# Pantheon Report

Generated at 2018-03-07 00:16:46 (UTC).

Data path: Stanford Ethernet (*remote*) →AWS California 1 Ethernet (*local*).

Repeated the test of 17 congestion control schemes 10 times.

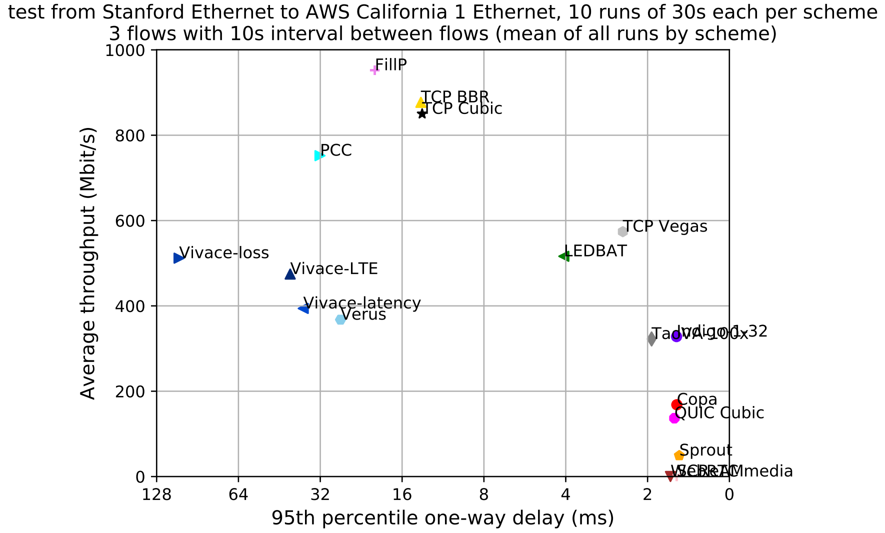
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

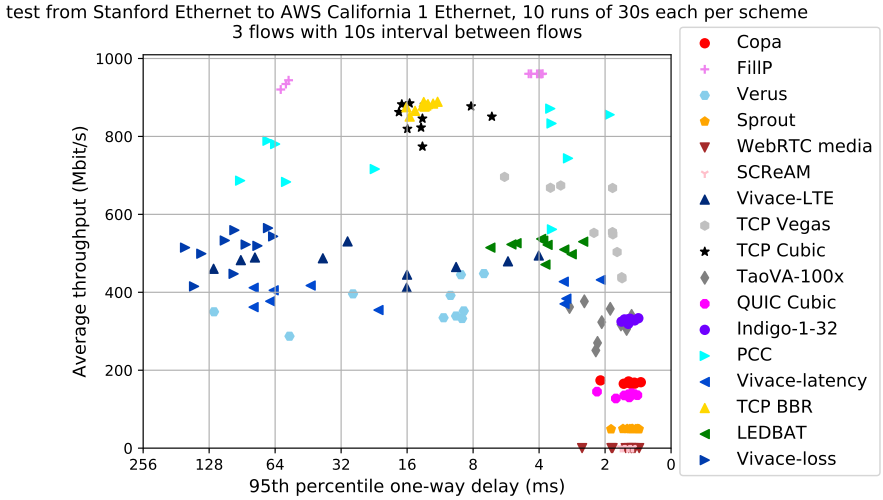
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.

```
Git summary:
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5cec90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
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 @ a488197ddd041ace68a42849b2540ad834825f42
```


test from Stanford Ethernet to AWS California 1 Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
1000
800
600
400
200
0
128
64
32
16
8
4
2
0
FillP
TCP BBR
TCP Cubic
PCC
TCP Vegas
Vivace-loss
LEDBAT
Vivace-LTE
Vivace-latency
Verus
Indigo-1-32
TaoVA-100x
Copa
QUIC Cubic
Sprout
WebRTC media
SCReAM


test from Stanford Ethernet to AWS California 1 Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
1000
800
600
400
200
0
256
128
64
32
16
8
4
2
0
Copa
FillP
Verus
Sprout
WebRTC media
SCReAM
Vivace-LTE
TCP Vegas
TCP Cubic
TaoVA-100x
QUIC Cubic
Indigo-1-32
PCC
Vivace-latency
TCP BBR
LEDBAT
Vivace-loss

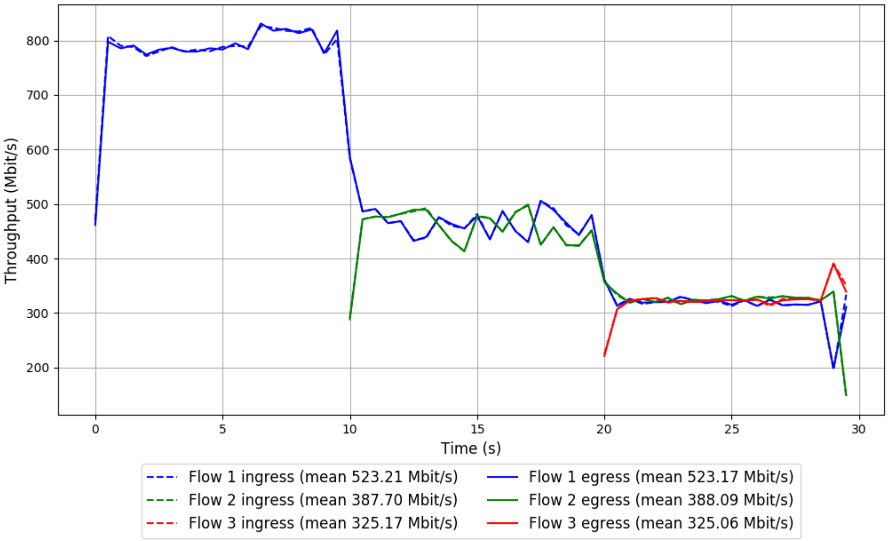
| scheme | # runs | mean avg tput (Mbit/s)<br>flow 1 | <br>flow 2 | <br>flow 3 | mean 95th-%ile delay (ms)<br>flow 1 | <br>flow 2 | <br>flow 3 | mean loss rate (%)<br>flow 1 | <br>flow 2 | <br>flow 3 |
|---|---|---|---|---|---|---|---|---|---|---|
| TCP BBR | 10 | 513.97 | 386.41 | 320.42 | 14.96 | 10.86 | 5.05 | 0.05 | 0.09 | 0.25 |
| TCP Cubic | 10 | 483.53 | 382.62 | 338.31 | 14.33 | 5.95 | 4.42 | 0.05 | 0.10 | 0.23 |
| LEDBAT | 10 | 294.08 | 241.59 | 186.26 | 3.90 | 4.61 | 2.76 | 0.05 | 0.10 | 0.28 |
| PCC | 10 | 544.02 | 217.10 | 194.56 | 40.13 | 3.00 | 3.04 | 1.91 | 0.18 | 0.26 |
| QUIC Cubic | 10 | 73.07 | 66.59 | 58.57 | 1.34 | 1.36 | 1.28 | 0.07 | 0.09 | 0.19 |
| SCReAM | 10 | 0.22 | 0.22 | 0.22 | 1.29 | 1.28 | 1.29 | 0.03 | 0.04 | 0.28 |
| WebRTC media | 10 | 0.05 | 0.05 | 0.05 | 1.38 | 1.43 | 1.44 | 0.02 | 0.97 | 0.01 |
| Sprout | 10 | 24.75 | 24.74 | 24.57 | 1.23 | 1.22 | 1.22 | 0.11 | 0.10 | 0.27 |
| TaoVA-100x | 10 | 182.72 | 157.09 | 106.80 | 1.83 | 1.97 | 2.01 | 0.11 | 0.21 | 0.45 |
| TCP Vegas | 10 | 302.41 | 285.59 | 246.26 | 1.95 | 2.69 | 2.29 | 0.06 | 0.08 | 0.19 |
| Verus | 10 | 220.03 | 160.79 | 126.13 | 13.40 | 46.69 | 4.42 | 0.32 | 1.95 | 0.73 |
| Copa | 10 | 86.84 | 84.28 | 76.89 | 1.27 | 1.29 | 1.33 | 0.04 | 0.06 | 0.16 |
| FillP | 10 | 581.45 | 401.12 | 315.67 | 20.25 | 4.45 | 4.46 | 1.02 | 0.10 | 0.24 |
| Indigo-1-32 | 10 | 176.48 | 162.45 | 133.83 | 1.21 | 1.47 | 1.30 | 0.06 | 0.10 | 0.18 |
| Vivace-latency | 10 | 271.60 | 146.58 | 76.44 | 68.59 | 1.75 | 1.42 | 0.57 | 0.08 | 0.27 |
| Vivace-loss | 10 | 319.48 | 211.77 | 157.74 | 127.80 | 21.42 | 11.81 | 3.93 | 0.68 | 0.72 |
| Vivace-LTE | 10 | 302.21 | 186.69 | 147.44 | 67.75 | 18.40 | 1.81 | 1.17 | 0.20 | 0.18 |

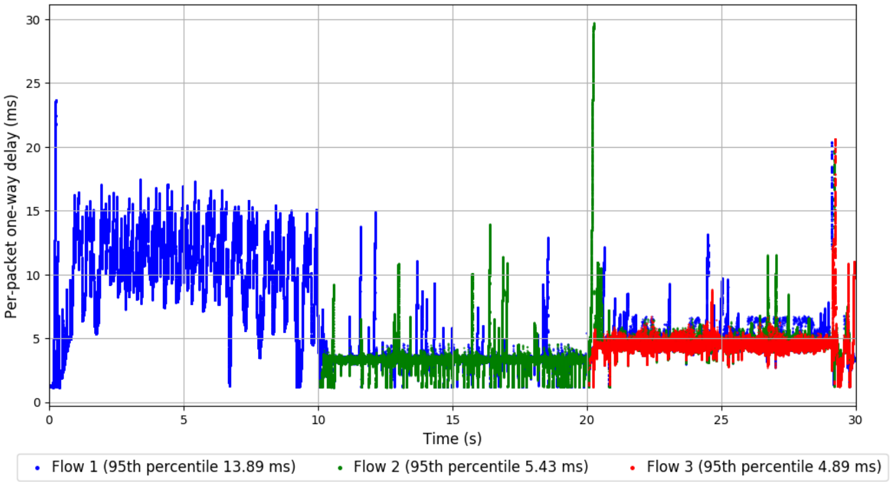
```
Run 1: Statistics of TCP BBR

Start at: 2018-03-06 12:12:48
End at: 2018-03-06 12:13:18
Local clock offset: -3.792 ms
Remote clock offset: 5.649 ms

# Below is generated by plot.py at 2018-03-06 22:09:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 888.26 Mbit/s
95th percentile per-packet one-way delay: 13.433 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 523.17 Mbit/s
95th percentile per-packet one-way delay: 13.895 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 388.09 Mbit/s
95th percentile per-packet one-way delay: 5.434 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 325.06 Mbit/s
95th percentile per-packet one-way delay: 4.887 ms
Loss rate: 0.24%
```

Run 1: Report of TCP BBR — Data Link



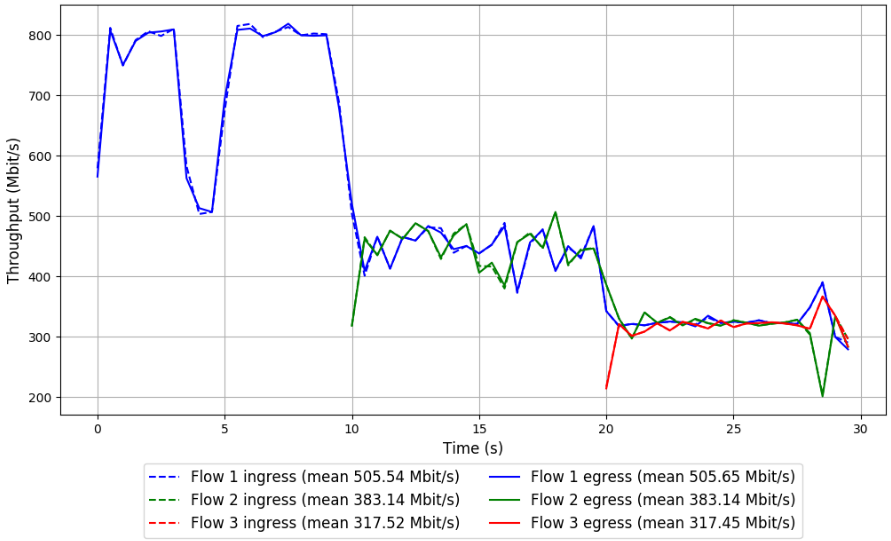


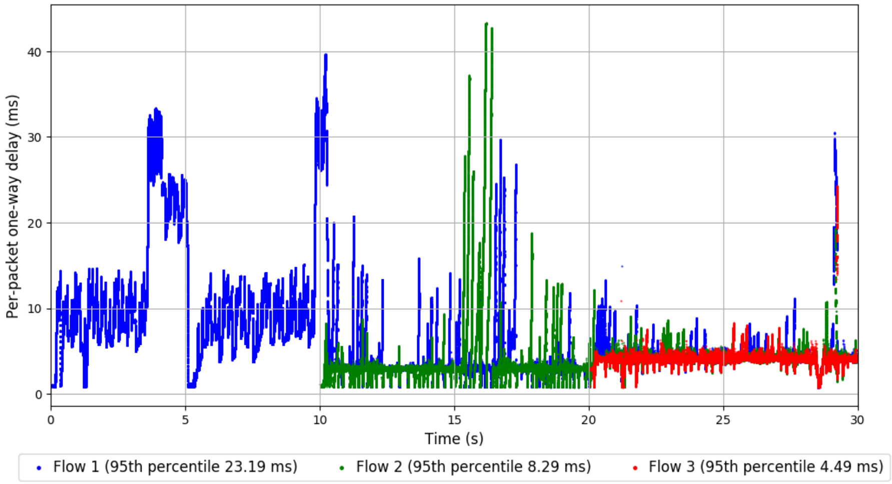
```
Run 2: Statistics of TCP BBR

Start at: 2018-03-06 12:42:26
End at: 2018-03-06 12:42:56
Local clock offset: -4.764 ms
Remote clock offset: 6.028 ms

# Below is generated by plot.py at 2018-03-06 22:09:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 865.70 Mbit/s
95th percentile per-packet one-way delay: 14.722 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 505.65 Mbit/s
95th percentile per-packet one-way delay: 23.188 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 383.14 Mbit/s
95th percentile per-packet one-way delay: 8.295 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 317.45 Mbit/s
95th percentile per-packet one-way delay: 4.488 ms
Loss rate: 0.24%
```

# Run 2: Report of TCP BBR — Data Link



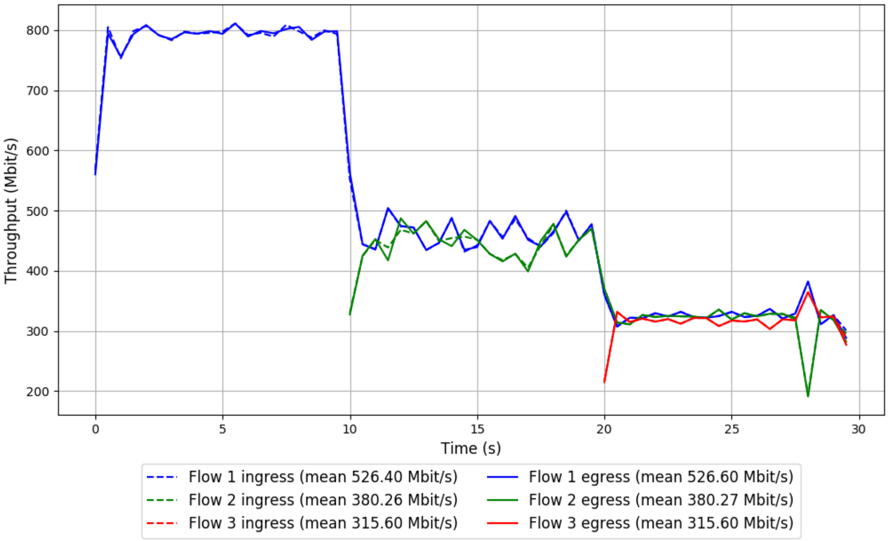


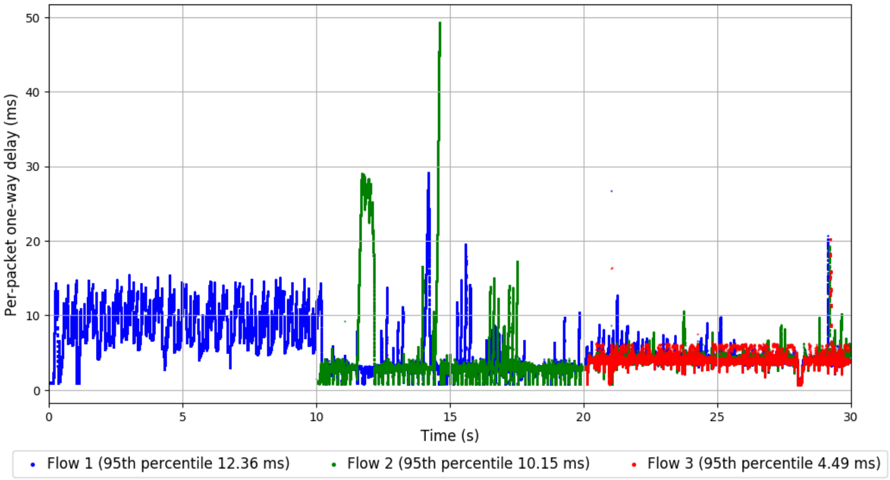
```
Run 3: Statistics of TCP BBR

Start at: 2018-03-06 13:11:45
End at: 2018-03-06 13:12:15
Local clock offset: -4.768 ms
Remote clock offset: 4.555 ms

# Below is generated by plot.py at 2018-03-06 22:09:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 884.28 Mbit/s
95th percentile per-packet one-way delay: 12.174 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 526.60 Mbit/s
95th percentile per-packet one-way delay: 12.360 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 380.27 Mbit/s
95th percentile per-packet one-way delay: 10.152 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 315.60 Mbit/s
95th percentile per-packet one-way delay: 4.487 ms
Loss rate: 0.24%
```

## Run 3: Report of TCP BBR — Data Link



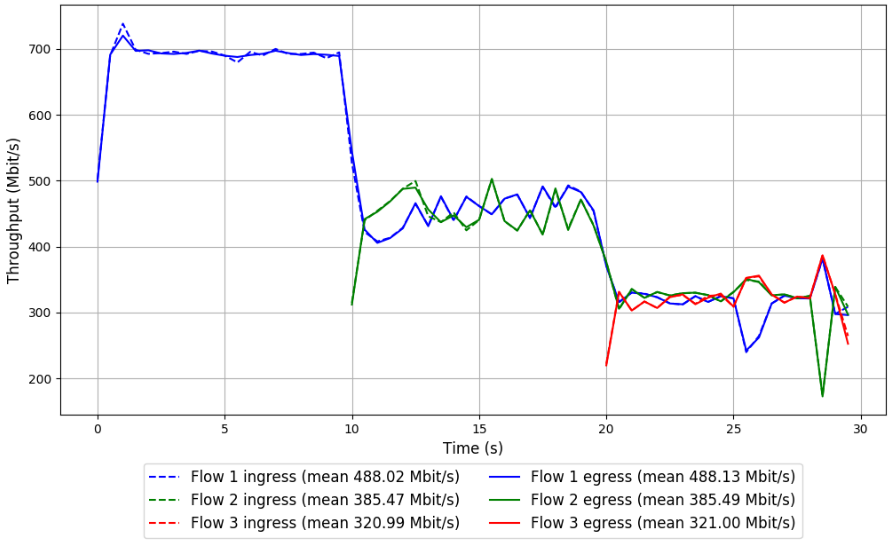


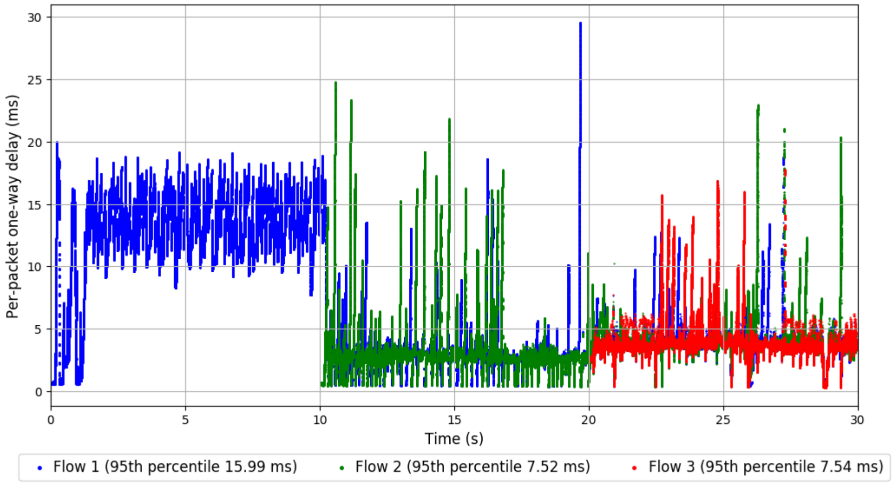
```
Run 4: Statistics of TCP BBR

Start at: 2018-03-06 13:40:55
End at: 2018-03-06 13:41:25
Local clock offset: -1.981 ms
Remote clock offset: -0.742 ms

# Below is generated by plot.py at 2018-03-06 22:09:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 850.90 Mbit/s
95th percentile per-packet one-way delay: 15.573 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 488.13 Mbit/s
95th percentile per-packet one-way delay: 15.995 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 385.49 Mbit/s
95th percentile per-packet one-way delay: 7.523 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 321.00 Mbit/s
95th percentile per-packet one-way delay: 7.535 ms
Loss rate: 0.22%
```

Run 4: Report of TCP BBR — Data Link



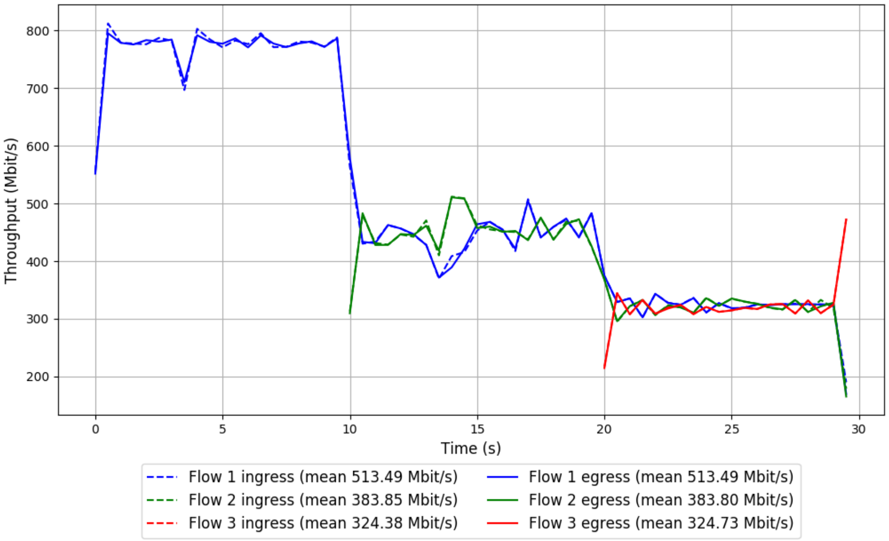


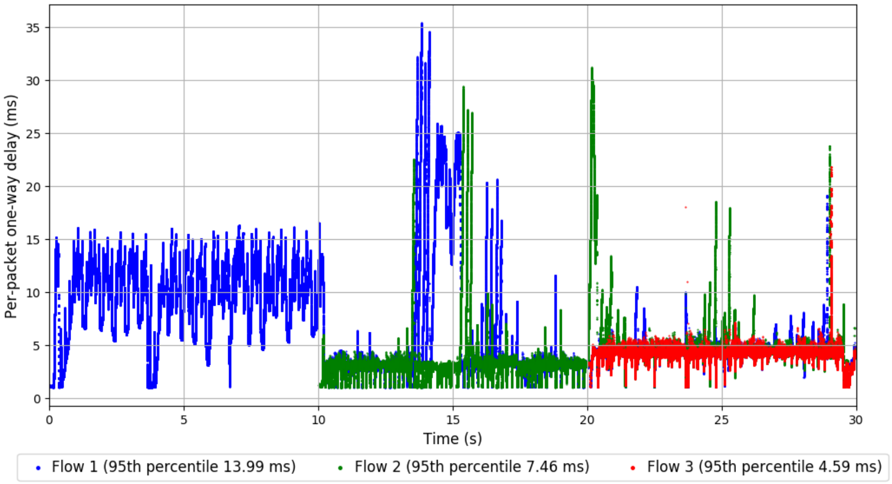
```
Run 5: Statistics of TCP BBR

Start at: 2018-03-06 14:10:32
End at: 2018-03-06 14:11:02
Local clock offset: 4.183 ms
Remote clock offset: 0.512 ms

# Below is generated by plot.py at 2018-03-06 22:09:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 876.49 Mbit/s
95th percentile per-packet one-way delay: 13.308 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 513.49 Mbit/s
95th percentile per-packet one-way delay: 13.992 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 383.80 Mbit/s
95th percentile per-packet one-way delay: 7.456 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 324.73 Mbit/s
95th percentile per-packet one-way delay: 4.593 ms
Loss rate: 0.05%
```

Run 5: Report of TCP BBR — Data Link



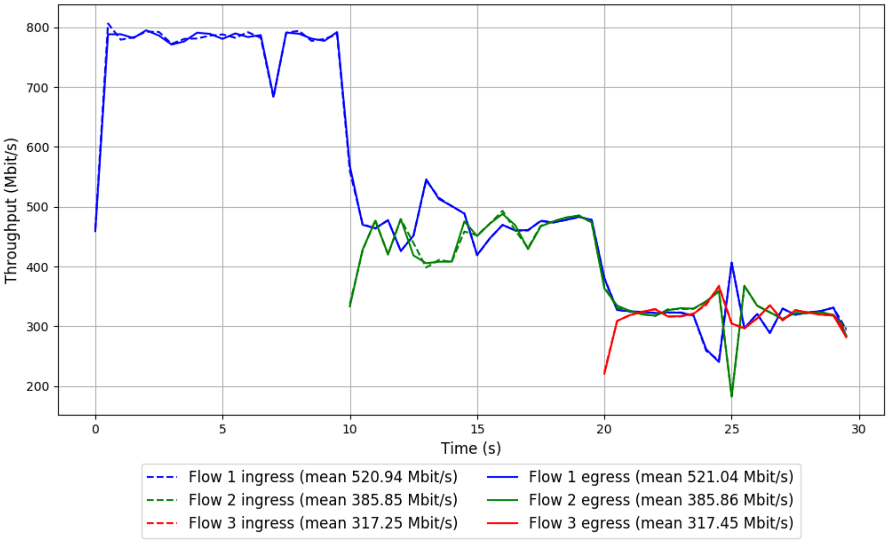


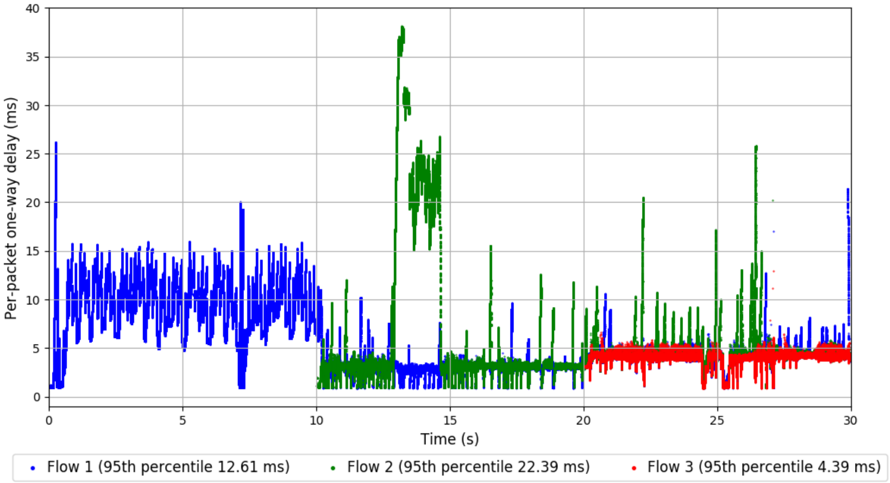
```
Run 6: Statistics of TCP BBR

Start at: 2018-03-06 14:39:58
End at: 2018-03-06 14:40:28
Local clock offset: 5.106 ms
Remote clock offset: 1.915 ms

# Below is generated by plot.py at 2018-03-06 22:09:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 882.90 Mbit/s
95th percentile per-packet one-way delay: 12.855 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 521.04 Mbit/s
95th percentile per-packet one-way delay: 12.612 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 385.86 Mbit/s
95th percentile per-packet one-way delay: 22.385 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 317.45 Mbit/s
95th percentile per-packet one-way delay: 4.395 ms
Loss rate: 0.23%
```

# Run 6: Report of TCP BBR — Data Link



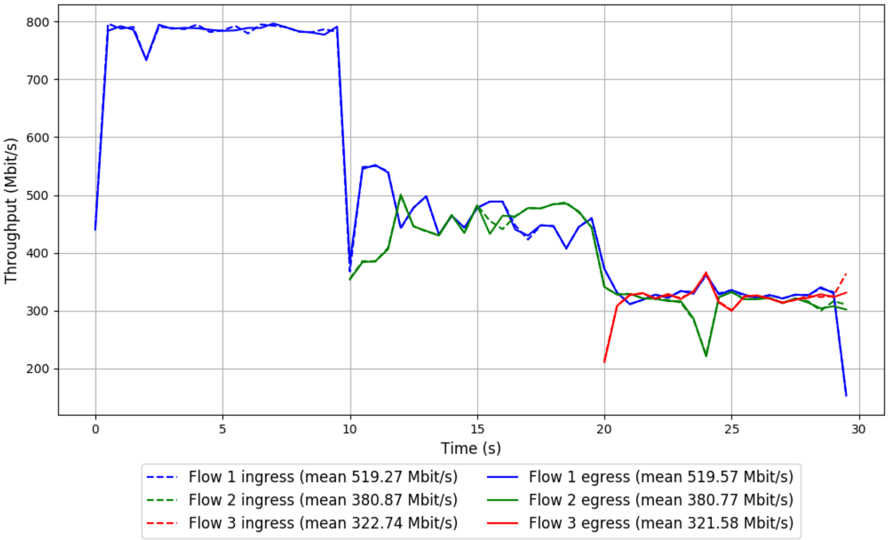


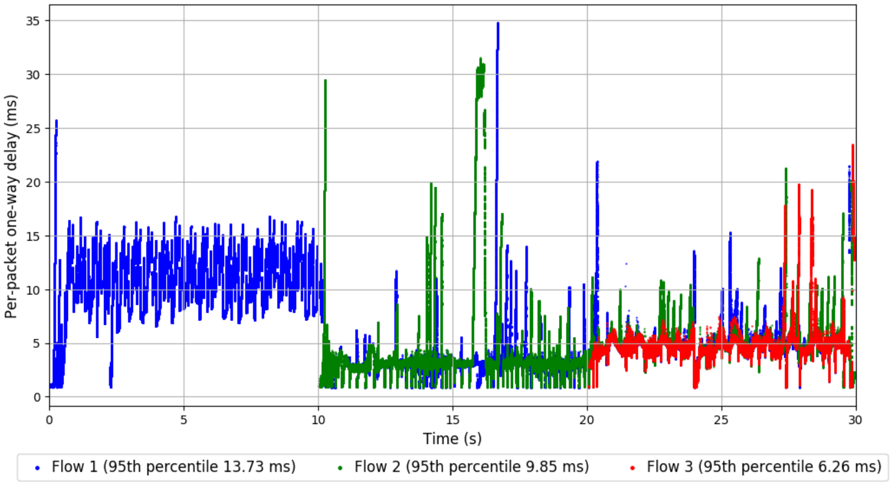
```
Run 7: Statistics of TCP BBR

Start at: 2018-03-06 15:14:33
End at: 2018-03-06 15:15:03
Local clock offset: 0.764 ms
Remote clock offset: 2.297 ms

# Below is generated by plot.py at 2018-03-06 22:09:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 879.28 Mbit/s
95th percentile per-packet one-way delay: 13.564 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 519.57 Mbit/s
95th percentile per-packet one-way delay: 13.733 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 380.77 Mbit/s
95th percentile per-packet one-way delay: 9.853 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 321.58 Mbit/s
95th percentile per-packet one-way delay: 6.256 ms
Loss rate: 0.58%
```

Run 7: Report of TCP BBR — Data Link



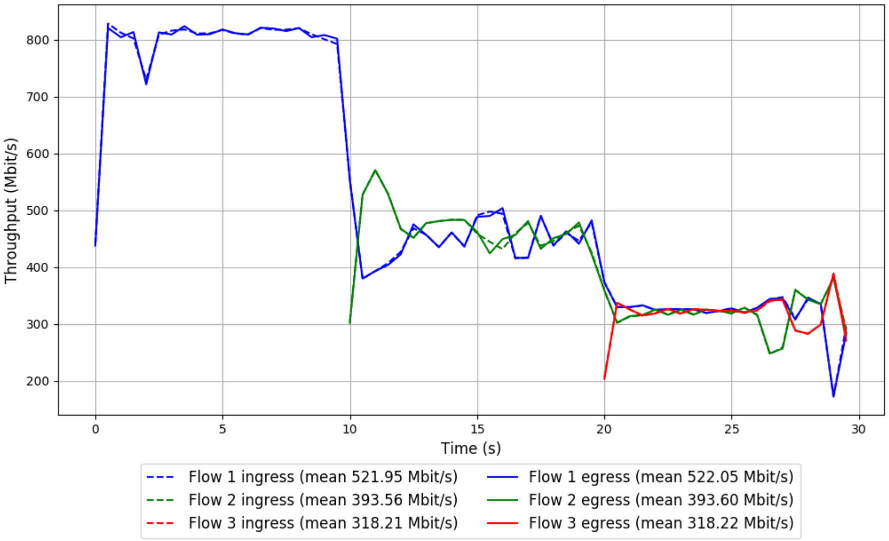


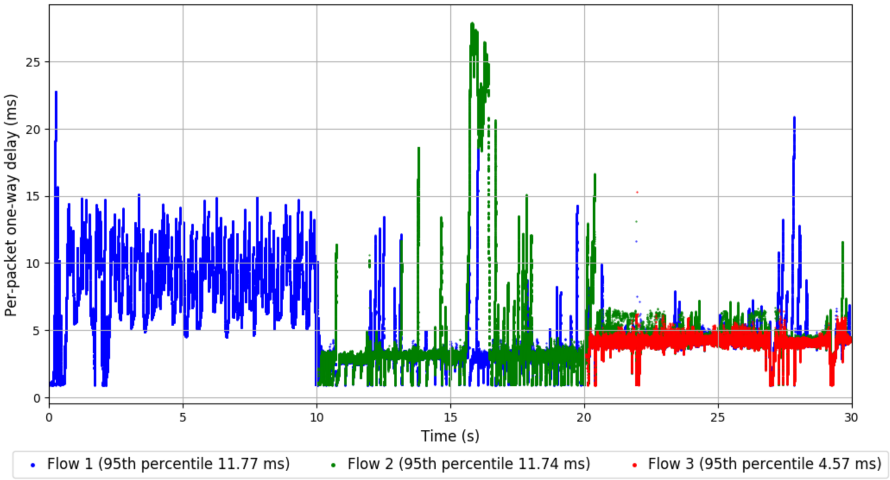
```
Run 8: Statistics of TCP BBR

Start at: 2018-03-06 15:43:32
End at: 2018-03-06 15:44:02
Local clock offset: 0.591 ms
Remote clock offset: 2.296 ms

# Below is generated by plot.py at 2018-03-06 22:09:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 888.91 Mbit/s
95th percentile per-packet one-way delay: 11.617 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 522.05 Mbit/s
95th percentile per-packet one-way delay: 11.771 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 393.60 Mbit/s
95th percentile per-packet one-way delay: 11.739 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 318.22 Mbit/s
95th percentile per-packet one-way delay: 4.572 ms
Loss rate: 0.24%
```

## Run 8: Report of TCP BBR — Data Link



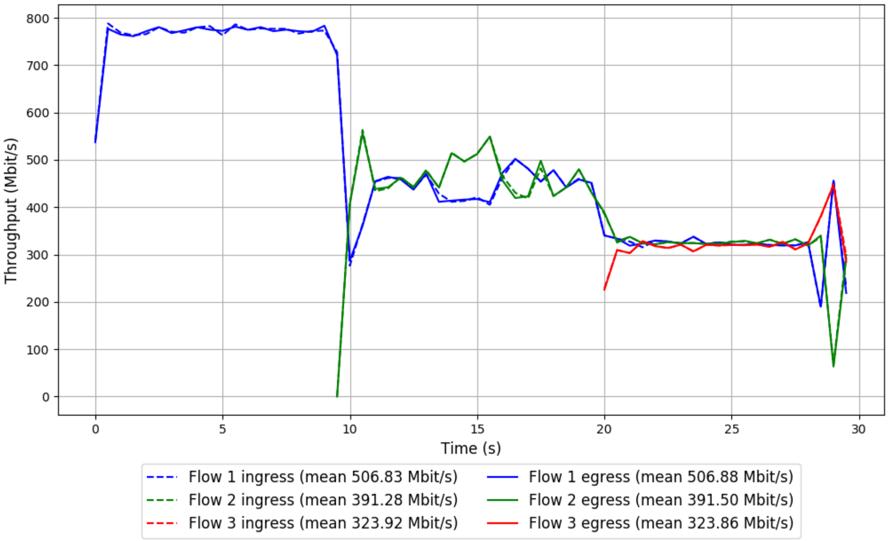


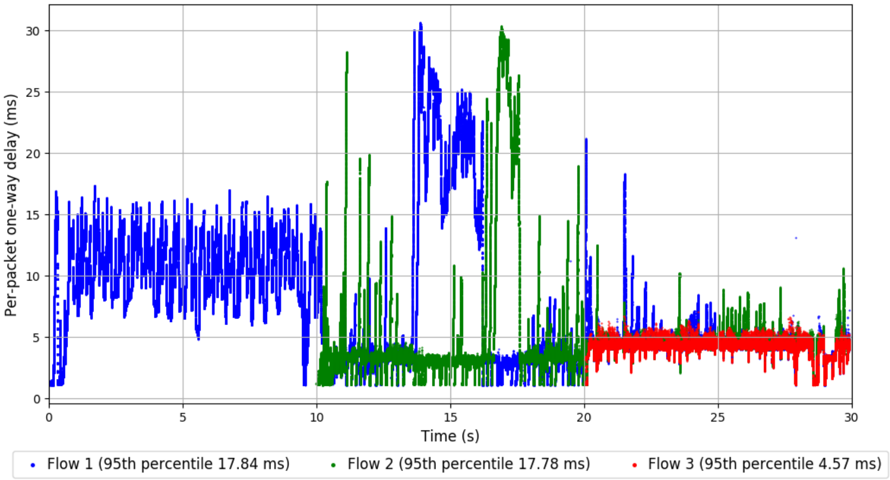
```
Run 9: Statistics of TCP BBR

Start at: 2018-03-06 16:12:44
End at: 2018-03-06 16:13:14
Local clock offset: -1.45 ms
Remote clock offset: 1.794 ms

# Below is generated by plot.py at 2018-03-06 22:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 874.96 Mbit/s
95th percentile per-packet one-way delay: 16.122 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 506.88 Mbit/s
95th percentile per-packet one-way delay: 17.843 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 391.50 Mbit/s
95th percentile per-packet one-way delay: 17.780 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 323.86 Mbit/s
95th percentile per-packet one-way delay: 4.567 ms
Loss rate: 0.24%
```

## Run 9: Report of TCP BBR — Data Link



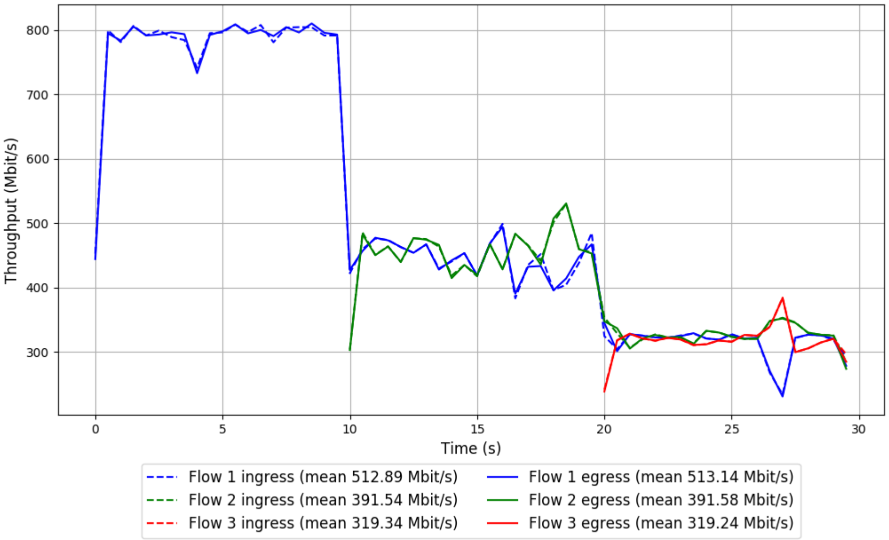


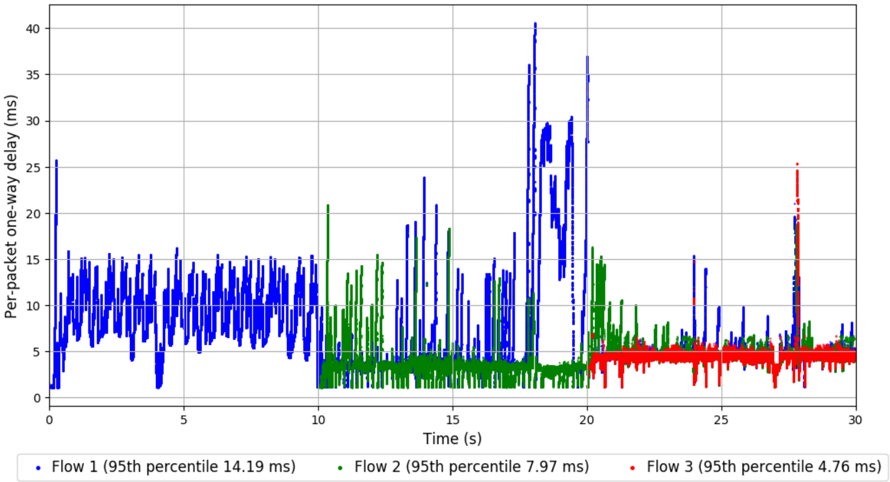
```
Run 10: Statistics of TCP BBR

Start at: 2018-03-06 16:41:49
End at: 2018-03-06 16:42:19
Local clock offset: -5.929 ms
Remote clock offset: 1.924 ms

# Below is generated by plot.py at 2018-03-06 22:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 879.26 Mbit/s
95th percentile per-packet one-way delay: 13.077 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 513.14 Mbit/s
95th percentile per-packet one-way delay: 14.192 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 391.58 Mbit/s
95th percentile per-packet one-way delay: 7.966 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 319.24 Mbit/s
95th percentile per-packet one-way delay: 4.757 ms
Loss rate: 0.23%
```

## Run 10: Report of TCP BBR — Data Link



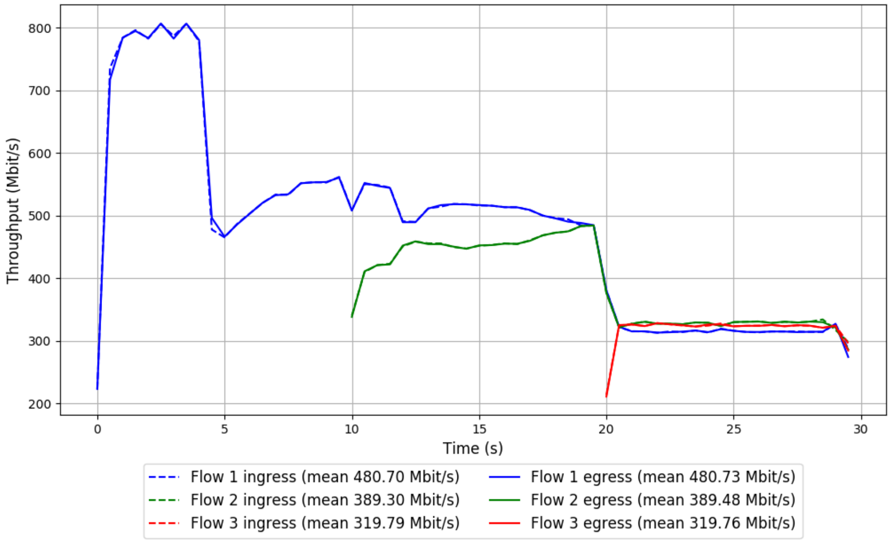


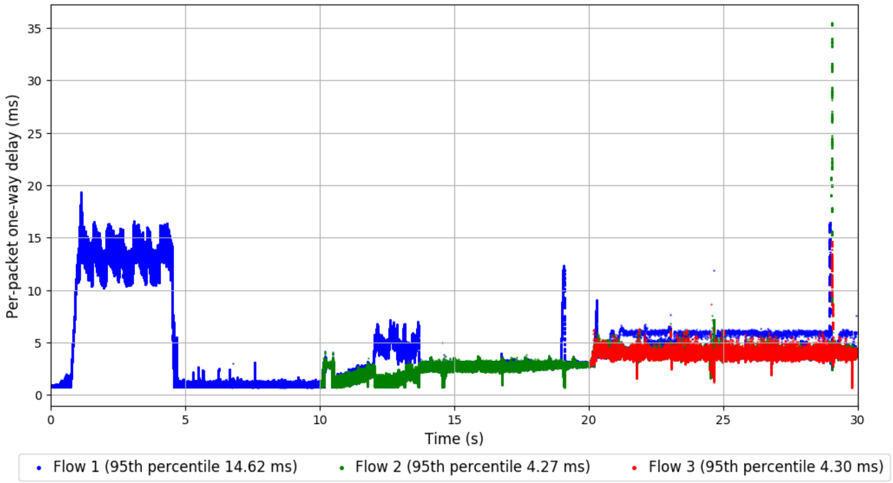
```
Run 1: Statistics of TCP Cubic

Start at: 2018-03-06 11:46:33
End at: 2018-03-06 11:47:03
Local clock offset: 4.819 ms
Remote clock offset: 4.365 ms

# Below is generated by plot.py at 2018-03-06 22:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 845.76 Mbit/s
95th percentile per-packet one-way delay: 13.622 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 480.73 Mbit/s
95th percentile per-packet one-way delay: 14.615 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 389.48 Mbit/s
95th percentile per-packet one-way delay: 4.266 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 319.76 Mbit/s
95th percentile per-packet one-way delay: 4.299 ms
Loss rate: 0.23%
```

Run 1: Report of TCP Cubic — Data Link



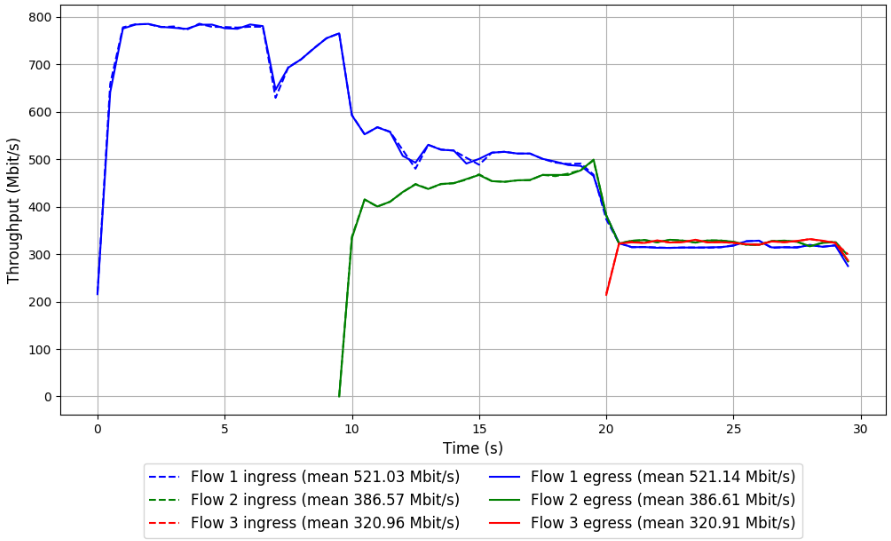


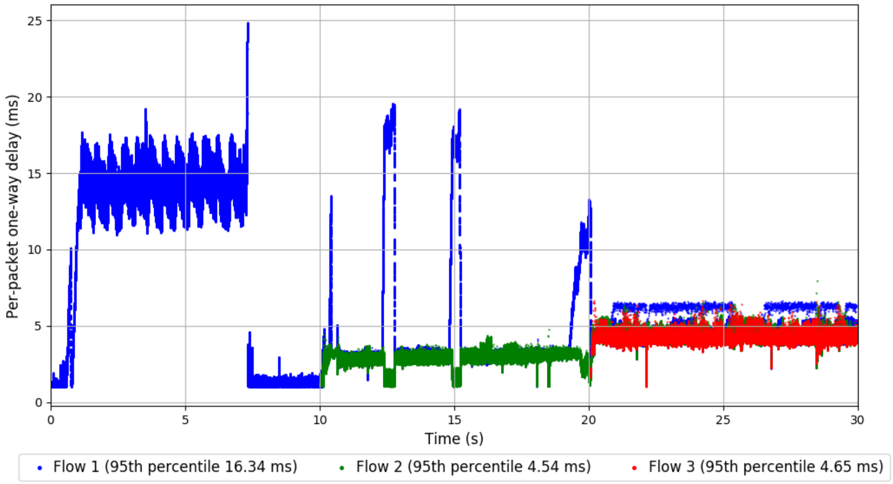
```
Run 2: Statistics of TCP Cubic

Start at: 2018-03-06 12:16:19
End at: 2018-03-06 12:16:49
Local clock offset: -4.35 ms
Remote clock offset: 5.867 ms

# Below is generated by plot.py at 2018-03-06 22:21:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 884.84 Mbit/s
95th percentile per-packet one-way delay: 15.583 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 521.14 Mbit/s
95th percentile per-packet one-way delay: 16.336 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 386.61 Mbit/s
95th percentile per-packet one-way delay: 4.540 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 320.91 Mbit/s
95th percentile per-packet one-way delay: 4.653 ms
Loss rate: 0.24%
```

Run 2: Report of TCP Cubic — Data Link



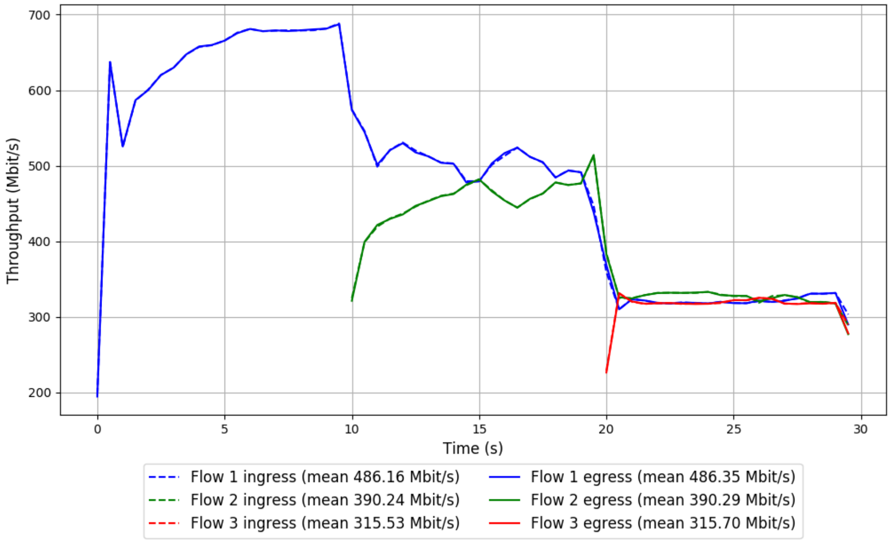


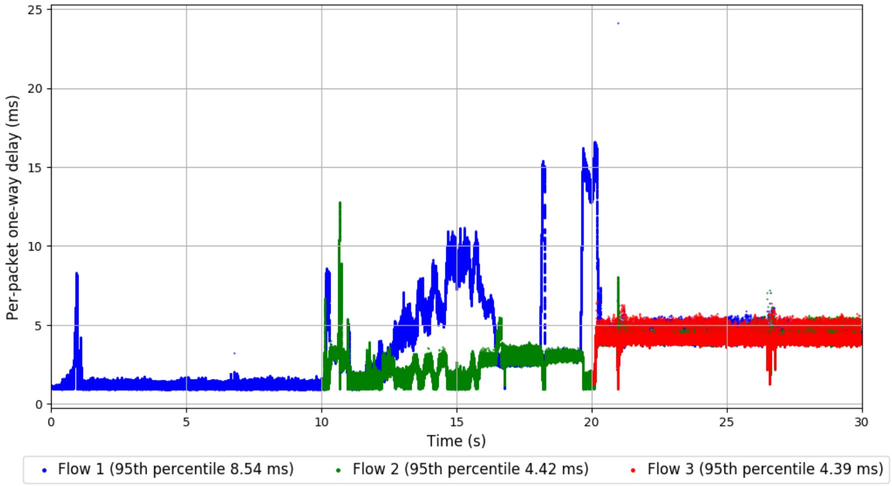
```
Run 3: Statistics of TCP Cubic

Start at: 2018-03-06 12:45:56
End at: 2018-03-06 12:46:26
Local clock offset: -4.758 ms
Remote clock offset: 5.462 ms

# Below is generated by plot.py at 2018-03-06 22:21:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 850.78 Mbit/s
95th percentile per-packet one-way delay: 6.569 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 486.35 Mbit/s
95th percentile per-packet one-way delay: 8.535 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 390.29 Mbit/s
95th percentile per-packet one-way delay: 4.424 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 315.70 Mbit/s
95th percentile per-packet one-way delay: 4.391 ms
Loss rate: 0.24%
```

## Run 3: Report of TCP Cubic — Data Link



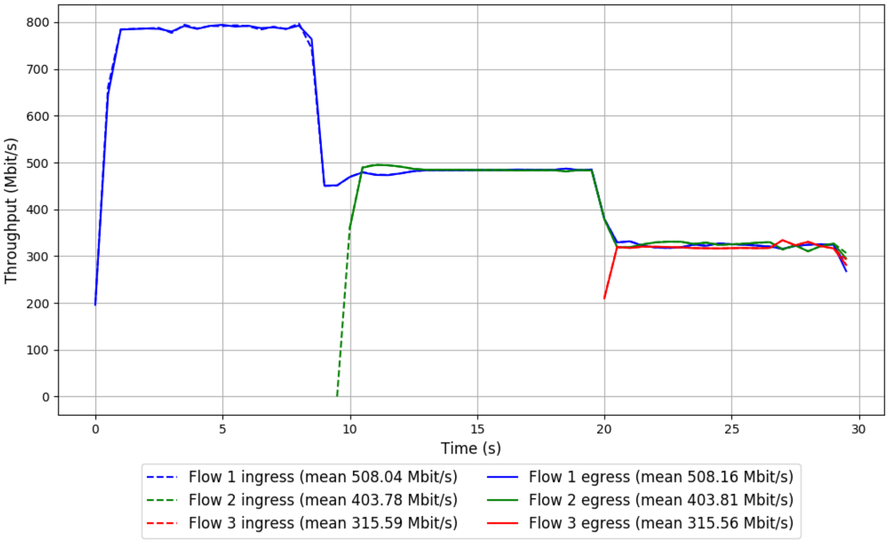


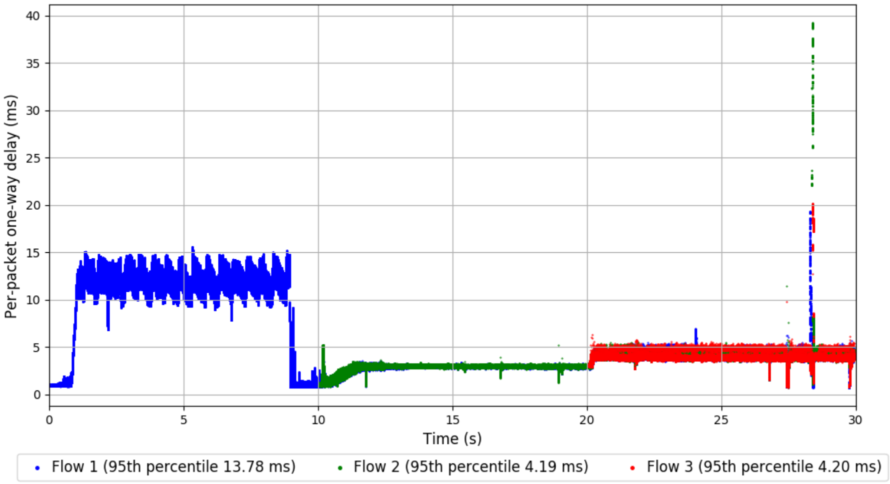
```
Run 4: Statistics of TCP Cubic

Start at: 2018-03-06 13:15:17
End at: 2018-03-06 13:15:47
Local clock offset: -4.745 ms
Remote clock offset: 3.135 ms

# Below is generated by plot.py at 2018-03-06 22:21:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 881.50 Mbit/s
95th percentile per-packet one-way delay: 13.320 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 508.16 Mbit/s
95th percentile per-packet one-way delay: 13.776 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 403.81 Mbit/s
95th percentile per-packet one-way delay: 4.190 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 315.56 Mbit/s
95th percentile per-packet one-way delay: 4.202 ms
Loss rate: 0.23%
```

Run 4: Report of TCP Cubic — Data Link



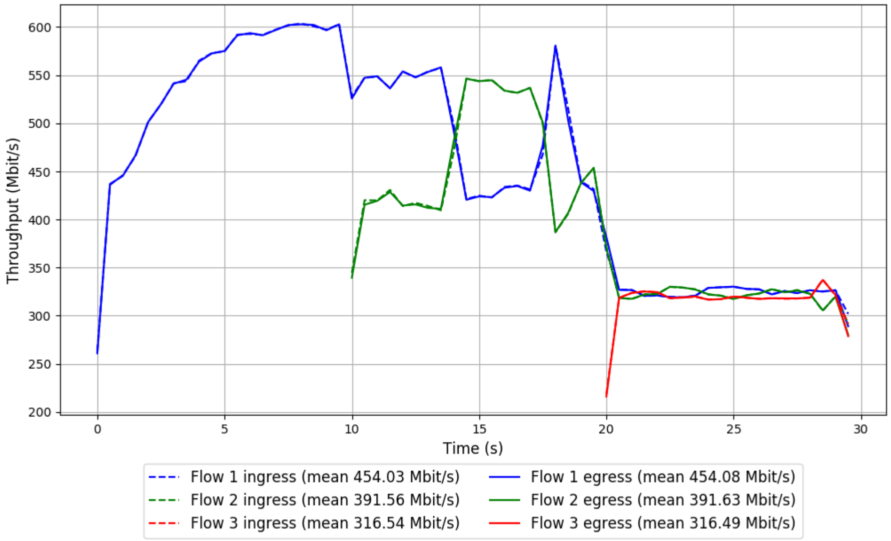


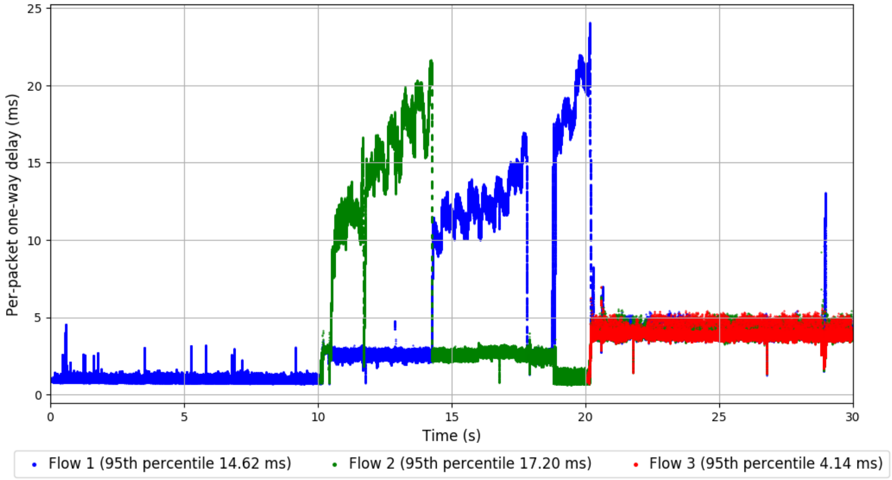
```
Run 5: Statistics of TCP Cubic

Start at: 2018-03-06 13:44:27
End at: 2018-03-06 13:44:57
Local clock offset: -0.473 ms
Remote clock offset: -1.042 ms

# Below is generated by plot.py at 2018-03-06 22:21:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 819.44 Mbit/s
95th percentile per-packet one-way delay: 15.951 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 454.08 Mbit/s
95th percentile per-packet one-way delay: 14.620 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 391.63 Mbit/s
95th percentile per-packet one-way delay: 17.205 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 316.49 Mbit/s
95th percentile per-packet one-way delay: 4.143 ms
Loss rate: 0.24%
```

## Run 5: Report of TCP Cubic — Data Link



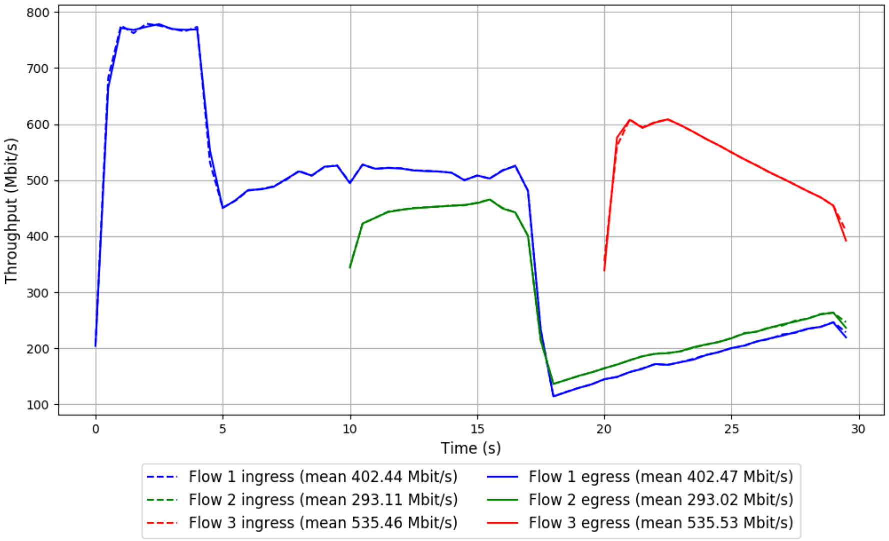


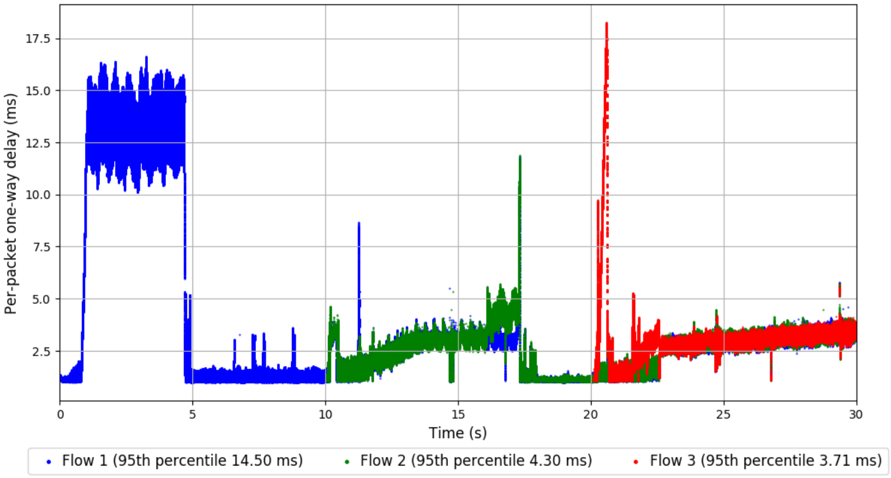
```
Run 6: Statistics of TCP Cubic

Start at: 2018-03-06 14:14:01
End at: 2018-03-06 14:14:31
Local clock offset: 3.982 ms
Remote clock offset: 0.544 ms

# Below is generated by plot.py at 2018-03-06 22:21:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 774.01 Mbit/s
95th percentile per-packet one-way delay: 13.619 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 402.47 Mbit/s
95th percentile per-packet one-way delay: 14.500 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 293.02 Mbit/s
95th percentile per-packet one-way delay: 4.300 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 535.53 Mbit/s
95th percentile per-packet one-way delay: 3.705 ms
Loss rate: 0.19%
```

Run 6: Report of TCP Cubic — Data Link



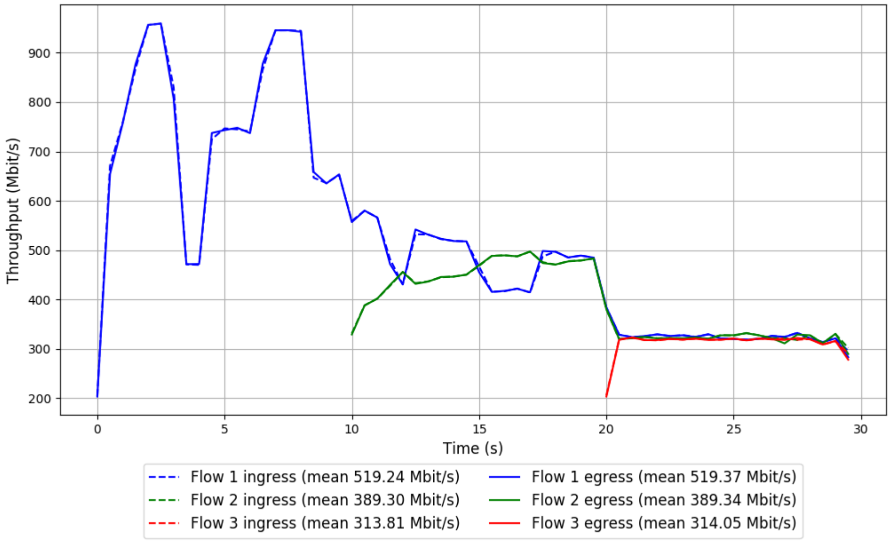


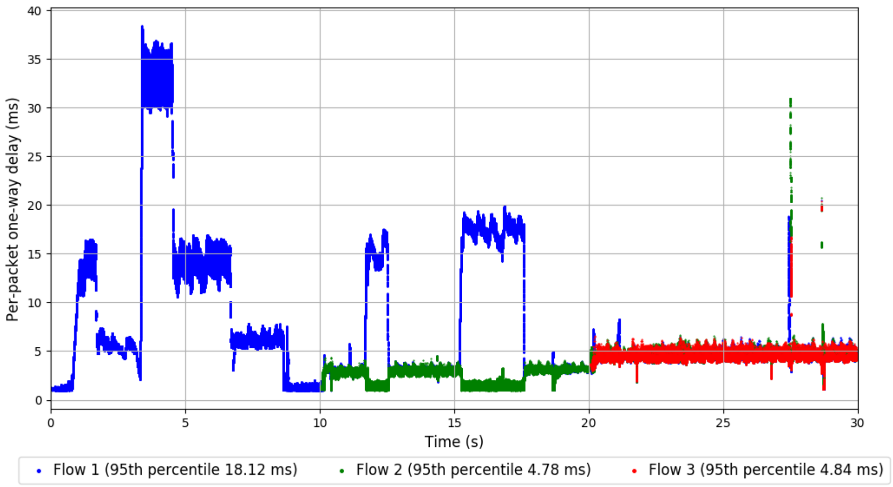
```
Run 7: Statistics of TCP Cubic

Start at: 2018-03-06 14:43:26
End at: 2018-03-06 14:43:56
Local clock offset: 5.38 ms
Remote clock offset: 1.929 ms

# Below is generated by plot.py at 2018-03-06 22:32:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 882.39 Mbit/s
95th percentile per-packet one-way delay: 16.914 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 519.37 Mbit/s
95th percentile per-packet one-way delay: 18.117 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 389.34 Mbit/s
95th percentile per-packet one-way delay: 4.781 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 314.05 Mbit/s
95th percentile per-packet one-way delay: 4.837 ms
Loss rate: 0.24%
```

## Run 7: Report of TCP Cubic — Data Link



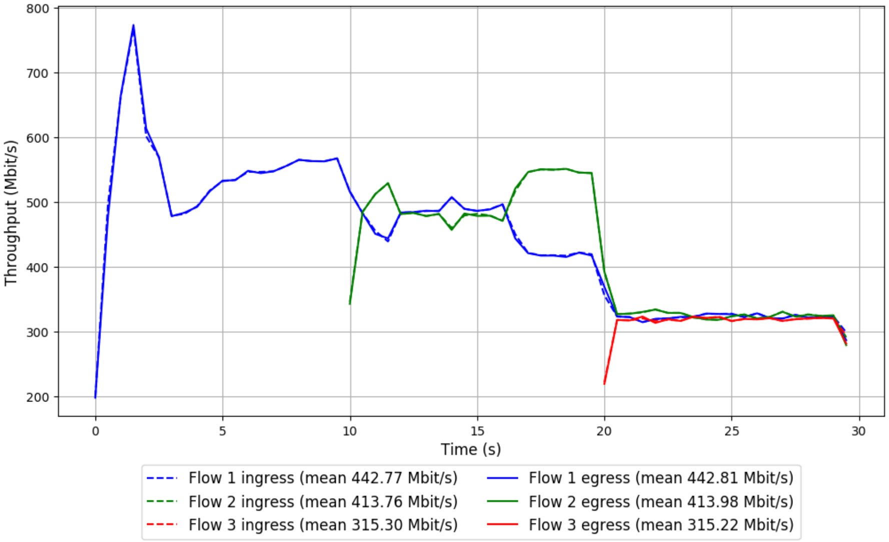


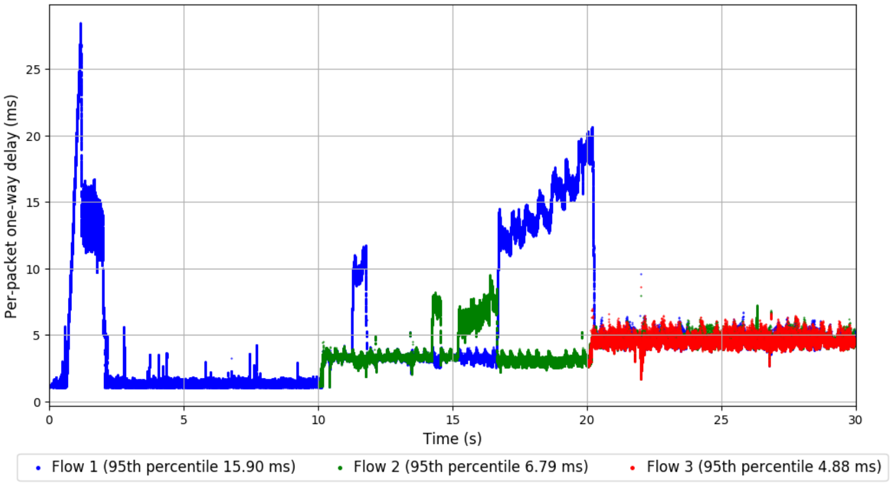
```
Run 8: Statistics of TCP Cubic

Start at: 2018-03-06 15:18:02
End at: 2018-03-06 15:18:32
Local clock offset: 0.831 ms
Remote clock offset: 2.222 ms

# Below is generated by plot.py at 2018-03-06 22:32:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 822.77 Mbit/s
95th percentile per-packet one-way delay: 13.820 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 442.81 Mbit/s
95th percentile per-packet one-way delay: 15.898 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 413.98 Mbit/s
95th percentile per-packet one-way delay: 6.791 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 315.22 Mbit/s
95th percentile per-packet one-way delay: 4.885 ms
Loss rate: 0.24%
```

## Run 8: Report of TCP Cubic — Data Link



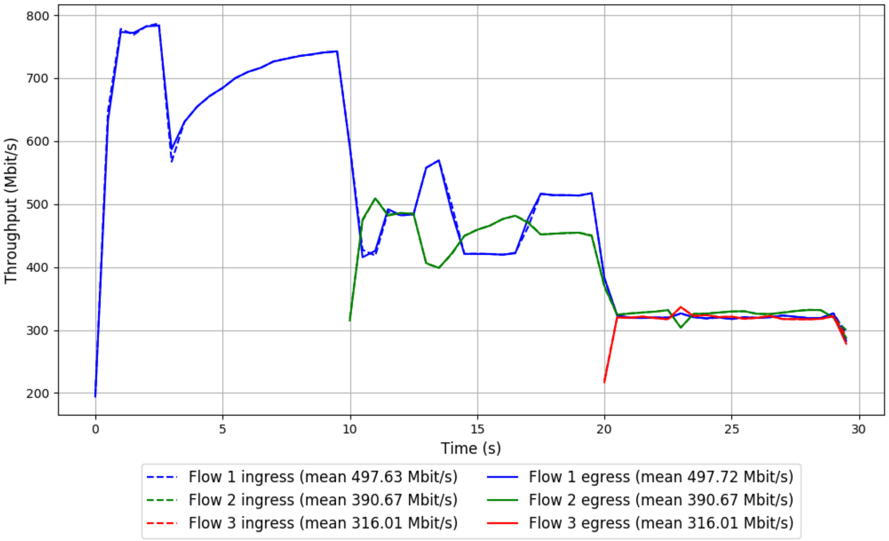


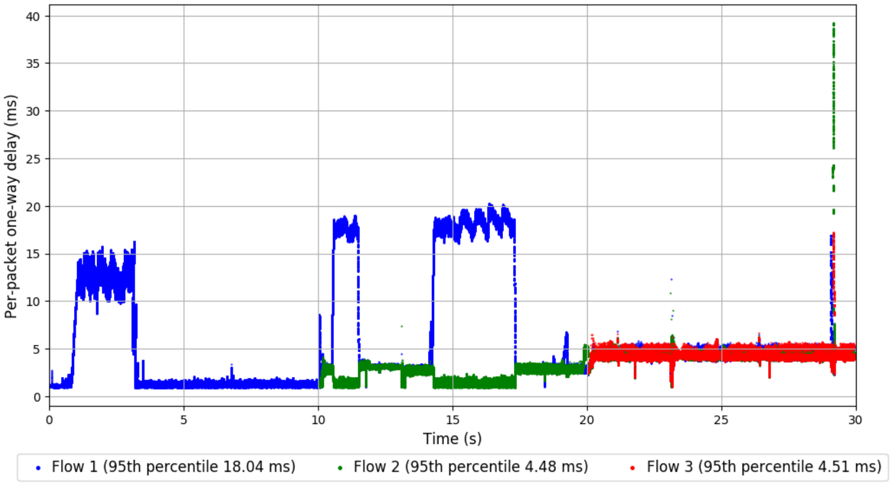
```
Run 9: Statistics of TCP Cubic

Start at: 2018-03-06 15:47:01
End at: 2018-03-06 15:47:31
Local clock offset: 0.592 ms
Remote clock offset: 2.301 ms

# Below is generated by plot.py at 2018-03-06 22:32:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 862.44 Mbit/s
95th percentile per-packet one-way delay: 17.428 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 497.72 Mbit/s
95th percentile per-packet one-way delay: 18.039 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 390.67 Mbit/s
95th percentile per-packet one-way delay: 4.481 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 316.01 Mbit/s
95th percentile per-packet one-way delay: 4.515 ms
Loss rate: 0.23%
```

## Run 9: Report of TCP Cubic — Data Link



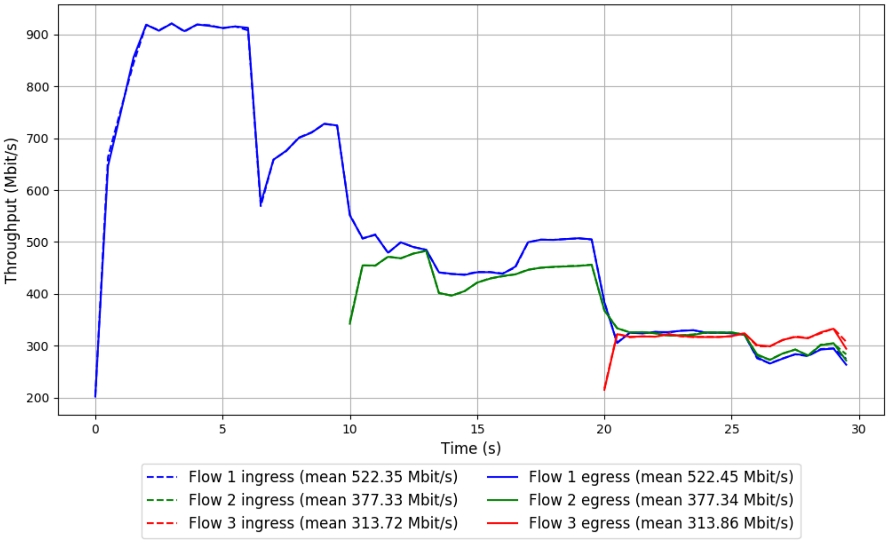


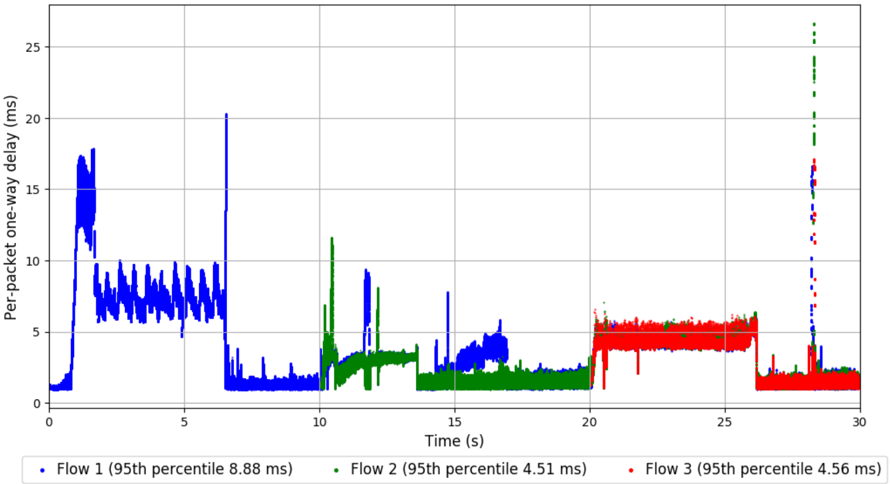
```
Run 10: Statistics of TCP Cubic

Start at: 2018-03-06 16:16:13
End at: 2018-03-06 16:16:43
Local clock offset: -1.683 ms
Remote clock offset: 1.726 ms

# Below is generated by plot.py at 2018-03-06 22:33:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 877.21 Mbit/s
95th percentile per-packet one-way delay: 8.173 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 522.45 Mbit/s
95th percentile per-packet one-way delay: 8.878 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 377.34 Mbit/s
95th percentile per-packet one-way delay: 4.514 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 313.86 Mbit/s
95th percentile per-packet one-way delay: 4.557 ms
Loss rate: 0.23%
```

## Run 10: Report of TCP Cubic — Data Link



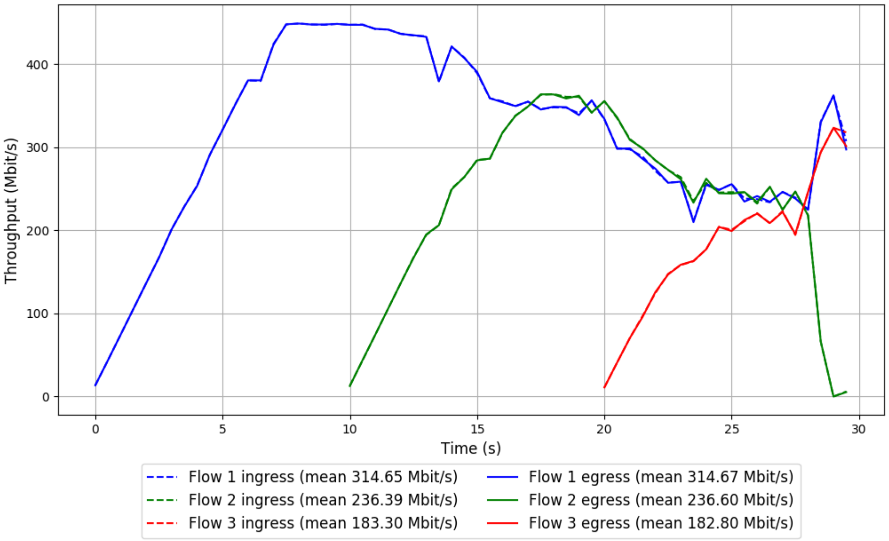


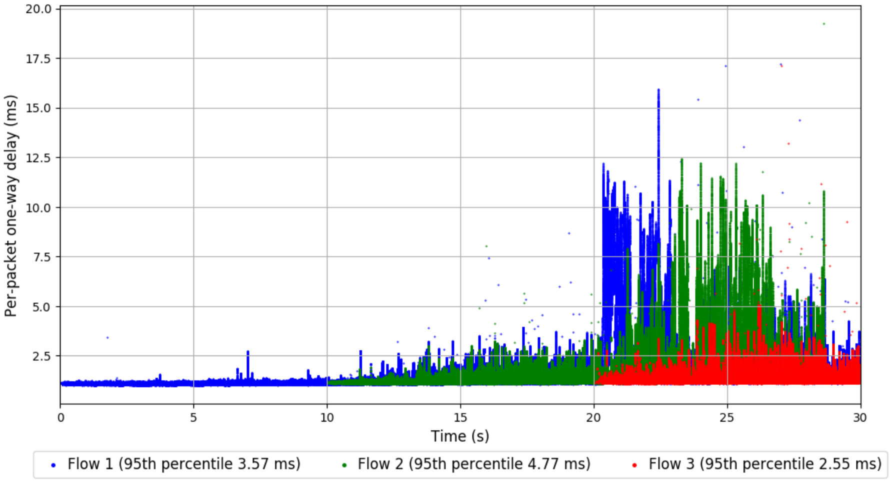
```
Run 1: Statistics of LEDBAT

Start at: 2018-03-06 12:11:04
End at: 2018-03-06 12:11:34
Local clock offset: -3.579 ms
Remote clock offset: 5.611 ms

# Below is generated by plot.py at 2018-03-06 22:33:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 532.36 Mbit/s
95th percentile per-packet one-way delay: 3.830 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 314.67 Mbit/s
95th percentile per-packet one-way delay: 3.570 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 236.60 Mbit/s
95th percentile per-packet one-way delay: 4.772 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 182.80 Mbit/s
95th percentile per-packet one-way delay: 2.550 ms
Loss rate: 0.46%
```

## Run 1: Report of LEDBAT — Data Link



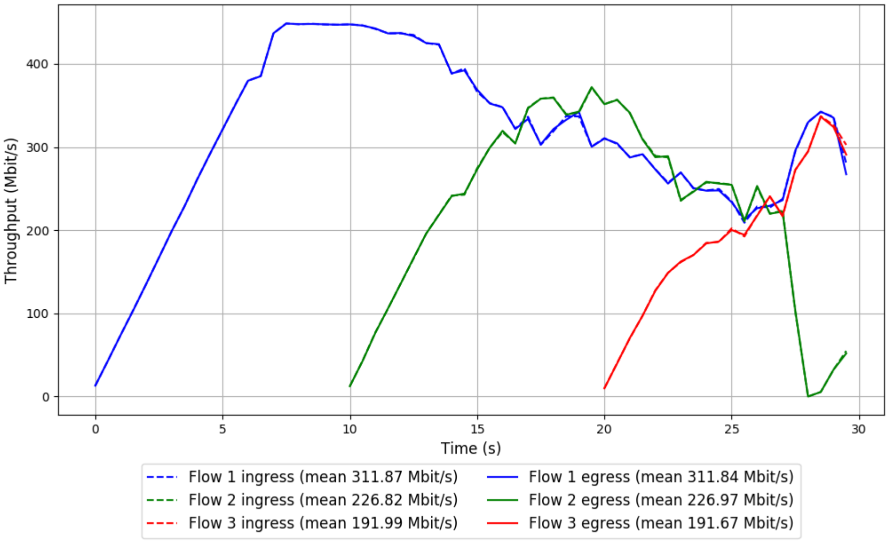


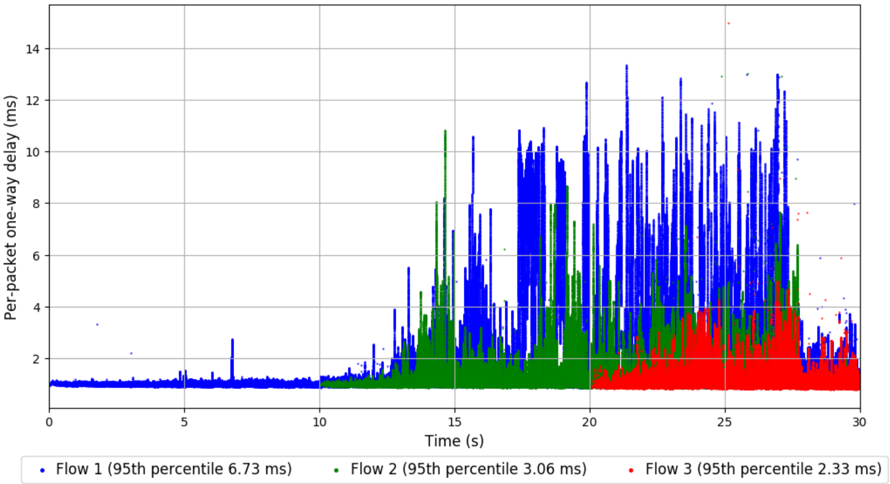
```
Run 2: Statistics of LEDBAT

Start at: 2018-03-06 12:40:40
End at: 2018-03-06 12:41:10
Local clock offset: -4.749 ms
Remote clock offset: 6.309 ms

# Below is generated by plot.py at 2018-03-06 22:33:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 525.98 Mbit/s
95th percentile per-packet one-way delay: 5.070 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 311.84 Mbit/s
95th percentile per-packet one-way delay: 6.726 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 226.97 Mbit/s
95th percentile per-packet one-way delay: 3.061 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 191.67 Mbit/s
95th percentile per-packet one-way delay: 2.328 ms
Loss rate: 0.39%
```

Run 2: Report of LEDBAT — Data Link



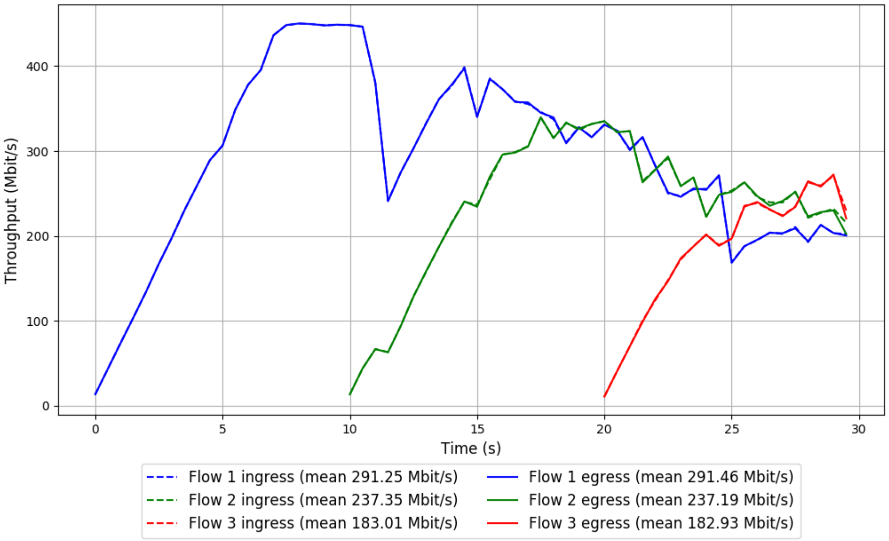


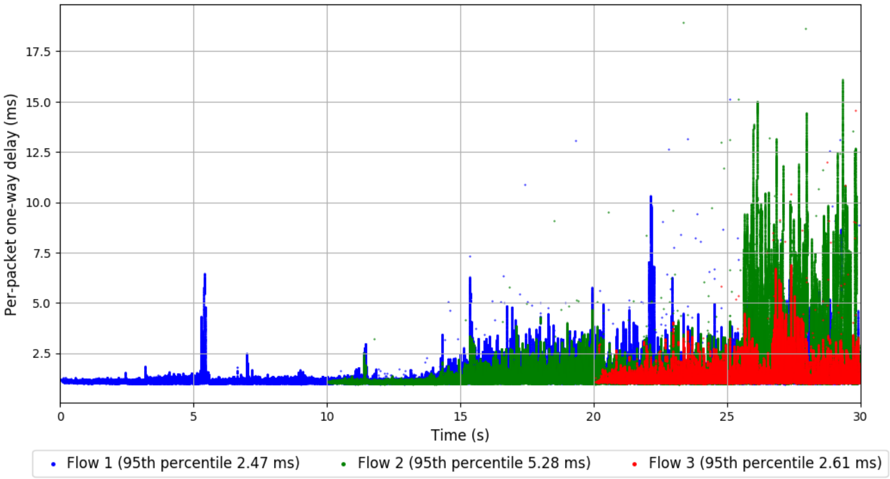
```
Run 3: Statistics of LEDBAT

Start at: 2018-03-06 13:10:01
End at: 2018-03-06 13:10:31
Local clock offset: -4.702 ms
Remote clock offset: 4.488 ms

# Below is generated by plot.py at 2018-03-06 22:33:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 509.64 Mbit/s
95th percentile per-packet one-way delay: 3.070 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 291.46 Mbit/s
95th percentile per-packet one-way delay: 2.472 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 237.19 Mbit/s
95th percentile per-packet one-way delay: 5.276 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 182.93 Mbit/s
95th percentile per-packet one-way delay: 2.608 ms
Loss rate: 0.26%
```

# Run 3: Report of LEDBAT — Data Link



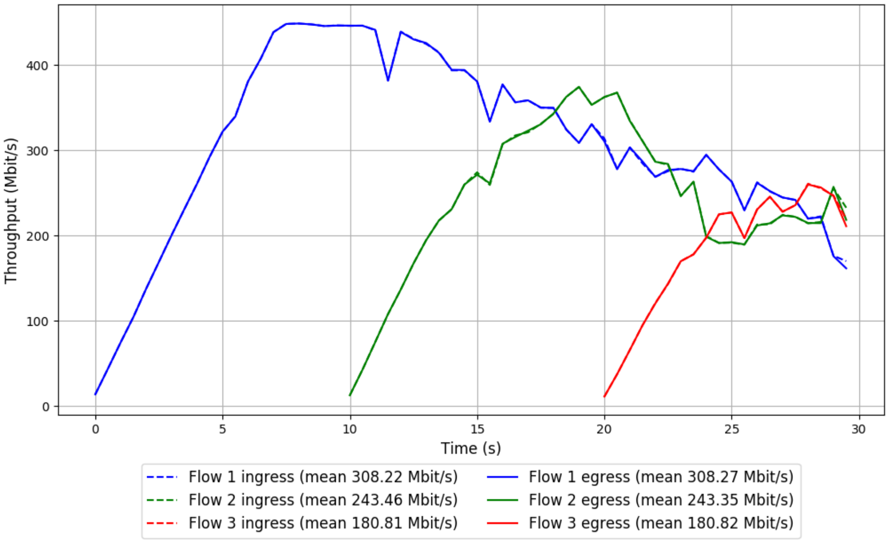


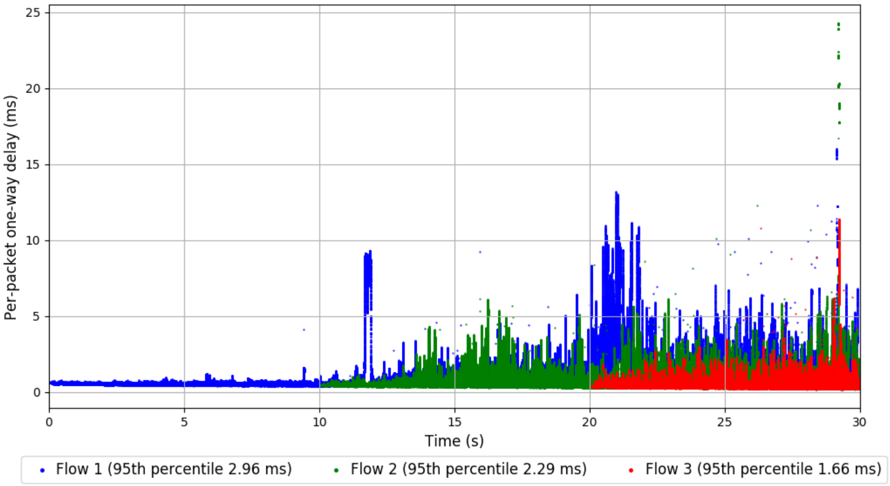
```
Run 4: Statistics of LEDBAT

Start at: 2018-03-06 13:39:10
End at: 2018-03-06 13:39:40
Local clock offset: -2.923 ms
Remote clock offset: -0.64 ms

# Below is generated by plot.py at 2018-03-06 22:33:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 529.85 Mbit/s
95th percentile per-packet one-way delay: 2.517 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 308.27 Mbit/s
95th percentile per-packet one-way delay: 2.962 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 243.35 Mbit/s
95th percentile per-packet one-way delay: 2.289 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 180.82 Mbit/s
95th percentile per-packet one-way delay: 1.662 ms
Loss rate: 0.25%
```

Run 4: Report of LEDBAT — Data Link



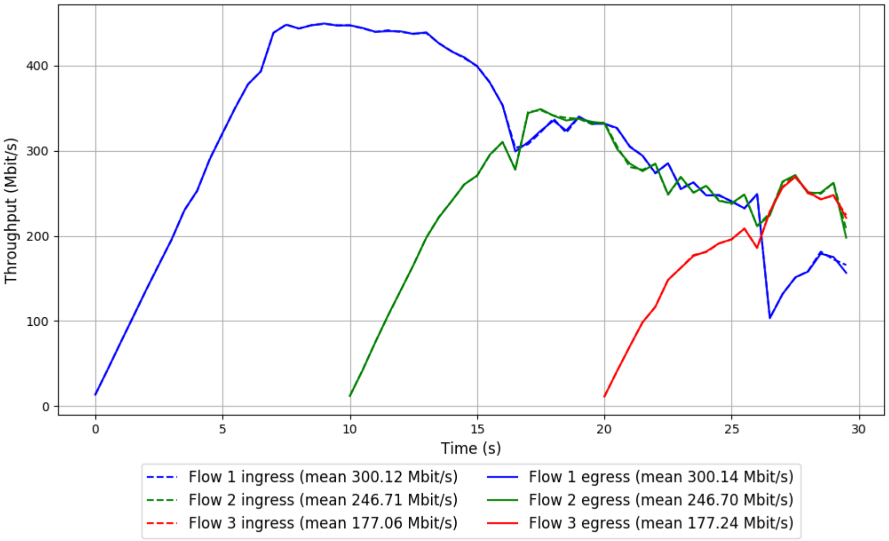


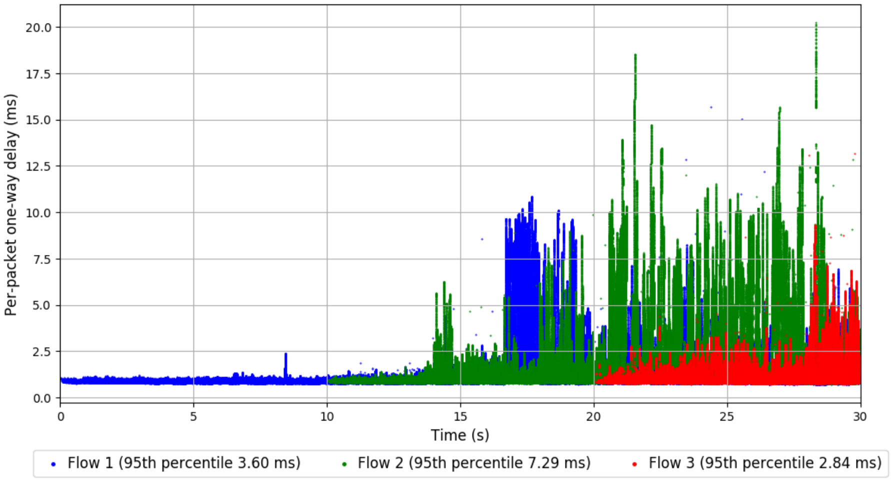
```
Run 5: Statistics of LEDBAT

Start at: 2018-03-06 14:08:49
End at: 2018-03-06 14:09:19
Local clock offset: 4.027 ms
Remote clock offset: 0.573 ms

# Below is generated by plot.py at 2018-03-06 22:36:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 522.77 Mbit/s
95th percentile per-packet one-way delay: 5.349 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 300.14 Mbit/s
95th percentile per-packet one-way delay: 3.601 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 246.70 Mbit/s
95th percentile per-packet one-way delay: 7.286 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 177.24 Mbit/s
95th percentile per-packet one-way delay: 2.838 ms
Loss rate: 0.10%
```

Run 5: Report of LEDBAT — Data Link



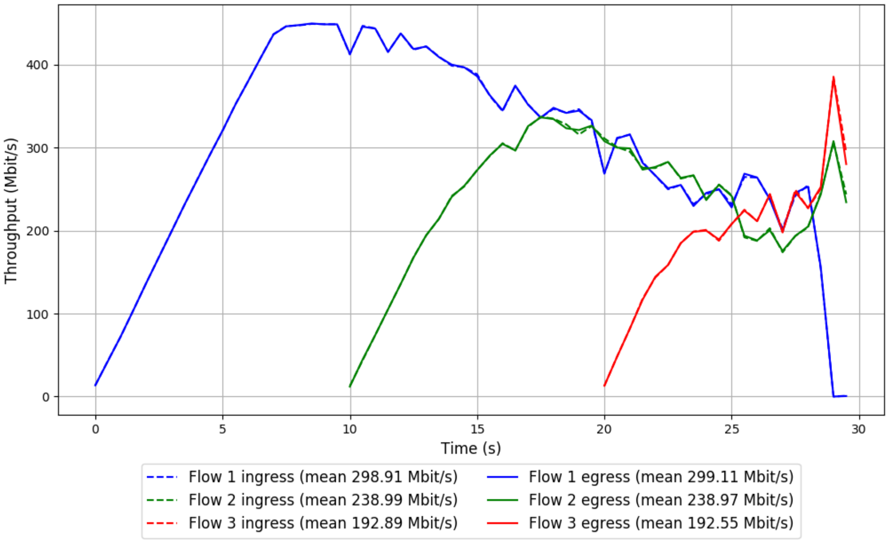


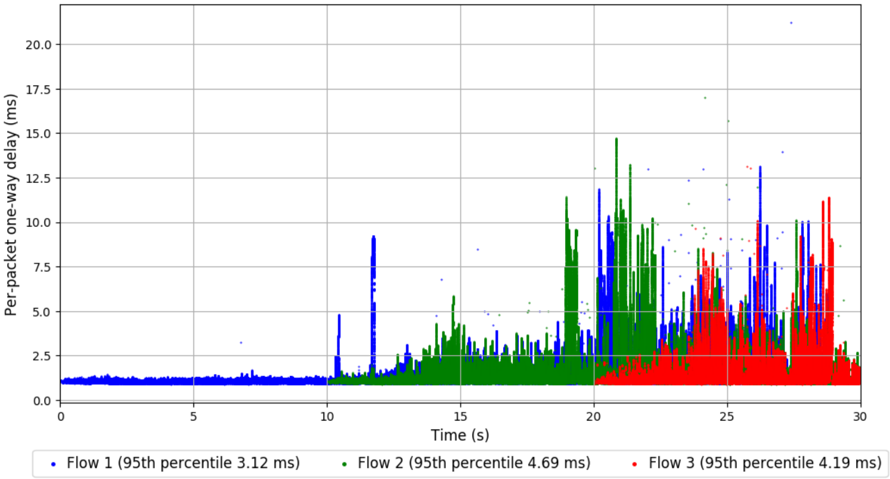
```
Run 6: Statistics of LEDBAT

Start at: 2018-03-06 14:38:15
End at: 2018-03-06 14:38:45
Local clock offset: 4.947 ms
Remote clock offset: 1.826 ms

# Below is generated by plot.py at 2018-03-06 22:36:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 521.64 Mbit/s
95th percentile per-packet one-way delay: 3.659 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 299.11 Mbit/s
95th percentile per-packet one-way delay: 3.120 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 238.97 Mbit/s
95th percentile per-packet one-way delay: 4.693 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 192.55 Mbit/s
95th percentile per-packet one-way delay: 4.193 ms
Loss rate: 0.41%
```

Run 6: Report of LEDBAT — Data Link



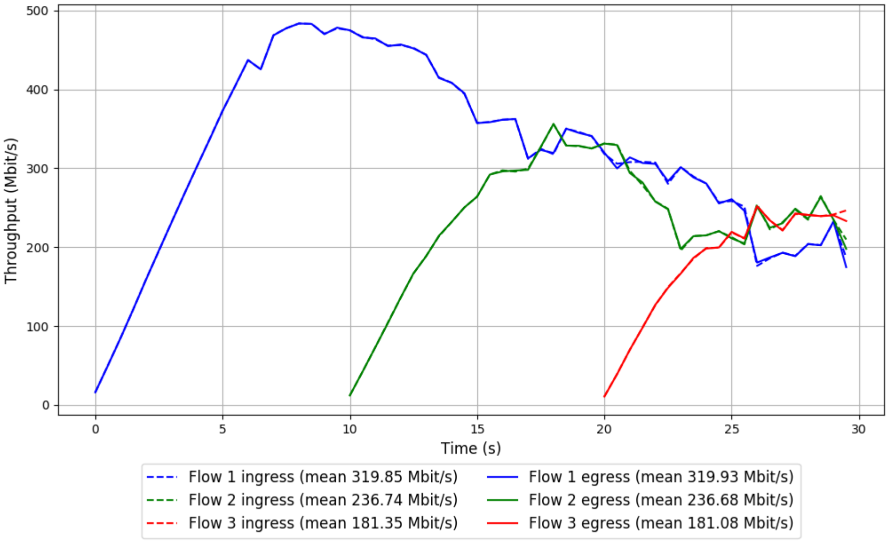


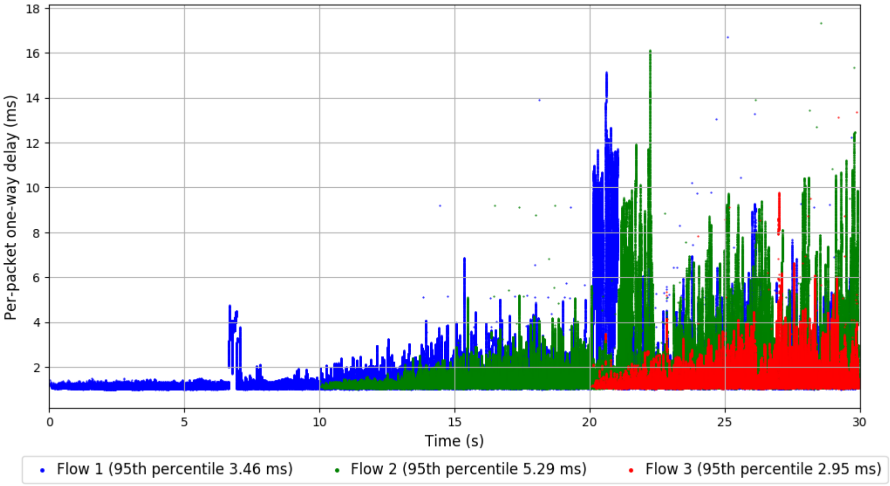
```
Run 7: Statistics of LEDBAT

Start at: 2018-03-06 15:12:47
End at: 2018-03-06 15:13:17
Local clock offset: 0.862 ms
Remote clock offset: 2.189 ms

# Below is generated by plot.py at 2018-03-06 22:36:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 536.95 Mbit/s
95th percentile per-packet one-way delay: 3.914 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 319.93 Mbit/s
95th percentile per-packet one-way delay: 3.464 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 236.68 Mbit/s
95th percentile per-packet one-way delay: 5.287 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 181.08 Mbit/s
95th percentile per-packet one-way delay: 2.950 ms
Loss rate: 0.40%
```

# Run 7: Report of LEDBAT — Data Link



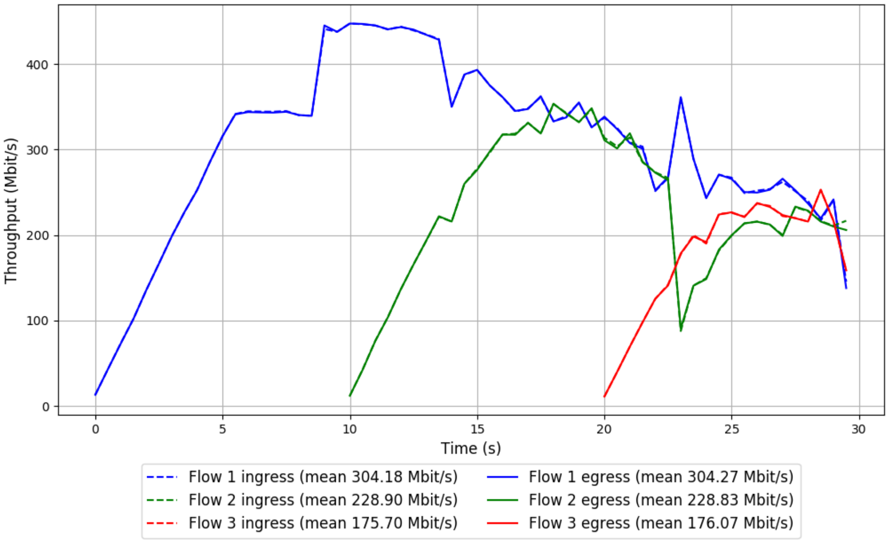


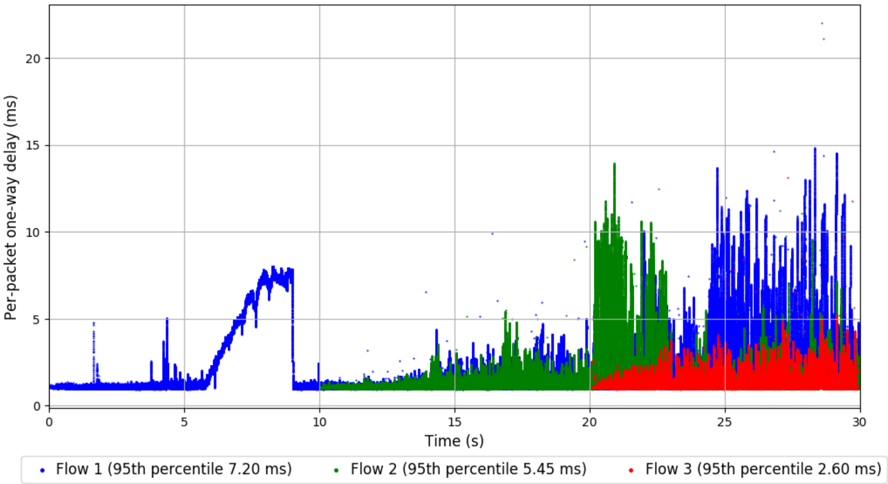
```
Run 8: Statistics of LEDBAT

Start at: 2018-03-06 15:41:50
End at: 2018-03-06 15:42:20
Local clock offset: 0.682 ms
Remote clock offset: 2.344 ms

# Below is generated by plot.py at 2018-03-06 22:36:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 514.59 Mbit/s
95th percentile per-packet one-way delay: 6.672 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 304.27 Mbit/s
95th percentile per-packet one-way delay: 7.195 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 228.83 Mbit/s
95th percentile per-packet one-way delay: 5.451 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 176.07 Mbit/s
95th percentile per-packet one-way delay: 2.599 ms
Loss rate: 0.00%
```

Run 8: Report of LEDBAT — Data Link



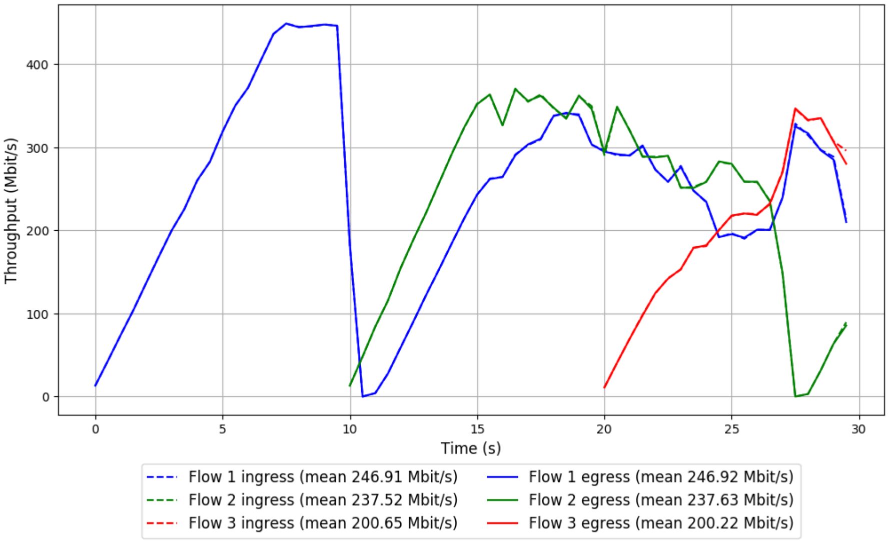


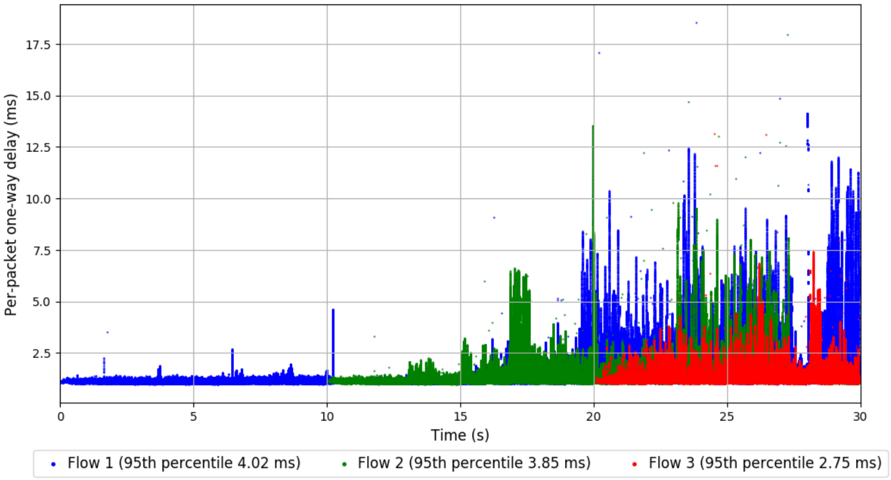
```
Run 9: Statistics of LEDBAT

Start at: 2018-03-06 16:11:03
End at: 2018-03-06 16:11:33
Local clock offset: -1.346 ms
Remote clock offset: 1.916 ms

# Below is generated by plot.py at 2018-03-06 22:38:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 471.10 Mbit/s
95th percentile per-packet one-way delay: 3.743 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 246.92 Mbit/s
95th percentile per-packet one-way delay: 4.019 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 237.63 Mbit/s
95th percentile per-packet one-way delay: 3.851 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 200.22 Mbit/s
95th percentile per-packet one-way delay: 2.748 ms
Loss rate: 0.41%
```

## Run 9: Report of LEDBAT — Data Link



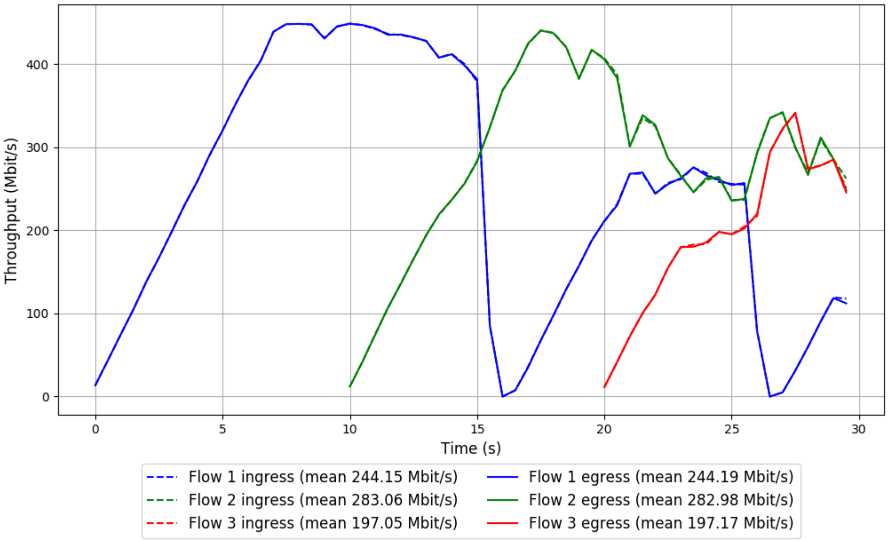


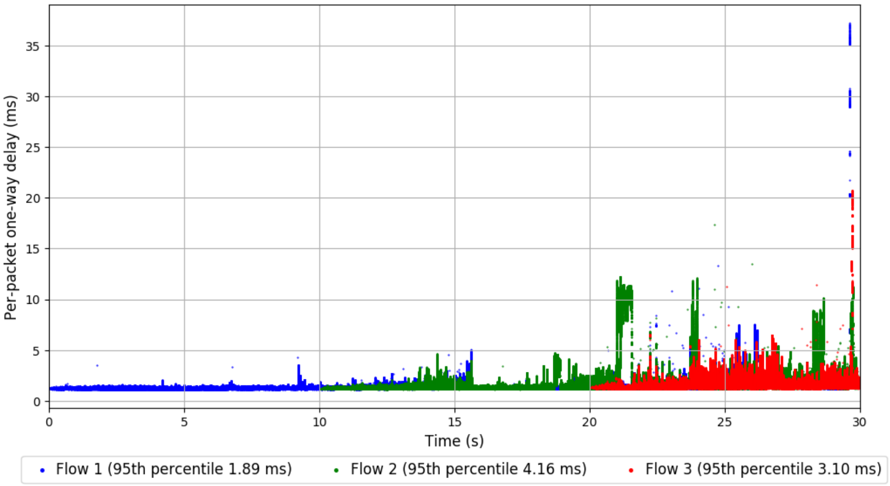
```
Run 10: Statistics of LEDBAT

Start at: 2018-03-06 16:40:04
End at: 2018-03-06 16:40:34
Local clock offset: -5.643 ms
Remote clock offset: 1.774 ms

# Below is generated by plot.py at 2018-03-06 22:39:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 497.55 Mbit/s
95th percentile per-packet one-way delay: 2.839 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 244.19 Mbit/s
95th percentile per-packet one-way delay: 1.887 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 282.98 Mbit/s
95th percentile per-packet one-way delay: 4.164 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 197.17 Mbit/s
95th percentile per-packet one-way delay: 3.101 ms
Loss rate: 0.14%
```

## Run 10: Report of LEDBAT — Data Link



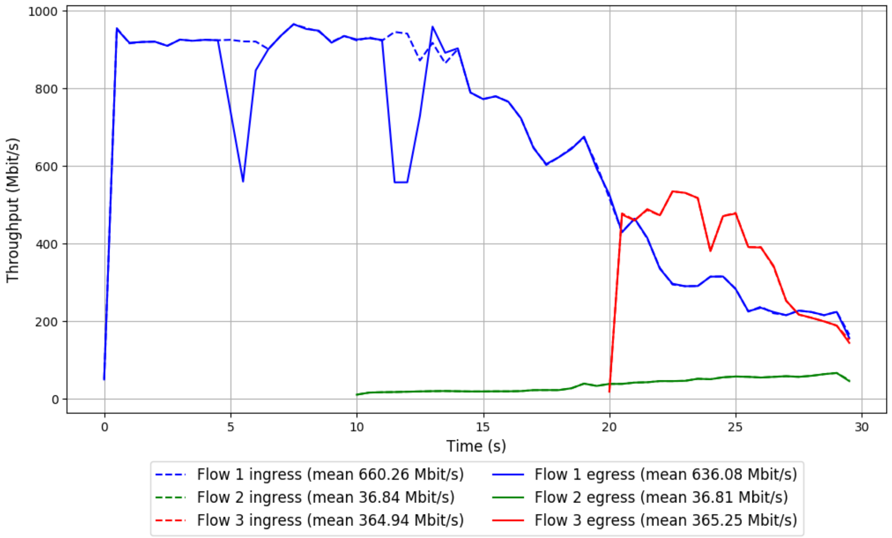


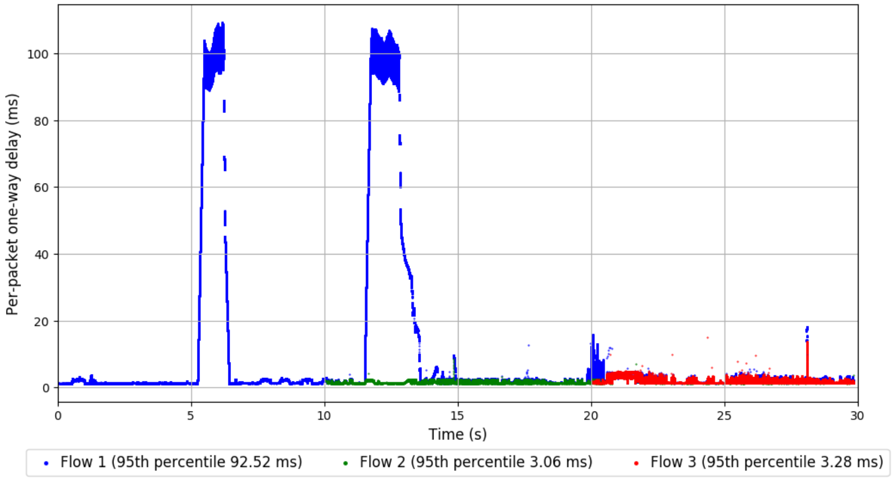
```
Run 1: Statistics of PCC

Start at: 2018-03-06 12:09:18
End at: 2018-03-06 12:09:48
Local clock offset: -3.177 ms
Remote clock offset: 5.455 ms

# Below is generated by plot.py at 2018-03-06 22:43:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 780.40 Mbit/s
95th percentile per-packet one-way delay: 63.987 ms
Loss rate: 3.08%
-- Flow 1:
Average throughput: 636.08 Mbit/s
95th percentile per-packet one-way delay: 92.524 ms
Loss rate: 3.73%
-- Flow 2:
Average throughput: 36.81 Mbit/s
95th percentile per-packet one-way delay: 3.061 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 365.25 Mbit/s
95th percentile per-packet one-way delay: 3.276 ms
Loss rate: 0.11%
```

Run 1: Report of PCC — Data Link



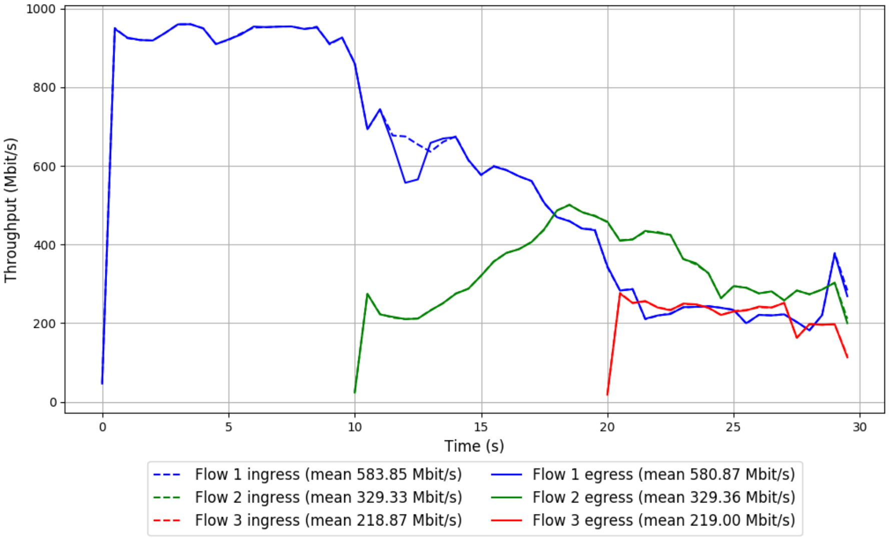


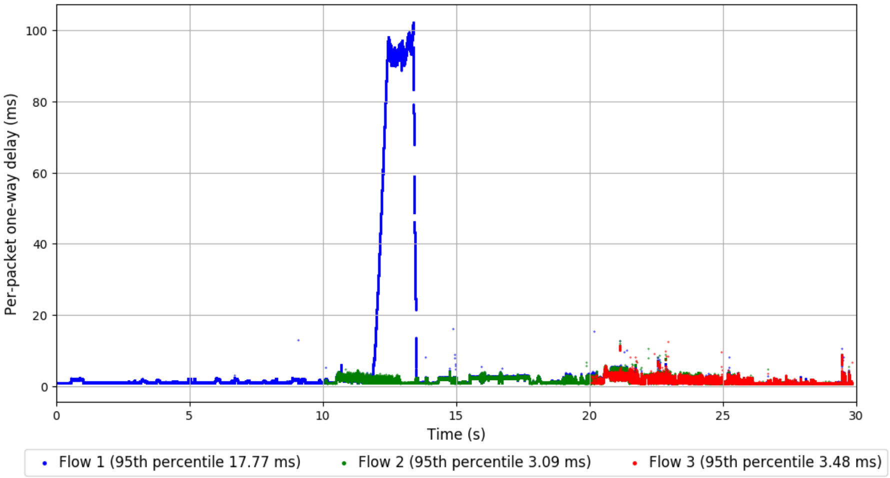
```
Run 2: Statistics of PCC

Start at: 2018-03-06 12:38:52
End at: 2018-03-06 12:39:22
Local clock offset: -4.774 ms
Remote clock offset: 6.751 ms

# Below is generated by plot.py at 2018-03-06 22:45:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 871.33 Mbit/s
95th percentile per-packet one-way delay: 3.557 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 580.87 Mbit/s
95th percentile per-packet one-way delay: 17.772 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 329.36 Mbit/s
95th percentile per-packet one-way delay: 3.088 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 219.00 Mbit/s
95th percentile per-packet one-way delay: 3.483 ms
Loss rate: 0.08%
```

Run 2: Report of PCC — Data Link



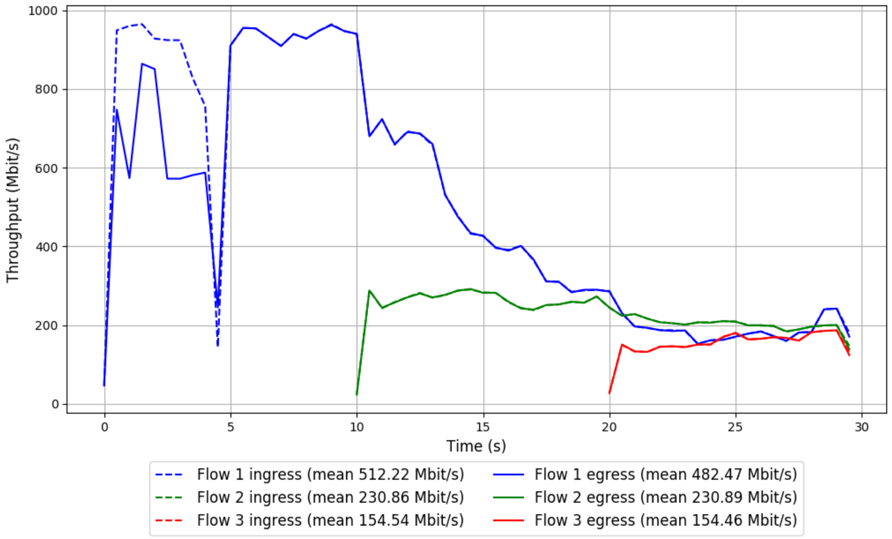


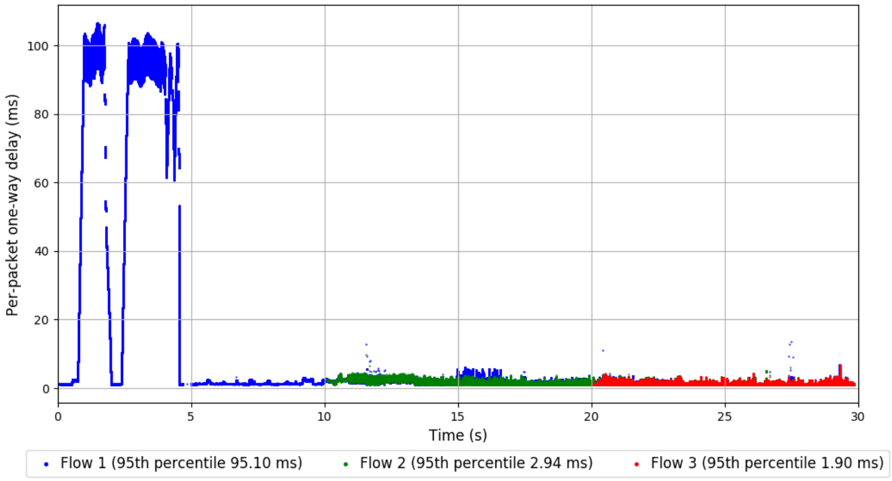
```
Run 3: Statistics of PCC

Start at: 2018-03-06 13:08:19
End at: 2018-03-06 13:08:49
Local clock offset: -4.711 ms
Remote clock offset: 4.494 ms

# Below is generated by plot.py at 2018-03-06 22:45:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 686.49 Mbit/s
95th percentile per-packet one-way delay: 92.438 ms
Loss rate: 4.24%
-- Flow 1:
Average throughput: 482.47 Mbit/s
95th percentile per-packet one-way delay: 95.098 ms
Loss rate: 5.87%
-- Flow 2:
Average throughput: 230.89 Mbit/s
95th percentile per-packet one-way delay: 2.939 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 154.46 Mbit/s
95th percentile per-packet one-way delay: 1.900 ms
Loss rate: 0.25%
```

## Run 3: Report of PCC — Data Link



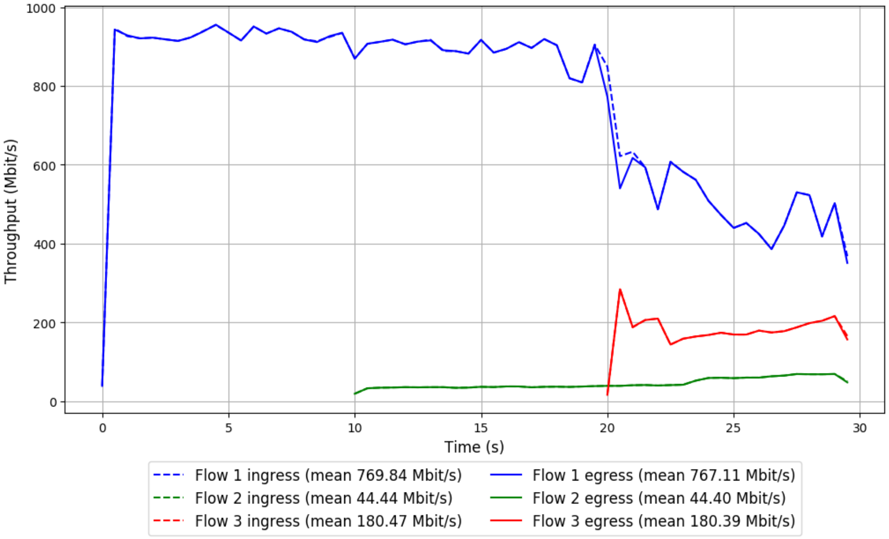


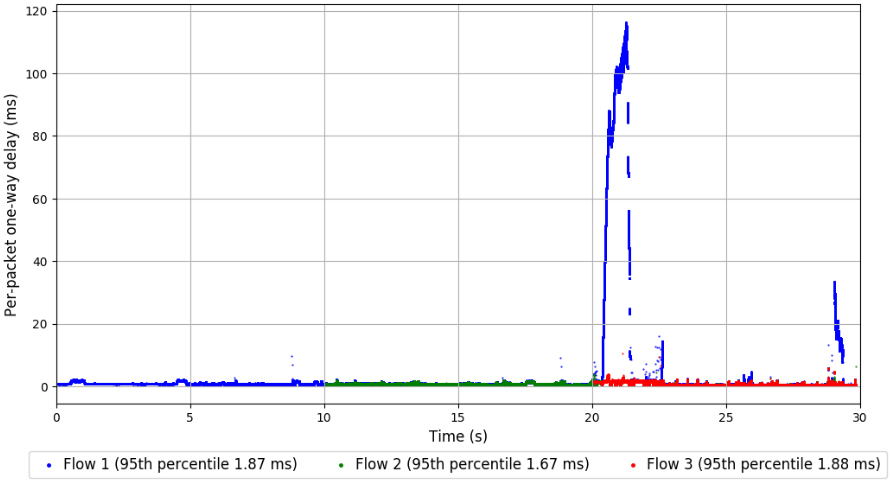
```
Run 4: Statistics of PCC

Start at: 2018-03-06 13:37:27
End at: 2018-03-06 13:37:57
Local clock offset: -3.746 ms
Remote clock offset: -0.59 ms

# Below is generated by plot.py at 2018-03-06 22:48:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 855.71 Mbit/s
95th percentile per-packet one-way delay: 1.862 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 767.11 Mbit/s
95th percentile per-packet one-way delay: 1.866 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 44.40 Mbit/s
95th percentile per-packet one-way delay: 1.671 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 180.39 Mbit/s
95th percentile per-packet one-way delay: 1.877 ms
Loss rate: 0.25%
```

Run 4: Report of PCC — Data Link



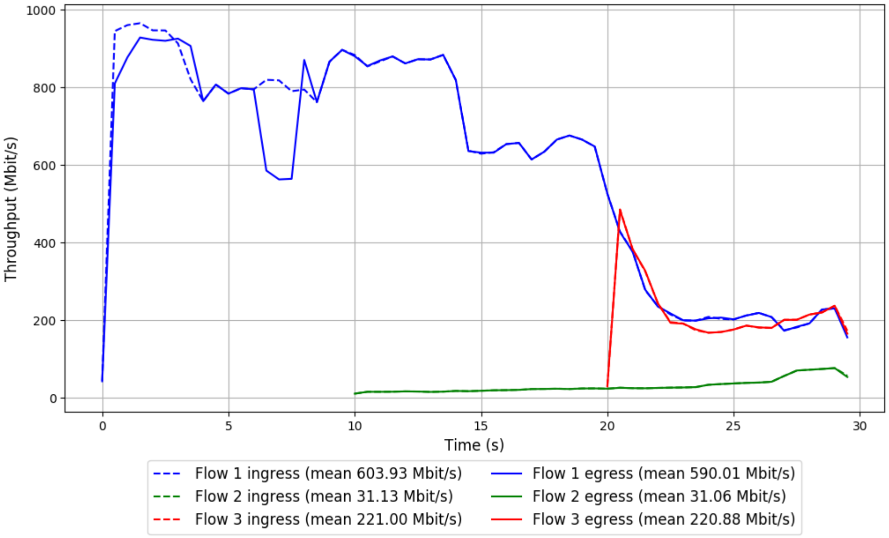


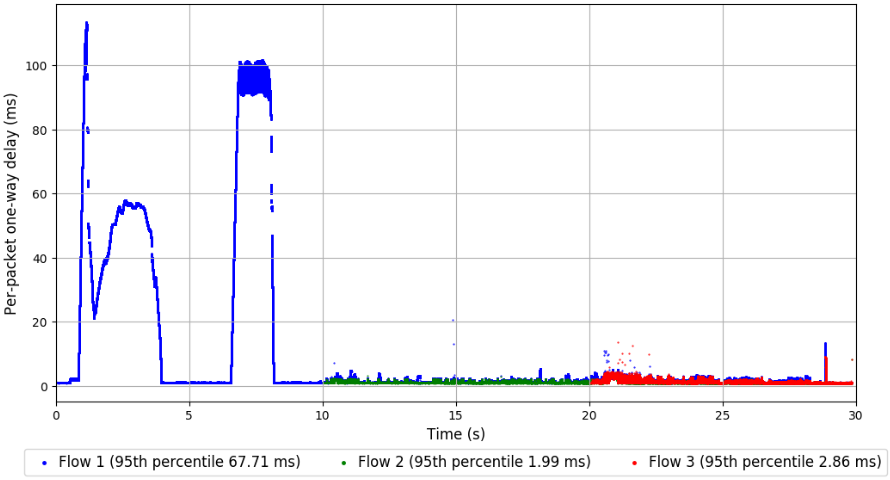
```
Run 5: Statistics of PCC

Start at: 2018-03-06 14:07:10
End at: 2018-03-06 14:07:40
Local clock offset: 3.911 ms
Remote clock offset: 0.515 ms

# Below is generated by plot.py at 2018-03-06 22:48:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 683.21 Mbit/s
95th percentile per-packet one-way delay: 57.057 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 590.01 Mbit/s
95th percentile per-packet one-way delay: 67.711 ms
Loss rate: 2.37%
-- Flow 2:
Average throughput: 31.06 Mbit/s
95th percentile per-packet one-way delay: 1.994 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 220.88 Mbit/s
95th percentile per-packet one-way delay: 2.860 ms
Loss rate: 0.19%
```

Run 5: Report of PCC — Data Link



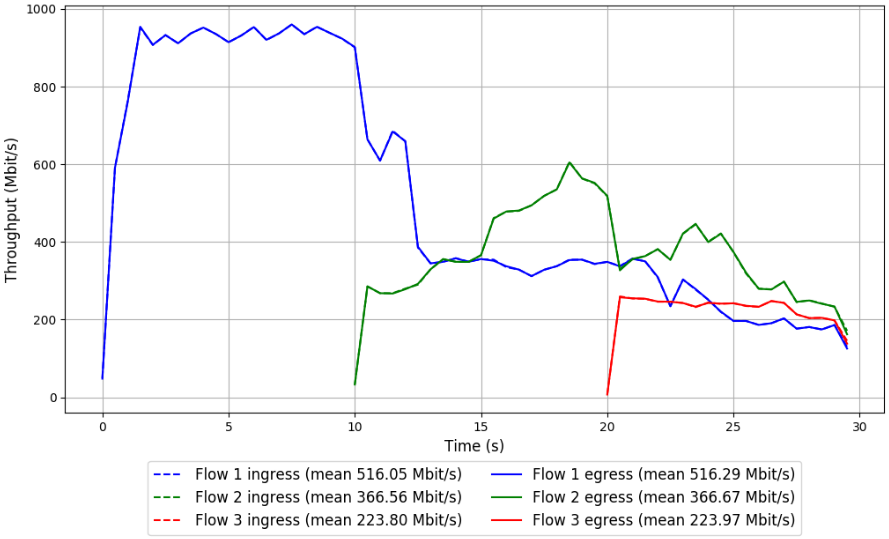


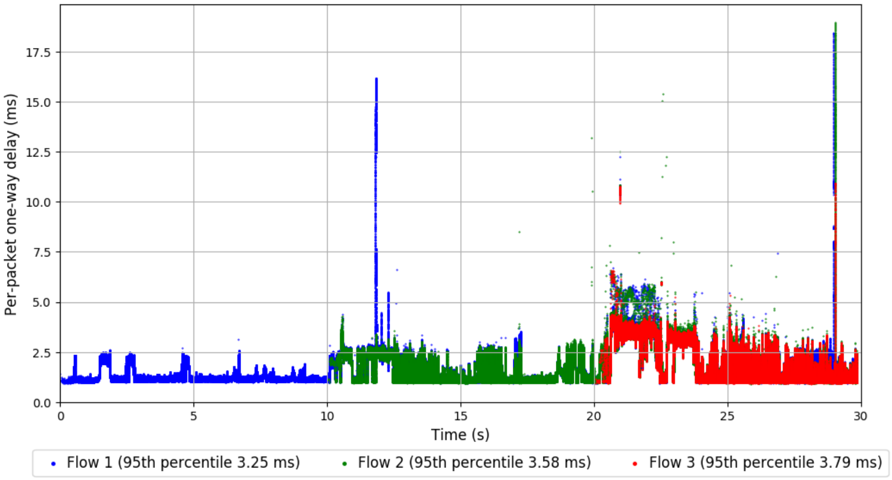
```
Run 6: Statistics of PCC

Start at: 2018-03-06 14:36:32
End at: 2018-03-06 14:37:02
Local clock offset: 4.819 ms
Remote clock offset: 1.723 ms

# Below is generated by plot.py at 2018-03-06 22:48:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 833.29 Mbit/s
95th percentile per-packet one-way delay: 3.510 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 516.29 Mbit/s
95th percentile per-packet one-way delay: 3.254 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 366.67 Mbit/s
95th percentile per-packet one-way delay: 3.577 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 223.97 Mbit/s
95th percentile per-packet one-way delay: 3.788 ms
Loss rate: 0.18%
```

Run 6: Report of PCC — Data Link



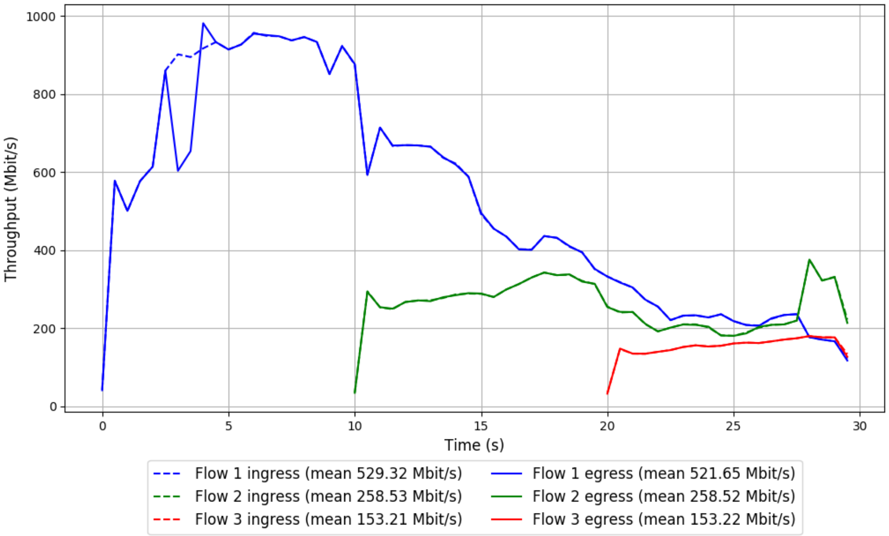


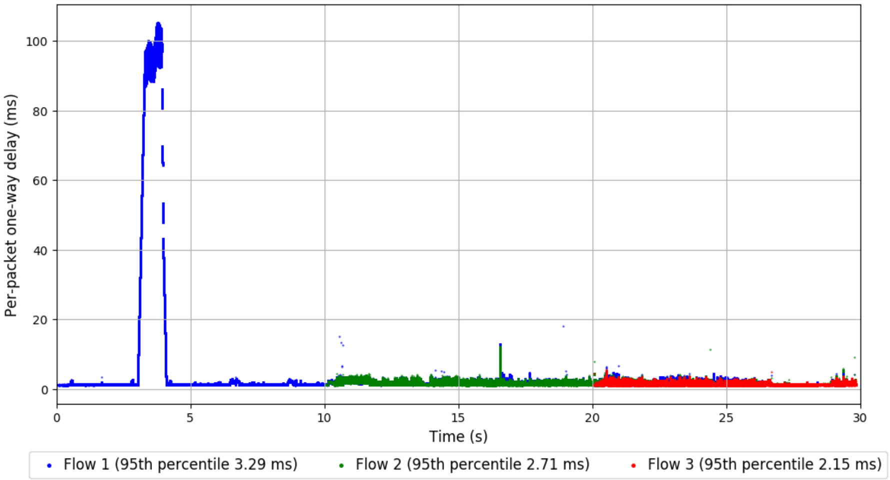
```
Run 7: Statistics of PCC

Start at: 2018-03-06 15:11:05
End at: 2018-03-06 15:11:35
Local clock offset: 0.887 ms
Remote clock offset: 2.175 ms

# Below is generated by plot.py at 2018-03-06 22:49:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 743.80 Mbit/s
95th percentile per-packet one-way delay: 2.952 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 521.65 Mbit/s
95th percentile per-packet one-way delay: 3.287 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 258.52 Mbit/s
95th percentile per-packet one-way delay: 2.707 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 153.22 Mbit/s
95th percentile per-packet one-way delay: 2.146 ms
Loss rate: 0.25%
```

Run 7: Report of PCC — Data Link



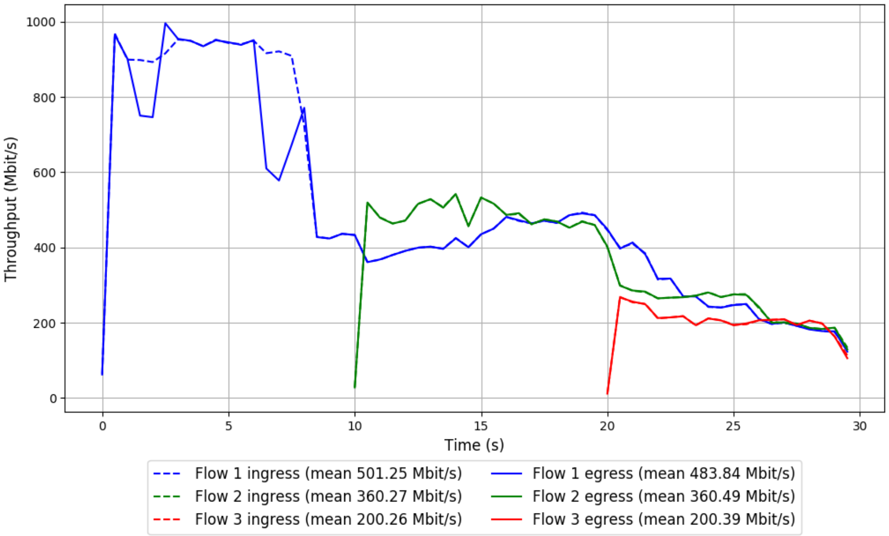


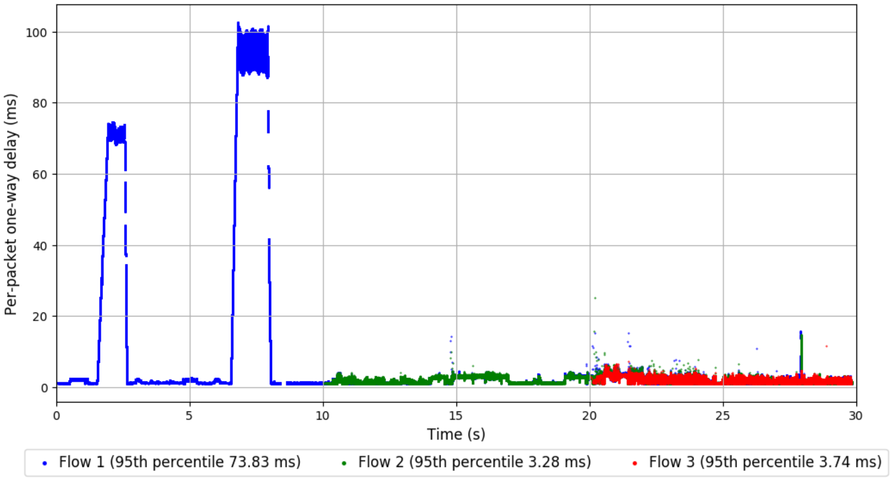
```
Run 8: Statistics of PCC

Start at: 2018-03-06 15:40:09
End at: 2018-03-06 15:40:39
Local clock offset: 0.7 ms
Remote clock offset: 2.277 ms

# Below is generated by plot.py at 2018-03-06 22:51:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 788.87 Mbit/s
95th percentile per-packet one-way delay: 69.343 ms
Loss rate: 2.23%
-- Flow 1:
Average throughput: 483.84 Mbit/s
95th percentile per-packet one-way delay: 73.826 ms
Loss rate: 3.54%
-- Flow 2:
Average throughput: 360.49 Mbit/s
95th percentile per-packet one-way delay: 3.278 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 200.39 Mbit/s
95th percentile per-packet one-way delay: 3.736 ms
Loss rate: 0.21%
```

Run 8: Report of PCC — Data Link



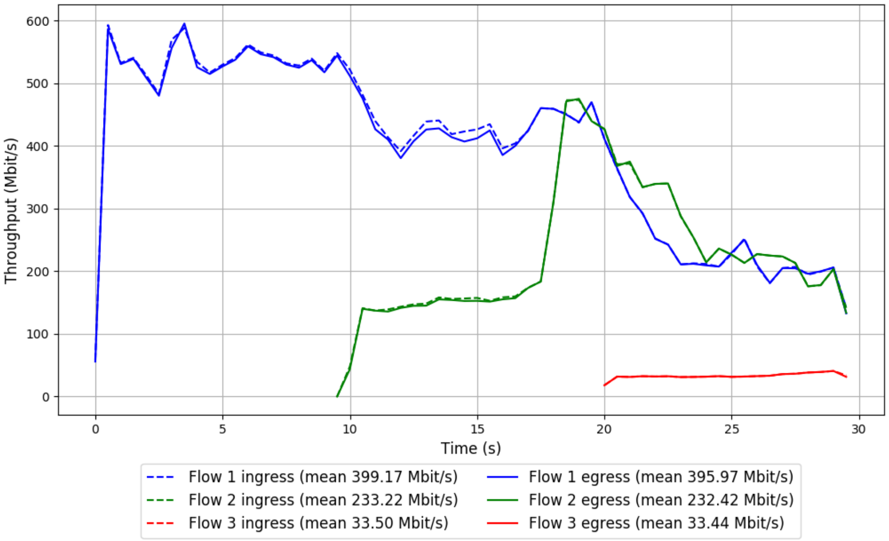


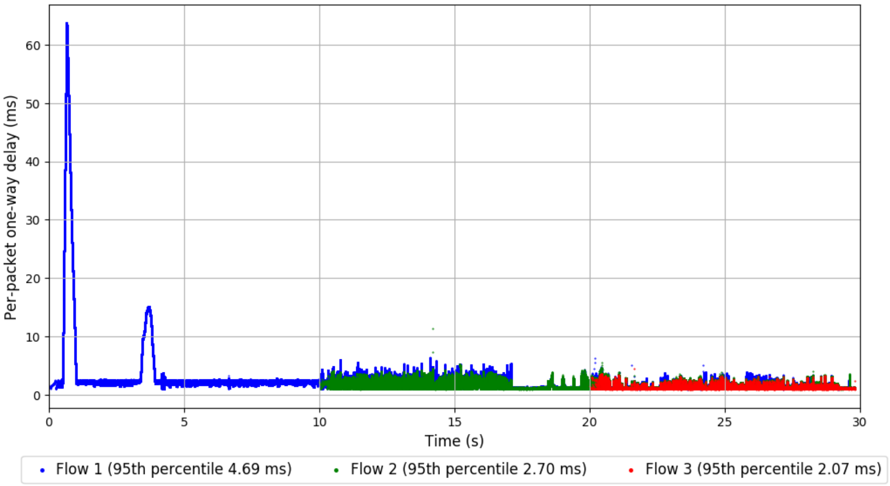
```
Run 9: Statistics of PCC

Start at: 2018-03-06 16:09:29
End at: 2018-03-06 16:09:59
Local clock offset: -1.358 ms
Remote clock offset: 1.925 ms

# Below is generated by plot.py at 2018-03-06 22:52:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 561.49 Mbit/s
95th percentile per-packet one-way delay: 3.494 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 395.97 Mbit/s
95th percentile per-packet one-way delay: 4.687 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 232.42 Mbit/s
95th percentile per-packet one-way delay: 2.697 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 33.44 Mbit/s
95th percentile per-packet one-way delay: 2.073 ms
Loss rate: 0.37%
```

Run 9: Report of PCC — Data Link



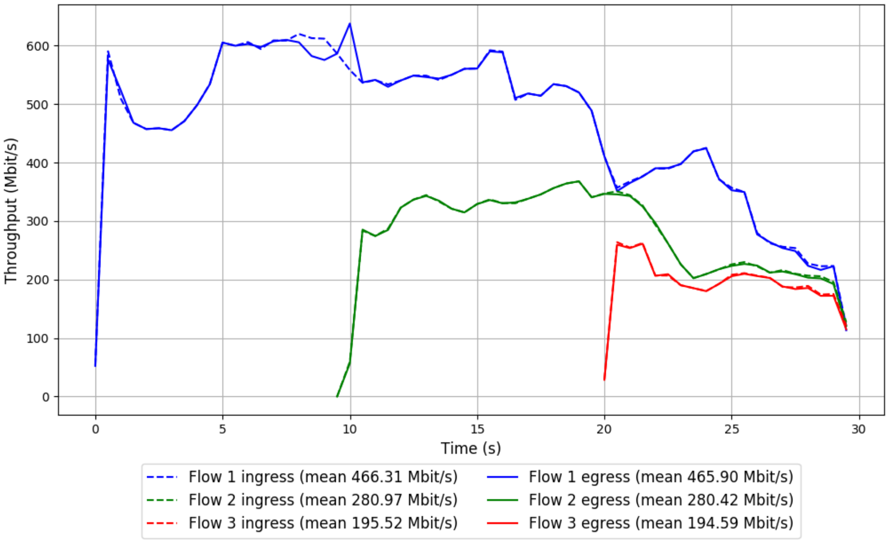


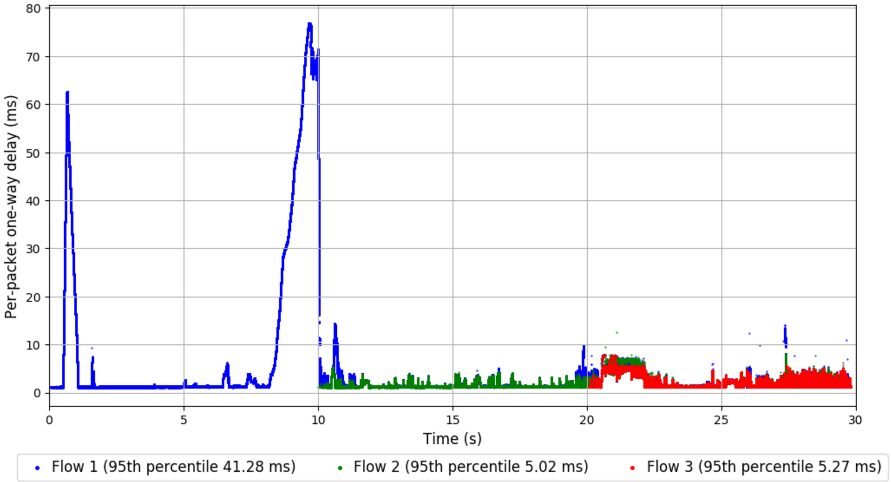
```
Run 10: Statistics of PCC

Start at: 2018-03-06 16:38:23
End at: 2018-03-06 16:38:53
Local clock offset: -5.353 ms
Remote clock offset: 1.73 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 716.25 Mbit/s
95th percentile per-packet one-way delay: 22.466 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 465.90 Mbit/s
95th percentile per-packet one-way delay: 41.277 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 280.42 Mbit/s
95th percentile per-packet one-way delay: 5.021 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 194.59 Mbit/s
95th percentile per-packet one-way delay: 5.270 ms
Loss rate: 0.69%
```

Run 10: Report of PCC — Data Link



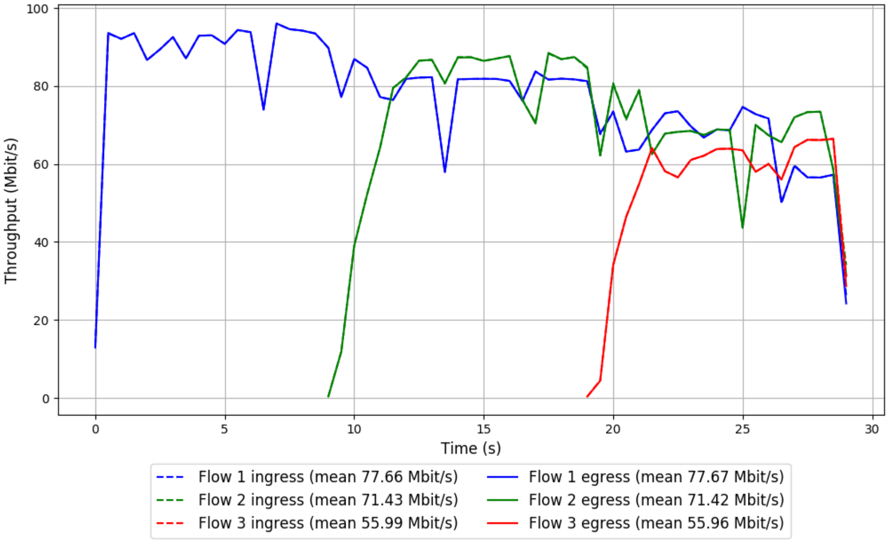


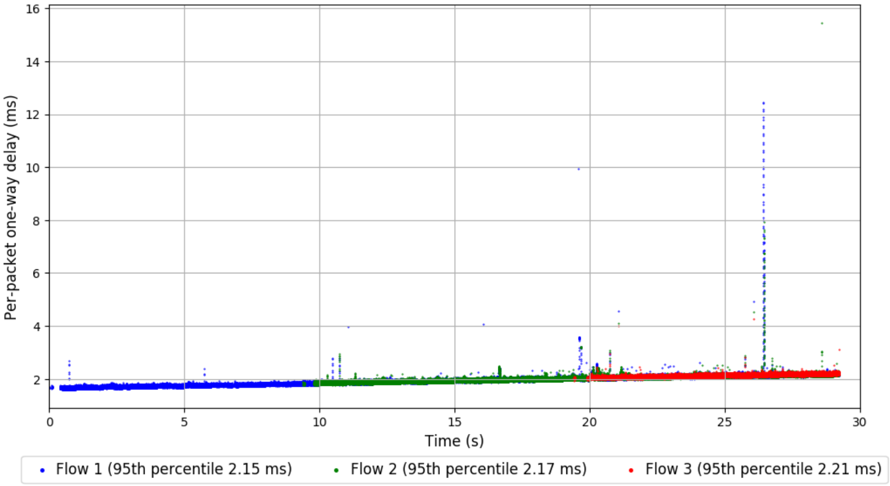
```
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-06 11:54:50
End at: 2018-03-06 11:55:20
Local clock offset: 4.516 ms
Remote clock offset: 4.683 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 145.00 Mbit/s
95th percentile per-packet one-way delay: 2.177 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 77.67 Mbit/s
95th percentile per-packet one-way delay: 2.149 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 71.42 Mbit/s
95th percentile per-packet one-way delay: 2.174 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 55.96 Mbit/s
95th percentile per-packet one-way delay: 2.214 ms
Loss rate: 0.24%
```

## Run 1: Report of QUIC Cubic — Data Link



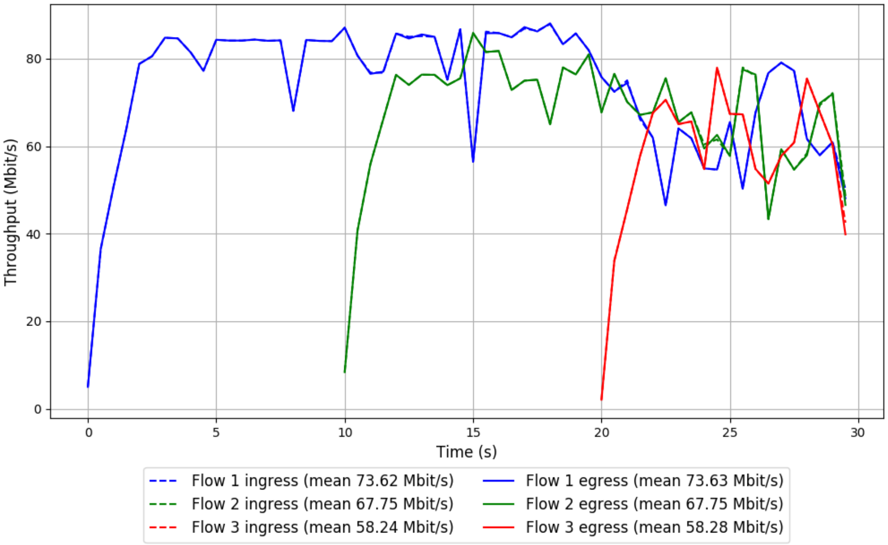


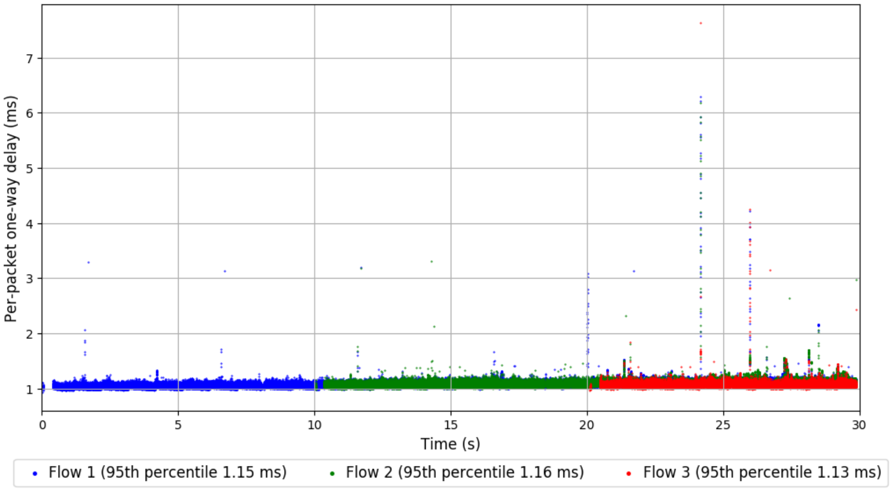
```
Run 2: Statistics of QUIC Cubic

Start at: 2018-03-06 12:24:33
End at: 2018-03-06 12:25:03
Local clock offset: -4.883 ms
Remote clock offset: 6.35 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 137.82 Mbit/s
95th percentile per-packet one-way delay: 1.151 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 73.63 Mbit/s
95th percentile per-packet one-way delay: 1.147 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 67.75 Mbit/s
95th percentile per-packet one-way delay: 1.161 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 58.28 Mbit/s
95th percentile per-packet one-way delay: 1.134 ms
Loss rate: 0.24%
```

## Run 2: Report of QUIC Cubic — Data Link



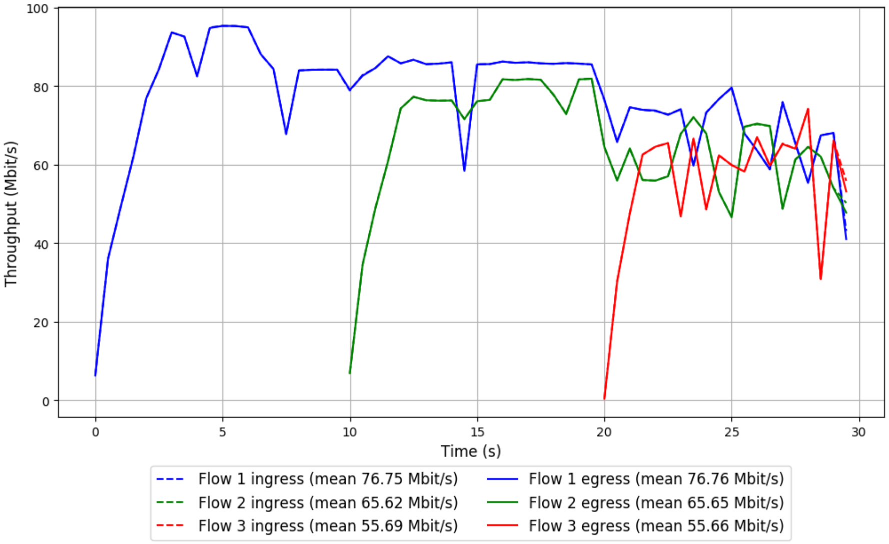


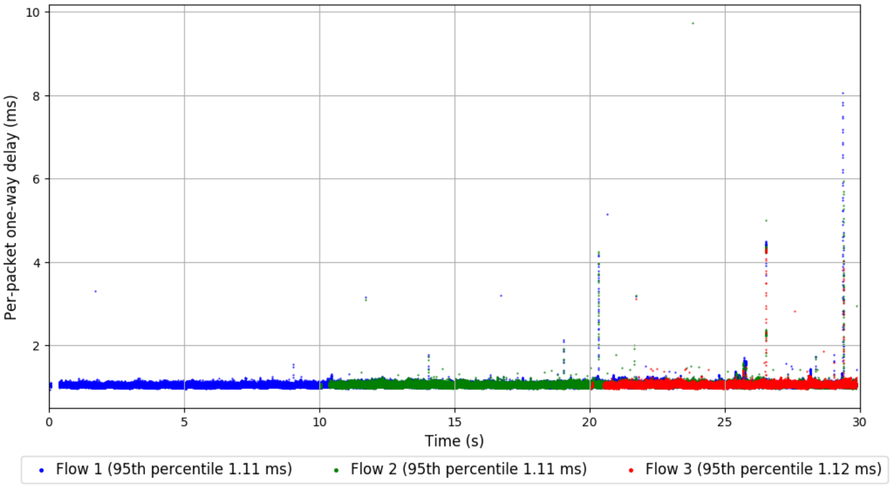
```
Run 3: Statistics of QUIC Cubic

Start at: 2018-03-06 12:54:16
End at: 2018-03-06 12:54:46
Local clock offset: -4.825 ms
Remote clock offset: 4.766 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.70 Mbit/s
95th percentile per-packet one-way delay: 1.110 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 76.76 Mbit/s
95th percentile per-packet one-way delay: 1.110 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 65.65 Mbit/s
95th percentile per-packet one-way delay: 1.109 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 55.66 Mbit/s
95th percentile per-packet one-way delay: 1.117 ms
Loss rate: 0.26%
```

## Run 3: Report of QUIC Cubic — Data Link



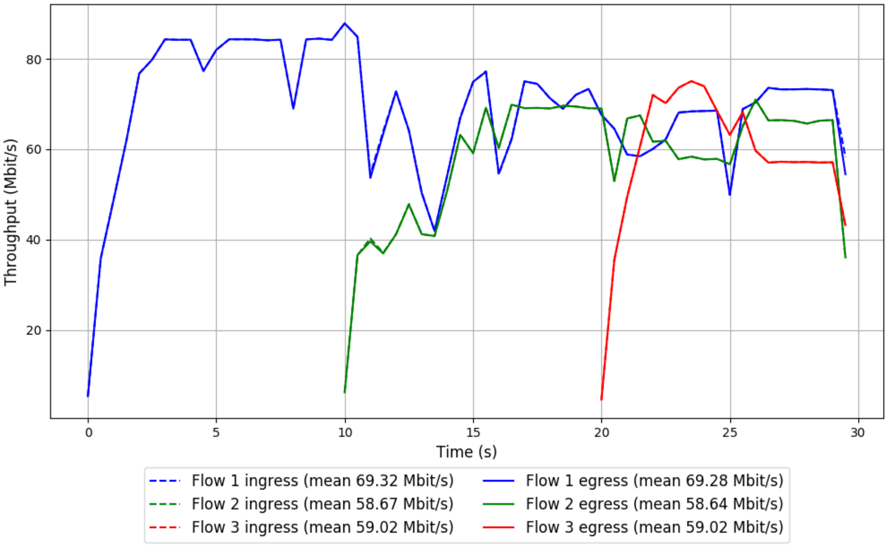


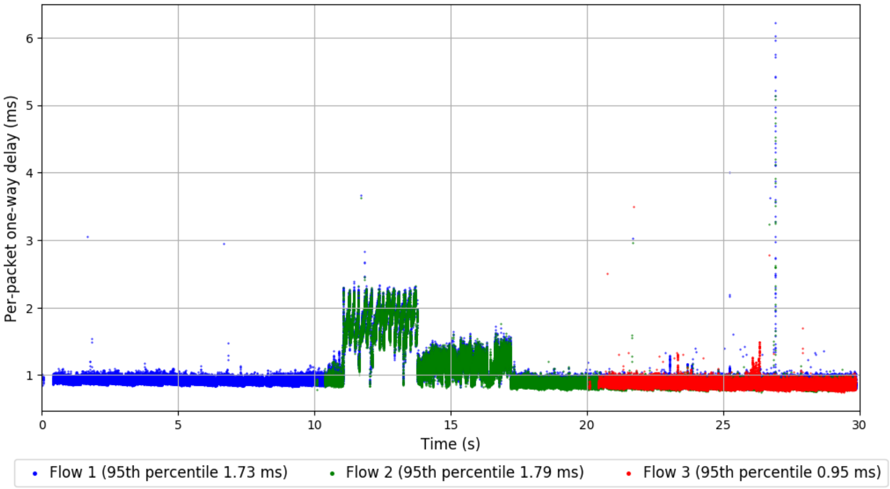
```
Run 4: Statistics of QUIC Cubic

Start at: 2018-03-06 13:23:31
End at: 2018-03-06 13:24:01
Local clock offset: -4.686 ms
Remote clock offset: 1.113 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 127.50 Mbit/s
95th percentile per-packet one-way delay: 1.674 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 69.28 Mbit/s
95th percentile per-packet one-way delay: 1.726 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 58.64 Mbit/s
95th percentile per-packet one-way delay: 1.794 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 59.02 Mbit/s
95th percentile per-packet one-way delay: 0.950 ms
Loss rate: 0.00%
```

Run 4: Report of QUIC Cubic — Data Link



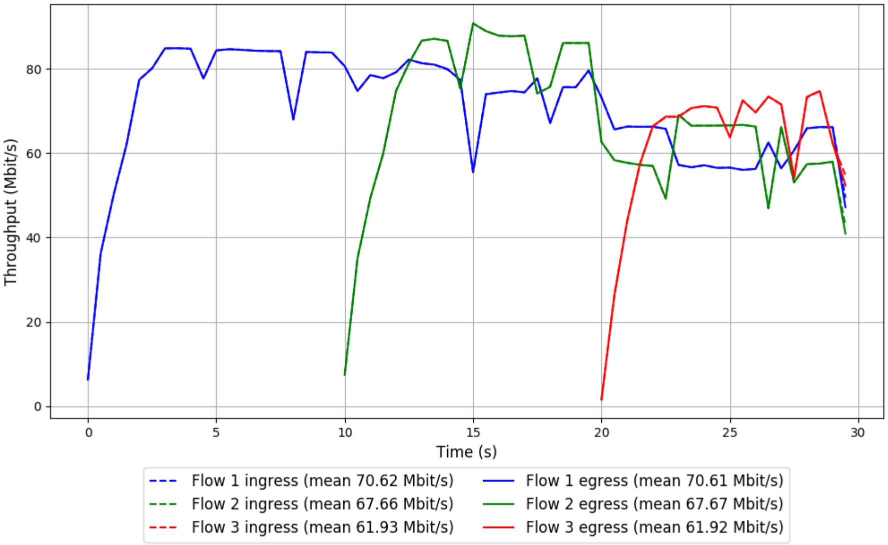


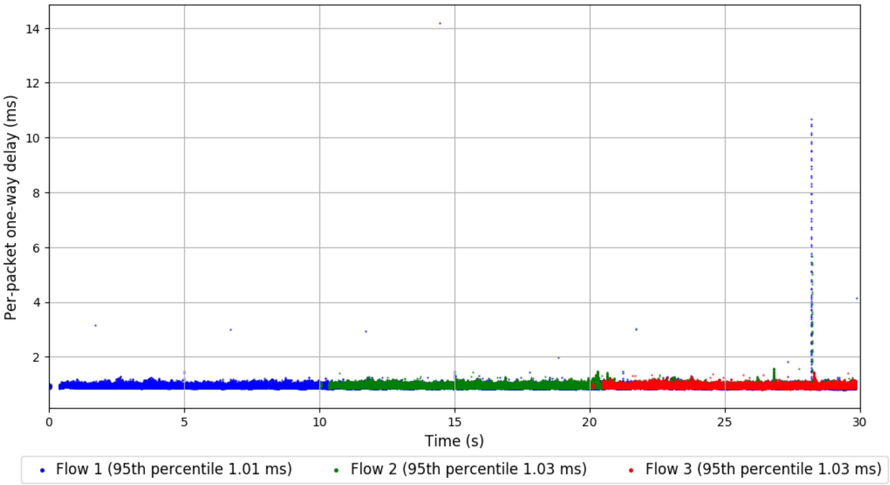
```
Run 5: Statistics of QUIC Cubic

Start at: 2018-03-06 13:53:05
End at: 2018-03-06 13:53:35
Local clock offset: 1.784 ms
Remote clock offset: 0.016 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.90 Mbit/s
95th percentile per-packet one-way delay: 1.021 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 70.61 Mbit/s
95th percentile per-packet one-way delay: 1.010 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 67.67 Mbit/s
95th percentile per-packet one-way delay: 1.030 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 61.92 Mbit/s
95th percentile per-packet one-way delay: 1.027 ms
Loss rate: 0.20%
```

## Run 5: Report of QUIC Cubic — Data Link



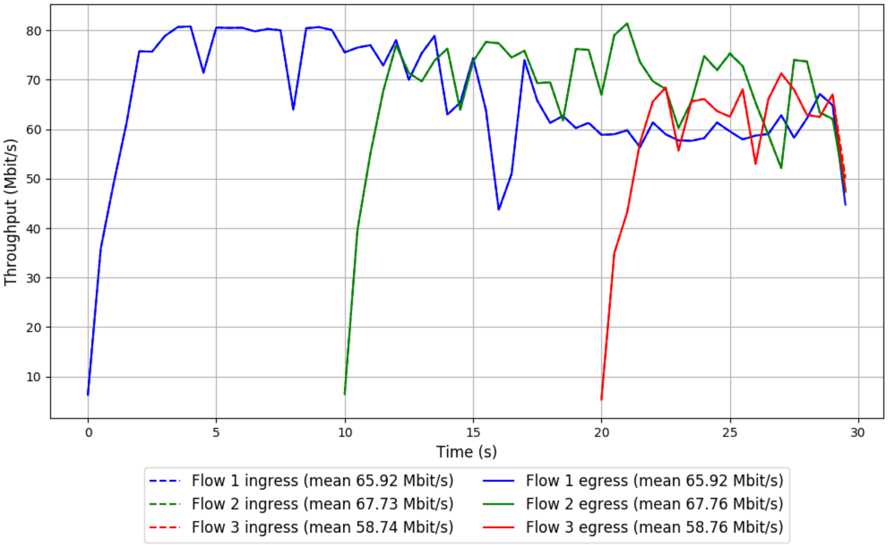


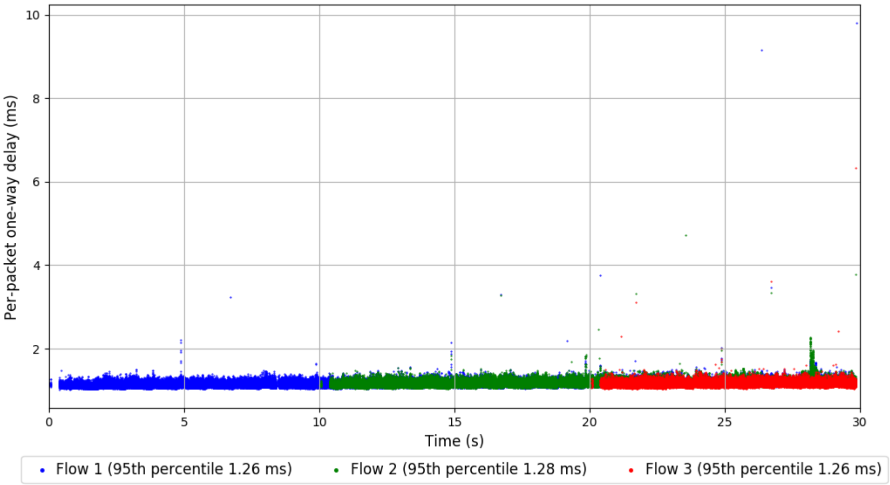
```
Run 6: Statistics of QUIC Cubic

Start at: 2018-03-06 14:22:32
End at: 2018-03-06 14:23:02
Local clock offset: 3.958 ms
Remote clock offset: 0.699 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 130.29 Mbit/s
95th percentile per-packet one-way delay: 1.266 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 65.92 Mbit/s
95th percentile per-packet one-way delay: 1.258 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 67.76 Mbit/s
95th percentile per-packet one-way delay: 1.279 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 58.76 Mbit/s
95th percentile per-packet one-way delay: 1.256 ms
Loss rate: 0.23%
```

Run 6: Report of QUIC Cubic — Data Link



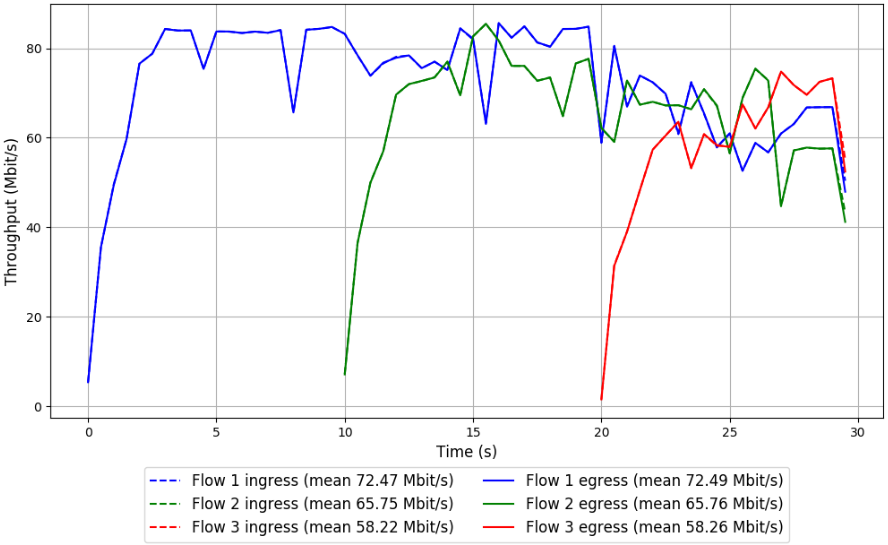


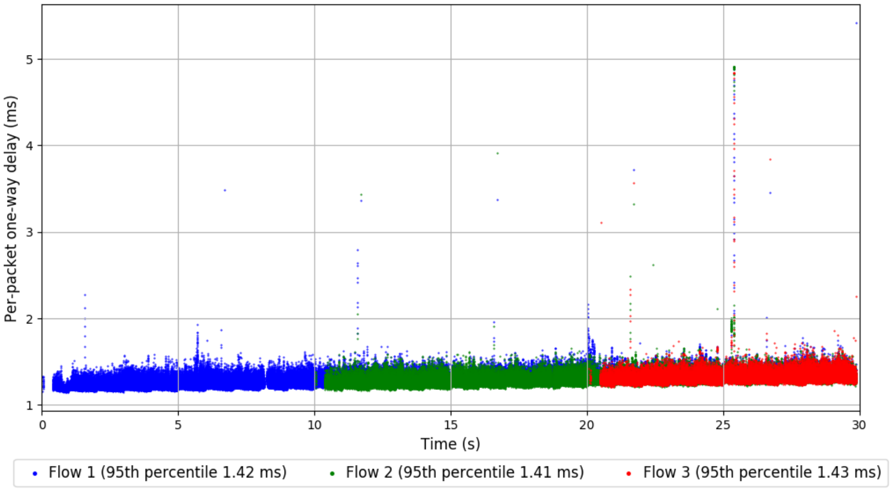
```
Run 7: Statistics of QUIC Cubic

Start at: 2018-03-06 14:52:03
End at: 2018-03-06 14:52:33
Local clock offset: 2.535 ms
Remote clock offset: 2.037 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.33 Mbit/s
95th percentile per-packet one-way delay: 1.417 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 72.49 Mbit/s
95th percentile per-packet one-way delay: 1.416 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 65.76 Mbit/s
95th percentile per-packet one-way delay: 1.408 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 58.26 Mbit/s
95th percentile per-packet one-way delay: 1.433 ms
Loss rate: 0.25%
```

Run 7: Report of QUIC Cubic — Data Link



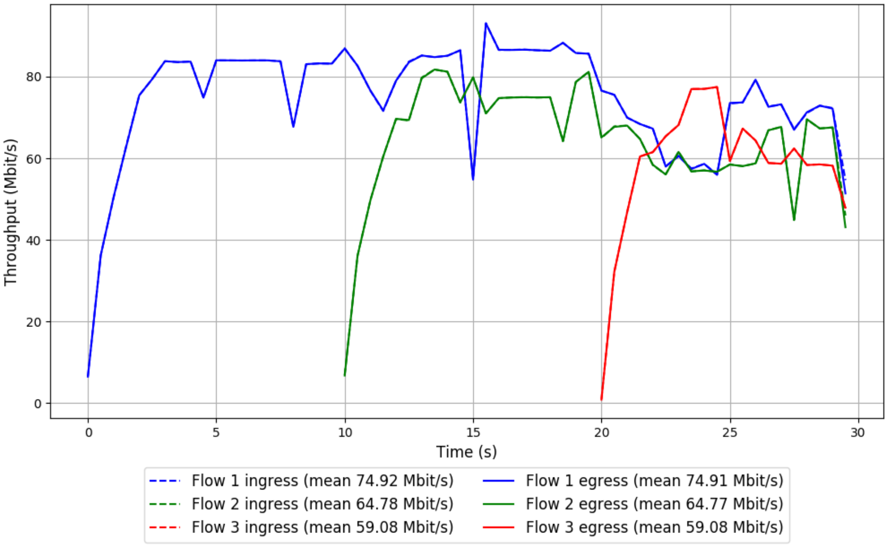


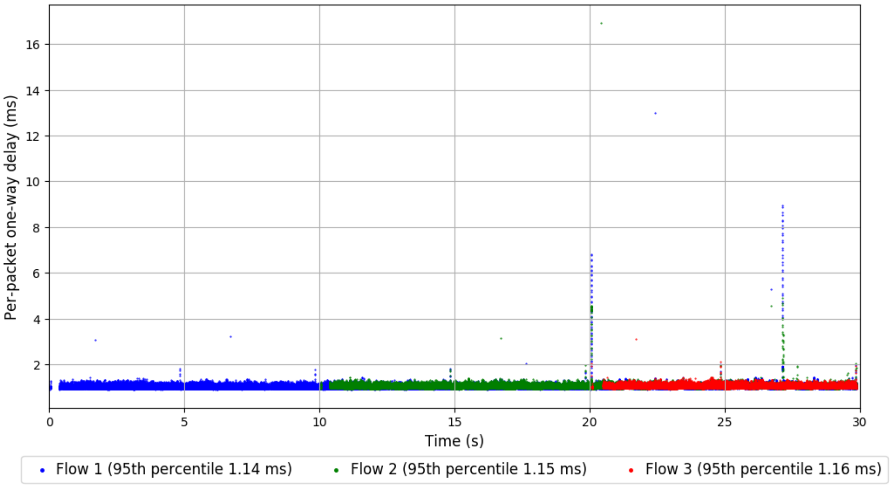
```
Run 8: Statistics of QUIC Cubic

Start at: 2018-03-06 15:26:22
End at: 2018-03-06 15:26:52
Local clock offset: 0.618 ms
Remote clock offset: 2.287 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 137.39 Mbit/s
95th percentile per-packet one-way delay: 1.147 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 74.91 Mbit/s
95th percentile per-packet one-way delay: 1.140 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 64.77 Mbit/s
95th percentile per-packet one-way delay: 1.149 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 59.08 Mbit/s
95th percentile per-packet one-way delay: 1.163 ms
Loss rate: 0.00%
```

## Run 8: Report of QUIC Cubic — Data Link



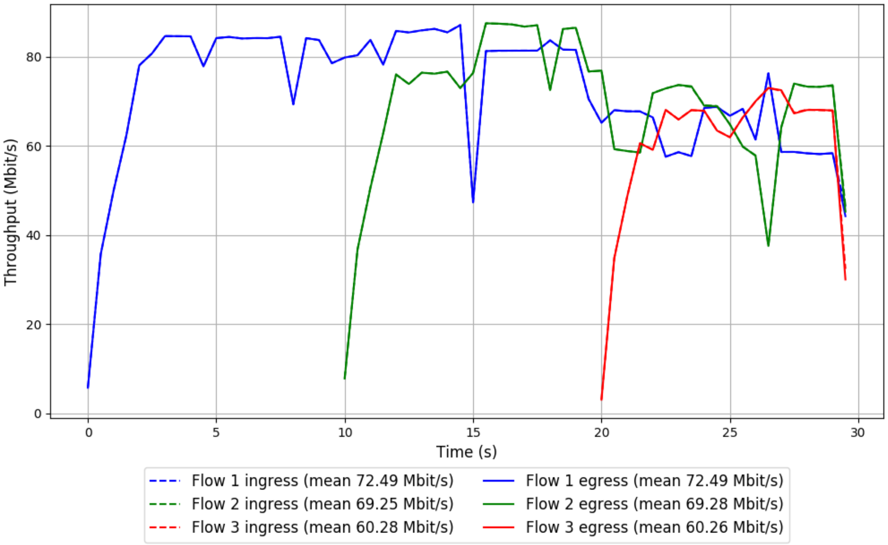


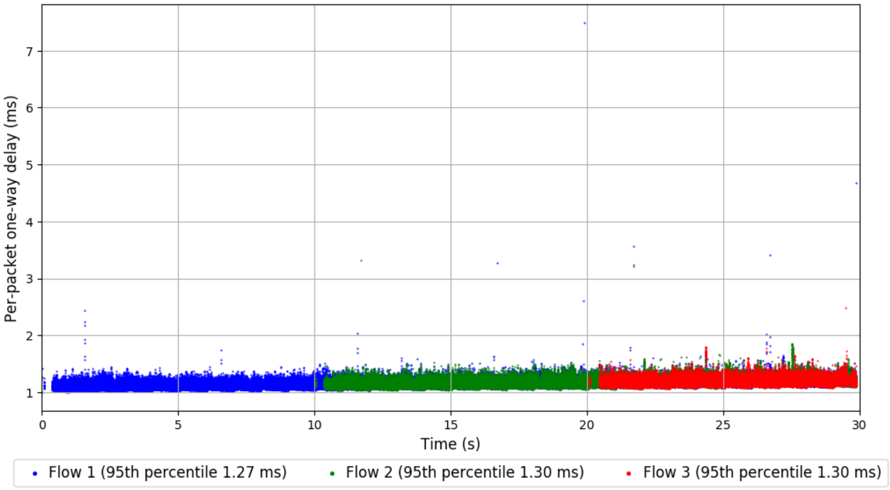
```
Run 9: Statistics of QUIC Cubic

Start at: 2018-03-06 15:55:34
End at: 2018-03-06 15:56:04
Local clock offset: 0.03 ms
Remote clock offset: 2.356 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.38 Mbit/s
95th percentile per-packet one-way delay: 1.285 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 72.49 Mbit/s
95th percentile per-packet one-way delay: 1.267 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 69.28 Mbit/s
95th percentile per-packet one-way delay: 1.299 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 60.26 Mbit/s
95th percentile per-packet one-way delay: 1.300 ms
Loss rate: 0.22%
```

## Run 9: Report of QUIC Cubic — Data Link



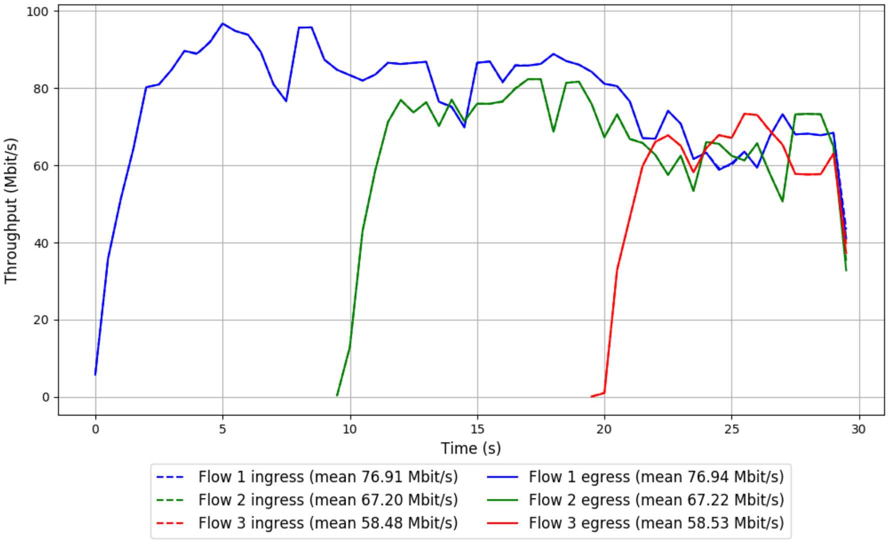


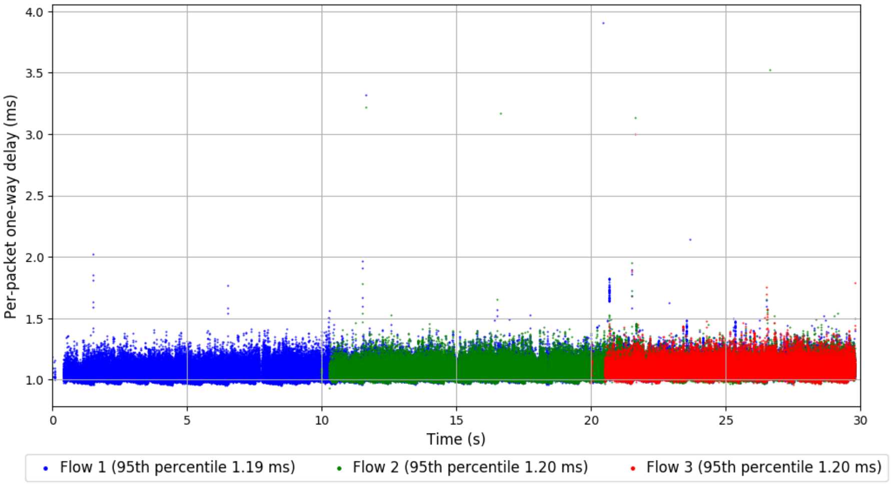
```
Run 10: Statistics of QUIC Cubic

Start at: 2018-03-06 16:24:30
End at: 2018-03-06 16:25:00
Local clock offset: -1.94 ms
Remote clock offset: 1.635 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.04 Mbit/s
95th percentile per-packet one-way delay: 1.195 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 76.94 Mbit/s
95th percentile per-packet one-way delay: 1.192 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 67.22 Mbit/s
95th percentile per-packet one-way delay: 1.196 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 58.53 Mbit/s
95th percentile per-packet one-way delay: 1.203 ms
Loss rate: 0.22%
```

Run 10: Report of QUIC Cubic — Data Link



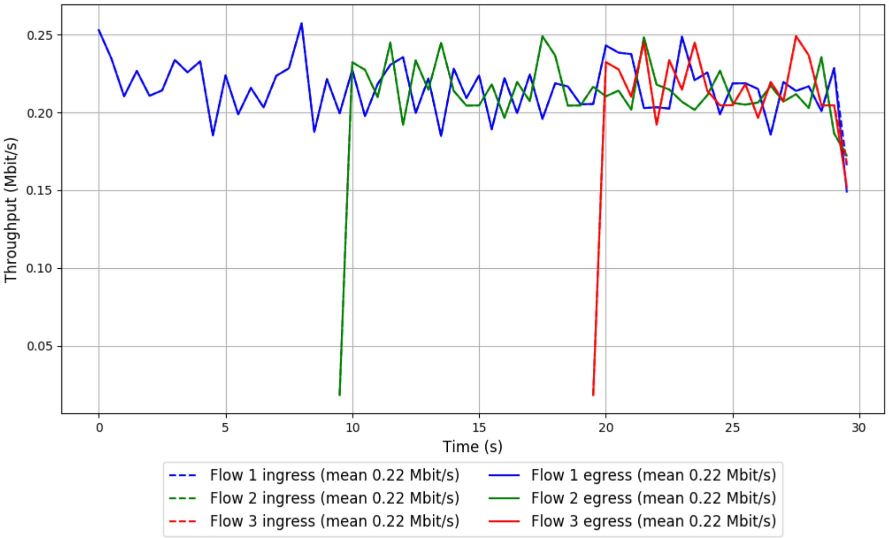


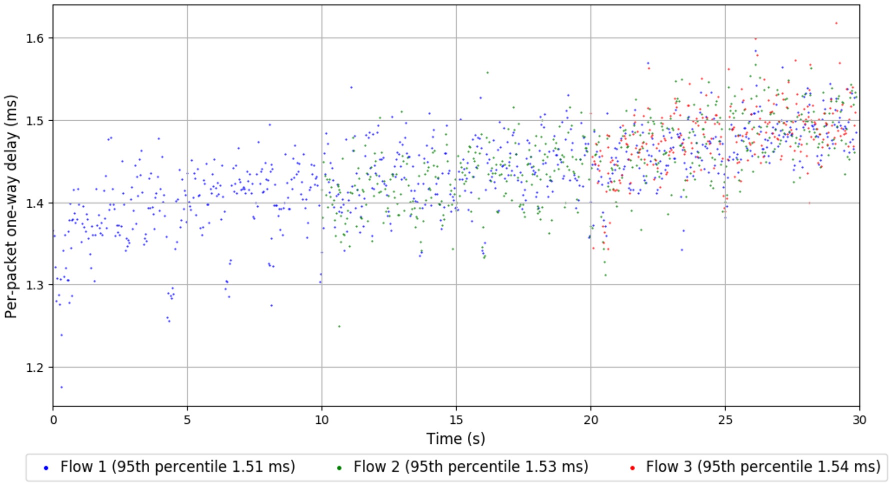
```
Run 1: Statistics of SCReAM

Start at: 2018-03-06 12:06:13
End at: 2018-03-06 12:06:43
Local clock offset: -2.326 ms
Remote clock offset: 5.381 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.525 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.507 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.529 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.538 ms
Loss rate: 0.35%
```

Run 1: Report of SCReAM — Data Link



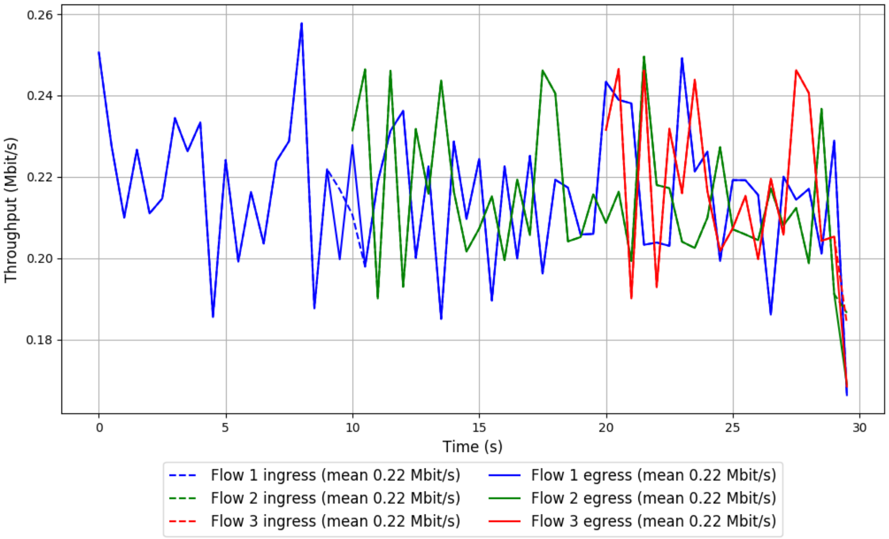


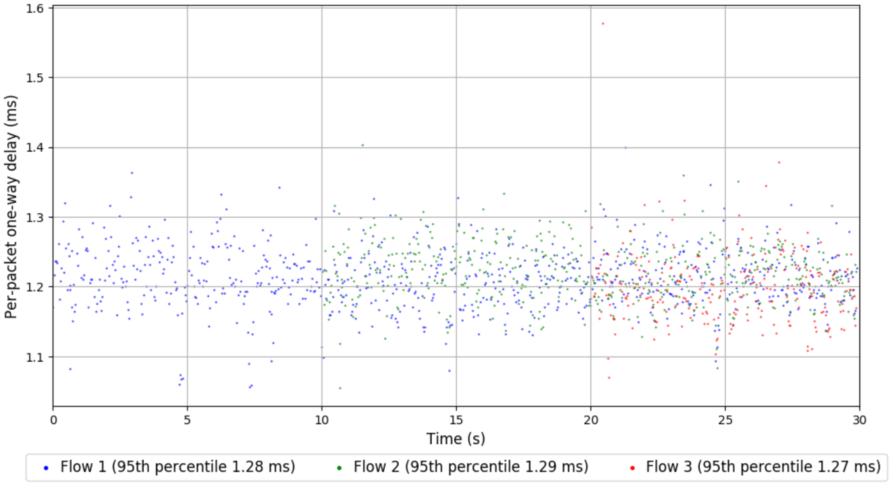
```
Run 2: Statistics of SCReAM

Start at: 2018-03-06 12:35:42
End at: 2018-03-06 12:36:12
Local clock offset: -4.781 ms
Remote clock offset: 6.863 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.283 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.280 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.289 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.270 ms
Loss rate: 0.35%
```

## Run 2: Report of SCReAM — Data Link



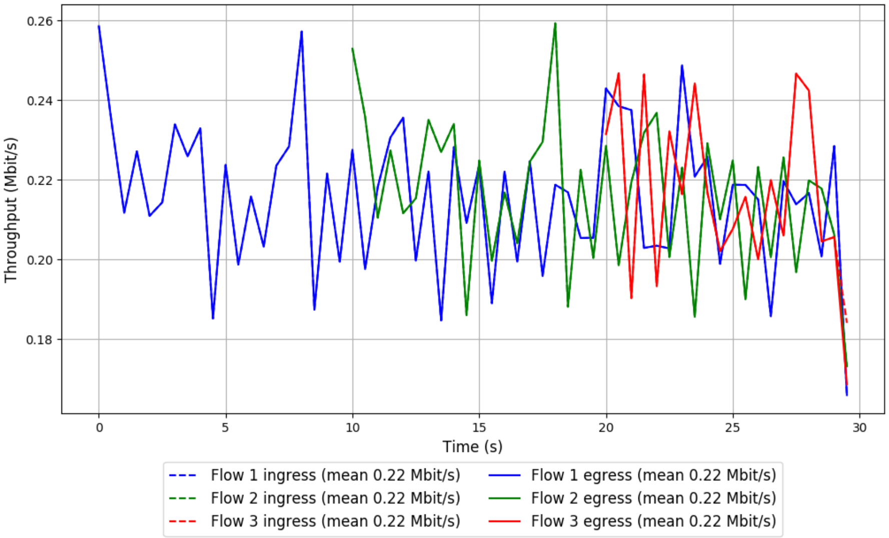


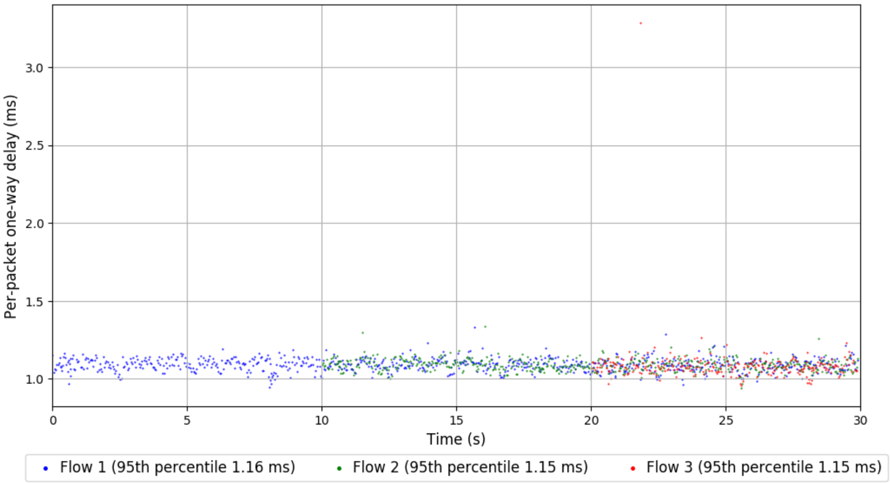
```
Run 3: Statistics of SCReAM

Start at: 2018-03-06 13:05:24
End at: 2018-03-06 13:05:54
Local clock offset: -4.803 ms
Remote clock offset: 4.578 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.151 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.155 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.150 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.151 ms
Loss rate: 0.35%
```

Run 3: Report of SCReAM — Data Link



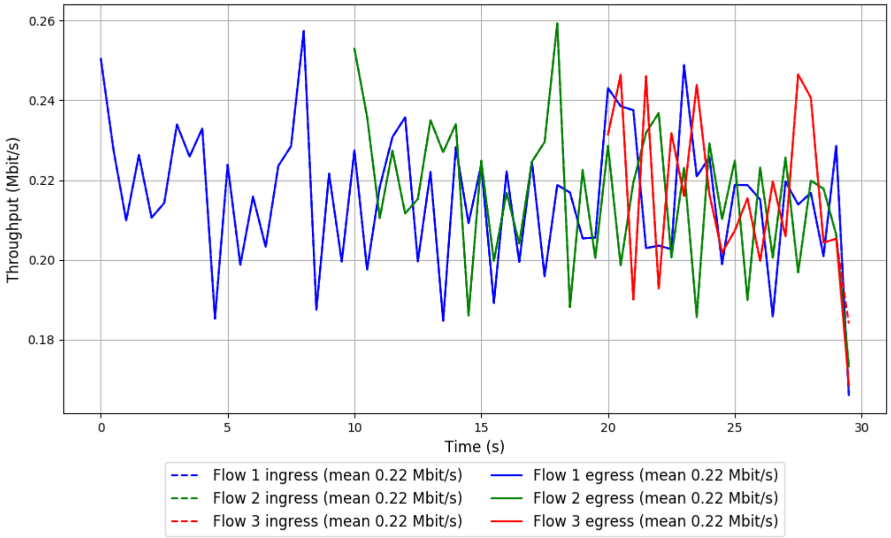


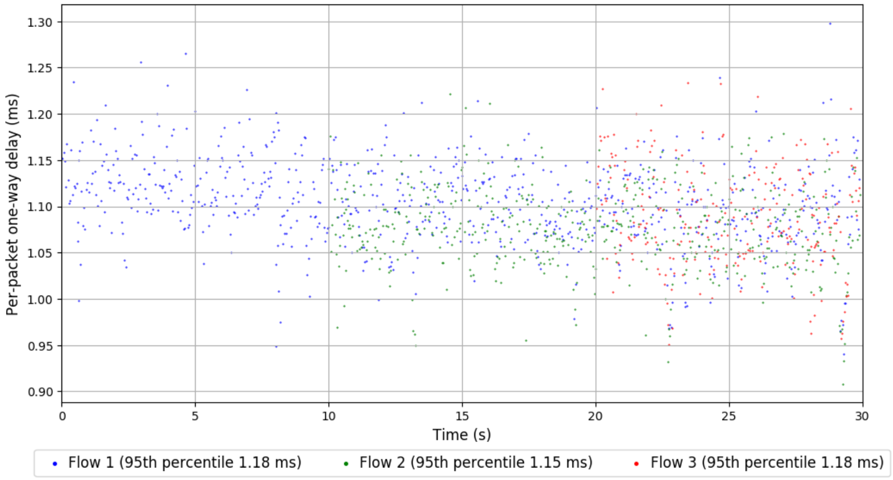
```
Run 4: Statistics of SCReAM

Start at: 2018-03-06 13:34:27
End at: 2018-03-06 13:34:57
Local clock offset: -4.75 ms
Remote clock offset: -0.253 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.171 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.175 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.149 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.176 ms
Loss rate: 0.35%
```

Run 4: Report of SCReAM — Data Link



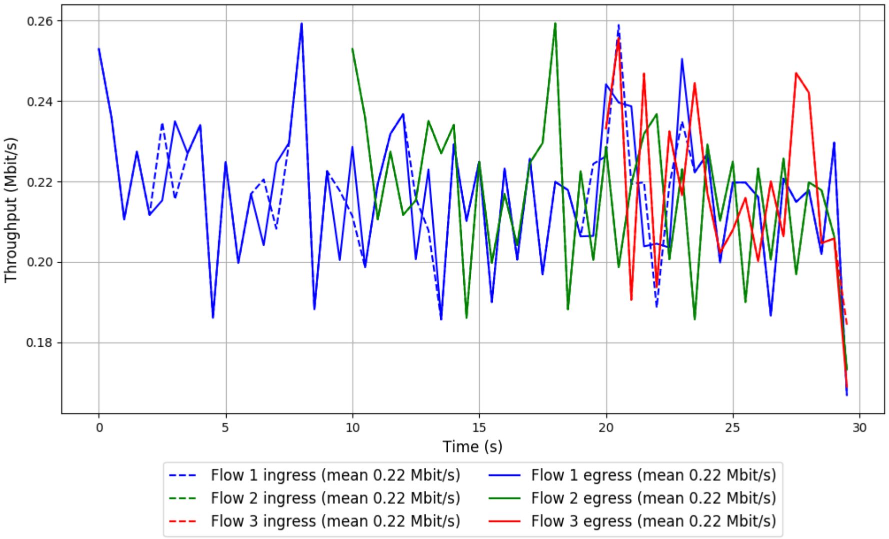


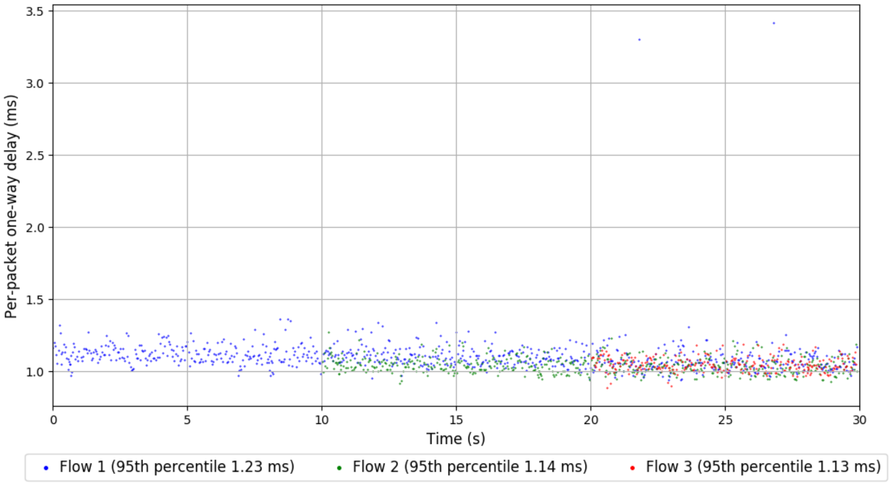
```
Run 5: Statistics of SCReAM

Start at: 2018-03-06 14:04:13
End at: 2018-03-06 14:04:43
Local clock offset: 3.517 ms
Remote clock offset: 0.523 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.197 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.229 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.144 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.133 ms
Loss rate: 0.35%
```

Run 5: Report of SCReAM — Data Link



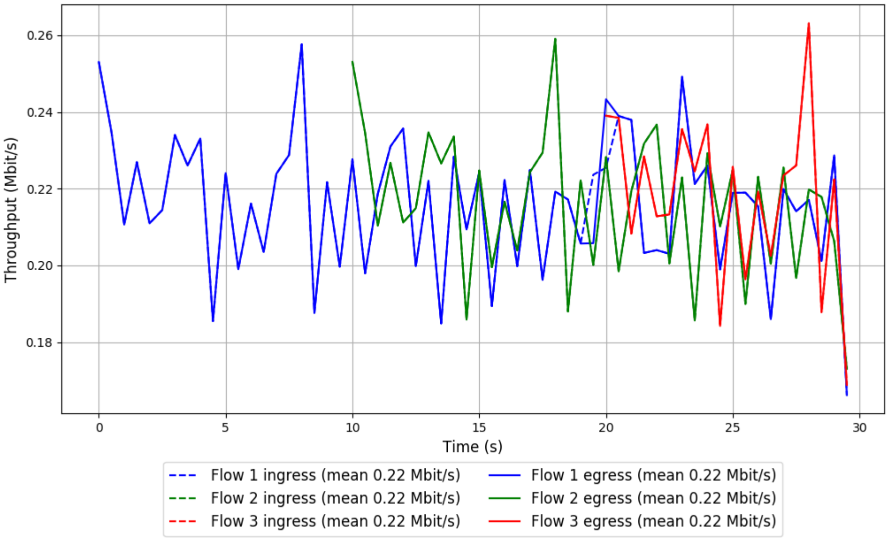


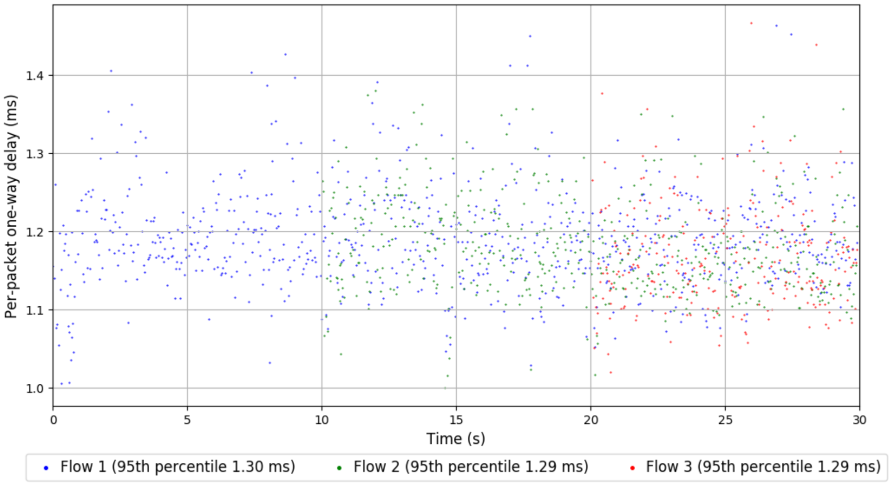
```
Run 6: Statistics of SCReAM

Start at: 2018-03-06 14:33:35
End at: 2018-03-06 14:34:05
Local clock offset: 4.609 ms
Remote clock offset: 1.622 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.293 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.304 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.291 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.289 ms
Loss rate: 0.00%
```

Run 6: Report of SCReAM — Data Link



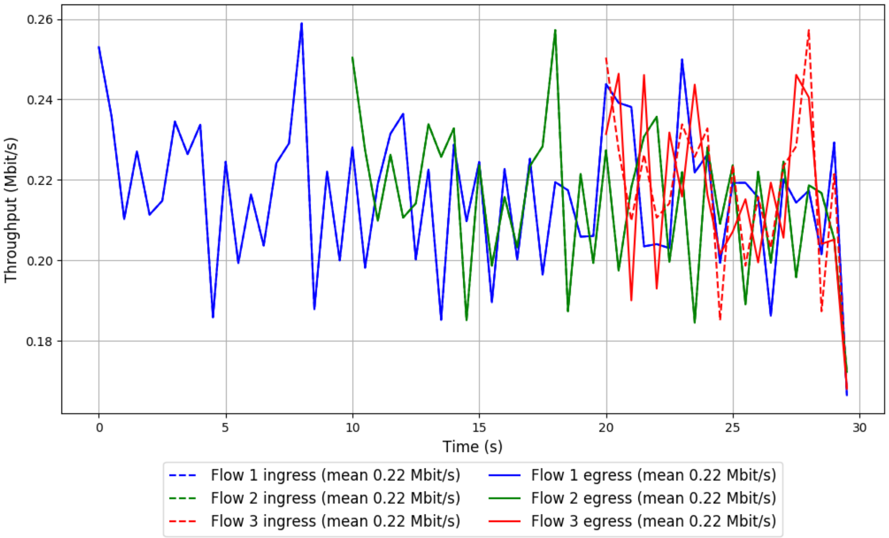


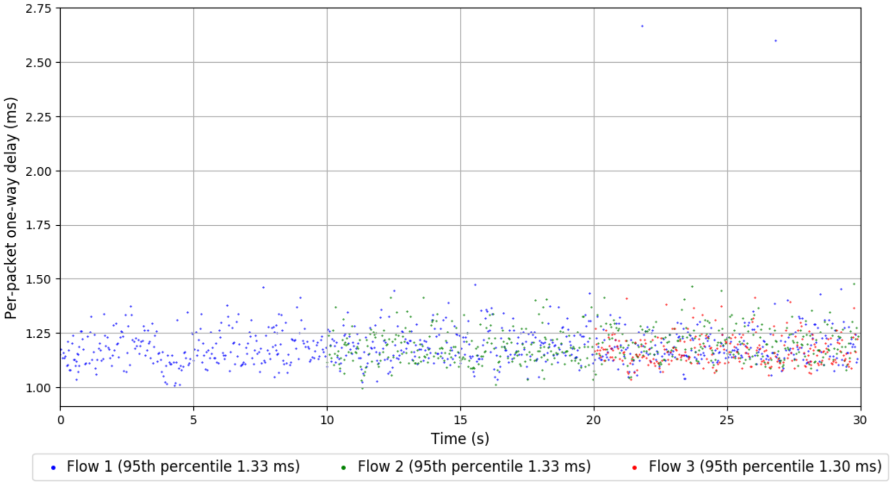
```
Run 7: Statistics of SCReAM

Start at: 2018-03-06 15:08:03
End at: 2018-03-06 15:08:33
Local clock offset: 0.955 ms
Remote clock offset: 2.22 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.326 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.328 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.335 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.300 ms
Loss rate: 0.35%
```

Run 7: Report of SCReAM — Data Link



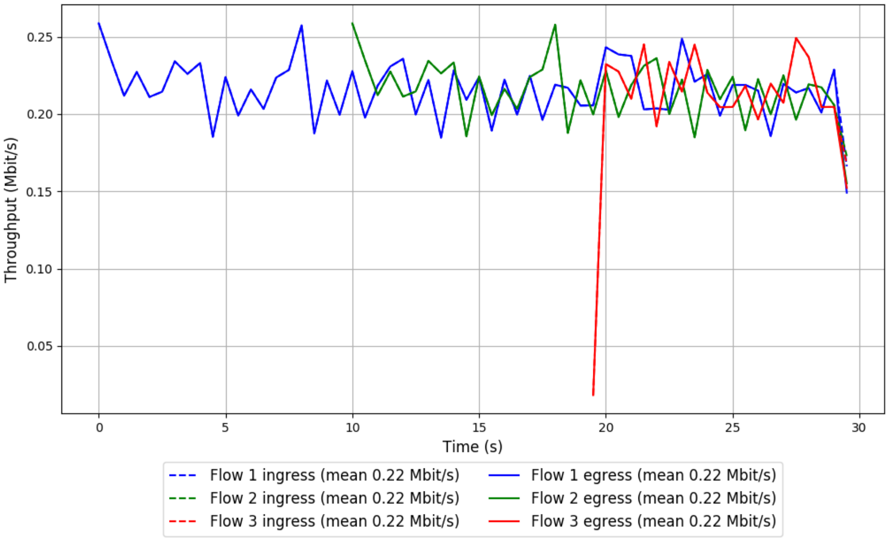


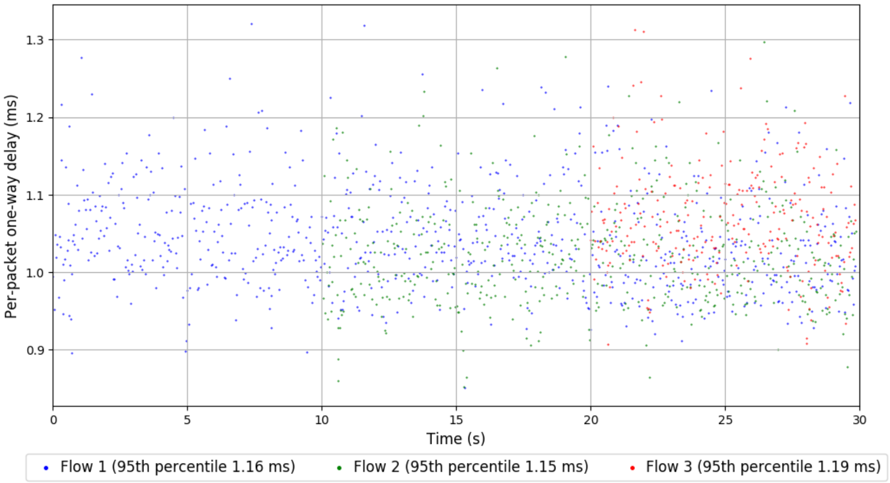
```
Run 8: Statistics of SCReAM

Start at: 2018-03-06 15:37:14
End at: 2018-03-06 15:37:44
Local clock offset: 0.594 ms
Remote clock offset: 2.379 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.163 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.163 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.148 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.188 ms
Loss rate: 0.35%
```

Run 8: Report of SCReAM — Data Link



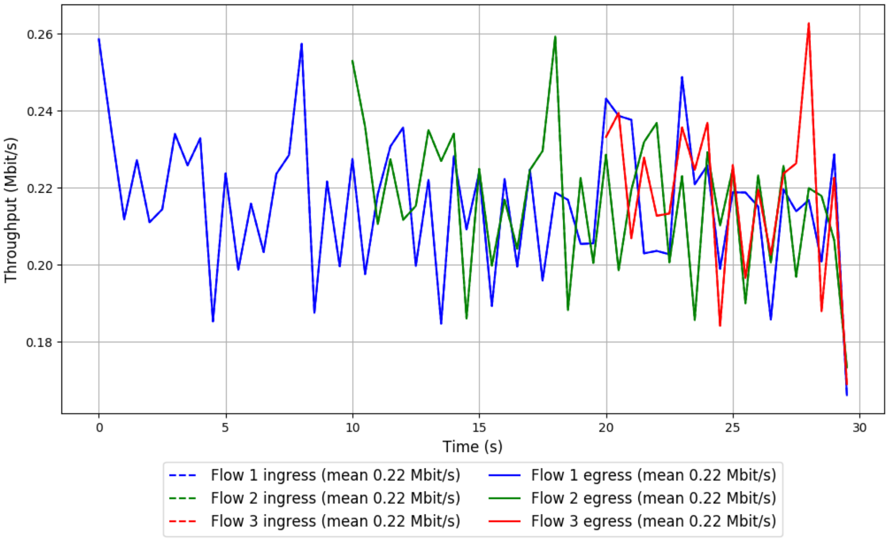


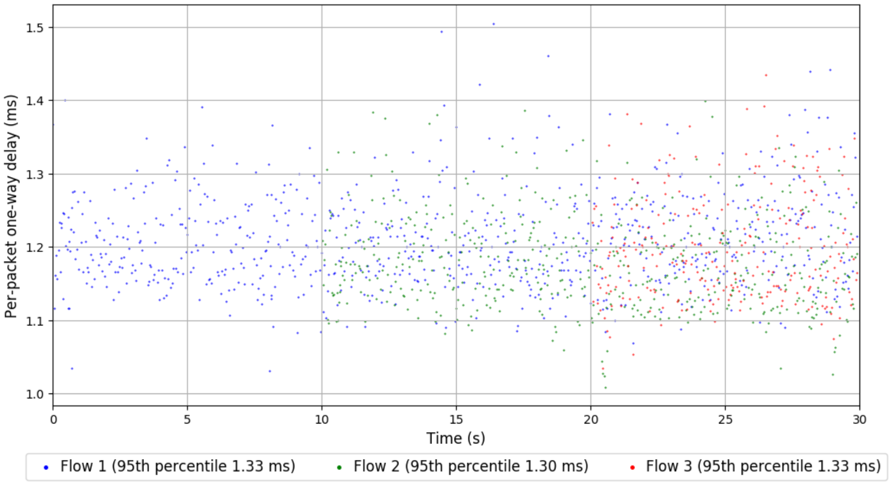
```
Run 9: Statistics of SCReAM

Start at: 2018-03-06 16:06:34
End at: 2018-03-06 16:07:04
Local clock offset: -1.061 ms
Remote clock offset: 2.166 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.321 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.328 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.297 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.326 ms
Loss rate: 0.00%
```

Run 9: Report of SCReAM — Data Link



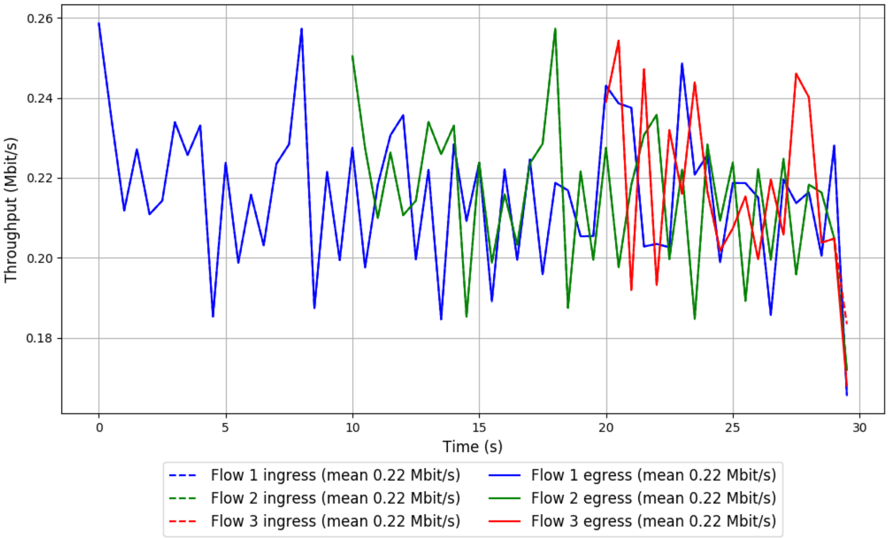


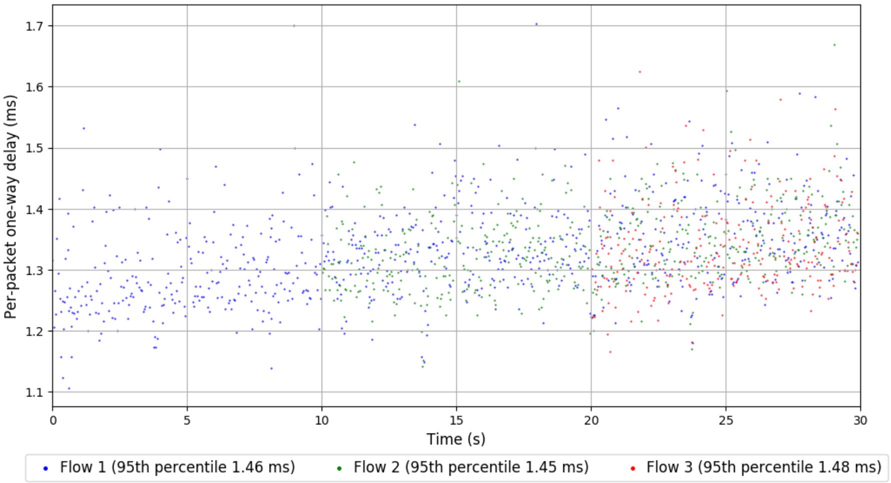
```
Run 10: Statistics of SCReAM

Start at: 2018-03-06 16:35:29
End at: 2018-03-06 16:35:59
Local clock offset: -4.777 ms
Remote clock offset: 1.607 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.456 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.455 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.449 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.479 ms
Loss rate: 0.35%
```

# Run 10: Report of SCReAM — Data Link



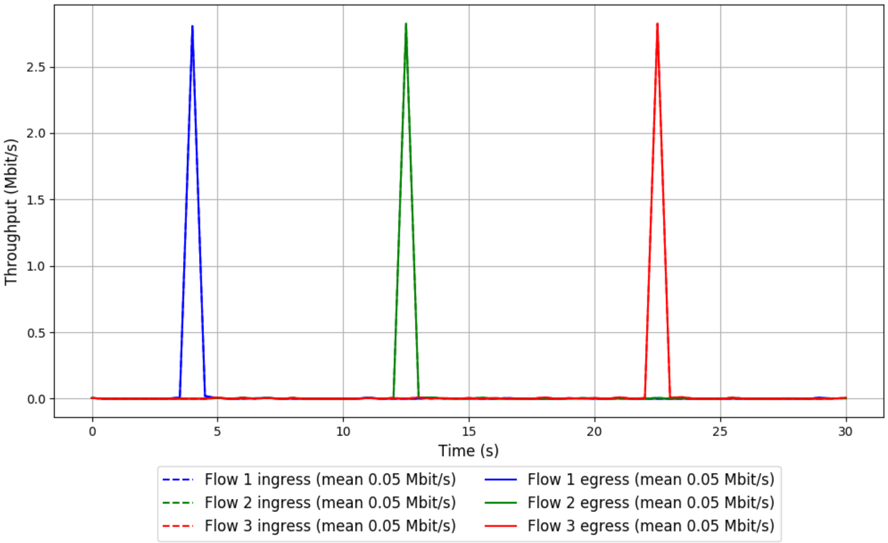


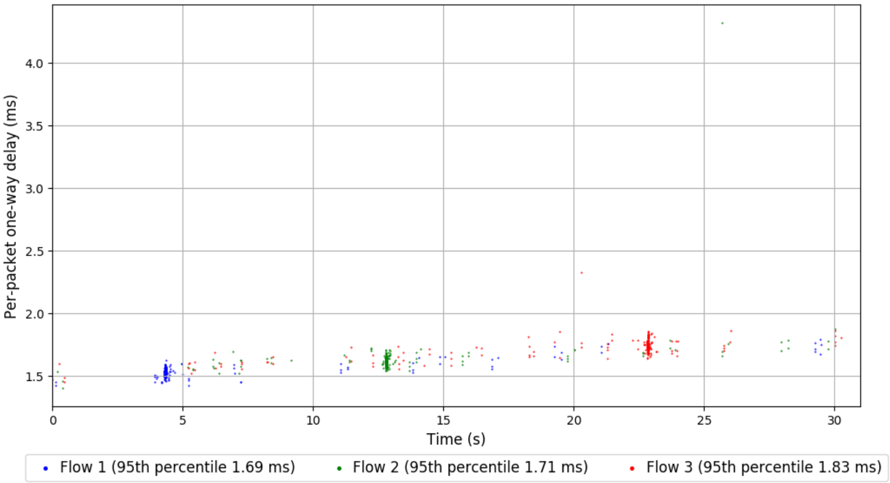
```
Run 1: Statistics of WebRTC media

Start at: 2018-03-06 11:59:38
End at: 2018-03-06 12:00:08
Local clock offset: 0.586 ms
Remote clock offset: 4.95 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 1.805 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.689 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.714 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.831 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link



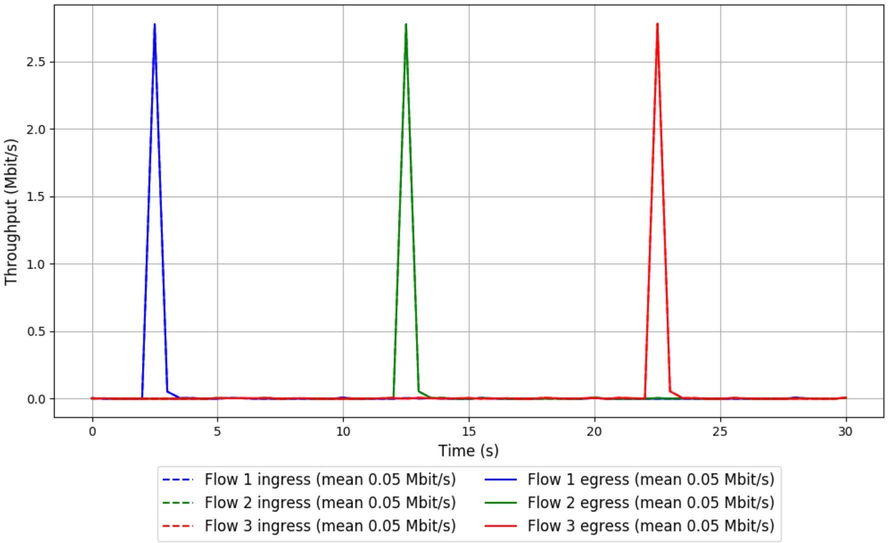


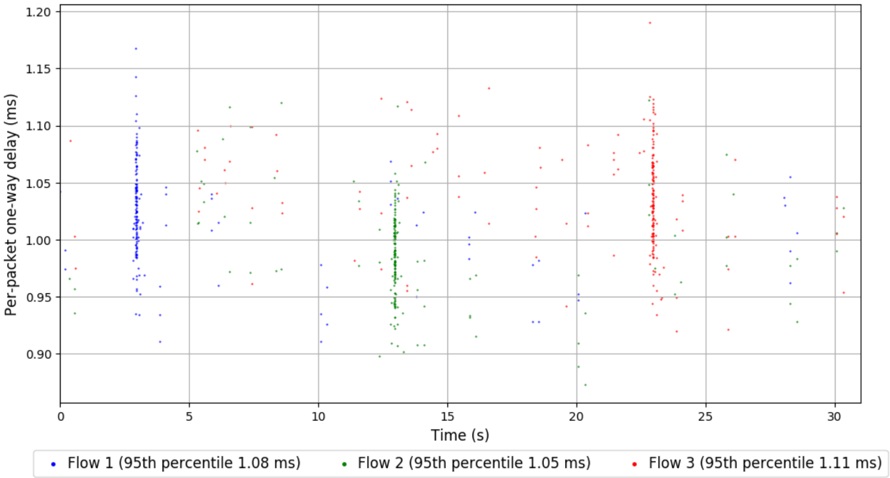
```
Run 2: Statistics of WebRTC media

Start at: 2018-03-06 12:29:18
End at: 2018-03-06 12:29:48
Local clock offset: -5.07 ms
Remote clock offset: 6.503 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 1.096 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.085 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.054 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.110 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link



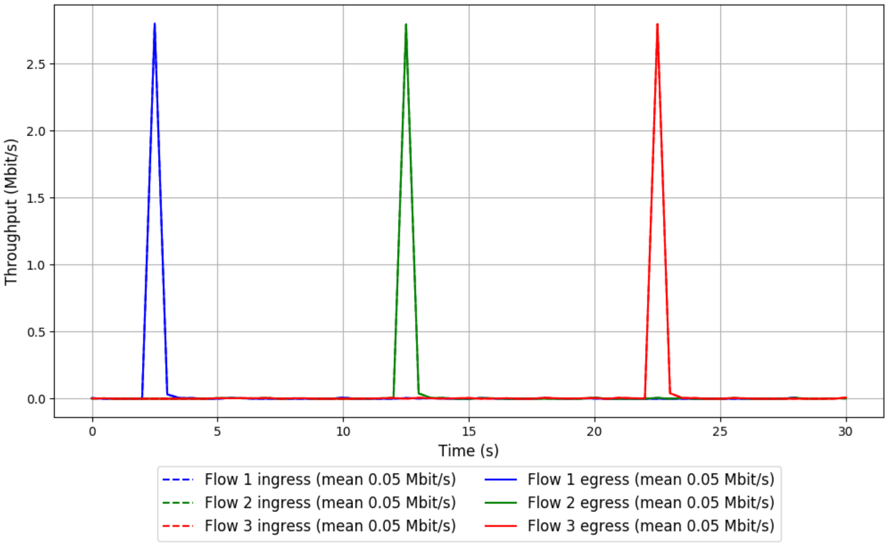


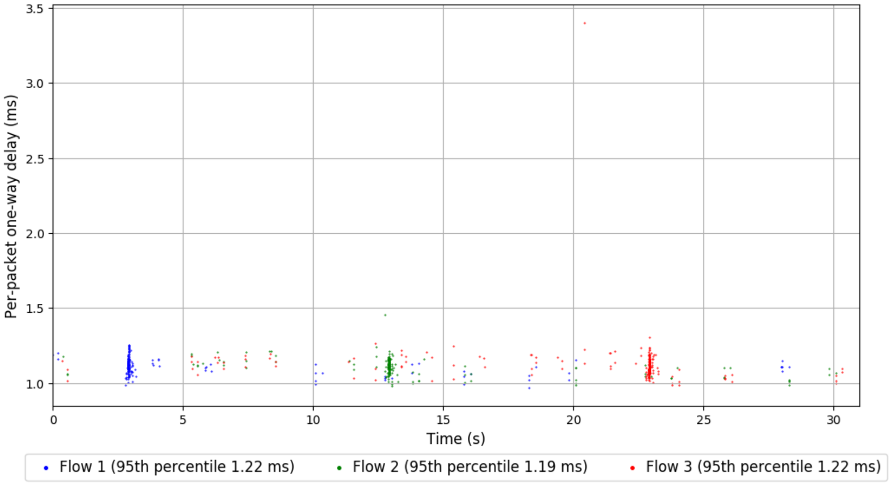
```
Run 3: Statistics of WebRTC media

Start at: 2018-03-06 12:58:54
End at: 2018-03-06 12:59:24
Local clock offset: -4.831 ms
Remote clock offset: 4.642 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 1.207 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.223 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.186 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.215 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link



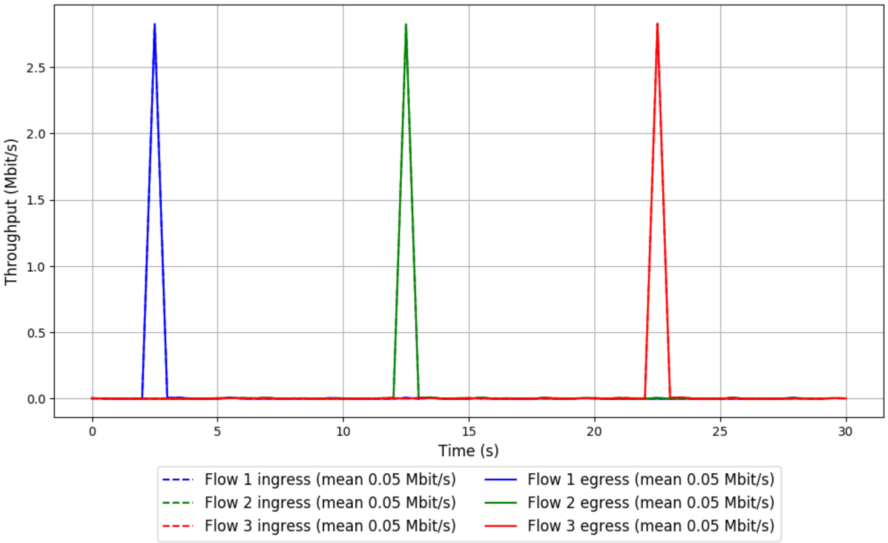


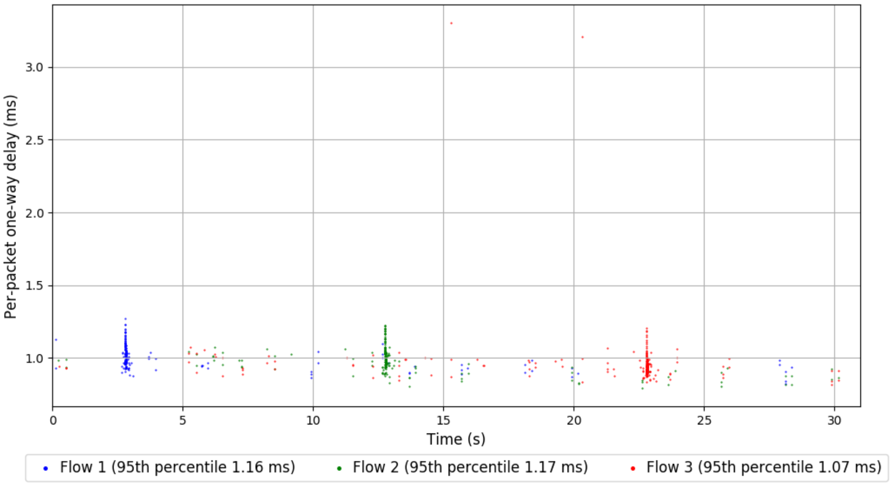
```
Run 4: Statistics of WebRTC media

Start at: 2018-03-06 13:28:08
End at: 2018-03-06 13:28:38
Local clock offset: -4.678 ms
Remote clock offset: 0.478 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 1.149 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.157 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.169 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.074 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



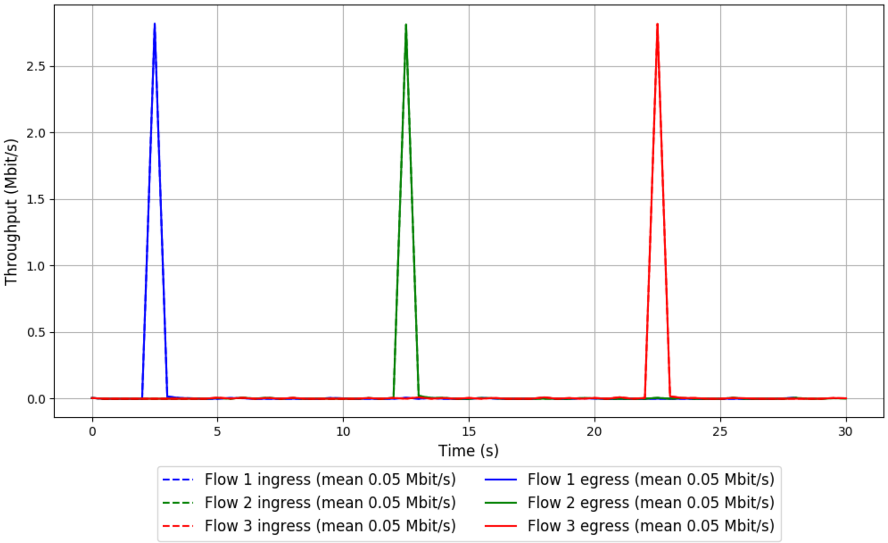


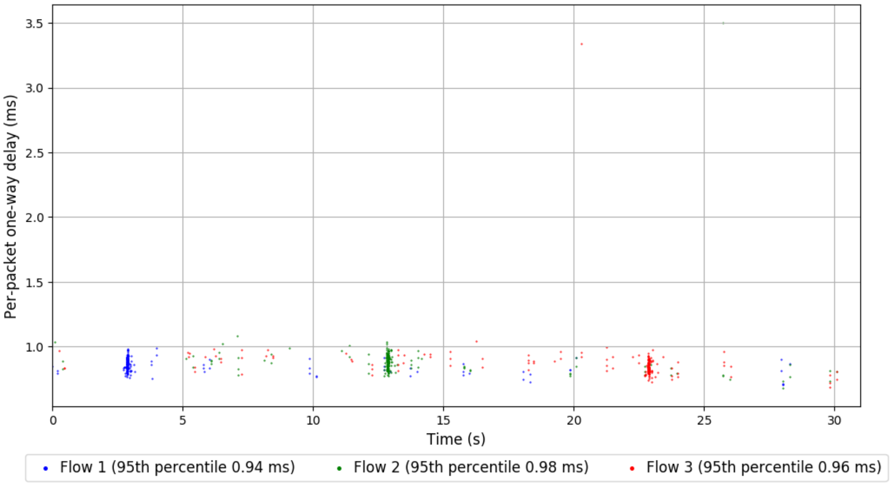
```
Run 5: Statistics of WebRTC media

Start at: 2018-03-06 13:57:42
End at: 2018-03-06 13:58:12
Local clock offset: 2.496 ms
Remote clock offset: 0.388 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 0.967 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.935 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.985 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.961 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link



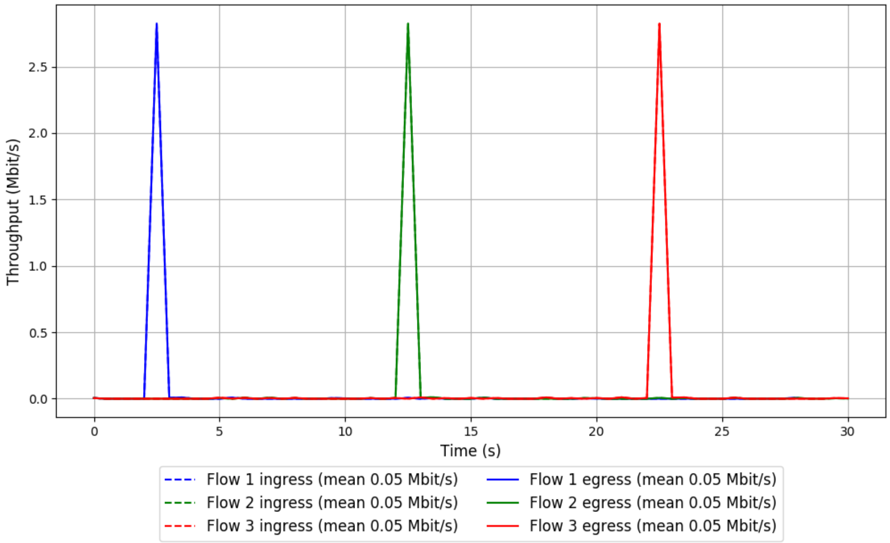


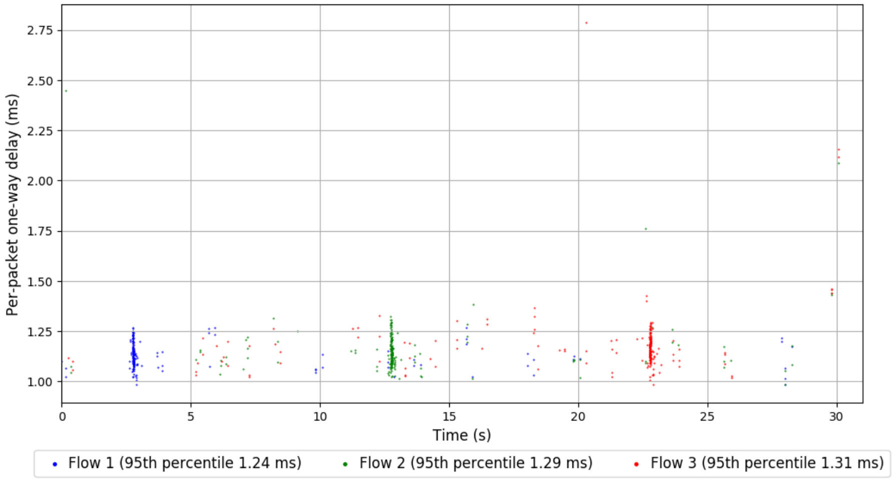
```
Run 6: Statistics of WebRTC media

Start at: 2018-03-06 14:27:08
End at: 2018-03-06 14:27:38
Local clock offset: 4.173 ms
Remote clock offset: 1.224 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 1.285 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.243 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.294 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.309 ms
Loss rate: 0.00%
```

## Run 6: Report of WebRTC media — Data Link



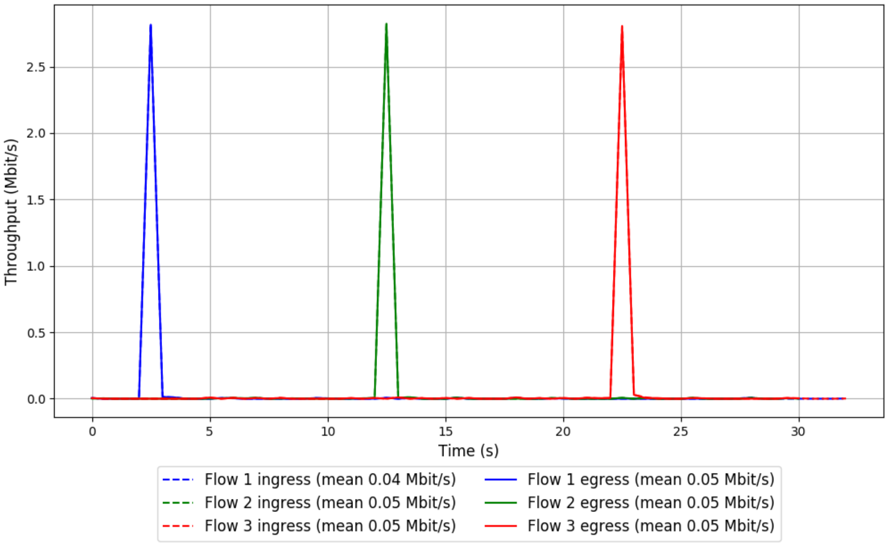


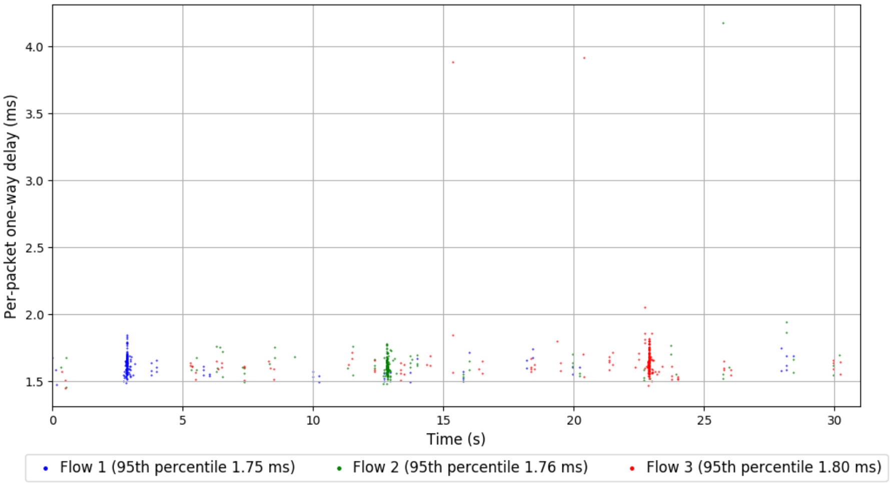
```
Run 7: Statistics of WebRTC media

Start at: 2018-03-06 15:01:41
End at: 2018-03-06 15:02:11
Local clock offset: 1.66 ms
Remote clock offset: 2.125 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 1.773 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.748 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.757 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.801 ms
Loss rate: 0.05%
```

Run 7: Report of WebRTC media — Data Link



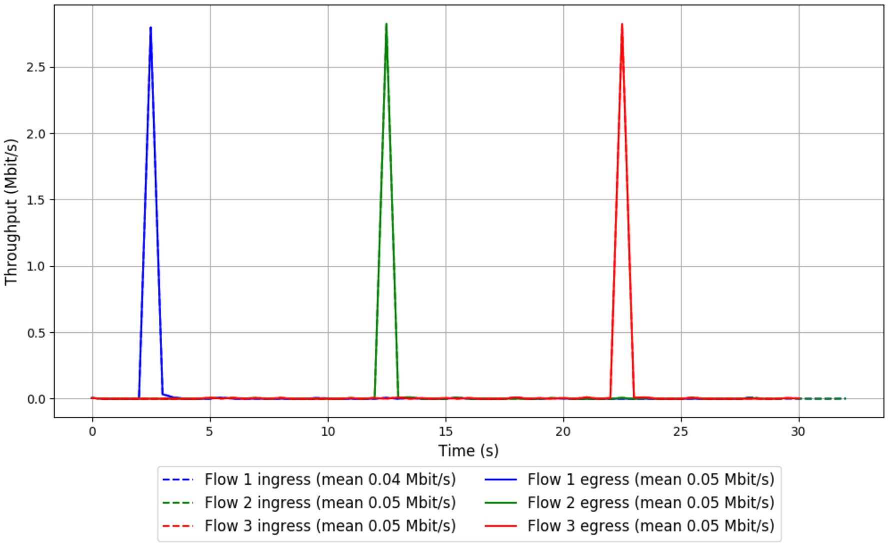


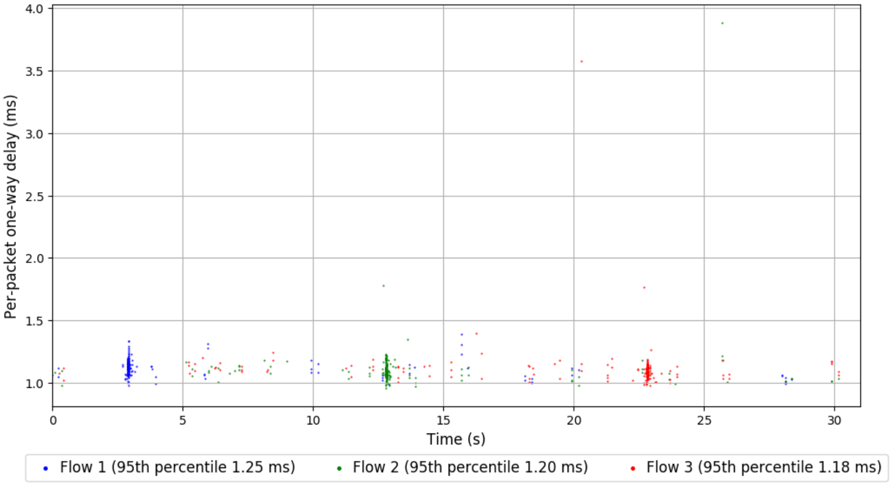
```
Run 8: Statistics of WebRTC media

Start at: 2018-03-06 15:30:52
End at: 2018-03-06 15:31:22
Local clock offset: 0.699 ms
Remote clock offset: 2.345 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 1.204 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.248 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.200 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.182 ms
Loss rate: 0.00%
```

Run 8: Report of WebRTC media — Data Link



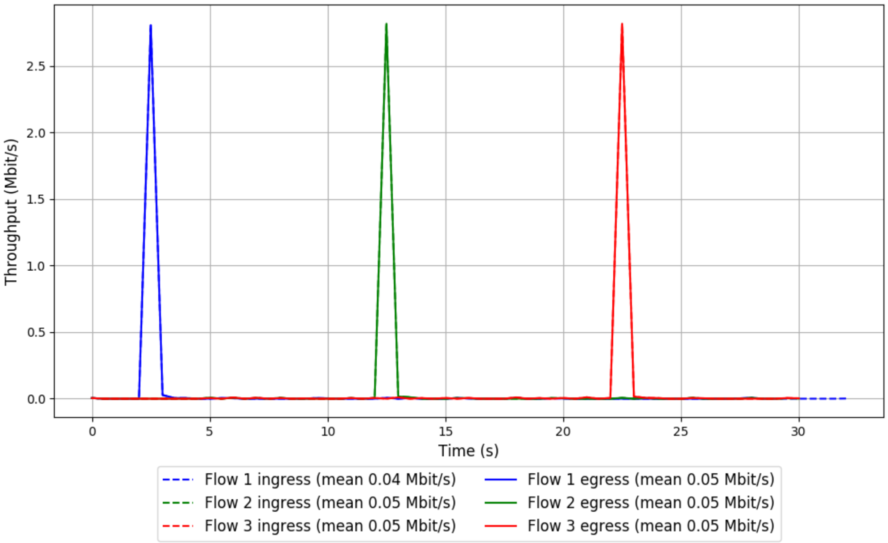


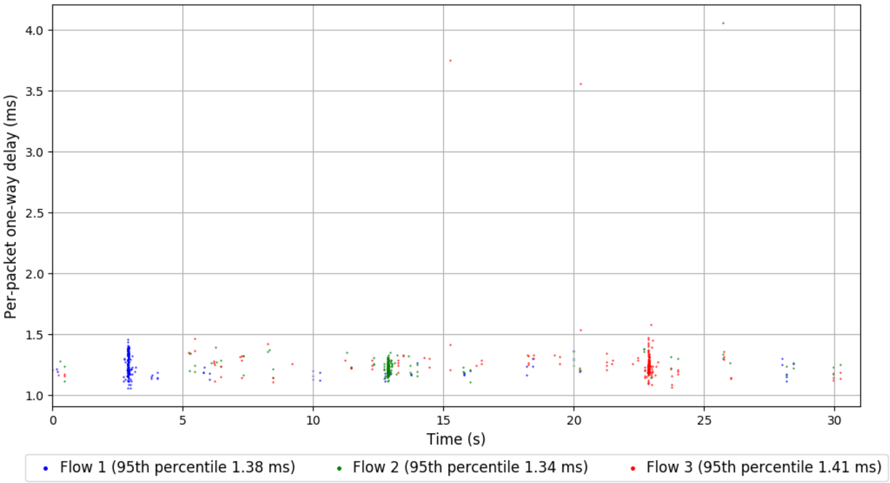
```
Run 9: Statistics of WebRTC media

Start at: 2018-03-06 16:00:13
End at: 2018-03-06 16:00:43
Local clock offset: -0.48 ms
Remote clock offset: 2.407 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 1.374 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.383 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.339 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.413 ms
Loss rate: 0.00%
```

Run 9: Report of WebRTC media — Data Link



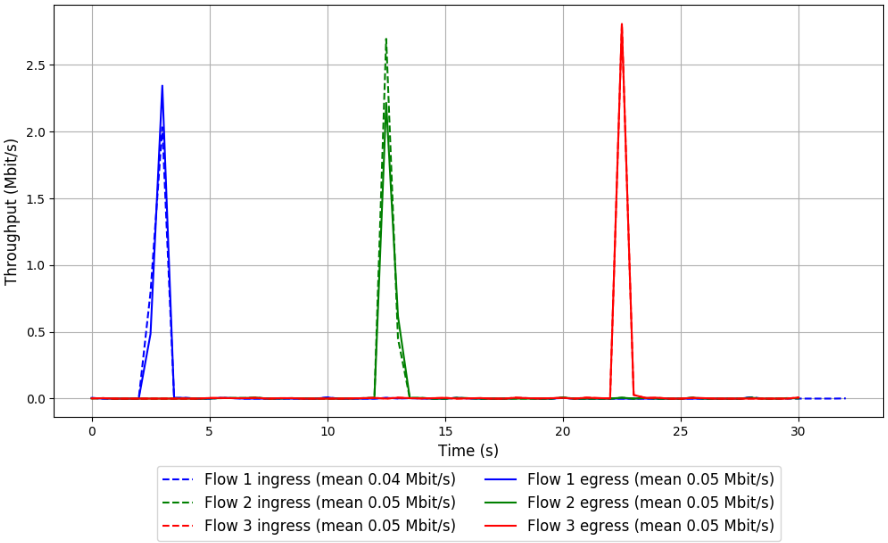


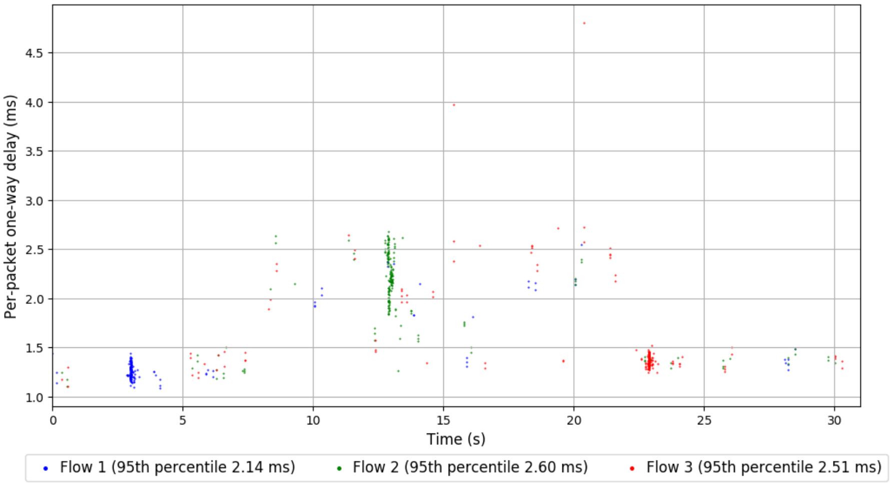
```
Run 10: Statistics of WebRTC media

Start at: 2018-03-06 16:29:08
End at: 2018-03-06 16:29:38
Local clock offset: -3.021 ms
Remote clock offset: 1.65 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 2.546 ms
Loss rate: 3.44%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.139 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.599 ms
Loss rate: 9.63%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.513 ms
Loss rate: 0.00%
```

## Run 10: Report of WebRTC media — Data Link



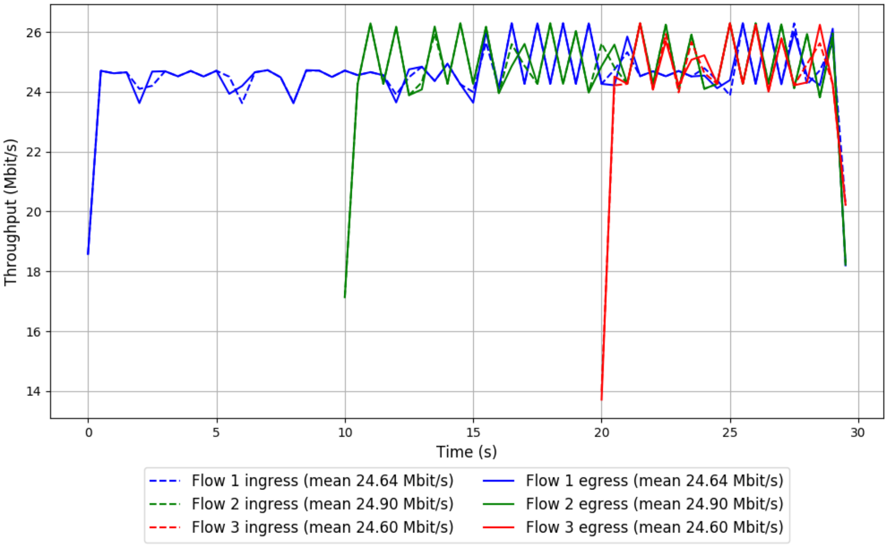


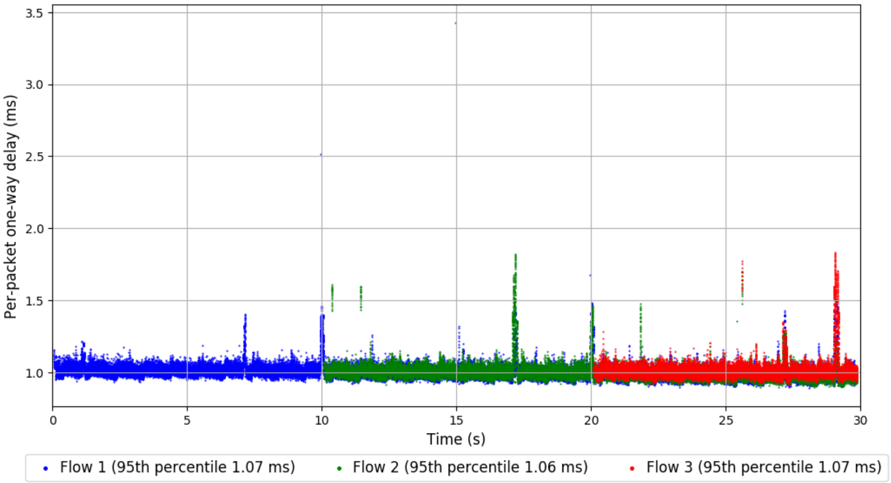
```
Run 1: Statistics of Sprout

Start at: 2018-03-06 11:51:50
End at: 2018-03-06 11:52:20
Local clock offset: 5.734 ms
Remote clock offset: 4.558 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.24 Mbit/s
95th percentile per-packet one-way delay: 1.065 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 24.64 Mbit/s
95th percentile per-packet one-way delay: 1.066 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 24.90 Mbit/s
95th percentile per-packet one-way delay: 1.059 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.60 Mbit/s
95th percentile per-packet one-way delay: 1.071 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link



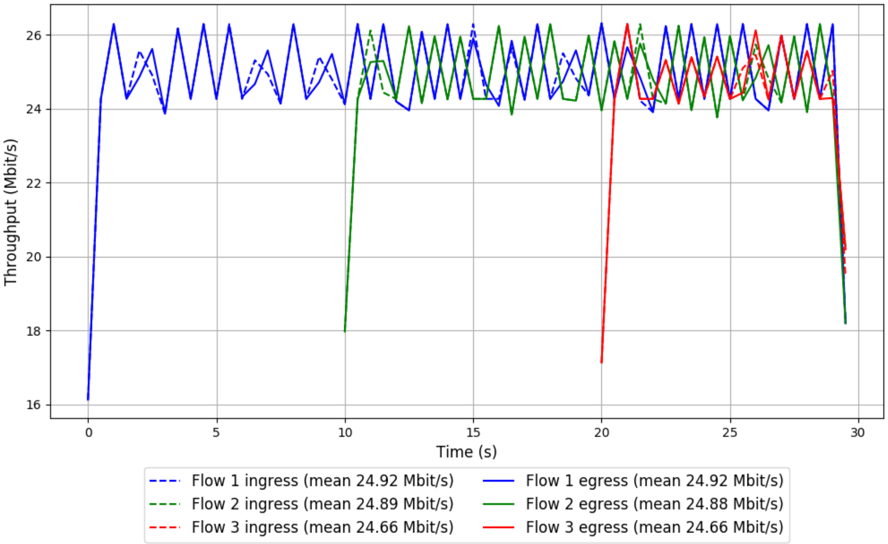


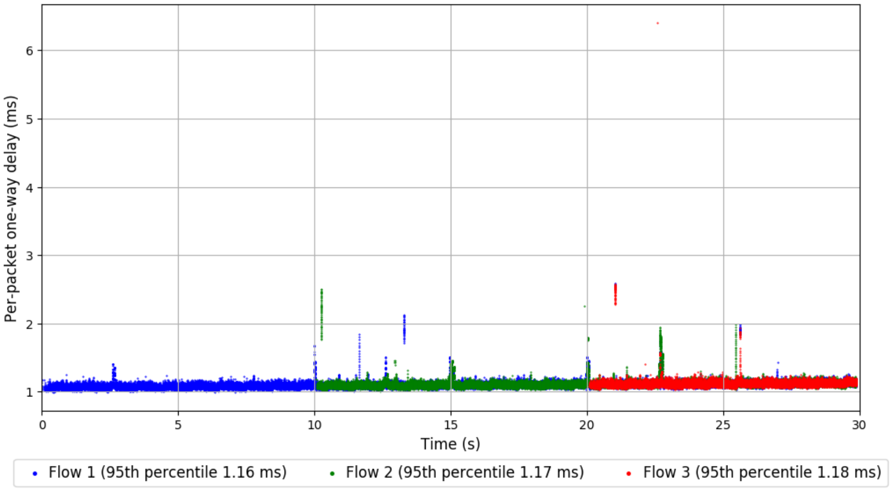
```
Run 2: Statistics of Sprout

Start at: 2018-03-06 12:21:35
End at: 2018-03-06 12:22:05
Local clock offset: -4.784 ms
Remote clock offset: 6.111 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.52 Mbit/s
95th percentile per-packet one-way delay: 1.170 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 24.92 Mbit/s
95th percentile per-packet one-way delay: 1.164 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.88 Mbit/s
95th percentile per-packet one-way delay: 1.173 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 24.66 Mbit/s
95th percentile per-packet one-way delay: 1.176 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link



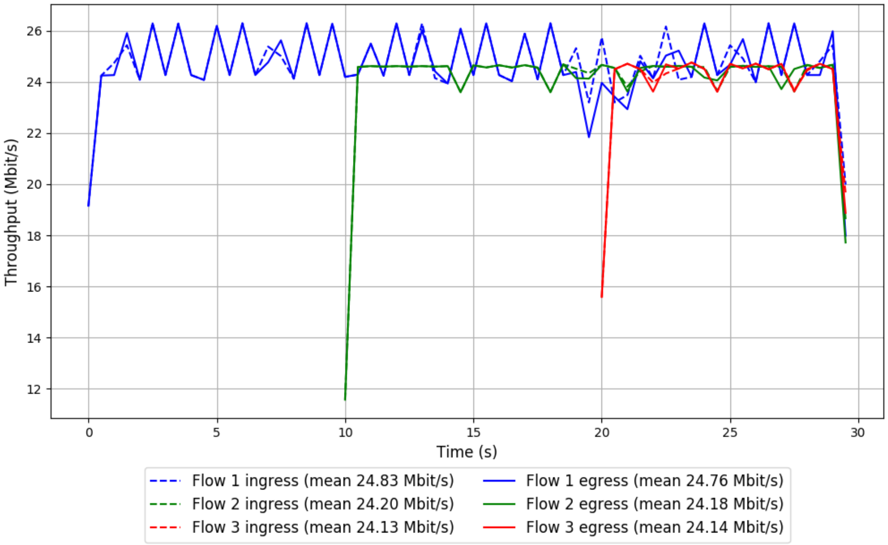


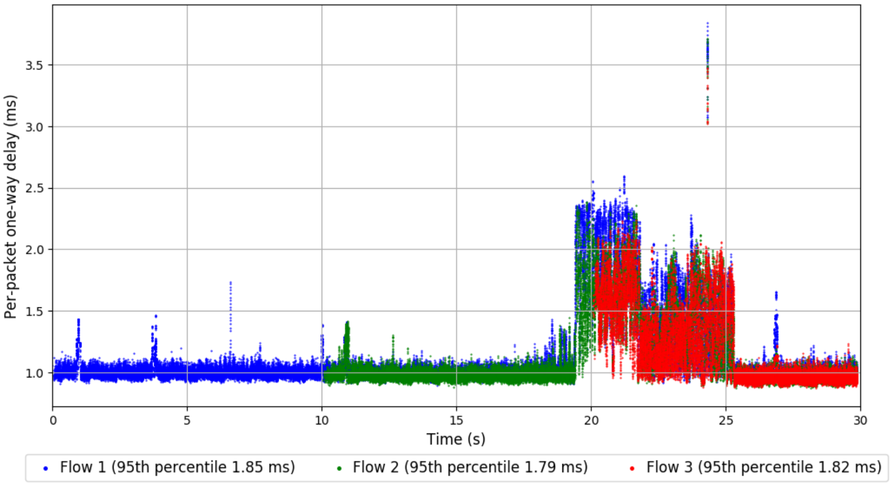
```
Run 3: Statistics of Sprout

Start at: 2018-03-06 12:51:16
End at: 2018-03-06 12:51:46
Local clock offset: -4.887 ms
Remote clock offset: 4.952 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.72 Mbit/s
95th percentile per-packet one-way delay: 1.819 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 24.76 Mbit/s
95th percentile per-packet one-way delay: 1.852 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 24.18 Mbit/s
95th percentile per-packet one-way delay: 1.794 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 24.14 Mbit/s
95th percentile per-packet one-way delay: 1.817 ms
Loss rate: 0.16%
```

## Run 3: Report of Sprout — Data Link



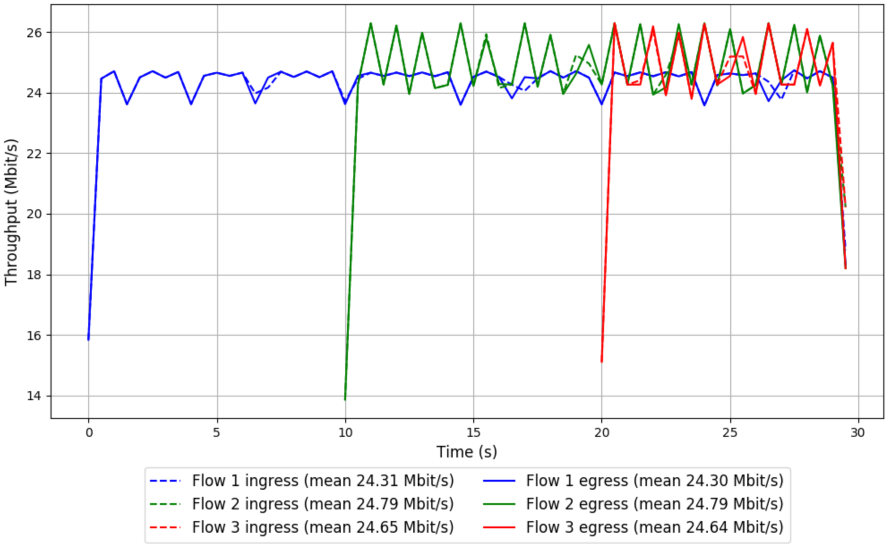


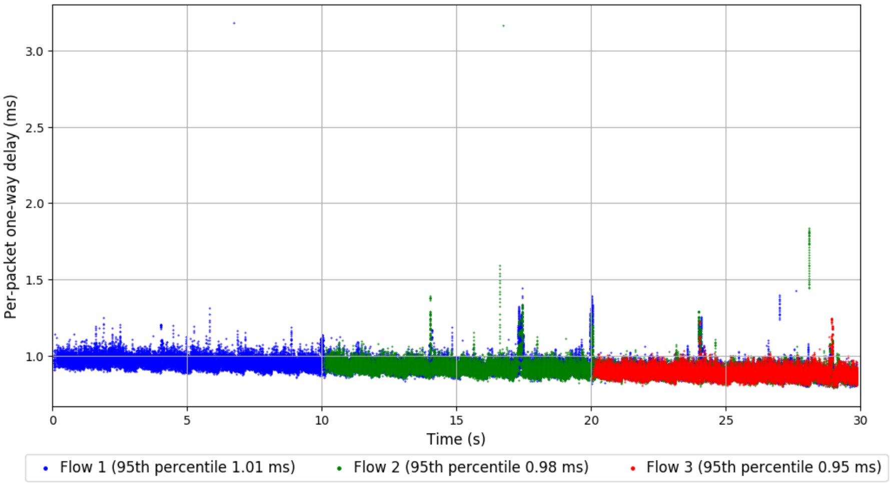
```
Run 4: Statistics of Sprout

Start at: 2018-03-06 13:20:32
End at: 2018-03-06 13:21:02
Local clock offset: -4.66 ms
Remote clock offset: 1.711 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.83 Mbit/s
95th percentile per-packet one-way delay: 0.999 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 24.30 Mbit/s
95th percentile per-packet one-way delay: 1.012 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 24.79 Mbit/s
95th percentile per-packet one-way delay: 0.981 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 24.64 Mbit/s
95th percentile per-packet one-way delay: 0.950 ms
Loss rate: 0.42%
```

Run 4: Report of Sprout — Data Link



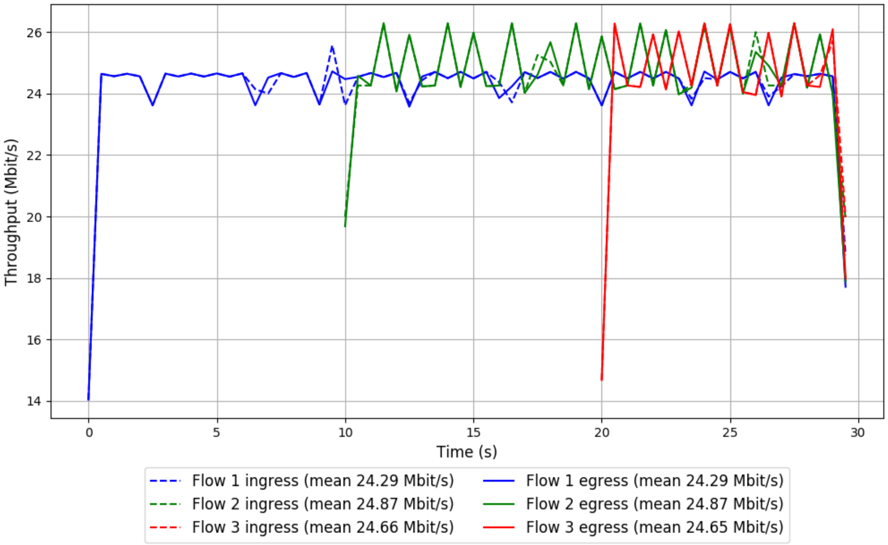


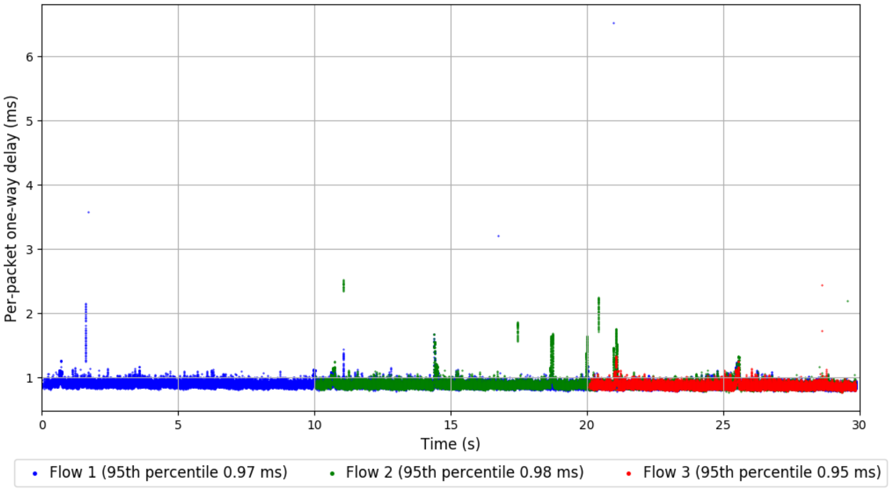
```
Run 5: Statistics of Sprout

Start at: 2018-03-06 13:50:05
End at: 2018-03-06 13:50:35
Local clock offset: 1.054 ms
Remote clock offset: -0.377 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.90 Mbit/s
95th percentile per-packet one-way delay: 0.973 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 24.29 Mbit/s
95th percentile per-packet one-way delay: 0.974 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 24.87 Mbit/s
95th percentile per-packet one-way delay: 0.981 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 24.65 Mbit/s
95th percentile per-packet one-way delay: 0.954 ms
Loss rate: 0.41%
```

Run 5: Report of Sprout — Data Link



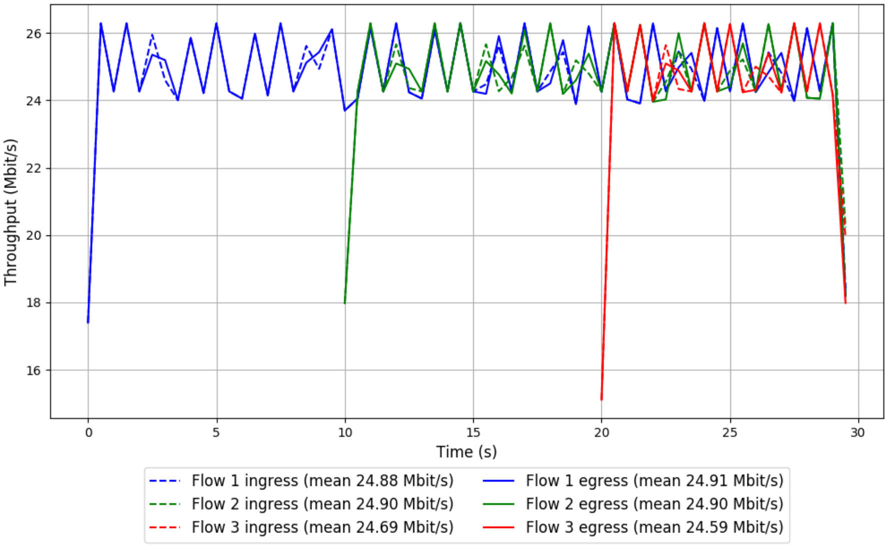


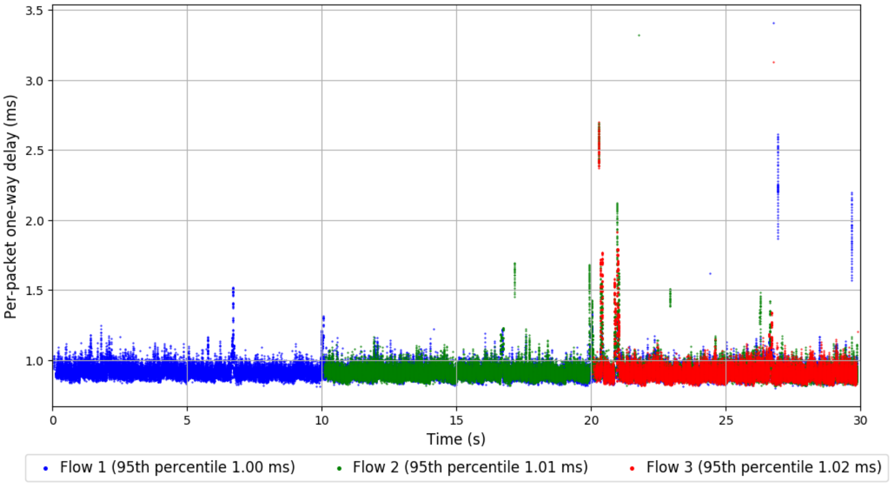
```
Run 6: Statistics of Sprout

Start at: 2018-03-06 14:19:29
End at: 2018-03-06 14:19:59
Local clock offset: 3.793 ms
Remote clock offset: 0.5 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.51 Mbit/s
95th percentile per-packet one-way delay: 1.008 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.91 Mbit/s
95th percentile per-packet one-way delay: 1.001 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 24.90 Mbit/s
95th percentile per-packet one-way delay: 1.015 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 24.59 Mbit/s
95th percentile per-packet one-way delay: 1.024 ms
Loss rate: 0.40%
```

## Run 6: Report of Sprout — Data Link



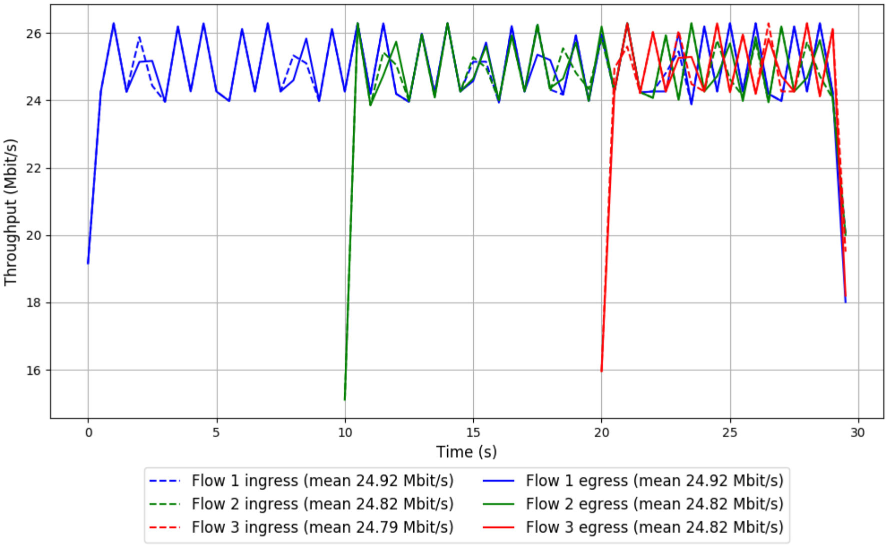


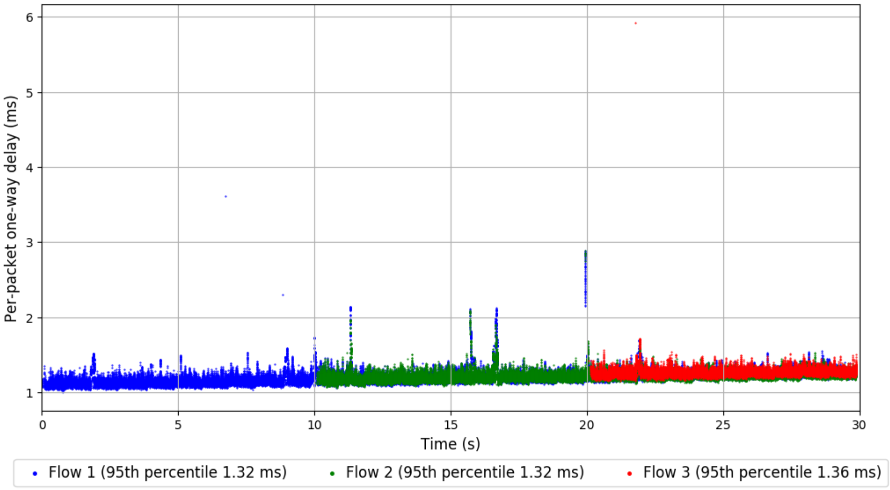
```
Run 7: Statistics of Sprout

Start at: 2018-03-06 14:49:03
End at: 2018-03-06 14:49:33
Local clock offset: 3.251 ms
Remote clock offset: 2.091 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.52 Mbit/s
95th percentile per-packet one-way delay: 1.330 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 24.92 Mbit/s
95th percentile per-packet one-way delay: 1.318 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 24.82 Mbit/s
95th percentile per-packet one-way delay: 1.320 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.82 Mbit/s
95th percentile per-packet one-way delay: 1.357 ms
Loss rate: 0.27%
```

Run 7: Report of Sprout — Data Link



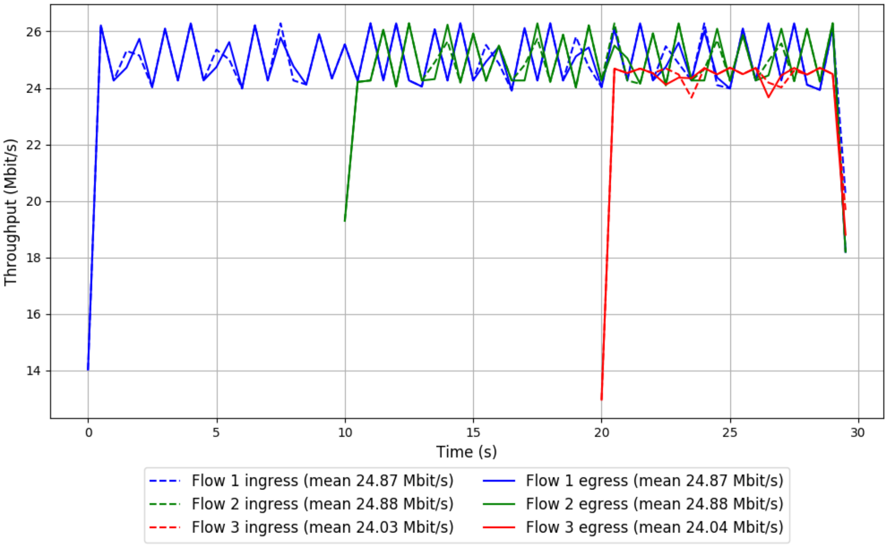


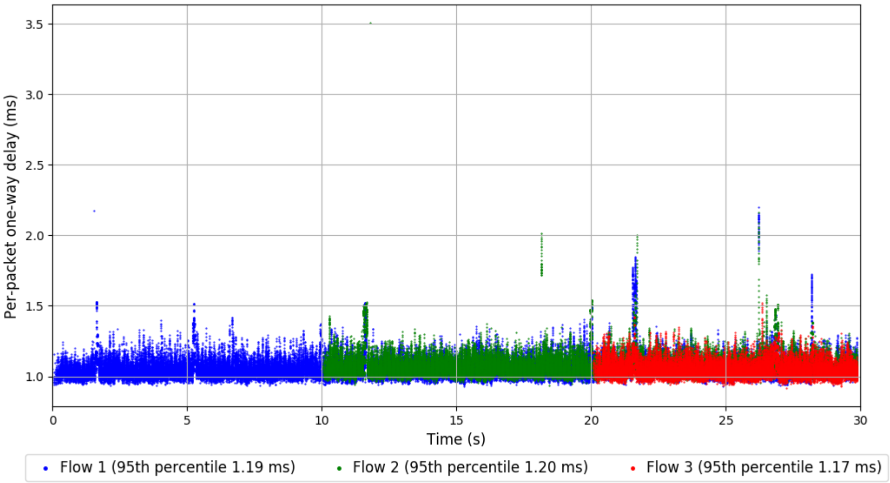
```
Run 8: Statistics of Sprout

Start at: 2018-03-06 15:23:23
End at: 2018-03-06 15:23:53
Local clock offset: 0.642 ms
Remote clock offset: 2.283 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.29 Mbit/s
95th percentile per-packet one-way delay: 1.189 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 24.87 Mbit/s
95th percentile per-packet one-way delay: 1.185 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 24.88 Mbit/s
95th percentile per-packet one-way delay: 1.200 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.04 Mbit/s
95th percentile per-packet one-way delay: 1.172 ms
Loss rate: 0.19%
```

## Run 8: Report of Sprout — Data Link



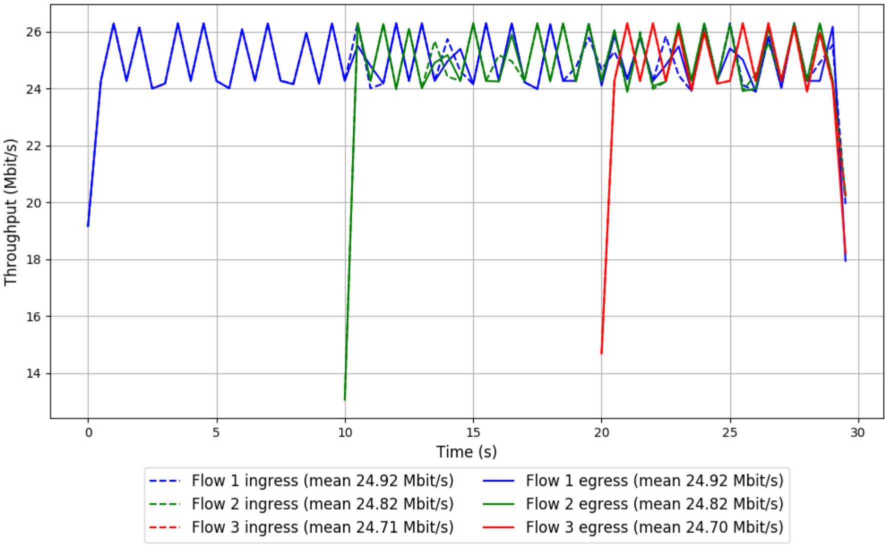


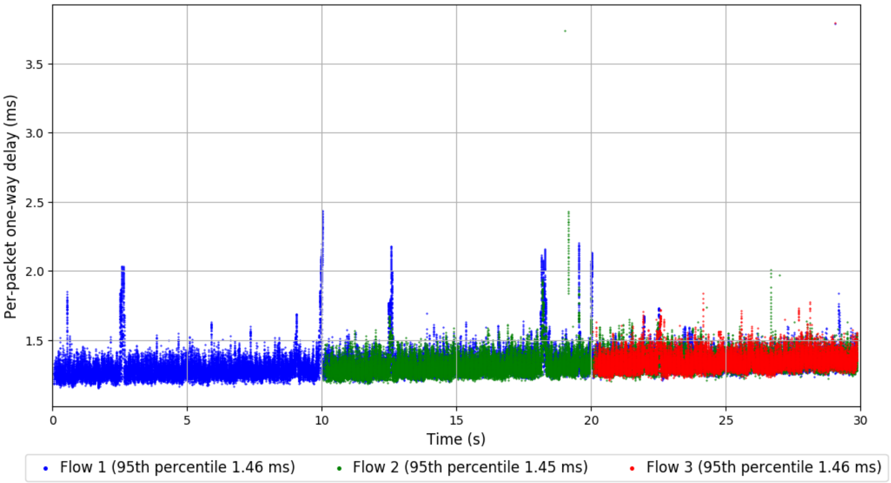
```
Run 9: Statistics of Sprout

Start at: 2018-03-06 15:52:31
End at: 2018-03-06 15:53:01
Local clock offset: 0.702 ms
Remote clock offset: 2.338 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.49 Mbit/s
95th percentile per-packet one-way delay: 1.457 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.92 Mbit/s
95th percentile per-packet one-way delay: 1.458 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 24.82 Mbit/s
95th percentile per-packet one-way delay: 1.454 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.70 Mbit/s
95th percentile per-packet one-way delay: 1.461 ms
Loss rate: 0.42%
```

Run 9: Report of Sprout — Data Link



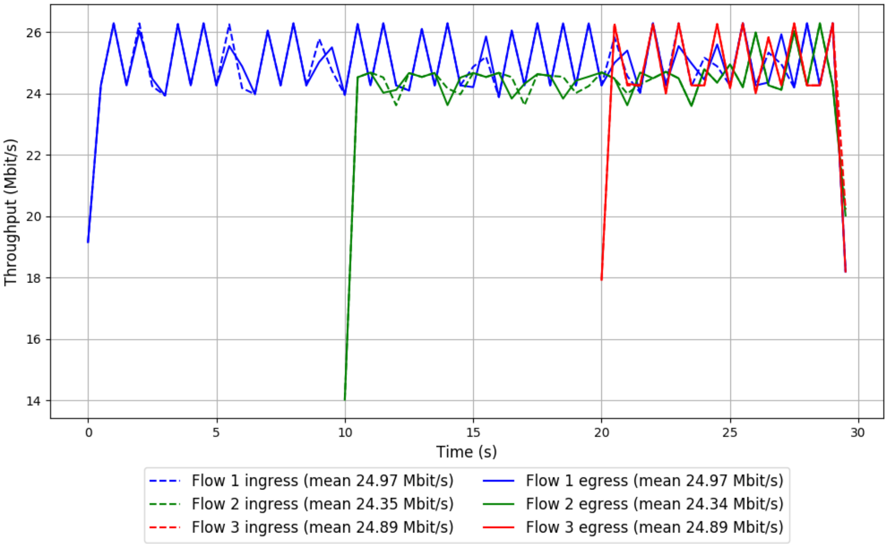


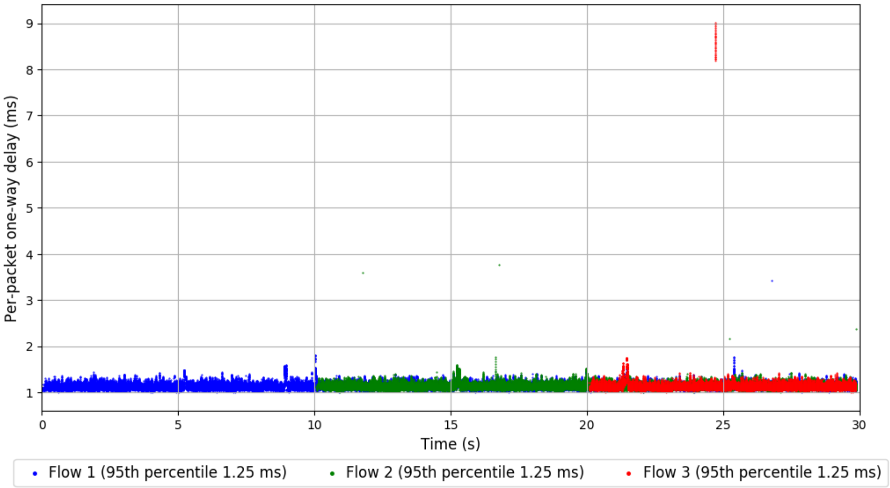
```
Run 10: Statistics of Sprout

Start at: 2018-03-06 16:21:28
End at: 2018-03-06 16:21:58
Local clock offset: -1.827 ms
Remote clock offset: 1.687 ms

# Below is generated by plot.py at 2018-03-06 22:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.28 Mbit/s
95th percentile per-packet one-way delay: 1.247 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 24.97 Mbit/s
95th percentile per-packet one-way delay: 1.248 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.34 Mbit/s
95th percentile per-packet one-way delay: 1.246 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 24.89 Mbit/s
95th percentile per-packet one-way delay: 1.247 ms
Loss rate: 0.41%
```

Run 10: Report of Sprout — Data Link



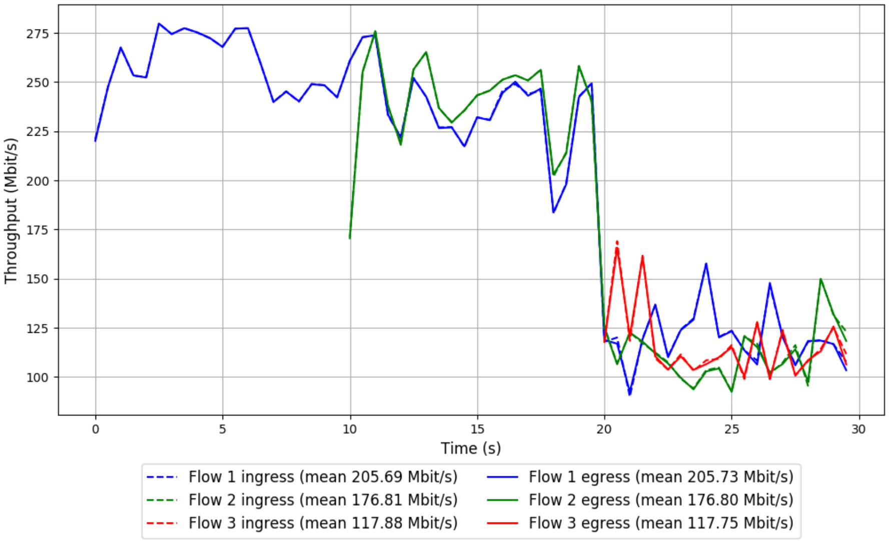


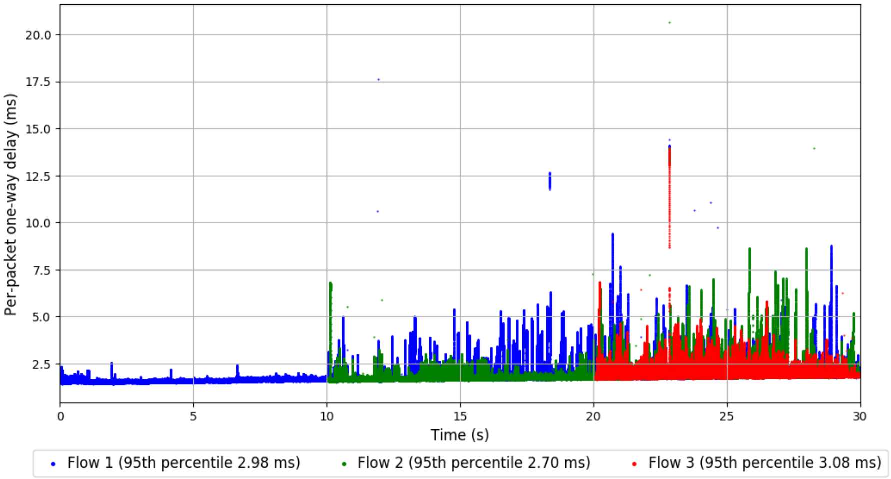
```
Run 1: Statistics of TaoVA-100x

Start at: 2018-03-06 11:57:46
End at: 2018-03-06 11:58:16
Local clock offset: 1.824 ms
Remote clock offset: 4.862 ms

# Below is generated by plot.py at 2018-03-06 23:02:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 362.23 Mbit/s
95th percentile per-packet one-way delay: 2.905 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 205.73 Mbit/s
95th percentile per-packet one-way delay: 2.979 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 176.80 Mbit/s
95th percentile per-packet one-way delay: 2.698 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 117.75 Mbit/s
95th percentile per-packet one-way delay: 3.076 ms
Loss rate: 0.36%
```

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



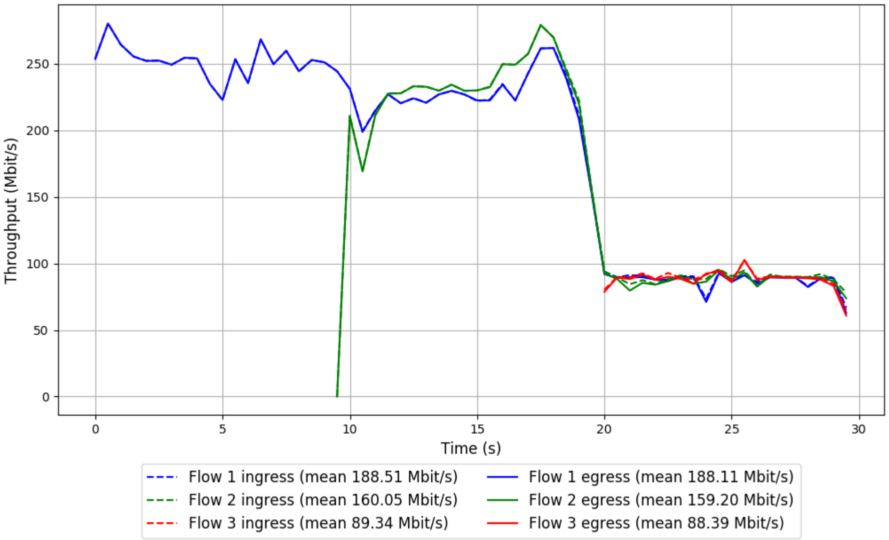


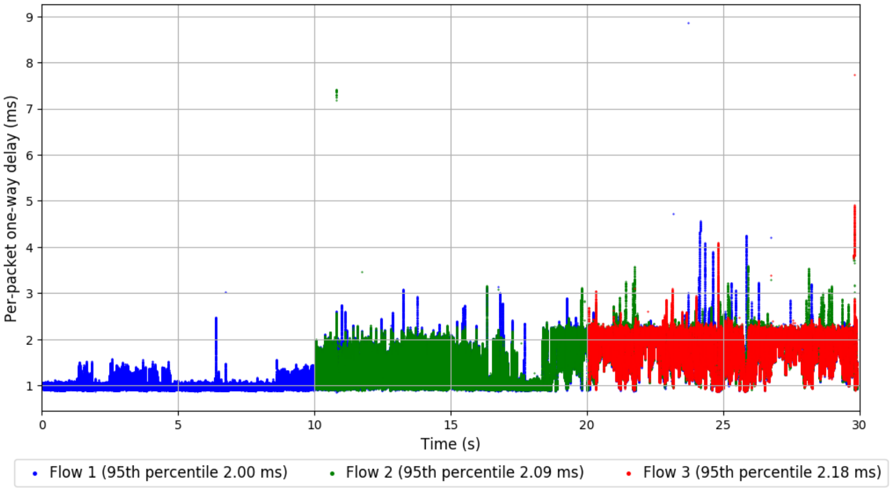
```
Run 2: Statistics of TaoVA-100x

Start at: 2018-03-06 12:27:27
End at: 2018-03-06 12:27:57
Local clock offset: -5.056 ms
Remote clock offset: 6.513 ms

# Below is generated by plot.py at 2018-03-06 23:02:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 323.33 Mbit/s
95th percentile per-packet one-way delay: 2.071 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 188.11 Mbit/s
95th percentile per-packet one-way delay: 1.999 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 159.20 Mbit/s
95th percentile per-packet one-way delay: 2.091 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 88.39 Mbit/s
95th percentile per-packet one-way delay: 2.183 ms
Loss rate: 1.30%
```

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



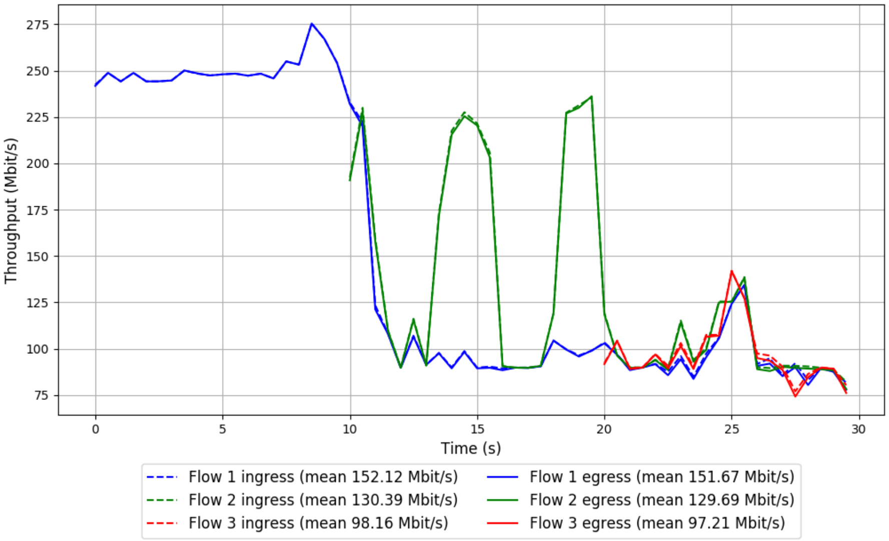


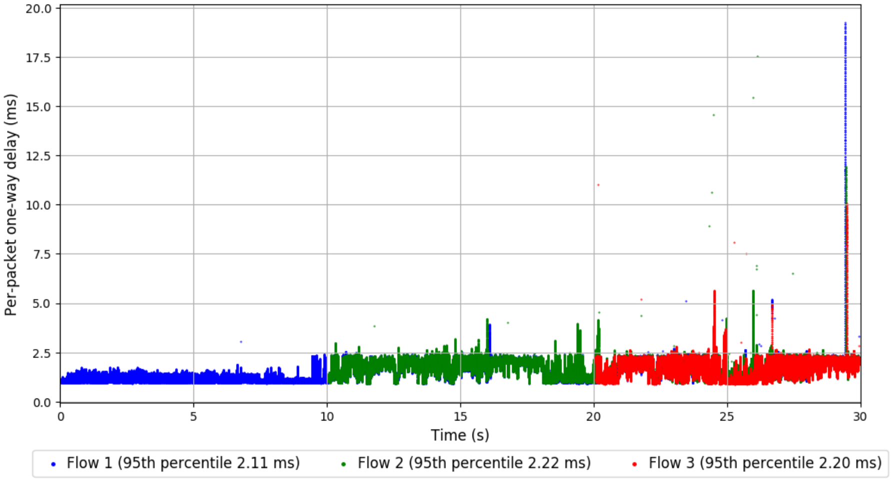
```
Run 3: Statistics of TaoVA-100x

Start at: 2018-03-06 12:57:10
End at: 2018-03-06 12:57:40
Local clock offset: -4.836 ms
Remote clock offset: 4.75 ms

# Below is generated by plot.py at 2018-03-06 23:02:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.06 Mbit/s
95th percentile per-packet one-way delay: 2.165 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 151.67 Mbit/s
95th percentile per-packet one-way delay: 2.108 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 129.69 Mbit/s
95th percentile per-packet one-way delay: 2.217 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 97.21 Mbit/s
95th percentile per-packet one-way delay: 2.203 ms
Loss rate: 1.18%
```

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



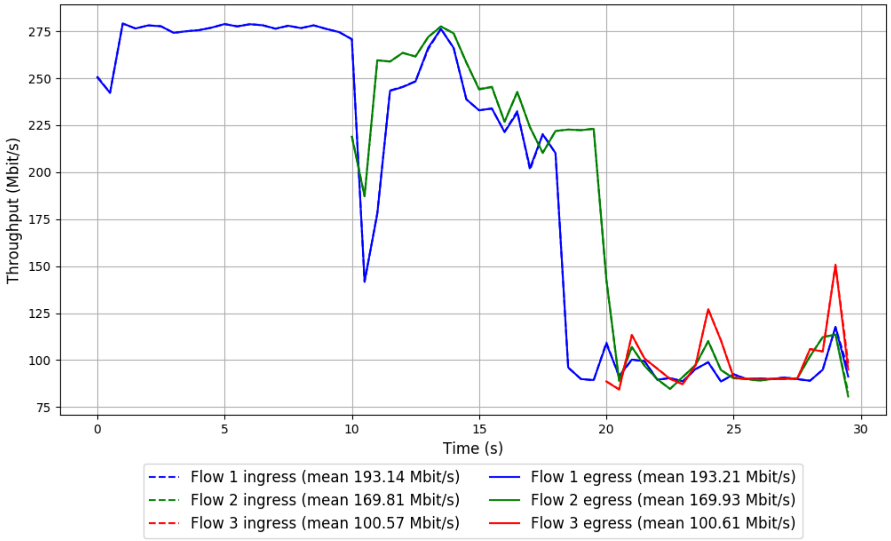


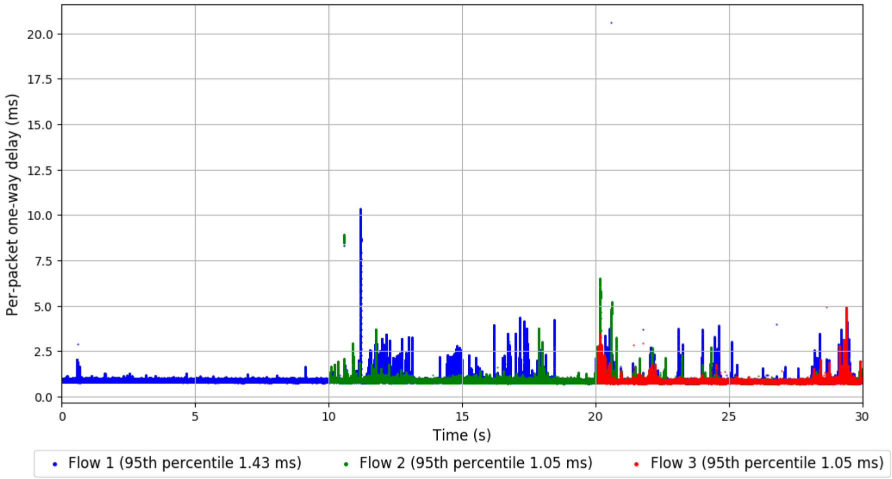
```
Run 4: Statistics of TaoVA-100x

Start at: 2018-03-06 13:26:26
End at: 2018-03-06 13:26:56
Local clock offset: -4.77 ms
Remote clock offset: 0.651 ms

# Below is generated by plot.py at 2018-03-06 23:02:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.45 Mbit/s
95th percentile per-packet one-way delay: 1.196 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 193.21 Mbit/s
95th percentile per-packet one-way delay: 1.432 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 169.93 Mbit/s
95th percentile per-packet one-way delay: 1.054 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 100.61 Mbit/s
95th percentile per-packet one-way delay: 1.054 ms
Loss rate: 0.19%
```

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



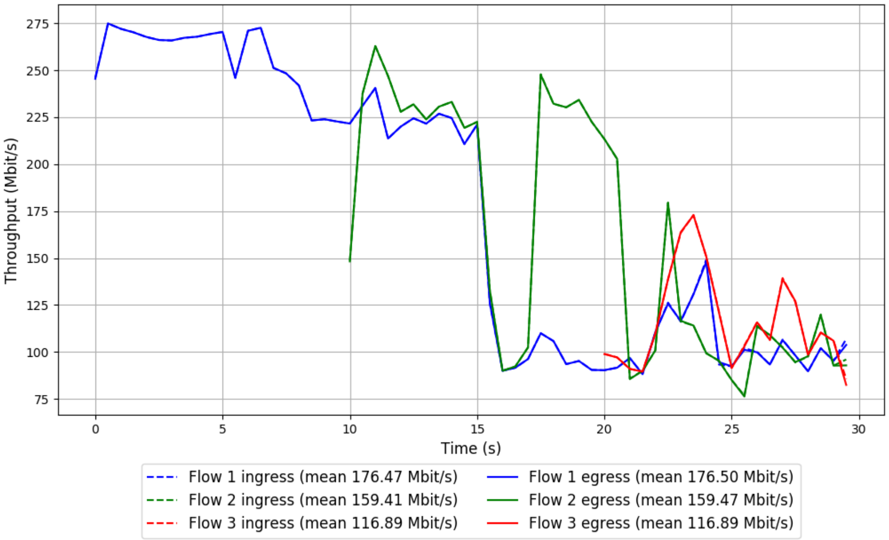


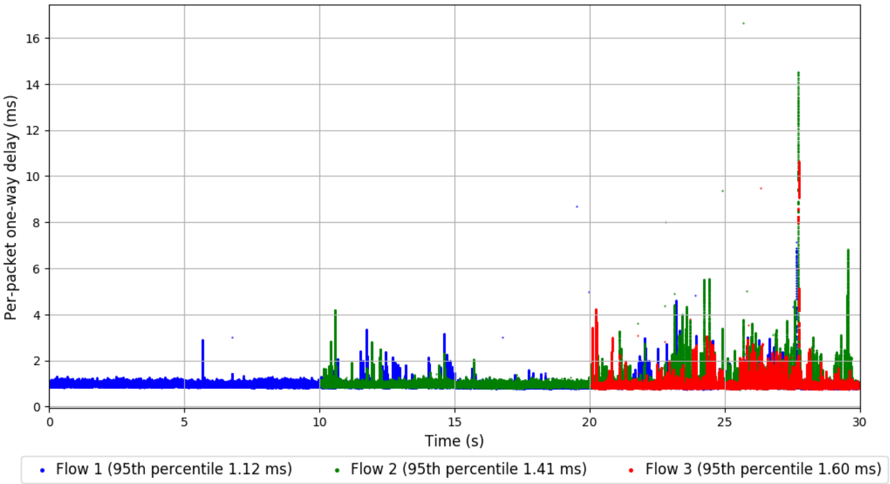
```
Run 5: Statistics of TaoVA-100x

Start at: 2018-03-06 13:56:00
End at: 2018-03-06 13:56:30
Local clock offset: 2.293 ms
Remote clock offset: 0.279 ms

# Below is generated by plot.py at 2018-03-06 23:02:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 321.20 Mbit/s
95th percentile per-packet one-way delay: 1.282 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 176.50 Mbit/s
95th percentile per-packet one-way delay: 1.124 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 159.47 Mbit/s
95th percentile per-packet one-way delay: 1.413 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 116.89 Mbit/s
95th percentile per-packet one-way delay: 1.601 ms
Loss rate: 0.19%
```

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



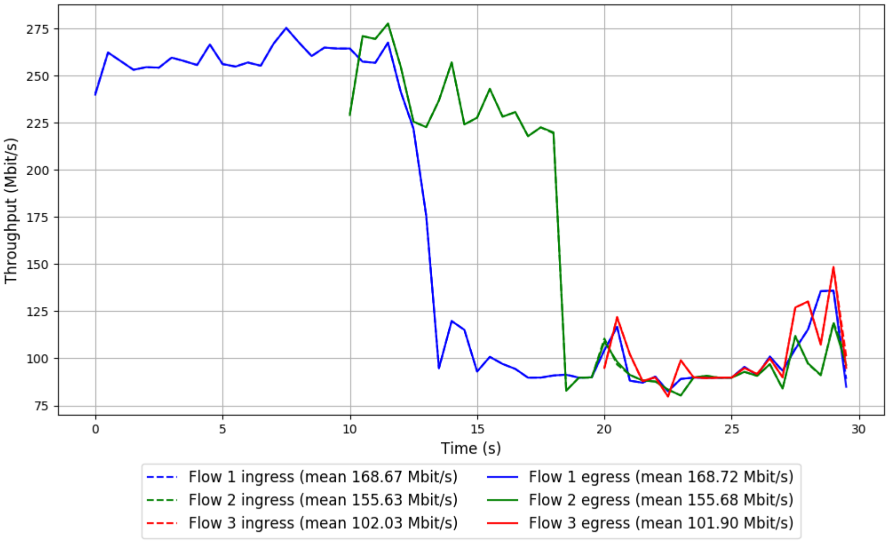


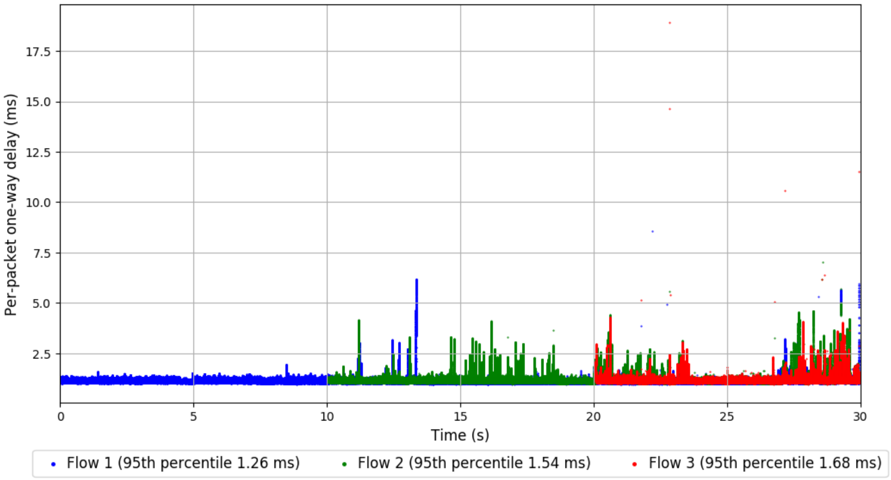
```
Run 6: Statistics of TaoVA-100x

Start at: 2018-03-06 14:25:27
End at: 2018-03-06 14:25:57
Local clock offset: 4.085 ms
Remote clock offset: 1.069 ms

# Below is generated by plot.py at 2018-03-06 23:02:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 305.94 Mbit/s
95th percentile per-packet one-way delay: 1.347 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 168.72 Mbit/s
95th percentile per-packet one-way delay: 1.263 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 155.68 Mbit/s
95th percentile per-packet one-way delay: 1.536 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 101.90 Mbit/s
95th percentile per-packet one-way delay: 1.680 ms
Loss rate: 0.31%
```

Run 6: Report of TaoVA-100x — Data Link



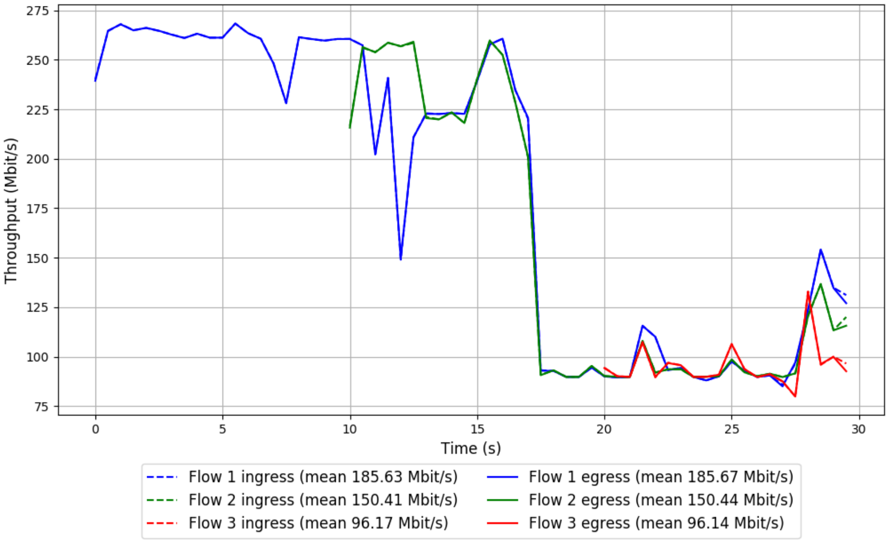


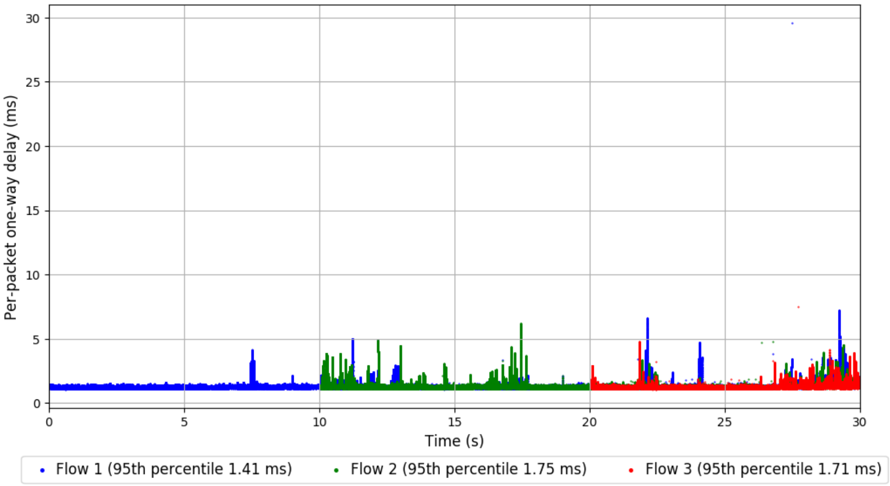
```
Run 7: Statistics of TaoVA-100x

Start at: 2018-03-06 14:54:57
End at: 2018-03-06 14:55:27
Local clock offset: 1.982 ms
Remote clock offset: 2.128 ms

# Below is generated by plot.py at 2018-03-06 23:02:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.50 Mbit/s
95th percentile per-packet one-way delay: 1.519 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 185.67 Mbit/s
95th percentile per-packet one-way delay: 1.407 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 150.44 Mbit/s
95th percentile per-packet one-way delay: 1.753 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 96.14 Mbit/s
95th percentile per-packet one-way delay: 1.711 ms
Loss rate: 0.22%
```

Run 7: Report of TaoVA-100x — Data Link



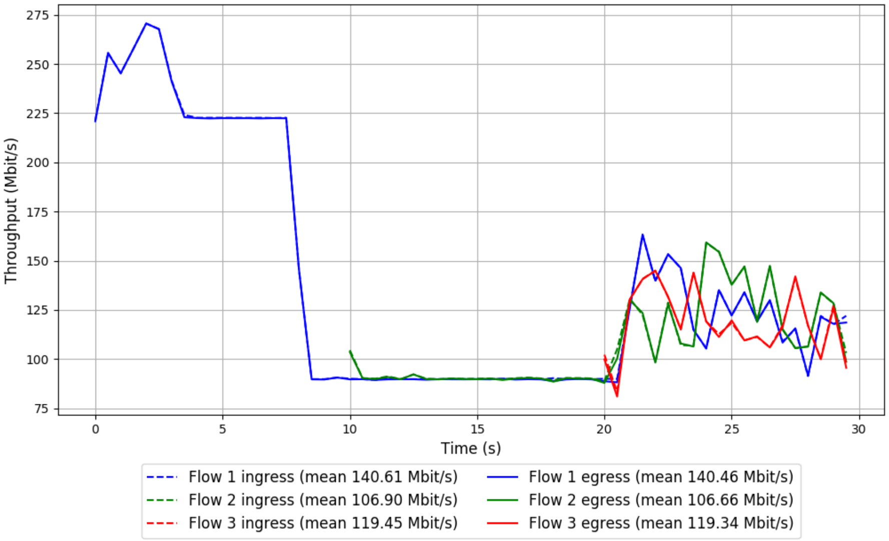


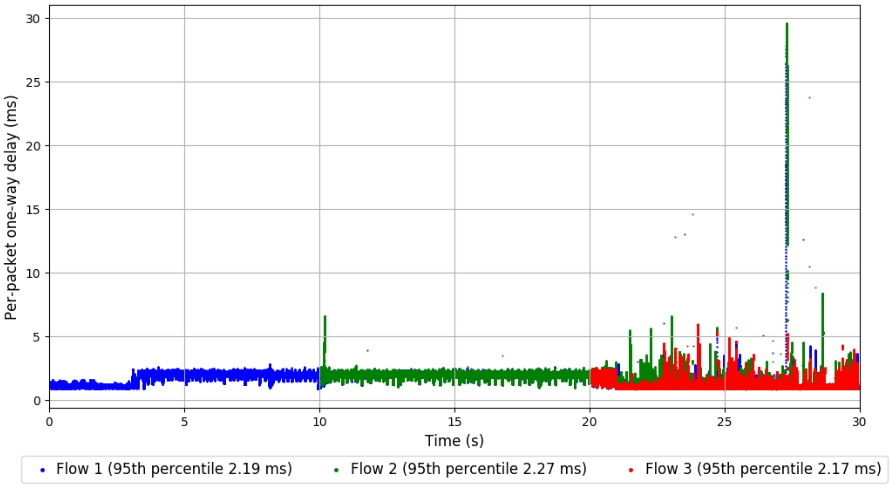
```
Run 8: Statistics of TaoVA-100x

Start at: 2018-03-06 15:29:16
End at: 2018-03-06 15:29:46
Local clock offset: 0.684 ms
Remote clock offset: 2.378 ms

# Below is generated by plot.py at 2018-03-06 23:03:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 250.86 Mbit/s
95th percentile per-packet one-way delay: 2.204 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 140.46 Mbit/s
95th percentile per-packet one-way delay: 2.190 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 106.66 Mbit/s
95th percentile per-packet one-way delay: 2.266 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 119.34 Mbit/s
95th percentile per-packet one-way delay: 2.171 ms
Loss rate: 0.34%
```

Run 8: Report of TaoVA-100x — Data Link



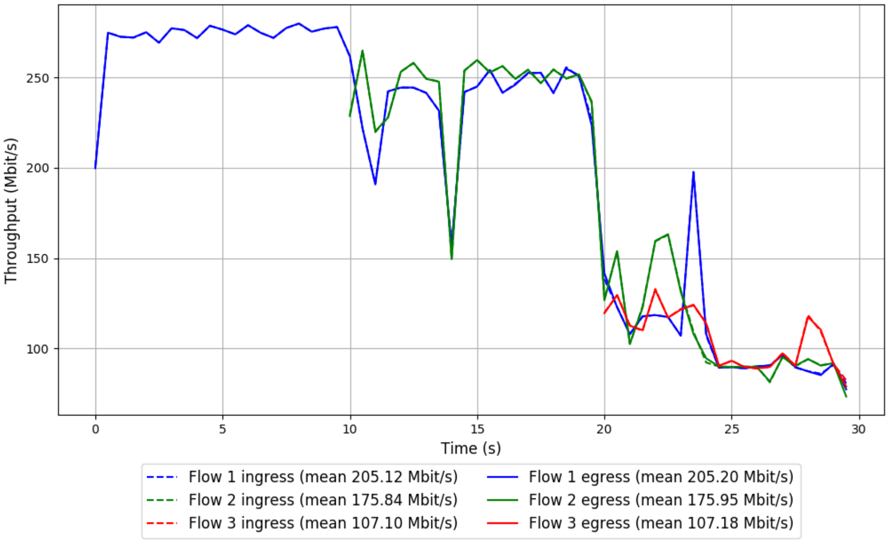


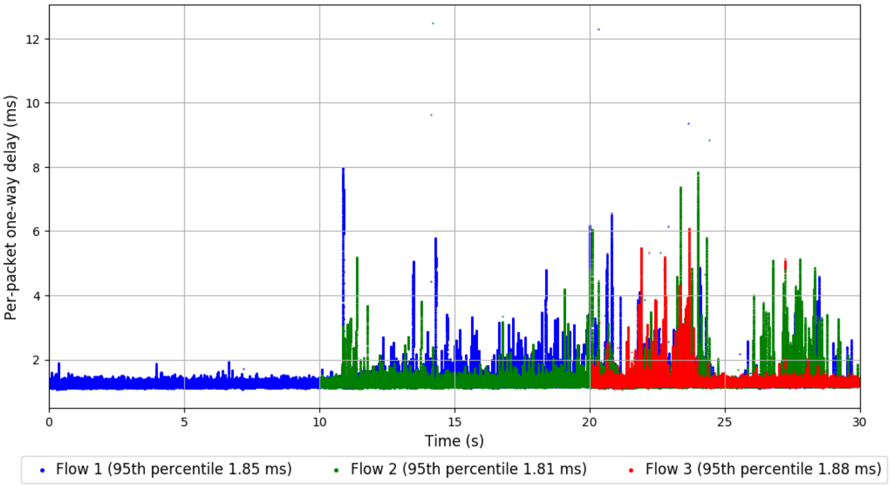
```
Run 9: Statistics of TaoVA-100x

Start at: 2018-03-06 15:58:29
End at: 2018-03-06 15:58:59
Local clock offset: -0.297 ms
Remote clock offset: 2.366 ms

# Below is generated by plot.py at 2018-03-06 23:09:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 357.58 Mbit/s
95th percentile per-packet one-way delay: 1.843 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 205.20 Mbit/s
95th percentile per-packet one-way delay: 1.850 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 175.95 Mbit/s
95th percentile per-packet one-way delay: 1.813 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 107.18 Mbit/s
95th percentile per-packet one-way delay: 1.875 ms
Loss rate: 0.17%
```

## Run 9: Report of TaoVA-100x — Data Link



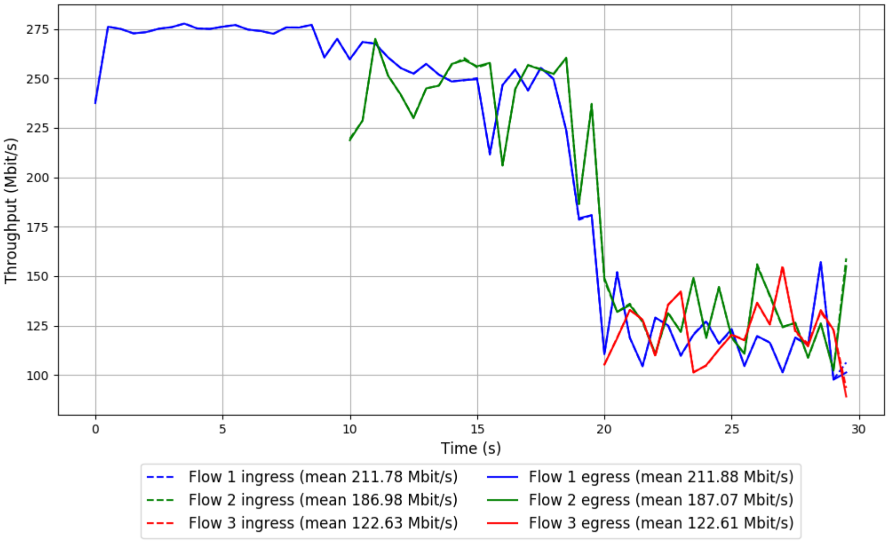


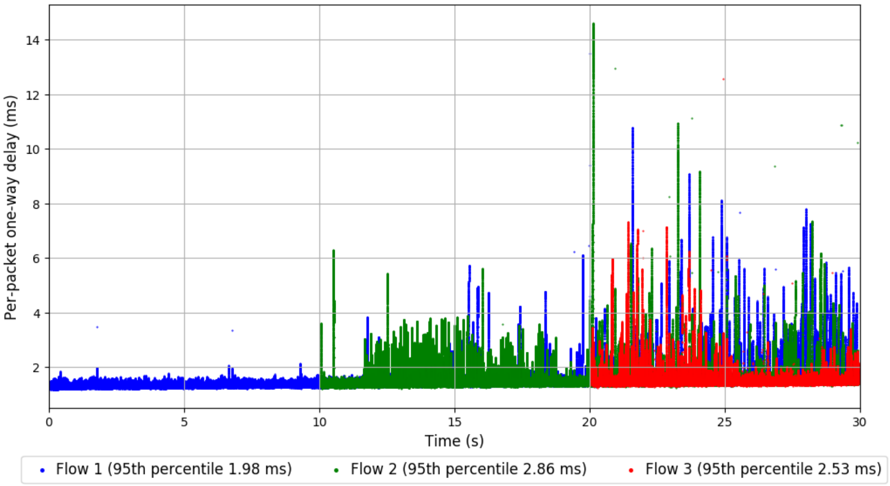
```
Run 10: Statistics of TaoVA-100x

Start at: 2018-03-06 16:27:24
End at: 2018-03-06 16:27:54
Local clock offset: -2.424 ms
Remote clock offset: 1.541 ms

# Below is generated by plot.py at 2018-03-06 23:11:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 376.77 Mbit/s
95th percentile per-packet one-way delay: 2.486 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 211.88 Mbit/s
95th percentile per-packet one-way delay: 1.983 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 187.07 Mbit/s
95th percentile per-packet one-way delay: 2.862 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 122.61 Mbit/s
95th percentile per-packet one-way delay: 2.526 ms
Loss rate: 0.19%
```

Run 10: Report of TaoVA-100x — Data Link



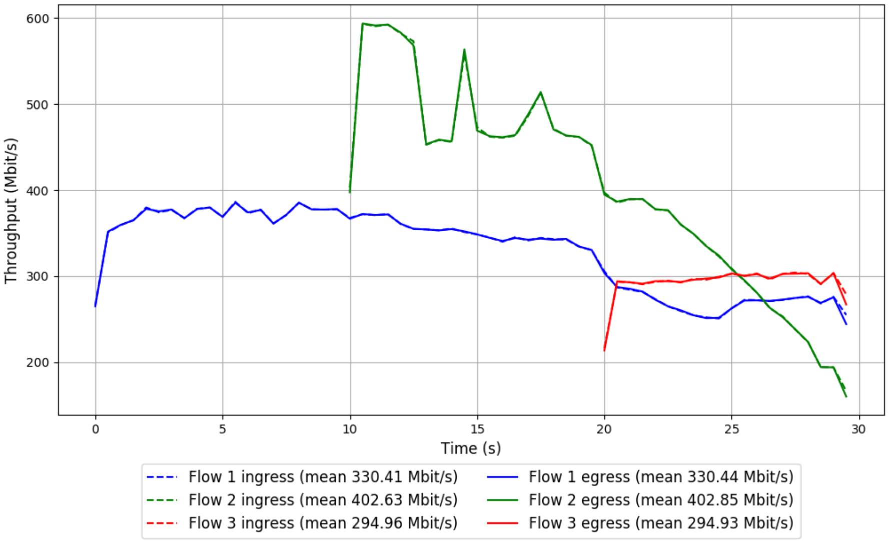


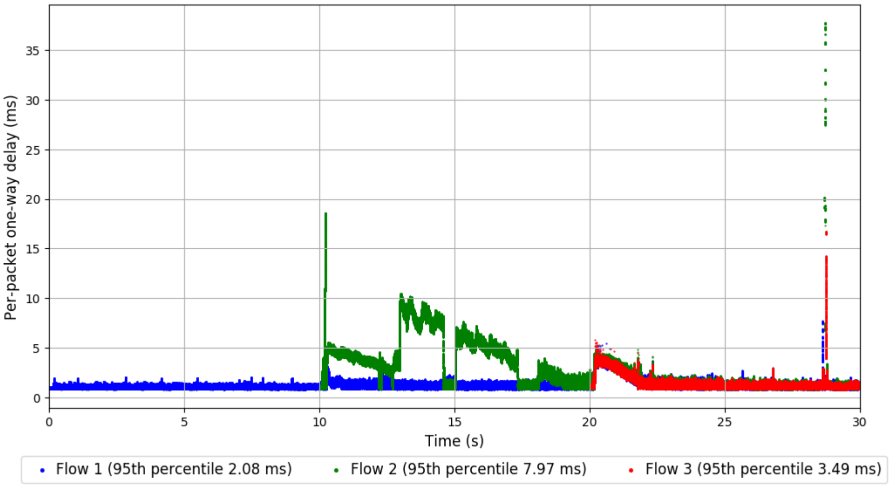
```
Run 1: Statistics of TCP Vegas

Start at: 2018-03-06 11:50:05
End at: 2018-03-06 11:50:35
Local clock offset: 5.353 ms
Remote clock offset: 4.453 ms

# Below is generated by plot.py at 2018-03-06 23:11:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 696.16 Mbit/s
95th percentile per-packet one-way delay: 5.750 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 330.44 Mbit/s
95th percentile per-packet one-way delay: 2.085 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 402.85 Mbit/s
95th percentile per-packet one-way delay: 7.966 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 294.93 Mbit/s
95th percentile per-packet one-way delay: 3.489 ms
Loss rate: 0.21%
```

## Run 1: Report of TCP Vegas — Data Link



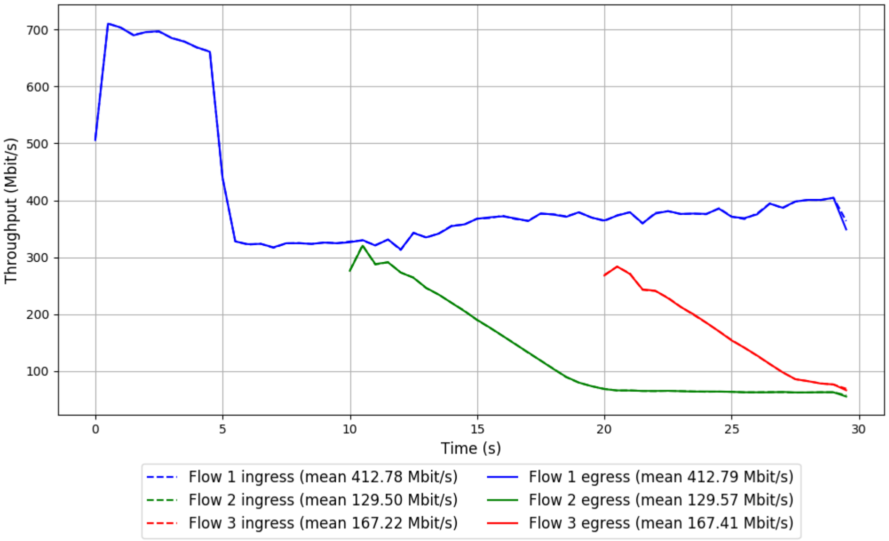


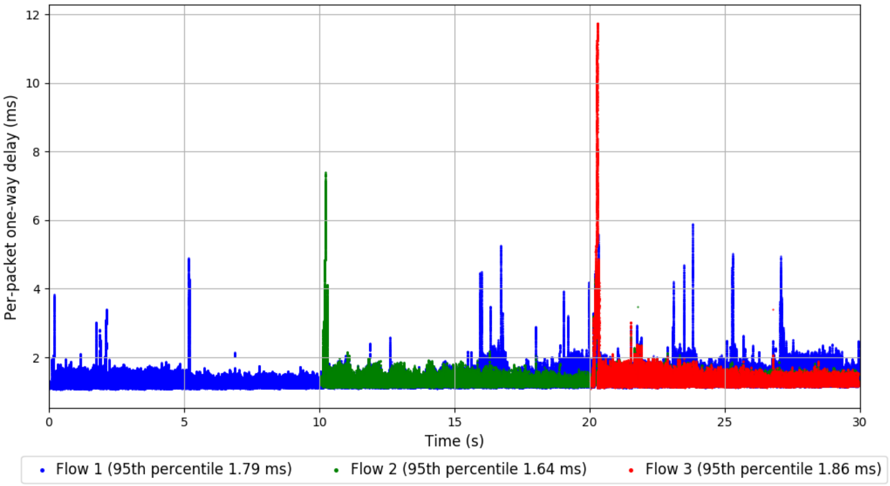
```
Run 2: Statistics of TCP Vegas

Start at: 2018-03-06 12:19:56
End at: 2018-03-06 12:20:26
Local clock offset: -4.576 ms
Remote clock offset: 6.031 ms

# Below is generated by plot.py at 2018-03-06 23:11:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 554.47 Mbit/s
95th percentile per-packet one-way delay: 1.776 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 412.79 Mbit/s
95th percentile per-packet one-way delay: 1.787 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 129.57 Mbit/s
95th percentile per-packet one-way delay: 1.640 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 167.41 Mbit/s
95th percentile per-packet one-way delay: 1.863 ms
Loss rate: 0.09%
```

## Run 2: Report of TCP Vegas — Data Link



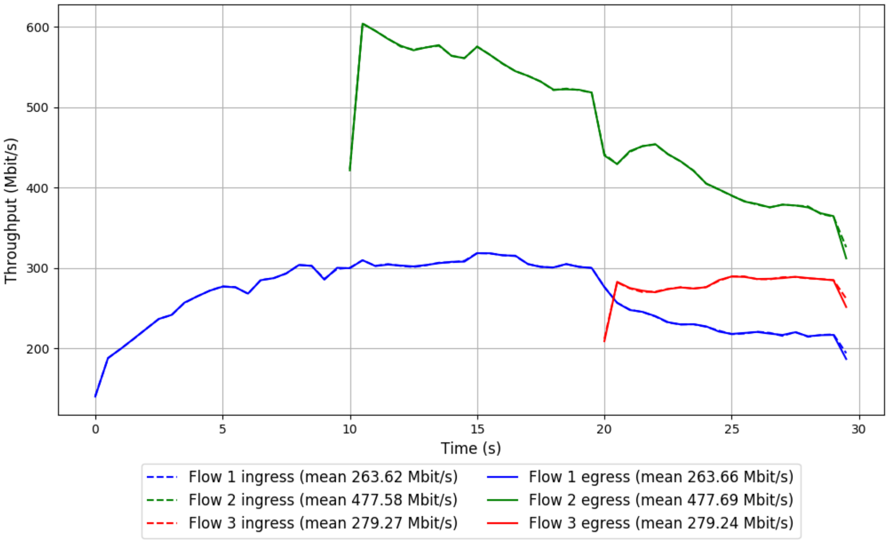


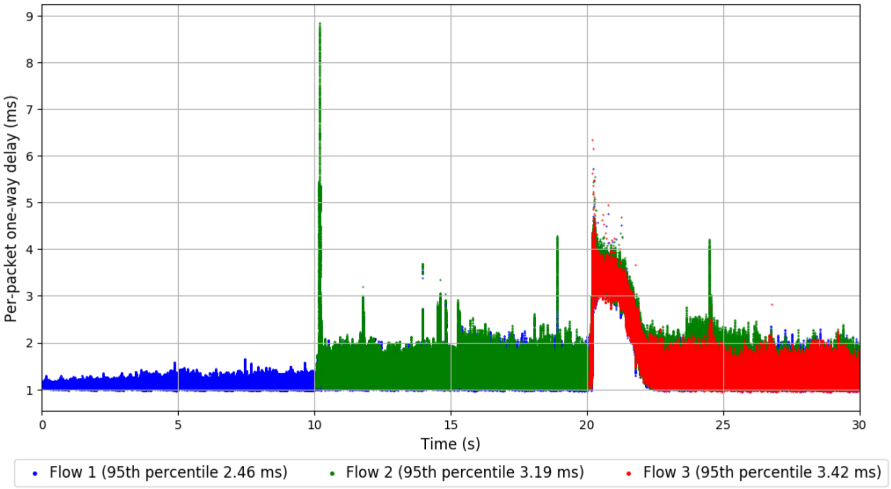
```
Run 3: Statistics of TCP Vegas

Start at: 2018-03-06 12:49:32
End at: 2018-03-06 12:50:02
Local clock offset: -4.784 ms
Remote clock offset: 5.062 ms

# Below is generated by plot.py at 2018-03-06 23:11:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 673.99 Mbit/s
95th percentile per-packet one-way delay: 3.187 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 263.66 Mbit/s
95th percentile per-packet one-way delay: 2.457 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 477.69 Mbit/s
95th percentile per-packet one-way delay: 3.185 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 279.24 Mbit/s
95th percentile per-packet one-way delay: 3.425 ms
Loss rate: 0.21%
```

Run 3: Report of TCP Vegas — Data Link



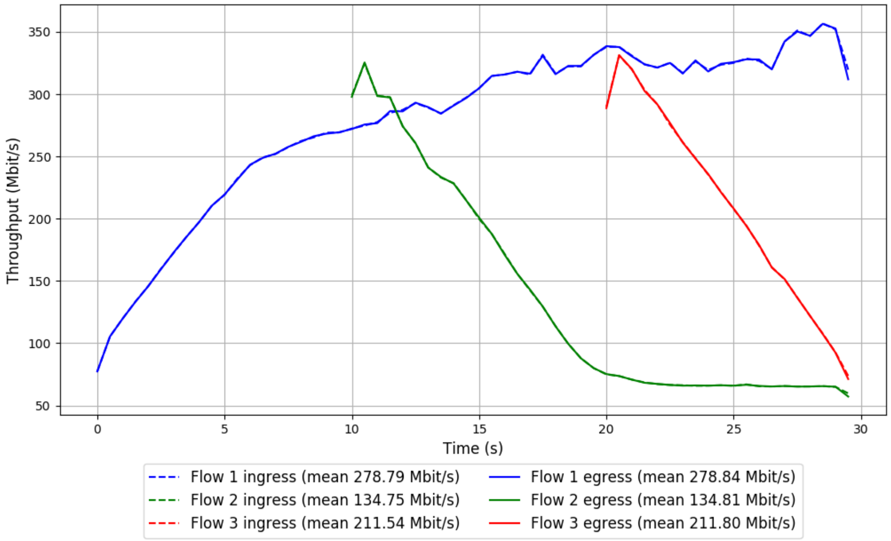


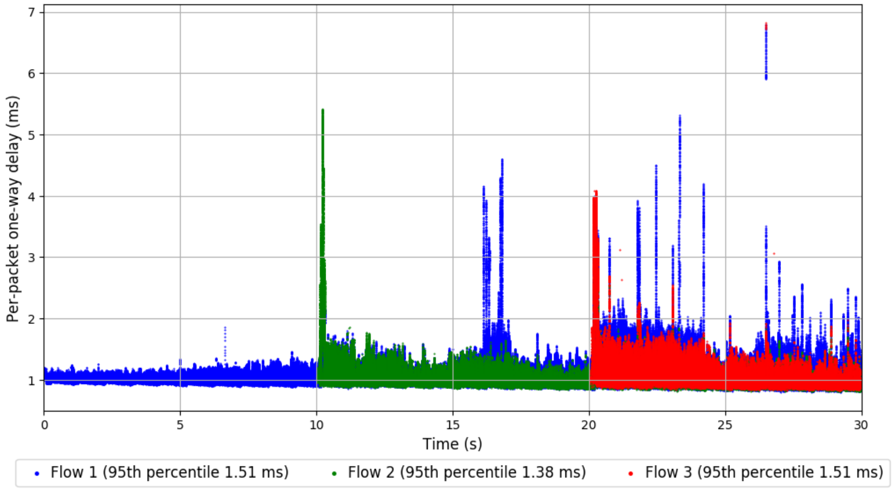
```
Run 4: Statistics of TCP Vegas

Start at: 2018-03-06 13:18:55
End at: 2018-03-06 13:19:25
Local clock offset: -4.675 ms
Remote clock offset: 2.009 ms

# Below is generated by plot.py at 2018-03-06 23:11:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 438.73 Mbit/s
95th percentile per-packet one-way delay: 1.496 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 278.84 Mbit/s
95th percentile per-packet one-way delay: 1.514 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 134.81 Mbit/s
95th percentile per-packet one-way delay: 1.377 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 211.80 Mbit/s
95th percentile per-packet one-way delay: 1.511 ms
Loss rate: 0.07%
```

## Run 4: Report of TCP Vegas — Data Link



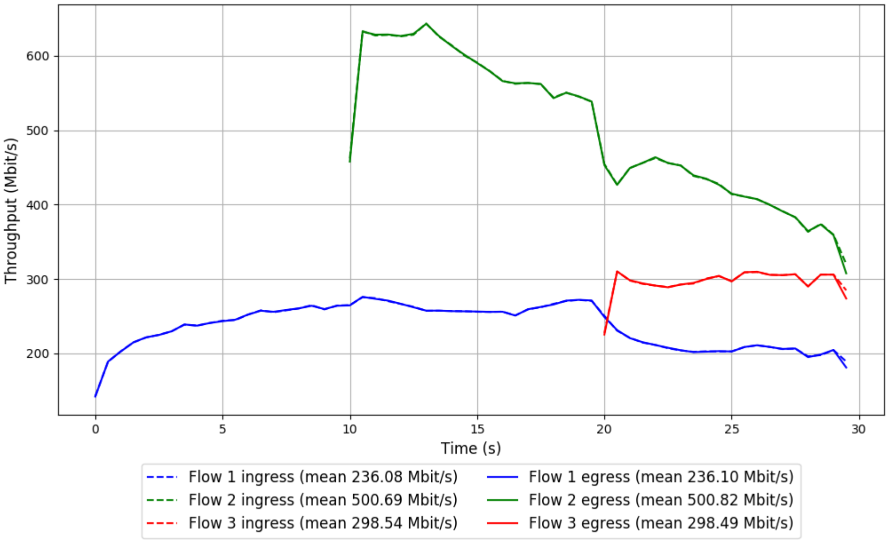


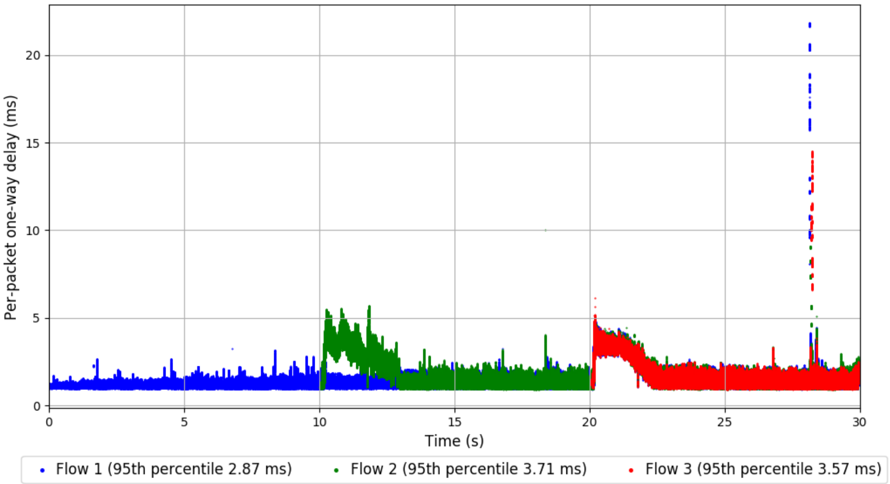
```
Run 5: Statistics of TCP Vegas

Start at: 2018-03-06 13:48:17
End at: 2018-03-06 13:48:47
Local clock offset: 0.724 ms
Remote clock offset: -0.727 ms

# Below is generated by plot.py at 2018-03-06 23:11:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 668.17 Mbit/s
95th percentile per-packet one-way delay: 3.550 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 236.10 Mbit/s
95th percentile per-packet one-way delay: 2.867 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 500.82 Mbit/s
95th percentile per-packet one-way delay: 3.707 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 298.49 Mbit/s
95th percentile per-packet one-way delay: 3.573 ms
Loss rate: 0.21%
```

## Run 5: Report of TCP Vegas — Data Link



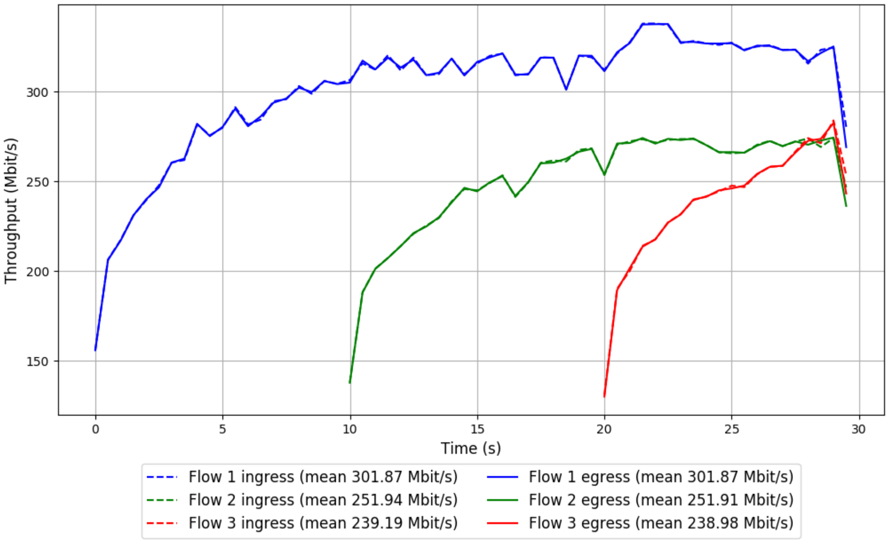


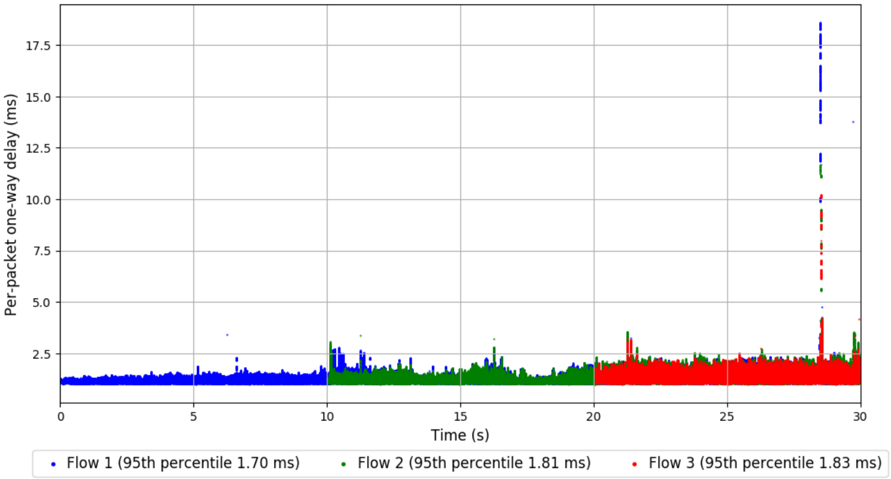
```
Run 6: Statistics of TCP Vegas

Start at: 2018-03-06 14:17:45
End at: 2018-03-06 14:18:15
Local clock offset: 3.893 ms
Remote clock offset: 0.452 ms

# Below is generated by plot.py at 2018-03-06 23:11:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 548.65 Mbit/s
95th percentile per-packet one-way delay: 1.764 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 301.87 Mbit/s
95th percentile per-packet one-way delay: 1.703 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 251.91 Mbit/s
95th percentile per-packet one-way delay: 1.808 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 238.98 Mbit/s
95th percentile per-packet one-way delay: 1.831 ms
Loss rate: 0.25%
```

Run 6: Report of TCP Vegas — Data Link



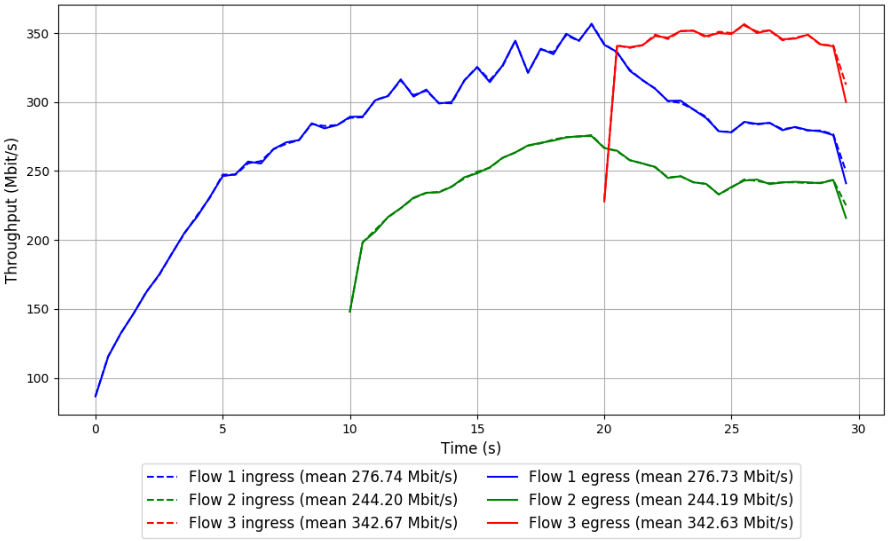


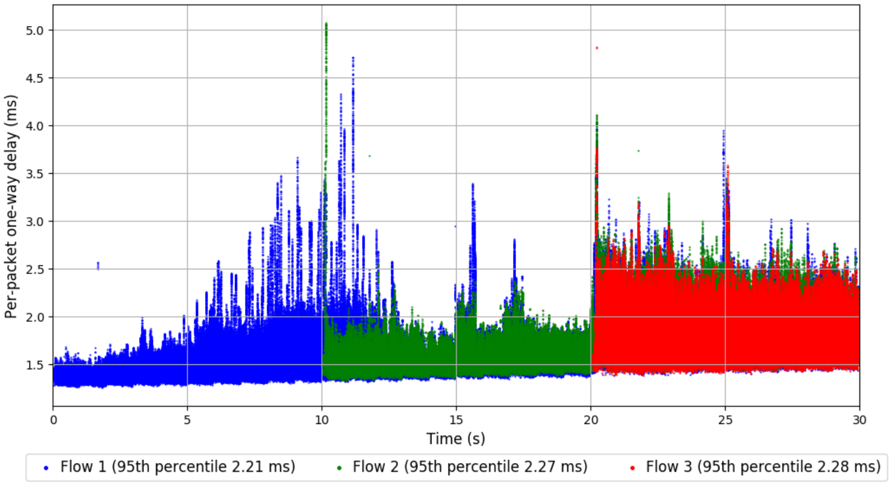
```
Run 7: Statistics of TCP Vegas

Start at: 2018-03-06 14:47:20
End at: 2018-03-06 14:47:50
Local clock offset: 4.053 ms
Remote clock offset: 2.041 ms

# Below is generated by plot.py at 2018-03-06 23:15:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 552.43 Mbit/s
95th percentile per-packet one-way delay: 2.248 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 276.73 Mbit/s
95th percentile per-packet one-way delay: 2.212 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 244.19 Mbit/s
95th percentile per-packet one-way delay: 2.265 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 342.63 Mbit/s
95th percentile per-packet one-way delay: 2.277 ms
Loss rate: 0.21%
```

Run 7: Report of TCP Vegas — Data Link



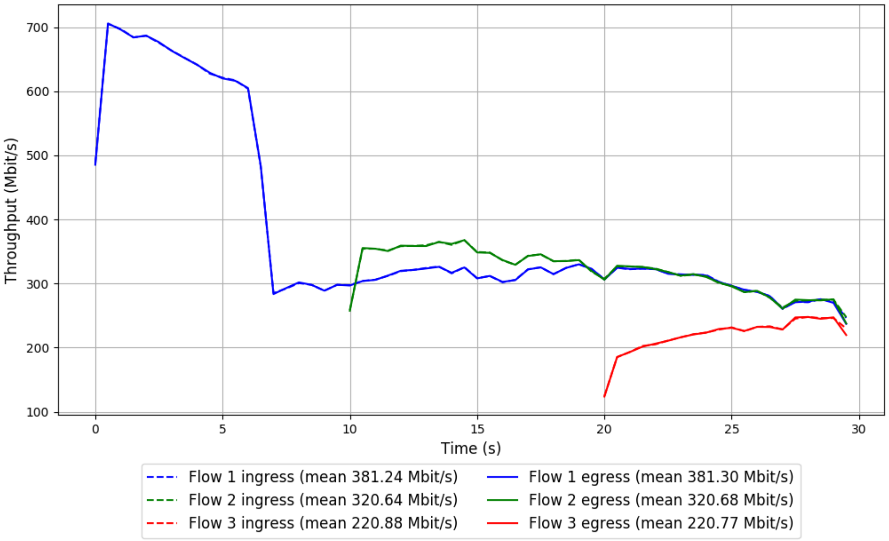


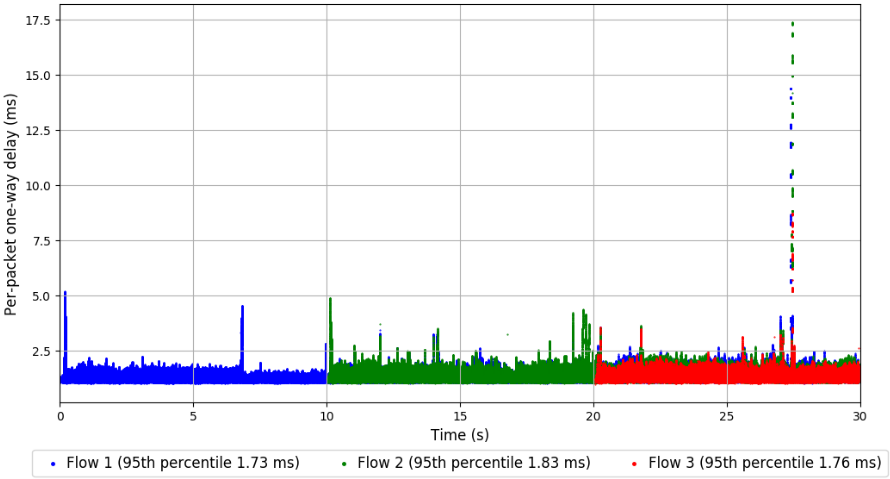
```
Run 8: Statistics of TCP Vegas

Start at: 2018-03-06 15:21:39
End at: 2018-03-06 15:22:09
Local clock offset: 0.752 ms
Remote clock offset: 2.258 ms

# Below is generated by plot.py at 2018-03-06 23:18:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 667.67 Mbit/s
95th percentile per-packet one-way delay: 1.773 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 381.30 Mbit/s
95th percentile per-packet one-way delay: 1.731 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 320.68 Mbit/s
95th percentile per-packet one-way delay: 1.832 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 220.77 Mbit/s
95th percentile per-packet one-way delay: 1.757 ms
Loss rate: 0.23%
```

Run 8: Report of TCP Vegas — Data Link



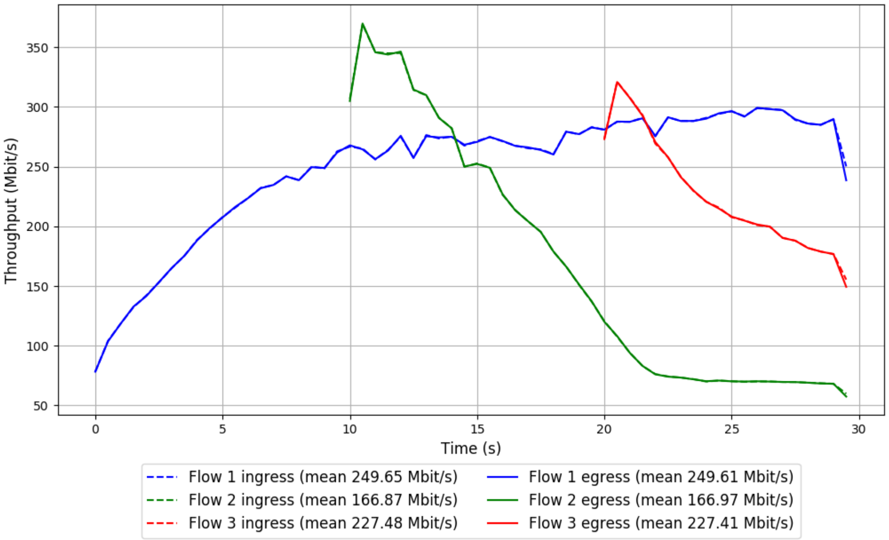


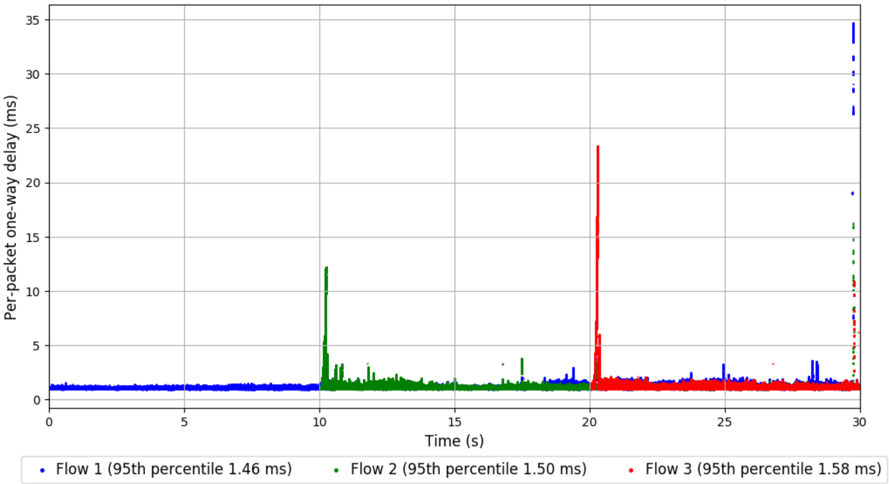
```
Run 9: Statistics of TCP Vegas

Start at: 2018-03-06 15:50:52
End at: 2018-03-06 15:51:22
Local clock offset: 0.69 ms
Remote clock offset: 2.426 ms

# Below is generated by plot.py at 2018-03-06 23:18:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 435.95 Mbit/s
95th percentile per-packet one-way delay: 1.485 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 249.61 Mbit/s
95th percentile per-packet one-way delay: 1.457 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 166.97 Mbit/s
95th percentile per-packet one-way delay: 1.503 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 227.41 Mbit/s
95th percentile per-packet one-way delay: 1.576 ms
Loss rate: 0.14%
```

## Run 9: Report of TCP Vegas — Data Link



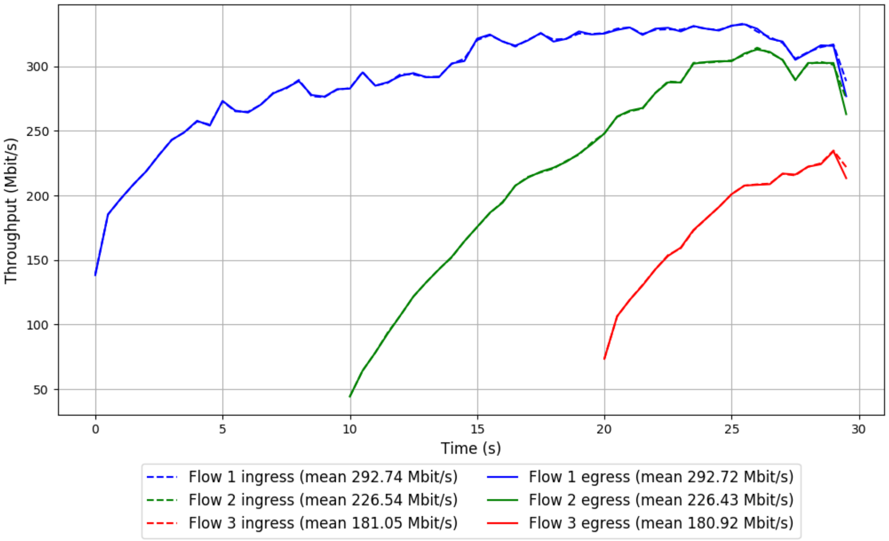


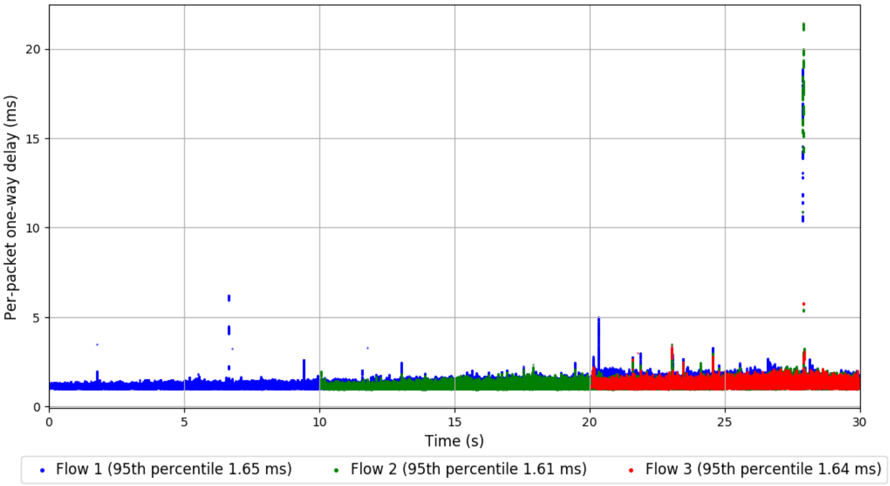
```
Run 10: Statistics of TCP Vegas

Start at: 2018-03-06 16:19:50
End at: 2018-03-06 16:20:20
Local clock offset: -1.756 ms
Remote clock offset: 1.725 ms

# Below is generated by plot.py at 2018-03-06 23:18:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 503.29 Mbit/s
95th percentile per-packet one-way delay: 1.635 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 292.72 Mbit/s
95th percentile per-packet one-way delay: 1.650 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 226.43 Mbit/s
95th percentile per-packet one-way delay: 1.606 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 180.92 Mbit/s
95th percentile per-packet one-way delay: 1.638 ms
Loss rate: 0.28%
```

## Run 10: Report of TCP Vegas — Data Link



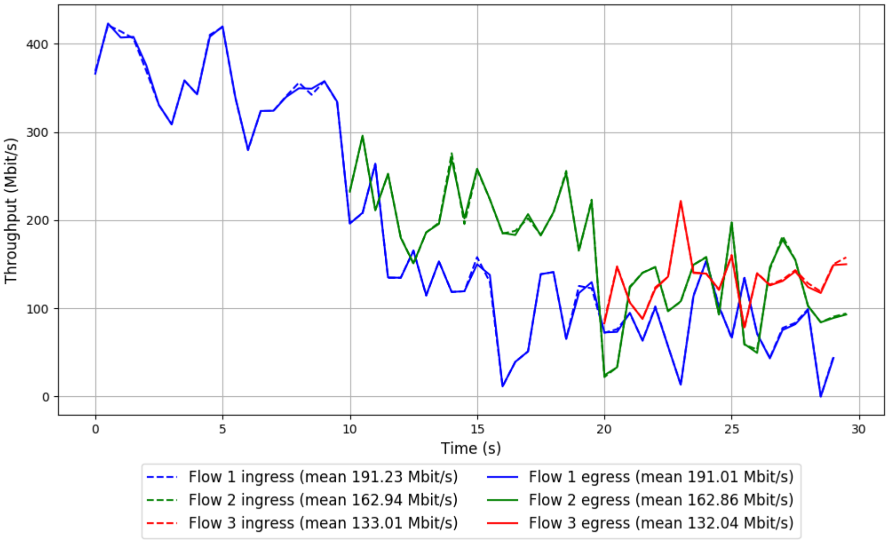


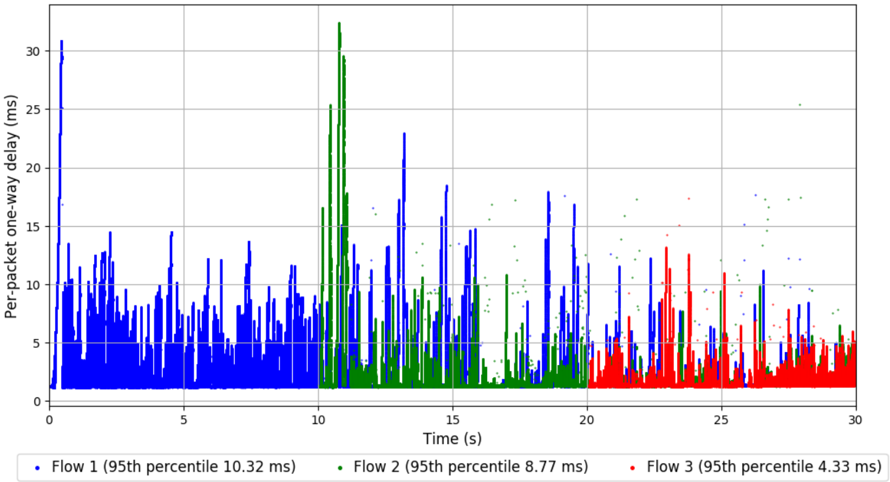
```
Run 1: Statistics of Verus

Start at: 2018-03-06 12:07:31
End at: 2018-03-06 12:08:01
Local clock offset: -2.702 ms
Remote clock offset: 5.474 ms

# Below is generated by plot.py at 2018-03-06 23:18:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.12 Mbit/s
95th percentile per-packet one-way delay: 9.568 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 191.01 Mbit/s
95th percentile per-packet one-way delay: 10.319 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 162.86 Mbit/s
95th percentile per-packet one-way delay: 8.772 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 132.04 Mbit/s
95th percentile per-packet one-way delay: 4.329 ms
Loss rate: 0.88%
```

Run 1: Report of Verus — Data Link



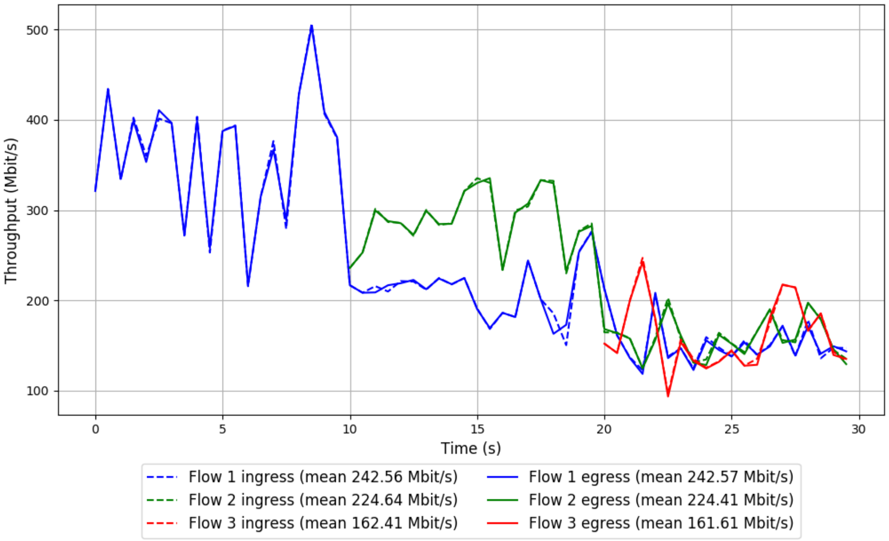


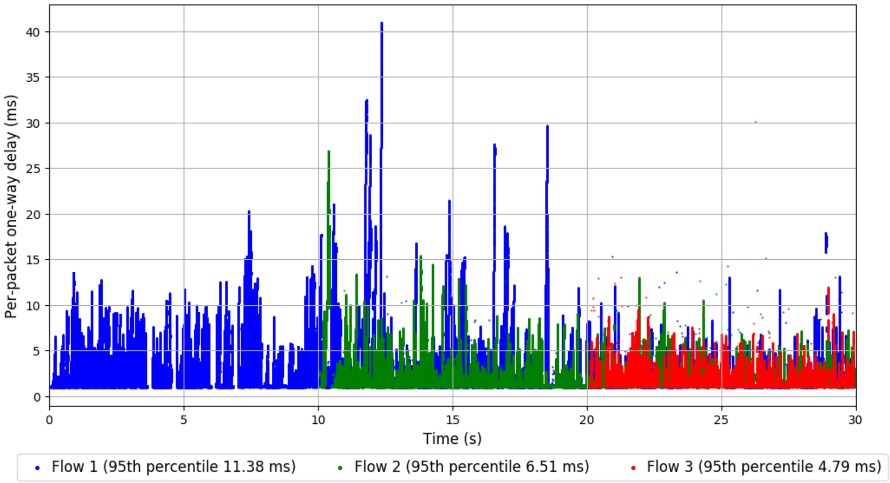
```
Run 2: Statistics of Verus

Start at: 2018-03-06 12:37:01
End at: 2018-03-06 12:37:31
Local clock offset: -4.798 ms
Remote clock offset: 6.957 ms

# Below is generated by plot.py at 2018-03-06 23:18:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.13 Mbit/s
95th percentile per-packet one-way delay: 9.086 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 242.57 Mbit/s
95th percentile per-packet one-way delay: 11.379 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 224.41 Mbit/s
95th percentile per-packet one-way delay: 6.507 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 161.61 Mbit/s
95th percentile per-packet one-way delay: 4.794 ms
Loss rate: 0.43%
```

Run 2: Report of Verus — Data Link



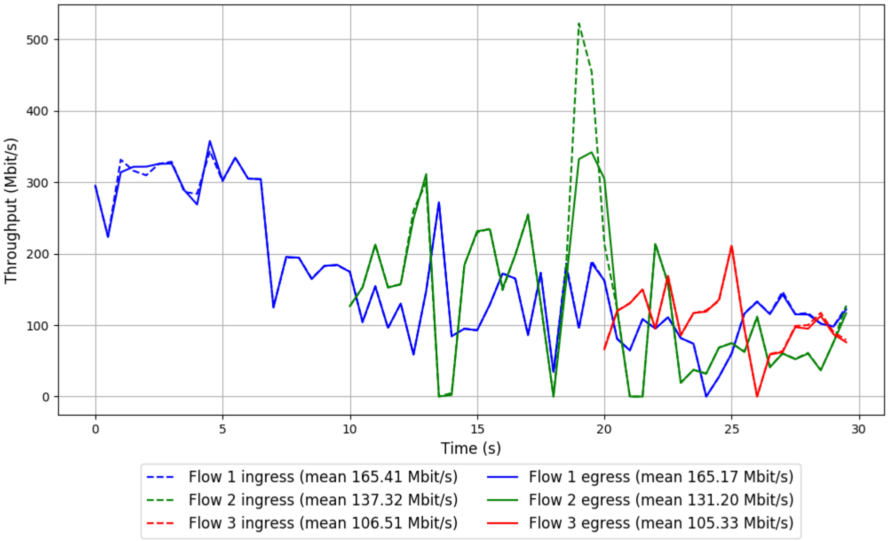


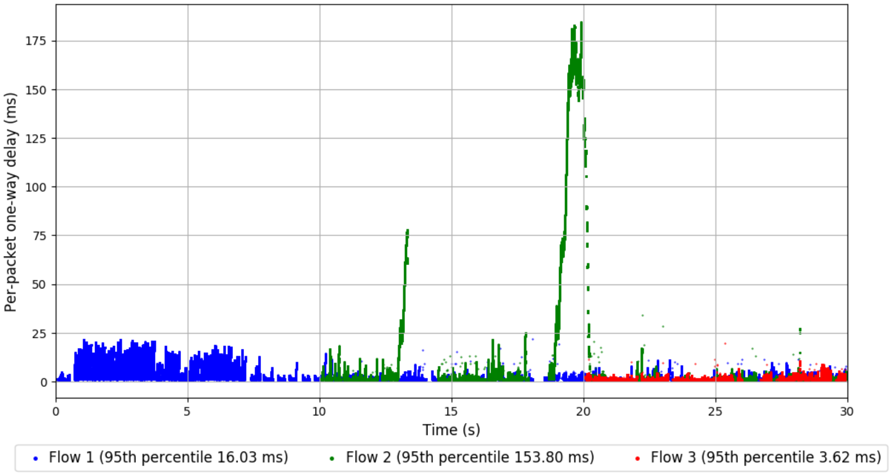
```
Run 3: Statistics of Verus

Start at: 2018-03-06 13:06:43
End at: 2018-03-06 13:07:13
Local clock offset: -4.756 ms
Remote clock offset: 4.502 ms

# Below is generated by plot.py at 2018-03-06 23:18:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 287.25 Mbit/s
95th percentile per-packet one-way delay: 55.028 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 165.17 Mbit/s
95th percentile per-packet one-way delay: 16.028 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 131.20 Mbit/s
95th percentile per-packet one-way delay: 153.801 ms
Loss rate: 4.55%
-- Flow 3:
Average throughput: 105.33 Mbit/s
95th percentile per-packet one-way delay: 3.623 ms
Loss rate: 1.11%
```

Run 3: Report of Verus — Data Link



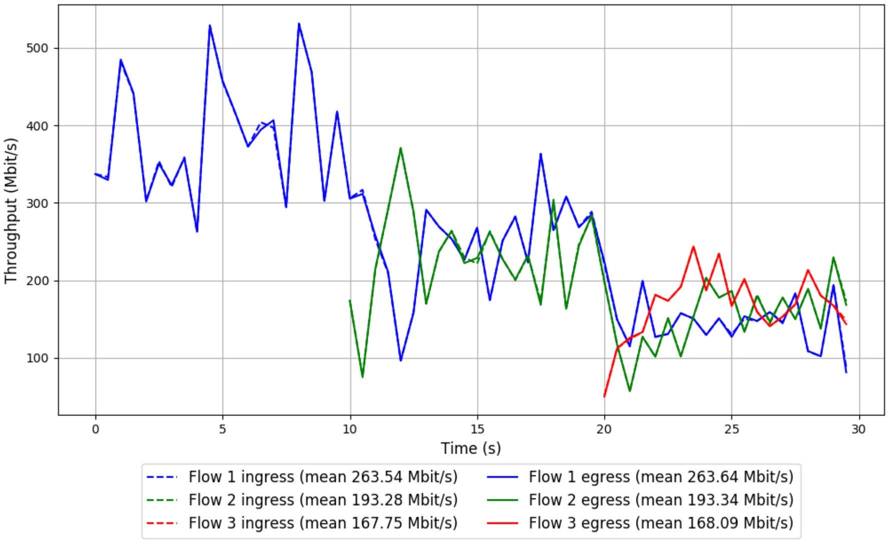


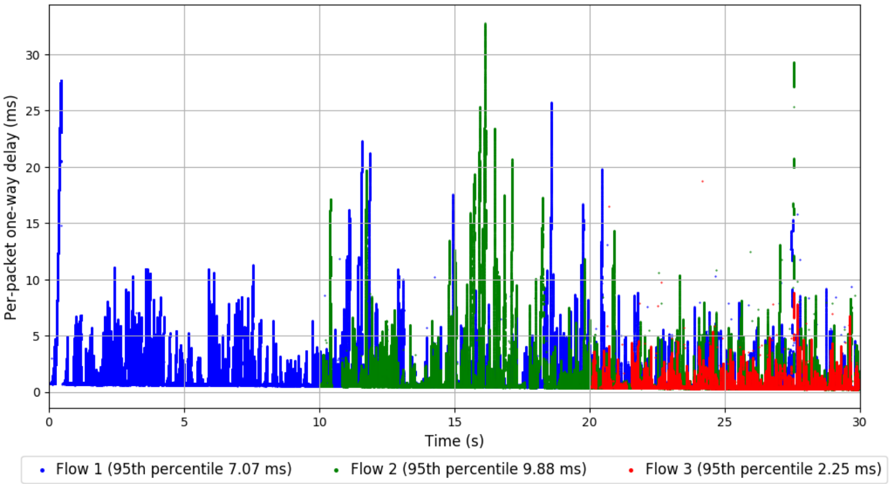
```
Run 4: Statistics of Verus

Start at: 2018-03-06 13:35:45
End at: 2018-03-06 13:36:15
Local clock offset: -4.828 ms
Remote clock offset: -0.342 ms

# Below is generated by plot.py at 2018-03-06 23:18:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 447.96 Mbit/s
95th percentile per-packet one-way delay: 7.138 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 263.64 Mbit/s
95th percentile per-packet one-way delay: 7.068 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 193.34 Mbit/s
95th percentile per-packet one-way delay: 9.875 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 168.09 Mbit/s
95th percentile per-packet one-way delay: 2.250 ms
Loss rate: 0.15%
```

Run 4: Report of Verus — Data Link



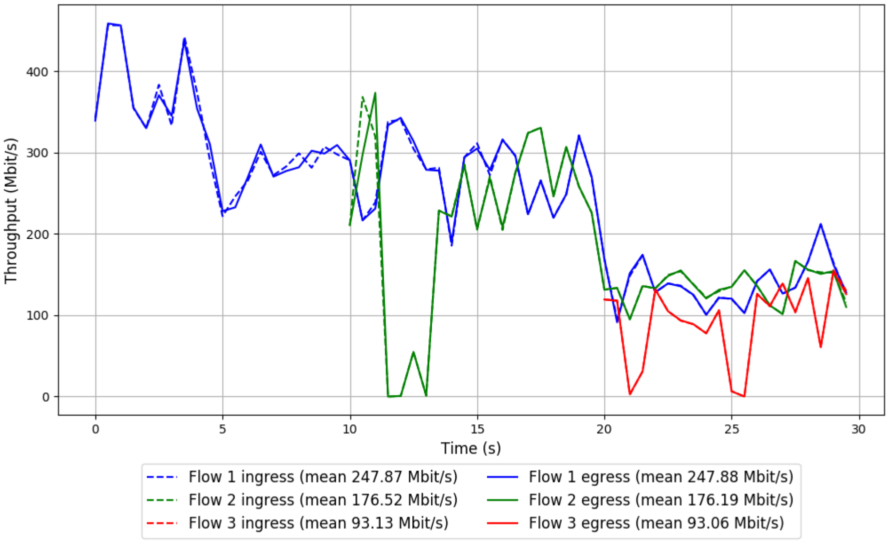


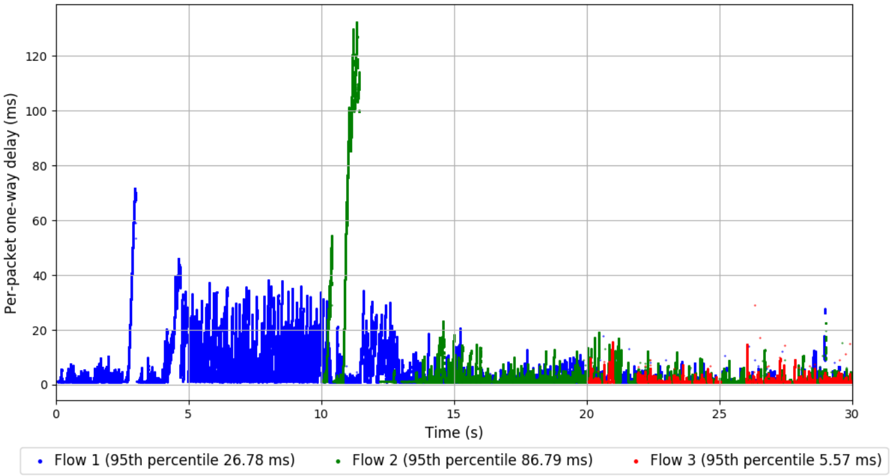
```
Run 5: Statistics of Verus

Start at: 2018-03-06 14:05:31
End at: 2018-03-06 14:06:01
Local clock offset: 3.715 ms
Remote clock offset: 0.542 ms

# Below is generated by plot.py at 2018-03-06 23:21:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.94 Mbit/s
95th percentile per-packet one-way delay: 28.244 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 247.88 Mbit/s
95th percentile per-packet one-way delay: 26.782 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 176.19 Mbit/s
95th percentile per-packet one-way delay: 86.788 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 93.06 Mbit/s
95th percentile per-packet one-way delay: 5.565 ms
Loss rate: 0.30%
```

Run 5: Report of Verus — Data Link



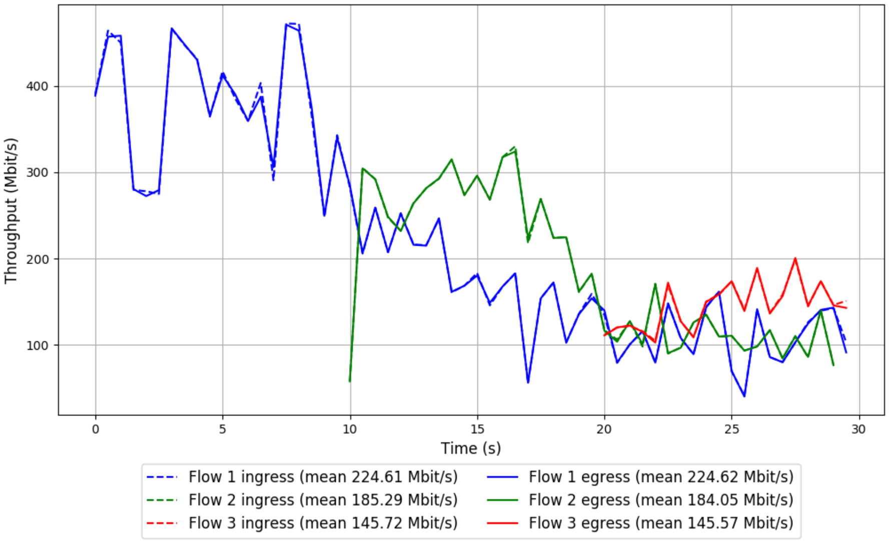


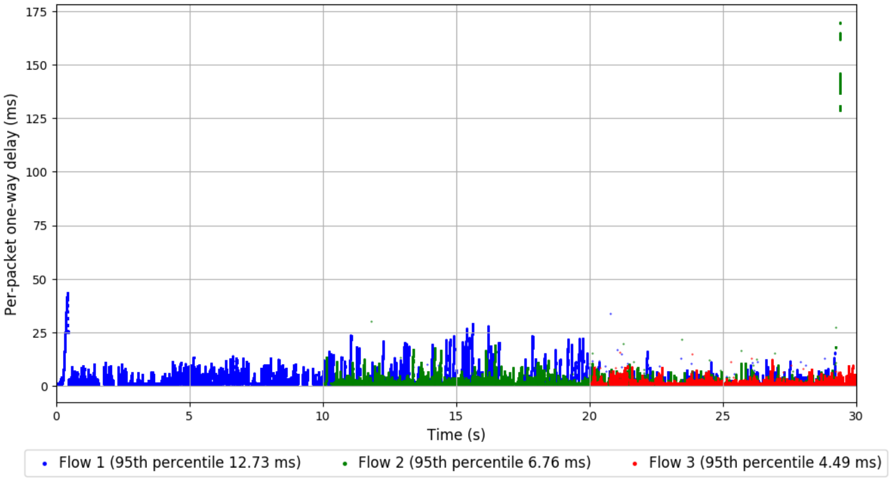
```
Run 6: Statistics of Verus

Start at: 2018-03-06 14:34:53
End at: 2018-03-06 14:35:23
Local clock offset: 4.618 ms
Remote clock offset: 1.67 ms

# Below is generated by plot.py at 2018-03-06 23:21:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 391.99 Mbit/s
95th percentile per-packet one-way delay: 10.141 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 224.62 Mbit/s
95th percentile per-packet one-way delay: 12.733 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 184.05 Mbit/s
95th percentile per-packet one-way delay: 6.756 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 145.57 Mbit/s
95th percentile per-packet one-way delay: 4.491 ms
Loss rate: 0.30%
```

## Run 6: Report of Verus — Data Link



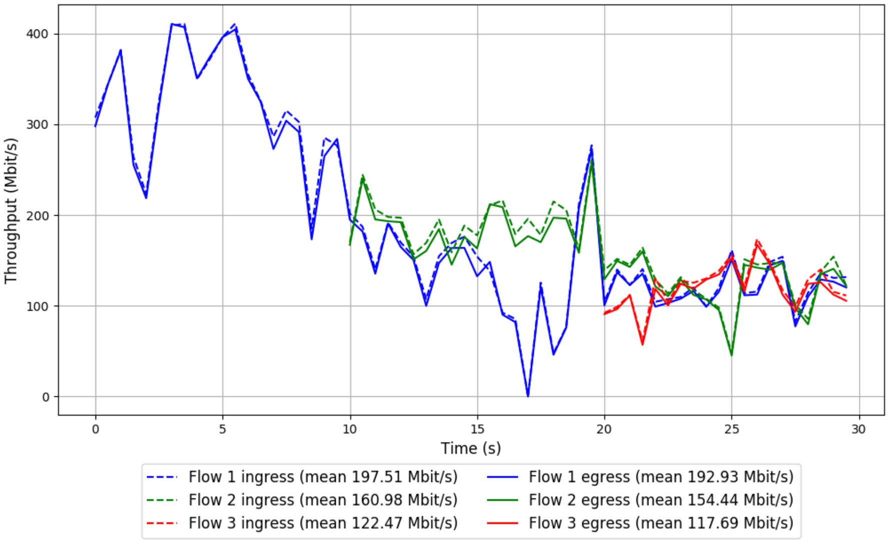


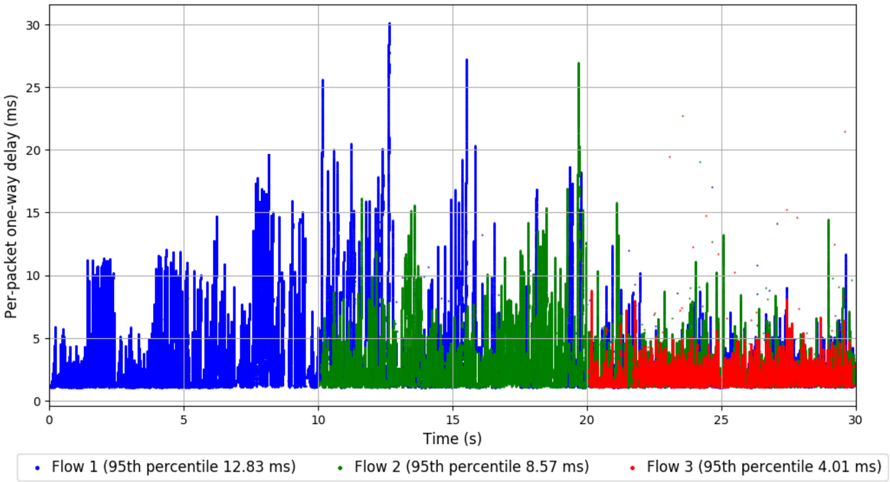
```
Run 7: Statistics of Verus

Start at: 2018-03-06 15:09:22
End at: 2018-03-06 15:09:52
Local clock offset: 0.937 ms
Remote clock offset: 2.148 ms

# Below is generated by plot.py at 2018-03-06 23:21:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 334.69 Mbit/s
95th percentile per-packet one-way delay: 10.910 ms
Loss rate: 3.08%
-- Flow 1:
Average throughput: 192.93 Mbit/s
95th percentile per-packet one-way delay: 12.830 ms
Loss rate: 2.37%
-- Flow 2:
Average throughput: 154.44 Mbit/s
95th percentile per-packet one-way delay: 8.575 ms
Loss rate: 4.06%
-- Flow 3:
Average throughput: 117.69 Mbit/s
95th percentile per-packet one-way delay: 4.008 ms
Loss rate: 3.92%
```

## Run 7: Report of Verus — Data Link



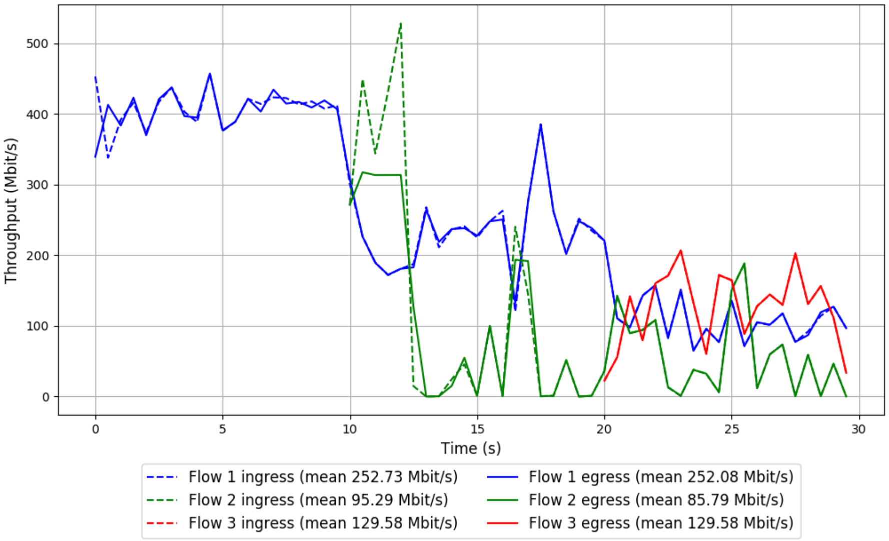


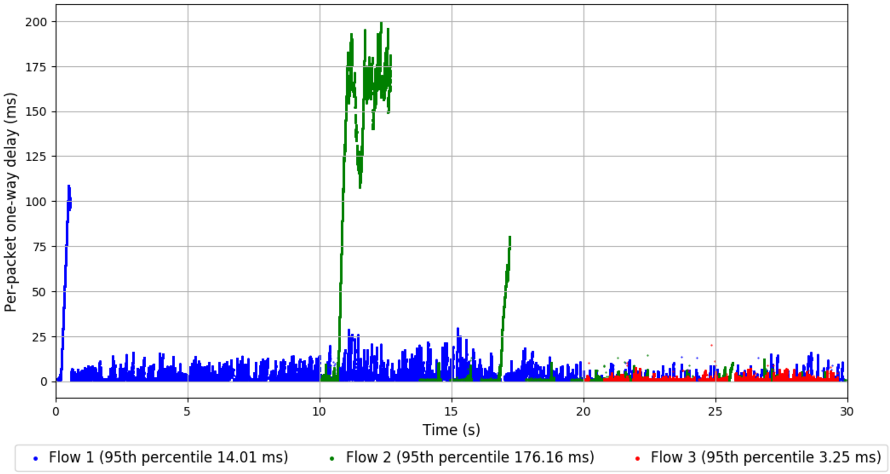
```
Run 8: Statistics of Verus

Start at: 2018-03-06 15:38:33
End at: 2018-03-06 15:39:03
Local clock offset: 0.594 ms
Remote clock offset: 2.358 ms

# Below is generated by plot.py at 2018-03-06 23:21:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 349.95 Mbit/s
95th percentile per-packet one-way delay: 121.618 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 252.08 Mbit/s
95th percentile per-packet one-way delay: 14.014 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 85.79 Mbit/s
95th percentile per-packet one-way delay: 176.155 ms
Loss rate: 10.07%
-- Flow 3:
Average throughput: 129.58 Mbit/s
95th percentile per-packet one-way delay: 3.252 ms
Loss rate: 0.00%
```

Run 8: Report of Verus — Data Link



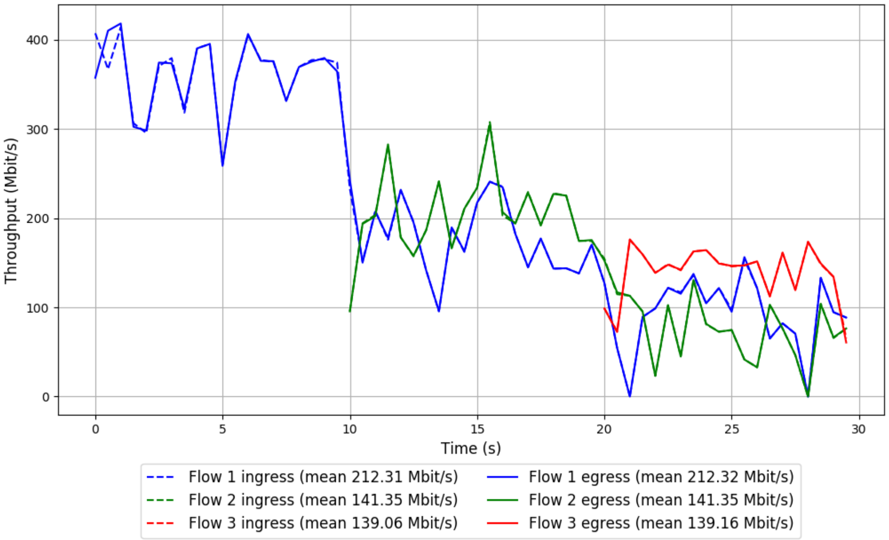


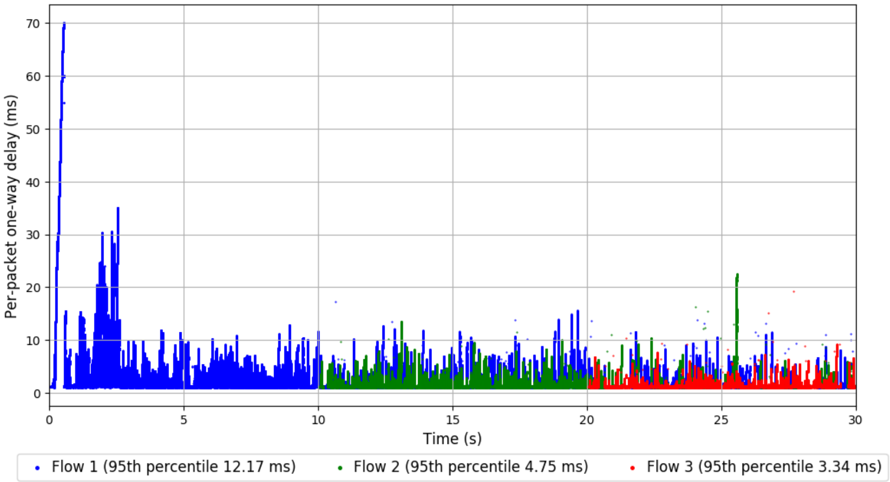
```
Run 9: Statistics of Verus

Start at: 2018-03-06 16:07:53
End at: 2018-03-06 16:08:23
Local clock offset: -1.167 ms
Remote clock offset: 2.036 ms

# Below is generated by plot.py at 2018-03-06 23:23:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 352.20 Mbit/s
95th percentile per-packet one-way delay: 8.821 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 212.32 Mbit/s
95th percentile per-packet one-way delay: 12.168 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 141.35 Mbit/s
95th percentile per-packet one-way delay: 4.751 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 139.16 Mbit/s
95th percentile per-packet one-way delay: 3.339 ms
Loss rate: 0.17%
```

Run 9: Report of Verus — Data Link



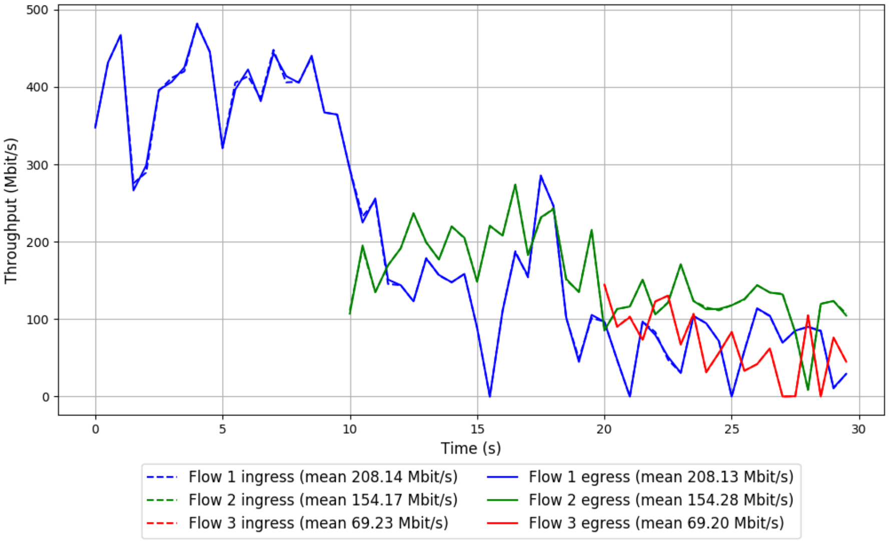


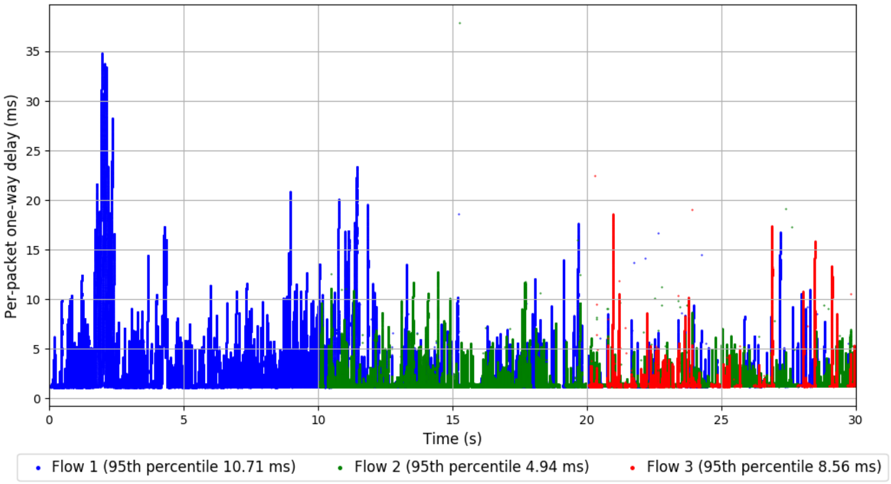
```
Run 10: Statistics of Verus

Start at: 2018-03-06 16:36:48
End at: 2018-03-06 16:37:18
Local clock offset: -5.046 ms
Remote clock offset: 1.593 ms

# Below is generated by plot.py at 2018-03-06 23:23:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.74 Mbit/s
95th percentile per-packet one-way delay: 8.977 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 208.13 Mbit/s
95th percentile per-packet one-way delay: 10.707 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 154.28 Mbit/s
95th percentile per-packet one-way delay: 4.943 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 69.20 Mbit/s
95th percentile per-packet one-way delay: 8.557 ms
Loss rate: 0.00%
```

Run 10: Report of Verus — Data Link



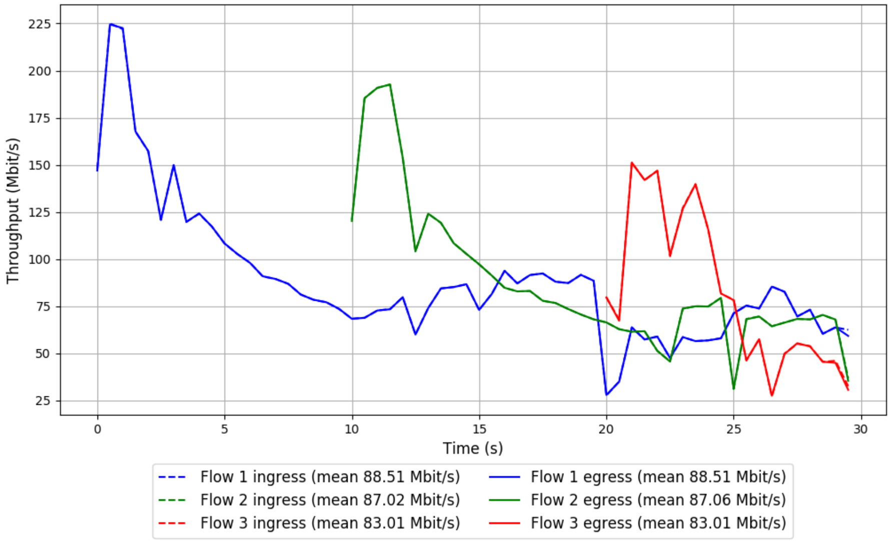


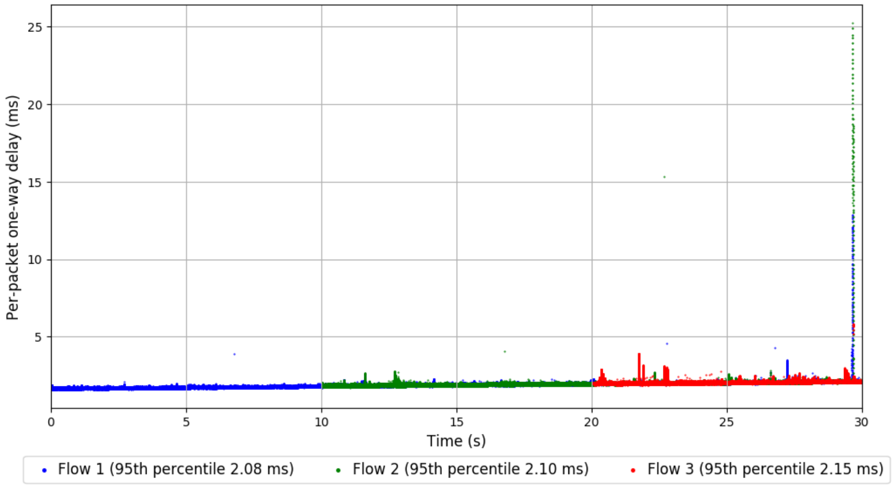
```
Run 1: Statistics of Copa

Start at: 2018-03-06 11:56:15
End at: 2018-03-06 11:56:45
Local clock offset: 3.189 ms
Remote clock offset: 4.759 ms

# Below is generated by plot.py at 2018-03-06 23:23:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 173.85 Mbit/s
95th percentile per-packet one-way delay: 2.099 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 88.51 Mbit/s
95th percentile per-packet one-way delay: 2.082 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 87.06 Mbit/s
95th percentile per-packet one-way delay: 2.098 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 83.01 Mbit/s
95th percentile per-packet one-way delay: 2.145 ms
Loss rate: 0.19%
```

## Run 1: Report of Copa — Data Link



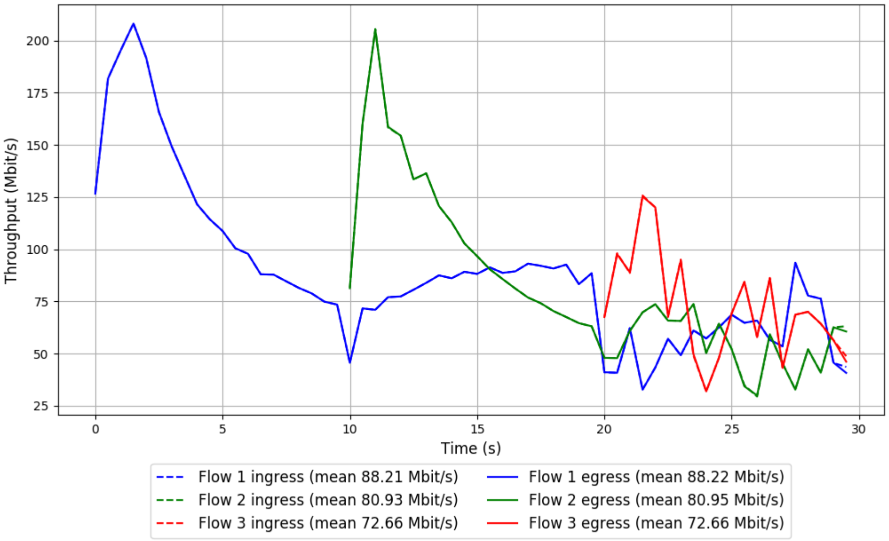


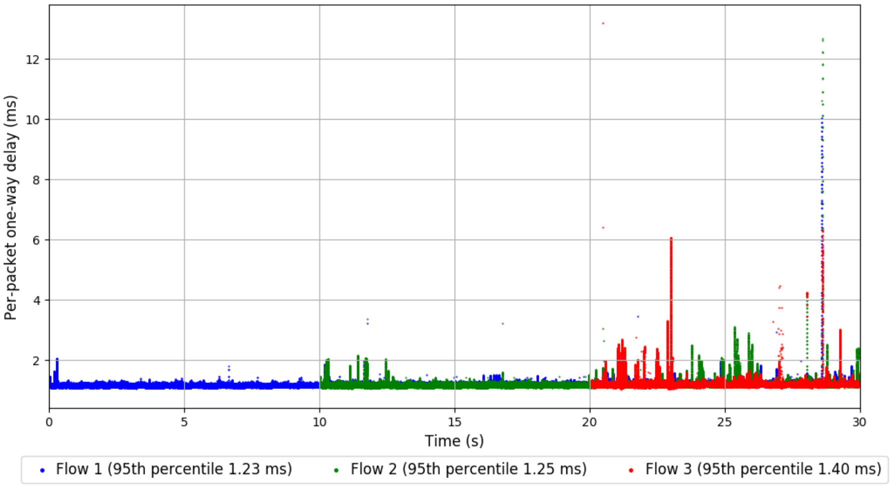
```
Run 2: Statistics of Copa

Start at: 2018-03-06 12:25:57
End at: 2018-03-06 12:26:27
Local clock offset: -4.972 ms
Remote clock offset: 6.315 ms

# Below is generated by plot.py at 2018-03-06 23:23:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 166.08 Mbit/s
95th percentile per-packet one-way delay: 1.247 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 88.22 Mbit/s
95th percentile per-packet one-way delay: 1.231 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 80.95 Mbit/s
95th percentile per-packet one-way delay: 1.246 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 72.66 Mbit/s
95th percentile per-packet one-way delay: 1.403 ms
Loss rate: 0.19%
```

Run 2: Report of Copa — Data Link



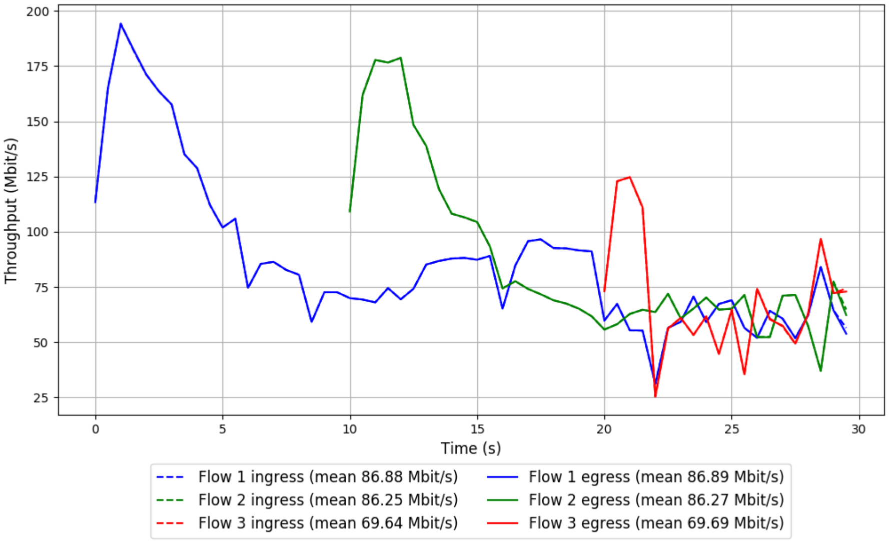


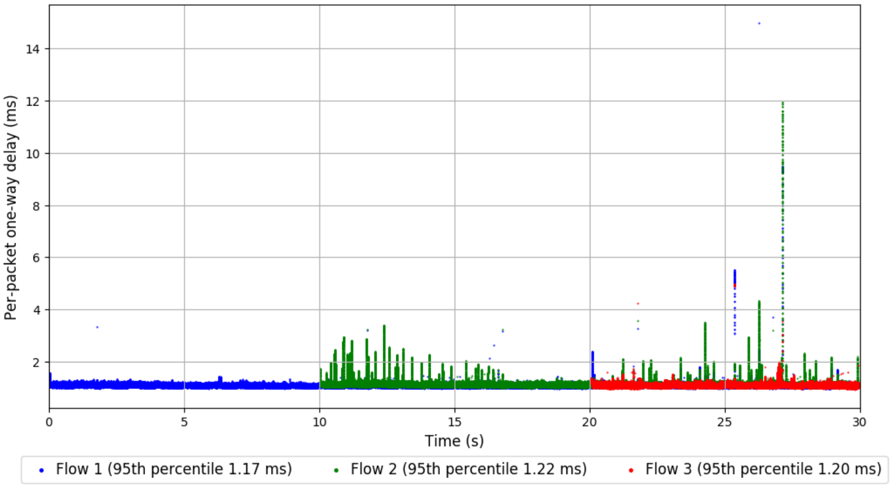
```
Run 3: Statistics of Copa

Start at: 2018-03-06 12:55:40
End at: 2018-03-06 12:56:10
Local clock offset: -4.812 ms
Remote clock offset: 4.715 ms

# Below is generated by plot.py at 2018-03-06 23:25:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 167.33 Mbit/s
95th percentile per-packet one-way delay: 1.192 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 86.89 Mbit/s
95th percentile per-packet one-way delay: 1.173 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 86.27 Mbit/s
95th percentile per-packet one-way delay: 1.215 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 69.69 Mbit/s
95th percentile per-packet one-way delay: 1.203 ms
Loss rate: 0.11%
```

Run 3: Report of Copa — Data Link



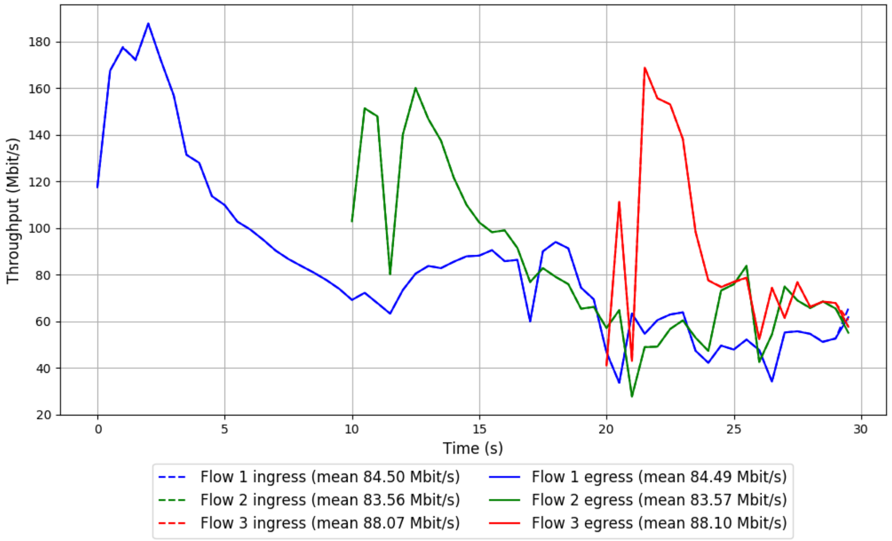


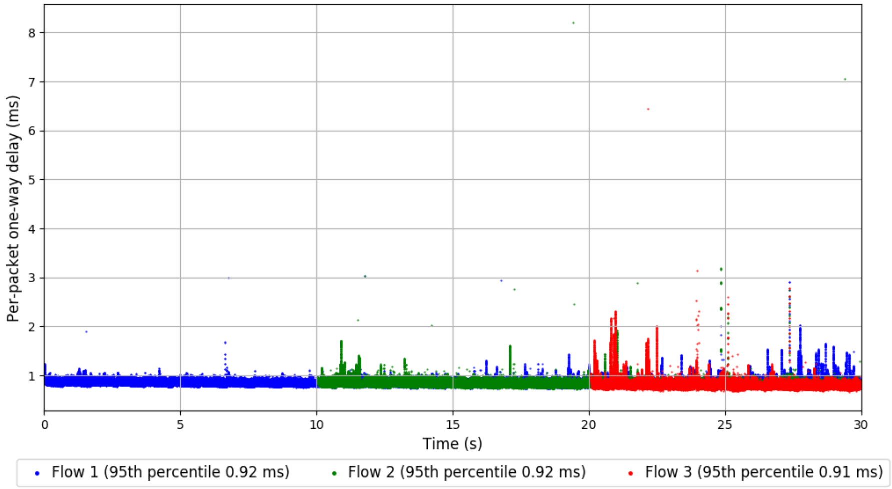
```
Run 4: Statistics of Copa

Start at: 2018-03-06 13:24:55
End at: 2018-03-06 13:25:25
Local clock offset: -4.736 ms
Remote clock offset: 0.914 ms

# Below is generated by plot.py at 2018-03-06 23:25:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 169.20 Mbit/s
95th percentile per-packet one-way delay: 0.917 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 84.49 Mbit/s
95th percentile per-packet one-way delay: 0.919 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 83.57 Mbit/s
95th percentile per-packet one-way delay: 0.915 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 88.10 Mbit/s
95th percentile per-packet one-way delay: 0.906 ms
Loss rate: 0.16%
```

Run 4: Report of Copa — Data Link



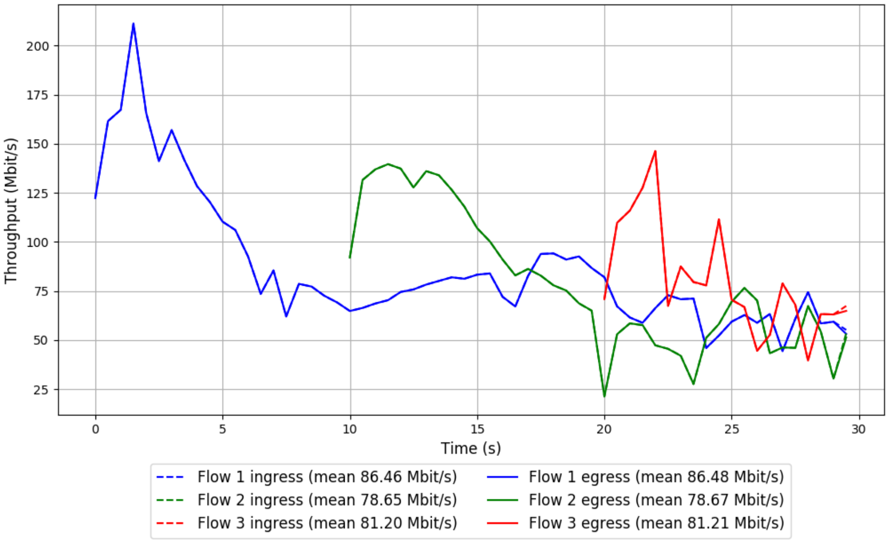


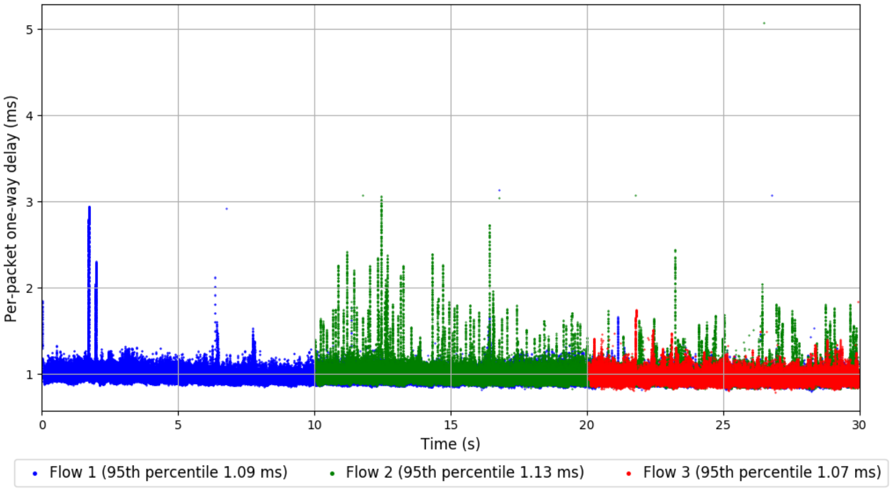
```
Run 5: Statistics of Copa

Start at: 2018-03-06 13:54:29
End at: 2018-03-06 13:54:59
Local clock offset: 2.064 ms
Remote clock offset: 0.153 ms

# Below is generated by plot.py at 2018-03-06 23:25:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 165.66 Mbit/s
95th percentile per-packet one-way delay: 1.098 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 86.48 Mbit/s
95th percentile per-packet one-way delay: 1.088 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 78.67 Mbit/s
95th percentile per-packet one-way delay: 1.134 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 81.21 Mbit/s
95th percentile per-packet one-way delay: 1.074 ms
Loss rate: 0.16%
```

Run 5: Report of Copa — Data Link



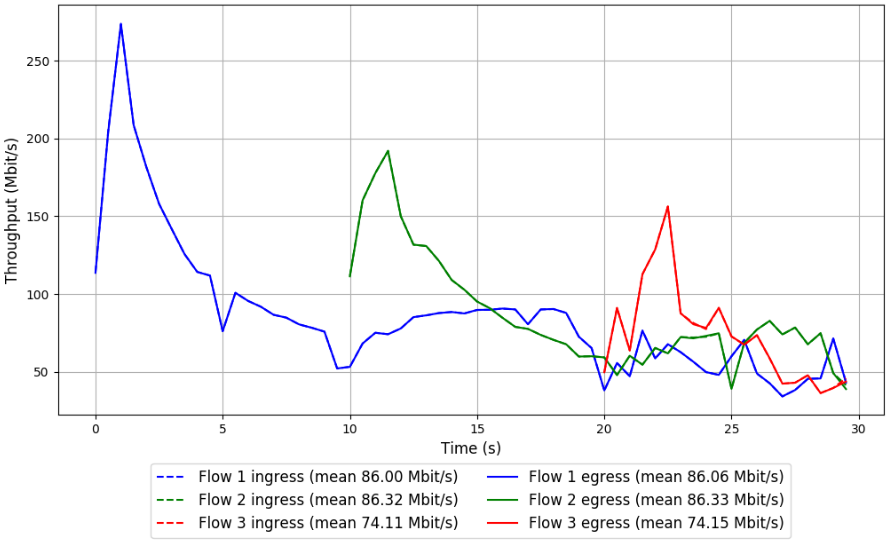


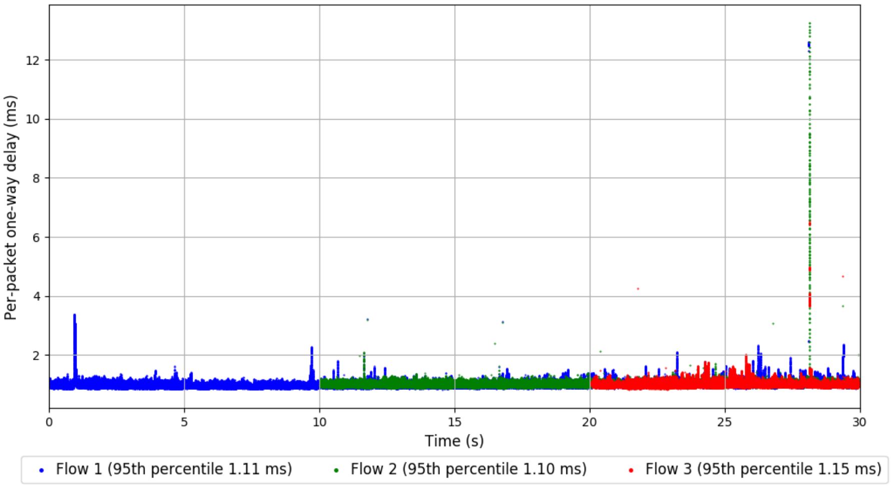
```
Run 6: Statistics of Copa

Start at: 2018-03-06 14:23:56
End at: 2018-03-06 14:24:26
Local clock offset: 3.921 ms
Remote clock offset: 0.929 ms

# Below is generated by plot.py at 2018-03-06 23:26:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 168.00 Mbit/s
95th percentile per-packet one-way delay: 1.110 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 86.06 Mbit/s
95th percentile per-packet one-way delay: 1.109 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 86.33 Mbit/s
95th percentile per-packet one-way delay: 1.098 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 74.15 Mbit/s
95th percentile per-packet one-way delay: 1.147 ms
Loss rate: 0.14%
```

Run 6: Report of Copa — Data Link



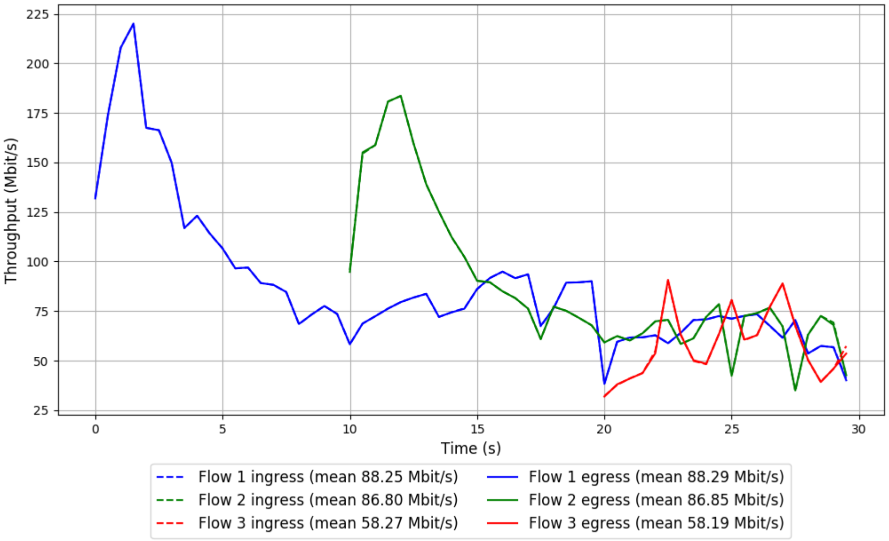


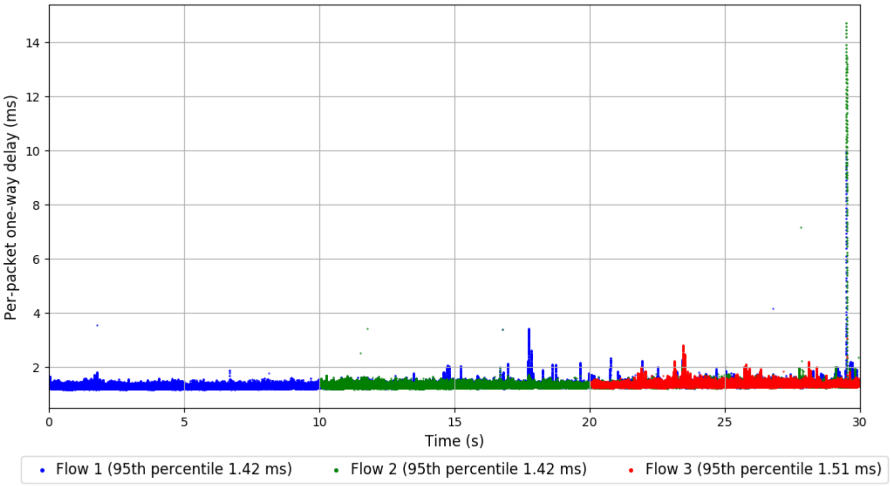
```
Run 7: Statistics of Copa

Start at: 2018-03-06 14:53:27
End at: 2018-03-06 14:53:57
Local clock offset: 2.28 ms
Remote clock offset: 2.046 ms

# Below is generated by plot.py at 2018-03-06 23:27:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 165.25 Mbit/s
95th percentile per-packet one-way delay: 1.434 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 88.29 Mbit/s
95th percentile per-packet one-way delay: 1.420 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 86.85 Mbit/s
95th percentile per-packet one-way delay: 1.422 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 58.19 Mbit/s
95th percentile per-packet one-way delay: 1.514 ms
Loss rate: 0.33%
```

## Run 7: Report of Copa — Data Link



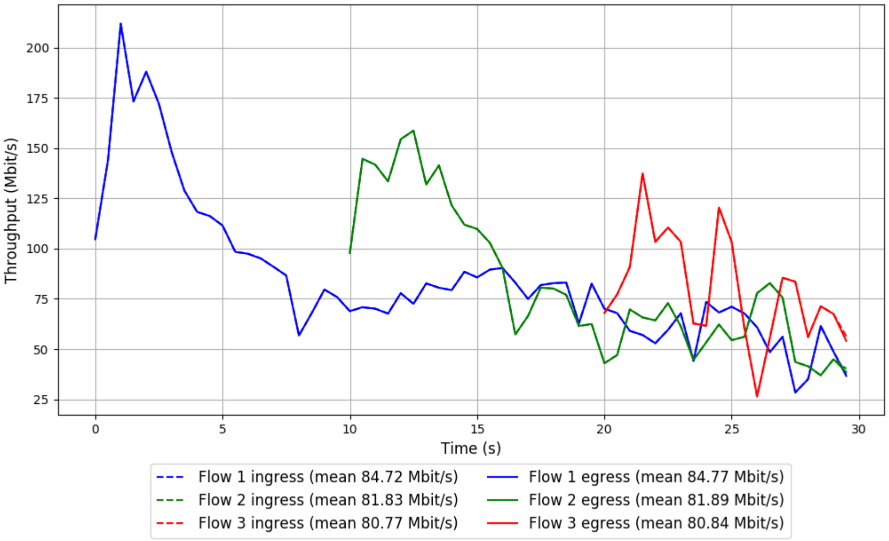


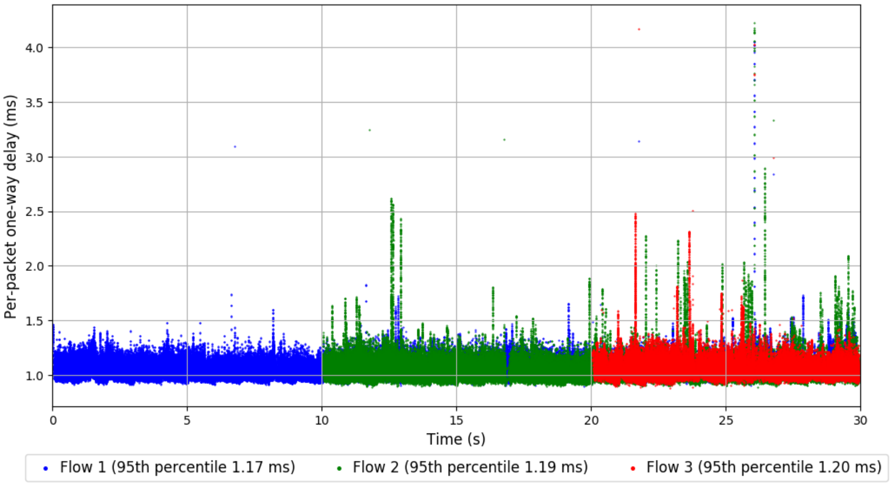
```
Run 8: Statistics of Copa

Start at: 2018-03-06 15:27:46
End at: 2018-03-06 15:28:16
Local clock offset: 0.607 ms
Remote clock offset: 2.298 ms

# Below is generated by plot.py at 2018-03-06 23:27:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 165.96 Mbit/s
95th percentile per-packet one-way delay: 1.181 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 84.77 Mbit/s
95th percentile per-packet one-way delay: 1.171 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 81.89 Mbit/s
95th percentile per-packet one-way delay: 1.191 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 80.84 Mbit/s
95th percentile per-packet one-way delay: 1.197 ms
Loss rate: 0.15%
```

Run 8: Report of Copa — Data Link



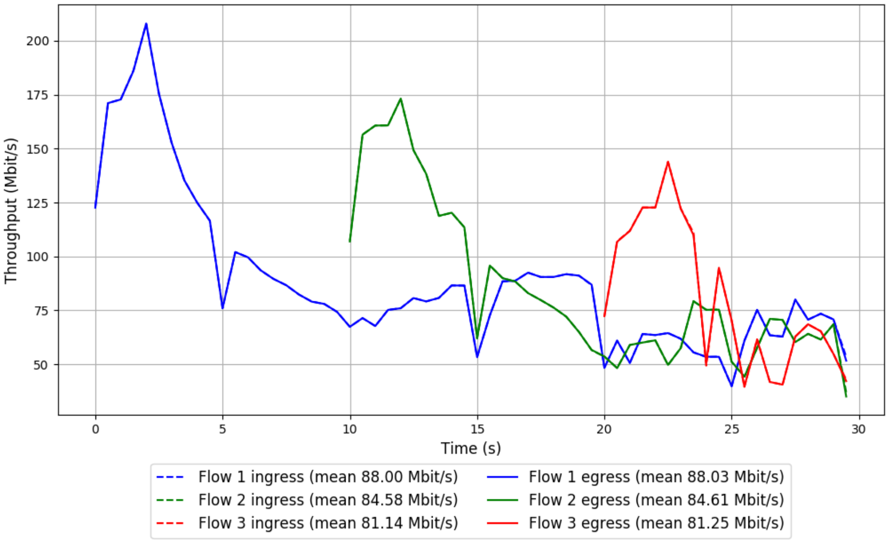


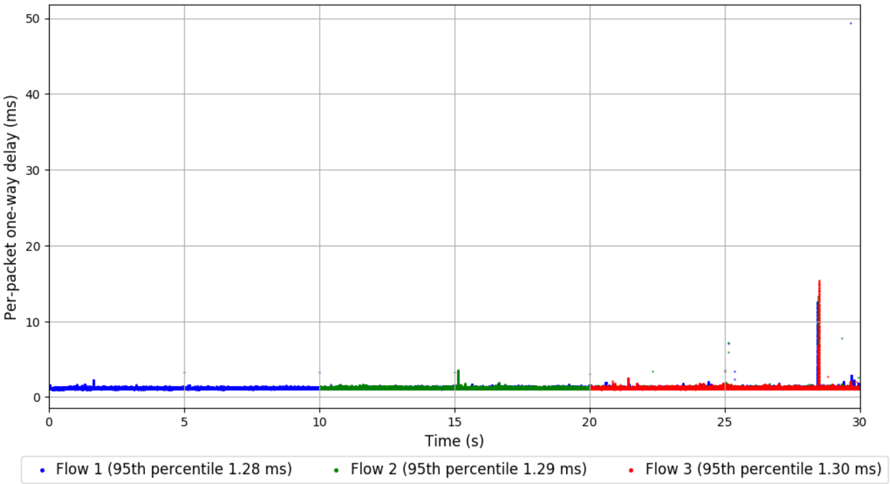
```
Run 9: Statistics of Copa

Start at: 2018-03-06 15:56:59
End at: 2018-03-06 15:57:29
Local clock offset: -0.184 ms
Remote clock offset: 2.346 ms

# Below is generated by plot.py at 2018-03-06 23:27:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 171.13 Mbit/s
95th percentile per-packet one-way delay: 1.287 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 88.03 Mbit/s
95th percentile per-packet one-way delay: 1.280 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 84.61 Mbit/s
95th percentile per-packet one-way delay: 1.290 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 81.25 Mbit/s
95th percentile per-packet one-way delay: 1.303 ms
Loss rate: 0.05%
```

## Run 9: Report of Copa — Data Link



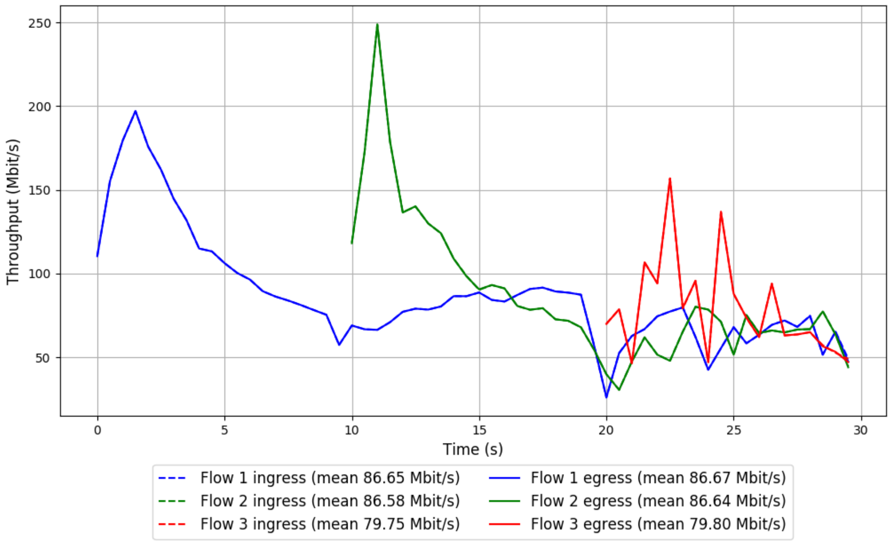


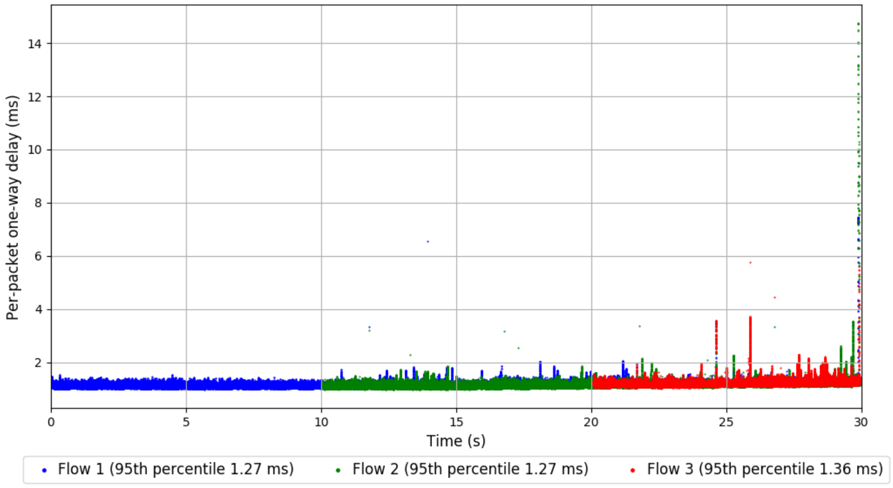
```
Run 10: Statistics of Copa

Start at: 2018-03-06 16:25:54
End at: 2018-03-06 16:26:24
Local clock offset: -1.98 ms
Remote clock offset: 1.618 ms

# Below is generated by plot.py at 2018-03-06 23:27:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 170.69 Mbit/s
95th percentile per-packet one-way delay: 1.289 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 86.67 Mbit/s
95th percentile per-packet one-way delay: 1.270 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 86.64 Mbit/s
95th percentile per-packet one-way delay: 1.273 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 79.80 Mbit/s
95th percentile per-packet one-way delay: 1.361 ms
Loss rate: 0.13%
```

## Run 10: Report of Copa — Data Link



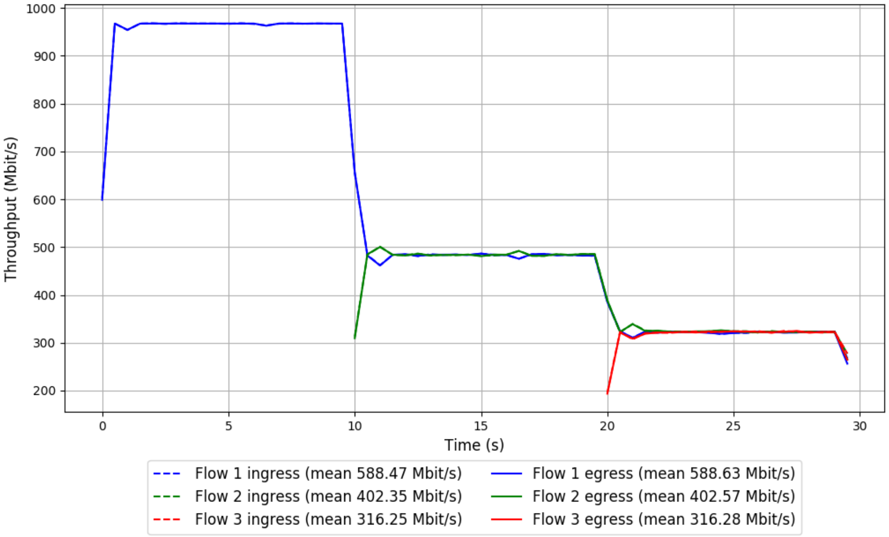


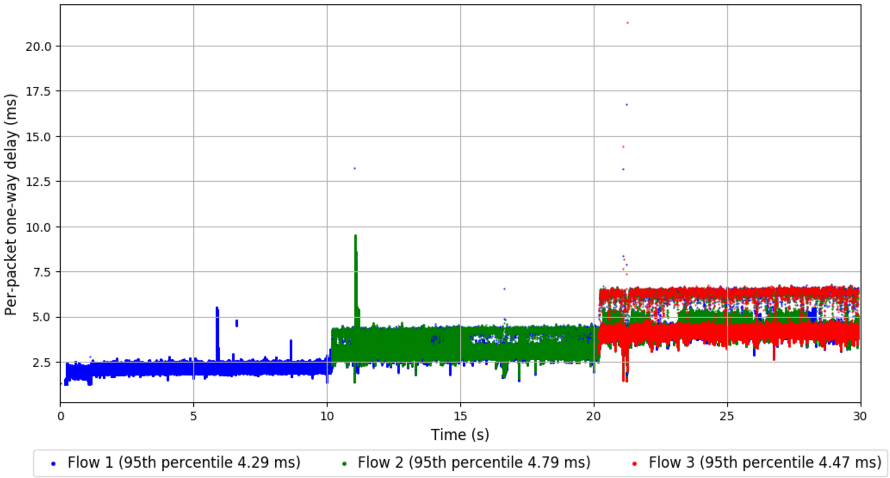
```
Run 1: Statistics of FillP

Start at: 2018-03-06 12:00:56
End at: 2018-03-06 12:01:26
Local clock offset: -0.241 ms
Remote clock offset: 5.09 ms

# Below is generated by plot.py at 2018-03-06 23:39:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 960.73 Mbit/s
95th percentile per-packet one-way delay: 4.461 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 588.63 Mbit/s
95th percentile per-packet one-way delay: 4.293 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 402.57 Mbit/s
95th percentile per-packet one-way delay: 4.787 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 316.28 Mbit/s
95th percentile per-packet one-way delay: 4.472 ms
Loss rate: 0.24%
```

## Run 1: Report of FillP — Data Link



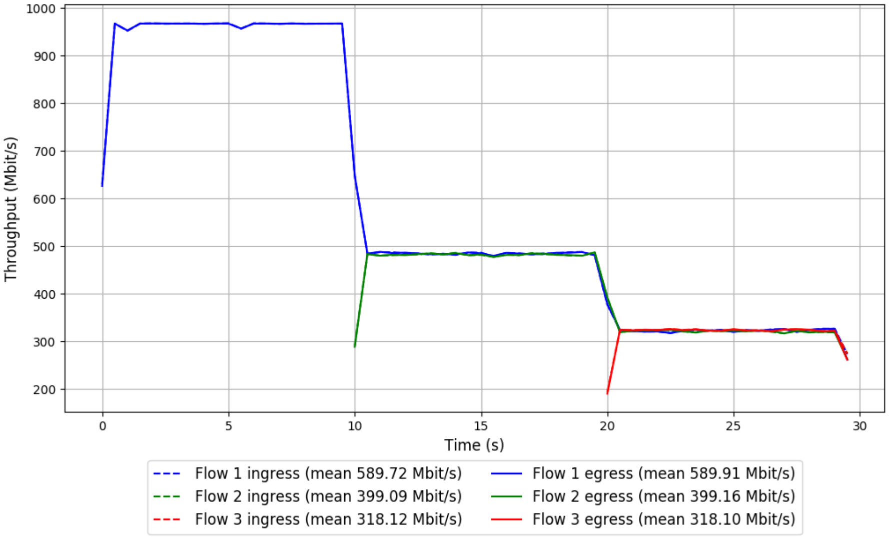


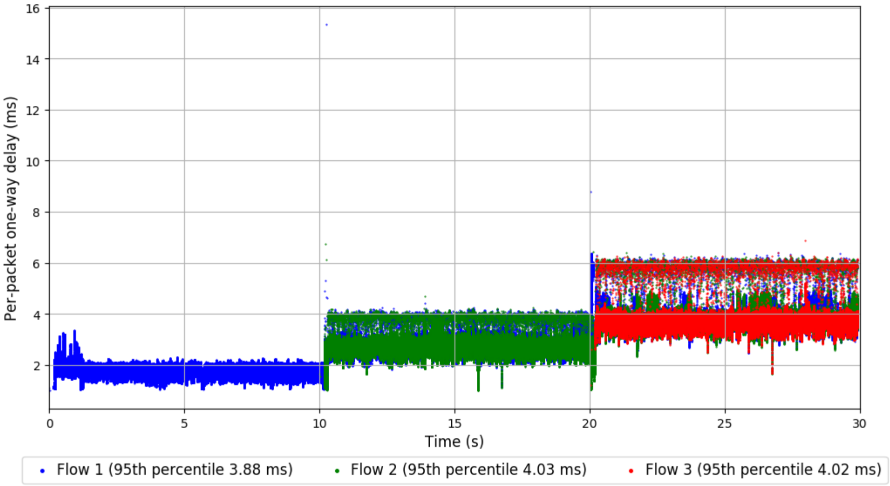
```
Run 2: Statistics of FillP

Start at: 2018-03-06 12:30:37
End at: 2018-03-06 12:31:07
Local clock offset: -4.932 ms
Remote clock offset: 6.569 ms

# Below is generated by plot.py at 2018-03-06 23:40:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 960.42 Mbit/s
95th percentile per-packet one-way delay: 3.959 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 589.91 Mbit/s
95th percentile per-packet one-way delay: 3.883 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 399.16 Mbit/s
95th percentile per-packet one-way delay: 4.026 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 318.10 Mbit/s
95th percentile per-packet one-way delay: 4.023 ms
Loss rate: 0.23%
```

Run 2: Report of FillP — Data Link



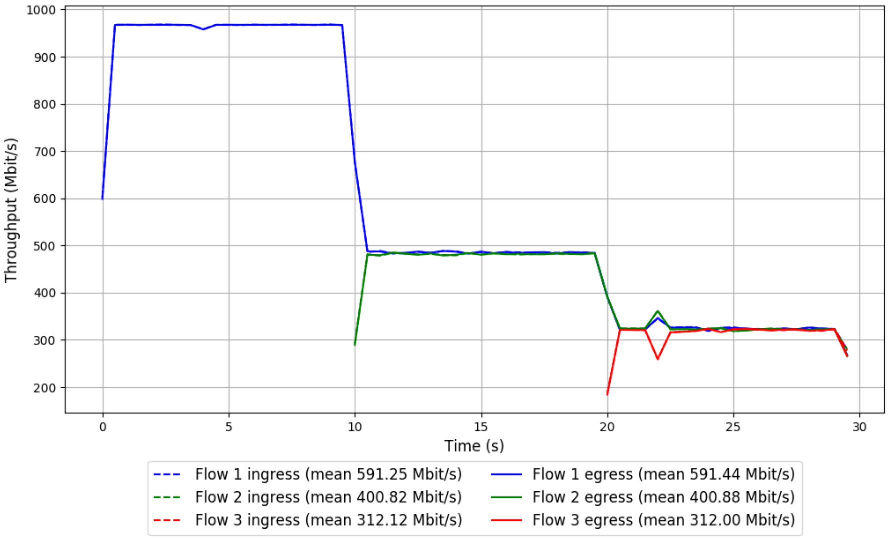


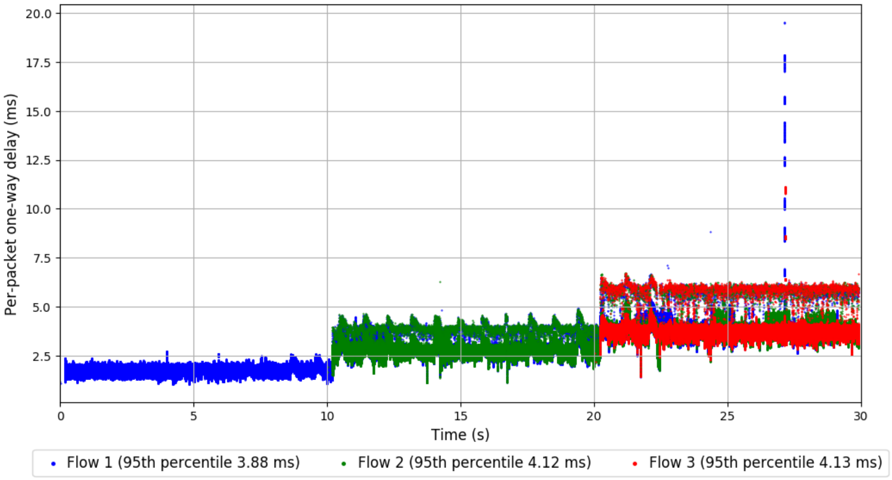
```
Run 3: Statistics of FillP

Start at: 2018-03-06 13:00:12
End at: 2018-03-06 13:00:42
Local clock offset: -4.86 ms
Remote clock offset: 4.615 ms

# Below is generated by plot.py at 2018-03-06 23:40:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 961.02 Mbit/s
95th percentile per-packet one-way delay: 4.002 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 591.44 Mbit/s
95th percentile per-packet one-way delay: 3.880 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 400.88 Mbit/s
95th percentile per-packet one-way delay: 4.125 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 312.00 Mbit/s
95th percentile per-packet one-way delay: 4.130 ms
Loss rate: 0.24%
```

Run 3: Report of FillP — Data Link



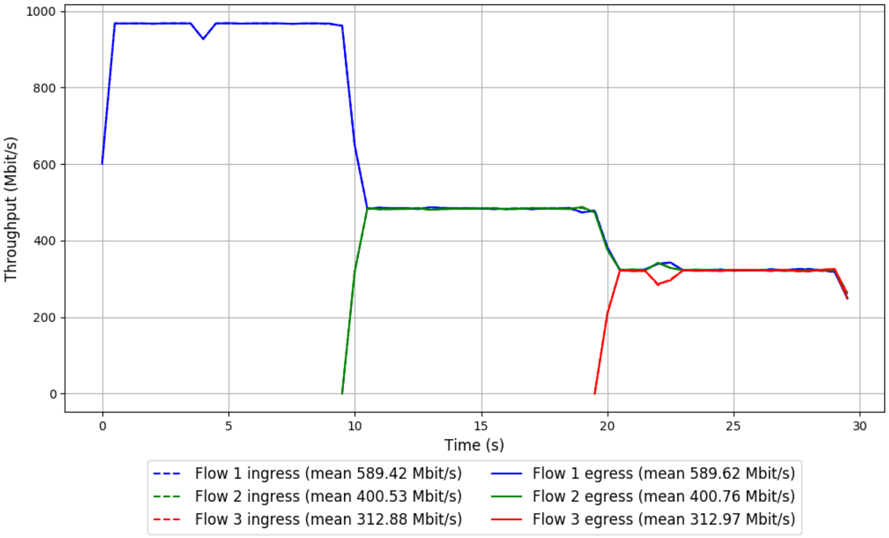


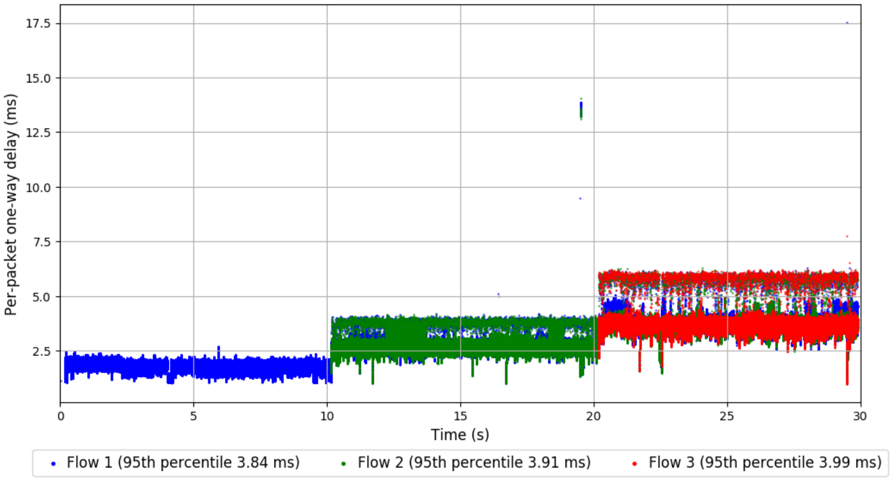
```
Run 4: Statistics of FillP

Start at: 2018-03-06 13:29:26
End at: 2018-03-06 13:29:56
Local clock offset: -4.689 ms
Remote clock offset: 0.182 ms

# Below is generated by plot.py at 2018-03-06 23:41:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 960.06 Mbit/s
95th percentile per-packet one-way delay: 3.904 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 589.62 Mbit/s
95th percentile per-packet one-way delay: 3.844 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 400.76 Mbit/s
95th percentile per-packet one-way delay: 3.910 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 312.97 Mbit/s
95th percentile per-packet one-way delay: 3.992 ms
Loss rate: 0.22%
```

Run 4: Report of FillP — Data Link



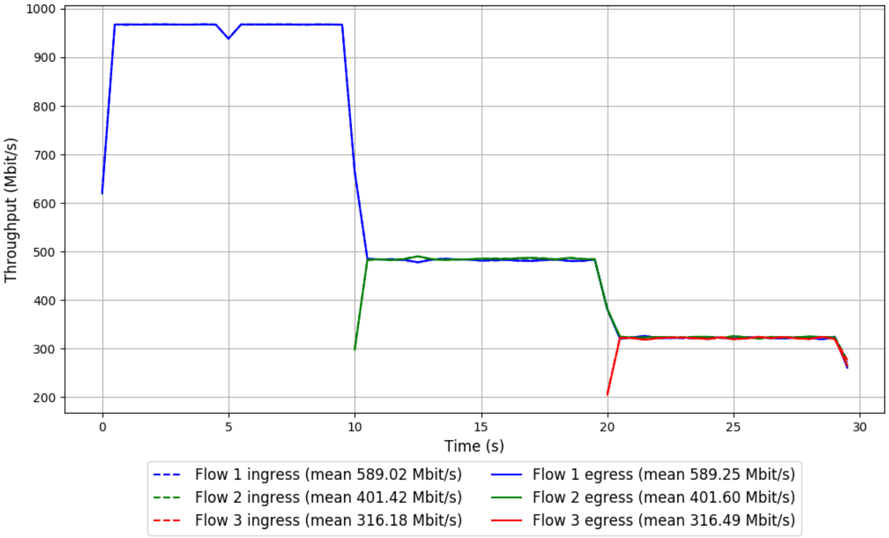


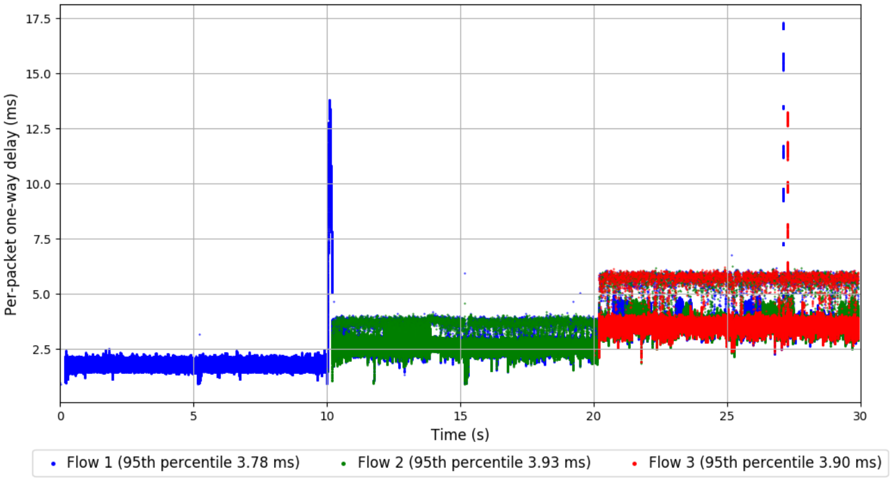
```
Run 5: Statistics of FillP

Start at: 2018-03-06 13:59:00
End at: 2018-03-06 13:59:30
Local clock offset: 2.781 ms
Remote clock offset: 0.377 ms

# Below is generated by plot.py at 2018-03-06 23:42:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 960.99 Mbit/s
95th percentile per-packet one-way delay: 3.855 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 589.25 Mbit/s
95th percentile per-packet one-way delay: 3.783 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 401.60 Mbit/s
95th percentile per-packet one-way delay: 3.931 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 316.49 Mbit/s
95th percentile per-packet one-way delay: 3.897 ms
Loss rate: 0.21%
```

# Run 5: Report of FillP — Data Link



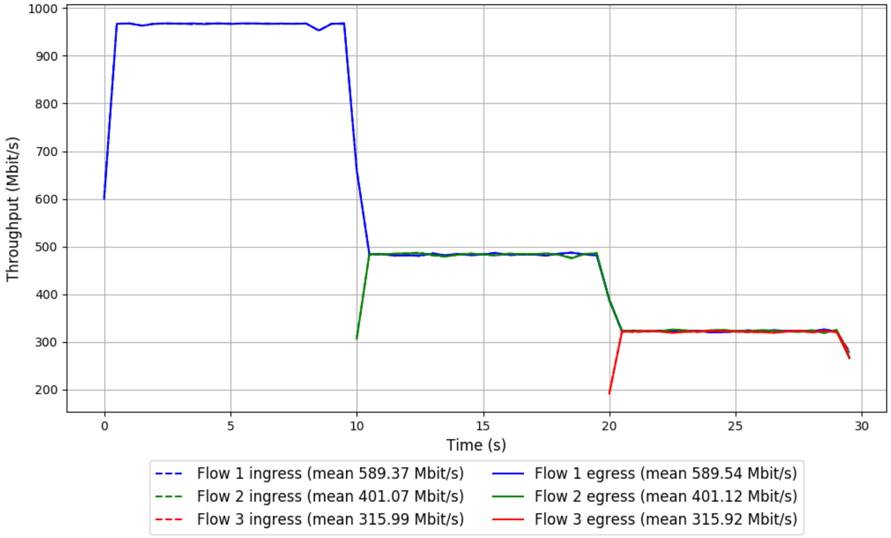


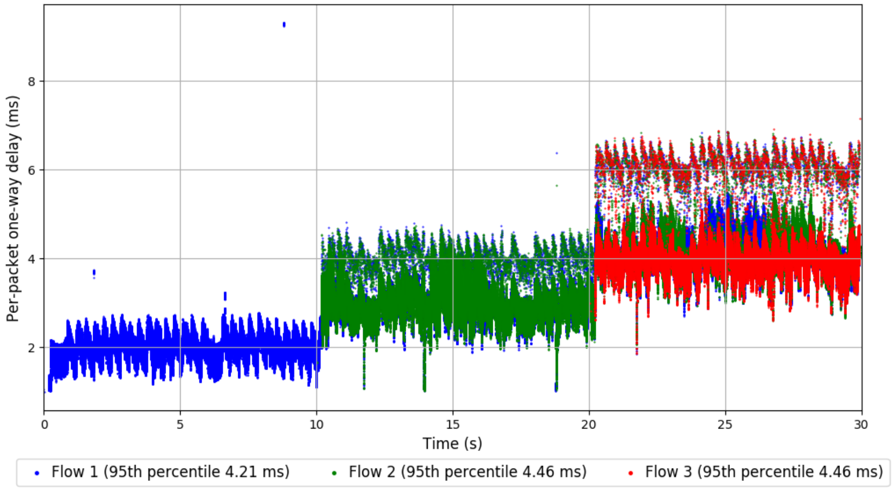
```
Run 6: Statistics of FillP

Start at: 2018-03-06 14:28:26
End at: 2018-03-06 14:28:56
Local clock offset: 4.243 ms
Remote clock offset: 1.326 ms

# Below is generated by plot.py at 2018-03-06 23:42:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 960.69 Mbit/s
95th percentile per-packet one-way delay: 4.349 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 589.54 Mbit/s
95th percentile per-packet one-way delay: 4.206 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 401.12 Mbit/s
95th percentile per-packet one-way delay: 4.465 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 315.92 Mbit/s
95th percentile per-packet one-way delay: 4.464 ms
Loss rate: 0.23%
```

## Run 6: Report of FillP — Data Link



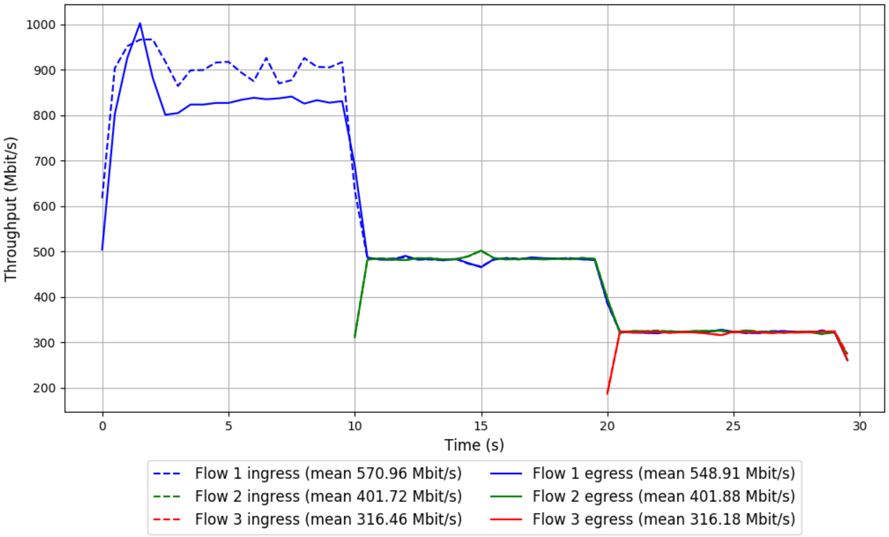


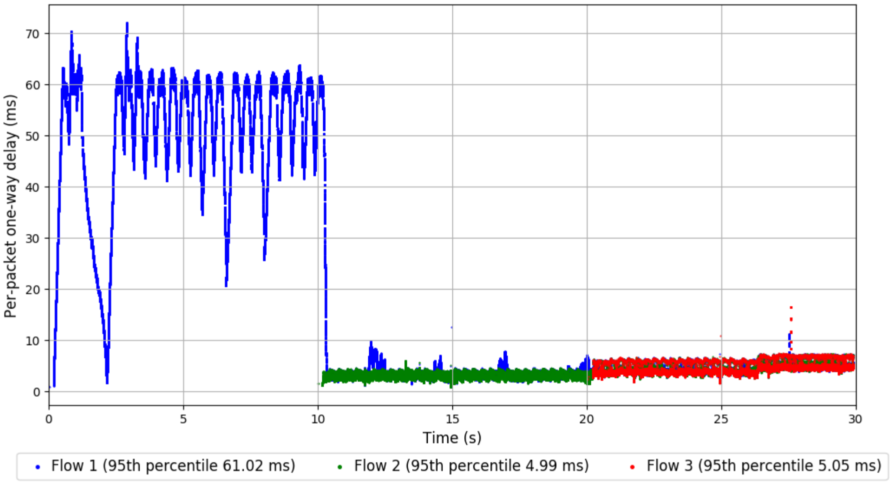
```
Run 7: Statistics of FillP

Start at: 2018-03-06 15:03:00
End at: 2018-03-06 15:03:30
Local clock offset: 1.099 ms
Remote clock offset: 2.206 ms

# Below is generated by plot.py at 2018-03-06 23:42:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 920.40 Mbit/s
95th percentile per-packet one-way delay: 60.338 ms
Loss rate: 2.46%
-- Flow 1:
Average throughput: 548.91 Mbit/s
95th percentile per-packet one-way delay: 61.018 ms
Loss rate: 3.96%
-- Flow 2:
Average throughput: 401.88 Mbit/s
95th percentile per-packet one-way delay: 4.989 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 316.18 Mbit/s
95th percentile per-packet one-way delay: 5.048 ms
Loss rate: 0.31%
```

Run 7: Report of FillP — Data Link



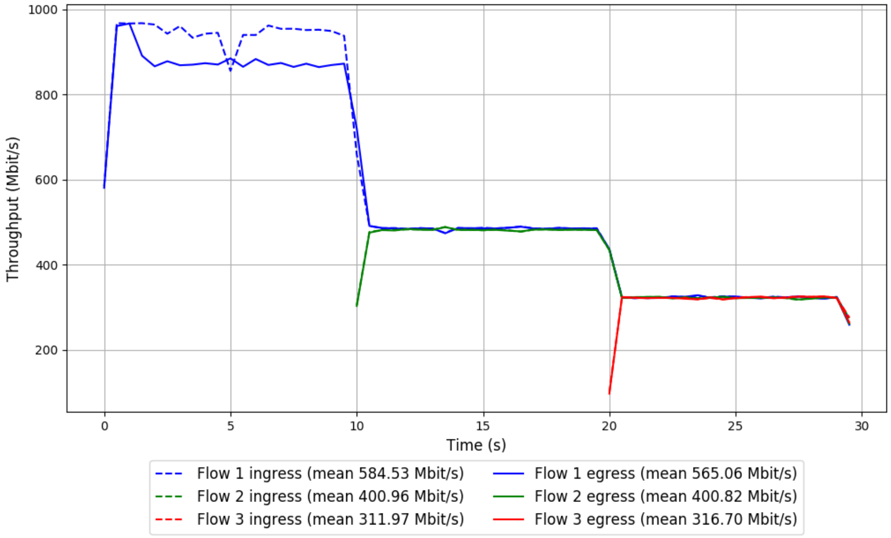


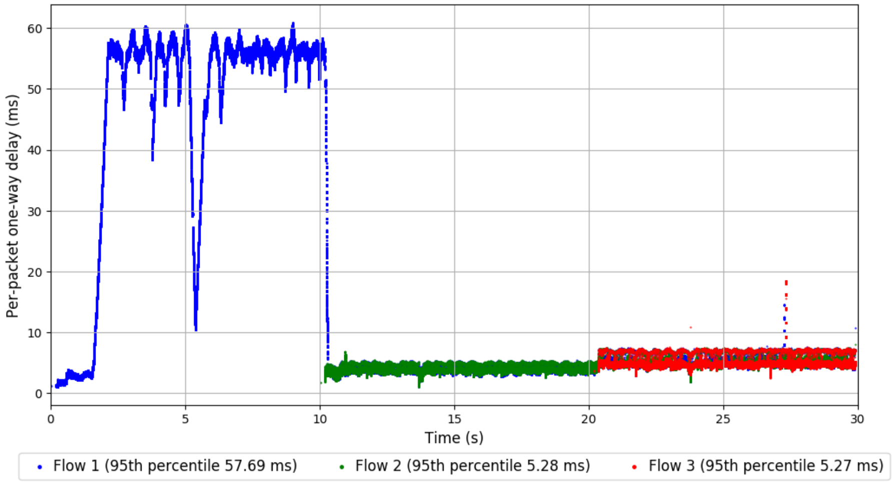
```
Run 8: Statistics of FillP

Start at: 2018-03-06 15:32:10
End at: 2018-03-06 15:32:40
Local clock offset: 0.716 ms
Remote clock offset: 2.283 ms

# Below is generated by plot.py at 2018-03-06 23:42:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 934.48 Mbit/s
95th percentile per-packet one-way delay: 57.147 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 565.06 Mbit/s
95th percentile per-packet one-way delay: 57.689 ms
Loss rate: 3.38%
-- Flow 2:
Average throughput: 400.82 Mbit/s
95th percentile per-packet one-way delay: 5.280 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 316.70 Mbit/s
95th percentile per-packet one-way delay: 5.272 ms
Loss rate: 0.27%
```

## Run 8: Report of FillP — Data Link



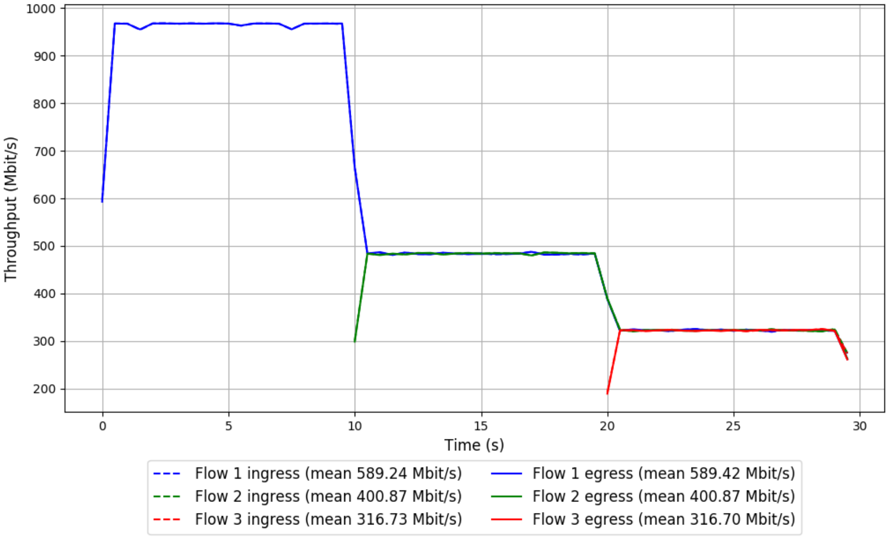


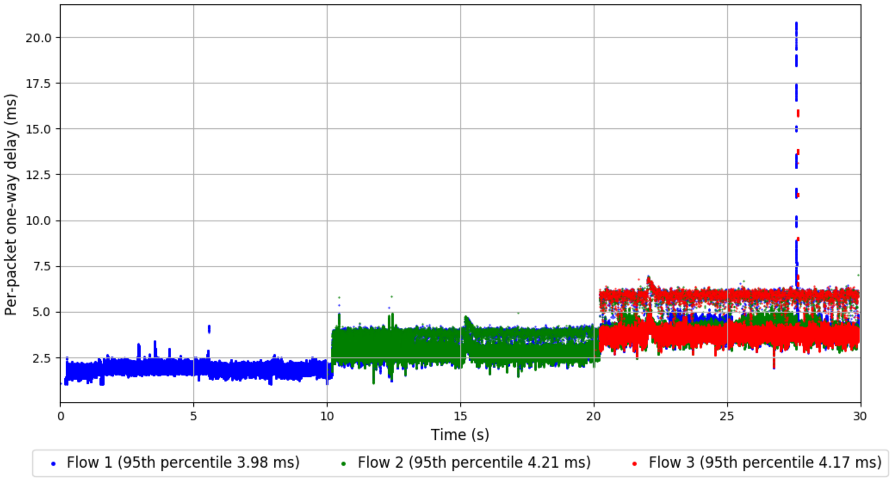
```
Run 9: Statistics of FillP

Start at: 2018-03-06 16:01:32
End at: 2018-03-06 16:02:02
Local clock offset: -0.712 ms
Remote clock offset: 2.421 ms

# Below is generated by plot.py at 2018-03-06 23:54:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 960.55 Mbit/s
95th percentile per-packet one-way delay: 4.087 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 589.42 Mbit/s
95th percentile per-packet one-way delay: 3.981 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 400.87 Mbit/s
95th percentile per-packet one-way delay: 4.211 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 316.70 Mbit/s
95th percentile per-packet one-way delay: 4.171 ms
Loss rate: 0.24%
```

## Run 9: Report of FillP — Data Link



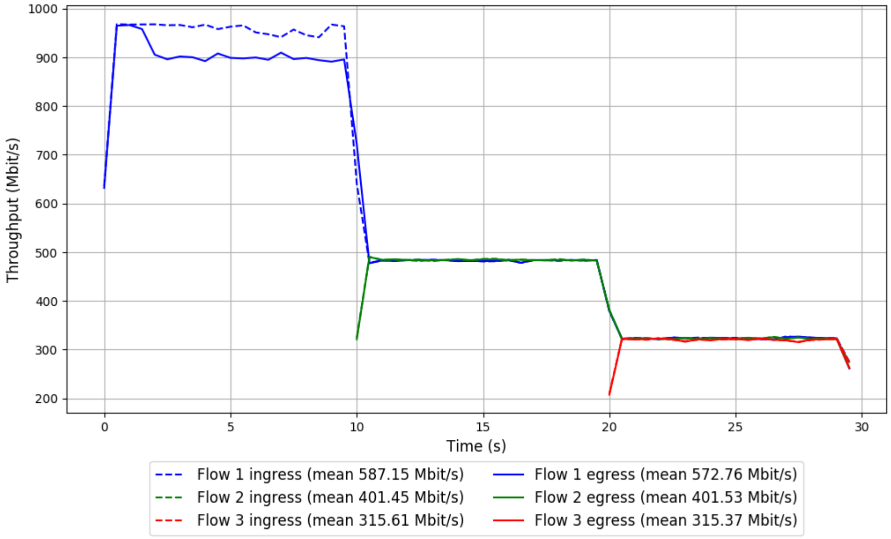


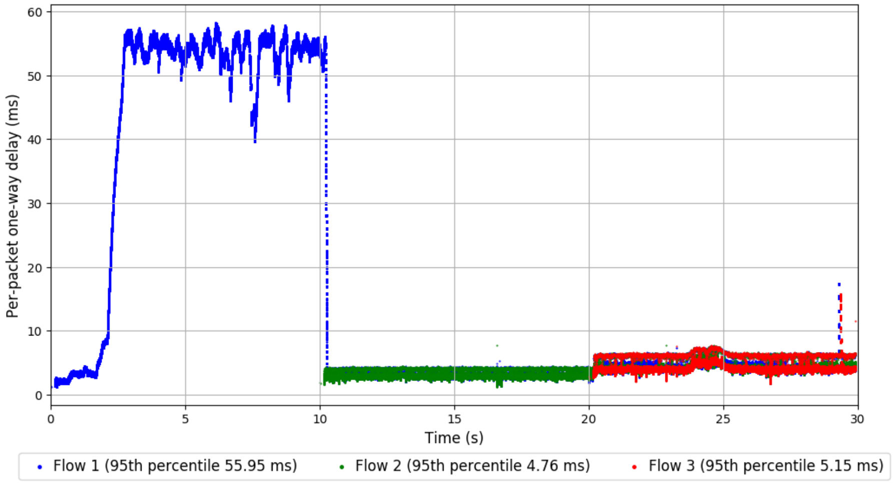
```
Run 10: Statistics of FillP

Start at: 2018-03-06 16:30:26
End at: 2018-03-06 16:30:56
Local clock offset: -3.404 ms
Remote clock offset: 1.646 ms

# Below is generated by plot.py at 2018-03-06 23:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 944.18 Mbit/s
95th percentile per-packet one-way delay: 55.564 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 572.76 Mbit/s
95th percentile per-packet one-way delay: 55.945 ms
Loss rate: 2.56%
-- Flow 2:
Average throughput: 401.53 Mbit/s
95th percentile per-packet one-way delay: 4.762 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 315.37 Mbit/s
95th percentile per-packet one-way delay: 5.154 ms
Loss rate: 0.23%
```

Run 10: Report of FillP — Data Link



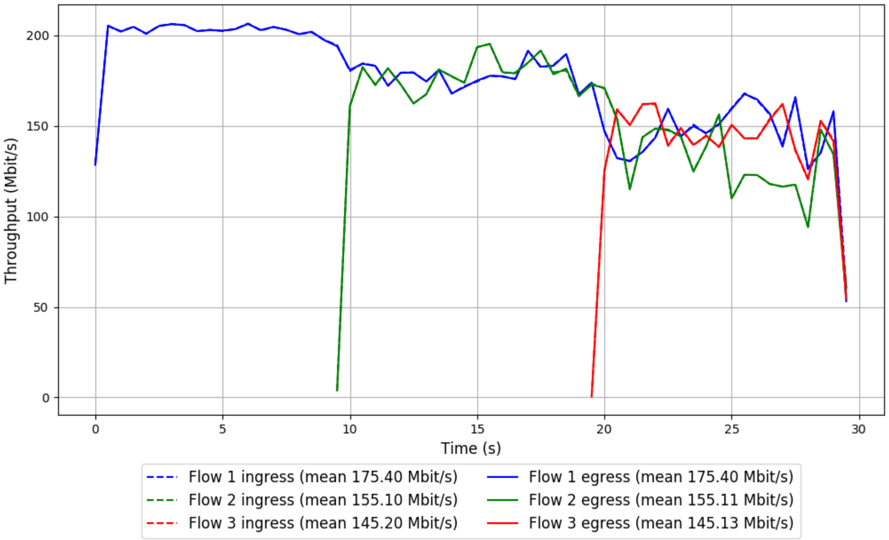


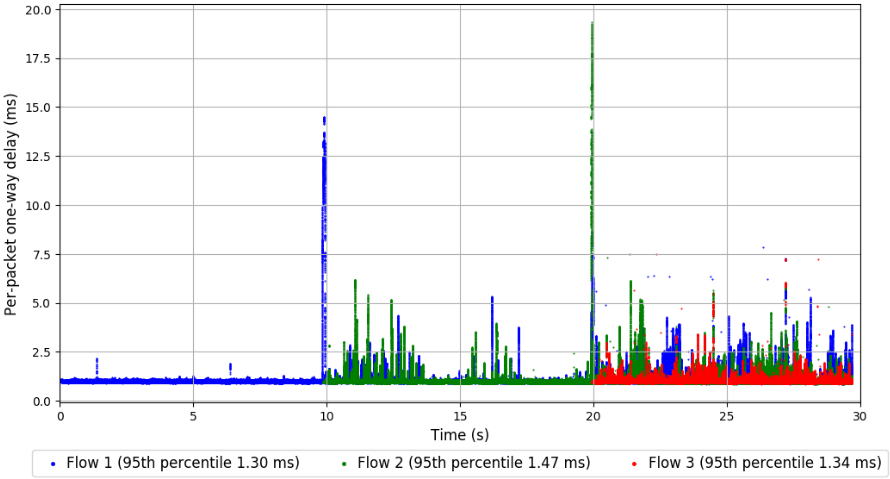
```
Run 1: Statistics of Indigo-1-32

Start at: 2018-03-06 11:44:58
End at: 2018-03-06 11:45:28
Local clock offset: 4.644 ms
Remote clock offset: 4.183 ms

# Below is generated by plot.py at 2018-03-06 23:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.47 Mbit/s
95th percentile per-packet one-way delay: 1.356 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 175.40 Mbit/s
95th percentile per-packet one-way delay: 1.298 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 155.11 Mbit/s
95th percentile per-packet one-way delay: 1.470 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 145.13 Mbit/s
95th percentile per-packet one-way delay: 1.340 ms
Loss rate: 0.23%
```

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



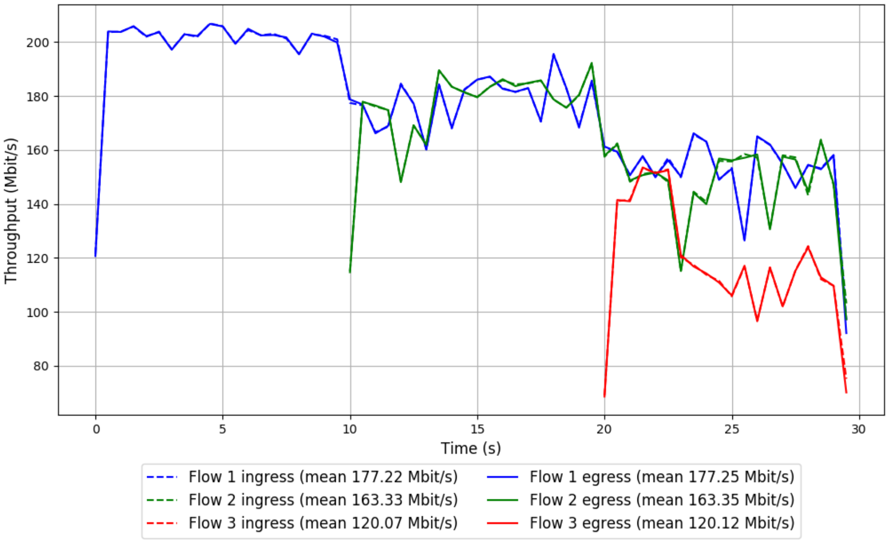


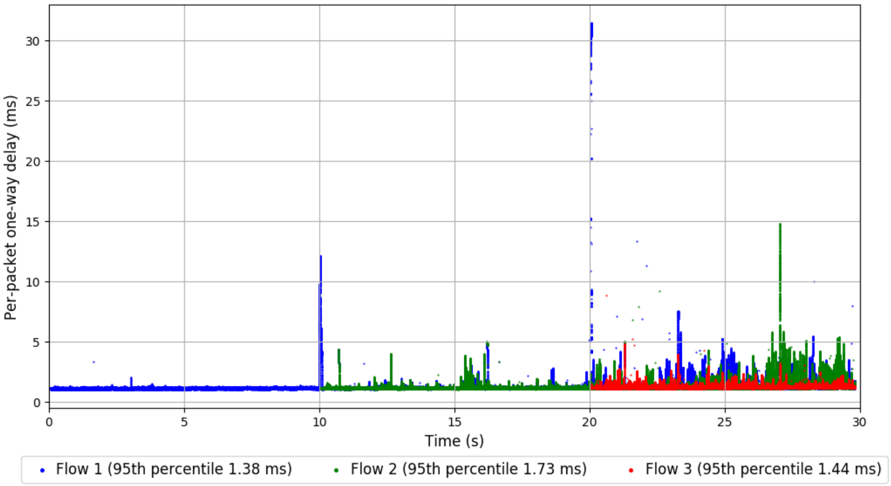
```
Run 2: Statistics of Indigo-1-32

Start at: 2018-03-06 12:14:44
End at: 2018-03-06 12:15:14
Local clock offset: -4.159 ms
Remote clock offset: 5.753 ms

# Below is generated by plot.py at 2018-03-06 23:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 324.75 Mbit/s
95th percentile per-packet one-way delay: 1.501 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 177.25 Mbit/s
95th percentile per-packet one-way delay: 1.382 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 163.35 Mbit/s
95th percentile per-packet one-way delay: 1.726 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 120.12 Mbit/s
95th percentile per-packet one-way delay: 1.443 ms
Loss rate: 0.22%
```

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



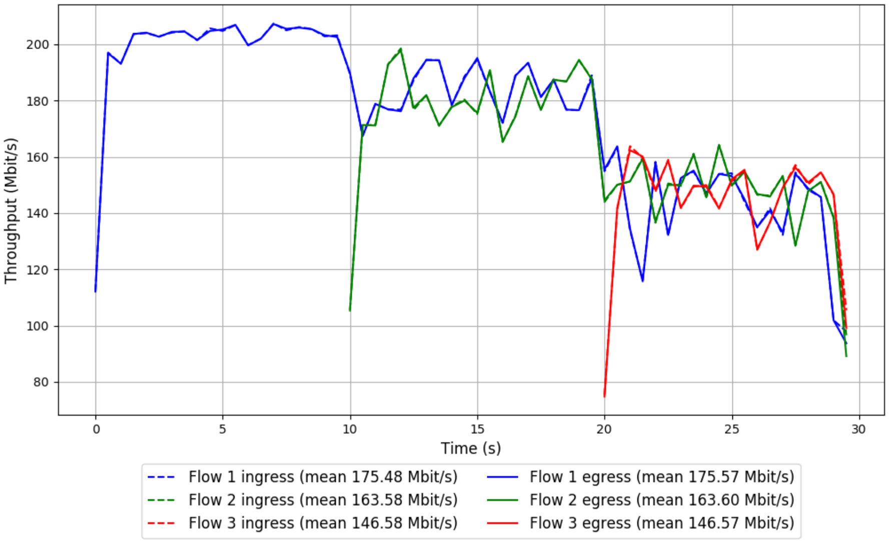


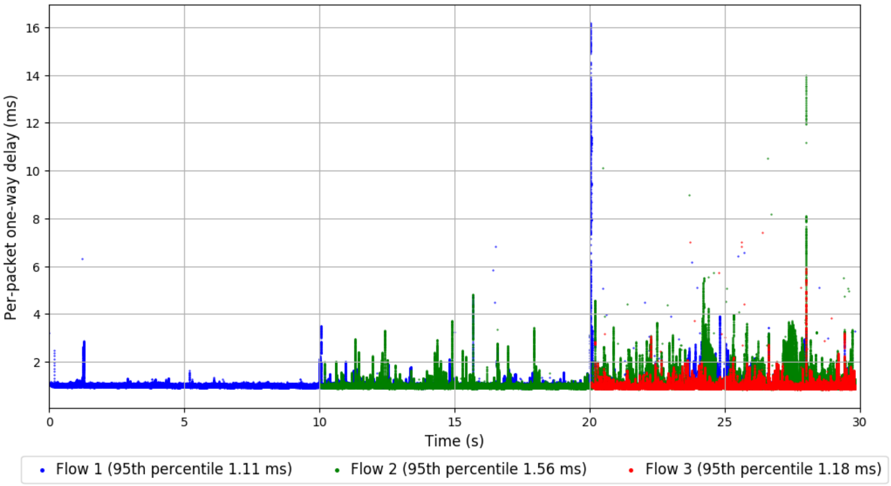
```
Run 3: Statistics of Indigo-1-32

Start at: 2018-03-06 12:44:20
End at: 2018-03-06 12:44:50
Local clock offset: -4.756 ms
Remote clock offset: 5.65 ms

# Below is generated by plot.py at 2018-03-06 23:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.06 Mbit/s
95th percentile per-packet one-way delay: 1.239 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 175.57 Mbit/s
95th percentile per-packet one-way delay: 1.114 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 163.60 Mbit/s
95th percentile per-packet one-way delay: 1.562 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 146.57 Mbit/s
95th percentile per-packet one-way delay: 1.184 ms
Loss rate: 0.22%
```

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



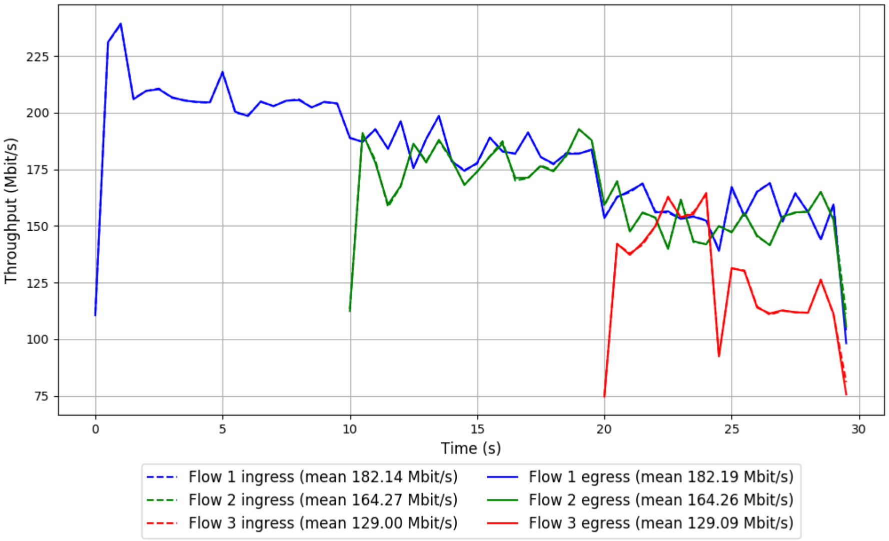


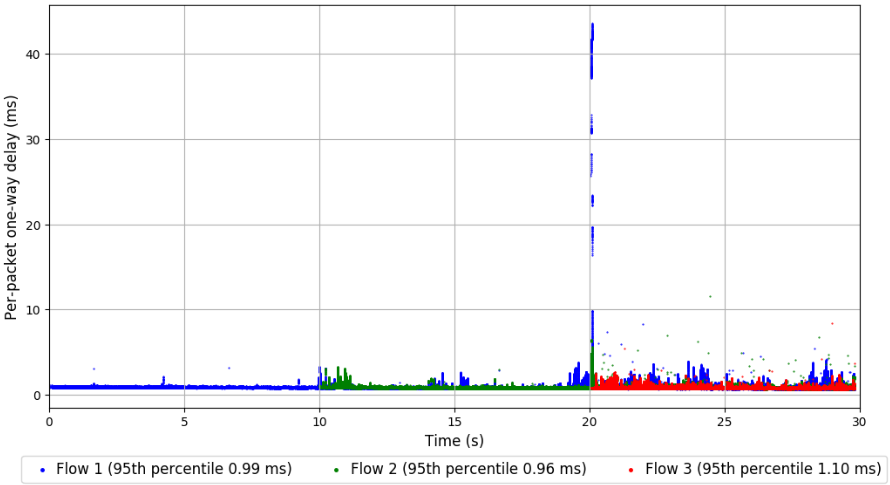
```
Run 4: Statistics of Indigo-1-32

Start at: 2018-03-06 13:13:42
End at: 2018-03-06 13:14:12
Local clock offset: -4.667 ms
Remote clock offset: 3.832 ms

# Below is generated by plot.py at 2018-03-06 23:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 333.41 Mbit/s
95th percentile per-packet one-way delay: 0.992 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 182.19 Mbit/s
95th percentile per-packet one-way delay: 0.992 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 164.26 Mbit/s
95th percentile per-packet one-way delay: 0.957 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 129.09 Mbit/s
95th percentile per-packet one-way delay: 1.105 ms
Loss rate: 0.22%
```

Run 4: Report of Indigo-1-32 — Data Link



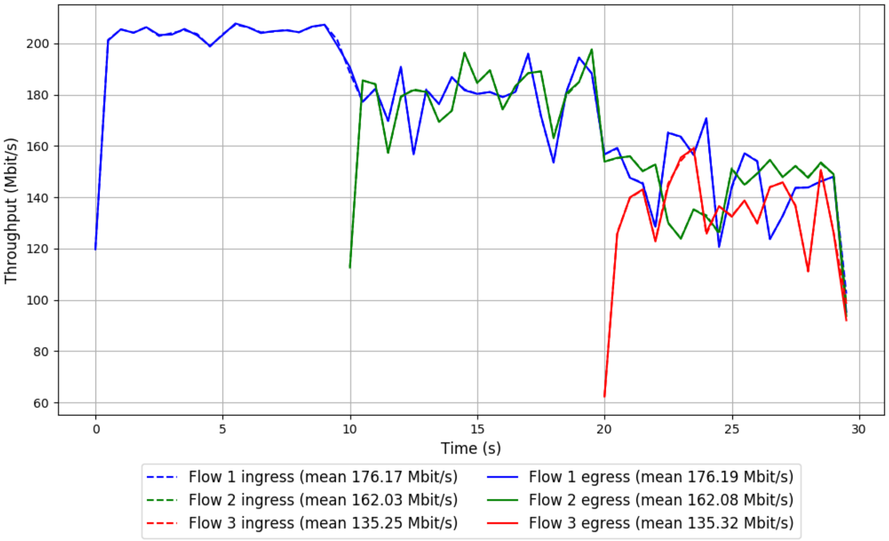


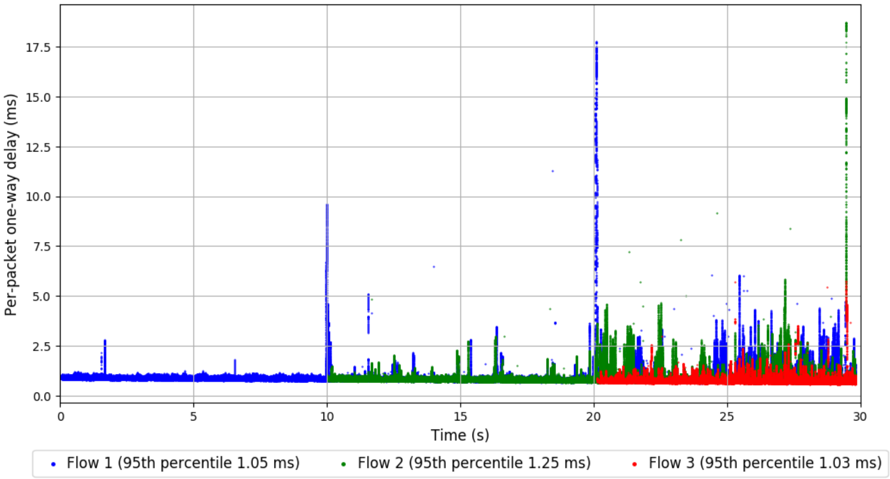
```
Run 5: Statistics of Indigo-1-32

Start at: 2018-03-06 13:42:51
End at: 2018-03-06 13:43:21
Local clock offset: -0.998 ms
Remote clock offset: -0.945 ms

# Below is generated by plot.py at 2018-03-06 23:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.77 Mbit/s
95th percentile per-packet one-way delay: 1.105 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 176.19 Mbit/s
95th percentile per-packet one-way delay: 1.055 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 162.08 Mbit/s
95th percentile per-packet one-way delay: 1.254 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 135.32 Mbit/s
95th percentile per-packet one-way delay: 1.028 ms
Loss rate: 0.25%
```

## Run 5: Report of Indigo-1-32 — Data Link



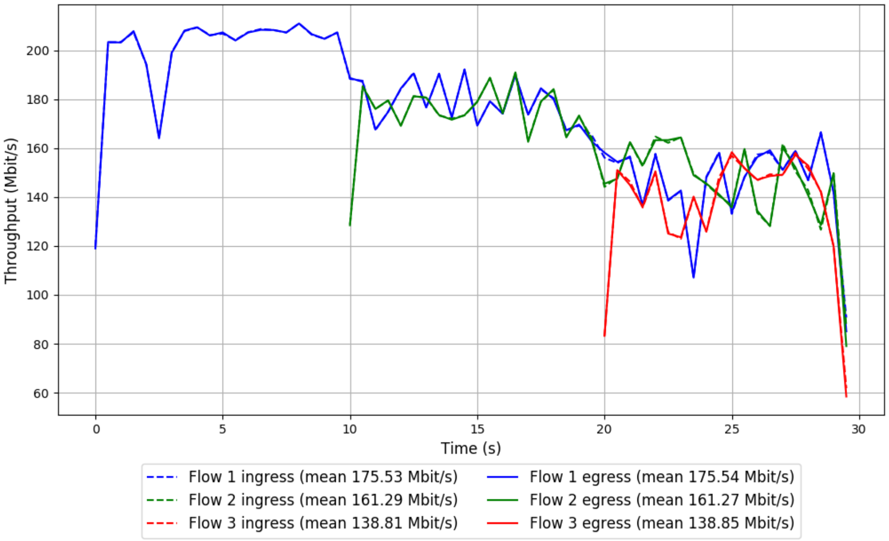


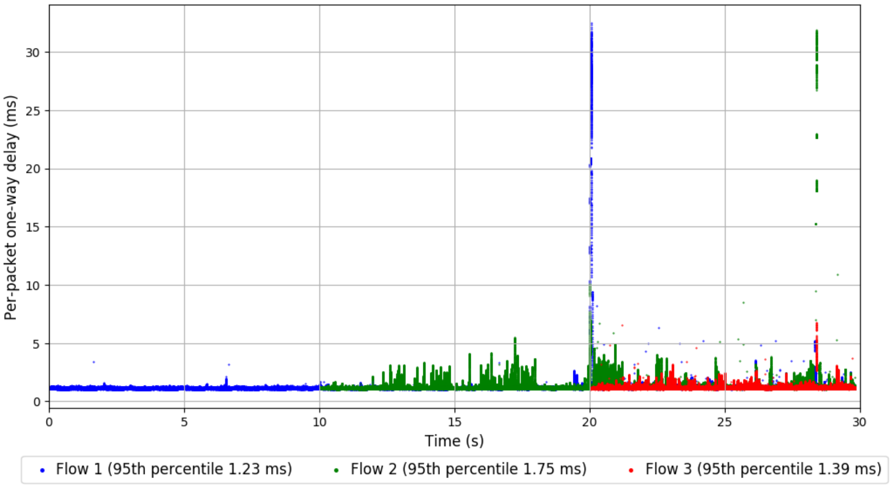
```
Run 6: Statistics of Indigo-1-32

Start at: 2018-03-06 14:12:26
End at: 2018-03-06 14:12:56
Local clock offset: 4.048 ms
Remote clock offset: 0.492 ms

# Below is generated by plot.py at 2018-03-06 23:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.06 Mbit/s
95th percentile per-packet one-way delay: 1.350 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 175.54 Mbit/s
95th percentile per-packet one-way delay: 1.230 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 161.27 Mbit/s
95th percentile per-packet one-way delay: 1.750 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 138.85 Mbit/s
95th percentile per-packet one-way delay: 1.394 ms
Loss rate: 0.13%
```

## Run 6: Report of Indigo-1-32 — Data Link



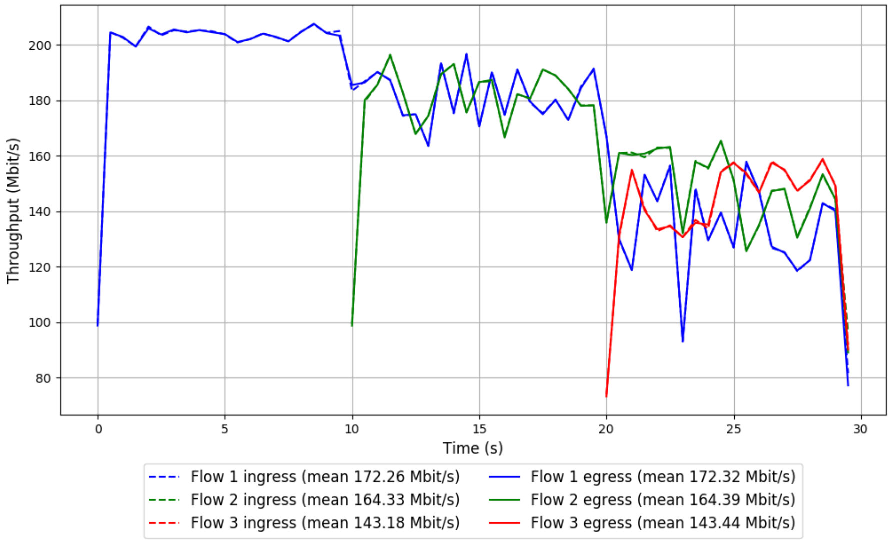


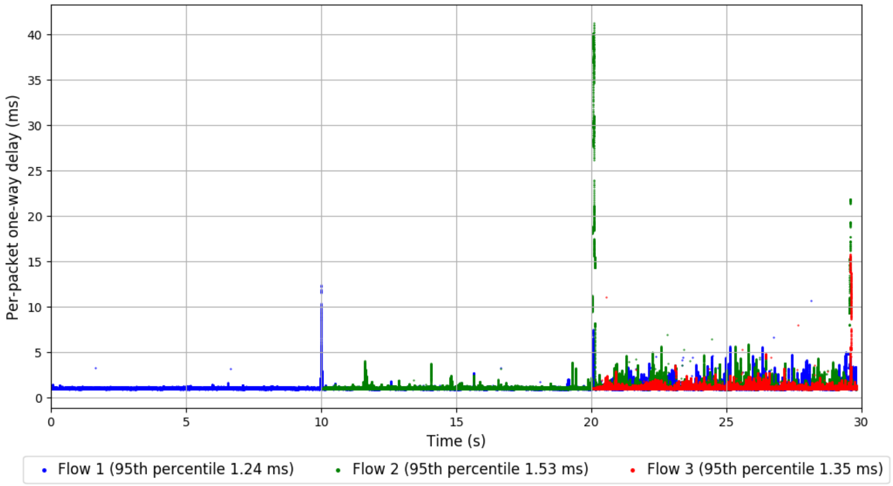
```
Run 7: Statistics of Indigo-1-32

Start at: 2018-03-06 14:41:51
End at: 2018-03-06 14:42:21
Local clock offset: 5.248 ms
Remote clock offset: 1.95 ms

# Below is generated by plot.py at 2018-03-06 23:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.92 Mbit/s
95th percentile per-packet one-way delay: 1.358 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 172.32 Mbit/s
95th percentile per-packet one-way delay: 1.243 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 164.39 Mbit/s
95th percentile per-packet one-way delay: 1.533 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 143.44 Mbit/s
95th percentile per-packet one-way delay: 1.351 ms
Loss rate: 0.07%
```

## Run 7: Report of Indigo-1-32 — Data Link



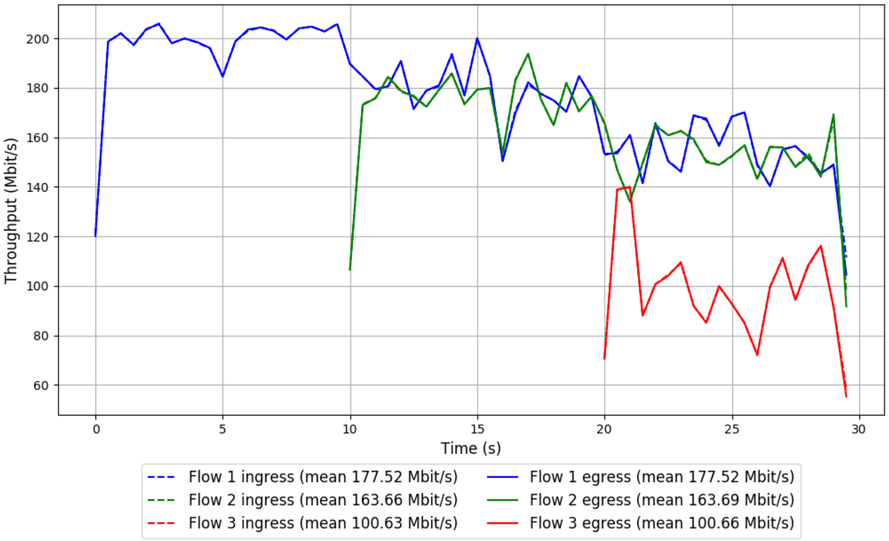


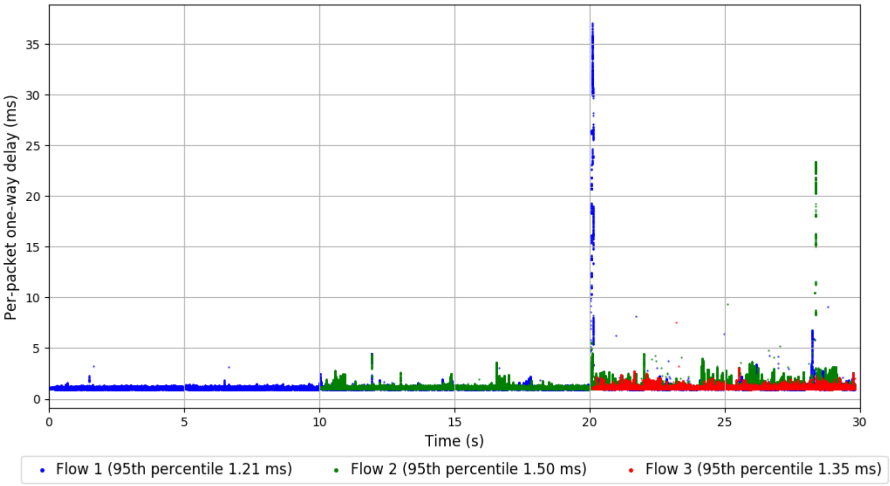
```
Run 8: Statistics of Indigo-1-32

Start at: 2018-03-06 15:16:28
End at: 2018-03-06 15:16:58
Local clock offset: 0.855 ms
Remote clock offset: 2.336 ms

# Below is generated by plot.py at 2018-03-06 23:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 318.95 Mbit/s
95th percentile per-packet one-way delay: 1.298 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 177.52 Mbit/s
95th percentile per-packet one-way delay: 1.207 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 163.69 Mbit/s
95th percentile per-packet one-way delay: 1.496 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 100.66 Mbit/s
95th percentile per-packet one-way delay: 1.355 ms
Loss rate: 0.16%
```

## Run 8: Report of Indigo-1-32 — Data Link



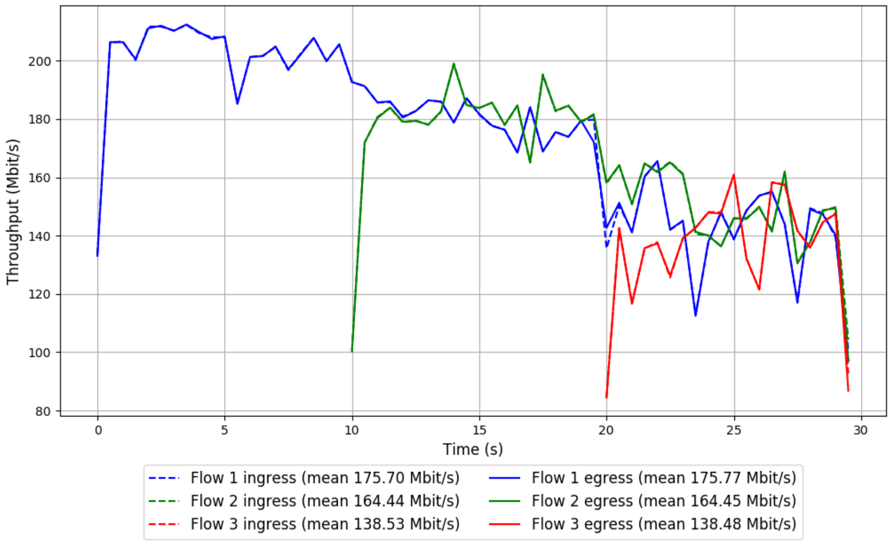


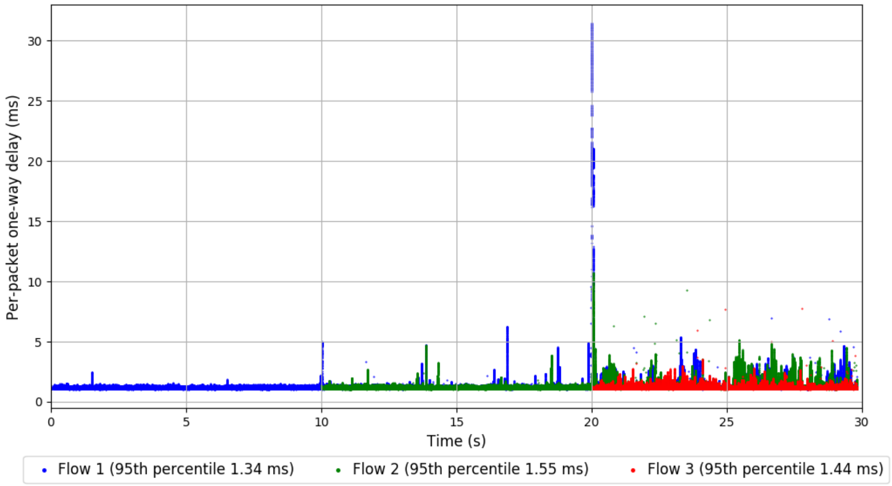
```
Run 9: Statistics of Indigo-1-32

Start at: 2018-03-06 15:45:26
End at: 2018-03-06 15:45:56
Local clock offset: 0.689 ms
Remote clock offset: 2.311 ms

# Below is generated by plot.py at 2018-03-06 23:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.40 Mbit/s
95th percentile per-packet one-way delay: 1.412 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 175.77 Mbit/s
95th percentile per-packet one-way delay: 1.345 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 164.45 Mbit/s
95th percentile per-packet one-way delay: 1.546 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 138.48 Mbit/s
95th percentile per-packet one-way delay: 1.435 ms
Loss rate: 0.24%
```

## Run 9: Report of Indigo-1-32 — Data Link



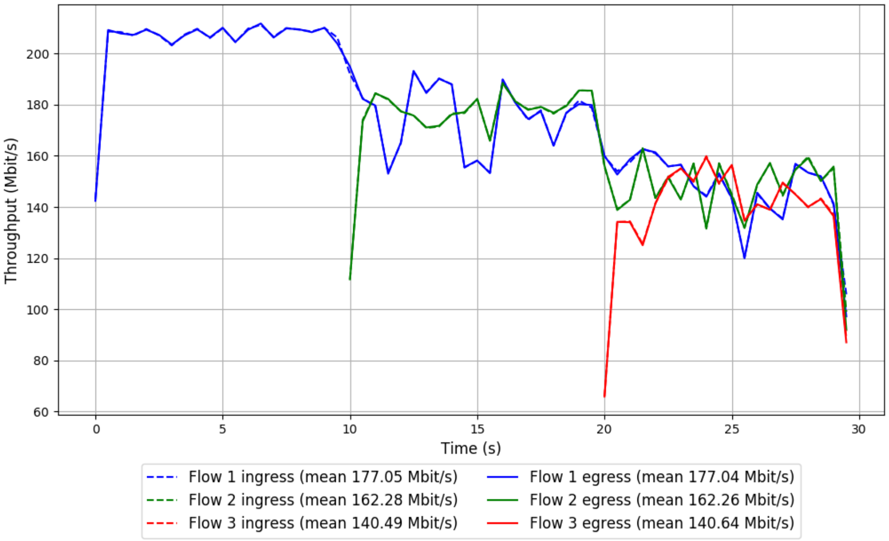


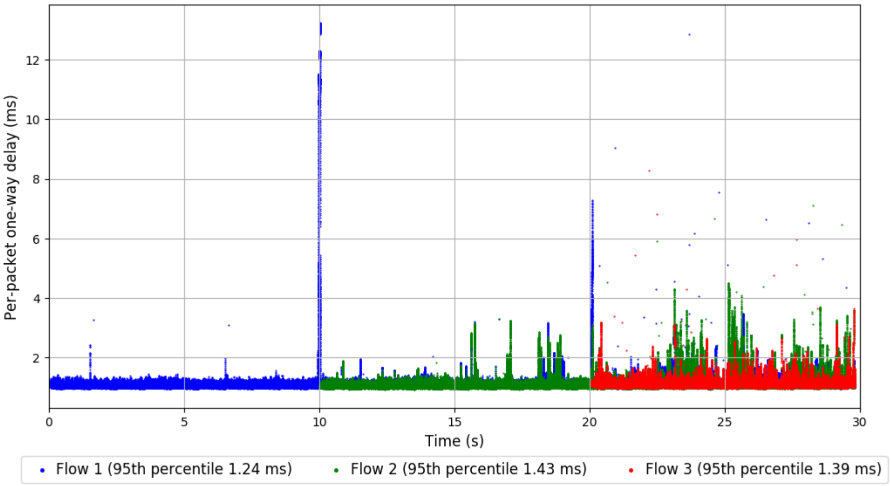
```
Run 10: Statistics of Indigo-1-32

Start at: 2018-03-06 16:14:37
End at: 2018-03-06 16:15:07
Local clock offset: -1.529 ms
Remote clock offset: 1.843 ms

# Below is generated by plot.py at 2018-03-06 23:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.76 Mbit/s
95th percentile per-packet one-way delay: 1.307 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 177.04 Mbit/s
95th percentile per-packet one-way delay: 1.238 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 162.26 Mbit/s
95th percentile per-packet one-way delay: 1.430 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 140.64 Mbit/s
95th percentile per-packet one-way delay: 1.392 ms
Loss rate: 0.09%
```

Run 10: Report of Indigo-1-32 — Data Link



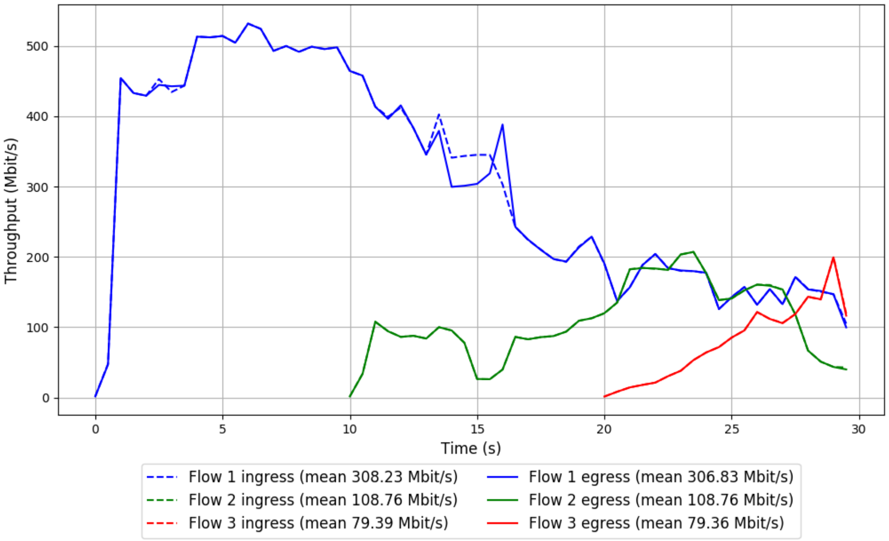


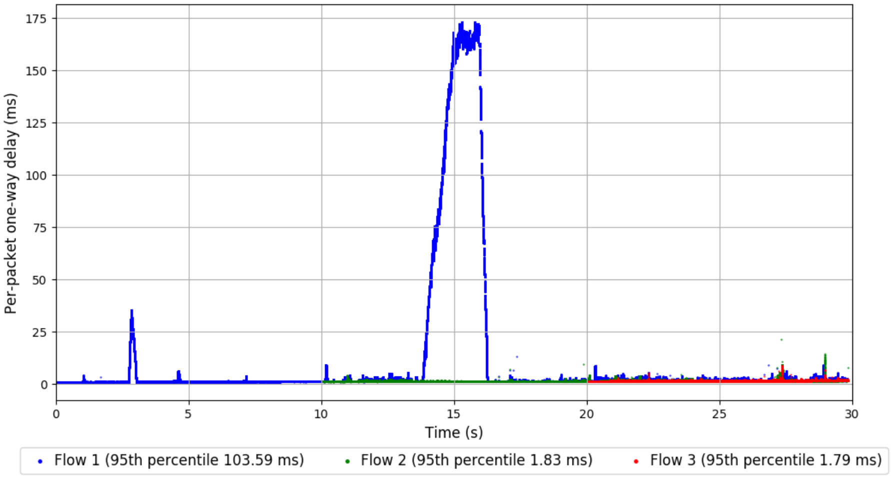
```
Run 1: Statistics of Vivace-latency

Start at: 2018-03-06 11:53:10
End at: 2018-03-06 11:53:40
Local clock offset: 5.844 ms
Remote clock offset: 4.688 ms

# Below is generated by plot.py at 2018-03-06 23:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 405.11 Mbit/s
95th percentile per-packet one-way delay: 64.991 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 306.83 Mbit/s
95th percentile per-packet one-way delay: 103.592 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 108.76 Mbit/s
95th percentile per-packet one-way delay: 1.830 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 79.36 Mbit/s
95th percentile per-packet one-way delay: 1.788 ms
Loss rate: 0.22%
```

## Run 1: Report of Vivace-latency — Data Link



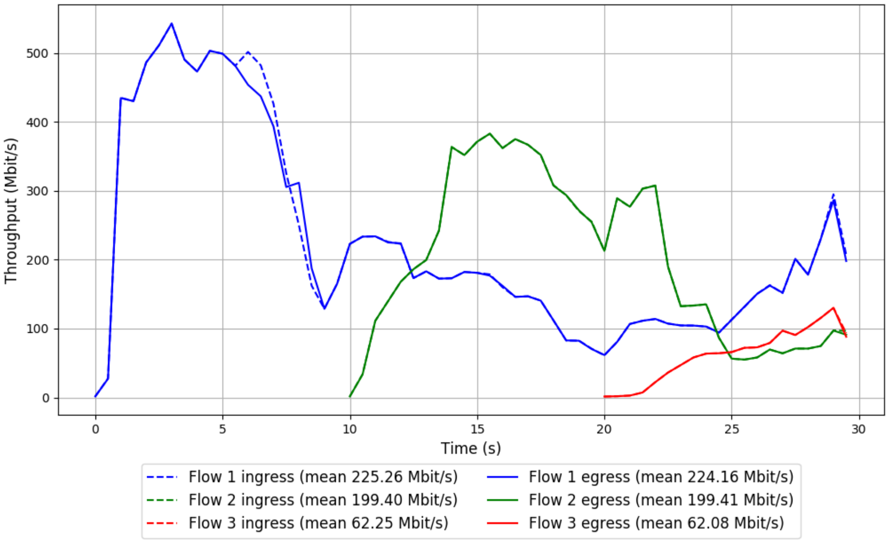


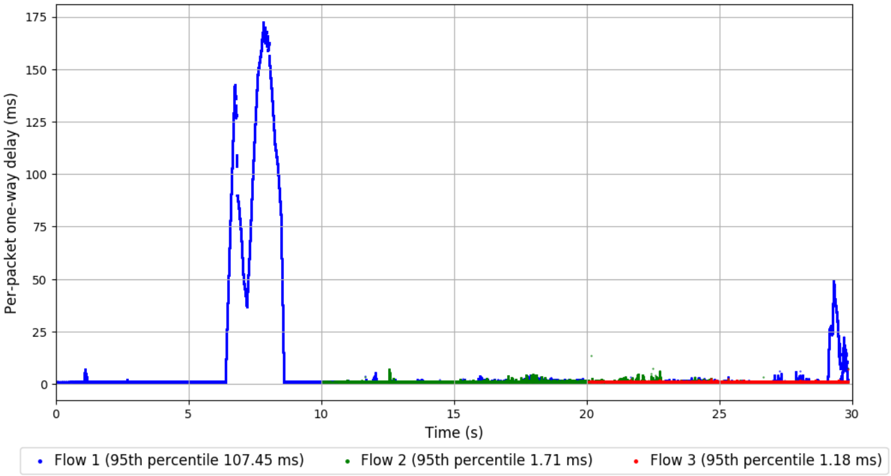
```
Run 2: Statistics of Vivace-latency

Start at: 2018-03-06 12:22:54
End at: 2018-03-06 12:23:24
Local clock offset: -4.89 ms
Remote clock offset: 6.167 ms

# Below is generated by plot.py at 2018-03-06 23:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 377.00 Mbit/s
95th percentile per-packet one-way delay: 67.389 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 224.16 Mbit/s
95th percentile per-packet one-way delay: 107.446 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 199.41 Mbit/s
95th percentile per-packet one-way delay: 1.713 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 62.08 Mbit/s
95th percentile per-packet one-way delay: 1.178 ms
Loss rate: 0.42%
```

# Run 2: Report of Vivace-latency — Data Link



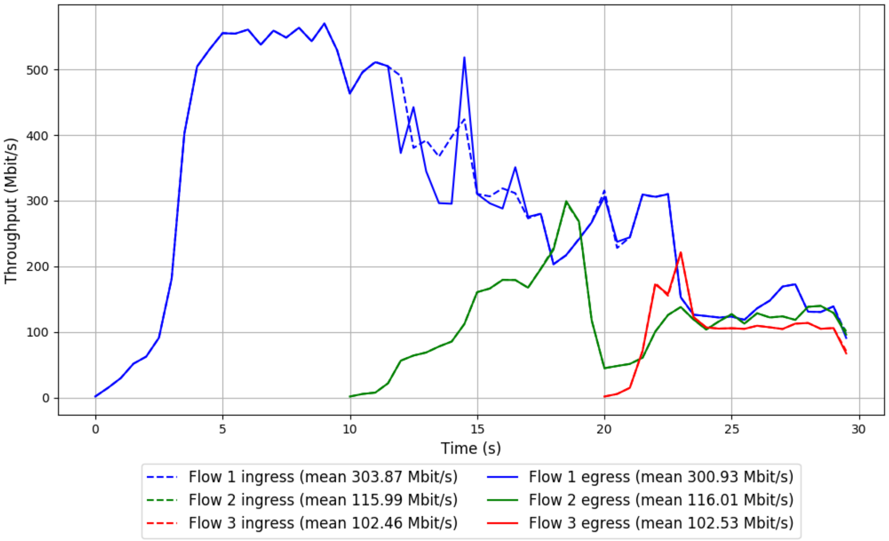


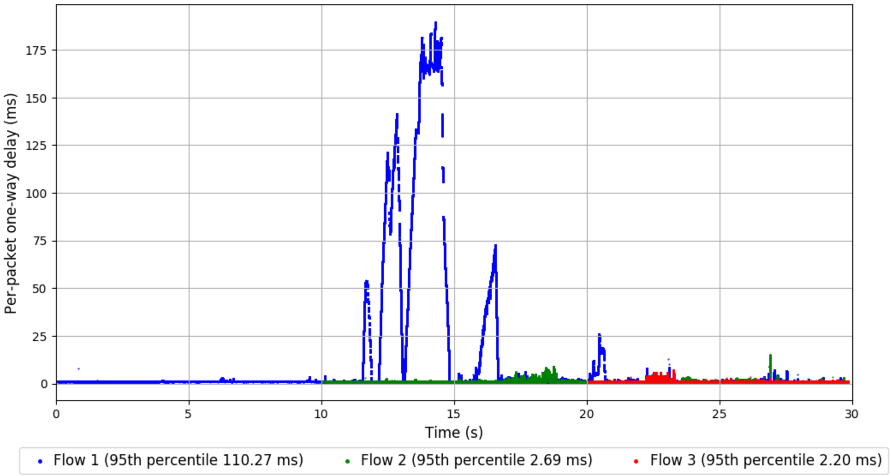
```
Run 3: Statistics of Vivace-latency

Start at: 2018-03-06 12:52:36
End at: 2018-03-06 12:53:06
Local clock offset: -4.913 ms
Remote clock offset: 4.89 ms

# Below is generated by plot.py at 2018-03-06 23:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.70 Mbit/s
95th percentile per-packet one-way delay: 80.193 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 300.93 Mbit/s
95th percentile per-packet one-way delay: 110.266 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 116.01 Mbit/s
95th percentile per-packet one-way delay: 2.691 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 102.53 Mbit/s
95th percentile per-packet one-way delay: 2.199 ms
Loss rate: 0.19%
```

## Run 3: Report of Vivace-latency — Data Link



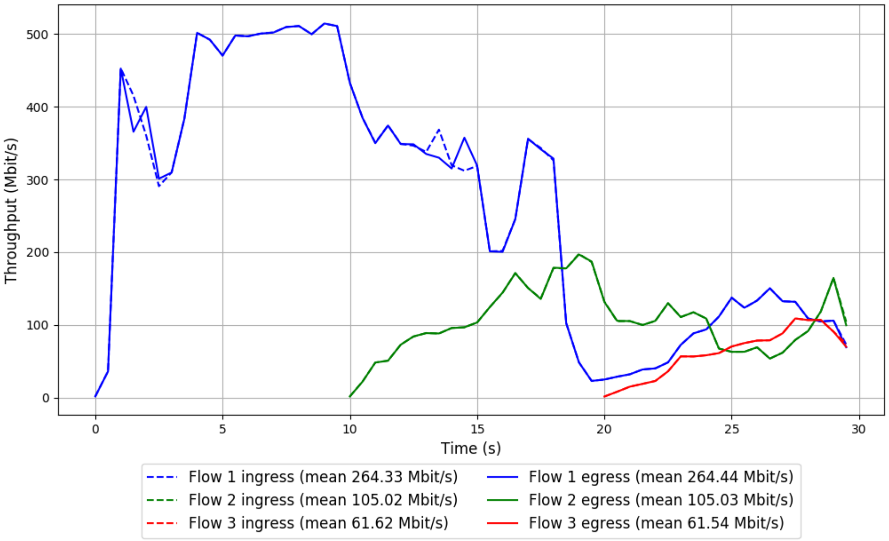


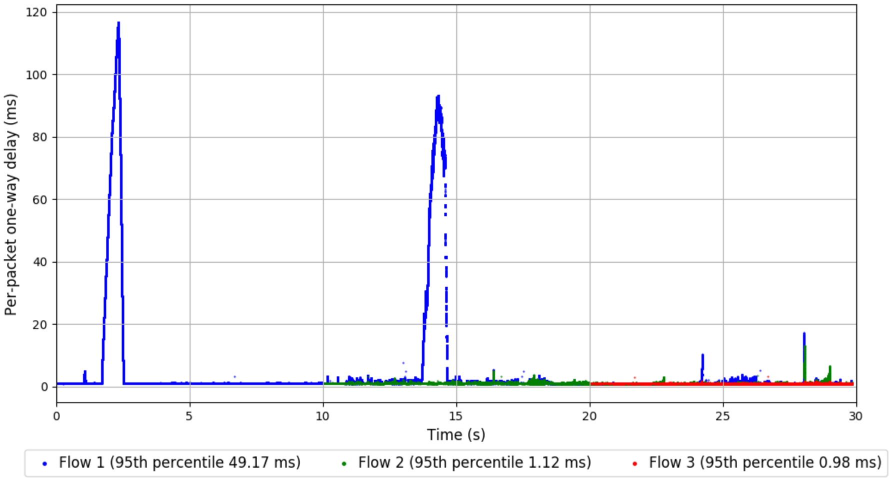
```
Run 4: Statistics of Vivace-latency

Start at: 2018-03-06 13:21:52
End at: 2018-03-06 13:22:22
Local clock offset: -4.695 ms
Remote clock offset: 1.341 ms

# Below is generated by plot.py at 2018-03-06 23:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 354.44 Mbit/s
95th percentile per-packet one-way delay: 21.614 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 264.44 Mbit/s
95th percentile per-packet one-way delay: 49.167 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 105.03 Mbit/s
95th percentile per-packet one-way delay: 1.124 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 61.54 Mbit/s
95th percentile per-packet one-way delay: 0.976 ms
Loss rate: 0.37%
```

Run 4: Report of Vivace-latency — Data Link



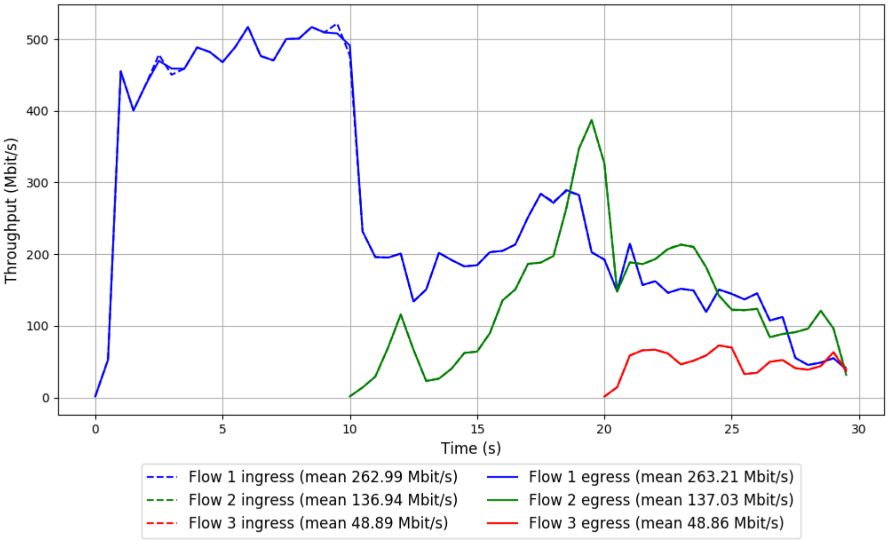


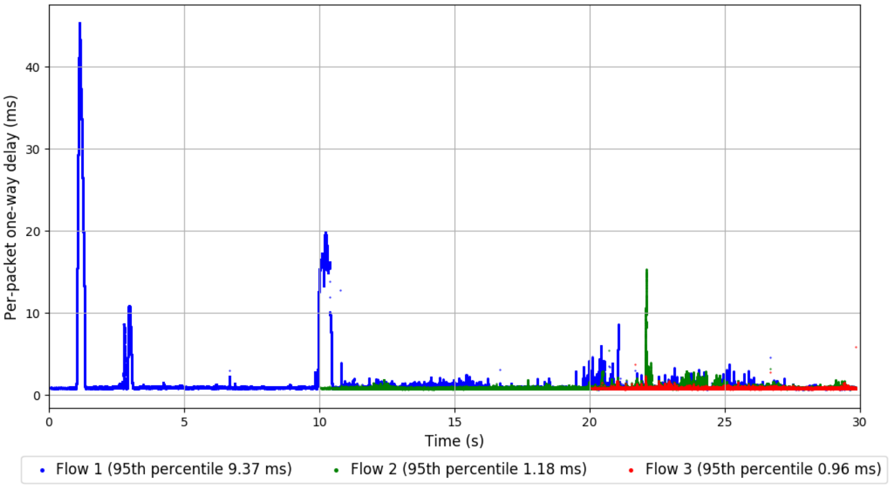
```
Run 5: Statistics of Vivace-latency

Start at: 2018-03-06 13:51:25
End at: 2018-03-06 13:51:55
Local clock offset: 1.315 ms
Remote clock offset: -0.225 ms

# Below is generated by plot.py at 2018-03-06 23:56:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 370.20 Mbit/s
95th percentile per-packet one-way delay: 3.063 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 263.21 Mbit/s
95th percentile per-packet one-way delay: 9.370 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 137.03 Mbit/s
95th percentile per-packet one-way delay: 1.183 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 48.86 Mbit/s
95th percentile per-packet one-way delay: 0.961 ms
Loss rate: 0.21%
```

## Run 5: Report of Vivace-latency — Data Link



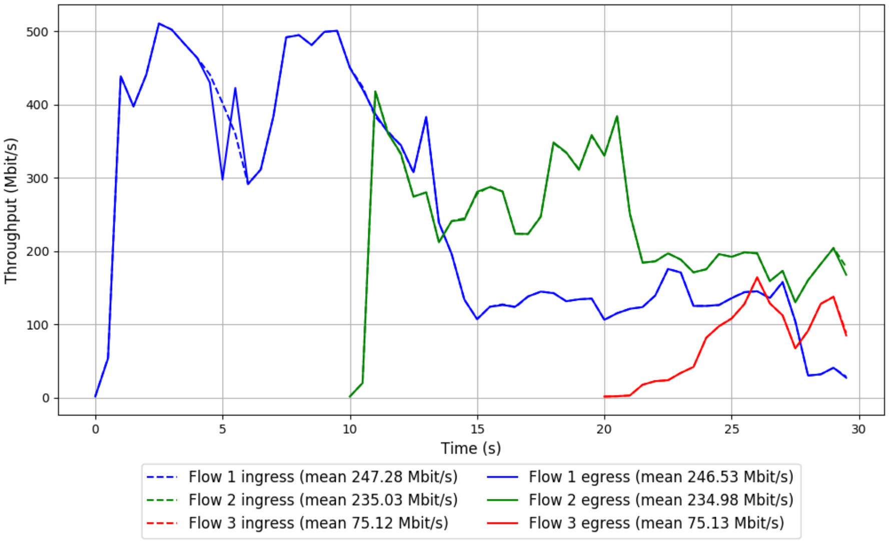


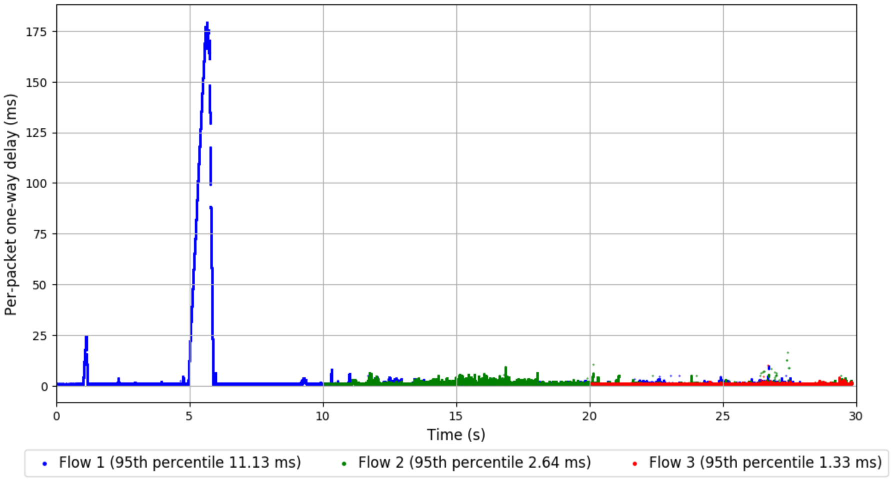
```
Run 6: Statistics of Vivace-latency

Start at: 2018-03-06 14:20:48
End at: 2018-03-06 14:21:18
Local clock offset: 3.892 ms
Remote clock offset: 0.506 ms

# Below is generated by plot.py at 2018-03-06 23:57:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 427.20 Mbit/s
95th percentile per-packet one-way delay: 3.087 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 246.53 Mbit/s
95th percentile per-packet one-way delay: 11.128 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 234.98 Mbit/s
95th percentile per-packet one-way delay: 2.640 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 75.13 Mbit/s
95th percentile per-packet one-way delay: 1.326 ms
Loss rate: 0.28%
```

Run 6: Report of Vivace-latency — Data Link



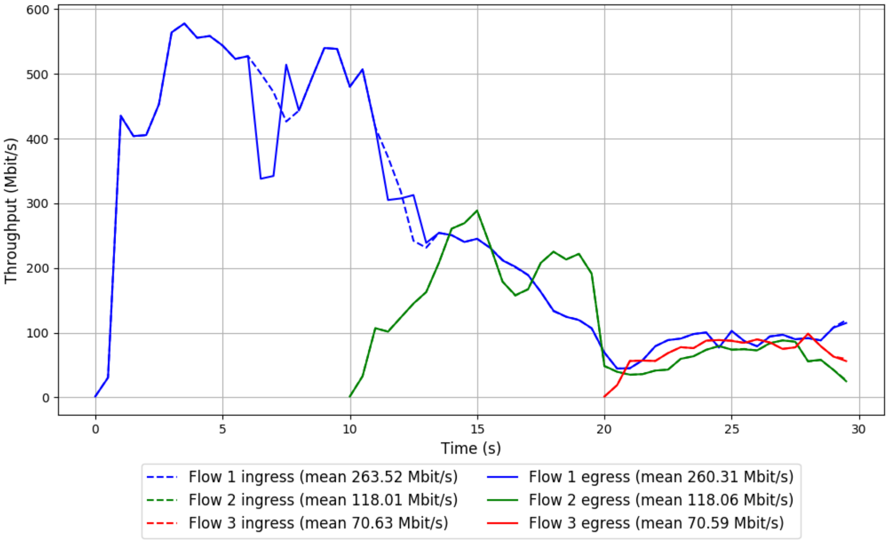


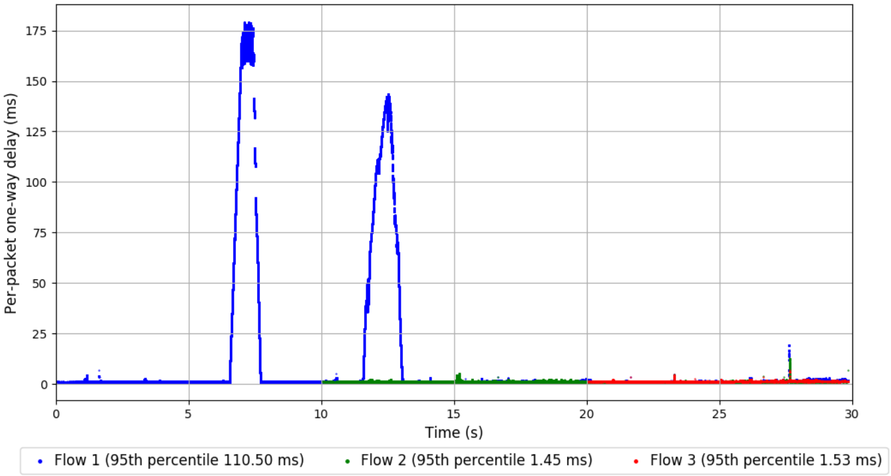
```
Run 7: Statistics of Vivace-latency

Start at: 2018-03-06 14:50:23
End at: 2018-03-06 14:50:53
Local clock offset: 2.963 ms
Remote clock offset: 2.12 ms

# Below is generated by plot.py at 2018-03-06 23:57:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 361.89 Mbit/s
95th percentile per-packet one-way delay: 80.257 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 260.31 Mbit/s
95th percentile per-packet one-way delay: 110.501 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 118.06 Mbit/s
95th percentile per-packet one-way delay: 1.449 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 70.59 Mbit/s
95th percentile per-packet one-way delay: 1.533 ms
Loss rate: 0.25%
```

## Run 7: Report of Vivace-latency — Data Link



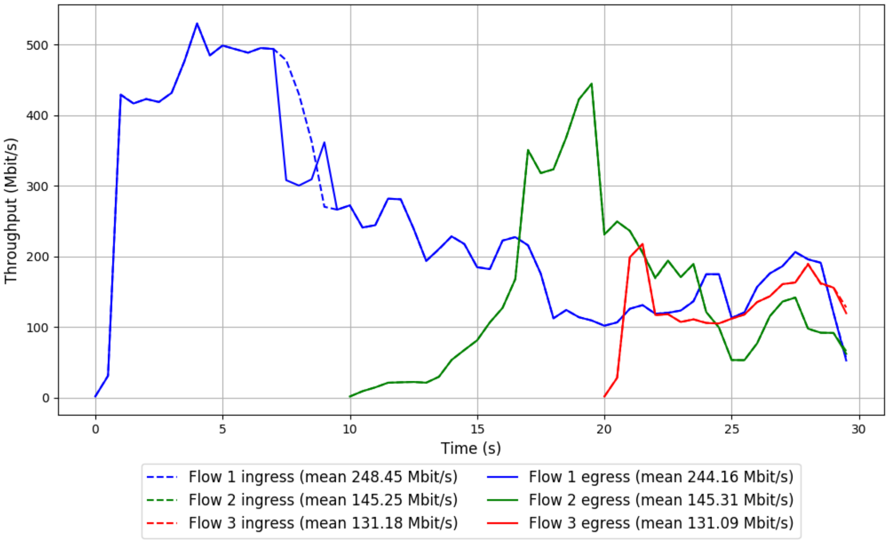


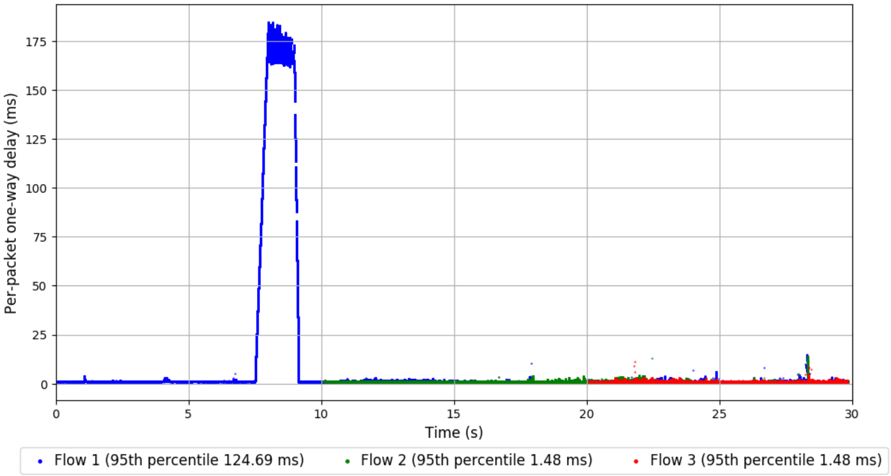
```
Run 8: Statistics of Vivace-latency

Start at: 2018-03-06 15:24:43
End at: 2018-03-06 15:25:13
Local clock offset: 0.716 ms
Remote clock offset: 2.393 ms

# Below is generated by plot.py at 2018-03-06 23:58:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.67 Mbit/s
95th percentile per-packet one-way delay: 3.004 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 244.16 Mbit/s
95th percentile per-packet one-way delay: 124.690 ms
Loss rate: 1.79%
-- Flow 2:
Average throughput: 145.31 Mbit/s
95th percentile per-packet one-way delay: 1.475 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 131.09 Mbit/s
95th percentile per-packet one-way delay: 1.480 ms
Loss rate: 0.35%
```

# Run 8: Report of Vivace-latency — Data Link



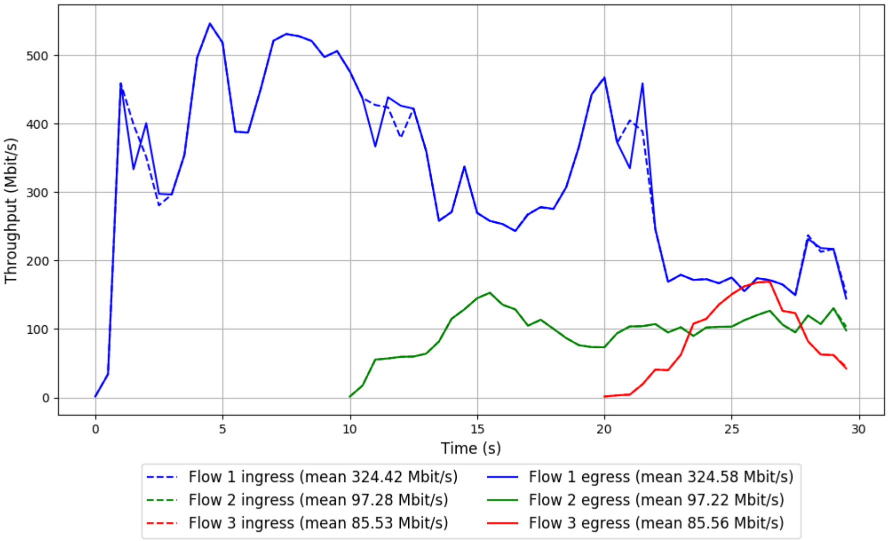


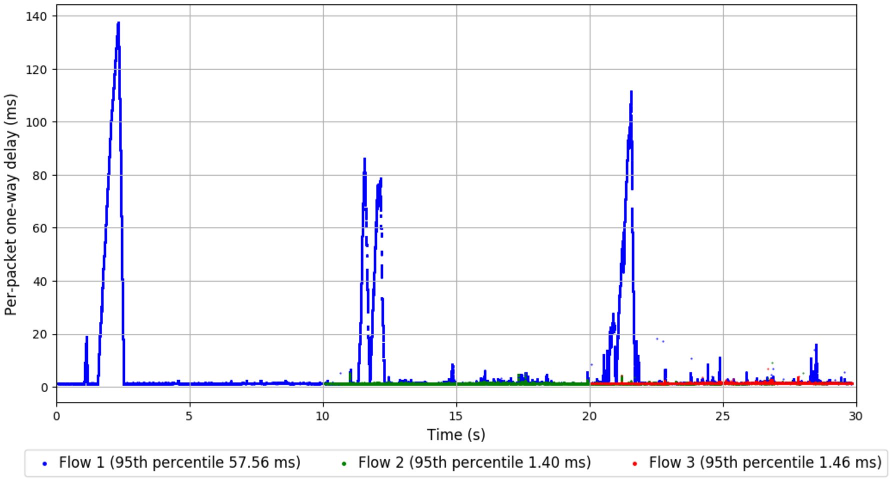
```
Run 9: Statistics of Vivace-latency

Start at: 2018-03-06 15:53:51
End at: 2018-03-06 15:54:21
Local clock offset: 0.438 ms
Remote clock offset: 2.338 ms

# Below is generated by plot.py at 2018-03-07 00:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 417.29 Mbit/s
95th percentile per-packet one-way delay: 44.067 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 324.58 Mbit/s
95th percentile per-packet one-way delay: 57.561 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 97.22 Mbit/s
95th percentile per-packet one-way delay: 1.397 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 85.56 Mbit/s
95th percentile per-packet one-way delay: 1.464 ms
Loss rate: 0.16%
```

Run 9: Report of Vivace-latency — Data Link



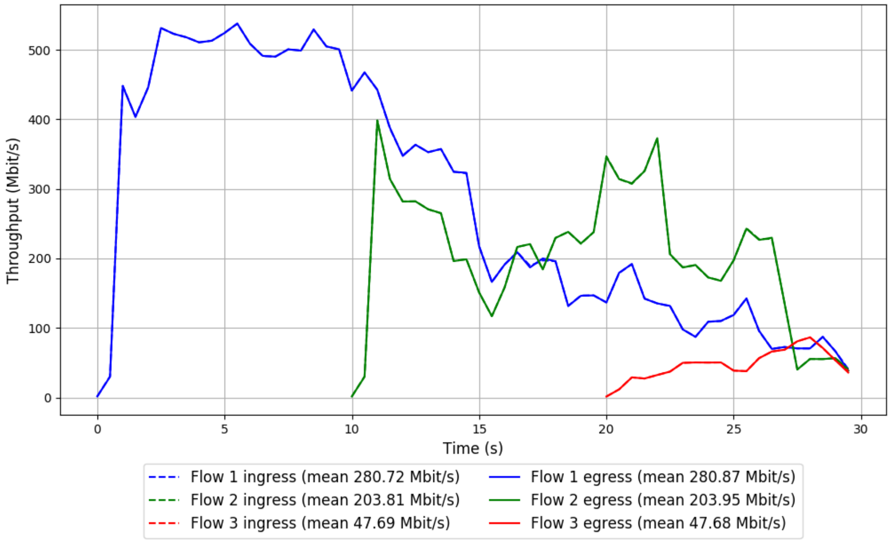


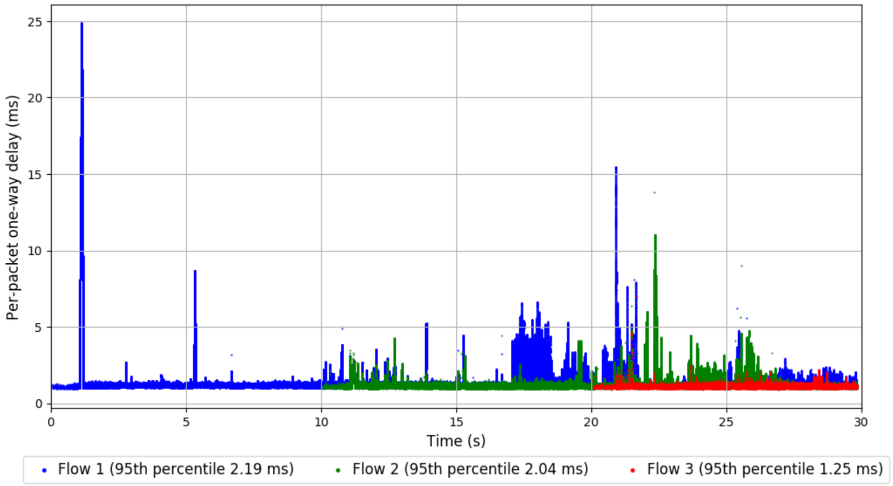
```
Run 10: Statistics of Vivace-latency

Start at: 2018-03-06 16:22:48
End at: 2018-03-06 16:23:18
Local clock offset: -1.88 ms
Remote clock offset: 1.668 ms

# Below is generated by plot.py at 2018-03-07 00:01:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 431.91 Mbit/s
95th percentile per-packet one-way delay: 2.091 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 280.87 Mbit/s
95th percentile per-packet one-way delay: 2.190 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 203.95 Mbit/s
95th percentile per-packet one-way delay: 2.043 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 47.68 Mbit/s
95th percentile per-packet one-way delay: 1.250 ms
Loss rate: 0.25%
```

Run 10: Report of Vivace-latency — Data Link



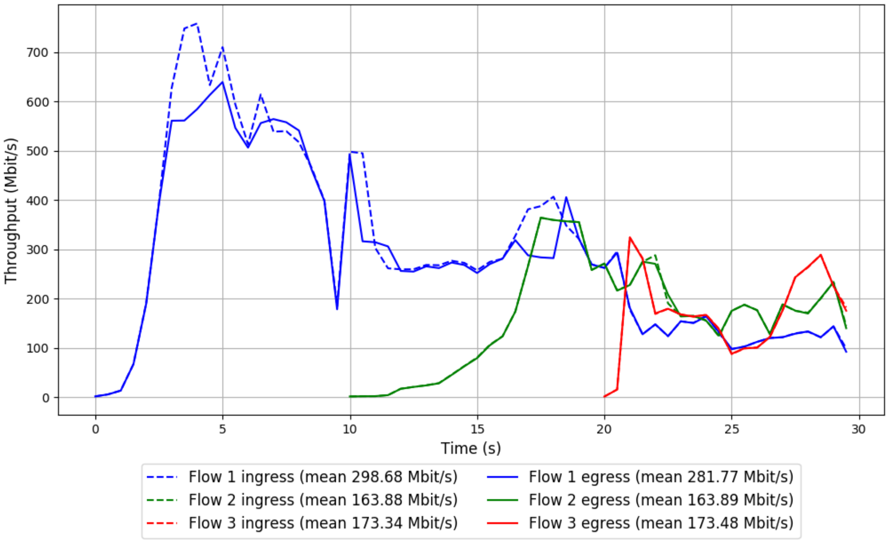


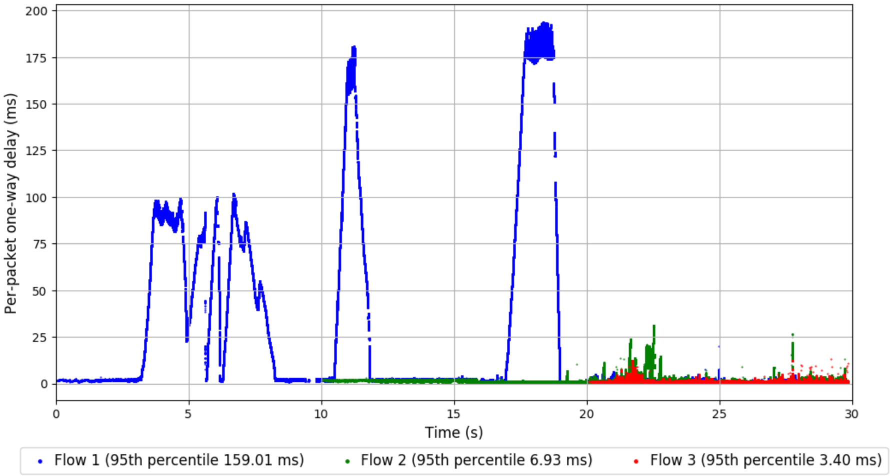
```
Run 1: Statistics of Vivace-loss

Start at: 2018-03-06 11:48:23
End at: 2018-03-06 11:48:53
Local clock offset: 5.179 ms
Remote clock offset: 4.355 ms

# Below is generated by plot.py at 2018-03-07 00:02:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 447.39 Mbit/s
95th percentile per-packet one-way delay: 98.979 ms
Loss rate: 3.74%
-- Flow 1:
Average throughput: 281.77 Mbit/s
95th percentile per-packet one-way delay: 159.010 ms
Loss rate: 5.73%
-- Flow 2:
Average throughput: 163.89 Mbit/s
95th percentile per-packet one-way delay: 6.927 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 173.48 Mbit/s
95th percentile per-packet one-way delay: 3.395 ms
Loss rate: 0.20%
```

## Run 1: Report of Vivace-loss — Data Link



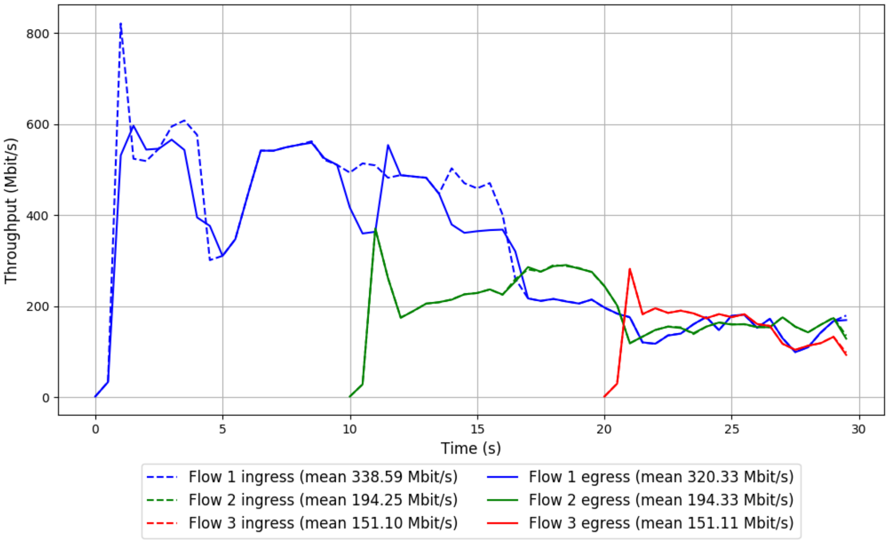


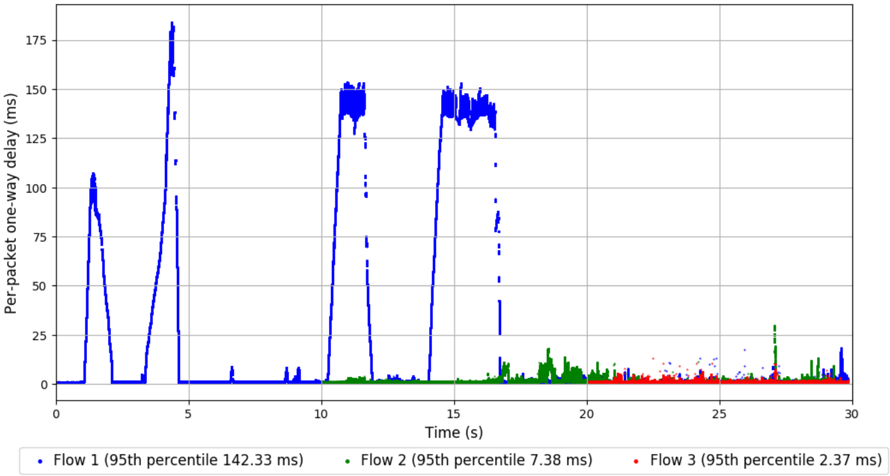
```
Run 2: Statistics of Vivace-loss

Start at: 2018-03-06 12:18:11
End at: 2018-03-06 12:18:41
Local clock offset: -4.451 ms
Remote clock offset: 5.936 ms

# Below is generated by plot.py at 2018-03-07 00:03:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 499.03 Mbit/s
95th percentile per-packet one-way delay: 138.993 ms
Loss rate: 3.64%
-- Flow 1:
Average throughput: 320.33 Mbit/s
95th percentile per-packet one-way delay: 142.326 ms
Loss rate: 5.49%
-- Flow 2:
Average throughput: 194.33 Mbit/s
95th percentile per-packet one-way delay: 7.378 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 151.11 Mbit/s
95th percentile per-packet one-way delay: 2.371 ms
Loss rate: 0.18%
```

Run 2: Report of Vivace-loss — Data Link



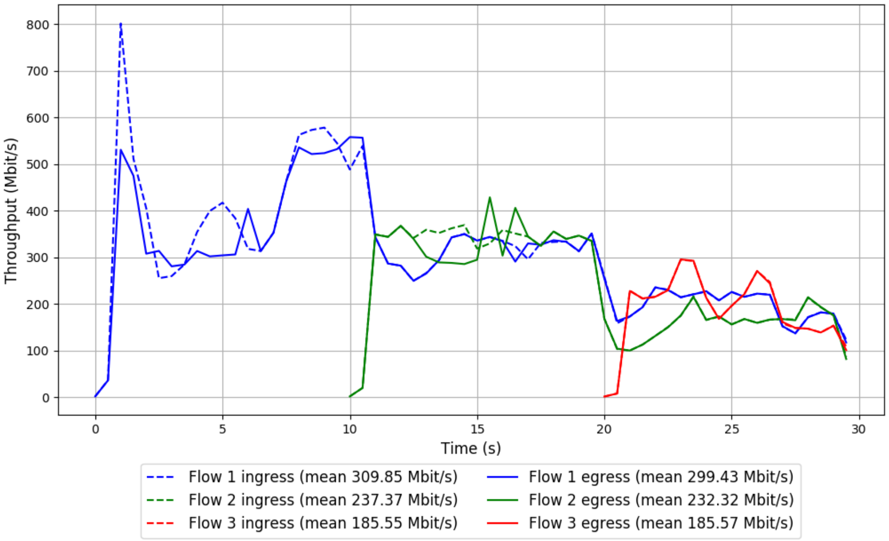


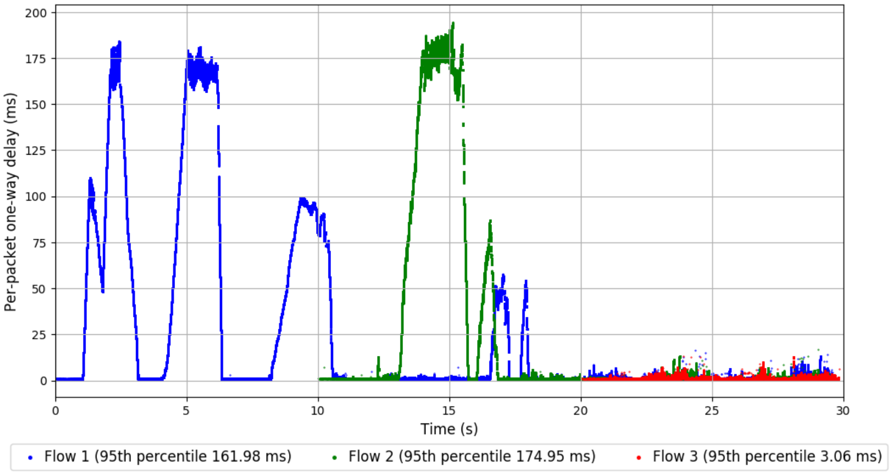
```
Run 3: Statistics of Vivace-loss

Start at: 2018-03-06 12:47:46
End at: 2018-03-06 12:48:16
Local clock offset: -4.852 ms
Remote clock offset: 5.204 ms

# Below is generated by plot.py at 2018-03-07 00:04:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 514.65 Mbit/s
95th percentile per-packet one-way delay: 164.830 ms
Loss rate: 2.70%
-- Flow 1:
Average throughput: 299.43 Mbit/s
95th percentile per-packet one-way delay: 161.977 ms
Loss rate: 3.43%
-- Flow 2:
Average throughput: 232.32 Mbit/s
95th percentile per-packet one-way delay: 174.949 ms
Loss rate: 2.23%
-- Flow 3:
Average throughput: 185.57 Mbit/s
95th percentile per-packet one-way delay: 3.061 ms
Loss rate: 0.22%
```

# Run 3: Report of Vivace-loss — Data Link



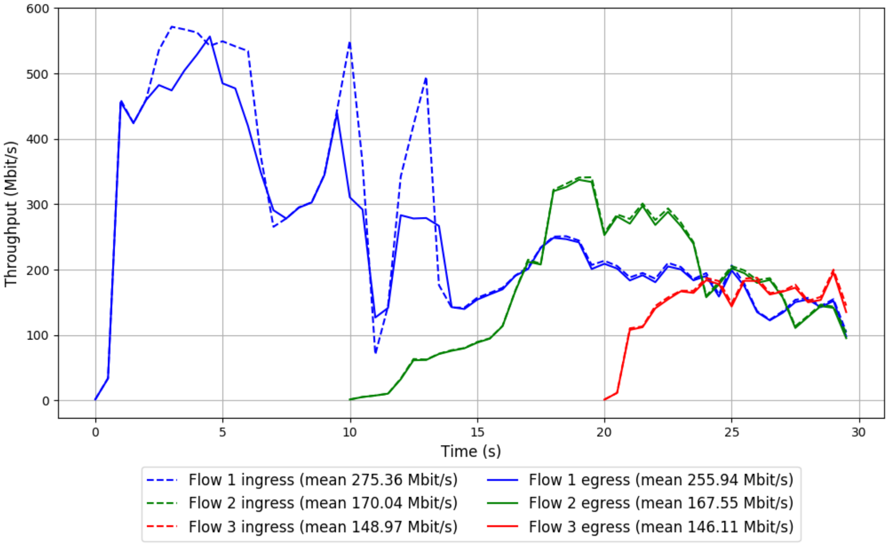


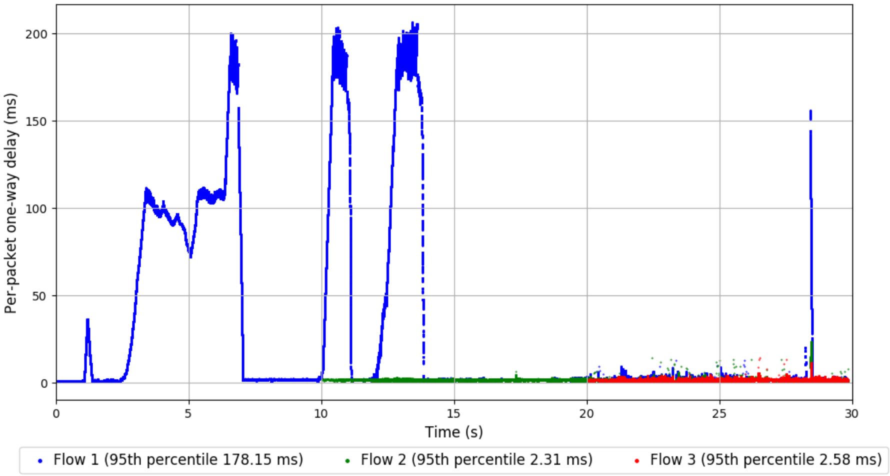
```
Run 4: Statistics of Vivace-loss

Start at: 2018-03-06 13:17:09
End at: 2018-03-06 13:17:39
Local clock offset: -4.743 ms
Remote clock offset: 2.5 ms

# Below is generated by plot.py at 2018-03-07 00:04:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 415.20 Mbit/s
95th percentile per-packet one-way delay: 149.946 ms
Loss rate: 5.14%
-- Flow 1:
Average throughput: 255.94 Mbit/s
95th percentile per-packet one-way delay: 178.152 ms
Loss rate: 7.12%
-- Flow 2:
Average throughput: 167.55 Mbit/s
95th percentile per-packet one-way delay: 2.308 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 146.11 Mbit/s
95th percentile per-packet one-way delay: 2.583 ms
Loss rate: 2.21%
```

# Run 4: Report of Vivace-loss — Data Link



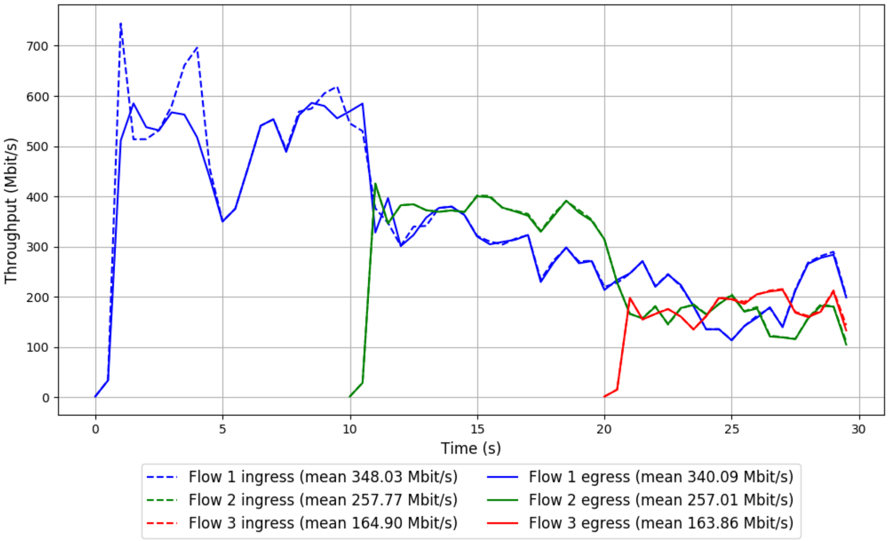


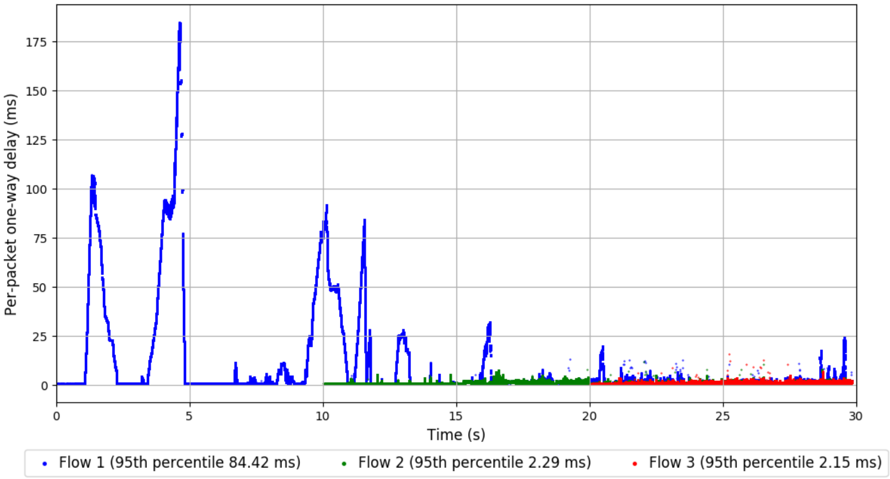
```
Run 5: Statistics of Vivace-loss

Start at: 2018-03-06 13:46:18
End at: 2018-03-06 13:46:48
Local clock offset: 0.023 ms
Remote clock offset: -1.151 ms

# Below is generated by plot.py at 2018-03-07 00:05:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 564.76 Mbit/s
95th percentile per-packet one-way delay: 68.966 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 340.09 Mbit/s
95th percentile per-packet one-way delay: 84.420 ms
Loss rate: 2.37%
-- Flow 2:
Average throughput: 257.01 Mbit/s
95th percentile per-packet one-way delay: 2.295 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 163.86 Mbit/s
95th percentile per-packet one-way delay: 2.151 ms
Loss rate: 0.85%
```

Run 5: Report of Vivace-loss — Data Link



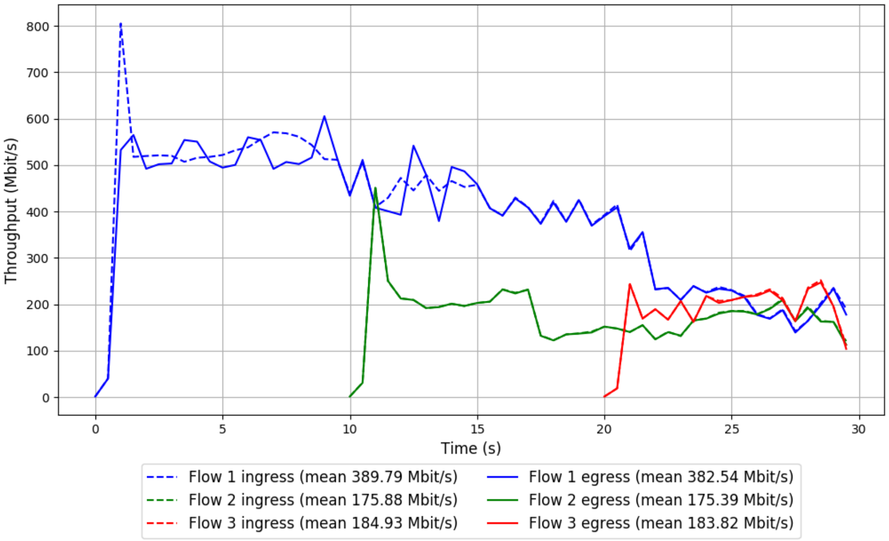


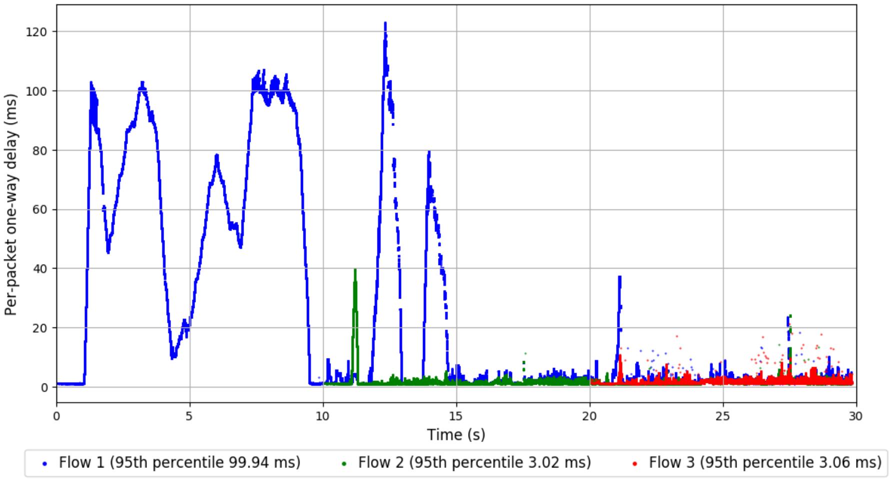
```
Run 6: Statistics of Vivace-loss

Start at: 2018-03-06 14:15:48
End at: 2018-03-06 14:16:18
Local clock offset: 3.801 ms
Remote clock offset: 0.465 ms

# Below is generated by plot.py at 2018-03-07 00:06:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 559.40 Mbit/s
95th percentile per-packet one-way delay: 98.173 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 382.54 Mbit/s
95th percentile per-packet one-way delay: 99.941 ms
Loss rate: 1.93%
-- Flow 2:
Average throughput: 175.39 Mbit/s
95th percentile per-packet one-way delay: 3.017 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 183.82 Mbit/s
95th percentile per-packet one-way delay: 3.059 ms
Loss rate: 0.76%
```

Run 6: Report of Vivace-loss — Data Link



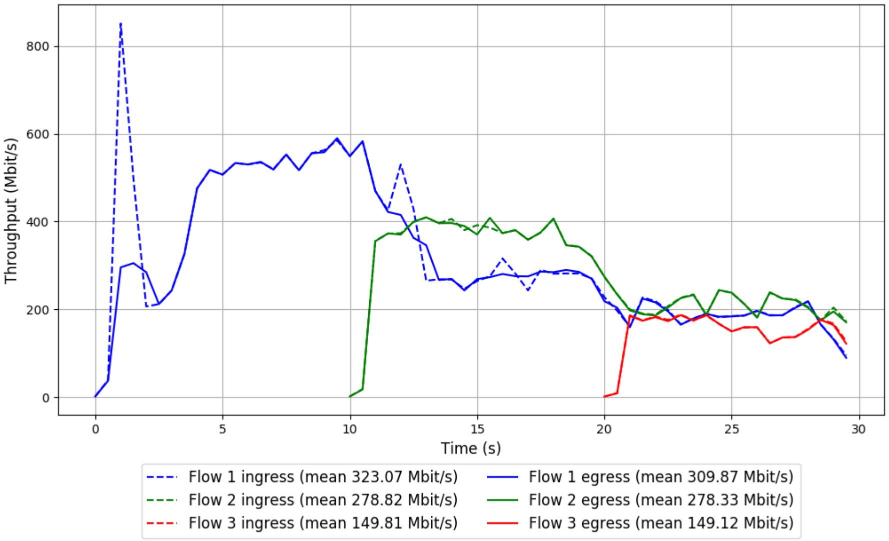


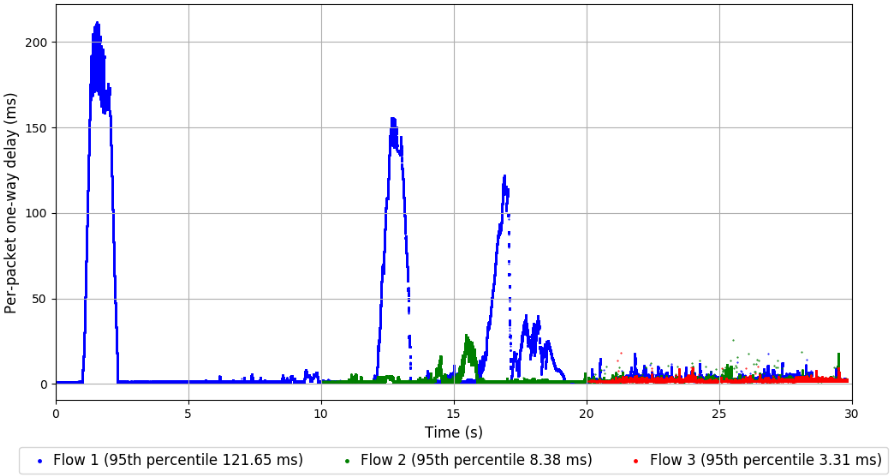
```
Run 7: Statistics of Vivace-loss

Start at: 2018-03-06 14:45:18
End at: 2018-03-06 14:45:48
Local clock offset: 4.939 ms
Remote clock offset: 2.026 ms

# Below is generated by plot.py at 2018-03-07 00:08:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 543.51 Mbit/s
95th percentile per-packet one-way delay: 65.342 ms
Loss rate: 2.55%
-- Flow 1:
Average throughput: 309.87 Mbit/s
95th percentile per-packet one-way delay: 121.650 ms
Loss rate: 4.15%
-- Flow 2:
Average throughput: 278.33 Mbit/s
95th percentile per-packet one-way delay: 8.376 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 149.12 Mbit/s
95th percentile per-packet one-way delay: 3.305 ms
Loss rate: 0.66%
```

## Run 7: Report of Vivace-loss — Data Link



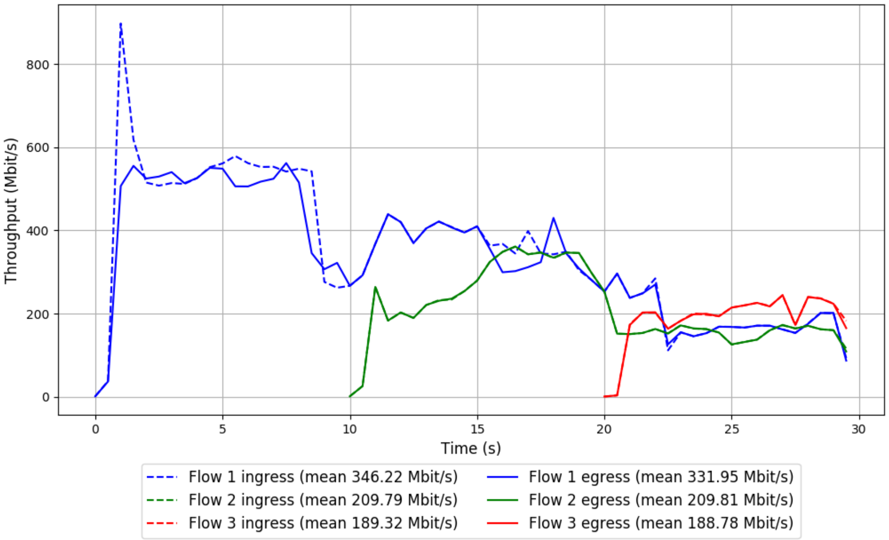


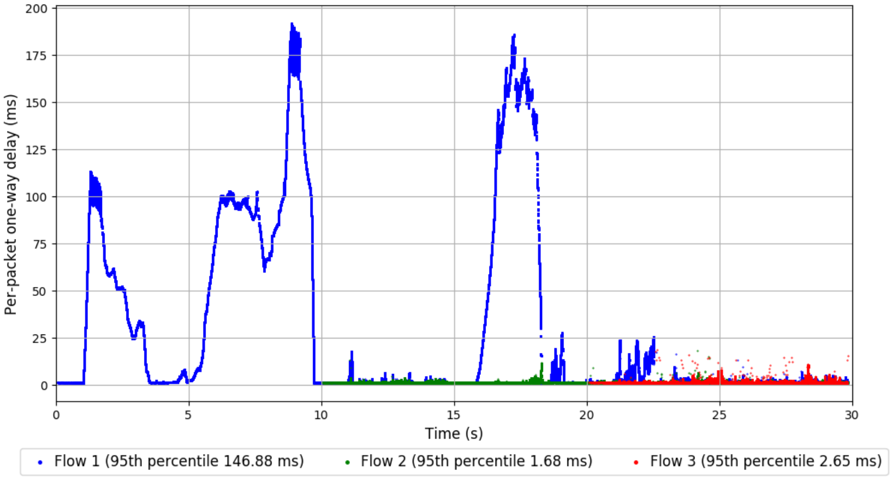
```
Run 8: Statistics of Vivace-loss

Start at: 2018-03-06 15:19:52
End at: 2018-03-06 15:20:22
Local clock offset: 0.787 ms
Remote clock offset: 2.243 ms

# Below is generated by plot.py at 2018-03-07 00:09:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 532.92 Mbit/s
95th percentile per-packet one-way delay: 108.600 ms
Loss rate: 2.73%
-- Flow 1:
Average throughput: 331.95 Mbit/s
95th percentile per-packet one-way delay: 146.885 ms
Loss rate: 4.19%
-- Flow 2:
Average throughput: 209.81 Mbit/s
95th percentile per-packet one-way delay: 1.678 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 188.78 Mbit/s
95th percentile per-packet one-way delay: 2.650 ms
Loss rate: 0.50%
```

Run 8: Report of Vivace-loss — Data Link



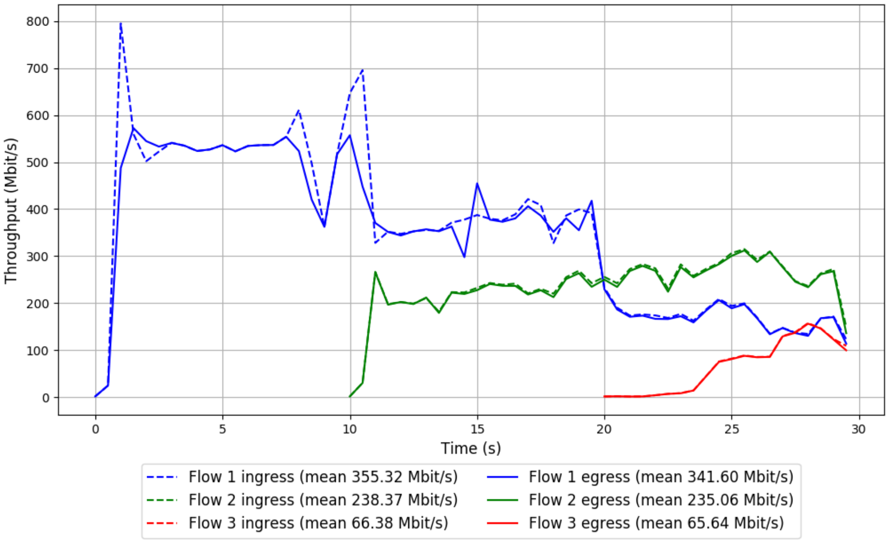


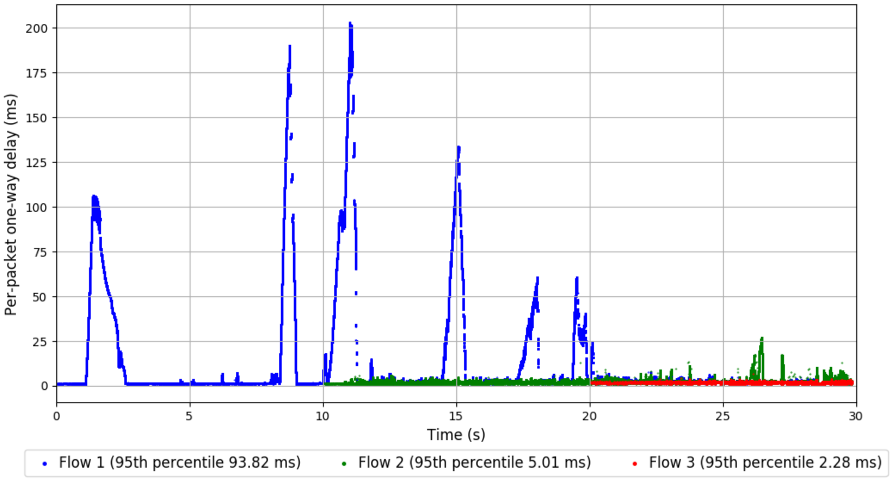
```
Run 9: Statistics of Vivace-loss

Start at: 2018-03-06 15:48:51
End at: 2018-03-06 15:49:21
Local clock offset: 0.587 ms
Remote clock offset: 2.319 ms

# Below is generated by plot.py at 2018-03-07 00:10:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 519.19 Mbit/s
95th percentile per-packet one-way delay: 77.075 ms
Loss rate: 3.12%
-- Flow 1:
Average throughput: 341.60 Mbit/s
95th percentile per-packet one-way delay: 93.822 ms
Loss rate: 3.95%
-- Flow 2:
Average throughput: 235.06 Mbit/s
95th percentile per-packet one-way delay: 5.014 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 65.64 Mbit/s
95th percentile per-packet one-way delay: 2.279 ms
Loss rate: 1.45%
```

Run 9: Report of Vivace-loss — Data Link



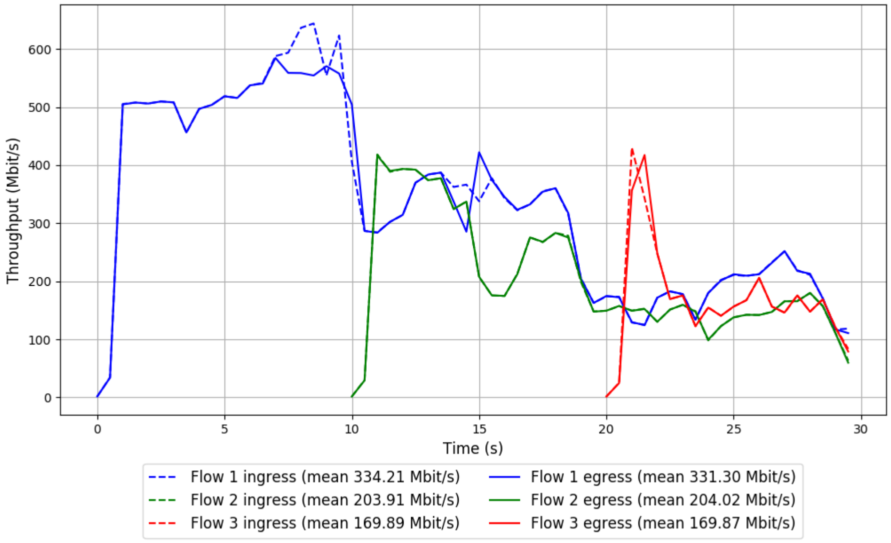


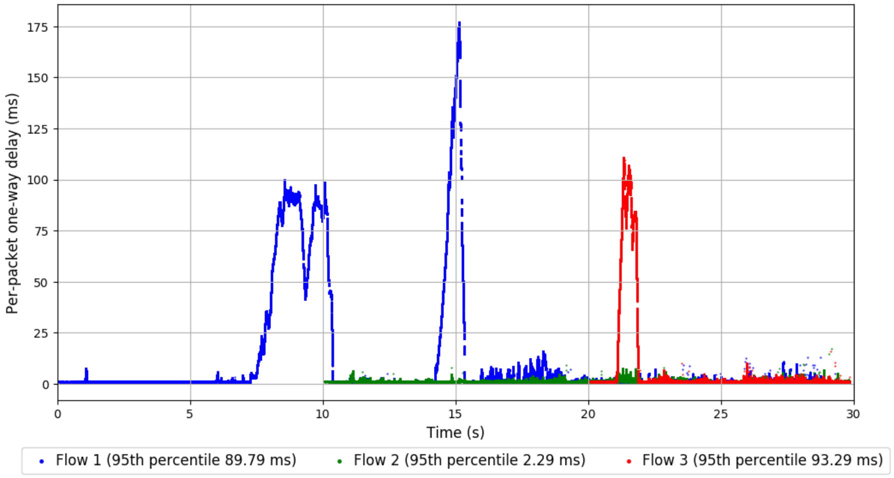
```
Run 10: Statistics of Vivace-loss

Start at: 2018-03-06 16:18:04
End at: 2018-03-06 16:18:34
Local clock offset: -1.693 ms
Remote clock offset: 1.73 ms

# Below is generated by plot.py at 2018-03-07 00:11:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 522.50 Mbit/s
95th percentile per-packet one-way delay: 87.215 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 331.30 Mbit/s
95th percentile per-packet one-way delay: 89.788 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 204.02 Mbit/s
95th percentile per-packet one-way delay: 2.287 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 169.87 Mbit/s
95th percentile per-packet one-way delay: 93.294 ms
Loss rate: 0.14%
```

# Run 10: Report of Vivace-loss — Data Link



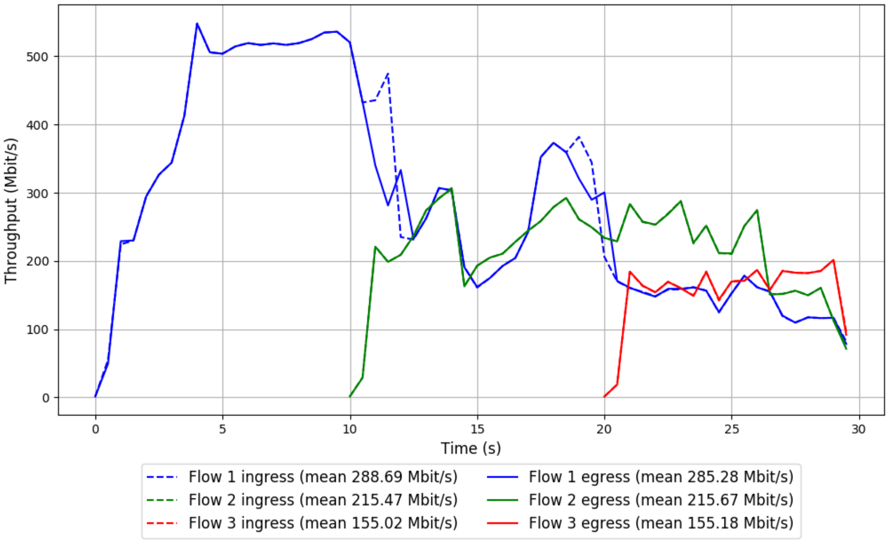


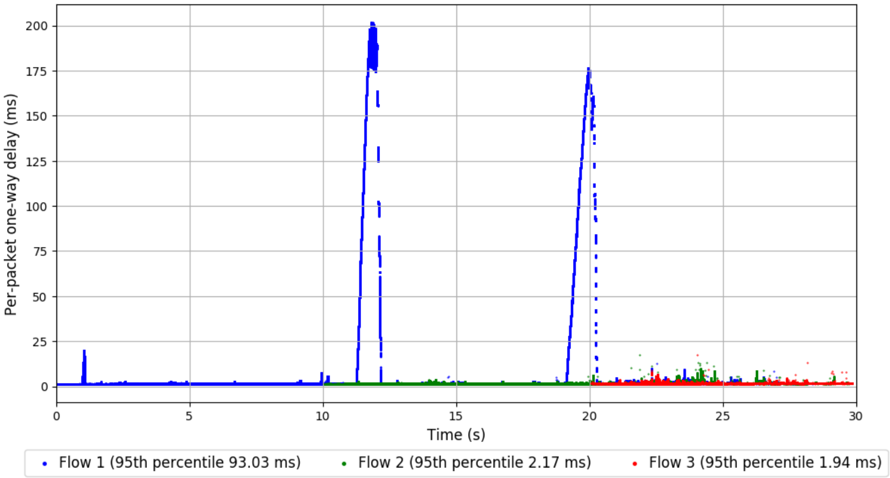
```
Run 1: Statistics of Vivace-LTE

Start at: 2018-03-06 12:04:23
End at: 2018-03-06 12:04:53
Local clock offset: -1.735 ms
Remote clock offset: 5.197 ms

# Below is generated by plot.py at 2018-03-07 00:11:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 479.49 Mbit/s
95th percentile per-packet one-way delay: 5.546 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 285.28 Mbit/s
95th percentile per-packet one-way delay: 93.029 ms
Loss rate: 1.25%
-- Flow 2:
Average throughput: 215.67 Mbit/s
95th percentile per-packet one-way delay: 2.165 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 155.18 Mbit/s
95th percentile per-packet one-way delay: 1.940 ms
Loss rate: 0.16%
```

# Run 1: Report of Vivace-LTE — Data Link



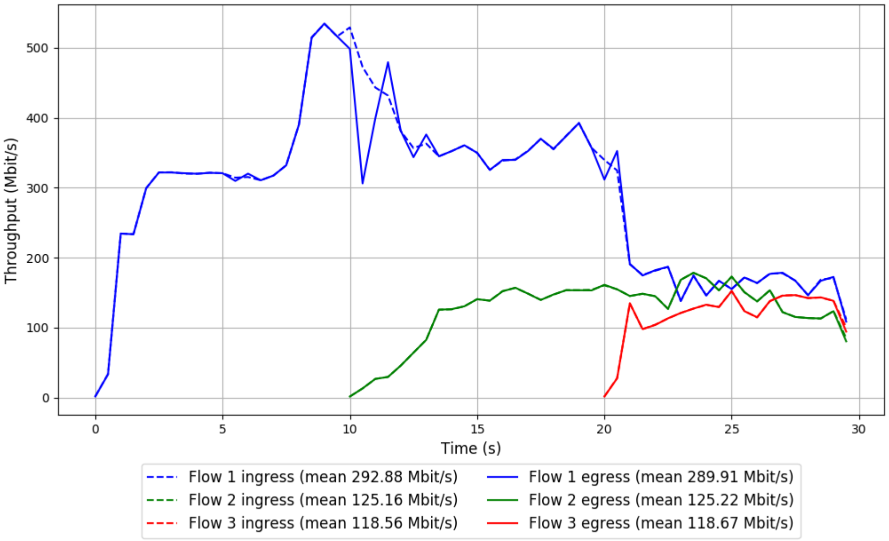


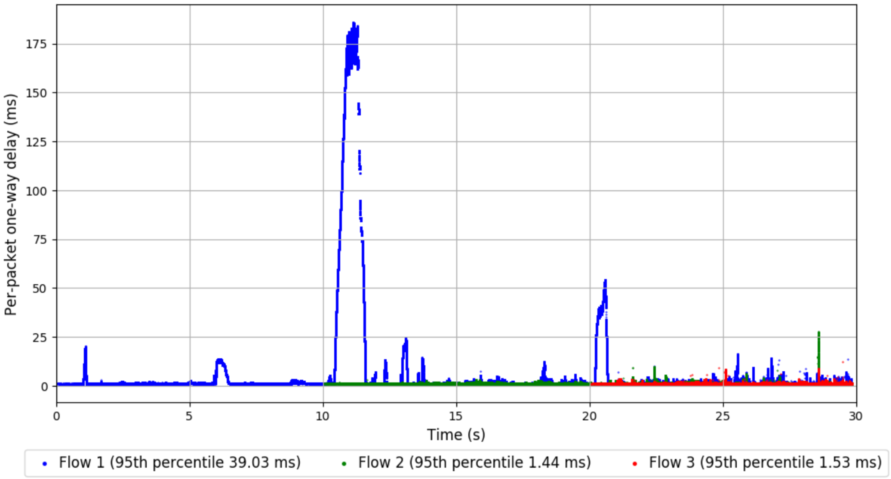
```
Run 2: Statistics of Vivace-LTE

Start at: 2018-03-06 12:34:01
End at: 2018-03-06 12:34:31
Local clock offset: -4.953 ms
Remote clock offset: 6.747 ms

# Below is generated by plot.py at 2018-03-07 00:11:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.97 Mbit/s
95th percentile per-packet one-way delay: 16.068 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 289.91 Mbit/s
95th percentile per-packet one-way delay: 39.027 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 125.22 Mbit/s
95th percentile per-packet one-way delay: 1.441 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 118.67 Mbit/s
95th percentile per-packet one-way delay: 1.535 ms
Loss rate: 0.26%
```

Run 2: Report of Vivace-LTE — Data Link



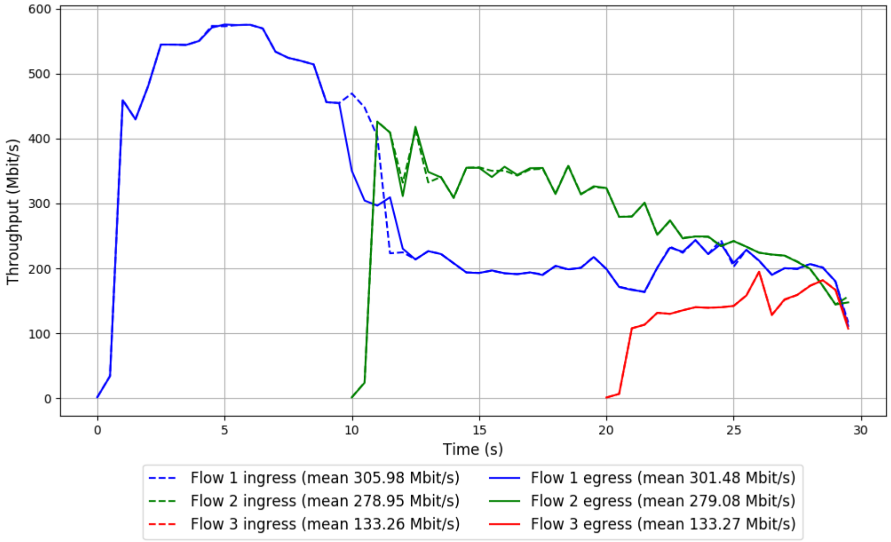


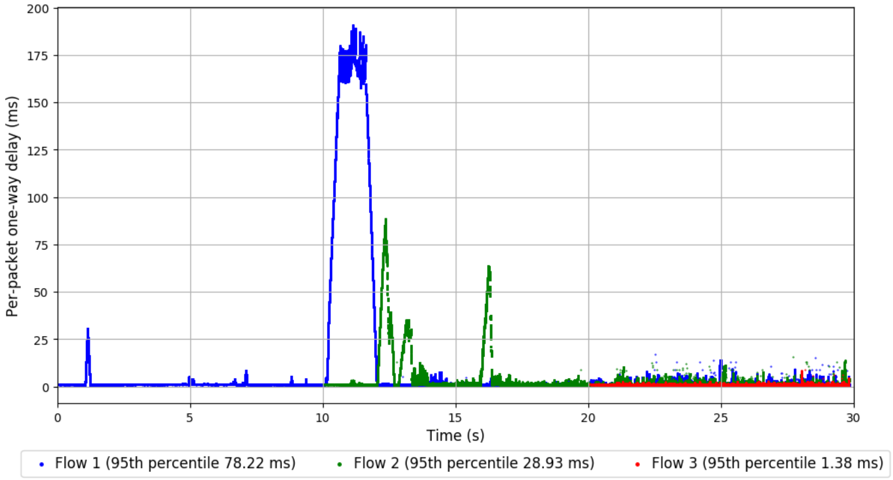
```
Run 3: Statistics of Vivace-LTE

Start at: 2018-03-06 13:03:37
End at: 2018-03-06 13:04:07
Local clock offset: -4.917 ms
Remote clock offset: 4.541 ms

# Below is generated by plot.py at 2018-03-07 00:13:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 530.62 Mbit/s
95th percentile per-packet one-way delay: 29.899 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 301.48 Mbit/s
95th percentile per-packet one-way delay: 78.221 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 279.08 Mbit/s
95th percentile per-packet one-way delay: 28.929 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 133.27 Mbit/s
95th percentile per-packet one-way delay: 1.375 ms
Loss rate: 0.24%
```

## Run 3: Report of Vivace-LTE — Data Link



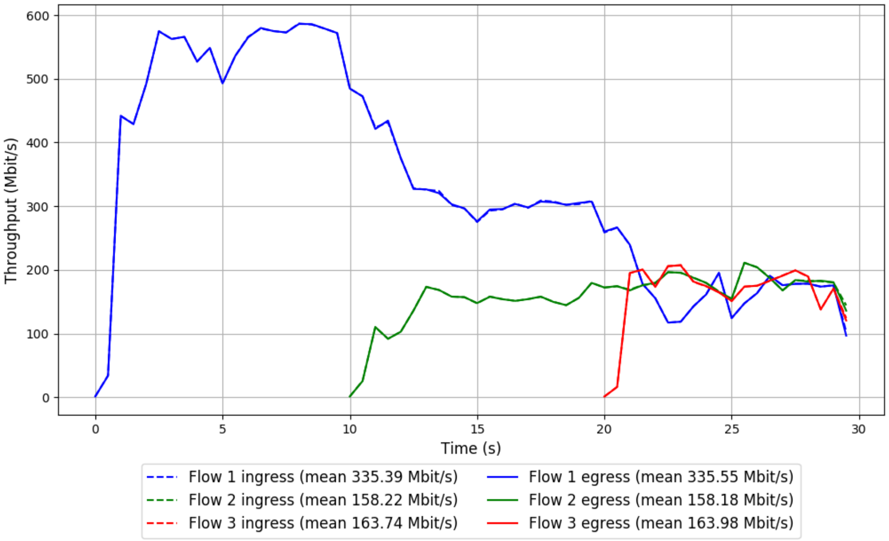


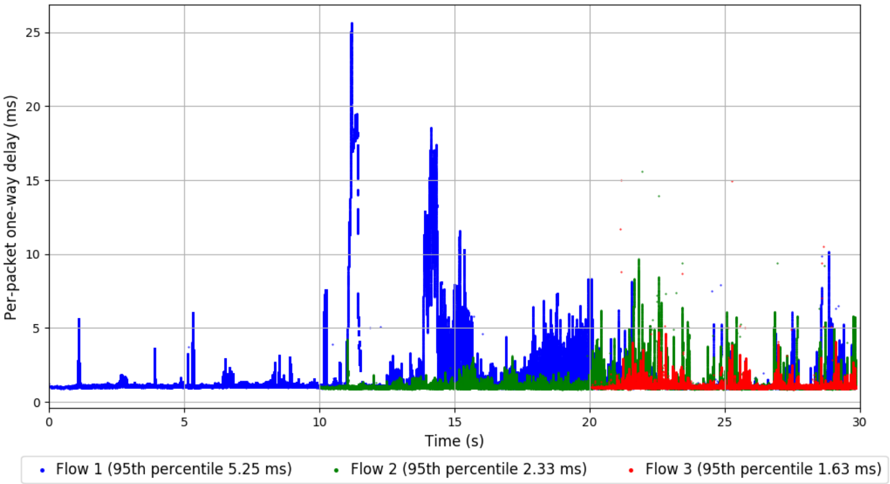
```
Run 4: Statistics of Vivace-LTE

Start at: 2018-03-06 13:32:41
End at: 2018-03-06 13:33:11
Local clock offset: -4.696 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2018-03-07 00:13:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 494.47 Mbit/s
95th percentile per-packet one-way delay: 4.012 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 335.55 Mbit/s
95th percentile per-packet one-way delay: 5.245 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 158.18 Mbit/s
95th percentile per-packet one-way delay: 2.335 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 163.98 Mbit/s
95th percentile per-packet one-way delay: 1.633 ms
Loss rate: 0.13%
```

Run 4: Report of Vivace-LTE — Data Link



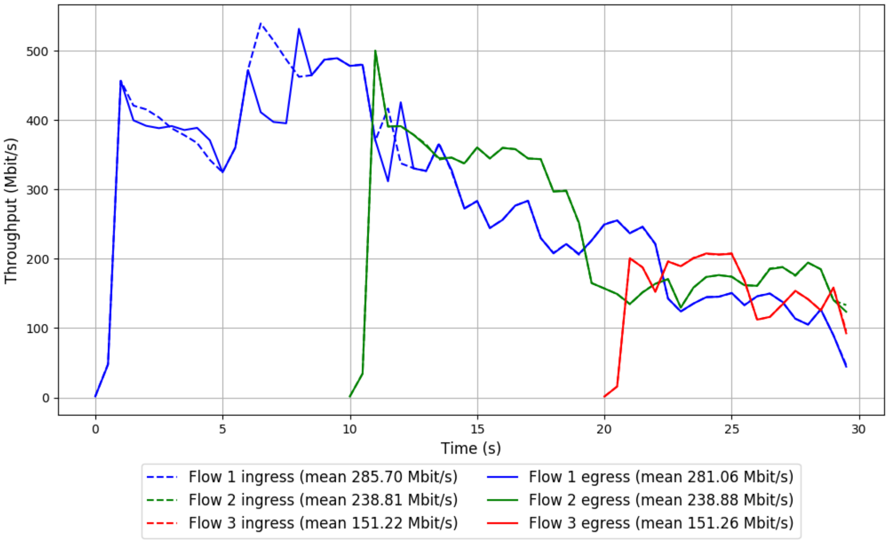


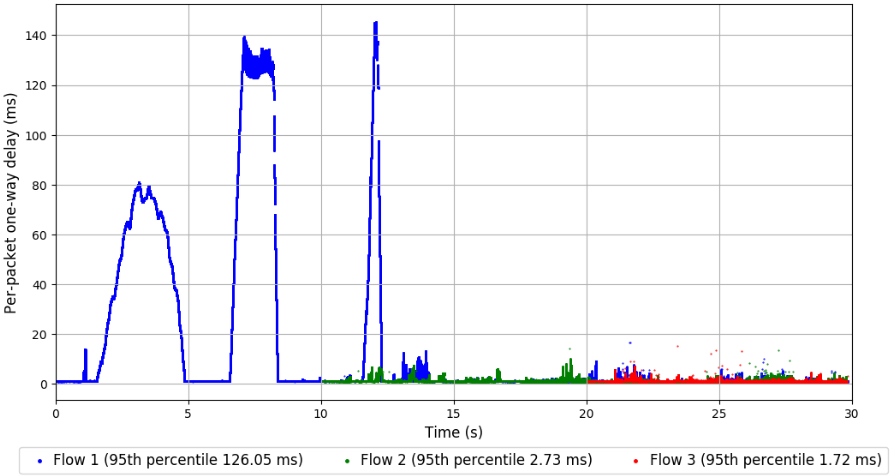
```
Run 5: Statistics of Vivace-LTE

Start at: 2018-03-06 14:02:26
End at: 2018-03-06 14:02:56
Local clock offset: 3.294 ms
Remote clock offset: 0.459 ms

# Below is generated by plot.py at 2018-03-07 00:15:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 489.29 Mbit/s
95th percentile per-packet one-way delay: 79.123 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 281.06 Mbit/s
95th percentile per-packet one-way delay: 126.051 ms
Loss rate: 1.69%
-- Flow 2:
Average throughput: 238.88 Mbit/s
95th percentile per-packet one-way delay: 2.733 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 151.26 Mbit/s
95th percentile per-packet one-way delay: 1.718 ms
Loss rate: 0.12%
```

Run 5: Report of Vivace-LTE — Data Link



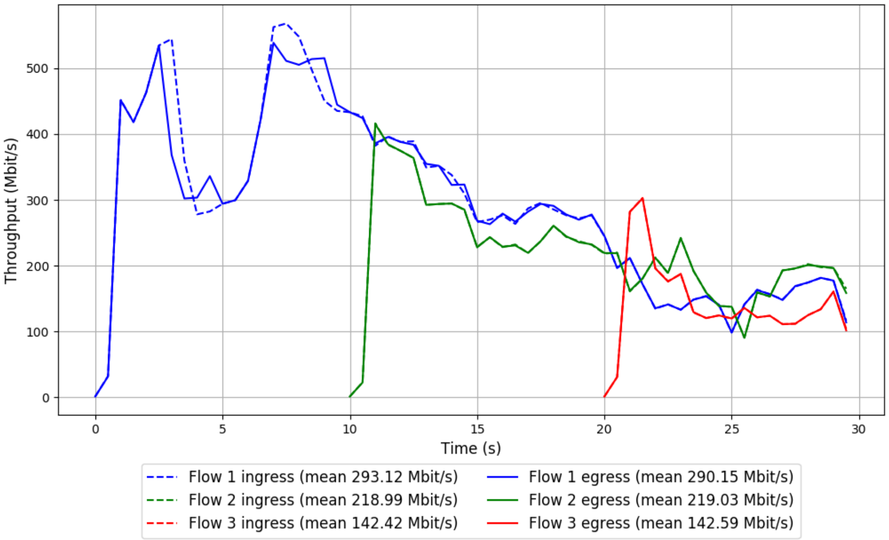


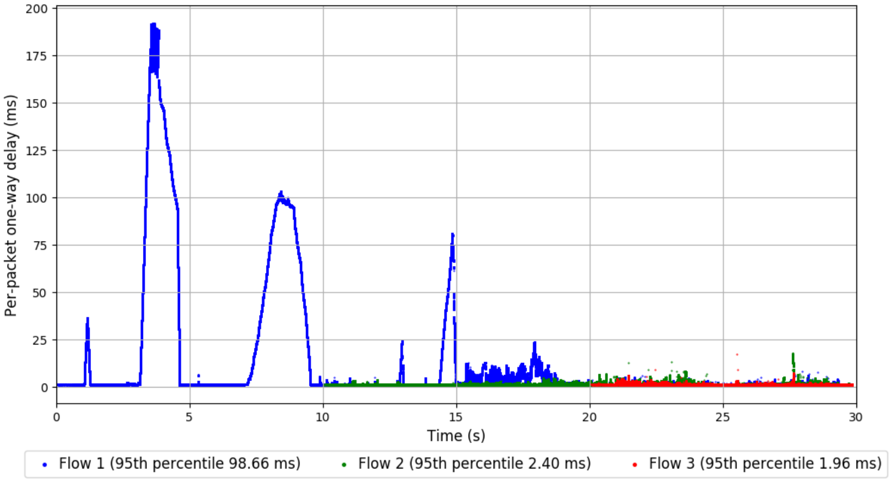
```
Run 6: Statistics of Vivace-LTE

Start at: 2018-03-06 14:31:50
End at: 2018-03-06 14:32:20
Local clock offset: 4.474 ms
Remote clock offset: 1.526 ms

# Below is generated by plot.py at 2018-03-07 00:16:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 482.55 Mbit/s
95th percentile per-packet one-way delay: 91.749 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 290.15 Mbit/s
95th percentile per-packet one-way delay: 98.656 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 219.03 Mbit/s
95th percentile per-packet one-way delay: 2.399 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 142.59 Mbit/s
95th percentile per-packet one-way delay: 1.955 ms
Loss rate: 0.09%
```

## Run 6: Report of Vivace-LTE — Data Link



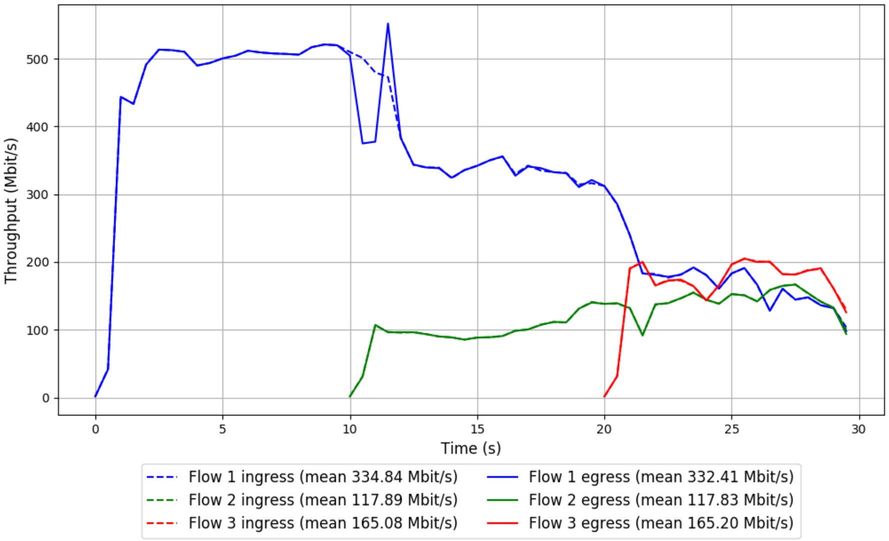


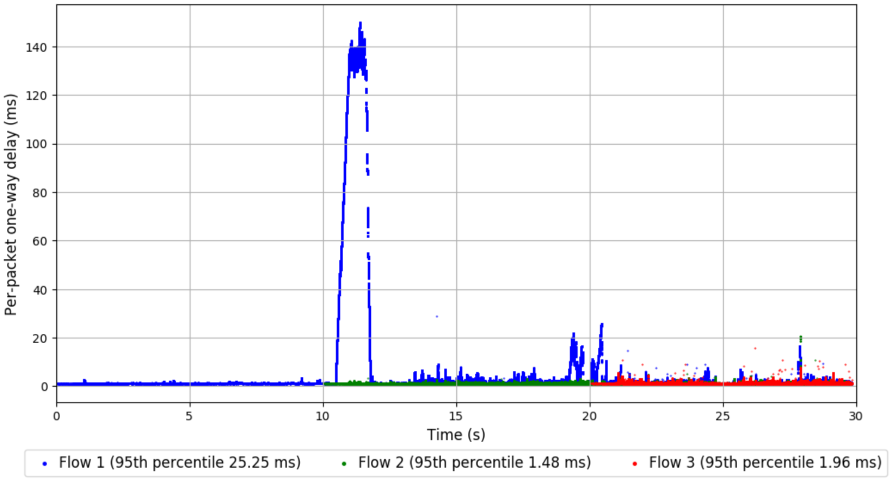
```
Run 7: Statistics of Vivace-LTE

Start at: 2018-03-06 15:06:20
End at: 2018-03-06 15:06:50
Local clock offset: 1.017 ms
Remote clock offset: 2.2 ms

# Below is generated by plot.py at 2018-03-07 00:16:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 464.91 Mbit/s
95th percentile per-packet one-way delay: 9.562 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 332.41 Mbit/s
95th percentile per-packet one-way delay: 25.247 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 117.83 Mbit/s
95th percentile per-packet one-way delay: 1.475 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 165.20 Mbit/s
95th percentile per-packet one-way delay: 1.964 ms
Loss rate: 0.14%
```

## Run 7: Report of Vivace-LTE — Data Link



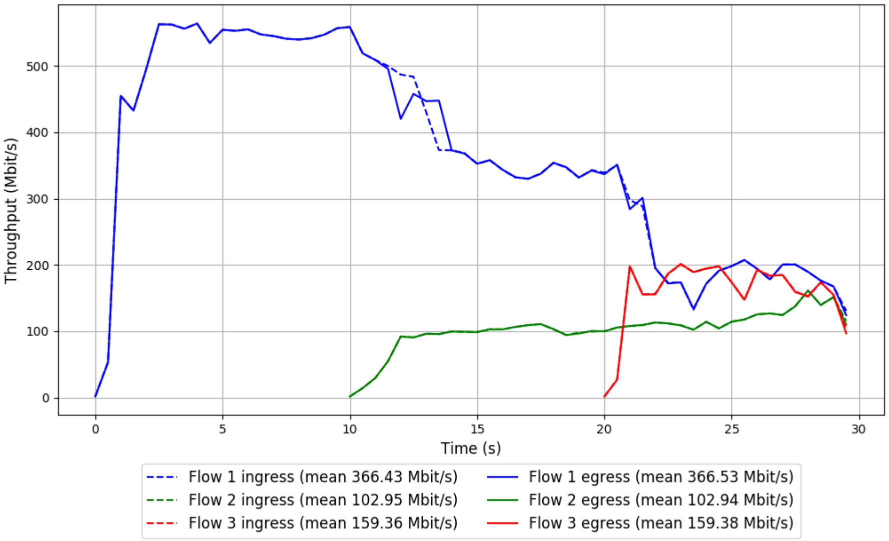


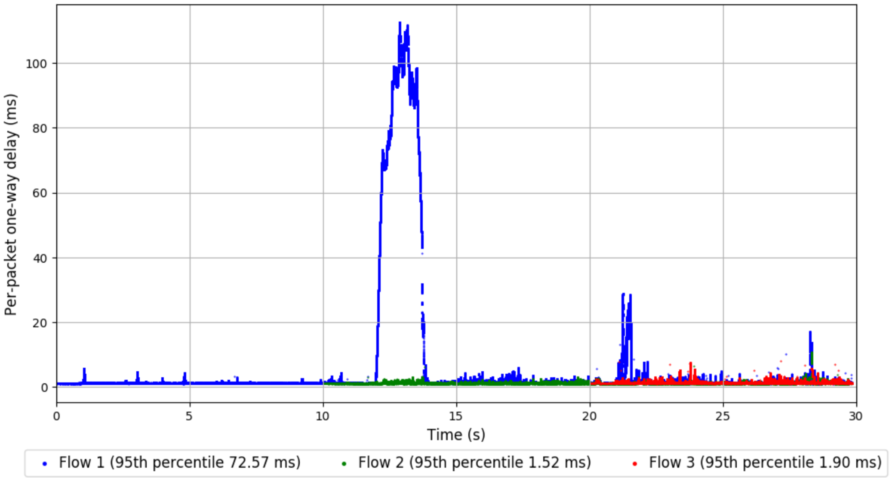
```
Run 8: Statistics of Vivace-LTE

Start at: 2018-03-06 15:35:30
End at: 2018-03-06 15:36:00
Local clock offset: 0.696 ms
Remote clock offset: 2.334 ms

# Below is generated by plot.py at 2018-03-07 00:16:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 487.28 Mbit/s
95th percentile per-packet one-way delay: 38.756 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 366.53 Mbit/s
95th percentile per-packet one-way delay: 72.573 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 102.94 Mbit/s
95th percentile per-packet one-way delay: 1.523 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 159.38 Mbit/s
95th percentile per-packet one-way delay: 1.904 ms
Loss rate: 0.21%
```

Run 8: Report of Vivace-LTE — Data Link



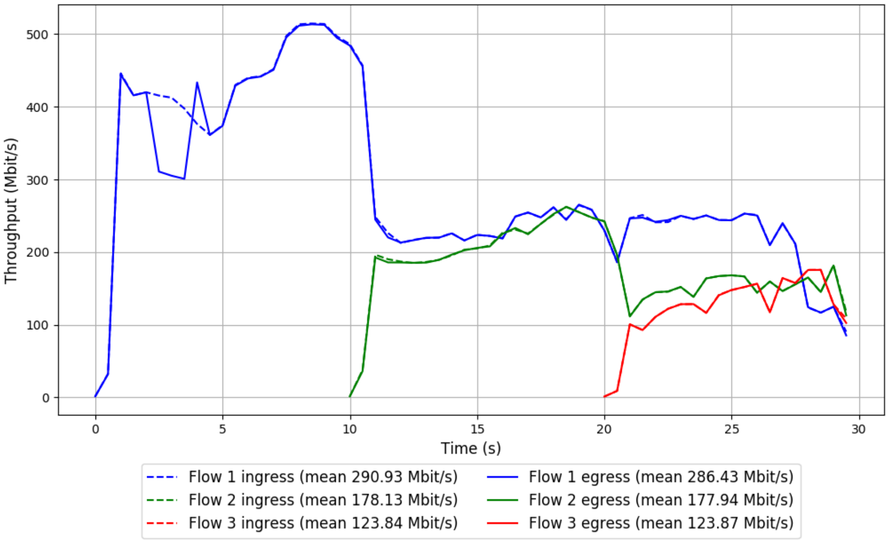


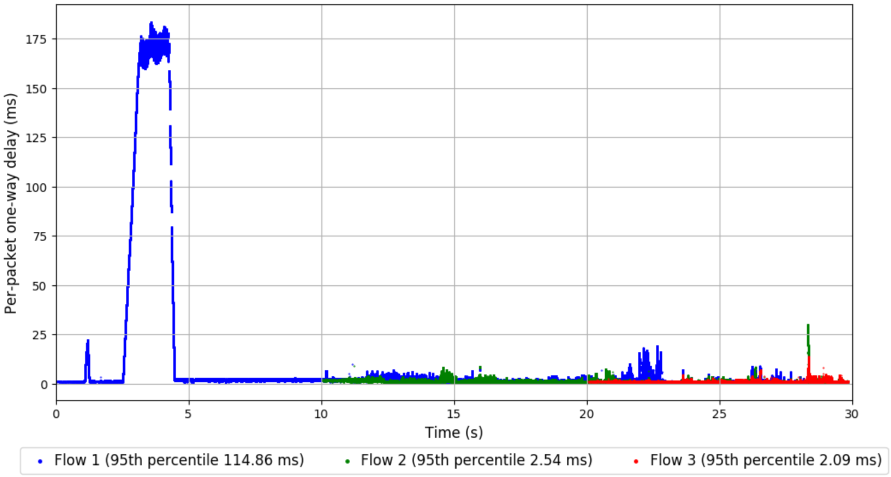
```
Run 9: Statistics of Vivace-LTE

Start at: 2018-03-06 16:04:53
End at: 2018-03-06 16:05:23
Local clock offset: -0.953 ms
Remote clock offset: 2.26 ms

# Below is generated by plot.py at 2018-03-07 00:16:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.30 Mbit/s
95th percentile per-packet one-way delay: 16.005 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 286.43 Mbit/s
95th percentile per-packet one-way delay: 114.856 ms
Loss rate: 1.63%
-- Flow 2:
Average throughput: 177.94 Mbit/s
95th percentile per-packet one-way delay: 2.535 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 123.87 Mbit/s
95th percentile per-packet one-way delay: 2.088 ms
Loss rate: 0.25%
```

Run 9: Report of Vivace-LTE — Data Link



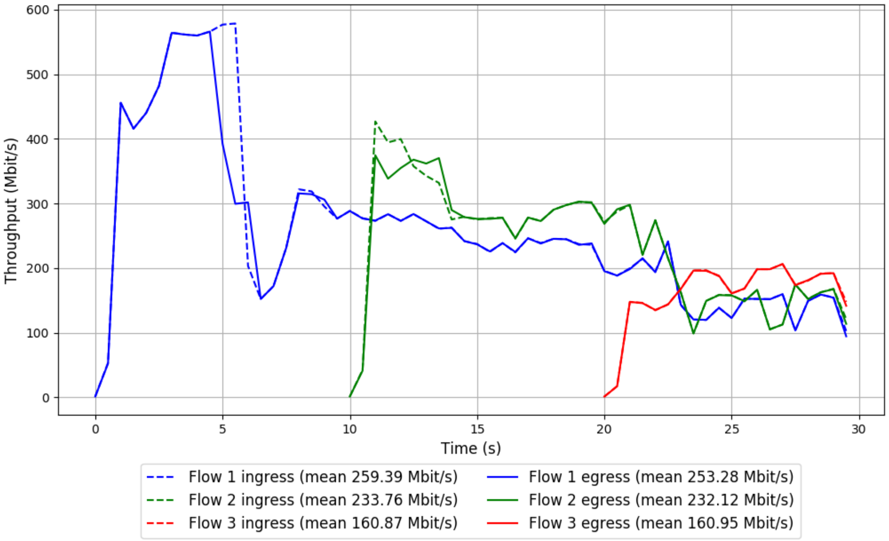


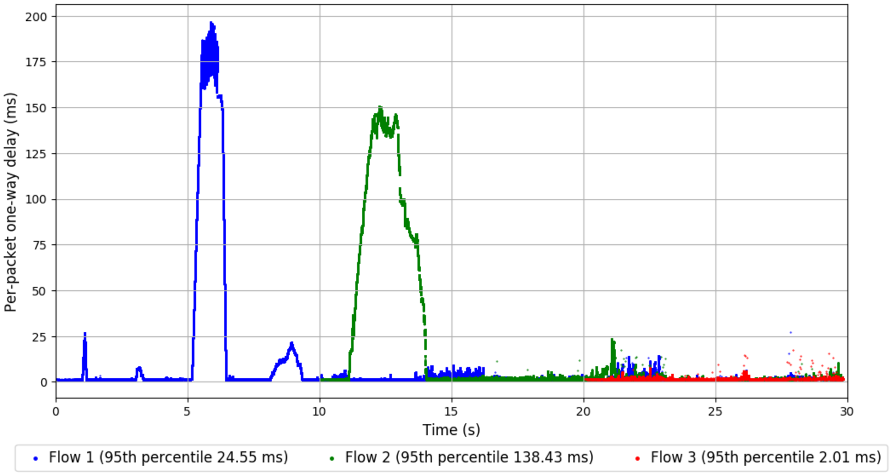
```
Run 10: Statistics of Vivace-LTE

Start at: 2018-03-06 16:33:46
End at: 2018-03-06 16:34:16
Local clock offset: -4.374 ms
Remote clock offset: 1.516 ms

# Below is generated by plot.py at 2018-03-07 00:16:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 460.33 Mbit/s
95th percentile per-packet one-way delay: 122.165 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 253.28 Mbit/s
95th percentile per-packet one-way delay: 24.547 ms
Loss rate: 2.42%
-- Flow 2:
Average throughput: 232.12 Mbit/s
95th percentile per-packet one-way delay: 138.432 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 160.95 Mbit/s
95th percentile per-packet one-way delay: 2.007 ms
Loss rate: 0.22%
```

# Run 10: Report of Vivace-LTE — Data Link


Throughput (Mbit/s)
600
500
400
300
200
100
0
0
5
10
15
20
25
30
Time (s)
Flow 1 ingress (mean 259.39 Mbit/s)
Flow 2 ingress (mean 233.76 Mbit/s)
Flow 3 ingress (mean 160.87 Mbit/s)
Flow 1 egress (mean 253.28 Mbit/s)
Flow 2 egress (mean 232.12 Mbit/s)
Flow 3 egress (mean 160.95 Mbit/s)


Per-packet one-way delay (ms)
200
175
150
125
100
75
50
25
0
0
5
10
15
20
25
30
Time (s)
Flow 1 (95th percentile 24.55 ms)
Flow 2 (95th percentile 138.43 ms)
Flow 3 (95th percentile 2.01 ms)