Pantheon Report

Generated at 2017-08-11 14:49:37 (UTC).

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

Repeated the test of 15 congestion control schemes 10 times.

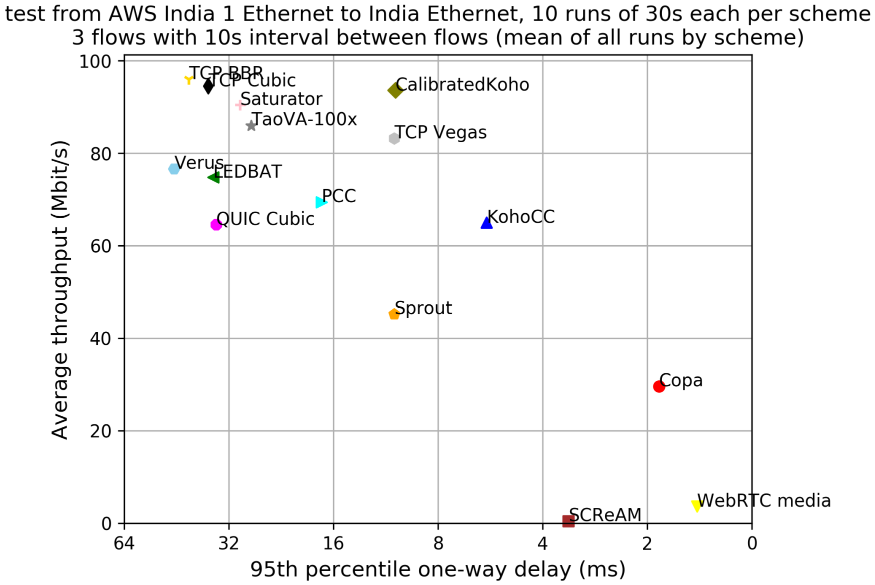
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

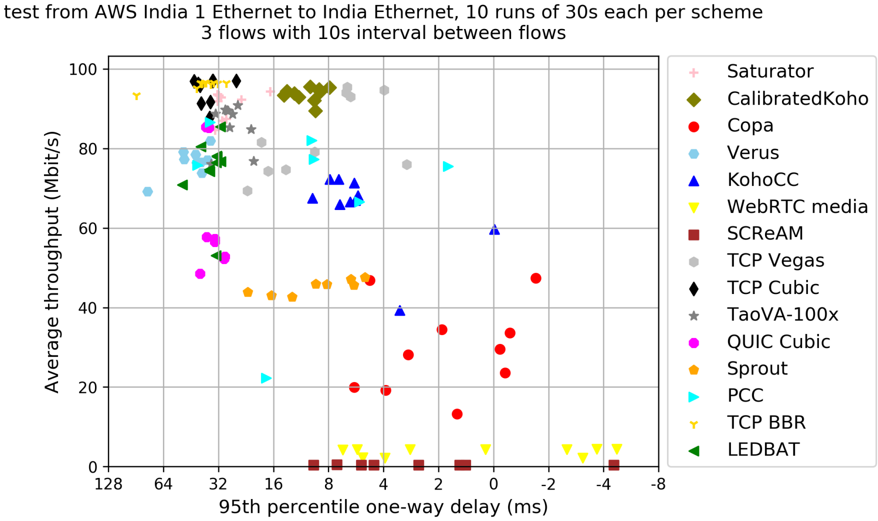
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

```
Git summary:
branch: master @ e43be7582298d552838afcf6382342bf187fbbd6
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ dae96123232f1bcb37725348fa2378691ce26725
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-stimuli @ fc73a85ca16c34366d1888dc8a0d0d88d4ebf2a7
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
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/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```


test from AWS India 1 Ethernet to India 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)
100
80
60
40
20
0
64
32
16
8
4
2
0
TCP BBR
TCP Cubic
Saturator
TaoVA-100x
CalibratedKoho
TCP Vegas
Verus
LEDBAT
PCC
QUIC Cubic
KohoCC
Sprout
Copa
SCReAM
WebRTC media


test from AWS India 1 Ethernet to India 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)
100
80
60
40
20
0
128
64
32
16
8
4
2
0
-2
-4
-8
Saturator
CalibratedKoho
Copa
Verus
KohoCC
WebRTC media
SCReAM
TCP Vegas
TCP Cubic
TaoVA-100x
QUIC Cubic
Sprout
PCC
TCP BBR
LEDBAT

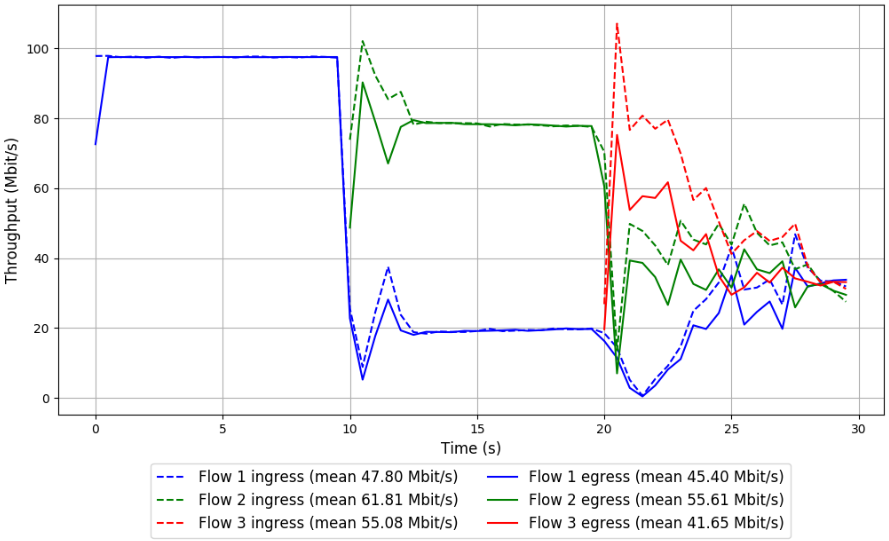
scheme	# runs	mean avg tput (Mbit/s) flow 1	flow 2	flow 3	mean 95th-%ile delay (ms) flow 1	flow 2	flow 3	mean loss rate (%) flow 1	flow 2	flow 3
TCP BBR	10	58.58	38.00	37.79	40.47	39.66	39.08	6.55	11.95	16.37
CalibratedKoho	10	55.38	41.16	32.71	7.37	11.38	9.72	0.07	0.18	0.05
Copa	10	13.40	16.73	16.61	2.01	-0.48	2.63	0.00	0.01	0.04
TCP Cubic	9	61.79	32.67	33.23	35.73	35.37	34.97	0.72	0.65	0.60
KohoCC	10	34.37	29.63	32.89	3.71	5.33	4.75	0.02	0.04	0.09
LEDBAT	10	45.67	31.00	25.82	35.00	33.96	35.57	0.32	0.52	0.51
PCC	7	49.04	26.46	8.56	13.77	18.98	13.66	3.80	5.62	3.30
QUIC Cubic	9	18.08	53.72	33.16	12.92	33.87	34.76	0.58	1.12	1.59
Saturator	10	54.70	43.39	34.34	26.06	29.73	36.34	4.02	7.42	18.71
SCReAM	8	0.21	0.22	0.22	0.04	4.66	-0.44	0.07	0.02	0.00
Sprout	8	23.31	21.39	21.25	5.66	11.67	8.58	0.00	0.02	0.03
TaoVA-100x	10	51.00	36.64	32.32	24.28	29.82	28.00	2.61	5.42	6.85
TCP Vegas	10	46.16	39.52	32.45	10.00	8.22	9.94	0.20	0.06	0.03
Verus	9	48.10	32.88	23.20	43.32	38.96	49.80	22.50	35.89	42.13
WebRTC media	10	1.66	1.46	0.56	-0.34	0.70	-0.67	0.00	0.00	0.02

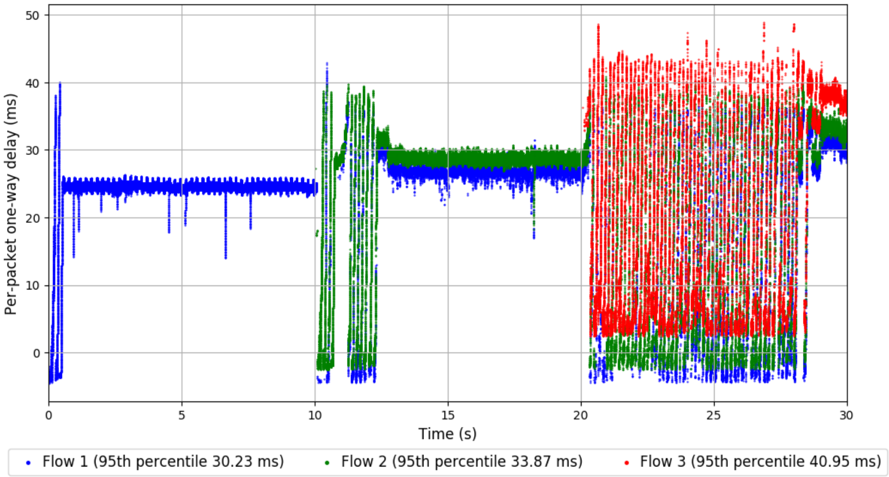
```
Run 1: Statistics of TCP BBR

Start at: 2017-08-11 08:34:59
End at: 2017-08-11 08:35:29
Local clock offset: 0.556 ms
Remote clock offset: -19.0 ms

# Below is generated by plot.py at 2017-08-11 14:37:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.20 Mbit/s
95th percentile per-packet one-way delay: 35.237 ms
Loss rate: 10.22%
-- Flow 1:
Average throughput: 45.40 Mbit/s
95th percentile per-packet one-way delay: 30.234 ms
Loss rate: 4.91%
-- Flow 2:
Average throughput: 55.61 Mbit/s
95th percentile per-packet one-way delay: 33.865 ms
Loss rate: 10.07%
-- Flow 3:
Average throughput: 41.65 Mbit/s
95th percentile per-packet one-way delay: 40.953 ms
Loss rate: 24.44%
```

Run 1: Report of TCP BBR — Data Link



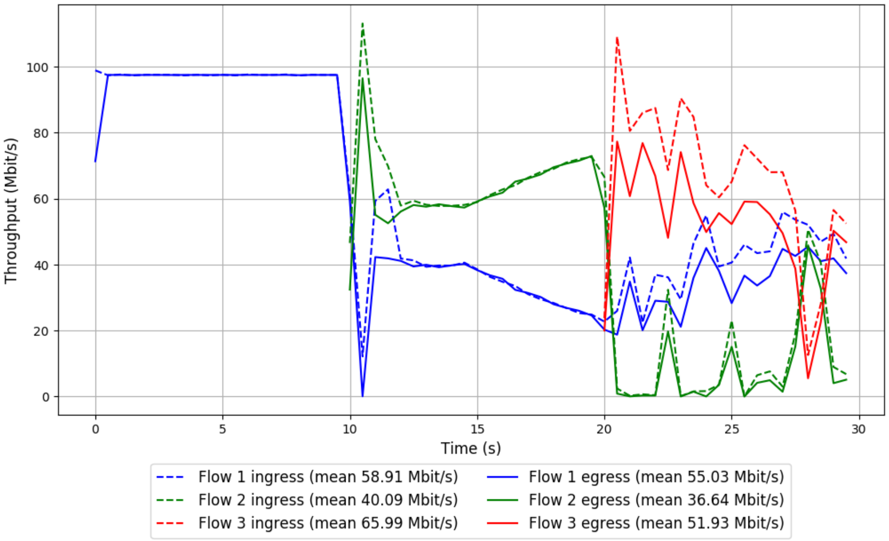


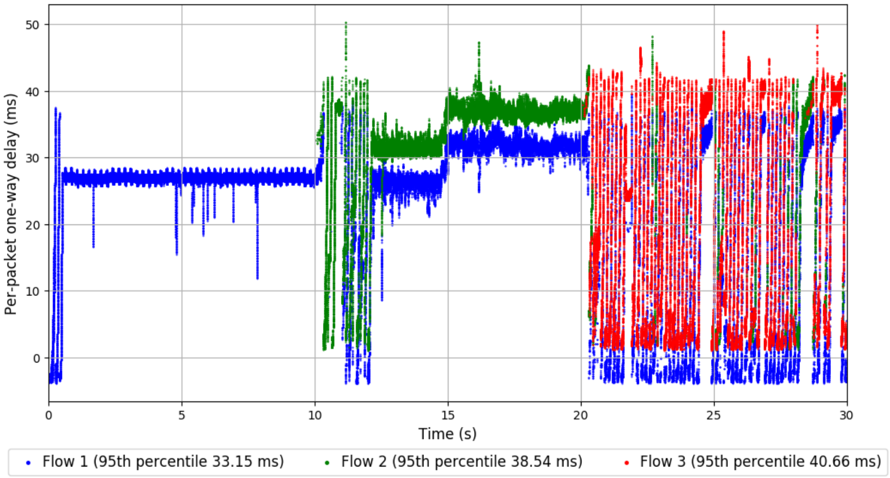
```
Run 2: Statistics of TCP BBR

Start at: 2017-08-11 08:52:55
End at: 2017-08-11 08:53:25
Local clock offset: 0.966 ms
Remote clock offset: -20.462 ms

# Below is generated by plot.py at 2017-08-11 14:37:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.52 Mbit/s
95th percentile per-packet one-way delay: 38.055 ms
Loss rate: 10.17%
-- Flow 1:
Average throughput: 55.03 Mbit/s
95th percentile per-packet one-way delay: 33.153 ms
Loss rate: 6.56%
-- Flow 2:
Average throughput: 36.64 Mbit/s
95th percentile per-packet one-way delay: 38.539 ms
Loss rate: 8.74%
-- Flow 3:
Average throughput: 51.93 Mbit/s
95th percentile per-packet one-way delay: 40.665 ms
Loss rate: 21.63%
```

Run 2: Report of TCP BBR — Data Link



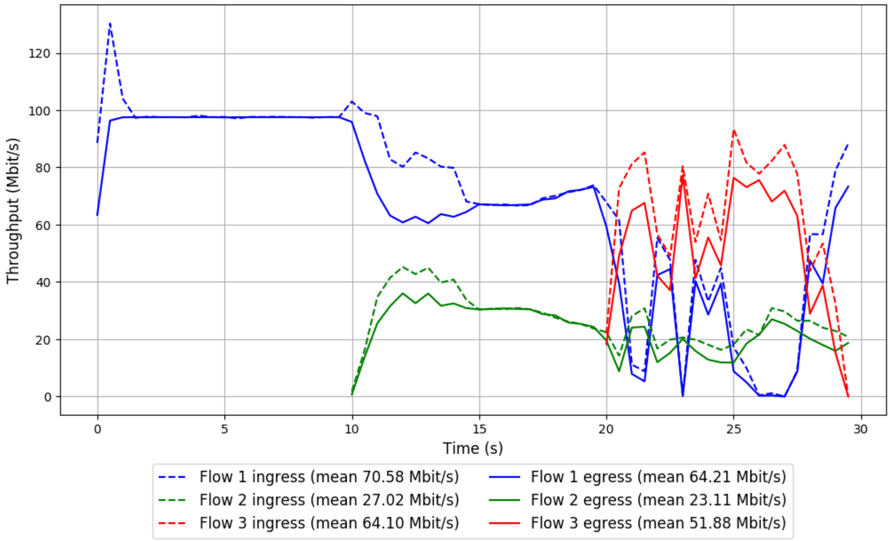


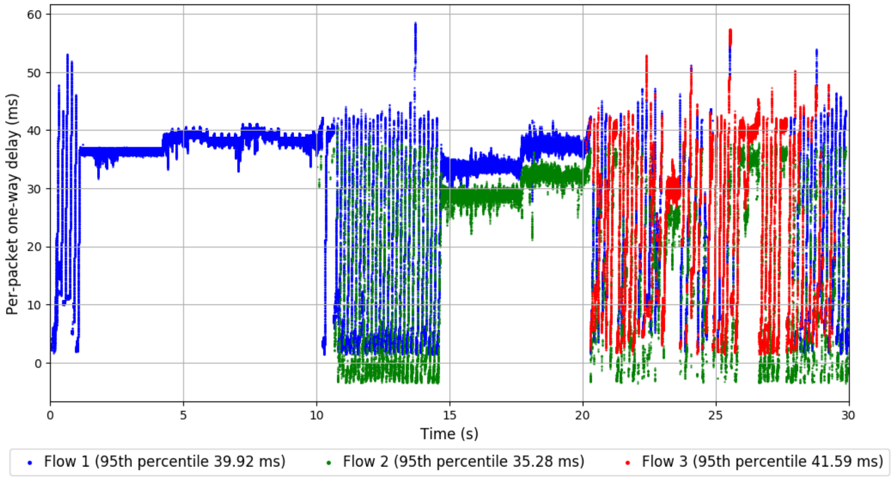
```
Run 3: Statistics of TCP BBR

Start at: 2017-08-11 09:12:20
End at: 2017-08-11 09:12:50
Local clock offset: -0.565 ms
Remote clock offset: -22.423 ms

# Below is generated by plot.py at 2017-08-11 14:37:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.43 Mbit/s
95th percentile per-packet one-way delay: 40.136 ms
Loss rate: 11.93%
-- Flow 1:
Average throughput: 64.21 Mbit/s
95th percentile per-packet one-way delay: 39.924 ms
Loss rate: 8.98%
-- Flow 2:
Average throughput: 23.11 Mbit/s
95th percentile per-packet one-way delay: 35.276 ms
Loss rate: 14.51%
-- Flow 3:
Average throughput: 51.88 Mbit/s
95th percentile per-packet one-way delay: 41.585 ms
Loss rate: 19.64%
```

Run 3: Report of TCP BBR — Data Link



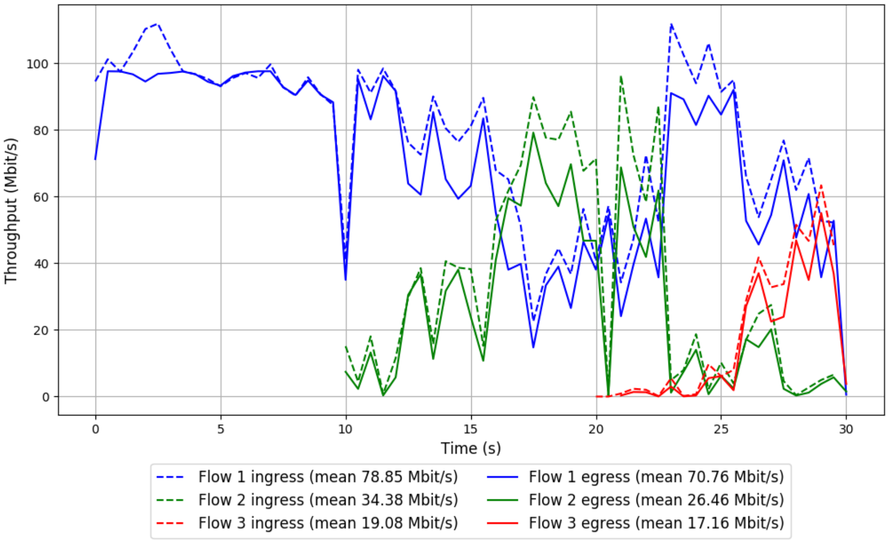


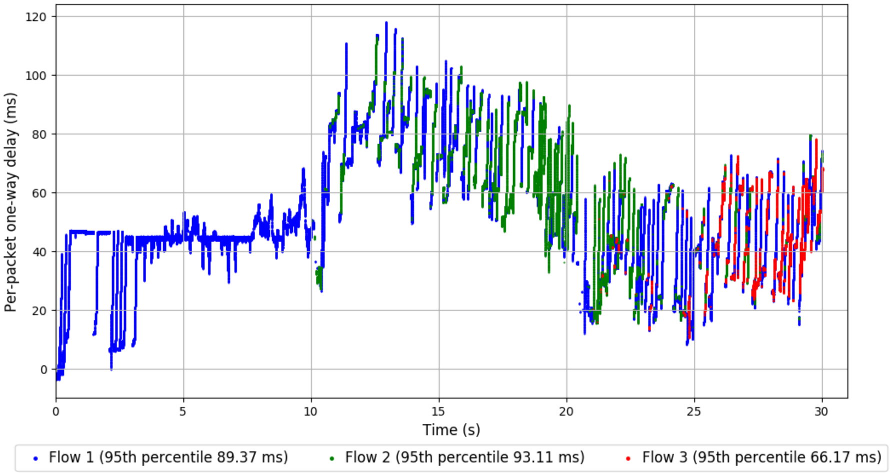
```
Run 4: Statistics of TCP BBR

Start at: 2017-08-11 09:32:03
End at: 2017-08-11 09:32:33
Local clock offset: -1.543 ms
Remote clock offset: -22.275 ms

# Below is generated by plot.py at 2017-08-11 14:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.42 Mbit/s
95th percentile per-packet one-way delay: 89.693 ms
Loss rate: 13.29%
-- Flow 1:
Average throughput: 70.76 Mbit/s
95th percentile per-packet one-way delay: 89.370 ms
Loss rate: 10.04%
-- Flow 2:
Average throughput: 26.46 Mbit/s
95th percentile per-packet one-way delay: 93.108 ms
Loss rate: 22.96%
-- Flow 3:
Average throughput: 17.16 Mbit/s
95th percentile per-packet one-way delay: 66.173 ms
Loss rate: 18.86%
```

Run 4: Report of TCP BBR — Data Link



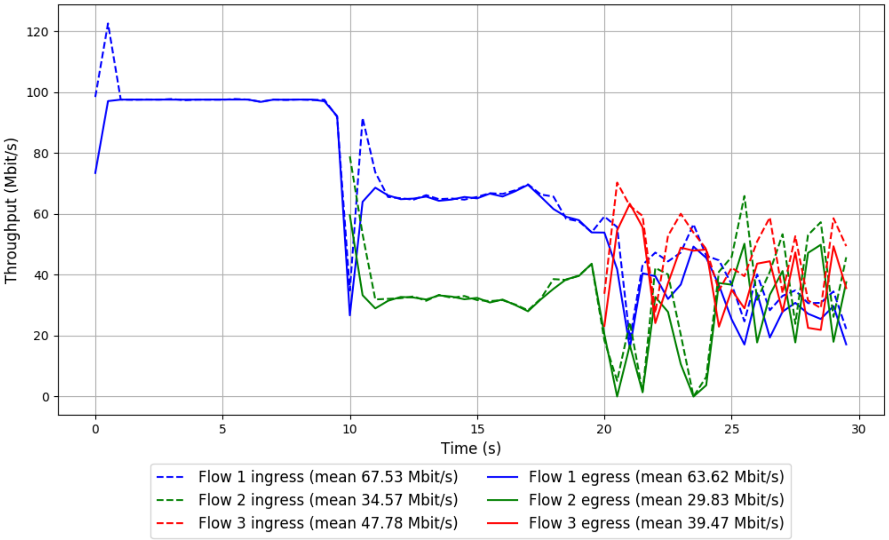


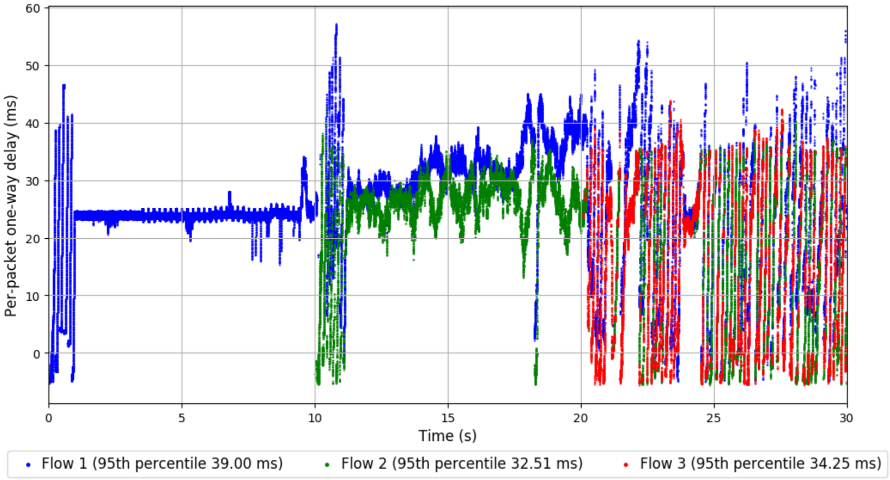
```
Run 5: Statistics of TCP BBR

Start at: 2017-08-11 10:27:53
End at: 2017-08-11 10:28:23
Local clock offset: -0.632 ms
Remote clock offset: -23.151 ms

# Below is generated by plot.py at 2017-08-11 14:37:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.54 Mbit/s
95th percentile per-packet one-way delay: 37.449 ms
Loss rate: 9.22%
-- Flow 1:
Average throughput: 63.62 Mbit/s
95th percentile per-packet one-way delay: 39.004 ms
Loss rate: 5.71%
-- Flow 2:
Average throughput: 29.83 Mbit/s
95th percentile per-packet one-way delay: 32.505 ms
Loss rate: 13.73%
-- Flow 3:
Average throughput: 39.47 Mbit/s
95th percentile per-packet one-way delay: 34.253 ms
Loss rate: 17.62%
```

Run 5: Report of TCP BBR — Data Link



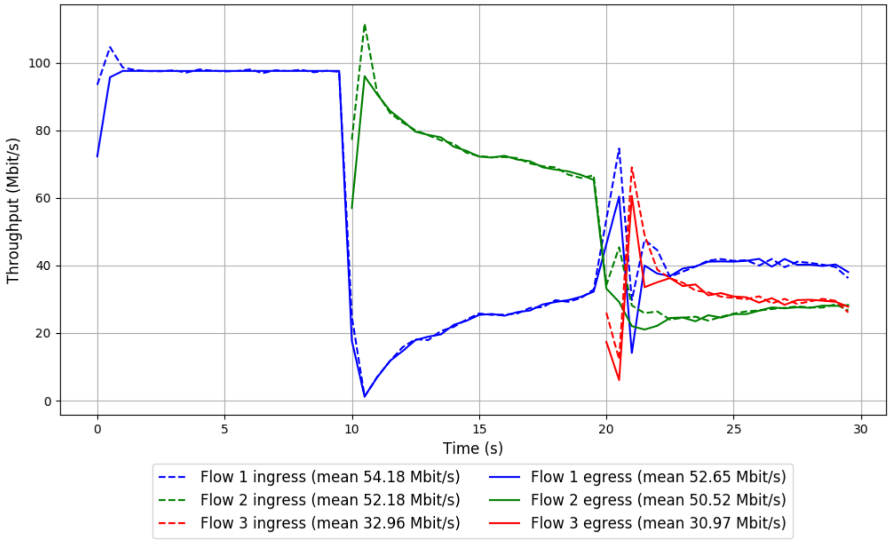


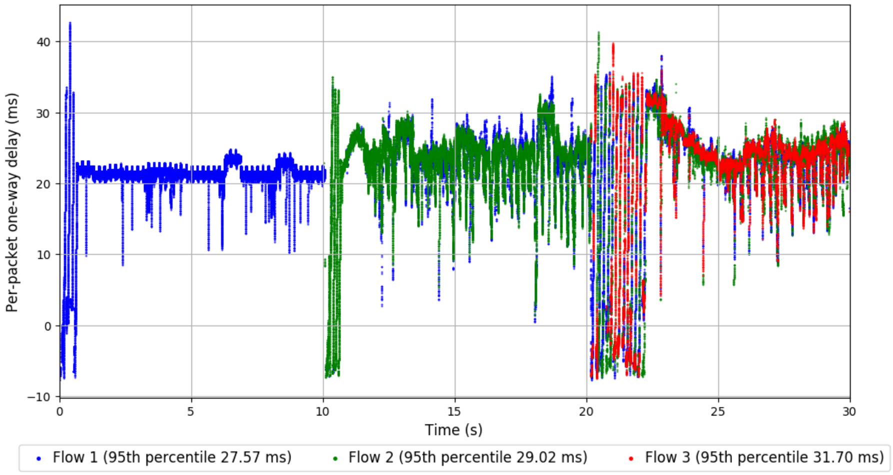
```
Run 6: Statistics of TCP BBR

Start at: 2017-08-11 10:46:33
End at: 2017-08-11 10:47:03
Local clock offset: 1.872 ms
Remote clock offset: -22.571 ms

# Below is generated by plot.py at 2017-08-11 14:37:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.50 Mbit/s
95th percentile per-packet one-way delay: 28.922 ms
Loss rate: 3.26%
-- Flow 1:
Average throughput: 52.65 Mbit/s
95th percentile per-packet one-way delay: 27.575 ms
Loss rate: 2.74%
-- Flow 2:
Average throughput: 50.52 Mbit/s
95th percentile per-packet one-way delay: 29.018 ms
Loss rate: 3.17%
-- Flow 3:
Average throughput: 30.97 Mbit/s
95th percentile per-packet one-way delay: 31.702 ms
Loss rate: 6.10%
```

Run 6: Report of TCP BBR — Data Link



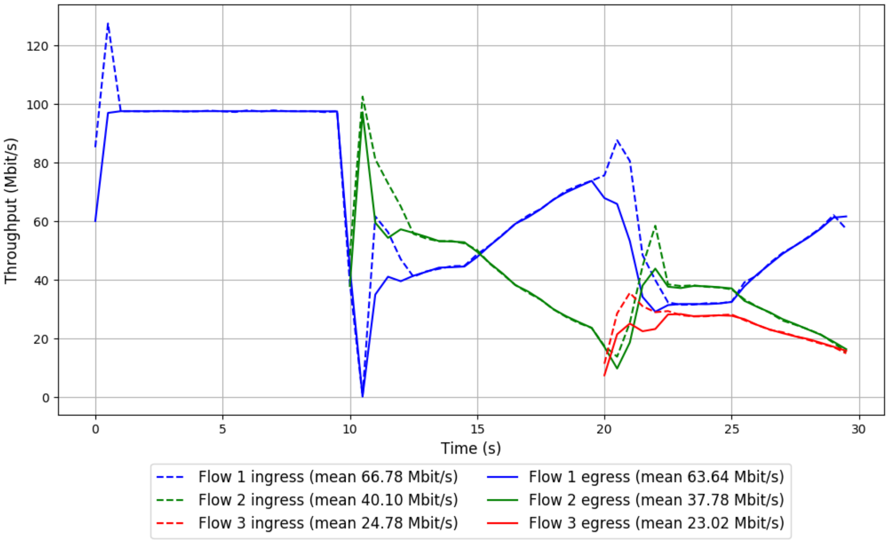


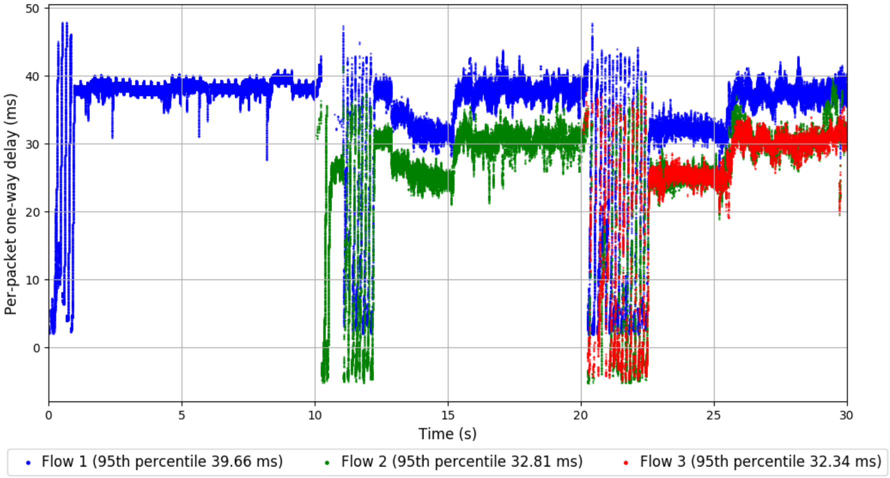
```
Run 7: Statistics of TCP BBR

Start at: 2017-08-11 11:06:44
End at: 2017-08-11 11:07:14
Local clock offset: -0.9 ms
Remote clock offset: -22.672 ms

# Below is generated by plot.py at 2017-08-11 14:38:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.39 Mbit/s
95th percentile per-packet one-way delay: 39.377 ms
Loss rate: 5.14%
-- Flow 1:
Average throughput: 63.64 Mbit/s
95th percentile per-packet one-way delay: 39.655 ms
Loss rate: 4.61%
-- Flow 2:
Average throughput: 37.78 Mbit/s
95th percentile per-packet one-way delay: 32.810 ms
Loss rate: 5.85%
-- Flow 3:
Average throughput: 23.02 Mbit/s
95th percentile per-packet one-way delay: 32.337 ms
Loss rate: 7.12%
```

Run 7: Report of TCP BBR — Data Link



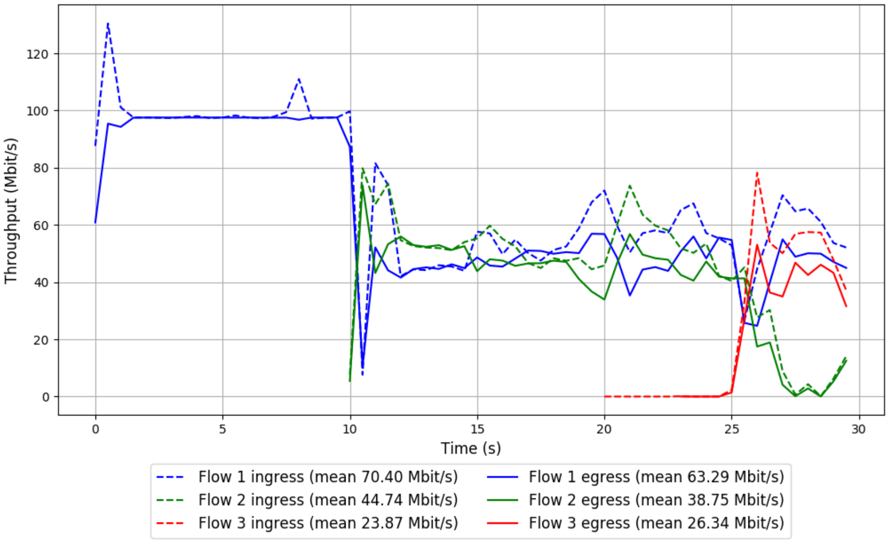


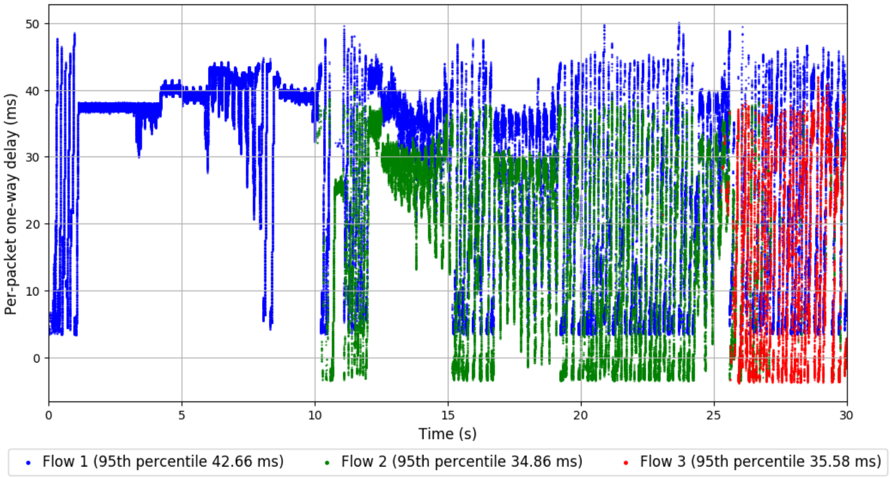
```
Run 8: Statistics of TCP BBR

Start at: 2017-08-11 11:33:49
End at: 2017-08-11 11:34:19
Local clock offset: -2.956 ms
Remote clock offset: -20.409 ms

# Below is generated by plot.py at 2017-08-11 14:38:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.12 Mbit/s
95th percentile per-packet one-way delay: 42.133 ms
Loss rate: 12.02%
-- Flow 1:
Average throughput: 63.29 Mbit/s
95th percentile per-packet one-way delay: 42.660 ms
Loss rate: 10.10%
-- Flow 2:
Average throughput: 38.75 Mbit/s
95th percentile per-packet one-way delay: 34.857 ms
Loss rate: 13.54%
-- Flow 3:
Average throughput: 26.34 Mbit/s
95th percentile per-packet one-way delay: 35.580 ms
Loss rate: 23.41%
```

Run 8: Report of TCP BBR — Data Link



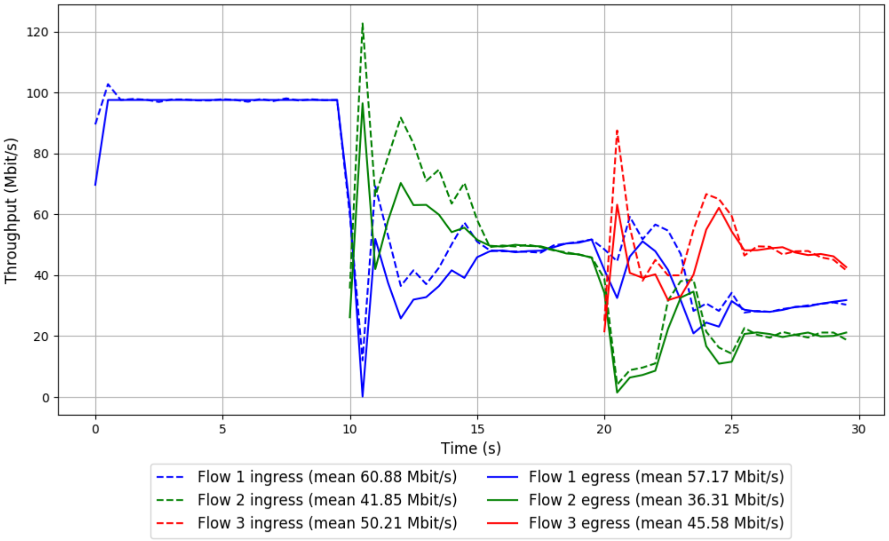


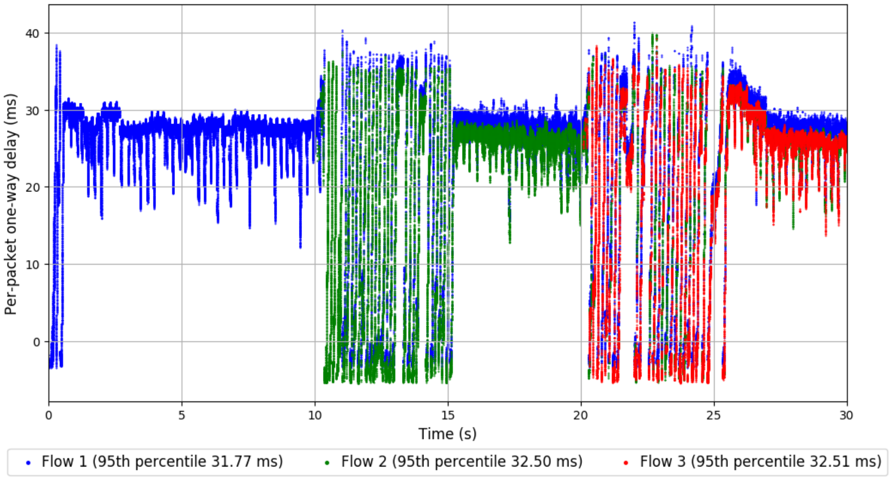
```
Run 9: Statistics of TCP BBR

Start at: 2017-08-11 12:19:17
End at: 2017-08-11 12:19:47
Local clock offset: 0.677 ms
Remote clock offset: -16.051 ms

# Below is generated by plot.py at 2017-08-11 14:38:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.42 Mbit/s
95th percentile per-packet one-way delay: 32.250 ms
Loss rate: 8.42%
-- Flow 1:
Average throughput: 57.17 Mbit/s
95th percentile per-packet one-way delay: 31.767 ms
Loss rate: 6.00%
-- Flow 2:
Average throughput: 36.31 Mbit/s
95th percentile per-packet one-way delay: 32.502 ms
Loss rate: 13.24%
-- Flow 3:
Average throughput: 45.58 Mbit/s
95th percentile per-packet one-way delay: 32.509 ms
Loss rate: 9.23%
```

Run 9: Report of TCP BBR — Data Link



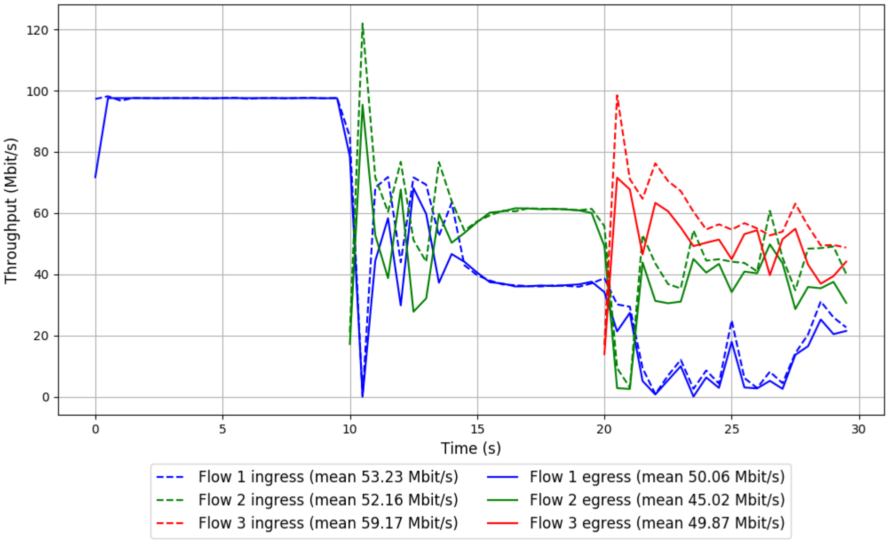


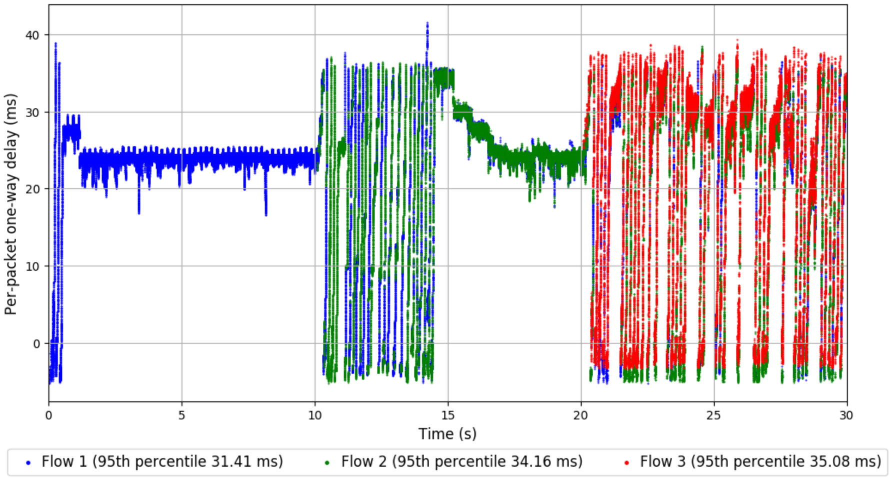
```
Run 10: Statistics of TCP BBR

Start at: 2017-08-11 13:08:47
End at: 2017-08-11 13:09:17
Local clock offset: -0.452 ms
Remote clock offset: -14.596 ms

# Below is generated by plot.py at 2017-08-11 14:38:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.53 Mbit/s
95th percentile per-packet one-way delay: 33.927 ms
Loss rate: 10.19%
-- Flow 1:
Average throughput: 50.06 Mbit/s
95th percentile per-packet one-way delay: 31.405 ms
Loss rate: 5.86%
-- Flow 2:
Average throughput: 45.02 Mbit/s
95th percentile per-packet one-way delay: 34.160 ms
Loss rate: 13.73%
-- Flow 3:
Average throughput: 49.87 Mbit/s
95th percentile per-packet one-way delay: 35.075 ms
Loss rate: 15.66%
```

Run 10: Report of TCP BBR — Data Link



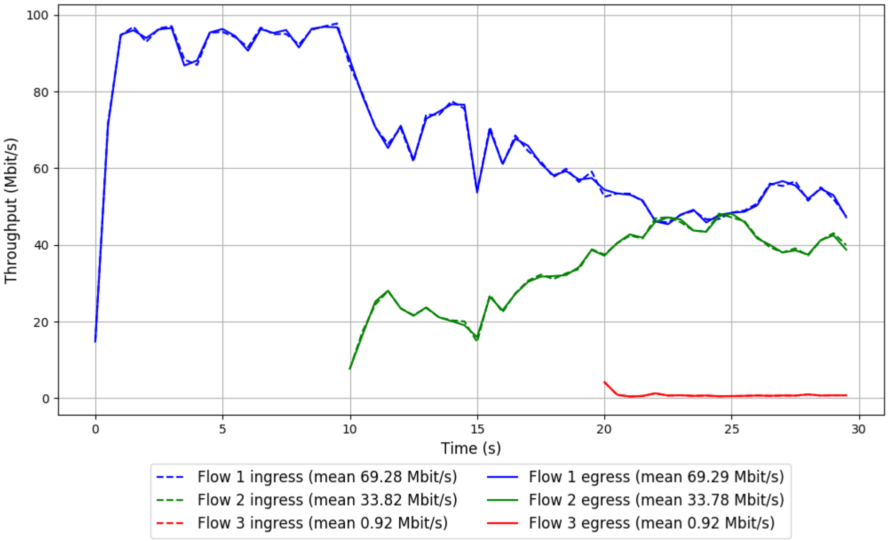


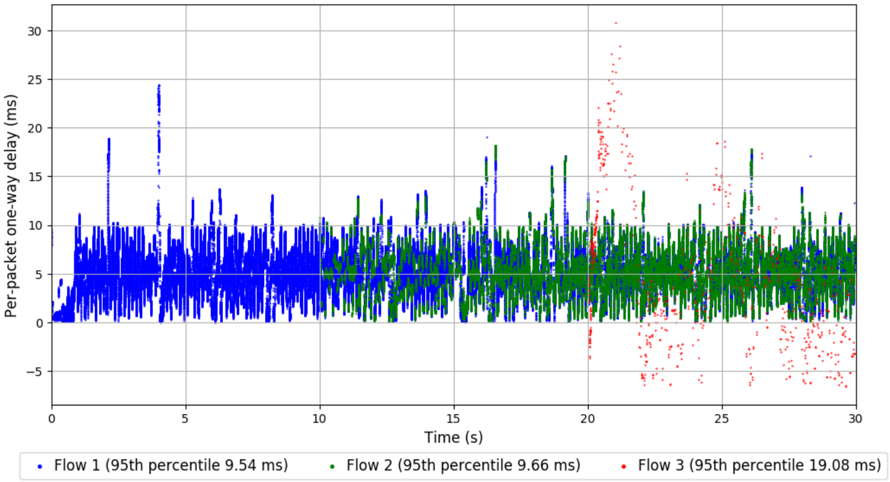
```
Run 1: Statistics of CalibratedKoho

Start at: 2017-08-11 08:49:11
End at: 2017-08-11 08:49:41
Local clock offset: 2.041 ms
Remote clock offset: -20.252 ms

# Below is generated by plot.py at 2017-08-11 14:38:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.09 Mbit/s
95th percentile per-packet one-way delay: 9.554 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 69.29 Mbit/s
95th percentile per-packet one-way delay: 9.535 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 33.78 Mbit/s
95th percentile per-packet one-way delay: 9.657 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 19.081 ms
Loss rate: 0.00%
```

Run 1: Report of CalibratedKoho — Data Link



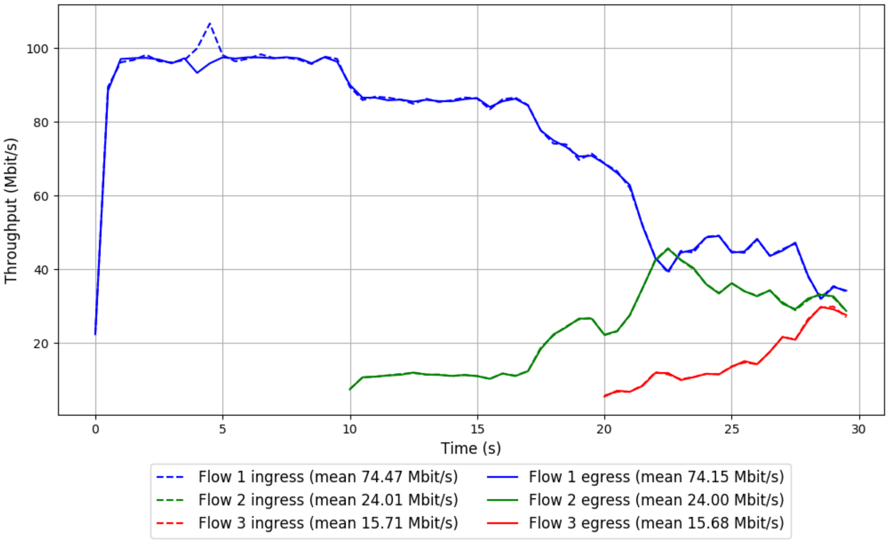


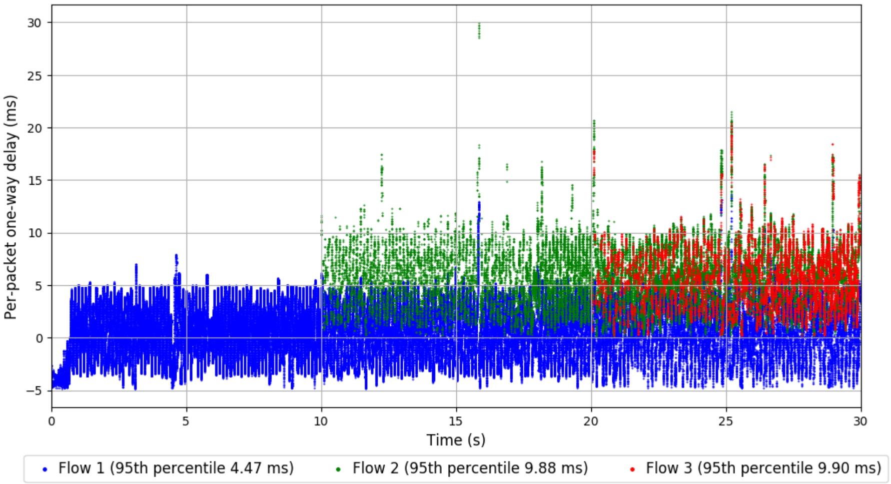
```
Run 2: Statistics of CalibratedKoho

Start at: 2017-08-11 09:08:11
End at: 2017-08-11 09:08:41
Local clock offset: 0.018 ms
Remote clock offset: -22.808 ms

# Below is generated by plot.py at 2017-08-11 14:38:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.32 Mbit/s
95th percentile per-packet one-way delay: 7.913 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 74.15 Mbit/s
95th percentile per-packet one-way delay: 4.472 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 24.00 Mbit/s
95th percentile per-packet one-way delay: 9.877 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 15.68 Mbit/s
95th percentile per-packet one-way delay: 9.900 ms
Loss rate: 0.17%
```

Run 2: Report of CalibratedKoho — Data Link



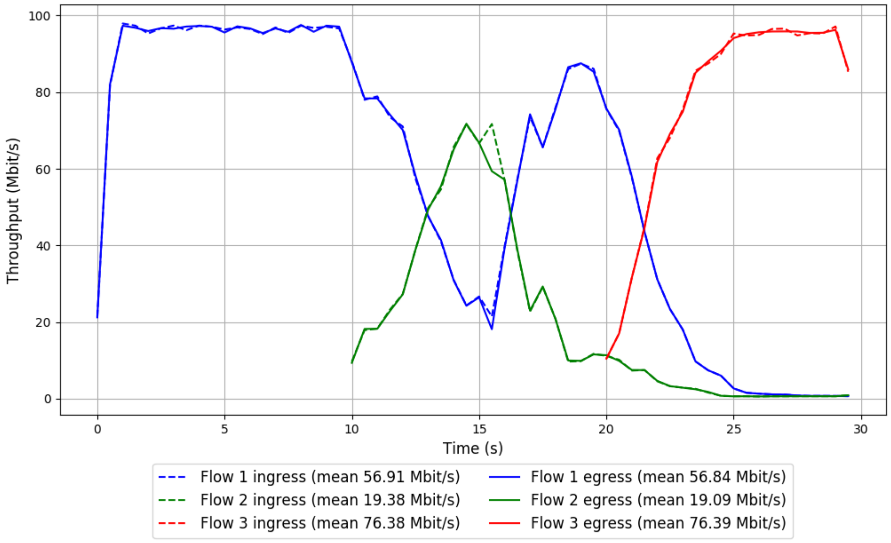


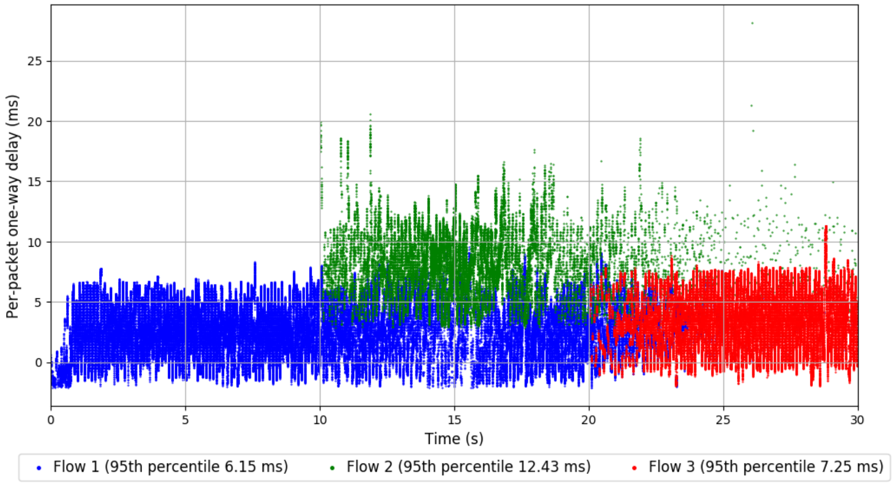
```
Run 3: Statistics of CalibratedKoho

Start at: 2017-08-11 09:27:59
End at: 2017-08-11 09:28:29
Local clock offset: -1.114 ms
Remote clock offset: -22.058 ms

# Below is generated by plot.py at 2017-08-11 14:38:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.84 Mbit/s
95th percentile per-packet one-way delay: 9.005 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 56.84 Mbit/s
95th percentile per-packet one-way delay: 6.152 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 19.09 Mbit/s
95th percentile per-packet one-way delay: 12.427 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 76.39 Mbit/s
95th percentile per-packet one-way delay: 7.252 ms
Loss rate: 0.03%
```

Run 3: Report of CalibratedKoho — Data Link



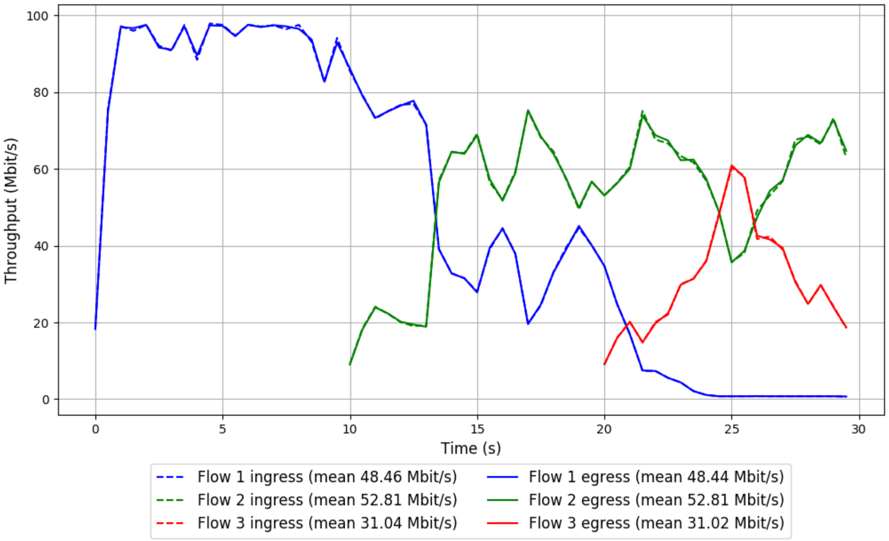


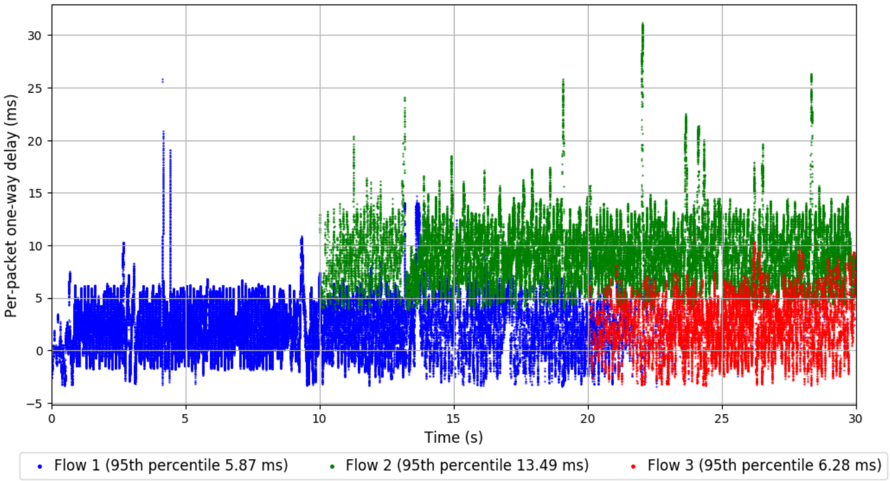
```
Run 4: Statistics of CalibratedKoho

Start at: 2017-08-11 10:24:06
End at: 2017-08-11 10:24:36
Local clock offset: -2.733 ms
Remote clock offset: -22.998 ms

# Below is generated by plot.py at 2017-08-11 14:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.89 Mbit/s
95th percentile per-packet one-way delay: 12.273 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 48.44 Mbit/s
95th percentile per-packet one-way delay: 5.865 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 52.81 Mbit/s
95th percentile per-packet one-way delay: 13.492 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.02 Mbit/s
95th percentile per-packet one-way delay: 6.284 ms
Loss rate: 0.00%
```

Run 4: Report of CalibratedKoho — Data Link



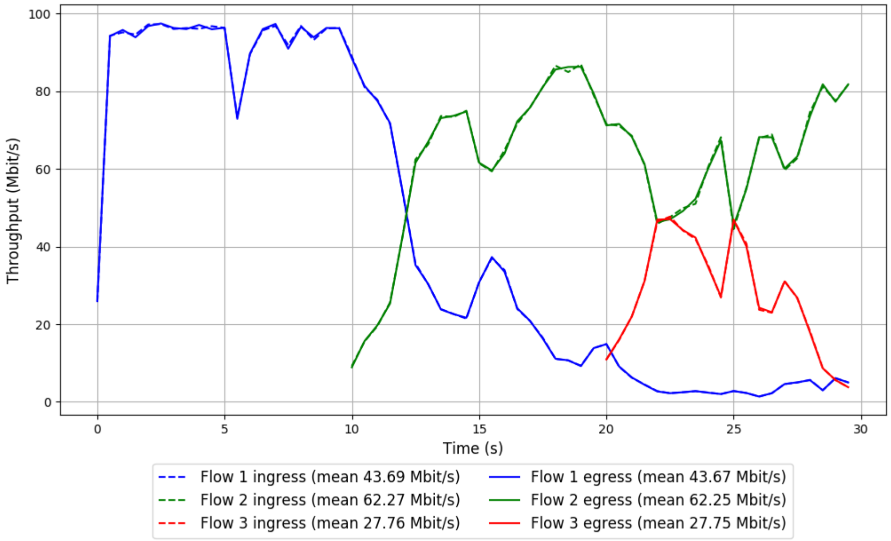


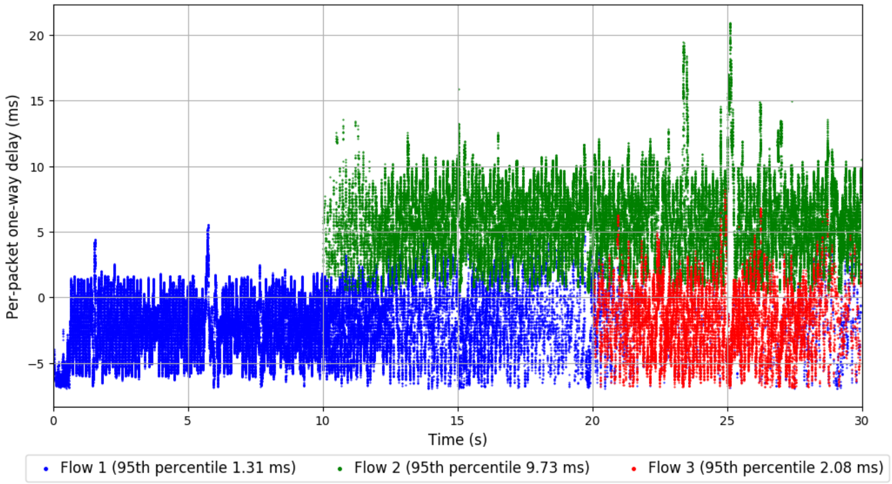
```
Run 5: Statistics of CalibratedKoho

Start at: 2017-08-11 10:42:46
End at: 2017-08-11 10:43:16
Local clock offset: -0.207 ms
Remote clock offset: -23.907 ms

# Below is generated by plot.py at 2017-08-11 14:38:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.29 Mbit/s
95th percentile per-packet one-way delay: 8.871 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 43.67 Mbit/s
95th percentile per-packet one-way delay: 1.313 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 62.25 Mbit/s
95th percentile per-packet one-way delay: 9.728 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 27.75 Mbit/s
95th percentile per-packet one-way delay: 2.080 ms
Loss rate: 0.00%
```

Run 5: Report of CalibratedKoho — Data Link



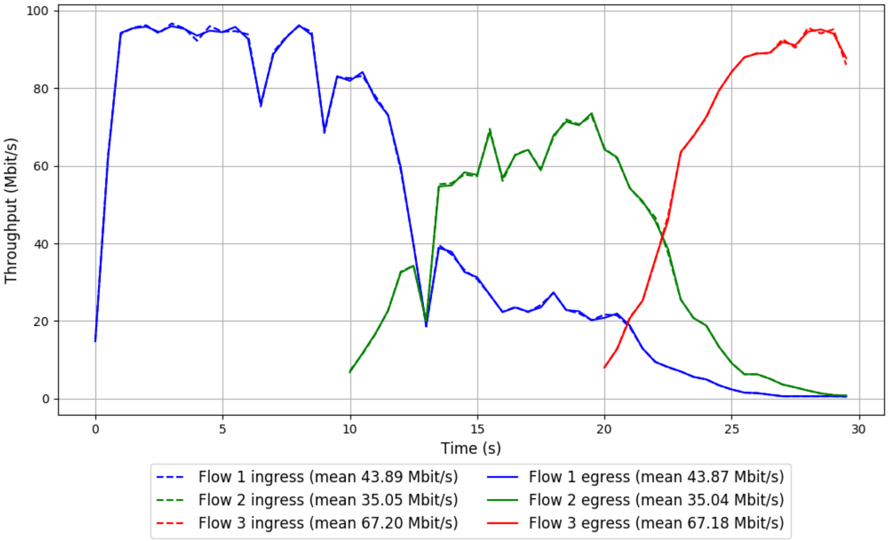


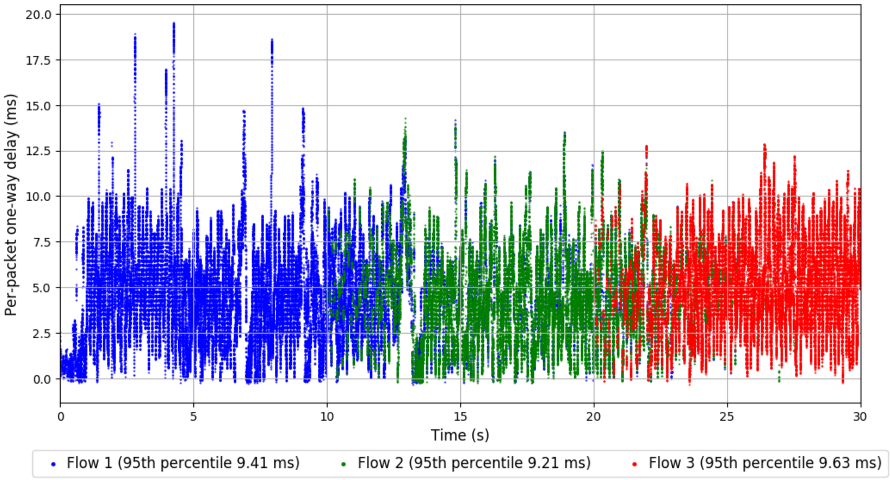
```
Run 6: Statistics of CalibratedKoho

Start at: 2017-08-11 11:02:14
End at: 2017-08-11 11:02:44
Local clock offset: 1.352 ms
Remote clock offset: -22.752 ms

# Below is generated by plot.py at 2017-08-11 14:38:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.48 Mbit/s
95th percentile per-packet one-way delay: 9.428 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 43.87 Mbit/s
95th percentile per-packet one-way delay: 9.411 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 35.04 Mbit/s
95th percentile per-packet one-way delay: 9.205 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 67.18 Mbit/s
95th percentile per-packet one-way delay: 9.631 ms
Loss rate: 0.00%
```

Run 6: Report of CalibratedKoho — Data Link



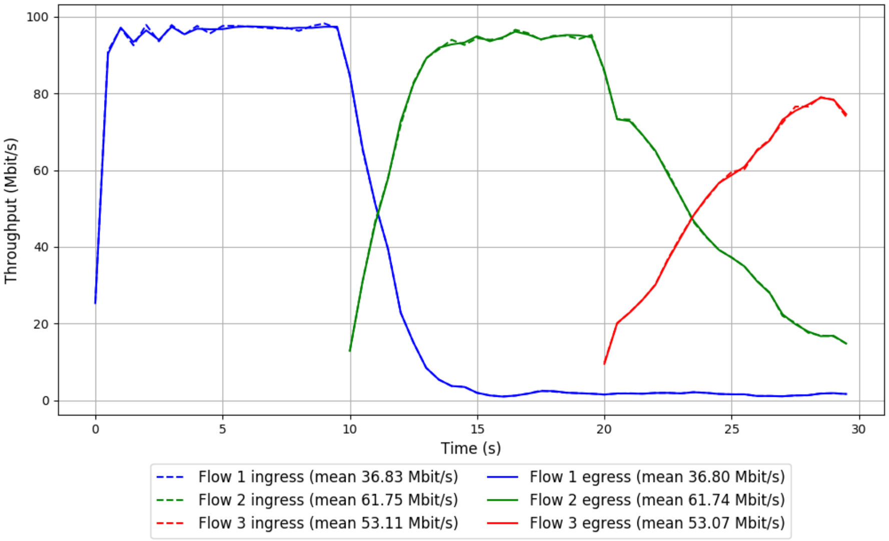


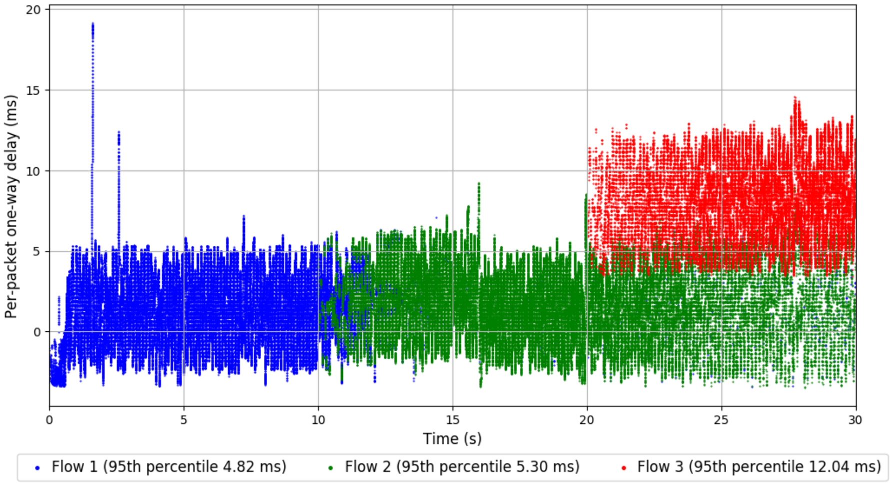
```
Run 7: Statistics of CalibratedKoho

Start at: 2017-08-11 11:22:17
End at: 2017-08-11 11:22:47
Local clock offset: -2.047 ms
Remote clock offset: -20.149 ms

# Below is generated by plot.py at 2017-08-11 14:39:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.51 Mbit/s
95th percentile per-packet one-way delay: 10.087 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 36.80 Mbit/s
95th percentile per-packet one-way delay: 4.815 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 61.74 Mbit/s
95th percentile per-packet one-way delay: 5.302 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 53.07 Mbit/s
95th percentile per-packet one-way delay: 12.041 ms
Loss rate: 0.05%
```

Run 7: Report of CalibratedKoho — Data Link



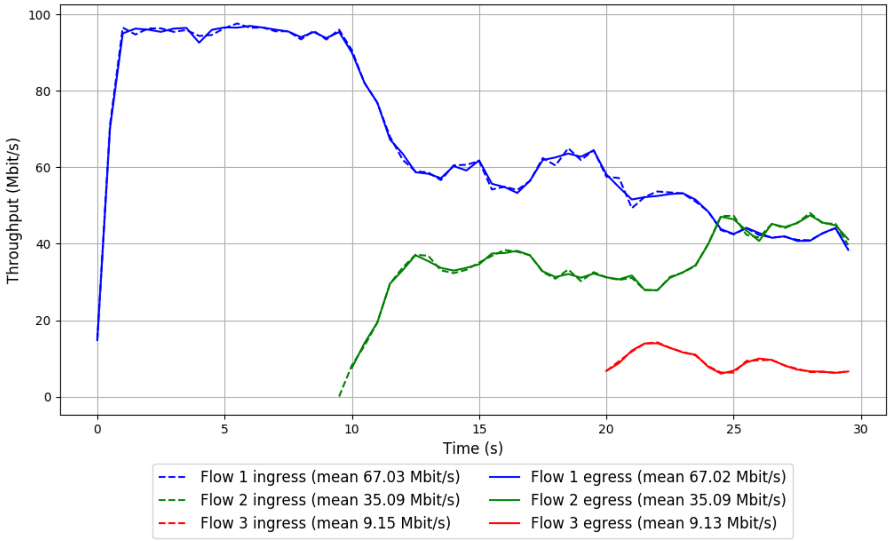


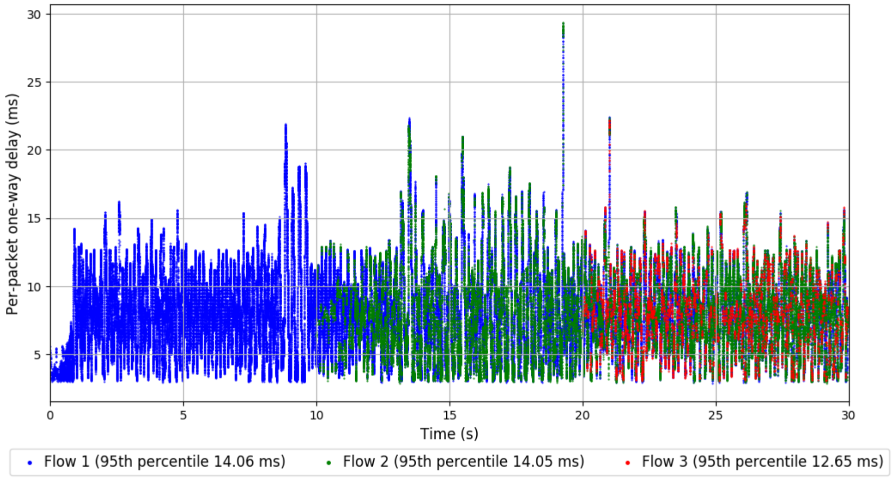
```
Run 8: Statistics of CalibratedKoho

Start at: 2017-08-11 12:09:00
End at: 2017-08-11 12:09:30
Local clock offset: -2.638 ms
Remote clock offset: -18.067 ms

# Below is generated by plot.py at 2017-08-11 14:39:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.42 Mbit/s
95th percentile per-packet one-way delay: 14.015 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 67.02 Mbit/s
95th percentile per-packet one-way delay: 14.061 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 35.09 Mbit/s
95th percentile per-packet one-way delay: 14.048 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 9.13 Mbit/s
95th percentile per-packet one-way delay: 12.647 ms
Loss rate: 0.17%
```

Run 8: Report of CalibratedKoho — Data Link



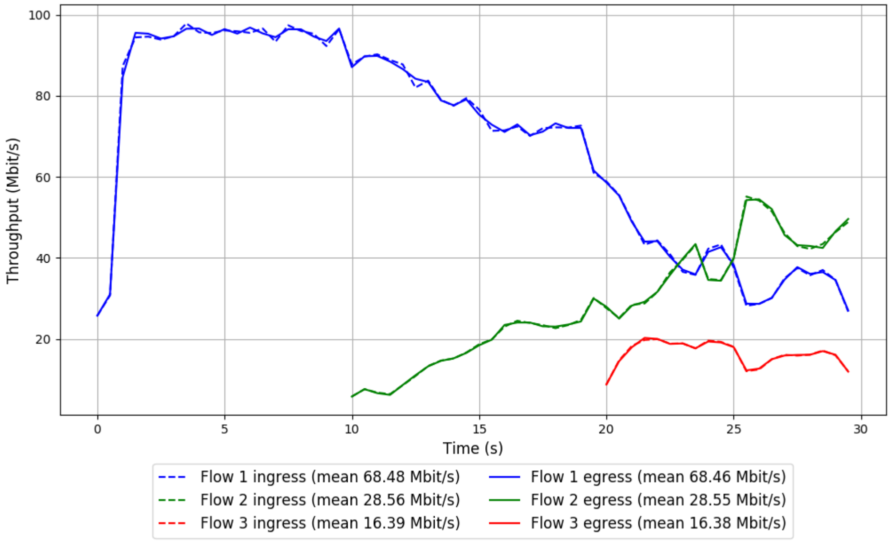


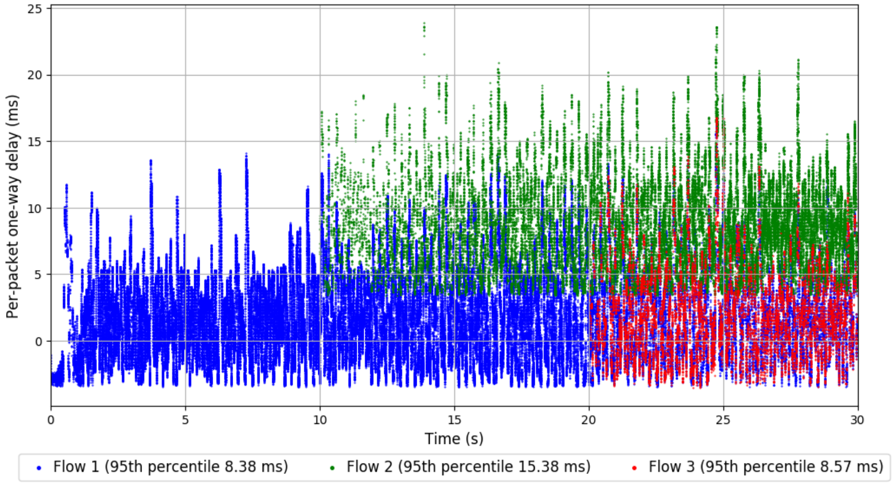
```
Run 9: Statistics of CalibratedKoho

Start at: 2017-08-11 12:50:14
End at: 2017-08-11 12:50:44
Local clock offset: -2.408 ms
Remote clock offset: -15.24 ms

# Below is generated by plot.py at 2017-08-11 14:39:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.90 Mbit/s
95th percentile per-packet one-way delay: 11.607 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 68.46 Mbit/s
95th percentile per-packet one-way delay: 8.379 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 28.55 Mbit/s
95th percentile per-packet one-way delay: 15.375 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 16.38 Mbit/s
95th percentile per-packet one-way delay: 8.570 ms
Loss rate: 0.01%
```

Run 9: Report of CalibratedKoho — Data Link



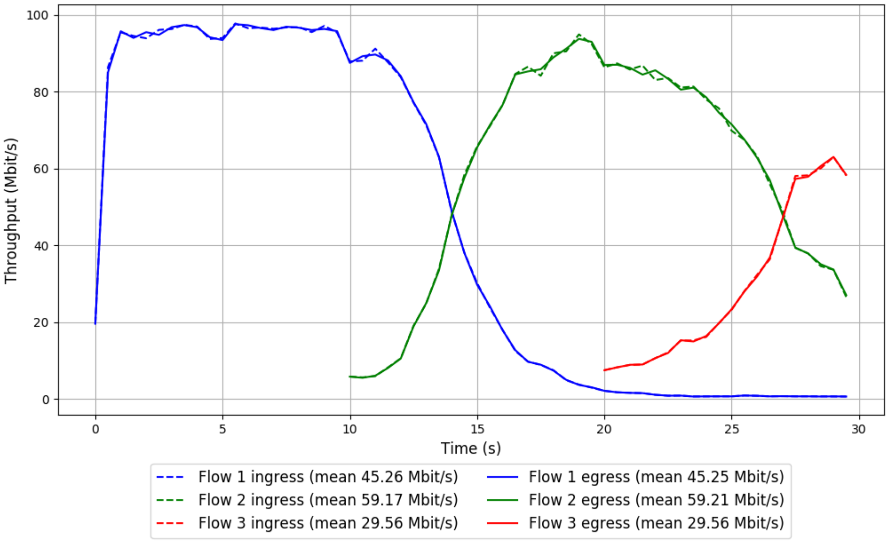


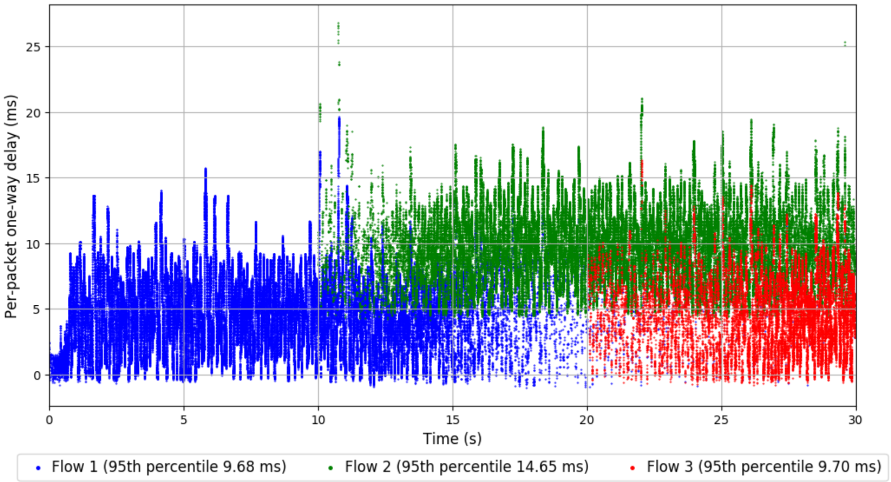
```
Run 10: Statistics of CalibratedKoho

Start at: 2017-08-11 13:37:21
End at: 2017-08-11 13:37:51
Local clock offset: -0.468 ms
Remote clock offset: -12.05 ms

# Below is generated by plot.py at 2017-08-11 14:39:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.46 Mbit/s
95th percentile per-packet one-way delay: 13.485 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 45.25 Mbit/s
95th percentile per-packet one-way delay: 9.679 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 59.21 Mbit/s
95th percentile per-packet one-way delay: 14.650 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 29.56 Mbit/s
95th percentile per-packet one-way delay: 9.695 ms
Loss rate: 0.08%
```

Run 10: Report of CalibratedKoho — Data Link



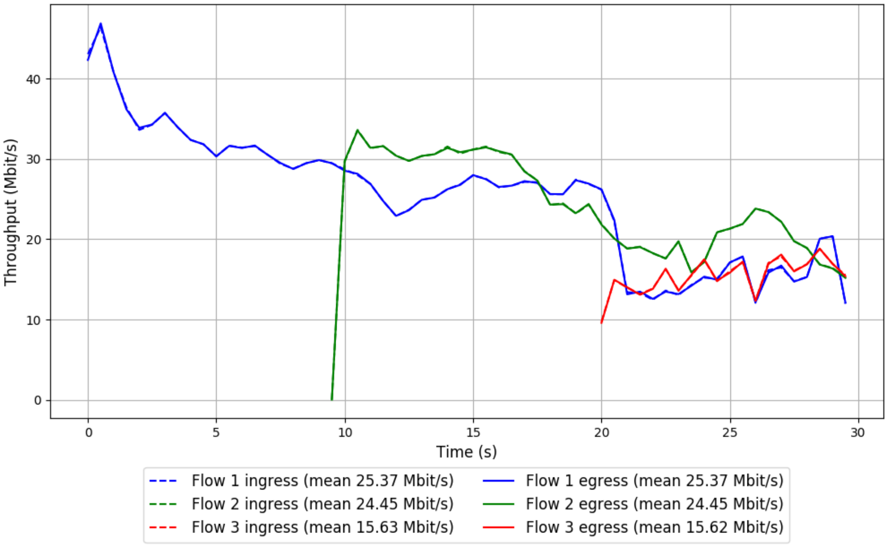


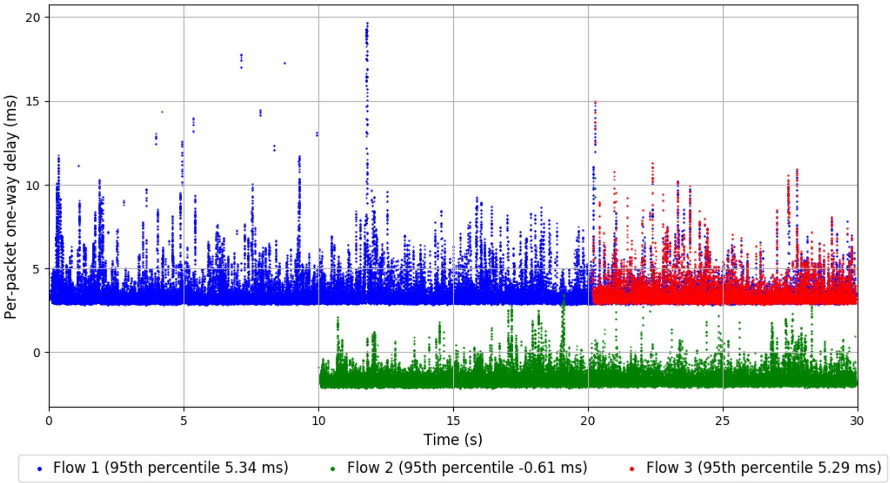
```
Run 1: Statistics of Copa

Start at: 2017-08-11 08:38:40
End at: 2017-08-11 08:39:10
Local clock offset: -2.066 ms
Remote clock offset: -21.253 ms

# Below is generated by plot.py at 2017-08-11 14:39:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.80 Mbit/s
95th percentile per-packet one-way delay: 4.762 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 25.37 Mbit/s
95th percentile per-packet one-way delay: 5.341 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.45 Mbit/s
95th percentile per-packet one-way delay: -0.611 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 15.62 Mbit/s
95th percentile per-packet one-way delay: 5.288 ms
Loss rate: 0.08%
```

Run 1: Report of Copa — Data Link



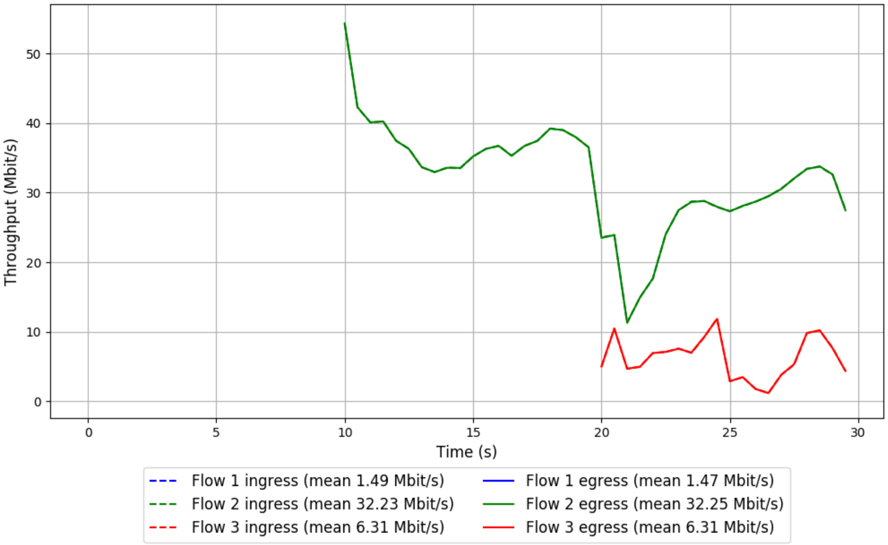


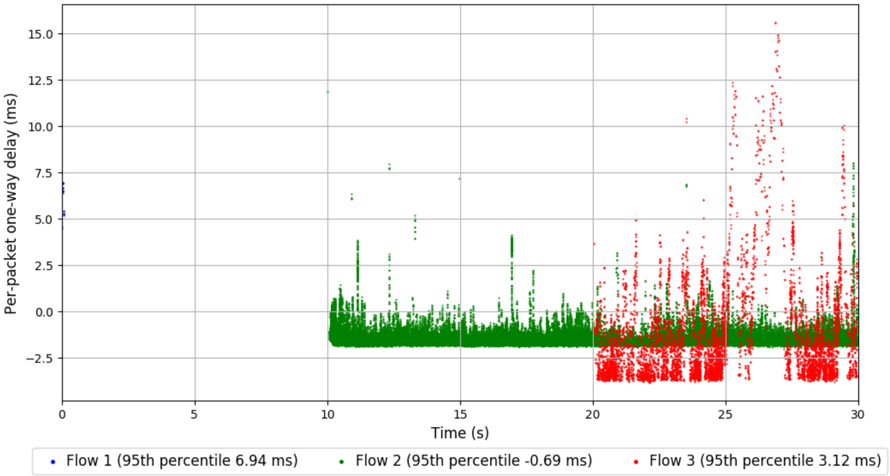
```
Run 2: Statistics of Copa

Start at: 2017-08-11 08:56:37
End at: 2017-08-11 08:57:07
Local clock offset: -0.774 ms
Remote clock offset: -20.367 ms

# Below is generated by plot.py at 2017-08-11 14:39:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.56 Mbit/s
95th percentile per-packet one-way delay: -0.416 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 6.936 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.25 Mbit/s
95th percentile per-packet one-way delay: -0.685 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 6.31 Mbit/s
95th percentile per-packet one-way delay: 3.121 ms
Loss rate: 0.00%
```

Run 2: Report of Copa — Data Link



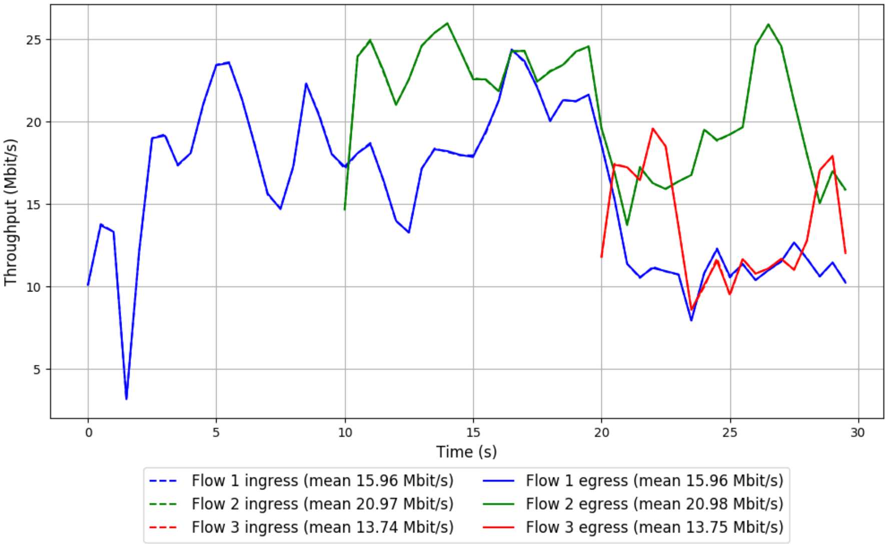


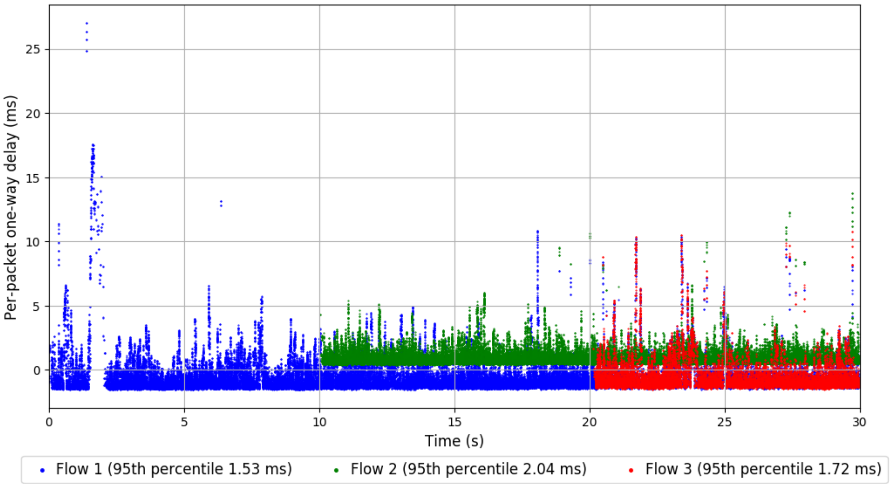
```
Run 3: Statistics of Copa

Start at: 2017-08-11 09:16:14
End at: 2017-08-11 09:16:44
Local clock offset: -3.254 ms
Remote clock offset: -21.328 ms

# Below is generated by plot.py at 2017-08-11 14:39:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.43 Mbit/s
95th percentile per-packet one-way delay: 1.878 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 15.96 Mbit/s
95th percentile per-packet one-way delay: 1.526 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.98 Mbit/s
95th percentile per-packet one-way delay: 2.043 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.75 Mbit/s
95th percentile per-packet one-way delay: 1.724 ms
Loss rate: 0.01%
```

Run 3: Report of Copa — Data Link



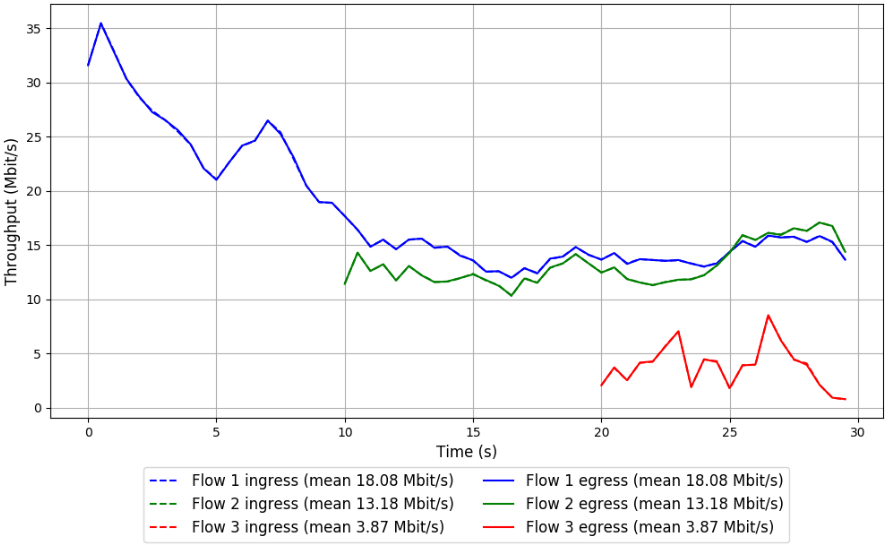


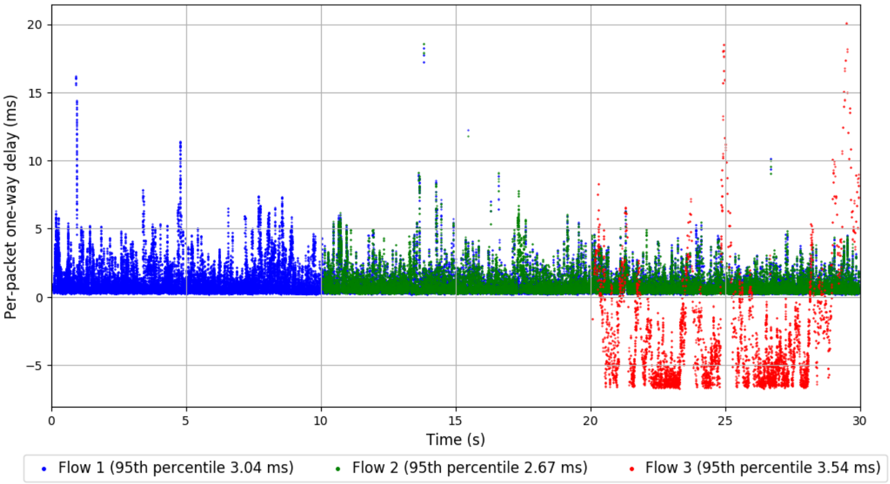
```
Run 4: Statistics of Copa

Start at: 2017-08-11 10:02:23
End at: 2017-08-11 10:02:53
Local clock offset: 0.526 ms
Remote clock offset: -23.448 ms

# Below is generated by plot.py at 2017-08-11 14:39:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.12 Mbit/s
95th percentile per-packet one-way delay: 2.931 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 18.08 Mbit/s
95th percentile per-packet one-way delay: 3.038 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.18 Mbit/s
95th percentile per-packet one-way delay: 2.672 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 3.536 ms
Loss rate: 0.00%
```

Run 4: Report of Copa — Data Link



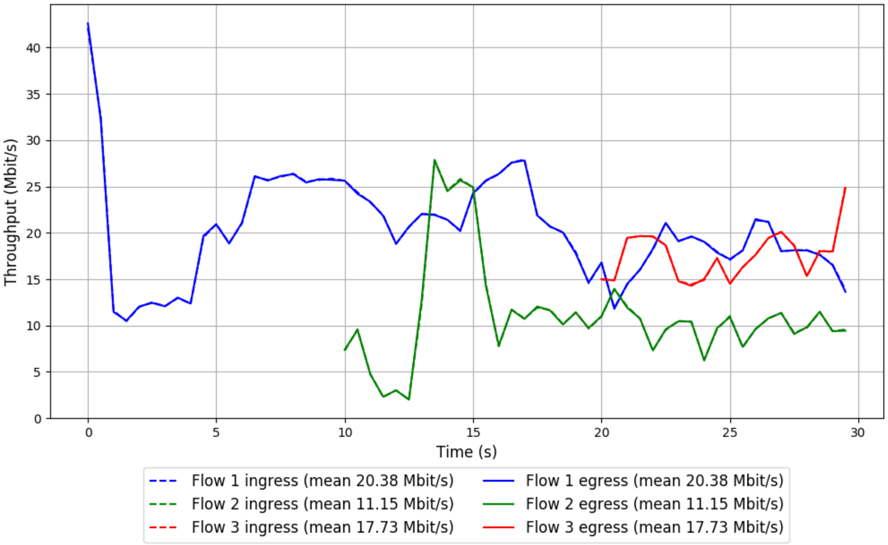


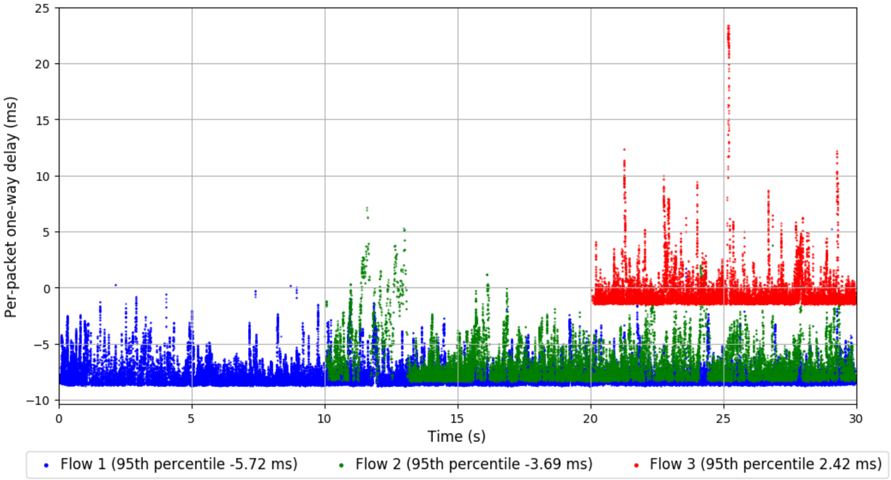
```
Run 5: Statistics of Copa

Start at: 2017-08-11 10:31:43
End at: 2017-08-11 10:32:13
Local clock offset: 1.553 ms
Remote clock offset: -24.087 ms

# Below is generated by plot.py at 2017-08-11 14:39:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.67 Mbit/s
95th percentile per-packet one-way delay: -0.601 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 20.38 Mbit/s
95th percentile per-packet one-way delay: -5.719 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.15 Mbit/s
95th percentile per-packet one-way delay: -3.688 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.73 Mbit/s
95th percentile per-packet one-way delay: 2.417 ms
Loss rate: 0.07%
```

Run 5: Report of Copa — Data Link



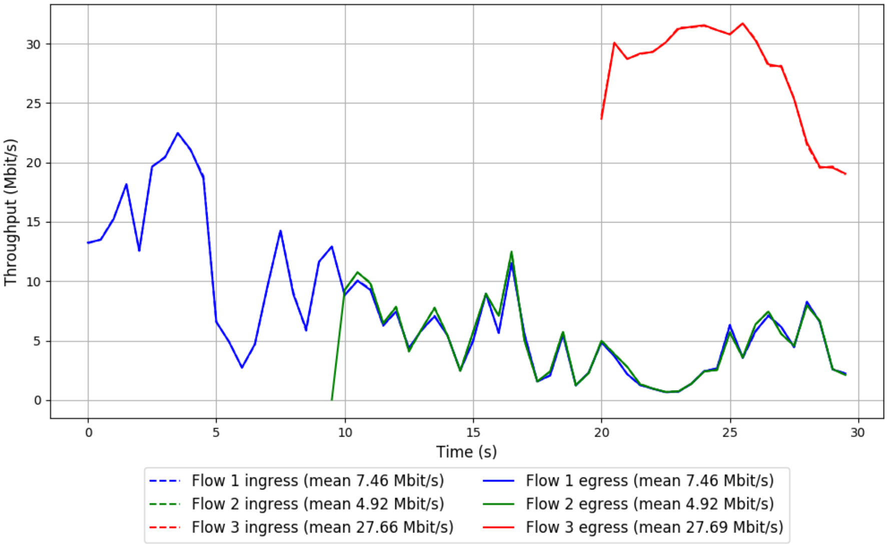


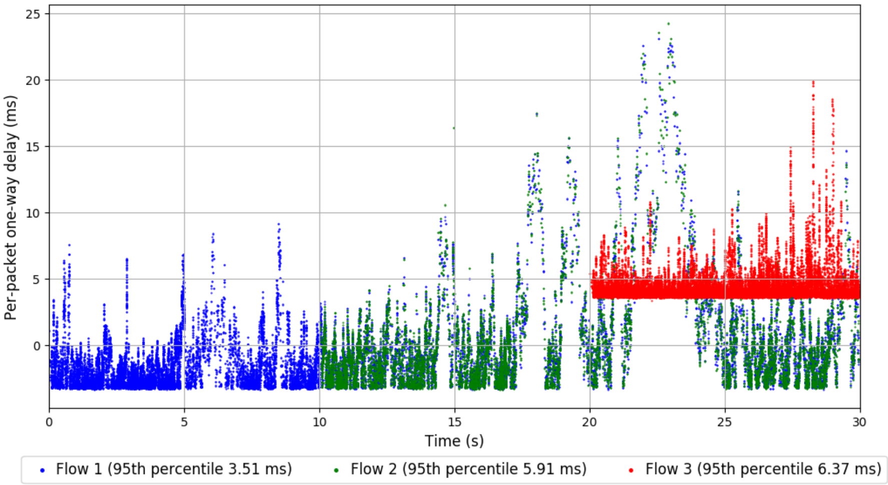
```
Run 6: Statistics of Copa

Start at: 2017-08-11 10:50:24
End at: 2017-08-11 10:50:54
Local clock offset: -2.115 ms
Remote clock offset: -22.355 ms

# Below is generated by plot.py at 2017-08-11 14:39:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.93 Mbit/s
95th percentile per-packet one-way delay: 5.784 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 7.46 Mbit/s
95th percentile per-packet one-way delay: 3.509 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 4.92 Mbit/s
95th percentile per-packet one-way delay: 5.907 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 27.69 Mbit/s
95th percentile per-packet one-way delay: 6.371 ms
Loss rate: 0.02%
```

Run 6: Report of Copa — Data Link



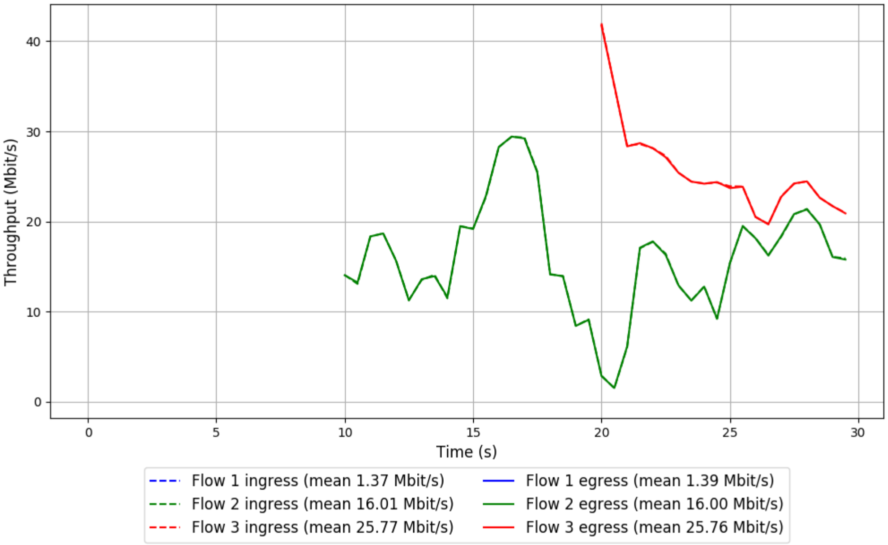


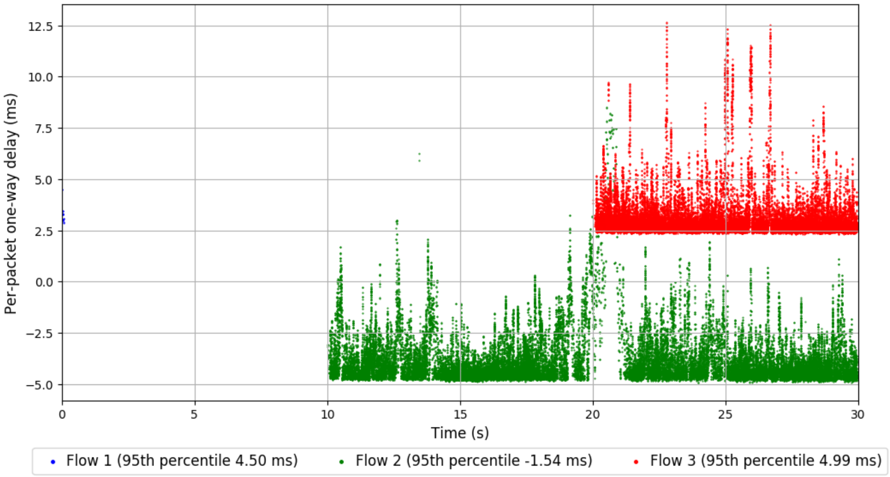
```
Run 7: Statistics of Copa

Start at: 2017-08-11 11:11:00
End at: 2017-08-11 11:11:30
Local clock offset: -1.786 ms
Remote clock offset: -22.086 ms

# Below is generated by plot.py at 2017-08-11 14:39:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.20 Mbit/s
95th percentile per-packet one-way delay: 3.889 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 4.500 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 16.00 Mbit/s
95th percentile per-packet one-way delay: -1.536 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 25.76 Mbit/s
95th percentile per-packet one-way delay: 4.989 ms
Loss rate: 0.11%
```

Run 7: Report of Copa — Data Link



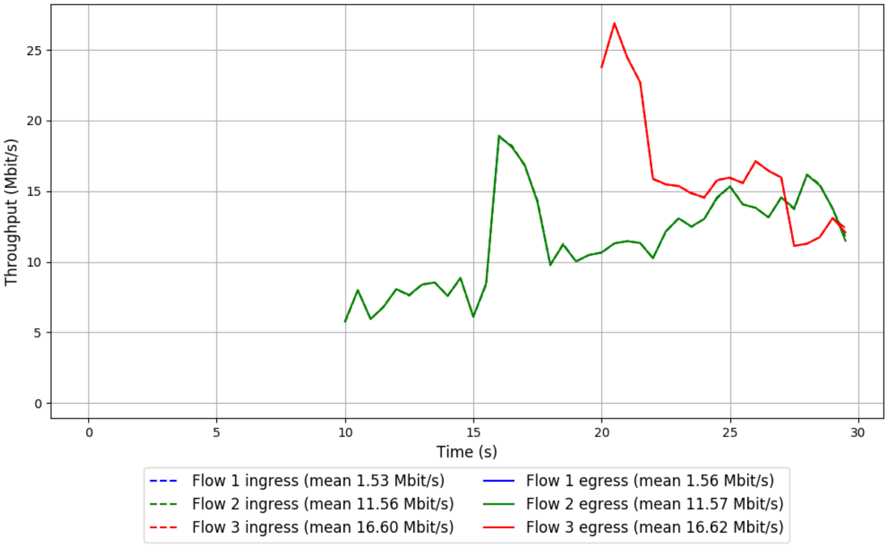


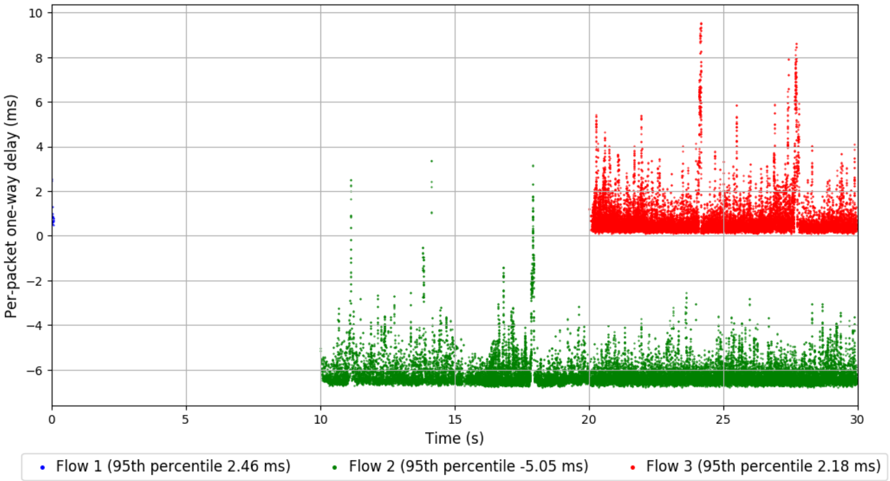
```
Run 8: Statistics of Copa

Start at: 2017-08-11 11:45:52
End at: 2017-08-11 11:46:22
Local clock offset: 0.562 ms
Remote clock offset: -19.309 ms

# Below is generated by plot.py at 2017-08-11 14:39:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.22 Mbit/s
95th percentile per-packet one-way delay: 1.325 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 2.463 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.57 Mbit/s
95th percentile per-packet one-way delay: -5.051 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 16.62 Mbit/s
95th percentile per-packet one-way delay: 2.179 ms
Loss rate: 0.09%
```

Run 8: Report of Copa — Data Link



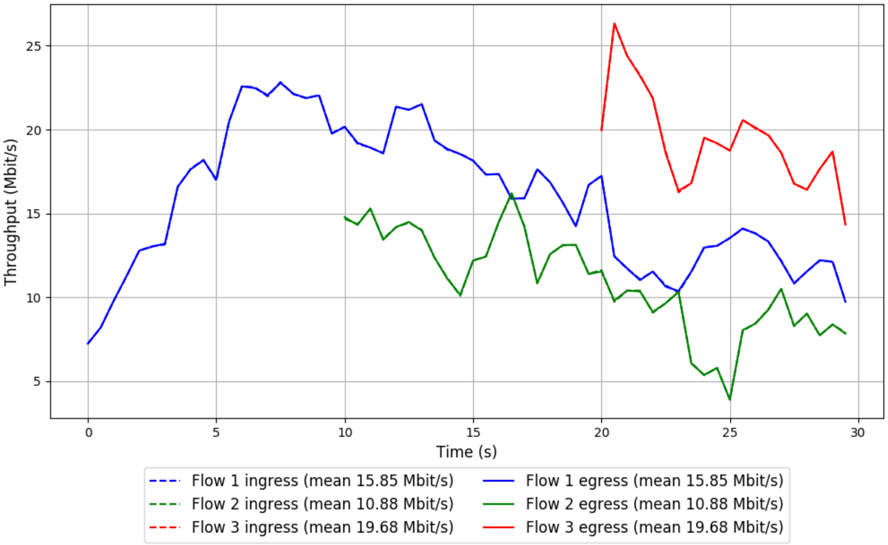


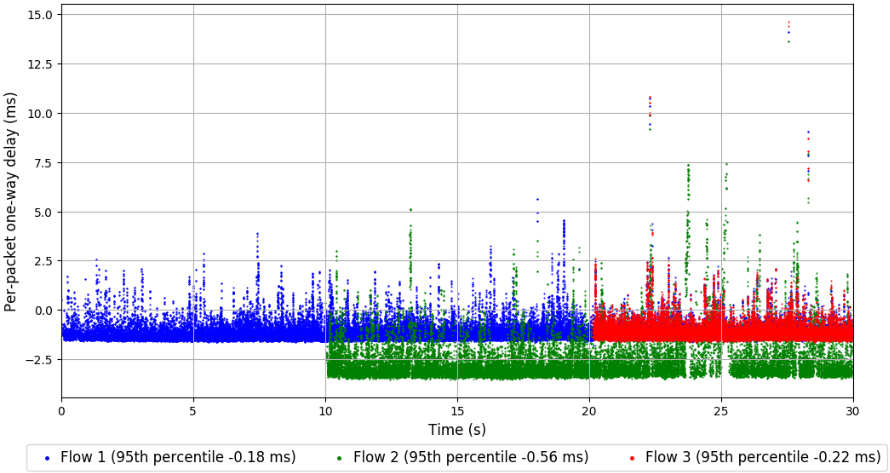
```
Run 9: Statistics of Copa

Start at: 2017-08-11 12:28:42
End at: 2017-08-11 12:29:12
Local clock offset: -2.584 ms
Remote clock offset: -16.875 ms

# Below is generated by plot.py at 2017-08-11 14:39:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 29.57 Mbit/s
95th percentile per-packet one-way delay: -0.234 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 15.85 Mbit/s
95th percentile per-packet one-way delay: -0.185 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.88 Mbit/s
95th percentile per-packet one-way delay: -0.556 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 19.68 Mbit/s
95th percentile per-packet one-way delay: -0.221 ms
Loss rate: 0.00%
```

Run 9: Report of Copa — Data Link



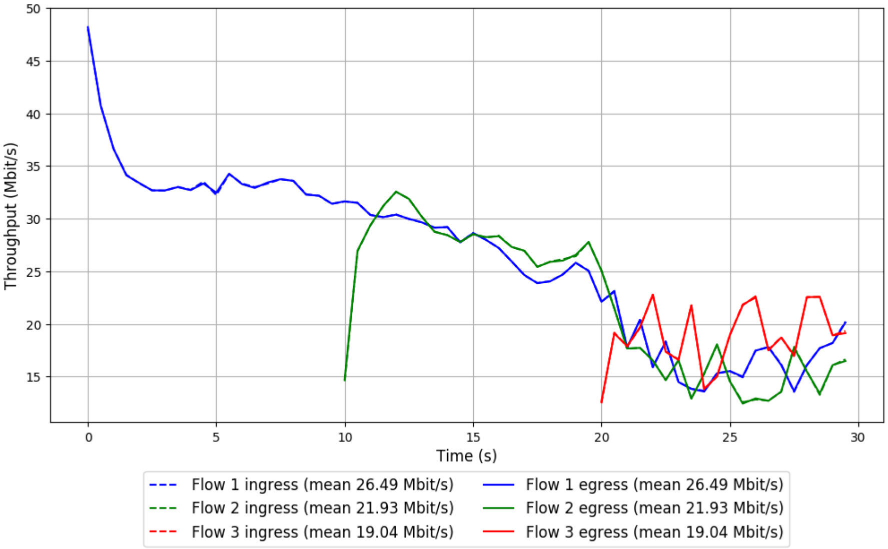


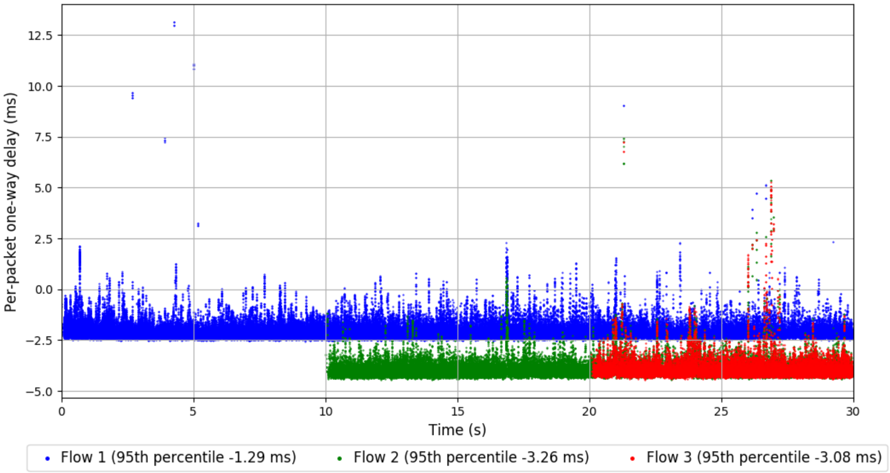
```
Run 10: Statistics of Copa

Start at: 2017-08-11 13:20:33
End at: 2017-08-11 13:21:03
Local clock offset: 0.379 ms
Remote clock offset: -12.439 ms

# Below is generated by plot.py at 2017-08-11 14:40:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.37 Mbit/s
95th percentile per-packet one-way delay: -1.537 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 26.49 Mbit/s
95th percentile per-packet one-way delay: -1.286 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.93 Mbit/s
95th percentile per-packet one-way delay: -3.259 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.04 Mbit/s
95th percentile per-packet one-way delay: -3.075 ms
Loss rate: 0.00%
```

Run 10: Report of Copa — Data Link



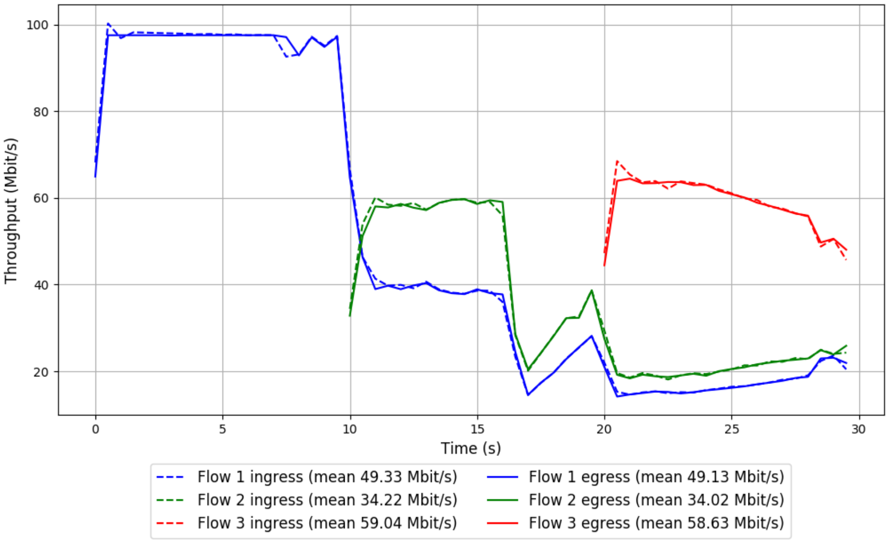


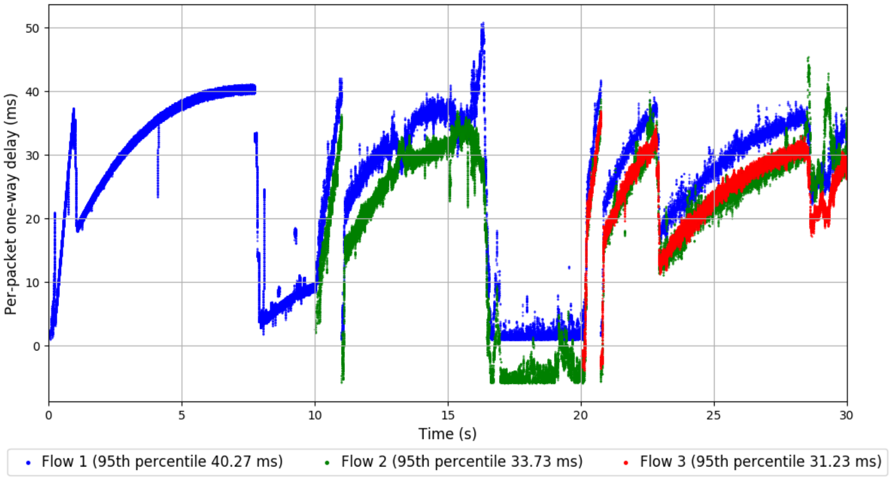
```
Run 1: Statistics of TCP Cubic

Start at: 2017-08-11 08:42:02
End at: 2017-08-11 08:42:32
Local clock offset: 0.657 ms
Remote clock offset: -20.52 ms

# Below is generated by plot.py at 2017-08-11 14:40:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.31 Mbit/s
95th percentile per-packet one-way delay: 39.826 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 49.13 Mbit/s
95th percentile per-packet one-way delay: 40.274 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 34.02 Mbit/s
95th percentile per-packet one-way delay: 33.730 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 58.63 Mbit/s
95th percentile per-packet one-way delay: 31.234 ms
Loss rate: 0.49%
```

Run 1: Report of TCP Cubic — Data Link



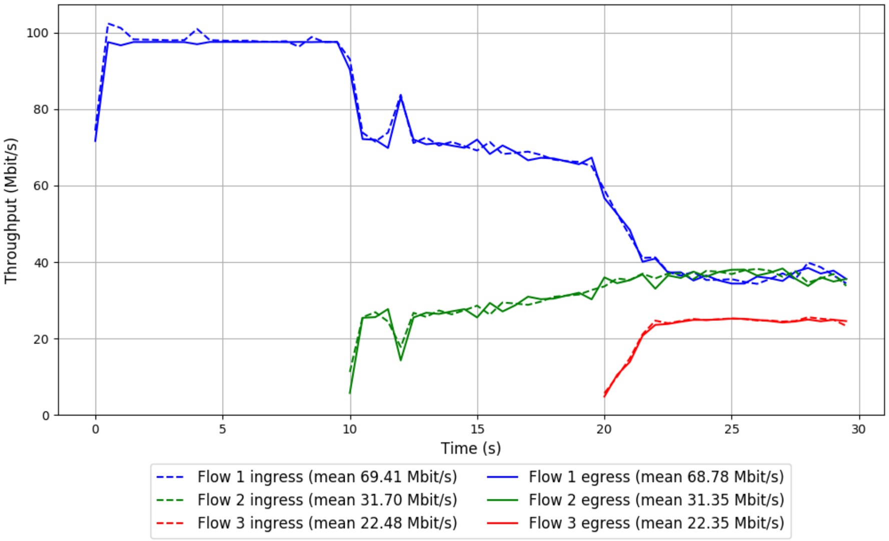


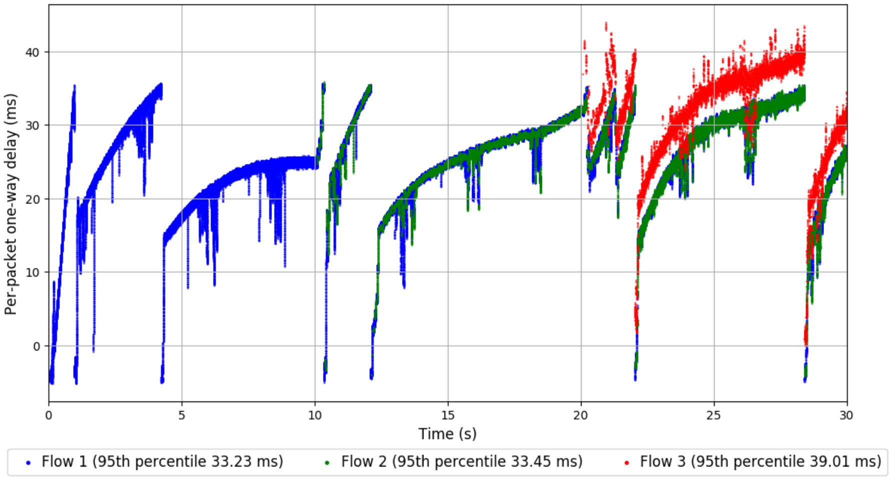
```
Run 2: Statistics of TCP Cubic

Start at: 2017-08-11 08:59:59
End at: 2017-08-11 09:00:29
Local clock offset: 2.737 ms
Remote clock offset: -20.325 ms

# Below is generated by plot.py at 2017-08-11 14:40:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.03 Mbit/s
95th percentile per-packet one-way delay: 34.394 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 68.78 Mbit/s
95th percentile per-packet one-way delay: 33.228 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 31.35 Mbit/s
95th percentile per-packet one-way delay: 33.455 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 22.35 Mbit/s
95th percentile per-packet one-way delay: 39.014 ms
Loss rate: 0.86%
```

Run 2: Report of TCP Cubic — Data Link



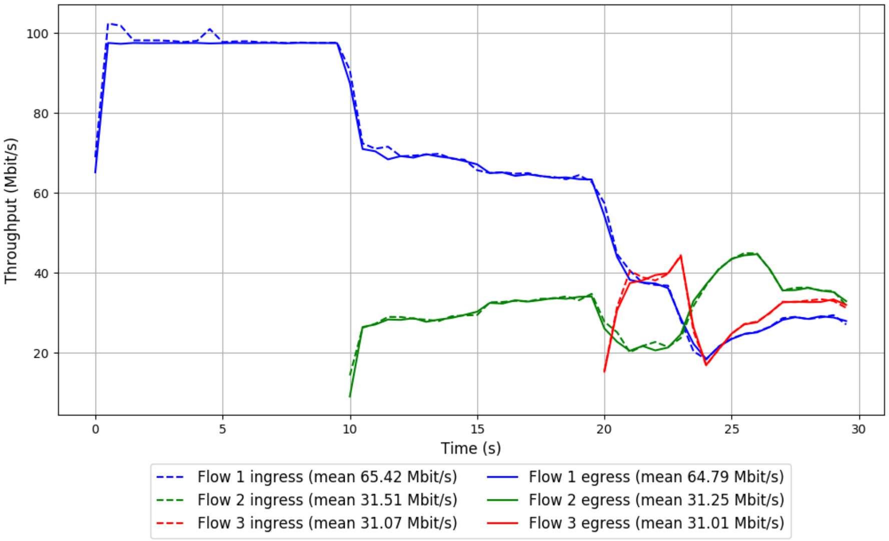


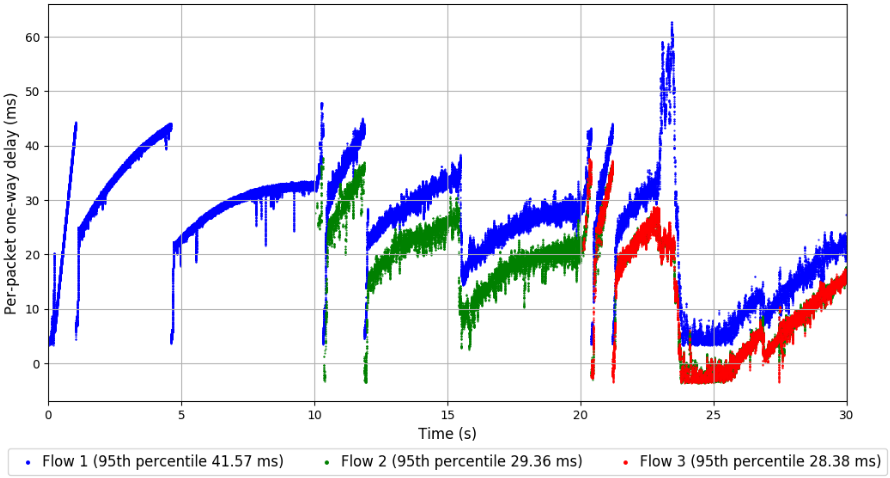
```
Run 3: Statistics of TCP Cubic

Start at: 2017-08-11 09:19:52
End at: 2017-08-11 09:20:22
Local clock offset: -3.351 ms
Remote clock offset: -23.739 ms

# Below is generated by plot.py at 2017-08-11 14:40:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.85 Mbit/s
95th percentile per-packet one-way delay: 40.321 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 64.79 Mbit/s
95th percentile per-packet one-way delay: 41.568 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 31.25 Mbit/s
95th percentile per-packet one-way delay: 29.361 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 31.01 Mbit/s
95th percentile per-packet one-way delay: 28.376 ms
Loss rate: 0.41%
```

Run 3: Report of TCP Cubic — Data Link

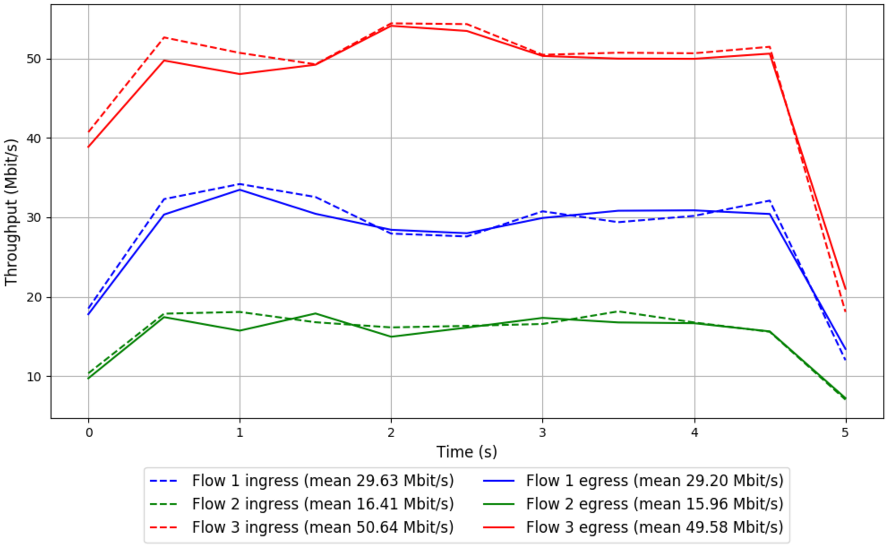


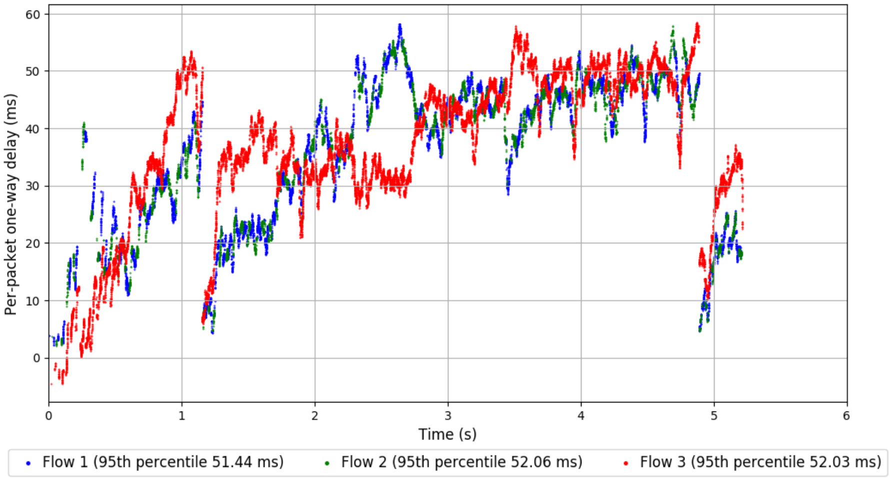


```
Run 4: Statistics of TCP Cubic

Start at: 2017-08-11 10:15:33
End at: 2017-08-11 10:16:03
Local clock offset: -0.112 ms
Remote clock offset: -22.812 ms
```

Run 4: Report of TCP Cubic — Data Link



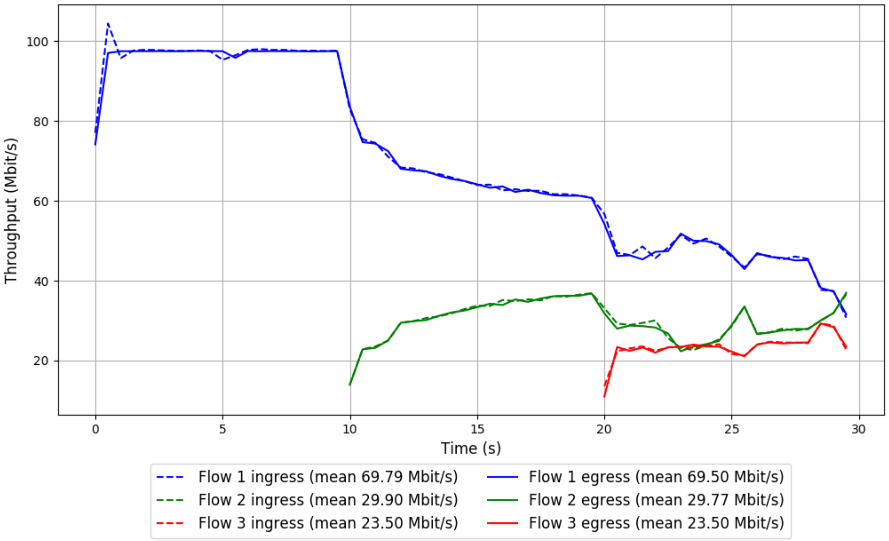


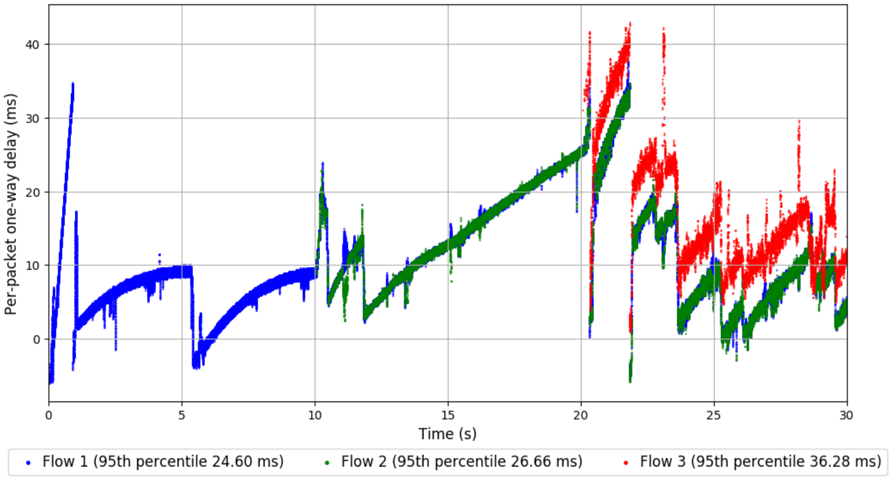
```
Run 5: Statistics of TCP Cubic

Start at: 2017-08-11 10:35:11
End at: 2017-08-11 10:35:41
Local clock offset: 0.625 ms
Remote clock offset: -22.552 ms

# Below is generated by plot.py at 2017-08-11 14:40:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.07 Mbit/s
95th percentile per-packet one-way delay: 25.555 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 69.50 Mbit/s
95th percentile per-packet one-way delay: 24.596 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 29.77 Mbit/s
95th percentile per-packet one-way delay: 26.662 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 23.50 Mbit/s
95th percentile per-packet one-way delay: 36.282 ms
Loss rate: 0.43%
```

Run 5: Report of TCP Cubic — Data Link



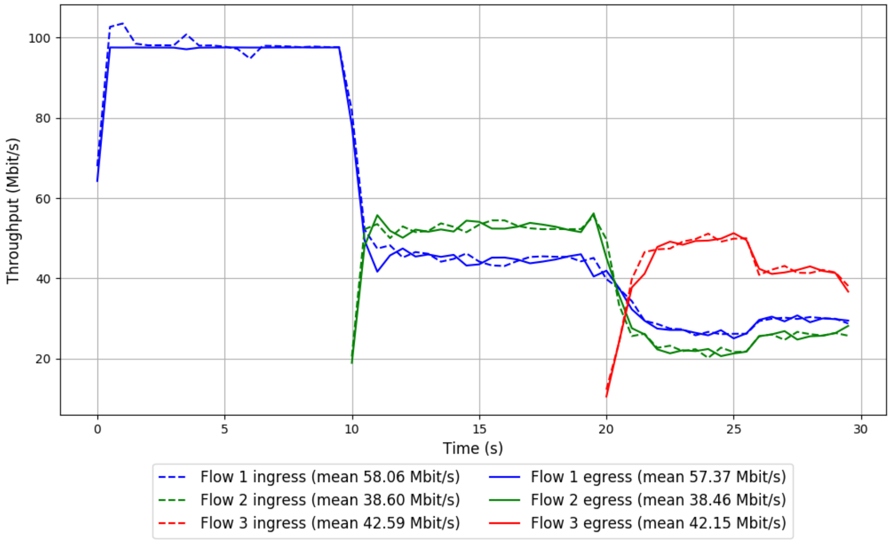


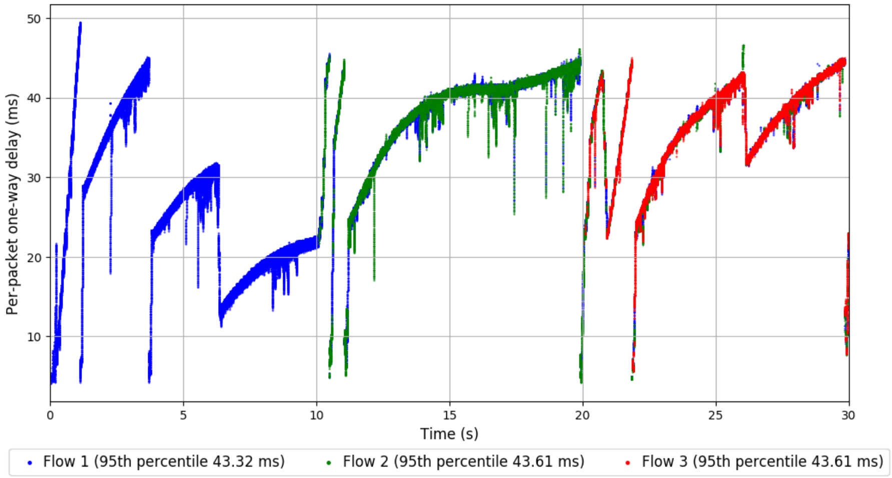
```
Run 6: Statistics of TCP Cubic

Start at: 2017-08-11 10:53:55
End at: 2017-08-11 10:54:25
Local clock offset: -2.887 ms
Remote clock offset: -22.618 ms

# Below is generated by plot.py at 2017-08-11 14:40:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.93 Mbit/s
95th percentile per-packet one-way delay: 43.416 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 57.37 Mbit/s
95th percentile per-packet one-way delay: 43.319 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 38.46 Mbit/s
95th percentile per-packet one-way delay: 43.606 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 42.15 Mbit/s
95th percentile per-packet one-way delay: 43.607 ms
Loss rate: 1.01%
```

Run 6: Report of TCP Cubic — Data Link



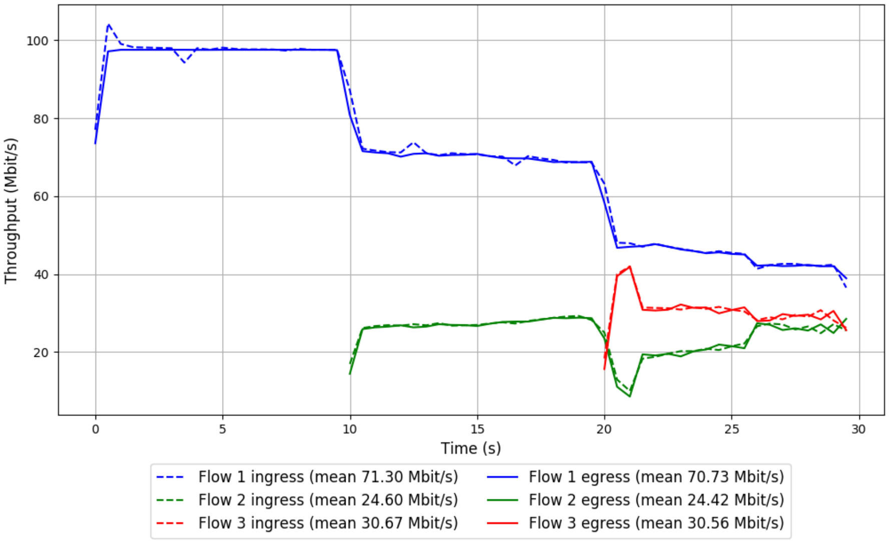


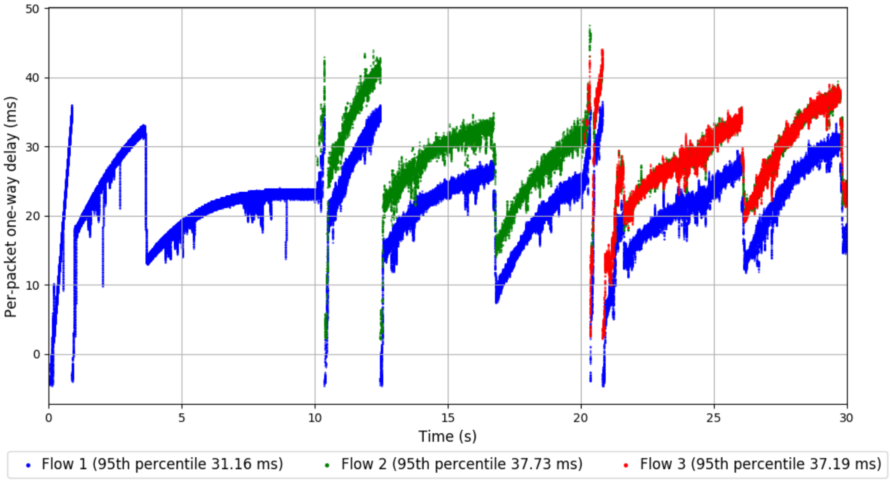
```
Run 7: Statistics of TCP Cubic

Start at: 2017-08-11 11:14:27
End at: 2017-08-11 11:14:57
Local clock offset: -1.608 ms
Remote clock offset: -21.75 ms

# Below is generated by plot.py at 2017-08-11 14:40:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.06 Mbit/s
95th percentile per-packet one-way delay: 34.237 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 70.73 Mbit/s
95th percentile per-packet one-way delay: 31.155 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 24.42 Mbit/s
95th percentile per-packet one-way delay: 37.735 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 30.56 Mbit/s
95th percentile per-packet one-way delay: 37.187 ms
Loss rate: 0.68%
```

Run 7: Report of TCP Cubic — Data Link



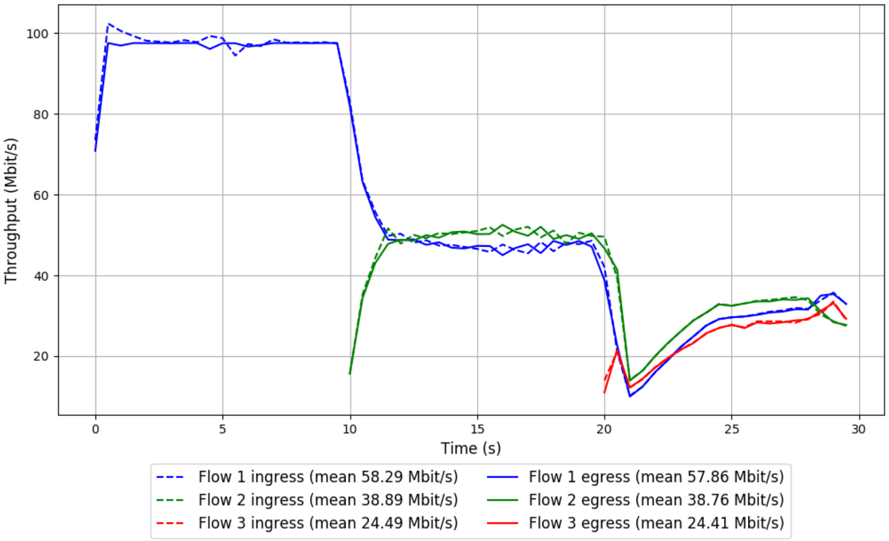


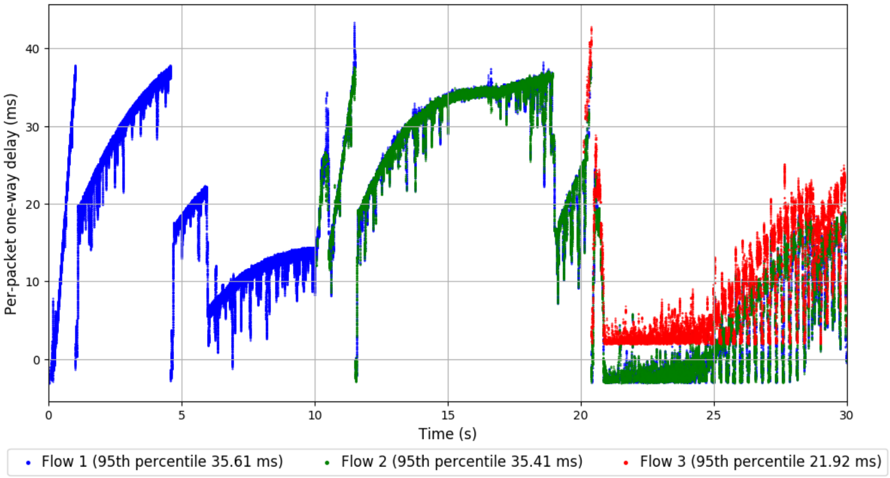
```
Run 8: Statistics of TCP Cubic

Start at: 2017-08-11 11:52:00
End at: 2017-08-11 11:52:30
Local clock offset: 0.493 ms
Remote clock offset: -17.1 ms

# Below is generated by plot.py at 2017-08-11 14:40:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.71 Mbit/s
95th percentile per-packet one-way delay: 35.409 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 57.86 Mbit/s
95th percentile per-packet one-way delay: 35.606 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 38.76 Mbit/s
95th percentile per-packet one-way delay: 35.409 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 24.41 Mbit/s
95th percentile per-packet one-way delay: 21.921 ms
Loss rate: 0.55%
```

Run 8: Report of TCP Cubic — Data Link



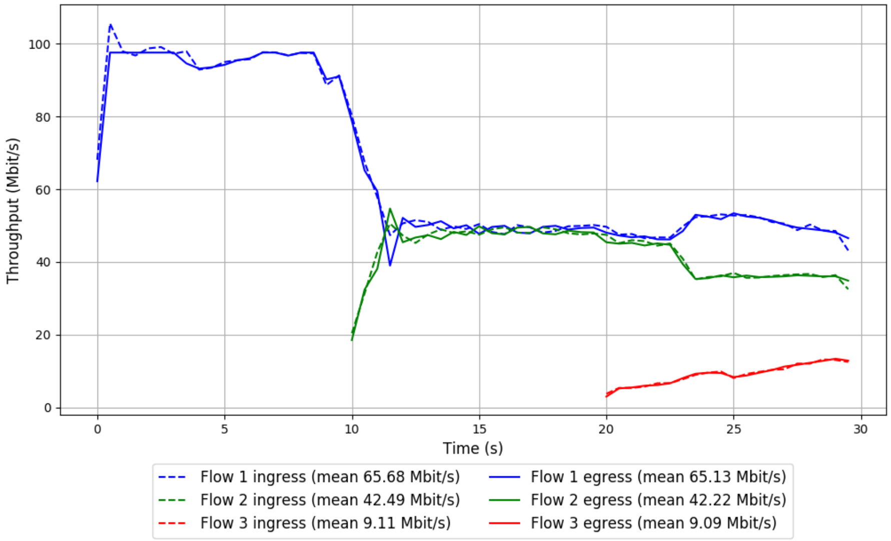


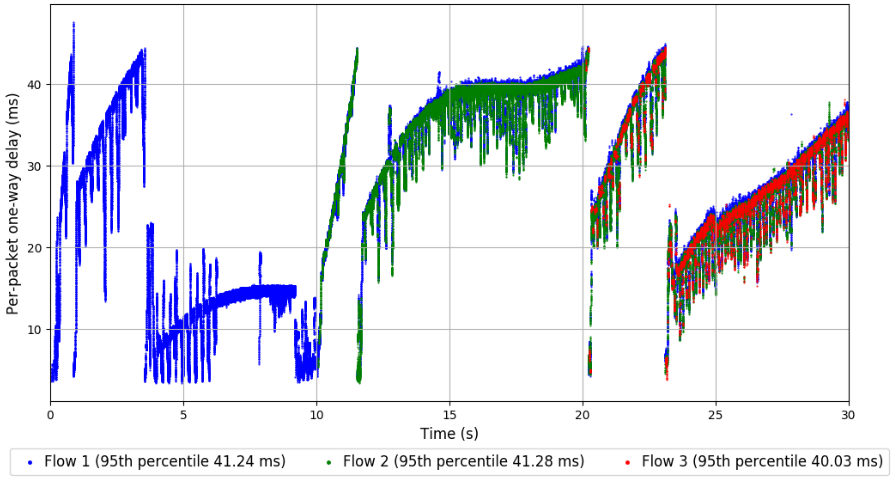
```
Run 9: Statistics of TCP Cubic

Start at: 2017-08-11 12:32:50
End at: 2017-08-11 12:33:20
Local clock offset: -2.185 ms
Remote clock offset: -16.379 ms

# Below is generated by plot.py at 2017-08-11 14:40:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.25 Mbit/s
95th percentile per-packet one-way delay: 41.249 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 65.13 Mbit/s
95th percentile per-packet one-way delay: 41.239 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 42.22 Mbit/s
95th percentile per-packet one-way delay: 41.277 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 9.09 Mbit/s
95th percentile per-packet one-way delay: 40.027 ms
Loss rate: 0.25%
```

Run 9: Report of TCP Cubic — Data Link



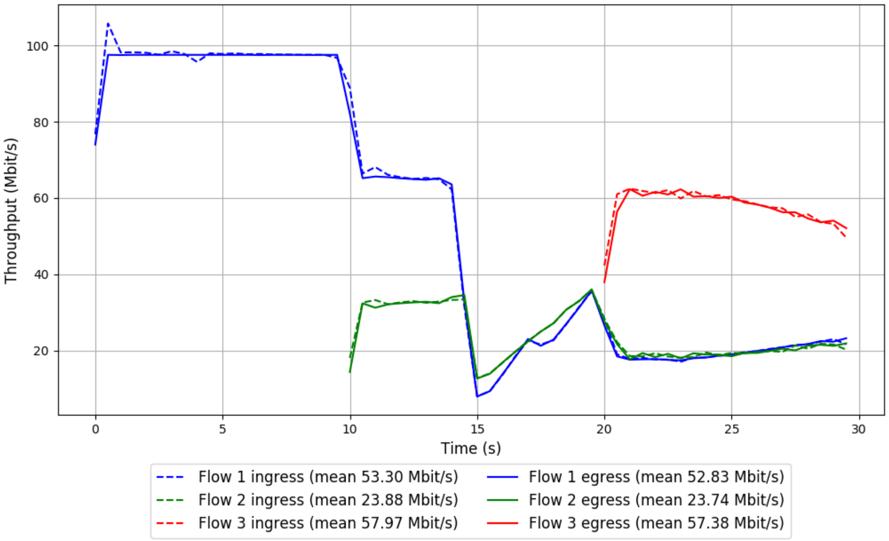


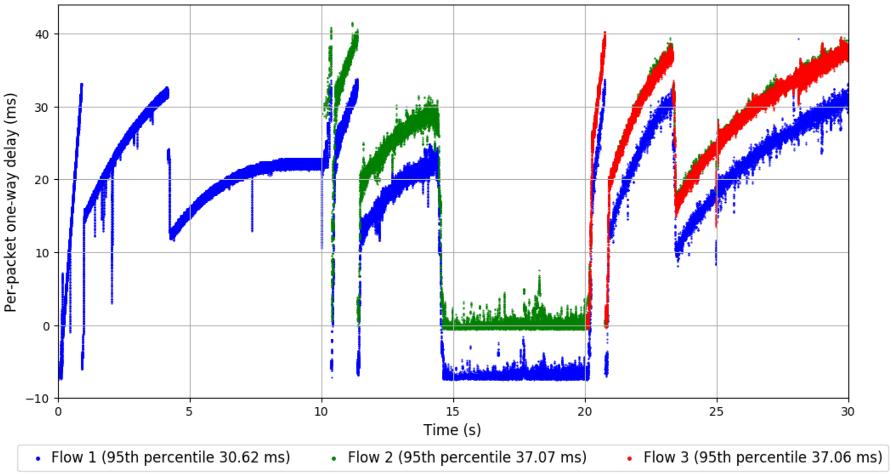
```
Run 10: Statistics of TCP Cubic

Start at: 2017-08-11 13:23:59
End at: 2017-08-11 13:24:29
Local clock offset: 1.626 ms
Remote clock offset: -14.054 ms

# Below is generated by plot.py at 2017-08-11 14:40:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.69 Mbit/s
95th percentile per-packet one-way delay: 35.763 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 52.83 Mbit/s
95th percentile per-packet one-way delay: 30.620 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 23.74 Mbit/s
95th percentile per-packet one-way delay: 37.074 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 57.38 Mbit/s
95th percentile per-packet one-way delay: 37.063 ms
Loss rate: 0.72%
```

Run 10: Report of TCP Cubic — Data Link



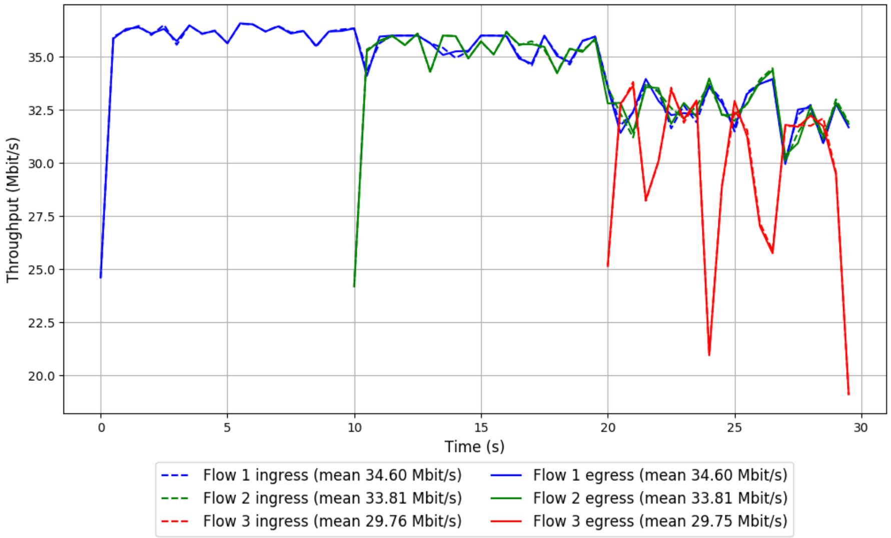


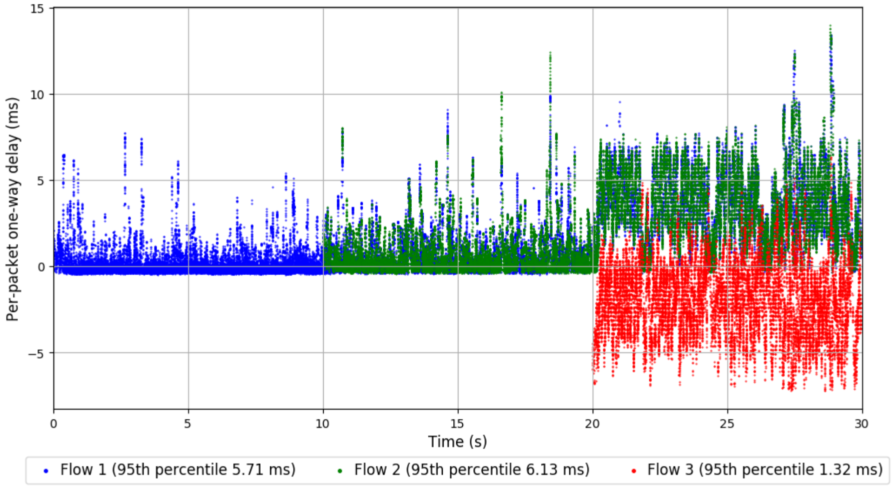
```
Run 1: Statistics of KohoCC

Start at: 2017-08-11 08:51:42
End at: 2017-08-11 08:52:12
Local clock offset: 0.623 ms
Remote clock offset: -22.221 ms

# Below is generated by plot.py at 2017-08-11 14:41:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.98 Mbit/s
95th percentile per-packet one-way delay: 5.715 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 34.60 Mbit/s
95th percentile per-packet one-way delay: 5.713 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 33.81 Mbit/s
95th percentile per-packet one-way delay: 6.133 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 29.75 Mbit/s
95th percentile per-packet one-way delay: 1.317 ms
Loss rate: 0.00%
```

Run 1: Report of KohoCC — Data Link



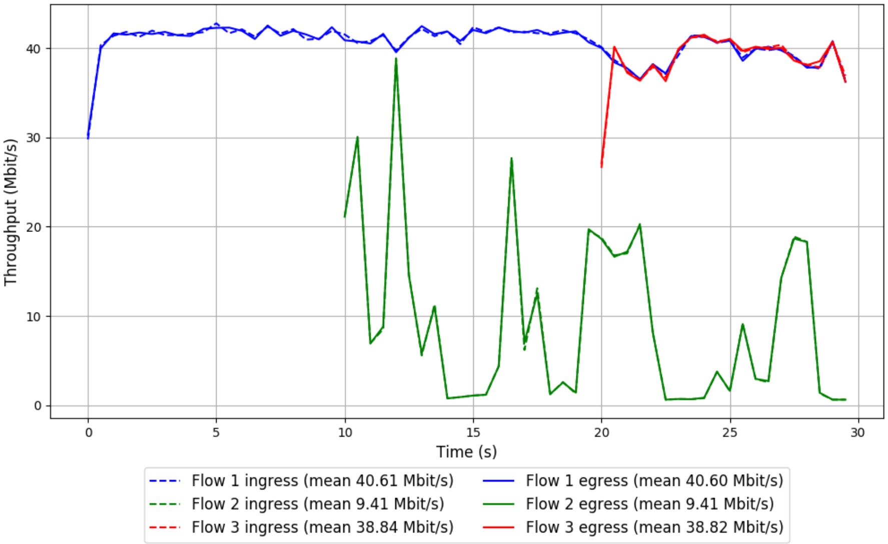


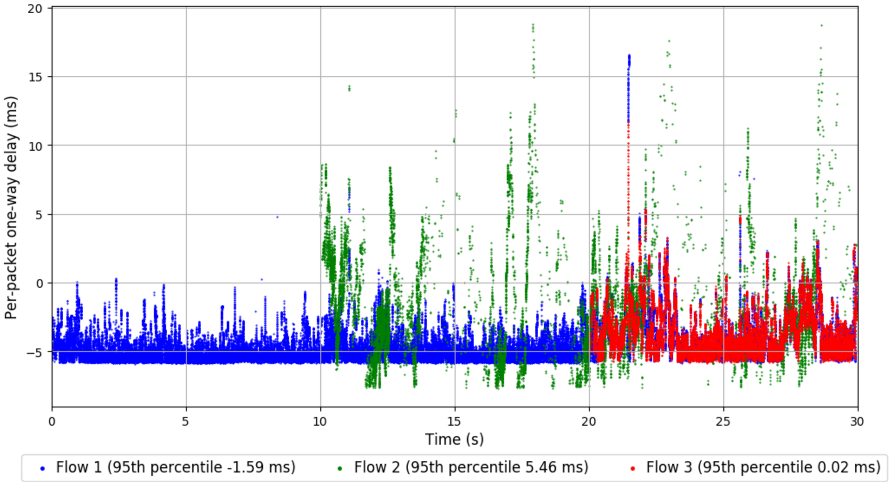
```
Run 2: Statistics of KohoCC

Start at: 2017-08-11 09:11:02
End at: 2017-08-11 09:11:32
Local clock offset: 2.079 ms
Remote clock offset: -21.92 ms

# Below is generated by plot.py at 2017-08-11 14:41:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.74 Mbit/s
95th percentile per-packet one-way delay: -0.034 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.60 Mbit/s
95th percentile per-packet one-way delay: -1.586 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.41 Mbit/s
95th percentile per-packet one-way delay: 5.459 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.82 Mbit/s
95th percentile per-packet one-way delay: 0.016 ms
Loss rate: 0.00%
```

Run 2: Report of KohoCC — Data Link



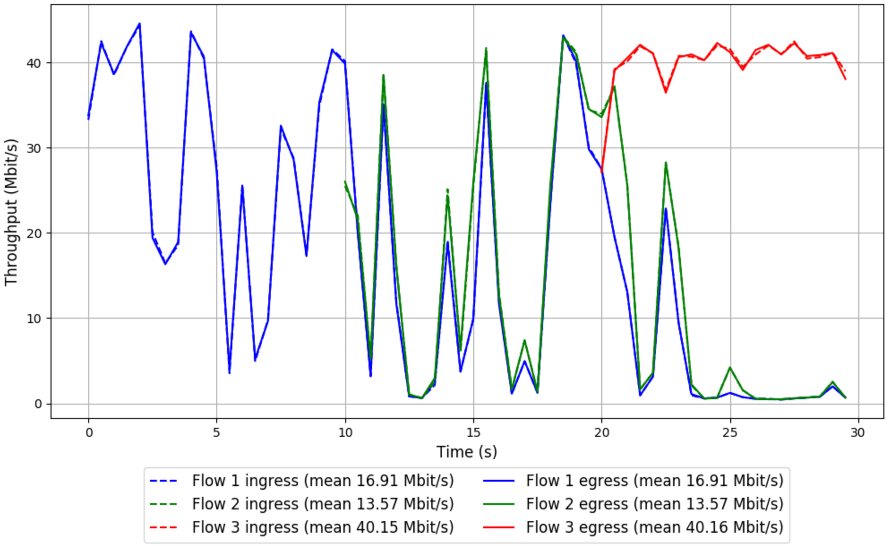


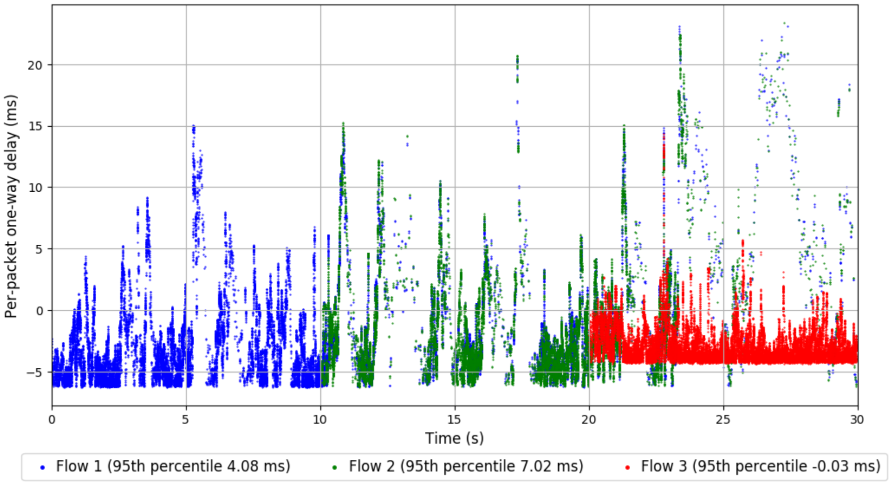
```
Run 3: Statistics of KohoCC

Start at: 2017-08-11 09:30:45
End at: 2017-08-11 09:31:15
Local clock offset: 0.665 ms
Remote clock offset: -22.509 ms

# Below is generated by plot.py at 2017-08-11 14:41:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 39.26 Mbit/s
95th percentile per-packet one-way delay: 3.254 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 16.91 Mbit/s
95th percentile per-packet one-way delay: 4.080 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.57 Mbit/s
95th percentile per-packet one-way delay: 7.017 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 40.16 Mbit/s
95th percentile per-packet one-way delay: -0.032 ms
Loss rate: 0.04%
```

Run 3: Report of KohoCC — Data Link



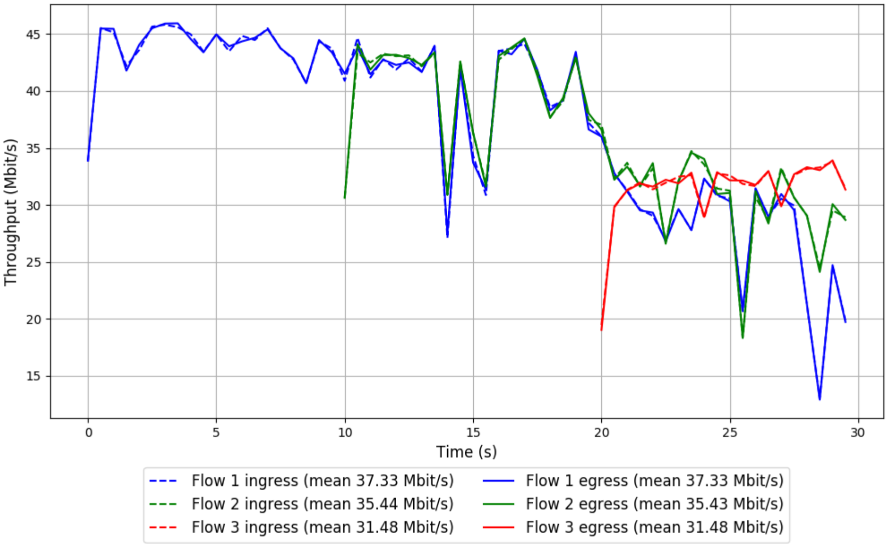


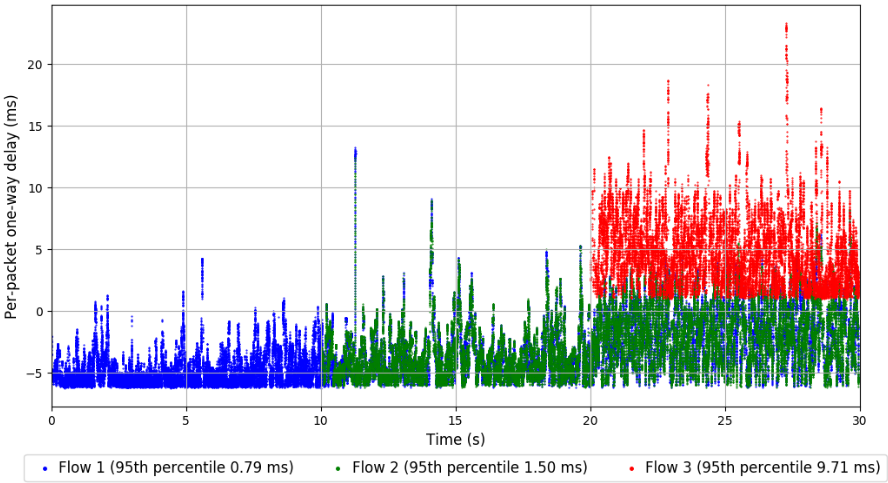
```
Run 4: Statistics of KohoCC

Start at: 2017-08-11 10:26:37
End at: 2017-08-11 10:27:07
Local clock offset: 0.266 ms
Remote clock offset: -22.799 ms

# Below is generated by plot.py at 2017-08-11 14:41:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.37 Mbit/s
95th percentile per-packet one-way delay: 5.792 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 37.33 Mbit/s
95th percentile per-packet one-way delay: 0.786 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 35.43 Mbit/s
95th percentile per-packet one-way delay: 1.498 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 31.48 Mbit/s
95th percentile per-packet one-way delay: 9.713 ms
Loss rate: 0.04%
```

Run 4: Report of KohoCC — Data Link



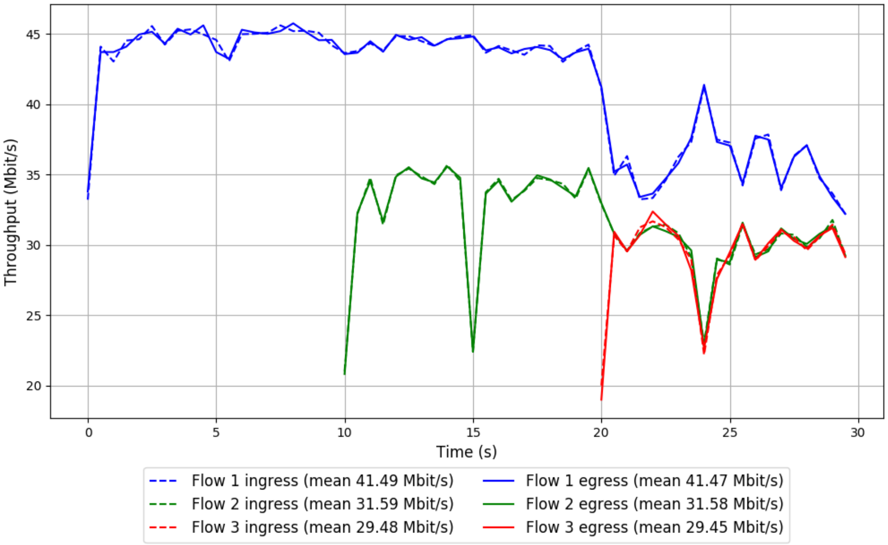


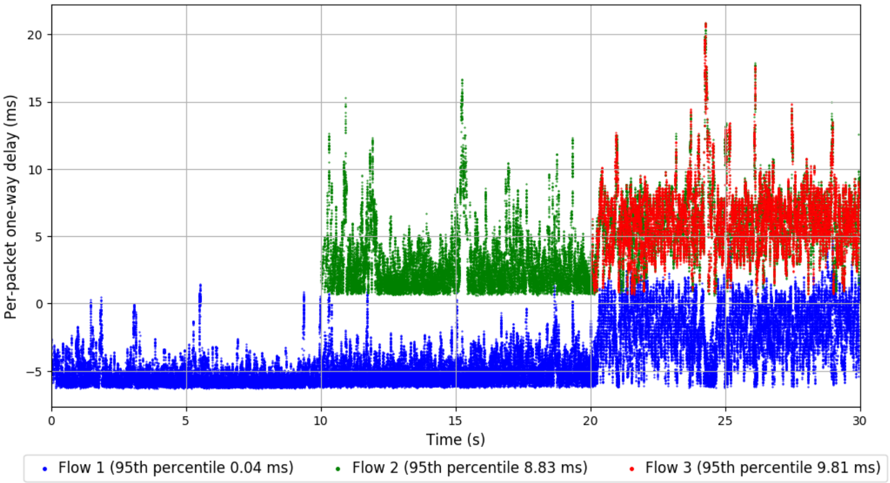
```
Run 5: Statistics of KohoCC

Start at: 2017-08-11 10:45:18
End at: 2017-08-11 10:45:48
Local clock offset: -0.175 ms
Remote clock offset: -23.507 ms

# Below is generated by plot.py at 2017-08-11 14:41:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.26 Mbit/s
95th percentile per-packet one-way delay: 7.855 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 41.47 Mbit/s
95th percentile per-packet one-way delay: 0.036 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 31.58 Mbit/s
95th percentile per-packet one-way delay: 8.828 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 29.45 Mbit/s
95th percentile per-packet one-way delay: 9.810 ms
Loss rate: 0.11%
```

Run 5: Report of KohoCC — Data Link



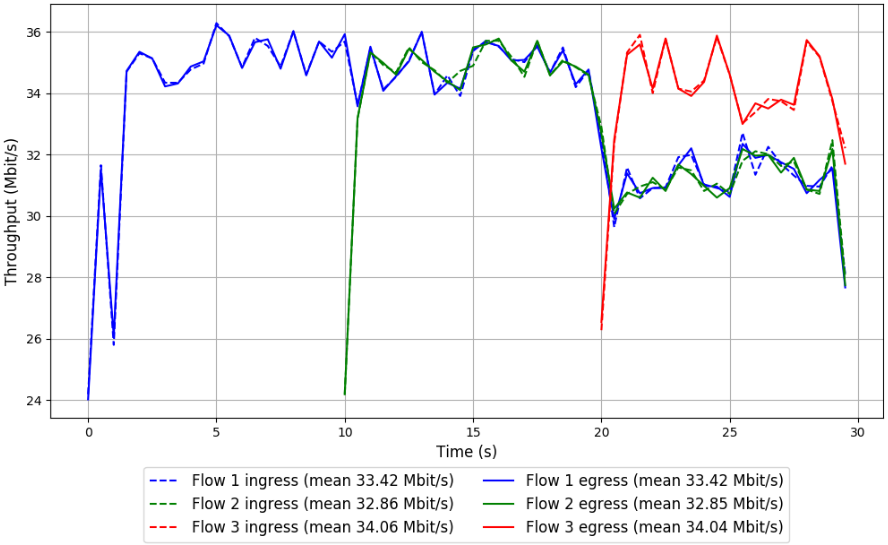


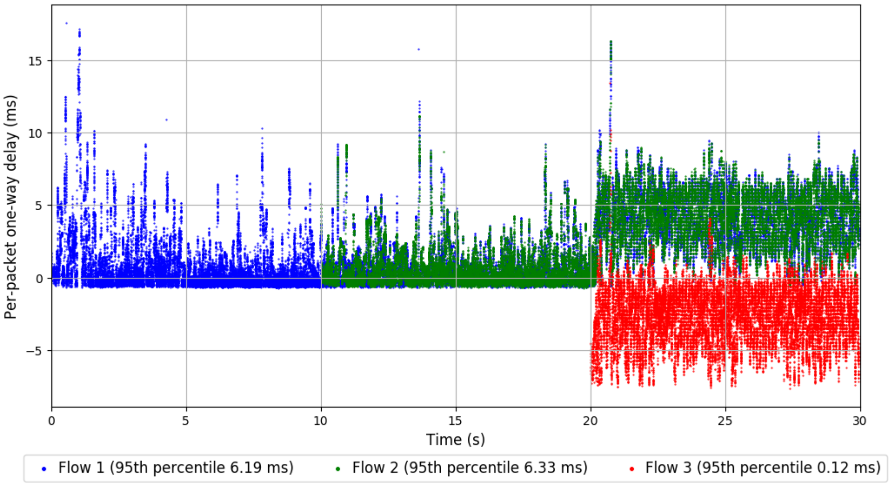
```
Run 6: Statistics of KohoCC

Start at: 2017-08-11 11:05:20
End at: 2017-08-11 11:05:50
Local clock offset: 1.062 ms
Remote clock offset: -23.393 ms

# Below is generated by plot.py at 2017-08-11 14:41:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.59 Mbit/s
95th percentile per-packet one-way delay: 6.087 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 33.42 Mbit/s
95th percentile per-packet one-way delay: 6.188 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 32.85 Mbit/s
95th percentile per-packet one-way delay: 6.334 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 34.04 Mbit/s
95th percentile per-packet one-way delay: 0.122 ms
Loss rate: 0.03%
```

Run 6: Report of KohoCC — Data Link



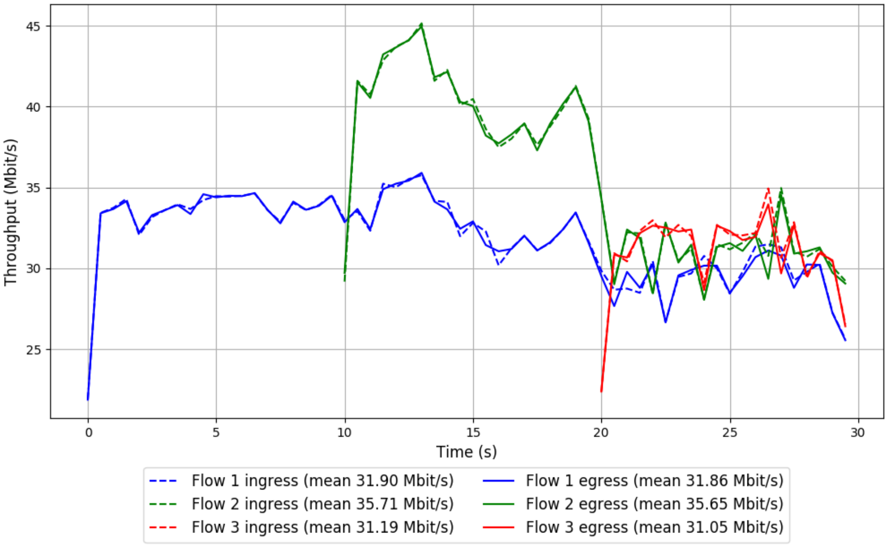


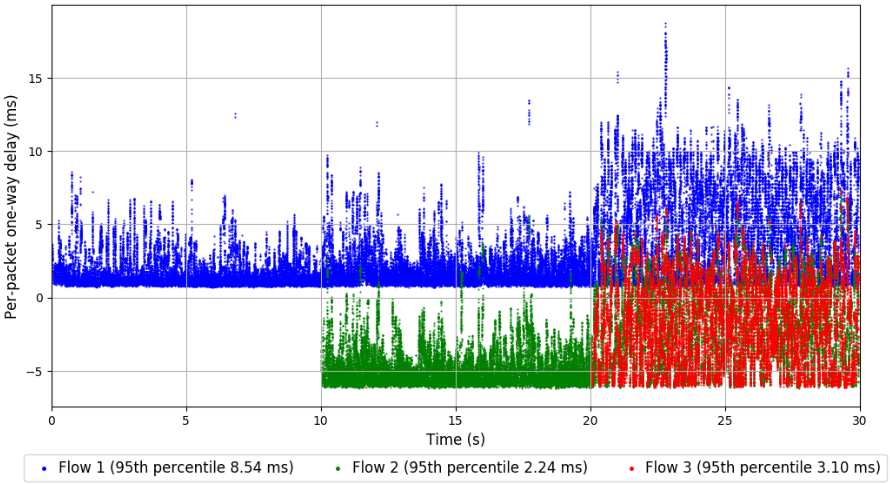
```
Run 7: Statistics of KohoCC

Start at: 2017-08-11 11:27:48
End at: 2017-08-11 11:28:18
Local clock offset: 1.066 ms
Remote clock offset: -19.299 ms

# Below is generated by plot.py at 2017-08-11 14:41:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.91 Mbit/s
95th percentile per-packet one-way delay: 6.922 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 31.86 Mbit/s
95th percentile per-packet one-way delay: 8.543 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 35.65 Mbit/s
95th percentile per-packet one-way delay: 2.237 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 31.05 Mbit/s
95th percentile per-packet one-way delay: 3.103 ms
Loss rate: 0.44%
```

Run 7: Report of KohoCC — Data Link



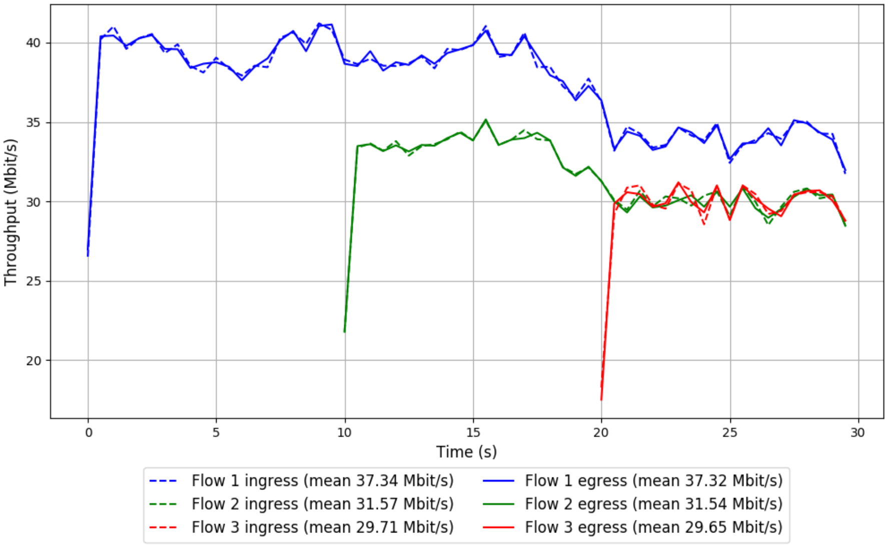


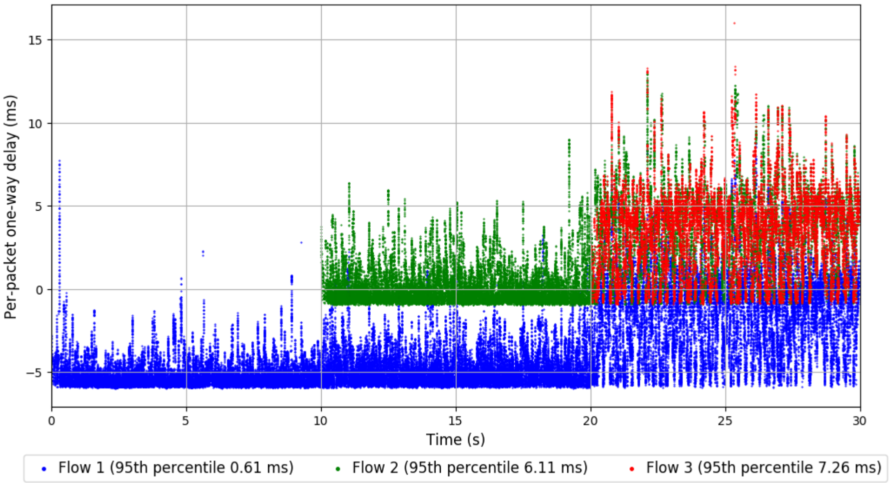
```
Run 8: Statistics of KohoCC

Start at: 2017-08-11 12:16:35
End at: 2017-08-11 12:17:05
Local clock offset: 0.648 ms
Remote clock offset: -18.495 ms

# Below is generated by plot.py at 2017-08-11 14:41:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.14 Mbit/s
95th percentile per-packet one-way delay: 5.522 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 37.32 Mbit/s
95th percentile per-packet one-way delay: 0.612 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 31.54 Mbit/s
95th percentile per-packet one-way delay: 6.108 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 29.65 Mbit/s
95th percentile per-packet one-way delay: 7.257 ms
Loss rate: 0.18%
```

Run 8: Report of KohoCC — Data Link



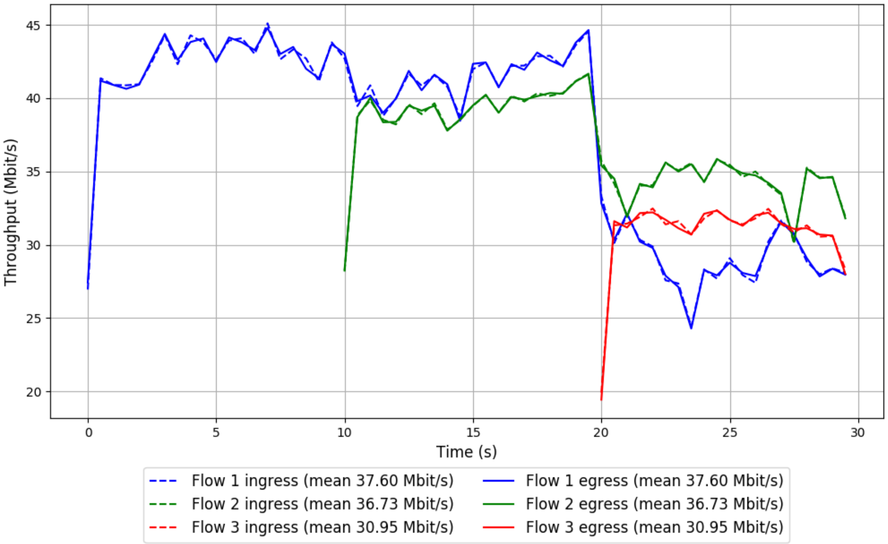


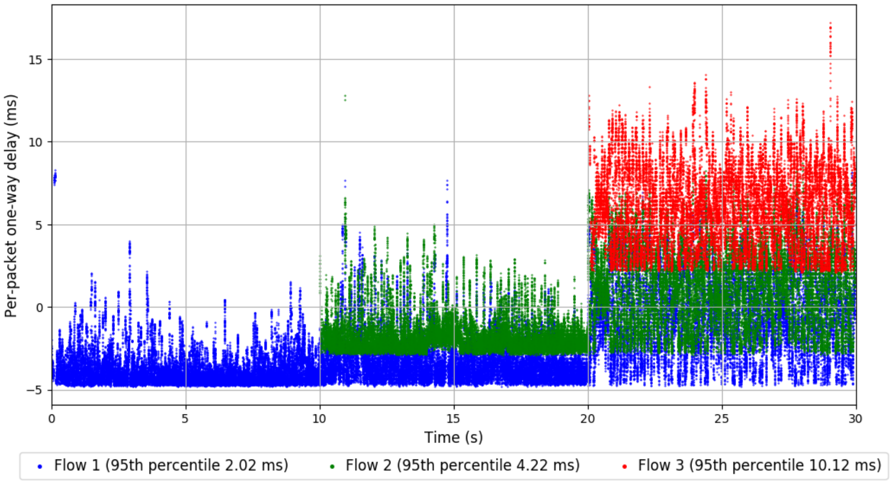
```
Run 9: Statistics of KohoCC

Start at: 2017-08-11 13:03:29
End at: 2017-08-11 13:03:59
Local clock offset: -2.022 ms
Remote clock offset: -15.812 ms

# Below is generated by plot.py at 2017-08-11 14:41:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.31 Mbit/s
95th percentile per-packet one-way delay: 7.043 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 37.60 Mbit/s
95th percentile per-packet one-way delay: 2.016 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.73 Mbit/s
95th percentile per-packet one-way delay: 4.217 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.95 Mbit/s
95th percentile per-packet one-way delay: 10.118 ms
Loss rate: 0.08%
```

Run 9: Report of KohoCC — Data Link



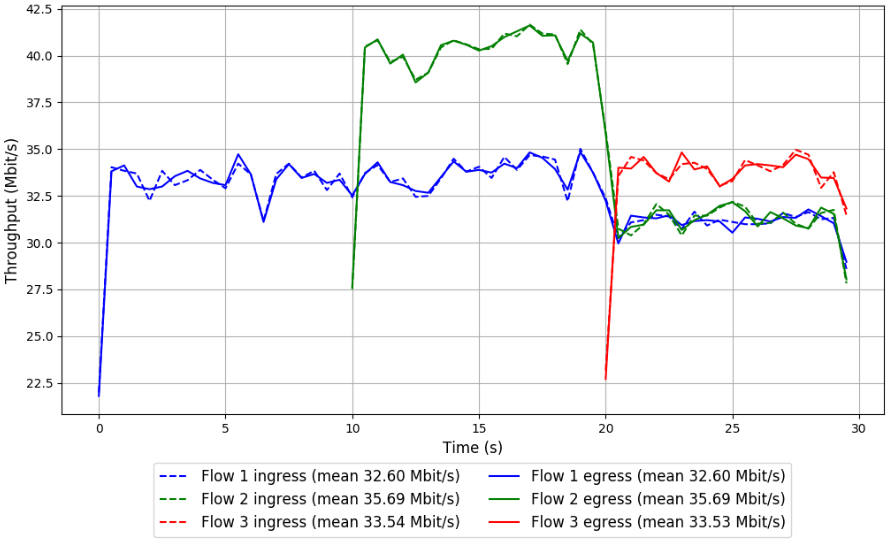


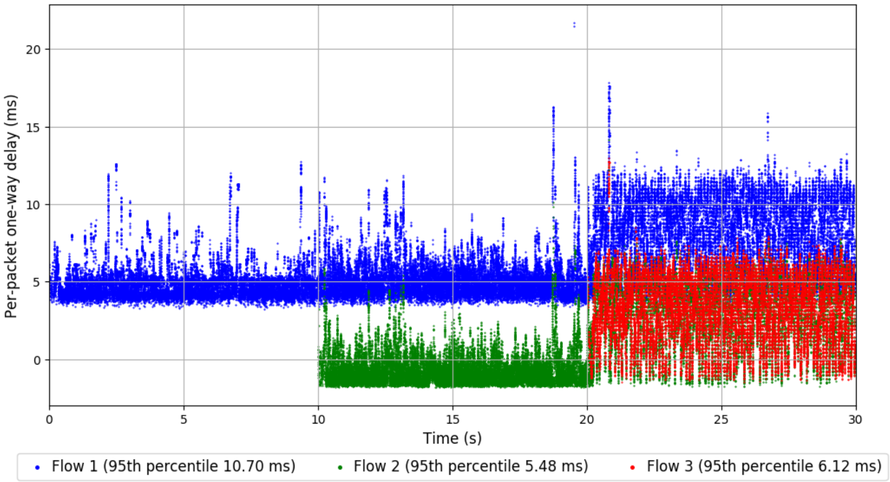
```
Run 10: Statistics of KohoCC

Start at: 2017-08-11 13:48:52
End at: 2017-08-11 13:49:22
Local clock offset: -1.447 ms
Remote clock offset: -14.148 ms

# Below is generated by plot.py at 2017-08-11 14:41:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.48 Mbit/s
95th percentile per-packet one-way delay: 9.802 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 32.60 Mbit/s
95th percentile per-packet one-way delay: 10.698 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 35.69 Mbit/s
95th percentile per-packet one-way delay: 5.481 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.53 Mbit/s
95th percentile per-packet one-way delay: 6.123 ms
Loss rate: 0.00%
```

Run 10: Report of KohoCC — Data Link



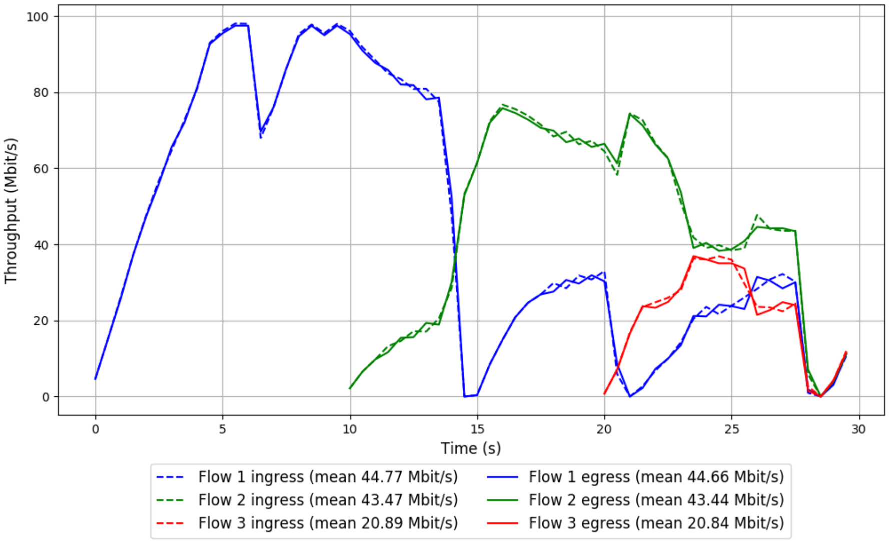


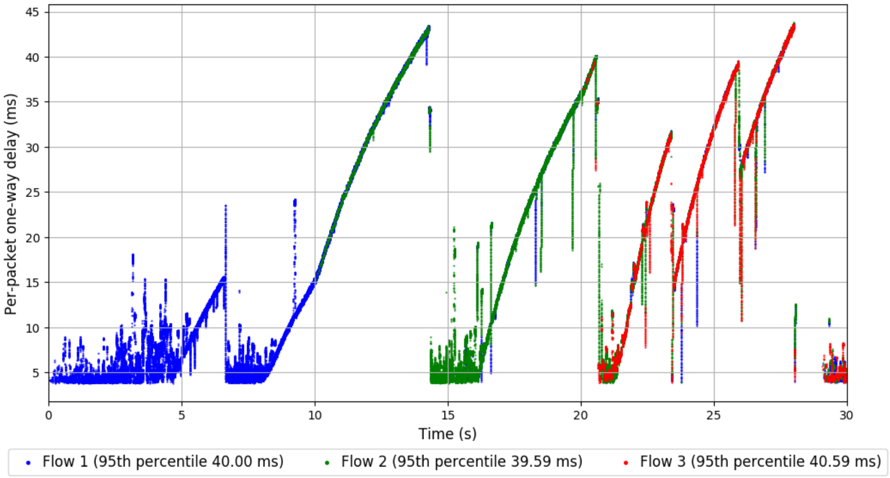
```
Run 1: Statistics of LEDBAT

Start at: 2017-08-11 08:50:28
End at: 2017-08-11 08:50:58
Local clock offset: -1.242 ms
Remote clock offset: -19.777 ms

# Below is generated by plot.py at 2017-08-11 14:41:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.42 Mbit/s
95th percentile per-packet one-way delay: 39.939 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 44.66 Mbit/s
95th percentile per-packet one-way delay: 40.002 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 43.44 Mbit/s
95th percentile per-packet one-way delay: 39.591 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 20.84 Mbit/s
95th percentile per-packet one-way delay: 40.585 ms
Loss rate: 0.57%
```

Run 1: Report of LEDBAT — Data Link



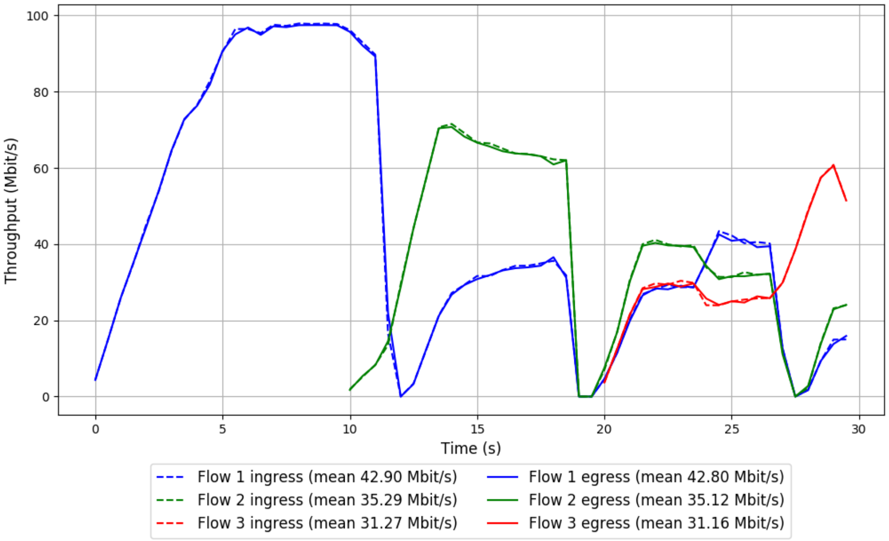


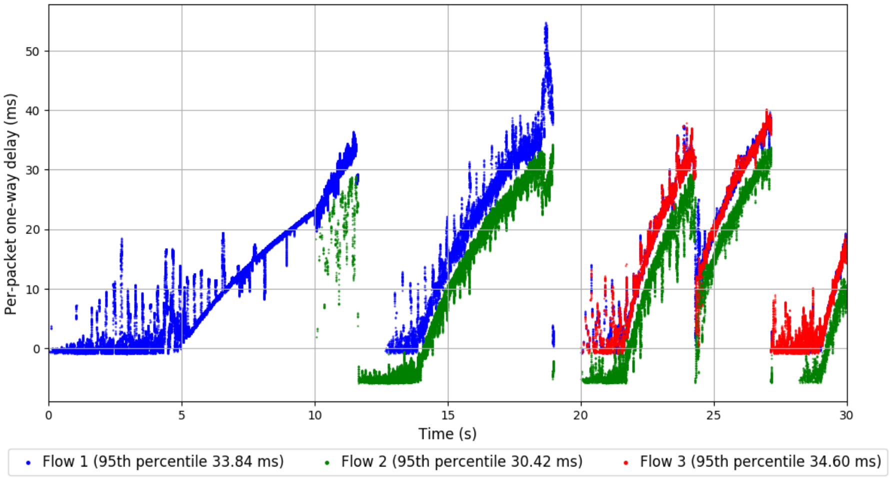
```
Run 2: Statistics of LEDBAT

Start at: 2017-08-11 09:09:40
End at: 2017-08-11 09:10:10
Local clock offset: 0.689 ms
Remote clock offset: -23.175 ms

# Below is generated by plot.py at 2017-08-11 14:41:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.47 Mbit/s
95th percentile per-packet one-way delay: 32.810 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 42.80 Mbit/s
95th percentile per-packet one-way delay: 33.838 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 35.12 Mbit/s
95th percentile per-packet one-way delay: 30.422 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 31.16 Mbit/s
95th percentile per-packet one-way delay: 34.598 ms
Loss rate: 0.25%
```

Run 2: Report of LEDBAT — Data Link



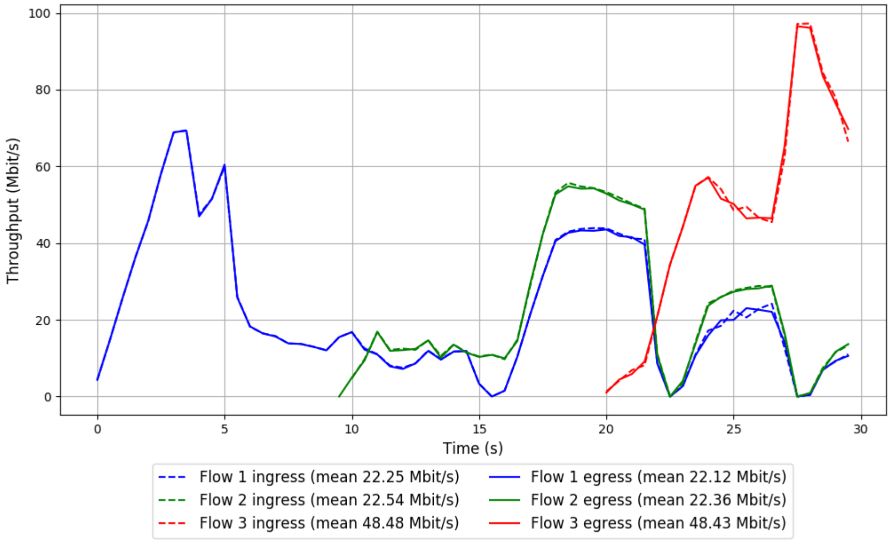


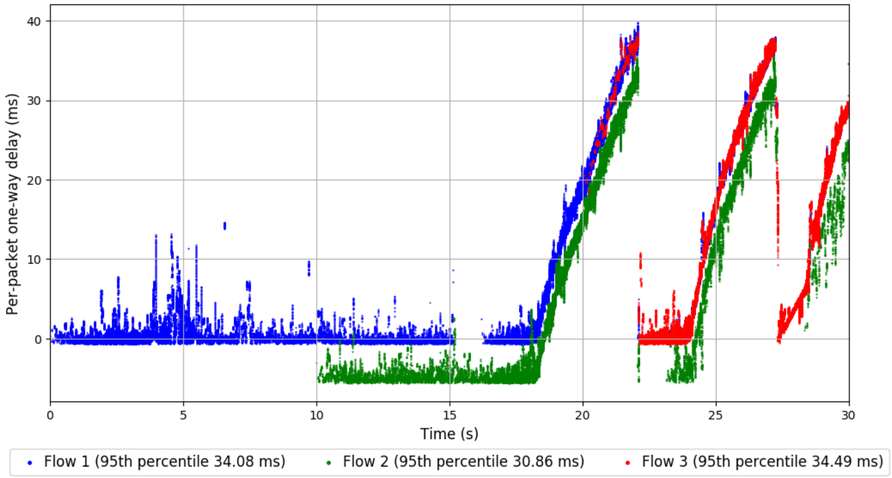
```
Run 3: Statistics of LEDBAT

Start at: 2017-08-11 09:29:26
End at: 2017-08-11 09:29:56
Local clock offset: 0.731 ms
Remote clock offset: -23.674 ms

# Below is generated by plot.py at 2017-08-11 14:41:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.04 Mbit/s
95th percentile per-packet one-way delay: 33.045 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 22.12 Mbit/s
95th percentile per-packet one-way delay: 34.082 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 22.36 Mbit/s
95th percentile per-packet one-way delay: 30.861 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 48.43 Mbit/s
95th percentile per-packet one-way delay: 34.491 ms
Loss rate: 0.10%
```

Run 3: Report of LEDBAT — Data Link



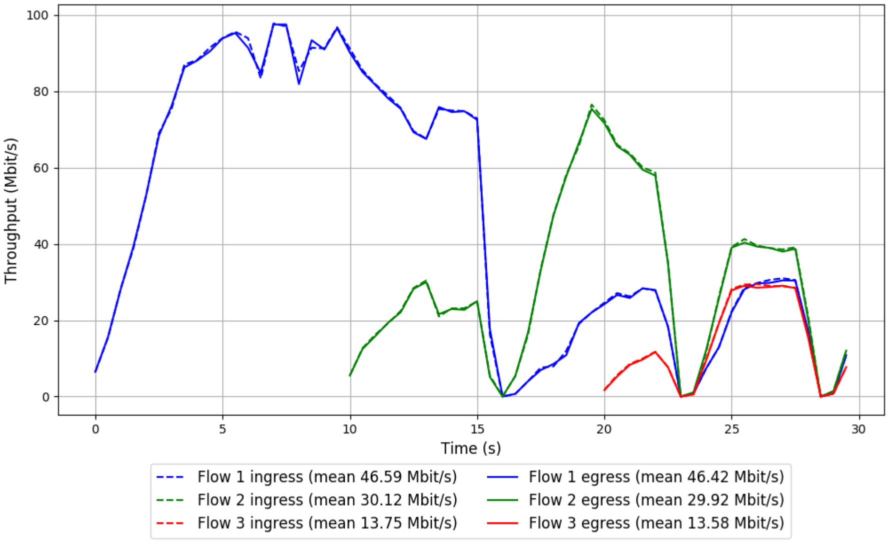


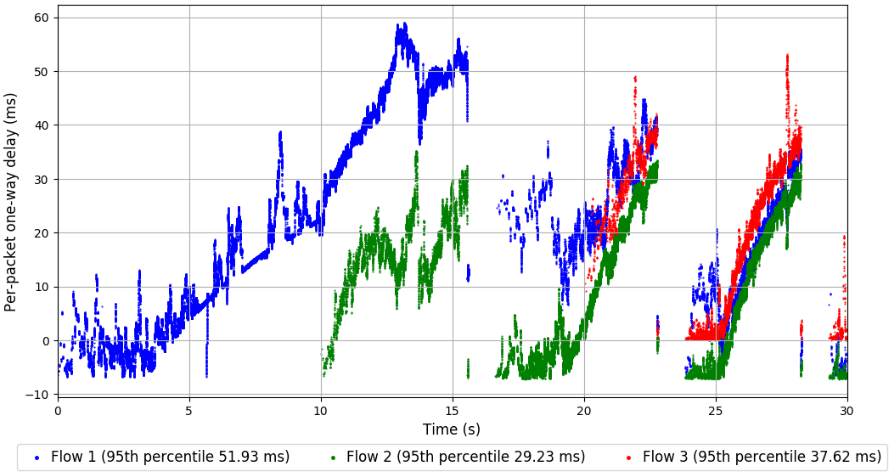
```
Run 4: Statistics of LEDBAT

Start at: 2017-08-11 10:25:24
End at: 2017-08-11 10:25:54
Local clock offset: 1.167 ms
Remote clock offset: -22.868 ms

# Below is generated by plot.py at 2017-08-11 14:42:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.83 Mbit/s
95th percentile per-packet one-way delay: 50.346 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 46.42 Mbit/s
95th percentile per-packet one-way delay: 51.926 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 29.92 Mbit/s
95th percentile per-packet one-way delay: 29.233 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 13.58 Mbit/s
95th percentile per-packet one-way delay: 37.617 ms
Loss rate: 1.35%
```

Run 4: Report of LEDBAT — Data Link



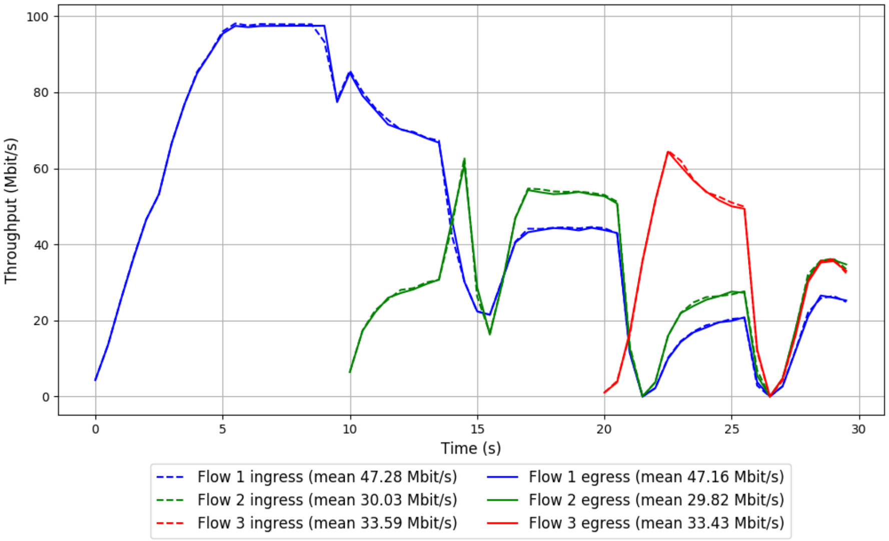


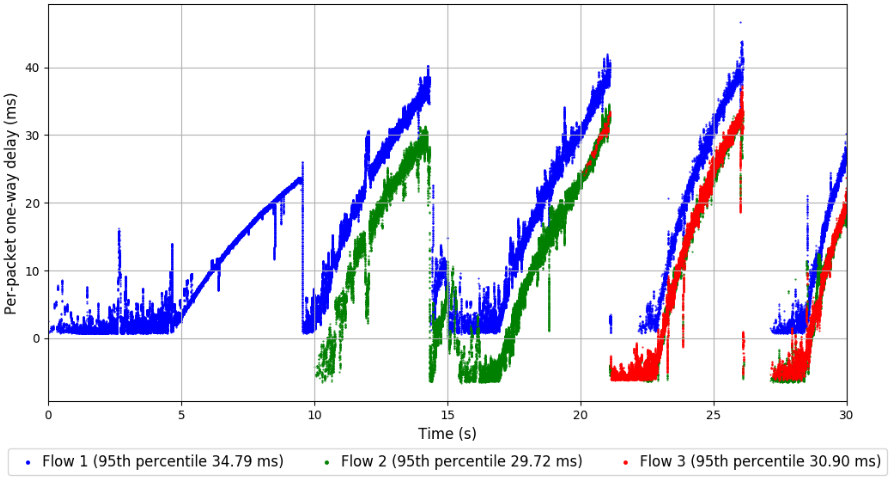
```
Run 5: Statistics of LEDBAT

Start at: 2017-08-11 10:44:02
End at: 2017-08-11 10:44:32
Local clock offset: -0.137 ms
Remote clock offset: -23.376 ms

# Below is generated by plot.py at 2017-08-11 14:42:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.08 Mbit/s
95th percentile per-packet one-way delay: 32.717 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 47.16 Mbit/s
95th percentile per-packet one-way delay: 34.793 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 29.82 Mbit/s
95th percentile per-packet one-way delay: 29.723 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 33.43 Mbit/s
95th percentile per-packet one-way delay: 30.898 ms
Loss rate: 0.52%
```

Run 5: Report of LEDBAT — Data Link



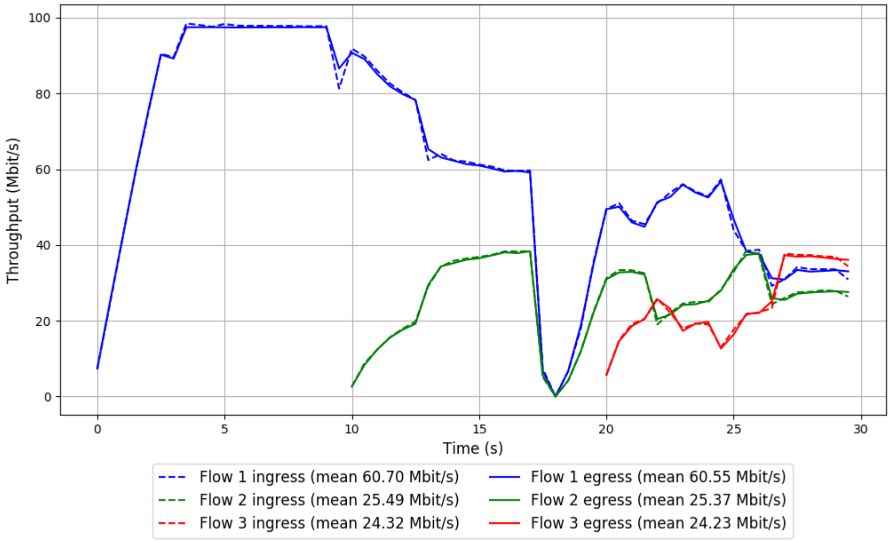


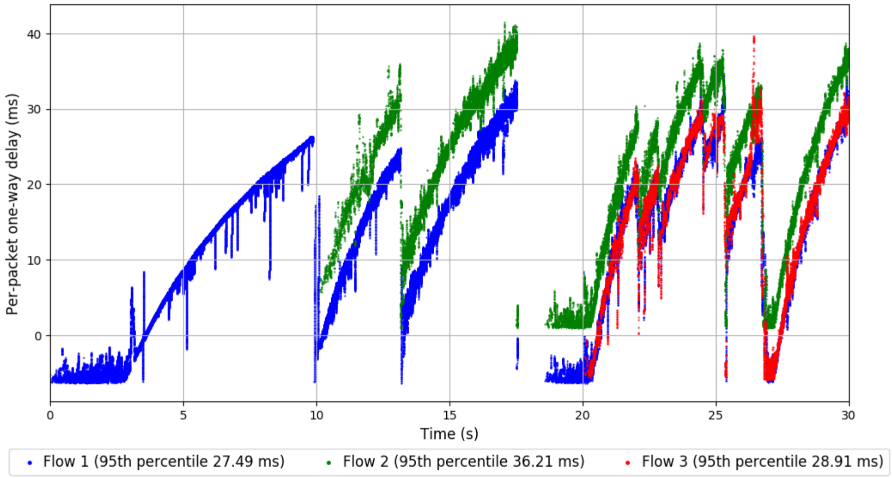
```
Run 6: Statistics of LEDBAT

Start at: 2017-08-11 11:03:51
End at: 2017-08-11 11:04:21
Local clock offset: 0.726 ms
Remote clock offset: -22.202 ms

# Below is generated by plot.py at 2017-08-11 14:42:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.50 Mbit/s
95th percentile per-packet one-way delay: 31.194 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 60.55 Mbit/s
95th percentile per-packet one-way delay: 27.491 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 25.37 Mbit/s
95th percentile per-packet one-way delay: 36.210 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 24.23 Mbit/s
95th percentile per-packet one-way delay: 28.908 ms
Loss rate: 0.02%
```

Run 6: Report of LEDBAT — Data Link



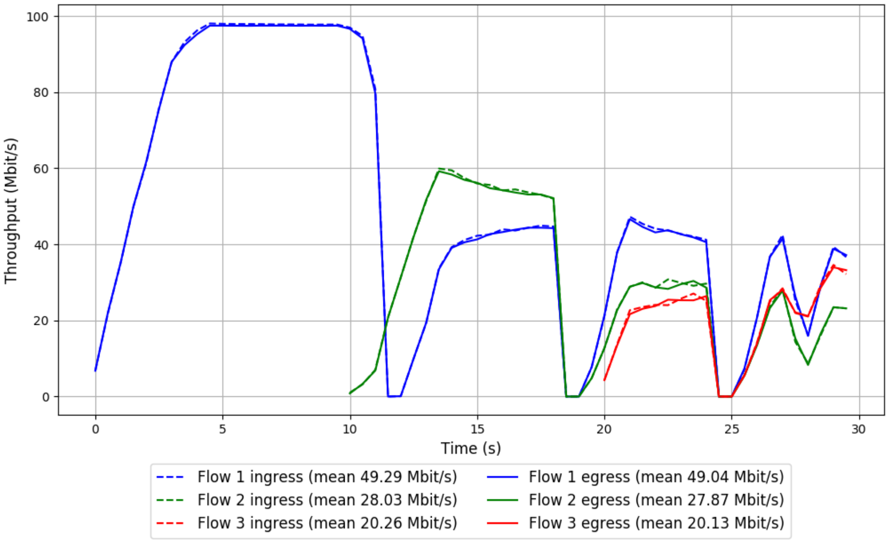


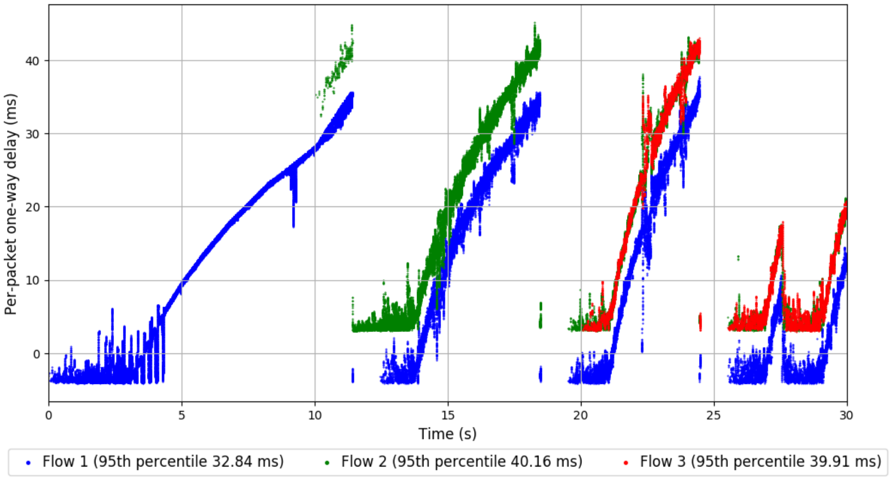
```
Run 7: Statistics of LEDBAT

Start at: 2017-08-11 11:23:47
End at: 2017-08-11 11:24:17
Local clock offset: -3.099 ms
Remote clock offset: -21.391 ms

# Below is generated by plot.py at 2017-08-11 14:42:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.22 Mbit/s
95th percentile per-packet one-way delay: 35.734 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 49.04 Mbit/s
95th percentile per-packet one-way delay: 32.840 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 27.87 Mbit/s
95th percentile per-packet one-way delay: 40.156 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 20.13 Mbit/s
95th percentile per-packet one-way delay: 39.906 ms
Loss rate: 0.52%
```

Run 7: Report of LEDBAT — Data Link



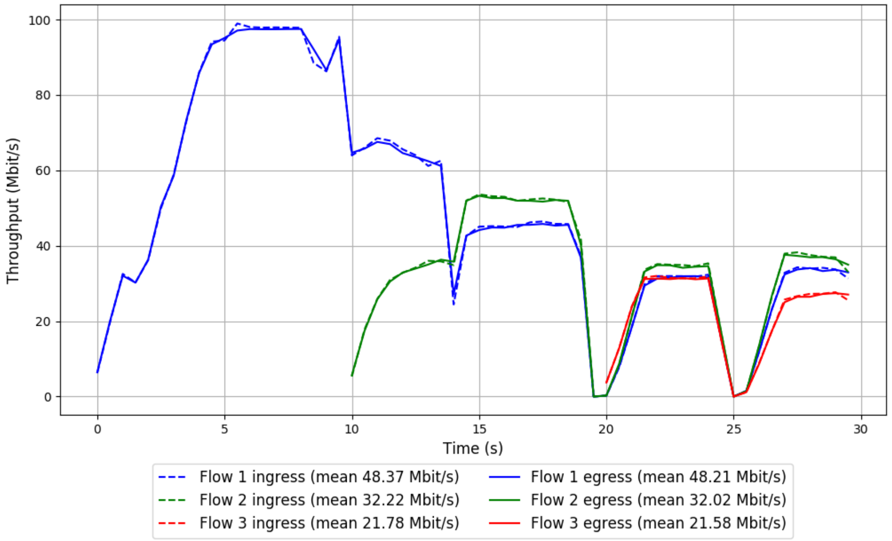


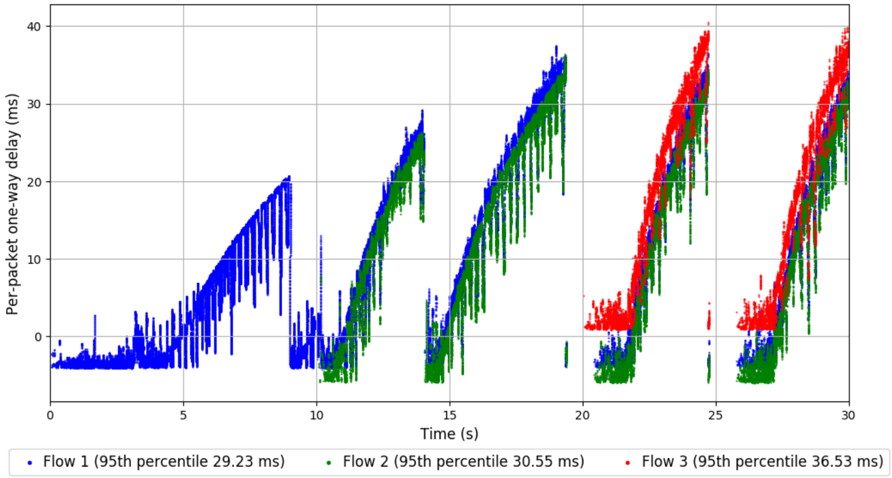
```
Run 8: Statistics of LEDBAT

Start at: 2017-08-11 12:11:57
End at: 2017-08-11 12:12:27
Local clock offset: 0.192 ms
Remote clock offset: -17.092 ms

# Below is generated by plot.py at 2017-08-11 14:42:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.71 Mbit/s
95th percentile per-packet one-way delay: 31.094 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 48.21 Mbit/s
95th percentile per-packet one-way delay: 29.225 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 32.02 Mbit/s
95th percentile per-packet one-way delay: 30.550 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 21.58 Mbit/s
95th percentile per-packet one-way delay: 36.527 ms
Loss rate: 0.67%
```

Run 8: Report of LEDBAT — Data Link



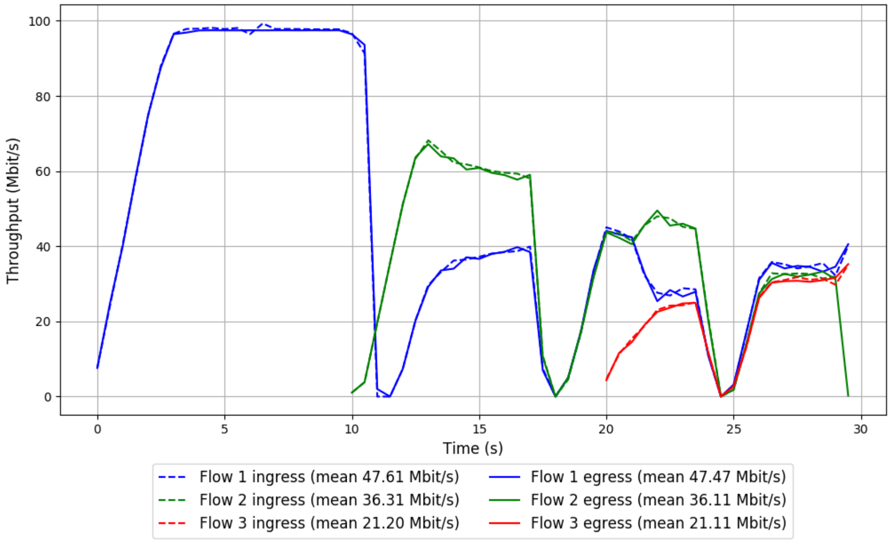


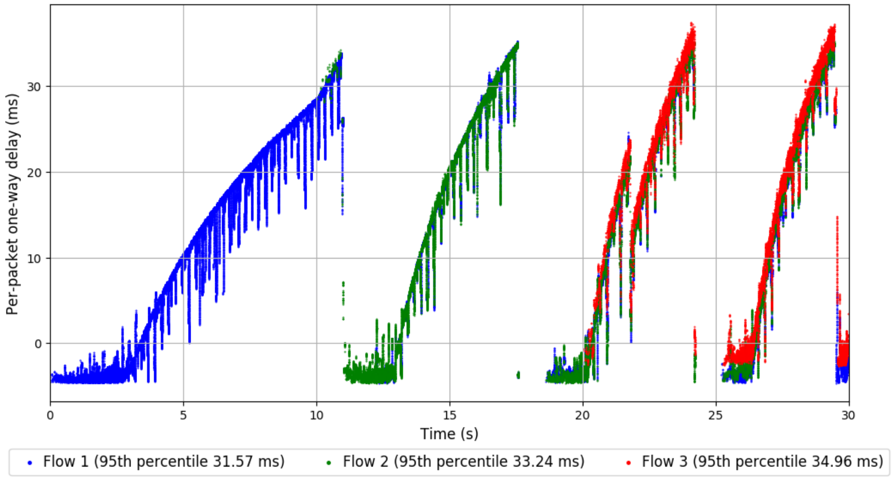
```
Run 9: Statistics of LEDBAT

Start at: 2017-08-11 12:58:54
End at: 2017-08-11 12:59:24
Local clock offset: -1.583 ms
Remote clock offset: -15.204 ms

# Below is generated by plot.py at 2017-08-11 14:42:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.90 Mbit/s
95th percentile per-packet one-way delay: 32.513 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 47.47 Mbit/s
95th percentile per-packet one-way delay: 31.570 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 36.11 Mbit/s
95th percentile per-packet one-way delay: 33.239 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 21.11 Mbit/s
95th percentile per-packet one-way delay: 34.960 ms
Loss rate: 0.47%
```

Run 9: Report of LEDBAT — Data Link



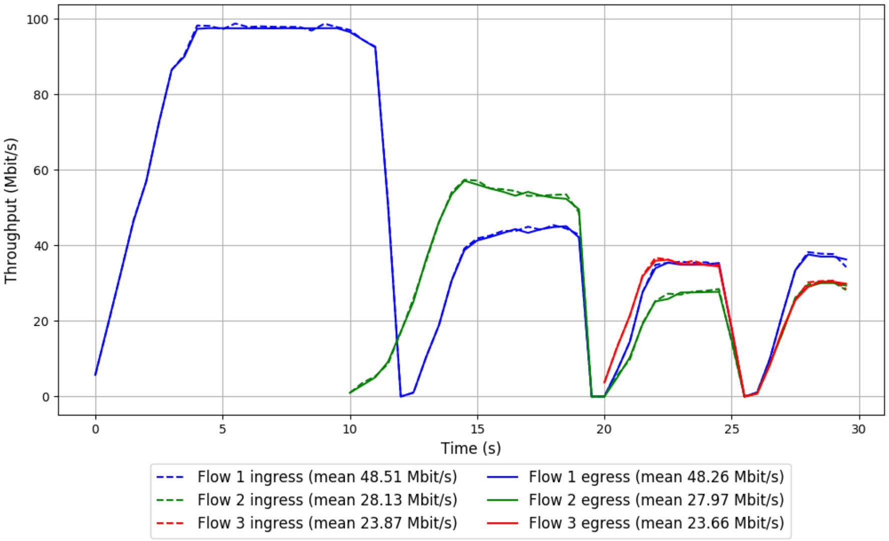


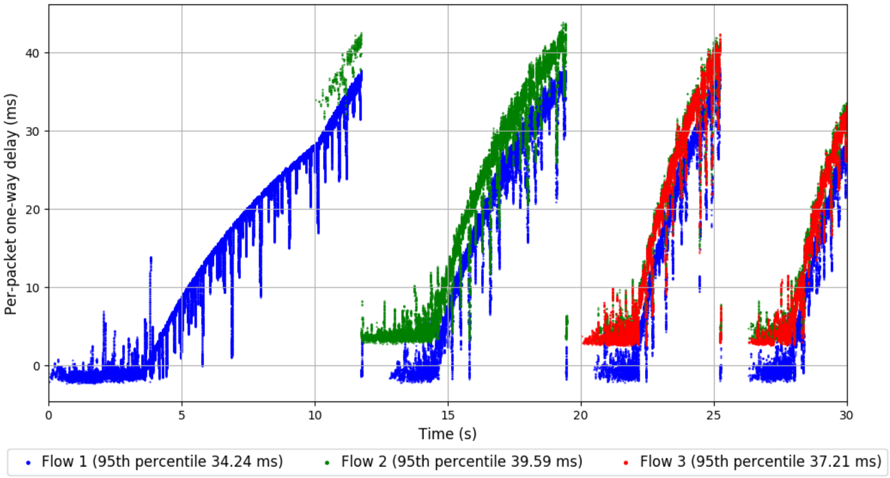
```
Run 10: Statistics of LEDBAT

Start at: 2017-08-11 13:44:22
End at: 2017-08-11 13:44:52
Local clock offset: -0.23 ms
Remote clock offset: -13.406 ms

# Below is generated by plot.py at 2017-08-11 14:42:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.73 Mbit/s
95th percentile per-packet one-way delay: 35.981 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 48.26 Mbit/s
95th percentile per-packet one-way delay: 34.240 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 27.97 Mbit/s
95th percentile per-packet one-way delay: 39.587 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 23.66 Mbit/s
95th percentile per-packet one-way delay: 37.207 ms
Loss rate: 0.62%
```

Run 10: Report of LEDBAT — Data Link



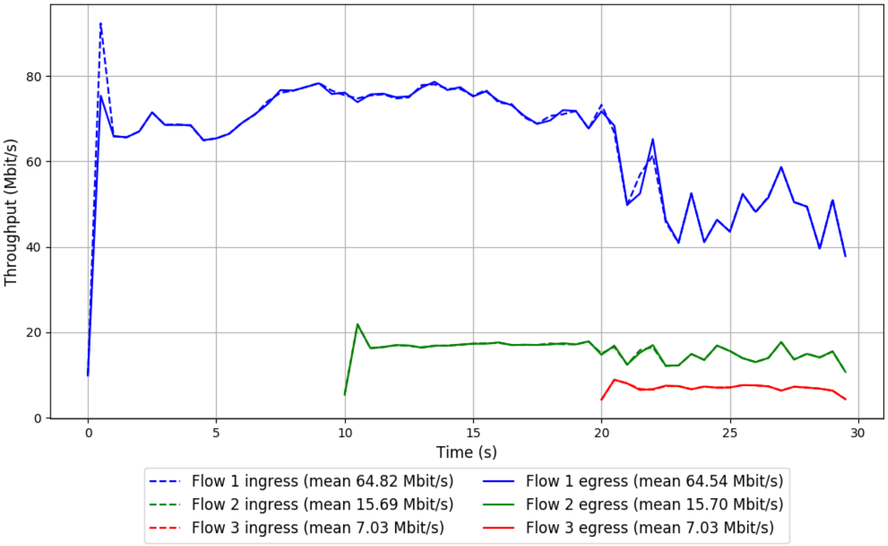


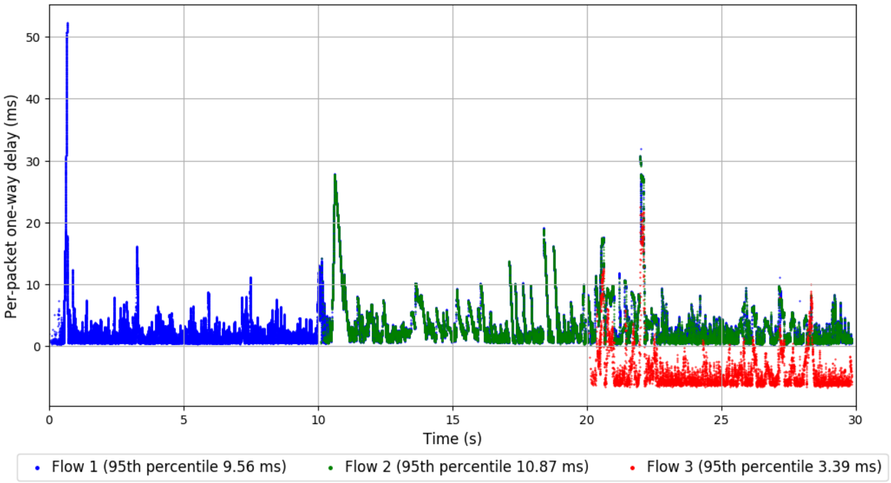
```
Run 1: Statistics of PCC

Start at: 2017-08-11 08:44:25
End at: 2017-08-11 08:44:55
Local clock offset: 2.589 ms
Remote clock offset: -19.122 ms

# Below is generated by plot.py at 2017-08-11 14:42:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.27 Mbit/s
95th percentile per-packet one-way delay: 9.612 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 64.54 Mbit/s
95th percentile per-packet one-way delay: 9.559 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 15.70 Mbit/s
95th percentile per-packet one-way delay: 10.871 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 7.03 Mbit/s
95th percentile per-packet one-way delay: 3.392 ms
Loss rate: 0.00%
```

Run 1: Report of PCC — Data Link

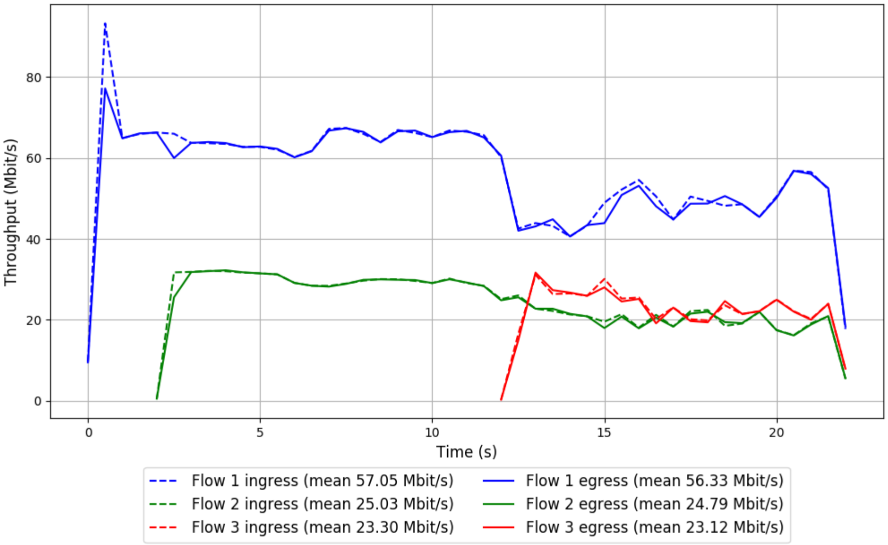


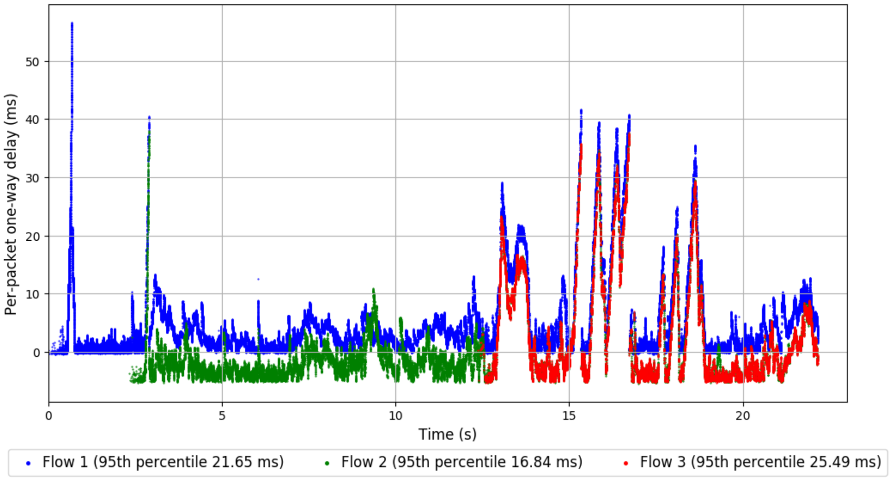


```
Run 2: Statistics of PCC

Start at: 2017-08-11 09:02:56
End at: 2017-08-11 09:03:26
Local clock offset: 1.619 ms
Remote clock offset: -21.386 ms
```

Run 2: Report of PCC — Data Link



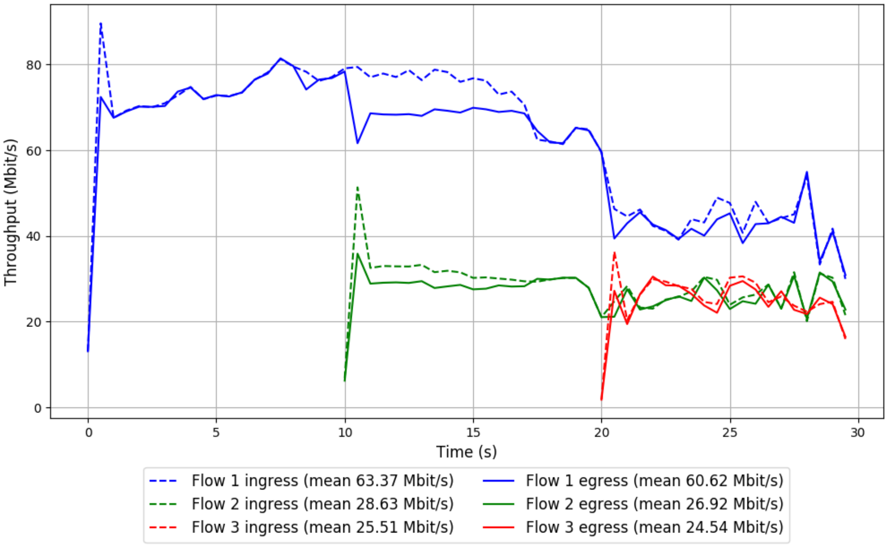


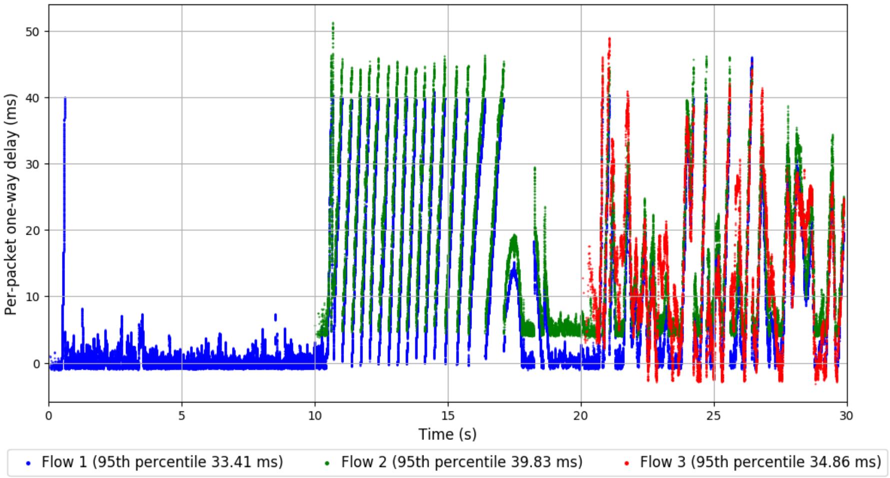
```
Run 3: Statistics of PCC

Start at: 2017-08-11 09:22:32
End at: 2017-08-11 09:23:02
Local clock offset: -1.201 ms
Remote clock offset: -20.905 ms

# Below is generated by plot.py at 2017-08-11 14:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.57 Mbit/s
95th percentile per-packet one-way delay: 35.504 ms
Loss rate: 4.56%
-- Flow 1:
Average throughput: 60.62 Mbit/s
95th percentile per-packet one-way delay: 33.409 ms
Loss rate: 4.26%
-- Flow 2:
Average throughput: 26.92 Mbit/s
95th percentile per-packet one-way delay: 39.825 ms
Loss rate: 5.90%
-- Flow 3:
Average throughput: 24.54 Mbit/s
95th percentile per-packet one-way delay: 34.862 ms
Loss rate: 3.73%
```

Run 3: Report of PCC — Data Link



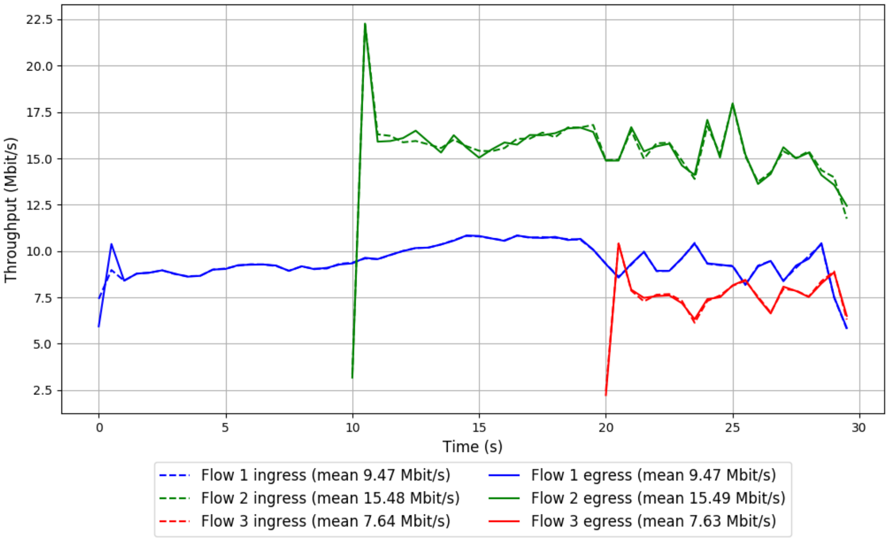


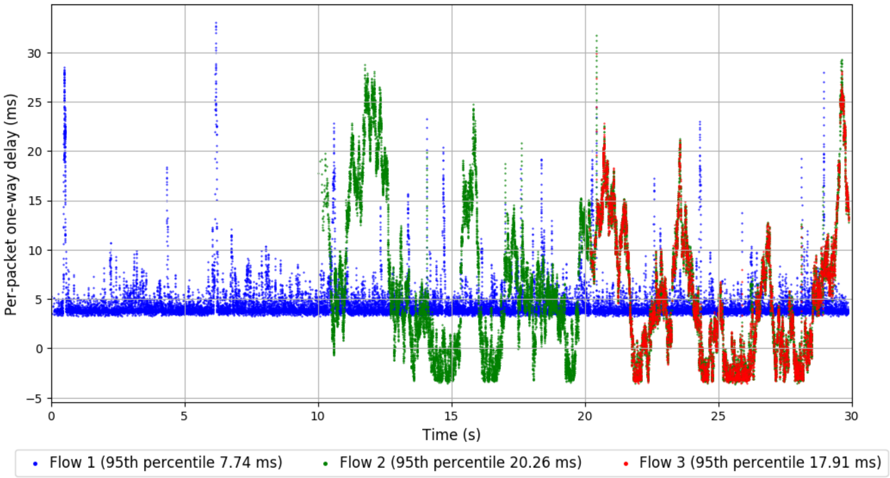
```
Run 4: Statistics of PCC

Start at: 2017-08-11 10:19:13
End at: 2017-08-11 10:19:43
Local clock offset: -2.203 ms
Remote clock offset: -22.751 ms

# Below is generated by plot.py at 2017-08-11 14:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.25 Mbit/s
95th percentile per-packet one-way delay: 17.556 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.47 Mbit/s
95th percentile per-packet one-way delay: 7.736 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.49 Mbit/s
95th percentile per-packet one-way delay: 20.264 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.63 Mbit/s
95th percentile per-packet one-way delay: 17.912 ms
Loss rate: 0.00%
```

Run 4: Report of PCC — Data Link

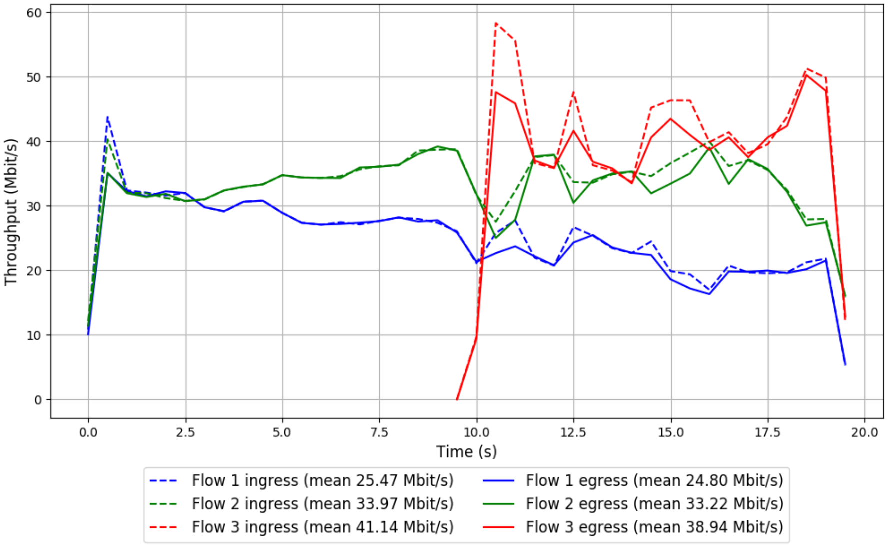


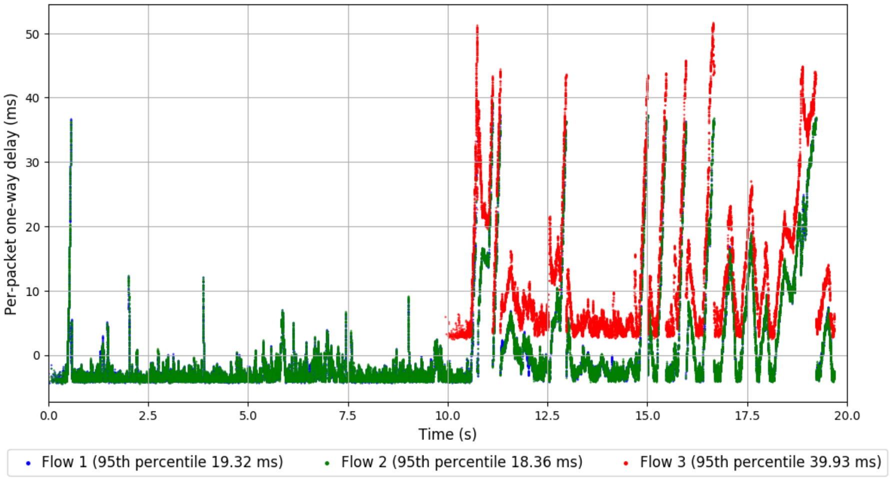


```
Run 5: Statistics of PCC

Start at: 2017-08-11 10:37:53
End at: 2017-08-11 10:38:23
Local clock offset: -1.288 ms
Remote clock offset: -22.551 ms
```

Run 5: Report of PCC — Data Link

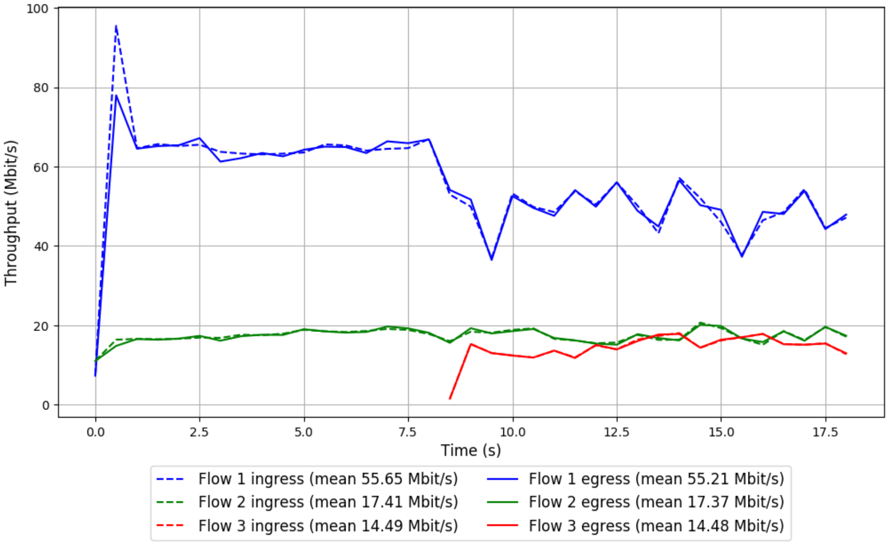


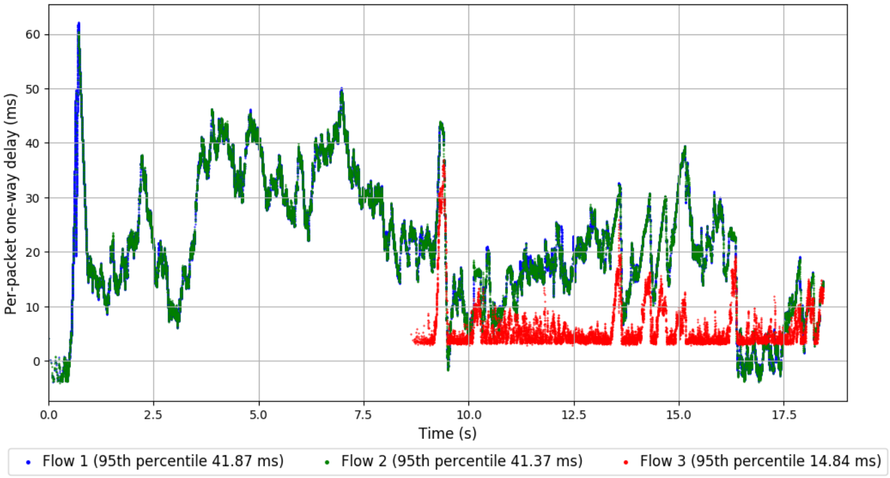


```
Run 6: Statistics of PCC

Start at: 2017-08-11 10:56:38
End at: 2017-08-11 10:57:08
Local clock offset: -2.302 ms
Remote clock offset: -22.972 ms
```

Run 6: Report of PCC — Data Link



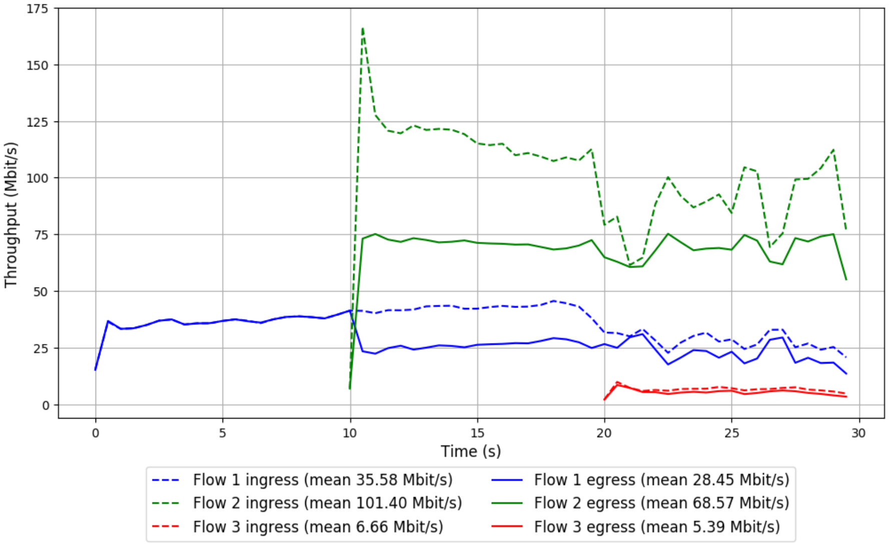


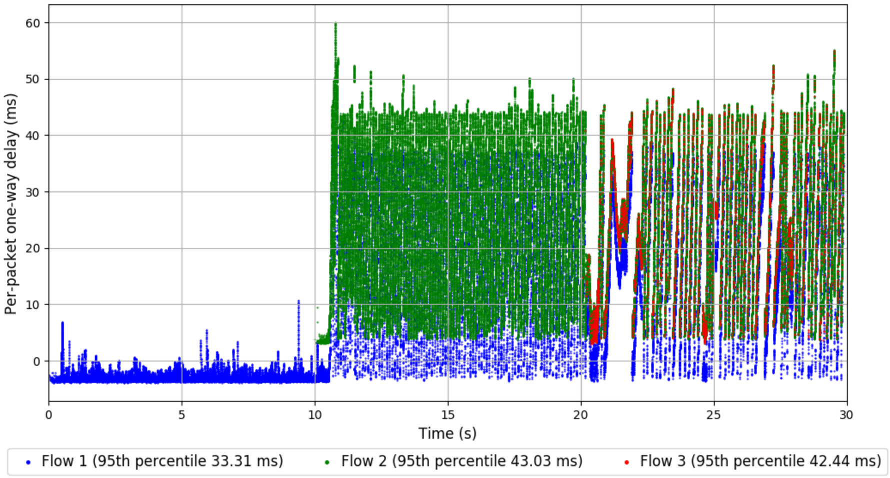
```
Run 7: Statistics of PCC

Start at: 2017-08-11 11:17:05
End at: 2017-08-11 11:17:35
Local clock offset: -2.696 ms
Remote clock offset: -21.601 ms

# Below is generated by plot.py at 2017-08-11 14:43:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.80 Mbit/s
95th percentile per-packet one-way delay: 41.699 ms
Loss rate: 27.89%
-- Flow 1:
Average throughput: 28.45 Mbit/s
95th percentile per-packet one-way delay: 33.306 ms
Loss rate: 19.99%
-- Flow 2:
Average throughput: 68.57 Mbit/s
95th percentile per-packet one-way delay: 43.033 ms
Loss rate: 32.34%
-- Flow 3:
Average throughput: 5.39 Mbit/s
95th percentile per-packet one-way delay: 42.436 ms
Loss rate: 19.23%
```

Run 7: Report of PCC — Data Link



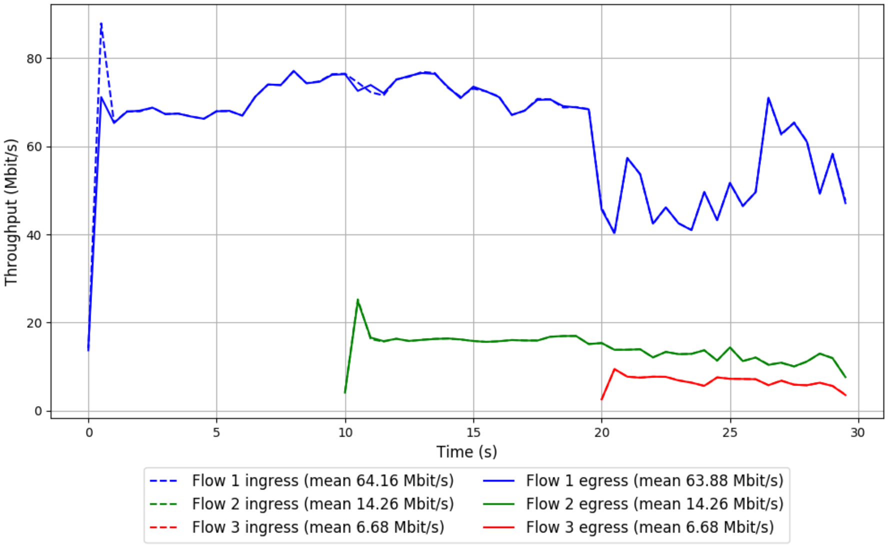


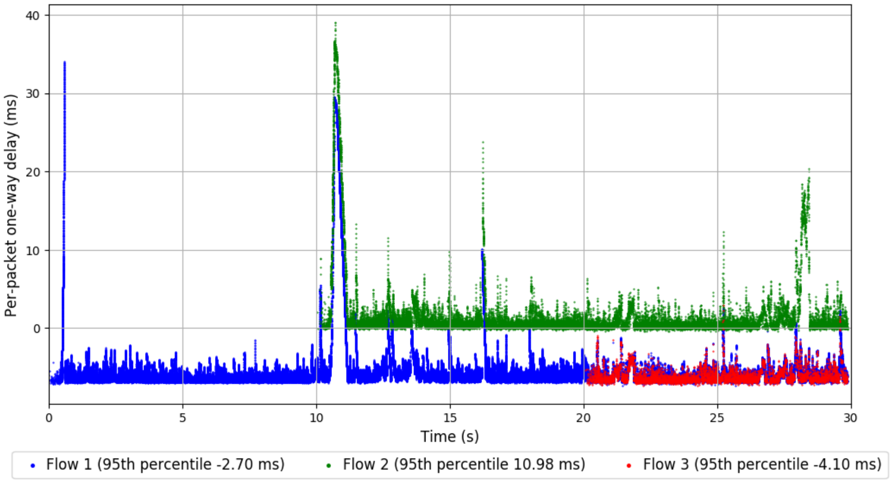
```
Run 8: Statistics of PCC

Start at: 2017-08-11 11:57:45
End at: 2017-08-11 11:58:15
Local clock offset: 1.383 ms
Remote clock offset: -17.756 ms

# Below is generated by plot.py at 2017-08-11 14:43:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.53 Mbit/s
95th percentile per-packet one-way delay: 1.649 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 63.88 Mbit/s
95th percentile per-packet one-way delay: -2.700 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 14.26 Mbit/s
95th percentile per-packet one-way delay: 10.976 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 6.68 Mbit/s
95th percentile per-packet one-way delay: -4.102 ms
Loss rate: 0.00%
```

Run 8: Report of PCC — Data Link



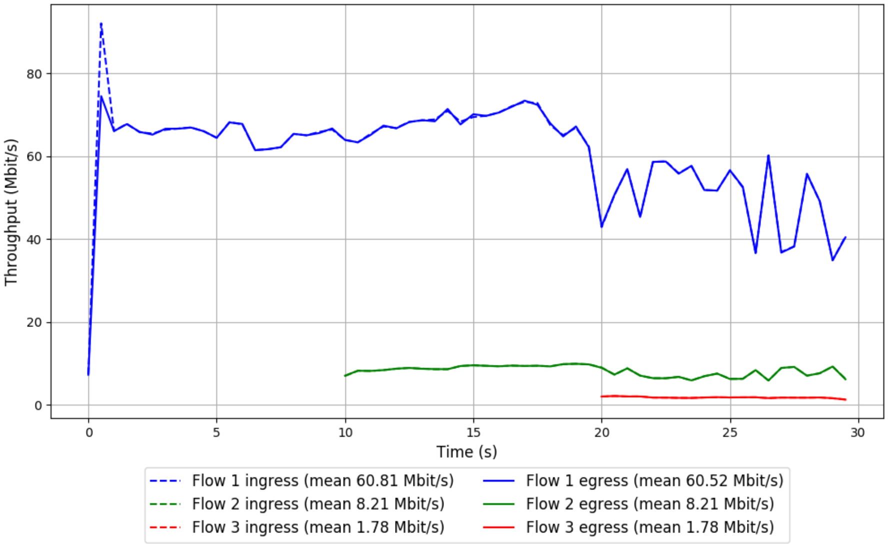


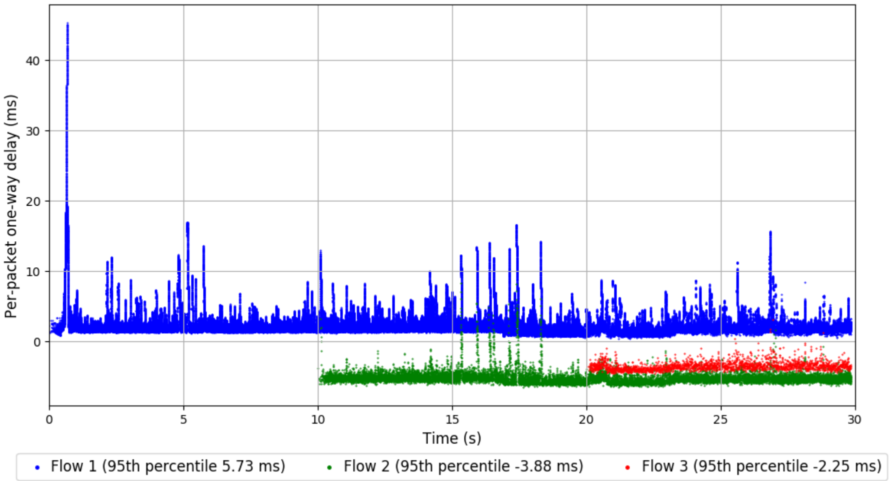
```
Run 9: Statistics of PCC

Start at: 2017-08-11 12:38:33
End at: 2017-08-11 12:39:03
Local clock offset: -0.067 ms
Remote clock offset: -16.38 ms

# Below is generated by plot.py at 2017-08-11 14:43:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.57 Mbit/s
95th percentile per-packet one-way delay: 5.409 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 60.52 Mbit/s
95th percentile per-packet one-way delay: 5.726 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 8.21 Mbit/s
95th percentile per-packet one-way delay: -3.877 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: -2.247 ms
Loss rate: 0.07%
```

Run 9: Report of PCC — Data Link



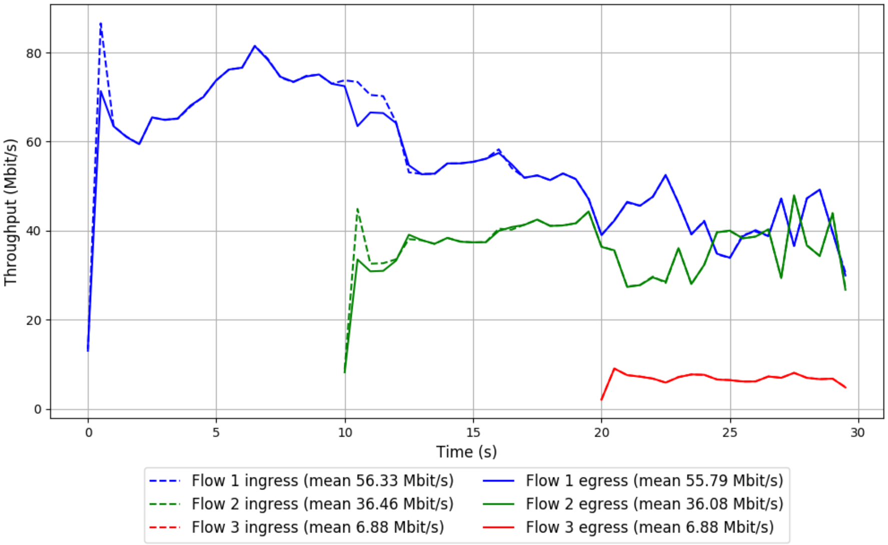


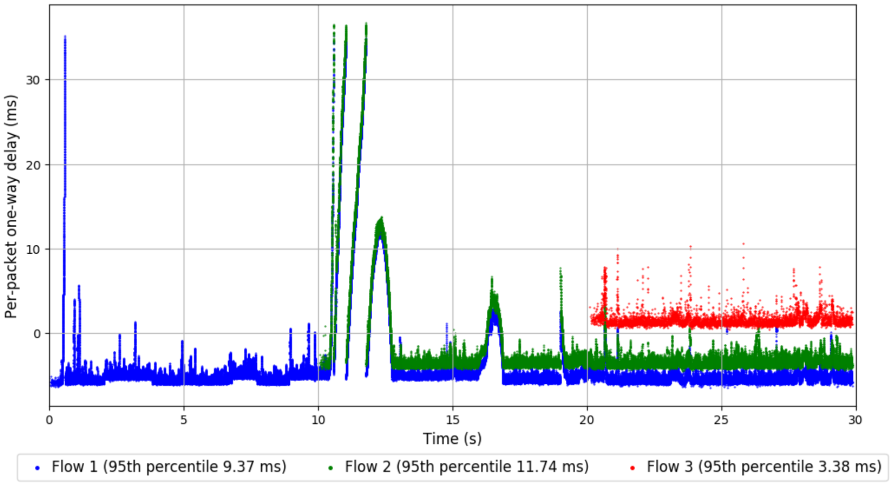
```
Run 10: Statistics of PCC

Start at: 2017-08-11 13:26:25
End at: 2017-08-11 13:26:55
Local clock offset: 0.221 ms
Remote clock offset: -13.92 ms

# Below is generated by plot.py at 2017-08-11 14:43:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.02 Mbit/s
95th percentile per-packet one-way delay: 9.860 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 55.79 Mbit/s
95th percentile per-packet one-way delay: 9.368 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 36.08 Mbit/s
95th percentile per-packet one-way delay: 11.737 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 6.88 Mbit/s
95th percentile per-packet one-way delay: 3.385 ms
Loss rate: 0.07%
```

Run 10: Report of PCC — Data Link

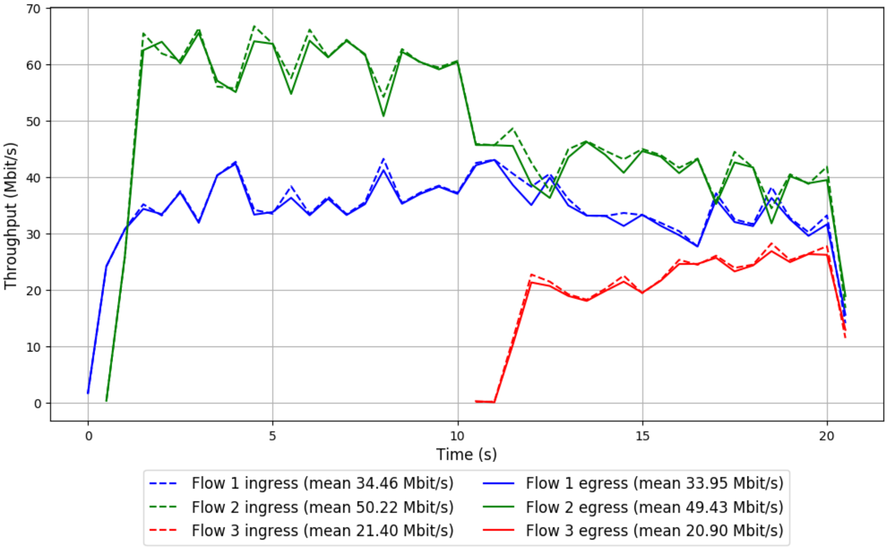


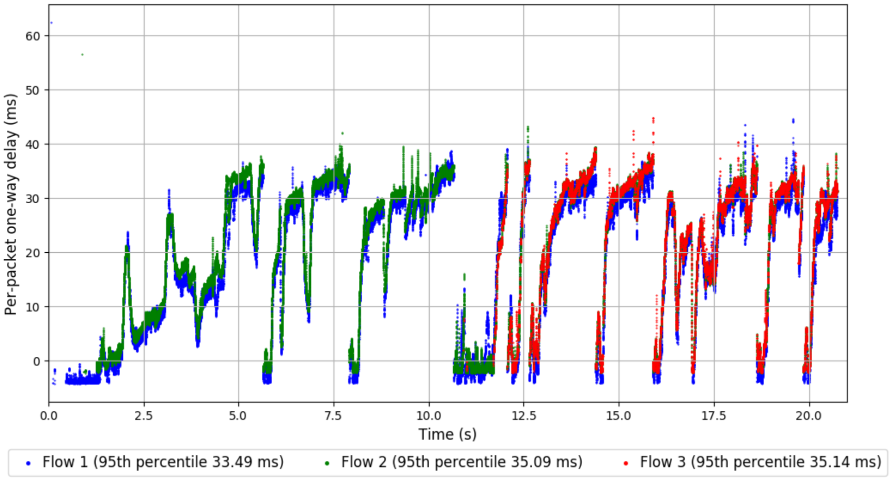


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-08-11 08:46:43
End at: 2017-08-11 08:47:13
Local clock offset: -0.977 ms
Remote clock offset: -20.487 ms
```

Run 1: Report of QUIC Cubic — Data Link



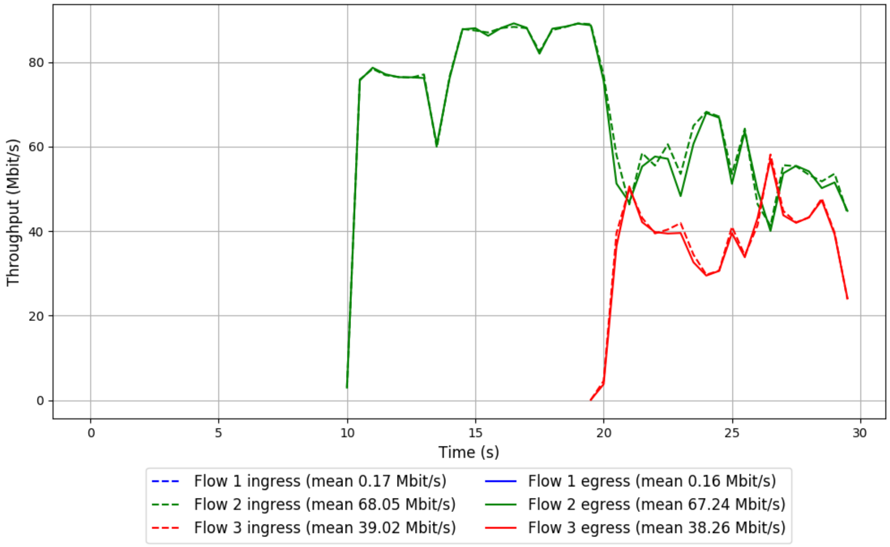


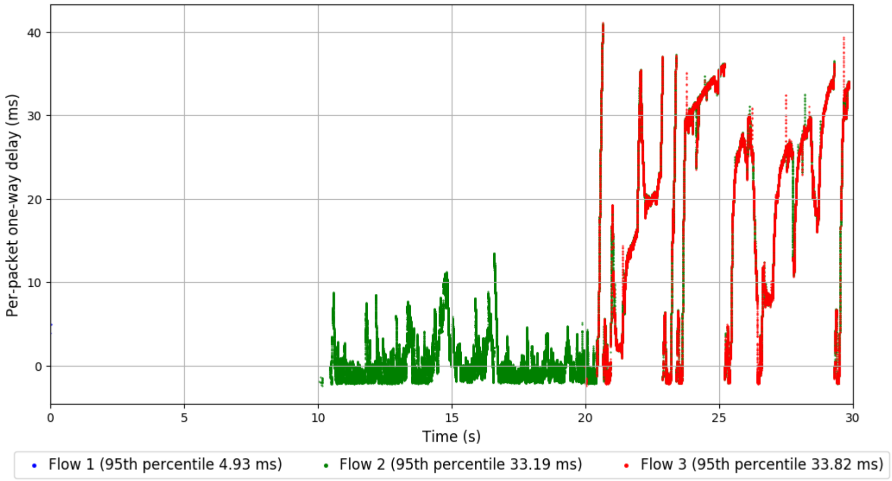
```
Run 2: Statistics of QUIC Cubic

Start at: 2017-08-11 09:05:27
End at: 2017-08-11 09:05:57
Local clock offset: -0.272 ms
Remote clock offset: -20.348 ms

# Below is generated by plot.py at 2017-08-11 14:43:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.31 Mbit/s
95th percentile per-packet one-way delay: 33.456 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 4.928 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 67.24 Mbit/s
95th percentile per-packet one-way delay: 33.192 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 38.26 Mbit/s
95th percentile per-packet one-way delay: 33.816 ms
Loss rate: 1.61%
```

Run 2: Report of QUIC Cubic — Data Link



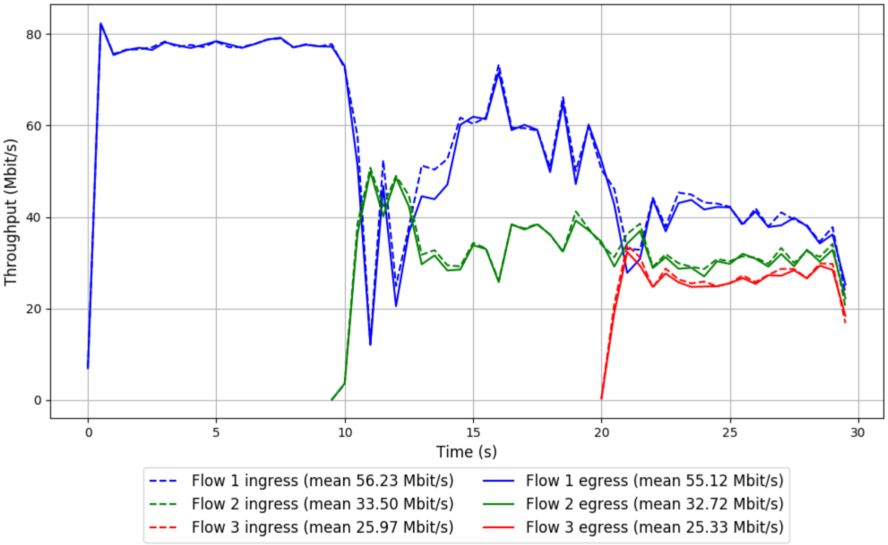


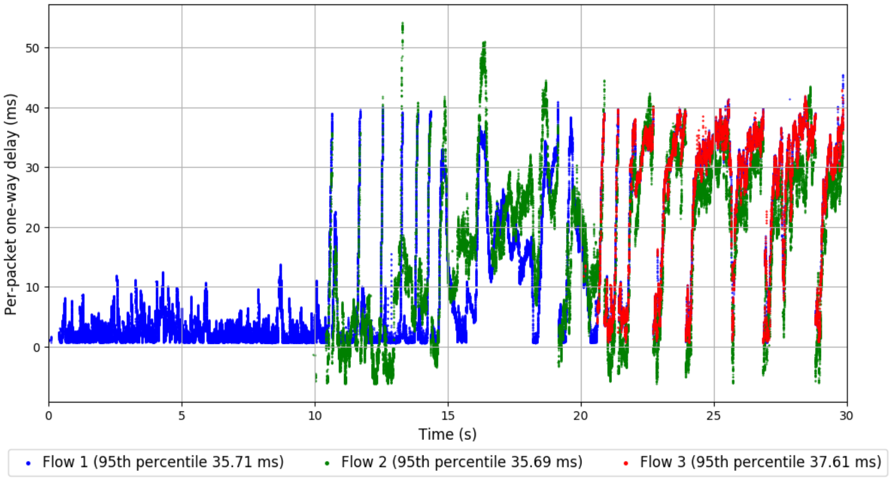
```
Run 3: Statistics of QUIC Cubic

Start at: 2017-08-11 09:25:00
End at: 2017-08-11 09:25:30
Local clock offset: 0.746 ms
Remote clock offset: -22.307 ms

# Below is generated by plot.py at 2017-08-11 14:43:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.24 Mbit/s
95th percentile per-packet one-way delay: 36.150 ms
Loss rate: 1.98%
-- Flow 1:
Average throughput: 55.12 Mbit/s
95th percentile per-packet one-way delay: 35.707 ms
Loss rate: 1.86%
-- Flow 2:
Average throughput: 32.72 Mbit/s
95th percentile per-packet one-way delay: 35.685 ms
Loss rate: 2.18%
-- Flow 3:
Average throughput: 25.33 Mbit/s
95th percentile per-packet one-way delay: 37.606 ms
Loss rate: 2.28%
```

Run 3: Report of QUIC Cubic — Data Link



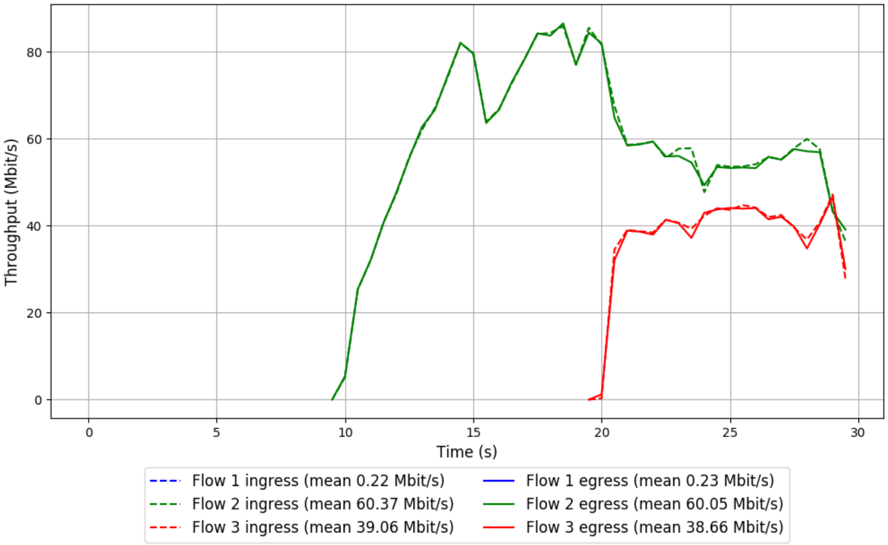


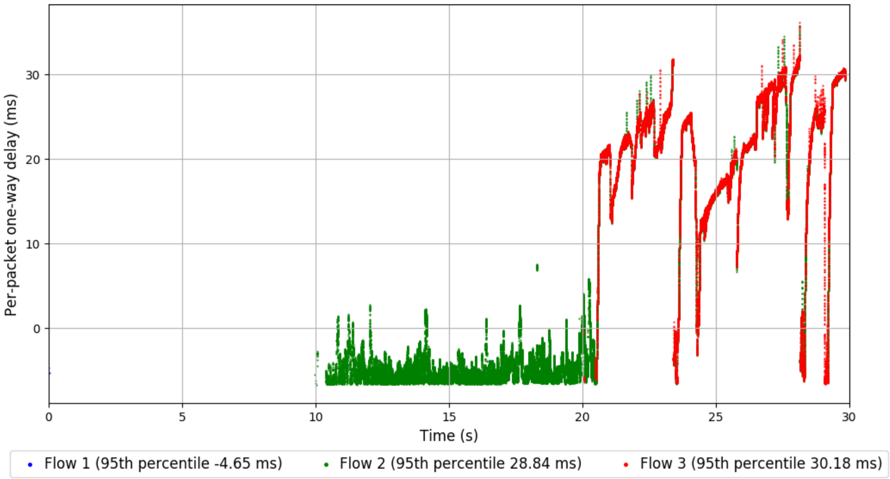
```
Run 4: Statistics of QUIC Cubic

Start at: 2017-08-11 10:21:35
End at: 2017-08-11 10:22:05
Local clock offset: 0.119 ms
Remote clock offset: -23.379 ms

# Below is generated by plot.py at 2017-08-11 14:43:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.78 Mbit/s
95th percentile per-packet one-way delay: 29.572 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: -4.652 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 60.05 Mbit/s
95th percentile per-packet one-way delay: 28.840 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 38.66 Mbit/s
95th percentile per-packet one-way delay: 30.184 ms
Loss rate: 0.77%
```

Run 4: Report of QUIC Cubic — Data Link



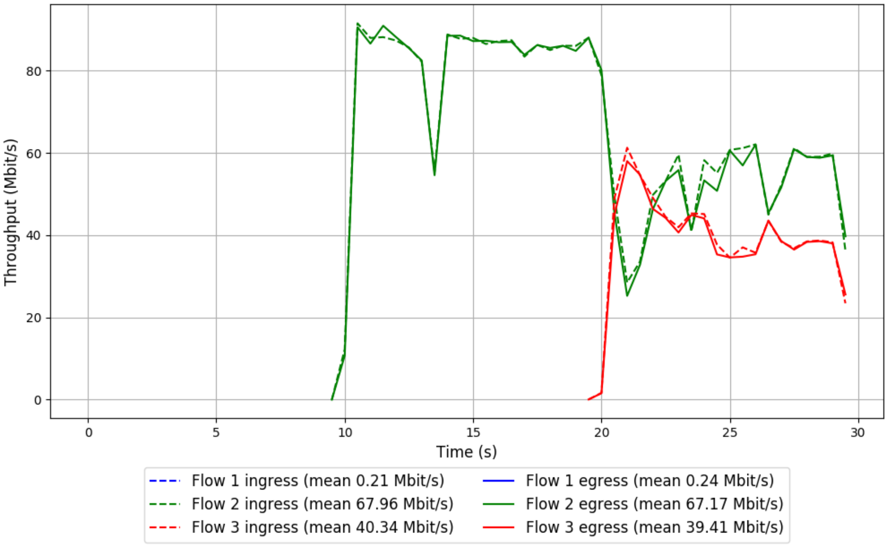


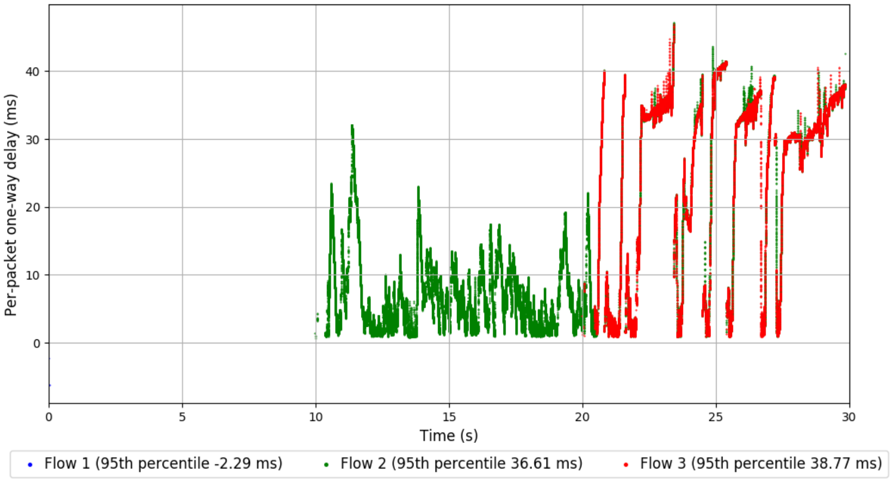
```
Run 5: Statistics of QUIC Cubic

Start at: 2017-08-11 10:40:17
End at: 2017-08-11 10:40:47
Local clock offset: -0.493 ms
Remote clock offset: -23.536 ms

# Below is generated by plot.py at 2017-08-11 14:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.75 Mbit/s
95th percentile per-packet one-way delay: 37.008 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: -2.291 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 67.17 Mbit/s
95th percentile per-packet one-way delay: 36.606 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 39.41 Mbit/s
95th percentile per-packet one-way delay: 38.768 ms
Loss rate: 2.07%
```

Run 5: Report of QUIC Cubic — Data Link



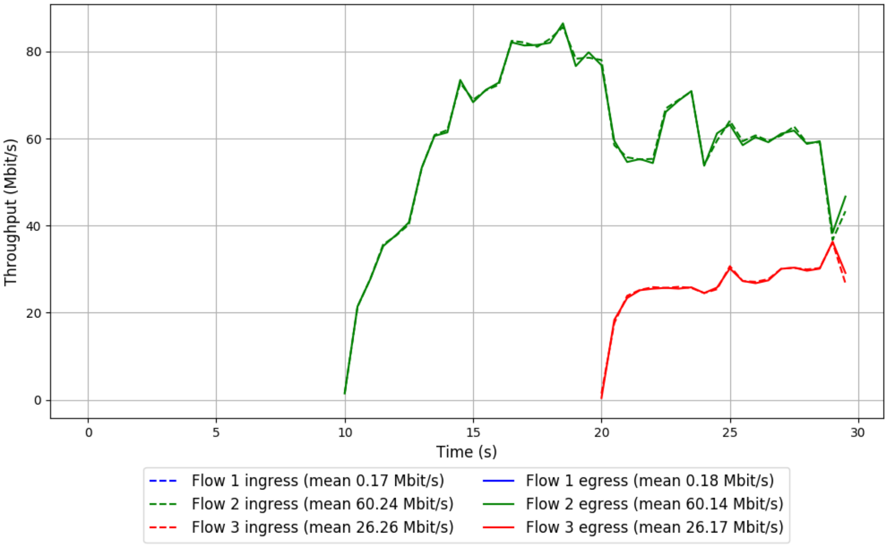


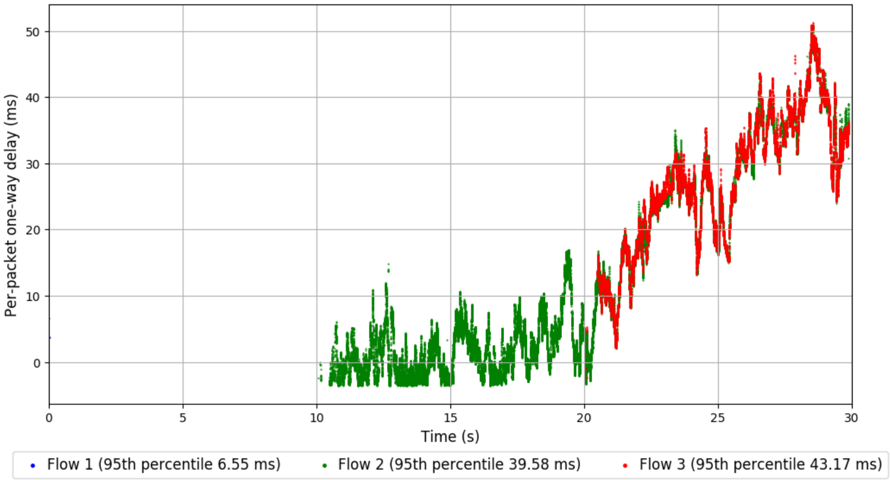
```
Run 6: Statistics of QUIC Cubic

Start at: 2017-08-11 10:59:08
End at: 2017-08-11 10:59:38
Local clock offset: -2.048 ms
Remote clock offset: -22.561 ms

# Below is generated by plot.py at 2017-08-11 14:43:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.55 Mbit/s
95th percentile per-packet one-way delay: 40.378 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 6.551 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 60.14 Mbit/s
95th percentile per-packet one-way delay: 39.583 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 26.17 Mbit/s
95th percentile per-packet one-way delay: 43.169 ms
Loss rate: 0.01%
```

Run 6: Report of QUIC Cubic — Data Link



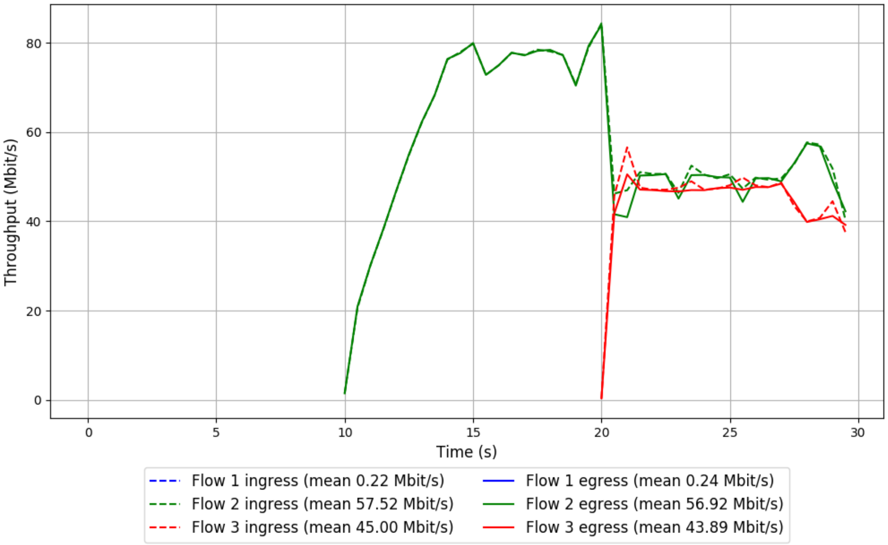


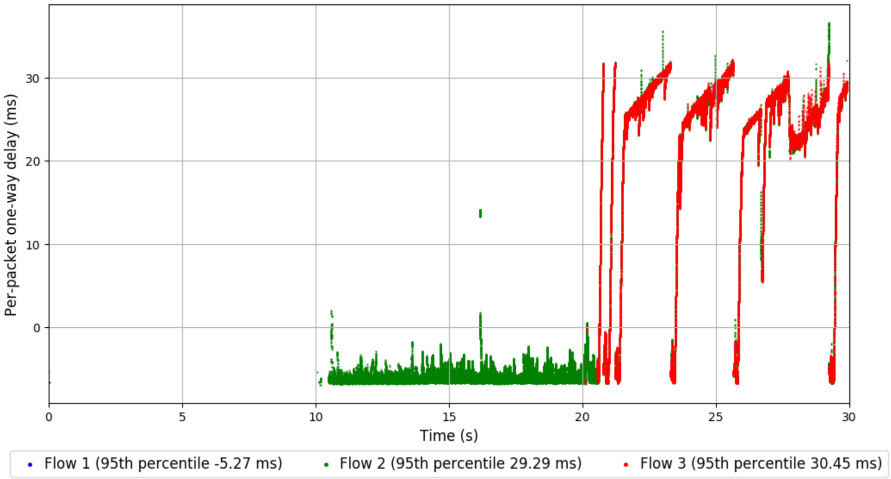
```
Run 7: Statistics of QUIC Cubic

Start at: 2017-08-11 11:19:34
End at: 2017-08-11 11:20:04
Local clock offset: 1.243 ms
Remote clock offset: -20.073 ms

# Below is generated by plot.py at 2017-08-11 14:43:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.20 Mbit/s
95th percentile per-packet one-way delay: 29.776 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: -5.271 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 56.92 Mbit/s
95th percentile per-packet one-way delay: 29.290 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 43.89 Mbit/s
95th percentile per-packet one-way delay: 30.446 ms
Loss rate: 2.11%
```

Run 7: Report of QUIC Cubic — Data Link



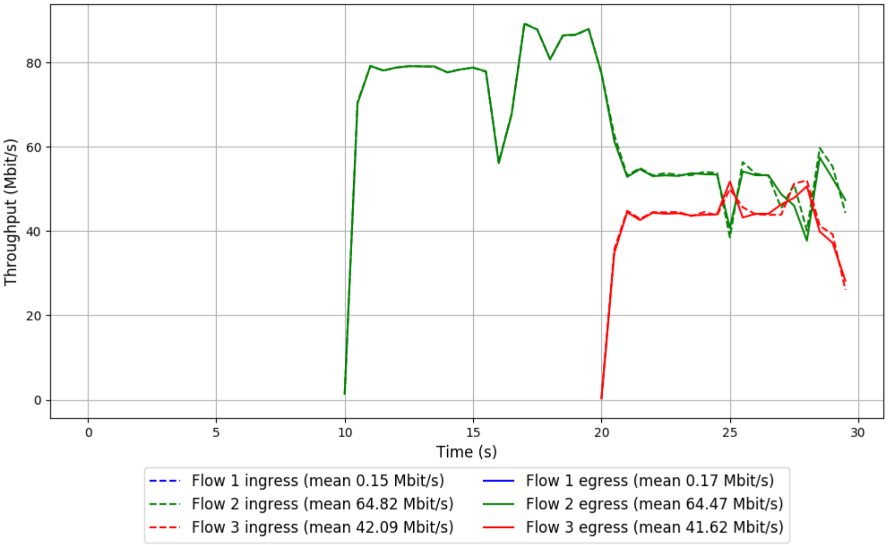


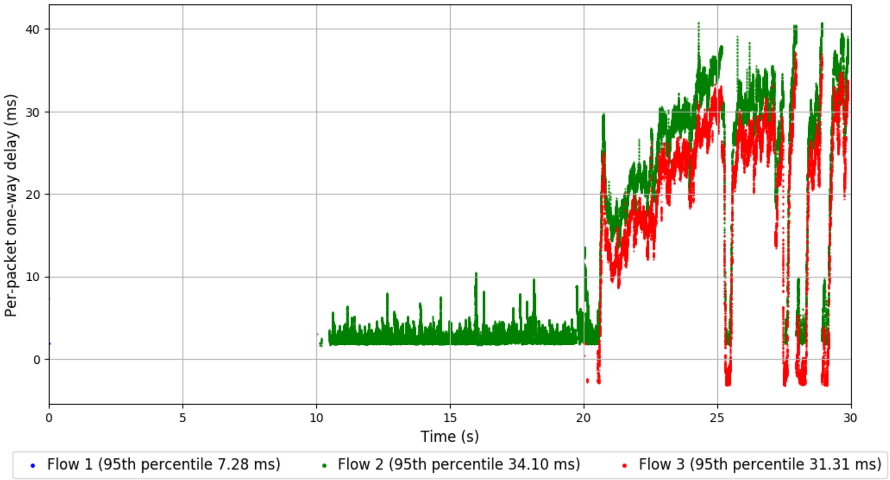
```
Run 8: Statistics of QUIC Cubic

Start at: 2017-08-11 12:02:37
End at: 2017-08-11 12:03:07
Local clock offset: -0.193 ms
Remote clock offset: -17.197 ms

# Below is generated by plot.py at 2017-08-11 14:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.52 Mbit/s
95th percentile per-packet one-way delay: 33.469 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 7.281 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 64.47 Mbit/s
95th percentile per-packet one-way delay: 34.097 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 41.62 Mbit/s
95th percentile per-packet one-way delay: 31.310 ms
Loss rate: 0.77%
```

Run 8: Report of QUIC Cubic — Data Link



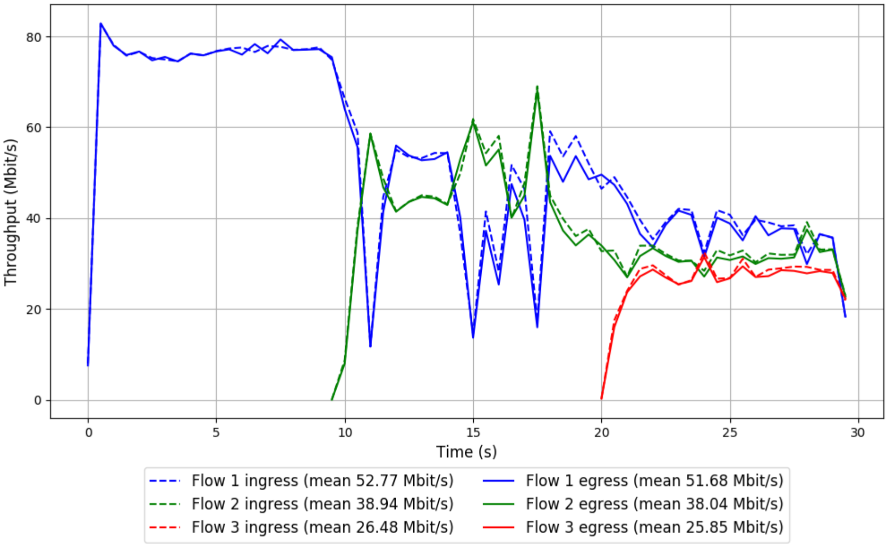


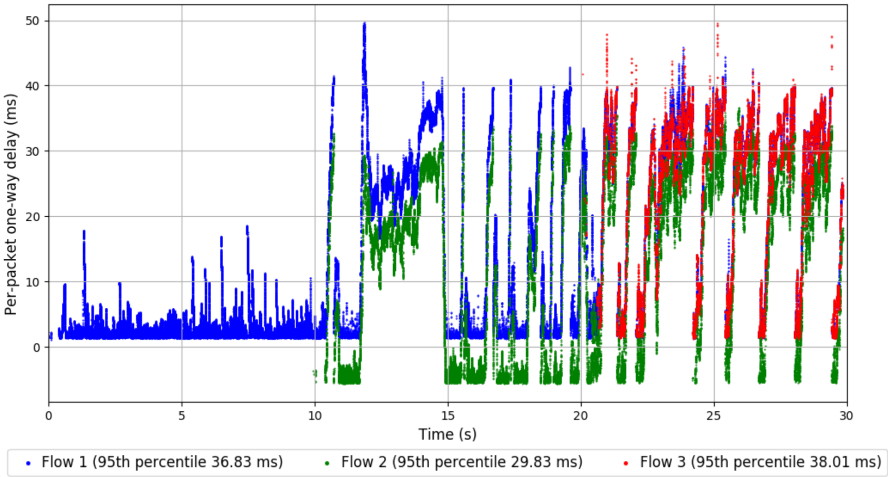
```
Run 9: Statistics of QUIC Cubic

Start at: 2017-08-11 12:42:30
End at: 2017-08-11 12:43:00
Local clock offset: -0.152 ms
Remote clock offset: -15.576 ms

# Below is generated by plot.py at 2017-08-11 14:44:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.49 Mbit/s
95th percentile per-packet one-way delay: 36.232 ms
Loss rate: 2.12%
-- Flow 1:
Average throughput: 51.68 Mbit/s
95th percentile per-packet one-way delay: 36.833 ms
Loss rate: 2.00%
-- Flow 2:
Average throughput: 38.04 Mbit/s
95th percentile per-packet one-way delay: 29.828 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 25.85 Mbit/s
95th percentile per-packet one-way delay: 38.010 ms
Loss rate: 2.57%
```

Run 9: Report of QUIC Cubic — Data Link



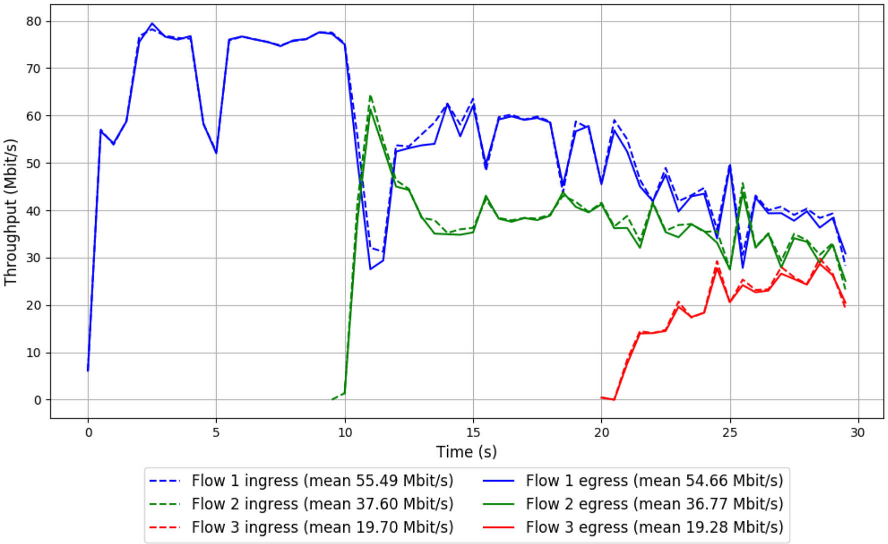


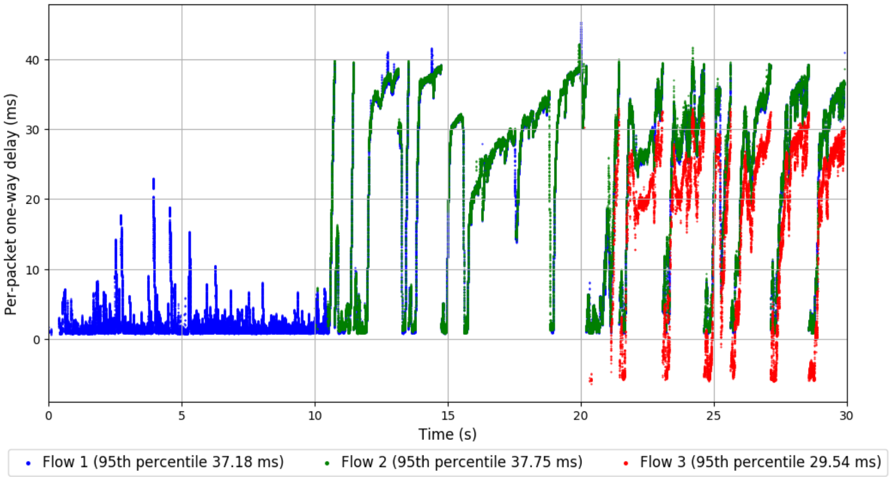
```
Run 10: Statistics of QUIC Cubic

Start at: 2017-08-11 13:28:44
End at: 2017-08-11 13:29:14
Local clock offset: 1.263 ms
Remote clock offset: -12.898 ms

# Below is generated by plot.py at 2017-08-11 14:44:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.41 Mbit/s
95th percentile per-packet one-way delay: 37.353 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 54.66 Mbit/s
95th percentile per-packet one-way delay: 37.184 ms
Loss rate: 1.39%
-- Flow 2:
Average throughput: 36.77 Mbit/s
95th percentile per-packet one-way delay: 37.748 ms
Loss rate: 2.08%
-- Flow 3:
Average throughput: 19.28 Mbit/s
95th percentile per-packet one-way delay: 29.541 ms
Loss rate: 2.12%
```

Run 10: Report of QUIC Cubic — Data Link



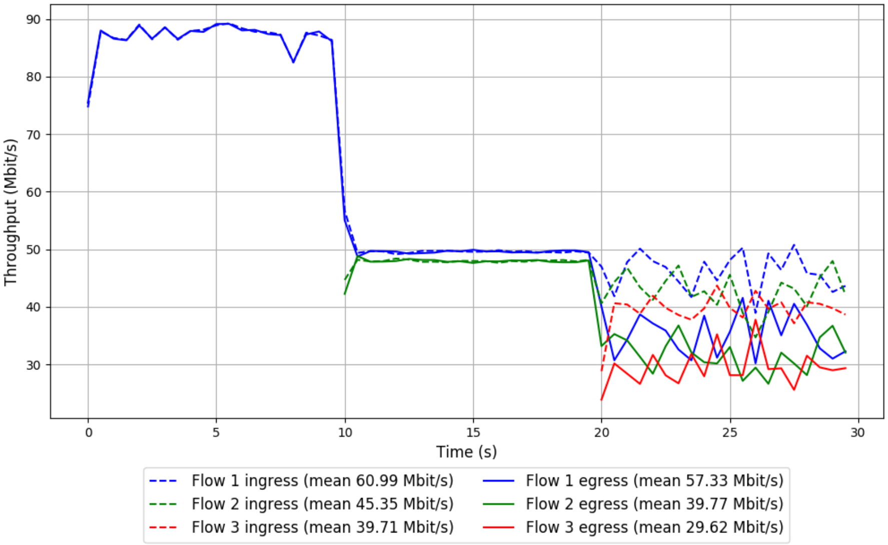


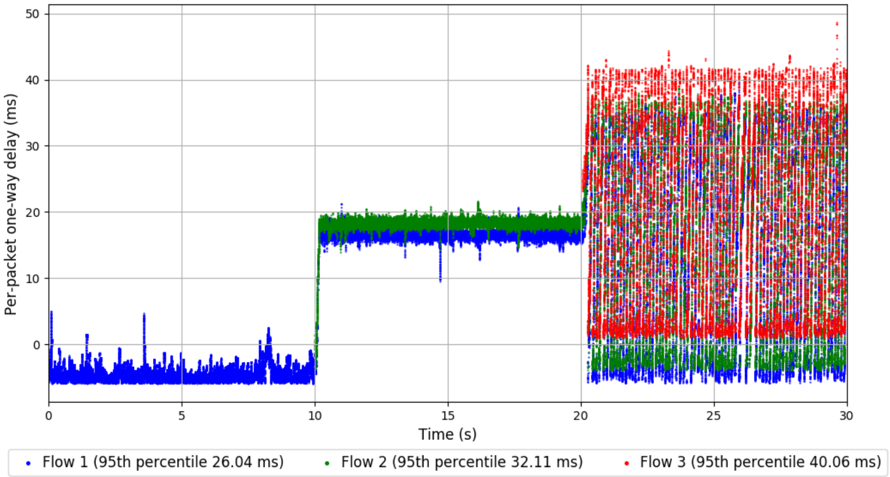
```
Run 1: Statistics of Saturator

Start at: 2017-08-11 08:36:12
End at: 2017-08-11 08:36:42
Local clock offset: 0.631 ms
Remote clock offset: -20.4 ms

# Below is generated by plot.py at 2017-08-11 14:44:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.62 Mbit/s
95th percentile per-packet one-way delay: 32.448 ms
Loss rate: 10.21%
-- Flow 1:
Average throughput: 57.33 Mbit/s
95th percentile per-packet one-way delay: 26.037 ms
Loss rate: 5.92%
-- Flow 2:
Average throughput: 39.77 Mbit/s
95th percentile per-packet one-way delay: 32.107 ms
Loss rate: 12.22%
-- Flow 3:
Average throughput: 29.62 Mbit/s
95th percentile per-packet one-way delay: 40.062 ms
Loss rate: 25.44%
```

Run 1: Report of Saturator — Data Link



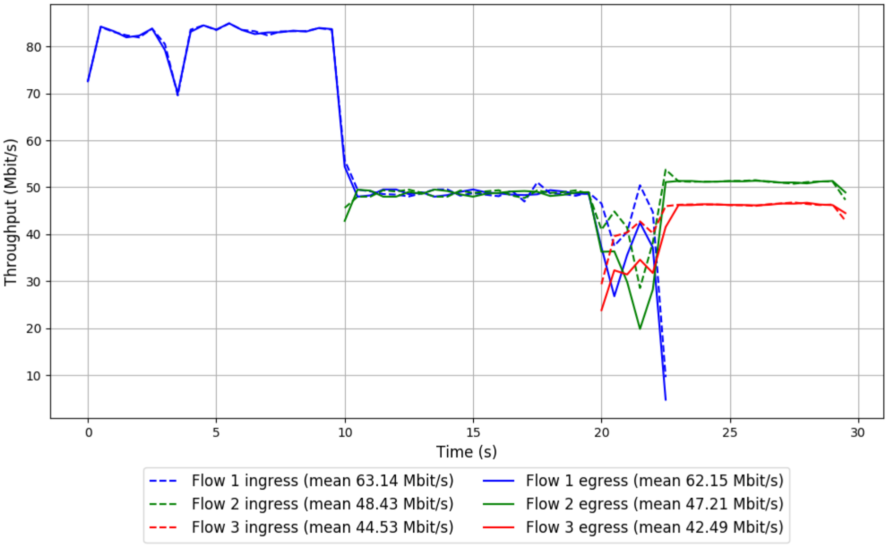


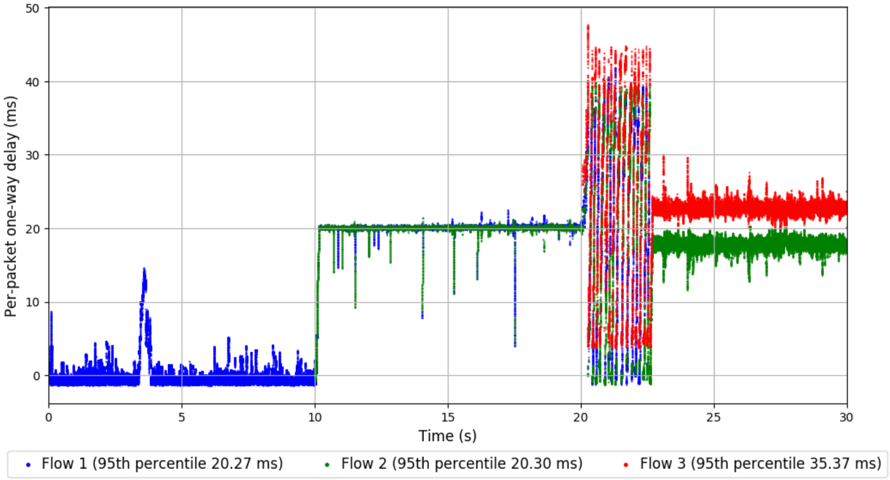
```
Run 2: Statistics of Saturator

Start at: 2017-08-11 08:54:10
End at: 2017-08-11 08:54:40
Local clock offset: -1.986 ms
Remote clock offset: -20.934 ms

# Below is generated by plot.py at 2017-08-11 14:44:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.26 Mbit/s
95th percentile per-packet one-way delay: 23.934 ms
Loss rate: 2.40%
-- Flow 1:
Average throughput: 62.15 Mbit/s
95th percentile per-packet one-way delay: 20.275 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 47.21 Mbit/s
95th percentile per-packet one-way delay: 20.297 ms
Loss rate: 2.43%
-- Flow 3:
Average throughput: 42.49 Mbit/s
95th percentile per-packet one-way delay: 35.366 ms
Loss rate: 4.67%
```

Run 2: Report of Saturator — Data Link



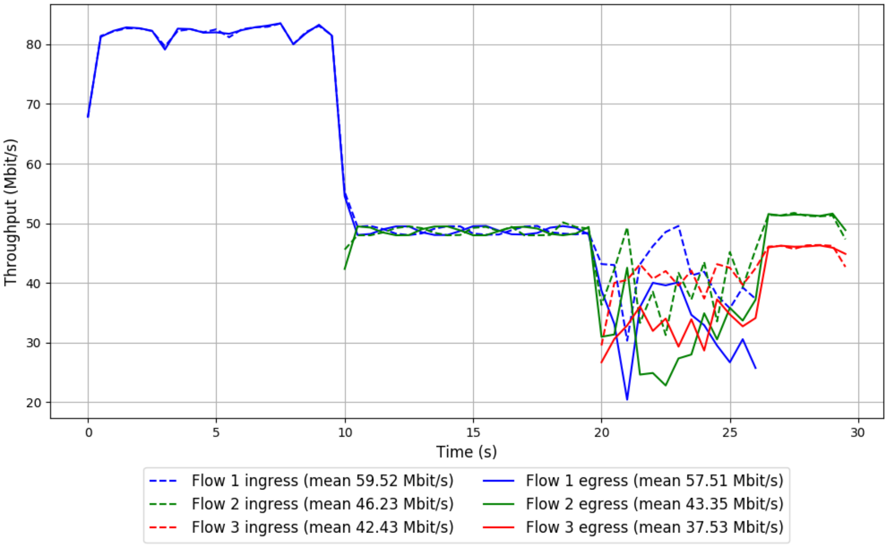


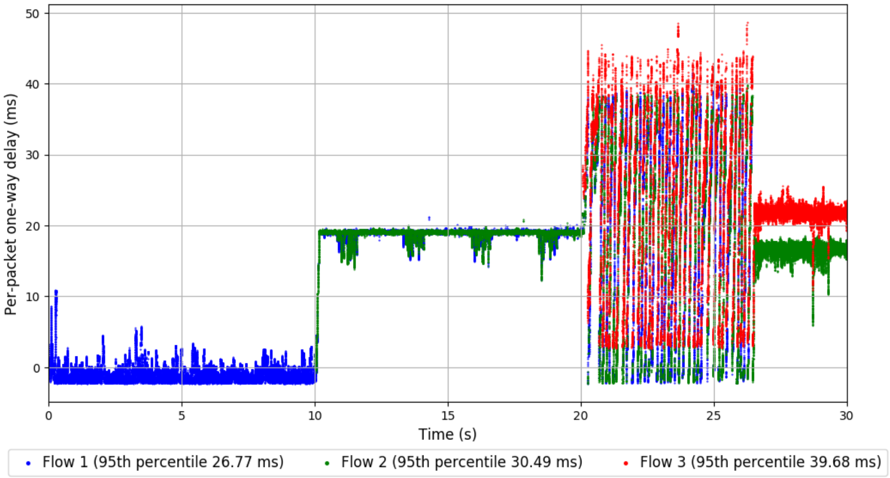
```
Run 3: Statistics of Saturator

Start at: 2017-08-11 09:13:39
End at: 2017-08-11 09:14:09
Local clock offset: -1.823 ms
Remote clock offset: -22.471 ms

# Below is generated by plot.py at 2017-08-11 14:44:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.94 Mbit/s
95th percentile per-packet one-way delay: 32.237 ms
Loss rate: 5.50%
-- Flow 1:
Average throughput: 57.51 Mbit/s
95th percentile per-packet one-way delay: 26.767 ms
Loss rate: 3.49%
-- Flow 2:
Average throughput: 43.35 Mbit/s
95th percentile per-packet one-way delay: 30.493 ms
Loss rate: 6.15%
-- Flow 3:
Average throughput: 37.53 Mbit/s
95th percentile per-packet one-way delay: 39.678 ms
Loss rate: 11.62%
```

Run 3: Report of Saturator — Data Link



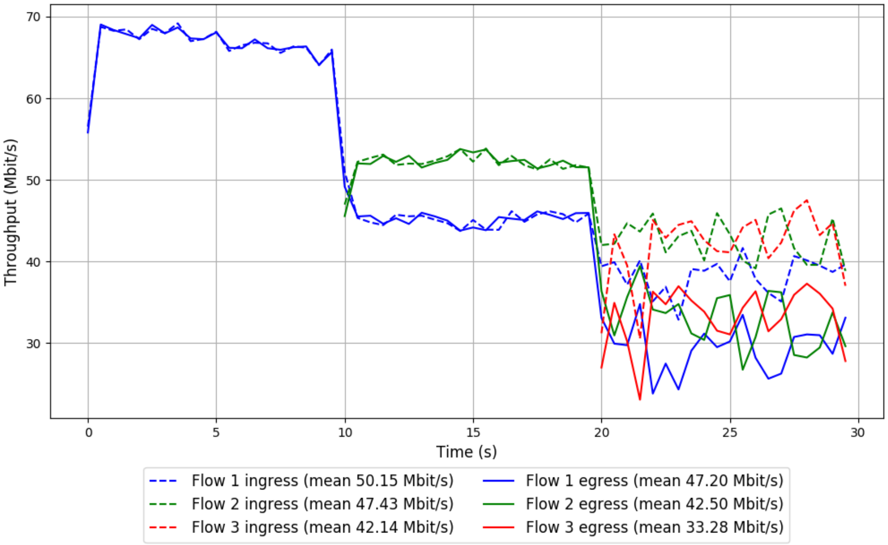


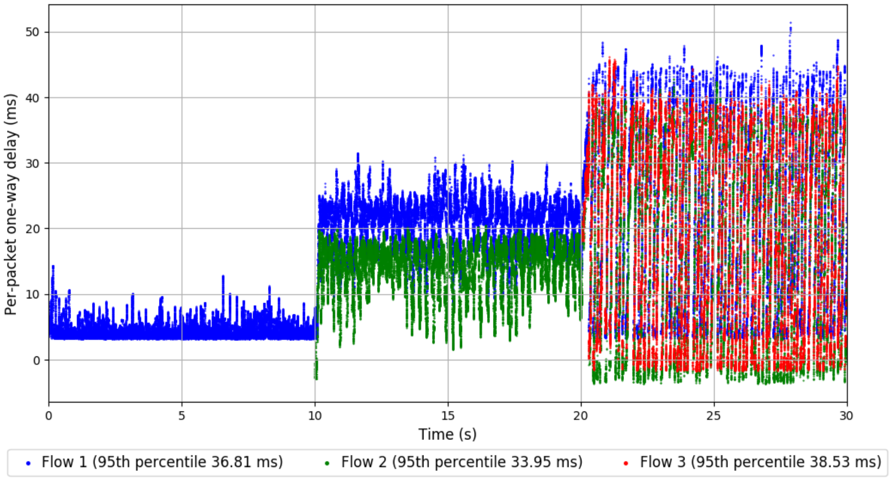
```
Run 4: Statistics of Saturator

Start at: 2017-08-11 09:41:49
End at: 2017-08-11 09:42:19
Local clock offset: -2.189 ms
Remote clock offset: -23.067 ms

# Below is generated by plot.py at 2017-08-11 14:44:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.54 Mbit/s
95th percentile per-packet one-way delay: 36.278 ms
Loss rate: 9.55%
-- Flow 1:
Average throughput: 47.20 Mbit/s
95th percentile per-packet one-way delay: 36.815 ms
Loss rate: 5.86%
-- Flow 2:
Average throughput: 42.50 Mbit/s
95th percentile per-packet one-way delay: 33.953 ms
Loss rate: 10.32%
-- Flow 3:
Average throughput: 33.28 Mbit/s
95th percentile per-packet one-way delay: 38.526 ms
Loss rate: 21.07%
```

Run 4: Report of Saturator — Data Link



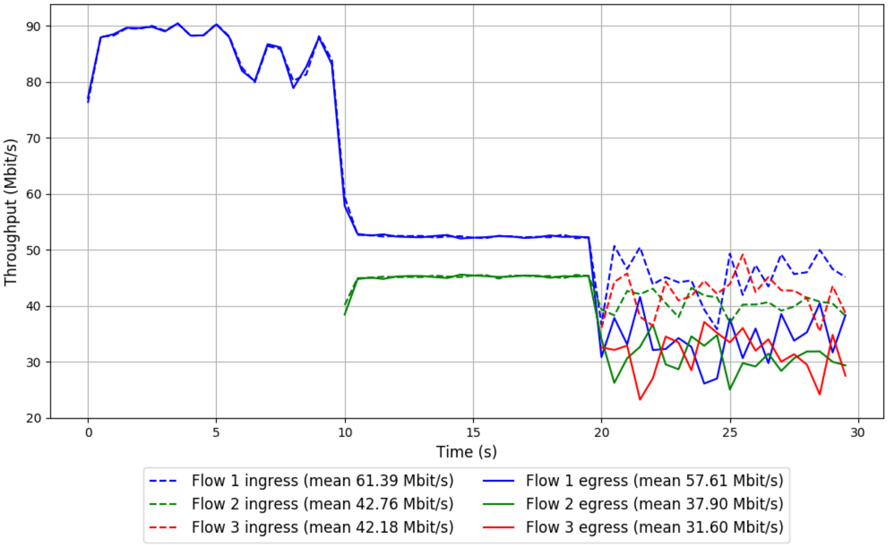


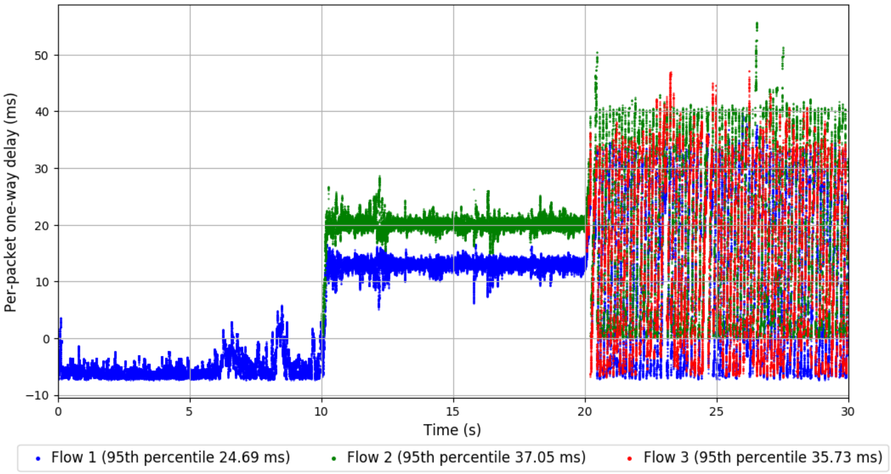
```
Run 5: Statistics of Saturator

Start at: 2017-08-11 10:29:07
End at: 2017-08-11 10:29:37
Local clock offset: 0.943 ms
Remote clock offset: -23.328 ms

# Below is generated by plot.py at 2017-08-11 14:44:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.33 Mbit/s
95th percentile per-packet one-way delay: 31.800 ms
Loss rate: 10.05%
-- Flow 1:
Average throughput: 57.61 Mbit/s
95th percentile per-packet one-way delay: 24.689 ms
Loss rate: 6.07%
-- Flow 2:
Average throughput: 37.90 Mbit/s
95th percentile per-packet one-way delay: 37.051 ms
Loss rate: 11.26%
-- Flow 3:
Average throughput: 31.60 Mbit/s
95th percentile per-packet one-way delay: 35.725 ms
Loss rate: 25.03%
```

Run 5: Report of Saturator — Data Link



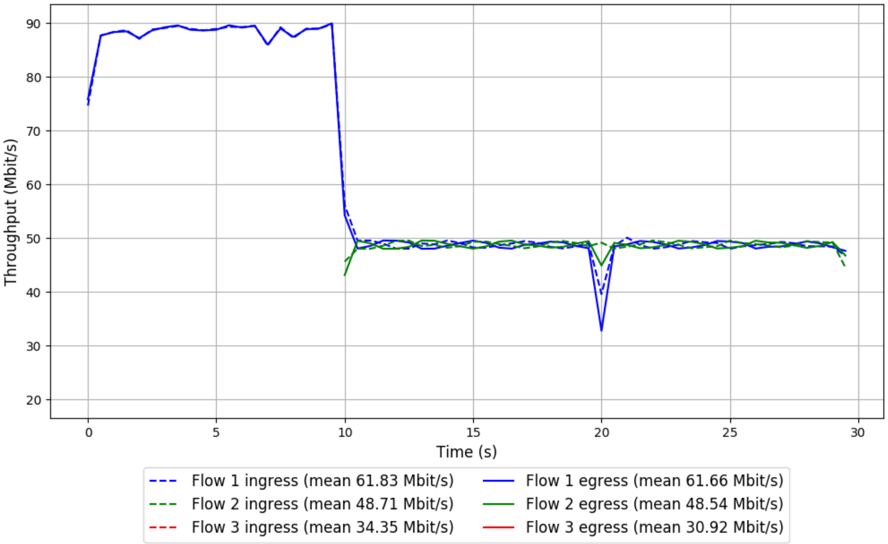


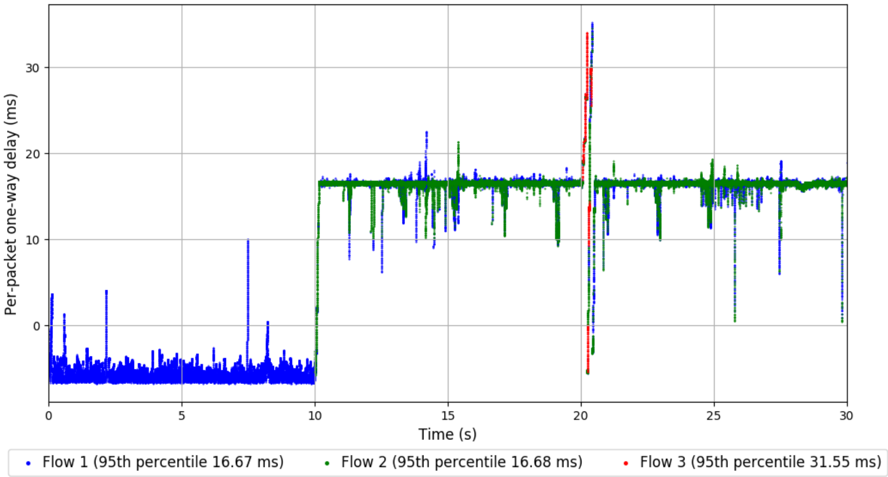
```
Run 6: Statistics of Saturator

Start at: 2017-08-11 10:47:48
End at: 2017-08-11 10:48:18
Local clock offset: 0.614 ms
Remote clock offset: -23.203 ms

# Below is generated by plot.py at 2017-08-11 14:44:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.33 Mbit/s
95th percentile per-packet one-way delay: 16.678 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 61.66 Mbit/s
95th percentile per-packet one-way delay: 16.673 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 48.54 Mbit/s
95th percentile per-packet one-way delay: 16.684 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 30.92 Mbit/s
95th percentile per-packet one-way delay: 31.550 ms
Loss rate: 22.07%
```

Run 6: Report of Saturator — Data Link



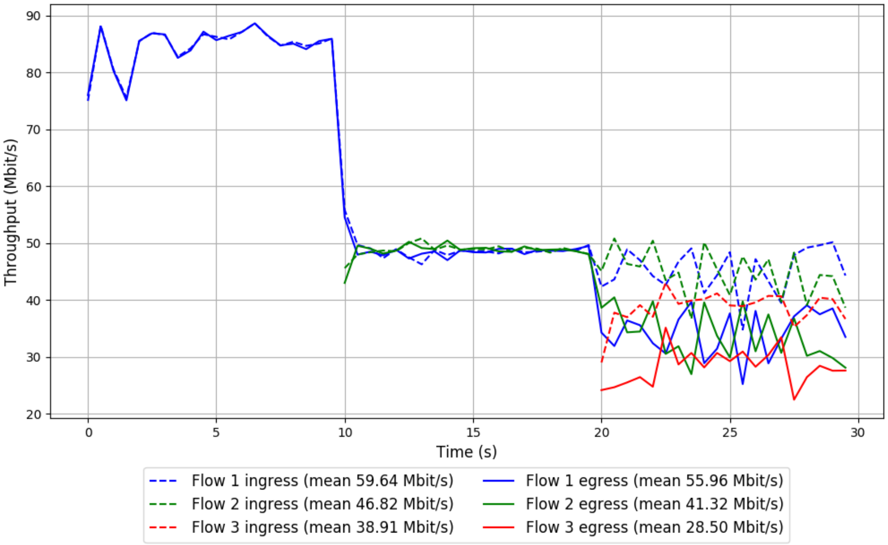


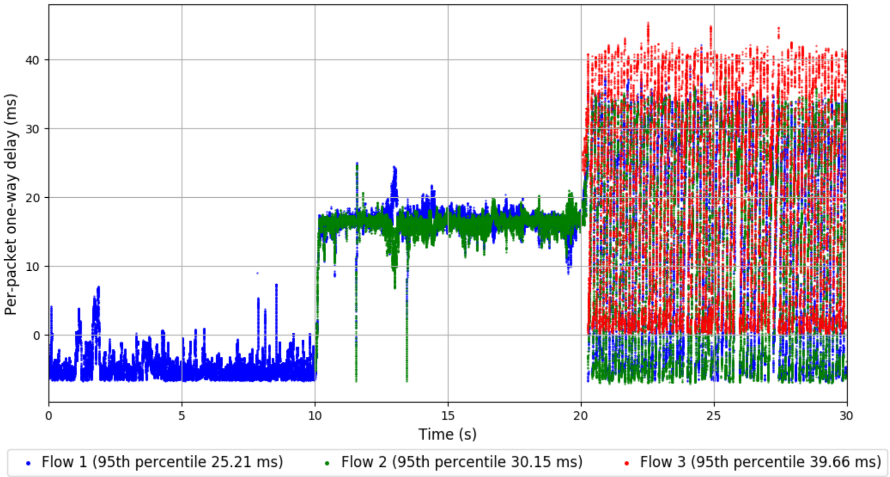
```
Run 7: Statistics of Saturator

Start at: 2017-08-11 11:08:07
End at: 2017-08-11 11:08:37
Local clock offset: -0.615 ms
Remote clock offset: -23.698 ms

# Below is generated by plot.py at 2017-08-11 14:44:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.88 Mbit/s
95th percentile per-packet one-way delay: 30.897 ms
Loss rate: 10.44%
-- Flow 1:
Average throughput: 55.96 Mbit/s
95th percentile per-packet one-way delay: 25.208 ms
Loss rate: 6.17%
-- Flow 2:
Average throughput: 41.32 Mbit/s
95th percentile per-packet one-way delay: 30.149 ms
Loss rate: 11.74%
-- Flow 3:
Average throughput: 28.50 Mbit/s
95th percentile per-packet one-way delay: 39.657 ms
Loss rate: 27.00%
```

Run 7: Report of Saturator — Data Link



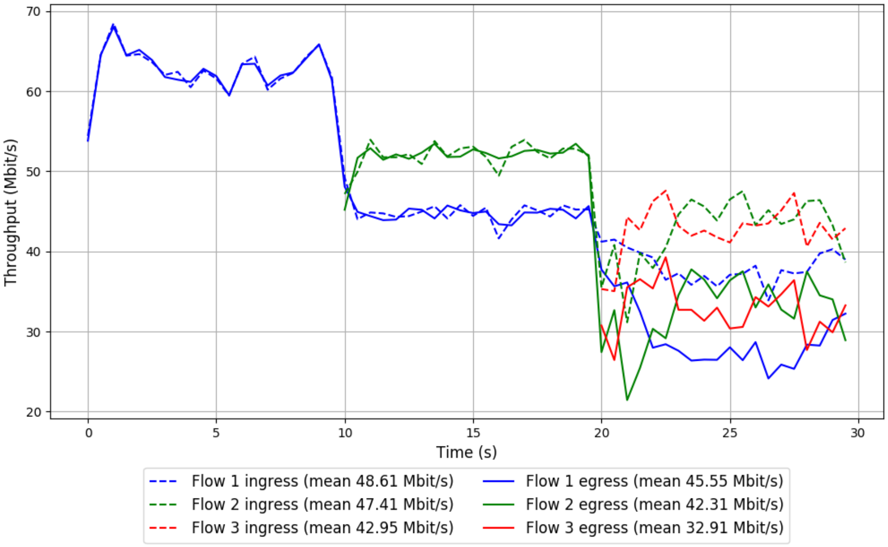


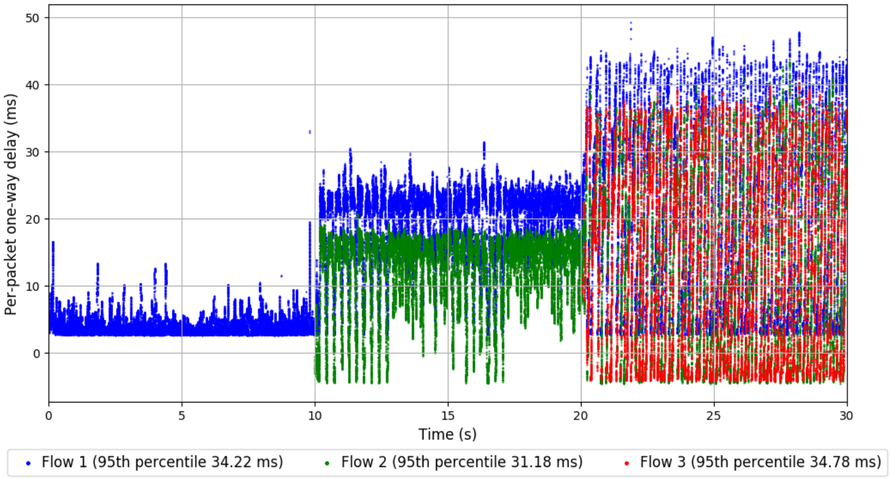
```
Run 8: Statistics of Saturator

Start at: 2017-08-11 11:37:31
End at: 2017-08-11 11:38:01
Local clock offset: -0.892 ms
Remote clock offset: -18.83 ms

# Below is generated by plot.py at 2017-08-11 14:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.62 Mbit/s
95th percentile per-packet one-way delay: 33.359 ms
Loss rate: 10.23%
-- Flow 1:
Average throughput: 45.55 Mbit/s
95th percentile per-packet one-way delay: 34.223 ms
Loss rate: 6.20%
-- Flow 2:
Average throughput: 42.31 Mbit/s
95th percentile per-packet one-way delay: 31.184 ms
Loss rate: 10.61%
-- Flow 3:
Average throughput: 32.91 Mbit/s
95th percentile per-packet one-way delay: 34.778 ms
Loss rate: 23.18%
```

Run 8: Report of Saturator — Data Link



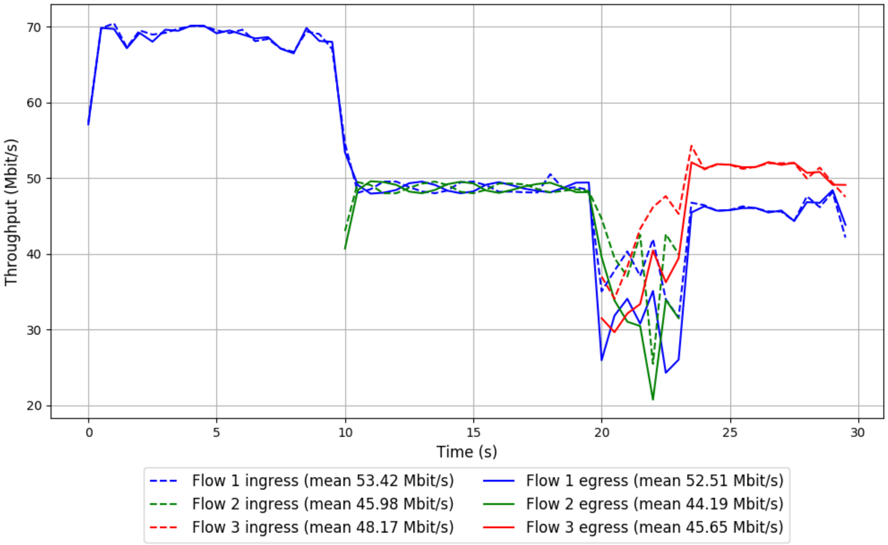


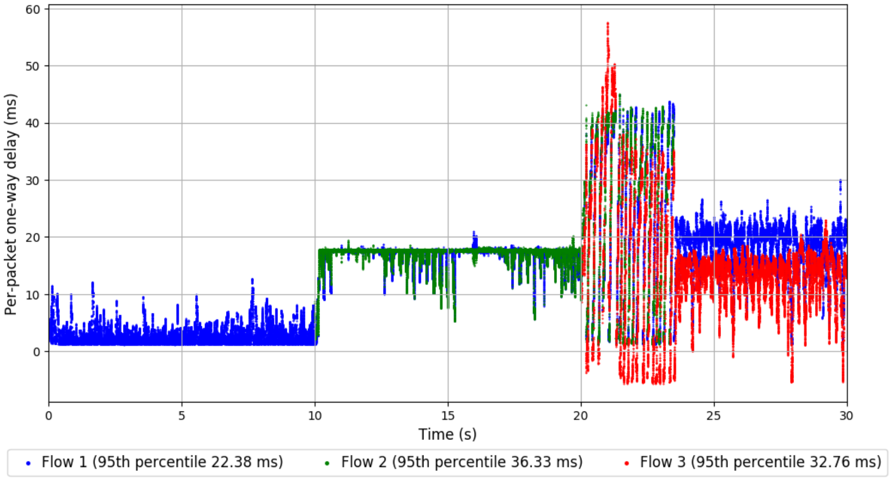
```
Run 9: Statistics of Saturator

Start at: 2017-08-11 12:22:31
End at: 2017-08-11 12:23:01
Local clock offset: 0.16 ms
Remote clock offset: -16.673 ms

# Below is generated by plot.py at 2017-08-11 14:45:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.48 Mbit/s
95th percentile per-packet one-way delay: 28.962 ms
Loss rate: 2.84%
-- Flow 1:
Average throughput: 52.51 Mbit/s
95th percentile per-packet one-way delay: 22.377 ms
Loss rate: 1.64%
-- Flow 2:
Average throughput: 44.19 Mbit/s
95th percentile per-packet one-way delay: 36.333 ms
Loss rate: 4.15%
-- Flow 3:
Average throughput: 45.65 Mbit/s
95th percentile per-packet one-way delay: 32.755 ms
Loss rate: 5.16%
```

Run 9: Report of Saturator — Data Link



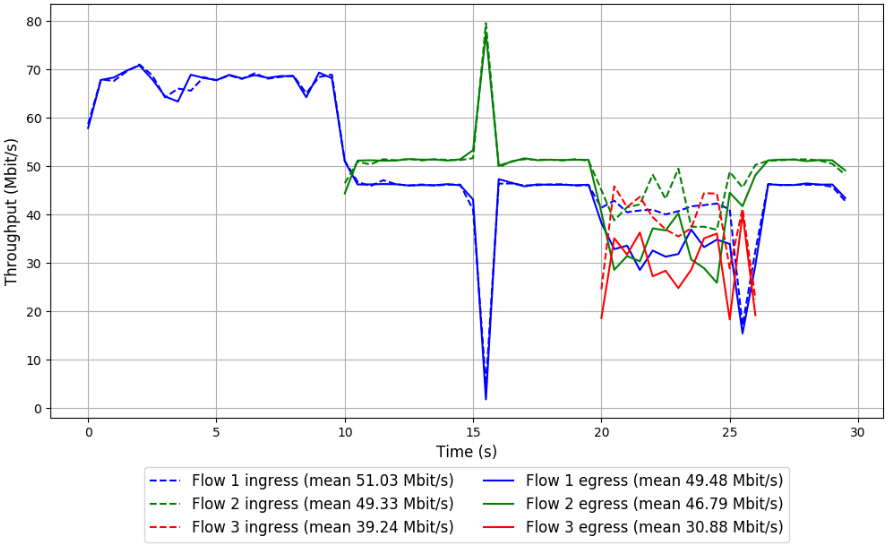


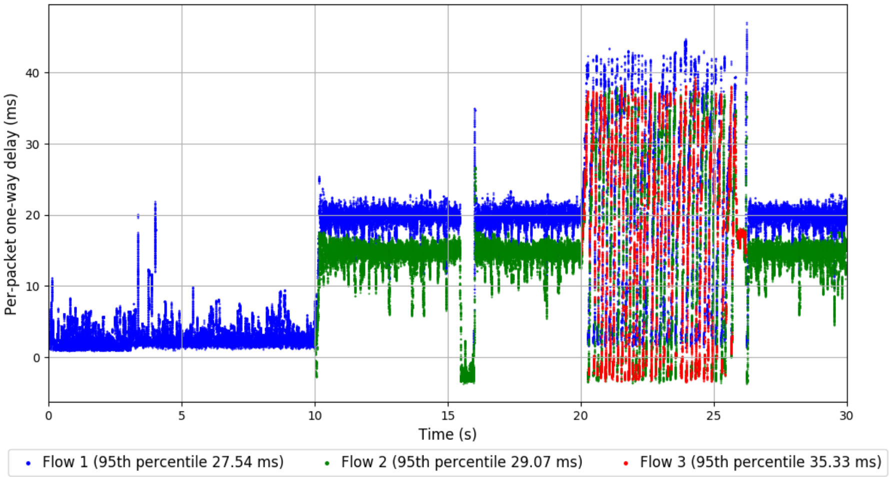
```
Run 10: Statistics of Saturator

Start at: 2017-08-11 13:13:31
End at: 2017-08-11 13:14:01
Local clock offset: 1.066 ms
Remote clock offset: -13.598 ms

# Below is generated by plot.py at 2017-08-11 14:45:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.99 Mbit/s
95th percentile per-packet one-way delay: 30.486 ms
Loss rate: 5.41%
-- Flow 1:
Average throughput: 49.48 Mbit/s
95th percentile per-packet one-way delay: 27.538 ms
Loss rate: 3.00%
-- Flow 2:
Average throughput: 46.79 Mbit/s
95th percentile per-packet one-way delay: 29.072 ms
Loss rate: 5.08%
-- Flow 3:
Average throughput: 30.88 Mbit/s
95th percentile per-packet one-way delay: 35.334 ms
Loss rate: 21.89%
```

Run 10: Report of Saturator — Data Link

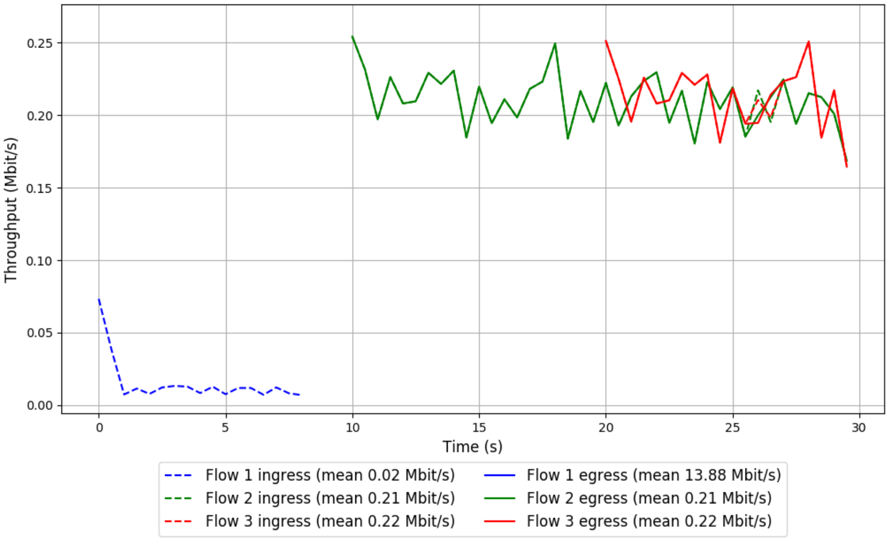


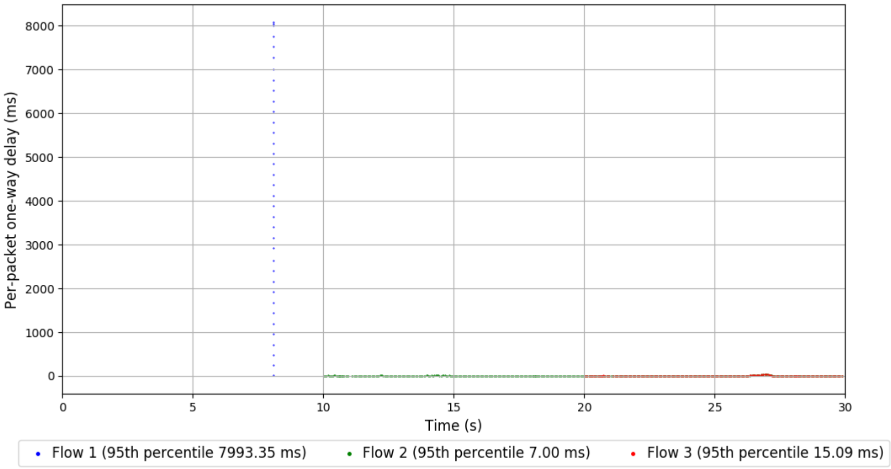


```
Run 1: Statistics of SCReAM

Start at: 2017-08-11 08:39:51
End at: 2017-08-11 08:40:21
Local clock offset: 0.073 ms
Remote clock offset: -19.308 ms
```

Run 1: Report of SCReAM — Data Link



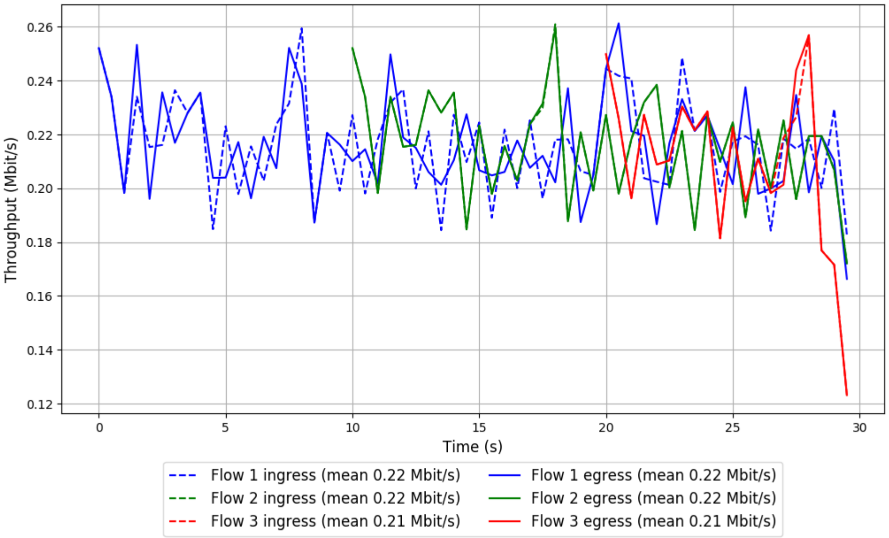


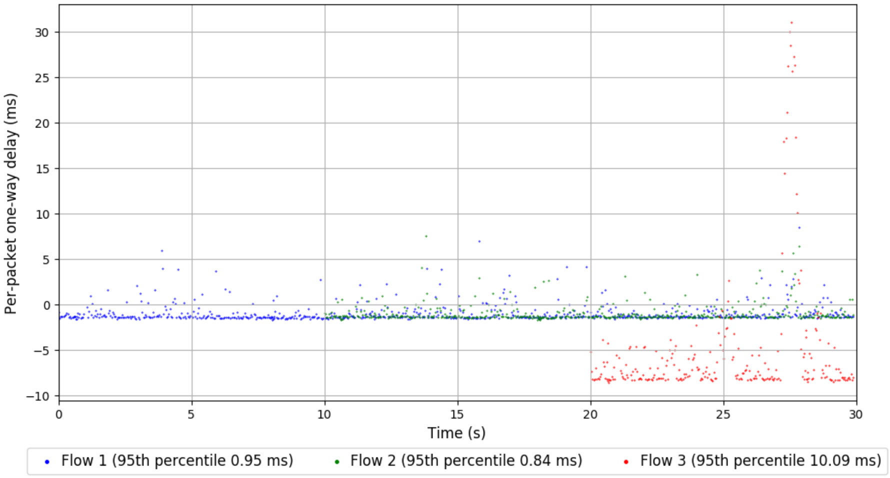
```
Run 2: Statistics of SCReAM

Start at: 2017-08-11 08:57:47
End at: 2017-08-11 08:58:17
Local clock offset: 2.433 ms
Remote clock offset: -21.746 ms

# Below is generated by plot.py at 2017-08-11 14:45:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.022 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.952 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.838 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 10.087 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

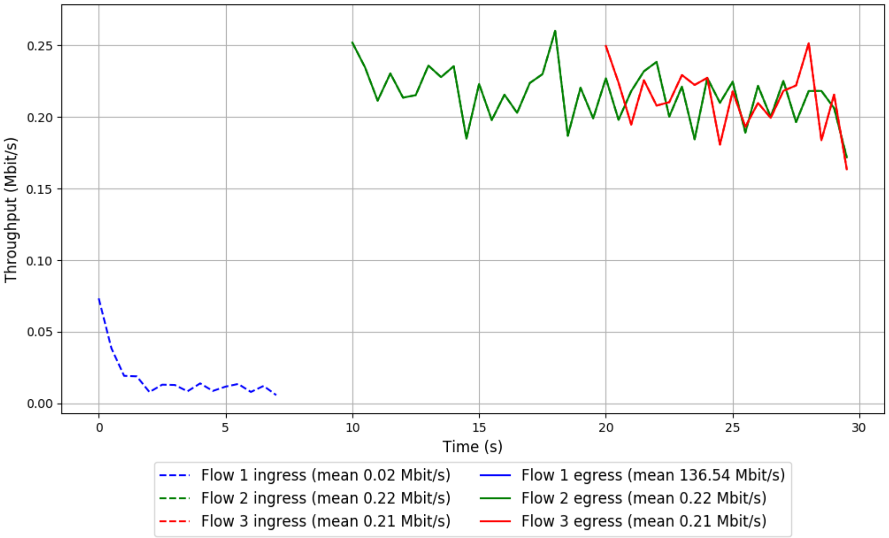


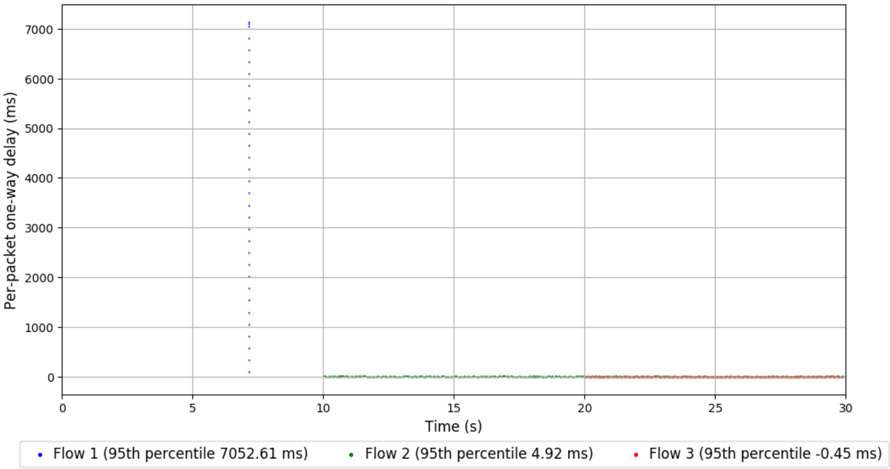


```
Run 3: Statistics of SCReAM

Start at: 2017-08-11 09:17:37
End at: 2017-08-11 09:18:07
Local clock offset: 1.205 ms
Remote clock offset: -19.78 ms
```

Run 3: Report of SCReAM — Data Link



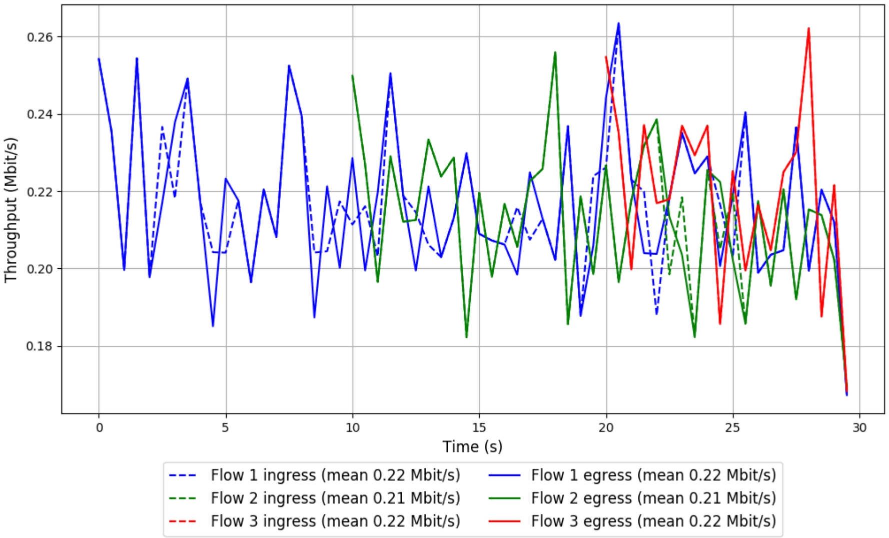


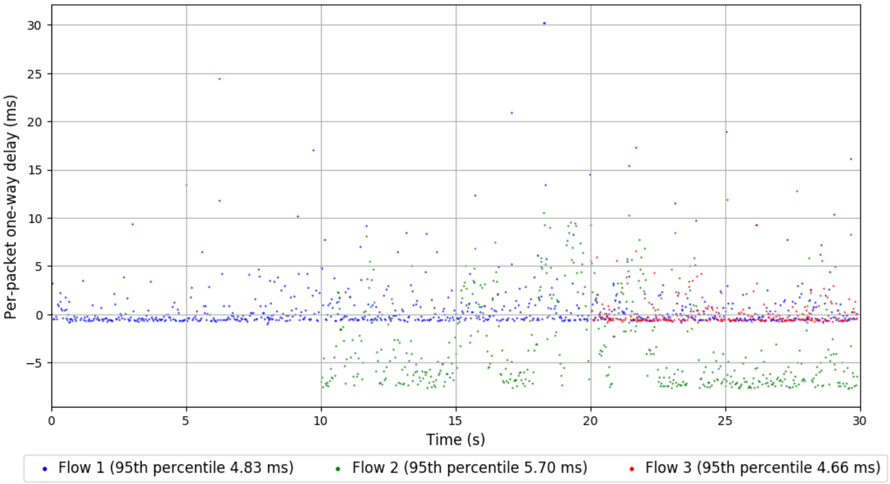
```
Run 4: Statistics of SCReAM

Start at: 2017-08-11 10:10:51
End at: 2017-08-11 10:11:21
Local clock offset: 1.628 ms
Remote clock offset: -23.244 ms

# Below is generated by plot.py at 2017-08-11 14:45:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 5.294 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 4.830 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 5.696 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 4.657 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link



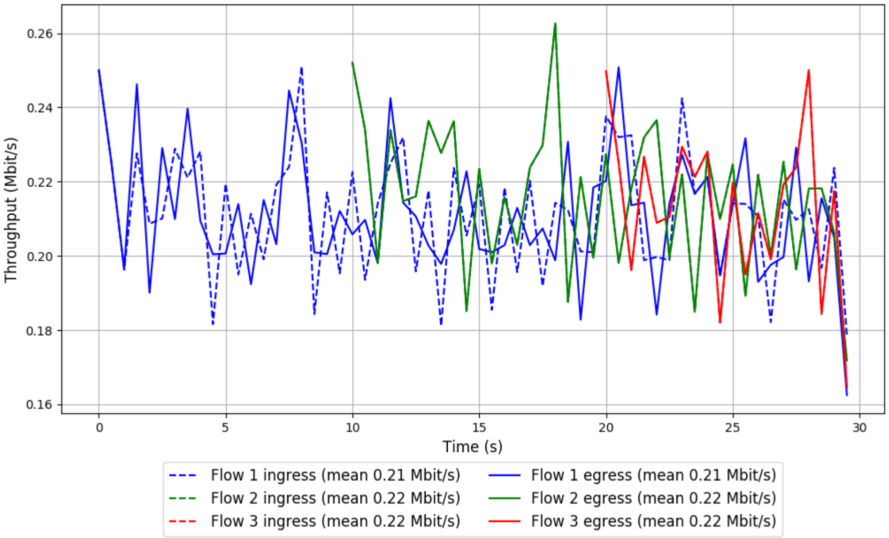


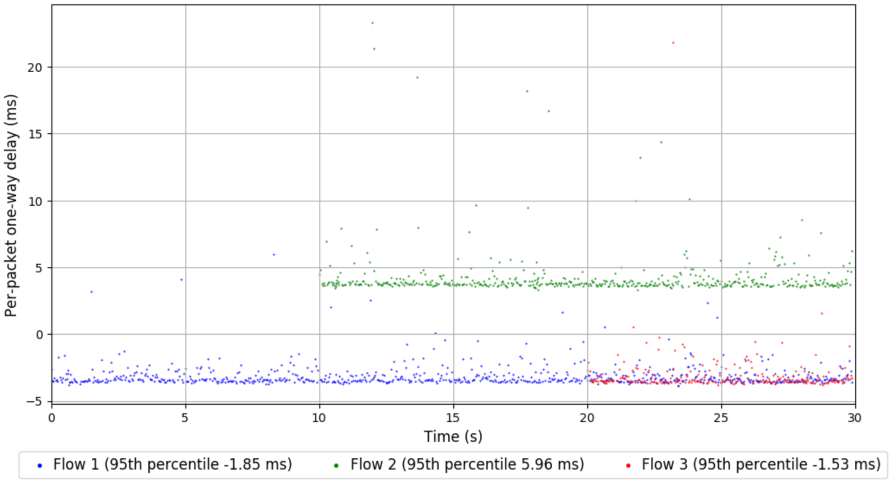
```
Run 5: Statistics of SCReAM

Start at: 2017-08-11 10:32:58
End at: 2017-08-11 10:33:28
Local clock offset: -1.606 ms
Remote clock offset: -22.237 ms

# Below is generated by plot.py at 2017-08-11 14:45:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 4.520 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: -1.850 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 5.957 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: -1.531 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link



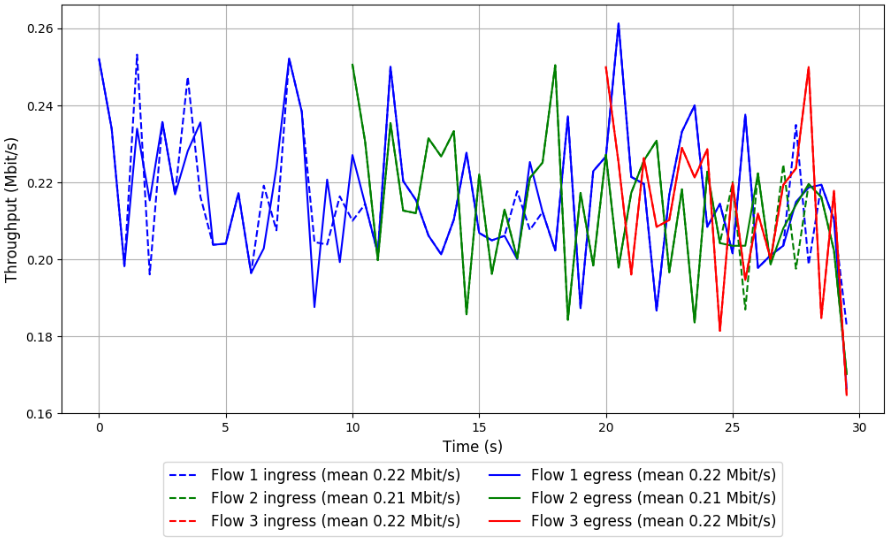


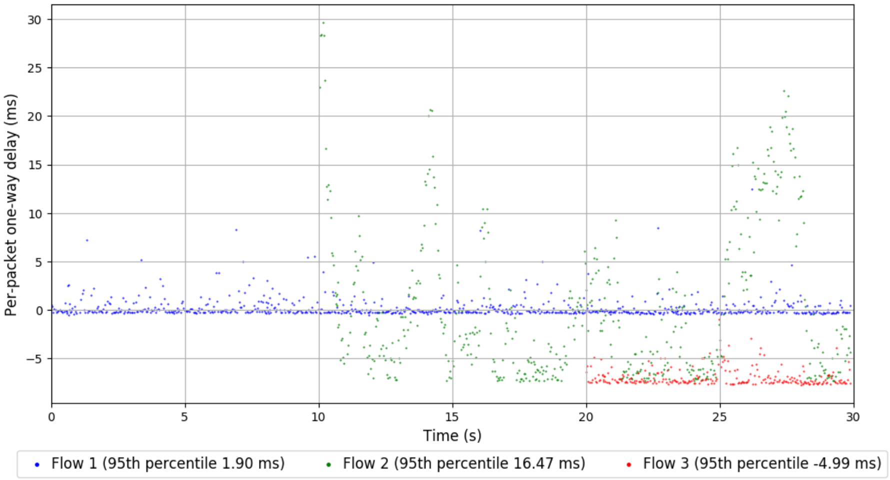
```
Run 6: Statistics of SCReAM

Start at: 2017-08-11 10:51:40
End at: 2017-08-11 10:52:10
Local clock offset: 0.585 ms
Remote clock offset: -23.683 ms

# Below is generated by plot.py at 2017-08-11 14:45:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 9.672 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.895 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 16.470 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: -4.991 ms
Loss rate: 0.00%
```

Run 6: Report of SCReAM — Data Link



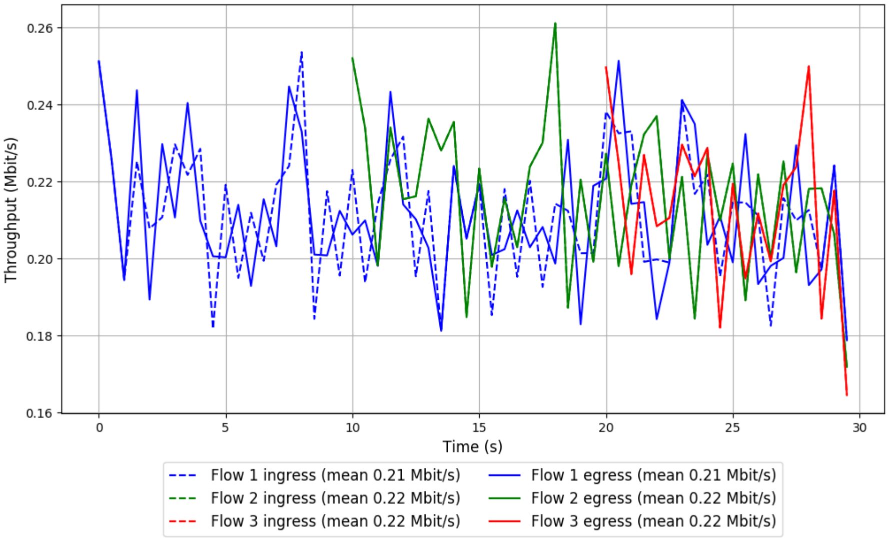


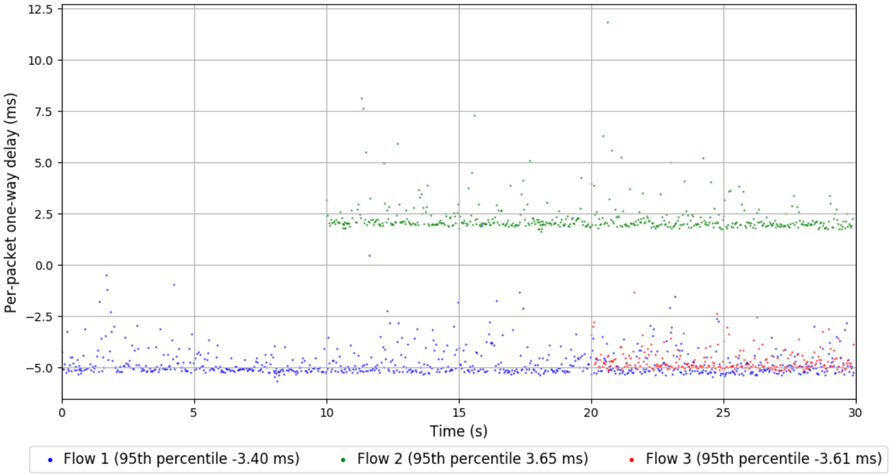
```
Run 7: Statistics of SCReAM

Start at: 2017-08-11 11:12:10
End at: 2017-08-11 11:12:40
Local clock offset: -2.558 ms
Remote clock offset: -23.249 ms

# Below is generated by plot.py at 2017-08-11 14:45:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.574 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: -3.399 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.649 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: -3.608 ms
Loss rate: 0.00%
```

Run 7: Report of SCReAM — Data Link



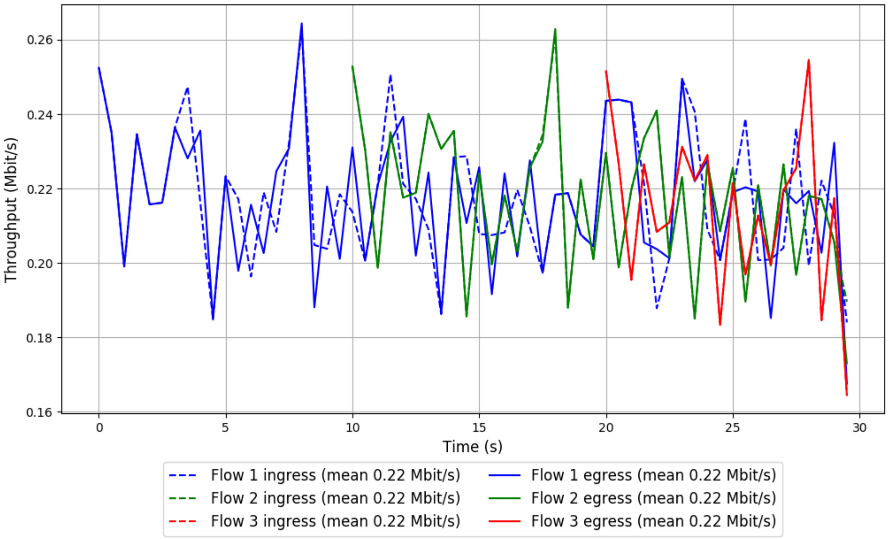


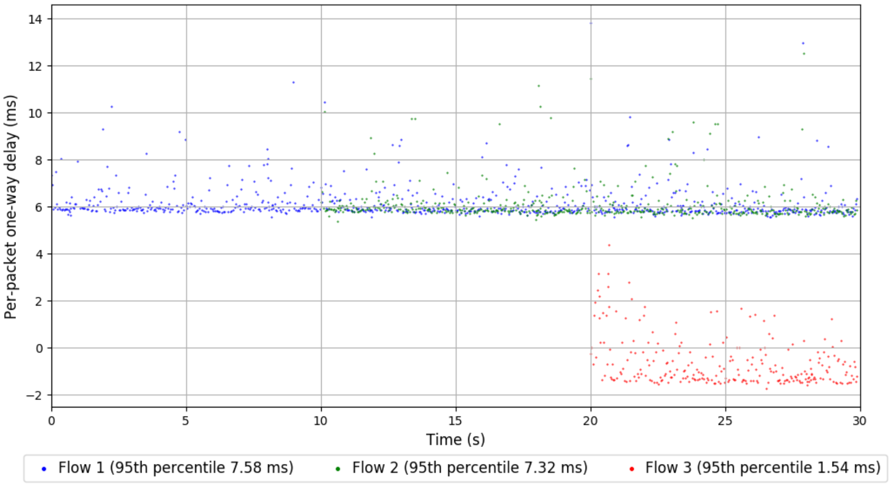
```
Run 8: Statistics of SCReAM

Start at: 2017-08-11 11:48:38
End at: 2017-08-11 11:49:08
Local clock offset: -4.853 ms
Remote clock offset: -19.082 ms

# Below is generated by plot.py at 2017-08-11 14:45:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 7.190 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 7.584 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 7.324 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.543 ms
Loss rate: 0.00%
```

Run 8: Report of SCReAM — Data Link



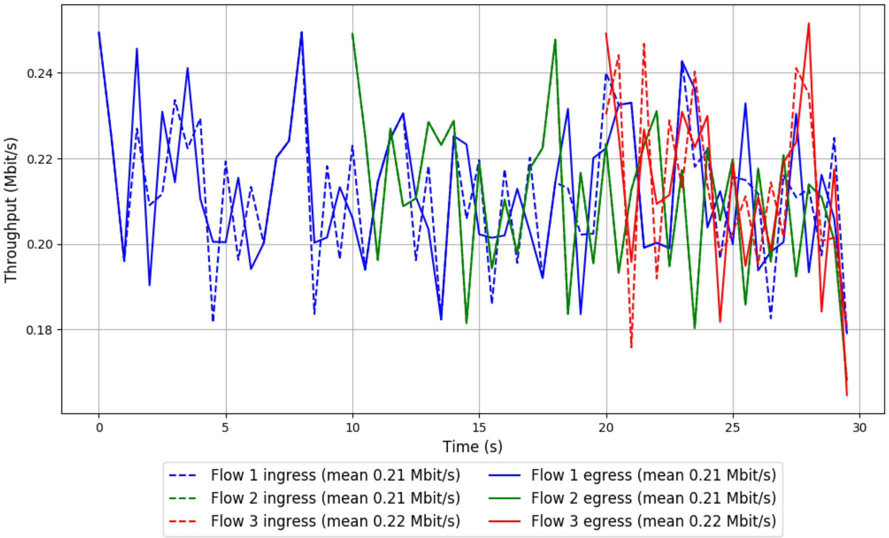


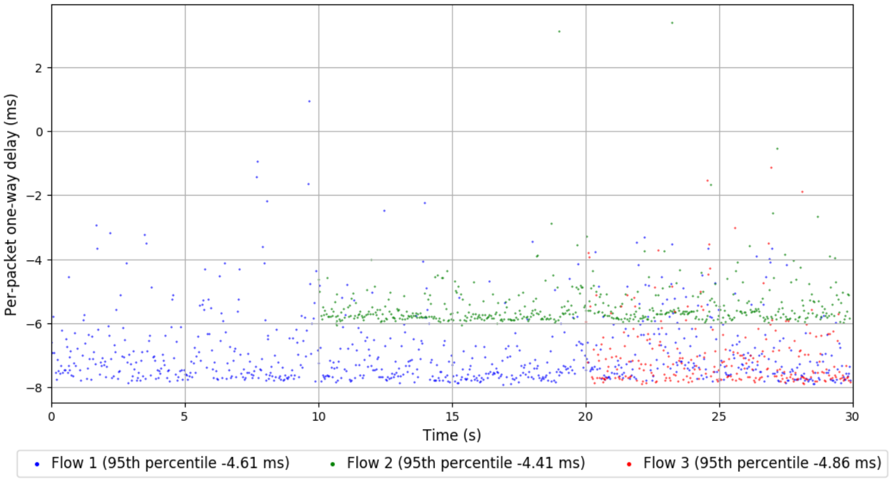
```
Run 9: Statistics of SCReAM

Start at: 2017-08-11 12:30:11
End at: 2017-08-11 12:30:41
Local clock offset: 0.573 ms
Remote clock offset: -18.153 ms

# Below is generated by plot.py at 2017-08-11 14:45:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: -4.544 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: -4.611 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: -4.405 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: -4.861 ms
Loss rate: 0.00%
```

Run 9: Report of SCReAM — Data Link



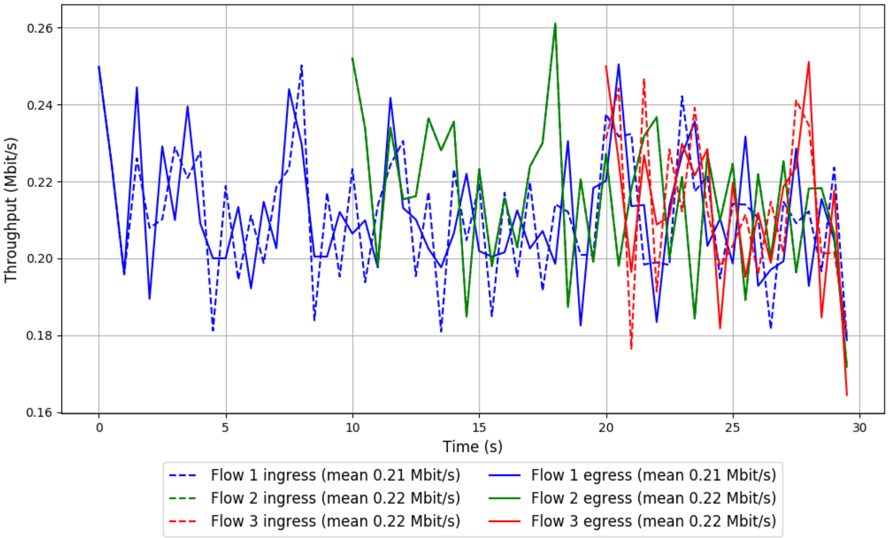


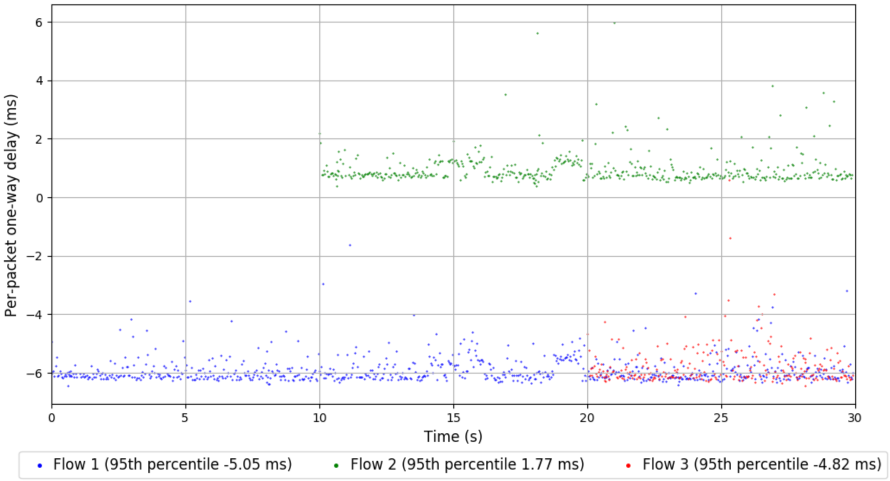
```
Run 10: Statistics of SCReAM

Start at: 2017-08-11 13:21:48
End at: 2017-08-11 13:22:18
Local clock offset: 0.962 ms
Remote clock offset: -13.77 ms

# Below is generated by plot.py at 2017-08-11 14:45:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.234 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: -5.055 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.768 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: -4.817 ms
Loss rate: 0.00%
```

Run 10: Report of SCReAM — Data Link



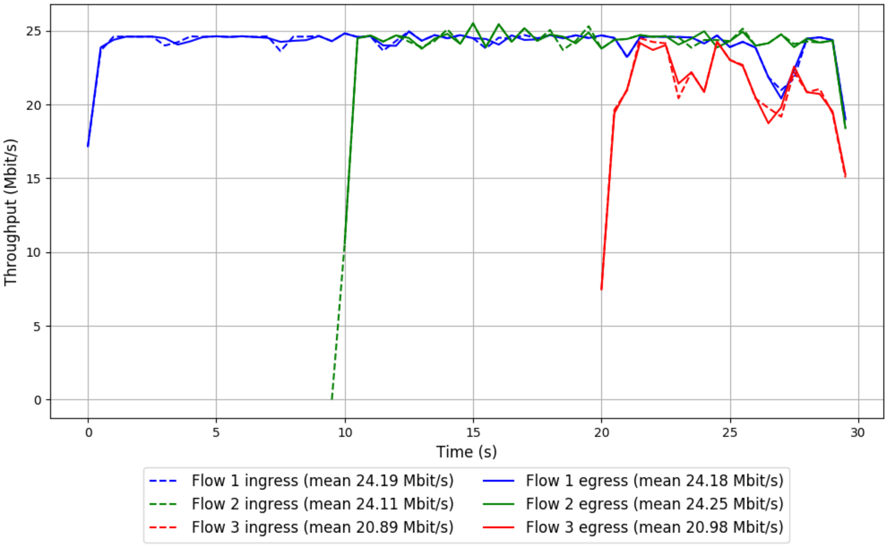


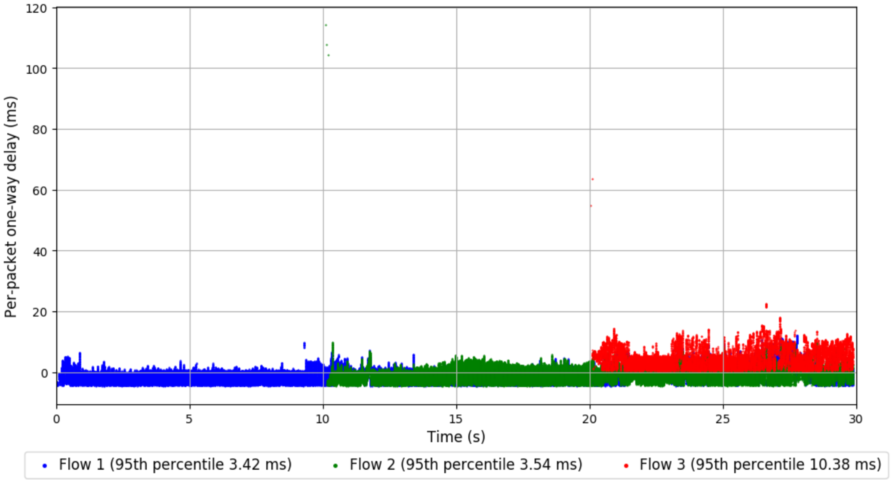
```
Run 1: Statistics of Sprout

Start at: 2017-08-11 08:45:35
End at: 2017-08-11 08:46:05
Local clock offset: 0.249 ms
Remote clock offset: -21.515 ms

# Below is generated by plot.py at 2017-08-11 14:45:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.11 Mbit/s
95th percentile per-packet one-way delay: 6.039 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 24.18 Mbit/s
95th percentile per-packet one-way delay: 3.423 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.25 Mbit/s
95th percentile per-packet one-way delay: 3.540 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.98 Mbit/s
95th percentile per-packet one-way delay: 10.381 ms
Loss rate: 0.04%
```

Run 1: Report of Sprout — Data Link



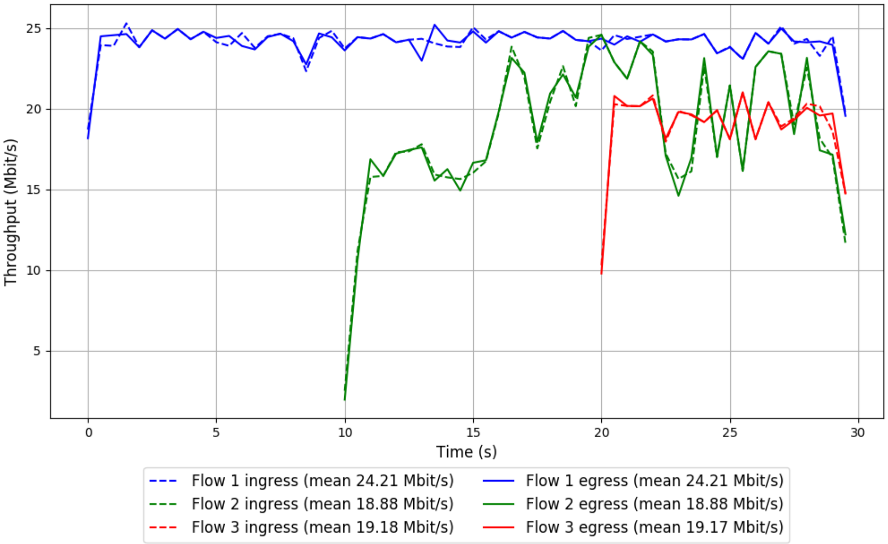


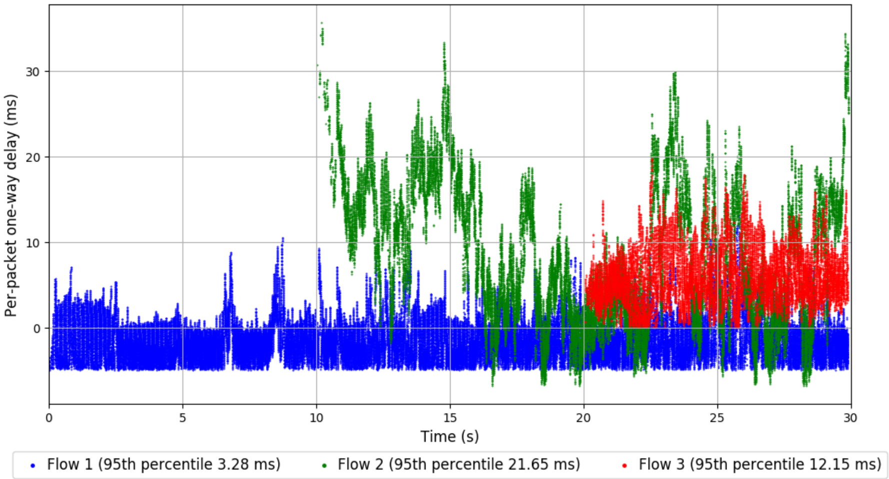
```
Run 2: Statistics of Sprout

Start at: 2017-08-11 09:04:11
End at: 2017-08-11 09:04:41
Local clock offset: 1.195 ms
Remote clock offset: -21.6 ms

# Below is generated by plot.py at 2017-08-11 14:45:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.05 Mbit/s
95th percentile per-packet one-way delay: 16.434 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.21 Mbit/s
95th percentile per-packet one-way delay: 3.280 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 18.88 Mbit/s
95th percentile per-packet one-way delay: 21.646 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.17 Mbit/s
95th percentile per-packet one-way delay: 12.150 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link



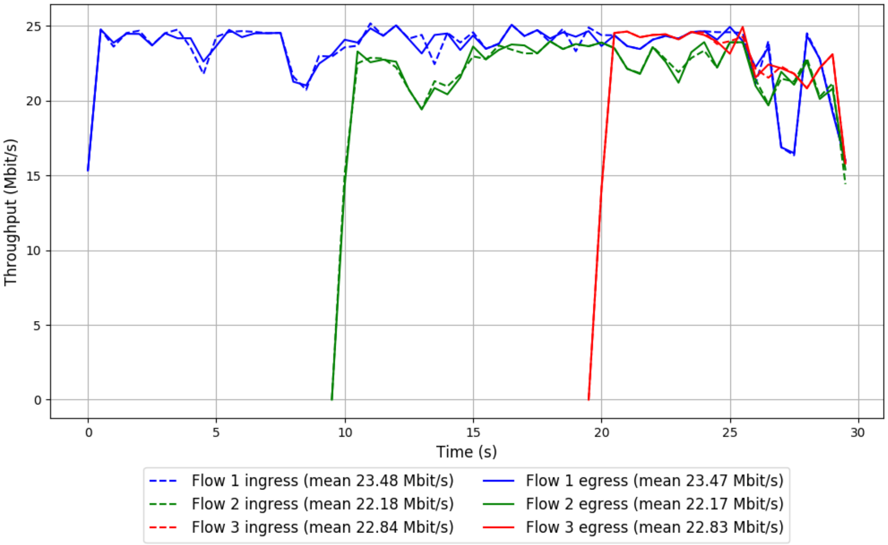


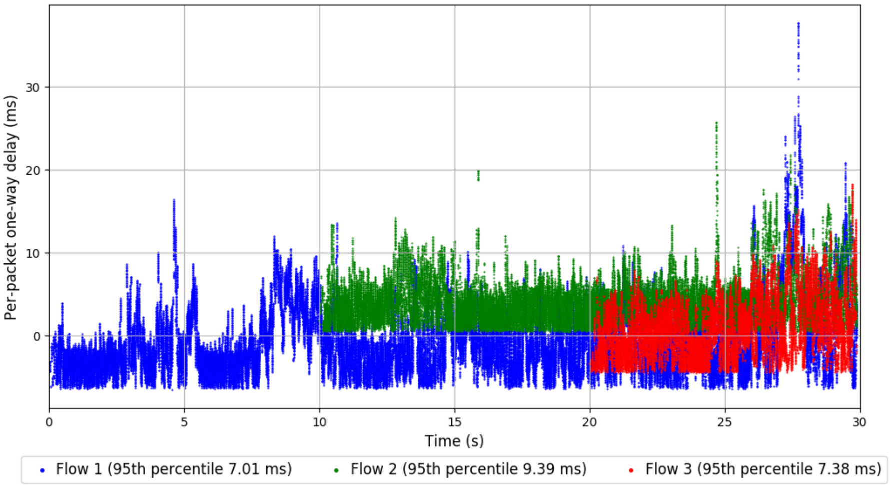
```
Run 3: Statistics of Sprout

Start at: 2017-08-11 09:23:48
End at: 2017-08-11 09:24:18
Local clock offset: 2.583 ms
Remote clock offset: -20.689 ms

# Below is generated by plot.py at 2017-08-11 14:45:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.78 Mbit/s
95th percentile per-packet one-way delay: 8.180 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 23.47 Mbit/s
95th percentile per-packet one-way delay: 7.008 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 22.17 Mbit/s
95th percentile per-packet one-way delay: 9.388 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 22.83 Mbit/s
95th percentile per-packet one-way delay: 7.384 ms
Loss rate: 0.01%
```

Run 3: Report of Sprout — Data Link



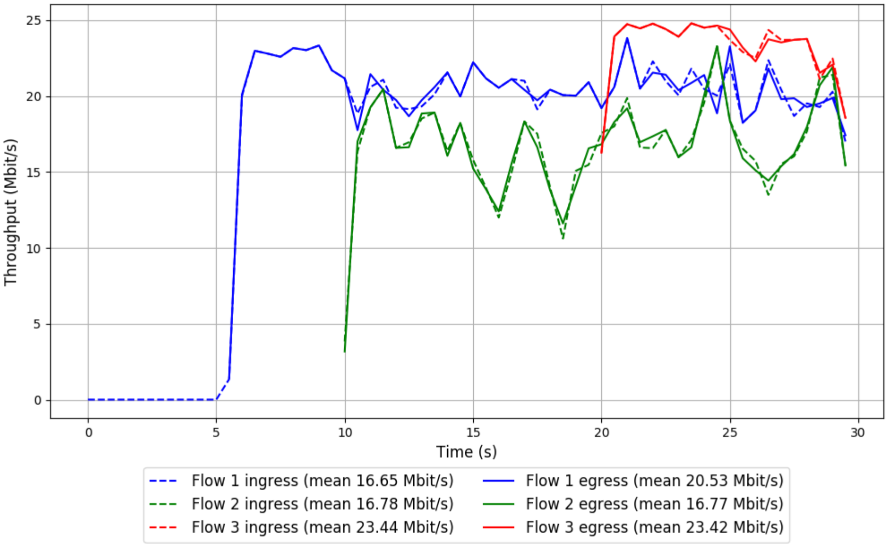


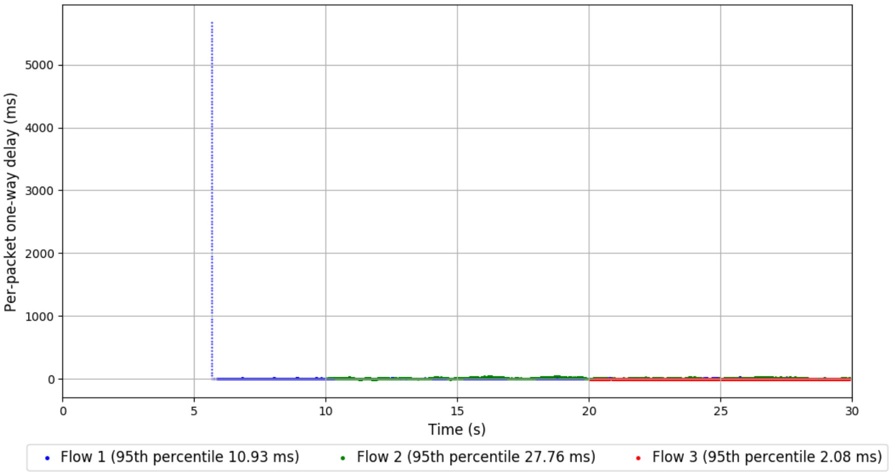
```
Run 4: Statistics of Sprout

Start at: 2017-08-11 10:20:23
End at: 2017-08-11 10:20:53
Local clock offset: 0.896 ms
Remote clock offset: -22.367 ms

# Below is generated by plot.py at 2017-08-11 14:45:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.84 Mbit/s
95th percentile per-packet one-way delay: 22.088 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 20.53 Mbit/s
95th percentile per-packet one-way delay: 10.933 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 16.77 Mbit/s
95th percentile per-packet one-way delay: 27.759 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 23.42 Mbit/s
95th percentile per-packet one-way delay: 2.085 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link



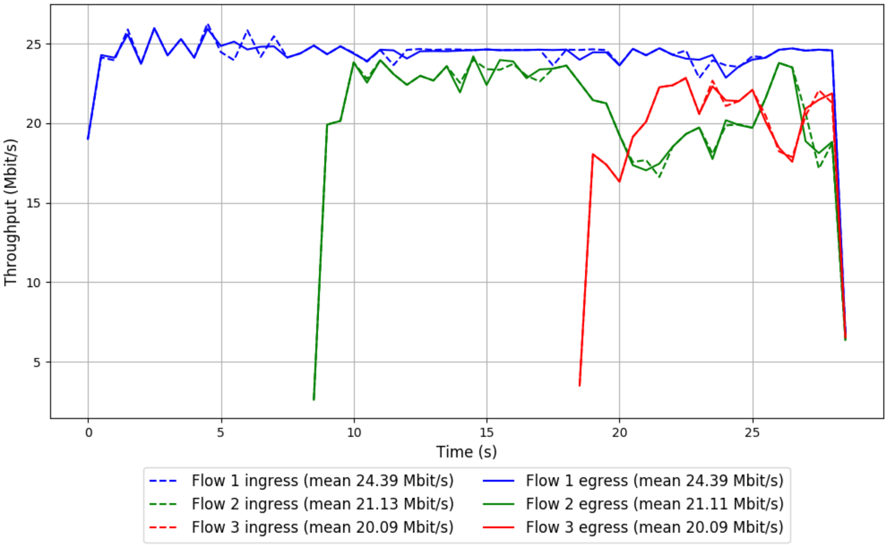


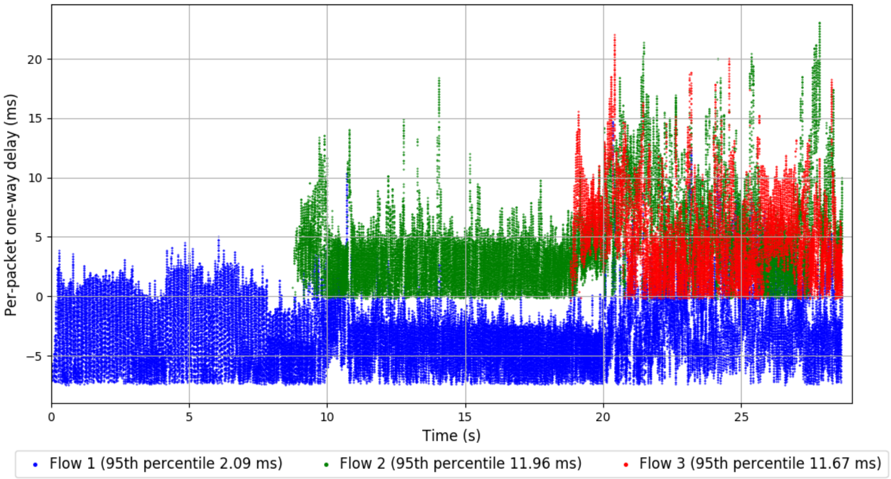
```
Run 5: Statistics of Sprout

Start at: 2017-08-11 10:39:06
End at: 2017-08-11 10:39:36
Local clock offset: 0.831 ms
Remote clock offset: -23.298 ms

# Below is generated by plot.py at 2017-08-11 14:45:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.96 Mbit/s
95th percentile per-packet one-way delay: 9.392 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 24.39 Mbit/s
95th percentile per-packet one-way delay: 2.092 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.11 Mbit/s
95th percentile per-packet one-way delay: 11.956 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 20.09 Mbit/s
95th percentile per-packet one-way delay: 11.668 ms
Loss rate: 0.02%
```

Run 5: Report of Sprout — Data Link



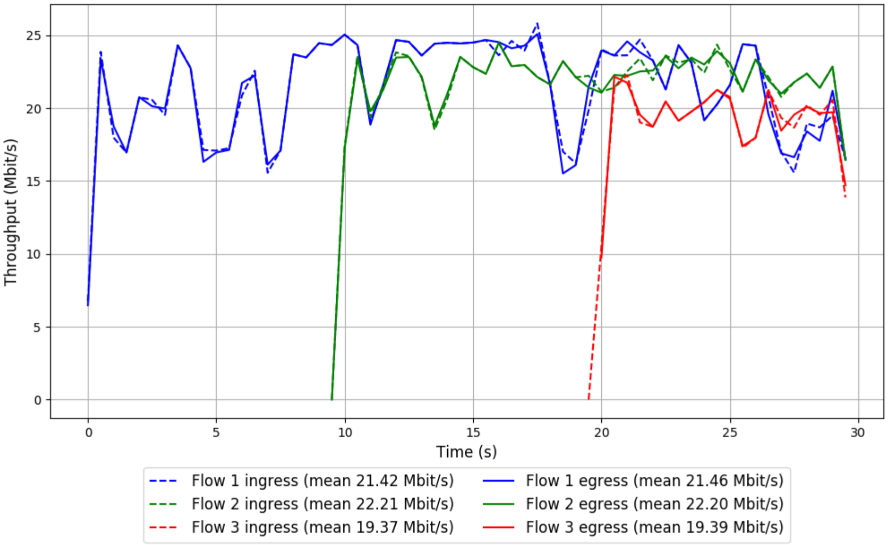


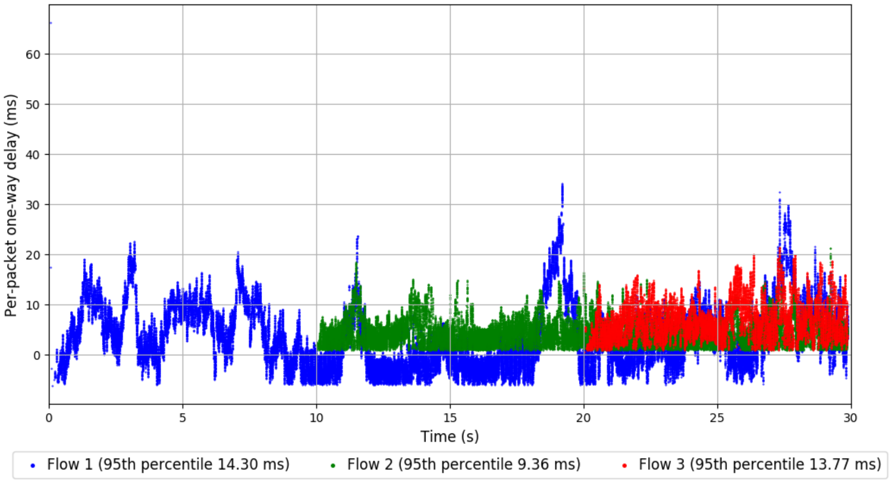
```
Run 6: Statistics of Sprout

Start at: 2017-08-11 10:57:55
End at: 2017-08-11 10:58:25
Local clock offset: 0.608 ms
Remote clock offset: -22.47 ms

# Below is generated by plot.py at 2017-08-11 14:45:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.68 Mbit/s
95th percentile per-packet one-way delay: 12.671 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 21.46 Mbit/s
95th percentile per-packet one-way delay: 14.299 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 22.20 Mbit/s
95th percentile per-packet one-way delay: 9.357 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 19.39 Mbit/s
95th percentile per-packet one-way delay: 13.772 ms
Loss rate: 0.00%
```

Run 6: Report of Sprout — Data Link



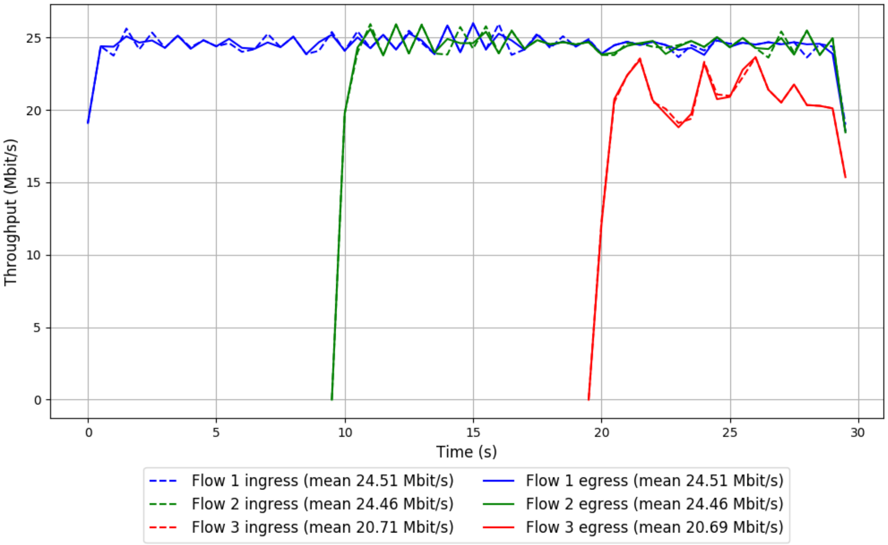


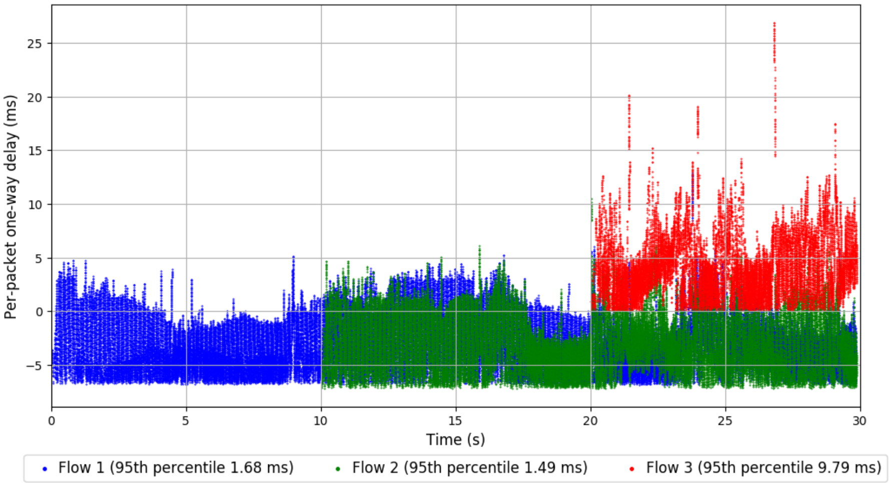
```
Run 7: Statistics of Sprout

Start at: 2017-08-11 11:18:22
End at: 2017-08-11 11:18:52
Local clock offset: 0.405 ms
Remote clock offset: -21.437 ms

# Below is generated by plot.py at 2017-08-11 14:45:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.62 Mbit/s
95th percentile per-packet one-way delay: 5.049 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 24.51 Mbit/s
95th percentile per-packet one-way delay: 1.681 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 24.46 Mbit/s
95th percentile per-packet one-way delay: 1.488 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 20.69 Mbit/s
95th percentile per-packet one-way delay: 9.792 ms
Loss rate: 0.08%
```

Run 7: Report of Sprout — Data Link



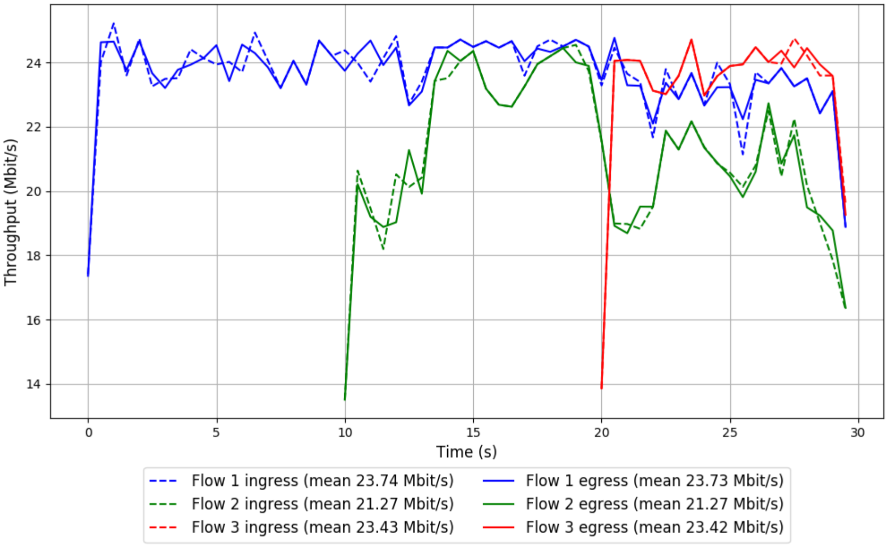


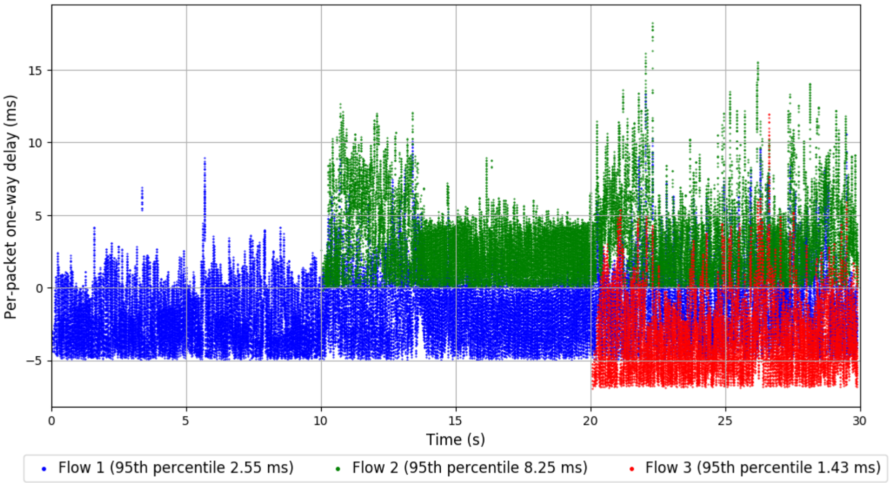
```
Run 8: Statistics of Sprout

Start at: 2017-08-11 12:00:18
End at: 2017-08-11 12:00:48
Local clock offset: 1.437 ms
Remote clock offset: -17.446 ms

# Below is generated by plot.py at 2017-08-11 14:45:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.61 Mbit/s
95th percentile per-packet one-way delay: 5.813 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 23.73 Mbit/s
95th percentile per-packet one-way delay: 2.552 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.27 Mbit/s
95th percentile per-packet one-way delay: 8.252 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 23.42 Mbit/s
95th percentile per-packet one-way delay: 1.433 ms
Loss rate: 0.06%
```

Run 8: Report of Sprout — Data Link

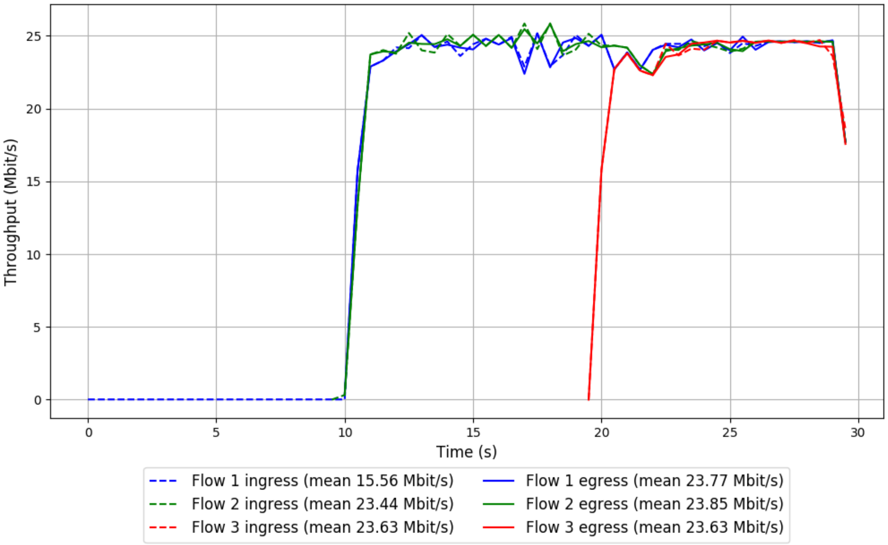


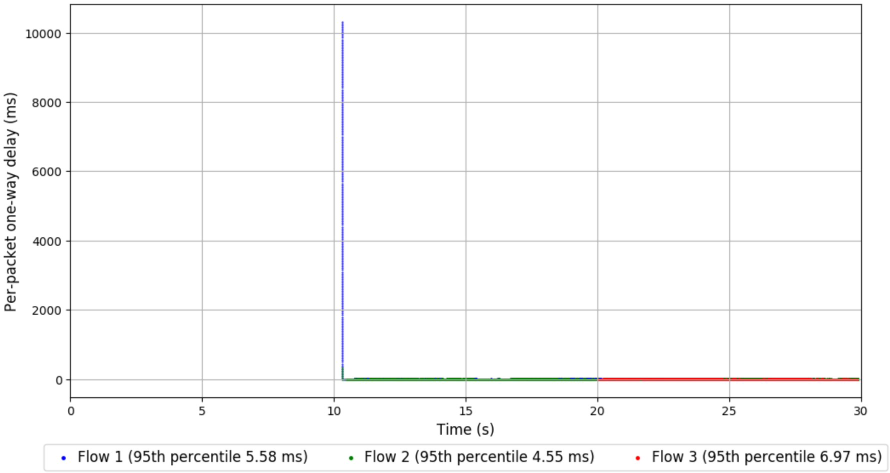


```
Run 9: Statistics of Sprout

Start at: 2017-08-11 12:41:14
End at: 2017-08-11 12:41:44
Local clock offset: -0.585 ms
Remote clock offset: -15.216 ms
```

Run 9: Report of Sprout — Data Link

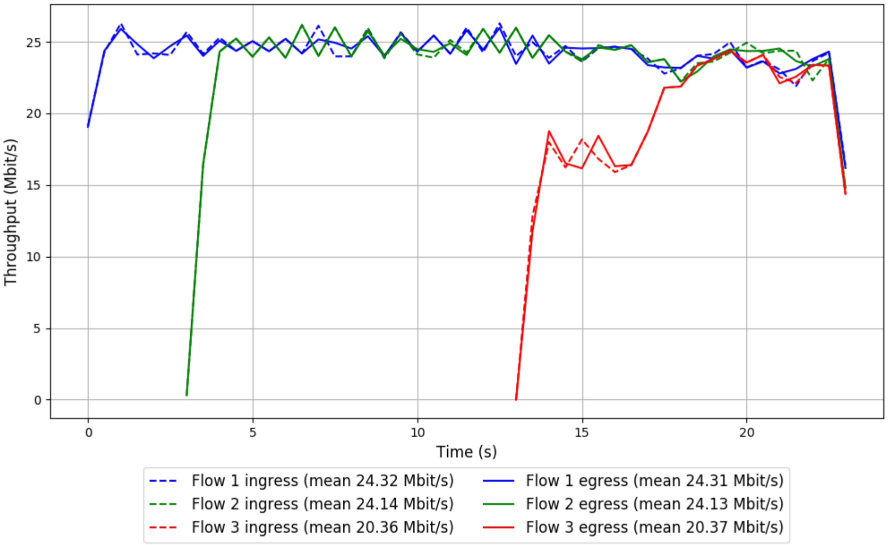


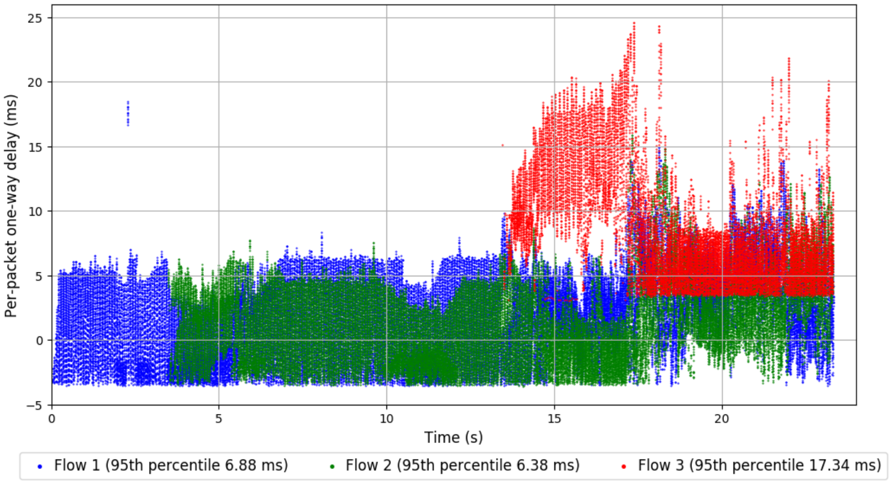


```
Run 10: Statistics of Sprout

Start at: 2017-08-11 13:27:35
End at: 2017-08-11 13:28:05
Local clock offset: -1.971 ms
Remote clock offset: -13.528 ms
```

Run 10: Report of Sprout — Data Link



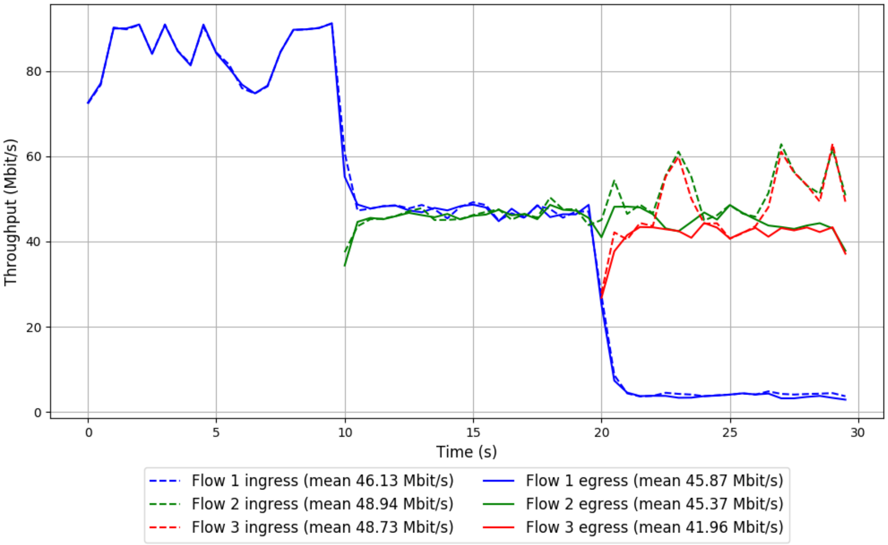


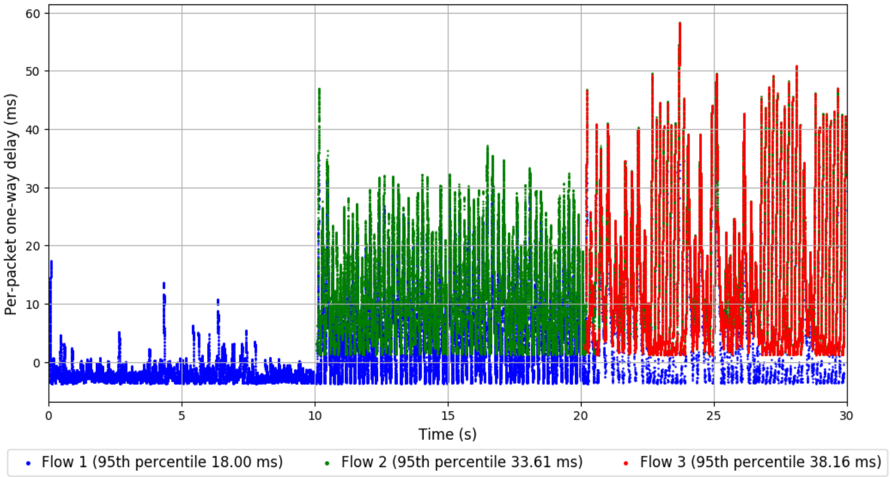
```
Run 1: Statistics of TaoVA-100x

Start at: 2017-08-11 08:47:54
End at: 2017-08-11 08:48:24
Local clock offset: -1.439 ms
Remote clock offset: -22.431 ms

# Below is generated by plot.py at 2017-08-11 14:46:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.81 Mbit/s
95th percentile per-packet one-way delay: 29.391 ms
Loss rate: 5.11%
-- Flow 1:
Average throughput: 45.87 Mbit/s
95th percentile per-packet one-way delay: 18.001 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 45.37 Mbit/s
95th percentile per-packet one-way delay: 33.608 ms
Loss rate: 7.28%
-- Flow 3:
Average throughput: 41.96 Mbit/s
95th percentile per-packet one-way delay: 38.162 ms
Loss rate: 13.87%
```

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



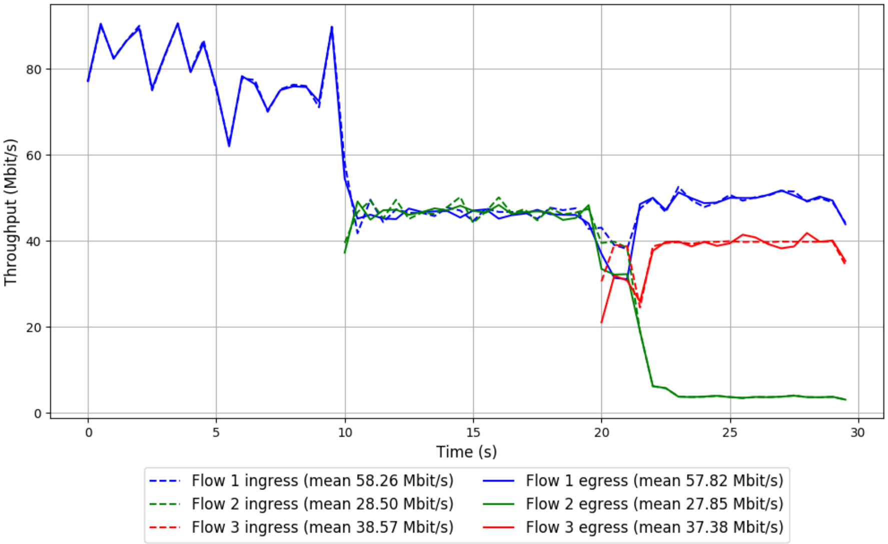


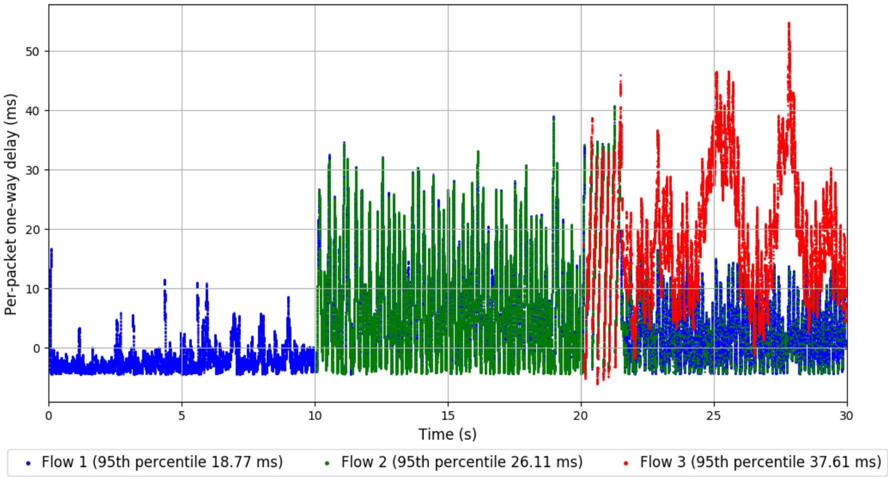
```
Run 2: Statistics of TaoVA-100x

Start at: 2017-08-11 09:06:46
End at: 2017-08-11 09:07:16
Local clock offset: 0.777 ms
Remote clock offset: -21.572 ms

# Below is generated by plot.py at 2017-08-11 14:46:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.66 Mbit/s
95th percentile per-packet one-way delay: 26.823 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 57.82 Mbit/s
95th percentile per-packet one-way delay: 18.773 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 27.85 Mbit/s
95th percentile per-packet one-way delay: 26.115 ms
Loss rate: 2.25%
-- Flow 3:
Average throughput: 37.38 Mbit/s
95th percentile per-packet one-way delay: 37.613 ms
Loss rate: 3.03%
```

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



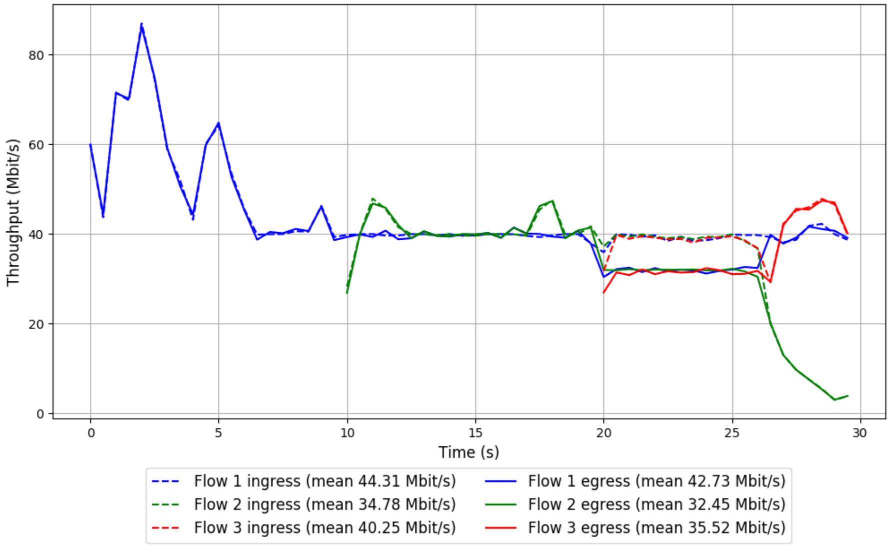


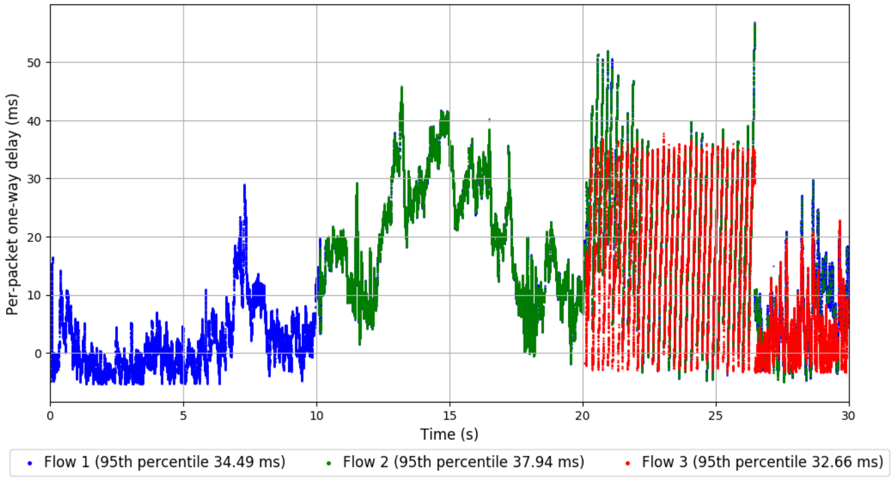
```
Run 3: Statistics of TaoVA-100x

Start at: 2017-08-11 09:26:23
End at: 2017-08-11 09:26:53
Local clock offset: 1.299 ms
Remote clock offset: -20.881 ms

# Below is generated by plot.py at 2017-08-11 14:46:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.04 Mbit/s
95th percentile per-packet one-way delay: 35.086 ms
Loss rate: 5.79%
-- Flow 1:
Average throughput: 42.73 Mbit/s
95th percentile per-packet one-way delay: 34.489 ms
Loss rate: 3.53%
-- Flow 2:
Average throughput: 32.45 Mbit/s
95th percentile per-packet one-way delay: 37.935 ms
Loss rate: 6.72%
-- Flow 3:
Average throughput: 35.52 Mbit/s
95th percentile per-packet one-way delay: 32.662 ms
Loss rate: 11.69%
```

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



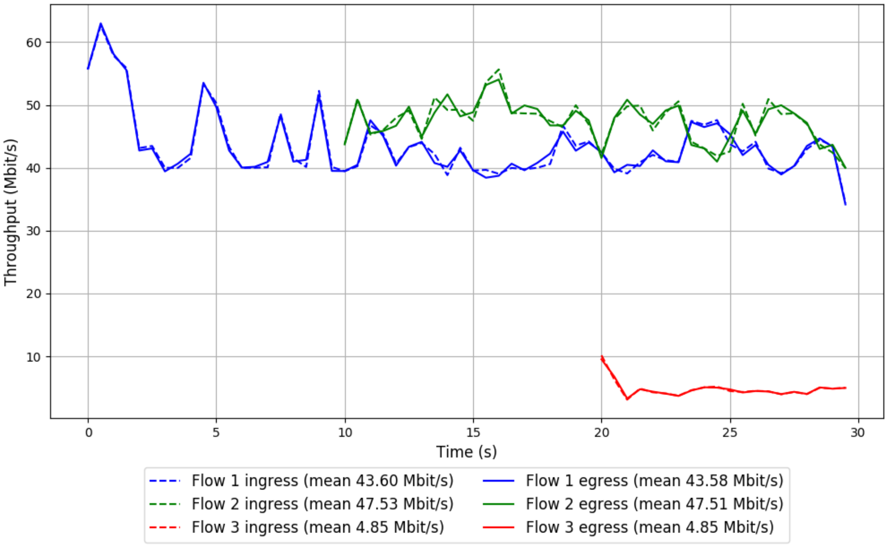


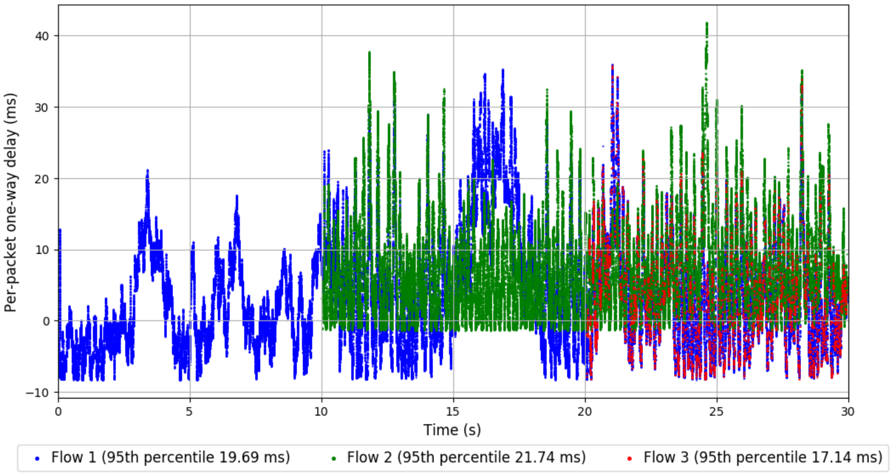
```
Run 4: Statistics of TaoVA-100x

Start at: 2017-08-11 10:22:47
End at: 2017-08-11 10:23:17
Local clock offset: 0.693 ms
Remote clock offset: -24.773 ms

# Below is generated by plot.py at 2017-08-11 14:46:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.79 Mbit/s
95th percentile per-packet one-way delay: 20.494 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 43.58 Mbit/s
95th percentile per-packet one-way delay: 19.686 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 47.51 Mbit/s
95th percentile per-packet one-way delay: 21.740 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 17.142 ms
Loss rate: 0.03%
```

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



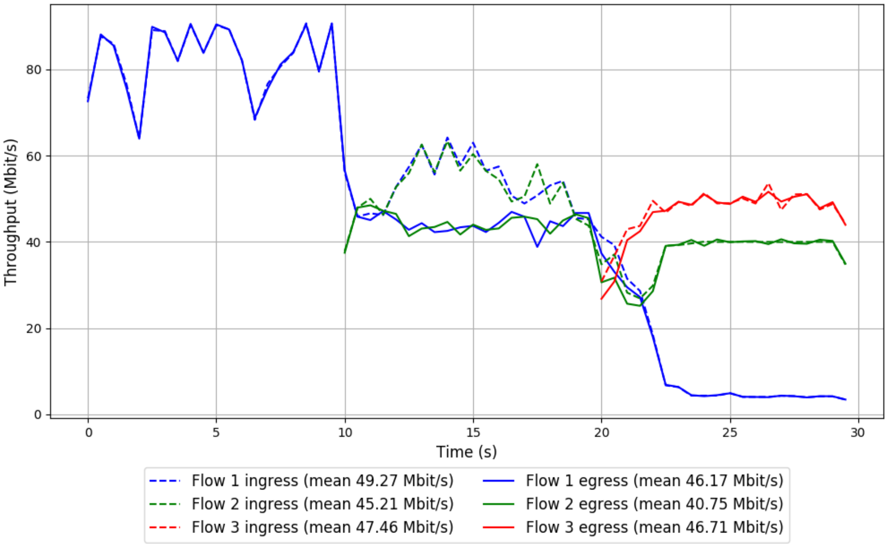


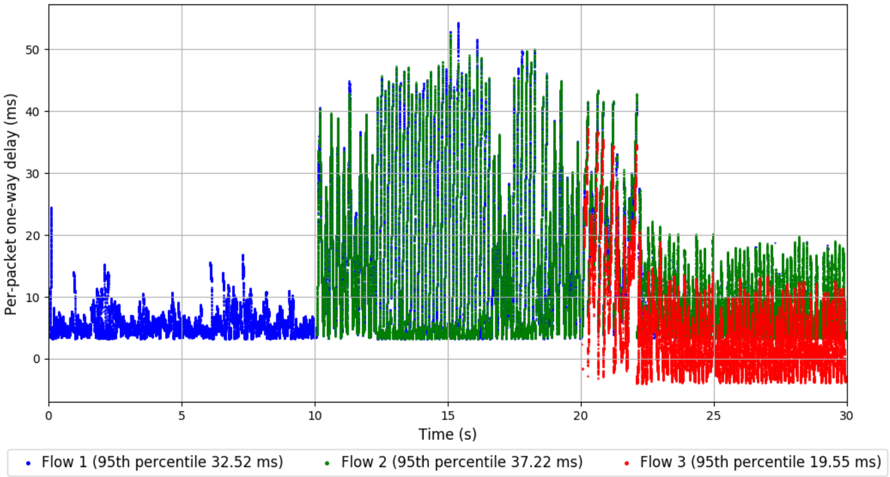
```
Run 5: Statistics of TaoVA-100x

Start at: 2017-08-11 10:41:29
End at: 2017-08-11 10:41:59
Local clock offset: -2.538 ms
Remote clock offset: -23.328 ms

# Below is generated by plot.py at 2017-08-11 14:46:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.70 Mbit/s
95th percentile per-packet one-way delay: 33.126 ms
Loss rate: 6.65%
-- Flow 1:
Average throughput: 46.17 Mbit/s
95th percentile per-packet one-way delay: 32.520 ms
Loss rate: 6.30%
-- Flow 2:
Average throughput: 40.75 Mbit/s
95th percentile per-packet one-way delay: 37.220 ms
Loss rate: 9.85%
-- Flow 3:
Average throughput: 46.71 Mbit/s
95th percentile per-packet one-way delay: 19.553 ms
Loss rate: 1.63%
```

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



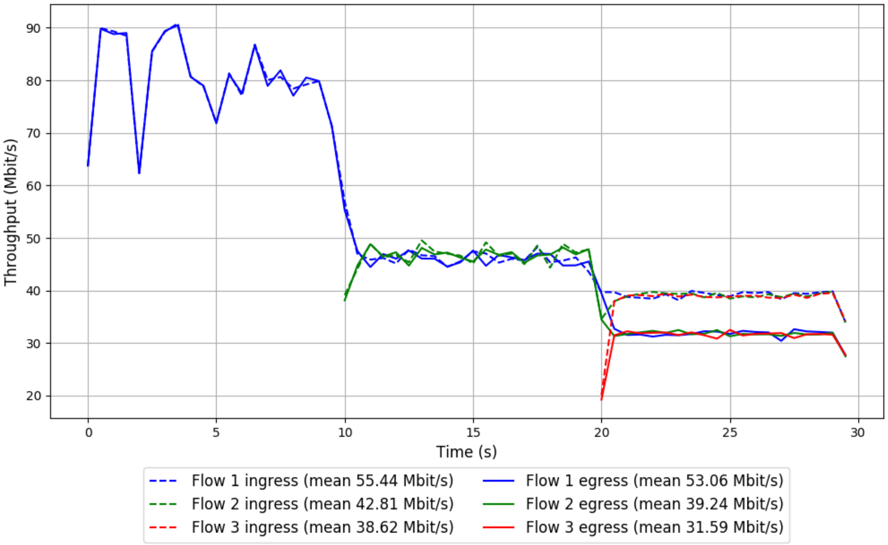


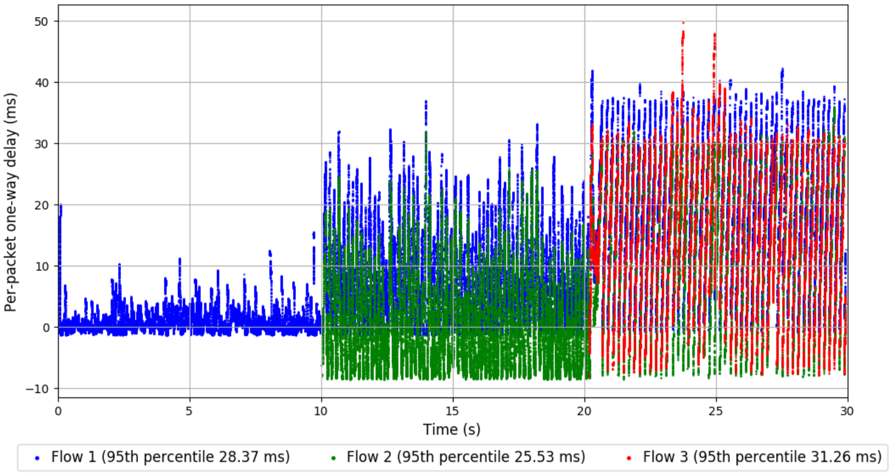
```
Run 6: Statistics of TaoVA-100x

Start at: 2017-08-11 11:00:25
End at: 2017-08-11 11:00:55
Local clock offset: 1.033 ms
Remote clock offset: -24.153 ms

# Below is generated by plot.py at 2017-08-11 14:46:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.47 Mbit/s
95th percentile per-packet one-way delay: 28.291 ms
Loss rate: 7.27%
-- Flow 1:
Average throughput: 53.06 Mbit/s
95th percentile per-packet one-way delay: 28.368 ms
Loss rate: 4.26%
-- Flow 2:
Average throughput: 39.24 Mbit/s
95th percentile per-packet one-way delay: 25.527 ms
Loss rate: 8.29%
-- Flow 3:
Average throughput: 31.59 Mbit/s
95th percentile per-packet one-way delay: 31.260 ms
Loss rate: 18.19%
```

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



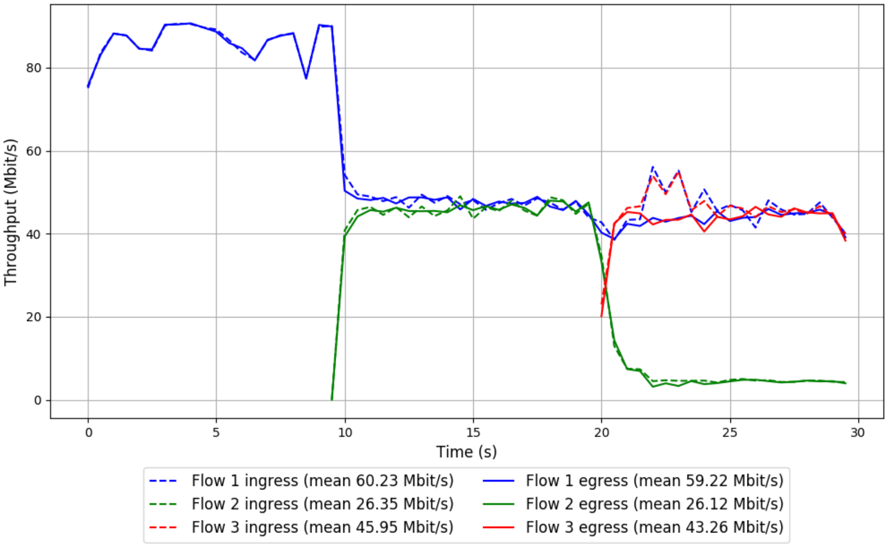


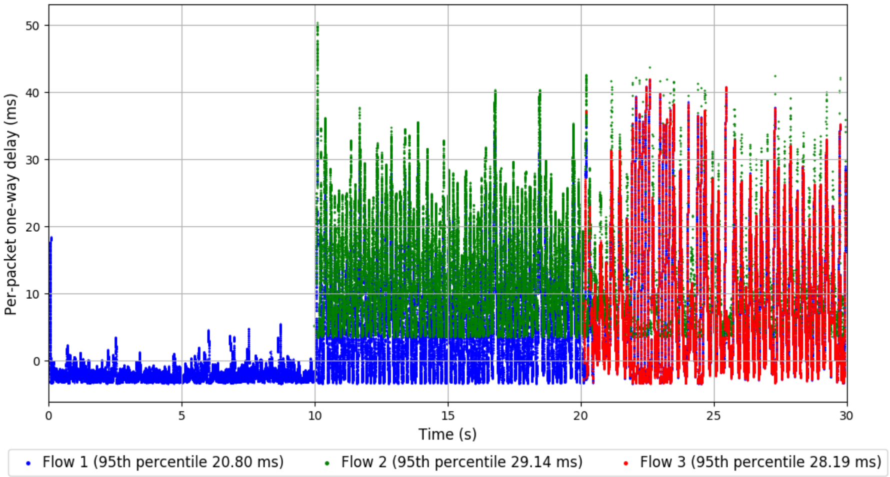
```
Run 7: Statistics of TaoVA-100x

Start at: 2017-08-11 11:20:54
End at: 2017-08-11 11:21:24
Local clock offset: -2.718 ms
Remote clock offset: -20.901 ms

# Below is generated by plot.py at 2017-08-11 14:47:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.87 Mbit/s
95th percentile per-packet one-way delay: 25.109 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 59.22 Mbit/s
95th percentile per-packet one-way delay: 20.795 ms
Loss rate: 1.57%
-- Flow 2:
Average throughput: 26.12 Mbit/s
95th percentile per-packet one-way delay: 29.142 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 43.26 Mbit/s
95th percentile per-packet one-way delay: 28.186 ms
Loss rate: 5.66%
```

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



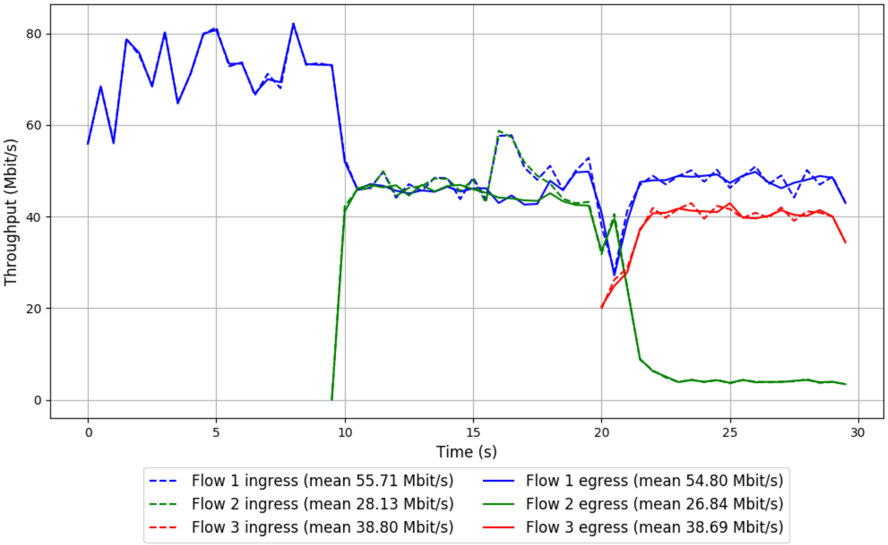


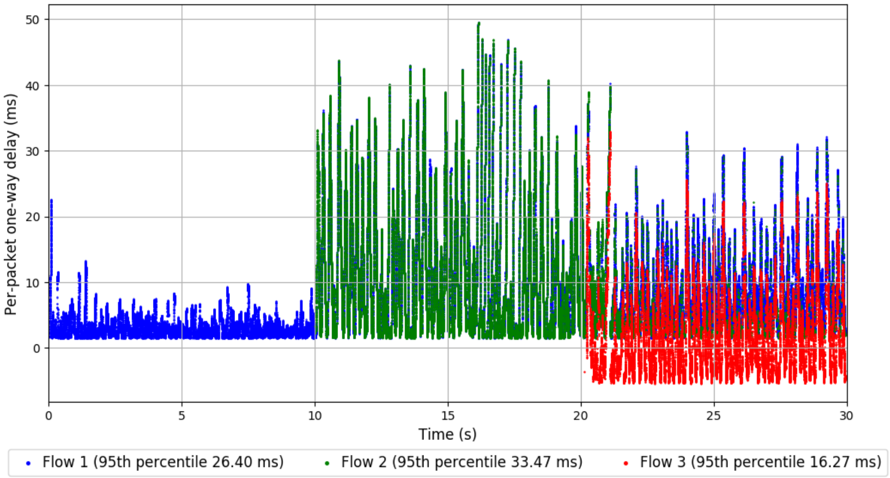
```
Run 8: Statistics of TaoVA-100x

Start at: 2017-08-11 12:05:33
End at: 2017-08-11 12:06:03
Local clock offset: -0.755 ms
Remote clock offset: -17.885 ms

# Below is generated by plot.py at 2017-08-11 14:47:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.32 Mbit/s
95th percentile per-packet one-way delay: 27.779 ms
Loss rate: 2.09%
-- Flow 1:
Average throughput: 54.80 Mbit/s
95th percentile per-packet one-way delay: 26.400 ms
Loss rate: 1.65%
-- Flow 2:
Average throughput: 26.84 Mbit/s
95th percentile per-packet one-way delay: 33.474 ms
Loss rate: 4.63%
-- Flow 3:
Average throughput: 38.69 Mbit/s
95th percentile per-packet one-way delay: 16.266 ms
Loss rate: 0.28%
```

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



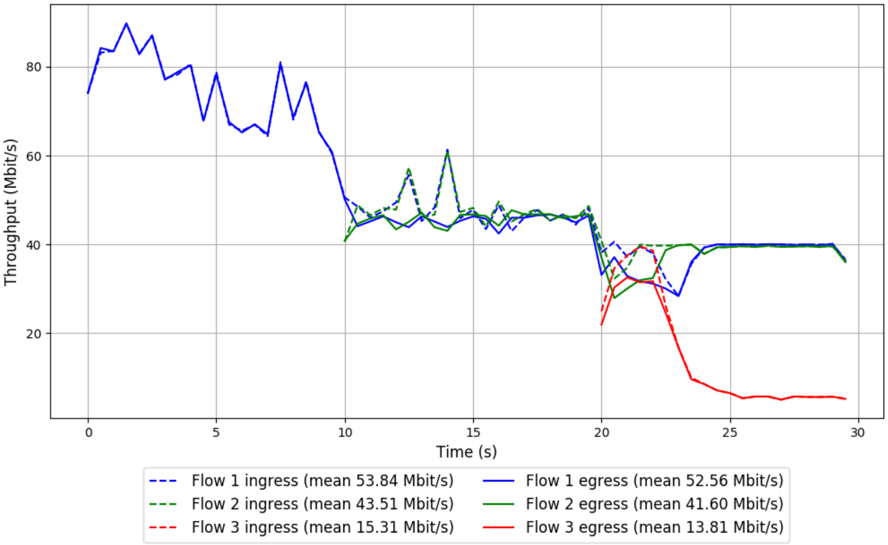


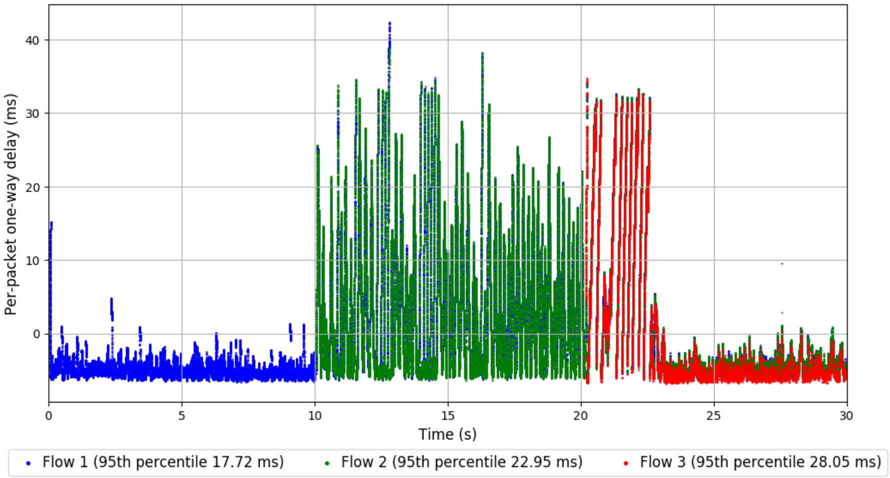
```
Run 9: Statistics of TaoVA-100x

Start at: 2017-08-11 12:45:02
End at: 2017-08-11 12:45:32
Local clock offset: 0.663 ms
Remote clock offset: -15.816 ms

# Below is generated by plot.py at 2017-08-11 14:47:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.78 Mbit/s
95th percentile per-packet one-way delay: 21.165 ms
Loss rate: 3.46%
-- Flow 1:
Average throughput: 52.56 Mbit/s
95th percentile per-packet one-way delay: 17.722 ms
Loss rate: 2.37%
-- Flow 2:
Average throughput: 41.60 Mbit/s
95th percentile per-packet one-way delay: 22.954 ms
Loss rate: 4.40%
-- Flow 3:
Average throughput: 13.81 Mbit/s
95th percentile per-packet one-way delay: 28.049 ms
Loss rate: 9.74%
```

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



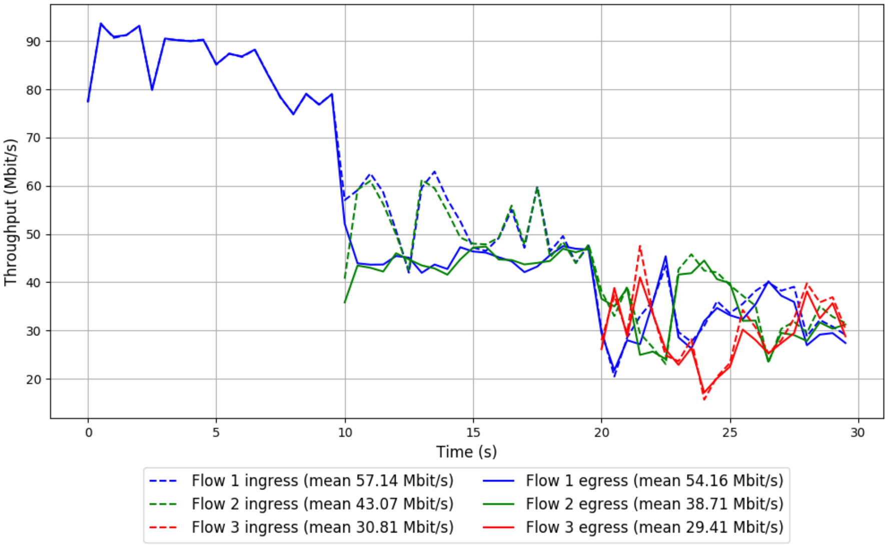


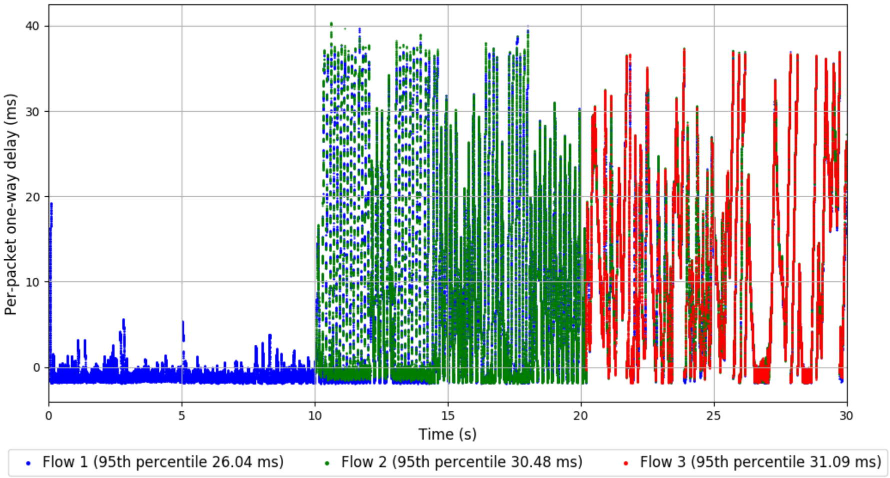
```
Run 10: Statistics of TaoVA-100x

Start at: 2017-08-11 13:29:58
End at: 2017-08-11 13:30:28
Local clock offset: -1.408 ms
Remote clock offset: -13.342 ms

# Below is generated by plot.py at 2017-08-11 14:47:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.60 Mbit/s
95th percentile per-packet one-way delay: 28.723 ms
Loss rate: 6.51%
-- Flow 1:
Average throughput: 54.16 Mbit/s
95th percentile per-packet one-way delay: 26.040 ms
Loss rate: 5.14%
-- Flow 2:
Average throughput: 38.71 Mbit/s
95th percentile per-packet one-way delay: 30.478 ms
Loss rate: 9.99%
-- Flow 3:
Average throughput: 29.41 Mbit/s
95th percentile per-packet one-way delay: 31.088 ms
Loss rate: 4.40%
```

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



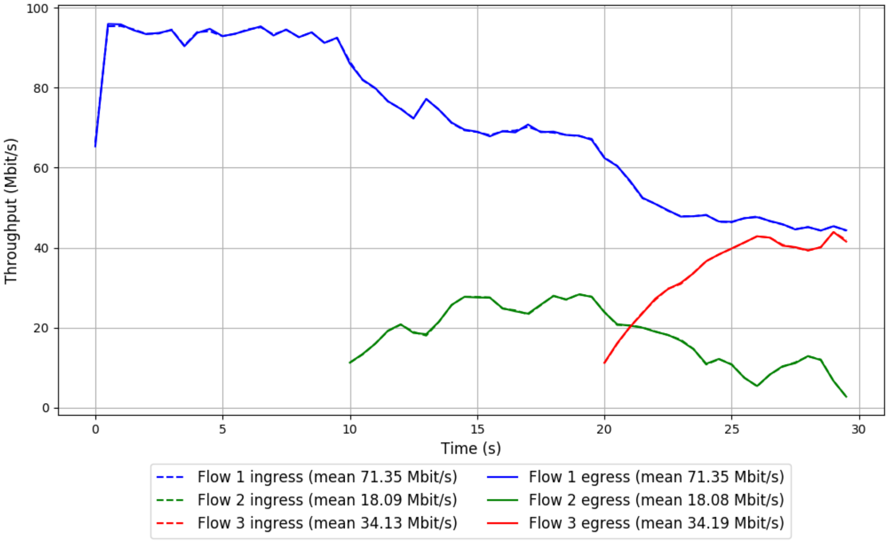


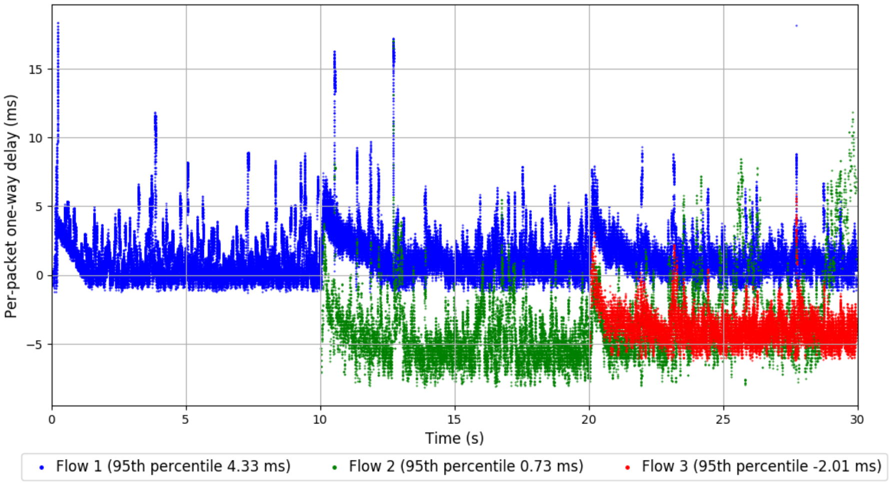
```
Run 1: Statistics of TCP Vegas

Start at: 2017-08-11 08:43:13
End at: 2017-08-11 08:43:43
Local clock offset: 2.312 ms
Remote clock offset: -21.134 ms

# Below is generated by plot.py at 2017-08-11 14:47:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.74 Mbit/s
95th percentile per-packet one-way delay: 3.972 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 71.35 Mbit/s
95th percentile per-packet one-way delay: 4.328 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 18.08 Mbit/s
95th percentile per-packet one-way delay: 0.727 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 34.19 Mbit/s
95th percentile per-packet one-way delay: -2.009 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Vegas — Data Link



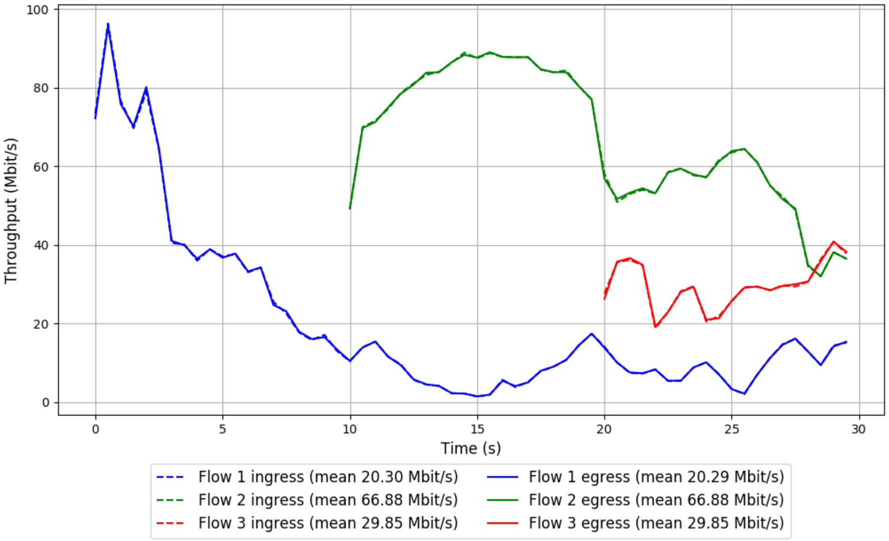


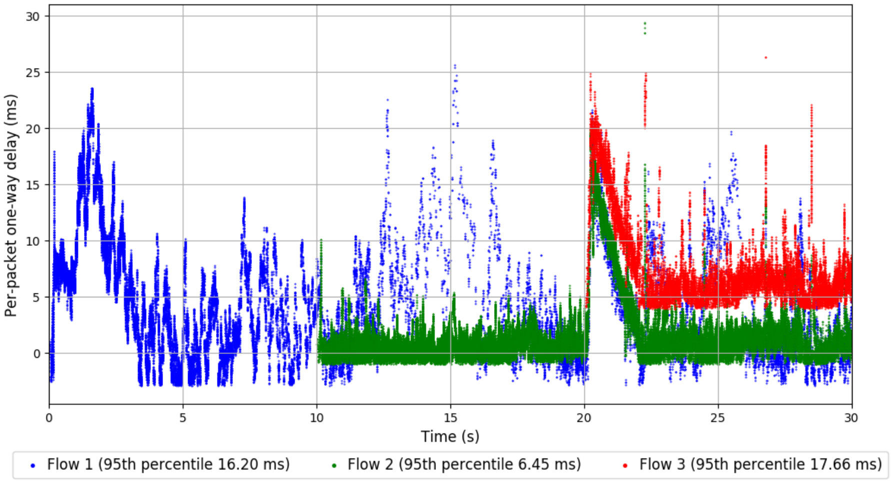
```
Run 2: Statistics of TCP Vegas

Start at: 2017-08-11 09:01:29
End at: 2017-08-11 09:01:59
Local clock offset: -1.991 ms
Remote clock offset: -20.793 ms

# Below is generated by plot.py at 2017-08-11 14:47:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.72 Mbit/s
95th percentile per-packet one-way delay: 13.716 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 20.29 Mbit/s
95th percentile per-packet one-way delay: 16.202 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 66.88 Mbit/s
95th percentile per-packet one-way delay: 6.449 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 29.85 Mbit/s
95th percentile per-packet one-way delay: 17.657 ms
Loss rate: 0.02%
```

Run 2: Report of TCP Vegas — Data Link



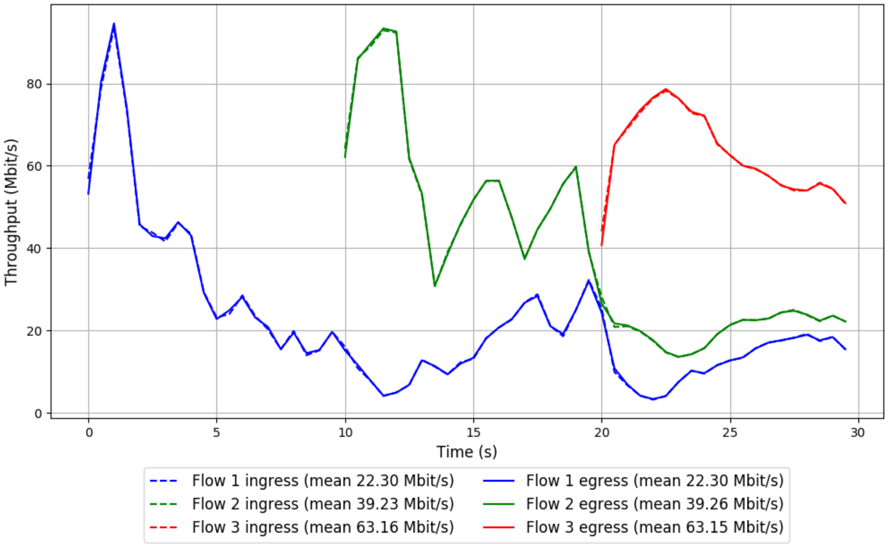


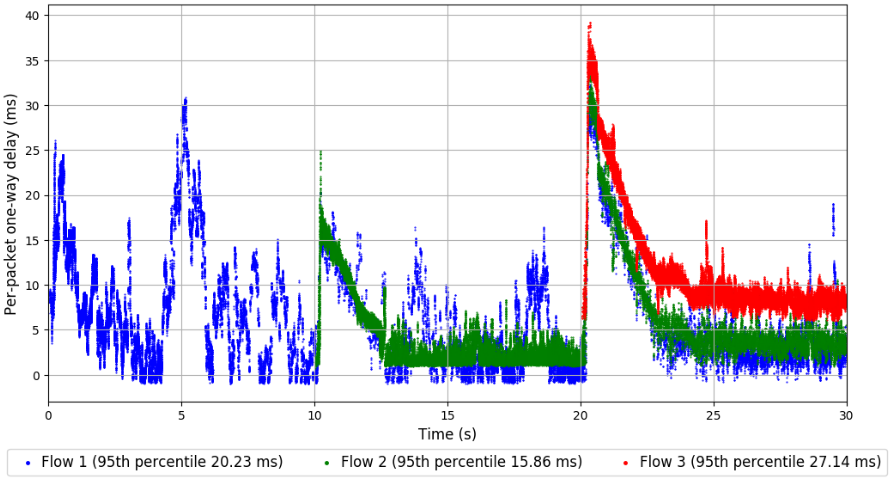
```
Run 3: Statistics of TCP Vegas

Start at: 2017-08-11 09:21:15
End at: 2017-08-11 09:21:45
Local clock offset: -2.423 ms
Remote clock offset: -20.185 ms

# Below is generated by plot.py at 2017-08-11 14:47:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.40 Mbit/s
95th percentile per-packet one-way delay: 22.210 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 22.30 Mbit/s
95th percentile per-packet one-way delay: 20.228 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 39.26 Mbit/s
95th percentile per-packet one-way delay: 15.861 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 63.15 Mbit/s
95th percentile per-packet one-way delay: 27.141 ms
Loss rate: 0.07%
```

Run 3: Report of TCP Vegas — Data Link



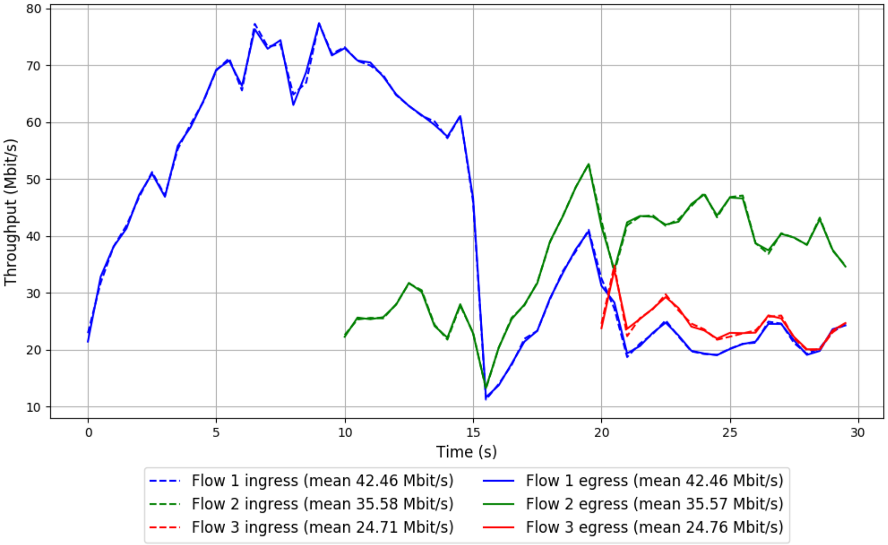


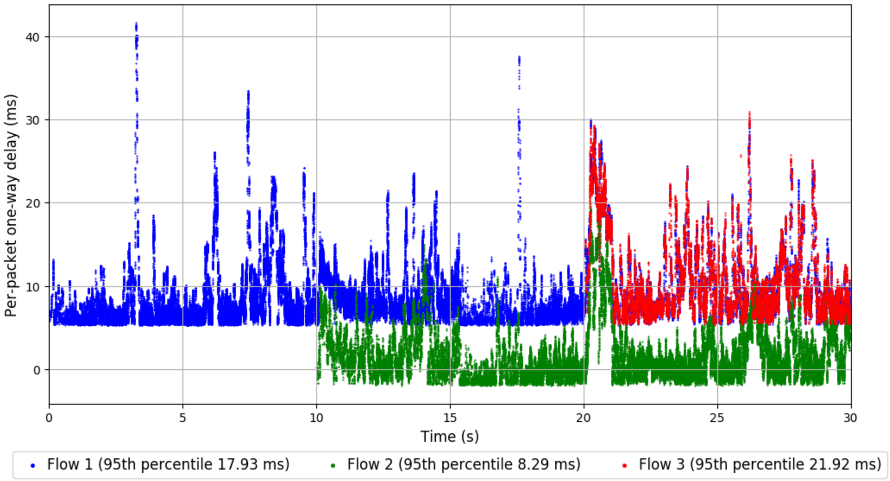
```
Run 4: Statistics of TCP Vegas

Start at: 2017-08-11 10:18:01
End at: 2017-08-11 10:18:31
Local clock offset: -2.691 ms
Remote clock offset: -21.479 ms

# Below is generated by plot.py at 2017-08-11 14:47:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.35 Mbit/s
95th percentile per-packet one-way delay: 17.148 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 42.46 Mbit/s
95th percentile per-packet one-way delay: 17.925 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 35.57 Mbit/s
95th percentile per-packet one-way delay: 8.289 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 24.76 Mbit/s
95th percentile per-packet one-way delay: 21.916 ms
Loss rate: 0.01%
```

Run 4: Report of TCP Vegas — Data Link



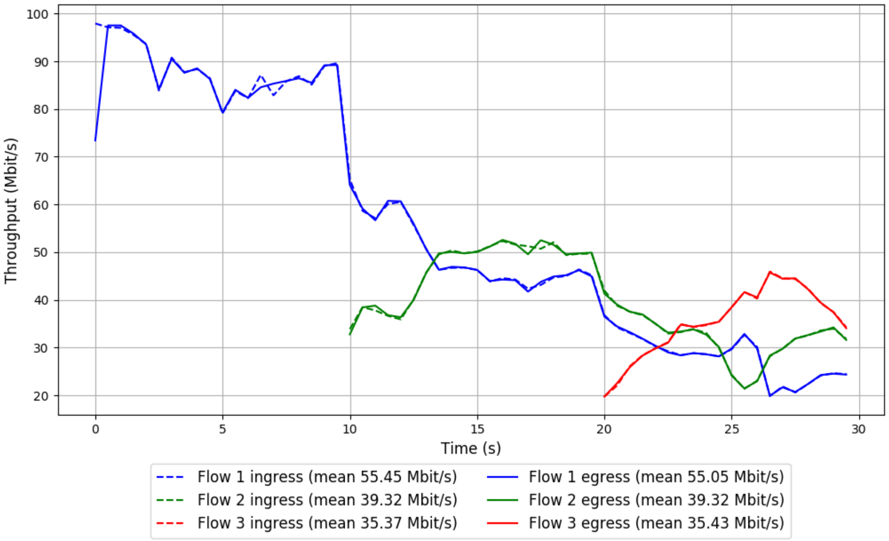


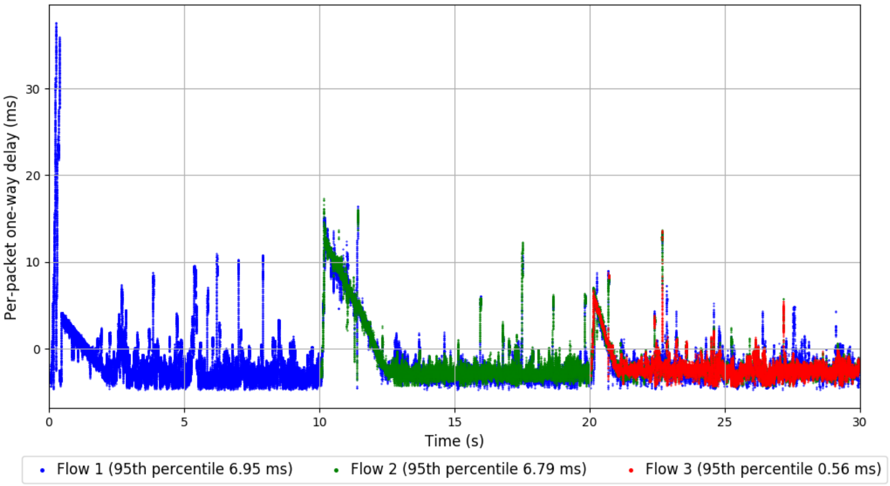
```
Run 5: Statistics of TCP Vegas

Start at: 2017-08-11 10:36:28
End at: 2017-08-11 10:36:58
Local clock offset: -0.115 ms
Remote clock offset: -21.638 ms

# Below is generated by plot.py at 2017-08-11 14:48:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.01 Mbit/s
95th percentile per-packet one-way delay: 6.048 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 55.05 Mbit/s
95th percentile per-packet one-way delay: 6.950 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 39.32 Mbit/s
95th percentile per-packet one-way delay: 6.790 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 35.43 Mbit/s
95th percentile per-packet one-way delay: 0.561 ms
Loss rate: 0.00%
```

Run 5: Report of TCP Vegas — Data Link



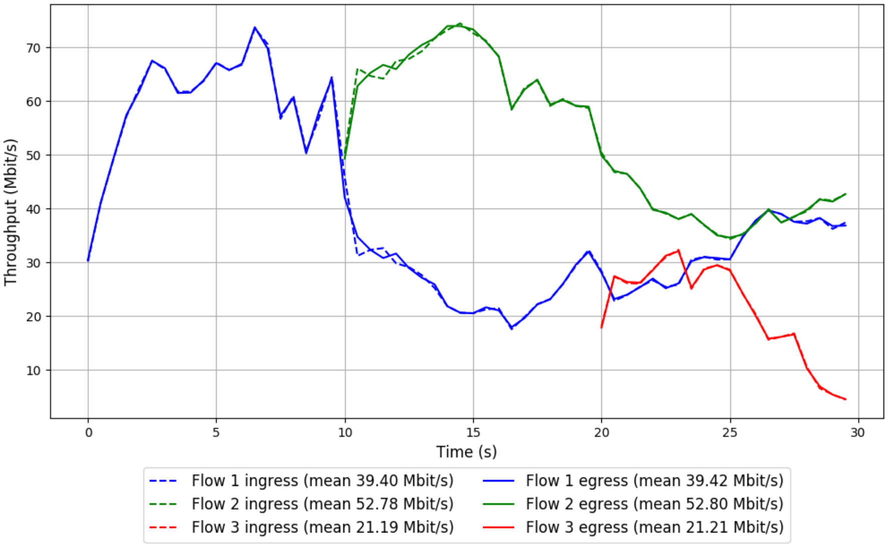


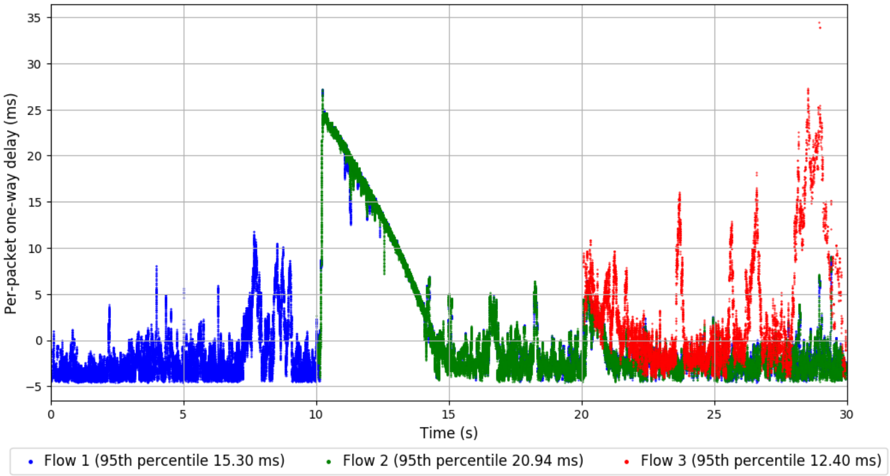
```
Run 6: Statistics of TCP Vegas

Start at: 2017-08-11 10:55:15
End at: 2017-08-11 10:55:45
Local clock offset: -2.917 ms
Remote clock offset: -24.045 ms

# Below is generated by plot.py at 2017-08-11 14:48:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.58 Mbit/s
95th percentile per-packet one-way delay: 18.626 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 39.42 Mbit/s
95th percentile per-packet one-way delay: 15.299 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 52.80 Mbit/s
95th percentile per-packet one-way delay: 20.940 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 21.21 Mbit/s
95th percentile per-packet one-way delay: 12.400 ms
Loss rate: 0.00%
```

Run 6: Report of TCP Vegas — Data Link



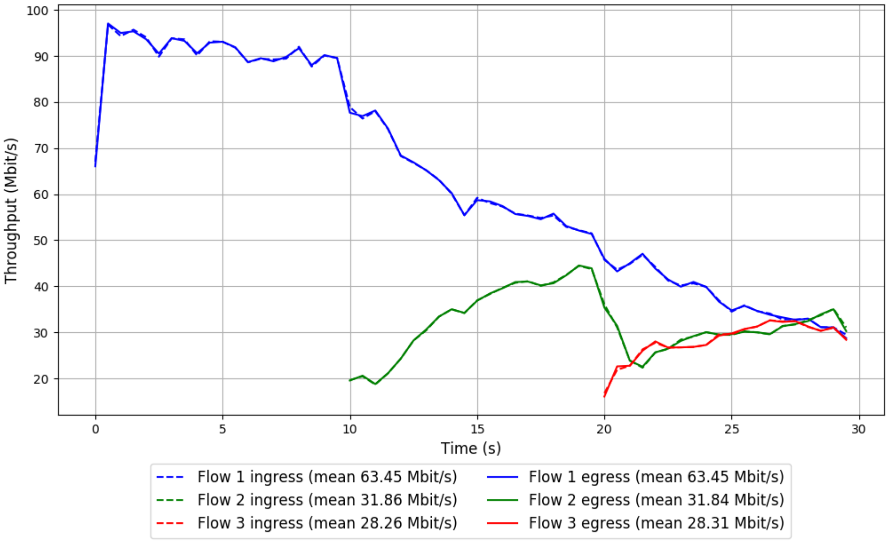


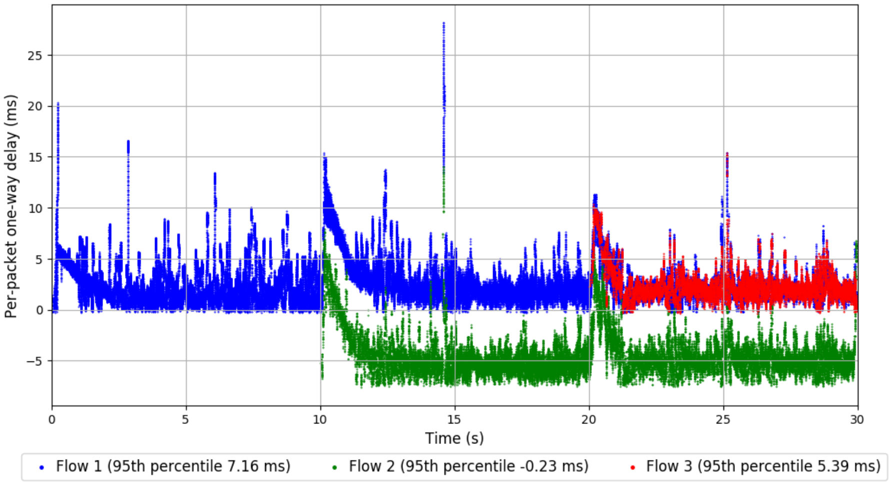
```
Run 7: Statistics of TCP Vegas

Start at: 2017-08-11 11:15:47
End at: 2017-08-11 11:16:17
Local clock offset: 0.985 ms
Remote clock offset: -21.464 ms

# Below is generated by plot.py at 2017-08-11 14:48:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.03 Mbit/s
95th percentile per-packet one-way delay: 6.392 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 63.45 Mbit/s
95th percentile per-packet one-way delay: 7.155 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 31.84 Mbit/s
95th percentile per-packet one-way delay: -0.230 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 28.31 Mbit/s
95th percentile per-packet one-way delay: 5.394 ms
Loss rate: 0.04%
```

Run 7: Report of TCP Vegas — Data Link



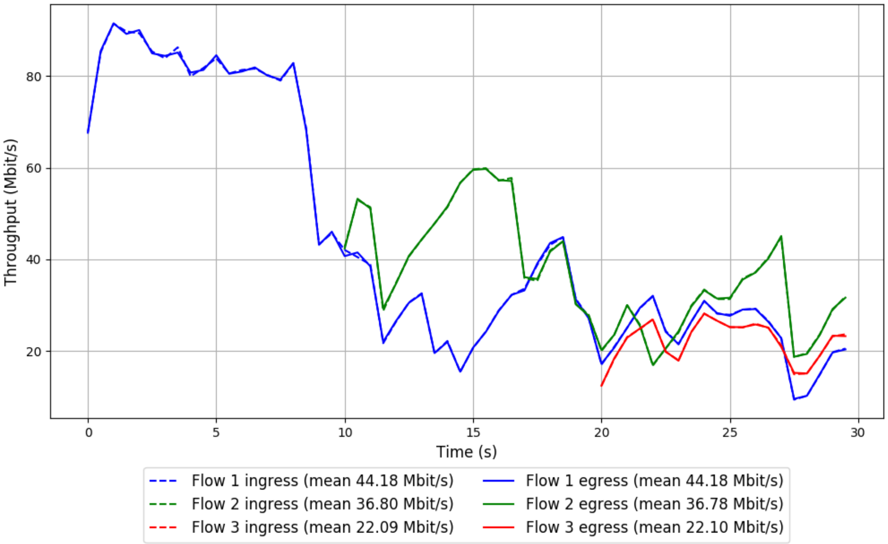


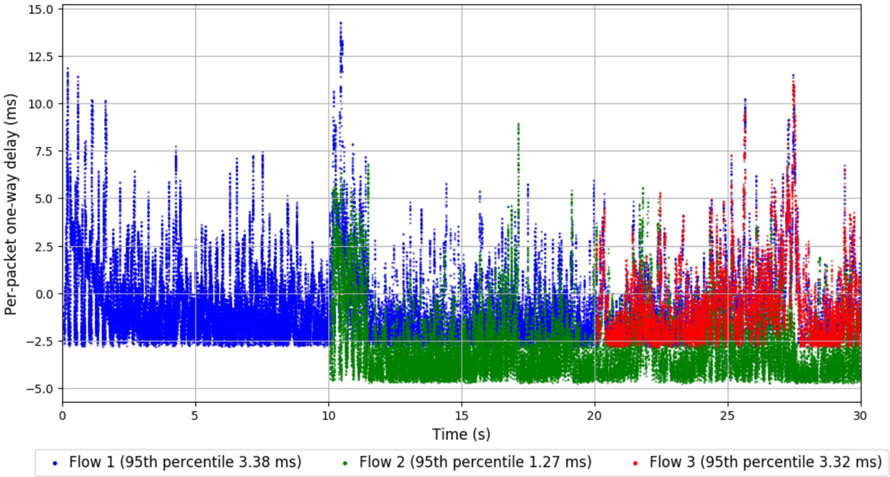
```
Run 8: Statistics of TCP Vegas

Start at: 2017-08-11 11:55:51
End at: 2017-08-11 11:56:21
Local clock offset: -2.851 ms
Remote clock offset: -19.856 ms

# Below is generated by plot.py at 2017-08-11 14:48:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.03 Mbit/s
95th percentile per-packet one-way delay: 2.980 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 44.18 Mbit/s
95th percentile per-packet one-way delay: 3.377 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 36.78 Mbit/s
95th percentile per-packet one-way delay: 1.271 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 22.10 Mbit/s
95th percentile per-packet one-way delay: 3.319 ms
Loss rate: 0.09%
```

Run 8: Report of TCP Vegas — Data Link



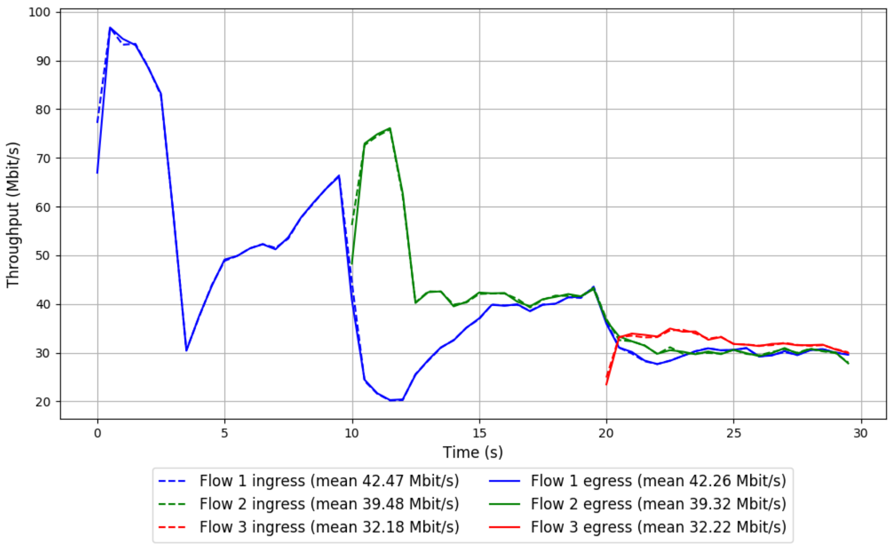


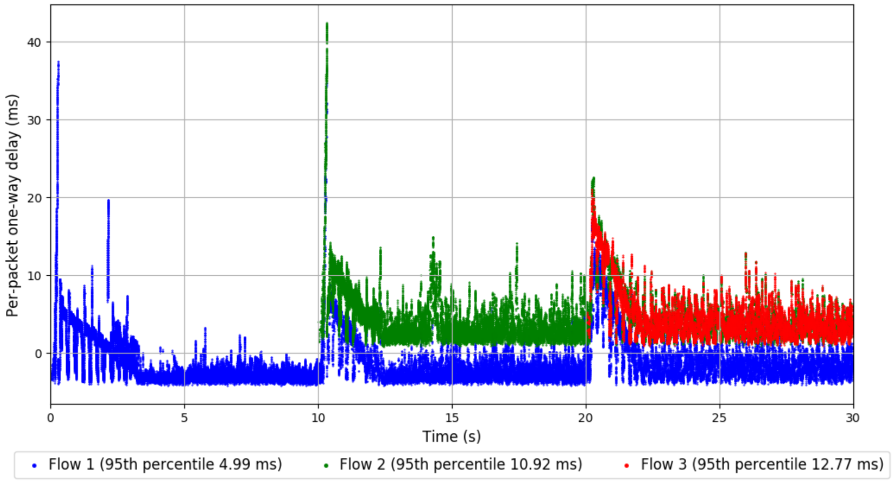
```
Run 9: Statistics of TCP Vegas

Start at: 2017-08-11 12:36:14
End at: 2017-08-11 12:36:44
Local clock offset: 0.307 ms
Remote clock offset: -16.29 ms

# Below is generated by plot.py at 2017-08-11 14:48:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.13 Mbit/s
95th percentile per-packet one-way delay: 9.526 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 42.26 Mbit/s
95th percentile per-packet one-way delay: 4.985 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 39.32 Mbit/s
95th percentile per-packet one-way delay: 10.922 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 32.22 Mbit/s
95th percentile per-packet one-way delay: 12.769 ms
Loss rate: 0.06%
```

Run 9: Report of TCP Vegas — Data Link



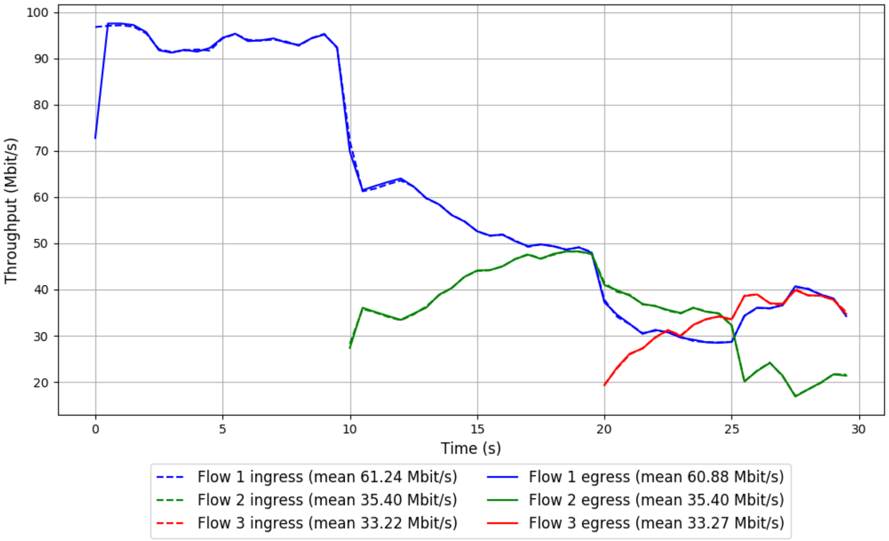


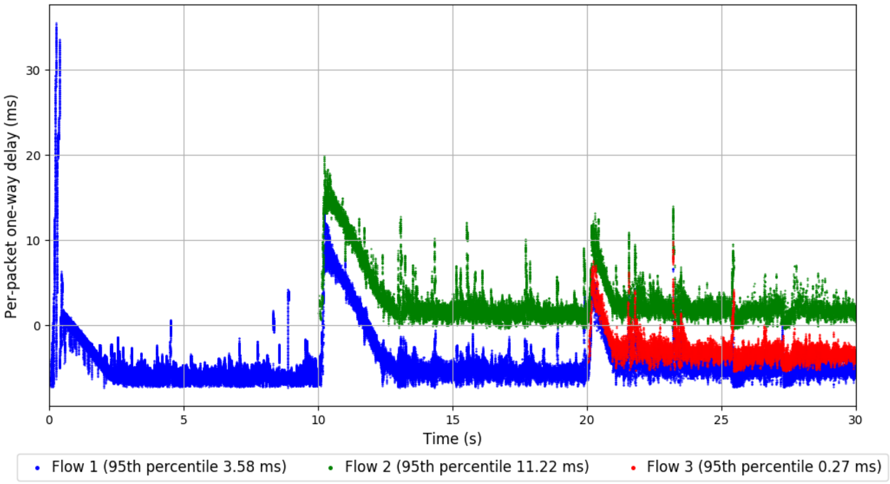
```
Run 10: Statistics of TCP Vegas

Start at: 2017-08-11 13:25:13
End at: 2017-08-11 13:25:43
Local clock offset: 0.859 ms
Remote clock offset: -14.596 ms

# Below is generated by plot.py at 2017-08-11 14:48:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.49 Mbit/s
95th percentile per-packet one-way delay: 6.330 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 60.88 Mbit/s
95th percentile per-packet one-way delay: 3.584 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 35.40 Mbit/s
95th percentile per-packet one-way delay: 11.218 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 33.27 Mbit/s
95th percentile per-packet one-way delay: 0.265 ms
Loss rate: 0.02%
```

Run 10: Report of TCP Vegas — Data Link



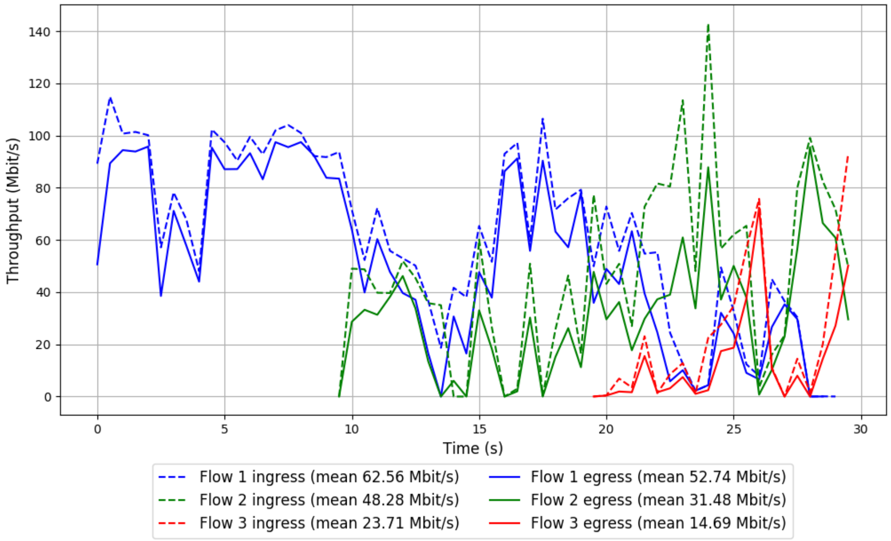


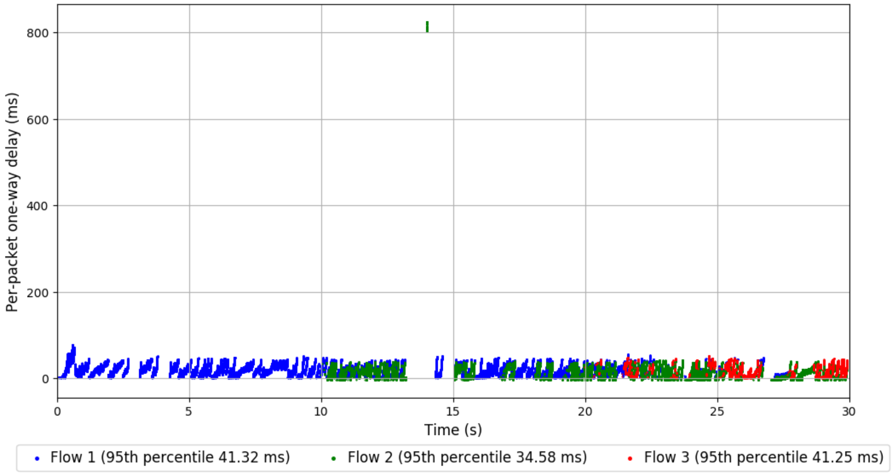
```
Run 1: Statistics of Verus

Start at: 2017-08-11 08:37:26
End at: 2017-08-11 08:37:56
Local clock offset: 0.195 ms
Remote clock offset: -20.022 ms

# Below is generated by plot.py at 2017-08-11 14:48:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.56 Mbit/s
95th percentile per-packet one-way delay: 39.977 ms
Loss rate: 23.97%
-- Flow 1:
Average throughput: 52.74 Mbit/s
95th percentile per-packet one-way delay: 41.318 ms
Loss rate: 16.47%
-- Flow 2:
Average throughput: 31.48 Mbit/s
95th percentile per-packet one-way delay: 34.582 ms
Loss rate: 34.72%
-- Flow 3:
Average throughput: 14.69 Mbit/s
95th percentile per-packet one-way delay: 41.251 ms
Loss rate: 38.00%
```

Run 1: Report of Verus — Data Link



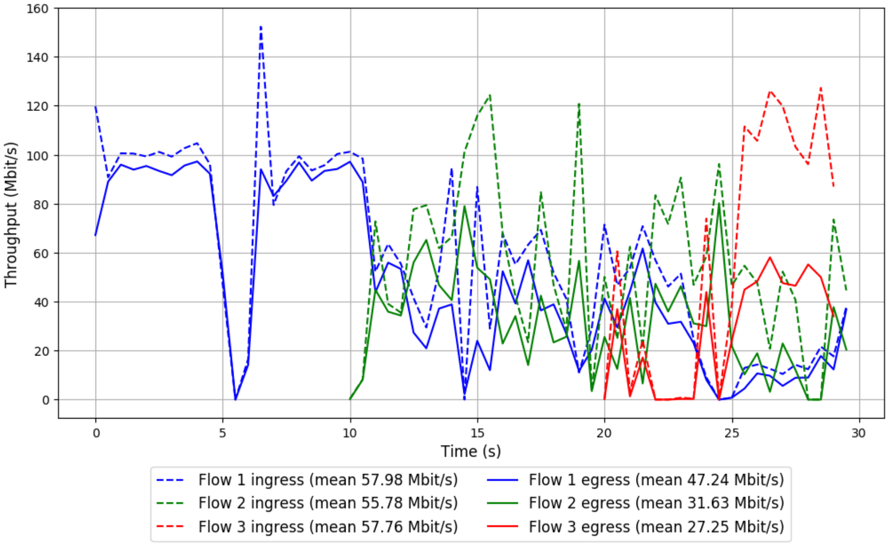


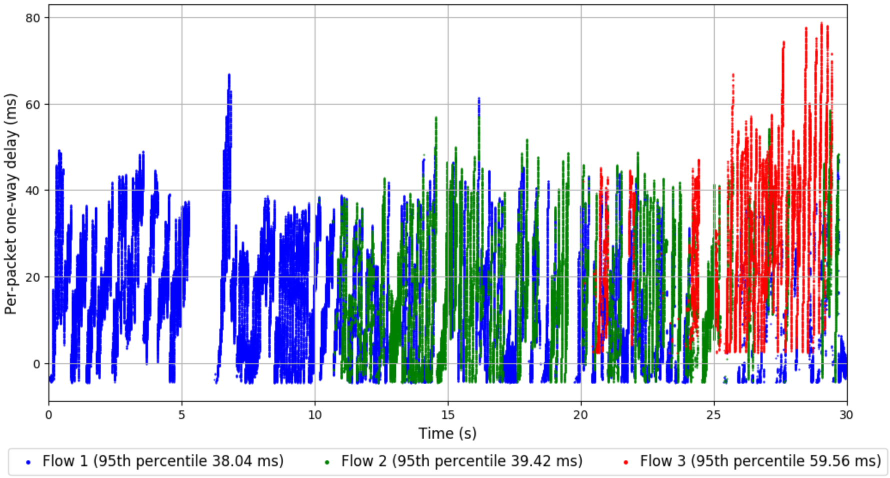
```
Run 2: Statistics of Verus

Start at: 2017-08-11 08:55:24
End at: 2017-08-11 08:55:54
Local clock offset: -0.925 ms
Remote clock offset: -21.247 ms

# Below is generated by plot.py at 2017-08-11 14:48:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.46 Mbit/s
95th percentile per-packet one-way delay: 42.040 ms
Loss rate: 32.04%
-- Flow 1:
Average throughput: 47.24 Mbit/s
95th percentile per-packet one-way delay: 38.039 ms
Loss rate: 18.52%
-- Flow 2:
Average throughput: 31.63 Mbit/s
95th percentile per-packet one-way delay: 39.416 ms
Loss rate: 43.24%
-- Flow 3:
Average throughput: 27.25 Mbit/s
95th percentile per-packet one-way delay: 59.561 ms
Loss rate: 52.85%
```

Run 2: Report of Verus — Data Link

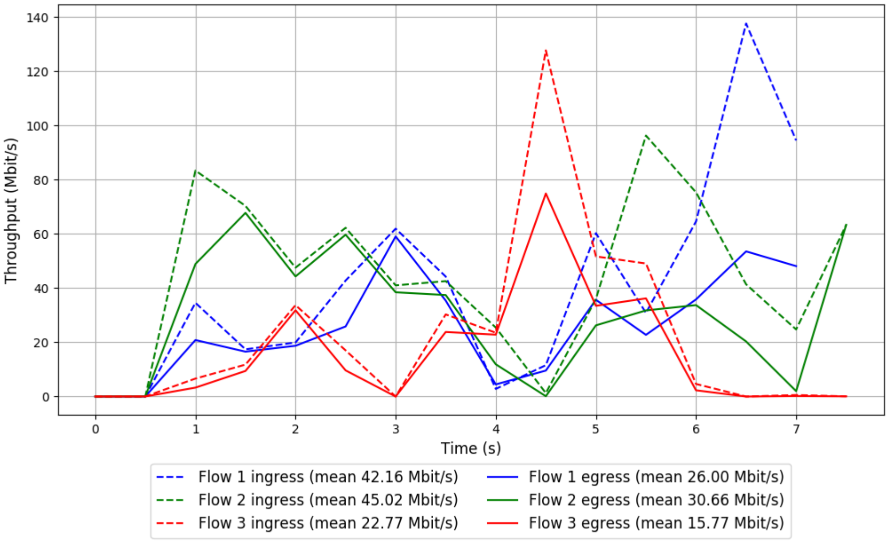


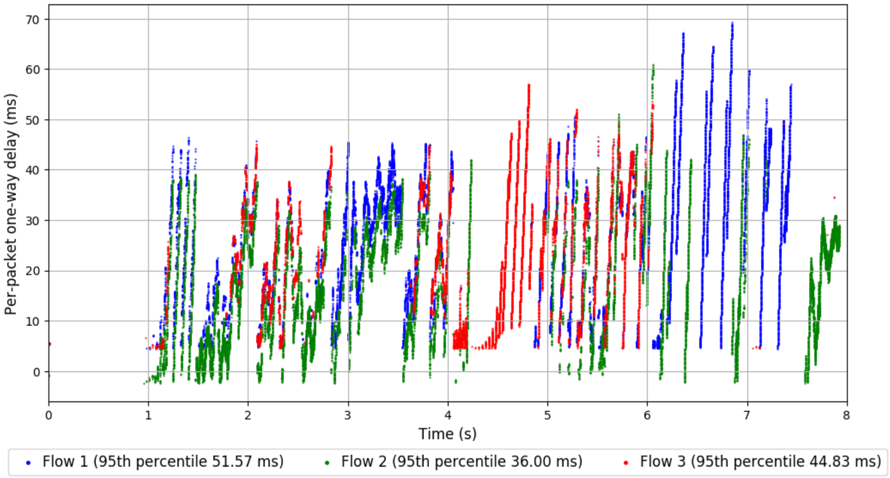


```
Run 3: Statistics of Verus

Start at: 2017-08-11 09:15:01
End at: 2017-08-11 09:15:31
Local clock offset: -3.082 ms
Remote clock offset: -22.029 ms
```

Run 3: Report of Verus — Data Link



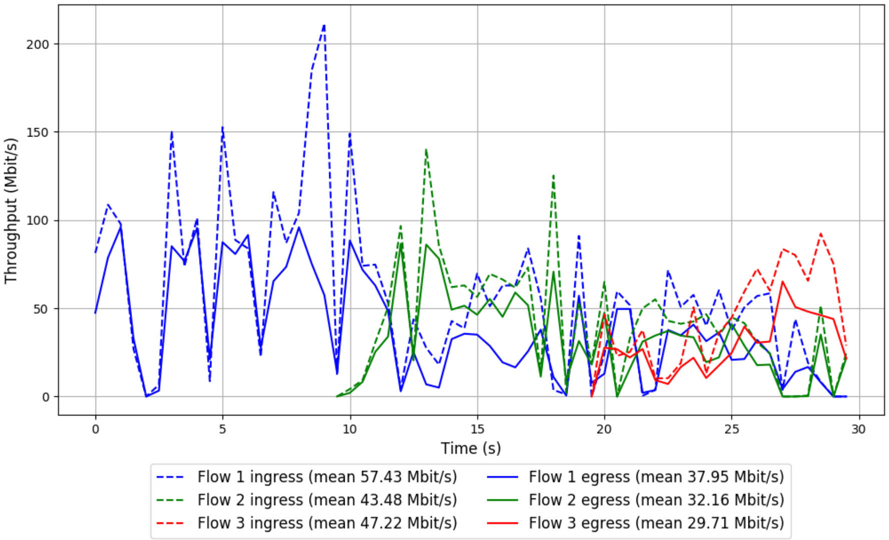


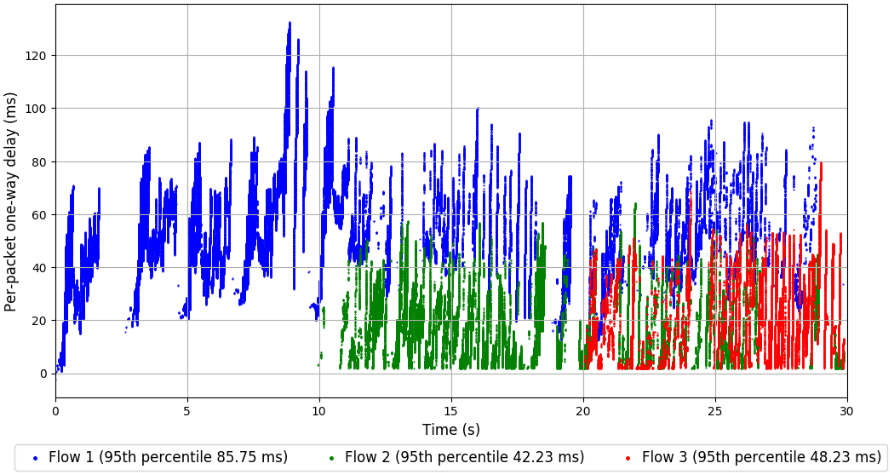
```
Run 4: Statistics of Verus

Start at: 2017-08-11 09:54:23
End at: 2017-08-11 09:54:53
Local clock offset: -0.342 ms
Remote clock offset: -22.808 ms

# Below is generated by plot.py at 2017-08-11 14:48:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.21 Mbit/s
95th percentile per-packet one-way delay: 78.270 ms
Loss rate: 32.11%
-- Flow 1:
Average throughput: 37.95 Mbit/s
95th percentile per-packet one-way delay: 85.748 ms
Loss rate: 33.84%
-- Flow 2:
Average throughput: 32.16 Mbit/s
95th percentile per-packet one-way delay: 42.235 ms
Loss rate: 26.02%
-- Flow 3:
Average throughput: 29.71 Mbit/s
95th percentile per-packet one-way delay: 48.229 ms
Loss rate: 37.02%
```

Run 4: Report of Verus — Data Link



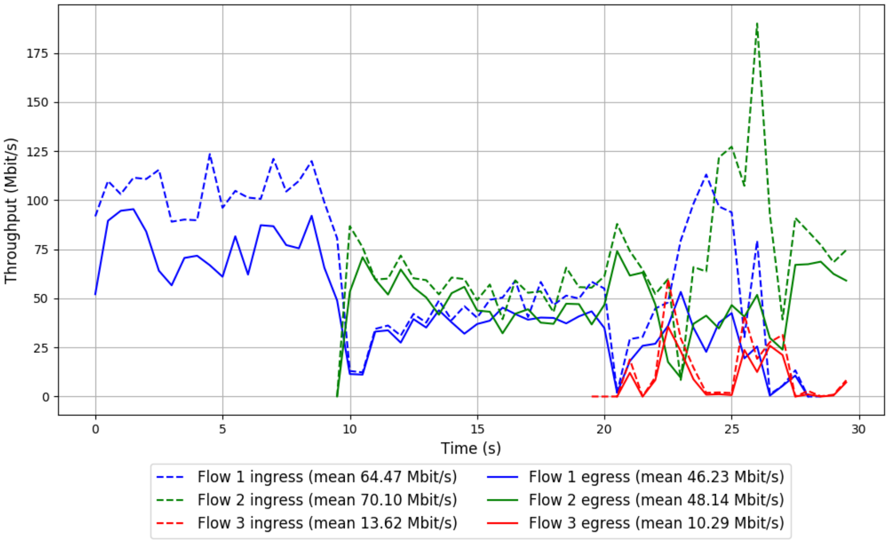


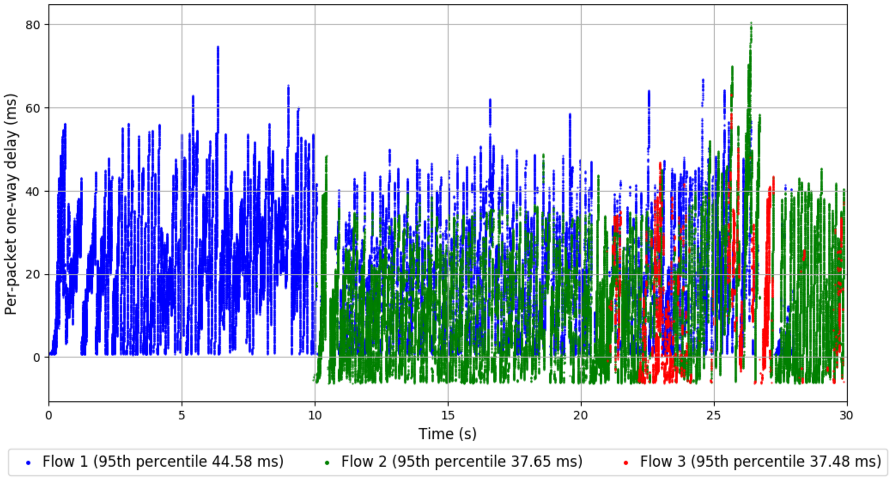
```
Run 5: Statistics of Verus

Start at: 2017-08-11 10:30:25
End at: 2017-08-11 10:30:55
Local clock offset: 1.265 ms
Remote clock offset: -22.264 ms

# Below is generated by plot.py at 2017-08-11 14:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.49 Mbit/s
95th percentile per-packet one-way delay: 42.706 ms
Loss rate: 30.99%
-- Flow 1:
Average throughput: 46.23 Mbit/s
95th percentile per-packet one-way delay: 44.583 ms
Loss rate: 30.73%
-- Flow 2:
Average throughput: 48.14 Mbit/s
95th percentile per-packet one-way delay: 37.652 ms
Loss rate: 31.21%
-- Flow 3:
Average throughput: 10.29 Mbit/s
95th percentile per-packet one-way delay: 37.483 ms
Loss rate: 32.28%
```

Run 5: Report of Verus — Data Link



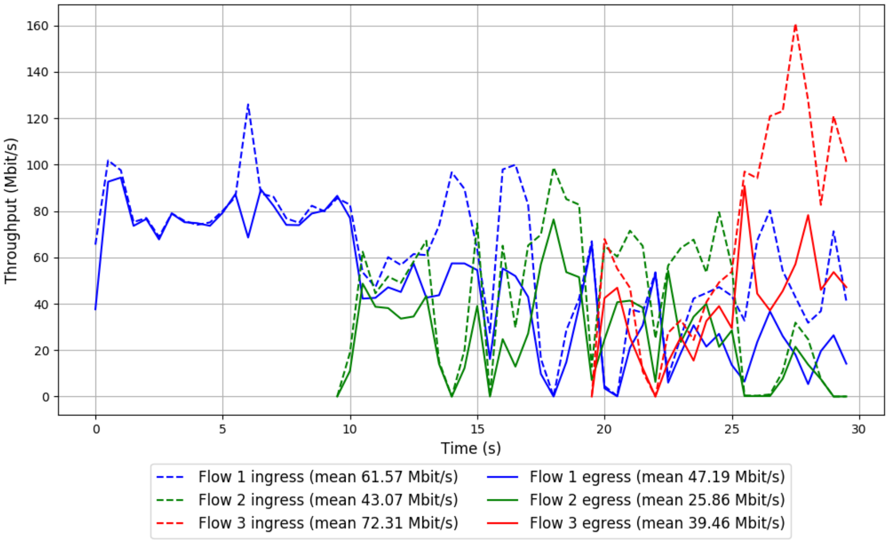


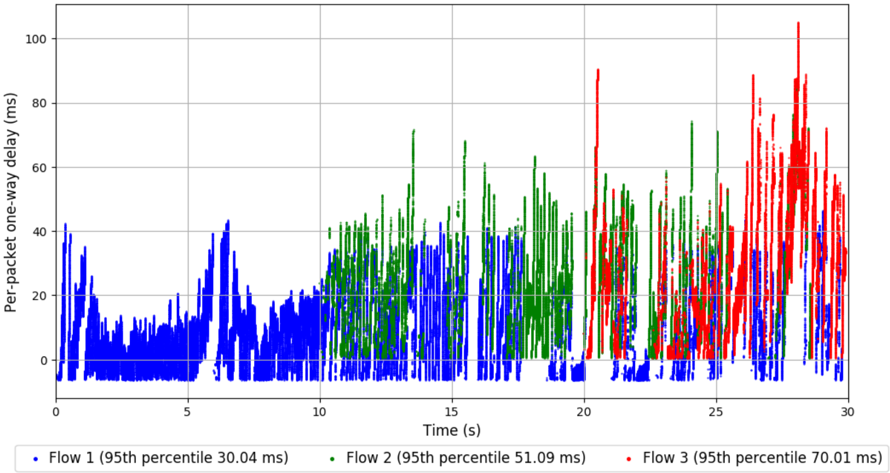
```
Run 6: Statistics of Verus

Start at: 2017-08-11 10:49:04
End at: 2017-08-11 10:49:34
Local clock offset: -0.114 ms
Remote clock offset: -23.534 ms

# Below is generated by plot.py at 2017-08-11 14:49:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.28 Mbit/s
95th percentile per-packet one-way delay: 49.383 ms
Loss rate: 32.17%
-- Flow 1:
Average throughput: 47.19 Mbit/s
95th percentile per-packet one-way delay: 30.037 ms
Loss rate: 23.34%
-- Flow 2:
Average throughput: 25.86 Mbit/s
95th percentile per-packet one-way delay: 51.088 ms
Loss rate: 39.94%
-- Flow 3:
Average throughput: 39.46 Mbit/s
95th percentile per-packet one-way delay: 70.009 ms
Loss rate: 45.45%
```

Run 6: Report of Verus — Data Link



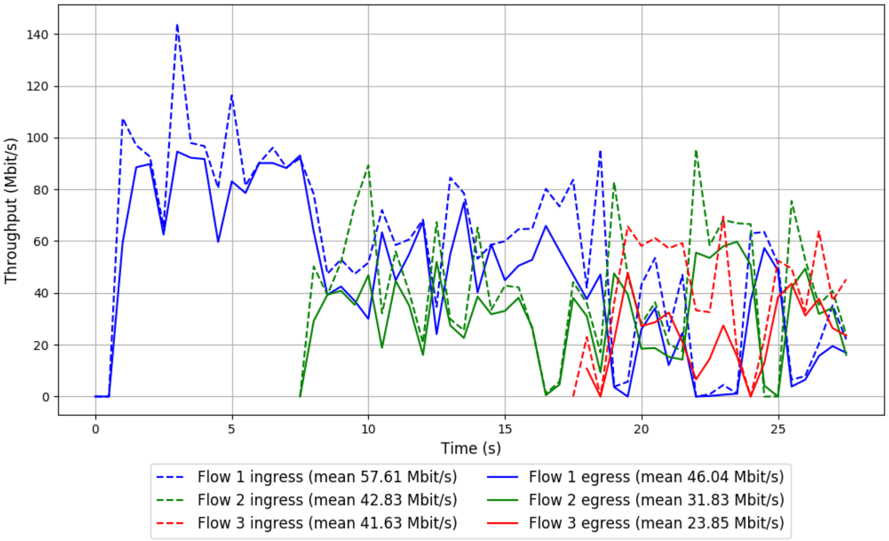


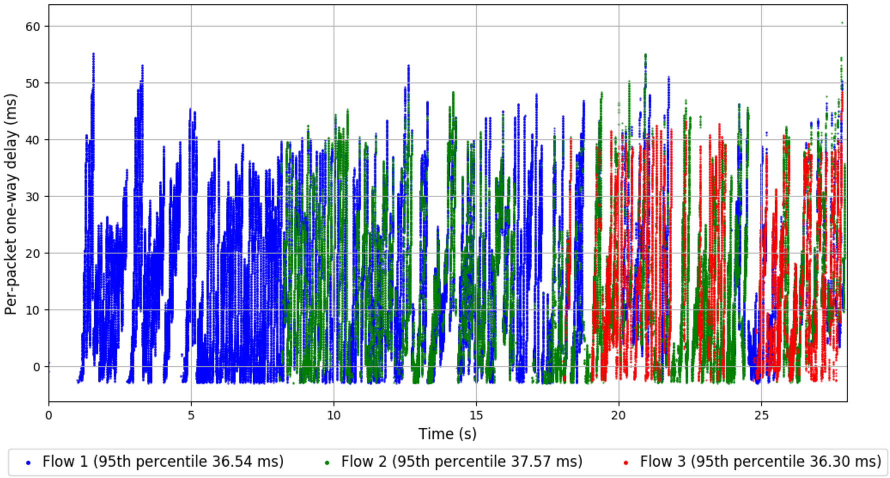
```
Run 7: Statistics of Verus

Start at: 2017-08-11 11:09:40
End at: 2017-08-11 11:10:10
Local clock offset: -2.537 ms
Remote clock offset: -21.212 ms

# Below is generated by plot.py at 2017-08-11 14:49:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.09 Mbit/s
95th percentile per-packet one-way delay: 36.814 ms
Loss rate: 24.93%
-- Flow 1:
Average throughput: 46.04 Mbit/s
95th percentile per-packet one-way delay: 36.541 ms
Loss rate: 20.04%
-- Flow 2:
Average throughput: 31.83 Mbit/s
95th percentile per-packet one-way delay: 37.572 ms
Loss rate: 25.60%
-- Flow 3:
Average throughput: 23.85 Mbit/s
95th percentile per-packet one-way delay: 36.304 ms
Loss rate: 42.75%
```

Run 7: Report of Verus — Data Link



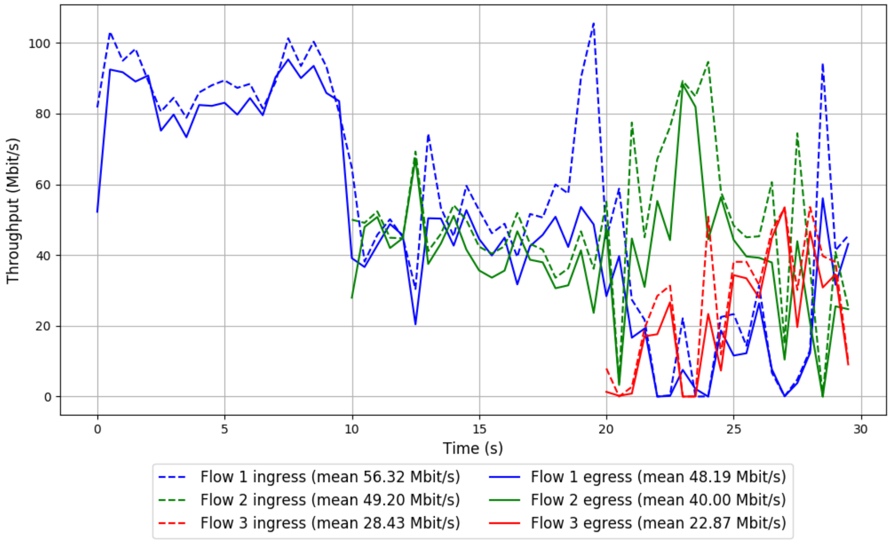


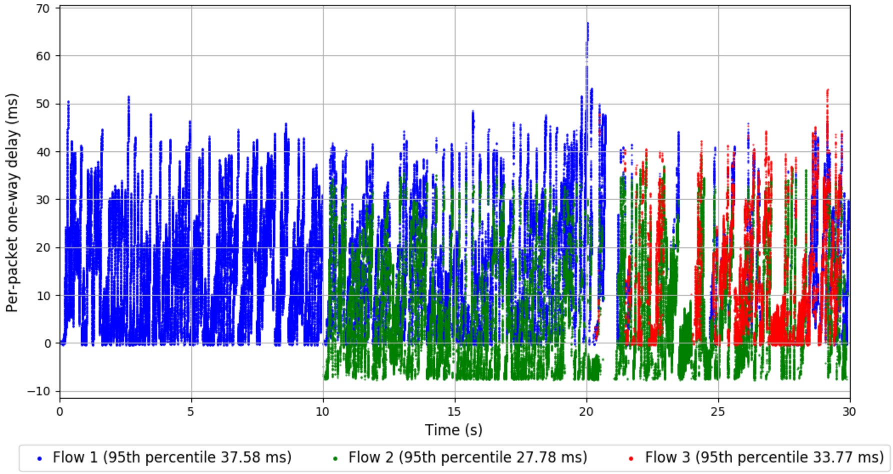
```
Run 8: Statistics of Verus

Start at: 2017-08-11 11:41:11
End at: 2017-08-11 11:41:41
Local clock offset: 0.45 ms
Remote clock offset: -20.296 ms

# Below is generated by plot.py at 2017-08-11 14:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.97 Mbit/s
95th percentile per-packet one-way delay: 35.365 ms
Loss rate: 16.26%
-- Flow 1:
Average throughput: 48.19 Mbit/s
95th percentile per-packet one-way delay: 37.580 ms
Loss rate: 14.39%
-- Flow 2:
Average throughput: 40.00 Mbit/s
95th percentile per-packet one-way delay: 27.777 ms
Loss rate: 18.63%
-- Flow 3:
Average throughput: 22.87 Mbit/s
95th percentile per-packet one-way delay: 33.773 ms
Loss rate: 19.33%
```

Run 8: Report of Verus — Data Link



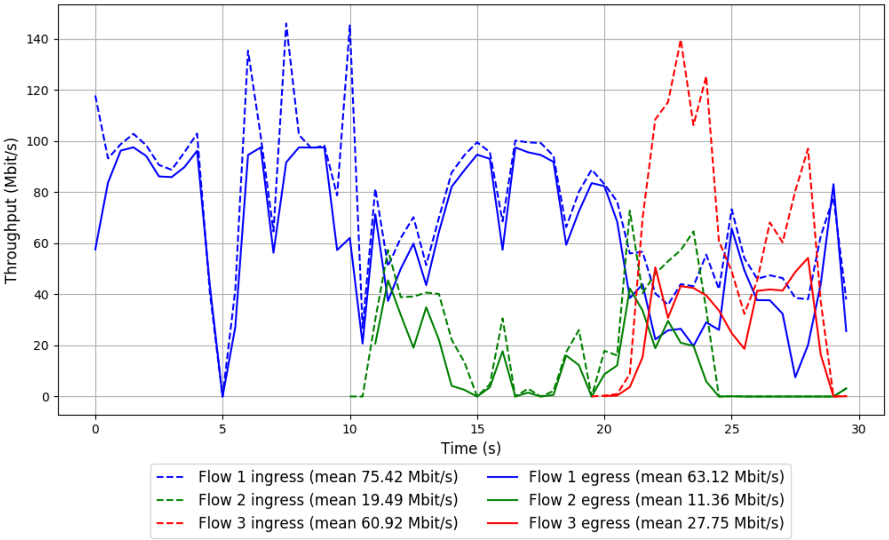


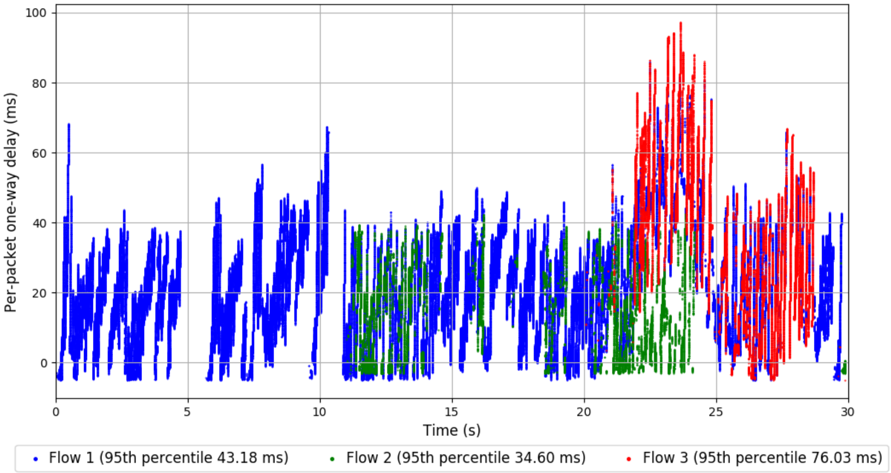
```
Run 9: Statistics of Verus

Start at: 2017-08-11 12:25:44
End at: 2017-08-11 12:26:14
Local clock offset: -0.326 ms
Remote clock offset: -16.343 ms

# Below is generated by plot.py at 2017-08-11 14:49:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.14 Mbit/s
95th percentile per-packet one-way delay: 49.822 ms
Loss rate: 26.81%
-- Flow 1:
Average throughput: 63.12 Mbit/s
95th percentile per-packet one-way delay: 43.180 ms
Loss rate: 16.27%
-- Flow 2:
Average throughput: 11.36 Mbit/s
95th percentile per-packet one-way delay: 34.601 ms
Loss rate: 44.64%
-- Flow 3:
Average throughput: 27.75 Mbit/s
95th percentile per-packet one-way delay: 76.028 ms
Loss rate: 54.57%
```

Run 9: Report of Verus — Data Link



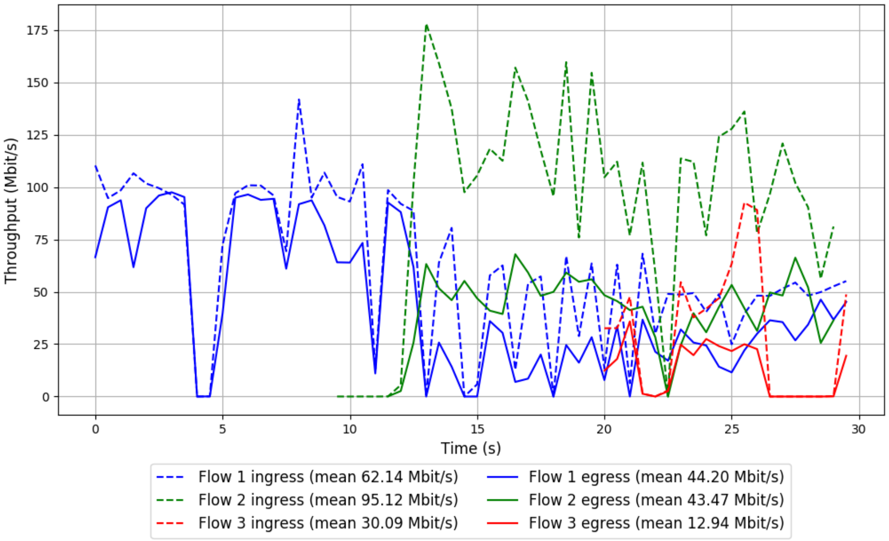


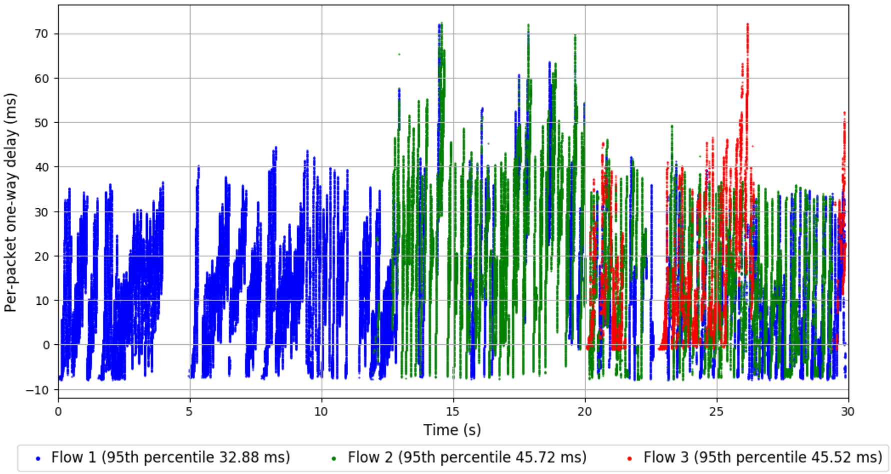
```
Run 10: Statistics of Verus

Start at: 2017-08-11 13:16:04
End at: 2017-08-11 13:16:34
Local clock offset: 0.753 ms
Remote clock offset: -15.798 ms

# Below is generated by plot.py at 2017-08-11 14:49:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.83 Mbit/s
95th percentile per-packet one-way delay: 39.478 ms
Loss rate: 44.86%
-- Flow 1:
Average throughput: 44.20 Mbit/s
95th percentile per-packet one-way delay: 32.877 ms
Loss rate: 28.87%
-- Flow 2:
Average throughput: 43.47 Mbit/s
95th percentile per-packet one-way delay: 45.715 ms
Loss rate: 59.00%
-- Flow 3:
Average throughput: 12.94 Mbit/s
95th percentile per-packet one-way delay: 45.522 ms
Loss rate: 56.96%
```

Run 10: Report of Verus — Data Link



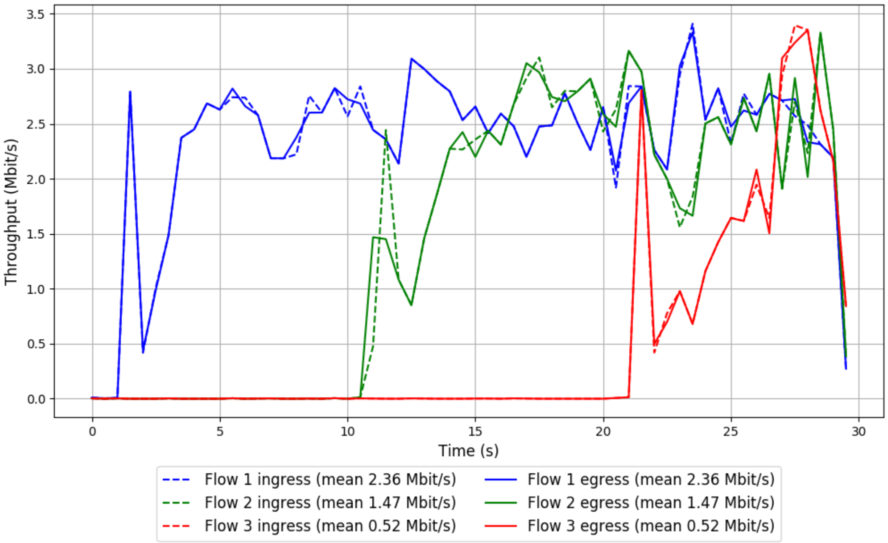


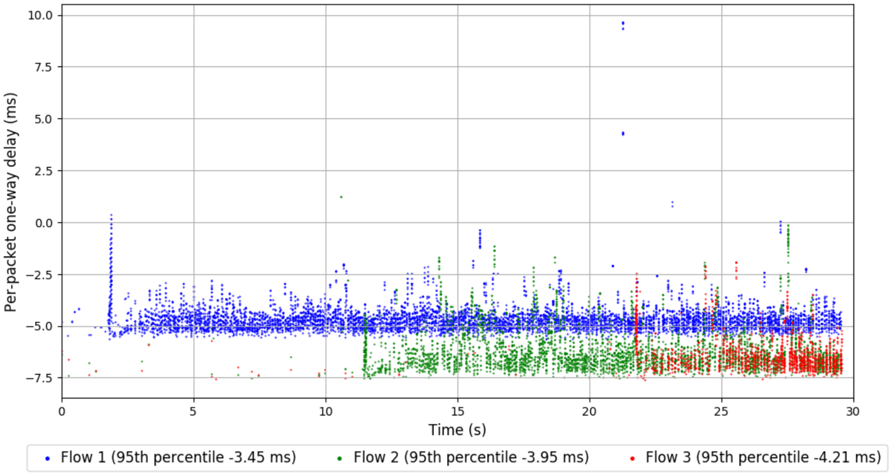
```
Run 1: Statistics of WebRTC media

Start at: 2017-08-11 08:40:56
End at: 2017-08-11 08:41:26
Local clock offset: 2.392 ms
Remote clock offset: -20.153 ms

# Below is generated by plot.py at 2017-08-11 14:49:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: -3.675 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: -3.452 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: -3.953 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: -4.211 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link



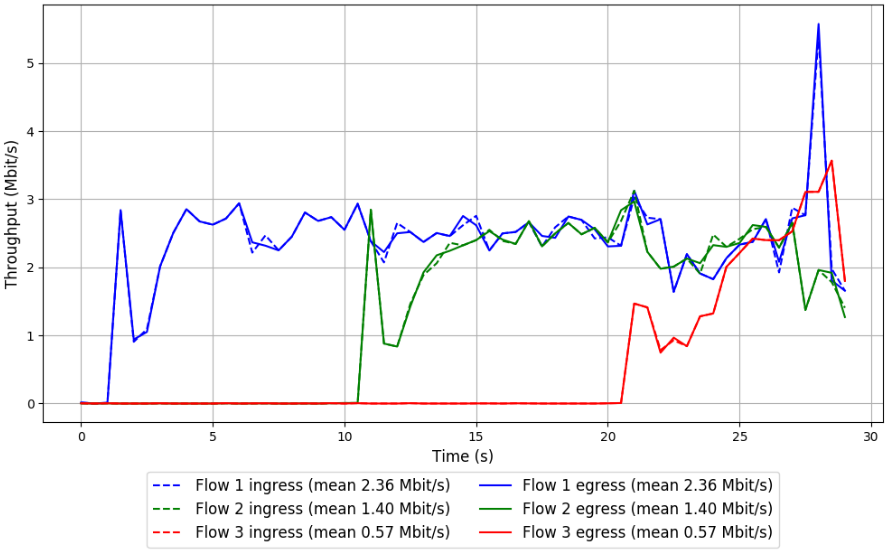


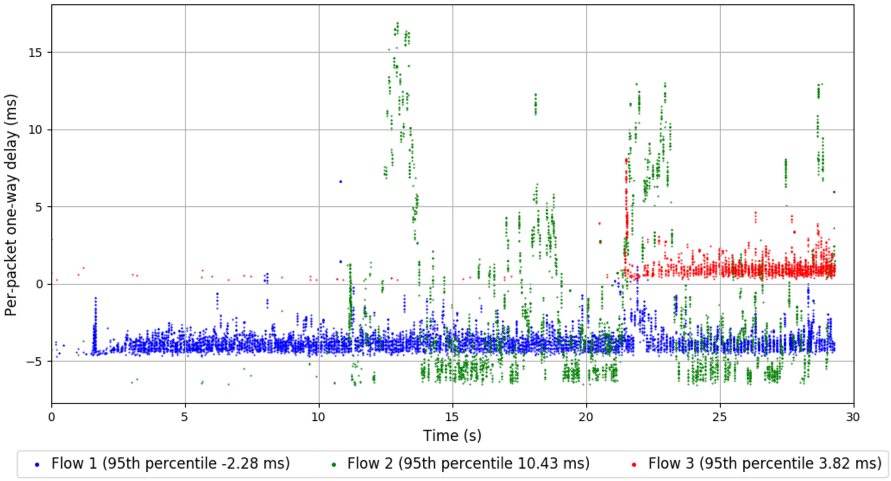
```
Run 2: Statistics of WebRTC media

Start at: 2017-08-11 08:58:53
End at: 2017-08-11 08:59:23
Local clock offset: 0.611 ms
Remote clock offset: -21.581 ms

# Below is generated by plot.py at 2017-08-11 14:49:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.33 Mbit/s
95th percentile per-packet one-way delay: 5.567 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: -2.279 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 10.431 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 3.821 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link



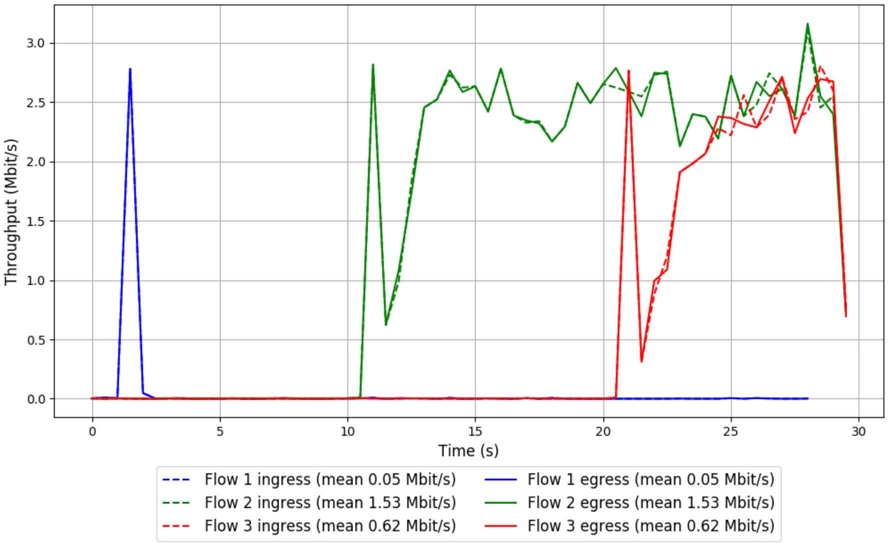


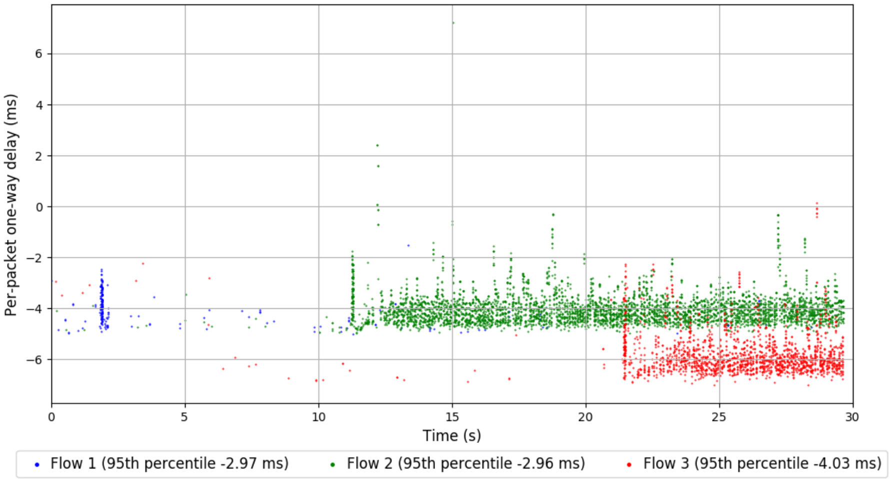
```
Run 3: Statistics of WebRTC media

Start at: 2017-08-11 09:18:44
End at: 2017-08-11 09:19:14
Local clock offset: 1.46 ms
Remote clock offset: -21.931 ms

# Below is generated by plot.py at 2017-08-11 14:49:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: -3.074 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: -2.970 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: -2.964 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: -4.029 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link



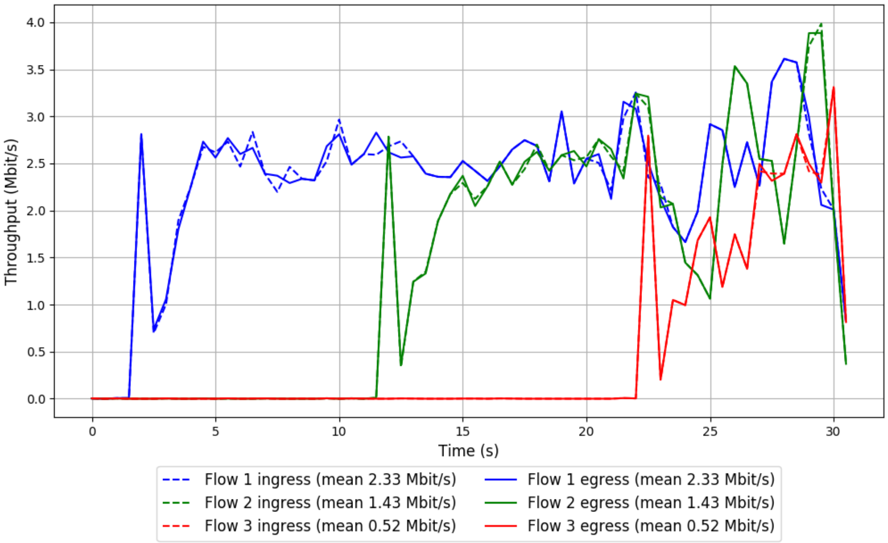


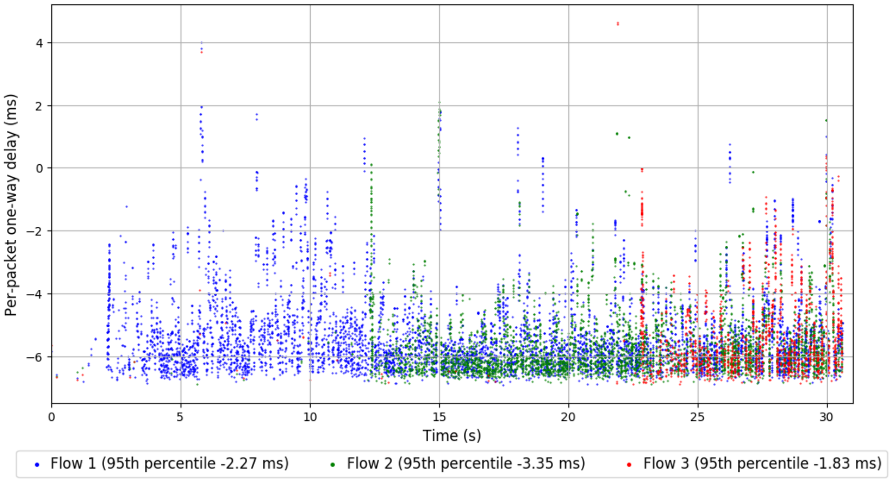
```
Run 4: Statistics of WebRTC media

Start at: 2017-08-11 10:12:54
End at: 2017-08-11 10:13:24
Local clock offset: 0.303 ms
Remote clock offset: -23.306 ms

# Below is generated by plot.py at 2017-08-11 14:49:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.28 Mbit/s
95th percentile per-packet one-way delay: -2.523 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: -2.275 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: -3.351 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: -1.835 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



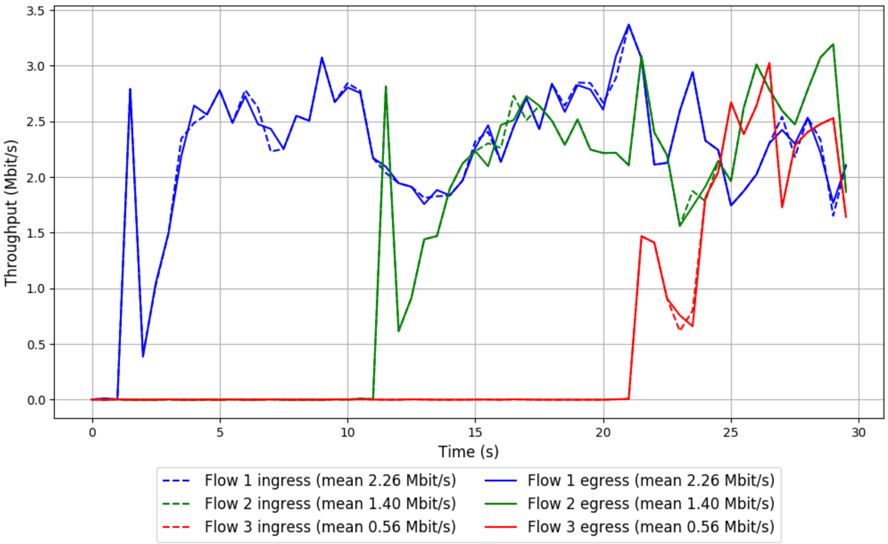


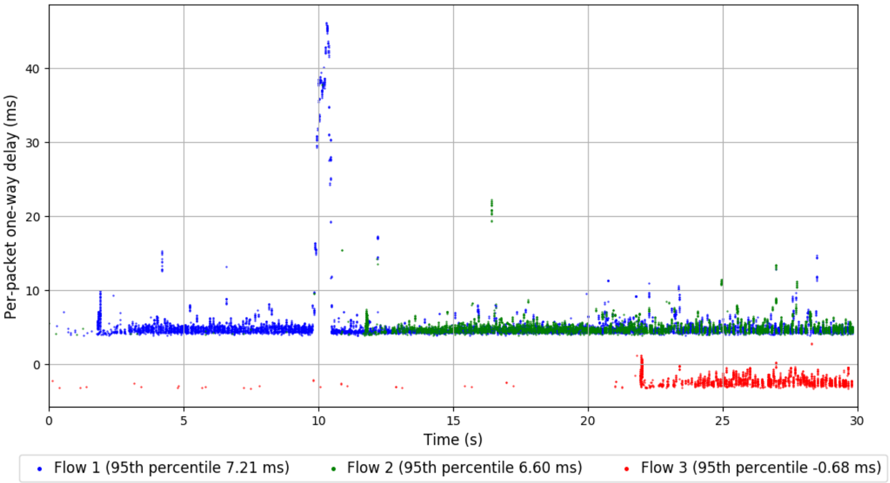
```
Run 5: Statistics of WebRTC media

Start at: 2017-08-11 10:34:04
End at: 2017-08-11 10:34:34
Local clock offset: -7.525 ms
Remote clock offset: -27.481 ms

# Below is generated by plot.py at 2017-08-11 14:49:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.19 Mbit/s
95th percentile per-packet one-way delay: 6.678 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 7.211 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 6.598 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: -0.679 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link



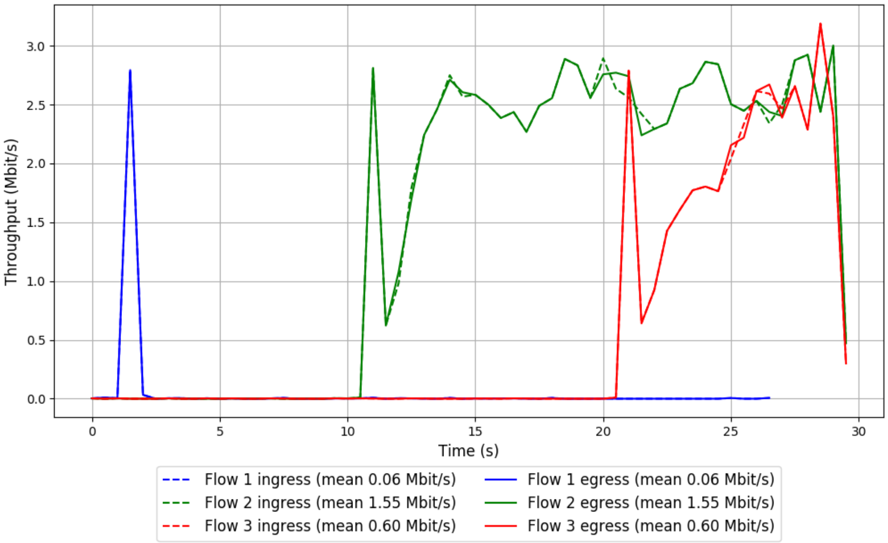


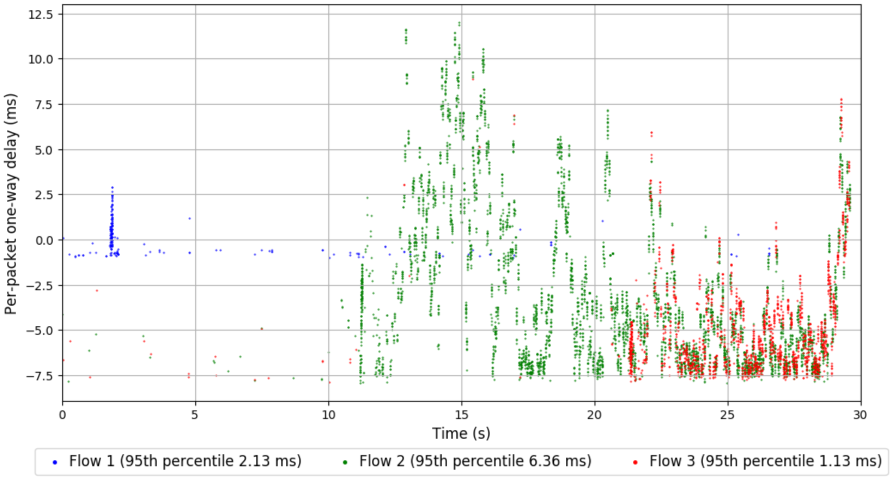
```
Run 6: Statistics of WebRTC media

Start at: 2017-08-11 10:52:48
End at: 2017-08-11 10:53:18
Local clock offset: 1.204 ms
Remote clock offset: -23.329 ms

# Below is generated by plot.py at 2017-08-11 14:49:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 5.191 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 2.127 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 6.360 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 1.127 ms
Loss rate: 0.00%
```

Run 6: Report of WebRTC media — Data Link



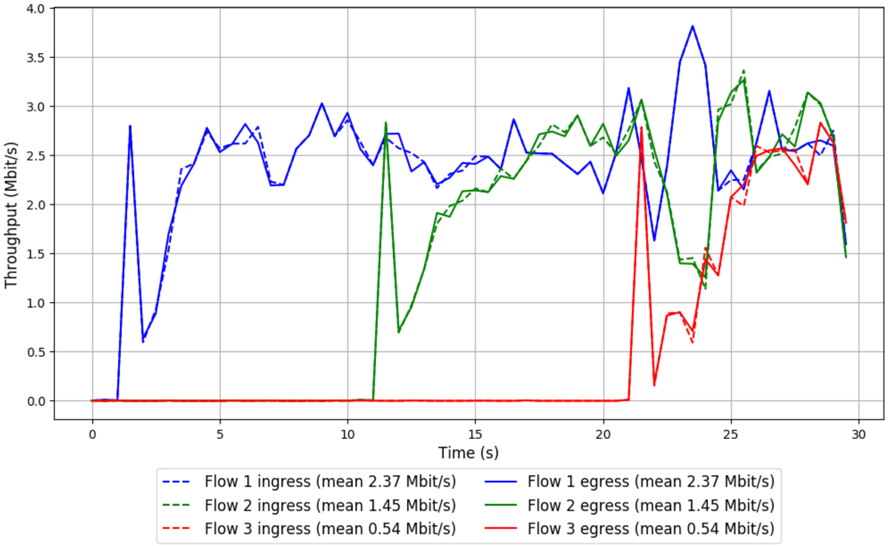


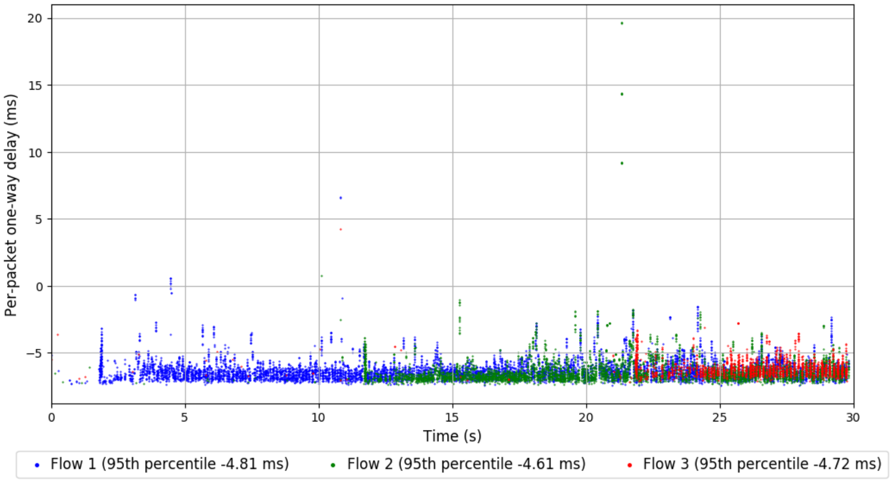
```
Run 7: Statistics of WebRTC media

Start at: 2017-08-11 11:13:18
End at: 2017-08-11 11:13:48
Local clock offset: -0.032 ms
Remote clock offset: -22.3 ms

# Below is generated by plot.py at 2017-08-11 14:49:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: -4.727 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: -4.810 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: -4.612 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: -4.718 ms
Loss rate: 0.00%
```

Run 7: Report of WebRTC media — Data Link



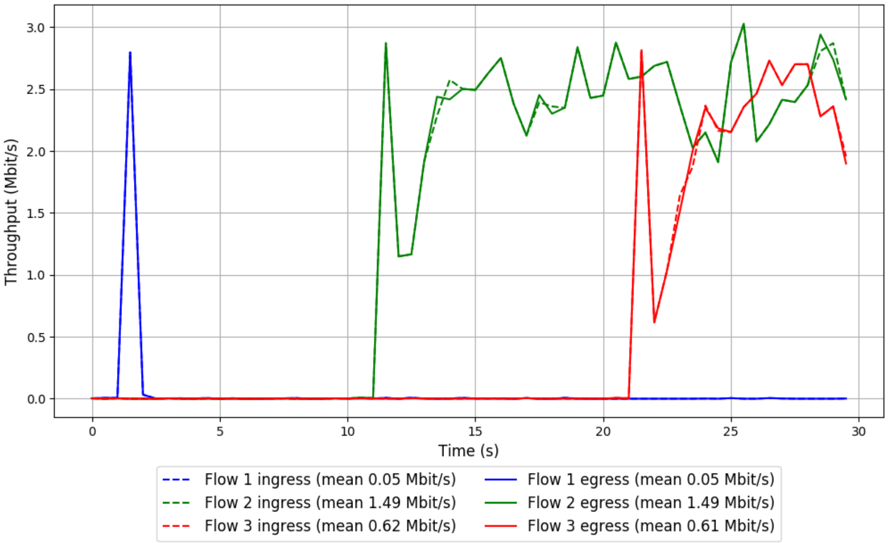


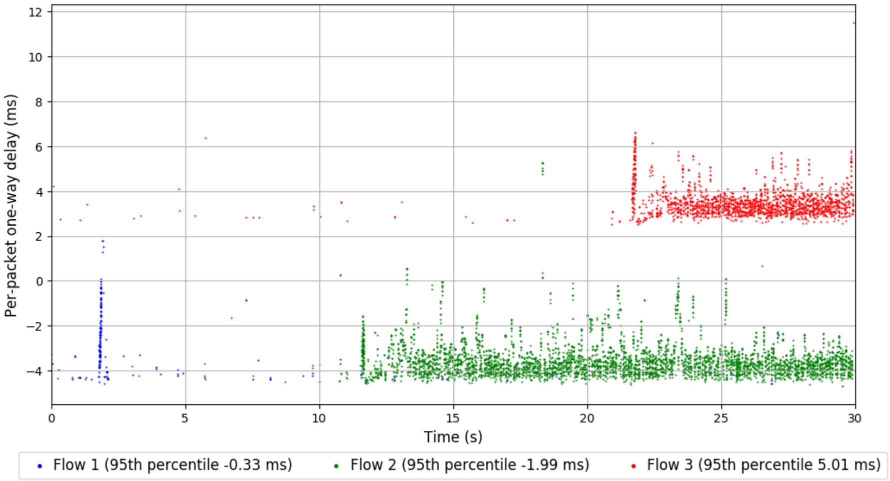
```
Run 8: Statistics of WebRTC media

Start at: 2017-08-11 11:50:32
End at: 2017-08-11 11:51:02
Local clock offset: -1.754 ms
Remote clock offset: -18.596 ms

# Below is generated by plot.py at 2017-08-11 14:49:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 3.937 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: -0.327 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: -1.987 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 5.007 ms
Loss rate: 0.16%
```

Run 8: Report of WebRTC media — Data Link



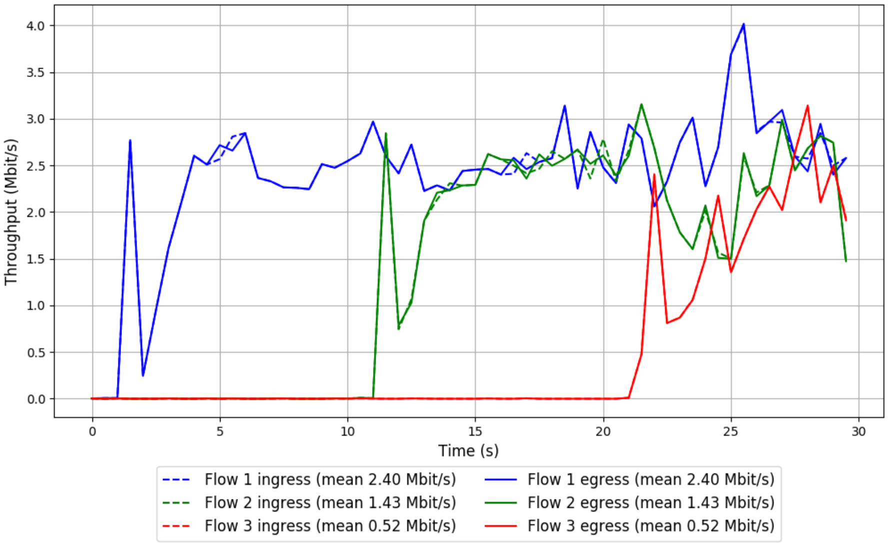


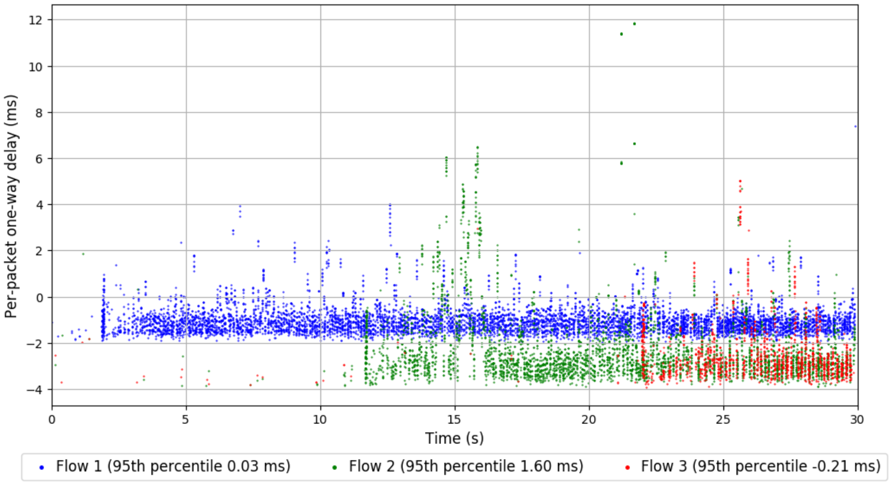
```
Run 9: Statistics of WebRTC media

Start at: 2017-08-11 12:31:22
End at: 2017-08-11 12:31:52
Local clock offset: -2.32 ms
Remote clock offset: -16.733 ms

# Below is generated by plot.py at 2017-08-11 14:49:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.34 Mbit/s
95th percentile per-packet one-way delay: 0.295 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 0.033 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 1.605 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: -0.214 ms
Loss rate: 0.06%
```

Run 9: Report of WebRTC media — Data Link



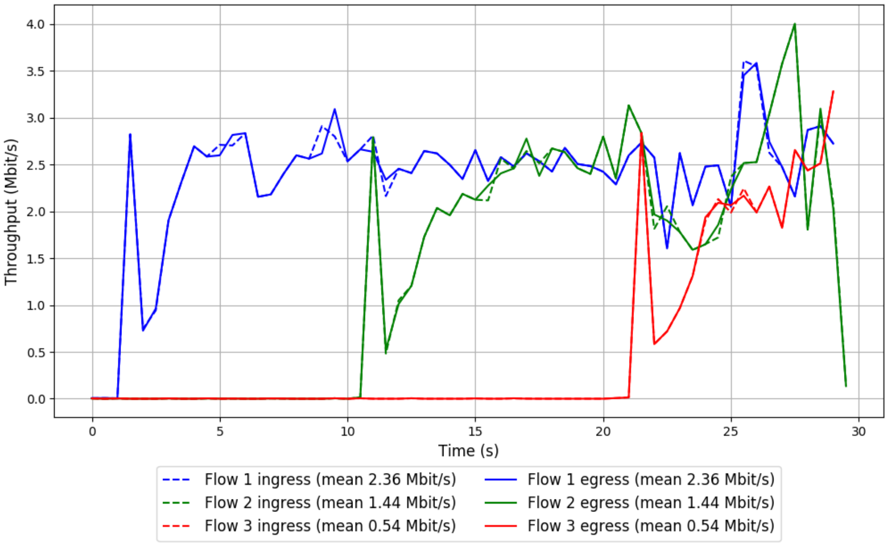


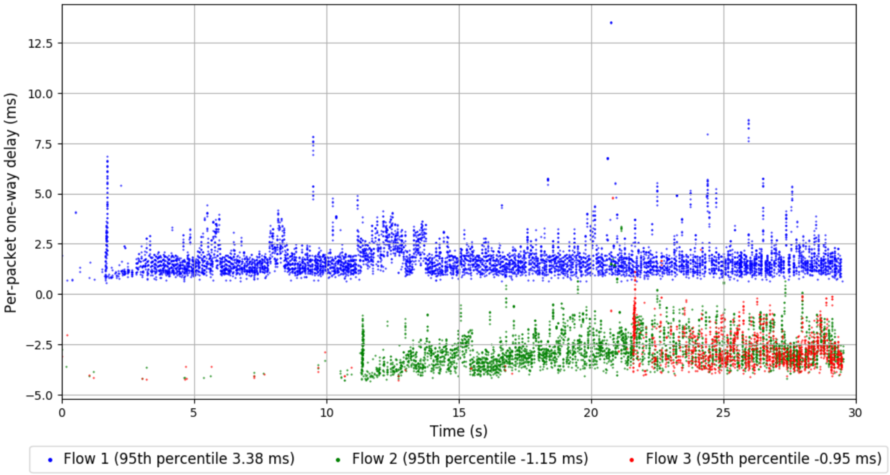
```
Run 10: Statistics of WebRTC media

Start at: 2017-08-11 13:22:54
End at: 2017-08-11 13:23:24
Local clock offset: 0.491 ms
Remote clock offset: -13.804 ms

# Below is generated by plot.py at 2017-08-11 14:49:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.33 Mbit/s
95th percentile per-packet one-way delay: 2.863 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 3.382 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: -1.146 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: -0.953 ms
Loss rate: 0.00%
```

Run 10: Report of WebRTC media — Data Link


Throughput (Mbit/s)
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
5
10
15
20
25
30
Time (s)
Flow 1 ingress (mean 2.36 Mbit/s)
Flow 2 ingress (mean 1.44 Mbit/s)
Flow 3 ingress (mean 0.54 Mbit/s)
Flow 1 egress (mean 2.36 Mbit/s)
Flow 2 egress (mean 1.44 Mbit/s)
Flow 3 egress (mean 0.54 Mbit/s)


Per-packet one-way delay (ms)
12.5
10.0
7.5
5.0
2.5
0.0
−2.5
−5.0
0
5
10
15
20
25
30
Time (s)
Flow 1 (95th percentile 3.38 ms)
Flow 2 (95th percentile -1.15 ms)
Flow 3 (95th percentile -0.95 ms)