Pantheon Report

Generated at 2018-03-21 08:11:34 (UTC).

Data path: AWS Korea Ethernet (*local*) →China Ethernet (*remote*).

Repeated the test of 17 congestion control schemes 10 times.

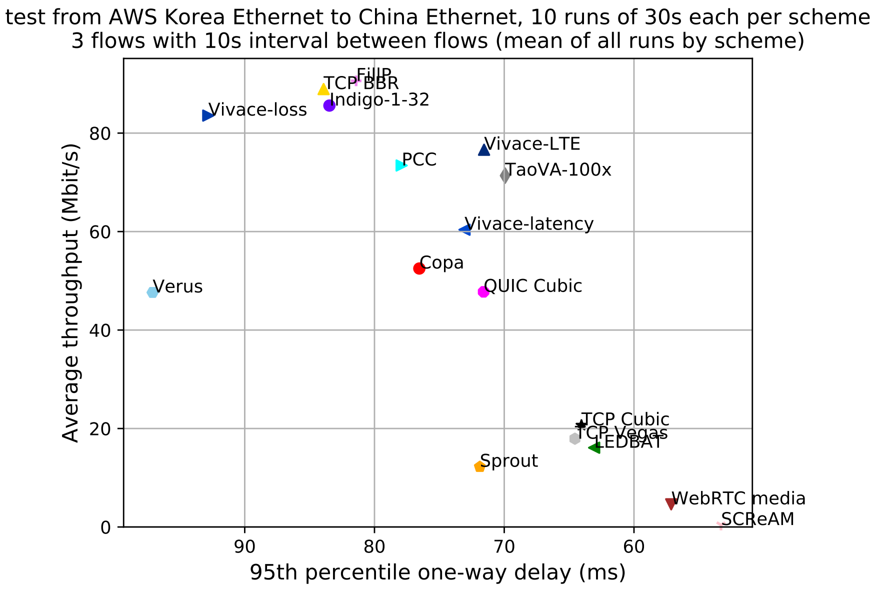
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

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

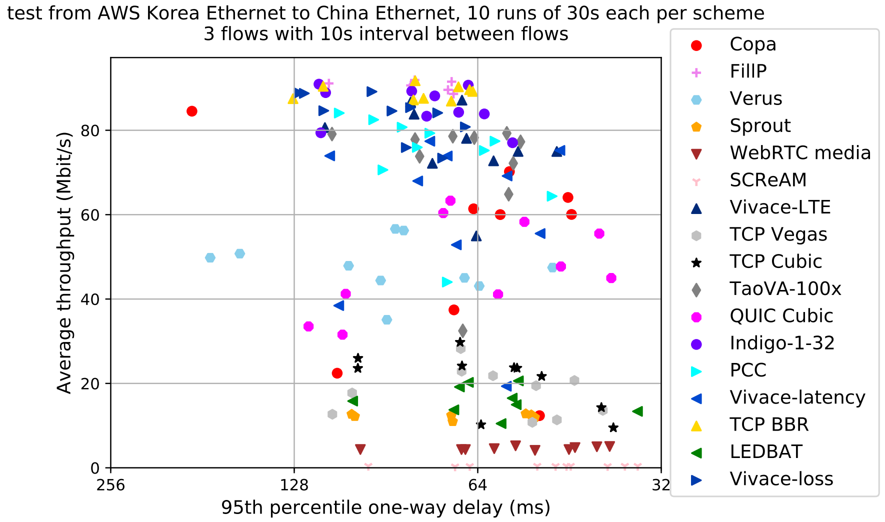
Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

NTP offsets were measured against `ntp.nict.jp` 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 AWS Korea Ethernet to China 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
90
80
70
60
FillP
TCP BBR
Indigo-1-32
Vivace-loss
Vivace-LTE
PCC
TaoVA-100x
Vivace-latency
Copa
QUIC Cubic
Verus
TCP Cubic
TCP Vegas
LEDBAT
Sprout
WebRTC media
SCReAM



test from AWS Korea Ethernet to China 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
256
128
64
32
Copa
FillP
Verus
Sprout
WebRTC media
SCReAM
Vivace-LTE
TCP Vegas
TCP Cubic
TaoVA-100x
QUIC Cubic
Indigo-1-32
PCC
Vivace-latency
TCP BBR
LEDBAT
Vivace-loss

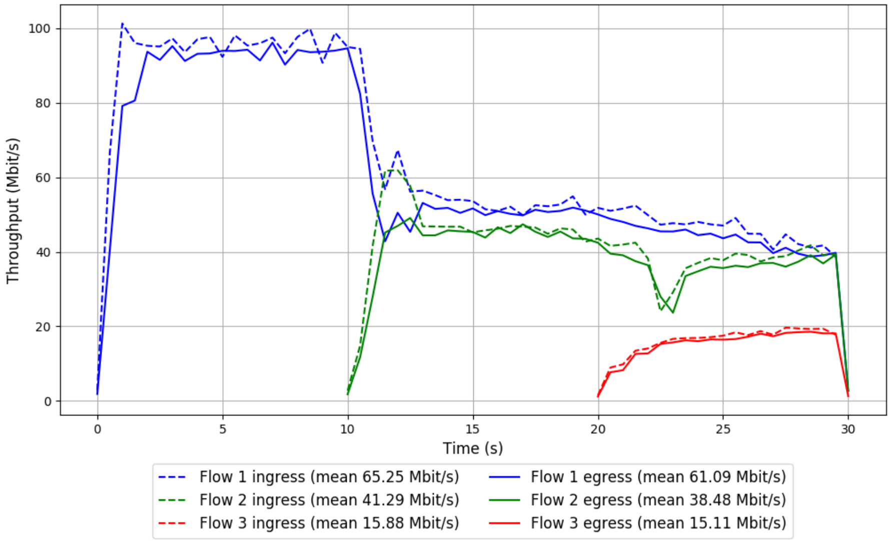
scheme	# runs	mean avg tput (Mbit/s) flow 1	flow 2	flow 3	mean 95th-%ile delay (ms) flow 1	flow 2	flow 3	mean loss rate (%) flow 1	flow 2	flow 3
TCP BBR	9	57.61	35.42	23.30	82.48	85.02	86.06	5.99	6.69	8.24
TCP Cubic	10	10.20	9.05	13.35	63.83	63.98	64.21	0.57	0.76	0.80
LEDBAT	9	8.15	8.29	7.38	63.09	62.85	63.35	0.50	0.47	0.45
PCC	10	57.17	19.83	9.30	77.12	78.48	80.99	1.76	1.65	2.07
QUIC Cubic	10	26.34	22.07	20.83	71.28	70.84	71.71	0.81	0.56	0.61
SCReAM	10	0.19	0.20	0.21	53.20	53.24	53.27	0.15	0.19	0.12
WebRTC media	10	2.45	1.52	0.66	57.22	57.10	56.94	0.08	0.10	0.08
Sprout	7	6.34	6.28	5.19	71.54	72.39	71.70	3.80	4.12	4.67
TaoVA-100x	10	60.93	9.42	13.08	69.90	69.68	71.29	5.08	10.13	12.79
TCP Vegas	10	9.37	8.23	9.29	64.16	65.04	64.89	0.68	0.68	1.27
Verus	10	29.59	24.82	6.47	95.76	85.55	79.34	81.94	79.66	62.45
Copa	9	33.45	22.66	11.91	75.34	77.01	63.72	9.59	10.67	0.45
FillP	7	37.40	51.01	58.37	80.47	81.54	81.72	29.25	30.68	42.13
Indigo-1-32	10	49.81	39.38	31.12	82.78	83.57	84.38	24.15	35.46	45.72
Vivace-latency	10	48.82	13.29	8.25	72.71	73.89	73.75	0.50	0.81	0.72
Vivace-loss	10	74.14	11.28	5.84	92.69	94.18	92.74	1.87	2.74	4.29
Vivace-LTE	10	63.32	13.97	12.18	71.39	71.80	71.81	1.10	1.19	1.55

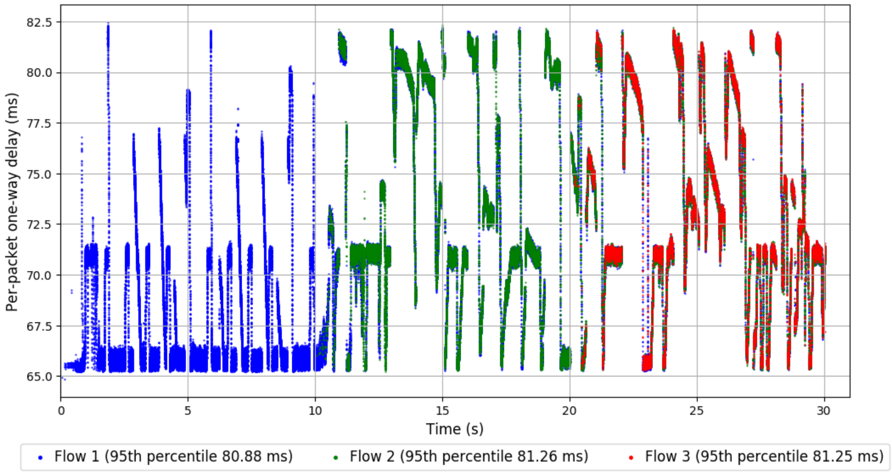
```
Run 1: Statistics of TCP BBR

Start at: 2018-03-21 03:52:49
End at: 2018-03-21 03:53:19
Local clock offset: 11.947 ms
Remote clock offset: -0.576 ms

# Below is generated by plot.py at 2018-03-21 07:52:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.75 Mbit/s
95th percentile per-packet one-way delay: 81.058 ms
Loss rate: 6.39%
-- Flow 1:
Average throughput: 61.09 Mbit/s
95th percentile per-packet one-way delay: 80.876 ms
Loss rate: 6.35%
-- Flow 2:
Average throughput: 38.48 Mbit/s
95th percentile per-packet one-way delay: 81.263 ms
Loss rate: 6.78%
-- Flow 3:
Average throughput: 15.11 Mbit/s
95th percentile per-packet one-way delay: 81.254 ms
Loss rate: 4.97%
```

Run 1: Report of TCP BBR — Data Link



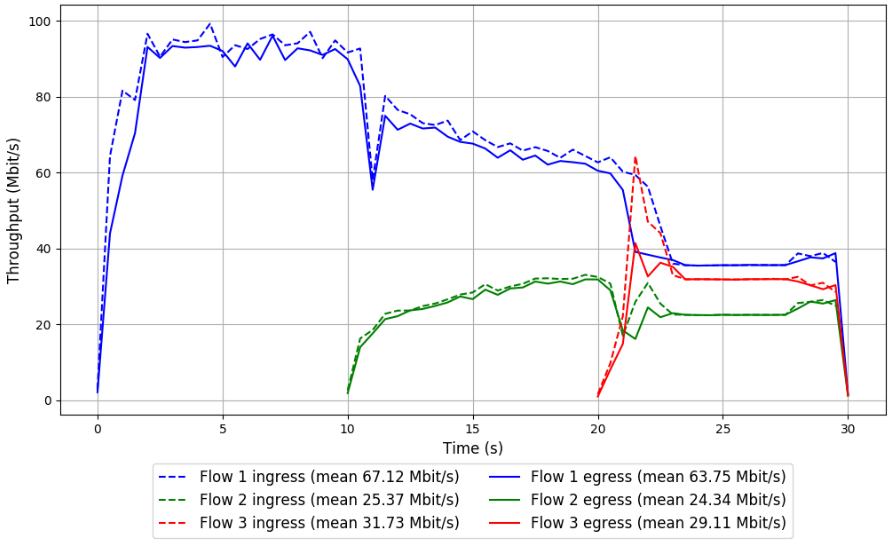


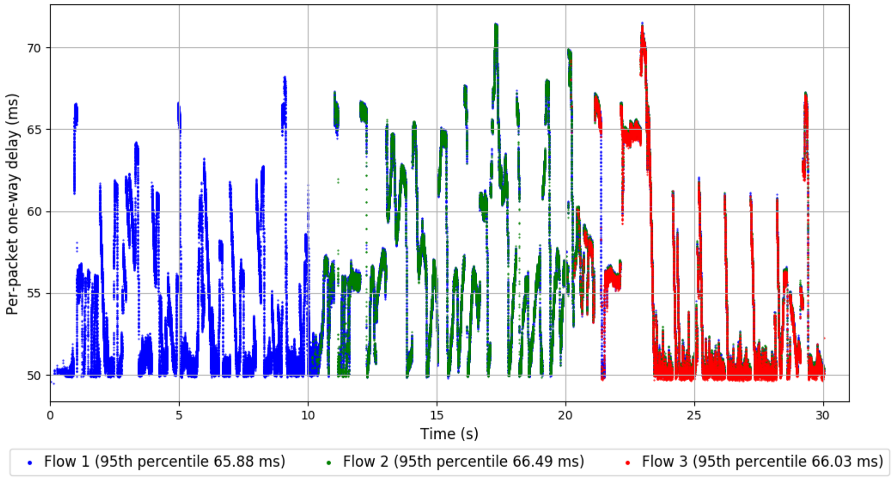
```
Run 2: Statistics of TCP BBR

Start at: 2018-03-21 04:16:07
End at: 2018-03-21 04:16:37
Local clock offset: -3.824 ms
Remote clock offset: -19.162 ms

# Below is generated by plot.py at 2018-03-21 07:52:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.61 Mbit/s
95th percentile per-packet one-way delay: 66.000 ms
Loss rate: 5.21%
-- Flow 1:
Average throughput: 63.75 Mbit/s
95th percentile per-packet one-way delay: 65.883 ms
Loss rate: 5.02%
-- Flow 2:
Average throughput: 24.34 Mbit/s
95th percentile per-packet one-way delay: 66.486 ms
Loss rate: 4.05%
-- Flow 3:
Average throughput: 29.11 Mbit/s
95th percentile per-packet one-way delay: 66.029 ms
Loss rate: 8.32%
```

Run 2: Report of TCP BBR — Data Link



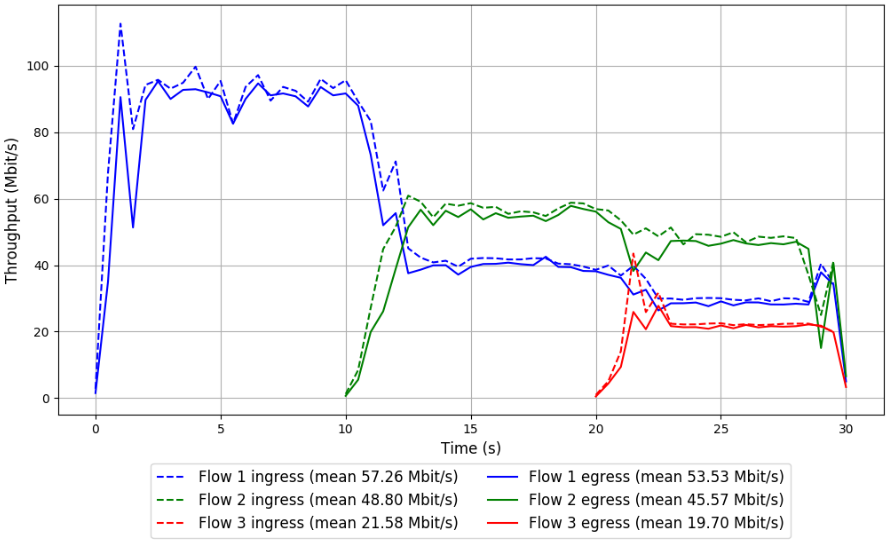


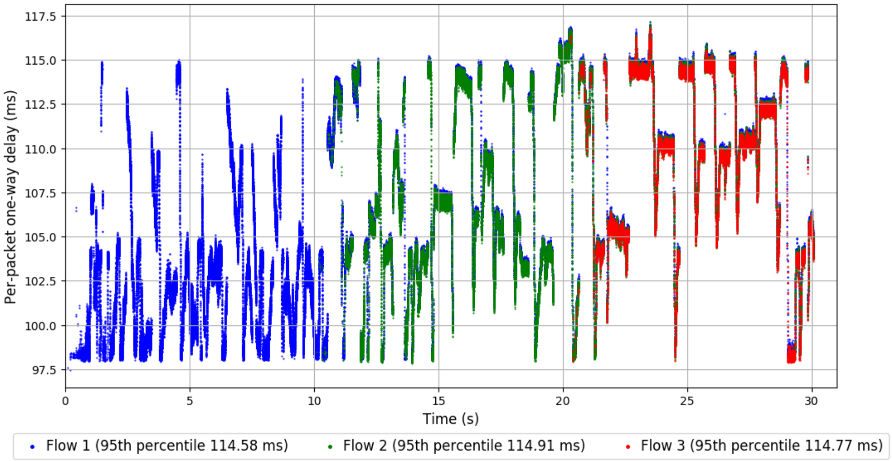
```
Run 3: Statistics of TCP BBR

Start at: 2018-03-21 04:39:04
End at: 2018-03-21 04:39:34
Local clock offset: -4.885 ms
Remote clock offset: 25.829 ms

# Below is generated by plot.py at 2018-03-21 07:52:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.42 Mbit/s
95th percentile per-packet one-way delay: 114.726 ms
Loss rate: 6.70%
-- Flow 1:
Average throughput: 53.53 Mbit/s
95th percentile per-packet one-way delay: 114.581 ms
Loss rate: 6.49%
-- Flow 2:
Average throughput: 45.57 Mbit/s
95th percentile per-packet one-way delay: 114.907 ms
Loss rate: 6.59%
-- Flow 3:
Average throughput: 19.70 Mbit/s
95th percentile per-packet one-way delay: 114.769 ms
Loss rate: 8.82%
```

Run 3: Report of TCP BBR — Data Link



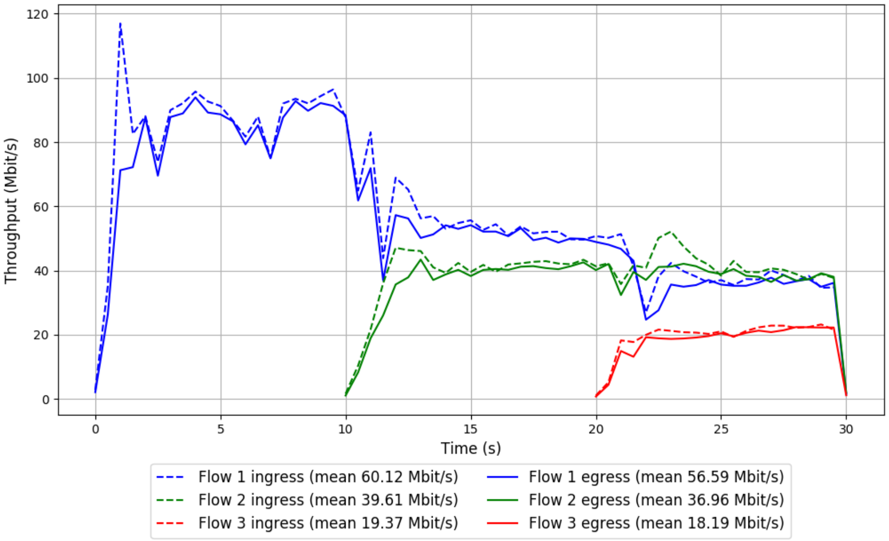


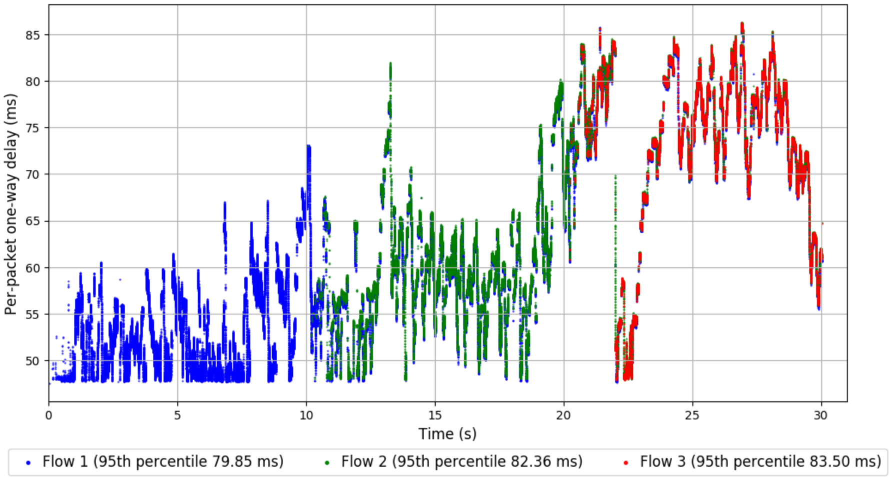
```
Run 4: Statistics of TCP BBR

Start at: 2018-03-21 05:01:50
End at: 2018-03-21 05:02:20
Local clock offset: -3.842 ms
Remote clock offset: -18.693 ms

# Below is generated by plot.py at 2018-03-21 07:52:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.20 Mbit/s
95th percentile per-packet one-way delay: 81.599 ms
Loss rate: 6.11%
-- Flow 1:
Average throughput: 56.59 Mbit/s
95th percentile per-packet one-way delay: 79.848 ms
Loss rate: 5.82%
-- Flow 2:
Average throughput: 36.96 Mbit/s
95th percentile per-packet one-way delay: 82.357 ms
Loss rate: 6.74%
-- Flow 3:
Average throughput: 18.19 Mbit/s
95th percentile per-packet one-way delay: 83.495 ms
Loss rate: 6.15%
```

Run 4: Report of TCP BBR — Data Link



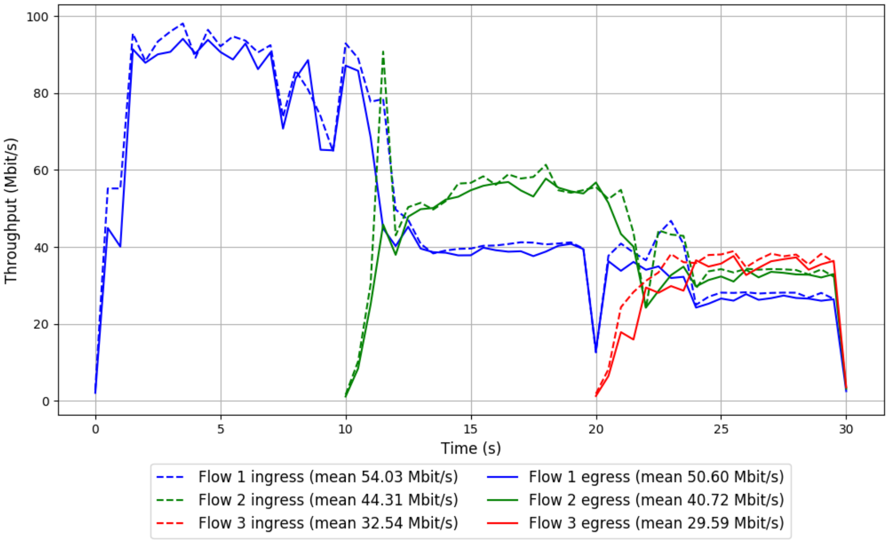


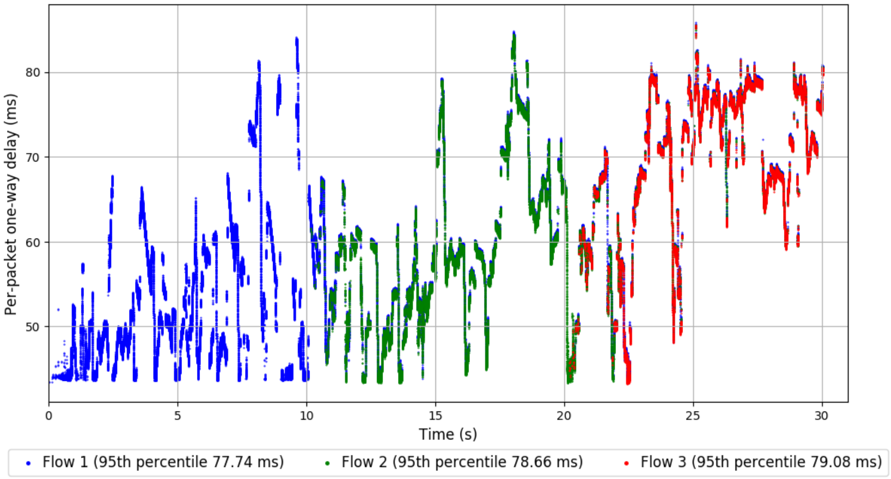
```
Run 5: Statistics of TCP BBR

Start at: 2018-03-21 05:25:31
End at: 2018-03-21 05:26:01
Local clock offset: -9.291 ms
Remote clock offset: -21.358 ms

# Below is generated by plot.py at 2018-03-21 07:53:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.57 Mbit/s
95th percentile per-packet one-way delay: 78.539 ms
Loss rate: 7.07%
-- Flow 1:
Average throughput: 50.60 Mbit/s
95th percentile per-packet one-way delay: 77.741 ms
Loss rate: 6.23%
-- Flow 2:
Average throughput: 40.72 Mbit/s
95th percentile per-packet one-way delay: 78.660 ms
Loss rate: 7.93%
-- Flow 3:
Average throughput: 29.59 Mbit/s
95th percentile per-packet one-way delay: 79.082 ms
Loss rate: 8.92%
```

Run 5: Report of TCP BBR — Data Link



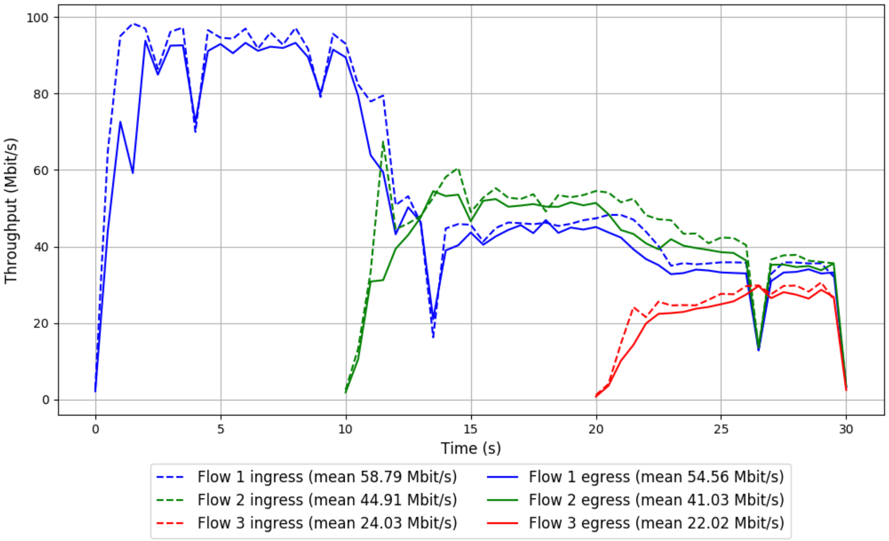


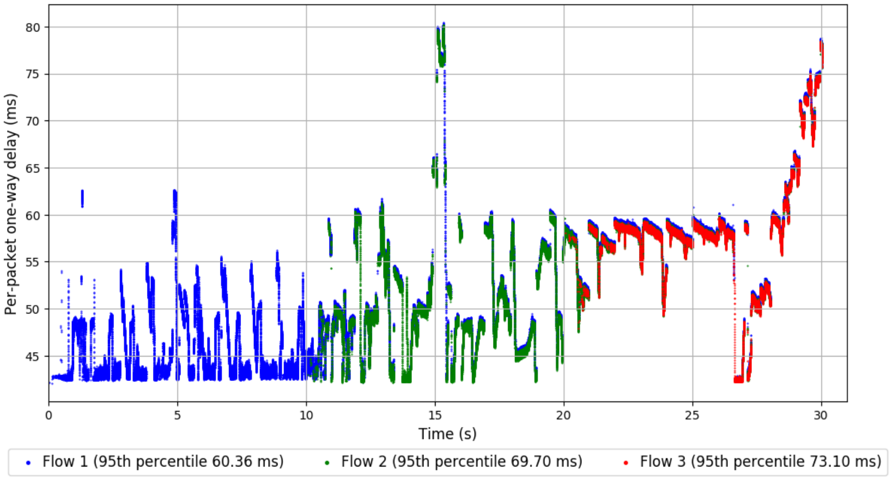
```
Run 6: Statistics of TCP BBR

Start at: 2018-03-21 05:48:19
End at: 2018-03-21 05:48:49
Local clock offset: -5.317 ms
Remote clock offset: -24.828 ms

# Below is generated by plot.py at 2018-03-21 07:53:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.21 Mbit/s
95th percentile per-packet one-way delay: 65.223 ms
Loss rate: 7.62%
-- Flow 1:
Average throughput: 54.56 Mbit/s
95th percentile per-packet one-way delay: 60.358 ms
Loss rate: 7.09%
-- Flow 2:
Average throughput: 41.03 Mbit/s
95th percentile per-packet one-way delay: 69.703 ms
Loss rate: 8.50%
-- Flow 3:
Average throughput: 22.02 Mbit/s
95th percentile per-packet one-way delay: 73.099 ms
Loss rate: 8.19%
```

Run 6: Report of TCP BBR — Data Link





Run 7: Statistics of TCP BBR

/home/ubuntu/pantheon_data/2018-03-21T03-34-AWS-Korea-to-China-10-runs-3-flows/bbr_stats_ru

Run 7: Report of TCP BBR — Data Link

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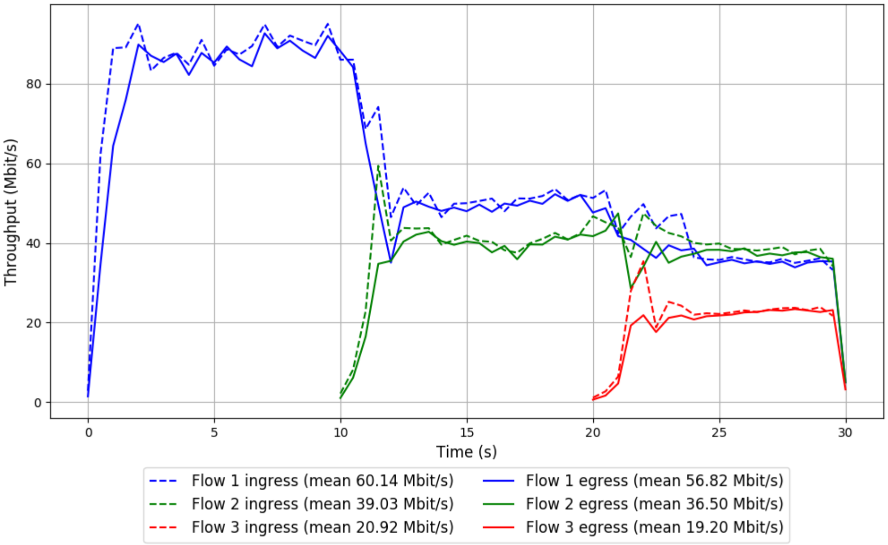
Figure is missing

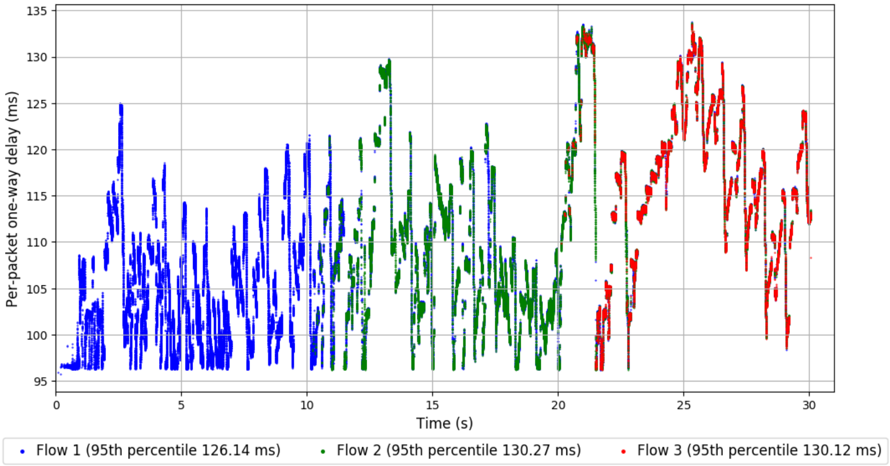
```
Run 8: Statistics of TCP BBR

Start at: 2018-03-21 06:36:12
End at: 2018-03-21 06:36:42
Local clock offset: 0.735 ms
Remote clock offset: 36.702 ms

# Below is generated by plot.py at 2018-03-21 07:53:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.50 Mbit/s
95th percentile per-packet one-way delay: 128.588 ms
Loss rate: 5.94%
-- Flow 1:
Average throughput: 56.82 Mbit/s
95th percentile per-packet one-way delay: 126.142 ms
Loss rate: 5.46%
-- Flow 2:
Average throughput: 36.50 Mbit/s
95th percentile per-packet one-way delay: 130.271 ms
Loss rate: 6.45%
-- Flow 3:
Average throughput: 19.20 Mbit/s
95th percentile per-packet one-way delay: 130.118 ms
Loss rate: 8.22%
```

Run 8: Report of TCP BBR — Data Link



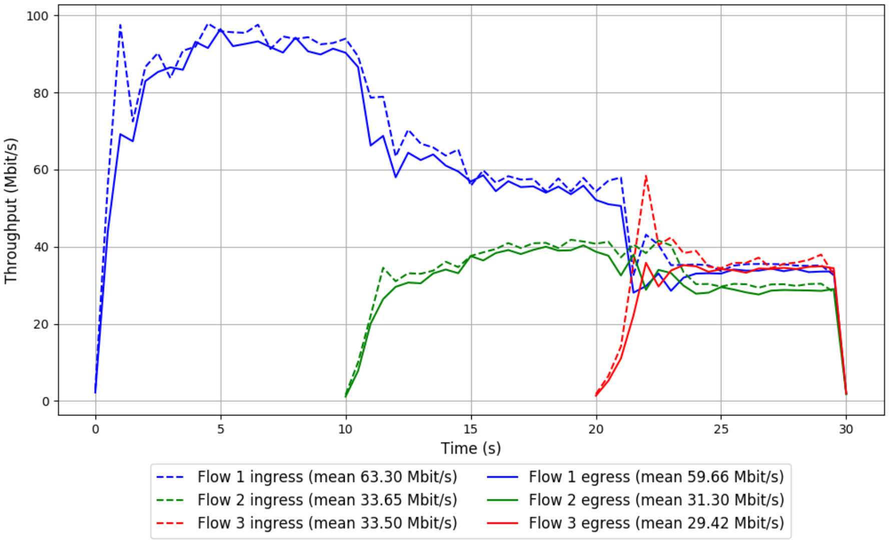


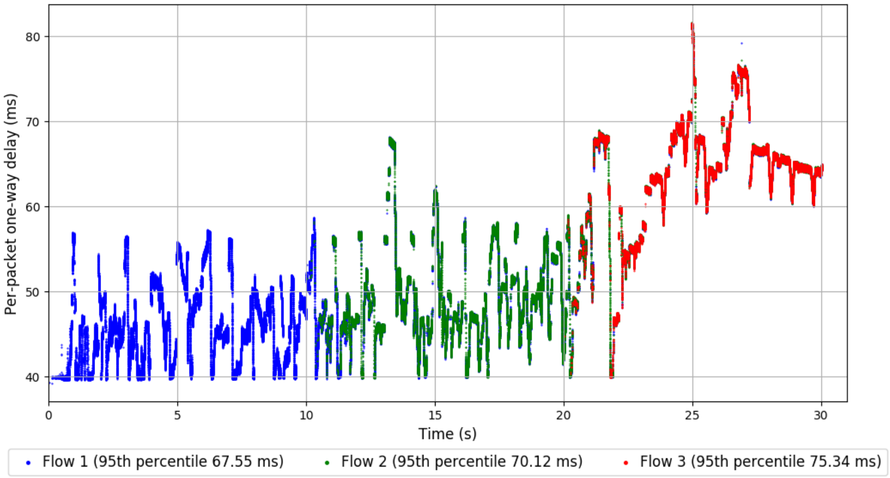
```
Run 9: Statistics of TCP BBR

Start at: 2018-03-21 06:58:59
End at: 2018-03-21 06:59:29
Local clock offset: 1.75 ms
Remote clock offset: -19.933 ms

# Below is generated by plot.py at 2018-03-21 07:53:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.30 Mbit/s
95th percentile per-packet one-way delay: 68.835 ms
Loss rate: 6.70%
-- Flow 1:
Average throughput: 59.66 Mbit/s
95th percentile per-packet one-way delay: 67.545 ms
Loss rate: 5.68%
-- Flow 2:
Average throughput: 31.30 Mbit/s
95th percentile per-packet one-way delay: 70.119 ms
Loss rate: 6.94%
-- Flow 3:
Average throughput: 29.42 Mbit/s
95th percentile per-packet one-way delay: 75.341 ms
Loss rate: 11.99%
```

Run 9: Report of TCP BBR — Data Link



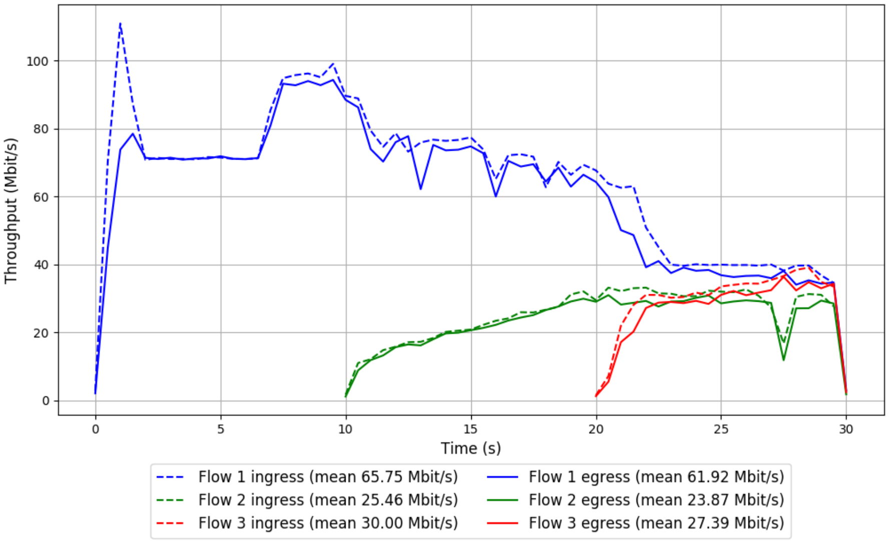


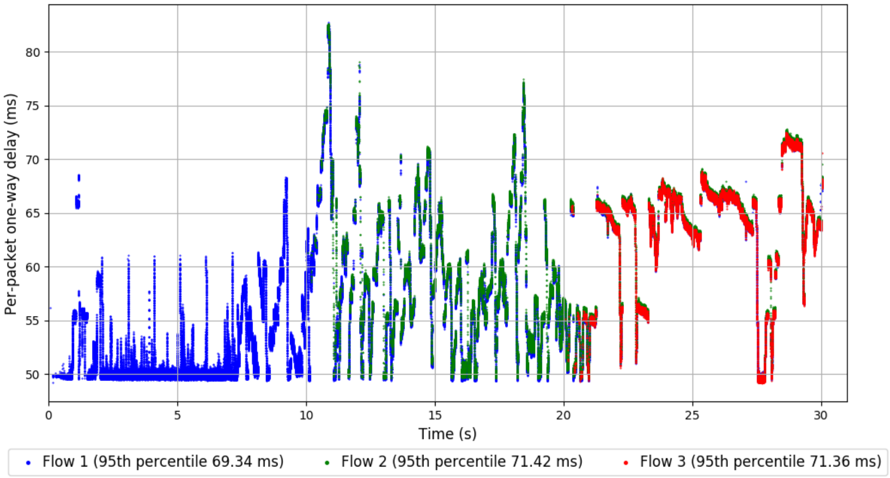
```
Run 10: Statistics of TCP BBR

Start at: 2018-03-21 07:22:26
End at: 2018-03-21 07:22:56
Local clock offset: 2.129 ms
Remote clock offset: -17.314 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.91 Mbit/s
95th percentile per-packet one-way delay: 70.723 ms
Loss rate: 6.17%
-- Flow 1:
Average throughput: 61.92 Mbit/s
95th percentile per-packet one-way delay: 69.341 ms
Loss rate: 5.79%
-- Flow 2:
Average throughput: 23.87 Mbit/s
95th percentile per-packet one-way delay: 71.417 ms
Loss rate: 6.20%
-- Flow 3:
Average throughput: 27.39 Mbit/s
95th percentile per-packet one-way delay: 71.365 ms
Loss rate: 8.61%
```

Run 10: Report of TCP BBR — Data Link



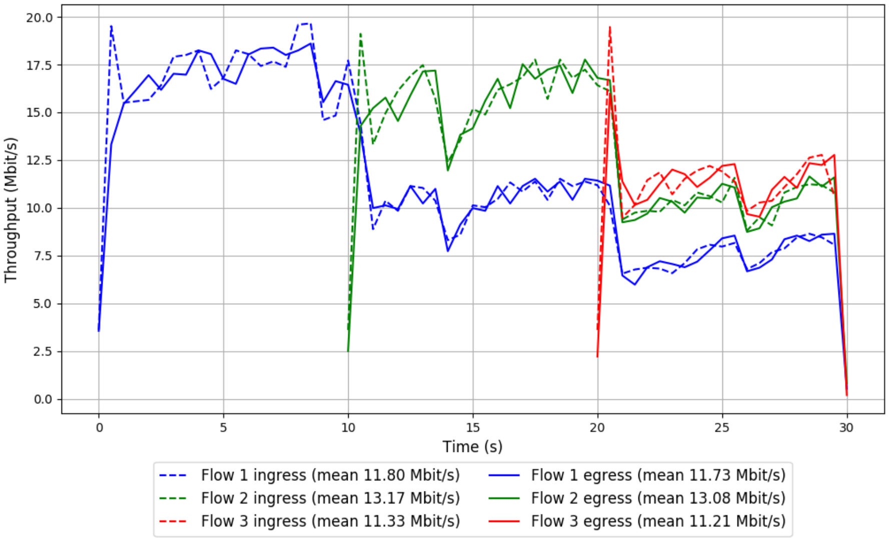


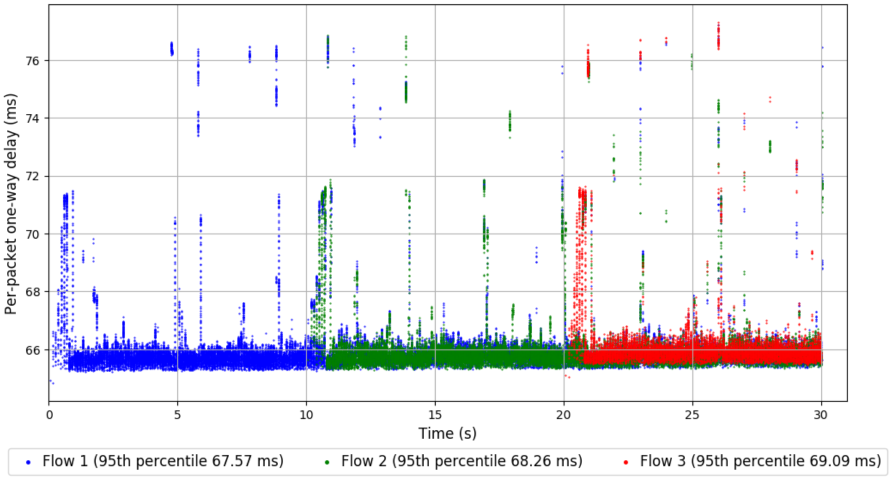
```
Run 1: Statistics of TCP Cubic

Start at: 2018-03-21 03:37:44
End at: 2018-03-21 03:38:14
Local clock offset: 9.734 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.16 Mbit/s
95th percentile per-packet one-way delay: 67.922 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 11.73 Mbit/s
95th percentile per-packet one-way delay: 67.571 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 13.08 Mbit/s
95th percentile per-packet one-way delay: 68.263 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 11.21 Mbit/s
95th percentile per-packet one-way delay: 69.094 ms
Loss rate: 1.05%
```

Run 1: Report of TCP Cubic — Data Link



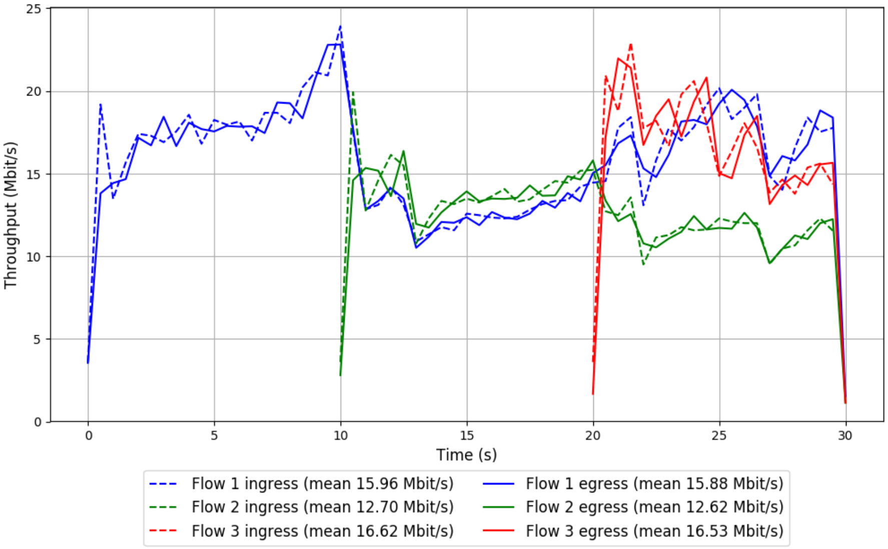


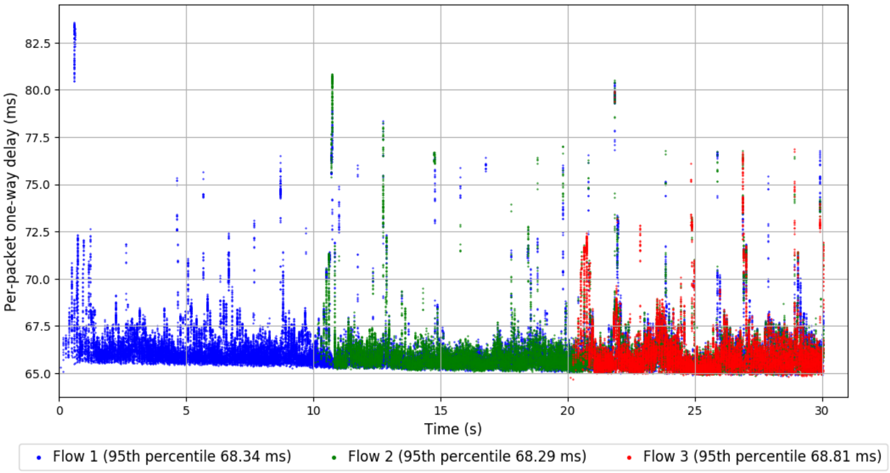
```
Run 2: Statistics of TCP Cubic

Start at: 2018-03-21 04:00:22
End at: 2018-03-21 04:00:52
Local clock offset: 7.53 ms
Remote clock offset: -0.576 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 29.76 Mbit/s
95th percentile per-packet one-way delay: 68.411 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 15.88 Mbit/s
95th percentile per-packet one-way delay: 68.344 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 12.62 Mbit/s
95th percentile per-packet one-way delay: 68.291 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 16.53 Mbit/s
95th percentile per-packet one-way delay: 68.811 ms
Loss rate: 0.54%
```

Run 2: Report of TCP Cubic — Data Link



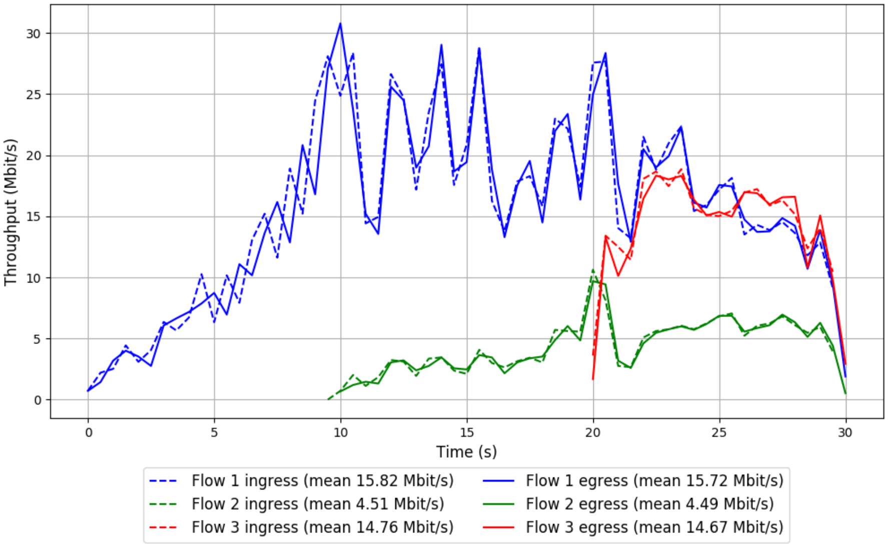


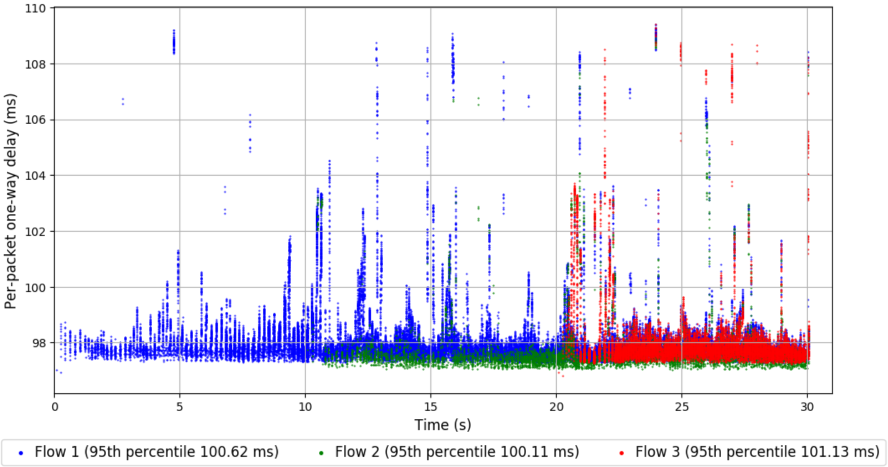
```
Run 3: Statistics of TCP Cubic

Start at: 2018-03-21 04:23:47
End at: 2018-03-21 04:24:17
Local clock offset: -6.866 ms
Remote clock offset: 26.682 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.58 Mbit/s
95th percentile per-packet one-way delay: 100.653 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 15.72 Mbit/s
95th percentile per-packet one-way delay: 100.621 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 4.49 Mbit/s
95th percentile per-packet one-way delay: 100.110 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 14.67 Mbit/s
95th percentile per-packet one-way delay: 101.128 ms
Loss rate: 0.58%
```

Run 3: Report of TCP Cubic — Data Link



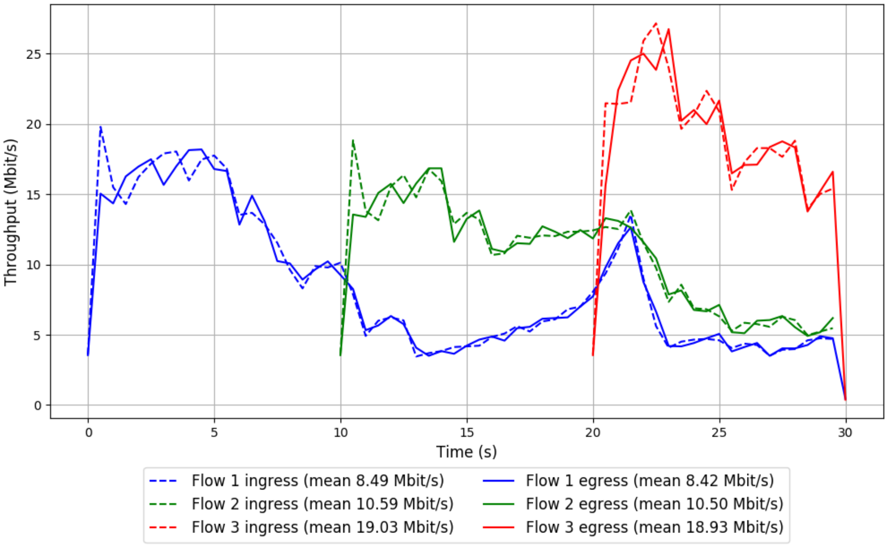


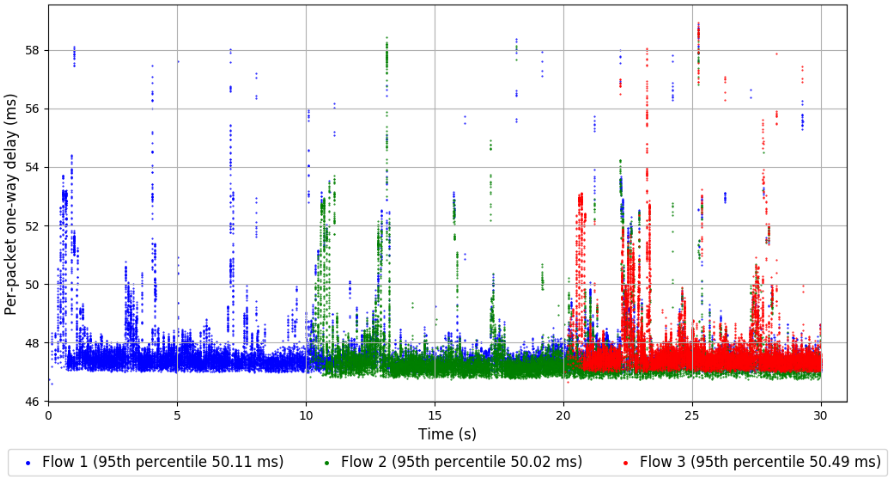
```
Run 4: Statistics of TCP Cubic

Start at: 2018-03-21 04:46:46
End at: 2018-03-21 04:47:16
Local clock offset: -3.16 ms
Remote clock offset: -21.966 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.68 Mbit/s
95th percentile per-packet one-way delay: 50.271 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 8.42 Mbit/s
95th percentile per-packet one-way delay: 50.110 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 10.50 Mbit/s
95th percentile per-packet one-way delay: 50.023 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 18.93 Mbit/s
95th percentile per-packet one-way delay: 50.492 ms
Loss rate: 0.52%
```

Run 4: Report of TCP Cubic — Data Link



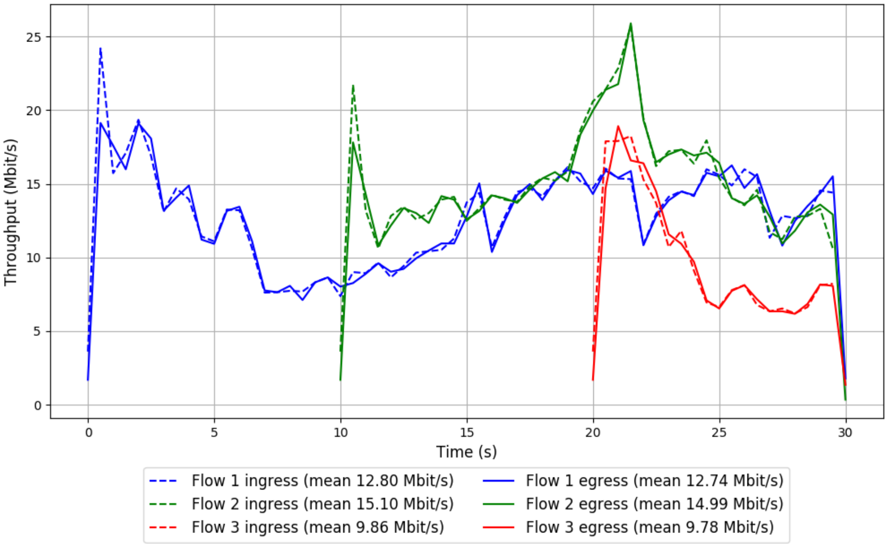


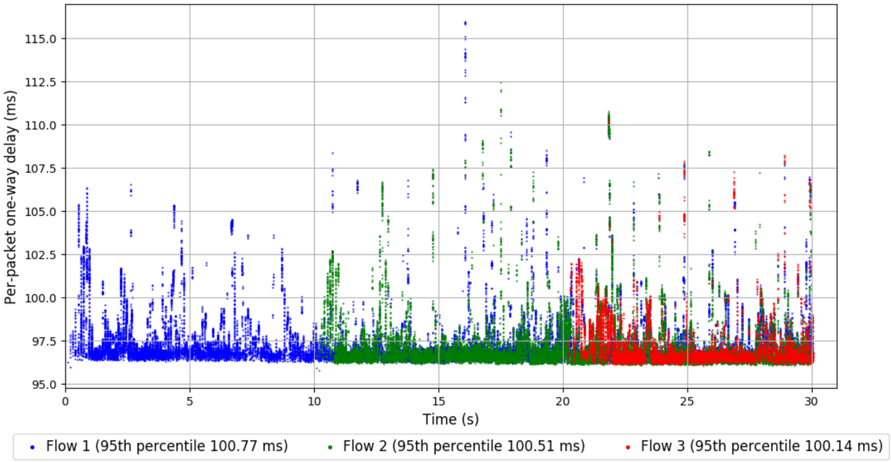
```
Run 5: Statistics of TCP Cubic

Start at: 2018-03-21 05:10:24
End at: 2018-03-21 05:10:54
Local clock offset: -5.57 ms
Remote clock offset: 30.736 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.96 Mbit/s
95th percentile per-packet one-way delay: 100.592 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 12.74 Mbit/s
95th percentile per-packet one-way delay: 100.772 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 14.99 Mbit/s
95th percentile per-packet one-way delay: 100.509 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 9.78 Mbit/s
95th percentile per-packet one-way delay: 100.142 ms
Loss rate: 0.84%
```

Run 5: Report of TCP Cubic — Data Link



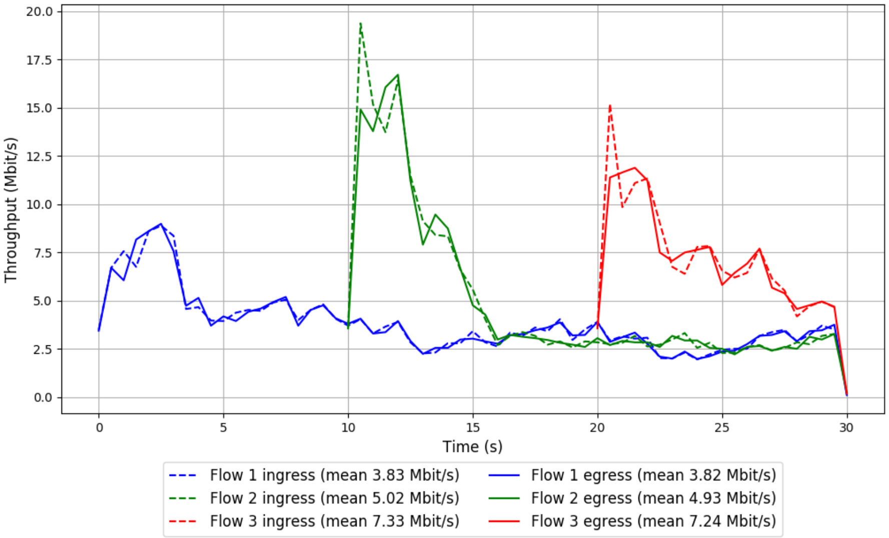


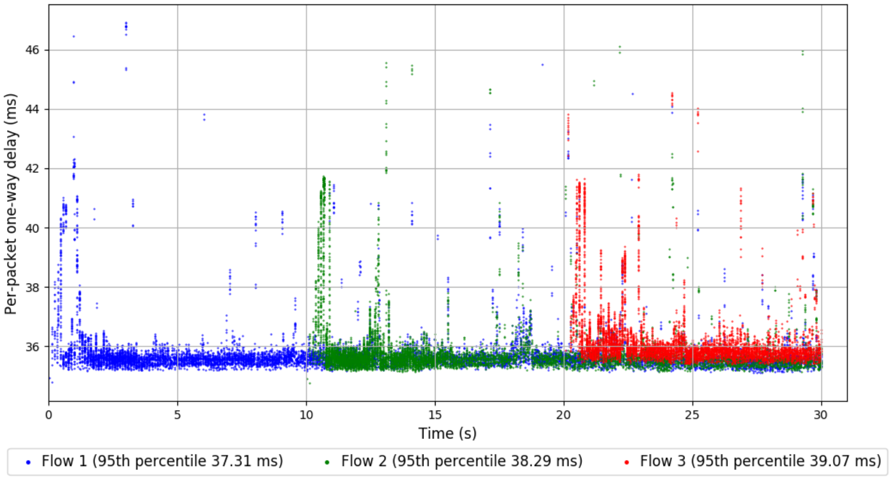
```
Run 6: Statistics of TCP Cubic

Start at: 2018-03-21 05:33:09
End at: 2018-03-21 05:33:39
Local clock offset: -10.717 ms
Remote clock offset: -29.344 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.50 Mbit/s
95th percentile per-packet one-way delay: 38.343 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 3.82 Mbit/s
95th percentile per-packet one-way delay: 37.313 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 4.93 Mbit/s
95th percentile per-packet one-way delay: 38.286 ms
Loss rate: 1.82%
-- Flow 3:
Average throughput: 7.24 Mbit/s
95th percentile per-packet one-way delay: 39.067 ms
Loss rate: 1.17%
```

Run 6: Report of TCP Cubic — Data Link



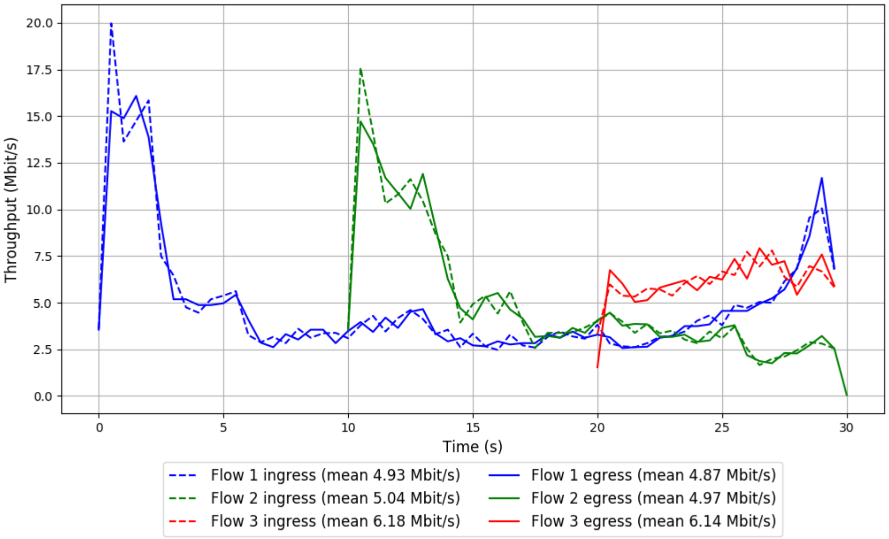


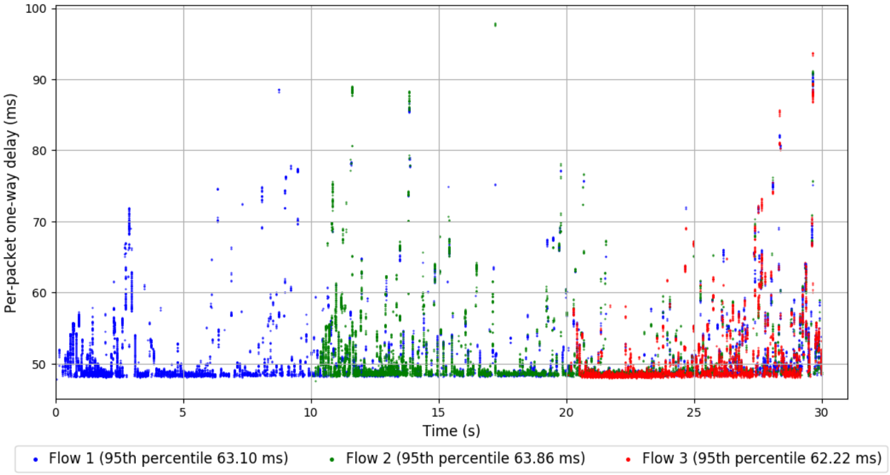
```
Run 7: Statistics of TCP Cubic

Start at: 2018-03-21 05:55:59
End at: 2018-03-21 05:56:29
Local clock offset: 0.573 ms
Remote clock offset: -15.598 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.22 Mbit/s
95th percentile per-packet one-way delay: 63.215 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 4.87 Mbit/s
95th percentile per-packet one-way delay: 63.102 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 4.97 Mbit/s
95th percentile per-packet one-way delay: 63.861 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 6.14 Mbit/s
95th percentile per-packet one-way delay: 62.215 ms
Loss rate: 0.55%
```

Run 7: Report of TCP Cubic — Data Link



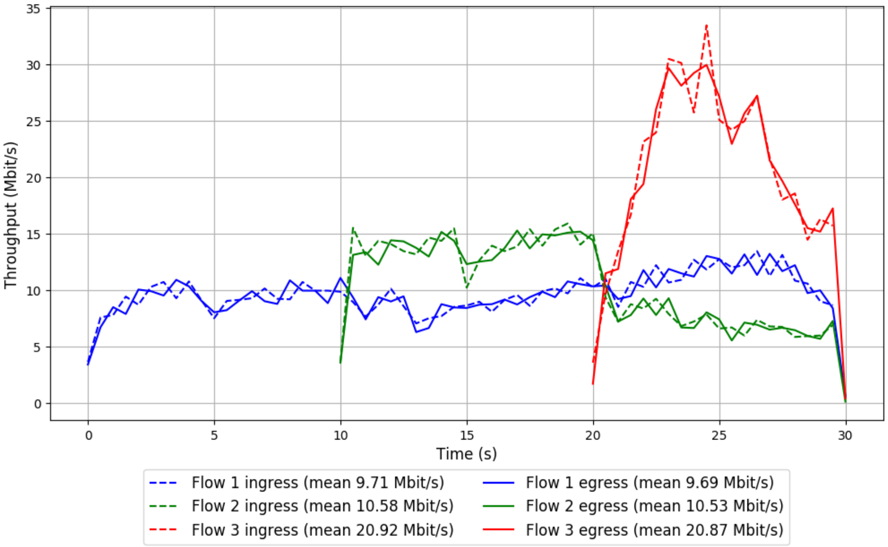


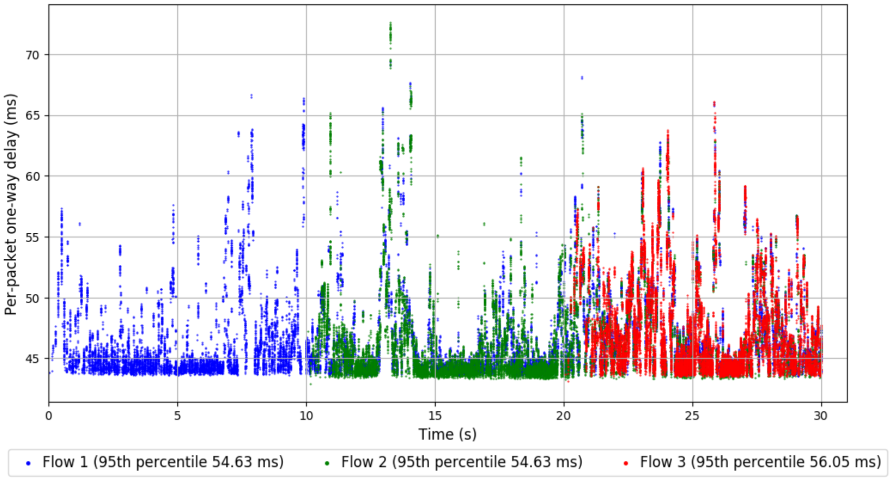
```
Run 8: Statistics of TCP Cubic

Start at: 2018-03-21 06:19:19
End at: 2018-03-21 06:19:49
Local clock offset: 2.605 ms
Remote clock offset: -17.247 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.63 Mbit/s
95th percentile per-packet one-way delay: 55.171 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 9.69 Mbit/s
95th percentile per-packet one-way delay: 54.631 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 10.53 Mbit/s
95th percentile per-packet one-way delay: 54.626 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 20.87 Mbit/s
95th percentile per-packet one-way delay: 56.049 ms
Loss rate: 0.23%
```

Run 8: Report of TCP Cubic — Data Link



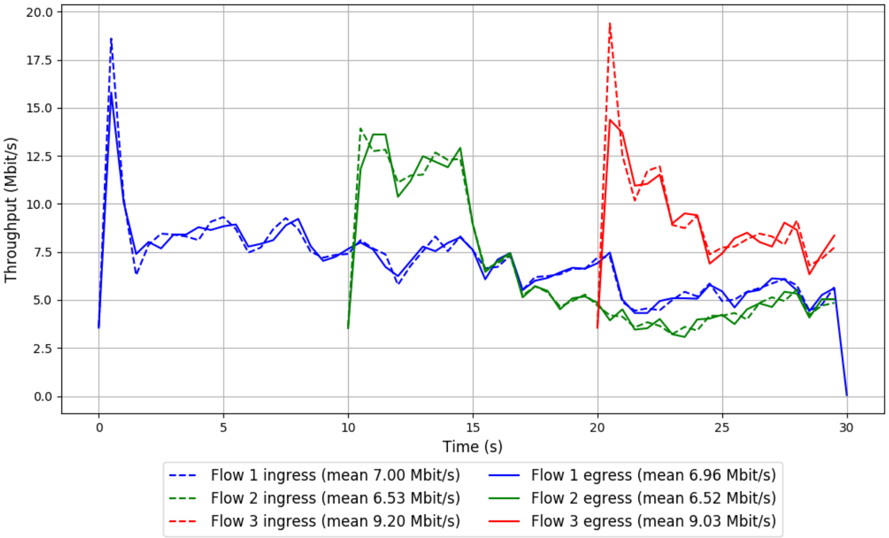


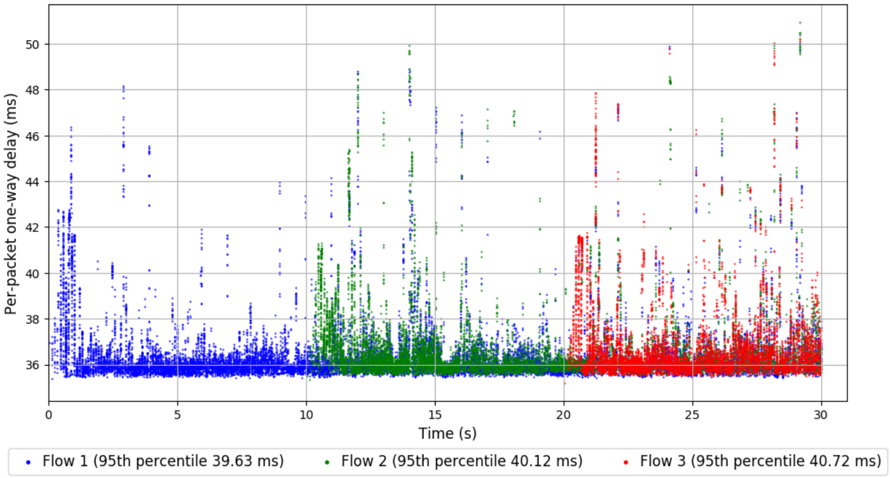
```
Run 9: Statistics of TCP Cubic

Start at: 2018-03-21 06:43:52
End at: 2018-03-21 06:44:22
Local clock offset: -0.121 ms
Remote clock offset: -24.294 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.29 Mbit/s
95th percentile per-packet one-way delay: 40.121 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 39.631 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 6.52 Mbit/s
95th percentile per-packet one-way delay: 40.118 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 9.03 Mbit/s
95th percentile per-packet one-way delay: 40.718 ms
Loss rate: 1.80%
```

Run 9: Report of TCP Cubic — Data Link



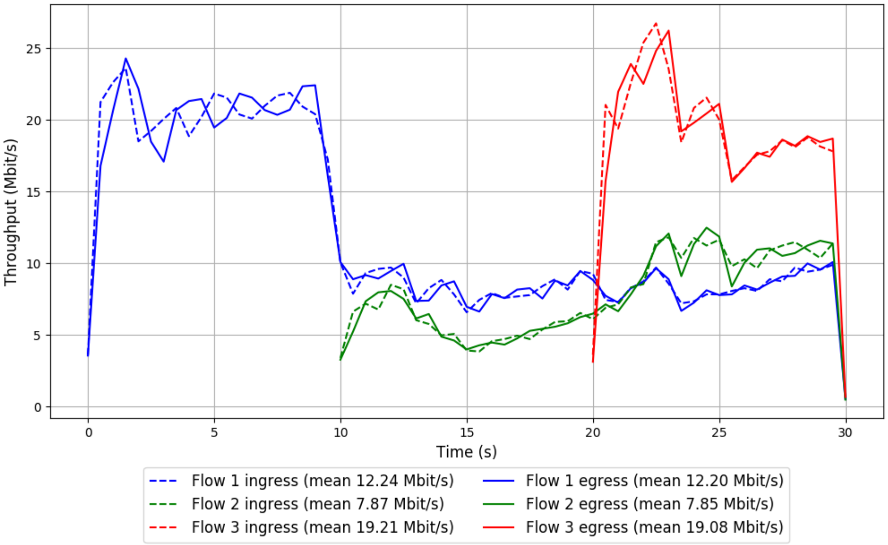


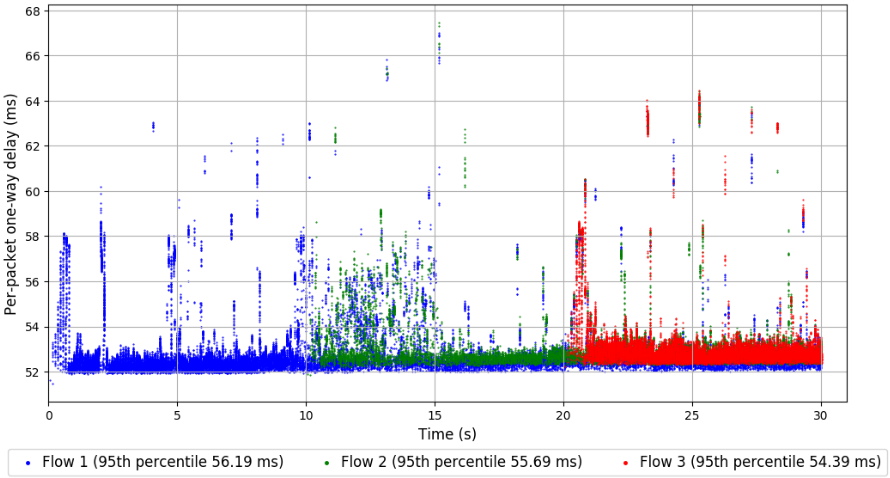
```
Run 10: Statistics of TCP Cubic

Start at: 2018-03-21 07:06:40
End at: 2018-03-21 07:07:10
Local clock offset: 1.939 ms
Remote clock offset: -11.888 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.75 Mbit/s
95th percentile per-packet one-way delay: 55.795 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 12.20 Mbit/s
95th percentile per-packet one-way delay: 56.186 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 55.694 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 19.08 Mbit/s
95th percentile per-packet one-way delay: 54.392 ms
Loss rate: 0.68%
```

Run 10: Report of TCP Cubic — Data Link



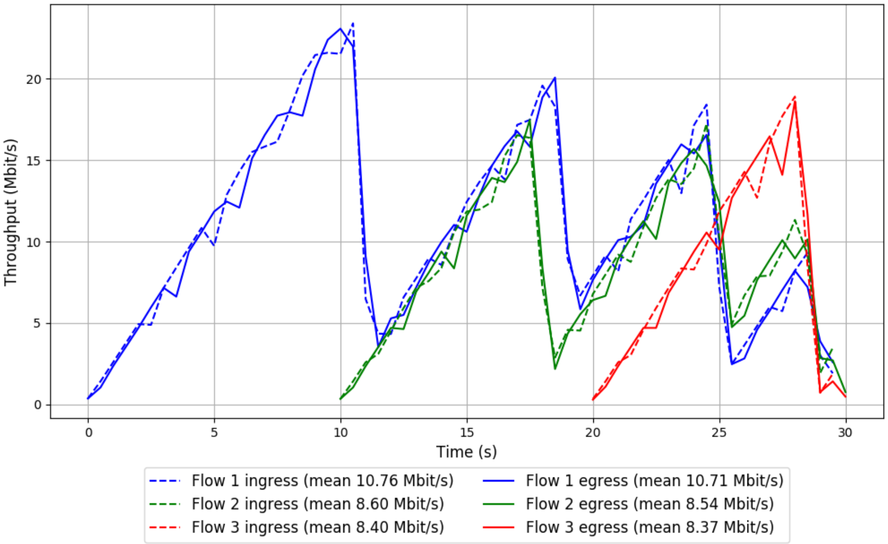


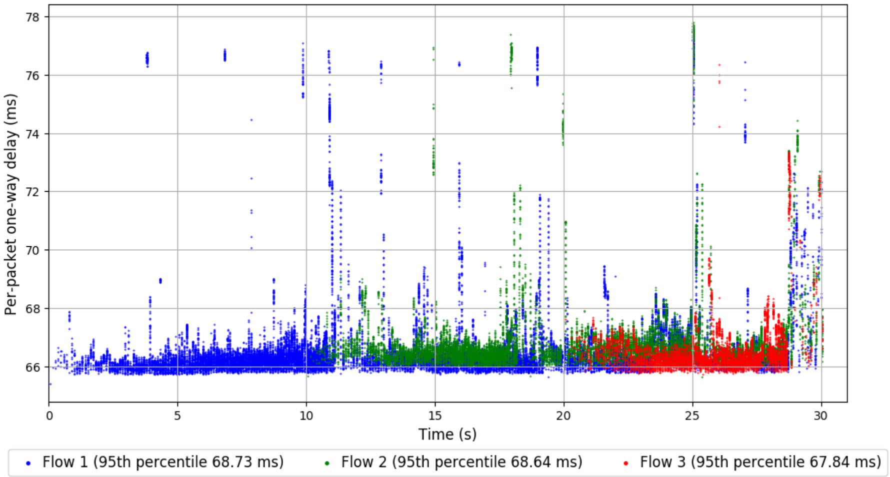
```
Run 1: Statistics of LEDBAT

Start at: 2018-03-21 03:45:16
End at: 2018-03-21 03:45:46
Local clock offset: 10.436 ms
Remote clock offset: -0.392 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.16 Mbit/s
95th percentile per-packet one-way delay: 68.590 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 10.71 Mbit/s
95th percentile per-packet one-way delay: 68.735 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 8.54 Mbit/s
95th percentile per-packet one-way delay: 68.641 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 8.37 Mbit/s
95th percentile per-packet one-way delay: 67.843 ms
Loss rate: 0.39%
```

Run 1: Report of LEDBAT — Data Link



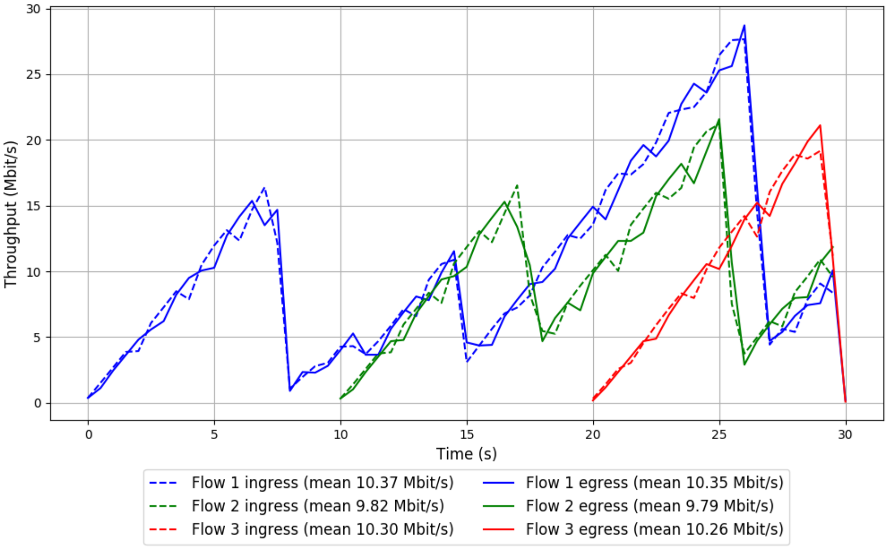


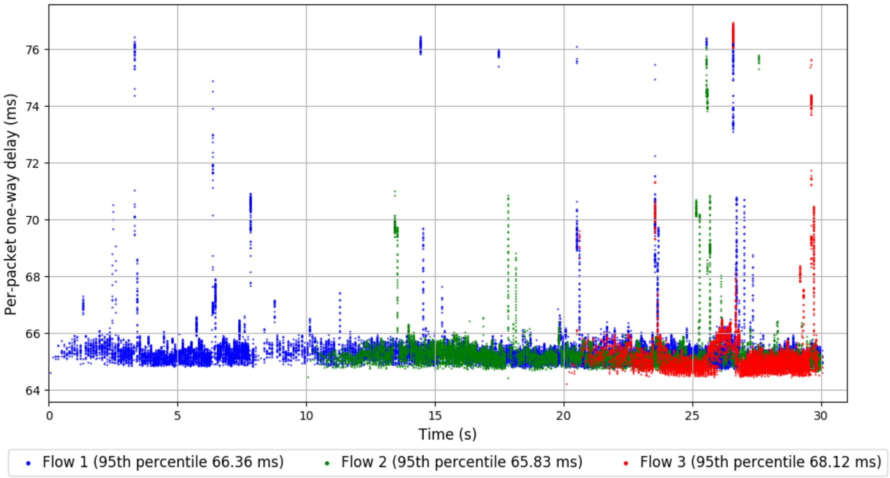
```
Run 2: Statistics of LEDBAT

Start at: 2018-03-21 04:08:34
End at: 2018-03-21 04:09:04
Local clock offset: 0.277 ms
Remote clock offset: -1.648 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.25 Mbit/s
95th percentile per-packet one-way delay: 66.300 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 10.35 Mbit/s
95th percentile per-packet one-way delay: 66.356 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 9.79 Mbit/s
95th percentile per-packet one-way delay: 65.834 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 10.26 Mbit/s
95th percentile per-packet one-way delay: 68.117 ms
Loss rate: 0.37%
```

Run 2: Report of LEDBAT — Data Link



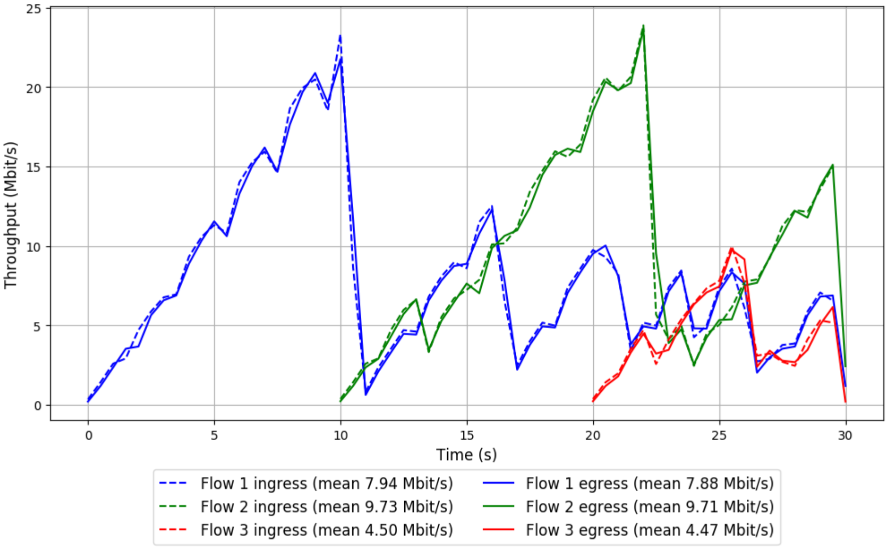


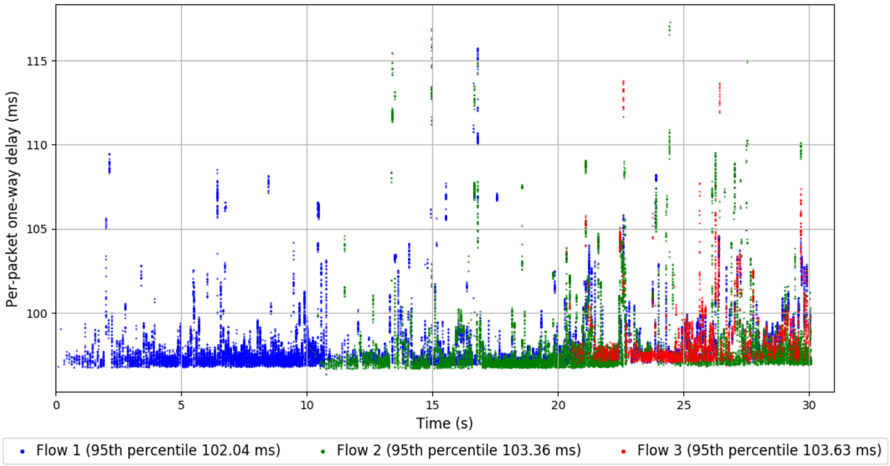
```
Run 3: Statistics of LEDBAT

Start at: 2018-03-21 04:31:27
End at: 2018-03-21 04:31:57
Local clock offset: -8.644 ms
Remote clock offset: 25.354 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.81 Mbit/s
95th percentile per-packet one-way delay: 102.657 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 7.88 Mbit/s
95th percentile per-packet one-way delay: 102.037 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 103.356 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 103.628 ms
Loss rate: 0.74%
```

Run 3: Report of LEDBAT — Data Link



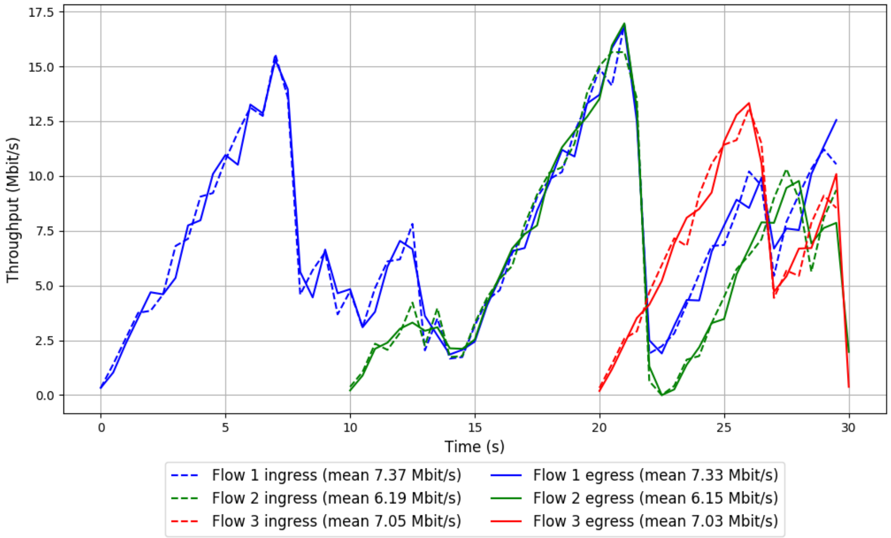


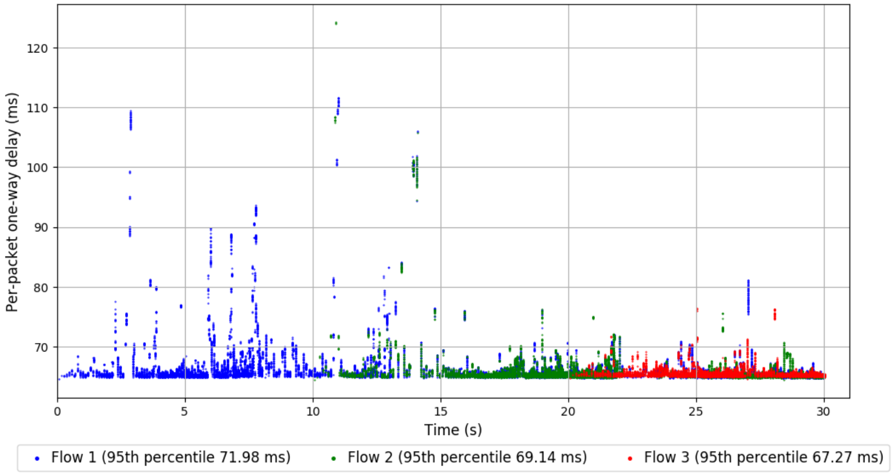
```
Run 4: Statistics of LEDBAT

Start at: 2018-03-21 04:54:19
End at: 2018-03-21 04:54:49
Local clock offset: -3.062 ms
Remote clock offset: -2.247 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.74 Mbit/s
95th percentile per-packet one-way delay: 70.049 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 7.33 Mbit/s
95th percentile per-packet one-way delay: 71.982 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 6.15 Mbit/s
95th percentile per-packet one-way delay: 69.136 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 7.03 Mbit/s
95th percentile per-packet one-way delay: 67.267 ms
Loss rate: 0.23%
```

Run 4: Report of LEDBAT — Data Link



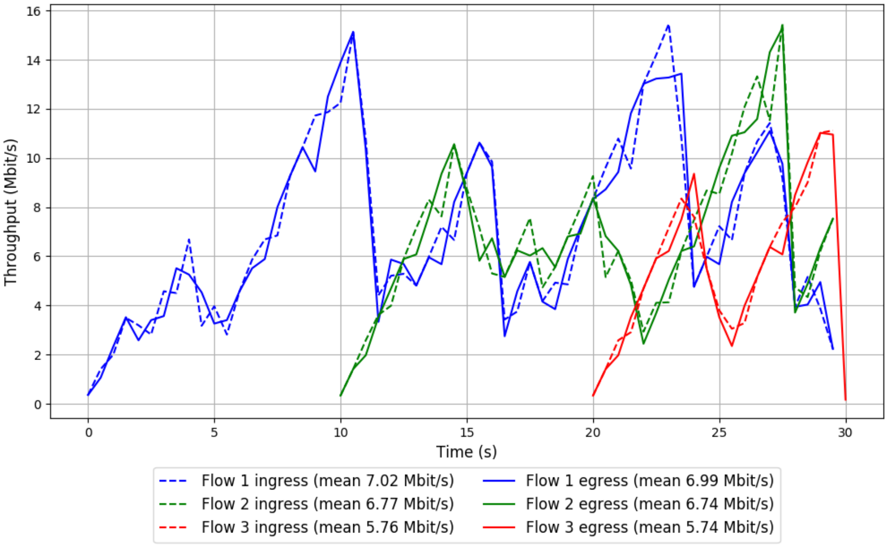


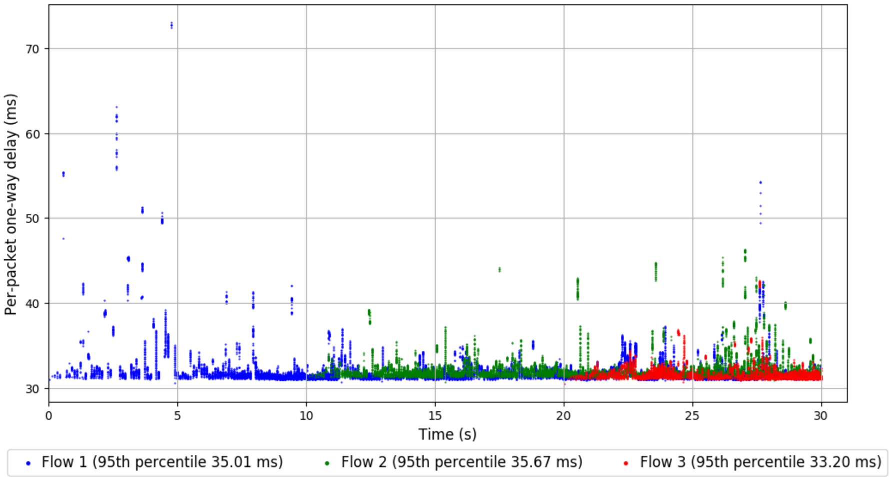
```
Run 5: Statistics of LEDBAT

Start at: 2018-03-21 05:17:56
End at: 2018-03-21 05:18:26
Local clock offset: -7.799 ms
Remote clock offset: -33.955 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.37 Mbit/s
95th percentile per-packet one-way delay: 35.009 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 35.005 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 6.74 Mbit/s
95th percentile per-packet one-way delay: 35.666 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 5.74 Mbit/s
95th percentile per-packet one-way delay: 33.200 ms
Loss rate: 0.27%
```

Run 5: Report of LEDBAT — Data Link



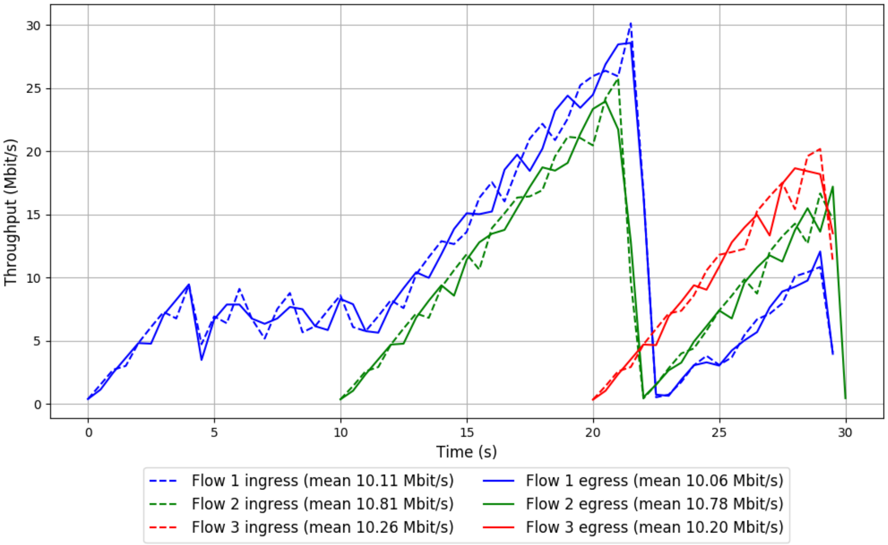


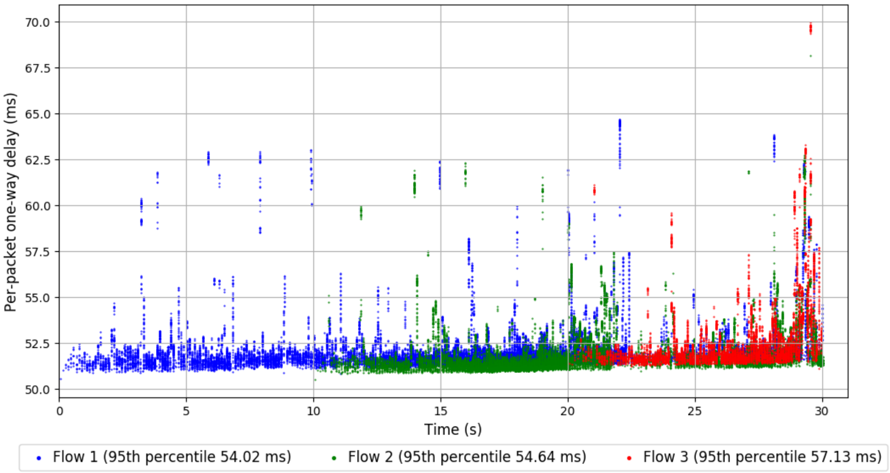
```
Run 6: Statistics of LEDBAT

Start at: 2018-03-21 05:40:43
End at: 2018-03-21 05:41:13
Local clock offset: -11.21 ms
Remote clock offset: -14.566 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.60 Mbit/s
95th percentile per-packet one-way delay: 54.897 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 54.023 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 10.78 Mbit/s
95th percentile per-packet one-way delay: 54.637 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 10.20 Mbit/s
95th percentile per-packet one-way delay: 57.131 ms
Loss rate: 0.58%
```

Run 6: Report of LEDBAT — Data Link



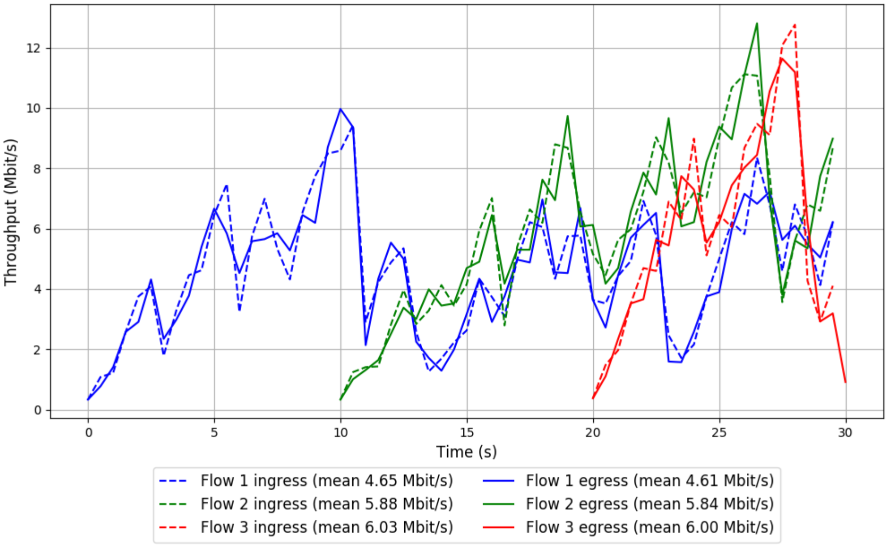


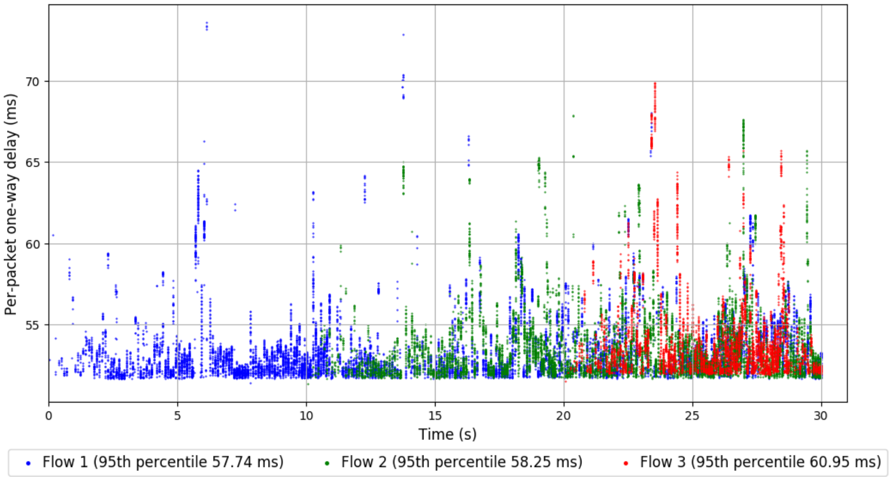
```
Run 7: Statistics of LEDBAT

Start at: 2018-03-21 06:03:31
End at: 2018-03-21 06:04:01
Local clock offset: 2.935 ms
Remote clock offset: -10.268 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.48 Mbit/s
95th percentile per-packet one-way delay: 58.605 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 4.61 Mbit/s
95th percentile per-packet one-way delay: 57.740 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 5.84 Mbit/s
95th percentile per-packet one-way delay: 58.252 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 6.00 Mbit/s
95th percentile per-packet one-way delay: 60.946 ms
Loss rate: 0.35%
```

Run 7: Report of LEDBAT — Data Link





Run 8: Statistics of LEDBAT

/home/ubuntu/pantheon_data/2018-03-21T03-34-AWS-Korea-to-China-10-runs-3-flows/ledbat_stats_

Run 8: Report of LEDBAT — Data Link

Figure is missing

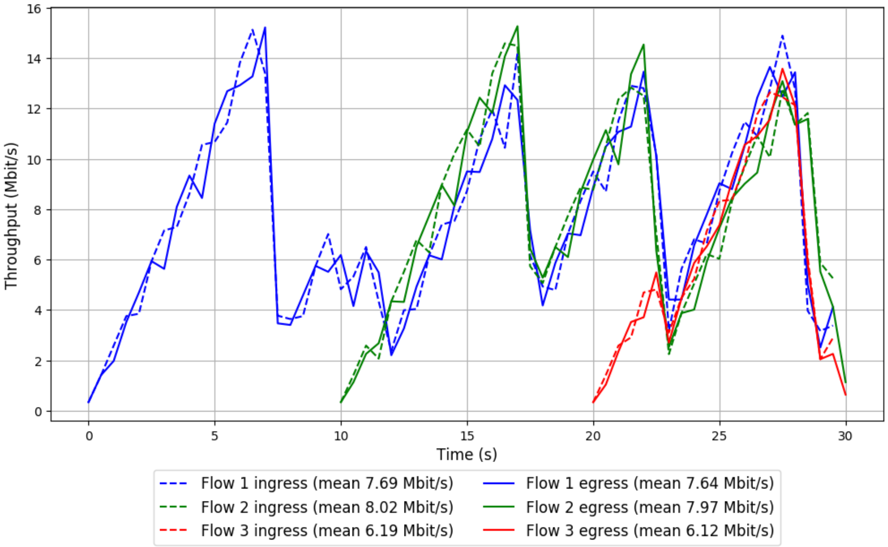
Figure is missing

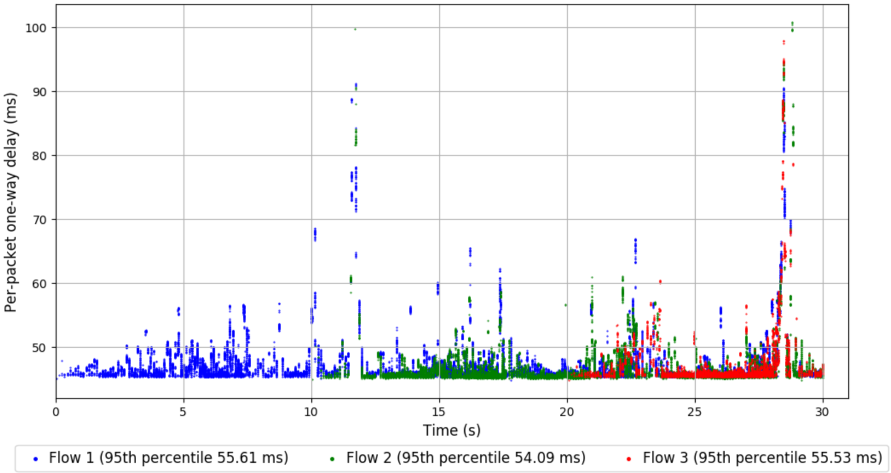
```
Run 9: Statistics of LEDBAT

Start at: 2018-03-21 06:51:24
End at: 2018-03-21 06:51:54
Local clock offset: 0.98 ms
Remote clock offset: -13.407 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.97 Mbit/s
95th percentile per-packet one-way delay: 55.346 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 7.64 Mbit/s
95th percentile per-packet one-way delay: 55.613 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 7.97 Mbit/s
95th percentile per-packet one-way delay: 54.091 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 6.12 Mbit/s
95th percentile per-packet one-way delay: 55.528 ms
Loss rate: 0.97%
```

Run 9: Report of LEDBAT — Data Link



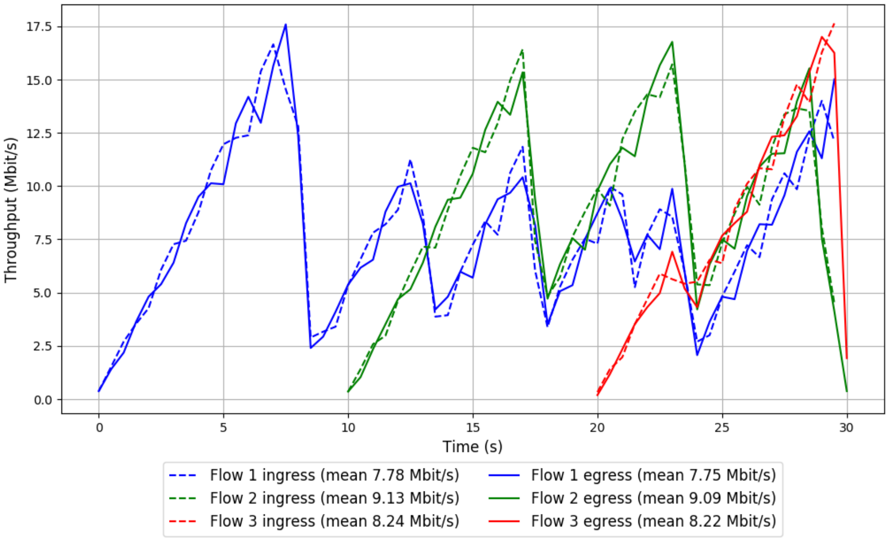


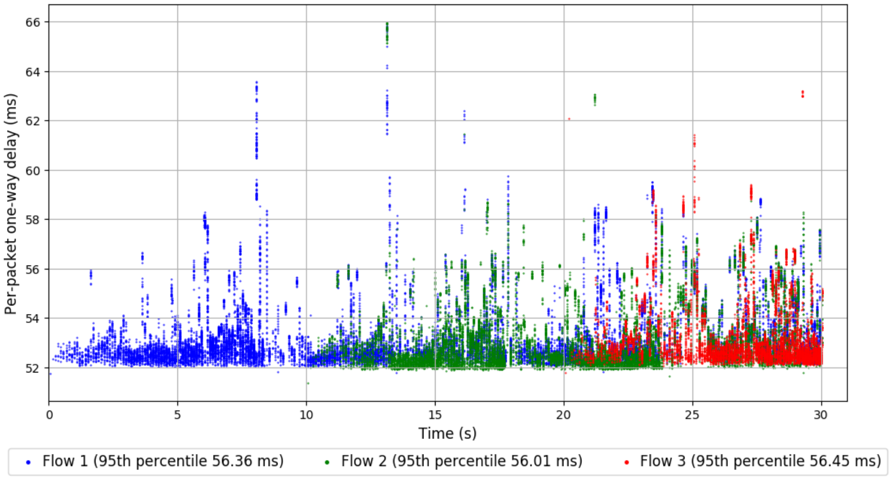
```
Run 10: Statistics of LEDBAT

Start at: 2018-03-21 07:14:53
End at: 2018-03-21 07:15:23
Local clock offset: 2.189 ms
Remote clock offset: -14.043 ms

# Below is generated by plot.py at 2018-03-21 07:54:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.51 Mbit/s
95th percentile per-packet one-way delay: 56.194 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 56.356 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 9.09 Mbit/s
95th percentile per-packet one-way delay: 56.012 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 8.22 Mbit/s
95th percentile per-packet one-way delay: 56.451 ms
Loss rate: 0.14%
```

Run 10: Report of LEDBAT — Data Link



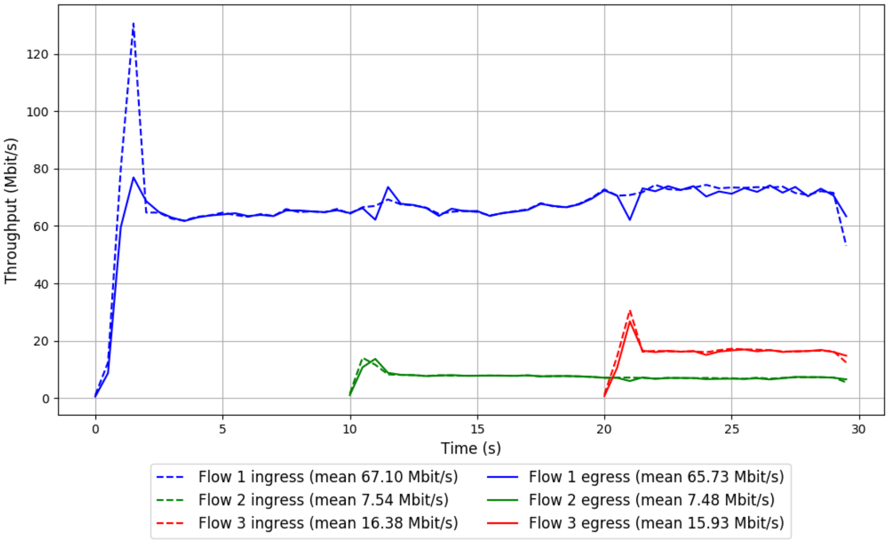


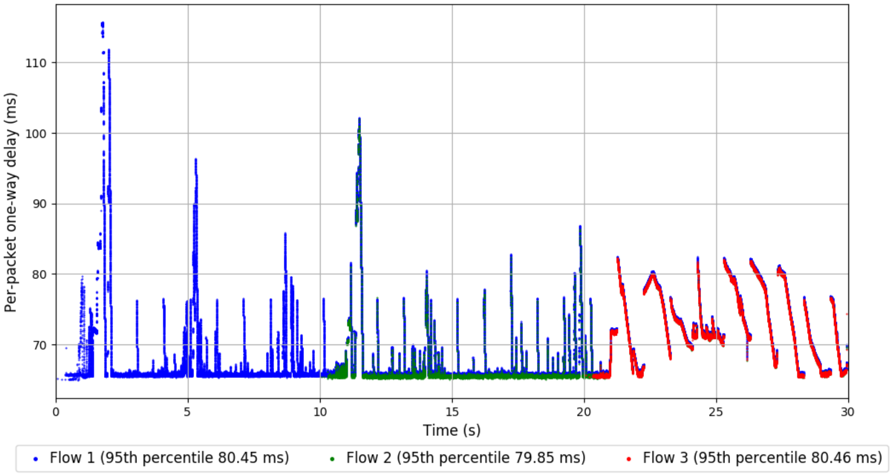
```
Run 1: Statistics of PCC

Start at: 2018-03-21 03:34:54
End at: 2018-03-21 03:35:24
Local clock offset: 9.28 ms
Remote clock offset: 0.16 ms

# Below is generated by plot.py at 2018-03-21 07:54:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.95 Mbit/s
95th percentile per-packet one-way delay: 80.405 ms
Loss rate: 2.00%
-- Flow 1:
Average throughput: 65.73 Mbit/s
95th percentile per-packet one-way delay: 80.450 ms
Loss rate: 2.04%
-- Flow 2:
Average throughput: 7.48 Mbit/s
95th percentile per-packet one-way delay: 79.850 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 15.93 Mbit/s
95th percentile per-packet one-way delay: 80.460 ms
Loss rate: 2.63%
```

Run 1: Report of PCC — Data Link



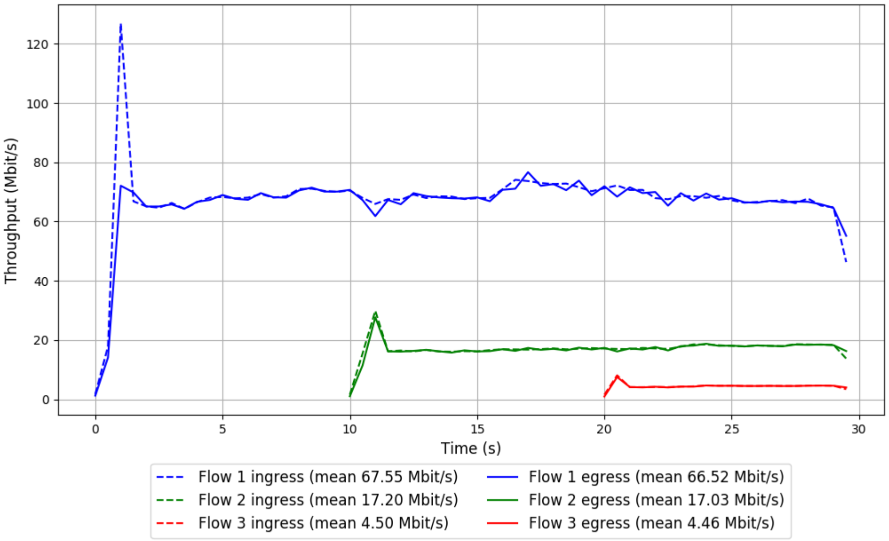


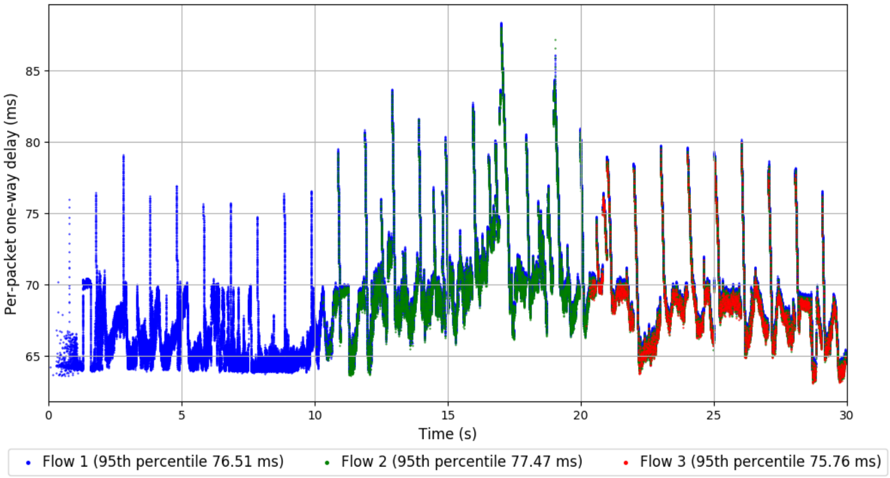
```
Run 2: Statistics of PCC

Start at: 2018-03-21 03:57:52
End at: 2018-03-21 03:58:22
Local clock offset: 12.67 ms
Remote clock offset: -0.673 ms

# Below is generated by plot.py at 2018-03-21 07:55:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.30 Mbit/s
95th percentile per-packet one-way delay: 76.683 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 66.52 Mbit/s
95th percentile per-packet one-way delay: 76.510 ms
Loss rate: 1.53%
-- Flow 2:
Average throughput: 17.03 Mbit/s
95th percentile per-packet one-way delay: 77.474 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 75.763 ms
Loss rate: 0.97%
```

Run 2: Report of PCC — Data Link



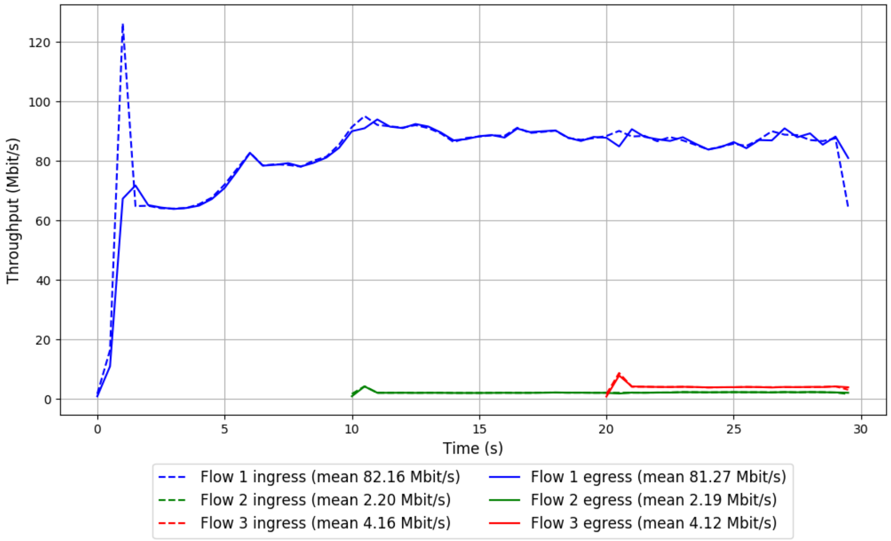


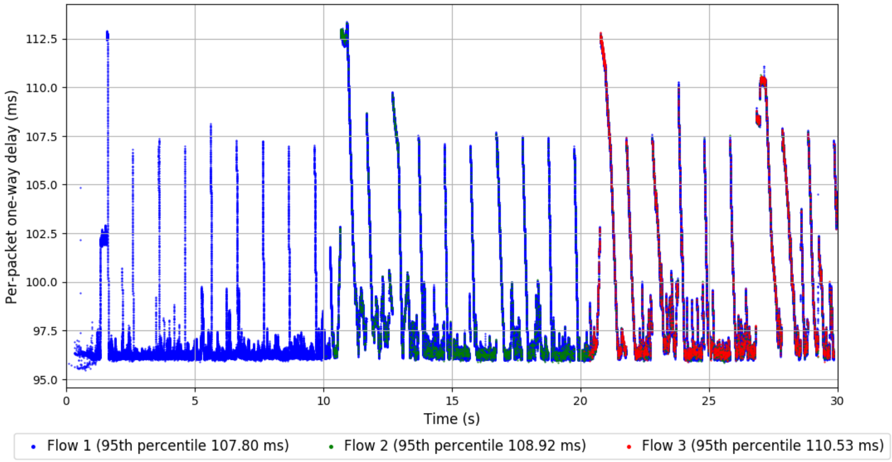
```
Run 3: Statistics of PCC

Start at: 2018-03-21 04:21:16
End at: 2018-03-21 04:21:46
Local clock offset: -5.643 ms
Remote clock offset: 26.396 ms

# Below is generated by plot.py at 2018-03-21 07:55:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.08 Mbit/s
95th percentile per-packet one-way delay: 107.964 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 81.27 Mbit/s
95th percentile per-packet one-way delay: 107.798 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 108.918 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 110.529 ms
Loss rate: 0.92%
```

Run 3: Report of PCC — Data Link



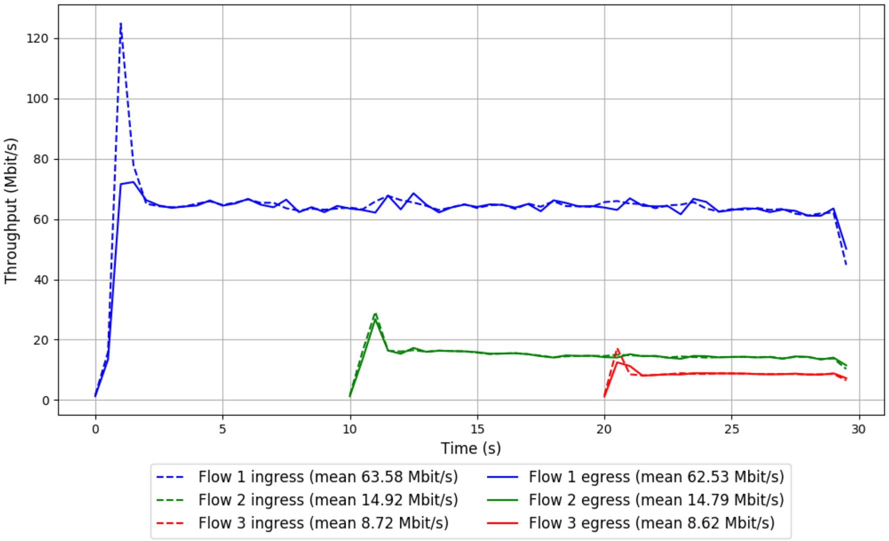


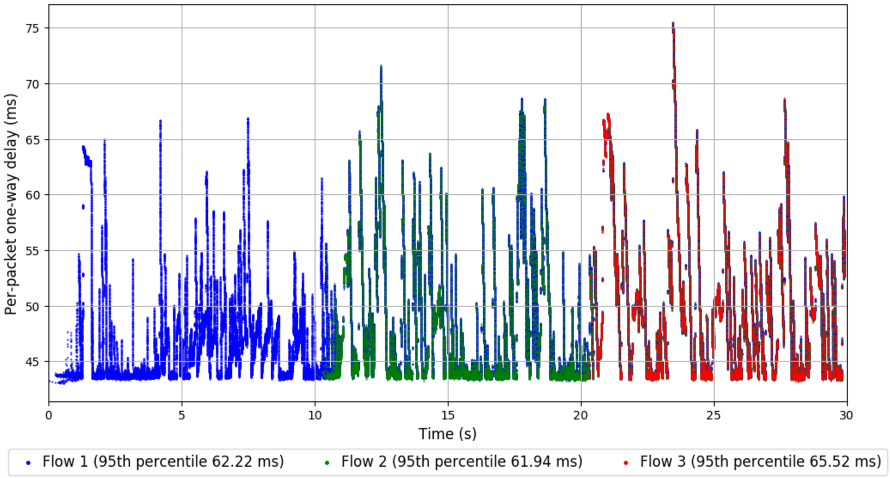
```
Run 4: Statistics of PCC

Start at: 2018-03-21 04:44:13
End at: 2018-03-21 04:44:43
Local clock offset: -4.253 ms
Remote clock offset: -27.033 ms

# Below is generated by plot.py at 2018-03-21 07:55:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.21 Mbit/s
95th percentile per-packet one-way delay: 62.428 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 62.53 Mbit/s
95th percentile per-packet one-way delay: 62.218 ms
Loss rate: 1.62%
-- Flow 2:
Average throughput: 14.79 Mbit/s
95th percentile per-packet one-way delay: 61.936 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 65.516 ms
Loss rate: 1.04%
```

Run 4: Report of PCC — Data Link



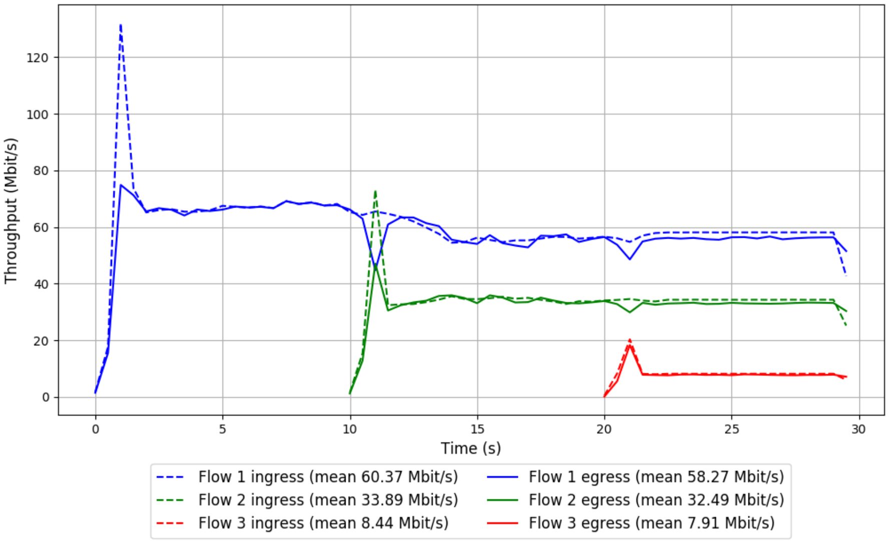


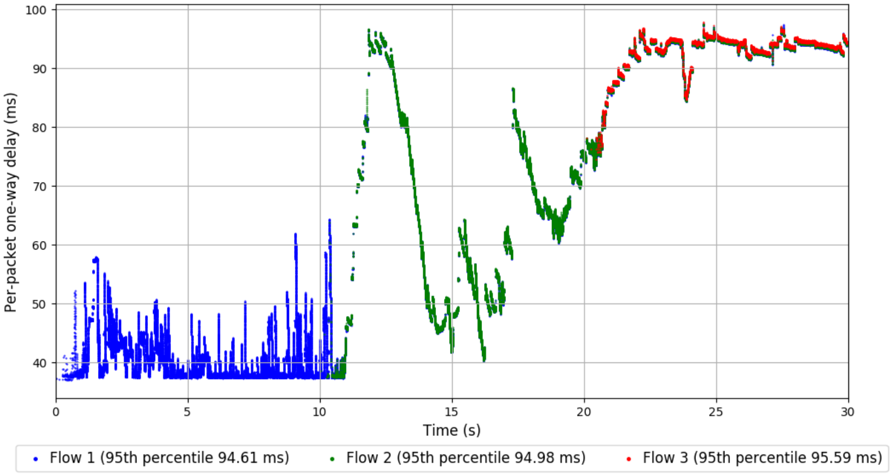
```
Run 5: Statistics of PCC

Start at: 2018-03-21 05:06:58
End at: 2018-03-21 05:07:28
Local clock offset: -4.274 ms
Remote clock offset: -27.924 ms

# Below is generated by plot.py at 2018-03-21 07:55:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.50 Mbit/s
95th percentile per-packet one-way delay: 94.809 ms
Loss rate: 3.53%
-- Flow 1:
Average throughput: 58.27 Mbit/s
95th percentile per-packet one-way delay: 94.605 ms
Loss rate: 3.29%
-- Flow 2:
Average throughput: 32.49 Mbit/s
95th percentile per-packet one-way delay: 94.982 ms
Loss rate: 3.85%
-- Flow 3:
Average throughput: 7.91 Mbit/s
95th percentile per-packet one-way delay: 95.586 ms
Loss rate: 6.15%
```

Run 5: Report of PCC — Data Link



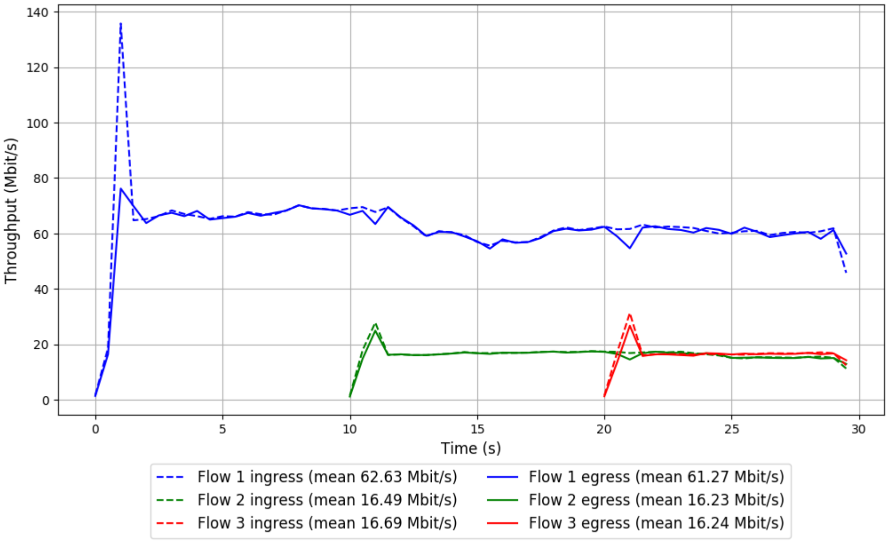


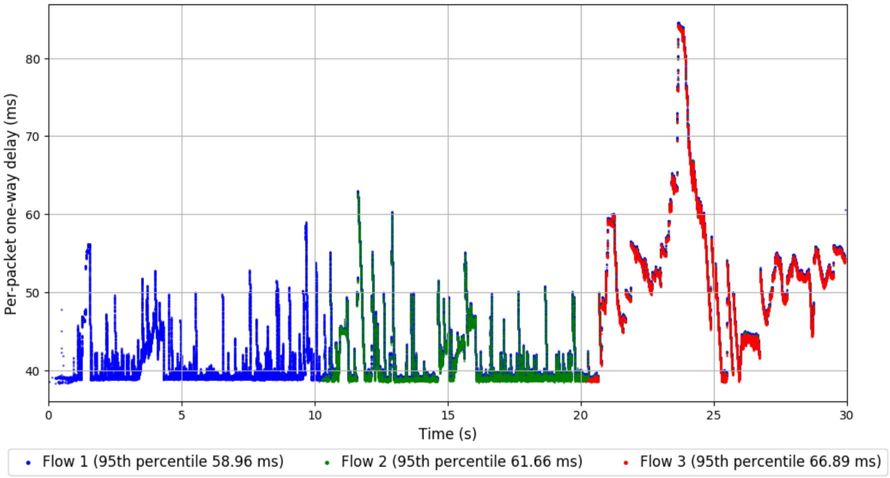
```
Run 6: Statistics of PCC

Start at: 2018-03-21 05:30:36
End at: 2018-03-21 05:31:06
Local clock offset: -10.205 ms
Remote clock offset: -25.933 ms

# Below is generated by plot.py at 2018-03-21 07:55:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.42 Mbit/s
95th percentile per-packet one-way delay: 59.952 ms
Loss rate: 2.04%
-- Flow 1:
Average throughput: 61.27 Mbit/s
95th percentile per-packet one-way delay: 58.962 ms
Loss rate: 2.09%
-- Flow 2:
Average throughput: 16.23 Mbit/s
95th percentile per-packet one-way delay: 61.663 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 16.24 Mbit/s
95th percentile per-packet one-way delay: 66.895 ms
Loss rate: 2.54%
```

Run 6: Report of PCC — Data Link



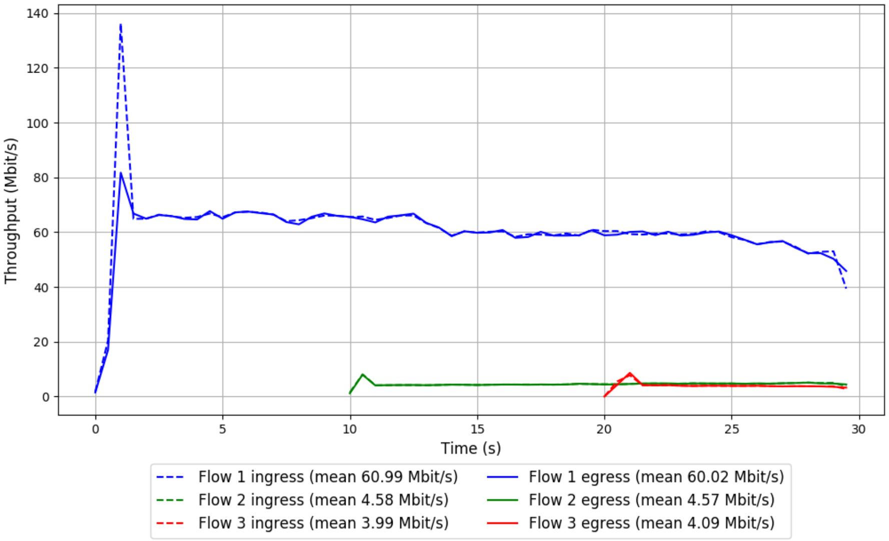


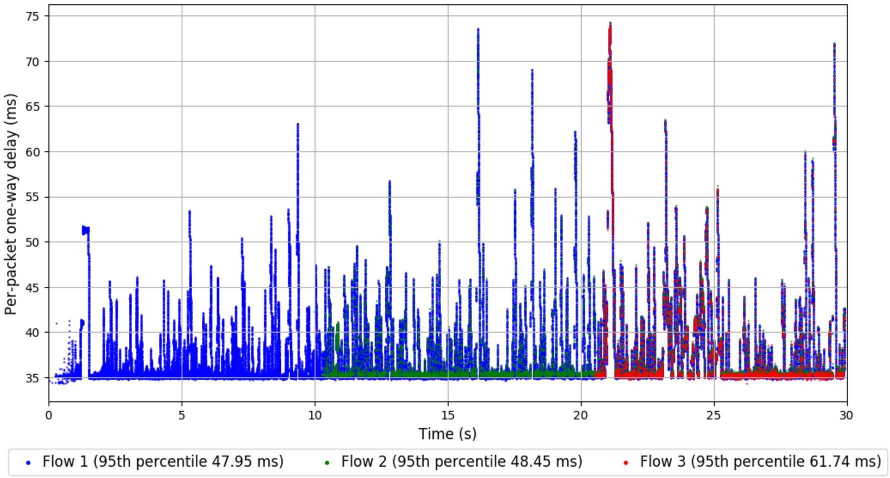
```
Run 7: Statistics of PCC

Start at: 2018-03-21 05:53:26
End at: 2018-03-21 05:53:56
Local clock offset: 0.269 ms
Remote clock offset: -28.317 ms

# Below is generated by plot.py at 2018-03-21 07:55:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.37 Mbit/s
95th percentile per-packet one-way delay: 48.318 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 60.02 Mbit/s
95th percentile per-packet one-way delay: 47.952 ms
Loss rate: 1.58%
-- Flow 2:
Average throughput: 4.57 Mbit/s
95th percentile per-packet one-way delay: 48.455 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 61.742 ms
Loss rate: 0.16%
```

Run 7: Report of PCC — Data Link



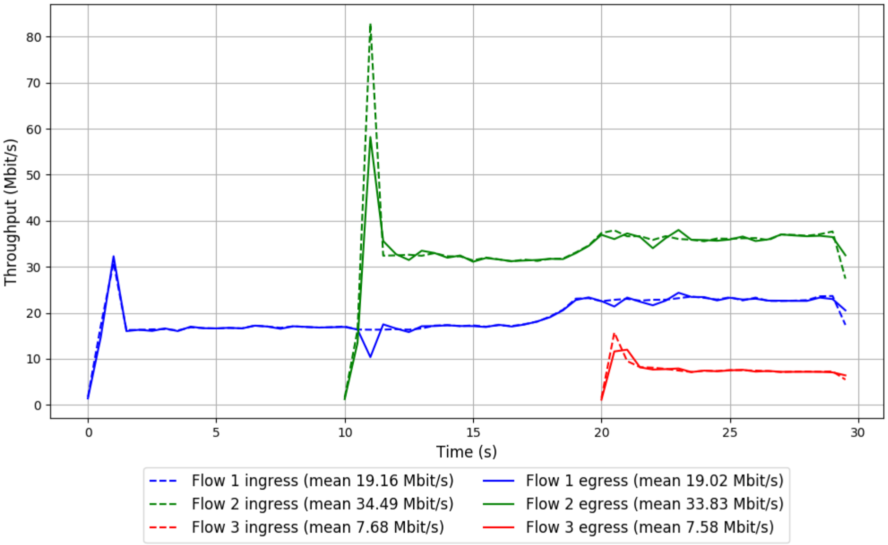


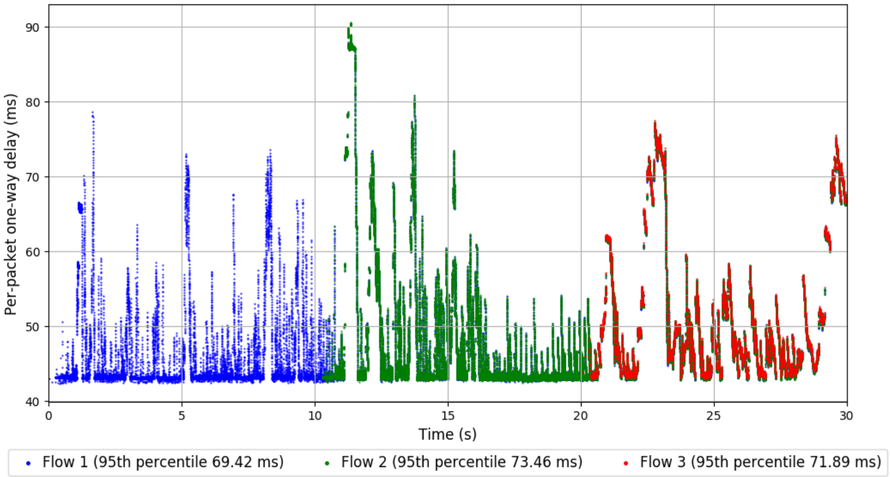
```
Run 8: Statistics of PCC

Start at: 2018-03-21 06:16:50
End at: 2018-03-21 06:17:20
Local clock offset: 2.952 ms
Remote clock offset: -18.057 ms

# Below is generated by plot.py at 2018-03-21 07:55:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.02 Mbit/s
95th percentile per-packet one-way delay: 71.793 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 19.02 Mbit/s
95th percentile per-packet one-way delay: 69.419 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 33.83 Mbit/s
95th percentile per-packet one-way delay: 73.457 ms
Loss rate: 1.79%
-- Flow 3:
Average throughput: 7.58 Mbit/s
95th percentile per-packet one-way delay: 71.886 ms
Loss rate: 1.07%
```

Run 8: Report of PCC — Data Link



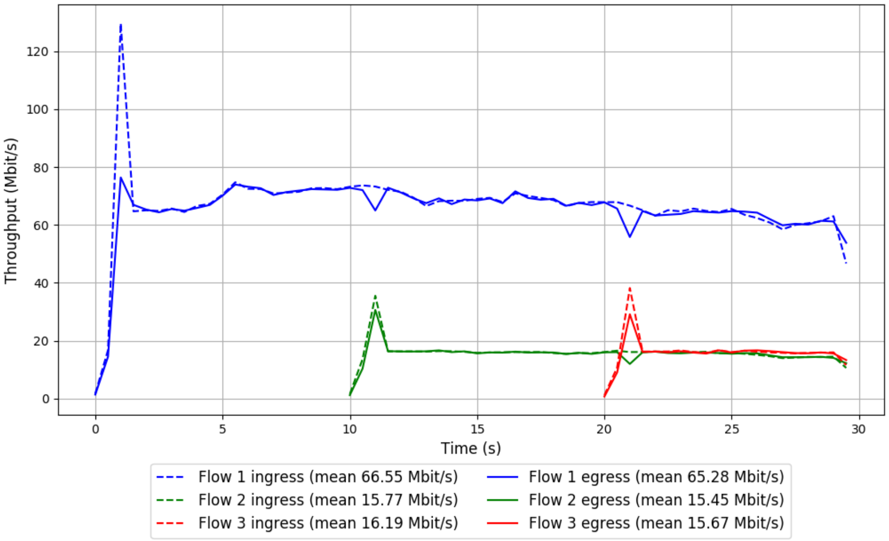


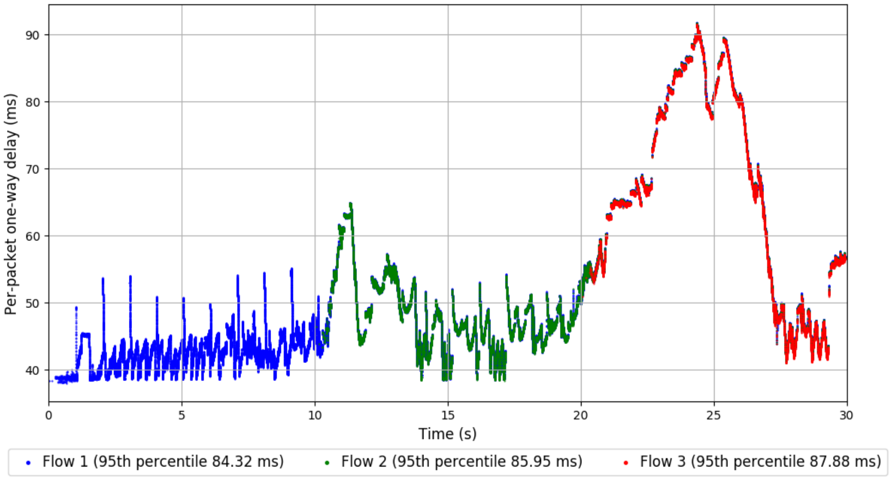
```
Run 9: Statistics of PCC

Start at: 2018-03-21 06:41:18
End at: 2018-03-21 06:41:48
Local clock offset: -0.098 ms
Remote clock offset: -21.421 ms

# Below is generated by plot.py at 2018-03-21 07:56:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.73 Mbit/s
95th percentile per-packet one-way delay: 85.143 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 65.28 Mbit/s
95th percentile per-packet one-way delay: 84.317 ms
Loss rate: 1.85%
-- Flow 2:
Average throughput: 15.45 Mbit/s
95th percentile per-packet one-way delay: 85.954 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 15.67 Mbit/s
95th percentile per-packet one-way delay: 87.882 ms
Loss rate: 3.15%
```

Run 9: Report of PCC — Data Link



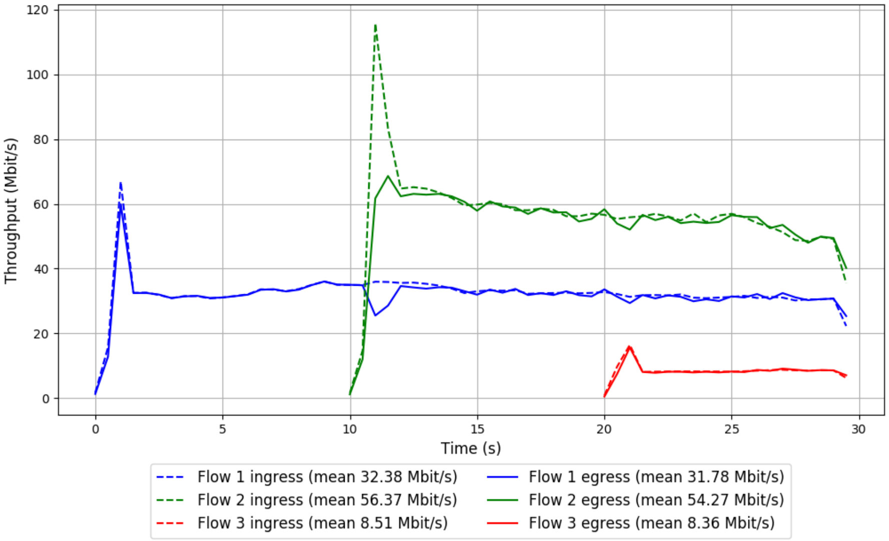


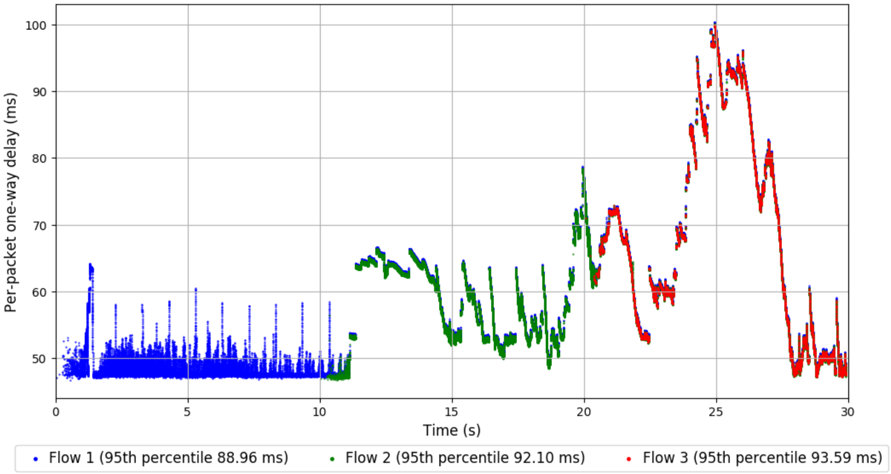
```
Run 10: Statistics of PCC

Start at: 2018-03-21 07:04:07
End at: 2018-03-21 07:04:37
Local clock offset: 1.852 ms
Remote clock offset: -15.842 ms

# Below is generated by plot.py at 2018-03-21 07:56:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.61 Mbit/s
95th percentile per-packet one-way delay: 91.547 ms
Loss rate: 2.82%
-- Flow 1:
Average throughput: 31.78 Mbit/s
95th percentile per-packet one-way delay: 88.956 ms
Loss rate: 1.86%
-- Flow 2:
Average throughput: 54.27 Mbit/s
95th percentile per-packet one-way delay: 92.101 ms
Loss rate: 3.71%
-- Flow 3:
Average throughput: 8.36 Mbit/s
95th percentile per-packet one-way delay: 93.594 ms
Loss rate: 2.06%
```

Run 10: Report of PCC — Data Link



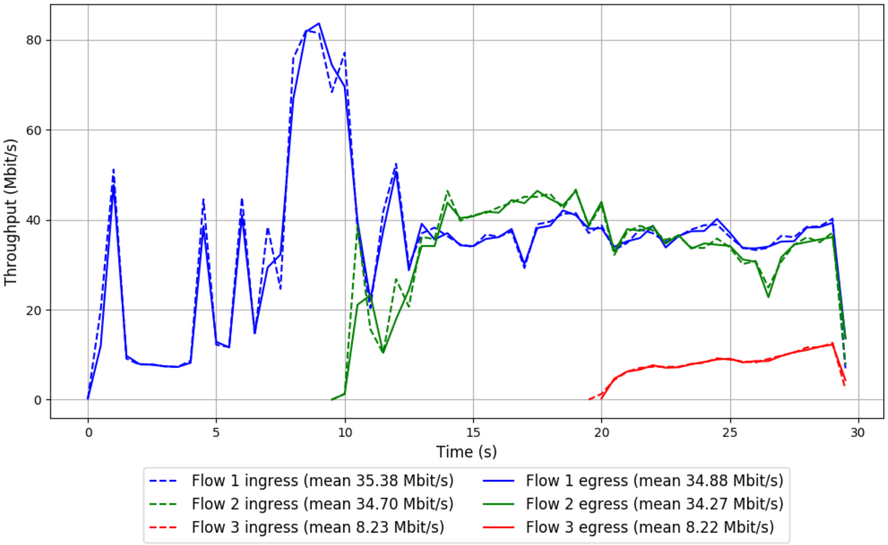


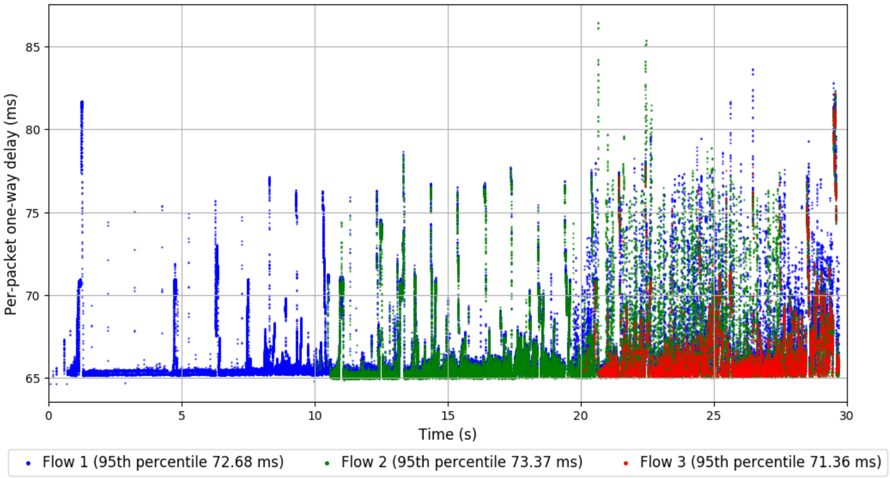
```
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-21 03:38:56
End at: 2018-03-21 03:39:27
Local clock offset: 10.144 ms
Remote clock offset: -0.198 ms

# Below is generated by plot.py at 2018-03-21 07:56:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.37 Mbit/s
95th percentile per-packet one-way delay: 72.897 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 34.88 Mbit/s
95th percentile per-packet one-way delay: 72.683 ms
Loss rate: 1.42%
-- Flow 2:
Average throughput: 34.27 Mbit/s
95th percentile per-packet one-way delay: 73.374 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 8.22 Mbit/s
95th percentile per-packet one-way delay: 71.361 ms
Loss rate: 0.11%
```

Run 1: Report of QUIC Cubic — Data Link



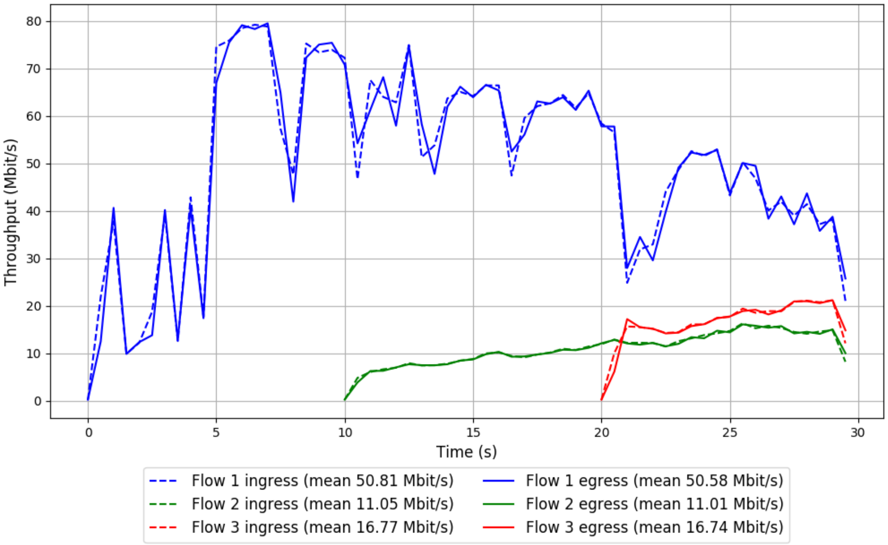


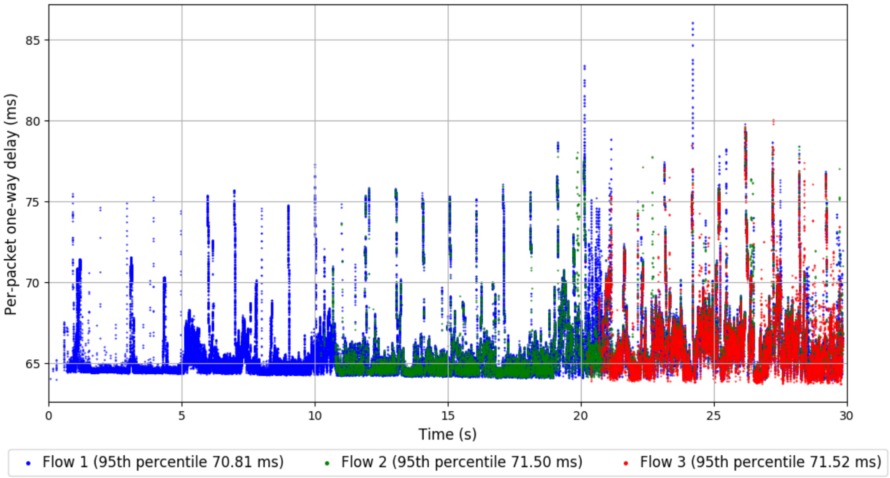
```
Run 2: Statistics of QUIC Cubic

Start at: 2018-03-21 04:01:35
End at: 2018-03-21 04:02:05
Local clock offset: 6.665 ms
Remote clock offset: -0.768 ms

# Below is generated by plot.py at 2018-03-21 07:56:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.31 Mbit/s
95th percentile per-packet one-way delay: 70.955 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 50.58 Mbit/s
95th percentile per-packet one-way delay: 70.805 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 11.01 Mbit/s
95th percentile per-packet one-way delay: 71.501 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 16.74 Mbit/s
95th percentile per-packet one-way delay: 71.517 ms
Loss rate: 0.24%
```

Run 2: Report of QUIC Cubic — Data Link



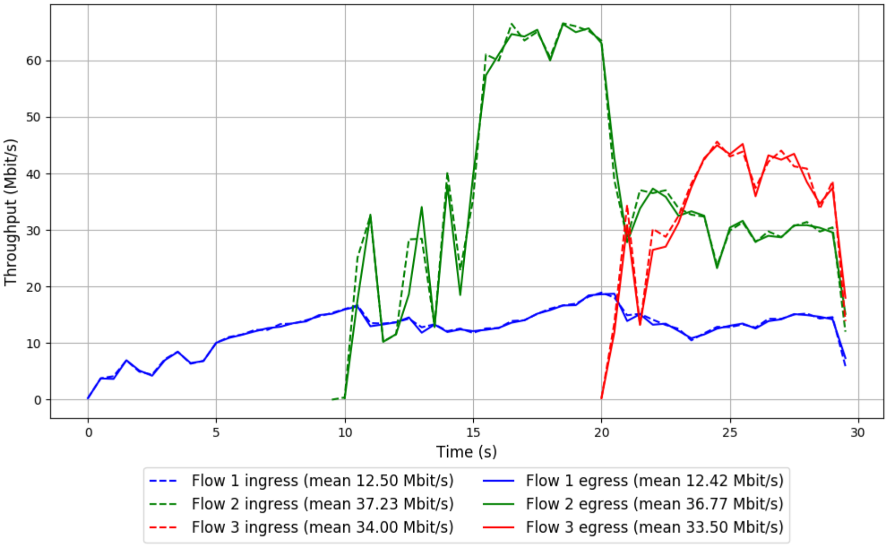


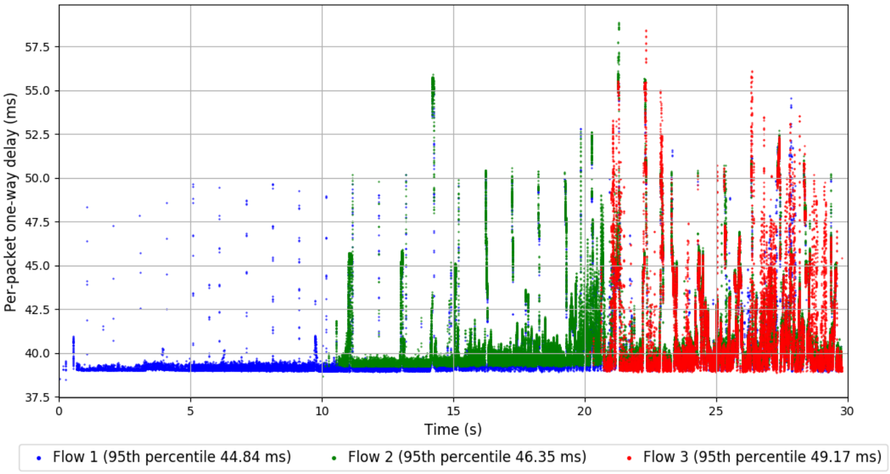
```
Run 3: Statistics of QUIC Cubic

Start at: 2018-03-21 04:25:03
End at: 2018-03-21 04:25:33
Local clock offset: -7.463 ms
Remote clock offset: -31.753 ms

# Below is generated by plot.py at 2018-03-21 07:56:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.72 Mbit/s
95th percentile per-packet one-way delay: 46.746 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 12.42 Mbit/s
95th percentile per-packet one-way delay: 44.840 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 36.77 Mbit/s
95th percentile per-packet one-way delay: 46.355 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 33.50 Mbit/s
95th percentile per-packet one-way delay: 49.172 ms
Loss rate: 1.42%
```

Run 3: Report of QUIC Cubic — Data Link



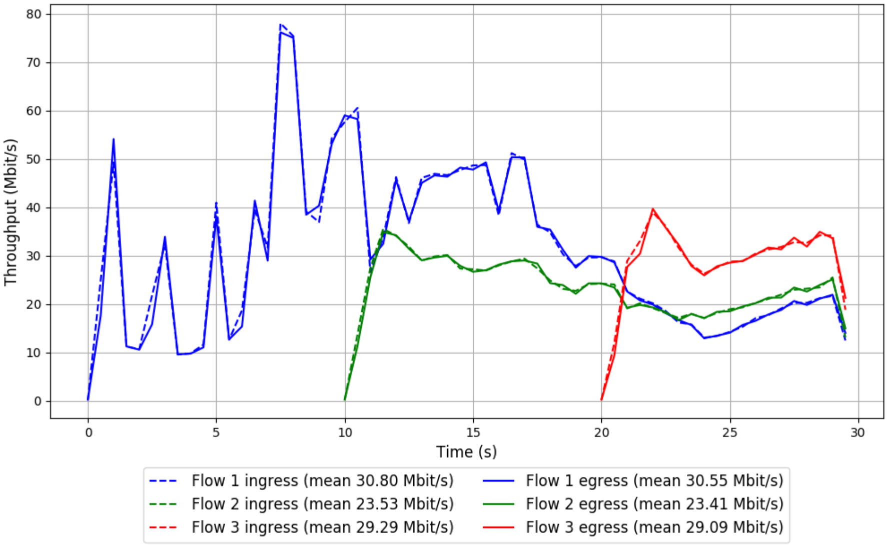


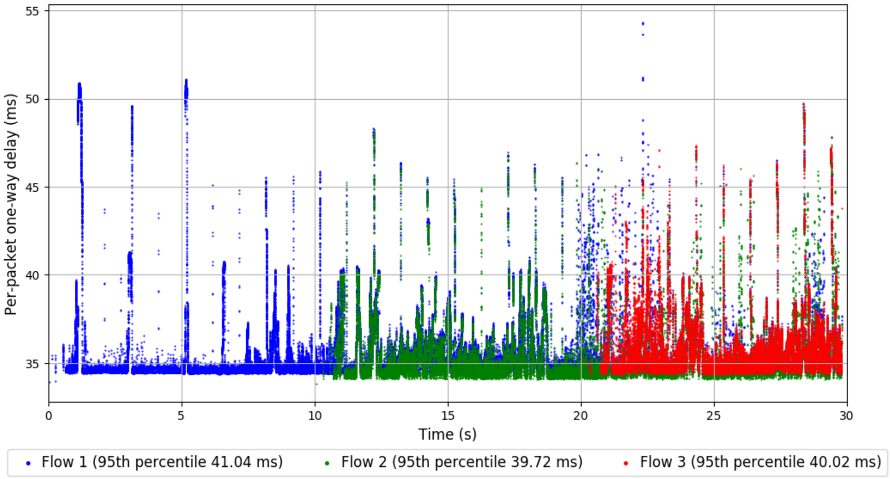
```
Run 4: Statistics of QUIC Cubic

Start at: 2018-03-21 04:47:59
End at: 2018-03-21 04:48:29
Local clock offset: -3.199 ms
Remote clock offset: -34.346 ms

# Below is generated by plot.py at 2018-03-21 07:56:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.51 Mbit/s
95th percentile per-packet one-way delay: 40.438 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 30.55 Mbit/s
95th percentile per-packet one-way delay: 41.040 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 23.41 Mbit/s
95th percentile per-packet one-way delay: 39.715 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 29.09 Mbit/s
95th percentile per-packet one-way delay: 40.023 ms
Loss rate: 0.61%
```

Run 4: Report of QUIC Cubic — Data Link



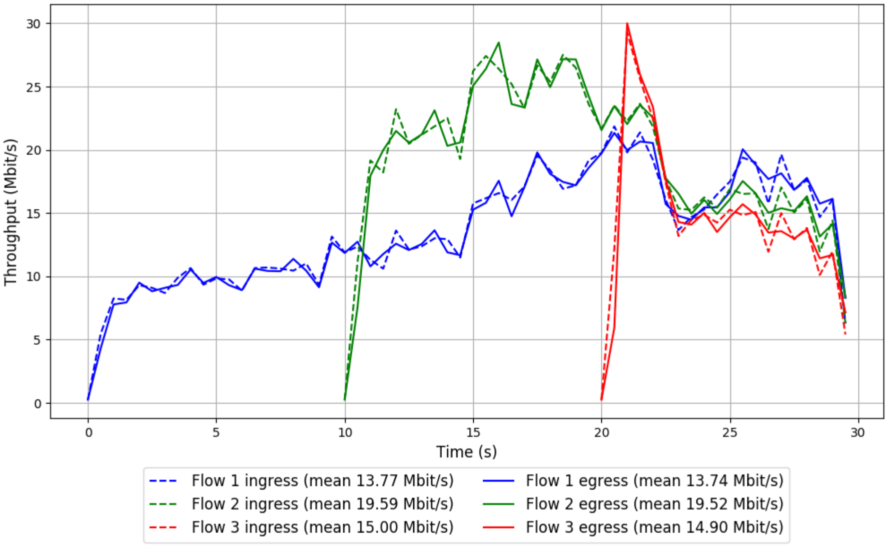


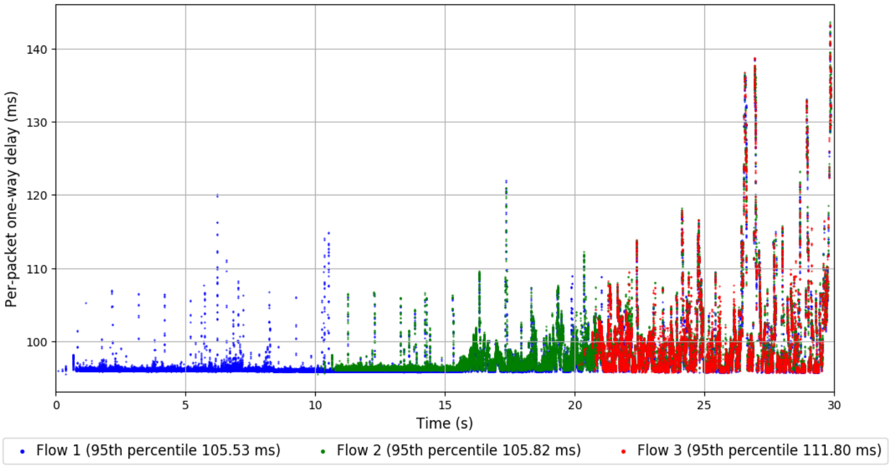
```
Run 5: Statistics of QUIC Cubic

Start at: 2018-03-21 05:11:38
End at: 2018-03-21 05:12:08
Local clock offset: -5.905 ms
Remote clock offset: 30.815 ms

# Below is generated by plot.py at 2018-03-21 07:56:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 31.56 Mbit/s
95th percentile per-packet one-way delay: 106.666 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 13.74 Mbit/s
95th percentile per-packet one-way delay: 105.533 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 19.52 Mbit/s
95th percentile per-packet one-way delay: 105.823 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 14.90 Mbit/s
95th percentile per-packet one-way delay: 111.804 ms
Loss rate: 0.34%
```

Run 5: Report of QUIC Cubic — Data Link



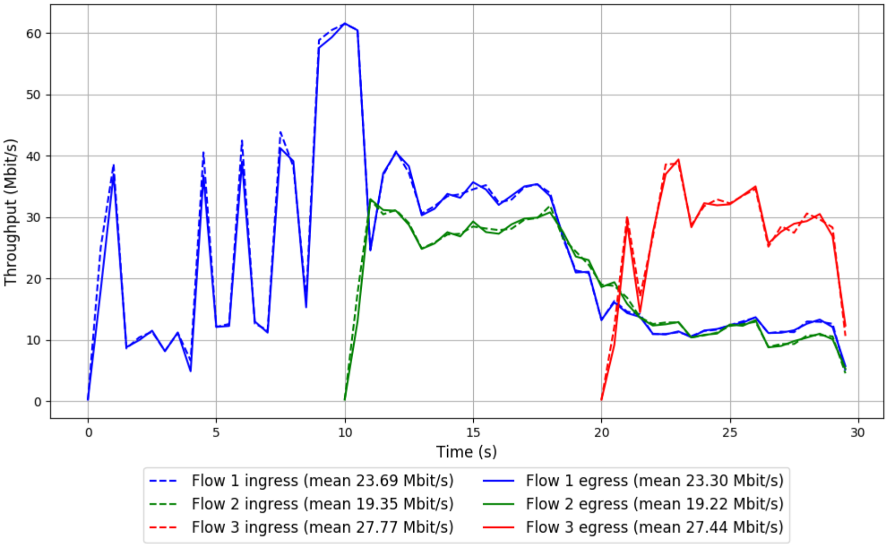


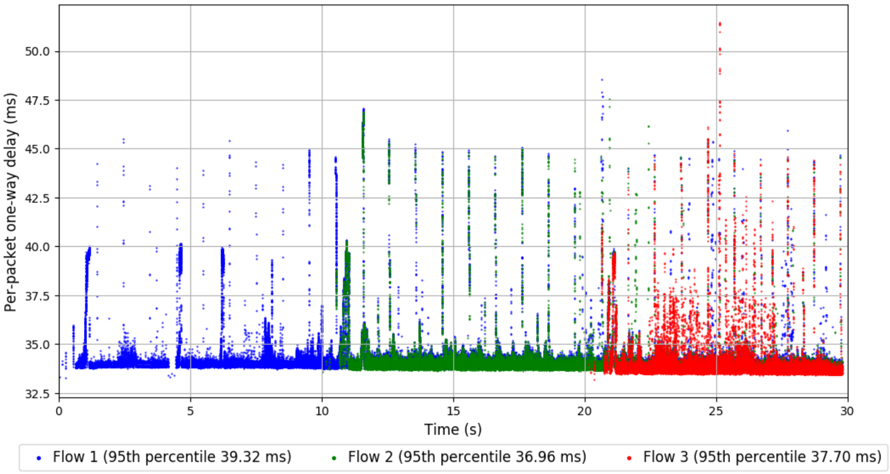
```
Run 6: Statistics of QUIC Cubic

Start at: 2018-03-21 05:34:22
End at: 2018-03-21 05:34:52
Local clock offset: -10.787 ms
Remote clock offset: -30.715 ms

# Below is generated by plot.py at 2018-03-21 07:56:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.98 Mbit/s
95th percentile per-packet one-way delay: 38.648 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 23.30 Mbit/s
95th percentile per-packet one-way delay: 39.322 ms
Loss rate: 1.65%
-- Flow 2:
Average throughput: 19.22 Mbit/s
95th percentile per-packet one-way delay: 36.959 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 27.44 Mbit/s
95th percentile per-packet one-way delay: 37.702 ms
Loss rate: 1.19%
```

Run 6: Report of QUIC Cubic — Data Link



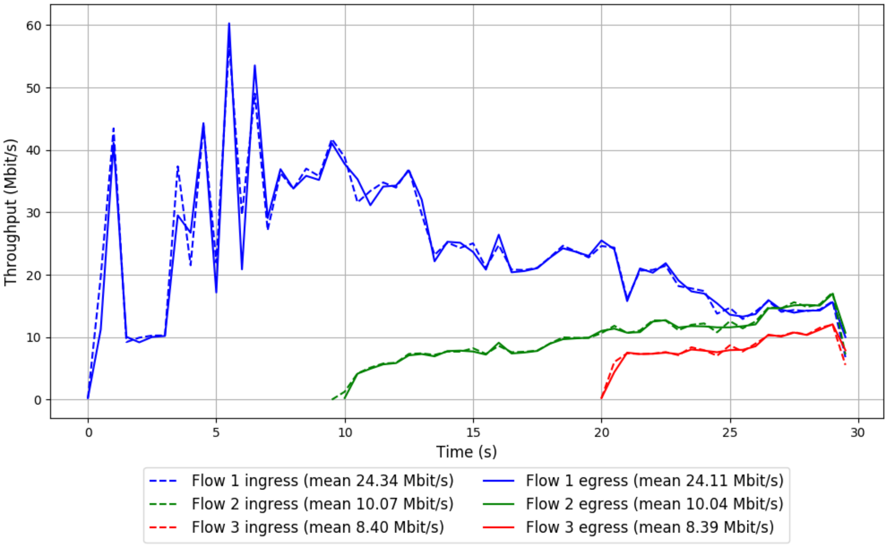


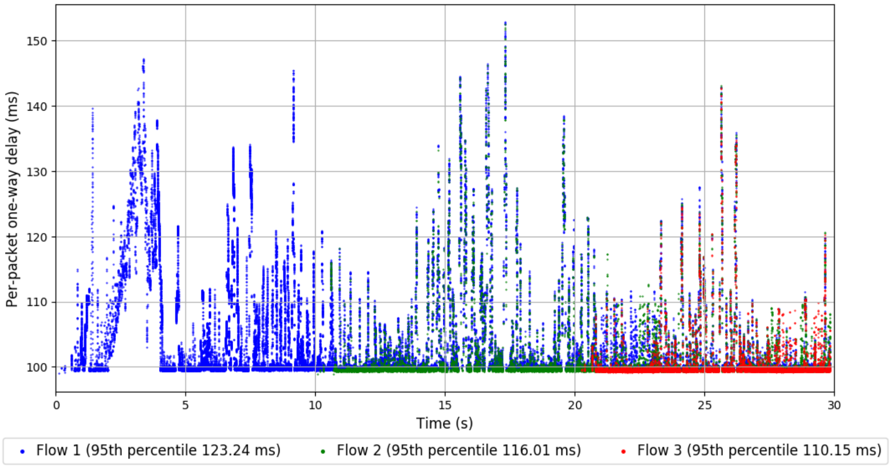
```
Run 7: Statistics of QUIC Cubic

Start at: 2018-03-21 05:57:12
End at: 2018-03-21 05:57:42
Local clock offset: -1.294 ms
Remote clock offset: 33.669 ms

# Below is generated by plot.py at 2018-03-21 07:56:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.51 Mbit/s
95th percentile per-packet one-way delay: 121.257 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 24.11 Mbit/s
95th percentile per-packet one-way delay: 123.236 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 10.04 Mbit/s
95th percentile per-packet one-way delay: 116.006 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 8.39 Mbit/s
95th percentile per-packet one-way delay: 110.148 ms
Loss rate: 0.17%
```

Run 7: Report of QUIC Cubic — Data Link



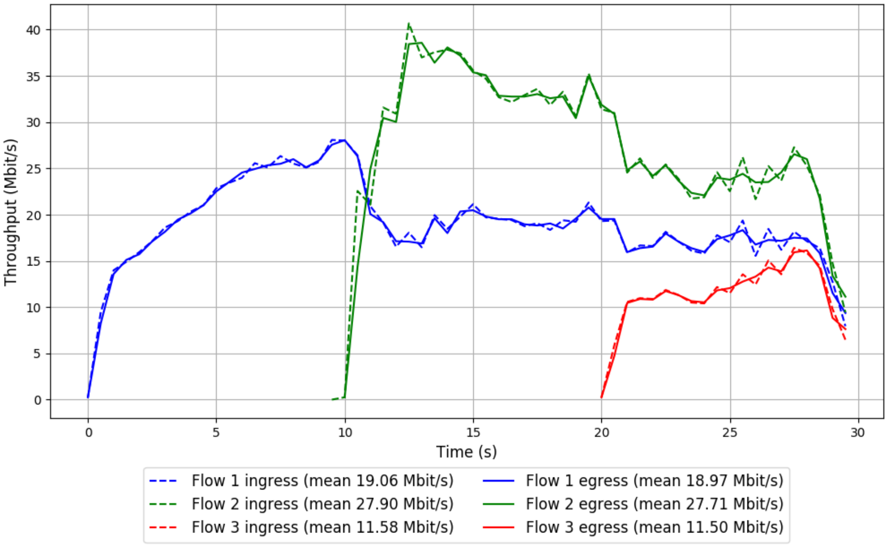


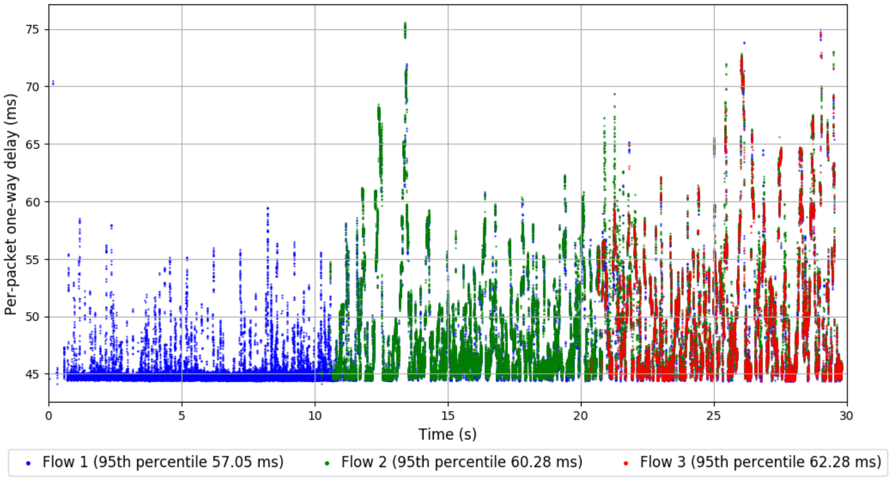
```
Run 8: Statistics of QUIC Cubic

Start at: 2018-03-21 06:20:32
End at: 2018-03-21 06:21:02
Local clock offset: 2.316 ms
Remote clock offset: -15.989 ms

# Below is generated by plot.py at 2018-03-21 07:56:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.10 Mbit/s
95th percentile per-packet one-way delay: 59.272 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 18.97 Mbit/s
95th percentile per-packet one-way delay: 57.051 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 27.71 Mbit/s
95th percentile per-packet one-way delay: 60.278 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 11.50 Mbit/s
95th percentile per-packet one-way delay: 62.280 ms
Loss rate: 0.78%
```

Run 8: Report of QUIC Cubic — Data Link



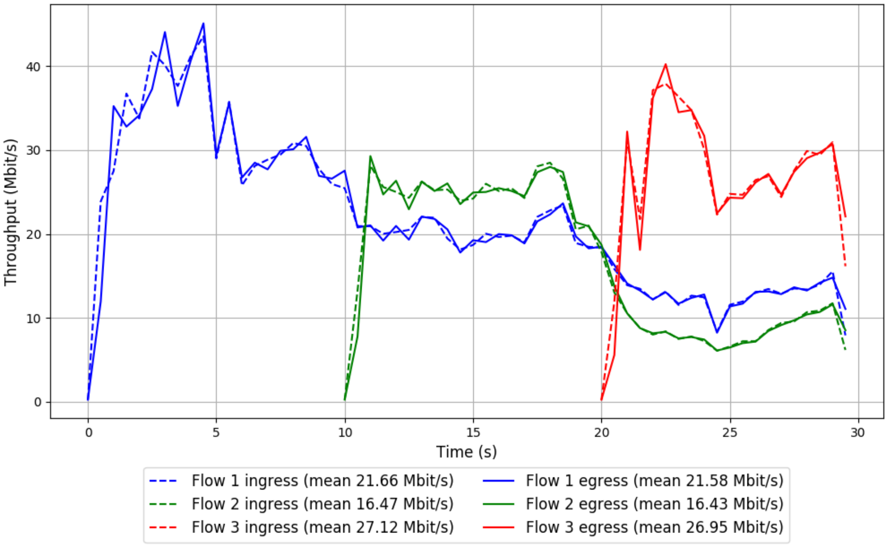


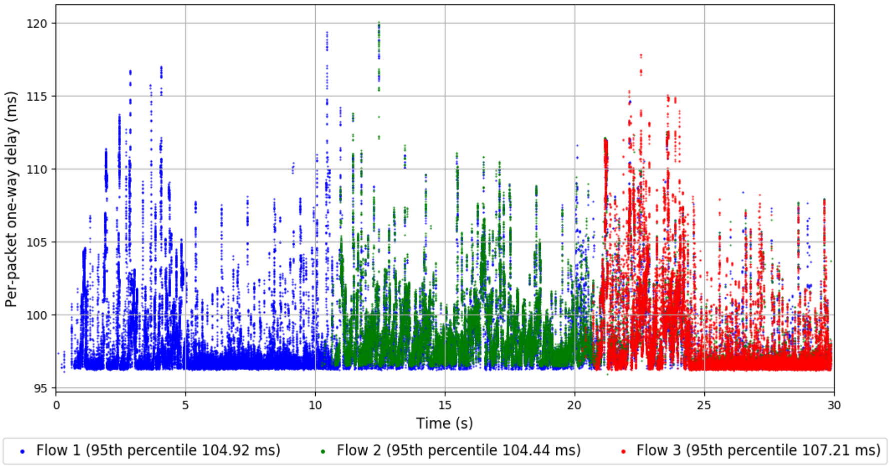
```
Run 9: Statistics of QUIC Cubic

Start at: 2018-03-21 06:45:05
End at: 2018-03-21 06:45:35
Local clock offset: 0.491 ms
Remote clock offset: 37.442 ms

# Below is generated by plot.py at 2018-03-21 07:56:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.22 Mbit/s
95th percentile per-packet one-way delay: 105.370 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 21.58 Mbit/s
95th percentile per-packet one-way delay: 104.925 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 16.43 Mbit/s
95th percentile per-packet one-way delay: 104.445 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 26.95 Mbit/s
95th percentile per-packet one-way delay: 107.212 ms
Loss rate: 0.62%
```

Run 9: Report of QUIC Cubic — Data Link



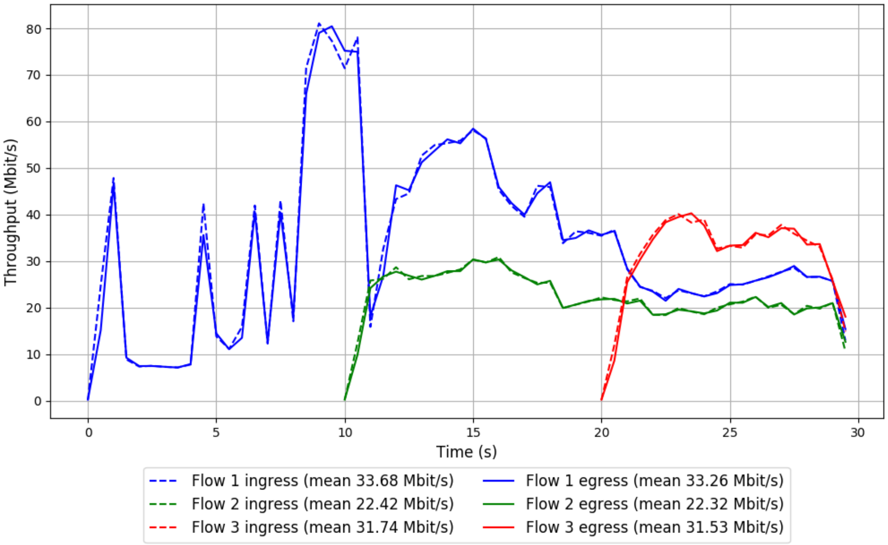


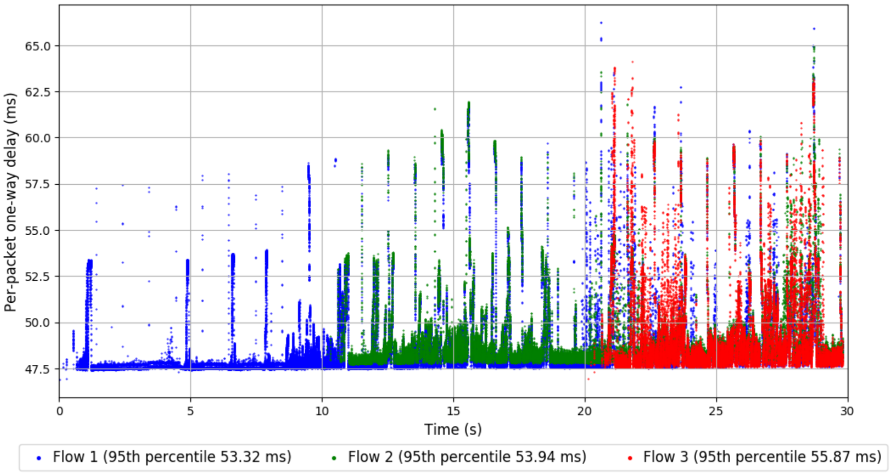
```
Run 10: Statistics of QUIC Cubic

Start at: 2018-03-21 07:07:53
End at: 2018-03-21 07:08:23
Local clock offset: 1.847 ms
Remote clock offset: -16.879 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.30 Mbit/s
95th percentile per-packet one-way delay: 53.657 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 33.26 Mbit/s
95th percentile per-packet one-way delay: 53.319 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 22.32 Mbit/s
95th percentile per-packet one-way delay: 53.941 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 31.53 Mbit/s
95th percentile per-packet one-way delay: 55.869 ms
Loss rate: 0.65%
```

Run 10: Report of QUIC Cubic — Data Link



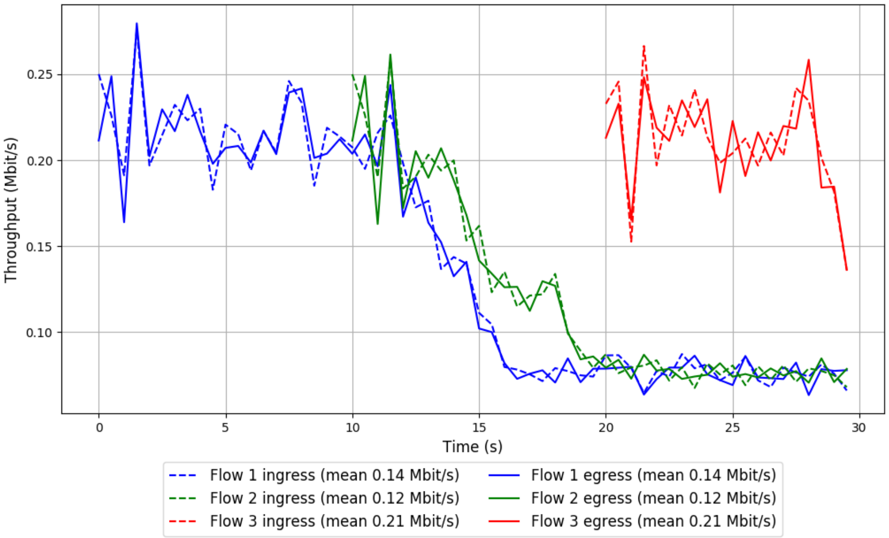


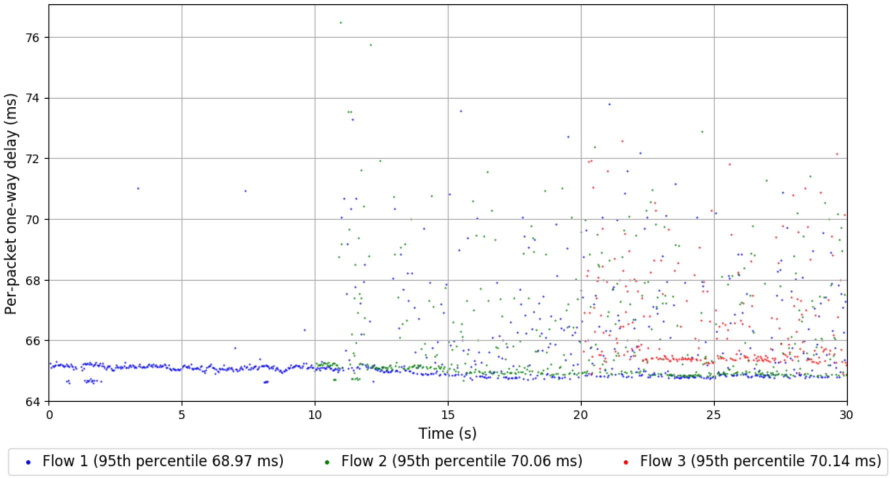
```
Run 1: Statistics of SCReAM

Start at: 2018-03-21 03:55:24
End at: 2018-03-21 03:55:54
Local clock offset: 12.396 ms
Remote clock offset: -0.63 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 69.719 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 68.969 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 70.057 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 70.144 ms
Loss rate: 0.72%
```

Run 1: Report of SCReAM — Data Link



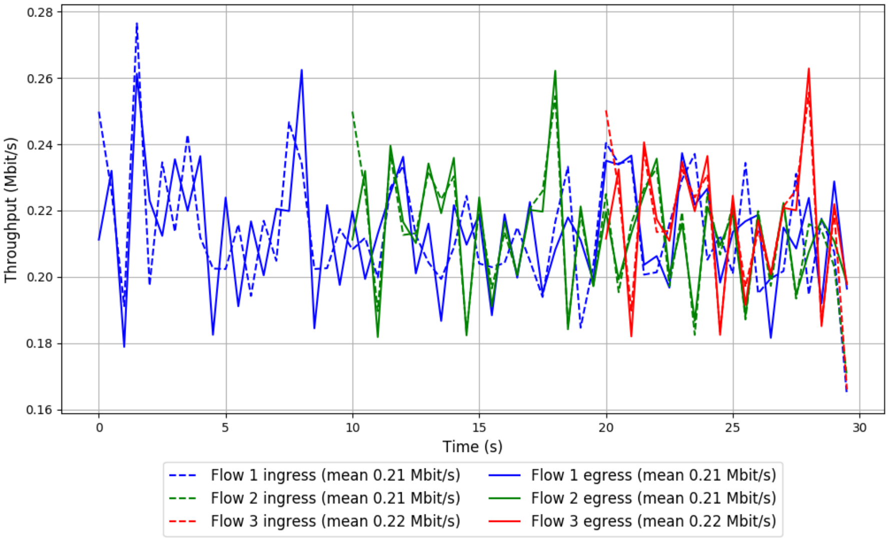


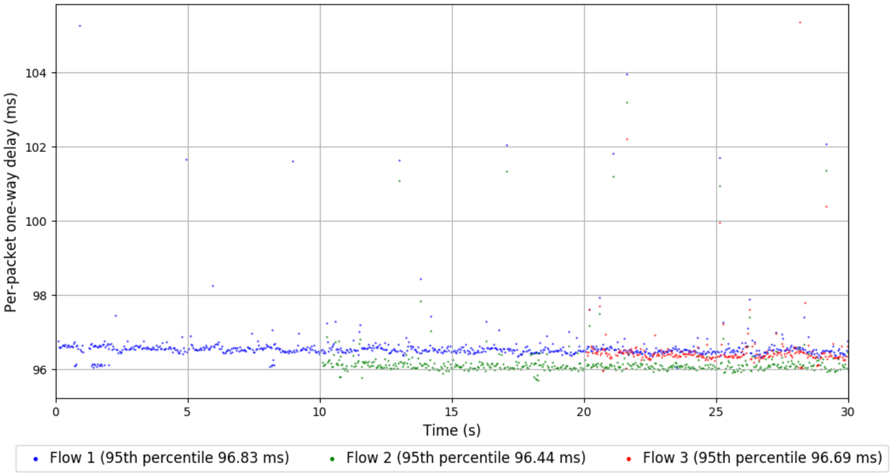
```
Run 2: Statistics of SCReAM

Start at: 2018-03-21 04:18:42
End at: 2018-03-21 04:19:12
Local clock offset: -4.724 ms
Remote clock offset: 26.953 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 96.758 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 96.834 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 96.437 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 96.694 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link



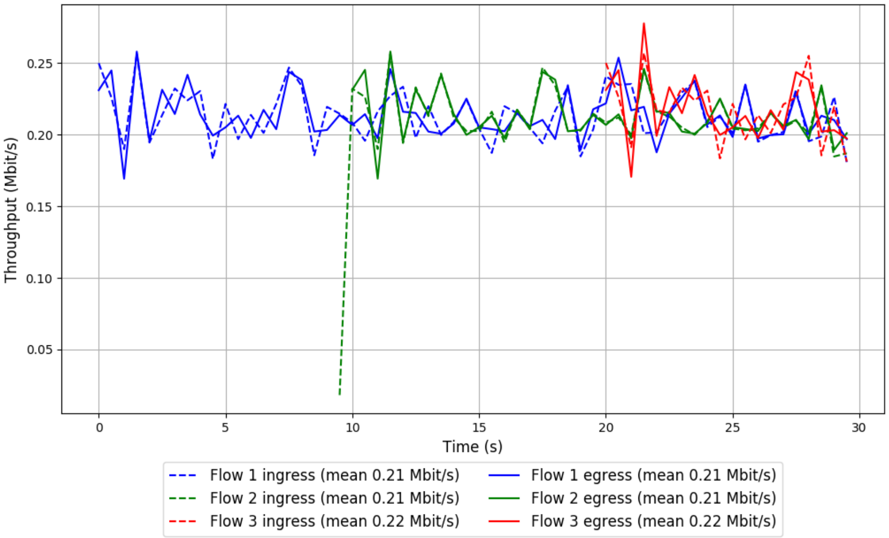


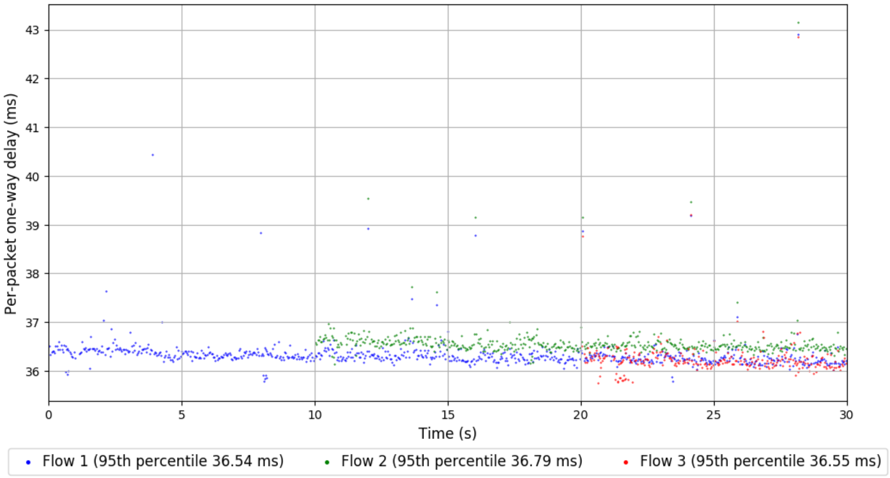
```
Run 3: Statistics of SCReAM

Start at: 2018-03-21 04:41:40
End at: 2018-03-21 04:42:10
Local clock offset: -6.844 ms
Remote clock offset: -37.613 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 36.711 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 36.537 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 36.794 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 36.546 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link



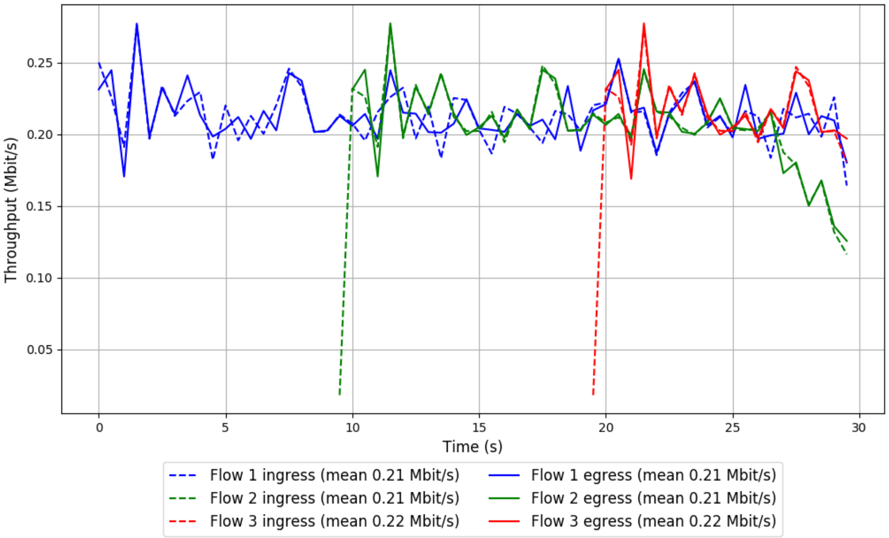


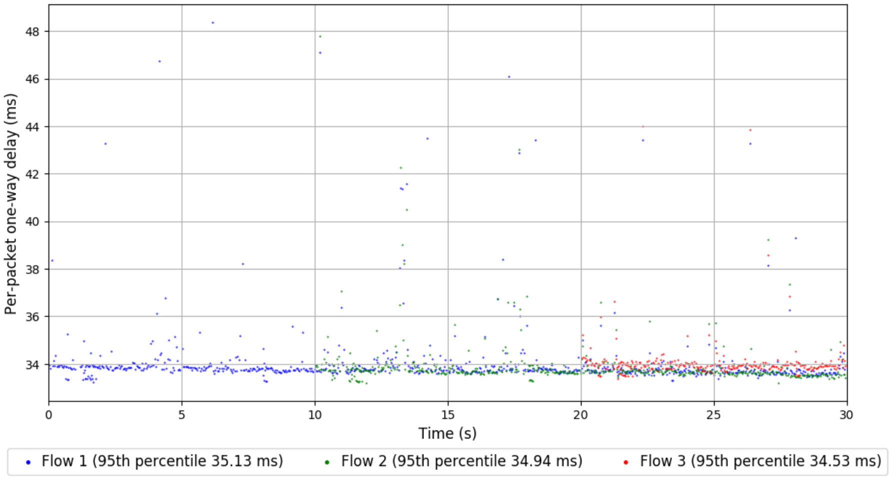
```
Run 4: Statistics of SCReAM

Start at: 2018-03-21 05:04:25
End at: 2018-03-21 05:04:55
Local clock offset: -3.834 ms
Remote clock offset: -32.276 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 34.974 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 35.131 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.939 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 34.527 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link



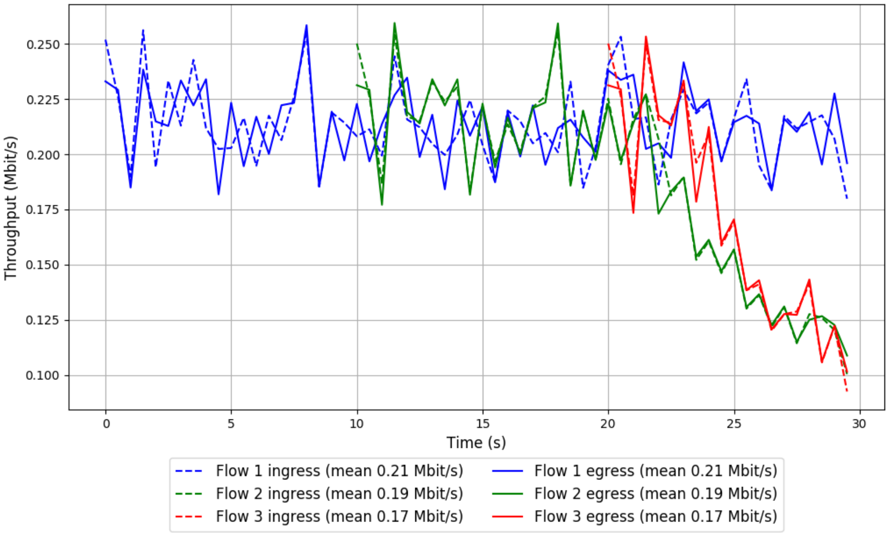


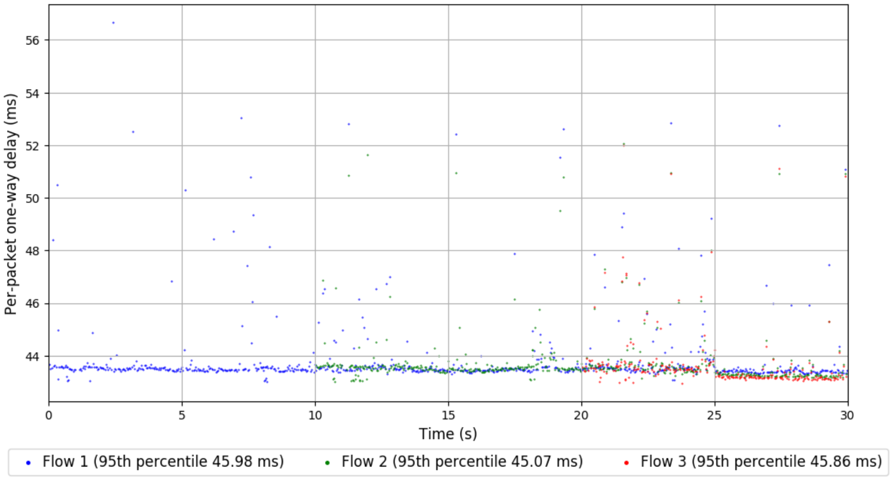
```
Run 5: Statistics of SCReAM

Start at: 2018-03-21 05:28:06
End at: 2018-03-21 05:28:36
Local clock offset: -10.138 ms
Remote clock offset: -21.487 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 45.768 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 45.978 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 45.073 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 45.857 ms
Loss rate: 0.51%
```

Run 5: Report of SCReAM — Data Link



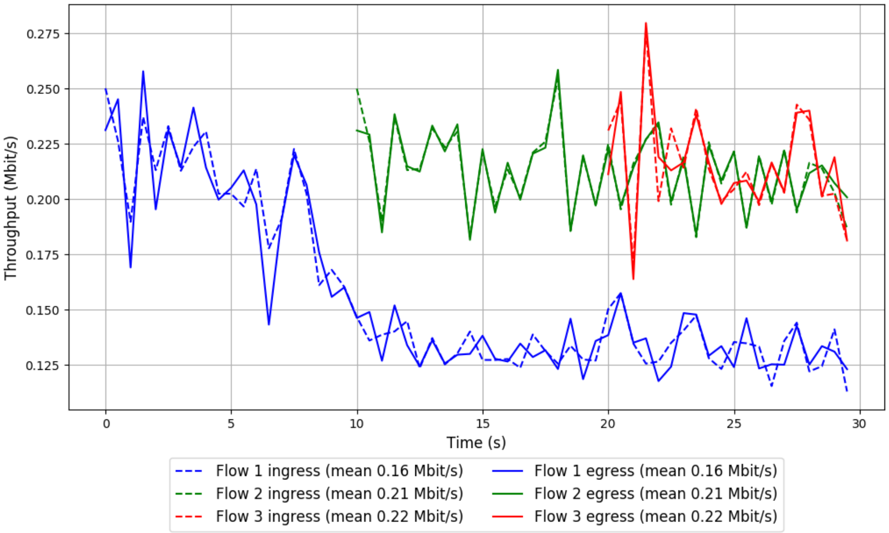


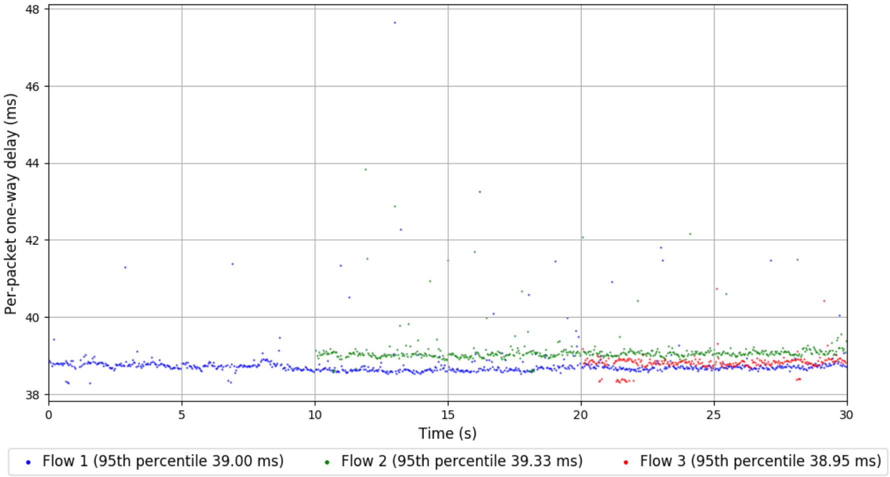
```
Run 6: Statistics of SCReAM

Start at: 2018-03-21 05:50:54
End at: 2018-03-21 05:51:24
Local clock offset: -1.241 ms
Remote clock offset: -25.26 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 39.185 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 38.996 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 39.333 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 38.945 ms
Loss rate: 0.00%
```

Run 6: Report of SCReAM — Data Link



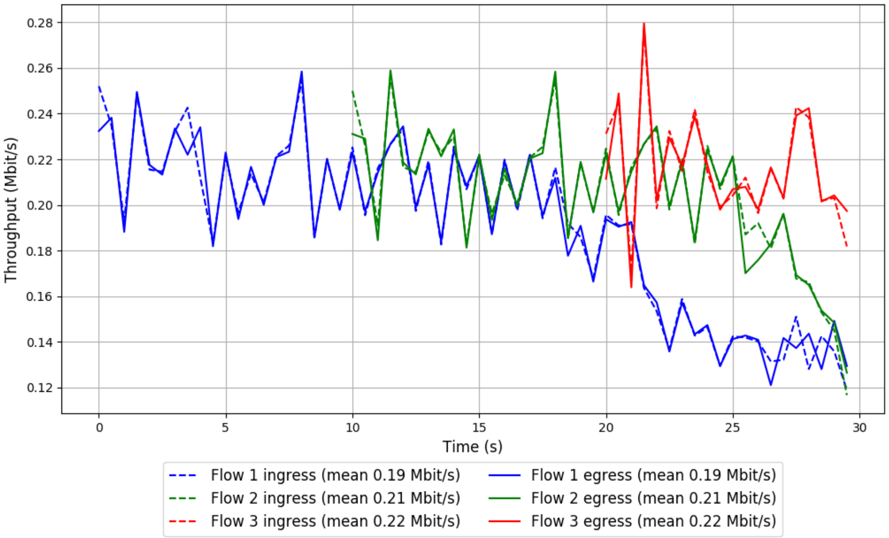


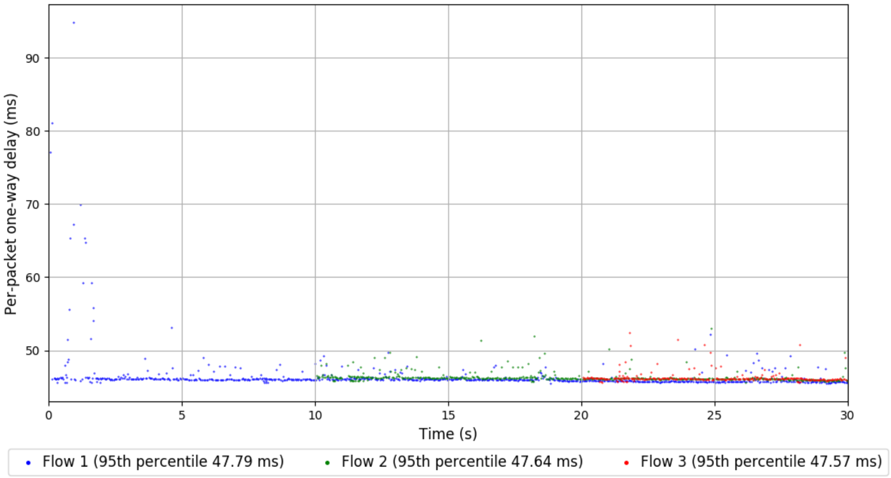
```
Run 7: Statistics of SCReAM

Start at: 2018-03-21 06:14:12
End at: 2018-03-21 06:14:42
Local clock offset: 4.22 ms
Remote clock offset: -14.867 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 47.696 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 47.793 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 47.637 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.573 ms
Loss rate: 0.00%
```

Run 7: Report of SCReAM — Data Link



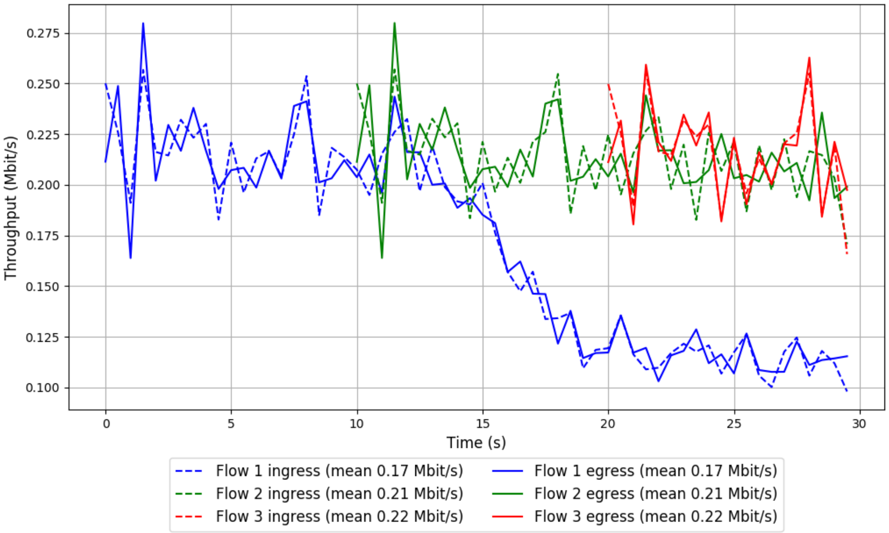


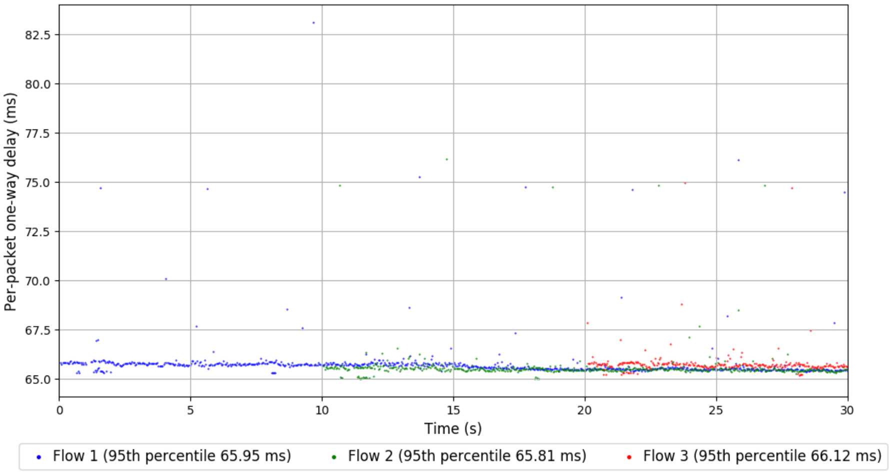
```
Run 8: Statistics of SCReAM

Start at: 2018-03-21 06:38:47
End at: 2018-03-21 06:39:17
Local clock offset: 0.095 ms
Remote clock offset: 5.641 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 65.953 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 65.953 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 65.807 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 66.121 ms
Loss rate: 0.00%
```

Run 8: Report of SCReAM — Data Link



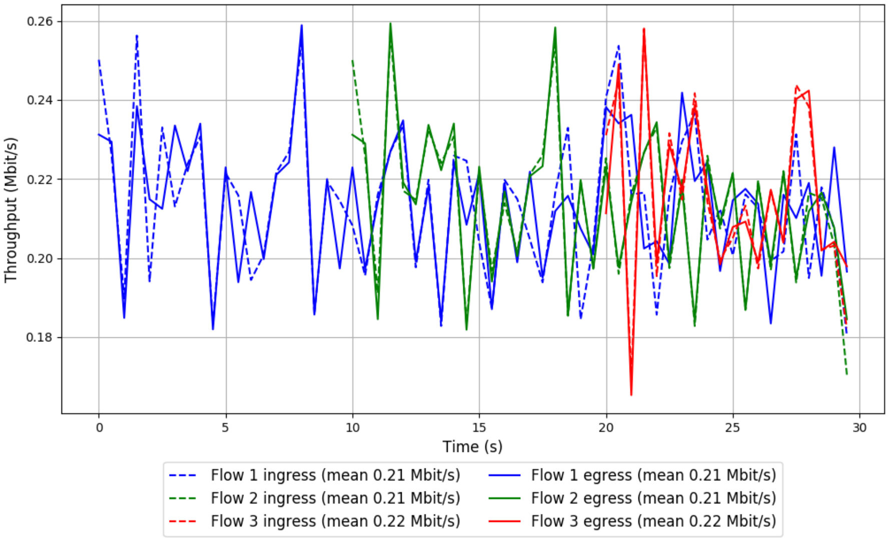


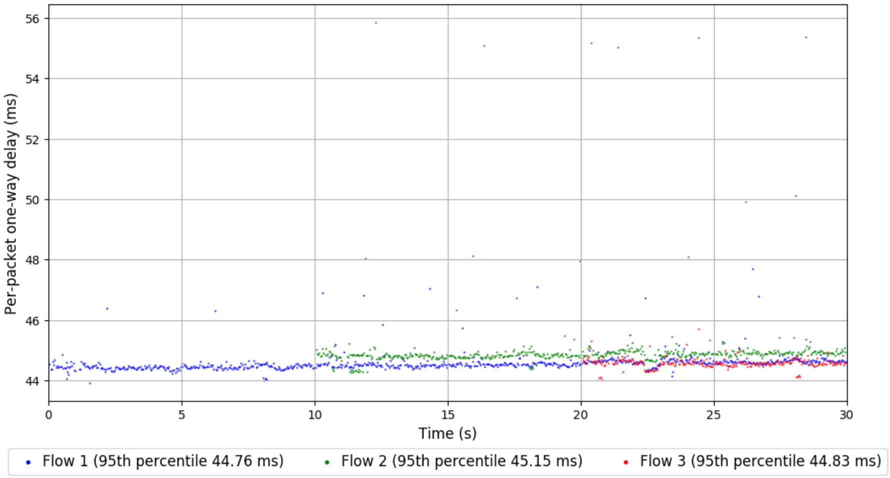
```
Run 9: Statistics of SCReAM

Start at: 2018-03-21 07:01:34
End at: 2018-03-21 07:02:04
Local clock offset: 1.216 ms
Remote clock offset: -17.769 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 45.041 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 44.763 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 45.149 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 44.826 ms
Loss rate: 0.00%
```

Run 9: Report of SCReAM — Data Link



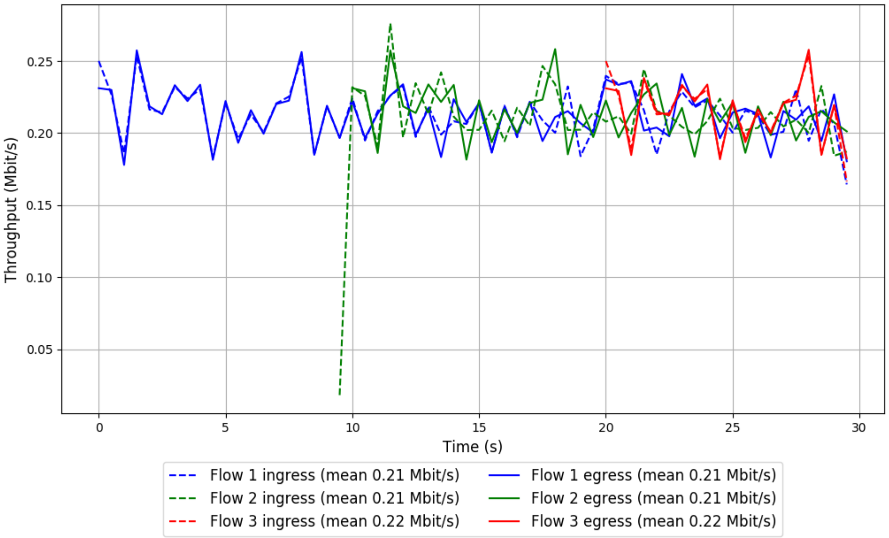


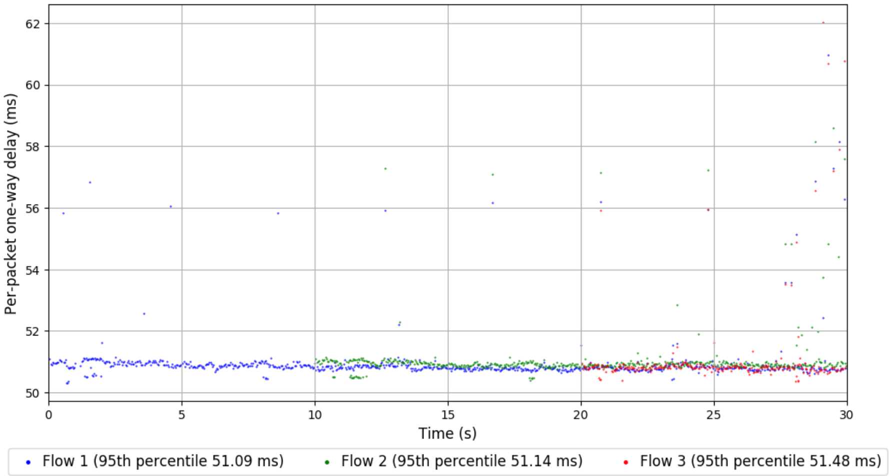
```
Run 10: Statistics of SCReAM

Start at: 2018-03-21 07:25:02
End at: 2018-03-21 07:25:32
Local clock offset: 0.696 ms
Remote clock offset: -16.452 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.114 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 51.095 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 51.137 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.478 ms
Loss rate: 0.00%
```

Run 10: Report of SCReAM — Data Link



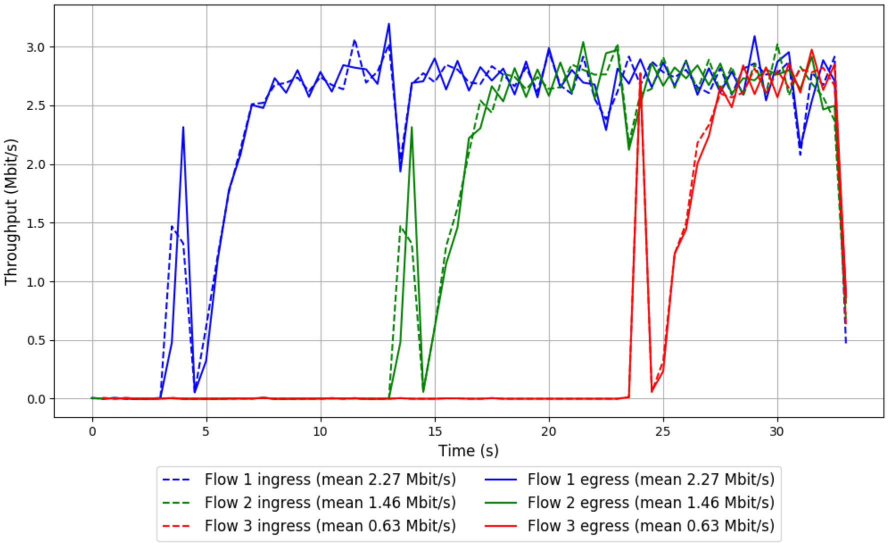


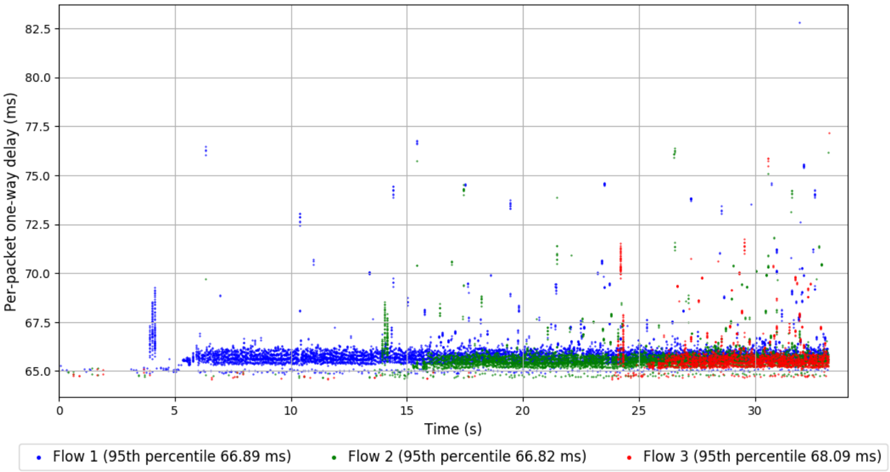
```
Run 1: Statistics of WebRTC media

Start at: 2018-03-21 03:49:00
End at: 2018-03-21 03:49:30
Local clock offset: 11.466 ms
Remote clock offset: -0.505 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.32 Mbit/s
95th percentile per-packet one-way delay: 67.055 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 66.889 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 66.824 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 68.092 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link



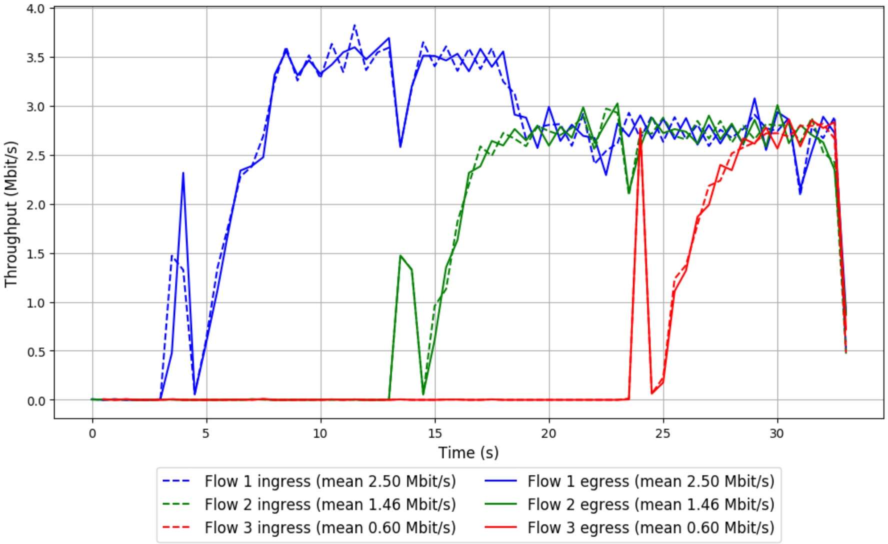


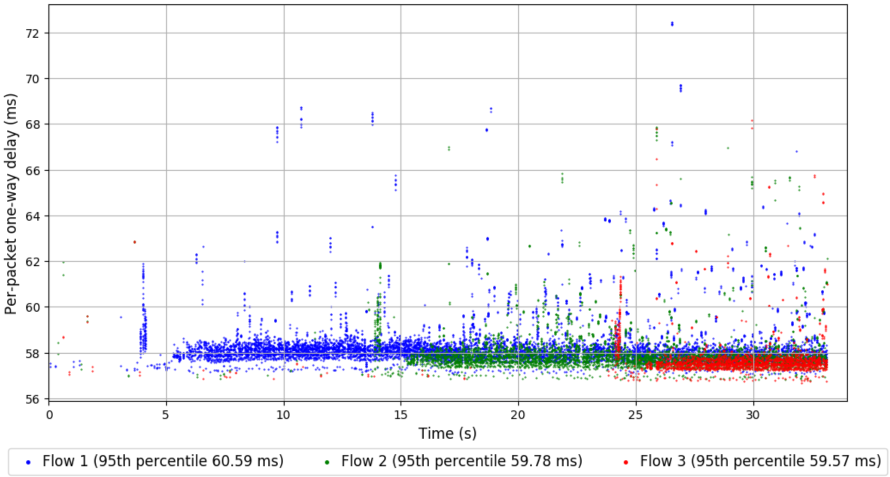
```
Run 2: Statistics of WebRTC media

Start at: 2018-03-21 04:12:18
End at: 2018-03-21 04:12:48
Local clock offset: -1.991 ms
Remote clock offset: -10.268 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 60.133 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 2.50 Mbit/s
95th percentile per-packet one-way delay: 60.589 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 59.783 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 59.569 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link



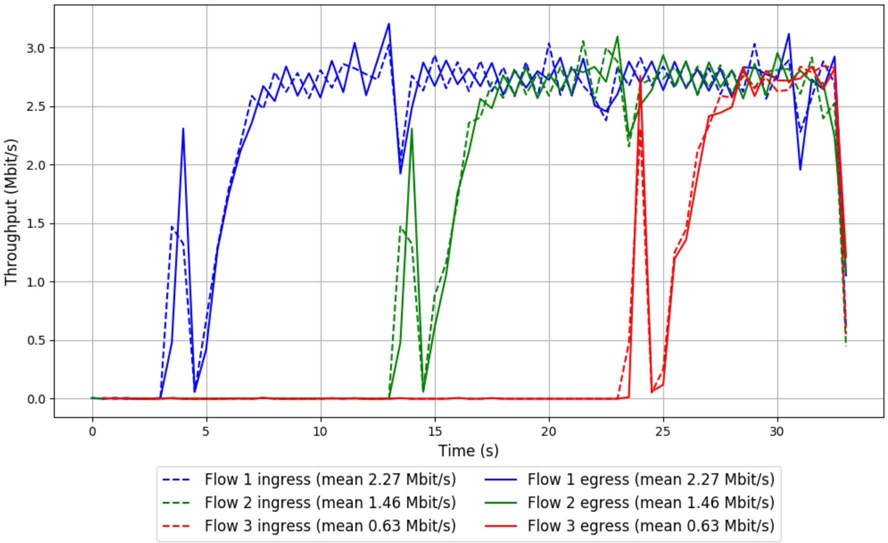


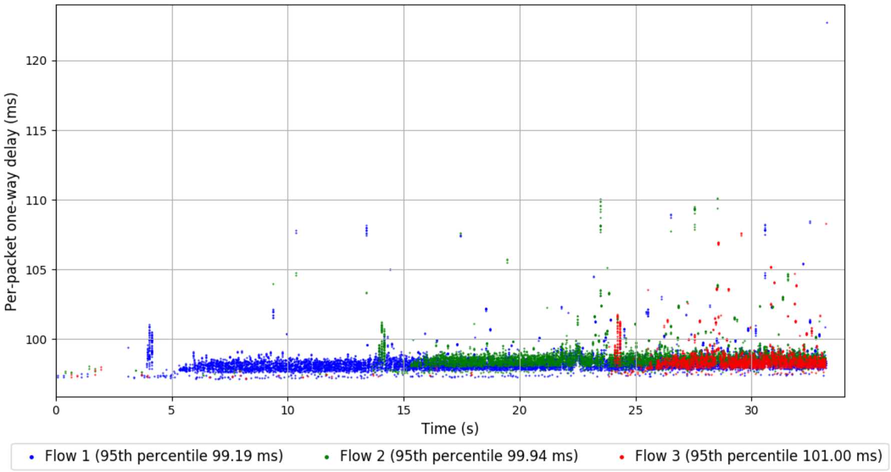
```
Run 3: Statistics of WebRTC media

Start at: 2018-03-21 04:35:12
End at: 2018-03-21 04:35:42
Local clock offset: -6.355 ms
Remote clock offset: 26.11 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.33 Mbit/s
95th percentile per-packet one-way delay: 99.703 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 99.194 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 99.941 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 101.002 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link



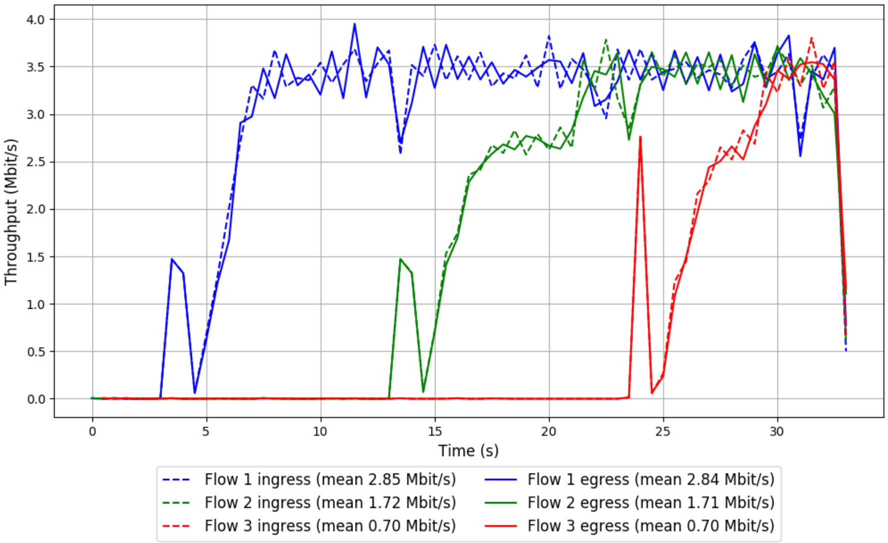


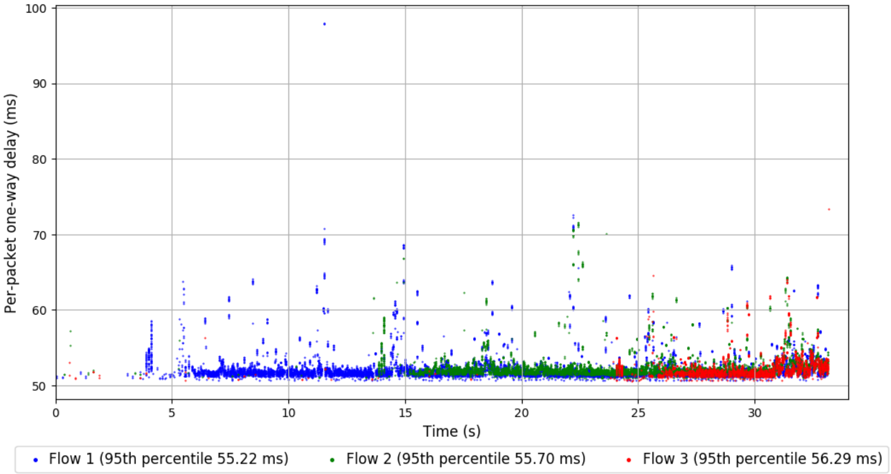
```
Run 4: Statistics of WebRTC media

Start at: 2018-03-21 04:58:01
End at: 2018-03-21 04:58:31
Local clock offset: -3.141 ms
Remote clock offset: -15.112 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.21 Mbit/s
95th percentile per-packet one-way delay: 55.477 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 55.219 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 55.702 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 56.289 ms
Loss rate: 0.25%
```

Run 4: Report of WebRTC media — Data Link



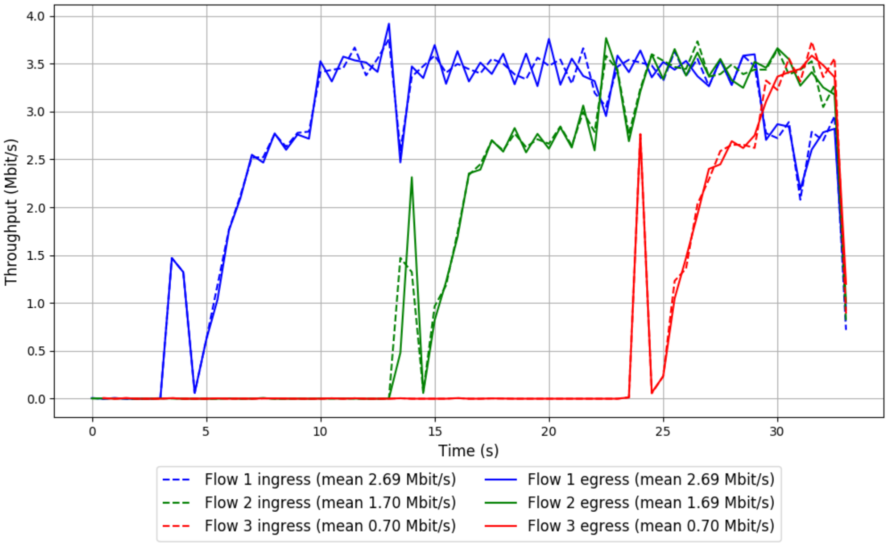


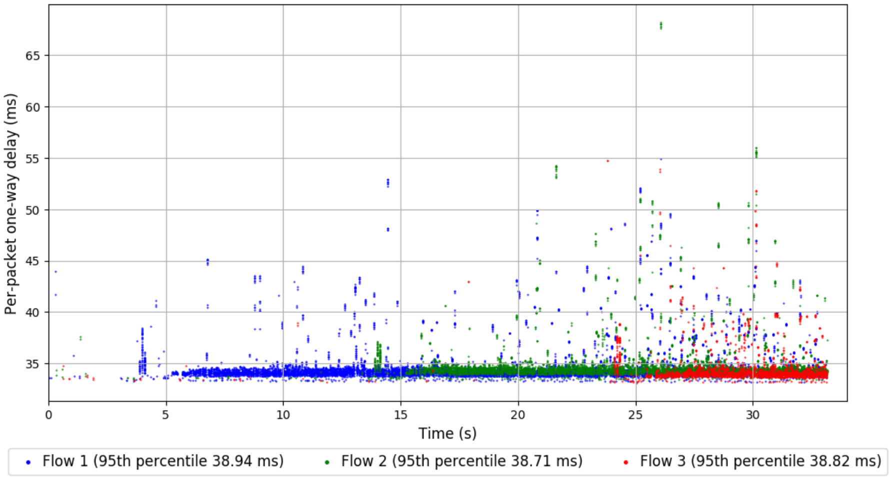
```
Run 5: Statistics of WebRTC media

Start at: 2018-03-21 05:21:41
End at: 2018-03-21 05:22:11
Local clock offset: -8.666 ms
Remote clock offset: -31.151 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.05 Mbit/s
95th percentile per-packet one-way delay: 38.883 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 2.69 Mbit/s
95th percentile per-packet one-way delay: 38.939 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 38.711 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 38.821 ms
Loss rate: 0.17%
```

Run 5: Report of WebRTC media — Data Link



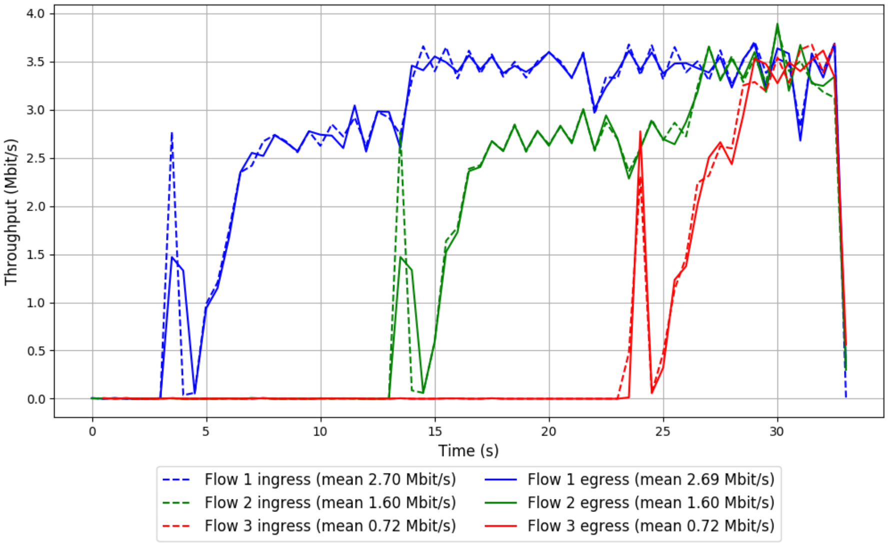


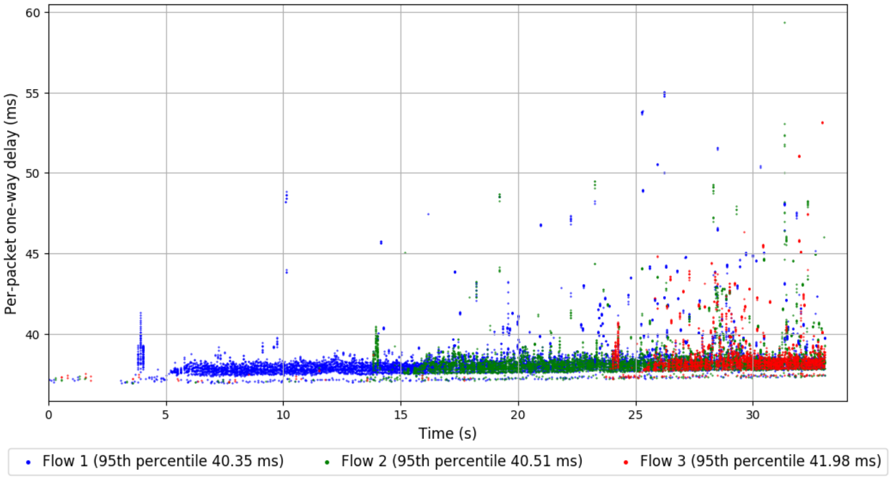
```
Run 6: Statistics of WebRTC media

Start at: 2018-03-21 05:44:28
End at: 2018-03-21 05:44:58
Local clock offset: -5.854 ms
Remote clock offset: -26.884 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.99 Mbit/s
95th percentile per-packet one-way delay: 40.808 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 2.69 Mbit/s
95th percentile per-packet one-way delay: 40.348 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 40.512 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 41.980 ms
Loss rate: 0.21%
```

Run 6: Report of WebRTC media — Data Link



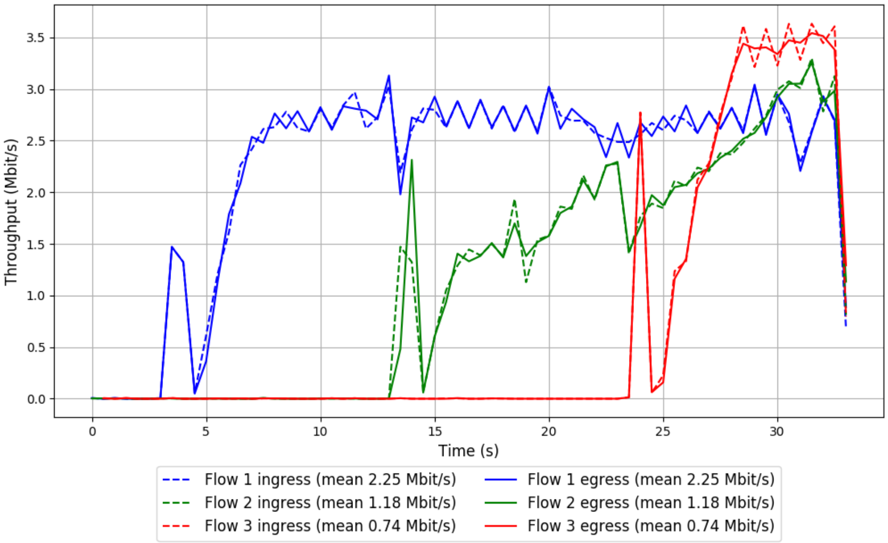


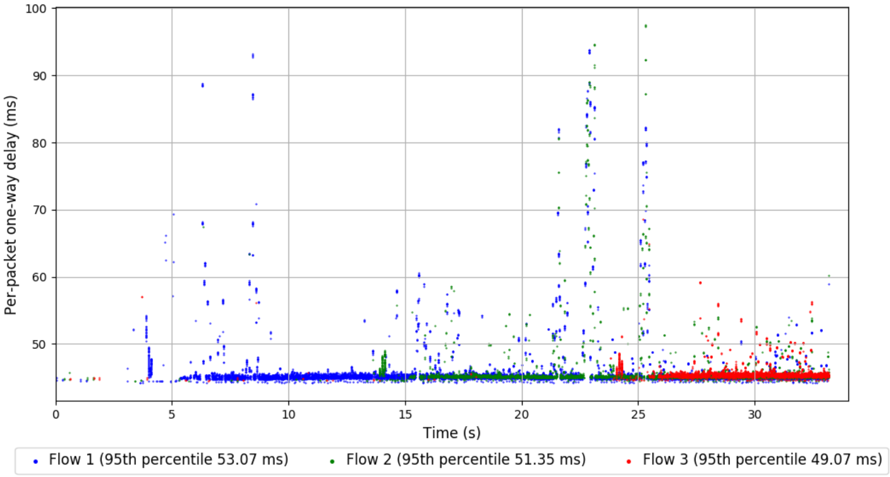
```
Run 7: Statistics of WebRTC media

Start at: 2018-03-21 06:07:15
End at: 2018-03-21 06:07:45
Local clock offset: 3.393 ms
Remote clock offset: -16.858 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.13 Mbit/s
95th percentile per-packet one-way delay: 51.547 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 53.072 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 51.346 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 49.074 ms
Loss rate: 0.09%
```

Run 7: Report of WebRTC media — Data Link



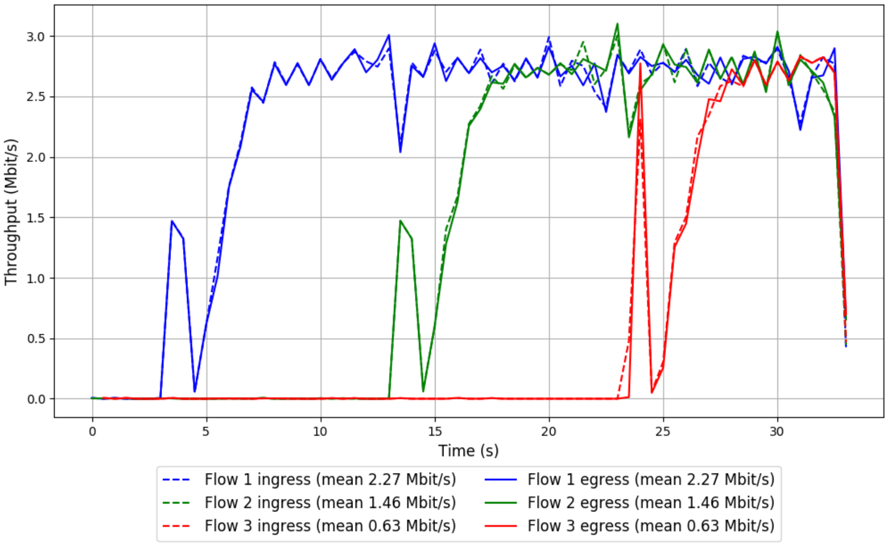


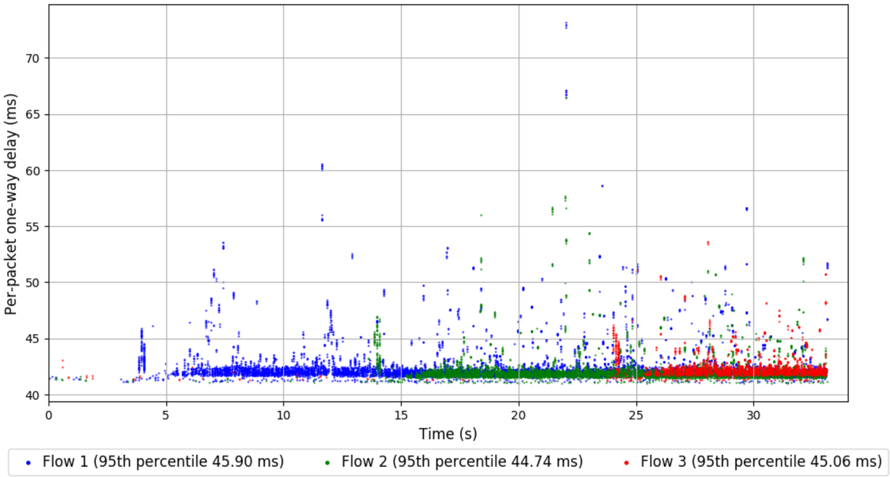
```
Run 8: Statistics of WebRTC media

Start at: 2018-03-21 06:32:23
End at: 2018-03-21 06:32:53
Local clock offset: 0.945 ms
Remote clock offset: -18.18 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.33 Mbit/s
95th percentile per-packet one-way delay: 45.345 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 45.895 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 44.740 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 45.061 ms
Loss rate: 0.00%
```

Run 8: Report of WebRTC media — Data Link



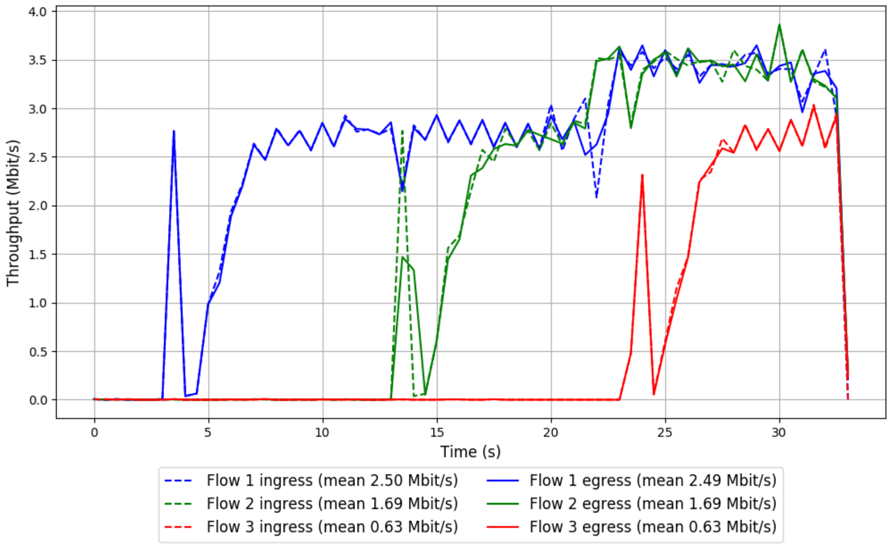


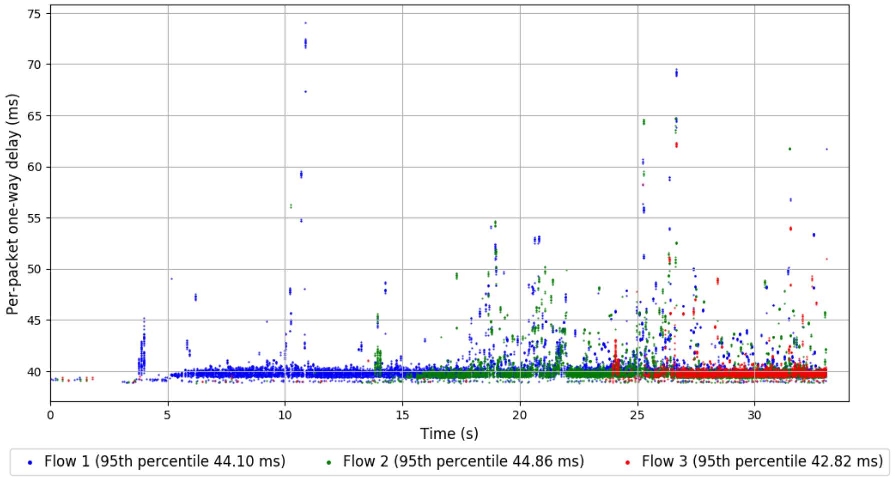
```
Run 9: Statistics of WebRTC media

Start at: 2018-03-21 06:55:09
End at: 2018-03-21 06:55:39
Local clock offset: -1.677 ms
Remote clock offset: -21.679 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 44.322 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 44.099 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 44.859 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 42.819 ms
Loss rate: 0.00%
```

Run 9: Report of WebRTC media — Data Link



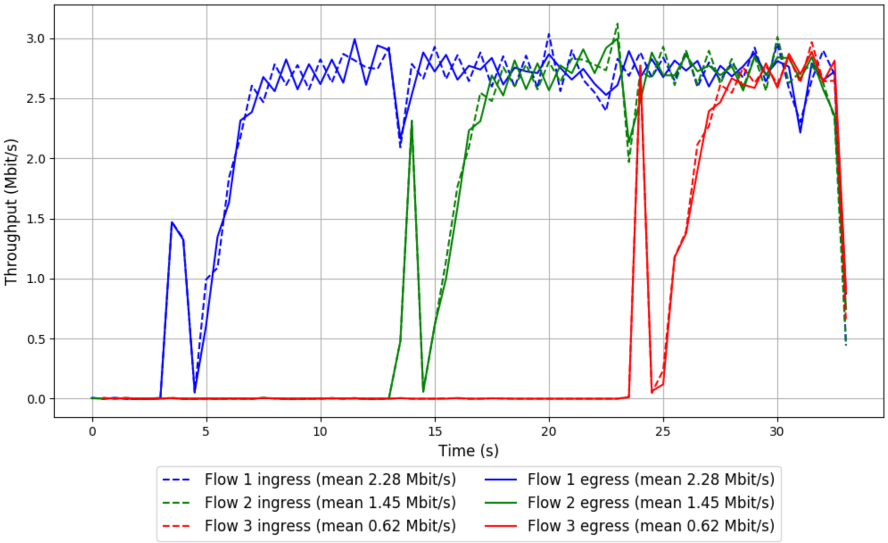


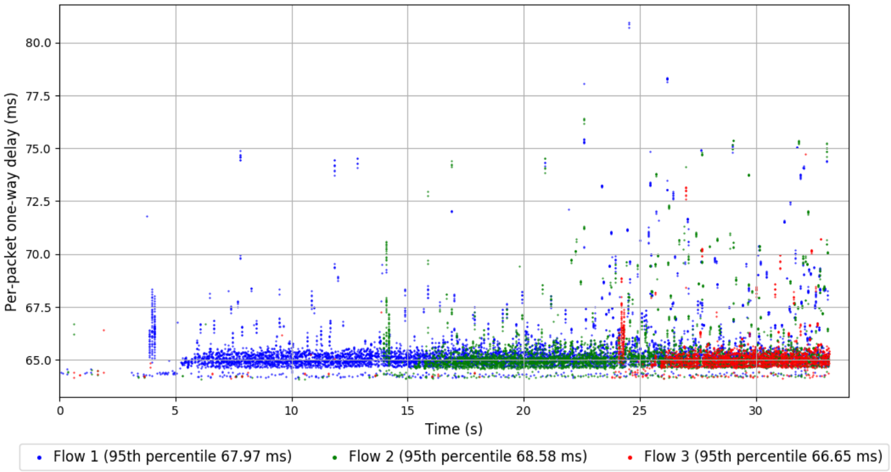
```
Run 10: Statistics of WebRTC media

Start at: 2018-03-21 07:18:38
End at: 2018-03-21 07:19:08
Local clock offset: 2.161 ms
Remote clock offset: -2.054 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.32 Mbit/s
95th percentile per-packet one-way delay: 68.048 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 67.973 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 68.578 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 66.650 ms
Loss rate: 0.05%
```

Run 10: Report of WebRTC media — Data Link



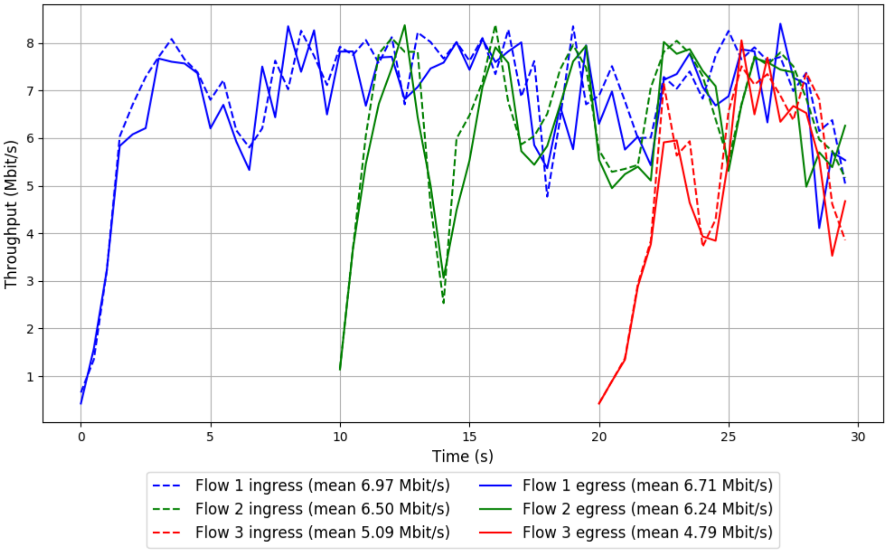


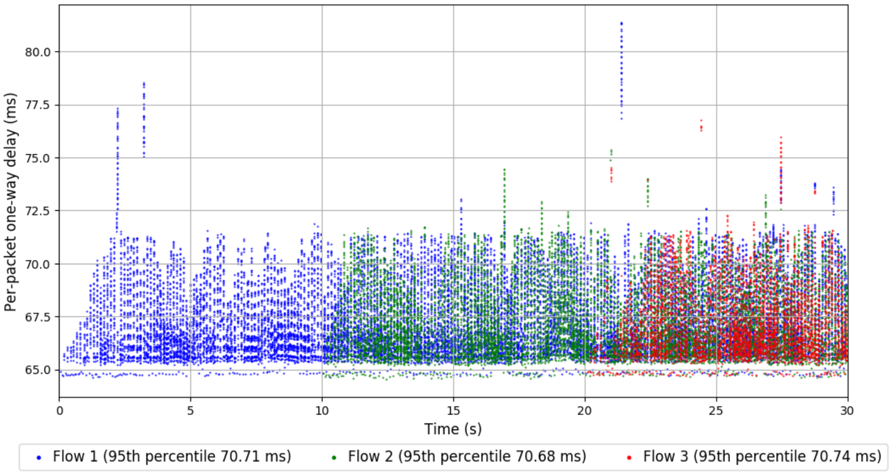
```
Run 1: Statistics of Sprout

Start at: 2018-03-21 03:44:04
End at: 2018-03-21 03:44:34
Local clock offset: 10.899 ms
Remote clock offset: -0.319 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.43 Mbit/s
95th percentile per-packet one-way delay: 70.704 ms
Loss rate: 4.11%
-- Flow 1:
Average throughput: 6.71 Mbit/s
95th percentile per-packet one-way delay: 70.707 ms
Loss rate: 3.75%
-- Flow 2:
Average throughput: 6.24 Mbit/s
95th percentile per-packet one-way delay: 70.677 ms
Loss rate: 3.99%
-- Flow 3:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 70.742 ms
Loss rate: 5.89%
```

Run 1: Report of Sprout — Data Link





Run 2: Statistics of Sprout

/home/ubuntu/pantheon_data/2018-03-21T03-34-AWS-Korea-to-China-10-runs-3-flows/sprout_stats_

Run 2: Report of Sprout — Data Link

Figure is missing

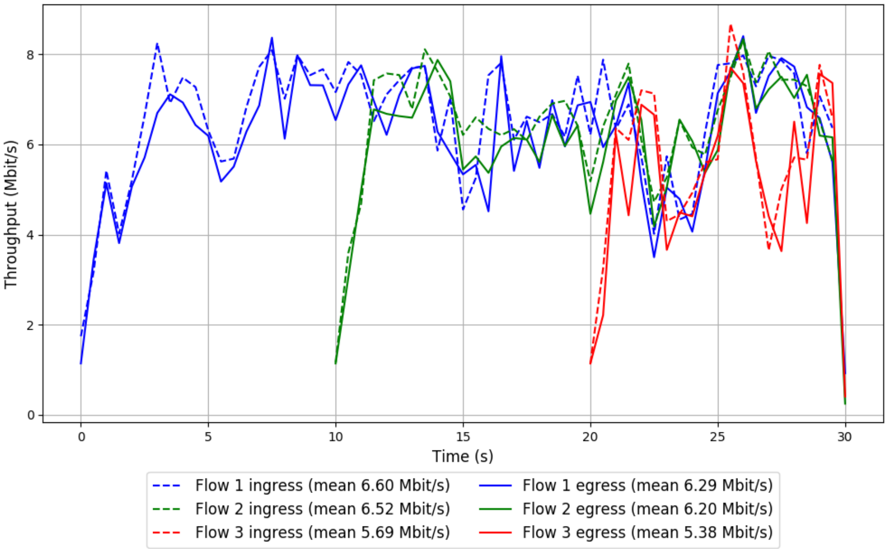
Figure is missing

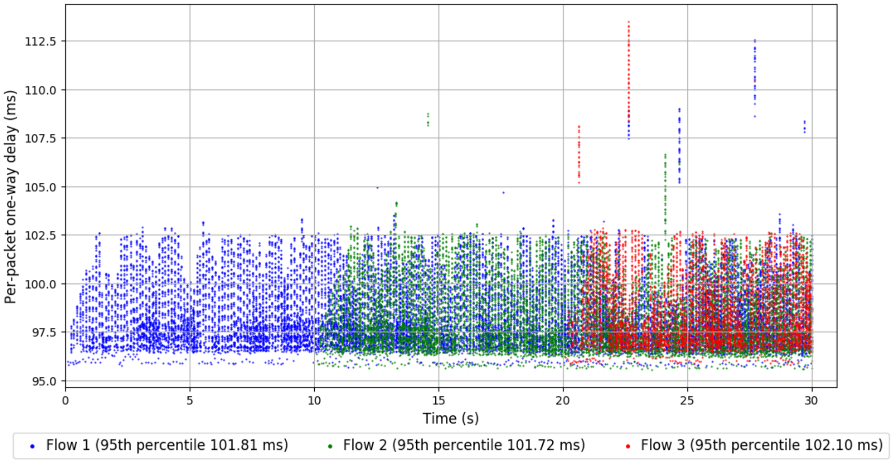
```
Run 3: Statistics of Sprout

Start at: 2018-03-21 04:30:14
End at: 2018-03-21 04:30:44
Local clock offset: -8.258 ms
Remote clock offset: 25.444 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.19 Mbit/s
95th percentile per-packet one-way delay: 101.842 ms
Loss rate: 4.85%
-- Flow 1:
Average throughput: 6.29 Mbit/s
95th percentile per-packet one-way delay: 101.812 ms
Loss rate: 4.66%
-- Flow 2:
Average throughput: 6.20 Mbit/s
95th percentile per-packet one-way delay: 101.725 ms
Loss rate: 4.93%
-- Flow 3:
Average throughput: 5.38 Mbit/s
95th percentile per-packet one-way delay: 102.104 ms
Loss rate: 5.33%
```

Run 3: Report of Sprout — Data Link



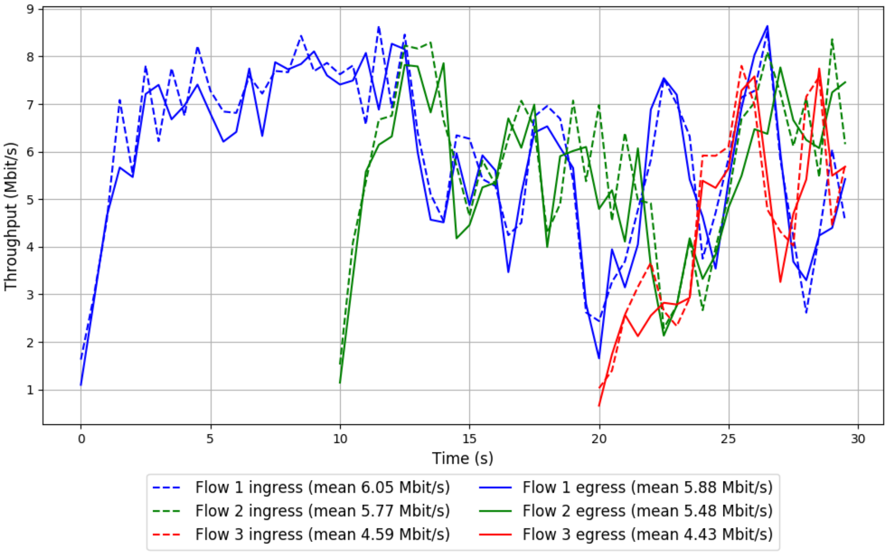


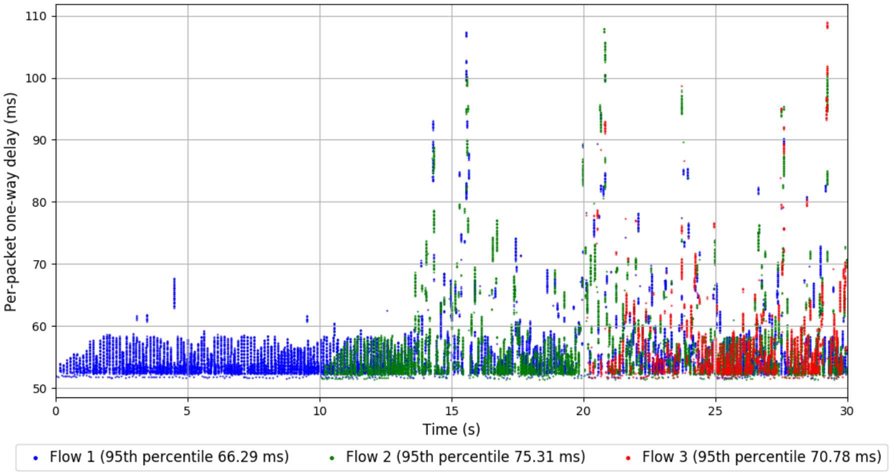
```
Run 4: Statistics of Sprout

Start at: 2018-03-21 04:53:06
End at: 2018-03-21 04:53:36
Local clock offset: -3.033 ms
Remote clock offset: -15.311 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.98 Mbit/s
95th percentile per-packet one-way delay: 70.346 ms
Loss rate: 3.62%
-- Flow 1:
Average throughput: 5.88 Mbit/s
95th percentile per-packet one-way delay: 66.290 ms
Loss rate: 2.76%
-- Flow 2:
Average throughput: 5.48 Mbit/s
95th percentile per-packet one-way delay: 75.306 ms
Loss rate: 4.90%
-- Flow 3:
Average throughput: 4.43 Mbit/s
95th percentile per-packet one-way delay: 70.780 ms
Loss rate: 3.79%
```

Run 4: Report of Sprout — Data Link



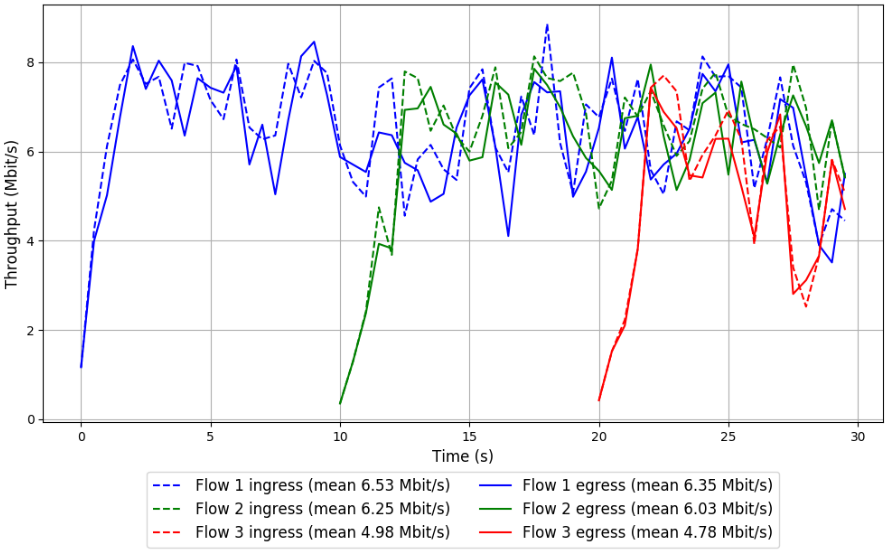


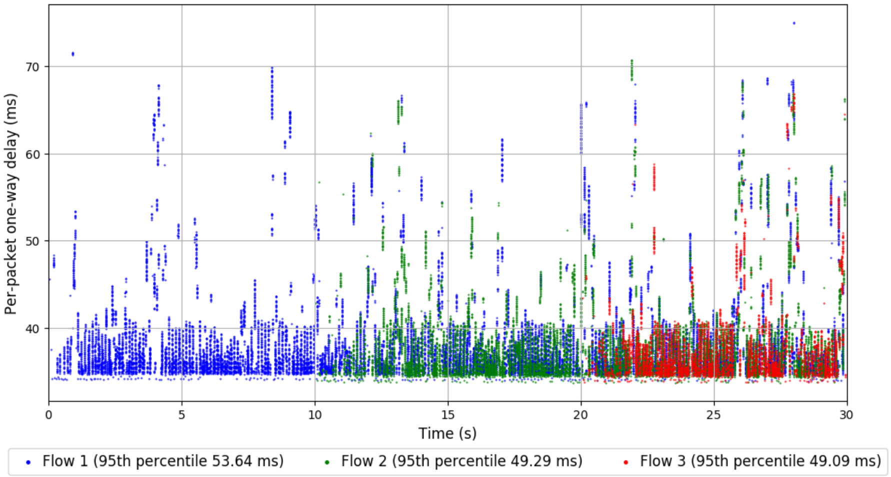
```
Run 5: Statistics of Sprout

Start at: 2018-03-21 05:16:43
End at: 2018-03-21 05:17:13
Local clock offset: -7.356 ms
Remote clock offset: -30.469 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.94 Mbit/s
95th percentile per-packet one-way delay: 51.601 ms
Loss rate: 3.15%
-- Flow 1:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 53.636 ms
Loss rate: 2.73%
-- Flow 2:
Average throughput: 6.03 Mbit/s
95th percentile per-packet one-way delay: 49.291 ms
Loss rate: 3.40%
-- Flow 3:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 49.090 ms
Loss rate: 4.19%
```

Run 5: Report of Sprout — Data Link



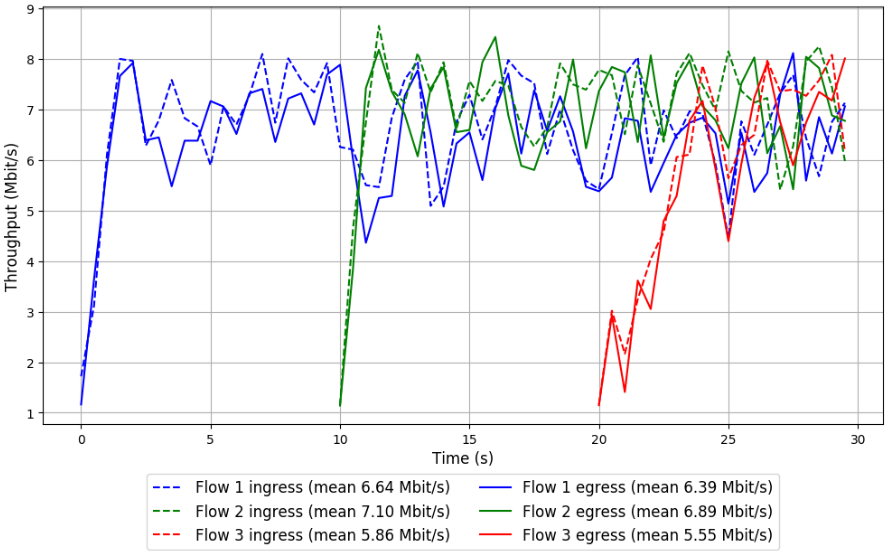


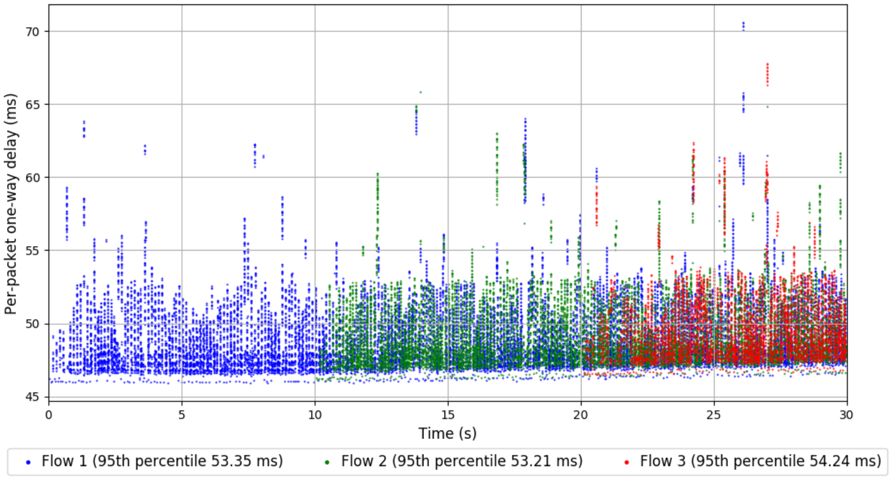
```
Run 6: Statistics of Sprout

Start at: 2018-03-21 05:39:31
End at: 2018-03-21 05:40:01
Local clock offset: -12.048 ms
Remote clock offset: -17.854 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.81 Mbit/s
95th percentile per-packet one-way delay: 53.378 ms
Loss rate: 3.67%
-- Flow 1:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 53.352 ms
Loss rate: 3.74%
-- Flow 2:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 53.207 ms
Loss rate: 2.89%
-- Flow 3:
Average throughput: 5.55 Mbit/s
95th percentile per-packet one-way delay: 54.245 ms
Loss rate: 5.29%
```

Run 6: Report of Sprout — Data Link



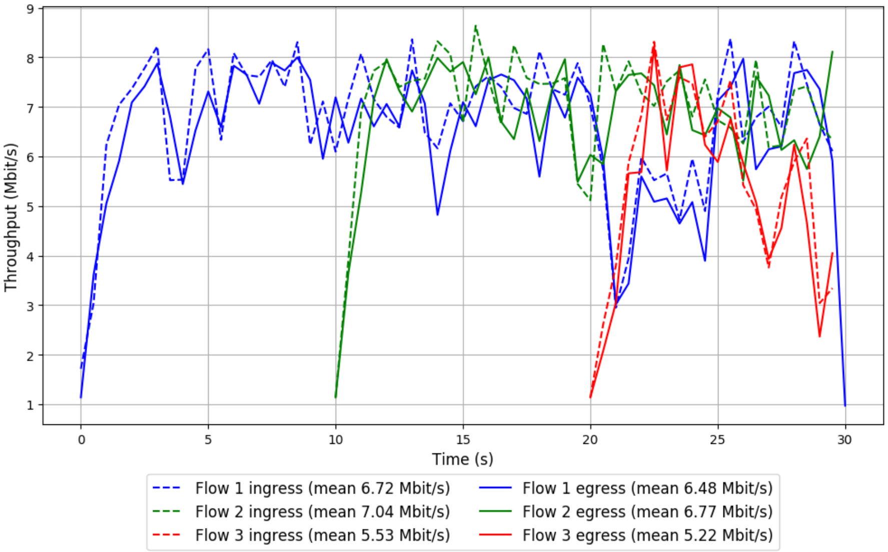


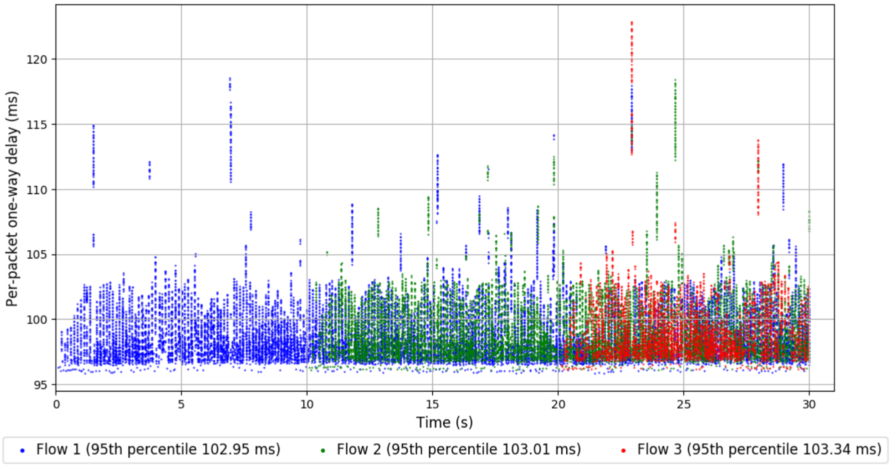
```
Run 7: Statistics of Sprout

Start at: 2018-03-21 06:02:19
End at: 2018-03-21 06:02:49
Local clock offset: 2.635 ms
Remote clock offset: 34.26 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.70 Mbit/s
95th percentile per-packet one-way delay: 103.022 ms
Loss rate: 3.97%
-- Flow 1:
Average throughput: 6.48 Mbit/s
95th percentile per-packet one-way delay: 102.951 ms
Loss rate: 3.61%
-- Flow 2:
Average throughput: 6.77 Mbit/s
95th percentile per-packet one-way delay: 103.012 ms
Loss rate: 3.84%
-- Flow 3:
Average throughput: 5.22 Mbit/s
95th percentile per-packet one-way delay: 103.342 ms
Loss rate: 5.61%
```

Run 7: Report of Sprout — Data Link





Run 8: Statistics of Sprout

/home/ubuntu/pantheon_data/2018-03-21T03-34-AWS-Korea-to-China-10-runs-3-flows/sprout_stats_

Run 8: Report of Sprout — Data Link

Figure is missing

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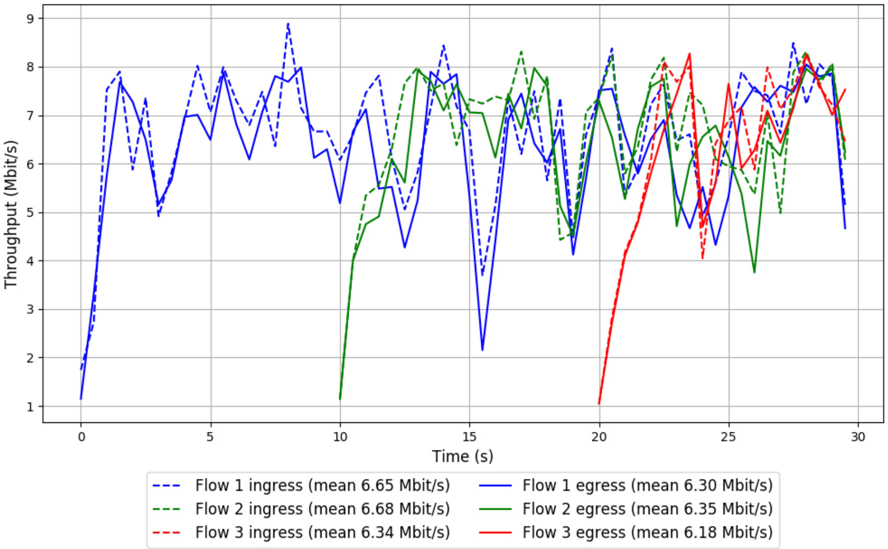
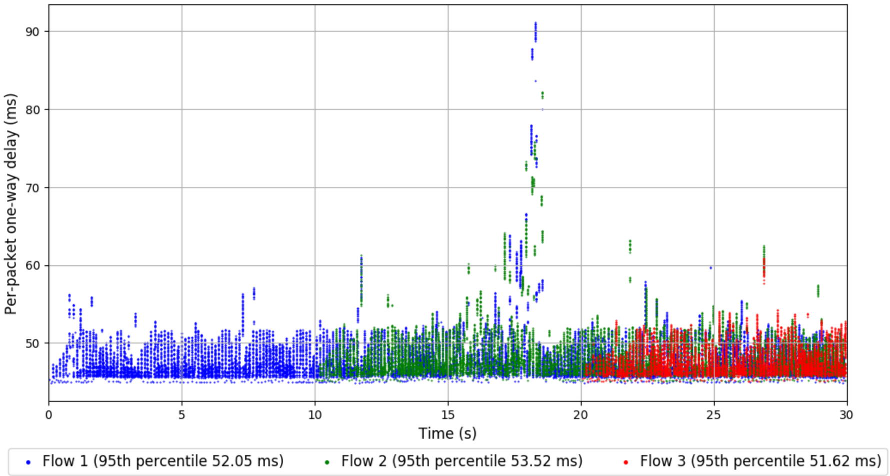
```
Run 9: Statistics of Sprout

Start at: 2018-03-21 06:50:12
End at: 2018-03-21 06:50:42
Local clock offset: -1.99 ms
Remote clock offset: -15.895 ms

# Below is generated by plot.py at 2018-03-21 07:57:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.56 Mbit/s
95th percentile per-packet one-way delay: 52.280 ms
Loss rate: 4.75%
-- Flow 1:
Average throughput: 6.30 Mbit/s
95th percentile per-packet one-way delay: 52.045 ms
Loss rate: 5.35%
-- Flow 2:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 53.516 ms
Loss rate: 4.90%
-- Flow 3:
Average throughput: 6.18 Mbit/s
95th percentile per-packet one-way delay: 51.615 ms
Loss rate: 2.56%
```

Run 9: Report of Sprout — Data Link





Run 10: Statistics of Sprout

/home/ubuntu/pantheon_data/2018-03-21T03-34-AWS-Korea-to-China-10-runs-3-flows/sprout_stats_

Run 10: Report of Sprout — Data Link

Figure is missing

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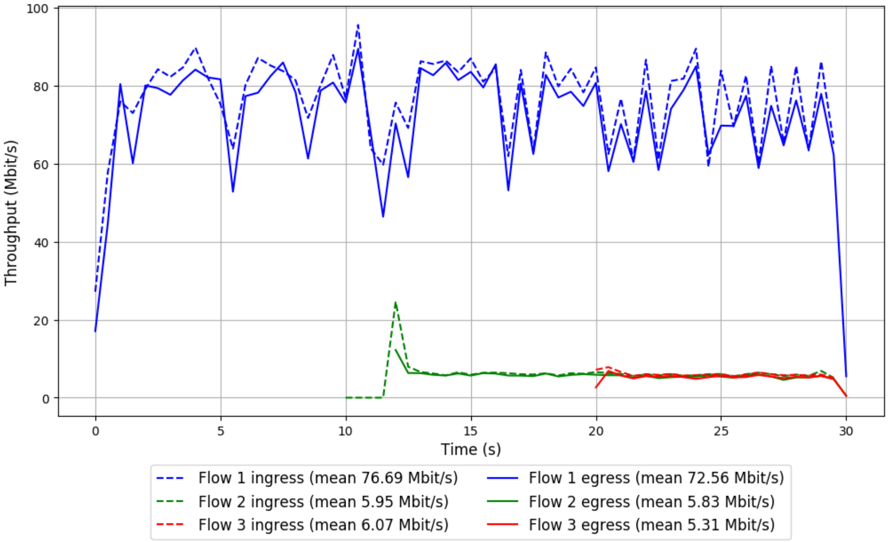
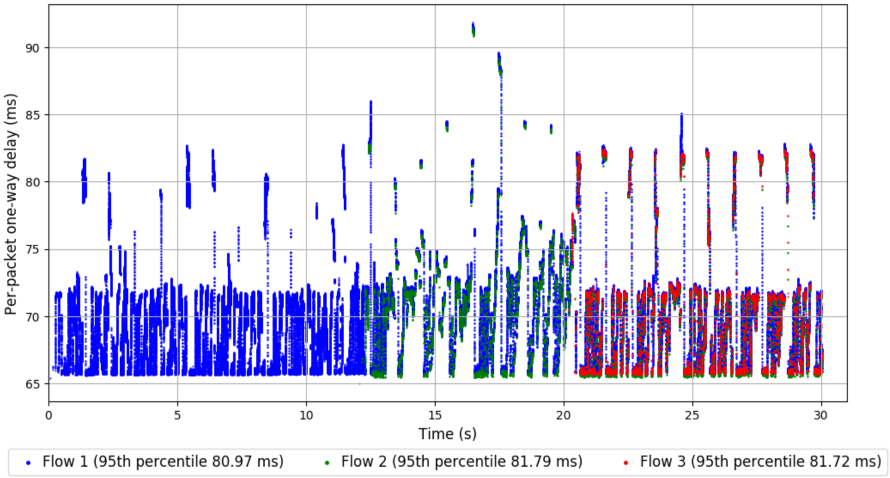
```
Run 1: Statistics of TaoVA-100x

Start at: 2018-03-21 03:40:11
End at: 2018-03-21 03:40:41
Local clock offset: 10.023 ms
Remote clock offset: -0.223 ms

# Below is generated by plot.py at 2018-03-21 07:58:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.81 Mbit/s
95th percentile per-packet one-way delay: 81.095 ms
Loss rate: 5.87%
-- Flow 1:
Average throughput: 72.56 Mbit/s
95th percentile per-packet one-way delay: 80.965 ms
Loss rate: 5.38%
-- Flow 2:
Average throughput: 5.83 Mbit/s
95th percentile per-packet one-way delay: 81.794 ms
Loss rate: 11.81%
-- Flow 3:
Average throughput: 5.31 Mbit/s
95th percentile per-packet one-way delay: 81.722 ms
Loss rate: 12.60%
```

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



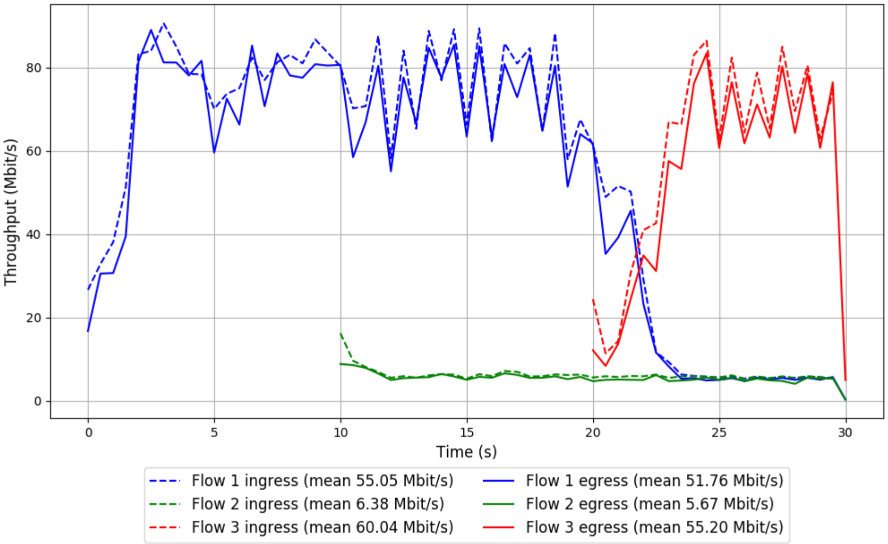


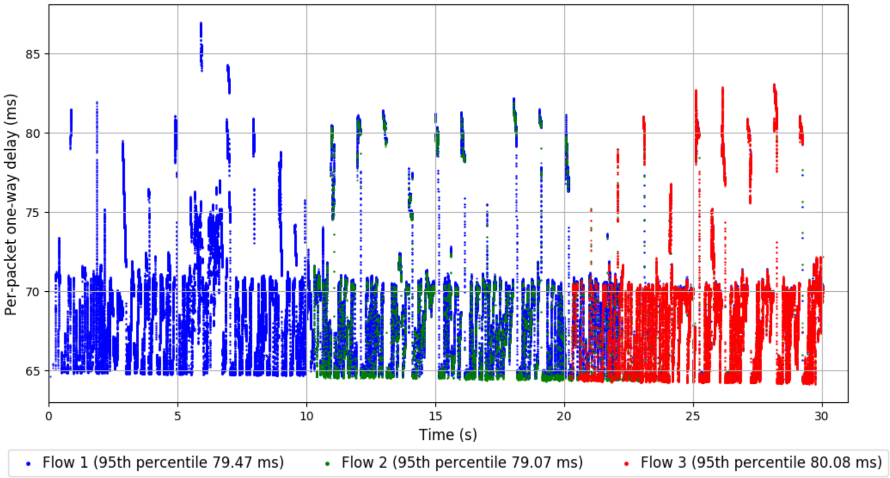
```
Run 2: Statistics of TaoVA-100x

Start at: 2018-03-21 04:02:50
End at: 2018-03-21 04:03:20
Local clock offset: 4.909 ms
Remote clock offset: -0.719 ms

# Below is generated by plot.py at 2018-03-21 07:58:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.82 Mbit/s
95th percentile per-packet one-way delay: 79.707 ms
Loss rate: 6.78%
-- Flow 1:
Average throughput: 51.76 Mbit/s
95th percentile per-packet one-way delay: 79.465 ms
Loss rate: 5.96%
-- Flow 2:
Average throughput: 5.67 Mbit/s
95th percentile per-packet one-way delay: 79.069 ms
Loss rate: 11.24%
-- Flow 3:
Average throughput: 55.20 Mbit/s
95th percentile per-packet one-way delay: 80.079 ms
Loss rate: 8.11%
```

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



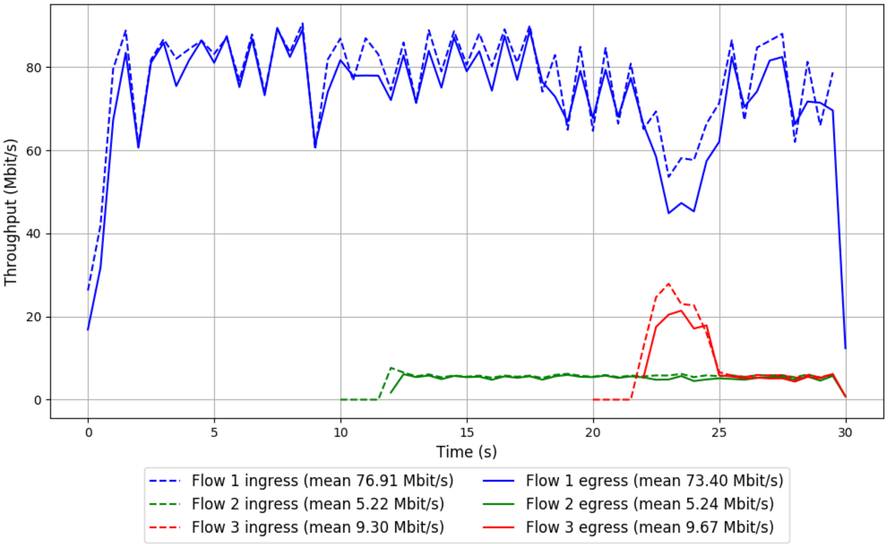


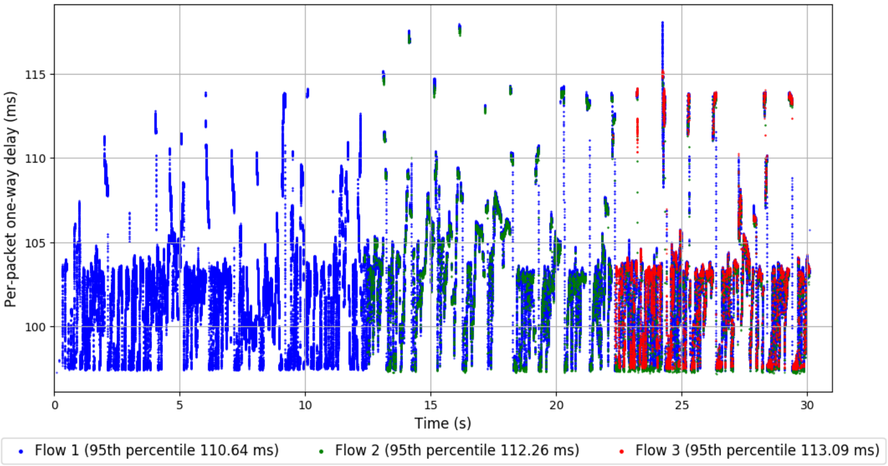
```
Run 3: Statistics of TaoVA-100x

Start at: 2018-03-21 04:26:18
End at: 2018-03-21 04:26:48
Local clock offset: -7.274 ms
Remote clock offset: 26.845 ms

# Below is generated by plot.py at 2018-03-21 07:58:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.10 Mbit/s
95th percentile per-packet one-way delay: 110.983 ms
Loss rate: 5.21%
-- Flow 1:
Average throughput: 73.40 Mbit/s
95th percentile per-packet one-way delay: 110.645 ms
Loss rate: 4.54%
-- Flow 2:
Average throughput: 5.24 Mbit/s
95th percentile per-packet one-way delay: 112.262 ms
Loss rate: 9.68%
-- Flow 3:
Average throughput: 9.67 Mbit/s
95th percentile per-packet one-way delay: 113.089 ms
Loss rate: 16.96%
```

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



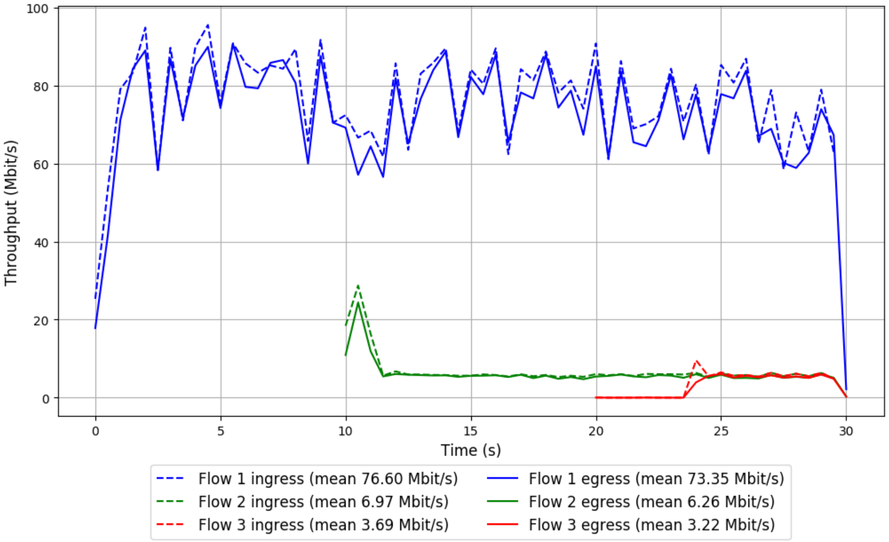


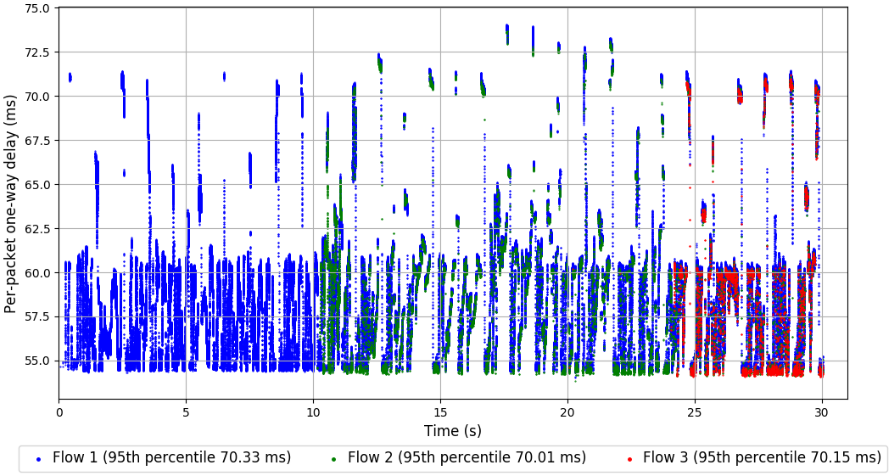
```
Run 4: Statistics of TaoVA-100x

Start at: 2018-03-21 04:49:14
End at: 2018-03-21 04:49:44
Local clock offset: -3.638 ms
Remote clock offset: -14.525 ms

# Below is generated by plot.py at 2018-03-21 07:58:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.58 Mbit/s
95th percentile per-packet one-way delay: 70.314 ms
Loss rate: 4.71%
-- Flow 1:
Average throughput: 73.35 Mbit/s
95th percentile per-packet one-way delay: 70.330 ms
Loss rate: 4.24%
-- Flow 2:
Average throughput: 6.26 Mbit/s
95th percentile per-packet one-way delay: 70.008 ms
Loss rate: 10.31%
-- Flow 3:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 70.151 ms
Loss rate: 12.73%
```

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



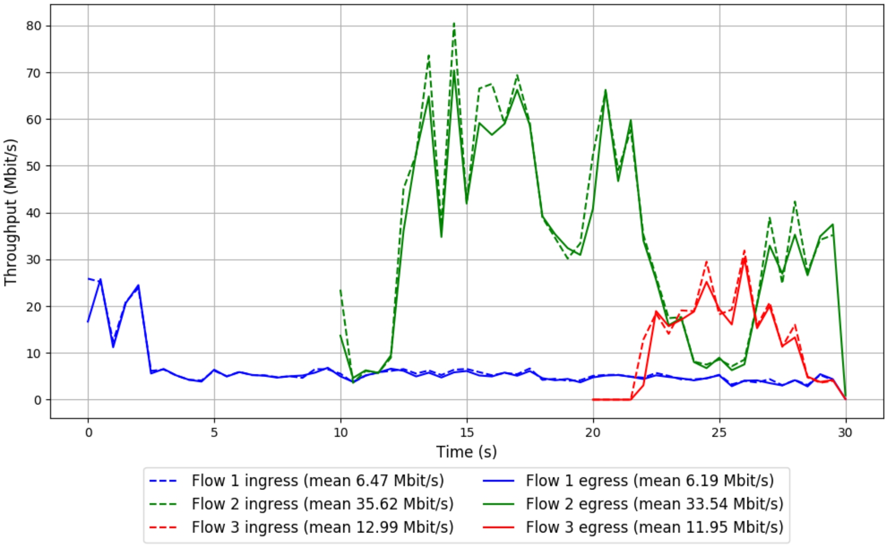


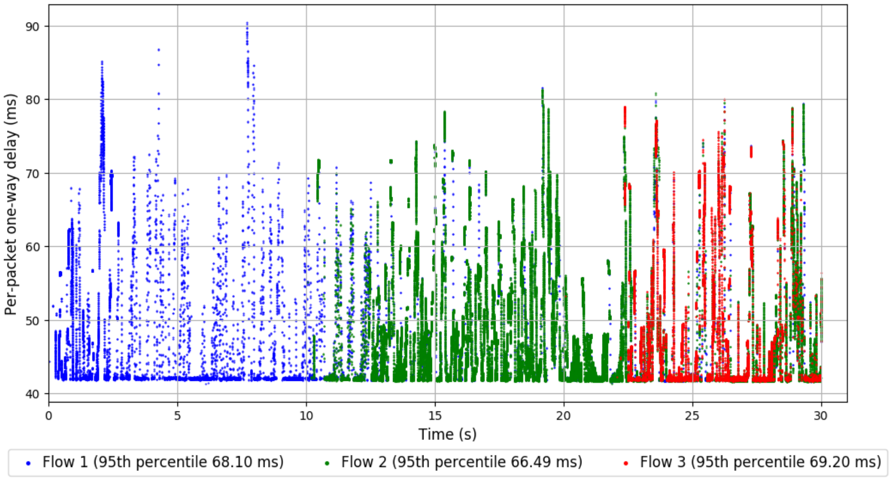
```
Run 5: Statistics of TaoVA-100x

Start at: 2018-03-21 05:12:54
End at: 2018-03-21 05:13:24
Local clock offset: -6.696 ms
Remote clock offset: -23.888 ms

# Below is generated by plot.py at 2018-03-21 07:58:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.47 Mbit/s
95th percentile per-packet one-way delay: 67.718 ms
Loss rate: 5.90%
-- Flow 1:
Average throughput: 6.19 Mbit/s
95th percentile per-packet one-way delay: 68.099 ms
Loss rate: 4.40%
-- Flow 2:
Average throughput: 33.54 Mbit/s
95th percentile per-packet one-way delay: 66.490 ms
Loss rate: 5.90%
-- Flow 3:
Average throughput: 11.95 Mbit/s
95th percentile per-packet one-way delay: 69.203 ms
Loss rate: 8.11%
```

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



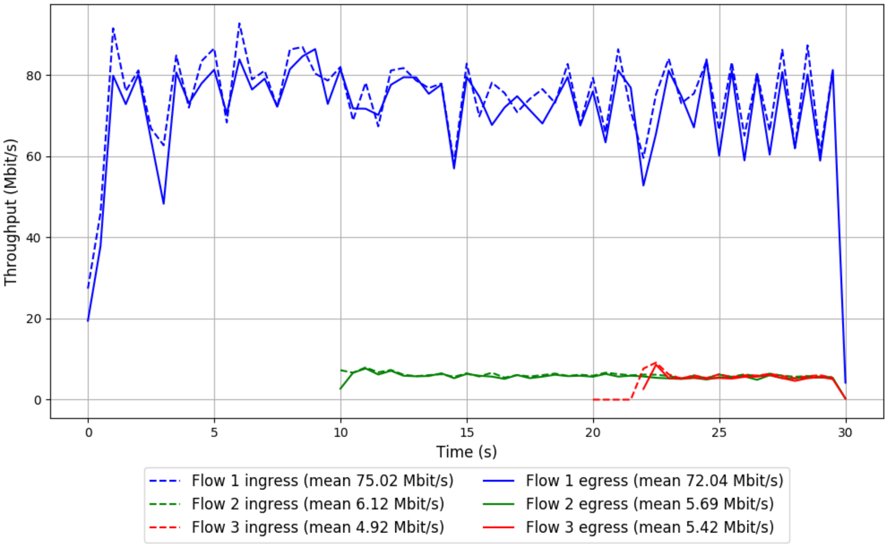


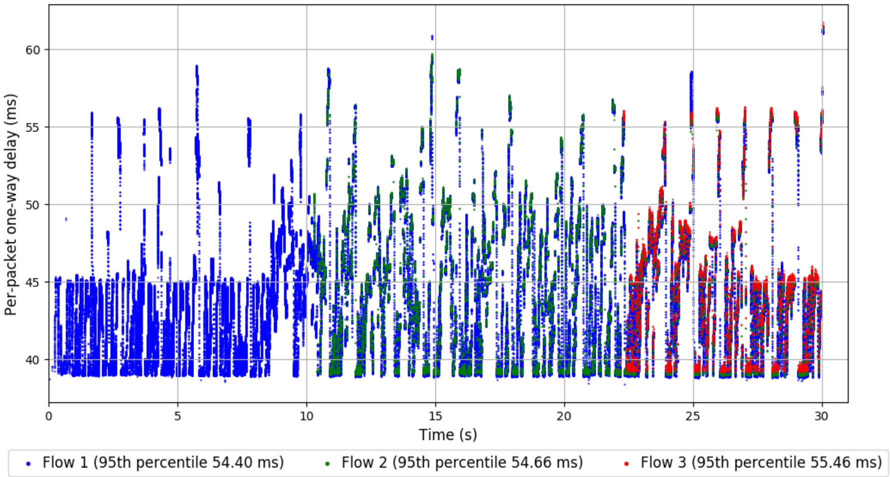
```
Run 6: Statistics of TaoVA-100x

Start at: 2018-03-21 05:35:36
End at: 2018-03-21 05:36:06
Local clock offset: -11.14 ms
Remote clock offset: -25.311 ms

# Below is generated by plot.py at 2018-03-21 07:59:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.27 Mbit/s
95th percentile per-packet one-way delay: 54.438 ms
Loss rate: 4.21%
-- Flow 1:
Average throughput: 72.04 Mbit/s
95th percentile per-packet one-way delay: 54.400 ms
Loss rate: 3.89%
-- Flow 2:
Average throughput: 5.69 Mbit/s
95th percentile per-packet one-way delay: 54.659 ms
Loss rate: 6.98%
-- Flow 3:
Average throughput: 5.42 Mbit/s
95th percentile per-packet one-way delay: 55.462 ms
Loss rate: 11.87%
```

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



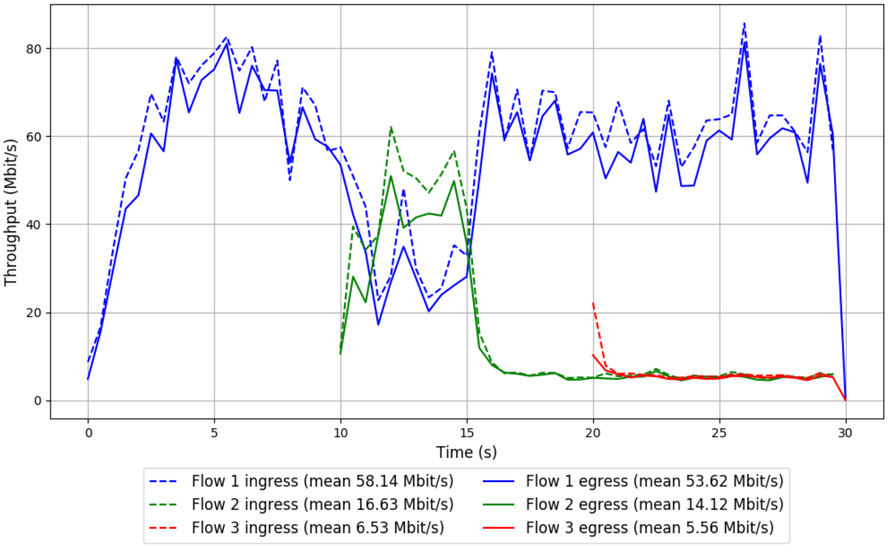


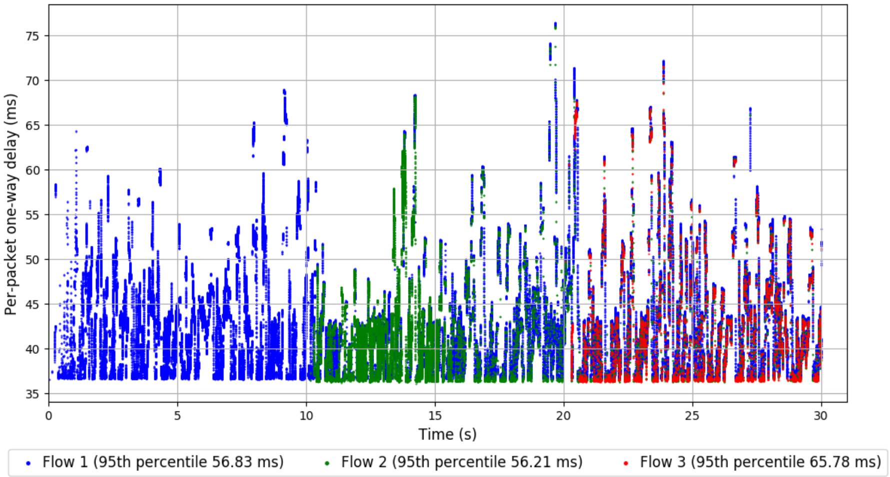
```
Run 7: Statistics of TaoVA-100x

Start at: 2018-03-21 05:58:26
End at: 2018-03-21 05:58:56
Local clock offset: 1.651 ms
Remote clock offset: -26.536 ms

# Below is generated by plot.py at 2018-03-21 07:59:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.84 Mbit/s
95th percentile per-packet one-way delay: 56.937 ms
Loss rate: 9.11%
-- Flow 1:
Average throughput: 53.62 Mbit/s
95th percentile per-packet one-way delay: 56.825 ms
Loss rate: 7.74%
-- Flow 2:
Average throughput: 14.12 Mbit/s
95th percentile per-packet one-way delay: 56.209 ms
Loss rate: 15.18%
-- Flow 3:
Average throughput: 5.56 Mbit/s
95th percentile per-packet one-way delay: 65.781 ms
Loss rate: 14.97%
```

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



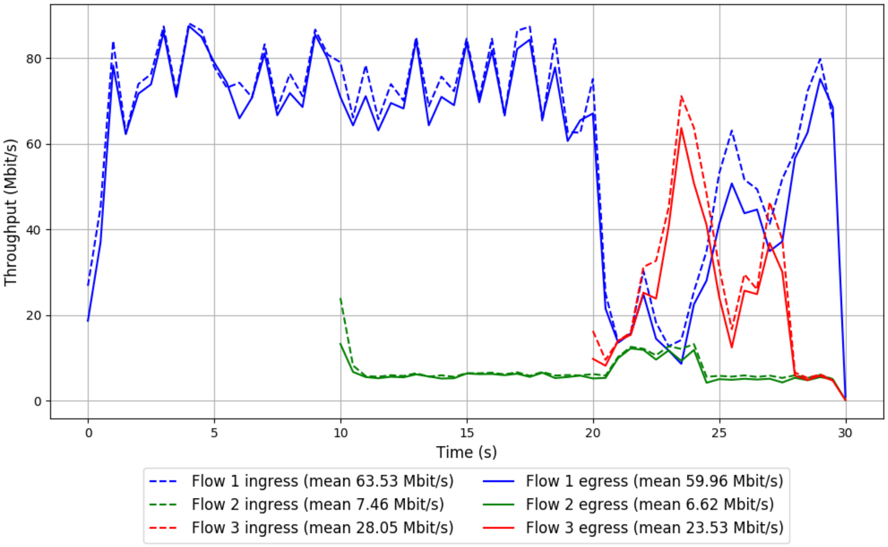


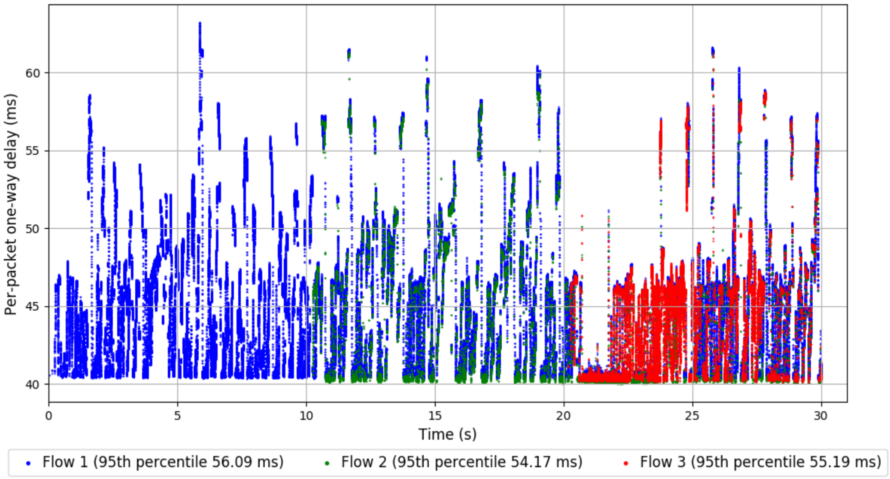
```
Run 8: Statistics of TaoVA-100x

Start at: 2018-03-21 06:21:47
End at: 2018-03-21 06:22:17
Local clock offset: 2.132 ms
Remote clock offset: -20.259 ms

# Below is generated by plot.py at 2018-03-21 07:59:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.18 Mbit/s
95th percentile per-packet one-way delay: 55.958 ms
Loss rate: 7.24%
-- Flow 1:
Average throughput: 59.96 Mbit/s
95th percentile per-packet one-way delay: 56.094 ms
Loss rate: 5.62%
-- Flow 2:
Average throughput: 6.62 Mbit/s
95th percentile per-packet one-way delay: 54.172 ms
Loss rate: 11.31%
-- Flow 3:
Average throughput: 23.53 Mbit/s
95th percentile per-packet one-way delay: 55.191 ms
Loss rate: 16.17%
```

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



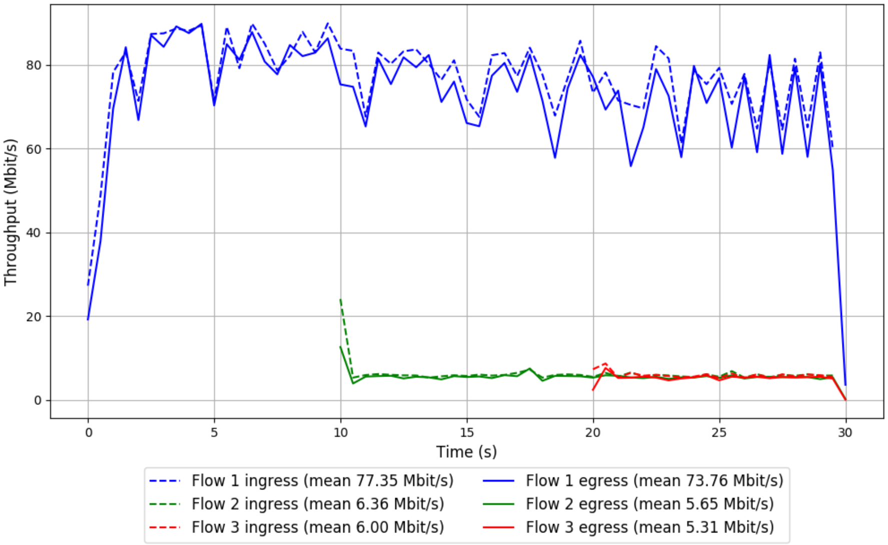


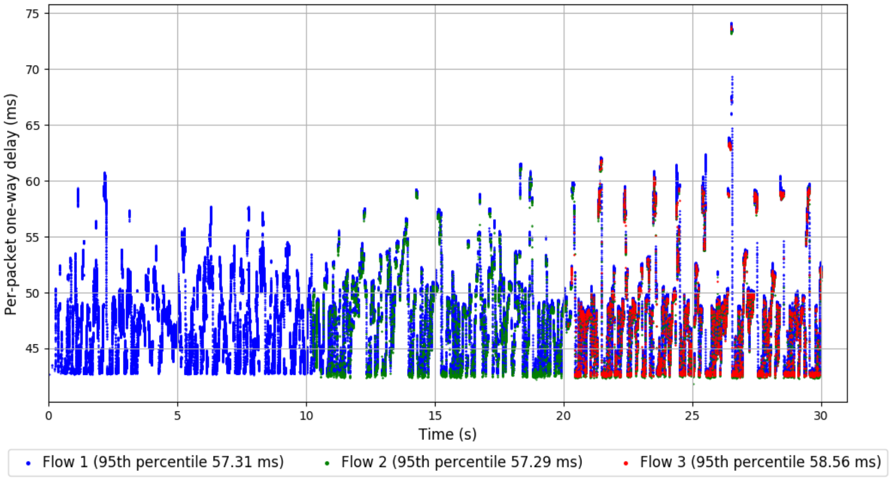
```
Run 9: Statistics of TaoVA-100x

Start at: 2018-03-21 06:46:19
End at: 2018-03-21 06:46:49
Local clock offset: 0.538 ms
Remote clock offset: -16.293 ms

# Below is generated by plot.py at 2018-03-21 07:59:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.28 Mbit/s
95th percentile per-packet one-way delay: 57.343 ms
Loss rate: 5.11%
-- Flow 1:
Average throughput: 73.76 Mbit/s
95th percentile per-packet one-way delay: 57.311 ms
Loss rate: 4.61%
-- Flow 2:
Average throughput: 5.65 Mbit/s
95th percentile per-packet one-way delay: 57.290 ms
Loss rate: 11.20%
-- Flow 3:
Average throughput: 5.31 Mbit/s
95th percentile per-packet one-way delay: 58.563 ms
Loss rate: 11.64%
```

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



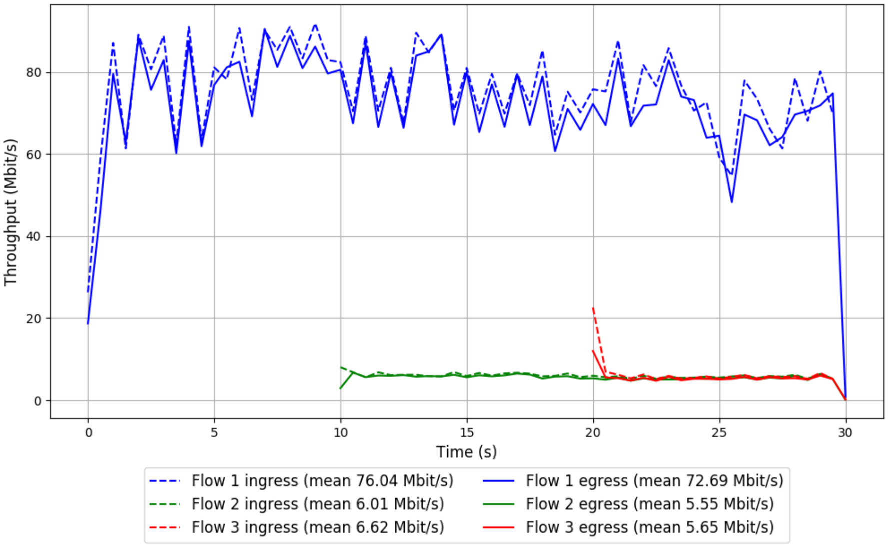


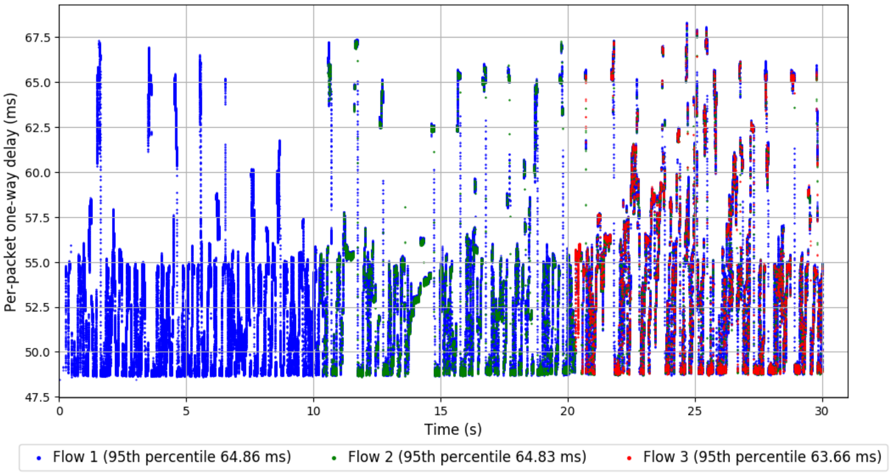
```
Run 10: Statistics of TaoVA-100x

Start at: 2018-03-21 07:09:08
End at: 2018-03-21 07:09:38
Local clock offset: 2.021 ms
Remote clock offset: -16.17 ms

# Below is generated by plot.py at 2018-03-21 08:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.25 Mbit/s
95th percentile per-packet one-way delay: 64.840 ms
Loss rate: 4.85%
-- Flow 1:
Average throughput: 72.69 Mbit/s
95th percentile per-packet one-way delay: 64.855 ms
Loss rate: 4.41%
-- Flow 2:
Average throughput: 5.55 Mbit/s
95th percentile per-packet one-way delay: 64.825 ms
Loss rate: 7.71%
-- Flow 3:
Average throughput: 5.65 Mbit/s
95th percentile per-packet one-way delay: 63.661 ms
Loss rate: 14.71%
```

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



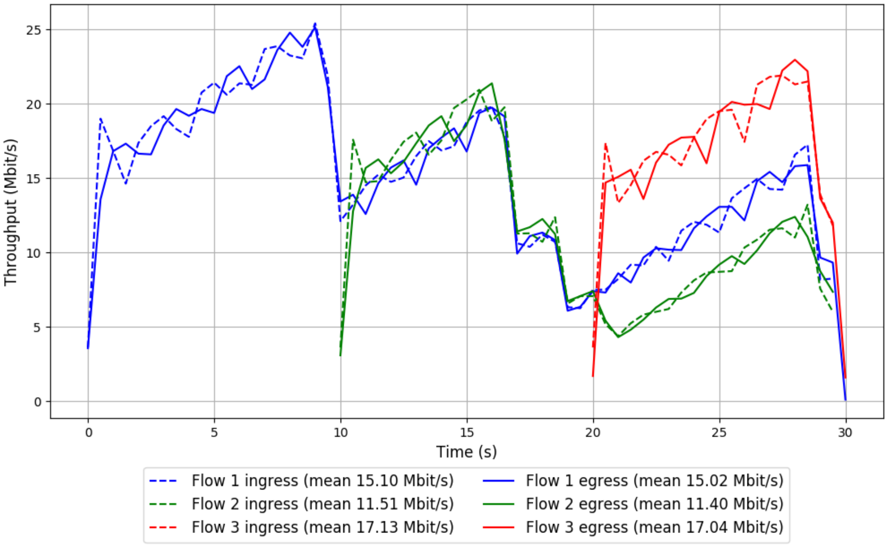


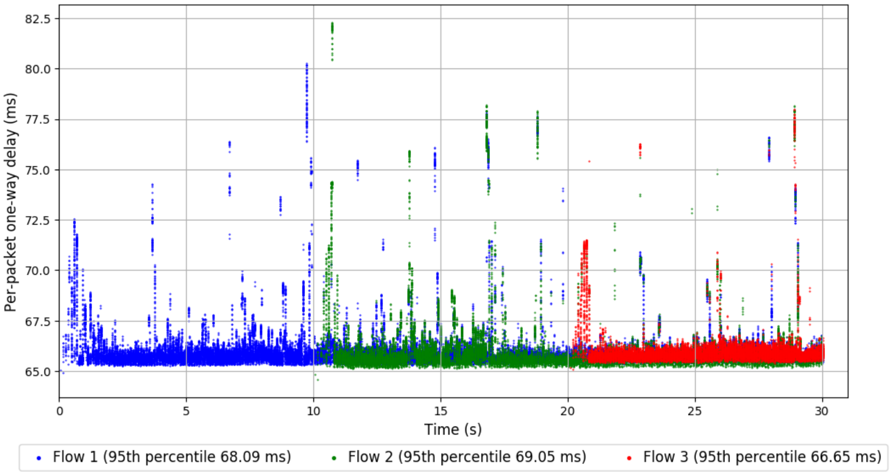
```
Run 1: Statistics of TCP Vegas

Start at: 2018-03-21 03:46:29
End at: 2018-03-21 03:46:59
Local clock offset: 11.31 ms
Remote clock offset: -0.422 ms

# Below is generated by plot.py at 2018-03-21 08:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.25 Mbit/s
95th percentile per-packet one-way delay: 68.238 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 15.02 Mbit/s
95th percentile per-packet one-way delay: 68.086 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 11.40 Mbit/s
95th percentile per-packet one-way delay: 69.053 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 17.04 Mbit/s
95th percentile per-packet one-way delay: 66.652 ms
Loss rate: 0.51%
```

Run 1: Report of TCP Vegas — Data Link



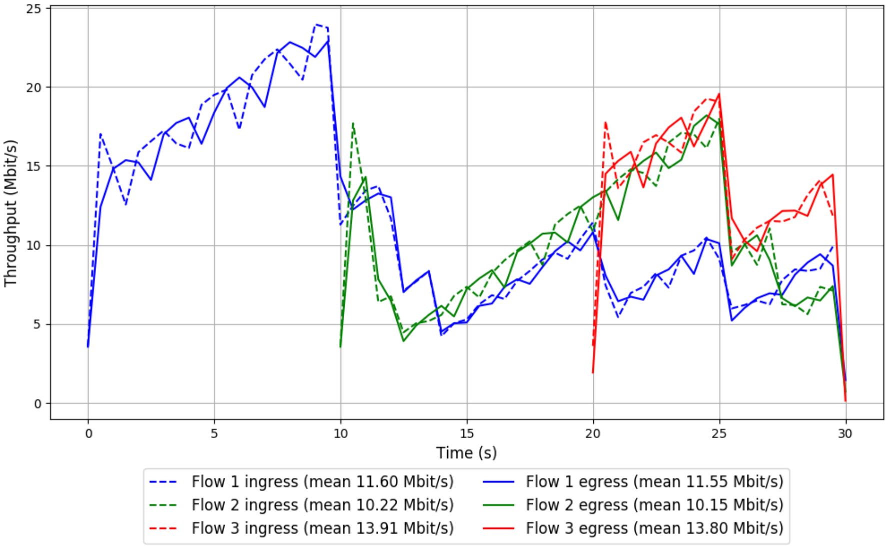


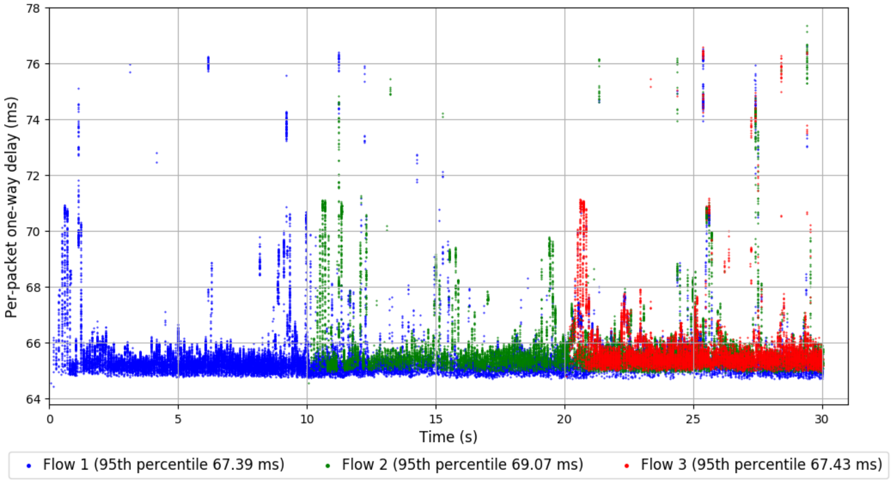
```
Run 2: Statistics of TCP Vegas

Start at: 2018-03-21 04:09:47
End at: 2018-03-21 04:10:17
Local clock offset: -0.782 ms
Remote clock offset: -2.258 ms

# Below is generated by plot.py at 2018-03-21 08:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.89 Mbit/s
95th percentile per-packet one-way delay: 68.009 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 11.55 Mbit/s
95th percentile per-packet one-way delay: 67.391 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 10.15 Mbit/s
95th percentile per-packet one-way delay: 69.070 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 13.80 Mbit/s
95th percentile per-packet one-way delay: 67.434 ms
Loss rate: 0.76%
```

Run 2: Report of TCP Vegas — Data Link



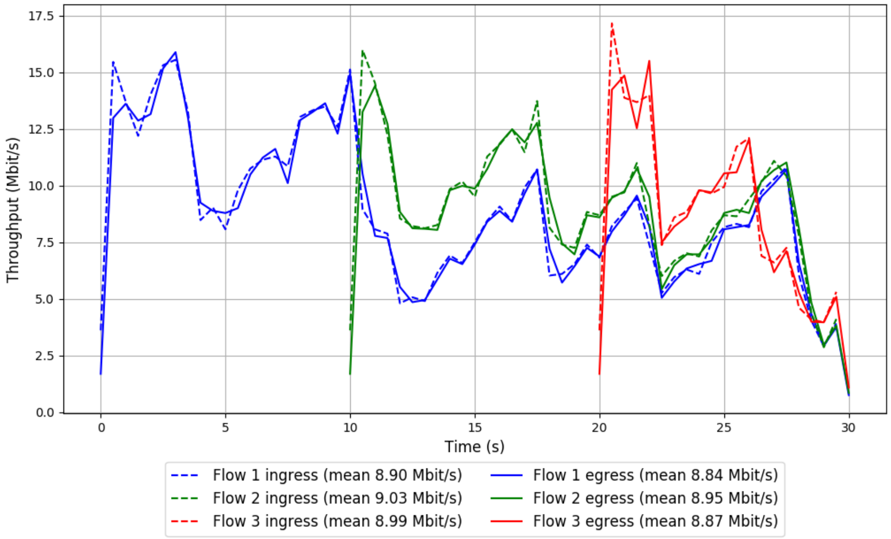


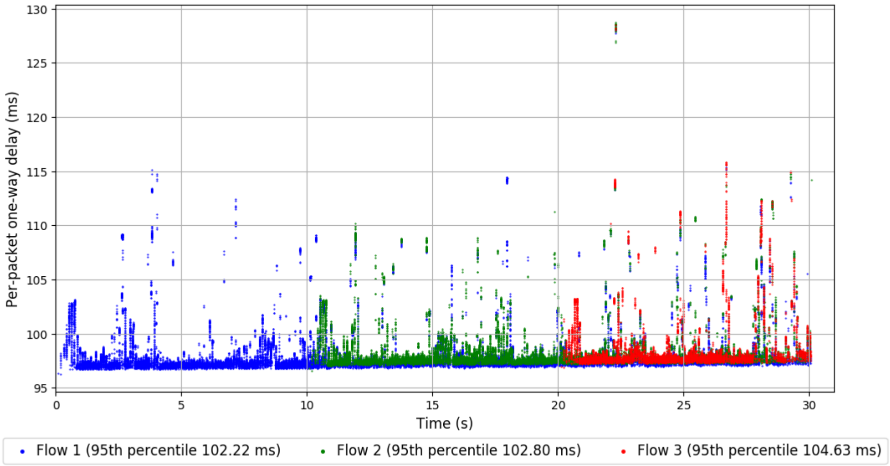
```
Run 3: Statistics of TCP Vegas

Start at: 2018-03-21 04:32:40
End at: 2018-03-21 04:33:10
Local clock offset: -7.927 ms
Remote clock offset: 25.244 ms

# Below is generated by plot.py at 2018-03-21 08:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.74 Mbit/s
95th percentile per-packet one-way delay: 102.847 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 8.84 Mbit/s
95th percentile per-packet one-way delay: 102.225 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 8.95 Mbit/s
95th percentile per-packet one-way delay: 102.799 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 8.87 Mbit/s
95th percentile per-packet one-way delay: 104.629 ms
Loss rate: 1.41%
```

Run 3: Report of TCP Vegas — Data Link



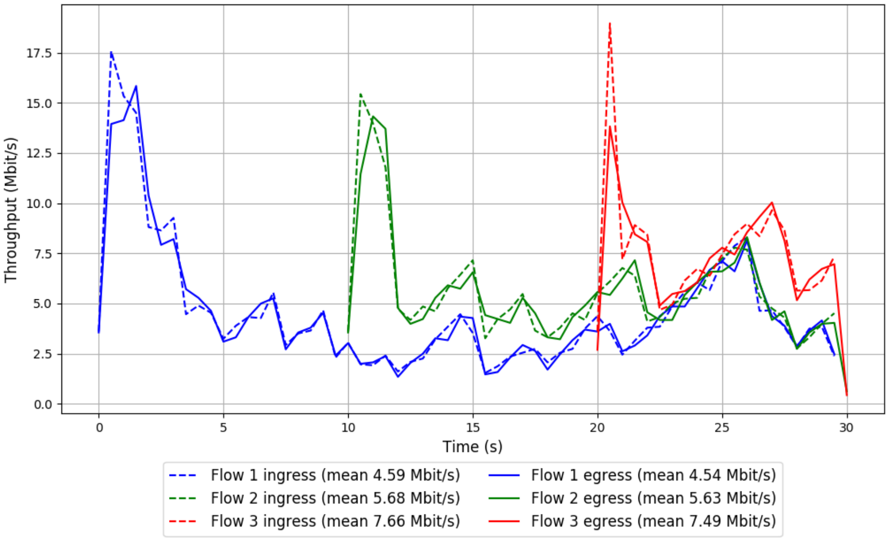


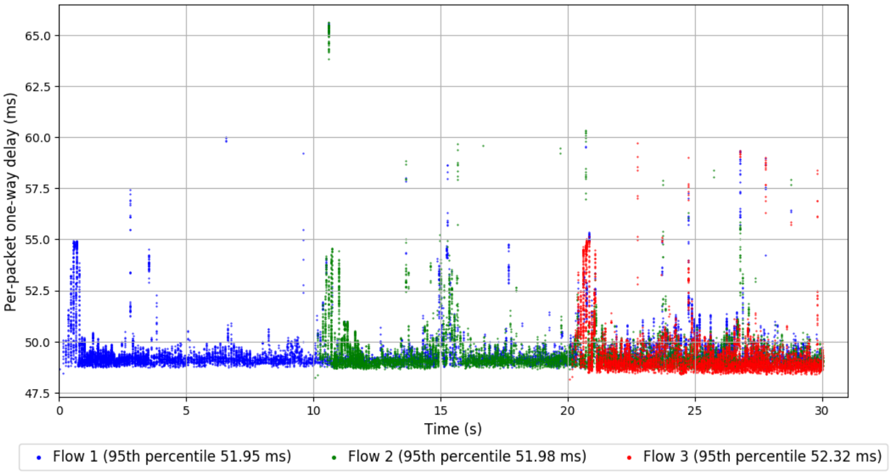
```
Run 4: Statistics of TCP Vegas

Start at: 2018-03-21 04:55:32
End at: 2018-03-21 04:56:02
Local clock offset: -2.861 ms
Remote clock offset: -18.177 ms

# Below is generated by plot.py at 2018-03-21 08:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.78 Mbit/s
95th percentile per-packet one-way delay: 52.073 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 51.955 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 5.63 Mbit/s
95th percentile per-packet one-way delay: 51.983 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 7.49 Mbit/s
95th percentile per-packet one-way delay: 52.317 ms
Loss rate: 2.11%
```

Run 4: Report of TCP Vegas — Data Link



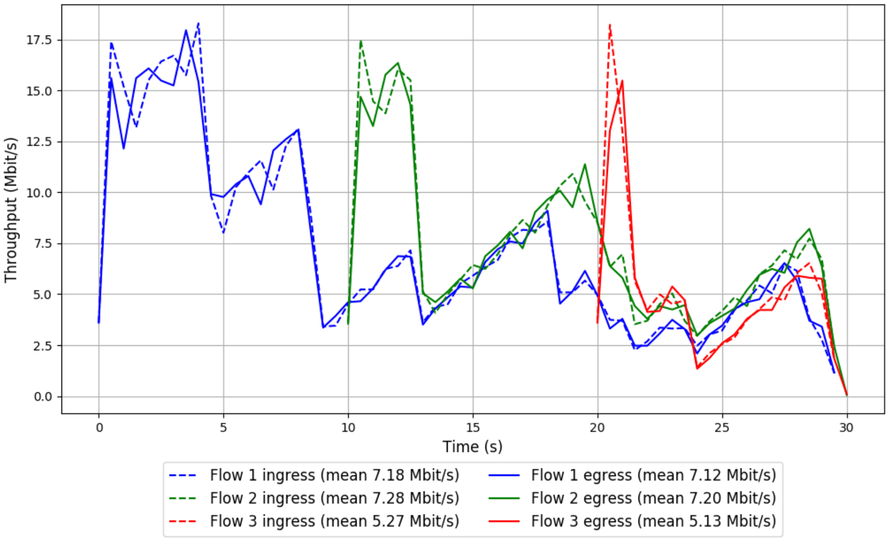


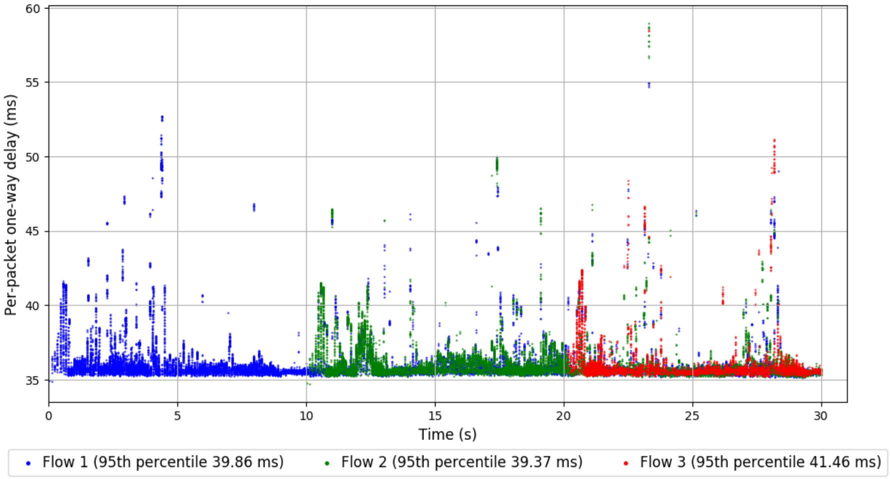
```
Run 5: Statistics of TCP Vegas

Start at: 2018-03-21 05:19:09
End at: 2018-03-21 05:19:39
Local clock offset: -8.172 ms
Remote clock offset: -29.883 ms

# Below is generated by plot.py at 2018-03-21 08:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.61 Mbit/s
95th percentile per-packet one-way delay: 39.899 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 7.12 Mbit/s
95th percentile per-packet one-way delay: 39.858 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 7.20 Mbit/s
95th percentile per-packet one-way delay: 39.368 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 5.13 Mbit/s
95th percentile per-packet one-way delay: 41.460 ms
Loss rate: 2.57%
```

Run 5: Report of TCP Vegas — Data Link



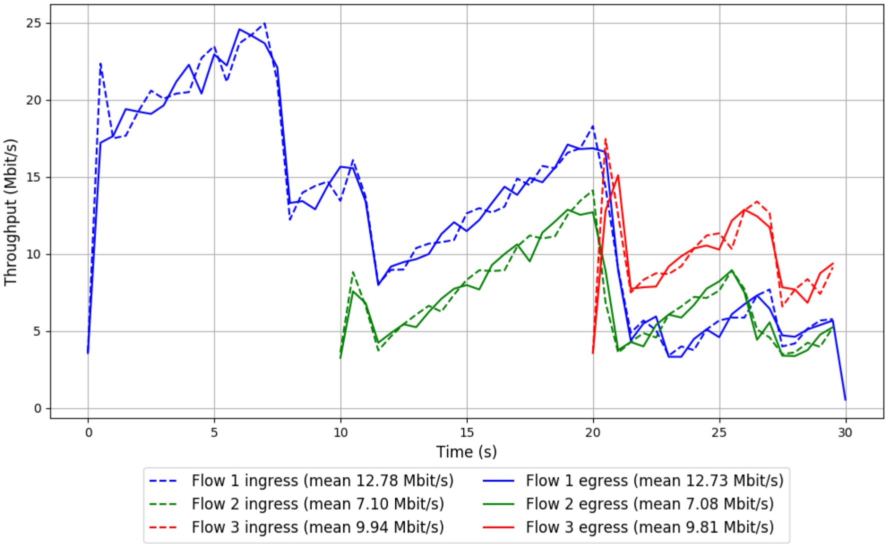


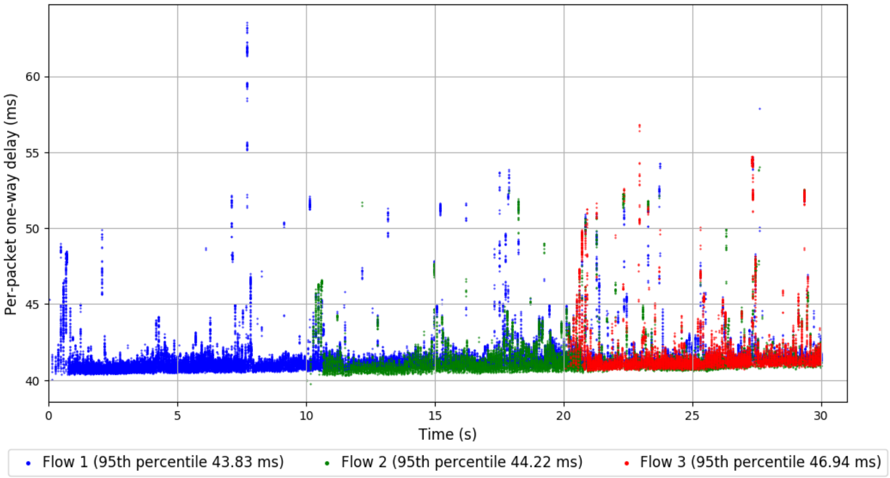
```
Run 6: Statistics of TCP Vegas

Start at: 2018-03-21 05:41:57
End at: 2018-03-21 05:42:27
Local clock offset: -9.224 ms
Remote clock offset: -24.727 ms

# Below is generated by plot.py at 2018-03-21 08:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.69 Mbit/s
95th percentile per-packet one-way delay: 44.418 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 43.831 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 7.08 Mbit/s
95th percentile per-packet one-way delay: 44.223 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 9.81 Mbit/s
95th percentile per-packet one-way delay: 46.941 ms
Loss rate: 1.27%
```

Run 6: Report of TCP Vegas — Data Link



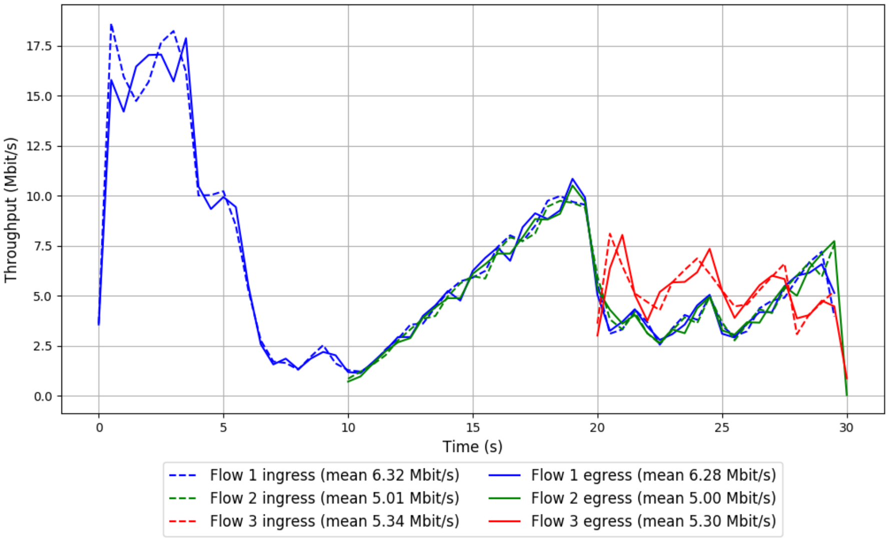


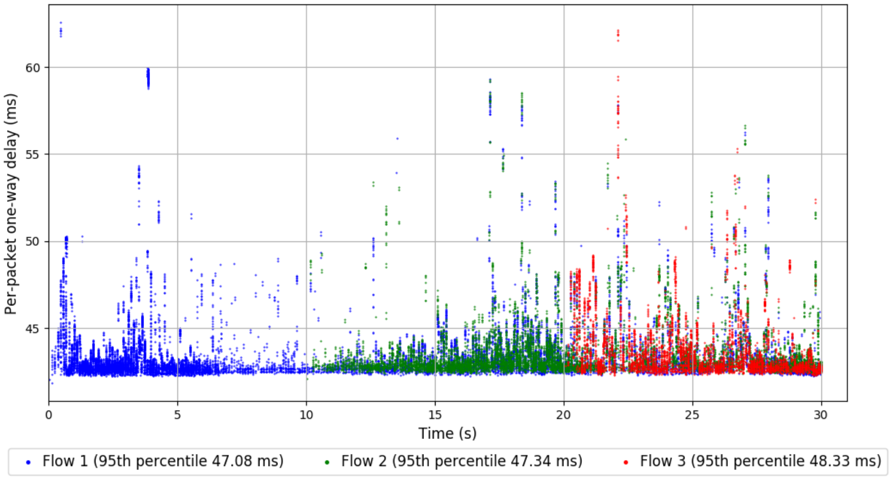
```
Run 7: Statistics of TCP Vegas

Start at: 2018-03-21 06:04:44
End at: 2018-03-21 06:05:14
Local clock offset: 2.956 ms
Remote clock offset: -19.684 ms

# Below is generated by plot.py at 2018-03-21 08:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.36 Mbit/s
95th percentile per-packet one-way delay: 47.458 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 6.28 Mbit/s
95th percentile per-packet one-way delay: 47.084 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 5.00 Mbit/s
95th percentile per-packet one-way delay: 47.342 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 5.30 Mbit/s
95th percentile per-packet one-way delay: 48.333 ms
Loss rate: 0.86%
```

Run 7: Report of TCP Vegas — Data Link



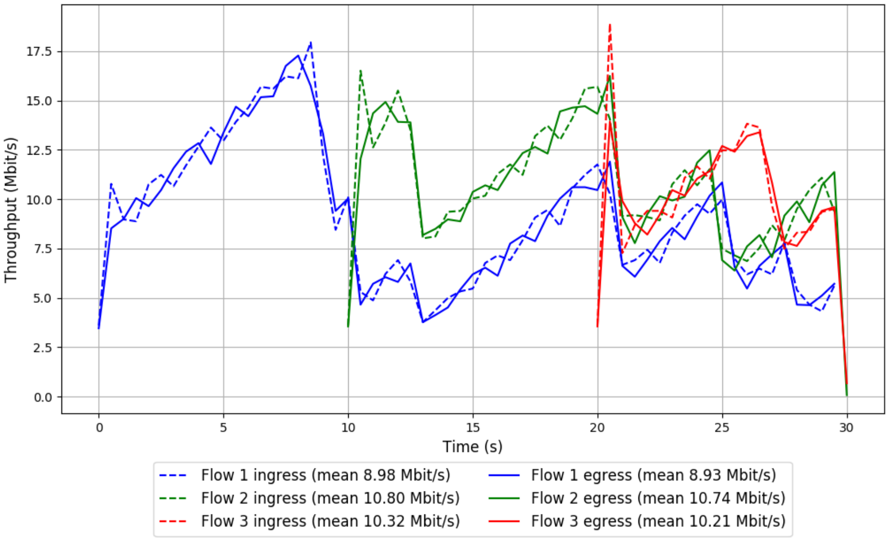


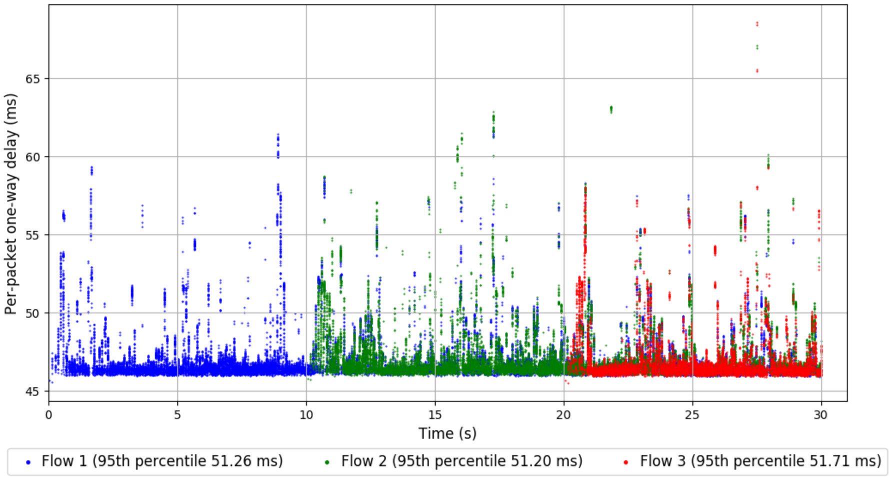
```
Run 8: Statistics of TCP Vegas

Start at: 2018-03-21 06:29:52
End at: 2018-03-21 06:30:22
Local clock offset: 1.198 ms
Remote clock offset: -14.069 ms

# Below is generated by plot.py at 2018-03-21 08:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.46 Mbit/s
95th percentile per-packet one-way delay: 51.340 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 8.93 Mbit/s
95th percentile per-packet one-way delay: 51.256 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 10.74 Mbit/s
95th percentile per-packet one-way delay: 51.200 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 10.21 Mbit/s
95th percentile per-packet one-way delay: 51.712 ms
Loss rate: 1.12%
```

Run 8: Report of TCP Vegas — Data Link



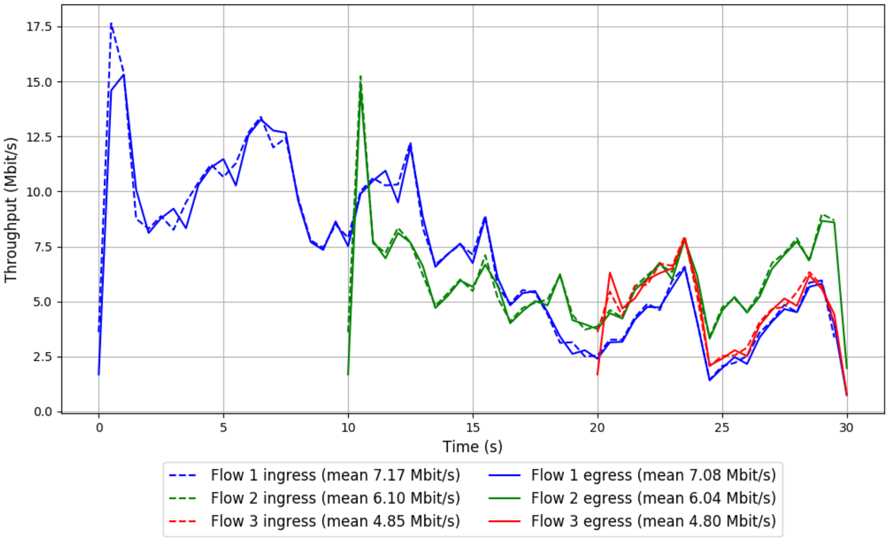


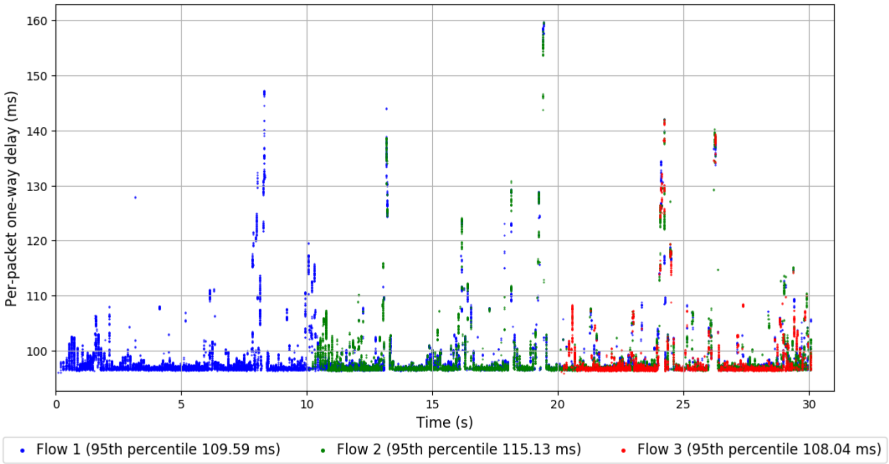
```
Run 9: Statistics of TCP Vegas

Start at: 2018-03-21 06:52:38
End at: 2018-03-21 06:53:08
Local clock offset: 1.258 ms
Remote clock offset: 37.986 ms

# Below is generated by plot.py at 2018-03-21 08:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.69 Mbit/s
95th percentile per-packet one-way delay: 110.820 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 7.08 Mbit/s
95th percentile per-packet one-way delay: 109.592 ms
Loss rate: 1.21%
-- Flow 2:
Average throughput: 6.04 Mbit/s
95th percentile per-packet one-way delay: 115.132 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 108.040 ms
Loss rate: 1.02%
```

Run 9: Report of TCP Vegas — Data Link



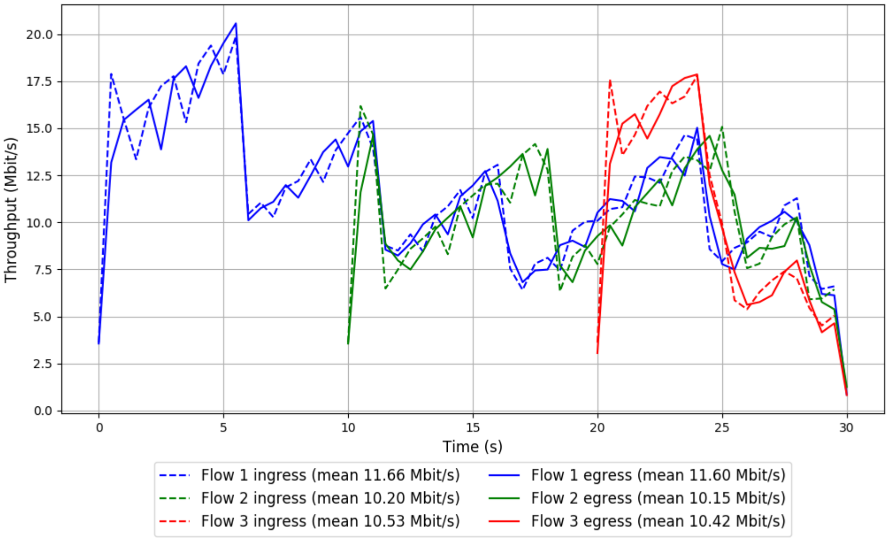


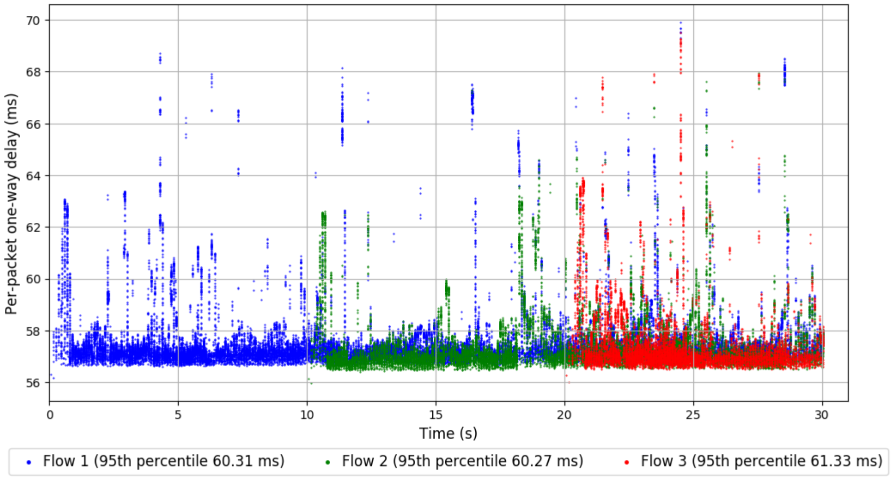
```
Run 10: Statistics of TCP Vegas

Start at: 2018-03-21 07:16:07
End at: 2018-03-21 07:16:37
Local clock offset: 2.097 ms
Remote clock offset: -9.82 ms

# Below is generated by plot.py at 2018-03-21 08:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.82 Mbit/s
95th percentile per-packet one-way delay: 60.410 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 11.60 Mbit/s
95th percentile per-packet one-way delay: 60.307 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 10.15 Mbit/s
95th percentile per-packet one-way delay: 60.274 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 10.42 Mbit/s
95th percentile per-packet one-way delay: 61.334 ms
Loss rate: 1.03%
```

Run 10: Report of TCP Vegas — Data Link



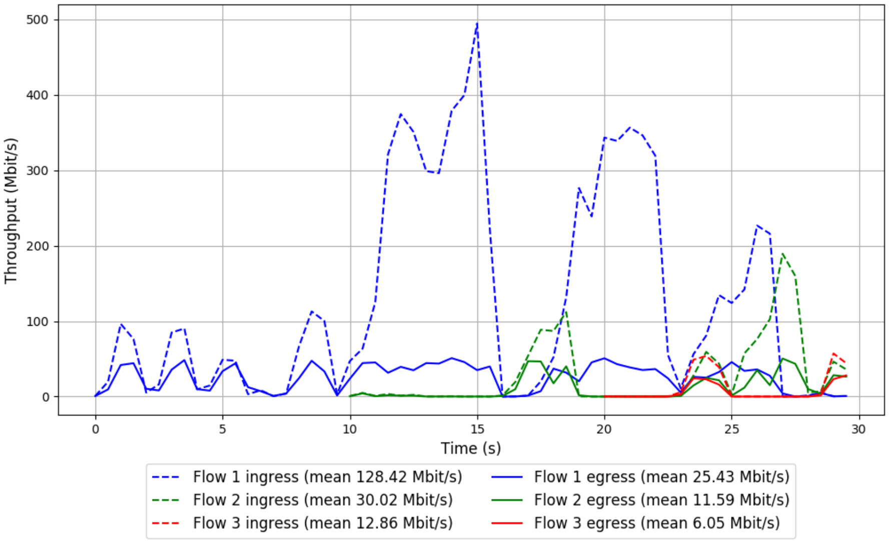


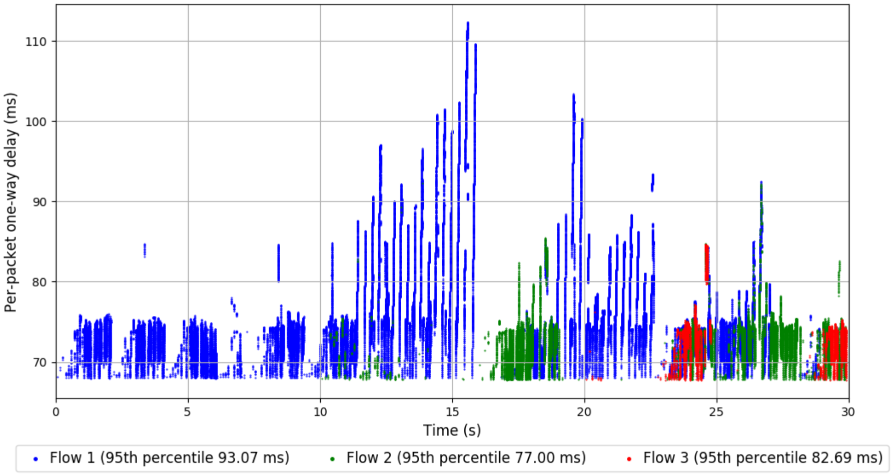
```
Run 1: Statistics of Verus

Start at: 2018-03-21 03:56:36
End at: 2018-03-21 03:57:06
Local clock offset: 9.869 ms
Remote clock offset: -0.696 ms

# Below is generated by plot.py at 2018-03-21 08:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.09 Mbit/s
95th percentile per-packet one-way delay: 90.207 ms
Loss rate: 76.98%
-- Flow 1:
Average throughput: 25.43 Mbit/s
95th percentile per-packet one-way delay: 93.074 ms
Loss rate: 80.20%
-- Flow 2:
Average throughput: 11.59 Mbit/s
95th percentile per-packet one-way delay: 76.995 ms
Loss rate: 61.39%
-- Flow 3:
Average throughput: 6.05 Mbit/s
95th percentile per-packet one-way delay: 82.690 ms
Loss rate: 52.97%
```

Run 1: Report of Verus — Data Link



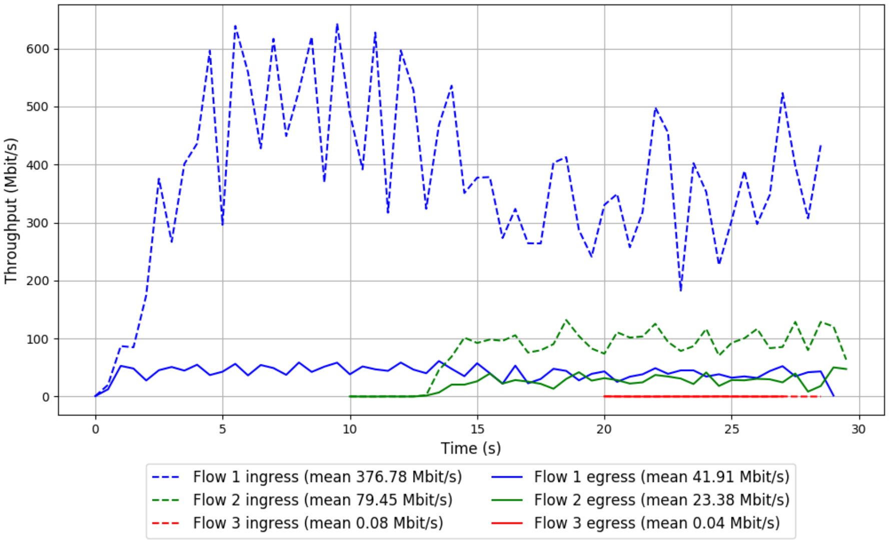


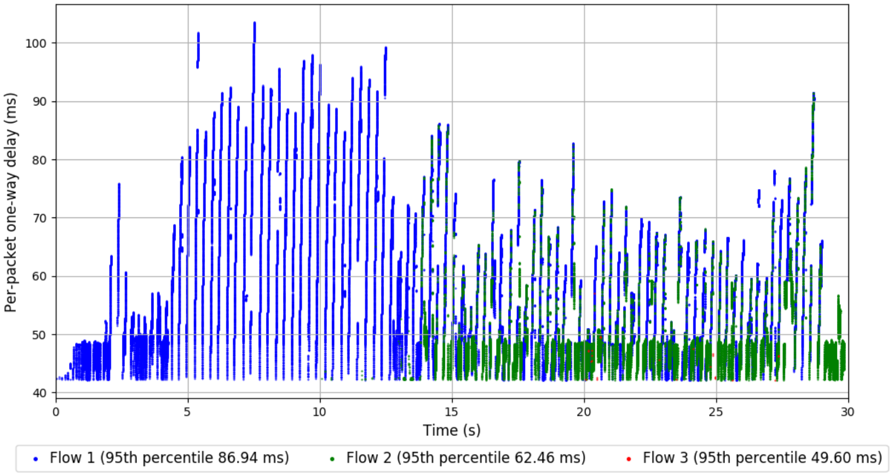
```
Run 2: Statistics of Verus

Start at: 2018-03-21 04:19:55
End at: 2018-03-21 04:20:25
Local clock offset: -5.277 ms
Remote clock offset: -27.603 ms

# Below is generated by plot.py at 2018-03-21 08:01:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.24 Mbit/s
95th percentile per-packet one-way delay: 84.650 ms
Loss rate: 86.56%
-- Flow 1:
Average throughput: 41.91 Mbit/s
95th percentile per-packet one-way delay: 86.937 ms
Loss rate: 88.87%
-- Flow 2:
Average throughput: 23.38 Mbit/s
95th percentile per-packet one-way delay: 62.463 ms
Loss rate: 70.57%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 49.597 ms
Loss rate: 57.81%
```

Run 2: Report of Verus — Data Link



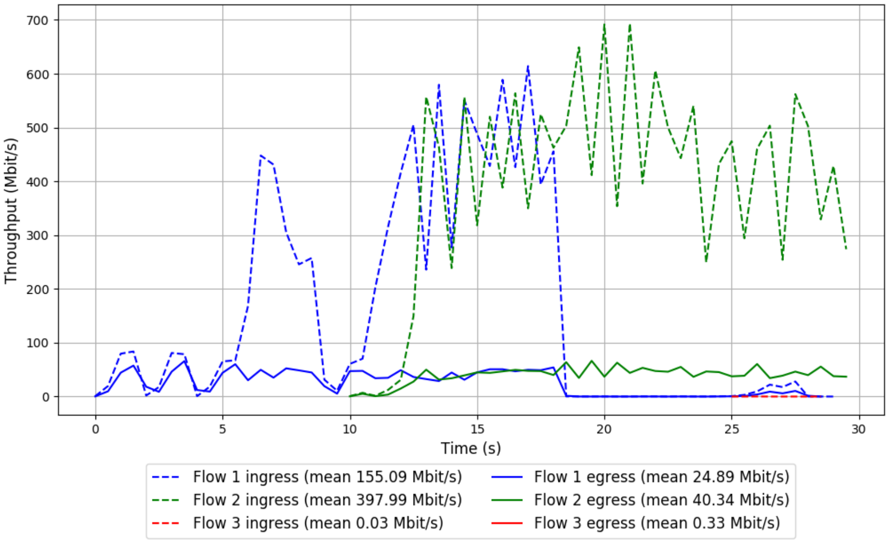


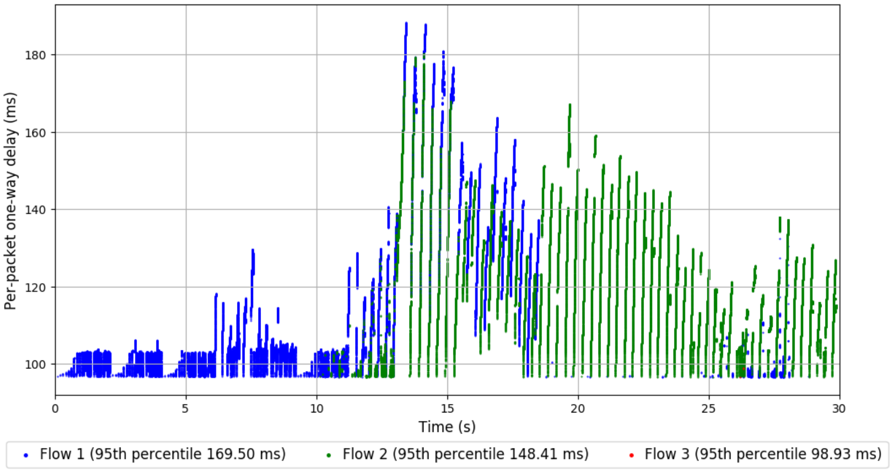
```
Run 3: Statistics of Verus

Start at: 2018-03-21 04:42:52
End at: 2018-03-21 04:43:22
Local clock offset: -3.99 ms
Remote clock offset: 26.146 ms

# Below is generated by plot.py at 2018-03-21 08:01:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.76 Mbit/s
95th percentile per-packet one-way delay: 157.207 ms
Loss rate: 87.82%
-- Flow 1:
Average throughput: 24.89 Mbit/s
95th percentile per-packet one-way delay: 169.502 ms
Loss rate: 84.30%
-- Flow 2:
Average throughput: 40.34 Mbit/s
95th percentile per-packet one-way delay: 148.413 ms
Loss rate: 89.85%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 98.933 ms
Loss rate: 72.73%
```

Run 3: Report of Verus — Data Link



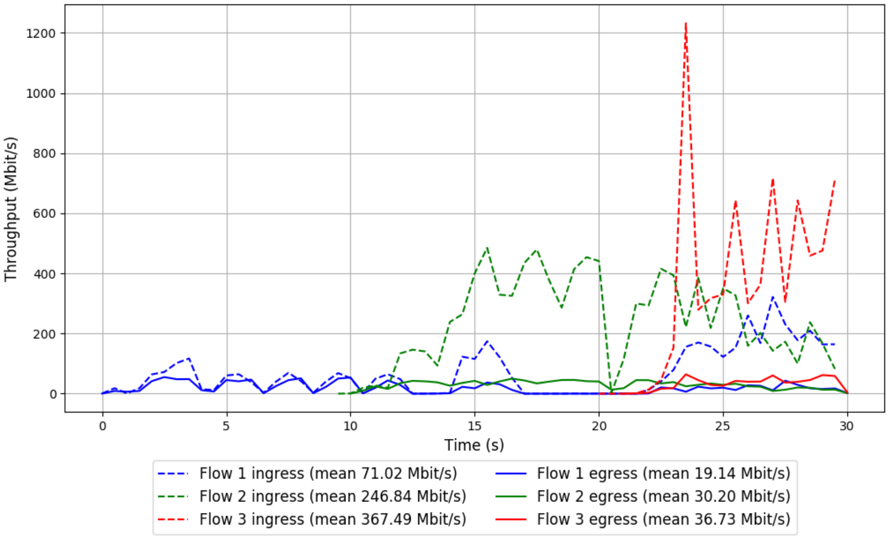


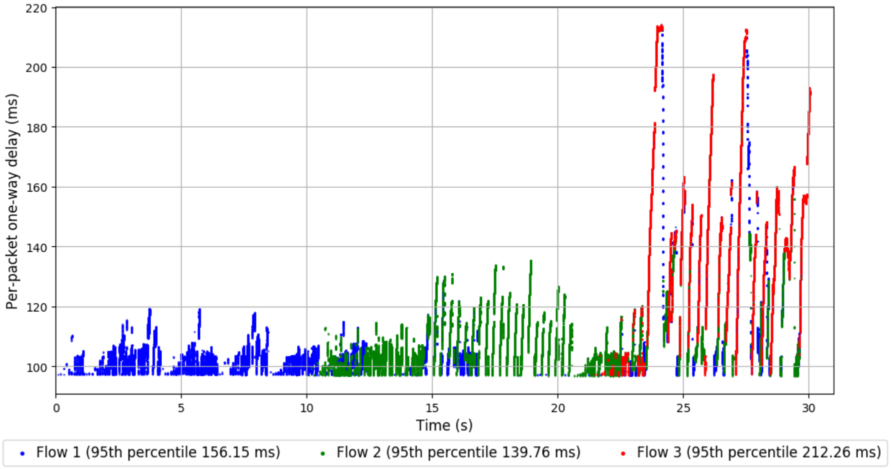
```
Run 4: Statistics of Verus

Start at: 2018-03-21 05:05:38
End at: 2018-03-21 05:06:08
Local clock offset: -3.776 ms
Remote clock offset: 31.405 ms

# Below is generated by plot.py at 2018-03-21 08:01:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.79 Mbit/s
95th percentile per-packet one-way delay: 175.796 ms
Loss rate: 85.82%
-- Flow 1:
Average throughput: 19.14 Mbit/s
95th percentile per-packet one-way delay: 156.149 ms
Loss rate: 72.96%
-- Flow 2:
Average throughput: 30.20 Mbit/s
95th percentile per-packet one-way delay: 139.762 ms
Loss rate: 87.71%
-- Flow 3:
Average throughput: 36.73 Mbit/s
95th percentile per-packet one-way delay: 212.261 ms
Loss rate: 90.96%
```

Run 4: Report of Verus — Data Link



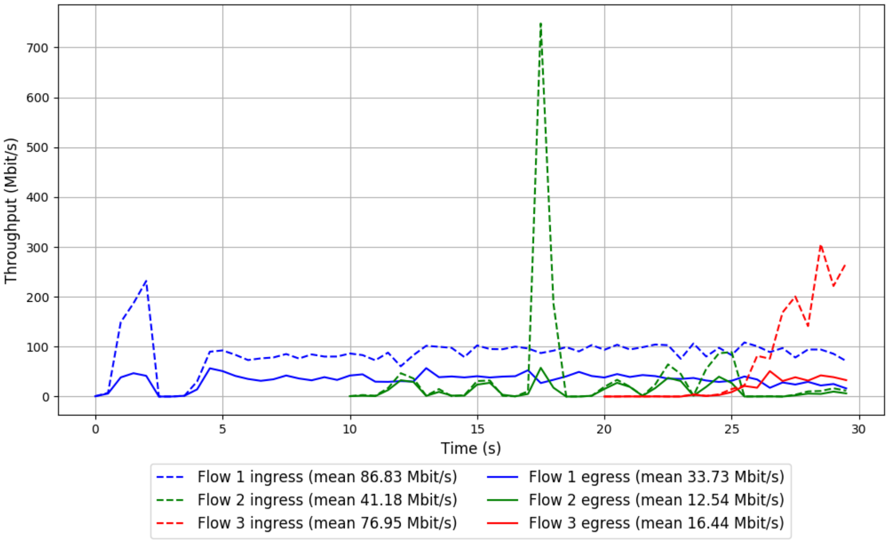


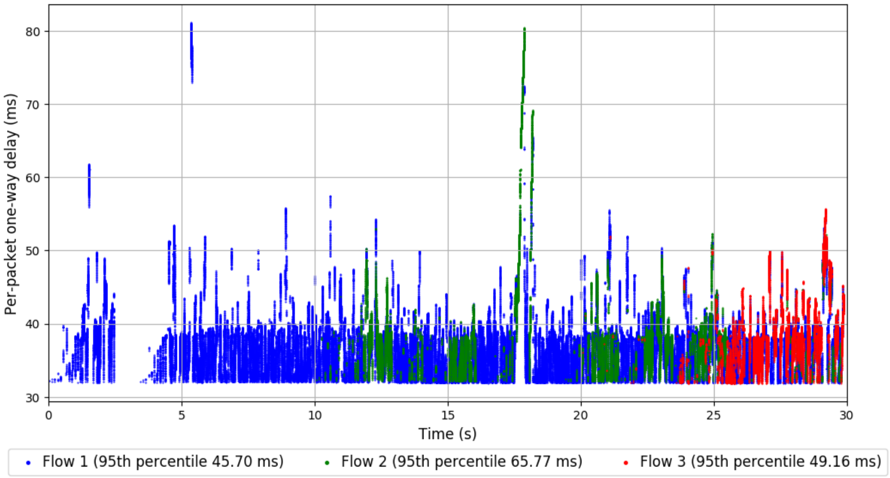
```
Run 5: Statistics of Verus

Start at: 2018-03-21 05:29:18
End at: 2018-03-21 05:29:48
Local clock offset: -10.146 ms
Remote clock offset: -32.71 ms

# Below is generated by plot.py at 2018-03-21 08:01:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.46 Mbit/s
95th percentile per-packet one-way delay: 48.243 ms
Loss rate: 65.97%
-- Flow 1:
Average throughput: 33.73 Mbit/s
95th percentile per-packet one-way delay: 45.696 ms
Loss rate: 61.15%
-- Flow 2:
Average throughput: 12.54 Mbit/s
95th percentile per-packet one-way delay: 65.771 ms
Loss rate: 69.56%
-- Flow 3:
Average throughput: 16.44 Mbit/s
95th percentile per-packet one-way delay: 49.159 ms
Loss rate: 78.62%
```

Run 5: Report of Verus — Data Link



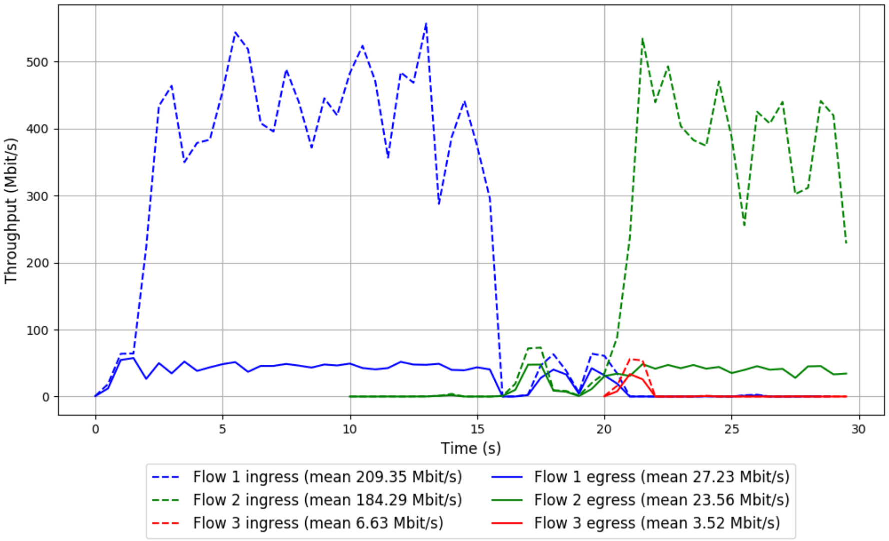


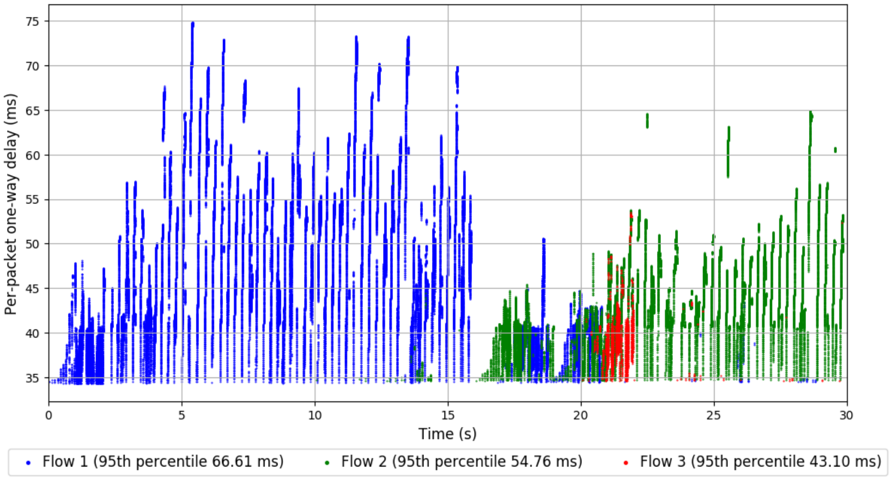
```
Run 6: Statistics of Verus

Start at: 2018-03-21 05:52:06
End at: 2018-03-21 05:52:36
Local clock offset: -0.53 ms
Remote clock offset: -29.329 ms

# Below is generated by plot.py at 2018-03-21 08:01:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.09 Mbit/s
95th percentile per-packet one-way delay: 63.639 ms
Loss rate: 86.98%
-- Flow 1:
Average throughput: 27.23 Mbit/s
95th percentile per-packet one-way delay: 66.610 ms
Loss rate: 87.27%
-- Flow 2:
Average throughput: 23.56 Mbit/s
95th percentile per-packet one-way delay: 54.762 ms
Loss rate: 87.21%
-- Flow 3:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 43.096 ms
Loss rate: 46.85%
```

Run 6: Report of Verus — Data Link



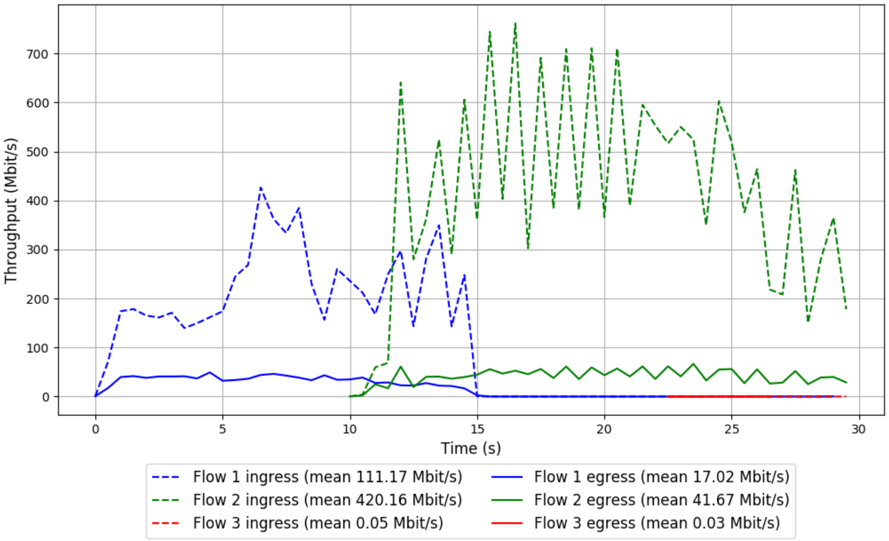


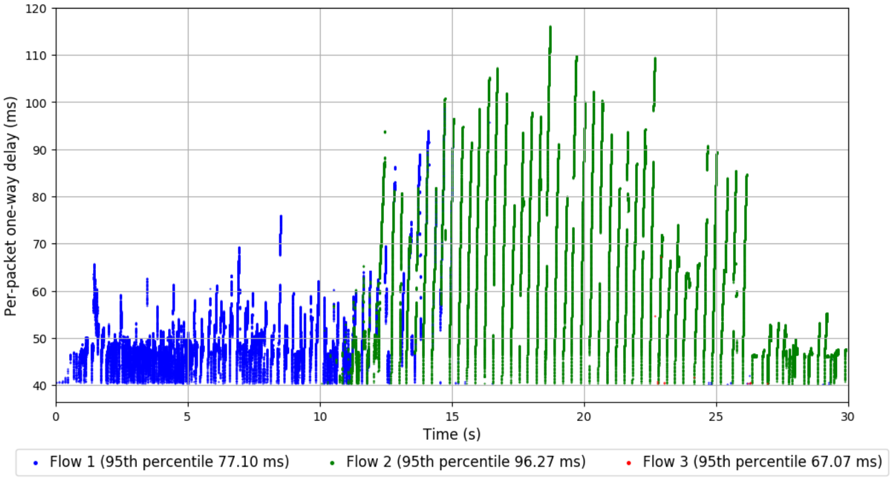
```
Run 7: Statistics of Verus

Start at: 2018-03-21 06:15:24
End at: 2018-03-21 06:15:54
Local clock offset: 3.783 ms
Remote clock offset: -20.599 ms

# Below is generated by plot.py at 2018-03-21 08:01:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.40 Mbit/s
95th percentile per-packet one-way delay: 92.351 ms
Loss rate: 88.57%
-- Flow 1:
Average throughput: 17.02 Mbit/s
95th percentile per-packet one-way delay: 77.100 ms
Loss rate: 84.74%
-- Flow 2:
Average throughput: 41.67 Mbit/s
95th percentile per-packet one-way delay: 96.266 ms
Loss rate: 90.08%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 67.067 ms
Loss rate: 63.33%
```

Run 7: Report of Verus — Data Link



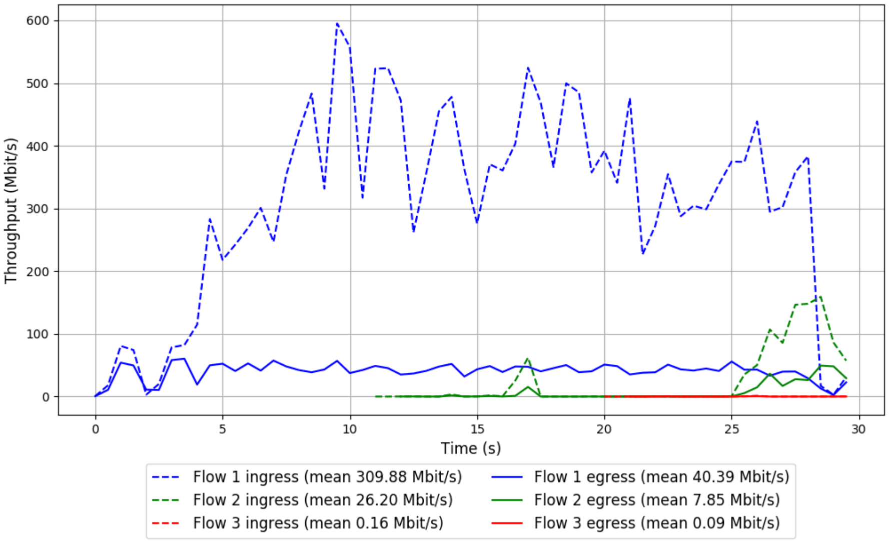


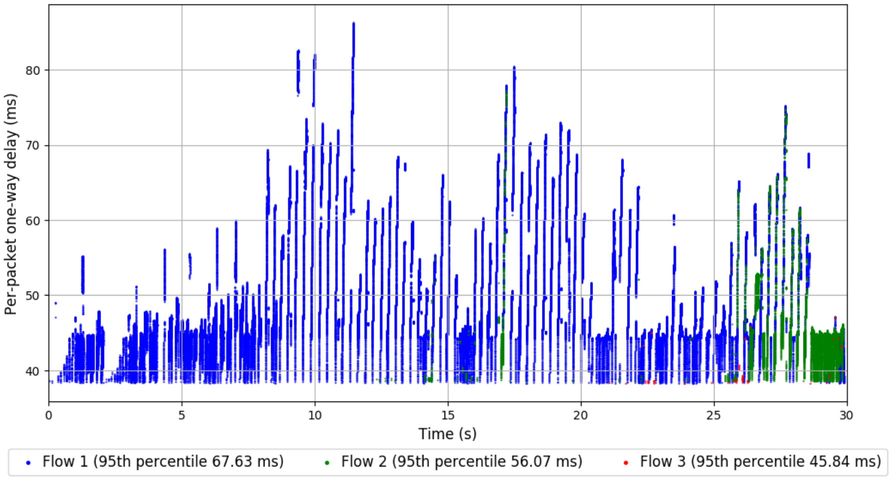
```
Run 8: Statistics of Verus

Start at: 2018-03-21 06:39:59
End at: 2018-03-21 06:40:29
Local clock offset: 0.478 ms
Remote clock offset: -21.013 ms

# Below is generated by plot.py at 2018-03-21 08:02:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.02 Mbit/s
95th percentile per-packet one-way delay: 67.282 ms
Loss rate: 86.20%
-- Flow 1:
Average throughput: 40.39 Mbit/s
95th percentile per-packet one-way delay: 67.634 ms
Loss rate: 86.97%
-- Flow 2:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 56.072 ms
Loss rate: 71.66%
-- Flow 3:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 45.843 ms
Loss rate: 50.37%
```

Run 8: Report of Verus — Data Link



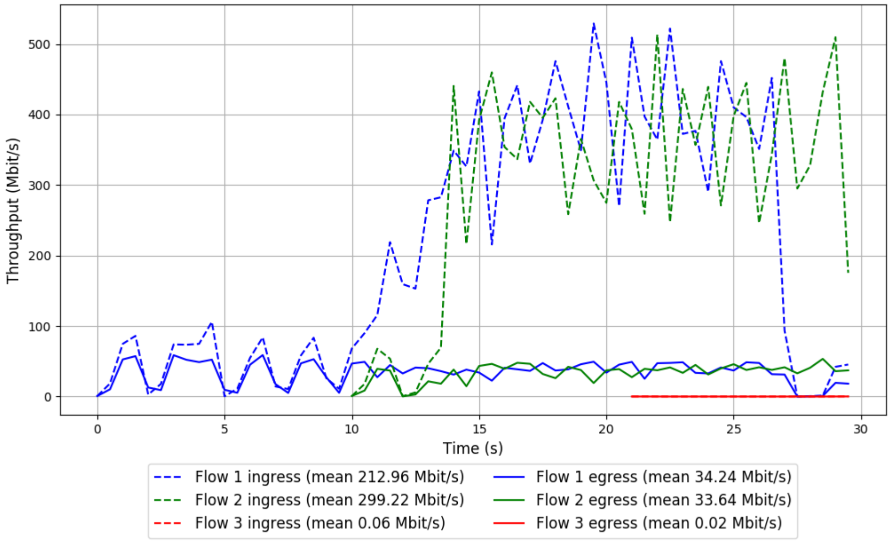


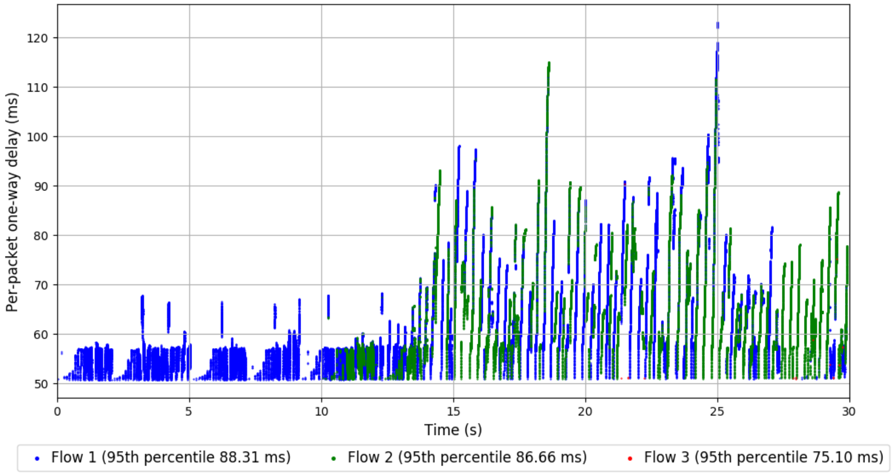
```
Run 9: Statistics of Verus

Start at: 2018-03-21 07:02:46
End at: 2018-03-21 07:03:16
Local clock offset: 1.765 ms
Remote clock offset: -11.83 ms

# Below is generated by plot.py at 2018-03-21 08:02:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.62 Mbit/s
95th percentile per-packet one-way delay: 87.373 ms
Loss rate: 86.24%
-- Flow 1:
Average throughput: 34.24 Mbit/s
95th percentile per-packet one-way delay: 88.309 ms
Loss rate: 83.91%
-- Flow 2:
Average throughput: 33.64 Mbit/s
95th percentile per-packet one-way delay: 86.655 ms
Loss rate: 88.74%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 75.102 ms
Loss rate: 58.54%
```

Run 9: Report of Verus — Data Link



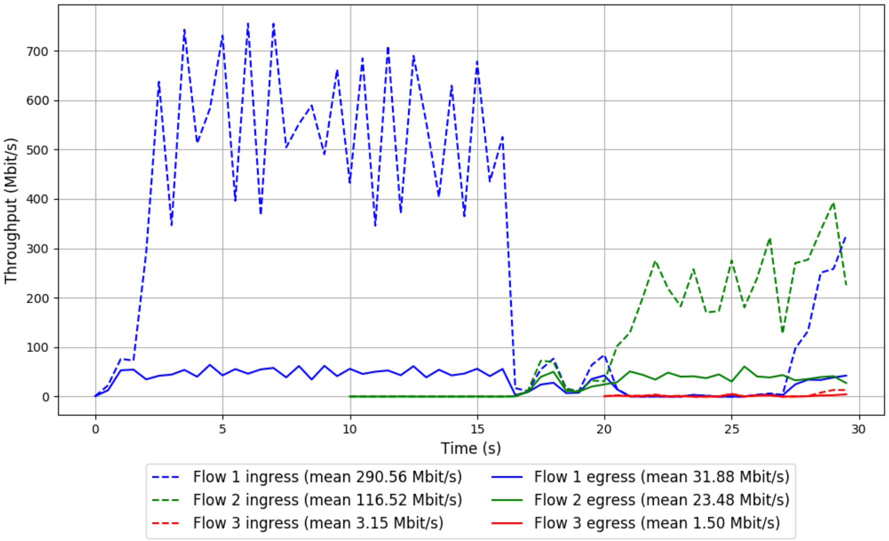


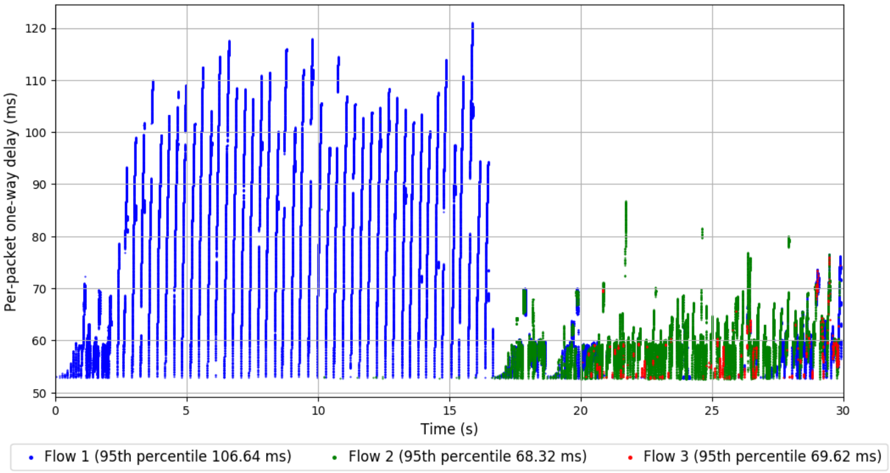
```
Run 10: Statistics of Verus

Start at: 2018-03-21 07:26:13
End at: 2018-03-21 07:26:43
Local clock offset: 0.247 ms
Remote clock offset: -14.346 ms

# Below is generated by plot.py at 2018-03-21 08:02:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.89 Mbit/s
95th percentile per-packet one-way delay: 104.241 ms
Loss rate: 87.01%
-- Flow 1:
Average throughput: 31.88 Mbit/s
95th percentile per-packet one-way delay: 106.638 ms
Loss rate: 89.03%
-- Flow 2:
Average throughput: 23.48 Mbit/s
95th percentile per-packet one-way delay: 68.322 ms
Loss rate: 79.87%
-- Flow 3:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 69.618 ms
Loss rate: 52.36%
```

Run 10: Report of Verus — Data Link



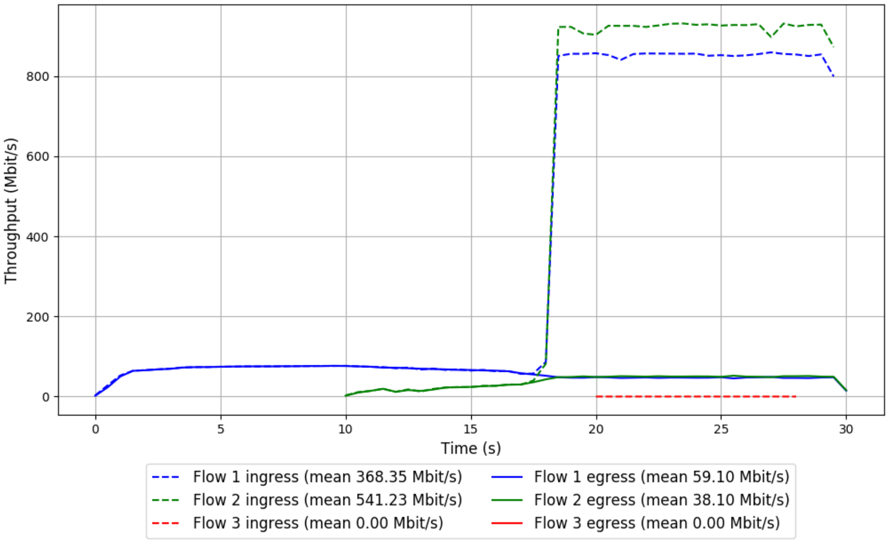


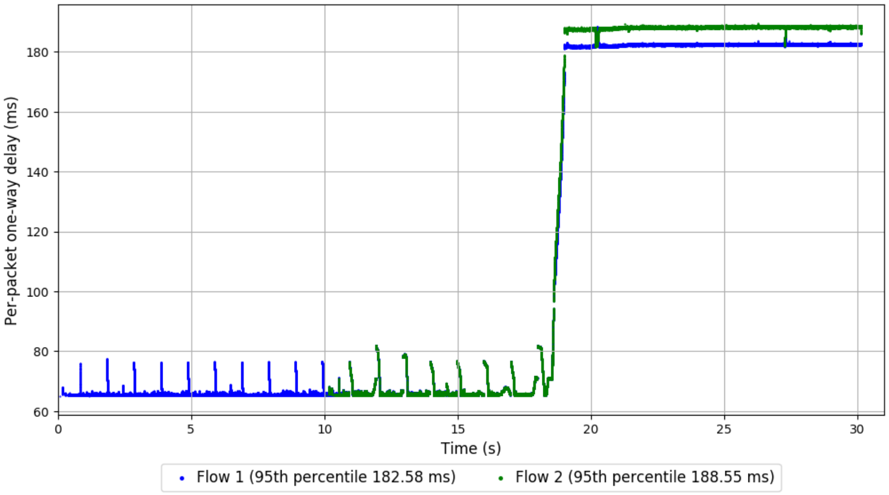
```
Run 1: Statistics of Copa

Start at: 2018-03-21 03:36:10
End at: 2018-03-21 03:36:40
Local clock offset: 9.57 ms
Remote clock offset: 0.067 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.52 Mbit/s
95th percentile per-packet one-way delay: 188.366 ms
Loss rate: 88.36%
-- Flow 1:
Average throughput: 59.10 Mbit/s
95th percentile per-packet one-way delay: 182.579 ms
Loss rate: 83.89%
-- Flow 2:
Average throughput: 38.10 Mbit/s
95th percentile per-packet one-way delay: 188.551 ms
Loss rate: 92.92%
-- Flow 3:
Average throughput: 0.00 Mbit/s
```

Run 1: Report of Copa — Data Link



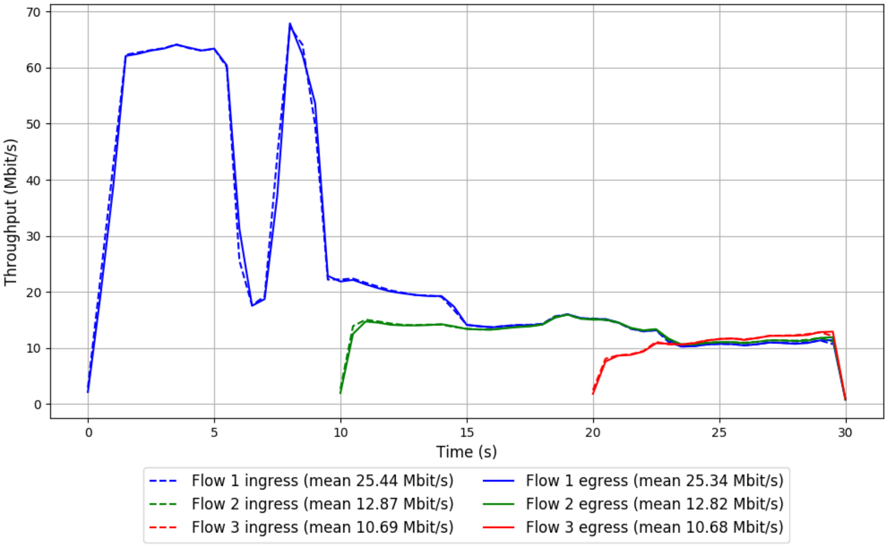


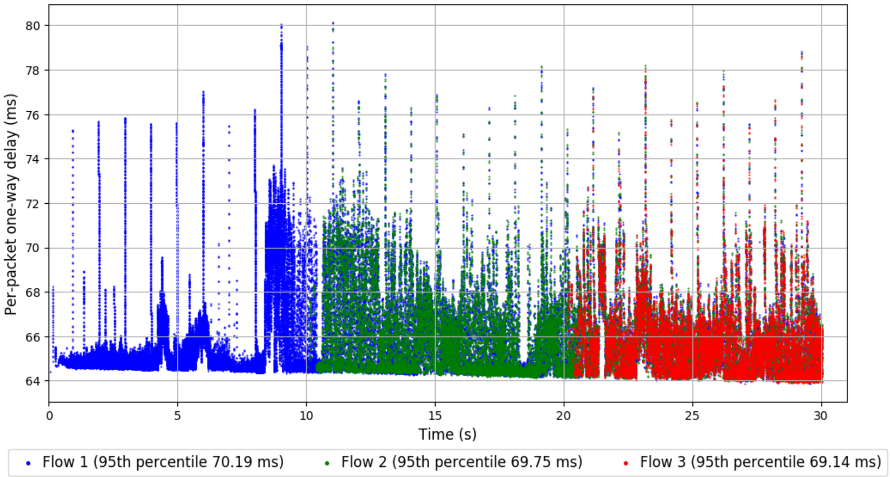
```
Run 2: Statistics of Copa

Start at: 2018-03-21 03:59:07
End at: 2018-03-21 03:59:37
Local clock offset: 9.835 ms
Remote clock offset: -0.687 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.43 Mbit/s
95th percentile per-packet one-way delay: 70.017 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 25.34 Mbit/s
95th percentile per-packet one-way delay: 70.185 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 12.82 Mbit/s
95th percentile per-packet one-way delay: 69.747 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 10.68 Mbit/s
95th percentile per-packet one-way delay: 69.137 ms
Loss rate: 0.16%
```

Run 2: Report of Copa — Data Link



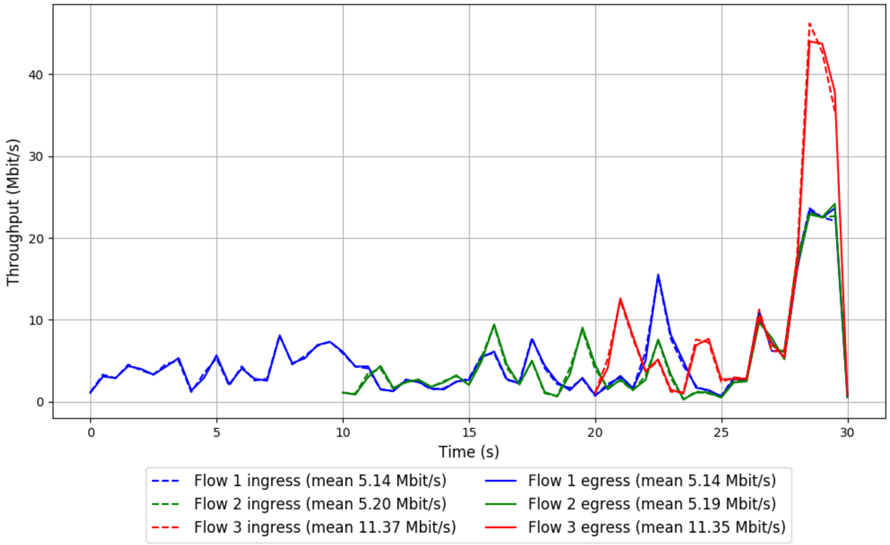


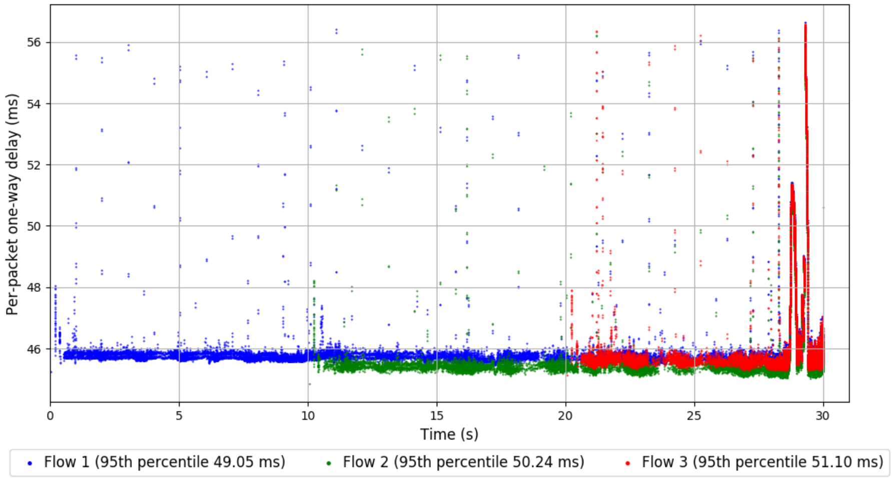
```
Run 3: Statistics of Copa

Start at: 2018-03-21 04:22:32
End at: 2018-03-21 04:23:02
Local clock offset: -6.348 ms
Remote clock offset: -24.914 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.36 Mbit/s
95th percentile per-packet one-way delay: 50.687 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 49.047 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 5.19 Mbit/s
95th percentile per-packet one-way delay: 50.240 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 11.35 Mbit/s
95th percentile per-packet one-way delay: 51.103 ms
Loss rate: 0.20%
```

Run 3: Report of Copa — Data Link



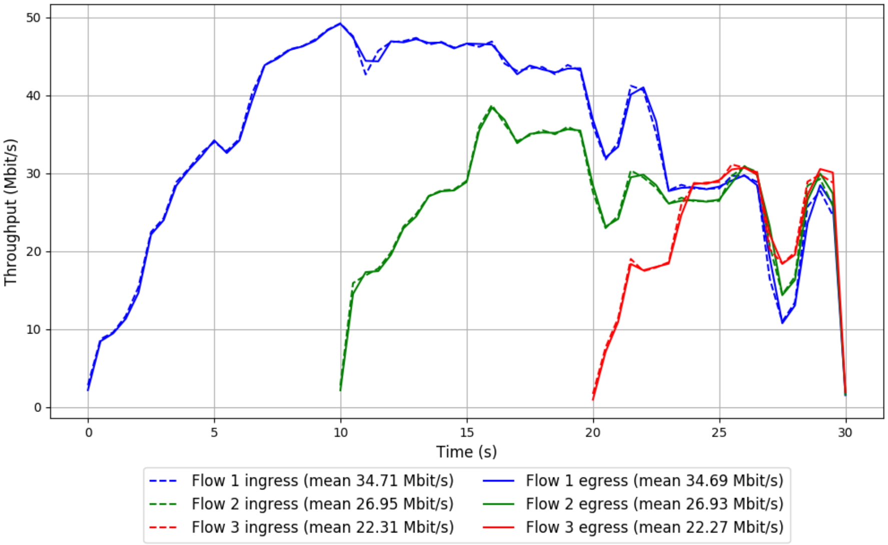


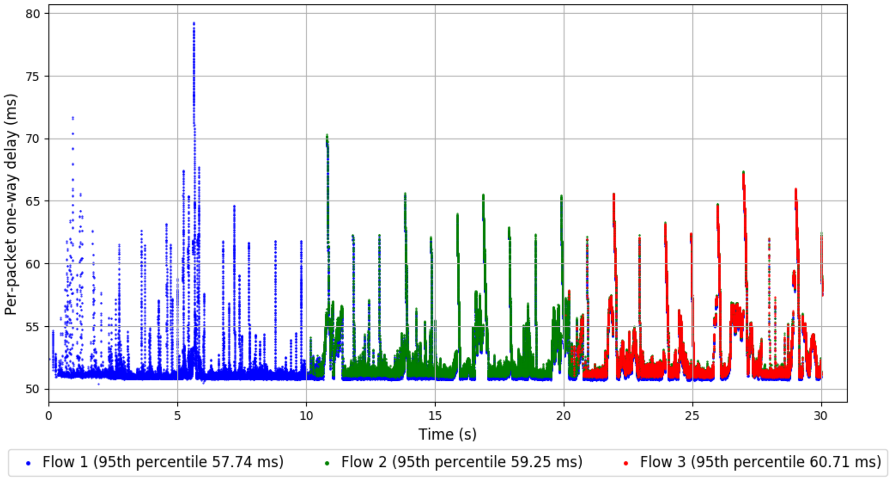
```
Run 4: Statistics of Copa

Start at: 2018-03-21 04:45:29
End at: 2018-03-21 04:45:59
Local clock offset: -4.011 ms
Remote clock offset: -19.14 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.02 Mbit/s
95th percentile per-packet one-way delay: 58.781 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 34.69 Mbit/s
95th percentile per-packet one-way delay: 57.740 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 26.93 Mbit/s
95th percentile per-packet one-way delay: 59.247 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 22.27 Mbit/s
95th percentile per-packet one-way delay: 60.710 ms
Loss rate: 0.13%
```

Run 4: Report of Copa — Data Link





Run 5: Statistics of Copa

```
/home/ubuntu/pantheon_data/2018-03-21T03-34-AWS-Korea-to-China-10-runs-3-flows/copa_stats_ru
```

Run 5: Report of Copa — Data Link

Figure is missing

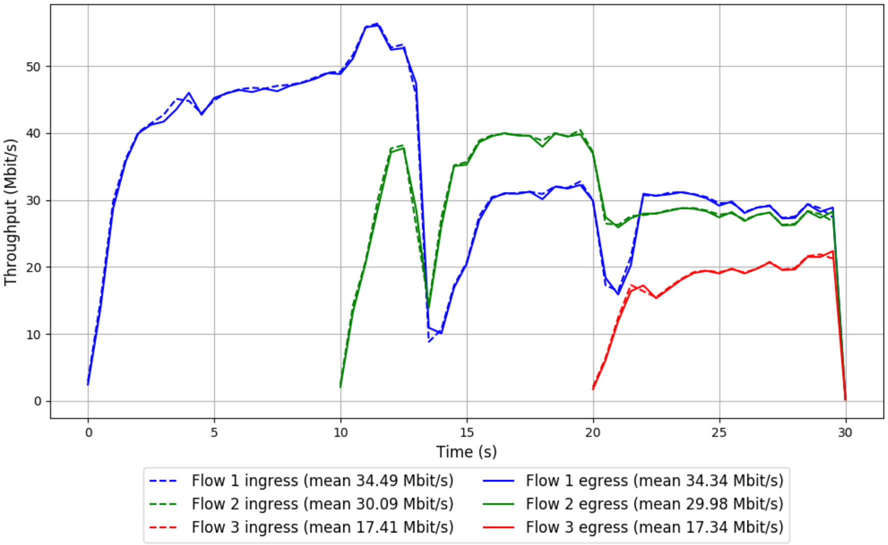
Figure is missing

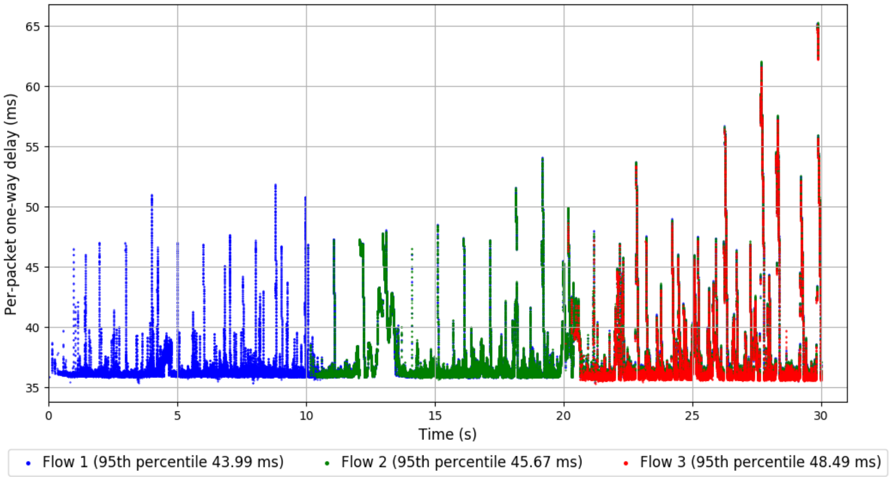
```
Run 6: Statistics of Copa

Start at: 2018-03-21 05:31:51
End at: 2018-03-21 05:32:21
Local clock offset: -10.615 ms
Remote clock offset: -29.004 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.05 Mbit/s
95th percentile per-packet one-way delay: 44.911 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 34.34 Mbit/s
95th percentile per-packet one-way delay: 43.989 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 29.98 Mbit/s
95th percentile per-packet one-way delay: 45.667 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 17.34 Mbit/s
95th percentile per-packet one-way delay: 48.495 ms
Loss rate: 0.47%
```

Run 6: Report of Copa — Data Link



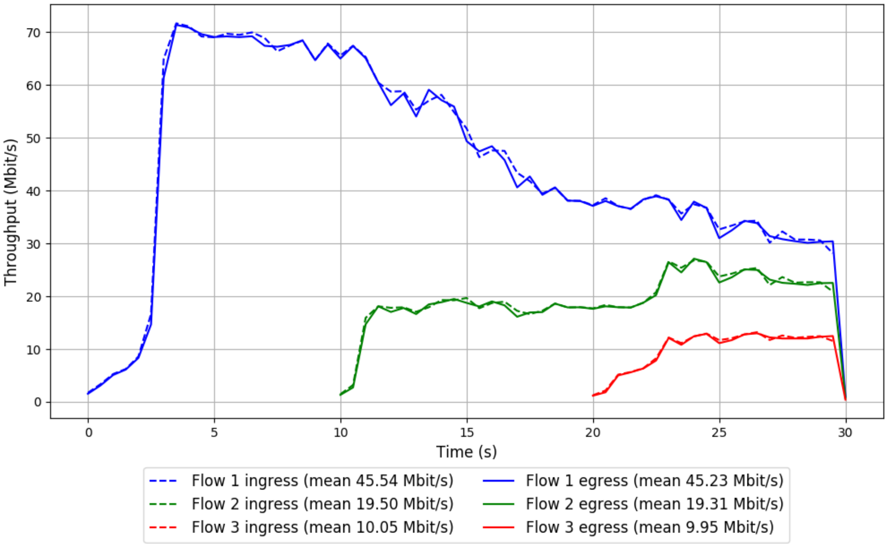


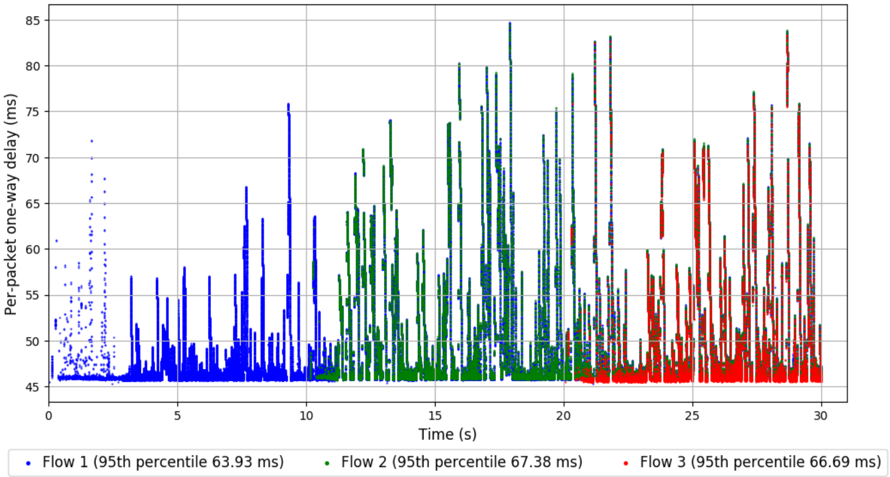
```
Run 7: Statistics of Copa

Start at: 2018-03-21 05:54:41
End at: 2018-03-21 05:55:11
Local clock offset: -2.156 ms
Remote clock offset: -20.509 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.39 Mbit/s
95th percentile per-packet one-way delay: 65.007 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 45.23 Mbit/s
95th percentile per-packet one-way delay: 63.926 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 19.31 Mbit/s
95th percentile per-packet one-way delay: 67.378 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 9.95 Mbit/s
95th percentile per-packet one-way delay: 66.695 ms
Loss rate: 0.97%
```

Run 7: Report of Copa — Data Link



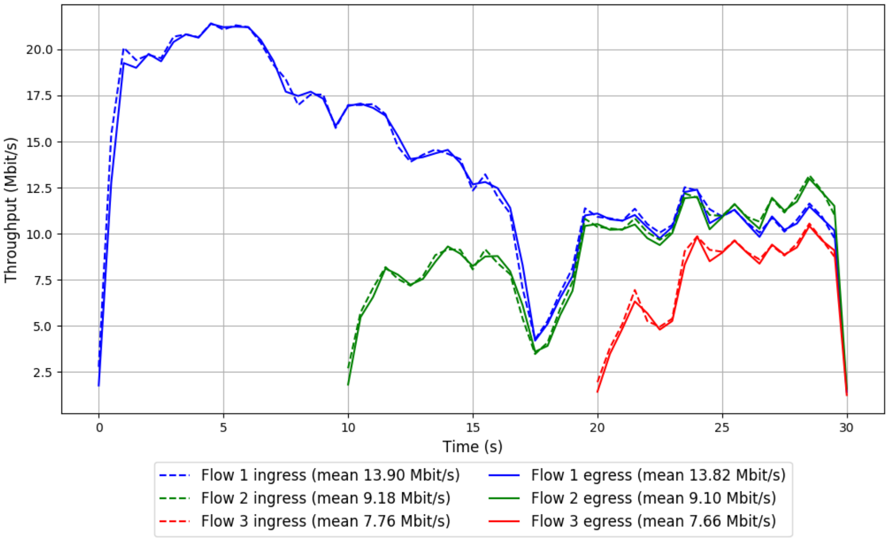


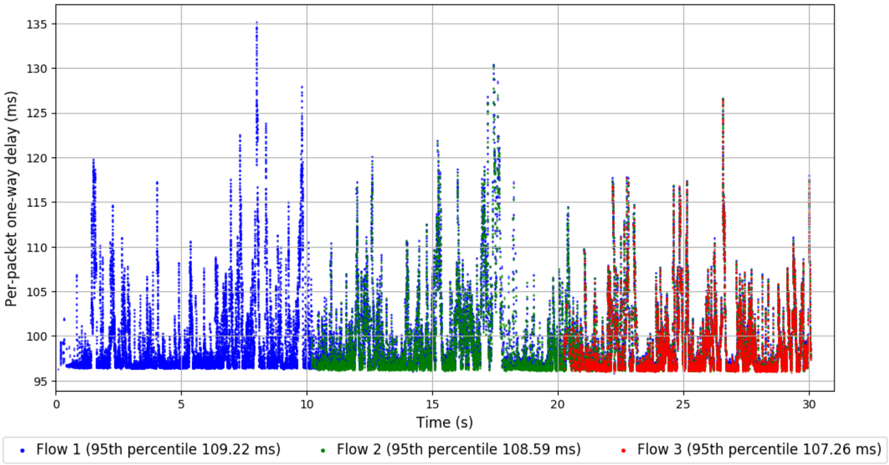
```
Run 8: Statistics of Copa

Start at: 2018-03-21 06:18:04
End at: 2018-03-21 06:18:34
Local clock offset: 2.865 ms
Remote clock offset: 35.474 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.42 Mbit/s
95th percentile per-packet one-way delay: 108.820 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 13.82 Mbit/s
95th percentile per-packet one-way delay: 109.218 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 9.10 Mbit/s
95th percentile per-packet one-way delay: 108.590 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 7.66 Mbit/s
95th percentile per-packet one-way delay: 107.257 ms
Loss rate: 1.29%
```

Run 8: Report of Copa — Data Link



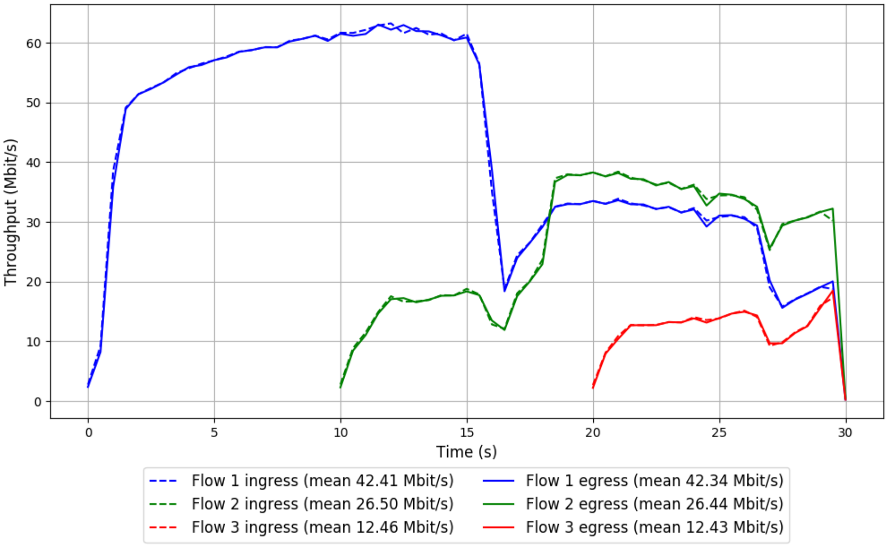


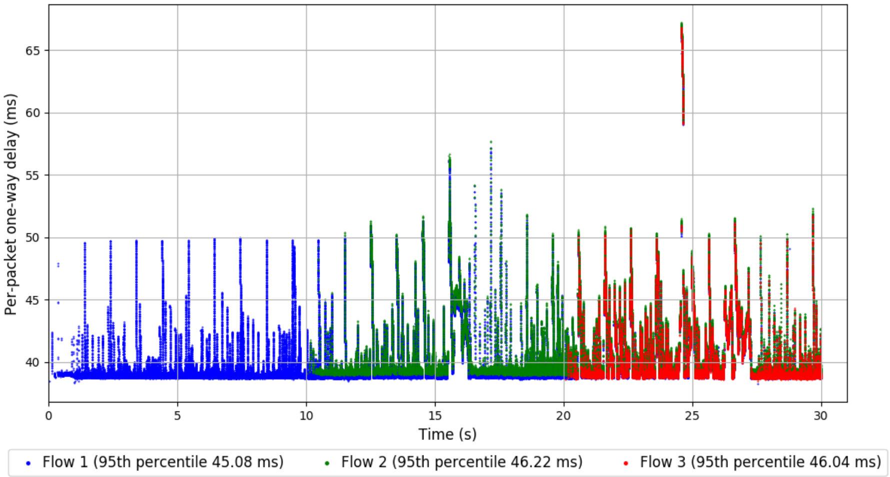
```
Run 9: Statistics of Copa

Start at: 2018-03-21 06:42:33
End at: 2018-03-21 06:43:03
Local clock offset: -0.154 ms
Remote clock offset: -20.984 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.08 Mbit/s
95th percentile per-packet one-way delay: 45.517 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 42.34 Mbit/s
95th percentile per-packet one-way delay: 45.077 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 26.44 Mbit/s
95th percentile per-packet one-way delay: 46.215 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 12.43 Mbit/s
95th percentile per-packet one-way delay: 46.044 ms
Loss rate: 0.26%
```

Run 9: Report of Copa — Data Link



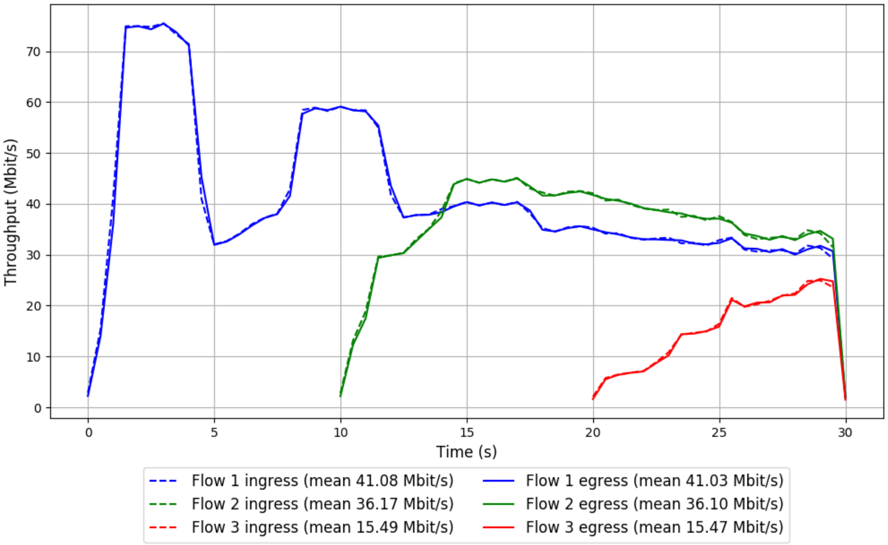


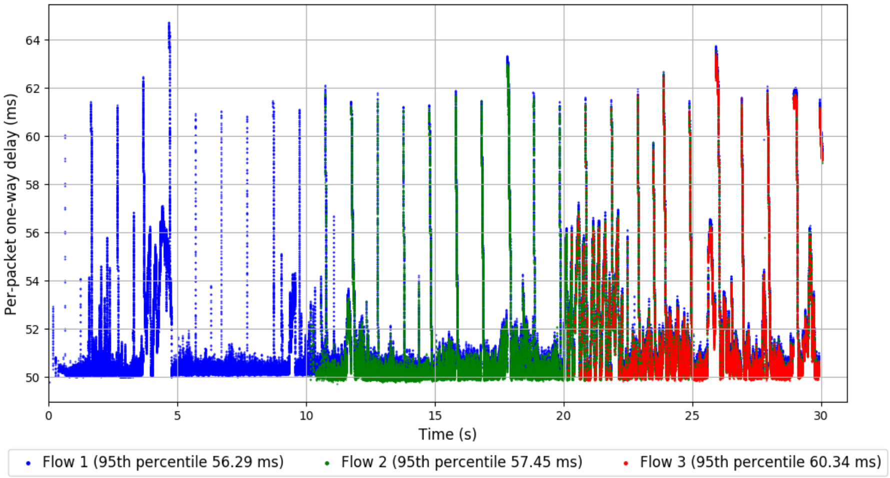
```
Run 10: Statistics of Copa

Start at: 2018-03-21 07:05:22
End at: 2018-03-21 07:05:52
Local clock offset: 1.901 ms
Remote clock offset: -13.597 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.20 Mbit/s
95th percentile per-packet one-way delay: 56.785 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 41.03 Mbit/s
95th percentile per-packet one-way delay: 56.292 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 36.10 Mbit/s
95th percentile per-packet one-way delay: 57.454 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 15.47 Mbit/s
95th percentile per-packet one-way delay: 60.345 ms
Loss rate: 0.11%
```

Run 10: Report of Copa — Data Link



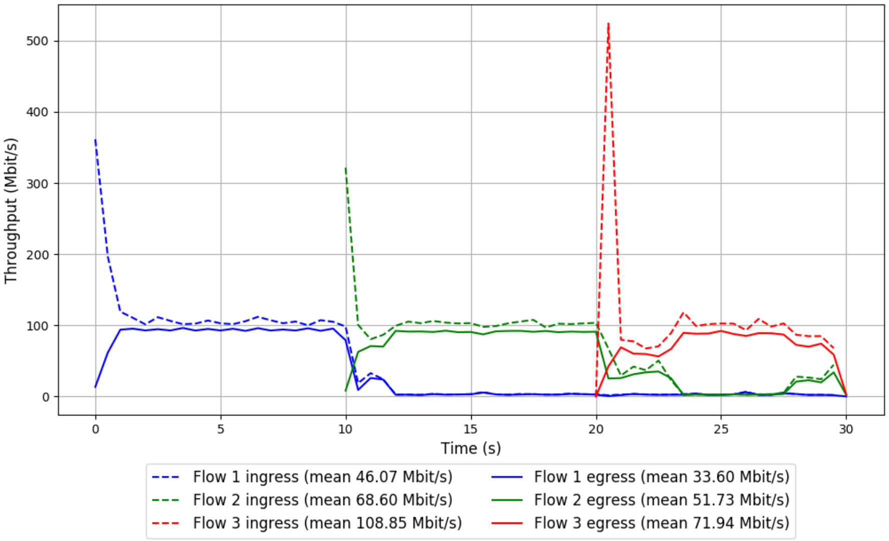


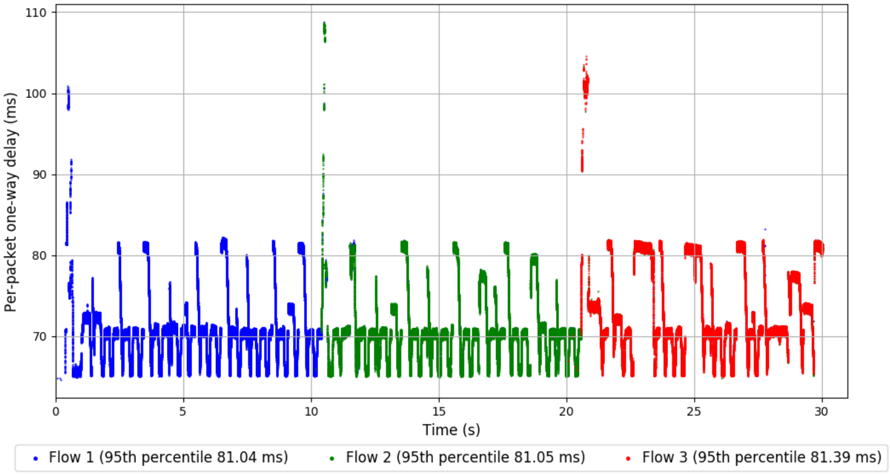
```
Run 1: Statistics of FillP

Start at: 2018-03-21 03:42:47
End at: 2018-03-21 03:43:17
Local clock offset: 10.706 ms
Remote clock offset: -0.351 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.91 Mbit/s
95th percentile per-packet one-way delay: 81.192 ms
Loss rate: 28.06%
-- Flow 1:
Average throughput: 33.60 Mbit/s
95th percentile per-packet one-way delay: 81.041 ms
Loss rate: 27.03%
-- Flow 2:
Average throughput: 51.73 Mbit/s
95th percentile per-packet one-way delay: 81.054 ms
Loss rate: 24.55%
-- Flow 3:
Average throughput: 71.94 Mbit/s
95th percentile per-packet one-way delay: 81.395 ms
Loss rate: 33.81%
```

Run 1: Report of FillP — Data Link





Run 2: Statistics of FillP

/home/ubuntu/pantheon_data/2018-03-21T03-34-AWS-Korea-to-China-10-runs-3-flows/fillp_stats_

Run 2: Report of FillP — Data Link

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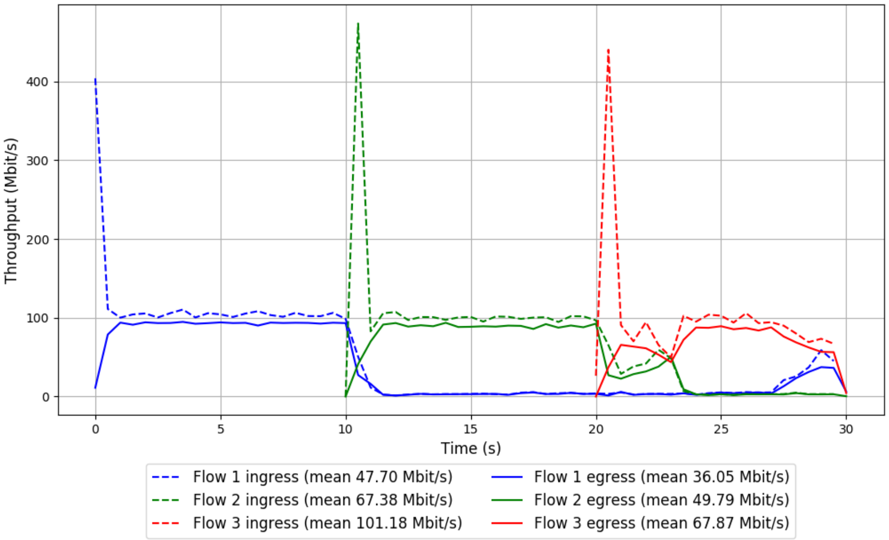
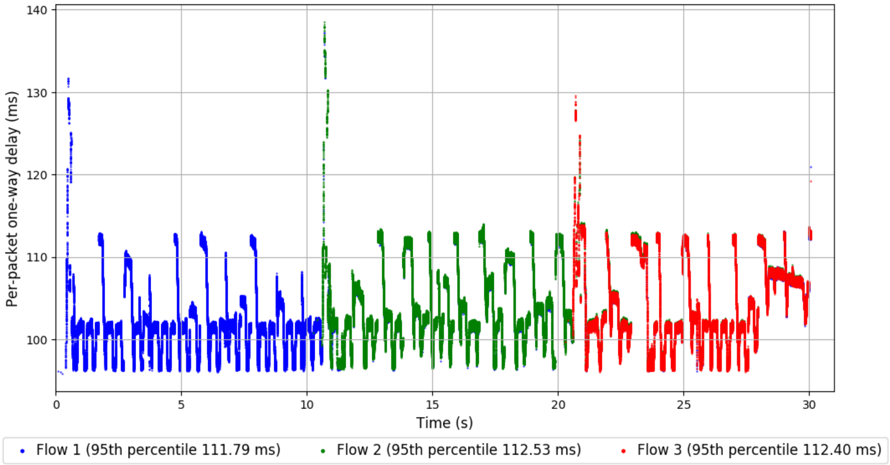
```
Run 3: Statistics of FillP

Start at: 2018-03-21 04:28:56
End at: 2018-03-21 04:29:26
Local clock offset: -7.951 ms
Remote clock offset: 25.599 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.11 Mbit/s
95th percentile per-packet one-way delay: 112.299 ms
Loss rate: 27.68%
-- Flow 1:
Average throughput: 36.05 Mbit/s
95th percentile per-packet one-way delay: 111.793 ms
Loss rate: 24.35%
-- Flow 2:
Average throughput: 49.79 Mbit/s
95th percentile per-packet one-way delay: 112.528 ms
Loss rate: 26.63%
-- Flow 3:
Average throughput: 67.87 Mbit/s
95th percentile per-packet one-way delay: 112.398 ms
Loss rate: 33.81%
```

Run 3: Report of FillP — Data Link



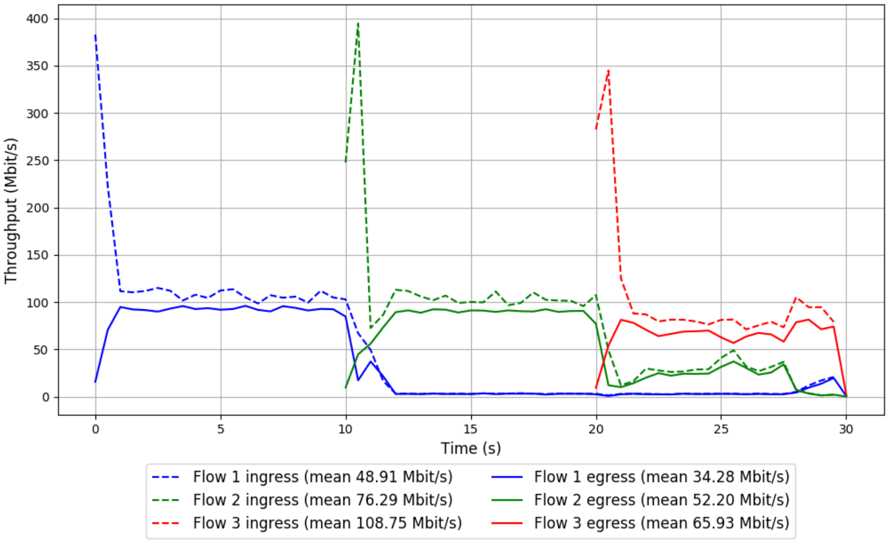


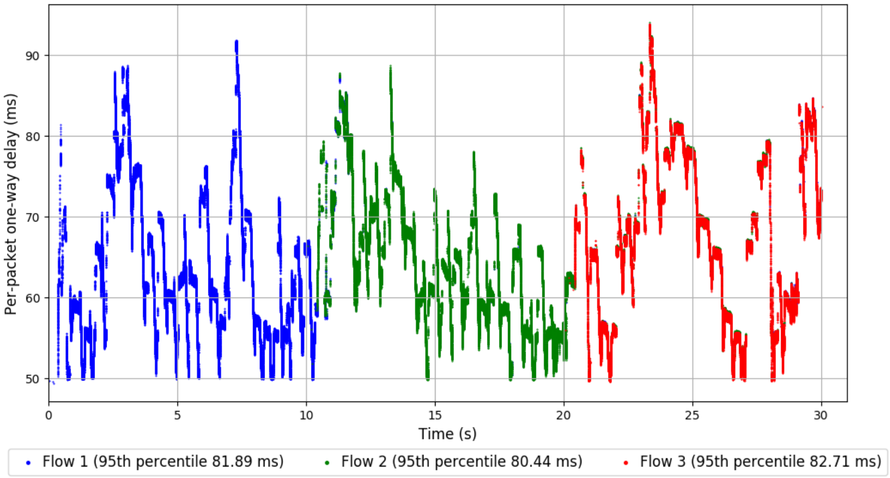
```
Run 4: Statistics of FillP

Start at: 2018-03-21 04:51:49
End at: 2018-03-21 04:52:19
Local clock offset: -2.888 ms
Remote clock offset: -17.747 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.89 Mbit/s
95th percentile per-packet one-way delay: 81.608 ms
Loss rate: 32.98%
-- Flow 1:
Average throughput: 34.28 Mbit/s
95th percentile per-packet one-way delay: 81.886 ms
Loss rate: 29.86%
-- Flow 2:
Average throughput: 52.20 Mbit/s
95th percentile per-packet one-way delay: 80.438 ms
Loss rate: 31.55%
-- Flow 3:
Average throughput: 65.93 Mbit/s
95th percentile per-packet one-way delay: 82.714 ms
Loss rate: 39.21%
```

Run 4: Report of FillP — Data Link



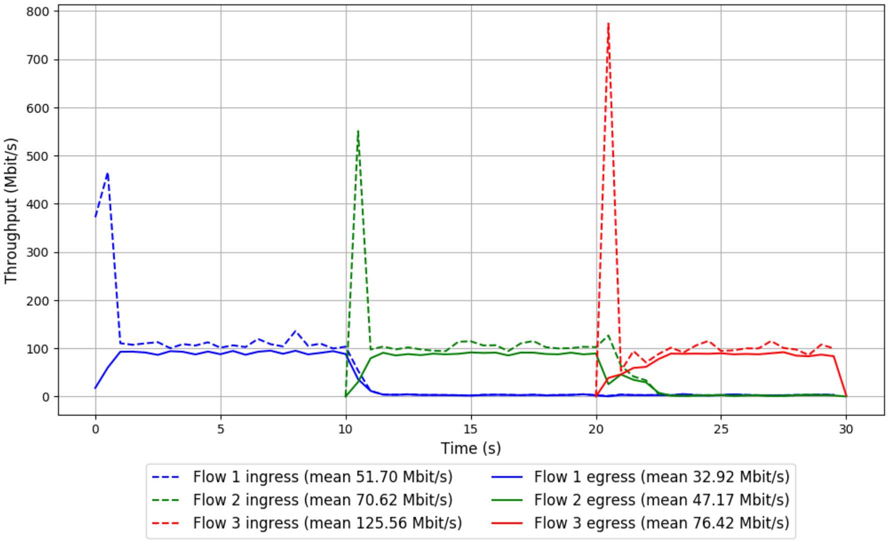


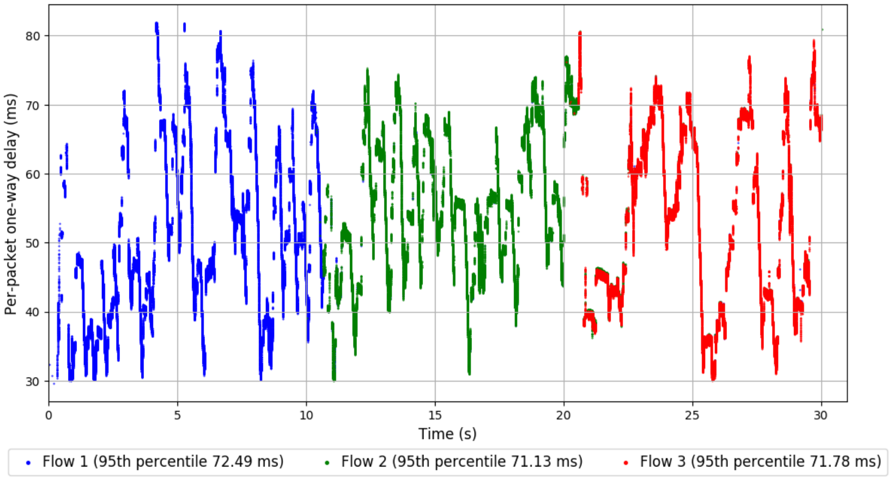
```
Run 5: Statistics of FillP

Start at: 2018-03-21 05:15:25
End at: 2018-03-21 05:15:55
Local clock offset: -7.298 ms
Remote clock offset: -35.265 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.58 Mbit/s
95th percentile per-packet one-way delay: 71.611 ms
Loss rate: 36.05%
-- Flow 1:
Average throughput: 32.92 Mbit/s
95th percentile per-packet one-way delay: 72.487 ms
Loss rate: 36.25%
-- Flow 2:
Average throughput: 47.17 Mbit/s
95th percentile per-packet one-way delay: 71.127 ms
Loss rate: 33.06%
-- Flow 3:
Average throughput: 76.42 Mbit/s
95th percentile per-packet one-way delay: 71.783 ms
Loss rate: 39.19%
```

Run 5: Report of FillP — Data Link



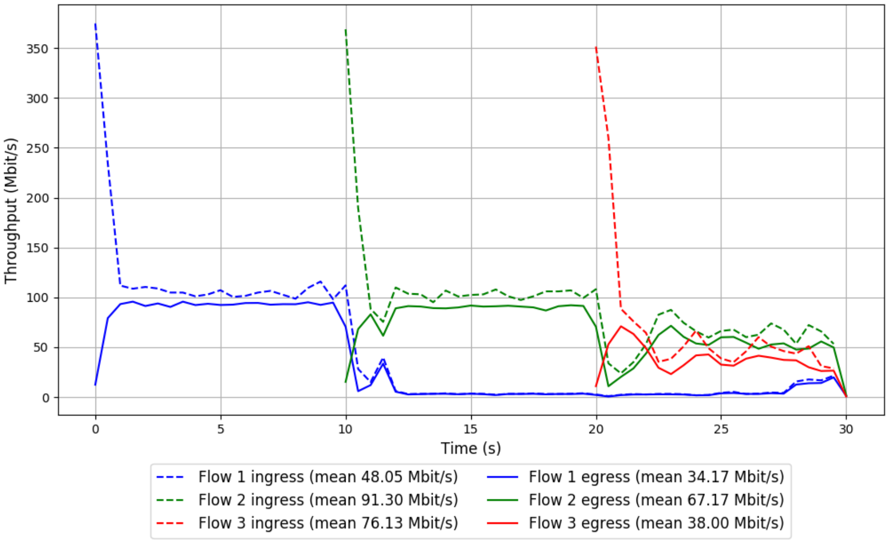


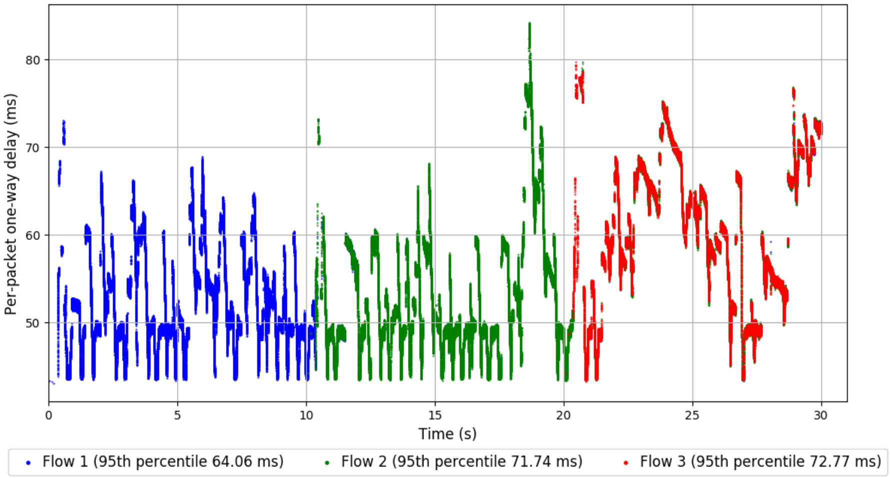
```
Run 6: Statistics of FillP

Start at: 2018-03-21 05:38:13
End at: 2018-03-21 05:38:43
Local clock offset: -11.887 ms
Remote clock offset: -20.829 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.52 Mbit/s
95th percentile per-packet one-way delay: 70.631 ms
Loss rate: 31.67%
-- Flow 1:
Average throughput: 34.17 Mbit/s
95th percentile per-packet one-way delay: 64.064 ms
Loss rate: 28.82%
-- Flow 2:
Average throughput: 67.17 Mbit/s
95th percentile per-packet one-way delay: 71.737 ms
Loss rate: 26.33%
-- Flow 3:
Average throughput: 38.00 Mbit/s
95th percentile per-packet one-way delay: 72.774 ms
Loss rate: 49.95%
```

Run 6: Report of FillP — Data Link



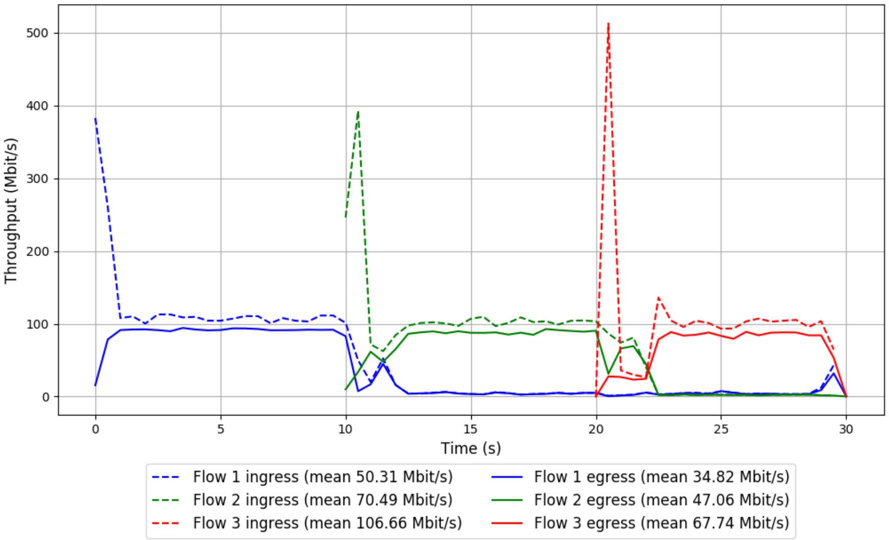


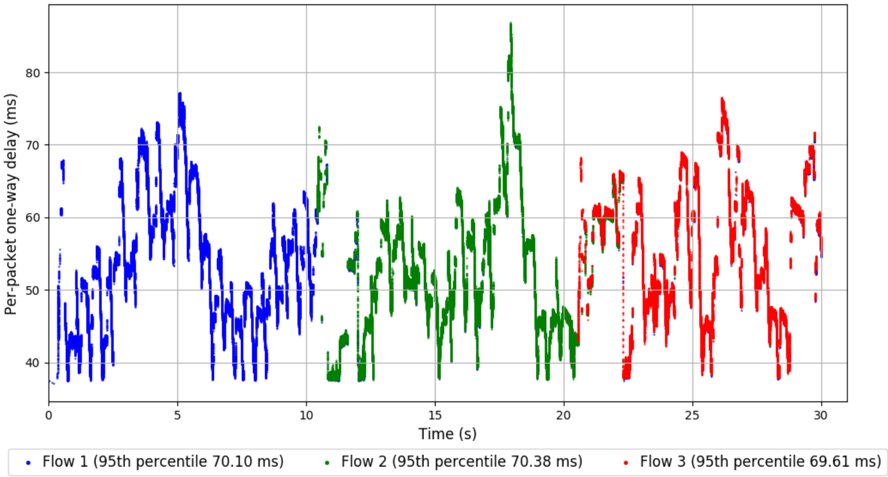
```
Run 7: Statistics of FillP

Start at: 2018-03-21 06:01:02
End at: 2018-03-21 06:01:32
Local clock offset: 2.399 ms
Remote clock offset: -24.627 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.62 Mbit/s
95th percentile per-packet one-way delay: 70.135 ms
Loss rate: 33.15%
-- Flow 1:
Average throughput: 34.82 Mbit/s
95th percentile per-packet one-way delay: 70.102 ms
Loss rate: 30.75%
-- Flow 2:
Average throughput: 47.06 Mbit/s
95th percentile per-packet one-way delay: 70.380 ms
Loss rate: 33.25%
-- Flow 3:
Average throughput: 67.74 Mbit/s
95th percentile per-packet one-way delay: 69.614 ms
Loss rate: 36.43%
```

Run 7: Report of FillP — Data Link





Run 8: Statistics of FillP

/home/ubuntu/pantheon_data/2018-03-21T03-34-AWS-Korea-to-China-10-runs-3-flows/fillp_stats_

Run 8: Report of FillP — Data Link

Figure is missing

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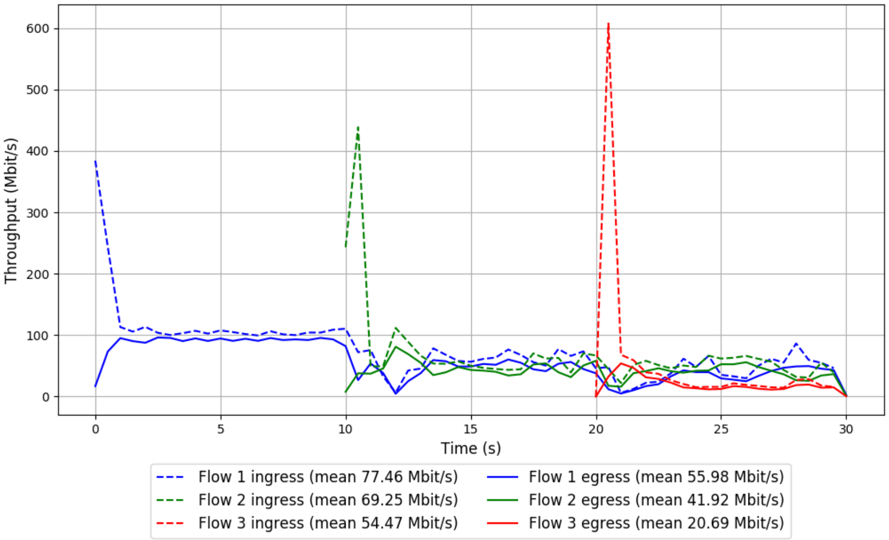
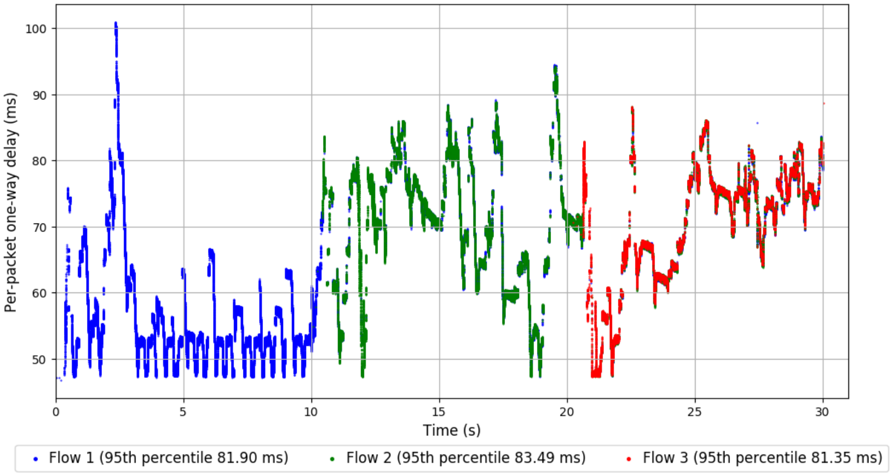
```
Run 9: Statistics of FillP

Start at: 2018-03-21 06:48:54
End at: 2018-03-21 06:49:24
Local clock offset: 0.343 ms
Remote clock offset: -11.79 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.63 Mbit/s
95th percentile per-packet one-way delay: 82.420 ms
Loss rate: 35.92%
-- Flow 1:
Average throughput: 55.98 Mbit/s
95th percentile per-packet one-way delay: 81.903 ms
Loss rate: 27.66%
-- Flow 2:
Average throughput: 41.92 Mbit/s
95th percentile per-packet one-way delay: 83.486 ms
Loss rate: 39.39%
-- Flow 3:
Average throughput: 20.69 Mbit/s
95th percentile per-packet one-way delay: 81.348 ms
Loss rate: 62.53%
```

Run 9: Report of FillP — Data Link





Run 10: Statistics of FillP

/home/ubuntu/pantheon_data/2018-03-21T03-34-AWS-Korea-to-China-10-runs-3-flows/fillp_stats_

Run 10: Report of FillP — Data Link

Figure is missing

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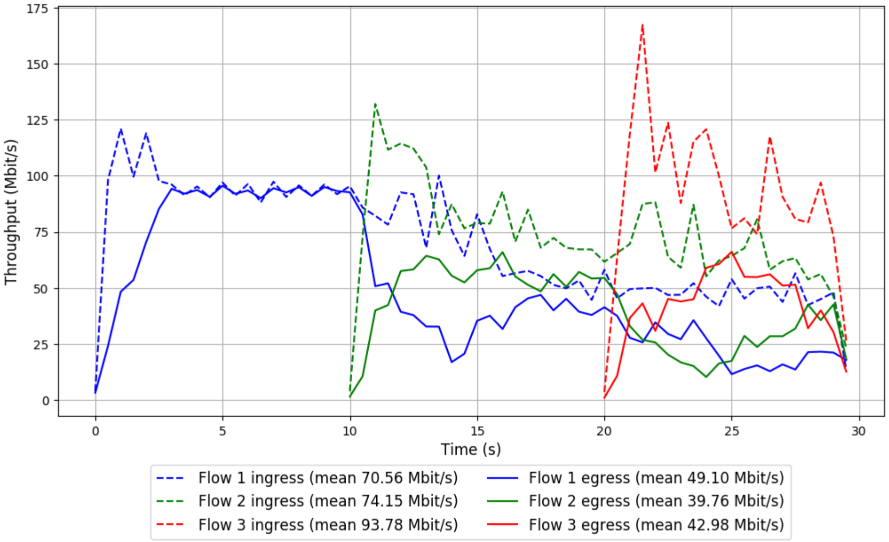
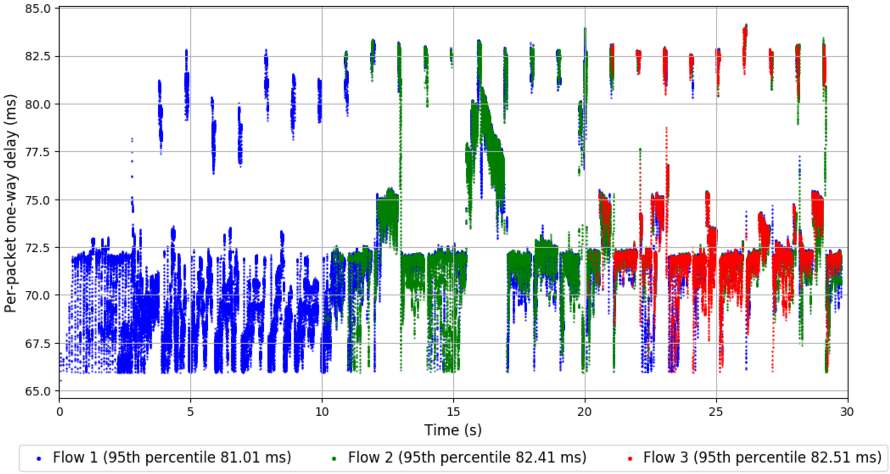
```
Run 1: Statistics of Indigo-1-32

Start at: 2018-03-21 03:50:11
End at: 2018-03-21 03:50:41
Local clock offset: 11.07 ms
Remote clock offset: -0.67 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.27 Mbit/s
95th percentile per-packet one-way delay: 82.125 ms
Loss rate: 40.43%
-- Flow 1:
Average throughput: 49.10 Mbit/s
95th percentile per-packet one-way delay: 81.010 ms
Loss rate: 30.41%
-- Flow 2:
Average throughput: 39.76 Mbit/s
95th percentile per-packet one-way delay: 82.411 ms
Loss rate: 46.36%
-- Flow 3:
Average throughput: 42.98 Mbit/s
95th percentile per-packet one-way delay: 82.510 ms
Loss rate: 54.16%
```

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



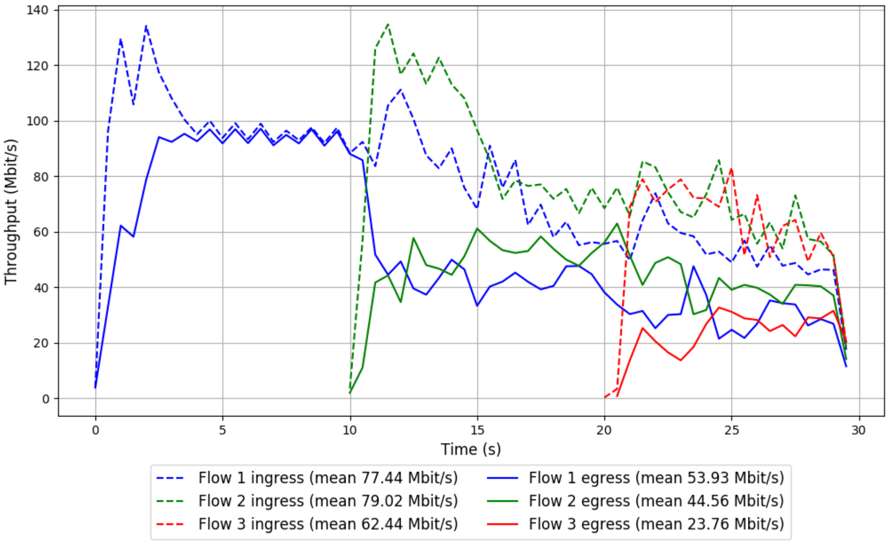


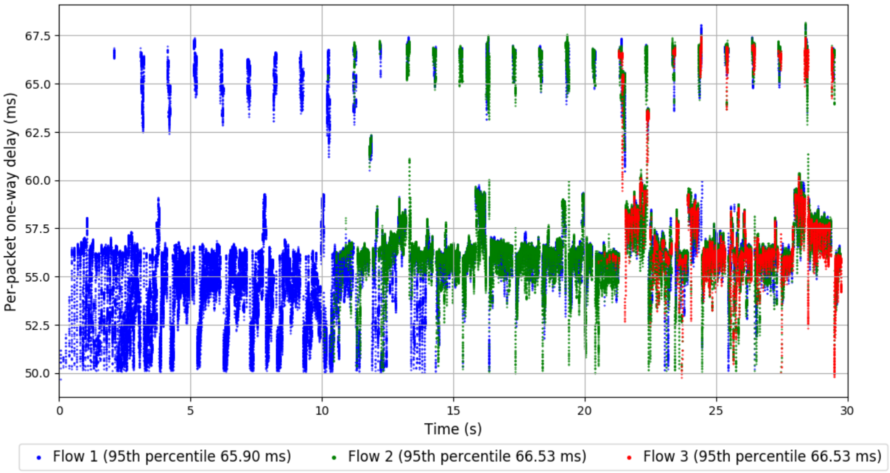
```
Run 2: Statistics of Indigo-1-32

Start at: 2018-03-21 04:13:30
End at: 2018-03-21 04:14:00
Local clock offset: -2.62 ms
Remote clock offset: -18.295 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.69 Mbit/s
95th percentile per-packet one-way delay: 66.333 ms
Loss rate: 39.10%
-- Flow 1:
Average throughput: 53.93 Mbit/s
95th percentile per-packet one-way delay: 65.899 ms
Loss rate: 30.34%
-- Flow 2:
Average throughput: 44.56 Mbit/s
95th percentile per-packet one-way delay: 66.533 ms
Loss rate: 43.59%
-- Flow 3:
Average throughput: 23.76 Mbit/s
95th percentile per-packet one-way delay: 66.531 ms
Loss rate: 61.94%
```

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



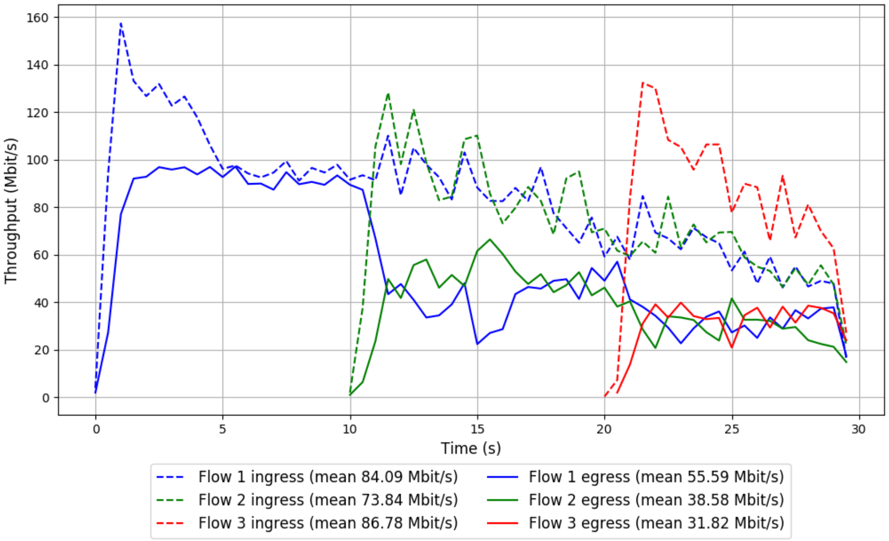


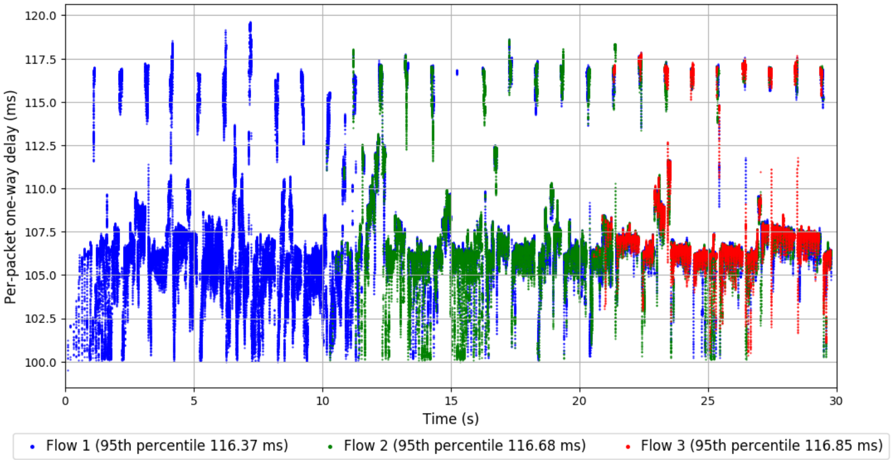
```
Run 3: Statistics of Indigo-1-32

Start at: 2018-03-21 04:36:25
End at: 2018-03-21 04:36:55
Local clock offset: -8.652 ms
Remote clock offset: 25.375 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.93 Mbit/s
95th percentile per-packet one-way delay: 116.585 ms
Loss rate: 43.08%
-- Flow 1:
Average throughput: 55.59 Mbit/s
95th percentile per-packet one-way delay: 116.366 ms
Loss rate: 33.87%
-- Flow 2:
Average throughput: 38.58 Mbit/s
95th percentile per-packet one-way delay: 116.676 ms
Loss rate: 47.77%
-- Flow 3:
Average throughput: 31.82 Mbit/s
95th percentile per-packet one-way delay: 116.851 ms
Loss rate: 63.33%
```

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



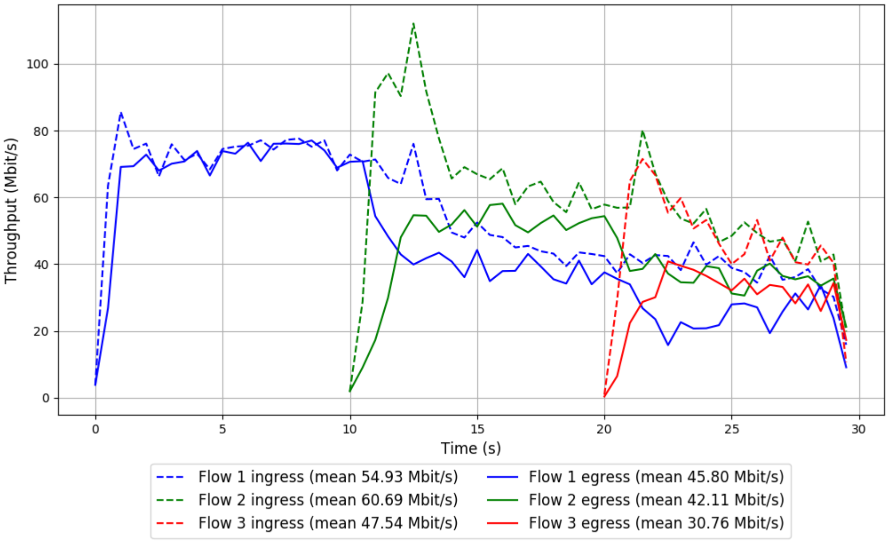


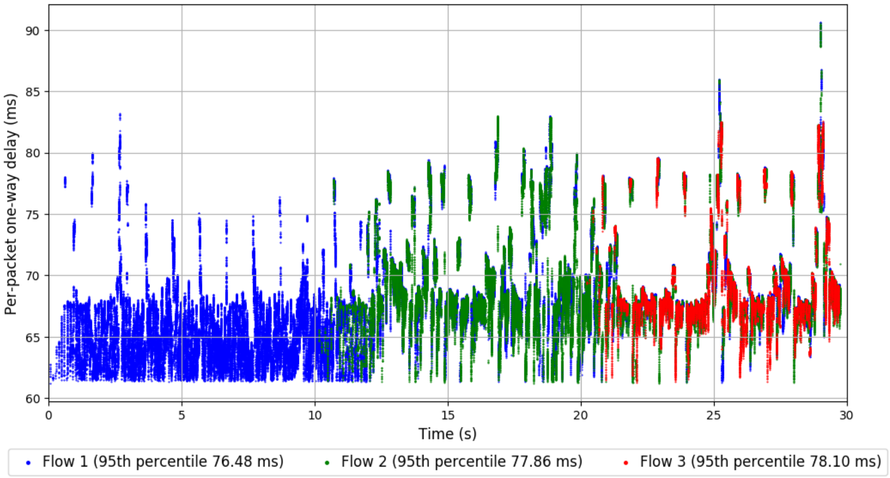
```
Run 4: Statistics of Indigo-1-32

Start at: 2018-03-21 04:59:14
End at: 2018-03-21 04:59:44
Local clock offset: -3.685 ms
Remote clock offset: -5.59 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.34 Mbit/s
95th percentile per-packet one-way delay: 77.623 ms
Loss rate: 24.27%
-- Flow 1:
Average throughput: 45.80 Mbit/s
95th percentile per-packet one-way delay: 76.484 ms
Loss rate: 16.60%
-- Flow 2:
Average throughput: 42.11 Mbit/s
95th percentile per-packet one-way delay: 77.860 ms
Loss rate: 30.60%
-- Flow 3:
Average throughput: 30.76 Mbit/s
95th percentile per-packet one-way delay: 78.098 ms
Loss rate: 35.30%
```

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



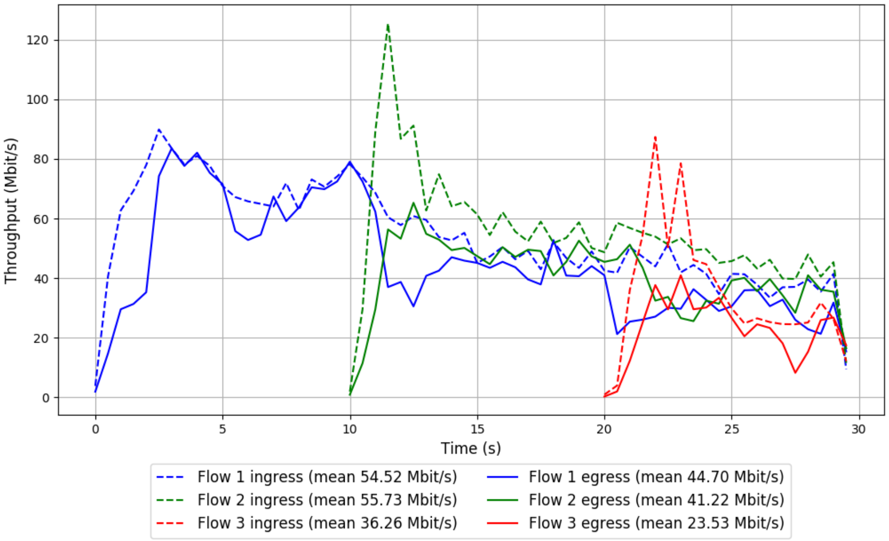


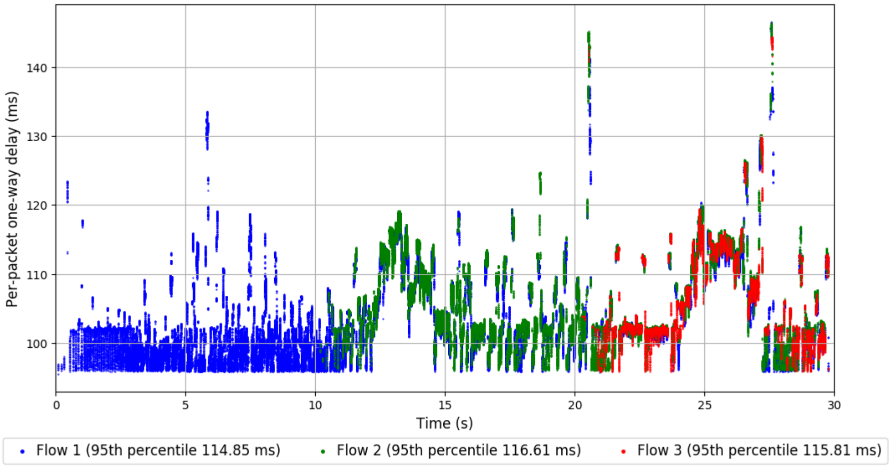
```
Run 5: Statistics of Indigo-1-32

Start at: 2018-03-21 05:22:54
End at: 2018-03-21 05:23:24
Local clock offset: -8.795 ms
Remote clock offset: 31.014 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.41 Mbit/s
95th percentile per-packet one-way delay: 115.755 ms
Loss rate: 22.79%
-- Flow 1:
Average throughput: 44.70 Mbit/s
95th percentile per-packet one-way delay: 114.847 ms
Loss rate: 18.00%
-- Flow 2:
Average throughput: 41.22 Mbit/s
95th percentile per-packet one-way delay: 116.610 ms
Loss rate: 26.00%
-- Flow 3:
Average throughput: 23.53 Mbit/s
95th percentile per-packet one-way delay: 115.805 ms
Loss rate: 35.16%
```

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



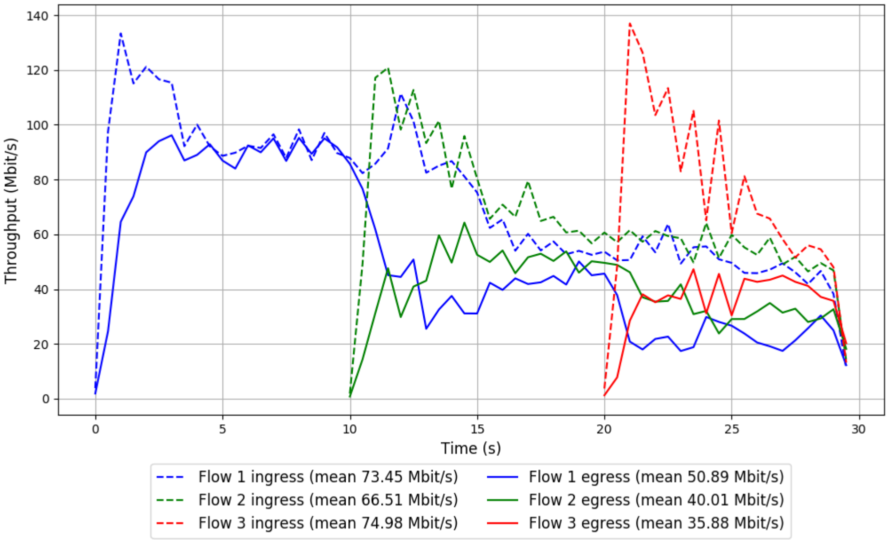


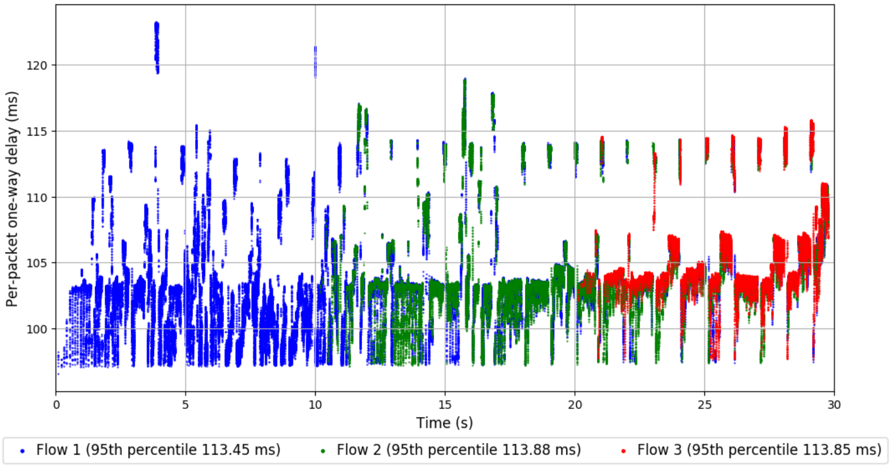
```
Run 6: Statistics of Indigo-1-32

Start at: 2018-03-21 05:45:41
End at: 2018-03-21 05:46:11
Local clock offset: -5.027 ms
Remote clock offset: 32.334 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.92 Mbit/s
95th percentile per-packet one-way delay: 113.695 ms
Loss rate: 37.20%
-- Flow 1:
Average throughput: 50.89 Mbit/s
95th percentile per-packet one-way delay: 113.450 ms
Loss rate: 30.68%
-- Flow 2:
Average throughput: 40.01 Mbit/s
95th percentile per-packet one-way delay: 113.880 ms
Loss rate: 39.84%
-- Flow 3:
Average throughput: 35.88 Mbit/s
95th percentile per-packet one-way delay: 113.848 ms
Loss rate: 52.11%
```

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



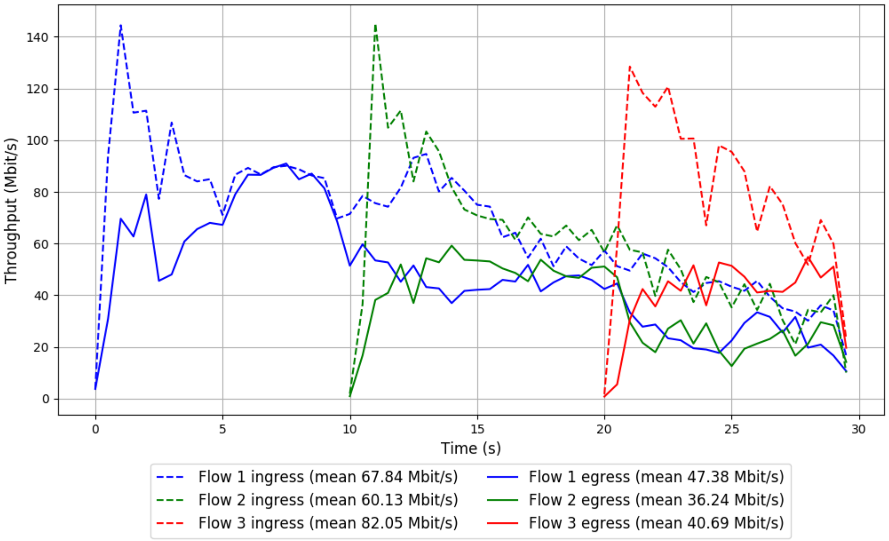


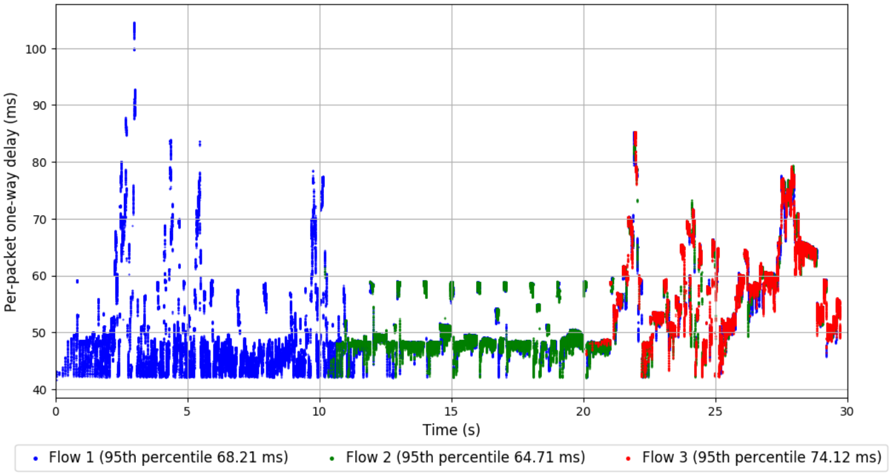
```
Run 7: Statistics of Indigo-1-32

Start at: 2018-03-21 06:08:27
End at: 2018-03-21 06:08:57
Local clock offset: 3.603 ms
Remote clock offset: -19.765 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.27 Mbit/s
95th percentile per-packet one-way delay: 68.786 ms
Loss rate: 36.99%
-- Flow 1:
Average throughput: 47.38 Mbit/s
95th percentile per-packet one-way delay: 68.211 ms
Loss rate: 30.14%
-- Flow 2:
Average throughput: 36.24 Mbit/s
95th percentile per-packet one-way delay: 64.709 ms
Loss rate: 39.75%
-- Flow 3:
Average throughput: 40.69 Mbit/s
95th percentile per-packet one-way delay: 74.125 ms
Loss rate: 50.39%
```

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



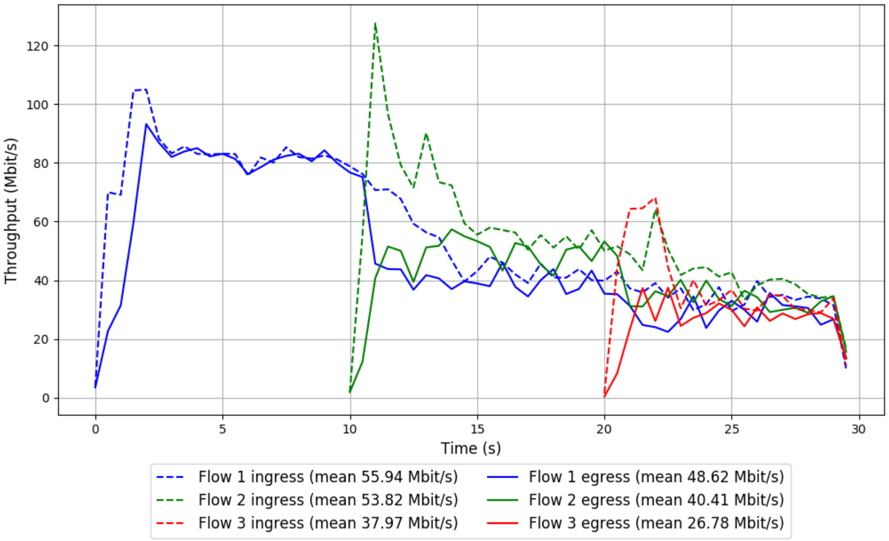


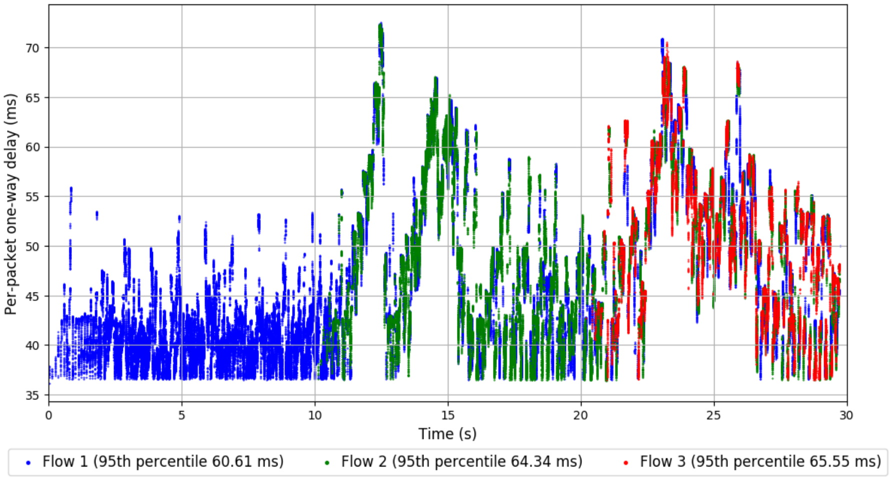
```
Run 8: Statistics of Indigo-1-32

Start at: 2018-03-21 06:33:35
End at: 2018-03-21 06:34:05
Local clock offset: 0.3 ms
Remote clock offset: -24.073 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.88 Mbit/s
95th percentile per-packet one-way delay: 62.432 ms
Loss rate: 19.03%
-- Flow 1:
Average throughput: 48.62 Mbit/s
95th percentile per-packet one-way delay: 60.606 ms
Loss rate: 13.05%
-- Flow 2:
Average throughput: 40.41 Mbit/s
95th percentile per-packet one-way delay: 64.341 ms
Loss rate: 24.88%
-- Flow 3:
Average throughput: 26.78 Mbit/s
95th percentile per-packet one-way delay: 65.553 ms
Loss rate: 29.41%
```

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



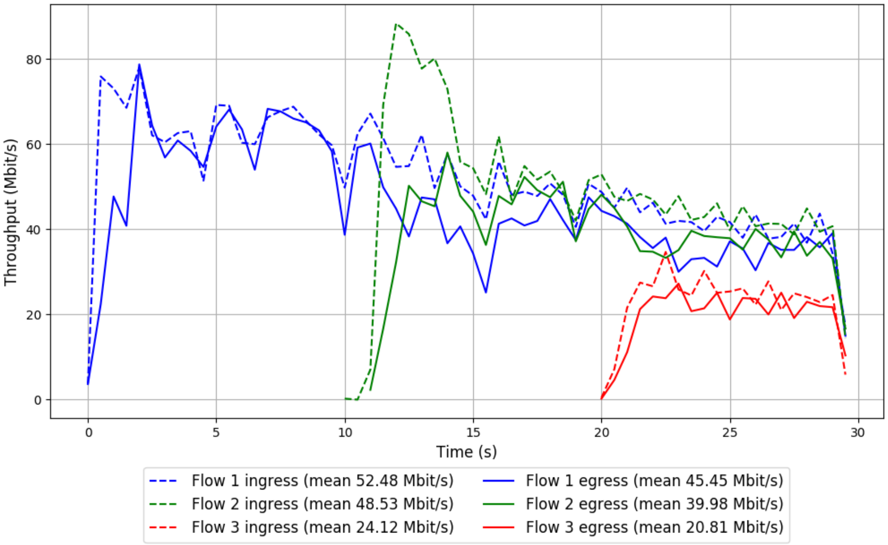


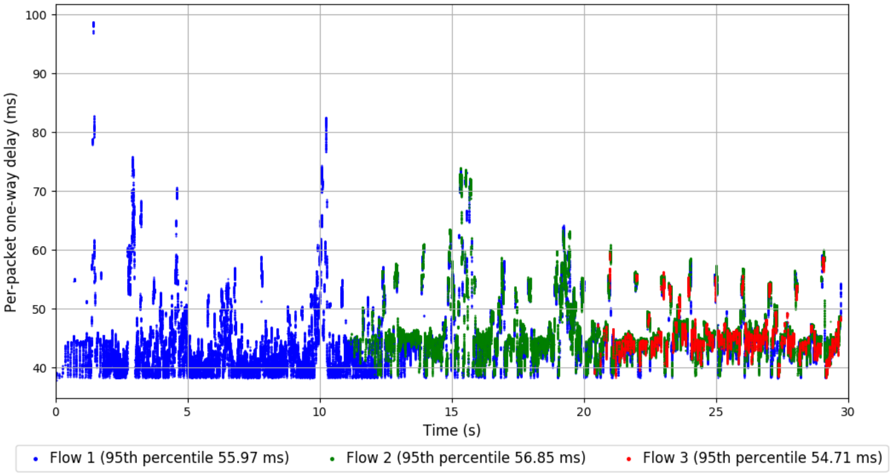
```
Run 9: Statistics of Indigo-1-32

Start at: 2018-03-21 06:56:22
End at: 2018-03-21 06:56:52
Local clock offset: 1.457 ms
Remote clock offset: -19.808 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.05 Mbit/s
95th percentile per-packet one-way delay: 56.119 ms
Loss rate: 16.32%
-- Flow 1:
Average throughput: 45.45 Mbit/s
95th percentile per-packet one-way delay: 55.969 ms
Loss rate: 13.37%
-- Flow 2:
Average throughput: 39.98 Mbit/s
95th percentile per-packet one-way delay: 56.848 ms
Loss rate: 21.79%
-- Flow 3:
Average throughput: 20.81 Mbit/s
95th percentile per-packet one-way delay: 54.710 ms
Loss rate: 13.63%
```

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



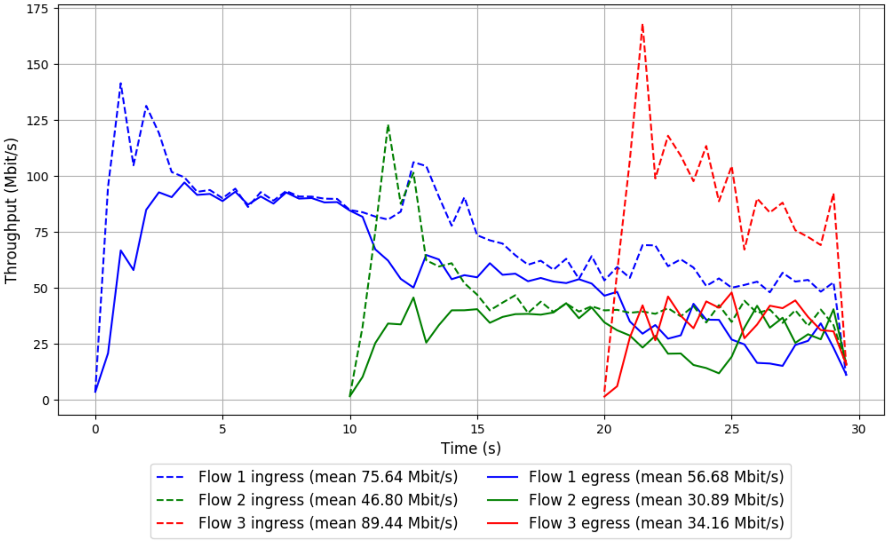


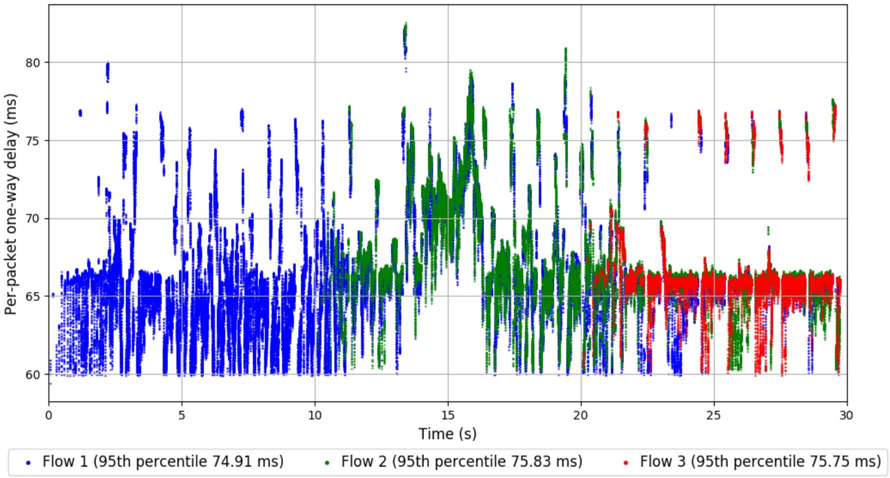
```
Run 10: Statistics of Indigo-1-32

Start at: 2018-03-21 07:19:50
End at: 2018-03-21 07:20:20
Local clock offset: 1.548 ms
Remote clock offset: -7.389 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.15 Mbit/s
95th percentile per-packet one-way delay: 75.284 ms
Loss rate: 34.94%
-- Flow 1:
Average throughput: 56.68 Mbit/s
95th percentile per-packet one-way delay: 74.913 ms
Loss rate: 25.04%
-- Flow 2:
Average throughput: 30.89 Mbit/s
95th percentile per-packet one-way delay: 75.830 ms
Loss rate: 33.98%
-- Flow 3:
Average throughput: 34.16 Mbit/s
95th percentile per-packet one-way delay: 75.745 ms
Loss rate: 61.78%
```

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



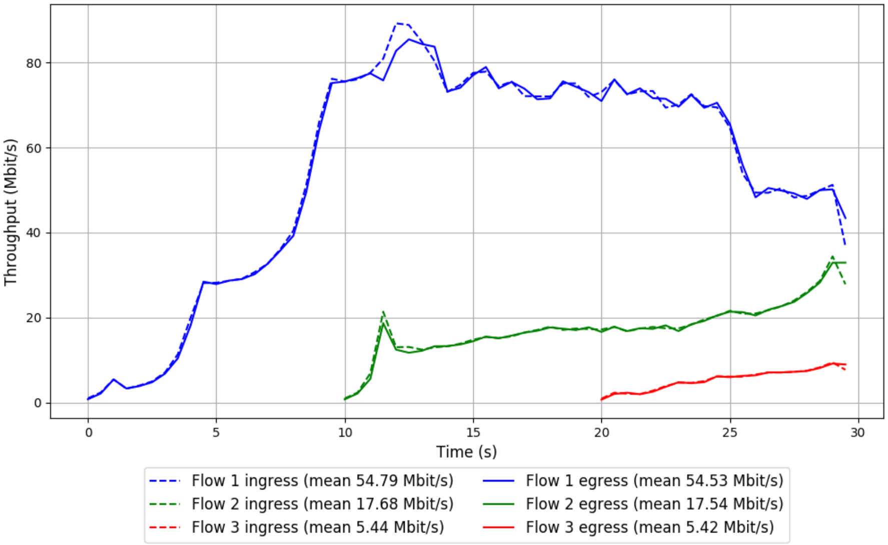


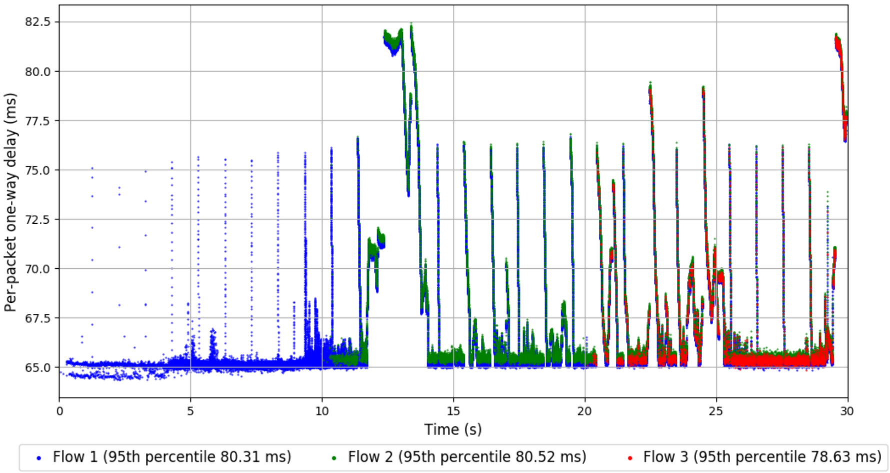
```
Run 1: Statistics of Vivace-latency

Start at: 2018-03-21 03:41:30
End at: 2018-03-21 03:42:00
Local clock offset: 10.634 ms
Remote clock offset: -0.265 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.98 Mbit/s
95th percentile per-packet one-way delay: 80.296 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 54.53 Mbit/s
95th percentile per-packet one-way delay: 80.313 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 17.54 Mbit/s
95th percentile per-packet one-way delay: 80.524 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 5.42 Mbit/s
95th percentile per-packet one-way delay: 78.628 ms
Loss rate: 0.22%
```

Run 1: Report of Vivace-latency — Data Link



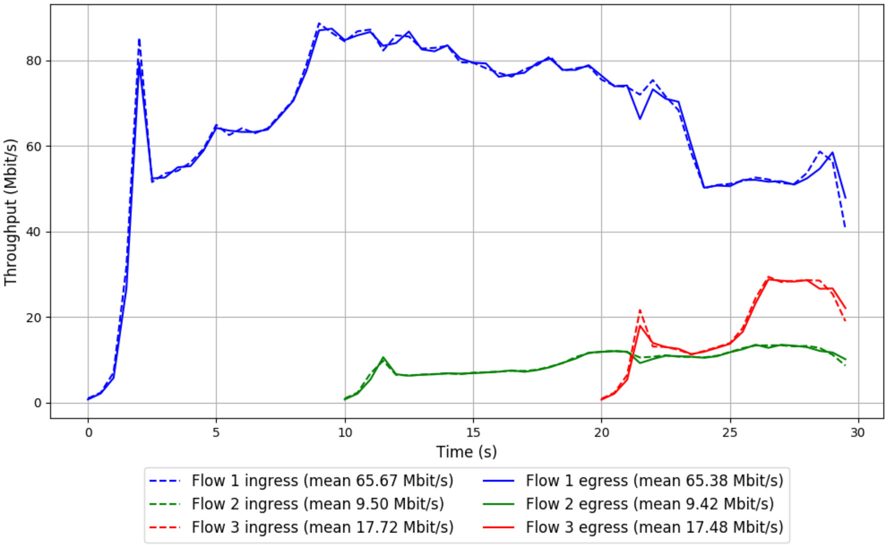


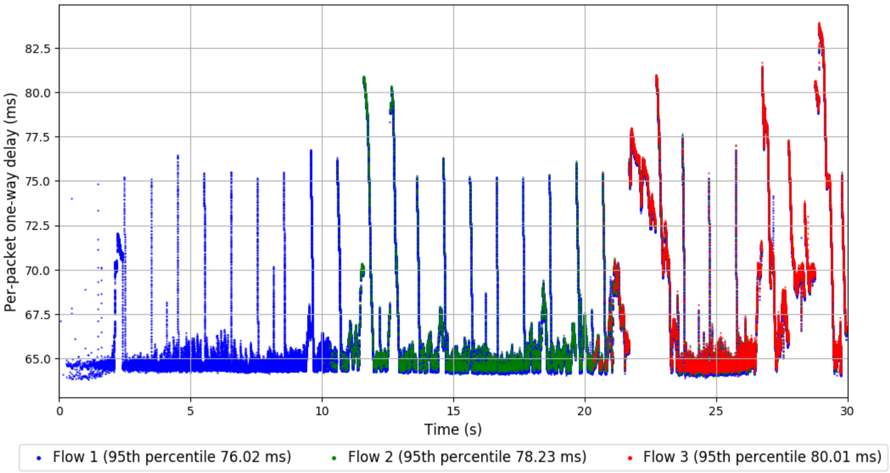
```
Run 2: Statistics of Vivace-latency

Start at: 2018-03-21 04:04:08
End at: 2018-03-21 04:04:38
Local clock offset: 3.882 ms
Remote clock offset: -0.714 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.40 Mbit/s
95th percentile per-packet one-way delay: 76.708 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 65.38 Mbit/s
95th percentile per-packet one-way delay: 76.016 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 9.42 Mbit/s
95th percentile per-packet one-way delay: 78.231 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 17.48 Mbit/s
95th percentile per-packet one-way delay: 80.007 ms
Loss rate: 1.34%
```

Run 2: Report of Vivace-latency — Data Link



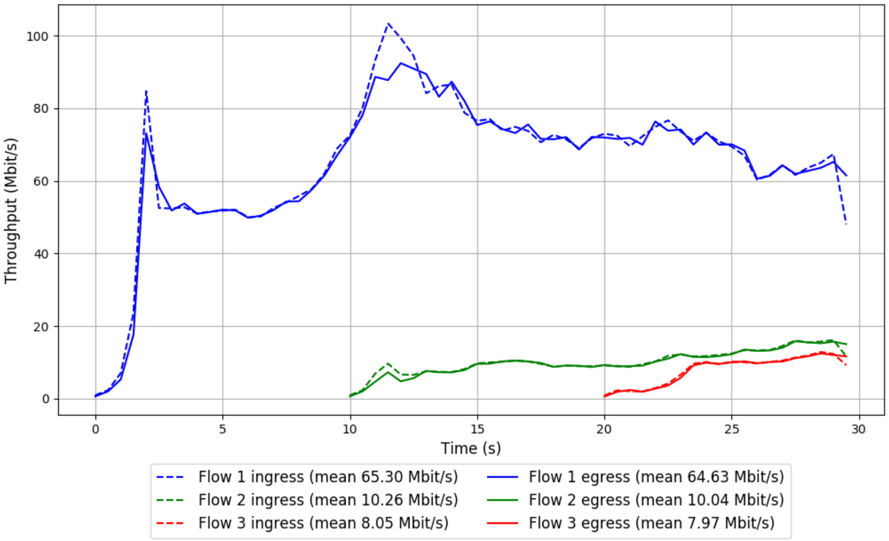


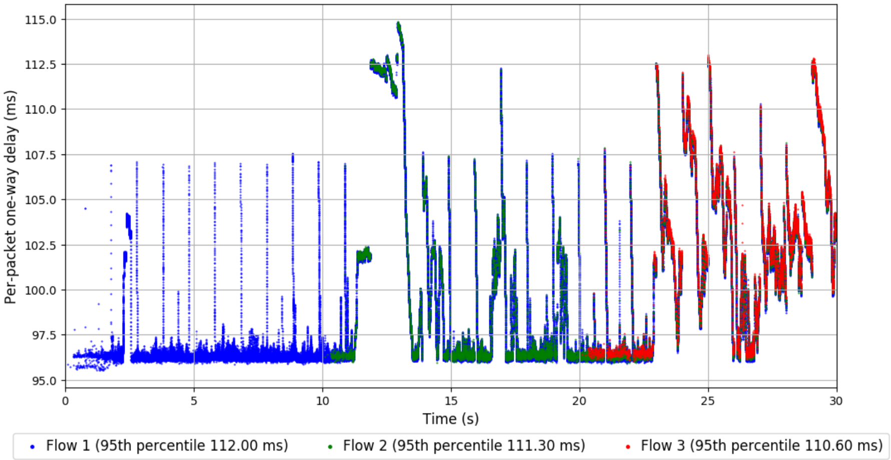
```
Run 3: Statistics of Vivace-latency

Start at: 2018-03-21 04:27:38
End at: 2018-03-21 04:28:08
Local clock offset: -7.522 ms
Remote clock offset: 25.67 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.93 Mbit/s
95th percentile per-packet one-way delay: 111.961 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 64.63 Mbit/s
95th percentile per-packet one-way delay: 112.004 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 10.04 Mbit/s
95th percentile per-packet one-way delay: 111.300 ms
Loss rate: 2.14%
-- Flow 3:
Average throughput: 7.97 Mbit/s
95th percentile per-packet one-way delay: 110.601 ms
Loss rate: 0.90%
```

Run 3: Report of Vivace-latency — Data Link



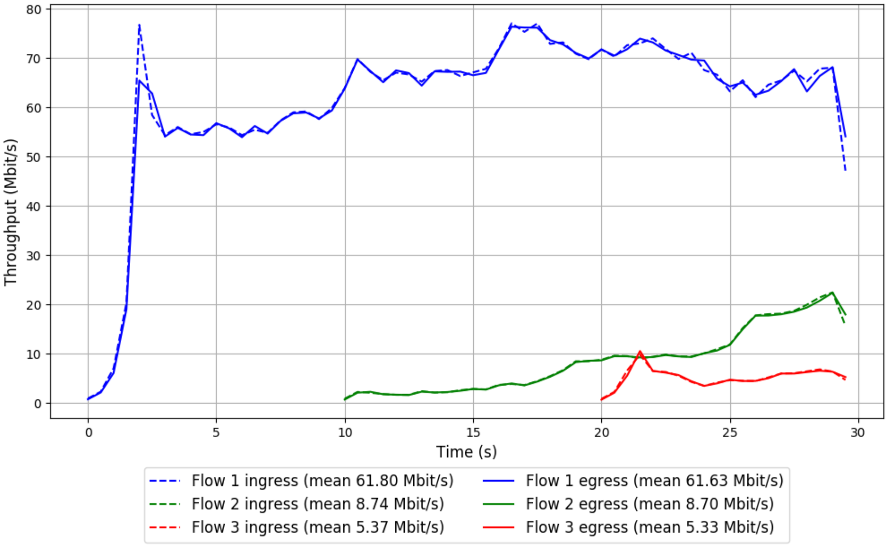


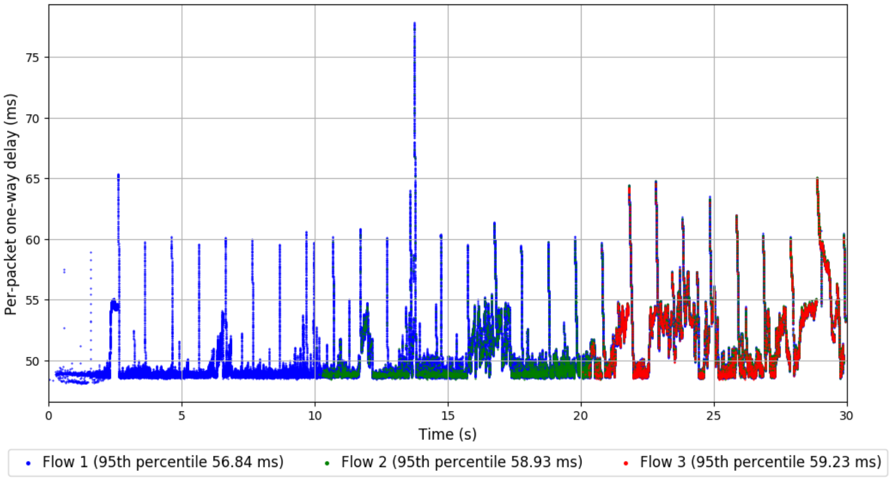
```
Run 4: Statistics of Vivace-latency

Start at: 2018-03-21 04:50:33
End at: 2018-03-21 04:51:03
Local clock offset: -3.686 ms
Remote clock offset: -19.834 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.17 Mbit/s
95th percentile per-packet one-way delay: 57.286 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 61.63 Mbit/s
95th percentile per-packet one-way delay: 56.839 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 8.70 Mbit/s
95th percentile per-packet one-way delay: 58.929 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 5.33 Mbit/s
95th percentile per-packet one-way delay: 59.225 ms
Loss rate: 0.68%
```

Run 4: Report of Vivace-latency — Data Link



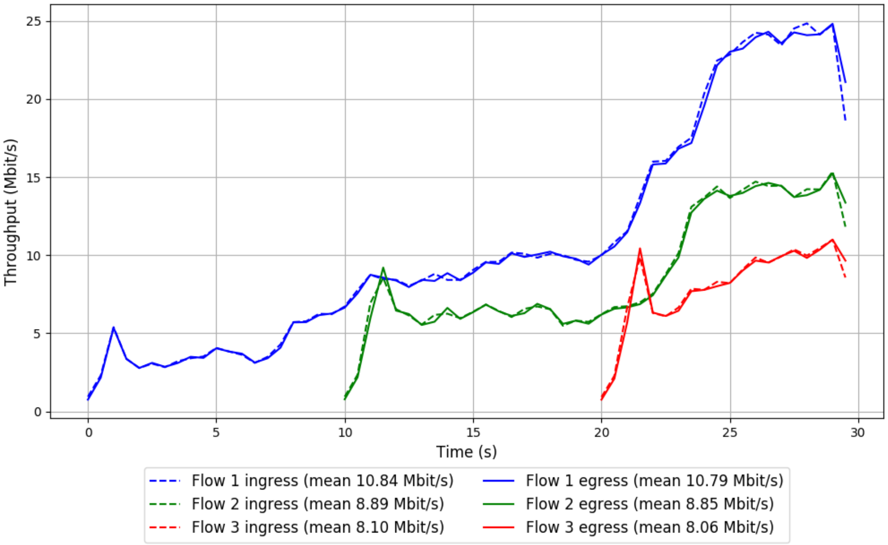


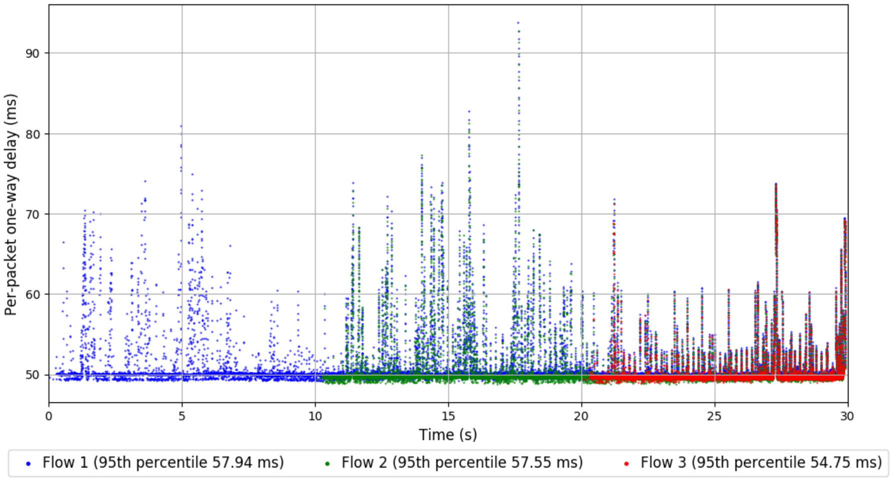
```
Run 5: Statistics of Vivace-latency

Start at: 2018-03-21 05:14:11
End at: 2018-03-21 05:14:41
Local clock offset: -7.002 ms
Remote clock offset: -15.76 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.33 Mbit/s
95th percentile per-packet one-way delay: 57.454 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 10.79 Mbit/s
95th percentile per-packet one-way delay: 57.942 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 8.85 Mbit/s
95th percentile per-packet one-way delay: 57.553 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 8.06 Mbit/s
95th percentile per-packet one-way delay: 54.754 ms
Loss rate: 0.52%
```

Run 5: Report of Vivace-latency — Data Link



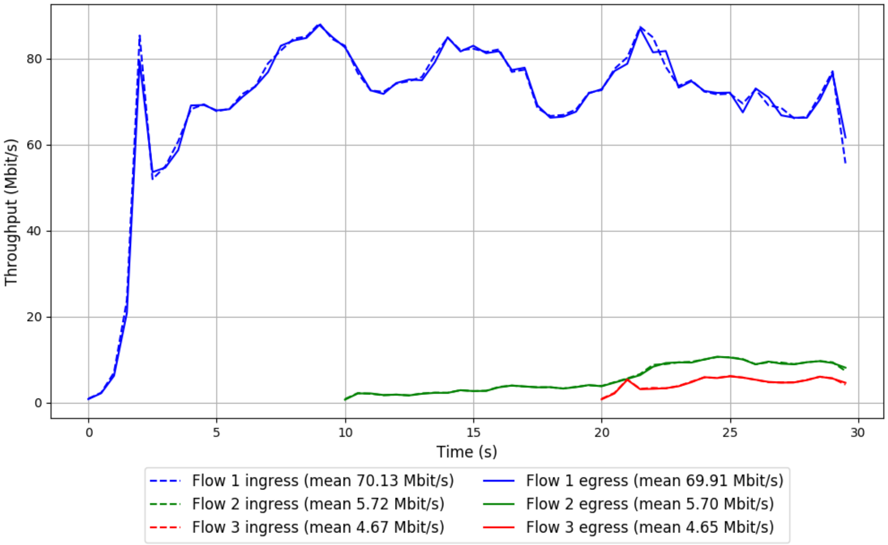


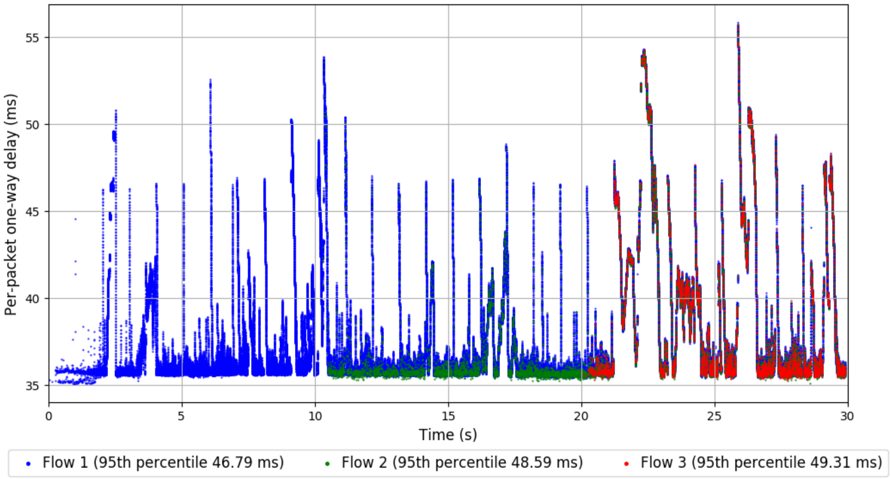
```
Run 6: Statistics of Vivace-latency

Start at: 2018-03-21 05:36:56
End at: 2018-03-21 05:37:26
Local clock offset: -11.476 ms
Remote clock offset: -28.689 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.23 Mbit/s
95th percentile per-packet one-way delay: 46.928 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 69.91 Mbit/s
95th percentile per-packet one-way delay: 46.793 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 5.70 Mbit/s
95th percentile per-packet one-way delay: 48.589 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 4.65 Mbit/s
95th percentile per-packet one-way delay: 49.313 ms
Loss rate: 0.50%
```

Run 6: Report of Vivace-latency — Data Link



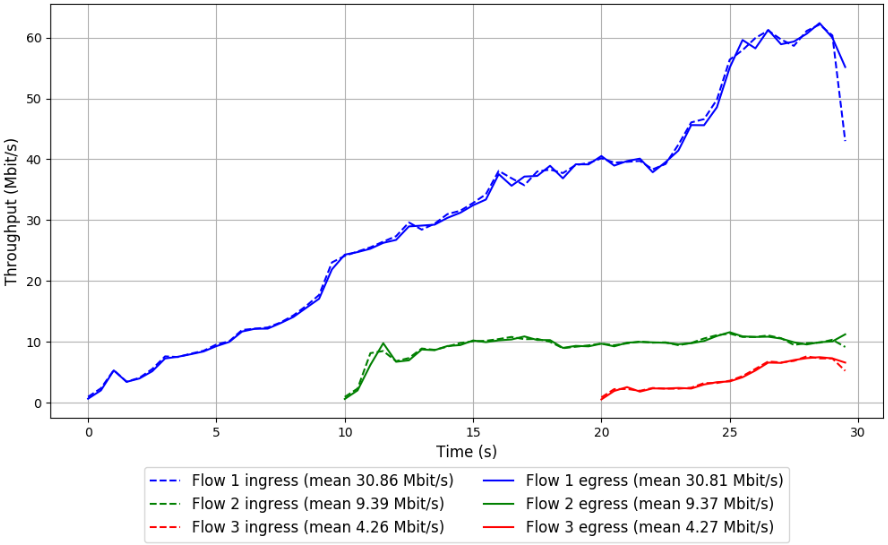


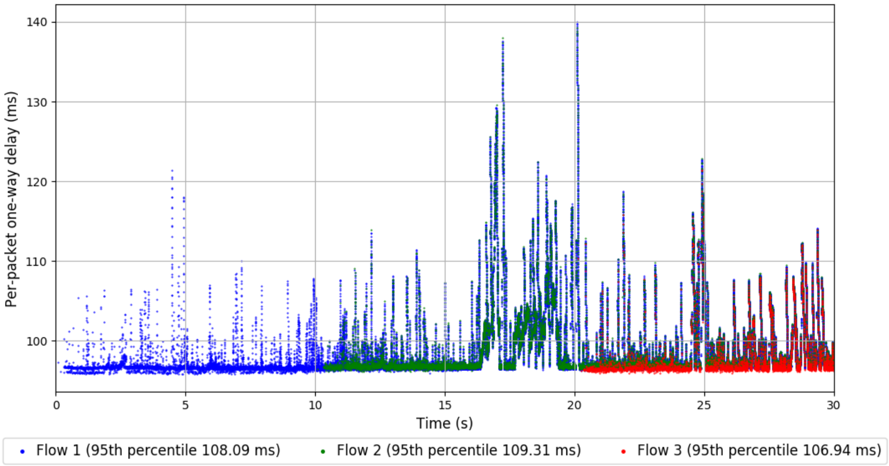
```
Run 7: Statistics of Vivace-latency

Start at: 2018-03-21 05:59:46
End at: 2018-03-21 06:00:17
Local clock offset: 2.257 ms
Remote clock offset: 33.943 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.44 Mbit/s
95th percentile per-packet one-way delay: 108.205 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 30.81 Mbit/s
95th percentile per-packet one-way delay: 108.088 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 9.37 Mbit/s
95th percentile per-packet one-way delay: 109.315 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 106.943 ms
Loss rate: 0.05%
```

Run 7: Report of Vivace-latency — Data Link



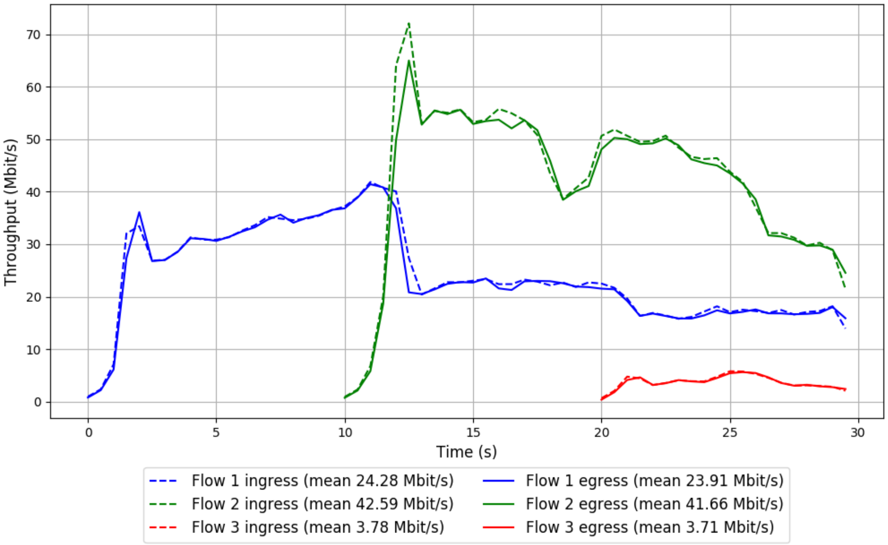


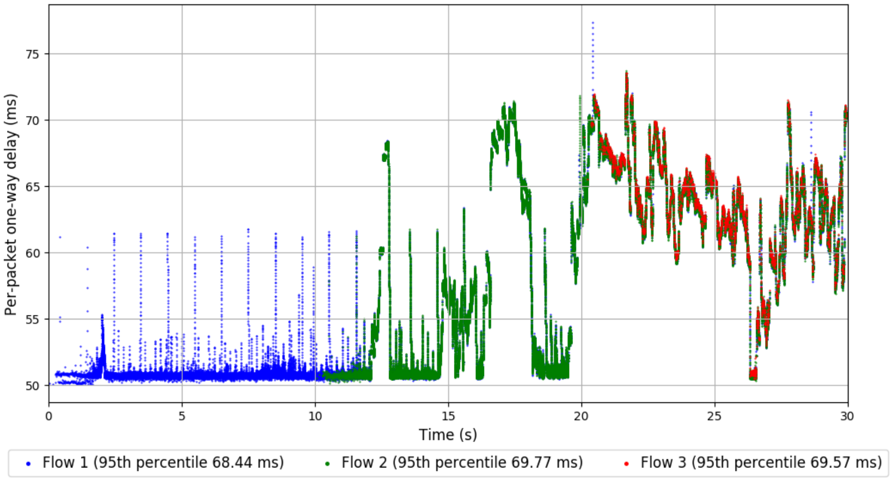
```
Run 8: Statistics of Vivace-latency

Start at: 2018-03-21 06:23:06
End at: 2018-03-21 06:23:36
Local clock offset: 1.275 ms
Remote clock offset: -10.474 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.84 Mbit/s
95th percentile per-packet one-way delay: 69.398 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 23.91 Mbit/s
95th percentile per-packet one-way delay: 68.437 ms
Loss rate: 1.45%
-- Flow 2:
Average throughput: 41.66 Mbit/s
95th percentile per-packet one-way delay: 69.773 ms
Loss rate: 2.09%
-- Flow 3:
Average throughput: 3.71 Mbit/s
95th percentile per-packet one-way delay: 69.571 ms
Loss rate: 1.88%
```

Run 8: Report of Vivace-latency — Data Link



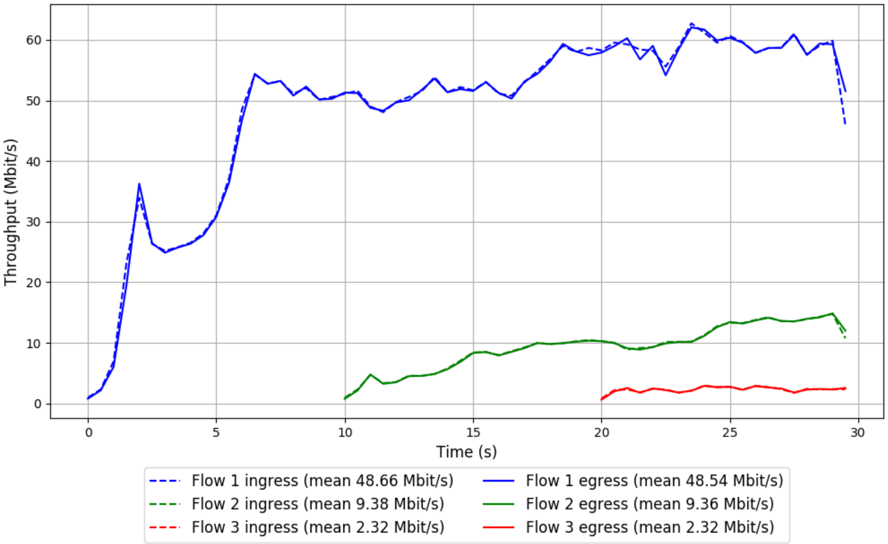


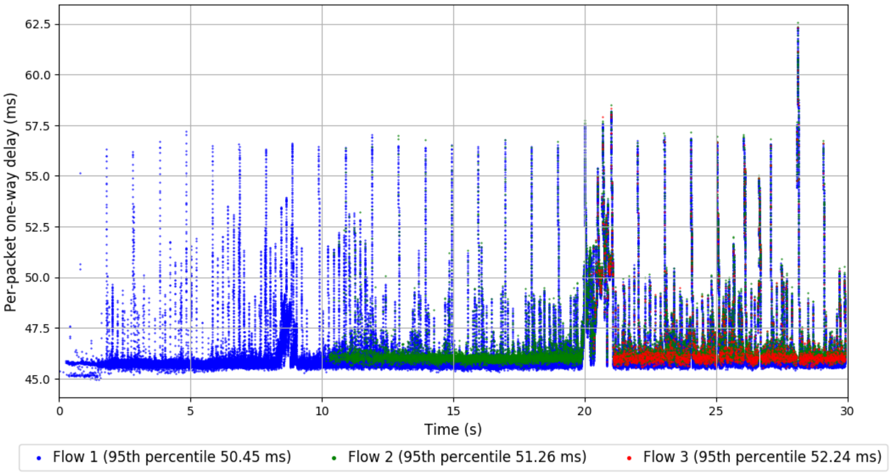
```
Run 9: Statistics of Vivace-latency

Start at: 2018-03-21 06:47:38
End at: 2018-03-21 06:48:08
Local clock offset: 0.445 ms
Remote clock offset: -13.121 ms

# Below is generated by plot.py at 2018-03-21 08:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.53 Mbit/s
95th percentile per-packet one-way delay: 50.572 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 48.54 Mbit/s
95th percentile per-packet one-way delay: 50.450 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 9.36 Mbit/s
95th percentile per-packet one-way delay: 51.255 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 52.238 ms
Loss rate: 0.10%
```

Run 9: Report of Vivace-latency — Data Link



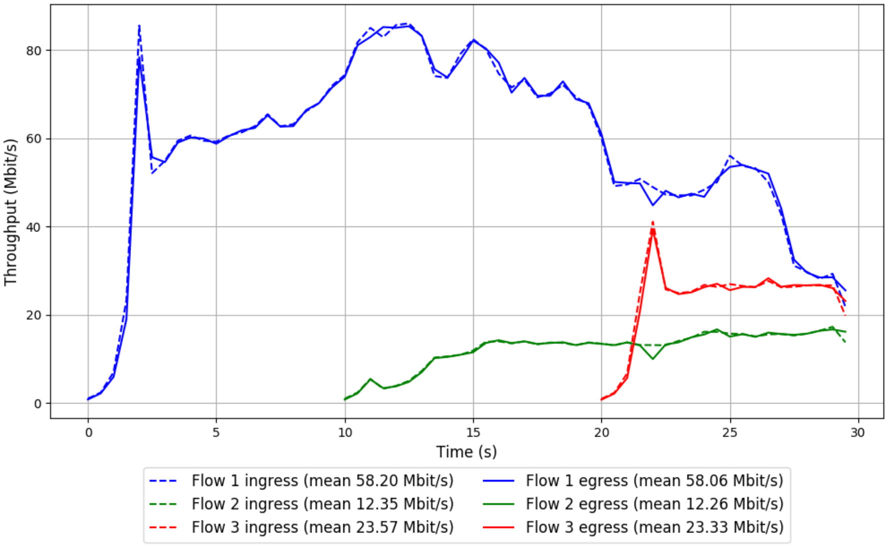


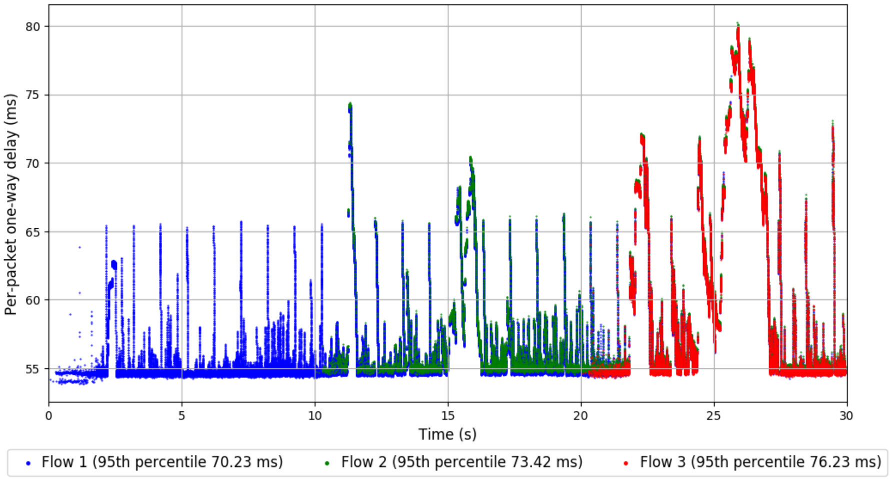
```
Run 10: Statistics of Vivace-latency

Start at: 2018-03-21 07:10:27
End at: 2018-03-21 07:10:57
Local clock offset: 1.894 ms
Remote clock offset: -10.635 ms

# Below is generated by plot.py at 2018-03-21 08:08:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.90 Mbit/s
95th percentile per-packet one-way delay: 71.820 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 58.06 Mbit/s
95th percentile per-packet one-way delay: 70.233 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 12.26 Mbit/s
95th percentile per-packet one-way delay: 73.416 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 23.33 Mbit/s
95th percentile per-packet one-way delay: 76.229 ms
Loss rate: 0.99%
```

Run 10: Report of Vivace-latency — Data Link



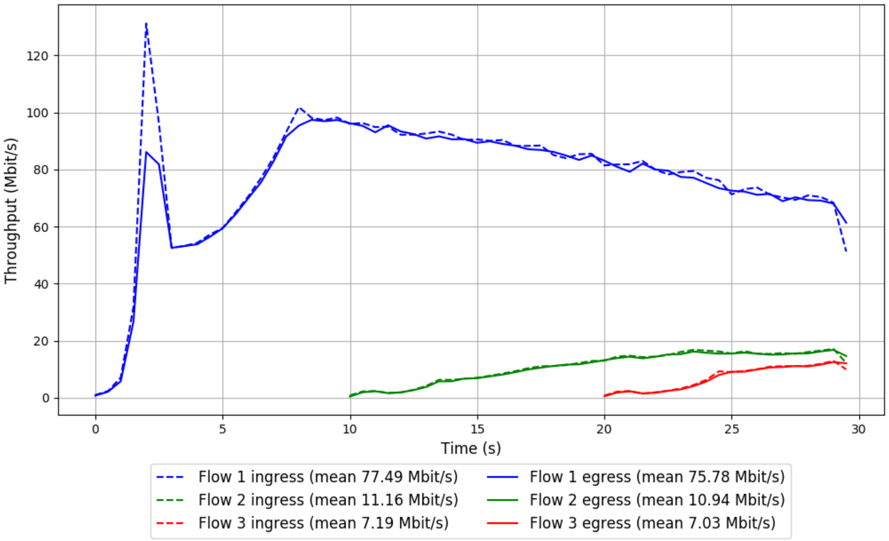


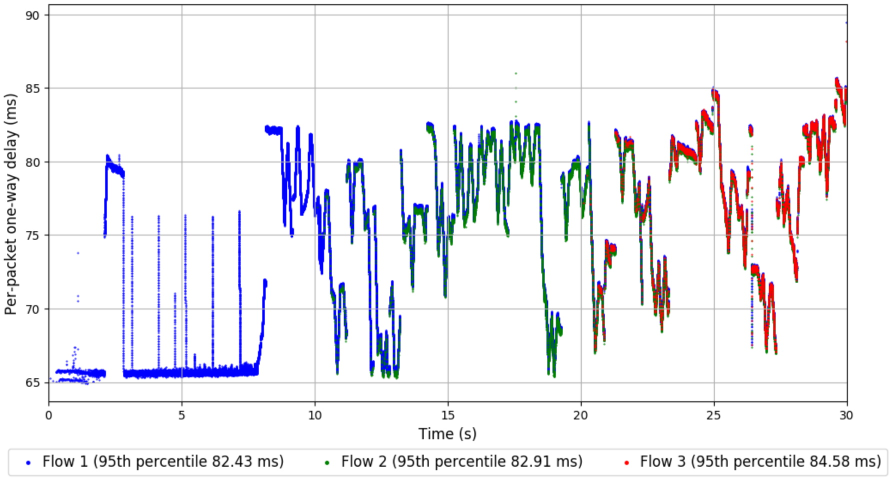
```
Run 1: Statistics of Vivace-loss

Start at: 2018-03-21 03:47:42
End at: 2018-03-21 03:48:12
Local clock offset: 11.221 ms
Remote clock offset: -0.502 ms

# Below is generated by plot.py at 2018-03-21 08:09:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.37 Mbit/s
95th percentile per-packet one-way delay: 82.491 ms
Loss rate: 2.11%
-- Flow 1:
Average throughput: 75.78 Mbit/s
95th percentile per-packet one-way delay: 82.427 ms
Loss rate: 2.13%
-- Flow 2:
Average throughput: 10.94 Mbit/s
95th percentile per-packet one-way delay: 82.911 ms
Loss rate: 1.92%
-- Flow 3:
Average throughput: 7.03 Mbit/s
95th percentile per-packet one-way delay: 84.585 ms
Loss rate: 2.07%
```

Run 1: Report of Vivace-loss — Data Link



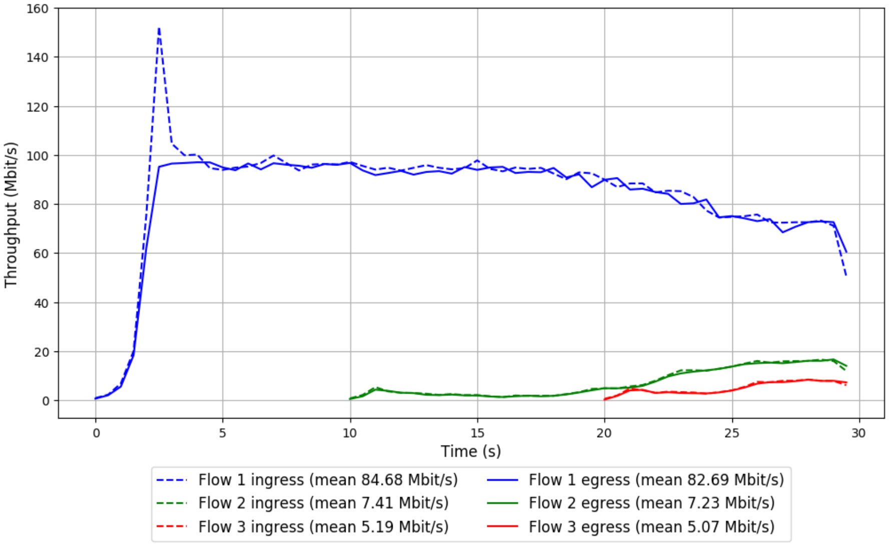


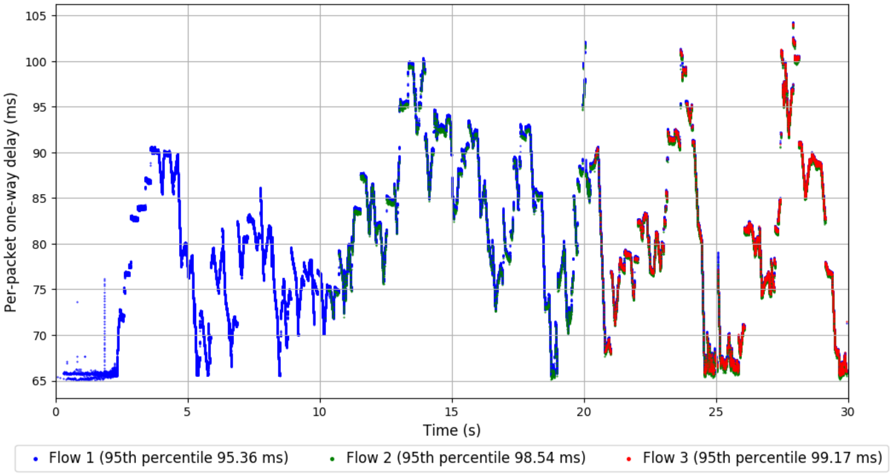
```
Run 2: Statistics of Vivace-loss

Start at: 2018-03-21 04:11:00
End at: 2018-03-21 04:11:30
Local clock offset: -1.994 ms
Remote clock offset: -2.719 ms

# Below is generated by plot.py at 2018-03-21 08:09:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.16 Mbit/s
95th percentile per-packet one-way delay: 95.424 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 82.69 Mbit/s
95th percentile per-packet one-way delay: 95.359 ms
Loss rate: 2.33%
-- Flow 2:
Average throughput: 7.23 Mbit/s
95th percentile per-packet one-way delay: 98.538 ms
Loss rate: 2.49%
-- Flow 3:
Average throughput: 5.07 Mbit/s
95th percentile per-packet one-way delay: 99.165 ms
Loss rate: 2.60%
```

Run 2: Report of Vivace-loss — Data Link



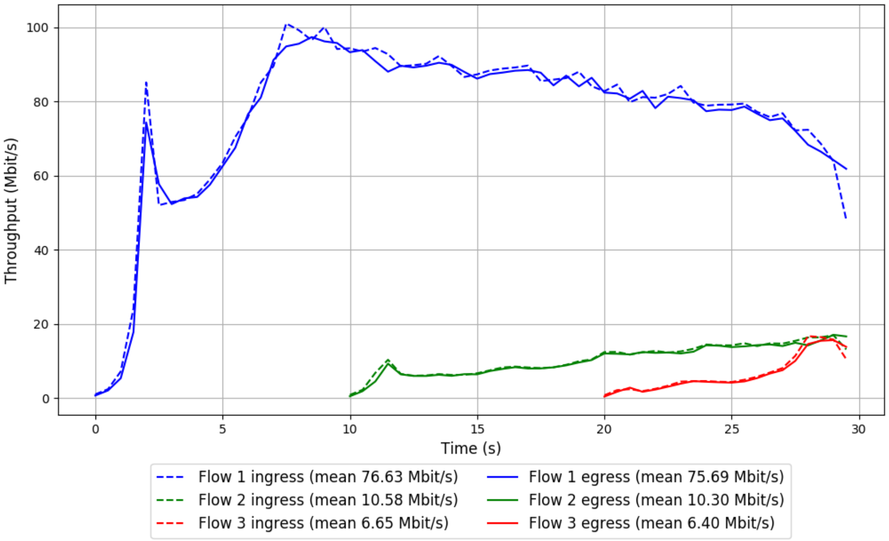


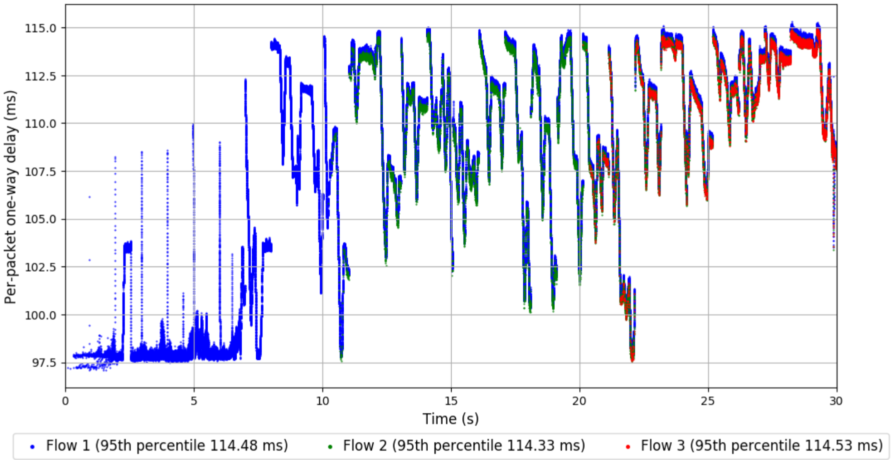
```
Run 3: Statistics of Vivace-loss

Start at: 2018-03-21 04:33:53
End at: 2018-03-21 04:34:23
Local clock offset: -7.118 ms
Remote clock offset: 25.834 ms

# Below is generated by plot.py at 2018-03-21 08:09:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.64 Mbit/s
95th percentile per-packet one-way delay: 114.471 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 75.69 Mbit/s
95th percentile per-packet one-way delay: 114.479 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 10.30 Mbit/s
95th percentile per-packet one-way delay: 114.328 ms
Loss rate: 2.73%
-- Flow 3:
Average throughput: 6.40 Mbit/s
95th percentile per-packet one-way delay: 114.528 ms
Loss rate: 3.83%
```

Run 3: Report of Vivace-loss — Data Link



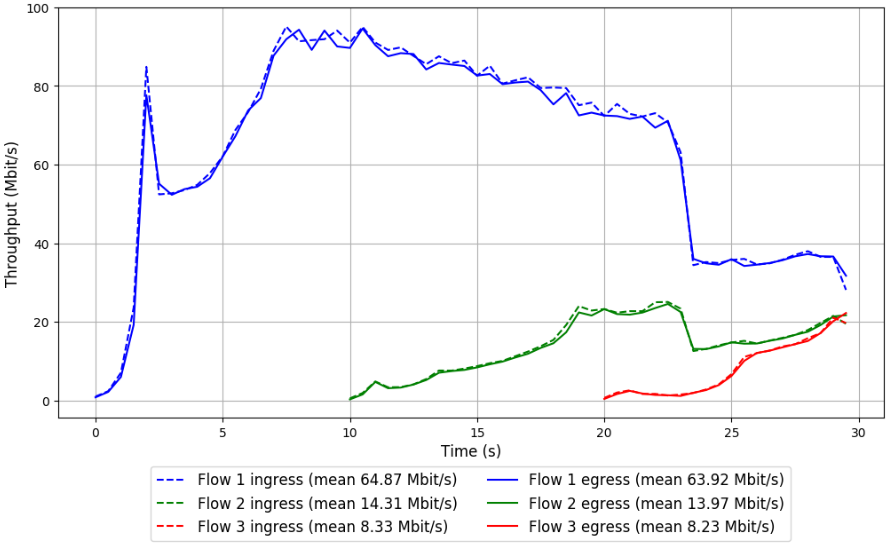


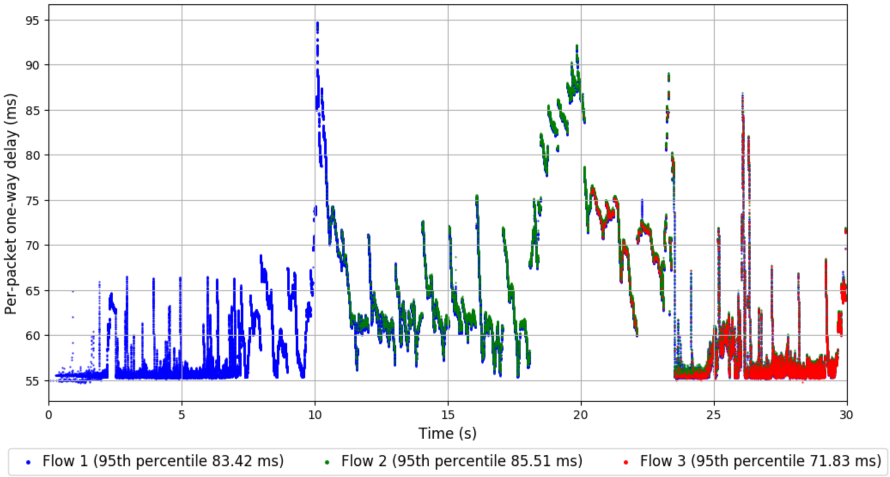
```
Run 4: Statistics of Vivace-loss

Start at: 2018-03-21 04:56:44
End at: 2018-03-21 04:57:14
Local clock offset: -3.225 ms
Remote clock offset: -11.463 ms

# Below is generated by plot.py at 2018-03-21 08:09:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.91 Mbit/s
95th percentile per-packet one-way delay: 83.818 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 63.92 Mbit/s
95th percentile per-packet one-way delay: 83.423 ms
Loss rate: 1.40%
-- Flow 2:
Average throughput: 13.97 Mbit/s
95th percentile per-packet one-way delay: 85.511 ms
Loss rate: 2.48%
-- Flow 3:
Average throughput: 8.23 Mbit/s
95th percentile per-packet one-way delay: 71.827 ms
Loss rate: 1.36%
```

Run 4: Report of Vivace-loss — Data Link



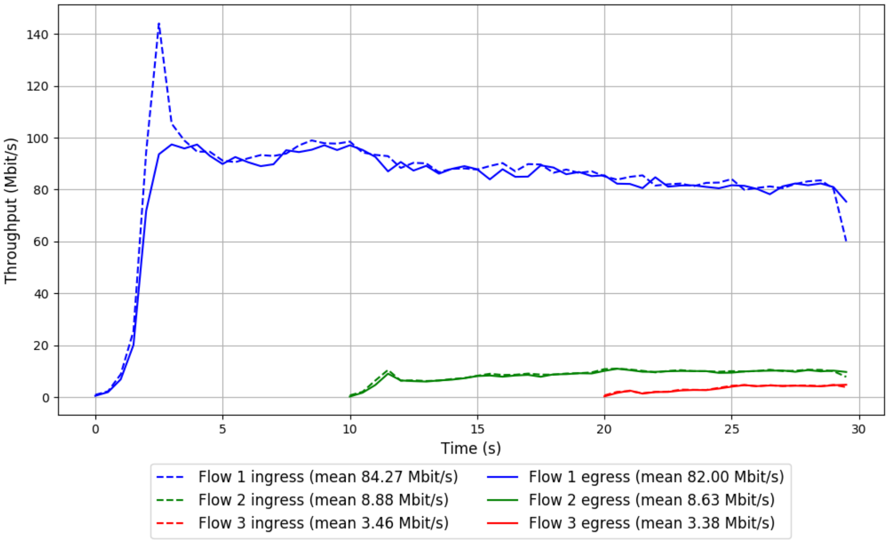


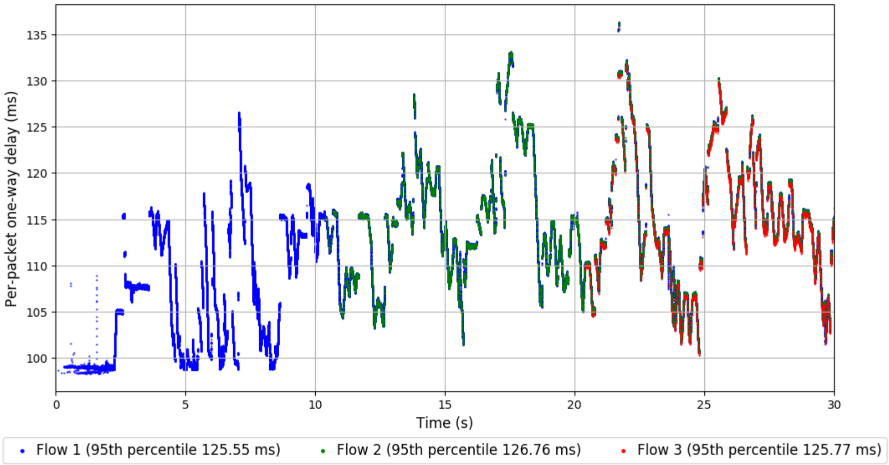
```
Run 5: Statistics of Vivace-loss

Start at: 2018-03-21 05:20:22
End at: 2018-03-21 05:20:52
Local clock offset: -8.41 ms
Remote clock offset: 33.432 ms

# Below is generated by plot.py at 2018-03-21 08:09:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.85 Mbit/s
95th percentile per-packet one-way delay: 125.614 ms
Loss rate: 2.64%
-- Flow 1:
Average throughput: 82.00 Mbit/s
95th percentile per-packet one-way delay: 125.552 ms
Loss rate: 2.64%
-- Flow 2:
Average throughput: 8.63 Mbit/s
95th percentile per-packet one-way delay: 126.764 ms
Loss rate: 2.81%
-- Flow 3:
Average throughput: 3.38 Mbit/s
95th percentile per-packet one-way delay: 125.767 ms
Loss rate: 2.30%
```

Run 5: Report of Vivace-loss — Data Link



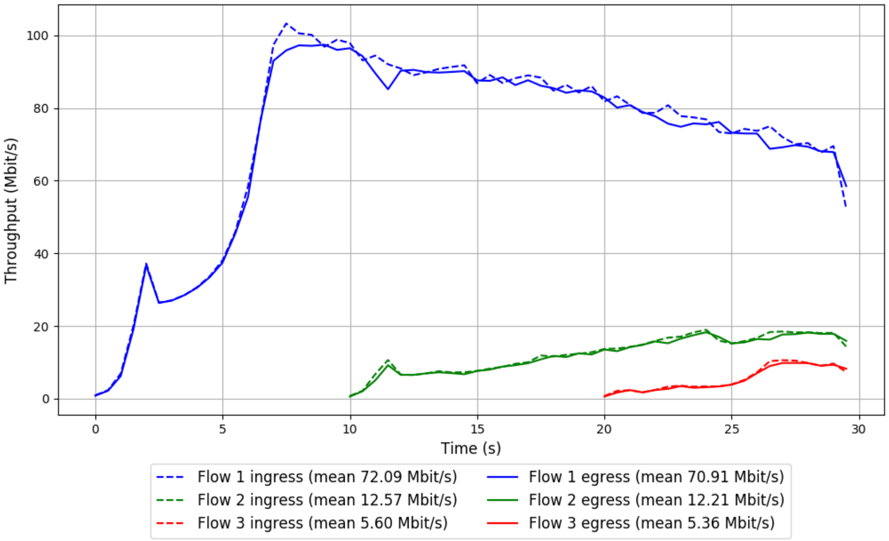


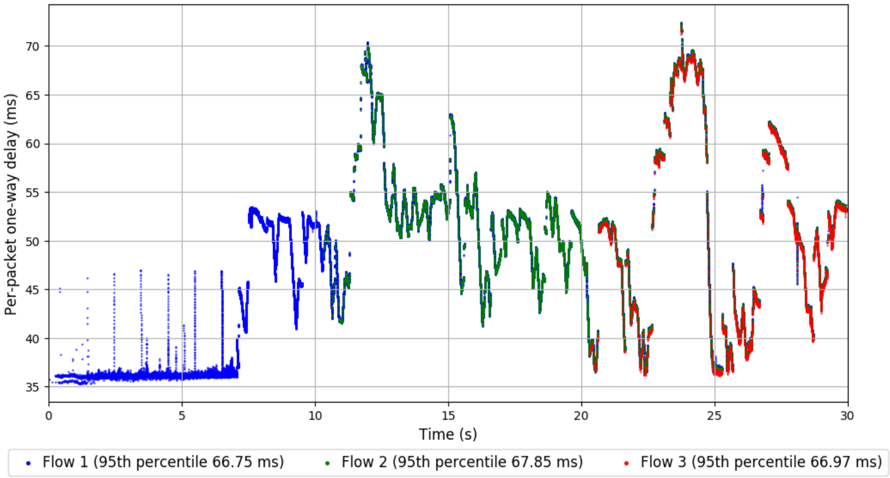
```
Run 6: Statistics of Vivace-loss

Start at: 2018-03-21 05:43:10
End at: 2018-03-21 05:43:40
Local clock offset: -7.455 ms
Remote clock offset: -28.905 ms

# Below is generated by plot.py at 2018-03-21 08:09:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.80 Mbit/s
95th percentile per-packet one-way delay: 67.063 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 70.91 Mbit/s
95th percentile per-packet one-way delay: 66.745 ms
Loss rate: 1.57%
-- Flow 2:
Average throughput: 12.21 Mbit/s
95th percentile per-packet one-way delay: 67.849 ms
Loss rate: 2.81%
-- Flow 3:
Average throughput: 5.36 Mbit/s
95th percentile per-packet one-way delay: 66.966 ms
Loss rate: 4.17%
```

Run 6: Report of Vivace-loss — Data Link



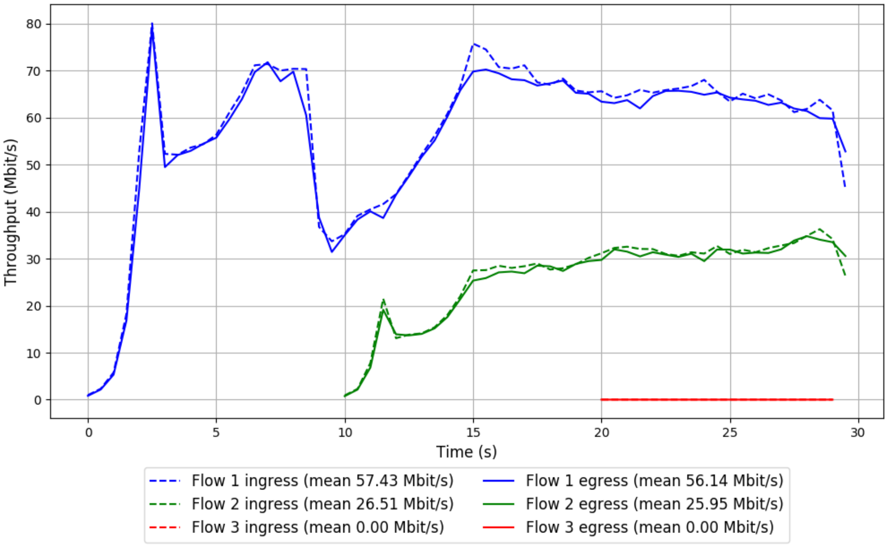


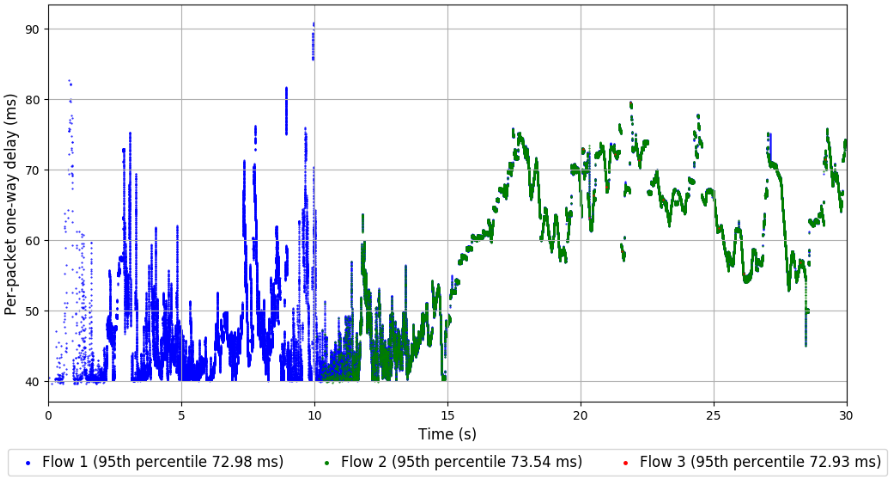
```
Run 7: Statistics of Vivace-loss

Start at: 2018-03-21 06:05:57
End at: 2018-03-21 06:06:27
Local clock offset: 3.298 ms
Remote clock offset: -21.651 ms

# Below is generated by plot.py at 2018-03-21 08:09:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.40 Mbit/s
95th percentile per-packet one-way delay: 73.071 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 56.14 Mbit/s
95th percentile per-packet one-way delay: 72.976 ms
Loss rate: 2.14%
-- Flow 2:
Average throughput: 25.95 Mbit/s
95th percentile per-packet one-way delay: 73.536 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 72.934 ms
Loss rate: 17.90%
```

Run 7: Report of Vivace-loss — Data Link



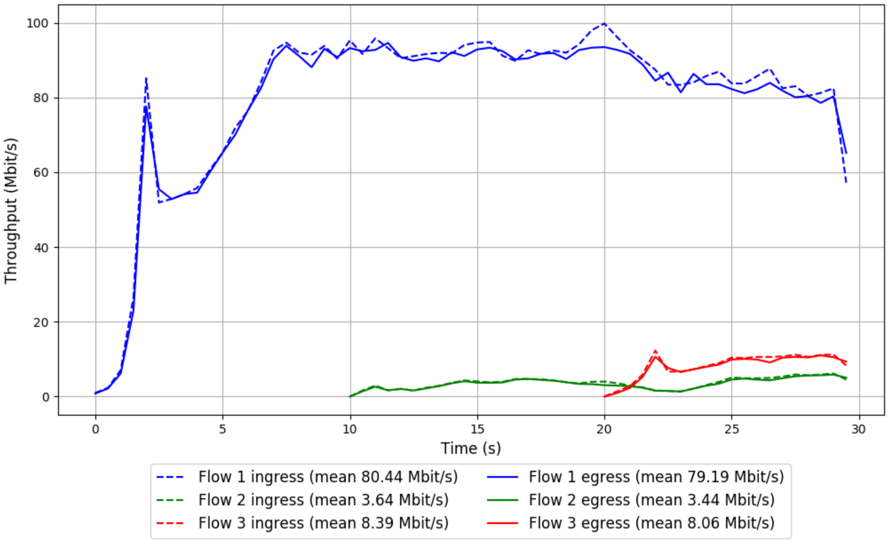


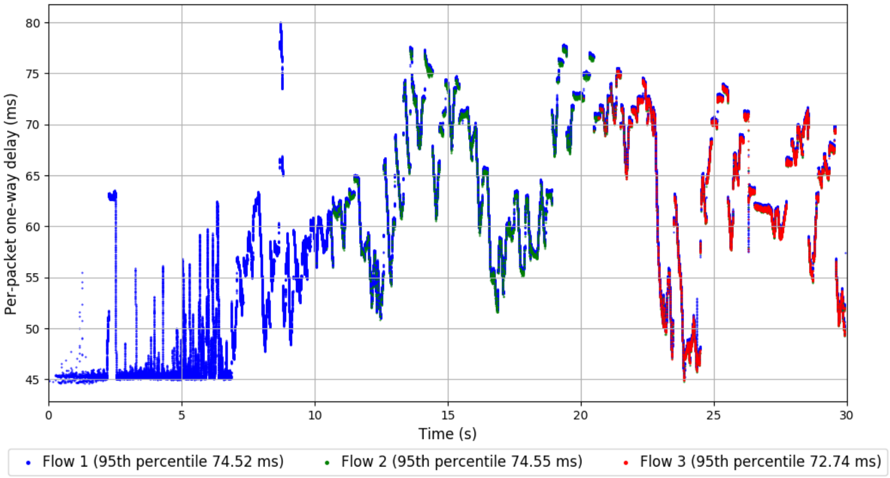
```
Run 8: Statistics of Vivace-loss

Start at: 2018-03-21 06:31:05
End at: 2018-03-21 06:31:35
Local clock offset: 1.104 ms
Remote clock offset: -14.966 ms

# Below is generated by plot.py at 2018-03-21 08:10:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.12 Mbit/s
95th percentile per-packet one-way delay: 74.445 ms
Loss rate: 1.72%
-- Flow 1:
Average throughput: 79.19 Mbit/s
95th percentile per-packet one-way delay: 74.523 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 74.550 ms
Loss rate: 5.62%
-- Flow 3:
Average throughput: 8.06 Mbit/s
95th percentile per-packet one-way delay: 72.742 ms
Loss rate: 4.10%
```

Run 8: Report of Vivace-loss — Data Link



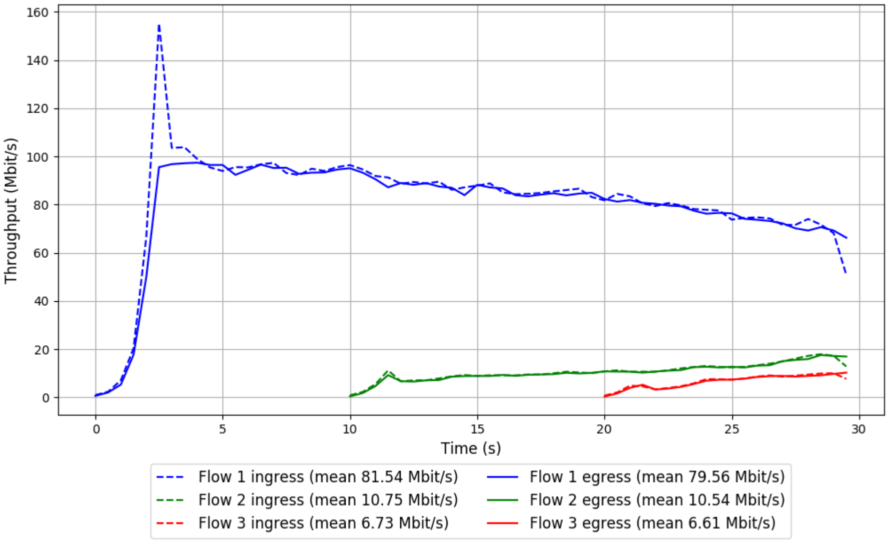


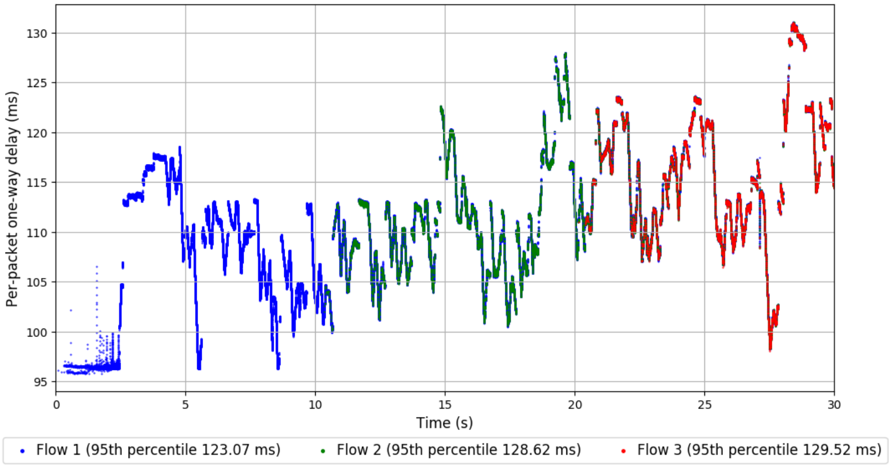
```
Run 9: Statistics of Vivace-loss

Start at: 2018-03-21 06:53:51
End at: 2018-03-21 06:54:21
Local clock offset: 1.243 ms
Remote clock offset: 38.121 ms

# Below is generated by plot.py at 2018-03-21 08:10:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.74 Mbit/s
95th percentile per-packet one-way delay: 123.207 ms
Loss rate: 2.32%
-- Flow 1:
Average throughput: 79.56 Mbit/s
95th percentile per-packet one-way delay: 123.069 ms
Loss rate: 2.37%
-- Flow 2:
Average throughput: 10.54 Mbit/s
95th percentile per-packet one-way delay: 128.618 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 6.61 Mbit/s
95th percentile per-packet one-way delay: 129.521 ms
Loss rate: 1.82%
```

Run 9: Report of Vivace-loss — Data Link



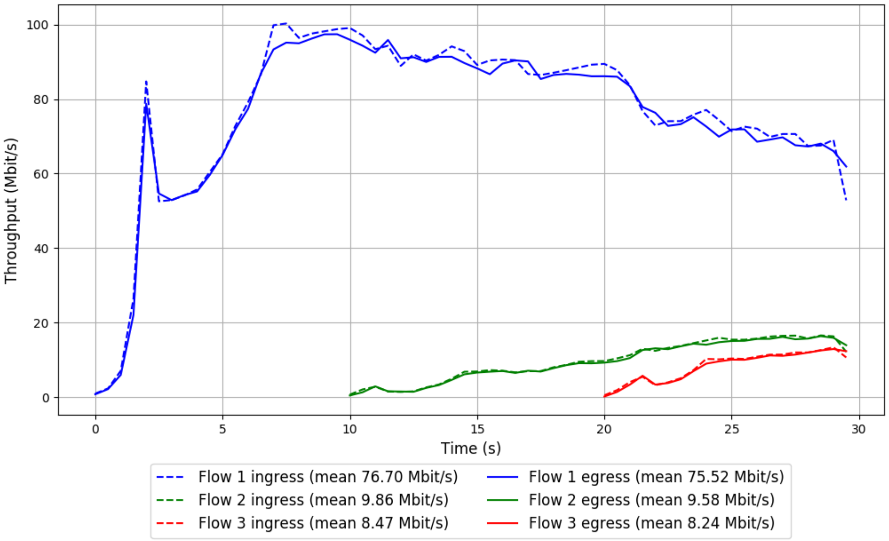


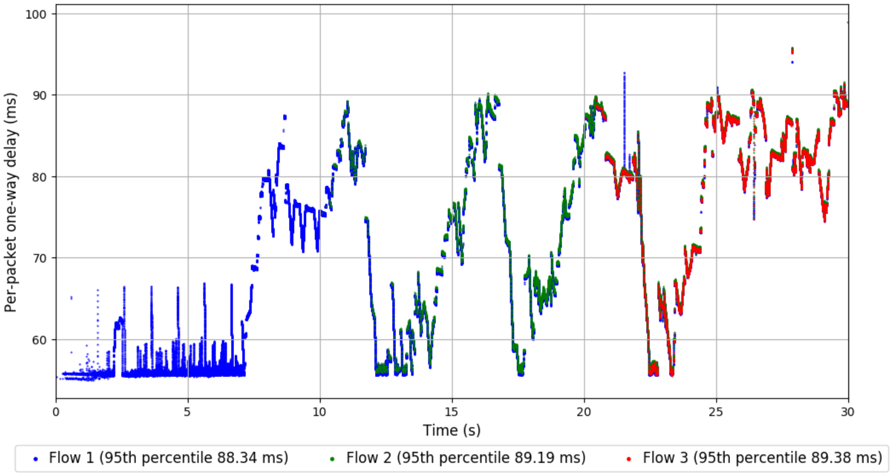
```
Run 10: Statistics of Vivace-loss

Start at: 2018-03-21 07:17:20
End at: 2018-03-21 07:17:50
Local clock offset: 2.067 ms
Remote clock offset: -10.869 ms

# Below is generated by plot.py at 2018-03-21 08:10:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.57 Mbit/s
95th percentile per-packet one-way delay: 88.477 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 75.52 Mbit/s
95th percentile per-packet one-way delay: 88.344 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 9.58 Mbit/s
95th percentile per-packet one-way delay: 89.187 ms
Loss rate: 2.67%
-- Flow 3:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 89.380 ms
Loss rate: 2.73%
```

Run 10: Report of Vivace-loss — Data Link



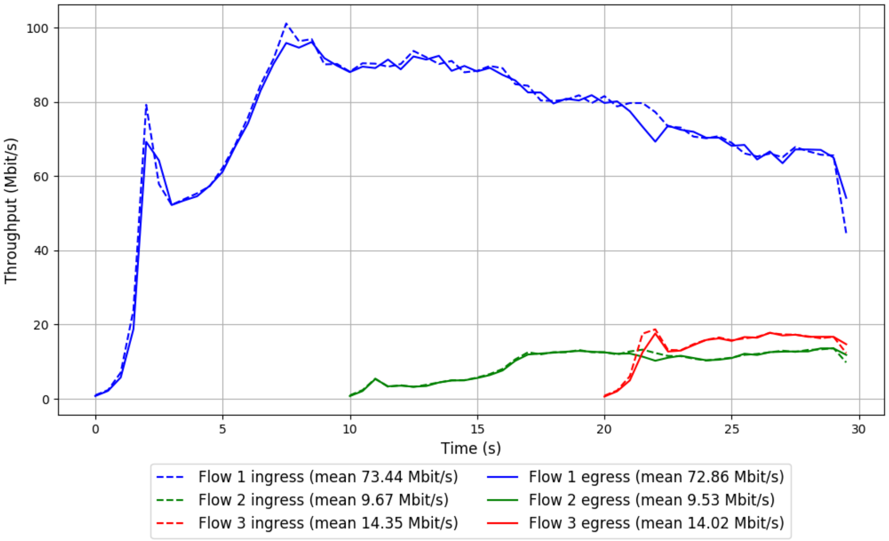


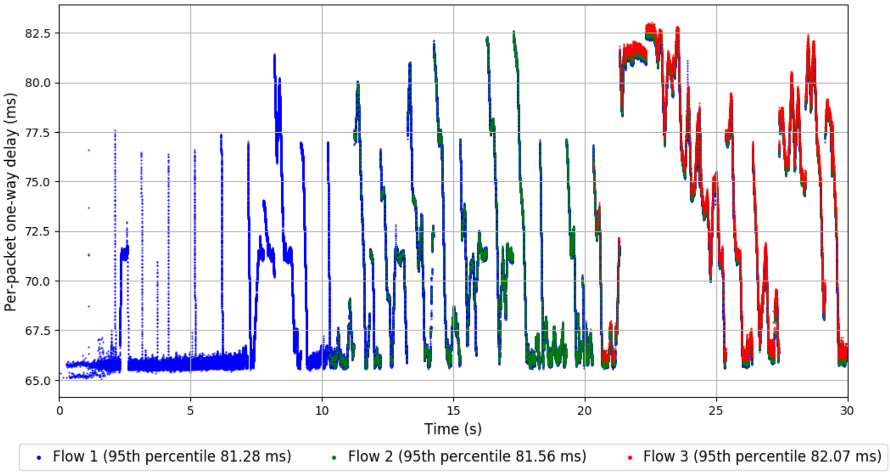
```
Run 1: Statistics of Vivace-LTE

Start at: 2018-03-21 03:54:07
End at: 2018-03-21 03:54:37
Local clock offset: 11.755 ms
Remote clock offset: -0.619 ms

# Below is generated by plot.py at 2018-03-21 08:10:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.81 Mbit/s
95th percentile per-packet one-way delay: 81.392 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 72.86 Mbit/s
95th percentile per-packet one-way delay: 81.277 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 9.53 Mbit/s
95th percentile per-packet one-way delay: 81.563 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 14.02 Mbit/s
95th percentile per-packet one-way delay: 82.072 ms
Loss rate: 2.26%
```

Run 1: Report of Vivace-LTE — Data Link



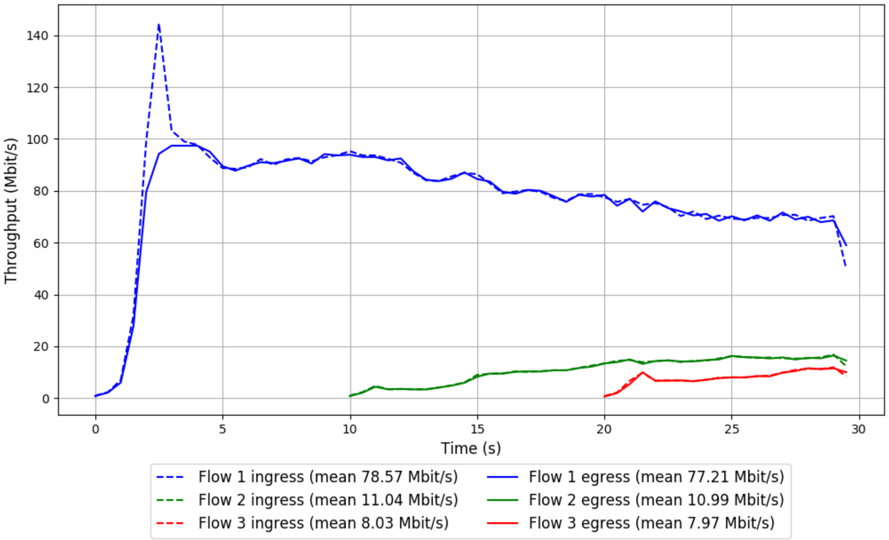


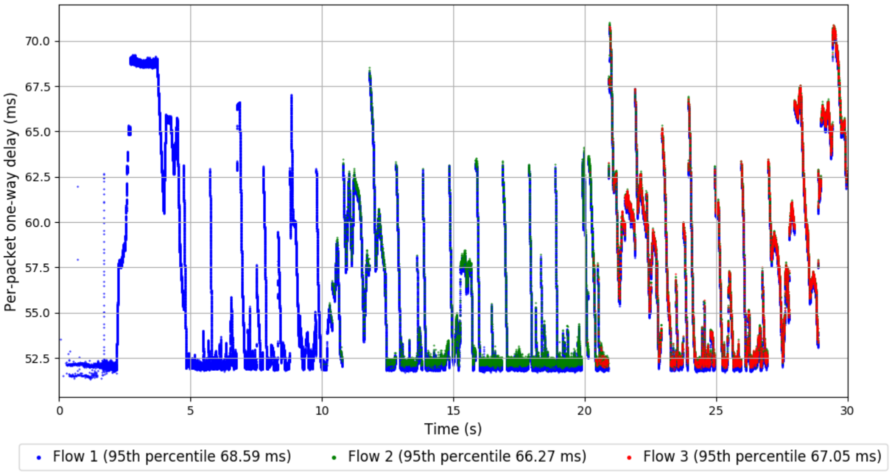
```
Run 2: Statistics of Vivace-LTE

Start at: 2018-03-21 04:17:24
End at: 2018-03-21 04:17:54
Local clock offset: -4.778 ms
Remote clock offset: -17.714 ms

# Below is generated by plot.py at 2018-03-21 08:10:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.15 Mbit/s
95th percentile per-packet one-way delay: 67.923 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 77.21 Mbit/s
95th percentile per-packet one-way delay: 68.589 ms
Loss rate: 1.70%
-- Flow 2:
Average throughput: 10.99 Mbit/s
95th percentile per-packet one-way delay: 66.274 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 7.97 Mbit/s
95th percentile per-packet one-way delay: 67.052 ms
Loss rate: 0.71%
```

Run 2: Report of Vivace-LTE — Data Link



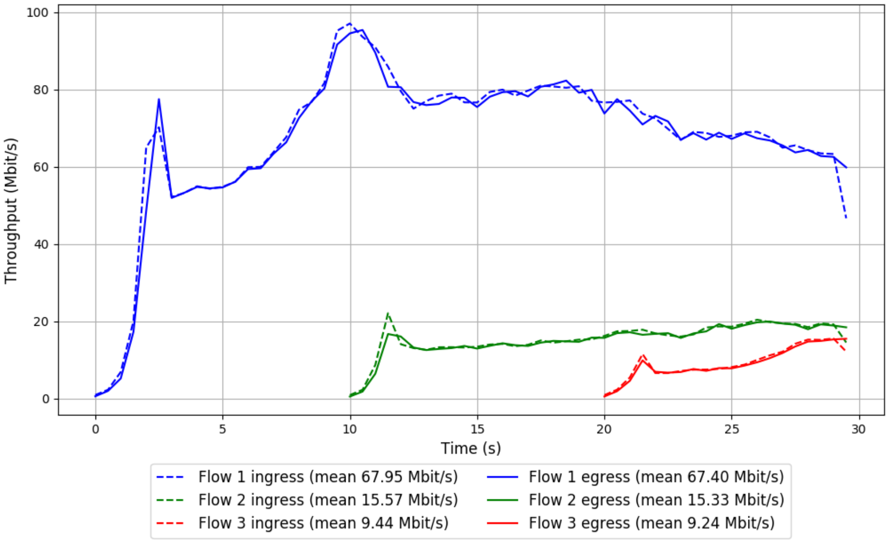


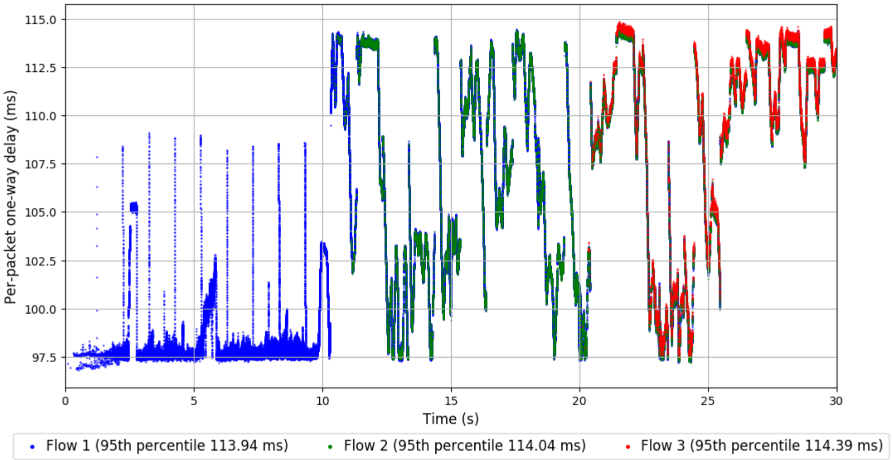
```
Run 3: Statistics of Vivace-LTE

Start at: 2018-03-21 04:40:22
End at: 2018-03-21 04:40:52
Local clock offset: -4.276 ms
Remote clock offset: 25.701 ms

# Below is generated by plot.py at 2018-03-21 08:11:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.65 Mbit/s
95th percentile per-packet one-way delay: 113.986 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 67.40 Mbit/s
95th percentile per-packet one-way delay: 113.937 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 15.33 Mbit/s
95th percentile per-packet one-way delay: 114.038 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 9.24 Mbit/s
95th percentile per-packet one-way delay: 114.394 ms
Loss rate: 1.97%
```

Run 3: Report of Vivace-LTE — Data Link



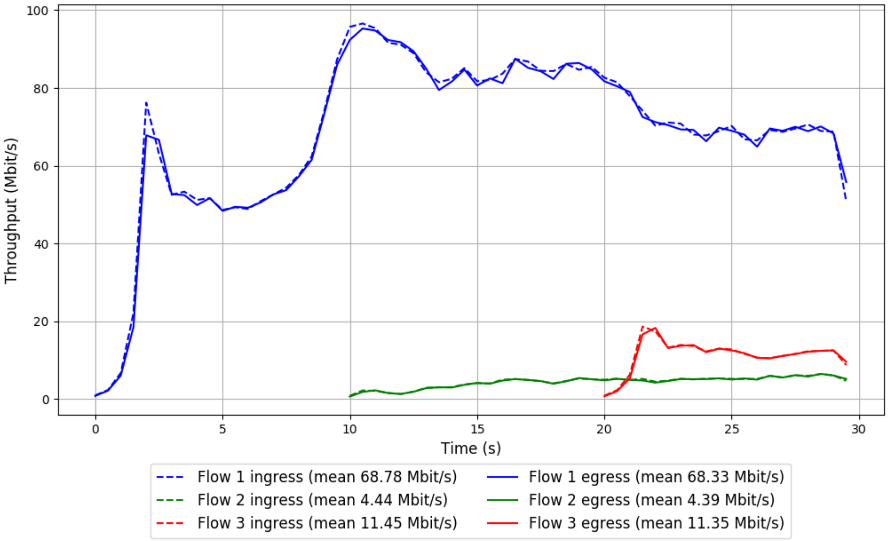


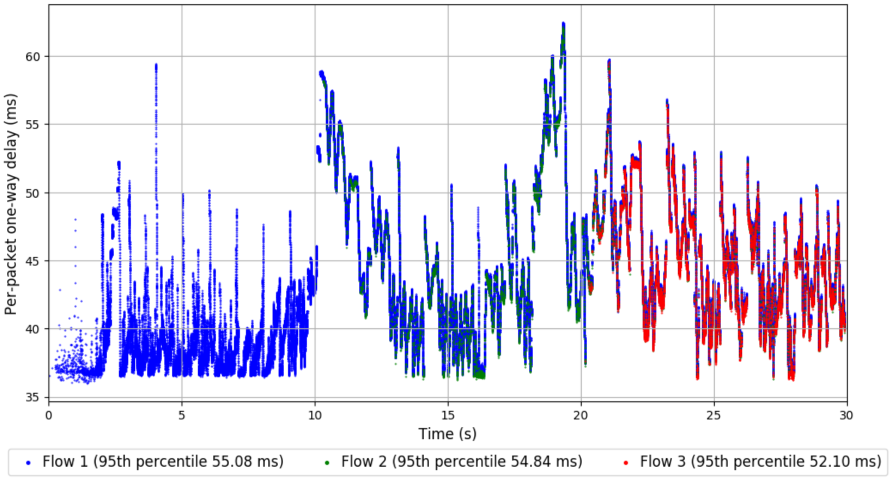
```
Run 4: Statistics of Vivace-LTE

Start at: 2018-03-21 05:03:08
End at: 2018-03-21 05:03:38
Local clock offset: -4.237 ms
Remote clock offset: -30.201 ms

# Below is generated by plot.py at 2018-03-21 08:11:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.99 Mbit/s
95th percentile per-packet one-way delay: 54.957 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 68.33 Mbit/s
95th percentile per-packet one-way delay: 55.075 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 4.39 Mbit/s
95th percentile per-packet one-way delay: 54.840 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 11.35 Mbit/s
95th percentile per-packet one-way delay: 52.097 ms
Loss rate: 1.01%
```

Run 4: Report of Vivace-LTE — Data Link



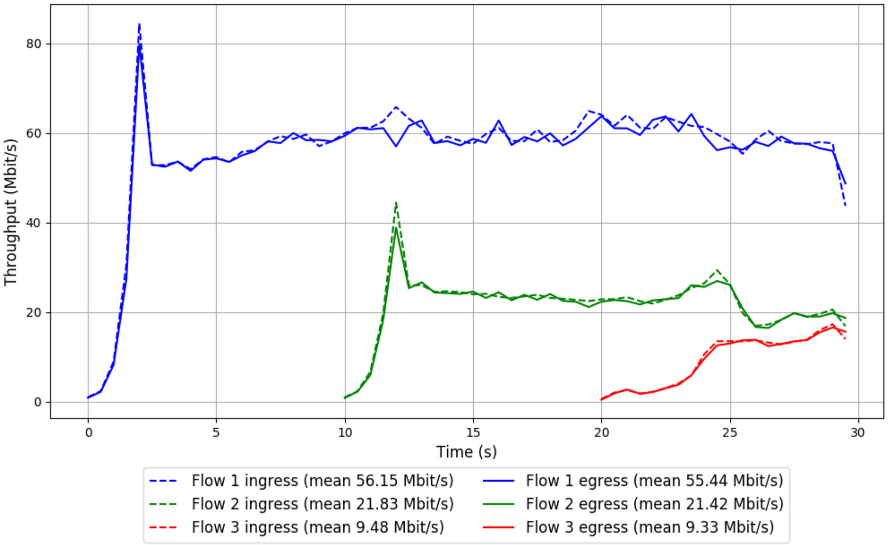


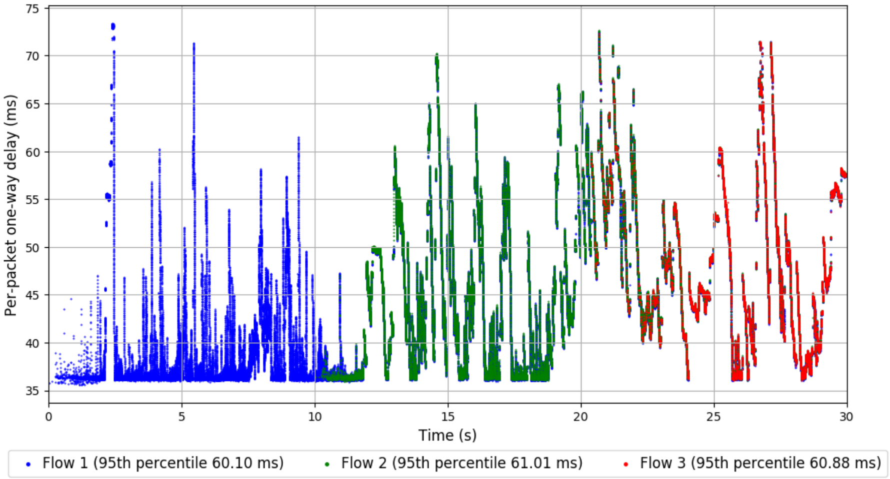
```
Run 5: Statistics of Vivace-LTE

Start at: 2018-03-21 05:26:49
End at: 2018-03-21 05:27:19
Local clock offset: -9.601 ms
Remote clock offset: -28.785 ms

# Below is generated by plot.py at 2018-03-21 08:11:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.76 Mbit/s
95th percentile per-packet one-way delay: 60.284 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 55.44 Mbit/s
95th percentile per-packet one-way delay: 60.100 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 21.42 Mbit/s
95th percentile per-packet one-way delay: 61.014 ms
Loss rate: 1.76%
-- Flow 3:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 60.875 ms
Loss rate: 1.61%
```

Run 5: Report of Vivace-LTE — Data Link



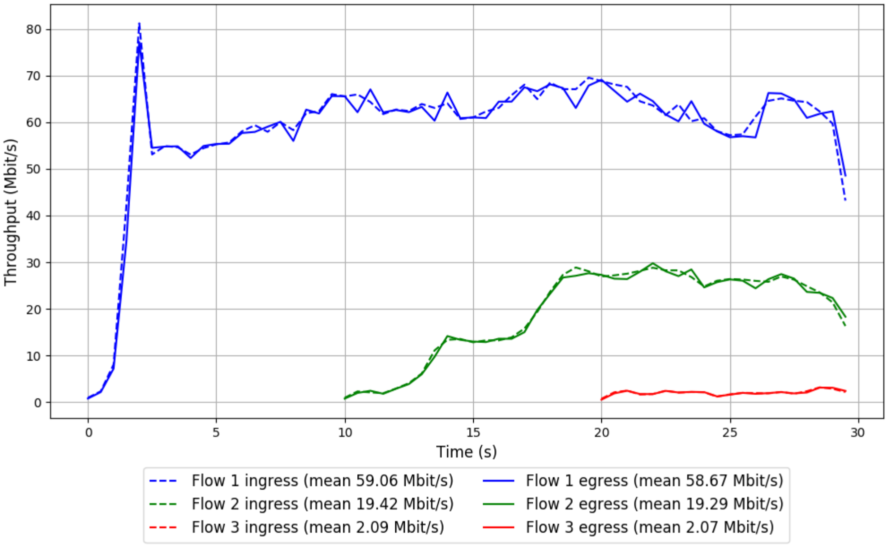


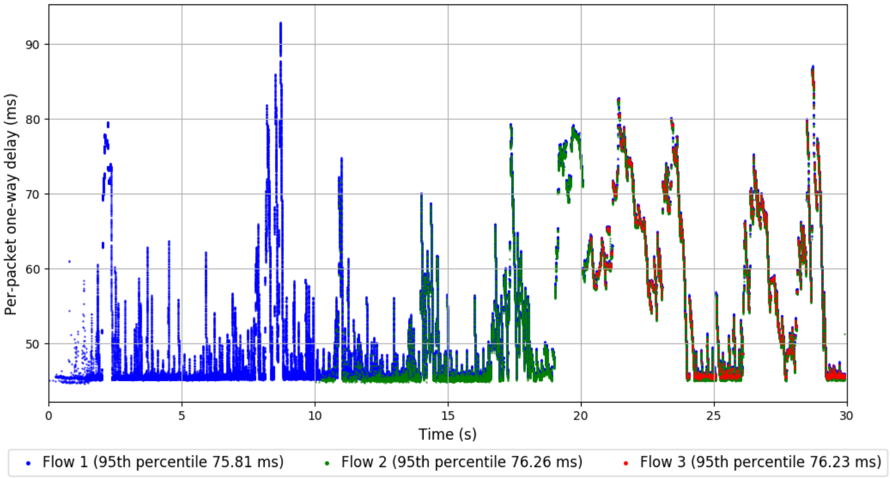
```
Run 6: Statistics of Vivace-LTE

Start at: 2018-03-21 05:49:36
End at: 2018-03-21 05:50:06
Local clock offset: -1.832 ms
Remote clock offset: -19.126 ms

# Below is generated by plot.py at 2018-03-21 08:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.17 Mbit/s
95th percentile per-packet one-way delay: 75.961 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 58.67 Mbit/s
95th percentile per-packet one-way delay: 75.811 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 19.29 Mbit/s
95th percentile per-packet one-way delay: 76.262 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 76.229 ms
Loss rate: 0.73%
```

Run 6: Report of Vivace-LTE — Data Link



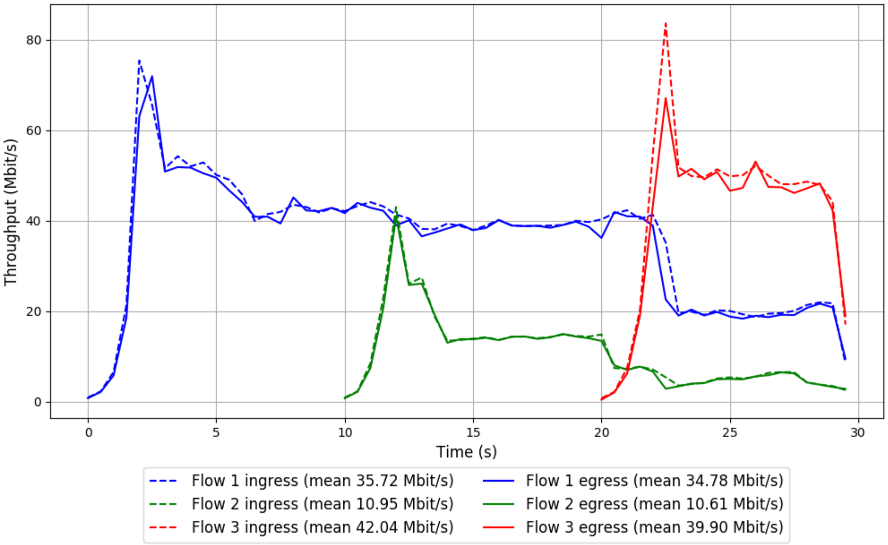


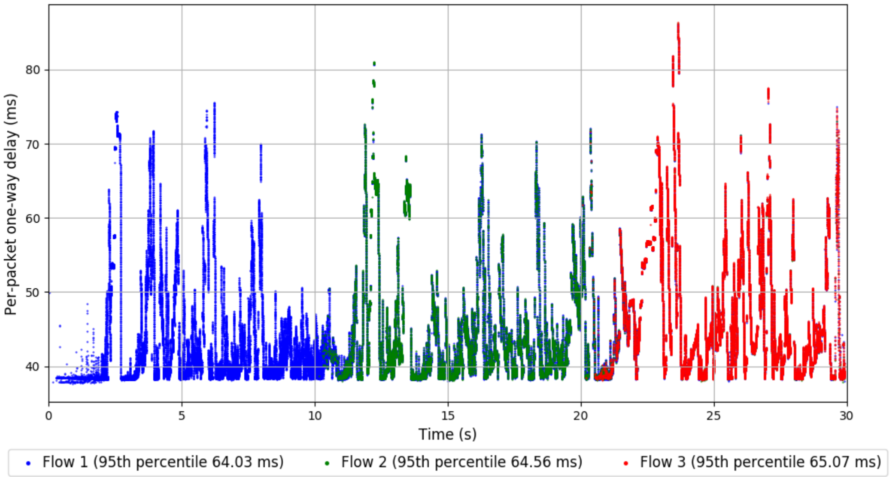
```
Run 7: Statistics of Vivace-LTE

Start at: 2018-03-21 06:12:56
End at: 2018-03-21 06:13:26
Local clock offset: 4.07 ms
Remote clock offset: -22.96 ms

# Below is generated by plot.py at 2018-03-21 08:11:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.96 Mbit/s
95th percentile per-packet one-way delay: 64.346 ms
Loss rate: 3.35%
-- Flow 1:
Average throughput: 34.78 Mbit/s
95th percentile per-packet one-way delay: 64.025 ms
Loss rate: 2.65%
-- Flow 2:
Average throughput: 10.61 Mbit/s
95th percentile per-packet one-way delay: 64.559 ms
Loss rate: 3.08%
-- Flow 3:
Average throughput: 39.90 Mbit/s
95th percentile per-packet one-way delay: 65.073 ms
Loss rate: 5.30%
```

Run 7: Report of Vivace-LTE — Data Link



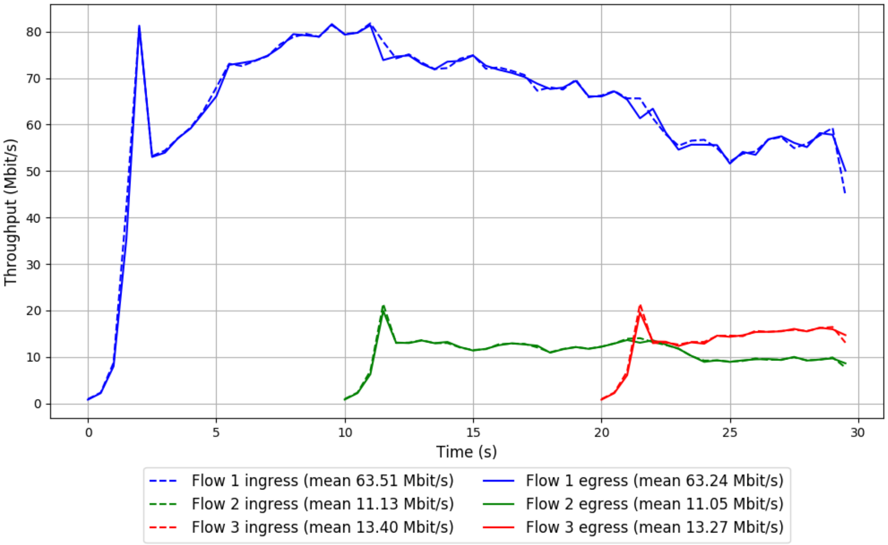


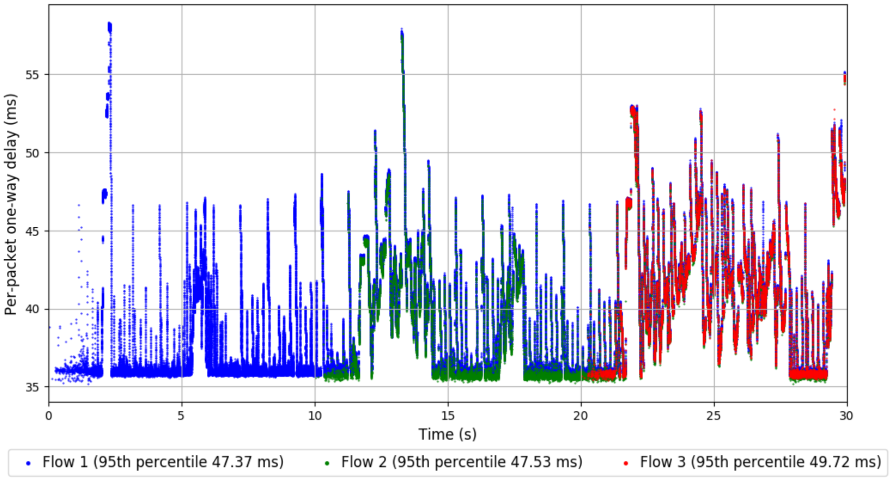
```
Run 8: Statistics of Vivace-LTE

Start at: 2018-03-21 06:37:30
End at: 2018-03-21 06:38:00
Local clock offset: 0.675 ms
Remote clock offset: -23.996 ms

# Below is generated by plot.py at 2018-03-21 08:11:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.98 Mbit/s
95th percentile per-packet one-way delay: 47.477 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 63.24 Mbit/s
95th percentile per-packet one-way delay: 47.368 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 11.05 Mbit/s
95th percentile per-packet one-way delay: 47.530 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 13.27 Mbit/s
95th percentile per-packet one-way delay: 49.723 ms
Loss rate: 0.79%
```

Run 8: Report of Vivace-LTE — Data Link



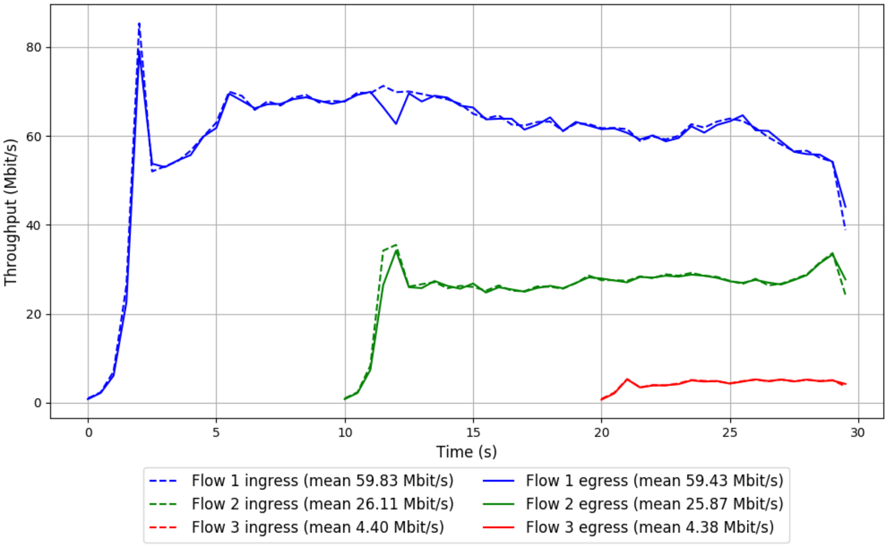


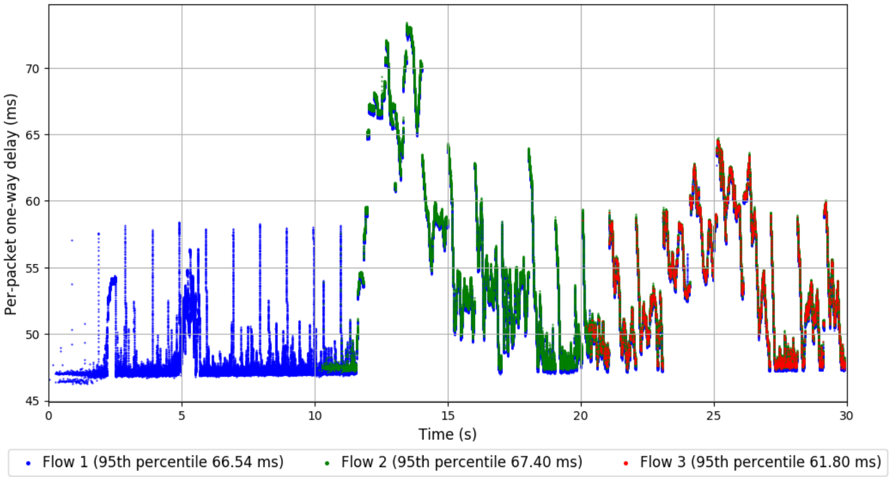
```
Run 9: Statistics of Vivace-LTE

Start at: 2018-03-21 07:00:16
End at: 2018-03-21 07:00:46
Local clock offset: 1.537 ms
Remote clock offset: -13.981 ms

# Below is generated by plot.py at 2018-03-21 08:11:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.08 Mbit/s
95th percentile per-packet one-way delay: 66.771 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 59.43 Mbit/s
95th percentile per-packet one-way delay: 66.536 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 25.87 Mbit/s
95th percentile per-packet one-way delay: 67.399 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 61.800 ms
Loss rate: 0.41%
```

Run 9: Report of Vivace-LTE — Data Link



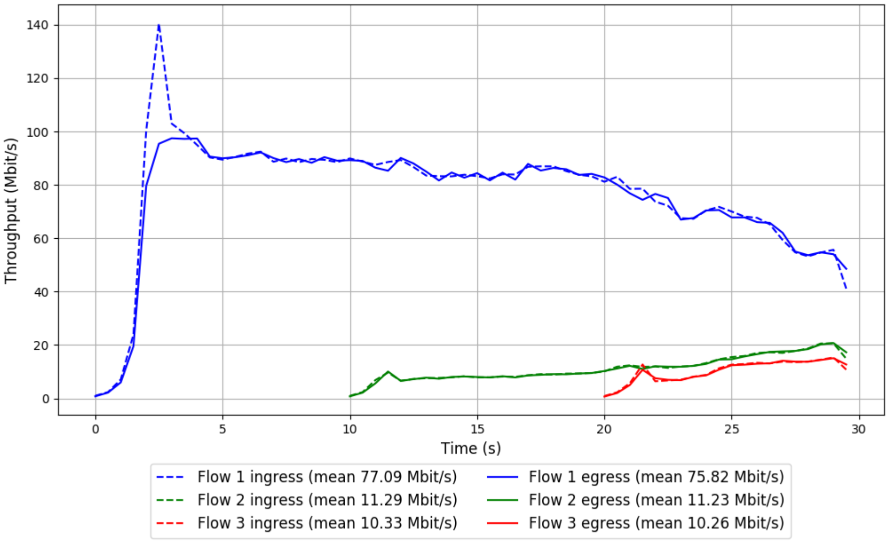


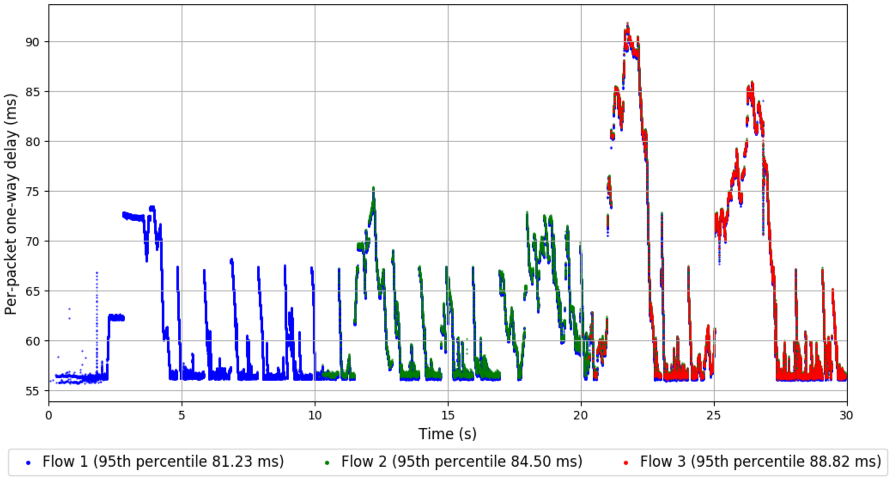
```
Run 10: Statistics of Vivace-LTE

Start at: 2018-03-21 07:23:43
End at: 2018-03-21 07:24:13
Local clock offset: 1.384 ms
Remote clock offset: -10.746 ms

# Below is generated by plot.py at 2018-03-21 08:11:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.67 Mbit/s
95th percentile per-packet one-way delay: 82.457 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 75.82 Mbit/s
95th percentile per-packet one-way delay: 81.230 ms
Loss rate: 1.64%
-- Flow 2:
Average throughput: 11.23 Mbit/s
95th percentile per-packet one-way delay: 84.503 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 10.26 Mbit/s
95th percentile per-packet one-way delay: 88.821 ms
Loss rate: 0.72%
```

Run 10: Report of Vivace-LTE — Data Link


Throughput (Mbit/s)
0
20
40
60
80
100
120
140
0
5
10
15
20
25
30
Time (s)
Flow 1 ingress (mean 77.09 Mbit/s)
Flow 2 ingress (mean 11.29 Mbit/s)
Flow 3 ingress (mean 10.33 Mbit/s)
Flow 1 egress (mean 75.82 Mbit/s)
Flow 2 egress (mean 11.23 Mbit/s)
Flow 3 egress (mean 10.26 Mbit/s)


Per-packet one-way delay (ms)
55
60
65
70
75
80
85
90
0
5
10
15
20
25
30
Time (s)
Flow 1 (95th percentile 81.23 ms)
Flow 2 (95th percentile 84.50 ms)
Flow 3 (95th percentile 88.82 ms)