Pantheon Report

Generated at 2018-03-21 07:01:01 (UTC).

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

Repeated the test of 17 congestion control schemes 10 times.

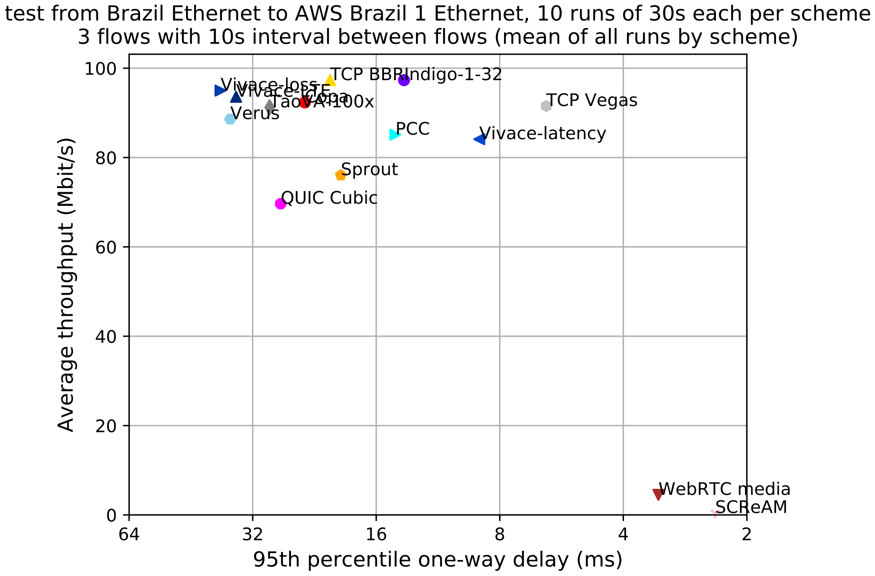
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

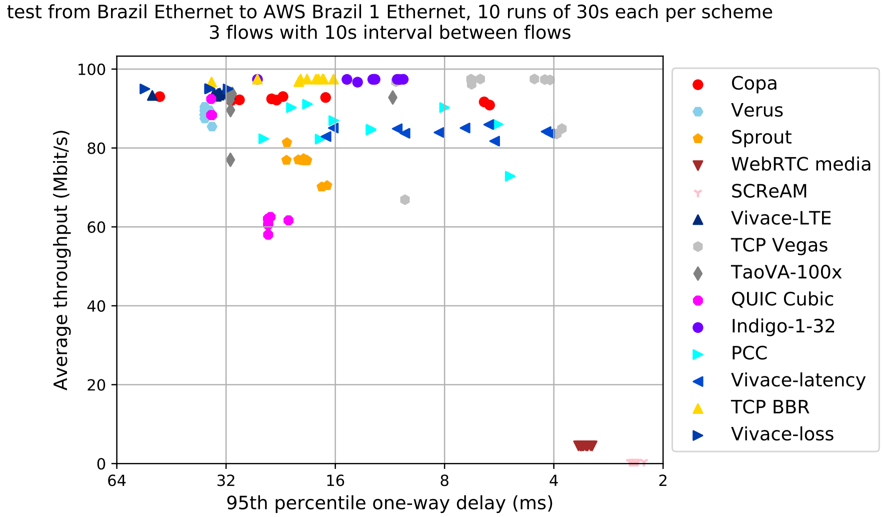
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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
Vivace-loss
Vivace-LTE
Verus
TaoVA-100x
Copa
TCP BBR
Indigo-1-32
TCP Vegas
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
TaoVA-100x
QUIC Cubic
Indigo-1-32
PCC
Vivace-latency
TCP BBR
Vivace-loss

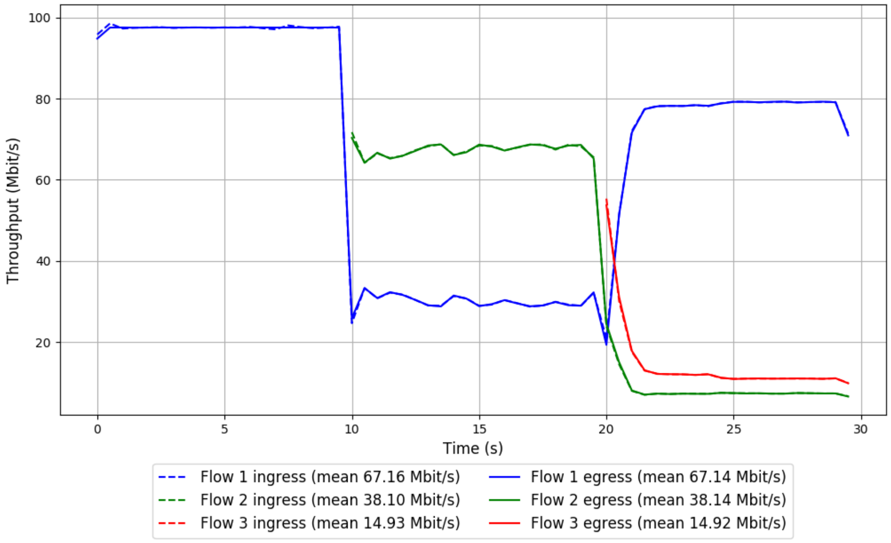
scheme	# runs	mean avg tput (Mbit/s) flow 1	flow 2	flow 3	mean 95th-%ile delay (ms) flow 1	flow 2	flow 3	mean loss rate (%) flow 1	flow 2	flow 3
TCP BBR	10	70.46	31.80	17.27	20.45	21.06	25.52	0.08	0.05	0.16
TCP Cubic	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LEDBAT	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PCC	10	67.85	21.25	9.57	13.94	14.91	14.71	0.01	0.04	0.09
QUIC Cubic	10	17.29	60.17	39.92	12.13	27.29	27.49	0.02	0.11	0.33
SCReAM	10	0.22	0.22	0.22	2.39	2.39	2.39	0.03	0.00	0.00
WebRTC media	10	2.36	1.50	0.66	3.27	3.25	3.41	0.02	0.00	0.03
Sprout	10	43.81	33.67	29.95	18.18	19.56	21.14	0.04	0.06	0.19
TaoVA-100x	10	53.34	40.42	33.30	28.97	29.14	29.14	0.06	0.14	0.32
TCP Vegas	10	42.33	45.79	56.51	7.27	5.95	4.20	0.01	0.02	0.05
Verus	10	51.64	40.28	30.71	35.49	36.25	36.59	0.08	0.17	0.42
Copa	10	58.64	38.37	24.79	21.89	23.16	24.51	0.06	0.22	0.40
FillP	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indigo-1-32	10	47.36	43.24	64.86	11.98	13.59	14.43	0.00	0.04	0.15
Vivace-latency	10	59.21	25.13	24.92	7.03	12.56	15.46	0.01	0.03	0.08
Vivace-loss	5	61.83	35.24	29.76	37.66	38.48	38.62	0.88	1.03	4.83
Vivace-LTE	10	59.89	37.21	27.37	33.92	35.54	36.12	0.05	0.10	0.32

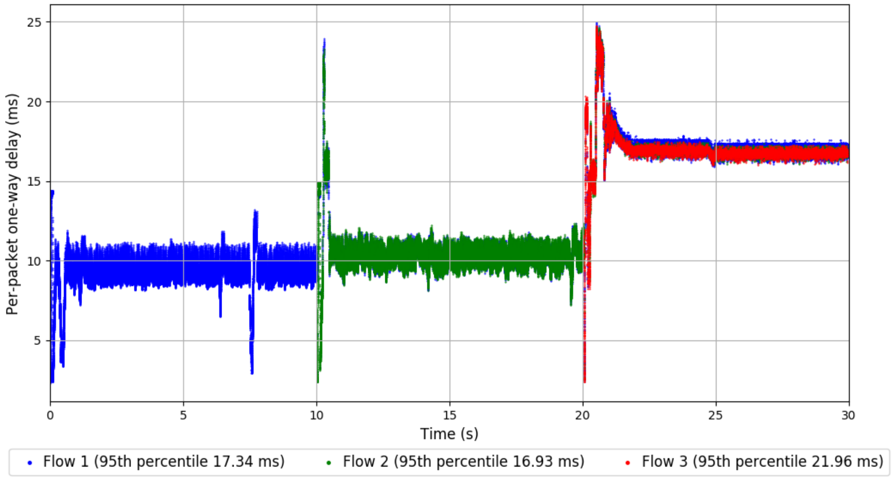
```
Run 1: Statistics of TCP BBR

Start at: 2018-03-20 23:46:26
End at: 2018-03-20 23:46:56
Local clock offset: -13.22 ms
Remote clock offset: -14.05 ms

# Below is generated by plot.py at 2018-03-21 06:39:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 17.339 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 67.14 Mbit/s
95th percentile per-packet one-way delay: 17.342 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 38.14 Mbit/s
95th percentile per-packet one-way delay: 16.934 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 14.92 Mbit/s
95th percentile per-packet one-way delay: 21.956 ms
Loss rate: 0.15%
```

Run 1: Report of TCP BBR — Data Link



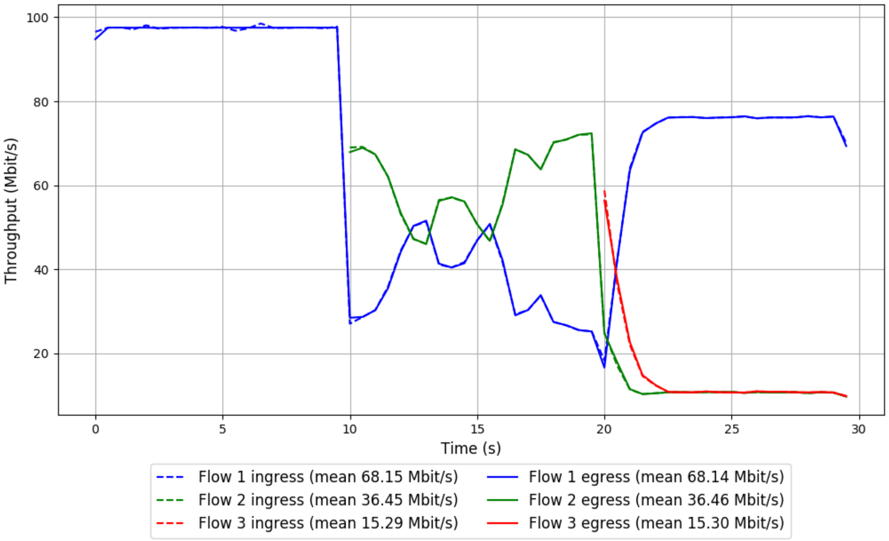


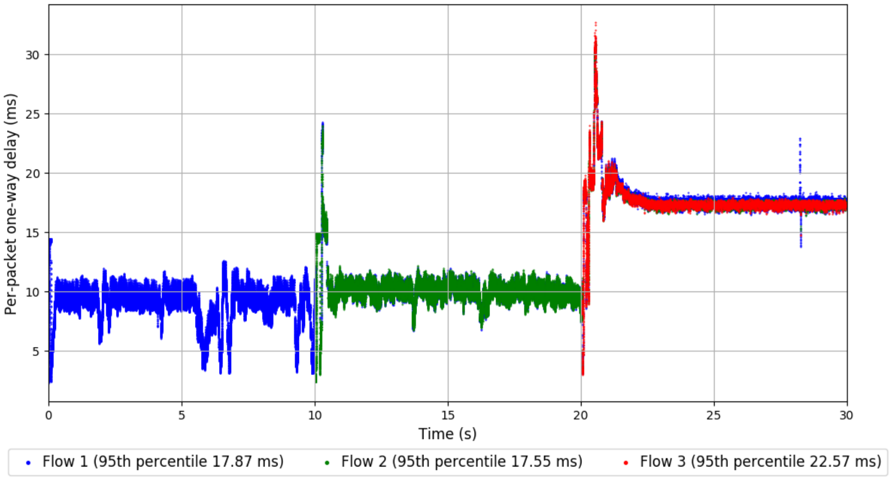
```
Run 2: Statistics of TCP BBR

Start at: 2018-03-21 00:06:57
End at: 2018-03-21 00:07:27
Local clock offset: -13.023 ms
Remote clock offset: -14.412 ms

# Below is generated by plot.py at 2018-03-21 06:39:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 18.086 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 68.14 Mbit/s
95th percentile per-packet one-way delay: 17.872 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 36.46 Mbit/s
95th percentile per-packet one-way delay: 17.552 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 15.30 Mbit/s
95th percentile per-packet one-way delay: 22.571 ms
Loss rate: 0.15%
```

Run 2: Report of TCP BBR — Data Link



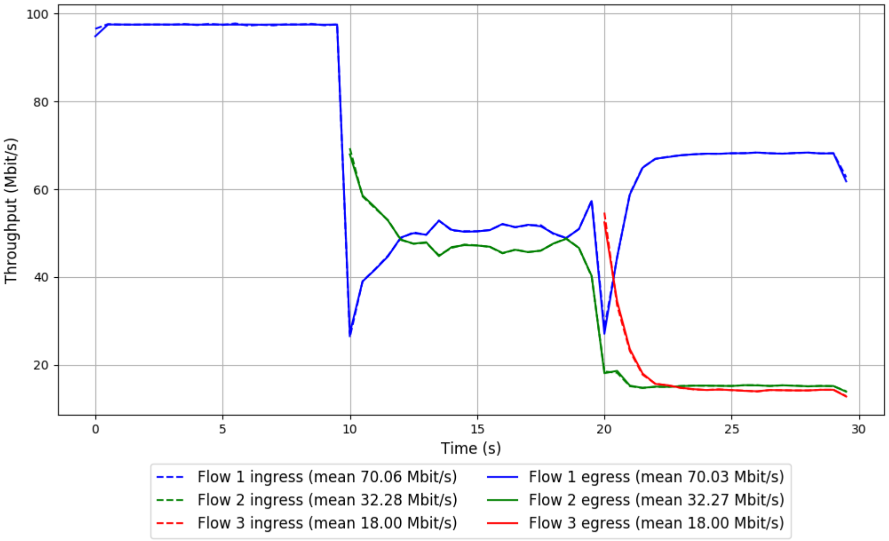


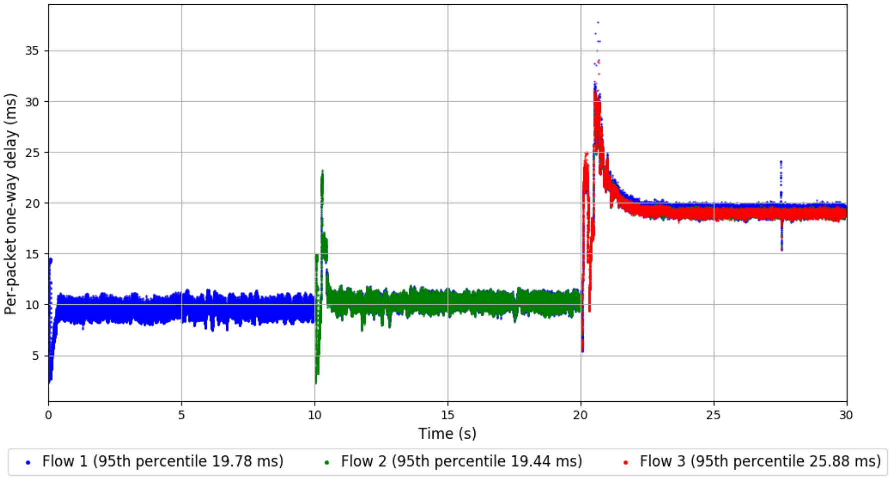
```
Run 3: Statistics of TCP BBR

Start at: 2018-03-21 00:27:33
End at: 2018-03-21 00:28:03
Local clock offset: -13.008 ms
Remote clock offset: -14.482 ms

# Below is generated by plot.py at 2018-03-21 06:39:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 19.946 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 70.03 Mbit/s
95th percentile per-packet one-way delay: 19.777 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 32.27 Mbit/s
95th percentile per-packet one-way delay: 19.442 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 18.00 Mbit/s
95th percentile per-packet one-way delay: 25.881 ms
Loss rate: 0.17%
```

Run 3: Report of TCP BBR — Data Link



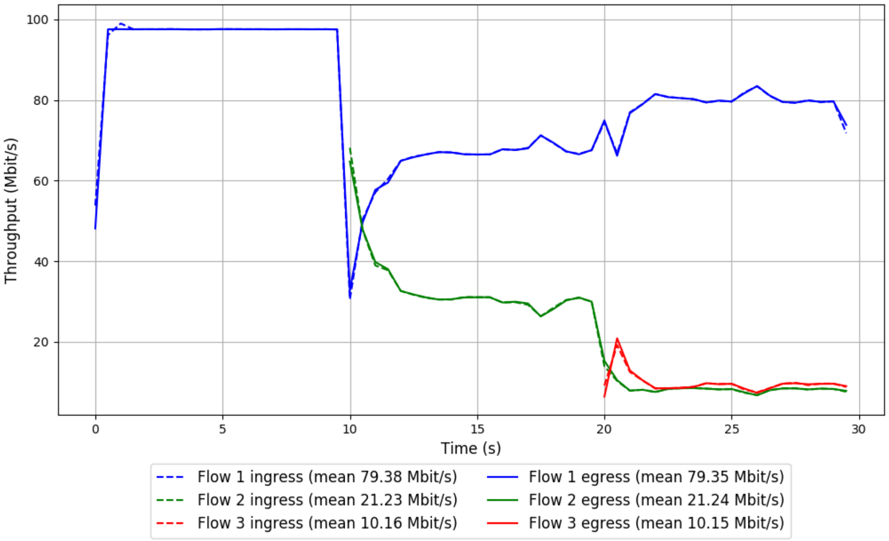


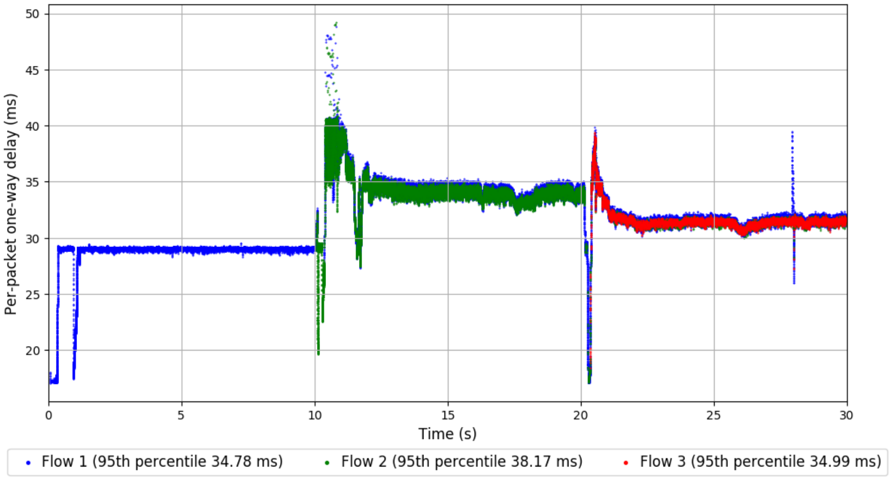
```
Run 4: Statistics of TCP BBR

Start at: 2018-03-21 00:48:01
End at: 2018-03-21 00:48:31
Local clock offset: -12.114 ms
Remote clock offset: -29.361 ms

# Below is generated by plot.py at 2018-03-21 06:39:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.73 Mbit/s
95th percentile per-packet one-way delay: 35.080 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 79.35 Mbit/s
95th percentile per-packet one-way delay: 34.783 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 21.24 Mbit/s
95th percentile per-packet one-way delay: 38.175 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 10.15 Mbit/s
95th percentile per-packet one-way delay: 34.992 ms
Loss rate: 0.21%
```

Run 4: Report of TCP BBR — Data Link



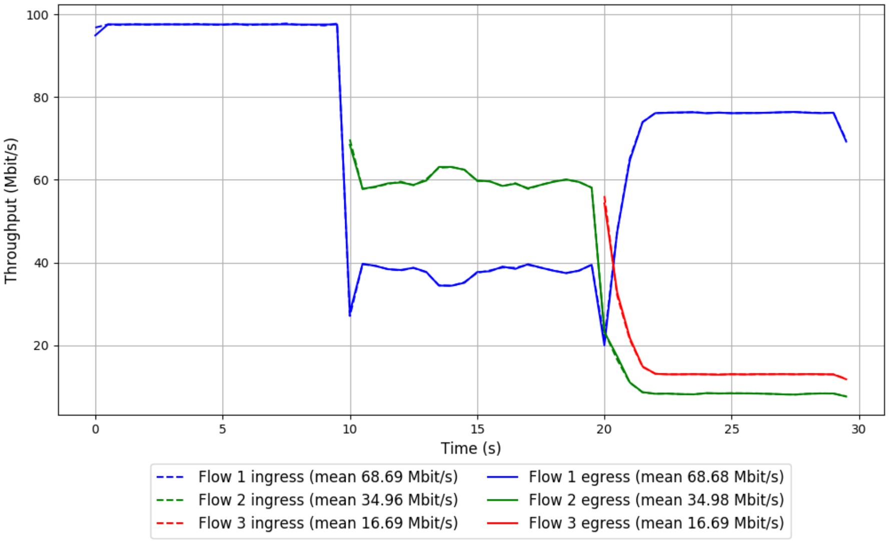


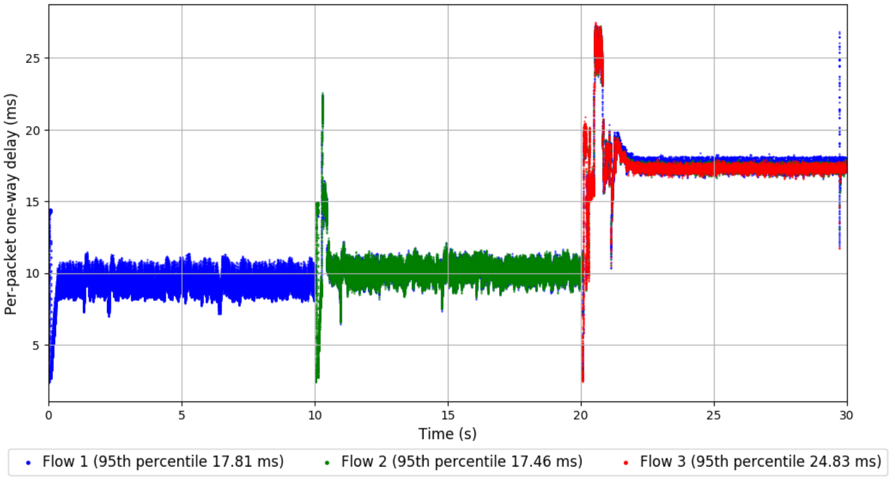
```
Run 5: Statistics of TCP BBR

Start at: 2018-03-21 01:08:29
End at: 2018-03-21 01:08:59
Local clock offset: -11.889 ms
Remote clock offset: -14.639 ms

# Below is generated by plot.py at 2018-03-21 06:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 17.817 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 68.68 Mbit/s
95th percentile per-packet one-way delay: 17.814 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 34.98 Mbit/s
95th percentile per-packet one-way delay: 17.462 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 16.69 Mbit/s
95th percentile per-packet one-way delay: 24.832 ms
Loss rate: 0.16%
```

Run 5: Report of TCP BBR — Data Link



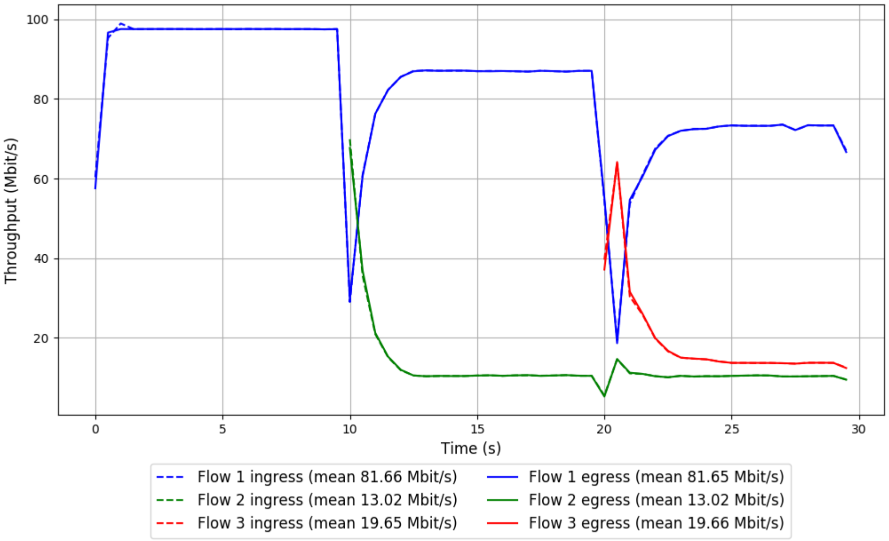


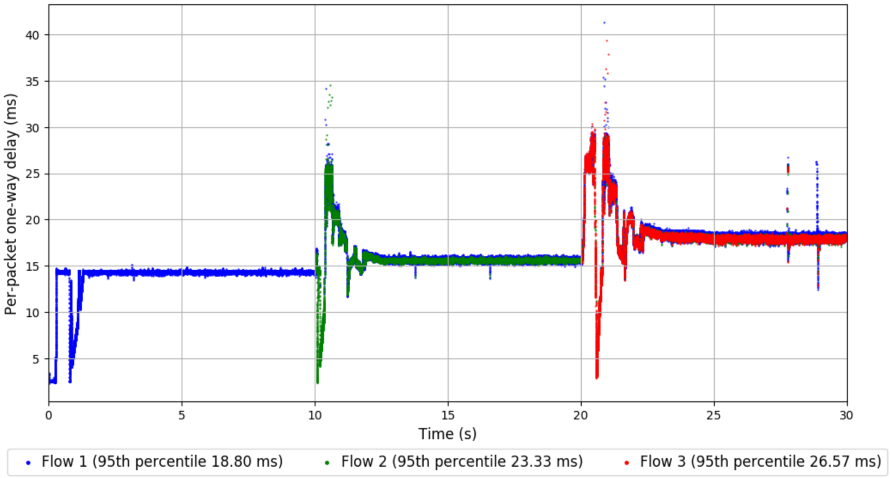
```
Run 6: Statistics of TCP BBR

Start at: 2018-03-21 01:28:54
End at: 2018-03-21 01:29:24
Local clock offset: -11.794 ms
Remote clock offset: -14.743 ms

# Below is generated by plot.py at 2018-03-21 06:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.82 Mbit/s
95th percentile per-packet one-way delay: 20.173 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 81.65 Mbit/s
95th percentile per-packet one-way delay: 18.800 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 13.02 Mbit/s
95th percentile per-packet one-way delay: 23.334 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 19.66 Mbit/s
95th percentile per-packet one-way delay: 26.573 ms
Loss rate: 0.15%
```

Run 6: Report of TCP BBR — Data Link



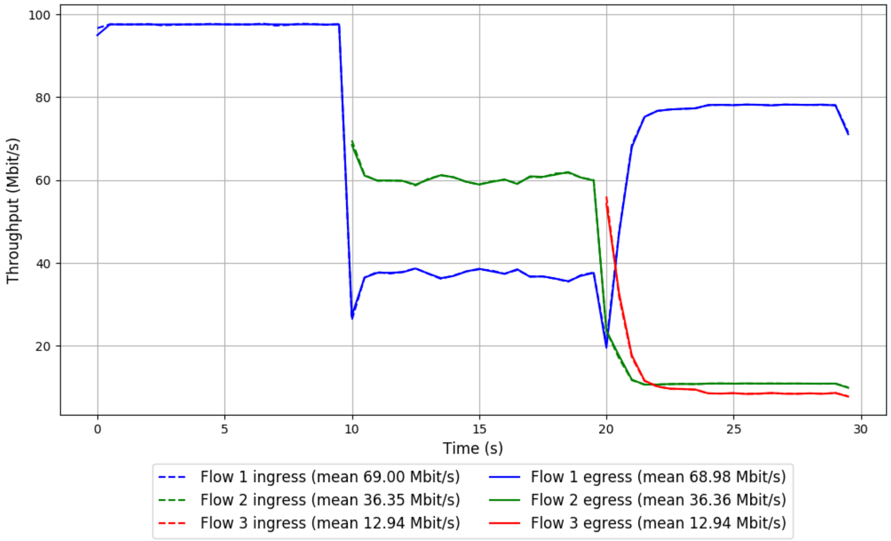


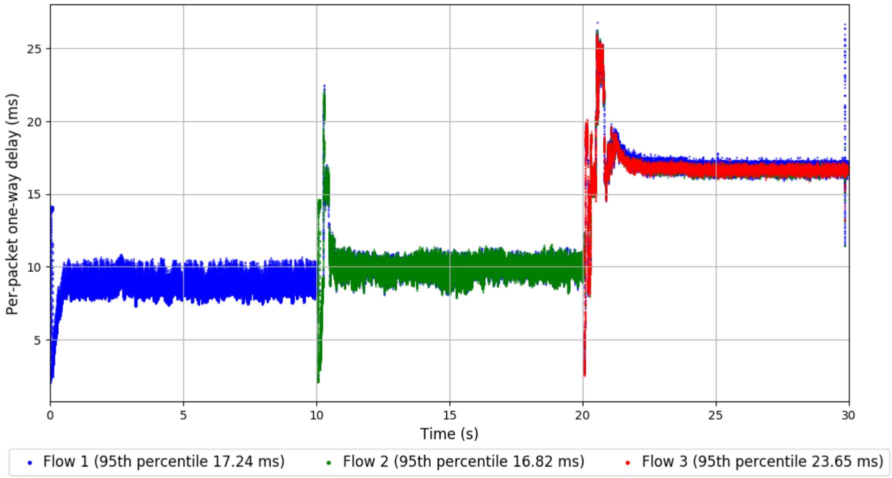
```
Run 7: Statistics of TCP BBR

Start at: 2018-03-21 01:49:17
End at: 2018-03-21 01:49:47
Local clock offset: -5.687 ms
Remote clock offset: -6.034 ms

# Below is generated by plot.py at 2018-03-21 06:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 17.242 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 68.98 Mbit/s
95th percentile per-packet one-way delay: 17.236 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 36.36 Mbit/s
95th percentile per-packet one-way delay: 16.825 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 12.94 Mbit/s
95th percentile per-packet one-way delay: 23.646 ms
Loss rate: 0.13%
```

Run 7: Report of TCP BBR — Data Link



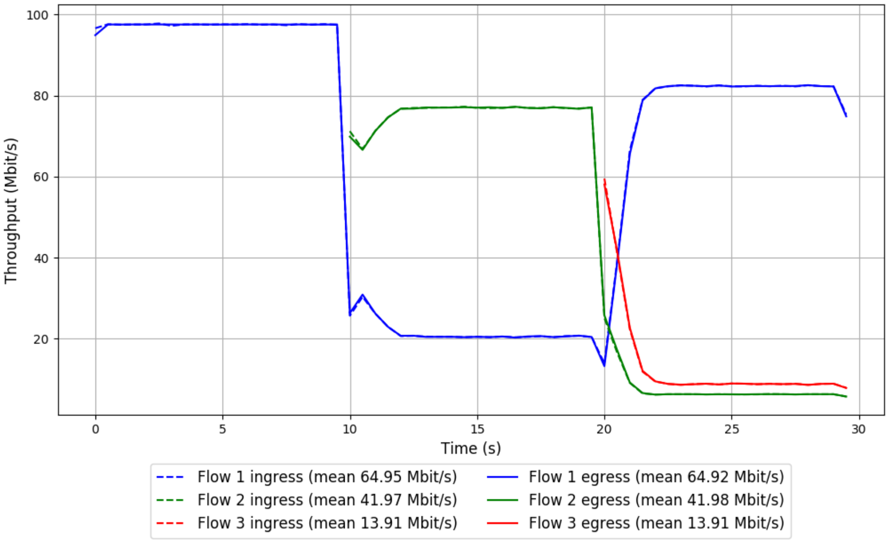


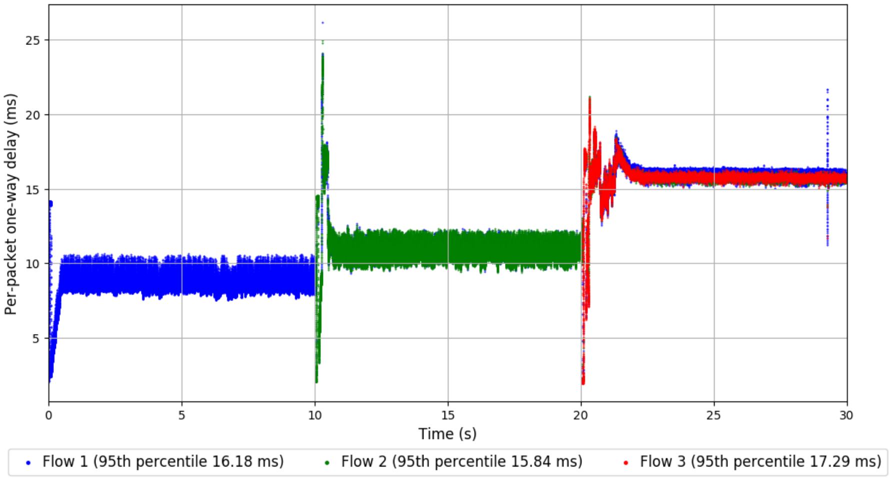
```
Run 8: Statistics of TCP BBR

Start at: 2018-03-21 02:09:41
End at: 2018-03-21 02:10:11
Local clock offset: -1.422 ms
Remote clock offset: -3.105 ms

# Below is generated by plot.py at 2018-03-21 06:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 16.186 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 64.92 Mbit/s
95th percentile per-packet one-way delay: 16.184 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 41.98 Mbit/s
95th percentile per-packet one-way delay: 15.843 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 13.91 Mbit/s
95th percentile per-packet one-way delay: 17.288 ms
Loss rate: 0.12%
```

Run 8: Report of TCP BBR — Data Link



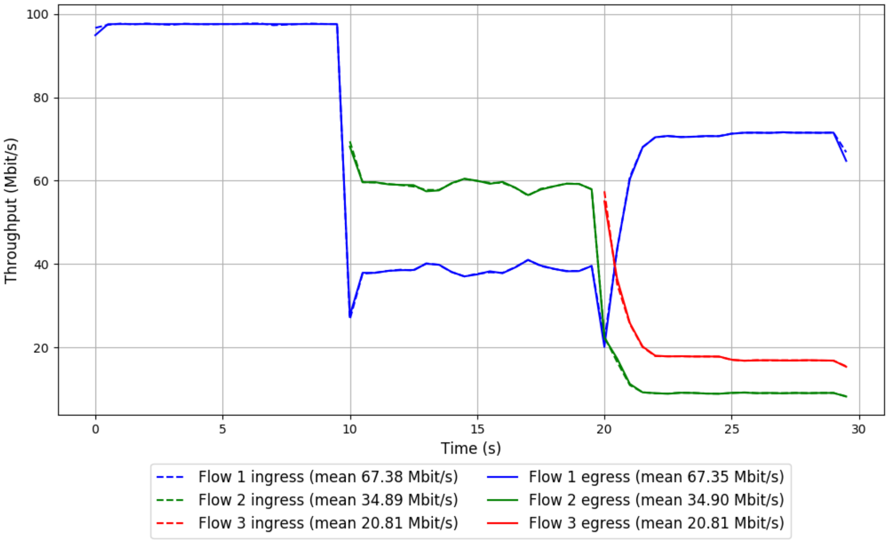


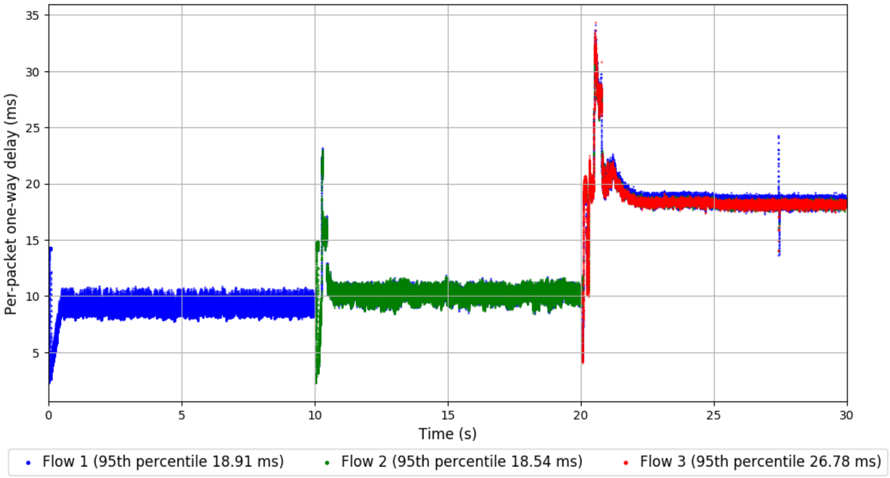
```
Run 9: Statistics of TCP BBR

Start at: 2018-03-21 02:30:07
End at: 2018-03-21 02:30:37
Local clock offset: -2.573 ms
Remote clock offset: -5.062 ms

# Below is generated by plot.py at 2018-03-21 06:40:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 19.144 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 67.35 Mbit/s
95th percentile per-packet one-way delay: 18.910 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 34.90 Mbit/s
95th percentile per-packet one-way delay: 18.535 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 20.81 Mbit/s
95th percentile per-packet one-way delay: 26.779 ms
Loss rate: 0.17%
```

Run 9: Report of TCP BBR — Data Link



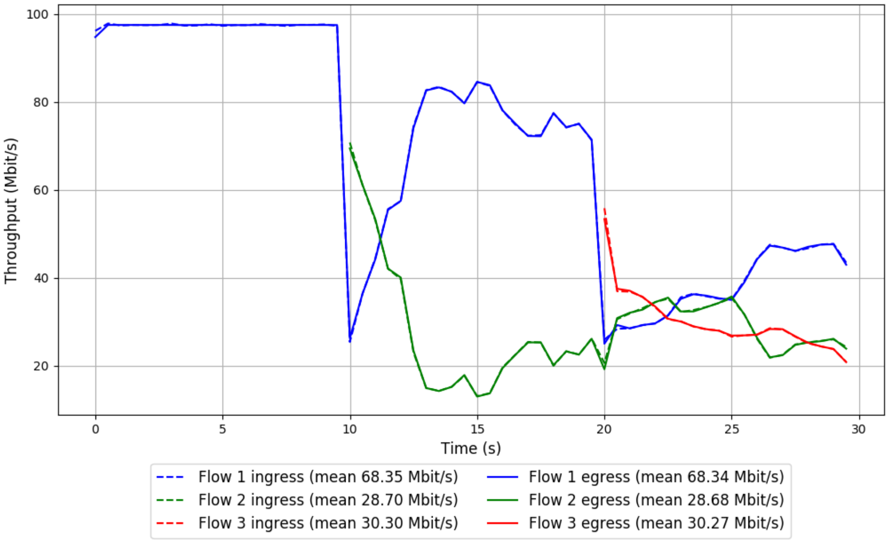


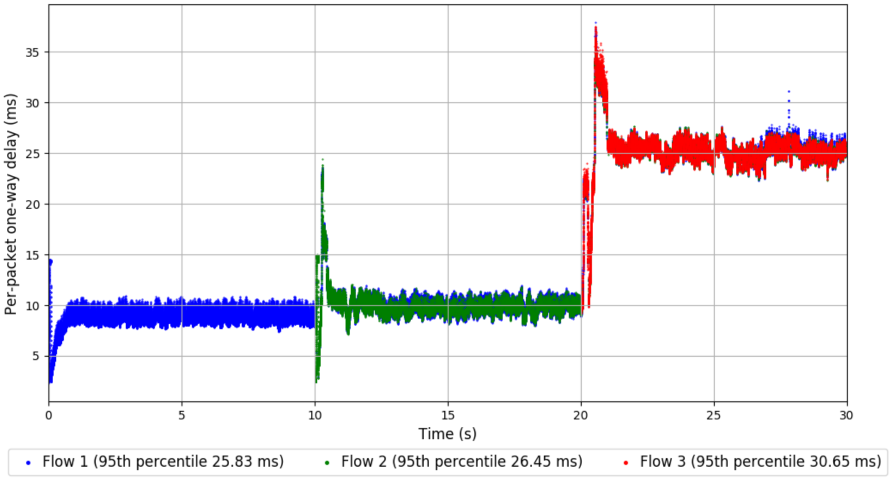
```
Run 10: Statistics of TCP BBR

Start at: 2018-03-21 02:50:30
End at: 2018-03-21 02:51:00
Local clock offset: -2.368 ms
Remote clock offset: -5.945 ms

# Below is generated by plot.py at 2018-03-21 06:40:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 26.224 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 68.34 Mbit/s
95th percentile per-packet one-way delay: 25.829 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 28.68 Mbit/s
95th percentile per-packet one-way delay: 26.454 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 30.27 Mbit/s
95th percentile per-packet one-way delay: 30.650 ms
Loss rate: 0.22%
```

Run 10: Report of TCP BBR — Data Link





```
Run 1: Statistics of TCP Cubic

Start at: 2018-03-20 23:47:35
End at: 2018-03-20 23:48:05
Local clock offset: -13.268 ms
Remote clock offset: -14.072 ms
```

Run 1: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 2: Statistics of TCP Cubic

Start at: 2018-03-21 00:08:06
End at: 2018-03-21 00:08:36
Local clock offset: -13.013 ms
Remote clock offset: -14.407 ms
```

Run 2: Report of TCP Cubic — Data Link

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Figure is missing

```
Run 3: Statistics of TCP Cubic

Start at: 2018-03-21 00:28:41
End at: 2018-03-21 00:29:11
Local clock offset: -13.029 ms
Remote clock offset: -14.455 ms
```

Run 3: Report of TCP Cubic — Data Link

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Figure is missing

Run 4: Statistics of TCP Cubic

Start at: 2018-03-21 00:49:10
End at: 2018-03-21 00:49:40
Local clock offset: -12.119 ms
Remote clock offset: -14.6 ms

Run 4: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 5: Statistics of TCP Cubic

Start at: 2018-03-21 01:09:37
End at: 2018-03-21 01:10:07
Local clock offset: -11.926 ms
Remote clock offset: -14.65 ms
```

Run 5: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 6: Statistics of TCP Cubic

Start at: 2018-03-21 01:30:02
End at: 2018-03-21 01:30:32
Local clock offset: -11.809 ms
Remote clock offset: -33.199 ms
```

Run 6: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 7: Statistics of TCP Cubic

Start at: 2018-03-21 01:50:25
End at: 2018-03-21 01:50:55
Local clock offset: -5.138 ms
Remote clock offset: -5.861 ms
```

Run 7: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 8: Statistics of TCP Cubic

Start at: 2018-03-21 02:10:49
End at: 2018-03-21 02:11:19
Local clock offset: -1.17 ms
Remote clock offset: -3.436 ms
```

Run 8: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 9: Statistics of TCP Cubic

Start at: 2018-03-21 02:31:15
End at: 2018-03-21 02:31:45
Local clock offset: -2.509 ms
Remote clock offset: -5.03 ms
```

Run 9: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 10: Statistics of TCP Cubic

Start at: 2018-03-21 02:51:38
End at: 2018-03-21 02:52:08
Local clock offset: -2.516 ms
Remote clock offset: -6.042 ms
```

Run 10: Report of TCP Cubic — Data Link

Figure is missing

Figure is missing

```
Run 1: Statistics of LEDBAT

Start at: 2018-03-20 23:49:51
End at: 2018-03-20 23:50:21
Local clock offset: -13.401 ms
Remote clock offset: -14.063 ms
```

Run 1: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 2: Statistics of LEDBAT

Start at: 2018-03-21 00:10:24
End at: 2018-03-21 00:10:54
Local clock offset: -13.078 ms
Remote clock offset: -14.431 ms
```

Run 2: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 3: Statistics of LEDBAT

Start at: 2018-03-21 00:30:58
End at: 2018-03-21 00:31:28
Local clock offset: -12.905 ms
Remote clock offset: -28.703 ms
```

Run 3: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 4: Statistics of LEDBAT

Start at: 2018-03-21 00:51:27
End at: 2018-03-21 00:51:57
Local clock offset: -12.143 ms
Remote clock offset: -14.617 ms
```

Run 4: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 5: Statistics of LEDBAT

Start at: 2018-03-21 01:11:54
End at: 2018-03-21 01:12:24
Local clock offset: -11.938 ms
Remote clock offset: -14.655 ms
```

Run 5: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 6: Statistics of LEDBAT

Start at: 2018-03-21 01:32:18
End at: 2018-03-21 01:32:48
Local clock offset: -11.845 ms
Remote clock offset: -14.683 ms
```

Run 6: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 7: Statistics of LEDBAT

Start at: 2018-03-21 01:52:42
End at: 2018-03-21 01:53:12
Local clock offset: -4.513 ms
Remote clock offset: -5.228 ms
```

Run 7: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 8: Statistics of LEDBAT

Start at: 2018-03-21 02:13:06
End at: 2018-03-21 02:13:36
Local clock offset: -1.116 ms
Remote clock offset: -4.086 ms
```

Run 8: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 9: Statistics of LEDBAT

Start at: 2018-03-21 02:33:32
End at: 2018-03-21 02:34:02
Local clock offset: -2.4 ms
Remote clock offset: -4.982 ms
```

Run 9: Report of LEDBAT — Data Link

Figure is missing

Figure is missing

```
Run 10: Statistics of LEDBAT

Start at: 2018-03-21 02:53:55
End at: 2018-03-21 02:54:25
Local clock offset: -2.719 ms
Remote clock offset: -6.285 ms
```

Run 10: Report of LEDBAT — Data Link

Figure is missing

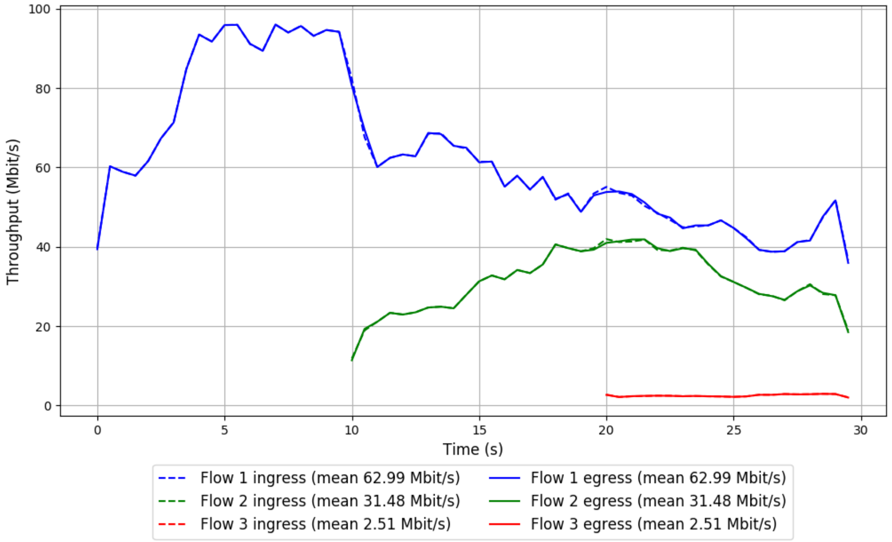
Figure is missing

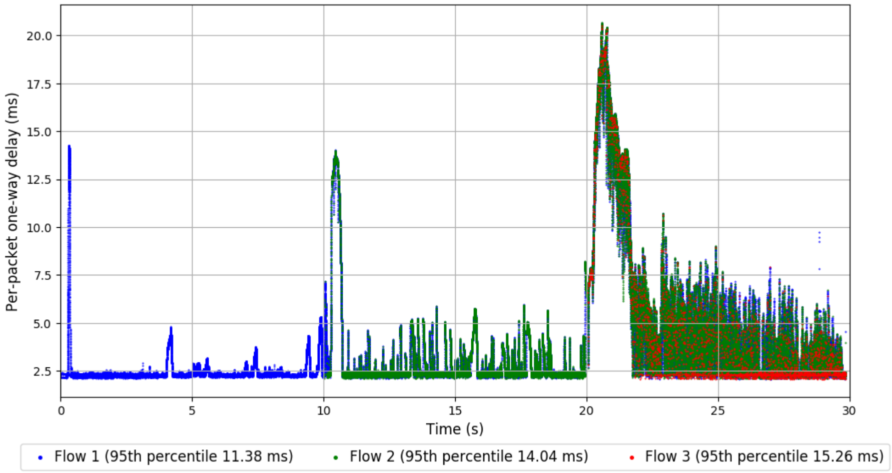
```
Run 1: Statistics of PCC

Start at: 2018-03-21 00:01:19
End at: 2018-03-21 00:01:49
Local clock offset: -13.219 ms
Remote clock offset: -14.374 ms

# Below is generated by plot.py at 2018-03-21 06:40:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.74 Mbit/s
95th percentile per-packet one-way delay: 12.744 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 62.99 Mbit/s
95th percentile per-packet one-way delay: 11.377 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 31.48 Mbit/s
95th percentile per-packet one-way delay: 14.037 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 2.51 Mbit/s
95th percentile per-packet one-way delay: 15.260 ms
Loss rate: 0.10%
```

Run 1: Report of PCC — Data Link



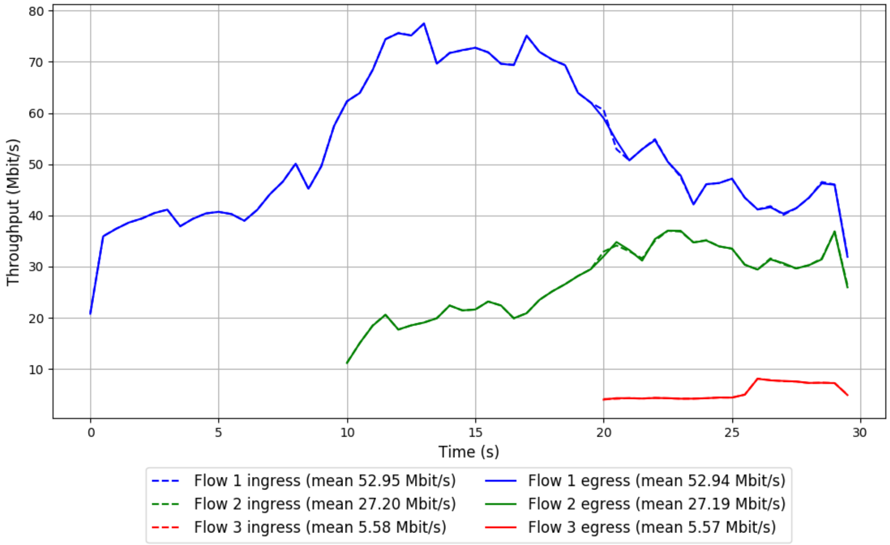


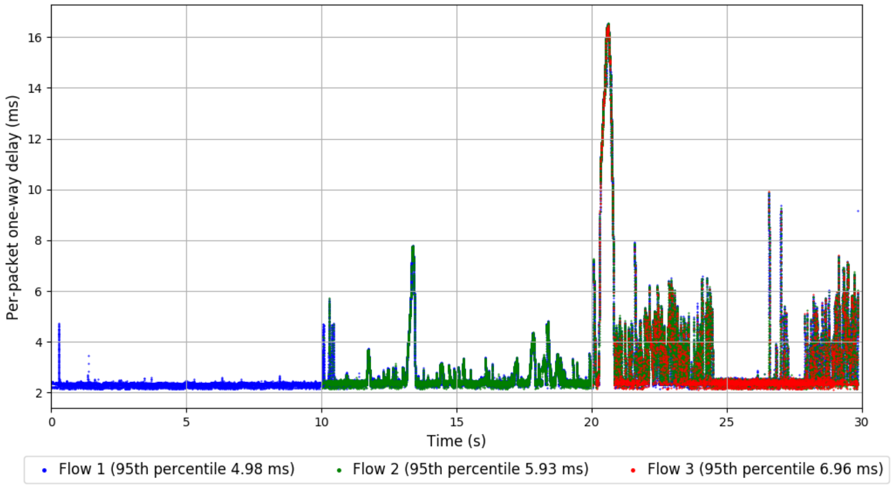
```
Run 2: Statistics of PCC

Start at: 2018-03-21 00:21:55
End at: 2018-03-21 00:22:25
Local clock offset: -13.065 ms
Remote clock offset: -14.41 ms

# Below is generated by plot.py at 2018-03-21 06:40:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.84 Mbit/s
95th percentile per-packet one-way delay: 5.273 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 52.94 Mbit/s
95th percentile per-packet one-way delay: 4.982 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 27.19 Mbit/s
95th percentile per-packet one-way delay: 5.928 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 5.57 Mbit/s
95th percentile per-packet one-way delay: 6.961 ms
Loss rate: 0.10%
```

Run 2: Report of PCC — Data Link



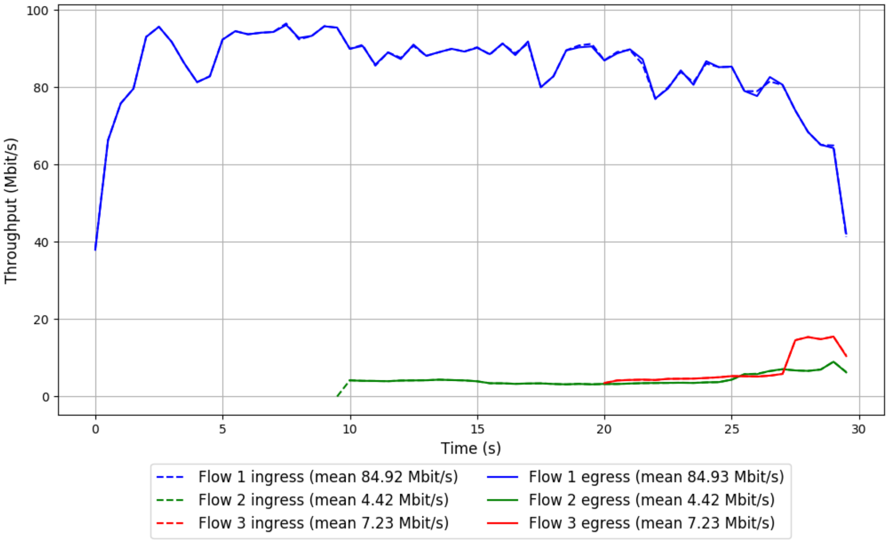


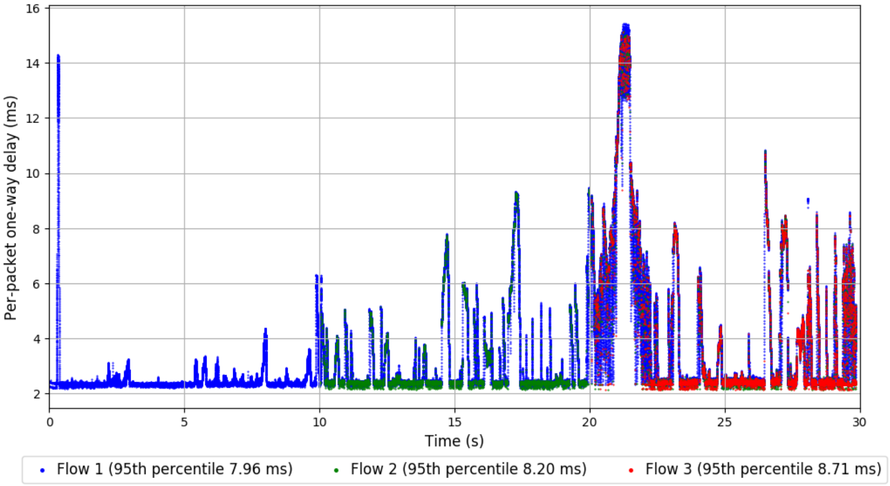
```
Run 3: Statistics of PCC

Start at: 2018-03-21 00:42:23
End at: 2018-03-21 00:42:53
Local clock offset: -12.257 ms
Remote clock offset: -14.6 ms

# Below is generated by plot.py at 2018-03-21 06:40:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.25 Mbit/s
95th percentile per-packet one-way delay: 7.998 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 84.93 Mbit/s
95th percentile per-packet one-way delay: 7.960 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.42 Mbit/s
95th percentile per-packet one-way delay: 8.204 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 7.23 Mbit/s
95th percentile per-packet one-way delay: 8.707 ms
Loss rate: 0.15%
```

Run 3: Report of PCC — Data Link



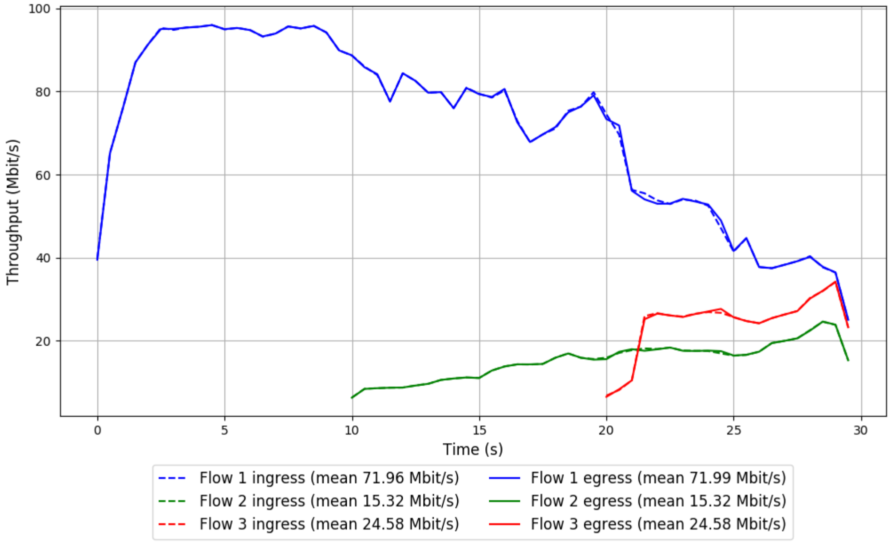


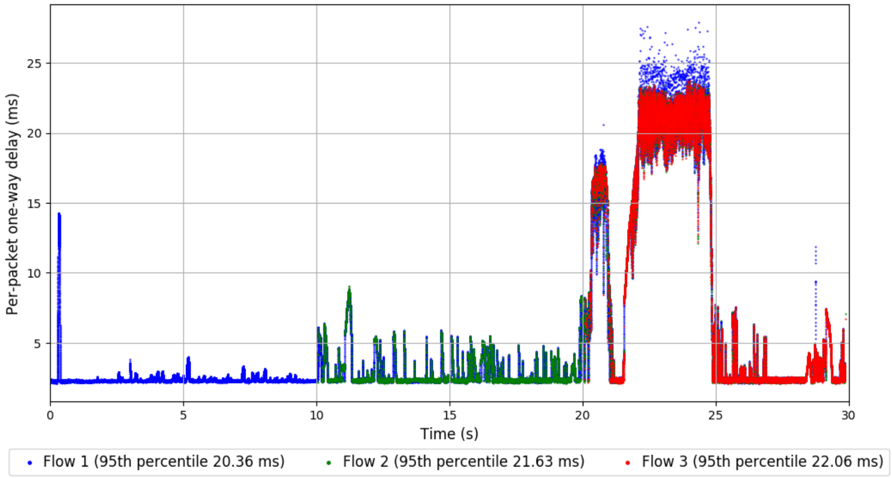
```
Run 4: Statistics of PCC

Start at: 2018-03-21 01:02:51
End at: 2018-03-21 01:03:21
Local clock offset: -12.018 ms
Remote clock offset: -14.645 ms

# Below is generated by plot.py at 2018-03-21 06:40:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.24 Mbit/s
95th percentile per-packet one-way delay: 21.130 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 71.99 Mbit/s
95th percentile per-packet one-way delay: 20.358 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.32 Mbit/s
95th percentile per-packet one-way delay: 21.626 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 24.58 Mbit/s
95th percentile per-packet one-way delay: 22.060 ms
Loss rate: 0.02%
```

Run 4: Report of PCC — Data Link



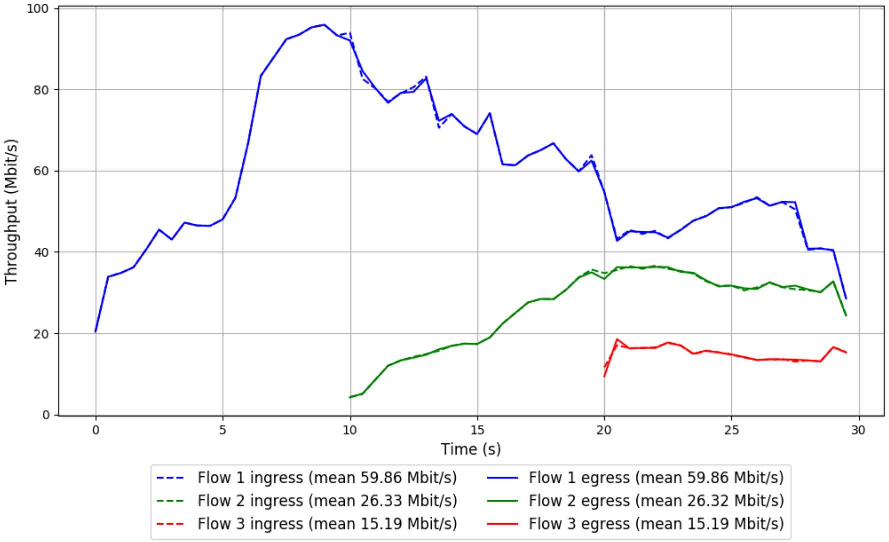


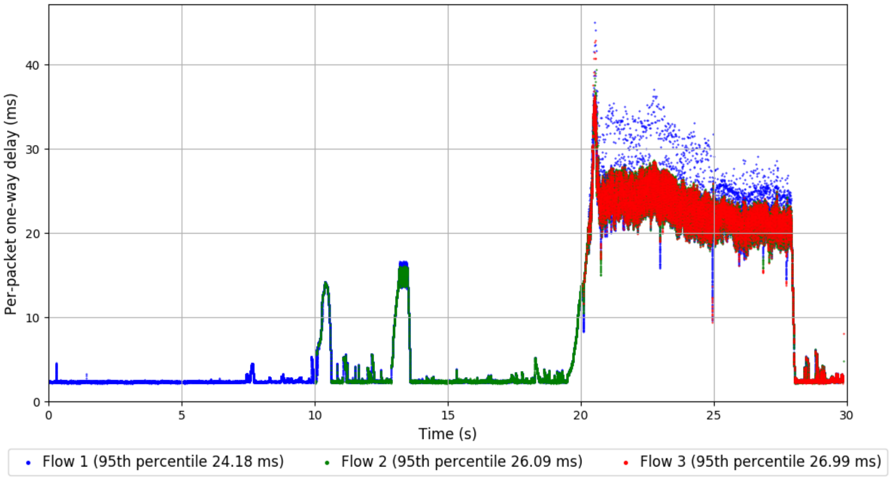
```
Run 5: Statistics of PCC

Start at: 2018-03-21 01:23:17
End at: 2018-03-21 01:23:47
Local clock offset: -11.84 ms
Remote clock offset: -14.675 ms

# Below is generated by plot.py at 2018-03-21 06:40:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.34 Mbit/s
95th percentile per-packet one-way delay: 25.190 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 59.86 Mbit/s
95th percentile per-packet one-way delay: 24.182 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 26.32 Mbit/s
95th percentile per-packet one-way delay: 26.085 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 15.19 Mbit/s
95th percentile per-packet one-way delay: 26.990 ms
Loss rate: 0.06%
```

Run 5: Report of PCC — Data Link



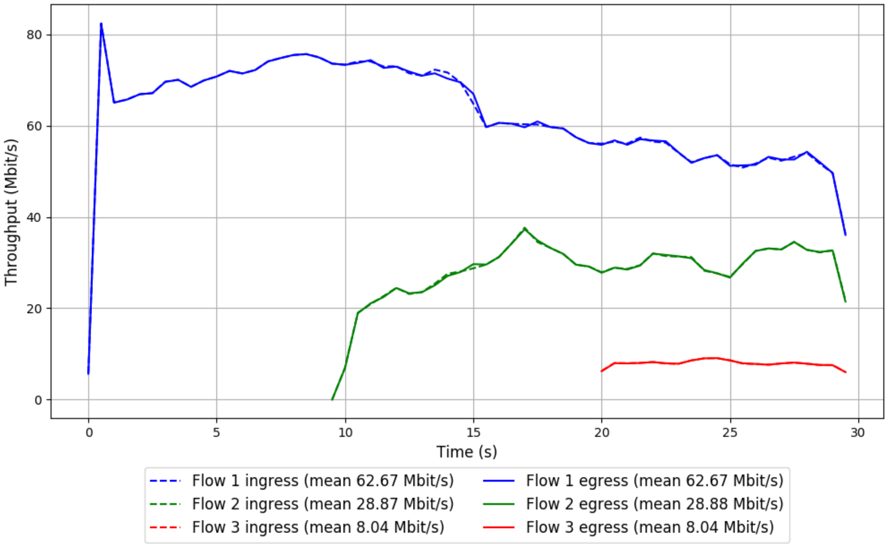


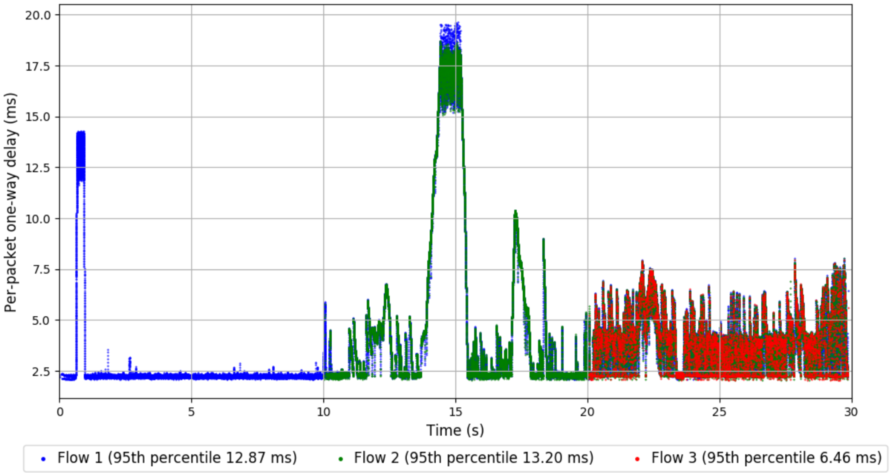
```
Run 6: Statistics of PCC

Start at: 2018-03-21 01:43:41
End at: 2018-03-21 01:44:11
Local clock offset: -7.86 ms
Remote clock offset: -8.034 ms

# Below is generated by plot.py at 2018-03-21 06:40:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.52 Mbit/s
95th percentile per-packet one-way delay: 12.762 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 62.67 Mbit/s
95th percentile per-packet one-way delay: 12.868 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 28.88 Mbit/s
95th percentile per-packet one-way delay: 13.202 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 8.04 Mbit/s
95th percentile per-packet one-way delay: 6.461 ms
Loss rate: 0.05%
```

Run 6: Report of PCC — Data Link



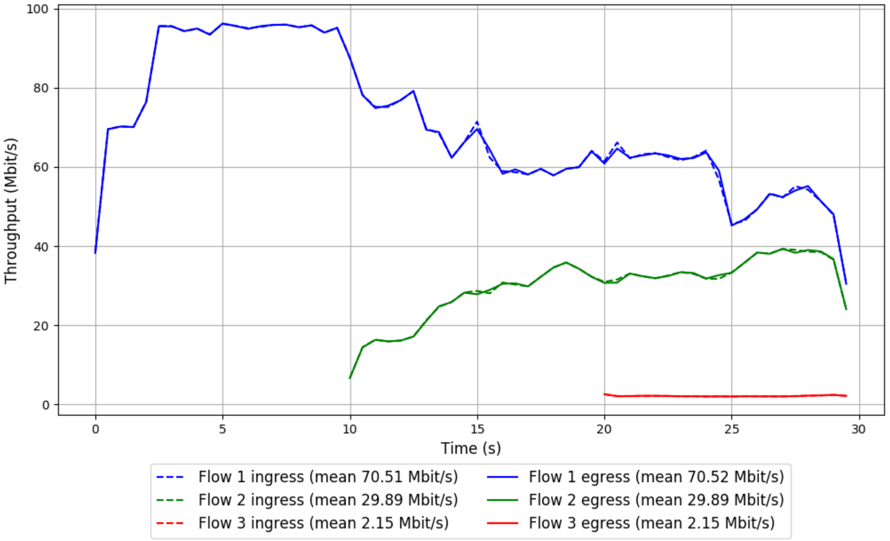


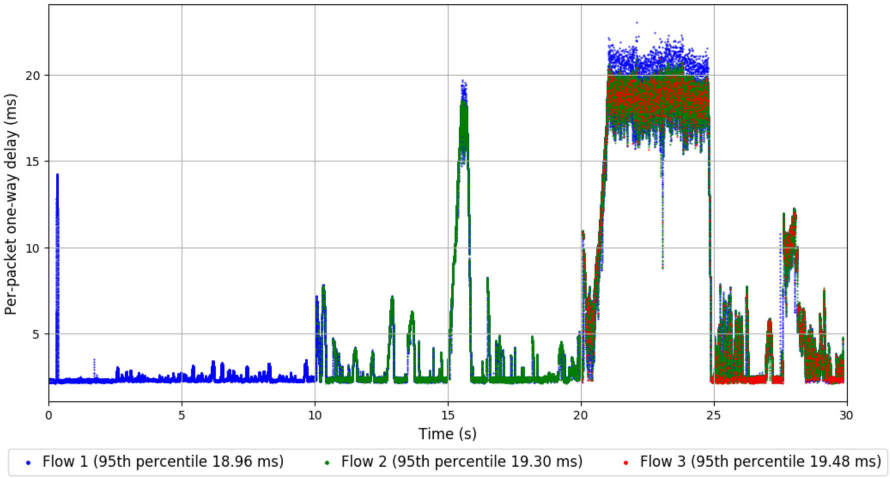
```
Run 7: Statistics of PCC

Start at: 2018-03-21 02:04:05
End at: 2018-03-21 02:04:35
Local clock offset: -2.164 ms
Remote clock offset: -2.98 ms

# Below is generated by plot.py at 2018-03-21 06:42:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.10 Mbit/s
95th percentile per-packet one-way delay: 19.085 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 70.52 Mbit/s
95th percentile per-packet one-way delay: 18.962 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 29.89 Mbit/s
95th percentile per-packet one-way delay: 19.299 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 19.485 ms
Loss rate: 0.06%
```

Run 7: Report of PCC — Data Link



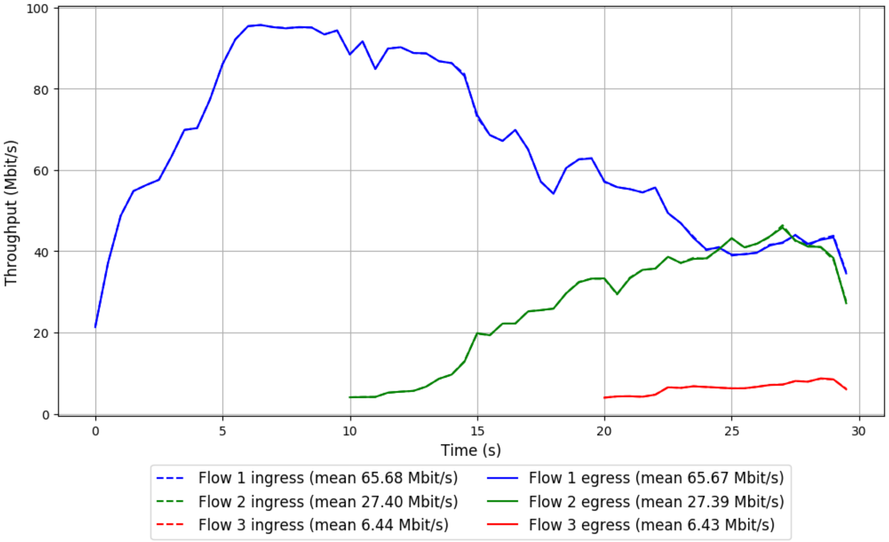


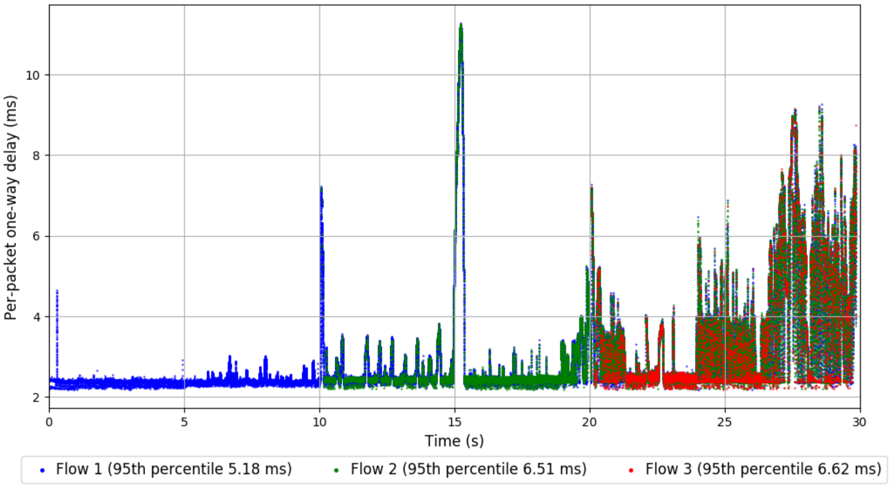
```
Run 8: Statistics of PCC

Start at: 2018-03-21 02:24:30
End at: 2018-03-21 02:25:00
Local clock offset: -2.556 ms
Remote clock offset: -5.16 ms

# Below is generated by plot.py at 2018-03-21 06:42:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.99 Mbit/s
95th percentile per-packet one-way delay: 5.698 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 65.67 Mbit/s
95th percentile per-packet one-way delay: 5.180 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 27.39 Mbit/s
95th percentile per-packet one-way delay: 6.506 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 6.43 Mbit/s
95th percentile per-packet one-way delay: 6.617 ms
Loss rate: 0.12%
```

Run 8: Report of PCC — Data Link



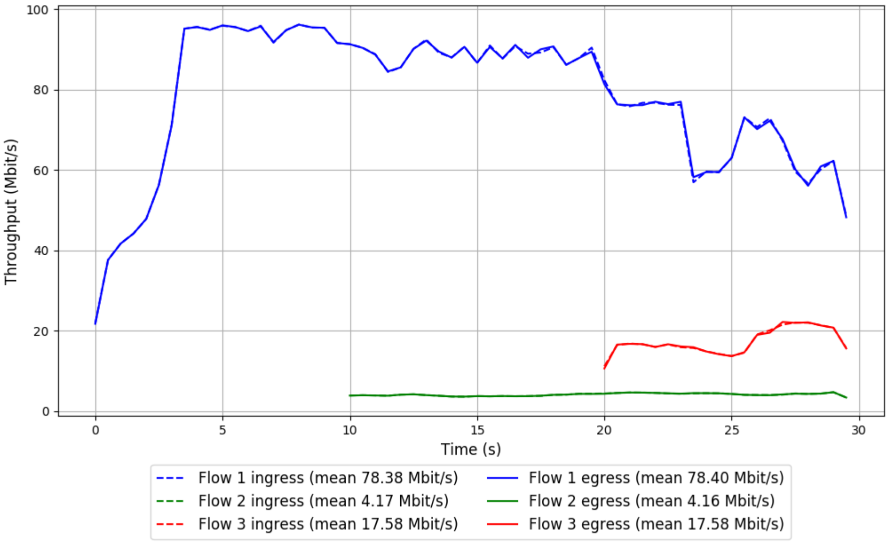


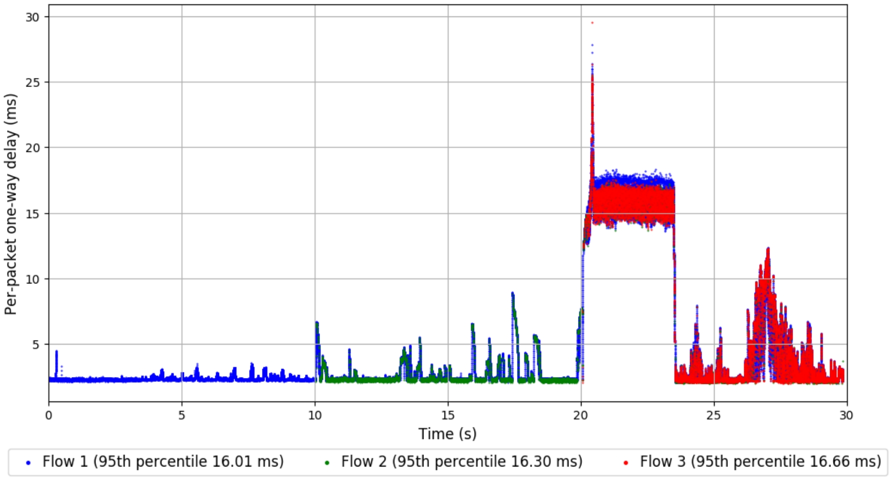
```
Run 9: Statistics of PCC

Start at: 2018-03-21 02:44:54
End at: 2018-03-21 02:45:24
Local clock offset: -1.729 ms
Remote clock offset: -5.155 ms

# Below is generated by plot.py at 2018-03-21 06:42:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.94 Mbit/s
95th percentile per-packet one-way delay: 16.154 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 78.40 Mbit/s
95th percentile per-packet one-way delay: 16.011 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 16.304 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 17.58 Mbit/s
95th percentile per-packet one-way delay: 16.660 ms
Loss rate: 0.06%
```

Run 9: Report of PCC — Data Link



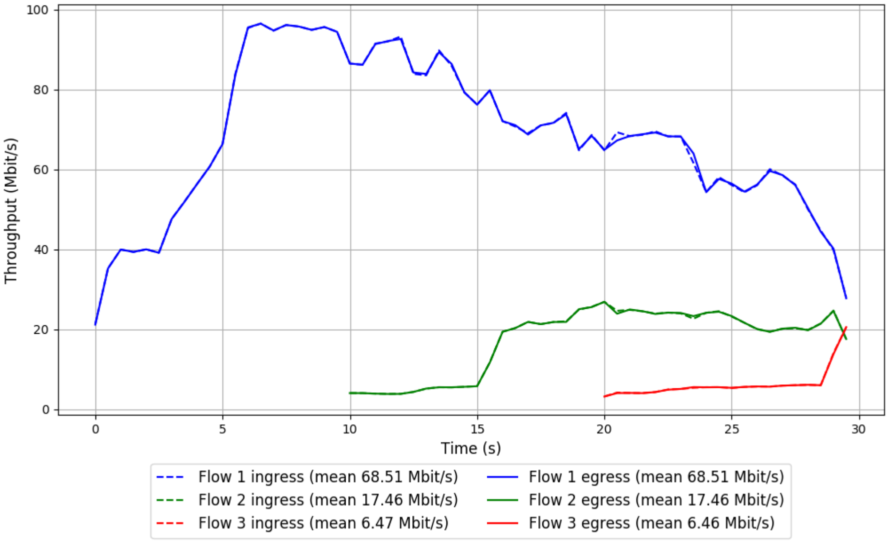


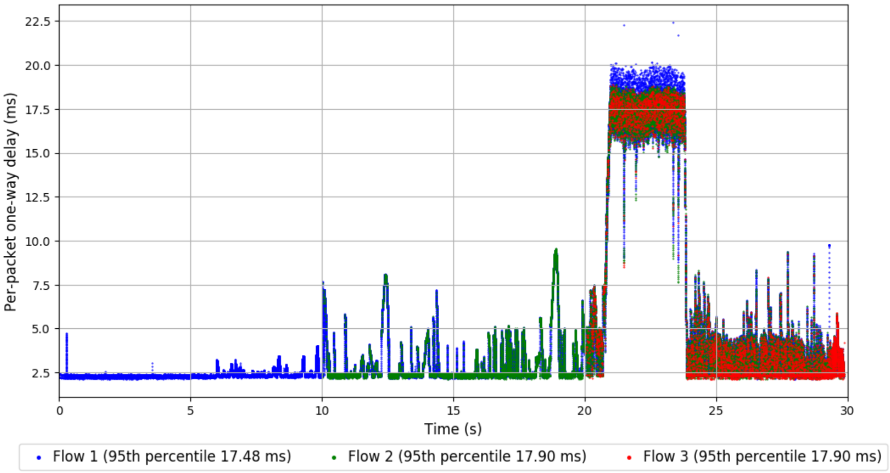
```
Run 10: Statistics of PCC

Start at: 2018-03-21 03:05:20
End at: 2018-03-21 03:05:50
Local clock offset: -2.992 ms
Remote clock offset: -6.513 ms

# Below is generated by plot.py at 2018-03-21 06:42:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.24 Mbit/s
95th percentile per-packet one-way delay: 17.617 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 68.51 Mbit/s
95th percentile per-packet one-way delay: 17.477 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 17.46 Mbit/s
95th percentile per-packet one-way delay: 17.904 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 17.896 ms
Loss rate: 0.19%
```

Run 10: Report of PCC — Data Link



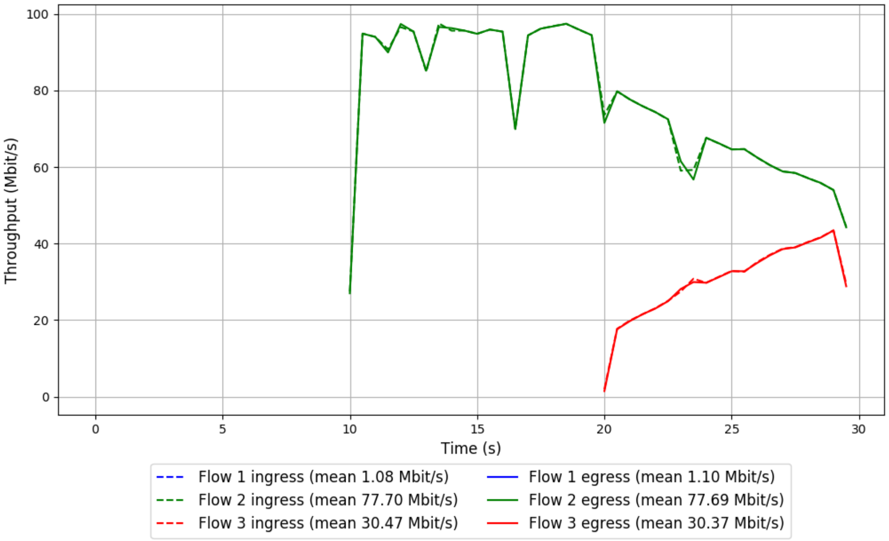


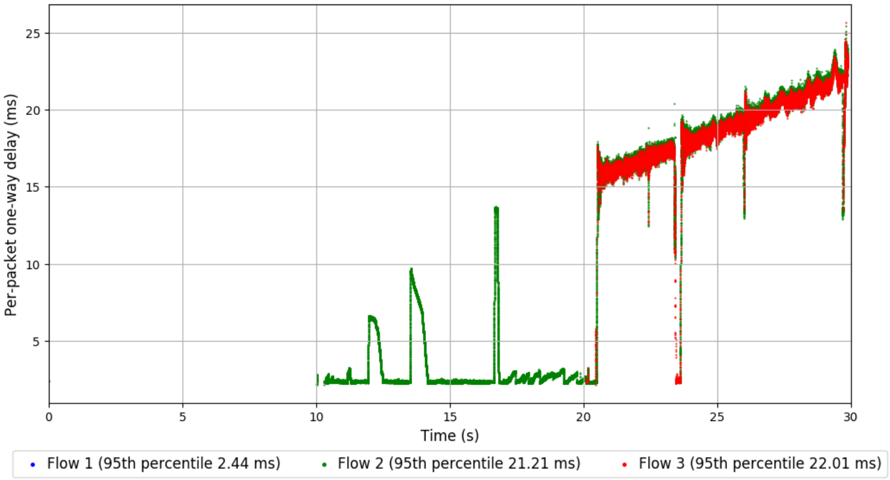
```
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-20 23:57:57
End at: 2018-03-20 23:58:27
Local clock offset: -13.35 ms
Remote clock offset: -14.333 ms

# Below is generated by plot.py at 2018-03-21 06:42:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.65 Mbit/s
95th percentile per-packet one-way delay: 21.531 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 1.10 Mbit/s
95th percentile per-packet one-way delay: 2.445 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 77.69 Mbit/s
95th percentile per-packet one-way delay: 21.212 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 30.37 Mbit/s
95th percentile per-packet one-way delay: 22.010 ms
Loss rate: 0.41%
```

Run 1: Report of QUIC Cubic — Data Link



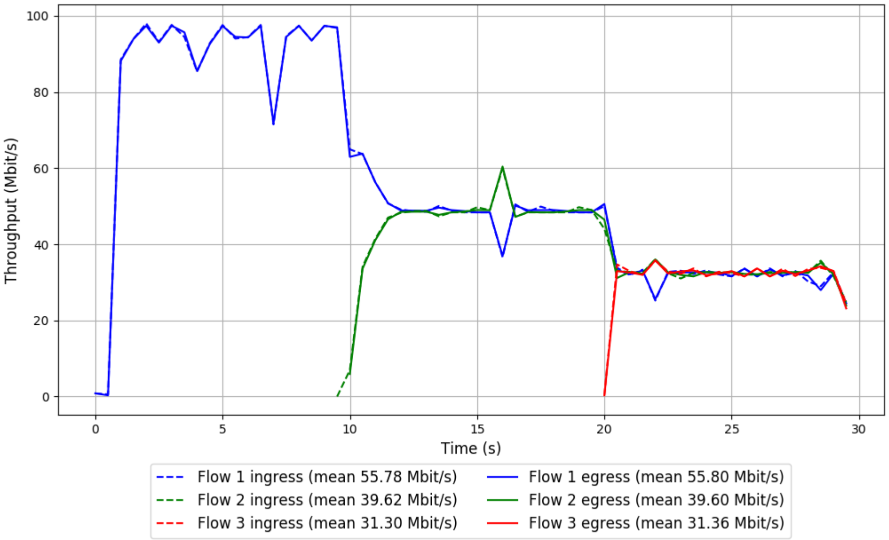


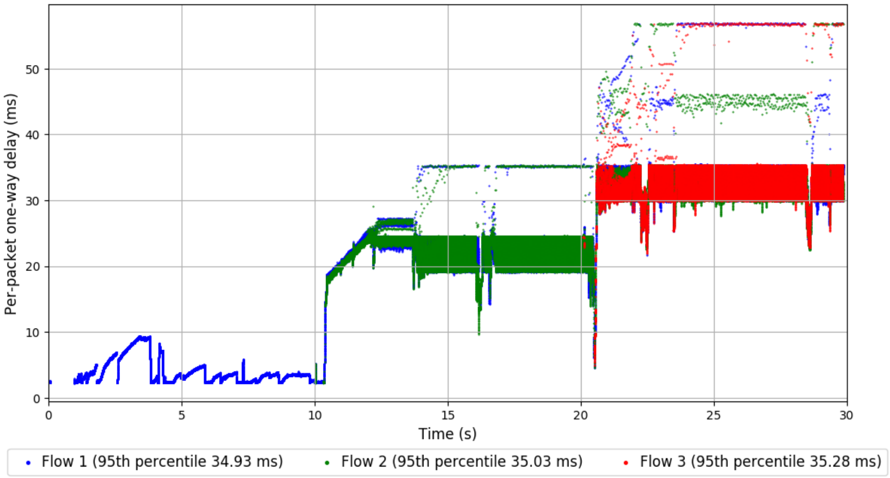
```
Run 2: Statistics of QUIC Cubic

Start at: 2018-03-21 00:18:32
End at: 2018-03-21 00:19:02
Local clock offset: -12.993 ms
Remote clock offset: -14.417 ms

# Below is generated by plot.py at 2018-03-21 06:42:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.43 Mbit/s
95th percentile per-packet one-way delay: 35.157 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 55.80 Mbit/s
95th percentile per-packet one-way delay: 34.933 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 39.60 Mbit/s
95th percentile per-packet one-way delay: 35.029 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 31.36 Mbit/s
95th percentile per-packet one-way delay: 35.277 ms
Loss rate: 0.55%
```

Run 2: Report of QUIC Cubic — Data Link



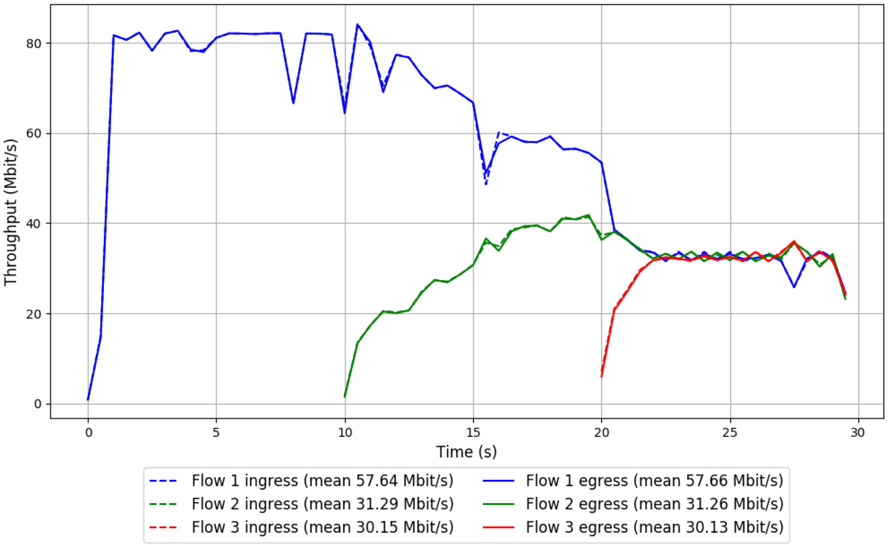


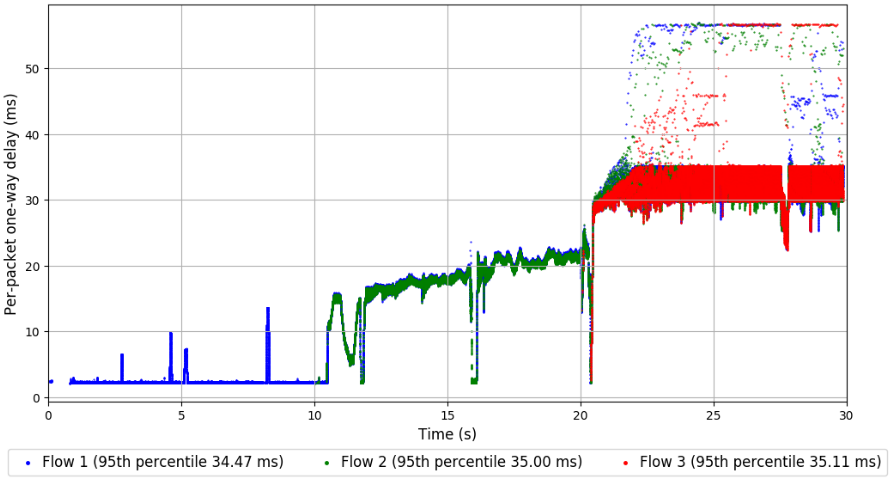
```
Run 3: Statistics of QUIC Cubic

Start at: 2018-03-21 00:39:02
End at: 2018-03-21 00:39:32
Local clock offset: -12.503 ms
Remote clock offset: -14.595 ms

# Below is generated by plot.py at 2018-03-21 06:42:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.33 Mbit/s
95th percentile per-packet one-way delay: 34.979 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 57.66 Mbit/s
95th percentile per-packet one-way delay: 34.472 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 31.26 Mbit/s
95th percentile per-packet one-way delay: 34.996 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 30.13 Mbit/s
95th percentile per-packet one-way delay: 35.107 ms
Loss rate: 0.37%
```

Run 3: Report of QUIC Cubic — Data Link



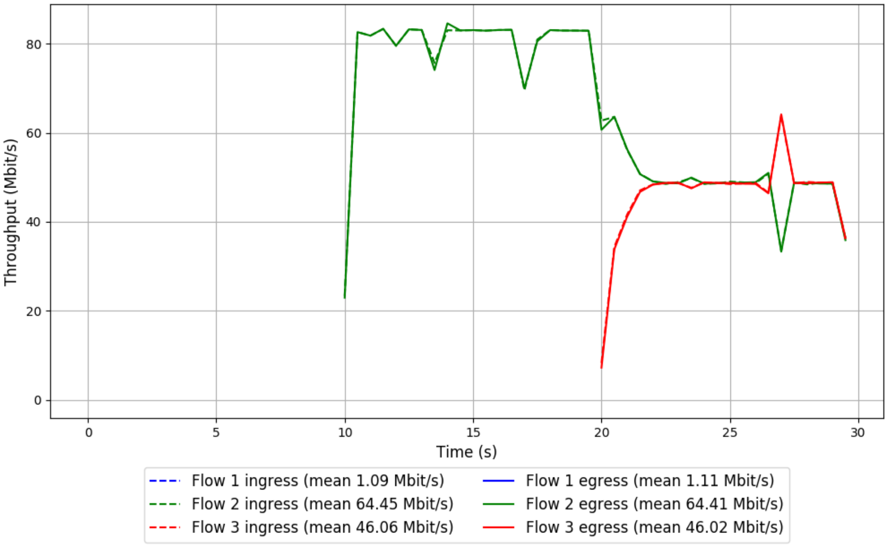


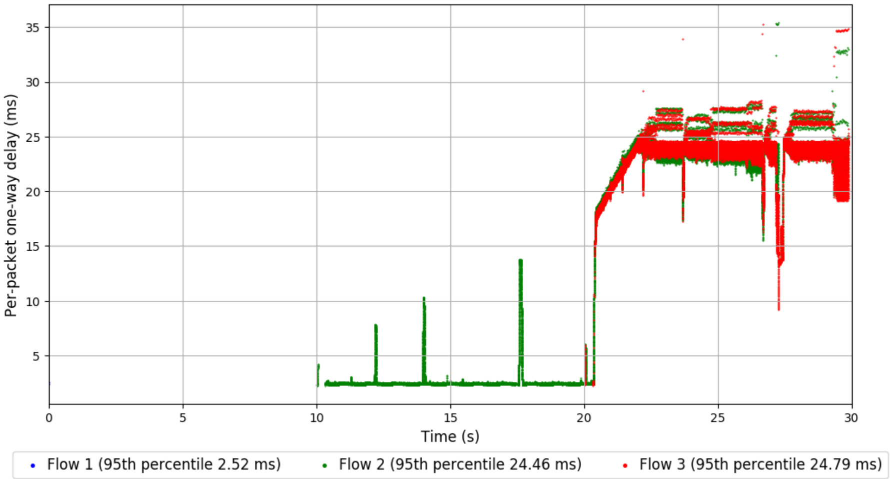
```
Run 4: Statistics of QUIC Cubic

Start at: 2018-03-21 00:59:31
End at: 2018-03-21 01:00:01
Local clock offset: -11.986 ms
Remote clock offset: -14.643 ms

# Below is generated by plot.py at 2018-03-21 06:42:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.01 Mbit/s
95th percentile per-packet one-way delay: 24.495 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 2.523 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 64.41 Mbit/s
95th percentile per-packet one-way delay: 24.456 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 46.02 Mbit/s
95th percentile per-packet one-way delay: 24.791 ms
Loss rate: 0.25%
```

Run 4: Report of QUIC Cubic — Data Link



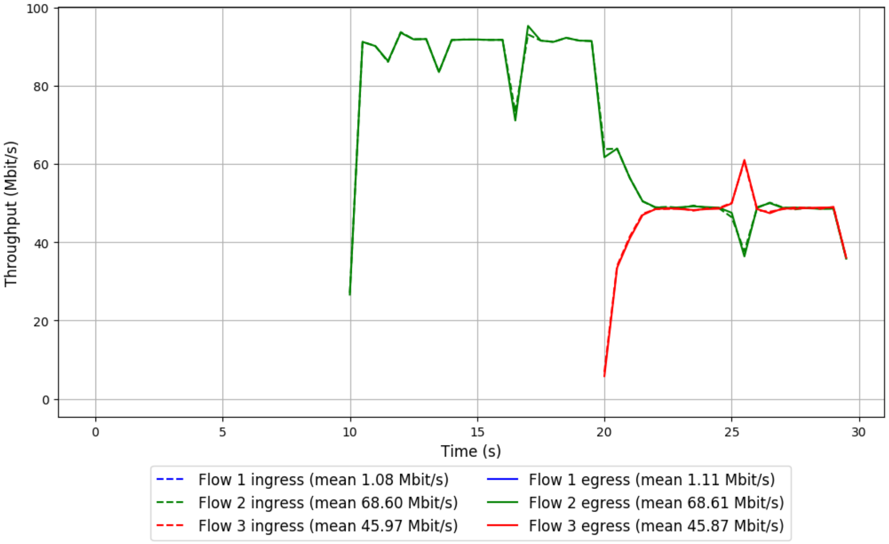


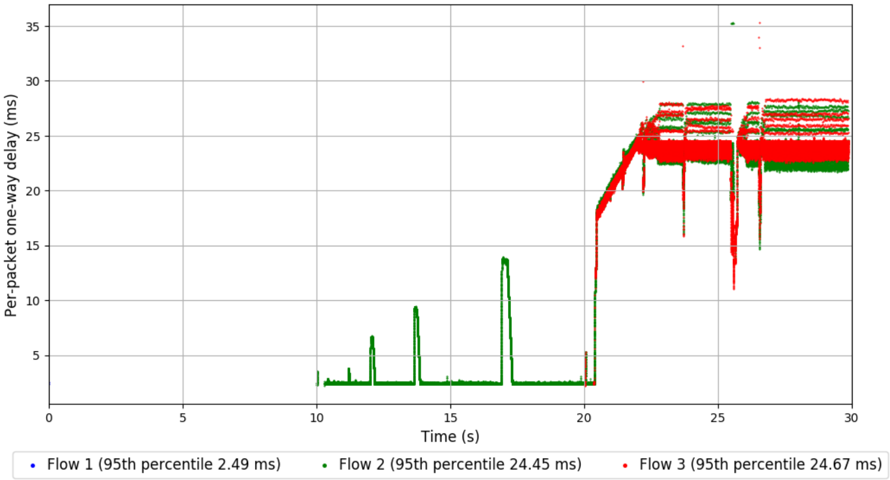
```
Run 5: Statistics of QUIC Cubic

Start at: 2018-03-21 01:19:56
End at: 2018-03-21 01:20:26
Local clock offset: -11.838 ms
Remote clock offset: -14.676 ms

# Below is generated by plot.py at 2018-03-21 06:42:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.77 Mbit/s
95th percentile per-packet one-way delay: 24.482 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 2.489 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 68.61 Mbit/s
95th percentile per-packet one-way delay: 24.451 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 45.87 Mbit/s
95th percentile per-packet one-way delay: 24.670 ms
Loss rate: 0.26%
```

Run 5: Report of QUIC Cubic — Data Link



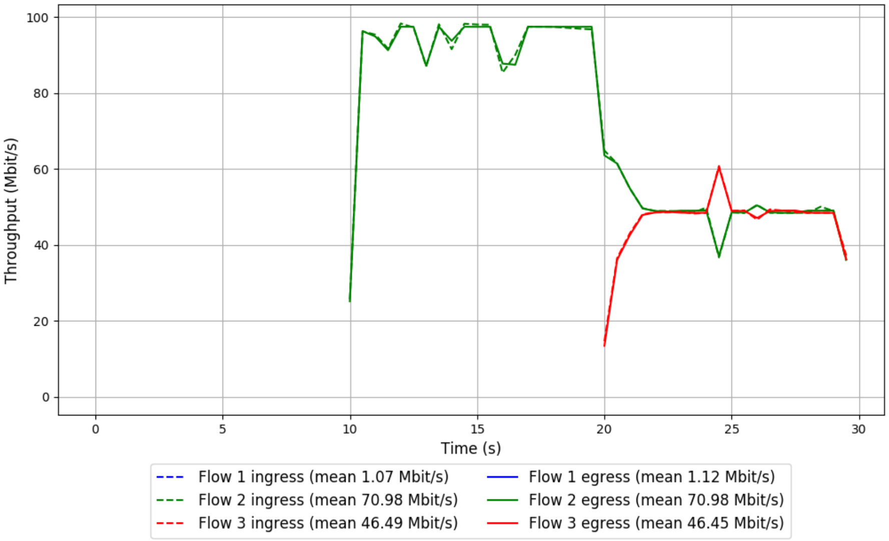


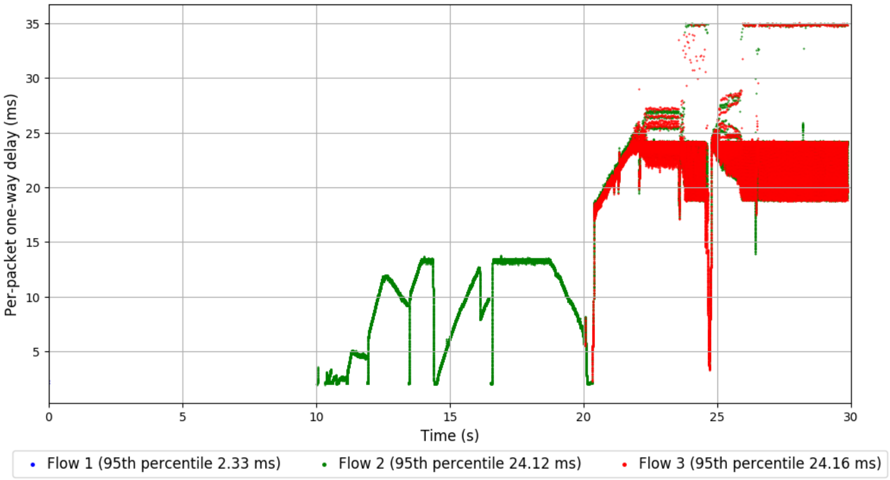
```
Run 6: Statistics of QUIC Cubic

Start at: 2018-03-21 01:40:20
End at: 2018-03-21 01:40:50
Local clock offset: -10.116 ms
Remote clock offset: -9.705 ms

# Below is generated by plot.py at 2018-03-21 06:42:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.51 Mbit/s
95th percentile per-packet one-way delay: 24.134 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 2.334 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 70.98 Mbit/s
95th percentile per-packet one-way delay: 24.116 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 46.45 Mbit/s
95th percentile per-packet one-way delay: 24.157 ms
Loss rate: 0.34%
```

Run 6: Report of QUIC Cubic — Data Link



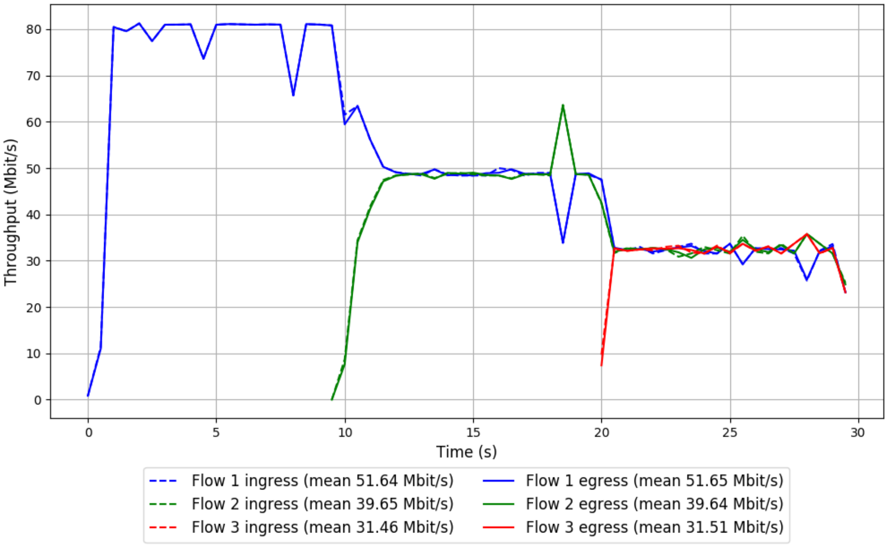


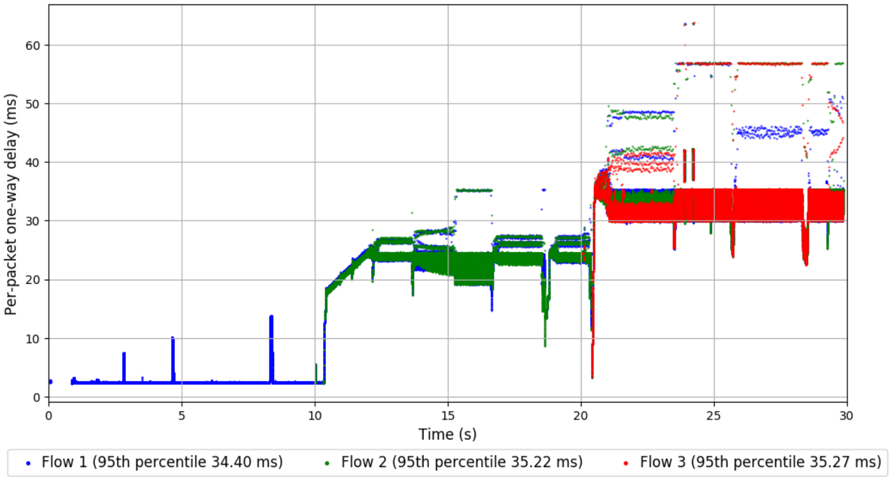
```
Run 7: Statistics of QUIC Cubic

Start at: 2018-03-21 02:00:43
End at: 2018-03-21 02:01:13
Local clock offset: -2.745 ms
Remote clock offset: -3.612 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.36 Mbit/s
95th percentile per-packet one-way delay: 35.177 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 51.65 Mbit/s
95th percentile per-packet one-way delay: 34.397 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 39.64 Mbit/s
95th percentile per-packet one-way delay: 35.224 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 31.51 Mbit/s
95th percentile per-packet one-way delay: 35.272 ms
Loss rate: 0.35%
```

Run 7: Report of QUIC Cubic — Data Link



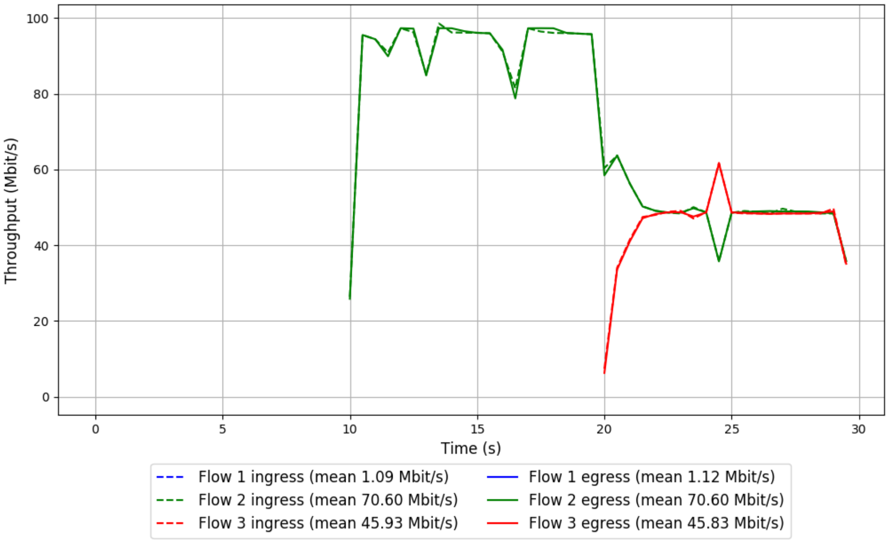


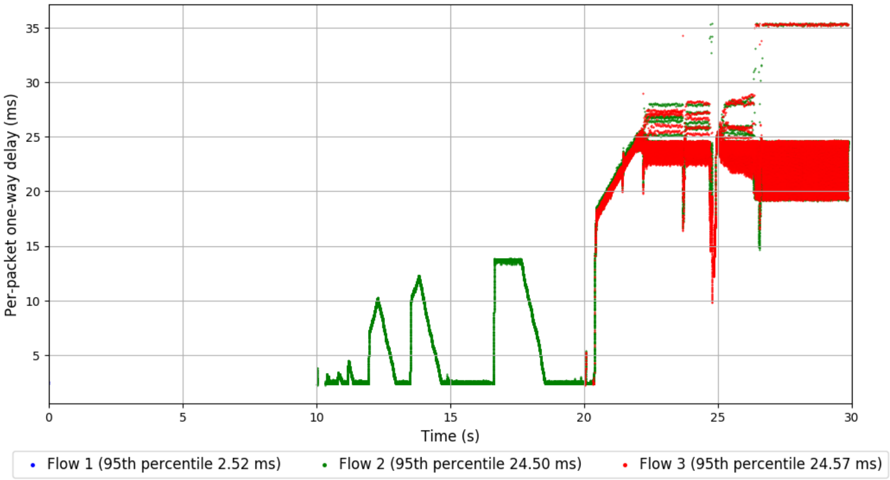
```
Run 8: Statistics of QUIC Cubic

Start at: 2018-03-21 02:21:10
End at: 2018-03-21 02:21:40
Local clock offset: -2.408 ms
Remote clock offset: -5.088 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.06 Mbit/s
95th percentile per-packet one-way delay: 24.531 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 2.525 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 70.60 Mbit/s
95th percentile per-packet one-way delay: 24.504 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 45.83 Mbit/s
95th percentile per-packet one-way delay: 24.567 ms
Loss rate: 0.24%
```

Run 8: Report of QUIC Cubic — Data Link



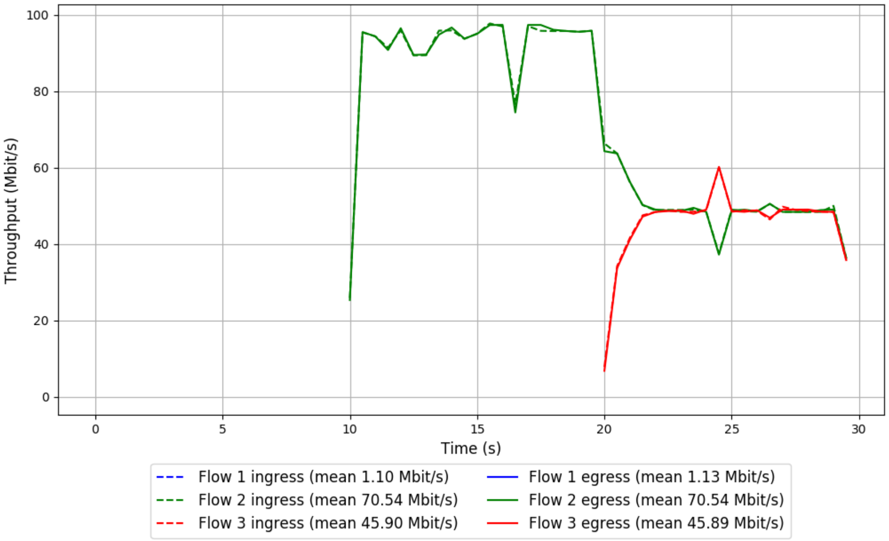


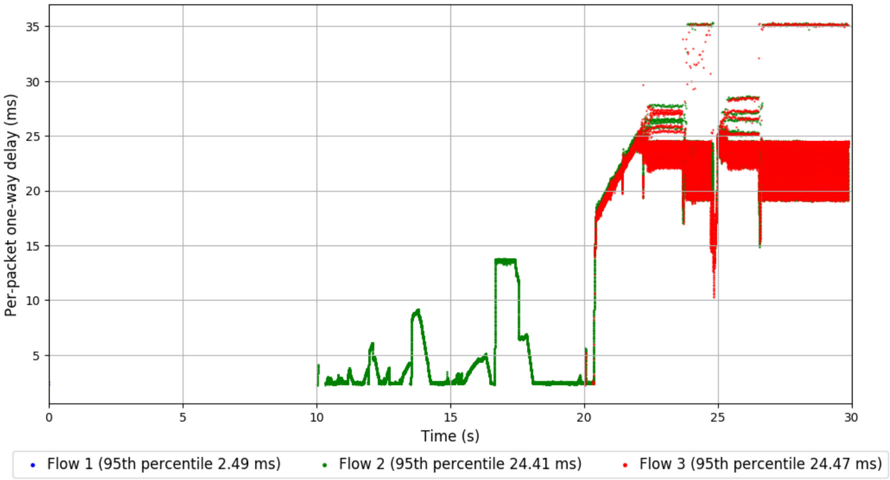
```
Run 9: Statistics of QUIC Cubic

Start at: 2018-03-21 02:41:34
End at: 2018-03-21 02:42:04
Local clock offset: -1.923 ms
Remote clock offset: -4.483 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.03 Mbit/s
95th percentile per-packet one-way delay: 24.438 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 2.491 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 70.54 Mbit/s
95th percentile per-packet one-way delay: 24.414 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 45.89 Mbit/s
95th percentile per-packet one-way delay: 24.471 ms
Loss rate: 0.24%
```

Run 9: Report of QUIC Cubic — Data Link



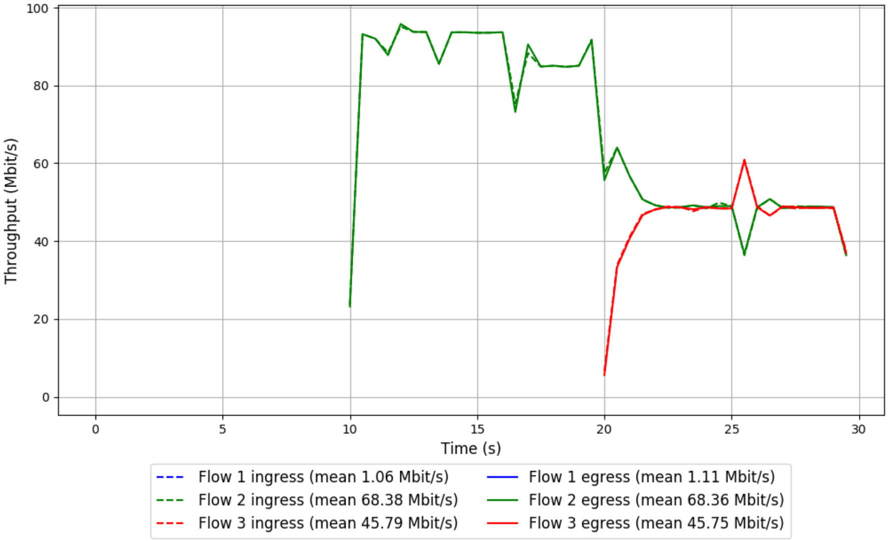


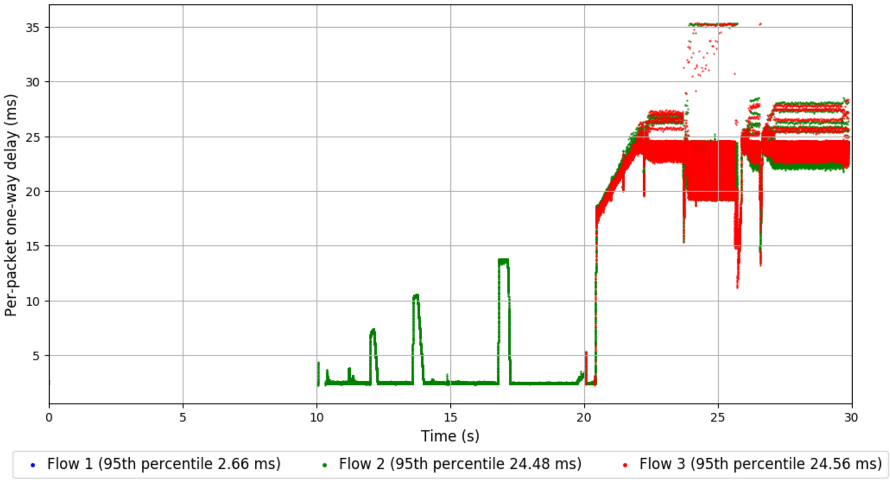
```
Run 10: Statistics of QUIC Cubic

Start at: 2018-03-21 03:02:00
End at: 2018-03-21 03:02:30
Local clock offset: -2.997 ms
Remote clock offset: -6.547 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.52 Mbit/s
95th percentile per-packet one-way delay: 24.508 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 2.659 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 68.36 Mbit/s
95th percentile per-packet one-way delay: 24.476 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 45.75 Mbit/s
95th percentile per-packet one-way delay: 24.557 ms
Loss rate: 0.29%
```

Run 10: Report of QUIC Cubic — Data Link



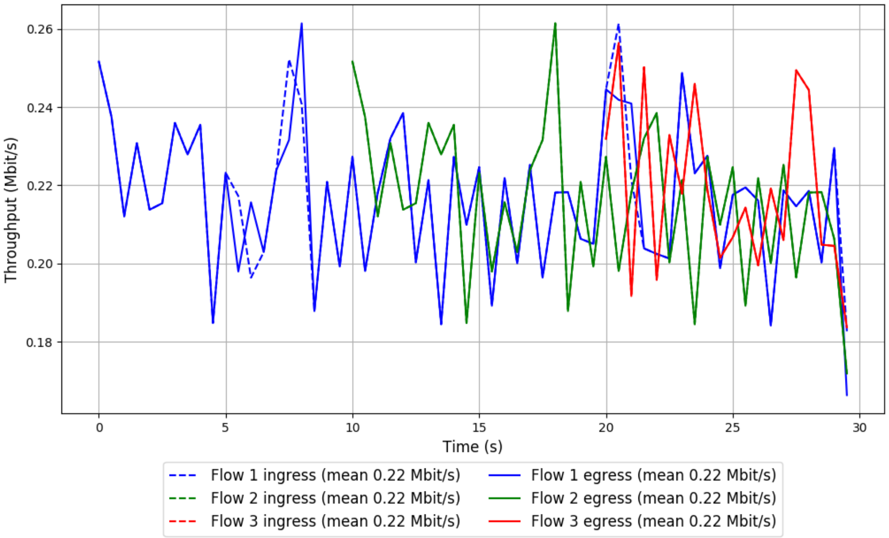


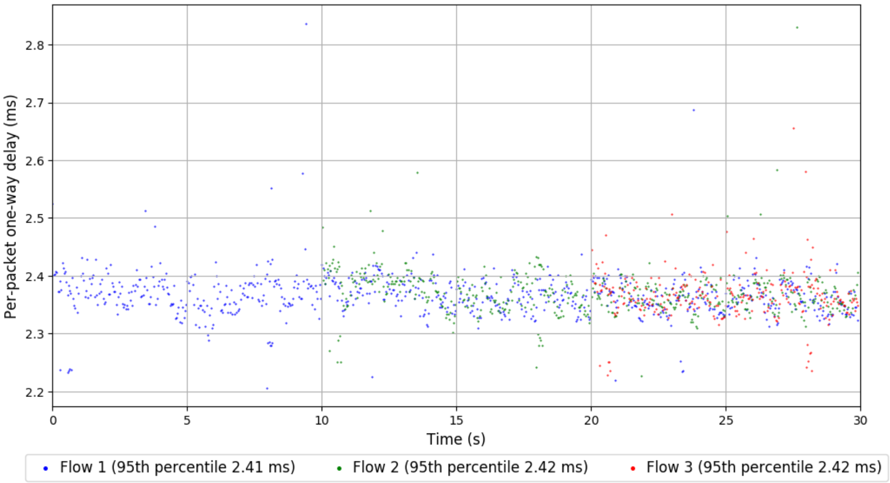
```
Run 1: Statistics of SCReAM

Start at: 2018-03-21 00:03:36
End at: 2018-03-21 00:04:06
Local clock offset: -13.084 ms
Remote clock offset: -14.406 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.416 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.413 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.419 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.421 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link



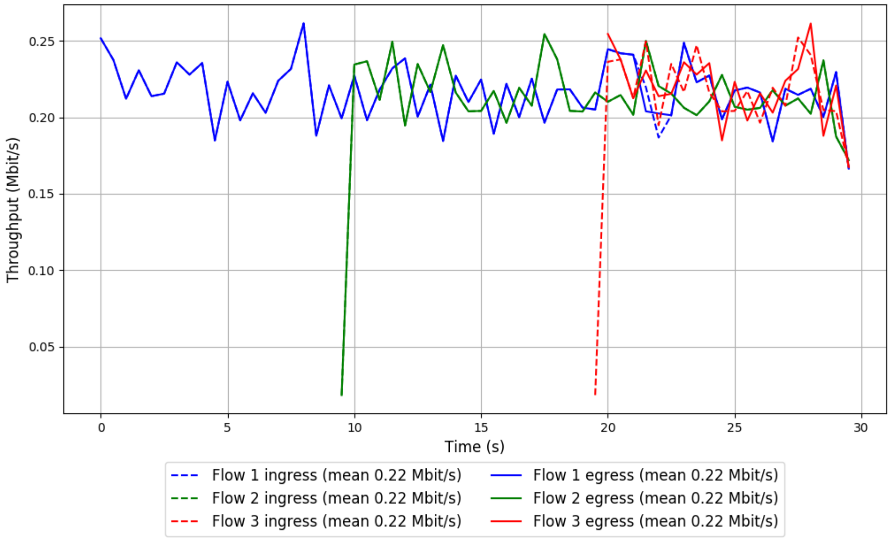


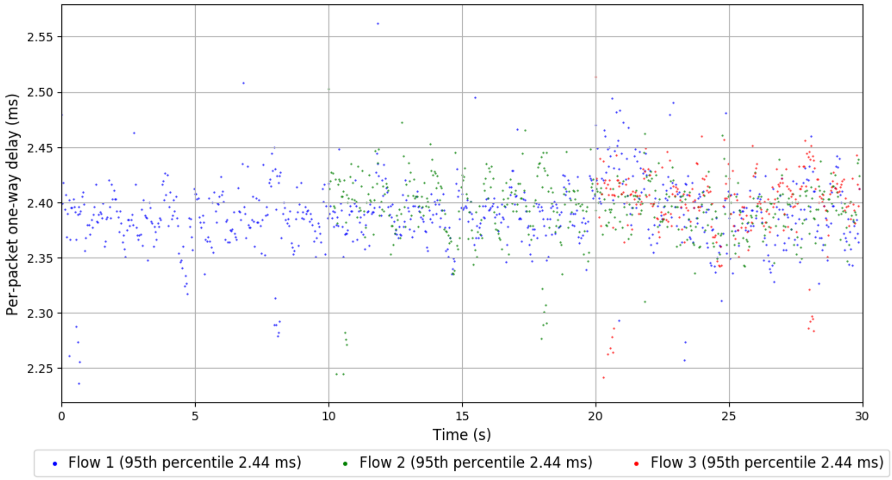
```
Run 2: Statistics of SCReAM

Start at: 2018-03-21 00:24:12
End at: 2018-03-21 00:24:42
Local clock offset: -12.996 ms
Remote clock offset: -14.386 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.437 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.435 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.436 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.441 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link



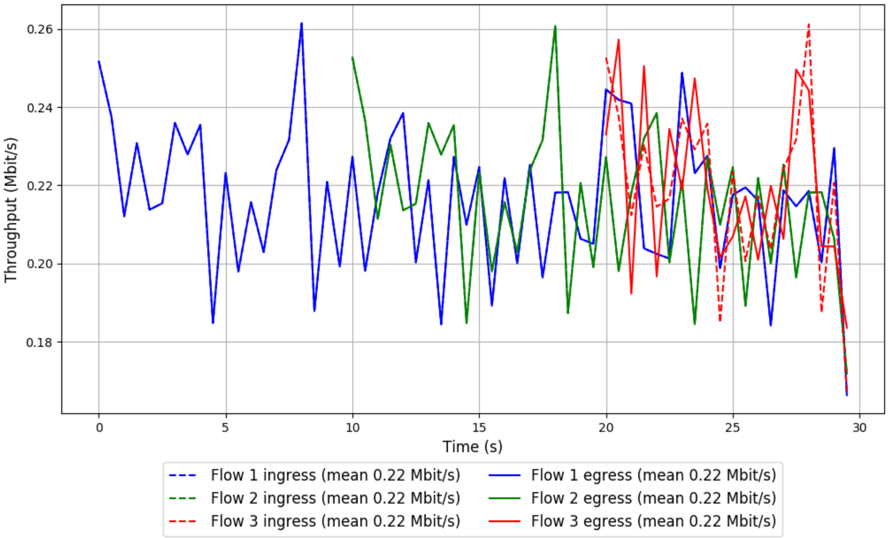


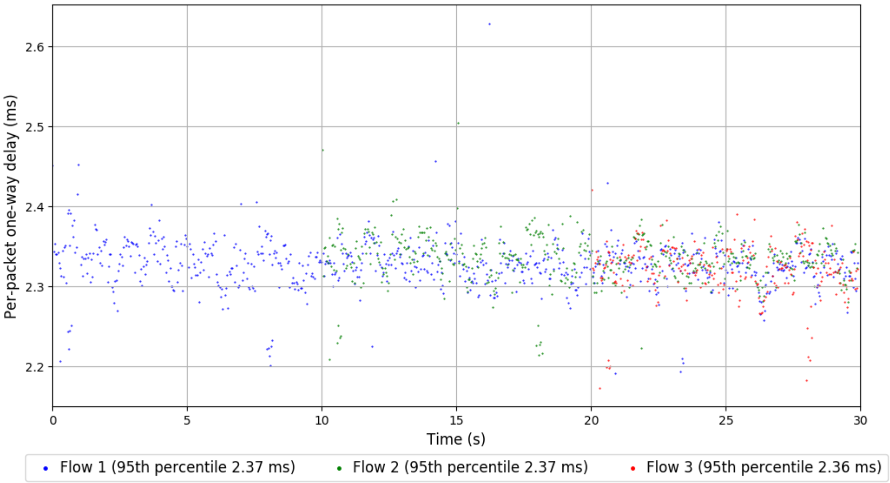
```
Run 3: Statistics of SCReAM

Start at: 2018-03-21 00:44:41
End at: 2018-03-21 00:45:11
Local clock offset: -12.22 ms
Remote clock offset: -14.598 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.369 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.365 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.373 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.363 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link



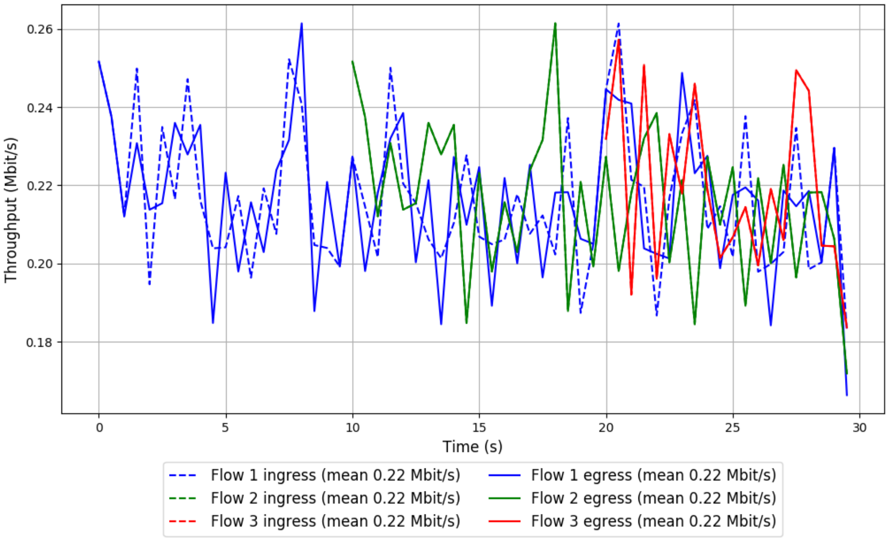


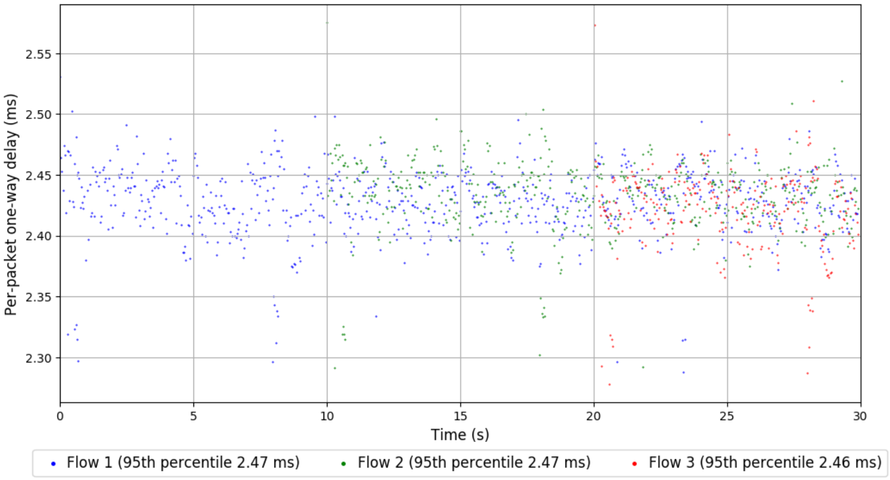
```
Run 4: Statistics of SCReAM

Start at: 2018-03-21 01:05:08
End at: 2018-03-21 01:05:38
Local clock offset: -11.962 ms
Remote clock offset: -14.713 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.468 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.467 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.472 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.461 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link



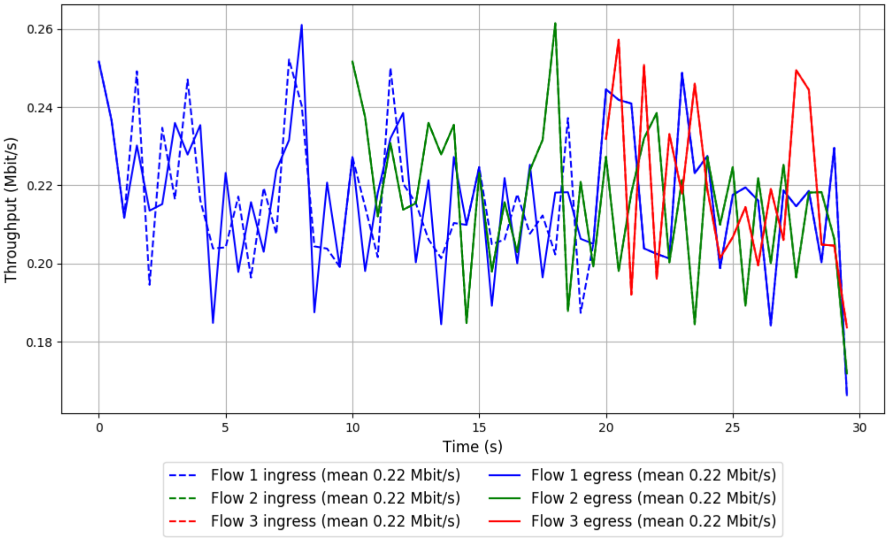


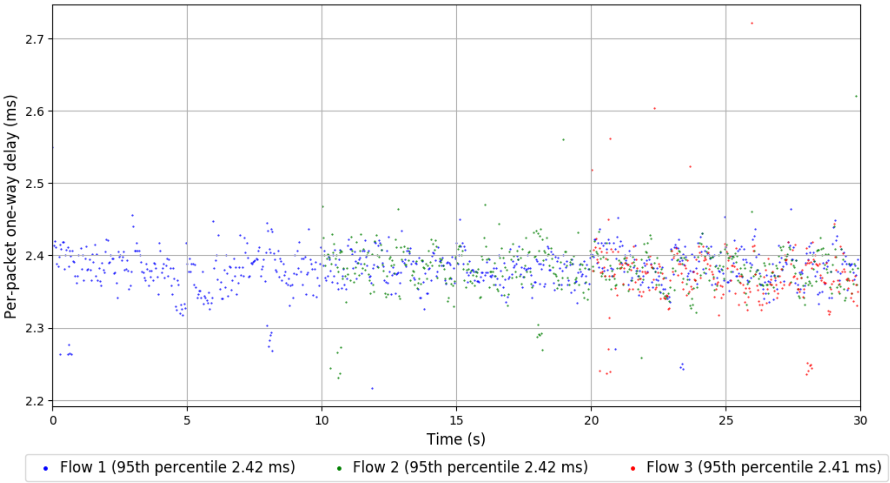
```
Run 5: Statistics of SCReAM

Start at: 2018-03-21 01:25:33
End at: 2018-03-21 01:26:03
Local clock offset: -11.821 ms
Remote clock offset: -14.679 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.421 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.421 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.424 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.413 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link



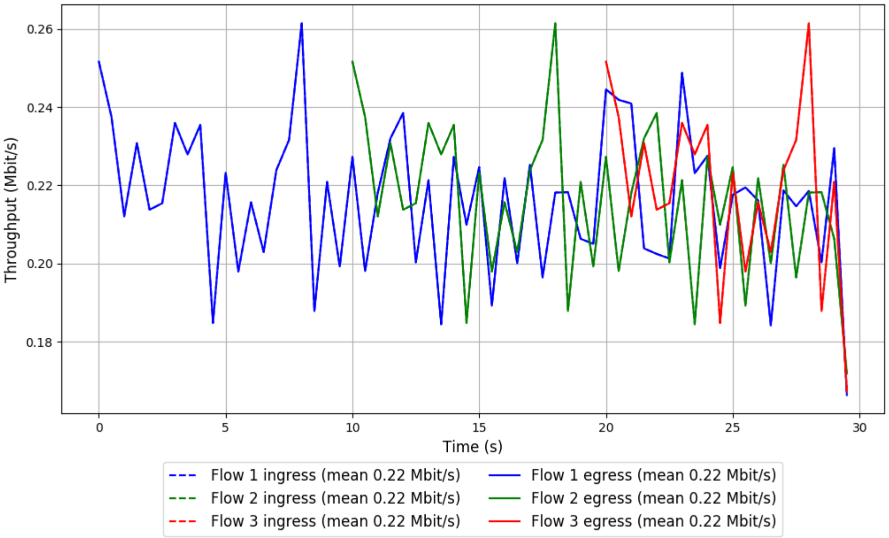


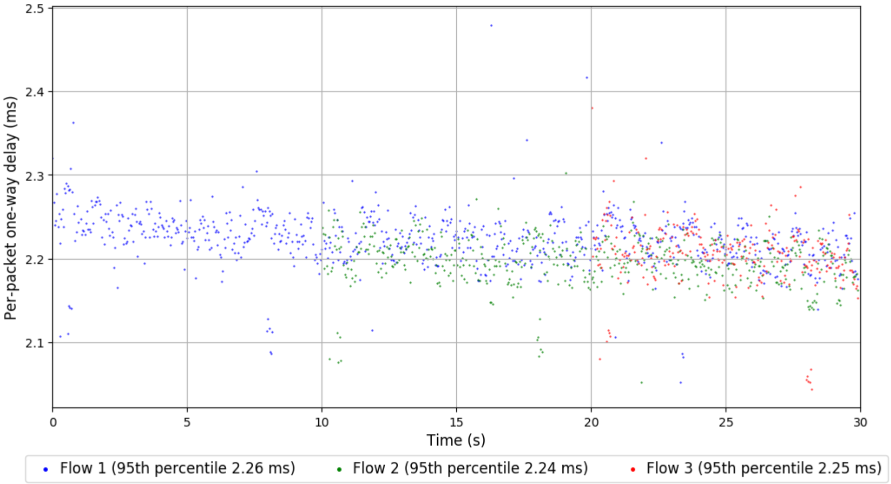
```
Run 6: Statistics of SCReAM

Start at: 2018-03-21 01:45:57
End at: 2018-03-21 01:46:27
Local clock offset: -6.897 ms
Remote clock offset: -7.205 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.258 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.264 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.237 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.252 ms
Loss rate: 0.00%
```

Run 6: Report of SCReAM — Data Link



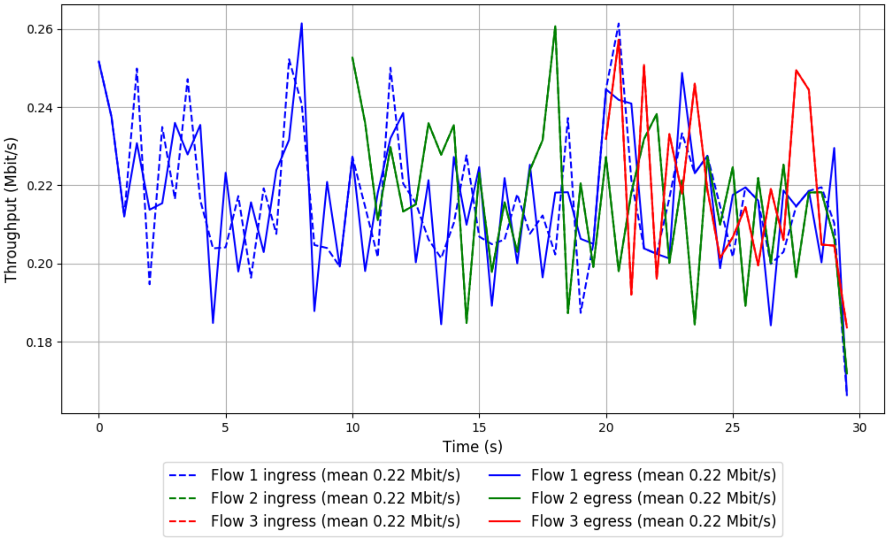


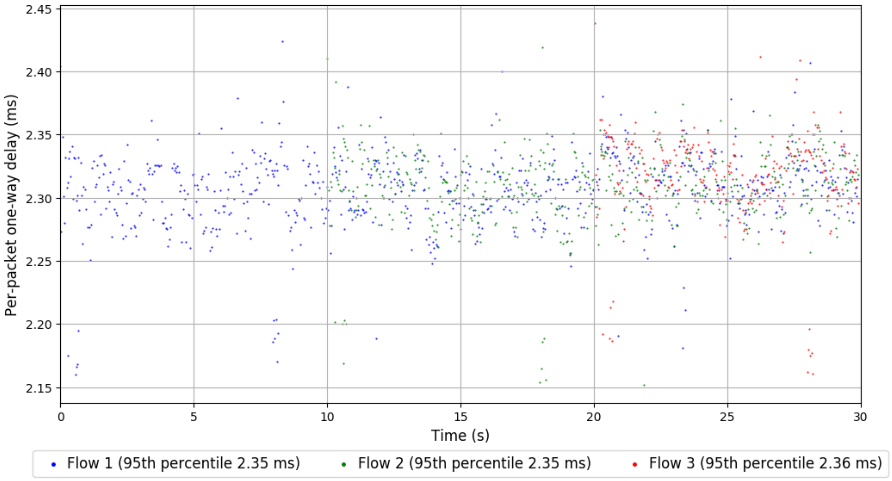
```
Run 7: Statistics of SCReAM

Start at: 2018-03-21 02:06:21
End at: 2018-03-21 02:06:51
Local clock offset: -1.83 ms
Remote clock offset: -2.619 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.350 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.347 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.347 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.356 ms
Loss rate: 0.00%
```

Run 7: Report of SCReAM — Data Link



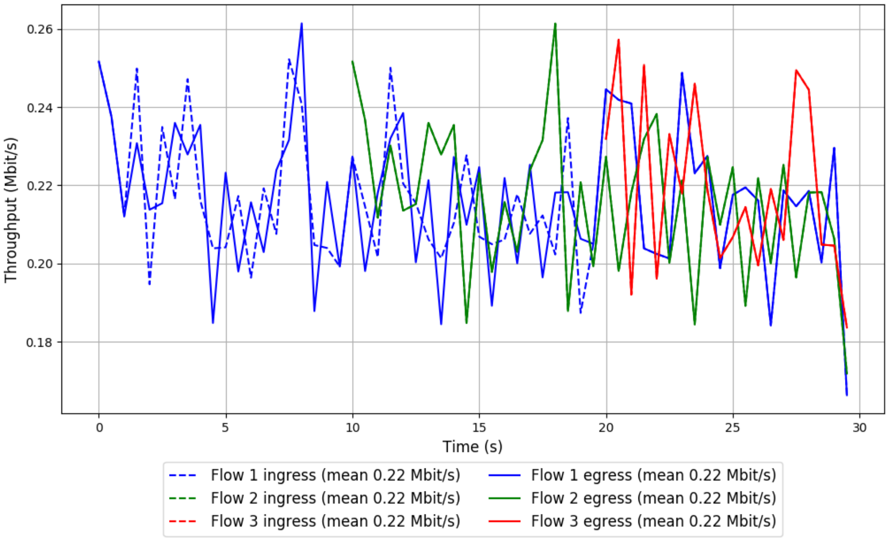


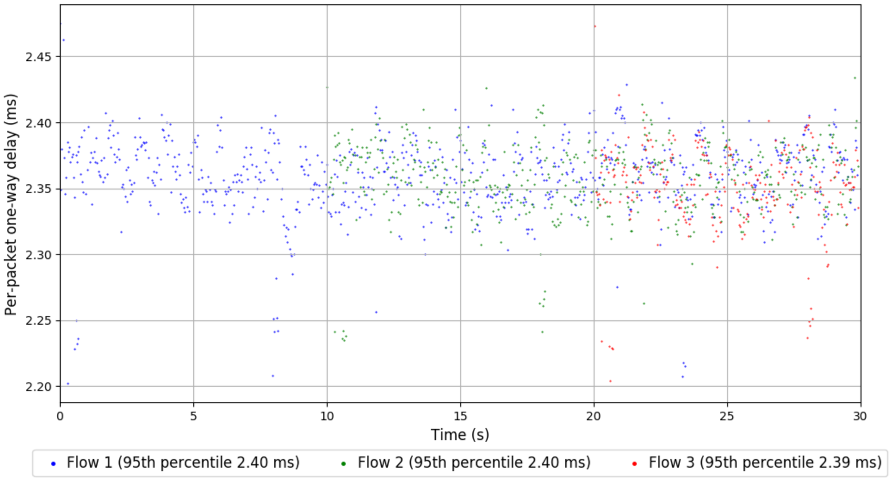
```
Run 8: Statistics of SCReAM

Start at: 2018-03-21 02:26:47
End at: 2018-03-21 02:27:17
Local clock offset: -2.583 ms
Remote clock offset: -5.129 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.396 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.398 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.396 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.390 ms
Loss rate: 0.00%
```

Run 8: Report of SCReAM — Data Link



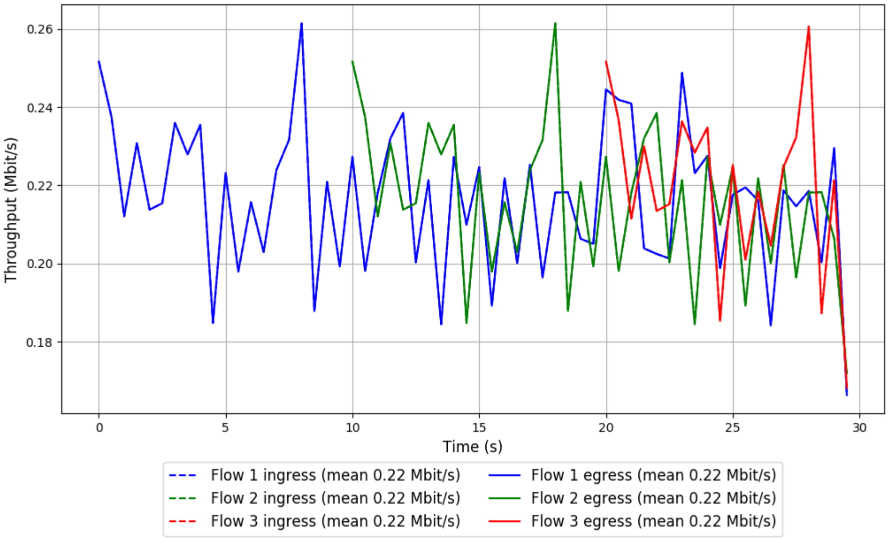


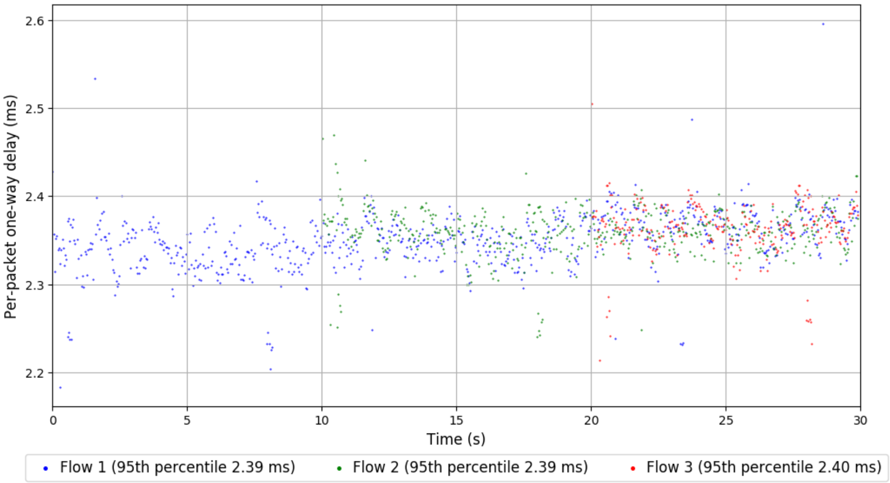
```
Run 9: Statistics of SCReAM

Start at: 2018-03-21 02:47:10
End at: 2018-03-21 02:47:40
Local clock offset: -1.856 ms
Remote clock offset: -5.524 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.395 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.391 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.394 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.401 ms
Loss rate: 0.00%
```

Run 9: Report of SCReAM — Data Link



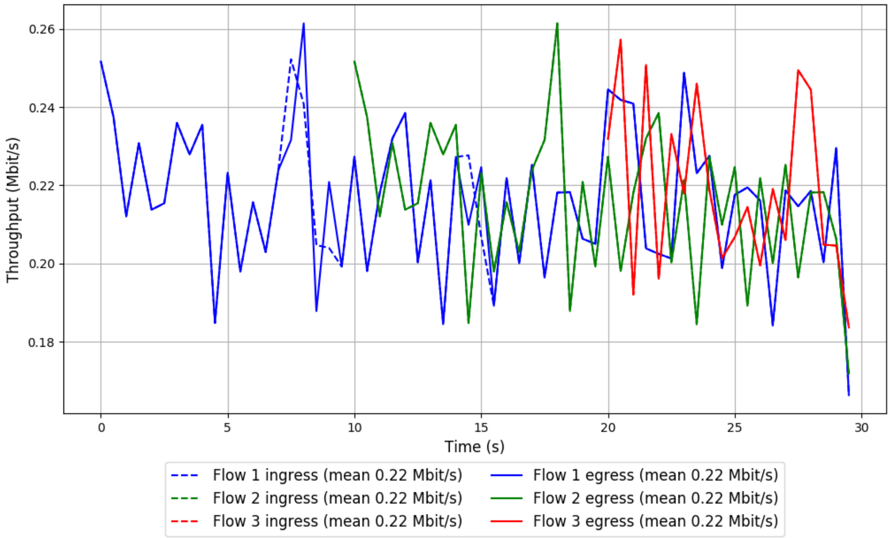


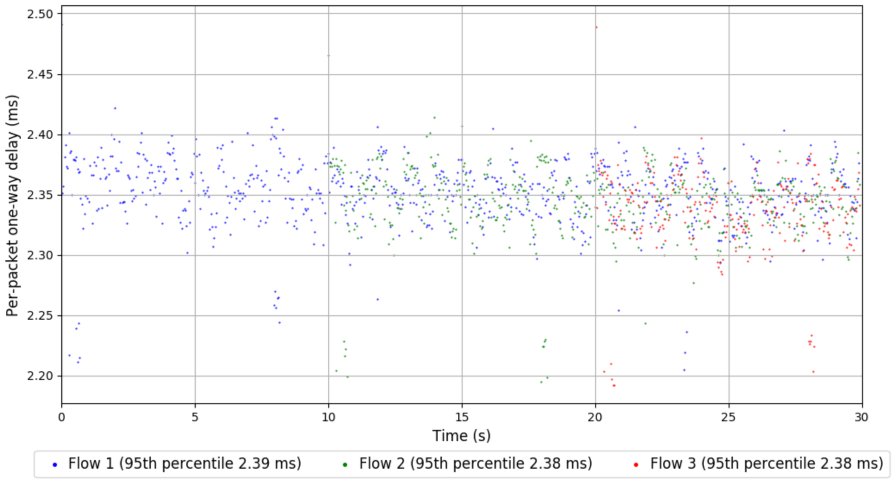
```
Run 10: Statistics of SCReAM

Start at: 2018-03-21 03:07:36
End at: 2018-03-21 03:08:06
Local clock offset: -2.96 ms
Remote clock offset: -6.516 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.384 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.388 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.380 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.376 ms
Loss rate: 0.00%
```

Run 10: Report of SCReAM — Data Link



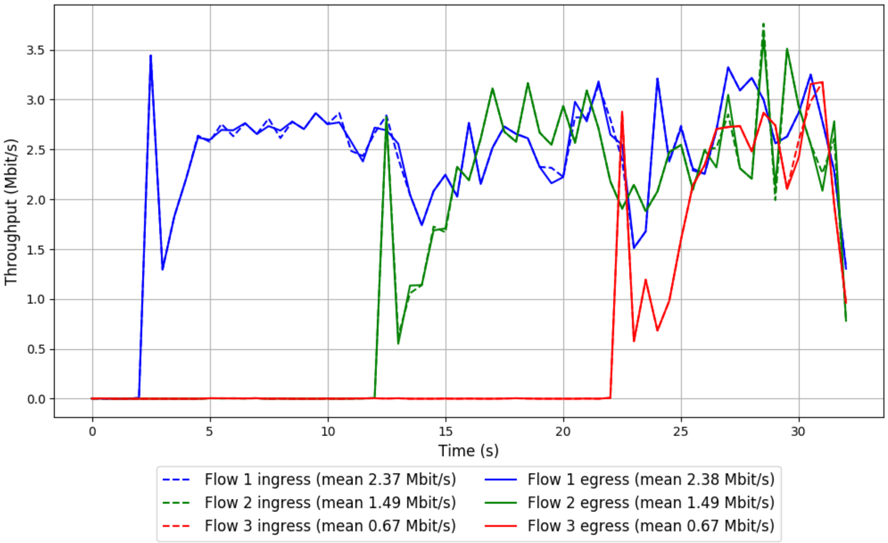


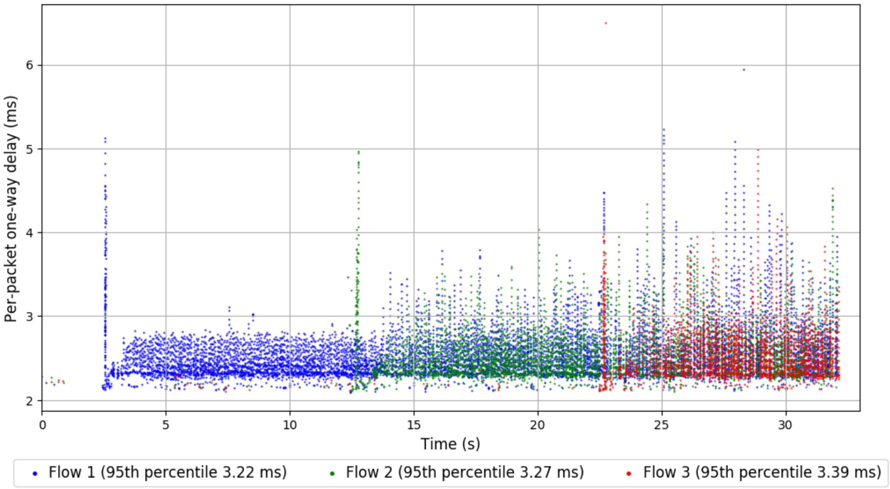
```
Run 1: Statistics of WebRTC media

Start at: 2018-03-20 23:59:05
End at: 2018-03-20 23:59:35
Local clock offset: -13.368 ms
Remote clock offset: -14.398 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.50 Mbit/s
95th percentile per-packet one-way delay: 3.262 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 3.220 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 3.271 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 3.387 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link



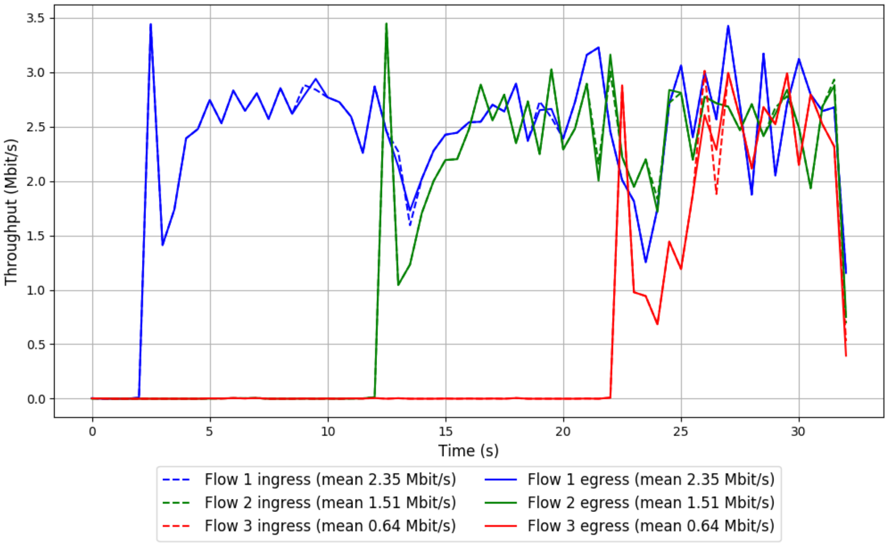


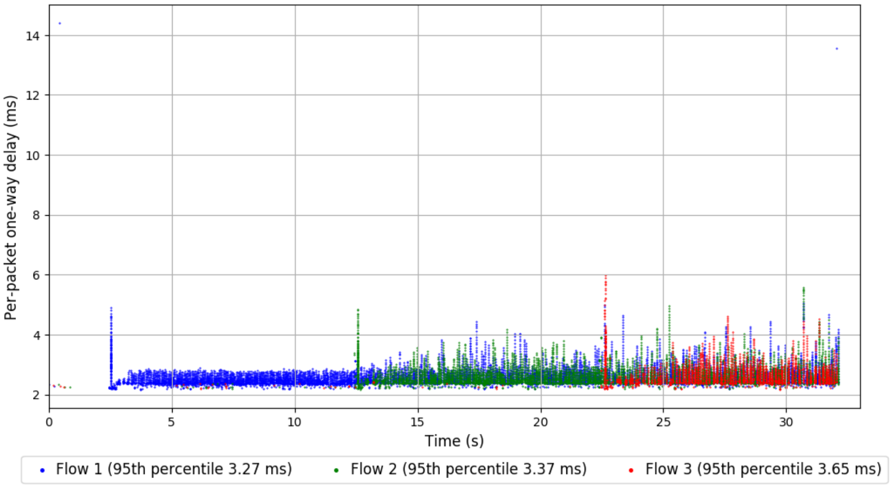
```
Run 2: Statistics of WebRTC media

Start at: 2018-03-21 00:19:41
End at: 2018-03-21 00:20:11
Local clock offset: -12.995 ms
Remote clock offset: -14.416 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 3.356 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 3.272 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 3.369 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 3.646 ms
Loss rate: 0.33%
```

Run 2: Report of WebRTC media — Data Link



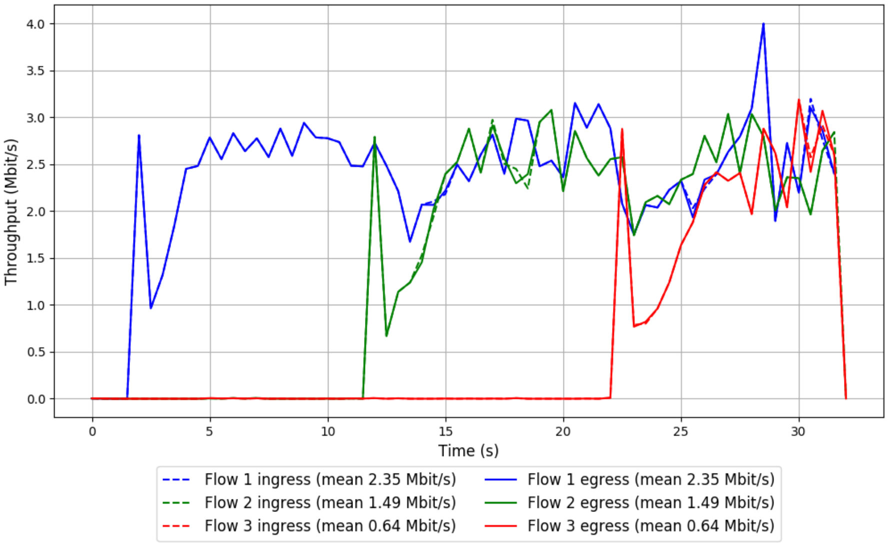


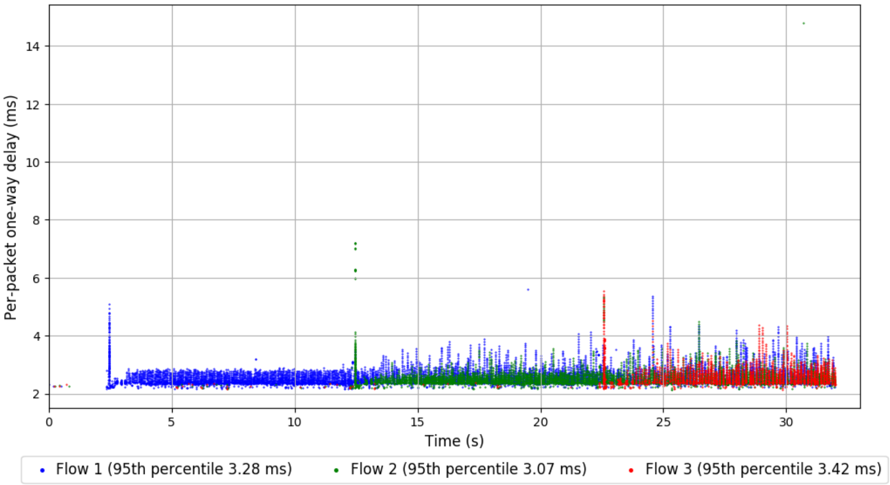
```
Run 3: Statistics of WebRTC media

Start at: 2018-03-21 00:40:10
End at: 2018-03-21 00:40:40
Local clock offset: -12.331 ms
Remote clock offset: -14.597 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.45 Mbit/s
95th percentile per-packet one-way delay: 3.228 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 3.282 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 3.067 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 3.418 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link



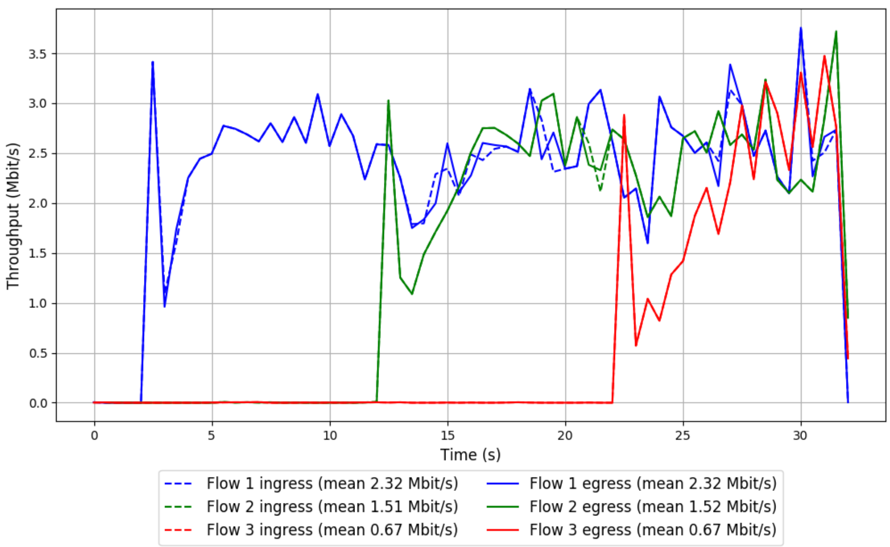


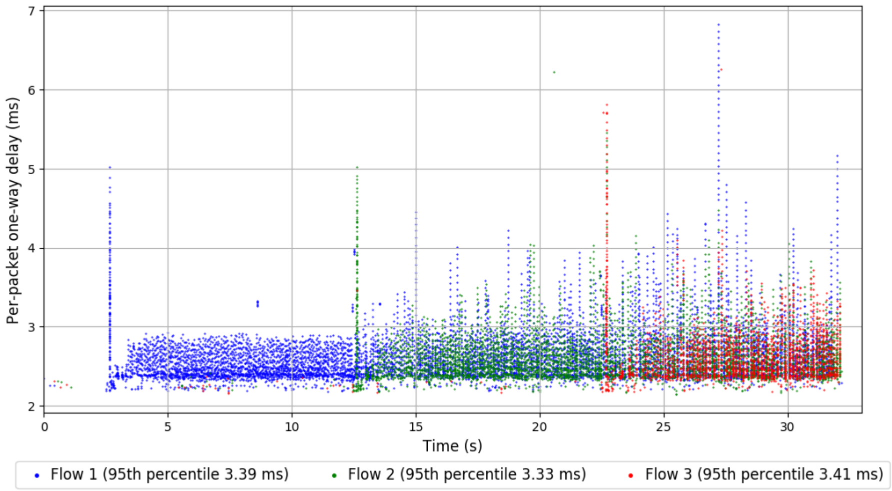
```
Run 4: Statistics of WebRTC media

Start at: 2018-03-21 01:00:38
End at: 2018-03-21 01:01:08
Local clock offset: -11.993 ms
Remote clock offset: -14.636 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 3.376 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 3.392 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 3.328 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 3.408 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



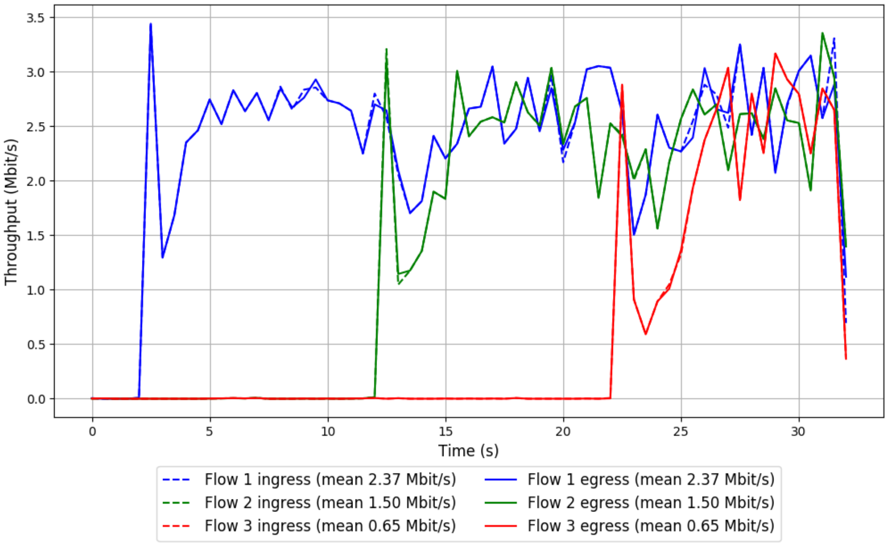


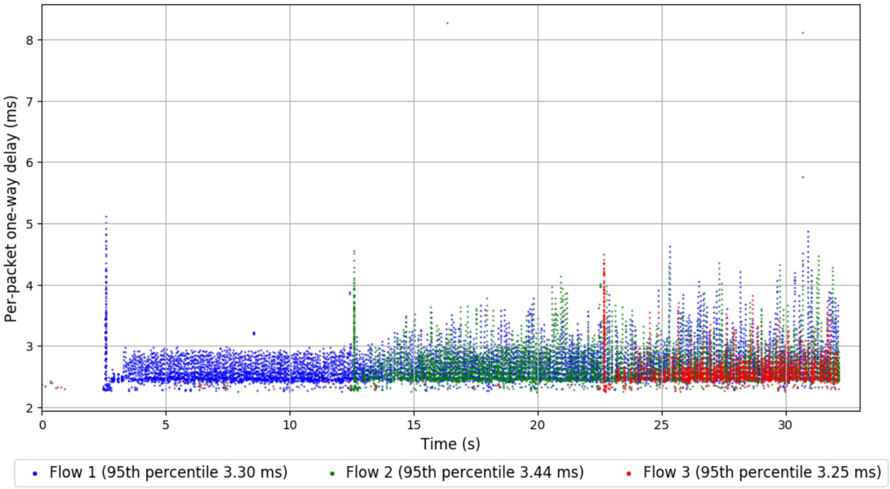
```
Run 5: Statistics of WebRTC media

Start at: 2018-03-21 01:21:03
End at: 2018-03-21 01:21:33
Local clock offset: -11.849 ms
Remote clock offset: -14.744 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.50 Mbit/s
95th percentile per-packet one-way delay: 3.339 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 3.296 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 3.440 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 3.250 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link



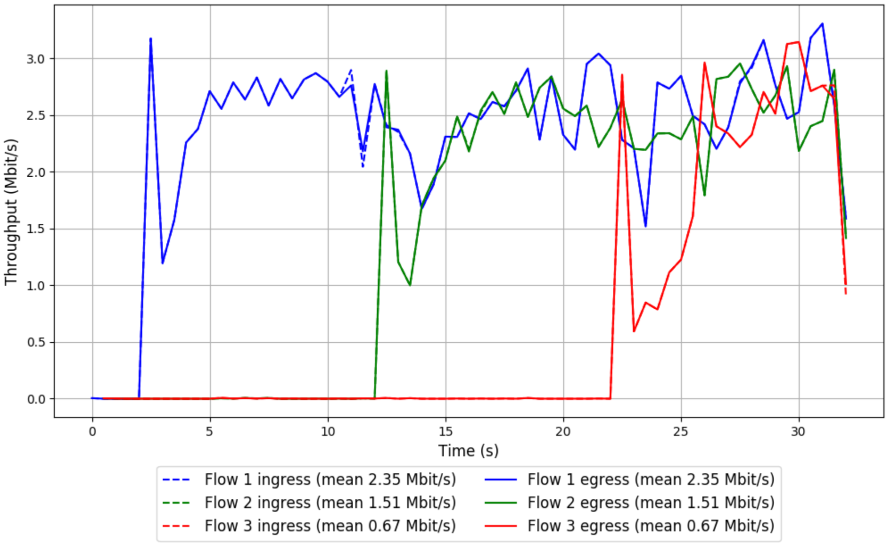


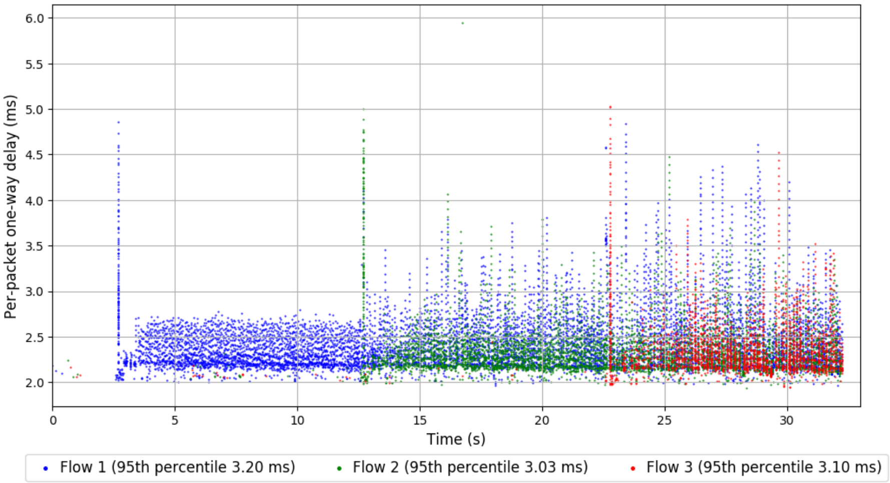
```
Run 6: Statistics of WebRTC media

Start at: 2018-03-21 01:41:27
End at: 2018-03-21 01:41:57
Local clock offset: -9.189 ms
Remote clock offset: -9.009 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 3.137 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 3.198 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 3.031 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 3.100 ms
Loss rate: 0.00%
```

Run 6: Report of WebRTC media — Data Link



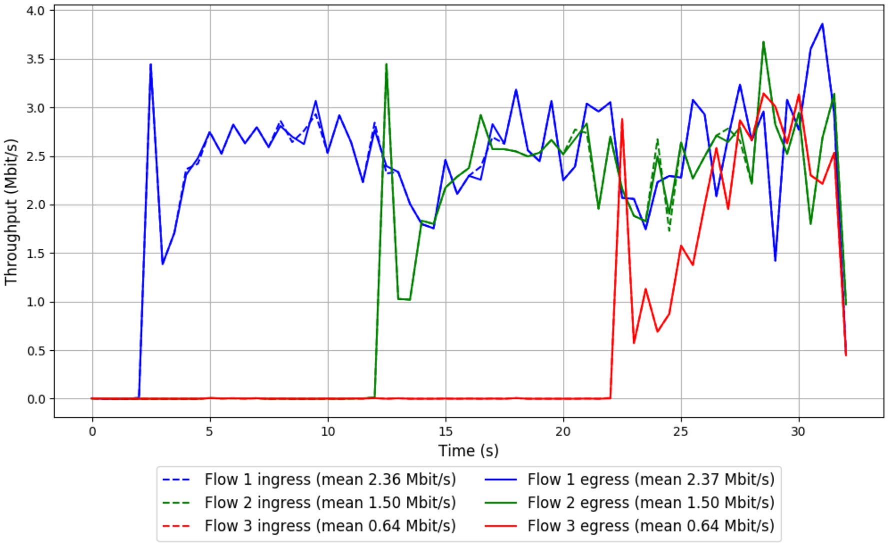


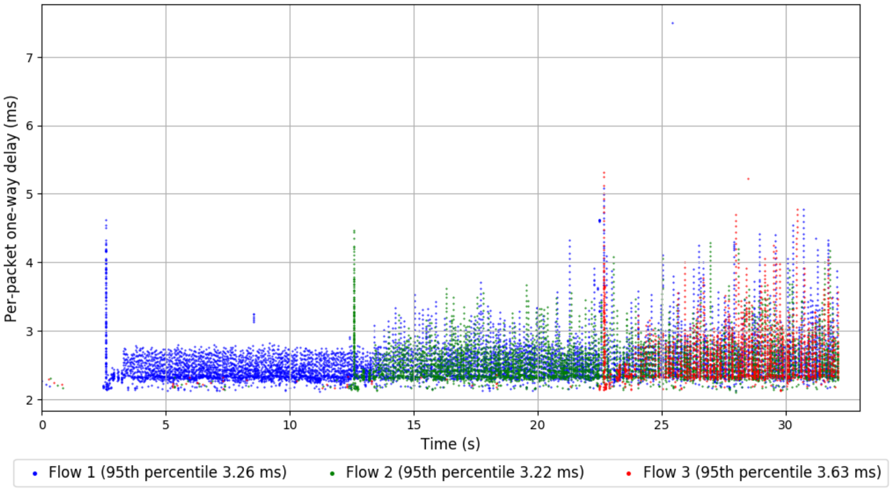
```
Run 7: Statistics of WebRTC media

Start at: 2018-03-21 02:01:51
End at: 2018-03-21 02:02:21
Local clock offset: -2.556 ms
Remote clock offset: -3.37 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 3.312 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 3.262 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 3.220 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 3.626 ms
Loss rate: 0.01%
```

Run 7: Report of WebRTC media — Data Link



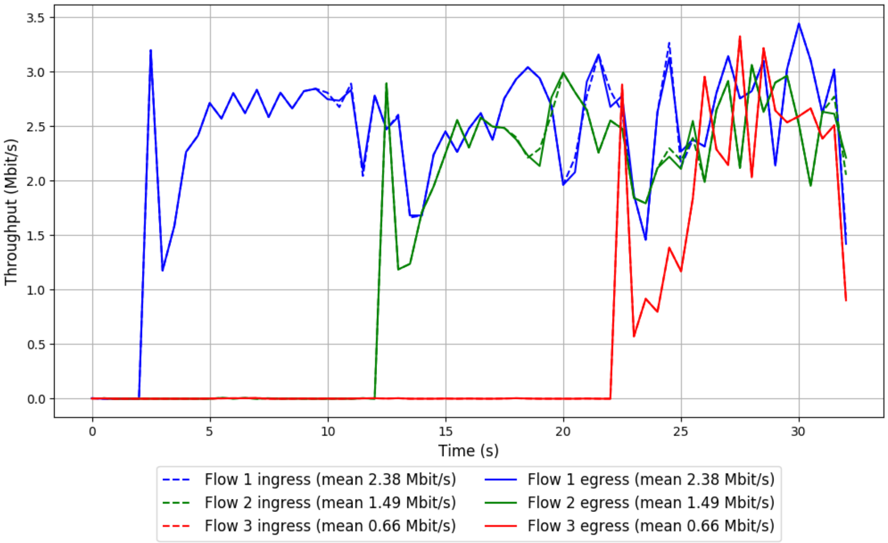


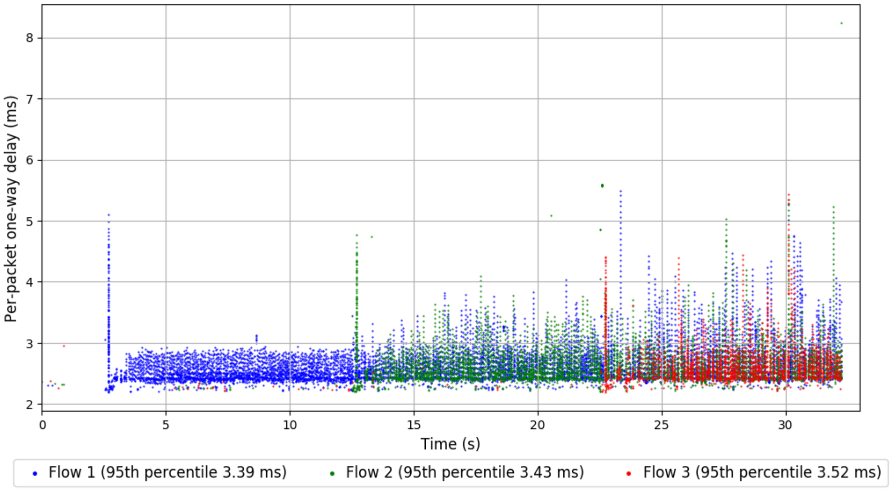
```
Run 8: Statistics of WebRTC media

Start at: 2018-03-21 02:22:17
End at: 2018-03-21 02:22:47
Local clock offset: -2.498 ms
Remote clock offset: -5.128 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.49 Mbit/s
95th percentile per-packet one-way delay: 3.420 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 3.394 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 3.428 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 3.523 ms
Loss rate: 0.00%
```

Run 8: Report of WebRTC media — Data Link



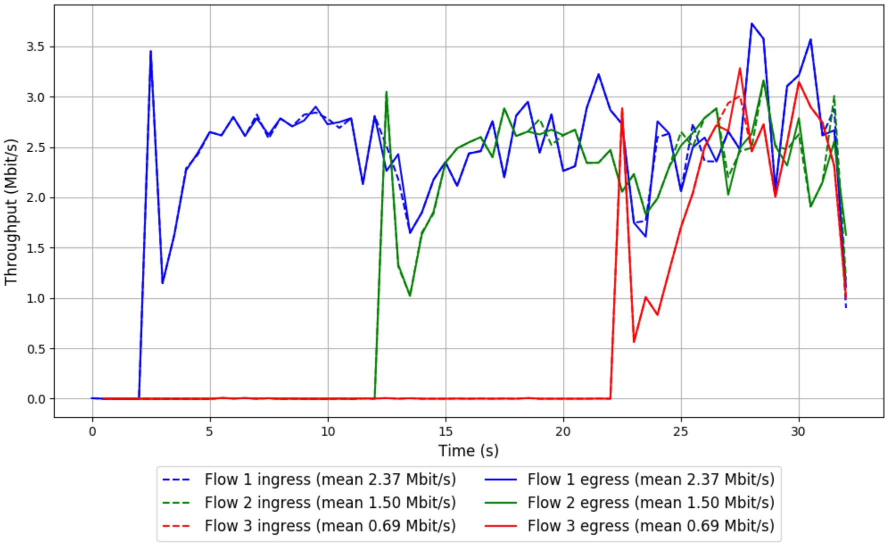


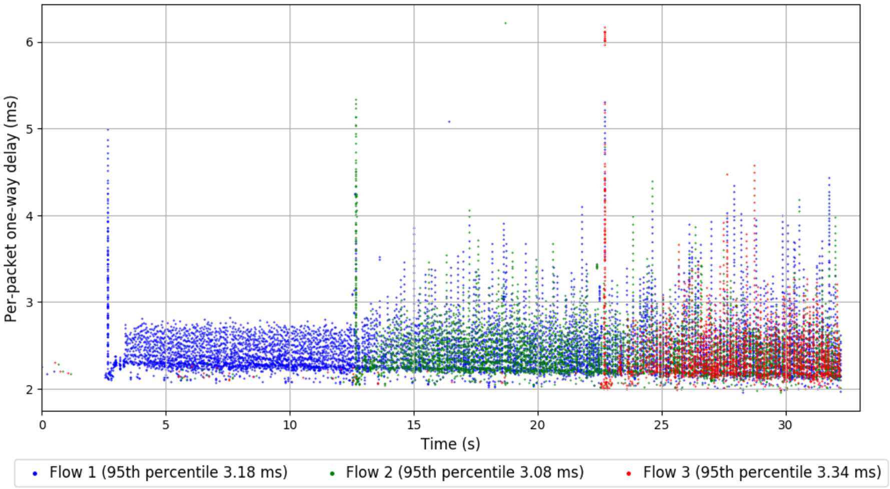
```
Run 9: Statistics of WebRTC media

Start at: 2018-03-21 02:42:41
End at: 2018-03-21 02:43:11
Local clock offset: -1.891 ms
Remote clock offset: -4.62 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 3.167 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 3.179 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 3.082 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 3.343 ms
Loss rate: 0.00%
```

Run 9: Report of WebRTC media — Data Link



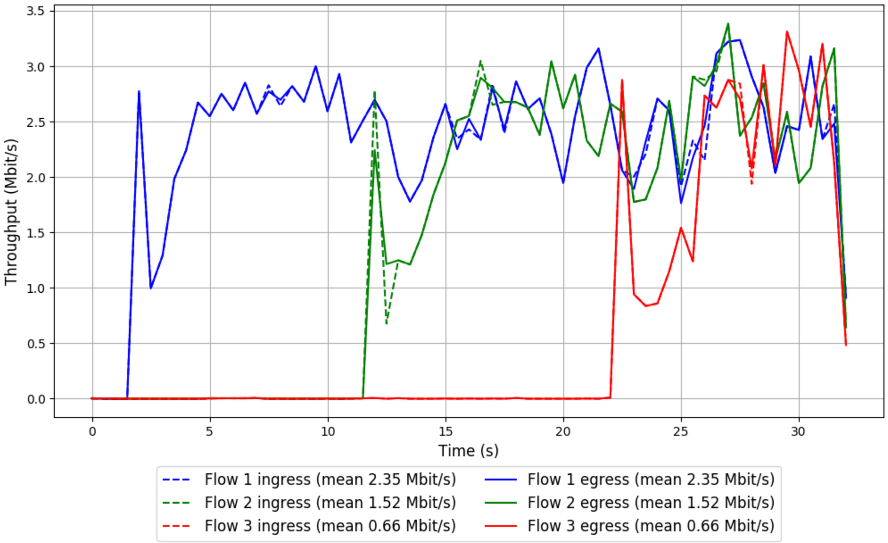


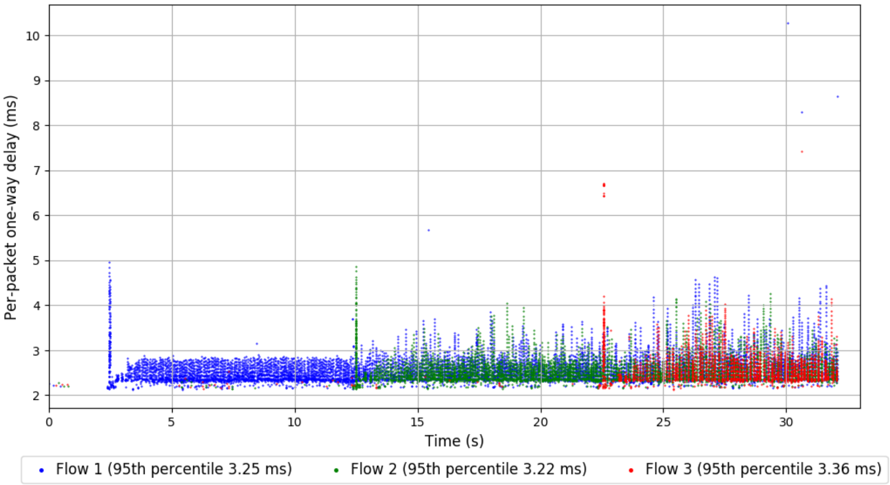
```
Run 10: Statistics of WebRTC media

Start at: 2018-03-21 03:03:06
End at: 2018-03-21 03:03:36
Local clock offset: -3.093 ms
Remote clock offset: -6.56 ms

# Below is generated by plot.py at 2018-03-21 06:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 3.257 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 3.251 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 3.221 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 3.360 ms
Loss rate: 0.00%
```

Run 10: Report of WebRTC media — Data Link



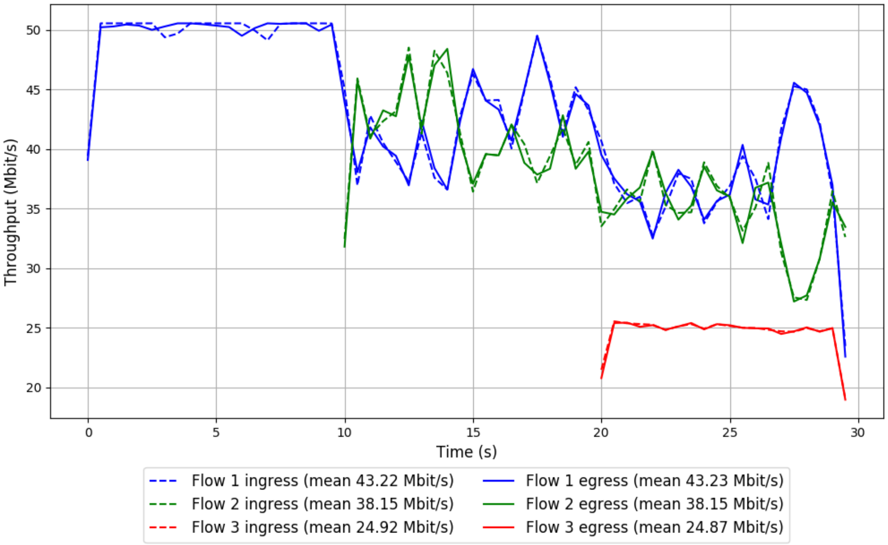


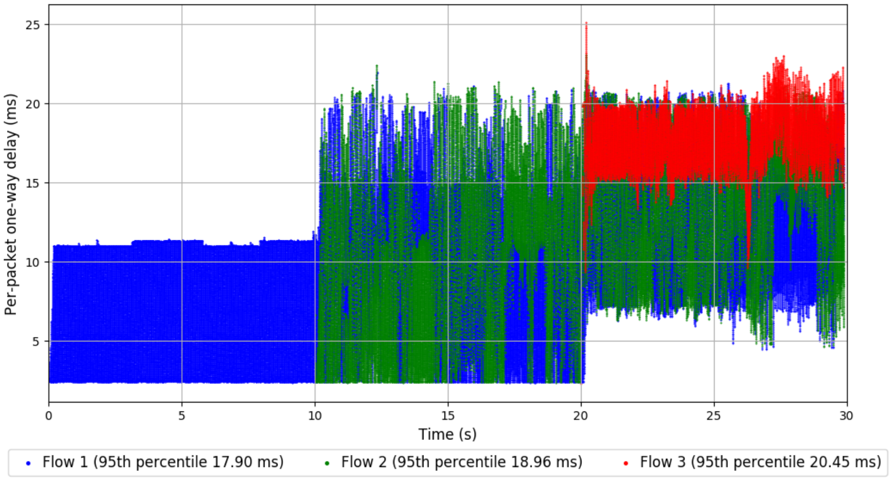
```
Run 1: Statistics of Sprout

Start at: 2018-03-21 00:04:41
End at: 2018-03-21 00:05:11
Local clock offset: -13.086 ms
Remote clock offset: -14.402 ms

# Below is generated by plot.py at 2018-03-21 06:44:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.77 Mbit/s
95th percentile per-packet one-way delay: 19.148 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 43.23 Mbit/s
95th percentile per-packet one-way delay: 17.902 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 38.15 Mbit/s
95th percentile per-packet one-way delay: 18.958 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 24.87 Mbit/s
95th percentile per-packet one-way delay: 20.453 ms
Loss rate: 0.23%
```

Run 1: Report of Sprout — Data Link



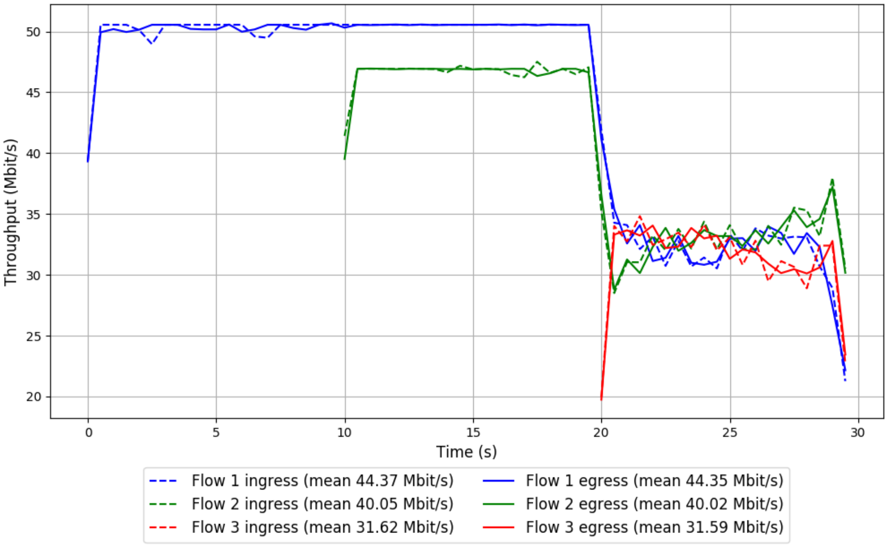


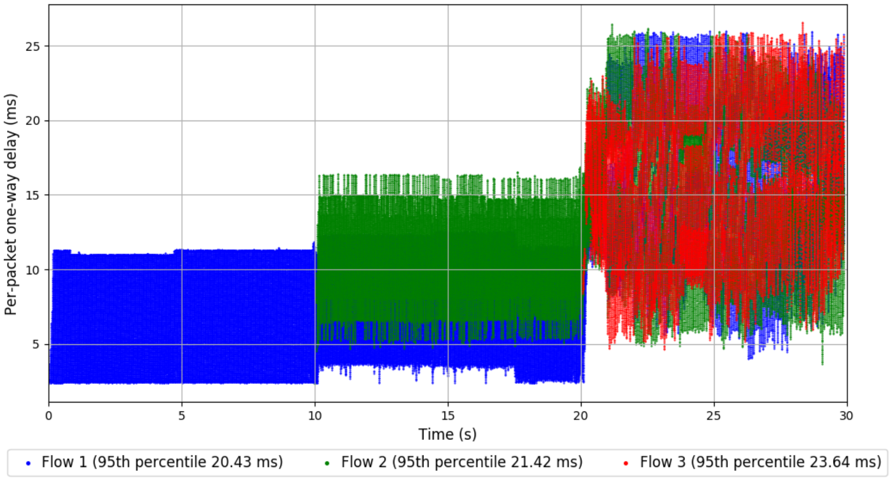
```
Run 2: Statistics of Sprout

Start at: 2018-03-21 00:25:16
End at: 2018-03-21 00:25:46
Local clock offset: -13.016 ms
Remote clock offset: -14.392 ms

# Below is generated by plot.py at 2018-03-21 06:44:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.36 Mbit/s
95th percentile per-packet one-way delay: 21.747 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 44.35 Mbit/s
95th percentile per-packet one-way delay: 20.433 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 40.02 Mbit/s
95th percentile per-packet one-way delay: 21.422 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 31.59 Mbit/s
95th percentile per-packet one-way delay: 23.645 ms
Loss rate: 0.15%
```

Run 2: Report of Sprout — Data Link



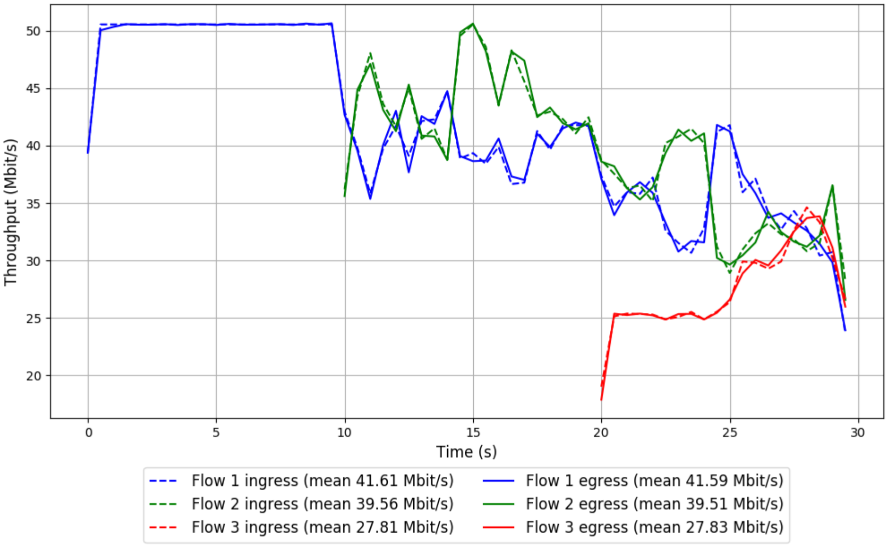


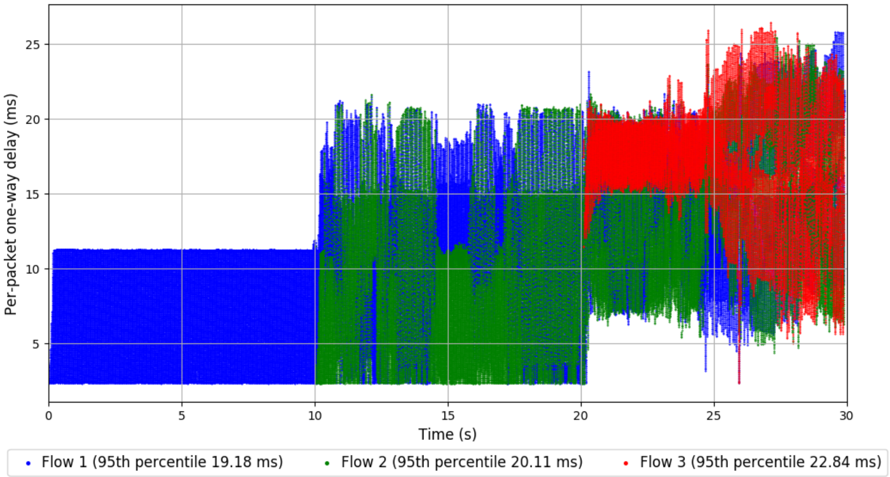
```
Run 3: Statistics of Sprout

Start at: 2018-03-21 00:45:45
End at: 2018-03-21 00:46:15
Local clock offset: -12.207 ms
Remote clock offset: -14.619 ms

# Below is generated by plot.py at 2018-03-21 06:44:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.01 Mbit/s
95th percentile per-packet one-way delay: 20.223 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 41.59 Mbit/s
95th percentile per-packet one-way delay: 19.183 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.51 Mbit/s
95th percentile per-packet one-way delay: 20.108 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 27.83 Mbit/s
95th percentile per-packet one-way delay: 22.843 ms
Loss rate: 0.12%
```

Run 3: Report of Sprout — Data Link



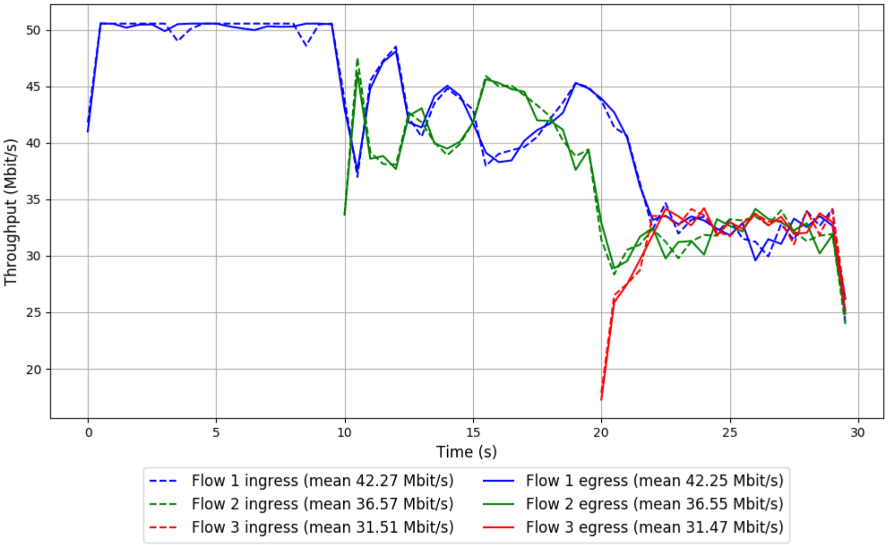


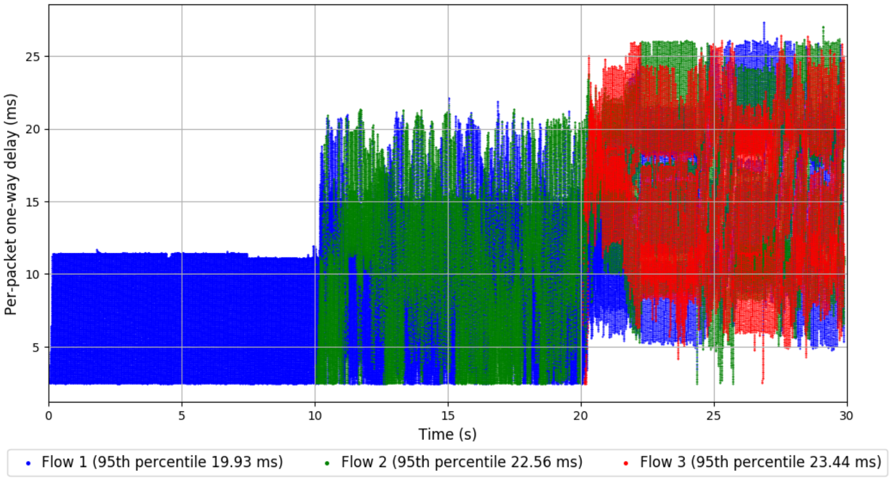
```
Run 4: Statistics of Sprout

Start at: 2018-03-21 01:06:12
End at: 2018-03-21 01:06:42
Local clock offset: -11.925 ms
Remote clock offset: -14.705 ms

# Below is generated by plot.py at 2018-03-21 06:44:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.91 Mbit/s
95th percentile per-packet one-way delay: 21.808 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 42.25 Mbit/s
95th percentile per-packet one-way delay: 19.932 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.55 Mbit/s
95th percentile per-packet one-way delay: 22.559 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 31.47 Mbit/s
95th percentile per-packet one-way delay: 23.442 ms
Loss rate: 0.33%
```

Run 4: Report of Sprout — Data Link



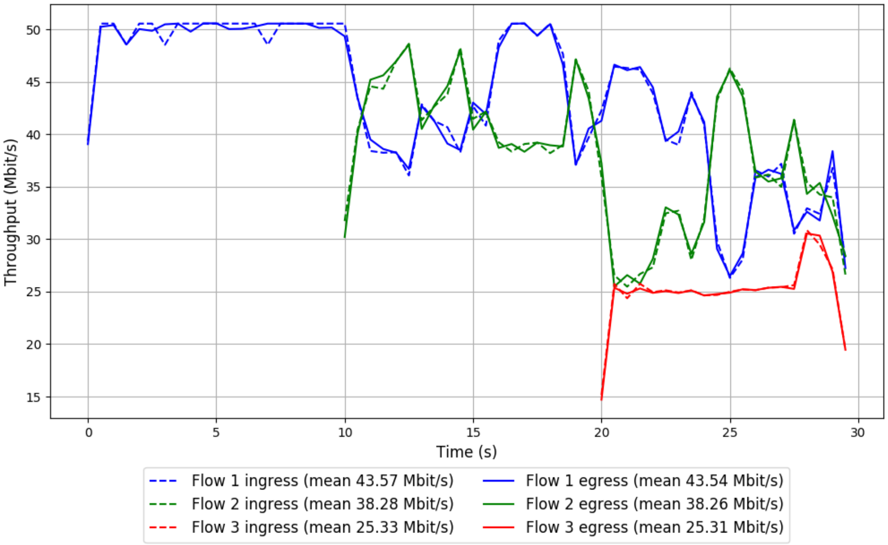


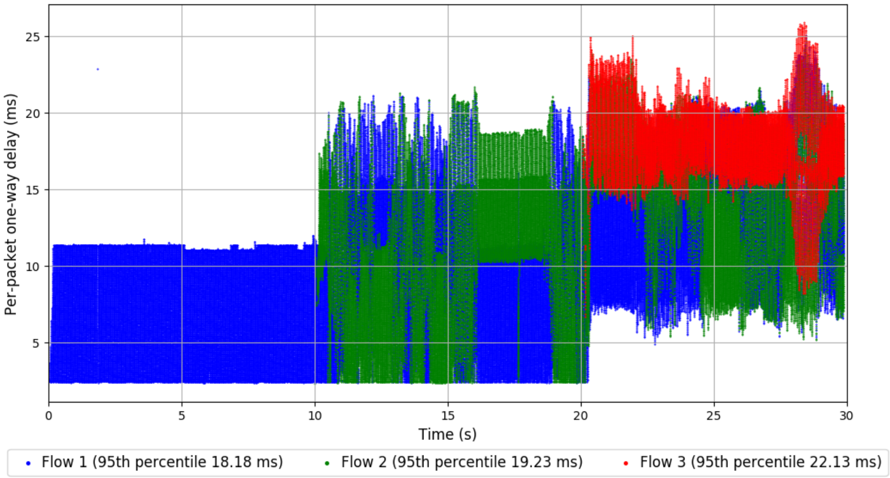
```
Run 5: Statistics of Sprout

Start at: 2018-03-21 01:26:37
End at: 2018-03-21 01:27:07
Local clock offset: -11.813 ms
Remote clock offset: -14.671 ms

# Below is generated by plot.py at 2018-03-21 06:44:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.31 Mbit/s
95th percentile per-packet one-way delay: 19.567 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 43.54 Mbit/s
95th percentile per-packet one-way delay: 18.180 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 38.26 Mbit/s
95th percentile per-packet one-way delay: 19.227 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 25.31 Mbit/s
95th percentile per-packet one-way delay: 22.128 ms
Loss rate: 0.21%
```

Run 5: Report of Sprout — Data Link



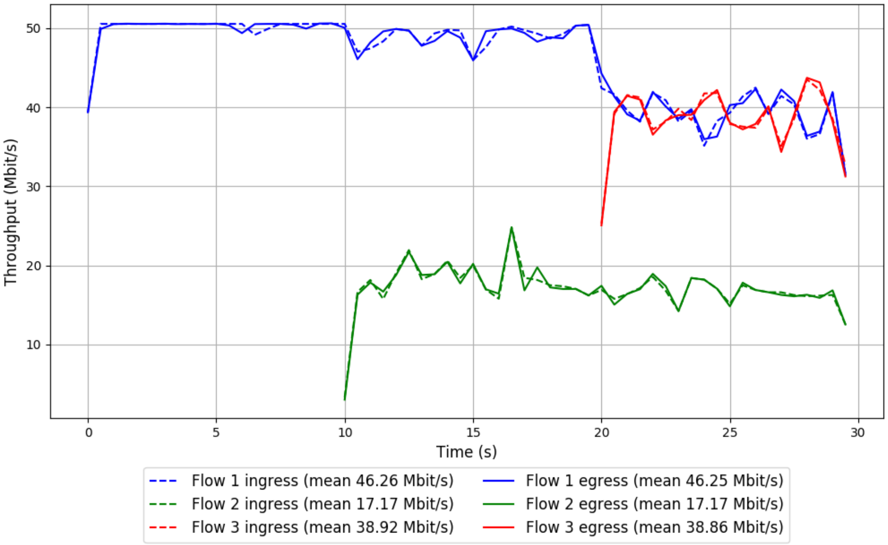


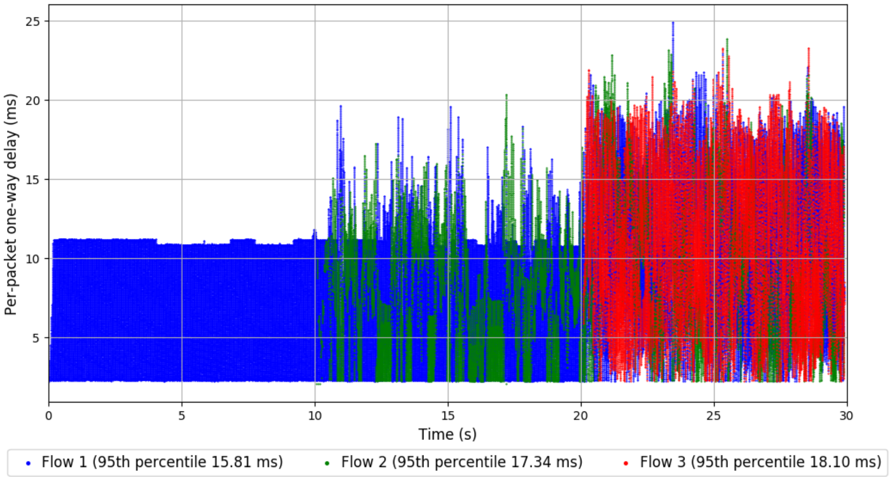
```
Run 6: Statistics of Sprout

Start at: 2018-03-21 01:47:01
End at: 2018-03-21 01:47:31
Local clock offset: -6.385 ms
Remote clock offset: -6.771 ms

# Below is generated by plot.py at 2018-03-21 06:44:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.47 Mbit/s
95th percentile per-packet one-way delay: 16.856 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 46.25 Mbit/s
95th percentile per-packet one-way delay: 15.815 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 17.17 Mbit/s
95th percentile per-packet one-way delay: 17.341 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.86 Mbit/s
95th percentile per-packet one-way delay: 18.102 ms
Loss rate: 0.24%
```

Run 6: Report of Sprout — Data Link



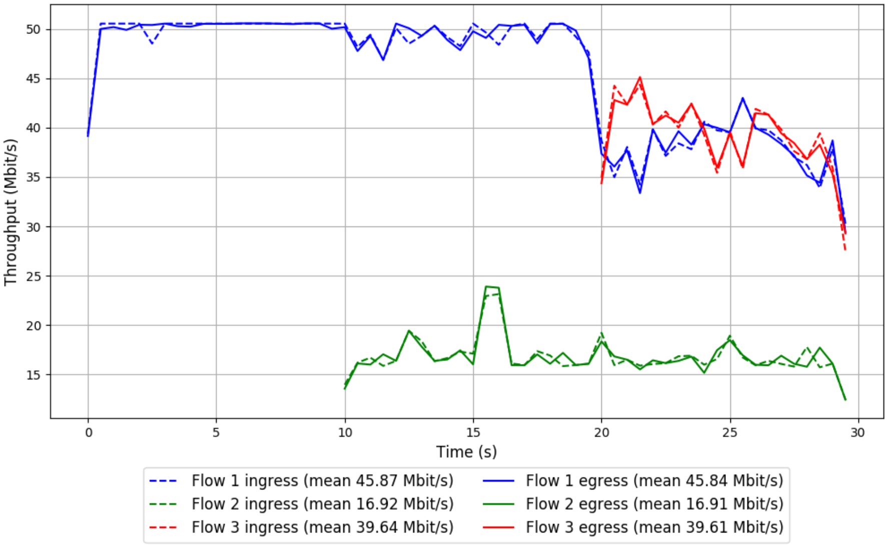


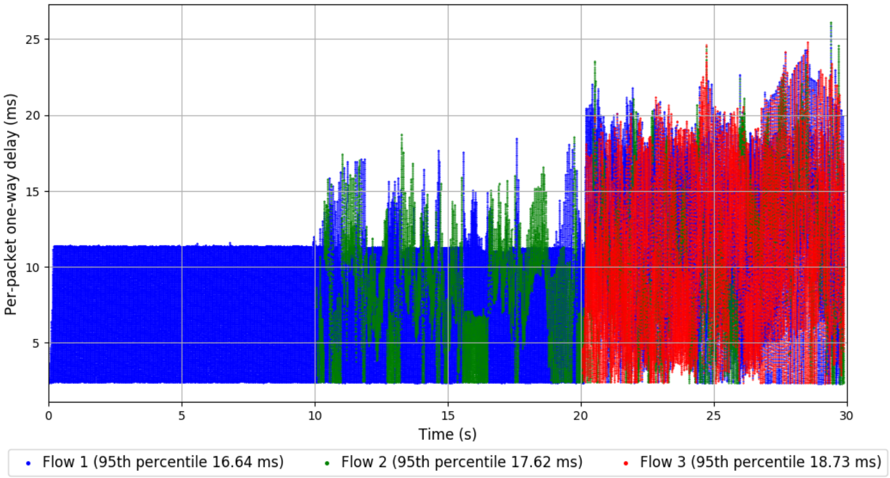
```
Run 7: Statistics of Sprout

Start at: 2018-03-21 02:07:25
End at: 2018-03-21 02:07:55
Local clock offset: -1.634 ms
Remote clock offset: -2.507 ms

# Below is generated by plot.py at 2018-03-21 06:44:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.14 Mbit/s
95th percentile per-packet one-way delay: 17.438 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 45.84 Mbit/s
95th percentile per-packet one-way delay: 16.638 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 16.91 Mbit/s
95th percentile per-packet one-way delay: 17.620 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 39.61 Mbit/s
95th percentile per-packet one-way delay: 18.734 ms
Loss rate: 0.00%
```

Run 7: Report of Sprout — Data Link



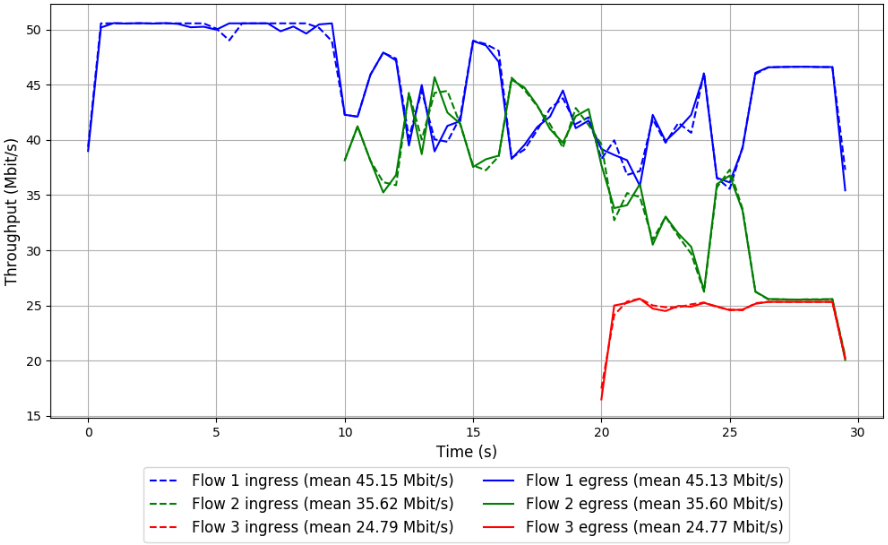


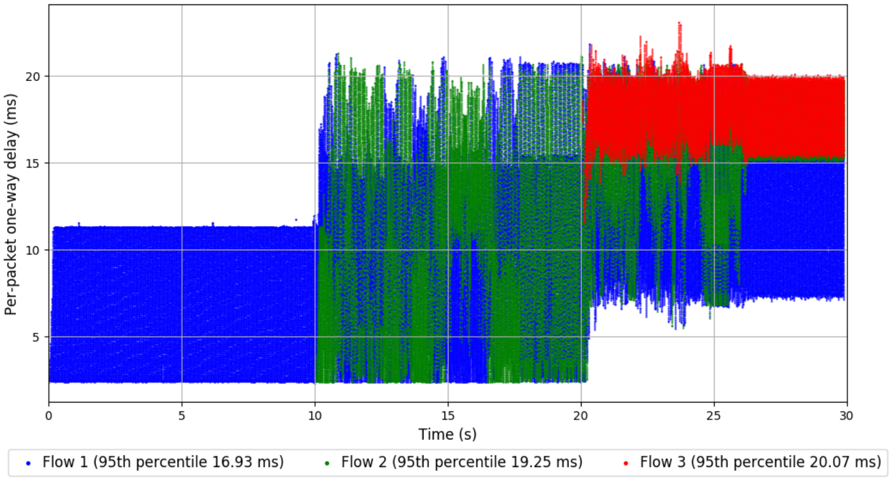
```
Run 8: Statistics of Sprout

Start at: 2018-03-21 02:27:51
End at: 2018-03-21 02:28:21
Local clock offset: -2.544 ms
Remote clock offset: -5.112 ms

# Below is generated by plot.py at 2018-03-21 06:44:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.95 Mbit/s
95th percentile per-packet one-way delay: 19.173 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 45.13 Mbit/s
95th percentile per-packet one-way delay: 16.929 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 35.60 Mbit/s
95th percentile per-packet one-way delay: 19.253 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 24.77 Mbit/s
95th percentile per-packet one-way delay: 20.074 ms
Loss rate: 0.22%
```

Run 8: Report of Sprout — Data Link



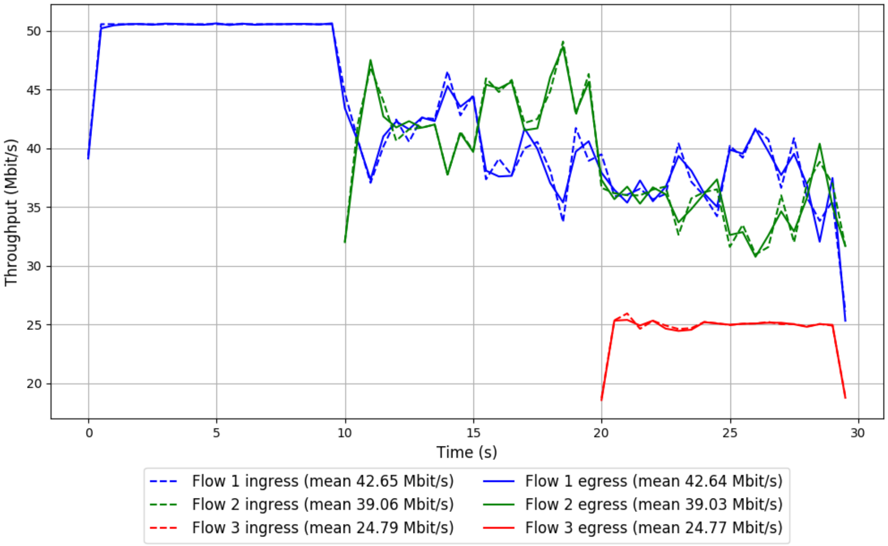


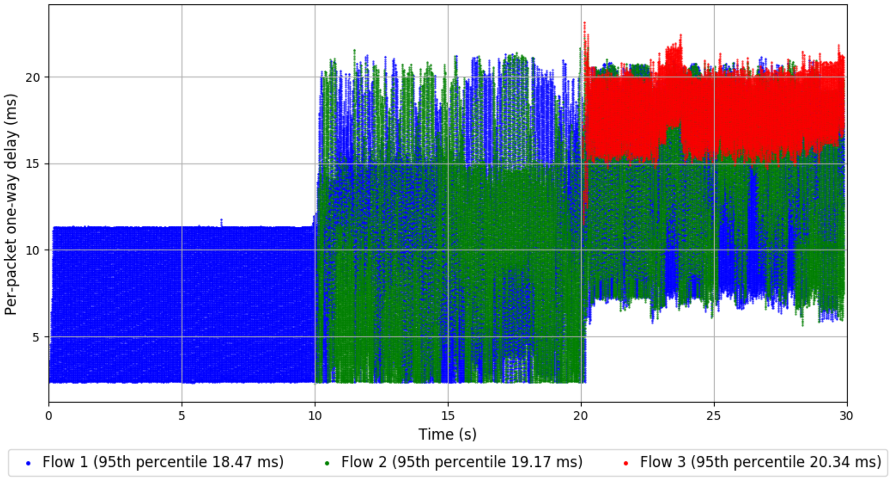
```
Run 9: Statistics of Sprout

Start at: 2018-03-21 02:48:14
End at: 2018-03-21 02:48:44
Local clock offset: -2.047 ms
Remote clock offset: -5.683 ms

# Below is generated by plot.py at 2018-03-21 06:45:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.76 Mbit/s
95th percentile per-packet one-way delay: 19.384 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 42.64 Mbit/s
95th percentile per-packet one-way delay: 18.471 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 39.03 Mbit/s
95th percentile per-packet one-way delay: 19.173 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 24.77 Mbit/s
95th percentile per-packet one-way delay: 20.339 ms
Loss rate: 0.21%
```

Run 9: Report of Sprout — Data Link



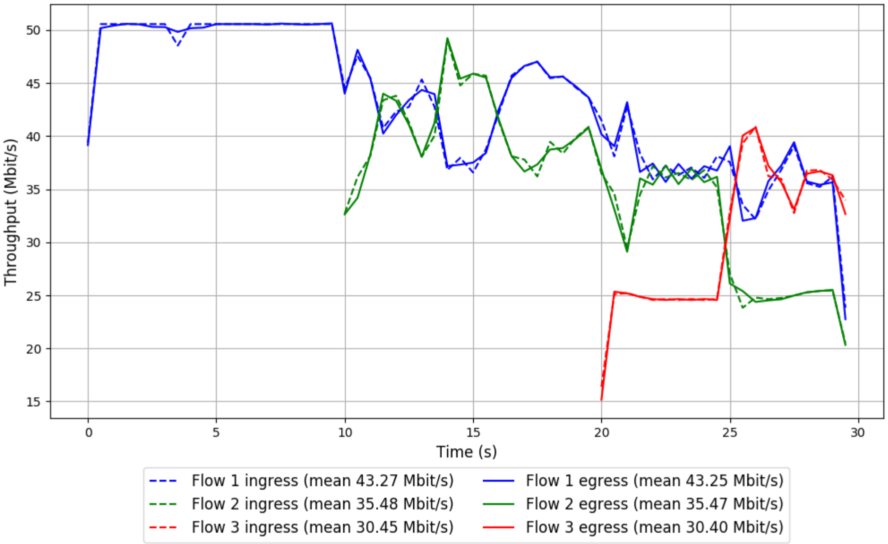


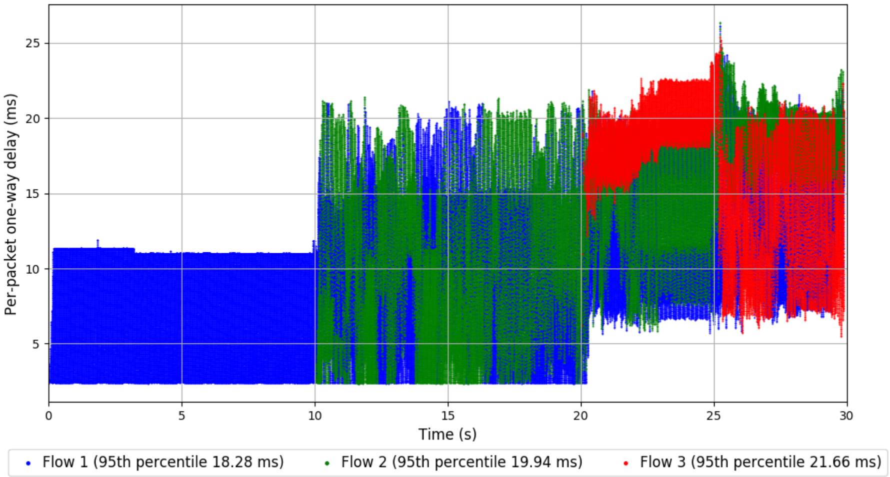
```
Run 10: Statistics of Sprout

Start at: 2018-03-21 03:08:40
End at: 2018-03-21 03:09:10
Local clock offset: -2.987 ms
Remote clock offset: -6.584 ms

# Below is generated by plot.py at 2018-03-21 06:45:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.84 Mbit/s
95th percentile per-packet one-way delay: 19.782 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 43.25 Mbit/s
95th percentile per-packet one-way delay: 18.283 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 35.47 Mbit/s
95th percentile per-packet one-way delay: 19.936 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 30.40 Mbit/s
95th percentile per-packet one-way delay: 21.661 ms
Loss rate: 0.22%
```

Run 10: Report of Sprout — Data Link



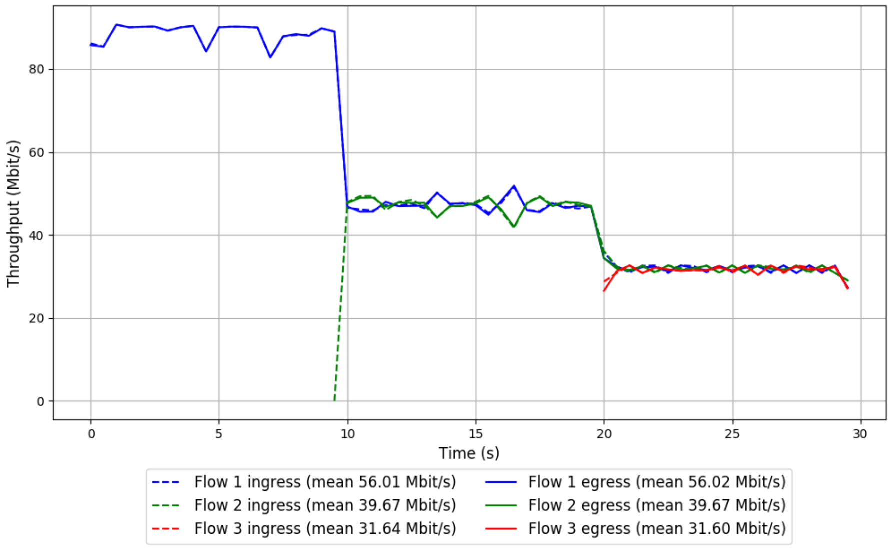


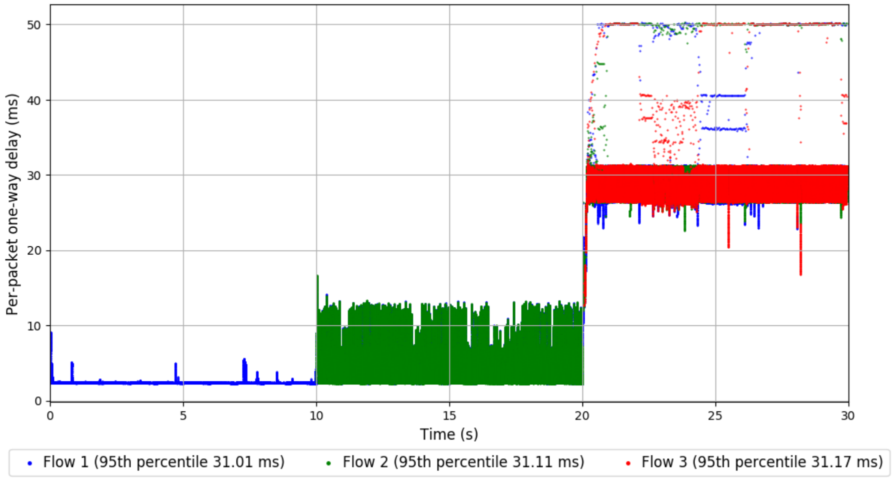
```
Run 1: Statistics of TaoVA-100x

Start at: 2018-03-20 23:56:46
End at: 2018-03-20 23:57:16
Local clock offset: -13.398 ms
Remote clock offset: -14.291 ms

# Below is generated by plot.py at 2018-03-21 06:46:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.85 Mbit/s
95th percentile per-packet one-way delay: 31.095 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 56.02 Mbit/s
95th percentile per-packet one-way delay: 31.008 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.67 Mbit/s
95th percentile per-packet one-way delay: 31.105 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.60 Mbit/s
95th percentile per-packet one-way delay: 31.169 ms
Loss rate: 0.30%
```

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



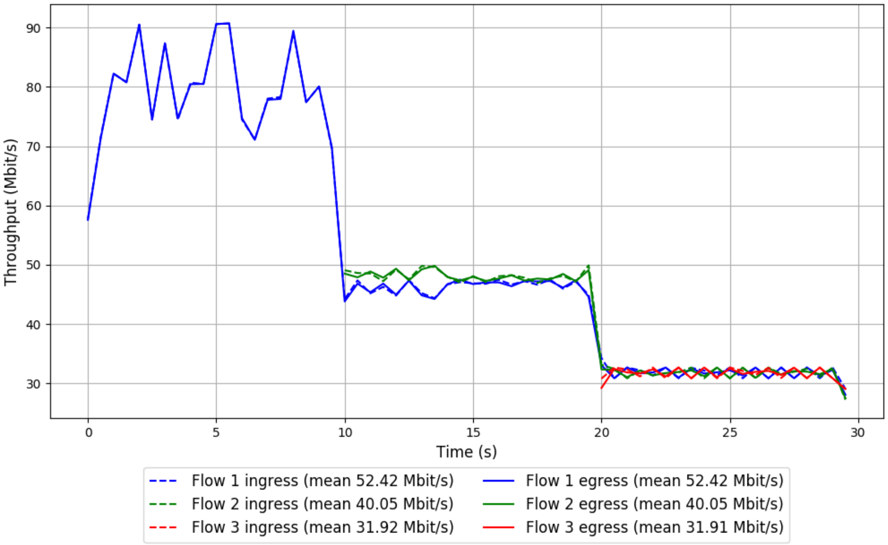


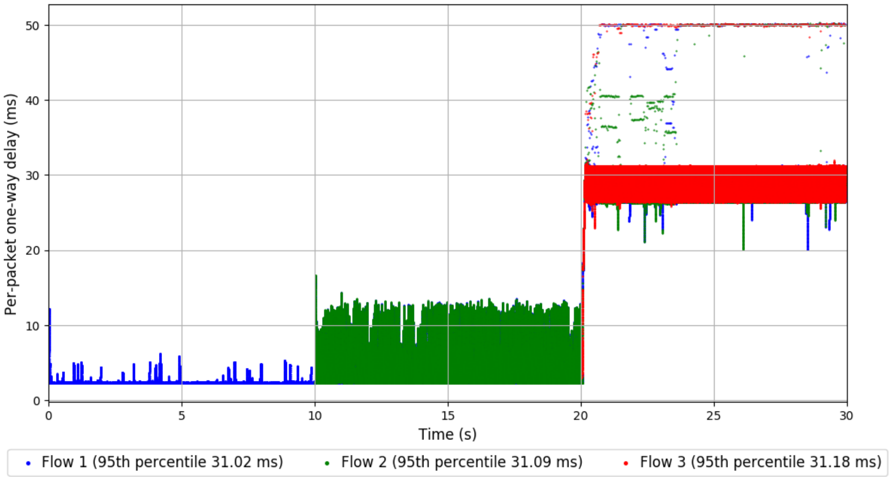
```
Run 2: Statistics of TaoVA-100x

Start at: 2018-03-21 00:17:21
End at: 2018-03-21 00:17:51
Local clock offset: -13.057 ms
Remote clock offset: -14.422 ms

# Below is generated by plot.py at 2018-03-21 06:46:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.61 Mbit/s
95th percentile per-packet one-way delay: 31.096 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 52.42 Mbit/s
95th percentile per-packet one-way delay: 31.024 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 40.05 Mbit/s
95th percentile per-packet one-way delay: 31.090 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.91 Mbit/s
95th percentile per-packet one-way delay: 31.178 ms
Loss rate: 0.29%
```

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



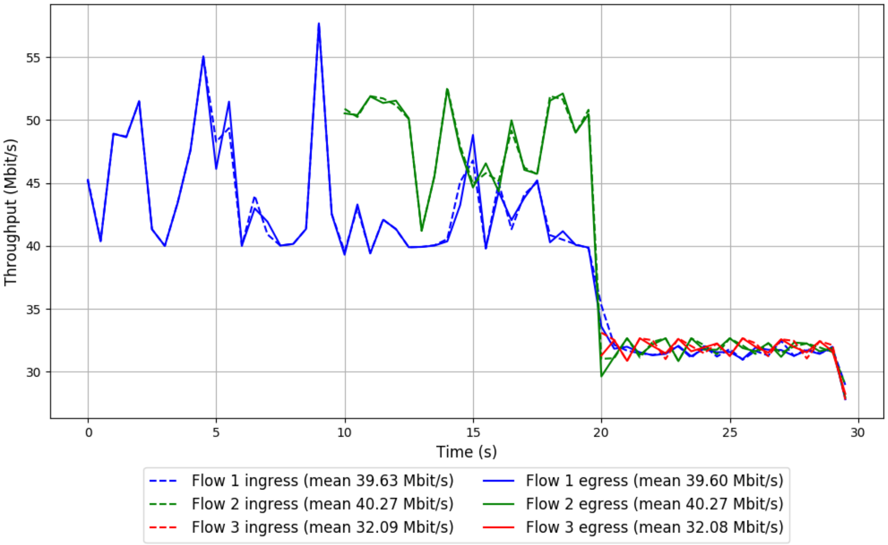


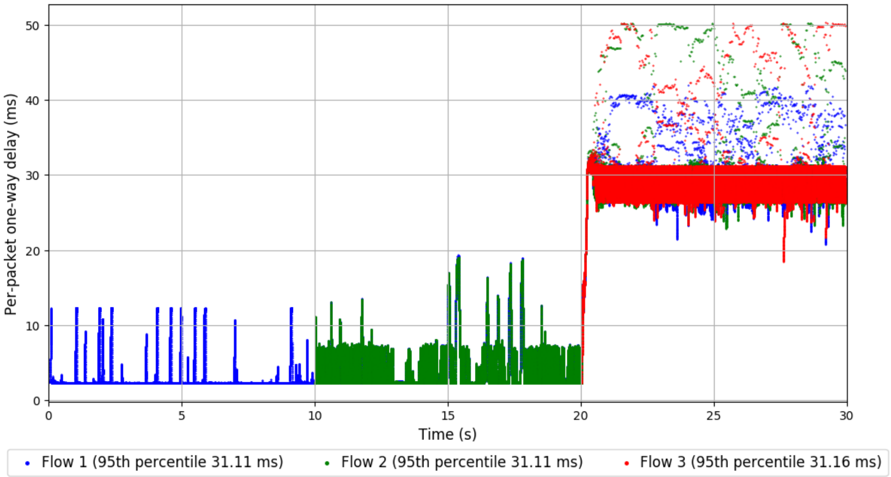
```
Run 3: Statistics of TaoVA-100x

Start at: 2018-03-21 00:37:51
End at: 2018-03-21 00:38:21
Local clock offset: -12.452 ms
Remote clock offset: -14.596 ms

# Below is generated by plot.py at 2018-03-21 06:46:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.01 Mbit/s
95th percentile per-packet one-way delay: 31.123 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 39.60 Mbit/s
95th percentile per-packet one-way delay: 31.105 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 40.27 Mbit/s
95th percentile per-packet one-way delay: 31.109 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 32.08 Mbit/s
95th percentile per-packet one-way delay: 31.162 ms
Loss rate: 0.29%
```

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



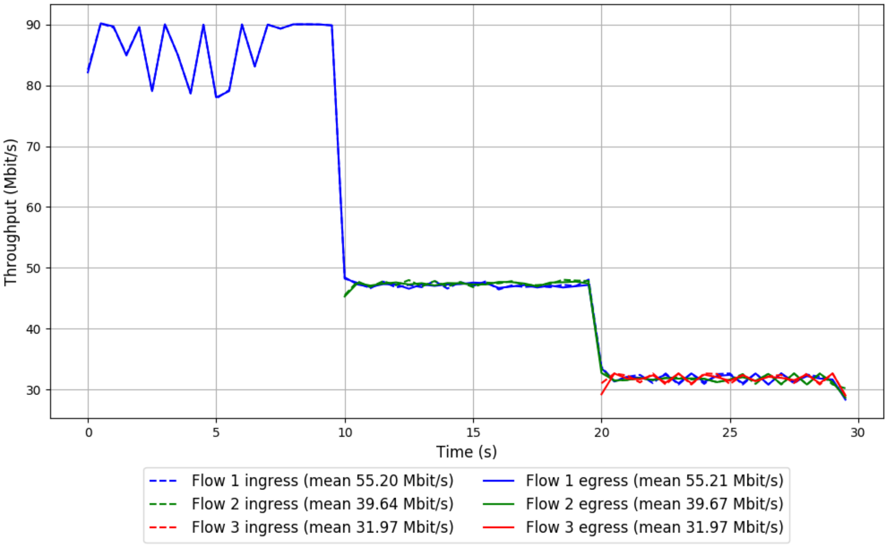


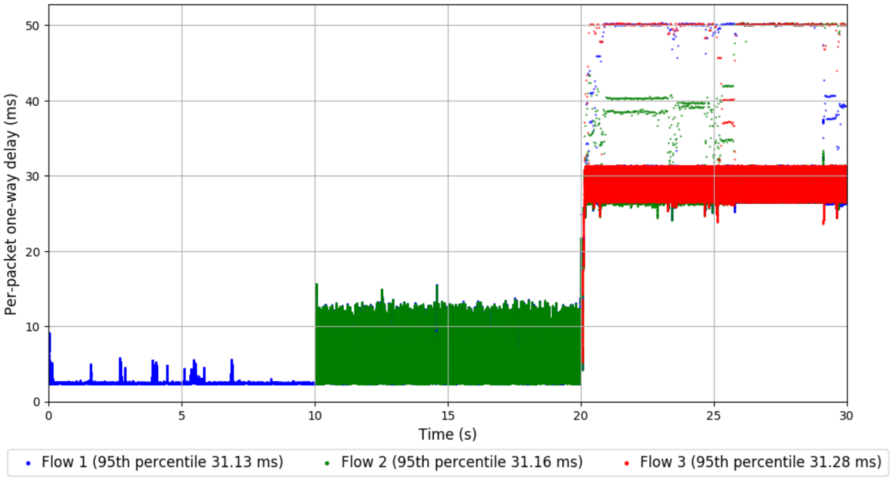
```
Run 4: Statistics of TaoVA-100x

Start at: 2018-03-21 00:58:20
End at: 2018-03-21 00:58:50
Local clock offset: -12.009 ms
Remote clock offset: -14.687 ms

# Below is generated by plot.py at 2018-03-21 06:46:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.15 Mbit/s
95th percentile per-packet one-way delay: 31.202 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 55.21 Mbit/s
95th percentile per-packet one-way delay: 31.130 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 39.67 Mbit/s
95th percentile per-packet one-way delay: 31.165 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 31.97 Mbit/s
95th percentile per-packet one-way delay: 31.284 ms
Loss rate: 0.29%
```

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



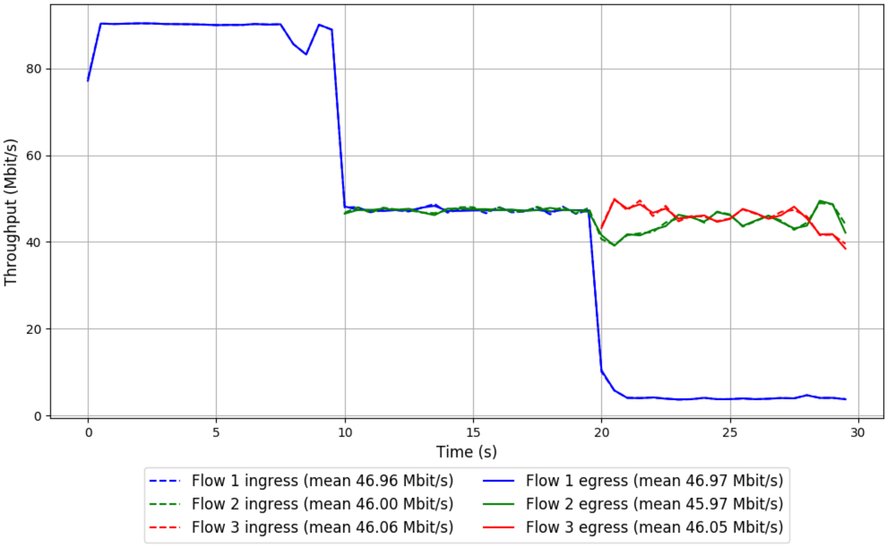


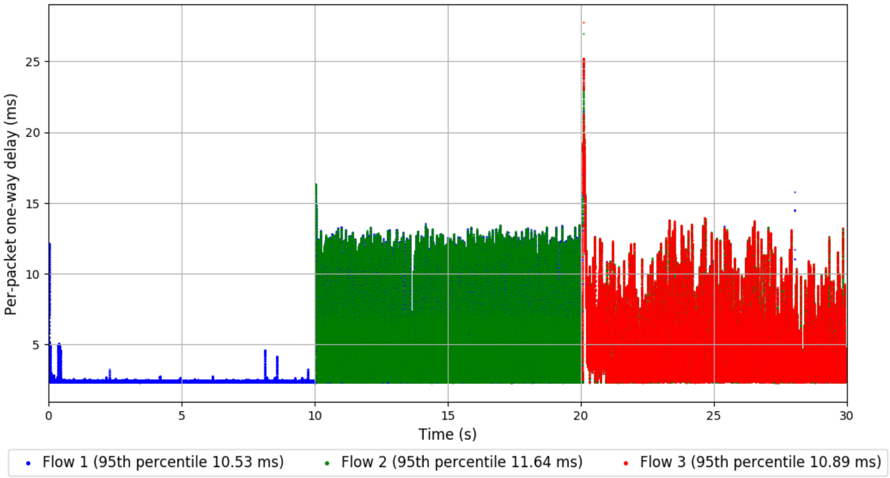
```
Run 5: Statistics of TaoVA-100x

Start at: 2018-03-21 01:18:45
End at: 2018-03-21 01:19:15
Local clock offset: -11.891 ms
Remote clock offset: -14.673 ms

# Below is generated by plot.py at 2018-03-21 06:46:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.80 Mbit/s
95th percentile per-packet one-way delay: 11.113 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 46.97 Mbit/s
95th percentile per-packet one-way delay: 10.528 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.97 Mbit/s
95th percentile per-packet one-way delay: 11.640 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 46.05 Mbit/s
95th percentile per-packet one-way delay: 10.891 ms
Loss rate: 0.16%
```

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



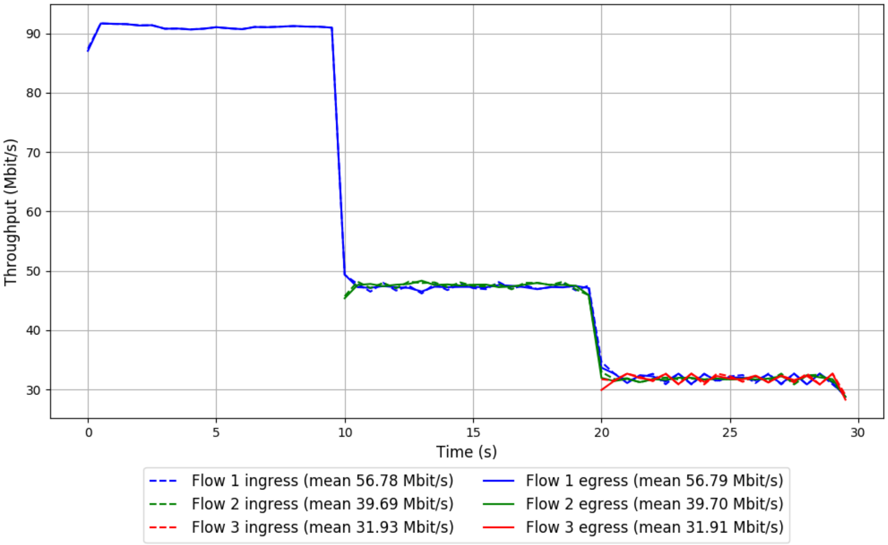


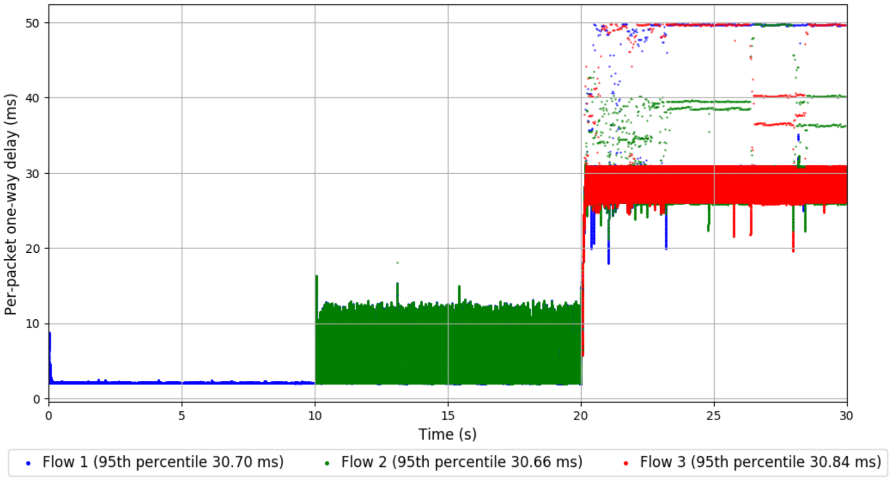
```
Run 6: Statistics of TaoVA-100x

Start at: 2018-03-21 01:39:09
End at: 2018-03-21 01:39:39
Local clock offset: -11.015 ms
Remote clock offset: -10.37 ms

# Below is generated by plot.py at 2018-03-21 06:47:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.72 Mbit/s
95th percentile per-packet one-way delay: 30.752 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.79 Mbit/s
95th percentile per-packet one-way delay: 30.697 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.70 Mbit/s
95th percentile per-packet one-way delay: 30.661 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.91 Mbit/s
95th percentile per-packet one-way delay: 30.840 ms
Loss rate: 0.41%
```

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



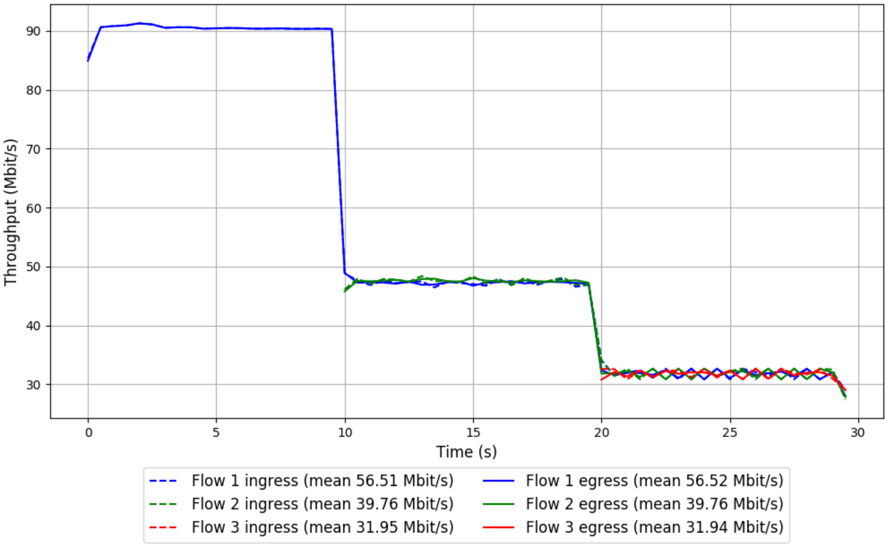


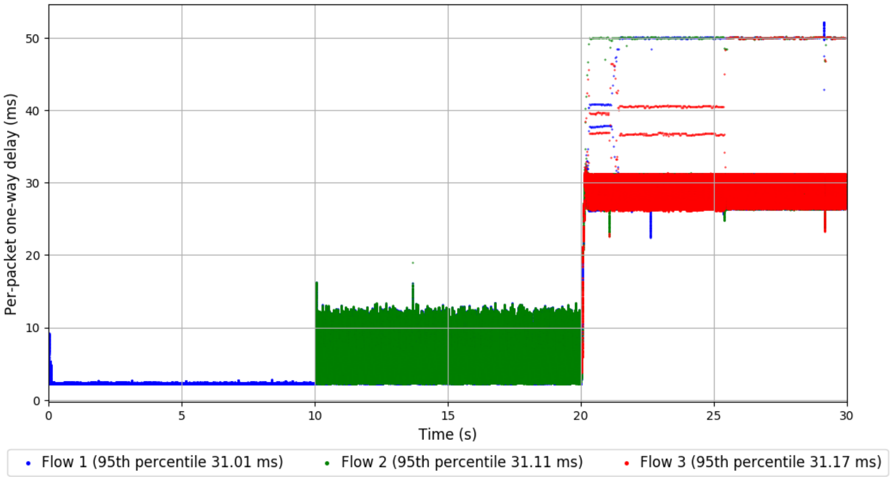
```
Run 7: Statistics of TaoVA-100x

Start at: 2018-03-21 01:59:32
End at: 2018-03-21 02:00:02
Local clock offset: -3.016 ms
Remote clock offset: -3.81 ms

# Below is generated by plot.py at 2018-03-21 06:47:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.52 Mbit/s
95th percentile per-packet one-way delay: 31.099 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.52 Mbit/s
95th percentile per-packet one-way delay: 31.013 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 39.76 Mbit/s
95th percentile per-packet one-way delay: 31.115 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.94 Mbit/s
95th percentile per-packet one-way delay: 31.169 ms
Loss rate: 0.29%
```

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



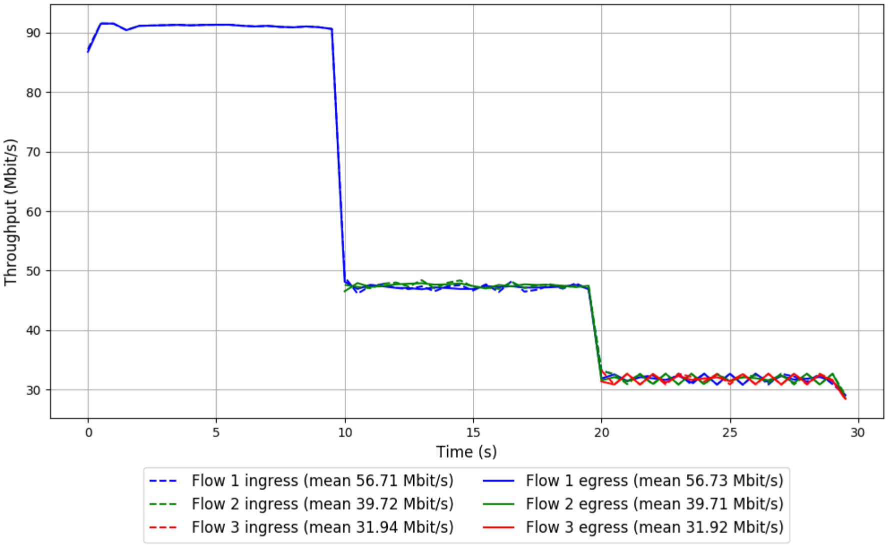


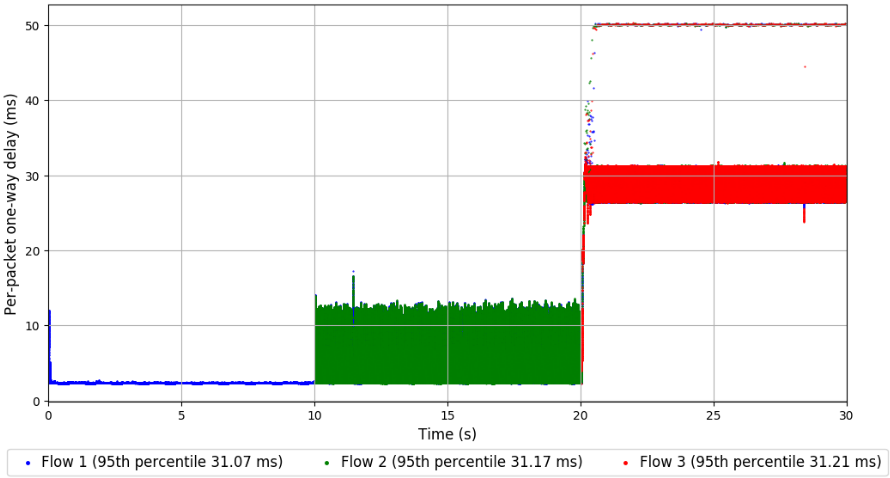
```
Run 8: Statistics of TaoVA-100x

Start at: 2018-03-21 02:19:59
End at: 2018-03-21 02:20:29
Local clock offset: -2.396 ms
Remote clock offset: -5.009 ms

# Below is generated by plot.py at 2018-03-21 06:47:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.70 Mbit/s
95th percentile per-packet one-way delay: 31.151 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.73 Mbit/s
95th percentile per-packet one-way delay: 31.071 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.71 Mbit/s
95th percentile per-packet one-way delay: 31.174 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 31.92 Mbit/s
95th percentile per-packet one-way delay: 31.213 ms
Loss rate: 0.29%
```

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



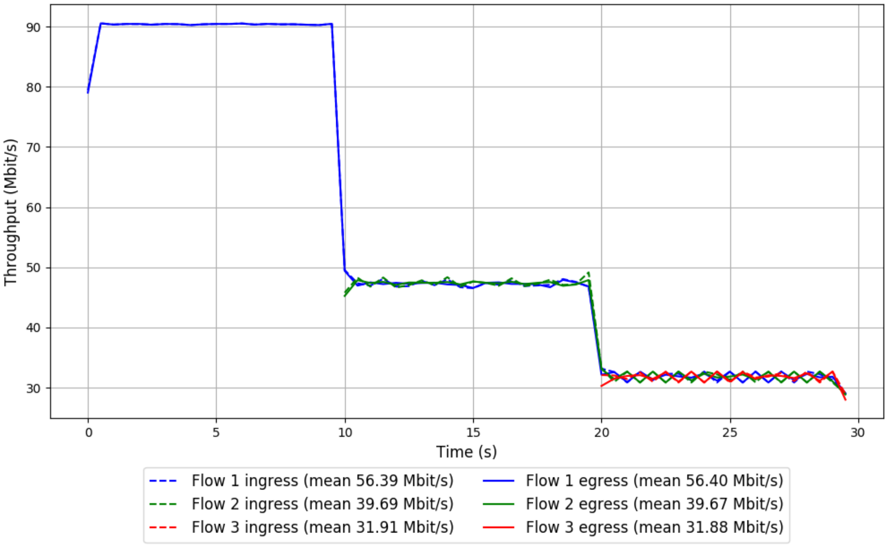


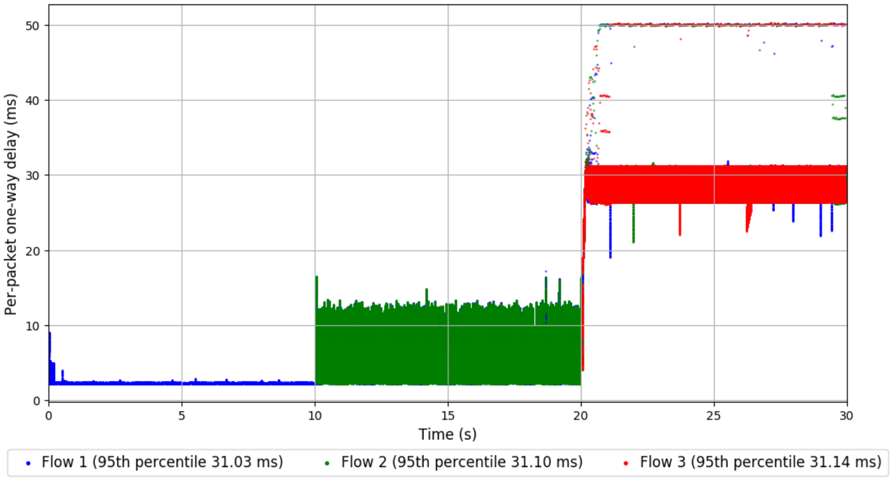
```
Run 9: Statistics of TaoVA-100x

Start at: 2018-03-21 02:40:22
End at: 2018-03-21 02:40:52
Local clock offset: -2.092 ms
Remote clock offset: -4.56 ms

# Below is generated by plot.py at 2018-03-21 06:49:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.32 Mbit/s
95th percentile per-packet one-way delay: 31.091 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.40 Mbit/s
95th percentile per-packet one-way delay: 31.034 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.67 Mbit/s
95th percentile per-packet one-way delay: 31.101 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.88 Mbit/s
95th percentile per-packet one-way delay: 31.136 ms
Loss rate: 0.43%
```

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



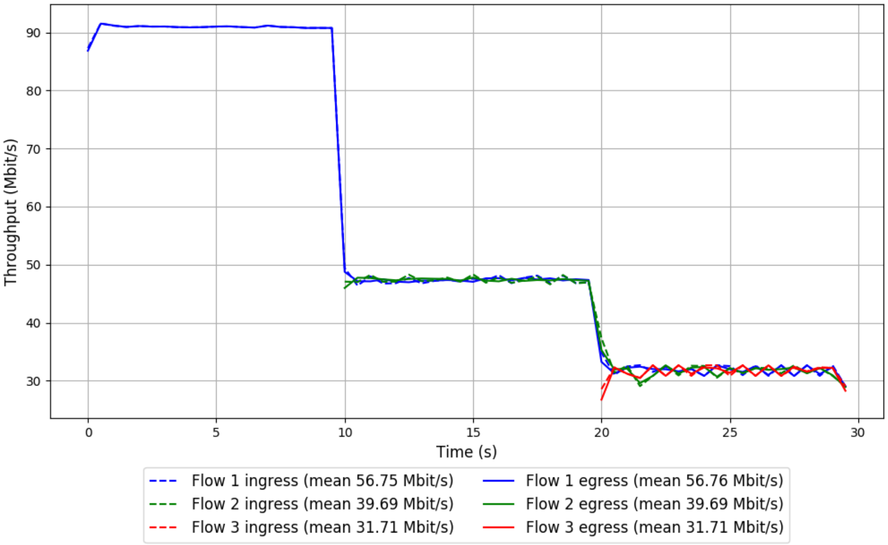


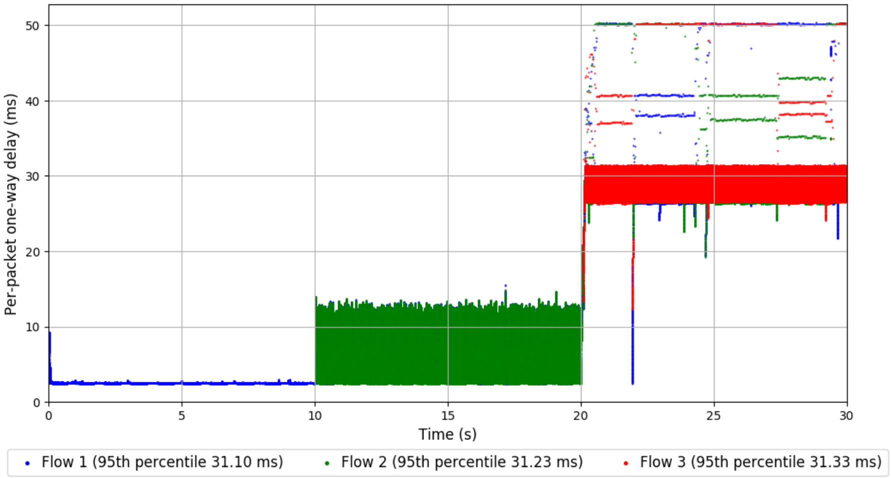
```
Run 10: Statistics of TaoVA-100x

Start at: 2018-03-21 03:00:48
End at: 2018-03-21 03:01:18
Local clock offset: -2.957 ms
Remote clock offset: -6.549 ms

# Below is generated by plot.py at 2018-03-21 06:49:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.63 Mbit/s
95th percentile per-packet one-way delay: 31.235 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.76 Mbit/s
95th percentile per-packet one-way delay: 31.104 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.69 Mbit/s
95th percentile per-packet one-way delay: 31.234 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.71 Mbit/s
95th percentile per-packet one-way delay: 31.326 ms
Loss rate: 0.41%
```

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



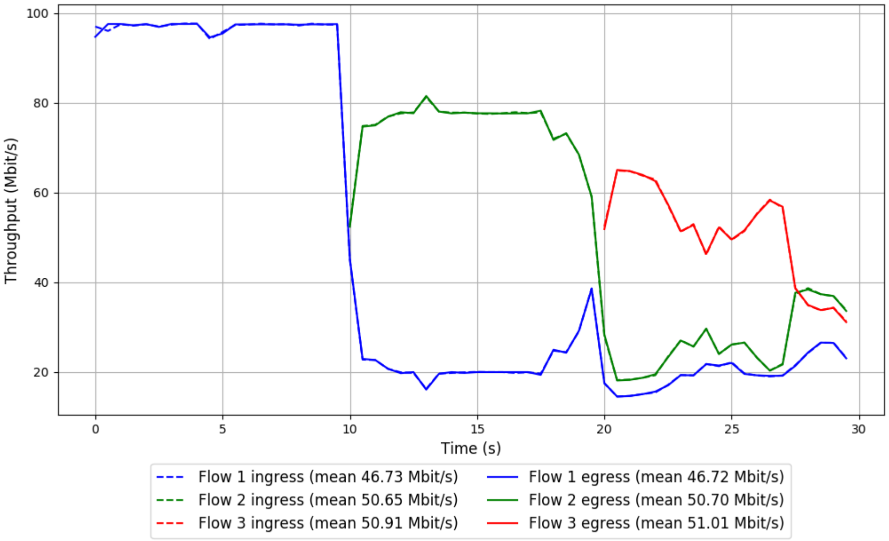


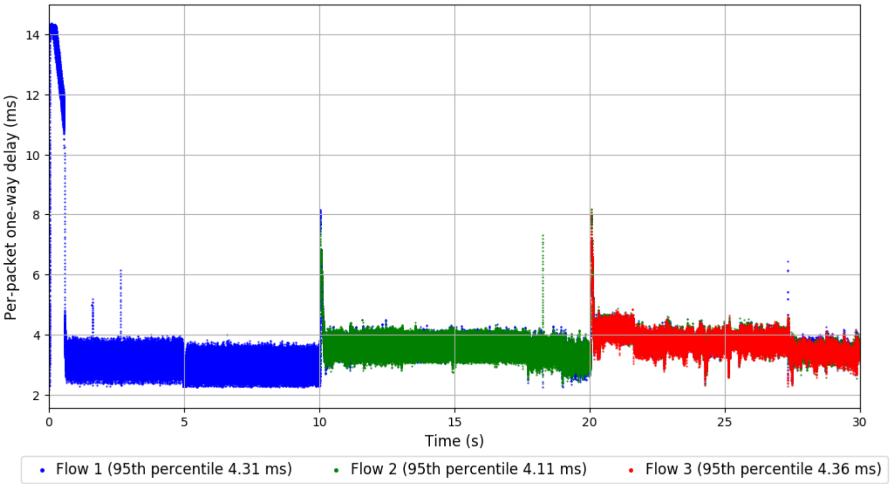
```
Run 1: Statistics of TCP Vegas

Start at: 2018-03-20 23:55:37
End at: 2018-03-20 23:56:07
Local clock offset: -13.493 ms
Remote clock offset: -14.236 ms

# Below is generated by plot.py at 2018-03-21 06:49:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.35 Mbit/s
95th percentile per-packet one-way delay: 4.235 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 46.72 Mbit/s
95th percentile per-packet one-way delay: 4.310 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 50.70 Mbit/s
95th percentile per-packet one-way delay: 4.107 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 51.01 Mbit/s
95th percentile per-packet one-way delay: 4.358 ms
Loss rate: 0.04%
```

Run 1: Report of TCP Vegas — Data Link



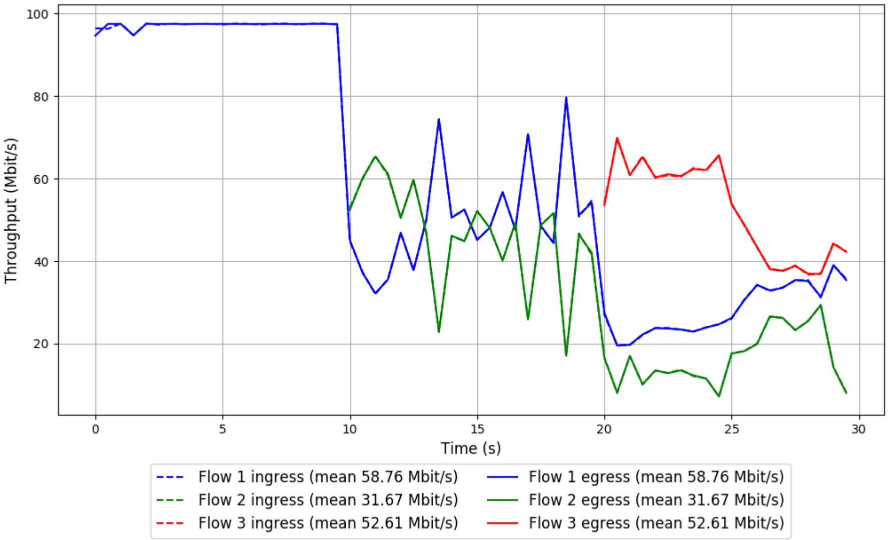


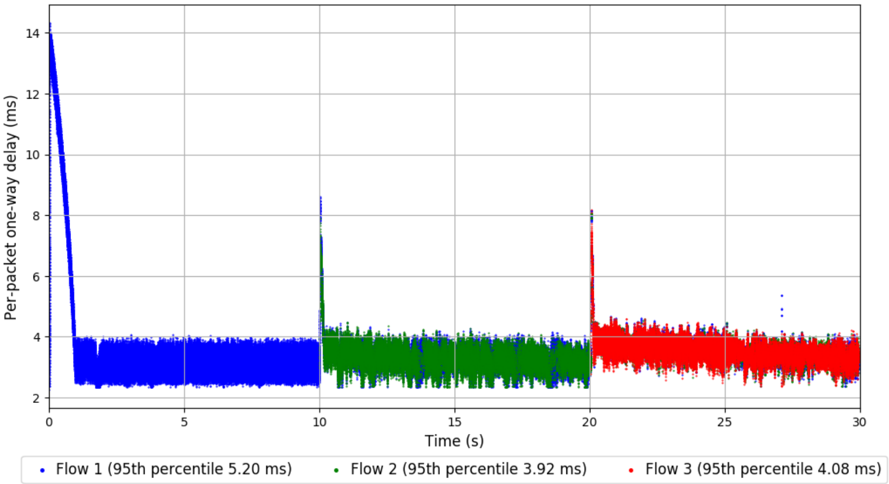
```
Run 2: Statistics of TCP Vegas

Start at: 2018-03-21 00:16:12
End at: 2018-03-21 00:16:42
Local clock offset: -12.994 ms
Remote clock offset: -14.428 ms

# Below is generated by plot.py at 2018-03-21 06:49:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.25 Mbit/s
95th percentile per-packet one-way delay: 4.098 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 58.76 Mbit/s
95th percentile per-packet one-way delay: 5.197 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 31.67 Mbit/s
95th percentile per-packet one-way delay: 3.917 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 52.61 Mbit/s
95th percentile per-packet one-way delay: 4.079 ms
Loss rate: 0.04%
```

Run 2: Report of TCP Vegas — Data Link



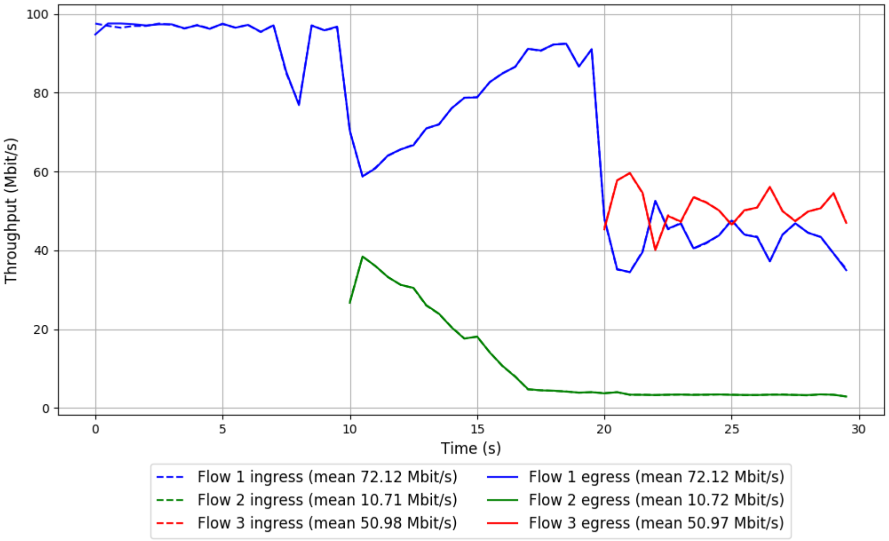


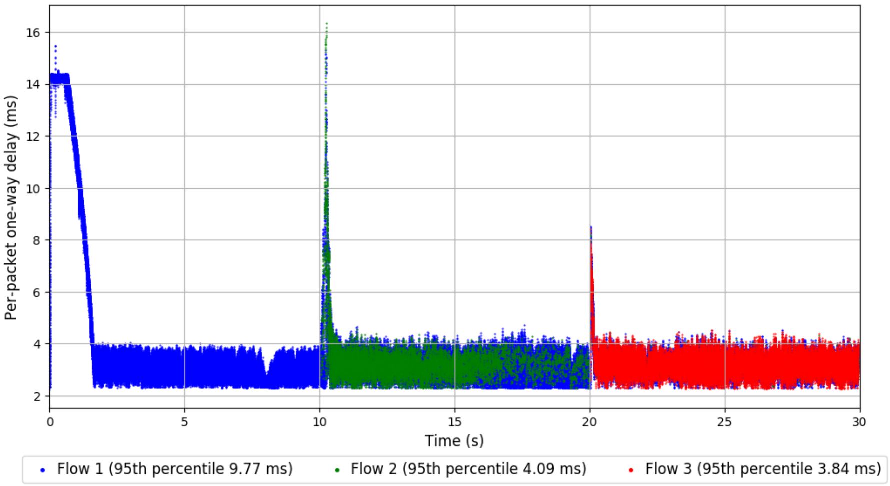
```
Run 3: Statistics of TCP Vegas

Start at: 2018-03-21 00:36:43
End at: 2018-03-21 00:37:13
Local clock offset: -12.514 ms
Remote clock offset: -14.587 ms

# Below is generated by plot.py at 2018-03-21 06:49:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.15 Mbit/s
95th percentile per-packet one-way delay: 6.738 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 72.12 Mbit/s
95th percentile per-packet one-way delay: 9.766 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 10.72 Mbit/s
95th percentile per-packet one-way delay: 4.088 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 50.97 Mbit/s
95th percentile per-packet one-way delay: 3.836 ms
Loss rate: 0.05%
```

Run 3: Report of TCP Vegas — Data Link



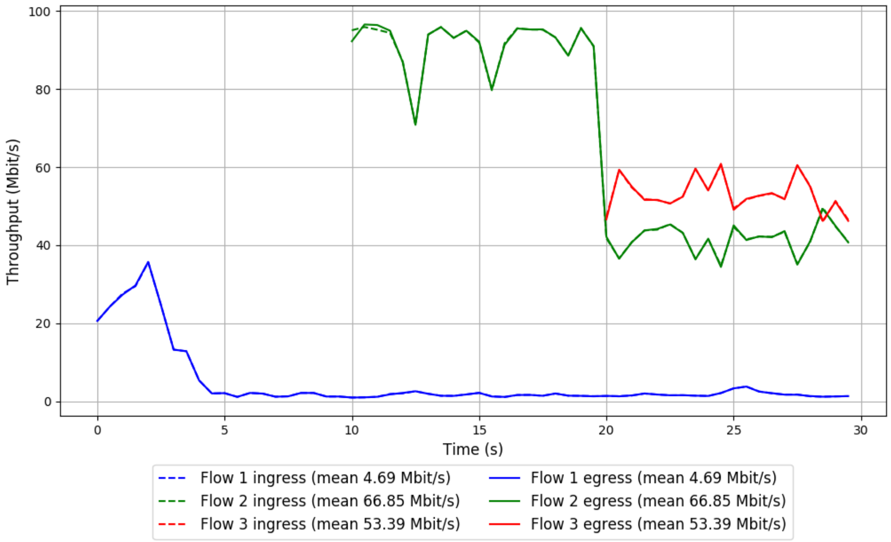


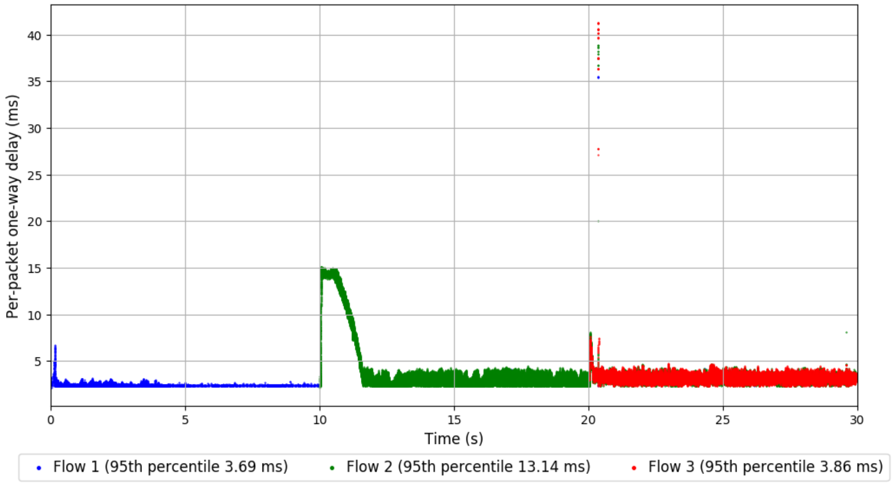
```
Run 4: Statistics of TCP Vegas

Start at: 2018-03-21 00:57:13
End at: 2018-03-21 00:57:43
Local clock offset: -12.027 ms
Remote clock offset: -14.626 ms

# Below is generated by plot.py at 2018-03-21 06:49:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.88 Mbit/s
95th percentile per-packet one-way delay: 10.284 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 4.69 Mbit/s
95th percentile per-packet one-way delay: 3.685 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 66.85 Mbit/s
95th percentile per-packet one-way delay: 13.143 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 53.39 Mbit/s
95th percentile per-packet one-way delay: 3.863 ms
Loss rate: 0.06%
```

Run 4: Report of TCP Vegas — Data Link



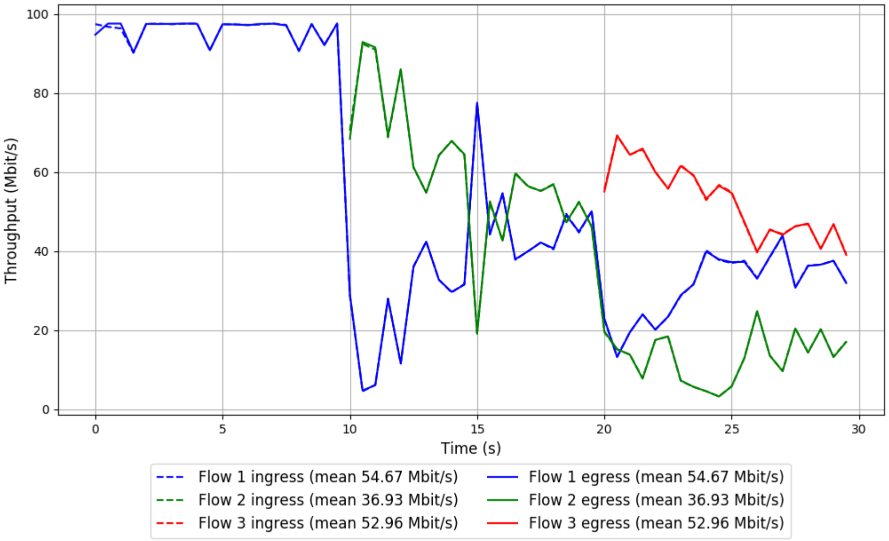


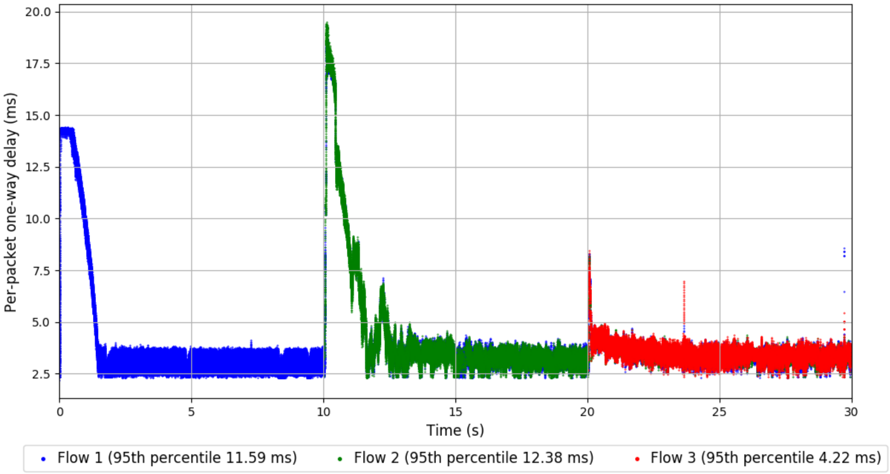
```
Run 5: Statistics of TCP Vegas

Start at: 2018-03-21 01:17:37
End at: 2018-03-21 01:18:07
Local clock offset: -11.894 ms
Remote clock offset: -14.667 ms

# Below is generated by plot.py at 2018-03-21 06:49:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.80 Mbit/s
95th percentile per-packet one-way delay: 10.894 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 54.67 Mbit/s
95th percentile per-packet one-way delay: 11.592 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 36.93 Mbit/s
95th percentile per-packet one-way delay: 12.381 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 52.96 Mbit/s
95th percentile per-packet one-way delay: 4.222 ms
Loss rate: 0.05%
```

Run 5: Report of TCP Vegas — Data Link



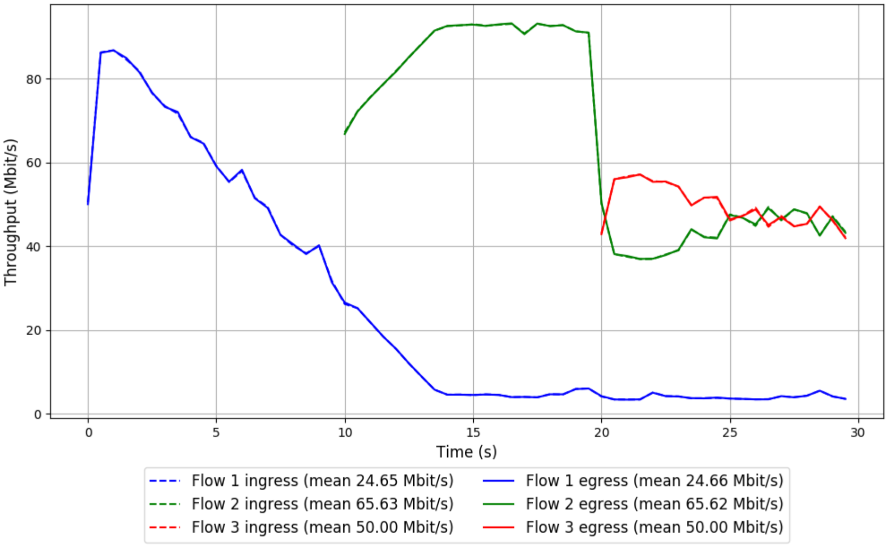


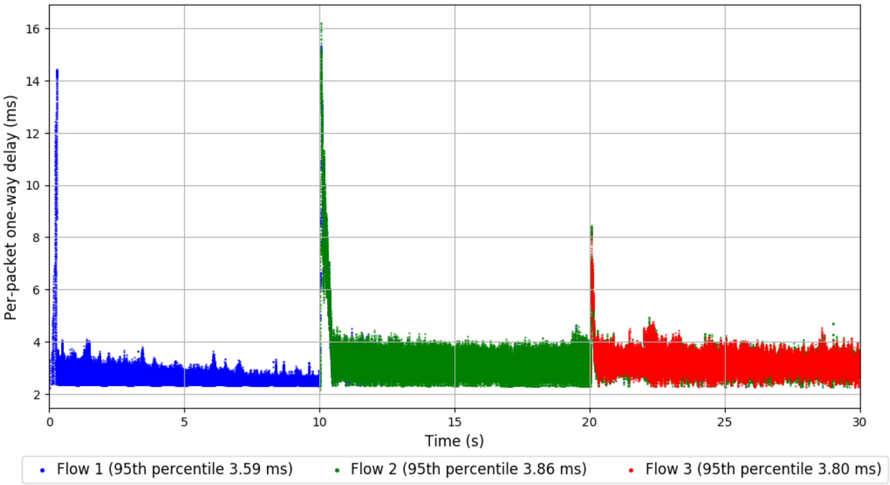
```
Run 6: Statistics of TCP Vegas

Start at: 2018-03-21 01:38:01
End at: 2018-03-21 01:38:31
Local clock offset: -11.763 ms
Remote clock offset: -11.208 ms

# Below is generated by plot.py at 2018-03-21 06:49:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.90 Mbit/s
95th percentile per-packet one-way delay: 3.800 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 24.66 Mbit/s
95th percentile per-packet one-way delay: 3.589 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 65.62 Mbit/s
95th percentile per-packet one-way delay: 3.856 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 50.00 Mbit/s
95th percentile per-packet one-way delay: 3.797 ms
Loss rate: 0.05%
```

Run 6: Report of TCP Vegas — Data Link



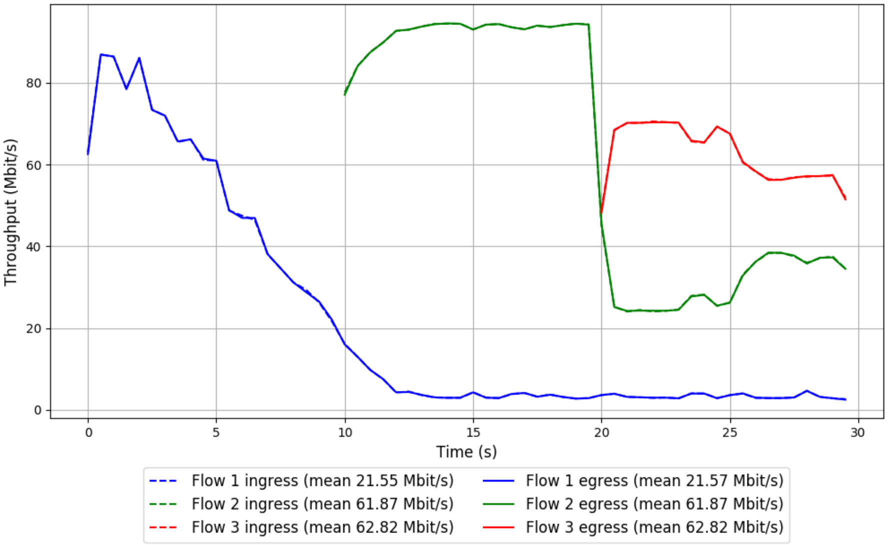


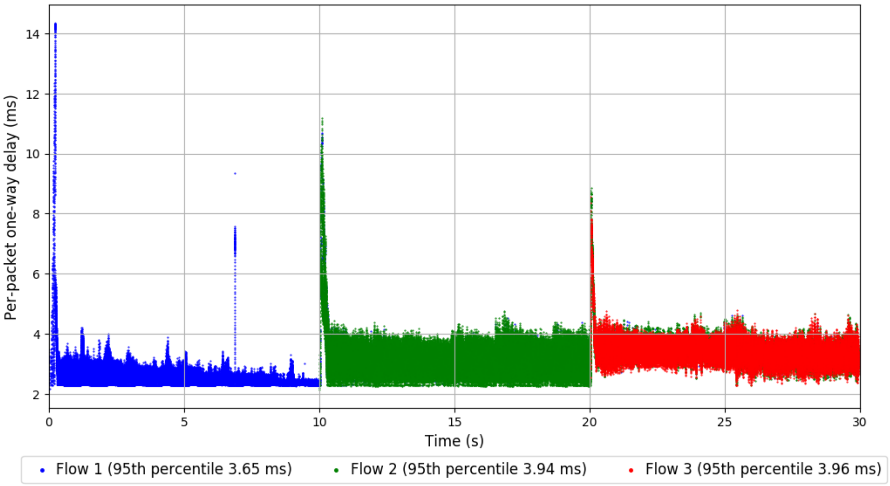
```
Run 7: Statistics of TCP Vegas

Start at: 2018-03-21 01:58:24
End at: 2018-03-21 01:58:54
Local clock offset: -3.228 ms
Remote clock offset: -4.016 ms

# Below is generated by plot.py at 2018-03-21 06:49:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.56 Mbit/s
95th percentile per-packet one-way delay: 3.924 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 21.57 Mbit/s
95th percentile per-packet one-way delay: 3.651 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 61.87 Mbit/s
95th percentile per-packet one-way delay: 3.943 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 62.82 Mbit/s
95th percentile per-packet one-way delay: 3.956 ms
Loss rate: 0.05%
```

Run 7: Report of TCP Vegas — Data Link



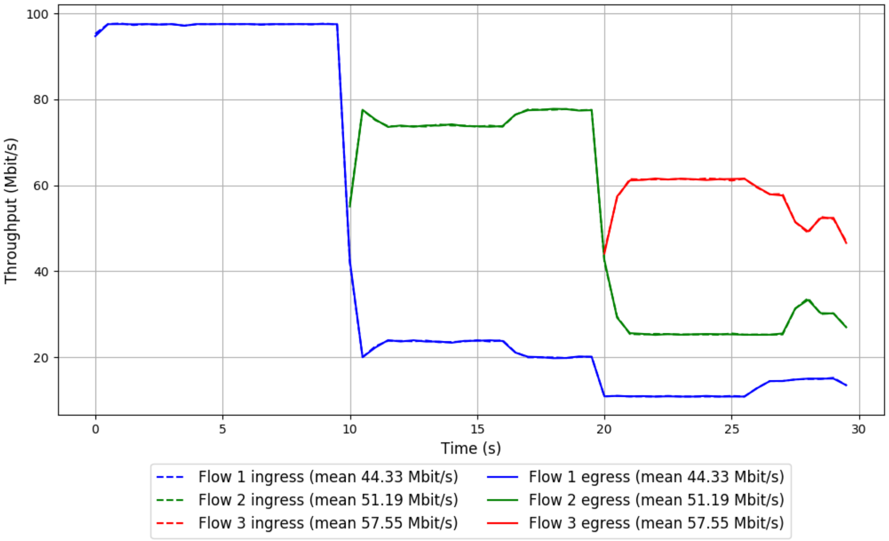


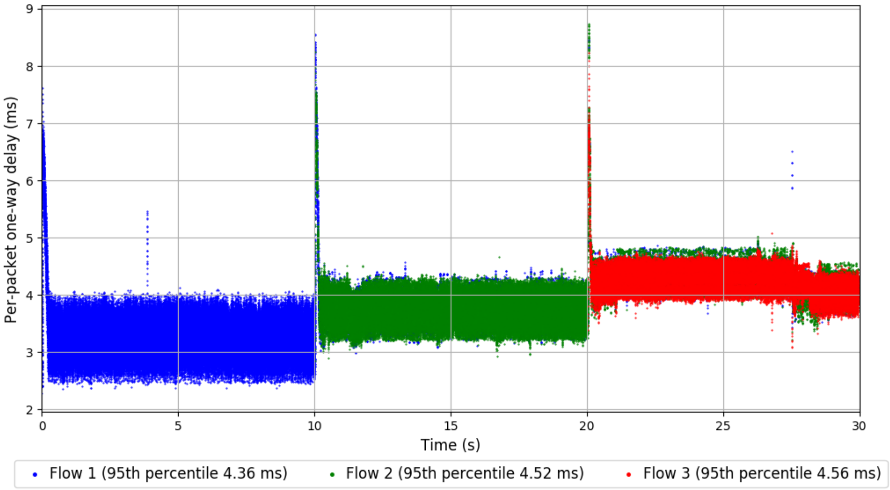
```
Run 8: Statistics of TCP Vegas

Start at: 2018-03-21 02:18:51
End at: 2018-03-21 02:19:21
Local clock offset: -2.298 ms
Remote clock offset: -4.984 ms

# Below is generated by plot.py at 2018-03-21 06:49:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 4.525 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 44.33 Mbit/s
95th percentile per-packet one-way delay: 4.359 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 51.19 Mbit/s
95th percentile per-packet one-way delay: 4.523 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 57.55 Mbit/s
95th percentile per-packet one-way delay: 4.562 ms
Loss rate: 0.06%
```

Run 8: Report of TCP Vegas — Data Link



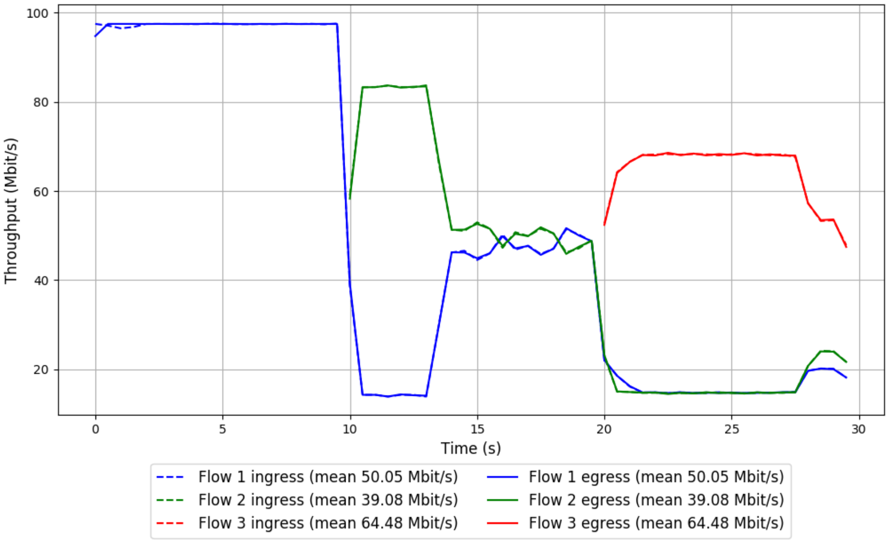


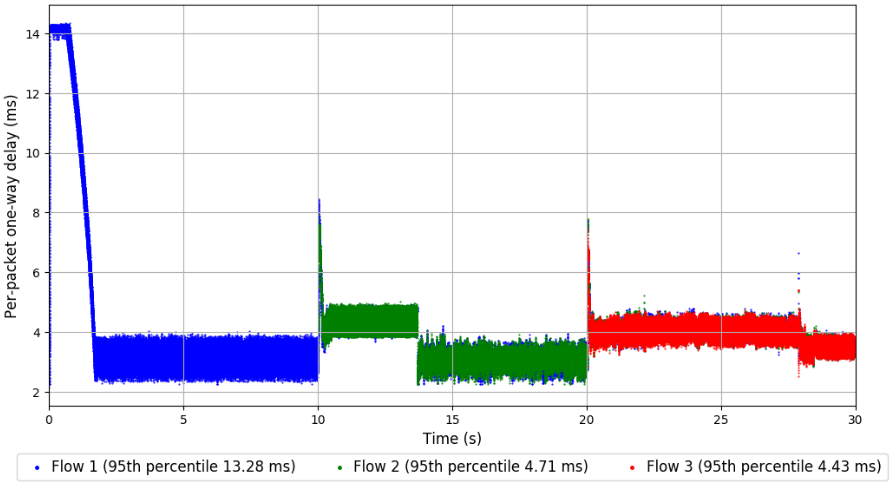
```
Run 9: Statistics of TCP Vegas

Start at: 2018-03-21 02:39:14
End at: 2018-03-21 02:39:44
Local clock offset: -2.167 ms
Remote clock offset: -4.633 ms

# Below is generated by plot.py at 2018-03-21 06:49:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 6.764 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 50.05 Mbit/s
95th percentile per-packet one-way delay: 13.282 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 39.08 Mbit/s
95th percentile per-packet one-way delay: 4.709 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 64.48 Mbit/s
95th percentile per-packet one-way delay: 4.435 ms
Loss rate: 0.05%
```

Run 9: Report of TCP Vegas — Data Link



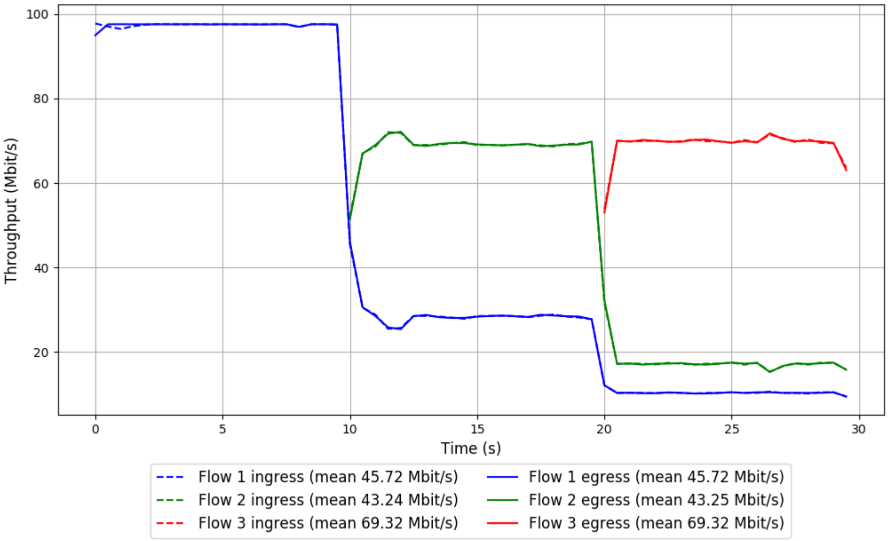


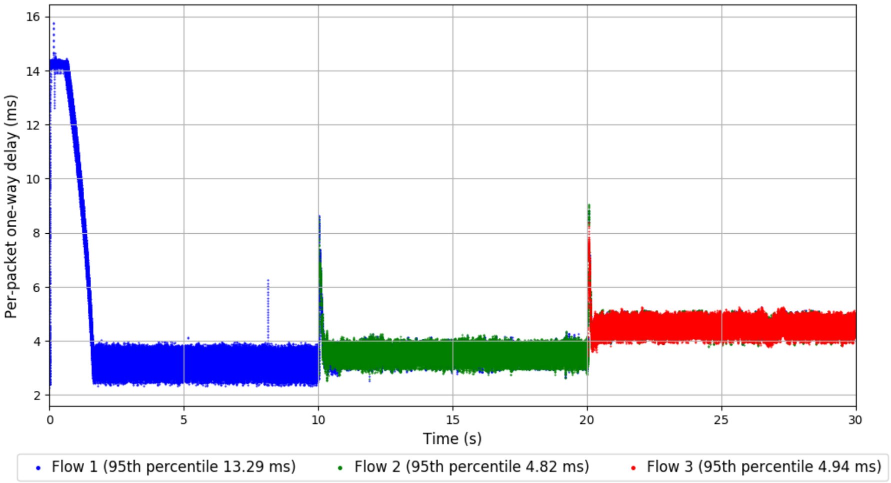
```
Run 10: Statistics of TCP Vegas

Start at: 2018-03-21 02:59:40
End at: 2018-03-21 03:00:10
Local clock offset: -2.988 ms
Remote clock offset: -6.46 ms

# Below is generated by plot.py at 2018-03-21 06:49:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 6.380 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 45.72 Mbit/s
95th percentile per-packet one-way delay: 13.285 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 43.25 Mbit/s
95th percentile per-packet one-way delay: 4.817 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 69.32 Mbit/s
95th percentile per-packet one-way delay: 4.939 ms
Loss rate: 0.07%
```

Run 10: Report of TCP Vegas — Data Link



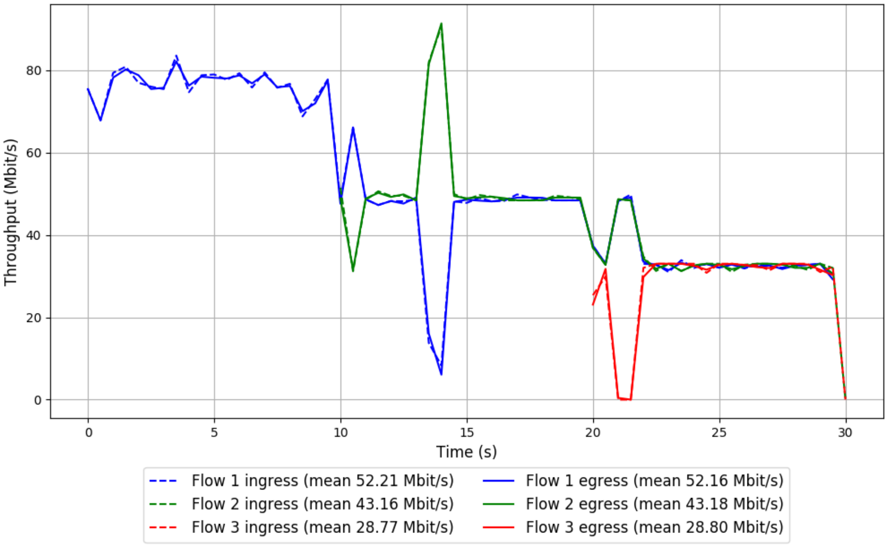


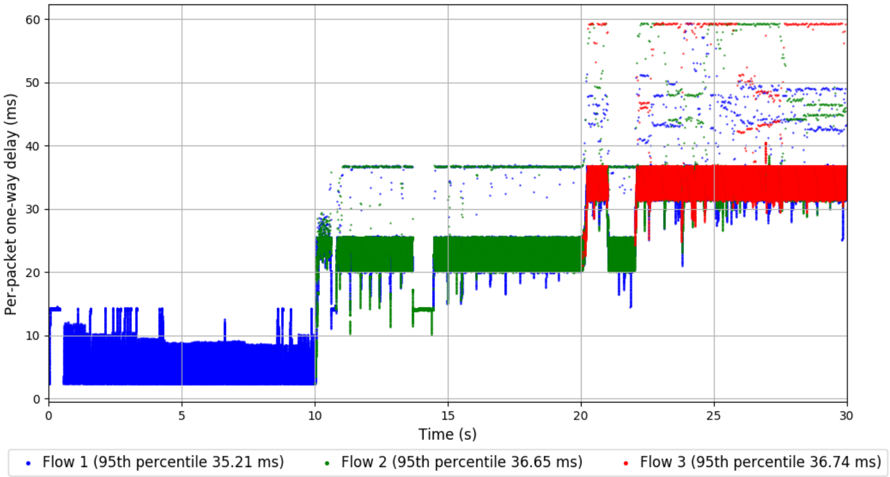
```
Run 1: Statistics of Verus

Start at: 2018-03-21 00:00:09
End at: 2018-03-21 00:00:39
Local clock offset: -13.267 ms
Remote clock offset: -14.429 ms

# Below is generated by plot.py at 2018-03-21 06:50:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.45 Mbit/s
95th percentile per-packet one-way delay: 36.624 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 52.16 Mbit/s
95th percentile per-packet one-way delay: 35.207 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 43.18 Mbit/s
95th percentile per-packet one-way delay: 36.645 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 28.80 Mbit/s
95th percentile per-packet one-way delay: 36.738 ms
Loss rate: 0.67%
```

Run 1: Report of Verus — Data Link



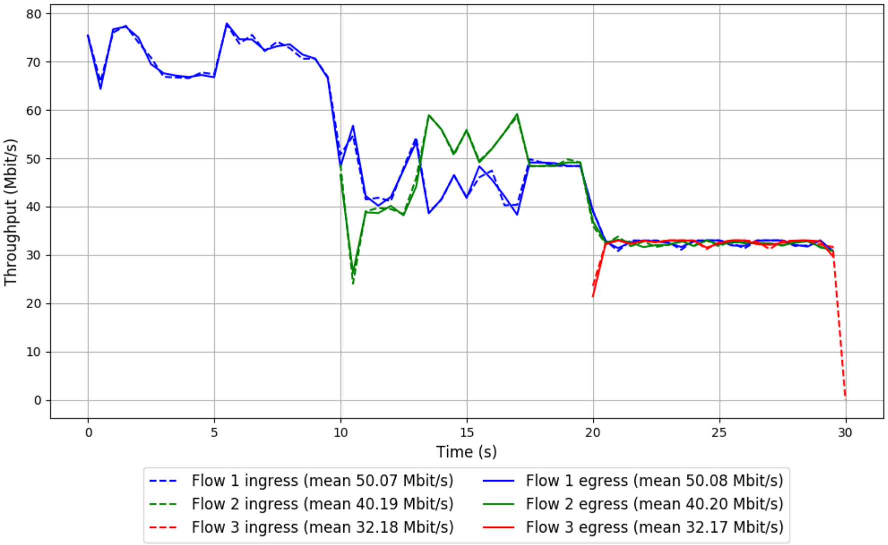


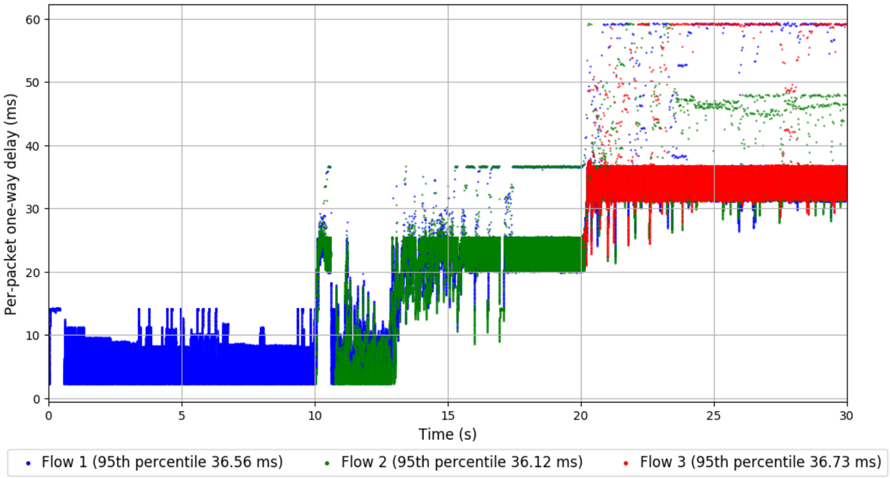
```
Run 2: Statistics of Verus

Start at: 2018-03-21 00:20:46
End at: 2018-03-21 00:21:16
Local clock offset: -13.008 ms
Remote clock offset: -14.394 ms

# Below is generated by plot.py at 2018-03-21 06:50:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.47 Mbit/s
95th percentile per-packet one-way delay: 36.620 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 50.08 Mbit/s
95th percentile per-packet one-way delay: 36.559 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 40.20 Mbit/s
95th percentile per-packet one-way delay: 36.123 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 32.17 Mbit/s
95th percentile per-packet one-way delay: 36.732 ms
Loss rate: 0.54%
```

Run 2: Report of Verus — Data Link



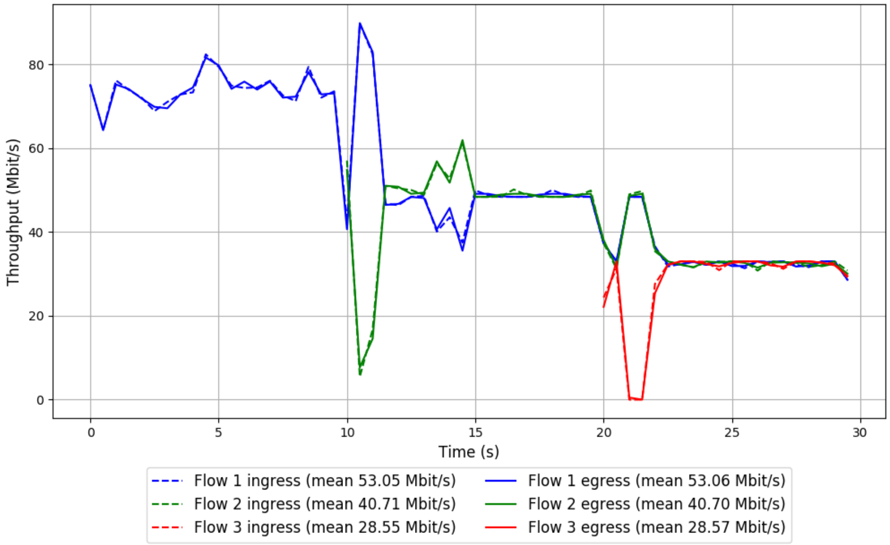


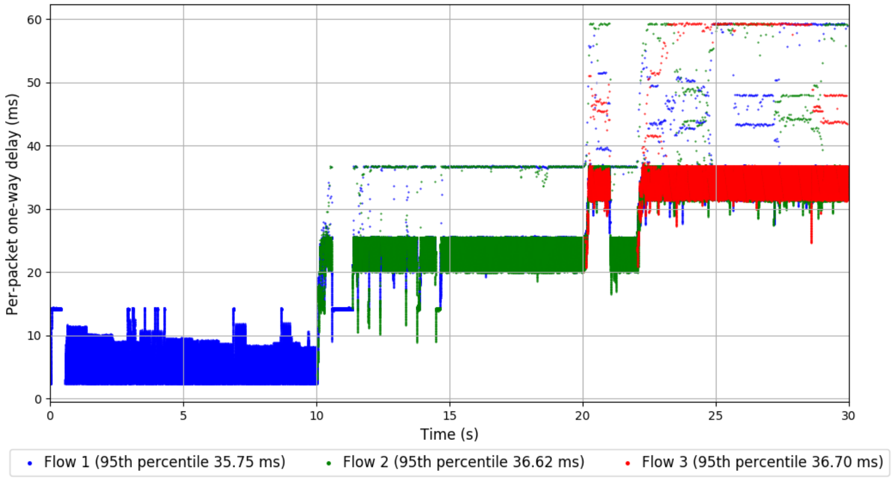
```
Run 3: Statistics of Verus

Start at: 2018-03-21 00:41:14
End at: 2018-03-21 00:41:44
Local clock offset: -12.359 ms
Remote clock offset: -14.682 ms

# Below is generated by plot.py at 2018-03-21 06:50:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.57 Mbit/s
95th percentile per-packet one-way delay: 36.609 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 53.06 Mbit/s
95th percentile per-packet one-way delay: 35.748 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 40.70 Mbit/s
95th percentile per-packet one-way delay: 36.624 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 28.57 Mbit/s
95th percentile per-packet one-way delay: 36.703 ms
Loss rate: 0.40%
```

Run 3: Report of Verus — Data Link



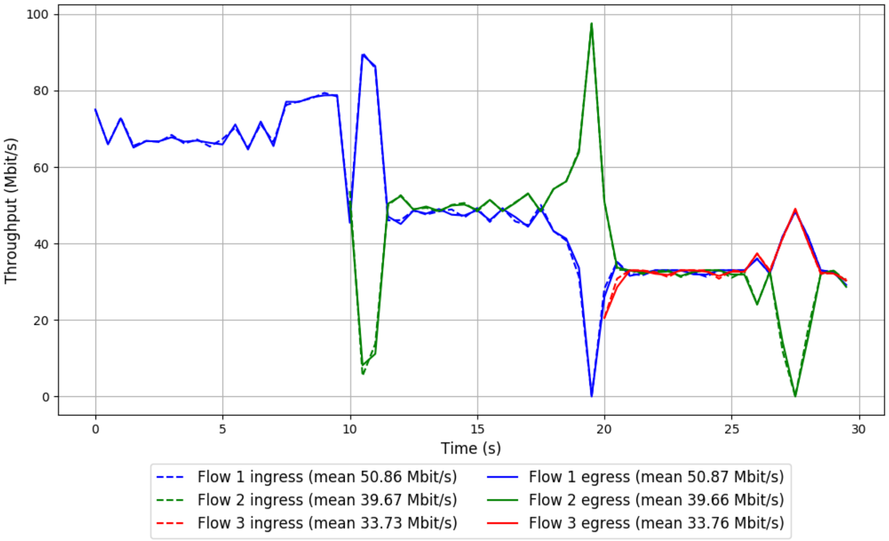


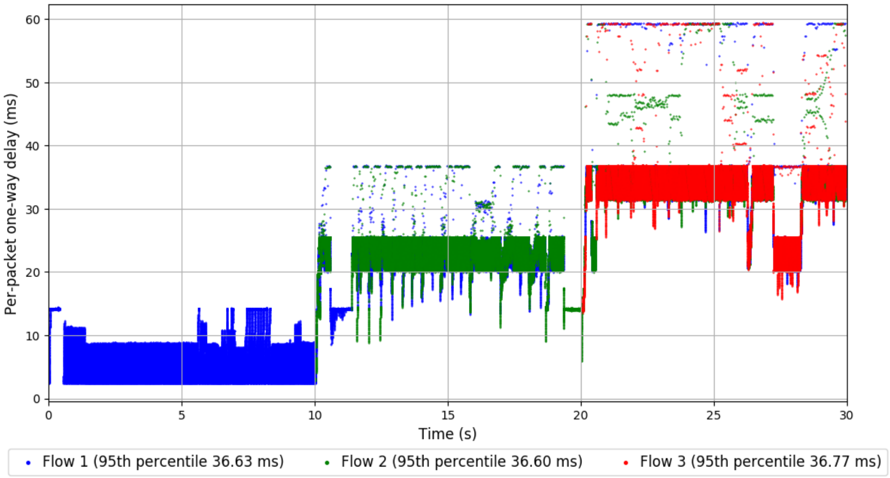
```
Run 4: Statistics of Verus

Start at: 2018-03-21 01:01:42
End at: 2018-03-21 01:02:12
Local clock offset: -11.989 ms
Remote clock offset: -14.698 ms

# Below is generated by plot.py at 2018-03-21 06:50:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.44 Mbit/s
95th percentile per-packet one-way delay: 36.681 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 50.87 Mbit/s
95th percentile per-packet one-way delay: 36.629 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 39.66 Mbit/s
95th percentile per-packet one-way delay: 36.601 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 33.76 Mbit/s
95th percentile per-packet one-way delay: 36.773 ms
Loss rate: 0.33%
```

Run 4: Report of Verus — Data Link



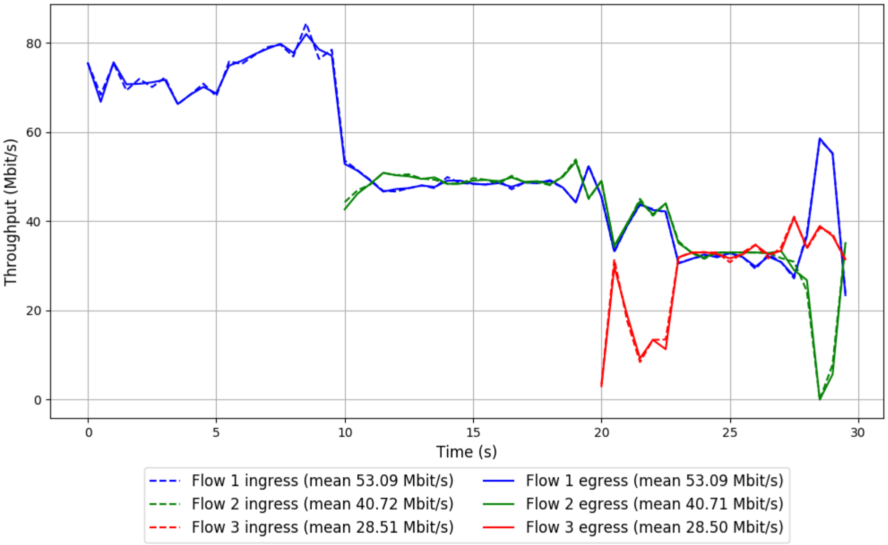


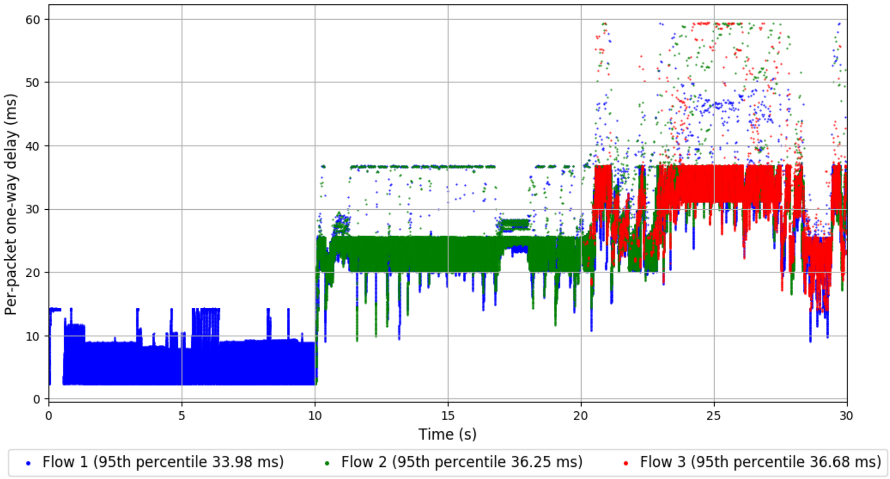
```
Run 5: Statistics of Verus

Start at: 2018-03-21 01:22:08
End at: 2018-03-21 01:22:38
Local clock offset: -11.891 ms
Remote clock offset: -14.747 ms

# Below is generated by plot.py at 2018-03-21 06:51:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.58 Mbit/s
95th percentile per-packet one-way delay: 35.596 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 53.09 Mbit/s
95th percentile per-packet one-way delay: 33.983 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 40.71 Mbit/s
95th percentile per-packet one-way delay: 36.249 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 28.50 Mbit/s
95th percentile per-packet one-way delay: 36.682 ms
Loss rate: 0.32%
```

Run 5: Report of Verus — Data Link



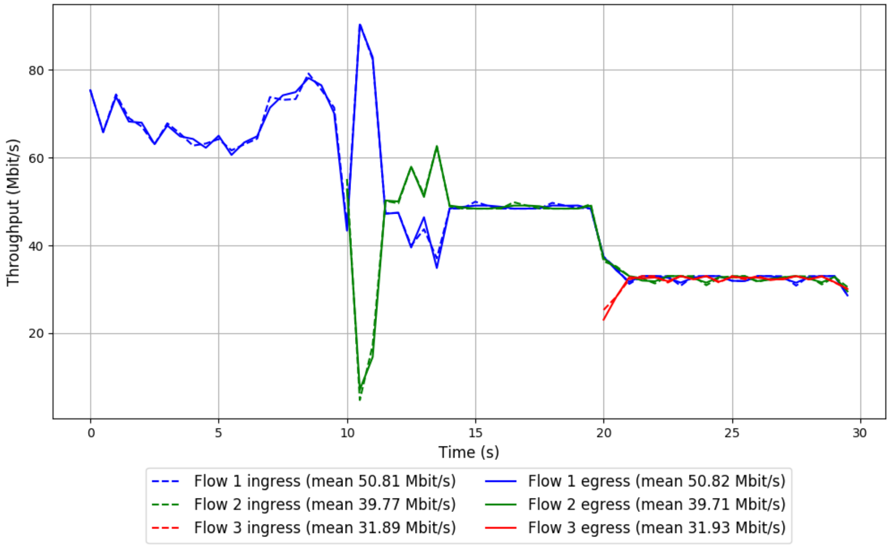


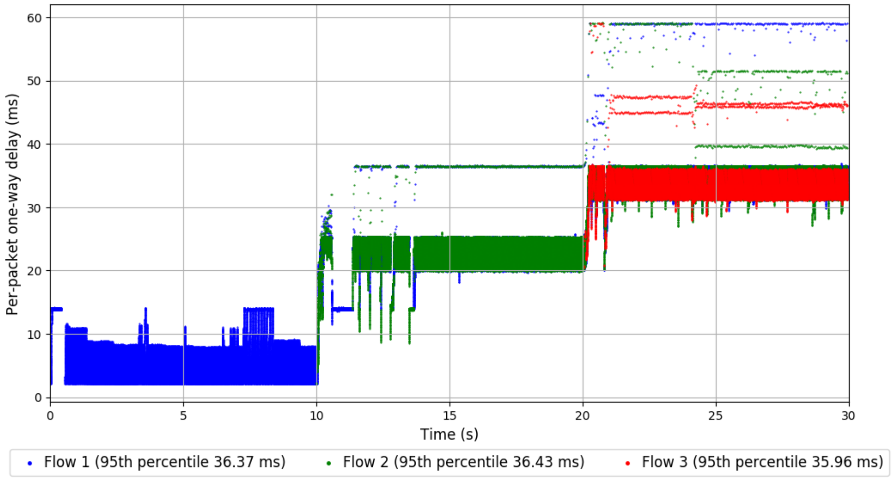
```
Run 6: Statistics of Verus

Start at: 2018-03-21 01:42:31
End at: 2018-03-21 01:43:01
Local clock offset: -8.685 ms
Remote clock offset: -8.622 ms

# Below is generated by plot.py at 2018-03-21 06:51:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.82 Mbit/s
95th percentile per-packet one-way delay: 36.386 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 50.82 Mbit/s
95th percentile per-packet one-way delay: 36.367 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 39.71 Mbit/s
95th percentile per-packet one-way delay: 36.429 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 31.93 Mbit/s
95th percentile per-packet one-way delay: 35.964 ms
Loss rate: 0.35%
```

Run 6: Report of Verus — Data Link



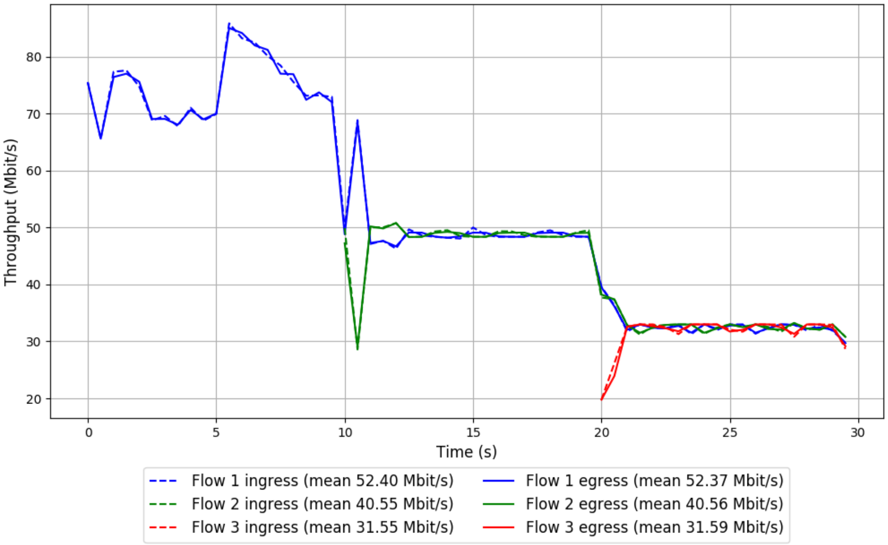


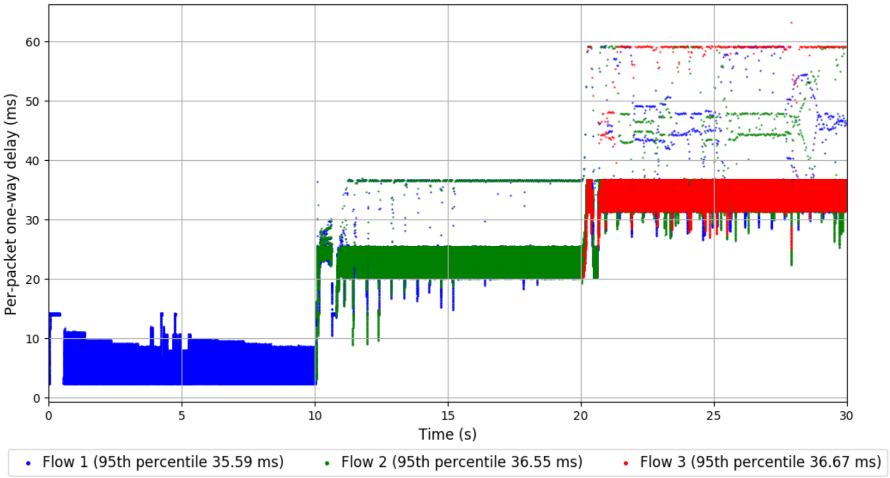
```
Run 7: Statistics of Verus

Start at: 2018-03-21 02:02:56
End at: 2018-03-21 02:03:26
Local clock offset: -2.388 ms
Remote clock offset: -3.185 ms

# Below is generated by plot.py at 2018-03-21 06:51:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.82 Mbit/s
95th percentile per-packet one-way delay: 36.562 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 52.37 Mbit/s
95th percentile per-packet one-way delay: 35.595 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 40.56 Mbit/s
95th percentile per-packet one-way delay: 36.553 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 31.59 Mbit/s
95th percentile per-packet one-way delay: 36.671 ms
Loss rate: 0.36%
```

Run 7: Report of Verus — Data Link



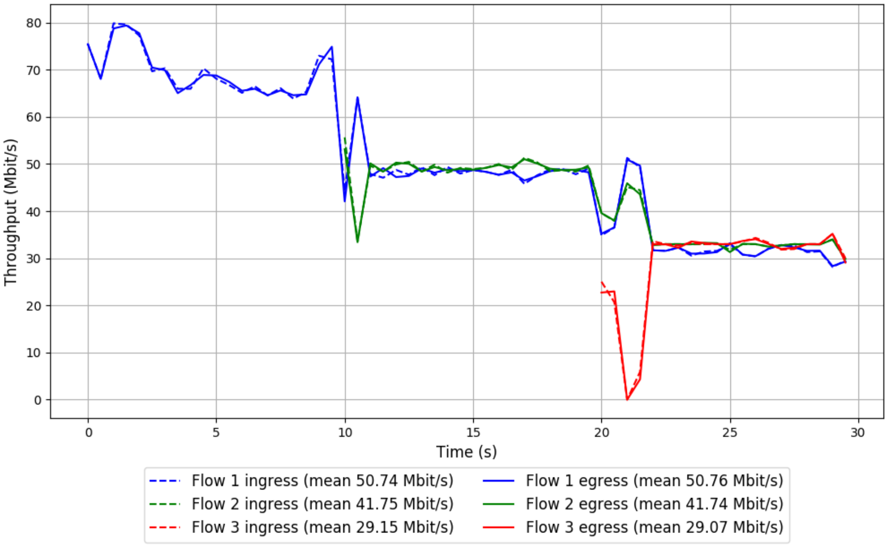


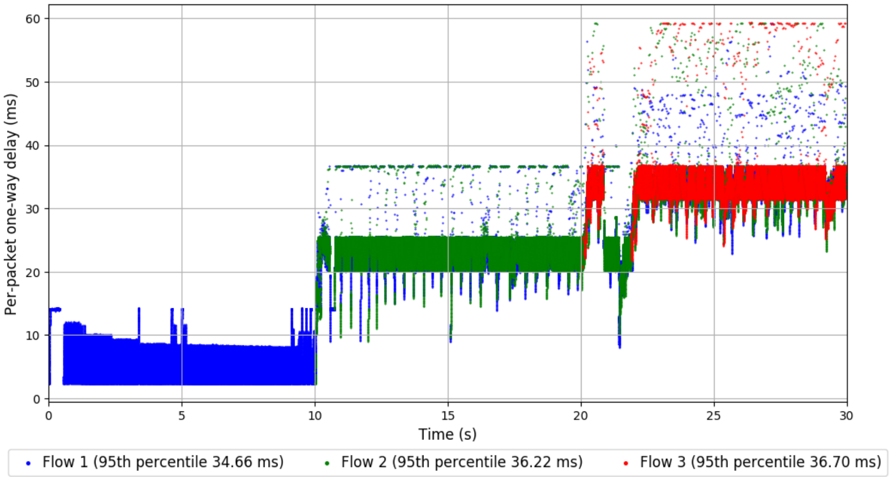
```
Run 8: Statistics of Verus

Start at: 2018-03-21 02:23:21
End at: 2018-03-21 02:23:51
Local clock offset: -2.548 ms
Remote clock offset: -5.136 ms

# Below is generated by plot.py at 2018-03-21 06:51:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.16 Mbit/s
95th percentile per-packet one-way delay: 36.279 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 50.76 Mbit/s
95th percentile per-packet one-way delay: 34.665 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 41.74 Mbit/s
95th percentile per-packet one-way delay: 36.222 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 29.07 Mbit/s
95th percentile per-packet one-way delay: 36.697 ms
Loss rate: 0.54%
```

Run 8: Report of Verus — Data Link



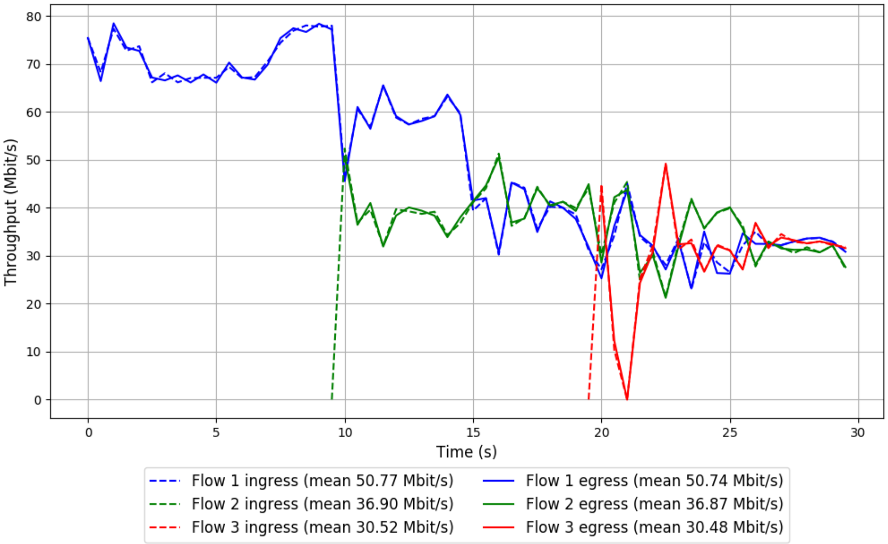


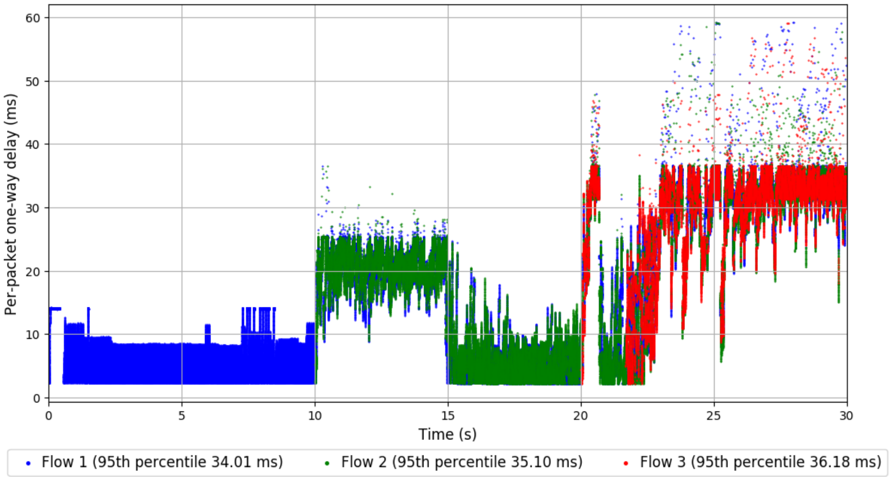
```
Run 9: Statistics of Verus

Start at: 2018-03-21 02:43:45
End at: 2018-03-21 02:44:15
Local clock offset: -1.794 ms
Remote clock offset: -4.908 ms

# Below is generated by plot.py at 2018-03-21 06:51:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.43 Mbit/s
95th percentile per-packet one-way delay: 34.973 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 50.74 Mbit/s
95th percentile per-packet one-way delay: 34.009 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 36.87 Mbit/s
95th percentile per-packet one-way delay: 35.099 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 30.48 Mbit/s
95th percentile per-packet one-way delay: 36.176 ms
Loss rate: 0.37%
```

Run 9: Report of Verus — Data Link



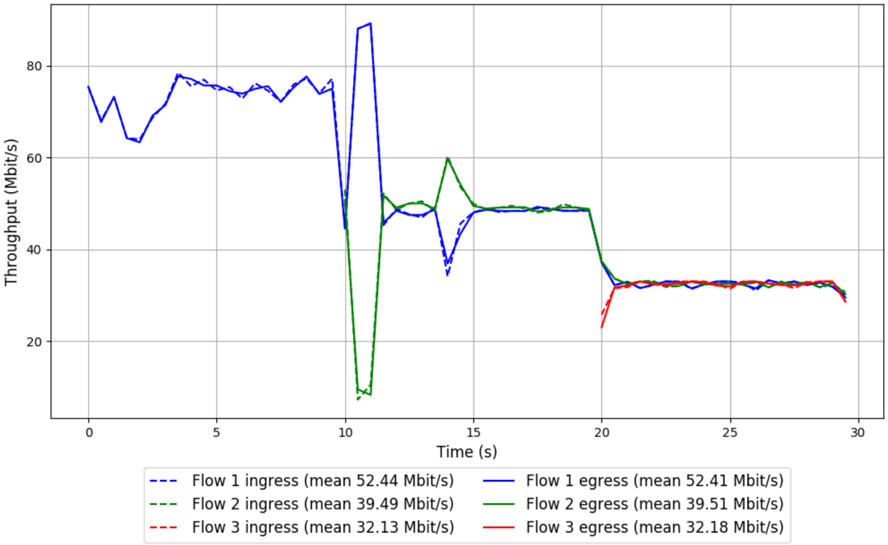


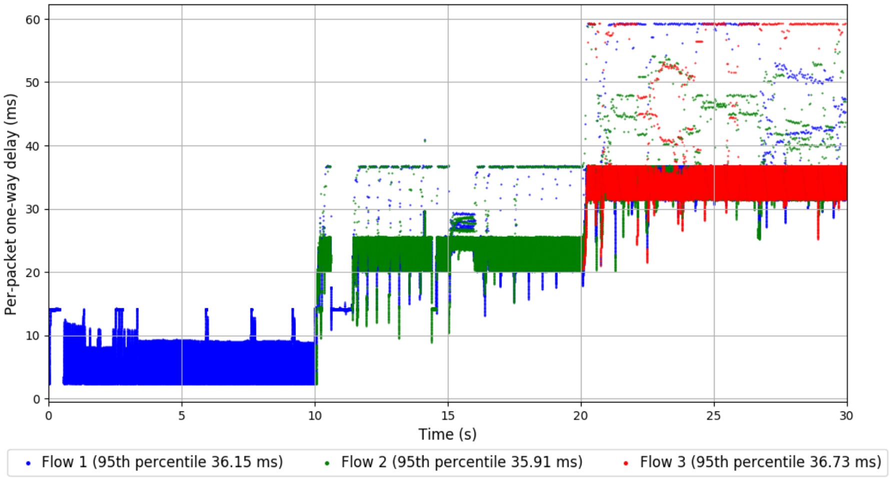
```
Run 10: Statistics of Verus

Start at: 2018-03-21 03:04:11
End at: 2018-03-21 03:04:41
Local clock offset: -2.988 ms
Remote clock offset: -6.526 ms

# Below is generated by plot.py at 2018-03-21 06:51:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.33 Mbit/s
95th percentile per-packet one-way delay: 36.603 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 52.41 Mbit/s
95th percentile per-packet one-way delay: 36.153 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 39.51 Mbit/s
95th percentile per-packet one-way delay: 35.908 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 32.18 Mbit/s
95th percentile per-packet one-way delay: 36.730 ms
Loss rate: 0.35%
```

Run 10: Report of Verus — Data Link



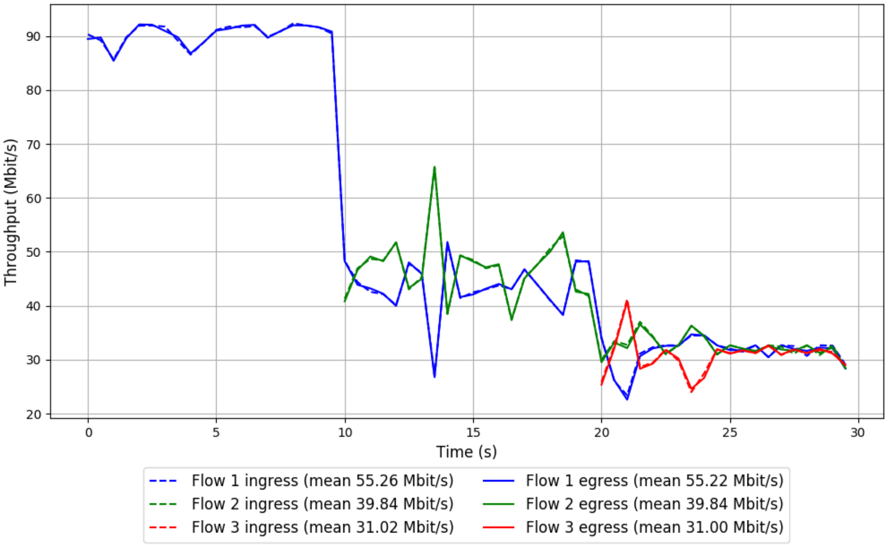


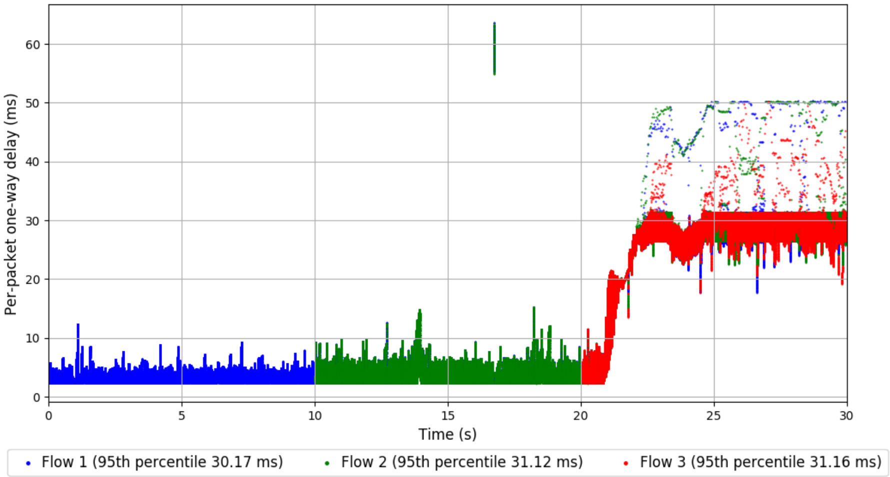
```
Run 1: Statistics of Copa

Start at: 2018-03-20 23:54:26
End at: 2018-03-20 23:54:56
Local clock offset: -13.437 ms
Remote clock offset: -14.247 ms

# Below is generated by plot.py at 2018-03-21 06:53:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.98 Mbit/s
95th percentile per-packet one-way delay: 30.978 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 55.22 Mbit/s
95th percentile per-packet one-way delay: 30.172 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 39.84 Mbit/s
95th percentile per-packet one-way delay: 31.123 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.00 Mbit/s
95th percentile per-packet one-way delay: 31.156 ms
Loss rate: 0.31%
```

Run 1: Report of Copa — Data Link



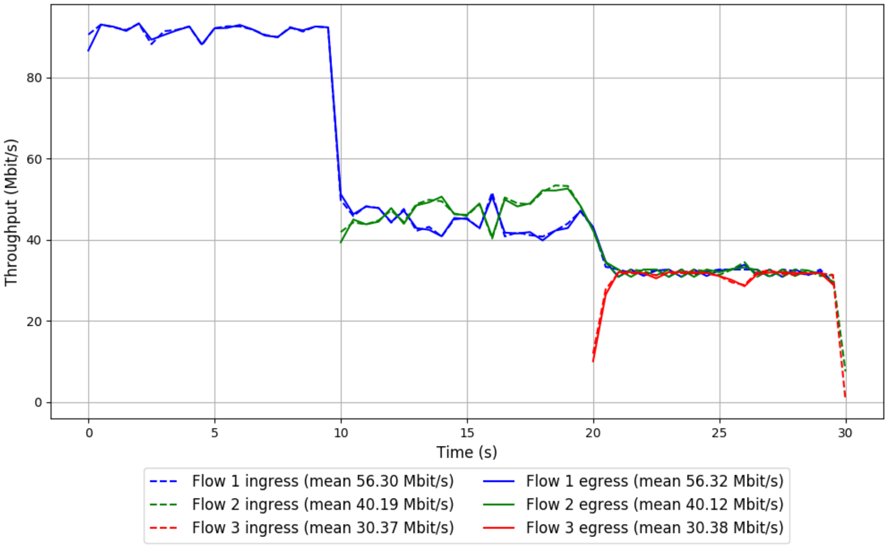


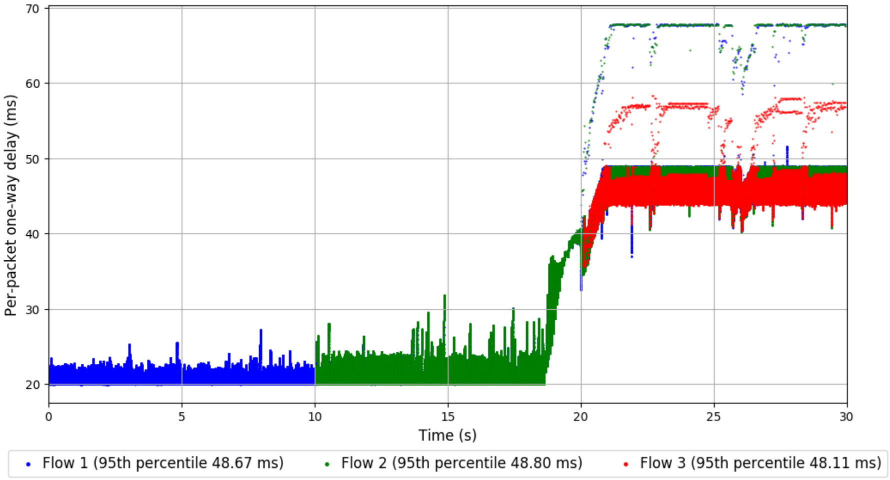
```
Run 2: Statistics of Copa

Start at: 2018-03-21 00:15:00
End at: 2018-03-21 00:15:30
Local clock offset: -13.0 ms
Remote clock offset: -32.09 ms

# Below is generated by plot.py at 2018-03-21 06:53:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.01 Mbit/s
95th percentile per-packet one-way delay: 48.740 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 56.32 Mbit/s
95th percentile per-packet one-way delay: 48.668 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 40.12 Mbit/s
95th percentile per-packet one-way delay: 48.799 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 30.38 Mbit/s
95th percentile per-packet one-way delay: 48.109 ms
Loss rate: 0.91%
```

Run 2: Report of Copa — Data Link



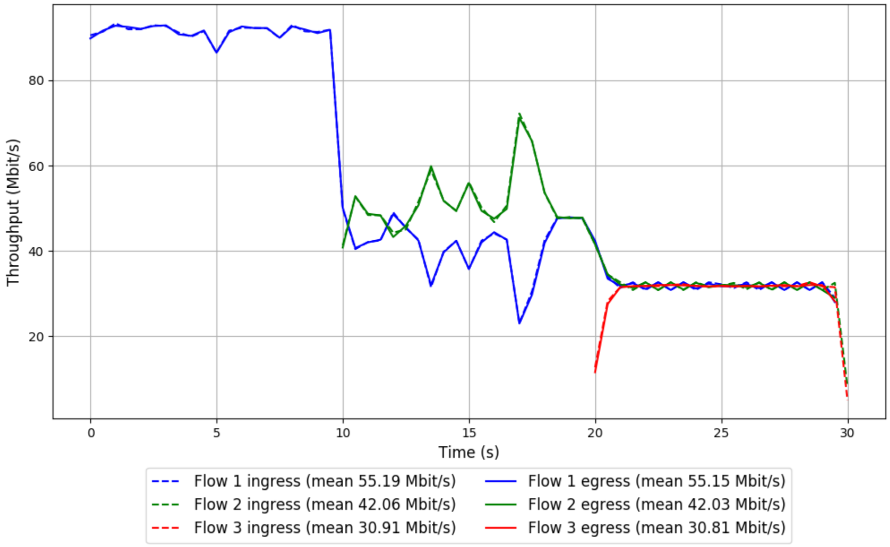


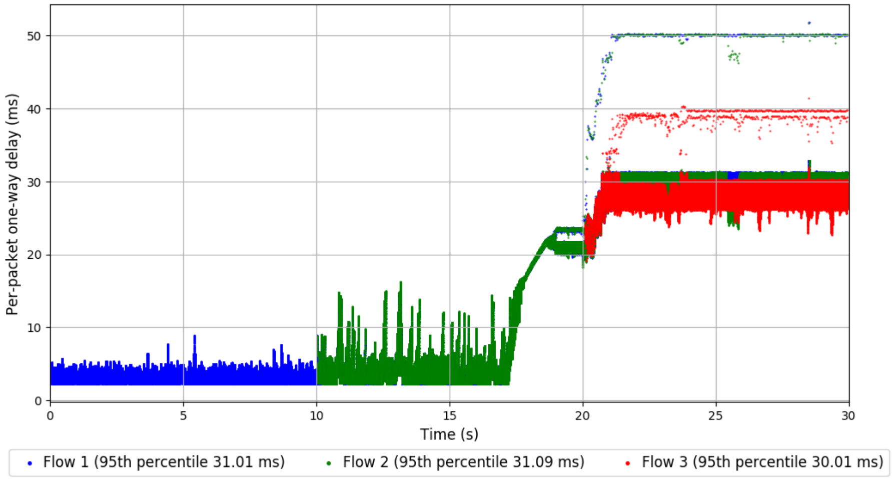
```
Run 3: Statistics of Copa

Start at: 2018-03-21 00:35:30
End at: 2018-03-21 00:36:00
Local clock offset: -12.565 ms
Remote clock offset: -14.561 ms

# Below is generated by plot.py at 2018-03-21 06:53:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.27 Mbit/s
95th percentile per-packet one-way delay: 31.044 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 55.15 Mbit/s
95th percentile per-packet one-way delay: 31.009 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 42.03 Mbit/s
95th percentile per-packet one-way delay: 31.092 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 30.81 Mbit/s
95th percentile per-packet one-way delay: 30.007 ms
Loss rate: 1.65%
```

Run 3: Report of Copa — Data Link



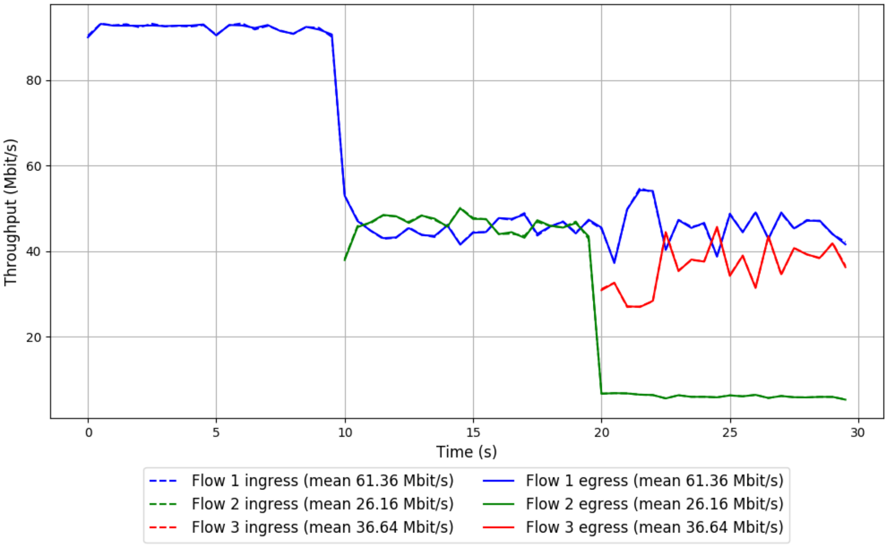


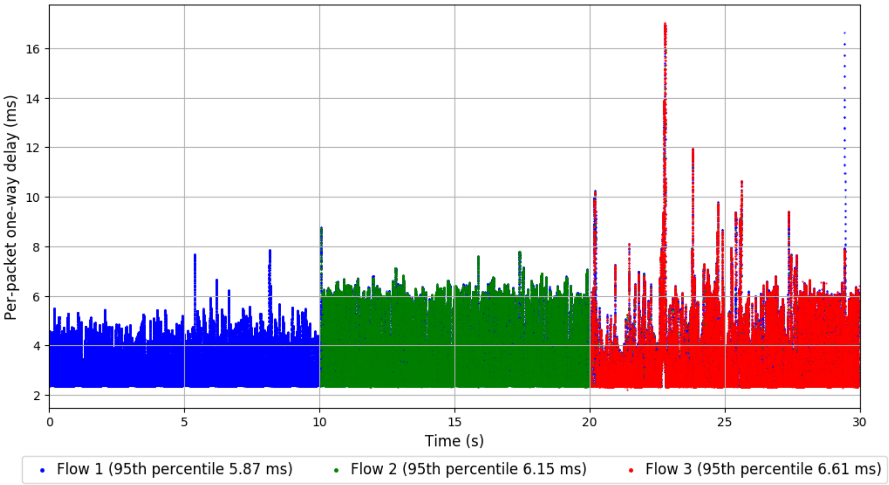
```
Run 4: Statistics of Copa

Start at: 2018-03-21 00:56:01
End at: 2018-03-21 00:56:31
Local clock offset: -12.006 ms
Remote clock offset: -14.624 ms

# Below is generated by plot.py at 2018-03-21 06:53:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.88 Mbit/s
95th percentile per-packet one-way delay: 6.011 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 61.36 Mbit/s
95th percentile per-packet one-way delay: 5.865 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 26.16 Mbit/s
95th percentile per-packet one-way delay: 6.150 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 36.64 Mbit/s
95th percentile per-packet one-way delay: 6.610 ms
Loss rate: 0.08%
```

Run 4: Report of Copa — Data Link



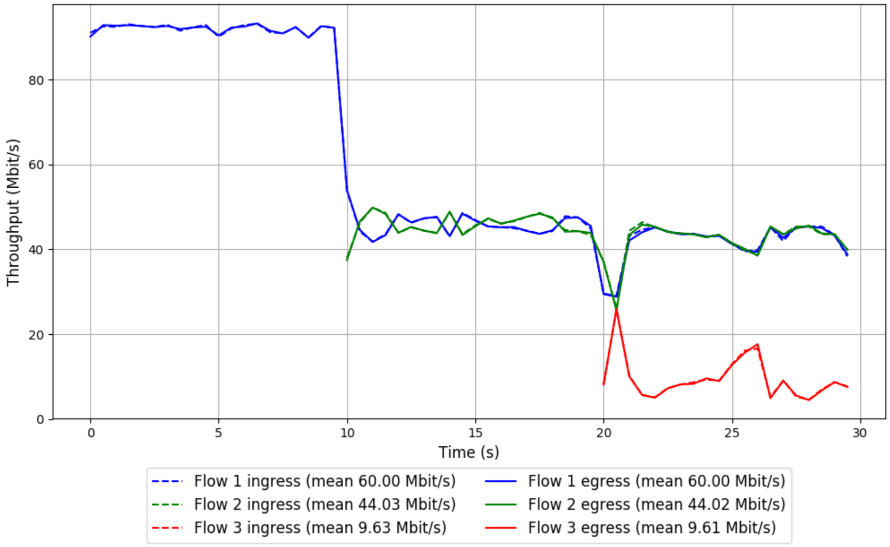


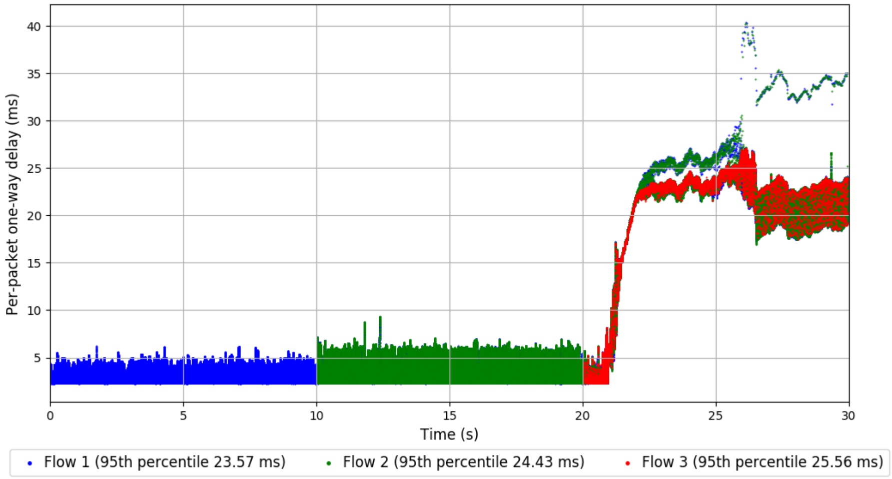
```
Run 5: Statistics of Copa

Start at: 2018-03-21 01:16:25
End at: 2018-03-21 01:16:55
Local clock offset: -11.934 ms
Remote clock offset: -14.676 ms

# Below is generated by plot.py at 2018-03-21 06:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.45 Mbit/s
95th percentile per-packet one-way delay: 23.969 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 60.00 Mbit/s
95th percentile per-packet one-way delay: 23.570 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 44.02 Mbit/s
95th percentile per-packet one-way delay: 24.431 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 9.61 Mbit/s
95th percentile per-packet one-way delay: 25.564 ms
Loss rate: 0.27%
```

Run 5: Report of Copa — Data Link



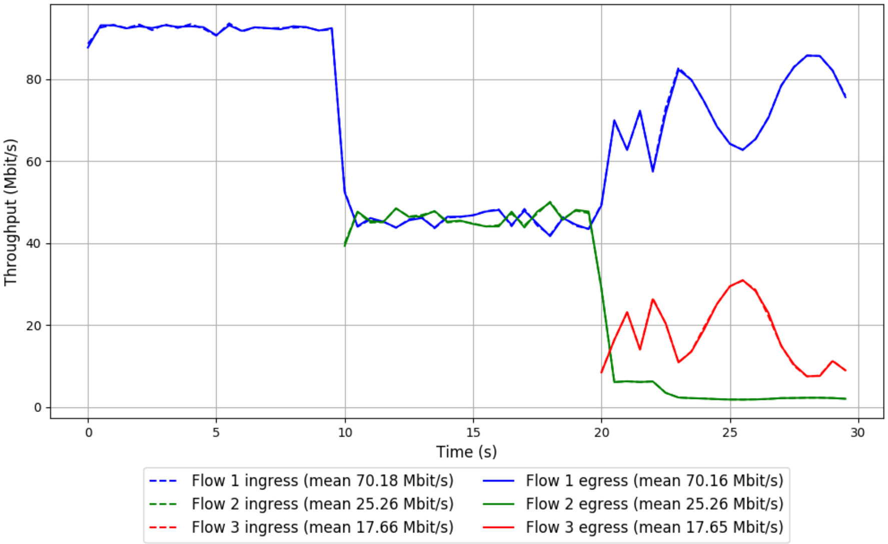


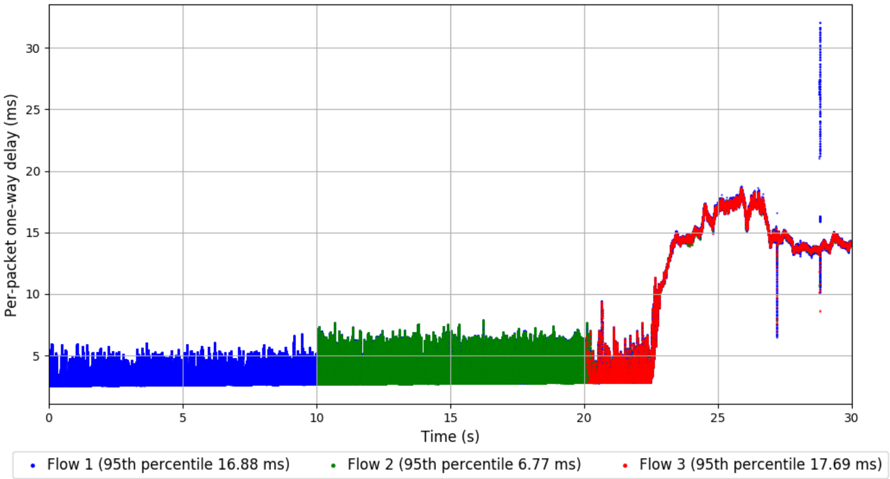
```
Run 6: Statistics of Copa

Start at: 2018-03-21 01:36:50
End at: 2018-03-21 01:37:20
Local clock offset: -11.767 ms
Remote clock offset: -12.039 ms

# Below is generated by plot.py at 2018-03-21 06:53:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.80 Mbit/s
95th percentile per-packet one-way delay: 17.014 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 70.16 Mbit/s
95th percentile per-packet one-way delay: 16.880 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 25.26 Mbit/s
95th percentile per-packet one-way delay: 6.774 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 17.65 Mbit/s
95th percentile per-packet one-way delay: 17.691 ms
Loss rate: 0.10%
```

Run 6: Report of Copa — Data Link



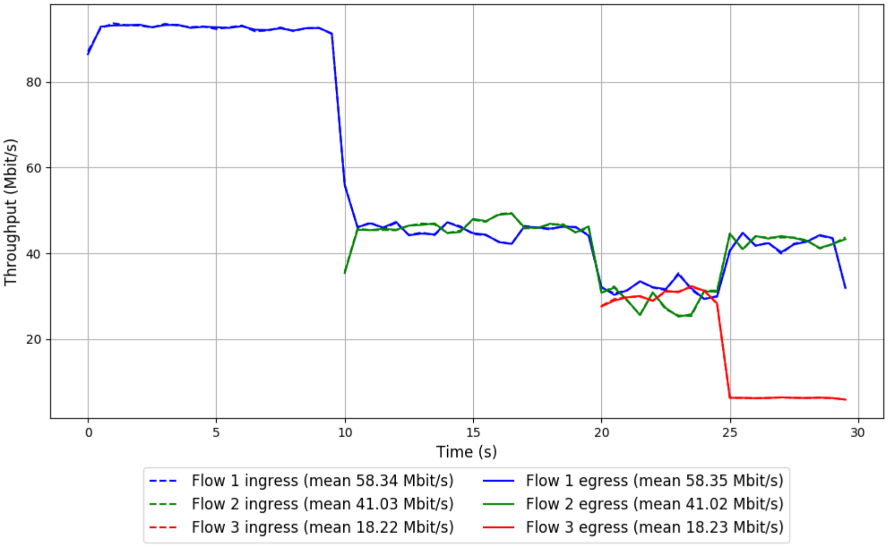


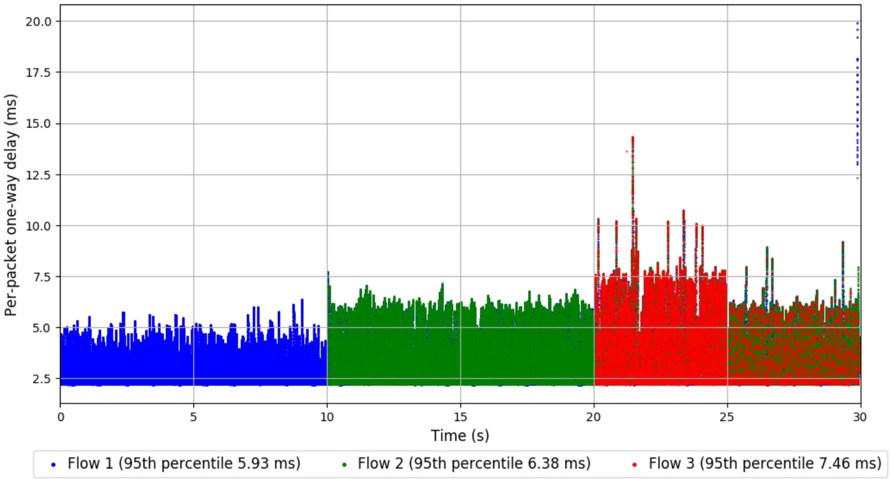
```
Run 7: Statistics of Copa

Start at: 2018-03-21 01:57:13
End at: 2018-03-21 01:57:43
Local clock offset: -3.505 ms
Remote clock offset: -4.22 ms

# Below is generated by plot.py at 2018-03-21 06:54:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.68 Mbit/s
95th percentile per-packet one-way delay: 6.222 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 58.35 Mbit/s
95th percentile per-packet one-way delay: 5.929 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.02 Mbit/s
95th percentile per-packet one-way delay: 6.379 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 18.23 Mbit/s
95th percentile per-packet one-way delay: 7.460 ms
Loss rate: 0.03%
```

Run 7: Report of Copa — Data Link



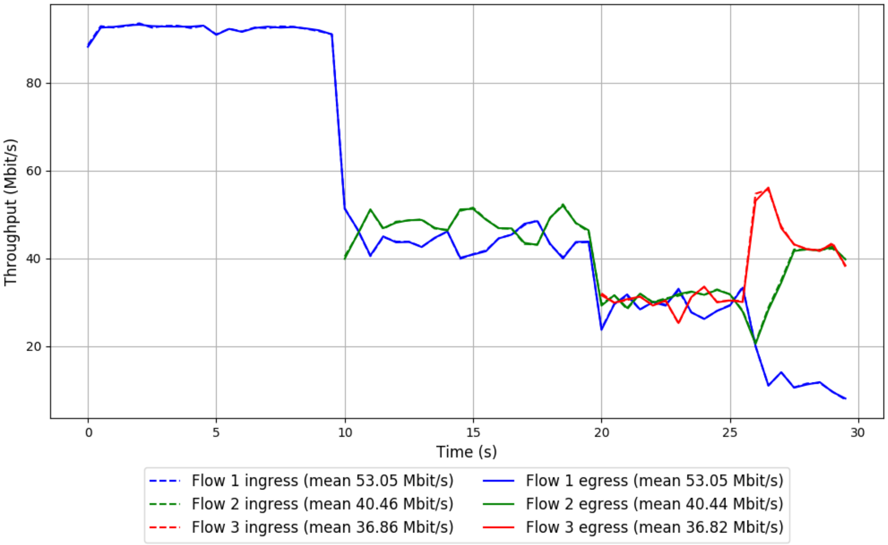


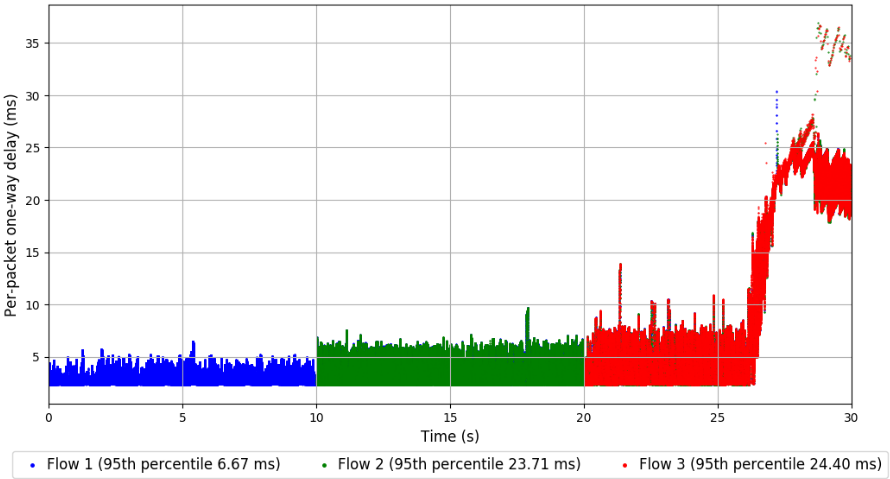
```
Run 8: Statistics of Copa

Start at: 2018-03-21 02:17:39
End at: 2018-03-21 02:18:09
Local clock offset: -2.102 ms
Remote clock offset: -4.81 ms

# Below is generated by plot.py at 2018-03-21 06:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.14 Mbit/s
95th percentile per-packet one-way delay: 23.216 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 53.05 Mbit/s
95th percentile per-packet one-way delay: 6.668 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 40.44 Mbit/s
95th percentile per-packet one-way delay: 23.715 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 36.82 Mbit/s
95th percentile per-packet one-way delay: 24.398 ms
Loss rate: 0.25%
```

Run 8: Report of Copa — Data Link



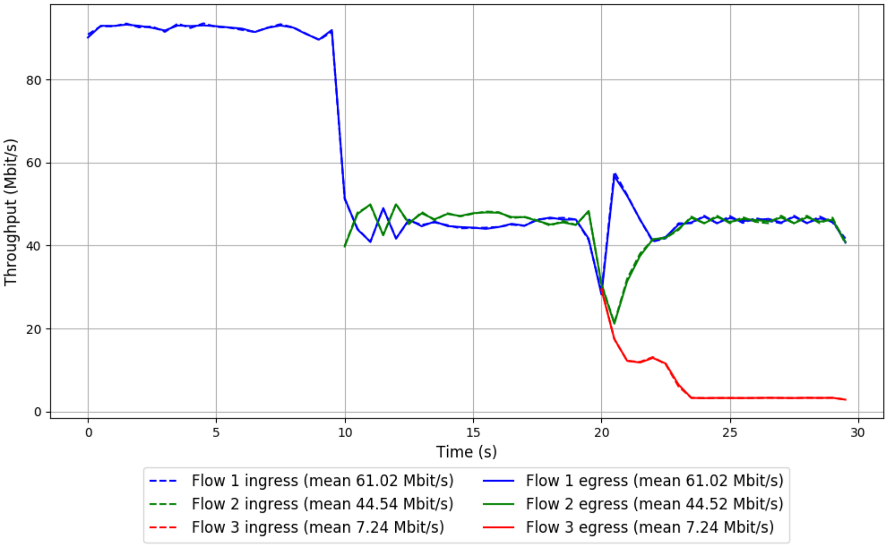


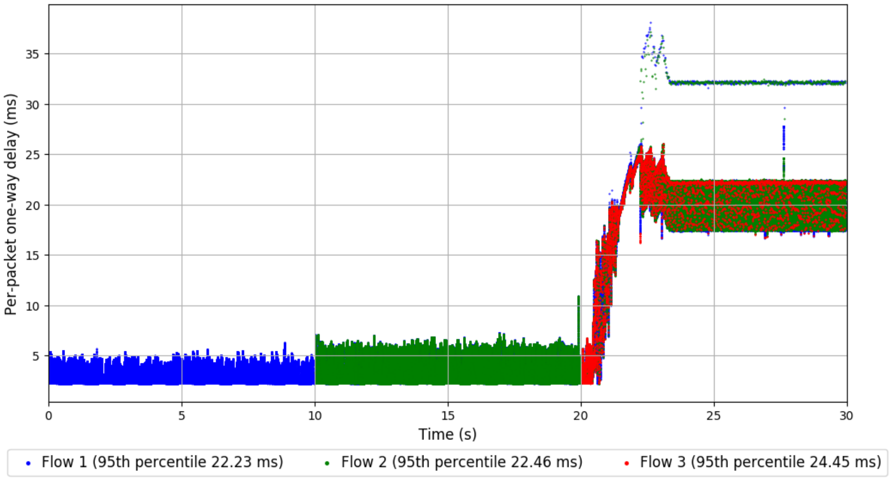
```
Run 9: Statistics of Copa

Start at: 2018-03-21 02:38:03
End at: 2018-03-21 02:38:33
Local clock offset: -2.244 ms
Remote clock offset: -4.696 ms

# Below is generated by plot.py at 2018-03-21 06:55:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.03 Mbit/s
95th percentile per-packet one-way delay: 22.300 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 61.02 Mbit/s
95th percentile per-packet one-way delay: 22.231 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 44.52 Mbit/s
95th percentile per-packet one-way delay: 22.459 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 7.24 Mbit/s
95th percentile per-packet one-way delay: 24.455 ms
Loss rate: 0.11%
```

Run 9: Report of Copa — Data Link



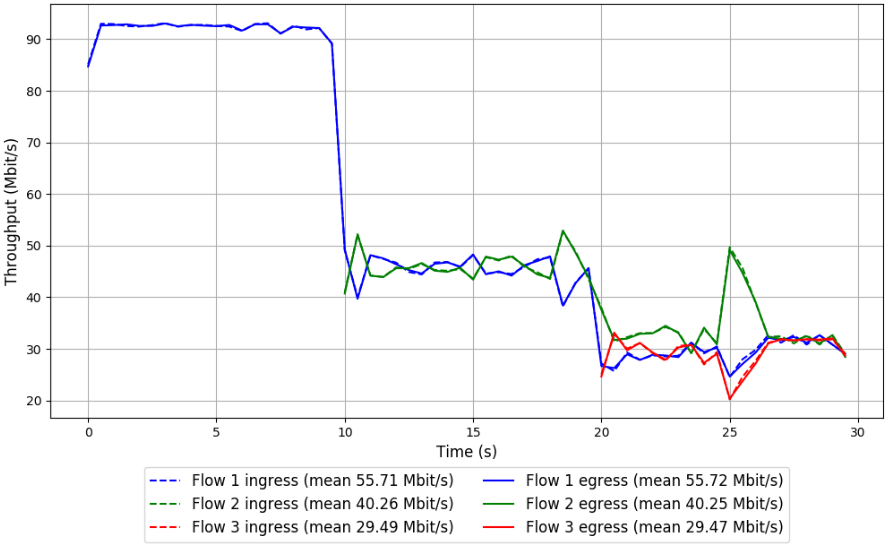


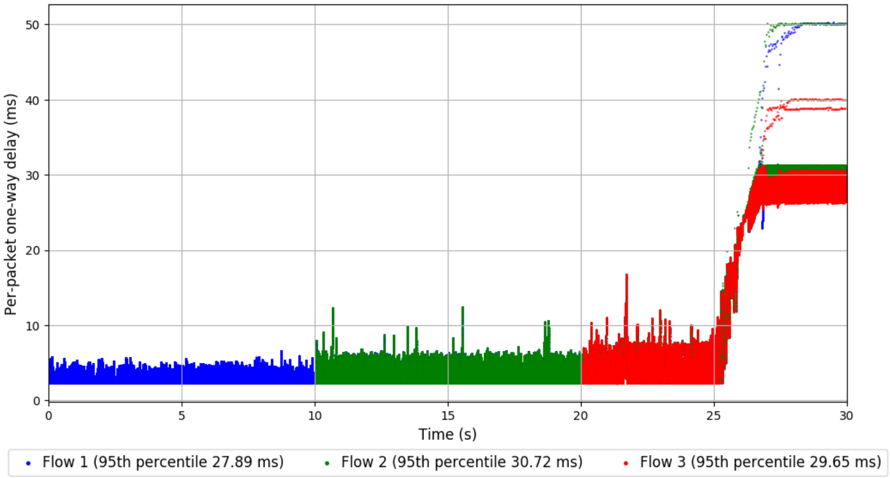
```
Run 10: Statistics of Copa

Start at: 2018-03-21 02:58:29
End at: 2018-03-21 02:58:59
Local clock offset: -2.944 ms
Remote clock offset: -6.408 ms

# Below is generated by plot.py at 2018-03-21 06:55:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.20 Mbit/s
95th percentile per-packet one-way delay: 29.391 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 55.72 Mbit/s
95th percentile per-packet one-way delay: 27.888 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 40.25 Mbit/s
95th percentile per-packet one-way delay: 30.723 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 29.47 Mbit/s
95th percentile per-packet one-way delay: 29.652 ms
Loss rate: 0.31%
```

Run 10: Report of Copa — Data Link





```
Run 1: Statistics of FillP

Start at: 2018-03-20 23:53:19
End at: 2018-03-20 23:53:49
Local clock offset: -13.404 ms
Remote clock offset: -14.122 ms
```

Run 1: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 2: Statistics of FillP

Start at: 2018-03-21 00:13:52
End at: 2018-03-21 00:14:22
Local clock offset: -13.055 ms
Remote clock offset: -30.423 ms
```

Run 2: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 3: Statistics of FillP

Start at: 2018-03-21 00:34:23
End at: 2018-03-21 00:34:53
Local clock offset: -12.642 ms
Remote clock offset: -14.553 ms
```

Run 3: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 4: Statistics of FillP

Start at: 2018-03-21 00:54:55
End at: 2018-03-21 00:55:25
Local clock offset: -12.042 ms
Remote clock offset: -14.7 ms
```

Run 4: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 5: Statistics of FillP

Start at: 2018-03-21 01:15:19
End at: 2018-03-21 01:15:49
Local clock offset: -11.894 ms
Remote clock offset: -14.718 ms
```

Run 5: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 6: Statistics of FillP

Start at: 2018-03-21 01:35:43
End at: 2018-03-21 01:36:13
Local clock offset: -11.783 ms
Remote clock offset: -12.943 ms
```

Run 6: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 7: Statistics of FillP

Start at: 2018-03-21 01:56:07
End at: 2018-03-21 01:56:37
Local clock offset: -3.681 ms
Remote clock offset: -4.434 ms
```

Run 7: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 8: Statistics of FillP

Start at: 2018-03-21 02:16:33
End at: 2018-03-21 02:17:03
Local clock offset: -1.986 ms
Remote clock offset: -4.772 ms
```

Run 8: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 9: Statistics of FillP

Start at: 2018-03-21 02:36:56
End at: 2018-03-21 02:37:26
Local clock offset: -2.215 ms
Remote clock offset: -4.755 ms
```

Run 9: Report of FillP — Data Link

Figure is missing

Figure is missing

```
Run 10: Statistics of FillP

Start at: 2018-03-21 02:57:22
End at: 2018-03-21 02:57:52
Local clock offset: -2.925 ms
Remote clock offset: -6.384 ms
```

Run 10: Report of FillP — Data Link

Figure is missing

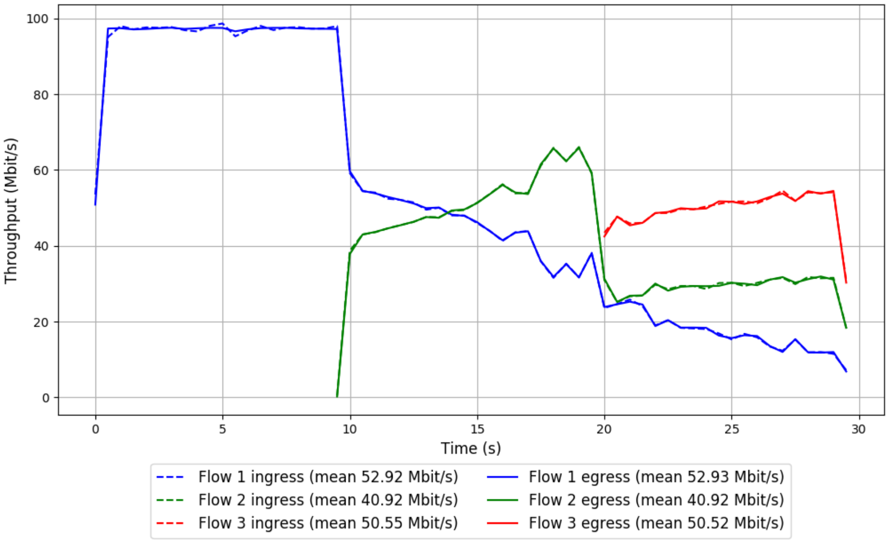
Figure is missing

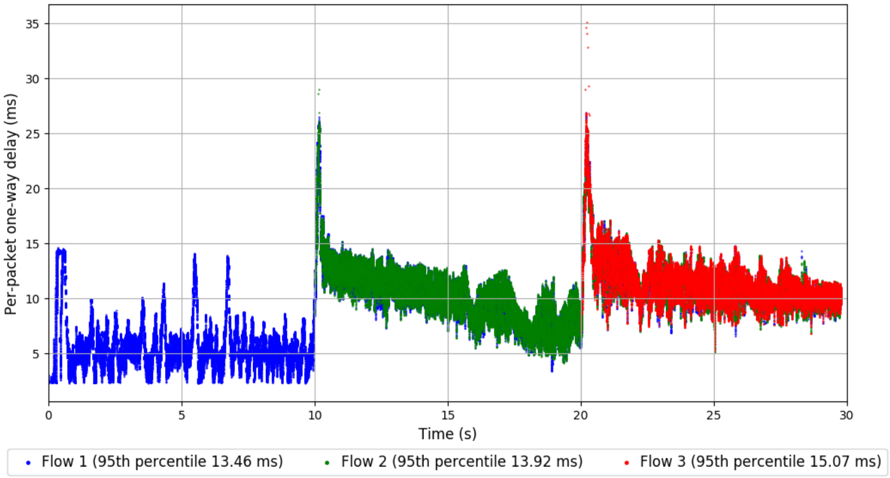
```
Run 1: Statistics of Indigo-1-32

Start at: 2018-03-21 00:02:26
End at: 2018-03-21 00:02:56
Local clock offset: -13.156 ms
Remote clock offset: -14.392 ms

# Below is generated by plot.py at 2018-03-21 06:55:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.68 Mbit/s
95th percentile per-packet one-way delay: 13.893 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 52.93 Mbit/s
95th percentile per-packet one-way delay: 13.457 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 40.92 Mbit/s
95th percentile per-packet one-way delay: 13.916 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 50.52 Mbit/s
95th percentile per-packet one-way delay: 15.074 ms
Loss rate: 0.15%
```

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



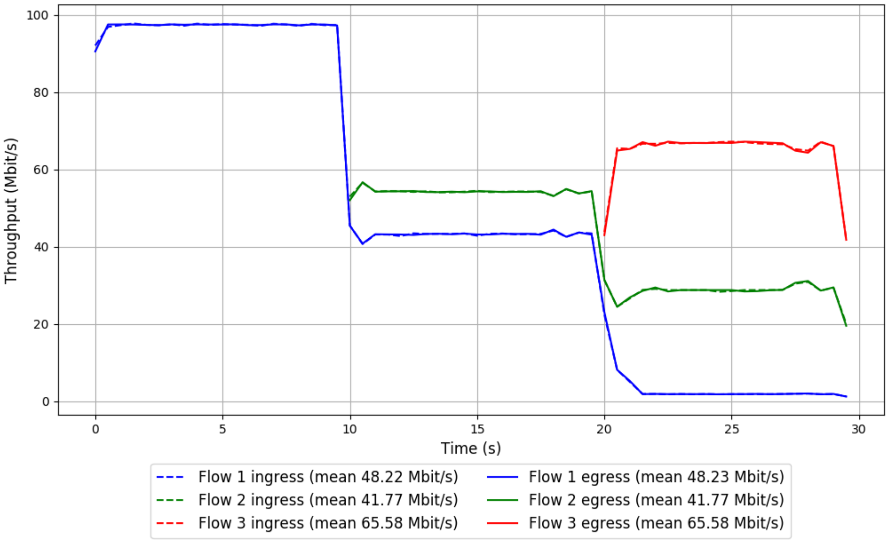


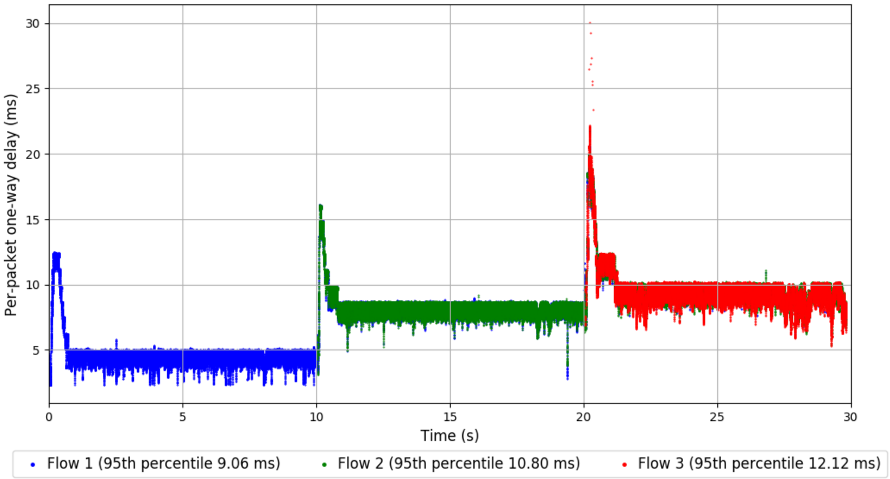
```
Run 2: Statistics of Indigo-1-32

Start at: 2018-03-21 00:23:02
End at: 2018-03-21 00:23:32
Local clock offset: -13.034 ms
Remote clock offset: -14.413 ms

# Below is generated by plot.py at 2018-03-21 06:55:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 10.801 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 48.23 Mbit/s
95th percentile per-packet one-way delay: 9.064 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.77 Mbit/s
95th percentile per-packet one-way delay: 10.805 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 65.58 Mbit/s
95th percentile per-packet one-way delay: 12.120 ms
Loss rate: 0.13%
```

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



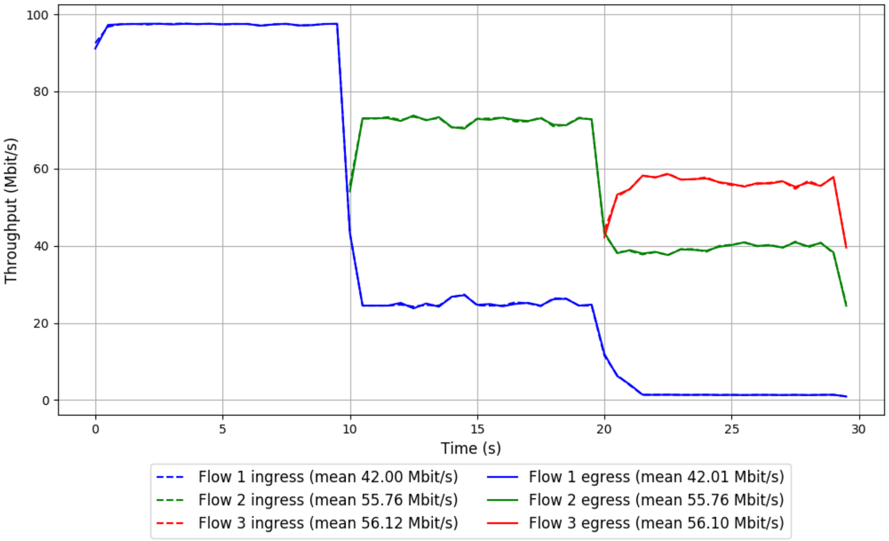


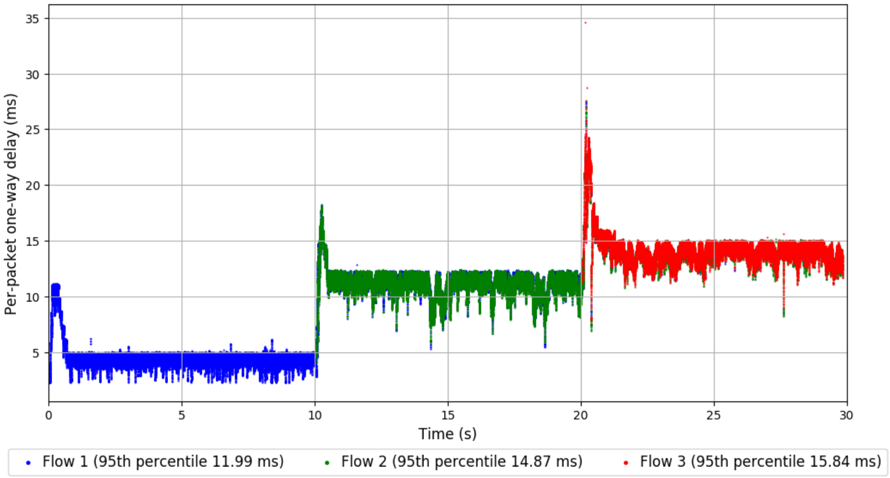
```
Run 3: Statistics of Indigo-1-32

Start at: 2018-03-21 00:43:31
End at: 2018-03-21 00:44:01
Local clock offset: -12.264 ms
Remote clock offset: -14.595 ms

# Below is generated by plot.py at 2018-03-21 06:55:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 14.862 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 42.01 Mbit/s
95th percentile per-packet one-way delay: 11.988 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 55.76 Mbit/s
95th percentile per-packet one-way delay: 14.869 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 56.10 Mbit/s
95th percentile per-packet one-way delay: 15.837 ms
Loss rate: 0.17%
```

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



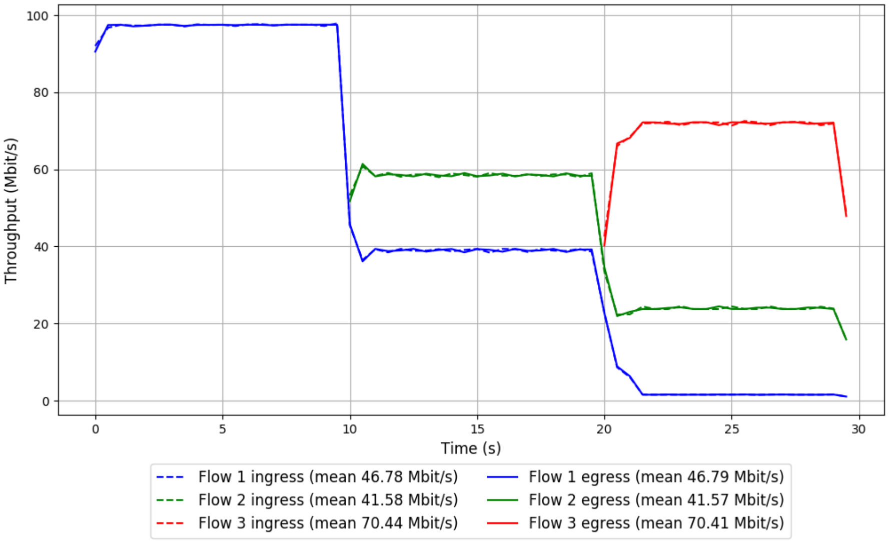


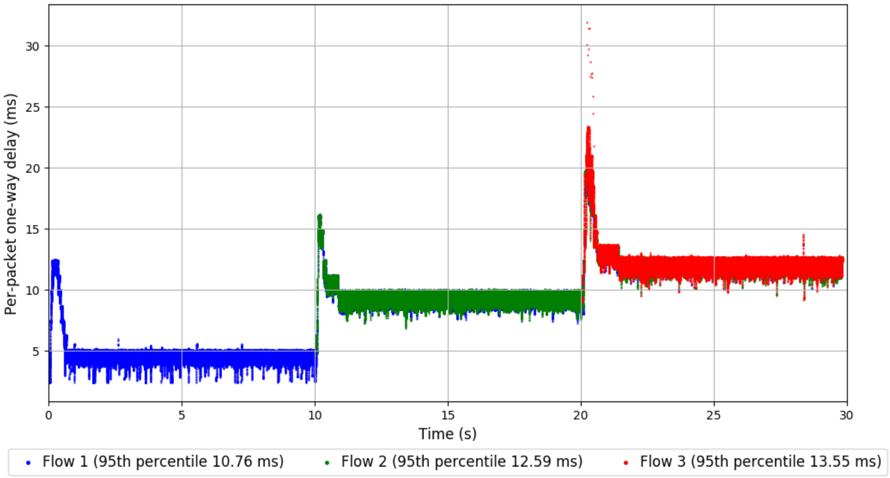
```
Run 4: Statistics of Indigo-1-32

Start at: 2018-03-21 01:03:58
End at: 2018-03-21 01:04:28
Local clock offset: -11.931 ms
Remote clock offset: -14.646 ms

# Below is generated by plot.py at 2018-03-21 06:55:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 12.615 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 46.79 Mbit/s
95th percentile per-packet one-way delay: 10.756 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.57 Mbit/s
95th percentile per-packet one-way delay: 12.589 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 70.41 Mbit/s
95th percentile per-packet one-way delay: 13.549 ms
Loss rate: 0.16%
```

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



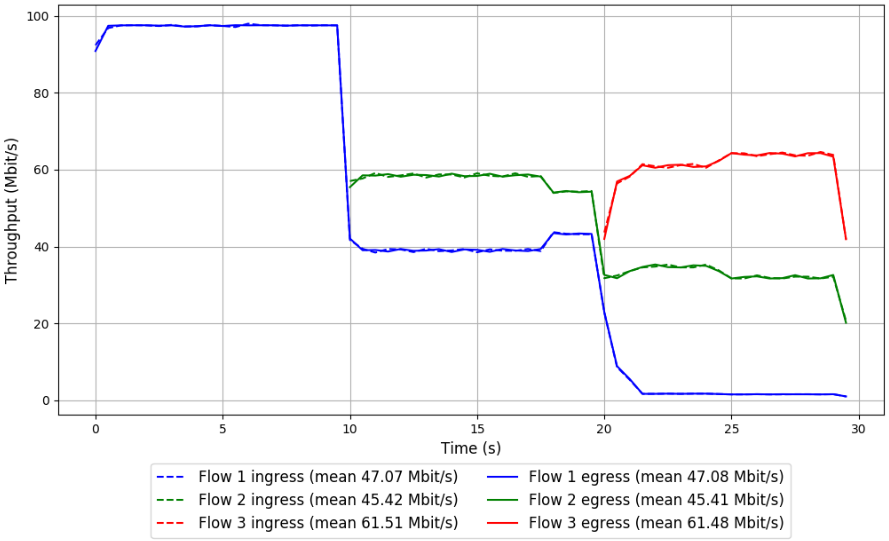


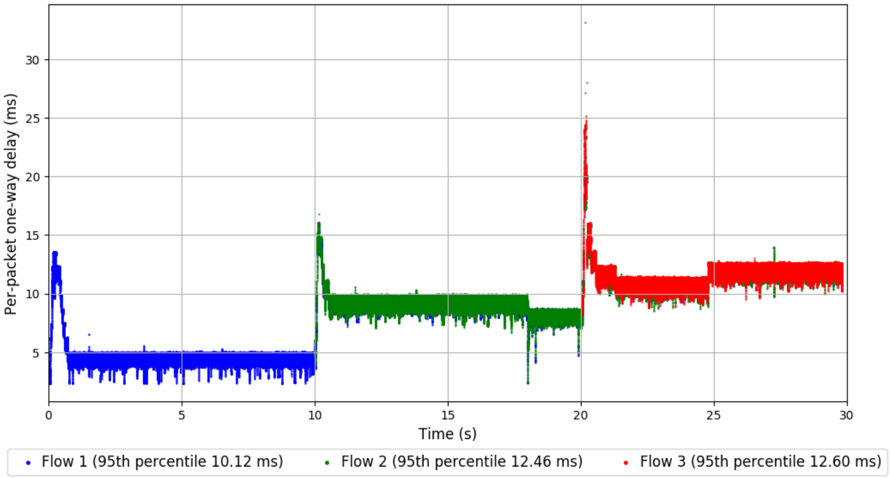
```
Run 5: Statistics of Indigo-1-32

Start at: 2018-03-21 01:24:24
End at: 2018-03-21 01:24:54
Local clock offset: -11.849 ms
Remote clock offset: -14.687 ms

# Below is generated by plot.py at 2018-03-21 06:55:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 12.488 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 47.08 Mbit/s
95th percentile per-packet one-way delay: 10.123 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.41 Mbit/s
95th percentile per-packet one-way delay: 12.458 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 61.48 Mbit/s
95th percentile per-packet one-way delay: 12.597 ms
Loss rate: 0.16%
```

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



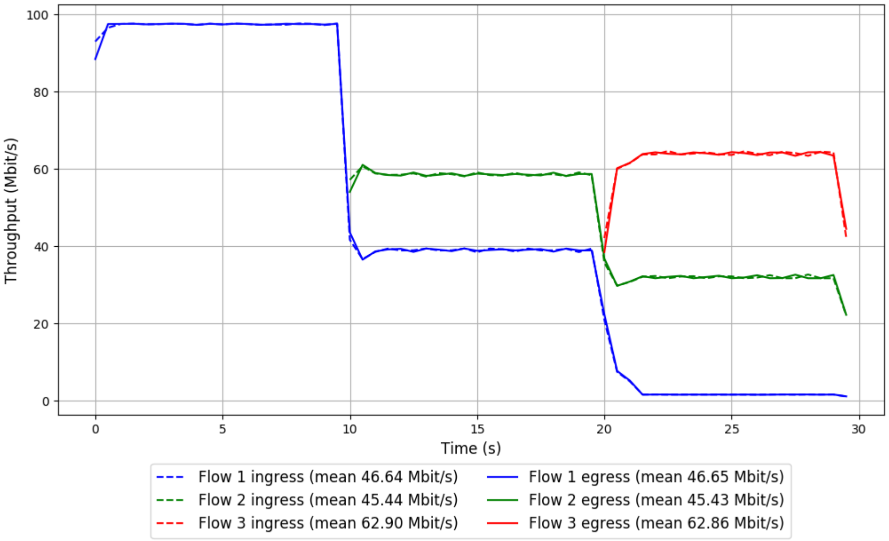


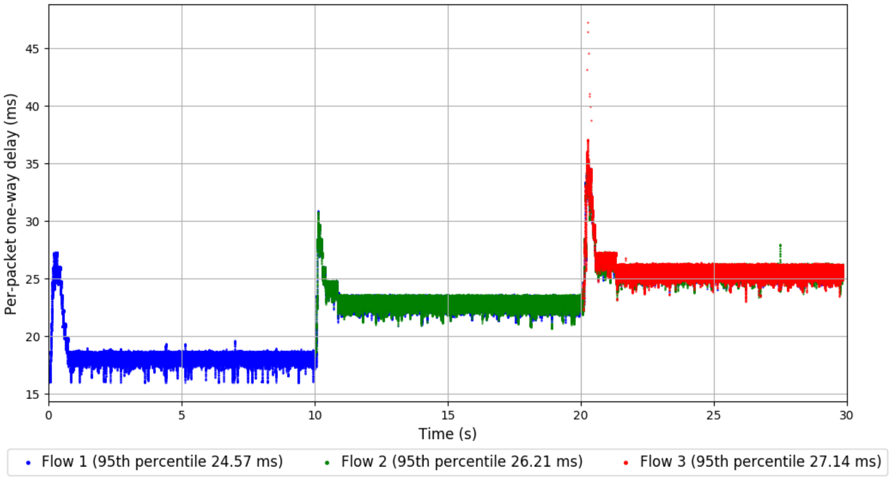
```
Run 6: Statistics of Indigo-1-32

Start at: 2018-03-21 01:44:47
End at: 2018-03-21 01:45:17
Local clock offset: -7.442 ms
Remote clock offset: -21.457 ms

# Below is generated by plot.py at 2018-03-21 06:56:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 26.220 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 46.65 Mbit/s
95th percentile per-packet one-way delay: 24.573 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.43 Mbit/s
95th percentile per-packet one-way delay: 26.213 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 62.86 Mbit/s
95th percentile per-packet one-way delay: 27.141 ms
Loss rate: 0.13%
```

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



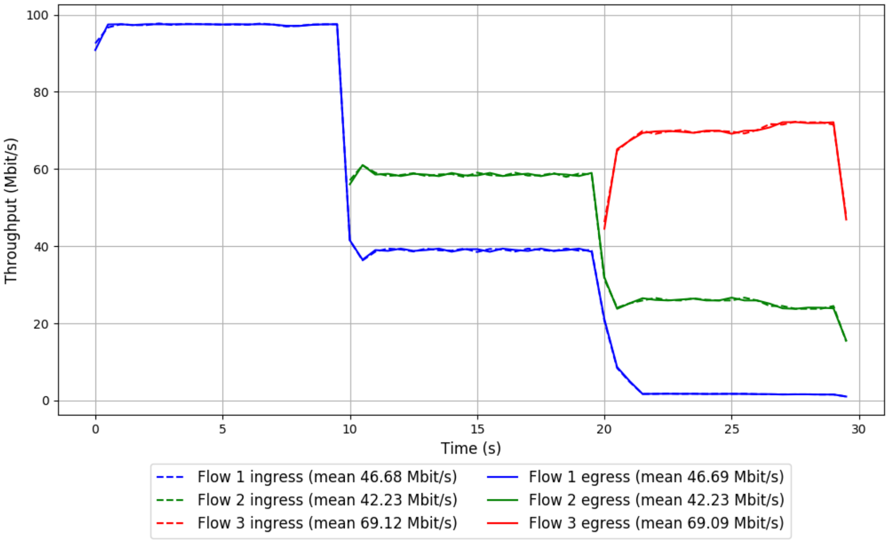


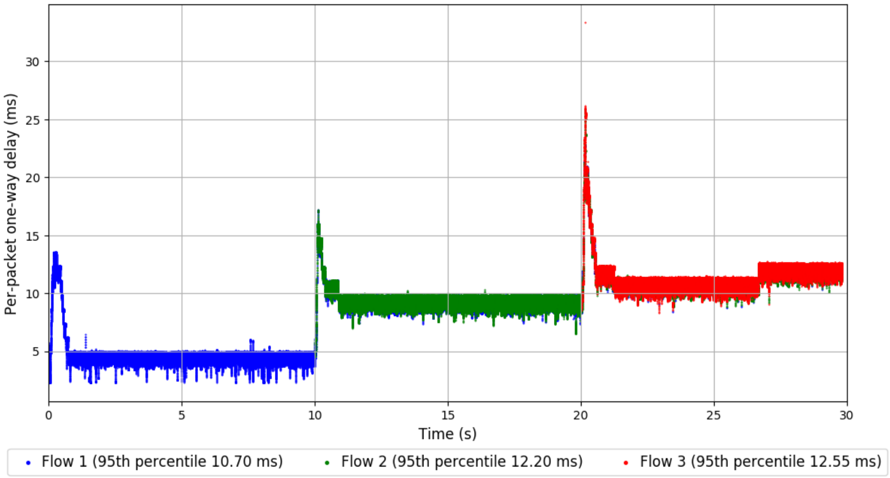
```
Run 7: Statistics of Indigo-1-32

Start at: 2018-03-21 02:05:12
End at: 2018-03-21 02:05:42
Local clock offset: -2.018 ms
Remote clock offset: -2.828 ms

# Below is generated by plot.py at 2018-03-21 06:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 12.433 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 46.69 Mbit/s
95th percentile per-packet one-way delay: 10.699 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.23 Mbit/s
95th percentile per-packet one-way delay: 12.204 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 69.09 Mbit/s
95th percentile per-packet one-way delay: 12.553 ms
Loss rate: 0.16%
```

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



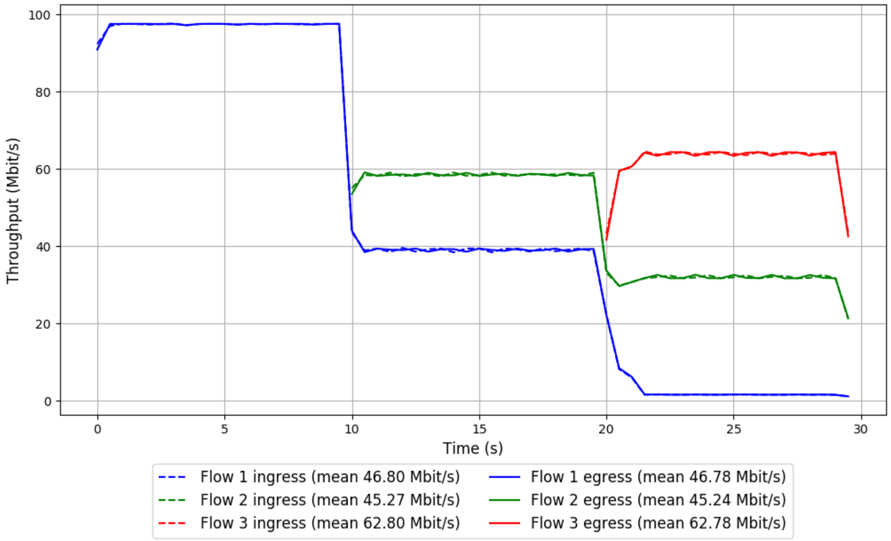


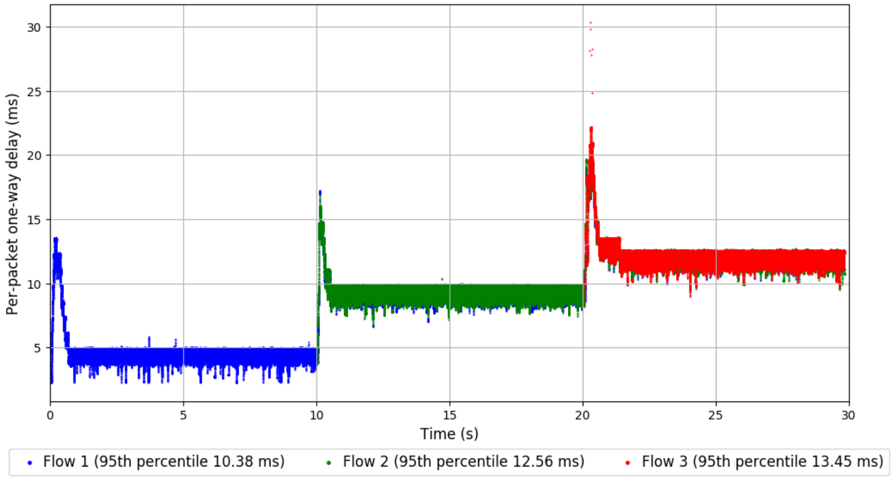
```
Run 8: Statistics of Indigo-1-32

Start at: 2018-03-21 02:25:37
End at: 2018-03-21 02:26:07
Local clock offset: -2.64 ms
Remote clock offset: -5.153 ms

# Below is generated by plot.py at 2018-03-21 06:56:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.41 Mbit/s
95th percentile per-packet one-way delay: 12.542 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 46.78 Mbit/s
95th percentile per-packet one-way delay: 10.375 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.24 Mbit/s
95th percentile per-packet one-way delay: 12.556 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 62.78 Mbit/s
95th percentile per-packet one-way delay: 13.451 ms
Loss rate: 0.16%
```

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



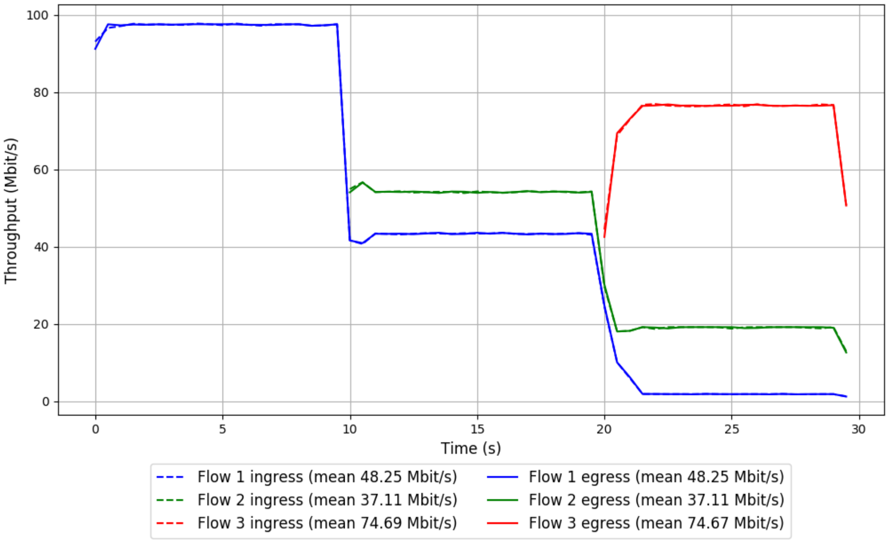


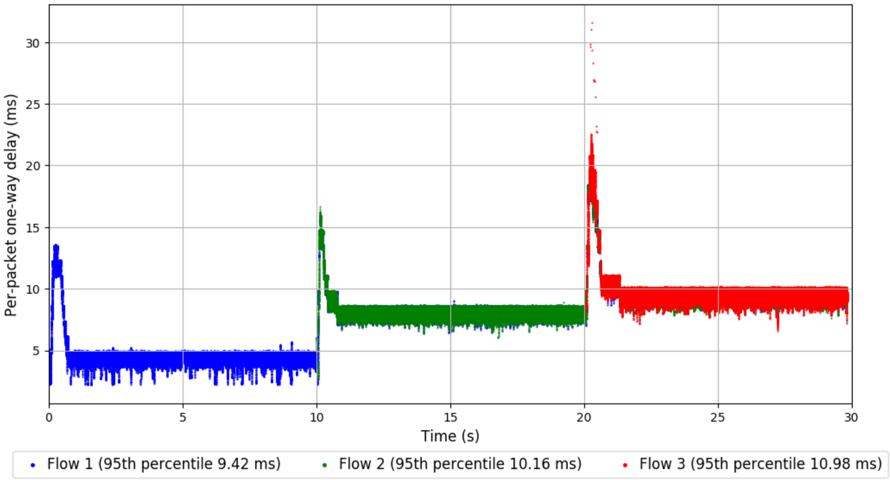
```
Run 9: Statistics of Indigo-1-32

Start at: 2018-03-21 02:46:01
End at: 2018-03-21 02:46:31
Local clock offset: -1.666 ms
Remote clock offset: -5.318 ms

# Below is generated by plot.py at 2018-03-21 06:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.36 Mbit/s
95th percentile per-packet one-way delay: 10.628 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 48.25 Mbit/s
95th percentile per-packet one-way delay: 9.416 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.11 Mbit/s
95th percentile per-packet one-way delay: 10.164 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 74.67 Mbit/s
95th percentile per-packet one-way delay: 10.980 ms
Loss rate: 0.13%
```

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



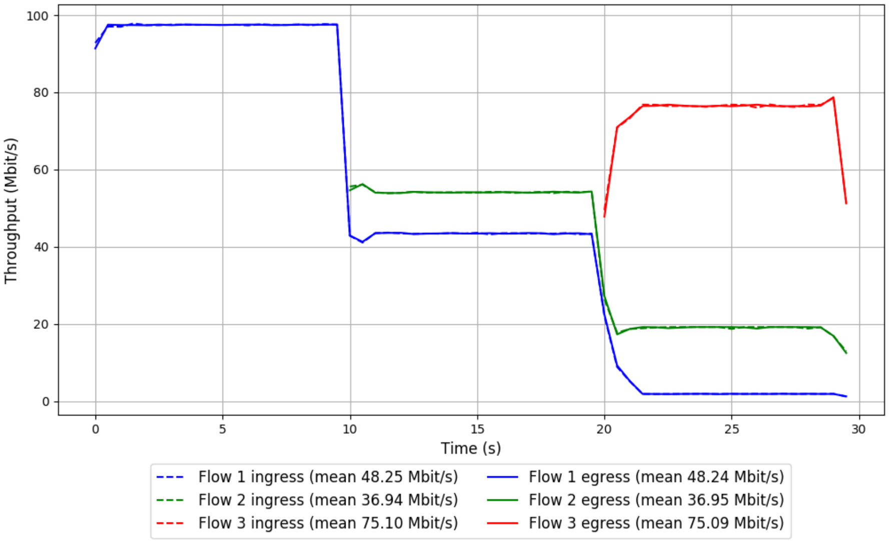


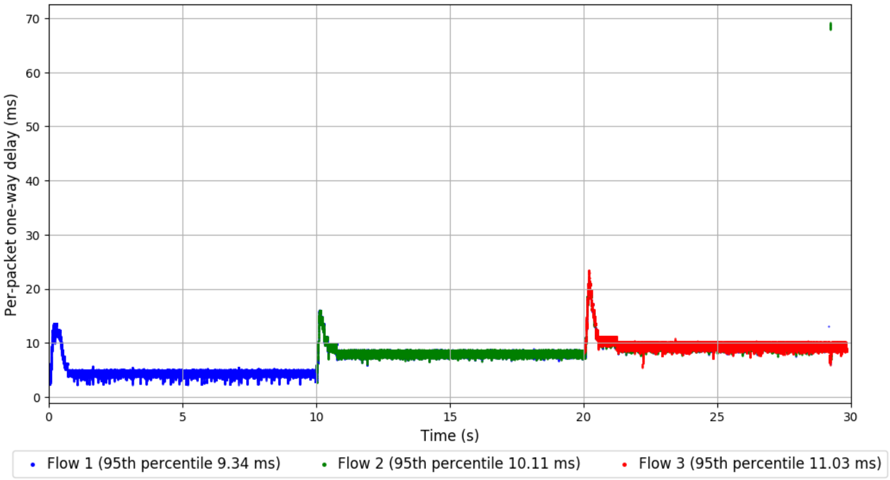
```
Run 10: Statistics of Indigo-1-32

Start at: 2018-03-21 03:06:26
End at: 2018-03-21 03:06:56
Local clock offset: -2.979 ms
Remote clock offset: -6.518 ms

# Below is generated by plot.py at 2018-03-21 06:56:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.41 Mbit/s
95th percentile per-packet one-way delay: 10.398 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 48.24 Mbit/s
95th percentile per-packet one-way delay: 9.338 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.95 Mbit/s
95th percentile per-packet one-way delay: 10.107 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 75.09 Mbit/s
95th percentile per-packet one-way delay: 11.034 ms
Loss rate: 0.12%
```

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



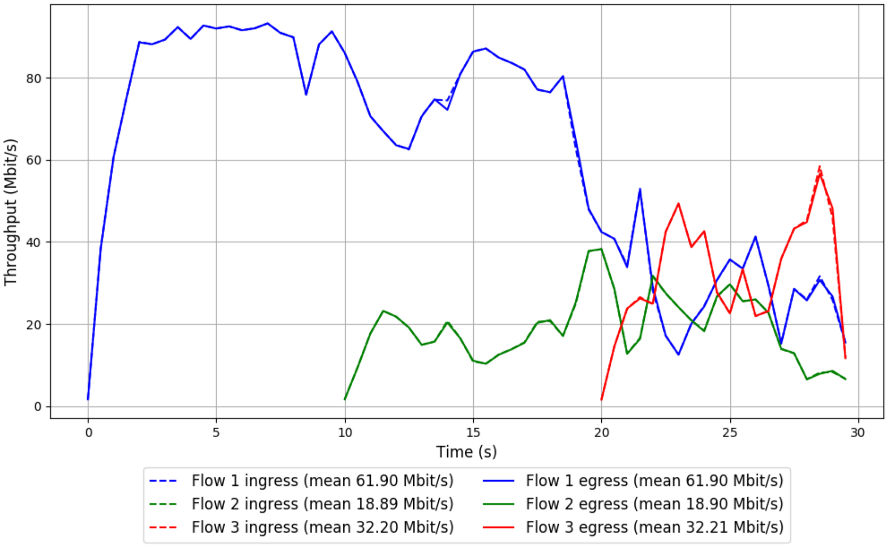


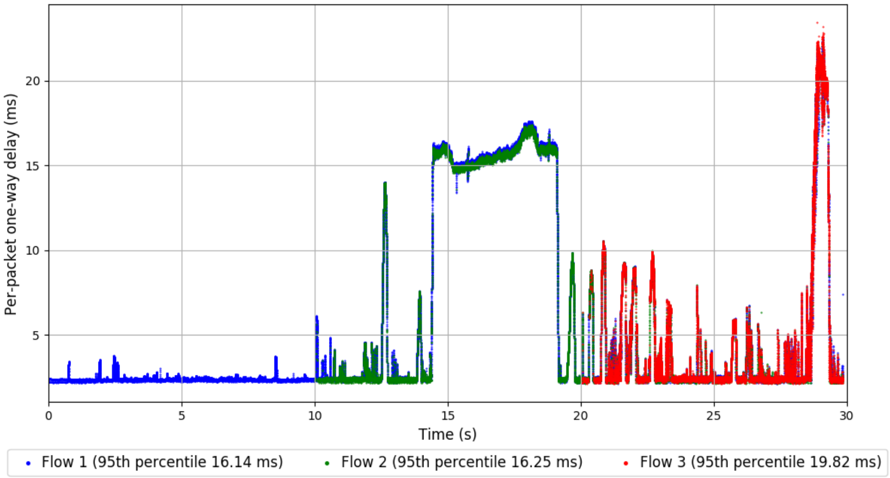
```
Run 1: Statistics of Vivace-latency

Start at: 2018-03-20 23:52:09
End at: 2018-03-20 23:52:39
Local clock offset: -13.383 ms
Remote clock offset: -14.077 ms

# Below is generated by plot.py at 2018-03-21 06:57:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.07 Mbit/s
95th percentile per-packet one-way delay: 16.208 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 61.90 Mbit/s
95th percentile per-packet one-way delay: 16.143 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 18.90 Mbit/s
95th percentile per-packet one-way delay: 16.251 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 32.21 Mbit/s
95th percentile per-packet one-way delay: 19.825 ms
Loss rate: 0.04%
```

Run 1: Report of Vivace-latency — Data Link



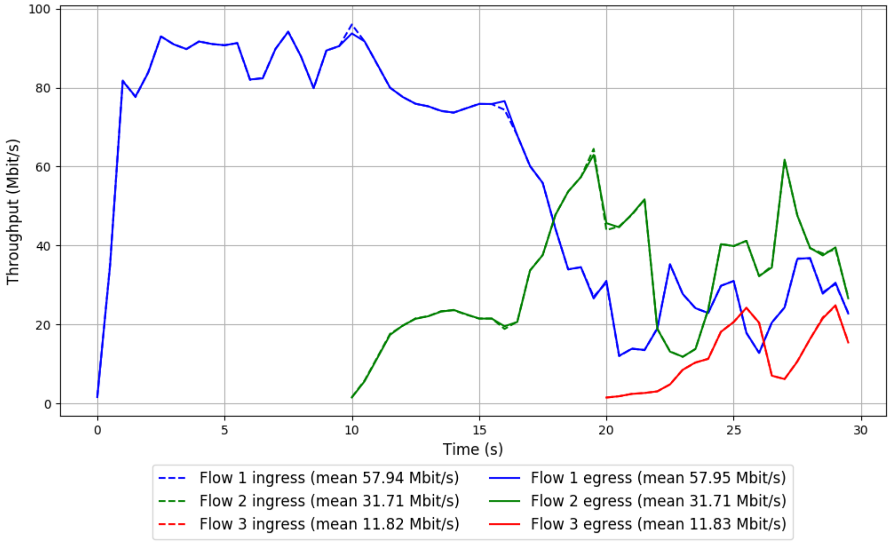


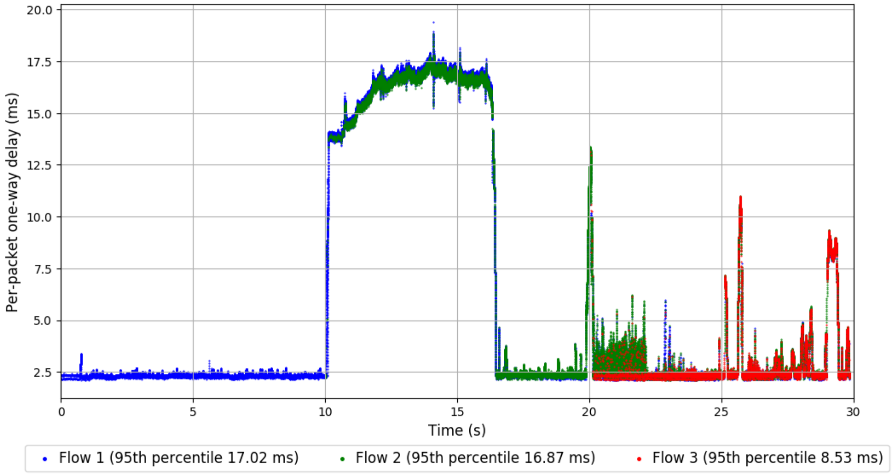
```
Run 2: Statistics of Vivace-latency

Start at: 2018-03-21 00:12:43
End at: 2018-03-21 00:13:13
Local clock offset: -13.076 ms
Remote clock offset: -14.449 ms

# Below is generated by plot.py at 2018-03-21 06:57:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.90 Mbit/s
95th percentile per-packet one-way delay: 16.973 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 57.95 Mbit/s
95th percentile per-packet one-way delay: 17.022 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 31.71 Mbit/s
95th percentile per-packet one-way delay: 16.873 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 11.83 Mbit/s
95th percentile per-packet one-way delay: 8.531 ms
Loss rate: 0.11%
```

Run 2: Report of Vivace-latency — Data Link



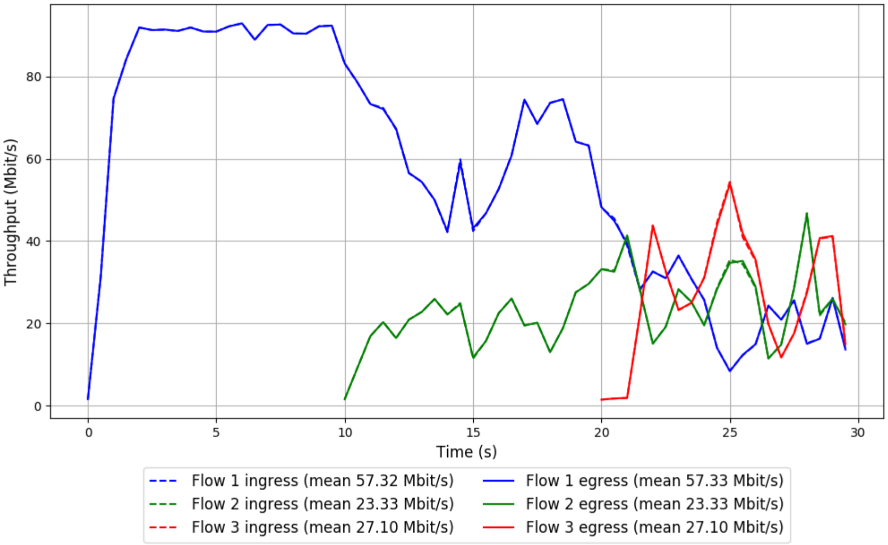


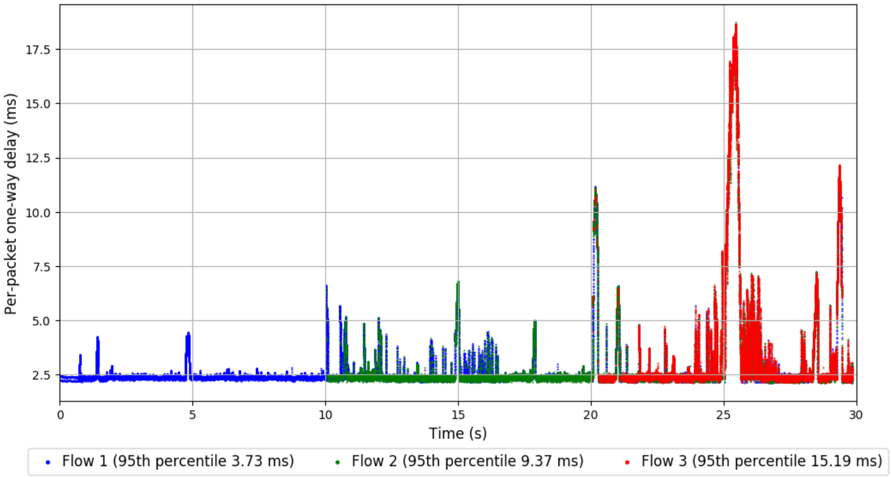
```
Run 3: Statistics of Vivace-latency

Start at: 2018-03-21 00:33:14
End at: 2018-03-21 00:33:44
Local clock offset: -12.717 ms
Remote clock offset: -14.561 ms

# Below is generated by plot.py at 2018-03-21 06:57:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.74 Mbit/s
95th percentile per-packet one-way delay: 5.824 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 57.33 Mbit/s
95th percentile per-packet one-way delay: 3.731 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 23.33 Mbit/s
95th percentile per-packet one-way delay: 9.366 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 27.10 Mbit/s
95th percentile per-packet one-way delay: 15.189 ms
Loss rate: 0.06%
```

Run 3: Report of Vivace-latency — Data Link



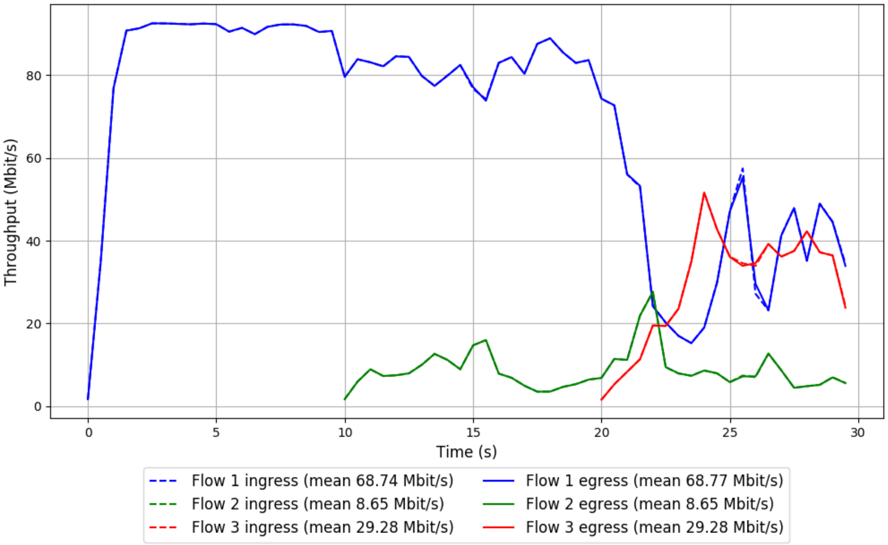


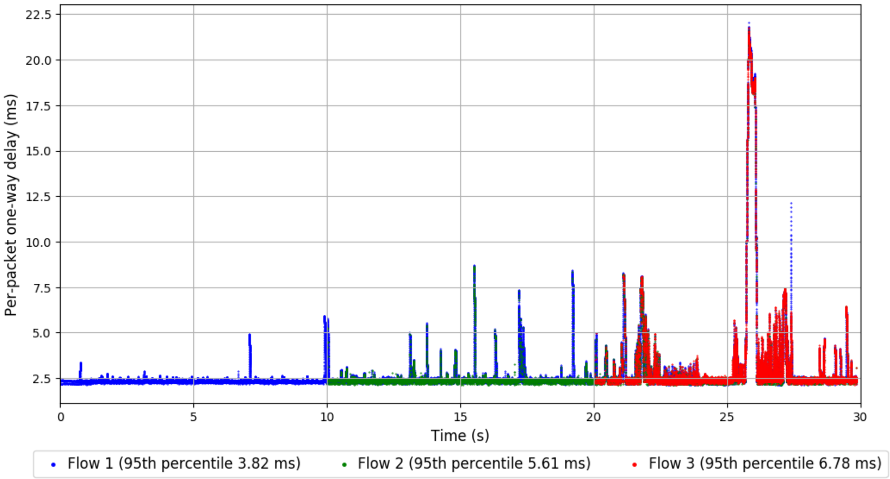
```
Run 4: Statistics of Vivace-latency

Start at: 2018-03-21 00:53:45
End at: 2018-03-21 00:54:15
Local clock offset: -12.122 ms
Remote clock offset: -14.682 ms

# Below is generated by plot.py at 2018-03-21 06:57:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.15 Mbit/s
95th percentile per-packet one-way delay: 4.202 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 68.77 Mbit/s
95th percentile per-packet one-way delay: 3.816 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 8.65 Mbit/s
95th percentile per-packet one-way delay: 5.607 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 29.28 Mbit/s
95th percentile per-packet one-way delay: 6.776 ms
Loss rate: 0.10%
```

Run 4: Report of Vivace-latency — Data Link



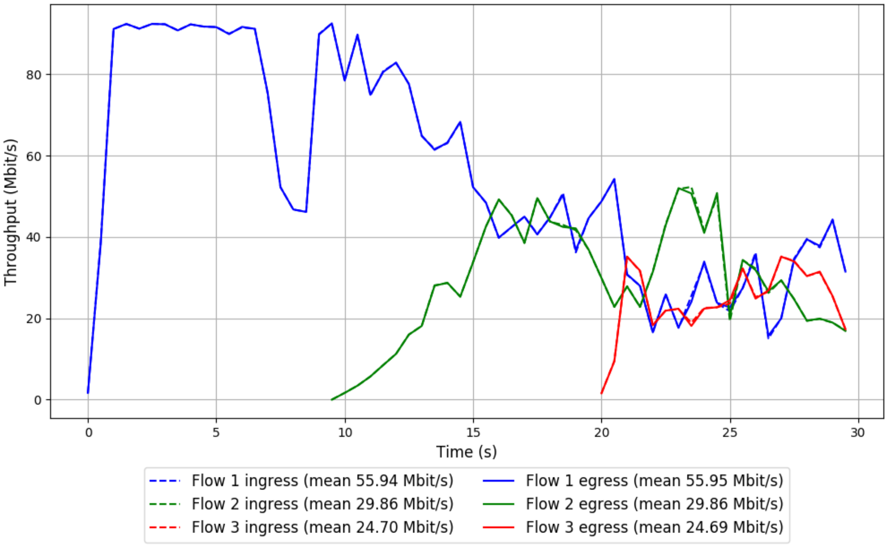


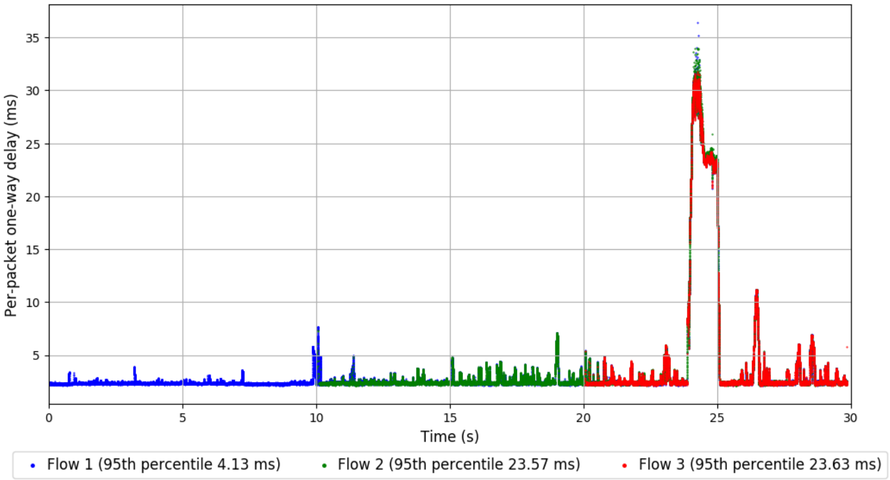
```
Run 5: Statistics of Vivace-latency

Start at: 2018-03-21 01:14:09
End at: 2018-03-21 01:14:39
Local clock offset: -11.925 ms
Remote clock offset: -14.655 ms

# Below is generated by plot.py at 2018-03-21 06:57:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.93 Mbit/s
95th percentile per-packet one-way delay: 8.289 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 55.95 Mbit/s
95th percentile per-packet one-way delay: 4.131 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 29.86 Mbit/s
95th percentile per-packet one-way delay: 23.569 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 24.69 Mbit/s
95th percentile per-packet one-way delay: 23.626 ms
Loss rate: 0.04%
```

Run 5: Report of Vivace-latency — Data Link



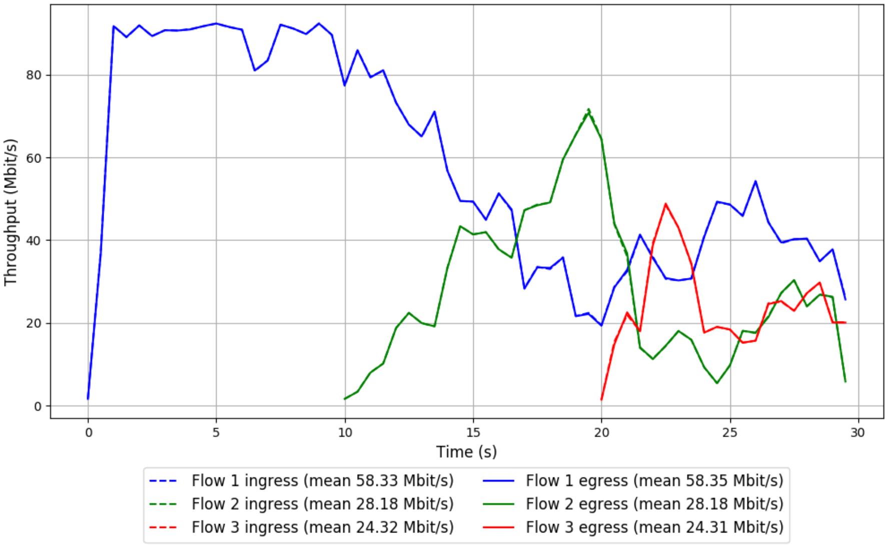


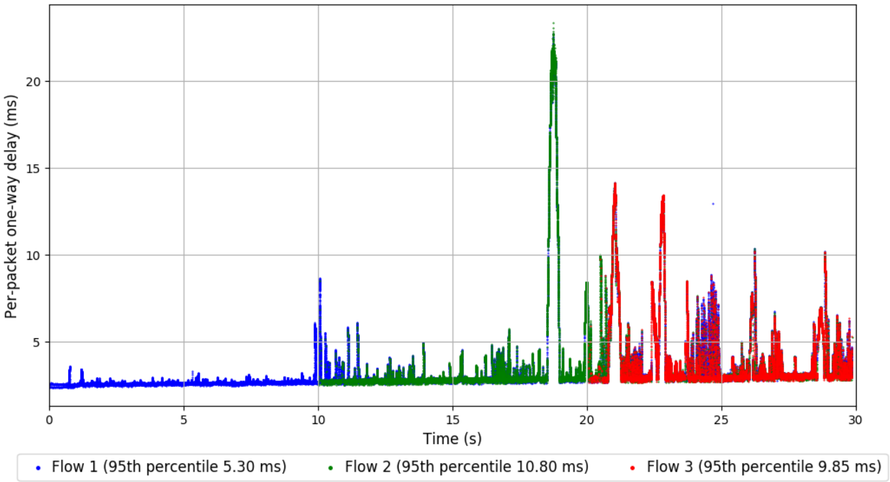
```
Run 6: Statistics of Vivace-latency

Start at: 2018-03-21 01:34:34
End at: 2018-03-21 01:35:04
Local clock offset: -11.781 ms
Remote clock offset: -13.918 ms

# Below is generated by plot.py at 2018-03-21 06:58:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.07 Mbit/s
95th percentile per-packet one-way delay: 7.028 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 58.35 Mbit/s
95th percentile per-packet one-way delay: 5.300 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 28.18 Mbit/s
95th percentile per-packet one-way delay: 10.805 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.31 Mbit/s
95th percentile per-packet one-way delay: 9.852 ms
Loss rate: 0.06%
```

Run 6: Report of Vivace-latency — Data Link



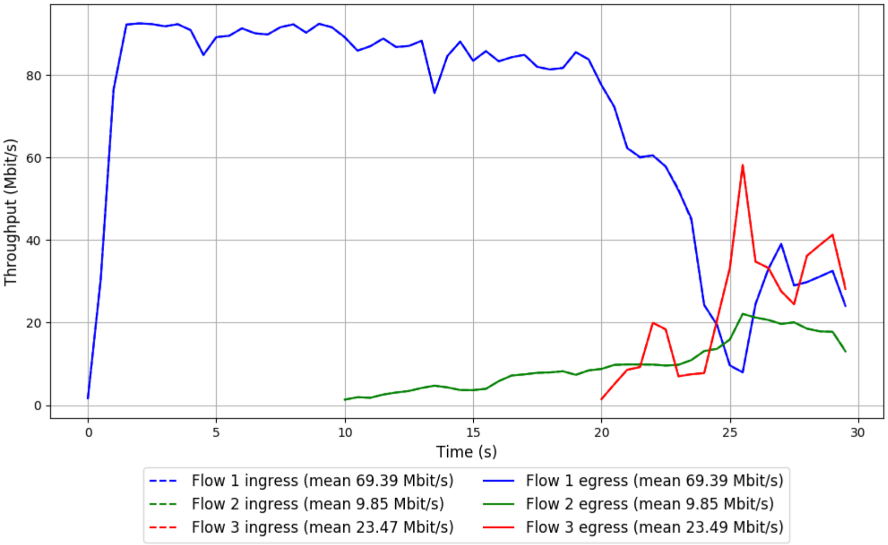


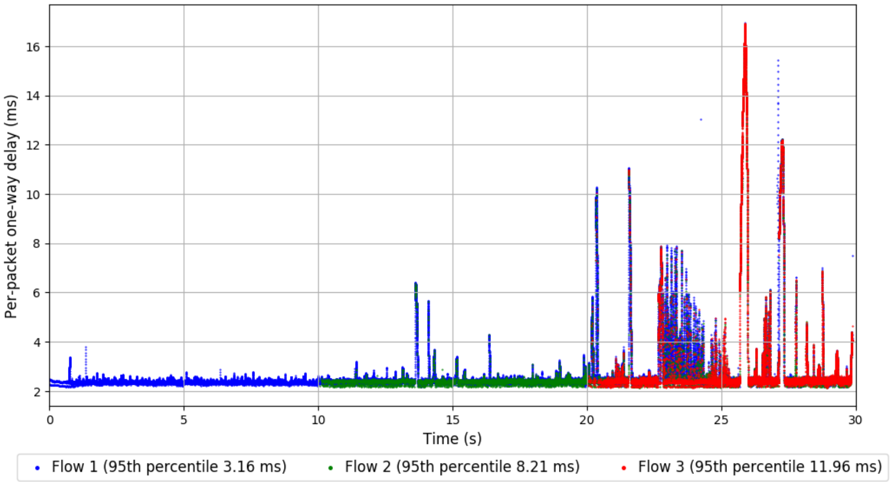
```
Run 7: Statistics of Vivace-latency

Start at: 2018-03-21 01:54:57
End at: 2018-03-21 01:55:27
Local clock offset: -3.927 ms
Remote clock offset: -4.733 ms

# Below is generated by plot.py at 2018-03-21 06:58:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.66 Mbit/s
95th percentile per-packet one-way delay: 4.110 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 69.39 Mbit/s
95th percentile per-packet one-way delay: 3.156 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 9.85 Mbit/s
95th percentile per-packet one-way delay: 8.212 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 23.49 Mbit/s
95th percentile per-packet one-way delay: 11.959 ms
Loss rate: 0.13%
```

Run 7: Report of Vivace-latency — Data Link



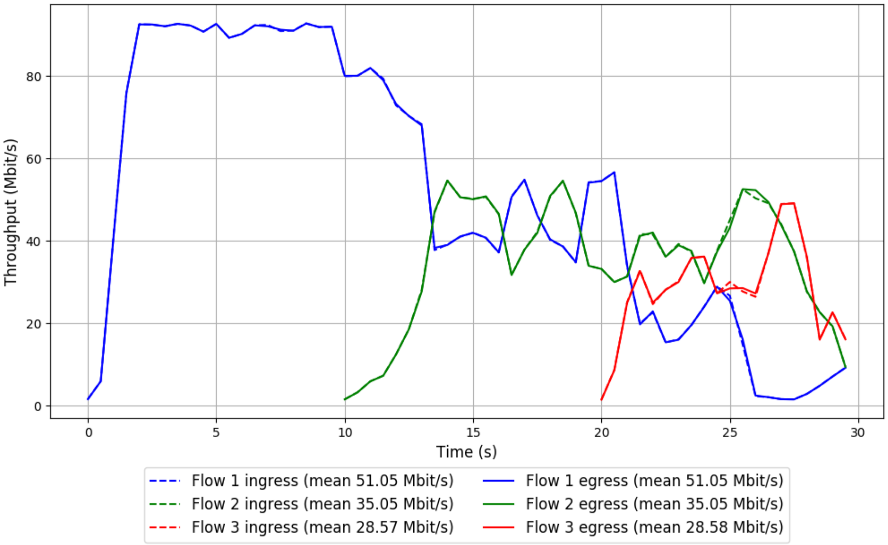


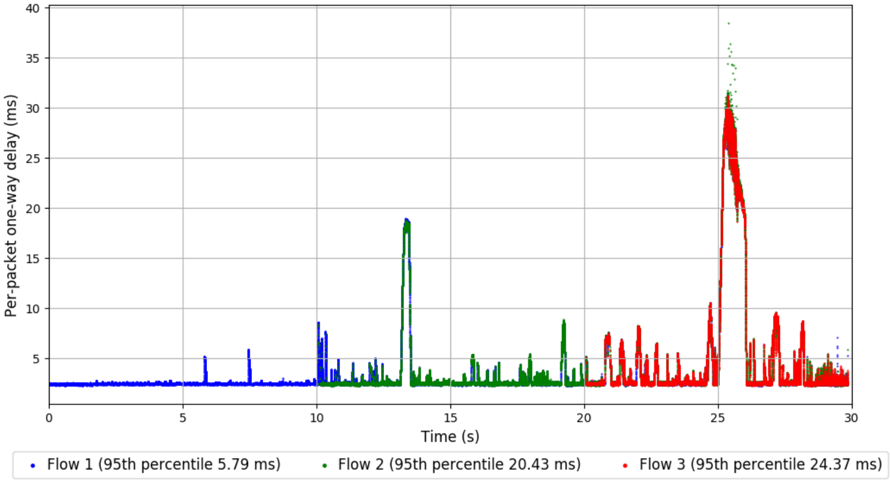
```
Run 8: Statistics of Vivace-latency

Start at: 2018-03-21 02:15:24
End at: 2018-03-21 02:15:54
Local clock offset: -1.69 ms
Remote clock offset: -4.556 ms

# Below is generated by plot.py at 2018-03-21 06:58:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.73 Mbit/s
95th percentile per-packet one-way delay: 10.286 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 51.05 Mbit/s
95th percentile per-packet one-way delay: 5.785 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.05 Mbit/s
95th percentile per-packet one-way delay: 20.426 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 28.58 Mbit/s
95th percentile per-packet one-way delay: 24.372 ms
Loss rate: 0.04%
```

Run 8: Report of Vivace-latency — Data Link



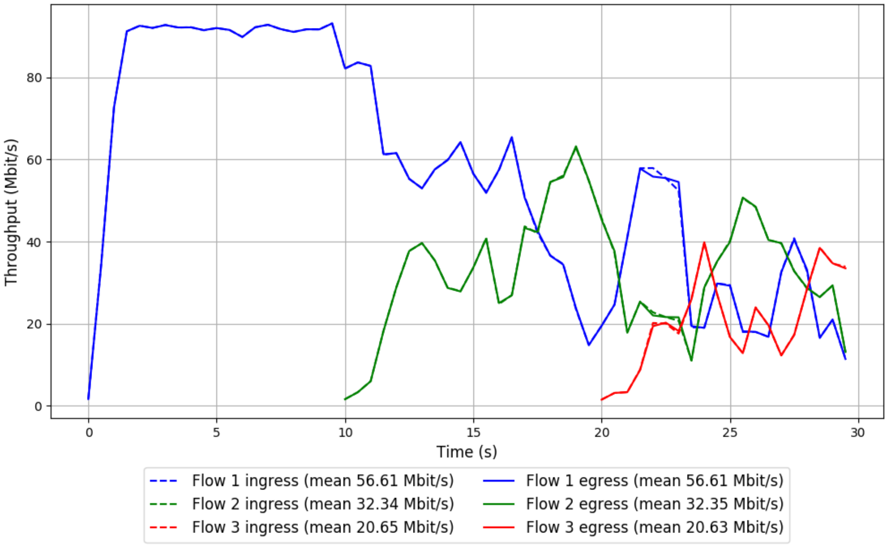


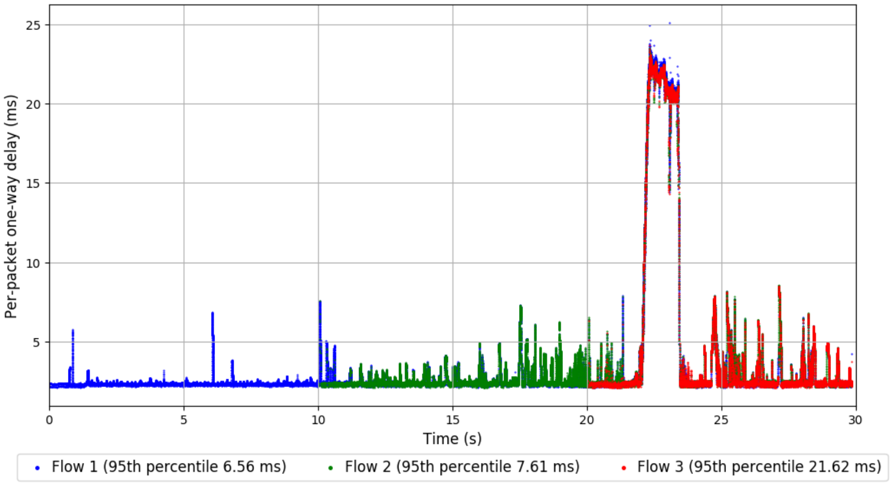
```
Run 9: Statistics of Vivace-latency

Start at: 2018-03-21 02:35:47
End at: 2018-03-21 02:36:17
Local clock offset: -2.306 ms
Remote clock offset: -4.808 ms

# Below is generated by plot.py at 2018-03-21 06:58:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.88 Mbit/s
95th percentile per-packet one-way delay: 10.804 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 56.61 Mbit/s
95th percentile per-packet one-way delay: 6.561 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.35 Mbit/s
95th percentile per-packet one-way delay: 7.613 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 20.63 Mbit/s
95th percentile per-packet one-way delay: 21.625 ms
Loss rate: 0.14%
```

Run 9: Report of Vivace-latency — Data Link



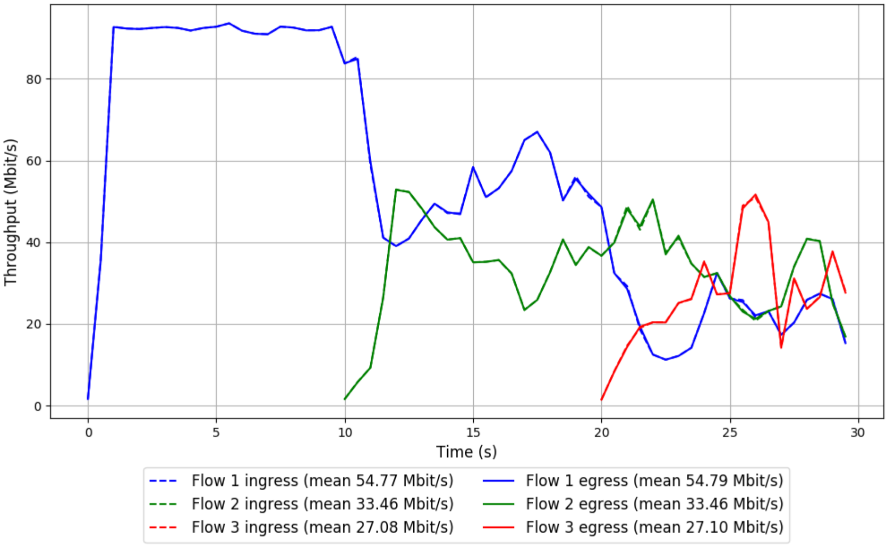


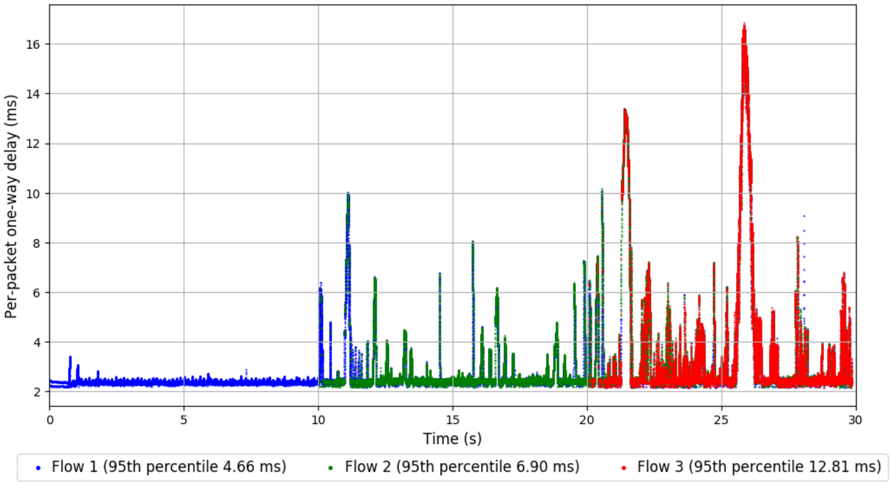
```
Run 10: Statistics of Vivace-latency

Start at: 2018-03-21 02:56:13
End at: 2018-03-21 02:56:43
Local clock offset: -2.874 ms
Remote clock offset: -6.335 ms

# Below is generated by plot.py at 2018-03-21 06:58:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.93 Mbit/s
95th percentile per-packet one-way delay: 6.047 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 54.79 Mbit/s
95th percentile per-packet one-way delay: 4.662 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 33.46 Mbit/s
95th percentile per-packet one-way delay: 6.896 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 27.10 Mbit/s
95th percentile per-packet one-way delay: 12.815 ms
Loss rate: 0.07%
```

Run 10: Report of Vivace-latency — Data Link



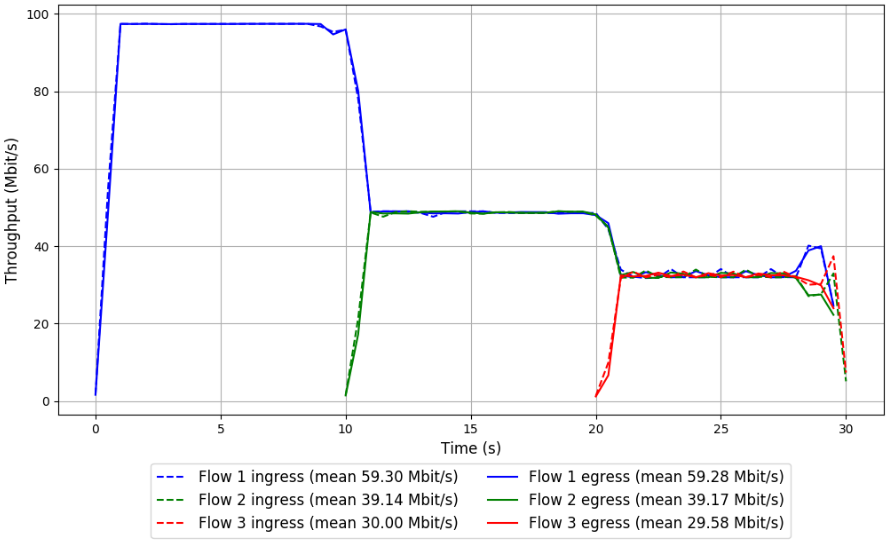


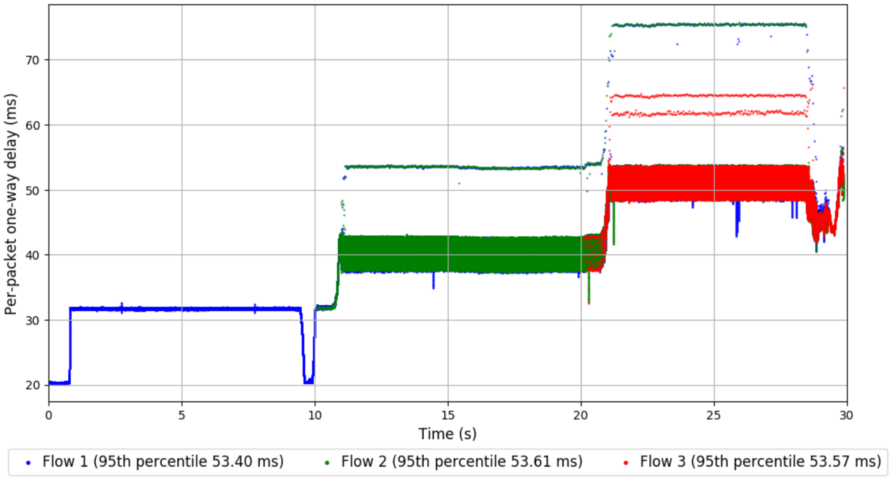
```
Run 1: Statistics of Vivace-loss

Start at: 2018-03-20 23:50:59
End at: 2018-03-20 23:51:29
Local clock offset: -13.425 ms
Remote clock offset: -32.108 ms

# Below is generated by plot.py at 2018-03-21 06:58:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.97 Mbit/s
95th percentile per-packet one-way delay: 53.542 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 59.28 Mbit/s
95th percentile per-packet one-way delay: 53.396 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 39.17 Mbit/s
95th percentile per-packet one-way delay: 53.614 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 29.58 Mbit/s
95th percentile per-packet one-way delay: 53.574 ms
Loss rate: 3.92%
```

Run 1: Report of Vivace-loss — Data Link



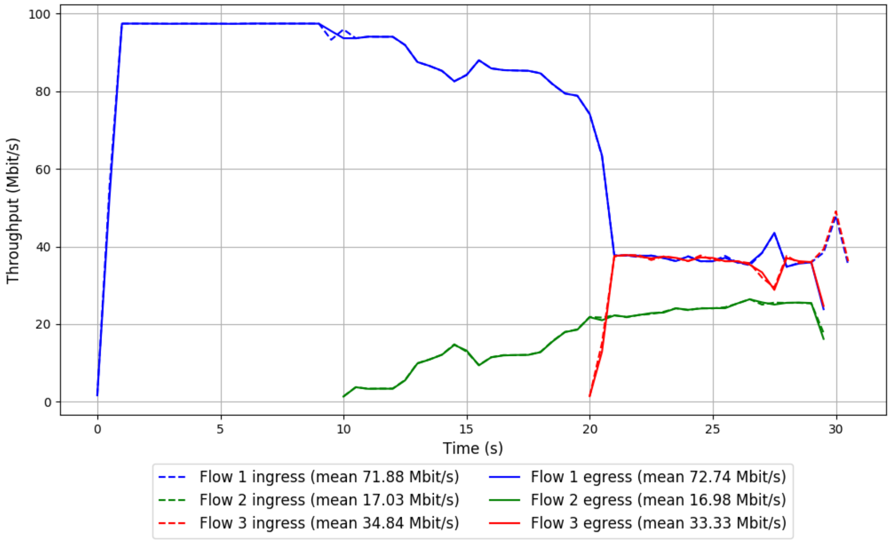


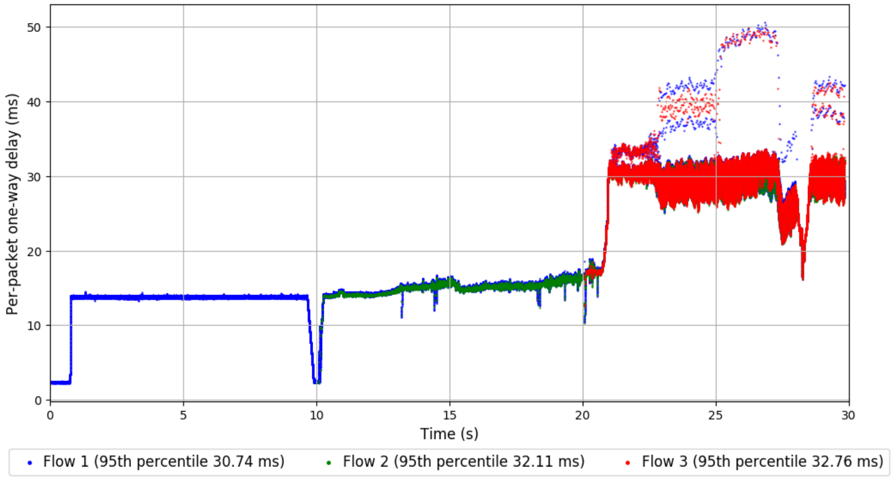
```
Run 2: Statistics of Vivace-loss

Start at: 2018-03-21 00:11:32
End at: 2018-03-21 00:12:02
Local clock offset: -12.989 ms
Remote clock offset: -14.491 ms

# Below is generated by plot.py at 2018-03-21 06:58:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.96 Mbit/s
95th percentile per-packet one-way delay: 31.588 ms
Loss rate: 3.49%
-- Flow 1:
Average throughput: 72.74 Mbit/s
95th percentile per-packet one-way delay: 30.744 ms
Loss rate: 2.25%
-- Flow 2:
Average throughput: 16.98 Mbit/s
95th percentile per-packet one-way delay: 32.107 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 33.33 Mbit/s
95th percentile per-packet one-way delay: 32.756 ms
Loss rate: 13.50%
```

Run 2: Report of Vivace-loss — Data Link





```
Run 3: Statistics of Vivace-loss

Start at: 2018-03-21 00:32:06
End at: 2018-03-21 00:32:36
Local clock offset: -12.83 ms
Remote clock offset: -14.511 ms
```

Run 3: Report of Vivace-loss — Data Link

Figure is missing

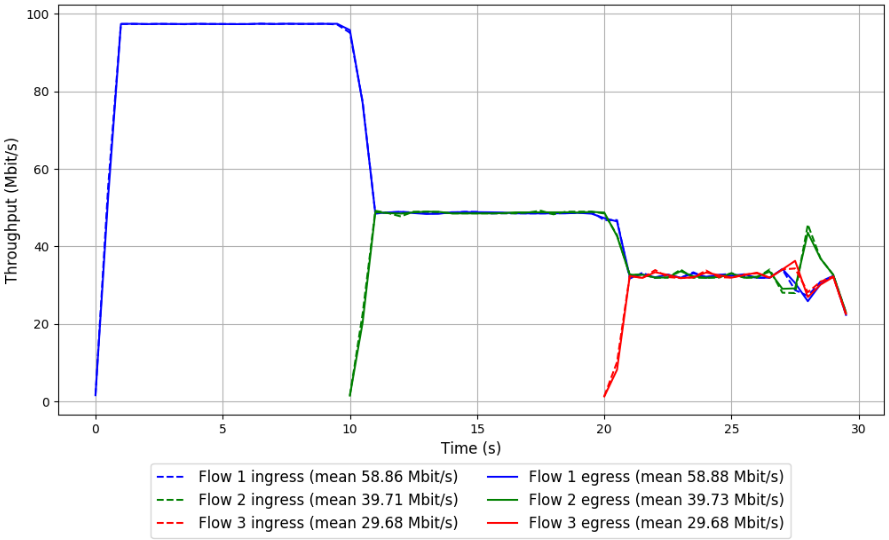
Figure is missing

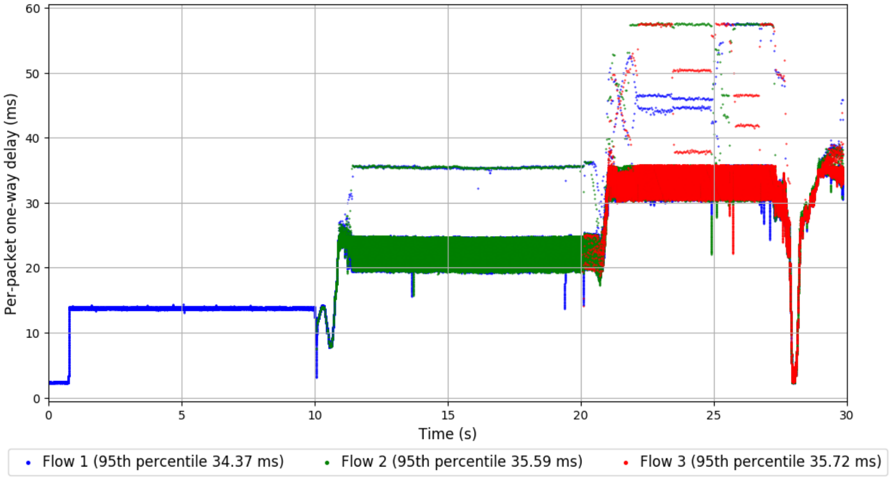
```
Run 4: Statistics of Vivace-loss

Start at: 2018-03-21 00:52:35
End at: 2018-03-21 00:53:05
Local clock offset: -12.083 ms
Remote clock offset: -14.679 ms

# Below is generated by plot.py at 2018-03-21 06:59:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.00 Mbit/s
95th percentile per-packet one-way delay: 35.536 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 58.88 Mbit/s
95th percentile per-packet one-way delay: 34.365 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 39.73 Mbit/s
95th percentile per-packet one-way delay: 35.595 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 29.68 Mbit/s
95th percentile per-packet one-way delay: 35.720 ms
Loss rate: 0.37%
```

Run 4: Report of Vivace-loss — Data Link





```
Run 5: Statistics of Vivace-loss

Start at: 2018-03-21 01:13:01
End at: 2018-03-21 01:13:31
Local clock offset: -11.886 ms
Remote clock offset: -14.656 ms
```

Run 5: Report of Vivace-loss — Data Link

Figure is missing

Figure is missing

```
Run 6: Statistics of Vivace-loss

Start at: 2018-03-21 01:33:26
End at: 2018-03-21 01:33:56
Local clock offset: -11.856 ms
Remote clock offset: -14.665 ms
```

Run 6: Report of Vivace-loss — Data Link

Figure is missing

Figure is missing

```
Run 7: Statistics of Vivace-loss

Start at: 2018-03-21 01:53:49
End at: 2018-03-21 01:54:19
Local clock offset: -4.234 ms
Remote clock offset: -4.912 ms
```

Run 7: Report of Vivace-loss — Data Link

Figure is missing

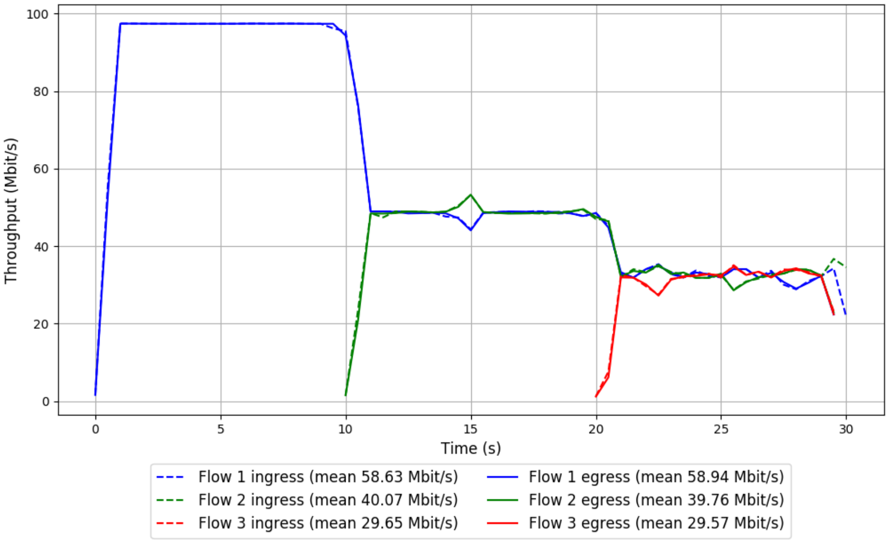
Figure is missing

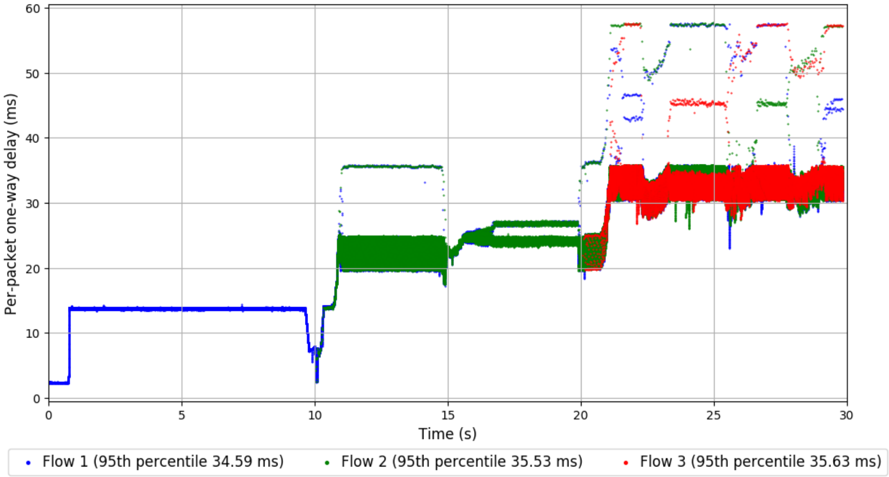
```
Run 8: Statistics of Vivace-loss

Start at: 2018-03-21 02:14:14
End at: 2018-03-21 02:14:44
Local clock offset: -1.457 ms
Remote clock offset: -4.339 ms

# Below is generated by plot.py at 2018-03-21 06:59:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.02 Mbit/s
95th percentile per-packet one-way delay: 35.430 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 58.94 Mbit/s
95th percentile per-packet one-way delay: 34.587 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 39.76 Mbit/s
95th percentile per-packet one-way delay: 35.533 ms
Loss rate: 3.09%
-- Flow 3:
Average throughput: 29.57 Mbit/s
95th percentile per-packet one-way delay: 35.632 ms
Loss rate: 0.51%
```

Run 8: Report of Vivace-loss — Data Link





```
Run 9: Statistics of Vivace-loss

Start at: 2018-03-21 02:34:39
End at: 2018-03-21 02:35:09
Local clock offset: -2.35 ms
Remote clock offset: -4.876 ms
```

Run 9: Report of Vivace-loss — Data Link

Figure is missing

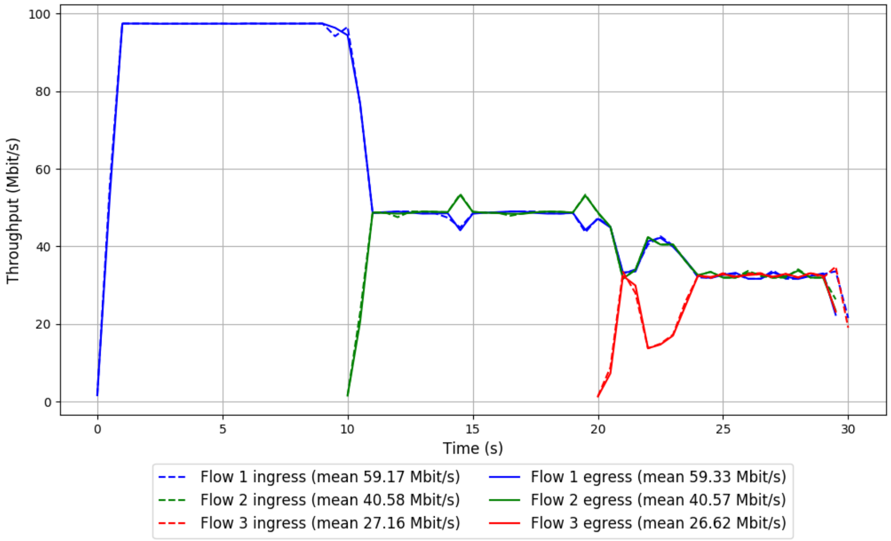
Figure is missing

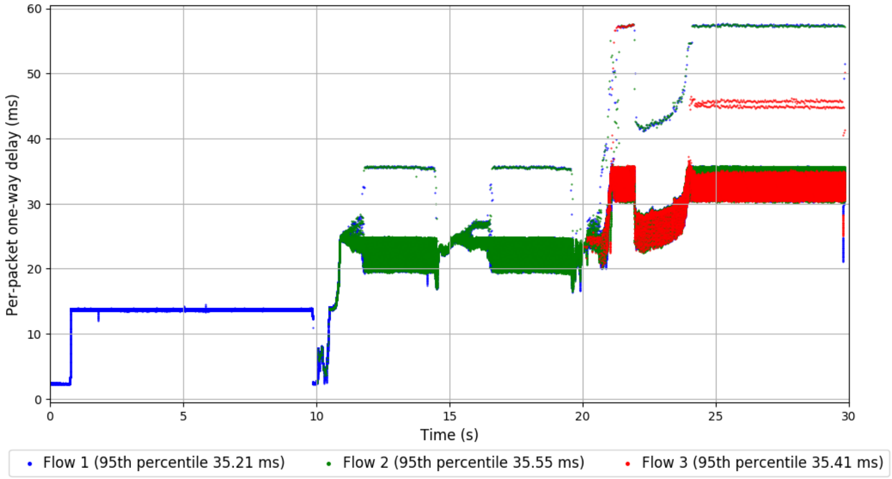
```
Run 10: Statistics of Vivace-loss

Start at: 2018-03-21 02:55:03
End at: 2018-03-21 02:55:33
Local clock offset: -2.779 ms
Remote clock offset: -6.276 ms

# Below is generated by plot.py at 2018-03-21 06:59:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.00 Mbit/s
95th percentile per-packet one-way delay: 35.473 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 59.33 Mbit/s
95th percentile per-packet one-way delay: 35.209 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 40.57 Mbit/s
95th percentile per-packet one-way delay: 35.553 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 26.62 Mbit/s
95th percentile per-packet one-way delay: 35.406 ms
Loss rate: 5.84%
```

Run 10: Report of Vivace-loss — Data Link



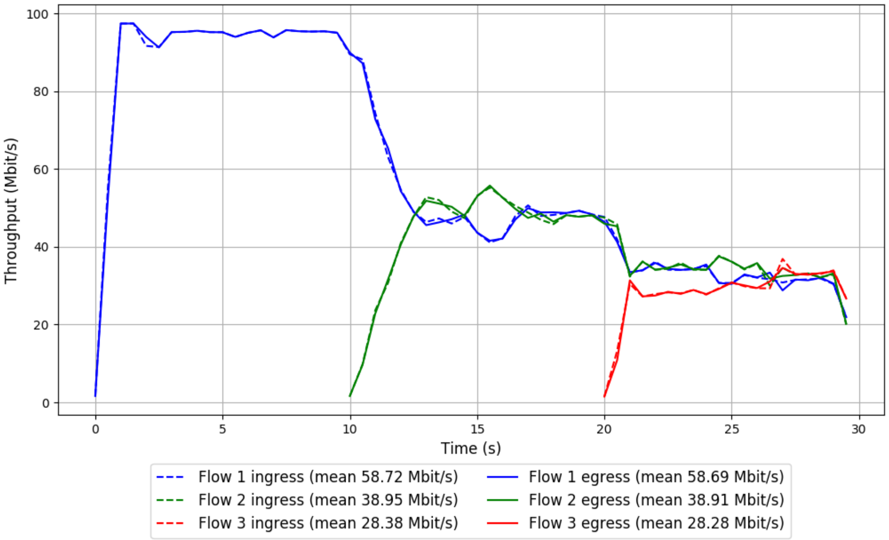


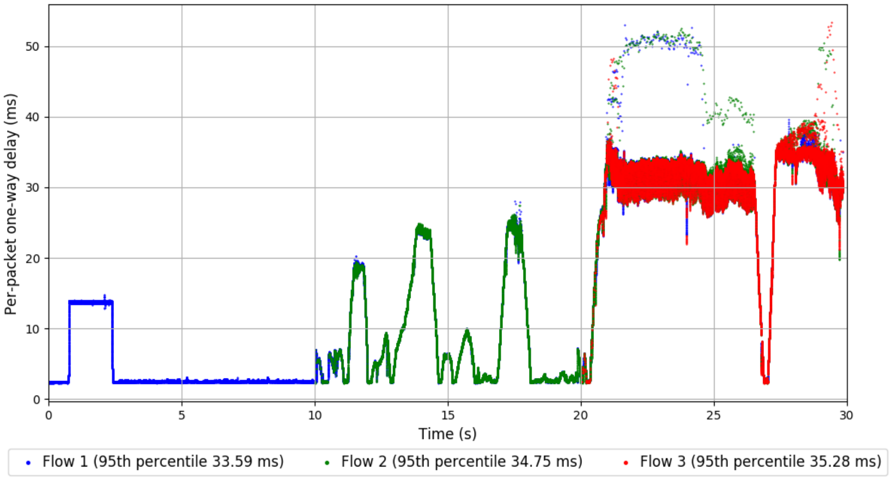
```
Run 1: Statistics of Vivace-LTE

Start at: 2018-03-20 23:48:42
End at: 2018-03-20 23:49:12
Local clock offset: -13.365 ms
Remote clock offset: -14.126 ms

# Below is generated by plot.py at 2018-03-21 06:59:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.86 Mbit/s
95th percentile per-packet one-way delay: 34.492 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 58.69 Mbit/s
95th percentile per-packet one-way delay: 33.586 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 38.91 Mbit/s
95th percentile per-packet one-way delay: 34.749 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 28.28 Mbit/s
95th percentile per-packet one-way delay: 35.279 ms
Loss rate: 0.46%
```

Run 1: Report of Vivace-LTE — Data Link



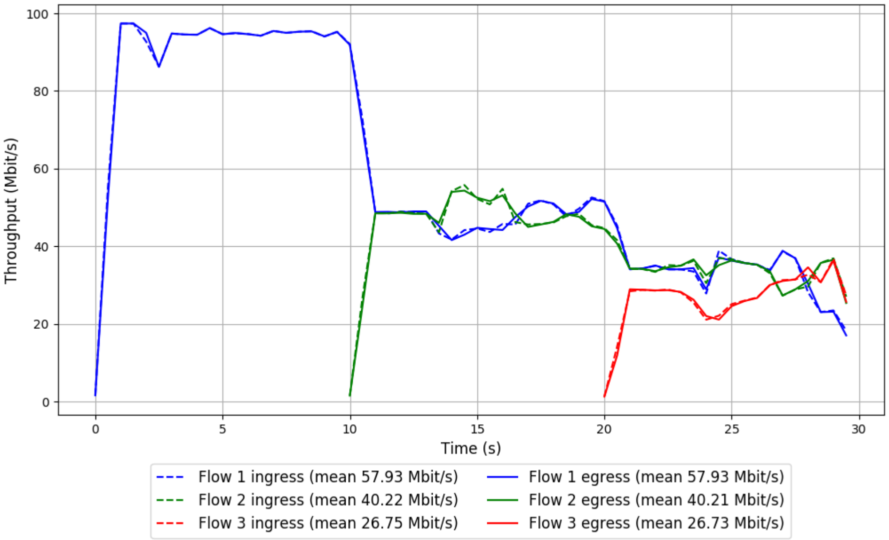


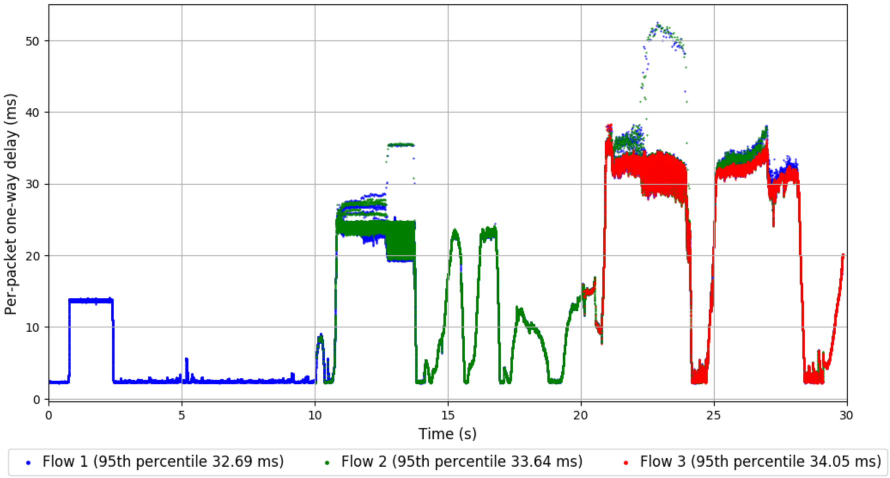
```
Run 2: Statistics of Vivace-LTE

Start at: 2018-03-21 00:09:13
End at: 2018-03-21 00:09:43
Local clock offset: -13.007 ms
Remote clock offset: -14.406 ms

# Below is generated by plot.py at 2018-03-21 07:00:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.41 Mbit/s
95th percentile per-packet one-way delay: 33.419 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 57.93 Mbit/s
95th percentile per-packet one-way delay: 32.691 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 40.21 Mbit/s
95th percentile per-packet one-way delay: 33.644 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 26.73 Mbit/s
95th percentile per-packet one-way delay: 34.051 ms
Loss rate: 0.44%
```

Run 2: Report of Vivace-LTE — Data Link



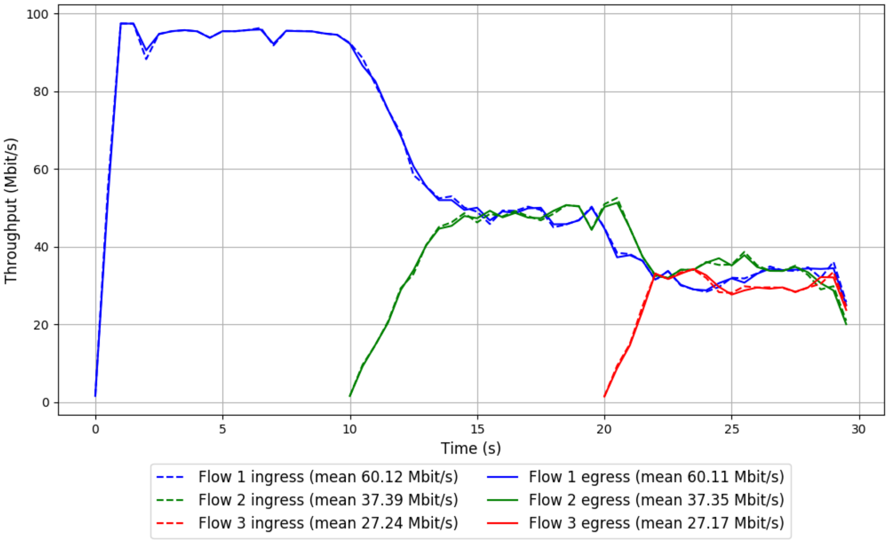


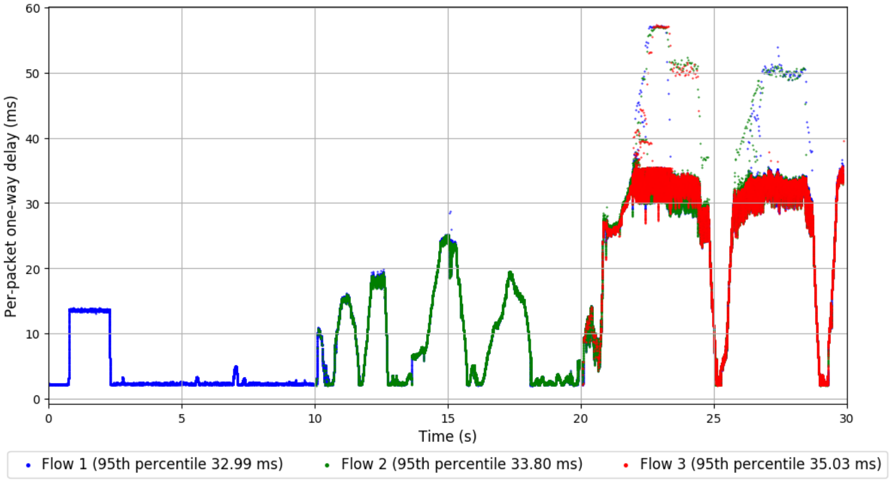
```
Run 3: Statistics of Vivace-LTE

Start at: 2018-03-21 00:29:48
End at: 2018-03-21 00:30:18
Local clock offset: -13.125 ms
Remote clock offset: -14.491 ms

# Below is generated by plot.py at 2018-03-21 07:00:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.85 Mbit/s
95th percentile per-packet one-way delay: 33.640 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 60.11 Mbit/s
95th percentile per-packet one-way delay: 32.993 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 37.35 Mbit/s
95th percentile per-packet one-way delay: 33.801 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 27.17 Mbit/s
95th percentile per-packet one-way delay: 35.029 ms
Loss rate: 0.45%
```

Run 3: Report of Vivace-LTE — Data Link



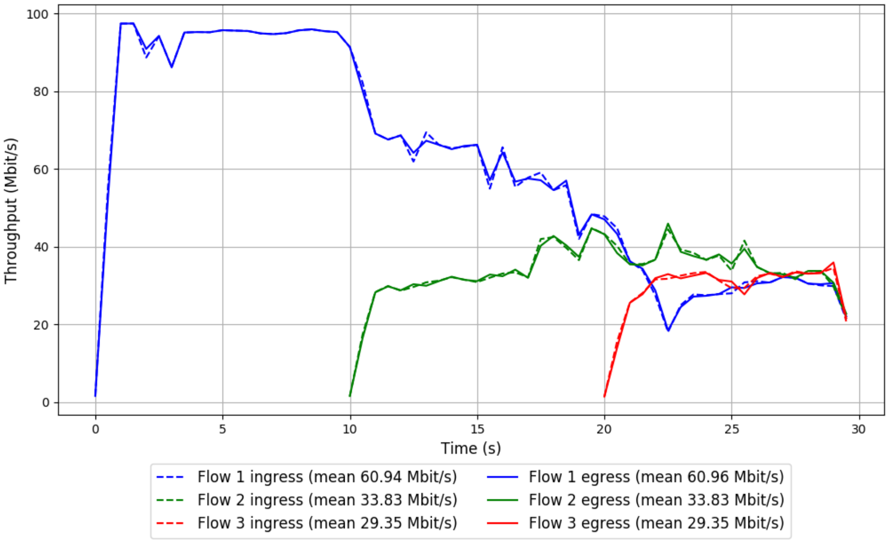


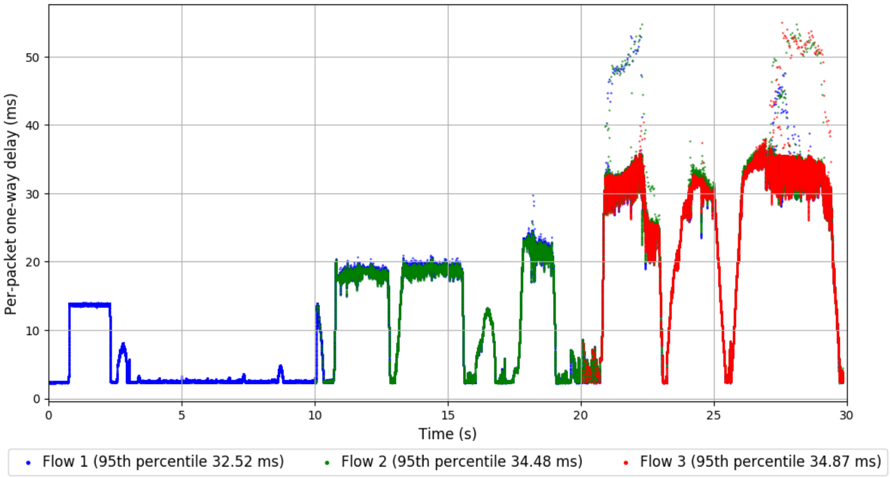
```
Run 4: Statistics of Vivace-LTE

Start at: 2018-03-21 00:50:17
End at: 2018-03-21 00:50:47
Local clock offset: -12.089 ms
Remote clock offset: -14.676 ms

# Below is generated by plot.py at 2018-03-21 07:00:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.10 Mbit/s
95th percentile per-packet one-way delay: 34.062 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 60.96 Mbit/s
95th percentile per-packet one-way delay: 32.518 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 33.83 Mbit/s
95th percentile per-packet one-way delay: 34.485 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 29.35 Mbit/s
95th percentile per-packet one-way delay: 34.865 ms
Loss rate: 0.06%
```

Run 4: Report of Vivace-LTE — Data Link



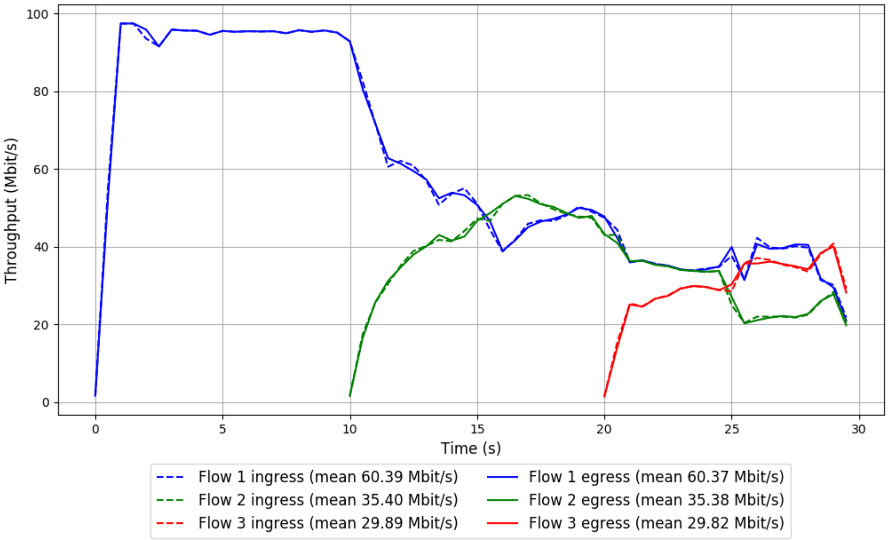


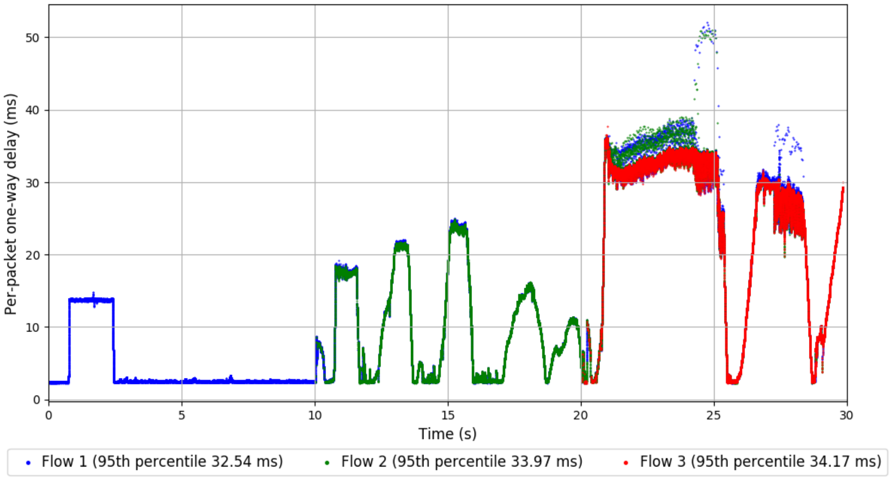
```
Run 5: Statistics of Vivace-LTE

Start at: 2018-03-21 01:10:44
End at: 2018-03-21 01:11:14
Local clock offset: -11.923 ms
Remote clock offset: -14.703 ms

# Below is generated by plot.py at 2018-03-21 07:00:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.68 Mbit/s
95th percentile per-packet one-way delay: 33.600 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 60.37 Mbit/s
95th percentile per-packet one-way delay: 32.536 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 35.38 Mbit/s
95th percentile per-packet one-way delay: 33.965 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 29.82 Mbit/s
95th percentile per-packet one-way delay: 34.167 ms
Loss rate: 0.44%
```

Run 5: Report of Vivace-LTE — Data Link



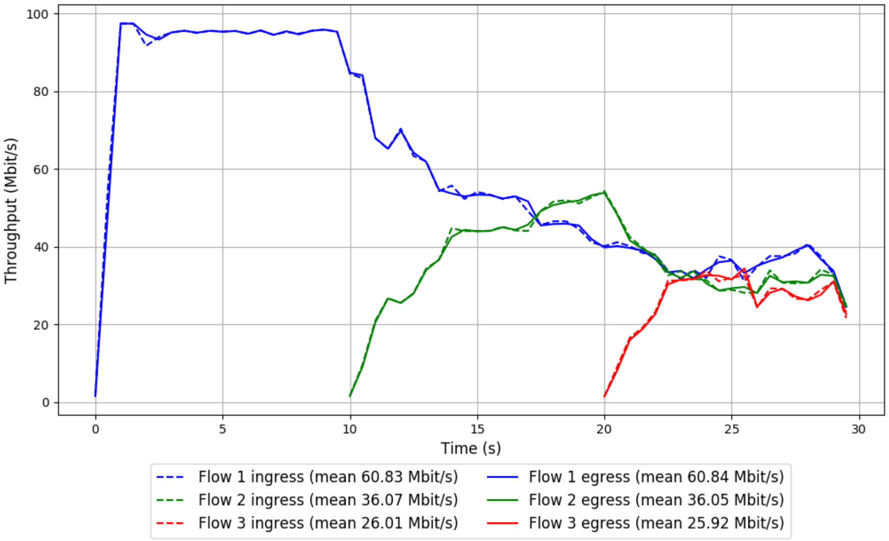


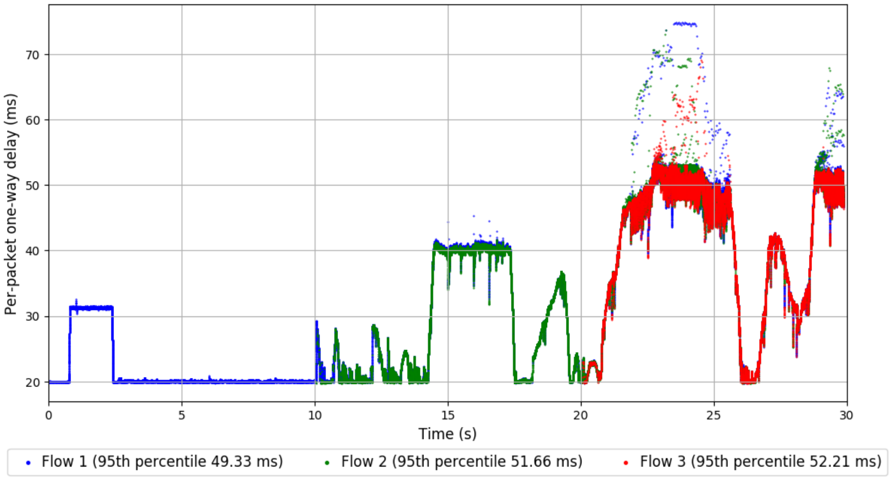
```
Run 6: Statistics of Vivace-LTE

Start at: 2018-03-21 01:31:09
End at: 2018-03-21 01:31:39
Local clock offset: -11.784 ms
Remote clock offset: -32.251 ms

# Below is generated by plot.py at 2018-03-21 07:00:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.32 Mbit/s
95th percentile per-packet one-way delay: 51.091 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 60.84 Mbit/s
95th percentile per-packet one-way delay: 49.329 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 36.05 Mbit/s
95th percentile per-packet one-way delay: 51.658 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 25.92 Mbit/s
95th percentile per-packet one-way delay: 52.208 ms
Loss rate: 0.40%
```

Run 6: Report of Vivace-LTE — Data Link



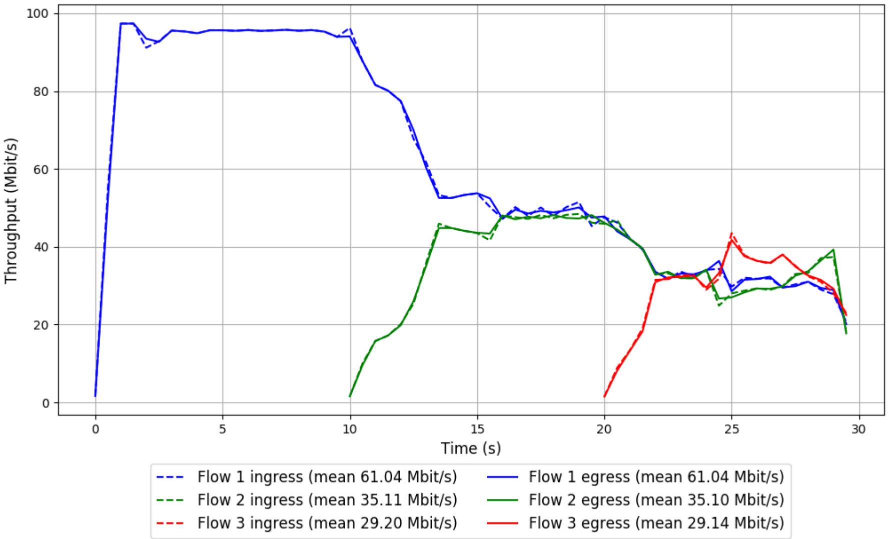


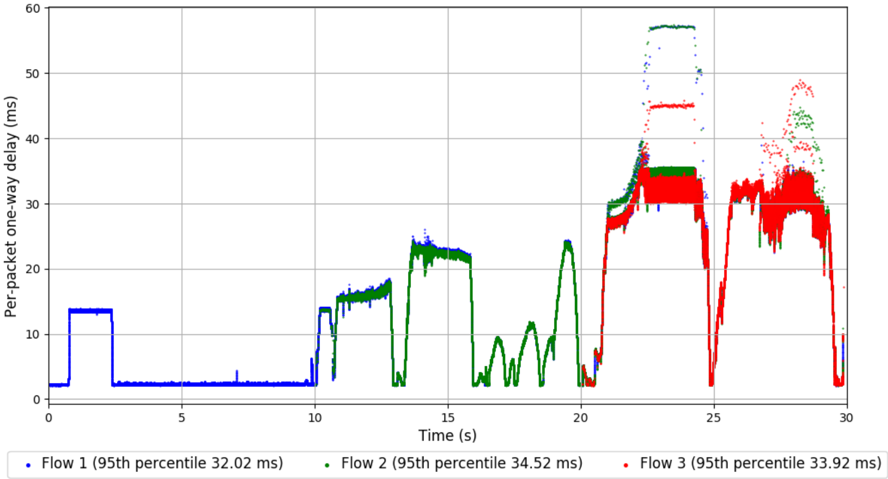
```
Run 7: Statistics of Vivace-LTE

Start at: 2018-03-21 01:51:32
End at: 2018-03-21 01:52:02
Local clock offset: -4.879 ms
Remote clock offset: -5.49 ms

# Below is generated by plot.py at 2018-03-21 07:00:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.92 Mbit/s
95th percentile per-packet one-way delay: 33.291 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 61.04 Mbit/s
95th percentile per-packet one-way delay: 32.022 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 35.10 Mbit/s
95th percentile per-packet one-way delay: 34.523 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 29.14 Mbit/s
95th percentile per-packet one-way delay: 33.920 ms
Loss rate: 0.17%
```

Run 7: Report of Vivace-LTE — Data Link



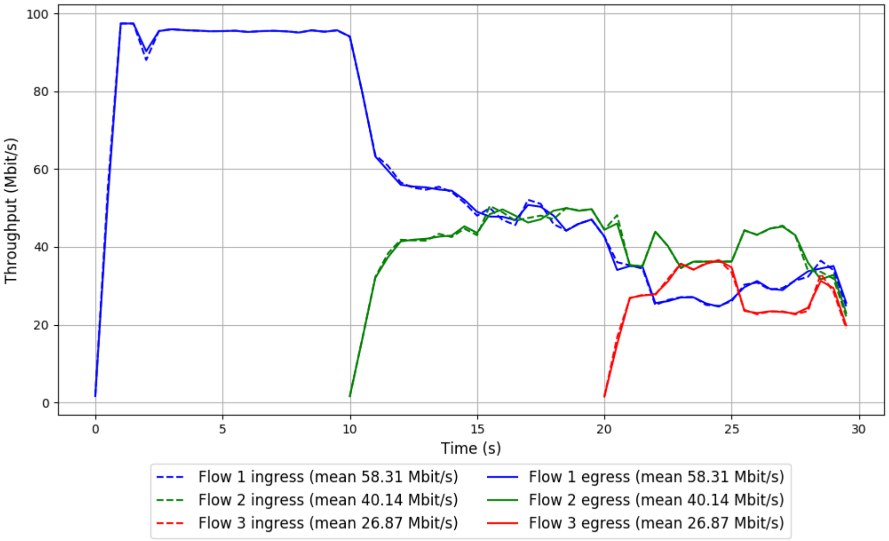


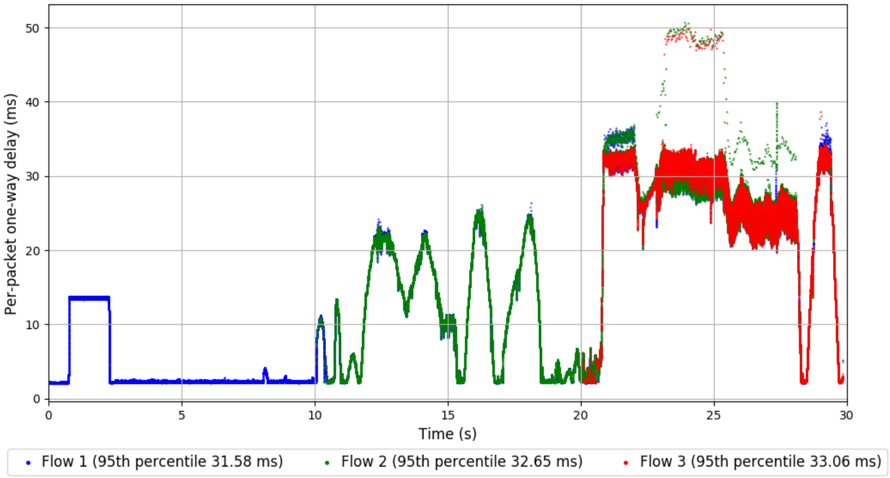
```
Run 8: Statistics of Vivace-LTE

Start at: 2018-03-21 02:11:56
End at: 2018-03-21 02:12:26
Local clock offset: -1.041 ms
Remote clock offset: -3.821 ms

# Below is generated by plot.py at 2018-03-21 07:00:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.82 Mbit/s
95th percentile per-packet one-way delay: 32.479 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 58.31 Mbit/s
95th percentile per-packet one-way delay: 31.579 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 40.14 Mbit/s
95th percentile per-packet one-way delay: 32.648 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 26.87 Mbit/s
95th percentile per-packet one-way delay: 33.058 ms
Loss rate: 0.06%
```

Run 8: Report of Vivace-LTE — Data Link



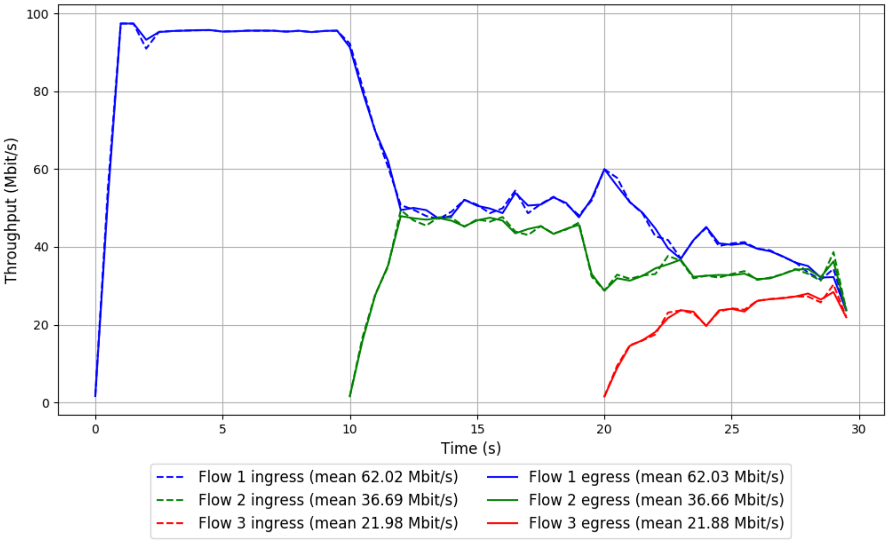


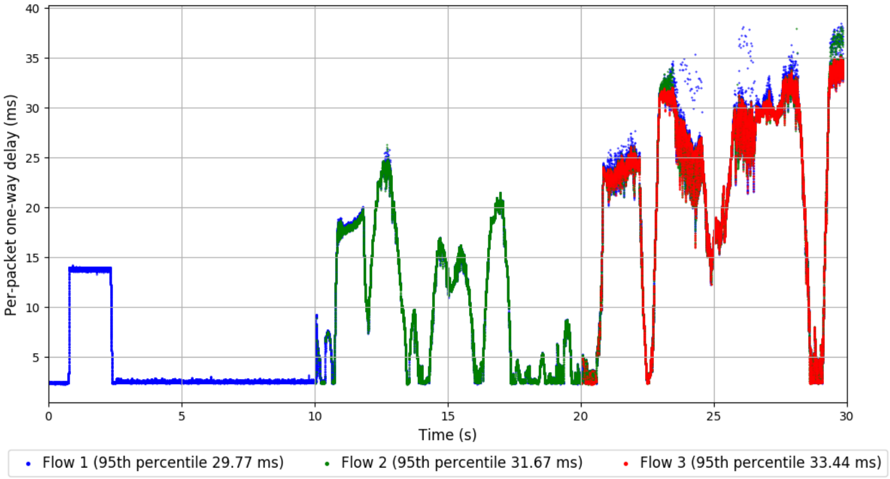
```
Run 9: Statistics of Vivace-LTE

Start at: 2018-03-21 02:32:22
End at: 2018-03-21 02:32:52
Local clock offset: -2.428 ms
Remote clock offset: -5.041 ms

# Below is generated by plot.py at 2018-03-21 07:00:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.58 Mbit/s
95th percentile per-packet one-way delay: 31.174 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 62.03 Mbit/s
95th percentile per-packet one-way delay: 29.772 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 36.66 Mbit/s
95th percentile per-packet one-way delay: 31.666 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 21.88 Mbit/s
95th percentile per-packet one-way delay: 33.442 ms
Loss rate: 0.51%
```

Run 9: Report of Vivace-LTE — Data Link



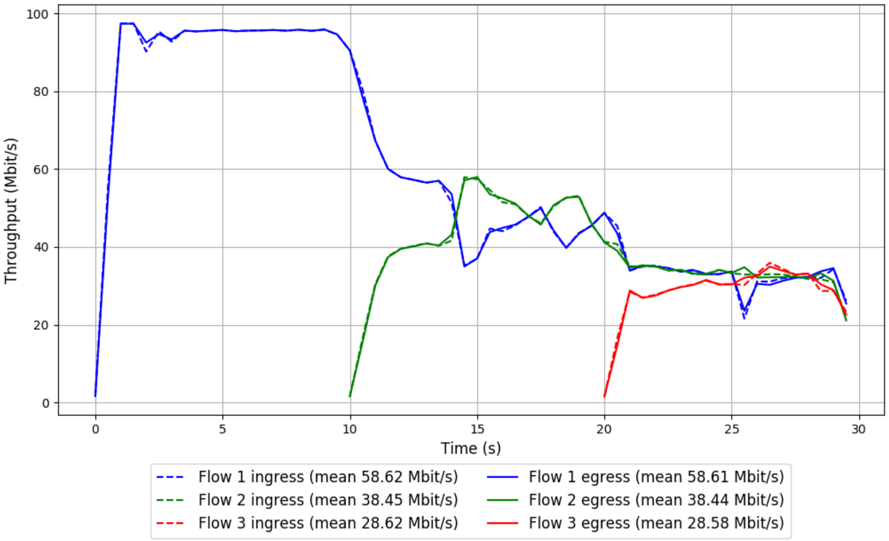


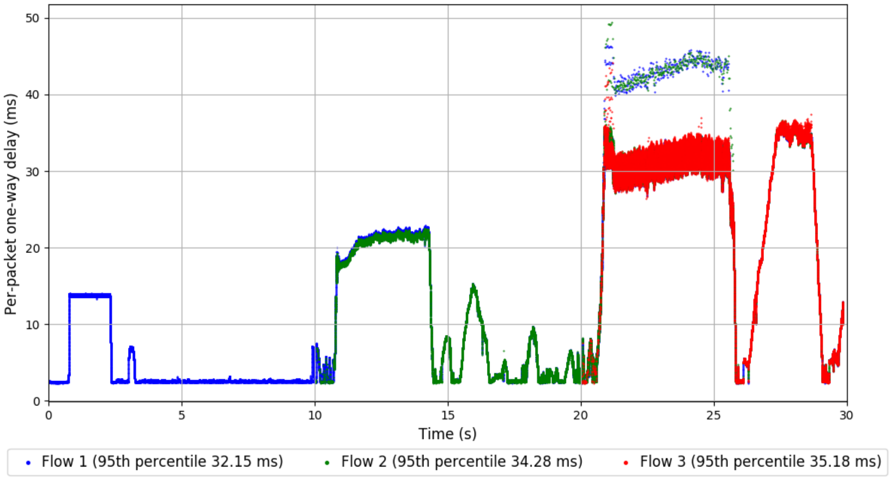
```
Run 10: Statistics of Vivace-LTE

Start at: 2018-03-21 02:52:45
End at: 2018-03-21 02:53:15
Local clock offset: -2.623 ms
Remote clock offset: -6.195 ms

# Below is generated by plot.py at 2018-03-21 07:00:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.54 Mbit/s
95th percentile per-packet one-way delay: 33.944 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 58.61 Mbit/s
95th percentile per-packet one-way delay: 32.150 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 38.44 Mbit/s
95th percentile per-packet one-way delay: 34.280 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 28.58 Mbit/s
95th percentile per-packet one-way delay: 35.181 ms
Loss rate: 0.19%
```

Run 10: Report of Vivace-LTE — Data Link


Throughput (Mbit/s)
0
20
40
60
80
100
Time (s)
0
5
10
15
20
25
30
Flow 1 ingress (mean 58.62 Mbit/s)
Flow 2 ingress (mean 38.45 Mbit/s)
Flow 3 ingress (mean 28.62 Mbit/s)
Flow 1 egress (mean 58.61 Mbit/s)
Flow 2 egress (mean 38.44 Mbit/s)
Flow 3 egress (mean 28.58 Mbit/s)


Per-packet one-way delay (ms)
0
10
20
30
40
50
Time (s)
0
5
10
15
20
25
30
Flow 1 (95th percentile 32.15 ms)
Flow 2 (95th percentile 34.28 ms)
Flow 3 (95th percentile 35.18 ms)