Pantheon Report

Generated at 2018-02-20 16:59:43 (UTC).

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

Repeated the test of 17 congestion control schemes 10 times.

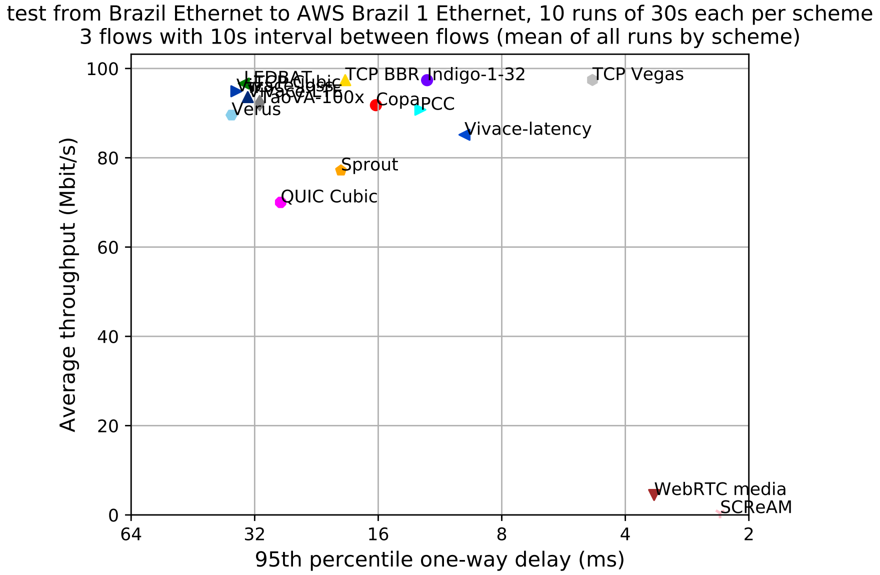
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

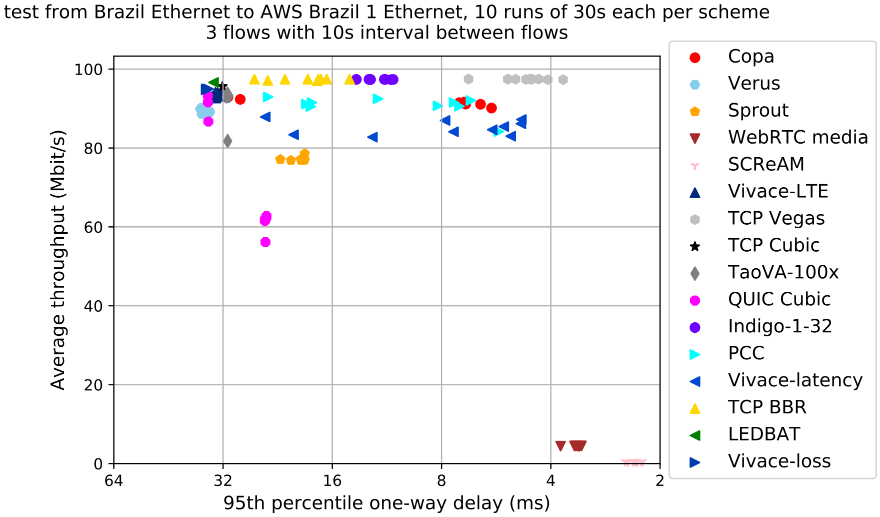
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

```
Git summary:
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5cec90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```


test from Brazil Ethernet to AWS Brazil 1 Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
0
20
40
60
80
100
64
32
16
8
4
2
LEDBAT
TCP Cubic
Vivace-loss
Vivace-LTE
TaoVA-100x
Verus
TCP BBR
Indigo-1-32
TCP Vegas
Copa
PCC
Vivace-latency
Sprout
QUIC Cubic
WebRTC media
SCReAM


test from Brazil Ethernet to AWS Brazil 1 Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
0
20
40
60
80
100
64
32
16
8
4
2
Copa
Verus
Sprout
WebRTC media
SCReAM
Vivace-LTE
TCP Vegas
TCP Cubic
TaoVA-100x
QUIC Cubic
Indigo-1-32
PCC
Vivace-latency
TCP BBR
LEDBAT
Vivace-loss

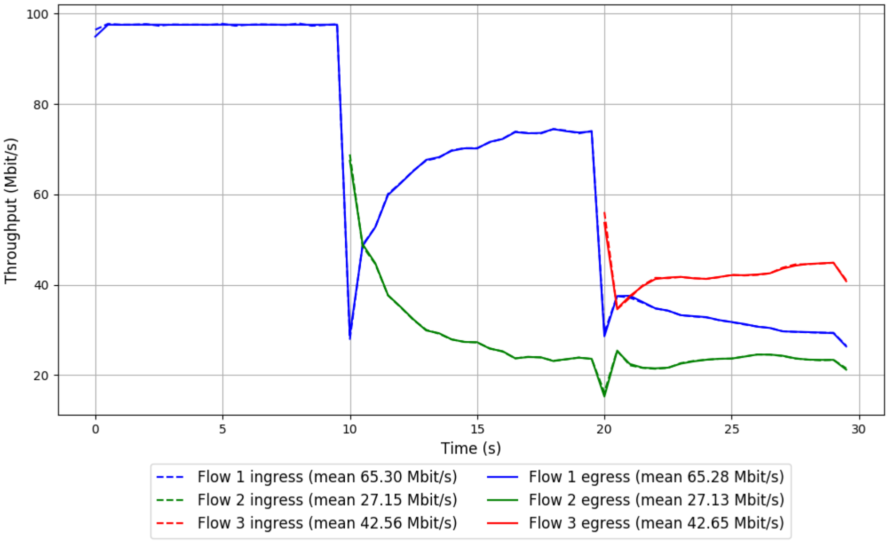
scheme	# runs	mean avg tput (Mbit/s) flow 1	flow 2	flow 3	mean 95th-%ile delay (ms) flow 1	flow 2	flow 3	mean loss rate (%) flow 1	flow 2	flow 3
TCP BBR	10	65.88	34.99	24.83	19.07	18.91	23.93	0.09	0.04	0.18
TCP Cubic	1	50.00	49.51	38.33	27.21	32.60	33.59	0.11	0.76	1.84
LEDBAT	1	54.99	45.84	33.76	30.77	34.71	36.28	0.16	0.45	0.98
PCC	10	74.56	19.29	10.28	11.95	13.95	12.99	0.02	0.07	0.08
QUIC Cubic	10	16.90	60.57	41.32	11.98	27.65	27.73	0.02	0.11	0.32
SCReAM	10	0.21	0.22	0.22	2.34	2.35	2.35	0.03	0.00	0.00
WebRTC media	10	2.36	1.49	0.64	3.37	3.40	3.48	0.03	0.07	0.06
Sprout	10	42.39	38.96	26.93	18.64	19.36	21.25	0.06	0.07	0.21
TaoVA-100x	10	55.14	39.93	31.88	30.46	31.14	31.18	0.06	0.13	0.32
TCP Vegas	10	49.80	43.54	56.24	7.90	4.33	4.42	0.01	0.02	0.06
Verus	10	52.29	41.31	29.59	35.48	36.33	36.67	0.08	0.15	0.42
Copa	10	56.74	39.77	25.97	15.48	16.37	16.87	0.04	0.08	0.17
FillP	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indigo-1-32	10	47.05	40.85	70.89	10.08	12.16	12.87	0.01	0.03	0.15
Vivace-latency	10	56.63	32.38	21.31	7.30	12.51	12.33	0.01	0.05	0.10
Vivace-loss	4	58.26	40.47	29.78	35.02	35.50	35.70	1.06	2.07	5.01
Vivace-LTE	10	60.23	37.05	26.64	31.88	33.65	34.66	0.04	0.12	0.34

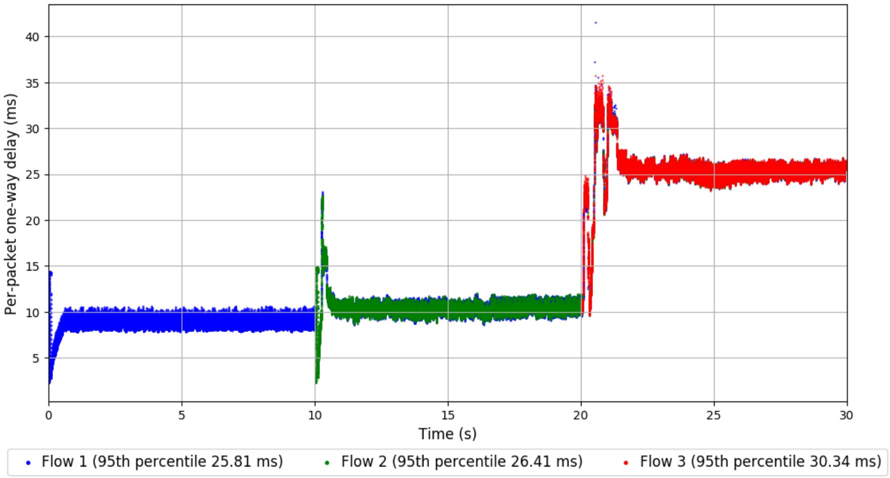
```
Run 1: Statistics of TCP BBR

Start at: 2018-02-20 09:56:07
End at: 2018-02-20 09:56:37
Local clock offset: -13.04 ms
Remote clock offset: -12.888 ms

# Below is generated by plot.py at 2018-02-20 16:38:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 26.231 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 65.28 Mbit/s
95th percentile per-packet one-way delay: 25.809 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 27.13 Mbit/s
95th percentile per-packet one-way delay: 26.405 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 42.65 Mbit/s
95th percentile per-packet one-way delay: 30.343 ms
Loss rate: 0.30%
```

Run 1: Report of TCP BBR — Data Link



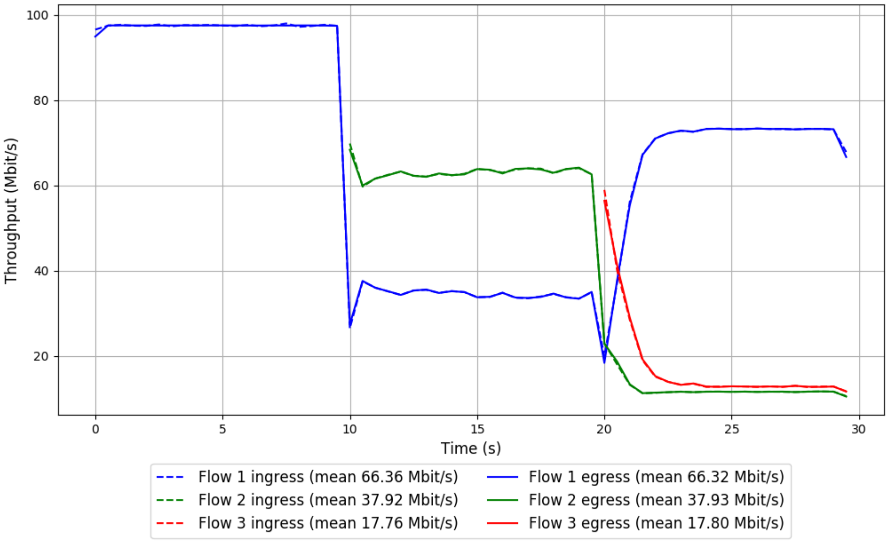


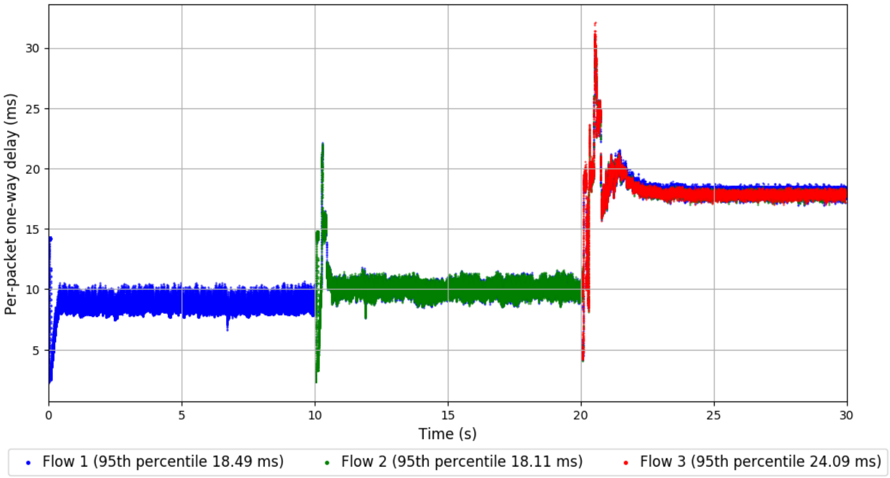
```
Run 2: Statistics of TCP BBR

Start at: 2018-02-20 10:16:32
End at: 2018-02-20 10:17:02
Local clock offset: -13.248 ms
Remote clock offset: -12.732 ms

# Below is generated by plot.py at 2018-02-20 16:38:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 18.691 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 66.32 Mbit/s
95th percentile per-packet one-way delay: 18.486 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 37.93 Mbit/s
95th percentile per-packet one-way delay: 18.105 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 17.80 Mbit/s
95th percentile per-packet one-way delay: 24.095 ms
Loss rate: 0.15%
```

Run 2: Report of TCP BBR — Data Link



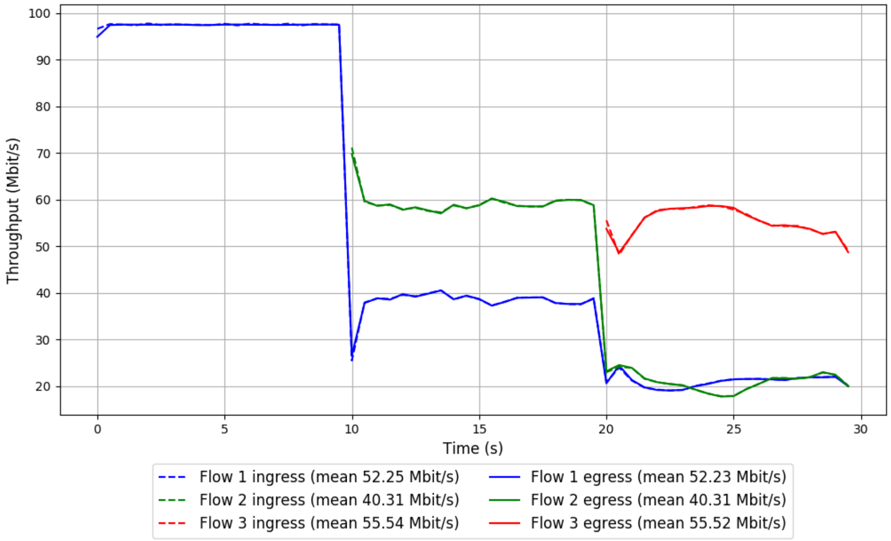


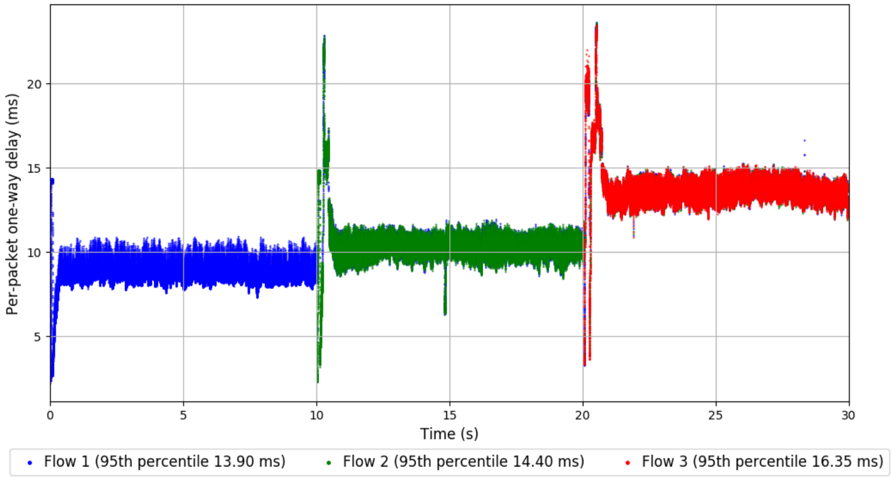
```
Run 3: Statistics of TCP BBR

Start at: 2018-02-20 10:36:59
End at: 2018-02-20 10:37:29
Local clock offset: -14.663 ms
Remote clock offset: -12.484 ms

# Below is generated by plot.py at 2018-02-20 16:38:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.44 Mbit/s
95th percentile per-packet one-way delay: 14.339 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 52.23 Mbit/s
95th percentile per-packet one-way delay: 13.901 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 40.31 Mbit/s
95th percentile per-packet one-way delay: 14.401 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 55.52 Mbit/s
95th percentile per-packet one-way delay: 16.346 ms
Loss rate: 0.16%
```

Run 3: Report of TCP BBR — Data Link



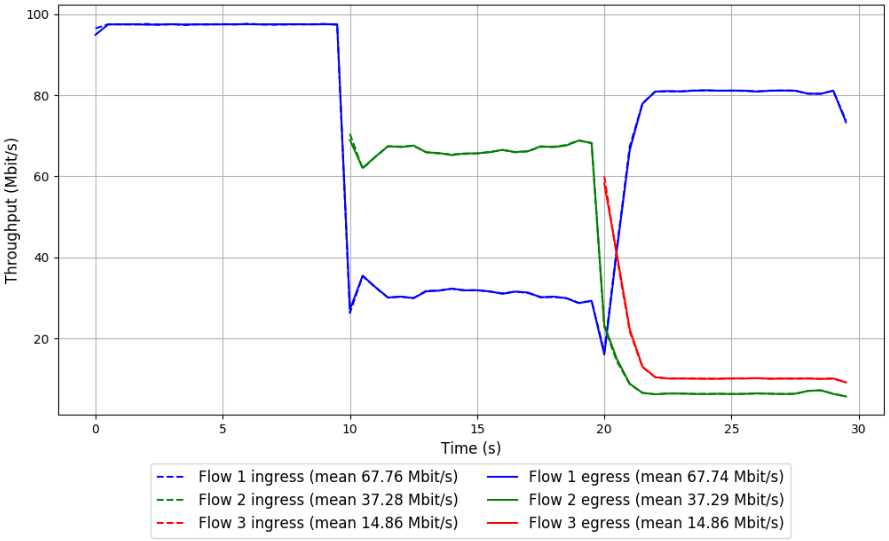


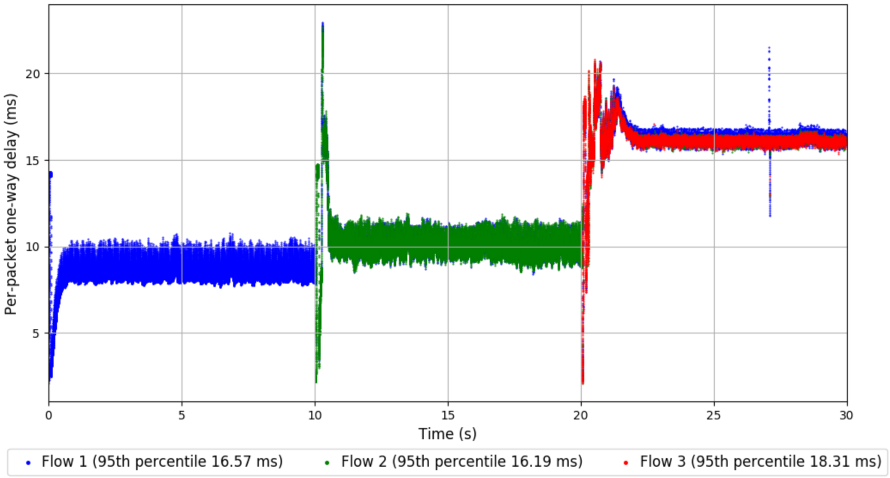
```
Run 4: Statistics of TCP BBR

Start at: 2018-02-20 10:57:25
End at: 2018-02-20 10:57:55
Local clock offset: -15.513 ms
Remote clock offset: -12.543 ms

# Below is generated by plot.py at 2018-02-20 16:38:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 16.579 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 67.74 Mbit/s
95th percentile per-packet one-way delay: 16.570 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 37.29 Mbit/s
95th percentile per-packet one-way delay: 16.186 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 14.86 Mbit/s
95th percentile per-packet one-way delay: 18.307 ms
Loss rate: 0.13%
```

Run 4: Report of TCP BBR — Data Link



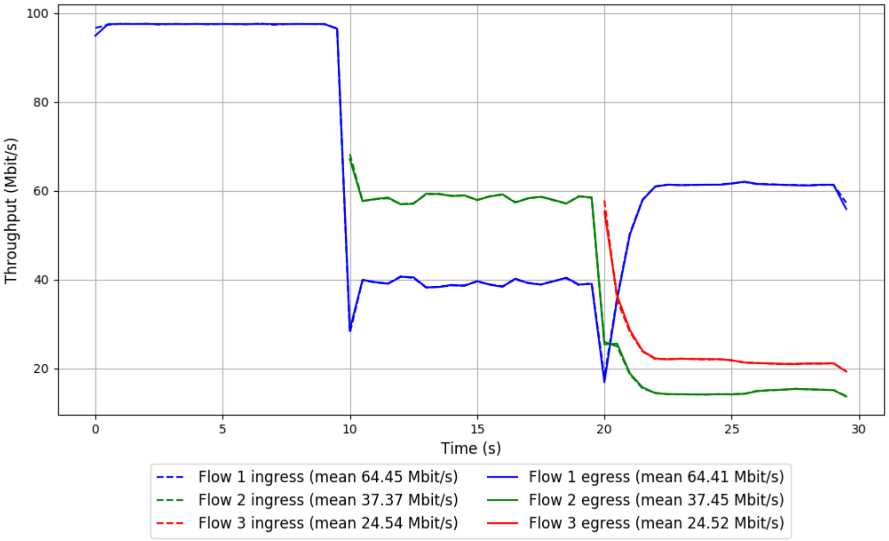


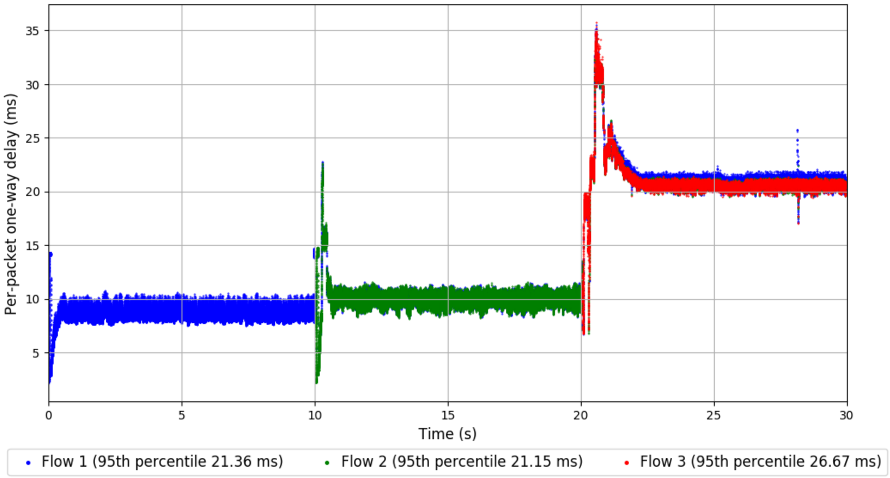
```
Run 5: Statistics of TCP BBR

Start at: 2018-02-20 11:17:48
End at: 2018-02-20 11:18:18
Local clock offset: -11.34 ms
Remote clock offset: -12.613 ms

# Below is generated by plot.py at 2018-02-20 16:38:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.44 Mbit/s
95th percentile per-packet one-way delay: 21.608 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 64.41 Mbit/s
95th percentile per-packet one-way delay: 21.356 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 37.45 Mbit/s
95th percentile per-packet one-way delay: 21.151 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 24.52 Mbit/s
95th percentile per-packet one-way delay: 26.668 ms
Loss rate: 0.21%
```

Run 5: Report of TCP BBR — Data Link



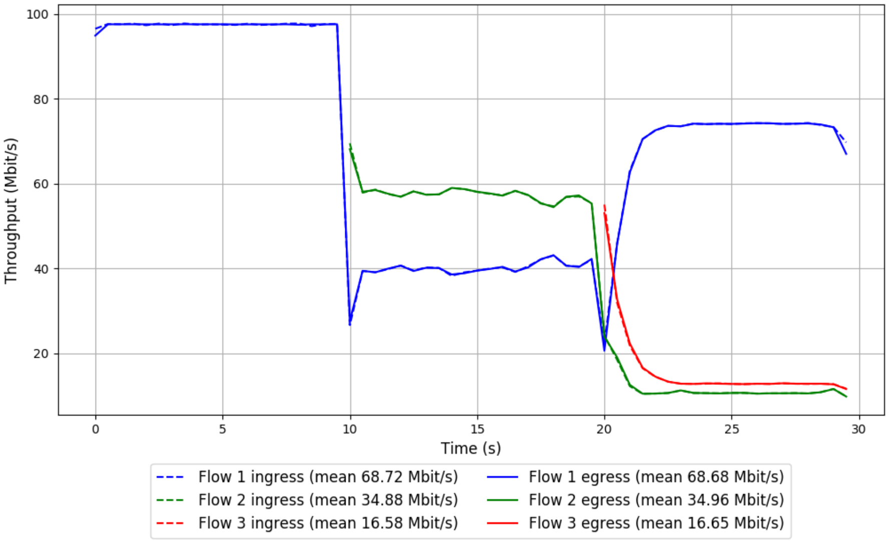


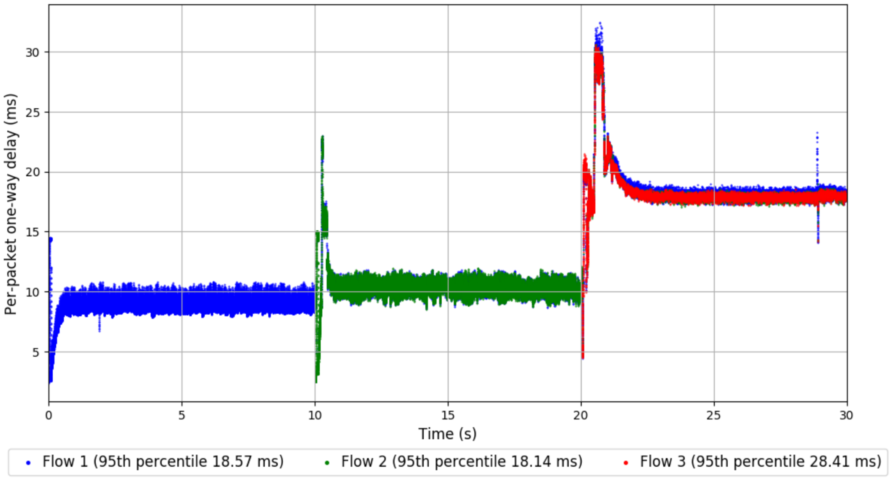
```
Run 6: Statistics of TCP BBR

Start at: 2018-02-20 11:38:11
End at: 2018-02-20 11:38:41
Local clock offset: -12.707 ms
Remote clock offset: -12.626 ms

# Below is generated by plot.py at 2018-02-20 16:38:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 18.692 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 68.68 Mbit/s
95th percentile per-packet one-way delay: 18.568 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 34.96 Mbit/s
95th percentile per-packet one-way delay: 18.145 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 16.65 Mbit/s
95th percentile per-packet one-way delay: 28.415 ms
Loss rate: 0.17%
```

Run 6: Report of TCP BBR — Data Link



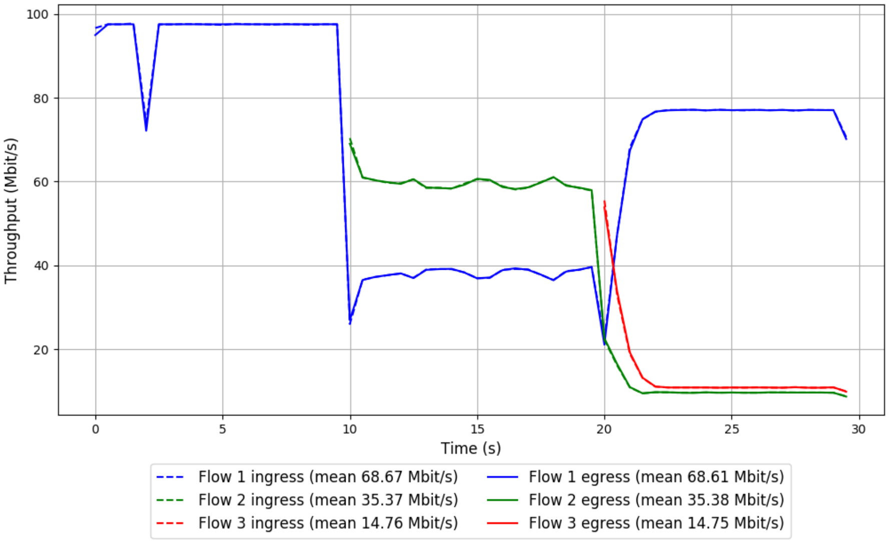


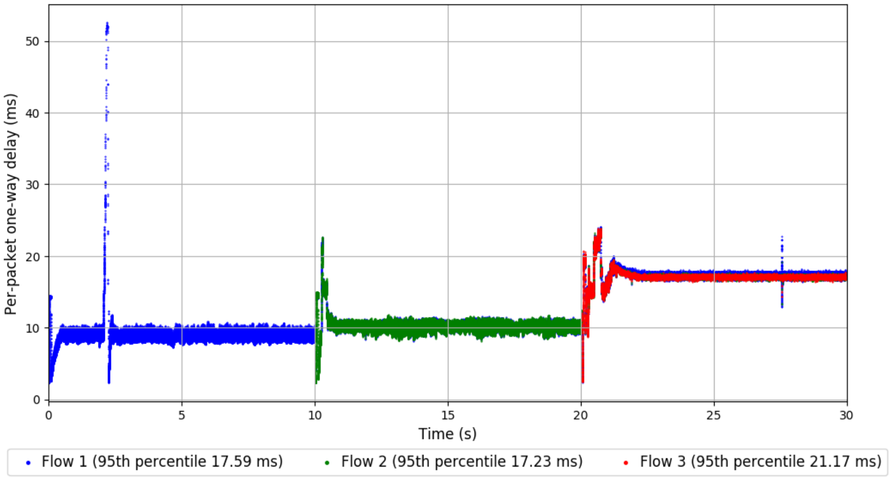
```
Run 7: Statistics of TCP BBR

Start at: 2018-02-20 11:58:37
End at: 2018-02-20 11:59:07
Local clock offset: -14.973 ms
Remote clock offset: -12.535 ms

# Below is generated by plot.py at 2018-02-20 16:38:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.05 Mbit/s
95th percentile per-packet one-way delay: 17.588 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 68.61 Mbit/s
95th percentile per-packet one-way delay: 17.595 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 35.38 Mbit/s
95th percentile per-packet one-way delay: 17.229 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 14.75 Mbit/s
95th percentile per-packet one-way delay: 21.171 ms
Loss rate: 0.15%
```

Run 7: Report of TCP BBR — Data Link



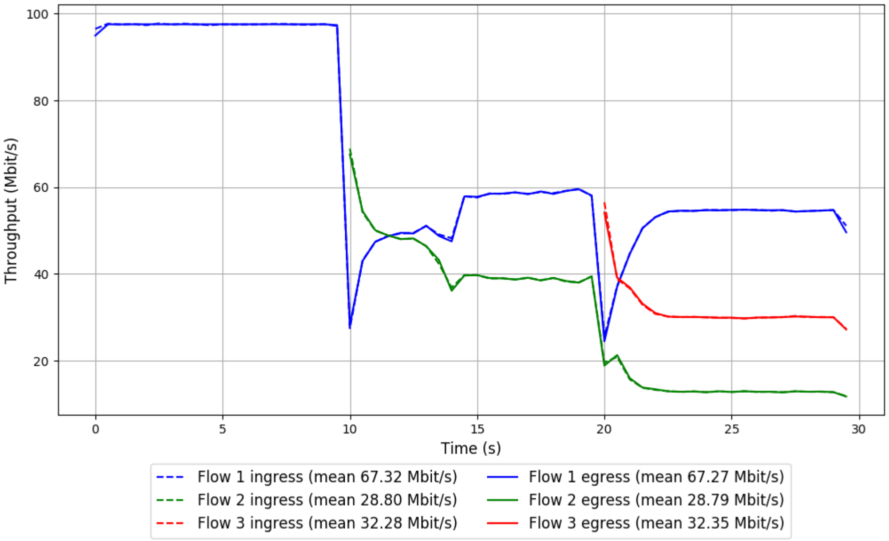


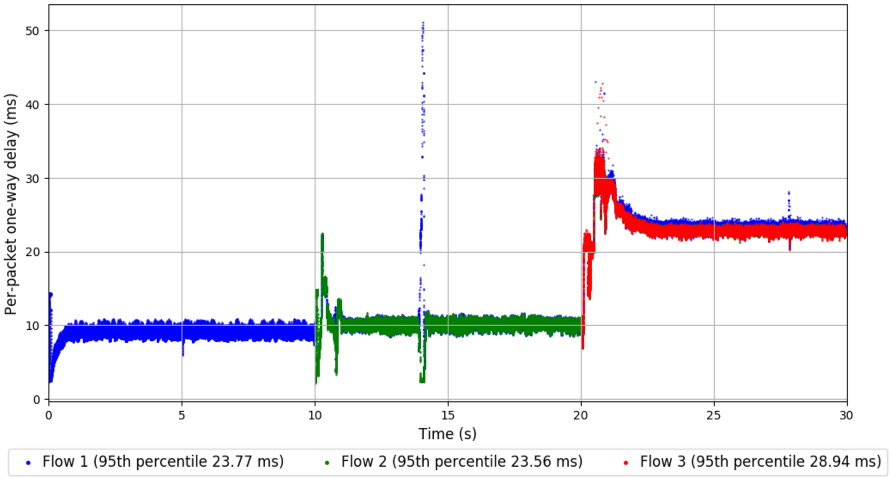
```
Run 8: Statistics of TCP BBR

Start at: 2018-02-20 12:19:00
End at: 2018-02-20 12:19:30
Local clock offset: -14.568 ms
Remote clock offset: -12.465 ms

# Below is generated by plot.py at 2018-02-20 16:38:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.14 Mbit/s
95th percentile per-packet one-way delay: 24.091 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 67.27 Mbit/s
95th percentile per-packet one-way delay: 23.767 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 28.79 Mbit/s
95th percentile per-packet one-way delay: 23.564 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 32.35 Mbit/s
95th percentile per-packet one-way delay: 28.937 ms
Loss rate: 0.23%
```

Run 8: Report of TCP BBR — Data Link



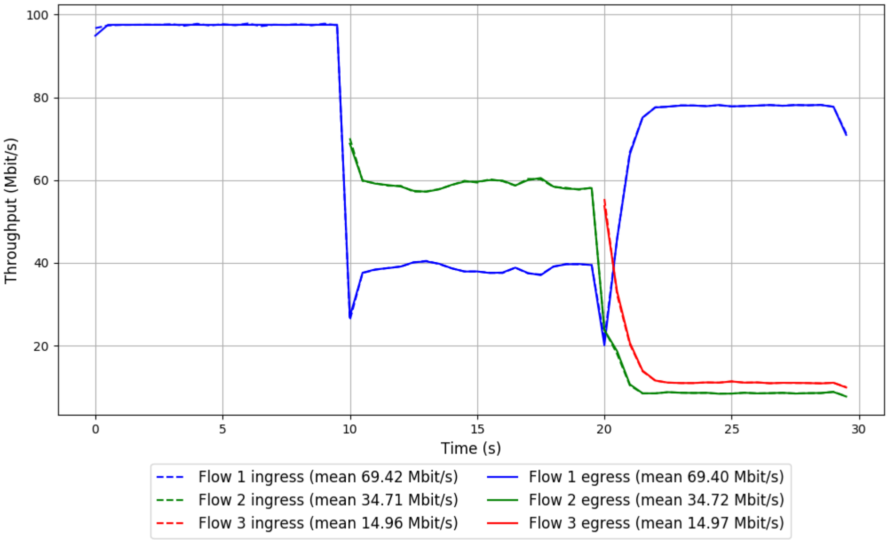


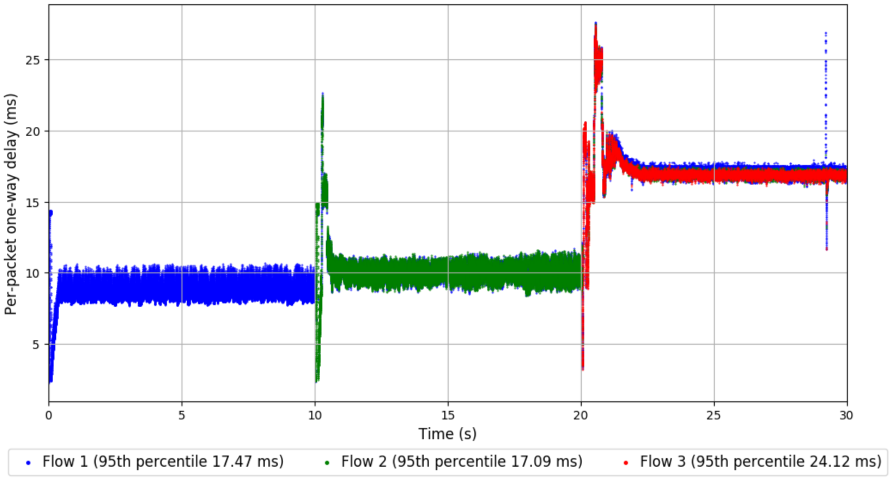
```
Run 9: Statistics of TCP BBR

Start at: 2018-02-20 12:39:25
End at: 2018-02-20 12:39:55
Local clock offset: -14.563 ms
Remote clock offset: -12.266 ms

# Below is generated by plot.py at 2018-02-20 16:39:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 17.492 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 69.40 Mbit/s
95th percentile per-packet one-way delay: 17.471 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 34.72 Mbit/s
95th percentile per-packet one-way delay: 17.093 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 14.97 Mbit/s
95th percentile per-packet one-way delay: 24.121 ms
Loss rate: 0.15%
```

Run 9: Report of TCP BBR — Data Link



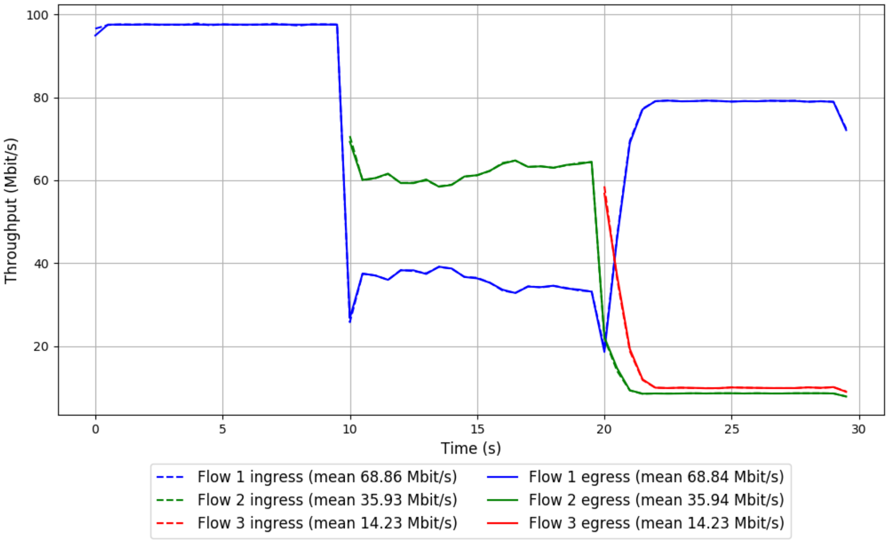


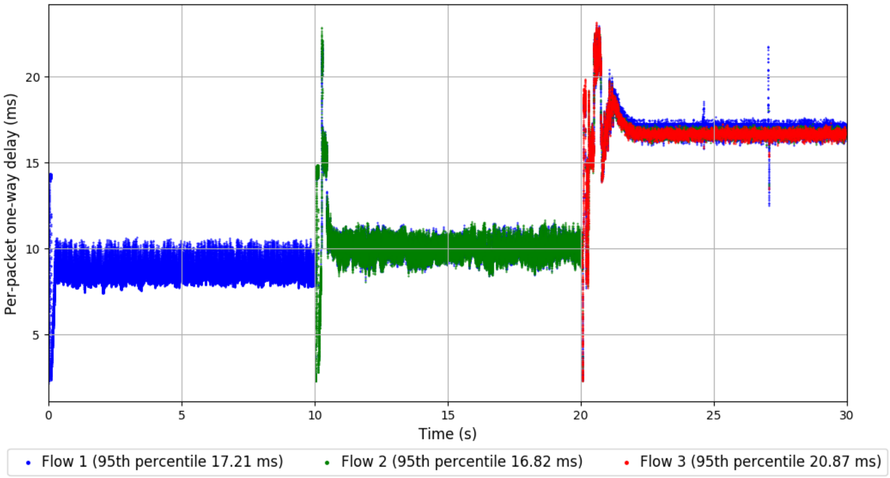
```
Run 10: Statistics of TCP BBR

Start at: 2018-02-20 12:59:52
End at: 2018-02-20 13:00:22
Local clock offset: -13.332 ms
Remote clock offset: -12.13 ms

# Below is generated by plot.py at 2018-02-20 16:40:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 17.206 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 68.84 Mbit/s
95th percentile per-packet one-way delay: 17.207 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 35.94 Mbit/s
95th percentile per-packet one-way delay: 16.821 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 14.23 Mbit/s
95th percentile per-packet one-way delay: 20.866 ms
Loss rate: 0.14%
```

Run 10: Report of TCP BBR — Data Link





```
Run 1: Statistics of TCP Cubic

Start at: 2018-02-20 09:58:22
End at: 2018-02-20 09:58:52
Local clock offset: -13.072 ms
Remote clock offset: -12.86 ms
```

Run 1: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 2: Statistics of TCP Cubic

Start at: 2018-02-20 10:18:46
End at: 2018-02-20 10:19:16
Local clock offset: -13.236 ms
Remote clock offset: -12.76 ms
```

Run 2: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 3: Statistics of TCP Cubic

Start at: 2018-02-20 10:39:14
End at: 2018-02-20 10:39:44
Local clock offset: -14.795 ms
Remote clock offset: -12.551 ms
```

Run 3: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 4: Statistics of TCP Cubic

Start at: 2018-02-20 10:59:39
End at: 2018-02-20 11:00:09
Local clock offset: -14.704 ms
Remote clock offset: -12.556 ms
```

Run 4: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 5: Statistics of TCP Cubic

Start at: 2018-02-20 11:20:02
End at: 2018-02-20 11:20:32
Local clock offset: -11.095 ms
Remote clock offset: -12.574 ms
```

Run 5: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 6: Statistics of TCP Cubic

Start at: 2018-02-20 11:40:26
End at: 2018-02-20 11:40:56
Local clock offset: -13.272 ms
Remote clock offset: -12.698 ms
```

Run 6: Report of TCP Cubic — Data Link

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Figure is missing

```
Run 7: Statistics of TCP Cubic

Start at: 2018-02-20 12:00:51
End at: 2018-02-20 12:01:21
Local clock offset: -15.161 ms
Remote clock offset: -12.492 ms
```

Run 7: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 8: Statistics of TCP Cubic

Start at: 2018-02-20 12:21:15
End at: 2018-02-20 12:21:45
Local clock offset: -14.525 ms
Remote clock offset: -12.504 ms
```

Run 8: Report of TCP Cubic — Data Link

Figure is missing

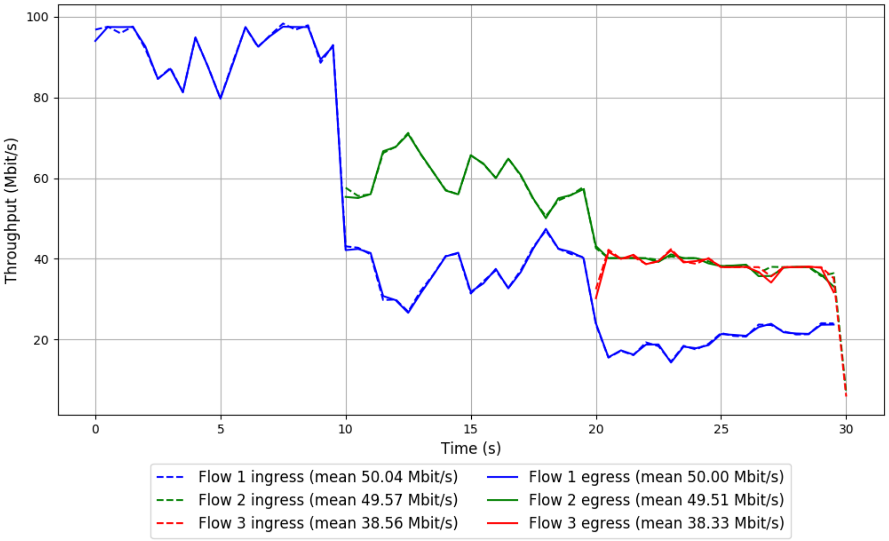
Figure is missing

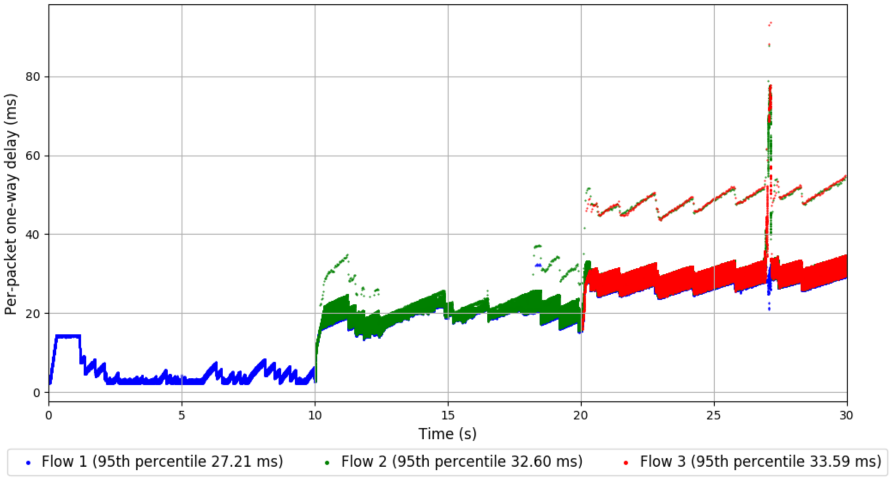
```
Run 9: Statistics of TCP Cubic

Start at: 2018-02-20 12:41:39
End at: 2018-02-20 12:42:09
Local clock offset: -14.371 ms
Remote clock offset: -12.311 ms

# Below is generated by plot.py at 2018-02-20 16:40:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.62 Mbit/s
95th percentile per-packet one-way delay: 32.112 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 50.00 Mbit/s
95th percentile per-packet one-way delay: 27.212 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 49.51 Mbit/s
95th percentile per-packet one-way delay: 32.598 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 38.33 Mbit/s
95th percentile per-packet one-way delay: 33.588 ms
Loss rate: 1.84%
```

Run 9: Report of TCP Cubic — Data Link





```
Run 10: Statistics of TCP Cubic

Start at: 2018-02-20 13:02:06
End at: 2018-02-20 13:02:36
Local clock offset: -13.366 ms
Remote clock offset: -12.144 ms
```

Run 10: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 1: Statistics of LEDBAT

Start at: 2018-02-20 09:48:09
End at: 2018-02-20 09:48:39
Local clock offset: -12.804 ms
Remote clock offset: -12.869 ms
```

Run 1: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 2: Statistics of LEDBAT

Start at: 2018-02-20 10:08:33
End at: 2018-02-20 10:09:03
Local clock offset: -13.196 ms
Remote clock offset: -12.894 ms
```

Run 2: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 3: Statistics of LEDBAT

Start at: 2018-02-20 10:29:00
End at: 2018-02-20 10:29:30
Local clock offset: -14.004 ms
Remote clock offset: -12.652 ms
```

Run 3: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 4: Statistics of LEDBAT

Start at: 2018-02-20 10:49:27
End at: 2018-02-20 10:49:57
Local clock offset: -15.306 ms
Remote clock offset: -12.521 ms
```

Run 4: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 5: Statistics of LEDBAT

Start at: 2018-02-20 11:09:50
End at: 2018-02-20 11:10:20
Local clock offset: -12.11 ms
Remote clock offset: -12.569 ms
```

Run 5: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 6: Statistics of LEDBAT

Start at: 2018-02-20 11:30:13
End at: 2018-02-20 11:30:43
Local clock offset: -10.598 ms
Remote clock offset: -12.605 ms
```

Run 6: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 7: Statistics of LEDBAT

Start at: 2018-02-20 11:50:39
End at: 2018-02-20 11:51:09
Local clock offset: -14.491 ms
Remote clock offset: -12.701 ms
```

Run 7: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 8: Statistics of LEDBAT

Start at: 2018-02-20 12:11:02
End at: 2018-02-20 12:11:32
Local clock offset: -14.927 ms
Remote clock offset: -12.442 ms
```

Run 8: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 9: Statistics of LEDBAT

Start at: 2018-02-20 12:31:26
End at: 2018-02-20 12:31:56
Local clock offset: -14.521 ms
Remote clock offset: -12.378 ms
```

Run 9: Report of LEDBAT — Data Link

Figure is missing

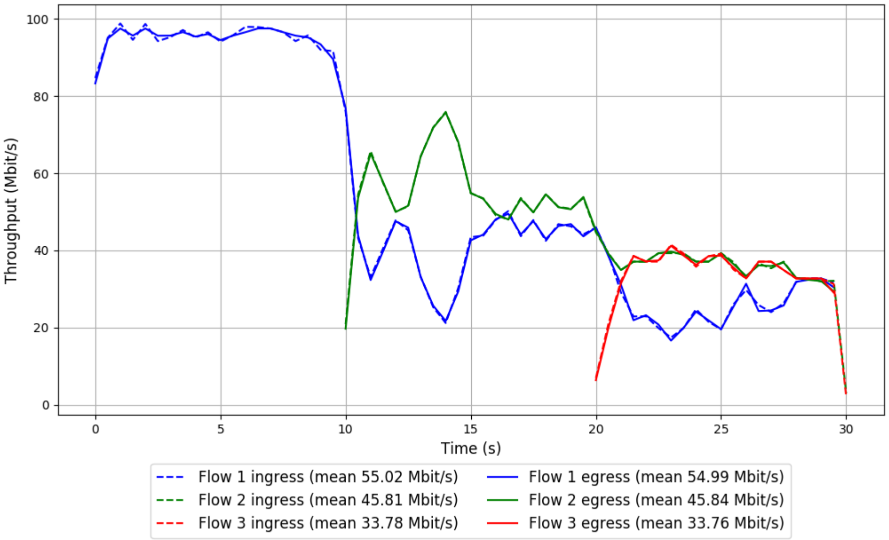
Figure is missing

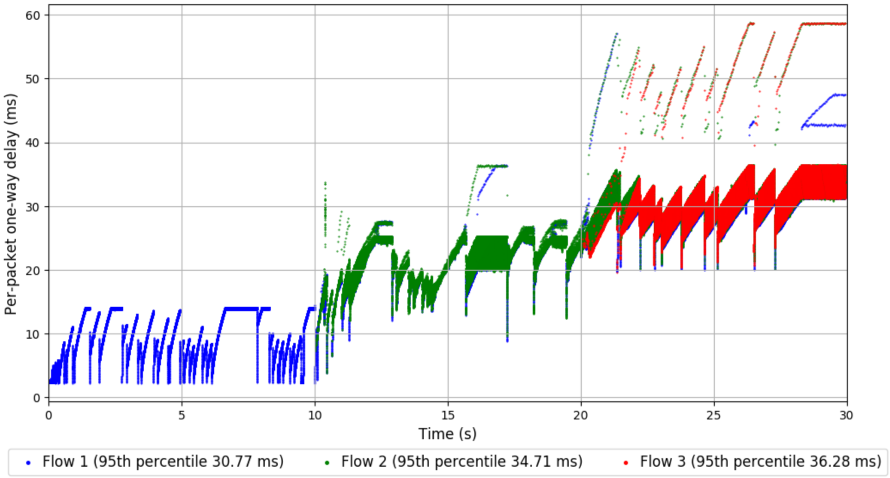
```
Run 10: Statistics of LEDBAT

Start at: 2018-02-20 12:51:52
End at: 2018-02-20 12:52:22
Local clock offset: -13.618 ms
Remote clock offset: -12.159 ms

# Below is generated by plot.py at 2018-02-20 16:40:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.63 Mbit/s
95th percentile per-packet one-way delay: 34.006 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 54.99 Mbit/s
95th percentile per-packet one-way delay: 30.772 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 45.84 Mbit/s
95th percentile per-packet one-way delay: 34.706 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 33.76 Mbit/s
95th percentile per-packet one-way delay: 36.276 ms
Loss rate: 0.98%
```

Run 10: Report of LEDBAT — Data Link



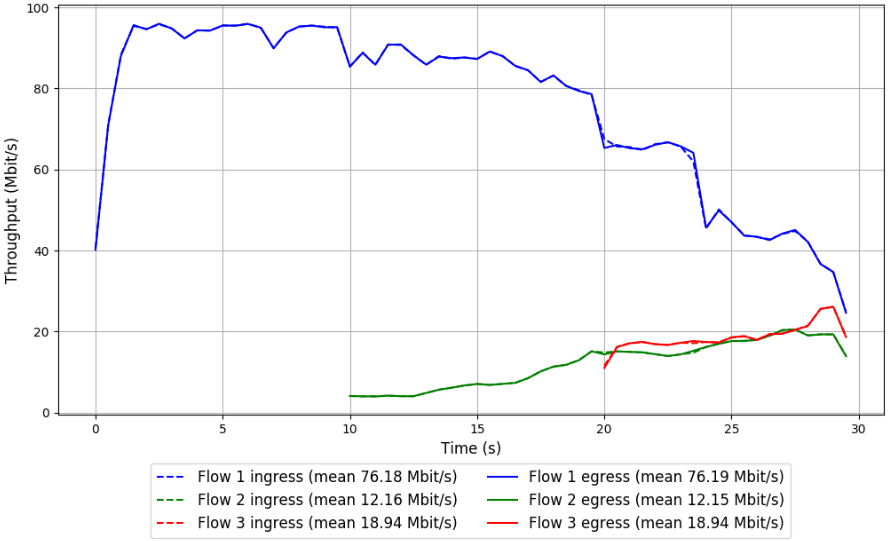


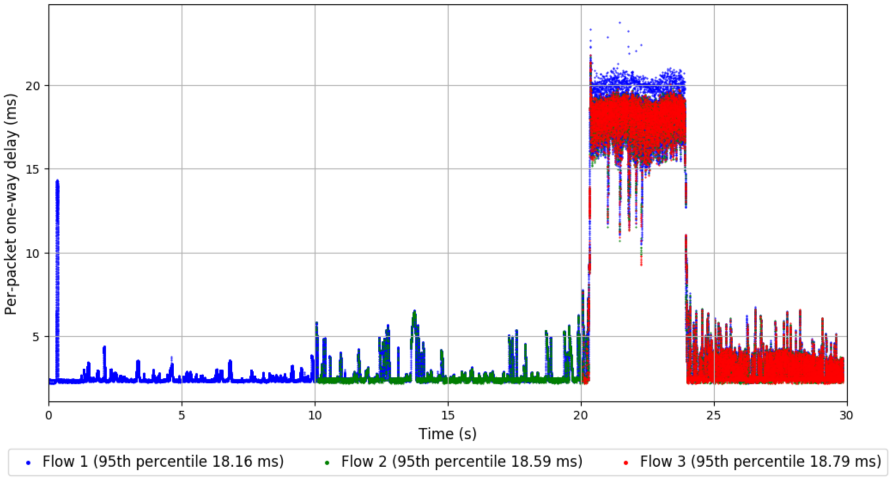
```
Run 1: Statistics of PCC

Start at: 2018-02-20 09:59:29
End at: 2018-02-20 09:59:59
Local clock offset: -13.101 ms
Remote clock offset: -12.923 ms

# Below is generated by plot.py at 2018-02-20 16:40:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.49 Mbit/s
95th percentile per-packet one-way delay: 18.338 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 76.19 Mbit/s
95th percentile per-packet one-way delay: 18.162 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 12.15 Mbit/s
95th percentile per-packet one-way delay: 18.585 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 18.94 Mbit/s
95th percentile per-packet one-way delay: 18.792 ms
Loss rate: 0.08%
```

Run 1: Report of PCC — Data Link



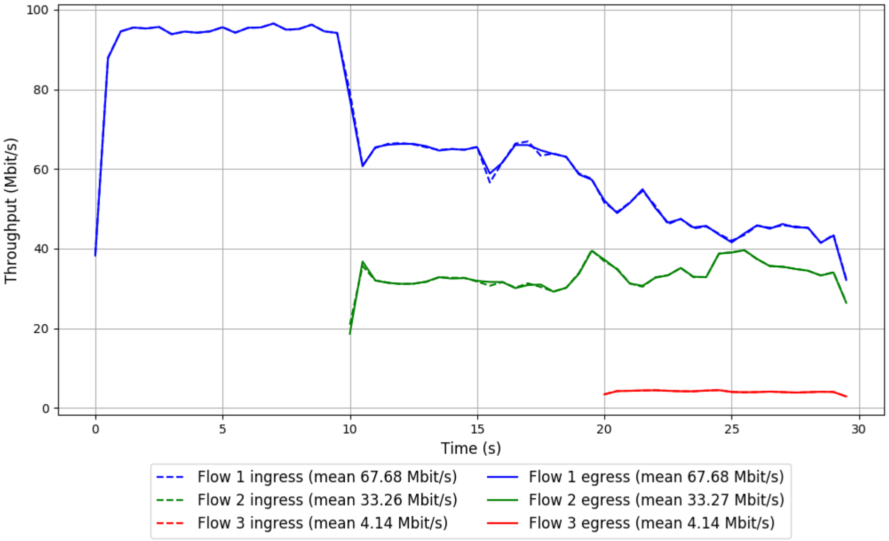


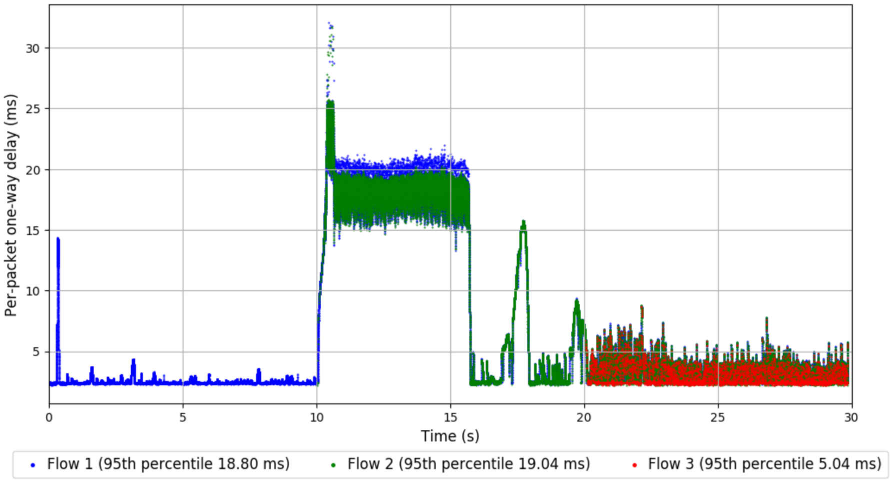
```
Run 2: Statistics of PCC

Start at: 2018-02-20 10:19:53
End at: 2018-02-20 10:20:23
Local clock offset: -13.238 ms
Remote clock offset: -12.749 ms

# Below is generated by plot.py at 2018-02-20 16:40:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.15 Mbit/s
95th percentile per-packet one-way delay: 18.860 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 67.68 Mbit/s
95th percentile per-packet one-way delay: 18.800 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 33.27 Mbit/s
95th percentile per-packet one-way delay: 19.035 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 5.037 ms
Loss rate: 0.03%
```

Run 2: Report of PCC — Data Link



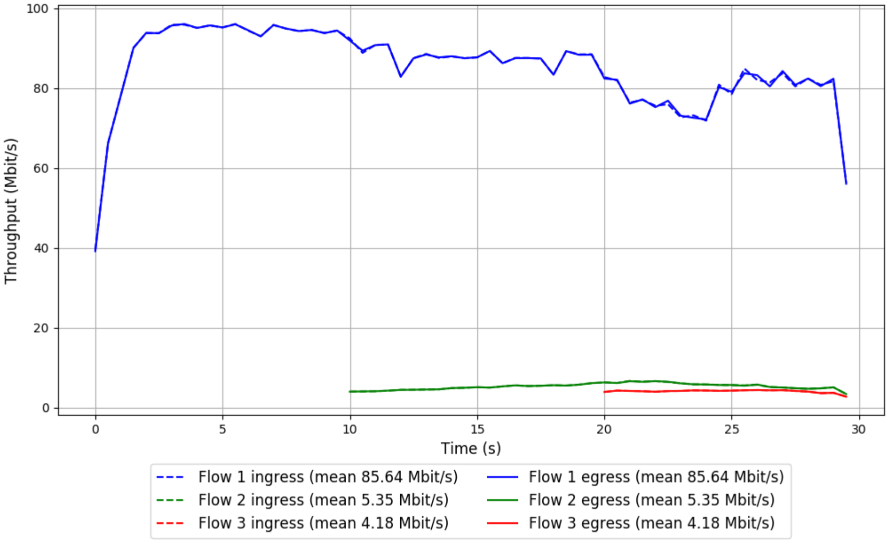


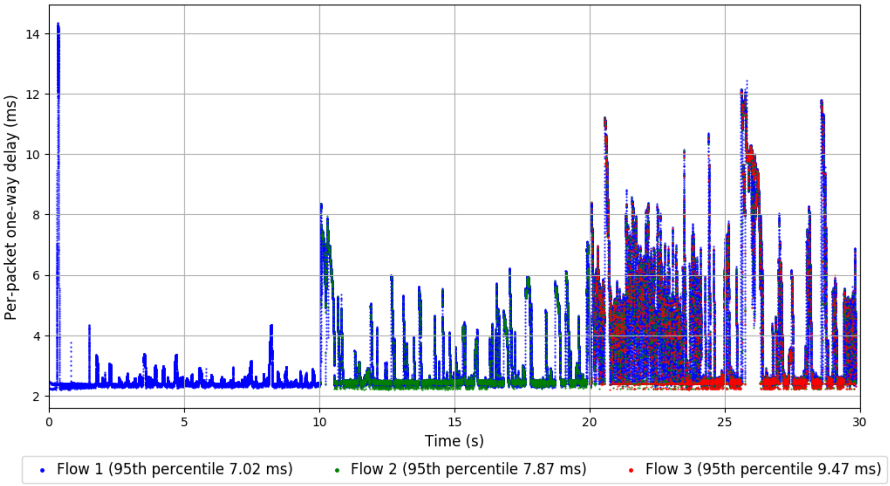
```
Run 3: Statistics of PCC

Start at: 2018-02-20 10:40:20
End at: 2018-02-20 10:40:50
Local clock offset: -14.813 ms
Remote clock offset: -12.48 ms

# Below is generated by plot.py at 2018-02-20 16:40:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.57 Mbit/s
95th percentile per-packet one-way delay: 7.142 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 85.64 Mbit/s
95th percentile per-packet one-way delay: 7.021 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 5.35 Mbit/s
95th percentile per-packet one-way delay: 7.873 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 9.474 ms
Loss rate: 0.03%
```

Run 3: Report of PCC — Data Link



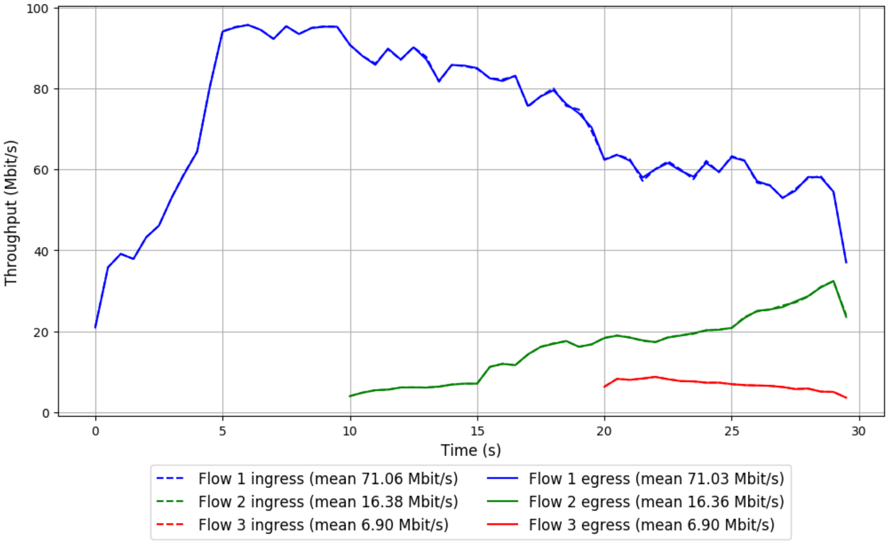


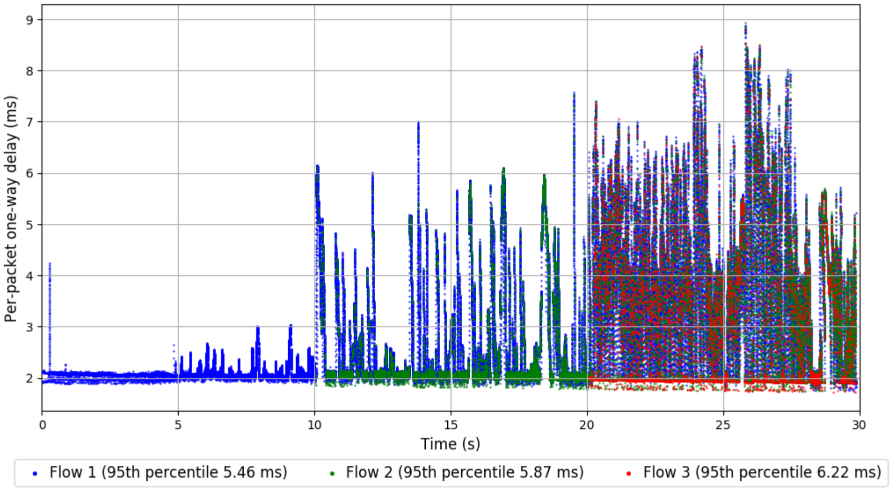
```
Run 4: Statistics of PCC

Start at: 2018-02-20 11:00:46
End at: 2018-02-20 11:01:16
Local clock offset: -14.318 ms
Remote clock offset: -12.549 ms

# Below is generated by plot.py at 2018-02-20 16:40:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.17 Mbit/s
95th percentile per-packet one-way delay: 5.561 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 71.03 Mbit/s
95th percentile per-packet one-way delay: 5.456 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 16.36 Mbit/s
95th percentile per-packet one-way delay: 5.868 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 6.90 Mbit/s
95th percentile per-packet one-way delay: 6.224 ms
Loss rate: 0.04%
```

Run 4: Report of PCC — Data Link



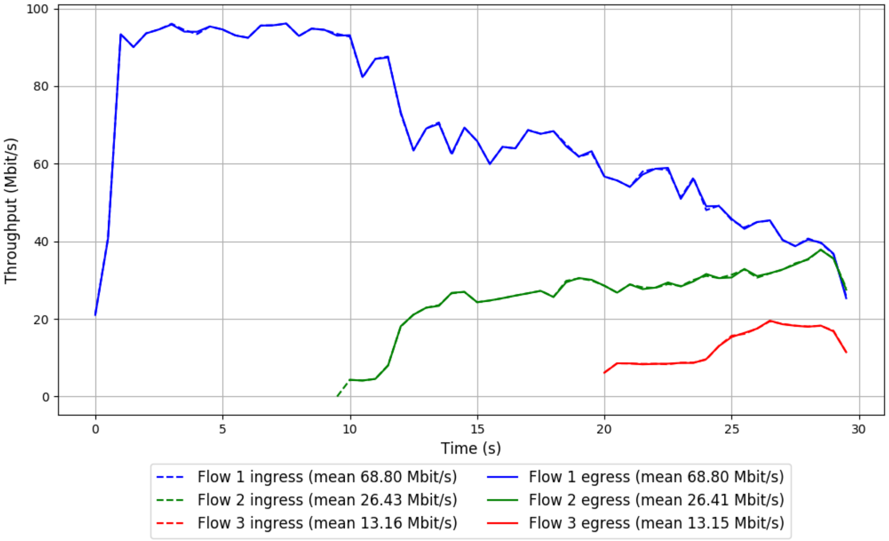


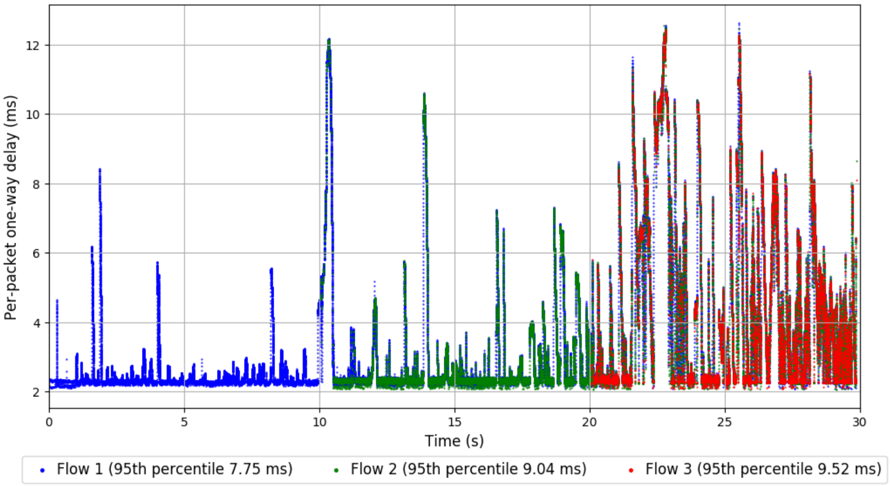
```
Run 5: Statistics of PCC

Start at: 2018-02-20 11:21:09
End at: 2018-02-20 11:21:39
Local clock offset: -11.044 ms
Remote clock offset: -12.574 ms

# Below is generated by plot.py at 2018-02-20 16:41:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.69 Mbit/s
95th percentile per-packet one-way delay: 8.178 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 68.80 Mbit/s
95th percentile per-packet one-way delay: 7.753 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 26.41 Mbit/s
95th percentile per-packet one-way delay: 9.043 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 13.15 Mbit/s
95th percentile per-packet one-way delay: 9.515 ms
Loss rate: 0.10%
```

Run 5: Report of PCC — Data Link



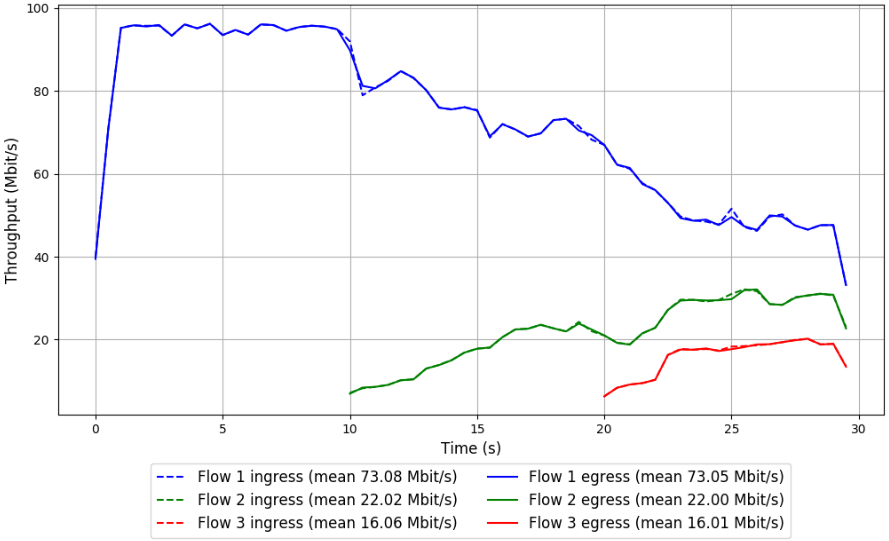


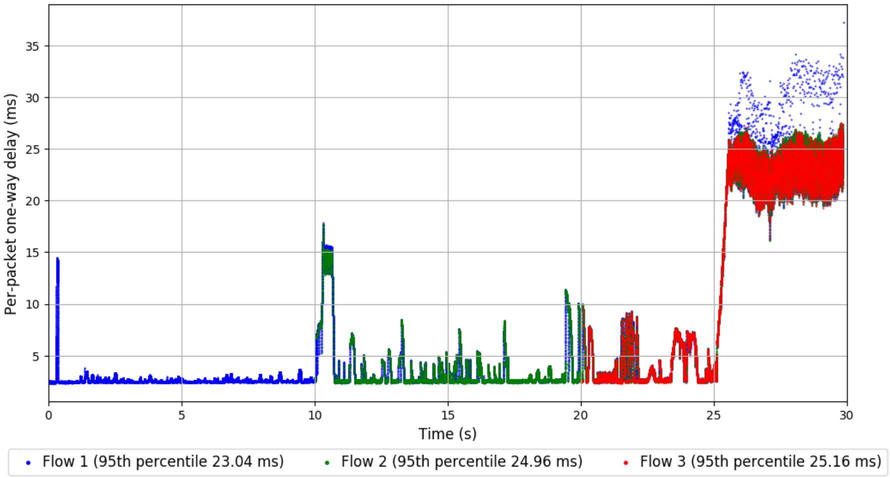
```
Run 6: Statistics of PCC

Start at: 2018-02-20 11:41:33
End at: 2018-02-20 11:42:03
Local clock offset: -13.429 ms
Remote clock offset: -12.706 ms

# Below is generated by plot.py at 2018-02-20 16:41:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.93 Mbit/s
95th percentile per-packet one-way delay: 24.026 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 73.05 Mbit/s
95th percentile per-packet one-way delay: 23.036 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 22.00 Mbit/s
95th percentile per-packet one-way delay: 24.961 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 16.01 Mbit/s
95th percentile per-packet one-way delay: 25.158 ms
Loss rate: 0.29%
```

Run 6: Report of PCC — Data Link



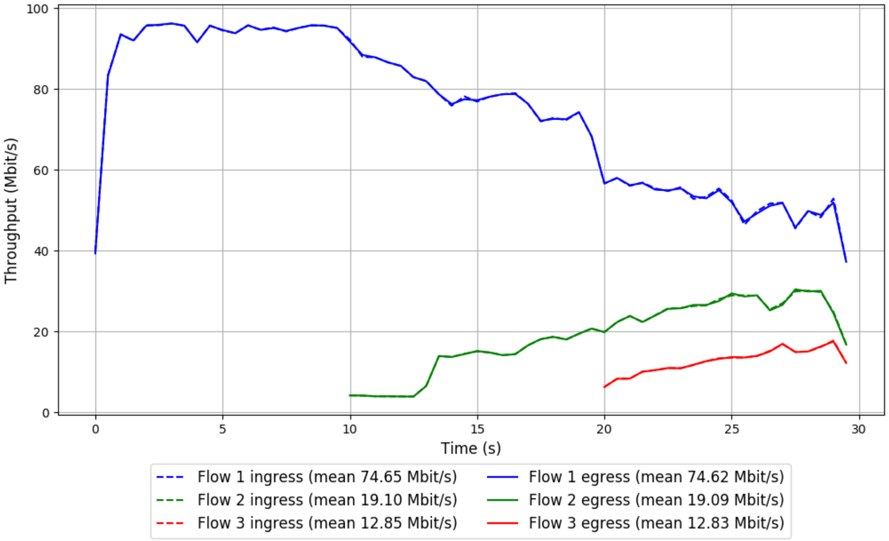


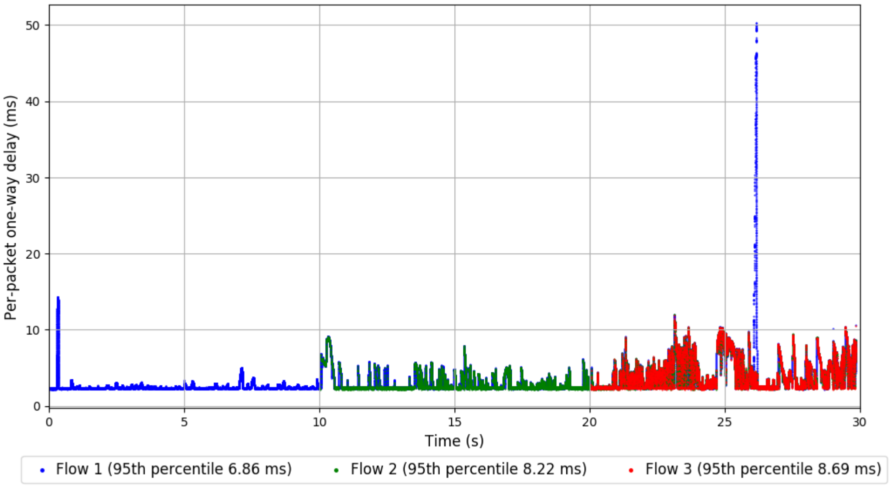
```
Run 7: Statistics of PCC

Start at: 2018-02-20 12:01:58
End at: 2018-02-20 12:02:28
Local clock offset: -15.134 ms
Remote clock offset: -12.464 ms

# Below is generated by plot.py at 2018-02-20 16:41:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.53 Mbit/s
95th percentile per-packet one-way delay: 7.389 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 74.62 Mbit/s
95th percentile per-packet one-way delay: 6.859 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 19.09 Mbit/s
95th percentile per-packet one-way delay: 8.221 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 12.83 Mbit/s
95th percentile per-packet one-way delay: 8.690 ms
Loss rate: 0.11%
```

Run 7: Report of PCC — Data Link



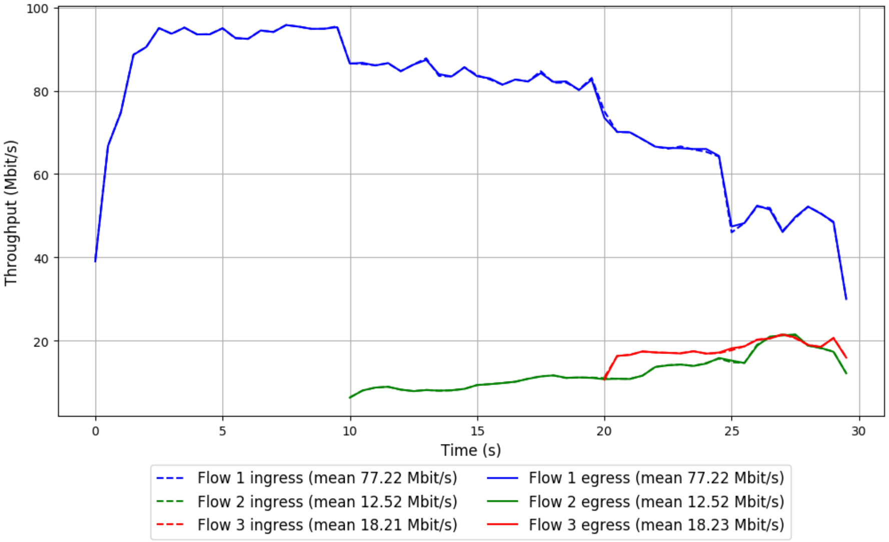


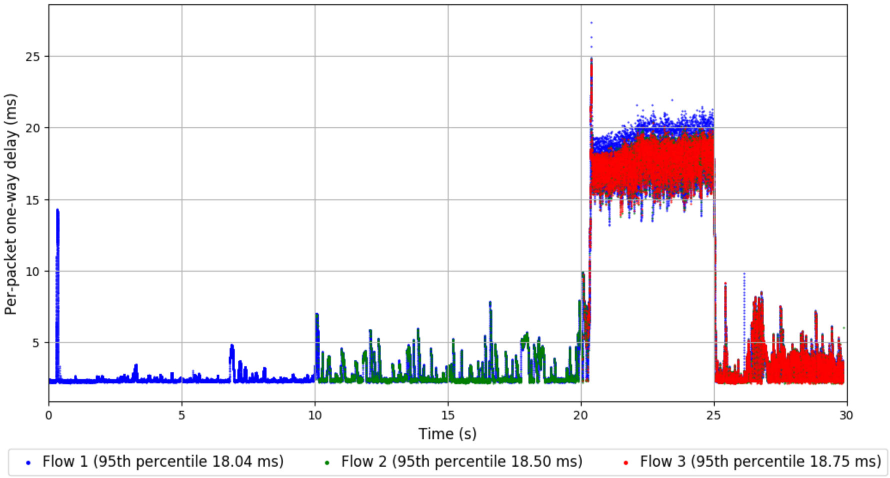
```
Run 8: Statistics of PCC

Start at: 2018-02-20 12:22:22
End at: 2018-02-20 12:22:52
Local clock offset: -14.517 ms
Remote clock offset: -12.474 ms

# Below is generated by plot.py at 2018-02-20 16:41:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.53 Mbit/s
95th percentile per-packet one-way delay: 18.208 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 77.22 Mbit/s
95th percentile per-packet one-way delay: 18.039 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 12.52 Mbit/s
95th percentile per-packet one-way delay: 18.495 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 18.23 Mbit/s
95th percentile per-packet one-way delay: 18.747 ms
Loss rate: 0.06%
```

Run 8: Report of PCC — Data Link



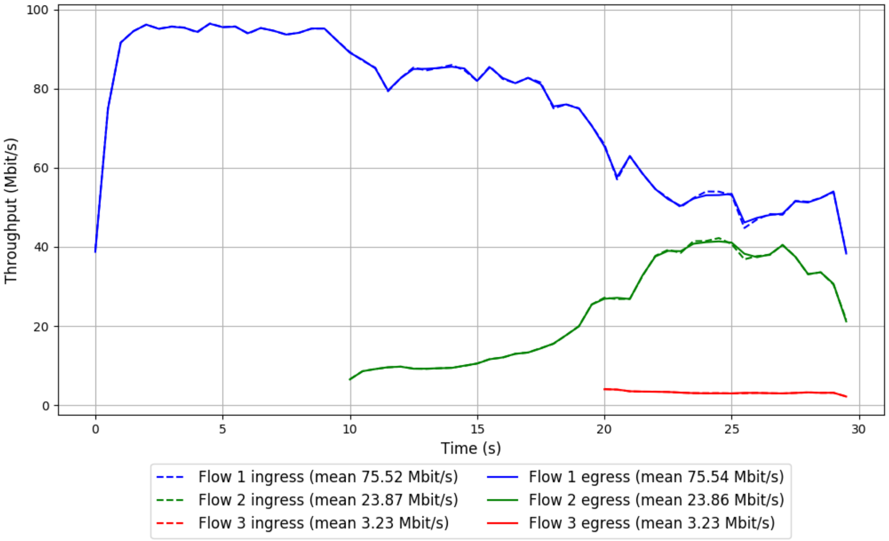


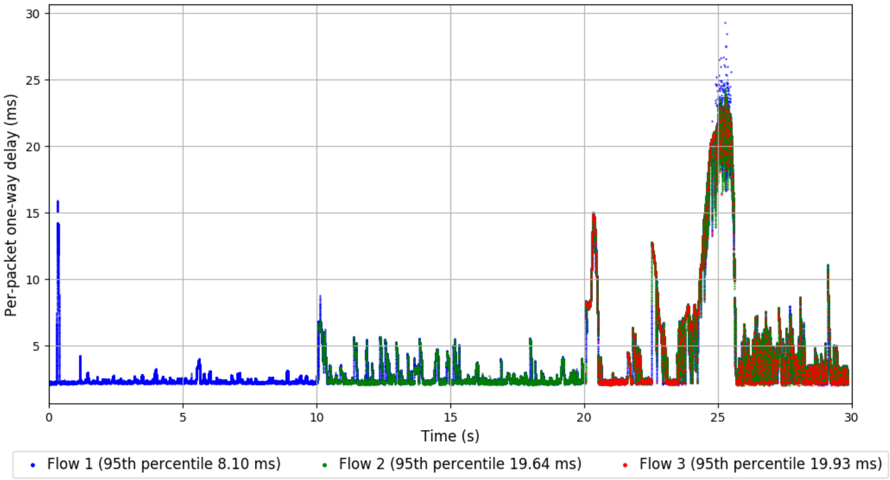
```
Run 9: Statistics of PCC

Start at: 2018-02-20 12:42:48
End at: 2018-02-20 12:43:18
Local clock offset: -14.321 ms
Remote clock offset: -12.273 ms

# Below is generated by plot.py at 2018-02-20 16:41:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.47 Mbit/s
95th percentile per-packet one-way delay: 11.964 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 75.54 Mbit/s
95th percentile per-packet one-way delay: 8.103 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 23.86 Mbit/s
95th percentile per-packet one-way delay: 19.641 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 3.23 Mbit/s
95th percentile per-packet one-way delay: 19.934 ms
Loss rate: 0.04%
```

Run 9: Report of PCC — Data Link



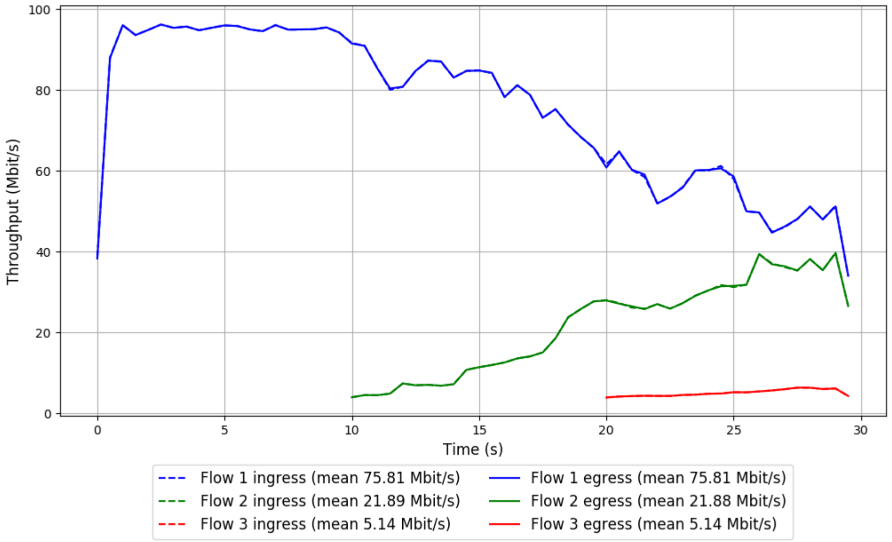


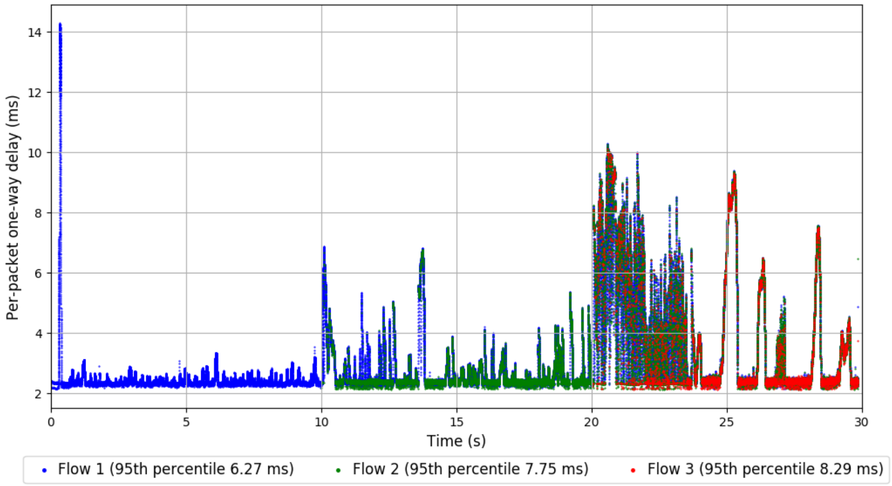
```
Run 10: Statistics of PCC

Start at: 2018-02-20 13:03:13
End at: 2018-02-20 13:03:43
Local clock offset: -13.26 ms
Remote clock offset: -12.159 ms

# Below is generated by plot.py at 2018-02-20 16:41:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.05 Mbit/s
95th percentile per-packet one-way delay: 6.640 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 75.81 Mbit/s
95th percentile per-packet one-way delay: 6.271 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 21.88 Mbit/s
95th percentile per-packet one-way delay: 7.748 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 8.289 ms
Loss rate: 0.03%
```

Run 10: Report of PCC — Data Link



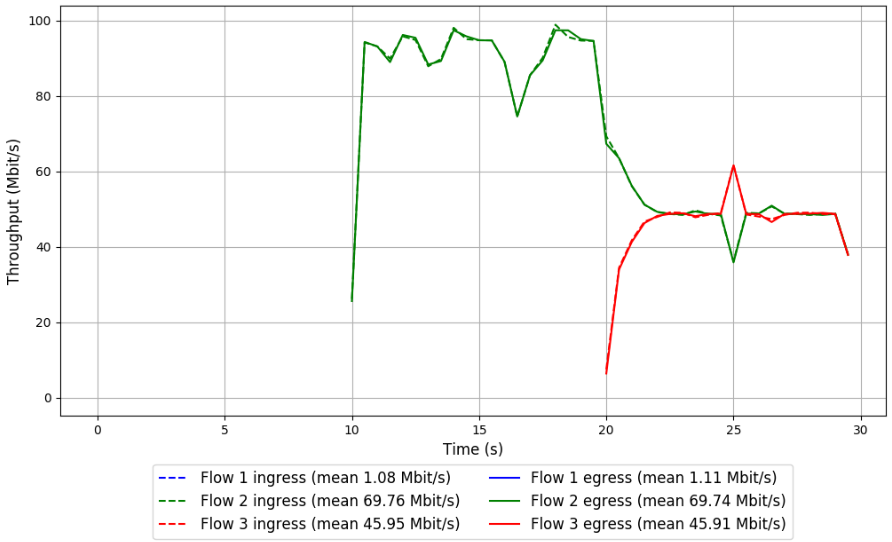


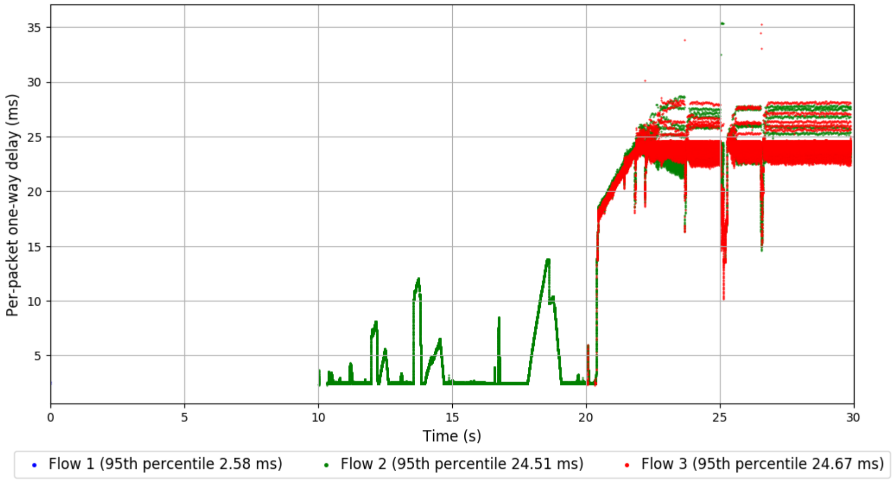
```
Run 1: Statistics of QUIC Cubic

Start at: 2018-02-20 09:49:17
End at: 2018-02-20 09:49:47
Local clock offset: -12.78 ms
Remote clock offset: -12.949 ms

# Below is generated by plot.py at 2018-02-20 16:41:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.53 Mbit/s
95th percentile per-packet one-way delay: 24.547 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 2.576 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 69.74 Mbit/s
95th percentile per-packet one-way delay: 24.514 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 45.91 Mbit/s
95th percentile per-packet one-way delay: 24.669 ms
Loss rate: 0.26%
```

Run 1: Report of QUIC Cubic — Data Link



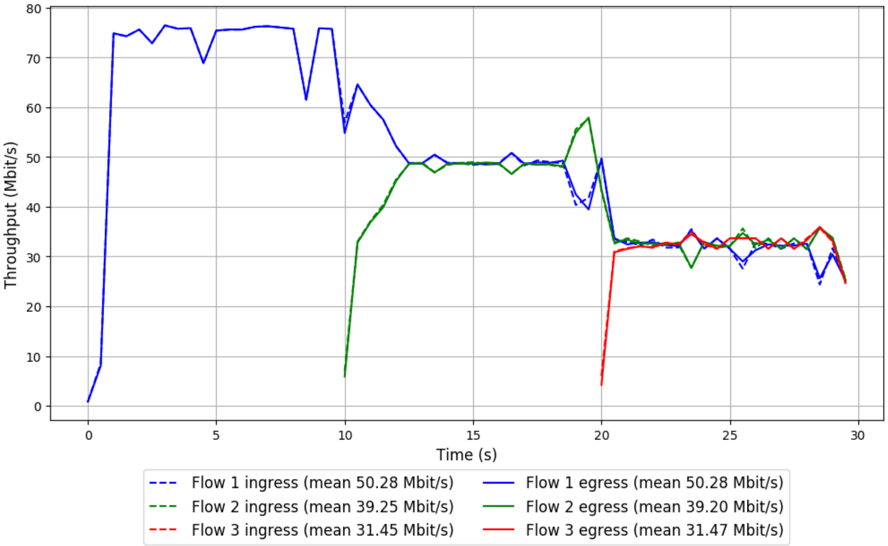


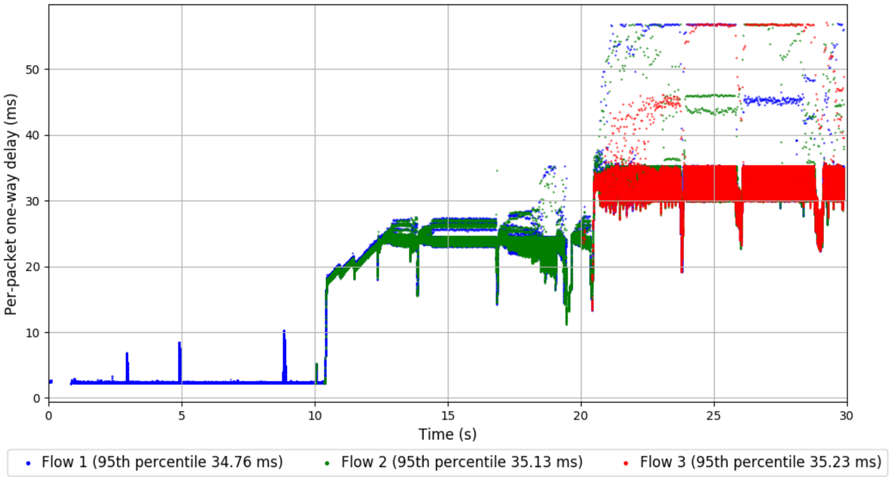
```
Run 2: Statistics of QUIC Cubic

Start at: 2018-02-20 10:09:40
End at: 2018-02-20 10:10:10
Local clock offset: -13.265 ms
Remote clock offset: -12.869 ms

# Below is generated by plot.py at 2018-02-20 16:41:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.71 Mbit/s
95th percentile per-packet one-way delay: 35.131 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 50.28 Mbit/s
95th percentile per-packet one-way delay: 34.757 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 39.20 Mbit/s
95th percentile per-packet one-way delay: 35.126 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 31.47 Mbit/s
95th percentile per-packet one-way delay: 35.229 ms
Loss rate: 0.34%
```

Run 2: Report of QUIC Cubic — Data Link



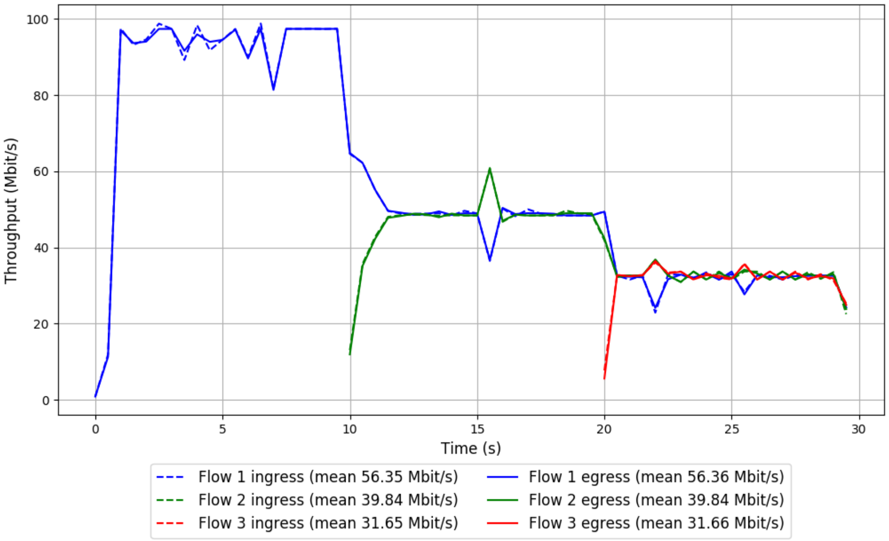


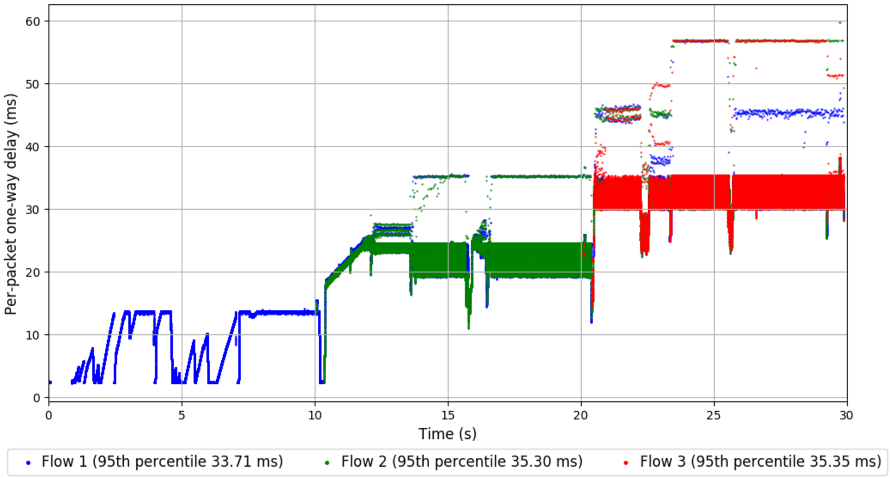
```
Run 3: Statistics of QUIC Cubic

Start at: 2018-02-20 10:30:07
End at: 2018-02-20 10:30:37
Local clock offset: -14.097 ms
Remote clock offset: -12.586 ms

# Below is generated by plot.py at 2018-02-20 16:42:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.22 Mbit/s
95th percentile per-packet one-way delay: 35.244 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.36 Mbit/s
95th percentile per-packet one-way delay: 33.713 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 39.84 Mbit/s
95th percentile per-packet one-way delay: 35.297 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 31.66 Mbit/s
95th percentile per-packet one-way delay: 35.354 ms
Loss rate: 0.40%
```

Run 3: Report of QUIC Cubic — Data Link



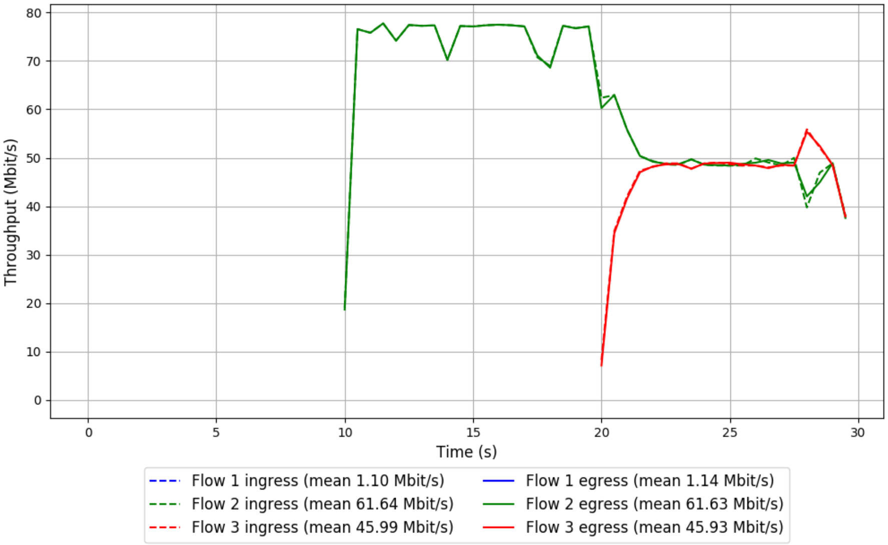


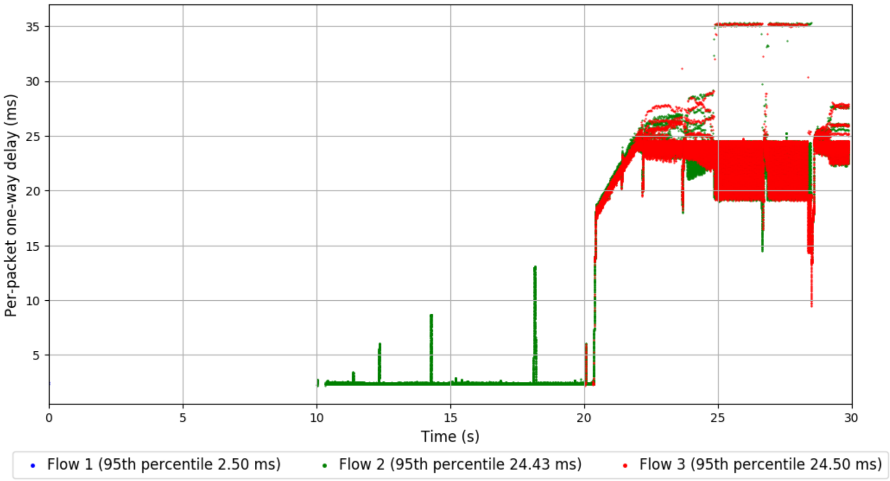
```
Run 4: Statistics of QUIC Cubic

Start at: 2018-02-20 10:50:35
End at: 2018-02-20 10:51:05
Local clock offset: -15.272 ms
Remote clock offset: -12.535 ms

# Below is generated by plot.py at 2018-02-20 16:42:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.15 Mbit/s
95th percentile per-packet one-way delay: 24.459 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 2.499 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 61.63 Mbit/s
95th percentile per-packet one-way delay: 24.435 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 45.93 Mbit/s
95th percentile per-packet one-way delay: 24.496 ms
Loss rate: 0.27%
```

Run 4: Report of QUIC Cubic — Data Link



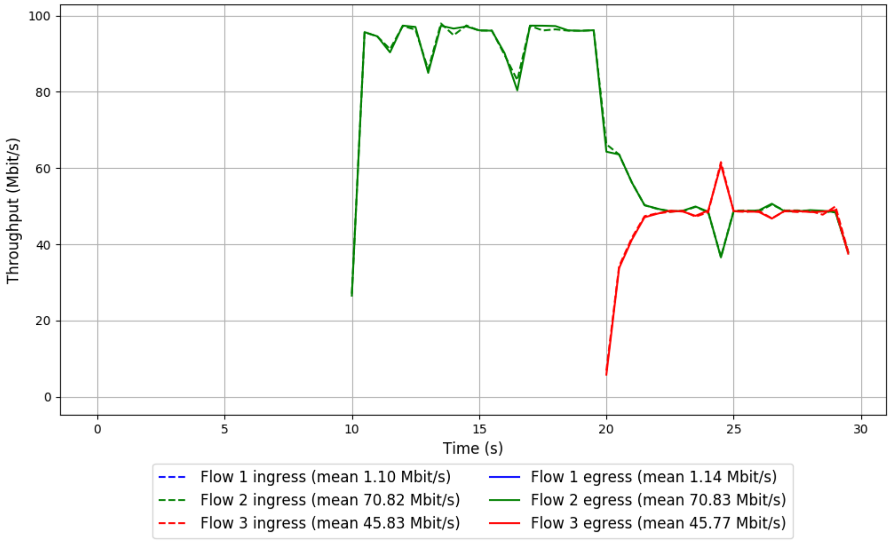


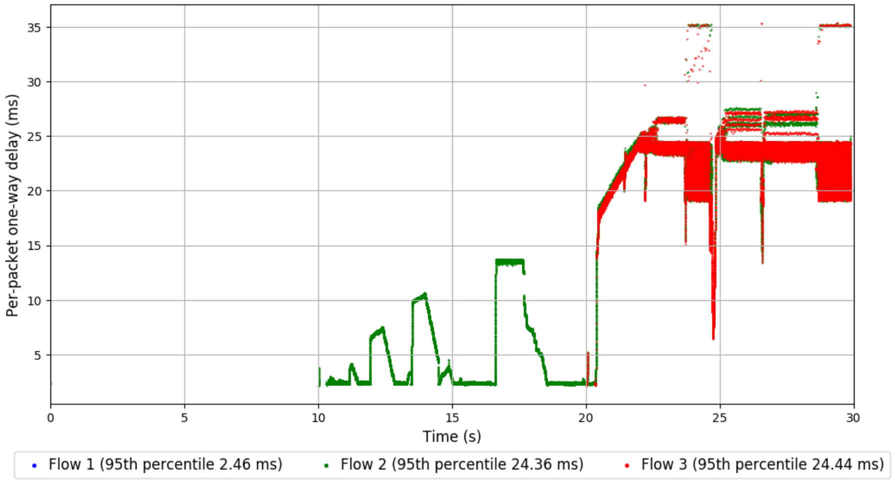
```
Run 5: Statistics of QUIC Cubic

Start at: 2018-02-20 11:10:58
End at: 2018-02-20 11:11:28
Local clock offset: -11.936 ms
Remote clock offset: -12.629 ms

# Below is generated by plot.py at 2018-02-20 16:42:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.23 Mbit/s
95th percentile per-packet one-way delay: 24.386 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 2.457 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 70.83 Mbit/s
95th percentile per-packet one-way delay: 24.361 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 45.77 Mbit/s
95th percentile per-packet one-way delay: 24.437 ms
Loss rate: 0.34%
```

Run 5: Report of QUIC Cubic — Data Link



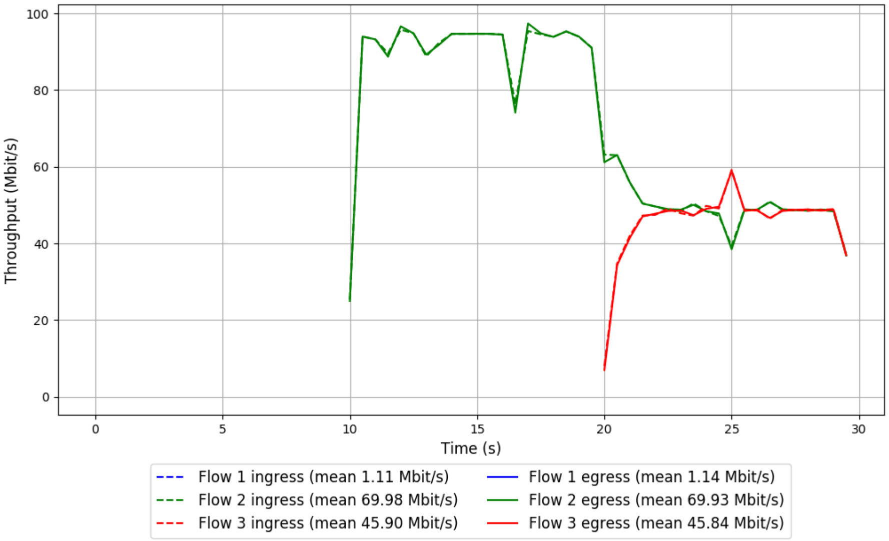


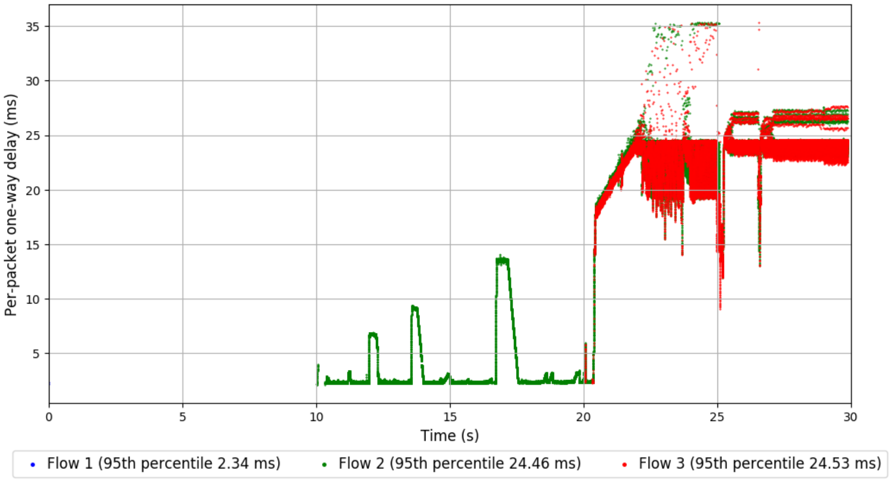
```
Run 6: Statistics of QUIC Cubic

Start at: 2018-02-20 11:31:21
End at: 2018-02-20 11:31:51
Local clock offset: -10.621 ms
Remote clock offset: -12.605 ms

# Below is generated by plot.py at 2018-02-20 16:42:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.62 Mbit/s
95th percentile per-packet one-way delay: 24.489 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 2.340 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 69.93 Mbit/s
95th percentile per-packet one-way delay: 24.461 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 45.84 Mbit/s
95th percentile per-packet one-way delay: 24.534 ms
Loss rate: 0.29%
```

Run 6: Report of QUIC Cubic — Data Link



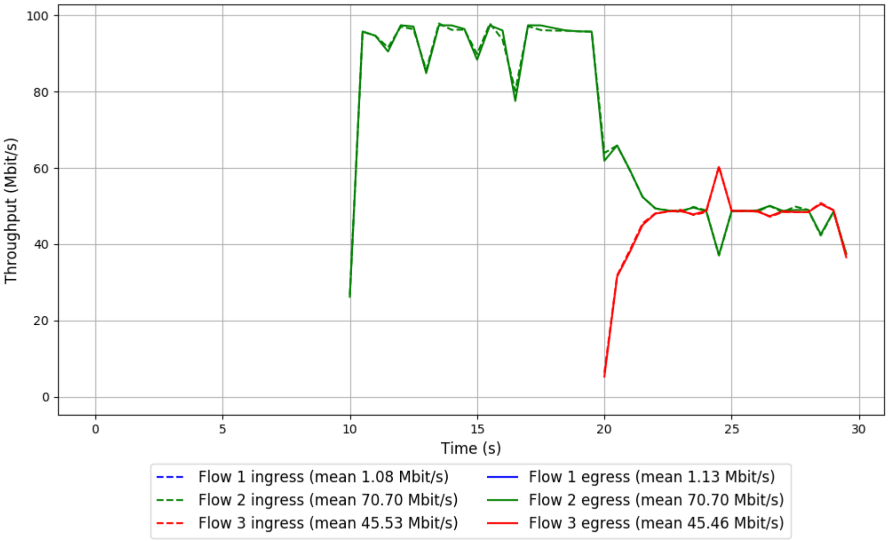


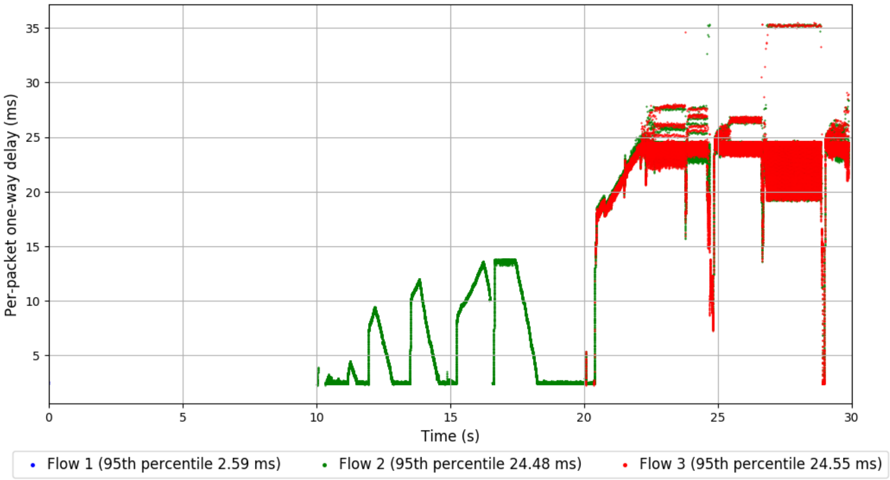
```
Run 7: Statistics of QUIC Cubic

Start at: 2018-02-20 11:51:47
End at: 2018-02-20 11:52:17
Local clock offset: -14.584 ms
Remote clock offset: -12.645 ms

# Below is generated by plot.py at 2018-02-20 16:42:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.01 Mbit/s
95th percentile per-packet one-way delay: 24.513 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 2.588 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 70.70 Mbit/s
95th percentile per-packet one-way delay: 24.485 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 45.46 Mbit/s
95th percentile per-packet one-way delay: 24.553 ms
Loss rate: 0.33%
```

Run 7: Report of QUIC Cubic — Data Link



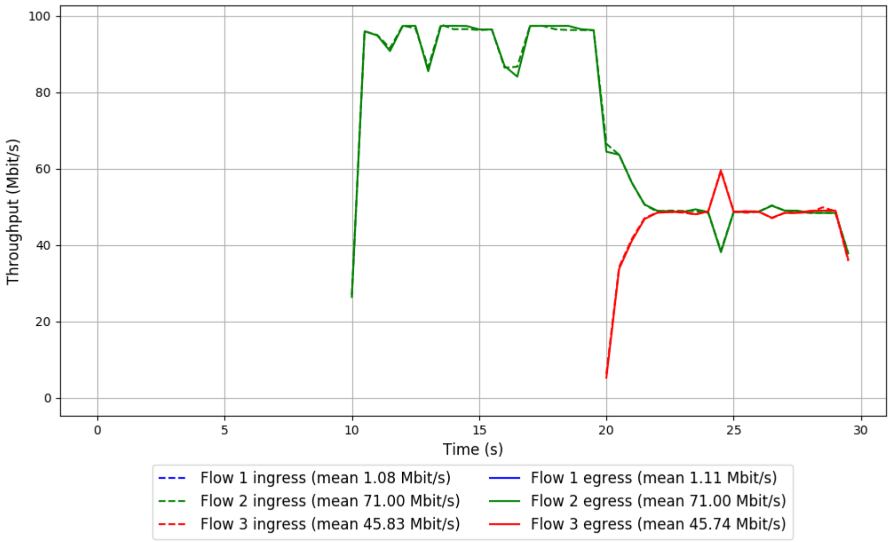


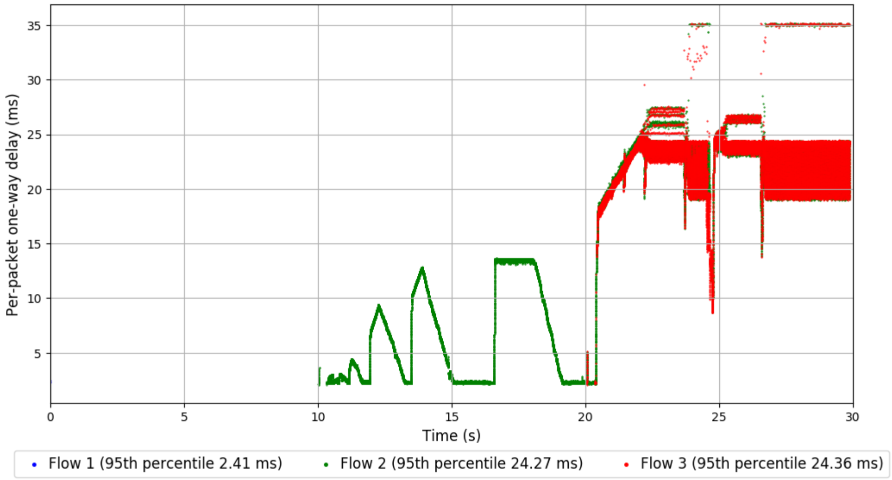
```
Run 8: Statistics of QUIC Cubic

Start at: 2018-02-20 12:12:10
End at: 2018-02-20 12:12:40
Local clock offset: -14.859 ms
Remote clock offset: -12.441 ms

# Below is generated by plot.py at 2018-02-20 16:42:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.31 Mbit/s
95th percentile per-packet one-way delay: 24.310 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 2.409 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 71.00 Mbit/s
95th percentile per-packet one-way delay: 24.273 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 45.74 Mbit/s
95th percentile per-packet one-way delay: 24.355 ms
Loss rate: 0.24%
```

Run 8: Report of QUIC Cubic — Data Link



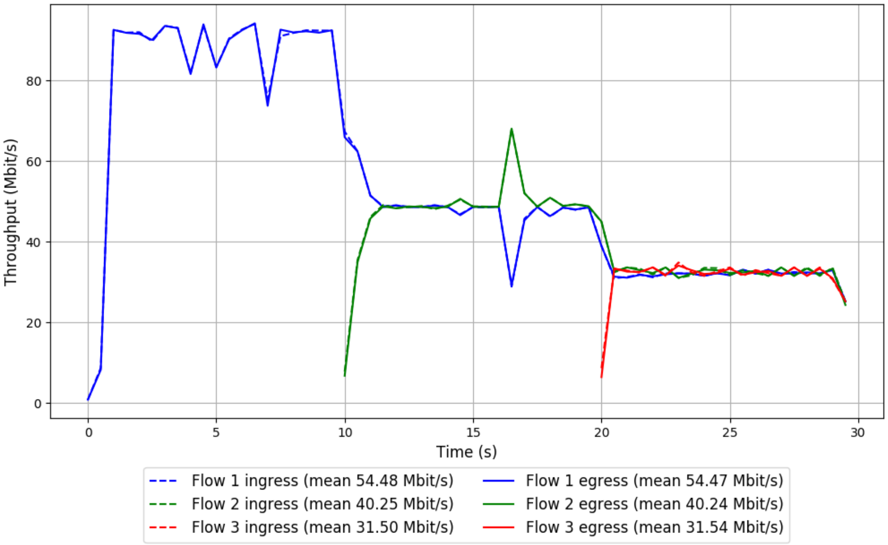


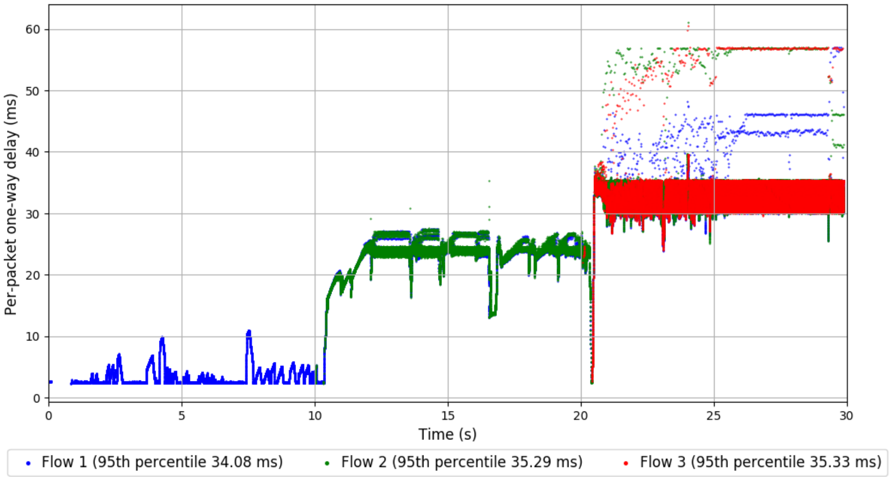
```
Run 9: Statistics of QUIC Cubic

Start at: 2018-02-20 12:32:34
End at: 2018-02-20 12:33:04
Local clock offset: -14.527 ms
Remote clock offset: -12.434 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.57 Mbit/s
95th percentile per-packet one-way delay: 35.233 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 54.47 Mbit/s
95th percentile per-packet one-way delay: 34.083 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 40.24 Mbit/s
95th percentile per-packet one-way delay: 35.292 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 31.54 Mbit/s
95th percentile per-packet one-way delay: 35.326 ms
Loss rate: 0.35%
```

Run 9: Report of QUIC Cubic — Data Link



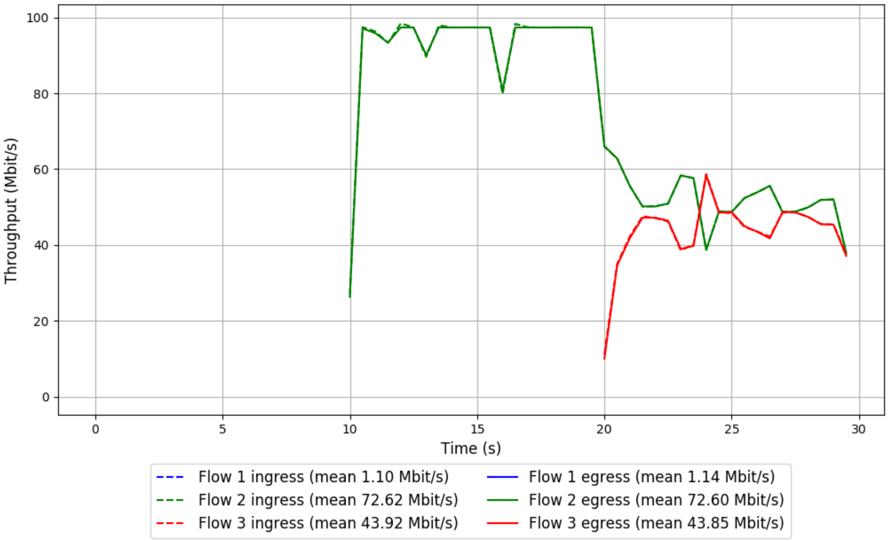


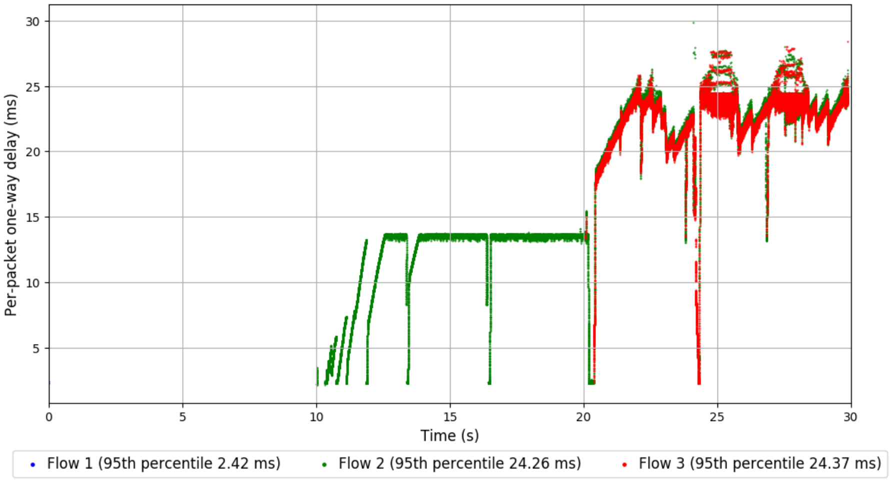
```
Run 10: Statistics of QUIC Cubic

Start at: 2018-02-20 12:53:02
End at: 2018-02-20 12:53:32
Local clock offset: -13.563 ms
Remote clock offset: -12.162 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.74 Mbit/s
95th percentile per-packet one-way delay: 24.301 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 2.416 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 72.60 Mbit/s
95th percentile per-packet one-way delay: 24.261 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 43.85 Mbit/s
95th percentile per-packet one-way delay: 24.366 ms
Loss rate: 0.34%
```

Run 10: Report of QUIC Cubic — Data Link



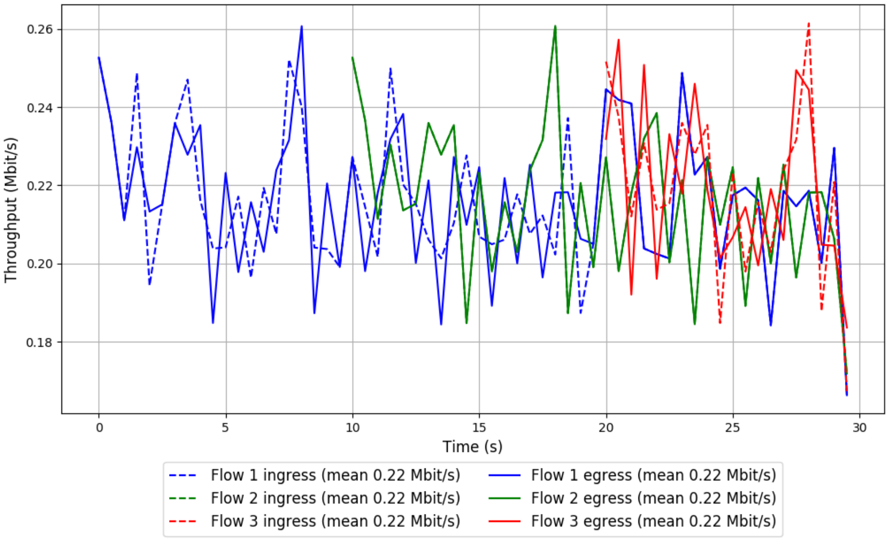


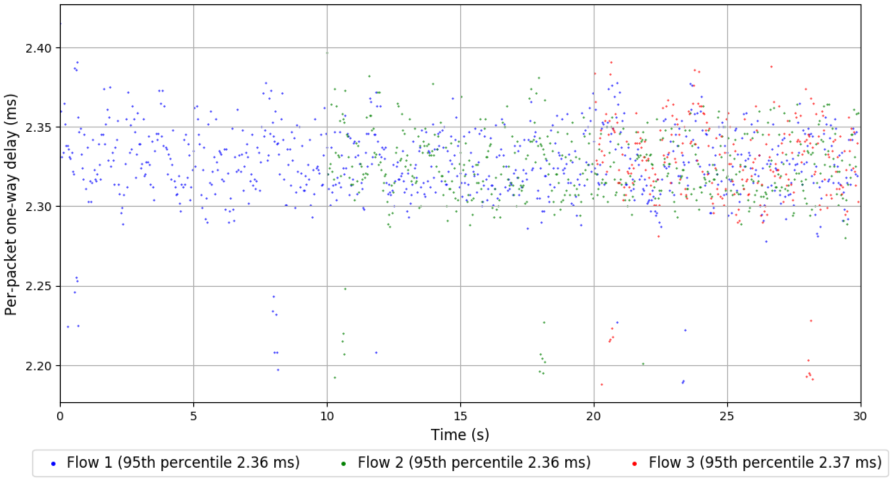
```
Run 1: Statistics of SCReAM

Start at: 2018-02-20 09:47:06
End at: 2018-02-20 09:47:36
Local clock offset: -12.798 ms
Remote clock offset: -12.87 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.363 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.362 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.361 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.365 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link



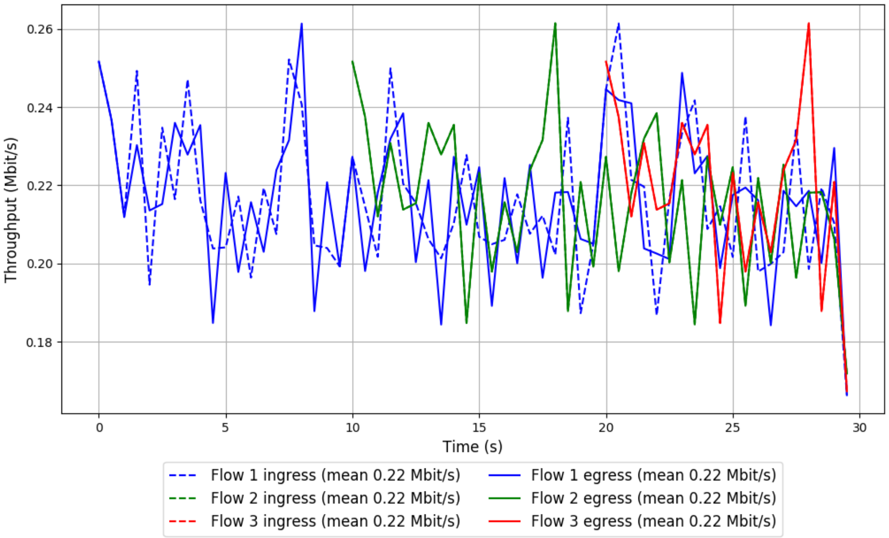


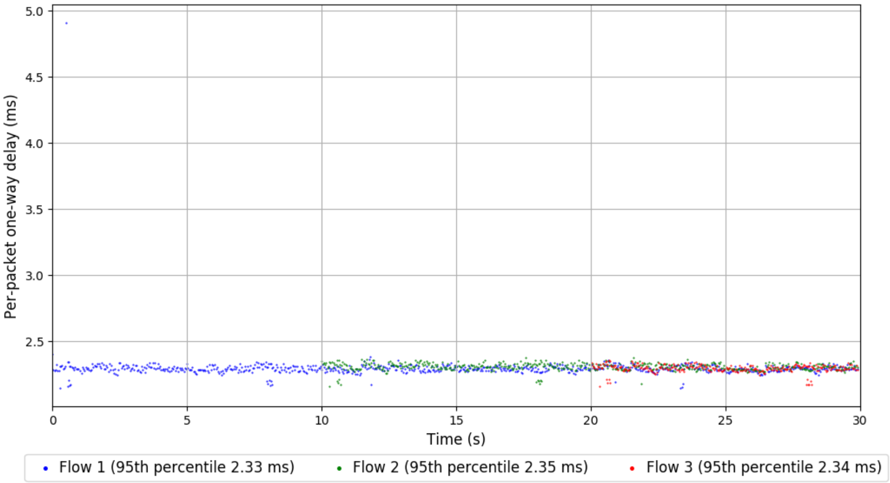
```
Run 2: Statistics of SCReAM

Start at: 2018-02-20 10:07:29
End at: 2018-02-20 10:07:59
Local clock offset: -13.181 ms
Remote clock offset: -12.819 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.342 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.333 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.352 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.337 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link



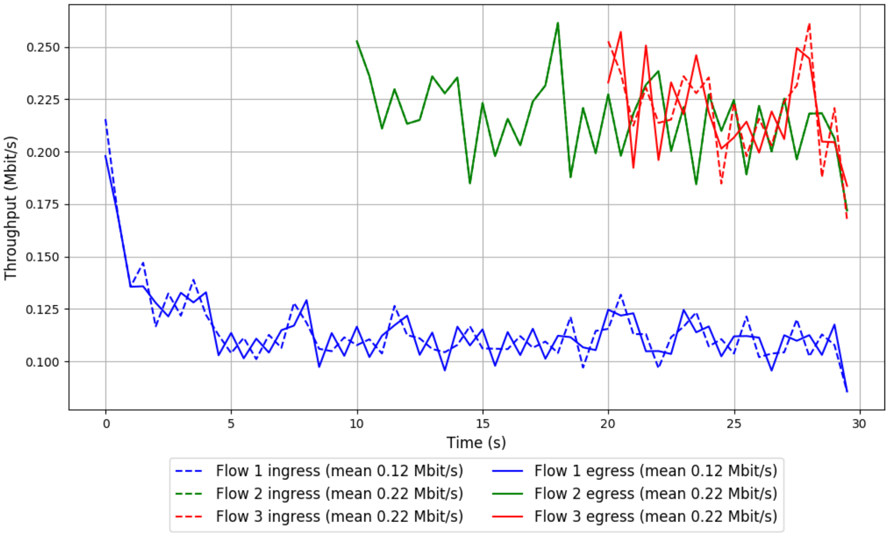


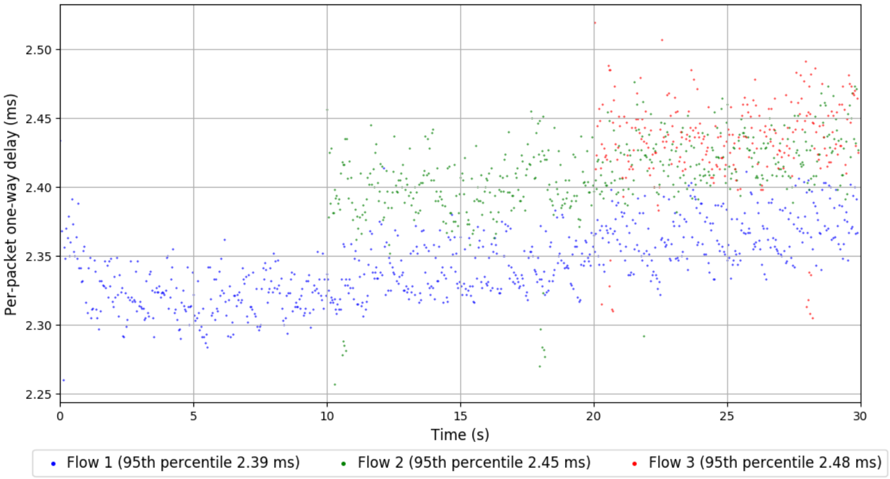
```
Run 3: Statistics of SCReAM

Start at: 2018-02-20 10:27:56
End at: 2018-02-20 10:28:26
Local clock offset: -13.949 ms
Remote clock offset: -12.678 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 2.454 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 2.389 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.451 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.478 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link



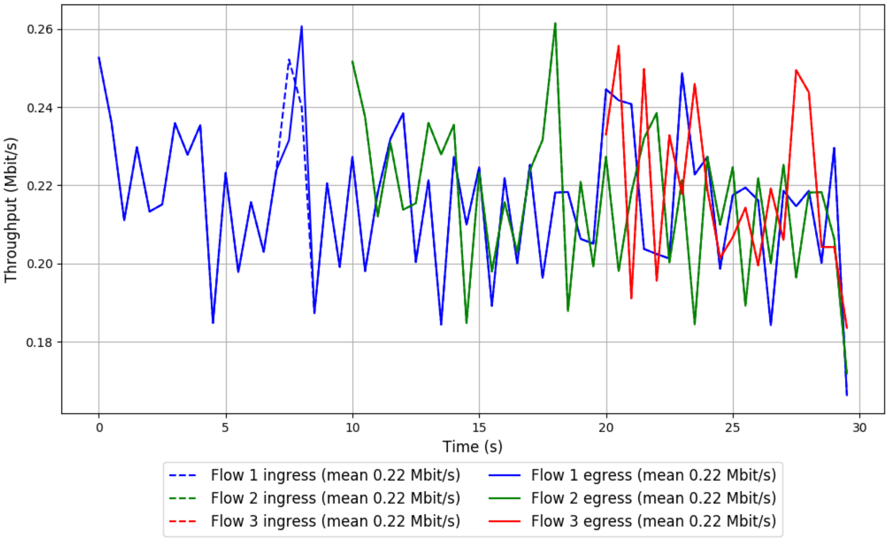


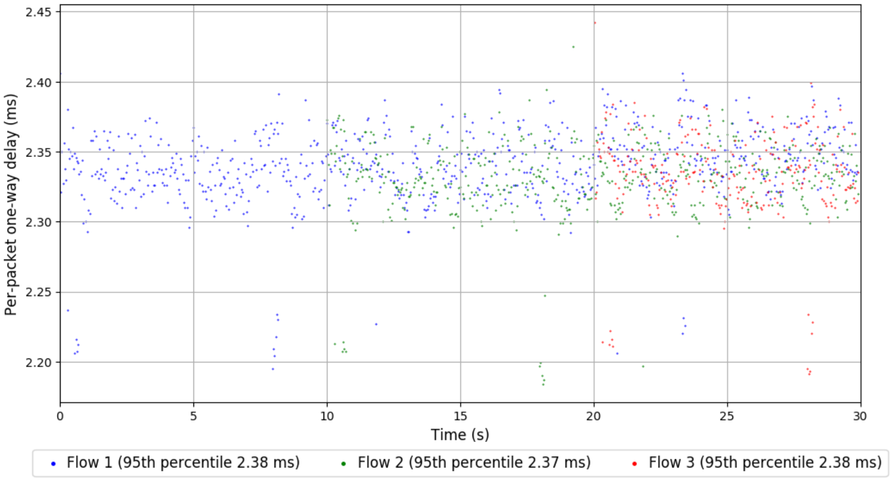
```
Run 4: Statistics of SCReAM

Start at: 2018-02-20 10:48:23
End at: 2018-02-20 10:48:53
Local clock offset: -15.182 ms
Remote clock offset: -12.504 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.374 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.375 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.367 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.375 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link



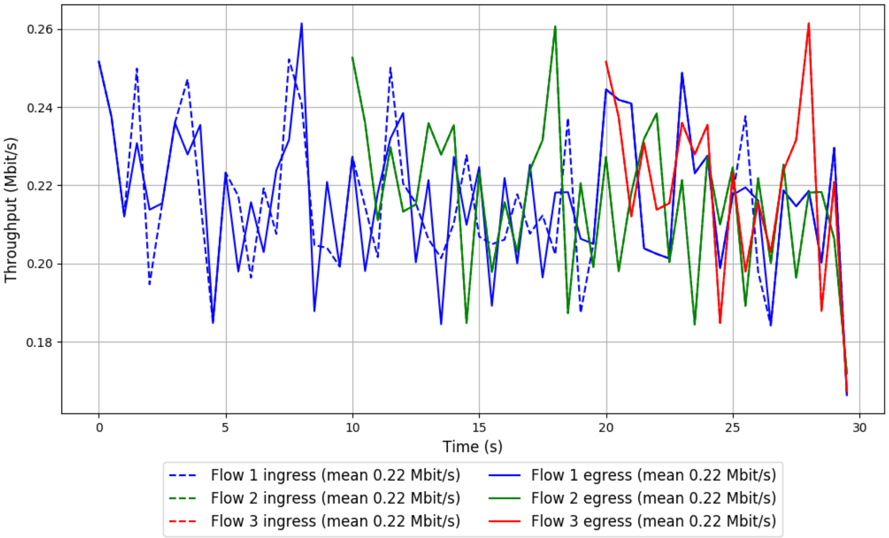


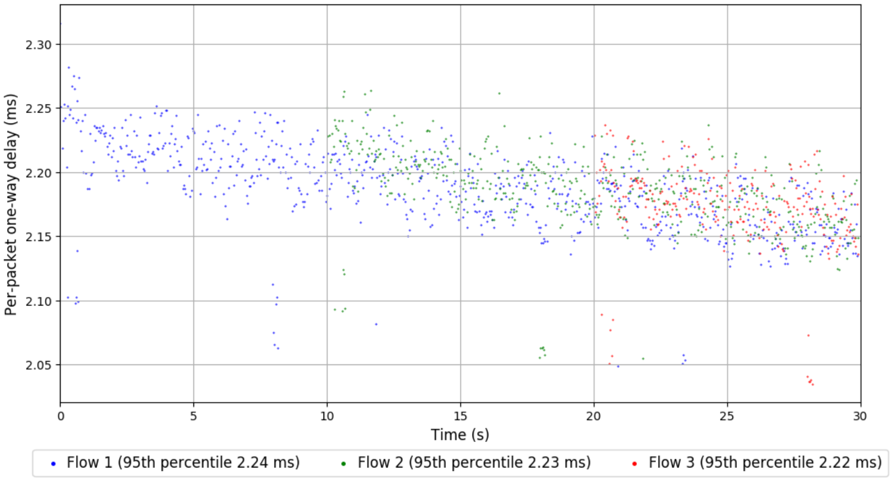
```
Run 5: Statistics of SCReAM

Start at: 2018-02-20 11:08:46
End at: 2018-02-20 11:09:16
Local clock offset: -12.286 ms
Remote clock offset: -12.578 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.233 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.239 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.230 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.217 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link



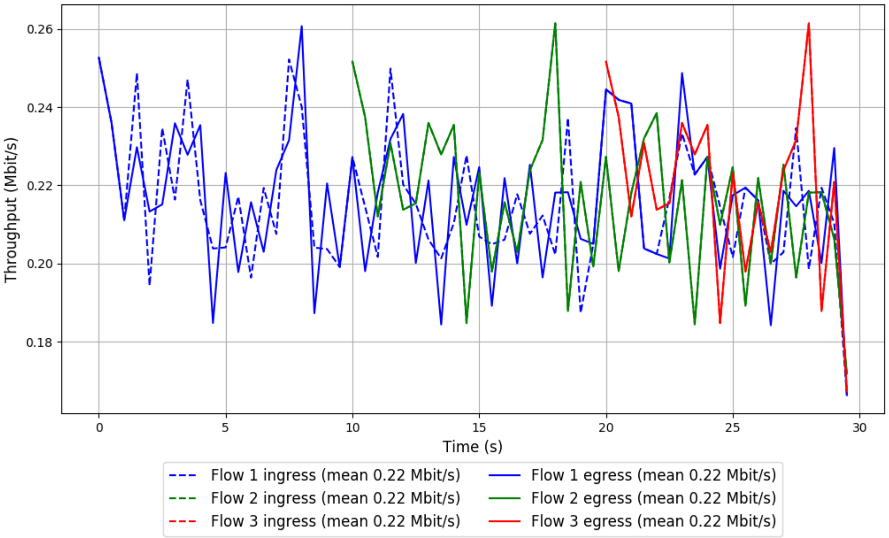


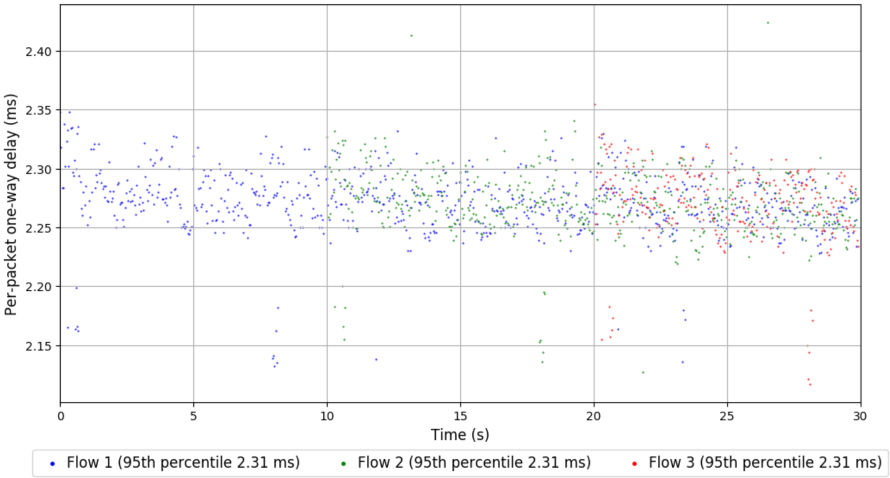
```
Run 6: Statistics of SCReAM

Start at: 2018-02-20 11:29:09
End at: 2018-02-20 11:29:39
Local clock offset: -10.652 ms
Remote clock offset: -12.603 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.313 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.314 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.310 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.313 ms
Loss rate: 0.00%
```

Run 6: Report of SCReAM — Data Link



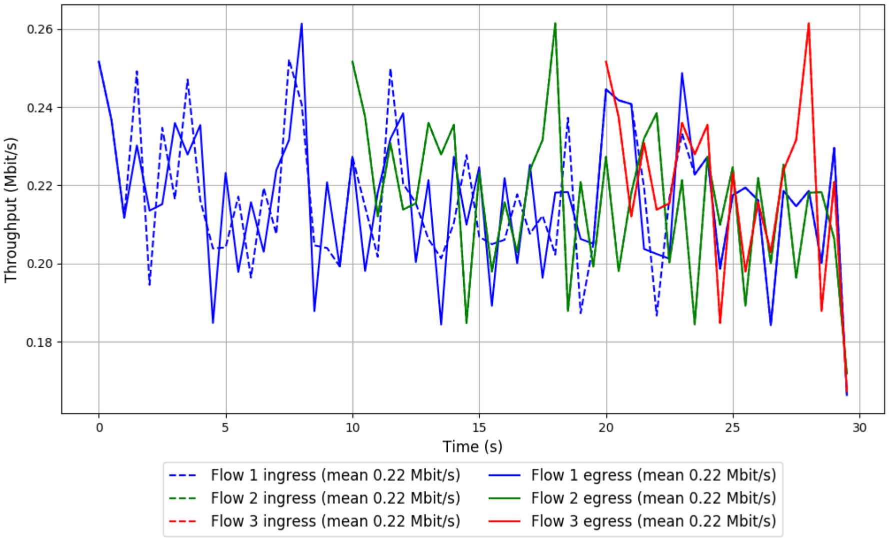


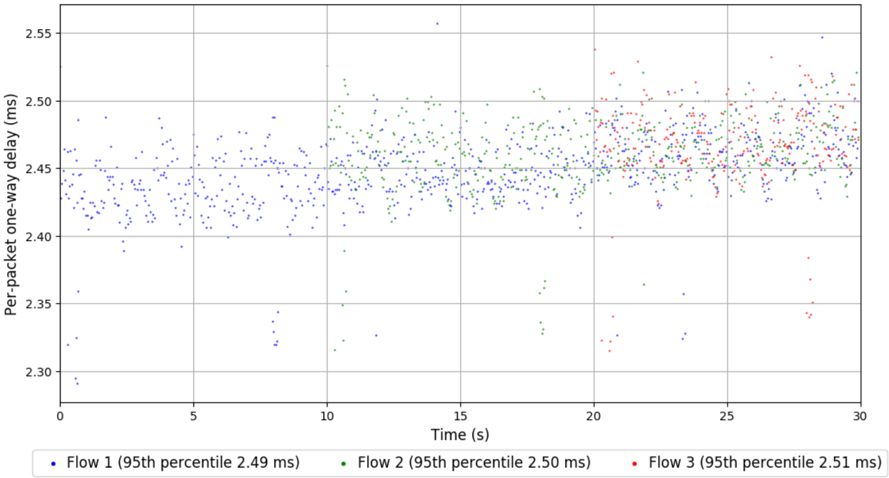
```
Run 7: Statistics of SCReAM

Start at: 2018-02-20 11:49:35
End at: 2018-02-20 11:50:05
Local clock offset: -14.396 ms
Remote clock offset: -12.707 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.499 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.488 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.500 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.510 ms
Loss rate: 0.00%
```

Run 7: Report of SCReAM — Data Link



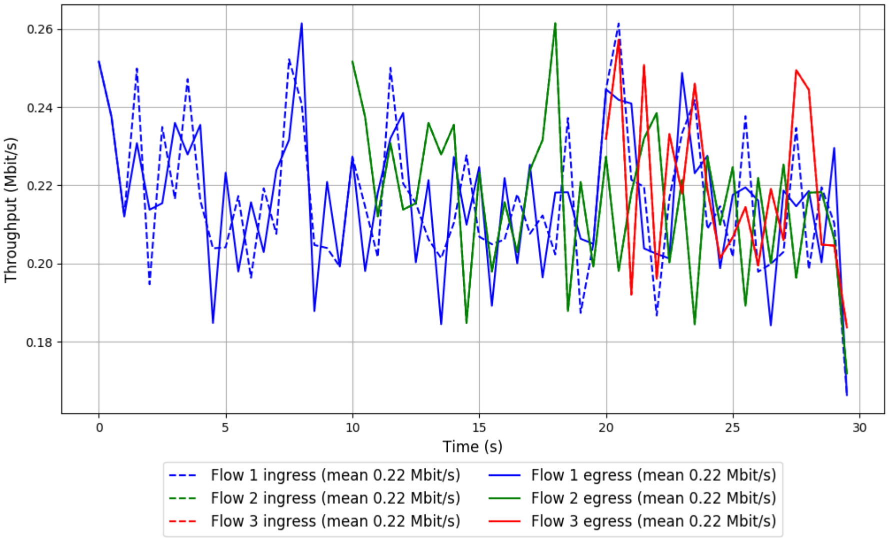


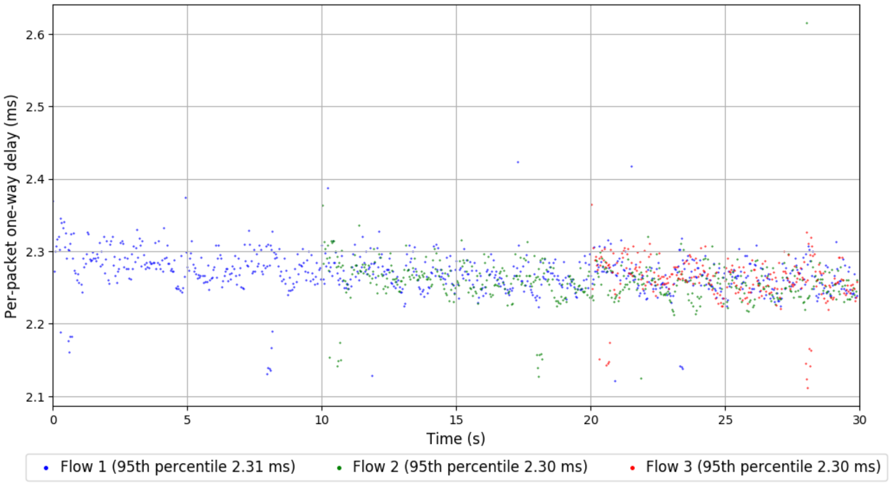
```
Run 8: Statistics of SCReAM

Start at: 2018-02-20 12:09:58
End at: 2018-02-20 12:10:28
Local clock offset: -14.927 ms
Remote clock offset: -12.446 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.308 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.312 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.297 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.303 ms
Loss rate: 0.00%
```

Run 8: Report of SCReAM — Data Link



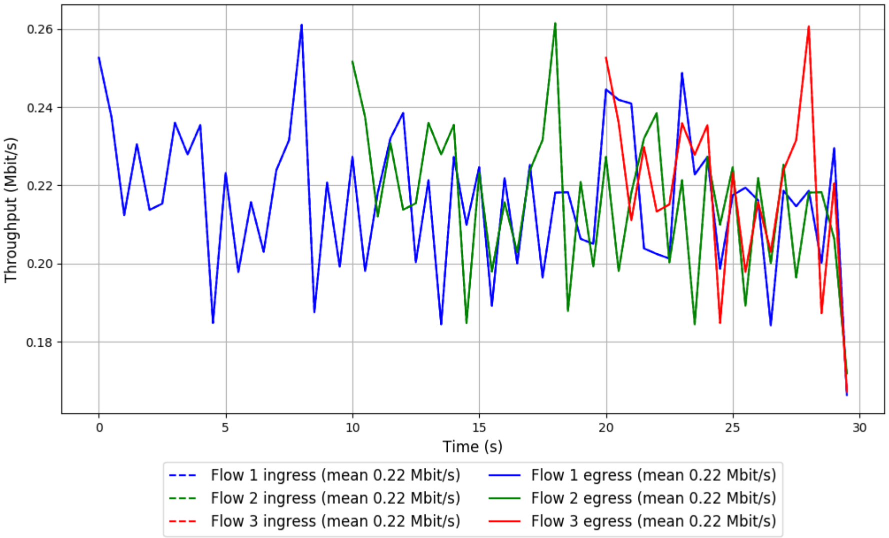


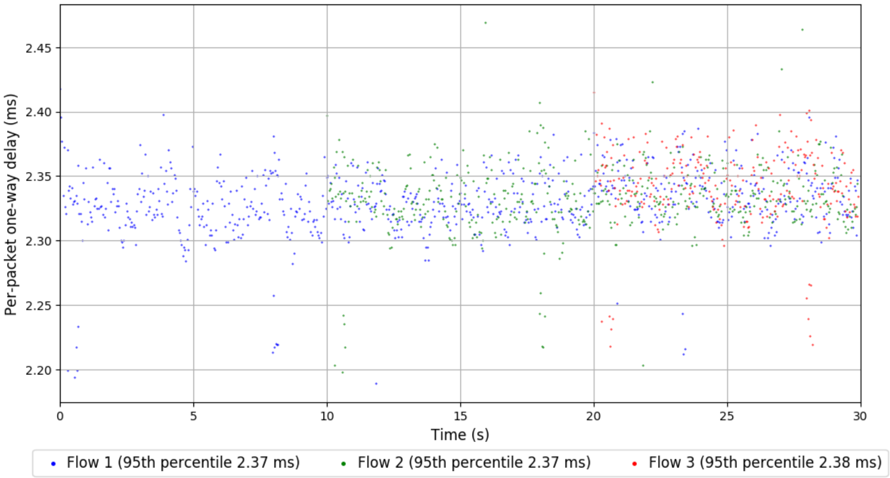
```
Run 9: Statistics of SCReAM

Start at: 2018-02-20 12:30:22
End at: 2018-02-20 12:30:52
Local clock offset: -14.513 ms
Remote clock offset: -12.399 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.373 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.367 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.370 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.381 ms
Loss rate: 0.00%
```

Run 9: Report of SCReAM — Data Link



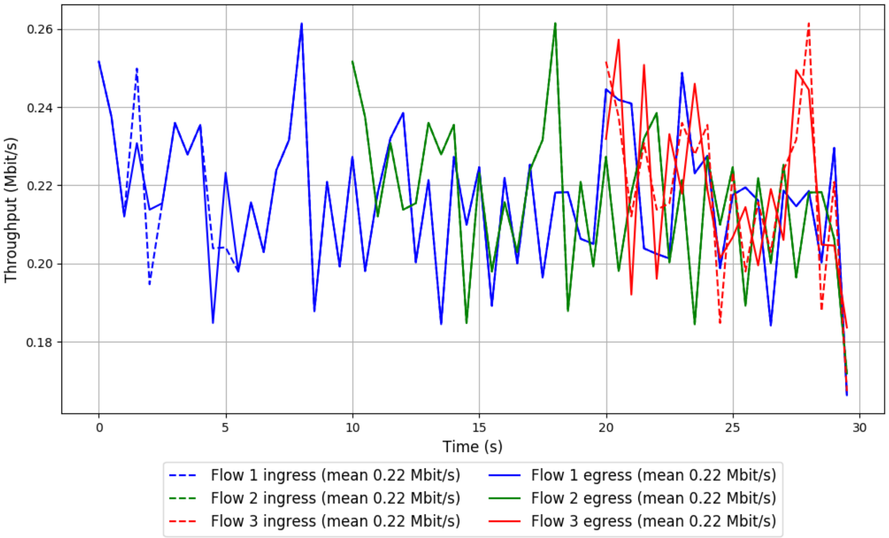


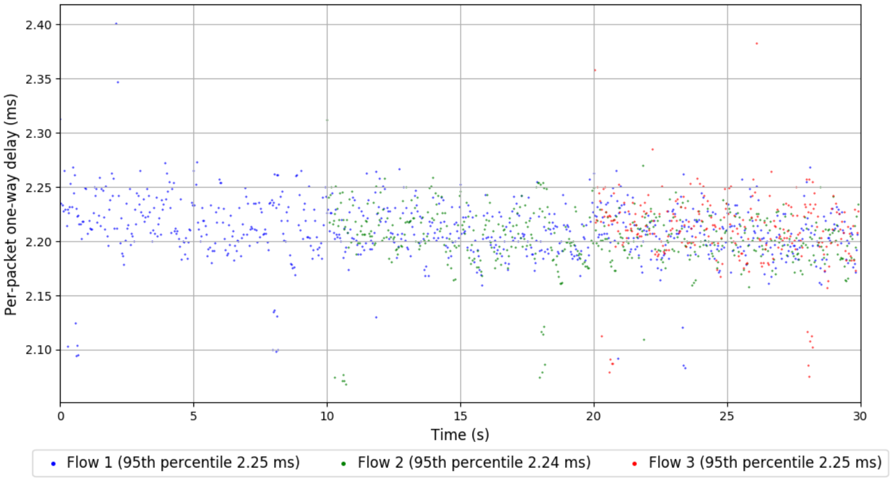
```
Run 10: Statistics of SCReAM

Start at: 2018-02-20 12:50:48
End at: 2018-02-20 12:51:18
Local clock offset: -13.726 ms
Remote clock offset: -12.164 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.250 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.252 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.244 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.251 ms
Loss rate: 0.00%
```

Run 10: Report of SCReAM — Data Link



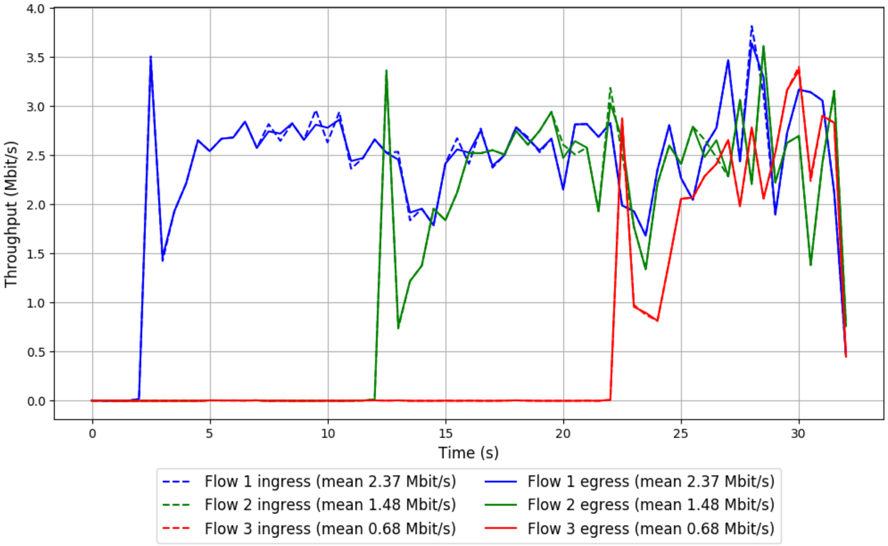


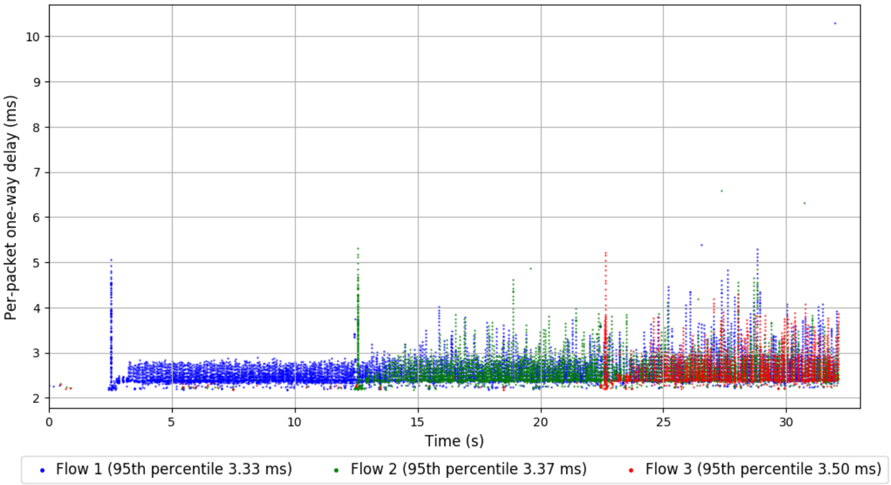
```
Run 1: Statistics of WebRTC media

Start at: 2018-02-20 09:52:44
End at: 2018-02-20 09:53:14
Local clock offset: -12.921 ms
Remote clock offset: -12.905 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.49 Mbit/s
95th percentile per-packet one-way delay: 3.380 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 3.327 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 3.372 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 3.505 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link



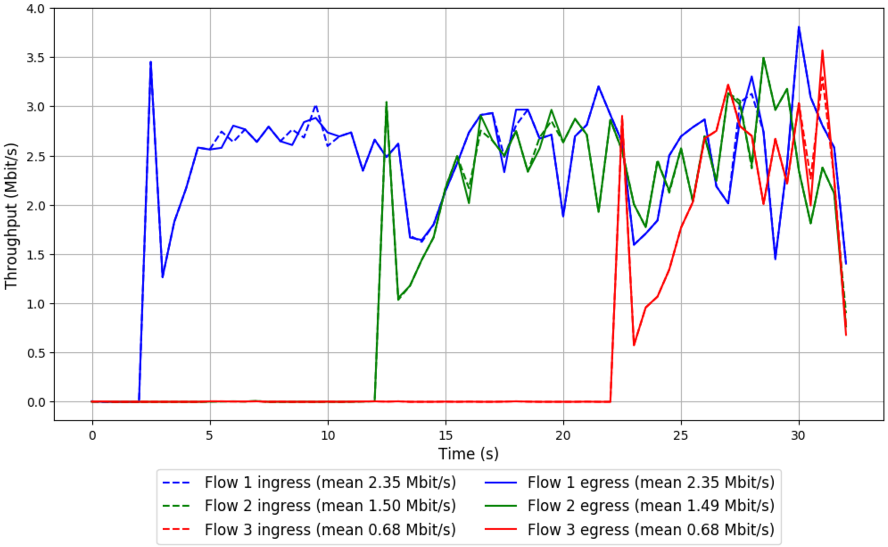


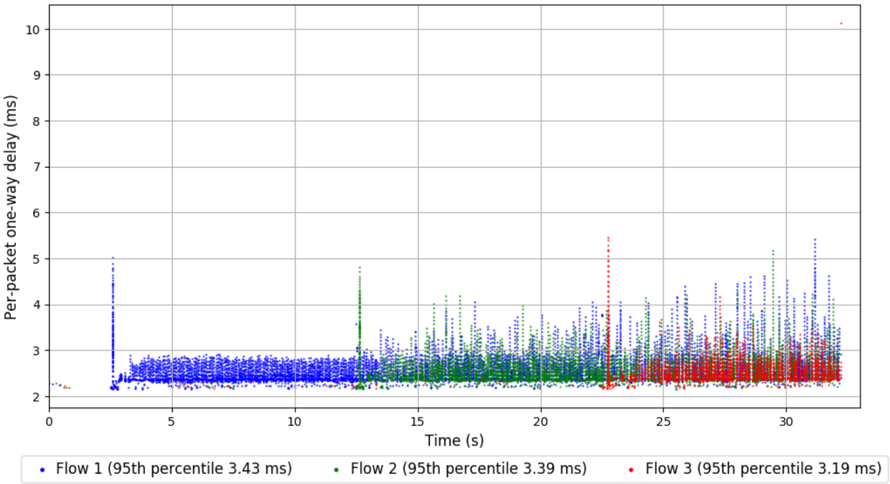
```
Run 2: Statistics of WebRTC media

Start at: 2018-02-20 10:13:09
End at: 2018-02-20 10:13:39
Local clock offset: -13.215 ms
Remote clock offset: -12.774 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.49 Mbit/s
95th percentile per-packet one-way delay: 3.383 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 3.432 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 3.391 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 3.189 ms
Loss rate: 0.27%
```

Run 2: Report of WebRTC media — Data Link



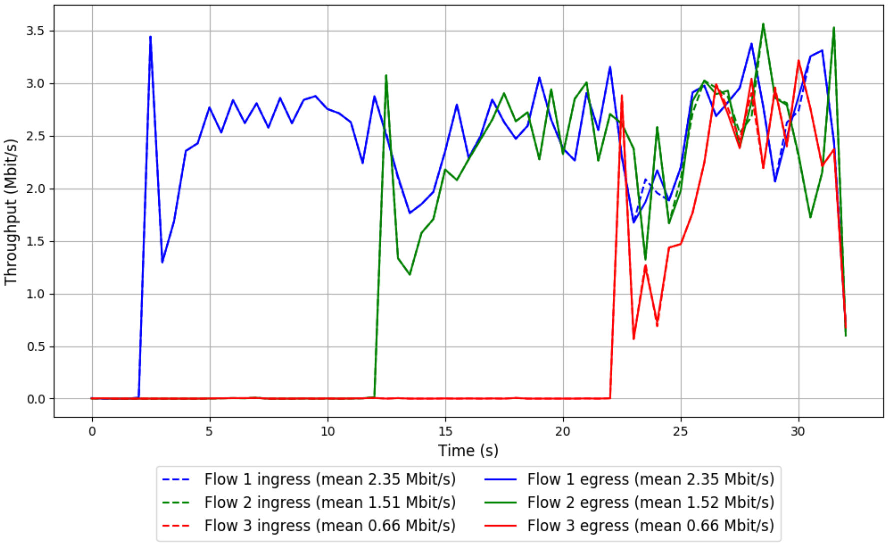


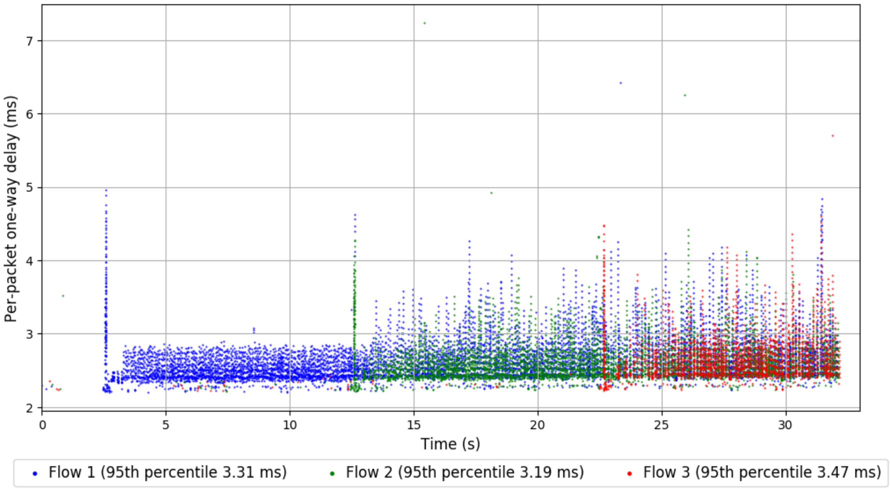
```
Run 3: Statistics of WebRTC media

Start at: 2018-02-20 10:33:36
End at: 2018-02-20 10:34:06
Local clock offset: -14.418 ms
Remote clock offset: -12.555 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.50 Mbit/s
95th percentile per-packet one-way delay: 3.300 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 3.308 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 3.191 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 3.468 ms
Loss rate: 0.05%
```

Run 3: Report of WebRTC media — Data Link



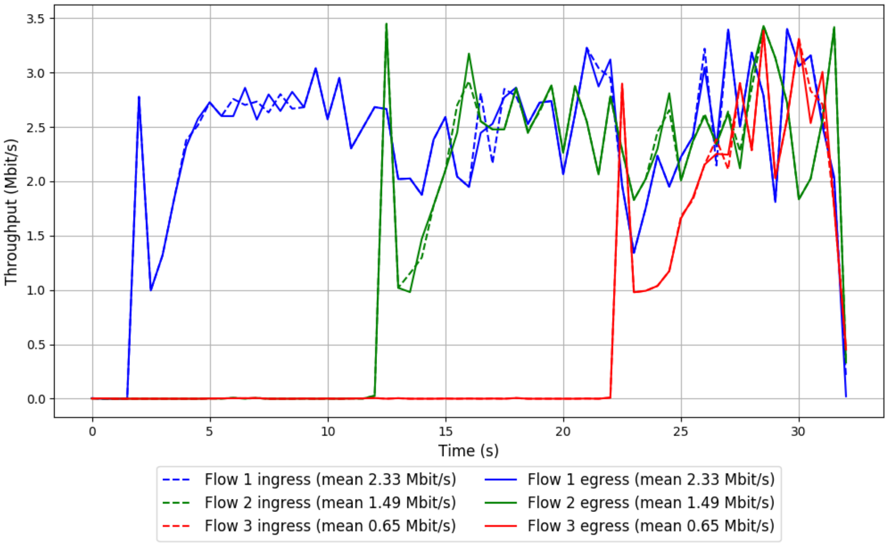


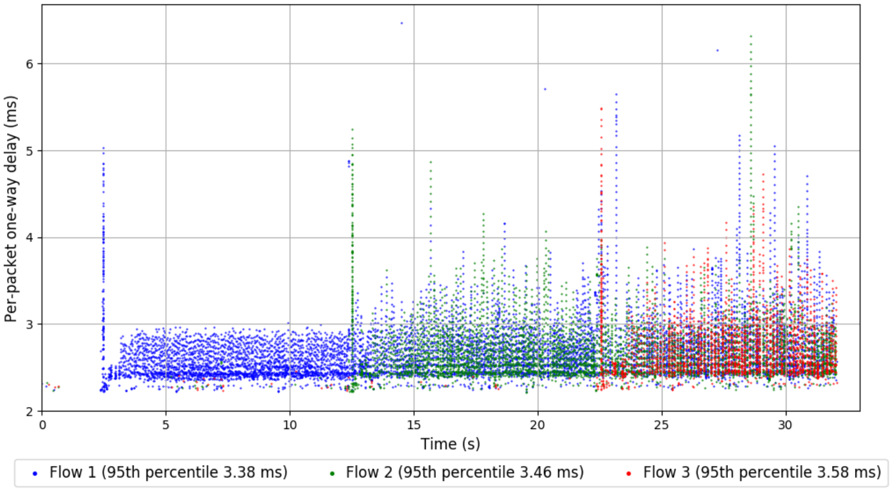
```
Run 4: Statistics of WebRTC media

Start at: 2018-02-20 10:54:02
End at: 2018-02-20 10:54:32
Local clock offset: -15.404 ms
Remote clock offset: -12.618 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 3.443 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 3.384 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 3.457 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 3.579 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



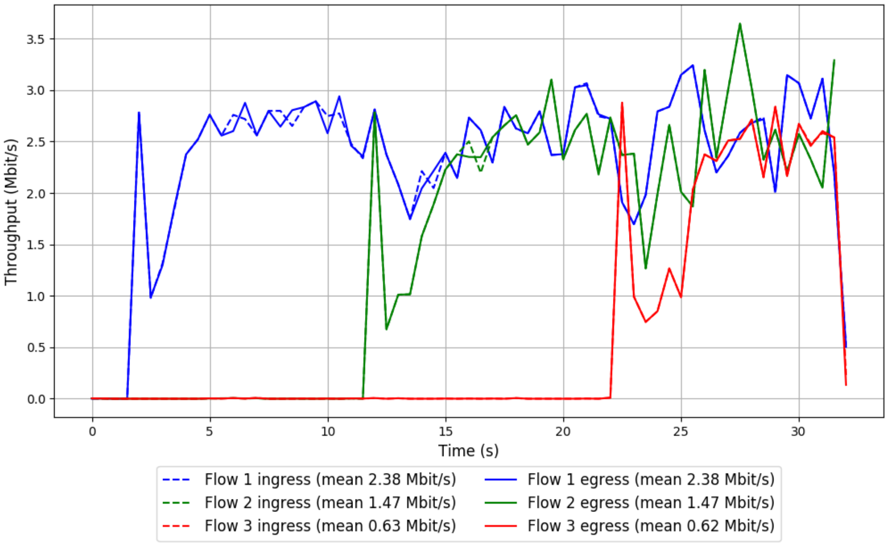


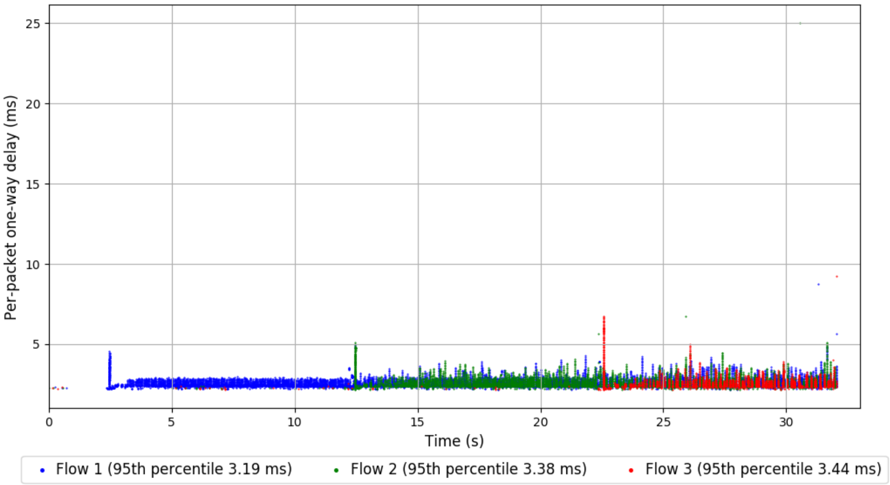
```
Run 5: Statistics of WebRTC media

Start at: 2018-02-20 11:14:25
End at: 2018-02-20 11:14:55
Local clock offset: -11.551 ms
Remote clock offset: -12.641 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.45 Mbit/s
95th percentile per-packet one-way delay: 3.294 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 3.191 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 3.383 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 3.444 ms
Loss rate: 0.24%
```

Run 5: Report of WebRTC media — Data Link



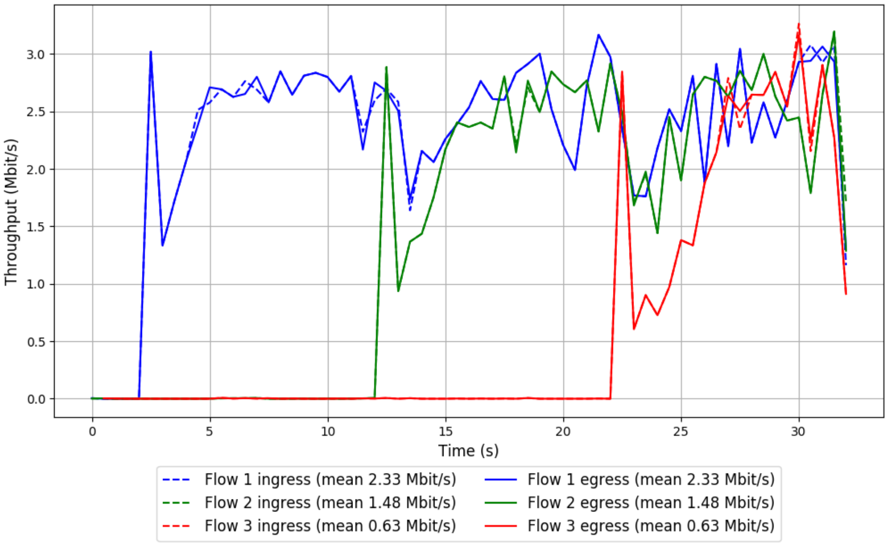


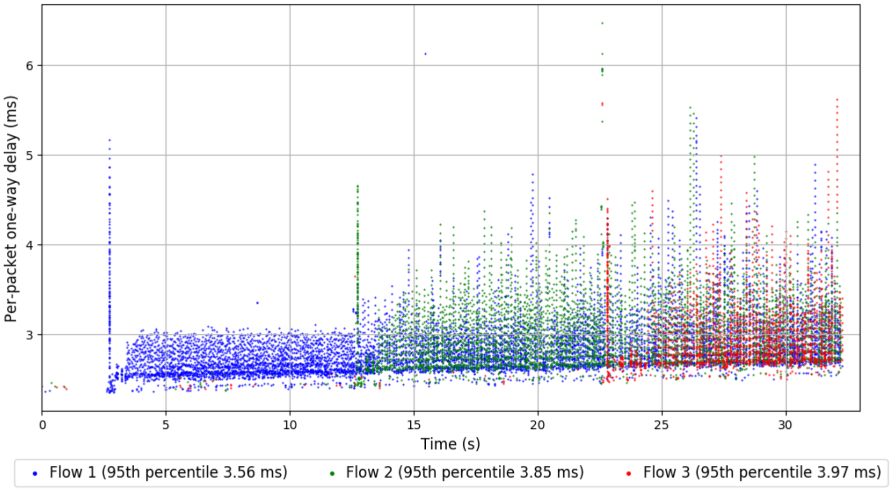
```
Run 6: Statistics of WebRTC media

Start at: 2018-02-20 11:34:48
End at: 2018-02-20 11:35:18
Local clock offset: -11.753 ms
Remote clock offset: -12.679 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.41 Mbit/s
95th percentile per-packet one-way delay: 3.759 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 3.561 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 3.847 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 3.971 ms
Loss rate: 0.00%
```

Run 6: Report of WebRTC media — Data Link



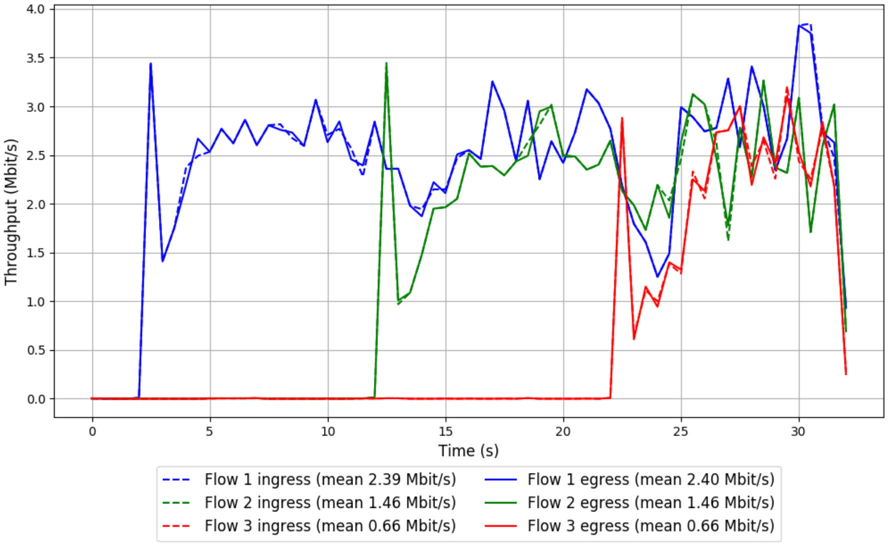


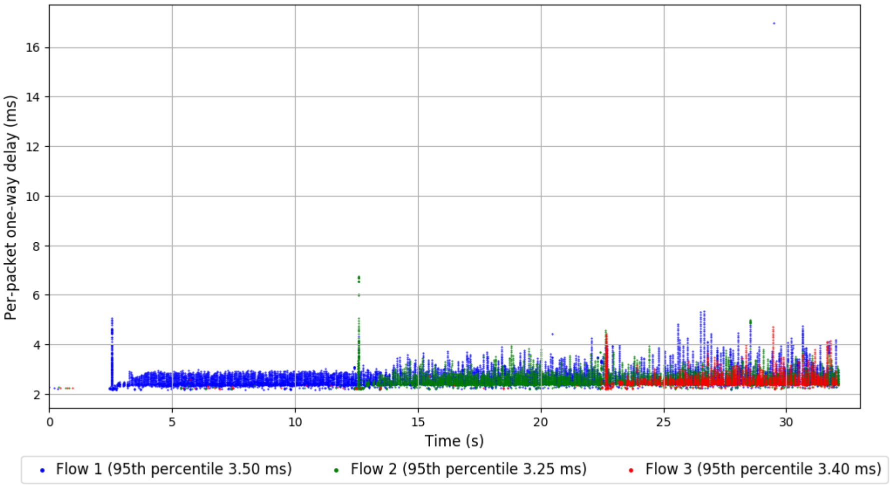
```
Run 7: Statistics of WebRTC media

Start at: 2018-02-20 11:55:14
End at: 2018-02-20 11:55:44
Local clock offset: -14.808 ms
Remote clock offset: -12.569 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.49 Mbit/s
95th percentile per-packet one-way delay: 3.414 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 3.496 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 3.248 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 3.404 ms
Loss rate: 0.05%
```

Run 7: Report of WebRTC media — Data Link



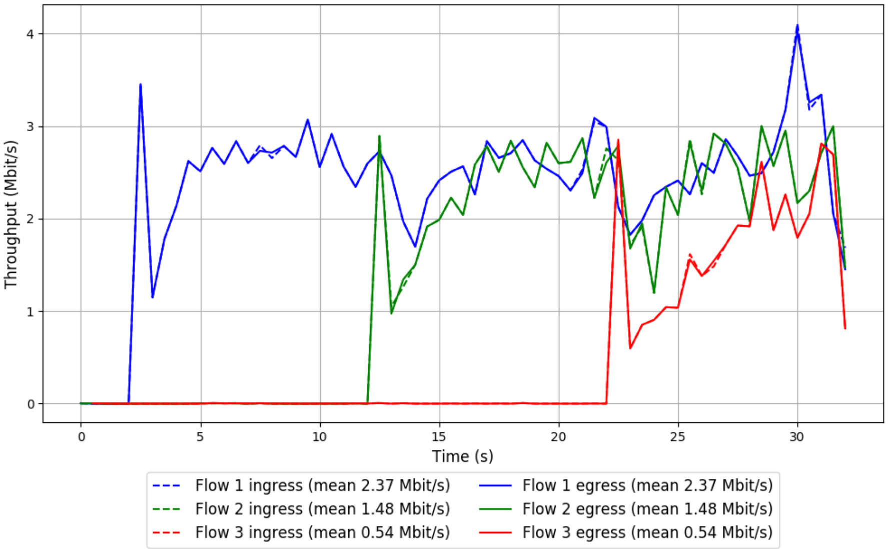


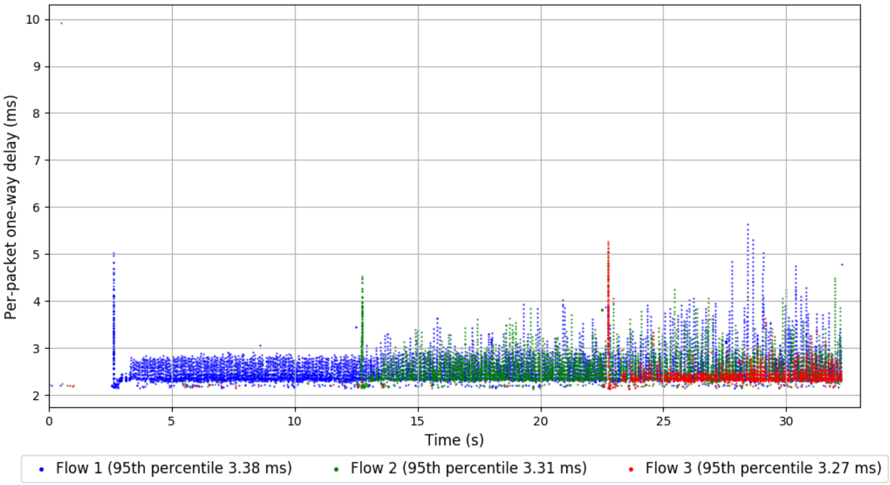
```
Run 8: Statistics of WebRTC media

Start at: 2018-02-20 12:15:38
End at: 2018-02-20 12:16:08
Local clock offset: -14.646 ms
Remote clock offset: -12.455 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 3.343 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 3.381 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 3.312 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 3.268 ms
Loss rate: 0.00%
```

Run 8: Report of WebRTC media — Data Link



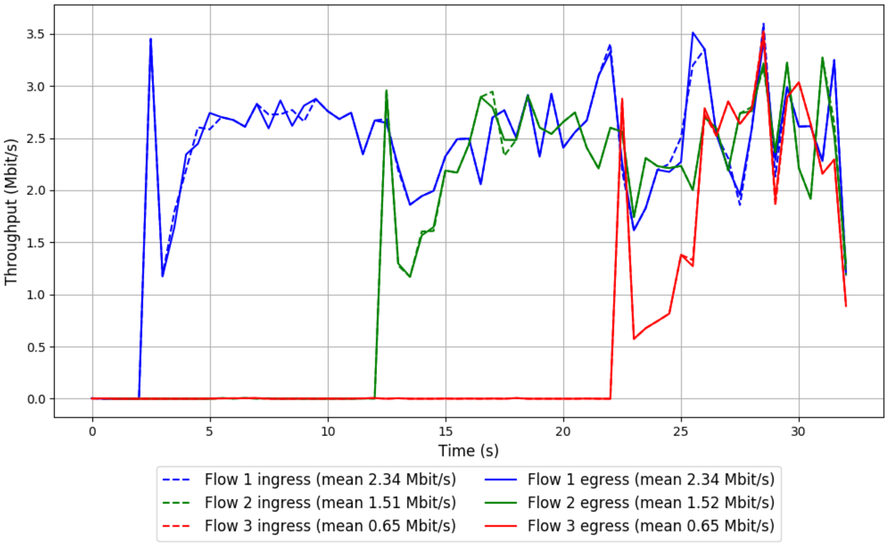


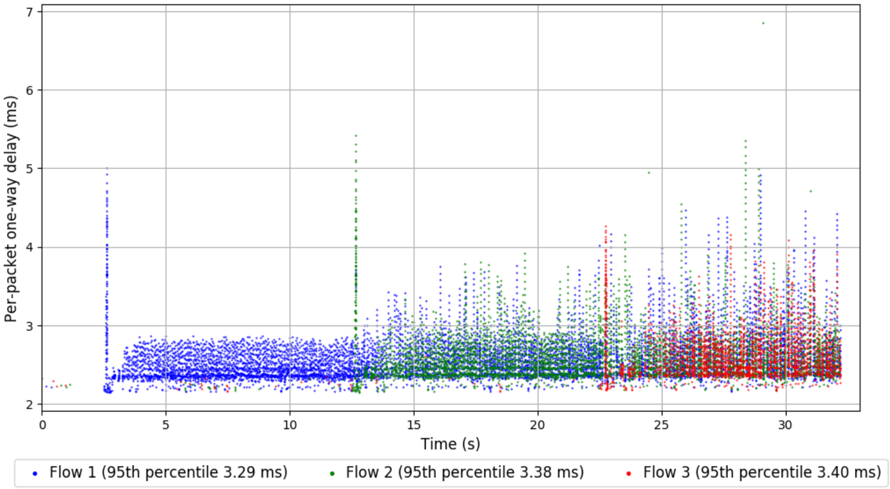
```
Run 9: Statistics of WebRTC media

Start at: 2018-02-20 12:36:02
End at: 2018-02-20 12:36:32
Local clock offset: -14.57 ms
Remote clock offset: -12.309 ms

# Below is generated by plot.py at 2018-02-20 16:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 3.337 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 3.294 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 3.379 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 3.401 ms
Loss rate: 0.00%
```

Run 9: Report of WebRTC media — Data Link



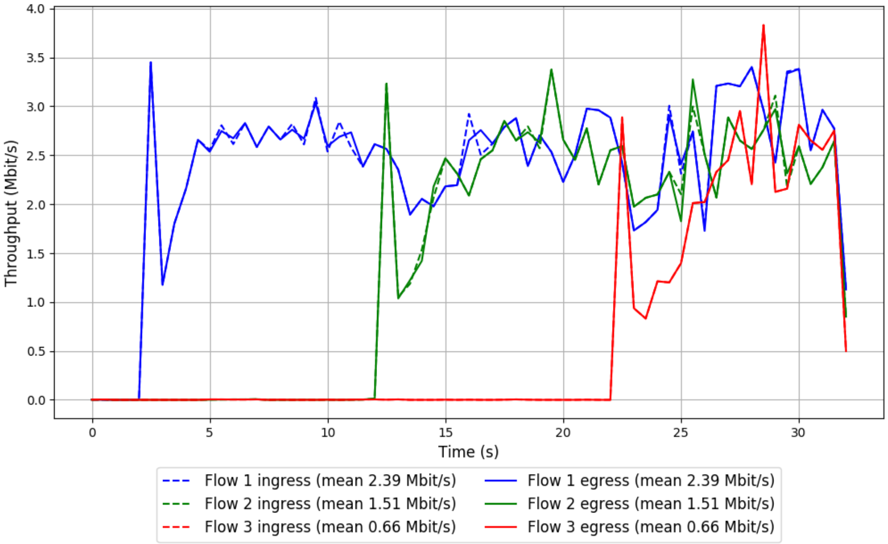


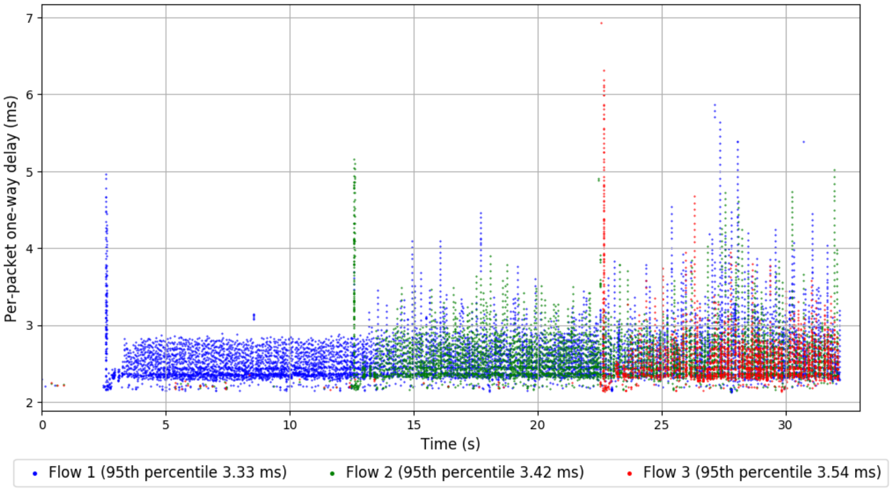
```
Run 10: Statistics of WebRTC media

Start at: 2018-02-20 12:56:29
End at: 2018-02-20 12:56:59
Local clock offset: -13.506 ms
Remote clock offset: -12.217 ms

# Below is generated by plot.py at 2018-02-20 16:42:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.53 Mbit/s
95th percentile per-packet one-way delay: 3.381 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 3.329 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 3.424 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 3.535 ms
Loss rate: 0.01%
```

Run 10: Report of WebRTC media — Data Link



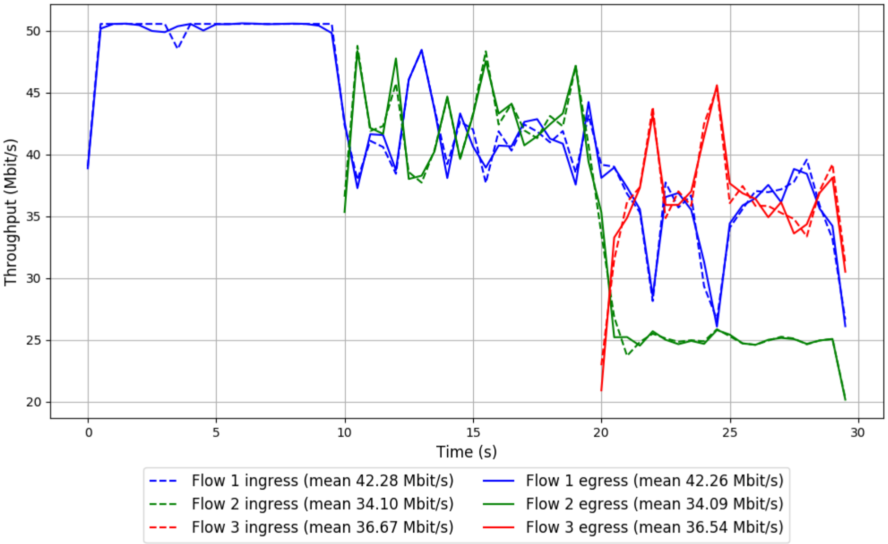


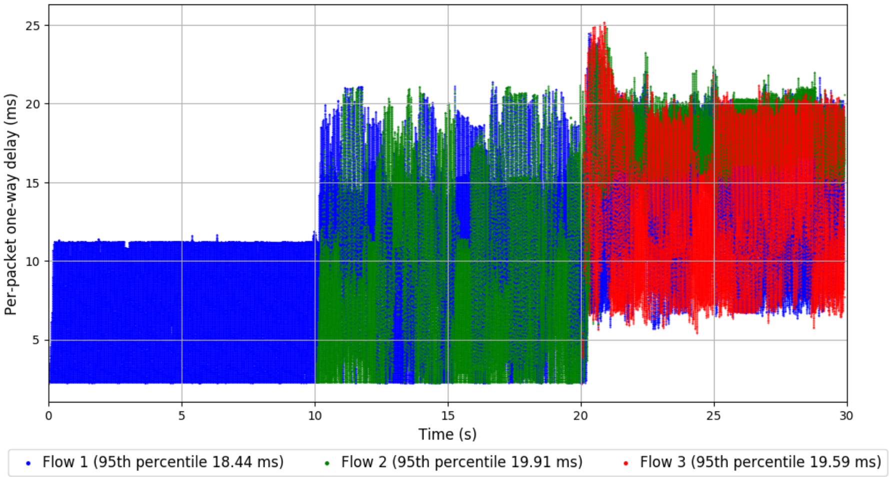
```
Run 1: Statistics of Sprout

Start at: 2018-02-20 09:45:59
End at: 2018-02-20 09:46:29
Local clock offset: -12.871 ms
Remote clock offset: -12.843 ms

# Below is generated by plot.py at 2018-02-20 16:43:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.97 Mbit/s
95th percentile per-packet one-way delay: 19.305 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 42.26 Mbit/s
95th percentile per-packet one-way delay: 18.440 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 34.09 Mbit/s
95th percentile per-packet one-way delay: 19.906 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 36.54 Mbit/s
95th percentile per-packet one-way delay: 19.585 ms
Loss rate: 0.34%
```

Run 1: Report of Sprout — Data Link



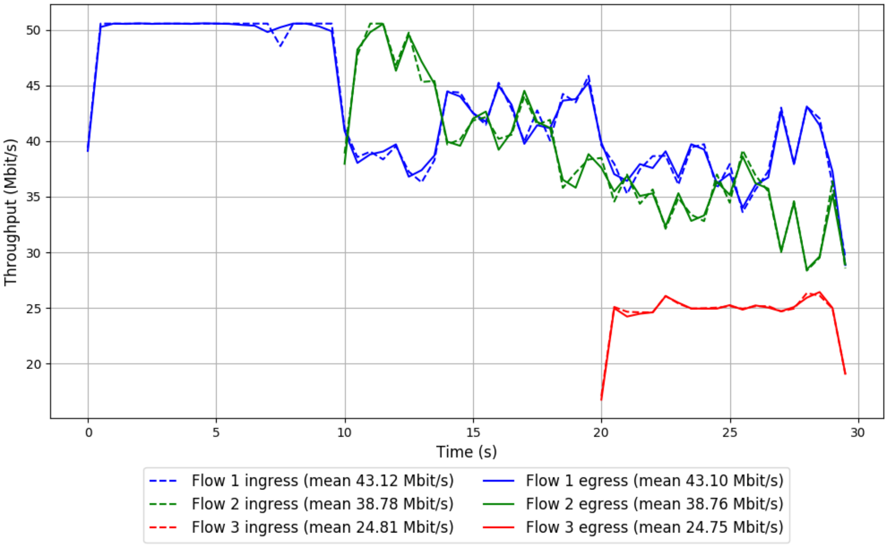


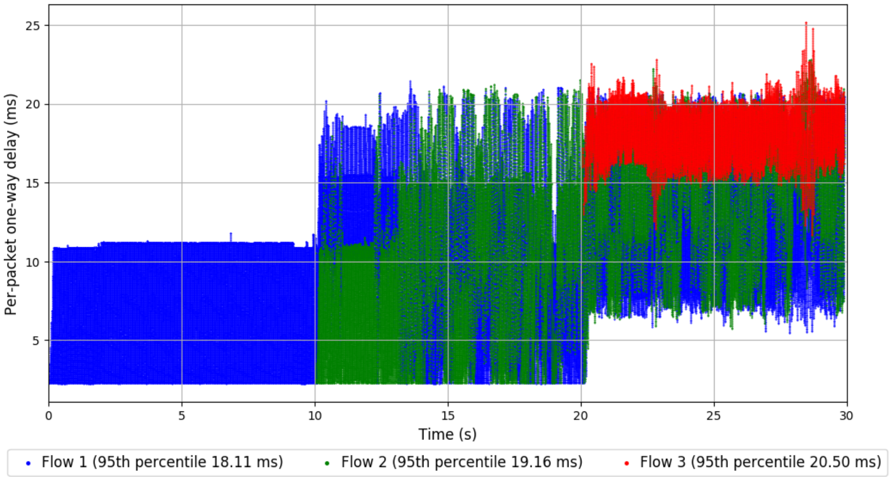
```
Run 2: Statistics of Sprout

Start at: 2018-02-20 10:06:22
End at: 2018-02-20 10:06:52
Local clock offset: -13.226 ms
Remote clock offset: -12.83 ms

# Below is generated by plot.py at 2018-02-20 16:43:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.03 Mbit/s
95th percentile per-packet one-way delay: 19.307 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 43.10 Mbit/s
95th percentile per-packet one-way delay: 18.107 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 38.76 Mbit/s
95th percentile per-packet one-way delay: 19.158 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 24.75 Mbit/s
95th percentile per-packet one-way delay: 20.498 ms
Loss rate: 0.19%
```

Run 2: Report of Sprout — Data Link



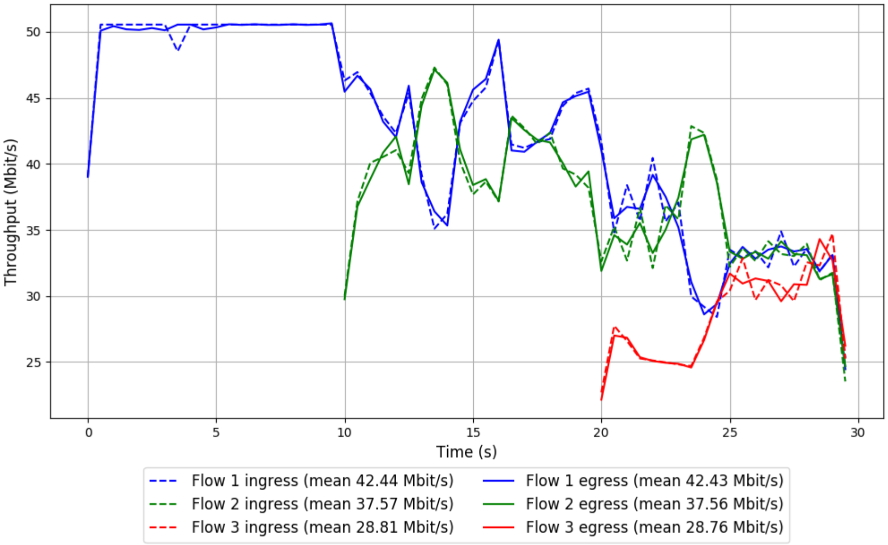


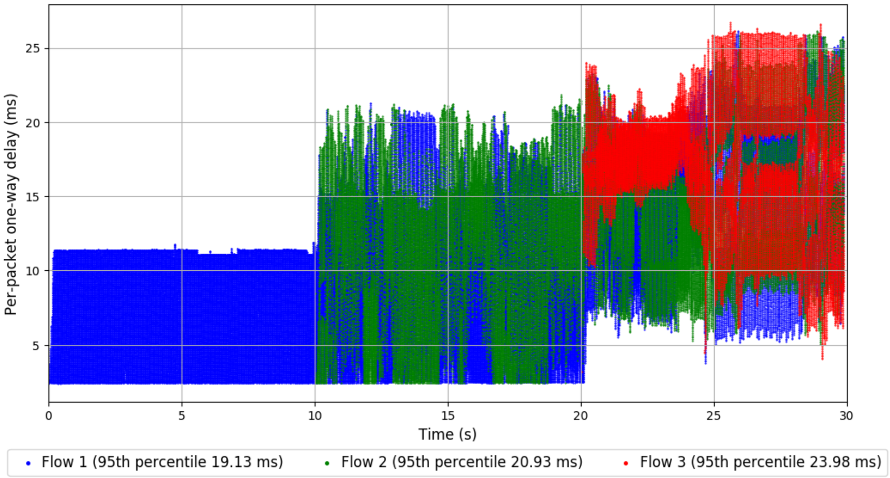
```
Run 3: Statistics of Sprout

Start at: 2018-02-20 10:26:49
End at: 2018-02-20 10:27:19
Local clock offset: -13.776 ms
Remote clock offset: -12.673 ms

# Below is generated by plot.py at 2018-02-20 16:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.87 Mbit/s
95th percentile per-packet one-way delay: 20.803 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 42.43 Mbit/s
95th percentile per-packet one-way delay: 19.126 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 37.56 Mbit/s
95th percentile per-packet one-way delay: 20.926 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 28.76 Mbit/s
95th percentile per-packet one-way delay: 23.975 ms
Loss rate: 0.18%
```

Run 3: Report of Sprout — Data Link



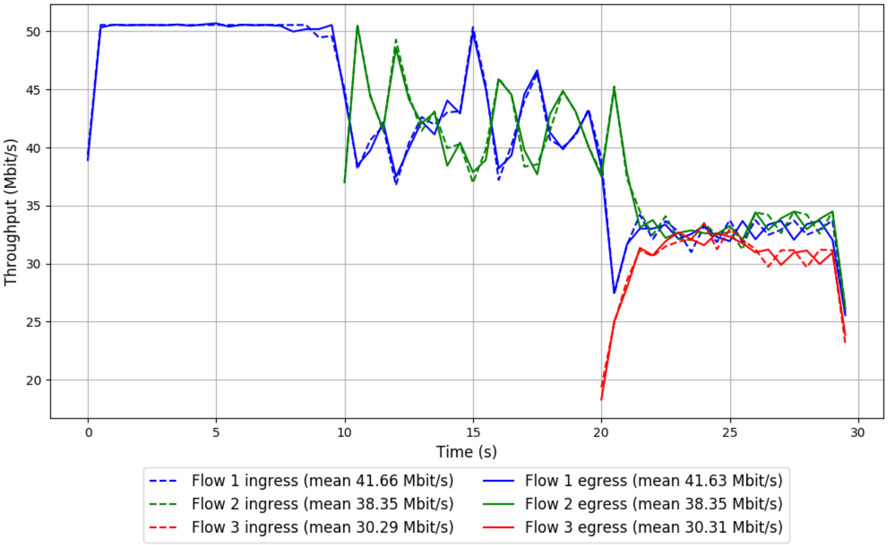


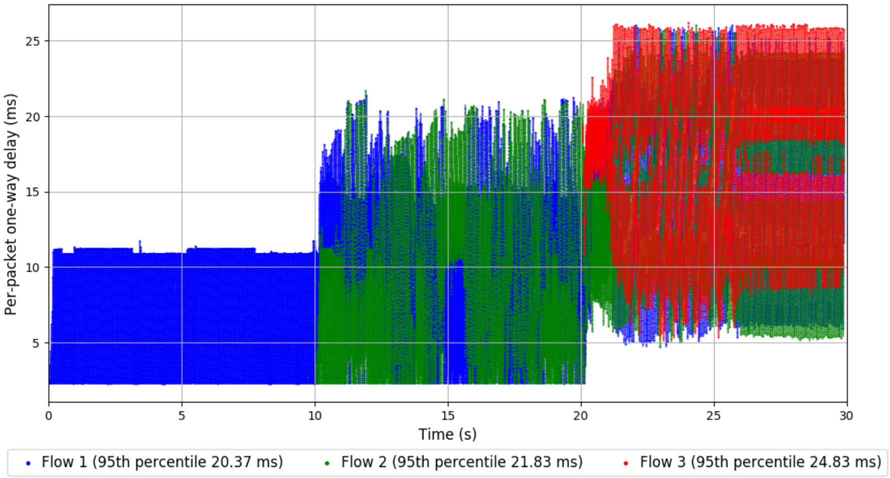
```
Run 4: Statistics of Sprout

Start at: 2018-02-20 10:47:17
End at: 2018-02-20 10:47:47
Local clock offset: -15.212 ms
Remote clock offset: -12.522 ms

# Below is generated by plot.py at 2018-02-20 16:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.12 Mbit/s
95th percentile per-packet one-way delay: 22.259 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 41.63 Mbit/s
95th percentile per-packet one-way delay: 20.373 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 38.35 Mbit/s
95th percentile per-packet one-way delay: 21.833 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 30.31 Mbit/s
95th percentile per-packet one-way delay: 24.827 ms
Loss rate: 0.16%
```

Run 4: Report of Sprout — Data Link



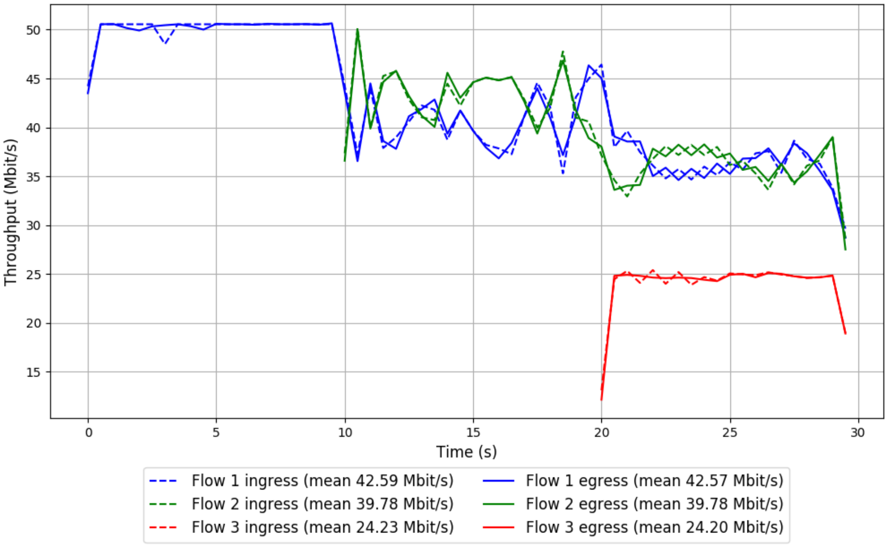


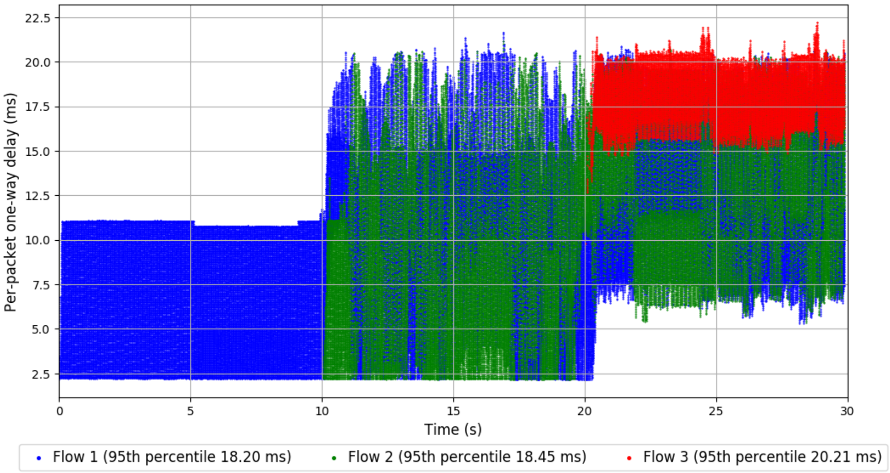
```
Run 5: Statistics of Sprout

Start at: 2018-02-20 11:07:40
End at: 2018-02-20 11:08:10
Local clock offset: -12.459 ms
Remote clock offset: -12.545 ms

# Below is generated by plot.py at 2018-02-20 16:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.97 Mbit/s
95th percentile per-packet one-way delay: 19.074 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 42.57 Mbit/s
95th percentile per-packet one-way delay: 18.196 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 39.78 Mbit/s
95th percentile per-packet one-way delay: 18.454 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 24.20 Mbit/s
95th percentile per-packet one-way delay: 20.212 ms
Loss rate: 0.21%
```

Run 5: Report of Sprout — Data Link



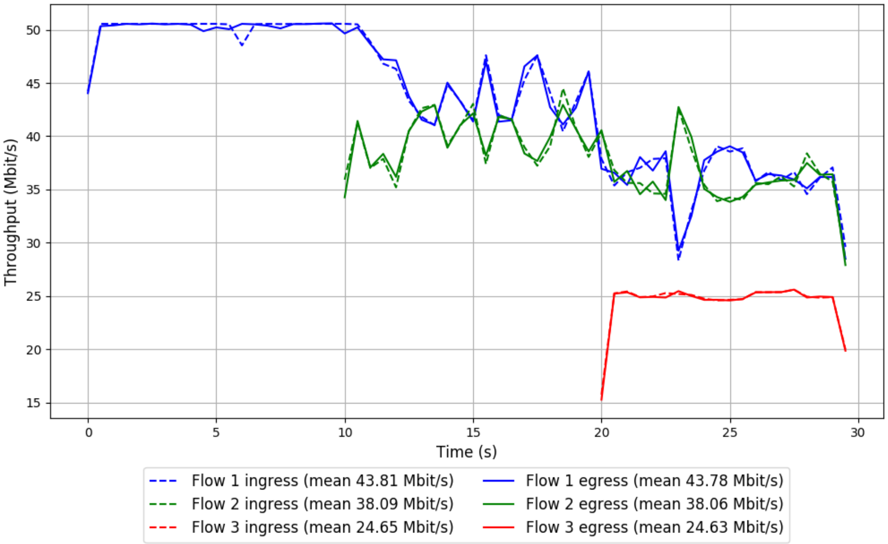


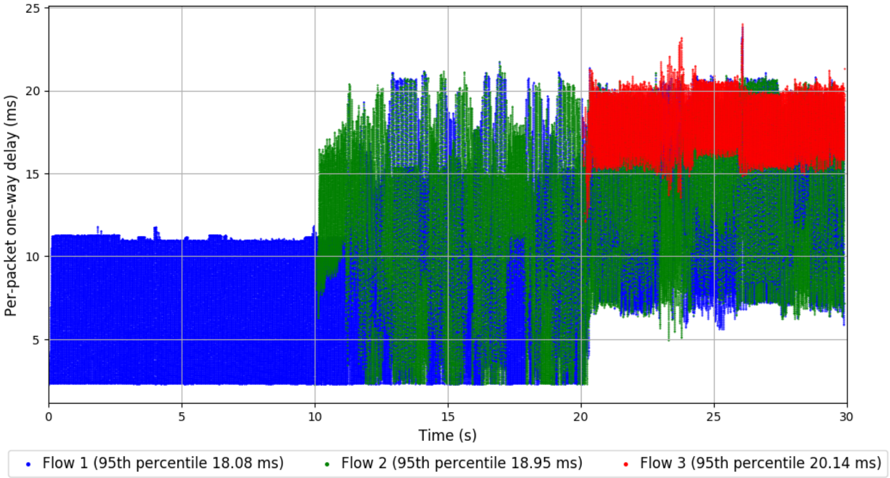
```
Run 6: Statistics of Sprout

Start at: 2018-02-20 11:28:03
End at: 2018-02-20 11:28:33
Local clock offset: -10.693 ms
Remote clock offset: -12.603 ms

# Below is generated by plot.py at 2018-02-20 16:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.19 Mbit/s
95th percentile per-packet one-way delay: 19.179 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 43.78 Mbit/s
95th percentile per-packet one-way delay: 18.076 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 38.06 Mbit/s
95th percentile per-packet one-way delay: 18.949 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 24.63 Mbit/s
95th percentile per-packet one-way delay: 20.145 ms
Loss rate: 0.23%
```

Run 6: Report of Sprout — Data Link



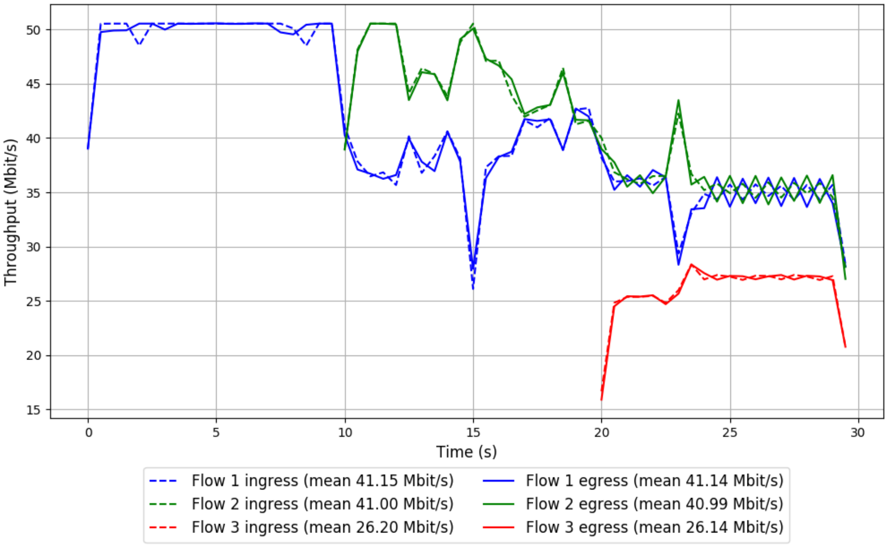


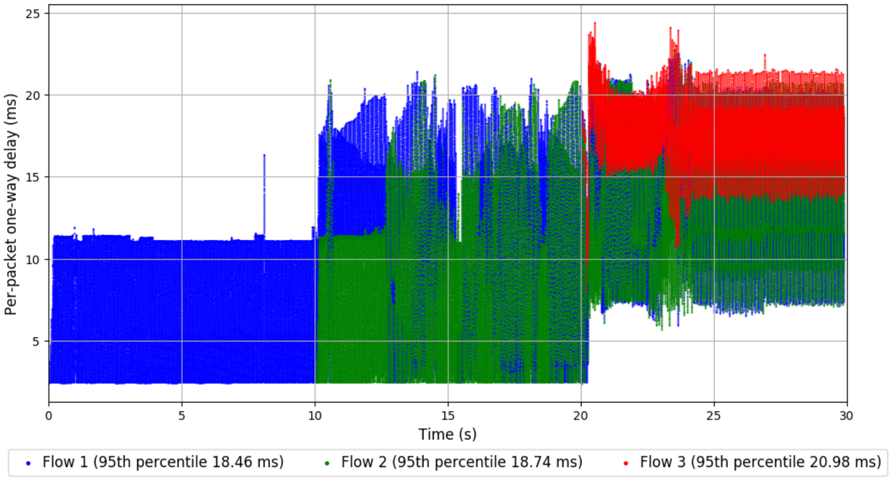
```
Run 7: Statistics of Sprout

Start at: 2018-02-20 11:48:29
End at: 2018-02-20 11:48:59
Local clock offset: -14.298 ms
Remote clock offset: -12.703 ms

# Below is generated by plot.py at 2018-02-20 16:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.00 Mbit/s
95th percentile per-packet one-way delay: 19.257 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 41.14 Mbit/s
95th percentile per-packet one-way delay: 18.462 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 40.99 Mbit/s
95th percentile per-packet one-way delay: 18.740 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 26.14 Mbit/s
95th percentile per-packet one-way delay: 20.978 ms
Loss rate: 0.24%
```

Run 7: Report of Sprout — Data Link



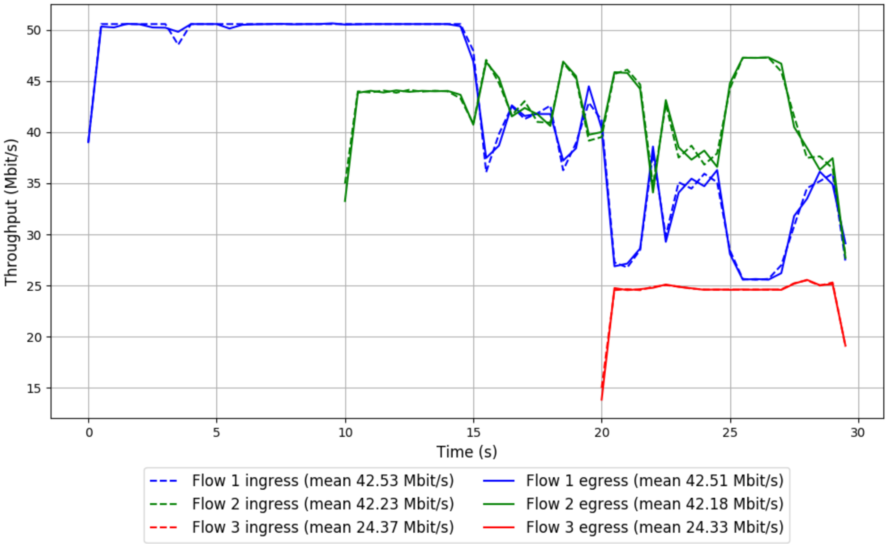


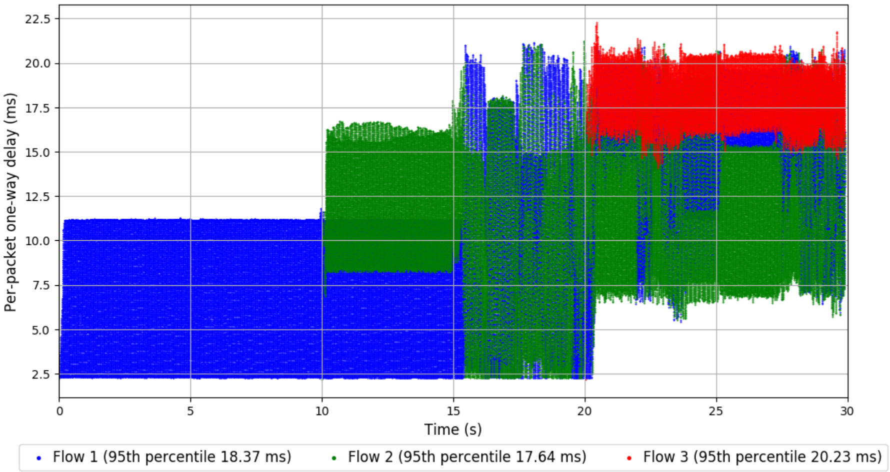
```
Run 8: Statistics of Sprout

Start at: 2018-02-20 12:08:52
End at: 2018-02-20 12:09:22
Local clock offset: -15.027 ms
Remote clock offset: -12.447 ms

# Below is generated by plot.py at 2018-02-20 16:44:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.59 Mbit/s
95th percentile per-packet one-way delay: 19.056 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 42.51 Mbit/s
95th percentile per-packet one-way delay: 18.369 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 42.18 Mbit/s
95th percentile per-packet one-way delay: 17.645 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 24.33 Mbit/s
95th percentile per-packet one-way delay: 20.229 ms
Loss rate: 0.22%
```

Run 8: Report of Sprout — Data Link



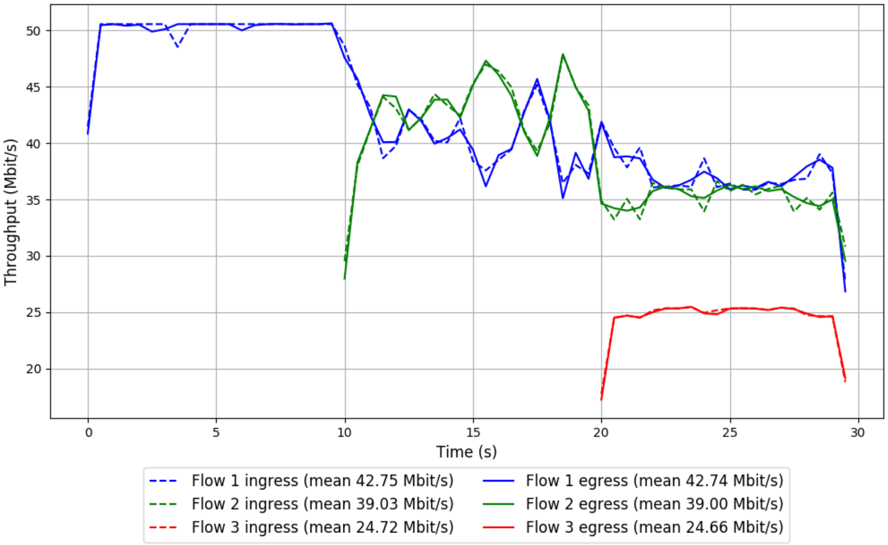


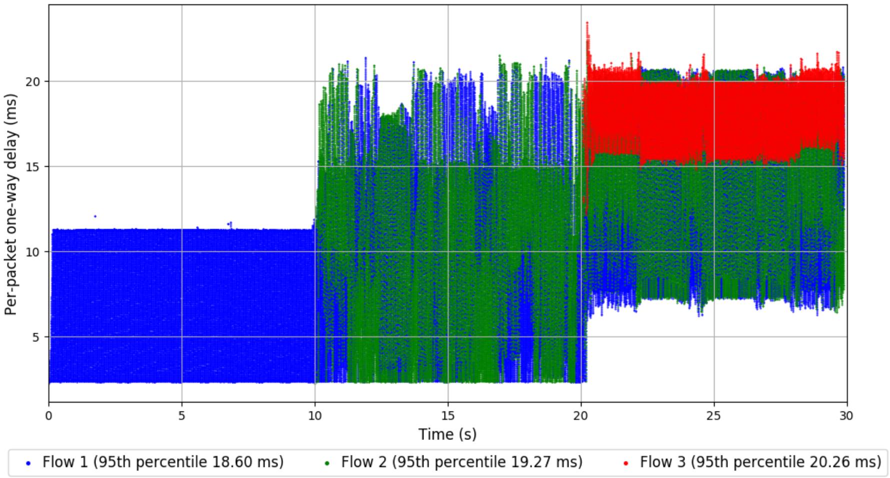
```
Run 9: Statistics of Sprout

Start at: 2018-02-20 12:29:16
End at: 2018-02-20 12:29:46
Local clock offset: -14.511 ms
Remote clock offset: -12.421 ms

# Below is generated by plot.py at 2018-02-20 16:44:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.81 Mbit/s
95th percentile per-packet one-way delay: 19.425 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 42.74 Mbit/s
95th percentile per-packet one-way delay: 18.597 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 39.00 Mbit/s
95th percentile per-packet one-way delay: 19.271 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 24.66 Mbit/s
95th percentile per-packet one-way delay: 20.261 ms
Loss rate: 0.13%
```

Run 9: Report of Sprout — Data Link



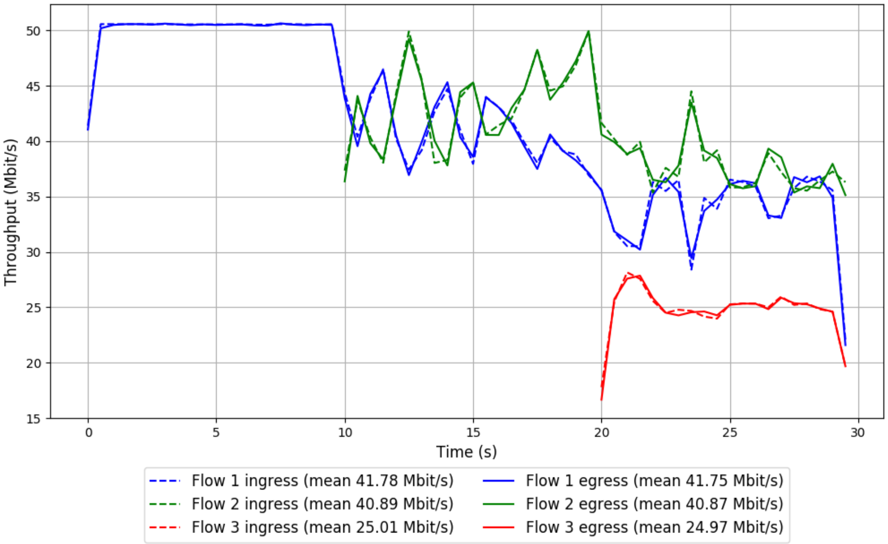


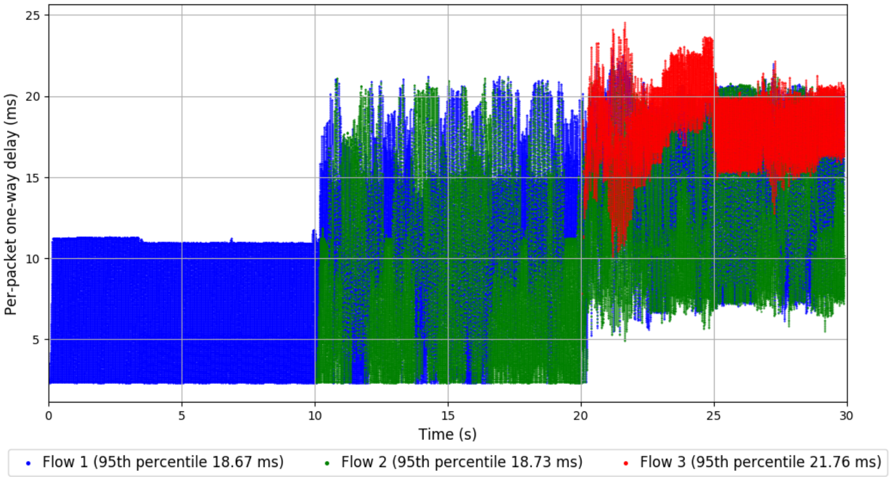
```
Run 10: Statistics of Sprout

Start at: 2018-02-20 12:49:42
End at: 2018-02-20 12:50:12
Local clock offset: -13.721 ms
Remote clock offset: -12.186 ms

# Below is generated by plot.py at 2018-02-20 16:44:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.13 Mbit/s
95th percentile per-packet one-way delay: 19.545 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 41.75 Mbit/s
95th percentile per-packet one-way delay: 18.670 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 40.87 Mbit/s
95th percentile per-packet one-way delay: 18.731 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 24.97 Mbit/s
95th percentile per-packet one-way delay: 21.757 ms
Loss rate: 0.20%
```

Run 10: Report of Sprout — Data Link



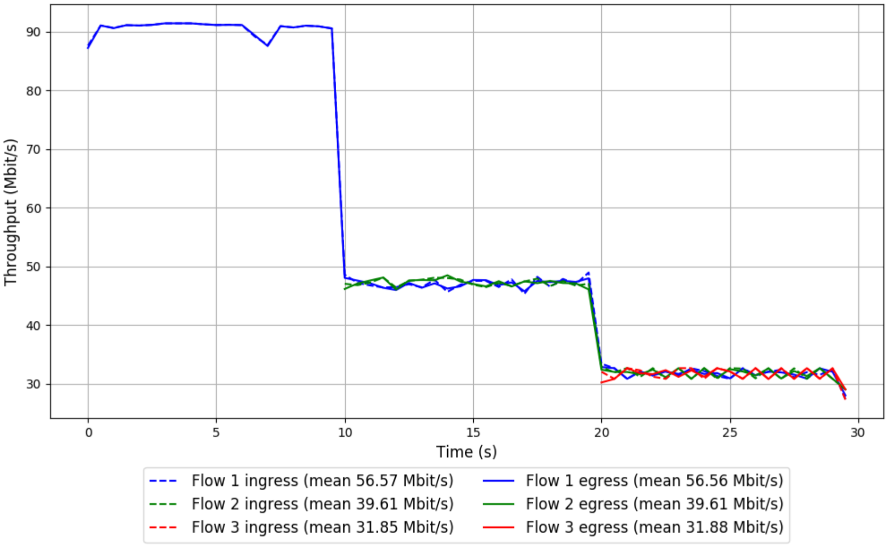


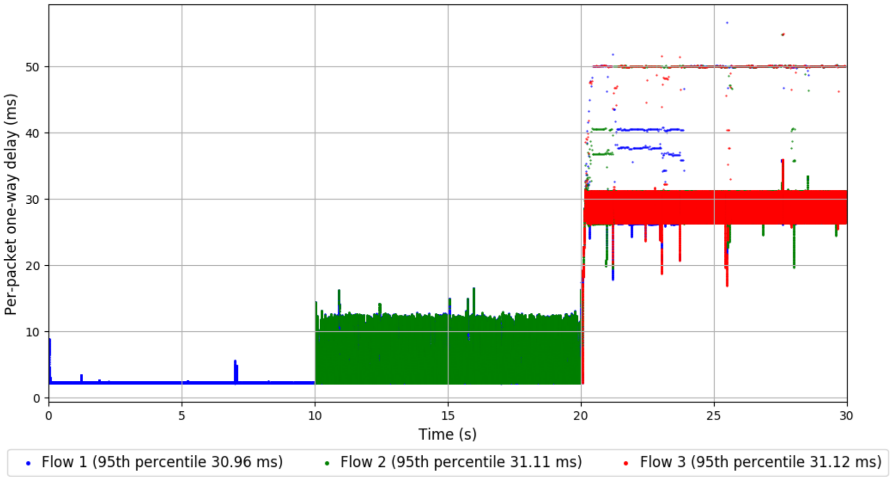
```
Run 1: Statistics of TaoVA-100x

Start at: 2018-02-20 10:01:44
End at: 2018-02-20 10:02:14
Local clock offset: -13.197 ms
Remote clock offset: -12.861 ms

# Below is generated by plot.py at 2018-02-20 16:46:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.46 Mbit/s
95th percentile per-packet one-way delay: 31.072 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 56.56 Mbit/s
95th percentile per-packet one-way delay: 30.959 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.61 Mbit/s
95th percentile per-packet one-way delay: 31.108 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.88 Mbit/s
95th percentile per-packet one-way delay: 31.121 ms
Loss rate: 0.05%
```

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



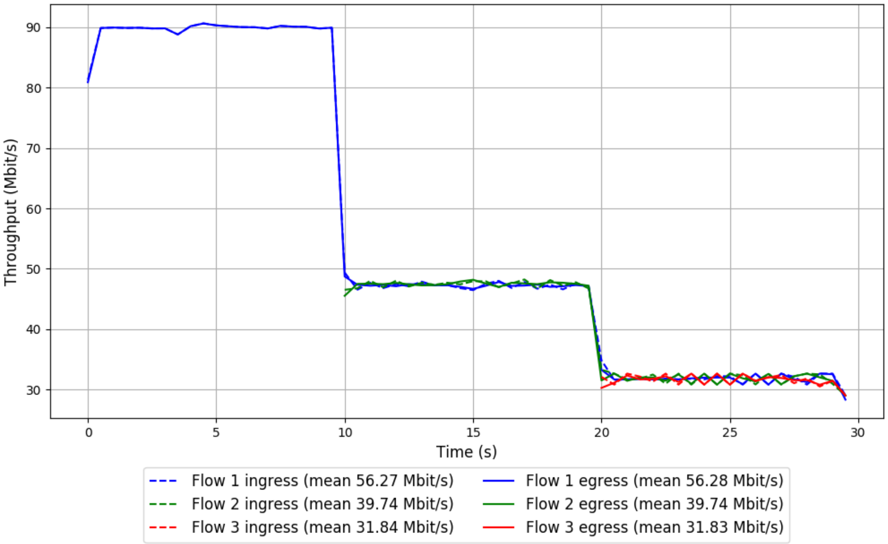


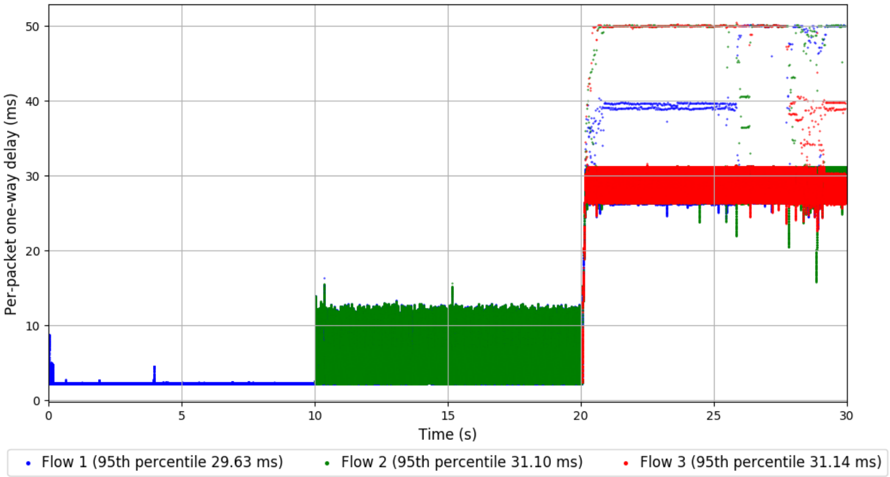
```
Run 2: Statistics of TaoVA-100x

Start at: 2018-02-20 10:22:08
End at: 2018-02-20 10:22:38
Local clock offset: -13.309 ms
Remote clock offset: -12.658 ms

# Below is generated by plot.py at 2018-02-20 16:46:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.24 Mbit/s
95th percentile per-packet one-way delay: 31.055 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.28 Mbit/s
95th percentile per-packet one-way delay: 29.628 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 39.74 Mbit/s
95th percentile per-packet one-way delay: 31.098 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.83 Mbit/s
95th percentile per-packet one-way delay: 31.140 ms
Loss rate: 0.29%
```

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



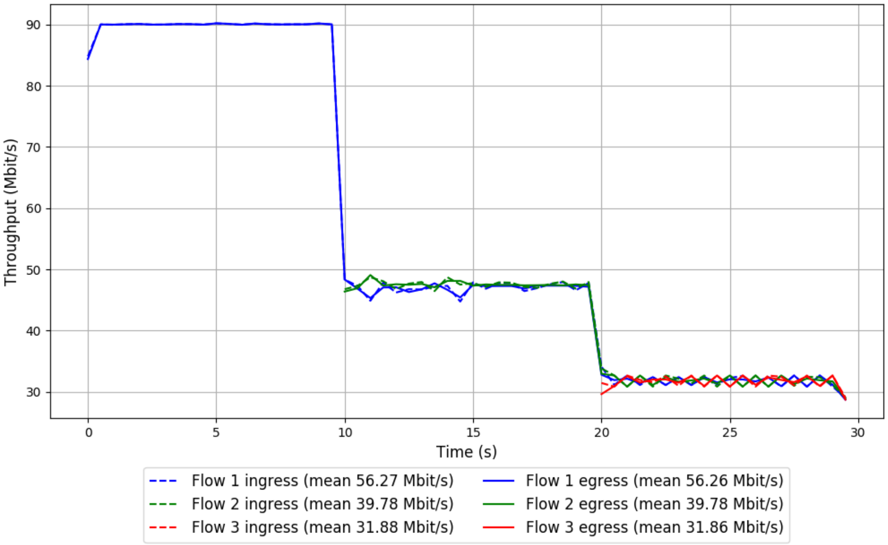


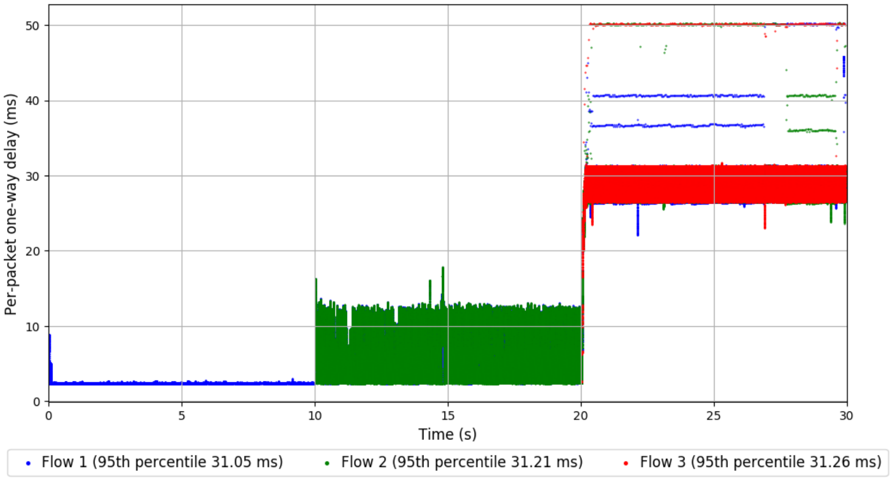
```
Run 3: Statistics of TaoVA-100x

Start at: 2018-02-20 10:42:35
End at: 2018-02-20 10:43:05
Local clock offset: -14.93 ms
Remote clock offset: -12.47 ms

# Below is generated by plot.py at 2018-02-20 16:46:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.26 Mbit/s
95th percentile per-packet one-way delay: 31.195 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 56.26 Mbit/s
95th percentile per-packet one-way delay: 31.053 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.78 Mbit/s
95th percentile per-packet one-way delay: 31.208 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.86 Mbit/s
95th percentile per-packet one-way delay: 31.261 ms
Loss rate: 0.34%
```

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



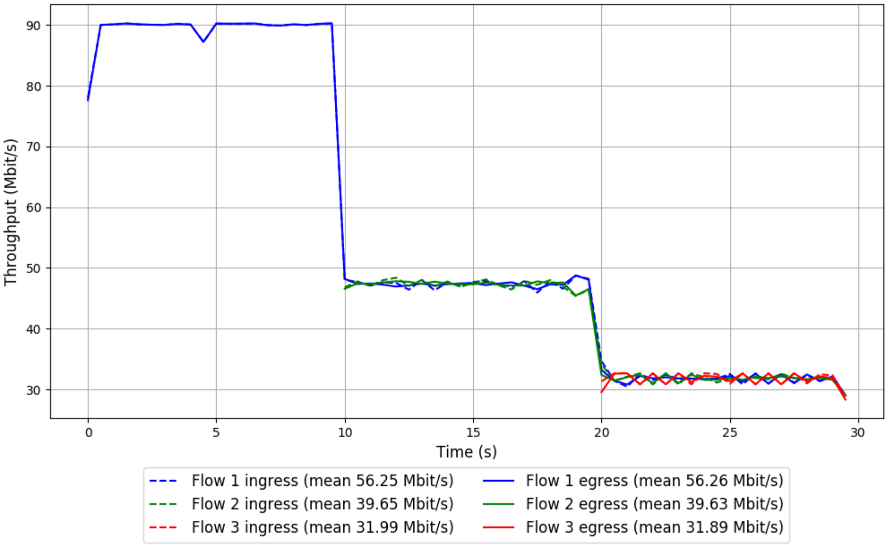


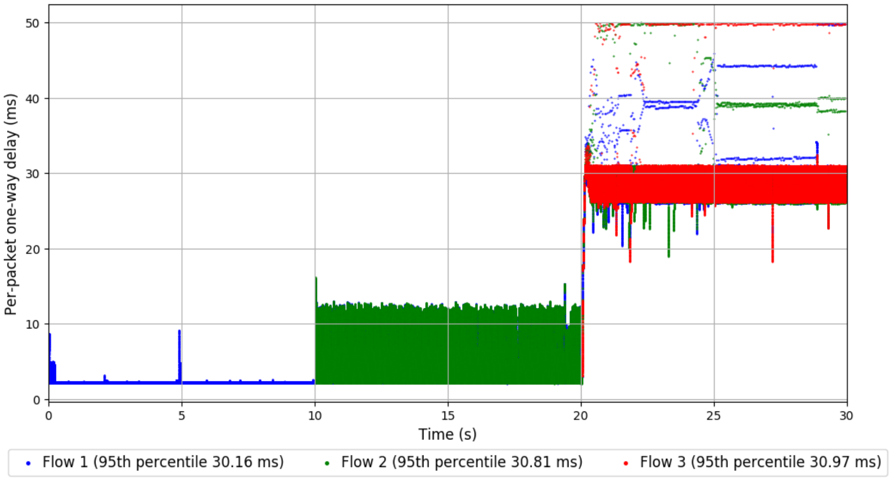
```
Run 4: Statistics of TaoVA-100x

Start at: 2018-02-20 11:03:01
End at: 2018-02-20 11:03:31
Local clock offset: -13.462 ms
Remote clock offset: -12.52 ms

# Below is generated by plot.py at 2018-02-20 16:46:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.18 Mbit/s
95th percentile per-packet one-way delay: 30.860 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 56.26 Mbit/s
95th percentile per-packet one-way delay: 30.159 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.63 Mbit/s
95th percentile per-packet one-way delay: 30.806 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.89 Mbit/s
95th percentile per-packet one-way delay: 30.969 ms
Loss rate: 0.44%
```

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



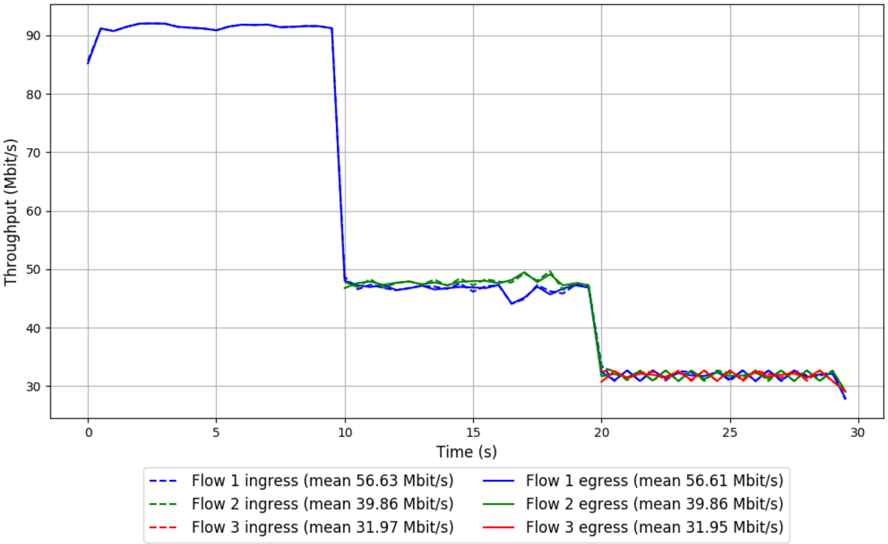


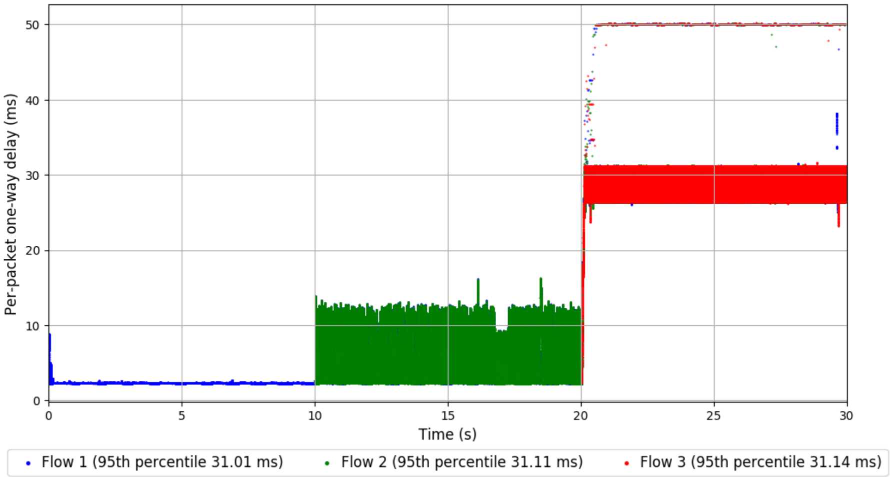
```
Run 5: Statistics of TaoVA-100x

Start at: 2018-02-20 11:23:24
End at: 2018-02-20 11:23:54
Local clock offset: -10.902 ms
Remote clock offset: -12.587 ms

# Below is generated by plot.py at 2018-02-20 16:46:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.71 Mbit/s
95th percentile per-packet one-way delay: 31.085 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 56.61 Mbit/s
95th percentile per-packet one-way delay: 31.009 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 39.86 Mbit/s
95th percentile per-packet one-way delay: 31.111 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.95 Mbit/s
95th percentile per-packet one-way delay: 31.139 ms
Loss rate: 0.29%
```

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



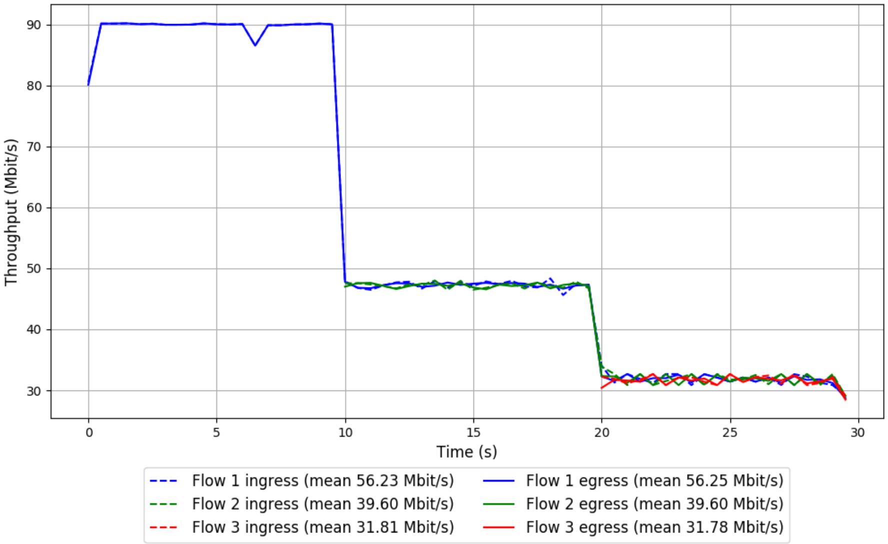


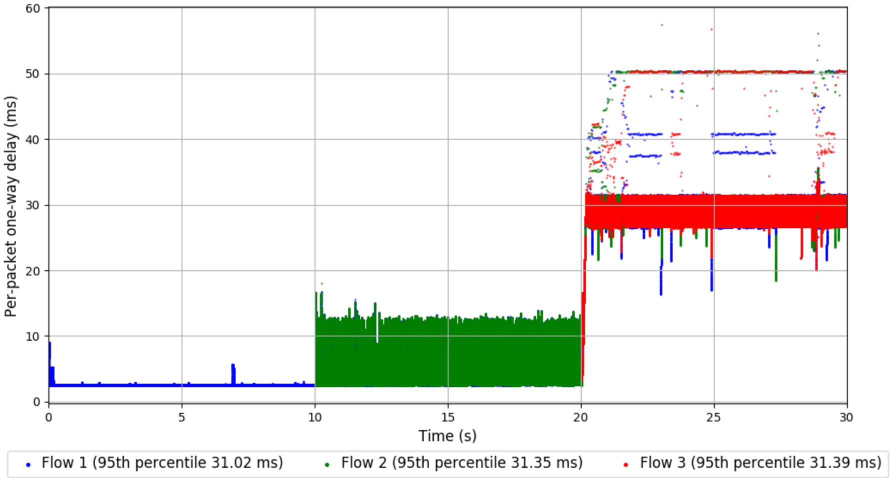
```
Run 6: Statistics of TaoVA-100x

Start at: 2018-02-20 11:43:48
End at: 2018-02-20 11:44:18
Local clock offset: -13.746 ms
Remote clock offset: -12.694 ms

# Below is generated by plot.py at 2018-02-20 16:46:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.09 Mbit/s
95th percentile per-packet one-way delay: 31.321 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.25 Mbit/s
95th percentile per-packet one-way delay: 31.019 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.60 Mbit/s
95th percentile per-packet one-way delay: 31.351 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.78 Mbit/s
95th percentile per-packet one-way delay: 31.385 ms
Loss rate: 0.38%
```

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



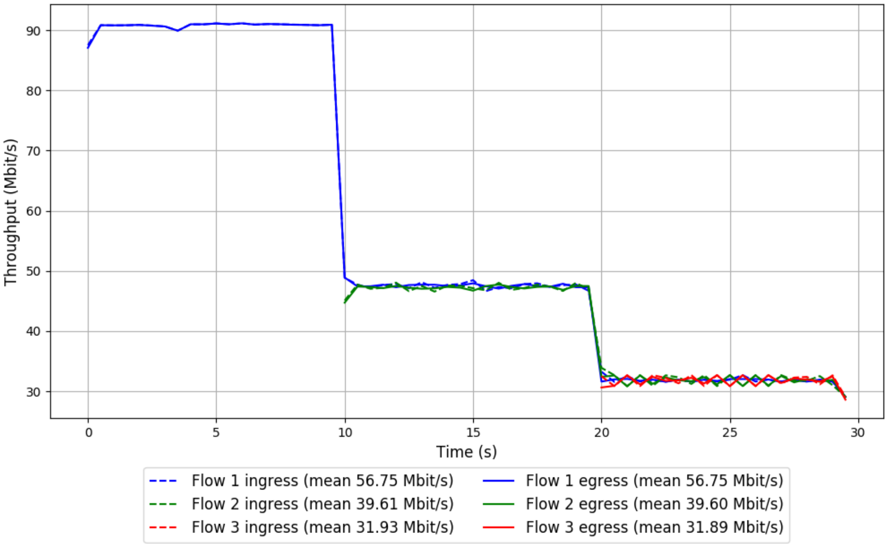


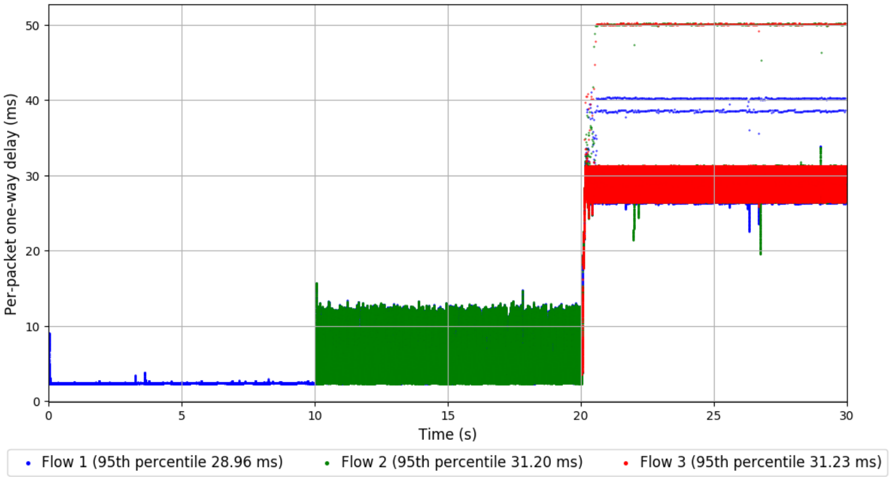
```
Run 7: Statistics of TaoVA-100x

Start at: 2018-02-20 12:04:13
End at: 2018-02-20 12:04:43
Local clock offset: -15.232 ms
Remote clock offset: -12.482 ms

# Below is generated by plot.py at 2018-02-20 16:47:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.62 Mbit/s
95th percentile per-packet one-way delay: 31.138 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 56.75 Mbit/s
95th percentile per-packet one-way delay: 28.958 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.60 Mbit/s
95th percentile per-packet one-way delay: 31.196 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 31.89 Mbit/s
95th percentile per-packet one-way delay: 31.228 ms
Loss rate: 0.39%
```

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



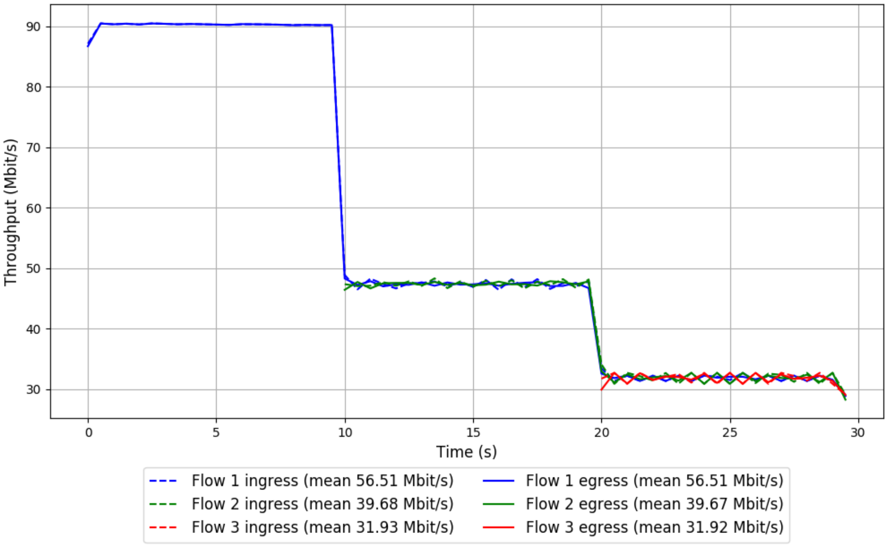


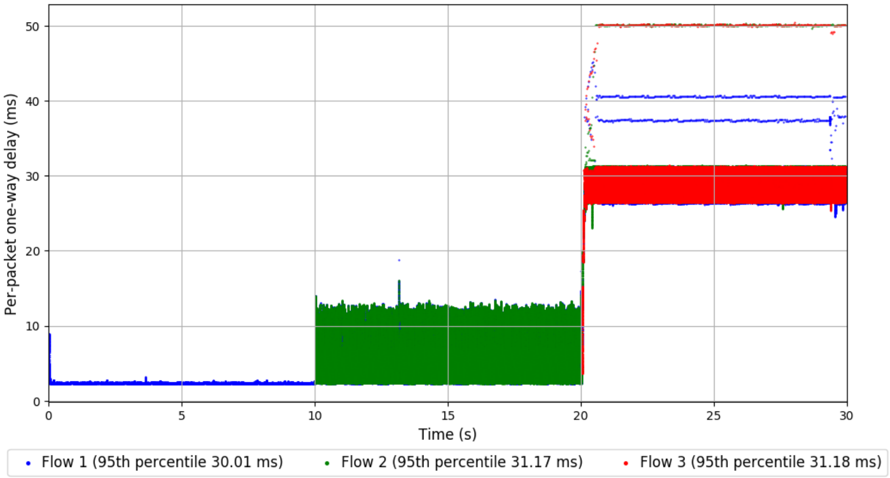
```
Run 8: Statistics of TaoVA-100x

Start at: 2018-02-20 12:24:37
End at: 2018-02-20 12:25:07
Local clock offset: -14.508 ms
Remote clock offset: -12.49 ms

# Below is generated by plot.py at 2018-02-20 16:47:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.46 Mbit/s
95th percentile per-packet one-way delay: 31.122 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.51 Mbit/s
95th percentile per-packet one-way delay: 30.014 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.67 Mbit/s
95th percentile per-packet one-way delay: 31.170 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 31.92 Mbit/s
95th percentile per-packet one-way delay: 31.184 ms
Loss rate: 0.29%
```

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



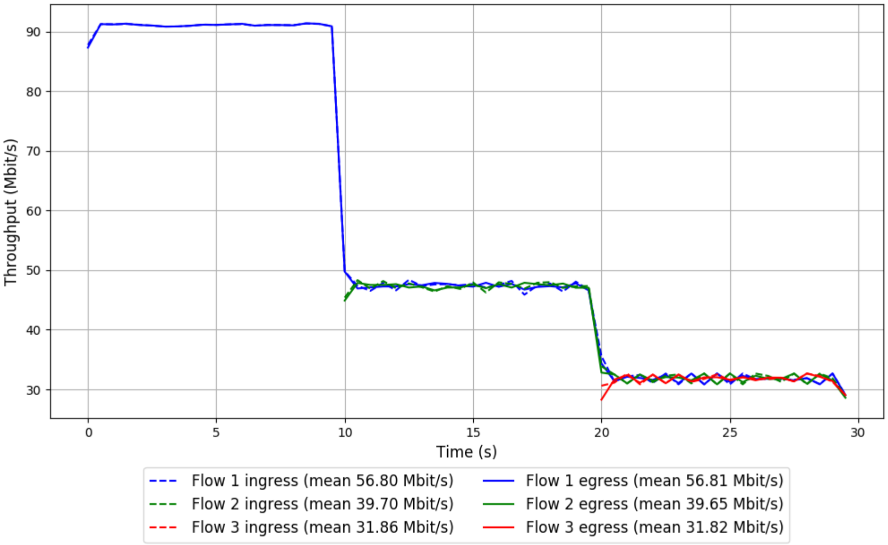


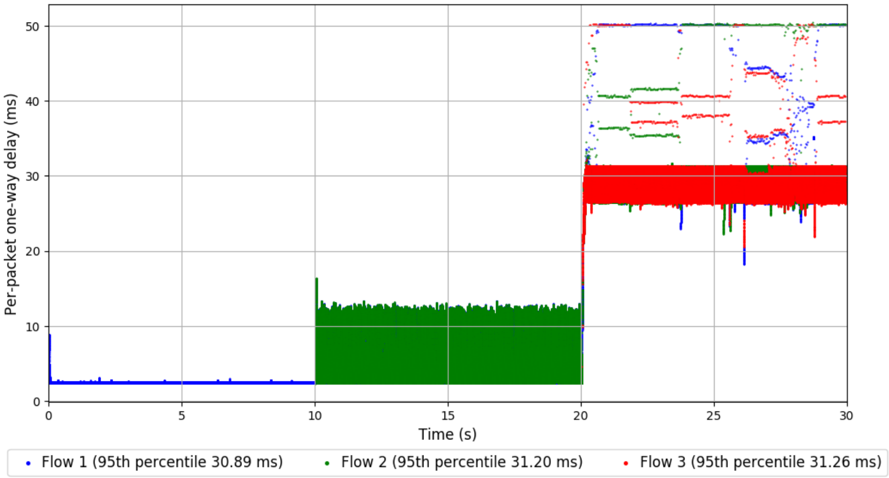
```
Run 9: Statistics of TaoVA-100x

Start at: 2018-02-20 12:45:03
End at: 2018-02-20 12:45:33
Local clock offset: -14.034 ms
Remote clock offset: -12.346 ms

# Below is generated by plot.py at 2018-02-20 16:48:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.71 Mbit/s
95th percentile per-packet one-way delay: 31.168 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.81 Mbit/s
95th percentile per-packet one-way delay: 30.892 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.65 Mbit/s
95th percentile per-packet one-way delay: 31.203 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 31.82 Mbit/s
95th percentile per-packet one-way delay: 31.256 ms
Loss rate: 0.29%
```

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



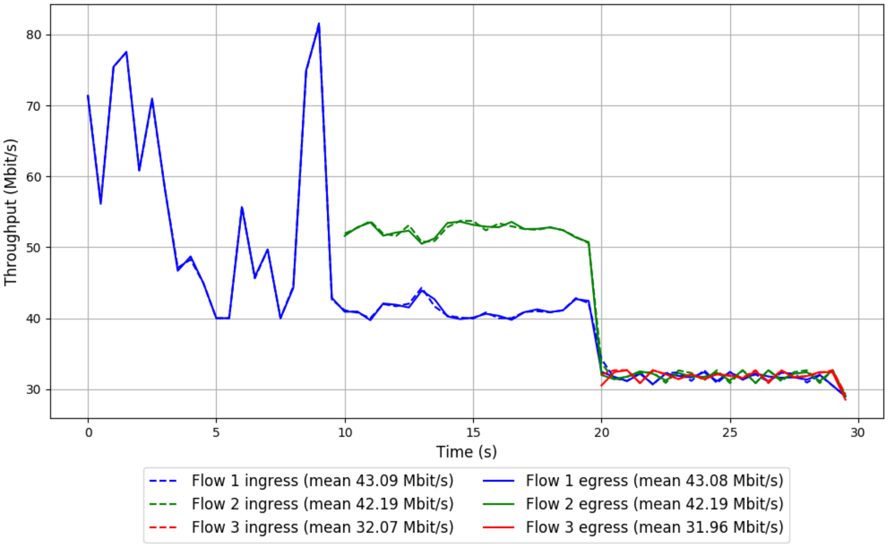


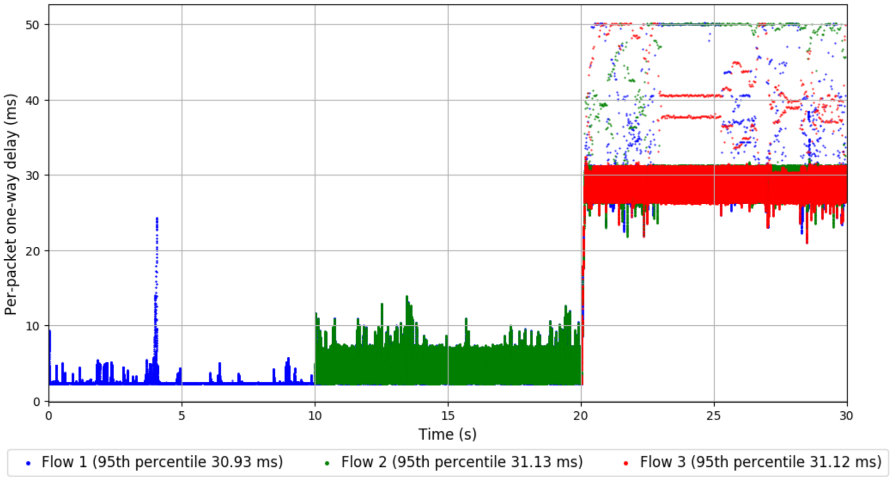
```
Run 10: Statistics of TaoVA-100x

Start at: 2018-02-20 13:05:28
End at: 2018-02-20 13:05:58
Local clock offset: -13.233 ms
Remote clock offset: -12.182 ms

# Below is generated by plot.py at 2018-02-20 16:48:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.76 Mbit/s
95th percentile per-packet one-way delay: 31.082 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 43.08 Mbit/s
95th percentile per-packet one-way delay: 30.929 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 42.19 Mbit/s
95th percentile per-packet one-way delay: 31.126 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 31.96 Mbit/s
95th percentile per-packet one-way delay: 31.119 ms
Loss rate: 0.43%
```

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



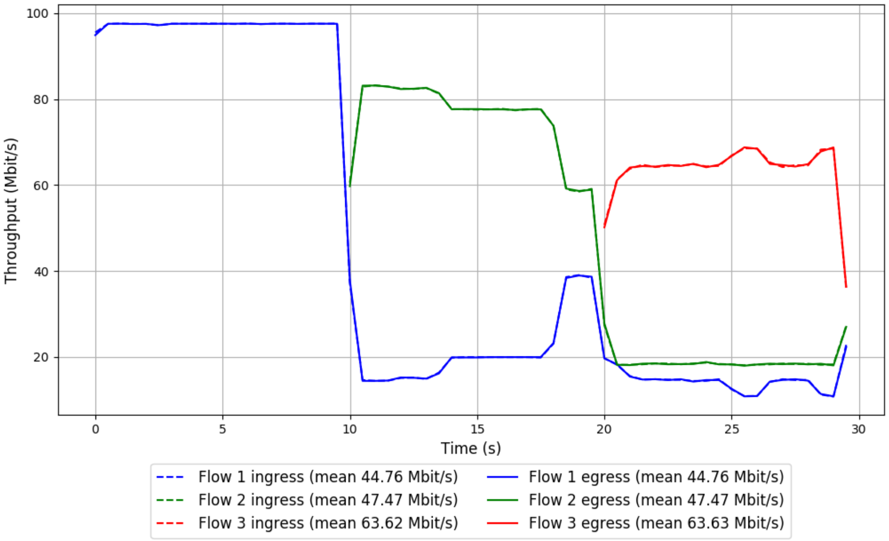


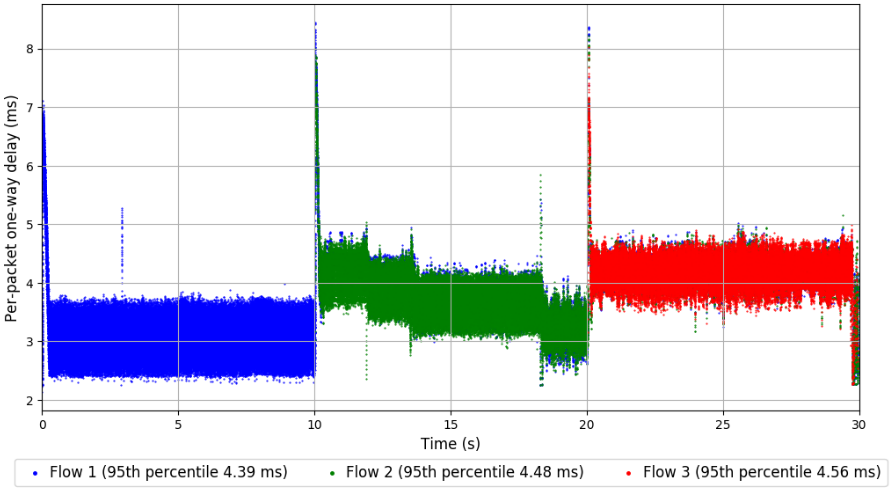
```
Run 1: Statistics of TCP Vegas

Start at: 2018-02-20 10:00:36
End at: 2018-02-20 10:01:06
Local clock offset: -13.181 ms
Remote clock offset: -12.855 ms

# Below is generated by plot.py at 2018-02-20 16:48:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.44 Mbit/s
95th percentile per-packet one-way delay: 4.497 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 44.76 Mbit/s
95th percentile per-packet one-way delay: 4.388 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 47.47 Mbit/s
95th percentile per-packet one-way delay: 4.478 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 63.63 Mbit/s
95th percentile per-packet one-way delay: 4.562 ms
Loss rate: 0.01%
```

Run 1: Report of TCP Vegas — Data Link



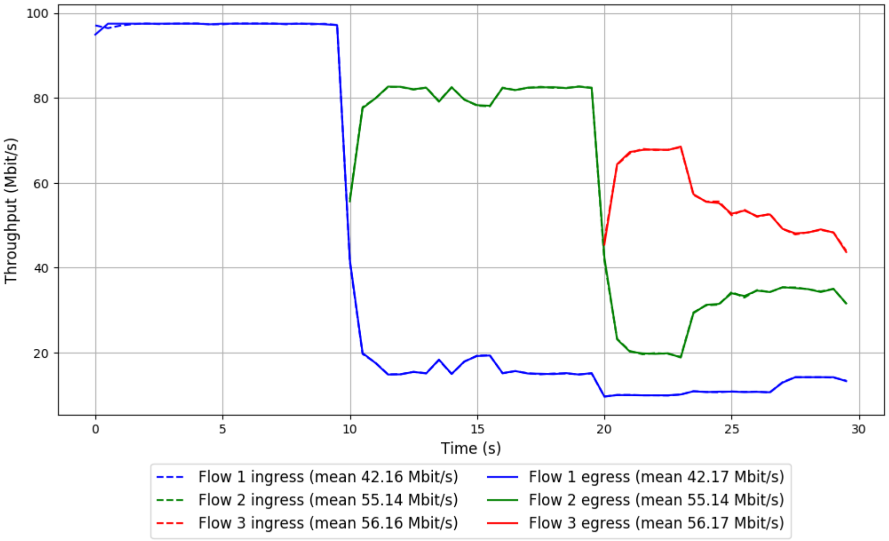


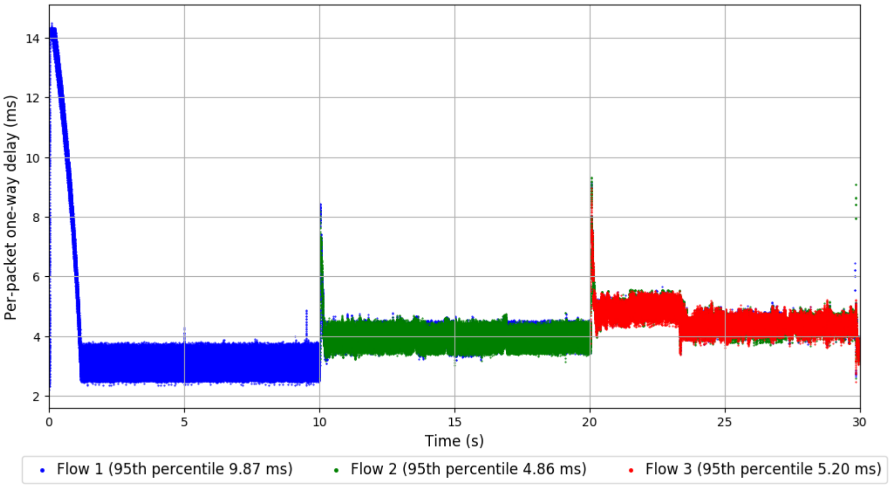
```
Run 2: Statistics of TCP Vegas

Start at: 2018-02-20 10:21:00
End at: 2018-02-20 10:21:30
Local clock offset: -13.24 ms
Remote clock offset: -12.669 ms

# Below is generated by plot.py at 2018-02-20 16:48:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 5.253 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 42.17 Mbit/s
95th percentile per-packet one-way delay: 9.872 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 55.14 Mbit/s
95th percentile per-packet one-way delay: 4.862 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 56.17 Mbit/s
95th percentile per-packet one-way delay: 5.201 ms
Loss rate: 0.05%
```

Run 2: Report of TCP Vegas — Data Link



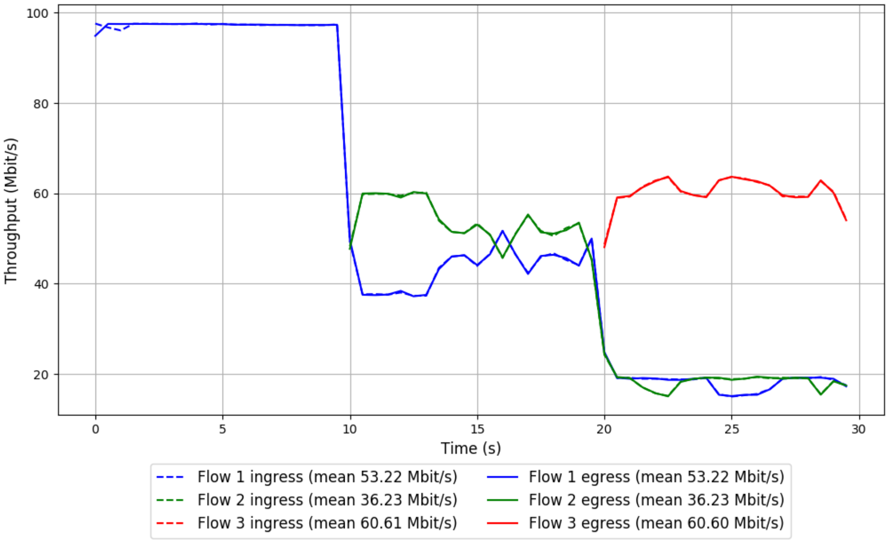


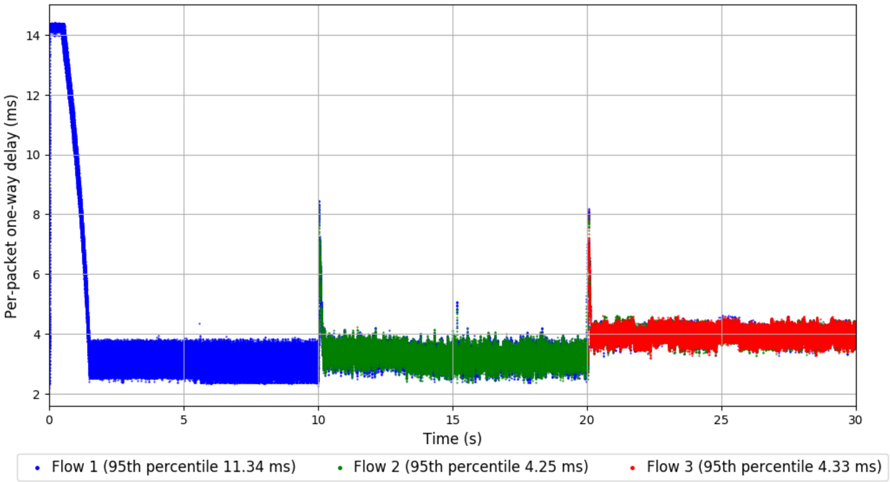
```
Run 3: Statistics of TCP Vegas

Start at: 2018-02-20 10:41:27
End at: 2018-02-20 10:41:57
Local clock offset: -14.881 ms
Remote clock offset: -12.476 ms

# Below is generated by plot.py at 2018-02-20 16:48:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 5.256 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 53.22 Mbit/s
95th percentile per-packet one-way delay: 11.343 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 36.23 Mbit/s
95th percentile per-packet one-way delay: 4.246 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 60.60 Mbit/s
95th percentile per-packet one-way delay: 4.334 ms
Loss rate: 0.06%
```

Run 3: Report of TCP Vegas — Data Link



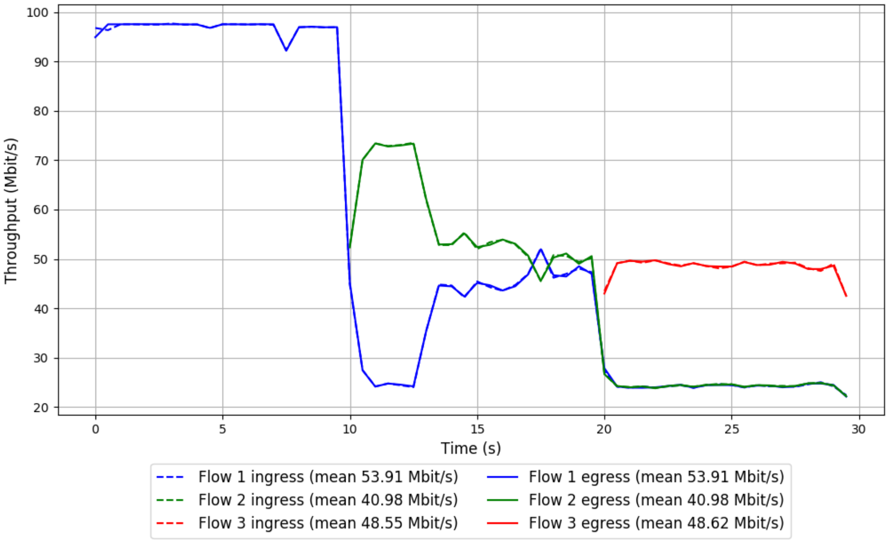


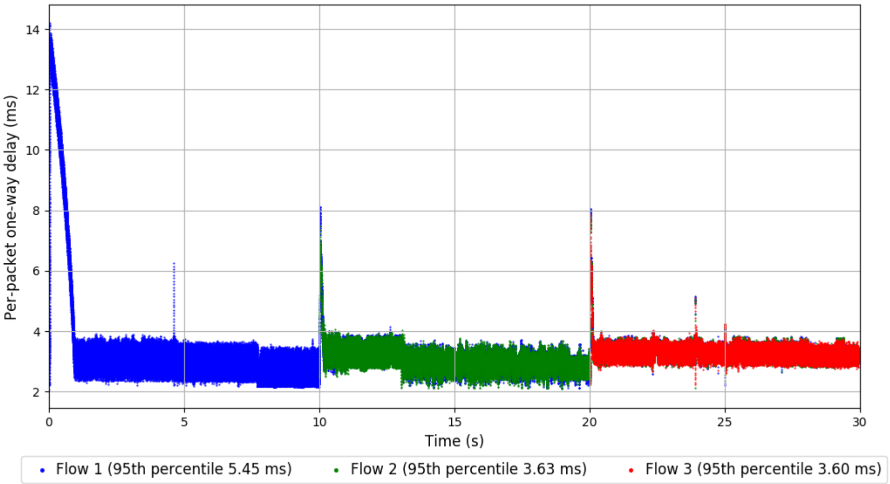
```
Run 4: Statistics of TCP Vegas

Start at: 2018-02-20 11:01:53
End at: 2018-02-20 11:02:23
Local clock offset: -13.893 ms
Remote clock offset: -12.616 ms

# Below is generated by plot.py at 2018-02-20 16:48:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 3.699 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 53.91 Mbit/s
95th percentile per-packet one-way delay: 5.448 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 40.98 Mbit/s
95th percentile per-packet one-way delay: 3.631 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 48.62 Mbit/s
95th percentile per-packet one-way delay: 3.598 ms
Loss rate: 0.05%
```

Run 4: Report of TCP Vegas — Data Link



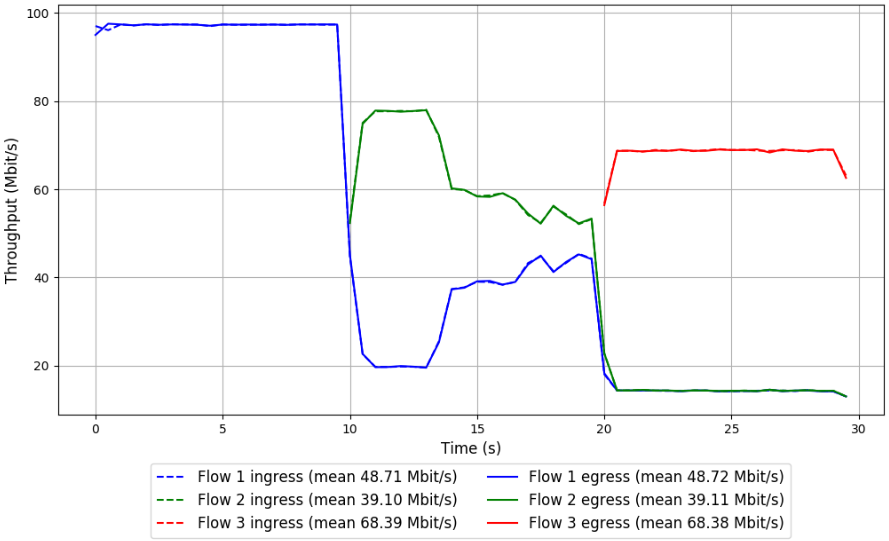


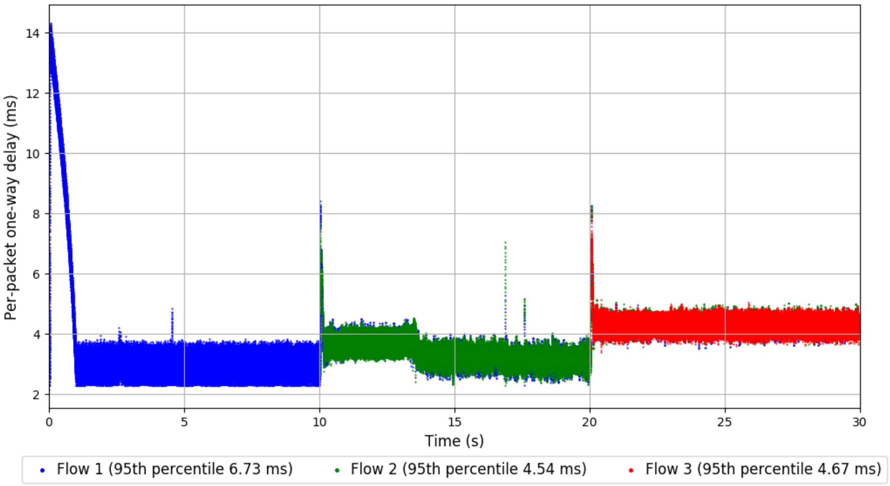
```
Run 5: Statistics of TCP Vegas

Start at: 2018-02-20 11:22:16
End at: 2018-02-20 11:22:46
Local clock offset: -10.971 ms
Remote clock offset: -12.583 ms

# Below is generated by plot.py at 2018-02-20 16:48:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 4.682 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 48.72 Mbit/s
95th percentile per-packet one-way delay: 6.732 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 39.11 Mbit/s
95th percentile per-packet one-way delay: 4.542 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 68.38 Mbit/s
95th percentile per-packet one-way delay: 4.669 ms
Loss rate: 0.07%
```

Run 5: Report of TCP Vegas — Data Link



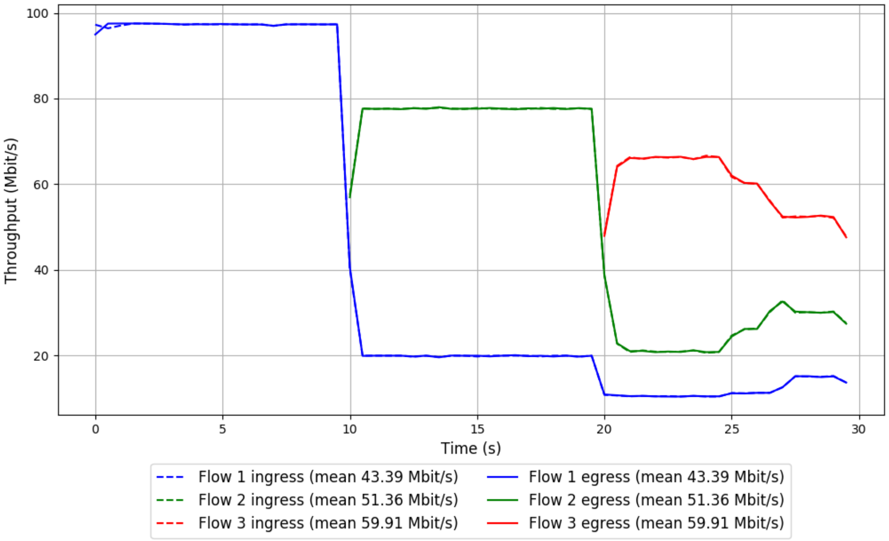


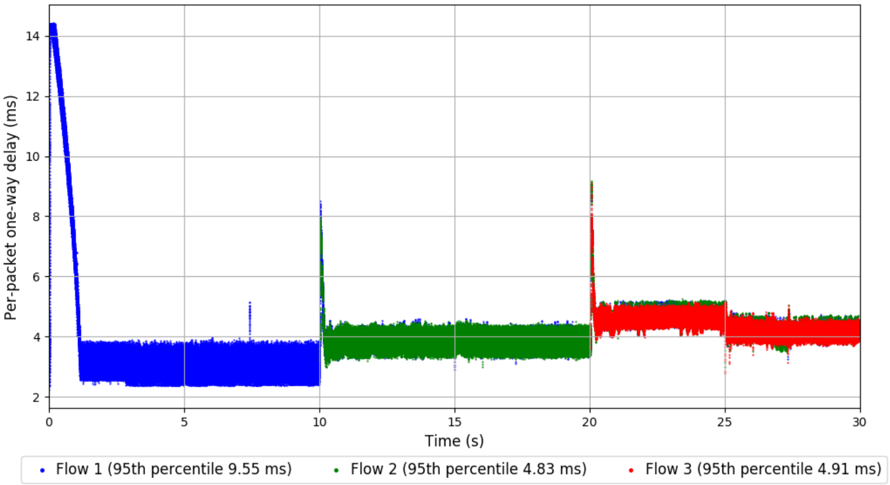
```
Run 6: Statistics of TCP Vegas

Start at: 2018-02-20 11:42:40
End at: 2018-02-20 11:43:10
Local clock offset: -13.598 ms
Remote clock offset: -12.615 ms

# Below is generated by plot.py at 2018-02-20 16:48:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.43 Mbit/s
95th percentile per-packet one-way delay: 5.005 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 43.39 Mbit/s
95th percentile per-packet one-way delay: 9.554 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 51.36 Mbit/s
95th percentile per-packet one-way delay: 4.827 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 59.91 Mbit/s
95th percentile per-packet one-way delay: 4.914 ms
Loss rate: 0.05%
```

Run 6: Report of TCP Vegas — Data Link



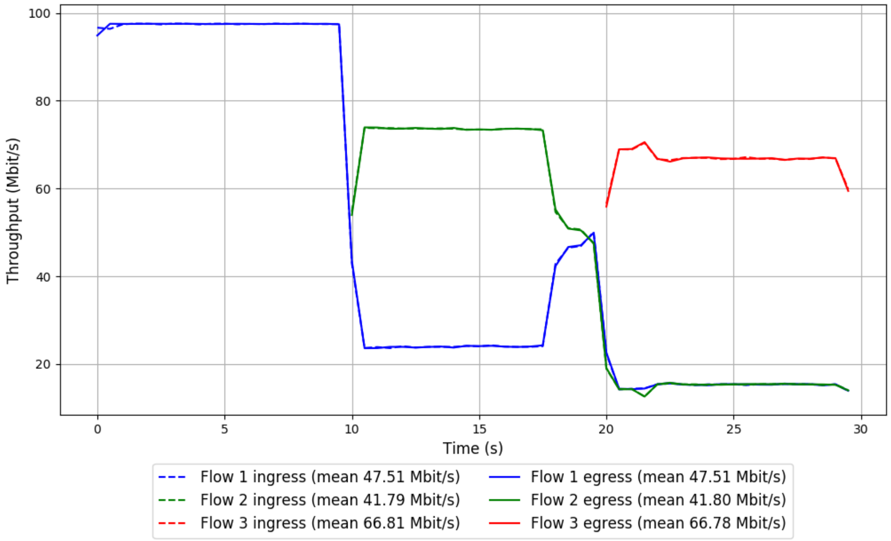


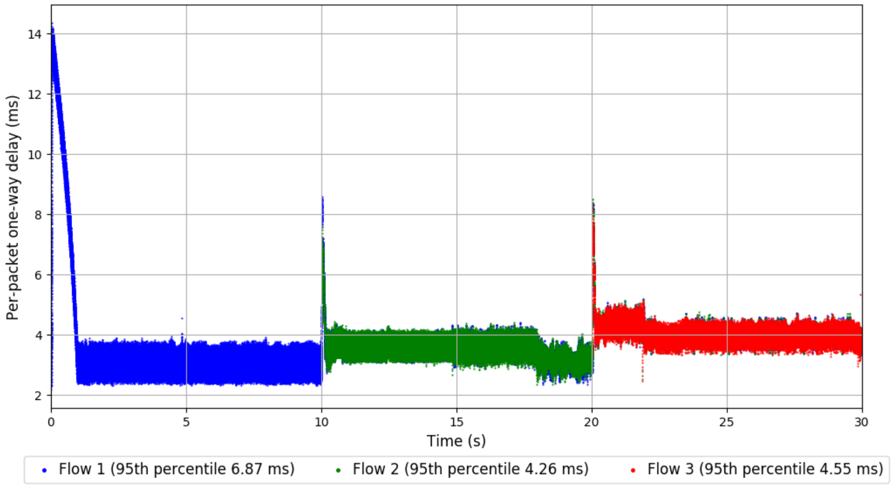
```
Run 7: Statistics of TCP Vegas

Start at: 2018-02-20 12:03:05
End at: 2018-02-20 12:03:35
Local clock offset: -15.199 ms
Remote clock offset: -12.485 ms

# Below is generated by plot.py at 2018-02-20 16:49:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 4.569 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 47.51 Mbit/s
95th percentile per-packet one-way delay: 6.872 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 41.80 Mbit/s
95th percentile per-packet one-way delay: 4.262 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 66.78 Mbit/s
95th percentile per-packet one-way delay: 4.547 ms
Loss rate: 0.06%
```

Run 7: Report of TCP Vegas — Data Link



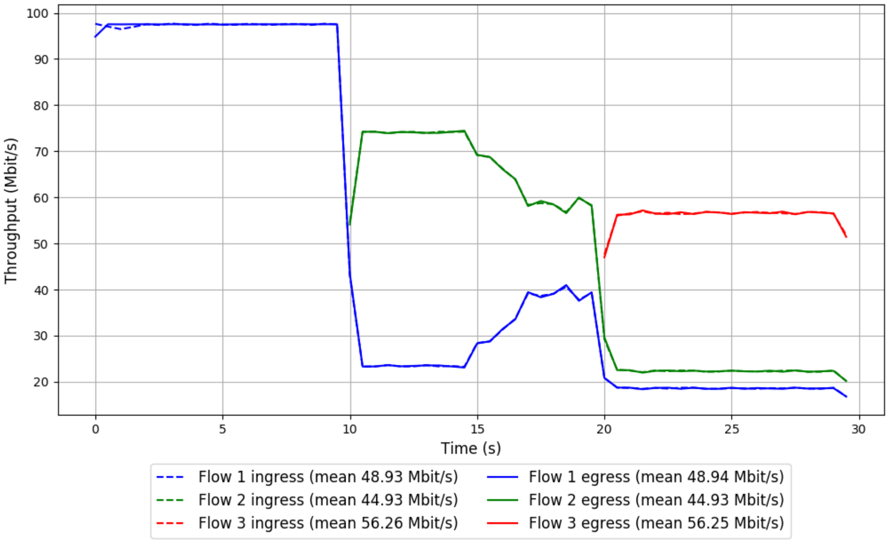


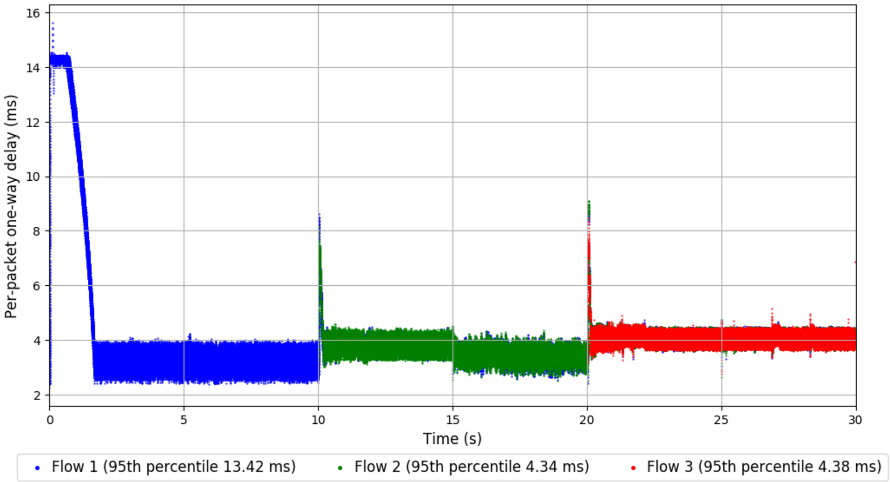
```
Run 8: Statistics of TCP Vegas

Start at: 2018-02-20 12:23:29
End at: 2018-02-20 12:23:59
Local clock offset: -14.516 ms
Remote clock offset: -12.543 ms

# Below is generated by plot.py at 2018-02-20 16:49:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 6.741 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 48.94 Mbit/s
95th percentile per-packet one-way delay: 13.417 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 44.93 Mbit/s
95th percentile per-packet one-way delay: 4.337 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 56.25 Mbit/s
95th percentile per-packet one-way delay: 4.381 ms
Loss rate: 0.06%
```

Run 8: Report of TCP Vegas — Data Link



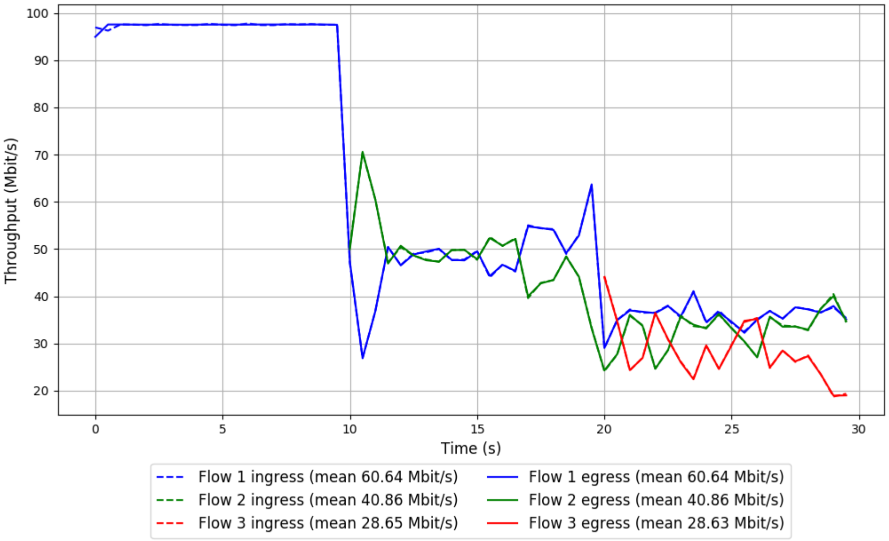


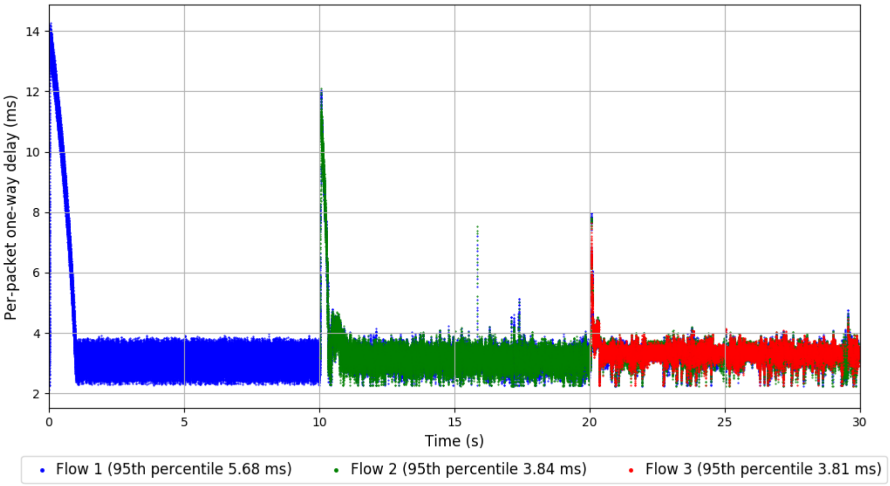
```
Run 9: Statistics of TCP Vegas

Start at: 2018-02-20 12:43:54
End at: 2018-02-20 12:44:25
Local clock offset: -14.15 ms
Remote clock offset: -12.215 ms

# Below is generated by plot.py at 2018-02-20 16:49:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.32 Mbit/s
95th percentile per-packet one-way delay: 4.077 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 60.64 Mbit/s
95th percentile per-packet one-way delay: 5.681 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 40.86 Mbit/s
95th percentile per-packet one-way delay: 3.840 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 28.63 Mbit/s
95th percentile per-packet one-way delay: 3.812 ms
Loss rate: 0.14%
```

Run 9: Report of TCP Vegas — Data Link



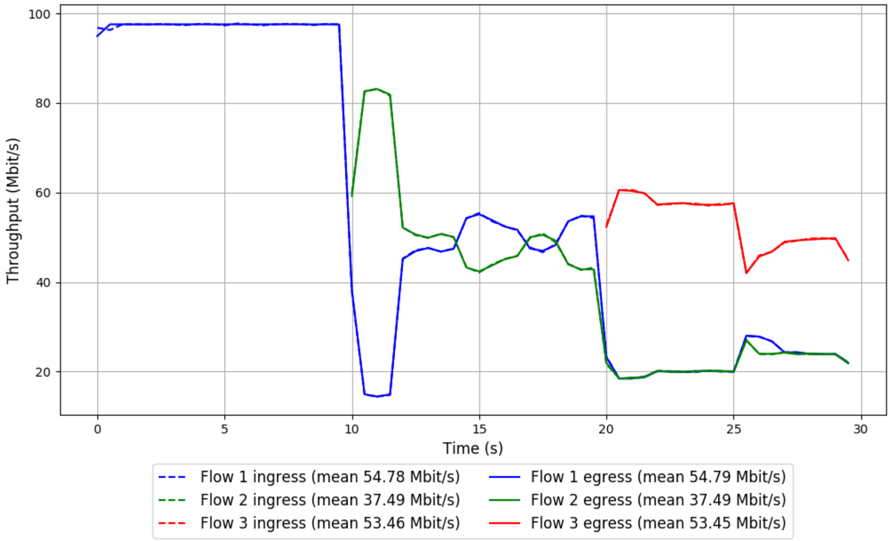


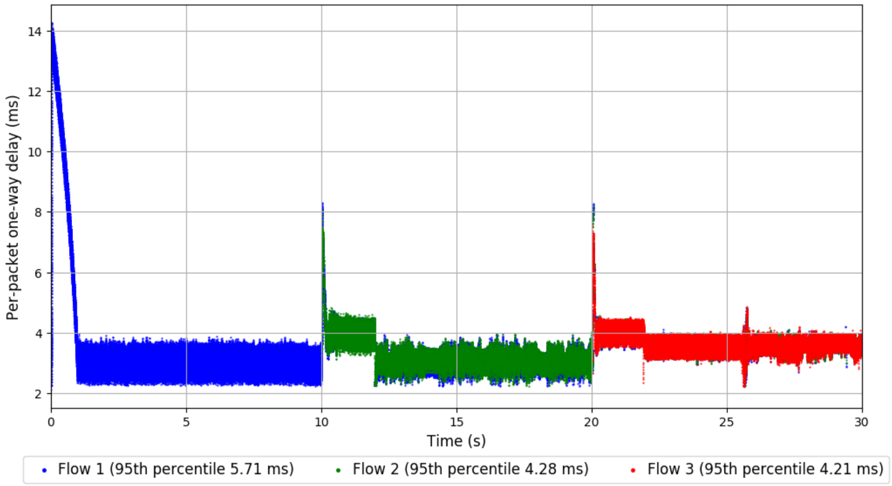
```
Run 10: Statistics of TCP Vegas

Start at: 2018-02-20 13:04:20
End at: 2018-02-20 13:04:50
Local clock offset: -13.309 ms
Remote clock offset: -12.165 ms

# Below is generated by plot.py at 2018-02-20 16:49:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 4.322 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 54.79 Mbit/s
95th percentile per-packet one-way delay: 5.709 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 37.49 Mbit/s
95th percentile per-packet one-way delay: 4.275 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 53.45 Mbit/s
95th percentile per-packet one-way delay: 4.206 ms
Loss rate: 0.06%
```

Run 10: Report of TCP Vegas — Data Link



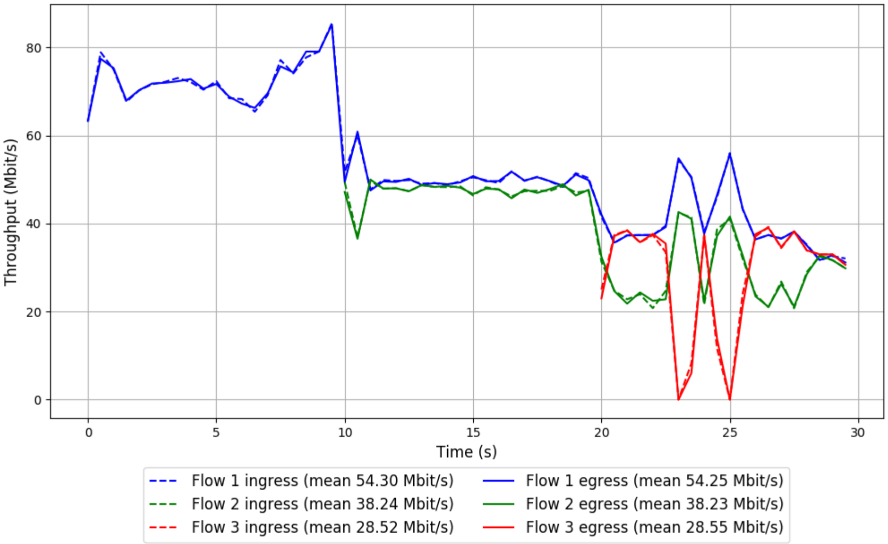


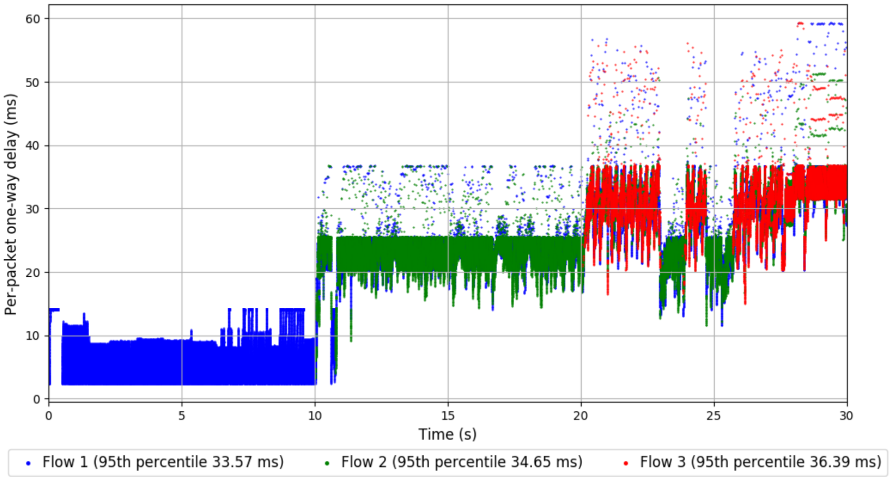
```
Run 1: Statistics of Verus

Start at: 2018-02-20 09:50:24
End at: 2018-02-20 09:50:54
Local clock offset: -12.828 ms
Remote clock offset: -12.886 ms

# Below is generated by plot.py at 2018-02-20 16:49:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.14 Mbit/s
95th percentile per-packet one-way delay: 34.777 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 54.25 Mbit/s
95th percentile per-packet one-way delay: 33.568 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 38.23 Mbit/s
95th percentile per-packet one-way delay: 34.646 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 28.55 Mbit/s
95th percentile per-packet one-way delay: 36.386 ms
Loss rate: 0.40%
```

Run 1: Report of Verus — Data Link



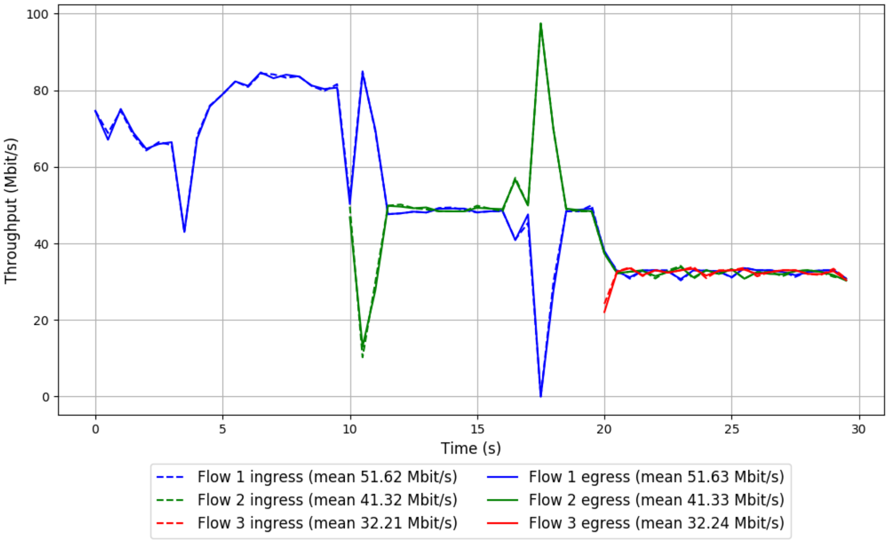


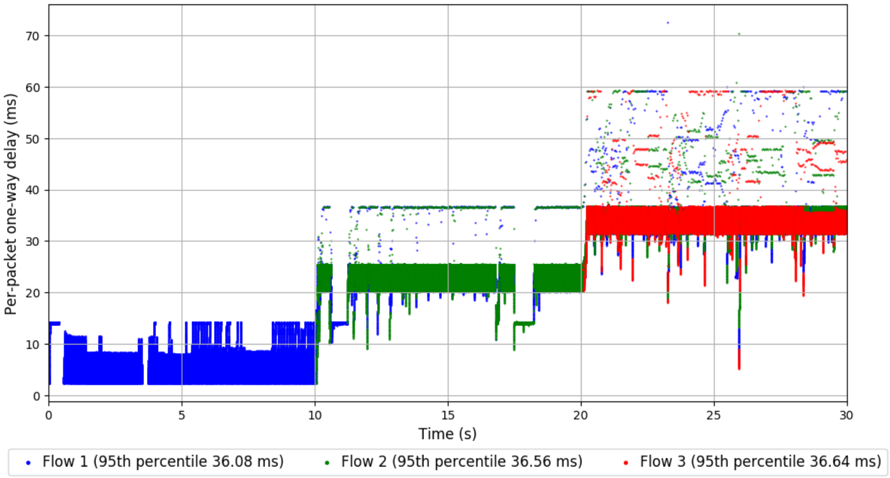
```
Run 2: Statistics of Verus

Start at: 2018-02-20 10:10:48
End at: 2018-02-20 10:11:18
Local clock offset: -13.255 ms
Remote clock offset: -12.809 ms

# Below is generated by plot.py at 2018-02-20 16:50:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.79 Mbit/s
95th percentile per-packet one-way delay: 36.542 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 51.63 Mbit/s
95th percentile per-packet one-way delay: 36.082 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 41.33 Mbit/s
95th percentile per-packet one-way delay: 36.557 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 32.24 Mbit/s
95th percentile per-packet one-way delay: 36.643 ms
Loss rate: 0.47%
```

Run 2: Report of Verus — Data Link



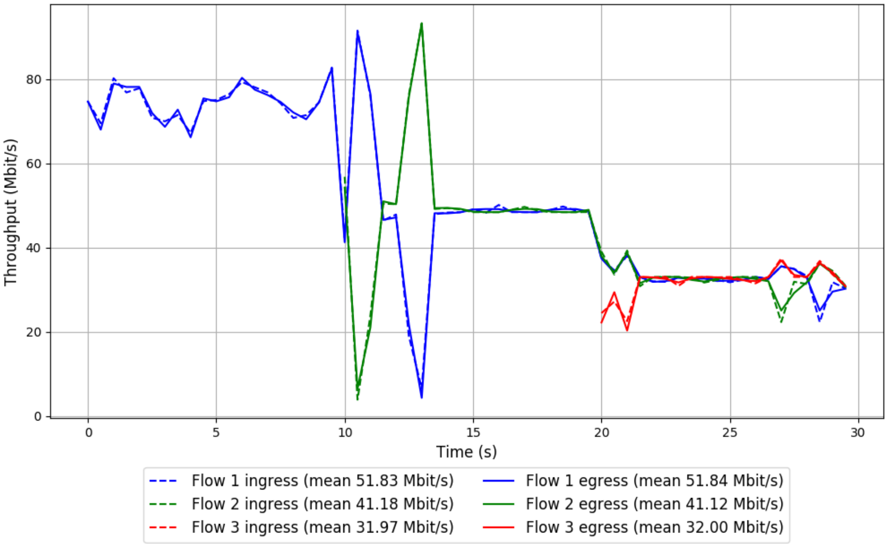


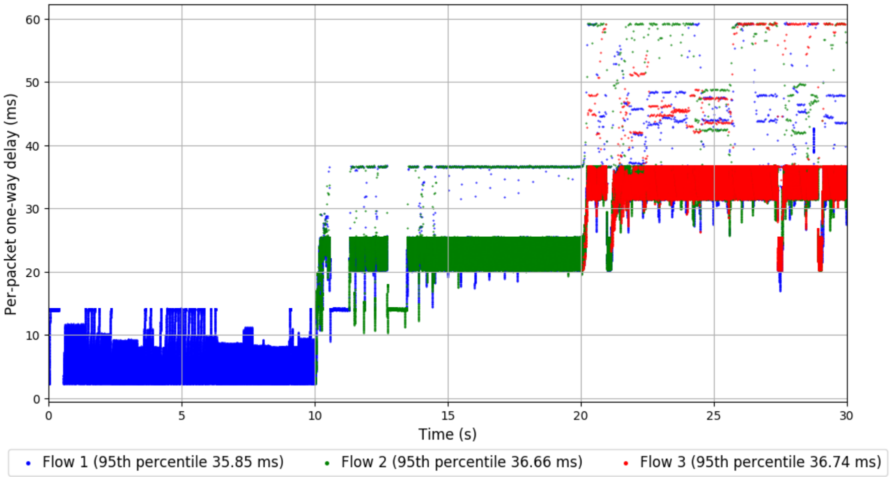
```
Run 3: Statistics of Verus

Start at: 2018-02-20 10:31:16
End at: 2018-02-20 10:31:46
Local clock offset: -14.267 ms
Remote clock offset: -12.574 ms

# Below is generated by plot.py at 2018-02-20 16:50:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.80 Mbit/s
95th percentile per-packet one-way delay: 36.645 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 51.84 Mbit/s
95th percentile per-packet one-way delay: 35.849 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 41.12 Mbit/s
95th percentile per-packet one-way delay: 36.663 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 32.00 Mbit/s
95th percentile per-packet one-way delay: 36.736 ms
Loss rate: 0.35%
```

Run 3: Report of Verus — Data Link



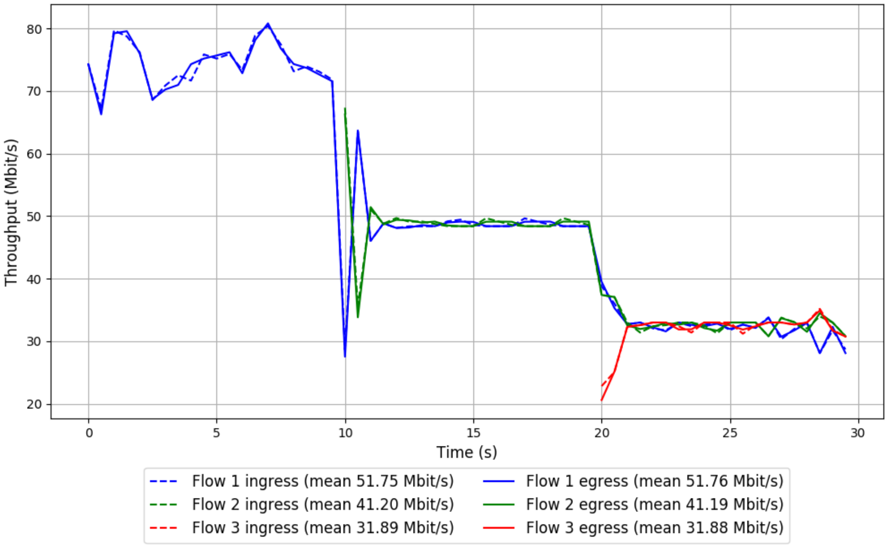


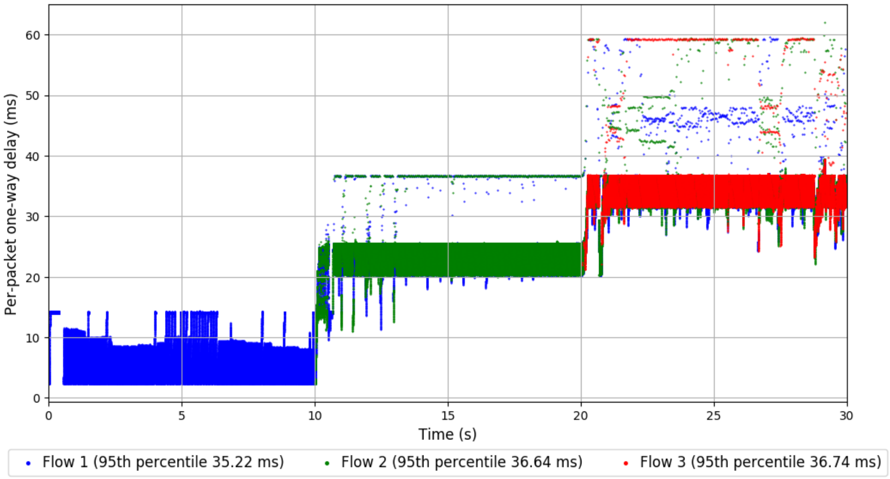
```
Run 4: Statistics of Verus

Start at: 2018-02-20 10:51:41
End at: 2018-02-20 10:52:11
Local clock offset: -15.299 ms
Remote clock offset: -12.527 ms

# Below is generated by plot.py at 2018-02-20 16:50:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.70 Mbit/s
95th percentile per-packet one-way delay: 36.628 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 51.76 Mbit/s
95th percentile per-packet one-way delay: 35.224 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 41.19 Mbit/s
95th percentile per-packet one-way delay: 36.638 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 31.88 Mbit/s
95th percentile per-packet one-way delay: 36.741 ms
Loss rate: 0.41%
```

Run 4: Report of Verus — Data Link



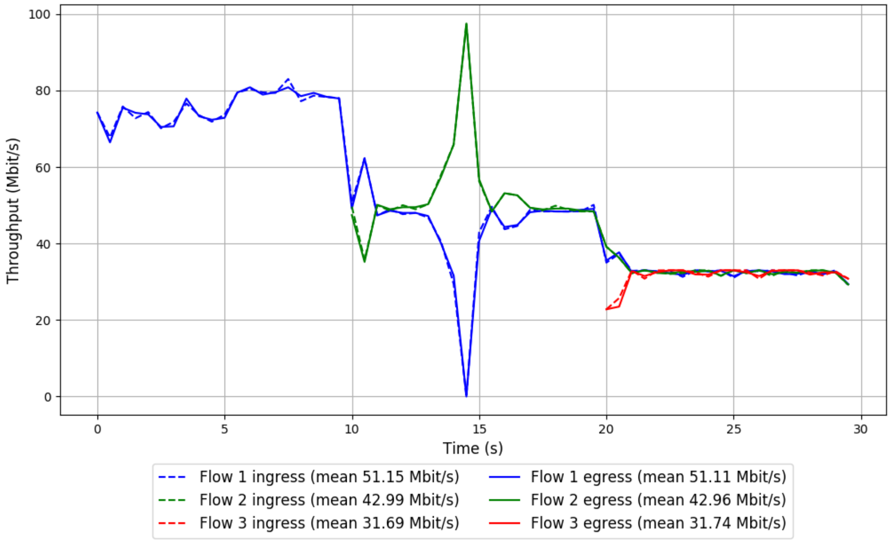


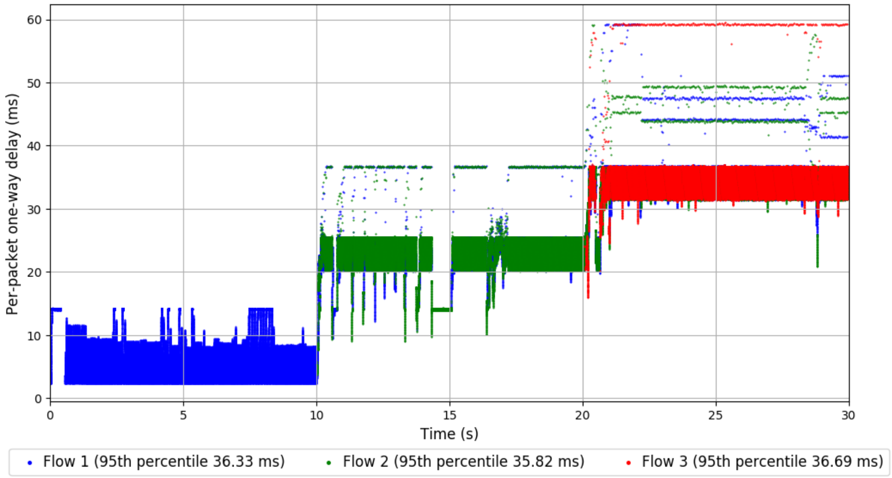
```
Run 5: Statistics of Verus

Start at: 2018-02-20 11:12:05
End at: 2018-02-20 11:12:35
Local clock offset: -11.774 ms
Remote clock offset: -12.639 ms

# Below is generated by plot.py at 2018-02-20 16:50:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.21 Mbit/s
95th percentile per-packet one-way delay: 36.590 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 51.11 Mbit/s
95th percentile per-packet one-way delay: 36.328 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 42.96 Mbit/s
95th percentile per-packet one-way delay: 35.816 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 31.74 Mbit/s
95th percentile per-packet one-way delay: 36.692 ms
Loss rate: 0.36%
```

Run 5: Report of Verus — Data Link



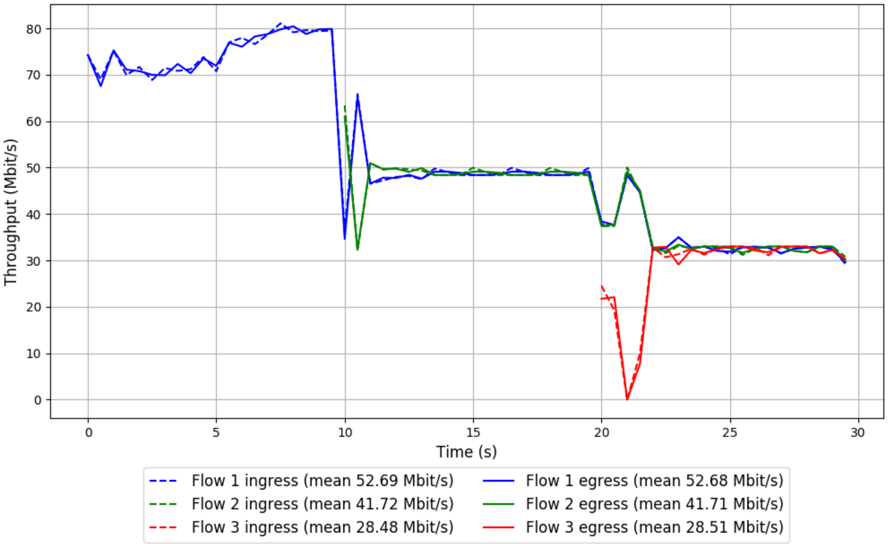


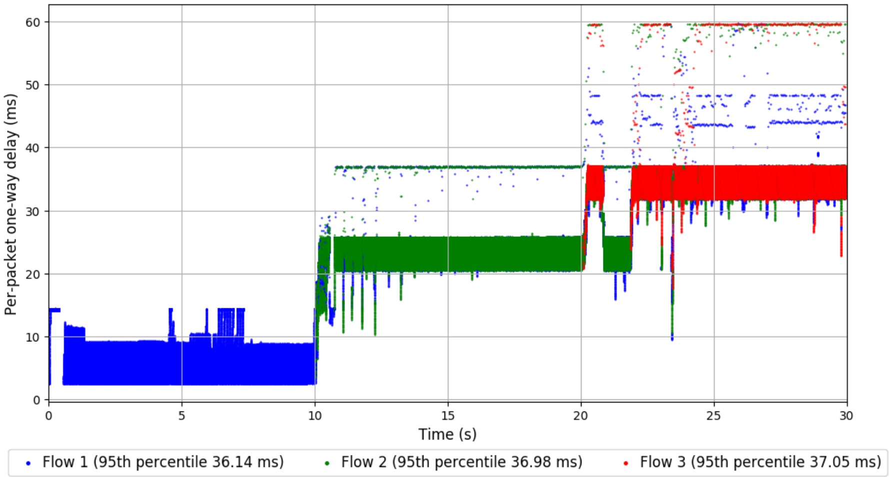
```
Run 6: Statistics of Verus

Start at: 2018-02-20 11:32:28
End at: 2018-02-20 11:32:58
Local clock offset: -10.798 ms
Remote clock offset: -12.615 ms

# Below is generated by plot.py at 2018-02-20 16:50:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.88 Mbit/s
95th percentile per-packet one-way delay: 36.966 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 52.68 Mbit/s
95th percentile per-packet one-way delay: 36.137 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 41.71 Mbit/s
95th percentile per-packet one-way delay: 36.980 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 28.51 Mbit/s
95th percentile per-packet one-way delay: 37.055 ms
Loss rate: 0.40%
```

Run 6: Report of Verus — Data Link



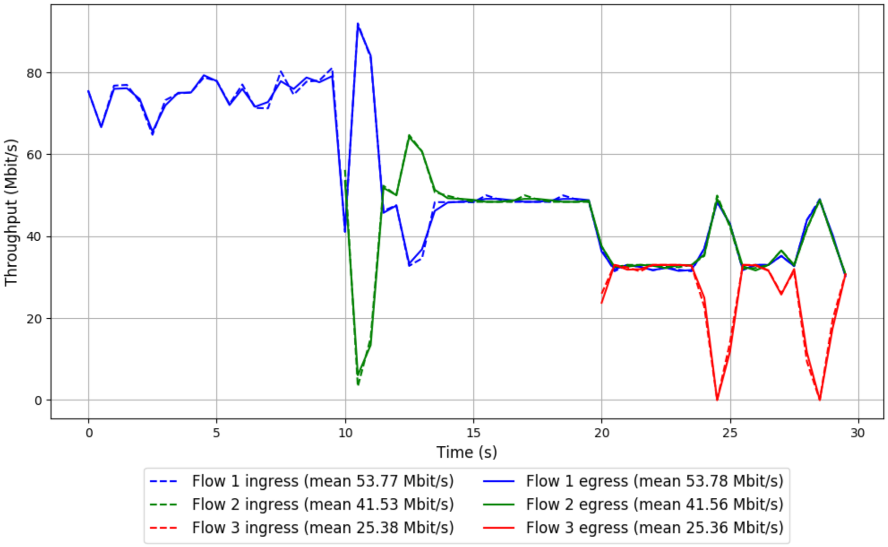


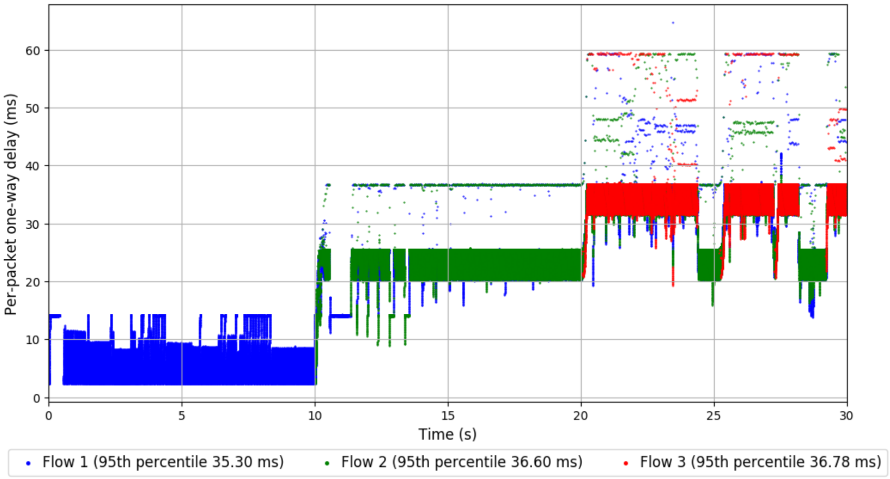
```
Run 7: Statistics of Verus

Start at: 2018-02-20 11:52:53
End at: 2018-02-20 11:53:23
Local clock offset: -14.666 ms
Remote clock offset: -12.615 ms

# Below is generated by plot.py at 2018-02-20 16:50:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.85 Mbit/s
95th percentile per-packet one-way delay: 36.641 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 53.78 Mbit/s
95th percentile per-packet one-way delay: 35.297 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 41.56 Mbit/s
95th percentile per-packet one-way delay: 36.596 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 25.36 Mbit/s
95th percentile per-packet one-way delay: 36.782 ms
Loss rate: 0.44%
```

Run 7: Report of Verus — Data Link



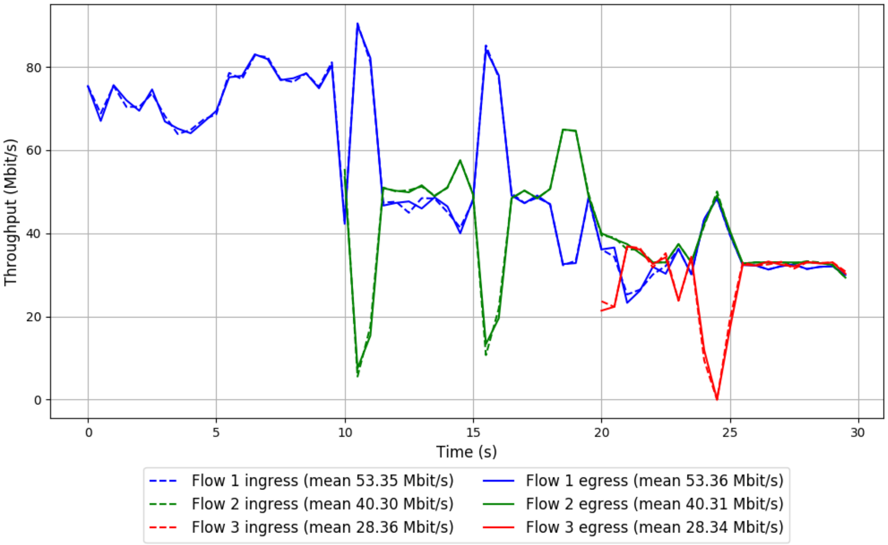


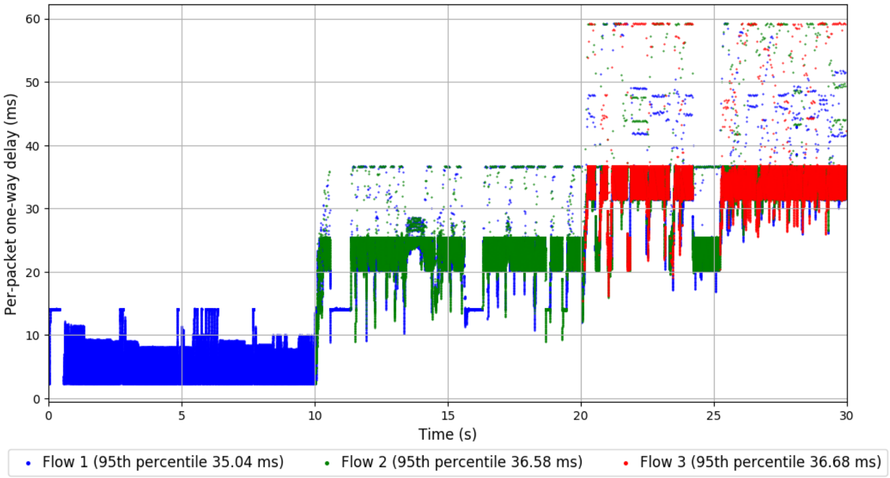
```
Run 8: Statistics of Verus

Start at: 2018-02-20 12:13:17
End at: 2018-02-20 12:13:47
Local clock offset: -14.709 ms
Remote clock offset: -12.448 ms

# Below is generated by plot.py at 2018-02-20 16:50:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.51 Mbit/s
95th percentile per-packet one-way delay: 36.538 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 53.36 Mbit/s
95th percentile per-packet one-way delay: 35.043 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 40.31 Mbit/s
95th percentile per-packet one-way delay: 36.581 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 28.34 Mbit/s
95th percentile per-packet one-way delay: 36.680 ms
Loss rate: 0.49%
```

Run 8: Report of Verus — Data Link



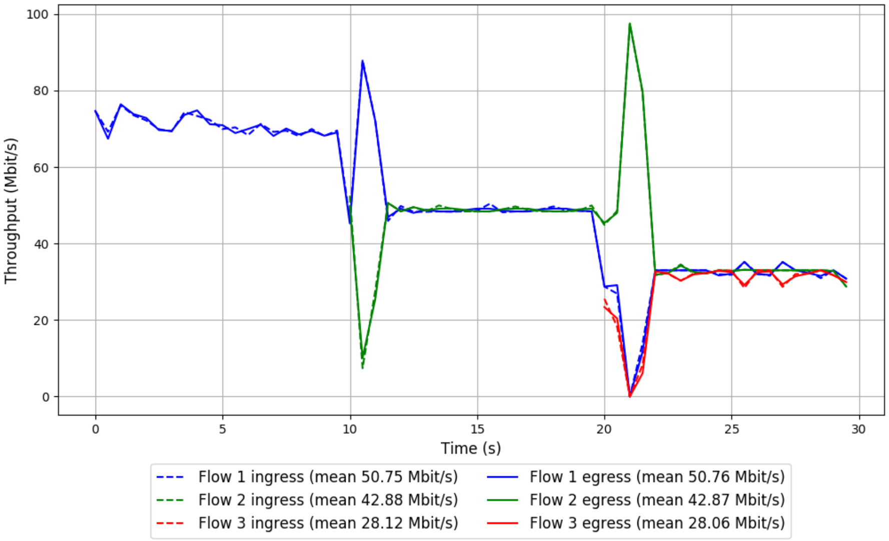


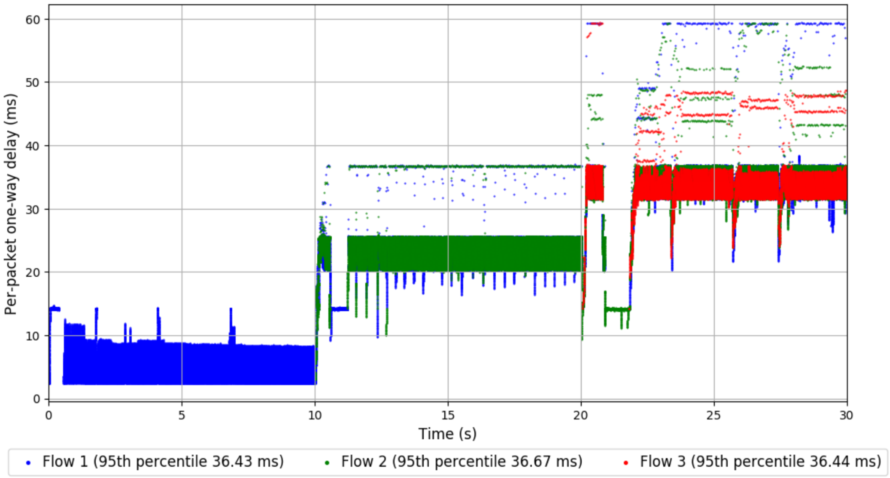
```
Run 9: Statistics of Verus

Start at: 2018-02-20 12:33:42
End at: 2018-02-20 12:34:12
Local clock offset: -14.539 ms
Remote clock offset: -12.404 ms

# Below is generated by plot.py at 2018-02-20 16:50:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.57 Mbit/s
95th percentile per-packet one-way delay: 36.612 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 50.76 Mbit/s
95th percentile per-packet one-way delay: 36.427 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 42.87 Mbit/s
95th percentile per-packet one-way delay: 36.666 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 28.06 Mbit/s
95th percentile per-packet one-way delay: 36.439 ms
Loss rate: 0.46%
```

Run 9: Report of Verus — Data Link



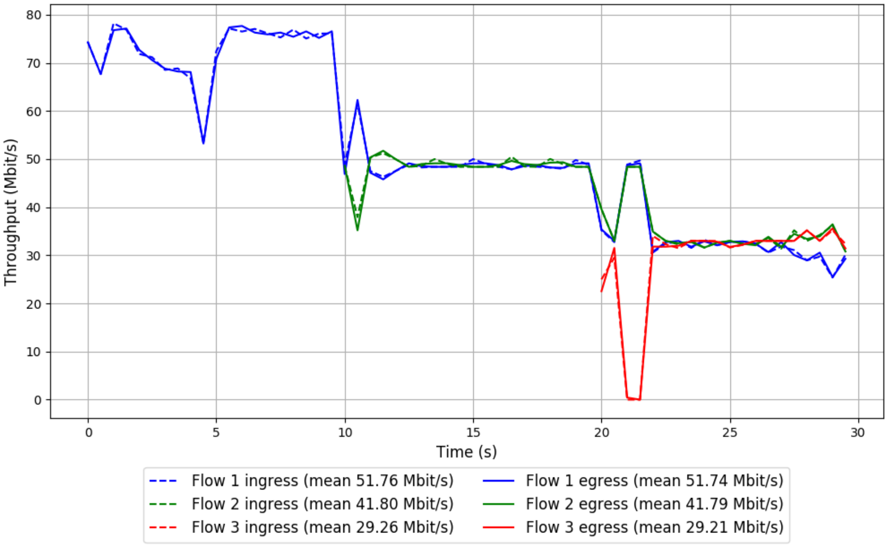


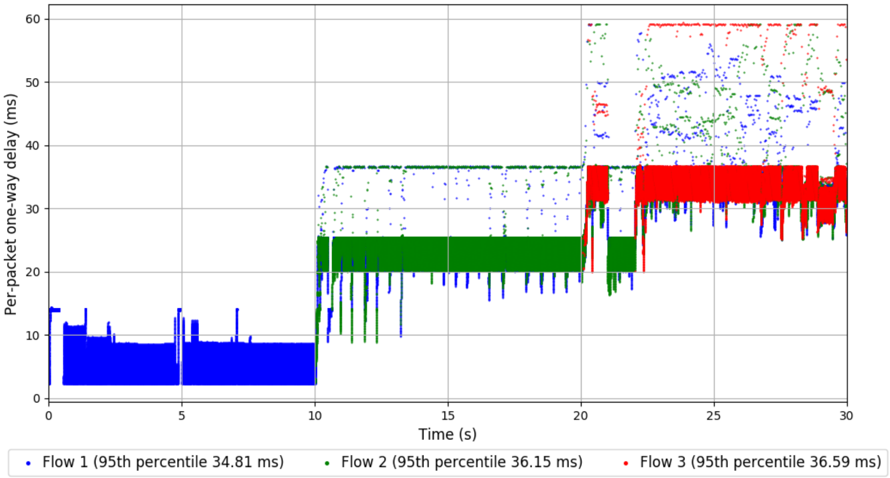
```
Run 10: Statistics of Verus

Start at: 2018-02-20 12:54:08
End at: 2018-02-20 12:54:38
Local clock offset: -13.592 ms
Remote clock offset: -12.18 ms

# Below is generated by plot.py at 2018-02-20 16:51:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.22 Mbit/s
95th percentile per-packet one-way delay: 36.331 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 51.74 Mbit/s
95th percentile per-packet one-way delay: 34.807 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 41.79 Mbit/s
95th percentile per-packet one-way delay: 36.150 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 29.21 Mbit/s
95th percentile per-packet one-way delay: 36.595 ms
Loss rate: 0.47%
```

Run 10: Report of Verus — Data Link



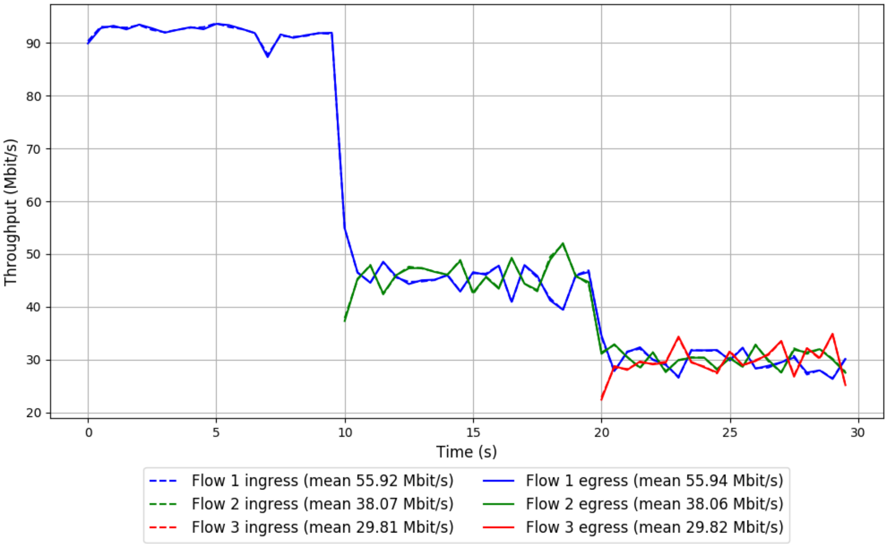


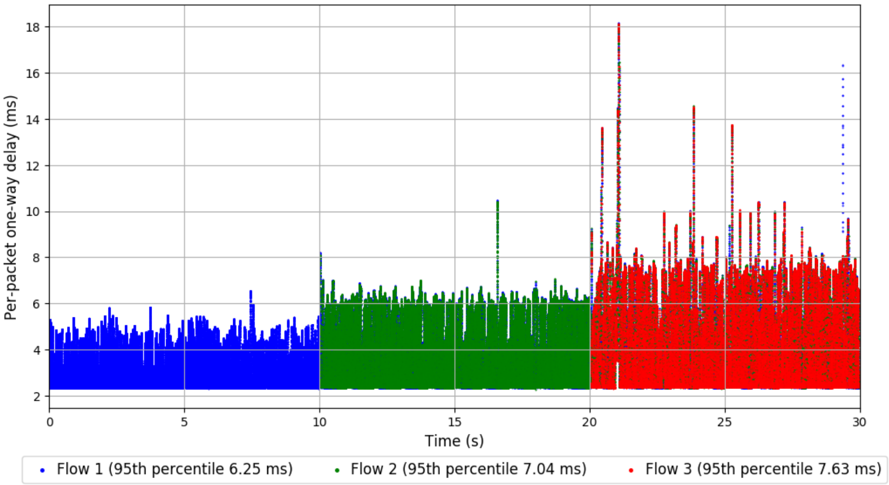
```
Run 1: Statistics of Copa

Start at: 2018-02-20 09:51:33
End at: 2018-02-20 09:52:03
Local clock offset: -12.87 ms
Remote clock offset: -12.883 ms

# Below is generated by plot.py at 2018-02-20 16:52:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.13 Mbit/s
95th percentile per-packet one-way delay: 6.868 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 55.94 Mbit/s
95th percentile per-packet one-way delay: 6.246 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 38.06 Mbit/s
95th percentile per-packet one-way delay: 7.037 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 29.82 Mbit/s
95th percentile per-packet one-way delay: 7.630 ms
Loss rate: 0.03%
```

Run 1: Report of Copa — Data Link



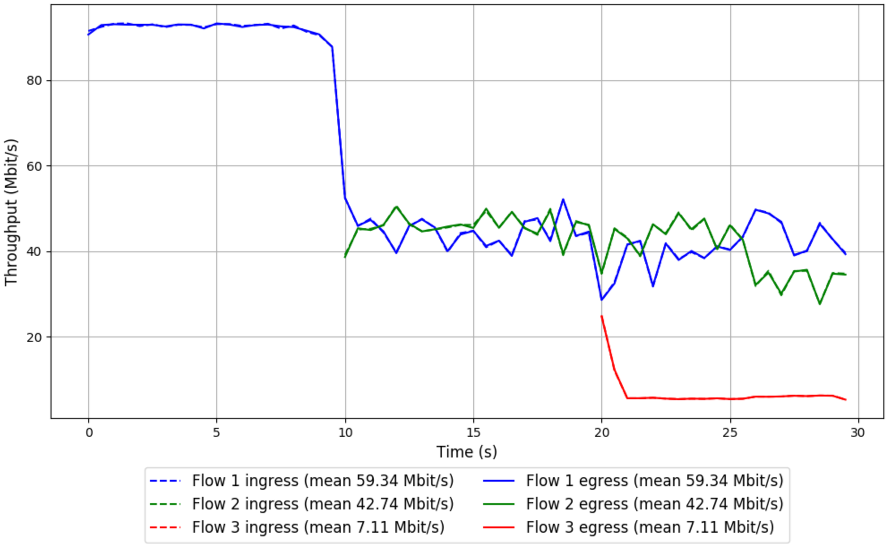


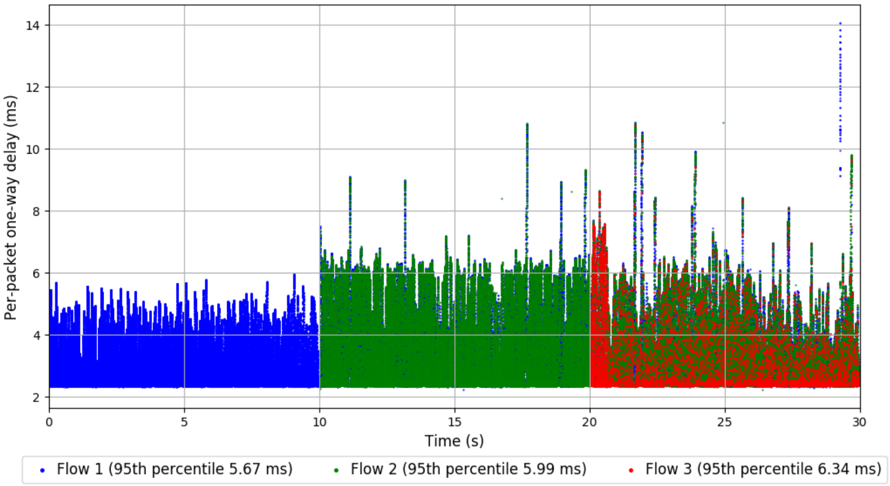
```
Run 2: Statistics of Copa

Start at: 2018-02-20 10:11:57
End at: 2018-02-20 10:12:27
Local clock offset: -13.198 ms
Remote clock offset: -12.8 ms

# Below is generated by plot.py at 2018-02-20 16:52:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.12 Mbit/s
95th percentile per-packet one-way delay: 5.827 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 59.34 Mbit/s
95th percentile per-packet one-way delay: 5.670 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 42.74 Mbit/s
95th percentile per-packet one-way delay: 5.988 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 7.11 Mbit/s
95th percentile per-packet one-way delay: 6.342 ms
Loss rate: 0.04%
```

Run 2: Report of Copa — Data Link



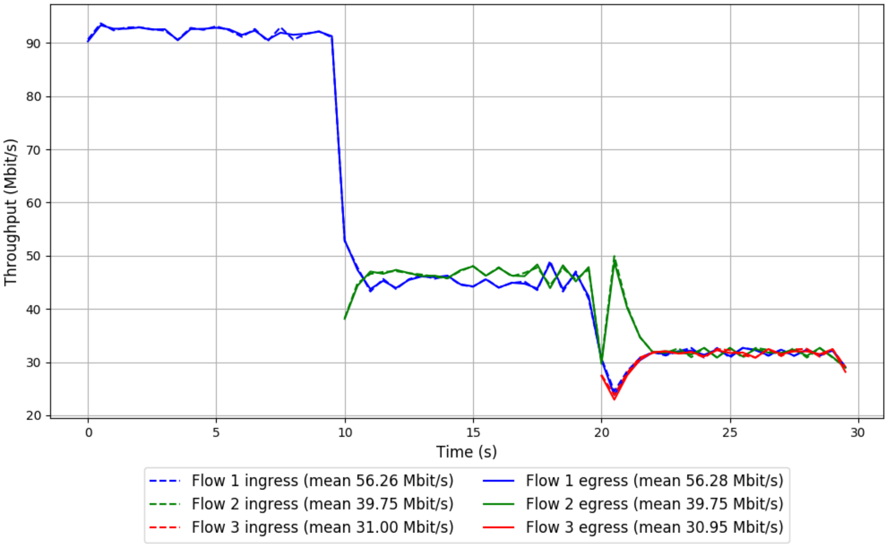


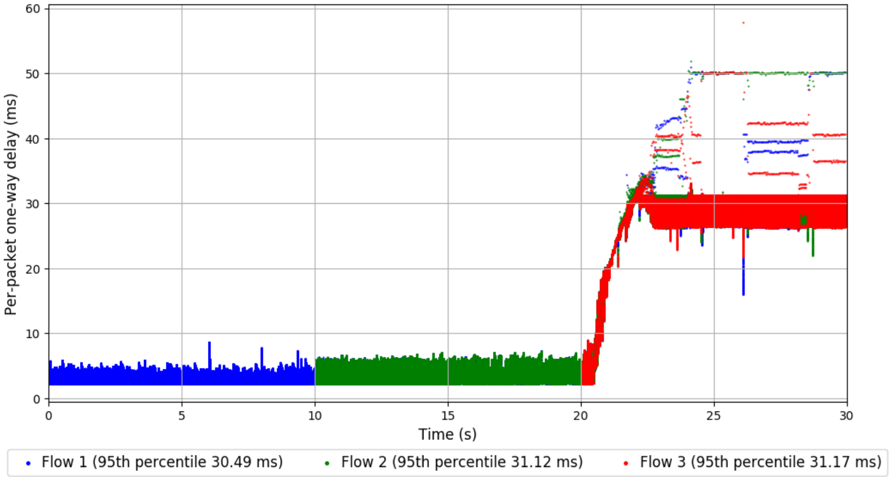
```
Run 3: Statistics of Copa

Start at: 2018-02-20 10:32:25
End at: 2018-02-20 10:32:55
Local clock offset: -14.393 ms
Remote clock offset: -12.533 ms

# Below is generated by plot.py at 2018-02-20 16:52:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.94 Mbit/s
95th percentile per-packet one-way delay: 31.072 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.28 Mbit/s
95th percentile per-packet one-way delay: 30.492 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.75 Mbit/s
95th percentile per-packet one-way delay: 31.116 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 30.95 Mbit/s
95th percentile per-packet one-way delay: 31.173 ms
Loss rate: 0.44%
```

Run 3: Report of Copa — Data Link



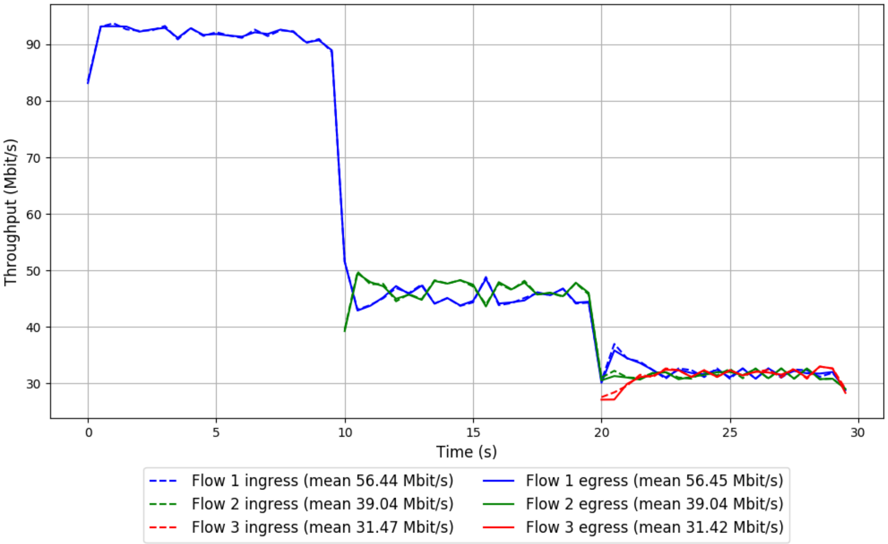


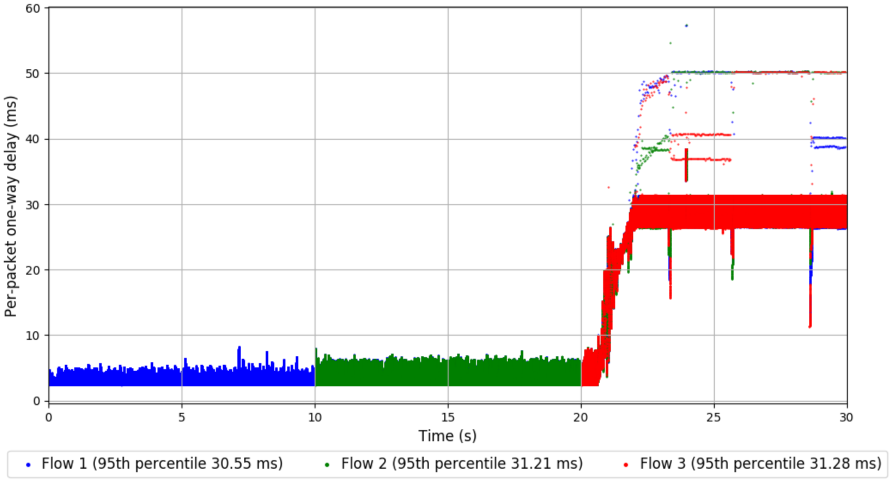
```
Run 4: Statistics of Copa

Start at: 2018-02-20 10:52:51
End at: 2018-02-20 10:53:21
Local clock offset: -15.333 ms
Remote clock offset: -12.584 ms

# Below is generated by plot.py at 2018-02-20 16:52:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.80 Mbit/s
95th percentile per-packet one-way delay: 31.181 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.45 Mbit/s
95th percentile per-packet one-way delay: 30.553 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.04 Mbit/s
95th percentile per-packet one-way delay: 31.214 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.42 Mbit/s
95th percentile per-packet one-way delay: 31.284 ms
Loss rate: 0.41%
```

Run 4: Report of Copa — Data Link



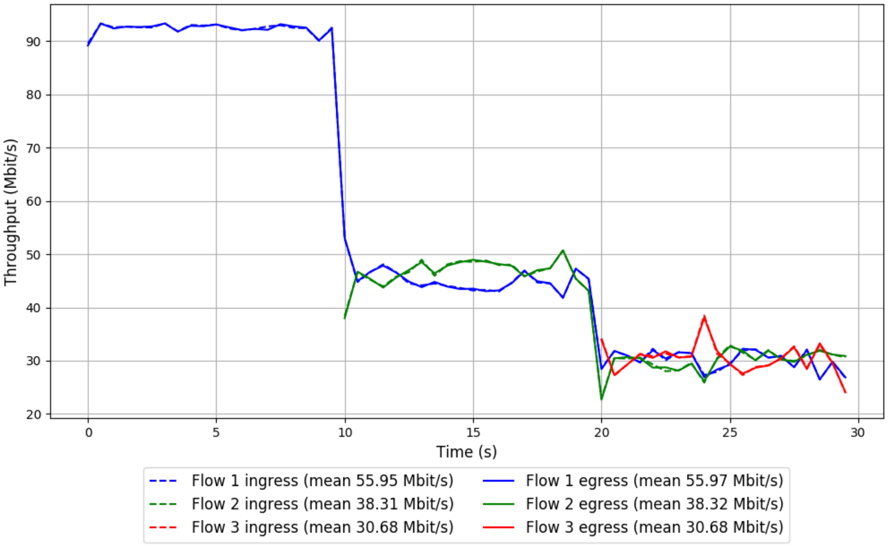


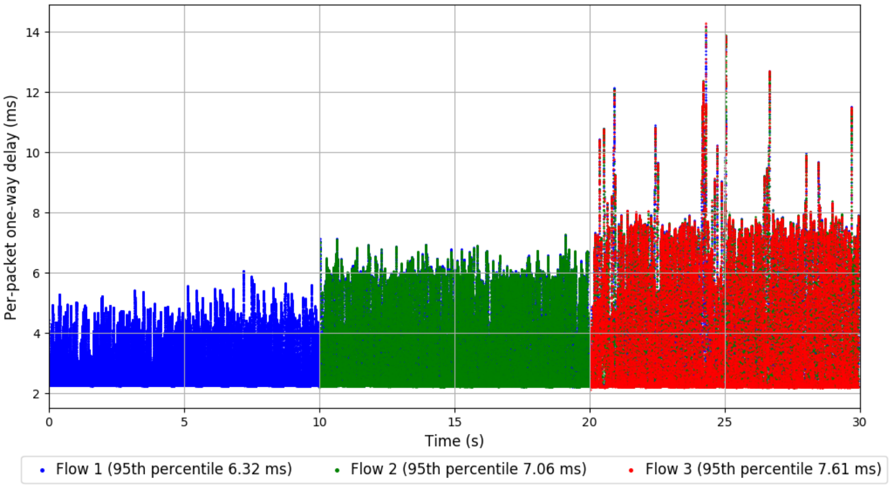
```
Run 5: Statistics of Copa

Start at: 2018-02-20 11:13:14
End at: 2018-02-20 11:13:44
Local clock offset: -11.668 ms
Remote clock offset: -12.563 ms

# Below is generated by plot.py at 2018-02-20 16:52:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.62 Mbit/s
95th percentile per-packet one-way delay: 6.924 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 55.97 Mbit/s
95th percentile per-packet one-way delay: 6.321 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 38.32 Mbit/s
95th percentile per-packet one-way delay: 7.062 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 30.68 Mbit/s
95th percentile per-packet one-way delay: 7.606 ms
Loss rate: 0.04%
```

Run 5: Report of Copa — Data Link



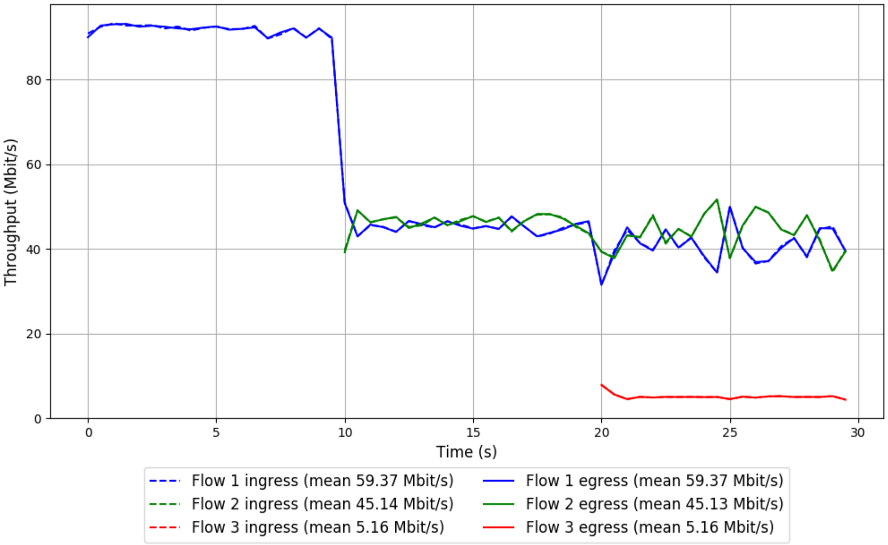


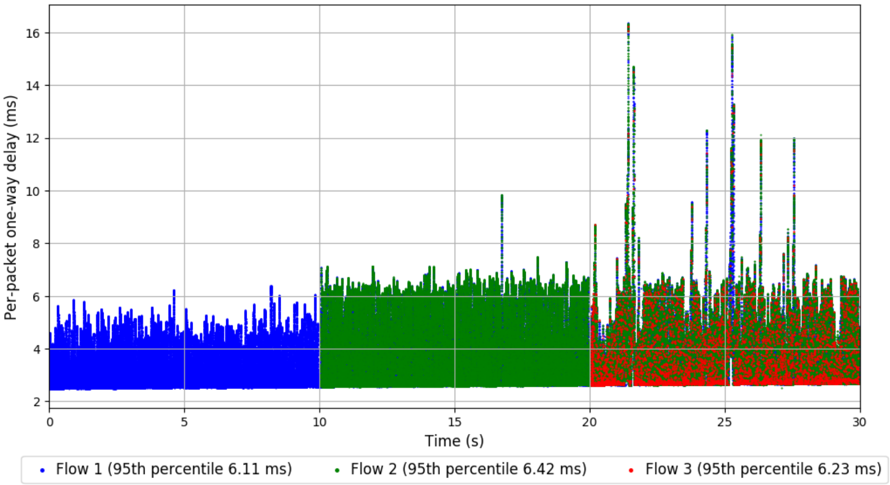
```
Run 6: Statistics of Copa

Start at: 2018-02-20 11:33:37
End at: 2018-02-20 11:34:07
Local clock offset: -11.284 ms
Remote clock offset: -12.615 ms

# Below is generated by plot.py at 2018-02-20 16:53:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.09 Mbit/s
95th percentile per-packet one-way delay: 6.248 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 59.37 Mbit/s
95th percentile per-packet one-way delay: 6.110 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 45.13 Mbit/s
95th percentile per-packet one-way delay: 6.416 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 5.16 Mbit/s
95th percentile per-packet one-way delay: 6.229 ms
Loss rate: 0.05%
```

Run 6: Report of Copa — Data Link



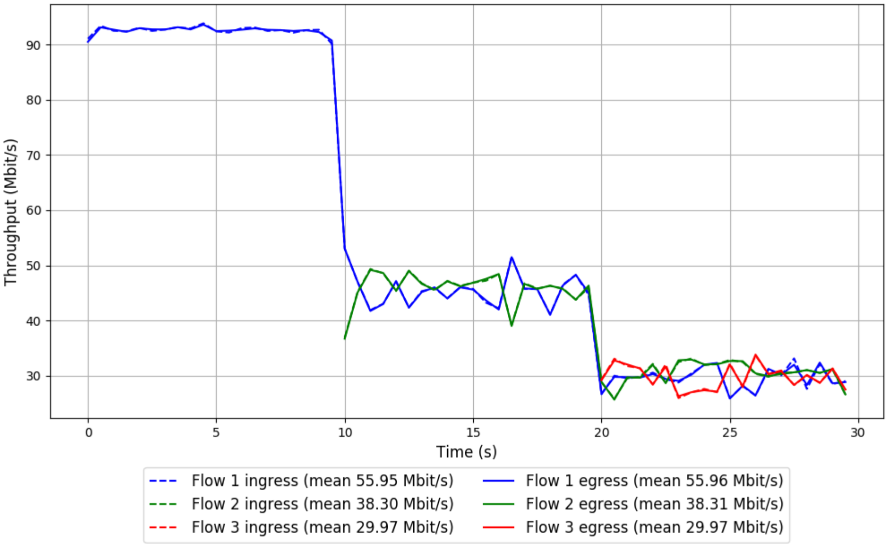


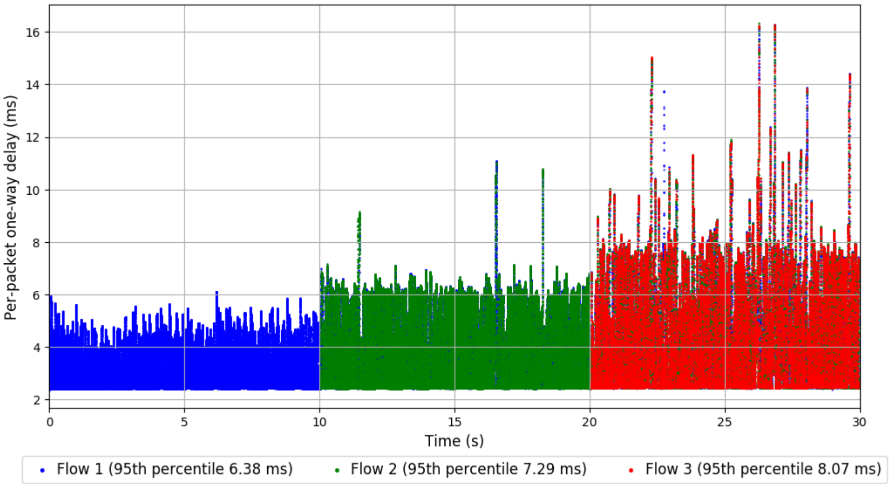
```
Run 7: Statistics of Copa

Start at: 2018-02-20 11:54:02
End at: 2018-02-20 11:54:33
Local clock offset: -14.73 ms
Remote clock offset: -12.658 ms

# Below is generated by plot.py at 2018-02-20 16:53:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.35 Mbit/s
95th percentile per-packet one-way delay: 7.091 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 55.96 Mbit/s
95th percentile per-packet one-way delay: 6.376 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 38.31 Mbit/s
95th percentile per-packet one-way delay: 7.289 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 29.97 Mbit/s
95th percentile per-packet one-way delay: 8.071 ms
Loss rate: 0.03%
```

Run 7: Report of Copa — Data Link



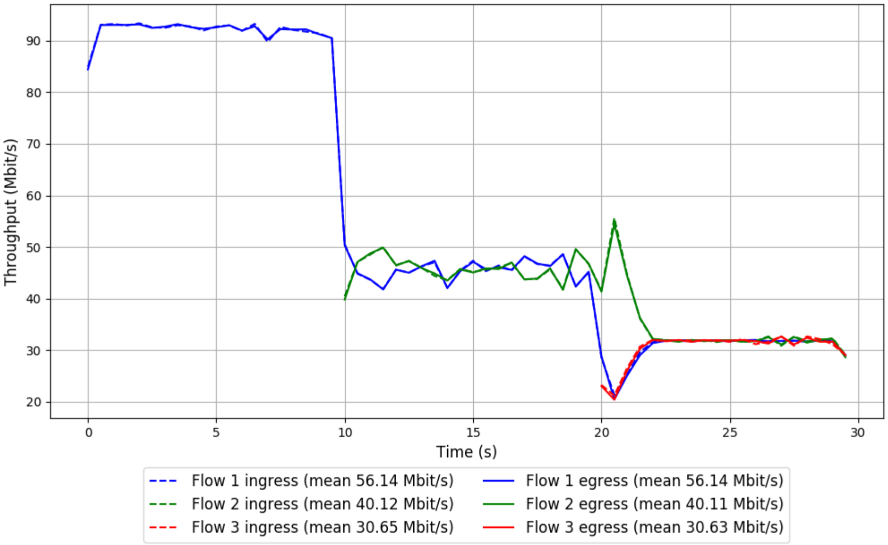


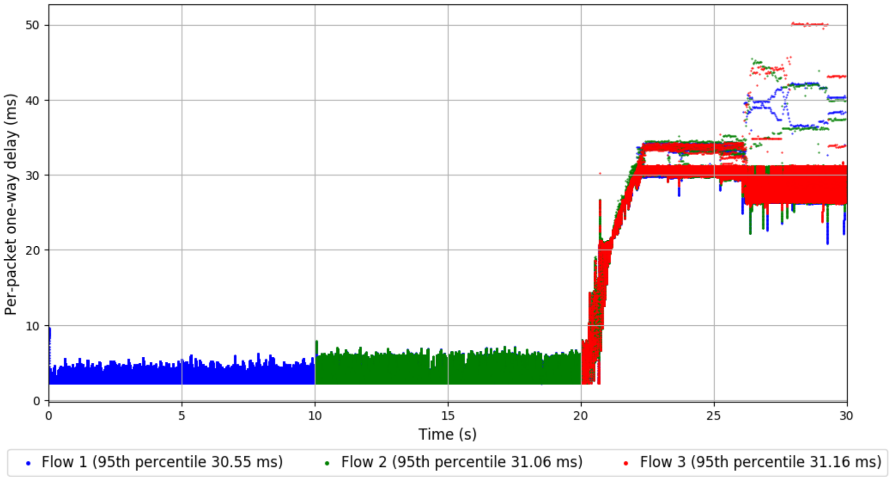
```
Run 8: Statistics of Copa

Start at: 2018-02-20 12:14:26
End at: 2018-02-20 12:14:56
Local clock offset: -14.696 ms
Remote clock offset: -12.441 ms

# Below is generated by plot.py at 2018-02-20 16:53:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.93 Mbit/s
95th percentile per-packet one-way delay: 31.016 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.14 Mbit/s
95th percentile per-packet one-way delay: 30.555 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 40.11 Mbit/s
95th percentile per-packet one-way delay: 31.058 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 30.63 Mbit/s
95th percentile per-packet one-way delay: 31.160 ms
Loss rate: 0.30%
```

Run 8: Report of Copa — Data Link



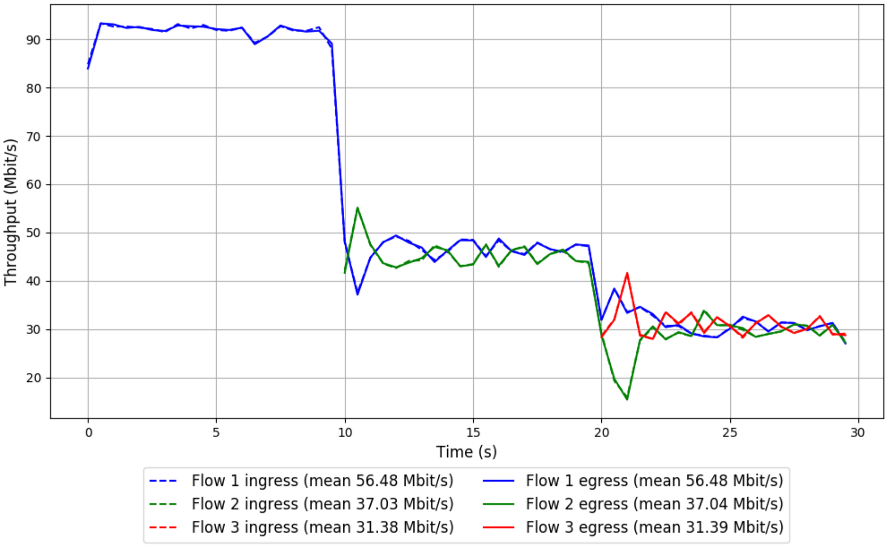


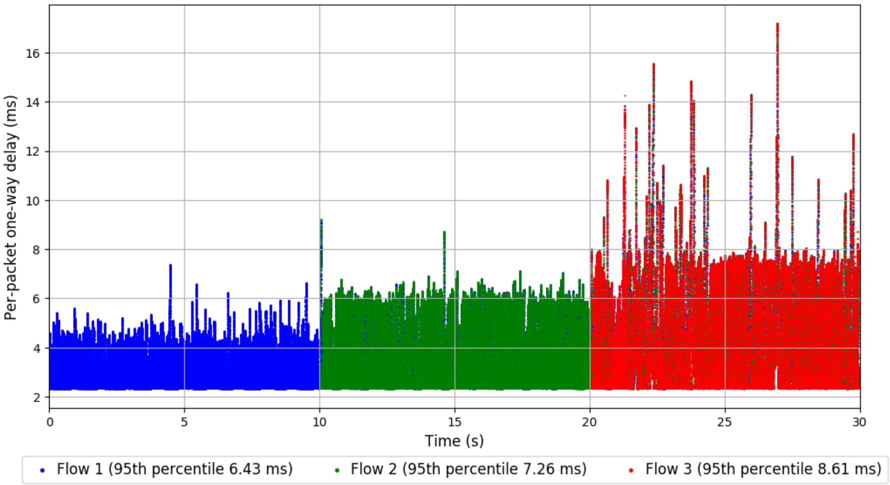
```
Run 9: Statistics of Copa

Start at: 2018-02-20 12:34:51
End at: 2018-02-20 12:35:21
Local clock offset: -14.532 ms
Remote clock offset: -12.33 ms

# Below is generated by plot.py at 2018-02-20 16:54:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.49 Mbit/s
95th percentile per-packet one-way delay: 7.144 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 56.48 Mbit/s
95th percentile per-packet one-way delay: 6.428 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 37.04 Mbit/s
95th percentile per-packet one-way delay: 7.257 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 31.39 Mbit/s
95th percentile per-packet one-way delay: 8.613 ms
Loss rate: 0.07%
```

Run 9: Report of Copa — Data Link



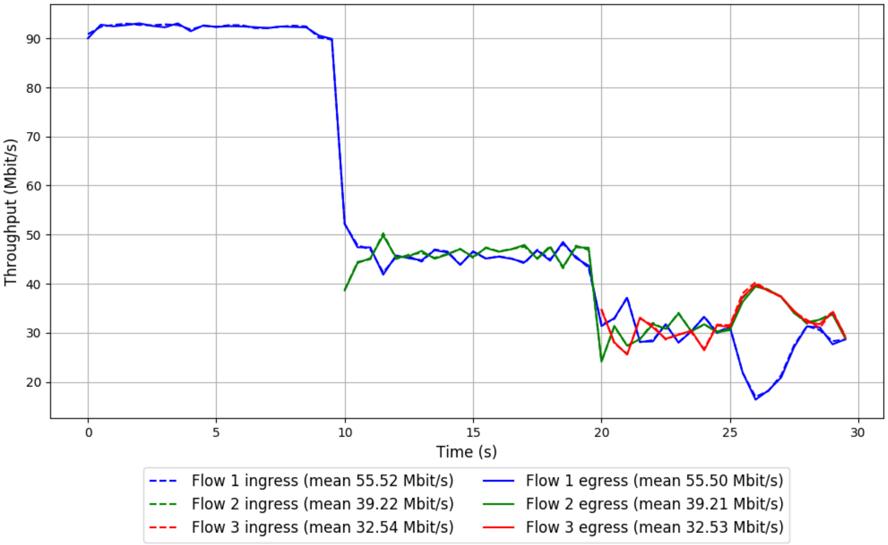


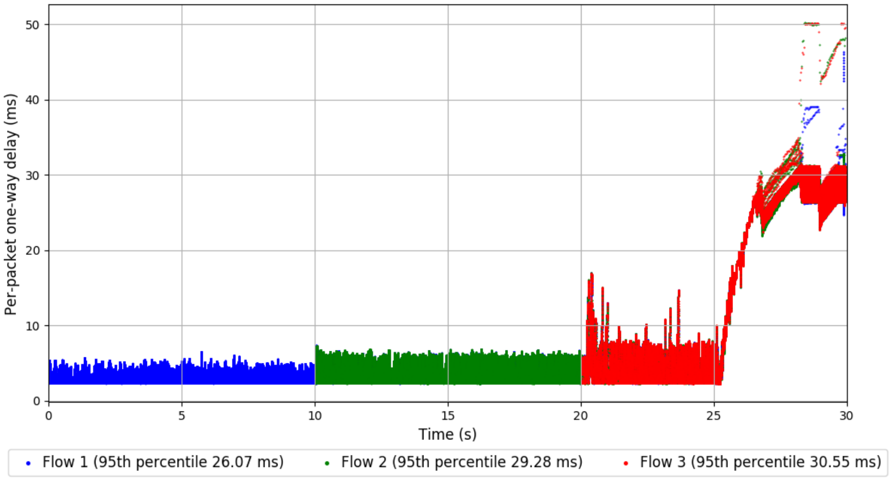
```
Run 10: Statistics of Copa

Start at: 2018-02-20 12:55:18
End at: 2018-02-20 12:55:48
Local clock offset: -13.479 ms
Remote clock offset: -12.157 ms

# Below is generated by plot.py at 2018-02-20 16:54:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.33 Mbit/s
95th percentile per-packet one-way delay: 28.693 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 55.50 Mbit/s
95th percentile per-packet one-way delay: 26.073 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 39.21 Mbit/s
95th percentile per-packet one-way delay: 29.283 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 32.53 Mbit/s
95th percentile per-packet one-way delay: 30.548 ms
Loss rate: 0.28%
```

Run 10: Report of Copa — Data Link





```
Run 1: Statistics of FillP

Start at: 2018-02-20 09:57:16
End at: 2018-02-20 09:57:46
Local clock offset: -13.052 ms
Remote clock offset: -12.871 ms
```

Run 1: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 2: Statistics of FillP

Start at: 2018-02-20 10:17:40
End at: 2018-02-20 10:18:10
Local clock offset: -13.311 ms
Remote clock offset: -12.703 ms
```

Run 2: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 3: Statistics of FillP

Start at: 2018-02-20 10:38:07
End at: 2018-02-20 10:38:37
Local clock offset: -14.709 ms
Remote clock offset: -12.459 ms
```

Run 3: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 4: Statistics of FillP

Start at: 2018-02-20 10:58:33
End at: 2018-02-20 10:59:03
Local clock offset: -15.109 ms
Remote clock offset: -12.553 ms
```

Run 4: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 5: Statistics of FillP

Start at: 2018-02-20 11:18:56
End at: 2018-02-20 11:19:26
Local clock offset: -11.181 ms
Remote clock offset: -12.637 ms
```

Run 5: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 6: Statistics of FillP

Start at: 2018-02-20 11:39:19
End at: 2018-02-20 11:39:49
Local clock offset: -12.986 ms
Remote clock offset: -12.612 ms
```

Run 6: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 7: Statistics of FillP

Start at: 2018-02-20 11:59:45
End at: 2018-02-20 12:00:15
Local clock offset: -15.042 ms
Remote clock offset: -12.508 ms
```

Run 7: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 8: Statistics of FillP

Start at: 2018-02-20 12:20:09
End at: 2018-02-20 12:20:39
Local clock offset: -14.631 ms
Remote clock offset: -12.478 ms
```

Run 8: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 9: Statistics of FillP

Start at: 2018-02-20 12:40:33
End at: 2018-02-20 12:41:03
Local clock offset: -14.516 ms
Remote clock offset: -12.251 ms
```

Run 9: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 10: Statistics of FillP

Start at: 2018-02-20 13:01:00
End at: 2018-02-20 13:01:30
Local clock offset: -13.323 ms
Remote clock offset: -12.481 ms
```

Run 10: Report of FillP — Data Link

Figure is missing

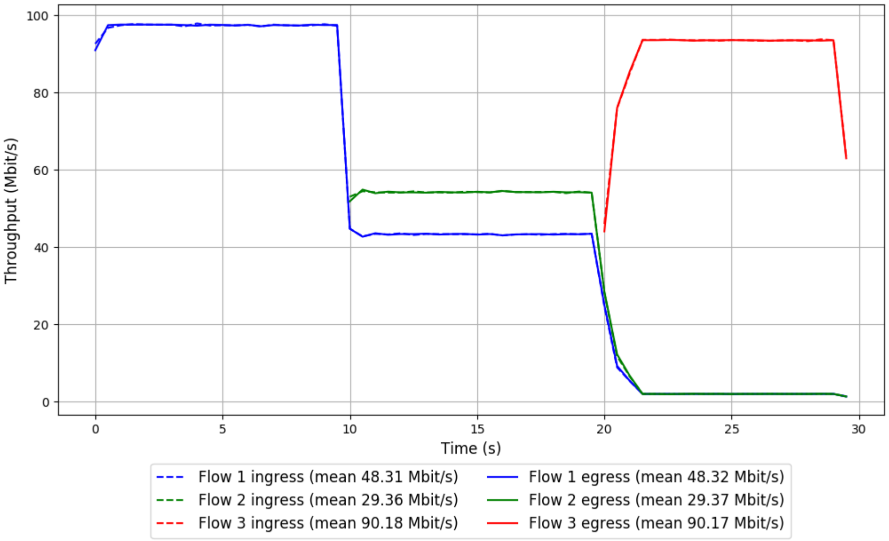
Figure is missing

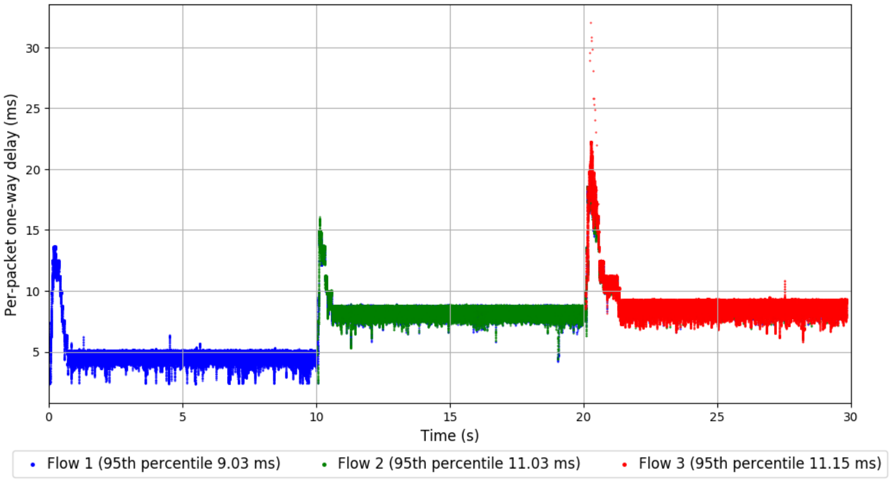
```
Run 1: Statistics of Indigo-1-32

Start at: 2018-02-20 09:53:48
End at: 2018-02-20 09:54:18
Local clock offset: -12.973 ms
Remote clock offset: -12.952 ms

# Below is generated by plot.py at 2018-02-20 16:54:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 10.879 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 48.32 Mbit/s
95th percentile per-packet one-way delay: 9.034 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 29.37 Mbit/s
95th percentile per-packet one-way delay: 11.030 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 90.17 Mbit/s
95th percentile per-packet one-way delay: 11.155 ms
Loss rate: 0.12%
```

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



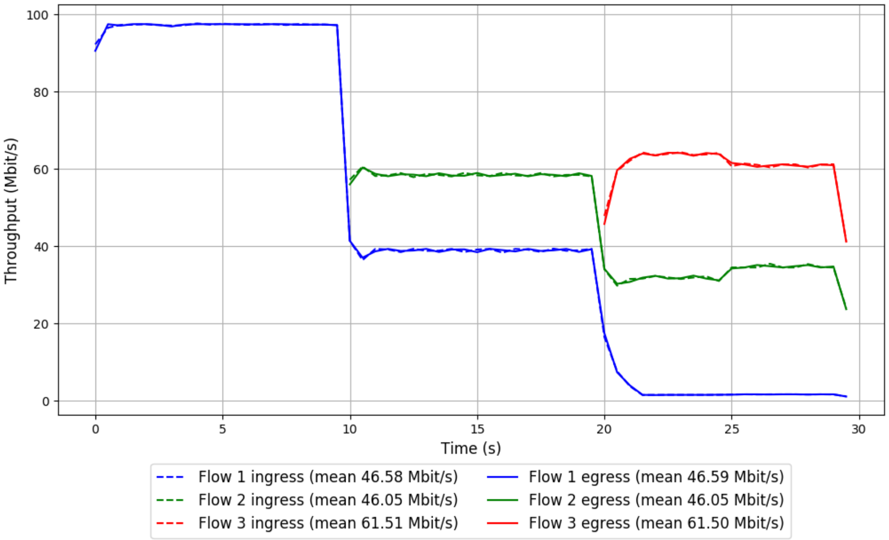


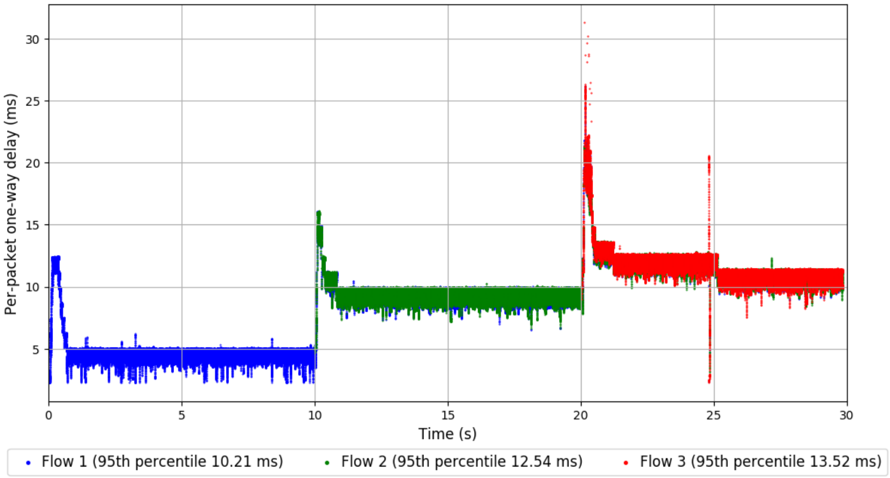
```
Run 2: Statistics of Indigo-1-32

Start at: 2018-02-20 10:14:13
End at: 2018-02-20 10:14:43
Local clock offset: -13.234 ms
Remote clock offset: -12.742 ms

# Below is generated by plot.py at 2018-02-20 16:54:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 12.555 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 46.59 Mbit/s
95th percentile per-packet one-way delay: 10.205 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.05 Mbit/s
95th percentile per-packet one-way delay: 12.537 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 61.50 Mbit/s
95th percentile per-packet one-way delay: 13.518 ms
Loss rate: 0.13%
```

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



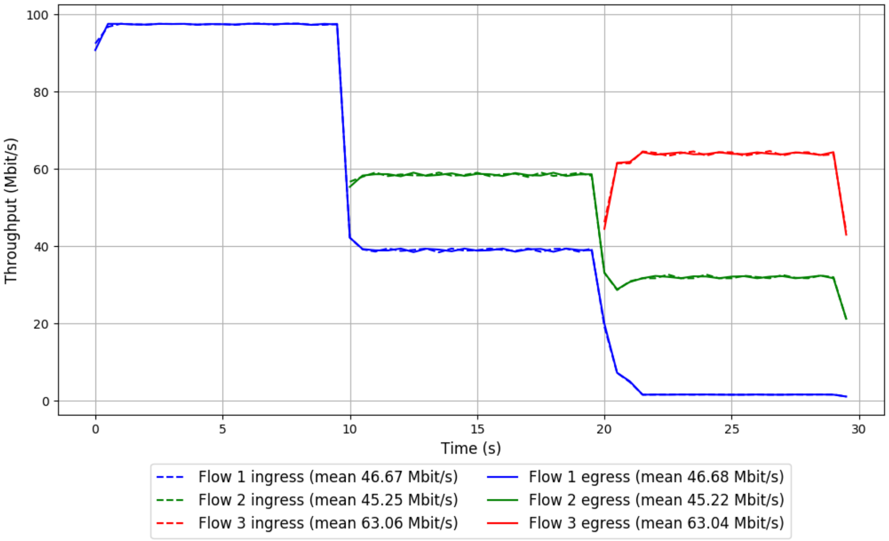


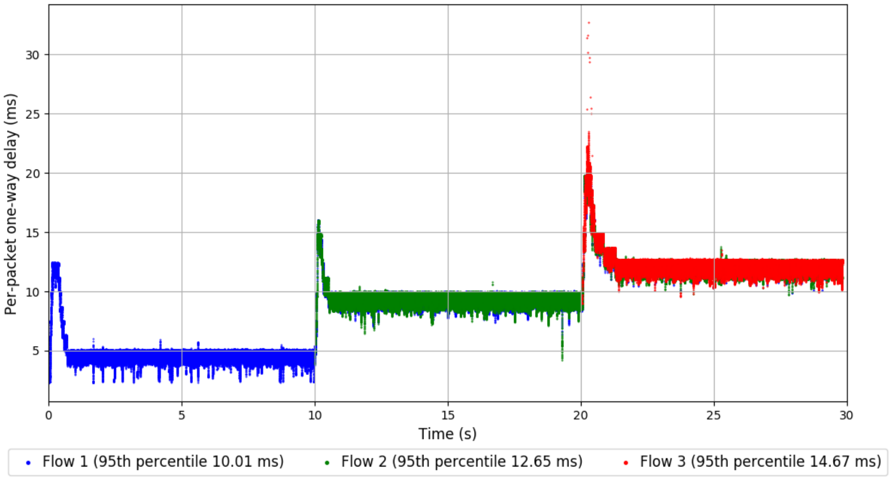
```
Run 3: Statistics of Indigo-1-32

Start at: 2018-02-20 10:34:40
End at: 2018-02-20 10:35:10
Local clock offset: -14.544 ms
Remote clock offset: -12.523 ms

# Below is generated by plot.py at 2018-02-20 16:54:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 12.631 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 46.68 Mbit/s
95th percentile per-packet one-way delay: 10.008 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.22 Mbit/s
95th percentile per-packet one-way delay: 12.649 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 63.04 Mbit/s
95th percentile per-packet one-way delay: 14.666 ms
Loss rate: 0.16%
```

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



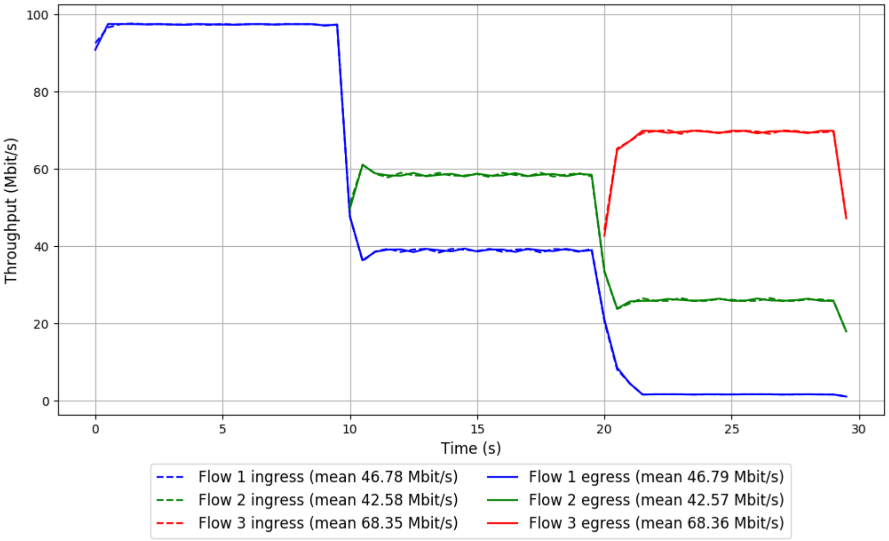


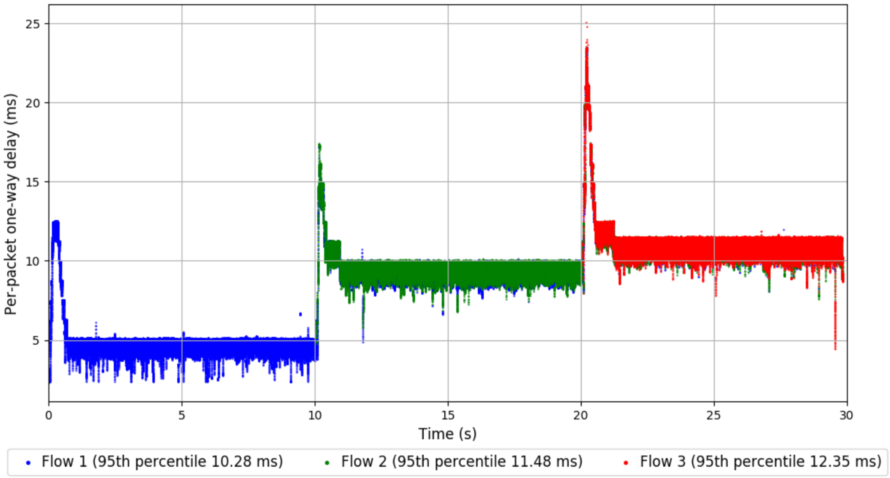
```
Run 4: Statistics of Indigo-1-32

Start at: 2018-02-20 10:55:06
End at: 2018-02-20 10:55:36
Local clock offset: -15.43 ms
Remote clock offset: -12.597 ms

# Below is generated by plot.py at 2018-02-20 16:54:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 11.502 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 46.79 Mbit/s
95th percentile per-packet one-way delay: 10.275 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.57 Mbit/s
95th percentile per-packet one-way delay: 11.476 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 68.36 Mbit/s
95th percentile per-packet one-way delay: 12.351 ms
Loss rate: 0.12%
```

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



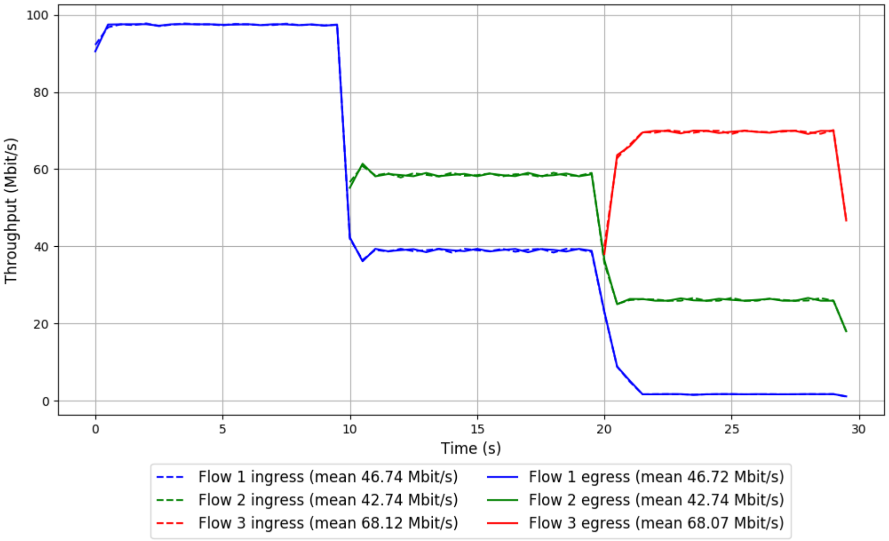


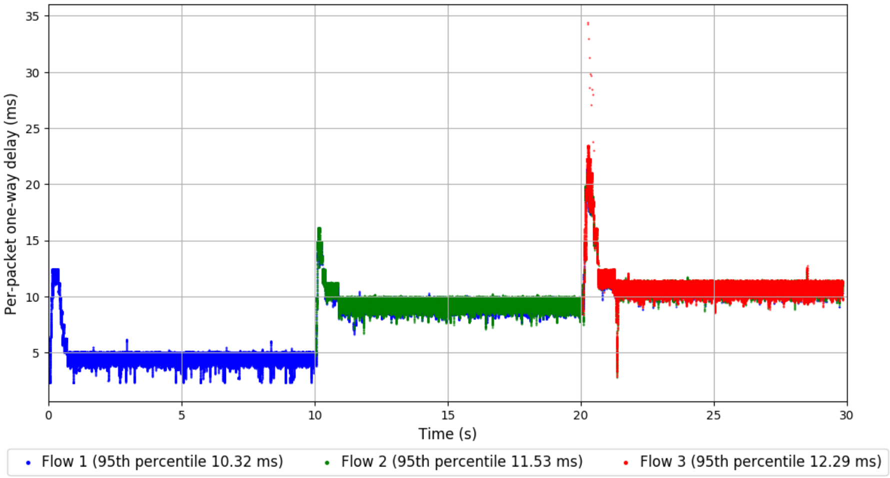
```
Run 5: Statistics of Indigo-1-32

Start at: 2018-02-20 11:15:29
End at: 2018-02-20 11:15:59
Local clock offset: -11.45 ms
Remote clock offset: -12.622 ms

# Below is generated by plot.py at 2018-02-20 16:54:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 11.428 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 46.72 Mbit/s
95th percentile per-packet one-way delay: 10.322 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.74 Mbit/s
95th percentile per-packet one-way delay: 11.525 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 68.07 Mbit/s
95th percentile per-packet one-way delay: 12.293 ms
Loss rate: 0.13%
```

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



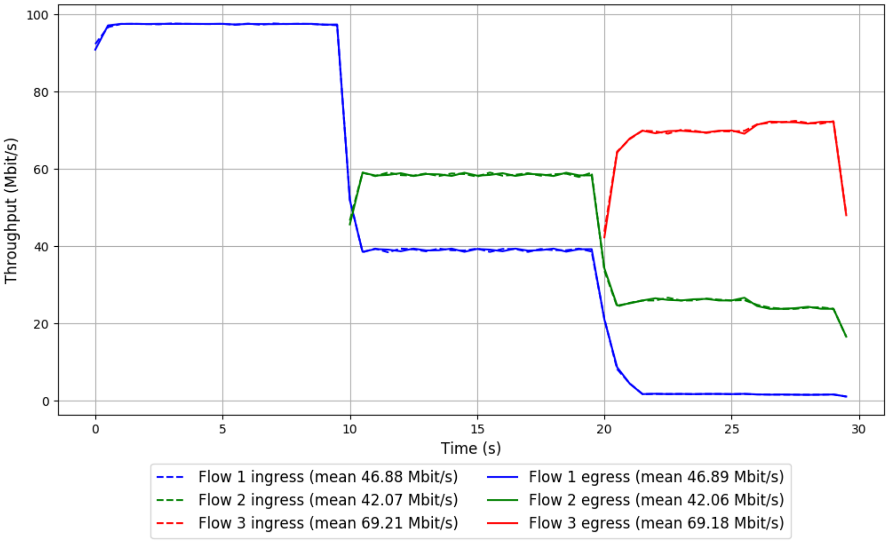


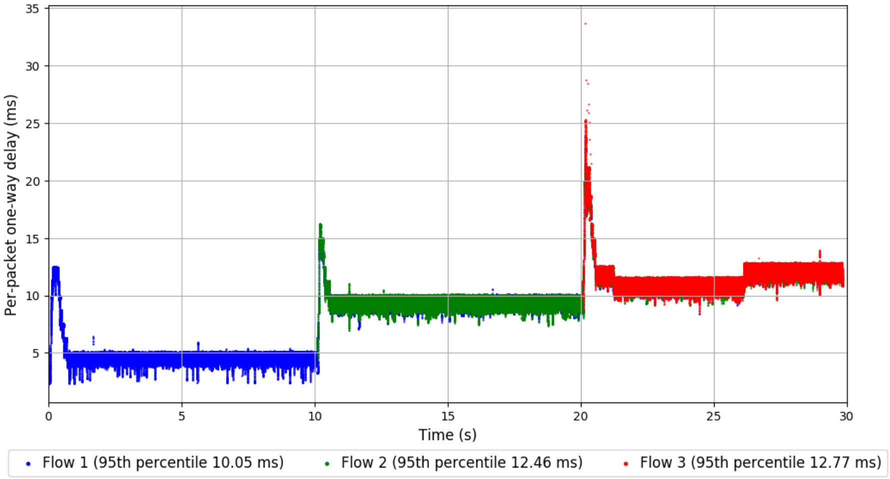
```
Run 6: Statistics of Indigo-1-32

Start at: 2018-02-20 11:35:52
End at: 2018-02-20 11:36:22
Local clock offset: -12.185 ms
Remote clock offset: -12.613 ms

# Below is generated by plot.py at 2018-02-20 16:55:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 12.657 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 46.89 Mbit/s
95th percentile per-packet one-way delay: 10.048 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.06 Mbit/s
95th percentile per-packet one-way delay: 12.460 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 69.18 Mbit/s
95th percentile per-packet one-way delay: 12.767 ms
Loss rate: 0.18%
```

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



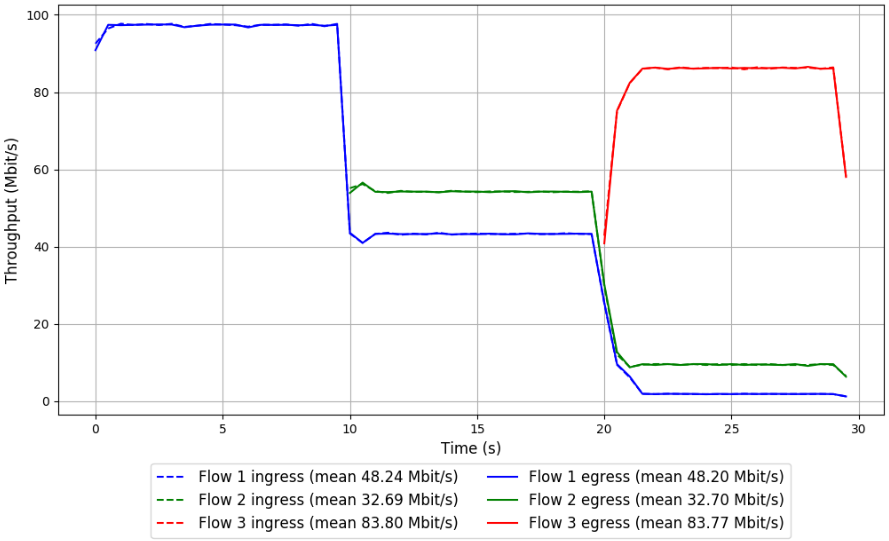


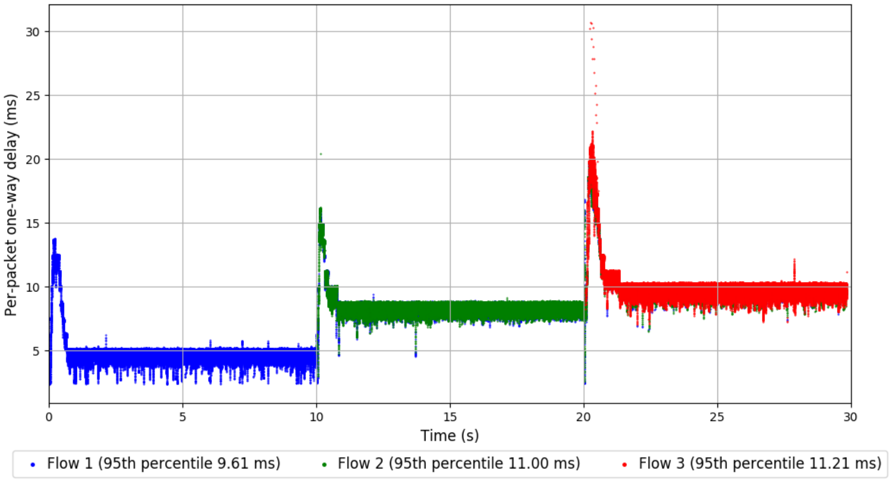
```
Run 7: Statistics of Indigo-1-32

Start at: 2018-02-20 11:56:18
End at: 2018-02-20 11:56:48
Local clock offset: -14.885 ms
Remote clock offset: -12.619 ms

# Below is generated by plot.py at 2018-02-20 16:55:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 11.009 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 48.20 Mbit/s
95th percentile per-packet one-way delay: 9.614 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 32.70 Mbit/s
95th percentile per-packet one-way delay: 10.999 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 83.77 Mbit/s
95th percentile per-packet one-way delay: 11.211 ms
Loss rate: 0.13%
```

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



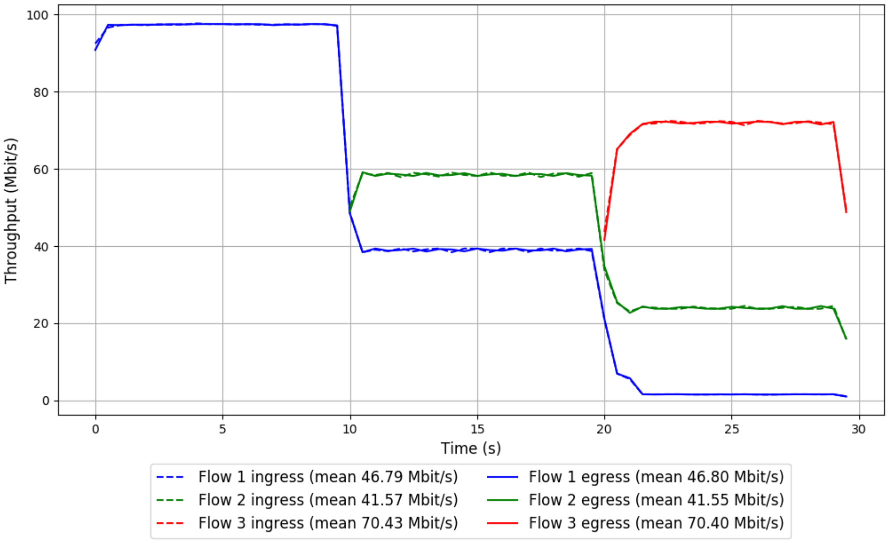


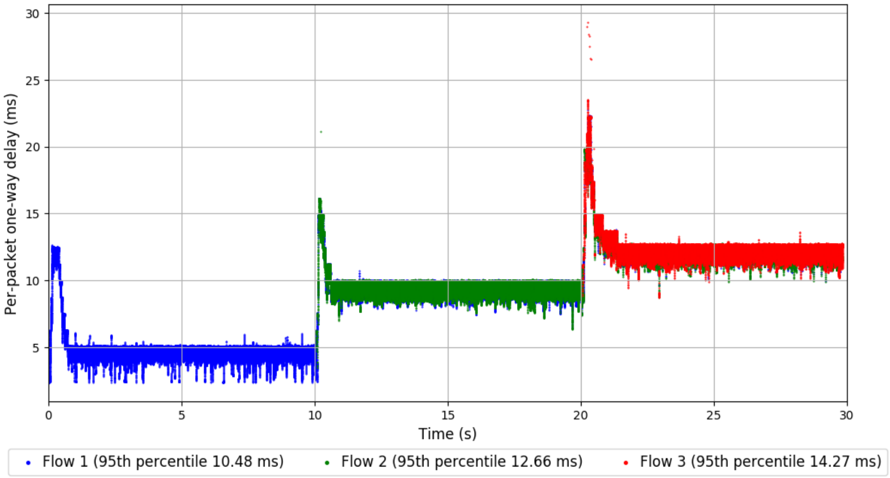
```
Run 8: Statistics of Indigo-1-32

Start at: 2018-02-20 12:16:42
End at: 2018-02-20 12:17:12
Local clock offset: -14.61 ms
Remote clock offset: -12.52 ms

# Below is generated by plot.py at 2018-02-20 16:55:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 12.677 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 46.80 Mbit/s
95th percentile per-packet one-way delay: 10.480 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.55 Mbit/s
95th percentile per-packet one-way delay: 12.660 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 70.40 Mbit/s
95th percentile per-packet one-way delay: 14.270 ms
Loss rate: 0.16%
```

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



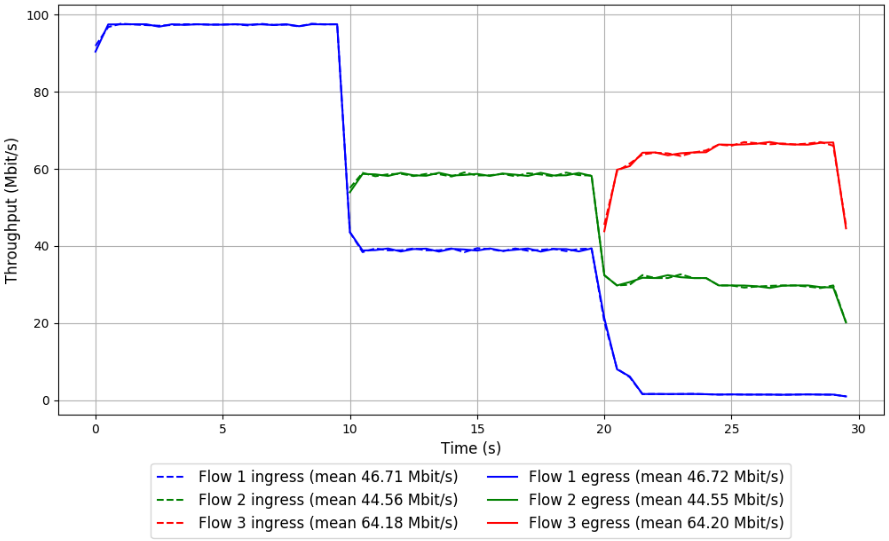


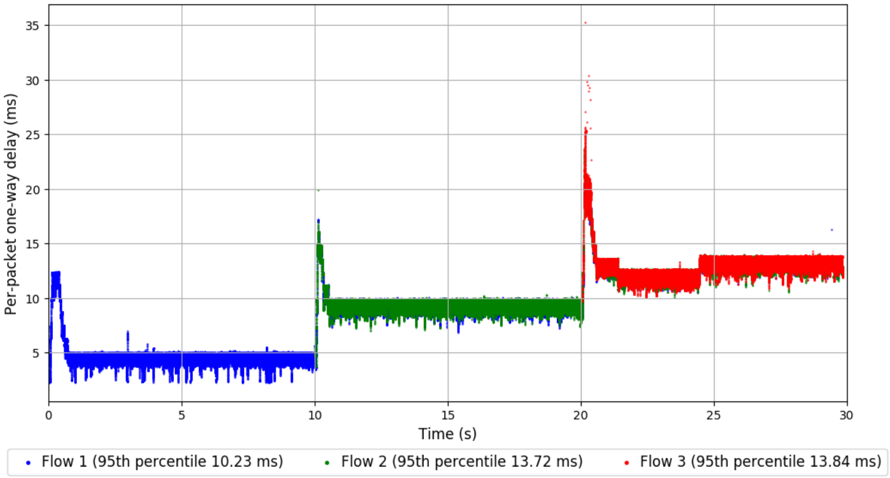
```
Run 9: Statistics of Indigo-1-32

Start at: 2018-02-20 12:37:06
End at: 2018-02-20 12:37:36
Local clock offset: -14.639 ms
Remote clock offset: -12.356 ms

# Below is generated by plot.py at 2018-02-20 16:55:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 13.737 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 46.72 Mbit/s
95th percentile per-packet one-way delay: 10.231 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 44.55 Mbit/s
95th percentile per-packet one-way delay: 13.722 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 64.20 Mbit/s
95th percentile per-packet one-way delay: 13.839 ms
Loss rate: 0.17%
```

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



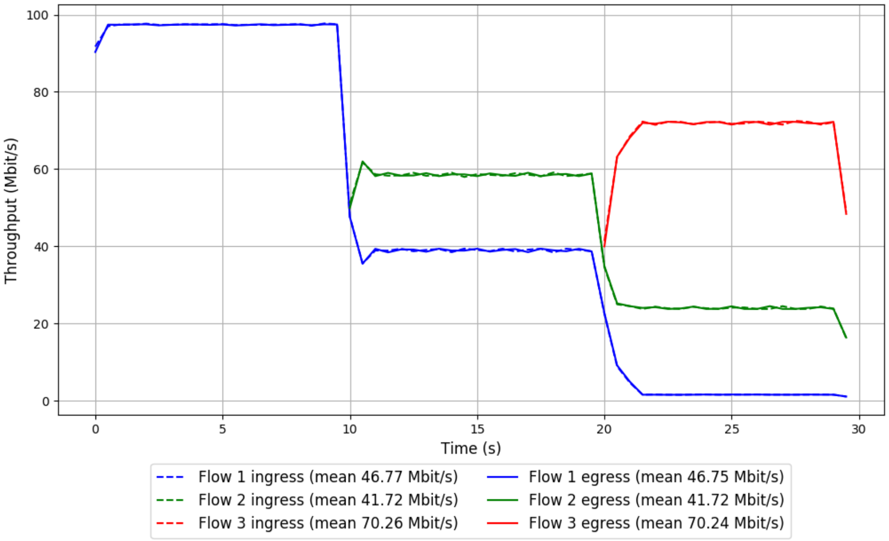


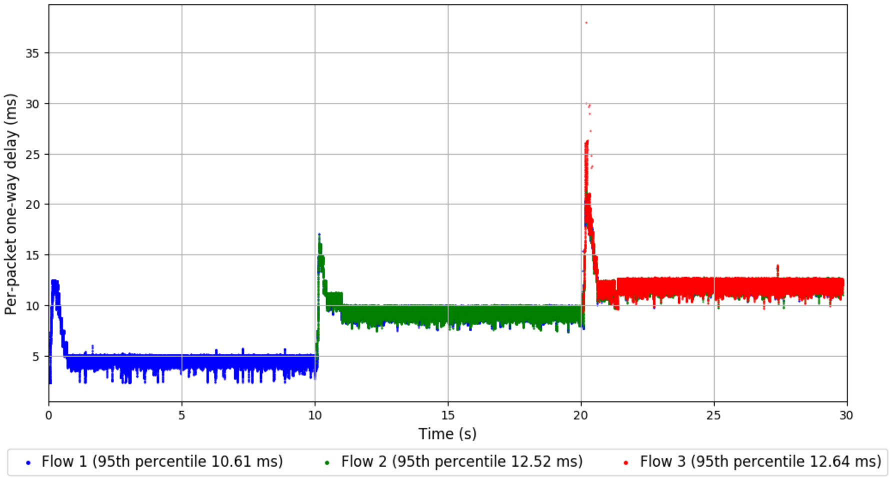
```
Run 10: Statistics of Indigo-1-32

Start at: 2018-02-20 12:57:33
End at: 2018-02-20 12:58:03
Local clock offset: -13.394 ms
Remote clock offset: -12.149 ms

# Below is generated by plot.py at 2018-02-20 16:55:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 12.565 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 46.75 Mbit/s
95th percentile per-packet one-way delay: 10.606 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 41.72 Mbit/s
95th percentile per-packet one-way delay: 12.521 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 70.24 Mbit/s
95th percentile per-packet one-way delay: 12.645 ms
Loss rate: 0.16%
```

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



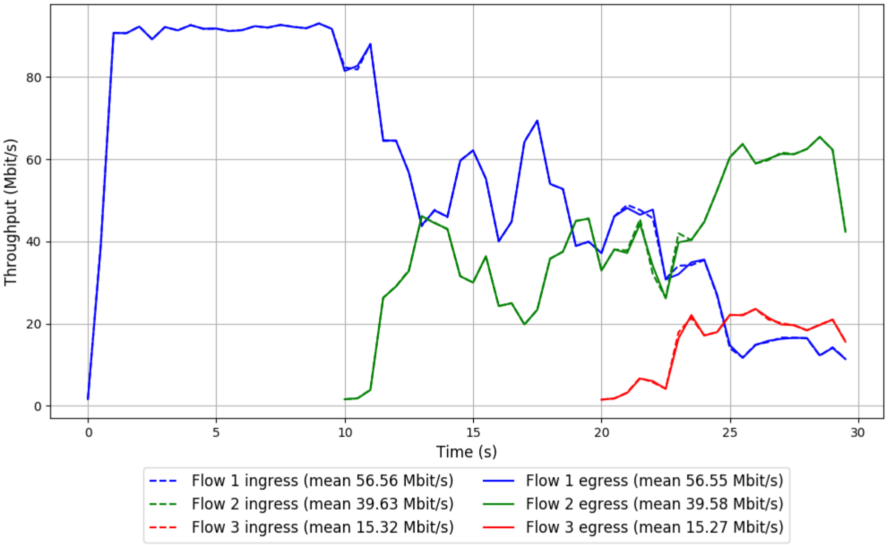


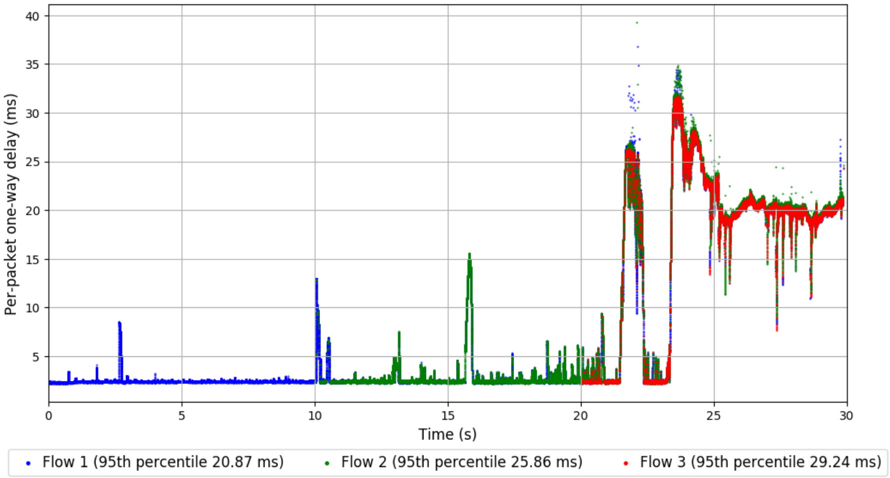
```
Run 1: Statistics of Vivace-latency

Start at: 2018-02-20 09:54:58
End at: 2018-02-20 09:55:28
Local clock offset: -12.999 ms
Remote clock offset: -12.896 ms

# Below is generated by plot.py at 2018-02-20 16:56:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.88 Mbit/s
95th percentile per-packet one-way delay: 24.492 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 56.55 Mbit/s
95th percentile per-packet one-way delay: 20.874 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 39.58 Mbit/s
95th percentile per-packet one-way delay: 25.860 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 15.27 Mbit/s
95th percentile per-packet one-way delay: 29.239 ms
Loss rate: 0.31%
```

Run 1: Report of Vivace-latency — Data Link



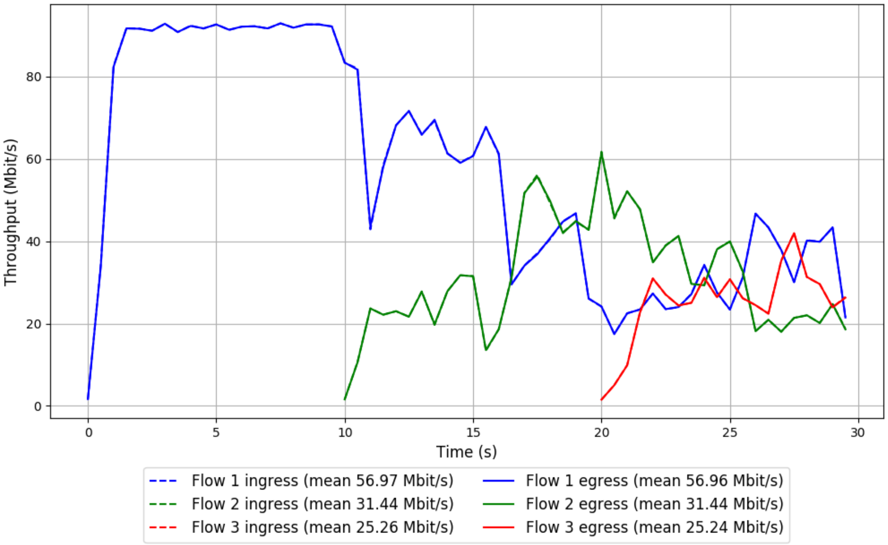


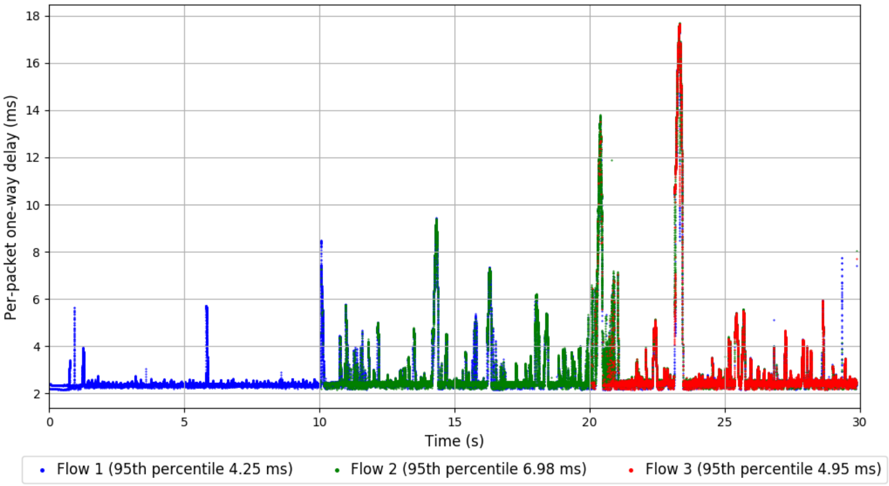
```
Run 2: Statistics of Vivace-latency

Start at: 2018-02-20 10:15:22
End at: 2018-02-20 10:15:52
Local clock offset: -13.209 ms
Remote clock offset: -12.729 ms

# Below is generated by plot.py at 2018-02-20 16:56:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.15 Mbit/s
95th percentile per-packet one-way delay: 4.838 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 56.96 Mbit/s
95th percentile per-packet one-way delay: 4.250 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 31.44 Mbit/s
95th percentile per-packet one-way delay: 6.979 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 25.24 Mbit/s
95th percentile per-packet one-way delay: 4.949 ms
Loss rate: 0.06%
```

Run 2: Report of Vivace-latency — Data Link



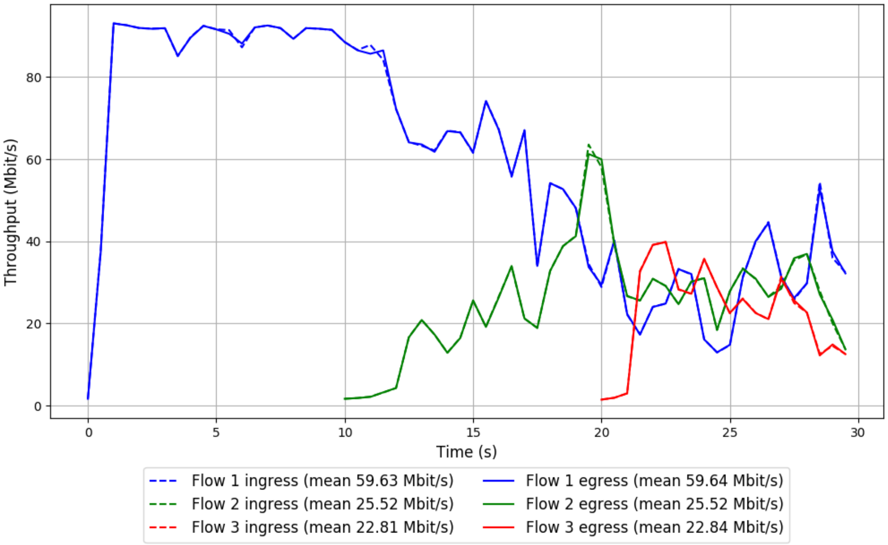


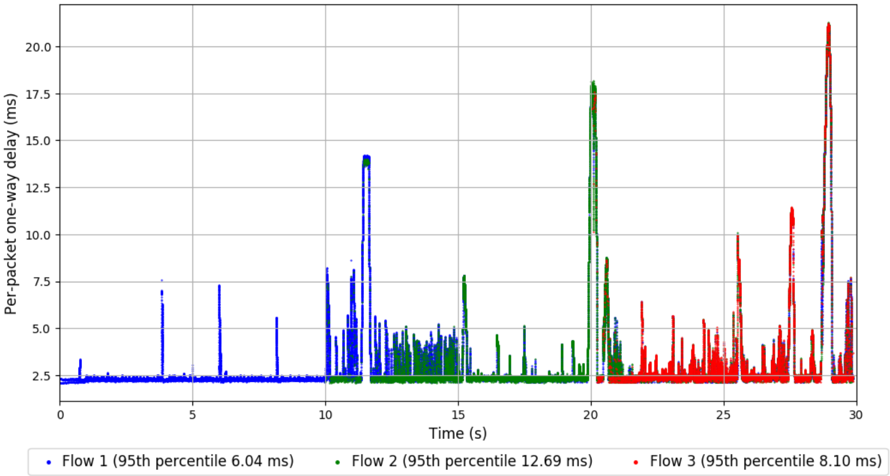
```
Run 3: Statistics of Vivace-latency

Start at: 2018-02-20 10:35:50
End at: 2018-02-20 10:36:20
Local clock offset: -14.642 ms
Remote clock offset: -12.515 ms

# Below is generated by plot.py at 2018-02-20 16:56:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.12 Mbit/s
95th percentile per-packet one-way delay: 7.417 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 59.64 Mbit/s
95th percentile per-packet one-way delay: 6.041 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 25.52 Mbit/s
95th percentile per-packet one-way delay: 12.690 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 22.84 Mbit/s
95th percentile per-packet one-way delay: 8.102 ms
Loss rate: 0.03%
```

Run 3: Report of Vivace-latency — Data Link



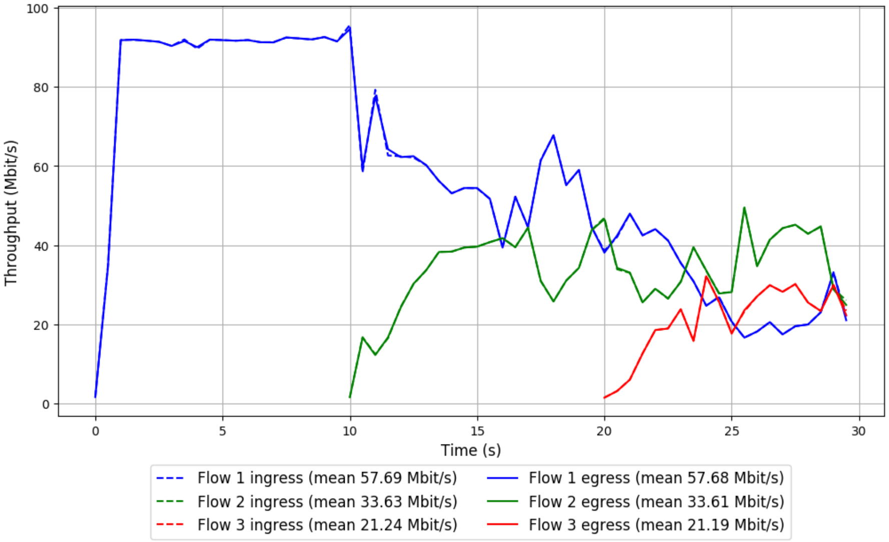


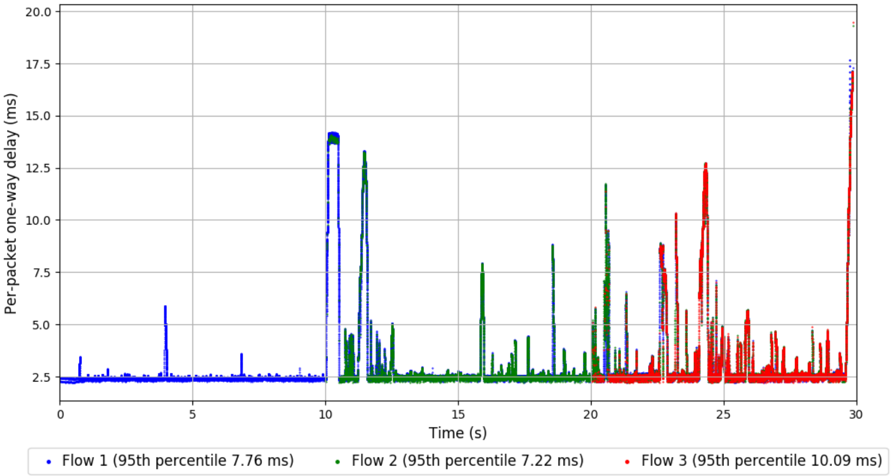
```
Run 4: Statistics of Vivace-latency

Start at: 2018-02-20 10:56:16
End at: 2018-02-20 10:56:46
Local clock offset: -15.456 ms
Remote clock offset: -12.62 ms

# Below is generated by plot.py at 2018-02-20 16:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.99 Mbit/s
95th percentile per-packet one-way delay: 7.825 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 57.68 Mbit/s
95th percentile per-packet one-way delay: 7.756 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 33.61 Mbit/s
95th percentile per-packet one-way delay: 7.220 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 21.19 Mbit/s
95th percentile per-packet one-way delay: 10.088 ms
Loss rate: 0.31%
```

Run 4: Report of Vivace-latency — Data Link



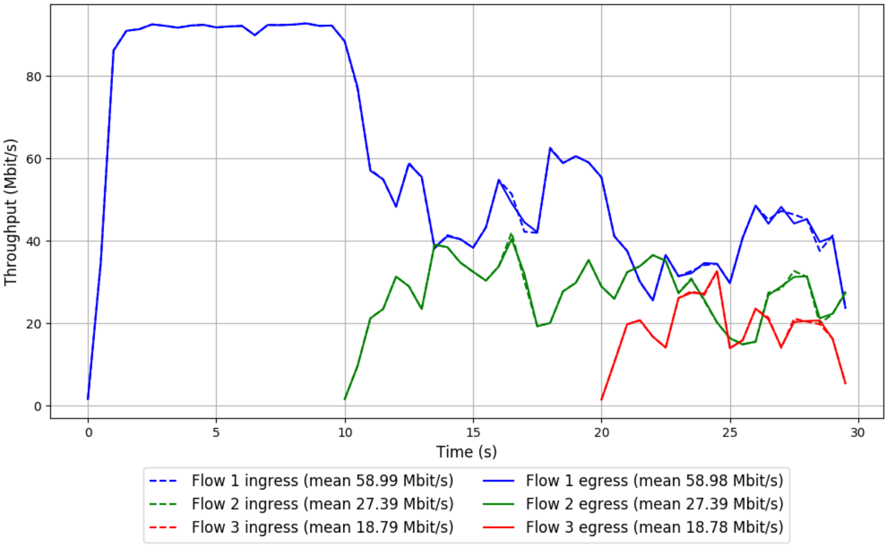


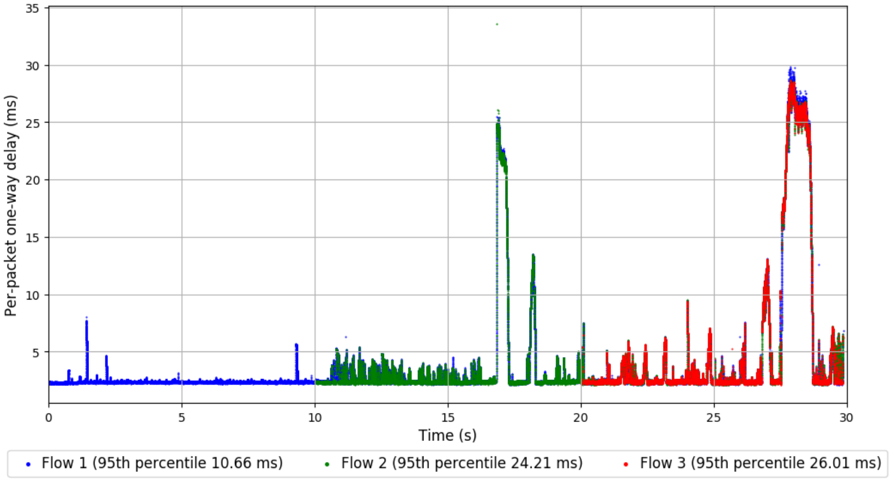
```
Run 5: Statistics of Vivace-latency

Start at: 2018-02-20 11:16:39
End at: 2018-02-20 11:17:09
Local clock offset: -11.367 ms
Remote clock offset: -12.638 ms

# Below is generated by plot.py at 2018-02-20 16:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.36 Mbit/s
95th percentile per-packet one-way delay: 20.463 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 58.98 Mbit/s
95th percentile per-packet one-way delay: 10.665 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 27.39 Mbit/s
95th percentile per-packet one-way delay: 24.212 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 18.78 Mbit/s
95th percentile per-packet one-way delay: 26.013 ms
Loss rate: 0.01%
```

Run 5: Report of Vivace-latency — Data Link



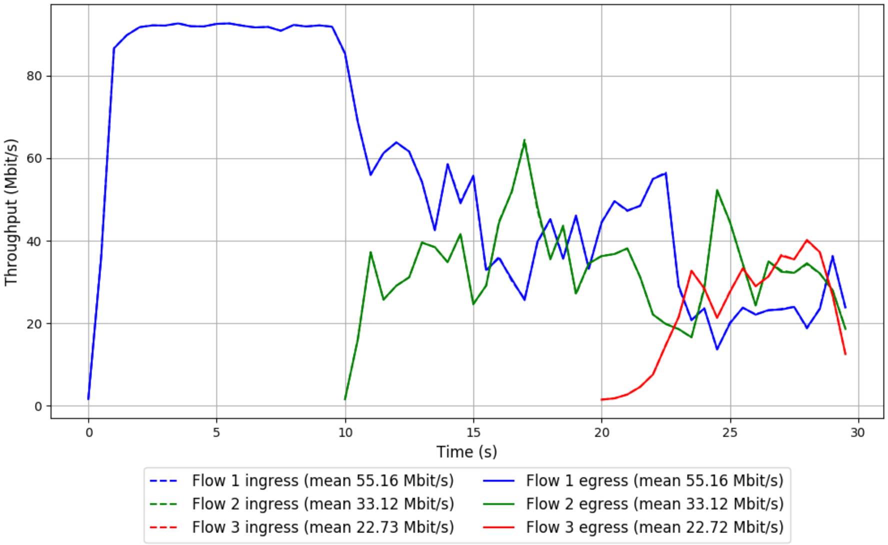


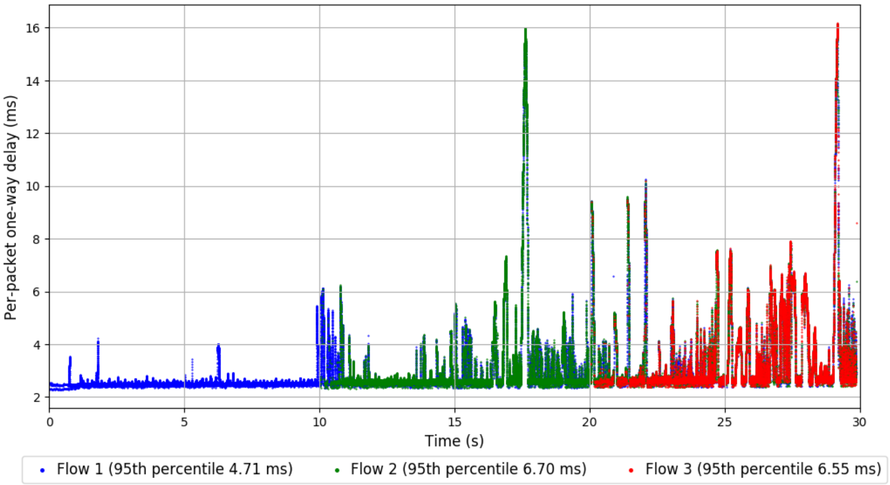
```
Run 6: Statistics of Vivace-latency

Start at: 2018-02-20 11:37:02
End at: 2018-02-20 11:37:32
Local clock offset: -12.412 ms
Remote clock offset: -12.626 ms

# Below is generated by plot.py at 2018-02-20 16:57:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.63 Mbit/s
95th percentile per-packet one-way delay: 5.801 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 55.16 Mbit/s
95th percentile per-packet one-way delay: 4.706 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 33.12 Mbit/s
95th percentile per-packet one-way delay: 6.702 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 22.72 Mbit/s
95th percentile per-packet one-way delay: 6.554 ms
Loss rate: 0.03%
```

Run 6: Report of Vivace-latency — Data Link



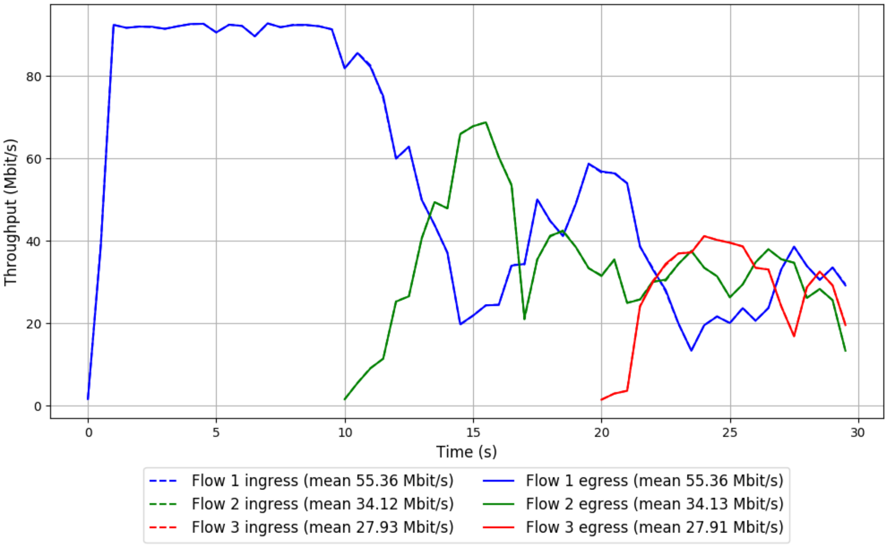


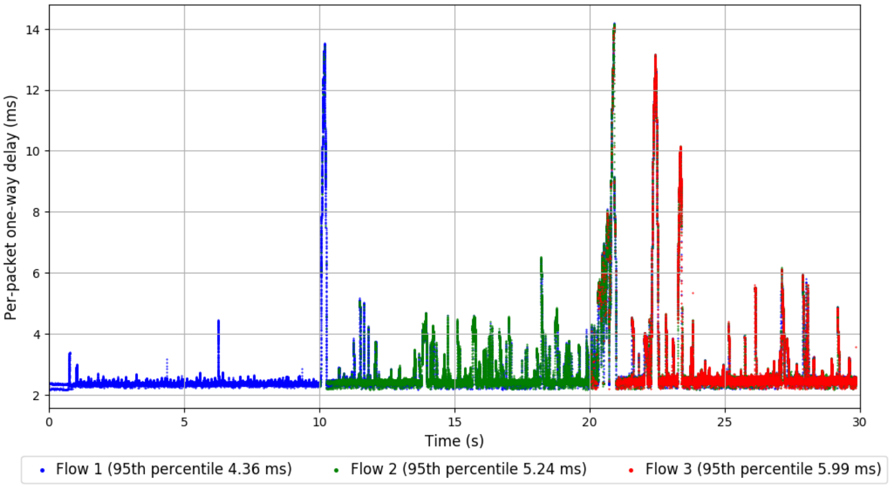
```
Run 7: Statistics of Vivace-latency

Start at: 2018-02-20 11:57:27
End at: 2018-02-20 11:57:57
Local clock offset: -14.933 ms
Remote clock offset: -12.535 ms

# Below is generated by plot.py at 2018-02-20 16:57:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.22 Mbit/s
95th percentile per-packet one-way delay: 4.823 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 55.36 Mbit/s
95th percentile per-packet one-way delay: 4.356 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 34.13 Mbit/s
95th percentile per-packet one-way delay: 5.241 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 27.91 Mbit/s
95th percentile per-packet one-way delay: 5.988 ms
Loss rate: 0.09%
```

Run 7: Report of Vivace-latency — Data Link



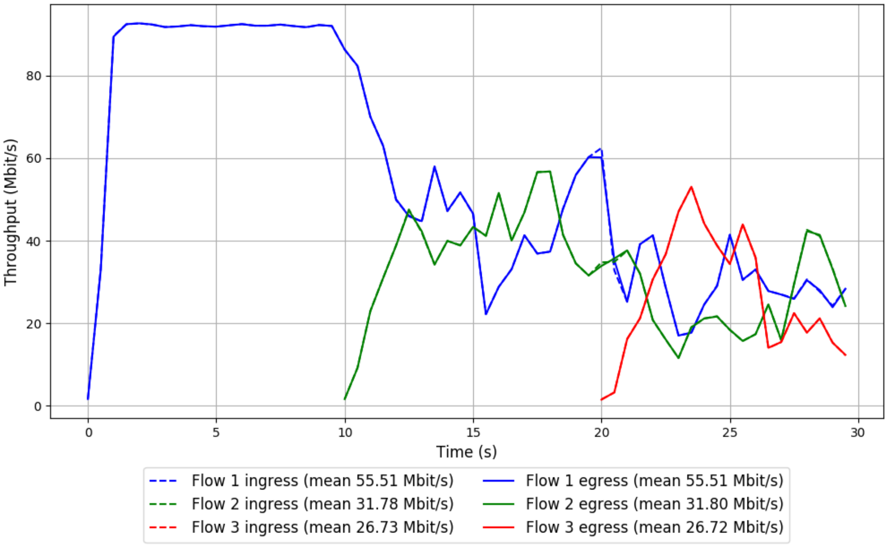


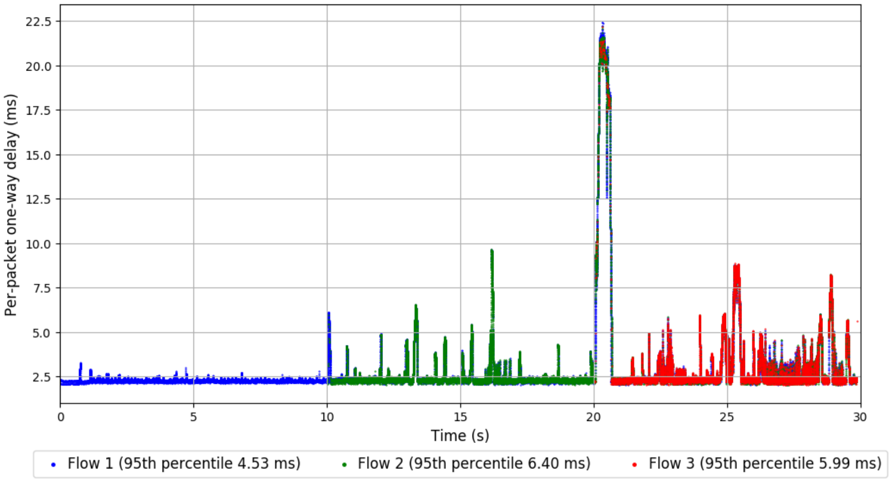
```
Run 8: Statistics of Vivace-latency

Start at: 2018-02-20 12:17:51
End at: 2018-02-20 12:18:21
Local clock offset: -14.672 ms
Remote clock offset: -12.454 ms

# Below is generated by plot.py at 2018-02-20 16:57:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.43 Mbit/s
95th percentile per-packet one-way delay: 5.392 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 55.51 Mbit/s
95th percentile per-packet one-way delay: 4.532 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 31.80 Mbit/s
95th percentile per-packet one-way delay: 6.398 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 26.72 Mbit/s
95th percentile per-packet one-way delay: 5.987 ms
Loss rate: 0.03%
```

Run 8: Report of Vivace-latency — Data Link



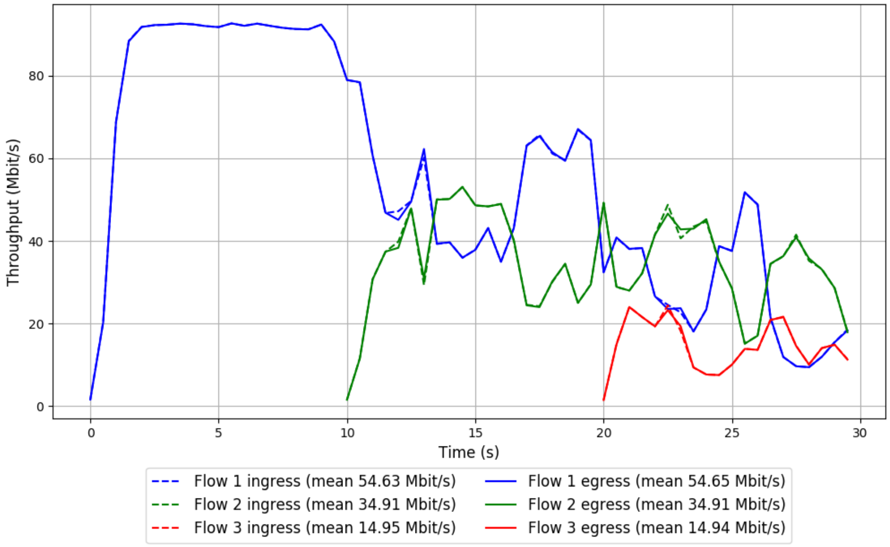


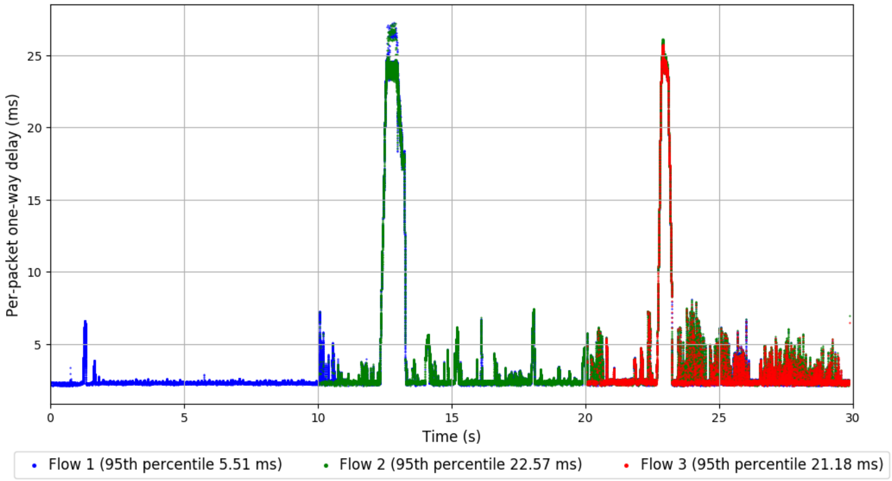
```
Run 9: Statistics of Vivace-latency

Start at: 2018-02-20 12:38:16
End at: 2018-02-20 12:38:46
Local clock offset: -14.565 ms
Remote clock offset: -12.268 ms

# Below is generated by plot.py at 2018-02-20 16:57:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.75 Mbit/s
95th percentile per-packet one-way delay: 12.409 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 54.65 Mbit/s
95th percentile per-packet one-way delay: 5.507 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 34.91 Mbit/s
95th percentile per-packet one-way delay: 22.566 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 14.94 Mbit/s
95th percentile per-packet one-way delay: 21.183 ms
Loss rate: 0.04%
```

Run 9: Report of Vivace-latency — Data Link



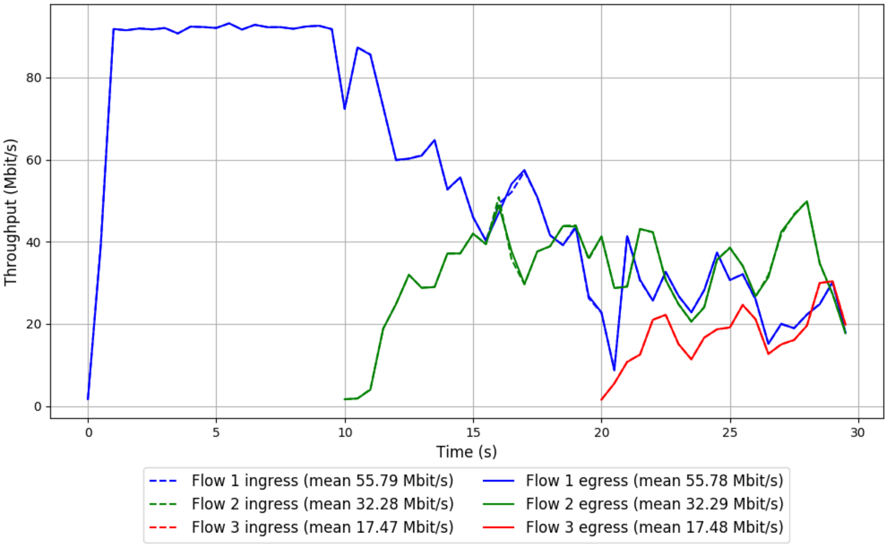


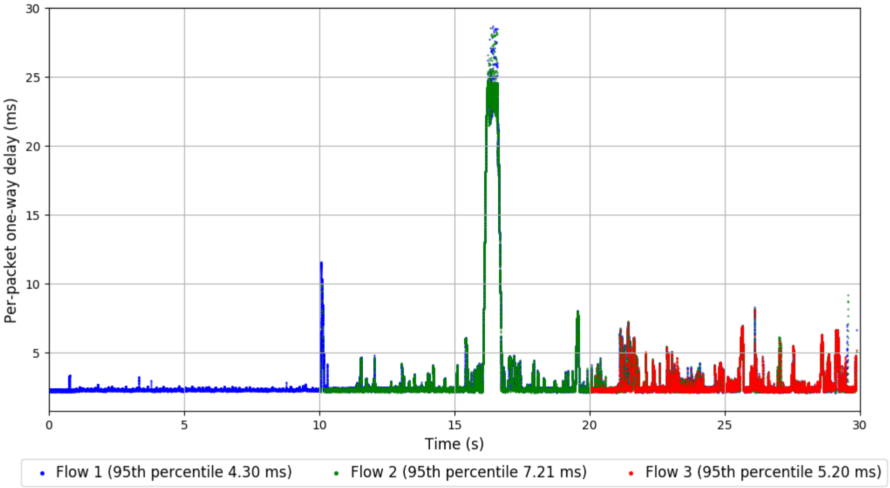
```
Run 10: Statistics of Vivace-latency

Start at: 2018-02-20 12:58:43
End at: 2018-02-20 12:59:13
Local clock offset: -13.385 ms
Remote clock offset: -12.148 ms

# Below is generated by plot.py at 2018-02-20 16:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.00 Mbit/s
95th percentile per-packet one-way delay: 5.161 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 55.78 Mbit/s
95th percentile per-packet one-way delay: 4.297 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.29 Mbit/s
95th percentile per-packet one-way delay: 7.205 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 17.48 Mbit/s
95th percentile per-packet one-way delay: 5.199 ms
Loss rate: 0.07%
```

Run 10: Report of Vivace-latency — Data Link



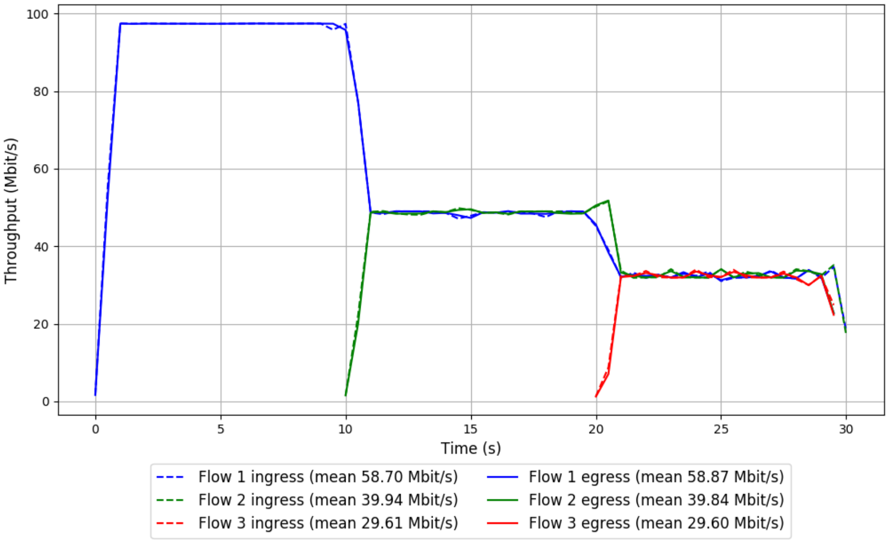


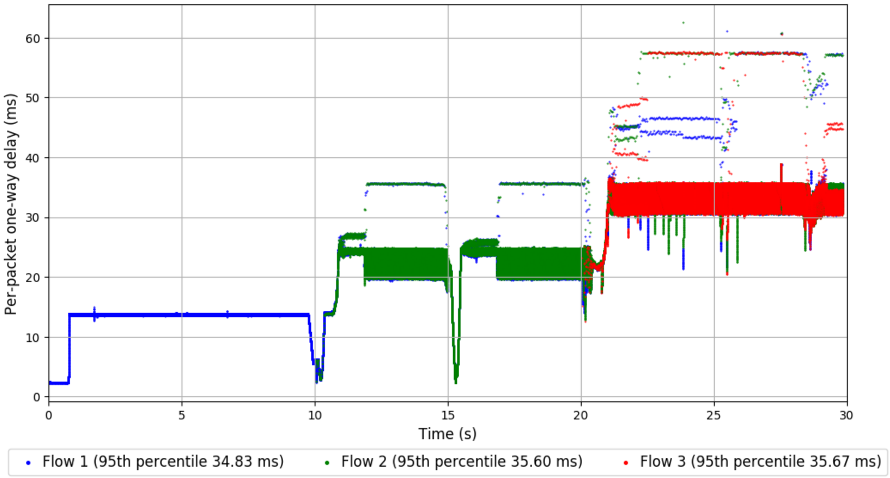
```
Run 1: Statistics of Vivace-loss

Start at: 2018-02-20 09:44:49
End at: 2018-02-20 09:45:19
Local clock offset: -12.821 ms
Remote clock offset: -12.889 ms

# Below is generated by plot.py at 2018-02-20 16:57:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 35.549 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 58.87 Mbit/s
95th percentile per-packet one-way delay: 34.825 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 39.84 Mbit/s
95th percentile per-packet one-way delay: 35.598 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 29.60 Mbit/s
95th percentile per-packet one-way delay: 35.672 ms
Loss rate: 0.80%
```

Run 1: Report of Vivace-loss — Data Link





```
Run 2: Statistics of Vivace-loss

Start at: 2018-02-20 10:05:15
End at: 2018-02-20 10:05:45
Local clock offset: -13.171 ms
Remote clock offset: -12.835 ms
```

Run 2: Report of Vivace-loss — Data Link

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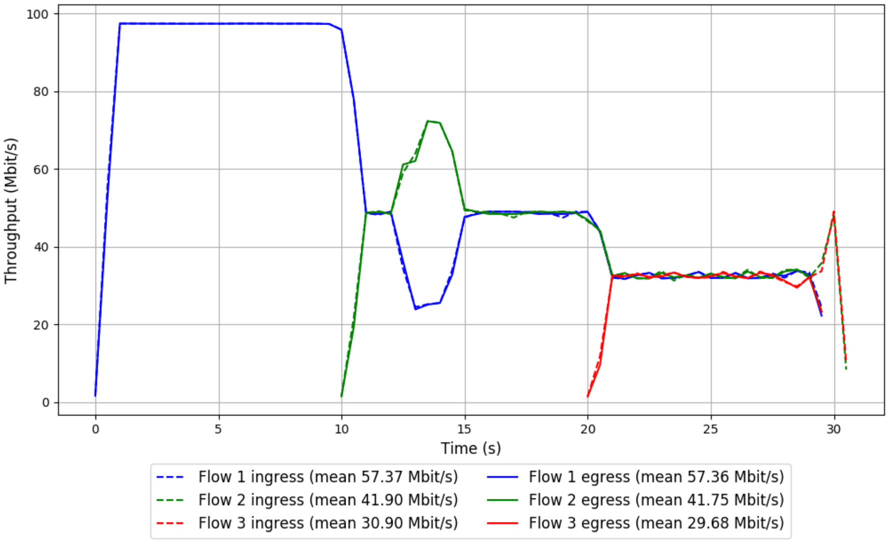
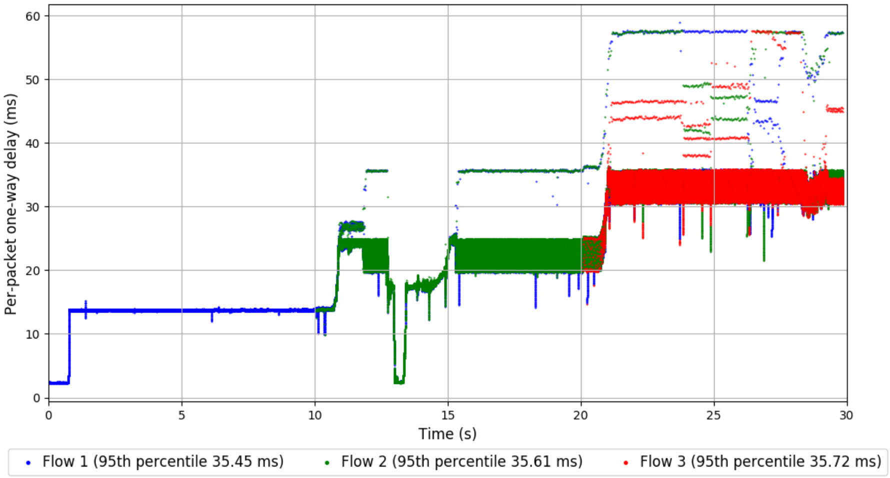
```
Run 3: Statistics of Vivace-loss

Start at: 2018-02-20 10:25:39
End at: 2018-02-20 10:26:09
Local clock offset: -13.57 ms
Remote clock offset: -12.63 ms

# Below is generated by plot.py at 2018-02-20 16:57:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.85 Mbit/s
95th percentile per-packet one-way delay: 35.586 ms
Loss rate: 2.54%
-- Flow 1:
Average throughput: 57.36 Mbit/s
95th percentile per-packet one-way delay: 35.445 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 41.75 Mbit/s
95th percentile per-packet one-way delay: 35.612 ms
Loss rate: 4.11%
-- Flow 3:
Average throughput: 29.68 Mbit/s
95th percentile per-packet one-way delay: 35.719 ms
Loss rate: 10.96%
```

Run 3: Report of Vivace-loss — Data Link



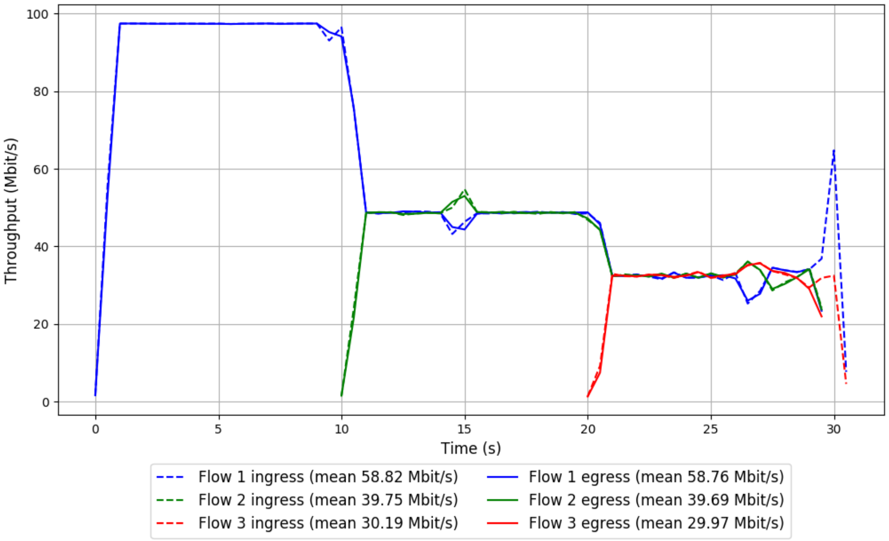


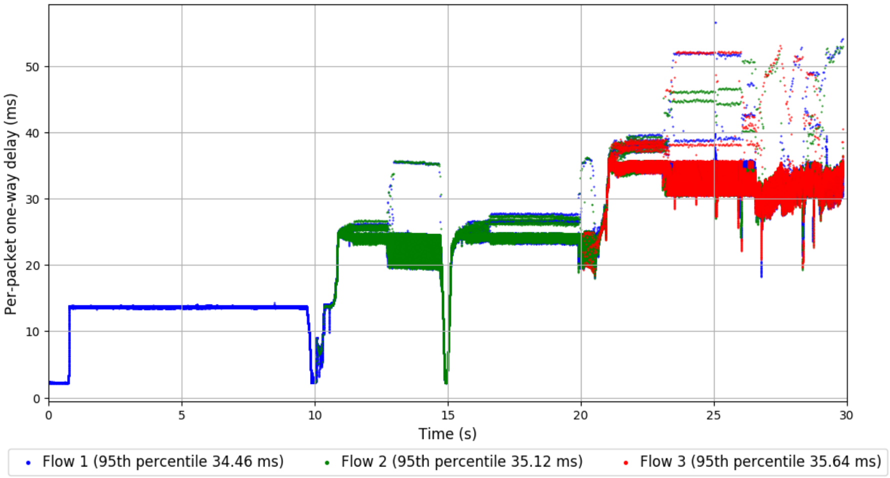
```
Run 4: Statistics of Vivace-loss

Start at: 2018-02-20 10:46:06
End at: 2018-02-20 10:46:36
Local clock offset: -15.088 ms
Remote clock offset: -12.481 ms

# Below is generated by plot.py at 2018-02-20 16:58:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.95 Mbit/s
95th percentile per-packet one-way delay: 35.079 ms
Loss rate: 2.43%
-- Flow 1:
Average throughput: 58.76 Mbit/s
95th percentile per-packet one-way delay: 34.460 ms
Loss rate: 2.47%
-- Flow 2:
Average throughput: 39.69 Mbit/s
95th percentile per-packet one-way delay: 35.119 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 29.97 Mbit/s
95th percentile per-packet one-way delay: 35.644 ms
Loss rate: 7.71%
```

Run 4: Report of Vivace-loss — Data Link





```
Run 5: Statistics of Vivace-loss

Start at: 2018-02-20 11:06:32
End at: 2018-02-20 11:07:02
Local clock offset: -12.66 ms
Remote clock offset: -12.57 ms
```

Run 5: Report of Vivace-loss — Data Link

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```
Run 6: Statistics of Vivace-loss

Start at: 2018-02-20 11:26:55
End at: 2018-02-20 11:27:25
Local clock offset: -10.738 ms
Remote clock offset: -12.599 ms
```

Run 6: Report of Vivace-loss — Data Link

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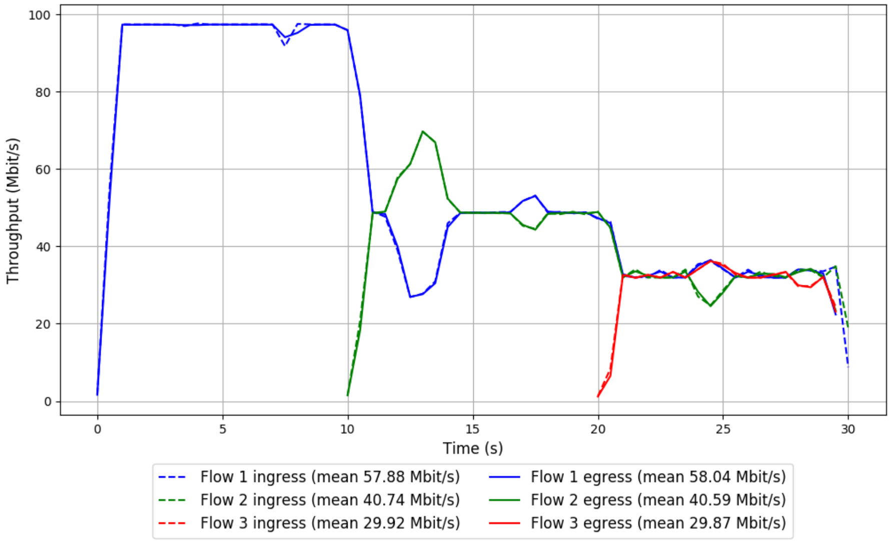
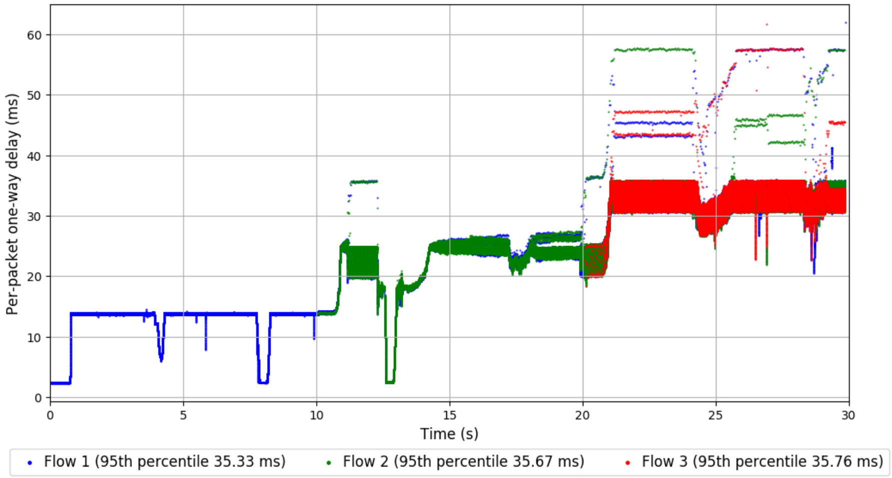
```
Run 7: Statistics of Vivace-loss

Start at: 2018-02-20 11:47:19
End at: 2018-02-20 11:47:49
Local clock offset: -14.199 ms
Remote clock offset: -12.712 ms

# Below is generated by plot.py at 2018-02-20 16:58:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.77 Mbit/s
95th percentile per-packet one-way delay: 35.625 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 58.04 Mbit/s
95th percentile per-packet one-way delay: 35.332 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 40.59 Mbit/s
95th percentile per-packet one-way delay: 35.666 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 29.87 Mbit/s
95th percentile per-packet one-way delay: 35.756 ms
Loss rate: 0.57%
```

Run 7: Report of Vivace-loss — Data Link





```
Run 8: Statistics of Vivace-loss

Start at: 2018-02-20 12:07:44
End at: 2018-02-20 12:08:14
Local clock offset: -15.121 ms
Remote clock offset: -12.45 ms
```

Run 8: Report of Vivace-loss — Data Link

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```
Run 9: Statistics of Vivace-loss

Start at: 2018-02-20 12:28:08
End at: 2018-02-20 12:28:38
Local clock offset: -14.494 ms
Remote clock offset: -12.516 ms
```

Run 9: Report of Vivace-loss — Data Link

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```
Run 10: Statistics of Vivace-loss

Start at: 2018-02-20 12:48:34
End at: 2018-02-20 12:49:04
Local clock offset: -13.885 ms
Remote clock offset: -12.256 ms
```

Run 10: Report of Vivace-loss — Data Link

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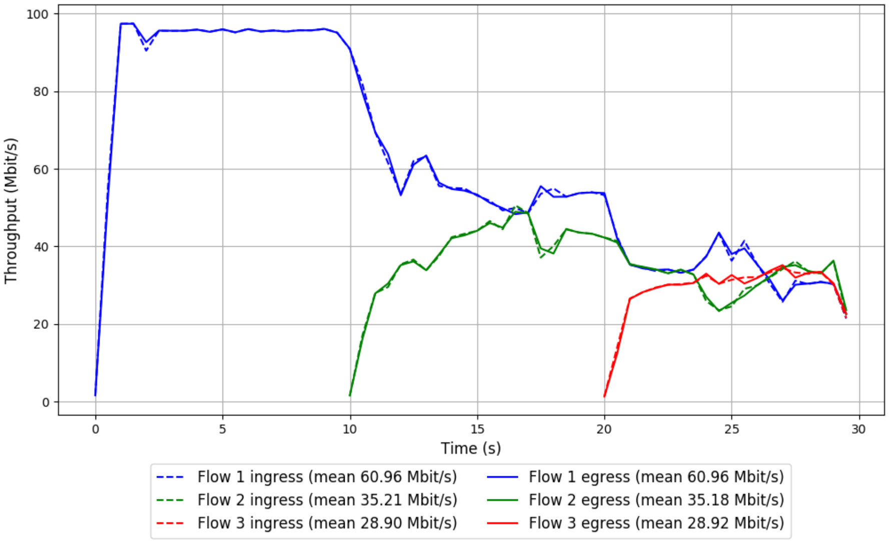
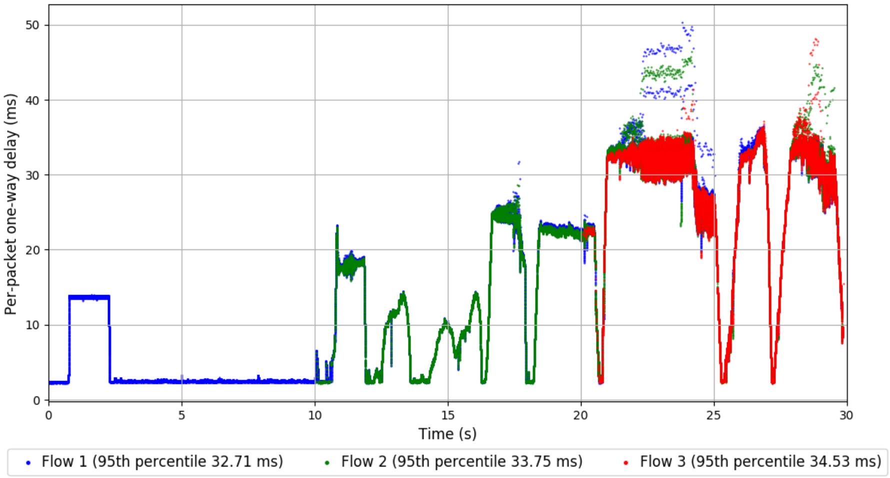
```
Run 1: Statistics of Vivace-LTE

Start at: 2018-02-20 10:04:05
End at: 2018-02-20 10:04:35
Local clock offset: -13.166 ms
Remote clock offset: -12.907 ms

# Below is generated by plot.py at 2018-02-20 16:58:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.82 Mbit/s
95th percentile per-packet one-way delay: 33.447 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 60.96 Mbit/s
95th percentile per-packet one-way delay: 32.714 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 35.18 Mbit/s
95th percentile per-packet one-way delay: 33.752 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 28.92 Mbit/s
95th percentile per-packet one-way delay: 34.529 ms
Loss rate: 0.12%
```

Run 1: Report of Vivace-LTE — Data Link



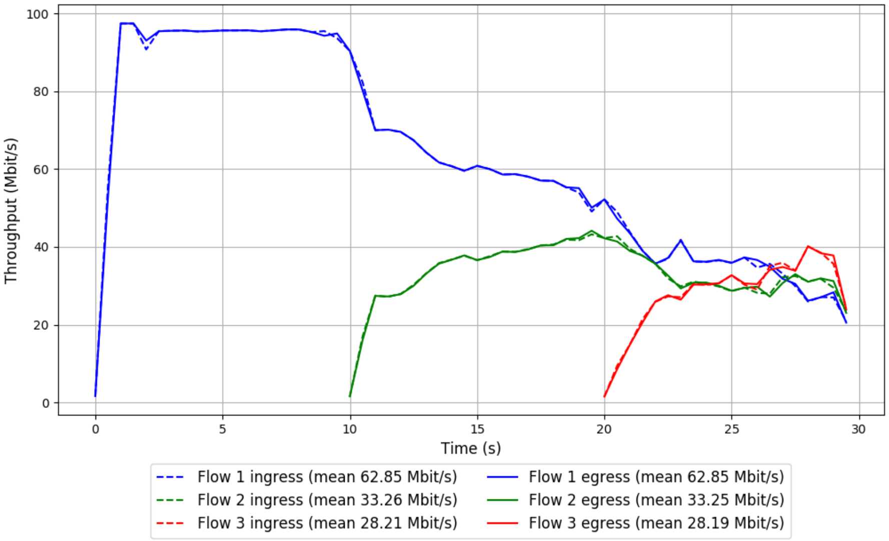


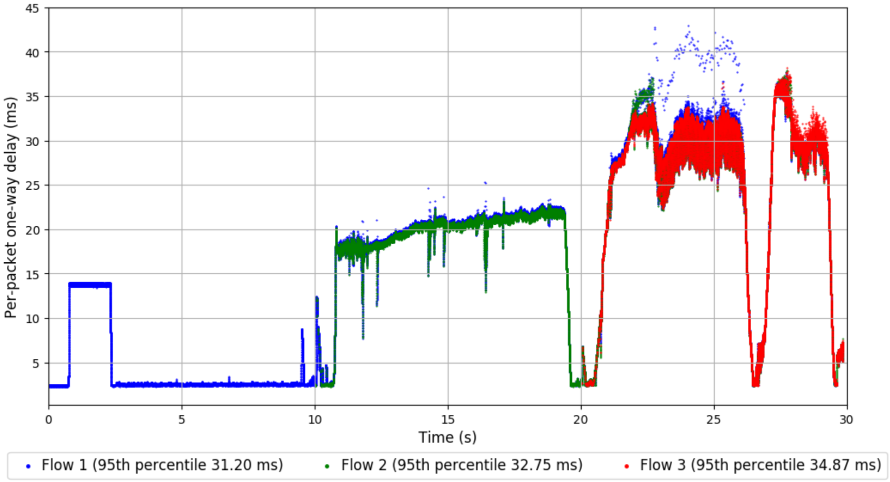
```
Run 2: Statistics of Vivace-LTE

Start at: 2018-02-20 10:24:29
End at: 2018-02-20 10:24:59
Local clock offset: -13.374 ms
Remote clock offset: -12.643 ms

# Below is generated by plot.py at 2018-02-20 16:58:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.21 Mbit/s
95th percentile per-packet one-way delay: 32.332 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 62.85 Mbit/s
95th percentile per-packet one-way delay: 31.204 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 33.25 Mbit/s
95th percentile per-packet one-way delay: 32.752 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 28.19 Mbit/s
95th percentile per-packet one-way delay: 34.871 ms
Loss rate: 0.12%
```

Run 2: Report of Vivace-LTE — Data Link



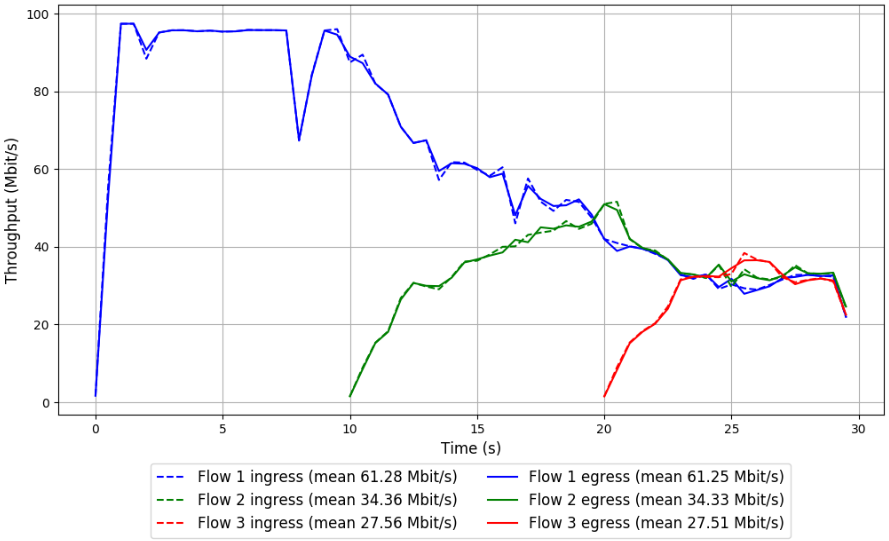


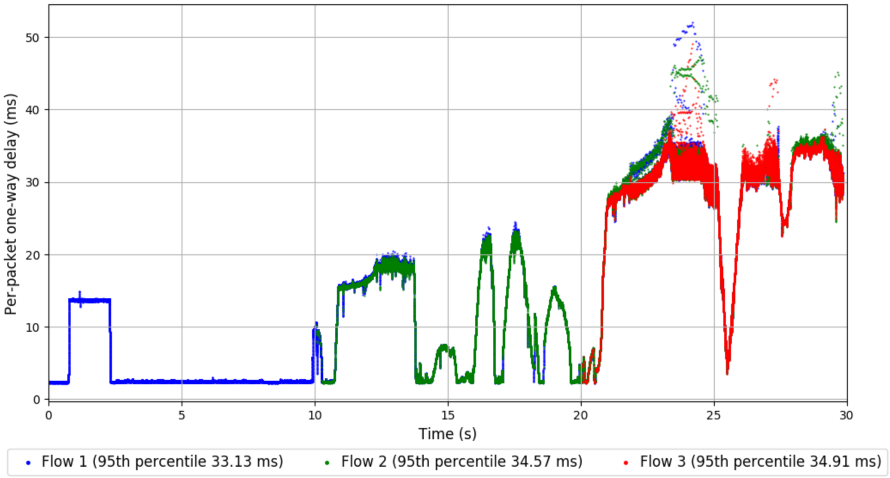
```
Run 3: Statistics of Vivace-LTE

Start at: 2018-02-20 10:44:57
End at: 2018-02-20 10:45:27
Local clock offset: -15.106 ms
Remote clock offset: -12.553 ms

# Below is generated by plot.py at 2018-02-20 16:59:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.08 Mbit/s
95th percentile per-packet one-way delay: 34.264 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 61.25 Mbit/s
95th percentile per-packet one-way delay: 33.129 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 34.33 Mbit/s
95th percentile per-packet one-way delay: 34.568 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 27.51 Mbit/s
95th percentile per-packet one-way delay: 34.906 ms
Loss rate: 0.34%
```

Run 3: Report of Vivace-LTE — Data Link



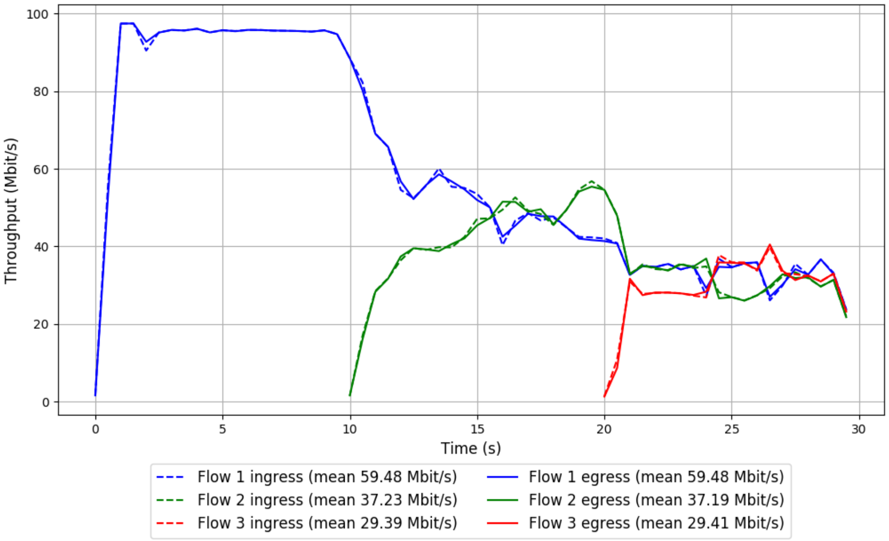


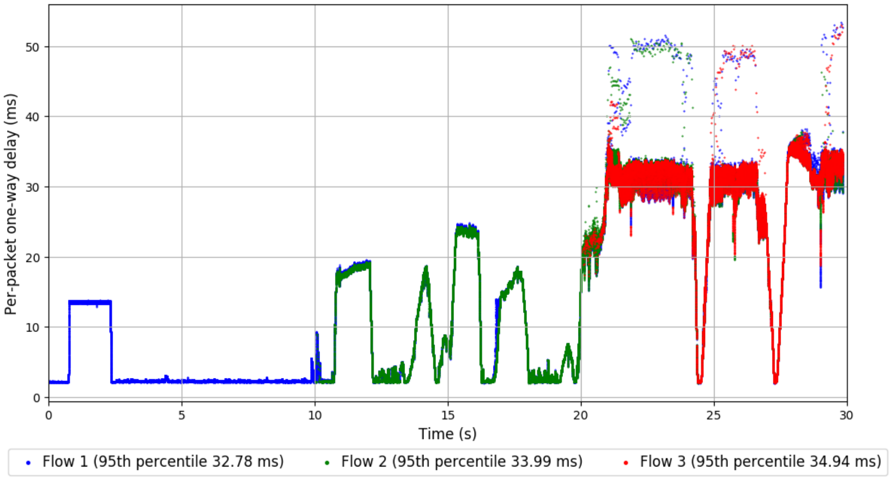
```
Run 4: Statistics of Vivace-LTE

Start at: 2018-02-20 11:05:22
End at: 2018-02-20 11:05:52
Local clock offset: -12.898 ms
Remote clock offset: -12.571 ms

# Below is generated by plot.py at 2018-02-20 16:59:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.84 Mbit/s
95th percentile per-packet one-way delay: 33.602 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 59.48 Mbit/s
95th percentile per-packet one-way delay: 32.776 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 37.19 Mbit/s
95th percentile per-packet one-way delay: 33.986 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 29.41 Mbit/s
95th percentile per-packet one-way delay: 34.941 ms
Loss rate: 0.38%
```

Run 4: Report of Vivace-LTE — Data Link



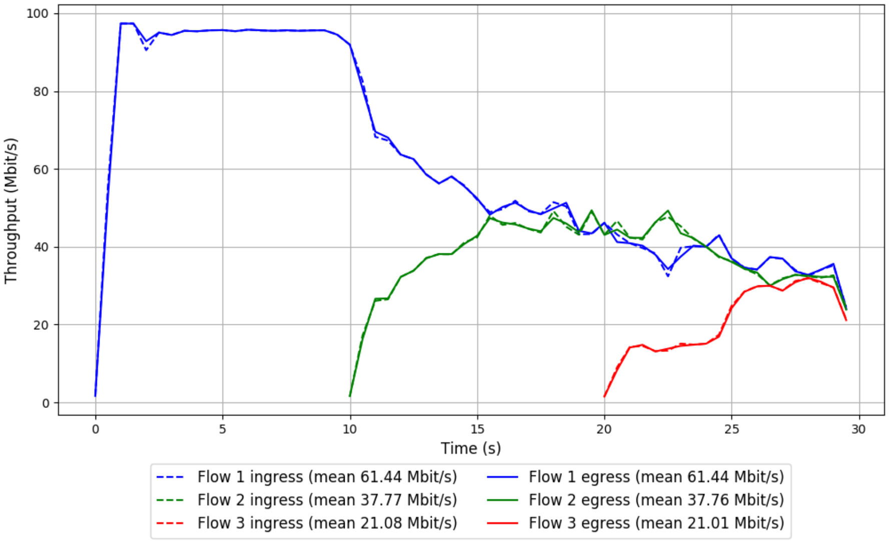


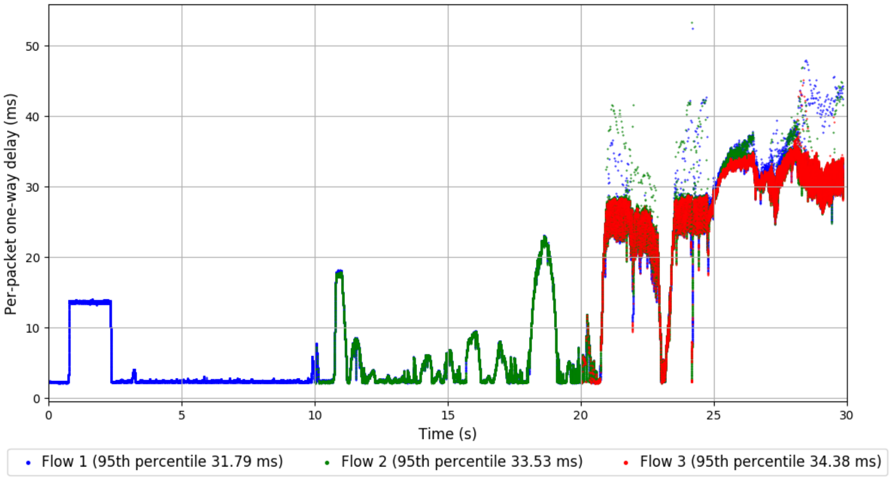
```
Run 5: Statistics of Vivace-LTE

Start at: 2018-02-20 11:25:45
End at: 2018-02-20 11:26:15
Local clock offset: -10.772 ms
Remote clock offset: -12.598 ms

# Below is generated by plot.py at 2018-02-20 16:59:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.43 Mbit/s
95th percentile per-packet one-way delay: 33.232 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 61.44 Mbit/s
95th percentile per-packet one-way delay: 31.789 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 37.76 Mbit/s
95th percentile per-packet one-way delay: 33.532 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 21.01 Mbit/s
95th percentile per-packet one-way delay: 34.376 ms
Loss rate: 0.50%
```

Run 5: Report of Vivace-LTE — Data Link



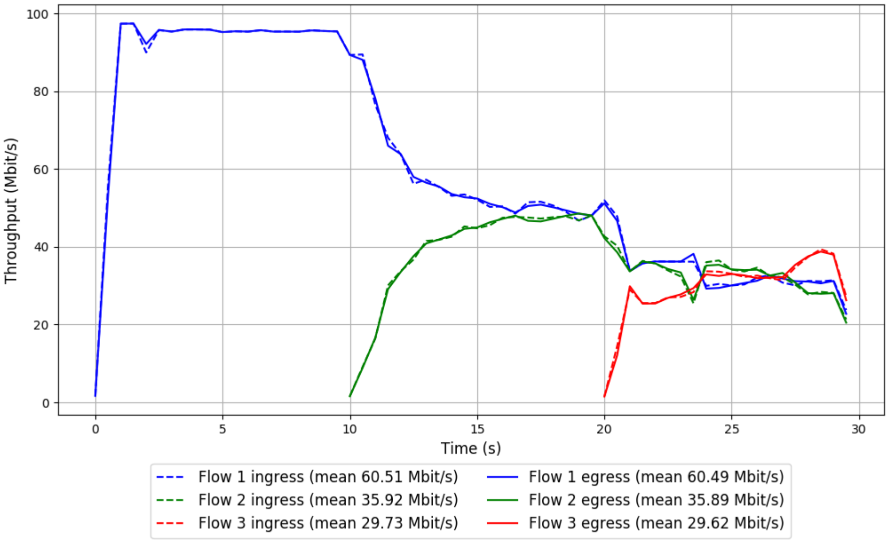


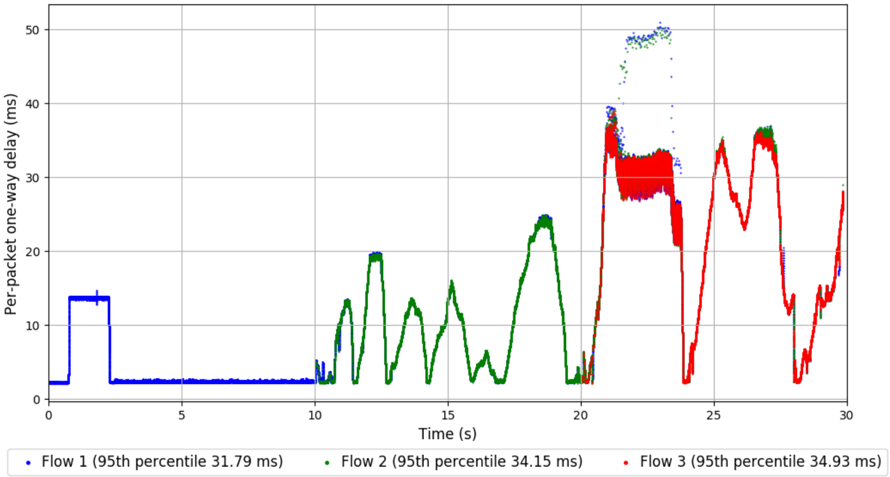
```
Run 6: Statistics of Vivace-LTE

Start at: 2018-02-20 11:46:09
End at: 2018-02-20 11:46:39
Local clock offset: -14.153 ms
Remote clock offset: -12.604 ms

# Below is generated by plot.py at 2018-02-20 16:59:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.06 Mbit/s
95th percentile per-packet one-way delay: 33.107 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 60.49 Mbit/s
95th percentile per-packet one-way delay: 31.785 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 35.89 Mbit/s
95th percentile per-packet one-way delay: 34.147 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 29.62 Mbit/s
95th percentile per-packet one-way delay: 34.926 ms
Loss rate: 0.43%
```

Run 6: Report of Vivace-LTE — Data Link



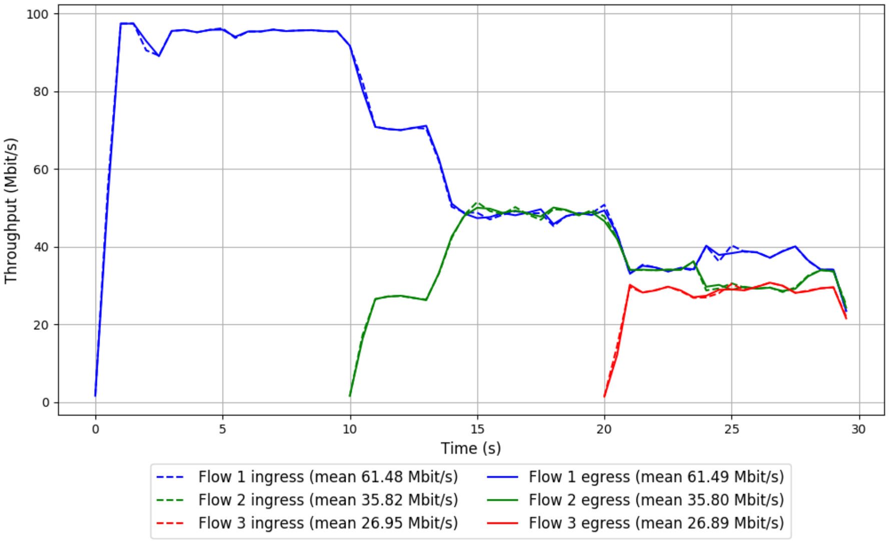


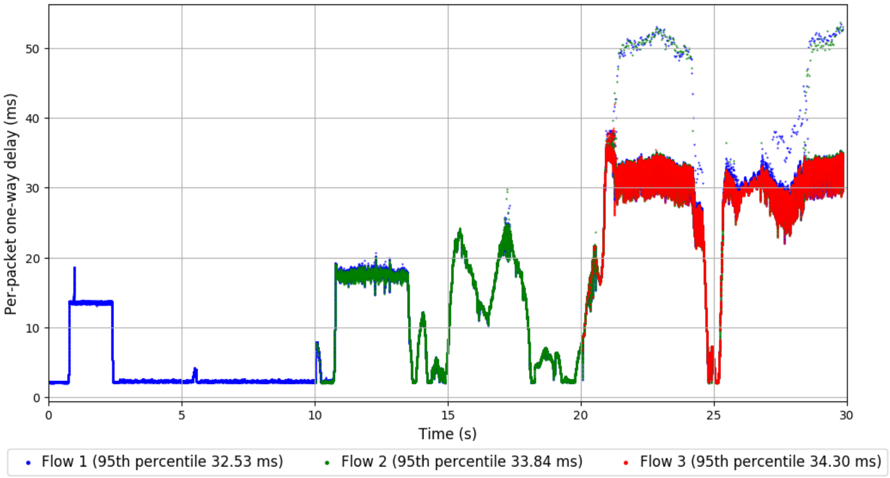
```
Run 7: Statistics of Vivace-LTE

Start at: 2018-02-20 12:06:34
End at: 2018-02-20 12:07:04
Local clock offset: -15.284 ms
Remote clock offset: -12.457 ms

# Below is generated by plot.py at 2018-02-20 16:59:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.11 Mbit/s
95th percentile per-packet one-way delay: 33.577 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 61.49 Mbit/s
95th percentile per-packet one-way delay: 32.528 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 35.80 Mbit/s
95th percentile per-packet one-way delay: 33.835 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 26.89 Mbit/s
95th percentile per-packet one-way delay: 34.301 ms
Loss rate: 0.44%
```

Run 7: Report of Vivace-LTE — Data Link



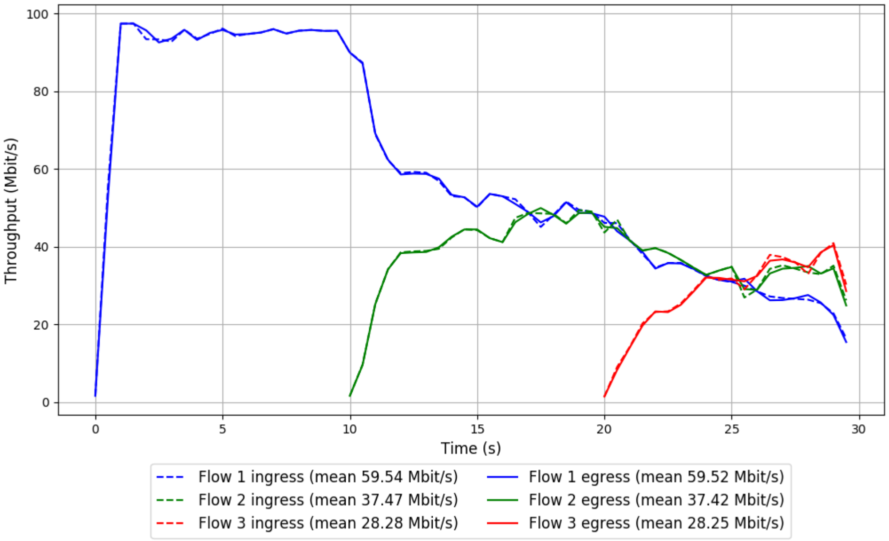


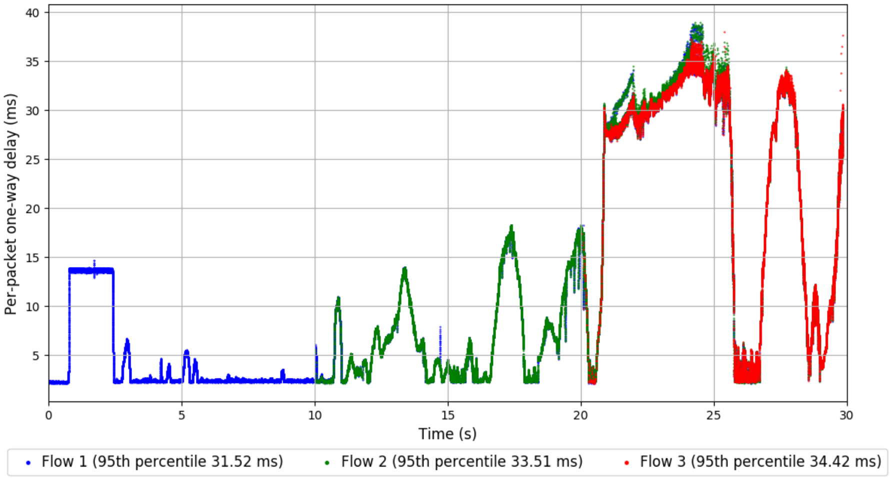
```
Run 8: Statistics of Vivace-LTE

Start at: 2018-02-20 12:26:58
End at: 2018-02-20 12:27:28
Local clock offset: -14.552 ms
Remote clock offset: -12.525 ms

# Below is generated by plot.py at 2018-02-20 16:59:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.68 Mbit/s
95th percentile per-packet one-way delay: 32.943 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 59.52 Mbit/s
95th percentile per-packet one-way delay: 31.516 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 37.42 Mbit/s
95th percentile per-packet one-way delay: 33.506 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 28.25 Mbit/s
95th percentile per-packet one-way delay: 34.421 ms
Loss rate: 0.51%
```

Run 8: Report of Vivace-LTE — Data Link



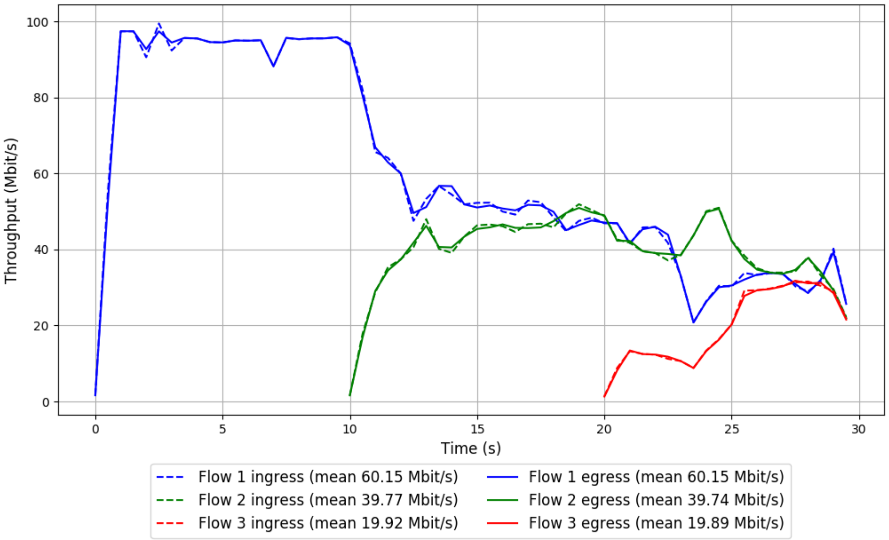


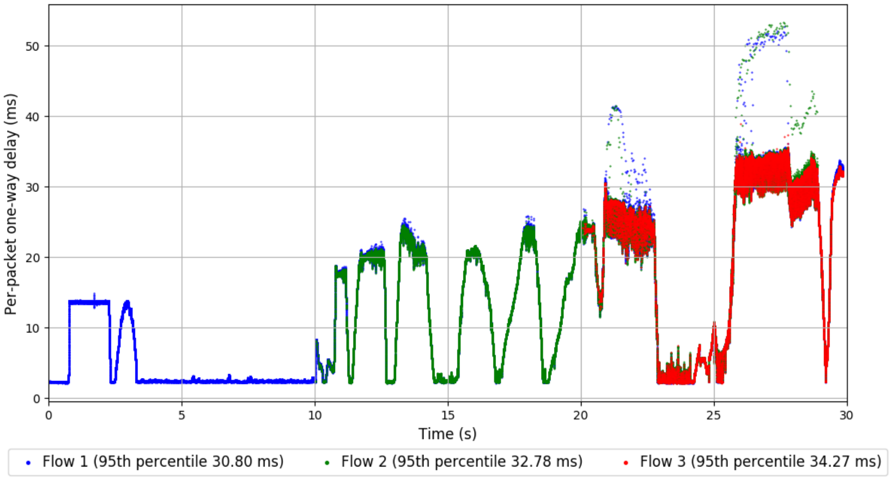
```
Run 9: Statistics of Vivace-LTE

Start at: 2018-02-20 12:47:24
End at: 2018-02-20 12:47:54
Local clock offset: -13.875 ms
Remote clock offset: -12.203 ms

# Below is generated by plot.py at 2018-02-20 16:59:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.09 Mbit/s
95th percentile per-packet one-way delay: 32.624 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 60.15 Mbit/s
95th percentile per-packet one-way delay: 30.802 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 39.74 Mbit/s
95th percentile per-packet one-way delay: 32.776 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 19.89 Mbit/s
95th percentile per-packet one-way delay: 34.269 ms
Loss rate: 0.55%
```

Run 9: Report of Vivace-LTE — Data Link



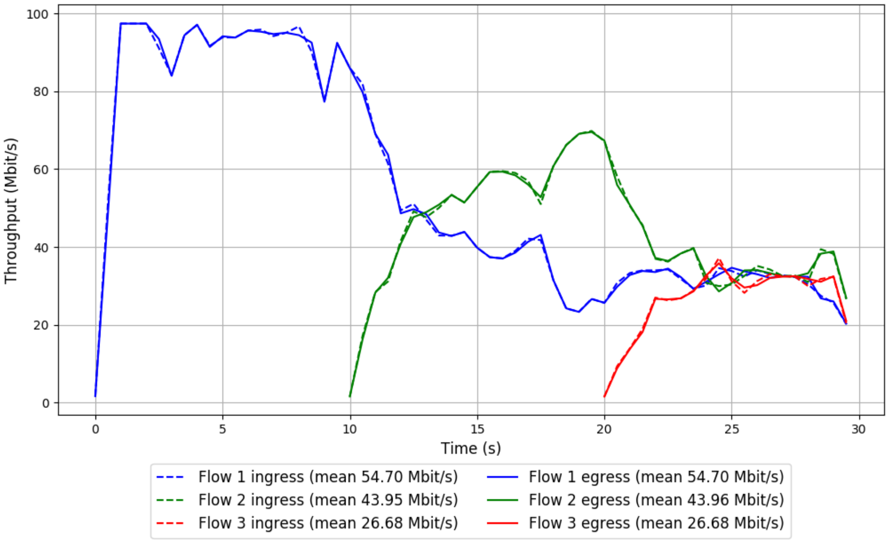


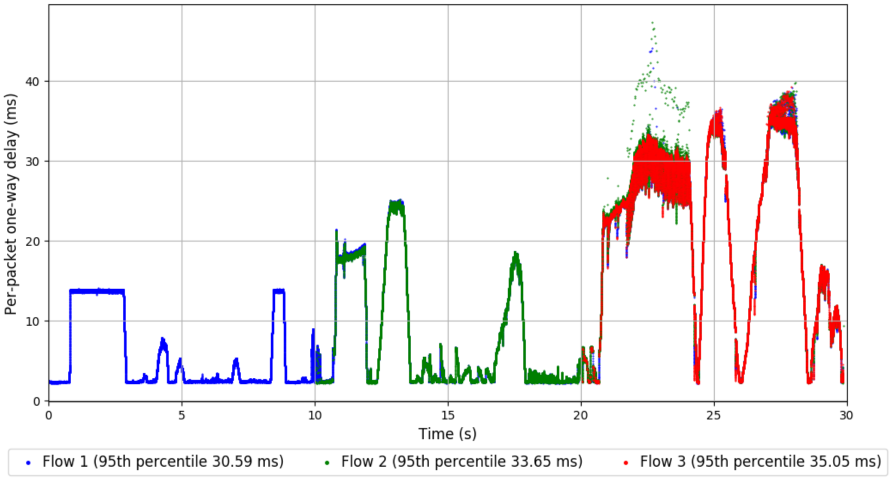
```
Run 10: Statistics of Vivace-LTE

Start at: 2018-02-20 13:07:48
End at: 2018-02-20 13:08:18
Local clock offset: -13.198 ms
Remote clock offset: -12.244 ms

# Below is generated by plot.py at 2018-02-20 16:59:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.66 Mbit/s
95th percentile per-packet one-way delay: 33.503 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 54.70 Mbit/s
95th percentile per-packet one-way delay: 30.591 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 43.96 Mbit/s
95th percentile per-packet one-way delay: 33.650 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 26.68 Mbit/s
95th percentile per-packet one-way delay: 35.053 ms
Loss rate: 0.04%
```

Run 10: Report of Vivace-LTE — Data Link


Throughput (Mbit/s)
Time (s)
0
20
40
60
80
100
0
5
10
15
20
25
30
Flow 1 ingress (mean 54.70 Mbit/s)
Flow 2 ingress (mean 43.95 Mbit/s)
Flow 3 ingress (mean 26.68 Mbit/s)
Flow 1 egress (mean 54.70 Mbit/s)
Flow 2 egress (mean 43.96 Mbit/s)
Flow 3 egress (mean 26.68 Mbit/s)


Per-packet one-way delay (ms)
Time (s)
0
10
20
30
40
0
5
10
15
20
25
30
Flow 1 (95th percentile 30.59 ms)
Flow 2 (95th percentile 33.65 ms)
Flow 3 (95th percentile 35.05 ms)