

Pantheon Report

Generated at 2018-03-28 04:51:50 (UTC).

Data path: GCE Tokyo Ethernet (*remote*) → GCE London Ethernet (*local*).

Repeated the test of 17 congestion control schemes 10 times.

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

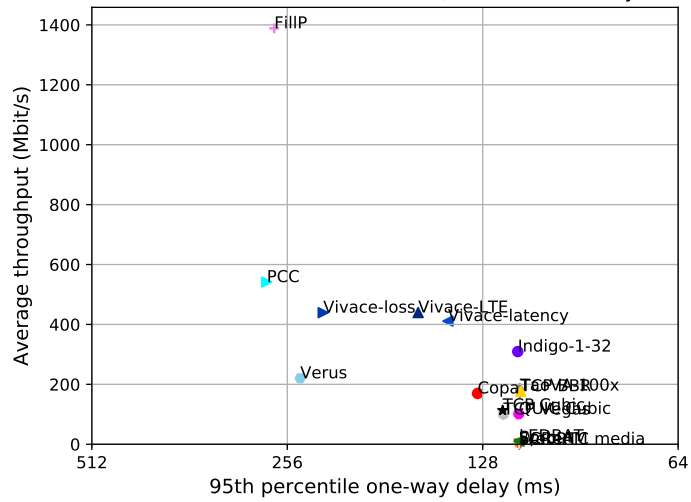
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

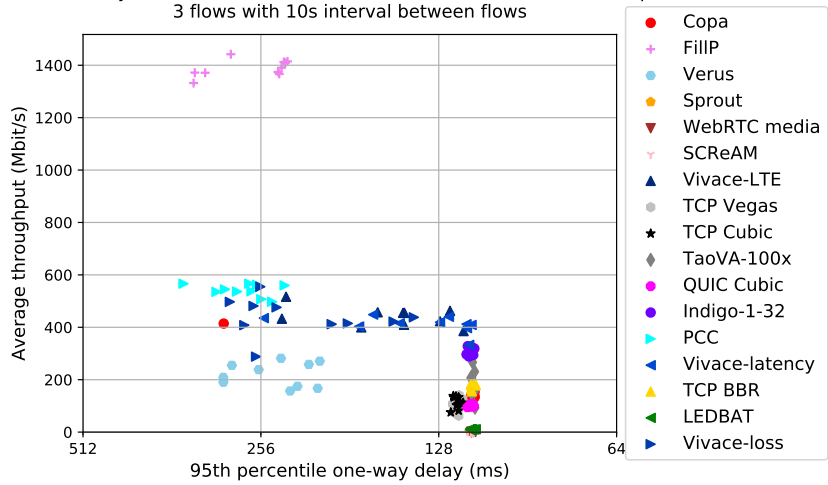
Git summary:

```
branch: master @ 503f51fe03f703a4c0a826a0792a4fead3e7d1b0
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5ce90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
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 @ f1a14bffe749737437f61b1eaaeb30b267cde681
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 @ f271183af822eee5d0031620f4bebf38aedc5581
```

test from GCE Tokyo Ethernet to GCE London Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE Tokyo Ethernet to GCE London Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows



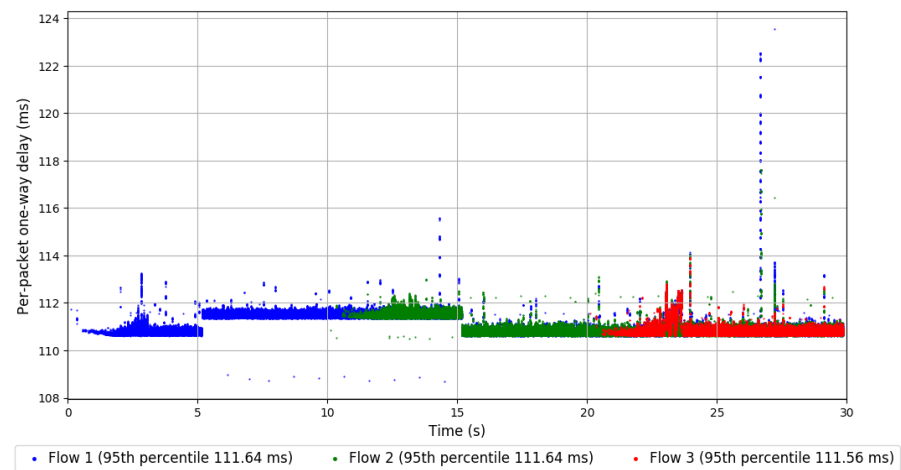
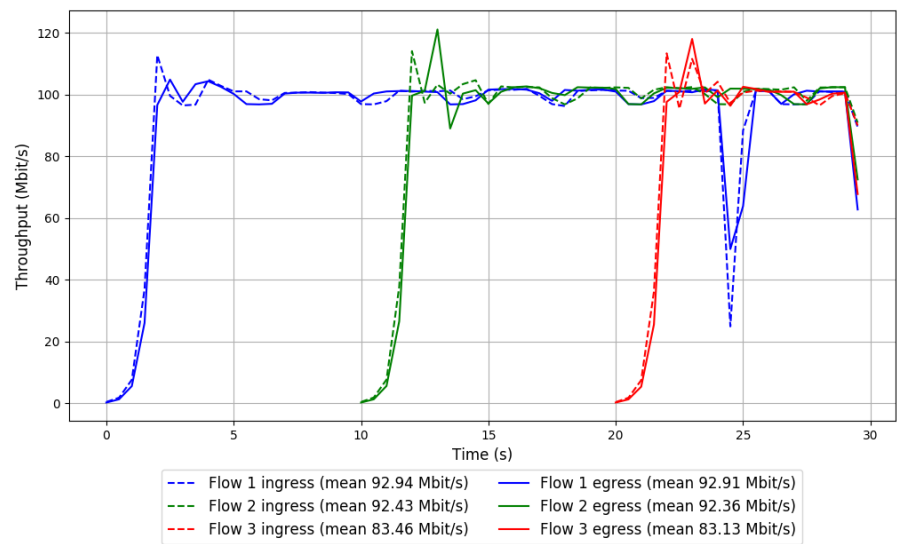
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	90.45	90.05	82.23	111.72	111.76	112.10	0.83	1.24	2.85
TCP Cubic	10	66.82	51.05	38.78	118.90	117.01	116.49	0.76	1.59	3.78
LEDBAT	10	6.67	4.29	2.14	112.59	112.43	112.25	1.56	2.39	4.51
PCC	10	471.96	91.78	26.49	280.55	229.94	229.95	4.54	3.19	4.60
QUIC Cubic	10	58.62	49.20	31.28	112.04	111.93	110.92	0.88	1.36	1.86
SCReAM	10	0.21	0.22	0.22	111.57	111.35	111.50	0.66	1.10	2.22
WebRTC media	10	0.06	0.06	0.05	111.93	112.21	112.21	0.00	0.01	0.38
Sprout	10	2.66	2.30	1.82	112.59	112.73	112.36	1.02	1.63	3.29
TaoVA-100x	10	87.15	108.61	74.53	112.43	111.90	112.10	0.82	0.95	2.21
TCP Vegas	10	46.37	58.34	43.96	118.07	117.69	118.46	0.69	1.07	2.52
Verus	10	143.47	96.72	39.56	229.31	231.73	187.08	2.37	3.78	3.31
Copa	10	103.18	64.78	72.42	130.29	125.93	121.25	3.08	1.07	2.01
FillP	10	724.16	705.46	605.66	242.54	268.57	289.55	11.34	9.81	15.89
Indigo-1-32	10	170.62	147.28	128.80	112.51	113.32	115.09	0.69	1.08	2.61
Vivace-latency	10	250.39	187.28	113.37	164.21	114.01	120.28	0.97	1.33	3.58
Vivace-loss	10	264.57	193.56	144.31	230.40	176.52	183.30	1.95	3.26	3.43
Vivace-LTE	10	272.24	194.22	121.18	173.90	131.17	155.75	0.98	1.73	2.85

```
Run 1: Statistics of TCP BBR

Start at: 2018-03-27 20:23:33
End at: 2018-03-27 20:24:03

# Below is generated by plot.py at 2018-03-28 03:05:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 181.35 Mbit/s
95th percentile per-packet one-way delay: 111.639 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 92.91 Mbit/s
95th percentile per-packet one-way delay: 111.642 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 92.36 Mbit/s
95th percentile per-packet one-way delay: 111.637 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 83.13 Mbit/s
95th percentile per-packet one-way delay: 111.561 ms
Loss rate: 2.62%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-03-27 20:42:46

End at: 2018-03-27 20:43:16

Below is generated by plot.py at 2018-03-28 03:05:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.19 Mbit/s

95th percentile per-packet one-way delay: 110.909 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 92.15 Mbit/s

95th percentile per-packet one-way delay: 110.925 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 92.71 Mbit/s

95th percentile per-packet one-way delay: 110.911 ms

Loss rate: 1.32%

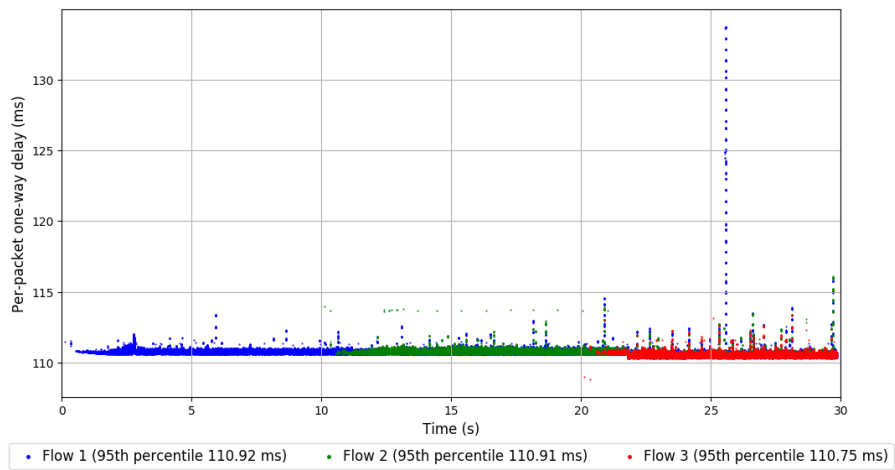
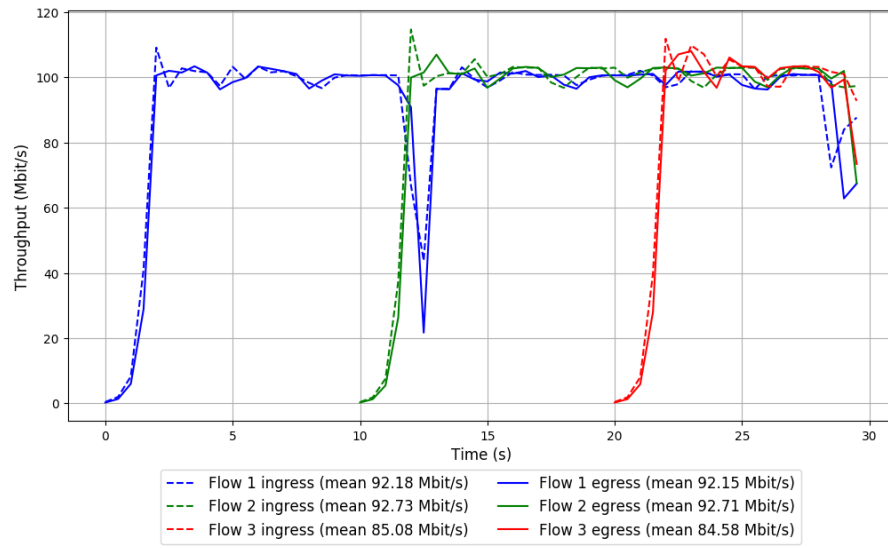
-- Flow 3:

Average throughput: 84.58 Mbit/s

95th percentile per-packet one-way delay: 110.748 ms

Loss rate: 2.68%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-03-27 21:01:50

End at: 2018-03-27 21:02:20

Below is generated by plot.py at 2018-03-28 03:05:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.85 Mbit/s

95th percentile per-packet one-way delay: 111.019 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 91.91 Mbit/s

95th percentile per-packet one-way delay: 111.007 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 91.68 Mbit/s

95th percentile per-packet one-way delay: 111.020 ms

Loss rate: 1.17%

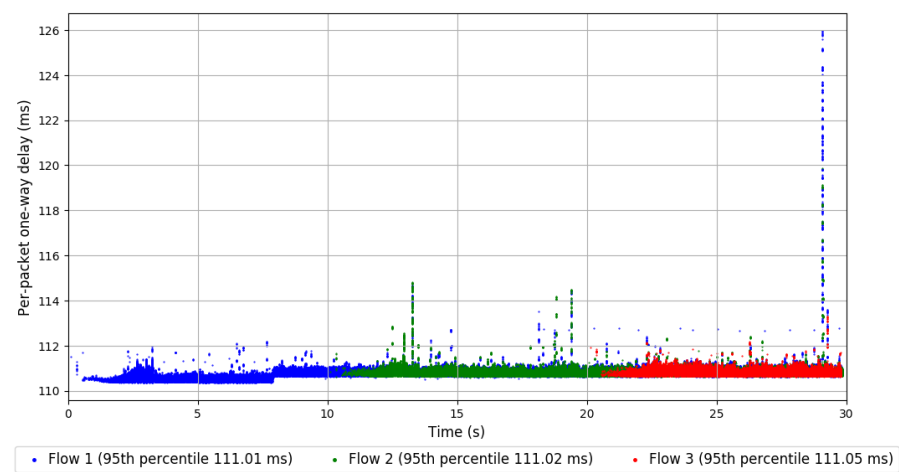
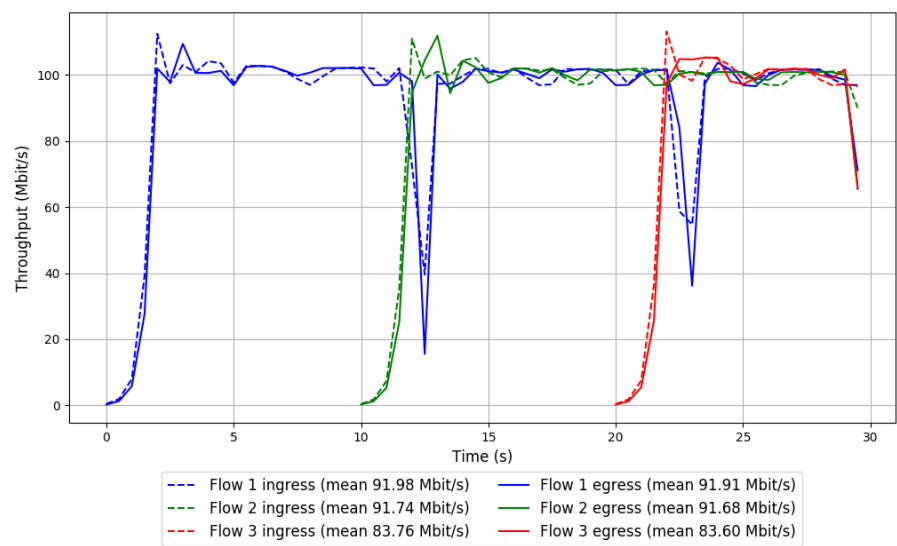
-- Flow 3:

Average throughput: 83.60 Mbit/s

95th percentile per-packet one-way delay: 111.049 ms

Loss rate: 2.90%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-03-27 21:20:53

End at: 2018-03-27 21:21:23

Below is generated by plot.py at 2018-03-28 03:05:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 180.95 Mbit/s

95th percentile per-packet one-way delay: 110.941 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 94.12 Mbit/s

95th percentile per-packet one-way delay: 110.814 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 94.05 Mbit/s

95th percentile per-packet one-way delay: 110.868 ms

Loss rate: 1.14%

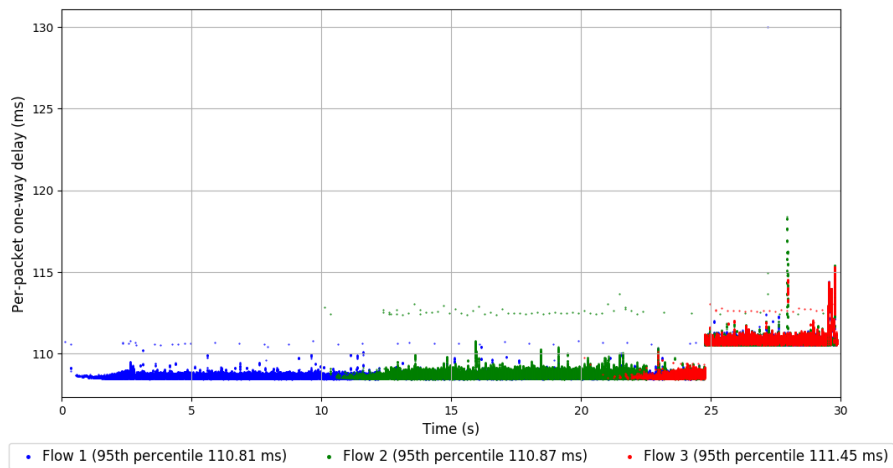
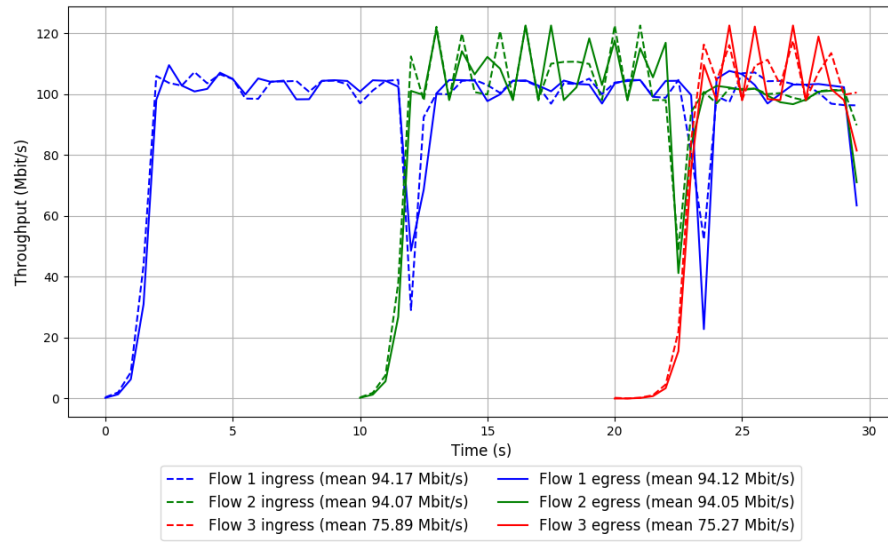
-- Flow 3:

Average throughput: 75.27 Mbit/s

95th percentile per-packet one-way delay: 111.452 ms

Loss rate: 3.02%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-03-27 21:39:58

End at: 2018-03-27 21:40:28

Below is generated by plot.py at 2018-03-28 03:05:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.42 Mbit/s

95th percentile per-packet one-way delay: 110.918 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 92.77 Mbit/s

95th percentile per-packet one-way delay: 110.905 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 88.79 Mbit/s

95th percentile per-packet one-way delay: 110.899 ms

Loss rate: 1.20%

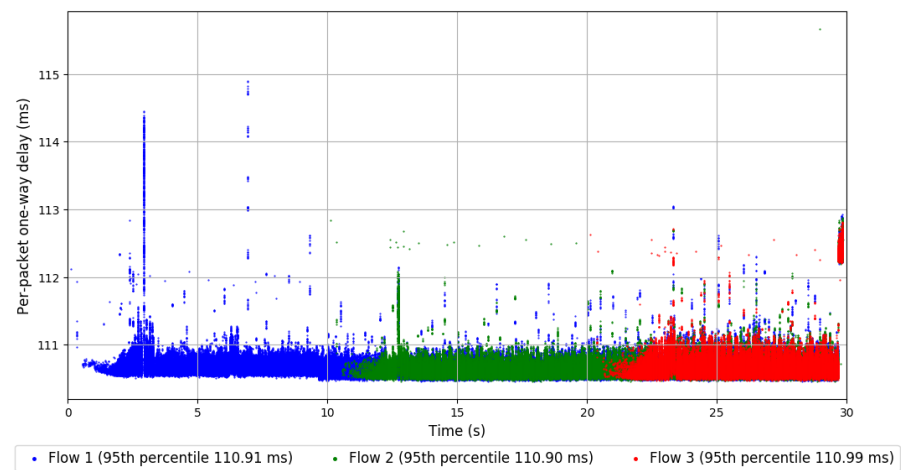
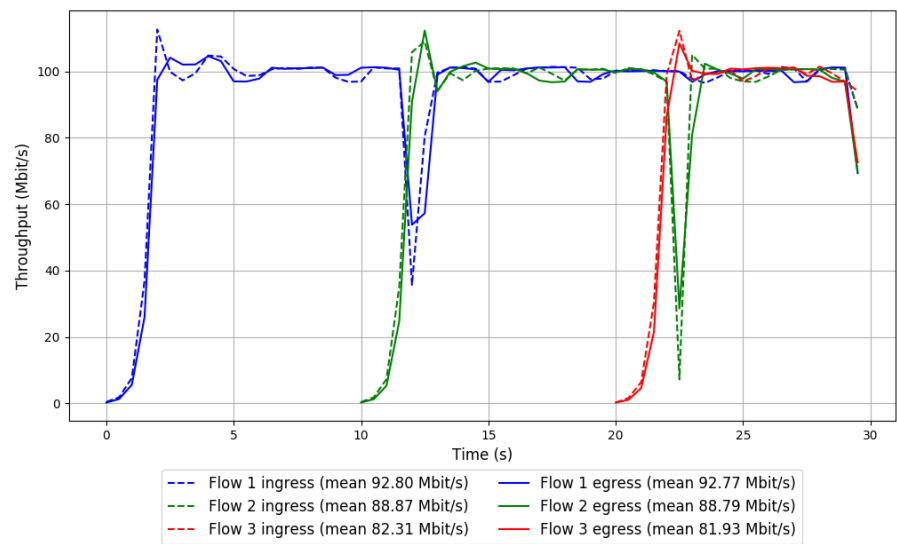
-- Flow 3:

Average throughput: 81.93 Mbit/s

95th percentile per-packet one-way delay: 110.990 ms

Loss rate: 2.79%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-03-27 21:59:40

End at: 2018-03-27 22:00:10

Below is generated by plot.py at 2018-03-28 03:05:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 155.76 Mbit/s

95th percentile per-packet one-way delay: 112.529 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 79.21 Mbit/s

95th percentile per-packet one-way delay: 112.485 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 82.25 Mbit/s

95th percentile per-packet one-way delay: 112.594 ms

Loss rate: 1.50%

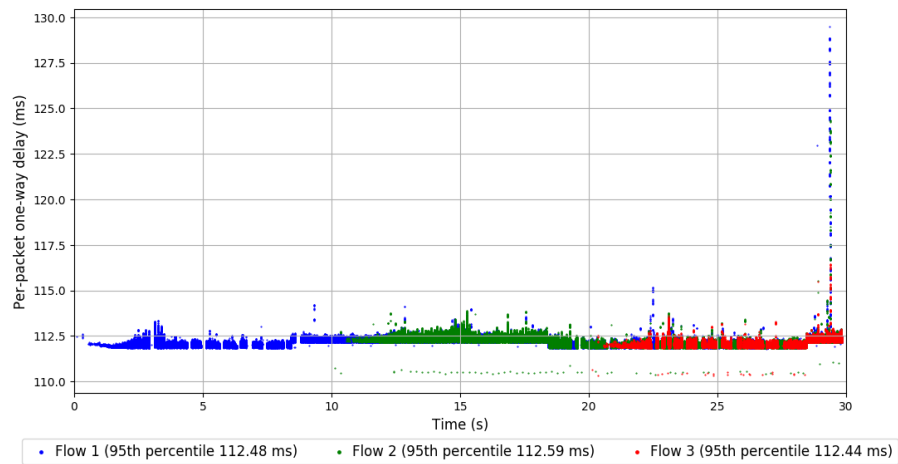
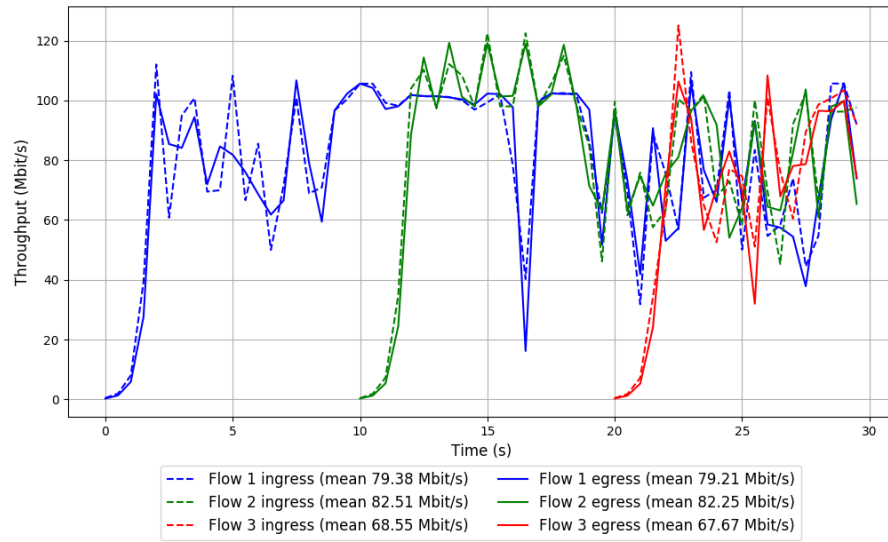
-- Flow 3:

Average throughput: 67.67 Mbit/s

95th percentile per-packet one-way delay: 112.437 ms

Loss rate: 3.38%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-03-27 22:19:31

End at: 2018-03-27 22:20:01

Below is generated by plot.py at 2018-03-28 03:05:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 164.36 Mbit/s

95th percentile per-packet one-way delay: 112.802 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 80.41 Mbit/s

95th percentile per-packet one-way delay: 112.413 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 84.04 Mbit/s

95th percentile per-packet one-way delay: 112.483 ms

Loss rate: 1.30%

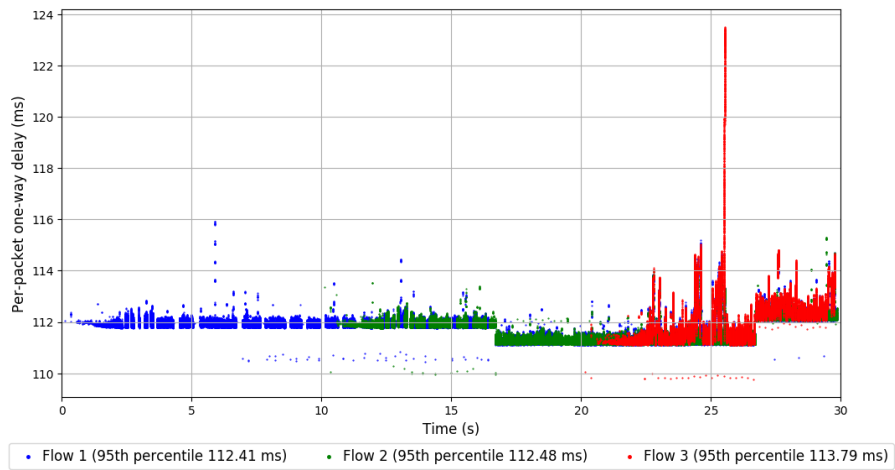
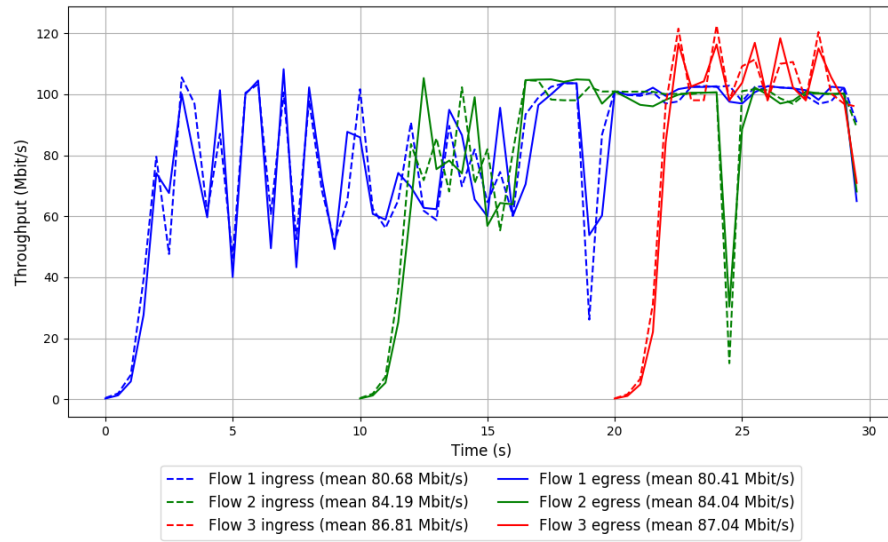
-- Flow 3:

Average throughput: 87.04 Mbit/s

95th percentile per-packet one-way delay: 113.792 ms

Loss rate: 2.81%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-03-27 22:39:39

End at: 2018-03-27 22:40:09

Below is generated by plot.py at 2018-03-28 03:05:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 180.92 Mbit/s

95th percentile per-packet one-way delay: 112.895 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 93.65 Mbit/s

95th percentile per-packet one-way delay: 112.869 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 88.91 Mbit/s

95th percentile per-packet one-way delay: 112.627 ms

Loss rate: 1.24%

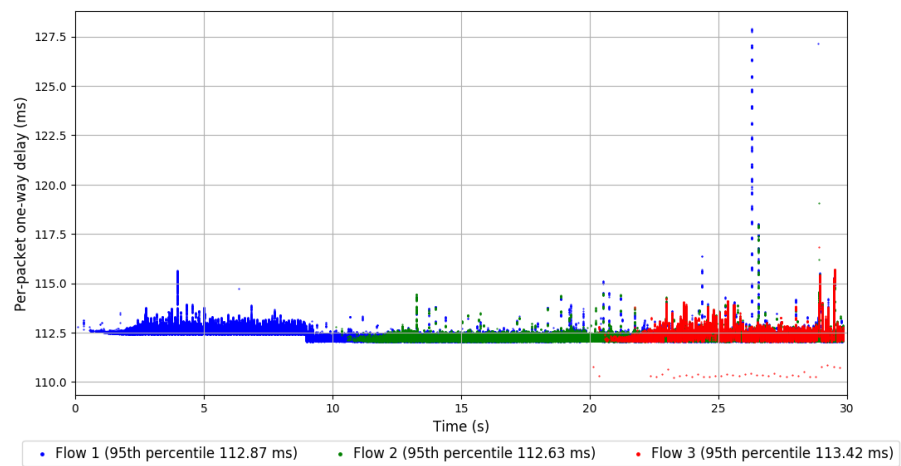
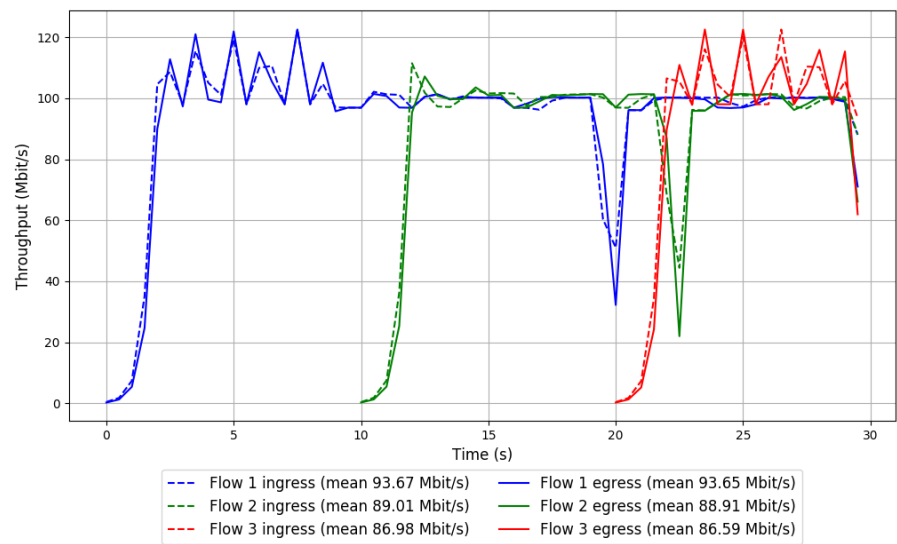
-- Flow 3:

Average throughput: 86.59 Mbit/s

95th percentile per-packet one-way delay: 113.417 ms

Loss rate: 2.68%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-03-27 22:59:20

End at: 2018-03-27 22:59:50

Below is generated by plot.py at 2018-03-28 03:08:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 182.13 Mbit/s

95th percentile per-packet one-way delay: 112.989 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 93.27 Mbit/s

95th percentile per-packet one-way delay: 112.932 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 92.97 Mbit/s

95th percentile per-packet one-way delay: 113.067 ms

Loss rate: 1.17%

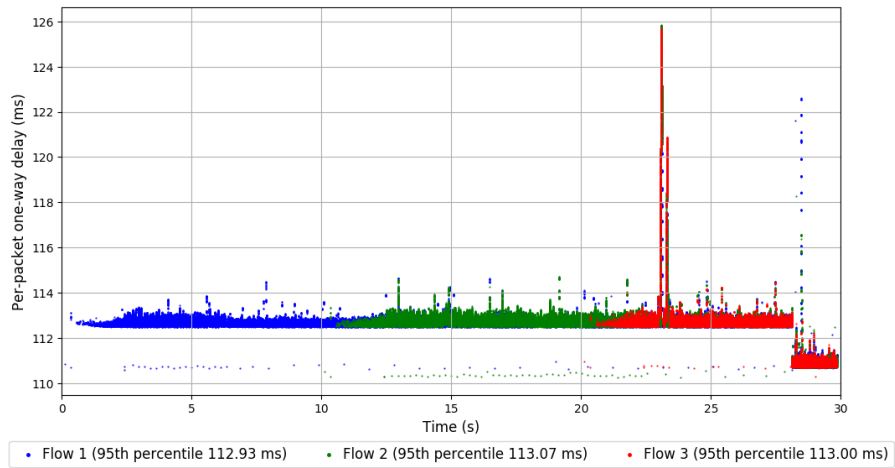
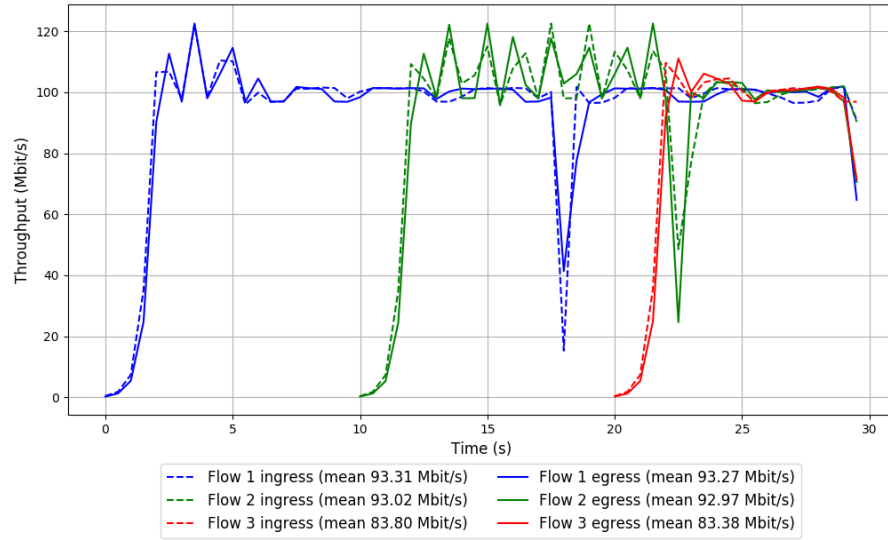
-- Flow 3:

Average throughput: 83.38 Mbit/s

95th percentile per-packet one-way delay: 113.000 ms

Loss rate: 2.90%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-03-27 23:18:33

End at: 2018-03-27 23:19:03

Below is generated by plot.py at 2018-03-28 03:08:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 184.72 Mbit/s

95th percentile per-packet one-way delay: 111.584 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 94.06 Mbit/s

95th percentile per-packet one-way delay: 111.203 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 92.79 Mbit/s

95th percentile per-packet one-way delay: 111.451 ms

Loss rate: 1.17%

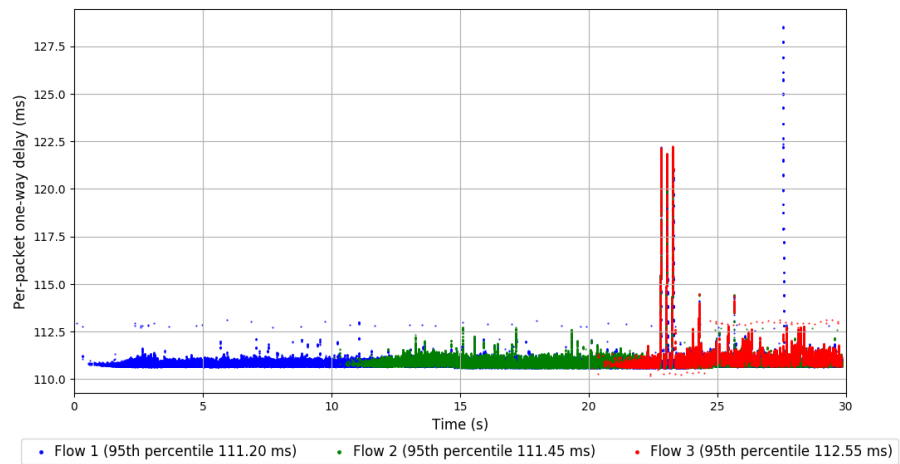
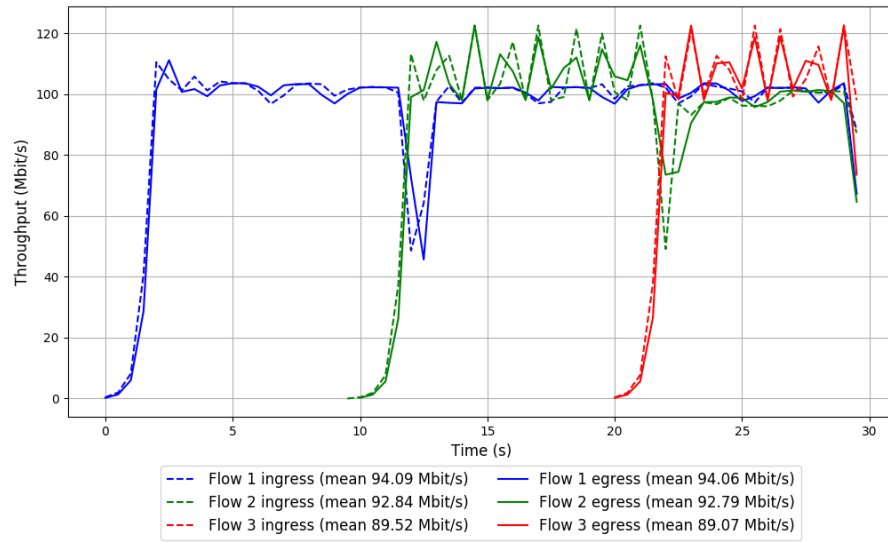
-- Flow 3:

Average throughput: 89.07 Mbit/s

95th percentile per-packet one-way delay: 112.550 ms

Loss rate: 2.76%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-03-27 20:27:26

End at: 2018-03-27 20:27:56

Below is generated by plot.py at 2018-03-28 03:08:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 136.78 Mbit/s

95th percentile per-packet one-way delay: 119.693 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 73.37 Mbit/s

95th percentile per-packet one-way delay: 120.103 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 74.46 Mbit/s

95th percentile per-packet one-way delay: 119.285 ms

Loss rate: 1.07%

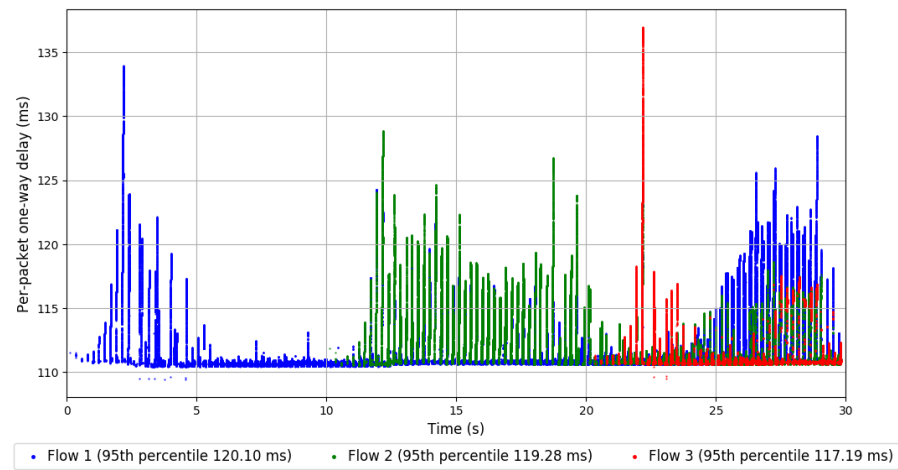
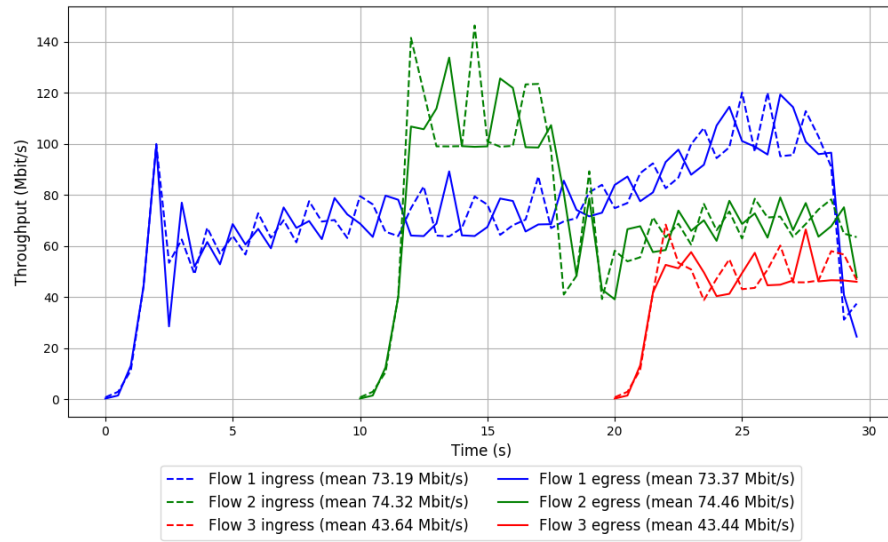
-- Flow 3:

Average throughput: 43.44 Mbit/s

95th percentile per-packet one-way delay: 117.192 ms

Loss rate: 2.68%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-03-27 20:46:40

End at: 2018-03-27 20:47:10

Below is generated by plot.py at 2018-03-28 03:08:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.32 Mbit/s

95th percentile per-packet one-way delay: 117.958 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 61.04 Mbit/s

95th percentile per-packet one-way delay: 117.085 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 52.93 Mbit/s

95th percentile per-packet one-way delay: 120.484 ms

Loss rate: 1.39%

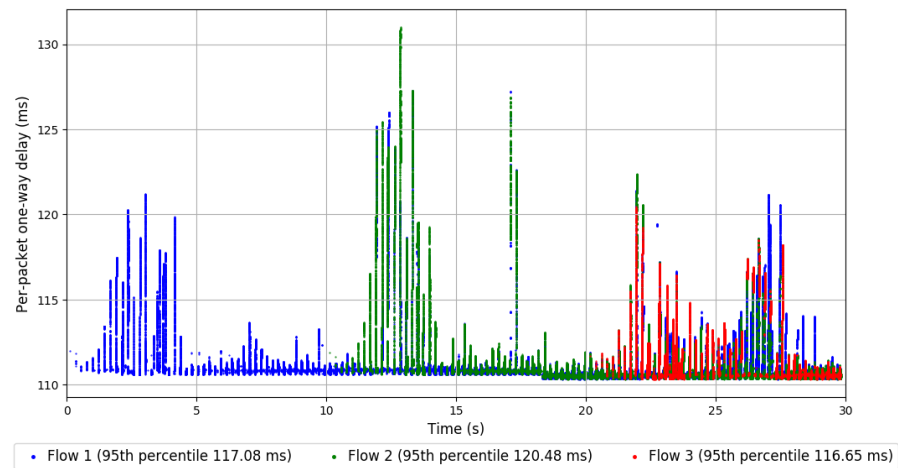
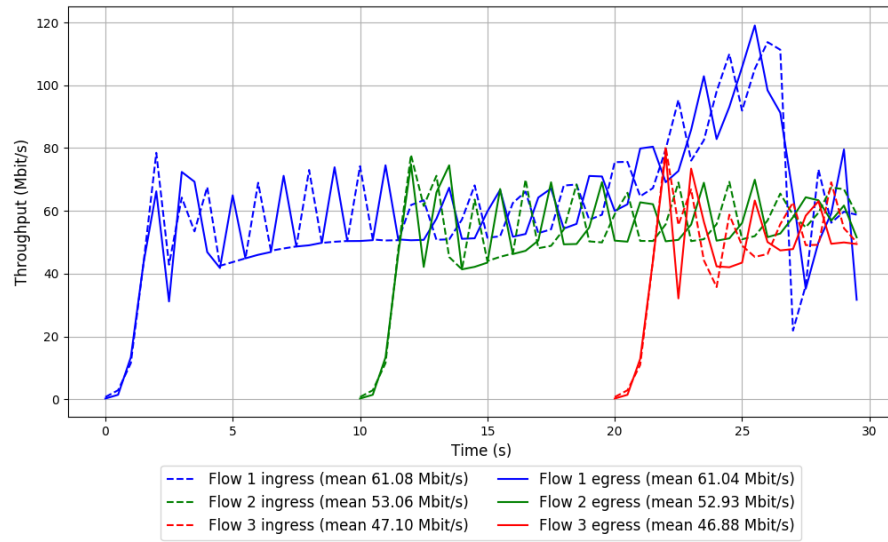
-- Flow 3:

Average throughput: 46.88 Mbit/s

95th percentile per-packet one-way delay: 116.652 ms

Loss rate: 2.68%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-03-27 21:05:46

End at: 2018-03-27 21:06:16

Below is generated by plot.py at 2018-03-28 03:08:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.16 Mbit/s

95th percentile per-packet one-way delay: 118.451 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 67.65 Mbit/s

95th percentile per-packet one-way delay: 118.889 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 21.16 Mbit/s

95th percentile per-packet one-way delay: 113.131 ms

Loss rate: 5.08%

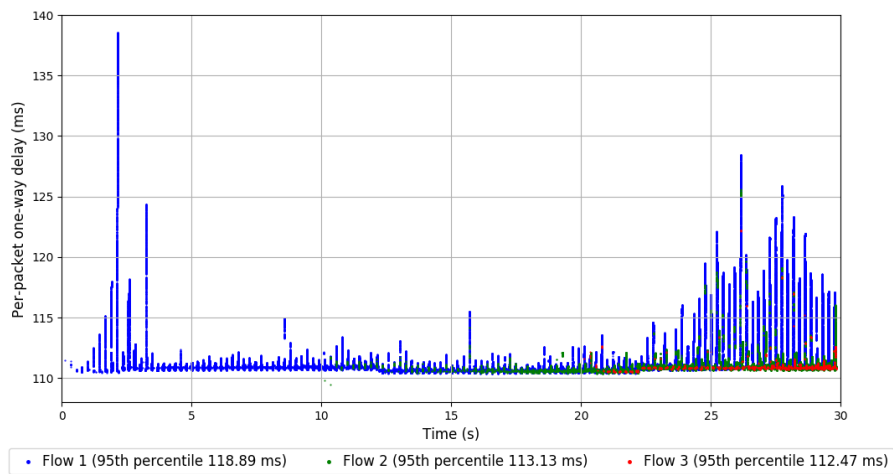
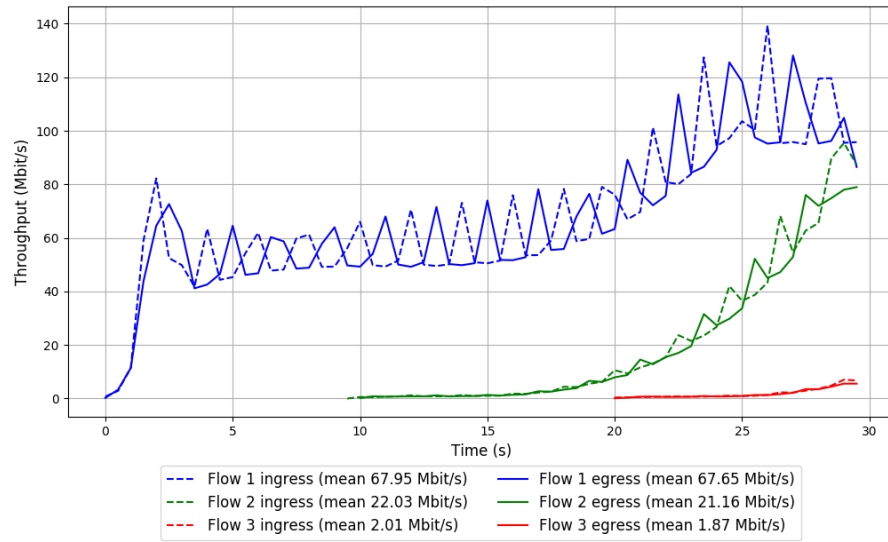
-- Flow 3:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 112.472 ms

Loss rate: 9.13%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-03-27 21:24:47

End at: 2018-03-27 21:25:17

Below is generated by plot.py at 2018-03-28 03:08:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.08 Mbit/s

95th percentile per-packet one-way delay: 116.355 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 57.51 Mbit/s

95th percentile per-packet one-way delay: 113.298 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 53.95 Mbit/s

95th percentile per-packet one-way delay: 118.751 ms

Loss rate: 1.14%

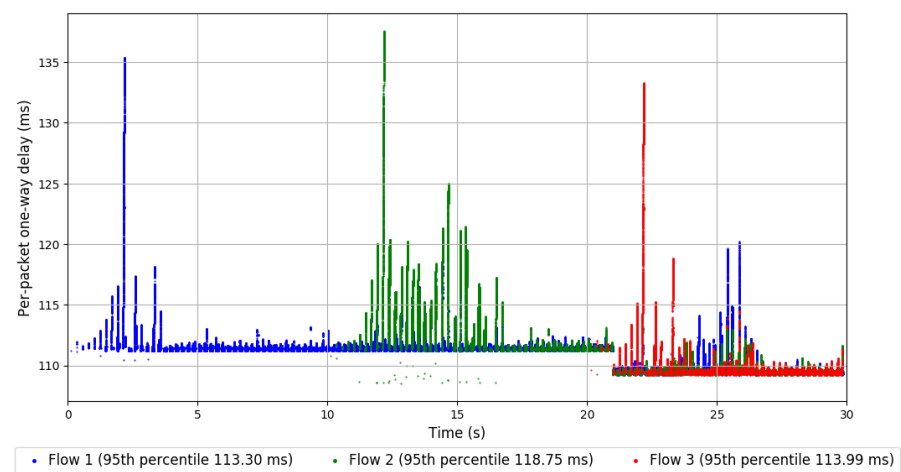
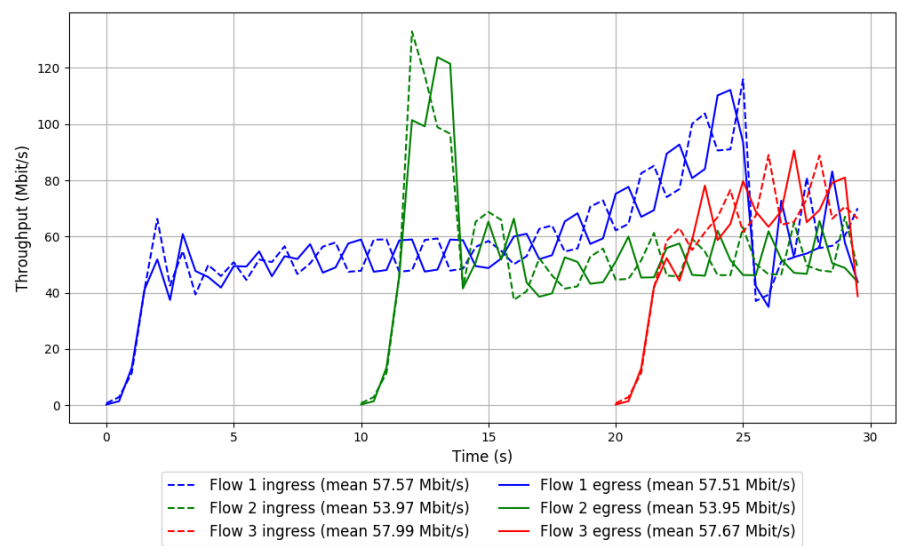
-- Flow 3:

Average throughput: 57.67 Mbit/s

95th percentile per-packet one-way delay: 113.988 ms

Loss rate: 2.86%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-03-27 21:43:51

End at: 2018-03-27 21:44:21

Below is generated by plot.py at 2018-03-28 03:08:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.86 Mbit/s

95th percentile per-packet one-way delay: 120.932 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 66.06 Mbit/s

95th percentile per-packet one-way delay: 117.897 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 64.01 Mbit/s

95th percentile per-packet one-way delay: 120.401 ms

Loss rate: 1.32%

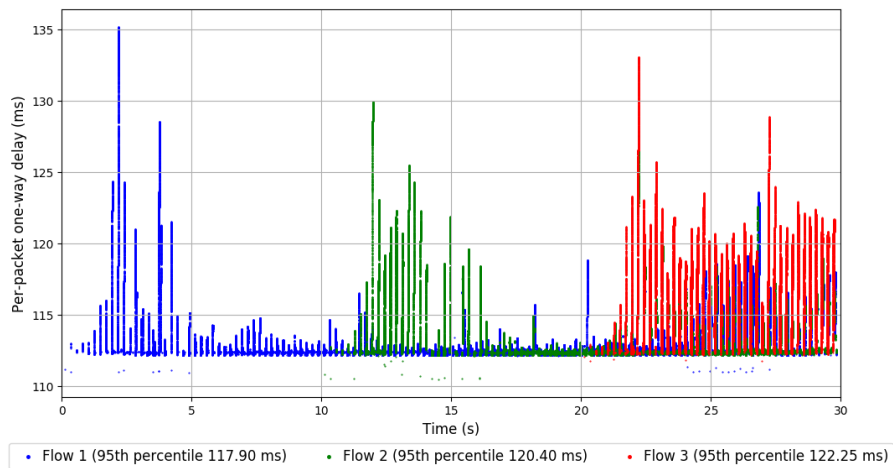
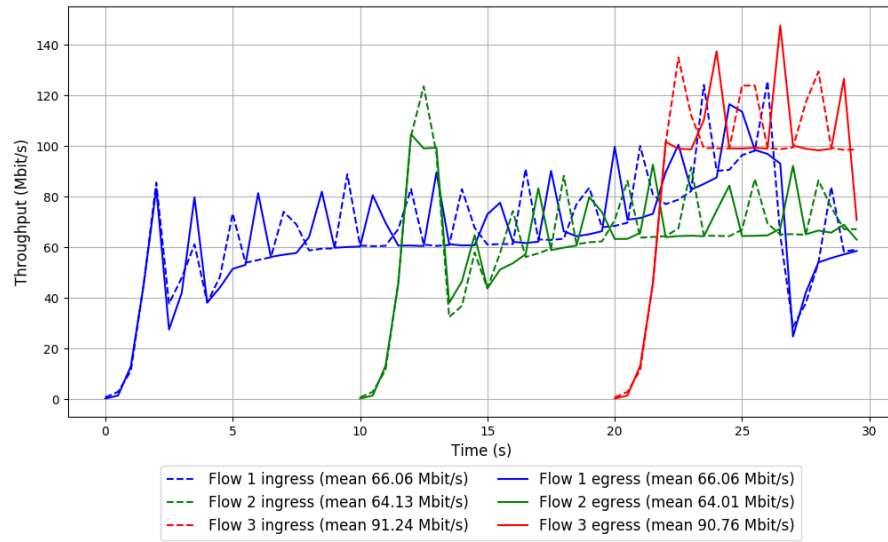
-- Flow 3:

Average throughput: 90.76 Mbit/s

95th percentile per-packet one-way delay: 122.249 ms

Loss rate: 2.75%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-03-27 22:03:34

End at: 2018-03-27 22:04:04

Below is generated by plot.py at 2018-03-28 03:08:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.58 Mbit/s

95th percentile per-packet one-way delay: 122.158 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 61.42 Mbit/s

95th percentile per-packet one-way delay: 122.552 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 5.87 Mbit/s

95th percentile per-packet one-way delay: 113.304 ms

Loss rate: 1.70%

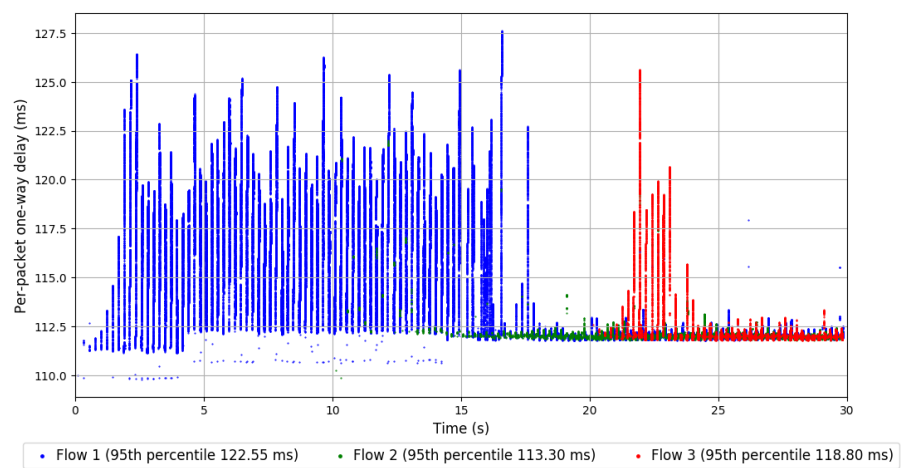
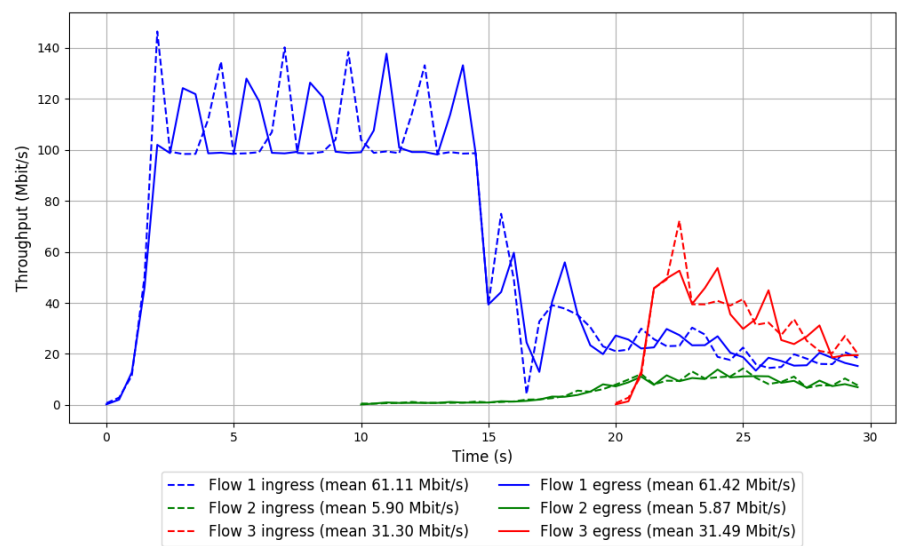
-- Flow 3:

Average throughput: 31.49 Mbit/s

95th percentile per-packet one-way delay: 118.800 ms

Loss rate: 1.65%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-03-27 22:23:57

End at: 2018-03-27 22:24:27

Below is generated by plot.py at 2018-03-28 03:08:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.70 Mbit/s

95th percentile per-packet one-way delay: 119.358 ms

Loss rate: 0.31%

-- Flow 1:

Average throughput: 70.22 Mbit/s

95th percentile per-packet one-way delay: 119.767 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 41.79 Mbit/s

95th percentile per-packet one-way delay: 115.482 ms

Loss rate: 0.59%

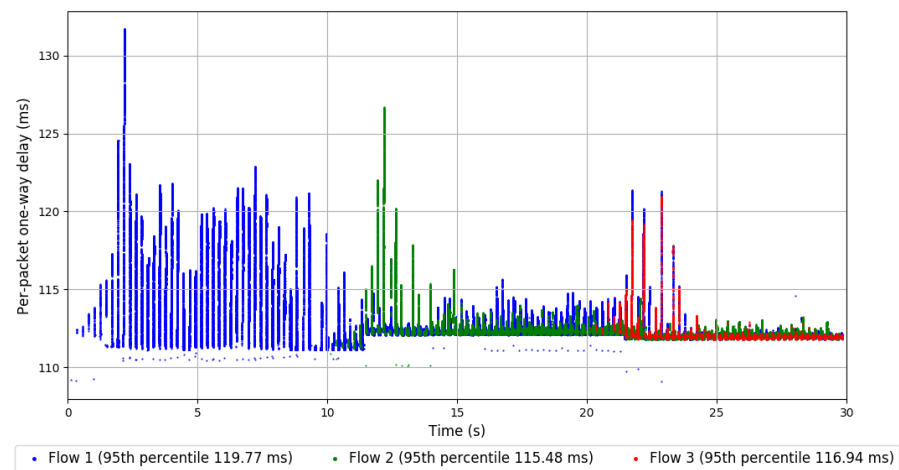
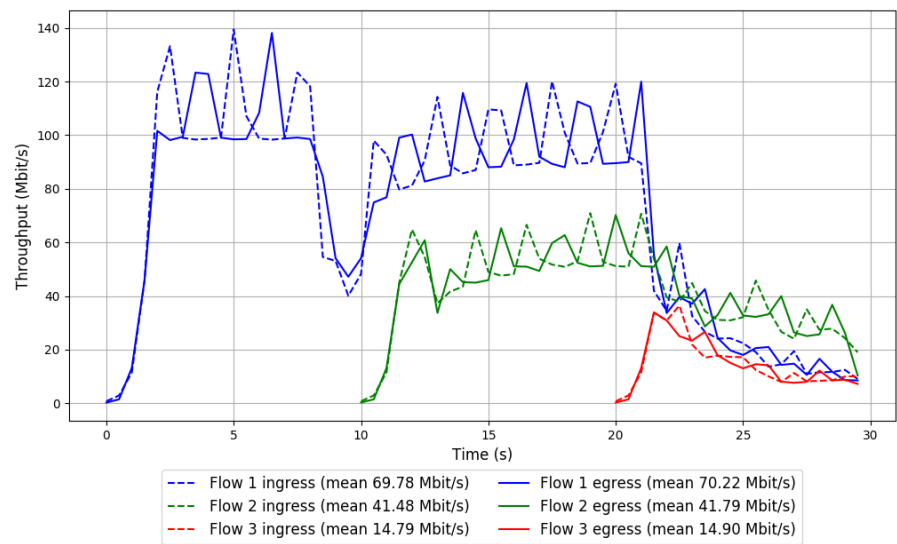
-- Flow 3:

Average throughput: 14.90 Mbit/s

95th percentile per-packet one-way delay: 116.944 ms

Loss rate: 1.53%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-03-27 22:43:33

End at: 2018-03-27 22:44:03

Below is generated by plot.py at 2018-03-28 03:09:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.60 Mbit/s

95th percentile per-packet one-way delay: 120.717 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 78.49 Mbit/s

95th percentile per-packet one-way delay: 121.482 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 59.32 Mbit/s

95th percentile per-packet one-way delay: 116.666 ms

Loss rate: 1.39%

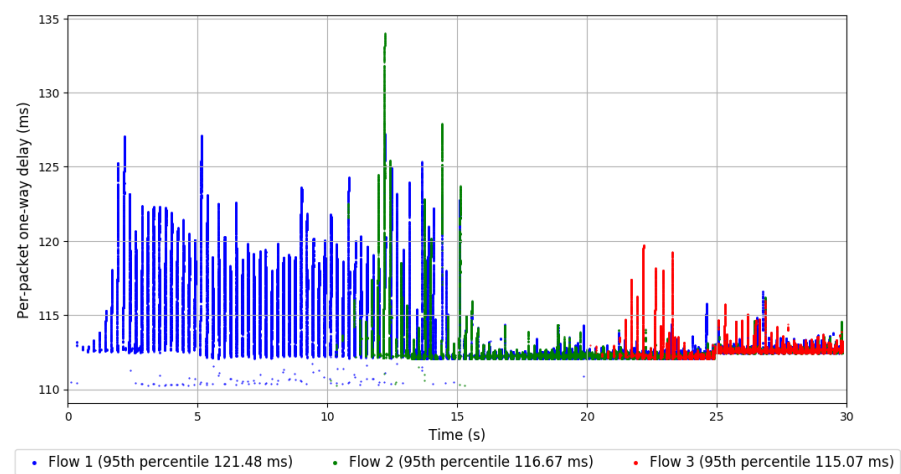
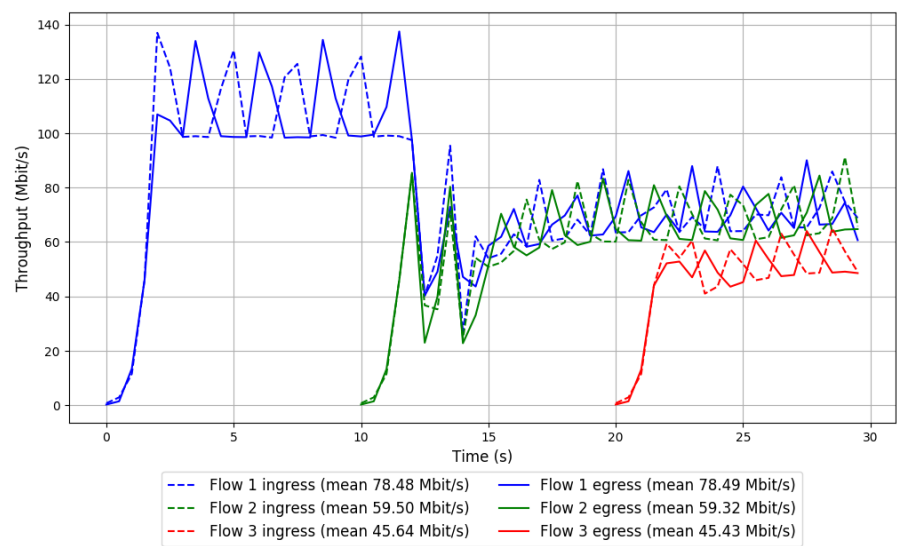
-- Flow 3:

Average throughput: 45.43 Mbit/s

95th percentile per-packet one-way delay: 115.074 ms

Loss rate: 2.71%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-03-27 23:03:13

End at: 2018-03-27 23:03:43

Below is generated by plot.py at 2018-03-28 03:09:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.12 Mbit/s

95th percentile per-packet one-way delay: 118.458 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 72.66 Mbit/s

95th percentile per-packet one-way delay: 118.727 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 65.42 Mbit/s

95th percentile per-packet one-way delay: 114.764 ms

Loss rate: 0.83%

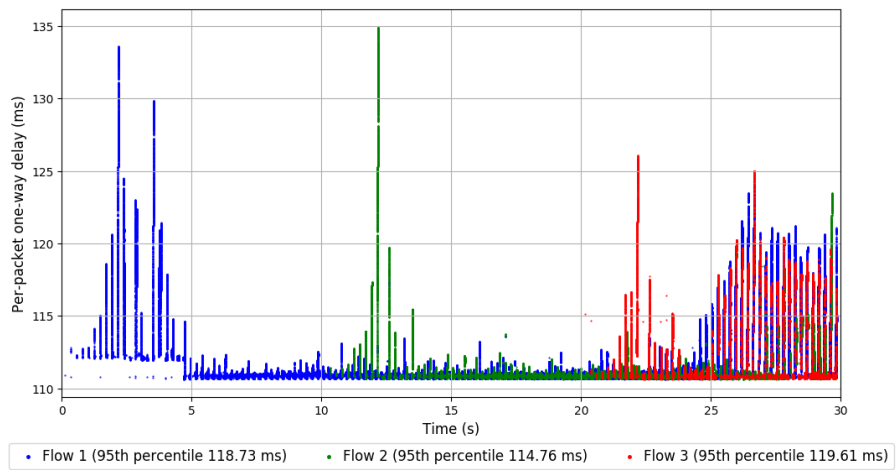
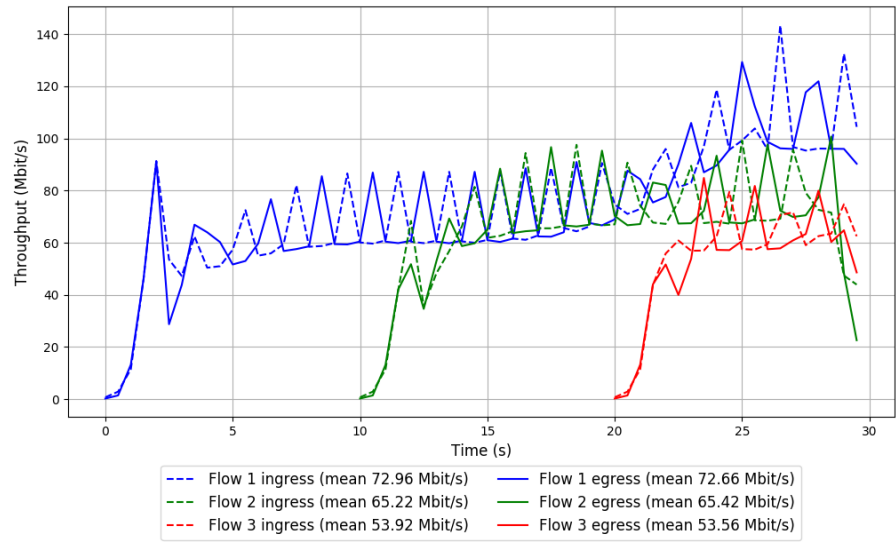
-- Flow 3:

Average throughput: 53.56 Mbit/s

95th percentile per-packet one-way delay: 119.609 ms

Loss rate: 2.90%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-03-27 23:22:30

End at: 2018-03-27 23:23:00

Below is generated by plot.py at 2018-03-28 03:09:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.85 Mbit/s

95th percentile per-packet one-way delay: 118.653 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 59.75 Mbit/s

95th percentile per-packet one-way delay: 119.187 ms

Loss rate: 1.33%

-- Flow 2:

Average throughput: 71.63 Mbit/s

95th percentile per-packet one-way delay: 117.855 ms

Loss rate: 1.42%

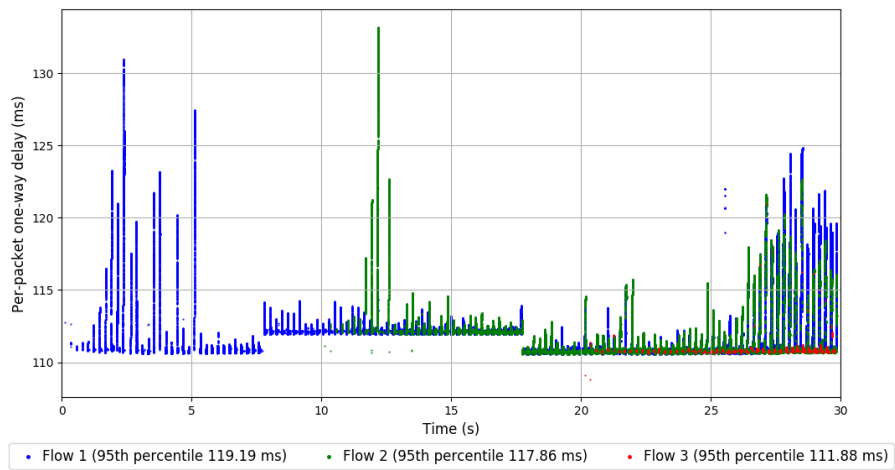
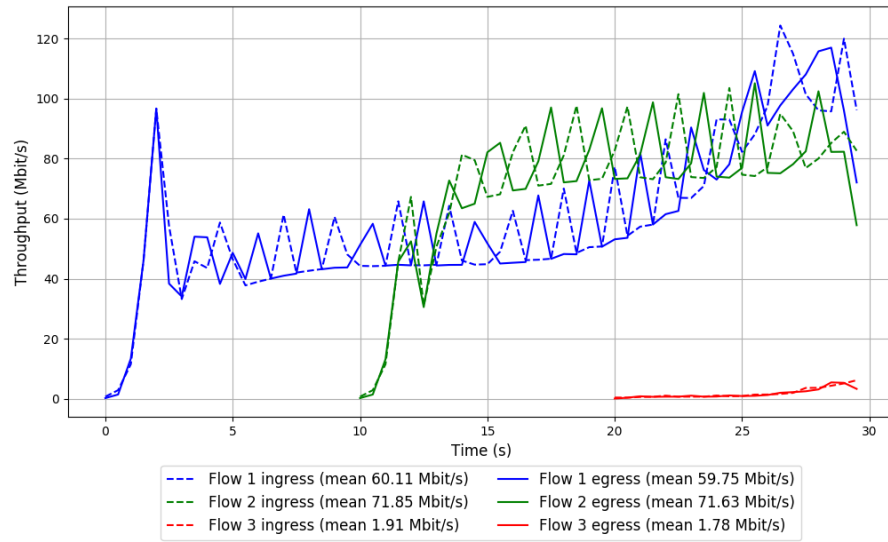
-- Flow 3:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 111.878 ms

Loss rate: 8.91%

Run 10: Report of TCP Cubic — Data Link

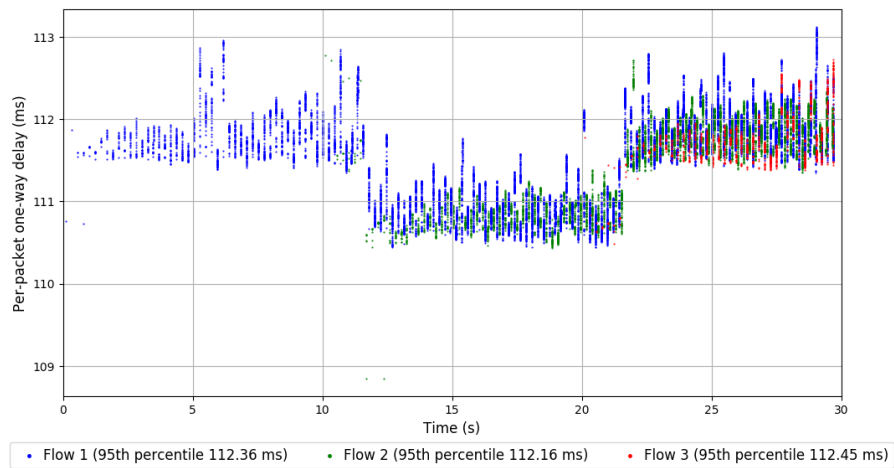
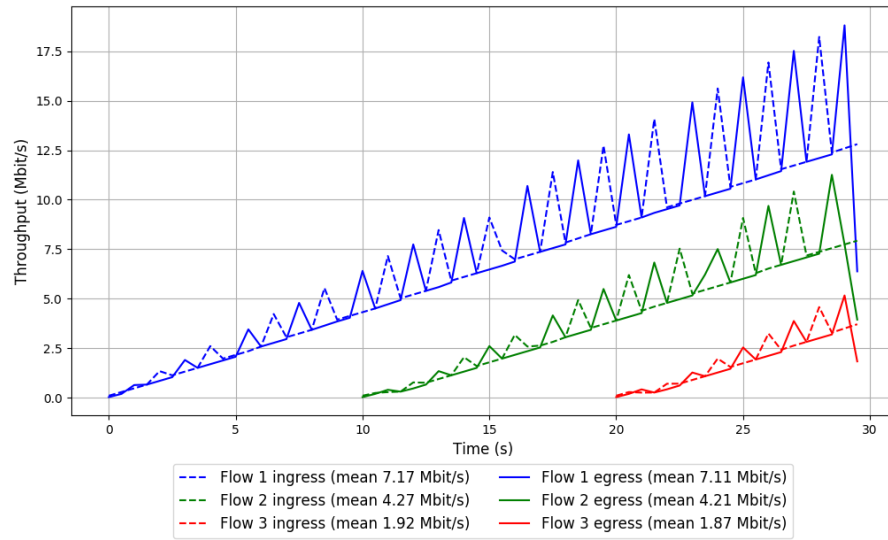


```
Run 1: Statistics of LEDBAT

Start at: 2018-03-27 20:35:56
End at: 2018-03-27 20:36:26

# Below is generated by plot.py at 2018-03-28 03:09:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.50 Mbit/s
95th percentile per-packet one-way delay: 112.309 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 7.11 Mbit/s
95th percentile per-packet one-way delay: 112.363 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 112.156 ms
Loss rate: 2.37%
-- Flow 3:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 112.446 ms
Loss rate: 4.99%
```


Run 1: Report of LEDBAT — Data Link

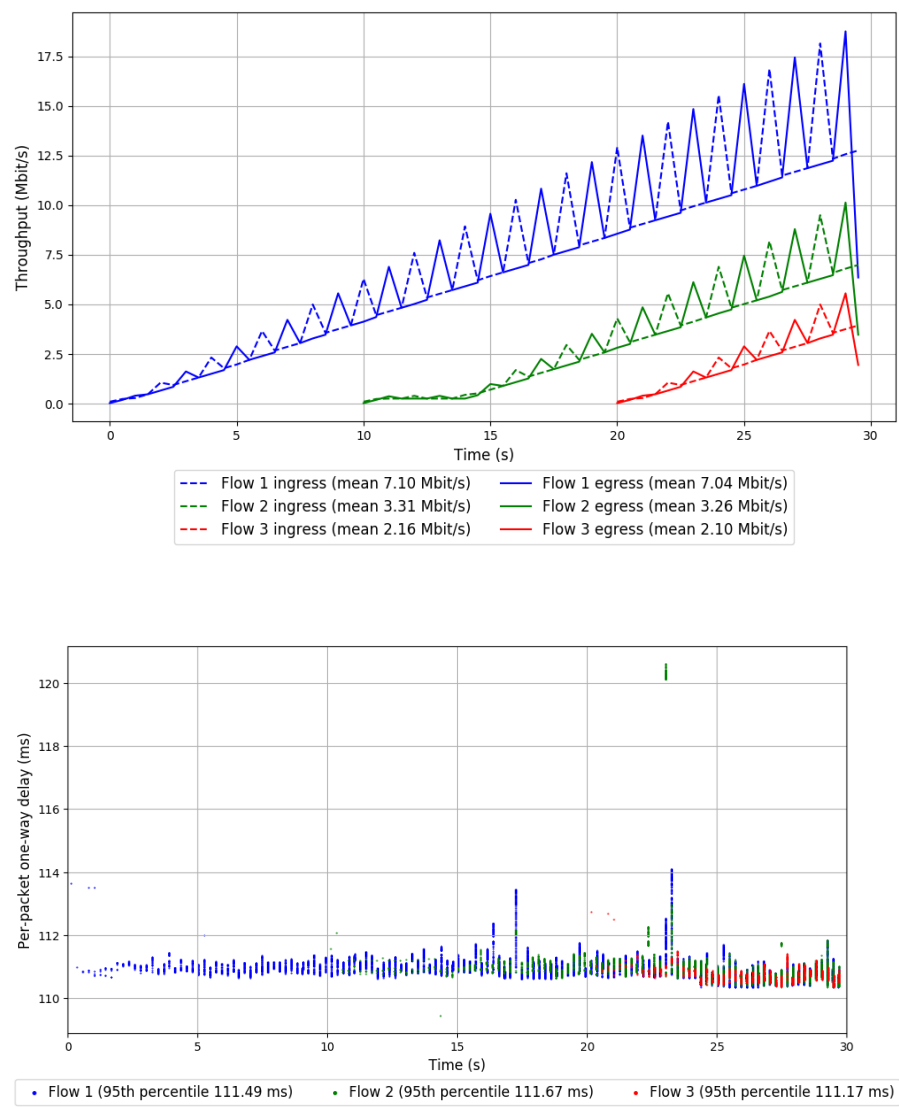


```
Run 2: Statistics of LEDBAT

Start at: 2018-03-27 20:54:54
End at: 2018-03-27 20:55:24

# Below is generated by plot.py at 2018-03-28 03:09:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.87 Mbit/s
95th percentile per-packet one-way delay: 111.465 ms
Loss rate: 2.00%
-- Flow 1:
Average throughput: 7.04 Mbit/s
95th percentile per-packet one-way delay: 111.488 ms
Loss rate: 1.51%
-- Flow 2:
Average throughput: 3.26 Mbit/s
95th percentile per-packet one-way delay: 111.667 ms
Loss rate: 2.69%
-- Flow 3:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 111.165 ms
Loss rate: 4.71%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-03-27 21:14:10

End at: 2018-03-27 21:14:40

Below is generated by plot.py at 2018-03-28 03:09:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.85 Mbit/s

95th percentile per-packet one-way delay: 110.810 ms

Loss rate: 1.82%

-- Flow 1:

Average throughput: 7.03 Mbit/s

95th percentile per-packet one-way delay: 110.997 ms

Loss rate: 1.51%

-- Flow 2:

Average throughput: 4.79 Mbit/s

95th percentile per-packet one-way delay: 109.667 ms

Loss rate: 2.25%

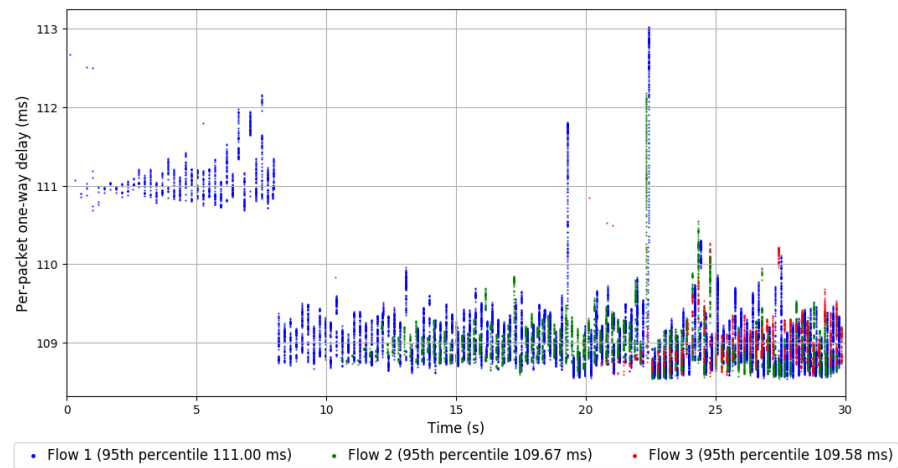
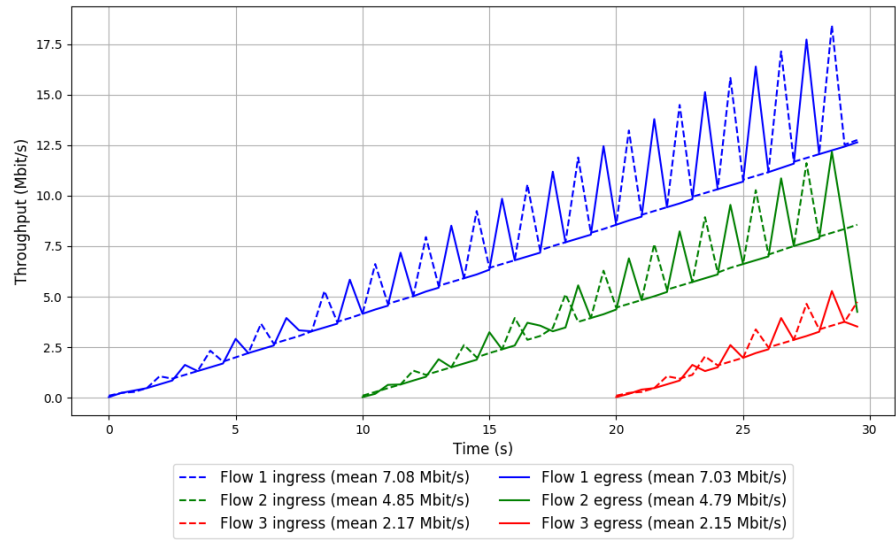
-- Flow 3:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 109.576 ms

Loss rate: 2.83%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-03-27 21:33:02

End at: 2018-03-27 21:33:32

Below is generated by plot.py at 2018-03-28 03:09:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.02 Mbit/s

95th percentile per-packet one-way delay: 113.258 ms

Loss rate: 1.92%

-- Flow 1:

Average throughput: 7.13 Mbit/s

95th percentile per-packet one-way delay: 113.146 ms

Loss rate: 1.49%

-- Flow 2:

Average throughput: 4.75 Mbit/s

95th percentile per-packet one-way delay: 113.507 ms

Loss rate: 2.24%

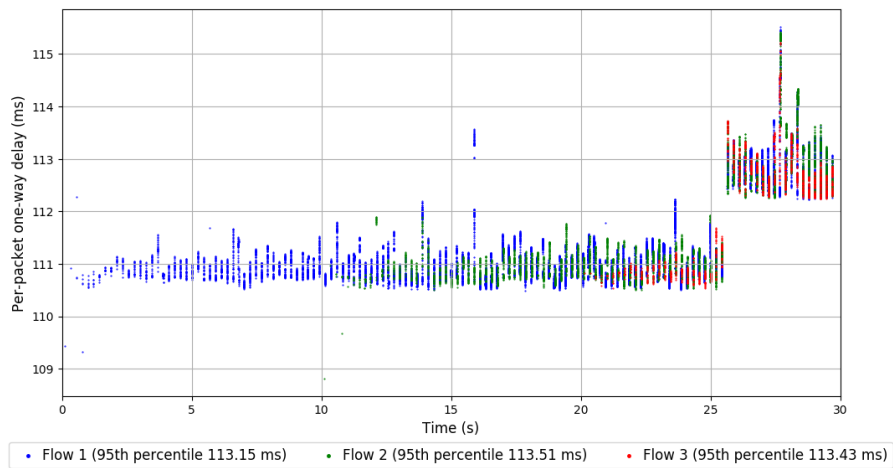
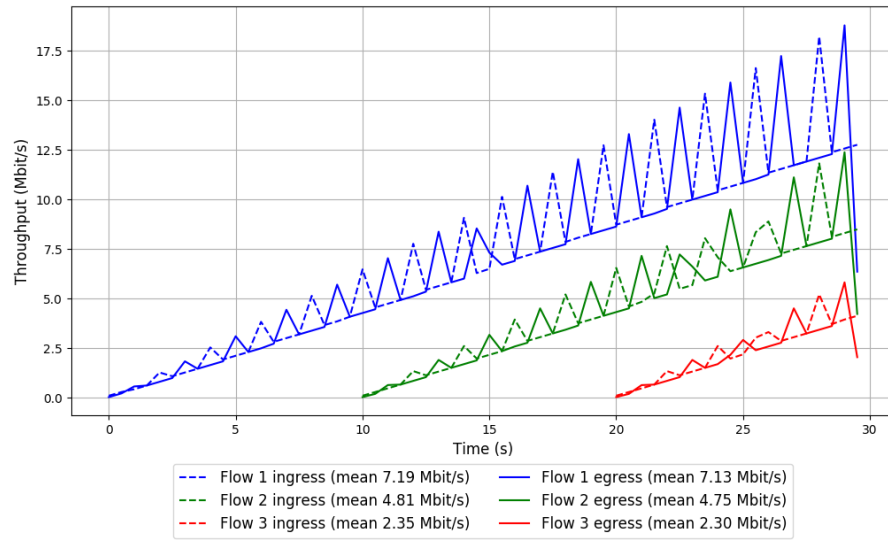
-- Flow 3:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 113.434 ms

Loss rate: 4.54%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-03-27 21:52:15

End at: 2018-03-27 21:52:45

Below is generated by plot.py at 2018-03-28 03:09:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.79 Mbit/s

95th percentile per-packet one-way delay: 112.914 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 7.04 Mbit/s

95th percentile per-packet one-way delay: 112.929 ms

Loss rate: 1.52%

-- Flow 2:

Average throughput: 4.61 Mbit/s

95th percentile per-packet one-way delay: 112.921 ms

Loss rate: 2.28%

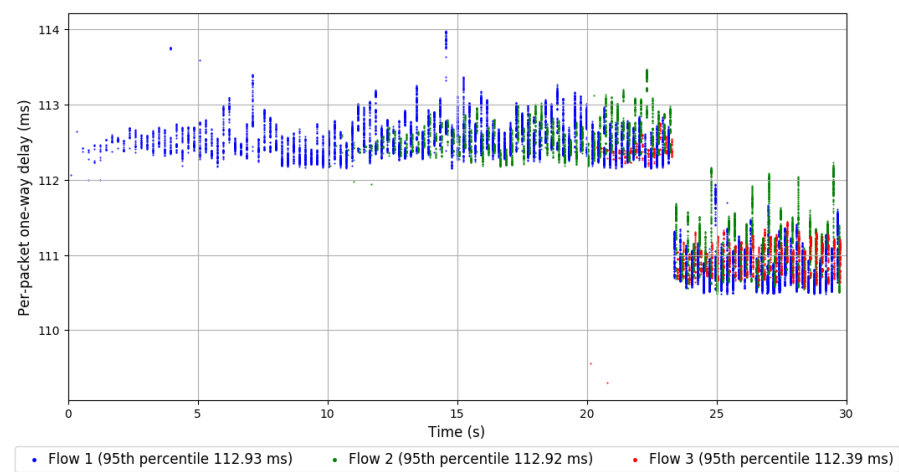
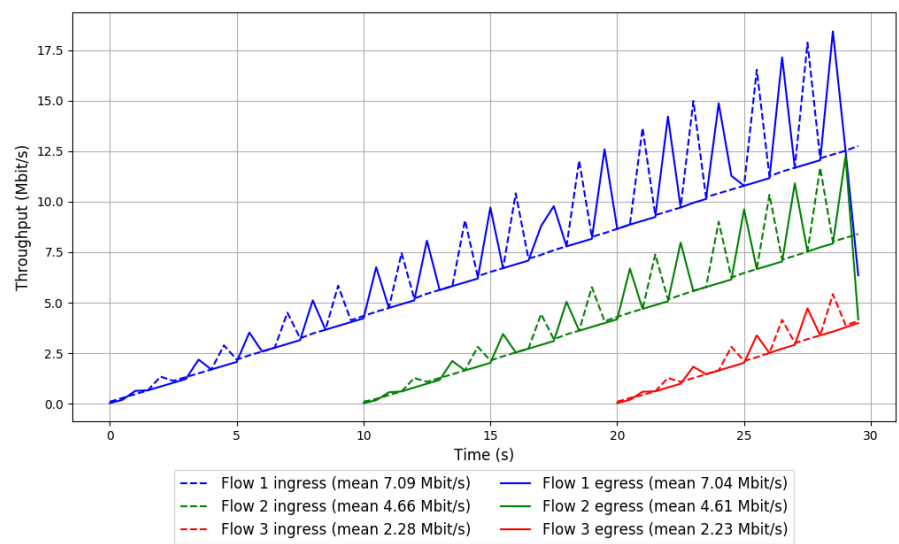
-- Flow 3:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 112.391 ms

Loss rate: 4.59%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-03-27 22:12:08

End at: 2018-03-27 22:12:38

Below is generated by plot.py at 2018-03-28 03:09:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.81 Mbit/s

95th percentile per-packet one-way delay: 113.064 ms

Loss rate: 1.94%

-- Flow 1:

Average throughput: 7.00 Mbit/s

95th percentile per-packet one-way delay: 113.140 ms

Loss rate: 1.51%

-- Flow 2:

Average throughput: 4.68 Mbit/s

95th percentile per-packet one-way delay: 113.013 ms

Loss rate: 2.27%

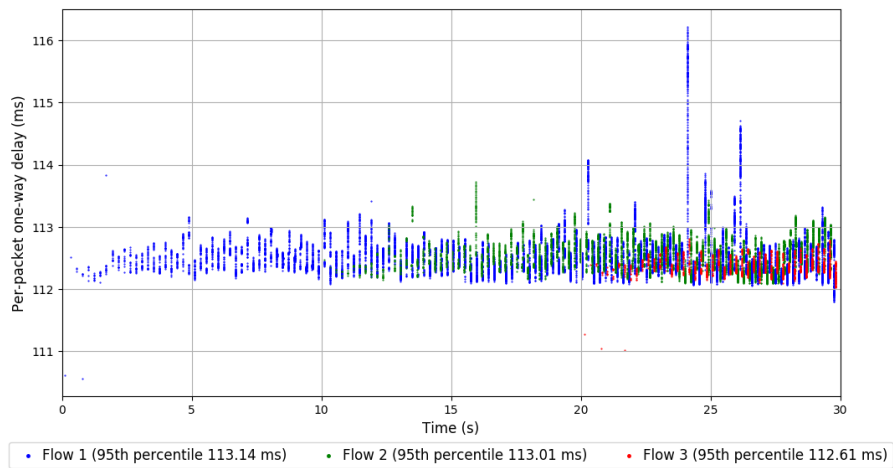
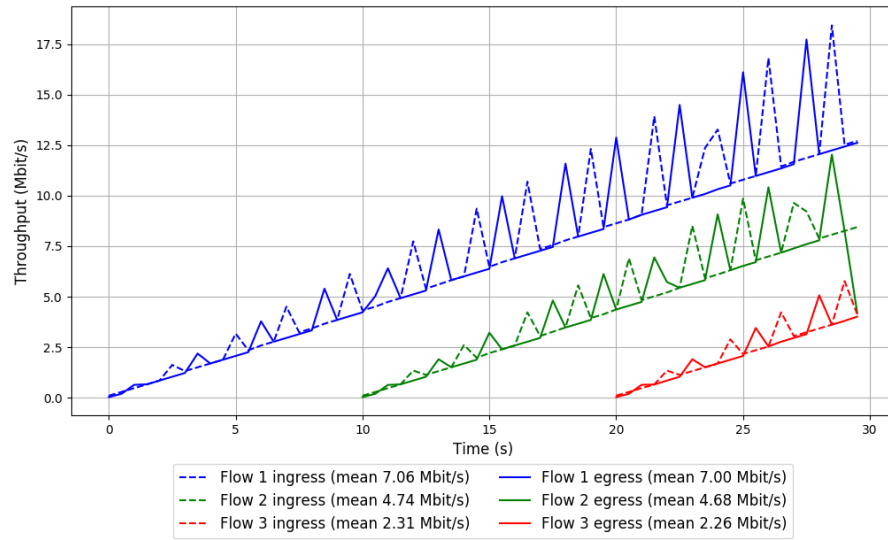
-- Flow 3:

Average throughput: 2.26 Mbit/s

95th percentile per-packet one-way delay: 112.606 ms

Loss rate: 4.56%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-03-27 22:32:40

End at: 2018-03-27 22:33:10

Below is generated by plot.py at 2018-03-28 03:09:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.61 Mbit/s

95th percentile per-packet one-way delay: 113.118 ms

Loss rate: 2.33%

-- Flow 1:

Average throughput: 3.95 Mbit/s

95th percentile per-packet one-way delay: 113.105 ms

Loss rate: 1.99%

-- Flow 2:

Average throughput: 4.74 Mbit/s

95th percentile per-packet one-way delay: 113.093 ms

Loss rate: 2.25%

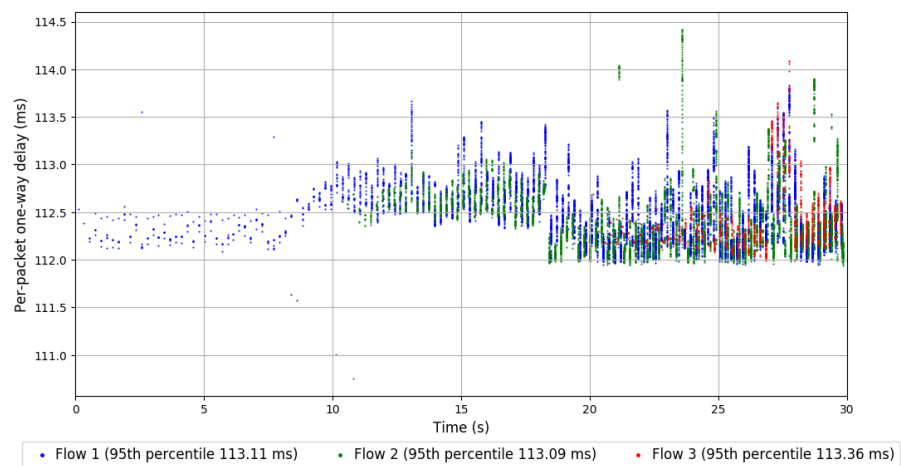
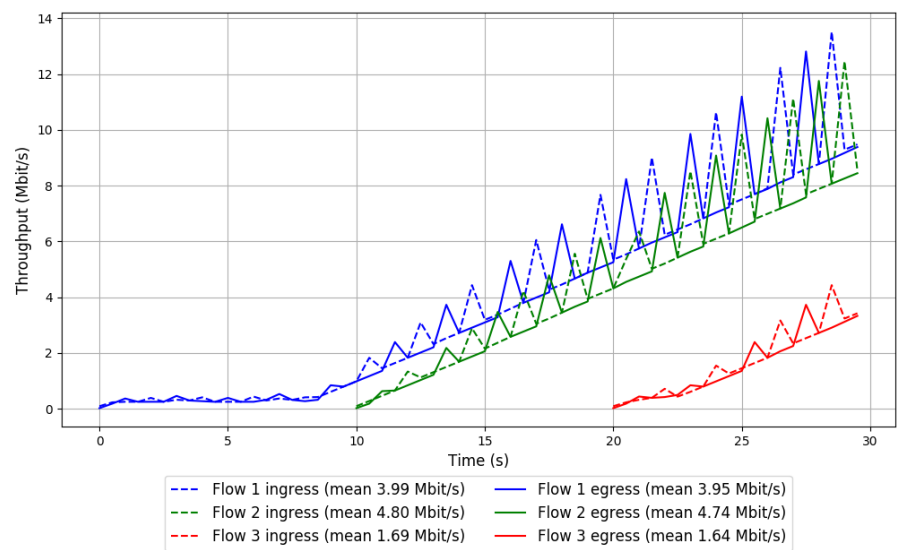
-- Flow 3:

Average throughput: 1.64 Mbit/s

95th percentile per-packet one-way delay: 113.361 ms

Loss rate: 5.23%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-03-27 22:52:21

End at: 2018-03-27 22:52:51

Below is generated by plot.py at 2018-03-28 03:09:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.97 Mbit/s

95th percentile per-packet one-way delay: 113.296 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 7.11 Mbit/s

95th percentile per-packet one-way delay: 113.302 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 4.73 Mbit/s

95th percentile per-packet one-way delay: 113.173 ms

Loss rate: 2.25%

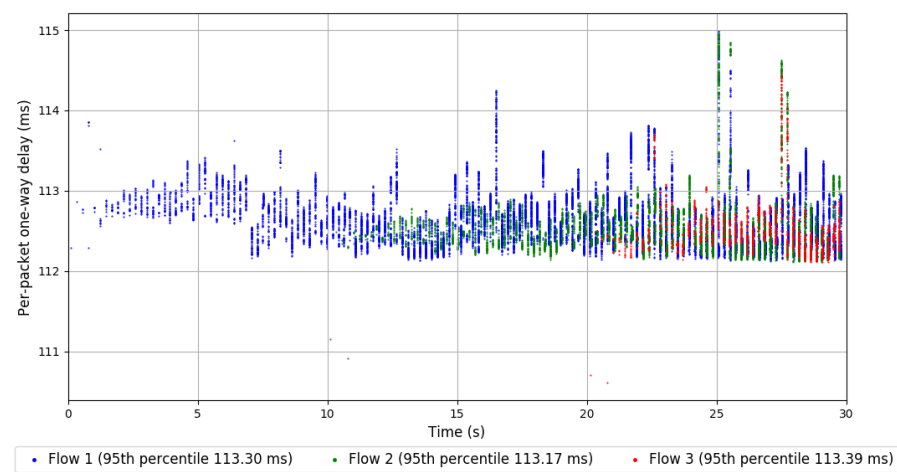
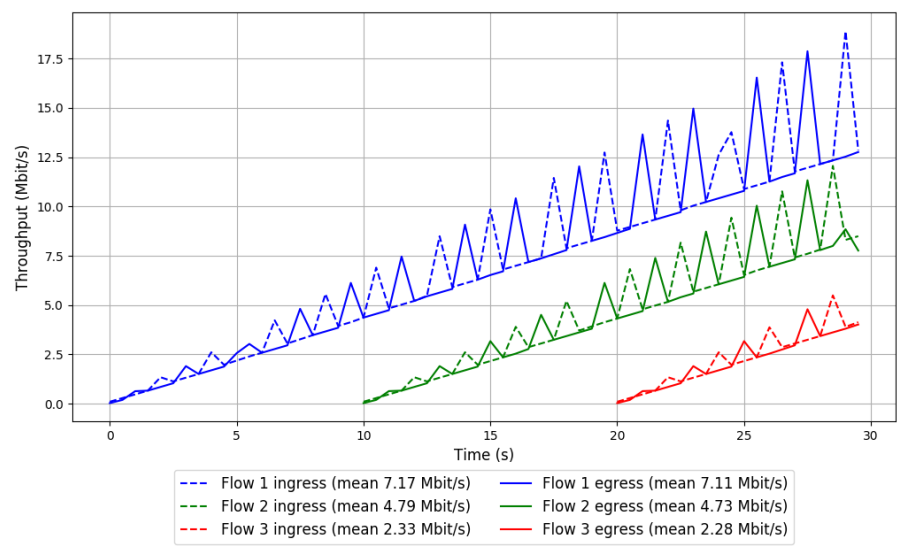
-- Flow 3:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 113.392 ms

Loss rate: 4.56%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-03-27 23:11:32

End at: 2018-03-27 23:12:02

Below is generated by plot.py at 2018-03-28 03:09:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.51 Mbit/s

95th percentile per-packet one-way delay: 112.559 ms

Loss rate: 2.16%

-- Flow 1:

Average throughput: 6.03 Mbit/s

95th percentile per-packet one-way delay: 112.578 ms

Loss rate: 1.63%

-- Flow 2:

Average throughput: 2.62 Mbit/s

95th percentile per-packet one-way delay: 112.517 ms

Loss rate: 2.96%

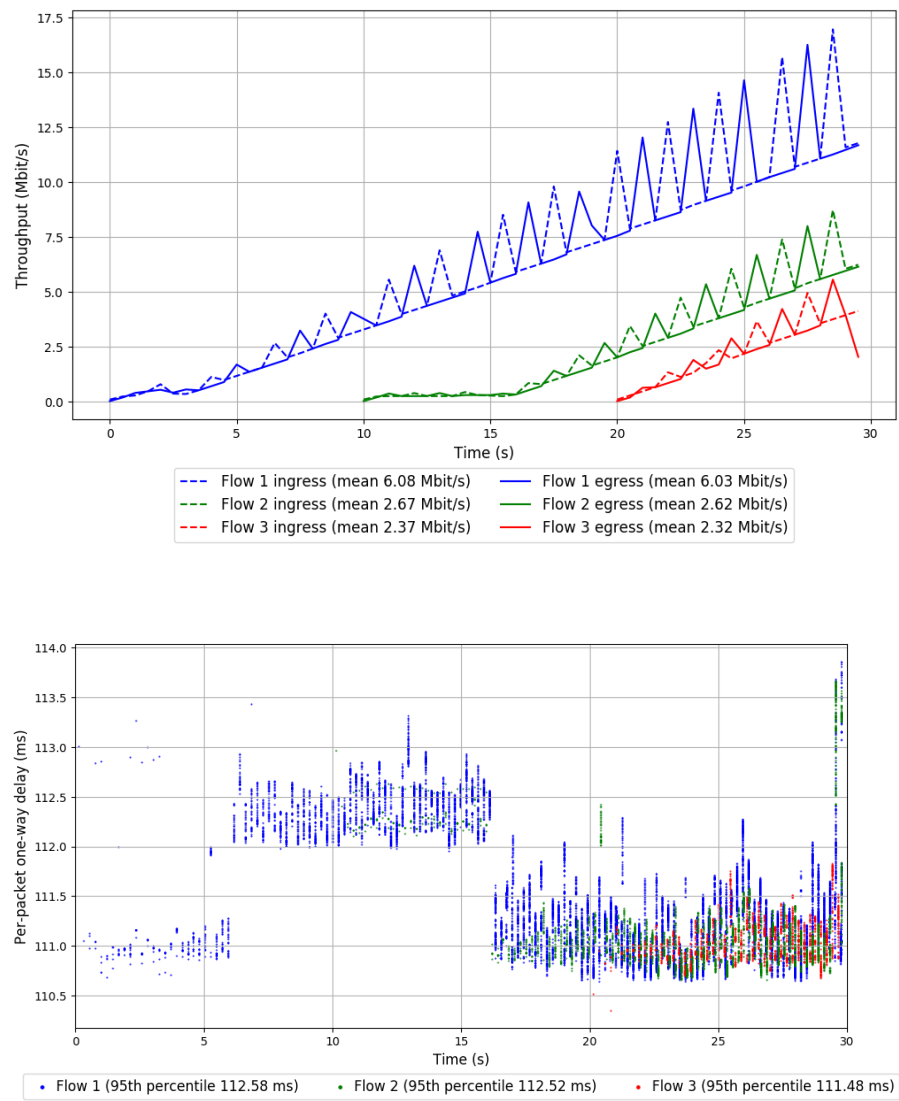
-- Flow 3:

Average throughput: 2.32 Mbit/s

95th percentile per-packet one-way delay: 111.483 ms

Loss rate: 4.53%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2018-03-27 23:30:49

End at: 2018-03-27 23:31:19

Below is generated by plot.py at 2018-03-28 03:09:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.03 Mbit/s

95th percentile per-packet one-way delay: 112.819 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 7.31 Mbit/s

95th percentile per-packet one-way delay: 112.884 ms

Loss rate: 1.47%

-- Flow 2:

Average throughput: 4.56 Mbit/s

95th percentile per-packet one-way delay: 112.615 ms

Loss rate: 2.29%

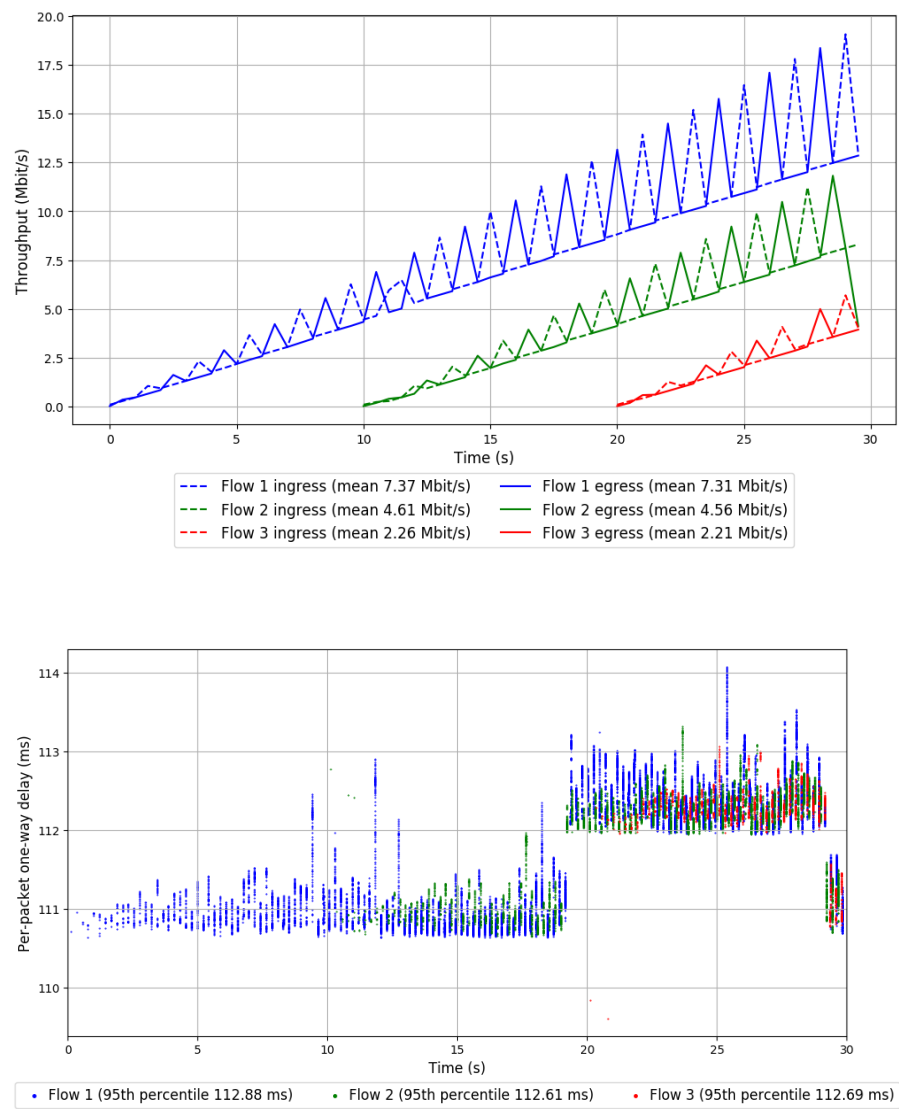
-- Flow 3:

Average throughput: 2.21 Mbit/s

95th percentile per-packet one-way delay: 112.690 ms

Loss rate: 4.56%

Run 10: Report of LEDBAT — Data Link

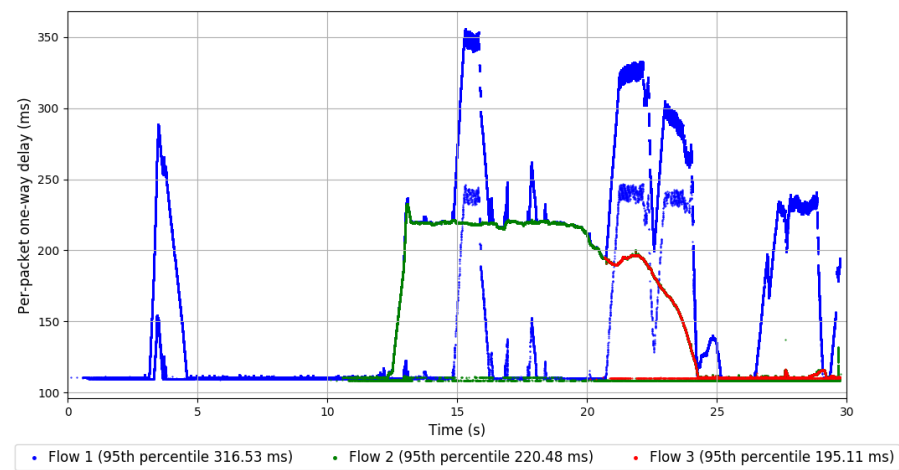
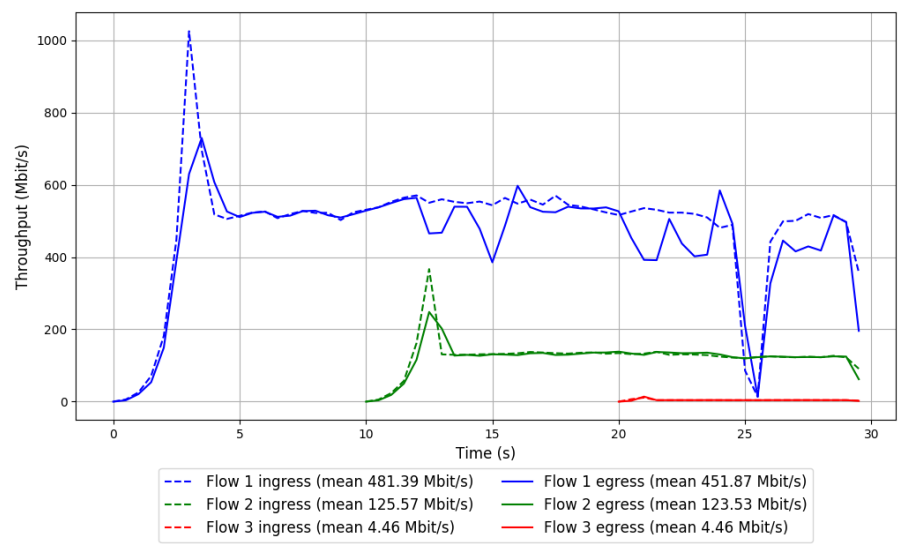


```
Run 1: Statistics of PCC

Start at: 2018-03-27 20:26:17
End at: 2018-03-27 20:26:47

# Below is generated by plot.py at 2018-03-28 03:17:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 535.10 Mbit/s
95th percentile per-packet one-way delay: 304.303 ms
Loss rate: 6.21%
-- Flow 1:
Average throughput: 451.87 Mbit/s
95th percentile per-packet one-way delay: 316.534 ms
Loss rate: 6.83%
-- Flow 2:
Average throughput: 123.53 Mbit/s
95th percentile per-packet one-way delay: 220.477 ms
Loss rate: 2.71%
-- Flow 3:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 195.106 ms
Loss rate: 2.10%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2018-03-27 20:45:30

End at: 2018-03-27 20:46:00

Below is generated by plot.py at 2018-03-28 03:18:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 566.40 Mbit/s

95th percentile per-packet one-way delay: 267.804 ms

Loss rate: 4.21%

-- Flow 1:

Average throughput: 476.02 Mbit/s

95th percentile per-packet one-way delay: 274.228 ms

Loss rate: 4.41%

-- Flow 2:

Average throughput: 120.79 Mbit/s

95th percentile per-packet one-way delay: 223.779 ms

Loss rate: 3.13%

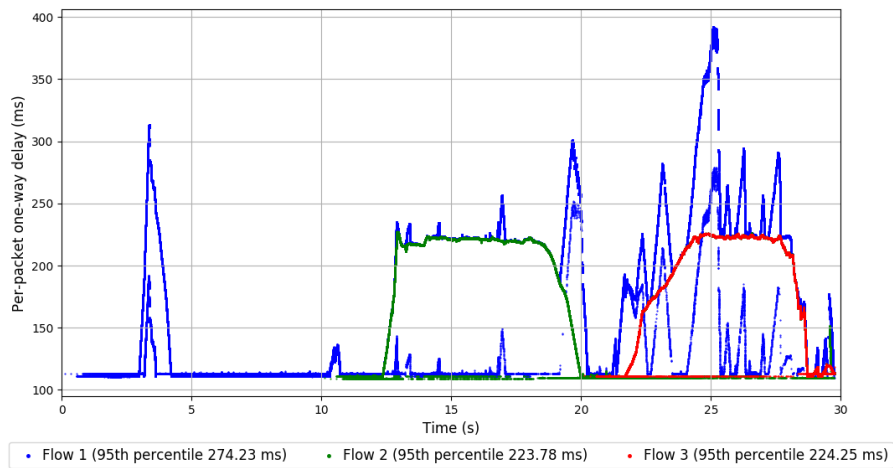
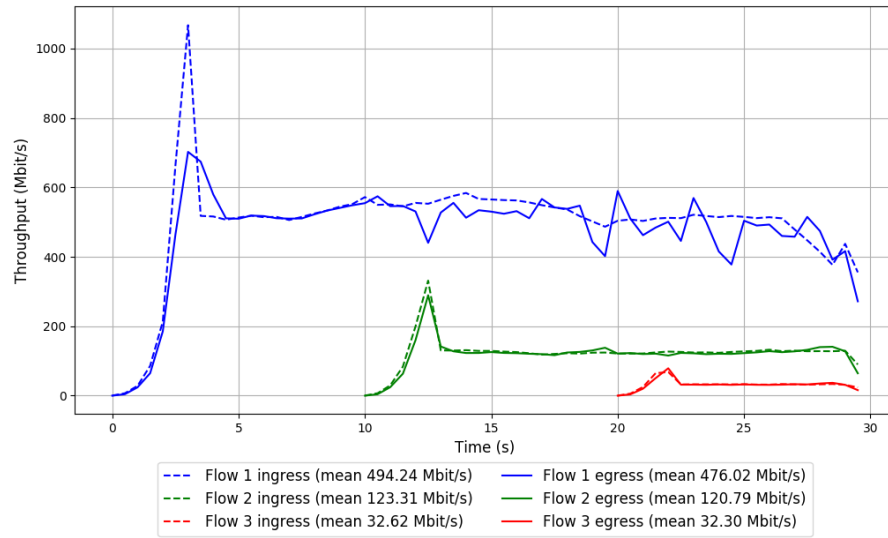
-- Flow 3:

Average throughput: 32.30 Mbit/s

95th percentile per-packet one-way delay: 224.246 ms

Loss rate: 3.19%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-03-27 21:04:36

End at: 2018-03-27 21:05:06

Below is generated by plot.py at 2018-03-28 03:18:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 566.36 Mbit/s

95th percentile per-packet one-way delay: 346.058 ms

Loss rate: 7.74%

-- Flow 1:

Average throughput: 483.72 Mbit/s

95th percentile per-packet one-way delay: 348.500 ms

Loss rate: 8.53%

-- Flow 2:

Average throughput: 122.68 Mbit/s

95th percentile per-packet one-way delay: 219.251 ms

Loss rate: 2.79%

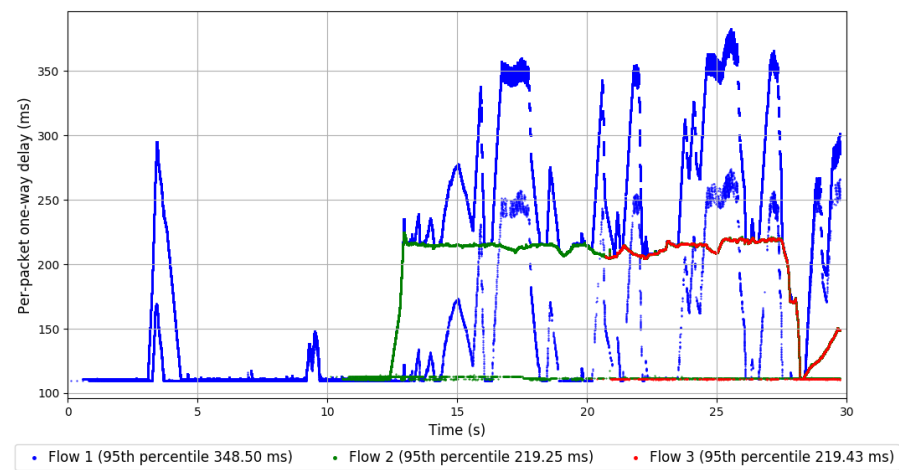
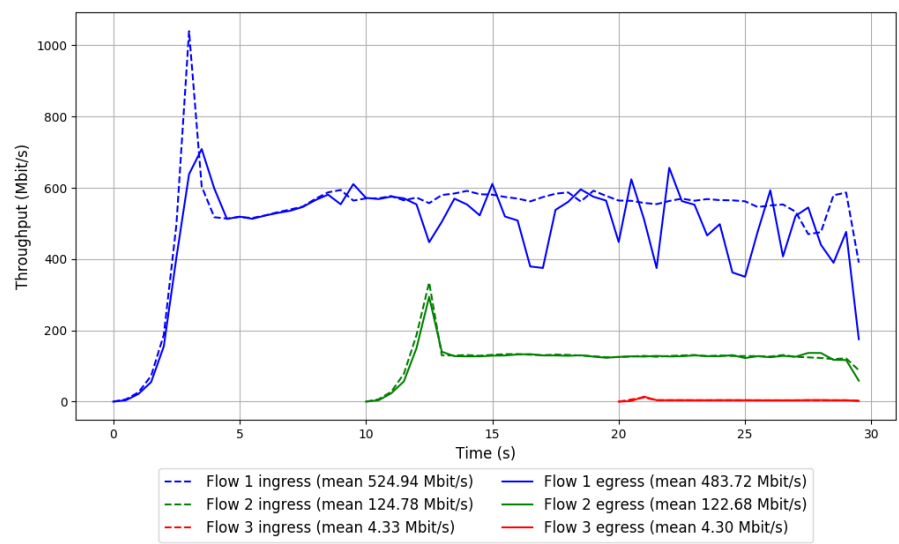
-- Flow 3:

Average throughput: 4.30 Mbit/s

95th percentile per-packet one-way delay: 219.426 ms

Loss rate: 3.00%

Run 3: Report of PCC — Data Link

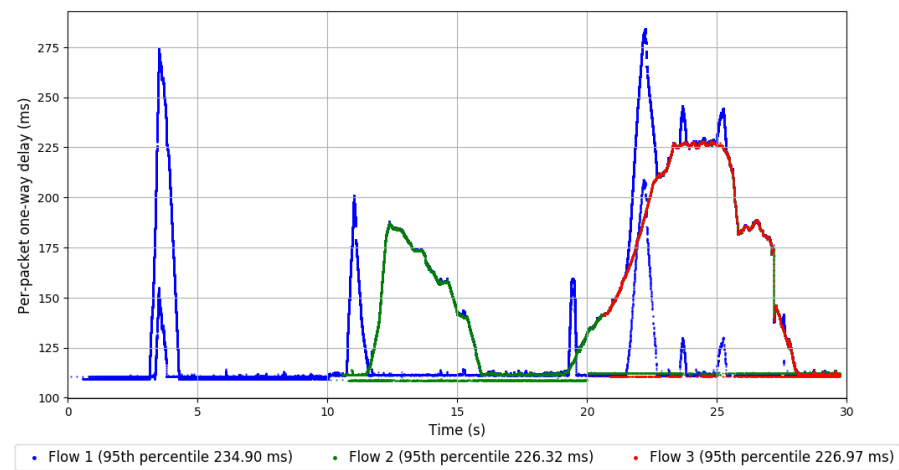
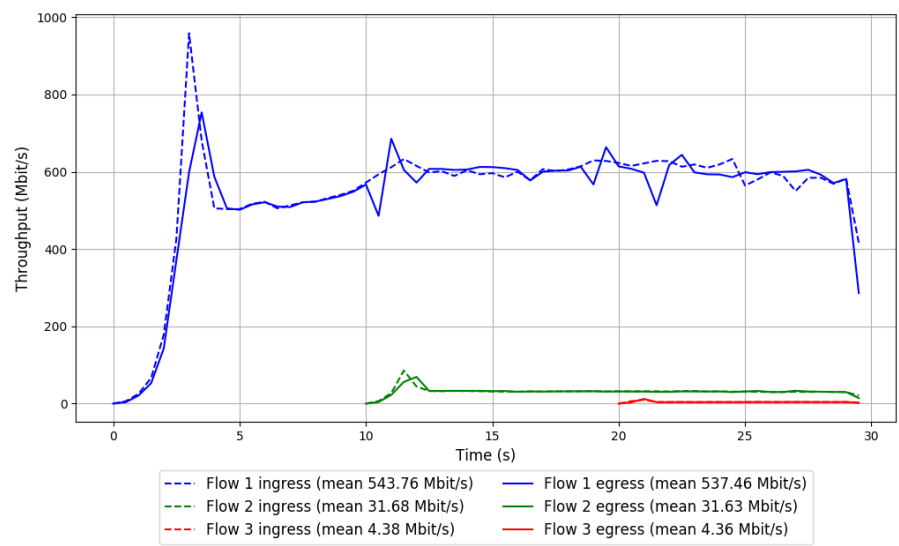


```
Run 4: Statistics of PCC

Start at: 2018-03-27 21:23:38
End at: 2018-03-27 21:24:08

# Below is generated by plot.py at 2018-03-28 03:18:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 559.82 Mbit/s
95th percentile per-packet one-way delay: 233.352 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 537.46 Mbit/s
95th percentile per-packet one-way delay: 234.896 ms
Loss rate: 1.89%
-- Flow 2:
Average throughput: 31.63 Mbit/s
95th percentile per-packet one-way delay: 226.322 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 226.965 ms
Loss rate: 2.61%
```

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-03-27 21:42:43

End at: 2018-03-27 21:43:13

Below is generated by plot.py at 2018-03-28 03:18:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 536.39 Mbit/s

95th percentile per-packet one-way delay: 280.874 ms

Loss rate: 2.78%

-- Flow 1:

Average throughput: 476.23 Mbit/s

95th percentile per-packet one-way delay: 287.347 ms

Loss rate: 2.85%

-- Flow 2:

Average throughput: 74.85 Mbit/s

95th percentile per-packet one-way delay: 228.823 ms

Loss rate: 1.95%

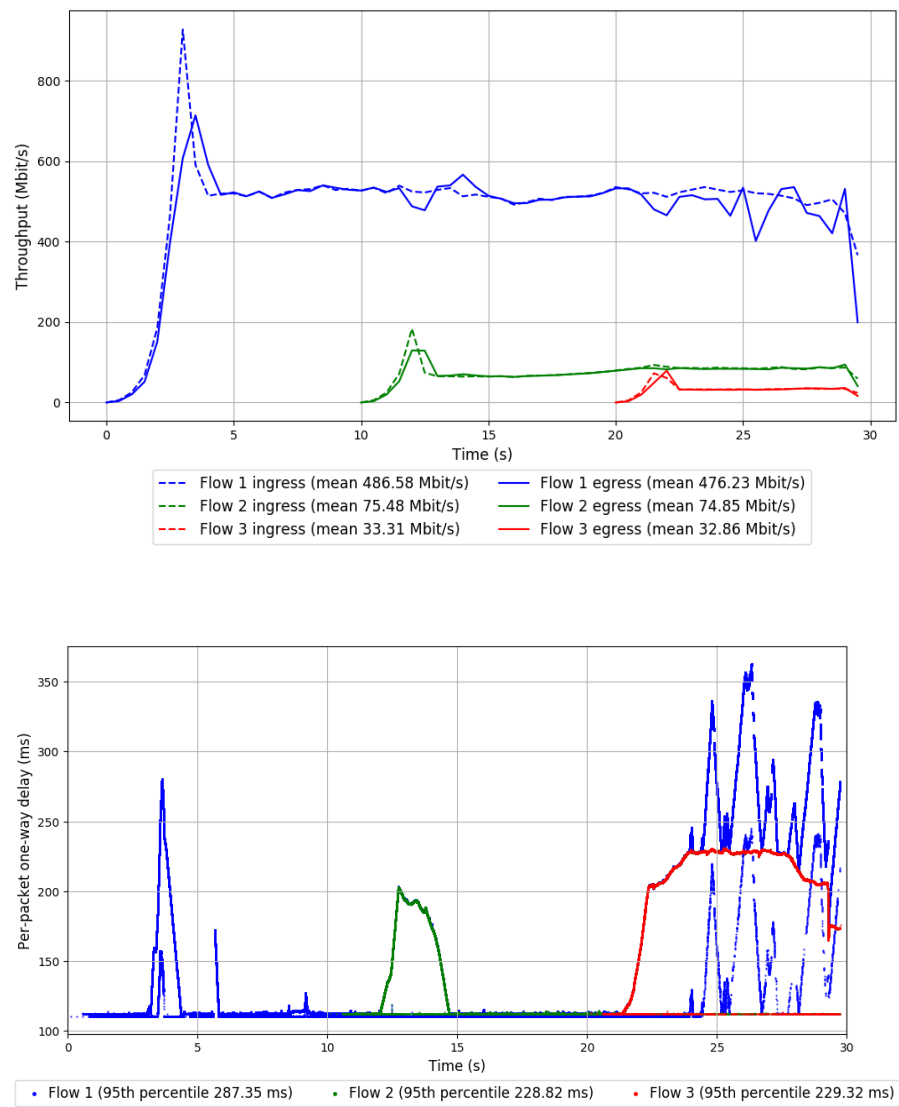
-- Flow 3:

Average throughput: 32.86 Mbit/s

95th percentile per-packet one-way delay: 229.319 ms

Loss rate: 3.55%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-03-27 22:02:23

End at: 2018-03-27 22:02:53

Below is generated by plot.py at 2018-03-28 03:18:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 544.76 Mbit/s

95th percentile per-packet one-way delay: 294.402 ms

Loss rate: 4.87%

-- Flow 1:

Average throughput: 459.26 Mbit/s

95th percentile per-packet one-way delay: 302.154 ms

Loss rate: 4.91%

-- Flow 2:

Average throughput: 127.98 Mbit/s

95th percentile per-packet one-way delay: 231.559 ms

Loss rate: 4.66%

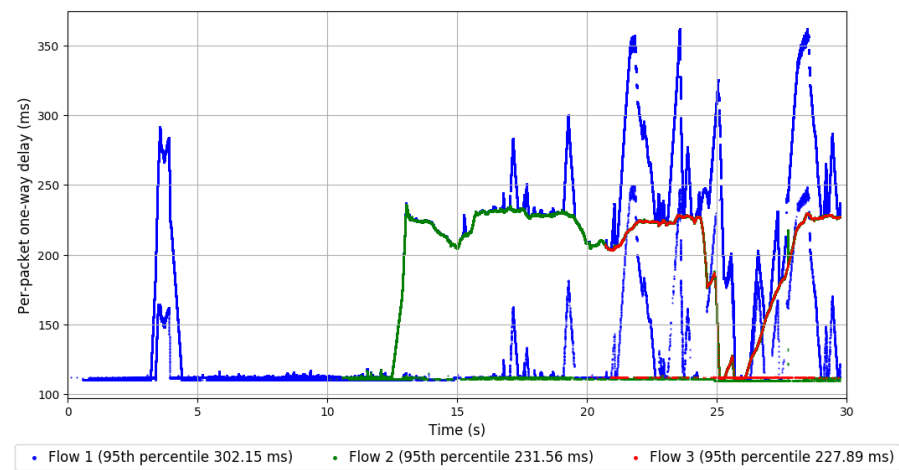
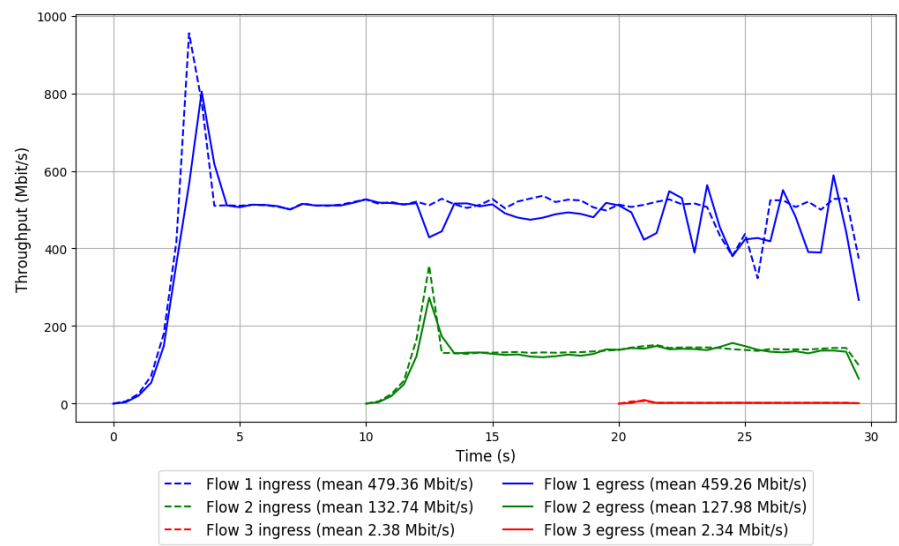
-- Flow 3:

Average throughput: 2.34 Mbit/s

95th percentile per-packet one-way delay: 227.886 ms

Loss rate: 4.11%

Run 6: Report of PCC — Data Link

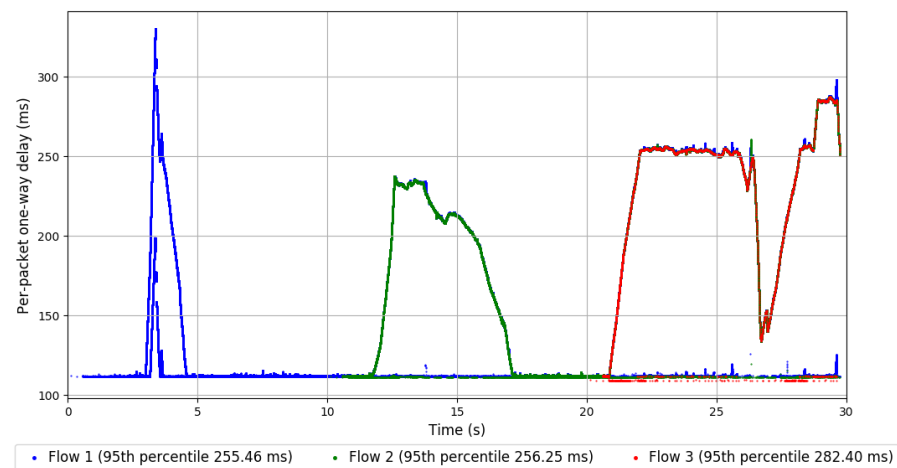
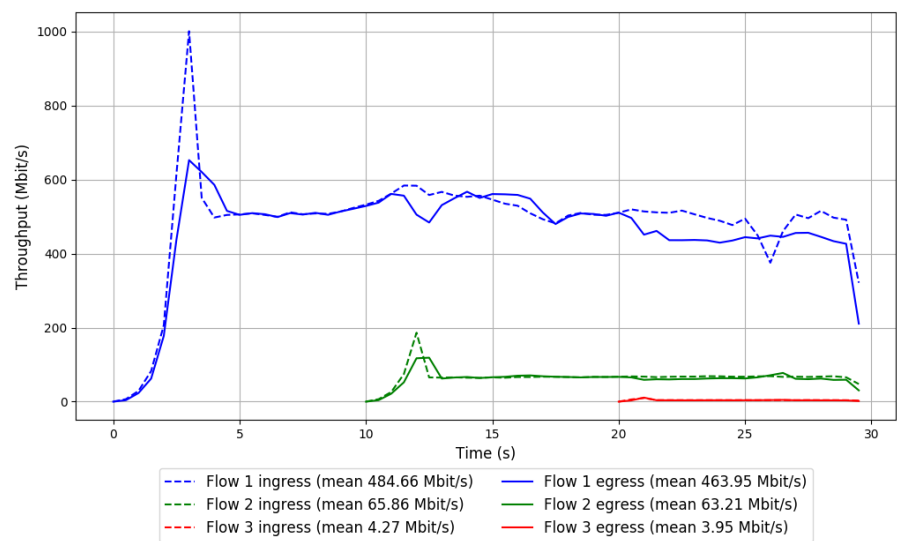


```
Run 7: Statistics of PCC

Start at: 2018-03-27 22:22:38
End at: 2018-03-27 22:23:08

# Below is generated by plot.py at 2018-03-28 03:18:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 507.09 Mbit/s
95th percentile per-packet one-way delay: 255.531 ms
Loss rate: 5.01%
-- Flow 1:
Average throughput: 463.95 Mbit/s
95th percentile per-packet one-way delay: 255.460 ms
Loss rate: 4.99%
-- Flow 2:
Average throughput: 63.21 Mbit/s
95th percentile per-packet one-way delay: 256.254 ms
Loss rate: 5.11%
-- Flow 3:
Average throughput: 3.95 Mbit/s
95th percentile per-packet one-way delay: 282.397 ms
Loss rate: 9.50%
```


Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-03-27 22:42:24

End at: 2018-03-27 22:42:54

Below is generated by plot.py at 2018-03-28 03:18:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 497.36 Mbit/s

95th percentile per-packet one-way delay: 245.013 ms

Loss rate: 3.13%

-- Flow 1:

Average throughput: 456.61 Mbit/s

95th percentile per-packet one-way delay: 246.236 ms

Loss rate: 2.89%

-- Flow 2:

Average throughput: 4.94 Mbit/s

95th percentile per-packet one-way delay: 234.627 ms

Loss rate: 2.59%

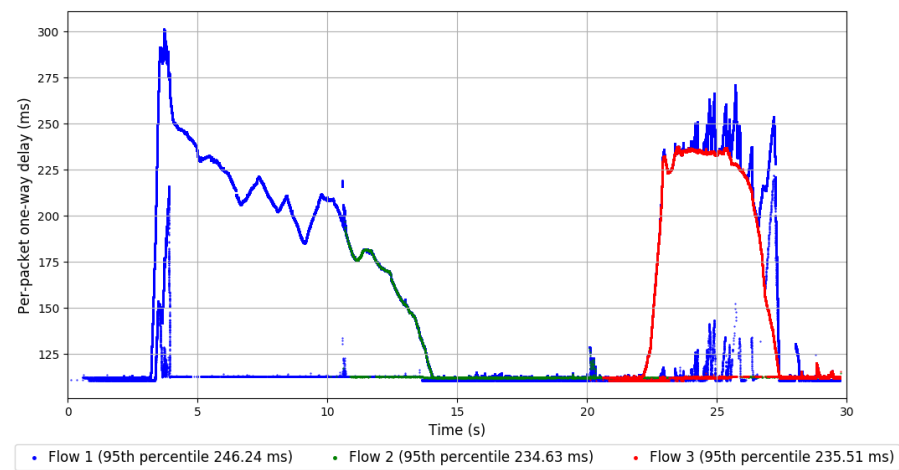
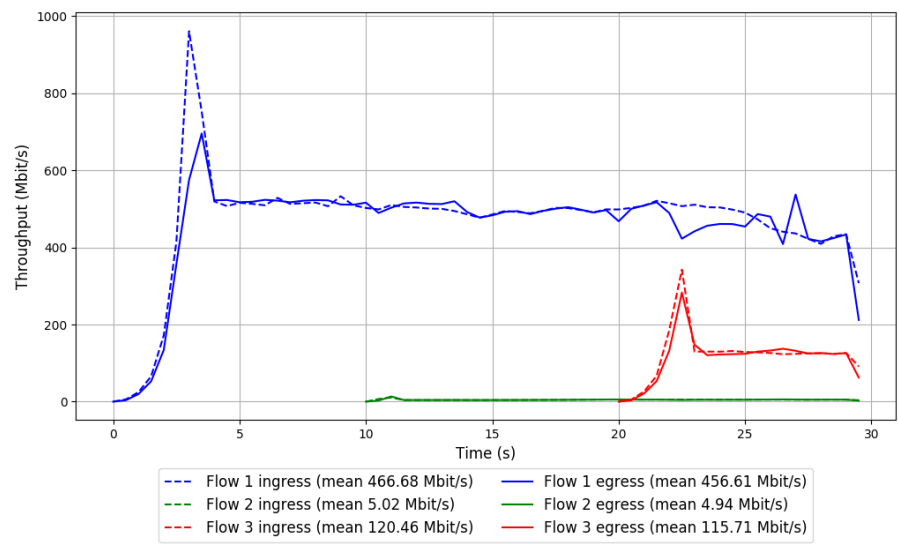
-- Flow 3:

Average throughput: 115.71 Mbit/s

95th percentile per-packet one-way delay: 235.506 ms

Loss rate: 6.07%

Run 8: Report of PCC — Data Link

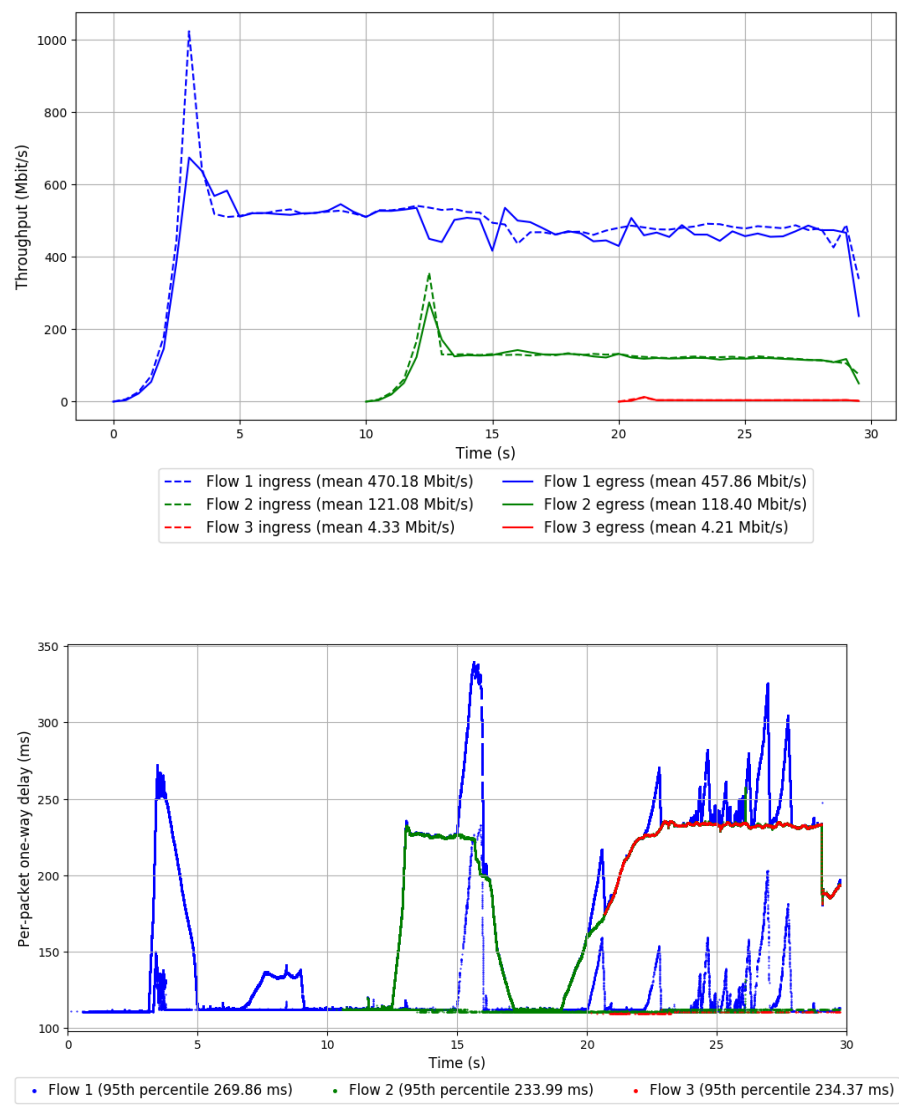


```
Run 9: Statistics of PCC

Start at: 2018-03-27 23:02:05
End at: 2018-03-27 23:02:35

# Below is generated by plot.py at 2018-03-28 03:27:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 537.64 Mbit/s
95th percentile per-packet one-way delay: 265.501 ms
Loss rate: 3.35%
-- Flow 1:
Average throughput: 457.86 Mbit/s
95th percentile per-packet one-way delay: 269.857 ms
Loss rate: 3.35%
-- Flow 2:
Average throughput: 118.40 Mbit/s
95th percentile per-packet one-way delay: 233.987 ms
Loss rate: 3.32%
-- Flow 3:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 234.368 ms
Loss rate: 4.92%
```

Run 9: Report of PCC — Data Link

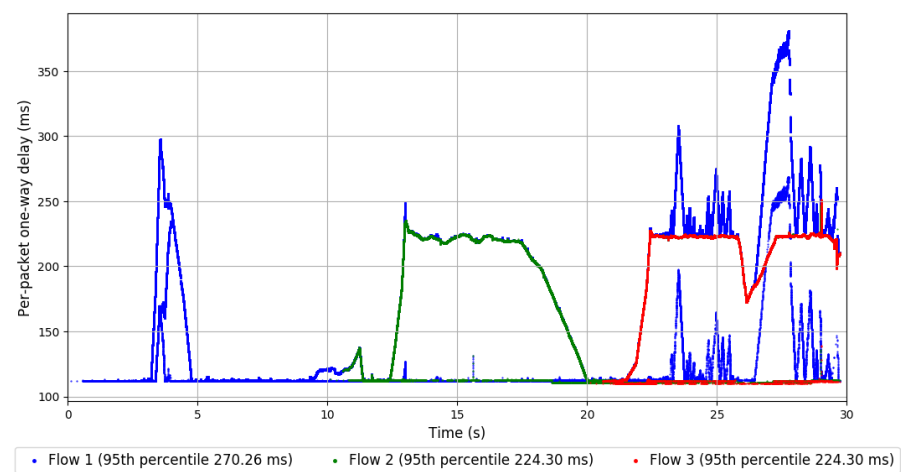
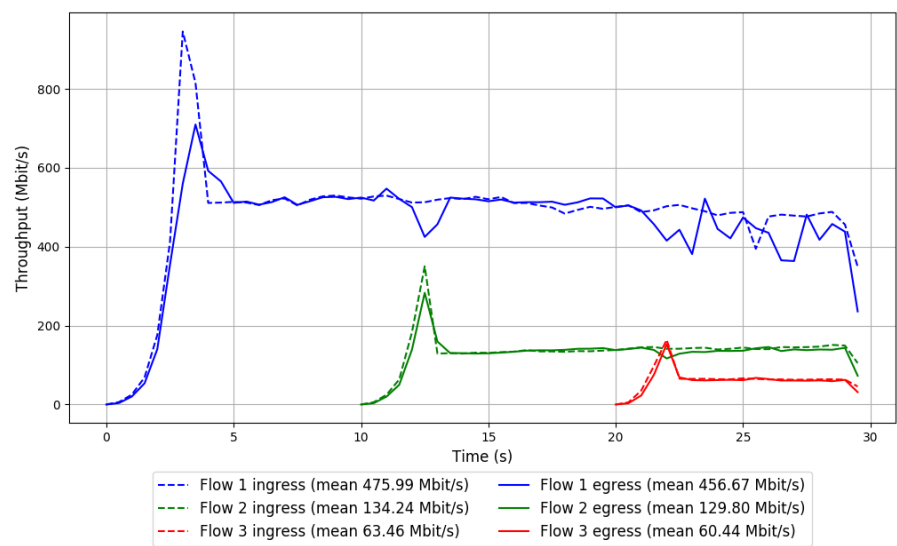


```
Run 10: Statistics of PCC

Start at: 2018-03-27 23:21:19
End at: 2018-03-27 23:21:49

# Below is generated by plot.py at 2018-03-28 03:27:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 562.23 Mbit/s
95th percentile per-packet one-way delay: 259.753 ms
Loss rate: 4.80%
-- Flow 1:
Average throughput: 456.67 Mbit/s
95th percentile per-packet one-way delay: 270.262 ms
Loss rate: 4.78%
-- Flow 2:
Average throughput: 129.80 Mbit/s
95th percentile per-packet one-way delay: 224.304 ms
Loss rate: 4.41%
-- Flow 3:
Average throughput: 60.44 Mbit/s
95th percentile per-packet one-way delay: 224.298 ms
Loss rate: 6.93%
```

Run 10: Report of PCC — Data Link

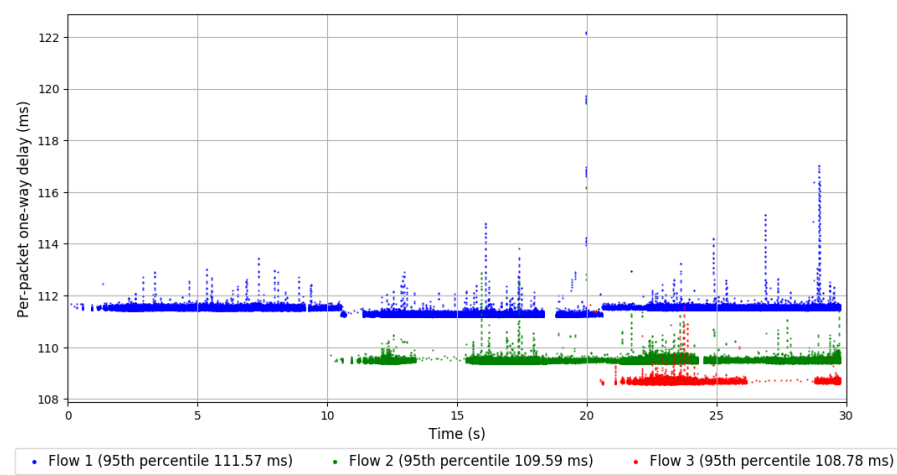
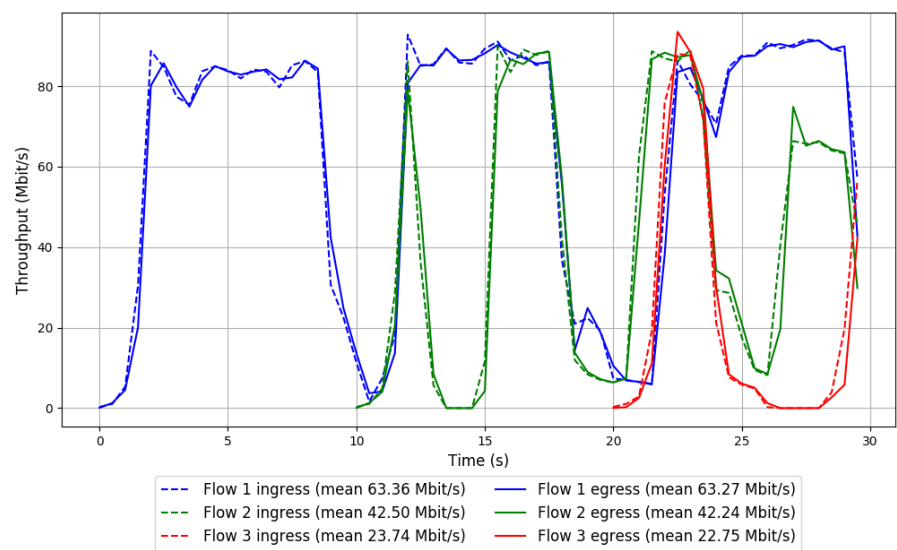


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-27 20:33:57
End at: 2018-03-27 20:34:27

# Below is generated by plot.py at 2018-03-28 03:27:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 98.62 Mbit/s
95th percentile per-packet one-way delay: 111.548 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 63.27 Mbit/s
95th percentile per-packet one-way delay: 111.567 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 42.24 Mbit/s
95th percentile per-packet one-way delay: 109.587 ms
Loss rate: 1.73%
-- Flow 3:
Average throughput: 22.75 Mbit/s
95th percentile per-packet one-way delay: 108.775 ms
Loss rate: 6.33%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-03-27 20:53:01

End at: 2018-03-27 20:53:31

Below is generated by plot.py at 2018-03-28 03:27:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.47 Mbit/s

95th percentile per-packet one-way delay: 112.377 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 61.18 Mbit/s

95th percentile per-packet one-way delay: 112.404 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 53.32 Mbit/s

95th percentile per-packet one-way delay: 111.682 ms

Loss rate: 1.35%

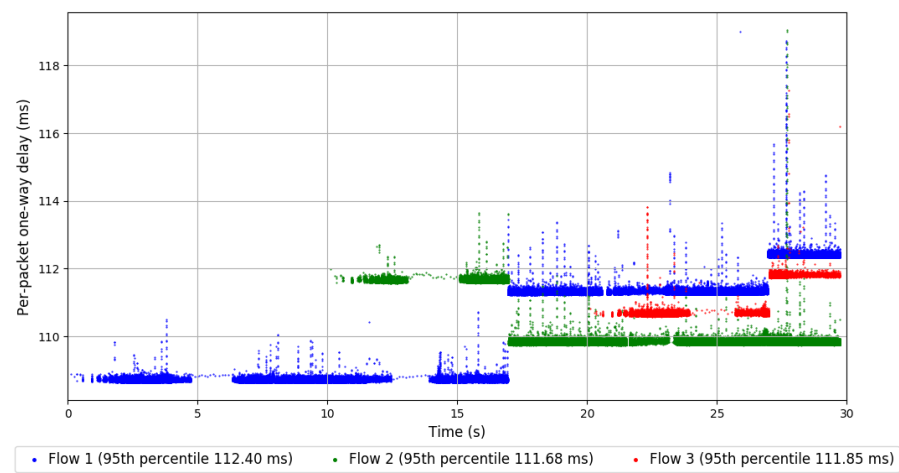
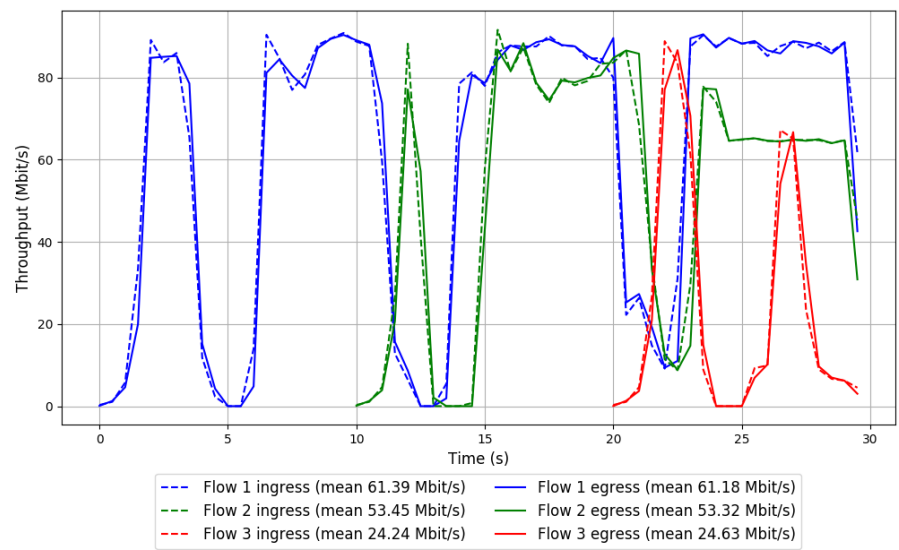
-- Flow 3:

Average throughput: 24.63 Mbit/s

95th percentile per-packet one-way delay: 111.849 ms

Loss rate: 0.60%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-03-27 21:12:11

End at: 2018-03-27 21:12:41

Below is generated by plot.py at 2018-03-28 03:27:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.03 Mbit/s

95th percentile per-packet one-way delay: 112.539 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 56.83 Mbit/s

95th percentile per-packet one-way delay: 112.560 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 53.85 Mbit/s

95th percentile per-packet one-way delay: 111.533 ms

Loss rate: 1.39%

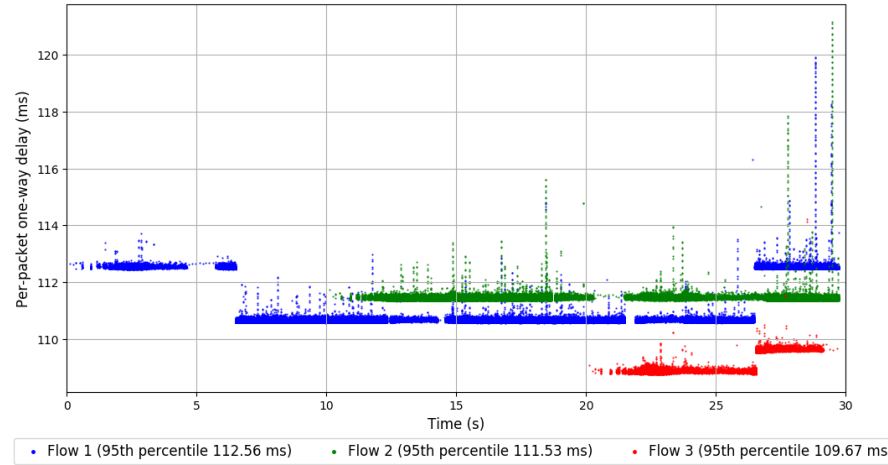
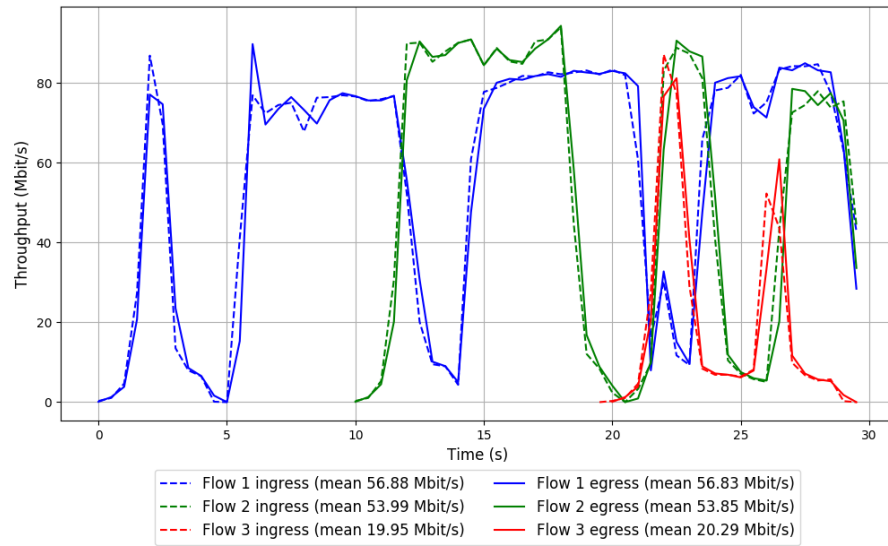
-- Flow 3:

Average throughput: 20.29 Mbit/s

95th percentile per-packet one-way delay: 109.672 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-03-27 21:31:01

End at: 2018-03-27 21:31:31

Below is generated by plot.py at 2018-03-28 03:27:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.77 Mbit/s

95th percentile per-packet one-way delay: 112.204 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 61.55 Mbit/s

95th percentile per-packet one-way delay: 110.976 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 45.89 Mbit/s

95th percentile per-packet one-way delay: 112.269 ms

Loss rate: 1.53%

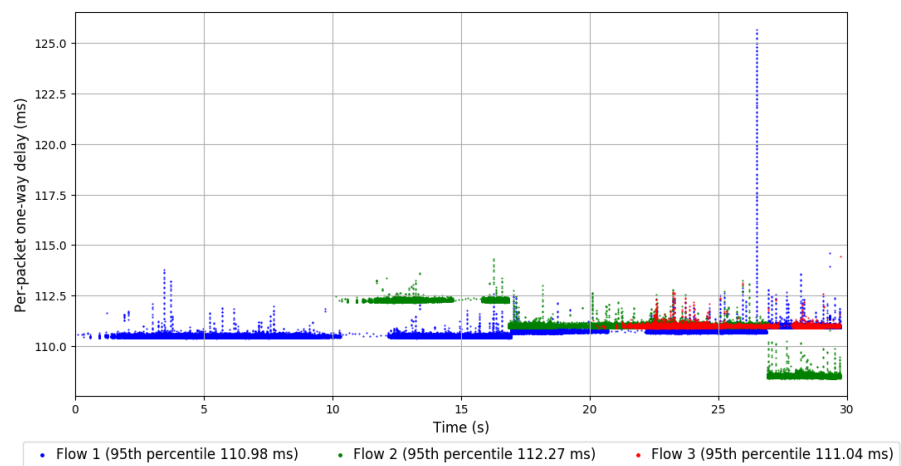
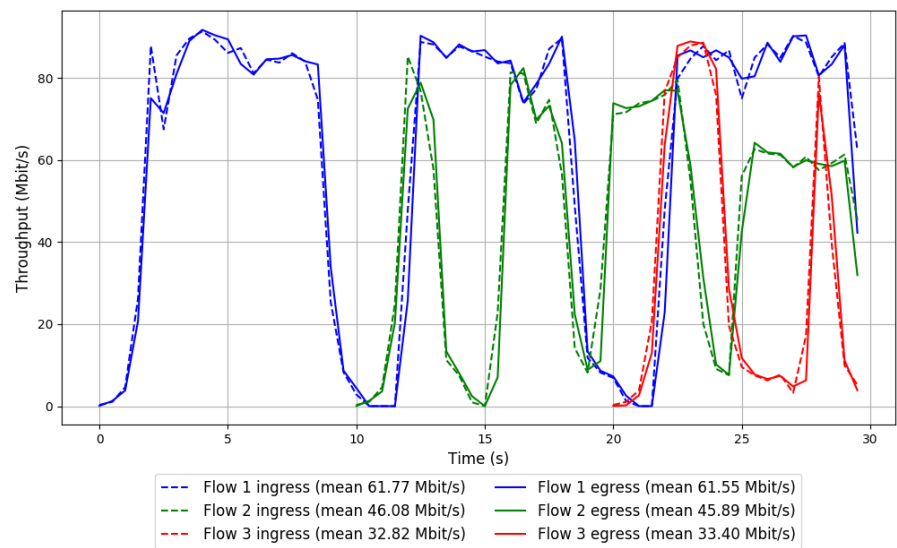
-- Flow 3:

Average throughput: 33.40 Mbit/s

95th percentile per-packet one-way delay: 111.044 ms

Loss rate: 0.50%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-03-27 21:50:17

End at: 2018-03-27 21:50:47

Below is generated by plot.py at 2018-03-28 03:27:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.70 Mbit/s

95th percentile per-packet one-way delay: 114.507 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 59.58 Mbit/s

95th percentile per-packet one-way delay: 112.218 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 40.52 Mbit/s

95th percentile per-packet one-way delay: 114.584 ms

Loss rate: 1.83%

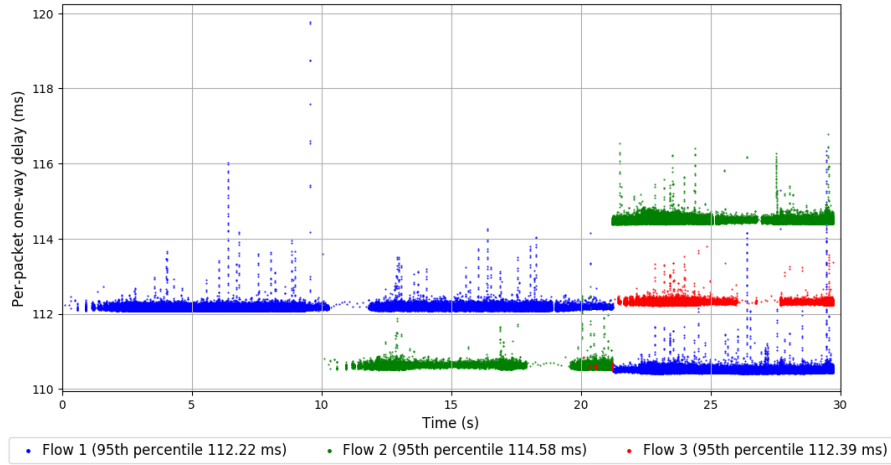
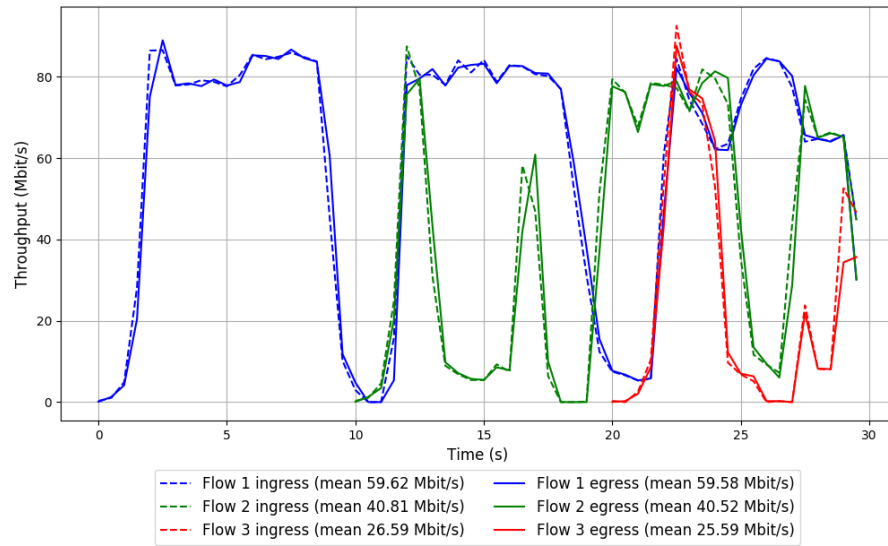
-- Flow 3:

Average throughput: 25.59 Mbit/s

95th percentile per-packet one-way delay: 112.392 ms

Loss rate: 5.93%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-03-27 22:10:16

End at: 2018-03-27 22:10:46

Below is generated by plot.py at 2018-03-28 03:27:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.15 Mbit/s

95th percentile per-packet one-way delay: 113.210 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 63.59 Mbit/s

95th percentile per-packet one-way delay: 112.016 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 50.40 Mbit/s

95th percentile per-packet one-way delay: 113.255 ms

Loss rate: 1.40%

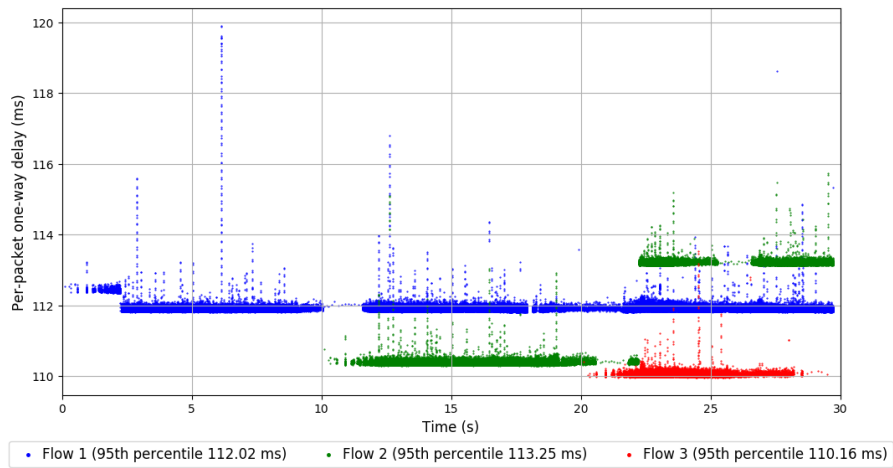
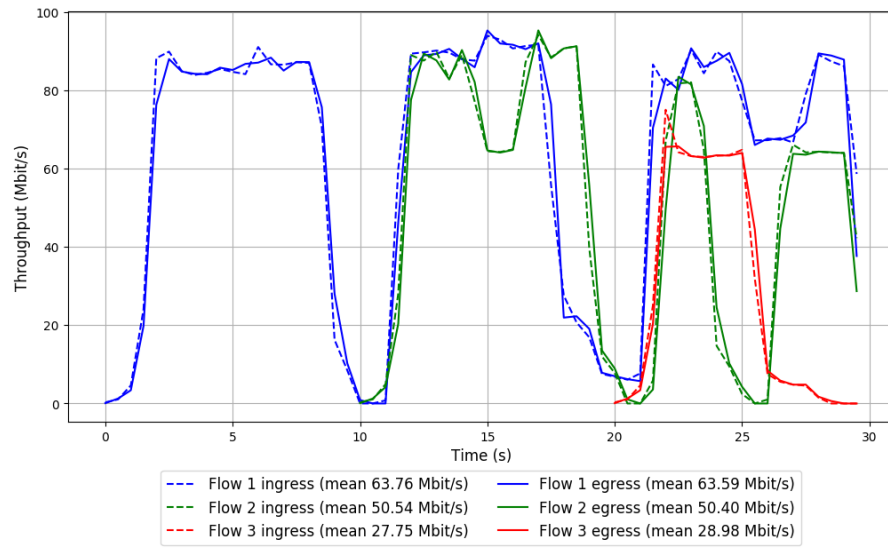
-- Flow 3:

Average throughput: 28.98 Mbit/s

95th percentile per-packet one-way delay: 110.163 ms

Loss rate: 0.00%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-03-27 22:30:47

End at: 2018-03-27 22:31:17

Below is generated by plot.py at 2018-03-28 03:27:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.16 Mbit/s

95th percentile per-packet one-way delay: 112.516 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 64.85 Mbit/s

95th percentile per-packet one-way delay: 112.502 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 33.47 Mbit/s

95th percentile per-packet one-way delay: 112.548 ms

Loss rate: 2.47%

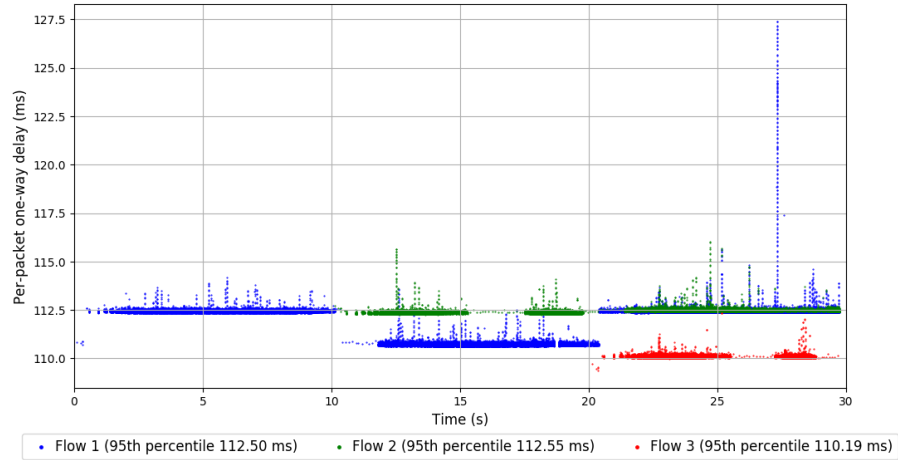
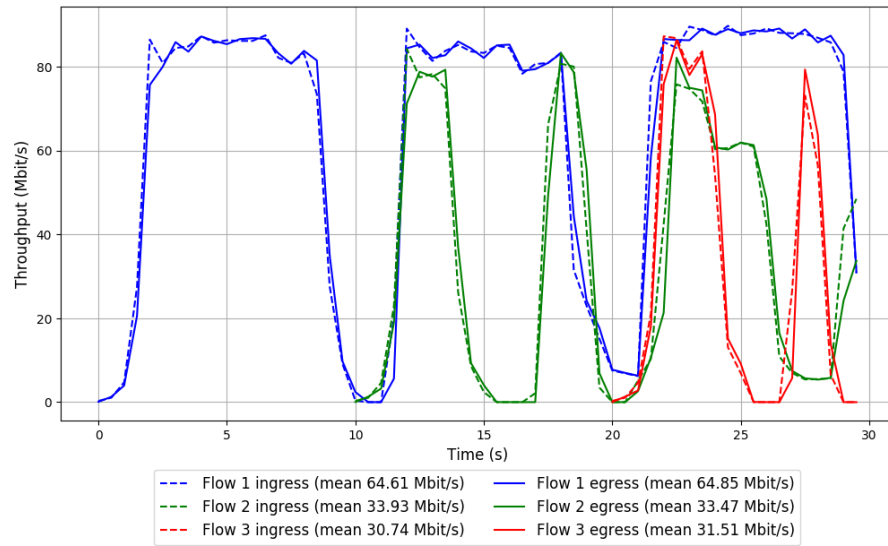
-- Flow 3:

Average throughput: 31.51 Mbit/s

95th percentile per-packet one-way delay: 110.187 ms

Loss rate: 0.00%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-03-27 22:50:22

End at: 2018-03-27 22:50:52

Below is generated by plot.py at 2018-03-28 03:27:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.58 Mbit/s

95th percentile per-packet one-way delay: 112.797 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 61.08 Mbit/s

95th percentile per-packet one-way delay: 112.766 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 50.03 Mbit/s

95th percentile per-packet one-way delay: 112.834 ms

Loss rate: 1.40%

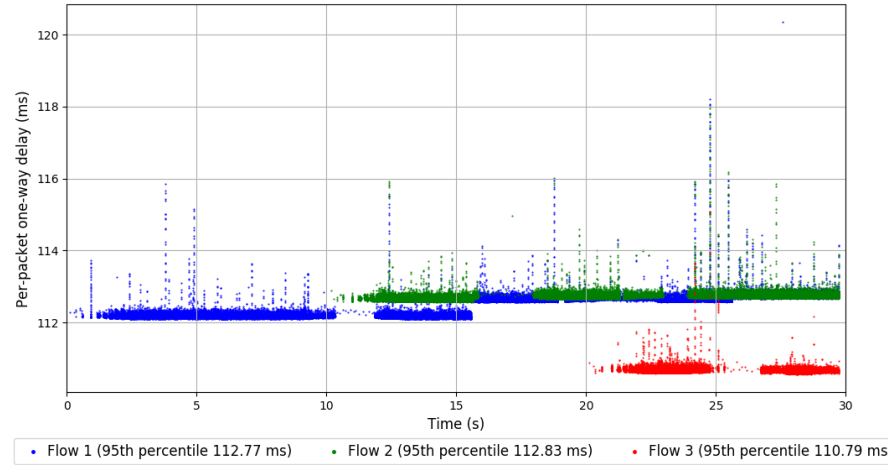
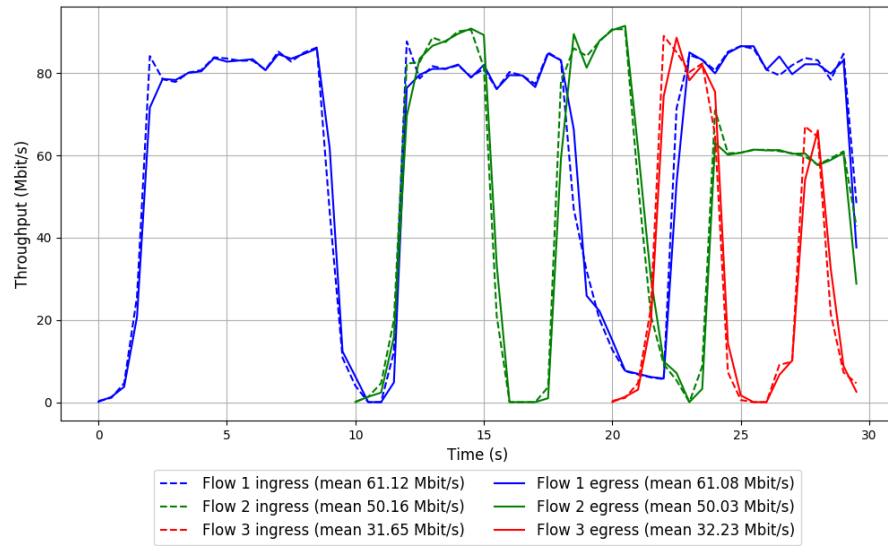
-- Flow 3:

Average throughput: 32.23 Mbit/s

95th percentile per-packet one-way delay: 110.788 ms

Loss rate: 0.51%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-03-27 23:09:37

End at: 2018-03-27 23:10:07

Below is generated by plot.py at 2018-03-28 03:27:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.85 Mbit/s

95th percentile per-packet one-way delay: 112.030 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 47.26 Mbit/s

95th percentile per-packet one-way delay: 110.735 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 61.55 Mbit/s

95th percentile per-packet one-way delay: 110.280 ms

Loss rate: 0.12%

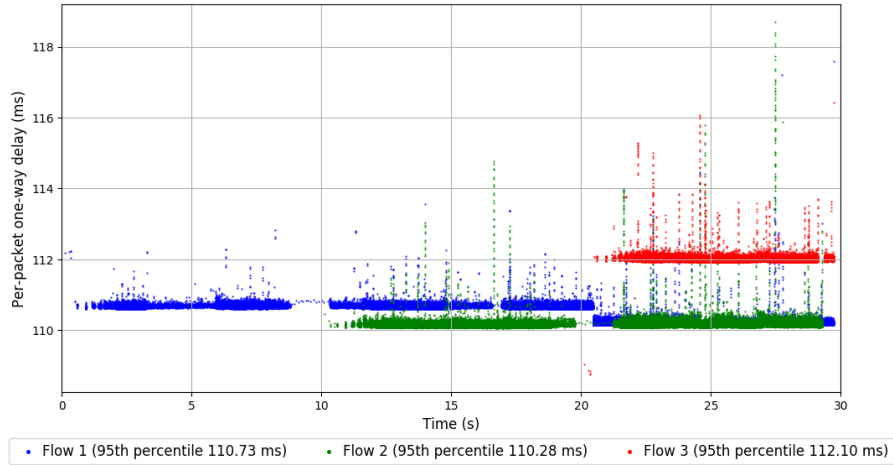
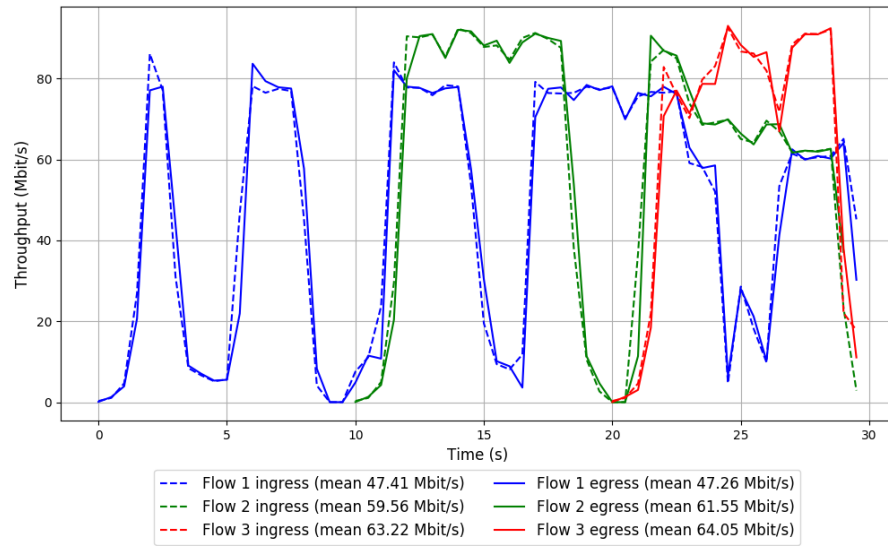
-- Flow 3:

Average throughput: 64.05 Mbit/s

95th percentile per-packet one-way delay: 112.101 ms

Loss rate: 0.89%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-03-27 23:28:54

End at: 2018-03-27 23:29:24

Below is generated by plot.py at 2018-03-28 03:27:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.72 Mbit/s

95th percentile per-packet one-way delay: 112.590 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 47.01 Mbit/s

95th percentile per-packet one-way delay: 112.623 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 60.68 Mbit/s

95th percentile per-packet one-way delay: 110.750 ms

Loss rate: 0.41%

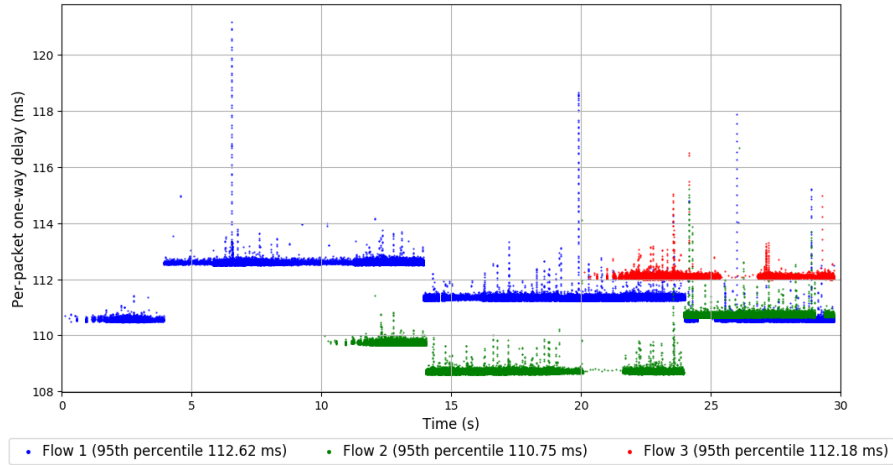
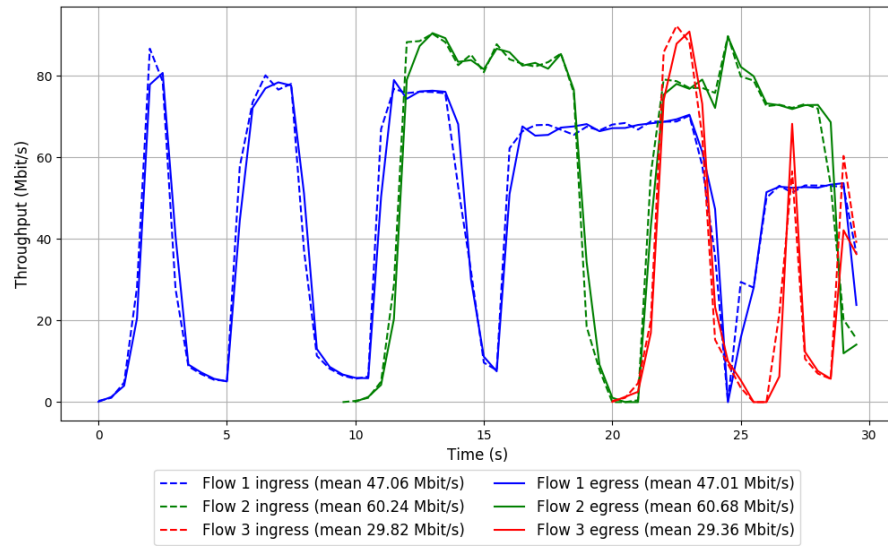
-- Flow 3:

Average throughput: 29.36 Mbit/s

95th percentile per-packet one-way delay: 112.184 ms

Loss rate: 3.80%

Run 10: Report of QUIC Cubic — Data Link

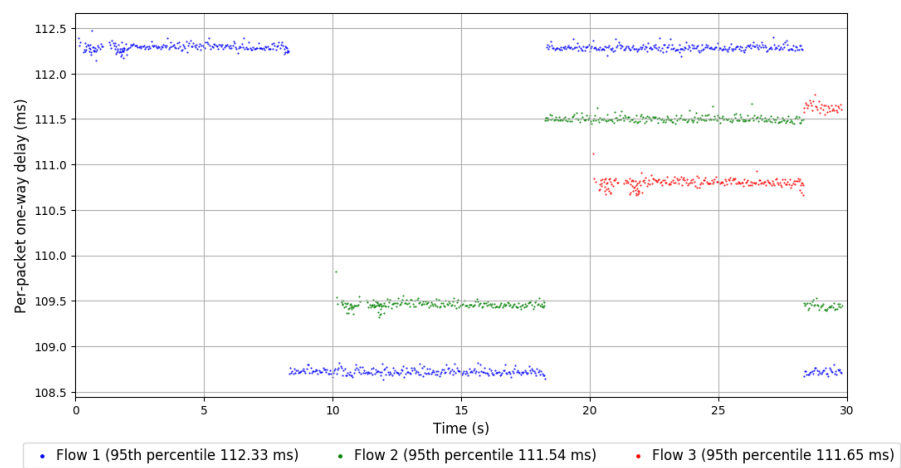
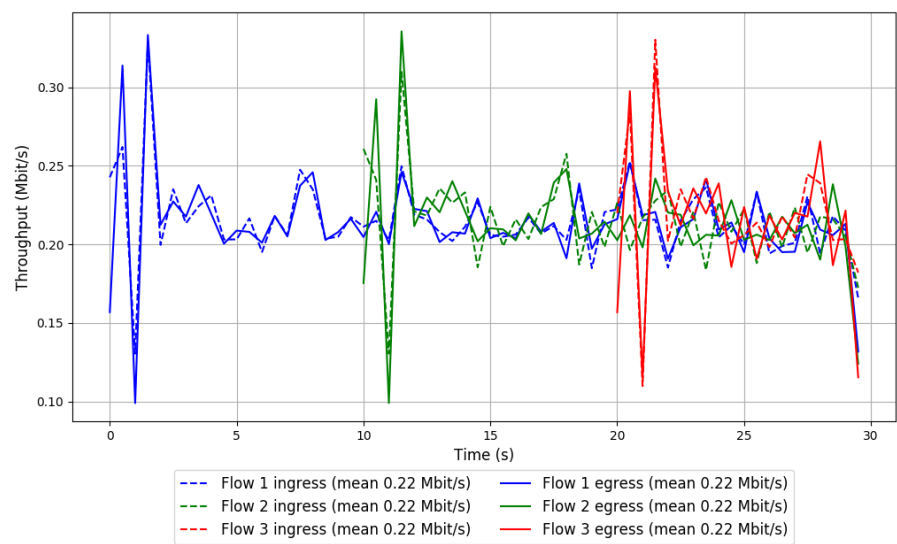


```
Run 1: Statistics of SReAM

Start at: 2018-03-27 20:28:20
End at: 2018-03-27 20:28:50

# Below is generated by plot.py at 2018-03-28 03:27:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.314 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.333 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.537 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.647 ms
Loss rate: 2.25%
```

Run 1: Report of SReAM — Data Link

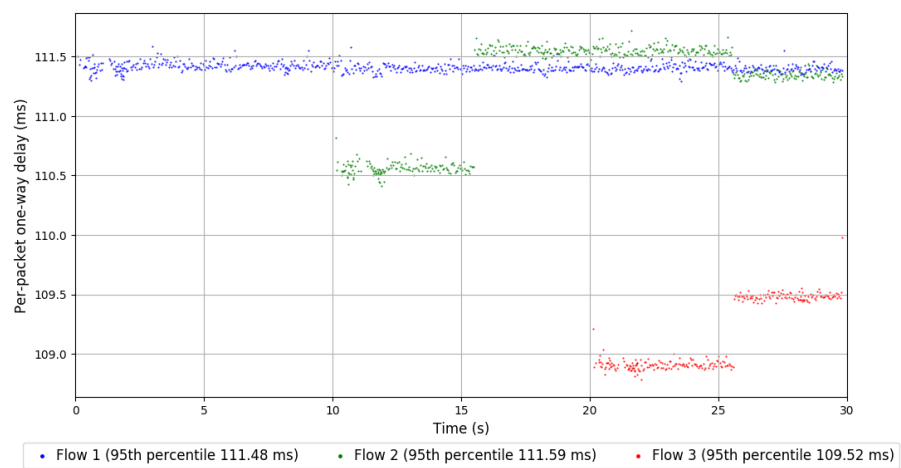
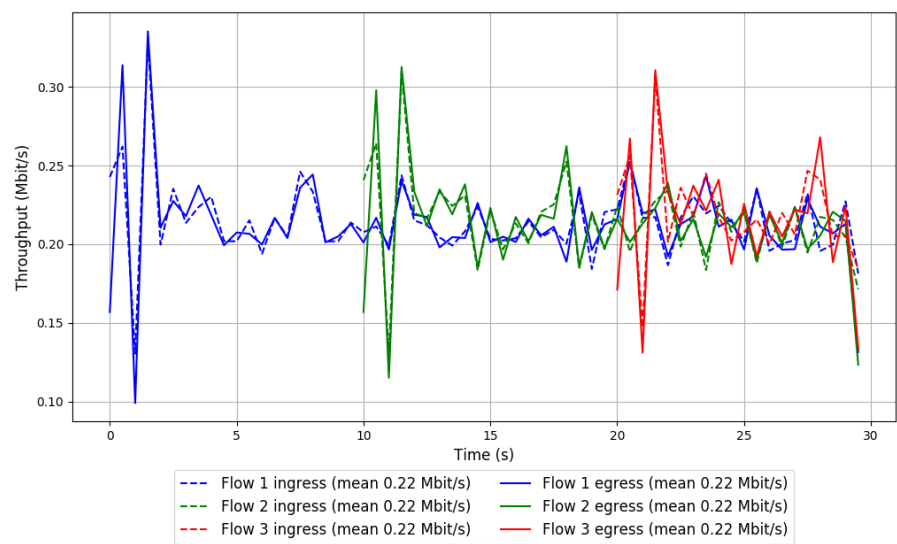


```
Run 2: Statistics of SReAM

Start at: 2018-03-27 20:47:32
End at: 2018-03-27 20:48:02

# Below is generated by plot.py at 2018-03-28 03:27:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 111.569 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.477 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.594 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.517 ms
Loss rate: 1.87%
```

Run 2: Report of SReAM — Data Link

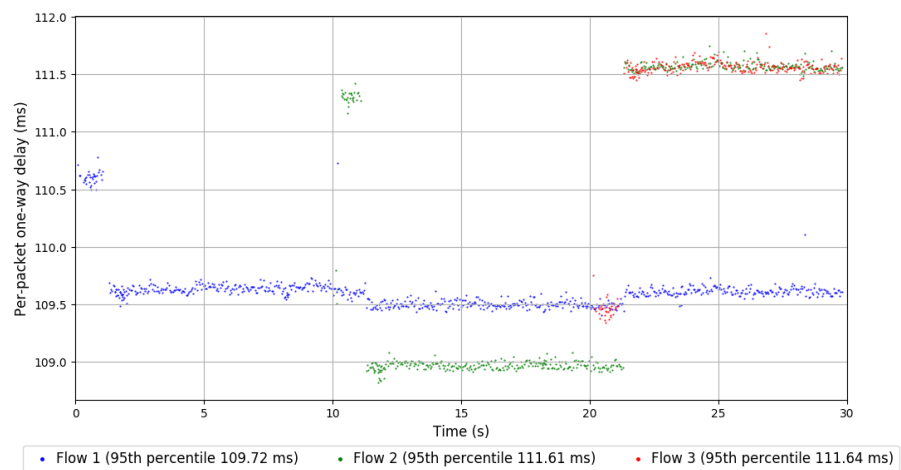
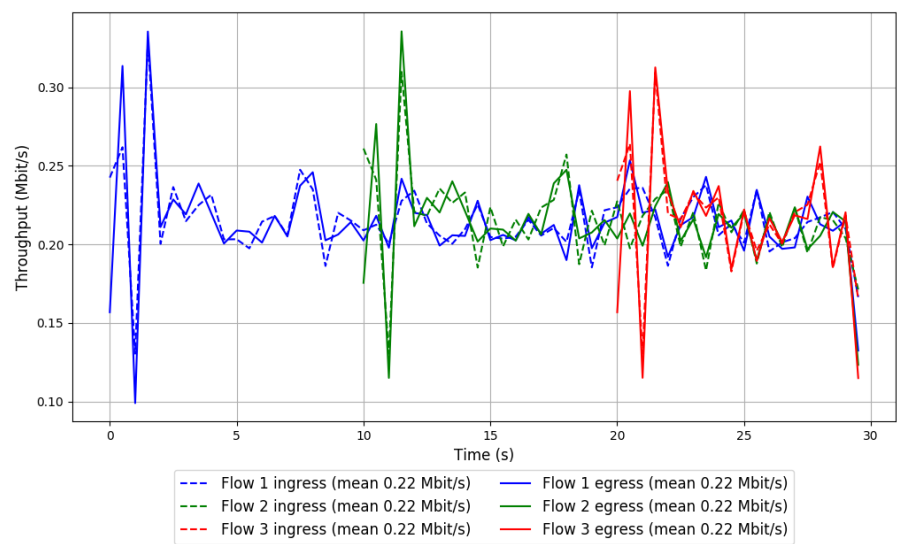


```
Run 3: Statistics of SCReAM

Start at: 2018-03-27 21:06:37
End at: 2018-03-27 21:07:07

# Below is generated by plot.py at 2018-03-28 03:27:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 111.602 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.720 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.608 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.639 ms
Loss rate: 2.25%
```


Run 3: Report of SReAM — Data Link

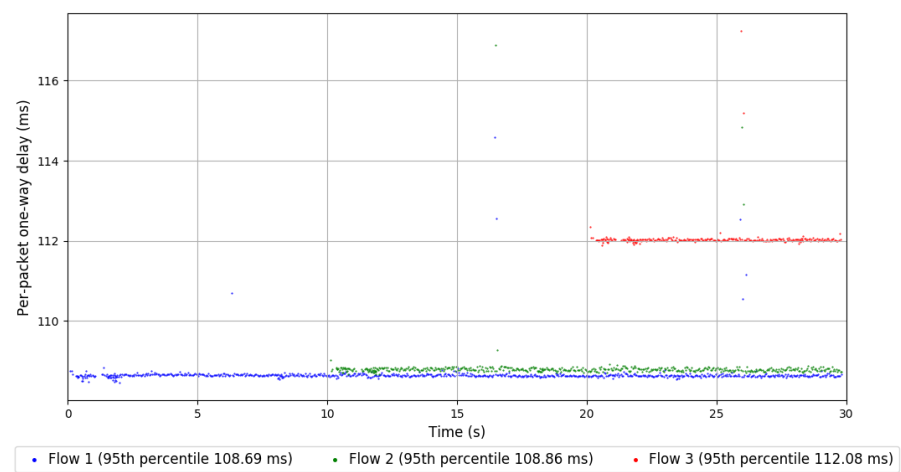
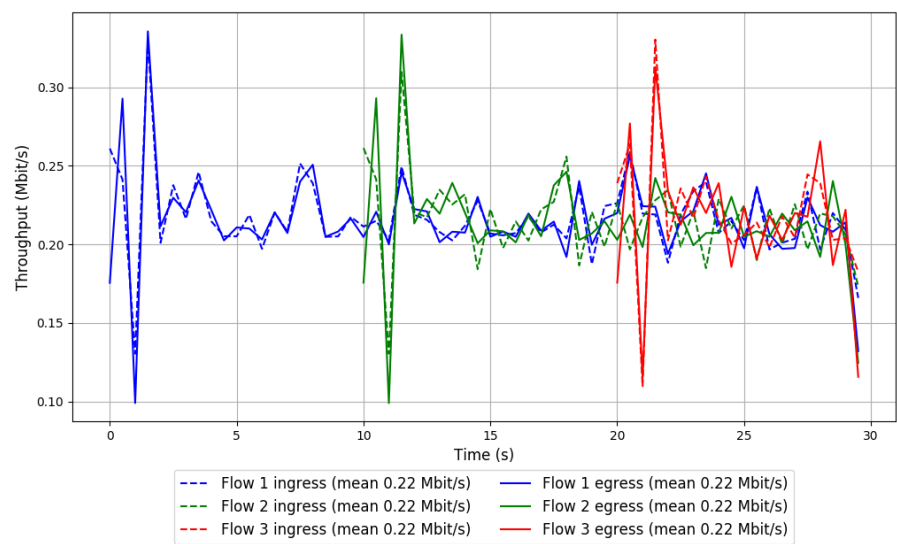


```
Run 4: Statistics of SCReAM

Start at: 2018-03-27 21:25:40
End at: 2018-03-27 21:26:10

# Below is generated by plot.py at 2018-03-28 03:27:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.038 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 108.695 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 108.855 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.078 ms
Loss rate: 2.25%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-03-27 21:44:45

End at: 2018-03-27 21:45:15

Below is generated by plot.py at 2018-03-28 03:27:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.123 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.472 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 112.147 ms

Loss rate: 1.05%

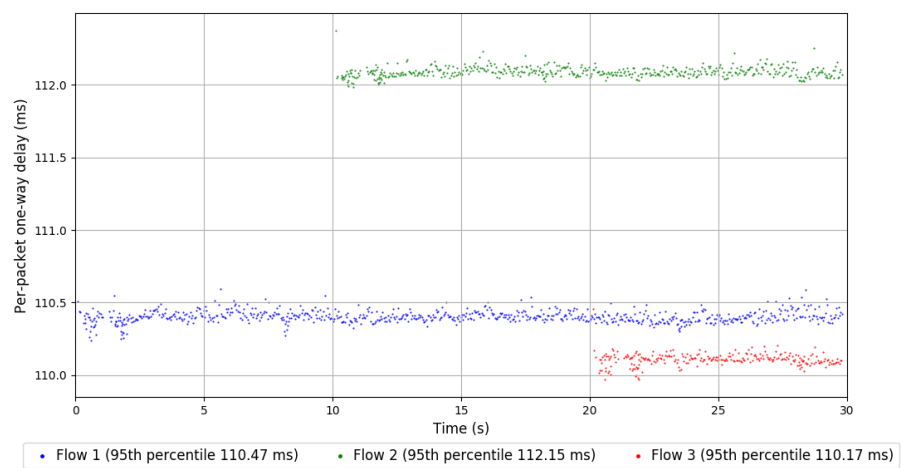
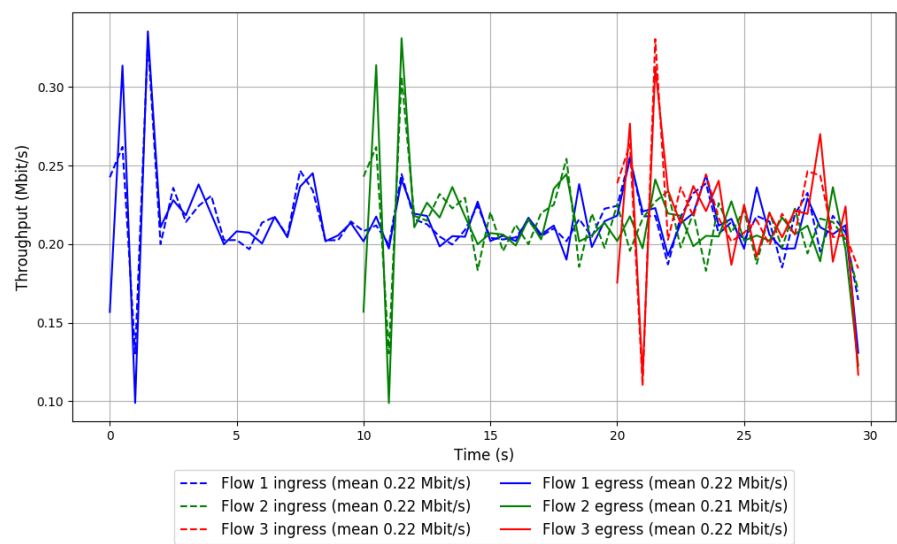
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.166 ms

Loss rate: 2.27%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-03-27 22:04:26

End at: 2018-03-27 22:04:56

Below is generated by plot.py at 2018-03-28 03:27:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 114.353 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 114.365 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.603 ms

Loss rate: 1.05%

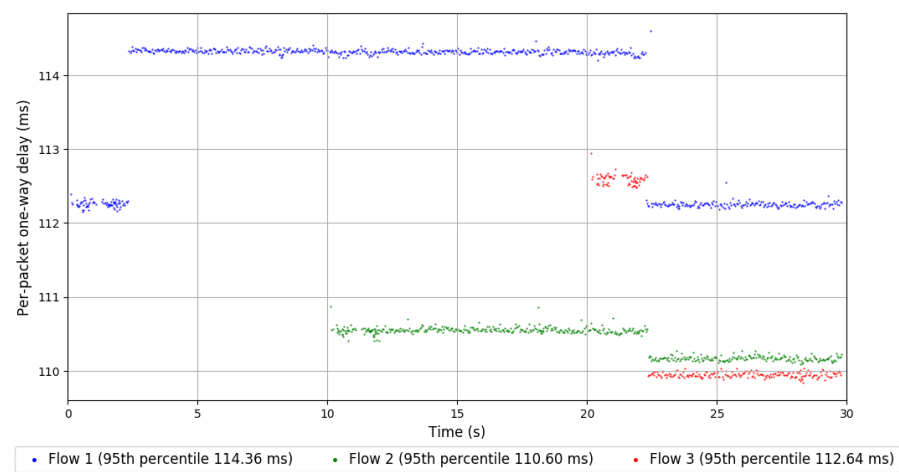
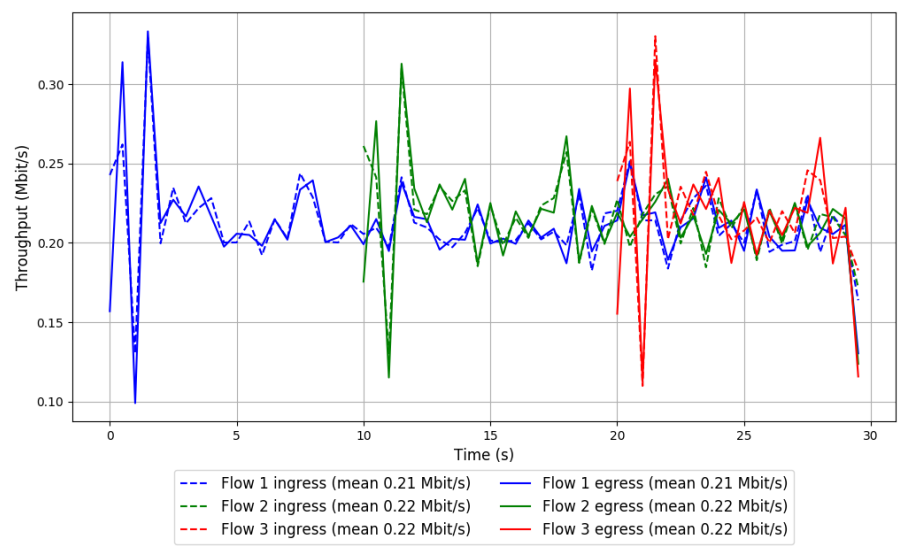
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.645 ms

Loss rate: 2.25%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SCReAM

Start at: 2018-03-27 22:24:51

End at: 2018-03-27 22:25:21

Below is generated by plot.py at 2018-03-28 03:27:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 112.597 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 0.11 Mbit/s

95th percentile per-packet one-way delay: 112.102 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.617 ms

Loss rate: 1.25%

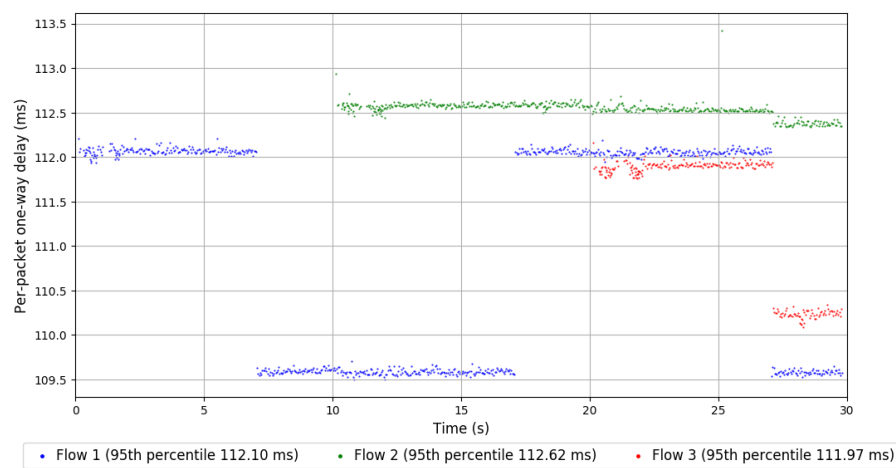
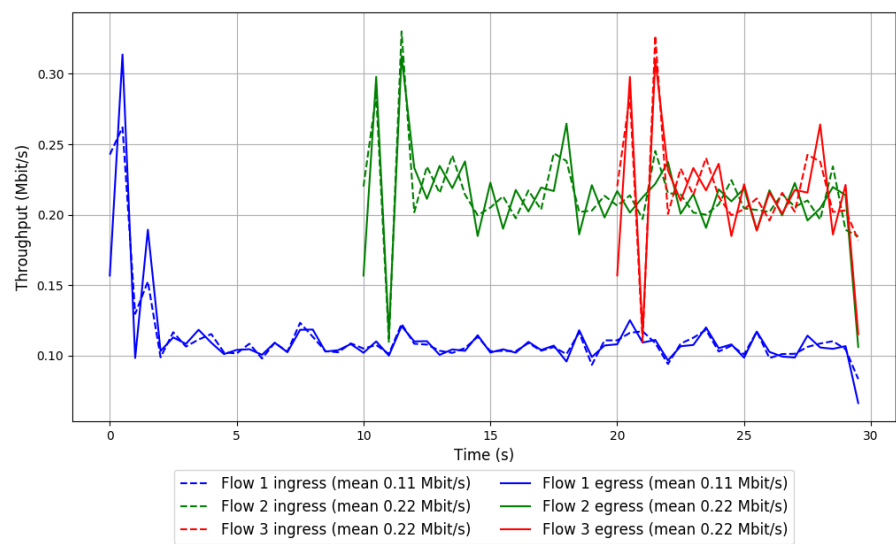
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.967 ms

Loss rate: 2.26%

Run 7: Report of SCSReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2018-03-27 22:44:35

End at: 2018-03-27 22:45:05

Below is generated by plot.py at 2018-03-28 03:27:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.728 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.905 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.751 ms

Loss rate: 1.06%

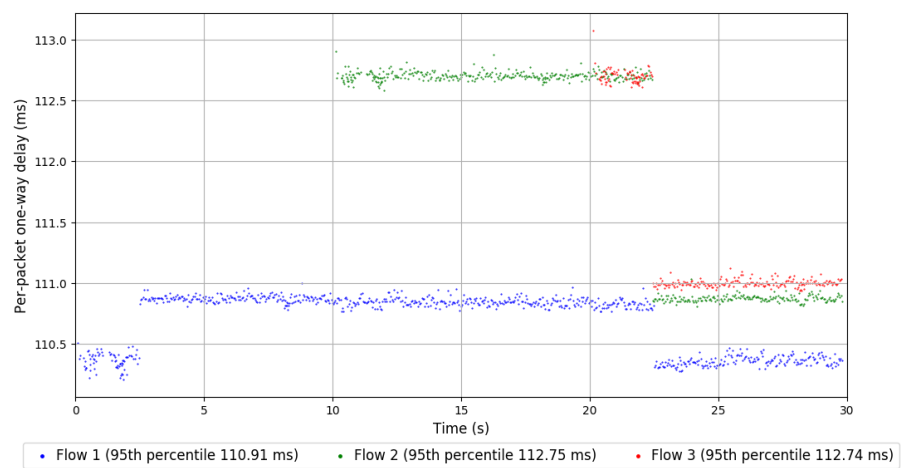
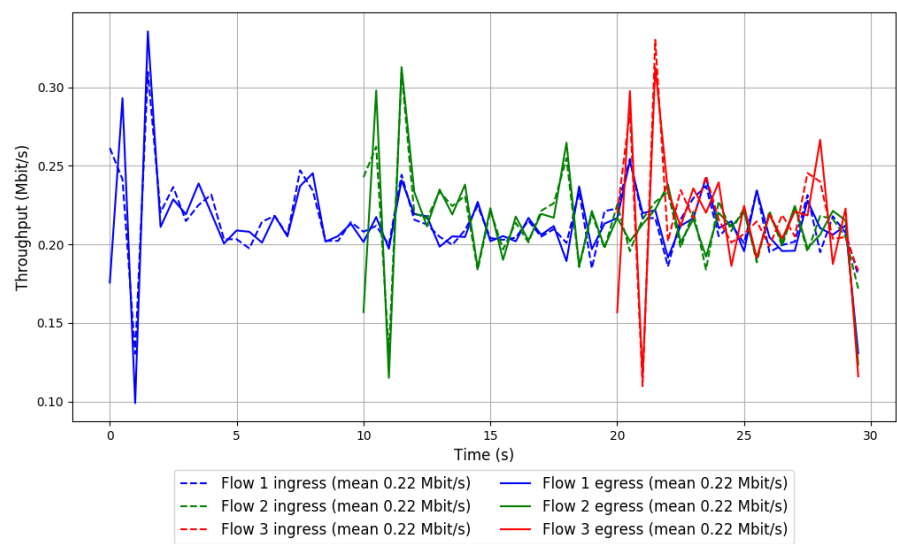
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.742 ms

Loss rate: 2.26%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2018-03-27 23:04:08

End at: 2018-03-27 23:04:38

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.820 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.838 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 108.861 ms

Loss rate: 1.06%

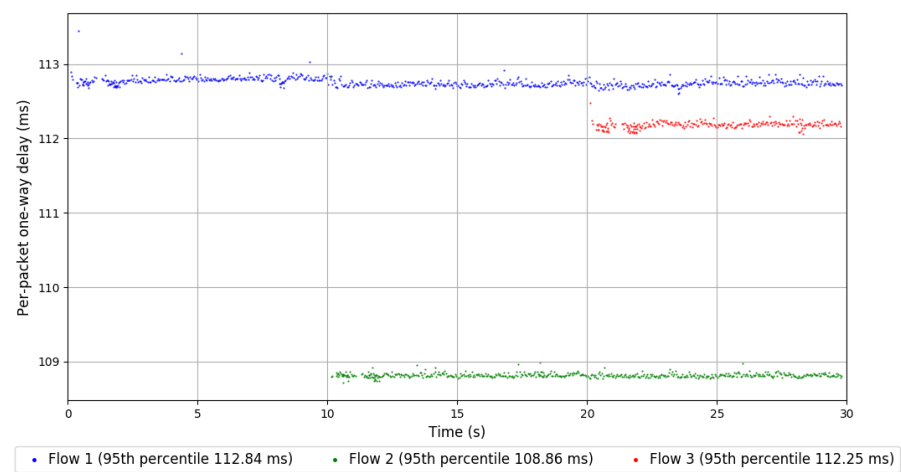
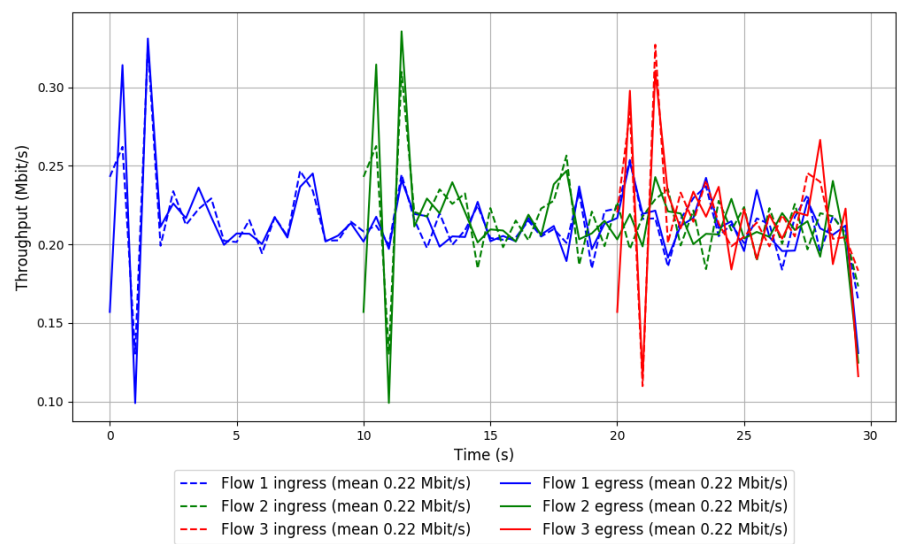
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.245 ms

Loss rate: 2.27%

Run 9: Report of SReAM — Data Link

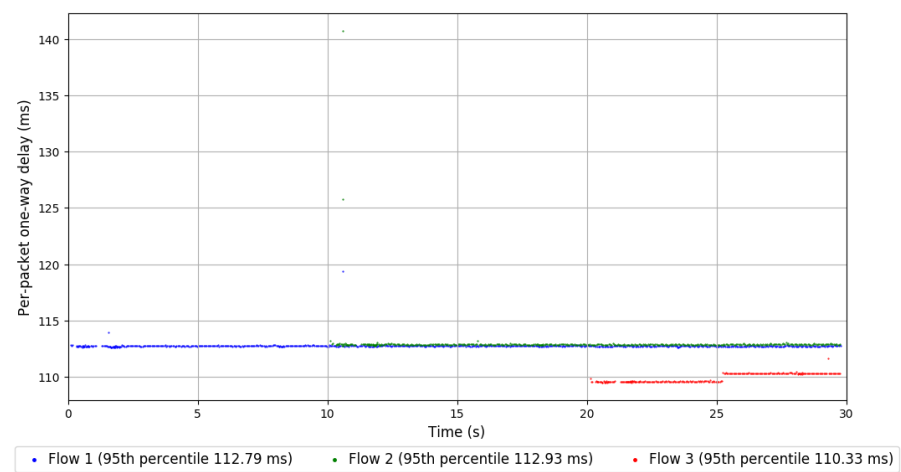
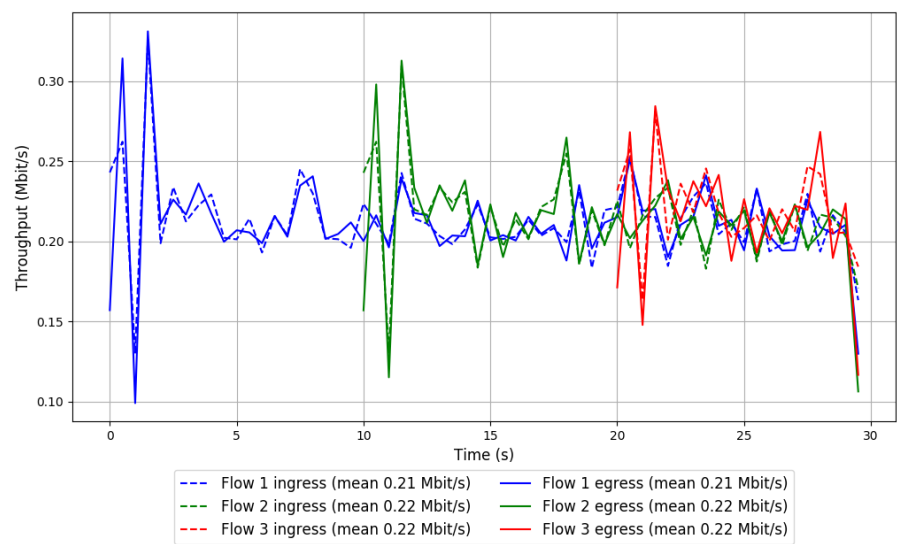


```
Run 10: Statistics of SReAM

Start at: 2018-03-27 23:23:23
End at: 2018-03-27 23:23:53

# Below is generated by plot.py at 2018-03-28 03:27:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.902 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.794 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.931 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.335 ms
Loss rate: 2.26%
```

Run 10: Report of SCReAM — Data Link

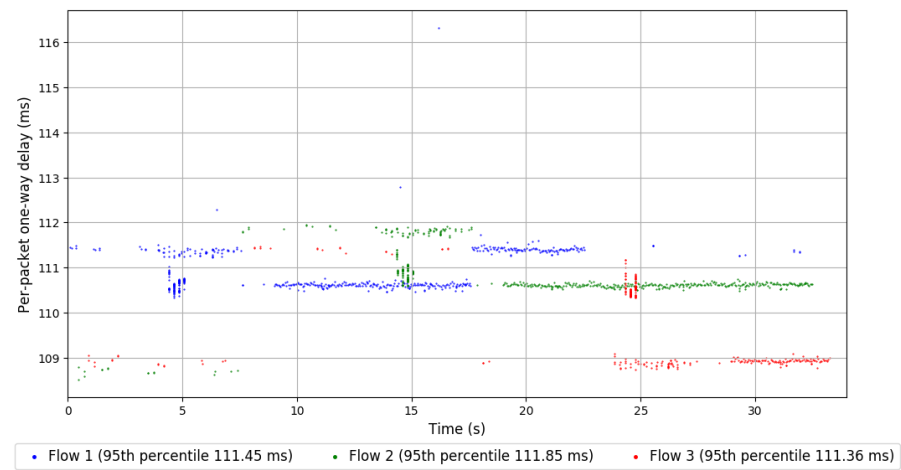
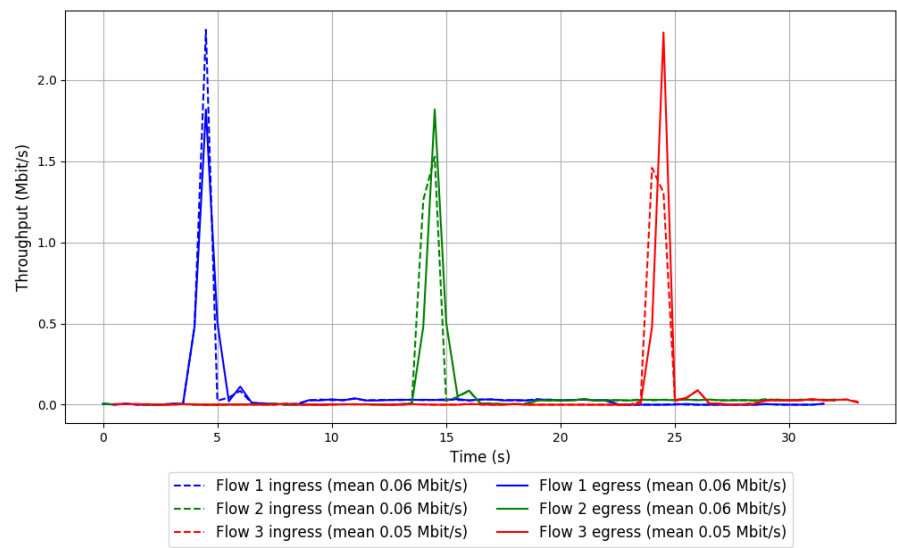


```
Run 1: Statistics of WebRTC media

Start at: 2018-03-27 20:39:54
End at: 2018-03-27 20:40:24

# Below is generated by plot.py at 2018-03-28 03:27:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 111.737 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 111.452 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 111.850 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 111.358 ms
Loss rate: 0.32%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-03-27 20:58:57

End at: 2018-03-27 20:59:27

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 112.575 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 111.614 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.601 ms

Loss rate: 0.00%

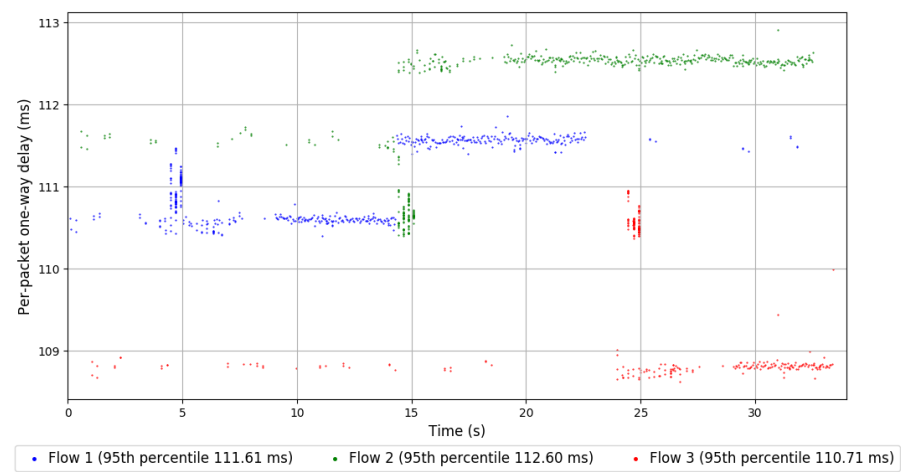
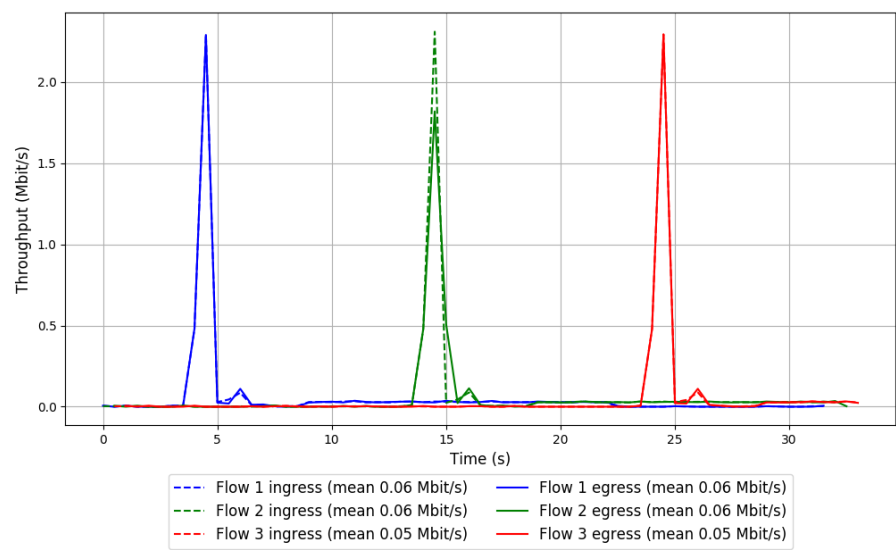
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 110.709 ms

Loss rate: 0.32%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-03-27 21:18:11

End at: 2018-03-27 21:18:41

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 110.971 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 109.086 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 111.237 ms

Loss rate: 0.00%

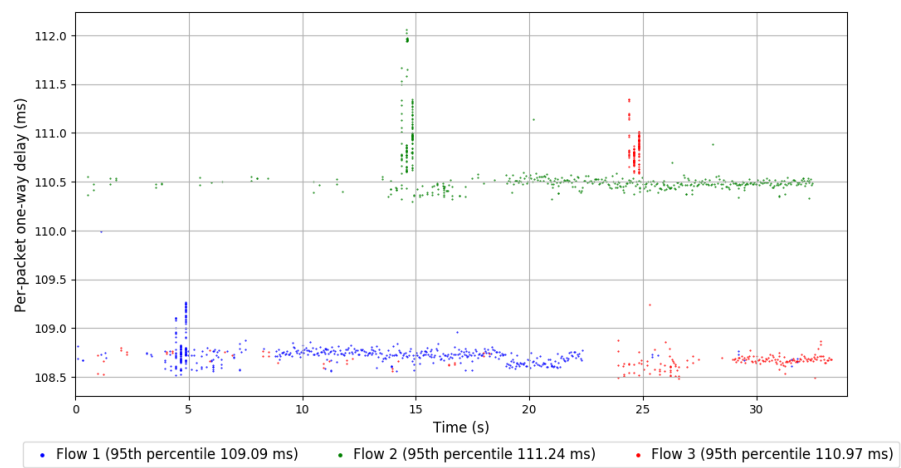
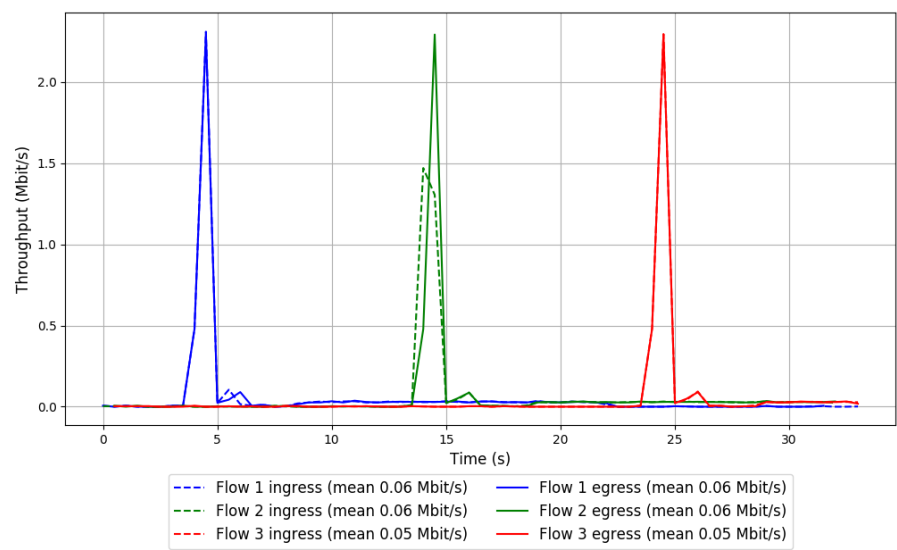
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 110.971 ms

Loss rate: 0.44%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-03-27 21:37:01

End at: 2018-03-27 21:37:31

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 112.570 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 111.007 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 111.020 ms

Loss rate: 0.04%

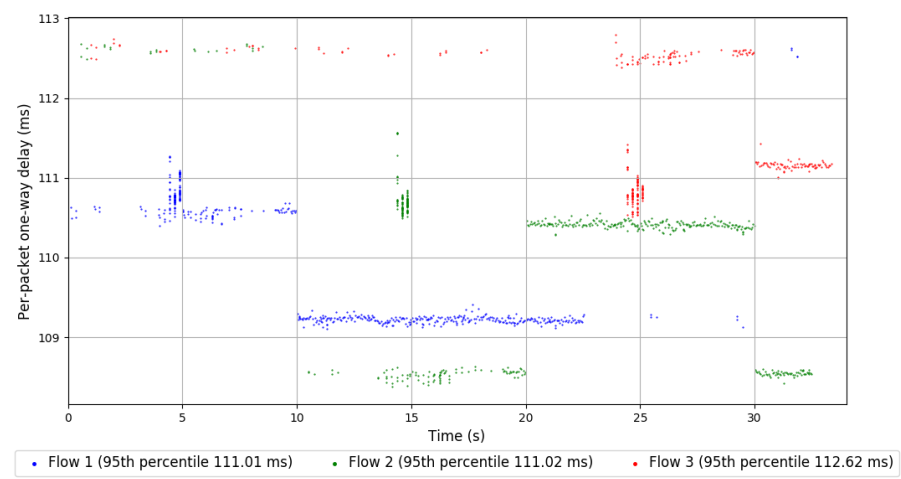
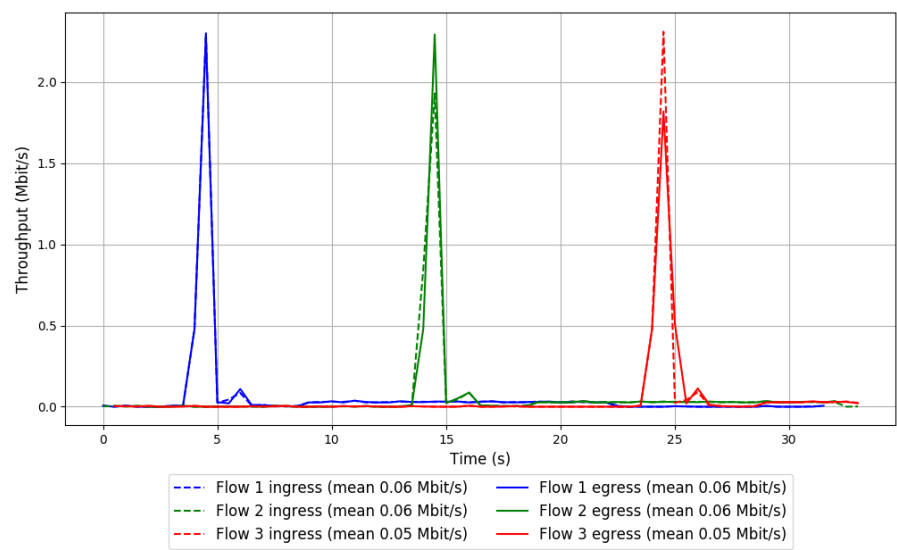
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.621 ms

Loss rate: 0.32%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-03-27 21:56:42

End at: 2018-03-27 21:57:12

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 112.626 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.655 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.431 ms

Loss rate: 0.00%

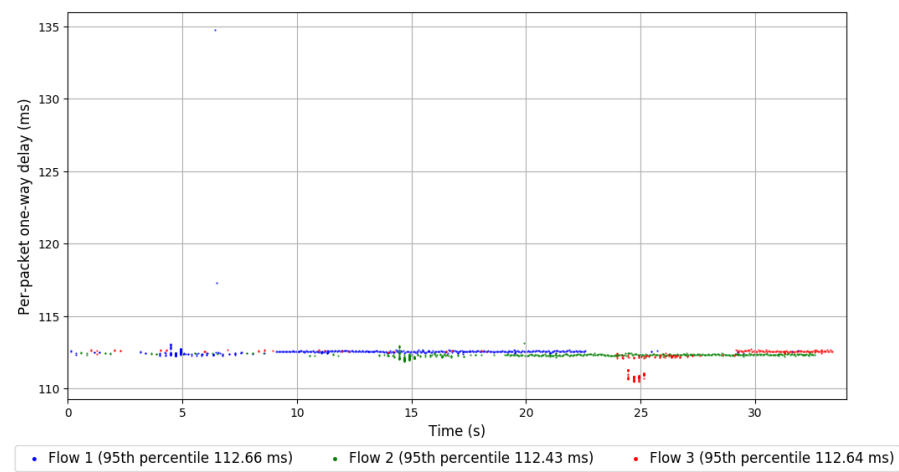
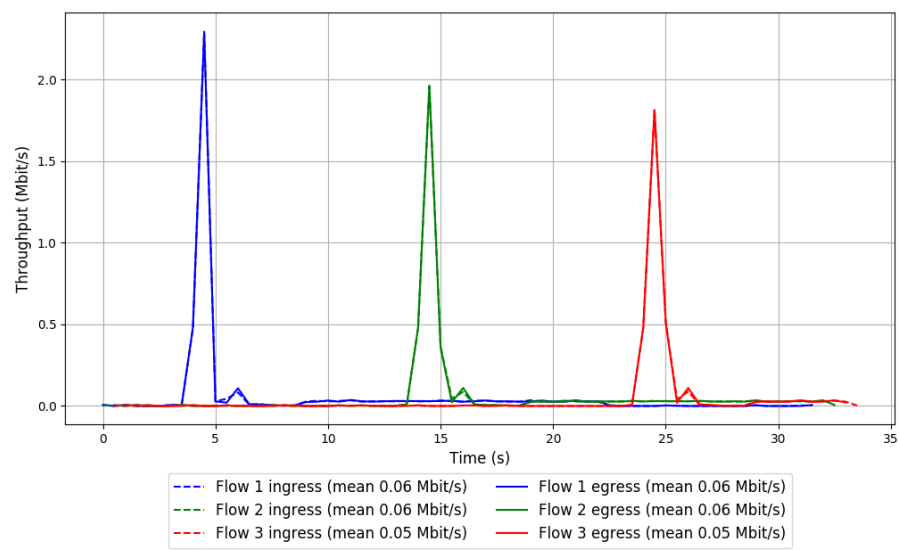
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.643 ms

Loss rate: 0.40%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-03-27 22:16:26

End at: 2018-03-27 22:16:56

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 112.377 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.450 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.424 ms

Loss rate: 0.00%

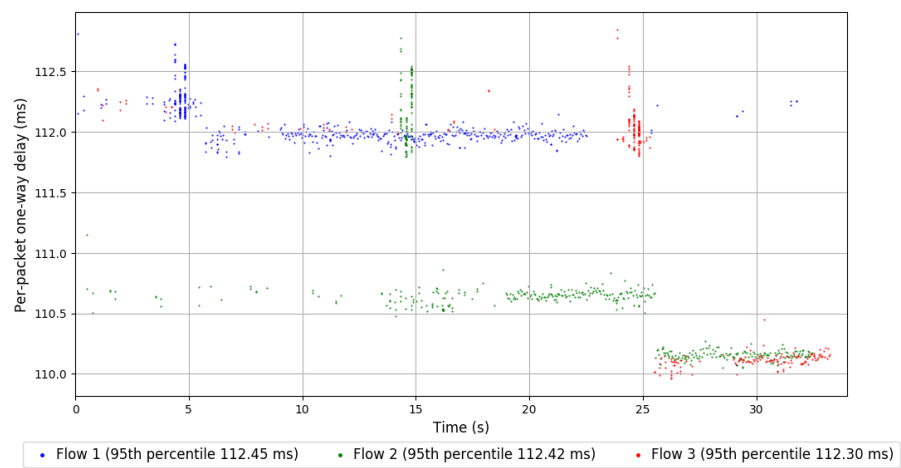
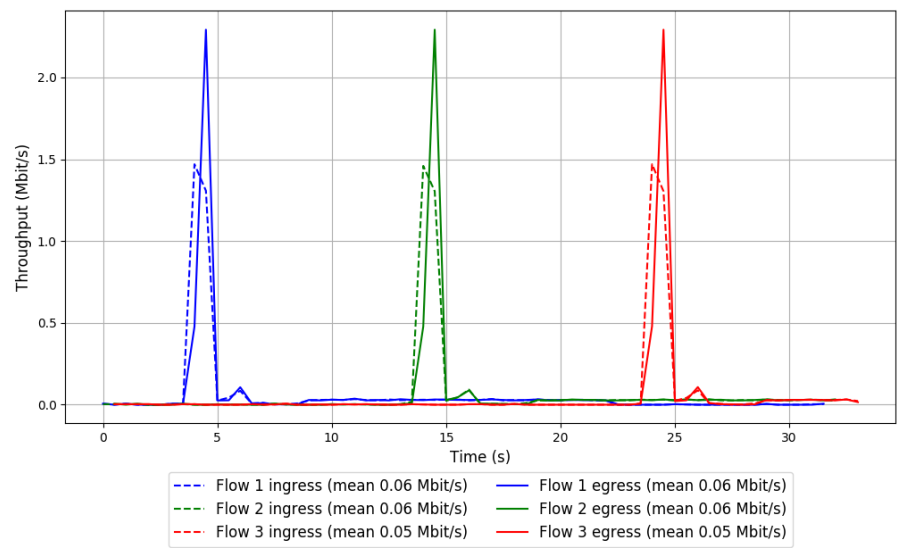
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.295 ms

Loss rate: 0.44%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-03-27 22:36:40

End at: 2018-03-27 22:37:10

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 112.850 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.852 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.828 ms

Loss rate: 0.00%

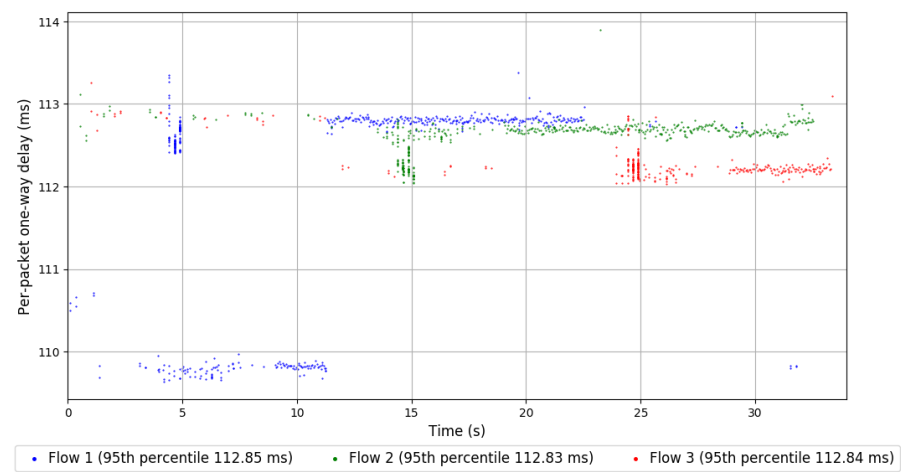
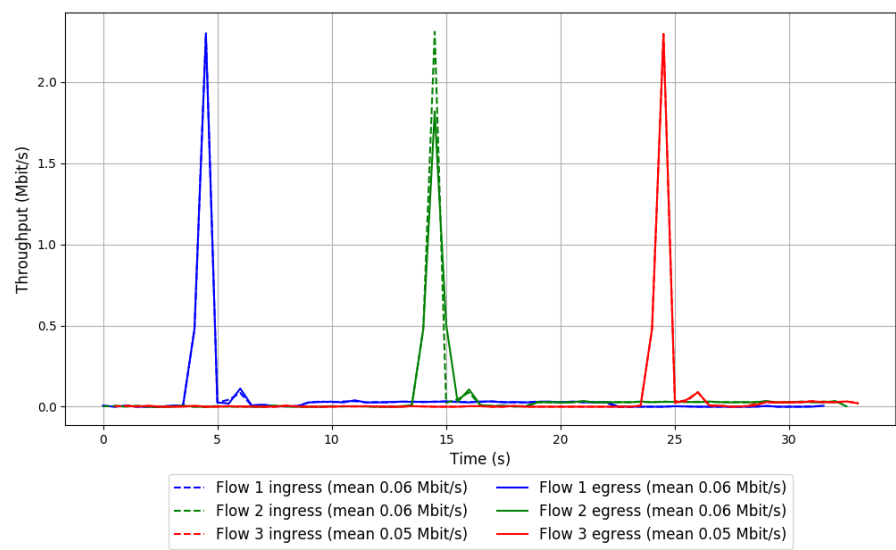
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.841 ms

Loss rate: 0.32%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-03-27 22:56:26

End at: 2018-03-27 22:56:56

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 112.856 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.718 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.726 ms

Loss rate: 0.00%

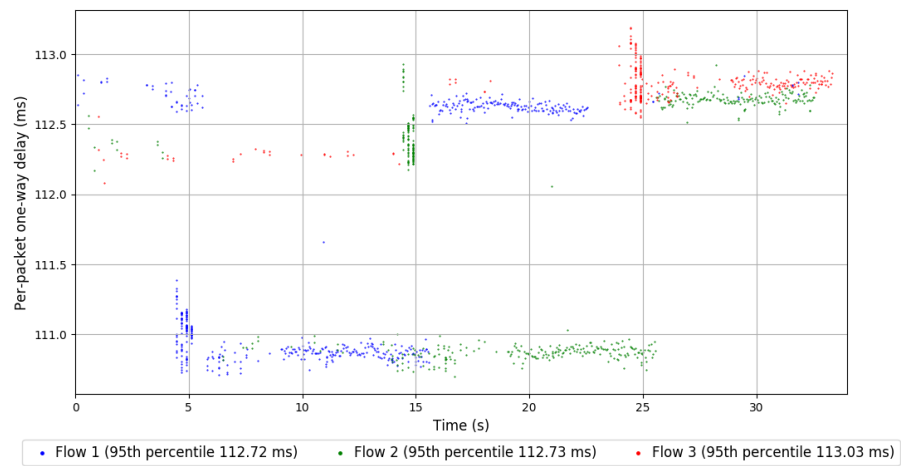
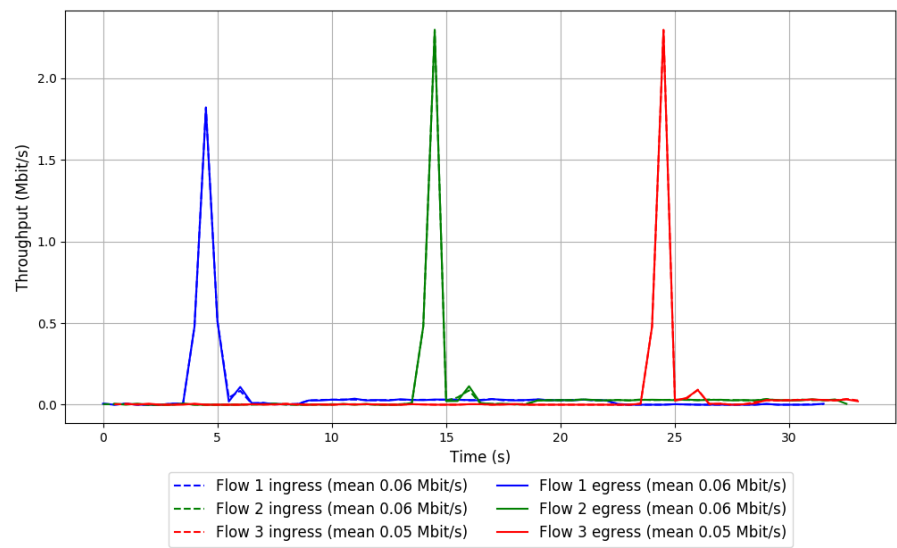
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 113.030 ms

Loss rate: 0.40%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-03-27 23:15:41

End at: 2018-03-27 23:16:11

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 112.861 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.673 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.789 ms

Loss rate: 0.00%

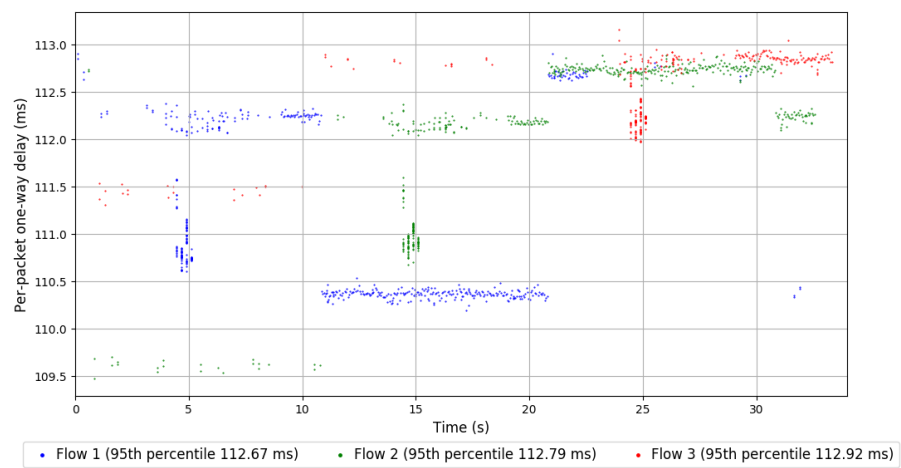
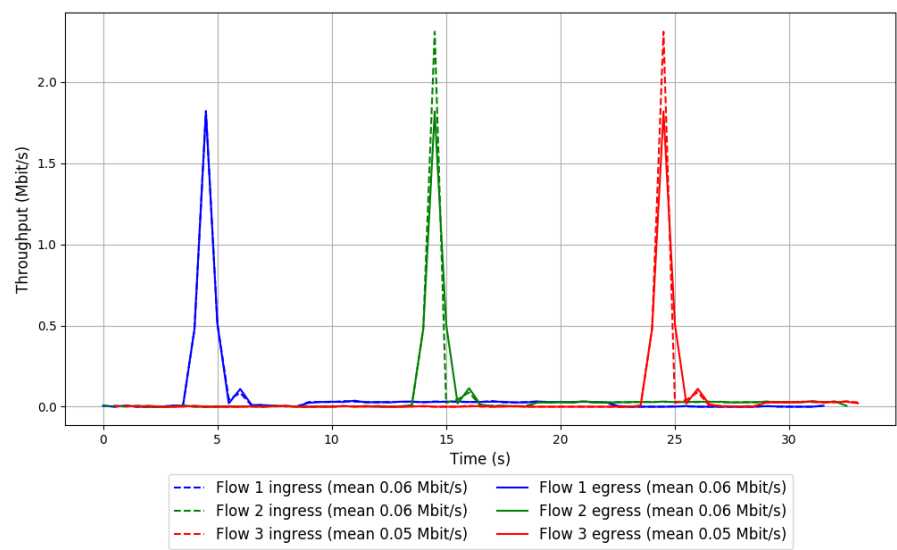
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.918 ms

Loss rate: 0.40%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-03-27 23:34:53

End at: 2018-03-27 23:35:23

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 112.765 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.783 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.230 ms

Loss rate: 0.04%

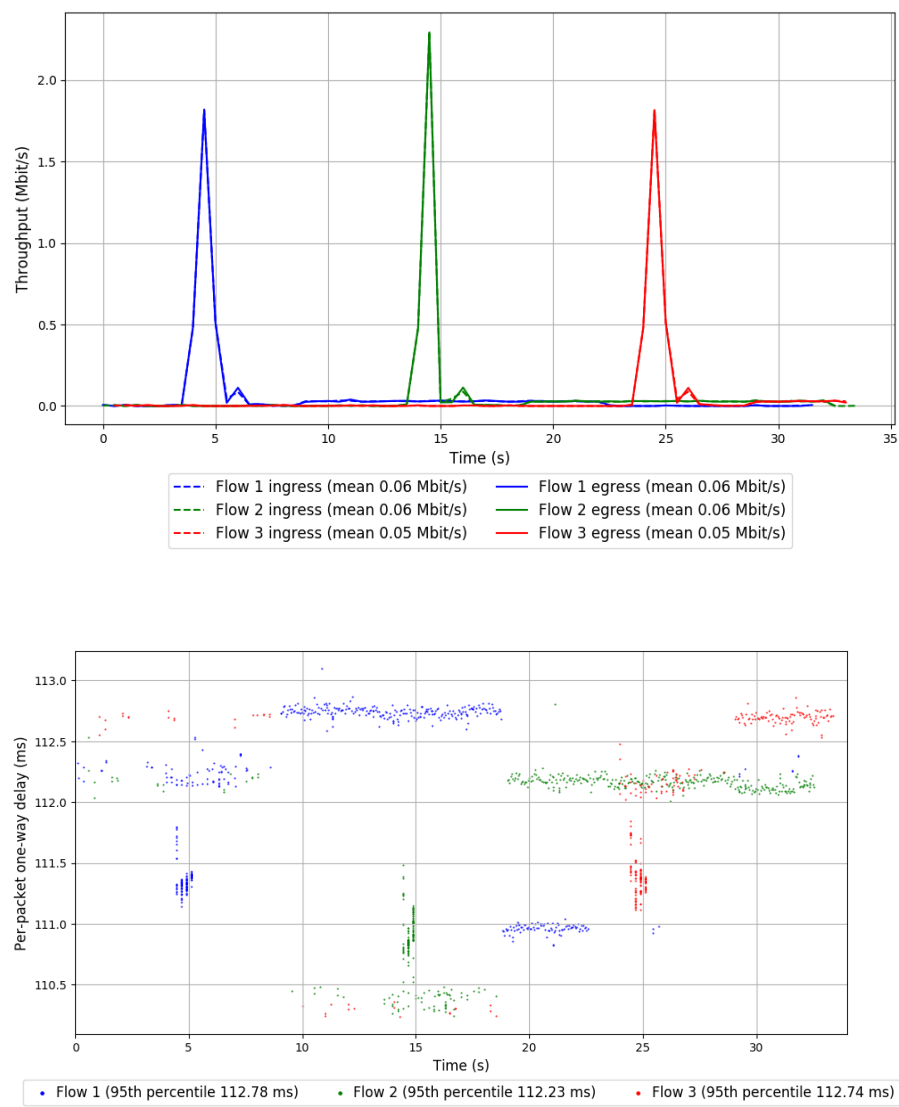
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.737 ms

Loss rate: 0.40%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-03-27 20:22:46

End at: 2018-03-27 20:23:16

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.33 Mbit/s

95th percentile per-packet one-way delay: 112.245 ms

Loss rate: 1.73%

-- Flow 1:

Average throughput: 2.86 Mbit/s

95th percentile per-packet one-way delay: 112.327 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 2.50 Mbit/s

95th percentile per-packet one-way delay: 112.055 ms

Loss rate: 1.98%

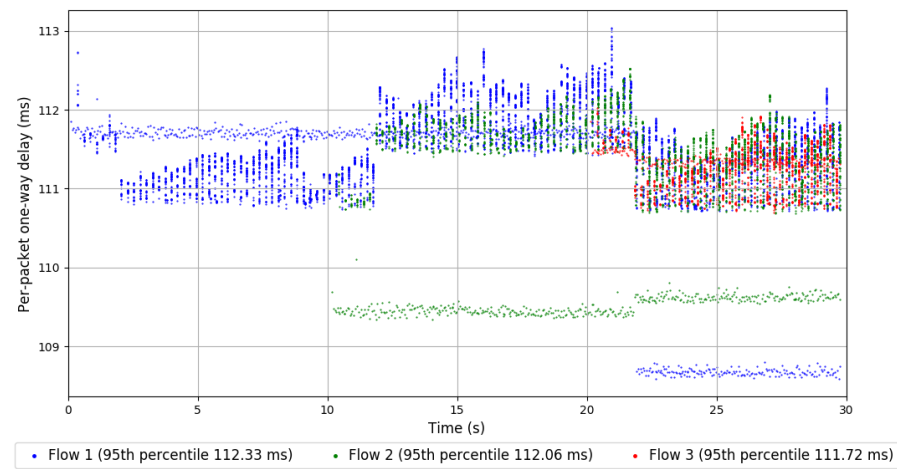
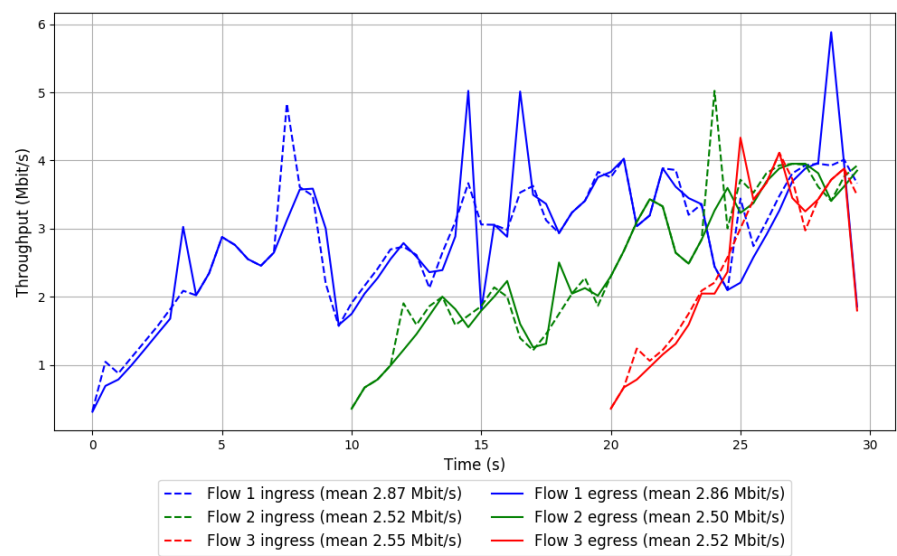
-- Flow 3:

Average throughput: 2.52 Mbit/s

95th percentile per-packet one-way delay: 111.719 ms

Loss rate: 3.38%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-03-27 20:41:59

End at: 2018-03-27 20:42:29

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.11 Mbit/s

95th percentile per-packet one-way delay: 111.664 ms

Loss rate: 1.87%

-- Flow 1:

Average throughput: 2.69 Mbit/s

95th percentile per-packet one-way delay: 111.715 ms

Loss rate: 1.21%

-- Flow 2:

Average throughput: 2.72 Mbit/s

95th percentile per-packet one-way delay: 111.482 ms

Loss rate: 1.74%

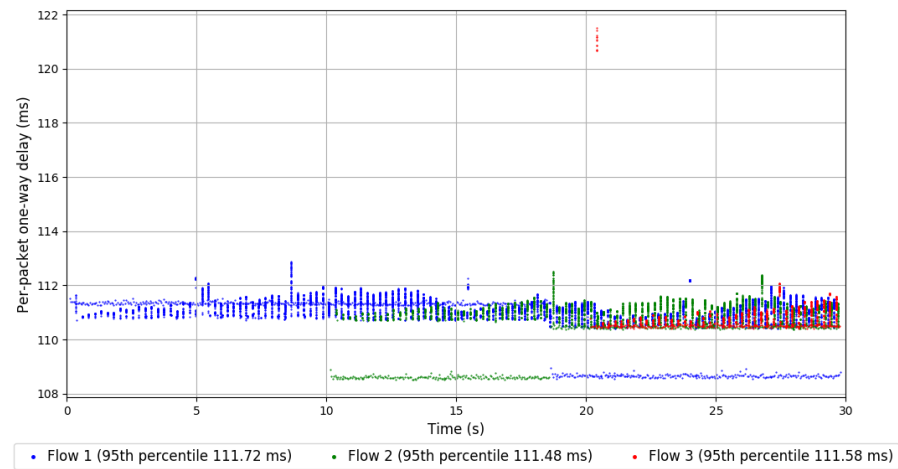
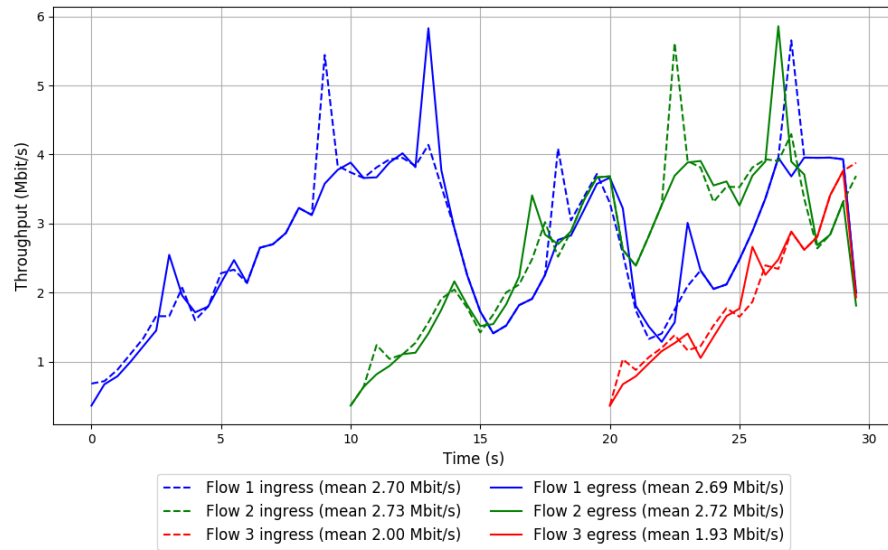
-- Flow 3:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 111.581 ms

Loss rate: 4.98%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-03-27 21:01:03

End at: 2018-03-27 21:01:33

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.38 Mbit/s

95th percentile per-packet one-way delay: 111.680 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 3.11 Mbit/s

95th percentile per-packet one-way delay: 111.690 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 2.55 Mbit/s

95th percentile per-packet one-way delay: 111.710 ms

Loss rate: 1.78%

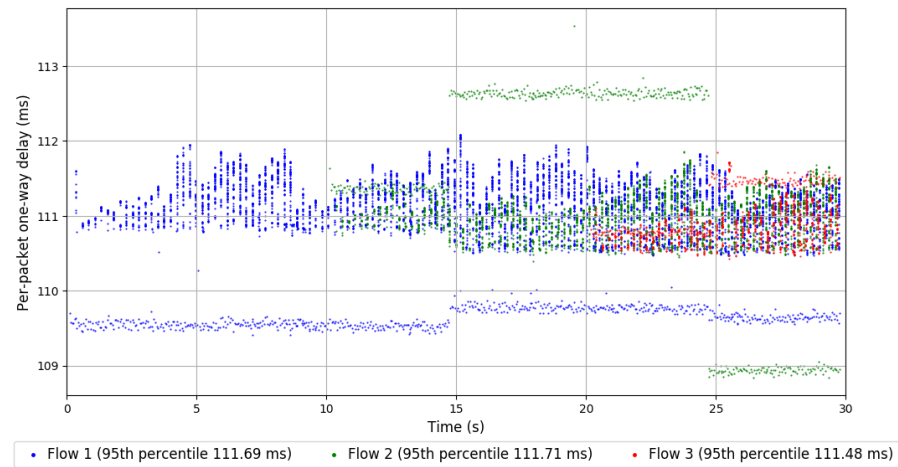
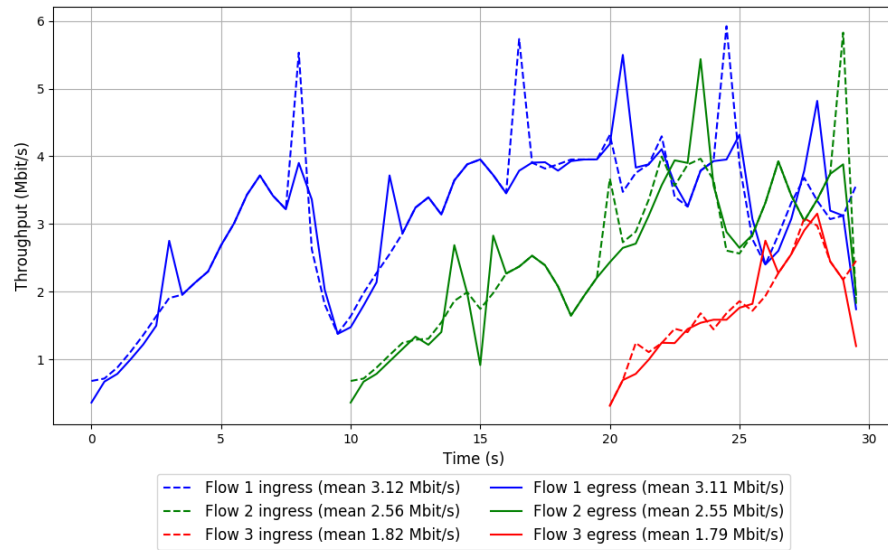
-- Flow 3:

Average throughput: 1.79 Mbit/s

95th percentile per-packet one-way delay: 111.478 ms

Loss rate: 3.54%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-03-27 21:20:06

End at: 2018-03-27 21:20:36

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.54 Mbit/s

95th percentile per-packet one-way delay: 111.582 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 3.30 Mbit/s

95th percentile per-packet one-way delay: 111.607 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 2.74 Mbit/s

95th percentile per-packet one-way delay: 111.512 ms

Loss rate: 1.82%

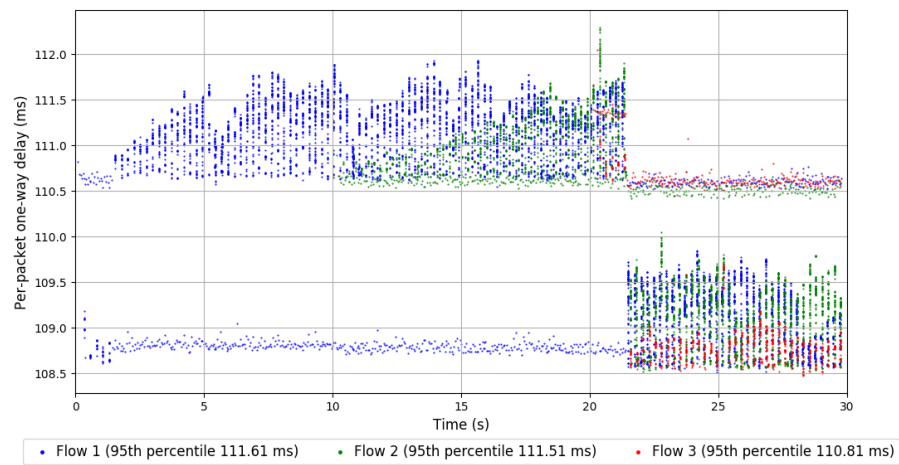
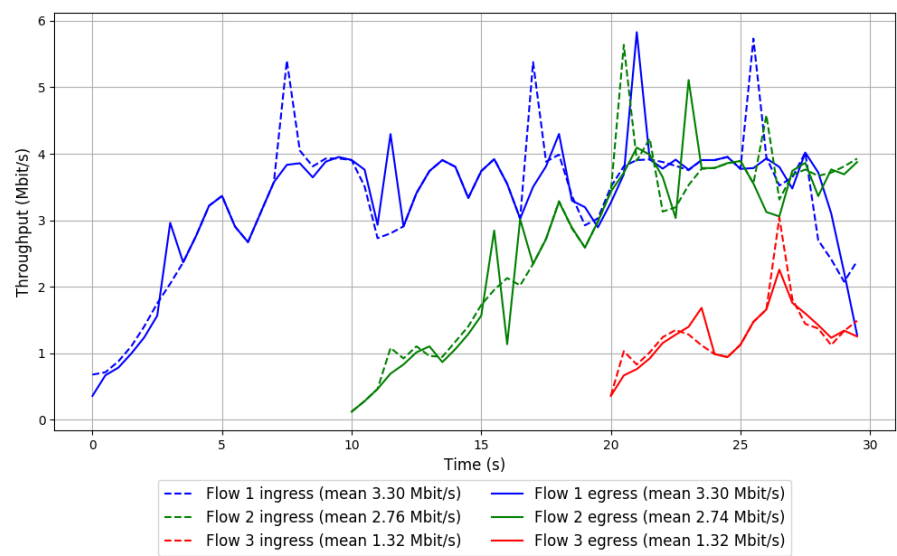
-- Flow 3:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 110.805 ms

Loss rate: 2.90%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-03-27 21:39:11

End at: 2018-03-27 21:39:41

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.91 Mbit/s

95th percentile per-packet one-way delay: 113.177 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 2.63 Mbit/s

95th percentile per-packet one-way delay: 113.038 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 2.31 Mbit/s

95th percentile per-packet one-way delay: 113.972 ms

Loss rate: 2.04%

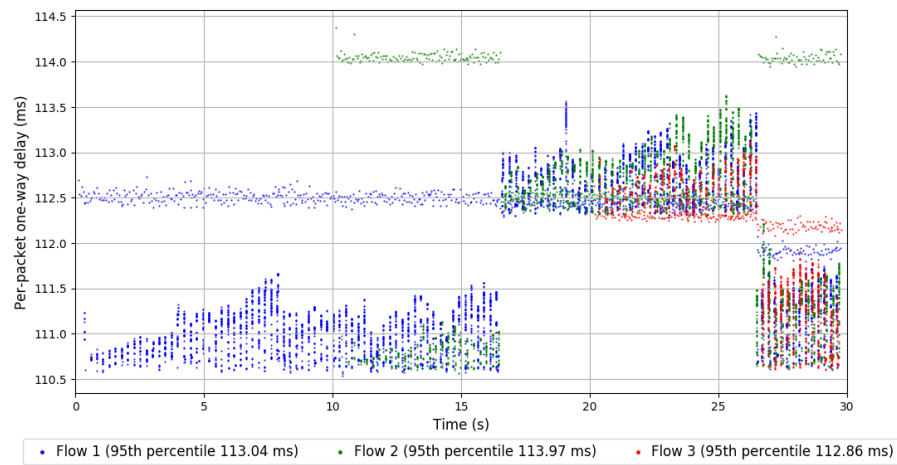
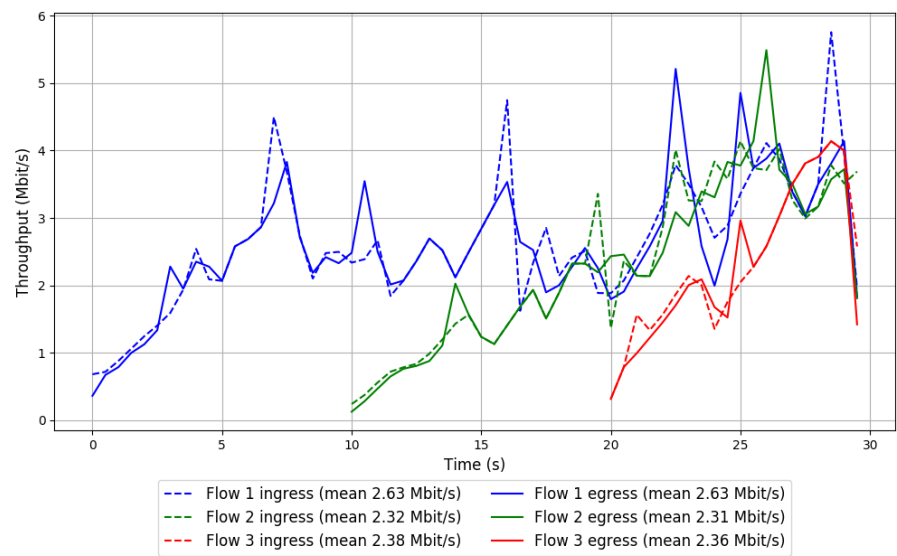
-- Flow 3:

Average throughput: 2.36 Mbit/s

95th percentile per-packet one-way delay: 112.855 ms

Loss rate: 2.49%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-03-27 21:58:53

End at: 2018-03-27 21:59:23

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.74 Mbit/s

95th percentile per-packet one-way delay: 113.099 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 3.02 Mbit/s

95th percentile per-packet one-way delay: 113.183 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 112.713 ms

Loss rate: 1.54%

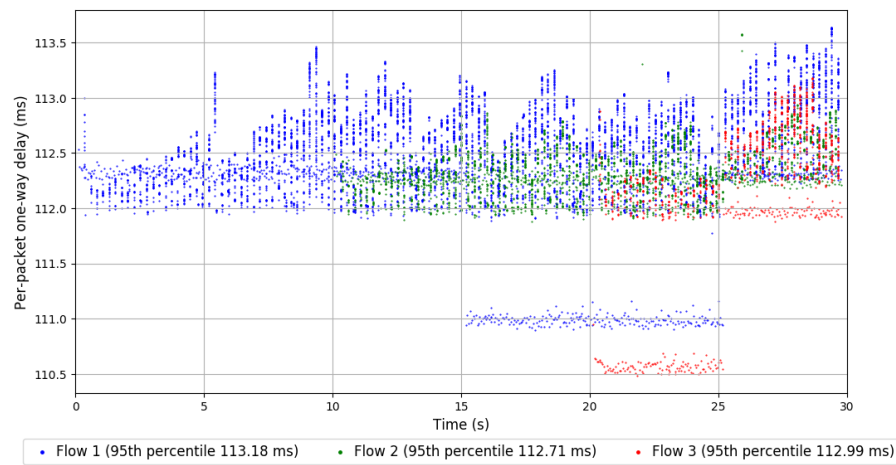
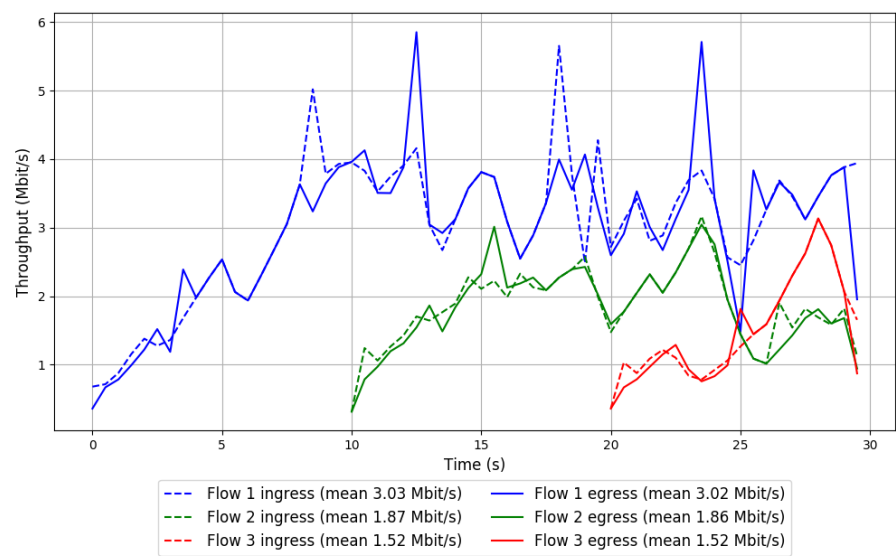
-- Flow 3:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 112.993 ms

Loss rate: 2.61%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-03-27 22:18:44

End at: 2018-03-27 22:19:14

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.48 Mbit/s

95th percentile per-packet one-way delay: 112.963 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 2.24 Mbit/s

95th percentile per-packet one-way delay: 112.931 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 2.66 Mbit/s

95th percentile per-packet one-way delay: 113.049 ms

Loss rate: 1.26%

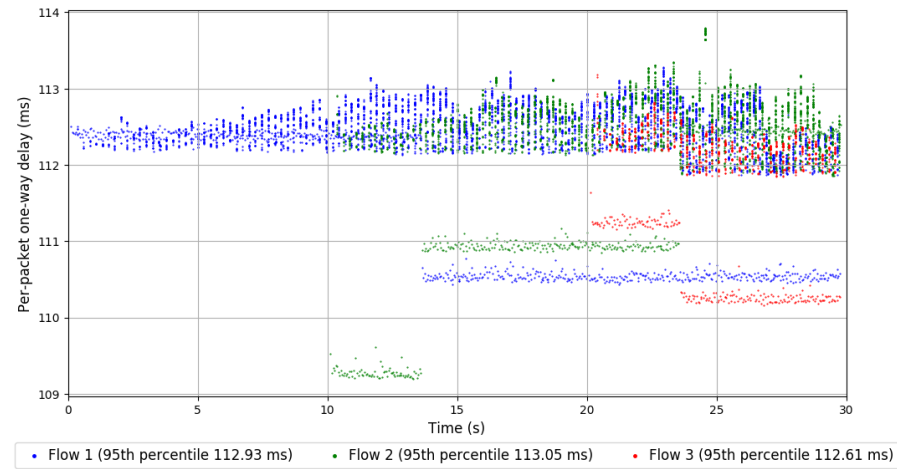
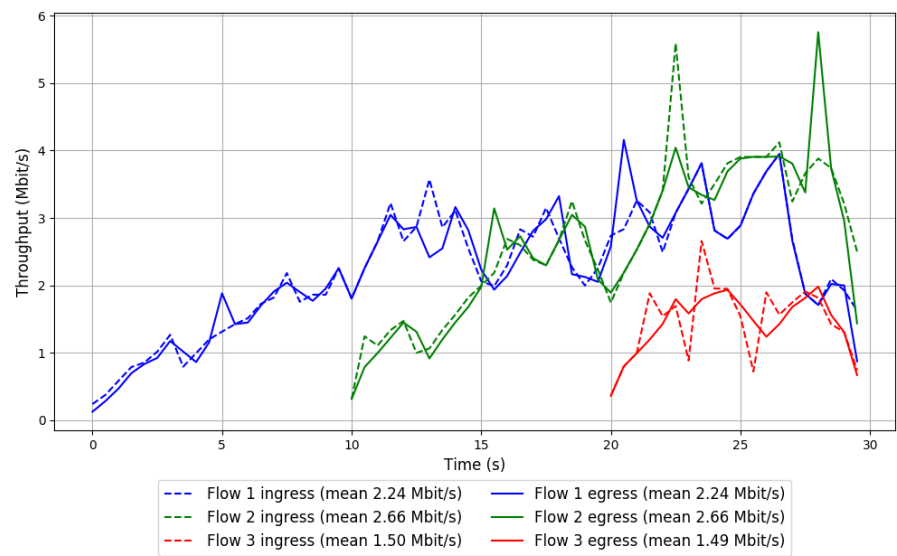
-- Flow 3:

Average throughput: 1.49 Mbit/s

95th percentile per-packet one-way delay: 112.612 ms

Loss rate: 2.58%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-03-27 22:38:52

End at: 2018-03-27 22:39:22

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.57 Mbit/s

95th percentile per-packet one-way delay: 113.294 ms

Loss rate: 1.76%

-- Flow 1:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 113.214 ms

Loss rate: 1.21%

-- Flow 2:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 114.777 ms

Loss rate: 1.61%

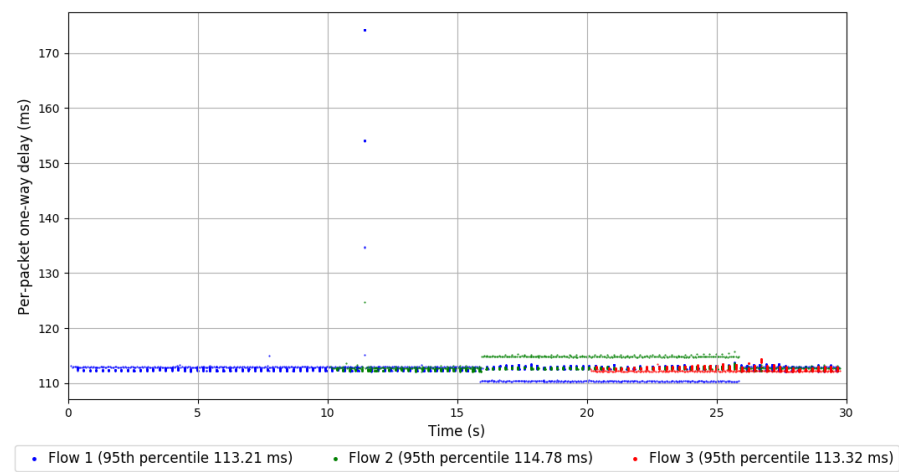
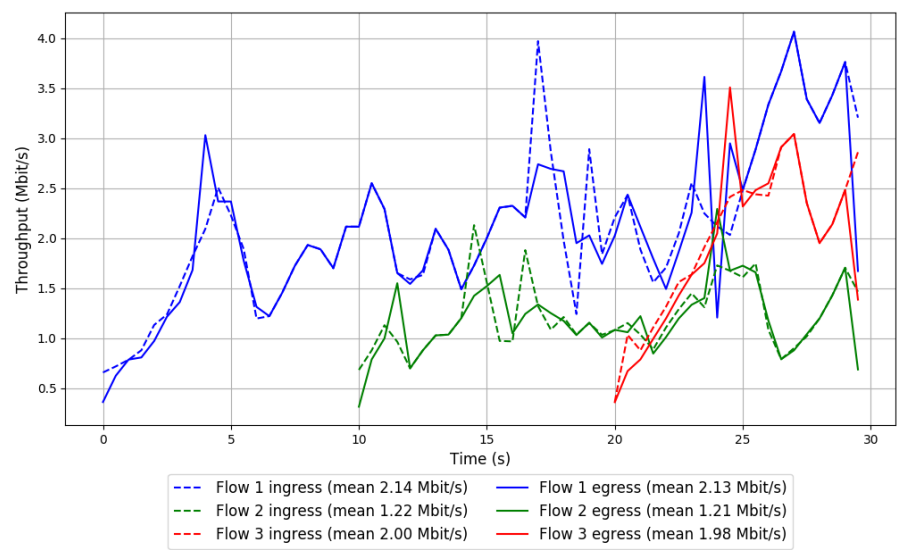
-- Flow 3:

Average throughput: 1.98 Mbit/s

95th percentile per-packet one-way delay: 113.320 ms

Loss rate: 3.75%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-03-27 22:58:33

End at: 2018-03-27 22:59:03

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 113.250 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 113.132 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 1.97 Mbit/s

95th percentile per-packet one-way delay: 112.899 ms

Loss rate: 0.53%

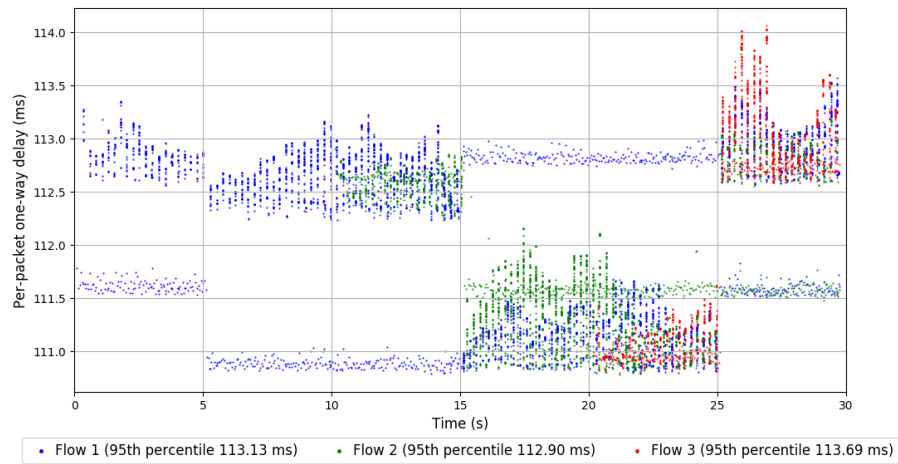
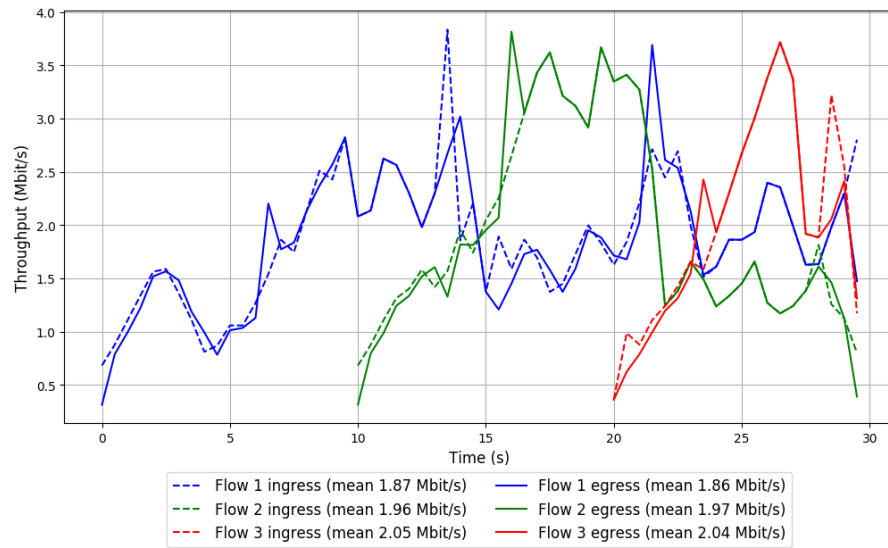
-- Flow 3:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 113.686 ms

Loss rate: 2.89%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-03-27 23:17:46

End at: 2018-03-27 23:18:16

Below is generated by plot.py at 2018-03-28 03:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.83 Mbit/s

95th percentile per-packet one-way delay: 113.080 ms

Loss rate: 1.62%

-- Flow 1:

Average throughput: 2.79 Mbit/s

95th percentile per-packet one-way delay: 113.089 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 2.46 Mbit/s

95th percentile per-packet one-way delay: 113.107 ms

Loss rate: 1.98%

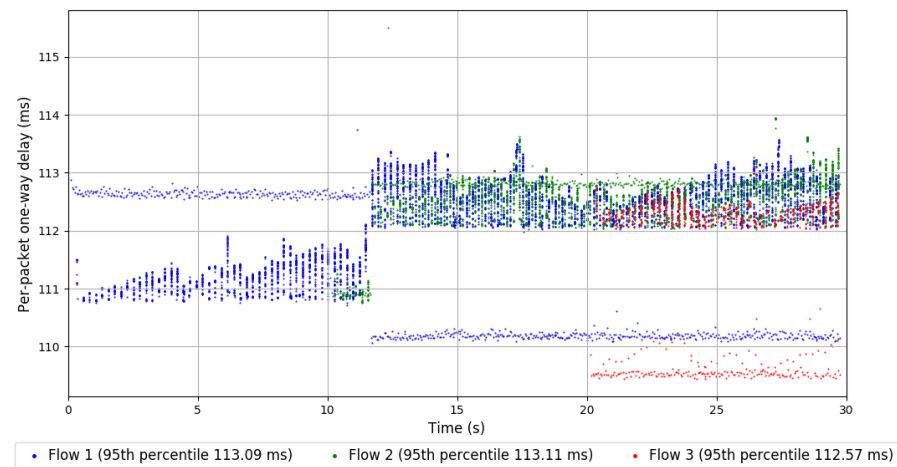
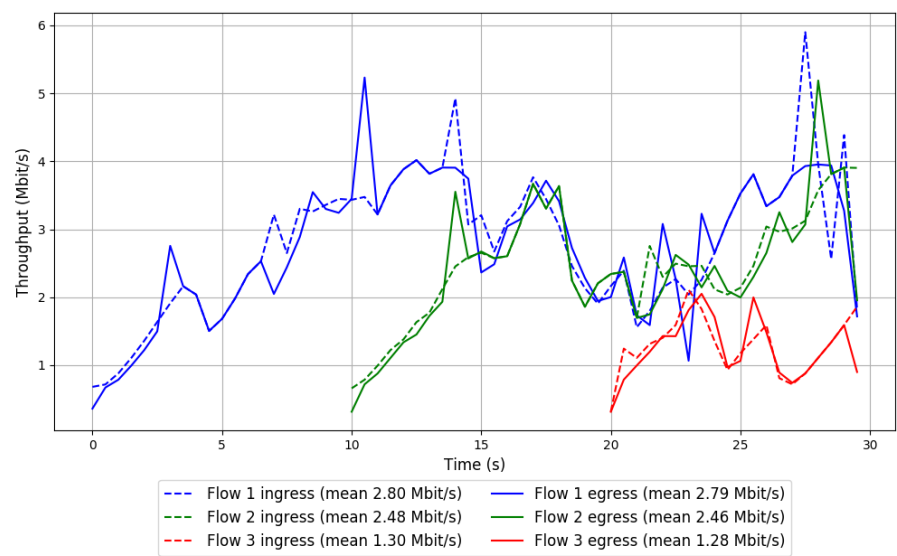
-- Flow 3:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 112.572 ms

Loss rate: 3.77%

Run 10: Report of Sprout — Data Link

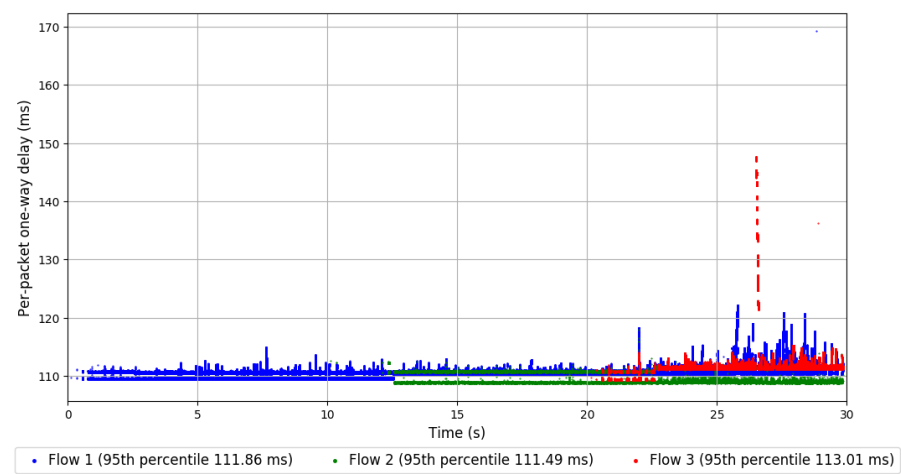
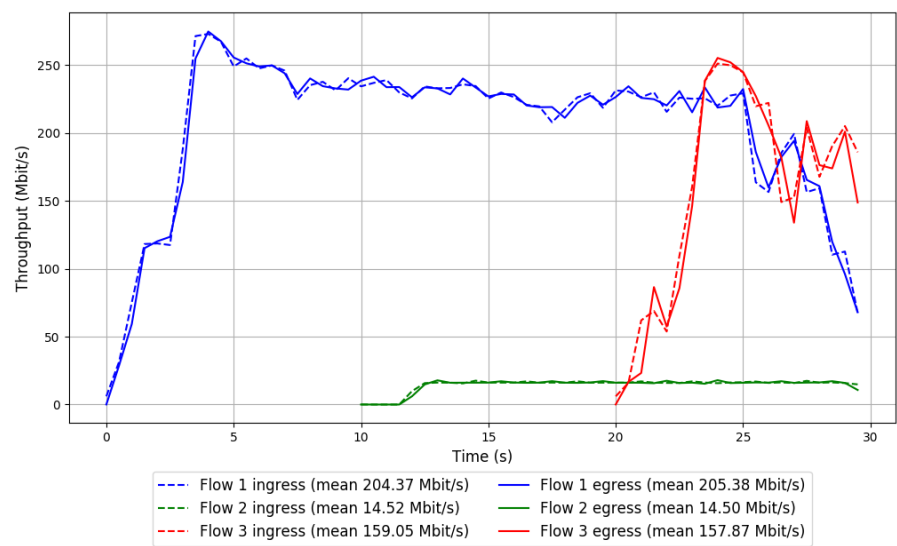


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-03-27 20:29:05
End at: 2018-03-27 20:29:35

# Below is generated by plot.py at 2018-03-28 03:29:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 266.53 Mbit/s
95th percentile per-packet one-way delay: 112.186 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 205.38 Mbit/s
95th percentile per-packet one-way delay: 111.859 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 14.50 Mbit/s
95th percentile per-packet one-way delay: 111.492 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 157.87 Mbit/s
95th percentile per-packet one-way delay: 113.009 ms
Loss rate: 2.95%
```


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

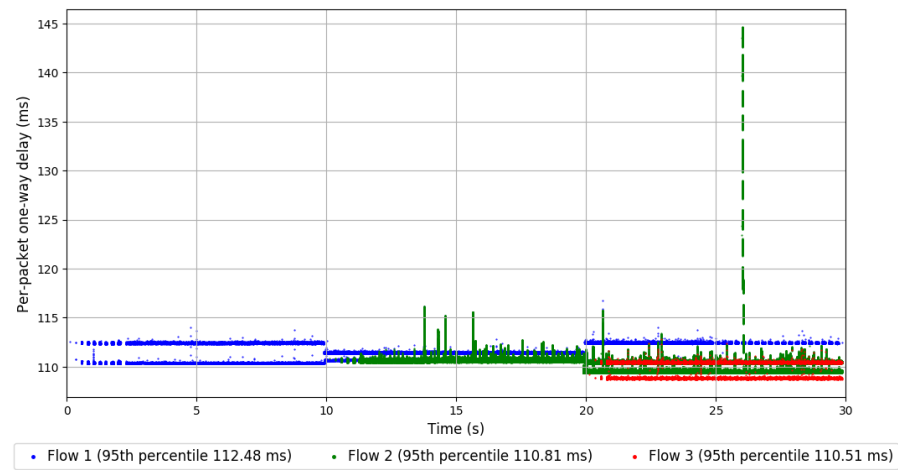
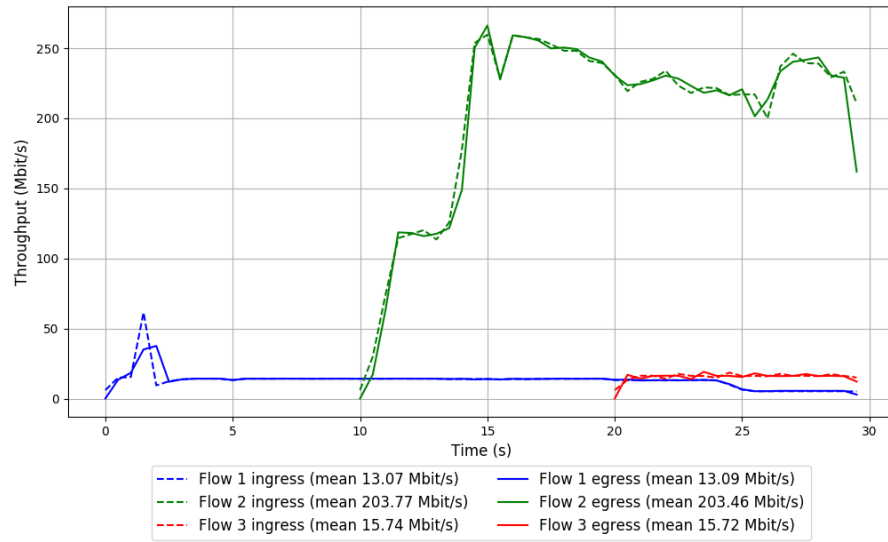


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-03-27 20:48:18
End at: 2018-03-27 20:48:48

# Below is generated by plot.py at 2018-03-28 03:29:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 153.24 Mbit/s
95th percentile per-packet one-way delay: 111.402 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 13.09 Mbit/s
95th percentile per-packet one-way delay: 112.484 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 203.46 Mbit/s
95th percentile per-packet one-way delay: 110.807 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 15.72 Mbit/s
95th percentile per-packet one-way delay: 110.513 ms
Loss rate: 2.33%
```

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

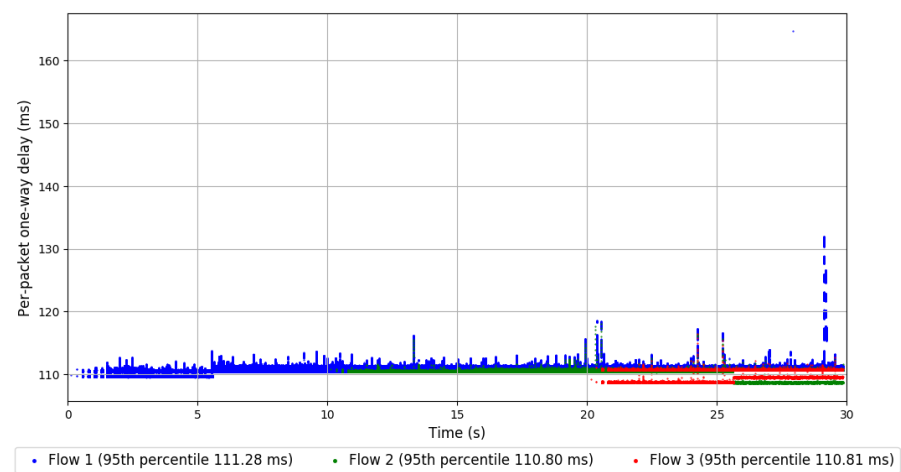
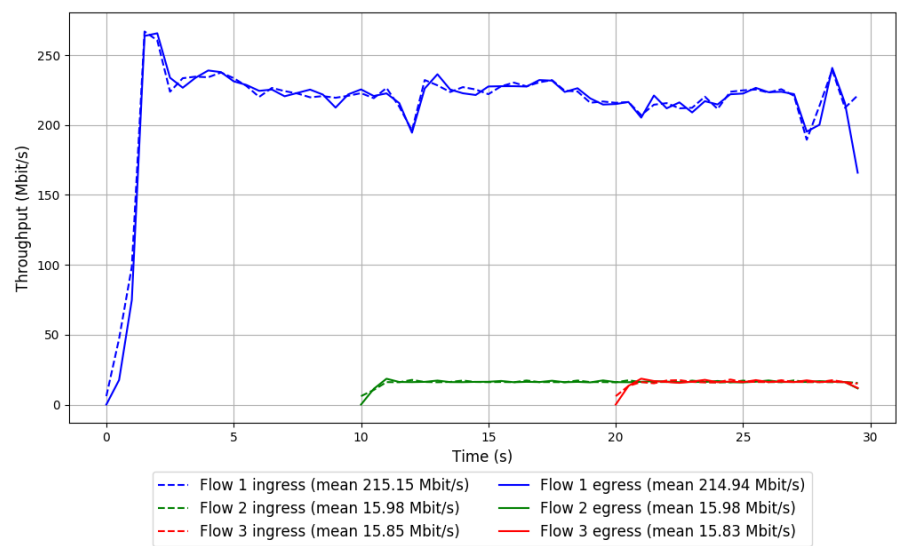


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-03-27 21:07:22
End at: 2018-03-27 21:07:52

# Below is generated by plot.py at 2018-03-28 03:29:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 230.70 Mbit/s
95th percentile per-packet one-way delay: 111.276 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 214.94 Mbit/s
95th percentile per-packet one-way delay: 111.281 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 15.98 Mbit/s
95th percentile per-packet one-way delay: 110.800 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 15.83 Mbit/s
95th percentile per-packet one-way delay: 110.813 ms
Loss rate: 2.35%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-03-27 21:26:26

End at: 2018-03-27 21:26:56

Below is generated by plot.py at 2018-03-28 03:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.23 Mbit/s

95th percentile per-packet one-way delay: 111.137 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 17.94 Mbit/s

95th percentile per-packet one-way delay: 111.953 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 107.04 Mbit/s

95th percentile per-packet one-way delay: 110.712 ms

Loss rate: 1.24%

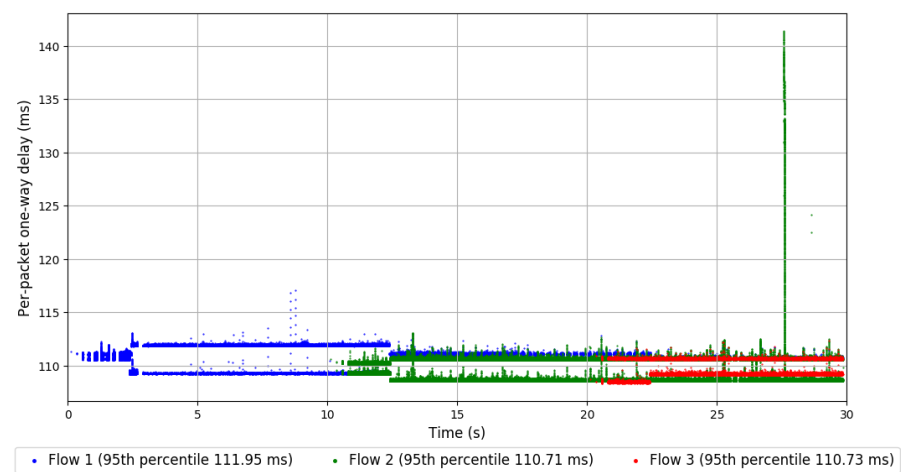
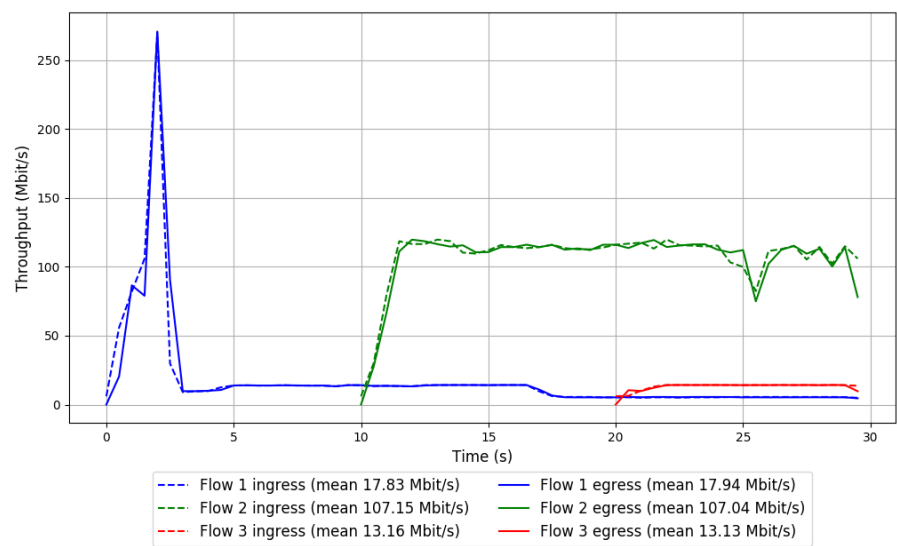
-- Flow 3:

Average throughput: 13.13 Mbit/s

95th percentile per-packet one-way delay: 110.731 ms

Loss rate: 2.68%

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

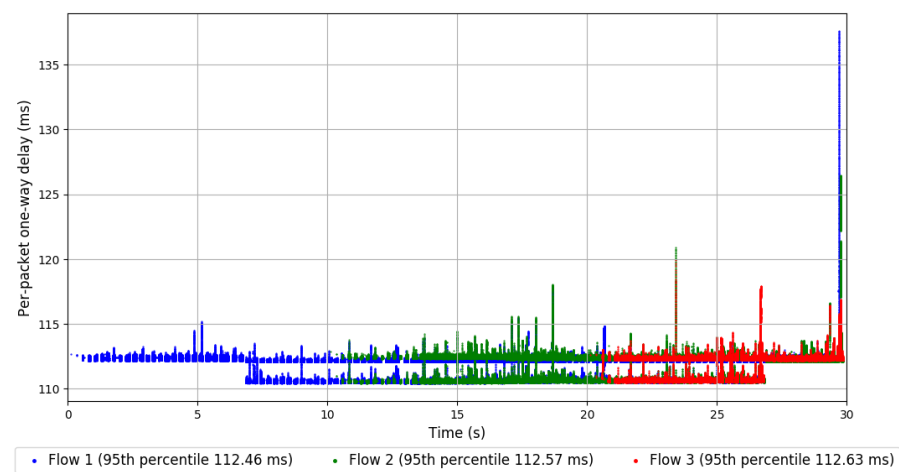
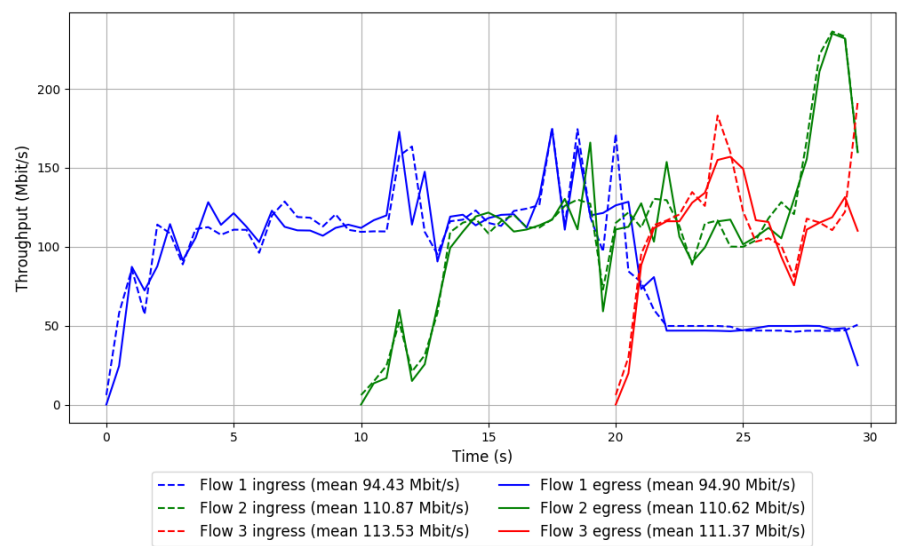


```
Run 5: Statistics of TaoVA-100x

Start at: 2018-03-27 21:45:31
End at: 2018-03-27 21:46:01

# Below is generated by plot.py at 2018-03-28 03:29:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 204.37 Mbit/s
95th percentile per-packet one-way delay: 112.524 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 94.90 Mbit/s
95th percentile per-packet one-way delay: 112.463 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 110.62 Mbit/s
95th percentile per-packet one-way delay: 112.574 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 111.37 Mbit/s
95th percentile per-packet one-way delay: 112.627 ms
Loss rate: 4.08%
```


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



Run 6: Statistics of TaoVA-100x

Start at: 2018-03-27 22:05:11

End at: 2018-03-27 22:05:41

Below is generated by plot.py at 2018-03-28 03:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 149.96 Mbit/s

95th percentile per-packet one-way delay: 112.609 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 15.92 Mbit/s

95th percentile per-packet one-way delay: 112.575 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 133.35 Mbit/s

95th percentile per-packet one-way delay: 112.167 ms

Loss rate: 0.99%

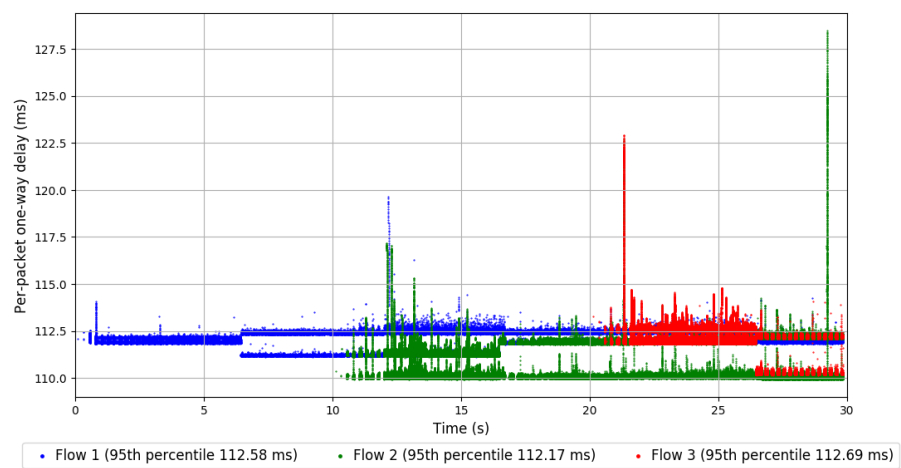
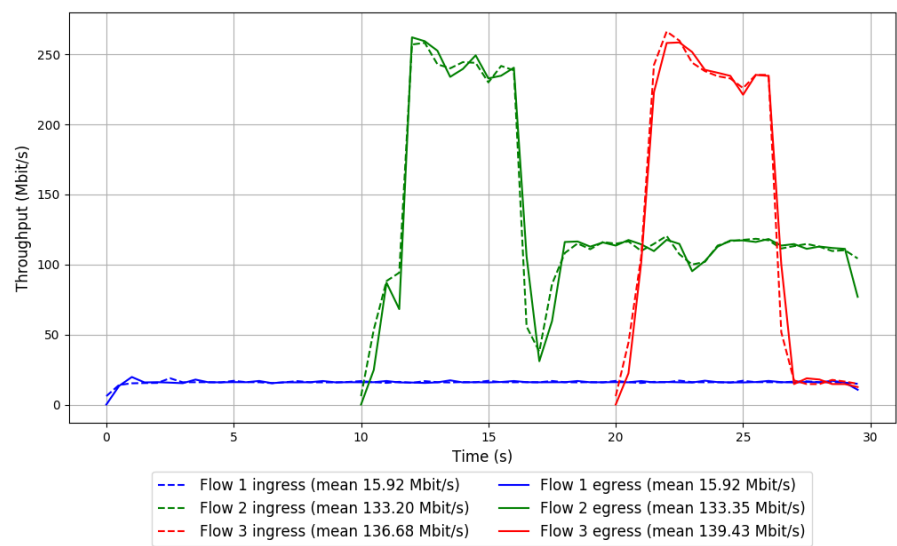
-- Flow 3:

Average throughput: 139.43 Mbit/s

95th percentile per-packet one-way delay: 112.695 ms

Loss rate: 0.28%

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

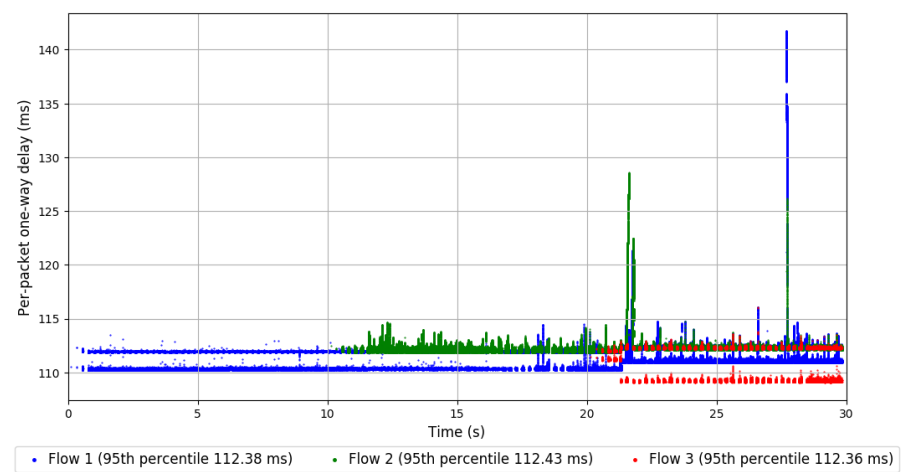
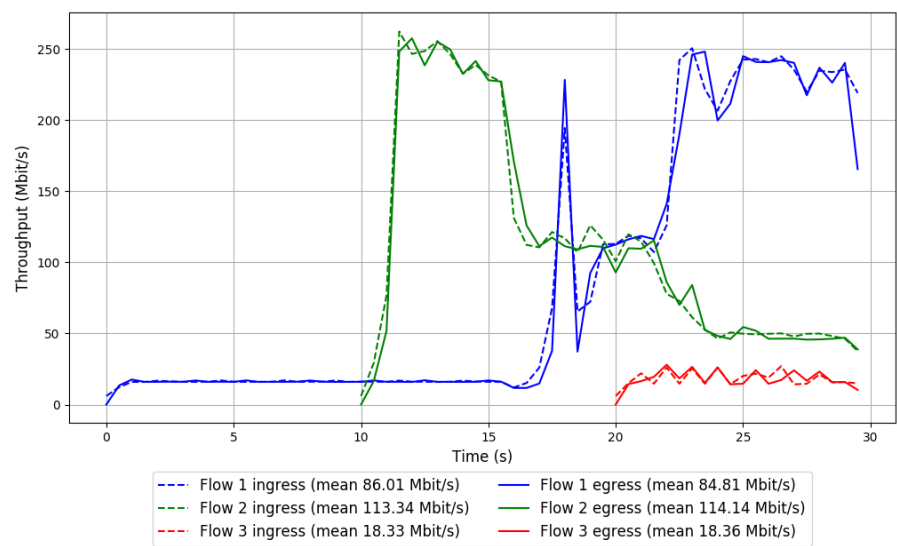


```
Run 7: Statistics of TaoVA-100x

Start at: 2018-03-27 22:25:37
End at: 2018-03-27 22:26:07

# Below is generated by plot.py at 2018-03-28 03:30:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 166.48 Mbit/s
95th percentile per-packet one-way delay: 112.399 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 84.81 Mbit/s
95th percentile per-packet one-way delay: 112.383 ms
Loss rate: 2.12%
-- Flow 2:
Average throughput: 114.14 Mbit/s
95th percentile per-packet one-way delay: 112.432 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 18.36 Mbit/s
95th percentile per-packet one-way delay: 112.361 ms
Loss rate: 2.05%
```

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-03-27 22:45:21

End at: 2018-03-27 22:45:51

Below is generated by plot.py at 2018-03-28 03:30:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 148.64 Mbit/s

95th percentile per-packet one-way delay: 112.805 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 11.34 Mbit/s

95th percentile per-packet one-way delay: 112.696 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 187.02 Mbit/s

95th percentile per-packet one-way delay: 112.815 ms

Loss rate: 1.40%

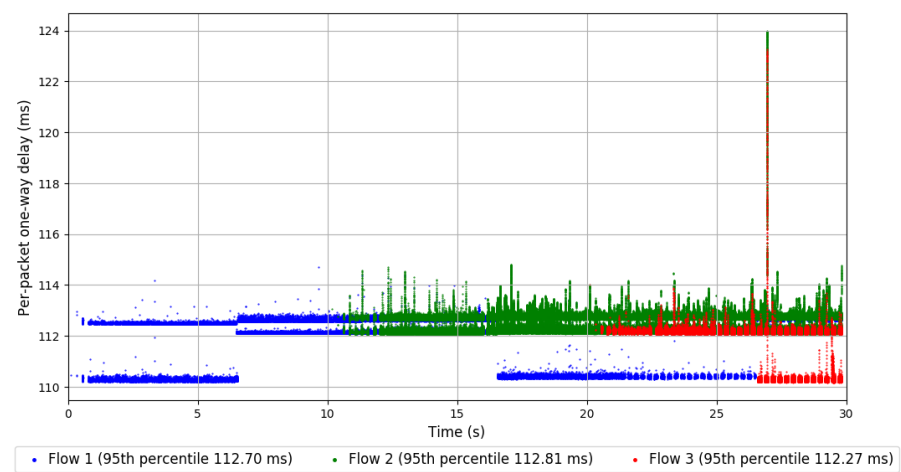
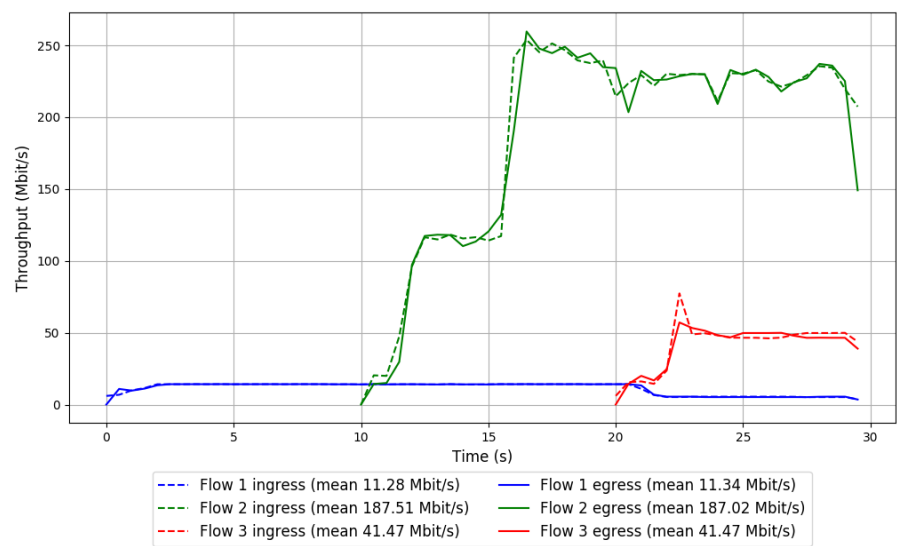
-- Flow 3:

Average throughput: 41.47 Mbit/s

95th percentile per-packet one-way delay: 112.273 ms

Loss rate: 2.30%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-03-27 23:04:54

End at: 2018-03-27 23:05:24

Below is generated by plot.py at 2018-03-28 03:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 207.03 Mbit/s

95th percentile per-packet one-way delay: 112.974 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 147.01 Mbit/s

95th percentile per-packet one-way delay: 113.842 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 53.08 Mbit/s

95th percentile per-packet one-way delay: 113.063 ms

Loss rate: 0.35%

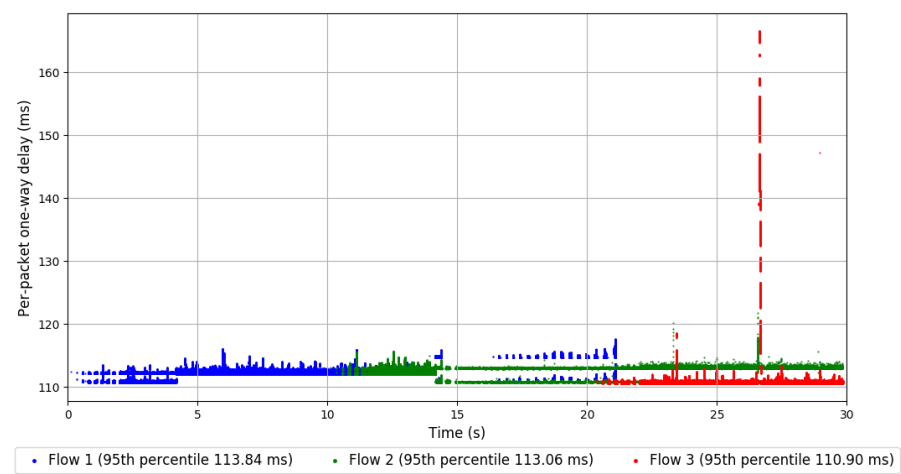
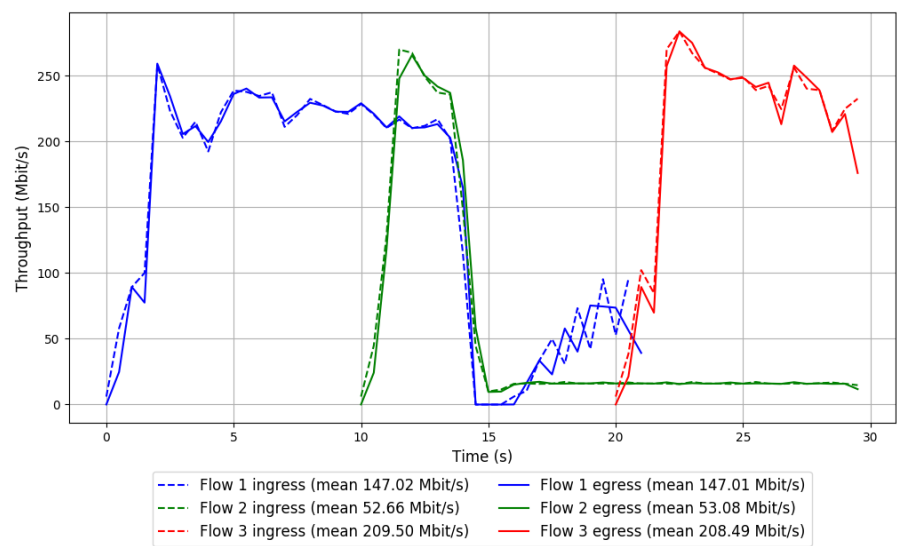
-- Flow 3:

Average throughput: 208.49 Mbit/s

95th percentile per-packet one-way delay: 110.897 ms

Loss rate: 2.73%

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

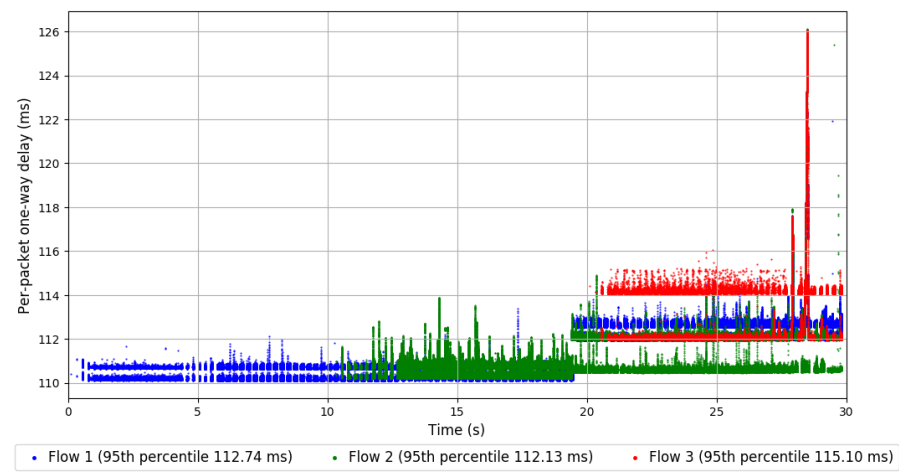
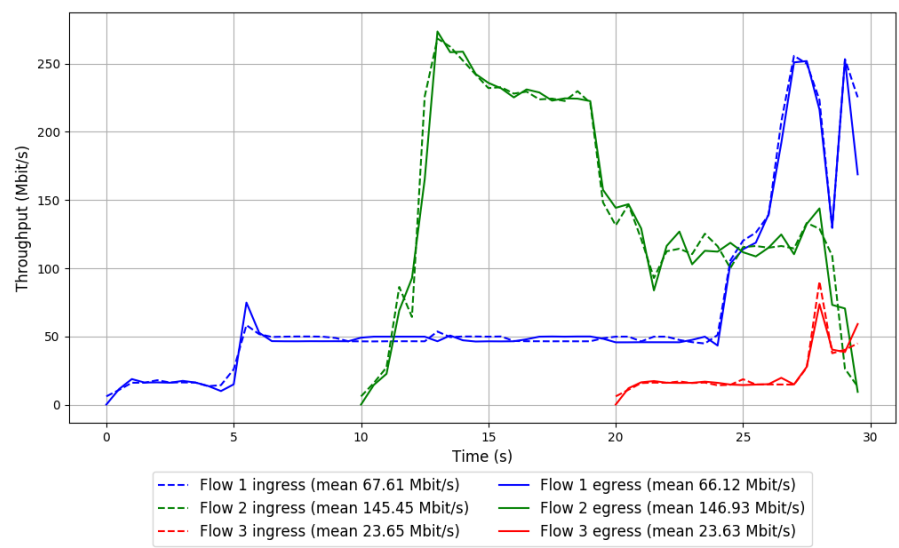


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-03-27 23:24:09
End at: 2018-03-27 23:24:39

# Below is generated by plot.py at 2018-03-28 03:33:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 171.34 Mbit/s
95th percentile per-packet one-way delay: 112.745 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 66.12 Mbit/s
95th percentile per-packet one-way delay: 112.740 ms
Loss rate: 2.92%
-- Flow 2:
Average throughput: 146.93 Mbit/s
95th percentile per-packet one-way delay: 112.131 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 23.63 Mbit/s
95th percentile per-packet one-way delay: 115.101 ms
Loss rate: 0.34%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-03-27 20:39:03

End at: 2018-03-27 20:39:33

Below is generated by plot.py at 2018-03-28 03:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.97 Mbit/s

95th percentile per-packet one-way delay: 118.796 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 57.27 Mbit/s

95th percentile per-packet one-way delay: 119.082 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 21.19 Mbit/s

95th percentile per-packet one-way delay: 112.613 ms

Loss rate: 1.31%

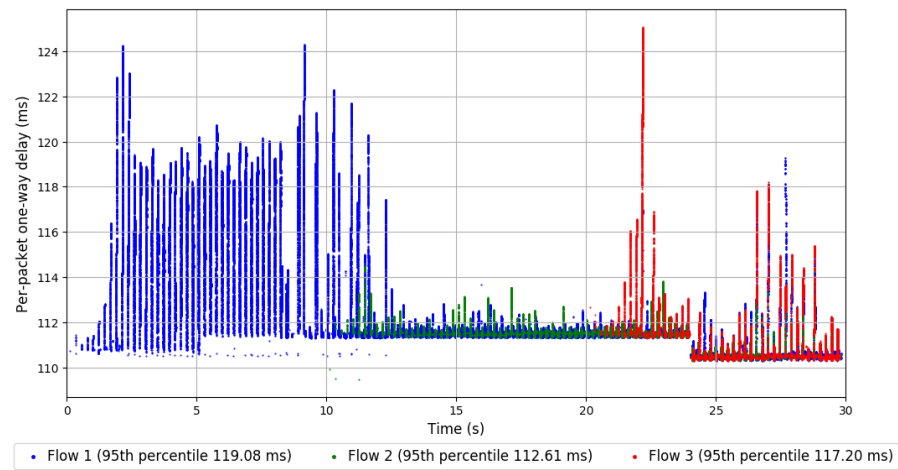
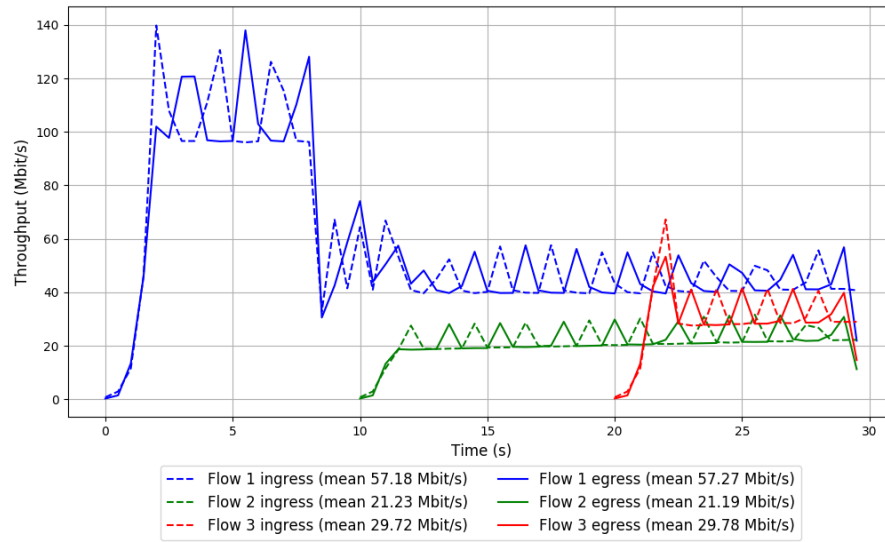
-- Flow 3:

Average throughput: 29.78 Mbit/s

95th percentile per-packet one-way delay: 117.204 ms

Loss rate: 2.46%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-03-27 20:58:03

End at: 2018-03-27 20:58:33

Below is generated by plot.py at 2018-03-28 03:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.83 Mbit/s

95th percentile per-packet one-way delay: 118.242 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 64.57 Mbit/s

95th percentile per-packet one-way delay: 114.312 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 99.29 Mbit/s

95th percentile per-packet one-way delay: 119.105 ms

Loss rate: 1.17%

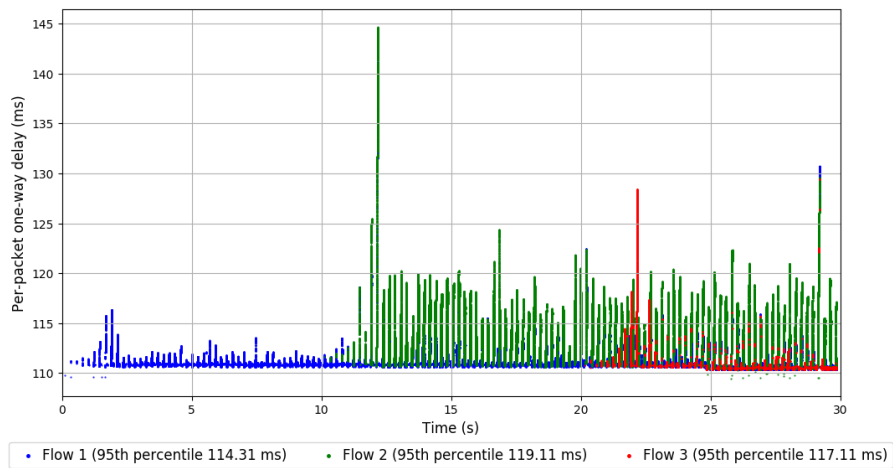
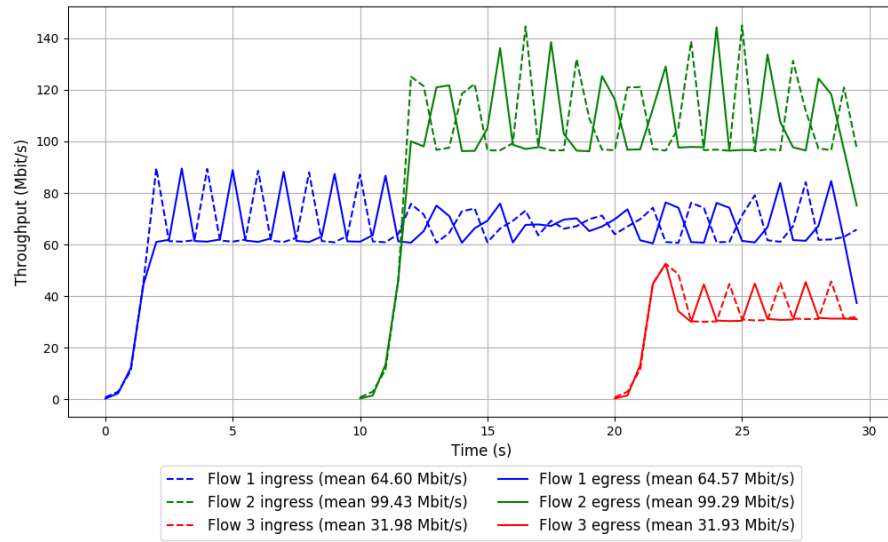
-- Flow 3:

Average throughput: 31.93 Mbit/s

95th percentile per-packet one-way delay: 117.105 ms

Loss rate: 2.47%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-03-27 21:17:17

End at: 2018-03-27 21:17:47

Below is generated by plot.py at 2018-03-28 03:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 126.10 Mbit/s

95th percentile per-packet one-way delay: 116.567 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 48.68 Mbit/s

95th percentile per-packet one-way delay: 114.075 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 100.69 Mbit/s

95th percentile per-packet one-way delay: 117.319 ms

Loss rate: 1.21%

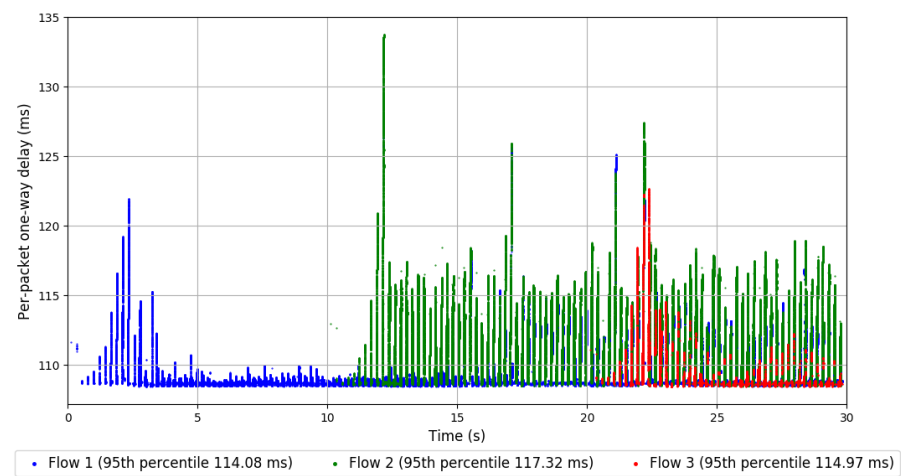
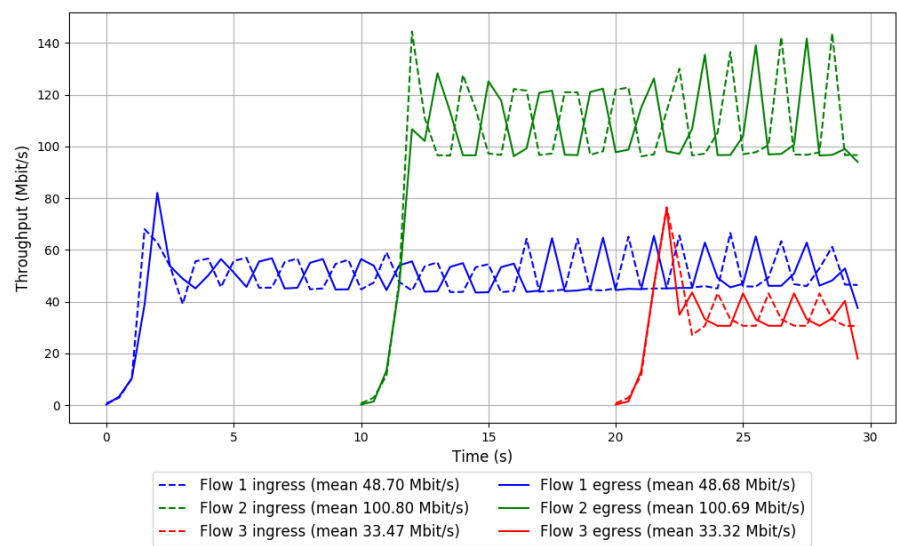
-- Flow 3:

Average throughput: 33.32 Mbit/s

95th percentile per-packet one-way delay: 114.968 ms

Loss rate: 2.30%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-03-27 21:36:09

End at: 2018-03-27 21:36:39

Below is generated by plot.py at 2018-03-28 03:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.52 Mbit/s

95th percentile per-packet one-way delay: 119.409 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 29.19 Mbit/s

95th percentile per-packet one-way delay: 119.320 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 78.32 Mbit/s

95th percentile per-packet one-way delay: 119.931 ms

Loss rate: 0.51%

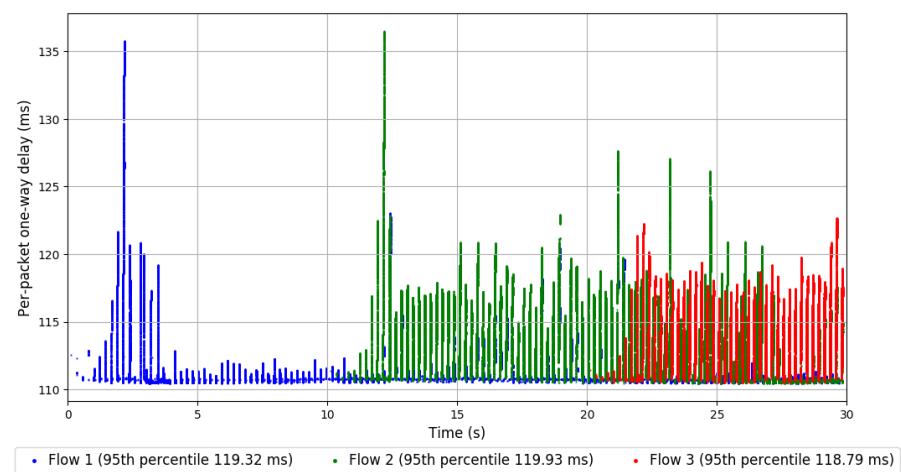
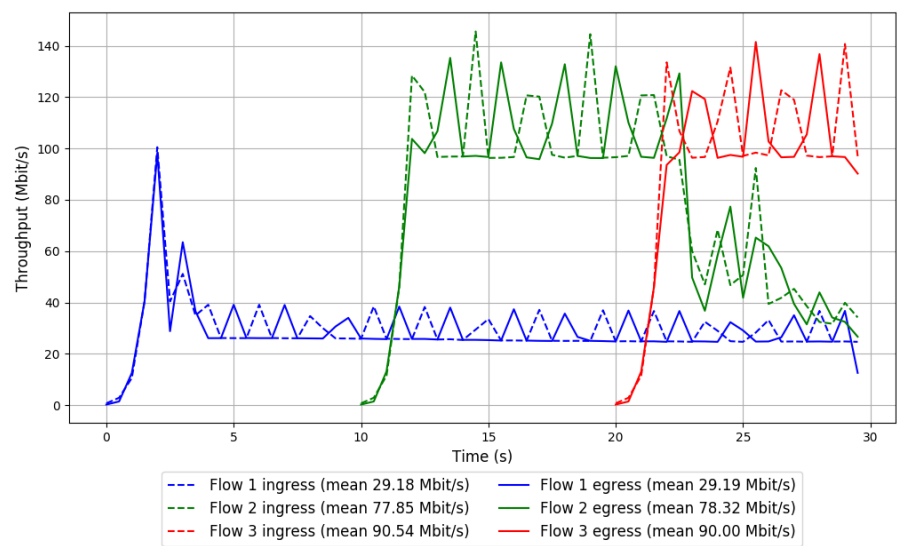
-- Flow 3:

Average throughput: 90.00 Mbit/s

95th percentile per-packet one-way delay: 118.787 ms

Loss rate: 2.82%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-03-27 21:55:50

End at: 2018-03-27 21:56:20

Below is generated by plot.py at 2018-03-28 03:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.62 Mbit/s

95th percentile per-packet one-way delay: 120.113 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 64.58 Mbit/s

95th percentile per-packet one-way delay: 121.345 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 22.09 Mbit/s

95th percentile per-packet one-way delay: 114.605 ms

Loss rate: 1.31%

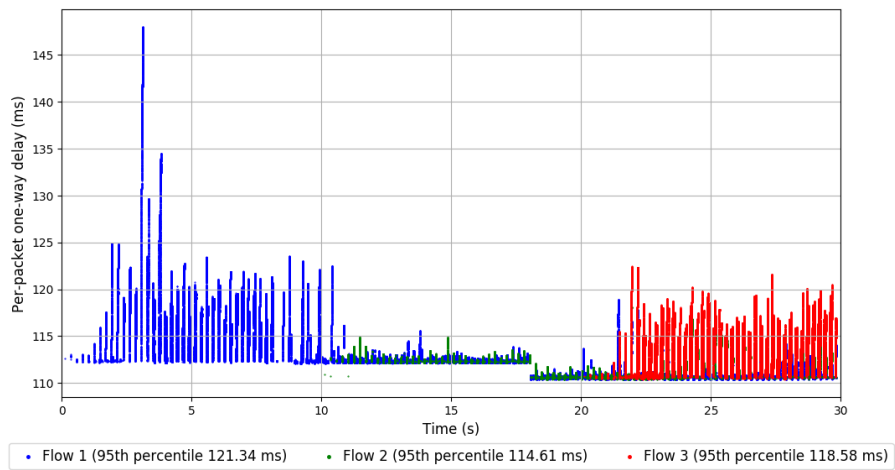
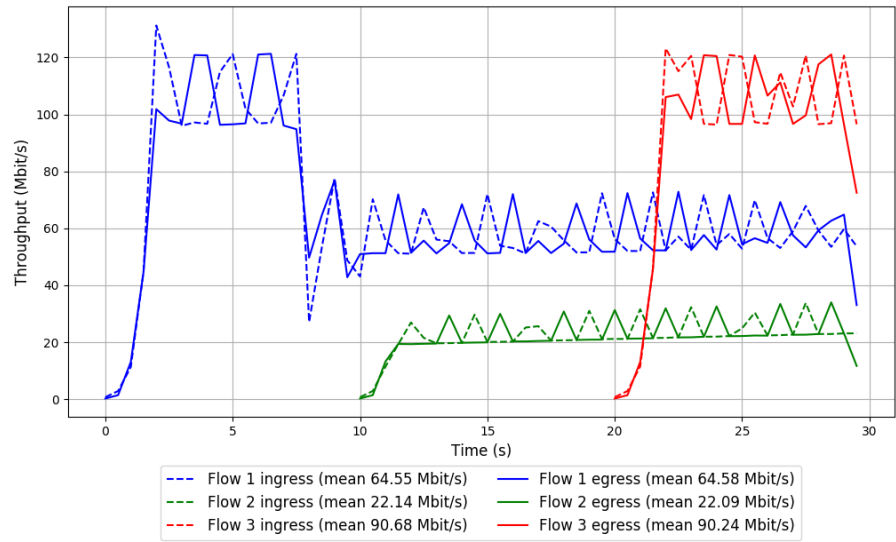
-- Flow 3:

Average throughput: 90.24 Mbit/s

95th percentile per-packet one-way delay: 118.585 ms

Loss rate: 2.68%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-03-27 22:15:32

End at: 2018-03-27 22:16:02

Below is generated by plot.py at 2018-03-28 03:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.23 Mbit/s

95th percentile per-packet one-way delay: 121.276 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 64.89 Mbit/s

95th percentile per-packet one-way delay: 121.340 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 38.71 Mbit/s

95th percentile per-packet one-way delay: 123.209 ms

Loss rate: 0.93%

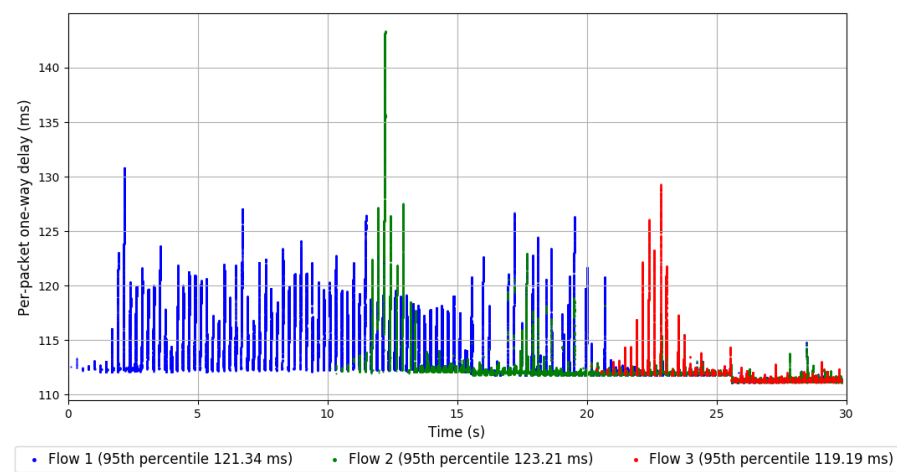
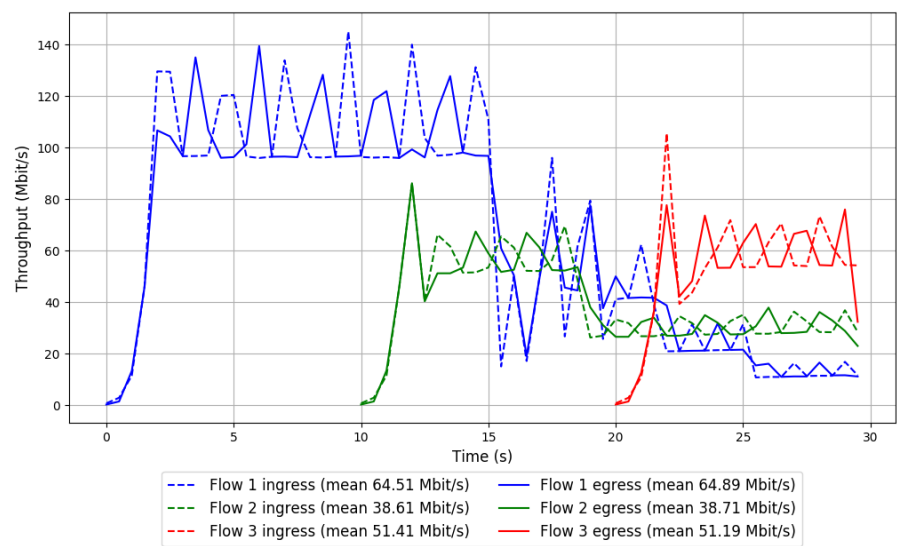
-- Flow 3:

Average throughput: 51.19 Mbit/s

95th percentile per-packet one-way delay: 119.189 ms

Loss rate: 2.66%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-03-27 22:35:50

End at: 2018-03-27 22:36:20

Below is generated by plot.py at 2018-03-28 03:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 62.24 Mbit/s

95th percentile per-packet one-way delay: 118.434 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 32.16 Mbit/s

95th percentile per-packet one-way delay: 119.349 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 31.27 Mbit/s

95th percentile per-packet one-way delay: 118.281 ms

Loss rate: 1.16%

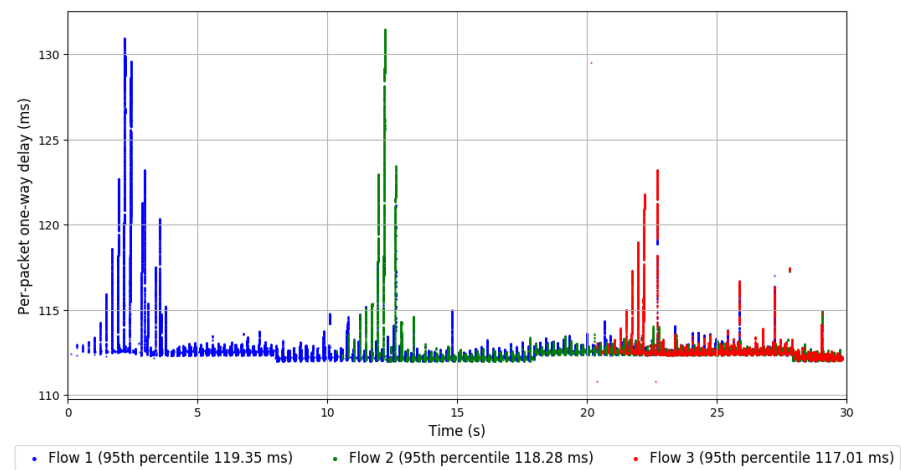
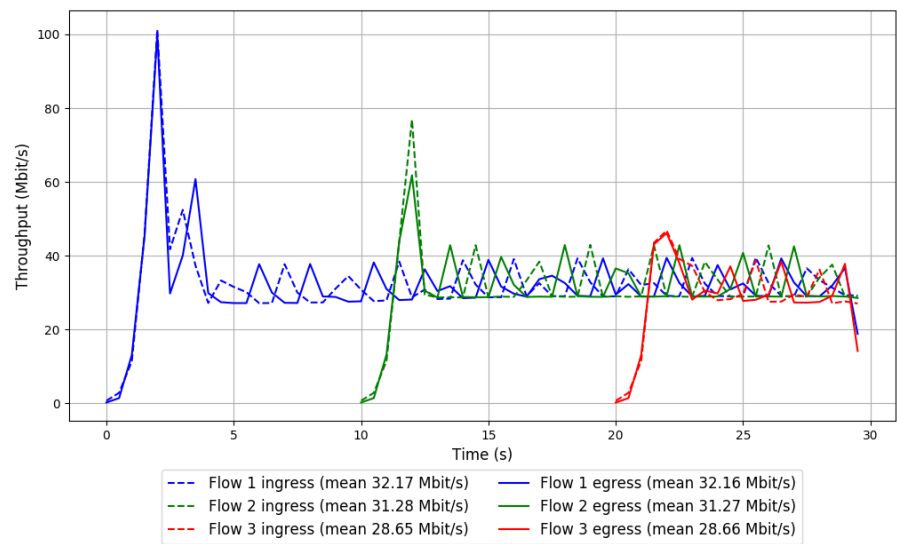
-- Flow 3:

Average throughput: 28.66 Mbit/s

95th percentile per-packet one-way delay: 117.007 ms

Loss rate: 2.38%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-03-27 22:55:35

End at: 2018-03-27 22:56:05

Below is generated by plot.py at 2018-03-28 03:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.52 Mbit/s

95th percentile per-packet one-way delay: 120.023 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 36.14 Mbit/s

95th percentile per-packet one-way delay: 120.561 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 50.05 Mbit/s

95th percentile per-packet one-way delay: 116.786 ms

Loss rate: 1.21%

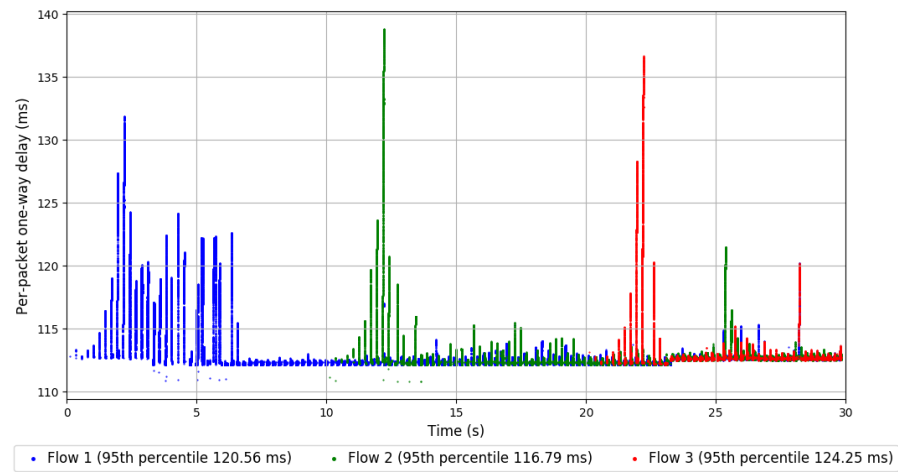
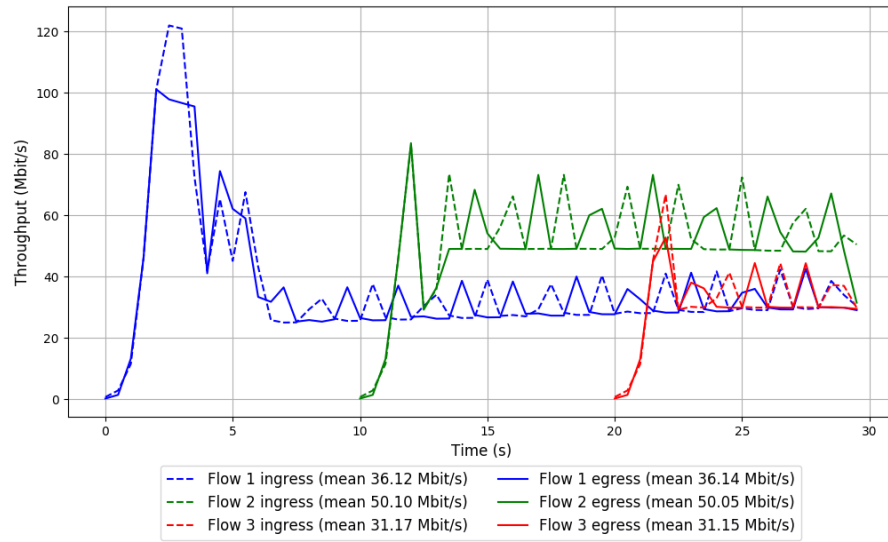
-- Flow 3:

Average throughput: 31.15 Mbit/s

95th percentile per-packet one-way delay: 124.252 ms

Loss rate: 2.41%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-03-27 23:14:48

End at: 2018-03-27 23:15:19

Below is generated by plot.py at 2018-03-28 03:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.86 Mbit/s

95th percentile per-packet one-way delay: 115.932 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 57.81 Mbit/s

95th percentile per-packet one-way delay: 114.560 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 45.99 Mbit/s

95th percentile per-packet one-way delay: 114.160 ms

Loss rate: 1.18%

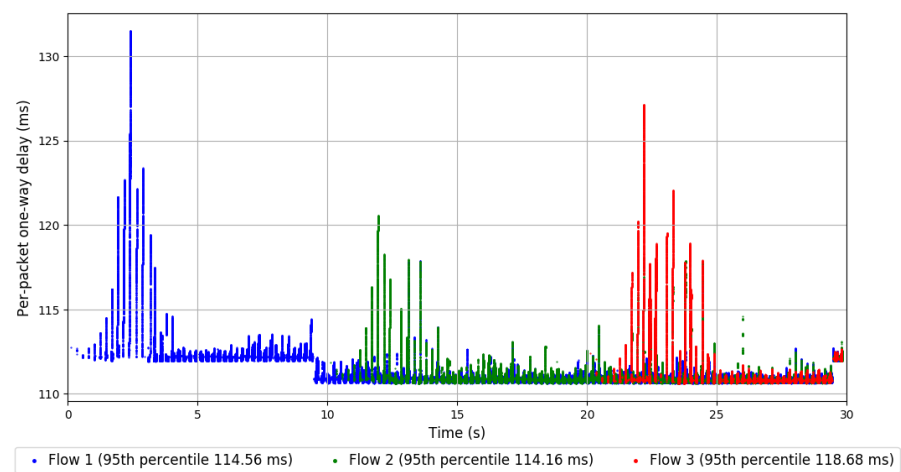
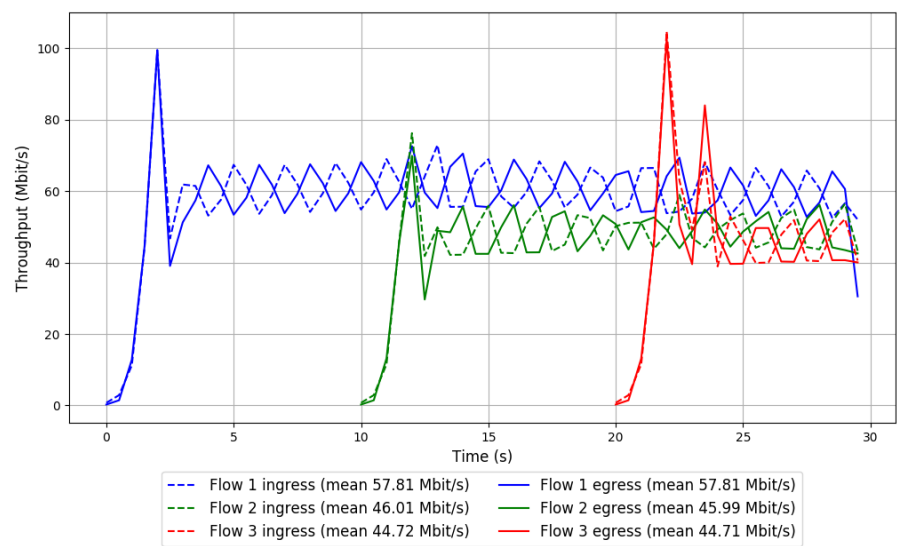
-- Flow 3:

Average throughput: 44.71 Mbit/s

95th percentile per-packet one-way delay: 118.677 ms

Loss rate: 2.29%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-03-27 23:34:02

End at: 2018-03-27 23:34:32

Below is generated by plot.py at 2018-03-28 03:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.44 Mbit/s

95th percentile per-packet one-way delay: 120.618 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 8.43 Mbit/s

95th percentile per-packet one-way delay: 116.785 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 95.82 Mbit/s

95th percentile per-packet one-way delay: 120.890 ms

Loss rate: 0.67%

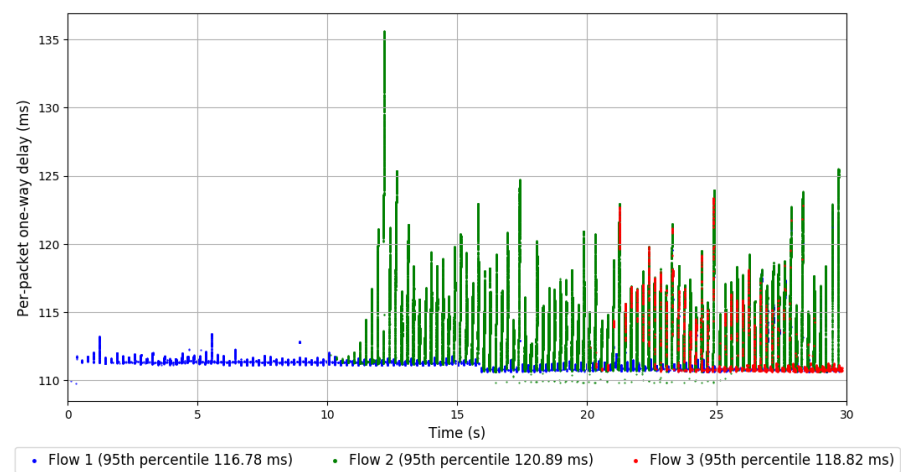
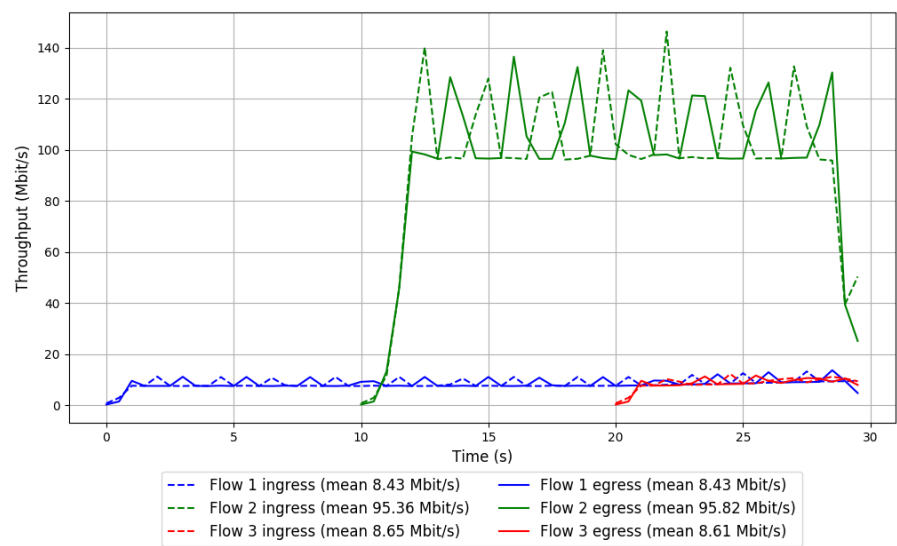
-- Flow 3:

Average throughput: 8.61 Mbit/s

95th percentile per-packet one-way delay: 118.819 ms

Loss rate: 2.71%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-03-27 20:34:50

End at: 2018-03-27 20:35:20

Below is generated by plot.py at 2018-03-28 03:36:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 254.70 Mbit/s

95th percentile per-packet one-way delay: 286.626 ms

Loss rate: 3.04%

-- Flow 1:

Average throughput: 154.59 Mbit/s

95th percentile per-packet one-way delay: 232.515 ms

Loss rate: 1.97%

-- Flow 2:

Average throughput: 140.73 Mbit/s

95th percentile per-packet one-way delay: 314.623 ms

Loss rate: 4.61%

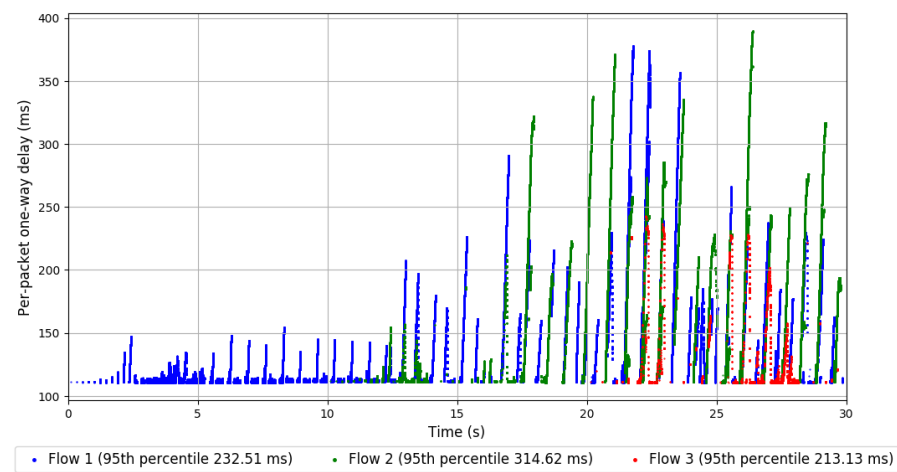
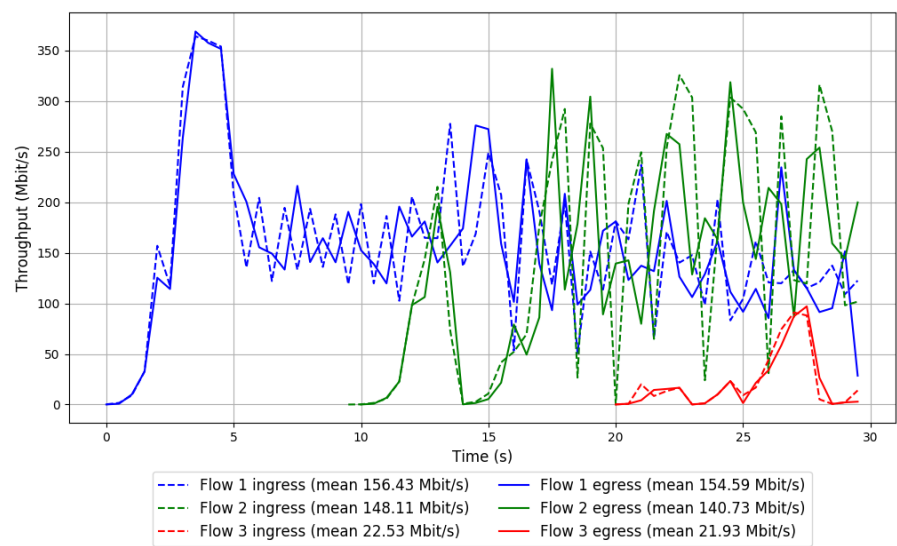
-- Flow 3:

Average throughput: 21.93 Mbit/s

95th percentile per-packet one-way delay: 213.134 ms

Loss rate: 4.93%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-03-27 20:53:53

End at: 2018-03-27 20:54:23

Below is generated by plot.py at 2018-03-28 03:36:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 174.95 Mbit/s

95th percentile per-packet one-way delay: 221.922 ms

Loss rate: 4.06%

-- Flow 1:

Average throughput: 125.88 Mbit/s

95th percentile per-packet one-way delay: 231.698 ms

Loss rate: 4.11%

-- Flow 2:

Average throughput: 57.09 Mbit/s

95th percentile per-packet one-way delay: 150.503 ms

Loss rate: 3.21%

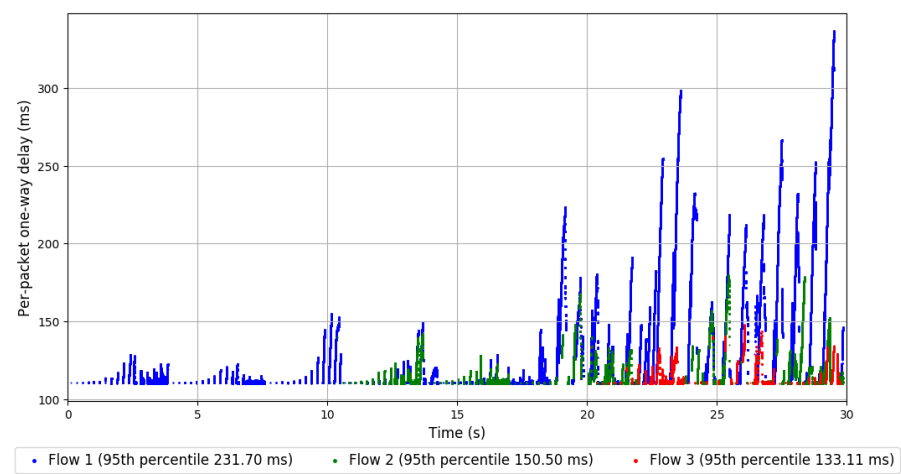
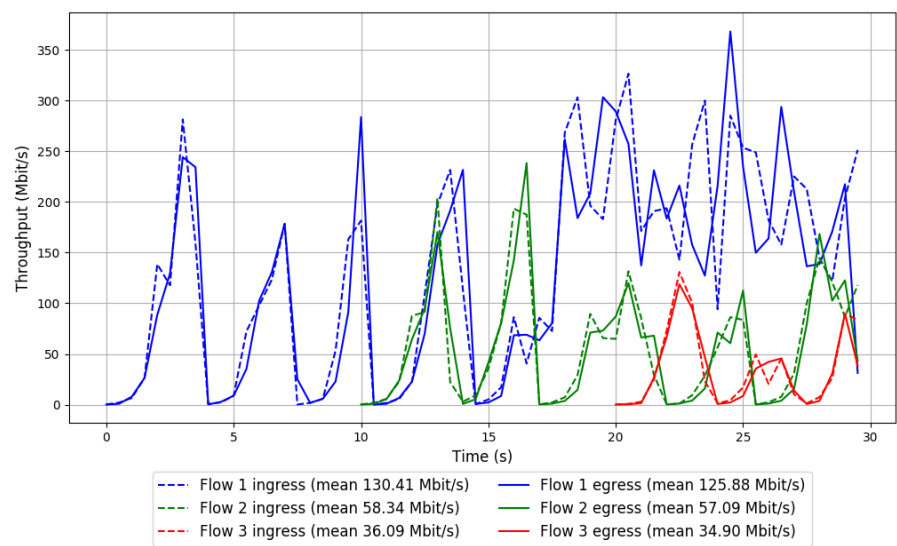
-- Flow 3:

Average throughput: 34.90 Mbit/s

95th percentile per-packet one-way delay: 133.113 ms

Loss rate: 6.34%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-03-27 21:13:03

End at: 2018-03-27 21:13:33

Below is generated by plot.py at 2018-03-28 03:37:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 270.77 Mbit/s

95th percentile per-packet one-way delay: 203.481 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 189.26 Mbit/s

95th percentile per-packet one-way delay: 178.283 ms

Loss rate: 1.59%

-- Flow 2:

Average throughput: 94.30 Mbit/s

95th percentile per-packet one-way delay: 260.070 ms

Loss rate: 0.03%

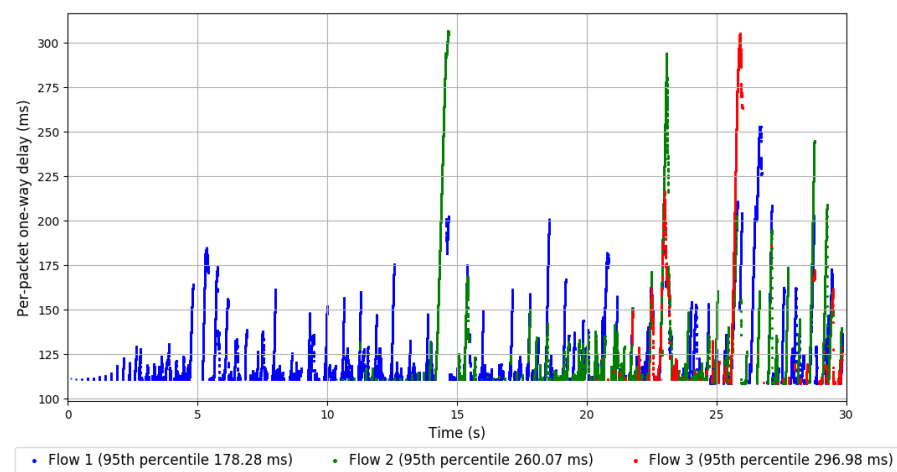
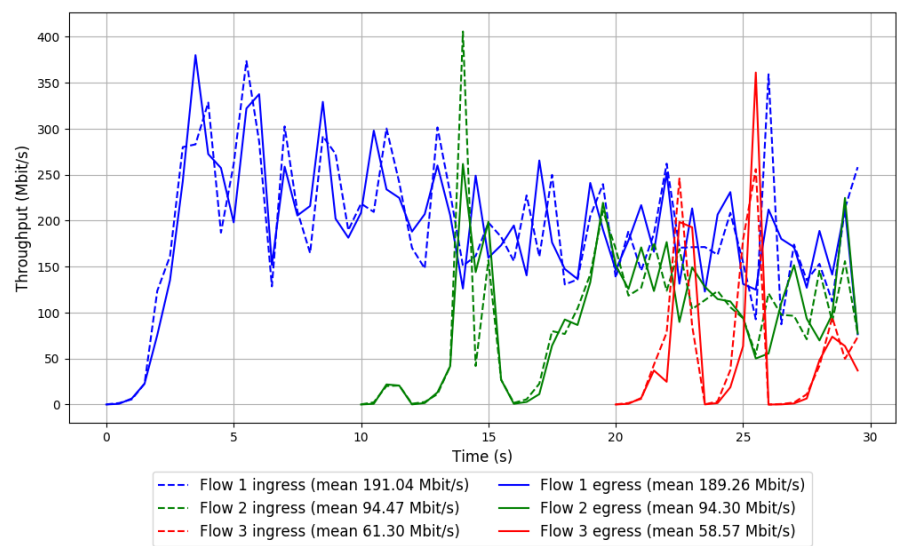
-- Flow 3:

Average throughput: 58.57 Mbit/s

95th percentile per-packet one-way delay: 296.981 ms

Loss rate: 6.19%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-03-27 21:31:54

End at: 2018-03-27 21:32:24

Below is generated by plot.py at 2018-03-28 03:37:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 281.73 Mbit/s

95th percentile per-packet one-way delay: 236.710 ms

Loss rate: 2.67%

-- Flow 1:

Average throughput: 161.65 Mbit/s

95th percentile per-packet one-way delay: 198.592 ms

Loss rate: 2.39%

-- Flow 2:

Average throughput: 168.48 Mbit/s

95th percentile per-packet one-way delay: 289.212 ms

Loss rate: 3.28%

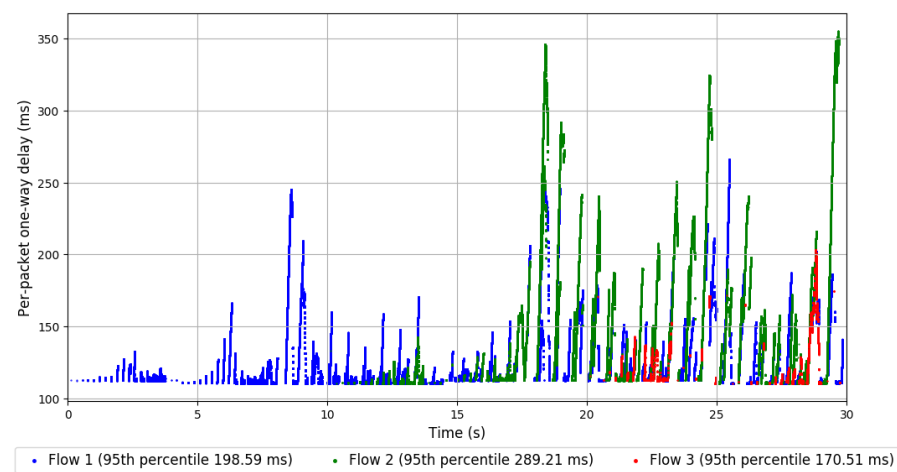
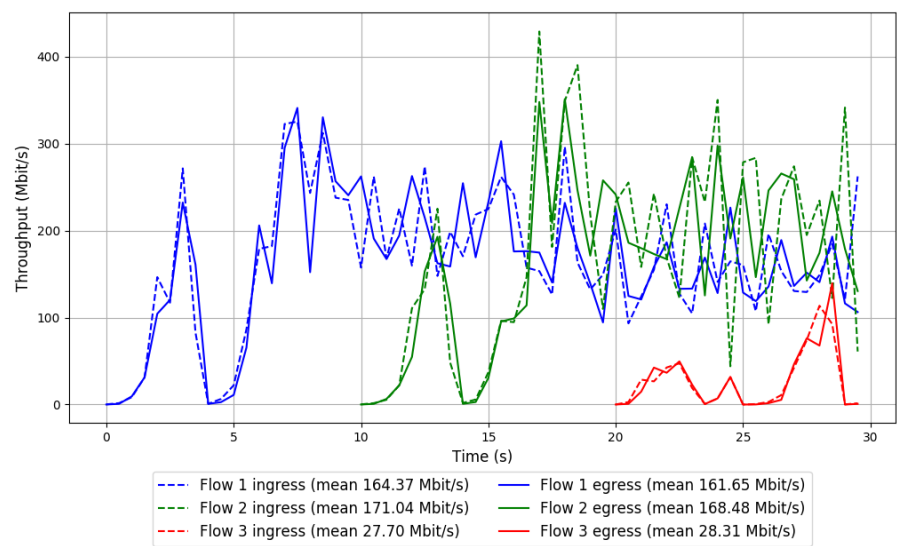
-- Flow 3:

Average throughput: 28.31 Mbit/s

95th percentile per-packet one-way delay: 170.513 ms

Loss rate: 0.16%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-03-27 21:51:09

End at: 2018-03-27 21:51:39

Below is generated by plot.py at 2018-03-28 03:37:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 258.21 Mbit/s

95th percentile per-packet one-way delay: 212.331 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 205.21 Mbit/s

95th percentile per-packet one-way delay: 219.420 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 67.54 Mbit/s

95th percentile per-packet one-way delay: 156.622 ms

Loss rate: 1.31%

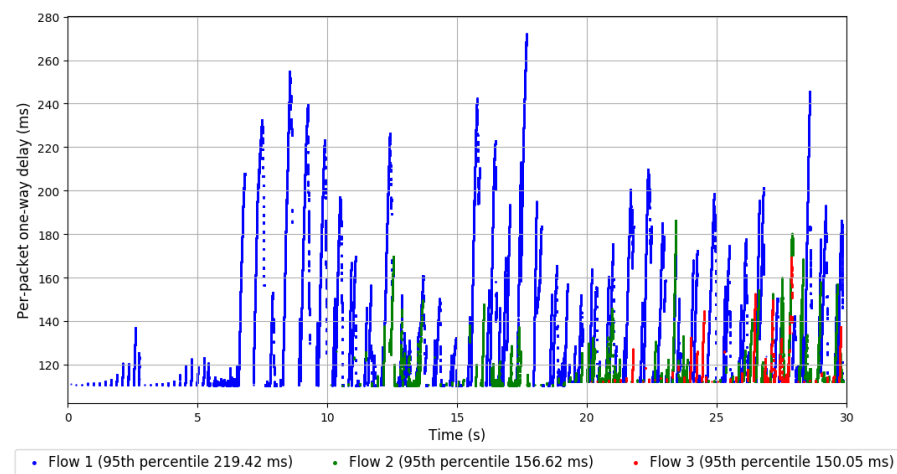
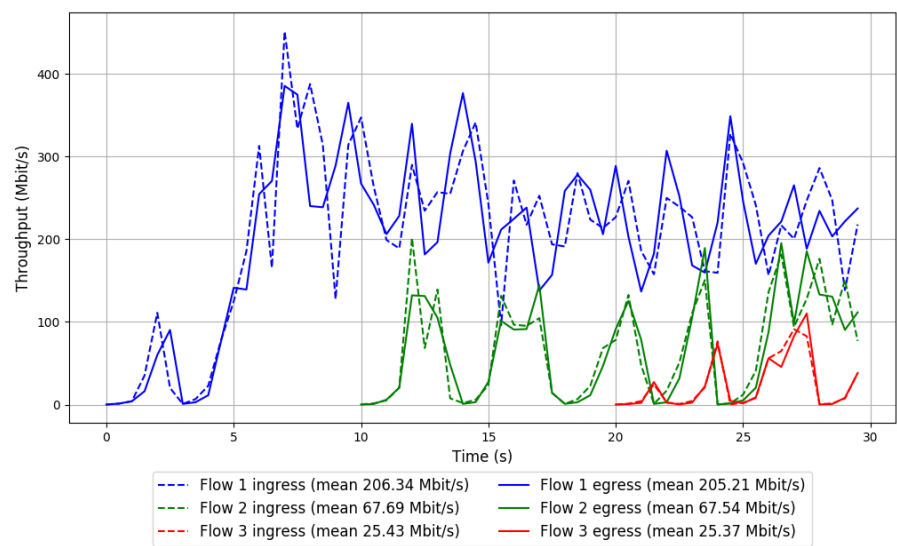
-- Flow 3:

Average throughput: 25.37 Mbit/s

95th percentile per-packet one-way delay: 150.047 ms

Loss rate: 0.00%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-03-27 22:11:09

End at: 2018-03-27 22:11:39

Below is generated by plot.py at 2018-03-28 03:37:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 167.23 Mbit/s

95th percentile per-packet one-way delay: 205.160 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 124.64 Mbit/s

95th percentile per-packet one-way delay: 228.079 ms

Loss rate: 2.48%

-- Flow 2:

Average throughput: 44.88 Mbit/s

95th percentile per-packet one-way delay: 172.719 ms

Loss rate: 0.03%

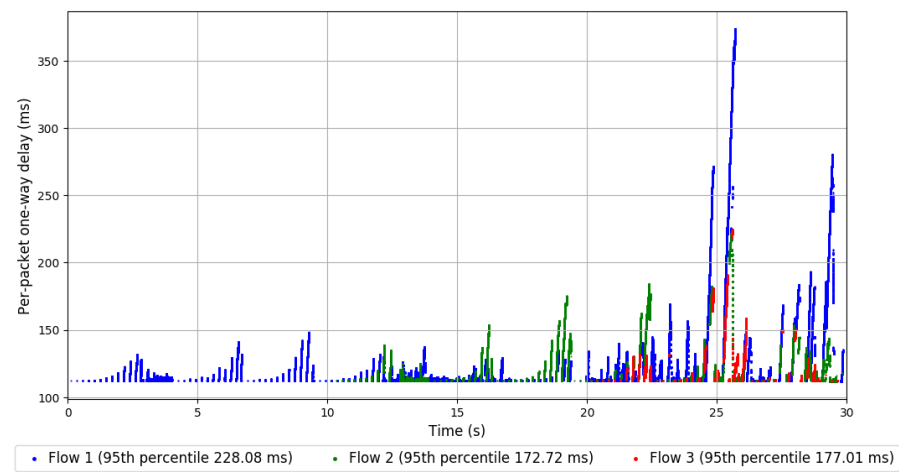
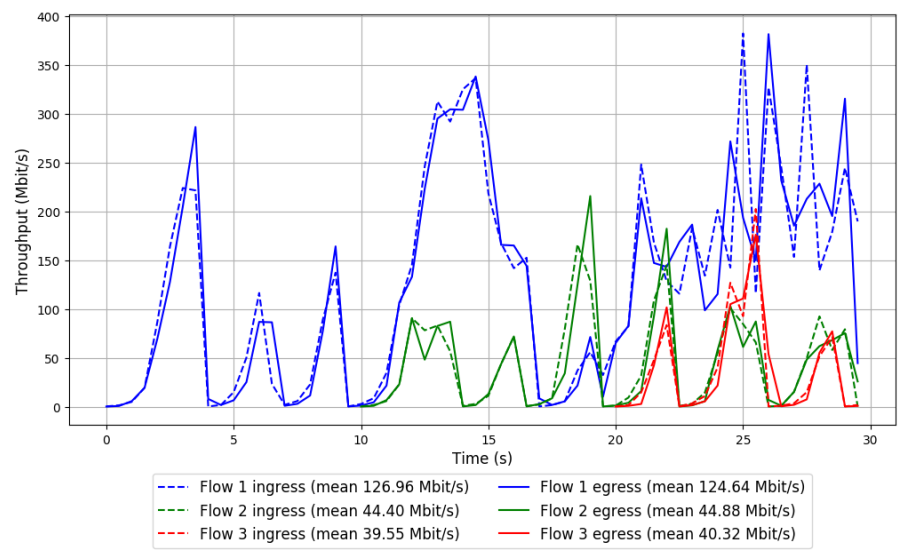
-- Flow 3:

Average throughput: 40.32 Mbit/s

95th percentile per-packet one-way delay: 177.007 ms

Loss rate: 0.43%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-03-27 22:31:40

End at: 2018-03-27 22:32:10

Below is generated by plot.py at 2018-03-28 03:37:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 156.95 Mbit/s

95th percentile per-packet one-way delay: 228.452 ms

Loss rate: 5.49%

-- Flow 1:

Average throughput: 109.69 Mbit/s

95th percentile per-packet one-way delay: 231.677 ms

Loss rate: 3.69%

-- Flow 2:

Average throughput: 49.78 Mbit/s

95th percentile per-packet one-way delay: 221.220 ms

Loss rate: 12.94%

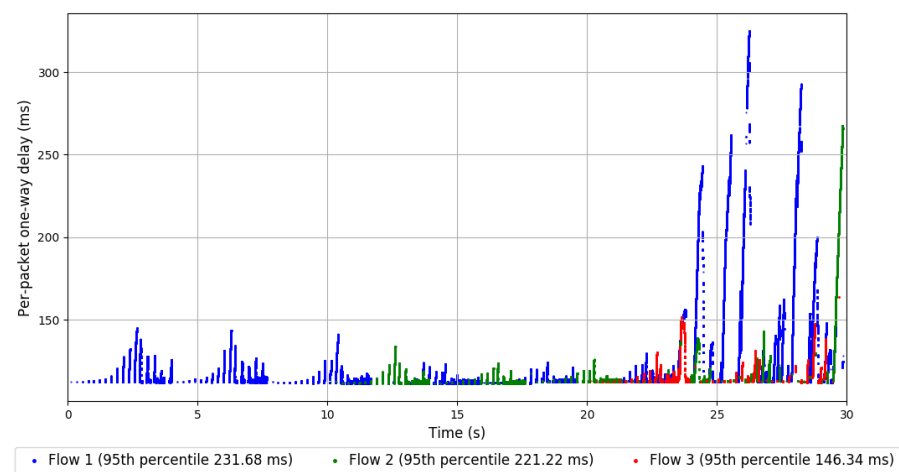
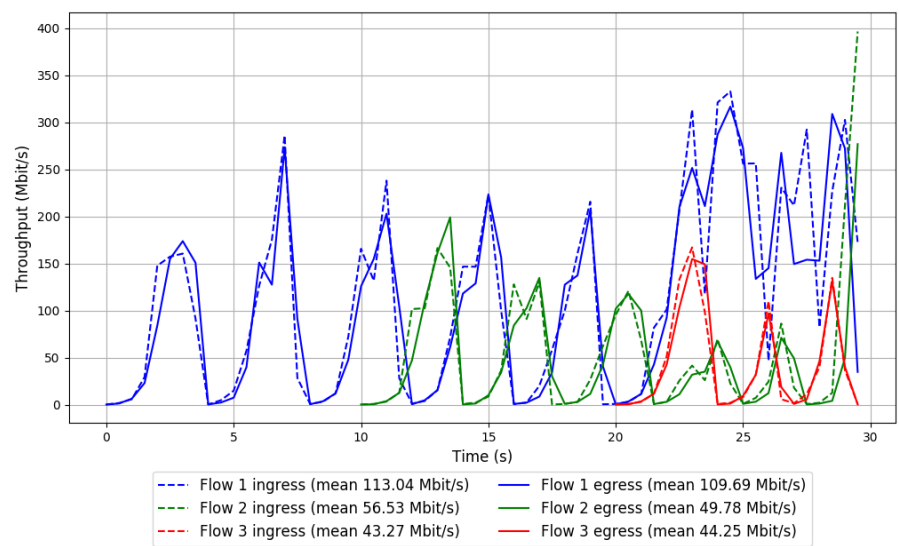
-- Flow 3:

Average throughput: 44.25 Mbit/s

95th percentile per-packet one-way delay: 146.337 ms

Loss rate: 0.06%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-03-27 22:51:15

End at: 2018-03-27 22:51:45

Below is generated by plot.py at 2018-03-28 03:37:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 238.32 Mbit/s

95th percentile per-packet one-way delay: 258.205 ms

Loss rate: 1.60%

-- Flow 1:

Average throughput: 192.67 Mbit/s

95th percentile per-packet one-way delay: 268.970 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 54.56 Mbit/s

95th percentile per-packet one-way delay: 205.263 ms

Loss rate: 2.66%

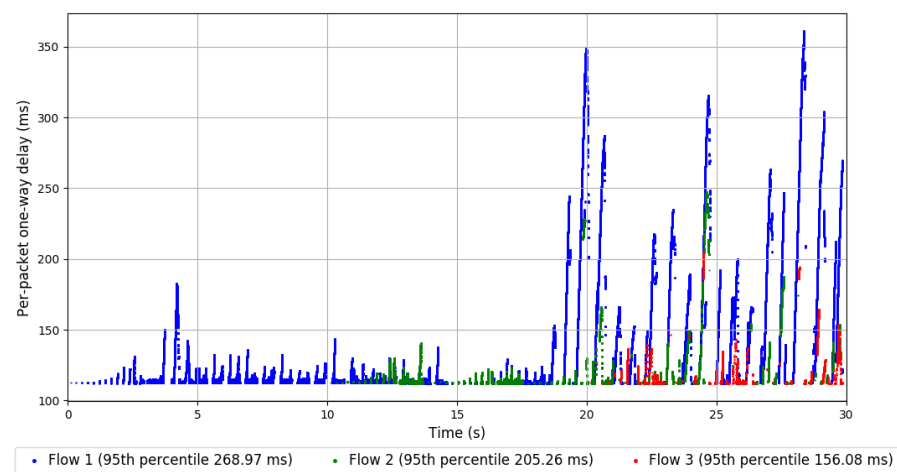
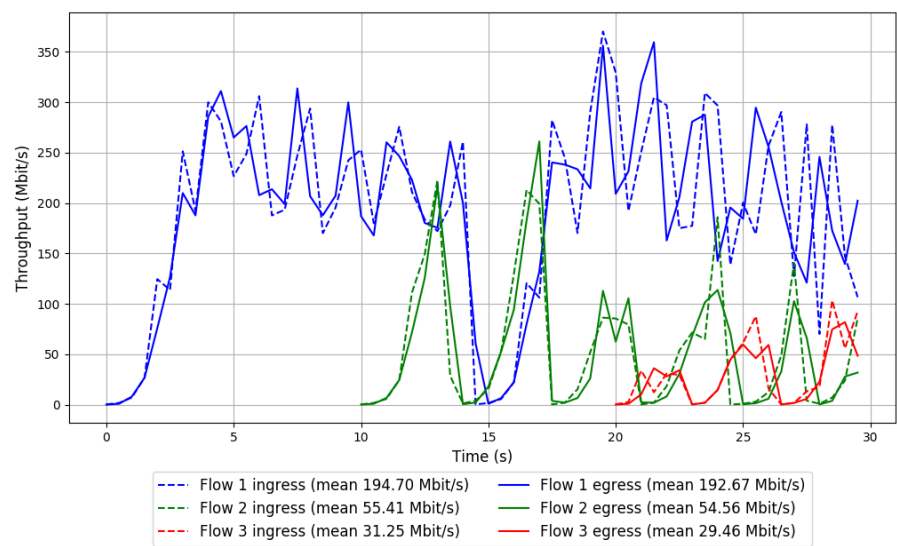
-- Flow 3:

Average throughput: 29.46 Mbit/s

95th percentile per-packet one-way delay: 156.081 ms

Loss rate: 7.96%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-03-27 23:10:30

End at: 2018-03-27 23:11:00

Below is generated by plot.py at 2018-03-28 03:38:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 190.36 Mbit/s

95th percentile per-packet one-way delay: 296.298 ms

Loss rate: 4.79%

-- Flow 1:

Average throughput: 116.77 Mbit/s

95th percentile per-packet one-way delay: 326.587 ms

Loss rate: 4.69%

-- Flow 2:

Average throughput: 96.03 Mbit/s

95th percentile per-packet one-way delay: 230.007 ms

Loss rate: 5.51%

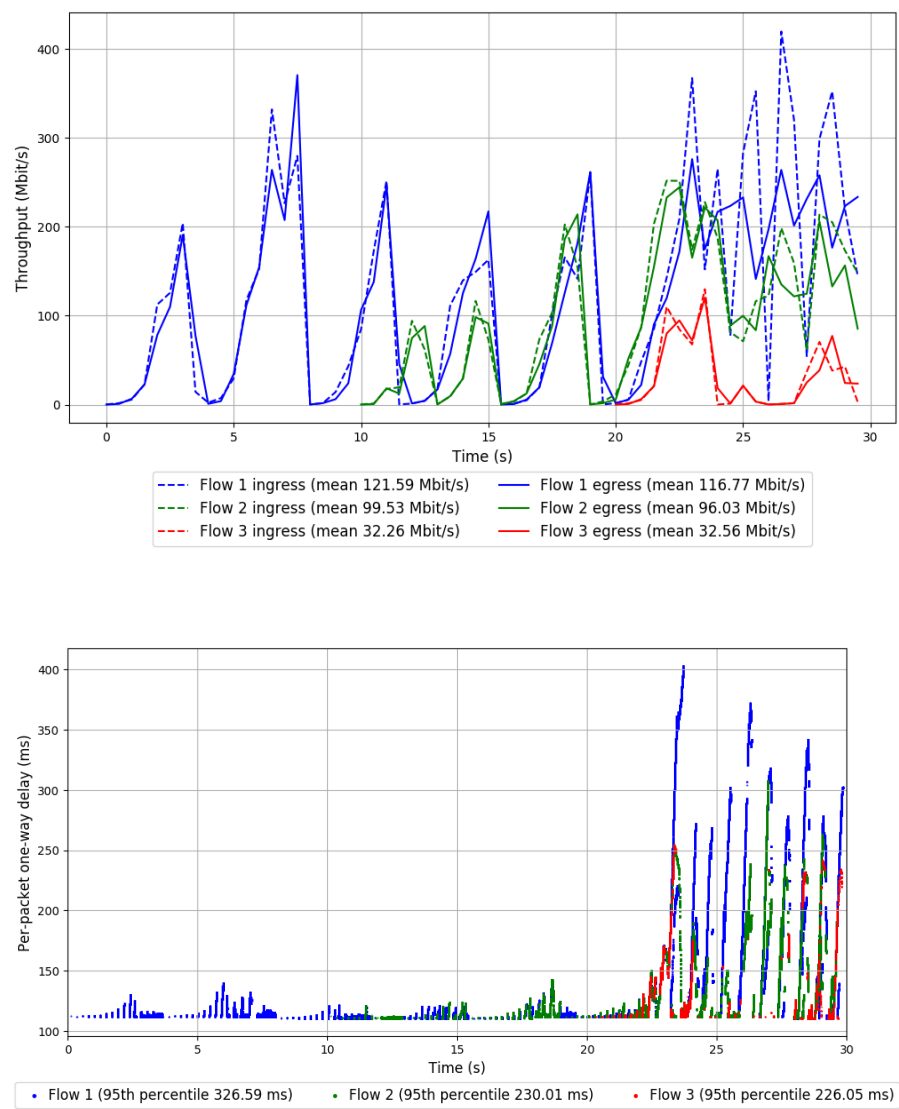
-- Flow 3:

Average throughput: 32.56 Mbit/s

95th percentile per-packet one-way delay: 226.049 ms

Loss rate: 1.49%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-03-27 23:29:46

End at: 2018-03-27 23:30:16

Below is generated by plot.py at 2018-03-28 03:39:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 208.88 Mbit/s

95th percentile per-packet one-way delay: 296.320 ms

Loss rate: 3.55%

-- Flow 1:

Average throughput: 54.34 Mbit/s

95th percentile per-packet one-way delay: 177.306 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 193.86 Mbit/s

95th percentile per-packet one-way delay: 317.108 ms

Loss rate: 4.27%

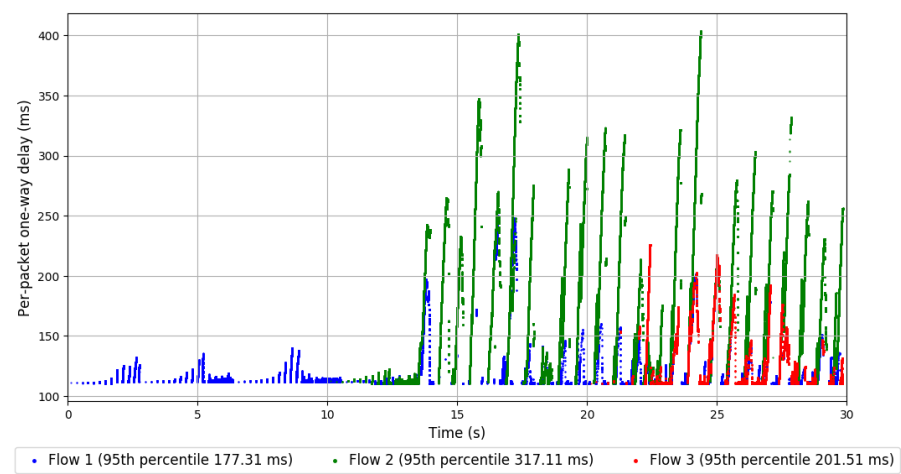
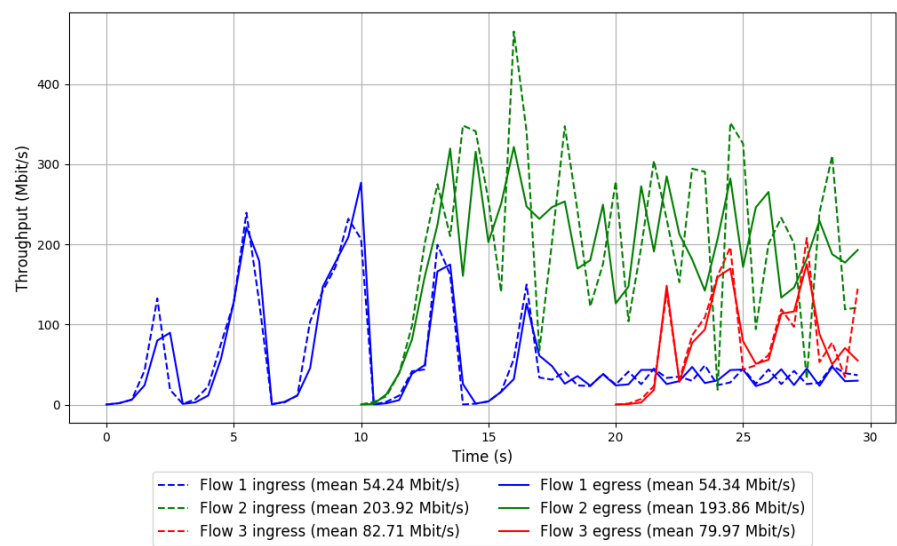
-- Flow 3:

Average throughput: 79.97 Mbit/s

95th percentile per-packet one-way delay: 201.509 ms

Loss rate: 5.51%

Run 10: Report of Verus — Data Link

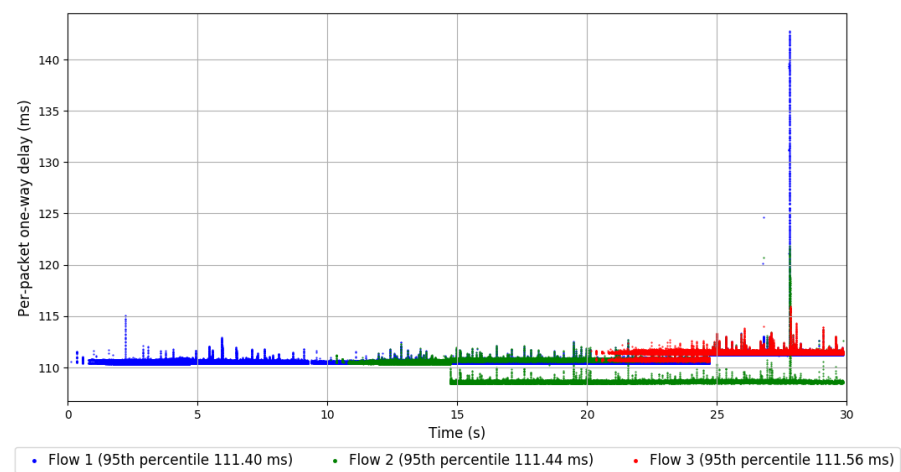
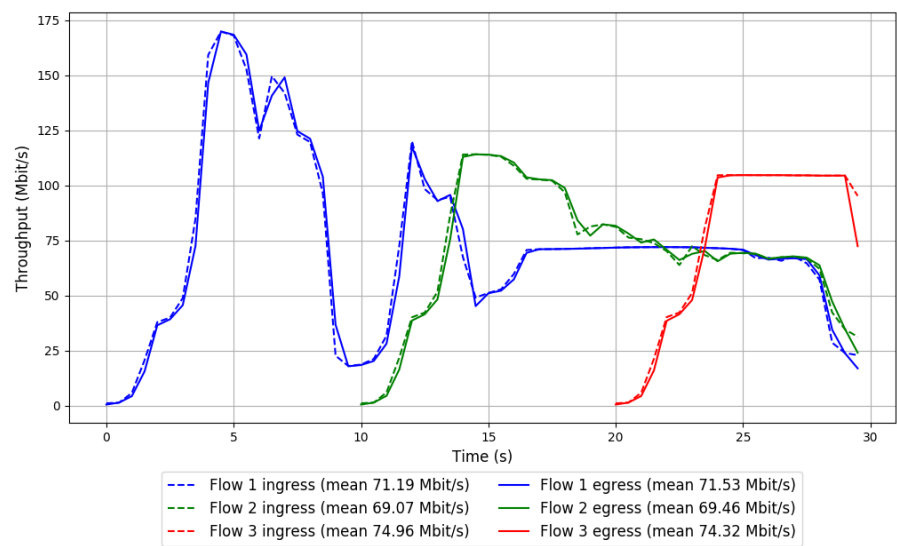


```
Run 1: Statistics of Copa

Start at: 2018-03-27 20:36:43
End at: 2018-03-27 20:37:13

# Below is generated by plot.py at 2018-03-28 03:40:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.86 Mbit/s
95th percentile per-packet one-way delay: 111.481 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 71.53 Mbit/s
95th percentile per-packet one-way delay: 111.401 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 69.46 Mbit/s
95th percentile per-packet one-way delay: 111.435 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 74.32 Mbit/s
95th percentile per-packet one-way delay: 111.562 ms
Loss rate: 3.10%
```

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-03-27 20:55:41

End at: 2018-03-27 20:56:11

Below is generated by plot.py at 2018-03-28 03:40:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.27 Mbit/s

95th percentile per-packet one-way delay: 111.329 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 63.50 Mbit/s

95th percentile per-packet one-way delay: 111.306 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 72.38 Mbit/s

95th percentile per-packet one-way delay: 110.790 ms

Loss rate: 1.02%

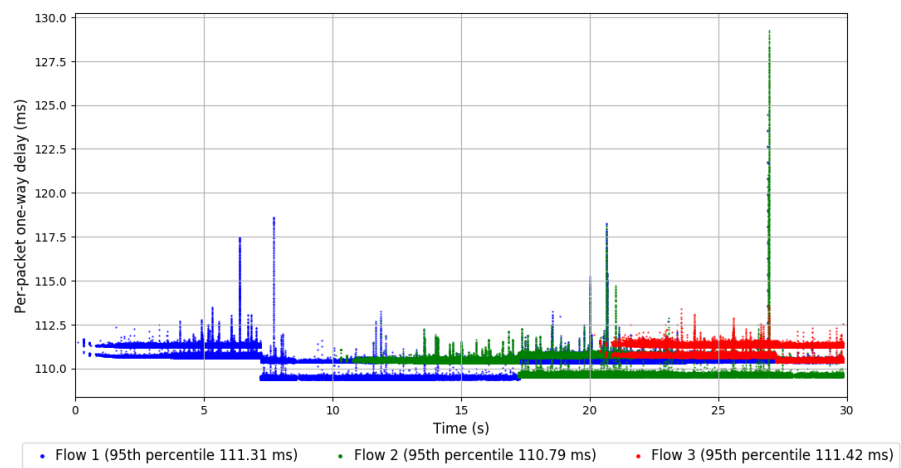
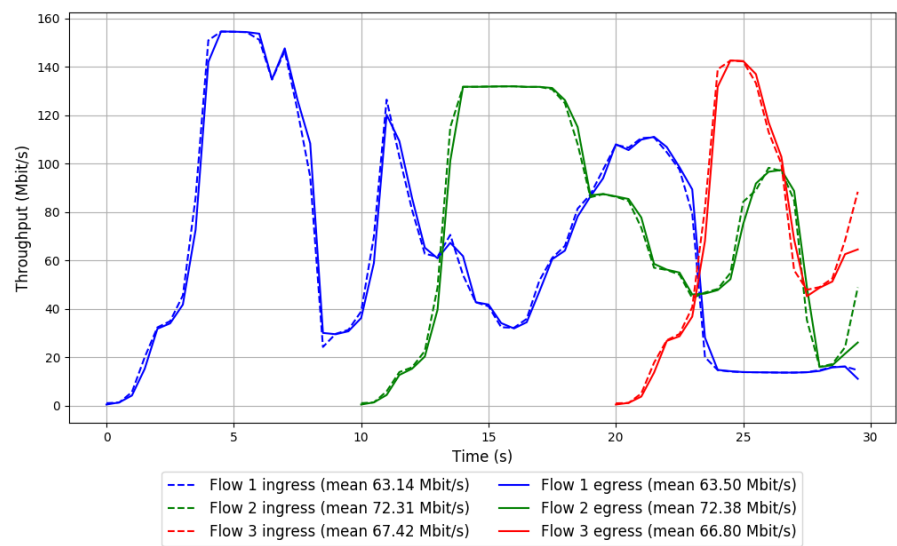
-- Flow 3:

Average throughput: 66.80 Mbit/s

95th percentile per-packet one-way delay: 111.415 ms

Loss rate: 3.13%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-03-27 21:14:57

End at: 2018-03-27 21:15:27

Below is generated by plot.py at 2018-03-28 03:41:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.39 Mbit/s

95th percentile per-packet one-way delay: 111.413 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 59.81 Mbit/s

95th percentile per-packet one-way delay: 111.314 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 67.16 Mbit/s

95th percentile per-packet one-way delay: 111.476 ms

Loss rate: 1.28%

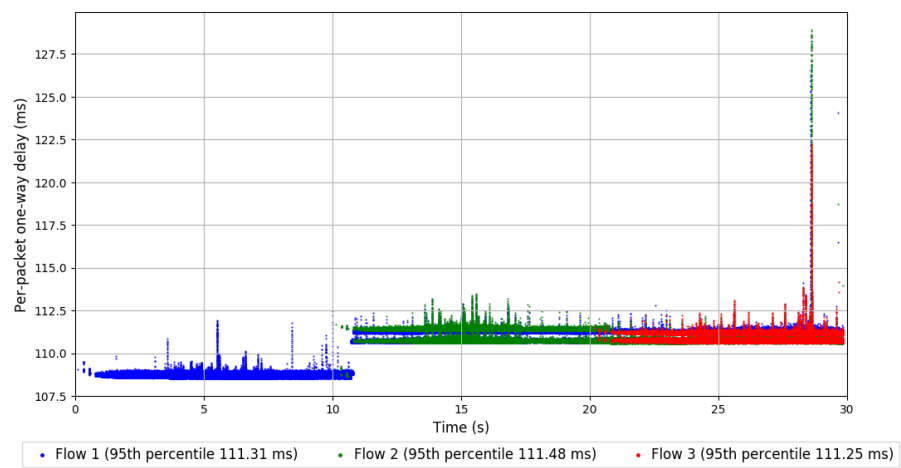
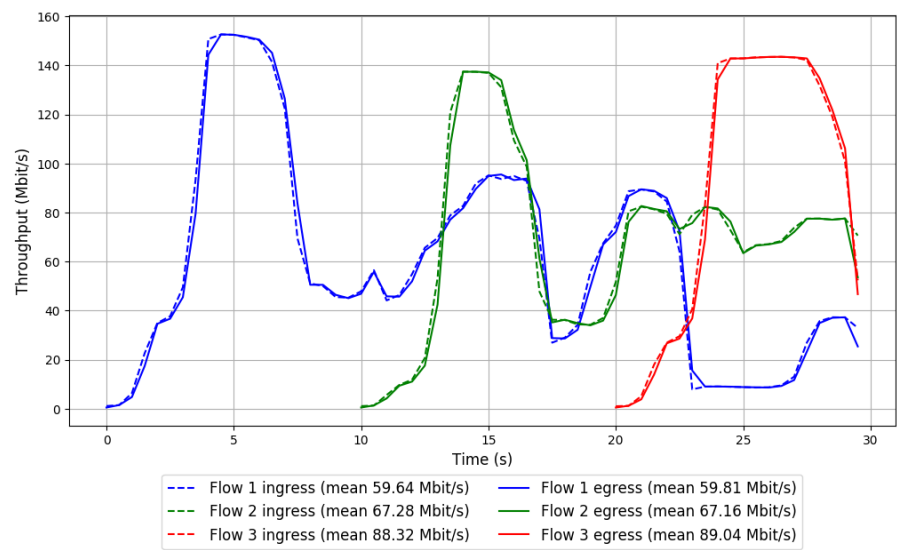
-- Flow 3:

Average throughput: 89.04 Mbit/s

95th percentile per-packet one-way delay: 111.252 ms

Loss rate: 1.45%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-03-27 21:33:49

End at: 2018-03-27 21:34:19

Below is generated by plot.py at 2018-03-28 03:41:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 154.88 Mbit/s

95th percentile per-packet one-way delay: 112.272 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 77.21 Mbit/s

95th percentile per-packet one-way delay: 112.315 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 82.57 Mbit/s

95th percentile per-packet one-way delay: 110.694 ms

Loss rate: 0.89%

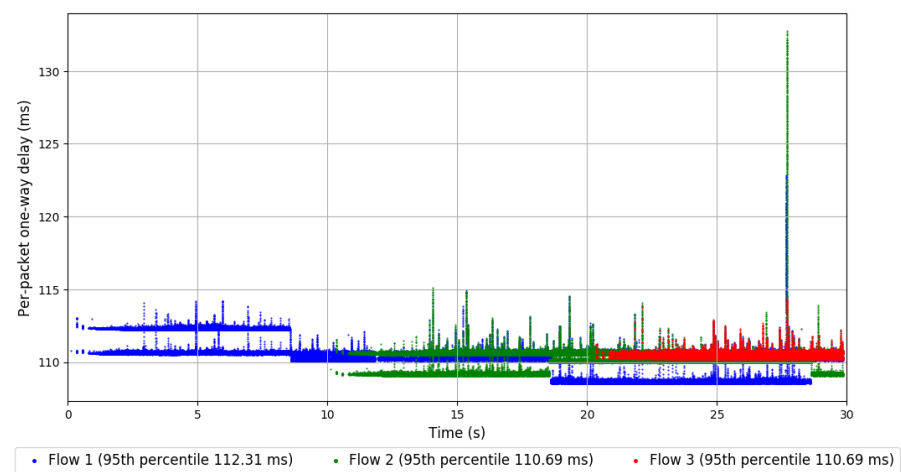
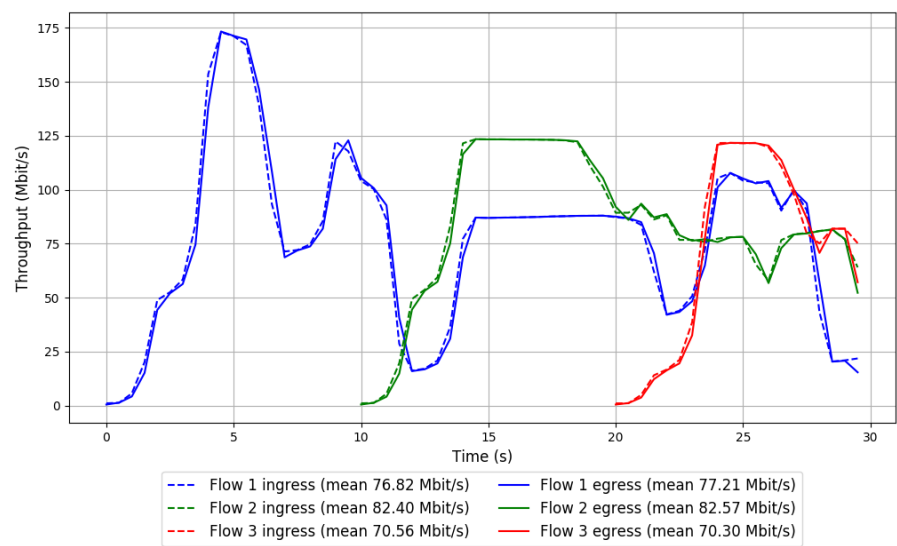
-- Flow 3:

Average throughput: 70.30 Mbit/s

95th percentile per-packet one-way delay: 110.694 ms

Loss rate: 2.59%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-03-27 21:53:02

End at: 2018-03-27 21:53:32

Below is generated by plot.py at 2018-03-28 03:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 414.20 Mbit/s

95th percentile per-packet one-way delay: 295.909 ms

Loss rate: 24.75%

-- Flow 1:

Average throughput: 377.08 Mbit/s

95th percentile per-packet one-way delay: 296.544 ms

Loss rate: 26.49%

-- Flow 2:

Average throughput: 26.55 Mbit/s

95th percentile per-packet one-way delay: 254.045 ms

Loss rate: 2.15%

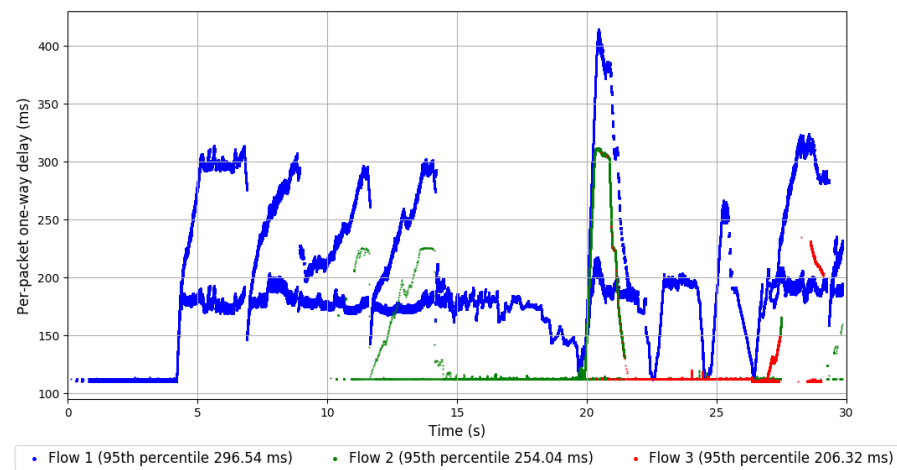
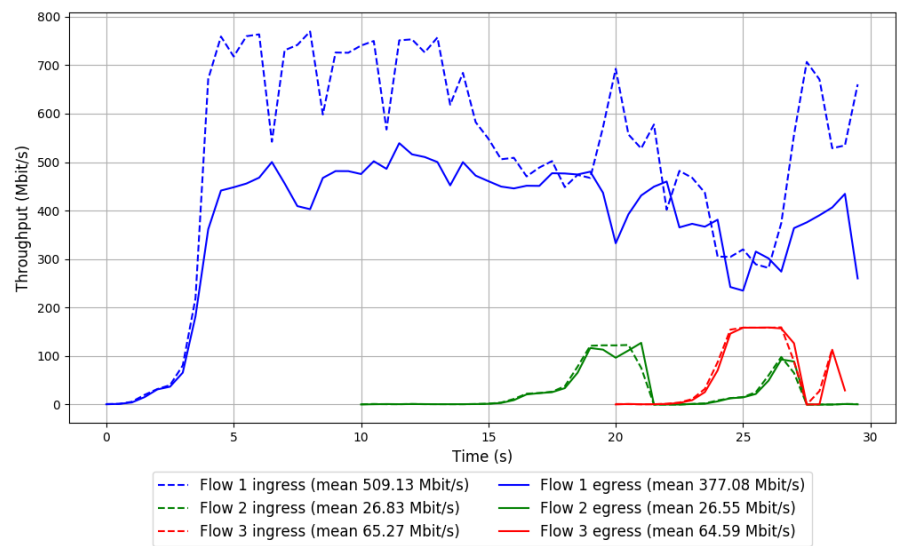
-- Flow 3:

Average throughput: 64.59 Mbit/s

95th percentile per-packet one-way delay: 206.325 ms

Loss rate: 0.03%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-03-27 22:12:55

End at: 2018-03-27 22:13:25

Below is generated by plot.py at 2018-03-28 03:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 130.56 Mbit/s

95th percentile per-packet one-way delay: 112.388 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 70.11 Mbit/s

95th percentile per-packet one-way delay: 112.424 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 58.71 Mbit/s

95th percentile per-packet one-way delay: 112.206 ms

Loss rate: 0.42%

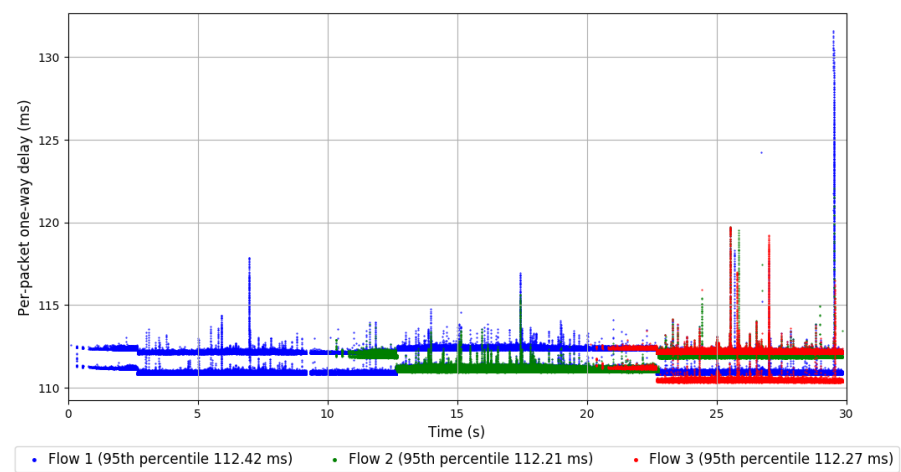
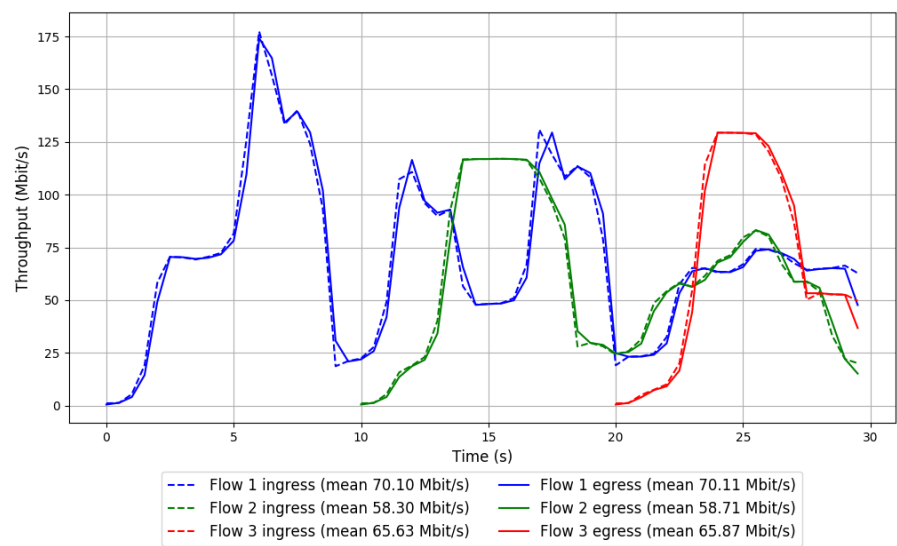
-- Flow 3:

Average throughput: 65.87 Mbit/s

95th percentile per-packet one-way delay: 112.273 ms

Loss rate: 1.90%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-03-27 22:33:27

End at: 2018-03-27 22:33:57

Below is generated by plot.py at 2018-03-28 03:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.64 Mbit/s

95th percentile per-packet one-way delay: 112.624 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 79.41 Mbit/s

95th percentile per-packet one-way delay: 112.123 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 54.97 Mbit/s

95th percentile per-packet one-way delay: 112.624 ms

Loss rate: 1.04%

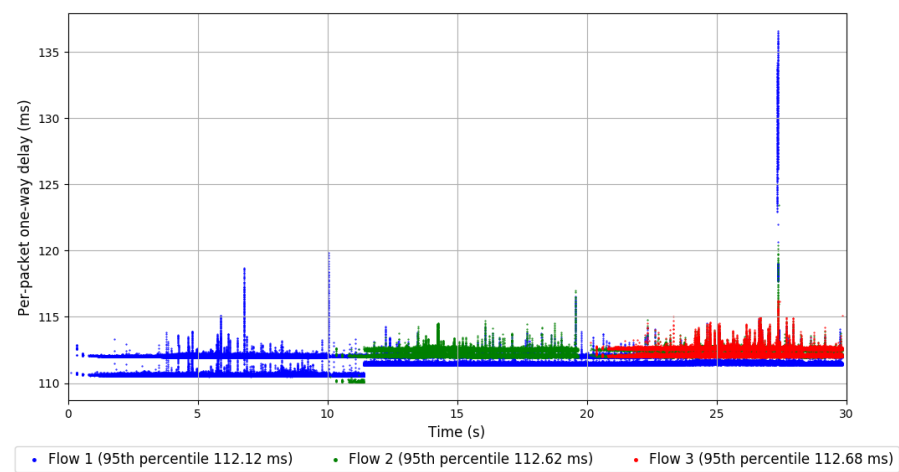
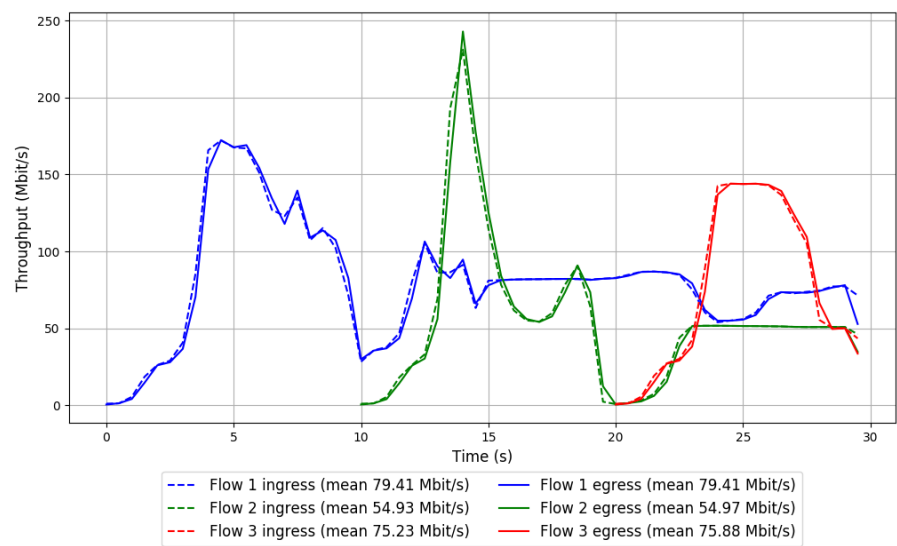
-- Flow 3:

Average throughput: 75.88 Mbit/s

95th percentile per-packet one-way delay: 112.679 ms

Loss rate: 1.41%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-03-27 22:53:08

End at: 2018-03-27 22:53:38

Below is generated by plot.py at 2018-03-28 03:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 143.48 Mbit/s

95th percentile per-packet one-way delay: 112.711 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 72.27 Mbit/s

95th percentile per-packet one-way delay: 112.662 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 74.38 Mbit/s

95th percentile per-packet one-way delay: 112.739 ms

Loss rate: 1.25%

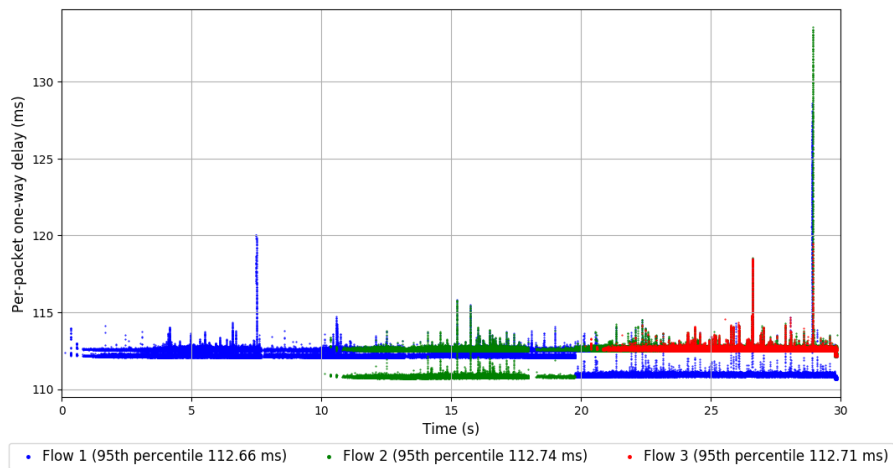
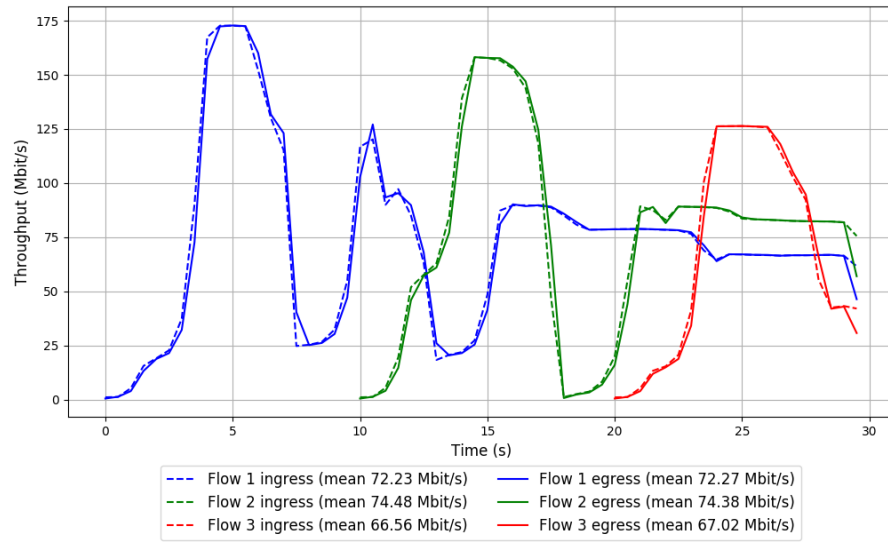
-- Flow 3:

Average throughput: 67.02 Mbit/s

95th percentile per-packet one-way delay: 112.712 ms

Loss rate: 1.60%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-03-27 23:12:19

End at: 2018-03-27 23:12:49

Below is generated by plot.py at 2018-03-28 03:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 149.34 Mbit/s

95th percentile per-packet one-way delay: 112.082 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 79.72 Mbit/s

95th percentile per-packet one-way delay: 112.042 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 72.62 Mbit/s

95th percentile per-packet one-way delay: 112.047 ms

Loss rate: 1.21%

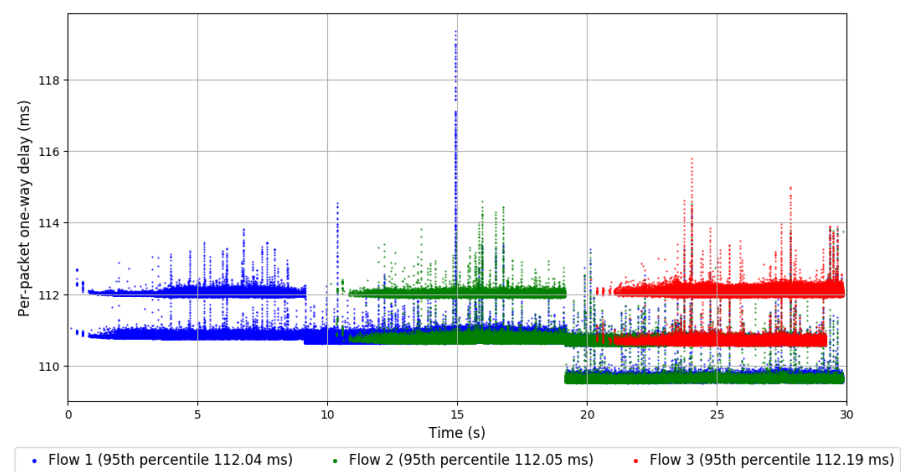
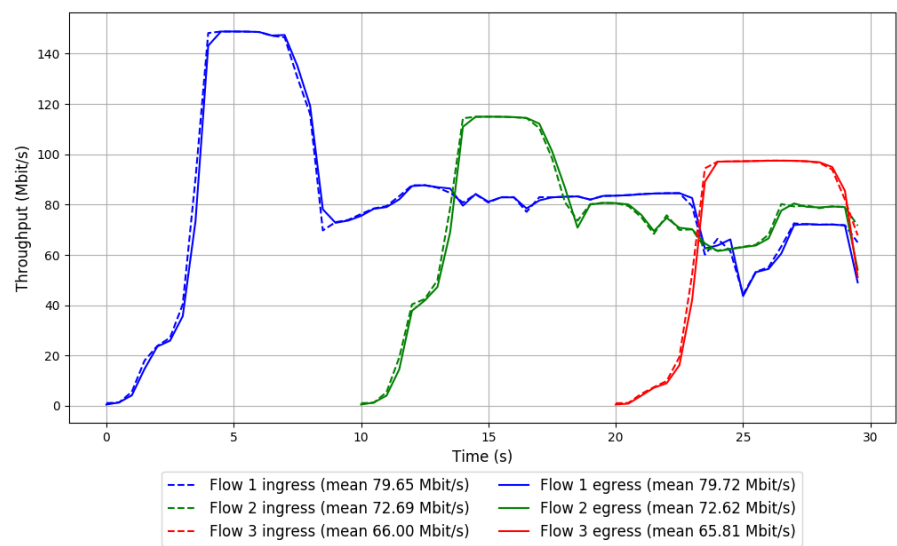
-- Flow 3:

Average throughput: 65.81 Mbit/s

95th percentile per-packet one-way delay: 112.194 ms

Loss rate: 2.55%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-03-27 23:31:36

End at: 2018-03-27 23:32:06

Below is generated by plot.py at 2018-03-28 03:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 154.58 Mbit/s

95th percentile per-packet one-way delay: 111.310 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 81.19 Mbit/s

95th percentile per-packet one-way delay: 110.801 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 69.03 Mbit/s

95th percentile per-packet one-way delay: 111.232 ms

Loss rate: 0.93%

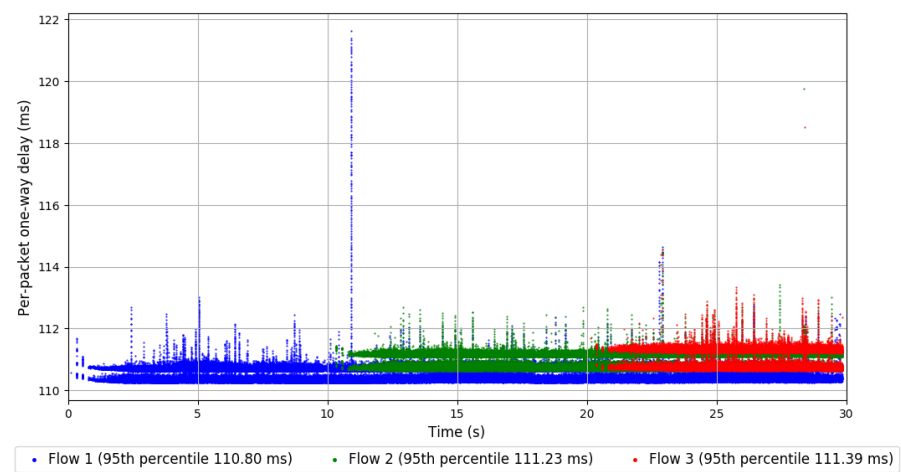
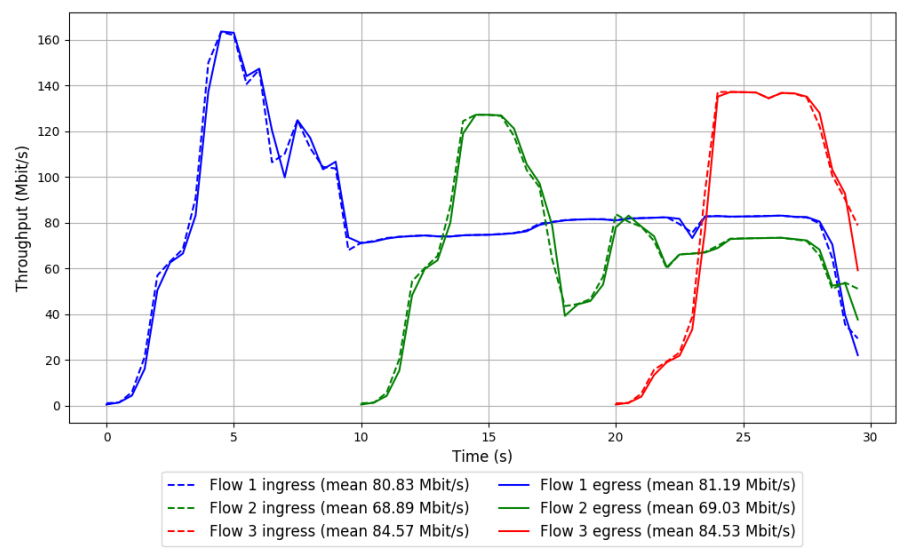
-- Flow 3:

Average throughput: 84.53 Mbit/s

95th percentile per-packet one-way delay: 111.386 ms

Loss rate: 2.30%

Run 10: Report of Copa — Data Link

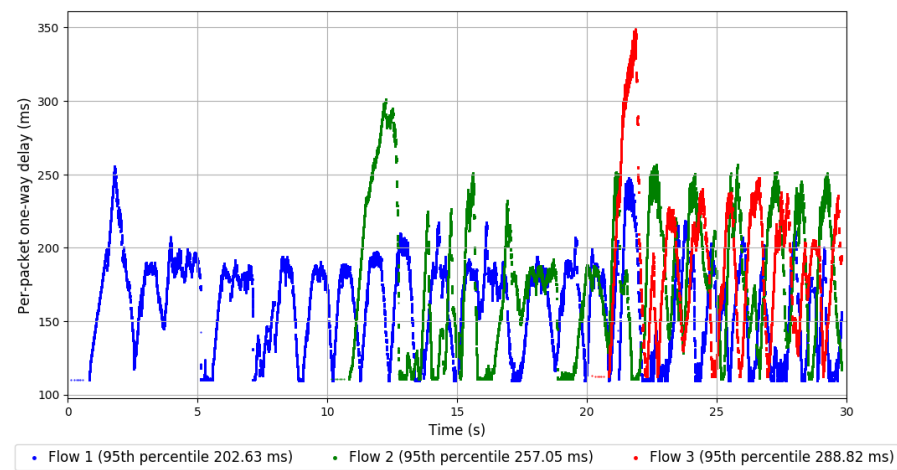
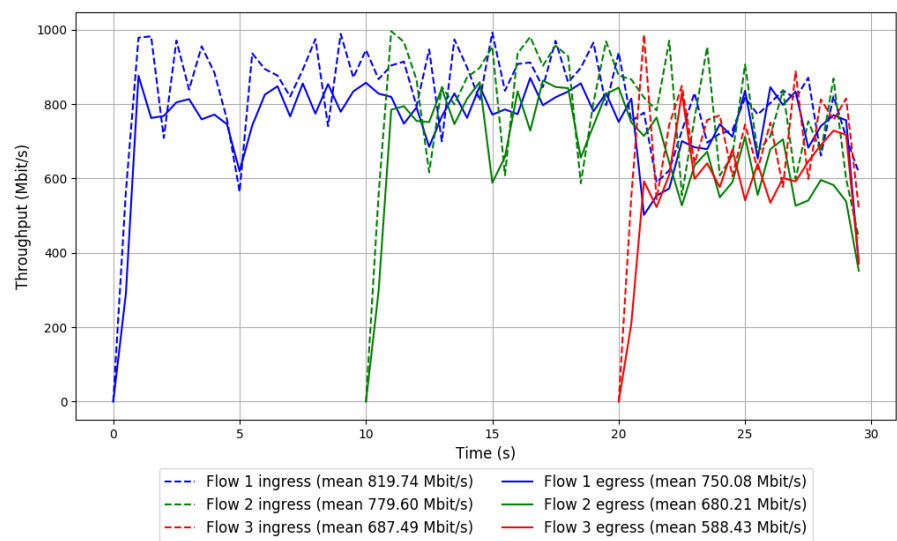


```
Run 1: Statistics of FillP

Start at: 2018-03-27 20:24:30
End at: 2018-03-27 20:25:00

# Below is generated by plot.py at 2018-03-28 04:06:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1390.44 Mbit/s
95th percentile per-packet one-way delay: 236.187 ms
Loss rate: 11.72%
-- Flow 1:
Average throughput: 750.08 Mbit/s
95th percentile per-packet one-way delay: 202.635 ms
Loss rate: 9.18%
-- Flow 2:
Average throughput: 680.21 Mbit/s
95th percentile per-packet one-way delay: 257.045 ms
Loss rate: 13.73%
-- Flow 3:
Average throughput: 588.43 Mbit/s
95th percentile per-packet one-way delay: 288.817 ms
Loss rate: 16.37%
```


Run 1: Report of FillP — Data Link

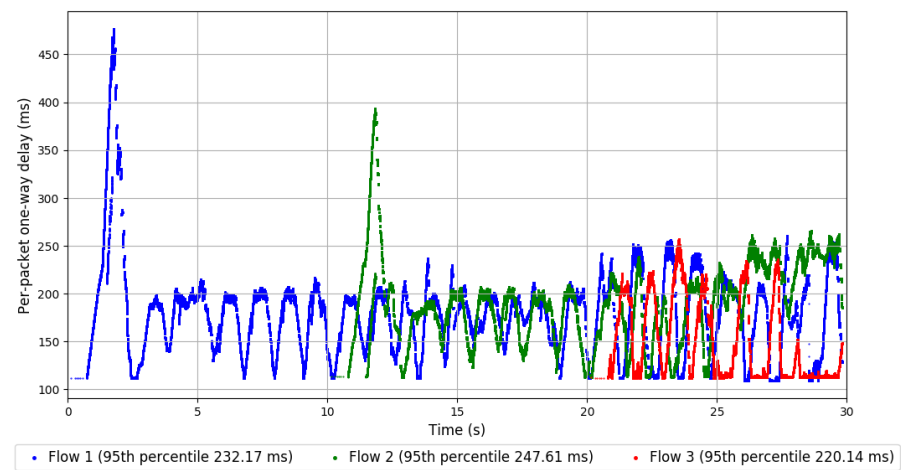
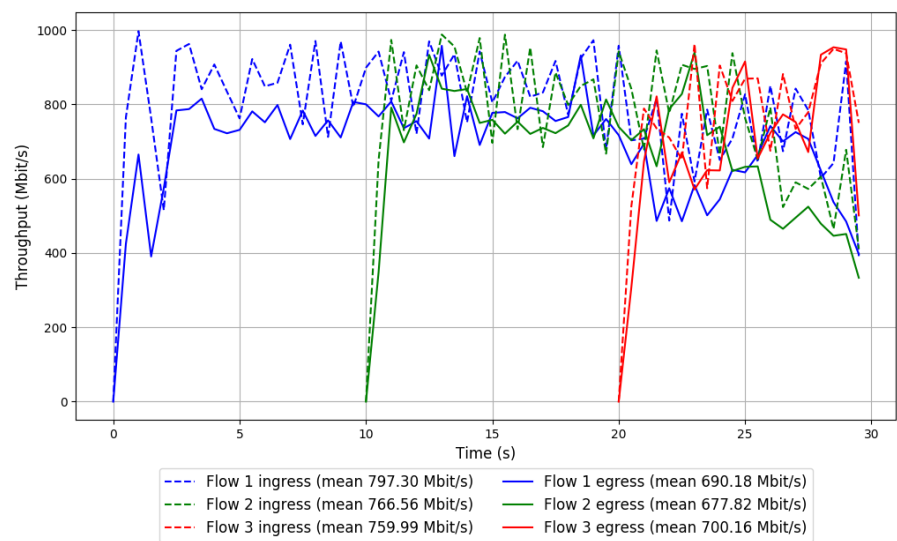


```
Run 2: Statistics of FillP

Start at: 2018-03-27 20:43:43
End at: 2018-03-27 20:44:13

# Below is generated by plot.py at 2018-03-28 04:06:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1366.81 Mbit/s
95th percentile per-packet one-way delay: 238.302 ms
Loss rate: 12.93%
-- Flow 1:
Average throughput: 690.18 Mbit/s
95th percentile per-packet one-way delay: 232.166 ms
Loss rate: 14.08%
-- Flow 2:
Average throughput: 677.82 Mbit/s
95th percentile per-packet one-way delay: 247.613 ms
Loss rate: 12.58%
-- Flow 3:
Average throughput: 700.16 Mbit/s
95th percentile per-packet one-way delay: 220.137 ms
Loss rate: 9.96%
```

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-03-27 21:02:47

End at: 2018-03-27 21:03:17

Below is generated by plot.py at 2018-03-28 04:07:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 1414.60 Mbit/s

95th percentile per-packet one-way delay: 230.786 ms

Loss rate: 11.84%

-- Flow 1:

Average throughput: 738.32 Mbit/s

95th percentile per-packet one-way delay: 230.042 ms

Loss rate: 10.96%

-- Flow 2:

Average throughput: 742.21 Mbit/s

95th percentile per-packet one-way delay: 209.598 ms

Loss rate: 9.50%

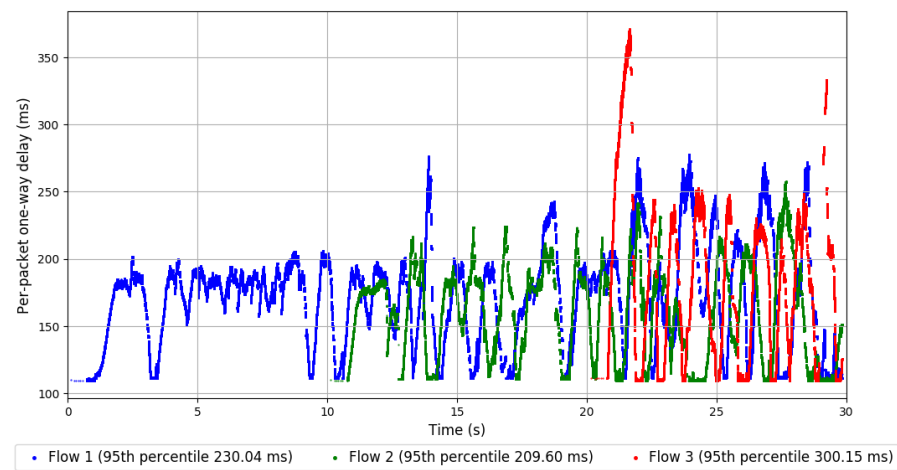
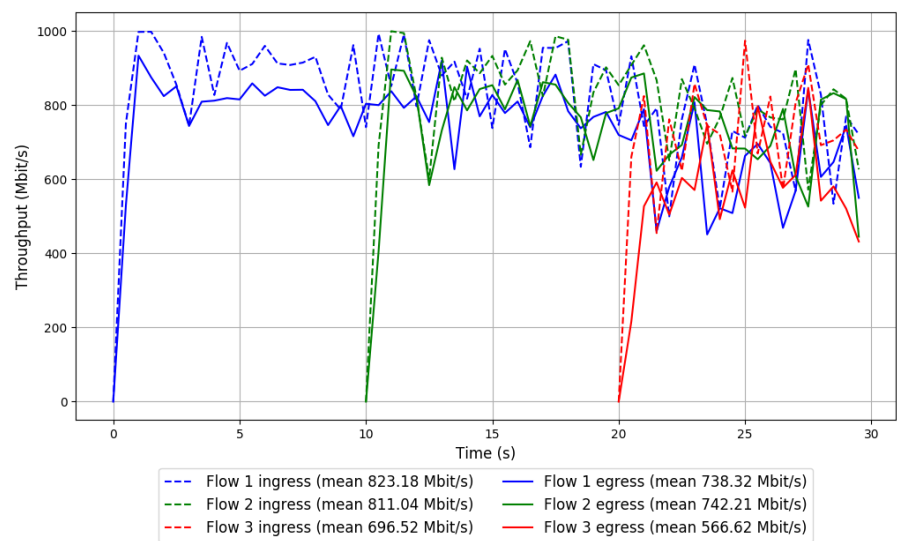
-- Flow 3:

Average throughput: 566.62 Mbit/s

95th percentile per-packet one-way delay: 300.148 ms

Loss rate: 20.48%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-03-27 21:21:50

End at: 2018-03-27 21:22:20

Below is generated by plot.py at 2018-03-28 04:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 1409.39 Mbit/s

95th percentile per-packet one-way delay: 232.729 ms

Loss rate: 10.46%

-- Flow 1:

Average throughput: 733.82 Mbit/s

95th percentile per-packet one-way delay: 234.410 ms

Loss rate: 8.48%

-- Flow 2:

Average throughput: 731.30 Mbit/s

95th percentile per-packet one-way delay: 218.224 ms

Loss rate: 9.65%

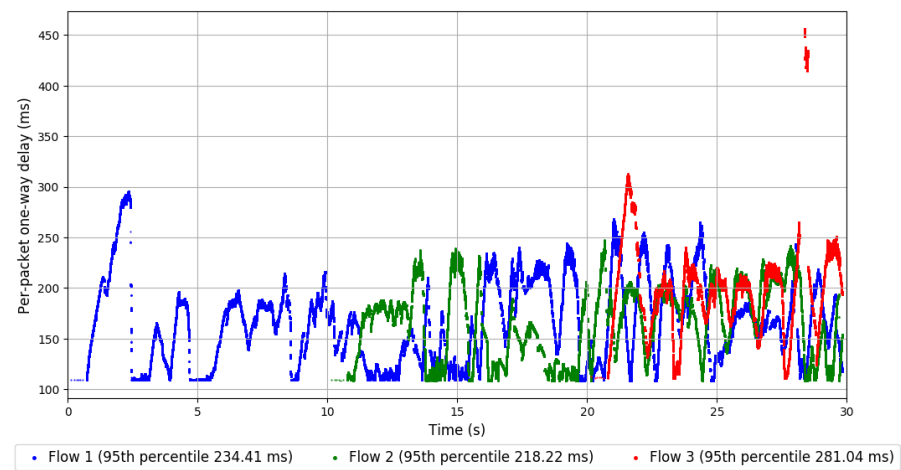
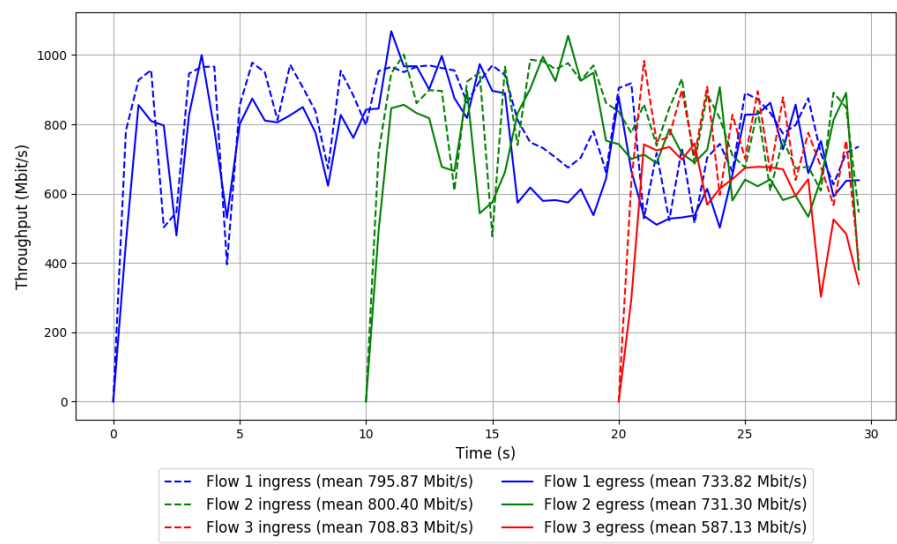
-- Flow 3:

Average throughput: 587.13 Mbit/s

95th percentile per-packet one-way delay: 281.035 ms

Loss rate: 19.04%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-03-27 21:40:55

End at: 2018-03-27 21:41:25

Below is generated by plot.py at 2018-03-28 04:08:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 1371.87 Mbit/s

95th percentile per-packet one-way delay: 331.178 ms

Loss rate: 10.80%

-- Flow 1:

Average throughput: 737.39 Mbit/s

95th percentile per-packet one-way delay: 211.930 ms

Loss rate: 11.19%

-- Flow 2:

Average throughput: 695.50 Mbit/s

95th percentile per-packet one-way delay: 337.668 ms

Loss rate: 7.28%

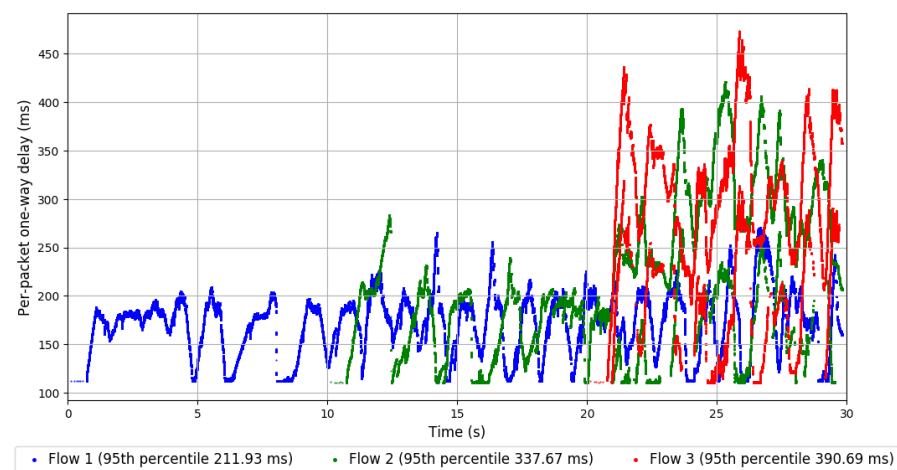
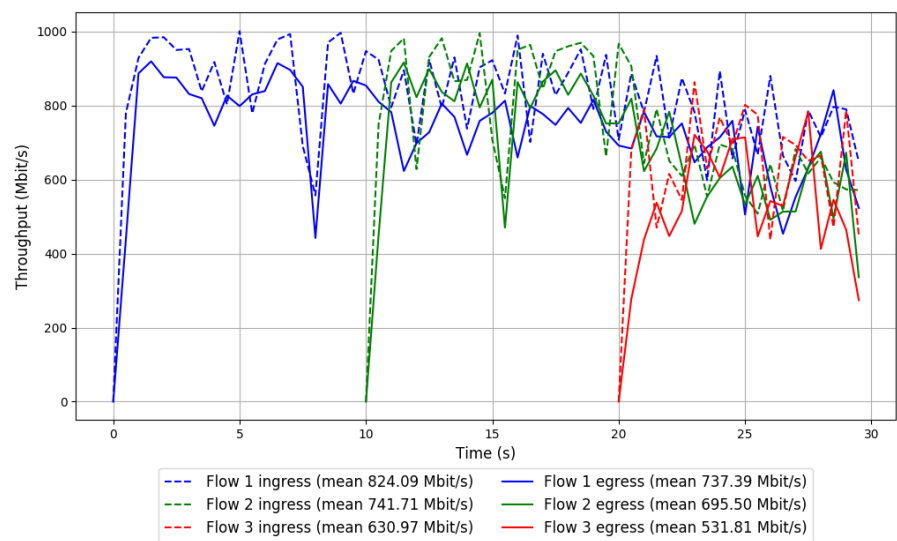
-- Flow 3:

Average throughput: 531.81 Mbit/s

95th percentile per-packet one-way delay: 390.688 ms

Loss rate: 17.61%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-03-27 22:00:35

End at: 2018-03-27 22:01:05

Below is generated by plot.py at 2018-03-28 04:09:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 1412.47 Mbit/s

95th percentile per-packet one-way delay: 234.062 ms

Loss rate: 9.67%

-- Flow 1:

Average throughput: 741.84 Mbit/s

95th percentile per-packet one-way delay: 238.430 ms

Loss rate: 9.71%

-- Flow 2:

Average throughput: 722.73 Mbit/s

95th percentile per-packet one-way delay: 209.194 ms

Loss rate: 6.48%

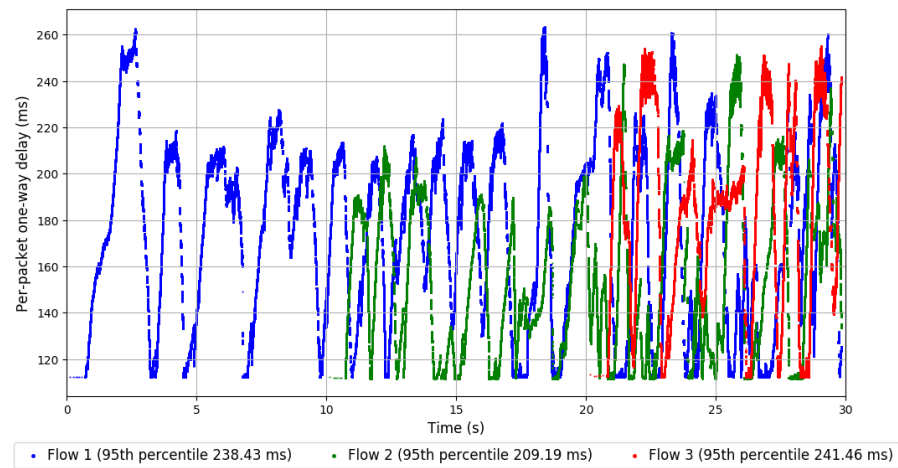
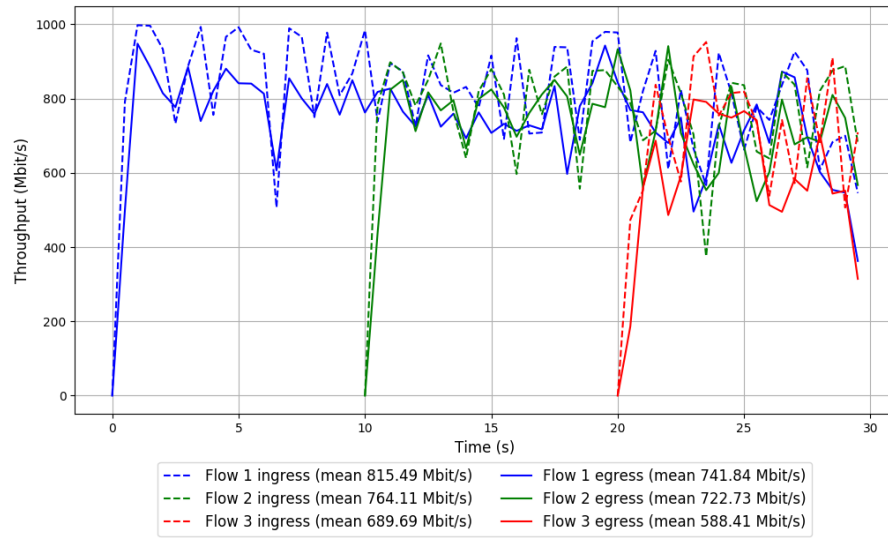
-- Flow 3:

Average throughput: 588.41 Mbit/s

95th percentile per-packet one-way delay: 241.457 ms

Loss rate: 16.63%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-03-27 22:20:30

End at: 2018-03-27 22:21:00

Below is generated by plot.py at 2018-03-28 04:10:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 1374.42 Mbit/s

95th percentile per-packet one-way delay: 239.439 ms

Loss rate: 13.70%

-- Flow 1:

Average throughput: 641.06 Mbit/s

95th percentile per-packet one-way delay: 253.605 ms

Loss rate: 16.70%

-- Flow 2:

Average throughput: 756.13 Mbit/s

95th percentile per-packet one-way delay: 221.014 ms

Loss rate: 11.22%

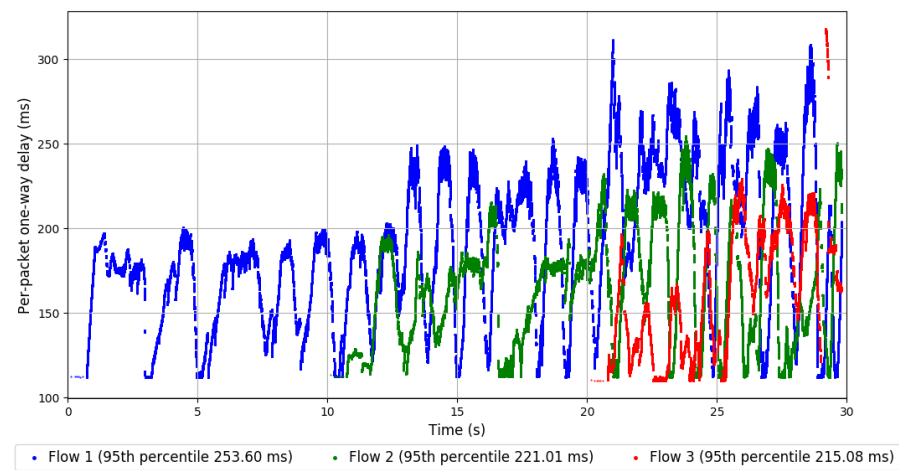
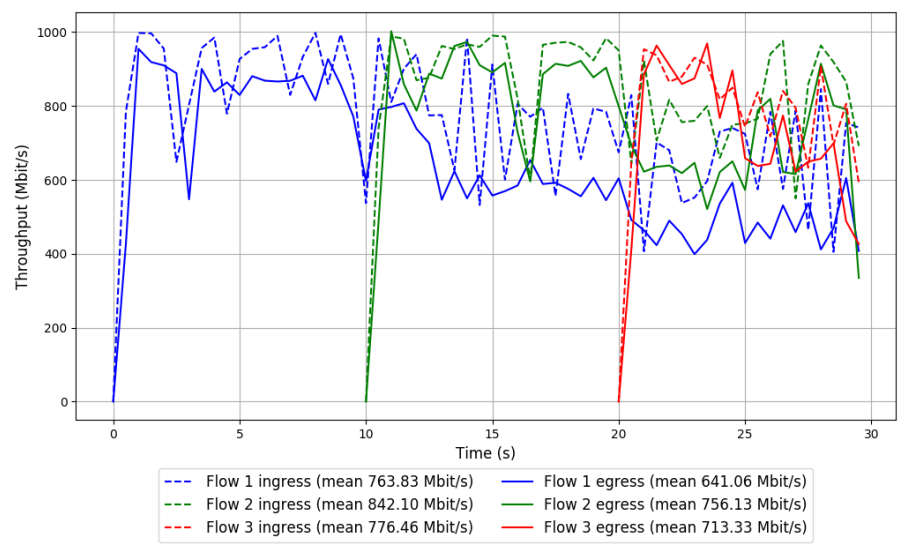
-- Flow 3:

Average throughput: 713.33 Mbit/s

95th percentile per-packet one-way delay: 215.076 ms

Loss rate: 10.19%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-03-27 22:40:36

End at: 2018-03-27 22:41:06

Below is generated by plot.py at 2018-03-28 04:18:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 1371.31 Mbit/s

95th percentile per-packet one-way delay: 318.091 ms

Loss rate: 10.28%

-- Flow 1:

Average throughput: 759.33 Mbit/s

95th percentile per-packet one-way delay: 253.107 ms

Loss rate: 9.56%

-- Flow 2:

Average throughput: 647.97 Mbit/s

95th percentile per-packet one-way delay: 331.398 ms

Loss rate: 9.20%

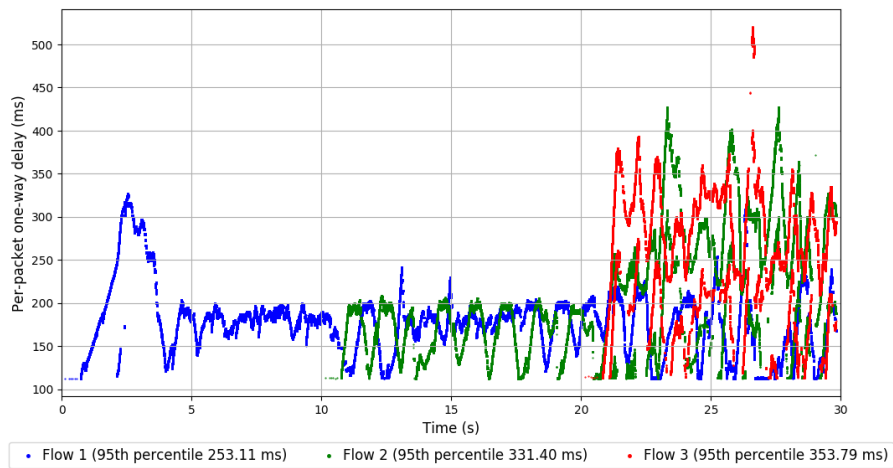
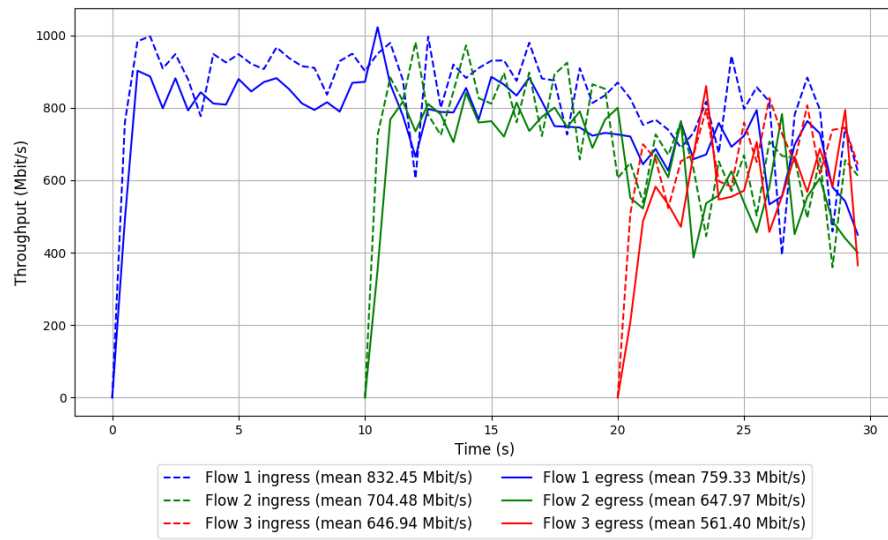
-- Flow 3:

Average throughput: 561.40 Mbit/s

95th percentile per-packet one-way delay: 353.793 ms

Loss rate: 15.47%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-03-27 23:00:18

End at: 2018-03-27 23:00:48

Below is generated by plot.py at 2018-03-28 04:32:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 1332.01 Mbit/s

95th percentile per-packet one-way delay: 332.774 ms

Loss rate: 13.23%

-- Flow 1:

Average throughput: 698.18 Mbit/s

95th percentile per-packet one-way delay: 289.721 ms

Loss rate: 13.64%

-- Flow 2:

Average throughput: 656.09 Mbit/s

95th percentile per-packet one-way delay: 358.173 ms

Loss rate: 10.81%

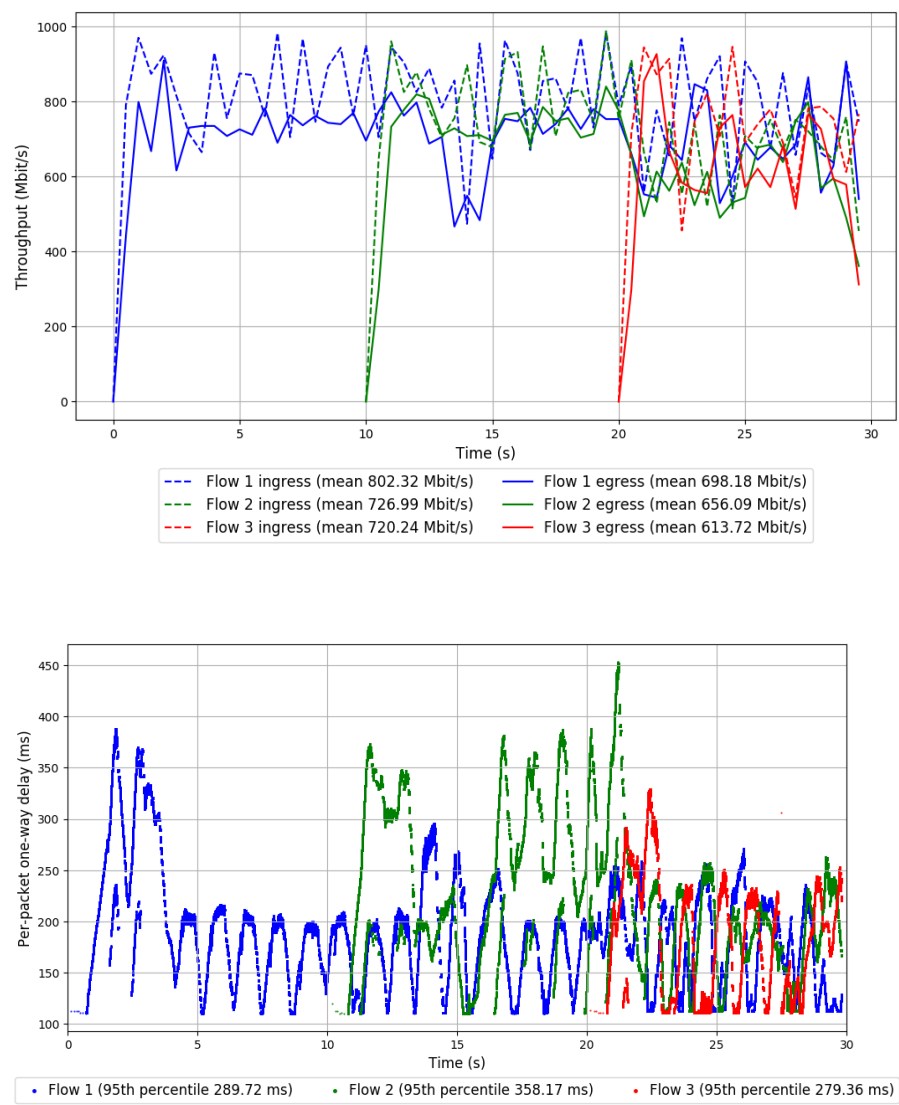
-- Flow 3:

Average throughput: 613.72 Mbit/s

95th percentile per-packet one-way delay: 279.360 ms

Loss rate: 16.74%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-03-27 23:19:30

End at: 2018-03-27 23:20:00

Below is generated by plot.py at 2018-03-28 04:34:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 1442.00 Mbit/s

95th percentile per-packet one-way delay: 287.807 ms

Loss rate: 10.11%

-- Flow 1:

Average throughput: 751.35 Mbit/s

95th percentile per-packet one-way delay: 279.310 ms

Loss rate: 9.93%

-- Flow 2:

Average throughput: 744.60 Mbit/s

95th percentile per-packet one-way delay: 295.808 ms

Loss rate: 7.61%

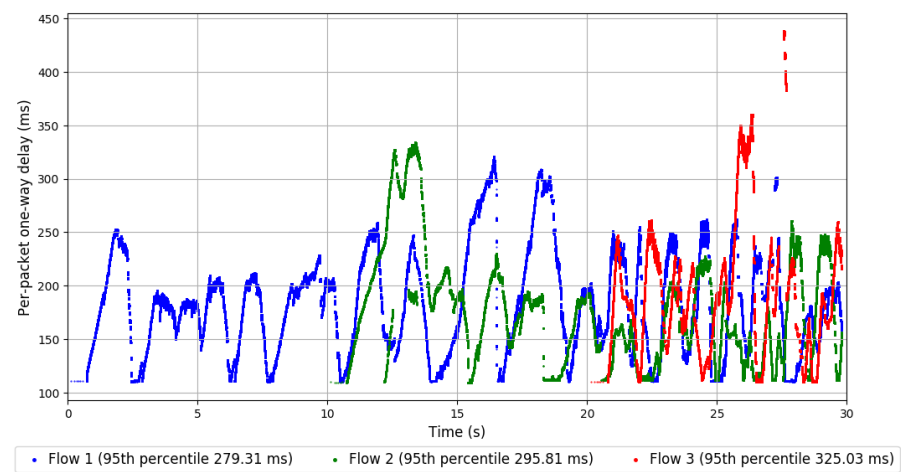
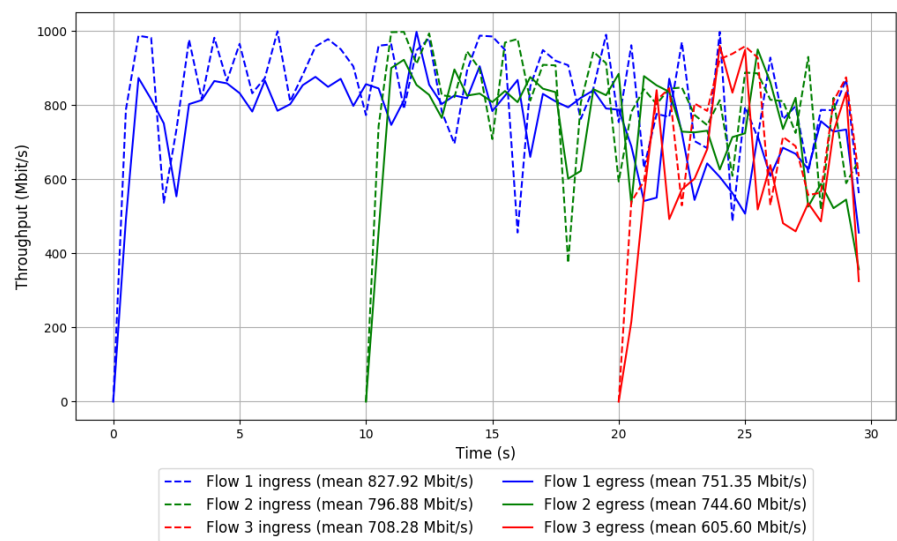
-- Flow 3:

Average throughput: 605.60 Mbit/s

95th percentile per-packet one-way delay: 325.027 ms

Loss rate: 16.43%

Run 10: Report of FillP — Data Link

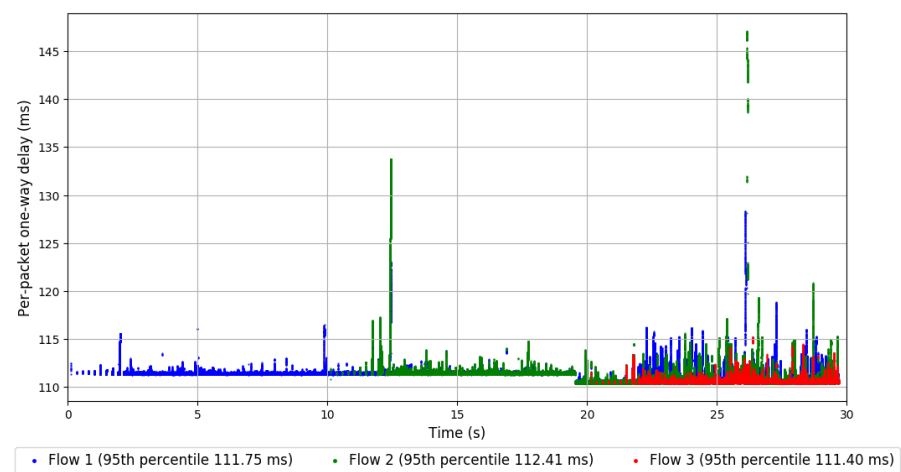
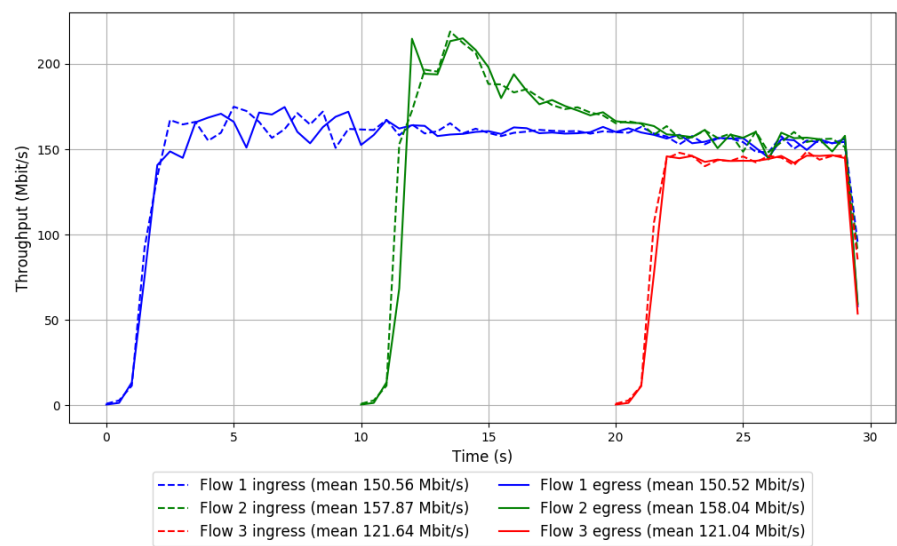


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-03-27 20:32:48
End at: 2018-03-27 20:33:18

# Below is generated by plot.py at 2018-03-28 04:34:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 294.18 Mbit/s
95th percentile per-packet one-way delay: 111.909 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 150.52 Mbit/s
95th percentile per-packet one-way delay: 111.753 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 158.04 Mbit/s
95th percentile per-packet one-way delay: 112.414 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 121.04 Mbit/s
95th percentile per-packet one-way delay: 111.400 ms
Loss rate: 2.75%
```

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

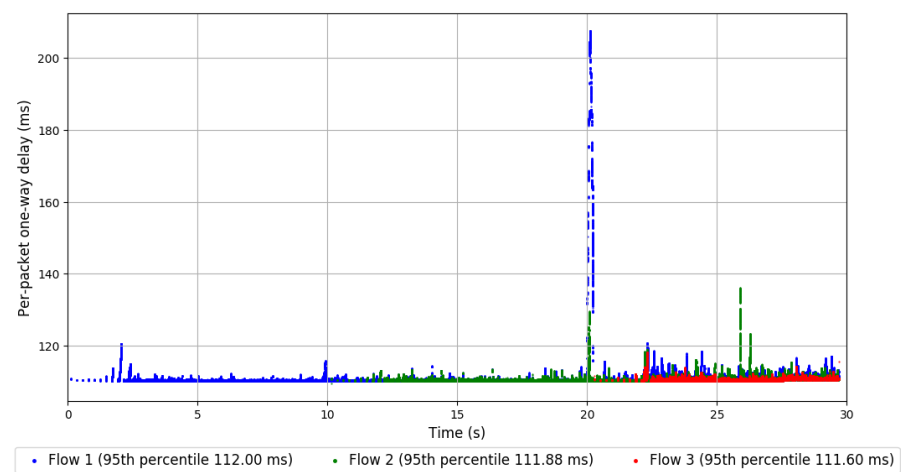
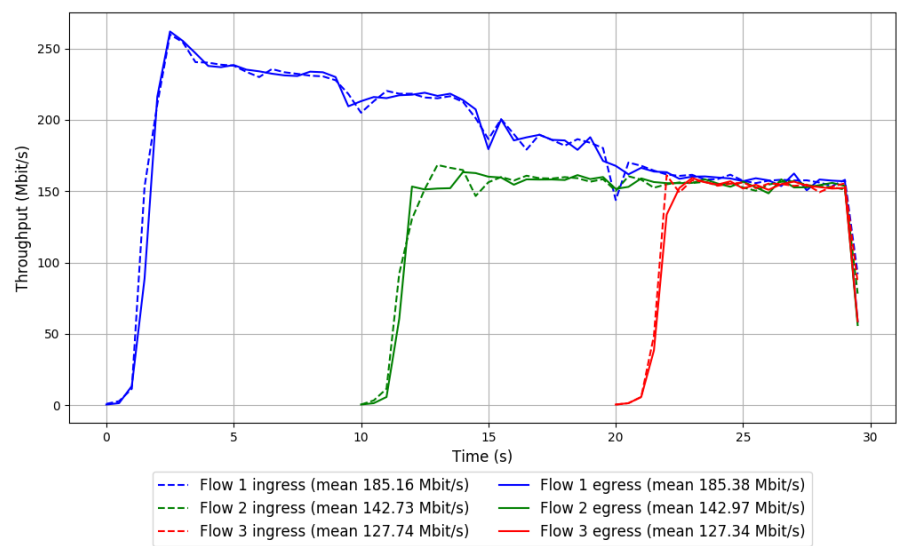


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-03-27 20:51:50
End at: 2018-03-27 20:52:20

# Below is generated by plot.py at 2018-03-28 04:34:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 320.28 Mbit/s
95th percentile per-packet one-way delay: 111.891 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 185.38 Mbit/s
95th percentile per-packet one-way delay: 111.999 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 142.97 Mbit/s
95th percentile per-packet one-way delay: 111.882 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 127.34 Mbit/s
95th percentile per-packet one-way delay: 111.601 ms
Loss rate: 2.56%
```

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



Run 3: Statistics of Indigo-1-32

Start at: 2018-03-27 21:11:03

End at: 2018-03-27 21:11:33

Below is generated by plot.py at 2018-03-28 04:34:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 288.64 Mbit/s

95th percentile per-packet one-way delay: 113.806 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 149.35 Mbit/s

95th percentile per-packet one-way delay: 111.623 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 146.38 Mbit/s

95th percentile per-packet one-way delay: 113.123 ms

Loss rate: 1.14%

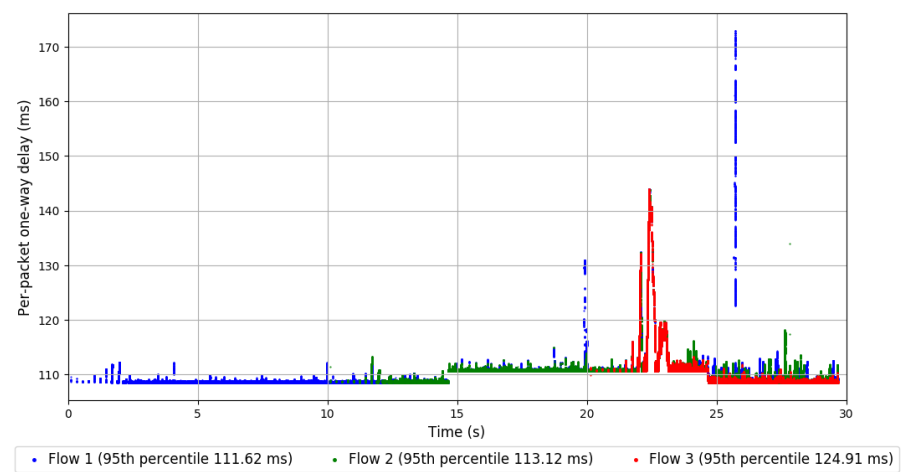
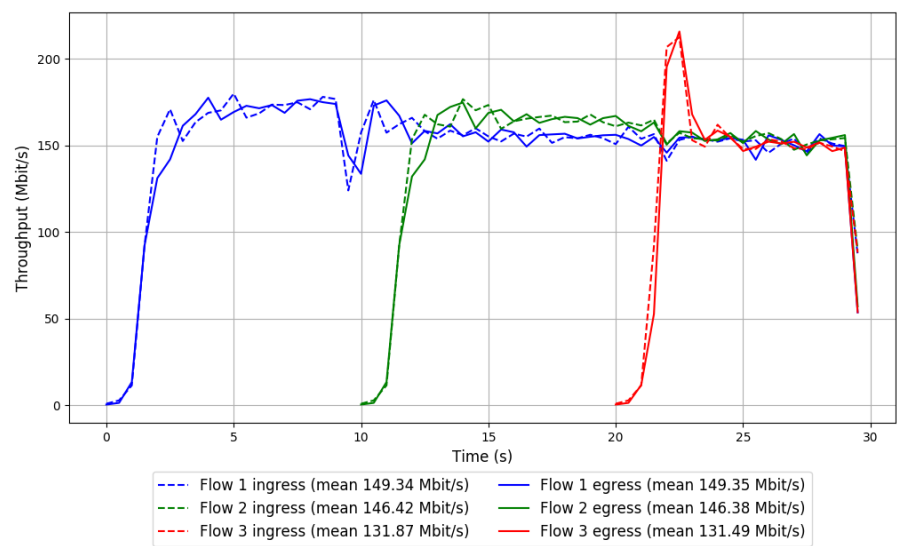
-- Flow 3:

Average throughput: 131.49 Mbit/s

95th percentile per-packet one-way delay: 124.913 ms

Loss rate: 2.54%

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



Run 4: Statistics of Indigo-1-32

Start at: 2018-03-27 21:29:51

End at: 2018-03-27 21:30:21

Below is generated by plot.py at 2018-03-28 04:34:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 318.82 Mbit/s

95th percentile per-packet one-way delay: 111.435 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 182.41 Mbit/s

95th percentile per-packet one-way delay: 111.254 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 142.86 Mbit/s

95th percentile per-packet one-way delay: 111.863 ms

Loss rate: 1.23%

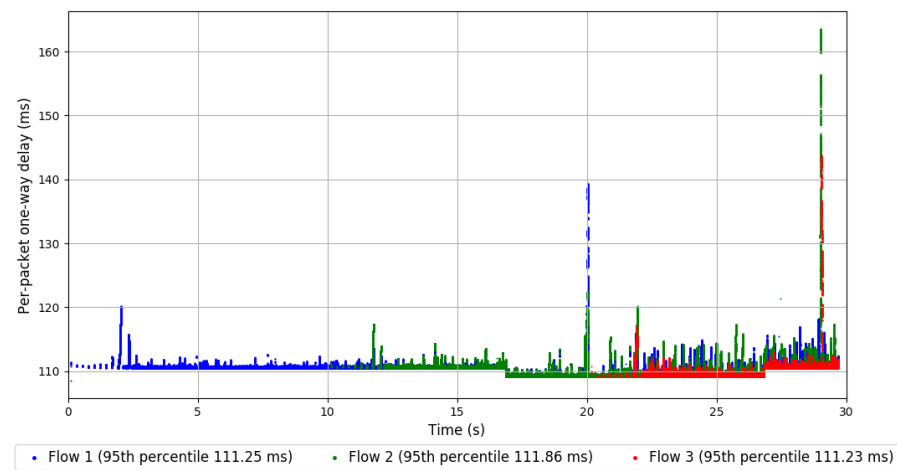
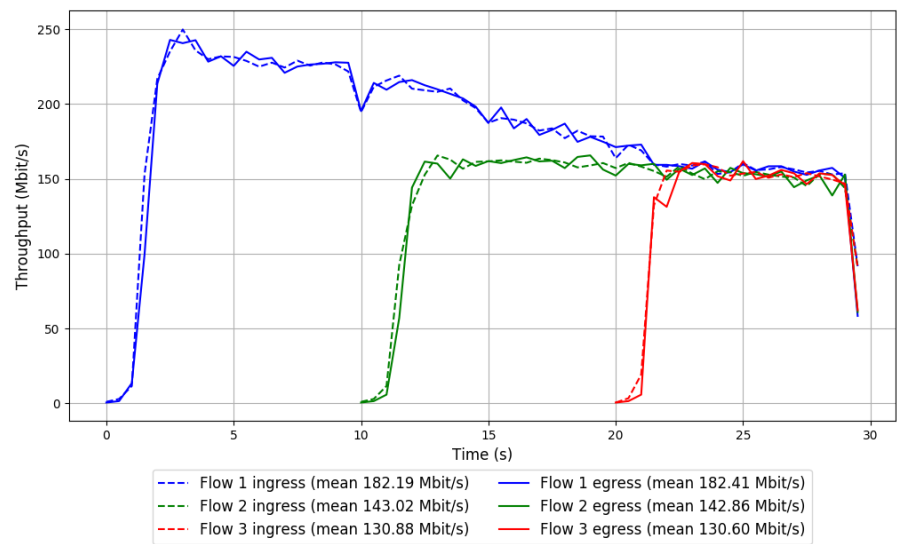
-- Flow 3:

Average throughput: 130.60 Mbit/s

95th percentile per-packet one-way delay: 111.233 ms

Loss rate: 2.47%

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



Run 5: Statistics of Indigo-1-32

Start at: 2018-03-27 21:49:07

End at: 2018-03-27 21:49:37

Below is generated by plot.py at 2018-03-28 04:34:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 299.03 Mbit/s

95th percentile per-packet one-way delay: 112.799 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 148.83 Mbit/s

95th percentile per-packet one-way delay: 112.518 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 164.85 Mbit/s

95th percentile per-packet one-way delay: 113.669 ms

Loss rate: 0.76%

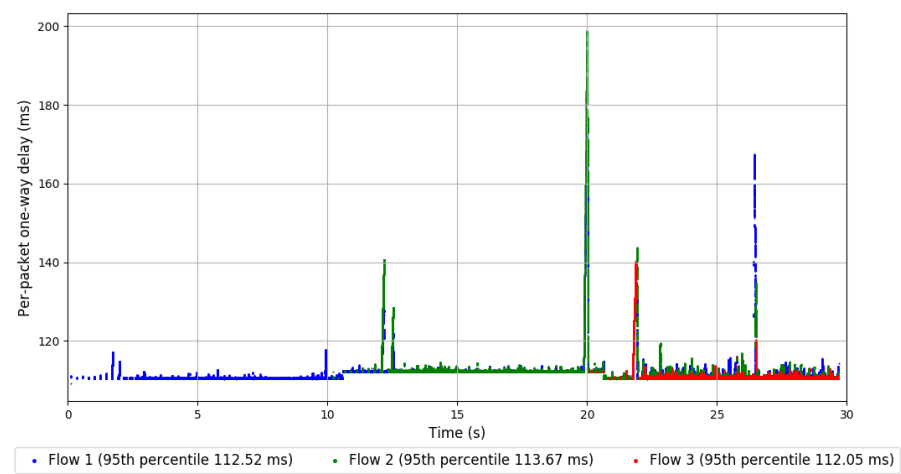
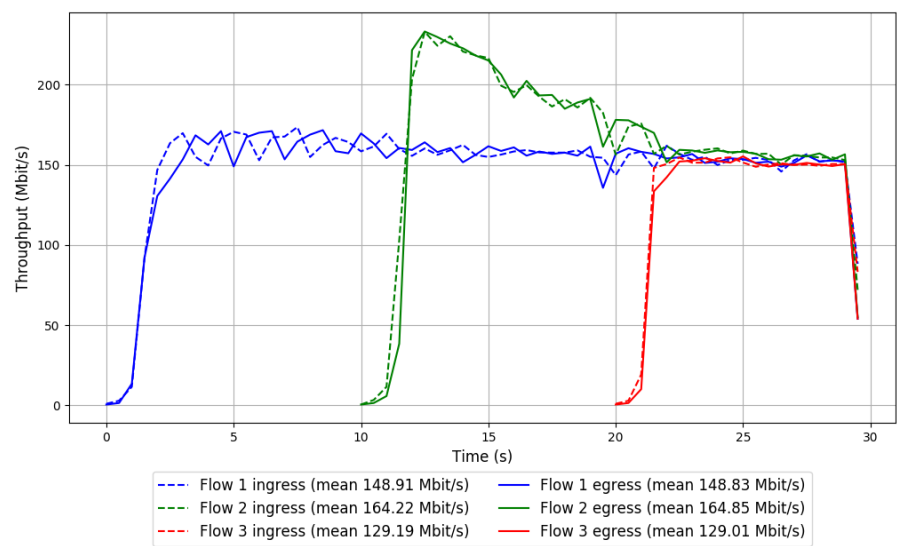
-- Flow 3:

Average throughput: 129.01 Mbit/s

95th percentile per-packet one-way delay: 112.046 ms

Loss rate: 2.46%

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



Run 6: Statistics of Indigo-1-32

Start at: 2018-03-27 22:09:05

End at: 2018-03-27 22:09:35

Below is generated by plot.py at 2018-03-28 04:34:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 322.10 Mbit/s

95th percentile per-packet one-way delay: 113.732 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 185.39 Mbit/s

95th percentile per-packet one-way delay: 113.318 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 142.54 Mbit/s

95th percentile per-packet one-way delay: 114.113 ms

Loss rate: 1.16%

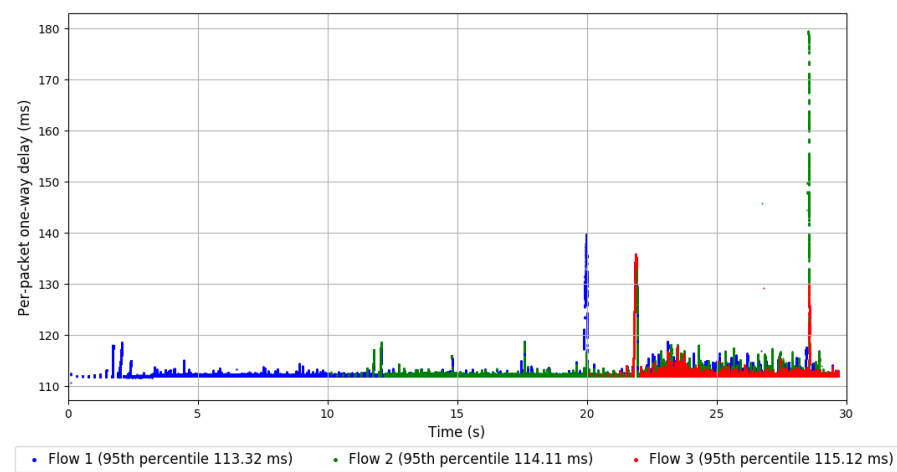
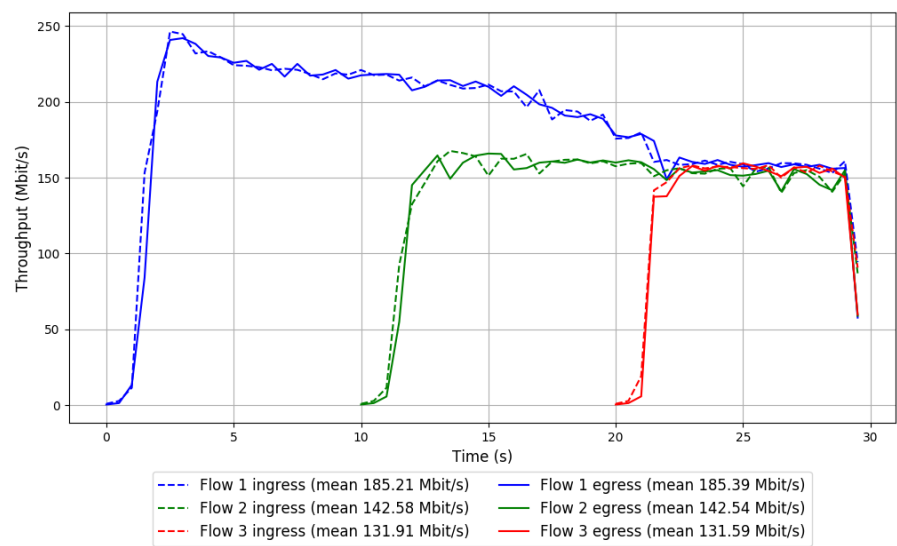
-- Flow 3:

Average throughput: 131.59 Mbit/s

95th percentile per-packet one-way delay: 115.122 ms

Loss rate: 2.52%

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



Run 7: Statistics of Indigo-1-32

Start at: 2018-03-27 22:29:38

End at: 2018-03-27 22:30:08

Below is generated by plot.py at 2018-03-28 04:34:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 296.69 Mbit/s

95th percentile per-packet one-way delay: 114.862 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 153.15 Mbit/s

95th percentile per-packet one-way delay: 113.819 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 145.98 Mbit/s

95th percentile per-packet one-way delay: 115.315 ms

Loss rate: 1.04%

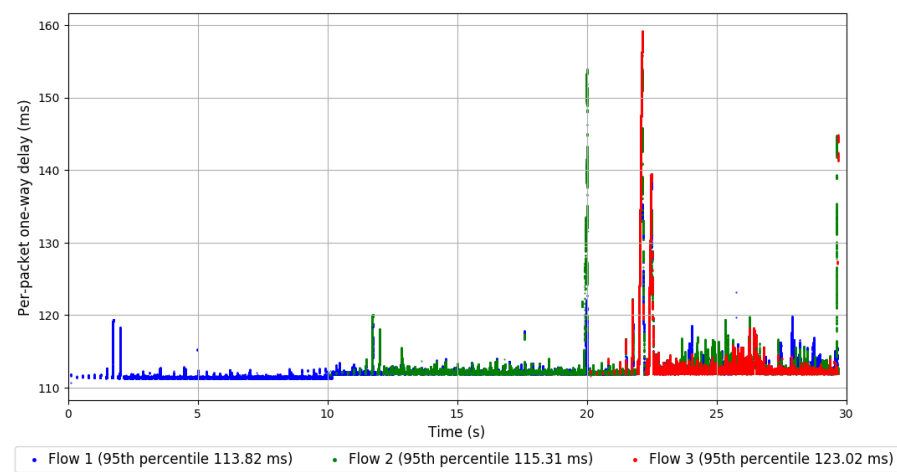
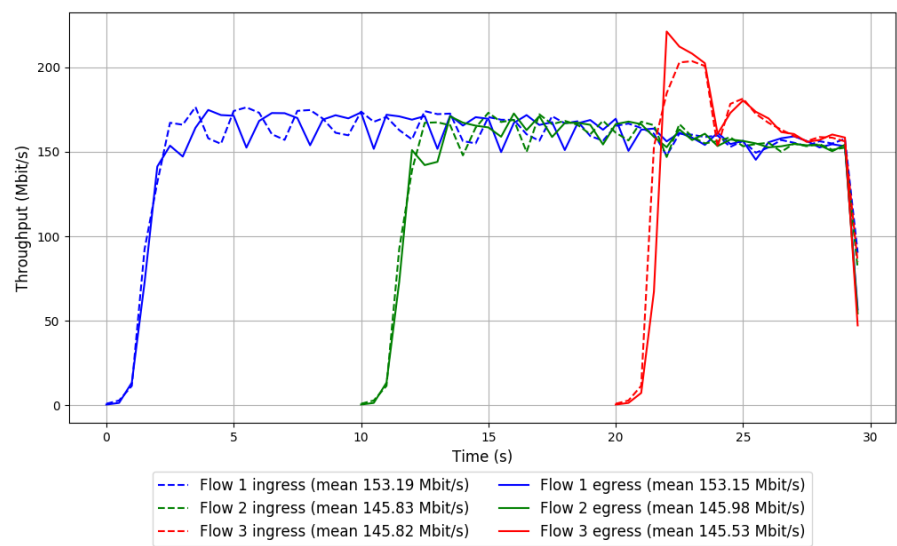
-- Flow 3:

Average throughput: 145.53 Mbit/s

95th percentile per-packet one-way delay: 123.020 ms

Loss rate: 2.49%

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



Run 8: Statistics of Indigo-1-32

Start at: 2018-03-27 22:49:12

End at: 2018-03-27 22:49:42

Below is generated by plot.py at 2018-03-28 04:34:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 306.78 Mbit/s

95th percentile per-packet one-way delay: 113.001 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 175.60 Mbit/s

95th percentile per-packet one-way delay: 112.822 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 141.42 Mbit/s

95th percentile per-packet one-way delay: 113.382 ms

Loss rate: 1.14%

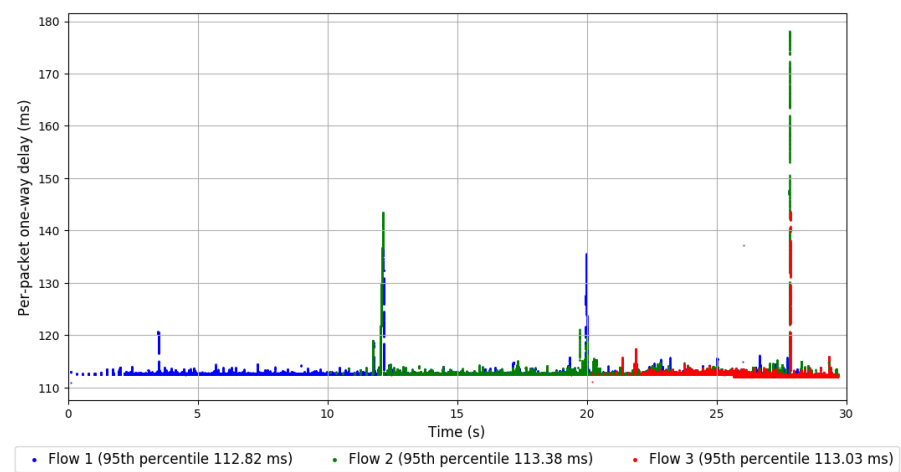
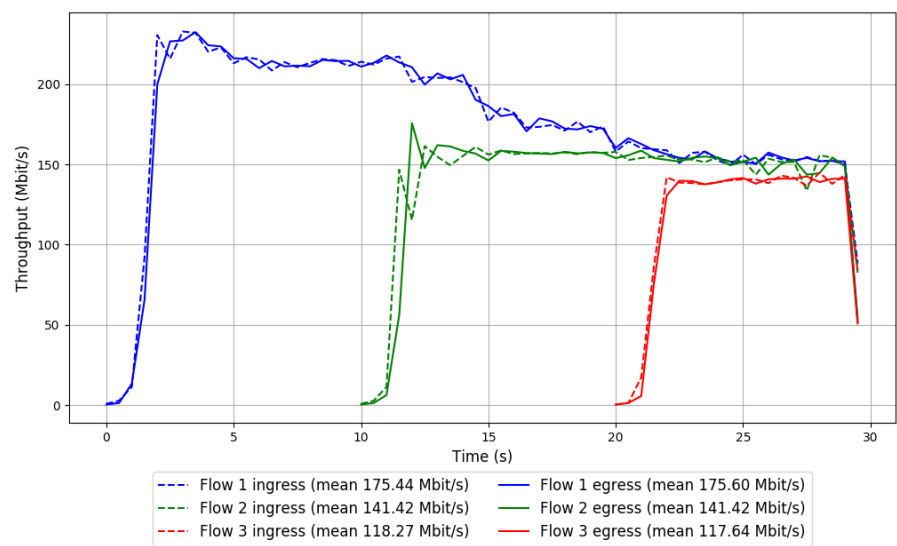
-- Flow 3:

Average throughput: 117.64 Mbit/s

95th percentile per-packet one-way delay: 113.027 ms

Loss rate: 2.82%

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



Run 9: Statistics of Indigo-1-32

Start at: 2018-03-27 23:08:26

End at: 2018-03-27 23:08:56

Below is generated by plot.py at 2018-03-28 04:34:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 327.99 Mbit/s

95th percentile per-packet one-way delay: 114.301 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 192.07 Mbit/s

95th percentile per-packet one-way delay: 113.582 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 143.75 Mbit/s

95th percentile per-packet one-way delay: 114.429 ms

Loss rate: 1.18%

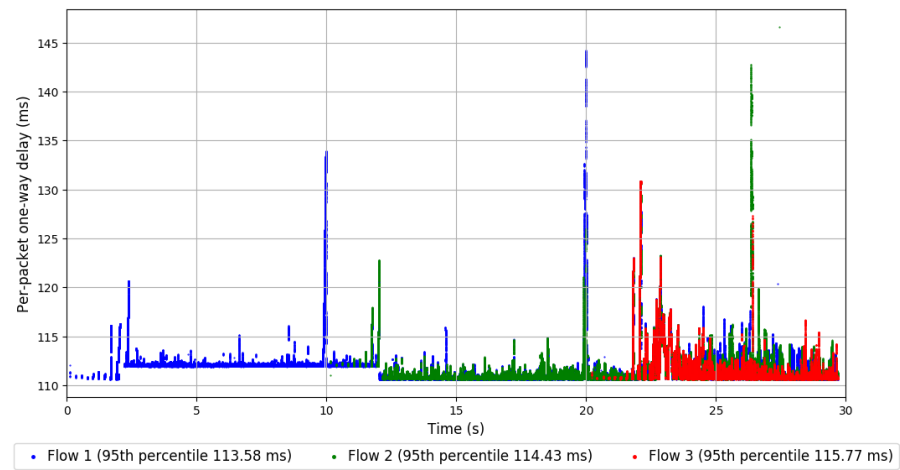
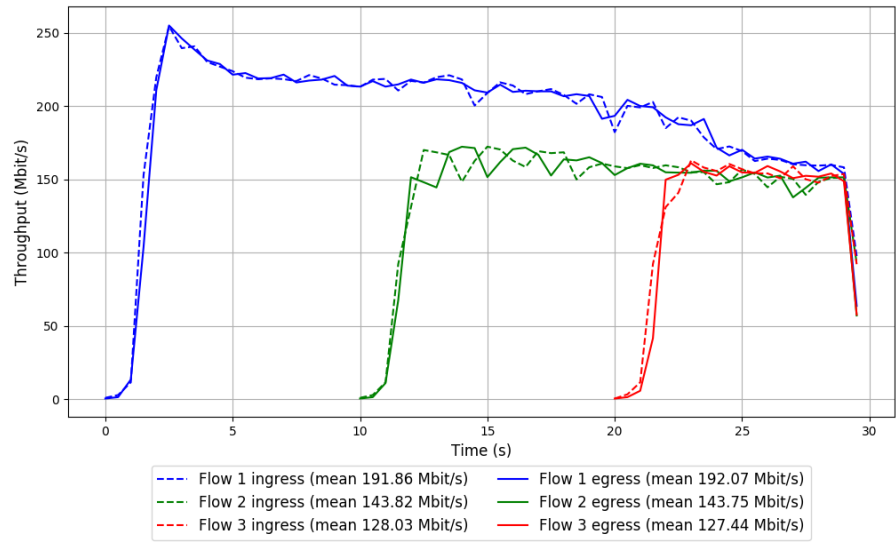
-- Flow 3:

Average throughput: 127.44 Mbit/s

95th percentile per-packet one-way delay: 115.768 ms

Loss rate: 2.75%

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



Run 10: Statistics of Indigo-1-32

Start at: 2018-03-27 23:27:43

End at: 2018-03-27 23:28:13

Below is generated by plot.py at 2018-03-28 04:34:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 318.94 Mbit/s

95th percentile per-packet one-way delay: 112.662 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 183.49 Mbit/s

95th percentile per-packet one-way delay: 112.385 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 143.97 Mbit/s

95th percentile per-packet one-way delay: 113.015 ms

Loss rate: 1.21%

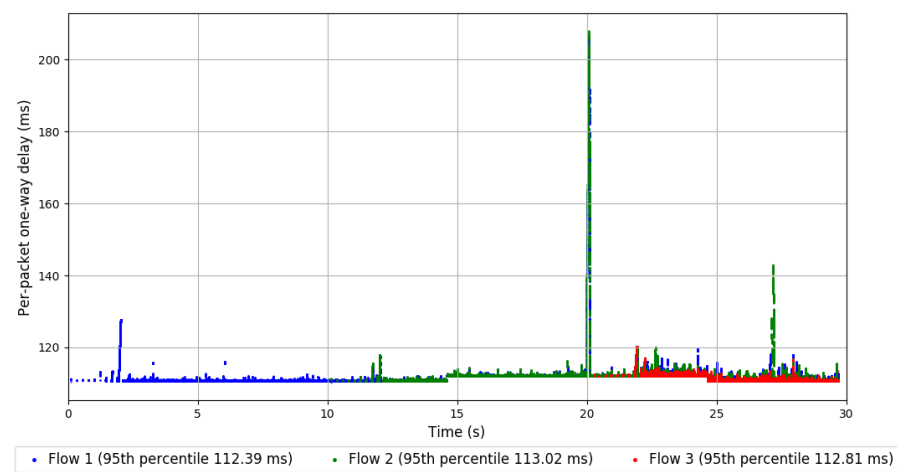
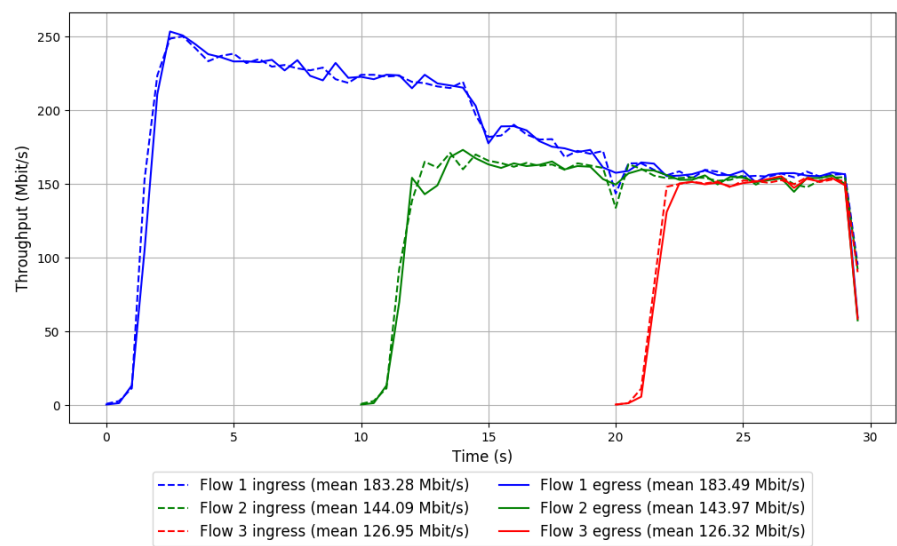
-- Flow 3:

Average throughput: 126.32 Mbit/s

95th percentile per-packet one-way delay: 112.810 ms

Loss rate: 2.76%

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

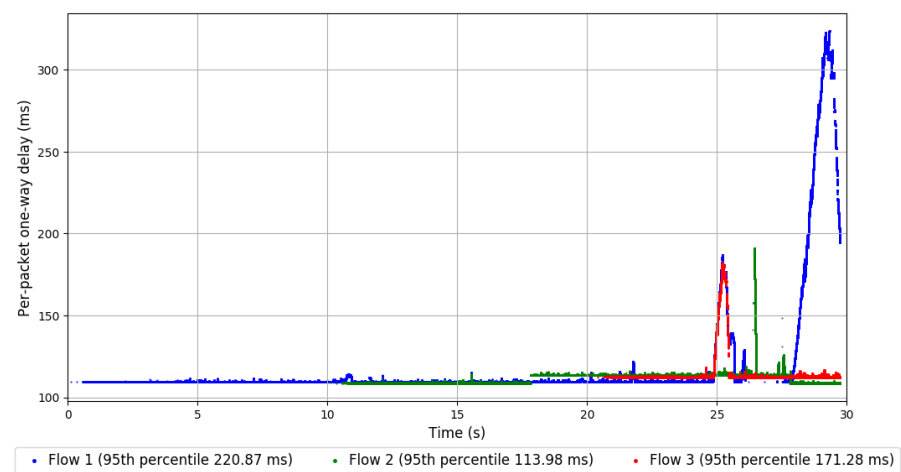
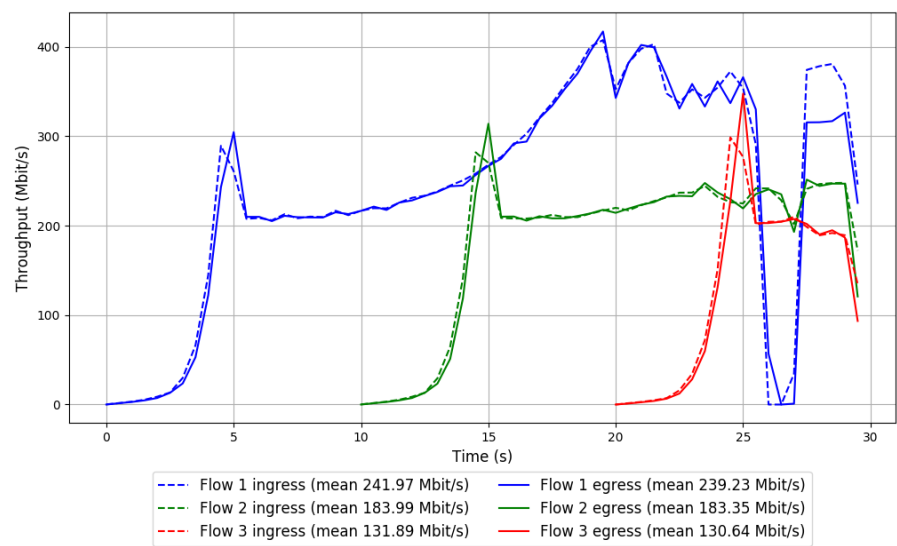


```
Run 1: Statistics of Vivace-latency

Start at: 2018-03-27 20:31:30
End at: 2018-03-27 20:32:00

# Below is generated by plot.py at 2018-03-28 04:34:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 402.97 Mbit/s
95th percentile per-packet one-way delay: 174.576 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 239.23 Mbit/s
95th percentile per-packet one-way delay: 220.868 ms
Loss rate: 1.87%
-- Flow 2:
Average throughput: 183.35 Mbit/s
95th percentile per-packet one-way delay: 113.979 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 130.64 Mbit/s
95th percentile per-packet one-way delay: 171.279 ms
Loss rate: 3.22%
```


Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-03-27 20:50:31

End at: 2018-03-27 20:51:01

Below is generated by plot.py at 2018-03-28 04:34:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 419.24 Mbit/s

95th percentile per-packet one-way delay: 127.389 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 257.79 Mbit/s

95th percentile per-packet one-way delay: 171.043 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 182.24 Mbit/s

95th percentile per-packet one-way delay: 112.824 ms

Loss rate: 0.95%

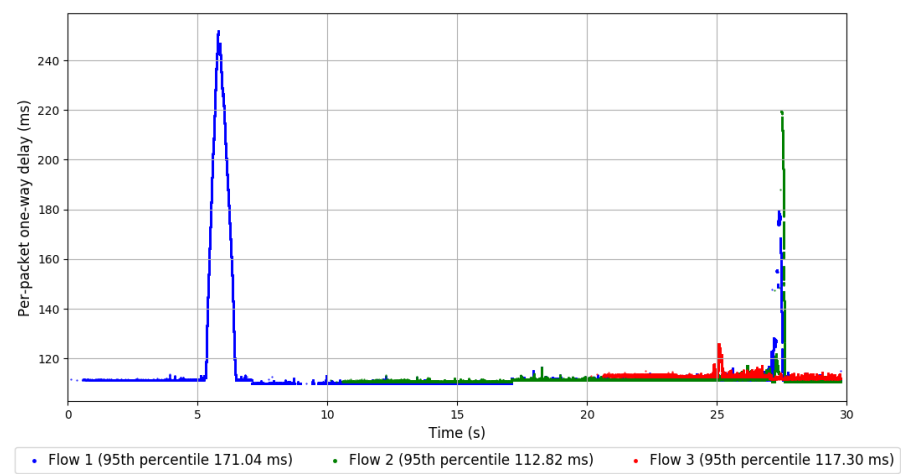
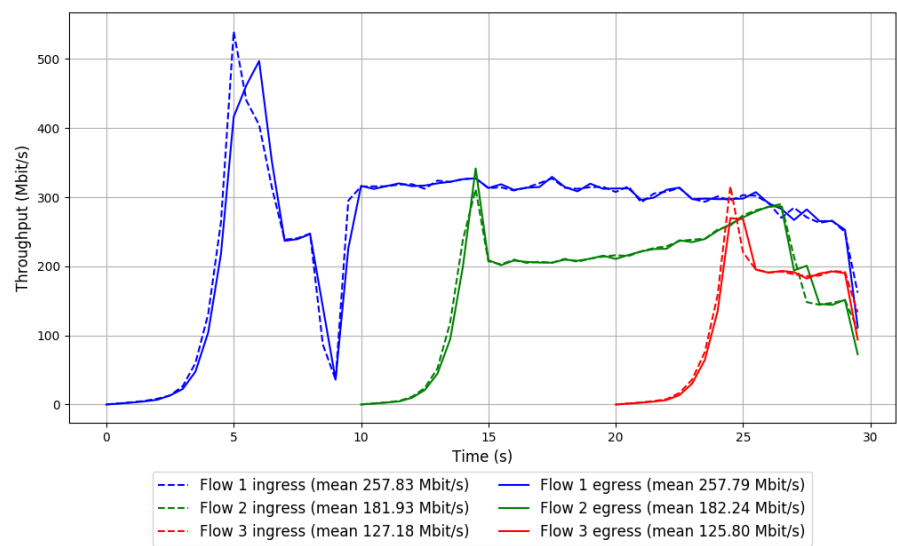
-- Flow 3:

Average throughput: 125.80 Mbit/s

95th percentile per-packet one-way delay: 117.298 ms

Loss rate: 3.34%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-03-27 21:09:43

End at: 2018-03-27 21:10:13

Below is generated by plot.py at 2018-03-28 04:34:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 434.99 Mbit/s

95th percentile per-packet one-way delay: 253.072 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 290.21 Mbit/s

95th percentile per-packet one-way delay: 281.171 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 184.20 Mbit/s

95th percentile per-packet one-way delay: 111.467 ms

Loss rate: 1.34%

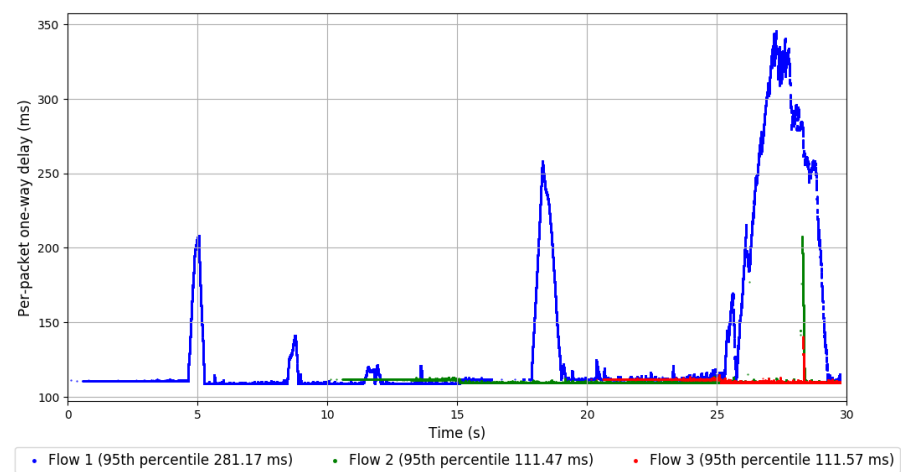
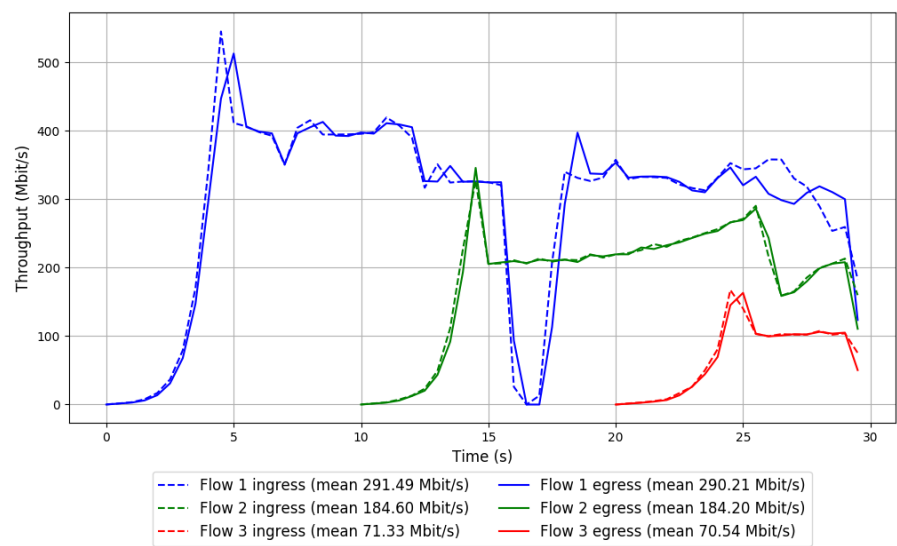
-- Flow 3:

Average throughput: 70.54 Mbit/s

95th percentile per-packet one-way delay: 111.573 ms

Loss rate: 3.35%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-03-27 21:28:32

End at: 2018-03-27 21:29:02

Below is generated by plot.py at 2018-03-28 04:34:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 408.88 Mbit/s

95th percentile per-packet one-way delay: 112.644 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 243.91 Mbit/s

95th percentile per-packet one-way delay: 110.599 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 187.06 Mbit/s

95th percentile per-packet one-way delay: 116.842 ms

Loss rate: 2.08%

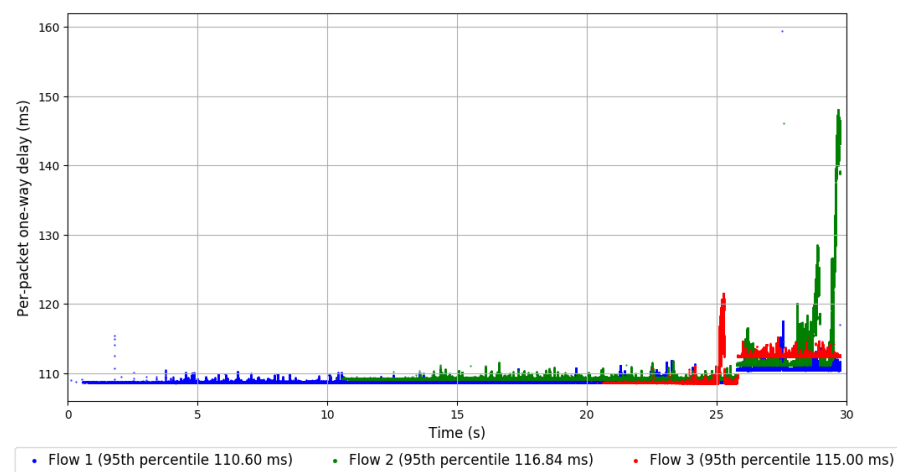
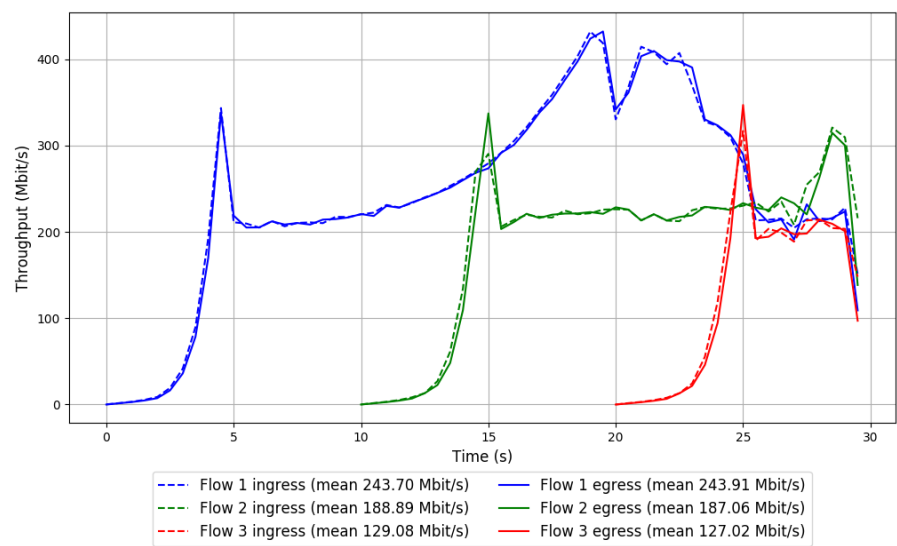
-- Flow 3:

Average throughput: 127.02 Mbit/s

95th percentile per-packet one-way delay: 114.996 ms

Loss rate: 3.82%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-03-27 21:47:49

End at: 2018-03-27 21:48:19

Below is generated by plot.py at 2018-03-28 04:34:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 396.64 Mbit/s

95th percentile per-packet one-way delay: 114.679 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 234.30 Mbit/s

95th percentile per-packet one-way delay: 113.903 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 180.28 Mbit/s

95th percentile per-packet one-way delay: 115.416 ms

Loss rate: 1.35%

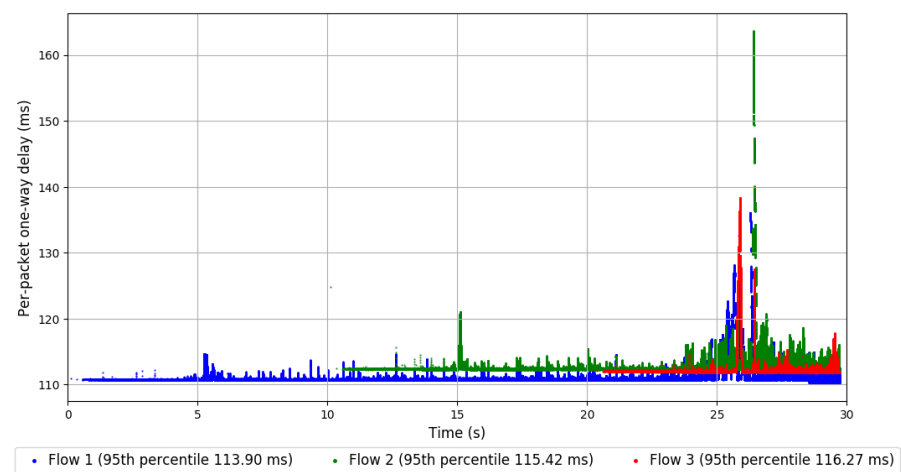
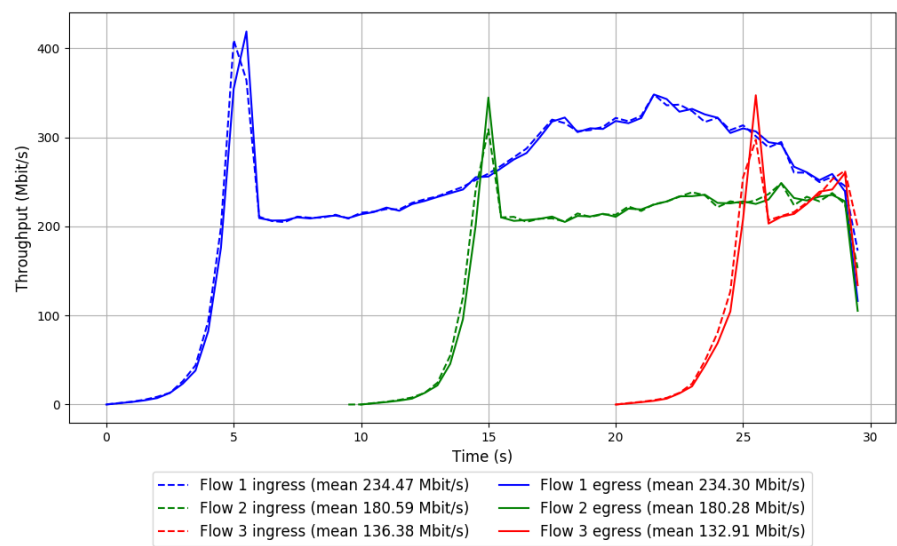
-- Flow 3:

Average throughput: 132.91 Mbit/s

95th percentile per-packet one-way delay: 116.273 ms

Loss rate: 4.76%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-03-27 22:07:45

End at: 2018-03-27 22:08:15

Below is generated by plot.py at 2018-03-28 04:34:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 411.86 Mbit/s

95th percentile per-packet one-way delay: 114.899 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 233.34 Mbit/s

95th percentile per-packet one-way delay: 113.960 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 205.39 Mbit/s

95th percentile per-packet one-way delay: 115.595 ms

Loss rate: 1.75%

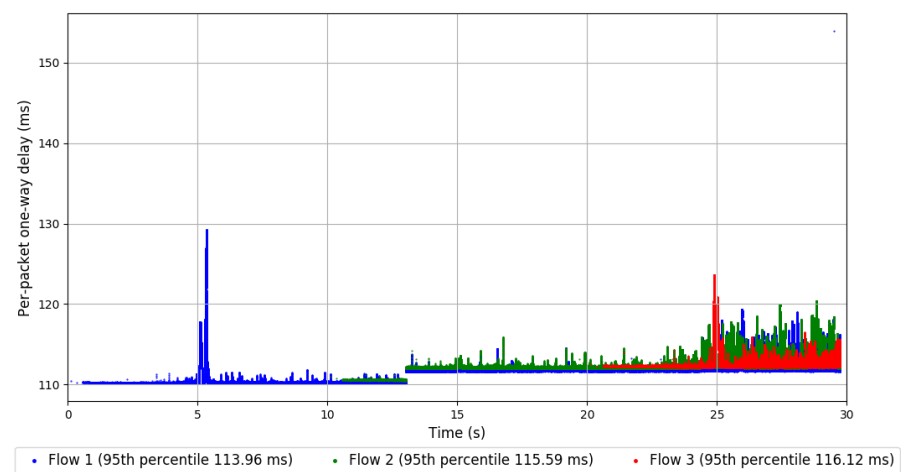
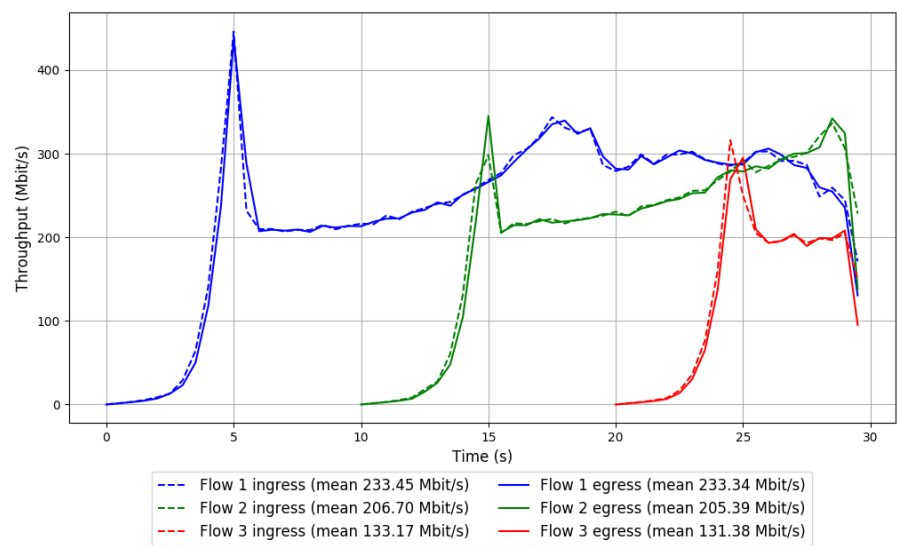
-- Flow 3:

Average throughput: 131.38 Mbit/s

95th percentile per-packet one-way delay: 116.125 ms

Loss rate: 3.59%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-03-27 22:28:12

End at: 2018-03-27 22:28:42

Below is generated by plot.py at 2018-03-28 04:34:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 448.25 Mbit/s

95th percentile per-packet one-way delay: 165.281 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 278.10 Mbit/s

95th percentile per-packet one-way delay: 176.712 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 188.05 Mbit/s

95th percentile per-packet one-way delay: 112.510 ms

Loss rate: 0.76%

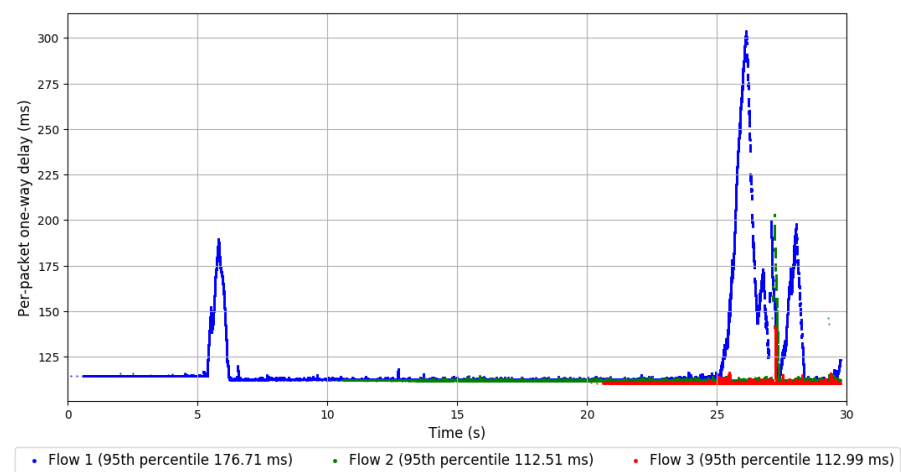
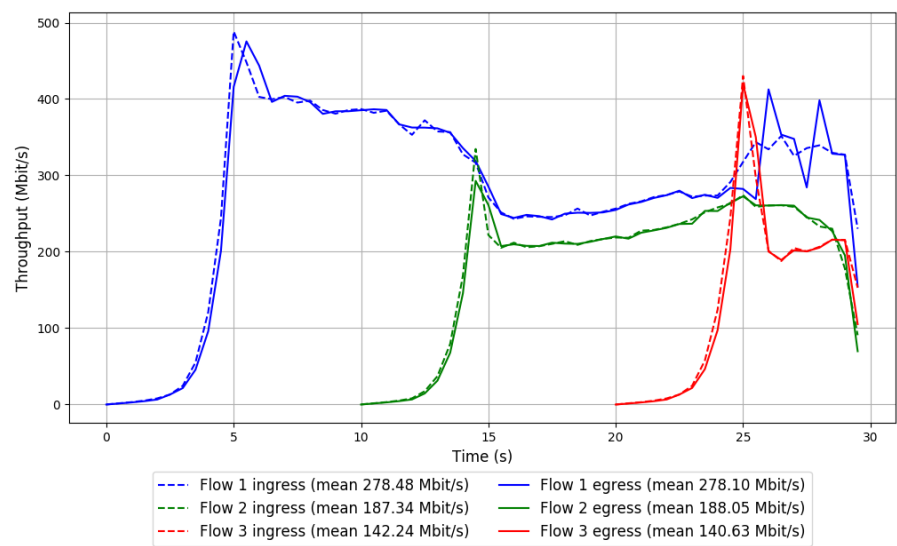
-- Flow 3:

Average throughput: 140.63 Mbit/s

95th percentile per-packet one-way delay: 112.986 ms

Loss rate: 3.38%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-03-27 22:47:51

End at: 2018-03-27 22:48:21

Below is generated by plot.py at 2018-03-28 04:34:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 440.12 Mbit/s

95th percentile per-packet one-way delay: 123.038 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 271.23 Mbit/s

95th percentile per-packet one-way delay: 160.009 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 190.21 Mbit/s

95th percentile per-packet one-way delay: 113.820 ms

Loss rate: 1.50%

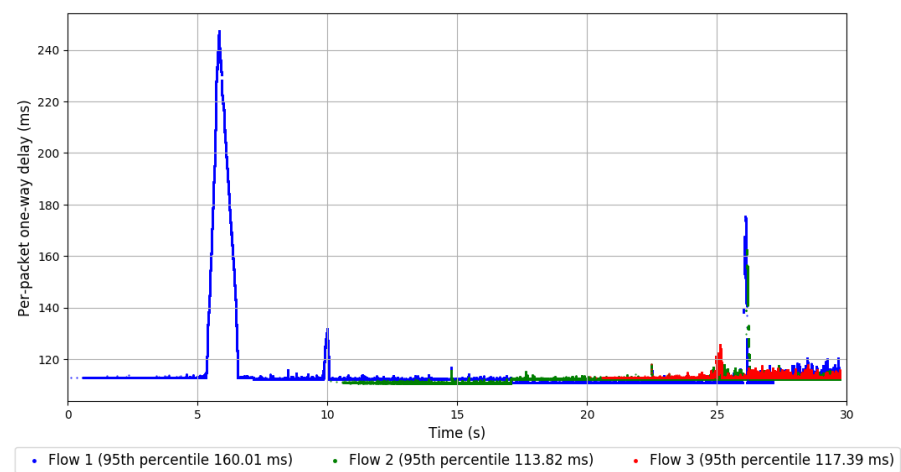
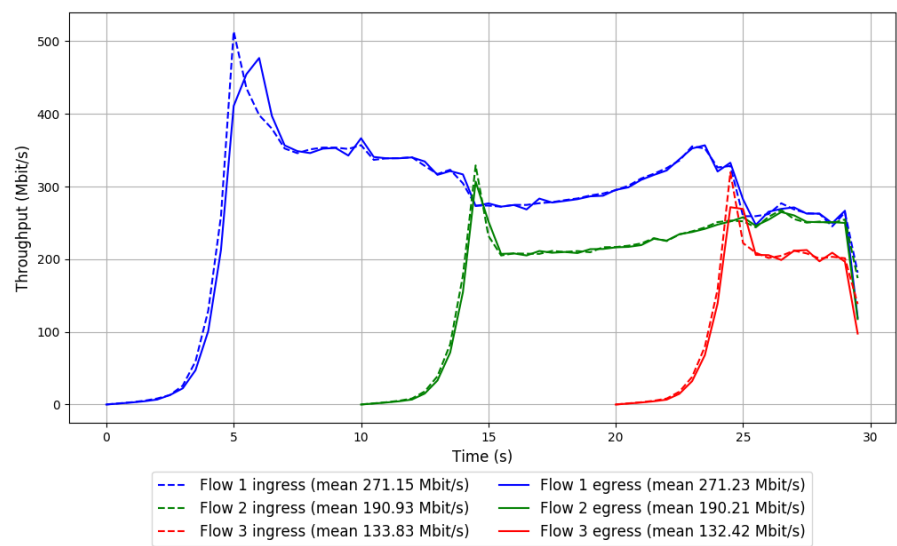
-- Flow 3:

Average throughput: 132.42 Mbit/s

95th percentile per-packet one-way delay: 117.391 ms

Loss rate: 3.34%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-03-27 23:07:13

End at: 2018-03-27 23:07:43

Below is generated by plot.py at 2018-03-28 04:34:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 332.98 Mbit/s

95th percentile per-packet one-way delay: 113.661 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 183.37 Mbit/s

95th percentile per-packet one-way delay: 113.845 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 191.04 Mbit/s

95th percentile per-packet one-way delay: 113.806 ms

Loss rate: 0.76%

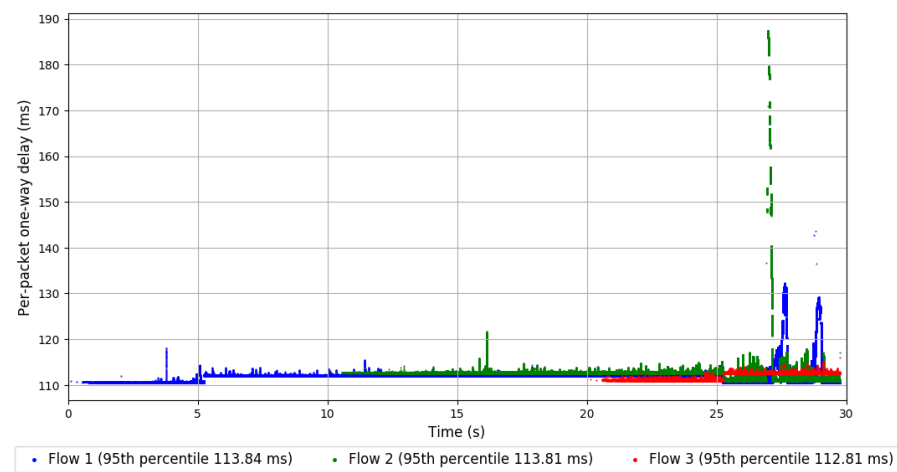
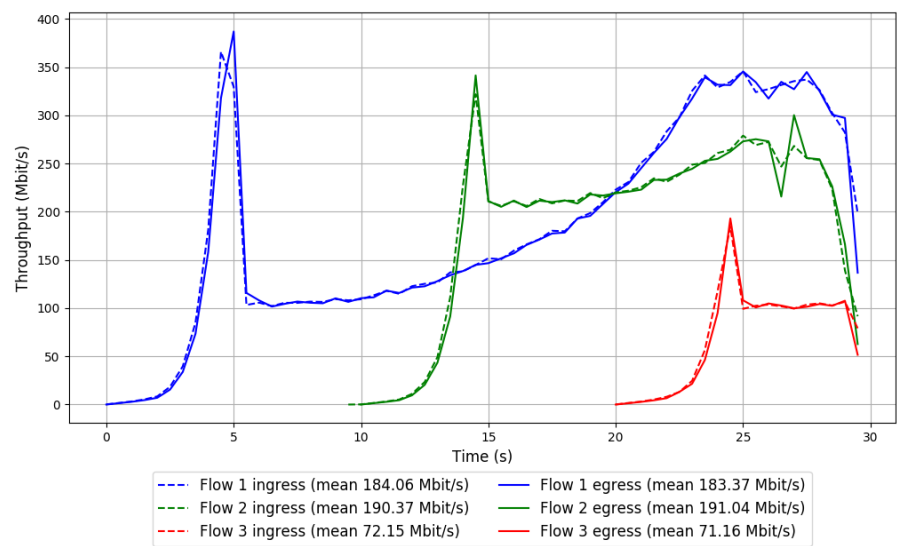
-- Flow 3:

Average throughput: 71.16 Mbit/s

95th percentile per-packet one-way delay: 112.810 ms

Loss rate: 3.58%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-03-27 23:26:24

End at: 2018-03-27 23:26:54

Below is generated by plot.py at 2018-03-28 04:34:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 415.34 Mbit/s

95th percentile per-packet one-way delay: 149.015 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 272.46 Mbit/s

95th percentile per-packet one-way delay: 179.992 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 180.96 Mbit/s

95th percentile per-packet one-way delay: 113.851 ms

Loss rate: 1.36%

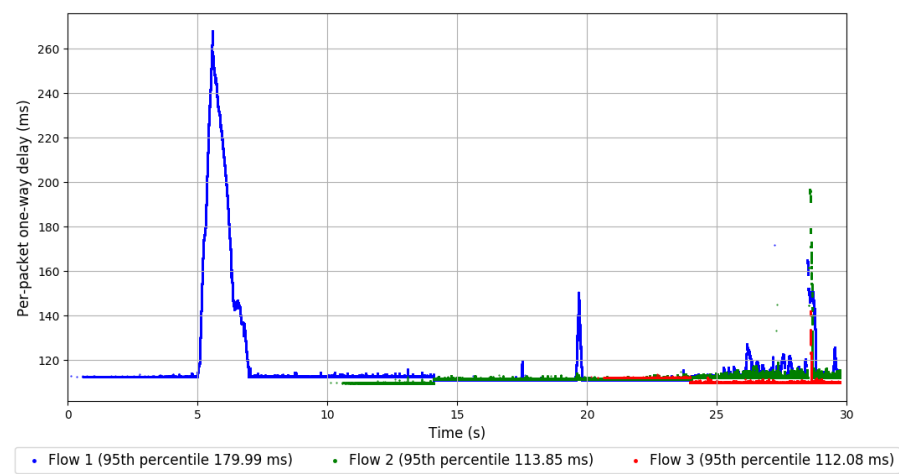
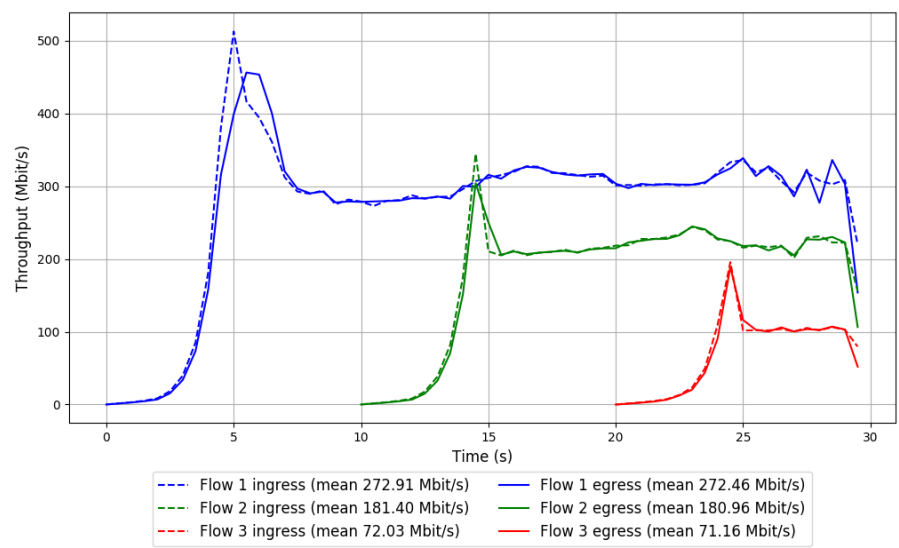
-- Flow 3:

Average throughput: 71.16 Mbit/s

95th percentile per-packet one-way delay: 112.084 ms

Loss rate: 3.47%

Run 10: Report of Vivace-latency — Data Link

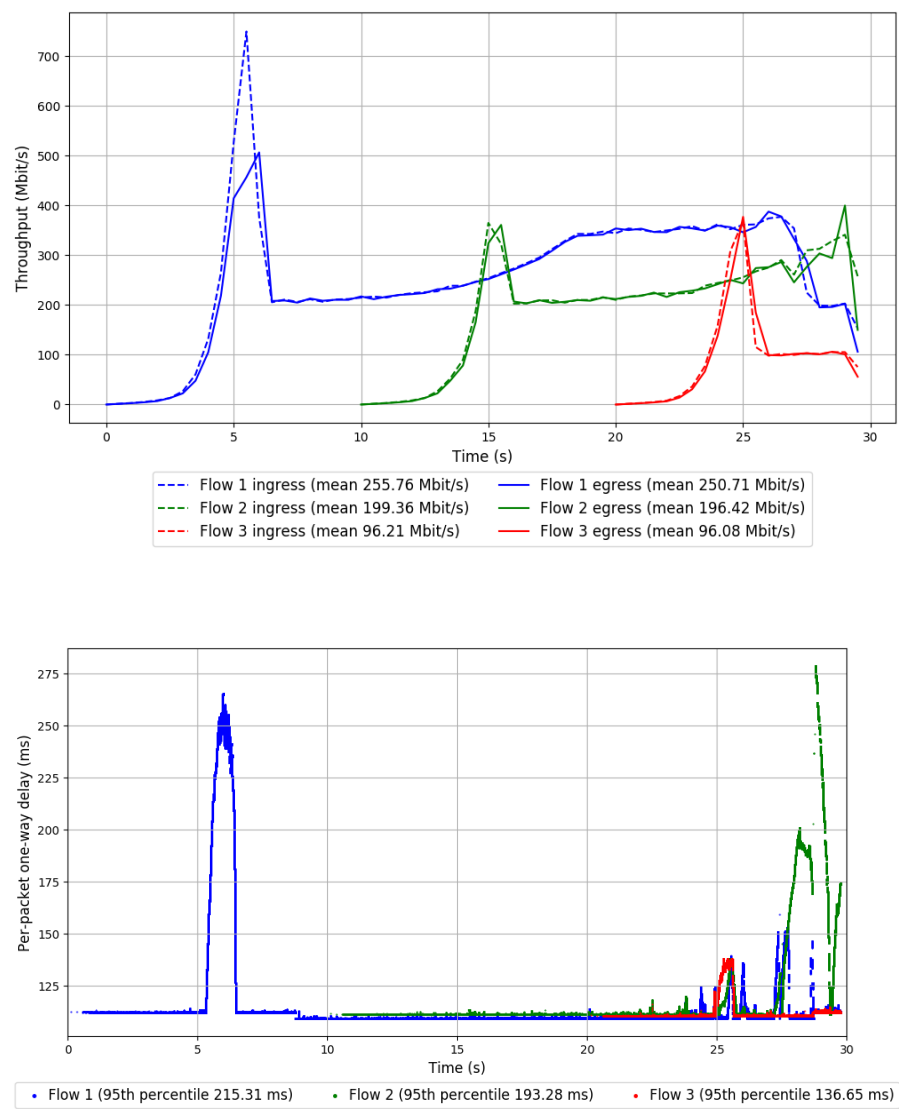


```
Run 1: Statistics of Vivace-loss

Start at: 2018-03-27 20:40:39
End at: 2018-03-27 20:41:09

# Below is generated by plot.py at 2018-03-28 04:36:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.89 Mbit/s
95th percentile per-packet one-way delay: 194.258 ms
Loss rate: 2.65%
-- Flow 1:
Average throughput: 250.71 Mbit/s
95th percentile per-packet one-way delay: 215.312 ms
Loss rate: 2.71%
-- Flow 2:
Average throughput: 196.42 Mbit/s
95th percentile per-packet one-way delay: 193.285 ms
Loss rate: 2.58%
-- Flow 3:
Average throughput: 96.08 Mbit/s
95th percentile per-packet one-way delay: 136.645 ms
Loss rate: 2.40%
```

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-03-27 20:59:43

End at: 2018-03-27 21:00:13

Below is generated by plot.py at 2018-03-28 04:36:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 421.76 Mbit/s

95th percentile per-packet one-way delay: 152.605 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 241.81 Mbit/s

95th percentile per-packet one-way delay: 124.556 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 198.15 Mbit/s

95th percentile per-packet one-way delay: 160.729 ms

Loss rate: 2.45%

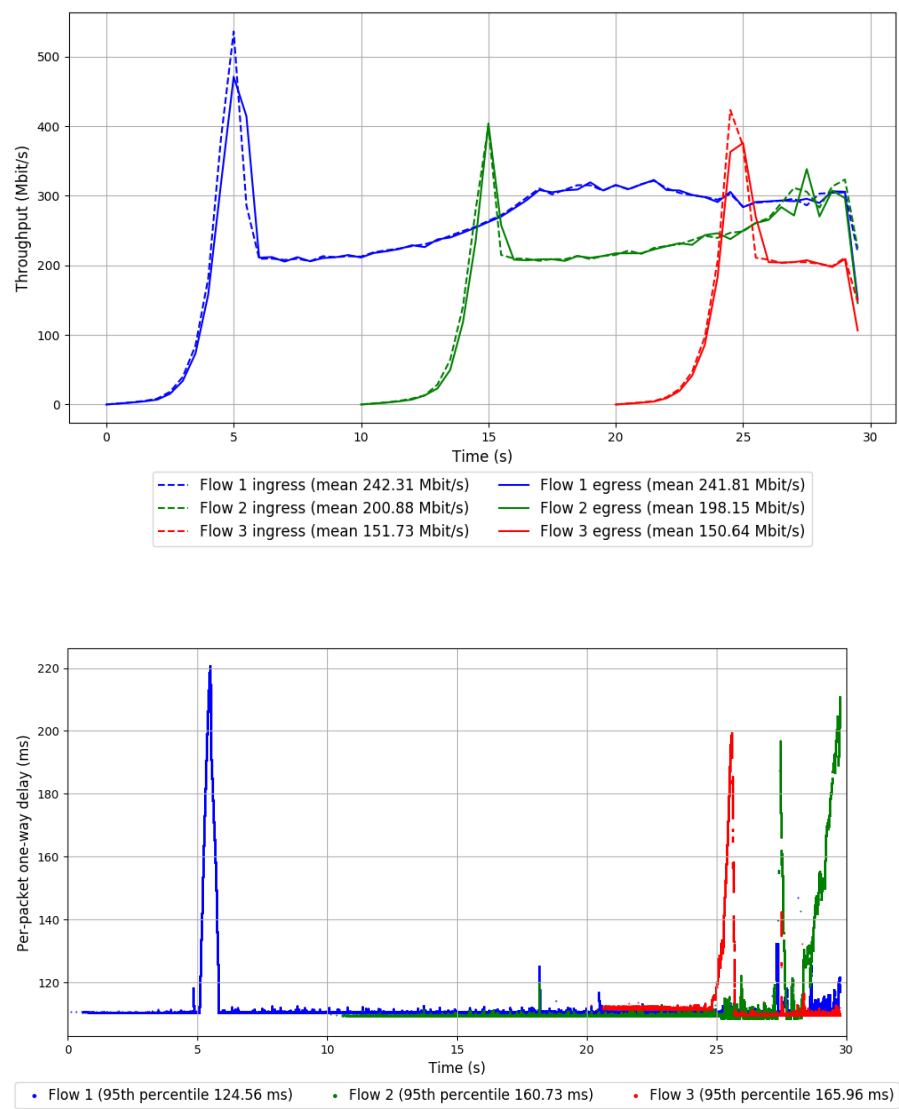
-- Flow 3:

Average throughput: 150.64 Mbit/s

95th percentile per-packet one-way delay: 165.963 ms

Loss rate: 2.96%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-03-27 21:18:57

End at: 2018-03-27 21:19:27

Below is generated by plot.py at 2018-03-28 04:37:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 288.05 Mbit/s

95th percentile per-packet one-way delay: 260.842 ms

Loss rate: 4.72%

-- Flow 1:

Average throughput: 195.90 Mbit/s

95th percentile per-packet one-way delay: 245.814 ms

Loss rate: 2.18%

-- Flow 2:

Average throughput: 92.77 Mbit/s

95th percentile per-packet one-way delay: 280.332 ms

Loss rate: 12.97%

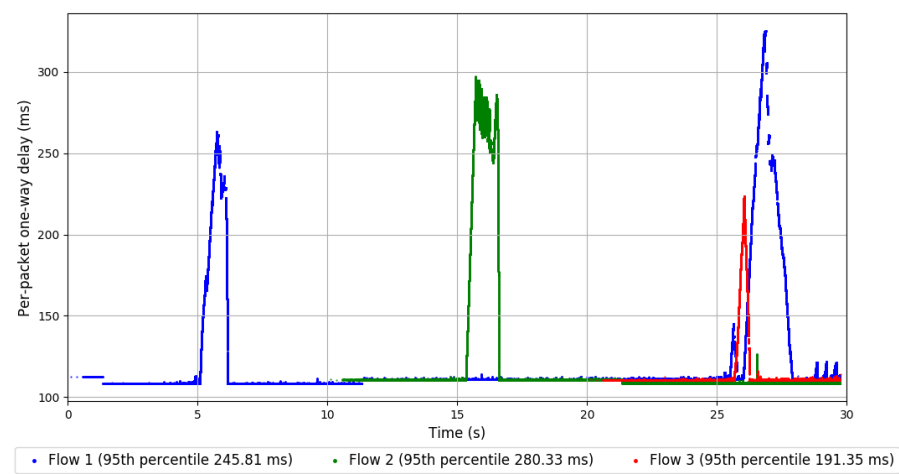
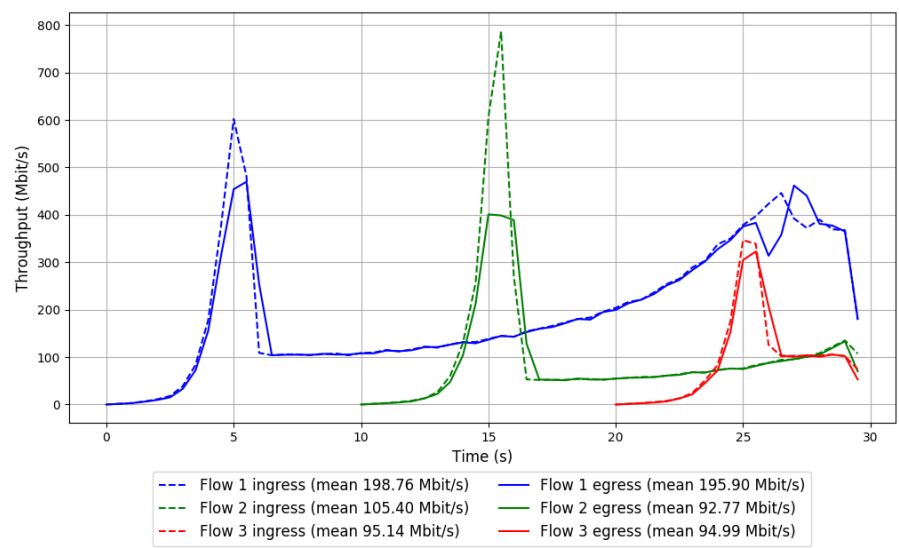
-- Flow 3:

Average throughput: 94.99 Mbit/s

95th percentile per-packet one-way delay: 191.352 ms

Loss rate: 2.38%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-03-27 21:37:47

End at: 2018-03-27 21:38:17

Below is generated by plot.py at 2018-03-28 04:41:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 476.05 Mbit/s

95th percentile per-packet one-way delay: 240.783 ms

Loss rate: 2.36%

-- Flow 1:

Average throughput: 275.25 Mbit/s

95th percentile per-packet one-way delay: 249.902 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 203.69 Mbit/s

95th percentile per-packet one-way delay: 156.438 ms

Loss rate: 1.59%

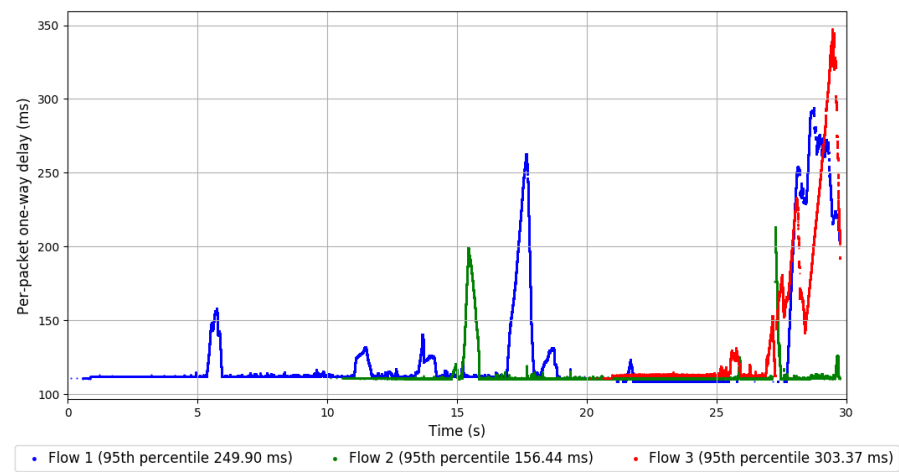
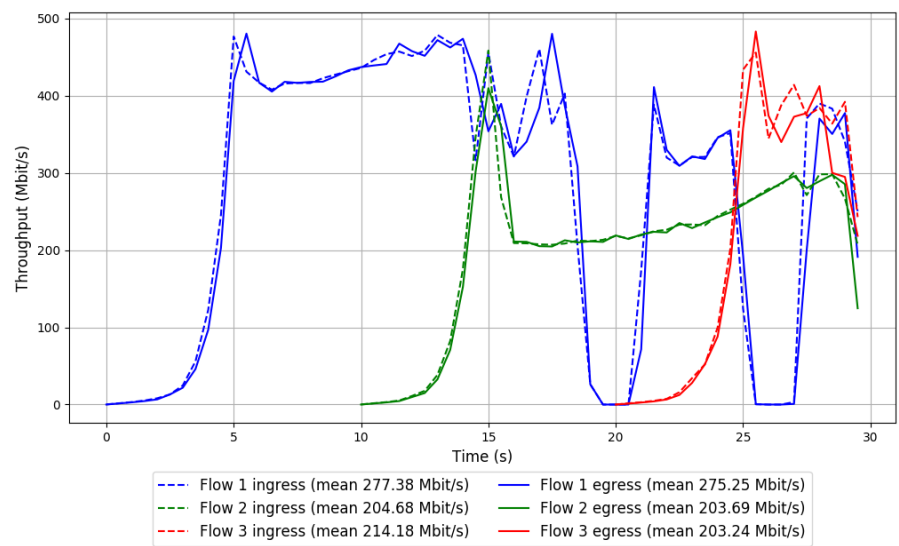
-- Flow 3:

Average throughput: 203.24 Mbit/s

95th percentile per-packet one-way delay: 303.367 ms

Loss rate: 7.24%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-03-27 21:57:28

End at: 2018-03-27 21:57:58

Below is generated by plot.py at 2018-03-28 04:41:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 481.36 Mbit/s

95th percentile per-packet one-way delay: 263.392 ms

Loss rate: 2.17%

-- Flow 1:

Average throughput: 255.12 Mbit/s

95th percentile per-packet one-way delay: 264.551 ms

Loss rate: 1.79%

-- Flow 2:

Average throughput: 273.51 Mbit/s

95th percentile per-packet one-way delay: 207.812 ms

Loss rate: 1.87%

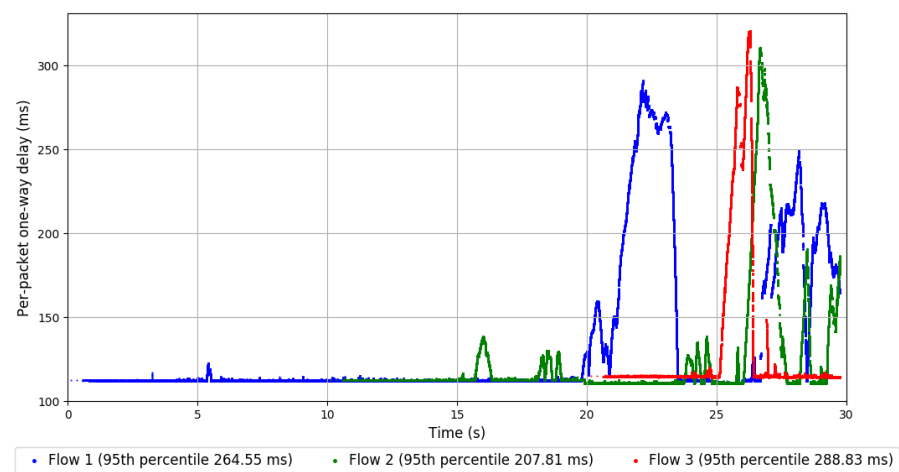
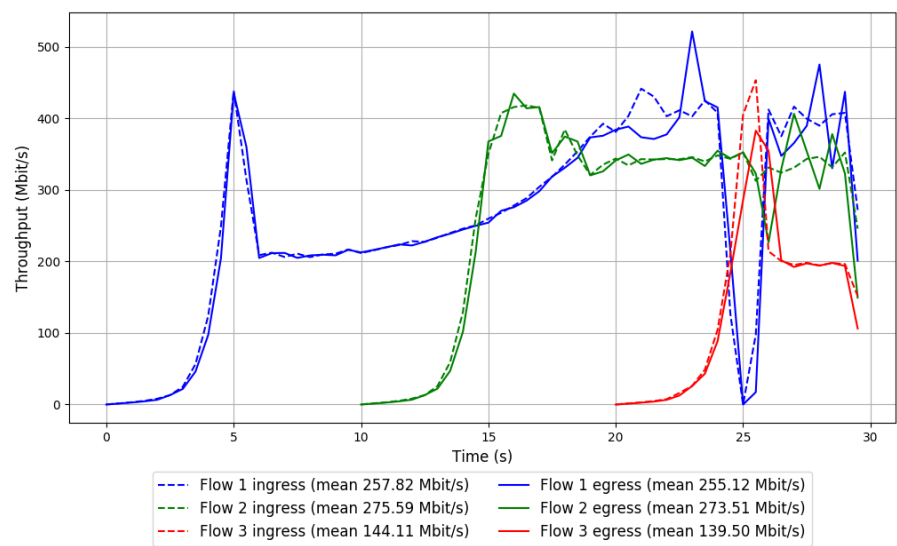
-- Flow 3:

Average throughput: 139.50 Mbit/s

95th percentile per-packet one-way delay: 288.828 ms

Loss rate: 5.45%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-03-27 22:17:12

End at: 2018-03-27 22:17:42

Below is generated by plot.py at 2018-03-28 04:43:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 554.93 Mbit/s

95th percentile per-packet one-way delay: 256.526 ms

Loss rate: 2.41%

-- Flow 1:

Average throughput: 315.35 Mbit/s

95th percentile per-packet one-way delay: 285.184 ms

Loss rate: 2.16%

-- Flow 2:

Average throughput: 265.50 Mbit/s

95th percentile per-packet one-way delay: 158.540 ms

Loss rate: 1.92%

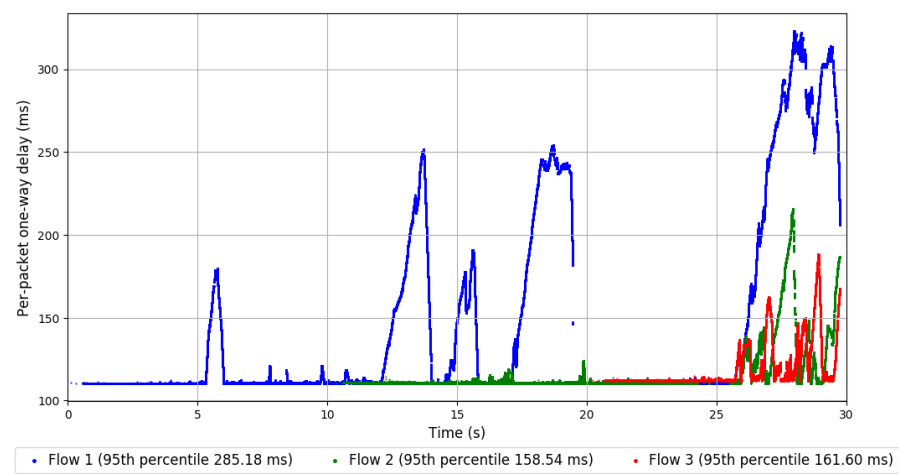
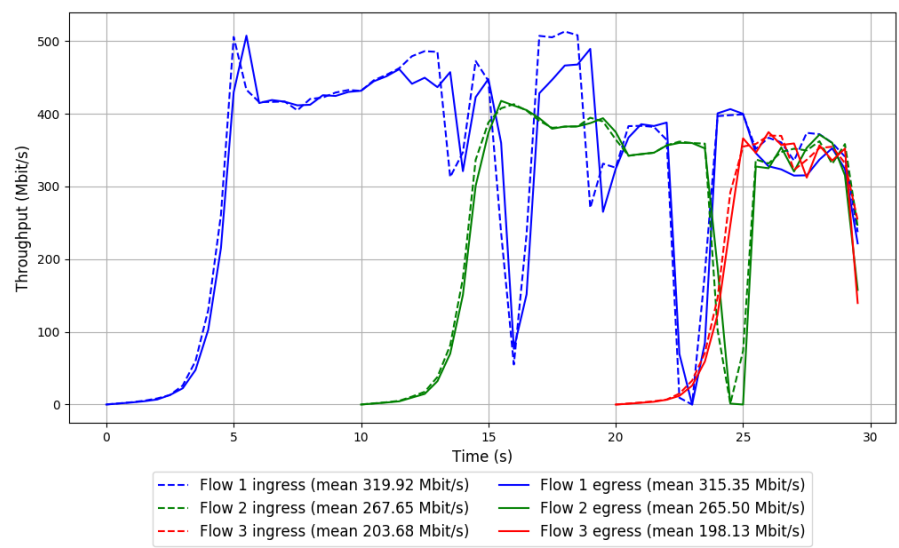
-- Flow 3:

Average throughput: 198.13 Mbit/s

95th percentile per-packet one-way delay: 161.599 ms

Loss rate: 4.95%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-03-27 22:37:26

End at: 2018-03-27 22:37:56

Below is generated by plot.py at 2018-03-28 04:43:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 496.99 Mbit/s

95th percentile per-packet one-way delay: 288.890 ms

Loss rate: 2.69%

-- Flow 1:

Average throughput: 322.94 Mbit/s

95th percentile per-packet one-way delay: 317.061 ms

Loss rate: 3.27%

-- Flow 2:

Average throughput: 195.82 Mbit/s

95th percentile per-packet one-way delay: 114.489 ms

Loss rate: 0.92%

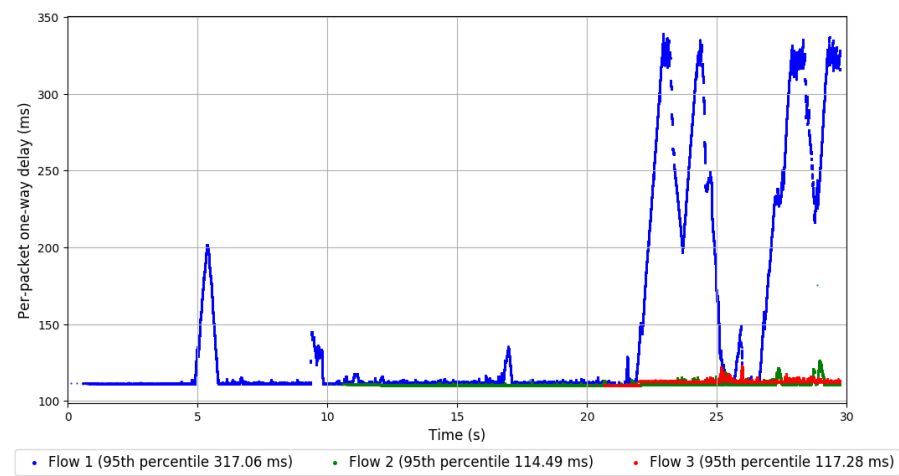
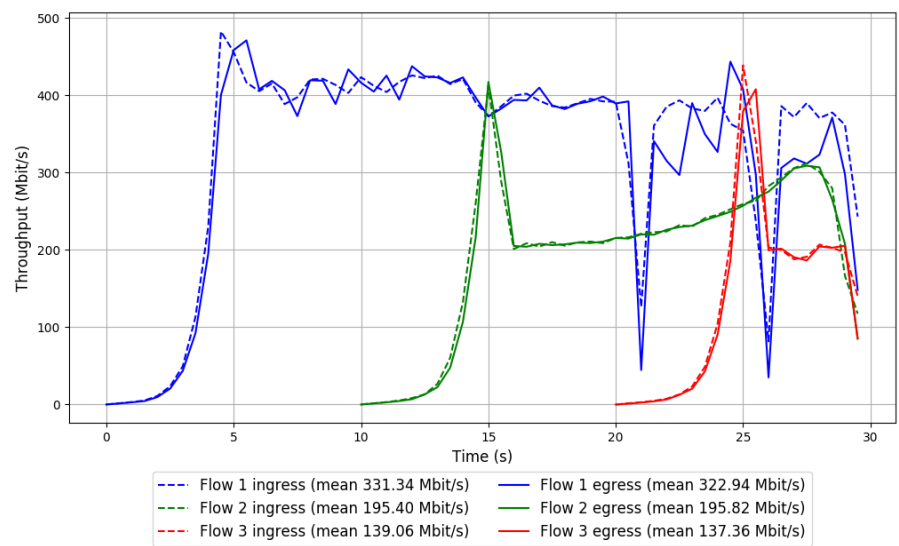
-- Flow 3:

Average throughput: 137.36 Mbit/s

95th percentile per-packet one-way delay: 117.280 ms

Loss rate: 3.48%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-03-27 22:57:12

End at: 2018-03-27 22:57:42

Below is generated by plot.py at 2018-03-28 04:43:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 414.86 Mbit/s

95th percentile per-packet one-way delay: 182.413 ms

Loss rate: 2.65%

-- Flow 1:

Average throughput: 282.08 Mbit/s

95th percentile per-packet one-way delay: 168.066 ms

Loss rate: 1.75%

-- Flow 2:

Average throughput: 129.83 Mbit/s

95th percentile per-packet one-way delay: 241.659 ms

Loss rate: 5.16%

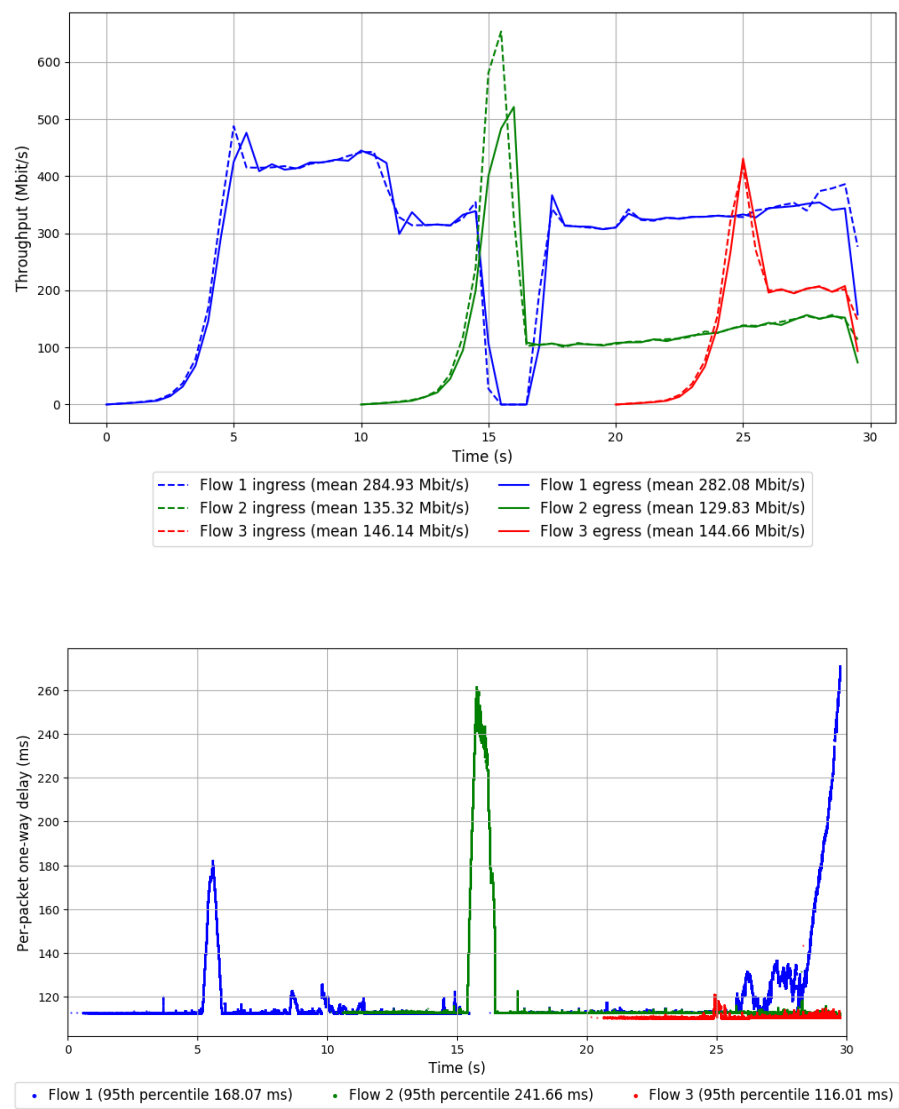
-- Flow 3:

Average throughput: 144.66 Mbit/s

95th percentile per-packet one-way delay: 116.011 ms

Loss rate: 3.29%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-03-27 23:16:26

End at: 2018-03-27 23:16:56

Below is generated by plot.py at 2018-03-28 04:43:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 408.07 Mbit/s

95th percentile per-packet one-way delay: 273.039 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 235.47 Mbit/s

95th percentile per-packet one-way delay: 277.352 ms

Loss rate: 1.90%

-- Flow 2:

Average throughput: 204.97 Mbit/s

95th percentile per-packet one-way delay: 138.785 ms

Loss rate: 1.84%

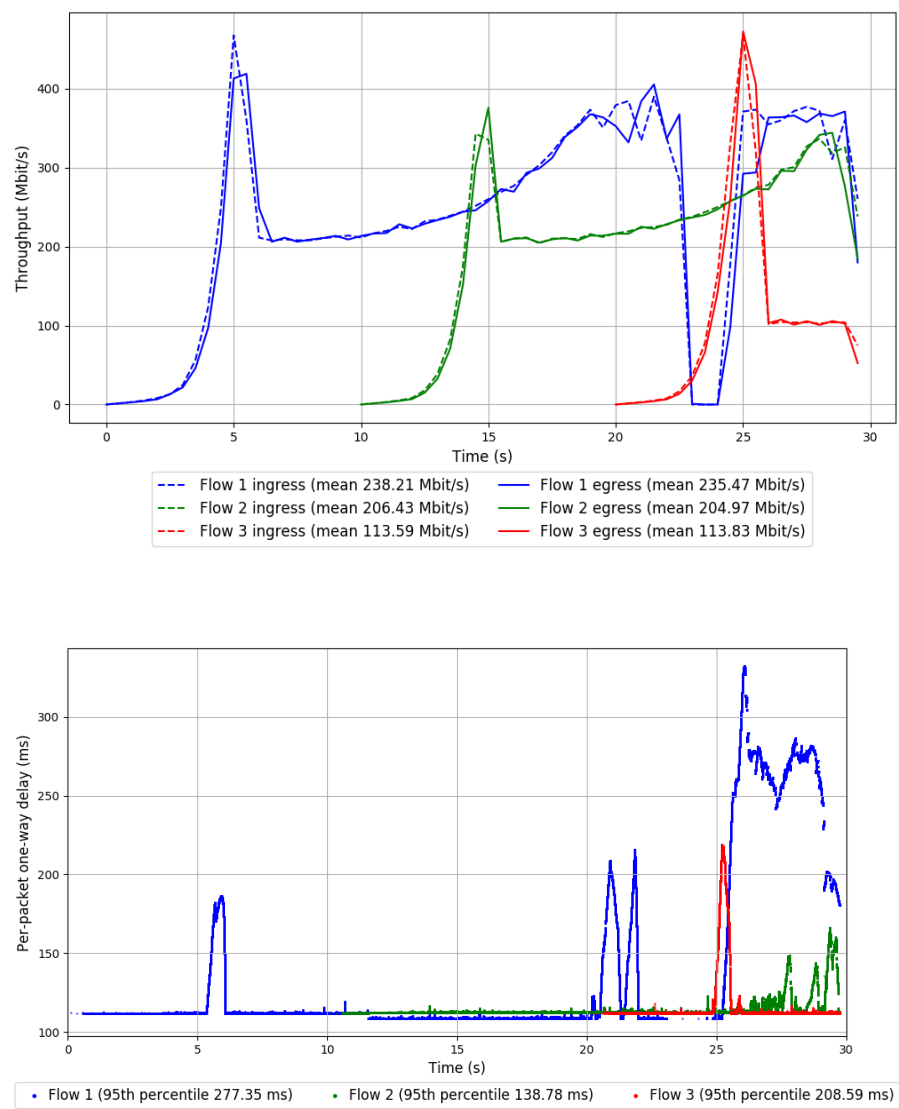
-- Flow 3:

Average throughput: 113.83 Mbit/s

95th percentile per-packet one-way delay: 208.595 ms

Loss rate: 2.12%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-03-27 23:35:39

End at: 2018-03-27 23:36:09

Below is generated by plot.py at 2018-03-28 04:45:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 438.12 Mbit/s

95th percentile per-packet one-way delay: 141.028 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 271.12 Mbit/s

95th percentile per-packet one-way delay: 156.199 ms

Loss rate: 1.30%

-- Flow 2:

Average throughput: 174.98 Mbit/s

95th percentile per-packet one-way delay: 113.104 ms

Loss rate: 1.29%

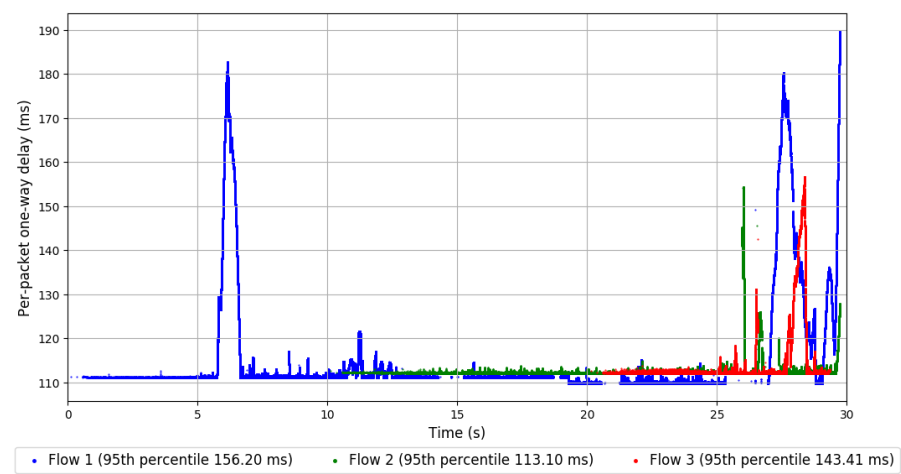
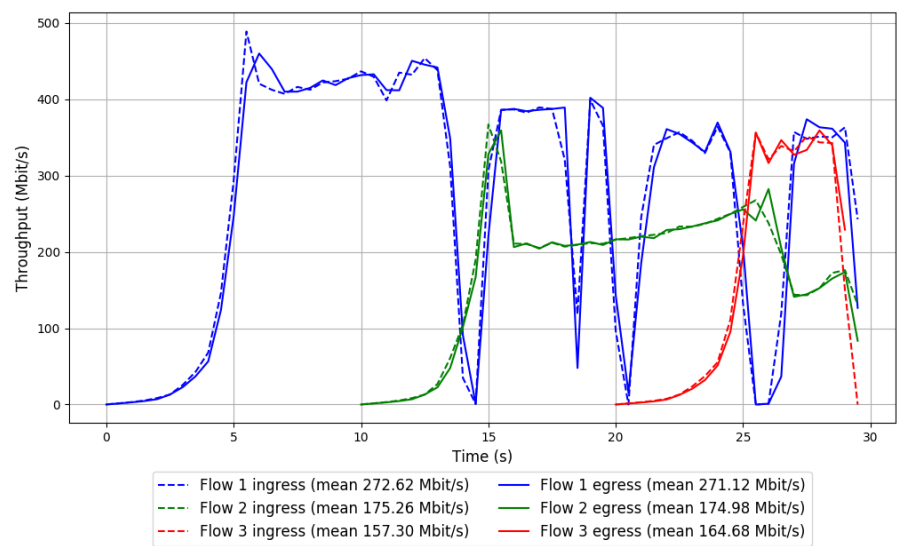
-- Flow 3:

Average throughput: 164.68 Mbit/s

95th percentile per-packet one-way delay: 143.406 ms

Loss rate: 0.00%

Run 10: Report of Vivace-loss — Data Link

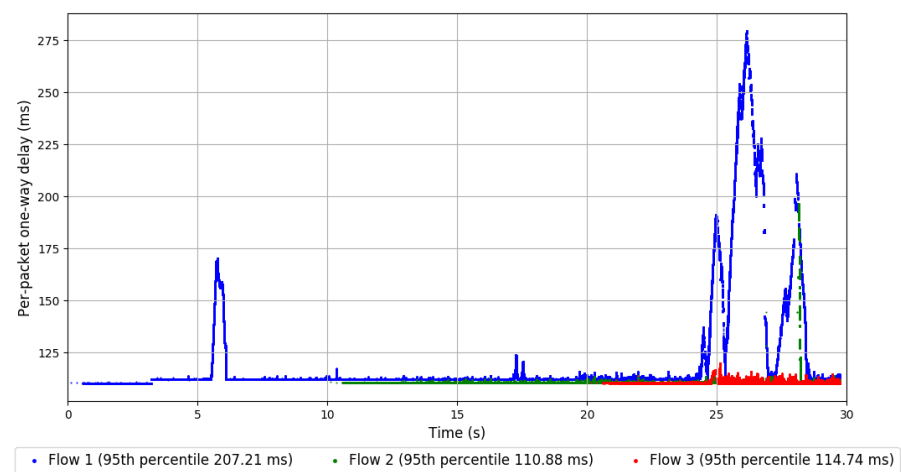
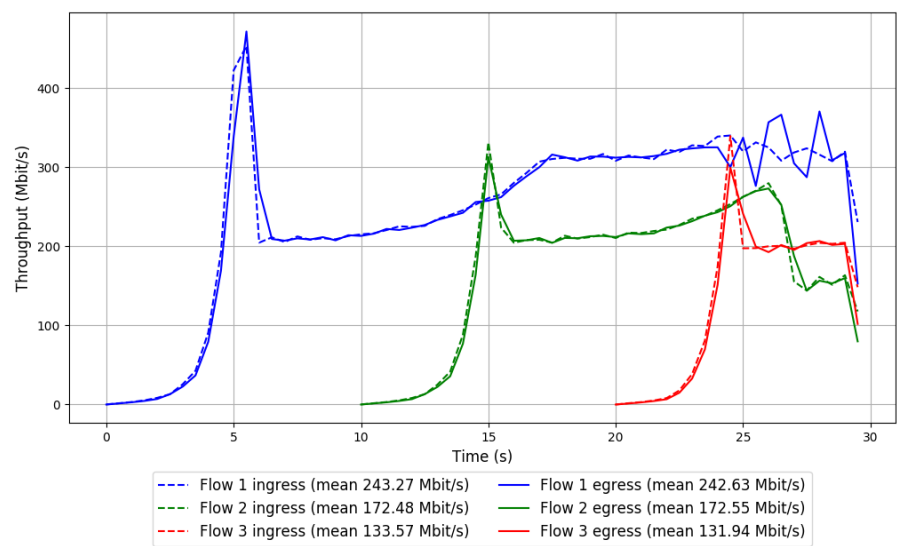


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-03-27 20:37:45
End at: 2018-03-27 20:38:15

# Below is generated by plot.py at 2018-03-28 04:45:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 399.64 Mbit/s
95th percentile per-packet one-way delay: 173.106 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 242.63 Mbit/s
95th percentile per-packet one-way delay: 207.209 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 172.55 Mbit/s
95th percentile per-packet one-way delay: 110.882 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 131.94 Mbit/s
95th percentile per-packet one-way delay: 114.740 ms
Loss rate: 3.54%
```


Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-03-27 20:56:41

End at: 2018-03-27 20:57:11

Below is generated by plot.py at 2018-03-28 04:49:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 455.14 Mbit/s

95th percentile per-packet one-way delay: 146.337 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 276.31 Mbit/s

95th percentile per-packet one-way delay: 116.927 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 194.68 Mbit/s

95th percentile per-packet one-way delay: 112.242 ms

Loss rate: 1.76%

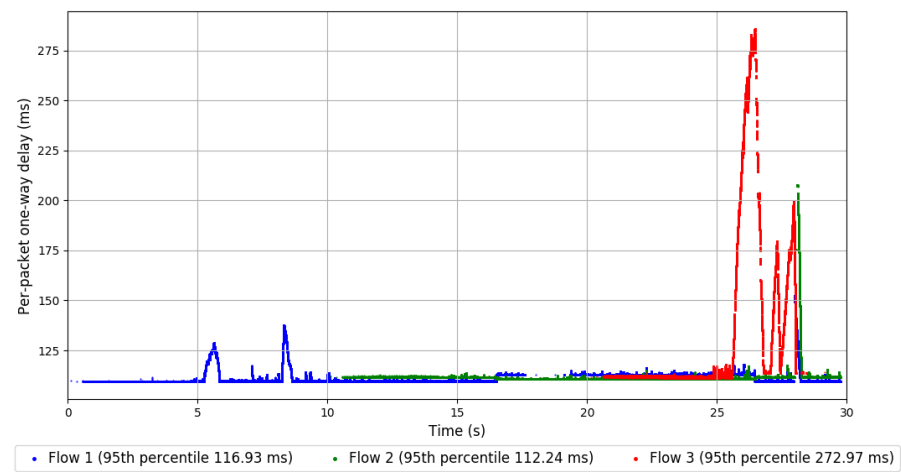
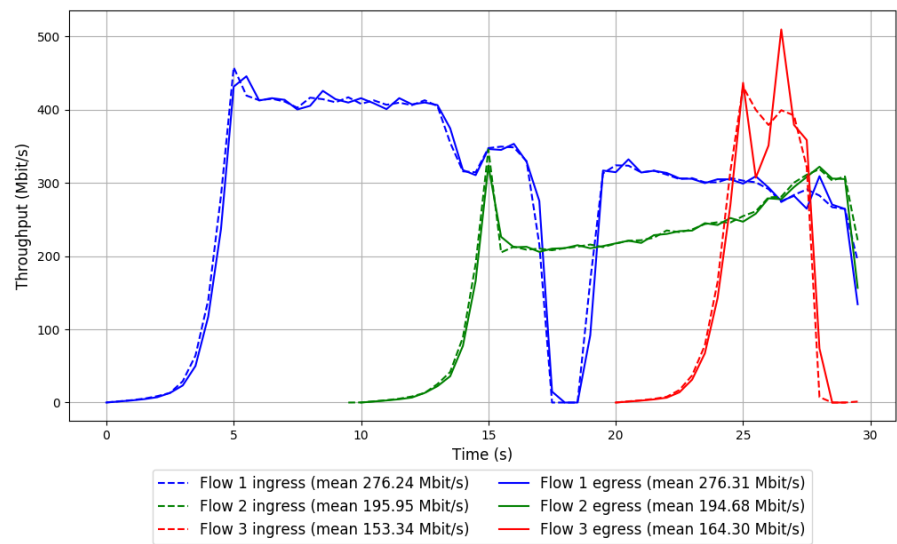
-- Flow 3:

Average throughput: 164.30 Mbit/s

95th percentile per-packet one-way delay: 272.972 ms

Loss rate: 0.24%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-03-27 21:15:58

End at: 2018-03-27 21:16:28

Below is generated by plot.py at 2018-03-28 04:49:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 432.72 Mbit/s

95th percentile per-packet one-way delay: 235.891 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 322.08 Mbit/s

95th percentile per-packet one-way delay: 255.596 ms

Loss rate: 1.22%

-- Flow 2:

Average throughput: 117.67 Mbit/s

95th percentile per-packet one-way delay: 111.319 ms

Loss rate: 1.87%

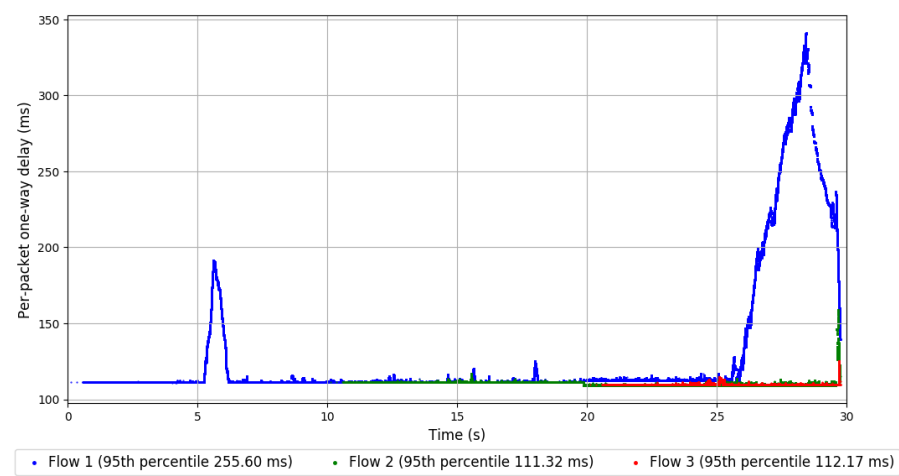
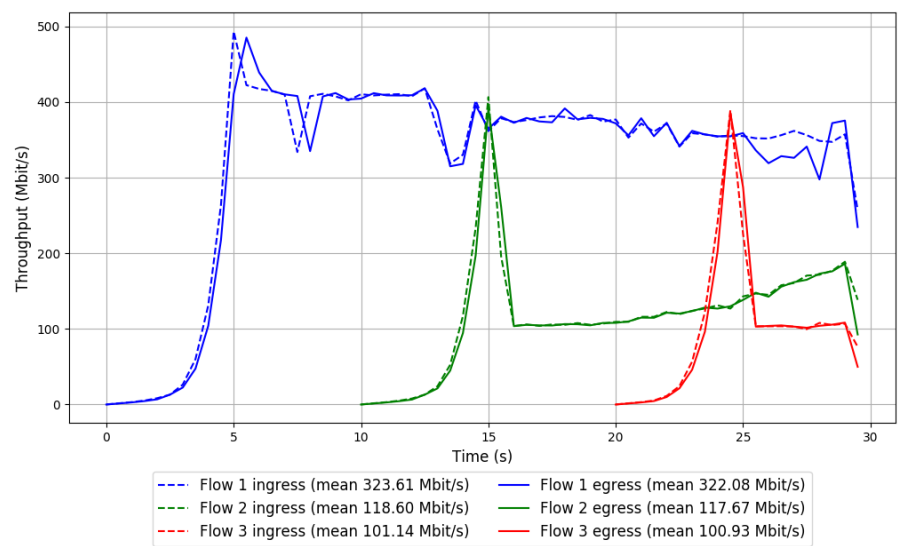
-- Flow 3:

Average throughput: 100.93 Mbit/s

95th percentile per-packet one-way delay: 112.173 ms

Loss rate: 2.42%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-03-27 21:34:53

End at: 2018-03-27 21:35:23

Below is generated by plot.py at 2018-03-28 04:49:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 385.59 Mbit/s

95th percentile per-packet one-way delay: 116.199 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 245.64 Mbit/s

95th percentile per-packet one-way delay: 136.162 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 175.63 Mbit/s

95th percentile per-packet one-way delay: 113.150 ms

Loss rate: 1.55%

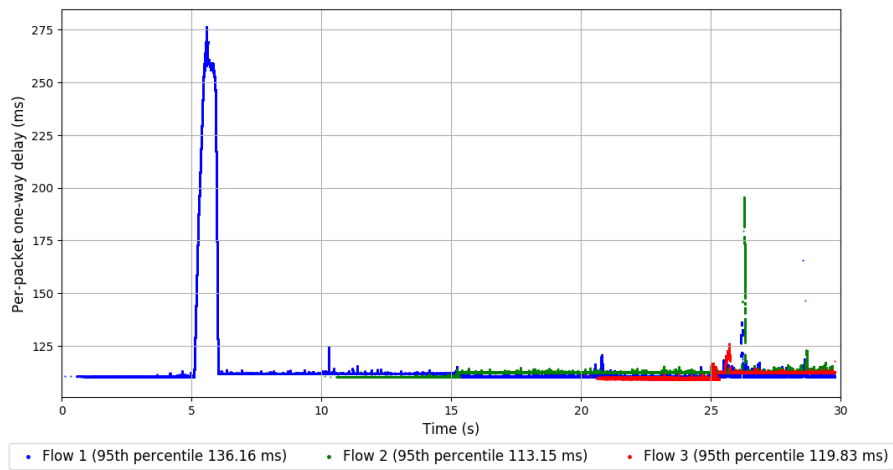
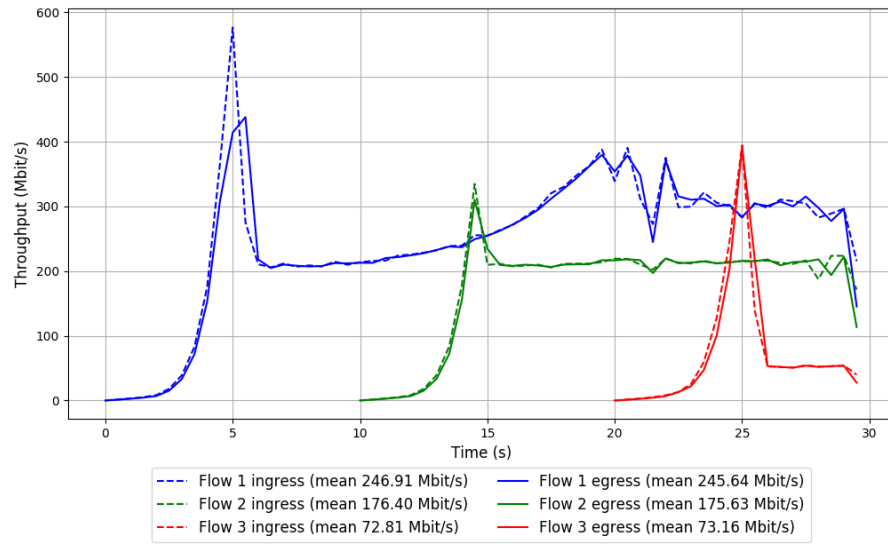
-- Flow 3:

Average throughput: 73.16 Mbit/s

95th percentile per-packet one-way delay: 119.828 ms

Loss rate: 1.75%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-03-27 21:54:27

End at: 2018-03-27 21:54:57

Below is generated by plot.py at 2018-03-28 04:50:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 457.24 Mbit/s

95th percentile per-packet one-way delay: 162.394 ms

Loss rate: 1.65%

-- Flow 1:

Average throughput: 249.81 Mbit/s

95th percentile per-packet one-way delay: 156.514 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 247.86 Mbit/s

95th percentile per-packet one-way delay: 189.352 ms

Loss rate: 2.14%

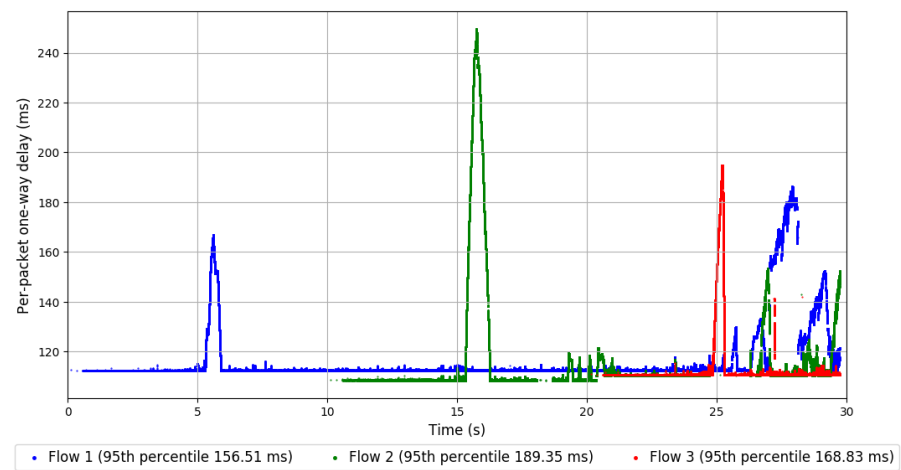
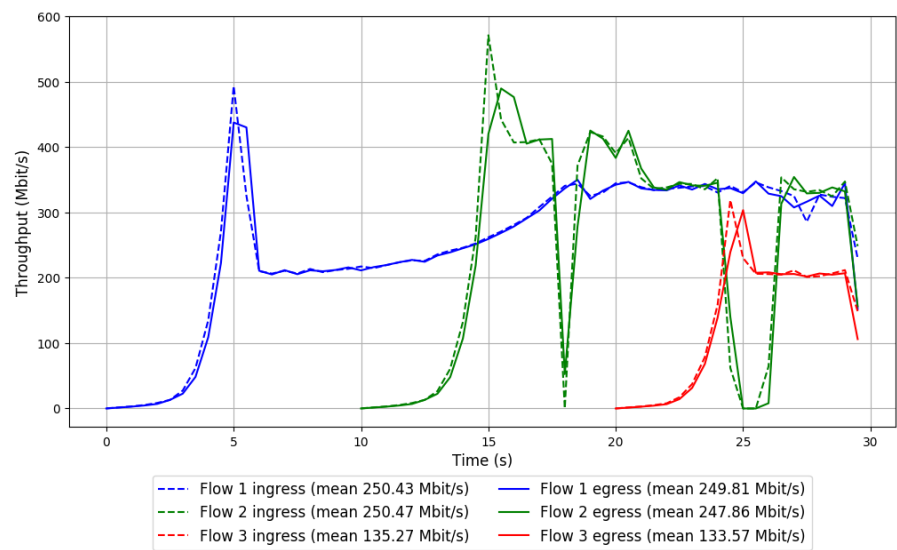
-- Flow 3:

Average throughput: 133.57 Mbit/s

95th percentile per-packet one-way delay: 168.831 ms

Loss rate: 3.52%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-03-27 22:14:03

End at: 2018-03-27 22:14:33

Below is generated by plot.py at 2018-03-28 04:50:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 423.01 Mbit/s

95th percentile per-packet one-way delay: 127.371 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 258.35 Mbit/s

95th percentile per-packet one-way delay: 113.562 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 201.94 Mbit/s

95th percentile per-packet one-way delay: 136.250 ms

Loss rate: 1.78%

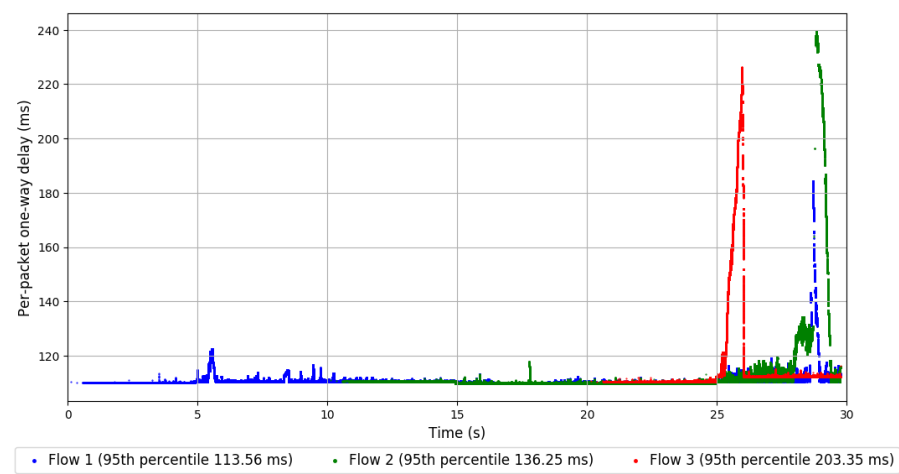
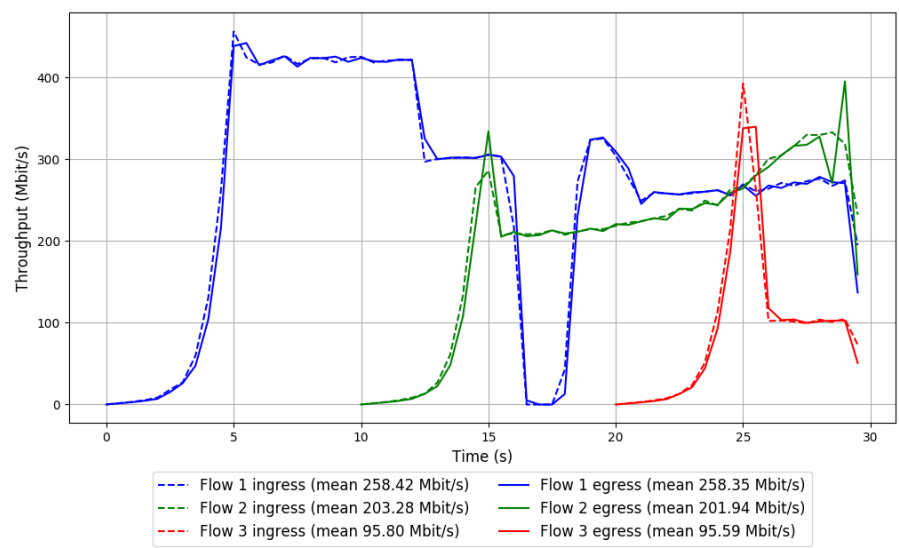
-- Flow 3:

Average throughput: 95.59 Mbit/s

95th percentile per-packet one-way delay: 203.349 ms

Loss rate: 2.43%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-03-27 22:34:29

End at: 2018-03-27 22:34:59

Below is generated by plot.py at 2018-03-28 04:50:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 409.65 Mbit/s

95th percentile per-packet one-way delay: 146.541 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 243.88 Mbit/s

95th percentile per-packet one-way delay: 186.216 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 189.00 Mbit/s

95th percentile per-packet one-way delay: 112.738 ms

Loss rate: 1.56%

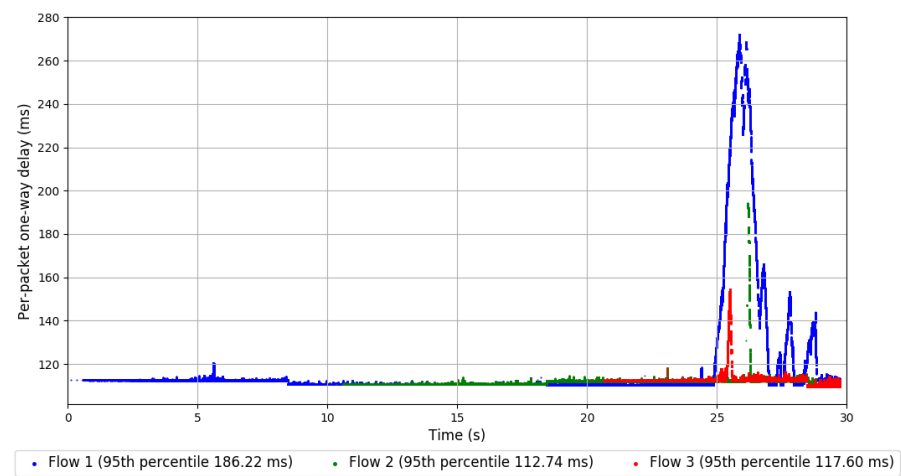
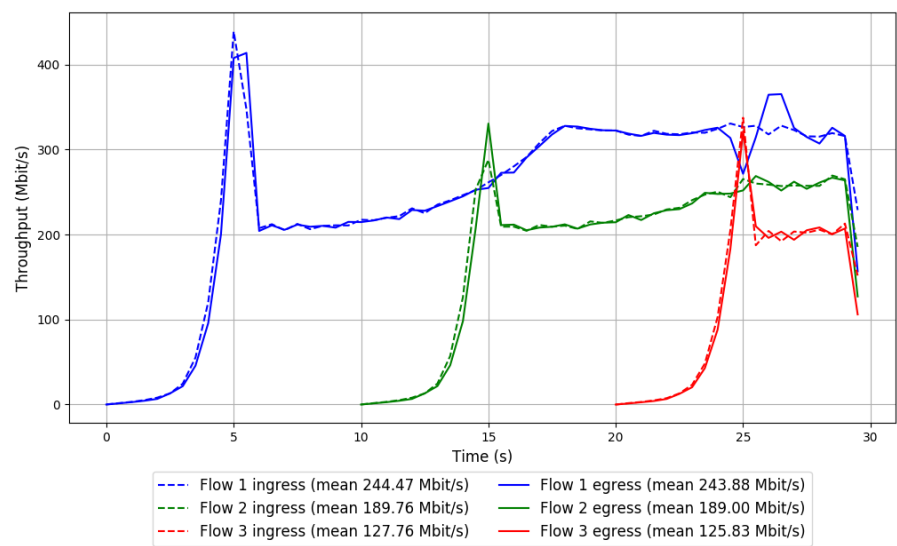
-- Flow 3:

Average throughput: 125.83 Mbit/s

95th percentile per-packet one-way delay: 117.600 ms

Loss rate: 3.76%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-03-27 22:54:11

End at: 2018-03-27 22:54:41

Below is generated by plot.py at 2018-03-28 04:51:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 455.13 Mbit/s

95th percentile per-packet one-way delay: 147.073 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 285.57 Mbit/s

95th percentile per-packet one-way delay: 150.864 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 193.76 Mbit/s

95th percentile per-packet one-way delay: 117.941 ms

Loss rate: 1.49%

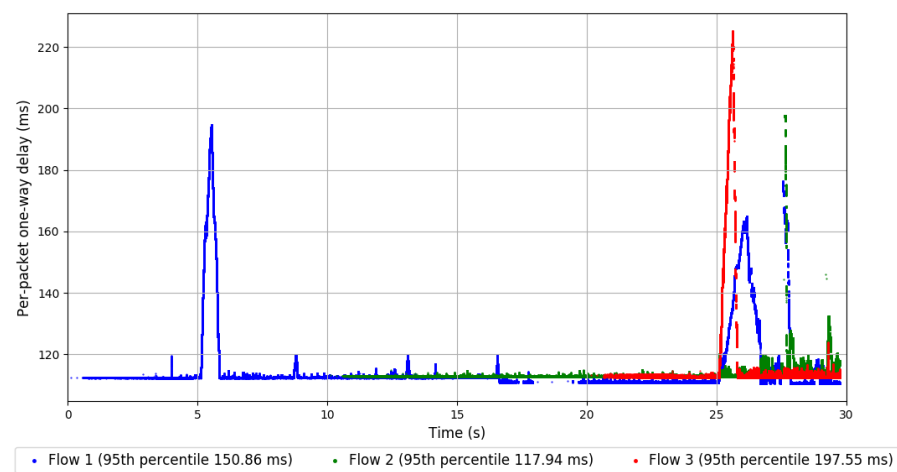
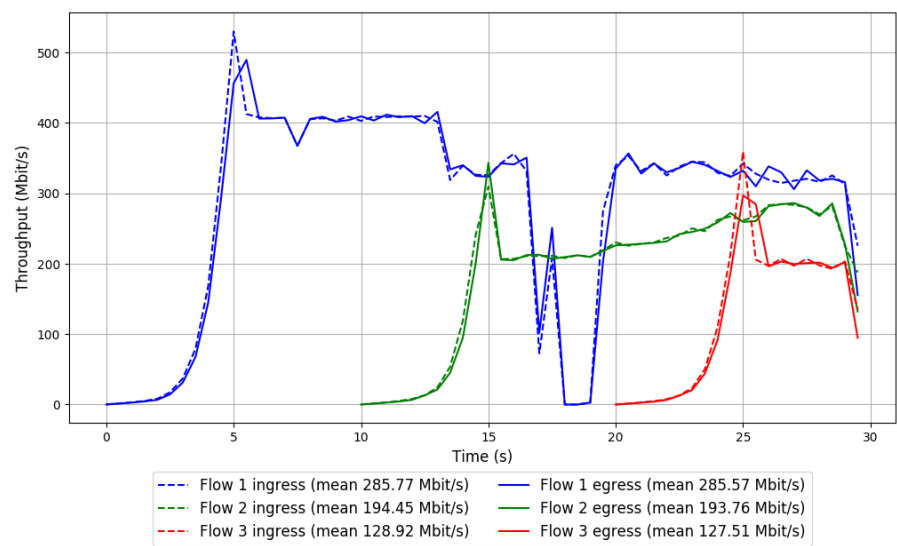
-- Flow 3:

Average throughput: 127.51 Mbit/s

95th percentile per-packet one-way delay: 197.546 ms

Loss rate: 3.37%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-03-27 23:13:22

End at: 2018-03-27 23:13:52

Below is generated by plot.py at 2018-03-28 04:51:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 516.50 Mbit/s

95th percentile per-packet one-way delay: 232.056 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 302.26 Mbit/s

95th percentile per-packet one-way delay: 276.221 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 261.71 Mbit/s

95th percentile per-packet one-way delay: 191.399 ms

Loss rate: 2.49%

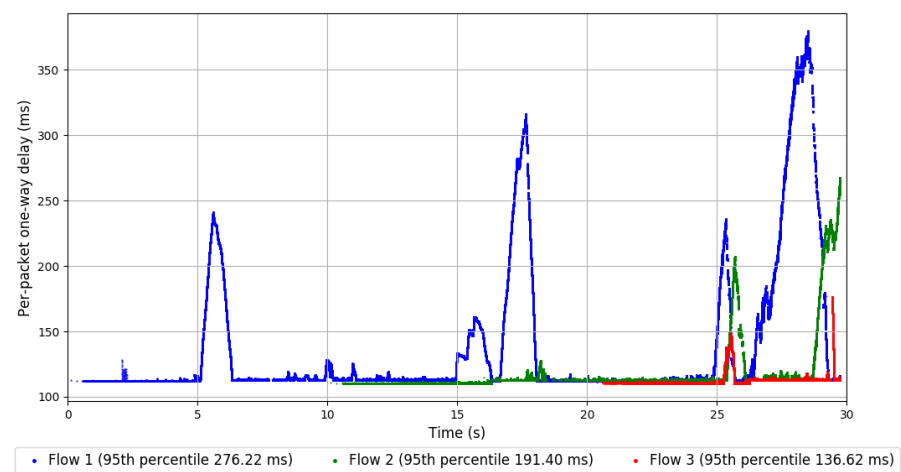
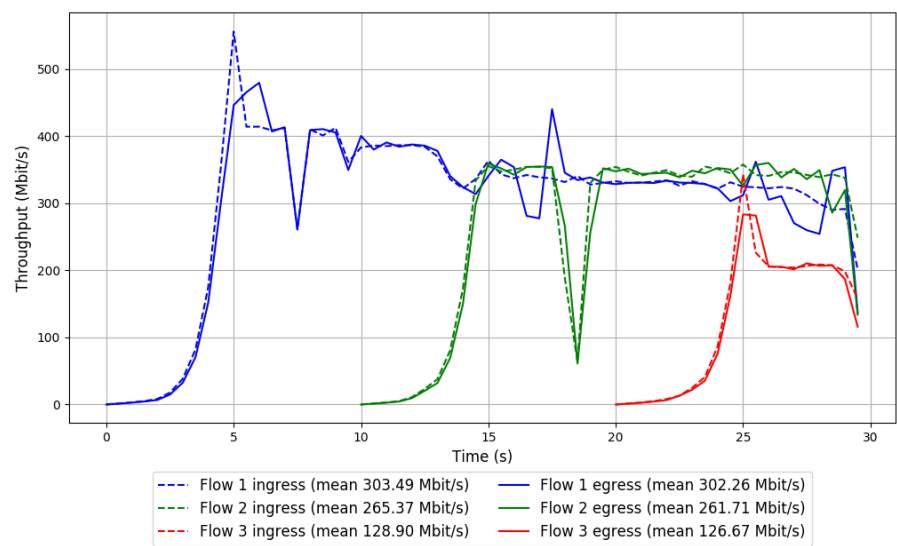
-- Flow 3:

Average throughput: 126.67 Mbit/s

95th percentile per-packet one-way delay: 136.623 ms

Loss rate: 3.97%

Run 9: Report of Vivace-LTE — Data Link



```
Run 10: Statistics of Vivace-LTE

Start at: 2018-03-27 23:32:39
End at: 2018-03-27 23:33:09

# Below is generated by plot.py at 2018-03-28 04:51:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 462.73 Mbit/s
95th percentile per-packet one-way delay: 122.497 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 295.86 Mbit/s
95th percentile per-packet one-way delay: 139.766 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 187.40 Mbit/s
95th percentile per-packet one-way delay: 116.439 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 132.29 Mbit/s
95th percentile per-packet one-way delay: 113.887 ms
Loss rate: 3.52%
```

Run 10: Report of Vivace-LTE — Data Link

