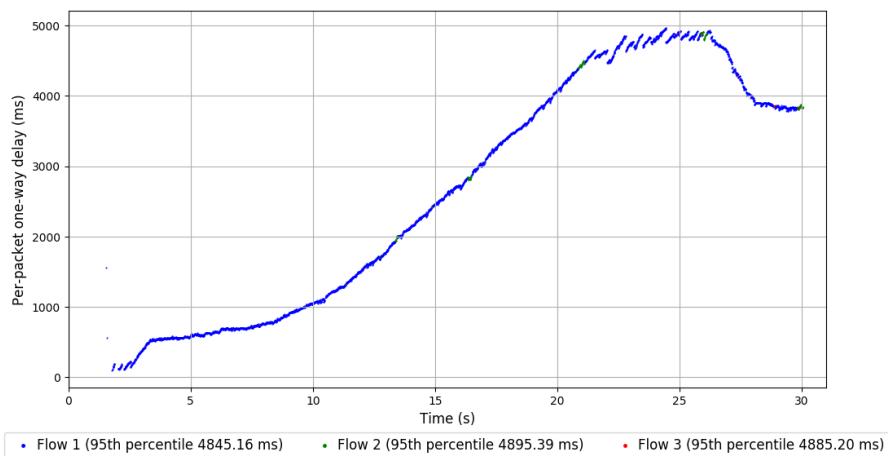
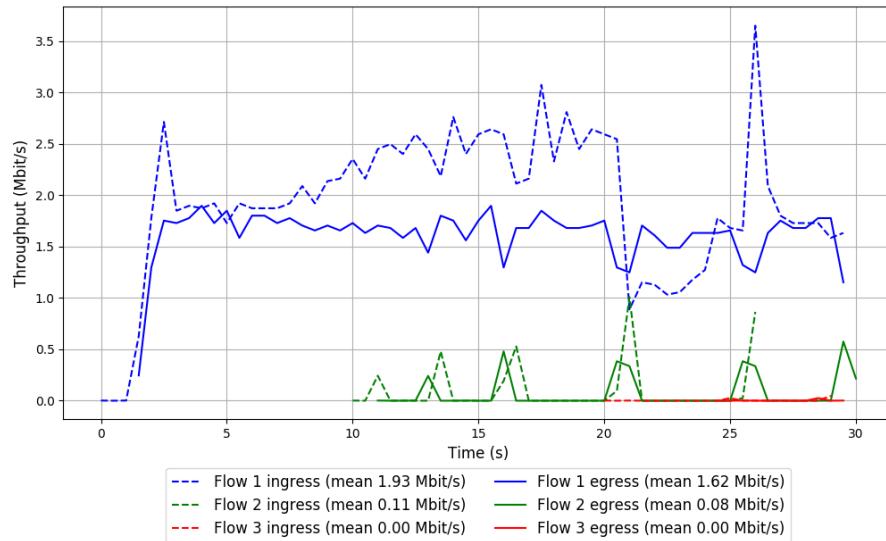


Run 2: Statistics of TCP Cubic

```
Start at: 2018-04-10 08:24:12
End at: 2018-04-10 08:24:42
Local clock offset: -6.334 ms
Remote clock offset: 3.655 ms

# Below is generated by plot.py at 2018-04-10 08:58:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 4845.467 ms
Loss rate: 20.00%
-- Flow 1:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 4845.163 ms
Loss rate: 20.15%
-- Flow 2:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 4895.391 ms
Loss rate: 13.96%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4885.203 ms
Loss rate: 61.12%
```

Run 2: Report of TCP Cubic — Data Link

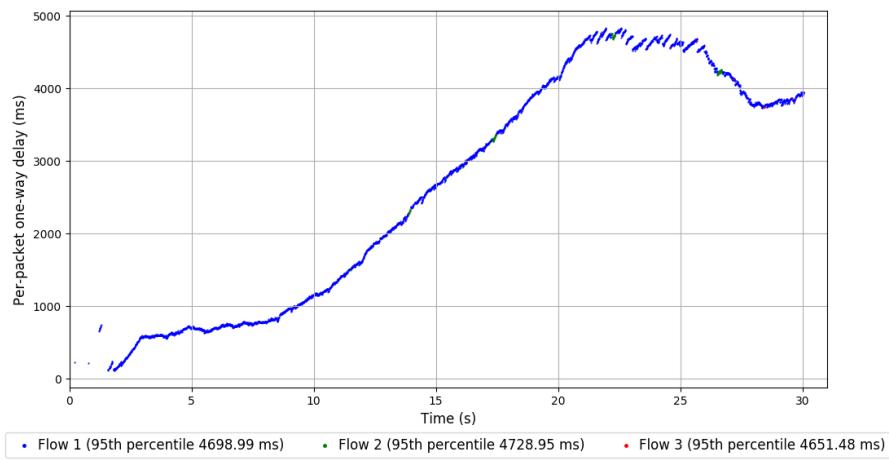
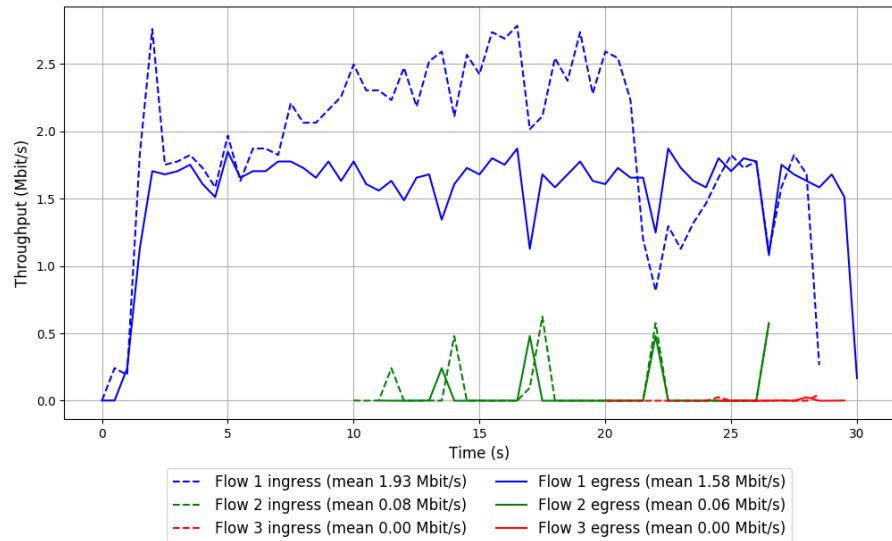


Run 3: Statistics of TCP Cubic

```
Start at: 2018-04-10 08:46:50
End at: 2018-04-10 08:47:20
Local clock offset: -6.45 ms
Remote clock offset: 2.222 ms

# Below is generated by plot.py at 2018-04-10 08:58:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 4708.676 ms
Loss rate: 14.94%
-- Flow 1:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 4698.989 ms
Loss rate: 14.52%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 4728.951 ms
Loss rate: 31.39%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4651.477 ms
Loss rate: 61.12%
```

Run 3: Report of TCP Cubic — Data Link

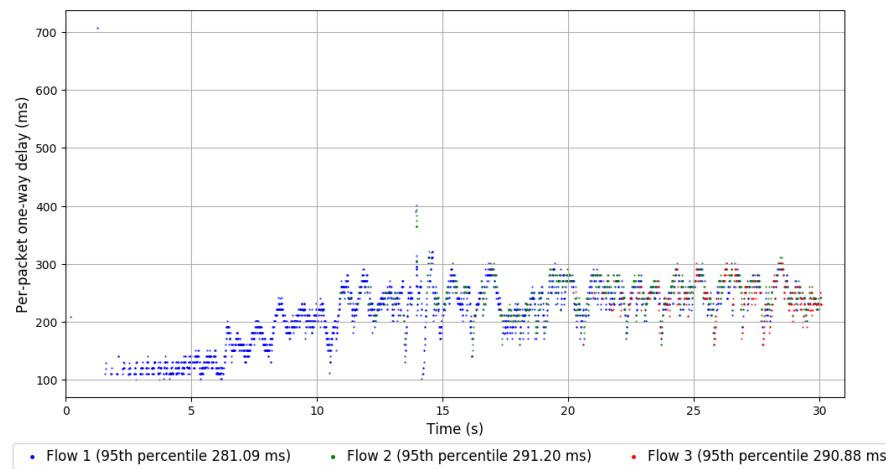
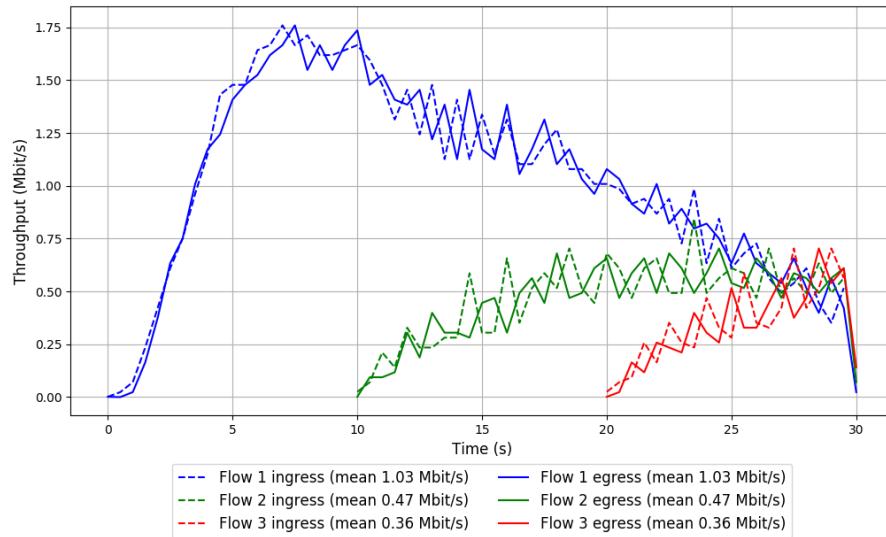


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-04-10 08:09:07
End at: 2018-04-10 08:09:37
Local clock offset: -4.951 ms
Remote clock offset: 8.385 ms

# Below is generated by plot.py at 2018-04-10 08:58:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 281.284 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 281.089 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 291.205 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 290.878 ms
Loss rate: 1.97%
```

Run 1: Report of LEDBAT — Data Link

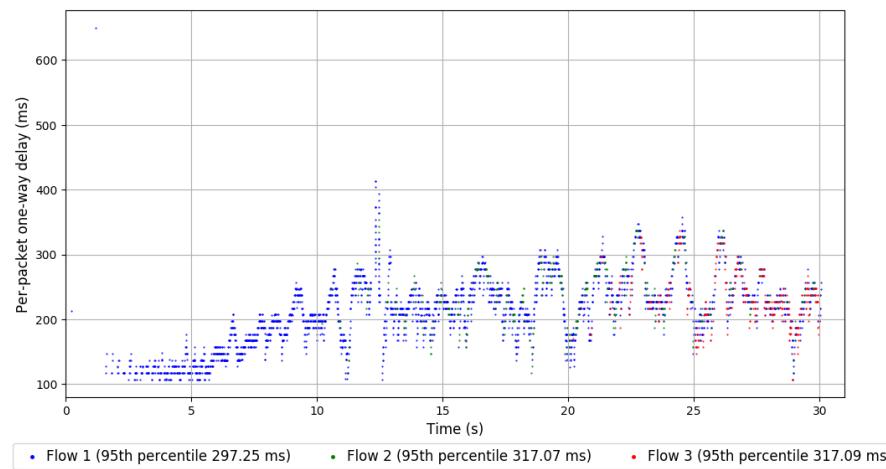
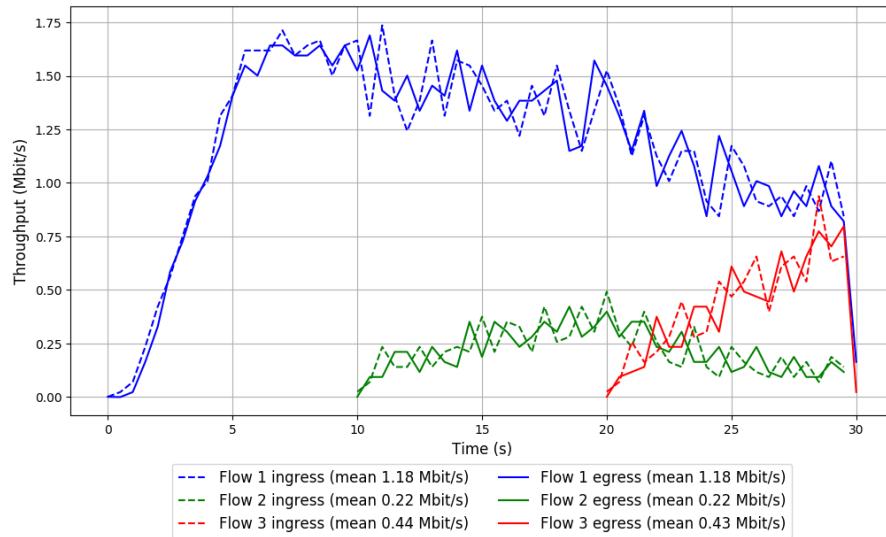


Run 2: Statistics of LEDBAT

```
Start at: 2018-04-10 08:31:44
End at: 2018-04-10 08:32:14
Local clock offset: -5.688 ms
Remote clock offset: 8.491 ms

# Below is generated by plot.py at 2018-04-10 08:58:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 297.350 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 297.246 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 317.069 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 317.087 ms
Loss rate: 2.16%
```

Run 2: Report of LEDBAT — Data Link

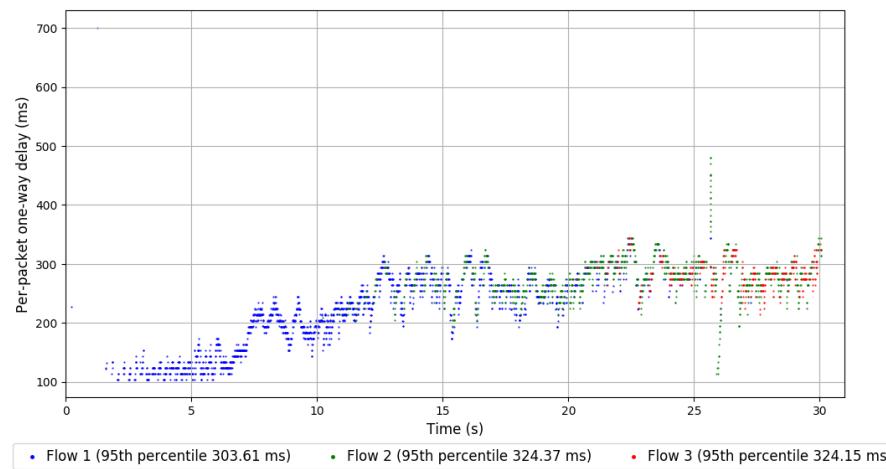
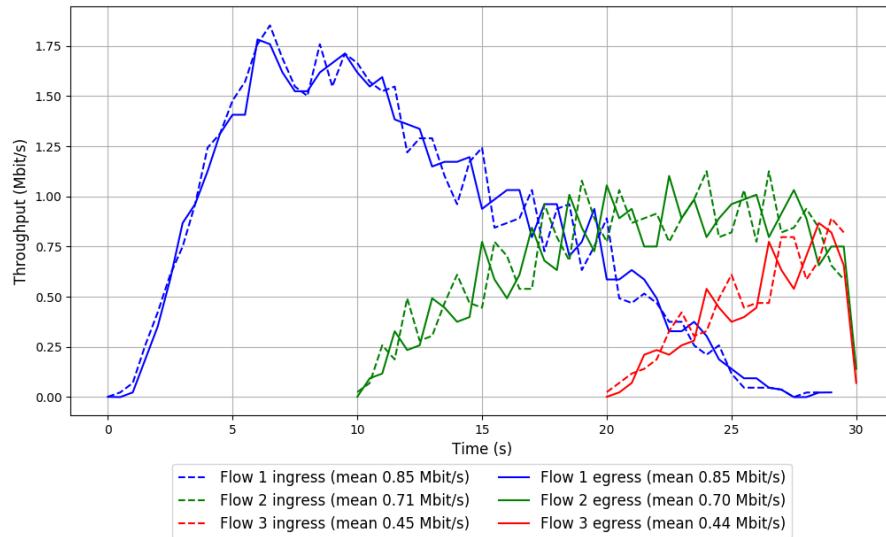


Run 3: Statistics of LEDBAT

```
Start at: 2018-04-10 08:54:21
End at: 2018-04-10 08:54:51
Local clock offset: -5.695 ms
Remote clock offset: 7.532 ms

# Below is generated by plot.py at 2018-04-10 08:58:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 314.148 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 303.608 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 324.374 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 324.149 ms
Loss rate: 4.70%
```

Run 3: Report of LEDBAT — Data Link

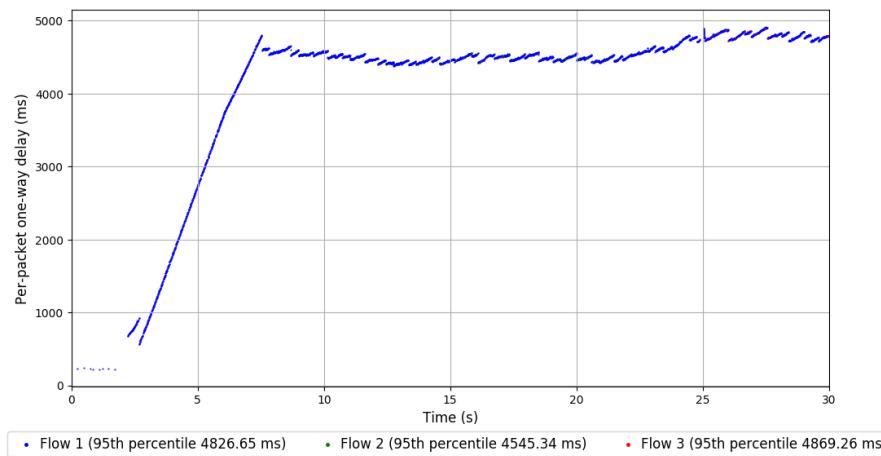
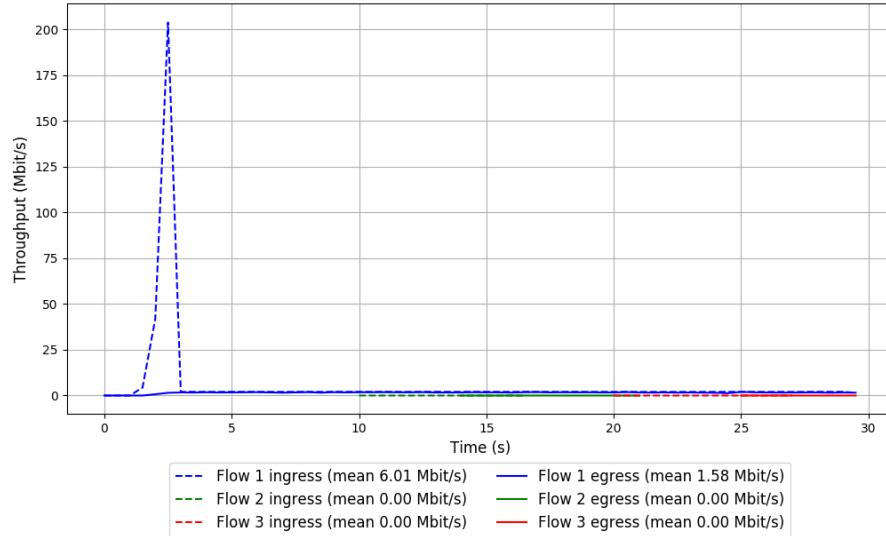


Run 1: Statistics of PCC

```
Start at: 2018-04-10 07:55:17
End at: 2018-04-10 07:55:47
Local clock offset: -7.034 ms
Remote clock offset: 8.351 ms

# Below is generated by plot.py at 2018-04-10 08:58:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 4826.849 ms
Loss rate: 73.80%
-- Flow 1:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 4826.654 ms
Loss rate: 73.81%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4545.340 ms
Loss rate: 5.60%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4869.255 ms
Loss rate: 43.82%
```

Run 1: Report of PCC — Data Link

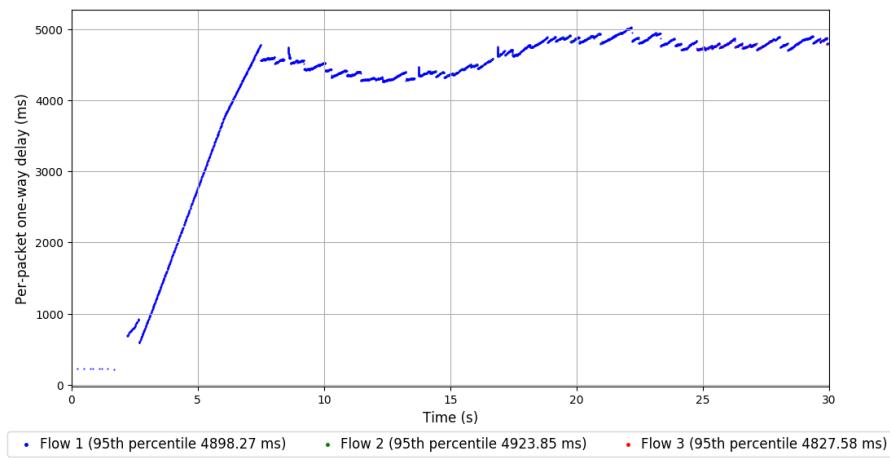
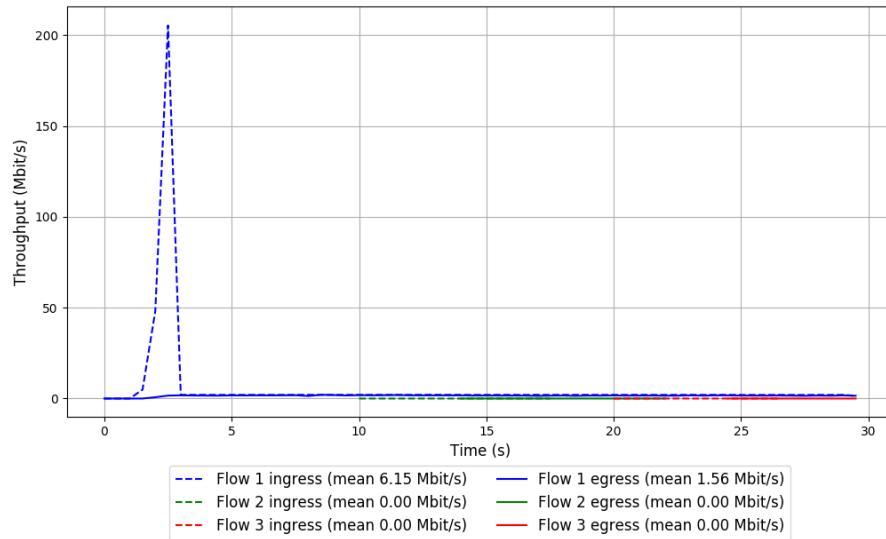


Run 2: Statistics of PCC

```
Start at: 2018-04-10 08:17:55
End at: 2018-04-10 08:18:25
Local clock offset: -5.678 ms
Remote clock offset: 2.831 ms

# Below is generated by plot.py at 2018-04-10 08:58:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 4898.273 ms
Loss rate: 74.67%
-- Flow 1:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 4898.273 ms
Loss rate: 74.69%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4923.849 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4827.580 ms
Loss rate: 33.62%
```

Run 2: Report of PCC — Data Link

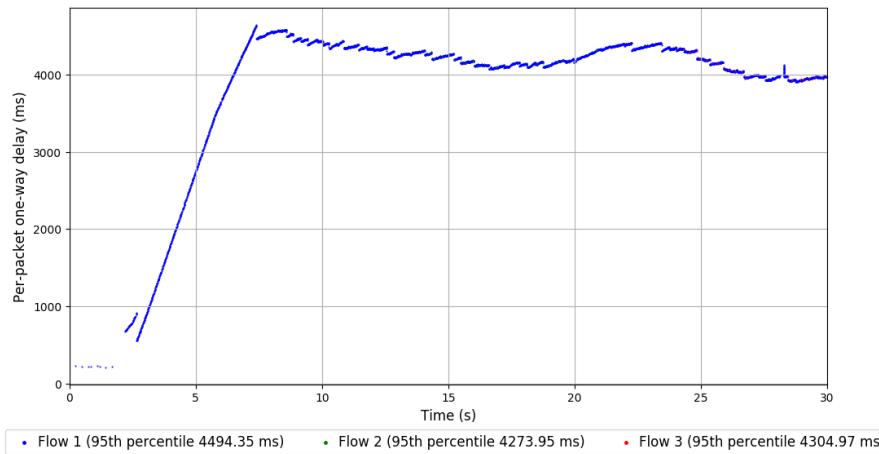
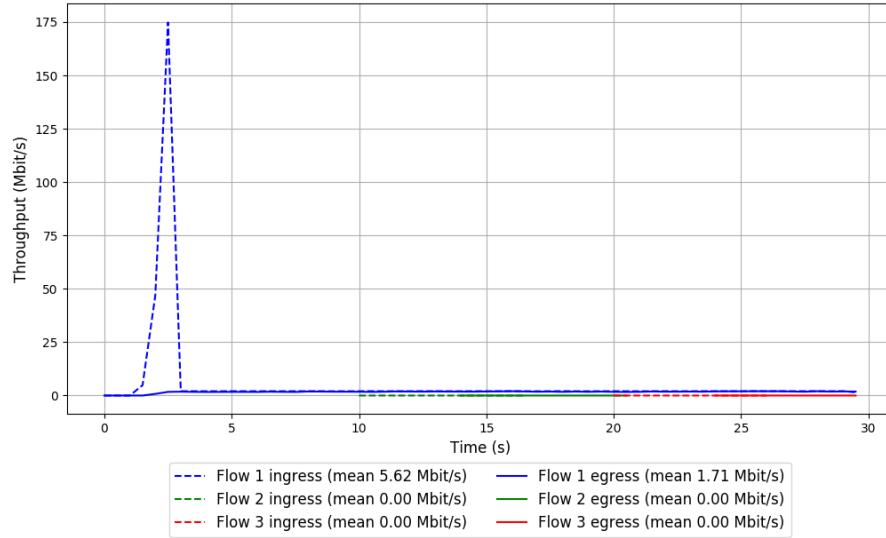


Run 3: Statistics of PCC

```
Start at: 2018-04-10 08:40:32
End at: 2018-04-10 08:41:02
Local clock offset: -5.732 ms
Remote clock offset: 2.552 ms

# Below is generated by plot.py at 2018-04-10 08:58:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 4493.668 ms
Loss rate: 69.76%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 4494.347 ms
Loss rate: 69.78%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4273.955 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4304.974 ms
Loss rate: 5.60%
```

Run 3: Report of PCC — Data Link

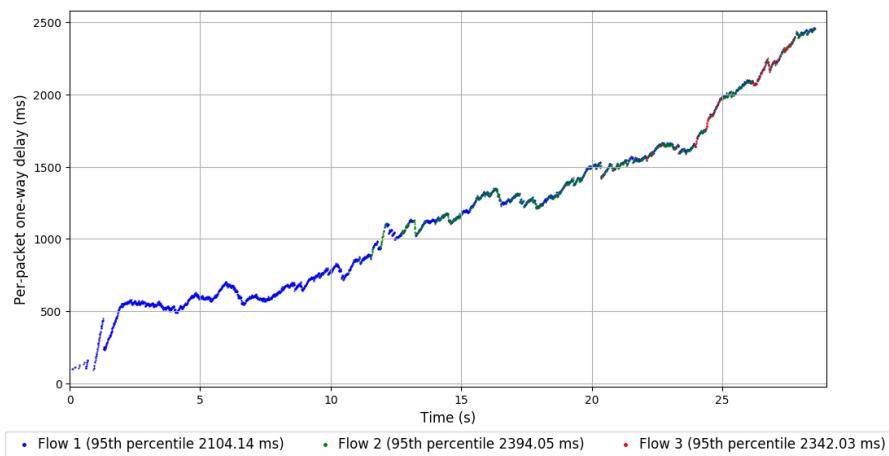
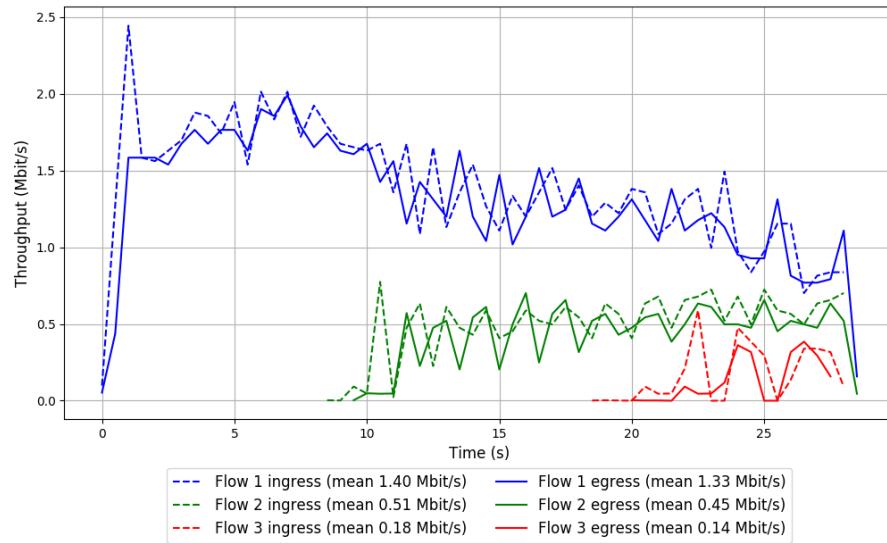


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-10 07:51:31
End at: 2018-04-10 07:52:01
Local clock offset: -7.06 ms
Remote clock offset: 3.577 ms

# Below is generated by plot.py at 2018-04-10 08:58:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 2234.846 ms
Loss rate: 8.01%
-- Flow 1:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 2104.140 ms
Loss rate: 5.12%
-- Flow 2:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 2394.046 ms
Loss rate: 14.76%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 2342.030 ms
Loss rate: 36.33%
```

Run 1: Report of QUIC Cubic — Data Link

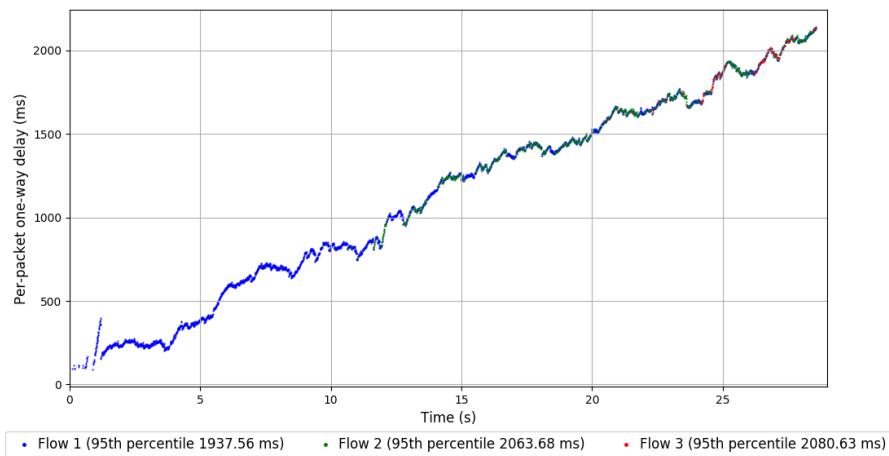
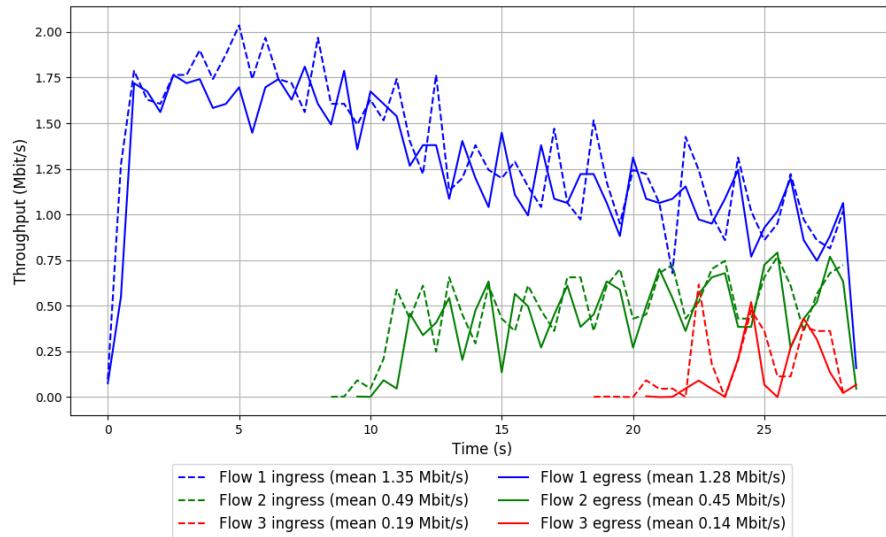


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-04-10 08:14:09
End at: 2018-04-10 08:14:39
Local clock offset: -5.634 ms
Remote clock offset: 2.75 ms

# Below is generated by plot.py at 2018-04-10 08:58:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 2007.819 ms
Loss rate: 7.37%
-- Flow 1:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 1937.555 ms
Loss rate: 4.98%
-- Flow 2:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 2063.681 ms
Loss rate: 12.14%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 2080.629 ms
Loss rate: 34.08%
```

Run 2: Report of QUIC Cubic — Data Link

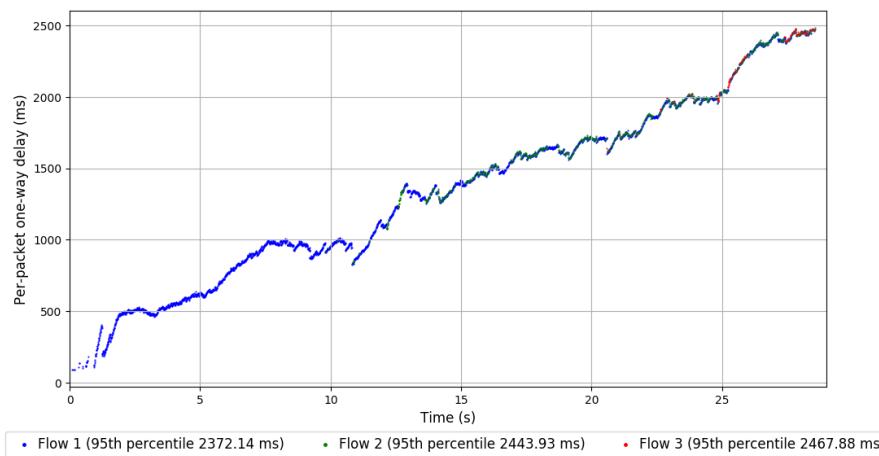
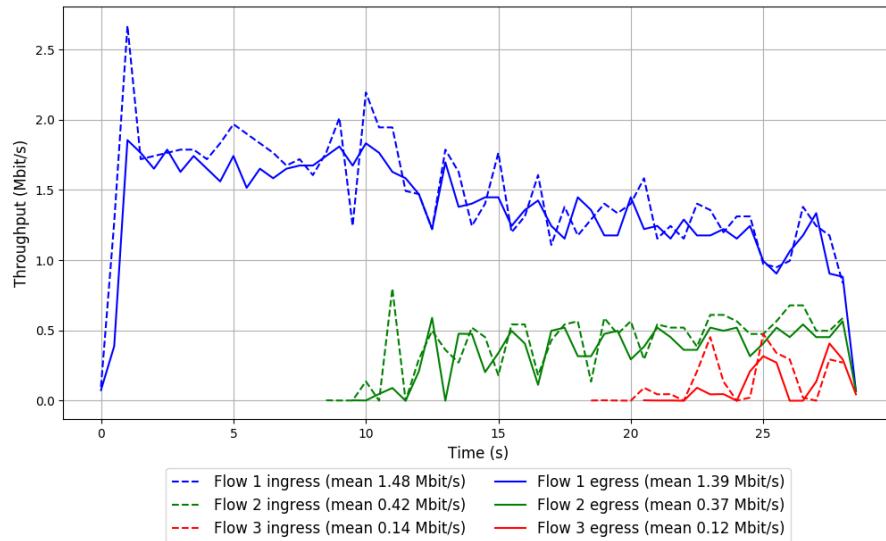


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-04-10 08:36:46
End at: 2018-04-10 08:37:16
Local clock offset: -5.711 ms
Remote clock offset: 2.833 ms

# Below is generated by plot.py at 2018-04-10 08:58:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 2400.787 ms
Loss rate: 8.85%
-- Flow 1:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 2372.135 ms
Loss rate: 6.54%
-- Flow 2:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 2443.928 ms
Loss rate: 17.04%
-- Flow 3:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 2467.879 ms
Loss rate: 30.93%
```

Run 3: Report of QUIC Cubic — Data Link

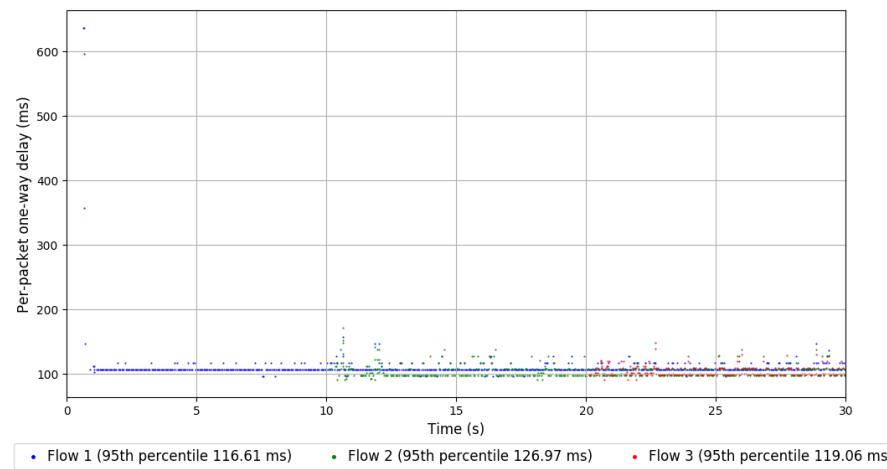
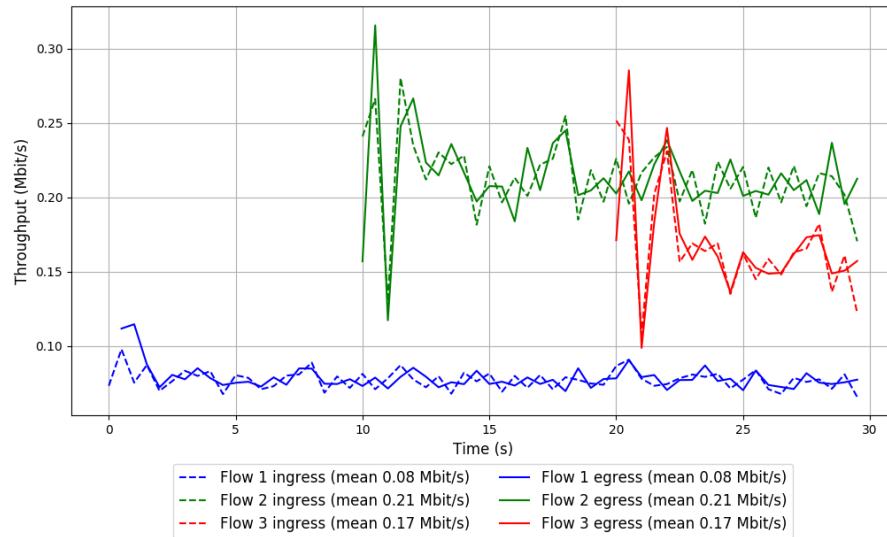


Run 1: Statistics of SCReAM

```
Start at: 2018-04-10 08:02:50
End at: 2018-04-10 08:03:20
Local clock offset: -5.878 ms
Remote clock offset: 3.517 ms

# Below is generated by plot.py at 2018-04-10 08:58:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 119.013 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 116.607 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 126.965 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 119.061 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

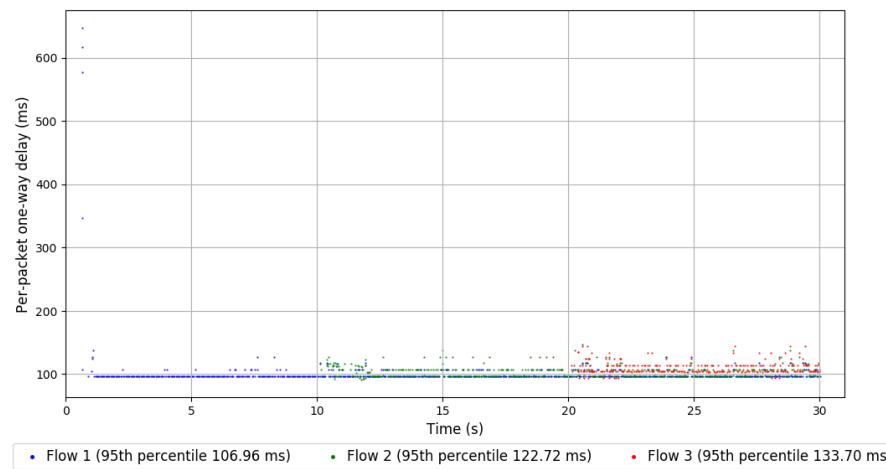
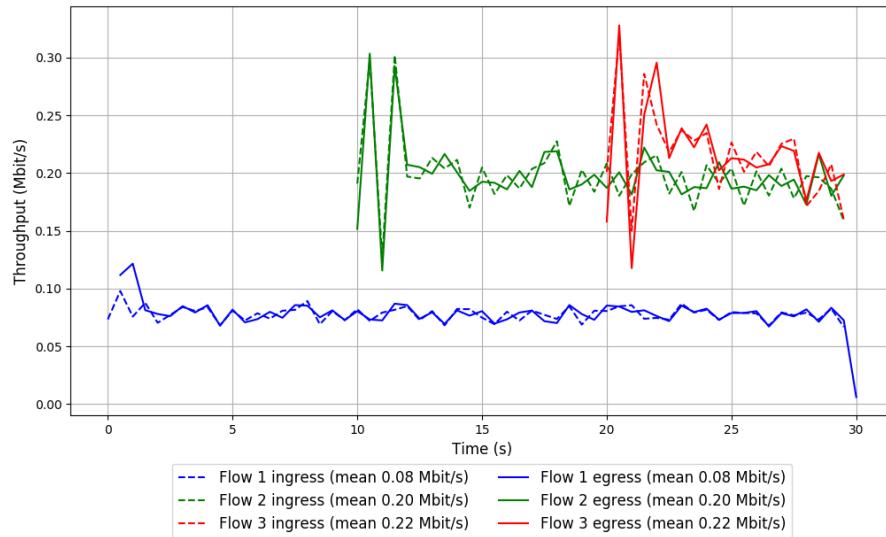


Run 2: Statistics of SCReAM

```
Start at: 2018-04-10 08:25:28
End at: 2018-04-10 08:25:58
Local clock offset: -5.554 ms
Remote clock offset: 3.66 ms

# Below is generated by plot.py at 2018-04-10 08:58:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 116.944 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 106.958 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 122.716 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 133.703 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

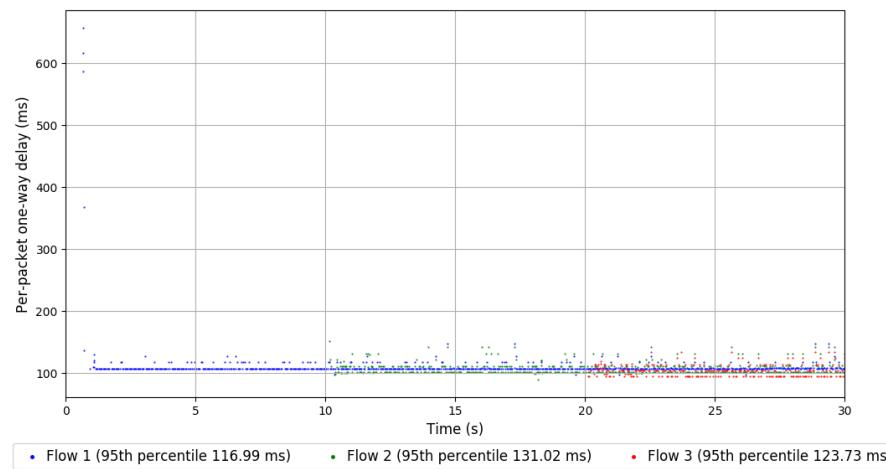
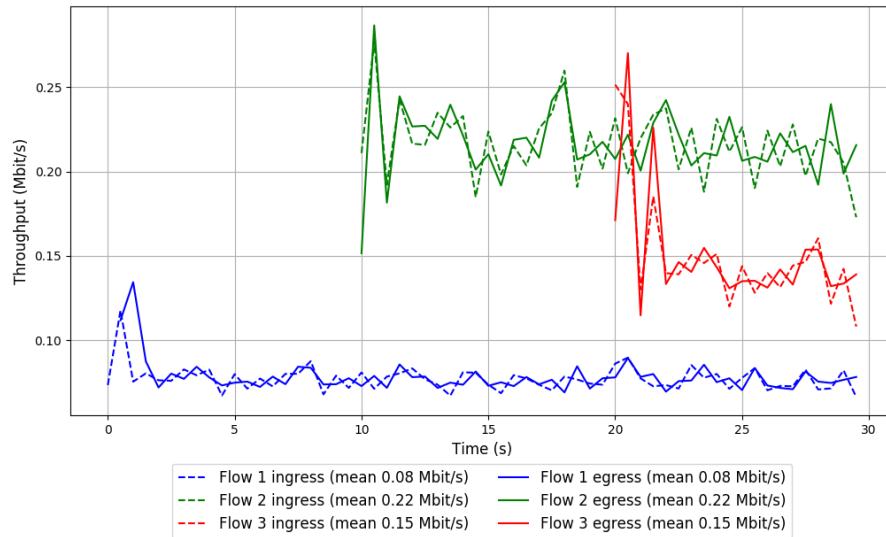


Run 3: Statistics of SCReAM

```
Start at: 2018-04-10 08:48:05
End at: 2018-04-10 08:48:35
Local clock offset: -6.458 ms
Remote clock offset: 2.137 ms

# Below is generated by plot.py at 2018-04-10 08:58:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 121.081 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 116.987 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 131.018 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 123.735 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

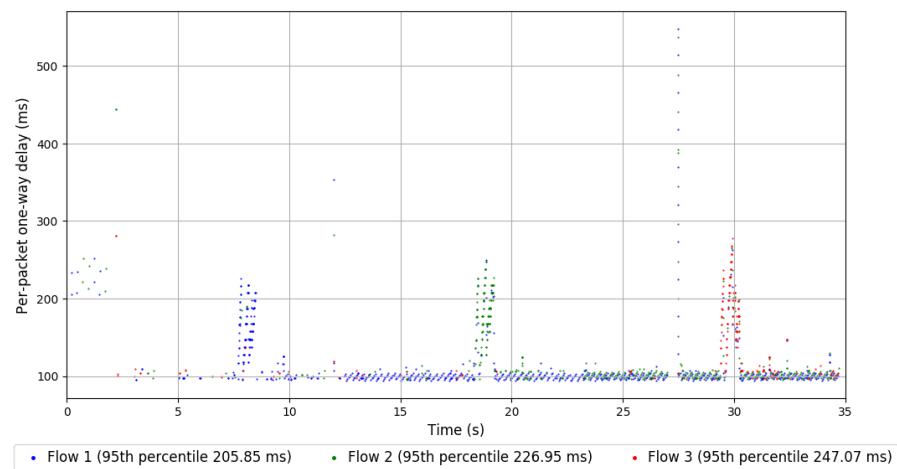
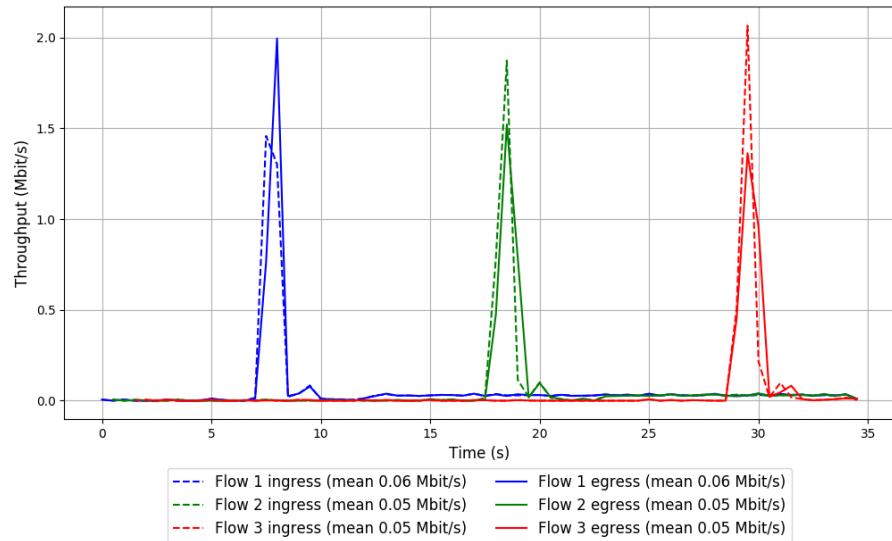


```
Run 1: Statistics of WebRTC media

Start at: 2018-04-10 07:56:34
End at: 2018-04-10 07:57:04
Local clock offset: -6.223 ms
Remote clock offset: 9.189 ms

# Below is generated by plot.py at 2018-04-10 08:58:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 217.609 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 205.855 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 226.951 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 247.066 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

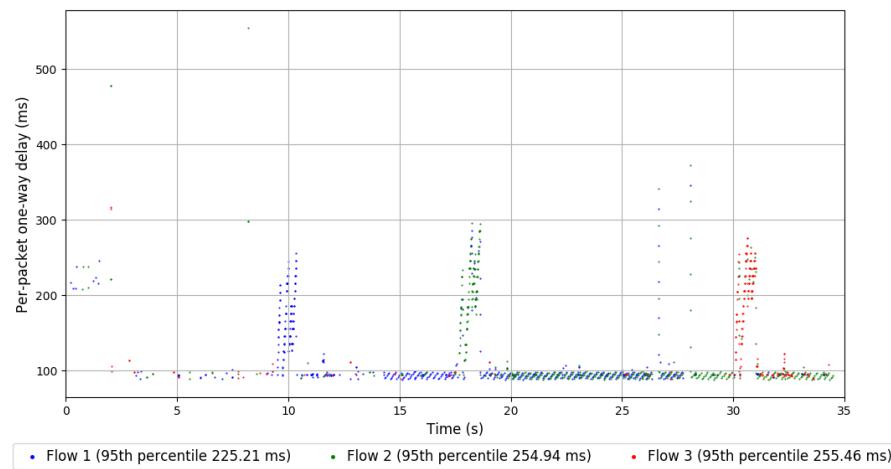
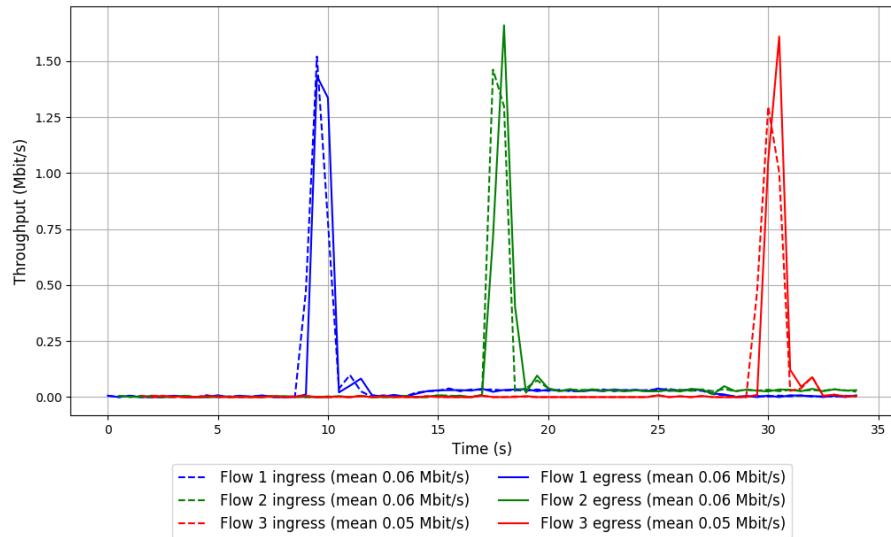


Run 2: Statistics of WebRTC media

```
Start at: 2018-04-10 08:19:11
End at: 2018-04-10 08:19:41
Local clock offset: -5.589 ms
Remote clock offset: 2.812 ms

# Below is generated by plot.py at 2018-04-10 08:58:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 245.453 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 225.212 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 254.935 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 255.464 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

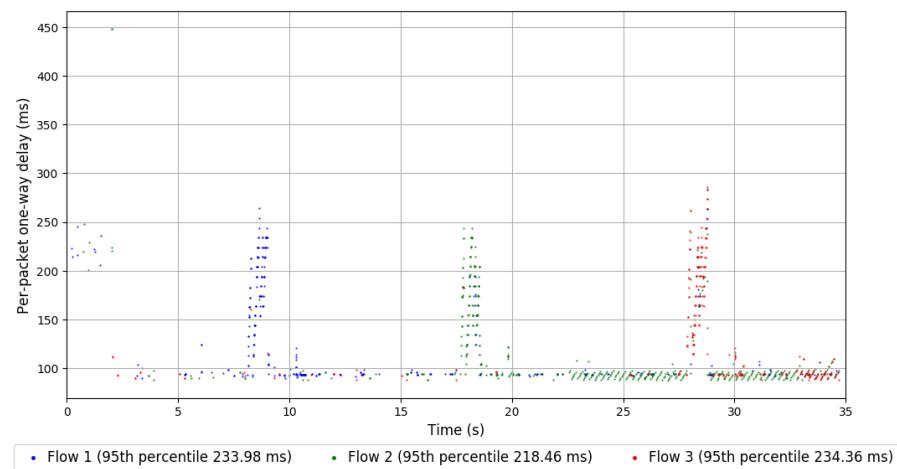
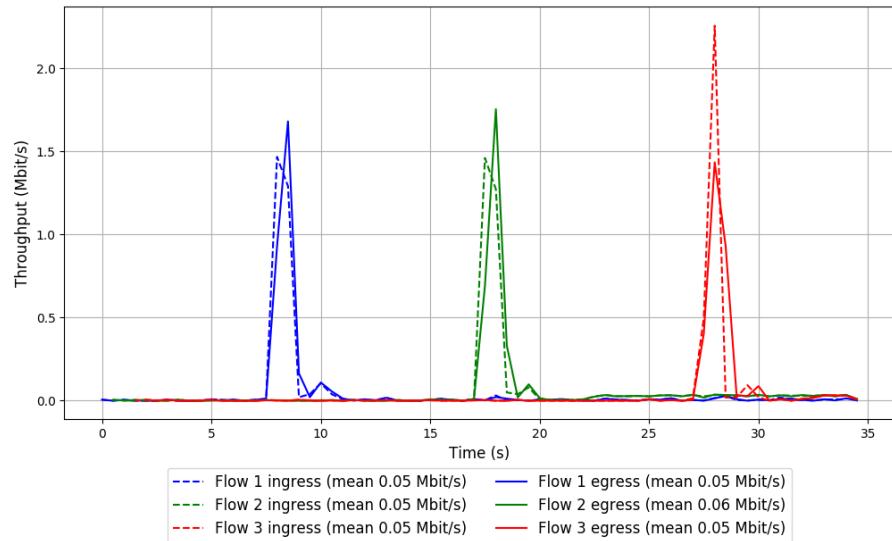


Run 3: Statistics of WebRTC media

```
Start at: 2018-04-10 08:41:49
End at: 2018-04-10 08:42:19
Local clock offset: -4.943 ms
Remote clock offset: 2.474 ms

# Below is generated by plot.py at 2018-04-10 08:58:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 233.258 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 233.983 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 218.460 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 234.357 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

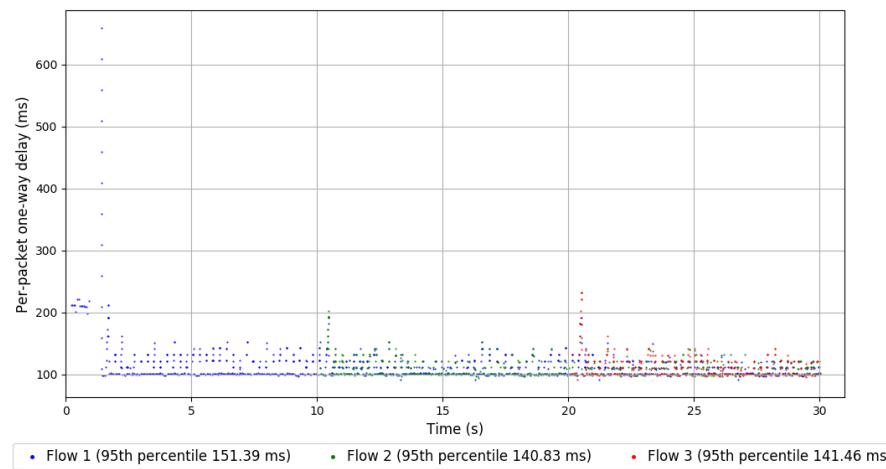
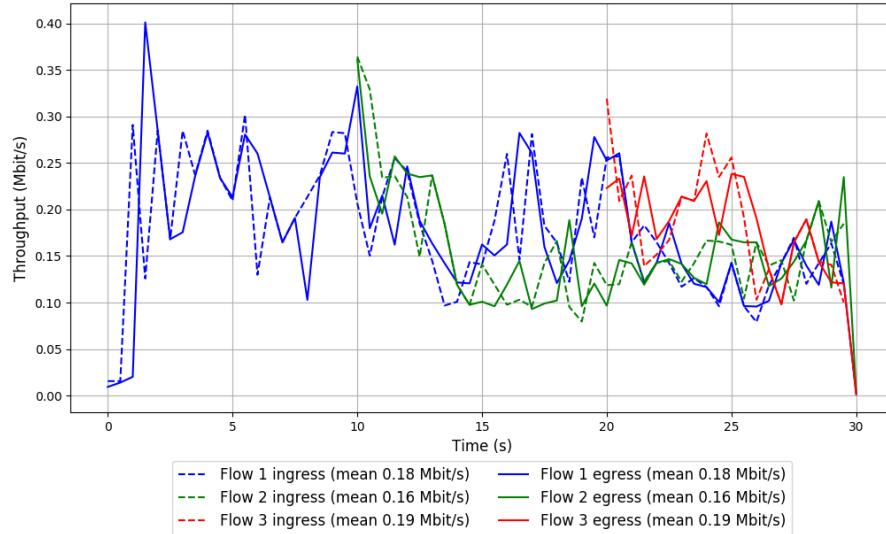


Run 1: Statistics of Sprout

```
Start at: 2018-04-10 07:59:04
End at: 2018-04-10 07:59:34
Local clock offset: -6.816 ms
Remote clock offset: 8.331 ms

# Below is generated by plot.py at 2018-04-10 08:58:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 142.146 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 151.393 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 140.829 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 141.463 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

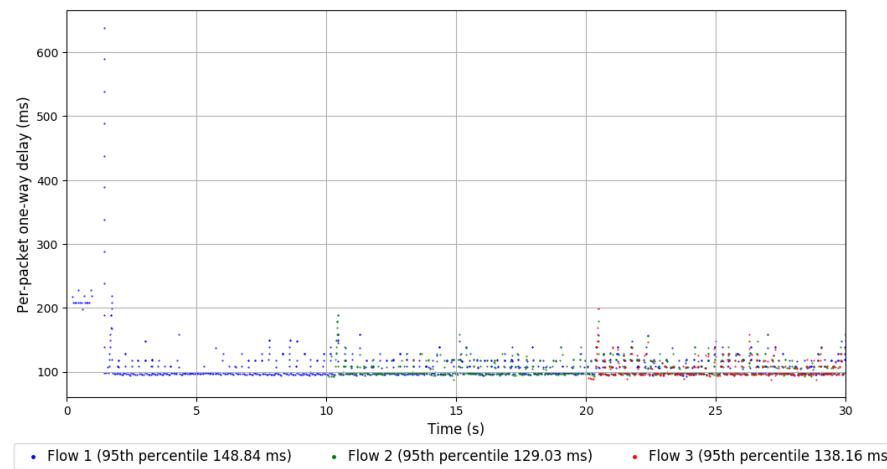
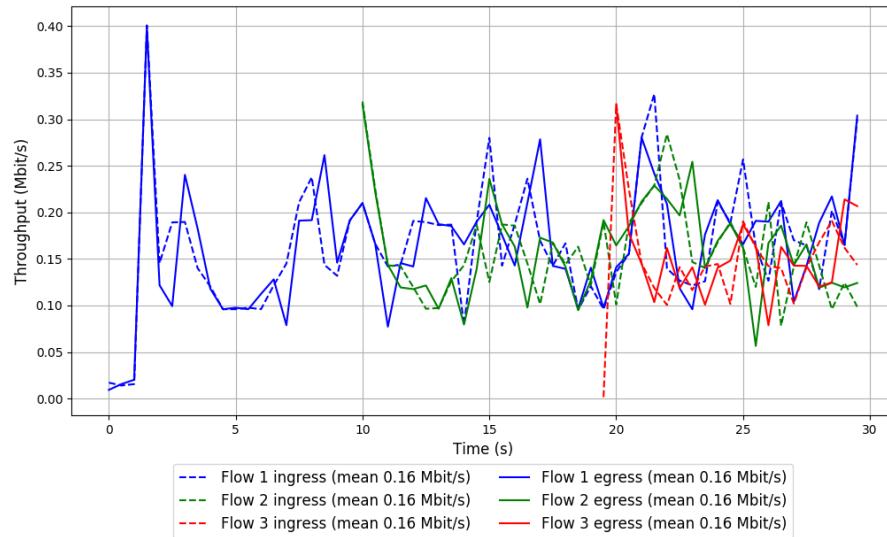


Run 2: Statistics of Sprout

```
Start at: 2018-04-10 08:21:42
End at: 2018-04-10 08:22:12
Local clock offset: -6.328 ms
Remote clock offset: 2.762 ms

# Below is generated by plot.py at 2018-04-10 08:58:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 138.787 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 148.840 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 129.031 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 138.158 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

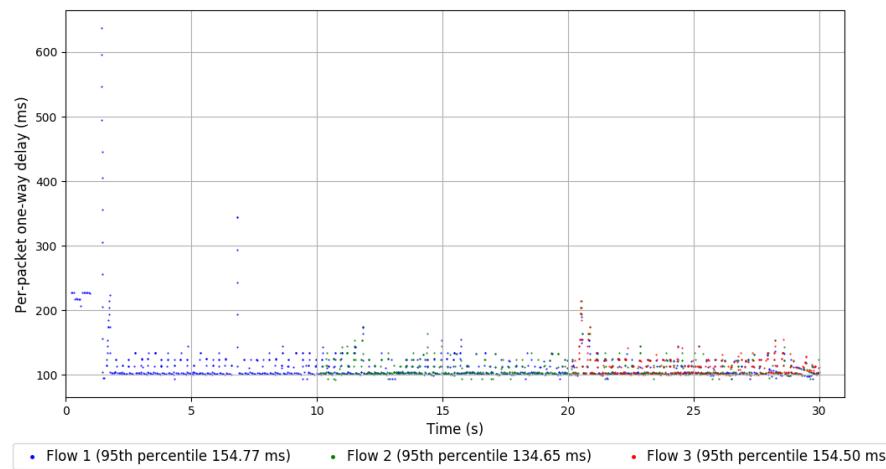
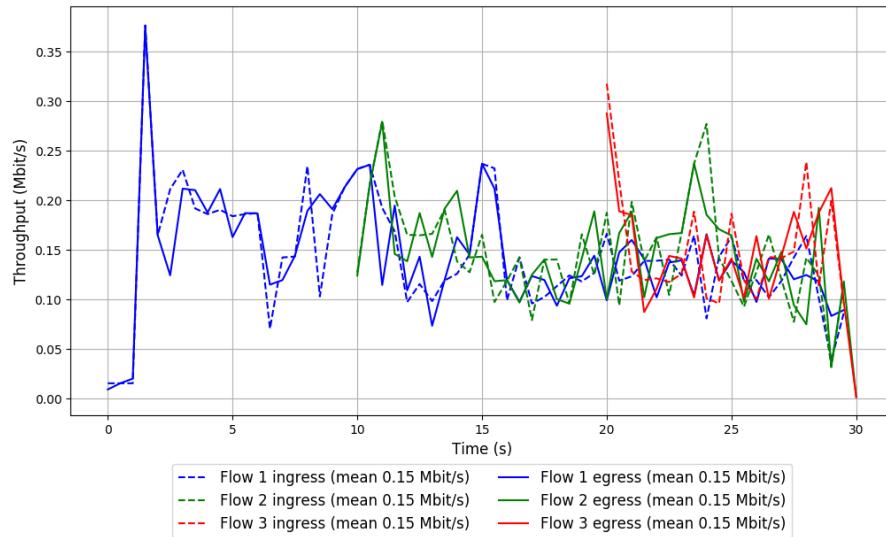


Run 3: Statistics of Sprout

```
Start at: 2018-04-10 08:44:19
End at: 2018-04-10 08:44:49
Local clock offset: -5.669 ms
Remote clock offset: 7.949 ms

# Below is generated by plot.py at 2018-04-10 08:58:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 144.514 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 154.766 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 134.645 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 154.503 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

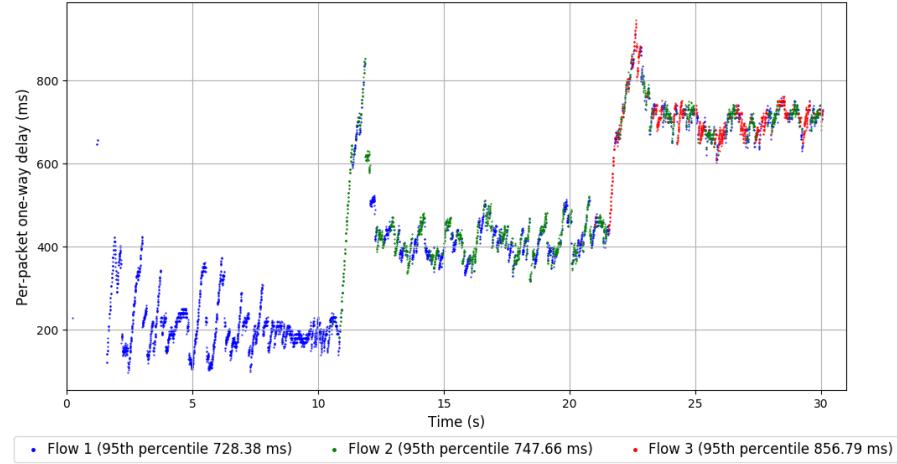
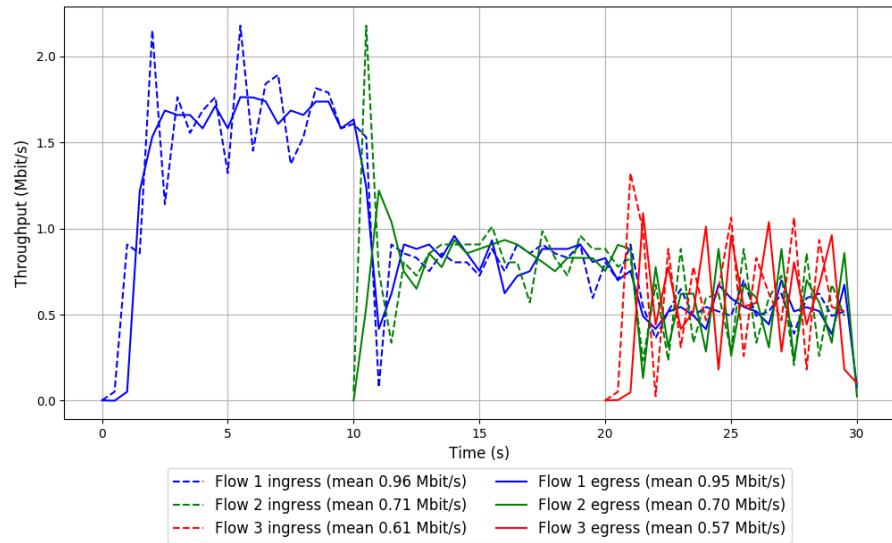


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-04-10 08:11:38
End at: 2018-04-10 08:12:08
Local clock offset: -5.662 ms
Remote clock offset: 8.348 ms

# Below is generated by plot.py at 2018-04-10 08:58:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 740.825 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 728.379 ms
Loss rate: 1.17%
-- Flow 2:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 747.656 ms
Loss rate: 1.83%
-- Flow 3:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 856.794 ms
Loss rate: 7.59%
```

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

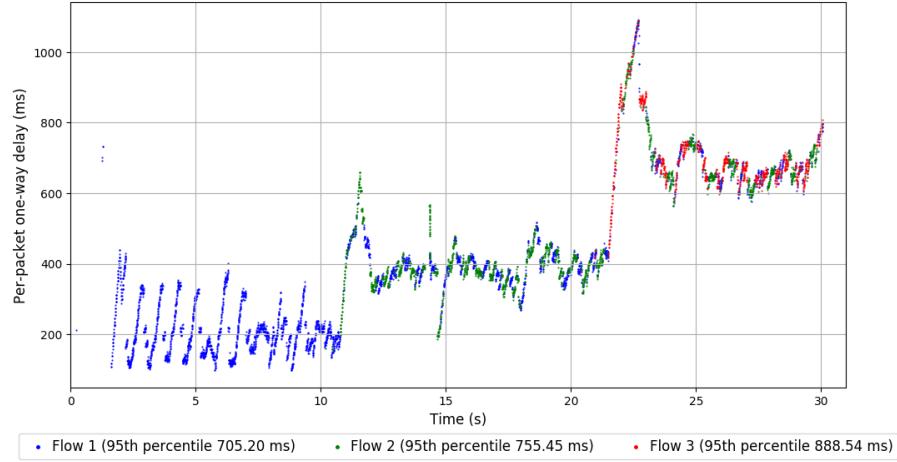
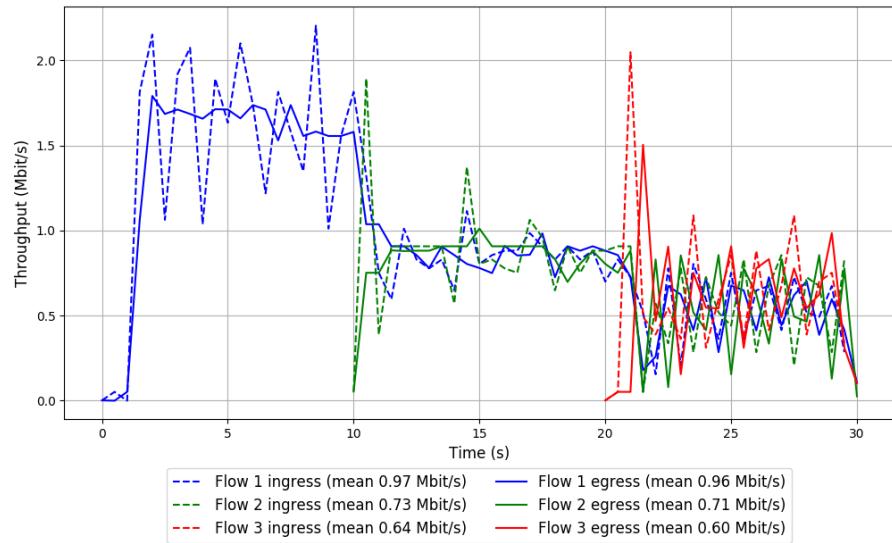


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-04-10 08:34:15
End at: 2018-04-10 08:34:45
Local clock offset: -6.378 ms
Remote clock offset: 2.846 ms

# Below is generated by plot.py at 2018-04-10 08:58:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 755.451 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 705.196 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 755.451 ms
Loss rate: 3.04%
-- Flow 3:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 888.542 ms
Loss rate: 5.67%
```

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

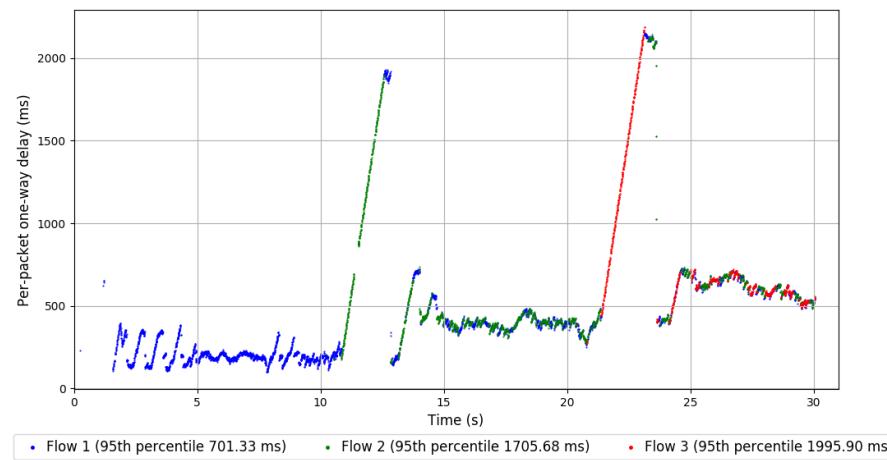
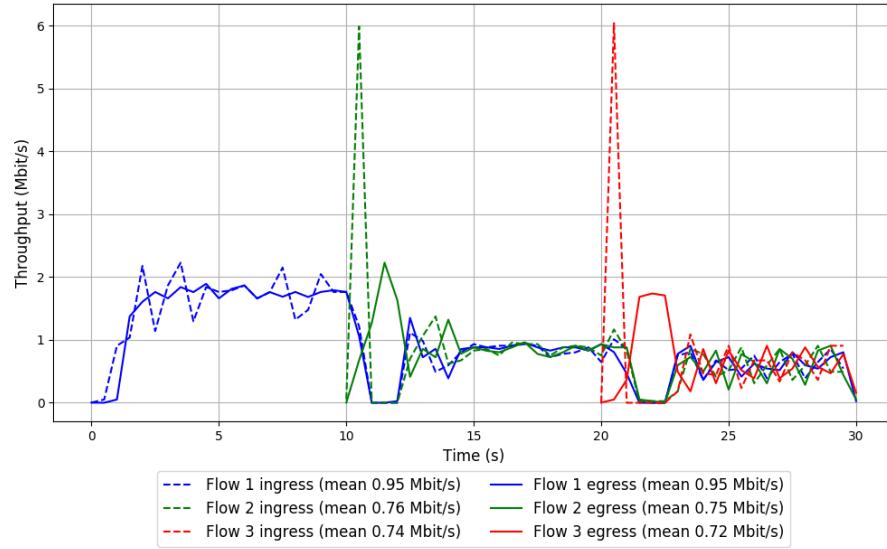


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-04-10 08:56:52
End at: 2018-04-10 08:57:22
Local clock offset: -5.702 ms
Remote clock offset: 7.529 ms

# Below is generated by plot.py at 2018-04-10 08:58:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 1705.680 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 701.328 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 1705.680 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 1995.897 ms
Loss rate: 5.98%
```

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

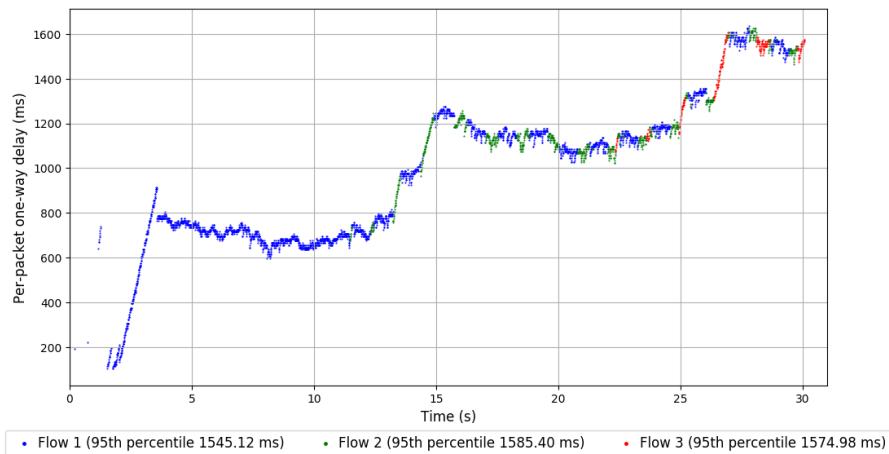
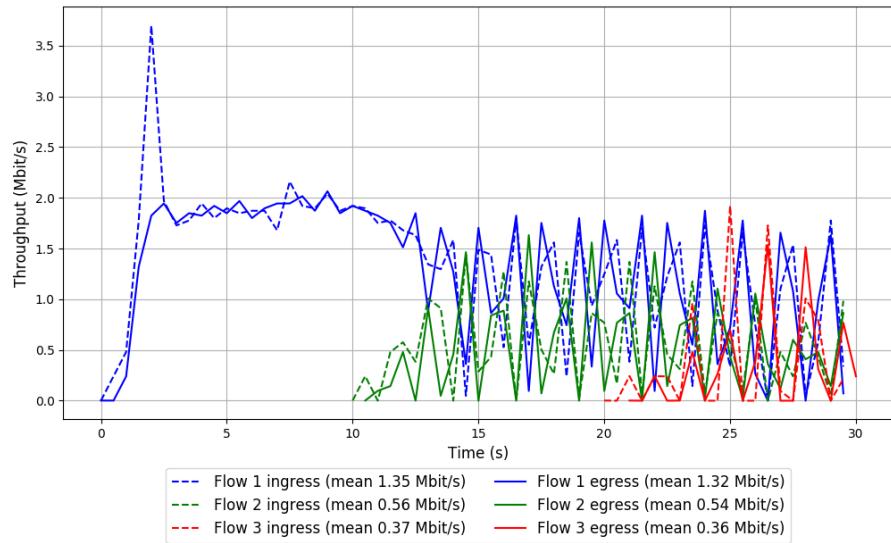


Run 1: Statistics of TCP Vegas

```
Start at: 2018-04-10 08:04:05
End at: 2018-04-10 08:04:35
Local clock offset: -5.88 ms
Remote clock offset: 2.64 ms

# Below is generated by plot.py at 2018-04-10 08:58:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 1565.117 ms
Loss rate: 4.69%
-- Flow 1:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 1545.125 ms
Loss rate: 3.35%
-- Flow 2:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 1585.404 ms
Loss rate: 6.58%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 1574.985 ms
Loss rate: 13.54%
```

Run 1: Report of TCP Vegas — Data Link

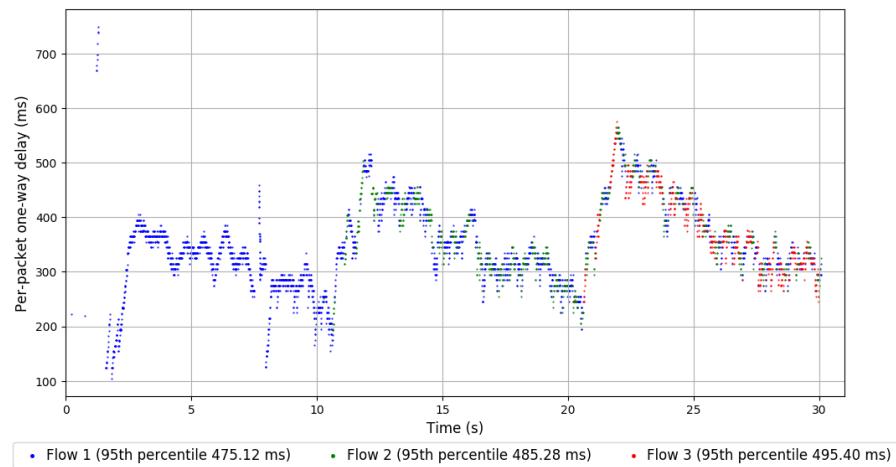
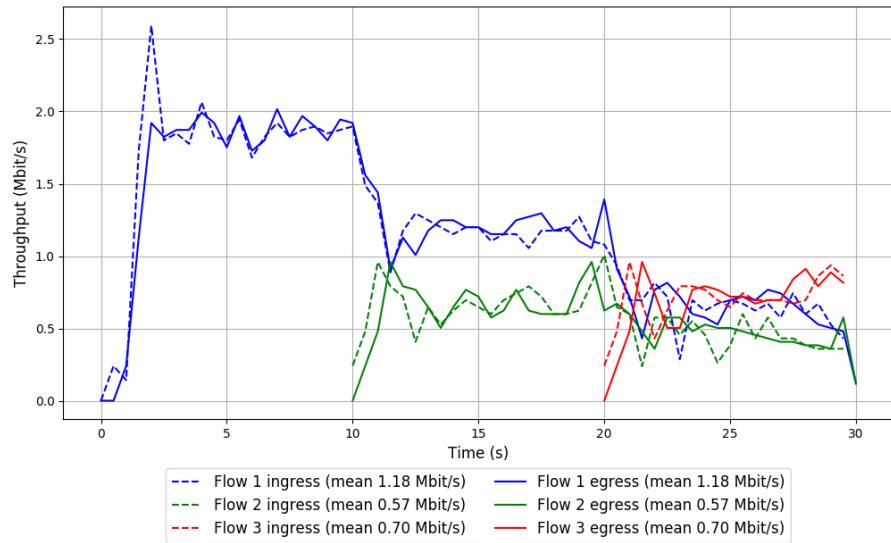


Run 2: Statistics of TCP Vegas

```
Start at: 2018-04-10 08:26:43
End at: 2018-04-10 08:27:13
Local clock offset: -6.314 ms
Remote clock offset: 7.584 ms

# Below is generated by plot.py at 2018-04-10 08:58:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 485.049 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 475.119 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 485.279 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 495.397 ms
Loss rate: 3.26%
```

Run 2: Report of TCP Vegas — Data Link

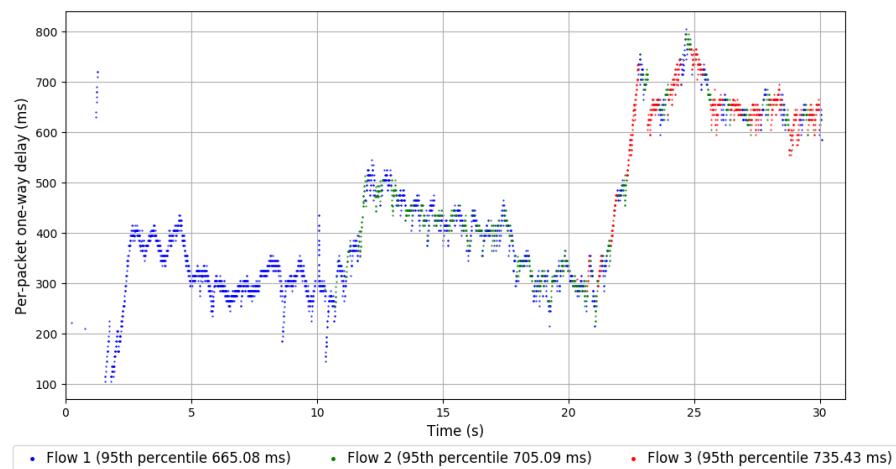
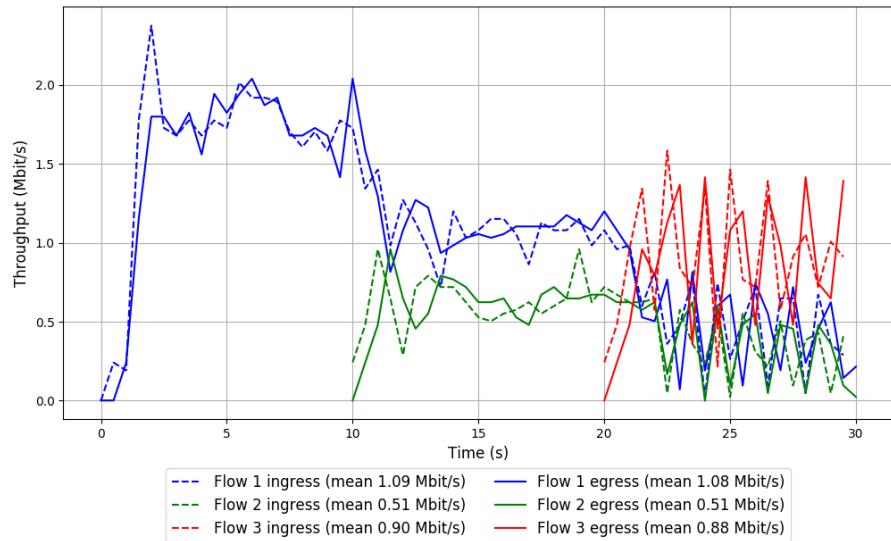


Run 3: Statistics of TCP Vegas

```
Start at: 2018-04-10 08:49:20
End at: 2018-04-10 08:49:50
Local clock offset: -6.526 ms
Remote clock offset: 2.918 ms

# Below is generated by plot.py at 2018-04-10 08:58:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 705.257 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 665.078 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 705.092 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 735.430 ms
Loss rate: 5.11%
```

Run 3: Report of TCP Vegas — Data Link

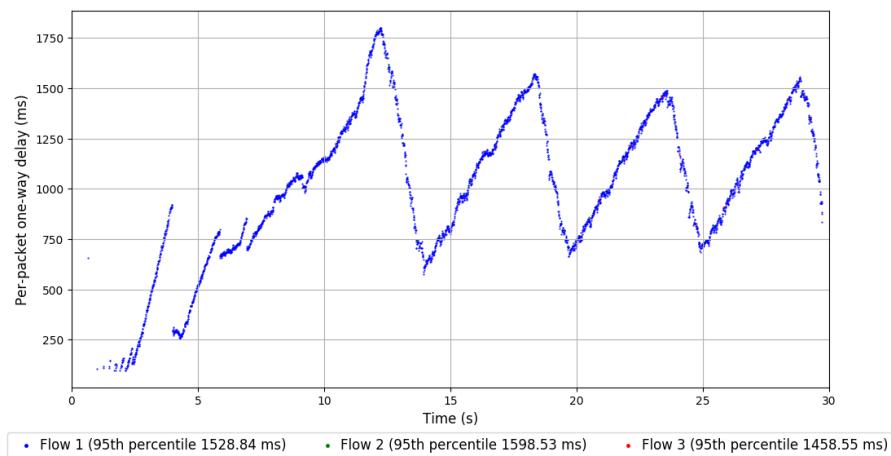
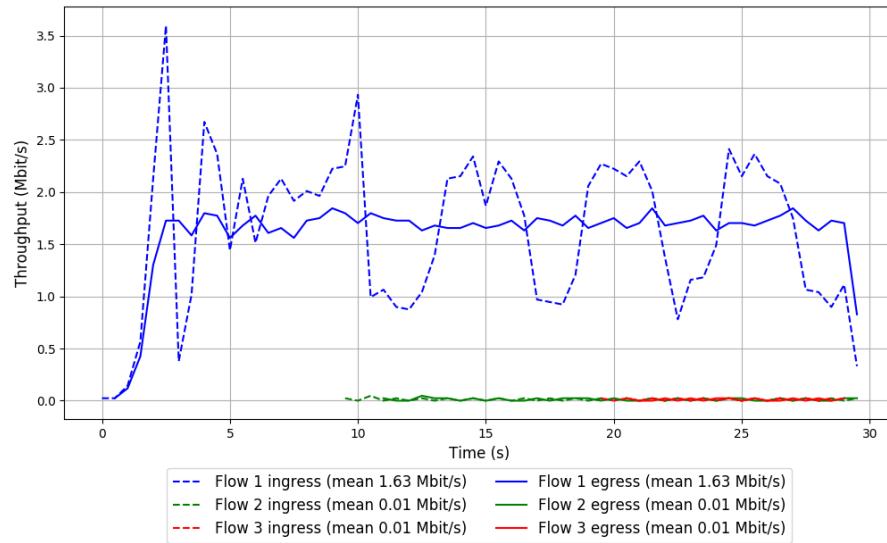


Run 1: Statistics of Verus

```
Start at: 2018-04-10 07:54:02
End at: 2018-04-10 07:54:32
Local clock offset: -6.289 ms
Remote clock offset: 2.669 ms

# Below is generated by plot.py at 2018-04-10 08:58:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 1529.266 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 1528.836 ms
Loss rate: 1.83%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1598.528 ms
Loss rate: 4.55%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1458.546 ms
Loss rate: 10.00%
```

Run 1: Report of Verus — Data Link

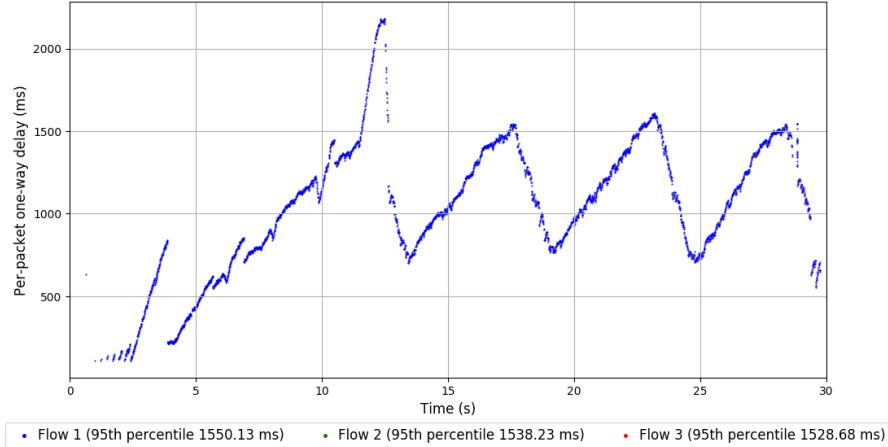
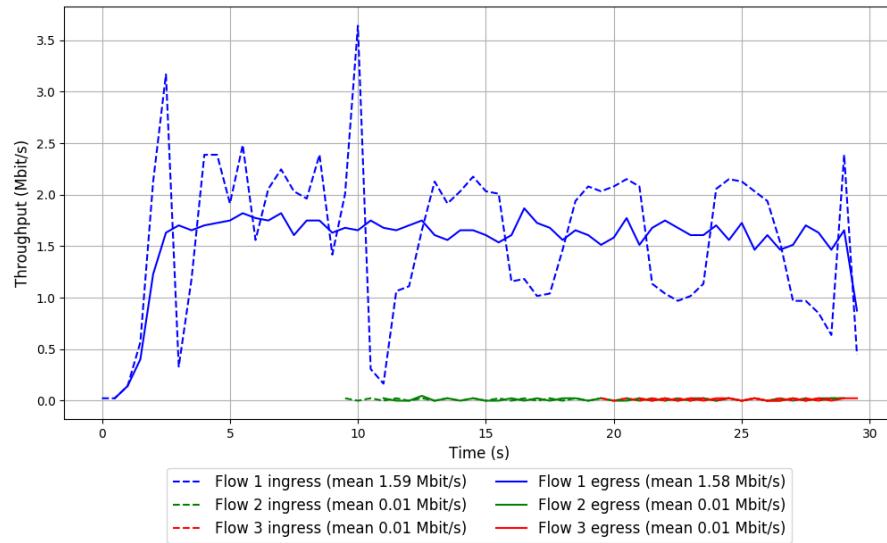


Run 2: Statistics of Verus

```
Start at: 2018-04-10 08:16:40
End at: 2018-04-10 08:17:10
Local clock offset: -6.402 ms
Remote clock offset: 9.28 ms

# Below is generated by plot.py at 2018-04-10 08:58:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 1550.131 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 1550.131 ms
Loss rate: 2.28%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1538.231 ms
Loss rate: 4.76%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1528.685 ms
Loss rate: 0.00%
```

Run 2: Report of Verus — Data Link

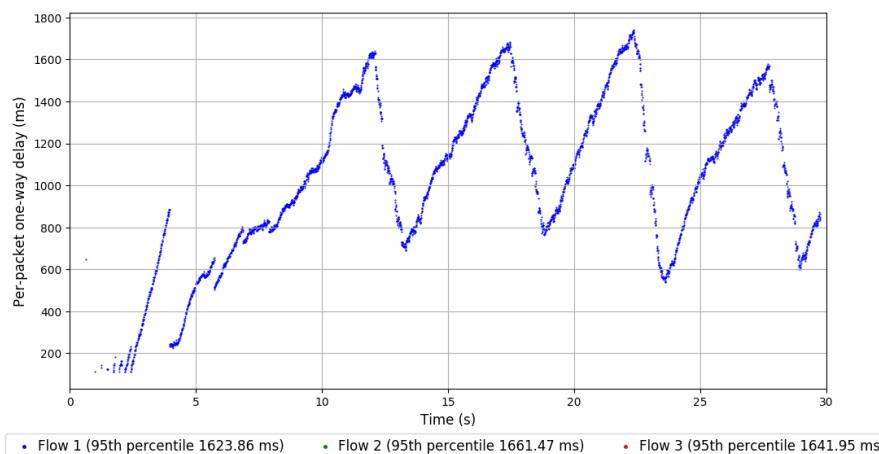
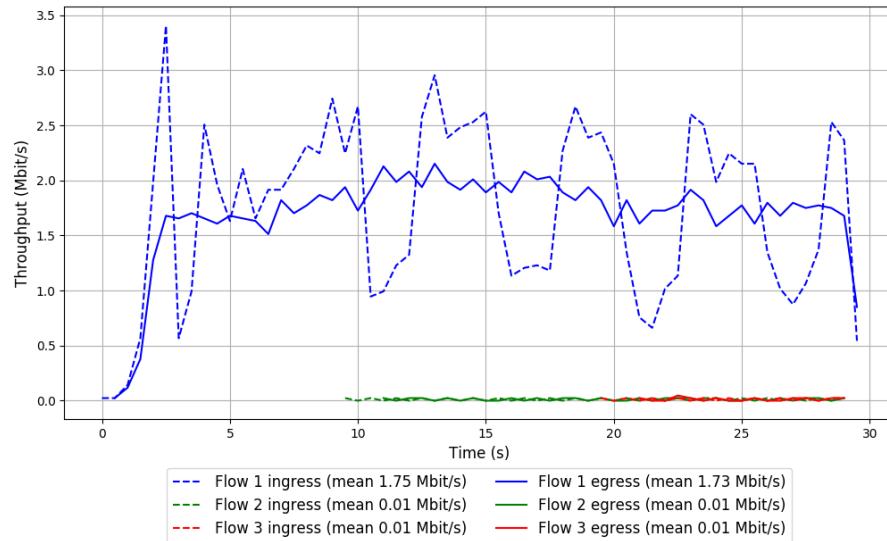


Run 3: Statistics of Verus

```
Start at: 2018-04-10 08:39:17
End at: 2018-04-10 08:39:47
Local clock offset: -5.666 ms
Remote clock offset: 9.176 ms

# Below is generated by plot.py at 2018-04-10 08:58:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.74 Mbit/s
95th percentile per-packet one-way delay: 1625.061 ms
Loss rate: 3.32%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 1623.860 ms
Loss rate: 3.30%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1661.469 ms
Loss rate: 4.76%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1641.954 ms
Loss rate: 9.09%
```

Run 3: Report of Verus — Data Link

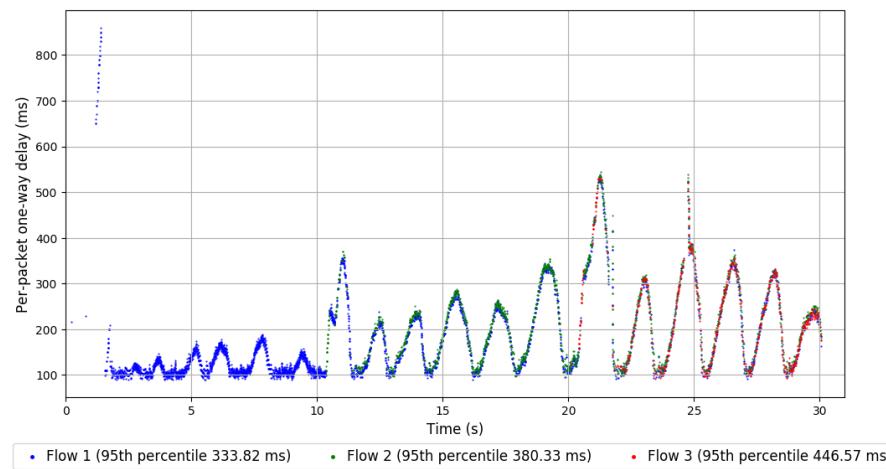
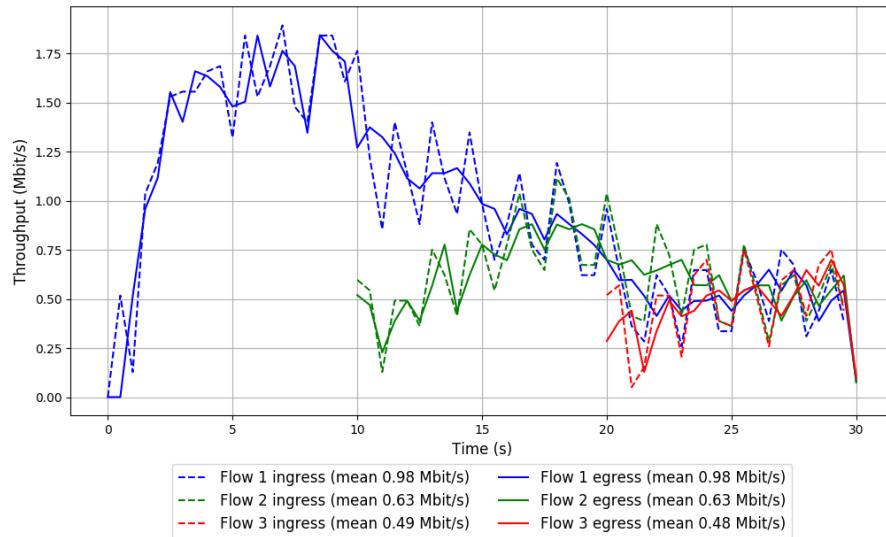


Run 1: Statistics of Copa

```
Start at: 2018-04-10 08:05:21
End at: 2018-04-10 08:05:51
Local clock offset: -6.611 ms
Remote clock offset: 2.727 ms

# Below is generated by plot.py at 2018-04-10 08:59:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 354.686 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 333.820 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 380.326 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 446.567 ms
Loss rate: 0.54%
```

Run 1: Report of Copa — Data Link

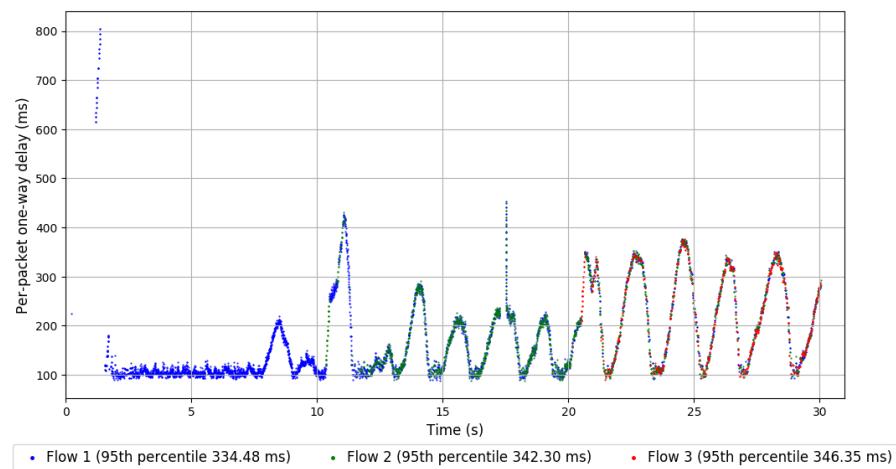
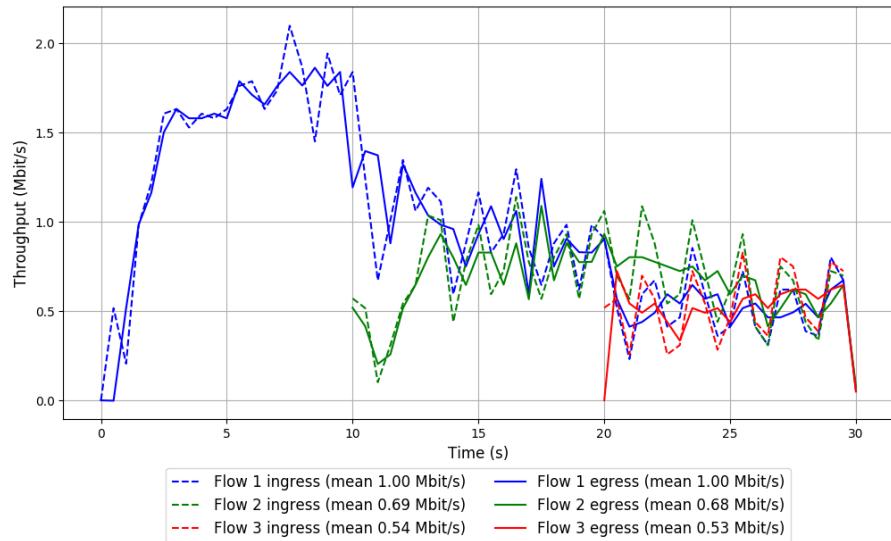


Run 2: Statistics of Copa

```
Start at: 2018-04-10 08:27:58
End at: 2018-04-10 08:28:28
Local clock offset: -4.795 ms
Remote clock offset: 2.794 ms

# Below is generated by plot.py at 2018-04-10 08:59:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 339.512 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 334.477 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 342.299 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 346.348 ms
Loss rate: 2.65%
```

Run 2: Report of Copa — Data Link

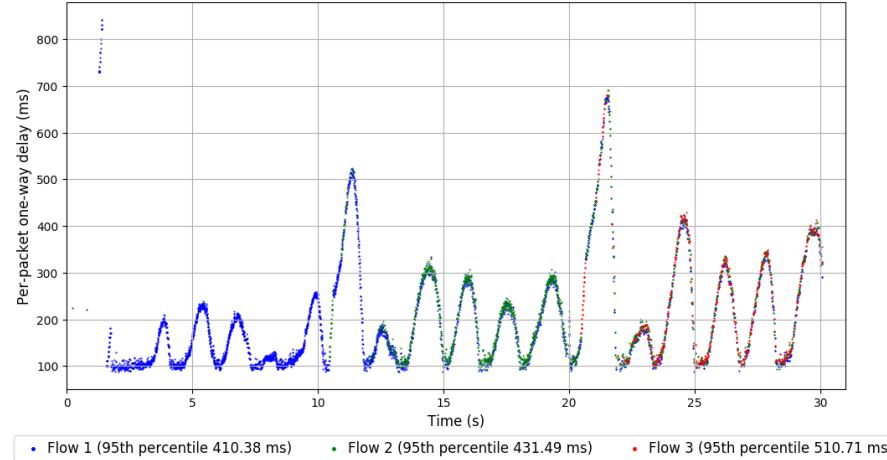
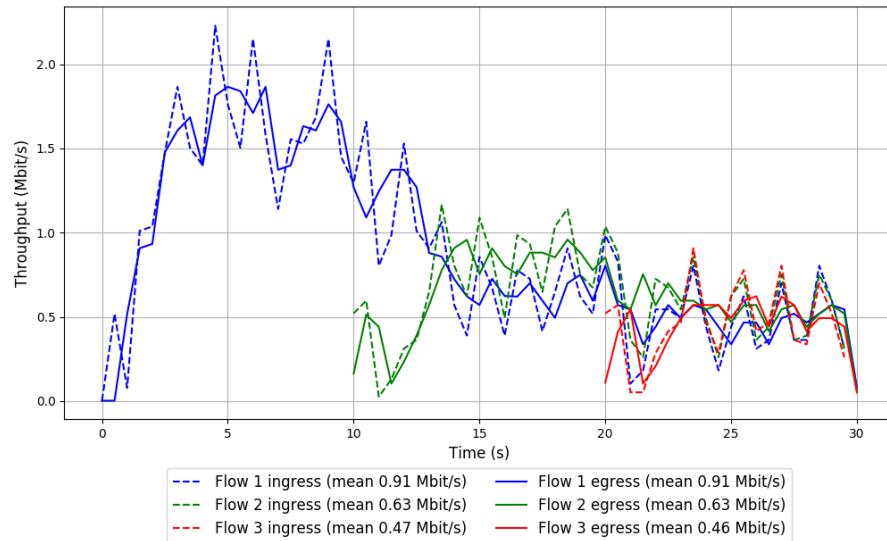


Run 3: Statistics of Copa

```
Start at: 2018-04-10 08:50:35
End at: 2018-04-10 08:51:05
Local clock offset: -5.778 ms
Remote clock offset: 2.041 ms

# Below is generated by plot.py at 2018-04-10 08:59:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 423.904 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 410.380 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 431.486 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 510.714 ms
Loss rate: 1.12%
```

Run 3: Report of Copa — Data Link

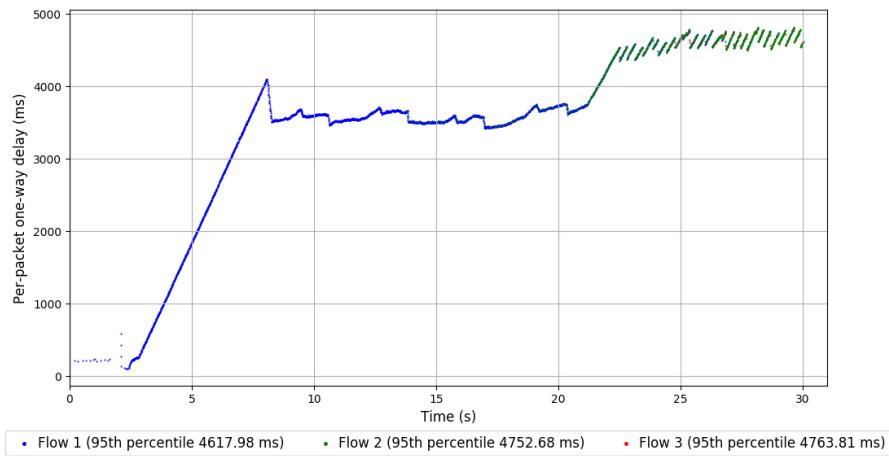
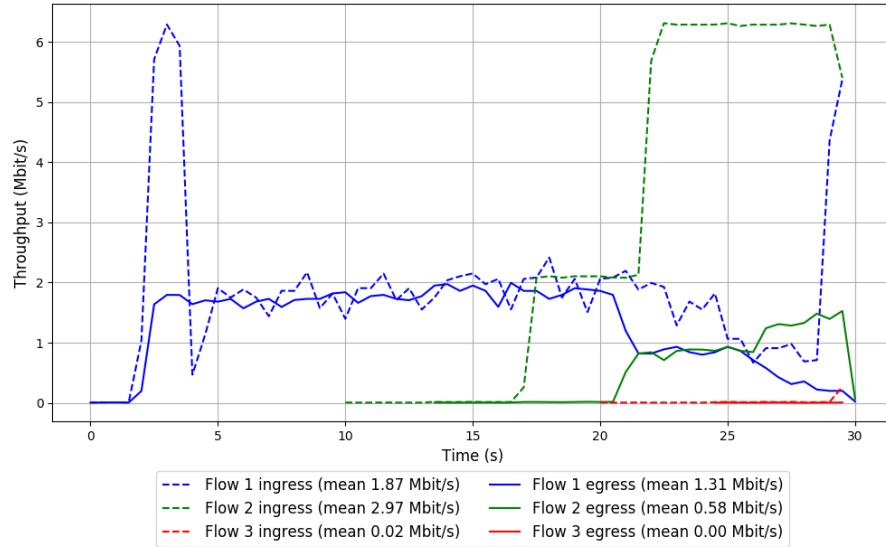


```
Run 1: Statistics of FillP

Start at: 2018-04-10 08:06:36
End at: 2018-04-10 08:07:06
Local clock offset: -5.852 ms
Remote clock offset: 8.358 ms

# Below is generated by plot.py at 2018-04-10 08:59:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 4705.979 ms
Loss rate: 58.07%
-- Flow 1:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 4617.985 ms
Loss rate: 30.38%
-- Flow 2:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 4752.683 ms
Loss rate: 84.12%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4763.813 ms
Loss rate: 89.64%
```

Run 1: Report of FillP — Data Link

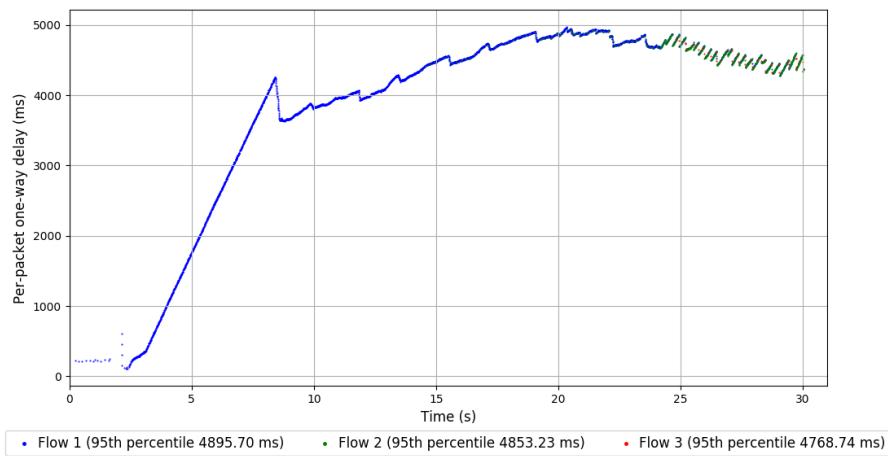
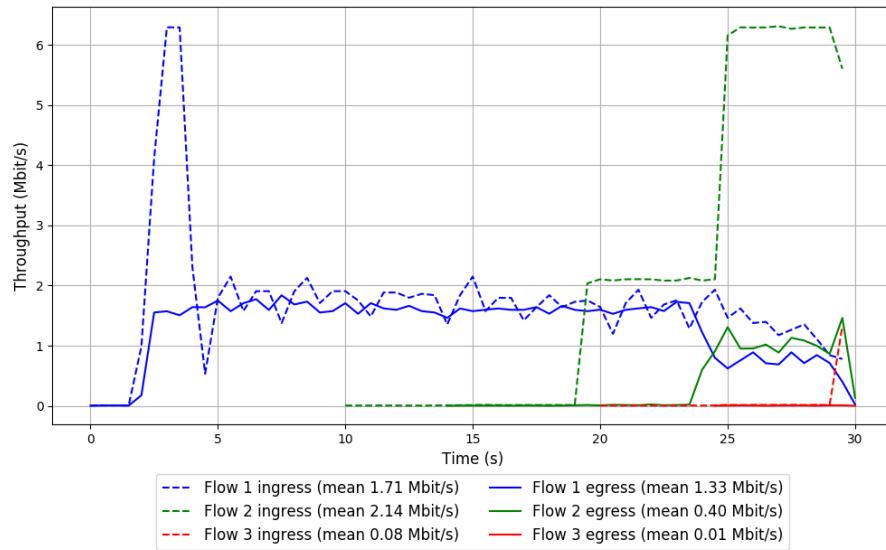


Run 2: Statistics of FillP

```
Start at: 2018-04-10 08:29:13
End at: 2018-04-10 08:29:43
Local clock offset: -5.524 ms
Remote clock offset: 9.312 ms

# Below is generated by plot.py at 2018-04-10 08:59:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 4889.939 ms
Loss rate: 51.57%
-- Flow 1:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 4895.700 ms
Loss rate: 22.82%
-- Flow 2:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 4853.227 ms
Loss rate: 85.36%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 4768.742 ms
Loss rate: 95.66%
```

Run 2: Report of FillP — Data Link

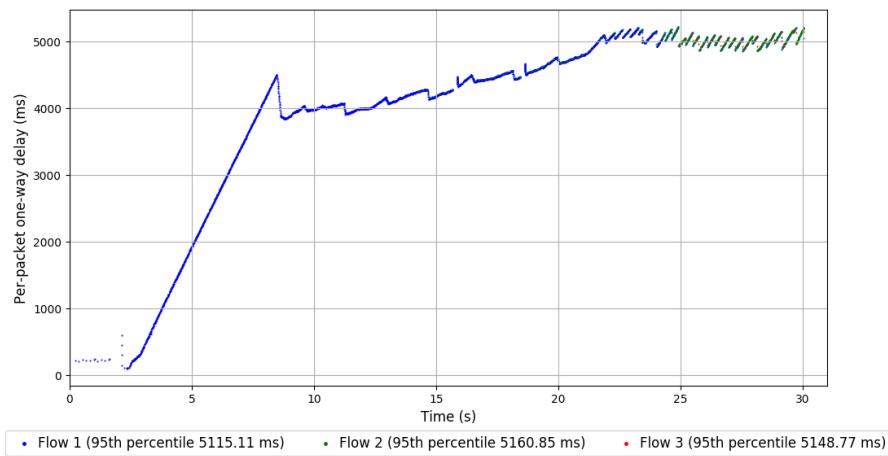
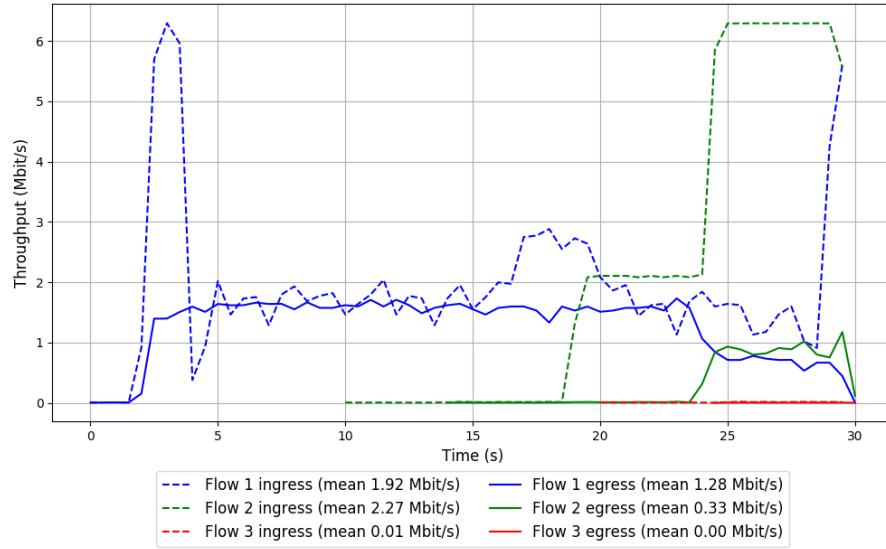


Run 3: Statistics of FillP

```
Start at: 2018-04-10 08:51:51
End at: 2018-04-10 08:52:21
Local clock offset: -6.469 ms
Remote clock offset: 7.69 ms

# Below is generated by plot.py at 2018-04-10 08:59:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 5127.256 ms
Loss rate: 57.77%
-- Flow 1:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 5115.113 ms
Loss rate: 33.61%
-- Flow 2:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 5160.845 ms
Loss rate: 88.49%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5148.772 ms
Loss rate: 75.11%
```

Run 3: Report of FillP — Data Link

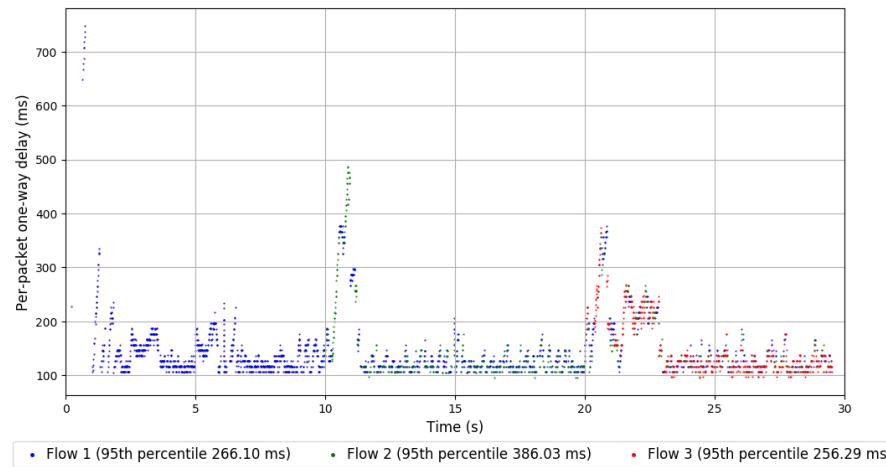
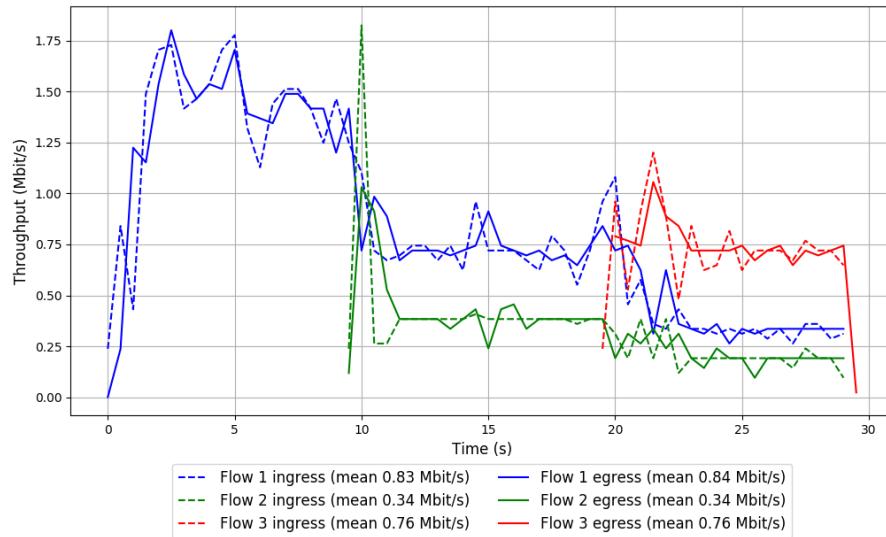


Run 1: Statistics of Indigo-1-32

```
Start at: 2018-04-10 07:50:16
End at: 2018-04-10 07:50:46
Local clock offset: -6.31 ms
Remote clock offset: 3.567 ms

# Below is generated by plot.py at 2018-04-10 08:59:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 285.973 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 266.097 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 386.027 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 256.289 ms
Loss rate: 0.33%
```

Run 1: Report of Indigo-1-32 — Data Link

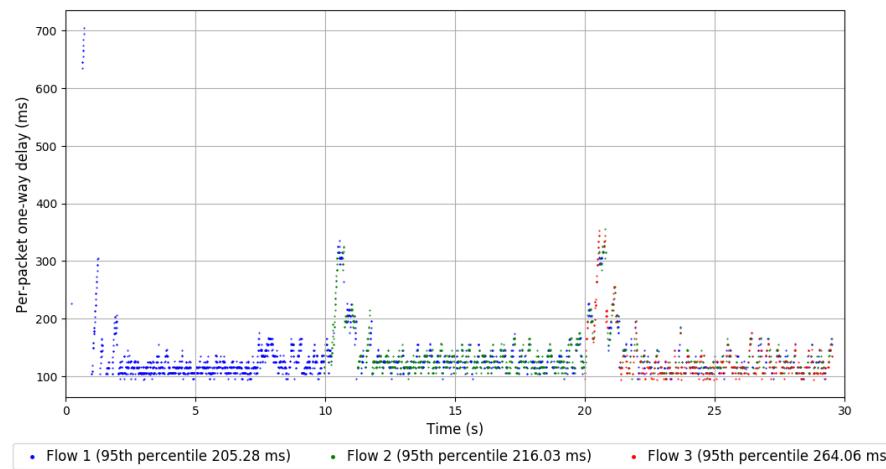
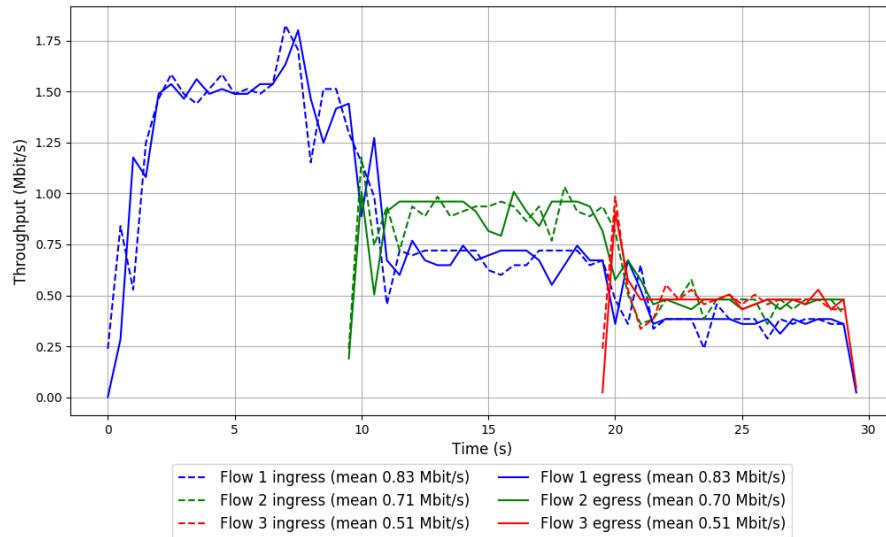


Run 2: Statistics of Indigo-1-32

```
Start at: 2018-04-10 08:12:54
End at: 2018-04-10 08:13:24
Local clock offset: -5.742 ms
Remote clock offset: 2.757 ms

# Below is generated by plot.py at 2018-04-10 08:59:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 215.552 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 205.279 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 216.032 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 264.061 ms
Loss rate: 0.25%
```

Run 2: Report of Indigo-1-32 — Data Link

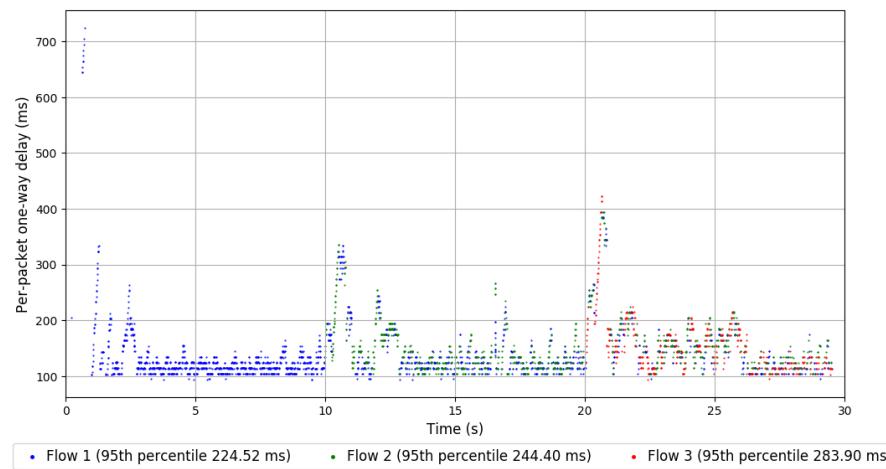
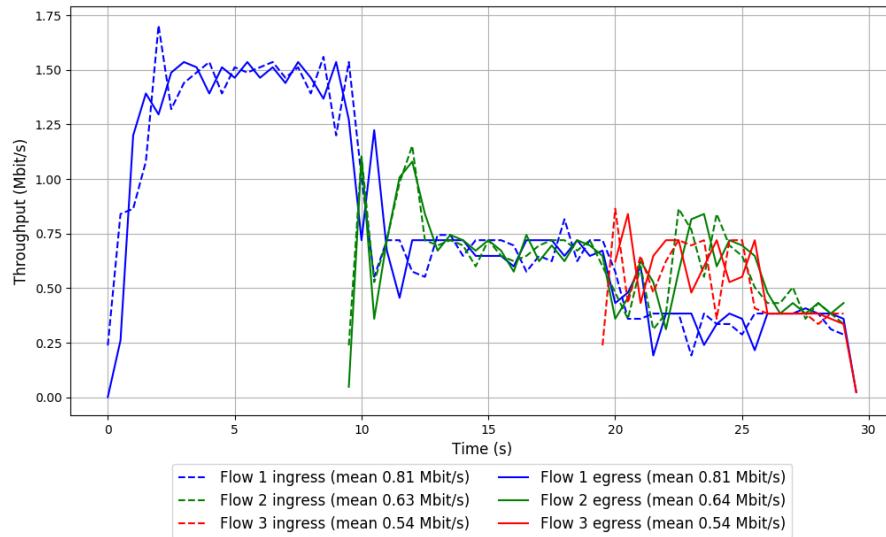


Run 3: Statistics of Indigo-1-32

```
Start at: 2018-04-10 08:35:31
End at: 2018-04-10 08:36:01
Local clock offset: -4.892 ms
Remote clock offset: 3.657 ms

# Below is generated by plot.py at 2018-04-10 08:59:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 234.829 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 224.517 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 244.403 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 283.896 ms
Loss rate: 0.47%
```

Run 3: Report of Indigo-1-32 — Data Link

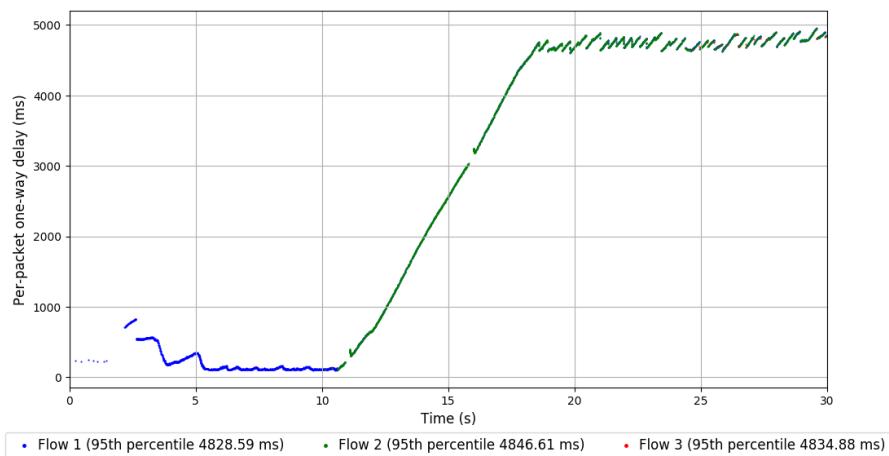
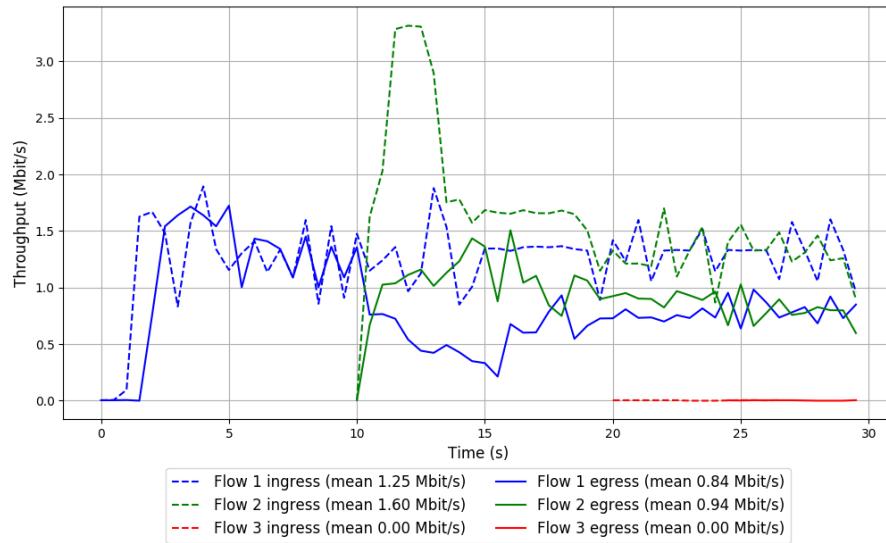


```
Run 1: Statistics of Vivace-latency
```

```
Start at: 2018-04-10 07:57:49
End at: 2018-04-10 07:58:19
Local clock offset: -6.095 ms
Remote clock offset: 8.346 ms

# Below is generated by plot.py at 2018-04-10 08:59:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 4836.381 ms
Loss rate: 37.01%
-- Flow 1:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 4828.593 ms
Loss rate: 33.26%
-- Flow 2:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 4846.607 ms
Loss rate: 41.41%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4834.881 ms
Loss rate: 33.62%
```

Run 1: Report of Vivace-latency — Data Link

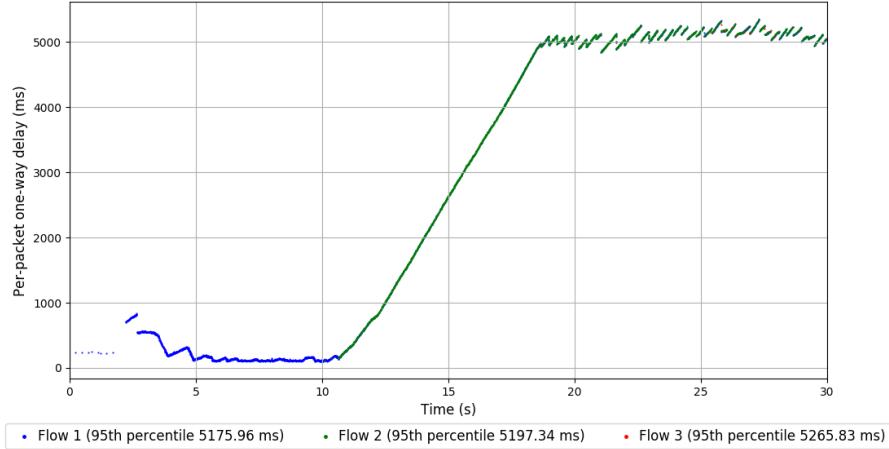
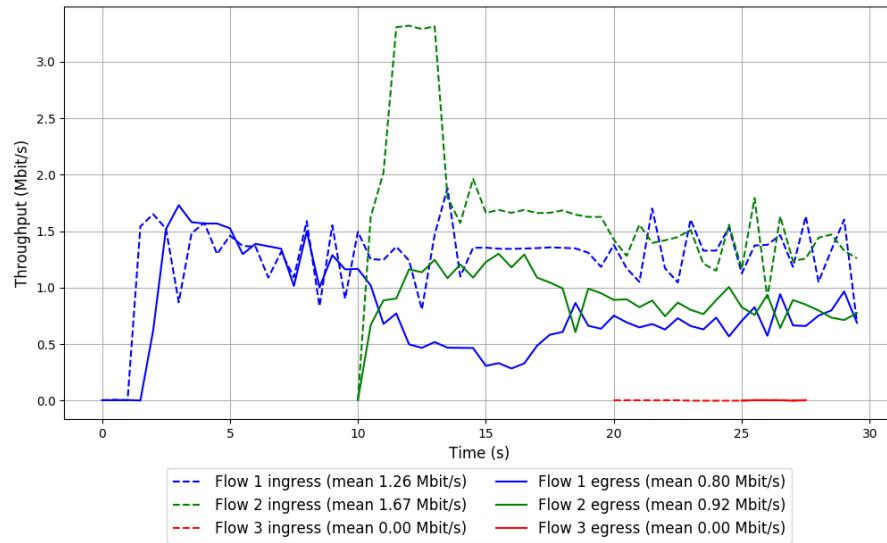


Run 2: Statistics of Vivace-latency

```
Start at: 2018-04-10 08:20:26
End at: 2018-04-10 08:20:56
Local clock offset: -6.392 ms
Remote clock offset: 7.63 ms

# Below is generated by plot.py at 2018-04-10 08:59:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 5187.424 ms
Loss rate: 40.60%
-- Flow 1:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 5175.958 ms
Loss rate: 36.90%
-- Flow 2:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 5197.341 ms
Loss rate: 44.79%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5265.831 ms
Loss rate: 54.02%
```

Run 2: Report of Vivace-latency — Data Link

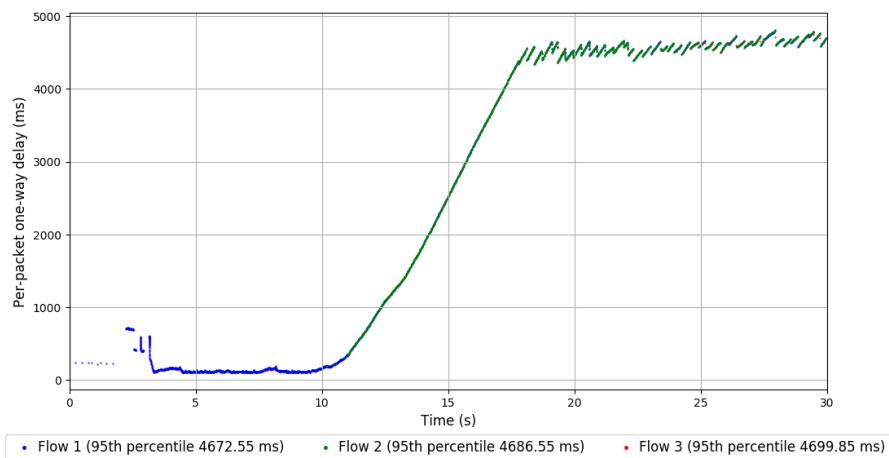
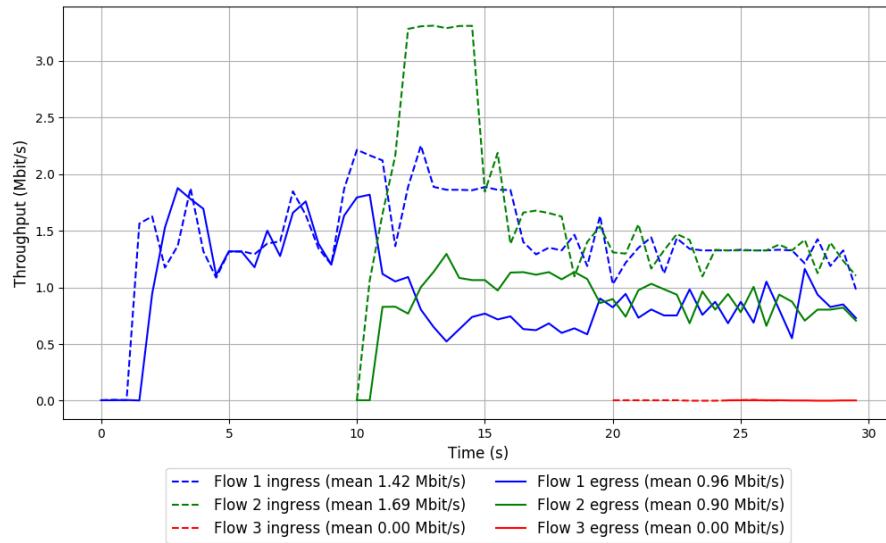


Run 3: Statistics of Vivace-latency

```
Start at: 2018-04-10 08:43:04
End at: 2018-04-10 08:43:34
Local clock offset: -4.935 ms
Remote clock offset: 7.998 ms

# Below is generated by plot.py at 2018-04-10 08:59:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 4680.978 ms
Loss rate: 39.09%
-- Flow 1:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 4672.553 ms
Loss rate: 33.16%
-- Flow 2:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 4686.551 ms
Loss rate: 46.63%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4699.849 ms
Loss rate: 33.62%
```

Run 3: Report of Vivace-latency — Data Link

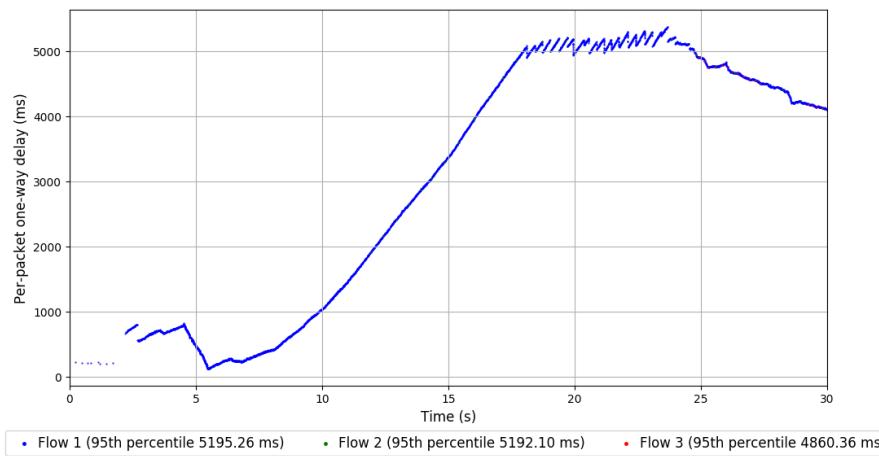
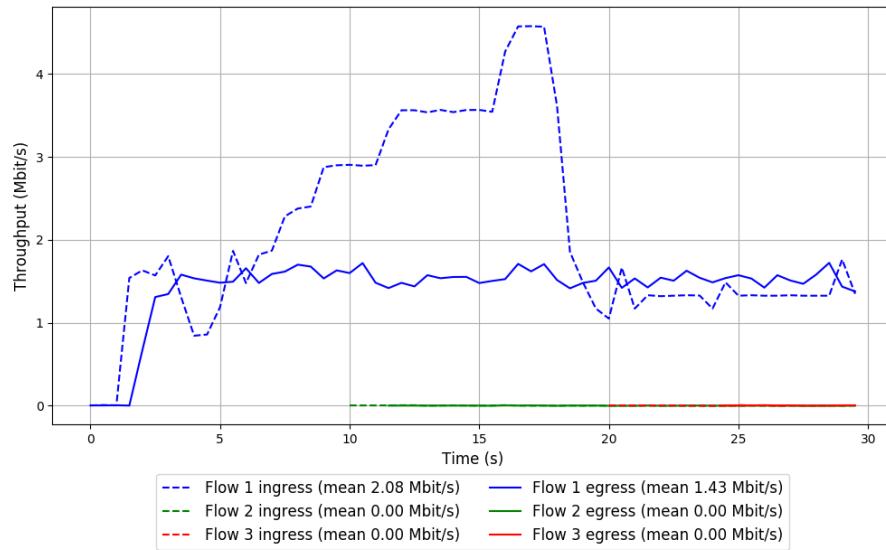


```
Run 1: Statistics of Vivace-loss
```

```
Start at: 2018-04-10 08:00:19
End at: 2018-04-10 08:00:49
Local clock offset: -5.969 ms
Remote clock offset: 2.675 ms

# Below is generated by plot.py at 2018-04-10 08:59:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 5194.914 ms
Loss rate: 31.40%
-- Flow 1:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 5195.256 ms
Loss rate: 31.41%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5192.105 ms
Loss rate: 26.38%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4860.360 ms
Loss rate: 22.41%
```

Run 1: Report of Vivace-loss — Data Link

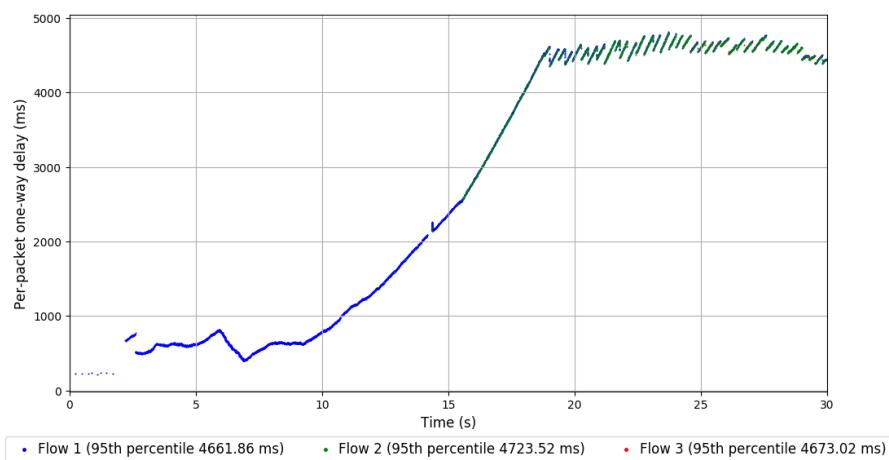
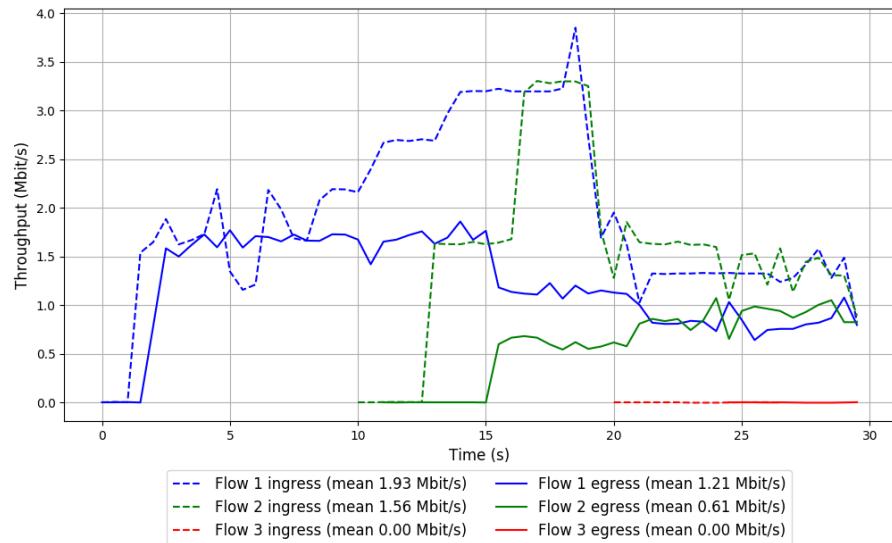


Run 2: Statistics of Vivace-loss

```
Start at: 2018-04-10 08:22:57
End at: 2018-04-10 08:23:27
Local clock offset: -5.645 ms
Remote clock offset: 2.844 ms

# Below is generated by plot.py at 2018-04-10 08:59:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 4688.977 ms
Loss rate: 46.52%
-- Flow 1:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 4661.862 ms
Loss rate: 37.54%
-- Flow 2:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 4723.521 ms
Loss rate: 63.20%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4673.024 ms
Loss rate: 37.21%
```

Run 2: Report of Vivace-loss — Data Link

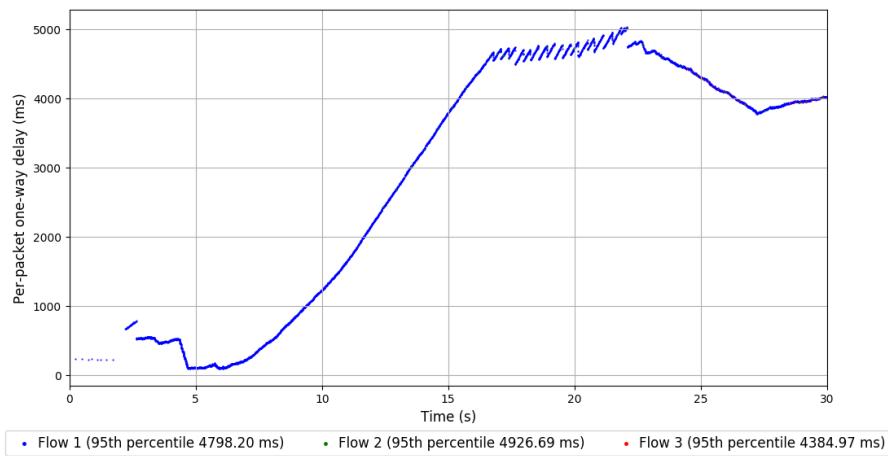
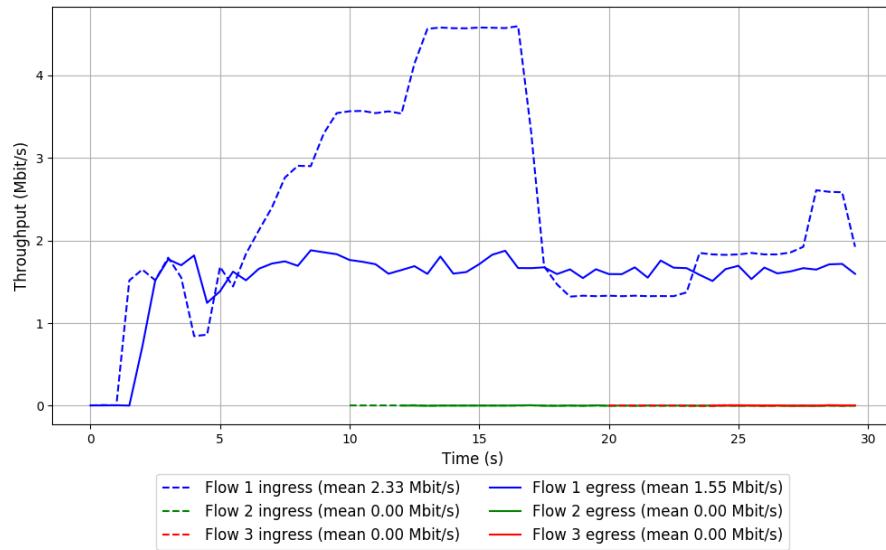


```
Run 3: Statistics of Vivace-loss
```

```
Start at: 2018-04-10 08:45:34
End at: 2018-04-10 08:46:04
Local clock offset: -5.68 ms
Remote clock offset: 7.058 ms

# Below is generated by plot.py at 2018-04-10 08:59:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 4798.280 ms
Loss rate: 33.89%
-- Flow 1:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 4798.204 ms
Loss rate: 33.91%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4926.695 ms
Loss rate: 21.08%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4384.965 ms
Loss rate: 5.60%
```

Run 3: Report of Vivace-loss — Data Link

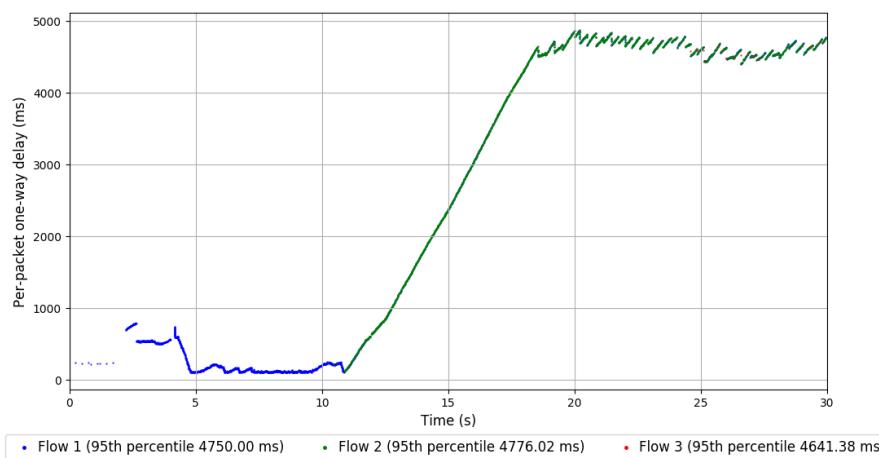
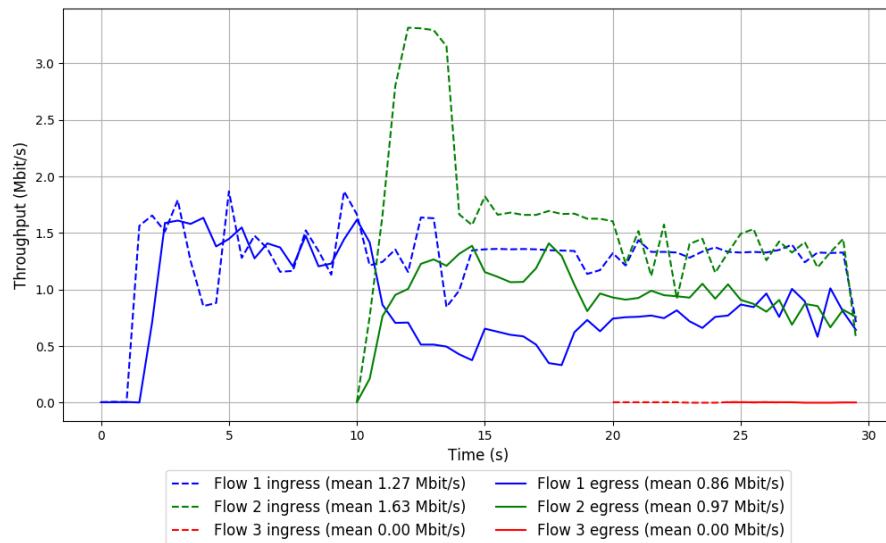


Run 1: Statistics of Vivace-LTE

```
Start at: 2018-04-10 08:10:23
End at: 2018-04-10 08:10:53
Local clock offset: -5.681 ms
Remote clock offset: 9.248 ms

# Below is generated by plot.py at 2018-04-10 08:59:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 4764.022 ms
Loss rate: 36.27%
-- Flow 1:
Average throughput: 0.86 Mbit/s
95th percentile per-packet one-way delay: 4749.999 ms
Loss rate: 32.38%
-- Flow 2:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 4776.024 ms
Loss rate: 40.85%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4641.379 ms
Loss rate: 33.62%
```

Run 1: Report of Vivace-LTE — Data Link

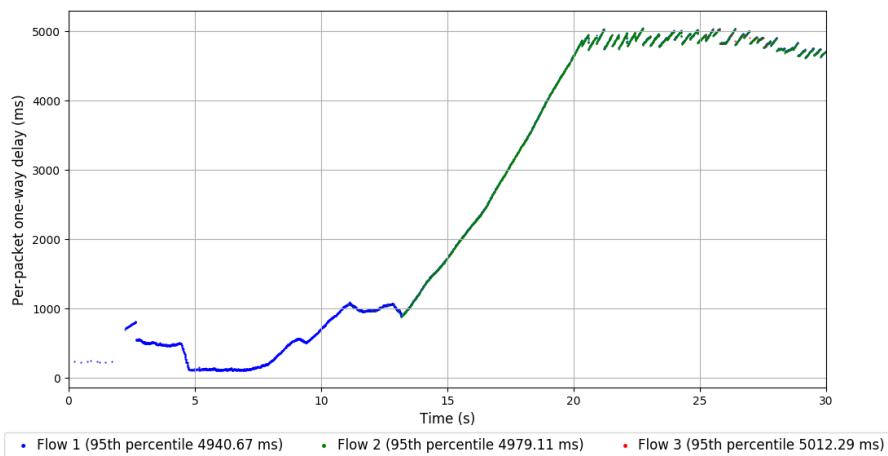
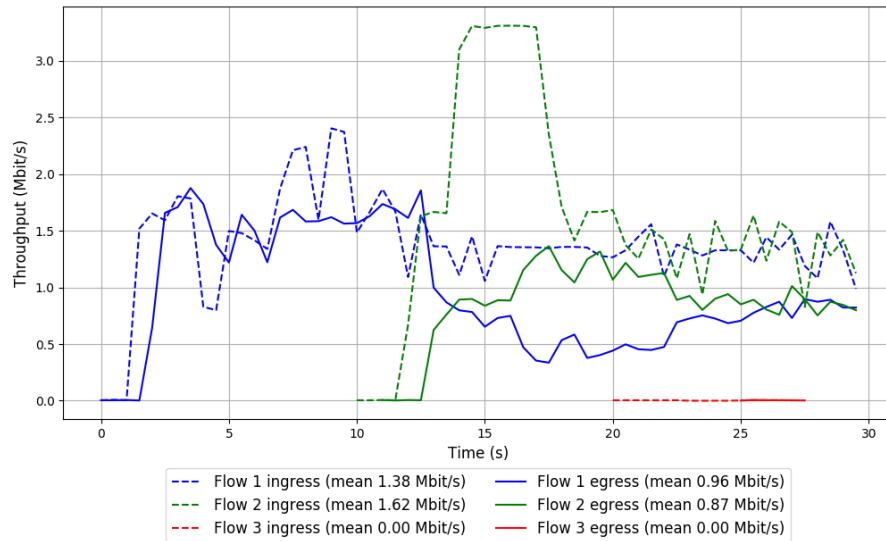


Run 2: Statistics of Vivace-LTE

```
Start at: 2018-04-10 08:32:59
End at: 2018-04-10 08:33:29
Local clock offset: -4.857 ms
Remote clock offset: 7.621 ms

# Below is generated by plot.py at 2018-04-10 08:59:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 4959.178 ms
Loss rate: 38.79%
-- Flow 1:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 4940.668 ms
Loss rate: 30.89%
-- Flow 2:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 4979.108 ms
Loss rate: 48.90%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5012.290 ms
Loss rate: 49.43%
```

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

```
Start at: 2018-04-10 08:55:37
End at: 2018-04-10 08:56:07
Local clock offset: -6.425 ms
Remote clock offset: 7.538 ms

# Below is generated by plot.py at 2018-04-10 08:59:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 4380.591 ms
Loss rate: 33.13%
-- Flow 1:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 4359.461 ms
Loss rate: 27.59%
-- Flow 2:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 4413.544 ms
Loss rate: 40.21%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4375.886 ms
Loss rate: 20.27%
```

Run 3: Report of Vivace-LTE — Data Link

