

Pantheon Report

Generated at 2018-02-21 01:45:22 (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.

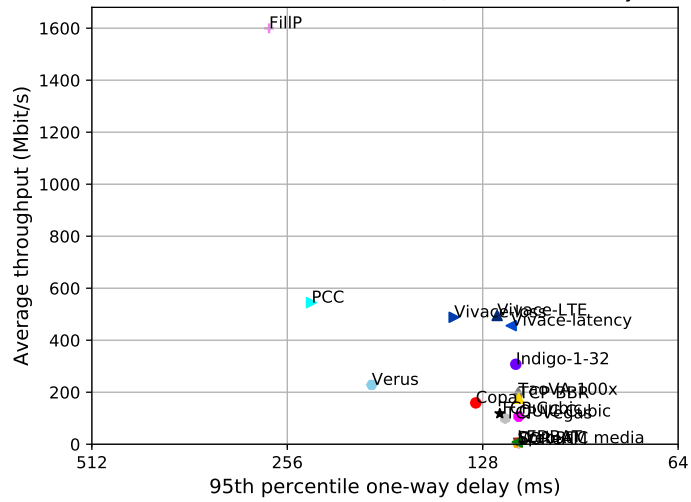
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

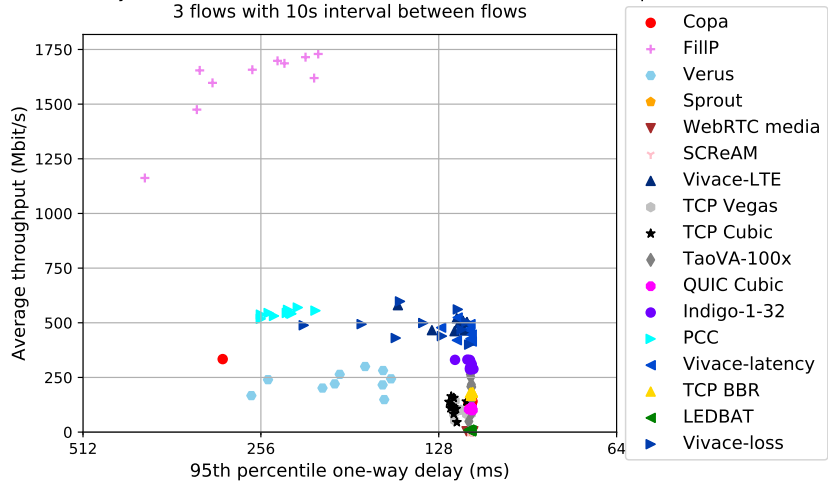
Git summary:

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

test from 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	91.18	88.29	83.16	112.60	112.64	112.98	0.68	1.16	2.24
TCP Cubic	10	61.89	62.90	43.22	120.96	118.54	117.19	0.72	1.54	3.75
LEDBAT	10	5.08	3.38	1.73	113.31	113.10	113.12	1.64	2.33	4.35
PCC	10	503.56	53.85	16.84	235.02	234.41	222.87	3.00	2.64	4.20
QUIC Cubic	10	58.74	49.30	47.01	112.20	111.93	112.08	0.93	1.62	3.03
SCReAM	10	0.21	0.22	0.21	112.38	111.74	111.47	0.65	1.07	2.23
WebRTC media	10	2.10	1.31	0.48	112.20	111.76	112.41	0.84	1.67	3.73
Sprout	10	2.57	2.06	1.70	113.20	113.05	112.85	0.96	1.03	3.52
TaoVA-100x	10	83.54	115.92	92.40	112.86	112.40	113.21	0.90	1.17	1.99
TCP Vegas	10	48.80	56.36	40.73	117.45	117.04	116.64	0.71	1.19	2.77
Verus	10	146.13	90.94	69.48	185.66	181.24	225.22	1.52	2.25	5.91
Copa	10	89.13	87.71	53.47	130.72	131.22	124.61	3.78	3.98	3.88
FillP	10	844.78	797.12	695.75	268.24	240.88	277.22	3.45	5.56	9.88
Indigo-1-32	10	166.10	152.09	127.44	113.05	114.04	115.48	0.69	1.07	2.63
Vivace-latency	10	283.70	193.20	137.10	115.25	117.19	117.62	0.83	1.60	3.40
Vivace-loss	10	282.73	243.59	136.48	151.83	126.48	132.60	1.22	1.70	3.20
Vivace-LTE	10	295.77	208.45	189.72	123.09	127.41	122.80	0.86	1.42	3.72

Run 1: Statistics of TCP BBR

Start at: 2018-02-20 17:07:41

End at: 2018-02-20 17:08:11

Below is generated by plot.py at 2018-02-20 23:52:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 180.35 Mbit/s

95th percentile per-packet one-way delay: 112.917 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 92.83 Mbit/s

95th percentile per-packet one-way delay: 112.881 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 88.98 Mbit/s

95th percentile per-packet one-way delay: 112.779 ms

Loss rate: 1.22%

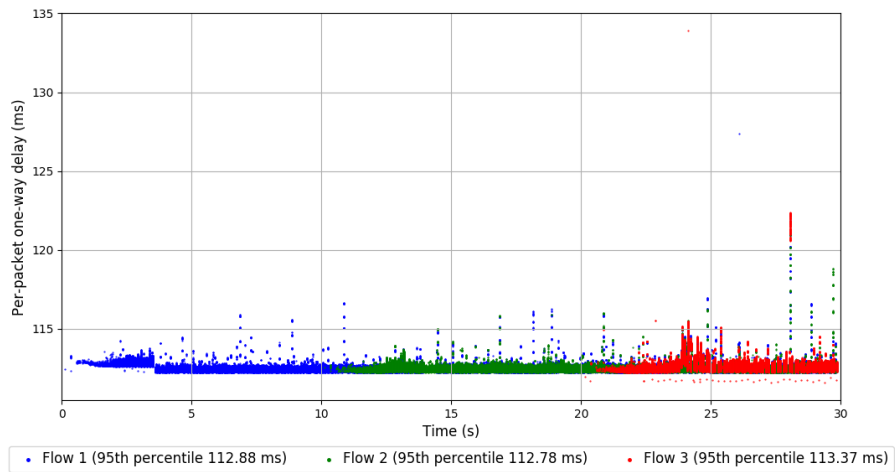
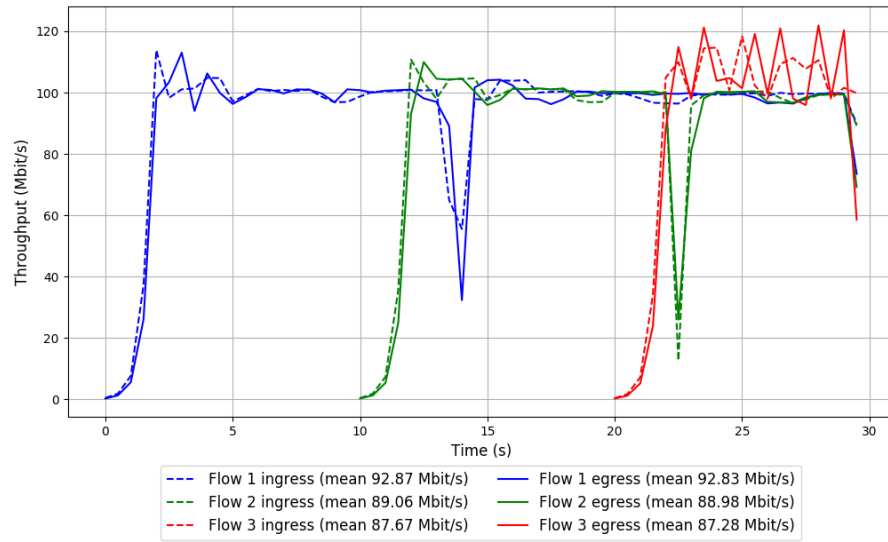
-- Flow 3:

Average throughput: 87.28 Mbit/s

95th percentile per-packet one-way delay: 113.366 ms

Loss rate: 2.70%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-02-20 17:27:10

End at: 2018-02-20 17:27:40

Below is generated by plot.py at 2018-02-20 23:52:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 182.41 Mbit/s

95th percentile per-packet one-way delay: 112.201 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 95.26 Mbit/s

95th percentile per-packet one-way delay: 112.196 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 90.27 Mbit/s

95th percentile per-packet one-way delay: 112.197 ms

Loss rate: 1.26%

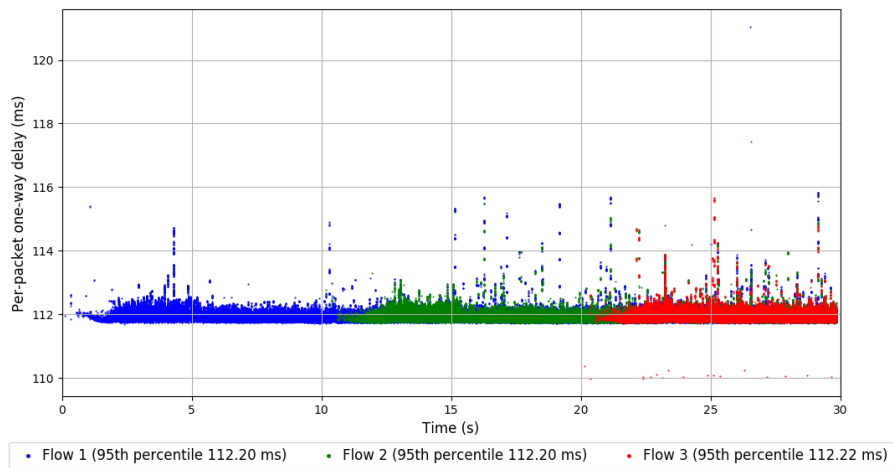
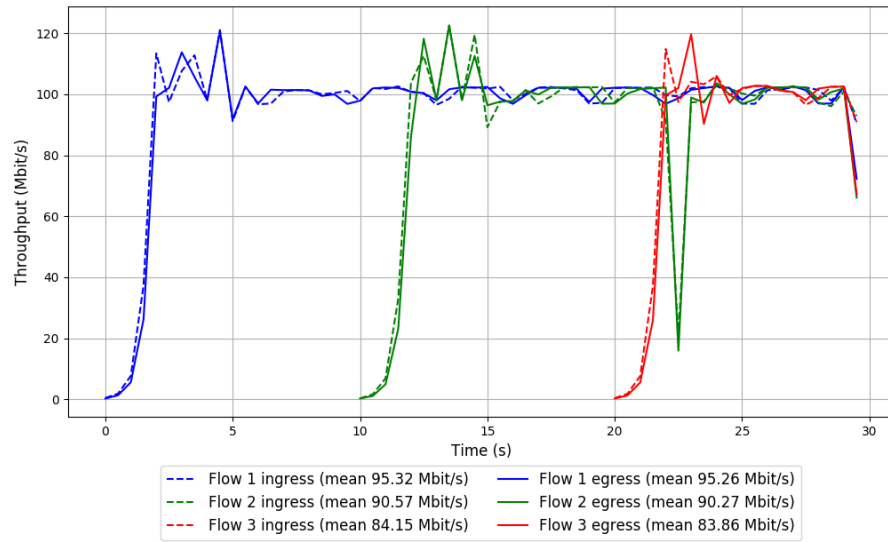
-- Flow 3:

Average throughput: 83.86 Mbit/s

95th percentile per-packet one-way delay: 112.222 ms

Loss rate: 2.59%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-02-20 17:47:20

End at: 2018-02-20 17:47:50

Below is generated by plot.py at 2018-02-20 23:52:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 167.53 Mbit/s

95th percentile per-packet one-way delay: 112.730 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 87.19 Mbit/s

95th percentile per-packet one-way delay: 112.693 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 82.36 Mbit/s

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

Loss rate: 0.20%

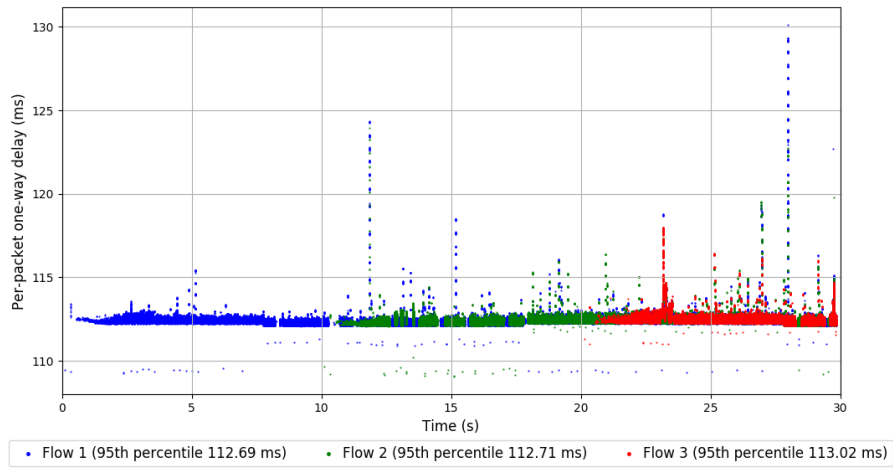
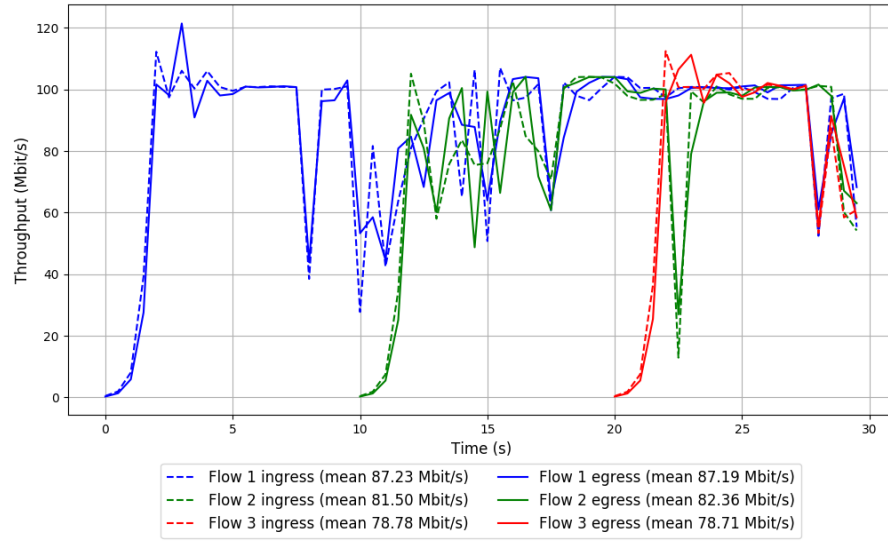
-- Flow 3:

Average throughput: 78.71 Mbit/s

95th percentile per-packet one-way delay: 113.021 ms

Loss rate: 0.29%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-02-20 18:07:48

End at: 2018-02-20 18:08:18

Below is generated by plot.py at 2018-02-20 23:52:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 165.57 Mbit/s

95th percentile per-packet one-way delay: 112.940 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 84.92 Mbit/s

95th percentile per-packet one-way delay: 112.901 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 86.32 Mbit/s

95th percentile per-packet one-way delay: 112.956 ms

Loss rate: 1.31%

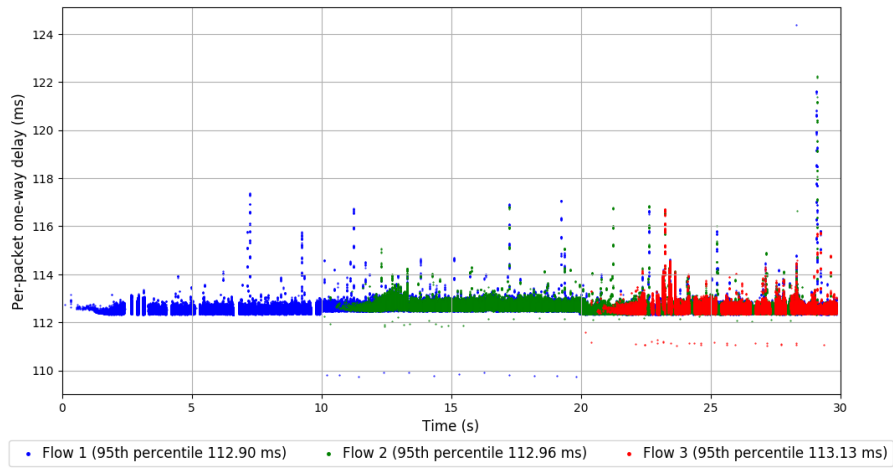
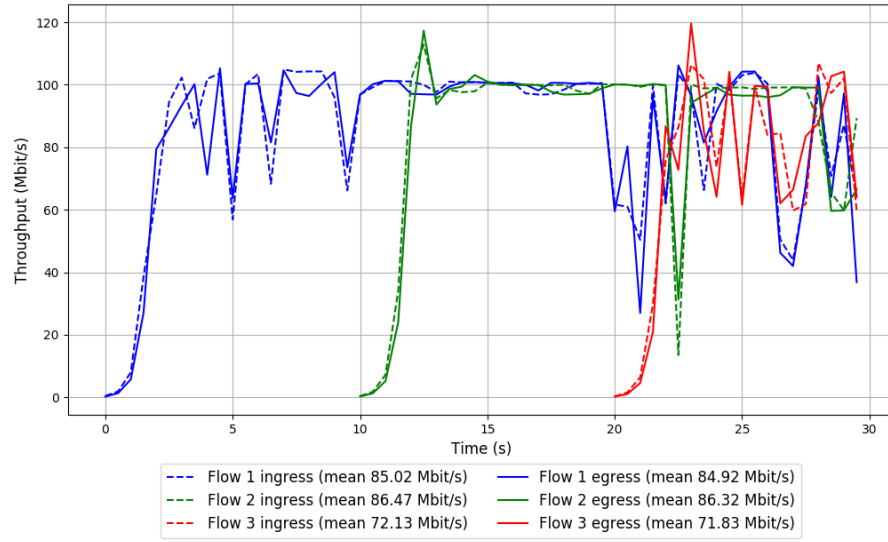
-- Flow 3:

Average throughput: 71.83 Mbit/s

95th percentile per-packet one-way delay: 113.130 ms

Loss rate: 0.89%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-02-20 18:27:16

End at: 2018-02-20 18:27:46

Below is generated by plot.py at 2018-02-20 23:52:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 180.80 Mbit/s

95th percentile per-packet one-way delay: 112.947 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 94.64 Mbit/s

95th percentile per-packet one-way delay: 112.796 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 87.47 Mbit/s

95th percentile per-packet one-way delay: 112.890 ms

Loss rate: 1.24%

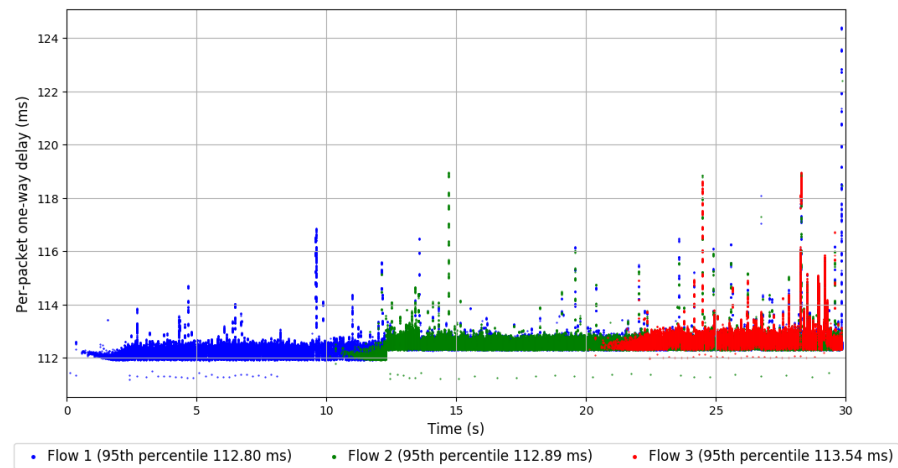
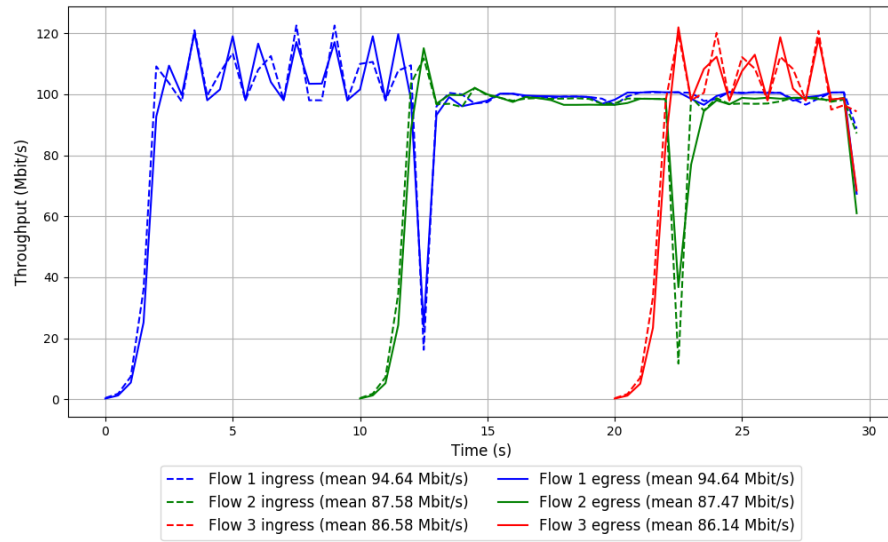
-- Flow 3:

Average throughput: 86.14 Mbit/s

95th percentile per-packet one-way delay: 113.536 ms

Loss rate: 2.75%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-02-20 18:47:15

End at: 2018-02-20 18:47:45

Below is generated by plot.py at 2018-02-20 23:52:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.54 Mbit/s

95th percentile per-packet one-way delay: 113.370 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 90.44 Mbit/s

95th percentile per-packet one-way delay: 112.988 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 91.33 Mbit/s

95th percentile per-packet one-way delay: 113.228 ms

Loss rate: 1.28%

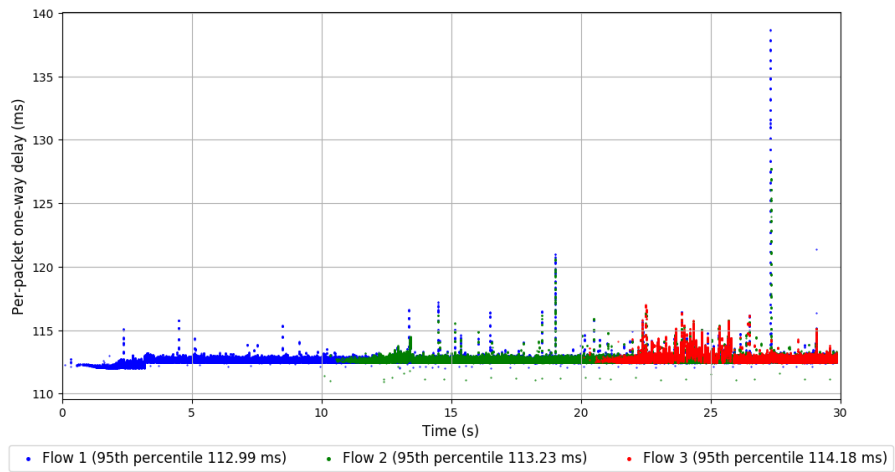
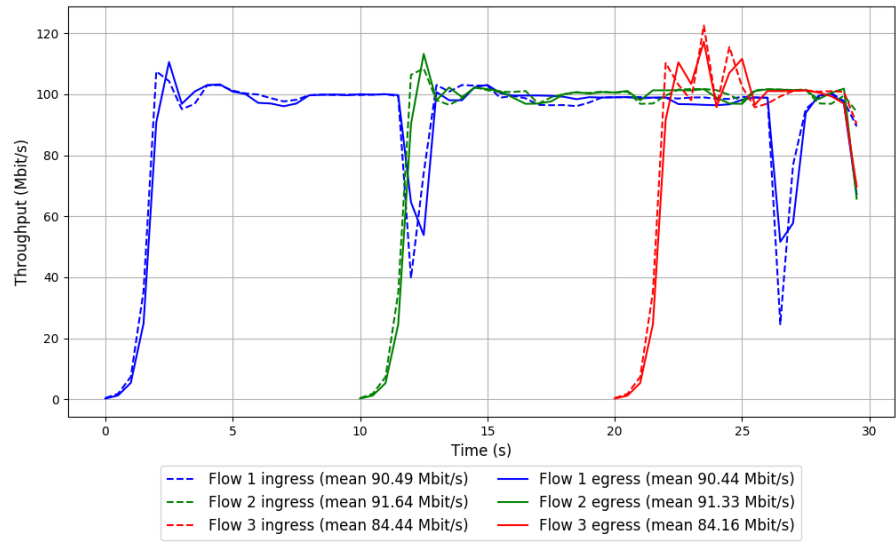
-- Flow 3:

Average throughput: 84.16 Mbit/s

95th percentile per-packet one-way delay: 114.182 ms

Loss rate: 2.58%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-02-20 19:06:59

End at: 2018-02-20 19:07:29

Below is generated by plot.py at 2018-02-20 23:52:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.05 Mbit/s

95th percentile per-packet one-way delay: 112.088 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 94.10 Mbit/s

95th percentile per-packet one-way delay: 112.067 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 90.21 Mbit/s

95th percentile per-packet one-way delay: 112.072 ms

Loss rate: 1.34%

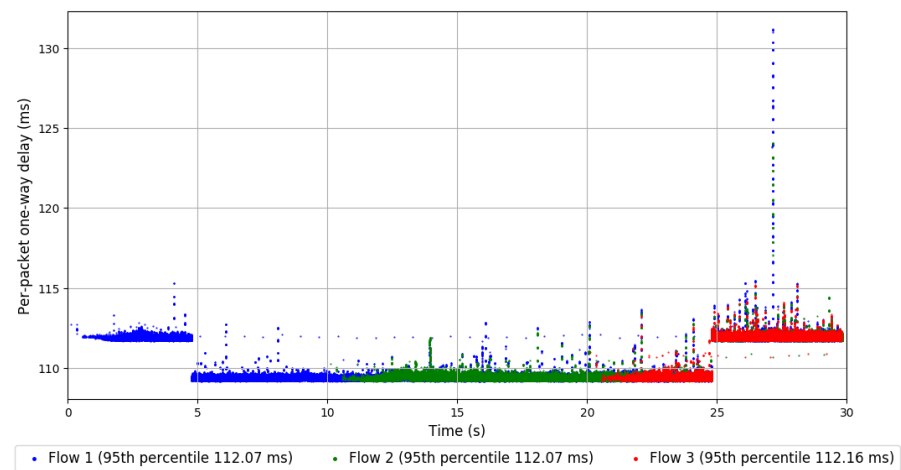
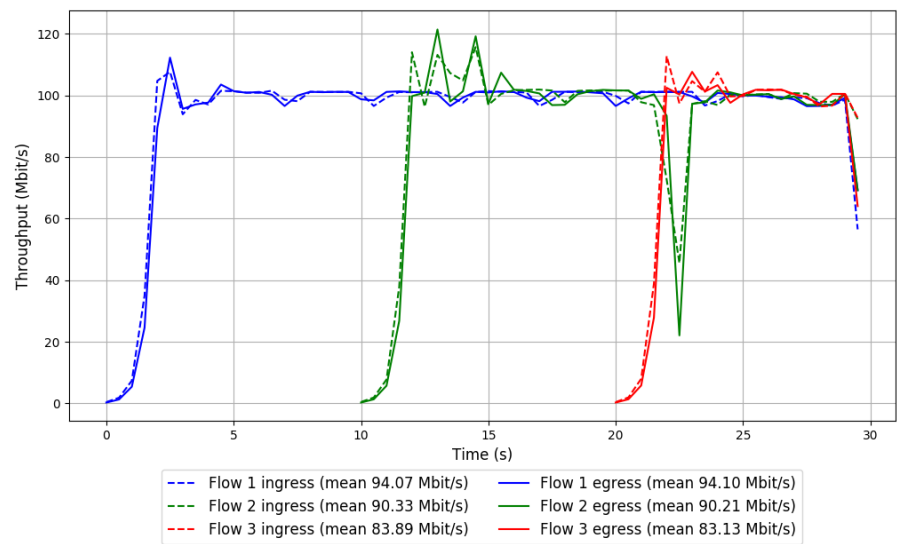
-- Flow 3:

Average throughput: 83.13 Mbit/s

95th percentile per-packet one-way delay: 112.157 ms

Loss rate: 2.91%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-02-20 19:26:29

End at: 2018-02-20 19:26:59

Below is generated by plot.py at 2018-02-20 23:52:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 180.07 Mbit/s

95th percentile per-packet one-way delay: 112.067 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 92.10 Mbit/s

95th percentile per-packet one-way delay: 111.961 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 88.94 Mbit/s

95th percentile per-packet one-way delay: 112.023 ms

Loss rate: 1.21%

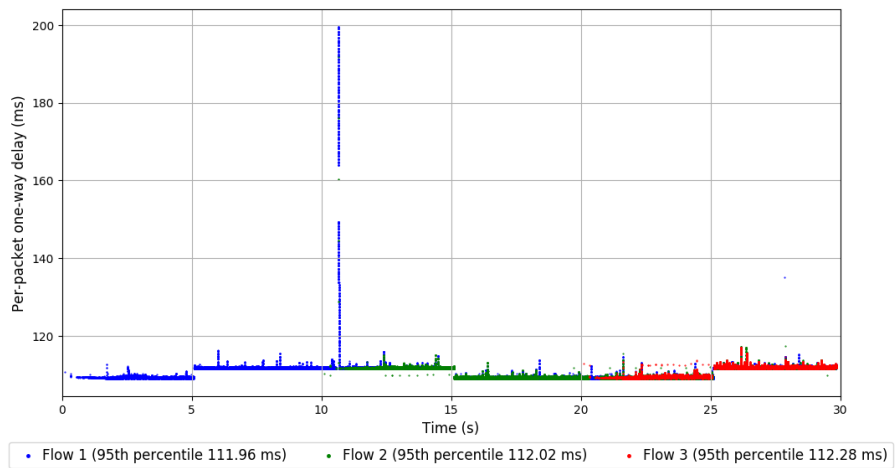
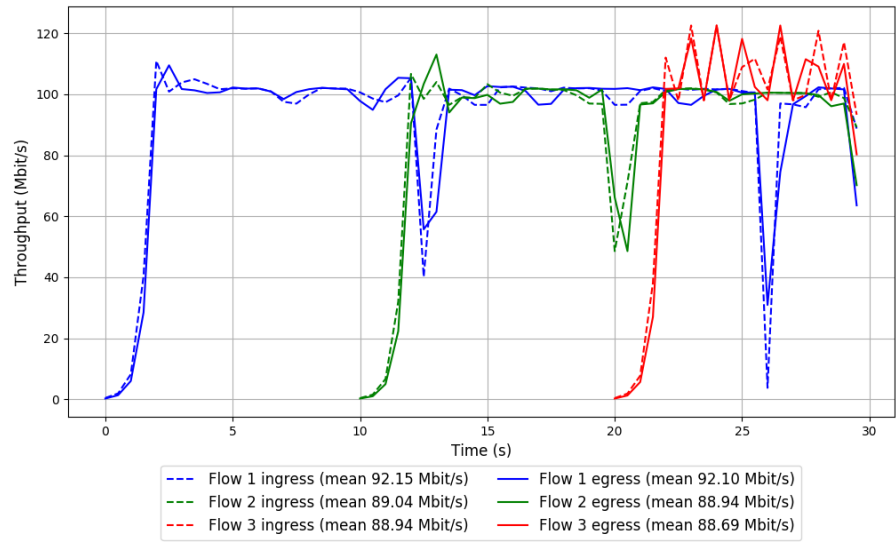
-- Flow 3:

Average throughput: 88.69 Mbit/s

95th percentile per-packet one-way delay: 112.279 ms

Loss rate: 2.52%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-02-20 19:46:22

End at: 2018-02-20 19:46:52

Below is generated by plot.py at 2018-02-20 23:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 174.62 Mbit/s

95th percentile per-packet one-way delay: 112.808 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 89.36 Mbit/s

95th percentile per-packet one-way delay: 112.770 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 88.16 Mbit/s

95th percentile per-packet one-way delay: 112.788 ms

Loss rate: 1.24%

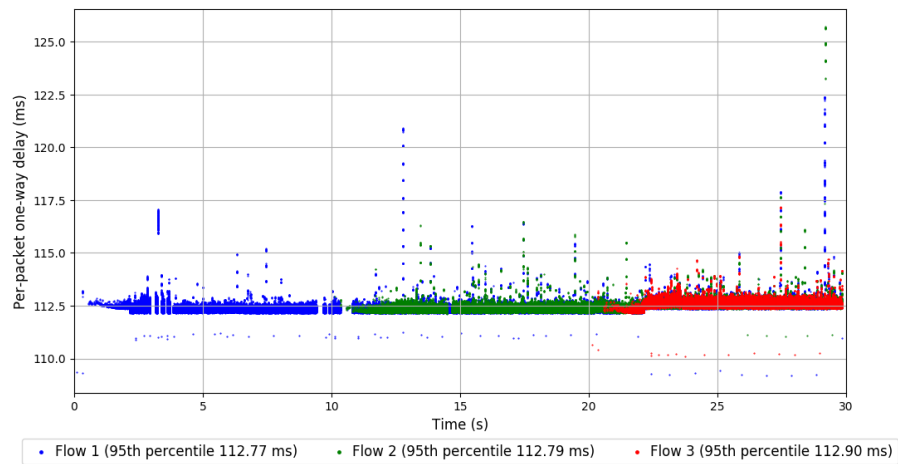
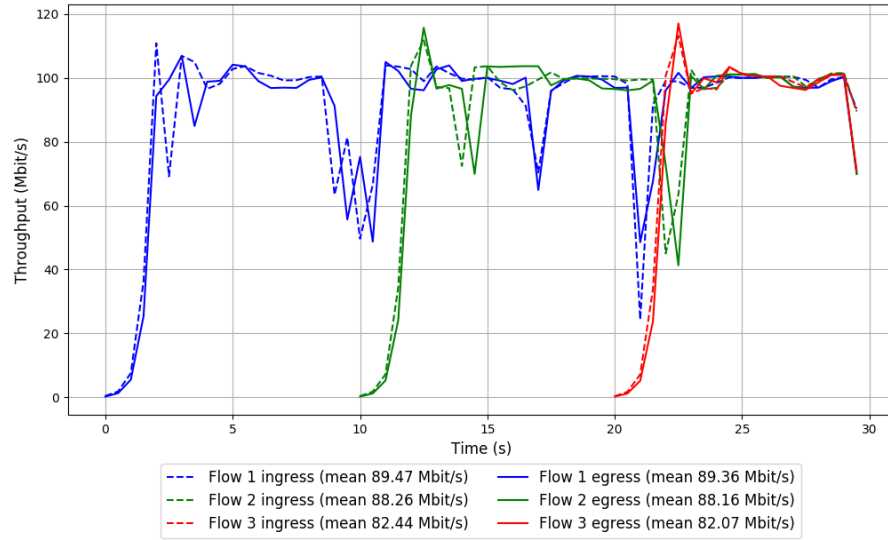
-- Flow 3:

Average throughput: 82.07 Mbit/s

95th percentile per-packet one-way delay: 112.904 ms

Loss rate: 2.69%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-02-20 20:05:59

End at: 2018-02-20 20:06:29

Below is generated by plot.py at 2018-02-20 23:55:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 177.93 Mbit/s

95th percentile per-packet one-way delay: 112.804 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 90.99 Mbit/s

95th percentile per-packet one-way delay: 112.705 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 88.85 Mbit/s

95th percentile per-packet one-way delay: 112.769 ms

Loss rate: 1.25%

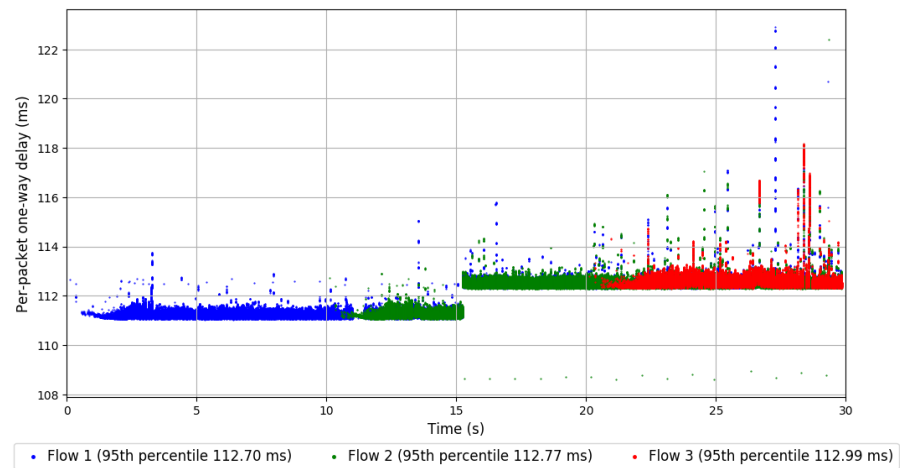
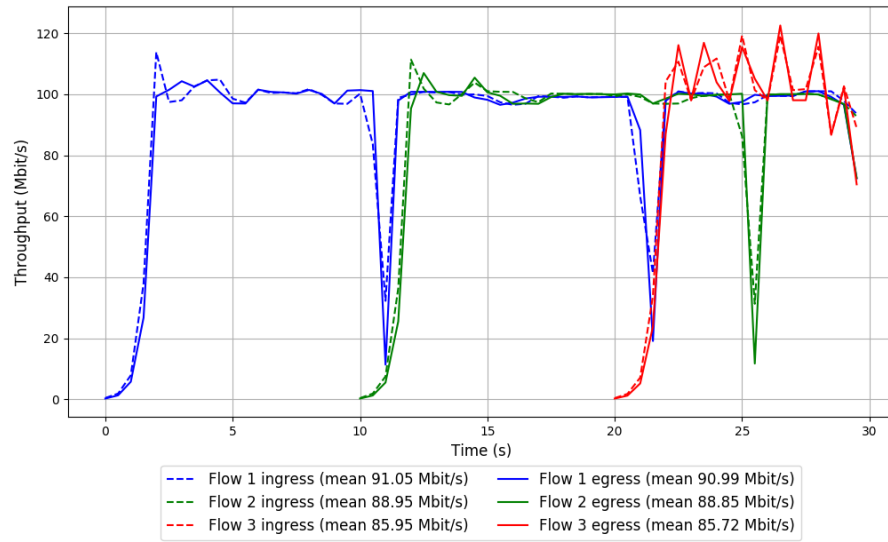
-- Flow 3:

Average throughput: 85.72 Mbit/s

95th percentile per-packet one-way delay: 112.987 ms

Loss rate: 2.51%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-02-20 17:04:14

End at: 2018-02-20 17:04:44

Below is generated by plot.py at 2018-02-20 23:55:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 120.35 Mbit/s

95th percentile per-packet one-way delay: 121.598 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 62.16 Mbit/s

95th percentile per-packet one-way delay: 121.810 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 64.09 Mbit/s

95th percentile per-packet one-way delay: 120.249 ms

Loss rate: 1.27%

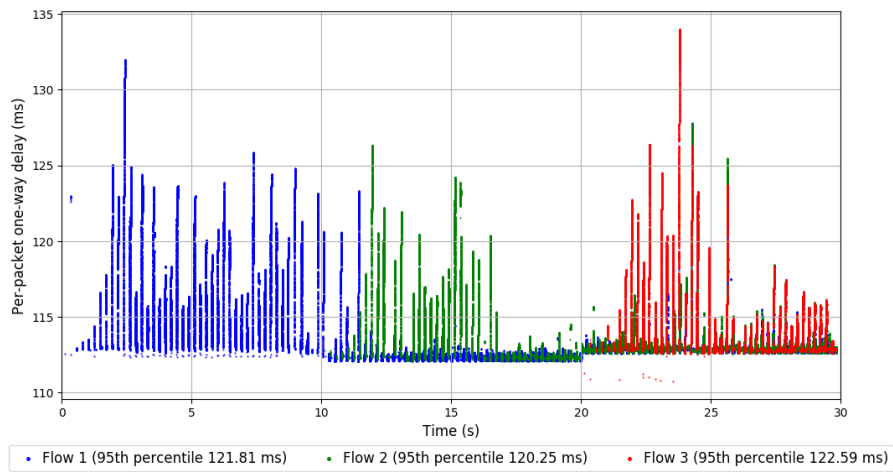
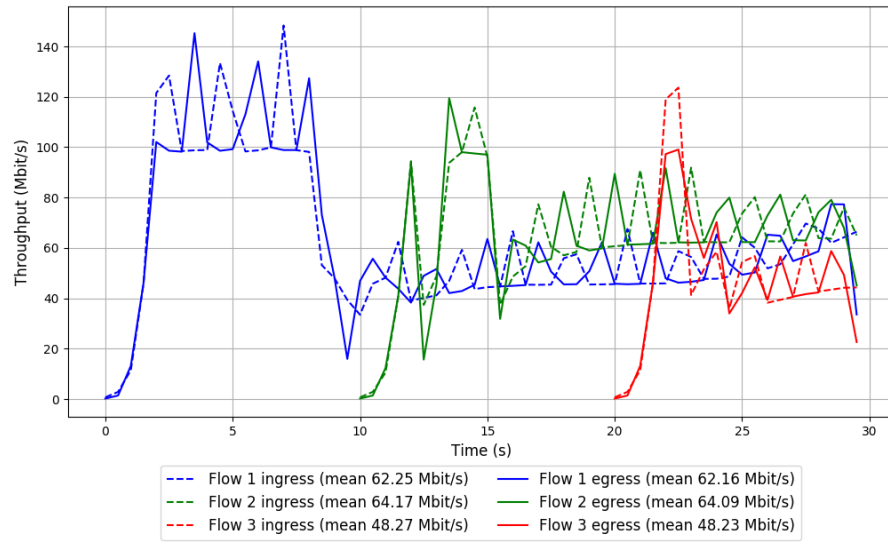
-- Flow 3:

Average throughput: 48.23 Mbit/s

95th percentile per-packet one-way delay: 122.590 ms

Loss rate: 2.32%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-02-20 17:23:43

End at: 2018-02-20 17:24:13

Below is generated by plot.py at 2018-02-20 23:55:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 114.05 Mbit/s

95th percentile per-packet one-way delay: 120.723 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 78.25 Mbit/s

95th percentile per-packet one-way delay: 122.099 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 53.04 Mbit/s

95th percentile per-packet one-way delay: 116.134 ms

Loss rate: 1.40%

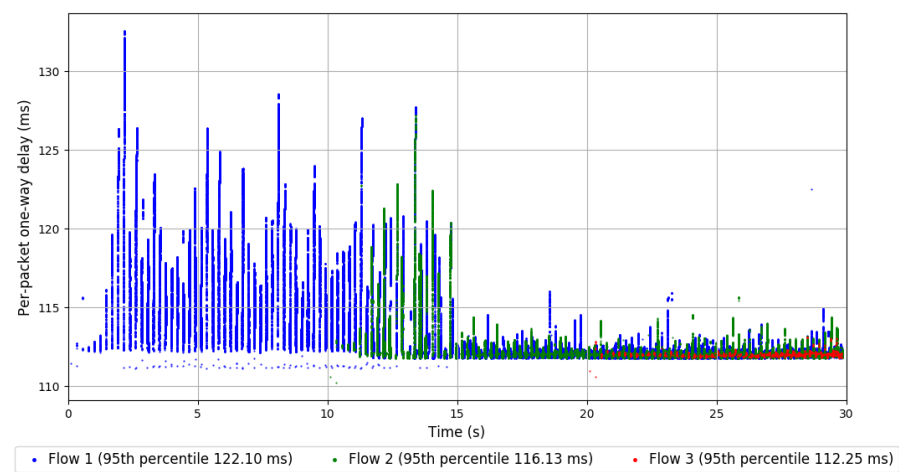
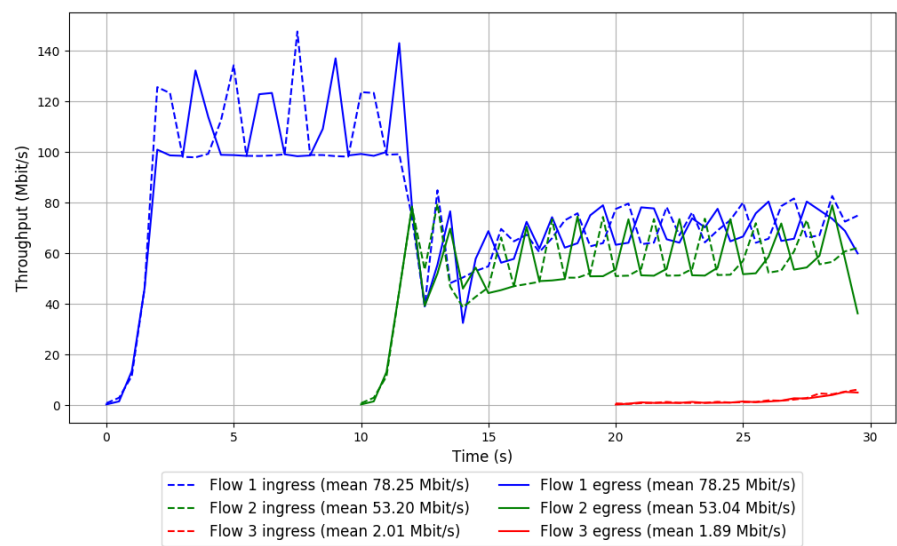
-- Flow 3:

Average throughput: 1.89 Mbit/s

95th percentile per-packet one-way delay: 112.249 ms

Loss rate: 8.09%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-02-20 17:43:27

End at: 2018-02-20 17:43:57

Below is generated by plot.py at 2018-02-20 23:55:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.40 Mbit/s

95th percentile per-packet one-way delay: 120.720 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 42.30 Mbit/s

95th percentile per-packet one-way delay: 120.931 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 61.06 Mbit/s

95th percentile per-packet one-way delay: 120.454 ms

Loss rate: 1.10%

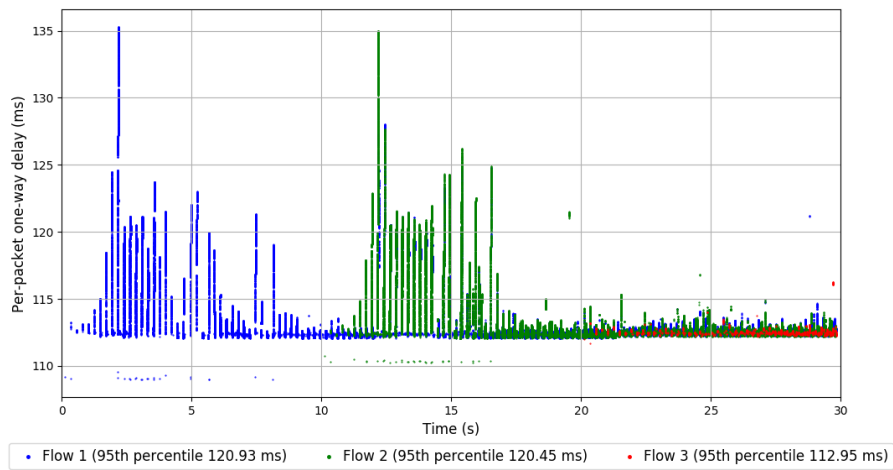
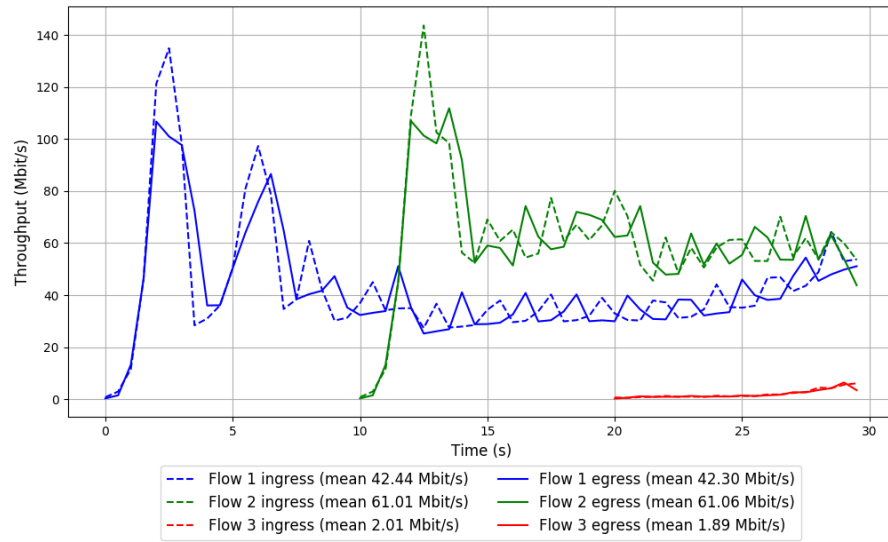
-- Flow 3:

Average throughput: 1.89 Mbit/s

95th percentile per-packet one-way delay: 112.951 ms

Loss rate: 8.07%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-02-20 18:04:12

End at: 2018-02-20 18:04:42

Below is generated by plot.py at 2018-02-20 23:55:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 45.23 Mbit/s

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

Loss rate: 1.16%

-- Flow 1:

Average throughput: 14.78 Mbit/s

95th percentile per-packet one-way delay: 120.405 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 27.63 Mbit/s

95th percentile per-packet one-way delay: 117.134 ms

Loss rate: 0.89%

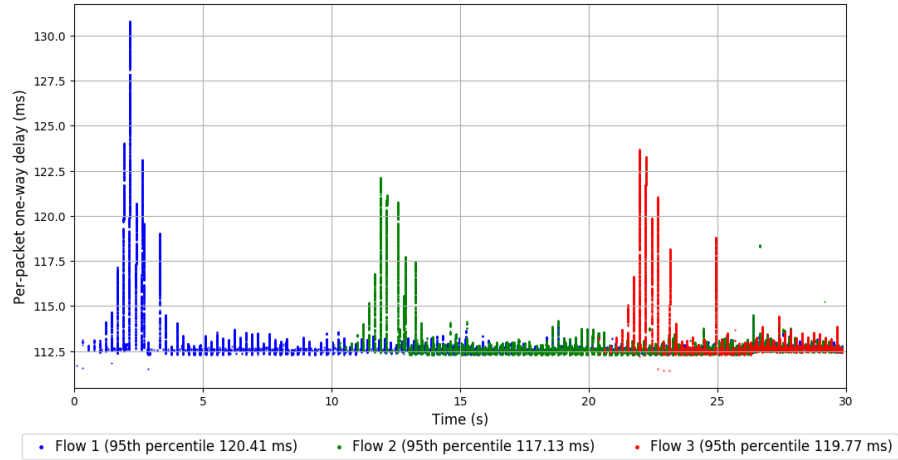
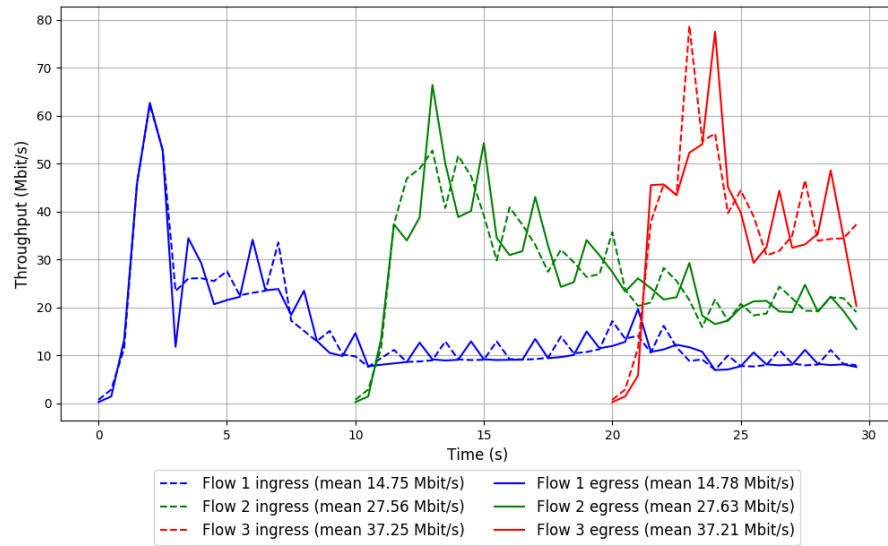
-- Flow 3:

Average throughput: 37.21 Mbit/s

95th percentile per-packet one-way delay: 119.772 ms

Loss rate: 2.36%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-02-20 18:23:45

End at: 2018-02-20 18:24:15

Below is generated by plot.py at 2018-02-20 23:55:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 156.61 Mbit/s

95th percentile per-packet one-way delay: 120.718 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 75.54 Mbit/s

95th percentile per-packet one-way delay: 120.606 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 78.18 Mbit/s

95th percentile per-packet one-way delay: 120.700 ms

Loss rate: 1.02%

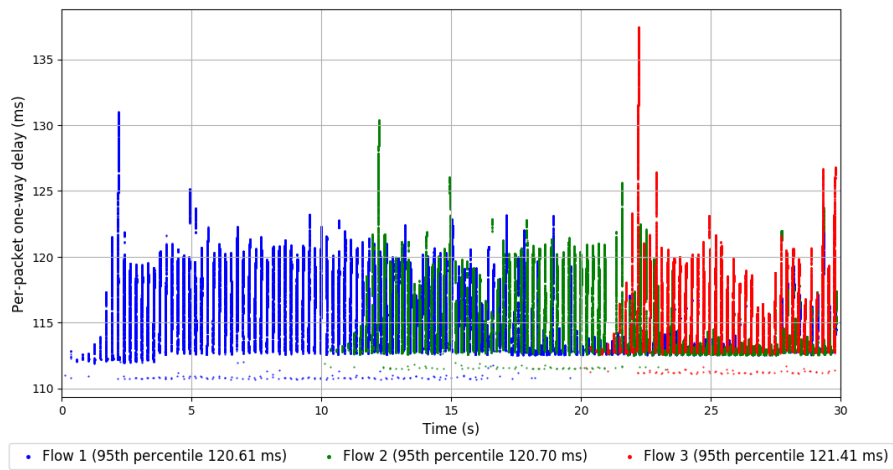
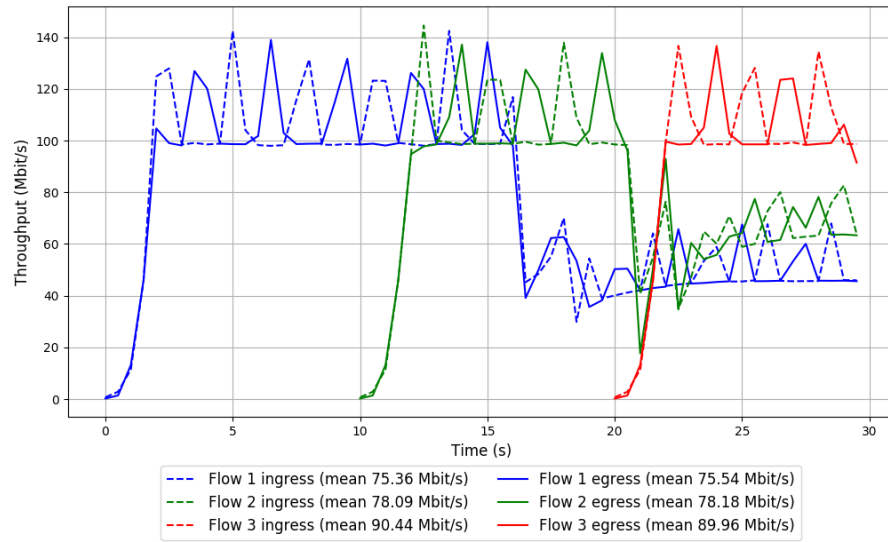
-- Flow 3:

Average throughput: 89.96 Mbit/s

95th percentile per-packet one-way delay: 121.410 ms

Loss rate: 2.75%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-02-20 18:43:35

End at: 2018-02-20 18:44:05

Below is generated by plot.py at 2018-02-20 23:55:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 163.26 Mbit/s

95th percentile per-packet one-way delay: 121.904 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 82.37 Mbit/s

95th percentile per-packet one-way delay: 121.716 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 99.90 Mbit/s

95th percentile per-packet one-way delay: 122.460 ms

Loss rate: 1.33%

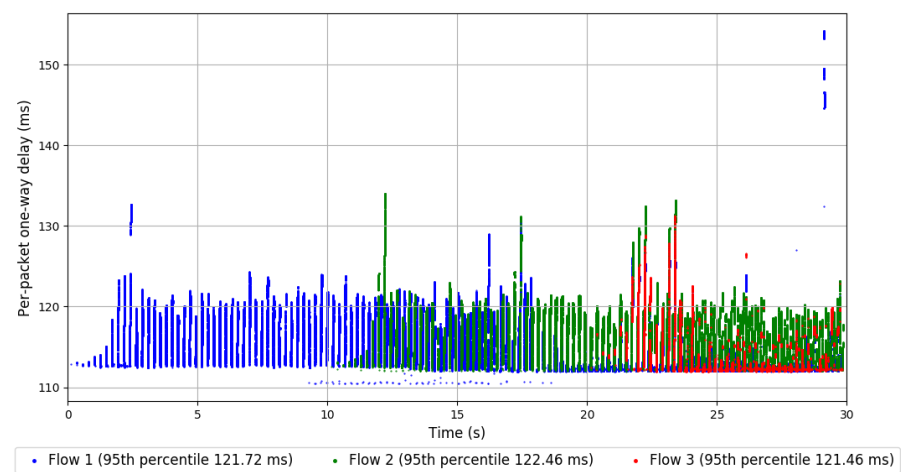
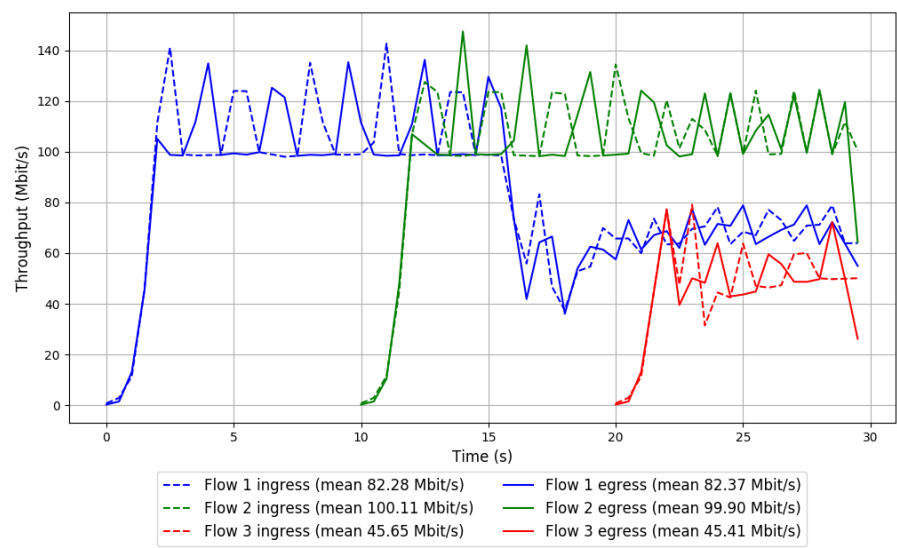
-- Flow 3:

Average throughput: 45.41 Mbit/s

95th percentile per-packet one-way delay: 121.457 ms

Loss rate: 2.77%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-02-20 19:03:27

End at: 2018-02-20 19:03:57

Below is generated by plot.py at 2018-02-20 23:55:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.31 Mbit/s

95th percentile per-packet one-way delay: 119.668 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 50.95 Mbit/s

95th percentile per-packet one-way delay: 121.111 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 55.55 Mbit/s

95th percentile per-packet one-way delay: 117.274 ms

Loss rate: 1.39%

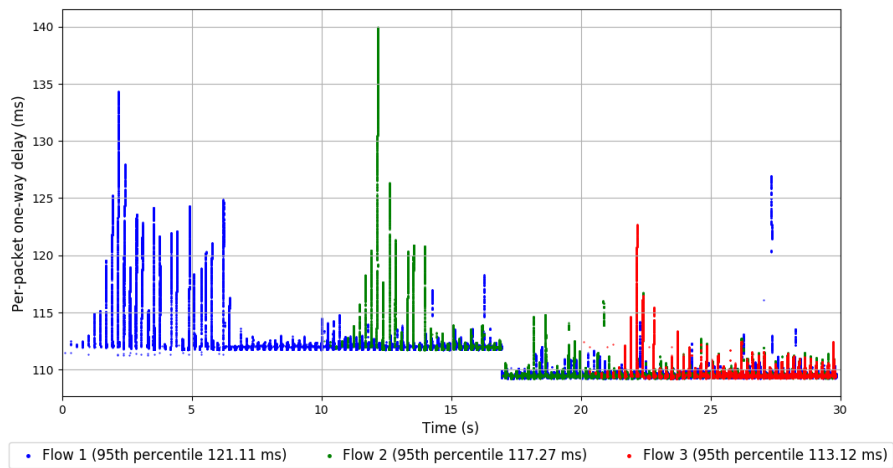
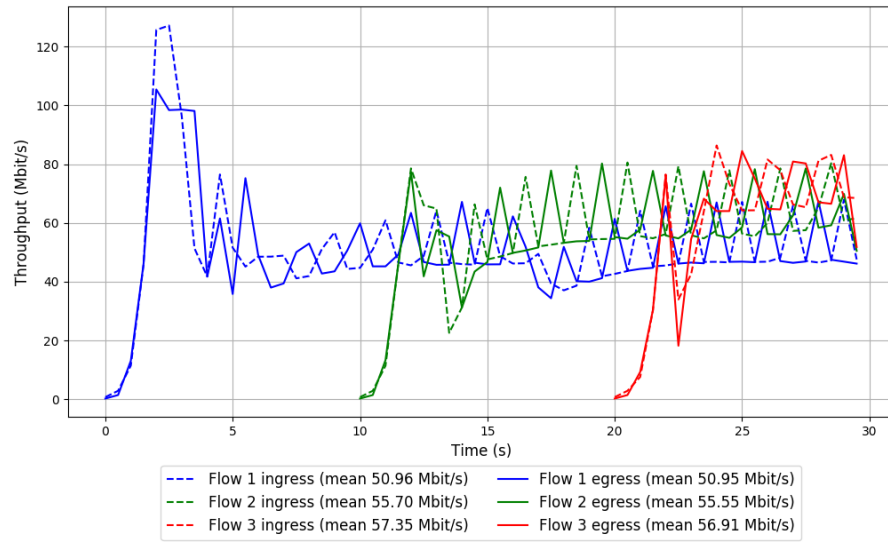
-- Flow 3:

Average throughput: 56.91 Mbit/s

95th percentile per-packet one-way delay: 113.120 ms

Loss rate: 3.02%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-02-20 19:23:00

End at: 2018-02-20 19:23:30

Below is generated by plot.py at 2018-02-20 23:56:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.67 Mbit/s

95th percentile per-packet one-way delay: 114.901 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 62.74 Mbit/s

95th percentile per-packet one-way delay: 114.487 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 90.60 Mbit/s

95th percentile per-packet one-way delay: 115.173 ms

Loss rate: 1.37%

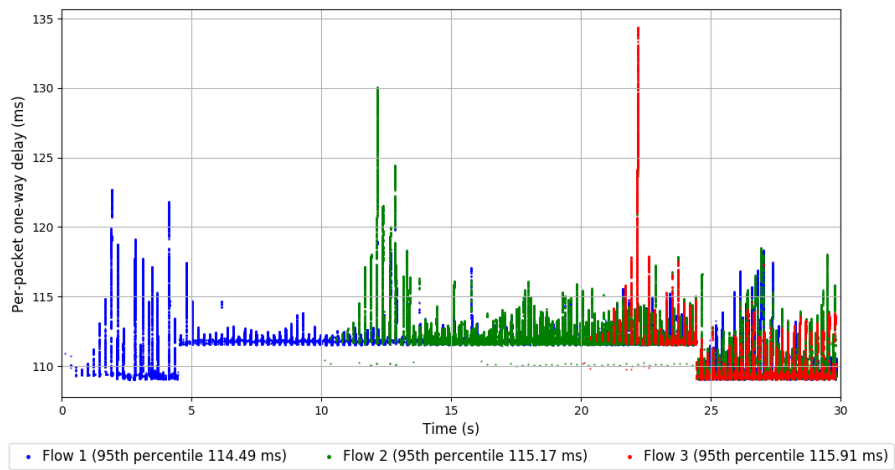
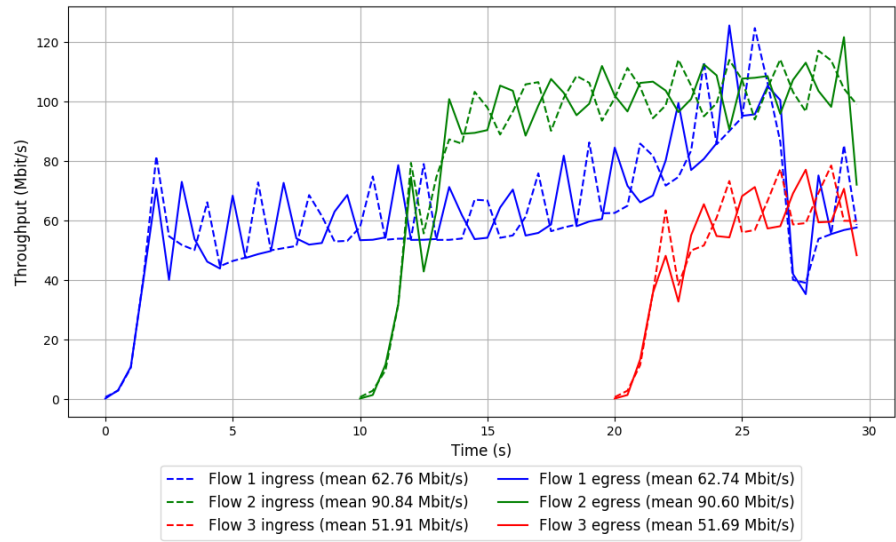
-- Flow 3:

Average throughput: 51.69 Mbit/s

95th percentile per-packet one-way delay: 115.911 ms

Loss rate: 2.91%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-02-20 19:42:50

End at: 2018-02-20 19:43:20

Below is generated by plot.py at 2018-02-20 23:57:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 138.51 Mbit/s

95th percentile per-packet one-way delay: 122.926 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 68.55 Mbit/s

95th percentile per-packet one-way delay: 123.409 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 77.53 Mbit/s

95th percentile per-packet one-way delay: 122.913 ms

Loss rate: 0.55%

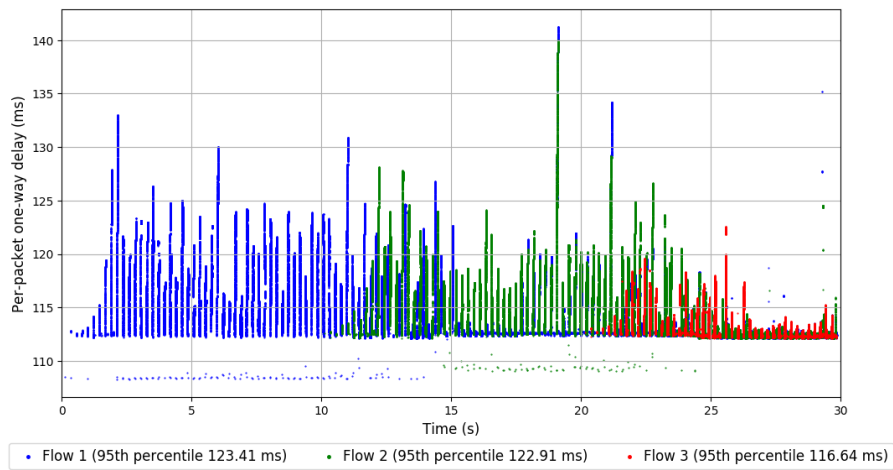
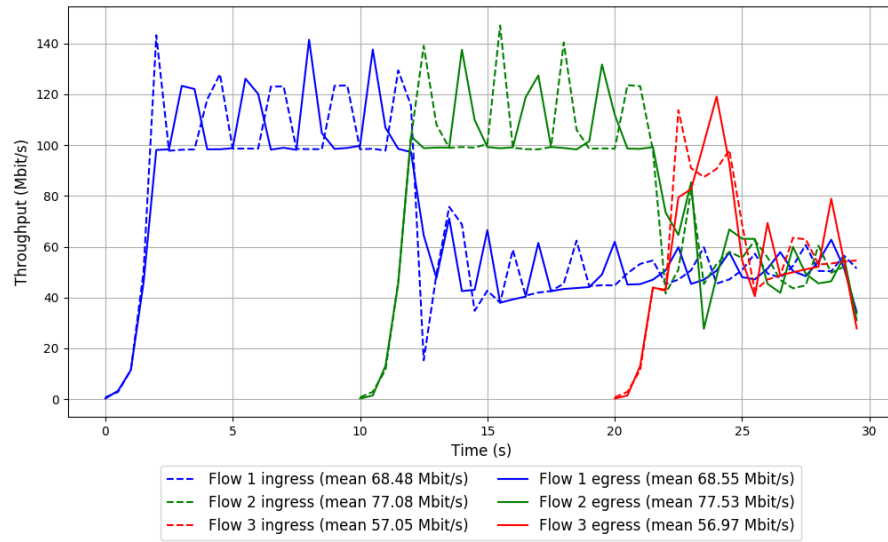
-- Flow 3:

Average throughput: 56.97 Mbit/s

95th percentile per-packet one-way delay: 116.638 ms

Loss rate: 2.42%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-02-20 20:02:32

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

Below is generated by plot.py at 2018-02-20 23:57:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.10 Mbit/s

95th percentile per-packet one-way delay: 122.283 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 81.24 Mbit/s

95th percentile per-packet one-way delay: 123.020 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 21.45 Mbit/s

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

Loss rate: 5.09%

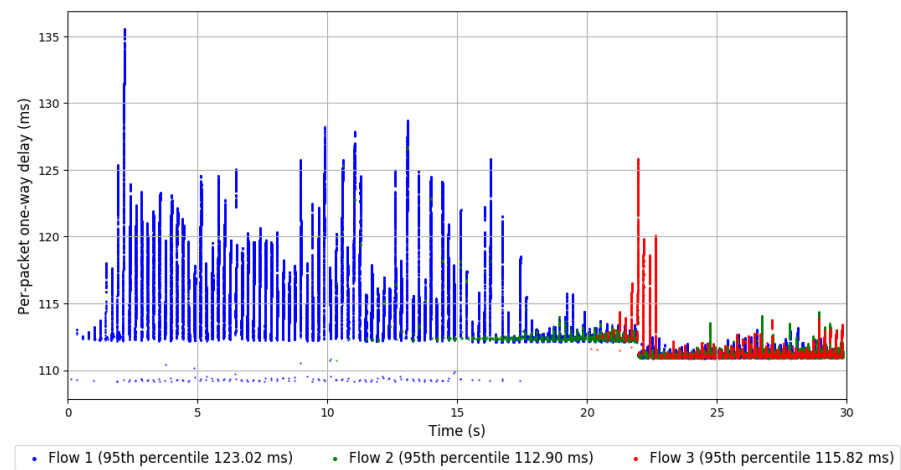
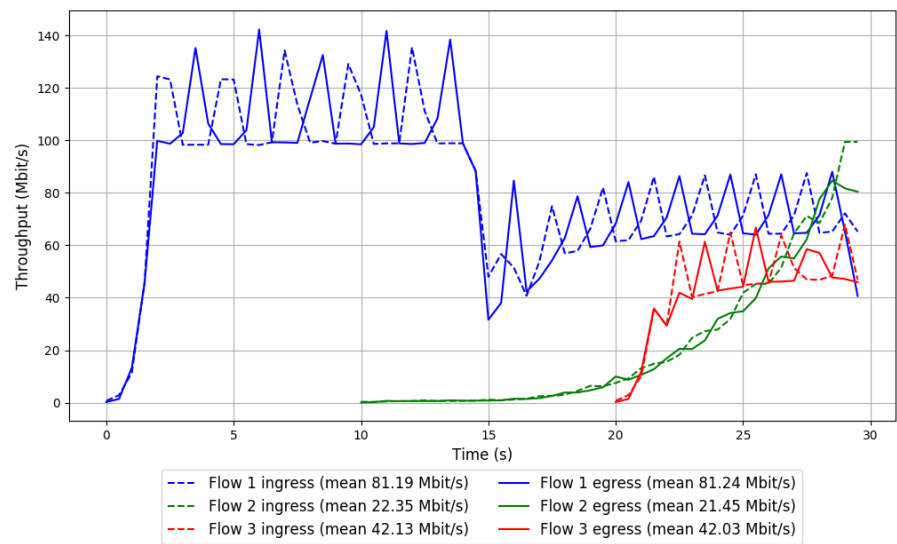
-- Flow 3:

Average throughput: 42.03 Mbit/s

95th percentile per-packet one-way delay: 115.823 ms

Loss rate: 2.81%

Run 10: Report of TCP Cubic — Data Link

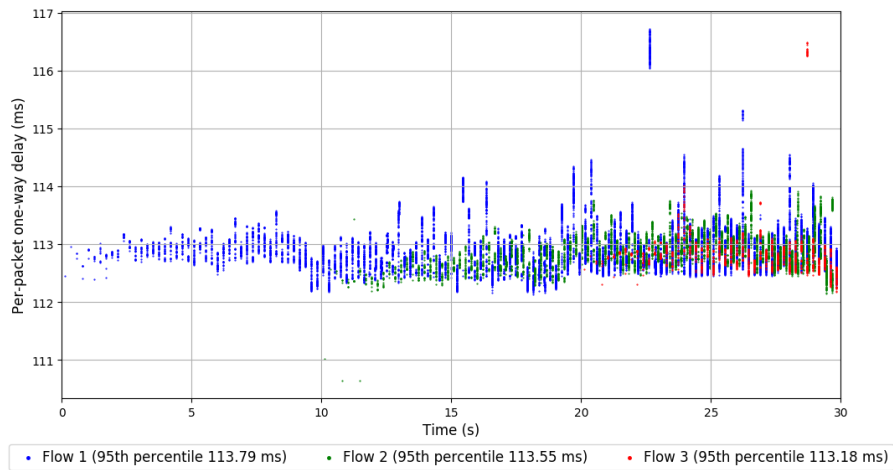
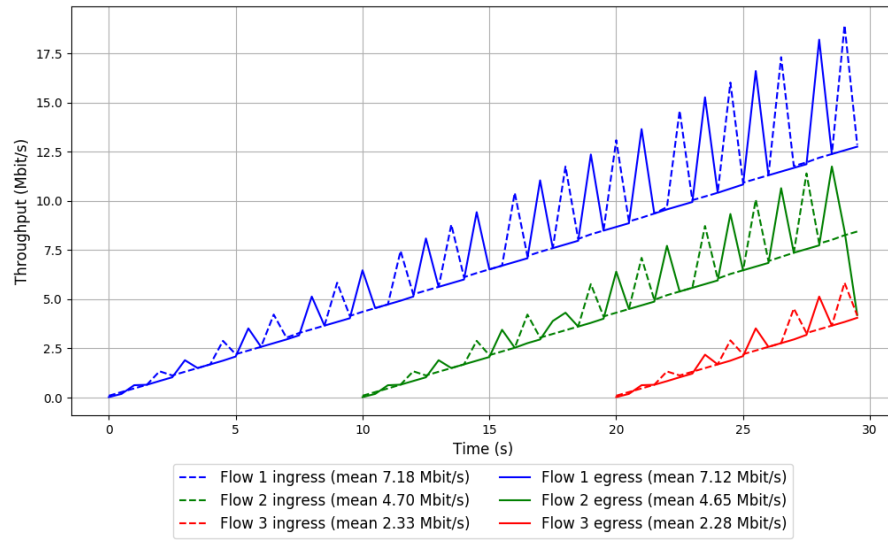


```
Run 1: Statistics of LEDBAT

Start at: 2018-02-20 17:13:15
End at: 2018-02-20 17:13:45

# Below is generated by plot.py at 2018-02-20 23:57:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.92 Mbit/s
95th percentile per-packet one-way delay: 113.664 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 7.12 Mbit/s
95th percentile per-packet one-way delay: 113.791 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 4.65 Mbit/s
95th percentile per-packet one-way delay: 113.545 ms
Loss rate: 2.28%
-- Flow 3:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 113.178 ms
Loss rate: 4.56%
```


Run 1: Report of LEDBAT — Data Link

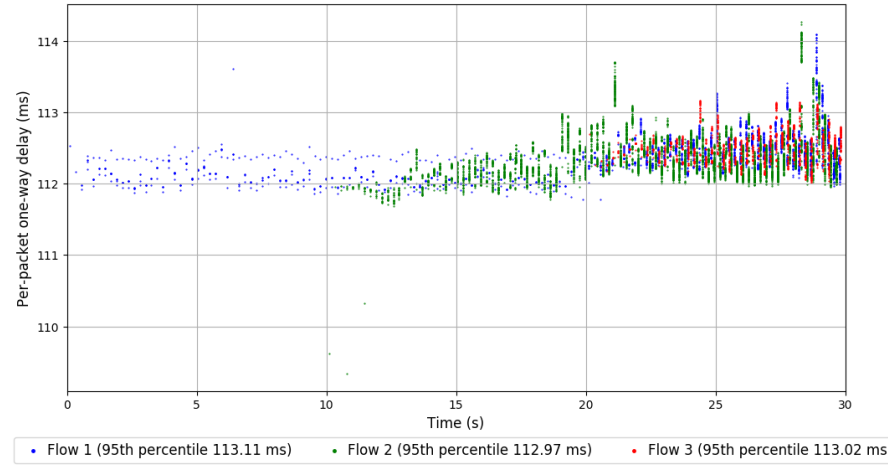
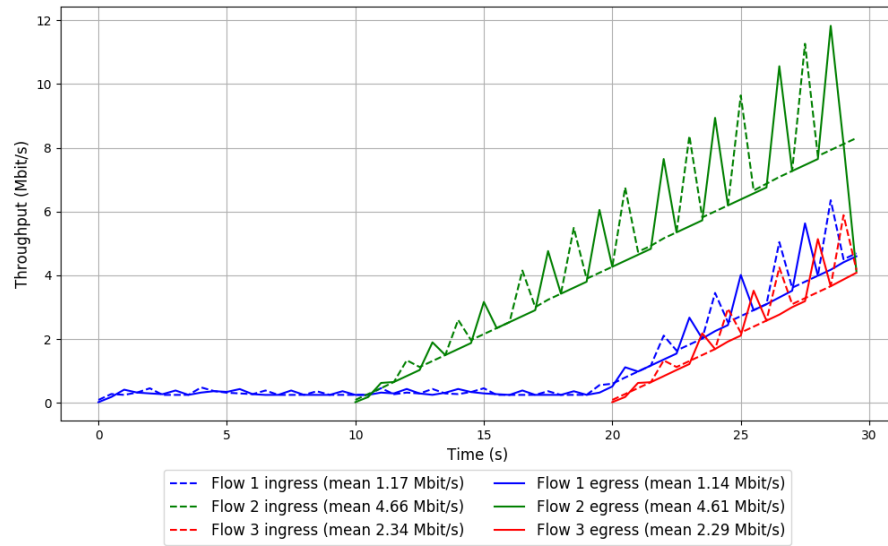


```
Run 2: Statistics of LEDBAT

Start at: 2018-02-20 17:32:55
End at: 2018-02-20 17:33:25

# Below is generated by plot.py at 2018-02-20 23:57:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.92 Mbit/s
95th percentile per-packet one-way delay: 113.025 ms
Loss rate: 2.88%
-- Flow 1:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 113.108 ms
Loss rate: 3.38%
-- Flow 2:
Average throughput: 4.61 Mbit/s
95th percentile per-packet one-way delay: 112.967 ms
Loss rate: 2.27%
-- Flow 3:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 113.020 ms
Loss rate: 4.55%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-02-20 17:53:03

End at: 2018-02-20 17:53:33

Below is generated by plot.py at 2018-02-20 23:57:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.44 Mbit/s

95th percentile per-packet one-way delay: 113.287 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 4.63 Mbit/s

95th percentile per-packet one-way delay: 113.346 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 4.67 Mbit/s

95th percentile per-packet one-way delay: 113.247 ms

Loss rate: 2.28%

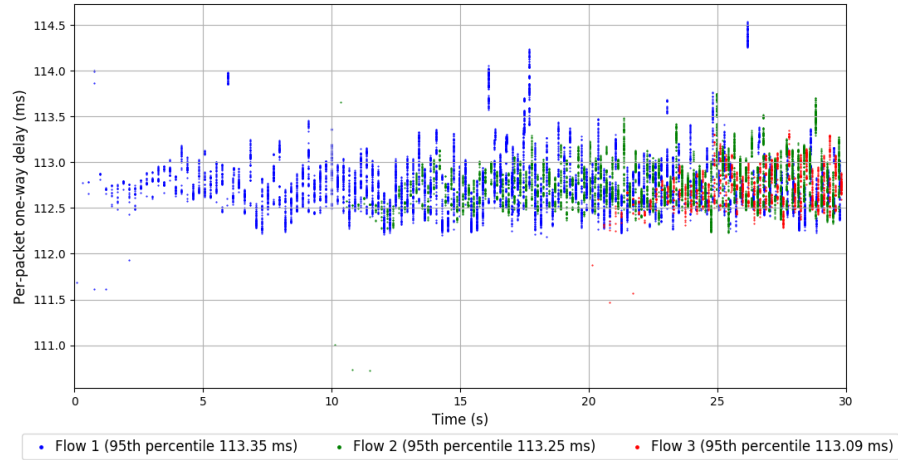
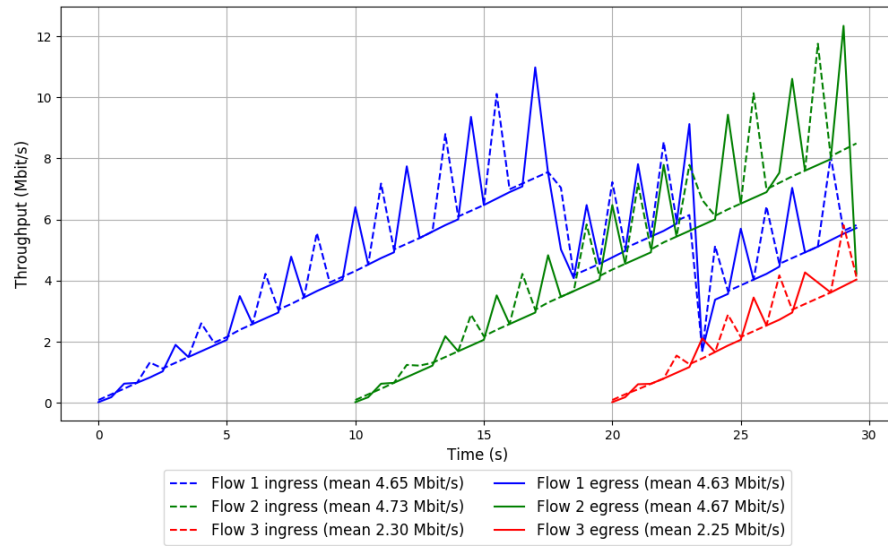
-- Flow 3:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 113.095 ms

Loss rate: 4.58%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-02-20 18:13:09

End at: 2018-02-20 18:13:39

Below is generated by plot.py at 2018-02-20 23:57:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.47 Mbit/s

95th percentile per-packet one-way delay: 112.837 ms

Loss rate: 2.14%

-- Flow 1:

Average throughput: 0.29 Mbit/s

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

Loss rate: 0.80%

-- Flow 2:

Average throughput: 4.67 Mbit/s

95th percentile per-packet one-way delay: 112.860 ms

Loss rate: 2.27%

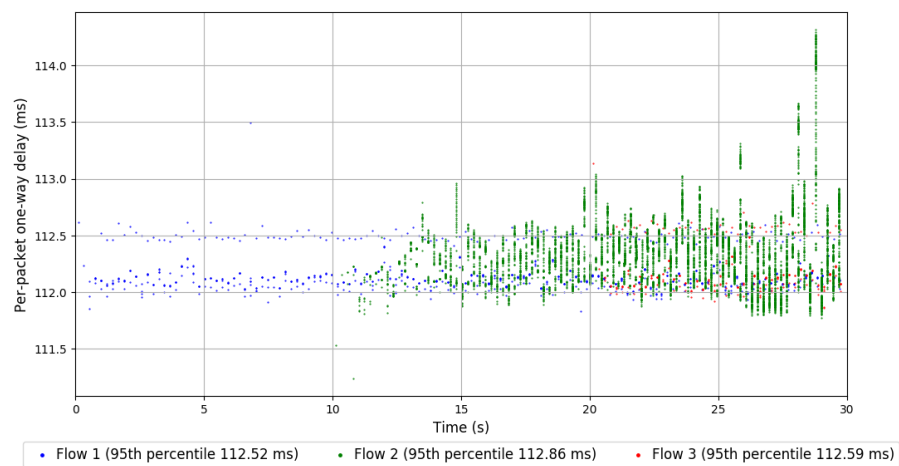
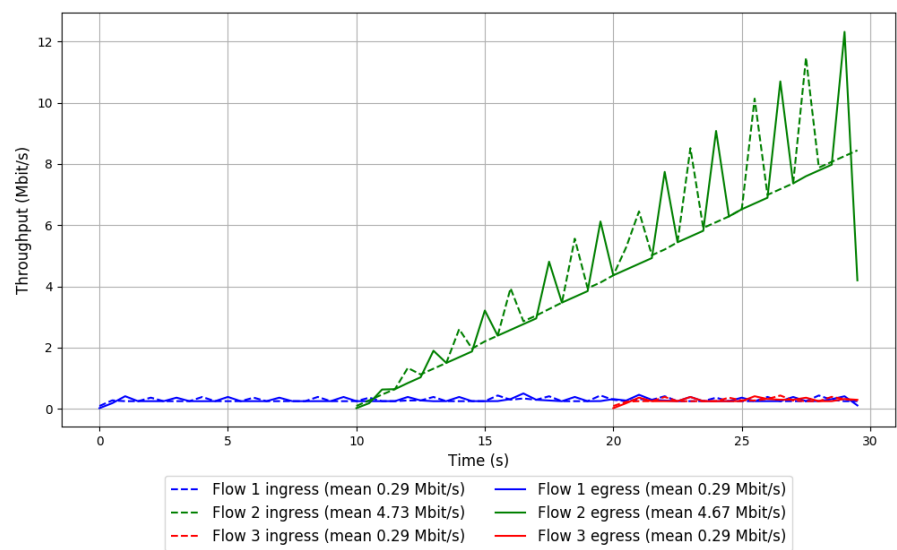
-- Flow 3:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 112.588 ms

Loss rate: 2.01%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-02-20 18:32:55

End at: 2018-02-20 18:33:25

Below is generated by plot.py at 2018-02-20 23:57:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.80 Mbit/s

95th percentile per-packet one-way delay: 113.503 ms

Loss rate: 1.78%

-- Flow 1:

Average throughput: 7.09 Mbit/s

95th percentile per-packet one-way delay: 113.550 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 112.893 ms

Loss rate: 2.40%

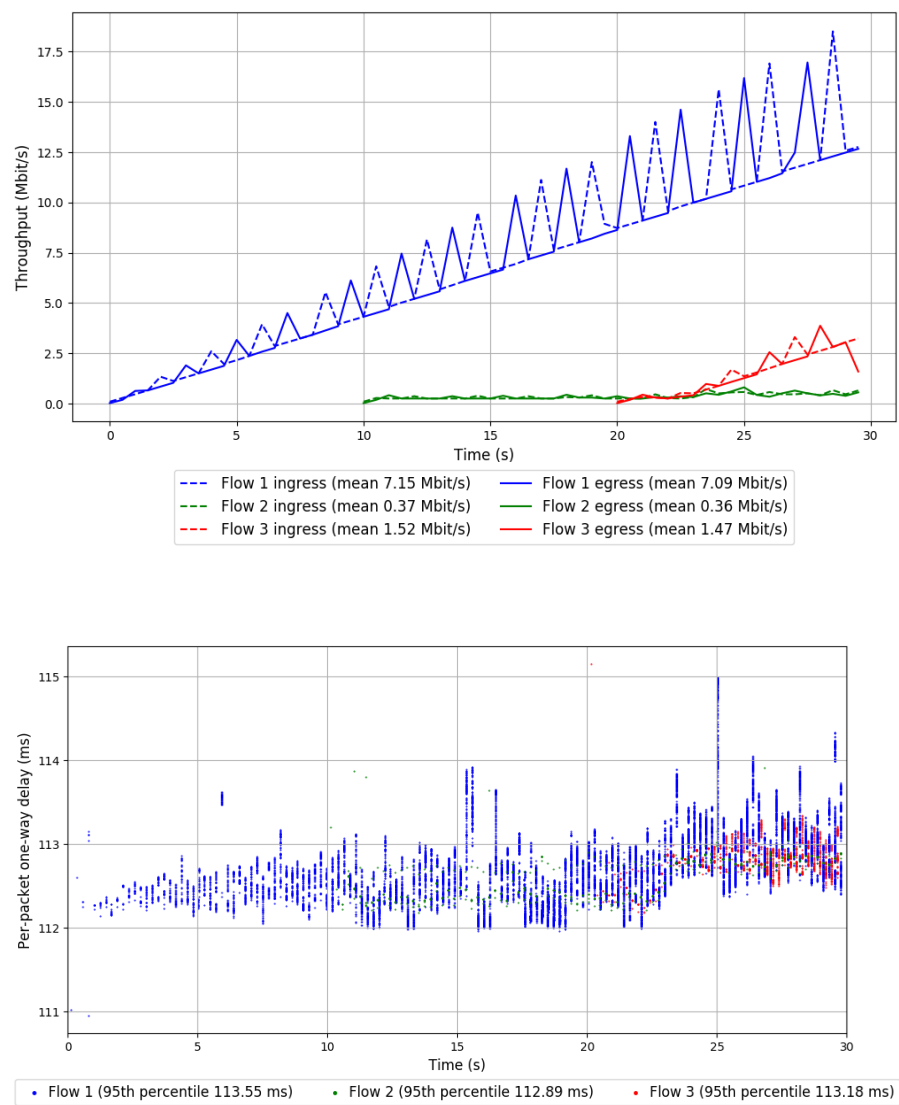
-- Flow 3:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 113.179 ms

Loss rate: 5.54%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-02-20 18:52:49

End at: 2018-02-20 18:53:19

Below is generated by plot.py at 2018-02-20 23:57:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.02 Mbit/s

95th percentile per-packet one-way delay: 114.060 ms

Loss rate: 2.16%

-- Flow 1:

Average throughput: 5.21 Mbit/s

95th percentile per-packet one-way delay: 114.138 ms

Loss rate: 1.75%

-- Flow 2:

Average throughput: 4.65 Mbit/s

95th percentile per-packet one-way delay: 113.873 ms

Loss rate: 2.27%

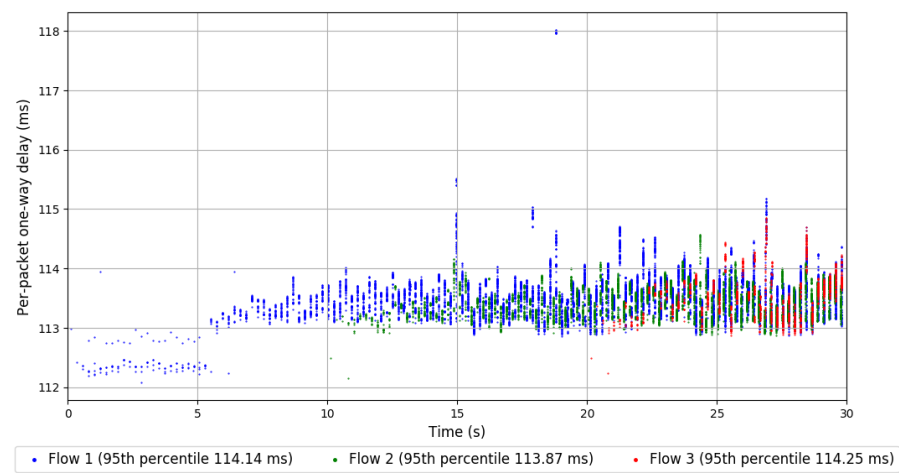
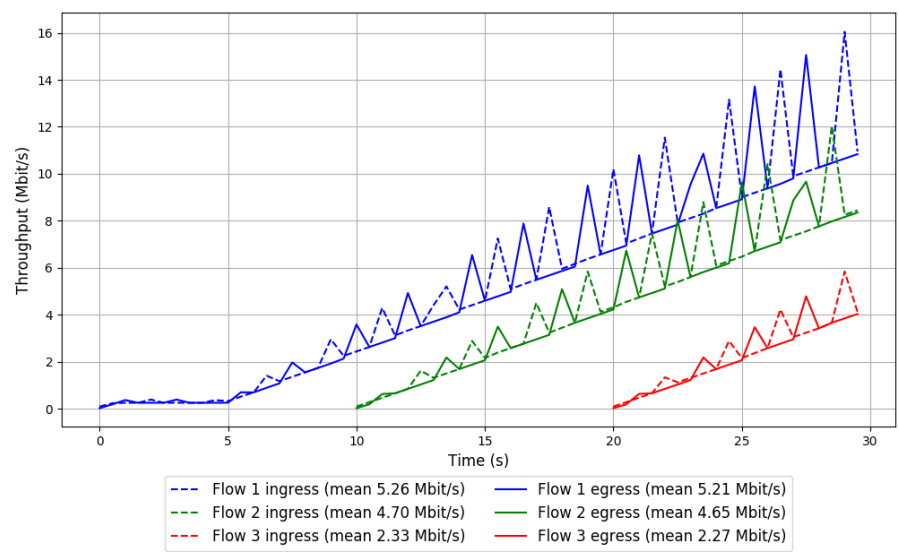
-- Flow 3:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 114.255 ms

Loss rate: 4.54%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-02-20 19:12:30

End at: 2018-02-20 19:13:00

Below is generated by plot.py at 2018-02-20 23:57:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.34 Mbit/s

95th percentile per-packet one-way delay: 112.775 ms

Loss rate: 2.03%

-- Flow 1:

Average throughput: 6.35 Mbit/s

95th percentile per-packet one-way delay: 112.873 ms

Loss rate: 1.58%

-- Flow 2:

Average throughput: 0.79 Mbit/s

95th percentile per-packet one-way delay: 112.383 ms

Loss rate: 4.31%

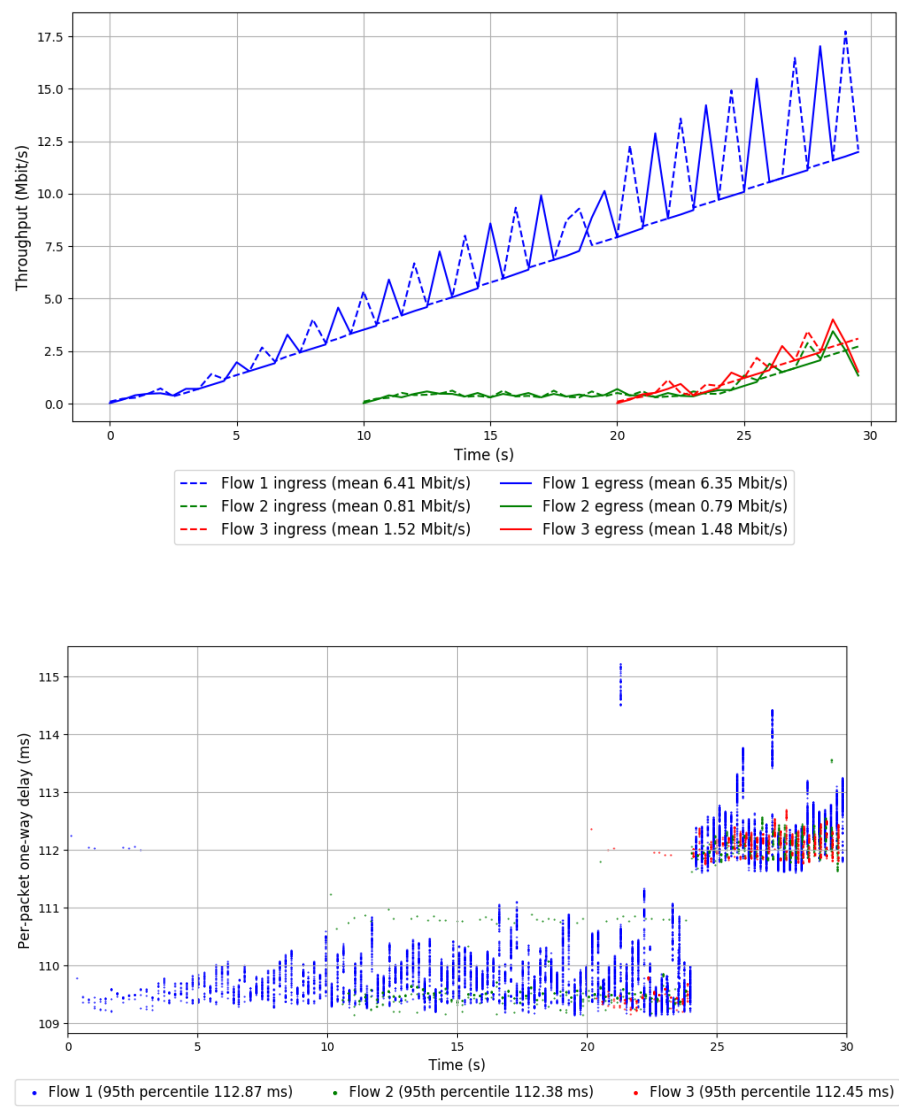
-- Flow 3:

Average throughput: 1.48 Mbit/s

95th percentile per-packet one-way delay: 112.449 ms

Loss rate: 5.29%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-02-20 19:31:49

End at: 2018-02-20 19:32:19

Below is generated by plot.py at 2018-02-20 23:57:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.88 Mbit/s

95th percentile per-packet one-way delay: 113.475 ms

Loss rate: 2.03%

-- Flow 1:

Average throughput: 5.16 Mbit/s

95th percentile per-packet one-way delay: 113.475 ms

Loss rate: 1.74%

-- Flow 2:

Average throughput: 4.52 Mbit/s

95th percentile per-packet one-way delay: 113.516 ms

Loss rate: 1.89%

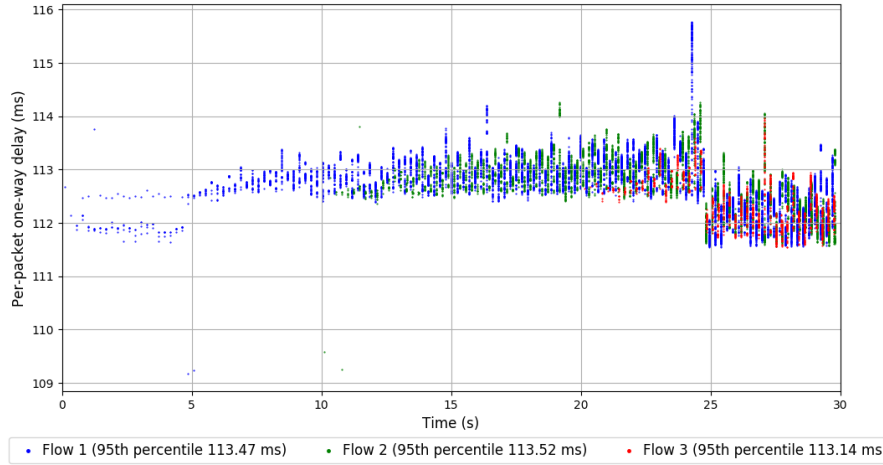
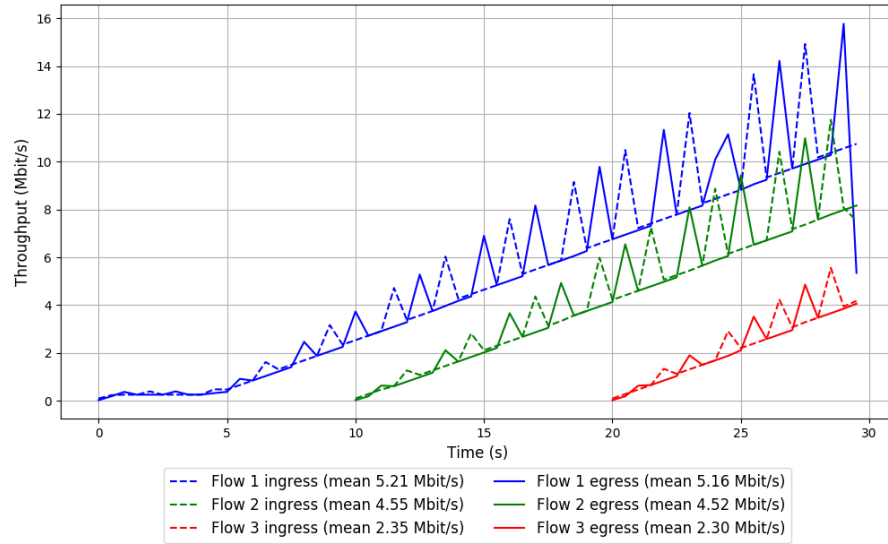
-- Flow 3:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 113.145 ms

Loss rate: 4.56%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-02-20 19:51:57

End at: 2018-02-20 19:52:27

Below is generated by plot.py at 2018-02-20 23:57:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.85 Mbit/s

95th percentile per-packet one-way delay: 113.552 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 7.17 Mbit/s

95th percentile per-packet one-way delay: 113.615 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 4.55 Mbit/s

95th percentile per-packet one-way delay: 113.456 ms

Loss rate: 2.28%

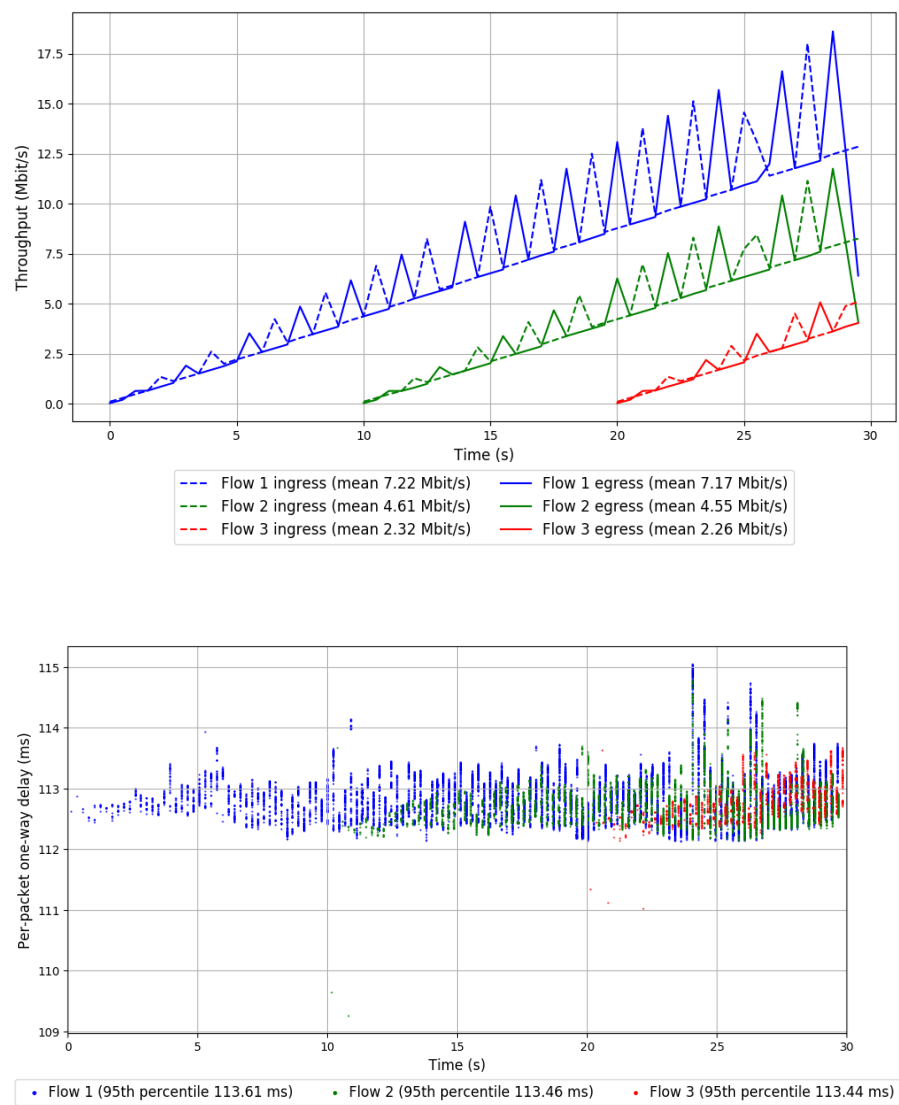
-- Flow 3:

Average throughput: 2.26 Mbit/s

95th percentile per-packet one-way delay: 113.435 ms

Loss rate: 4.54%

Run 9: Report of LEDBAT — Data Link

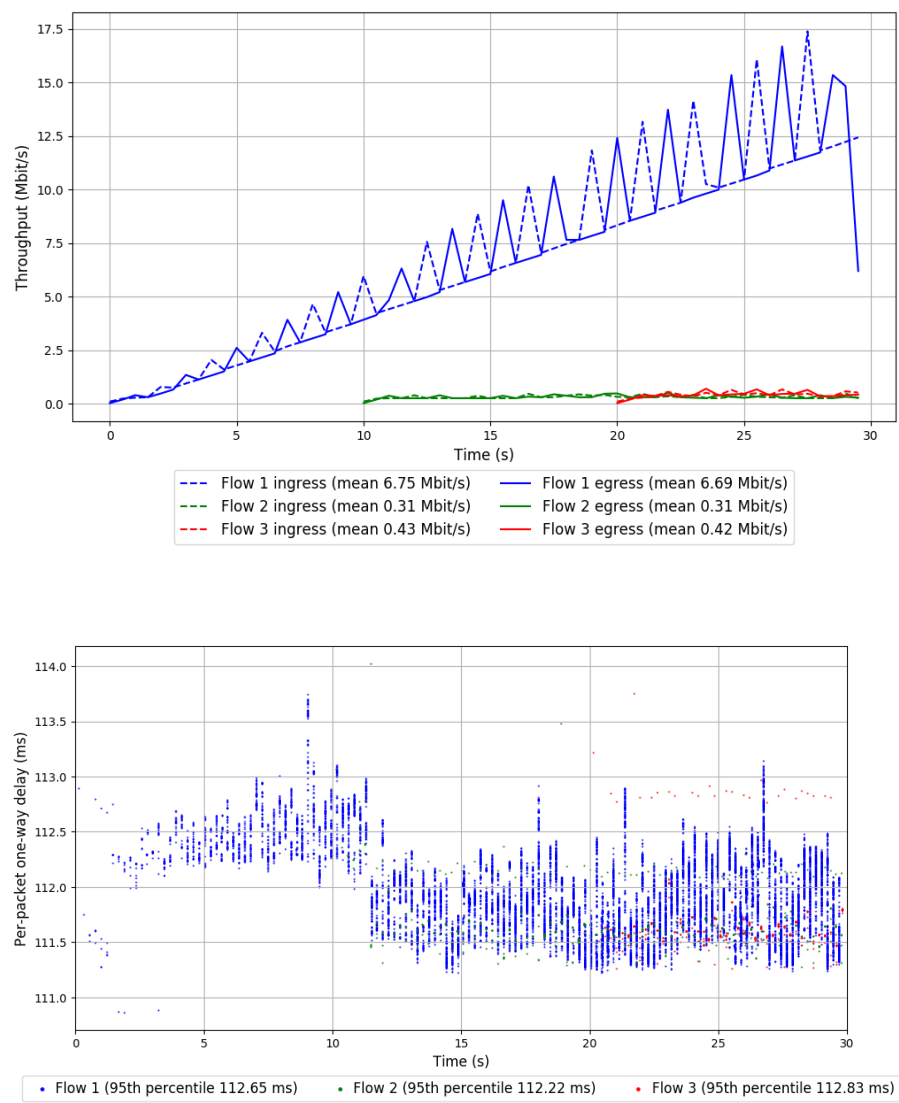


```
Run 10: Statistics of LEDBAT

Start at: 2018-02-20 20:11:43
End at: 2018-02-20 20:12:13

# Below is generated by plot.py at 2018-02-20 23:57:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.02 Mbit/s
95th percentile per-packet one-way delay: 112.649 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 6.69 Mbit/s
95th percentile per-packet one-way delay: 112.651 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 112.225 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 112.825 ms
Loss rate: 3.32%
```

Run 10: Report of LEDBAT — Data Link

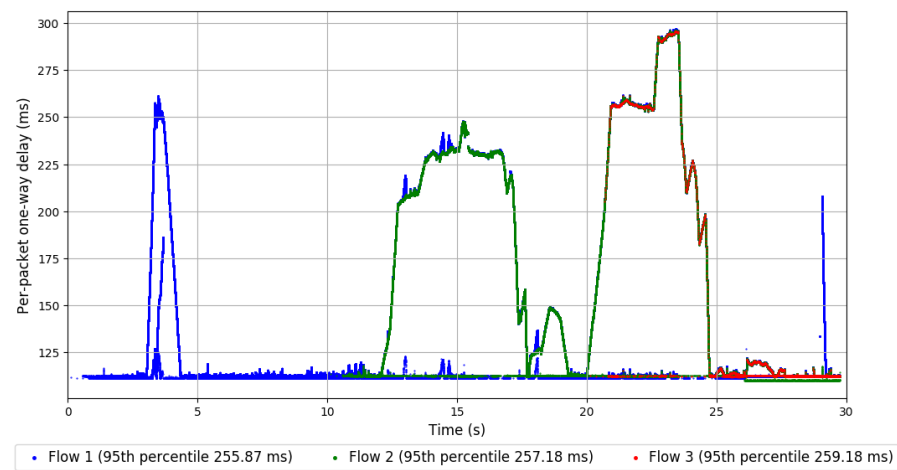
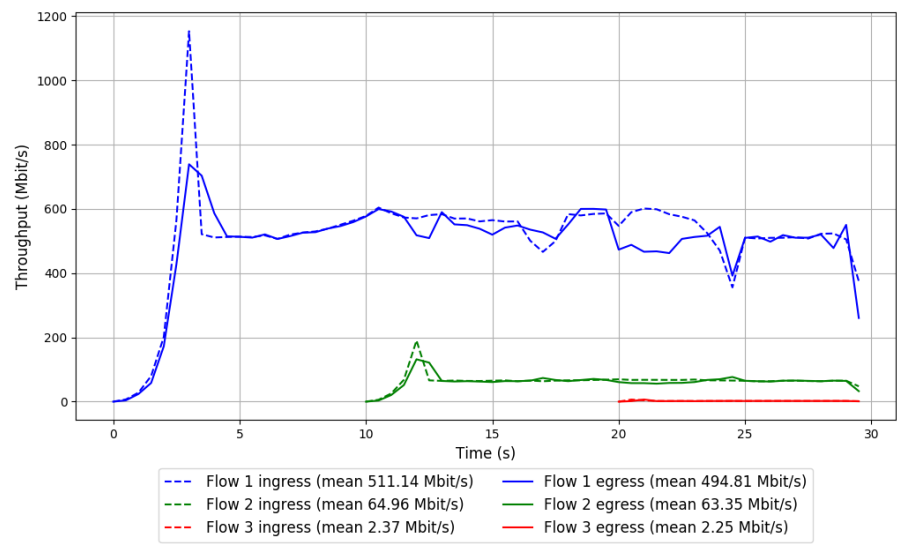


```
Run 1: Statistics of PCC

Start at: 2018-02-20 17:15:28
End at: 2018-02-20 17:15:58

# Below is generated by plot.py at 2018-02-21 00:04:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 537.44 Mbit/s
95th percentile per-packet one-way delay: 255.986 ms
Loss rate: 3.90%
-- Flow 1:
Average throughput: 494.81 Mbit/s
95th percentile per-packet one-way delay: 255.865 ms
Loss rate: 3.92%
-- Flow 2:
Average throughput: 63.35 Mbit/s
95th percentile per-packet one-way delay: 257.181 ms
Loss rate: 3.59%
-- Flow 3:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 259.183 ms
Loss rate: 7.48%
```

Run 1: Report of PCC — Data Link

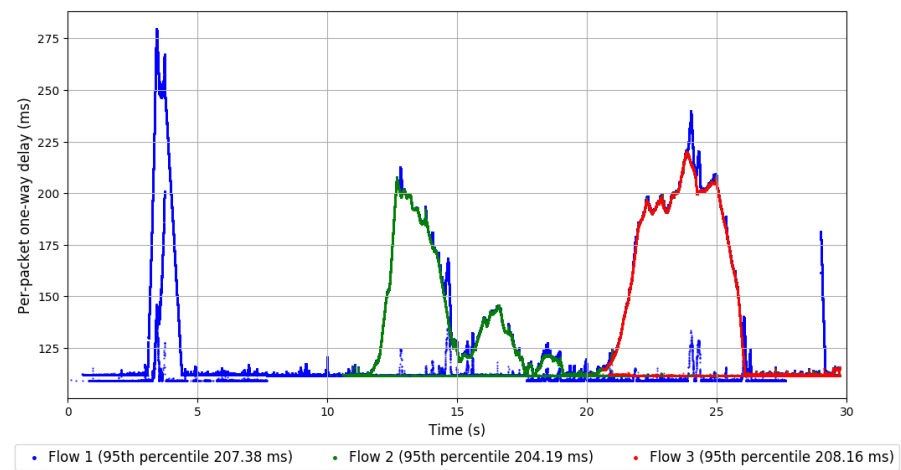
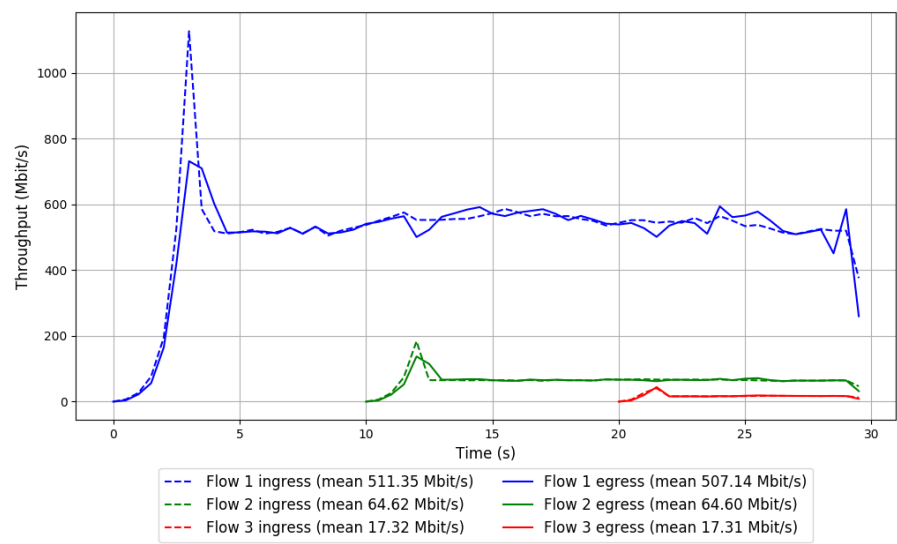


```
Run 2: Statistics of PCC

Start at: 2018-02-20 17:35:06
End at: 2018-02-20 17:35:36

# Below is generated by plot.py at 2018-02-21 00:05:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 555.51 Mbit/s
95th percentile per-packet one-way delay: 206.928 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 507.14 Mbit/s
95th percentile per-packet one-way delay: 207.384 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 64.60 Mbit/s
95th percentile per-packet one-way delay: 204.188 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 17.31 Mbit/s
95th percentile per-packet one-way delay: 208.162 ms
Loss rate: 2.27%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-02-20 17:55:14

End at: 2018-02-20 17:55:44

Below is generated by plot.py at 2018-02-21 00:05:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 531.22 Mbit/s

95th percentile per-packet one-way delay: 243.245 ms

Loss rate: 4.12%

-- Flow 1:

Average throughput: 445.93 Mbit/s

95th percentile per-packet one-way delay: 243.196 ms

Loss rate: 4.06%

-- Flow 2:

Average throughput: 126.69 Mbit/s

95th percentile per-packet one-way delay: 243.361 ms

Loss rate: 4.45%

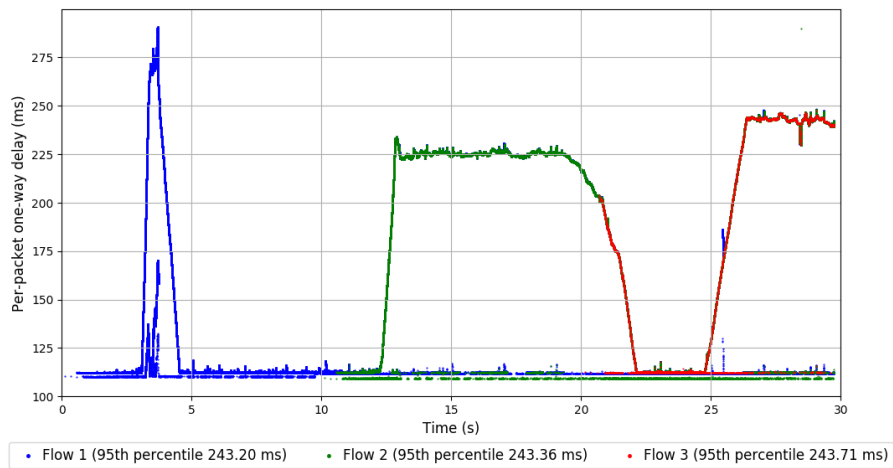
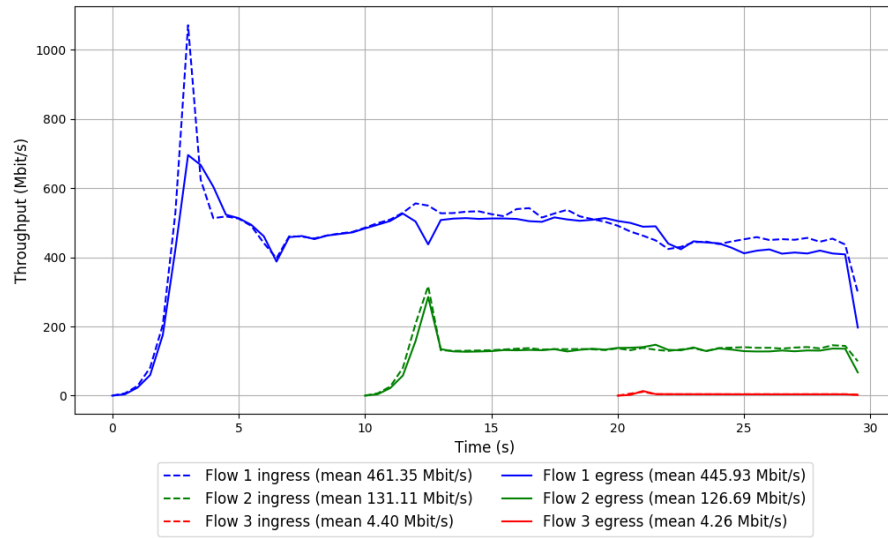
-- Flow 3:

Average throughput: 4.26 Mbit/s

95th percentile per-packet one-way delay: 243.712 ms

Loss rate: 5.40%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-02-20 18:15:14

End at: 2018-02-20 18:15:44

Below is generated by plot.py at 2018-02-21 00:05:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 541.43 Mbit/s

95th percentile per-packet one-way delay: 227.227 ms

Loss rate: 2.42%

-- Flow 1:

Average throughput: 482.65 Mbit/s

95th percentile per-packet one-way delay: 227.266 ms

Loss rate: 2.44%

-- Flow 2:

Average throughput: 72.75 Mbit/s

95th percentile per-packet one-way delay: 226.613 ms

Loss rate: 1.75%

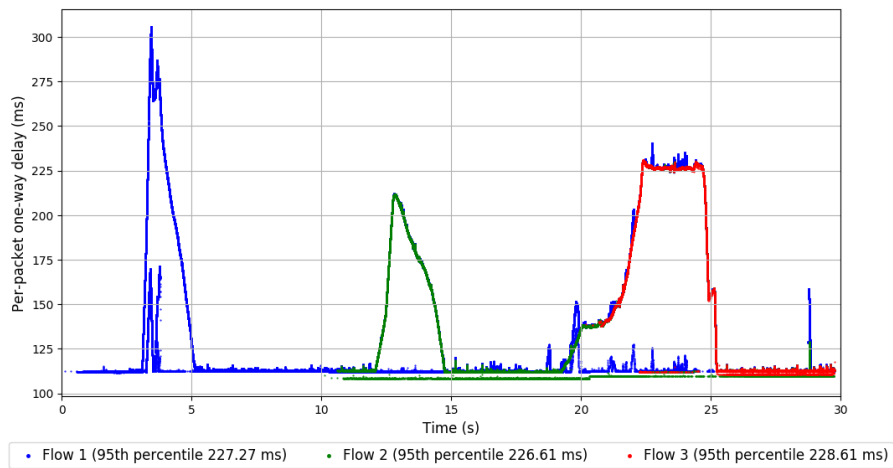
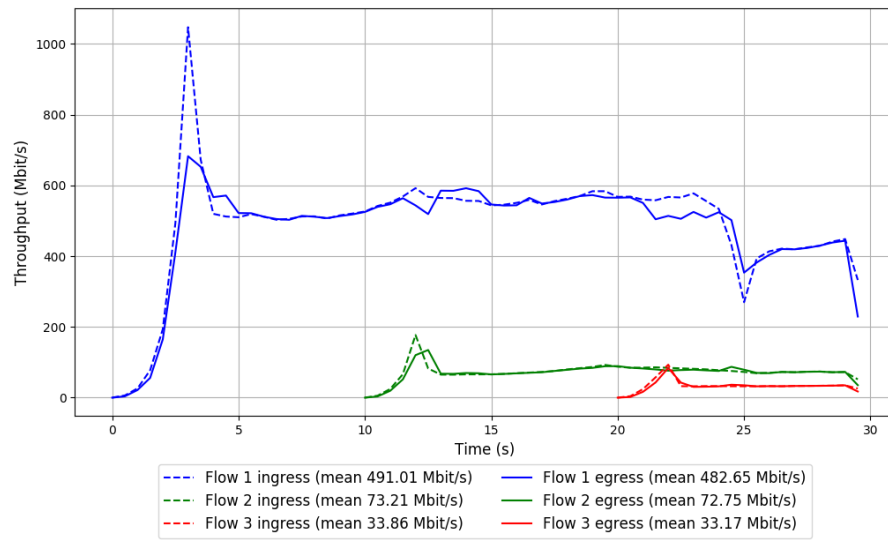
-- Flow 3:

Average throughput: 33.17 Mbit/s

95th percentile per-packet one-way delay: 228.608 ms

Loss rate: 4.50%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-02-20 18:35:15

End at: 2018-02-20 18:35:45

Below is generated by plot.py at 2018-02-21 00:05:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 544.64 Mbit/s

95th percentile per-packet one-way delay: 248.356 ms

Loss rate: 5.12%

-- Flow 1:

Average throughput: 522.61 Mbit/s

95th percentile per-packet one-way delay: 248.378 ms

Loss rate: 5.15%

-- Flow 2:

Average throughput: 31.36 Mbit/s

95th percentile per-packet one-way delay: 247.958 ms

Loss rate: 4.21%

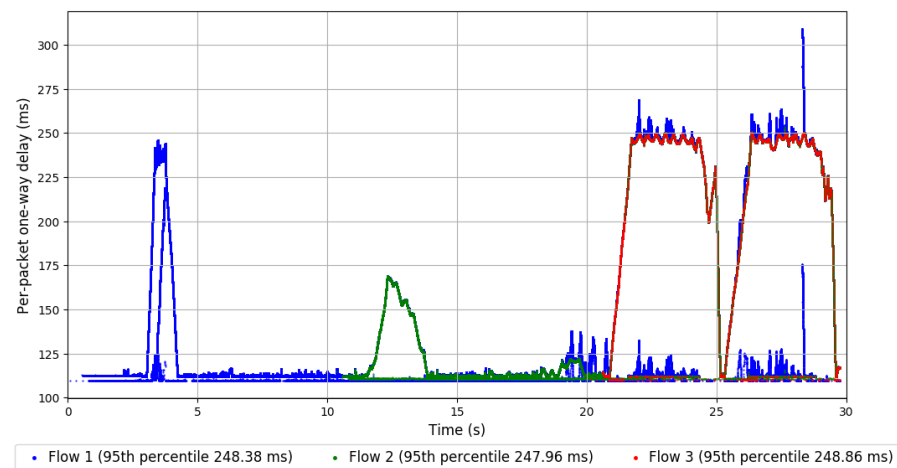
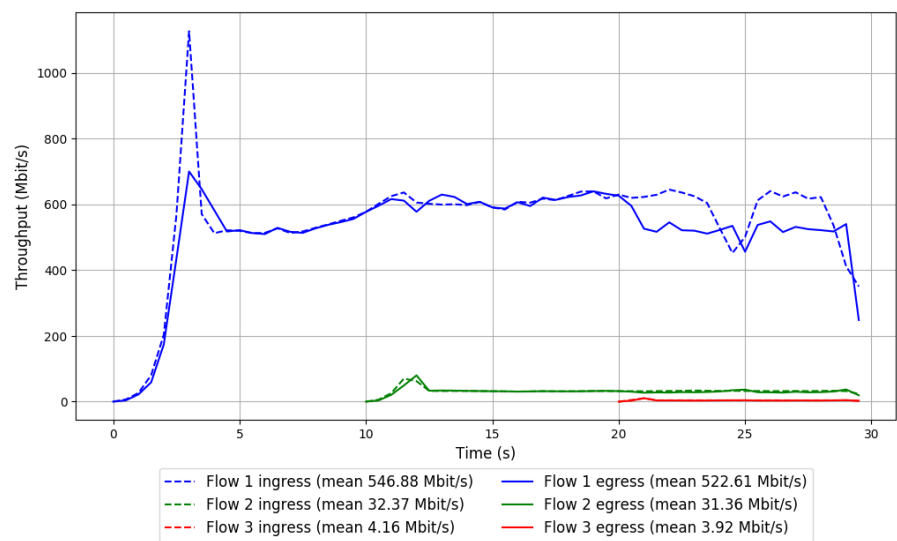
-- Flow 3:

Average throughput: 3.92 Mbit/s

95th percentile per-packet one-way delay: 248.857 ms

Loss rate: 7.90%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-02-20 18:54:58

End at: 2018-02-20 18:55:28

Below is generated by plot.py at 2018-02-21 00:05:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 544.88 Mbit/s

95th percentile per-packet one-way delay: 231.350 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 520.48 Mbit/s

95th percentile per-packet one-way delay: 231.366 ms

Loss rate: 1.67%

-- Flow 2:

Average throughput: 34.79 Mbit/s

95th percentile per-packet one-way delay: 231.180 ms

Loss rate: 1.50%

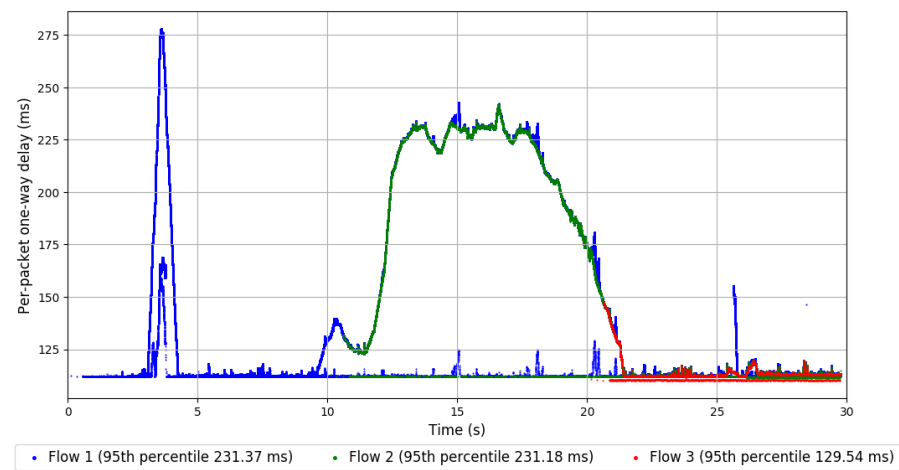
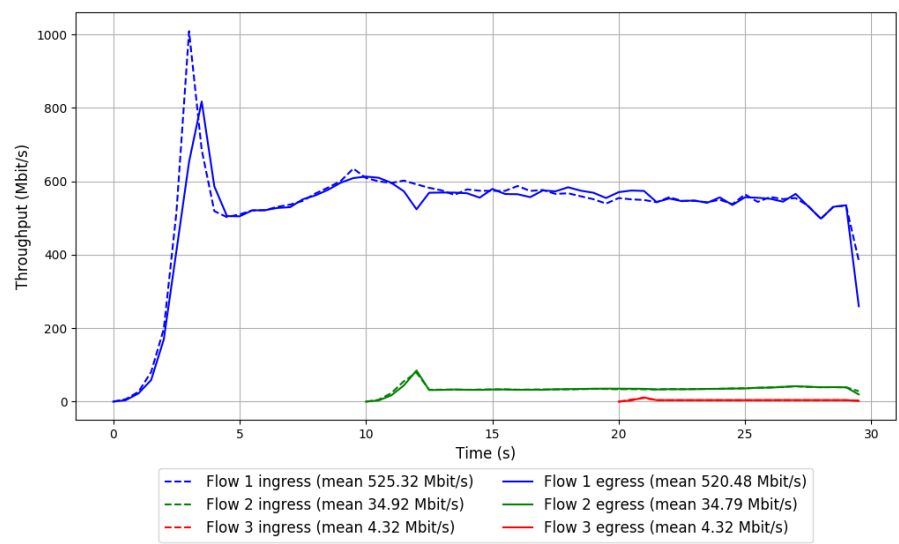
-- Flow 3:

Average throughput: 4.32 Mbit/s

95th percentile per-packet one-way delay: 129.540 ms

Loss rate: 2.14%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-02-20 19:14:41

End at: 2018-02-20 19:15:11

Below is generated by plot.py at 2018-02-21 00:05:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 517.92 Mbit/s

95th percentile per-packet one-way delay: 256.086 ms

Loss rate: 3.75%

-- Flow 1:

Average throughput: 505.46 Mbit/s

95th percentile per-packet one-way delay: 256.171 ms

Loss rate: 3.76%

-- Flow 2:

Average throughput: 2.32 Mbit/s

95th percentile per-packet one-way delay: 255.954 ms

Loss rate: 3.58%

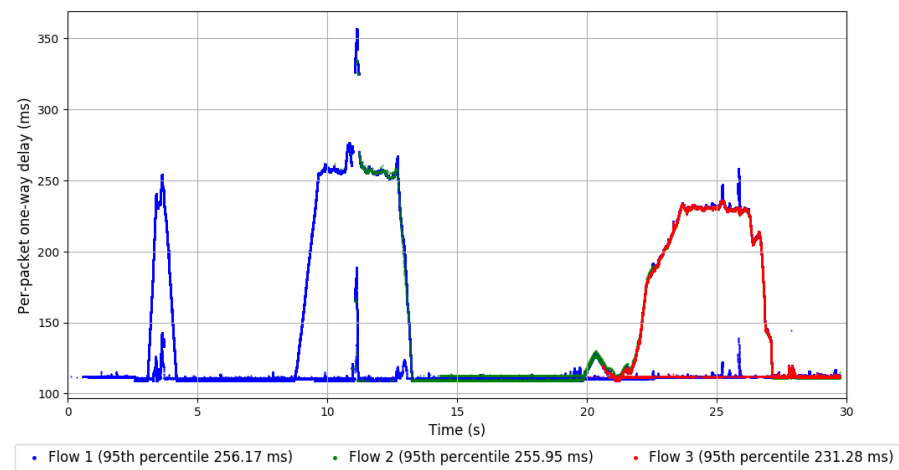
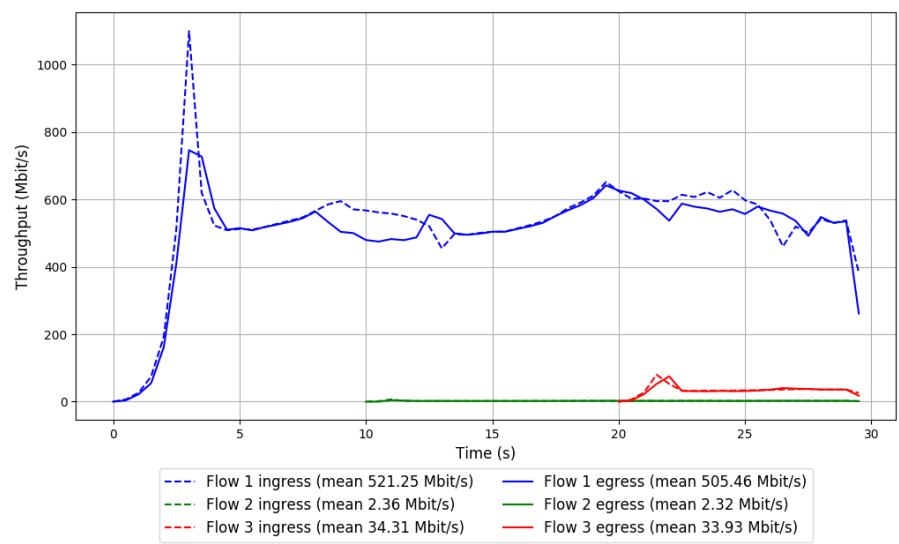
-- Flow 3:

Average throughput: 33.93 Mbit/s

95th percentile per-packet one-way delay: 231.283 ms

Loss rate: 3.38%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-02-20 19:34:08

End at: 2018-02-20 19:34:38

Below is generated by plot.py at 2018-02-21 00:07:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 569.77 Mbit/s

95th percentile per-packet one-way delay: 221.676 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 547.93 Mbit/s

95th percentile per-packet one-way delay: 221.624 ms

Loss rate: 1.94%

-- Flow 2:

Average throughput: 17.22 Mbit/s

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

Loss rate: 1.43%

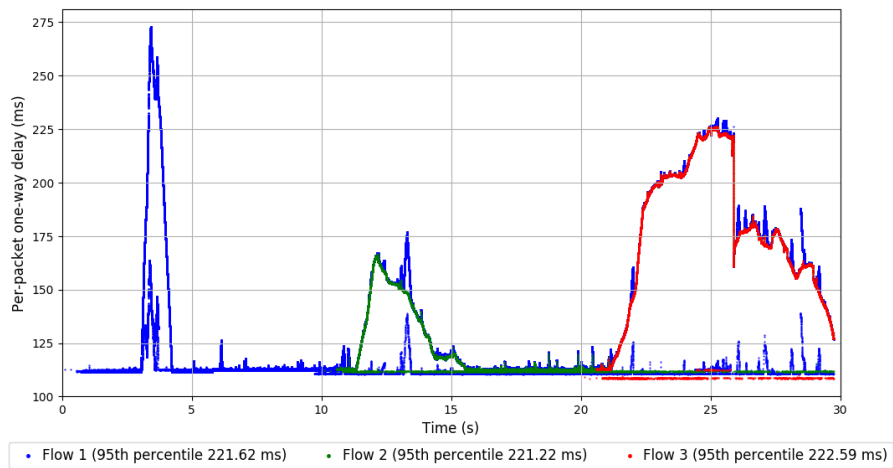
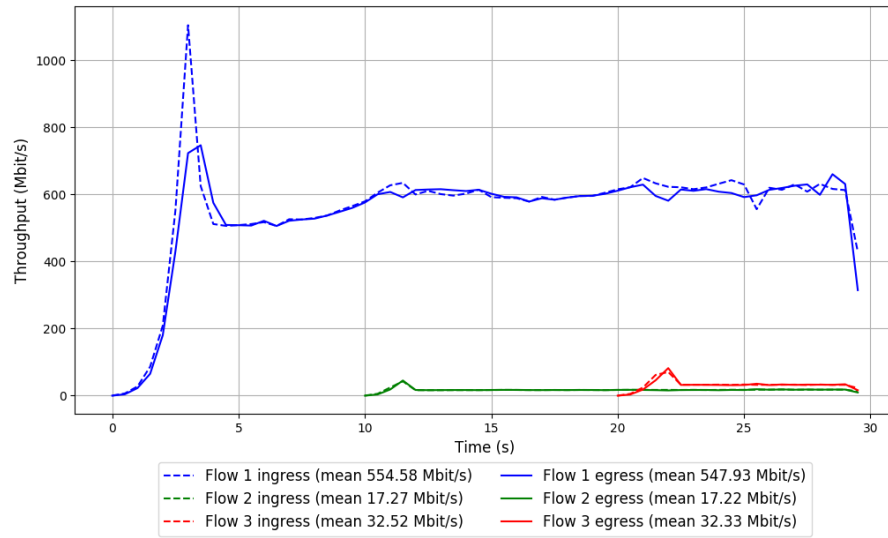
-- Flow 3:

Average throughput: 32.33 Mbit/s

95th percentile per-packet one-way delay: 222.591 ms

Loss rate: 2.78%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-02-20 19:54:11

End at: 2018-02-20 19:54:41

Below is generated by plot.py at 2018-02-21 00:13:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 544.28 Mbit/s

95th percentile per-packet one-way delay: 228.251 ms

Loss rate: 2.46%

-- Flow 1:

Average throughput: 500.42 Mbit/s

95th percentile per-packet one-way delay: 228.422 ms

Loss rate: 2.49%

-- Flow 2:

Average throughput: 64.27 Mbit/s

95th percentile per-packet one-way delay: 227.440 ms

Loss rate: 2.18%

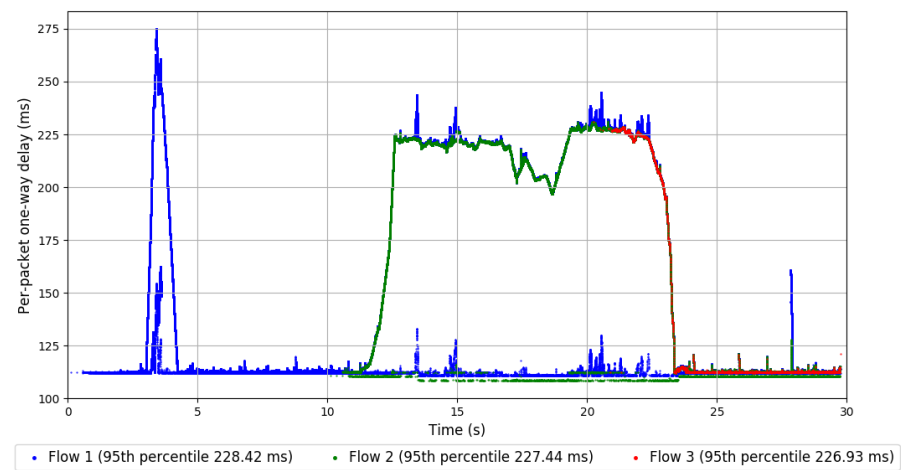
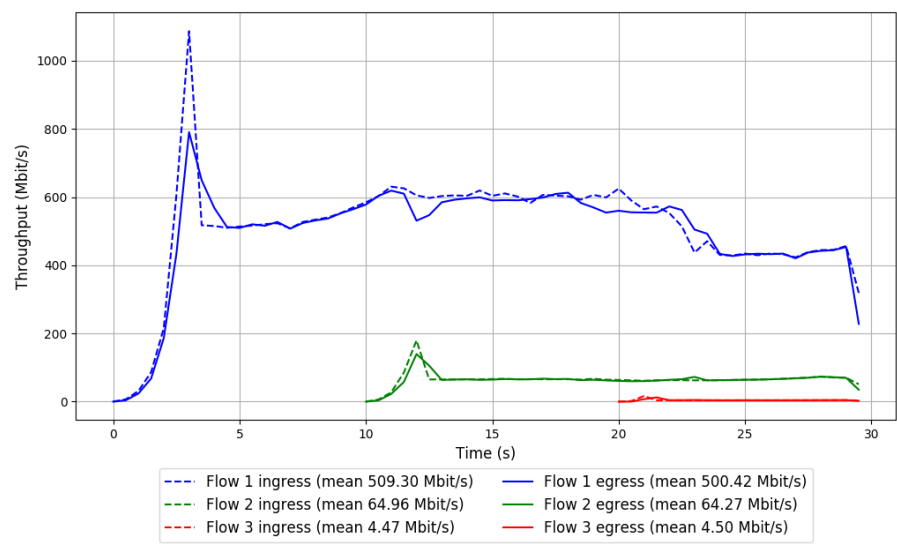
-- Flow 3:

Average throughput: 4.50 Mbit/s

95th percentile per-packet one-way delay: 226.929 ms

Loss rate: 2.91%

Run 9: Report of PCC — Data Link

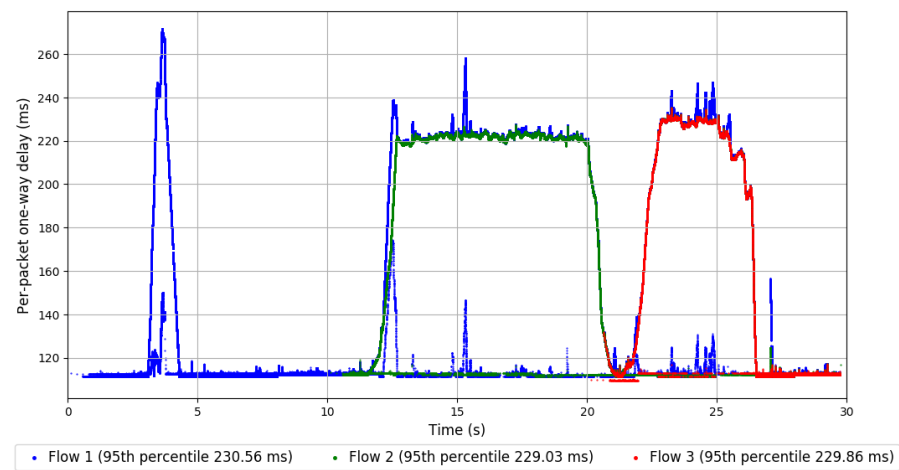
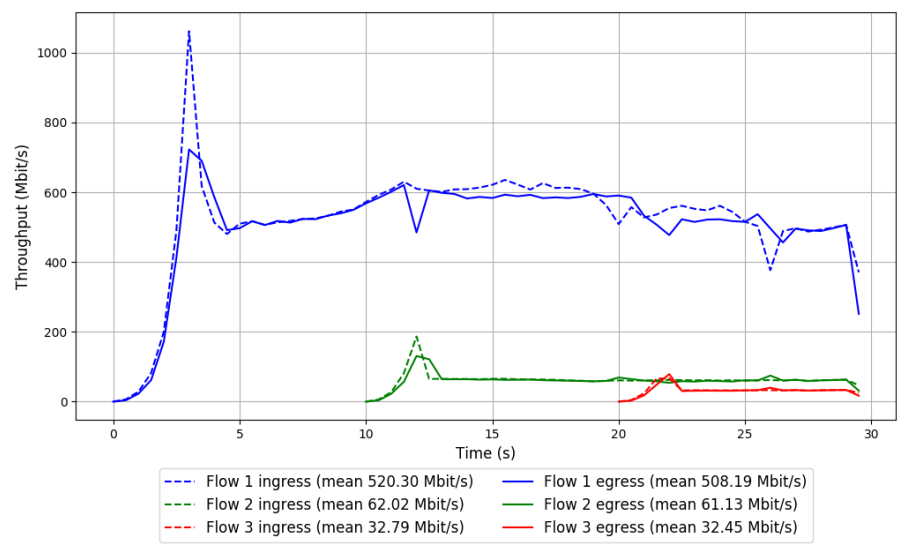


```
Run 10: Statistics of PCC

Start at: 2018-02-20 20:13:56
End at: 2018-02-20 20:14:26

# Below is generated by plot.py at 2018-02-21 00:14:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 559.11 Mbit/s
95th percentile per-packet one-way delay: 230.303 ms
Loss rate: 3.03%
-- Flow 1:
Average throughput: 508.19 Mbit/s
95th percentile per-packet one-way delay: 230.561 ms
Loss rate: 3.06%
-- Flow 2:
Average throughput: 61.13 Mbit/s
95th percentile per-packet one-way delay: 229.029 ms
Loss rate: 2.53%
-- Flow 3:
Average throughput: 32.45 Mbit/s
95th percentile per-packet one-way delay: 229.861 ms
Loss rate: 3.28%
```

Run 10: Report of PCC — Data Link

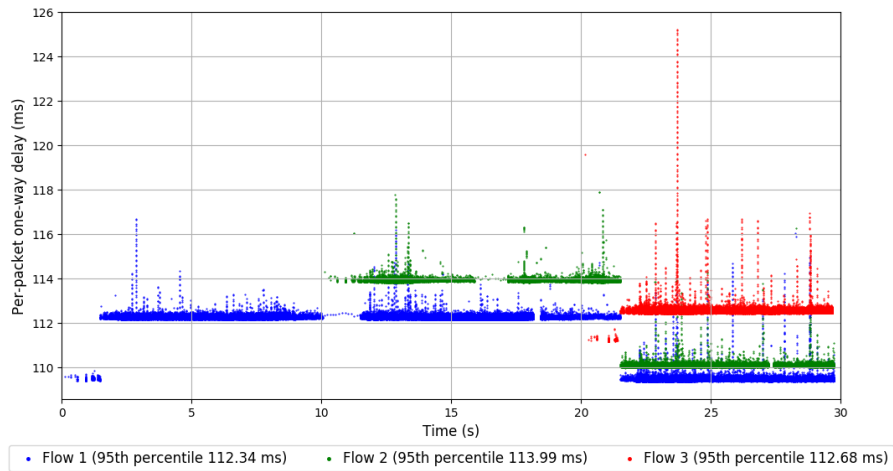
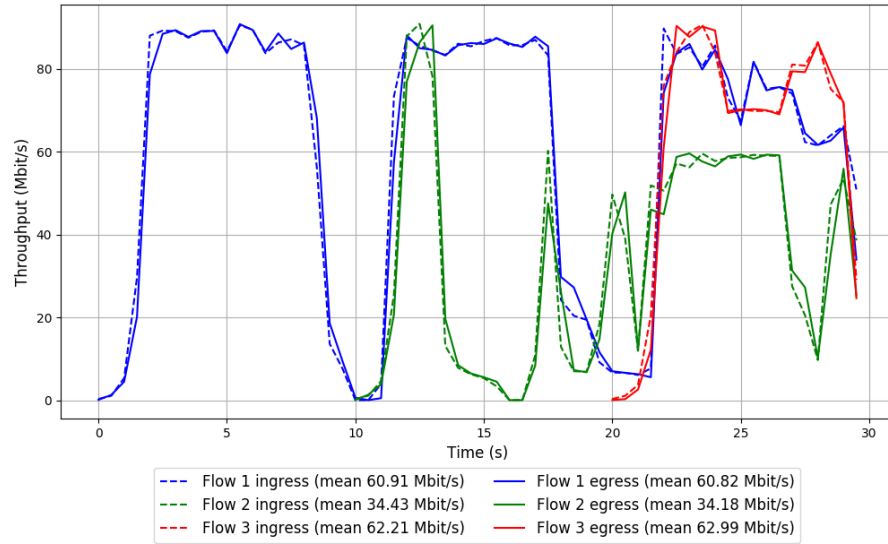


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-02-20 17:19:53
End at: 2018-02-20 17:20:23

# Below is generated by plot.py at 2018-02-21 00:14:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 103.74 Mbit/s
95th percentile per-packet one-way delay: 113.906 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 60.82 Mbit/s
95th percentile per-packet one-way delay: 112.342 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 34.18 Mbit/s
95th percentile per-packet one-way delay: 113.986 ms
Loss rate: 1.83%
-- Flow 3:
Average throughput: 62.99 Mbit/s
95th percentile per-packet one-way delay: 112.684 ms
Loss rate: 1.67%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-02-20 17:39:34

End at: 2018-02-20 17:40:04

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.71 Mbit/s

95th percentile per-packet one-way delay: 112.758 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 55.34 Mbit/s

95th percentile per-packet one-way delay: 112.398 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 51.10 Mbit/s

95th percentile per-packet one-way delay: 112.347 ms

Loss rate: 1.90%

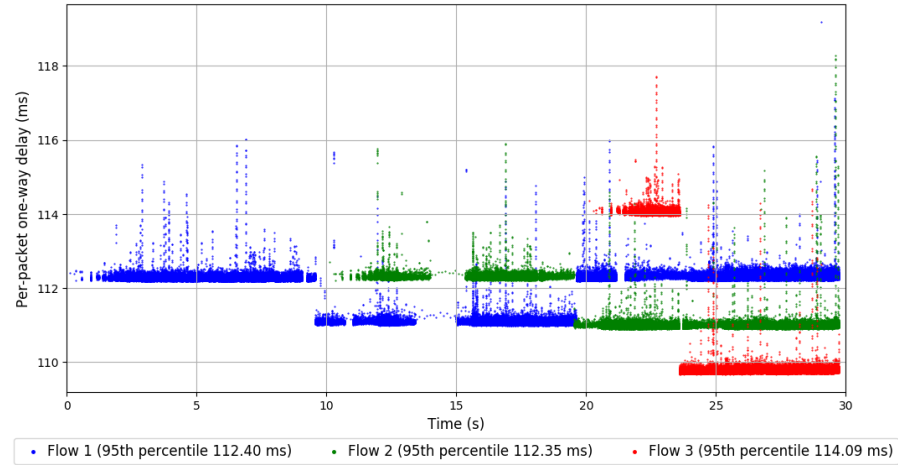
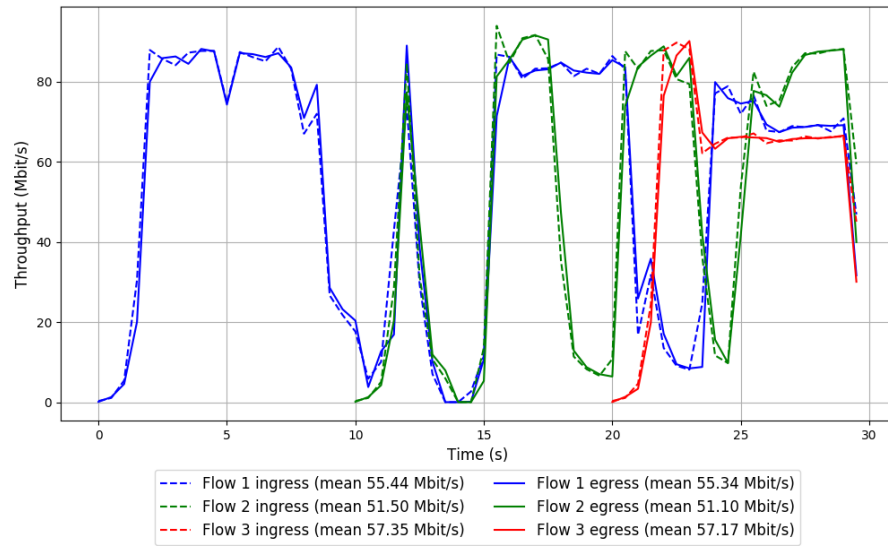
-- Flow 3:

Average throughput: 57.17 Mbit/s

95th percentile per-packet one-way delay: 114.094 ms

Loss rate: 2.60%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-02-20 17:59:43

End at: 2018-02-20 18:00:13

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.26 Mbit/s

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

Loss rate: 1.22%

-- Flow 1:

Average throughput: 58.05 Mbit/s

95th percentile per-packet one-way delay: 111.466 ms

Loss rate: 1.13%

-- Flow 2:

Average throughput: 50.06 Mbit/s

95th percentile per-packet one-way delay: 112.322 ms

Loss rate: 1.65%

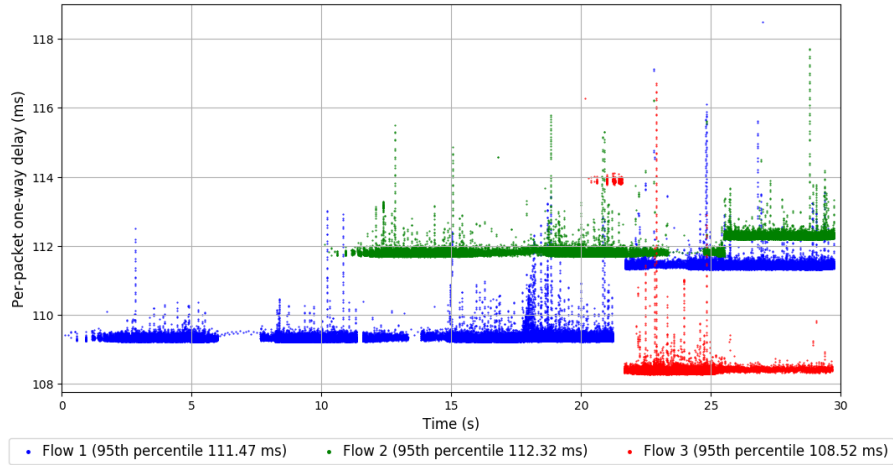
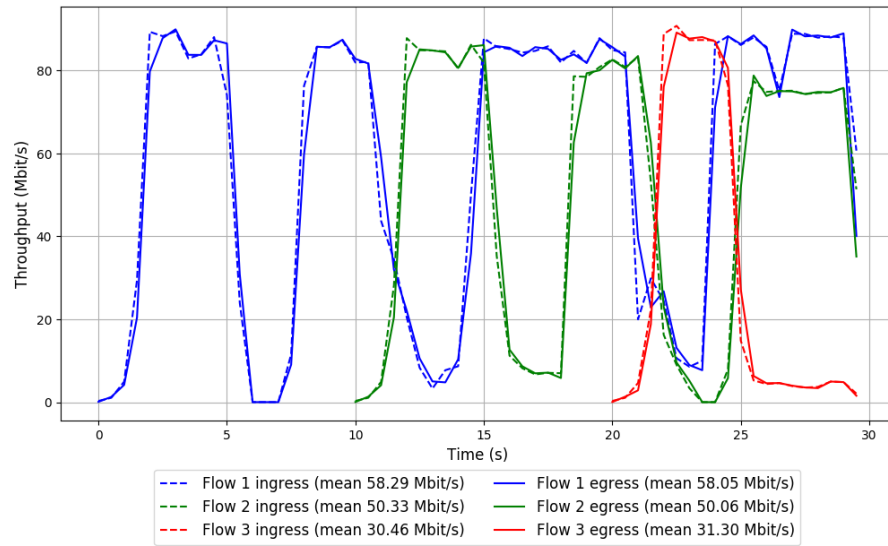
-- Flow 3:

Average throughput: 31.30 Mbit/s

95th percentile per-packet one-way delay: 108.516 ms

Loss rate: 0.27%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-02-20 18:19:50

End at: 2018-02-20 18:20:20

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.07 Mbit/s

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

Loss rate: 1.46%

-- Flow 1:

Average throughput: 65.80 Mbit/s

95th percentile per-packet one-way delay: 112.402 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 44.36 Mbit/s

95th percentile per-packet one-way delay: 112.466 ms

Loss rate: 2.04%

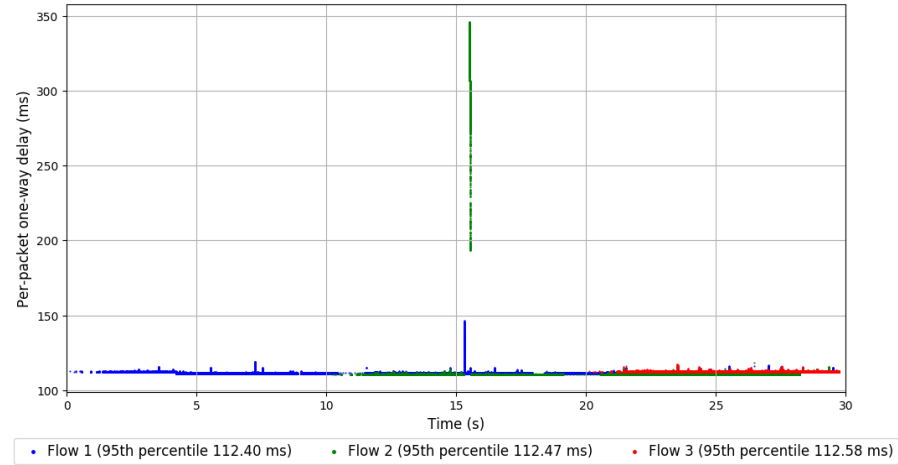
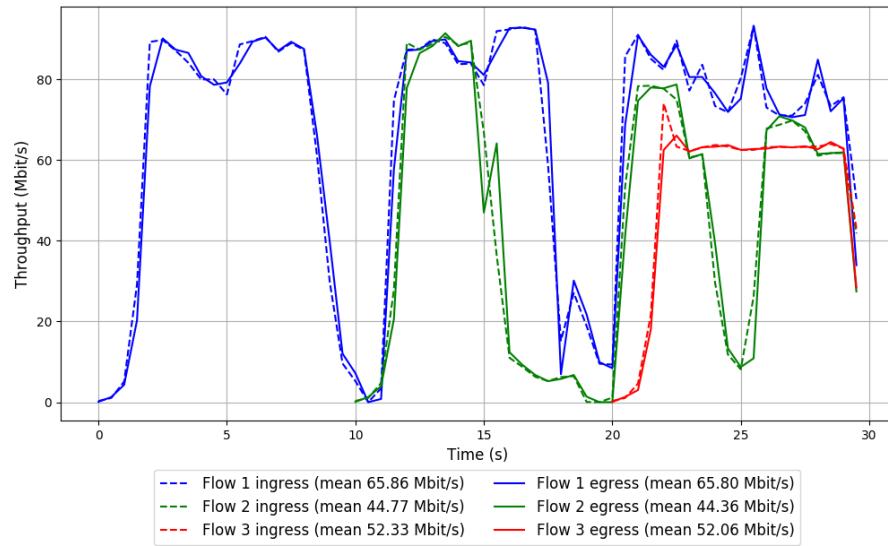
-- Flow 3:

Average throughput: 52.06 Mbit/s

95th percentile per-packet one-way delay: 112.585 ms

Loss rate: 2.81%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-02-20 18:39:43

End at: 2018-02-20 18:40:13

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.39 Mbit/s

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

Loss rate: 1.36%

-- Flow 1:

Average throughput: 57.83 Mbit/s

95th percentile per-packet one-way delay: 112.687 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 55.25 Mbit/s

95th percentile per-packet one-way delay: 112.622 ms

Loss rate: 1.55%

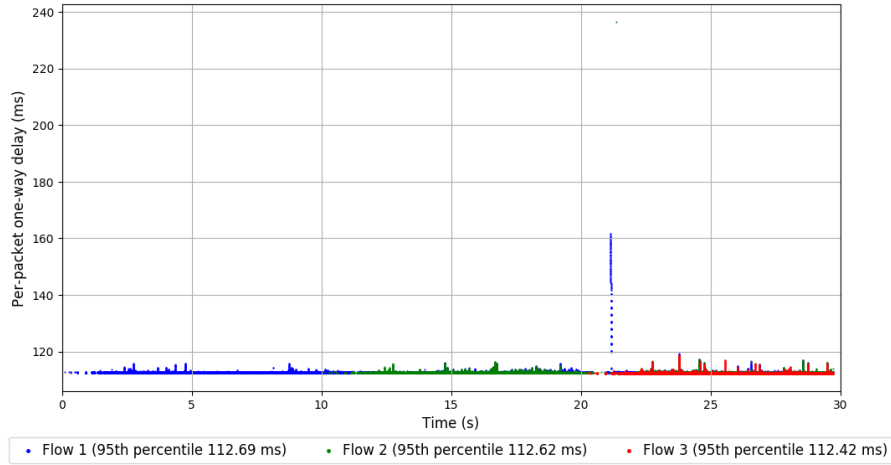
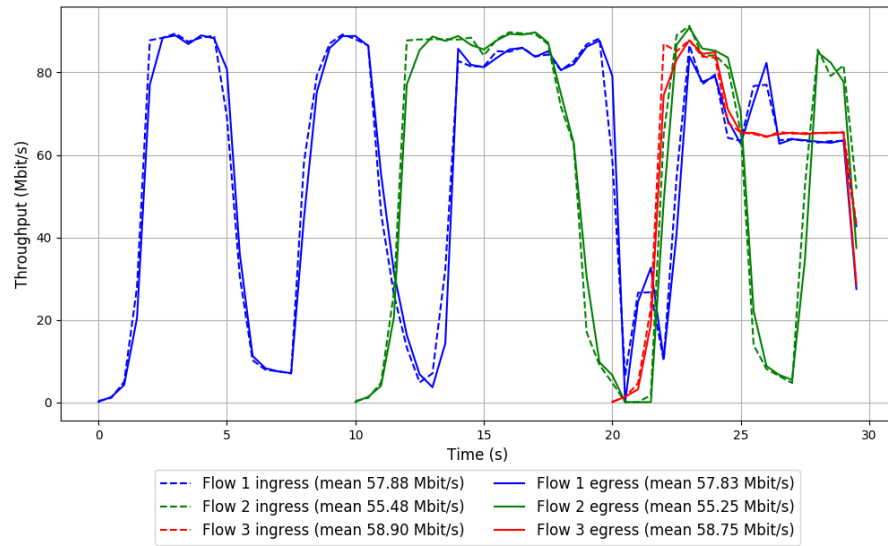
-- Flow 3:

Average throughput: 58.75 Mbit/s

95th percentile per-packet one-way delay: 112.419 ms

Loss rate: 2.55%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-02-20 18:59:33

End at: 2018-02-20 19:00:03

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.88 Mbit/s

95th percentile per-packet one-way delay: 112.541 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 62.14 Mbit/s

95th percentile per-packet one-way delay: 112.567 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 35.51 Mbit/s

95th percentile per-packet one-way delay: 112.156 ms

Loss rate: 2.00%

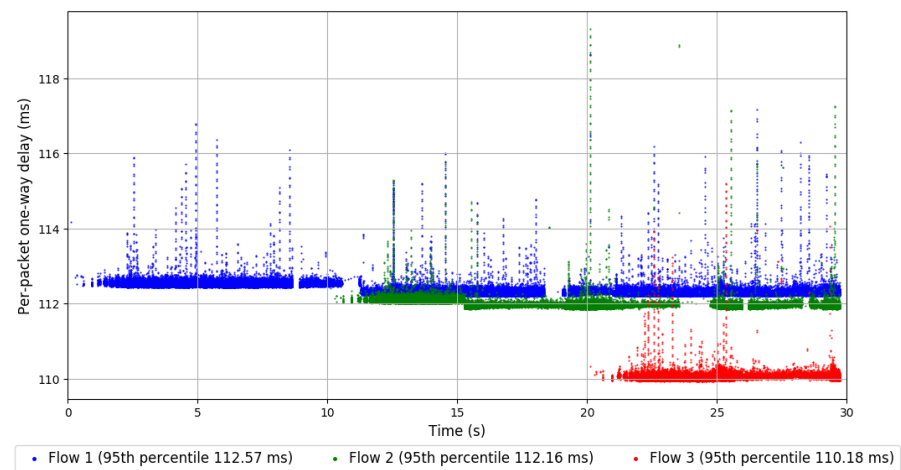
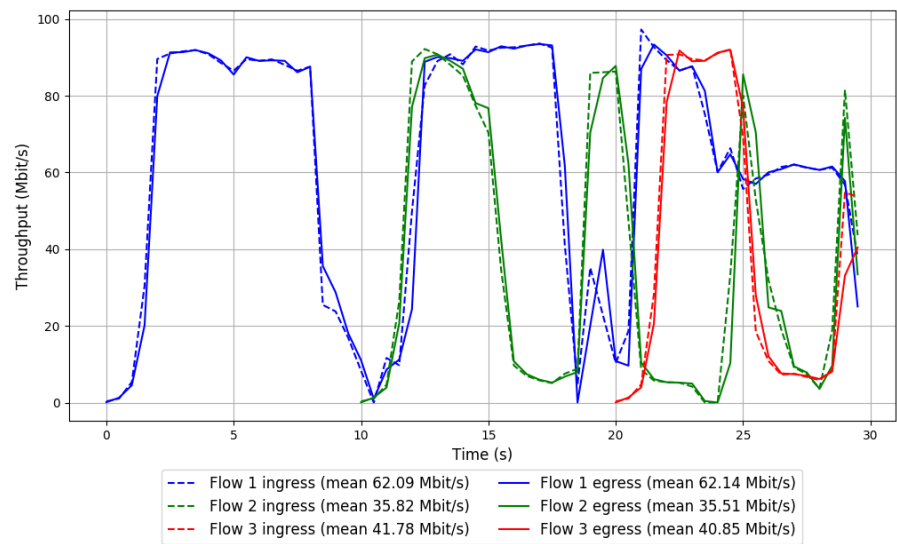
-- Flow 3:

Average throughput: 40.85 Mbit/s

95th percentile per-packet one-way delay: 110.176 ms

Loss rate: 4.43%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-02-20 19:19:05

End at: 2018-02-20 19:19:35

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.98 Mbit/s

95th percentile per-packet one-way delay: 112.466 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 56.51 Mbit/s

95th percentile per-packet one-way delay: 111.998 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 57.07 Mbit/s

95th percentile per-packet one-way delay: 109.282 ms

Loss rate: 1.52%

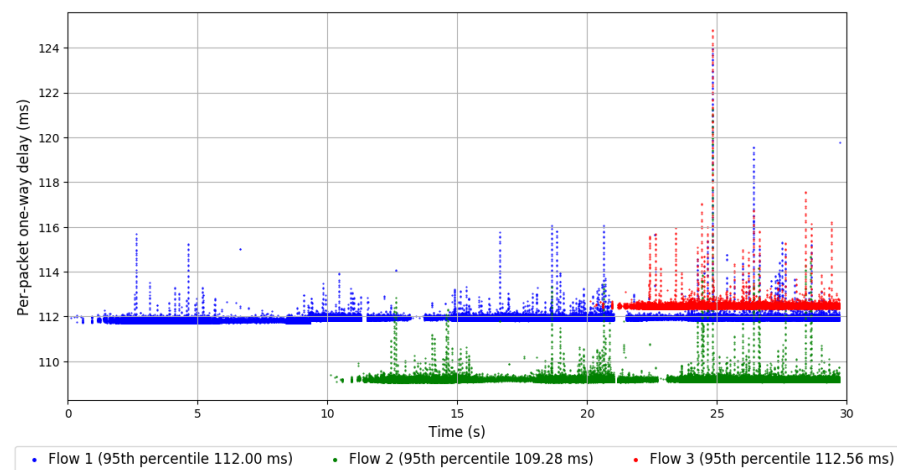
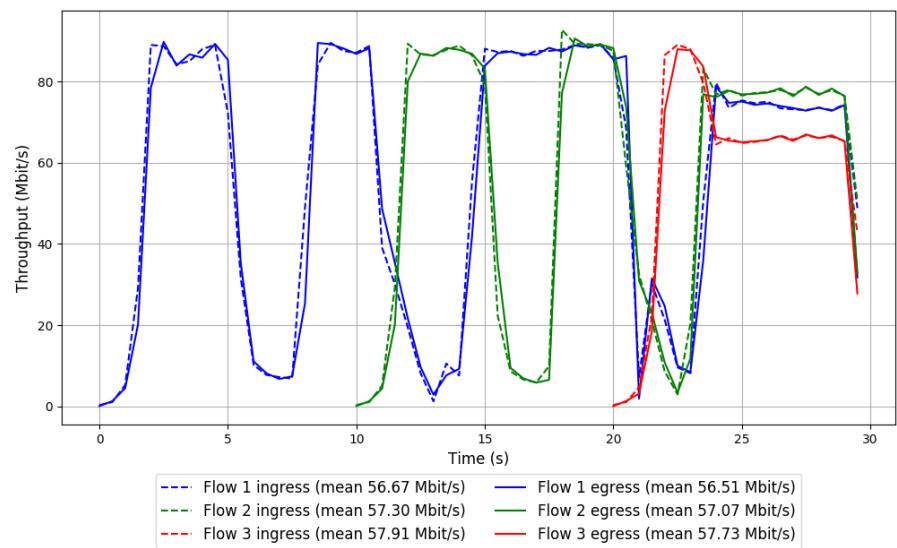
-- Flow 3:

Average throughput: 57.73 Mbit/s

95th percentile per-packet one-way delay: 112.555 ms

Loss rate: 2.60%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-02-20 19:38:40

End at: 2018-02-20 19:39:10

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.59 Mbit/s

95th percentile per-packet one-way delay: 112.395 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 61.04 Mbit/s

95th percentile per-packet one-way delay: 111.927 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 55.49 Mbit/s

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

Loss rate: 1.71%

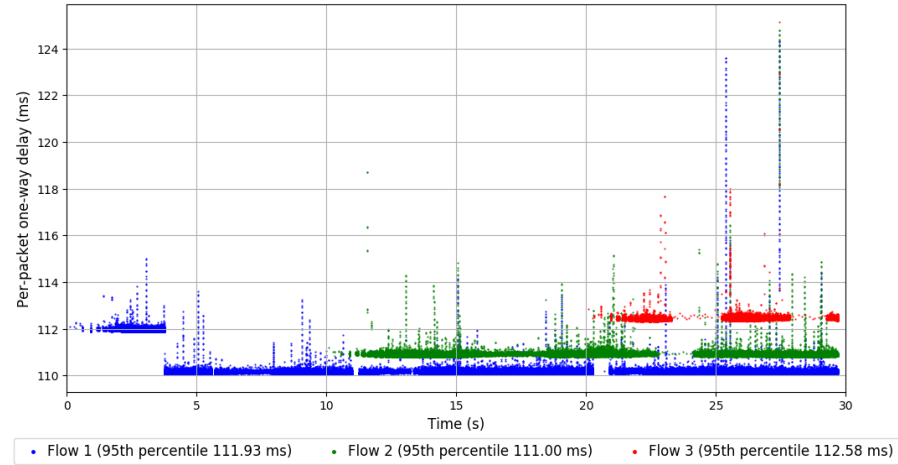
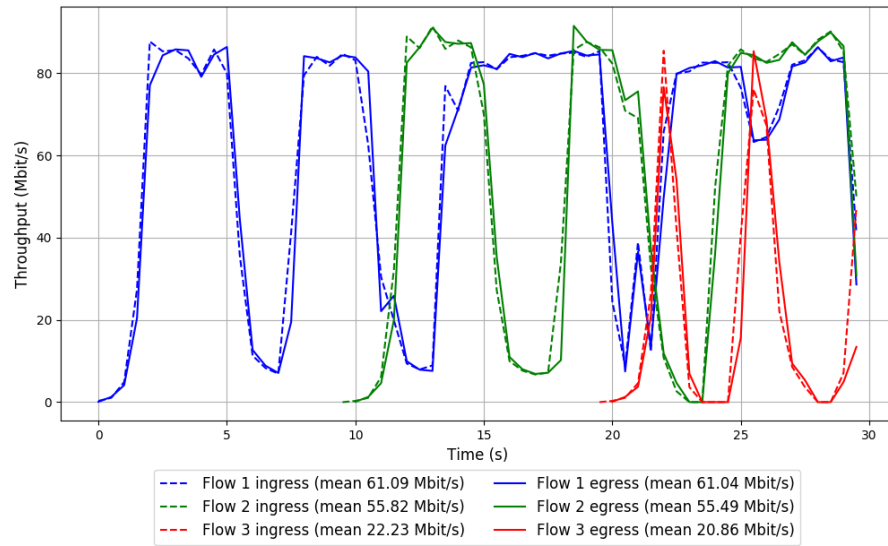
-- Flow 3:

Average throughput: 20.86 Mbit/s

95th percentile per-packet one-way delay: 112.579 ms

Loss rate: 8.31%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-02-20 19:58:40

End at: 2018-02-20 19:59:10

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.36 Mbit/s

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

Loss rate: 1.47%

-- Flow 1:

Average throughput: 57.12 Mbit/s

95th percentile per-packet one-way delay: 111.958 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 47.78 Mbit/s

95th percentile per-packet one-way delay: 110.243 ms

Loss rate: 1.85%

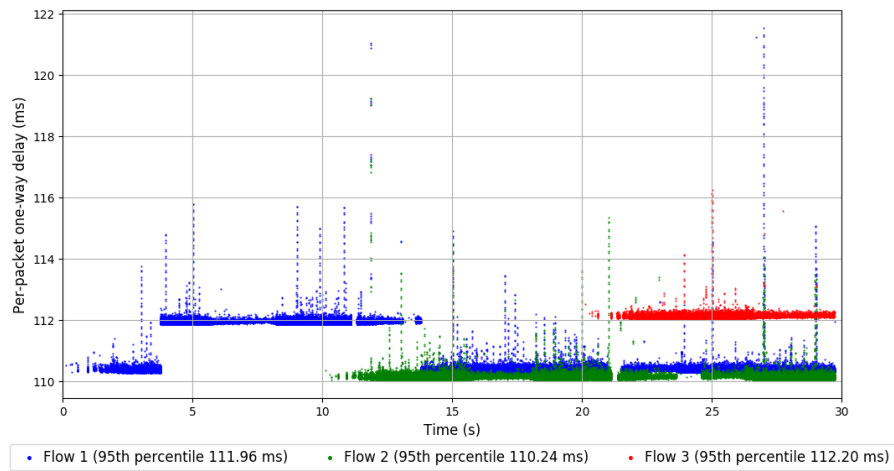
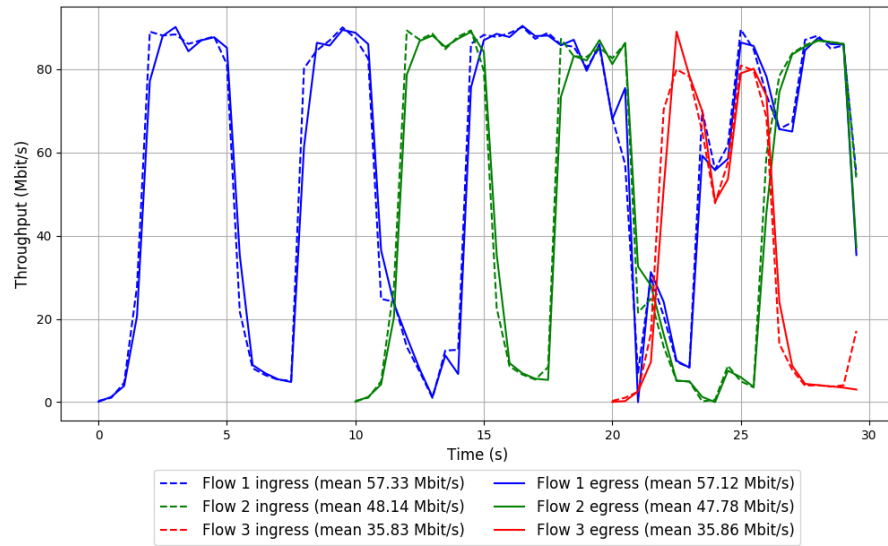
-- Flow 3:

Average throughput: 35.86 Mbit/s

95th percentile per-packet one-way delay: 112.200 ms

Loss rate: 2.20%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-02-20 20:18:32

End at: 2018-02-20 20:19:02

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.56 Mbit/s

95th percentile per-packet one-way delay: 112.909 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 52.73 Mbit/s

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

Loss rate: 1.07%

-- Flow 2:

Average throughput: 62.20 Mbit/s

95th percentile per-packet one-way delay: 112.927 ms

Loss rate: 0.14%

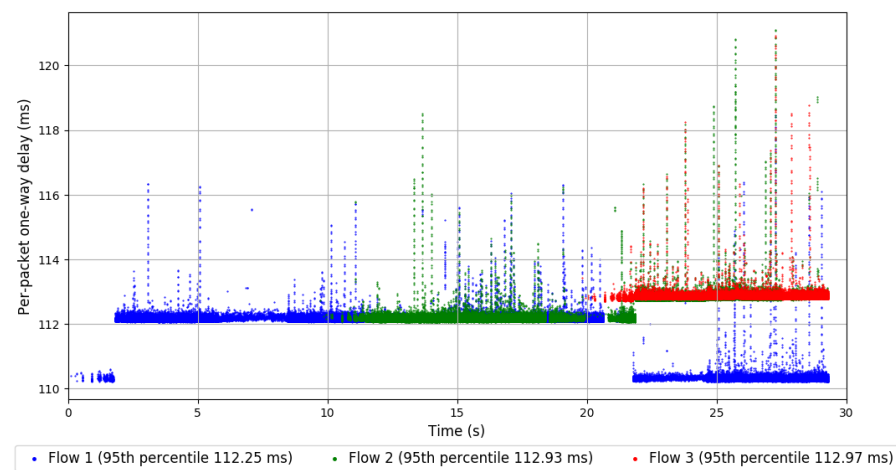
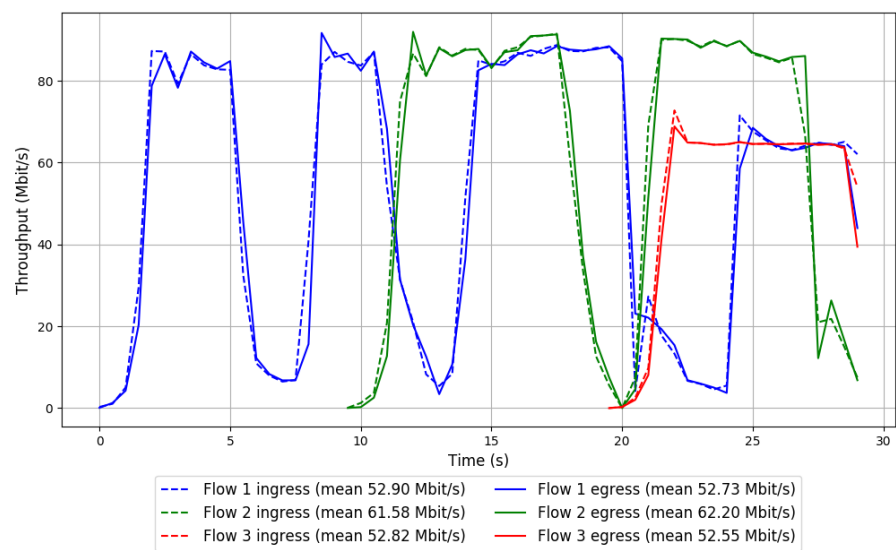
-- Flow 3:

Average throughput: 52.55 Mbit/s

95th percentile per-packet one-way delay: 112.973 ms

Loss rate: 2.82%

Run 10: Report of QUIC Cubic — Data Link

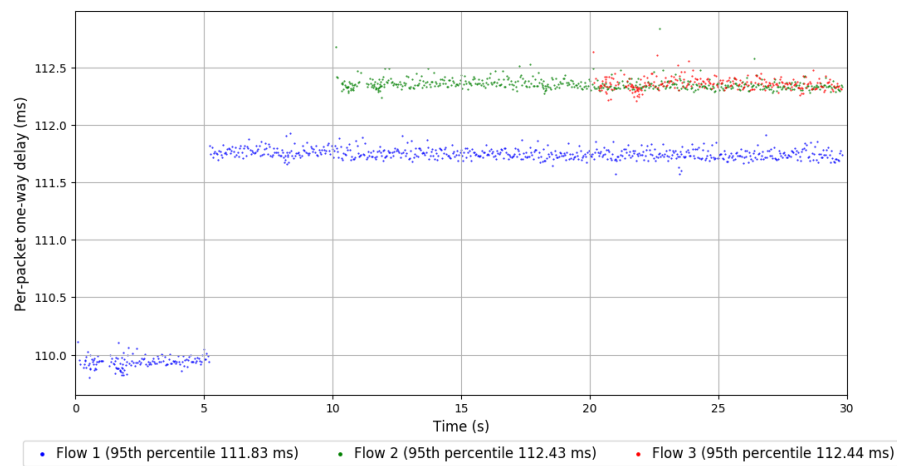
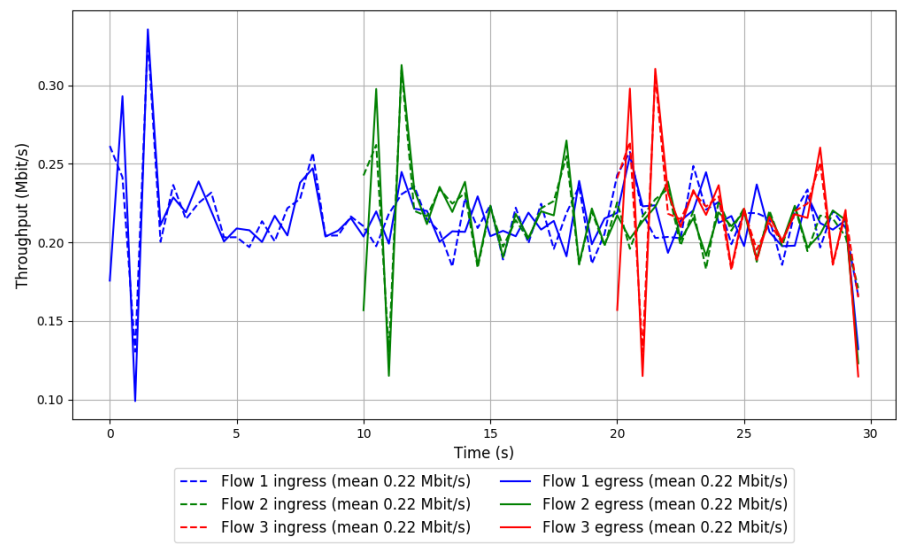


```
Run 1: Statistics of SCReAM

Start at: 2018-02-20 17:12:29
End at: 2018-02-20 17:12:59

# Below is generated by plot.py at 2018-02-21 00:14:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.410 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.825 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.432 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.437 ms
Loss rate: 2.25%
```

Run 1: Report of SReAM — Data Link

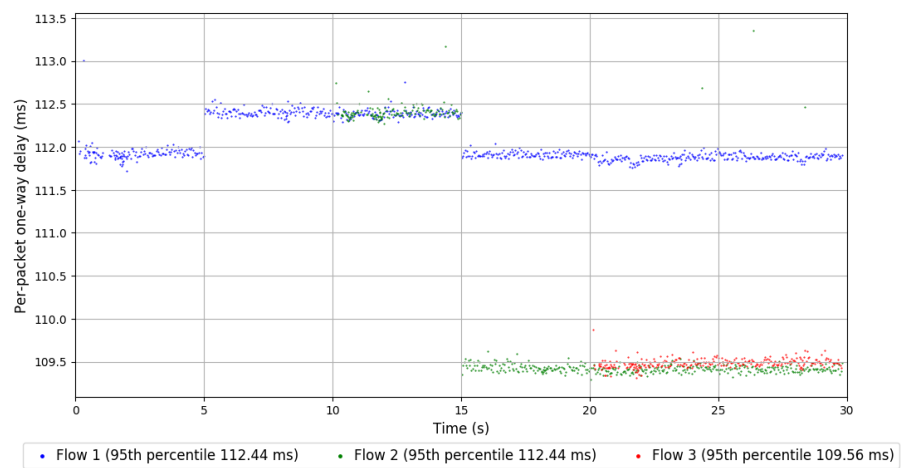
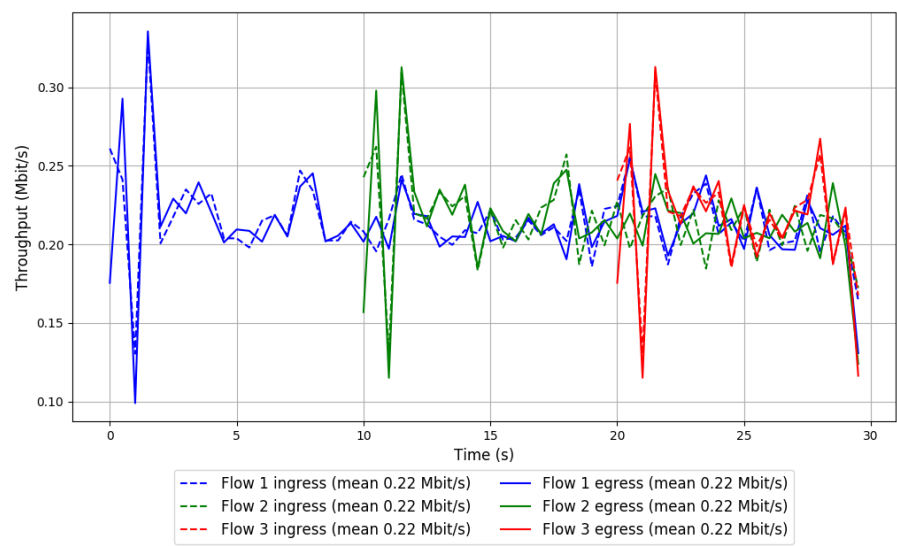


```
Run 2: Statistics of SReAM

Start at: 2018-02-20 17:32:09
End at: 2018-02-20 17:32:39

# Below is generated by plot.py at 2018-02-21 00:14:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.430 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.442 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.438 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.564 ms
Loss rate: 2.26%
```

Run 2: Report of SReAM — Data Link

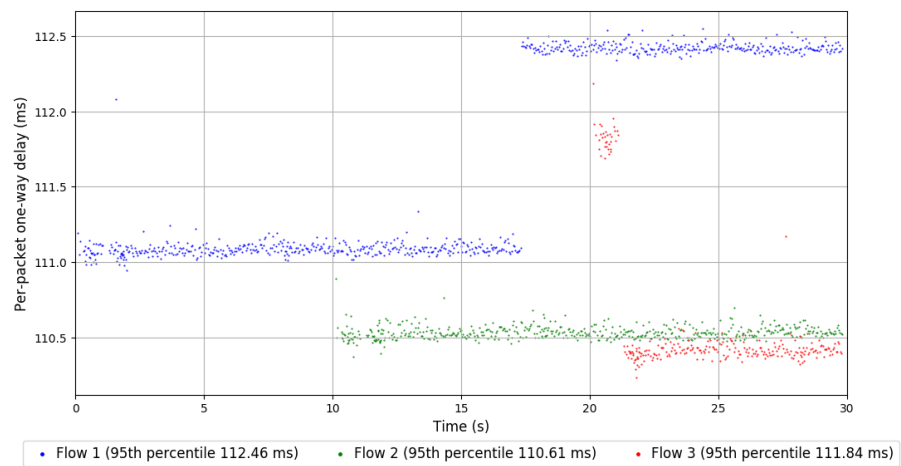
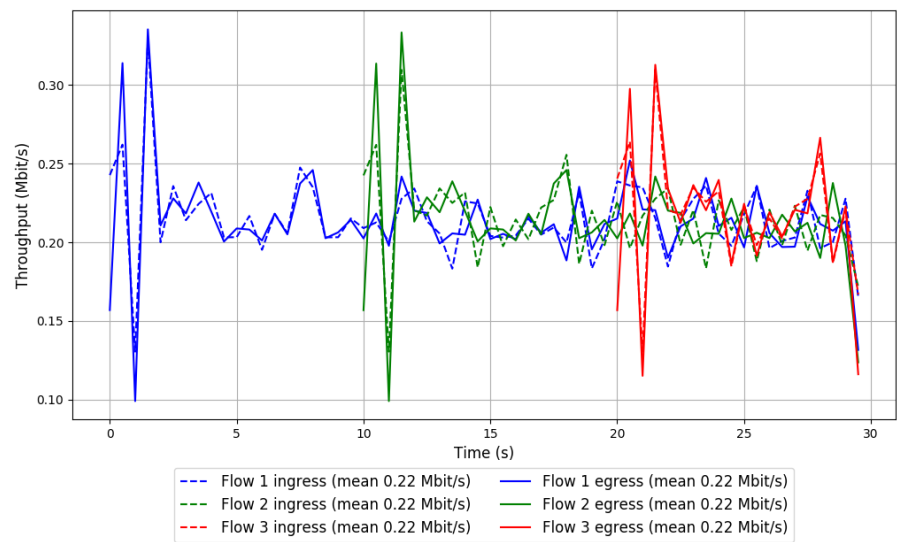


```
Run 3: Statistics of SReAM

Start at: 2018-02-20 17:52:17
End at: 2018-02-20 17:52:47

# Below is generated by plot.py at 2018-02-21 00:14:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.439 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.463 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.611 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.843 ms
Loss rate: 2.26%
```


Run 3: Report of SReAM — Data Link

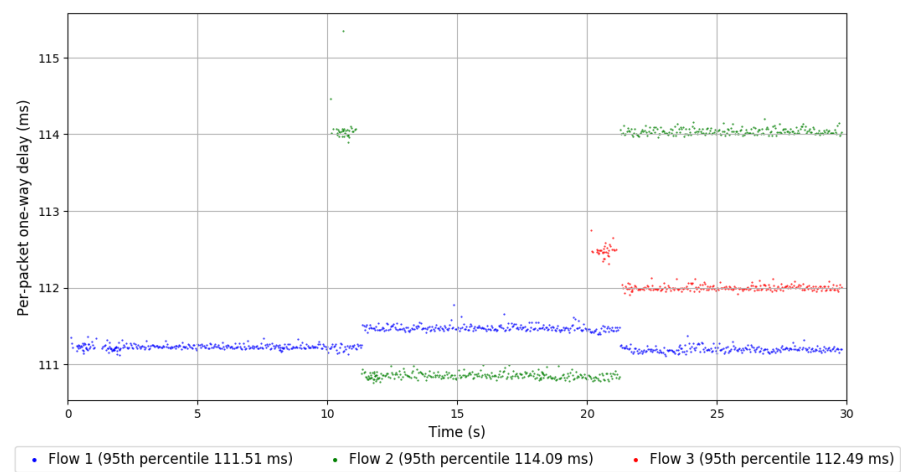
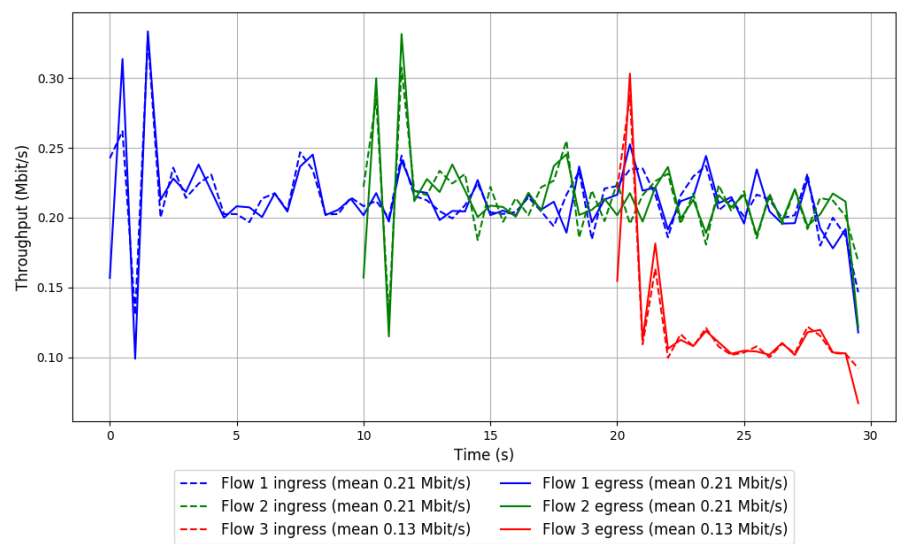


```
Run 4: Statistics of SCReAM

Start at: 2018-02-20 18:12:23
End at: 2018-02-20 18:12:53

# Below is generated by plot.py at 2018-02-21 00:14:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 114.059 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 111.508 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 114.092 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 112.489 ms
Loss rate: 1.99%
```

Run 4: Report of SReAM — Data Link

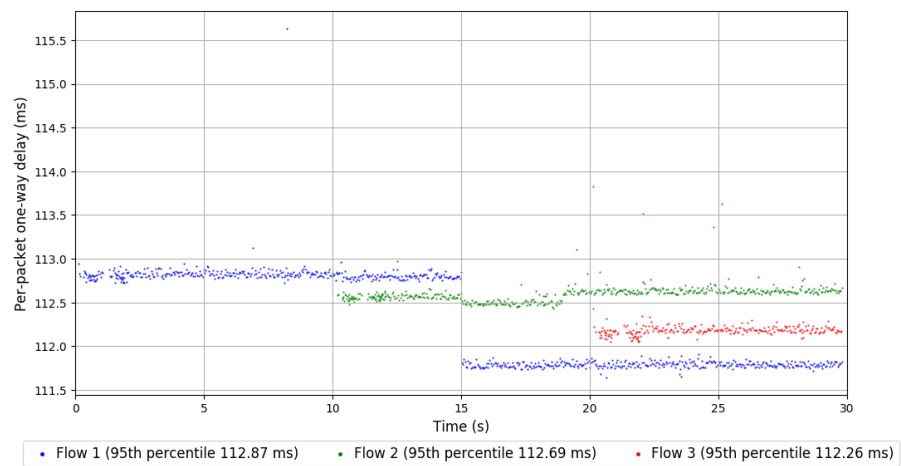
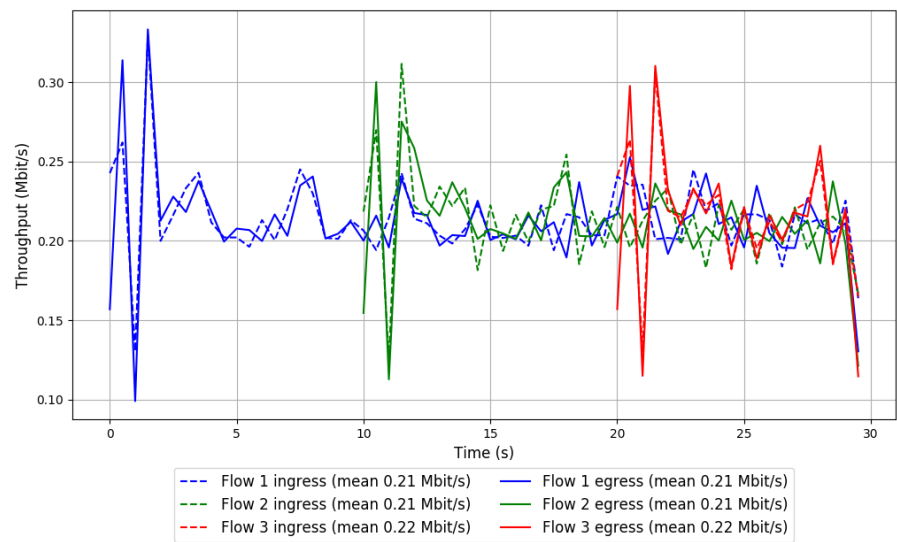


```
Run 5: Statistics of SReAM

Start at: 2018-02-20 18:32:09
End at: 2018-02-20 18:32:39

# Below is generated by plot.py at 2018-02-21 00:14:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.849 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.870 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.692 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.260 ms
Loss rate: 2.25%
```

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SReAM

Start at: 2018-02-20 18:52:03

End at: 2018-02-20 18:52:33

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.843 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.455 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.867 ms

Loss rate: 1.05%

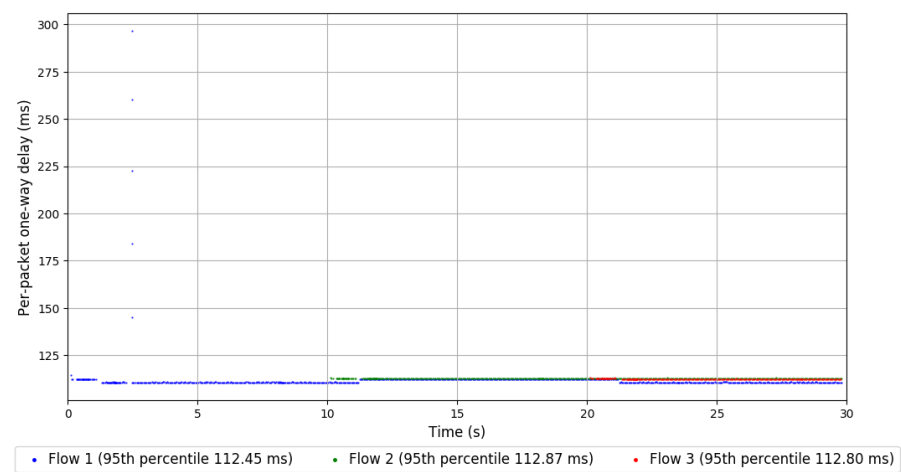
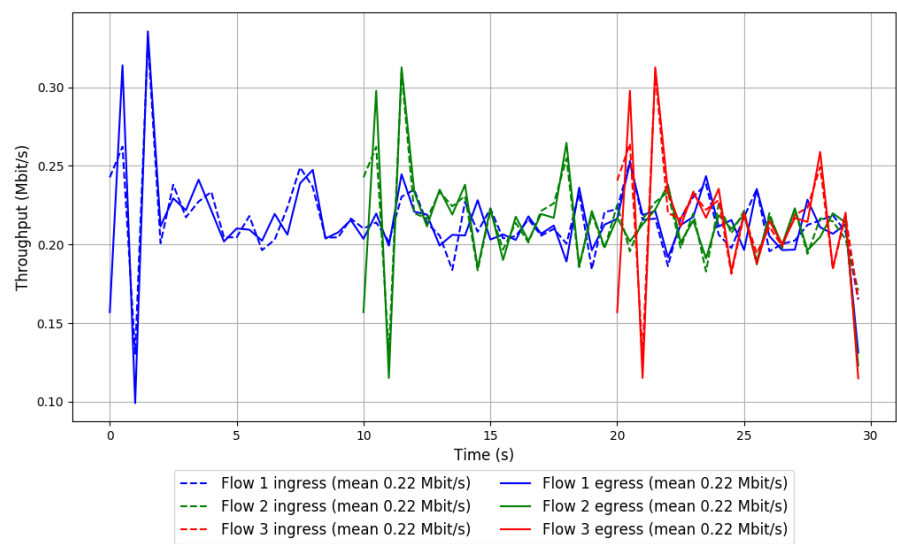
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.801 ms

Loss rate: 2.26%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SCReAM

Start at: 2018-02-20 19:11:44

End at: 2018-02-20 19:12:14

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.683 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.706 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.333 ms

Loss rate: 1.05%

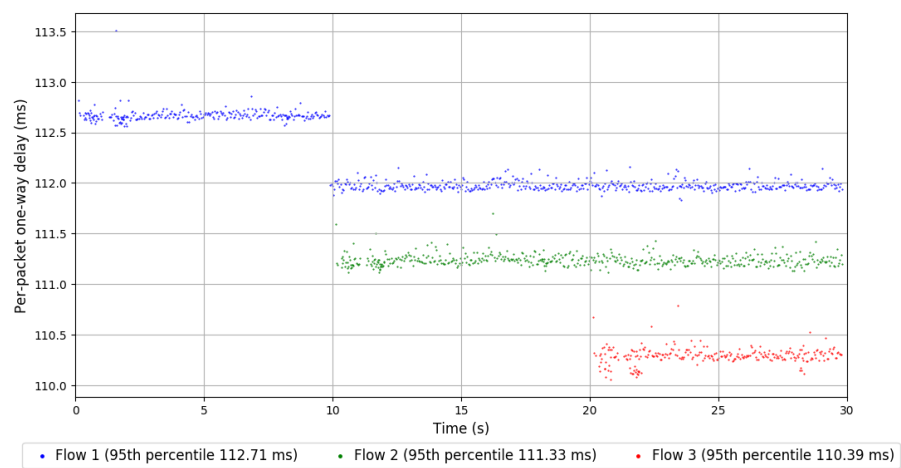
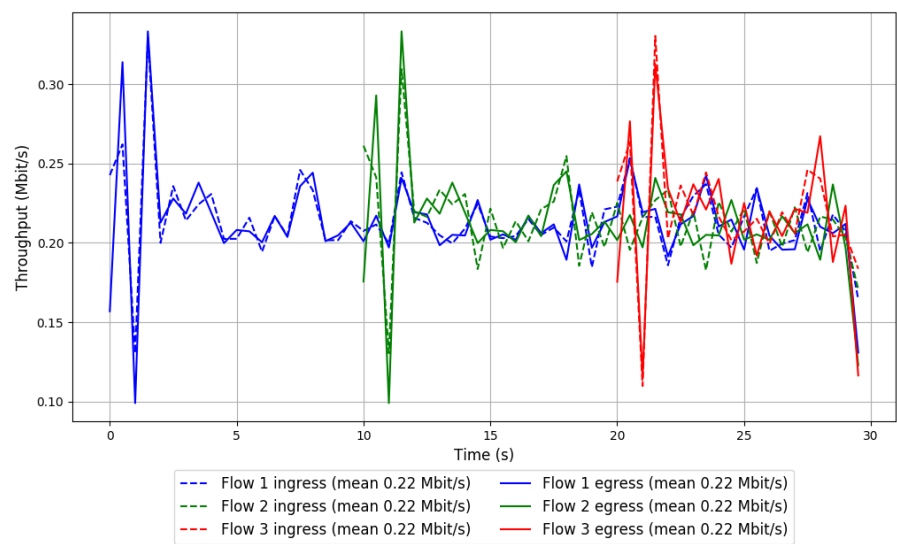
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.394 ms

Loss rate: 2.26%

Run 7: Report of SCRaM — Data Link



Run 8: Statistics of SCReAM

Start at: 2018-02-20 19:31:04

End at: 2018-02-20 19:31:34

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.004 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 112.021 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.096 ms

Loss rate: 1.05%

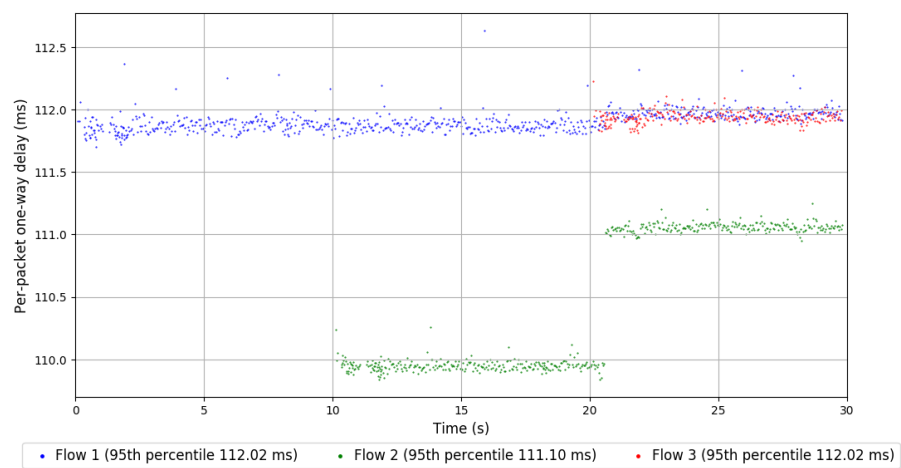
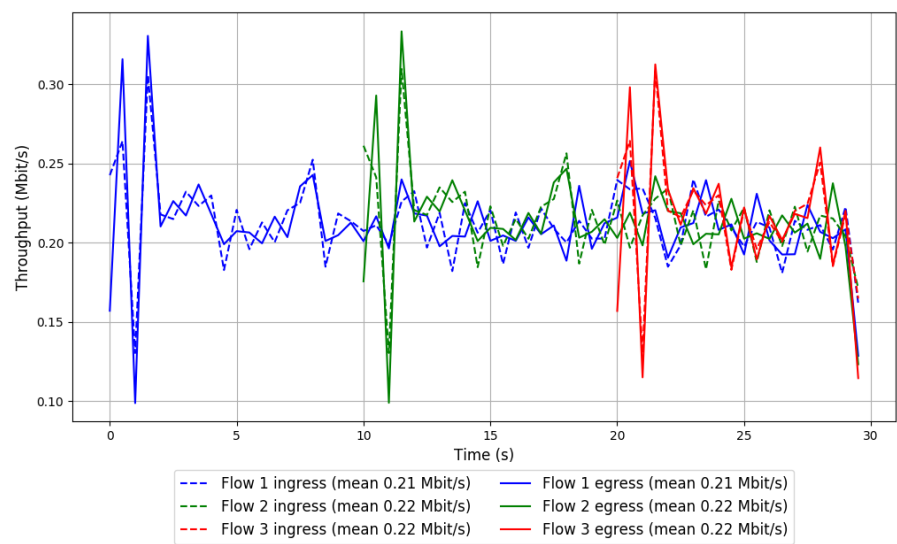
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.015 ms

Loss rate: 2.24%

Run 8: Report of SReAM — Data Link

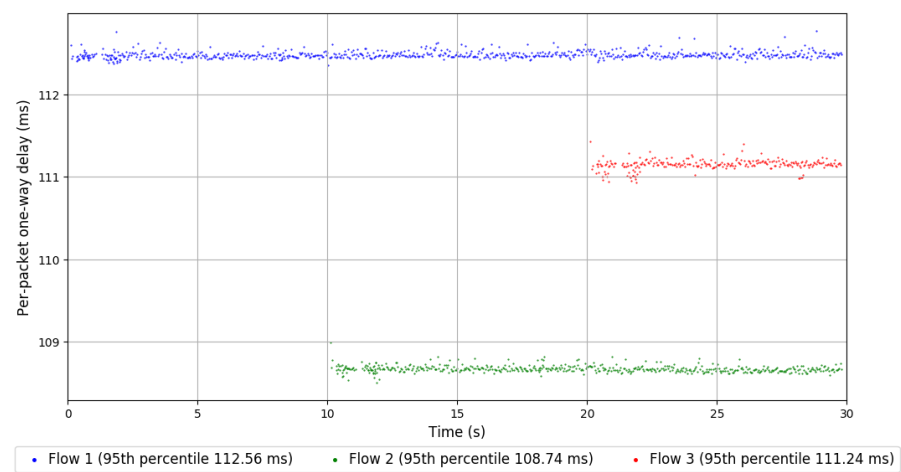
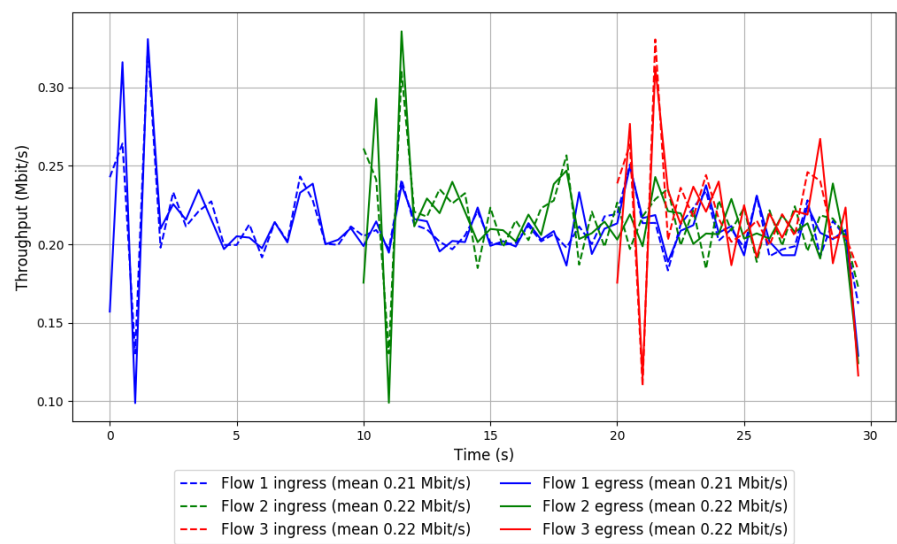


```
Run 9: Statistics of SCReAM

Start at: 2018-02-20 19:51:11
End at: 2018-02-20 19:51:41

# Below is generated by plot.py at 2018-02-21 00:14:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.539 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.564 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 108.742 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.237 ms
Loss rate: 2.26%
```

Run 9: Report of SReAM — Data Link

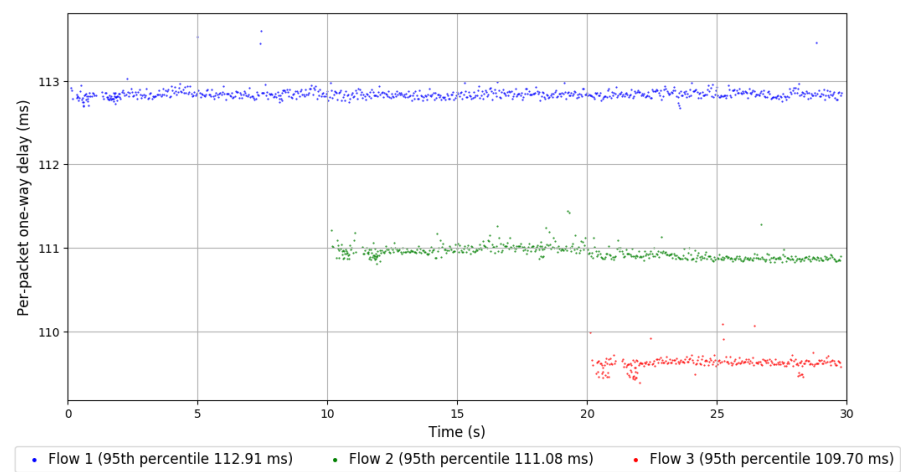
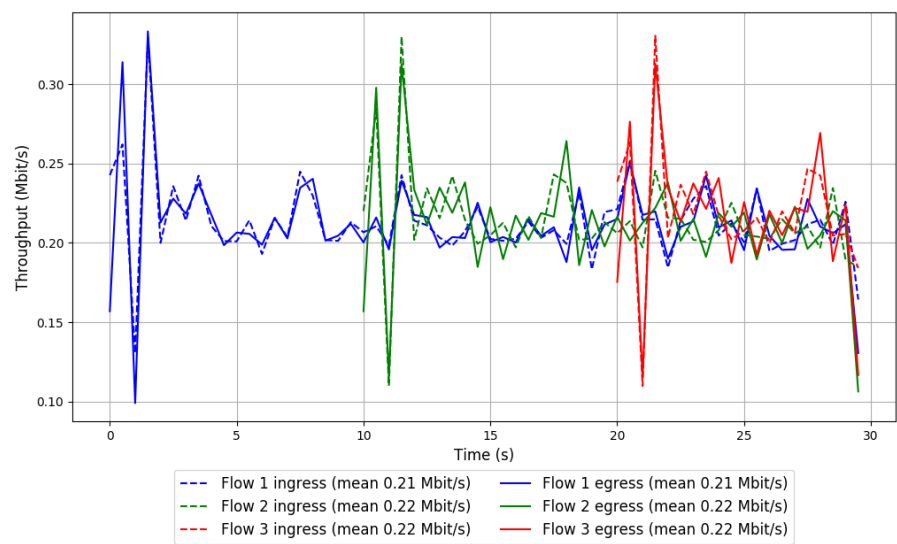


```
Run 10: Statistics of SReAM

Start at: 2018-02-20 20:10:57
End at: 2018-02-20 20:11:27

# Below is generated by plot.py at 2018-02-21 00:14:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.895 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.912 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.077 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.699 ms
Loss rate: 2.26%
```

Run 10: Report of SReAM — Data Link

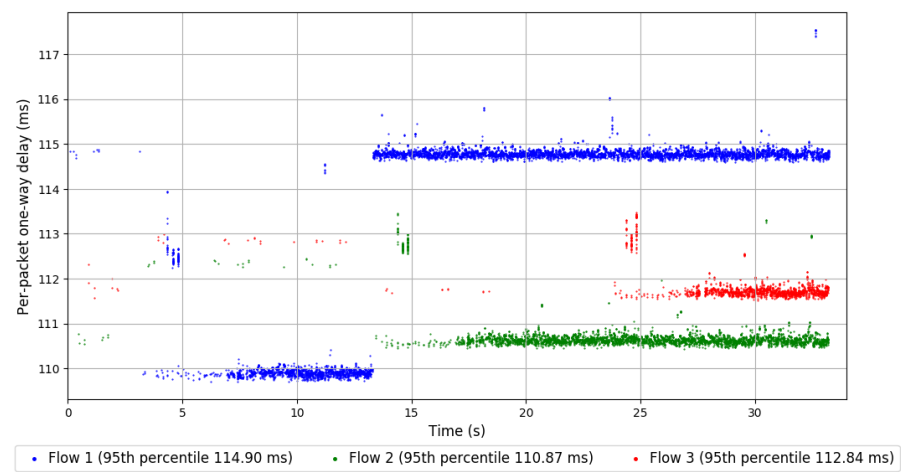
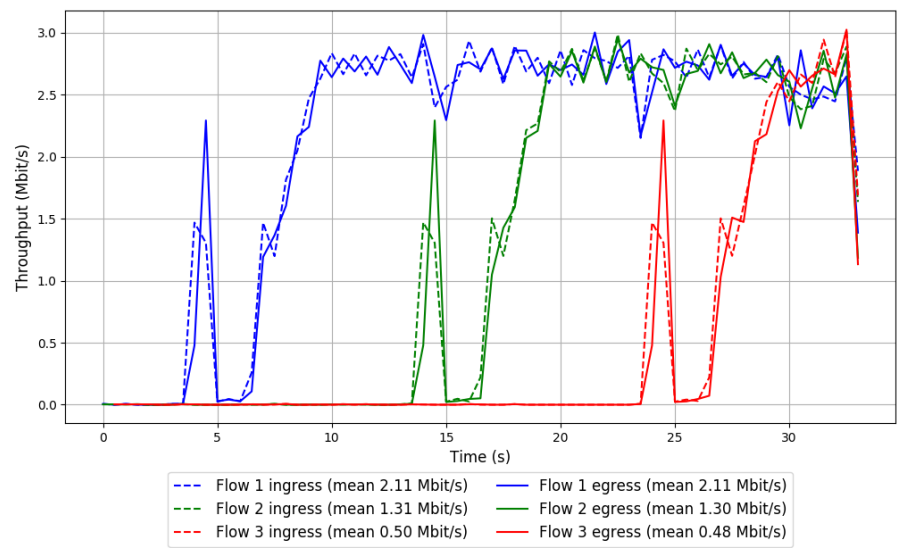


```
Run 1: Statistics of WebRTC media

Start at: 2018-02-20 17:10:34
End at: 2018-02-20 17:11:04

# Below is generated by plot.py at 2018-02-21 00:14:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 114.867 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 114.903 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 110.873 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 112.838 ms
Loss rate: 3.77%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-02-20 17:30:04

End at: 2018-02-20 17:30:34

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.88 Mbit/s

95th percentile per-packet one-way delay: 112.614 ms

Loss rate: 1.63%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 112.508 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 112.664 ms

Loss rate: 1.88%

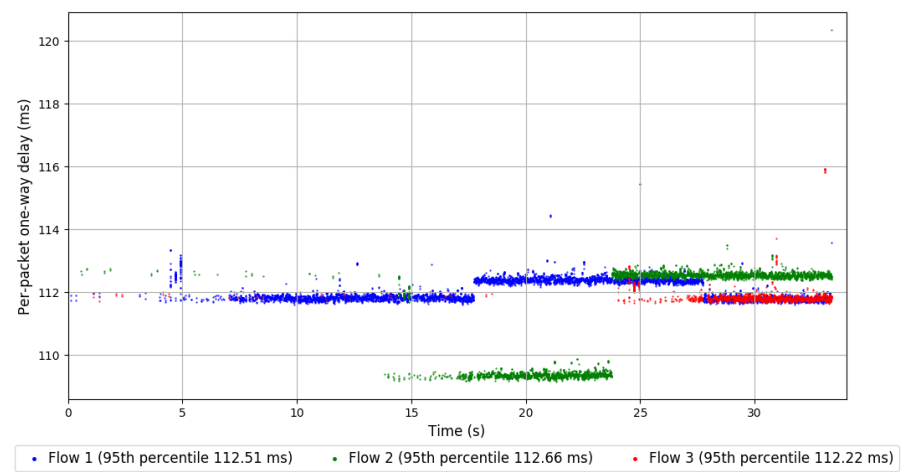
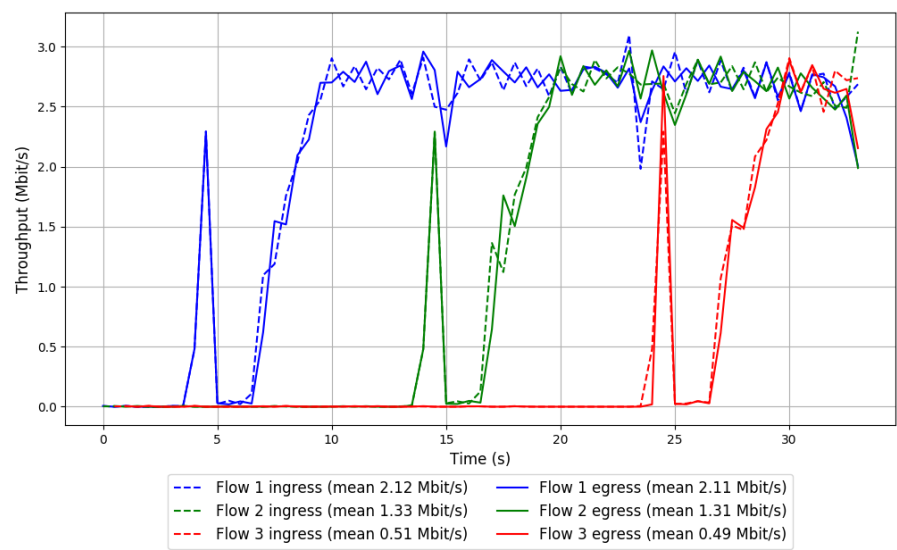
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 112.223 ms

Loss rate: 3.94%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-02-20 17:50:25

End at: 2018-02-20 17:50:55

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 111.923 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 111.942 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 111.226 ms

Loss rate: 1.57%

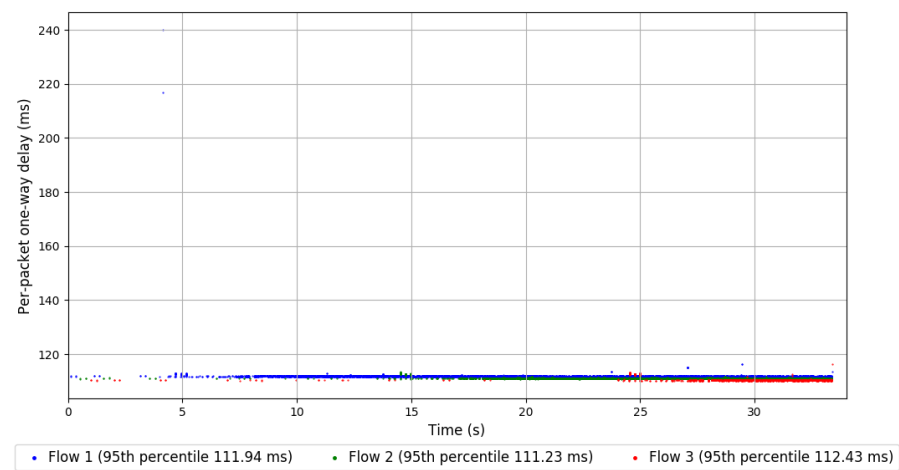
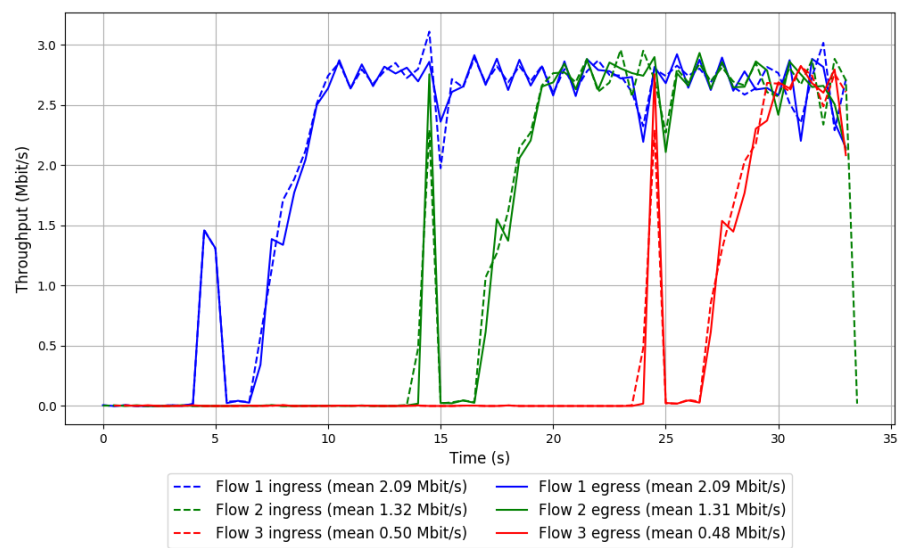
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 112.426 ms

Loss rate: 3.34%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-02-20 18:10:41

End at: 2018-02-20 18:11:11

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.88 Mbit/s

95th percentile per-packet one-way delay: 111.965 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 109.750 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 108.751 ms

Loss rate: 1.88%

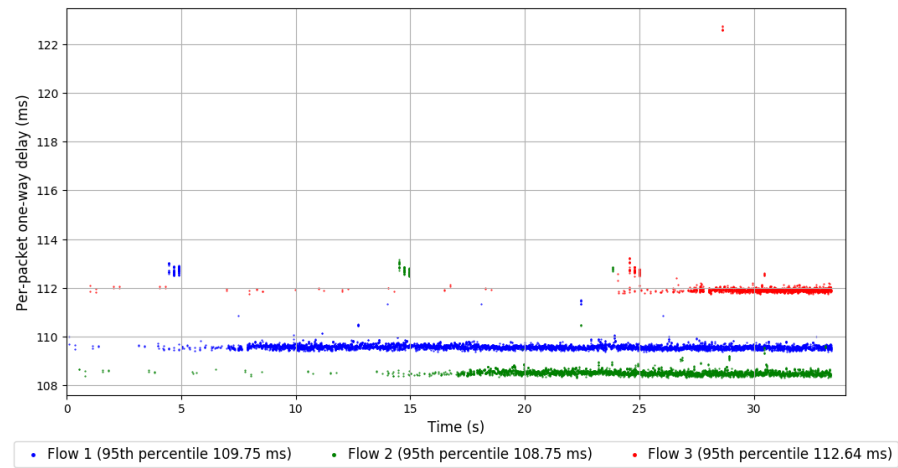
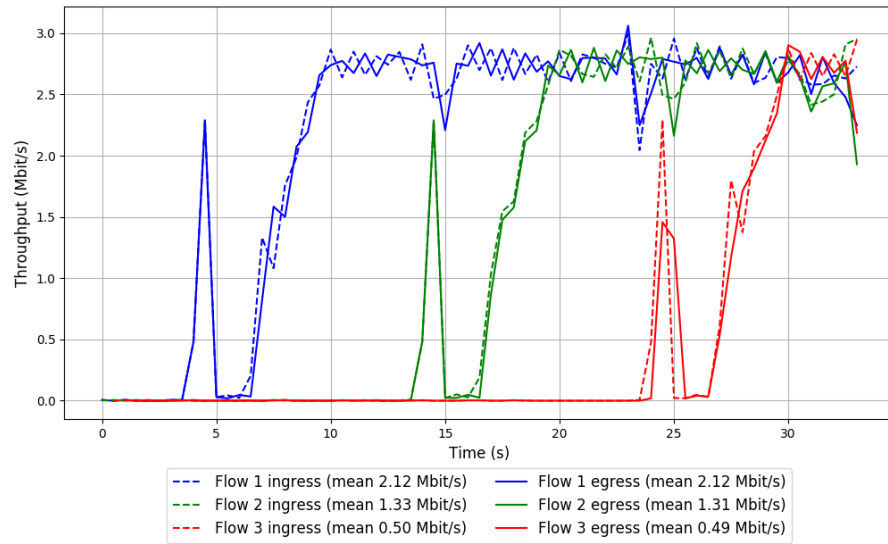
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 112.641 ms

Loss rate: 3.89%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-02-20 18:30:10

End at: 2018-02-20 18:30:40

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.82 Mbit/s

95th percentile per-packet one-way delay: 112.743 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 2.06 Mbit/s

95th percentile per-packet one-way delay: 112.755 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 112.650 ms

Loss rate: 1.34%

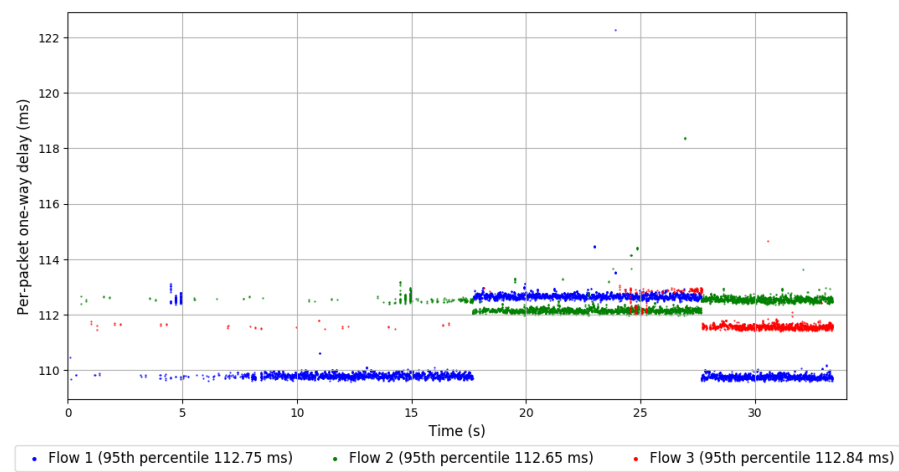
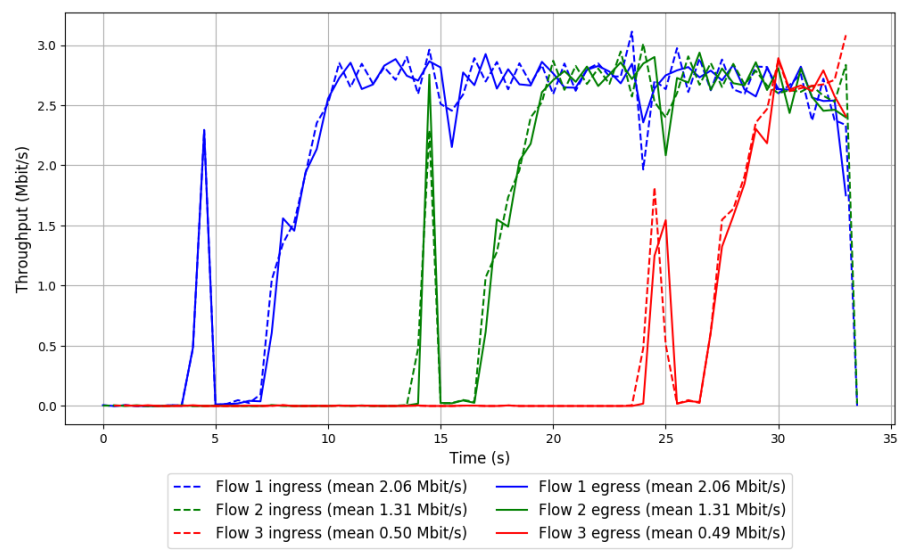
-- Flow 3:

Average throughput: 0.49 Mbit/s

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

Loss rate: 4.17%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-02-20 18:50:09

End at: 2018-02-20 18:50:39

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 112.795 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 111.908 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 112.875 ms

Loss rate: 1.67%

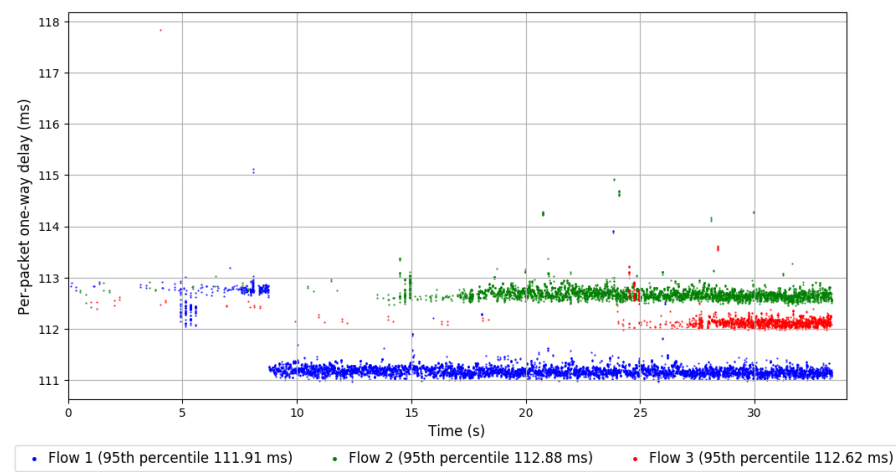
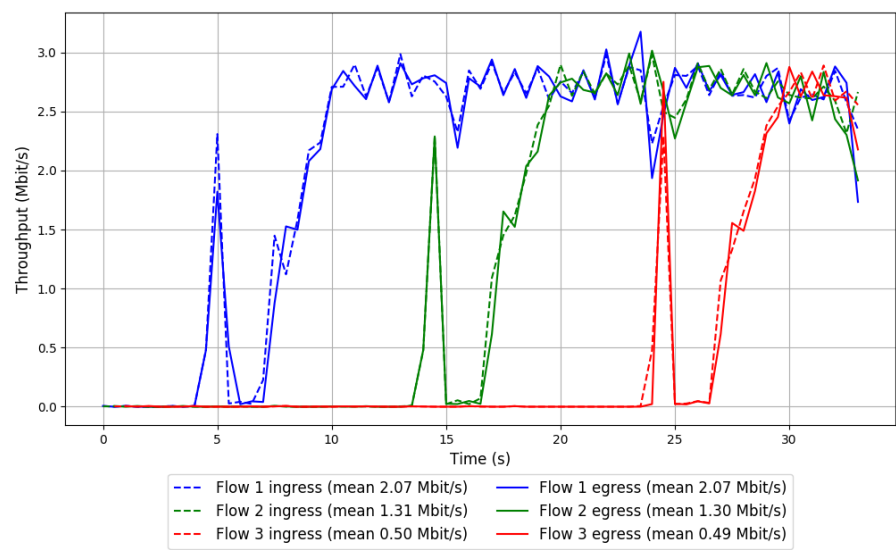
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 112.620 ms

Loss rate: 3.29%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-02-20 19:09:55

End at: 2018-02-20 19:10:25

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 112.119 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 2.12 Mbit/s

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

Loss rate: 0.84%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 112.149 ms

Loss rate: 1.96%

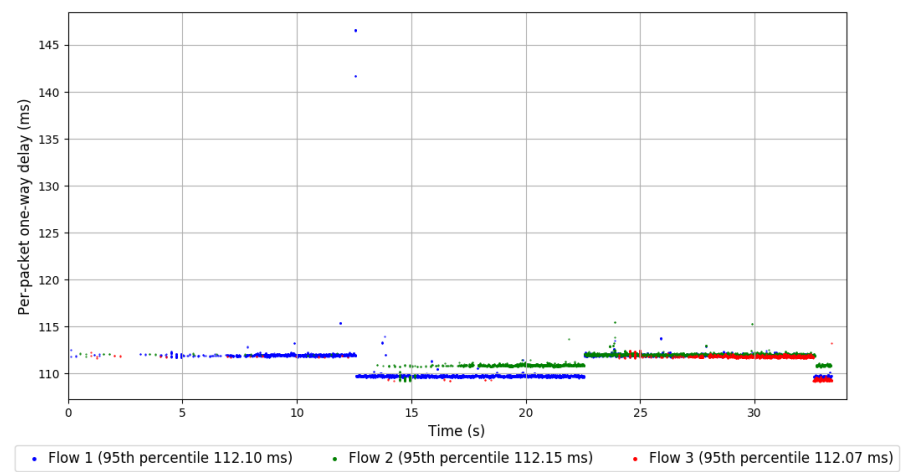
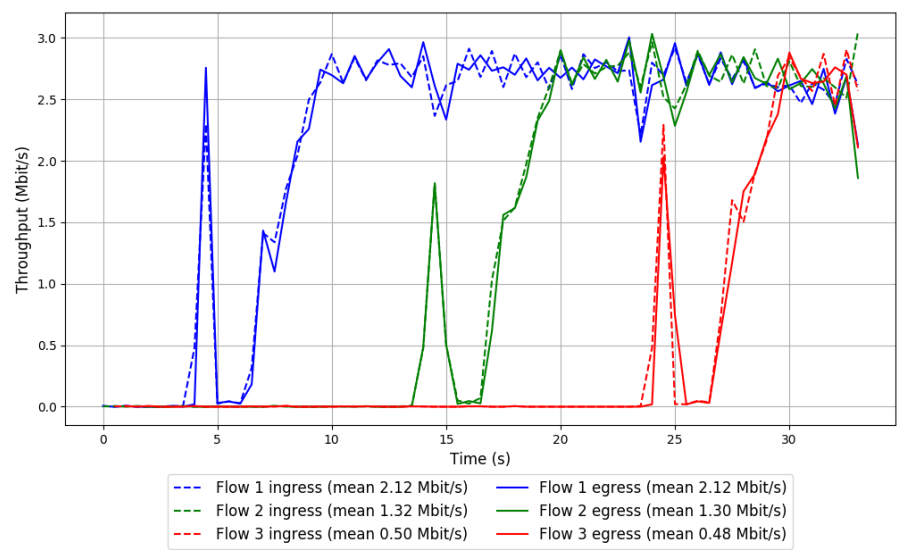
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 112.067 ms

Loss rate: 3.59%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-02-20 19:29:25

End at: 2018-02-20 19:29:55

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 112.519 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 111.924 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 111.009 ms

Loss rate: 1.74%

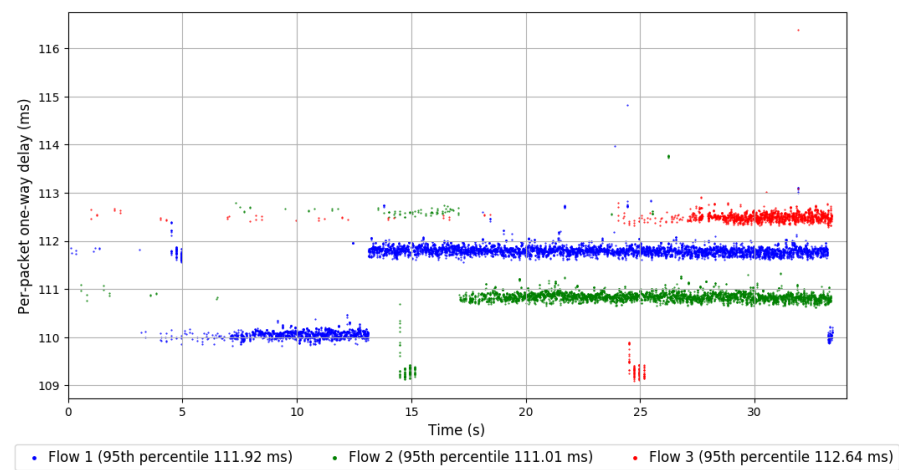
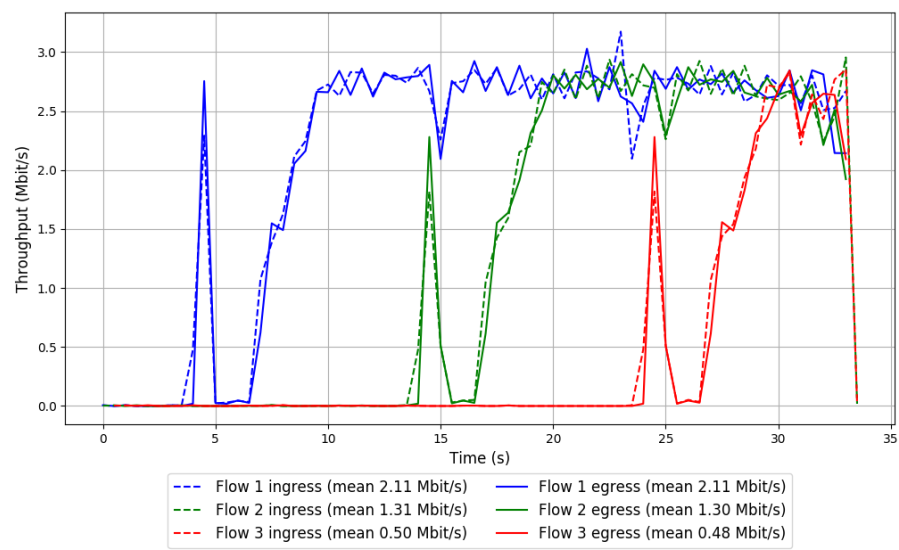
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 112.636 ms

Loss rate: 4.18%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-02-20 19:49:16

End at: 2018-02-20 19:49:46

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.88 Mbit/s

95th percentile per-packet one-way delay: 112.527 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 111.364 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 112.588 ms

Loss rate: 1.77%

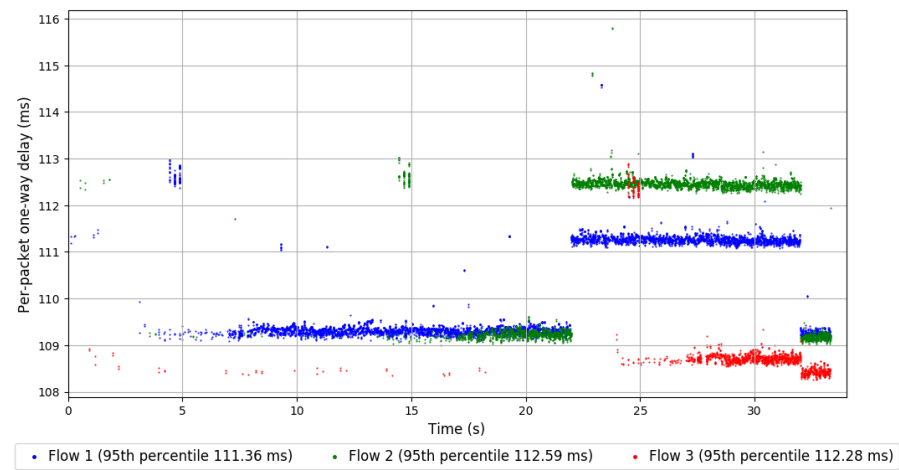
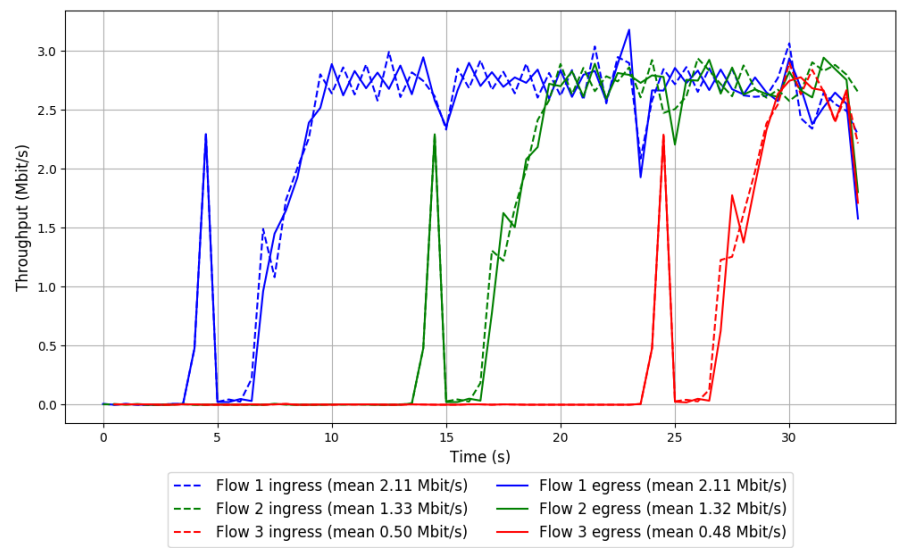
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 112.282 ms

Loss rate: 3.45%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-02-20 20:08:56

End at: 2018-02-20 20:09:26

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.82 Mbit/s

95th percentile per-packet one-way delay: 112.846 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 112.860 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 112.849 ms

Loss rate: 1.51%

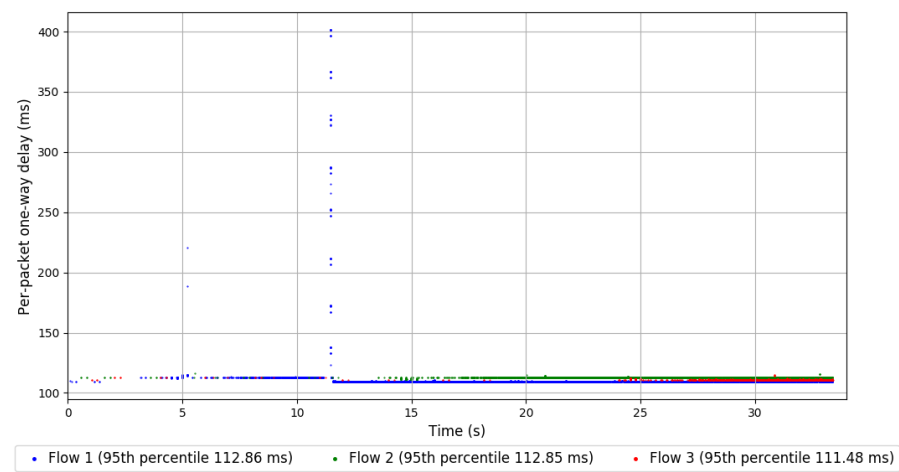
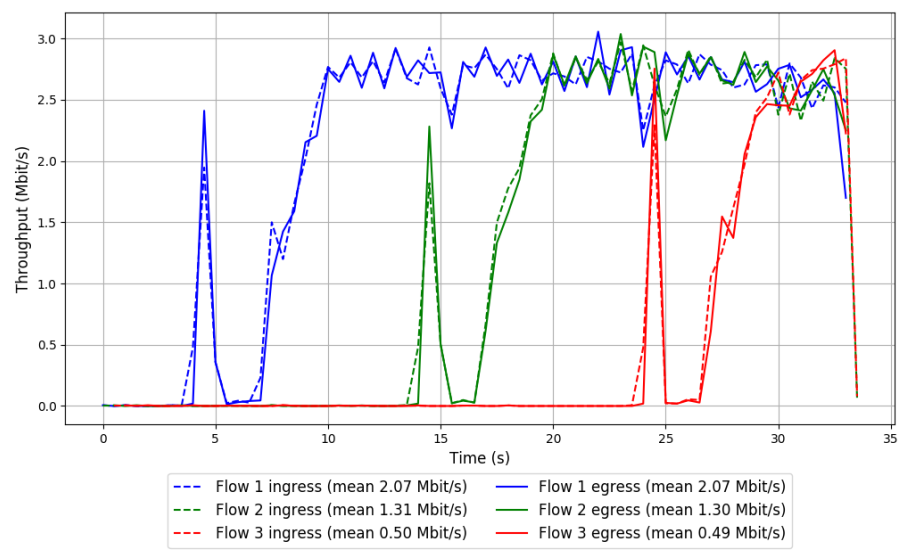
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 111.484 ms

Loss rate: 3.64%

Run 10: Report of WebRTC media — Data Link

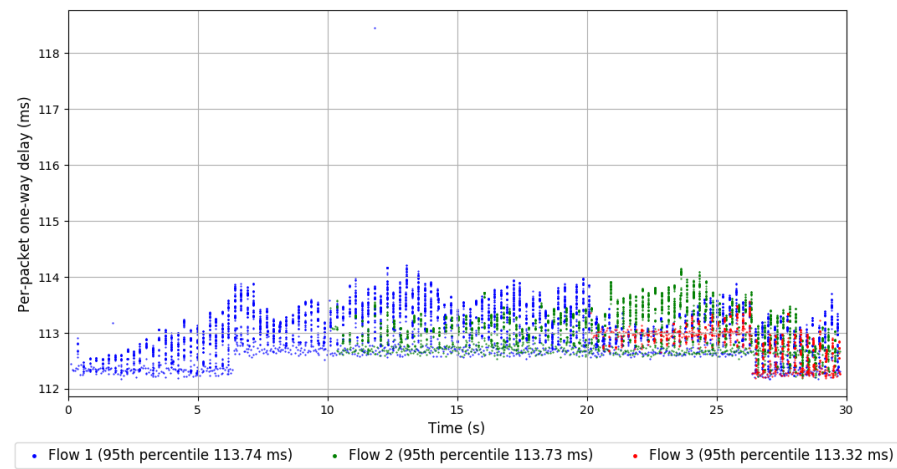
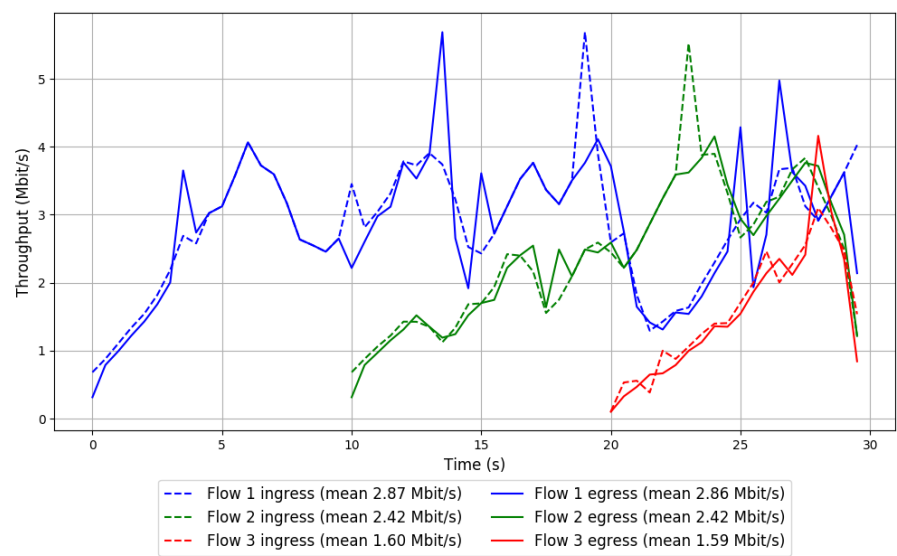


```
Run 1: Statistics of Sprout

Start at: 2018-02-20 17:03:28
End at: 2018-02-20 17:03:58

# Below is generated by plot.py at 2018-02-21 00:14:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.98 Mbit/s
95th percentile per-packet one-way delay: 113.723 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 2.86 Mbit/s
95th percentile per-packet one-way delay: 113.743 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 113.731 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 113.324 ms
Loss rate: 2.64%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-02-20 17:22:56

End at: 2018-02-20 17:23:26

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.10 Mbit/s

95th percentile per-packet one-way delay: 113.187 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 2.78 Mbit/s

95th percentile per-packet one-way delay: 113.300 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 2.47 Mbit/s

95th percentile per-packet one-way delay: 113.043 ms

Loss rate: 0.59%

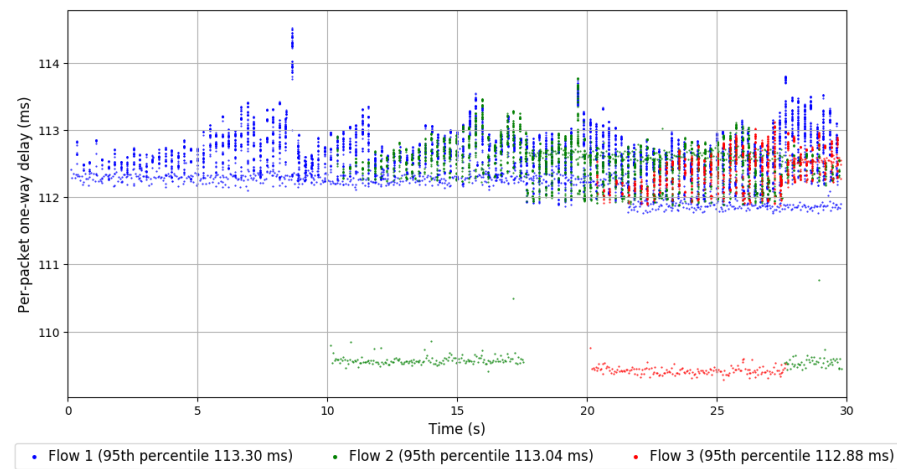
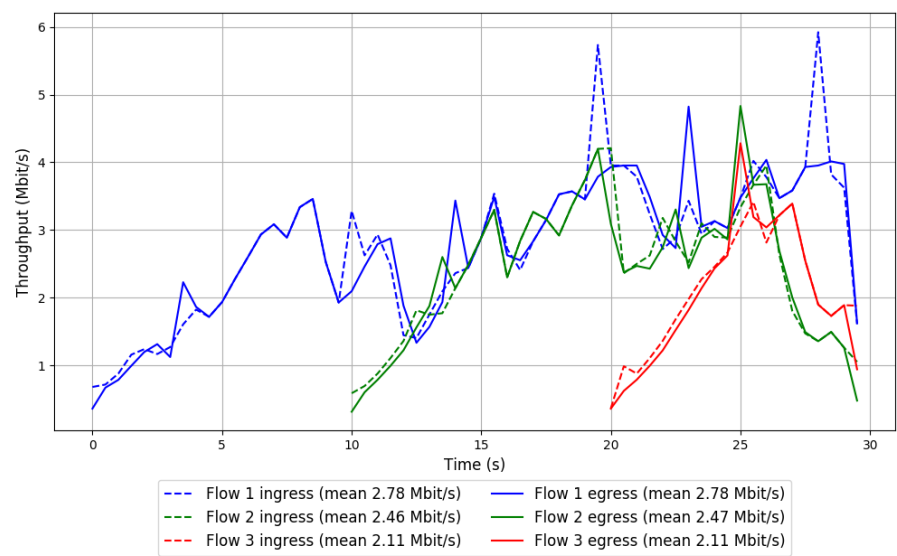
-- Flow 3:

Average throughput: 2.11 Mbit/s

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

Loss rate: 2.27%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-02-20 17:42:40

End at: 2018-02-20 17:43:10

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.80 Mbit/s

95th percentile per-packet one-way delay: 113.152 ms

Loss rate: 1.84%

-- Flow 1:

Average throughput: 2.20 Mbit/s

95th percentile per-packet one-way delay: 113.181 ms

Loss rate: 1.21%

-- Flow 2:

Average throughput: 1.70 Mbit/s

95th percentile per-packet one-way delay: 112.996 ms

Loss rate: 1.23%

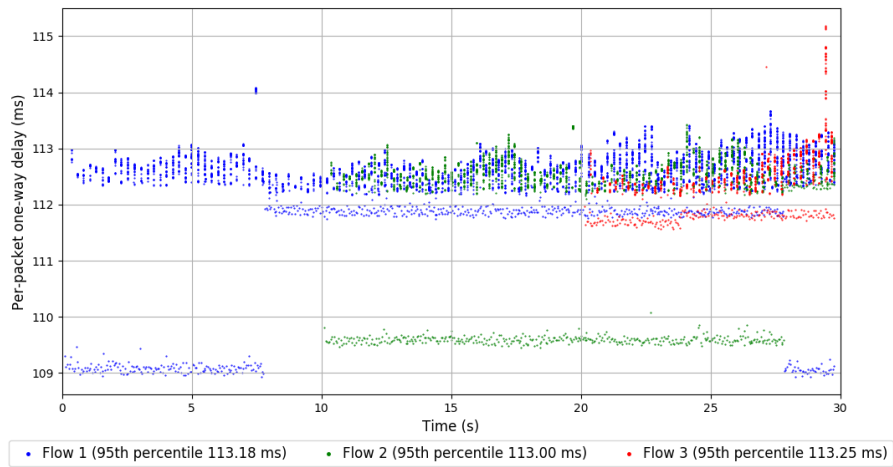
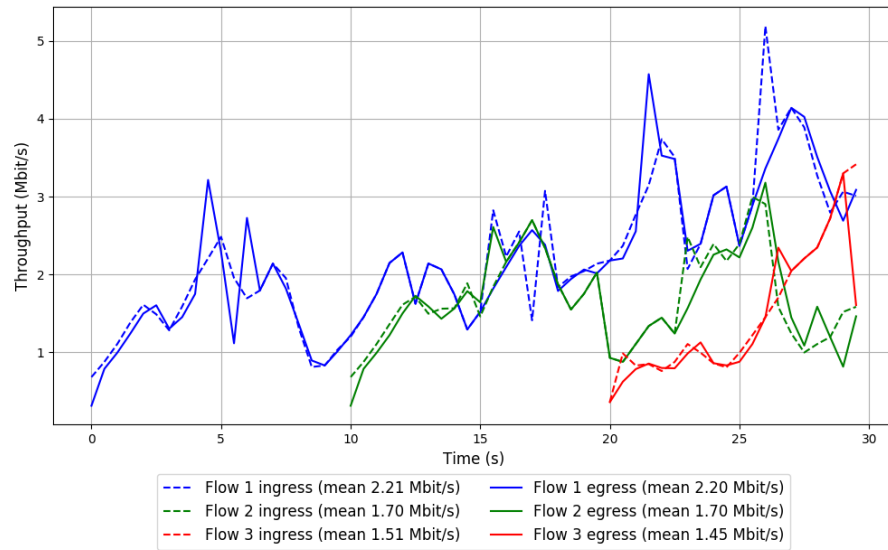
-- Flow 3:

Average throughput: 1.45 Mbit/s

95th percentile per-packet one-way delay: 113.247 ms

Loss rate: 6.07%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-02-20 18:03:25

End at: 2018-02-20 18:03:55

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.08 Mbit/s

95th percentile per-packet one-way delay: 113.420 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 2.14 Mbit/s

95th percentile per-packet one-way delay: 113.397 ms

Loss rate: 1.28%

-- Flow 2:

Average throughput: 2.37 Mbit/s

95th percentile per-packet one-way delay: 113.474 ms

Loss rate: 1.02%

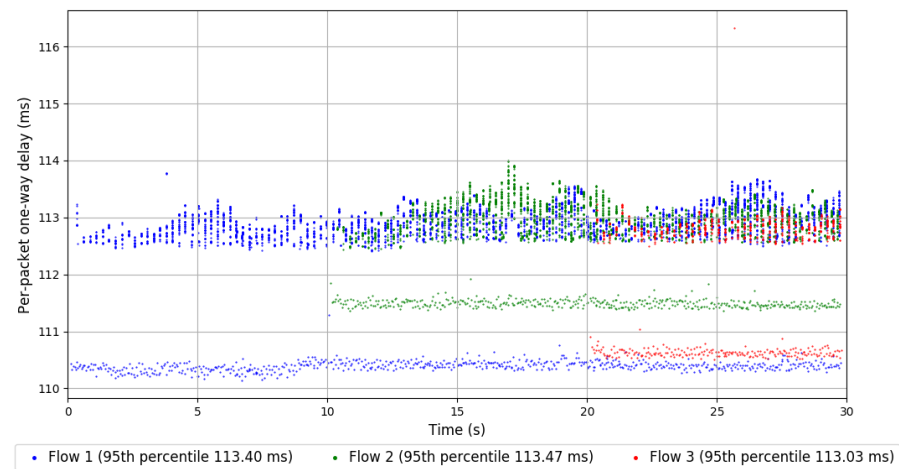
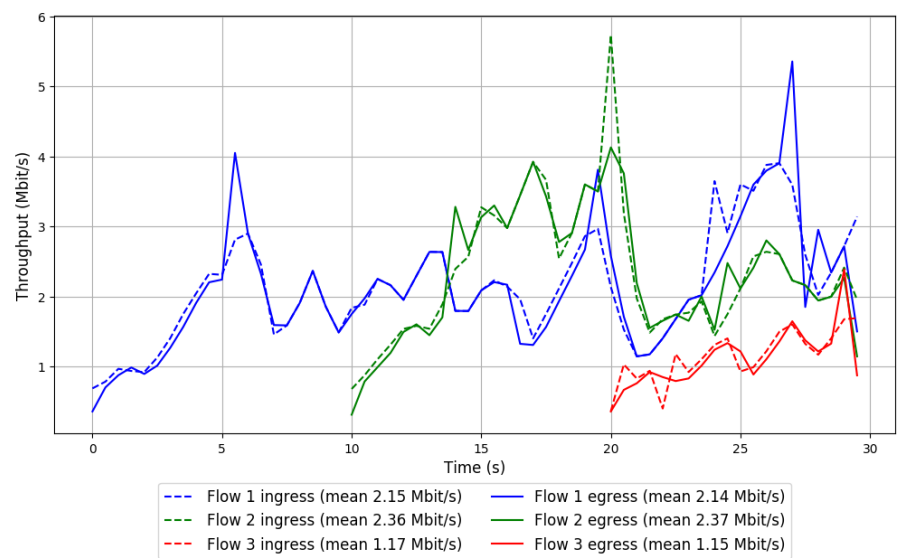
-- Flow 3:

Average throughput: 1.15 Mbit/s

95th percentile per-packet one-way delay: 113.028 ms

Loss rate: 3.56%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-02-20 18:22:58

End at: 2018-02-20 18:23:28

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.16 Mbit/s

95th percentile per-packet one-way delay: 113.243 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 113.322 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 113.190 ms

Loss rate: 0.01%

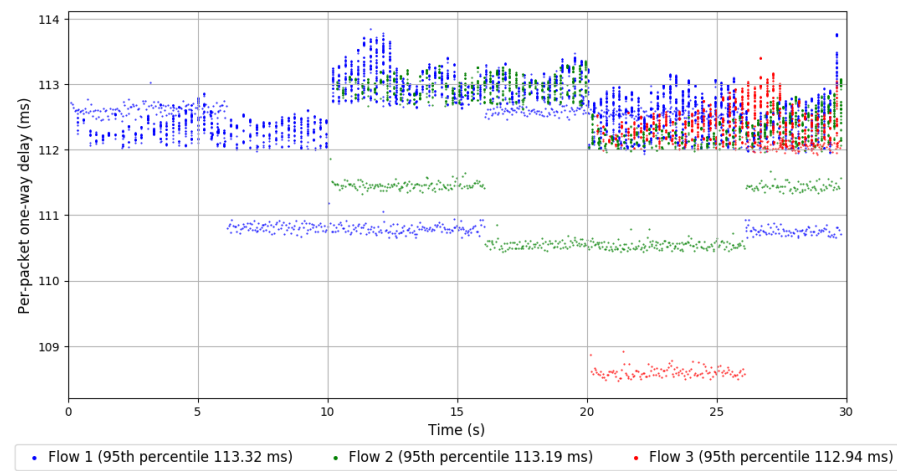
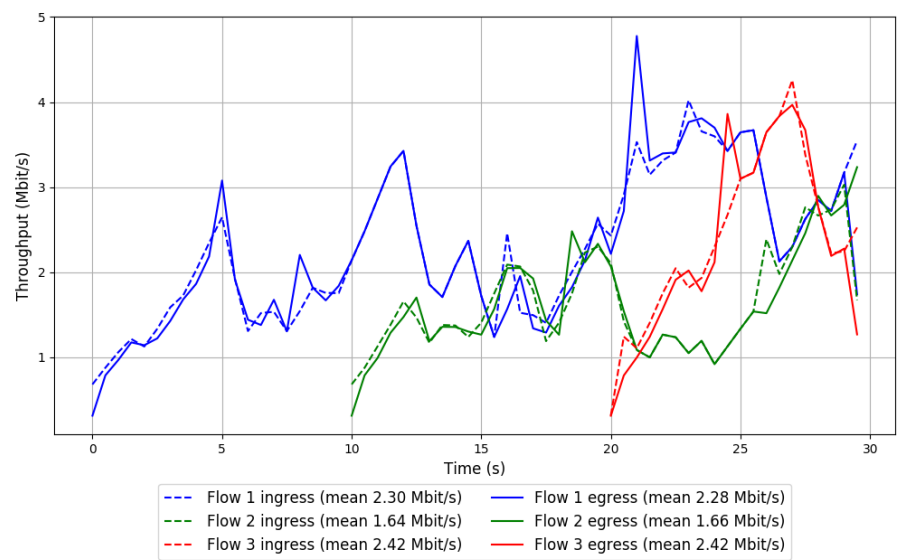
-- Flow 3:

Average throughput: 2.42 Mbit/s

95th percentile per-packet one-way delay: 112.939 ms

Loss rate: 2.64%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-02-20 18:42:49

End at: 2018-02-20 18:43:19

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.55 Mbit/s

95th percentile per-packet one-way delay: 113.185 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 113.182 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 2.69 Mbit/s

95th percentile per-packet one-way delay: 113.257 ms

Loss rate: 1.56%

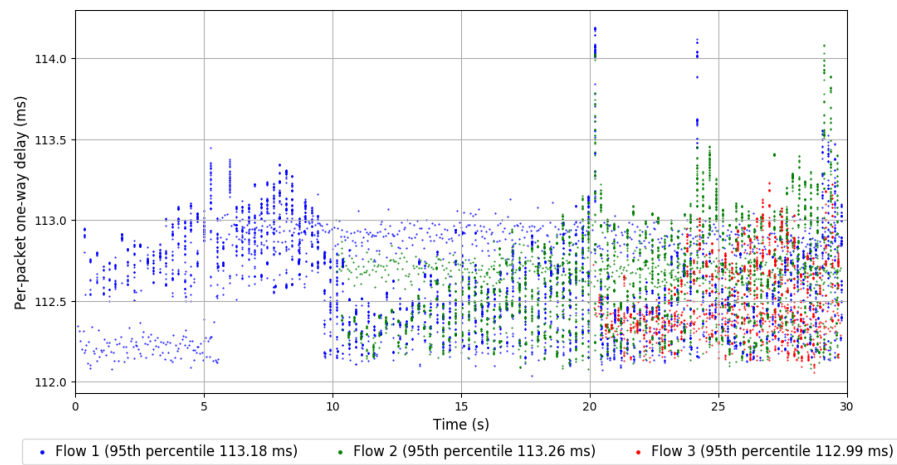
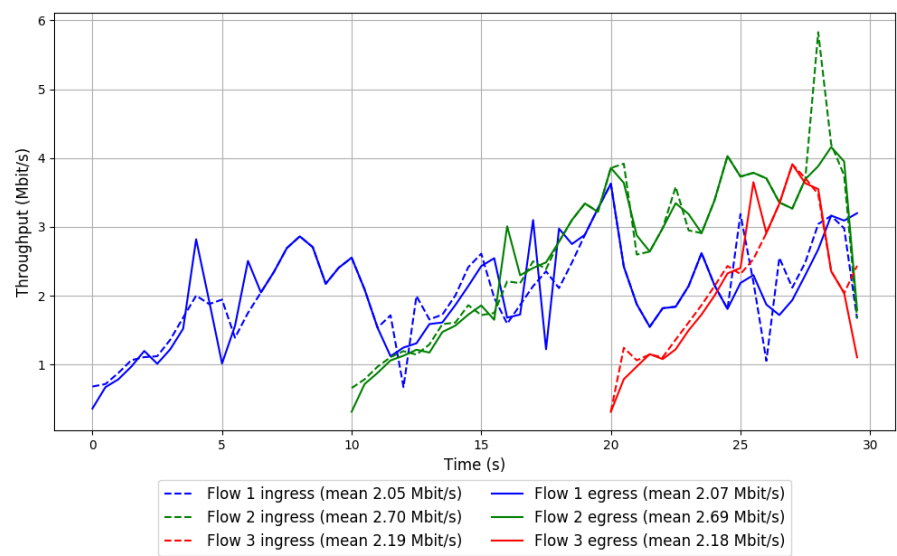
-- Flow 3:

Average throughput: 2.18 Mbit/s

95th percentile per-packet one-way delay: 112.992 ms

Loss rate: 3.08%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-02-20 19:02:41

End at: 2018-02-20 19:03:11

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.95 Mbit/s

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

Loss rate: 1.02%

-- Flow 1:

Average throughput: 3.34 Mbit/s

95th percentile per-packet one-way delay: 113.015 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 1.76 Mbit/s

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

Loss rate: 0.16%

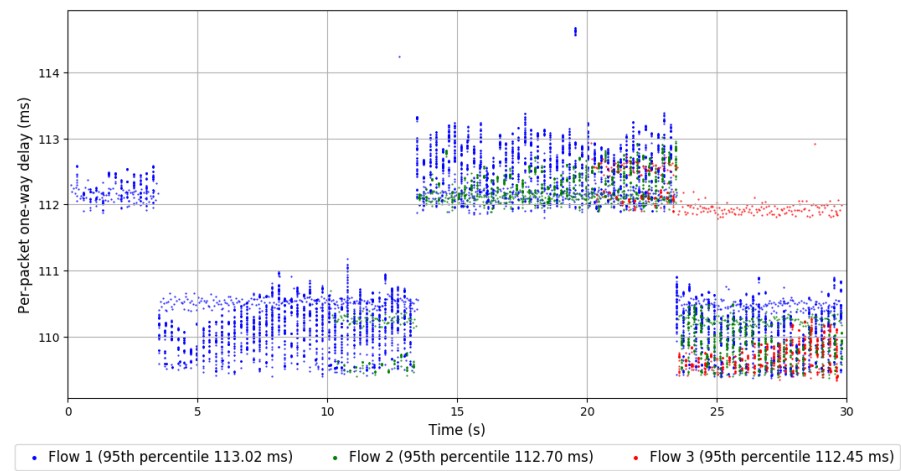
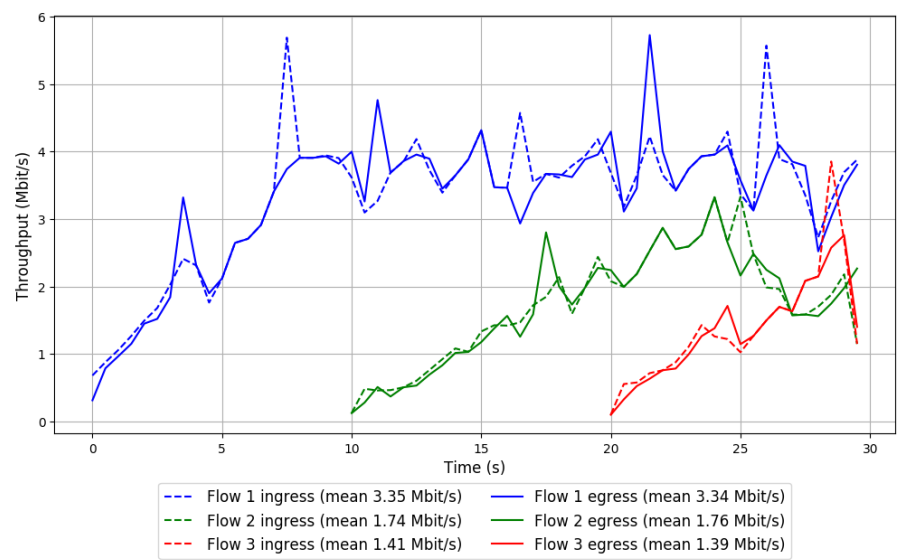
-- Flow 3:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 112.455 ms

Loss rate: 3.46%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-02-20 19:22:13

End at: 2018-02-20 19:22:43

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.51 Mbit/s

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

Loss rate: 1.36%

-- Flow 1:

Average throughput: 2.83 Mbit/s

95th percentile per-packet one-way delay: 112.768 ms

Loss rate: 1.14%

-- Flow 2:

Average throughput: 1.88 Mbit/s

95th percentile per-packet one-way delay: 112.446 ms

Loss rate: 1.18%

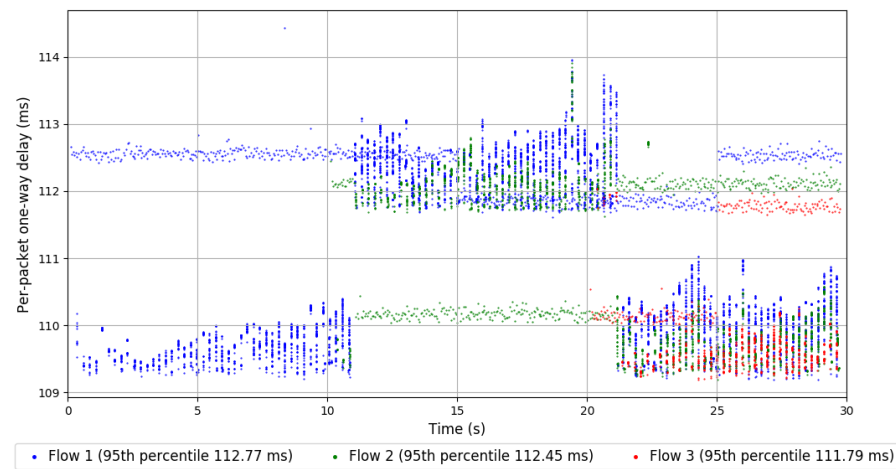
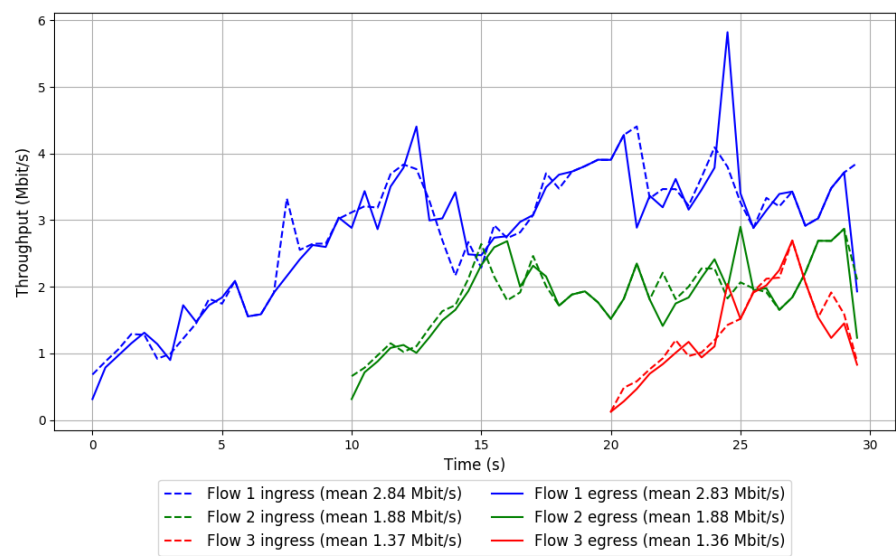
-- Flow 3:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 111.786 ms

Loss rate: 3.23%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-02-20 19:42:03

End at: 2018-02-20 19:42:33

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.14 Mbit/s

95th percentile per-packet one-way delay: 113.190 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 113.190 ms

Loss rate: 1.14%

-- Flow 2:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 113.124 ms

Loss rate: 1.62%

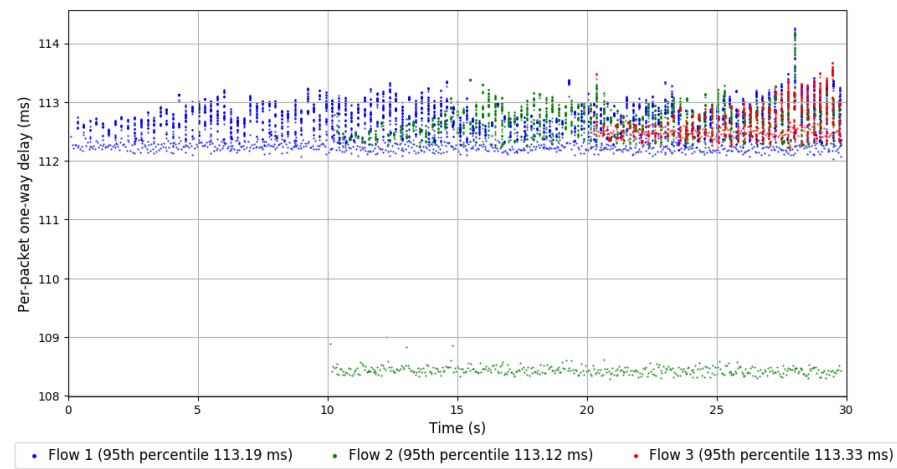
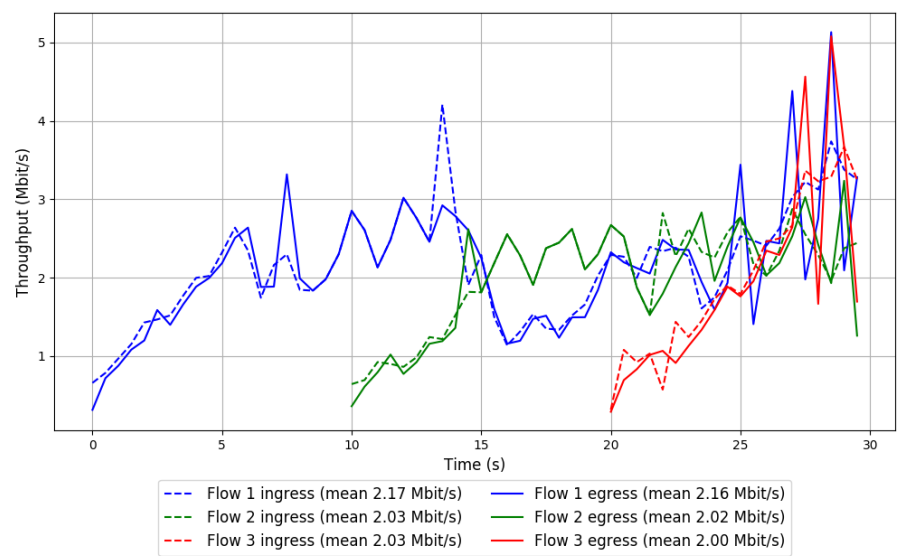
-- Flow 3:

Average throughput: 2.00 Mbit/s

95th percentile per-packet one-way delay: 113.328 ms

Loss rate: 3.95%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-02-20 20:01:46

End at: 2018-02-20 20:02:16

Below is generated by plot.py at 2018-02-21 00:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.56 Mbit/s

95th percentile per-packet one-way delay: 112.824 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 3.03 Mbit/s

95th percentile per-packet one-way delay: 112.891 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 1.64 Mbit/s

95th percentile per-packet one-way delay: 112.525 ms

Loss rate: 1.69%

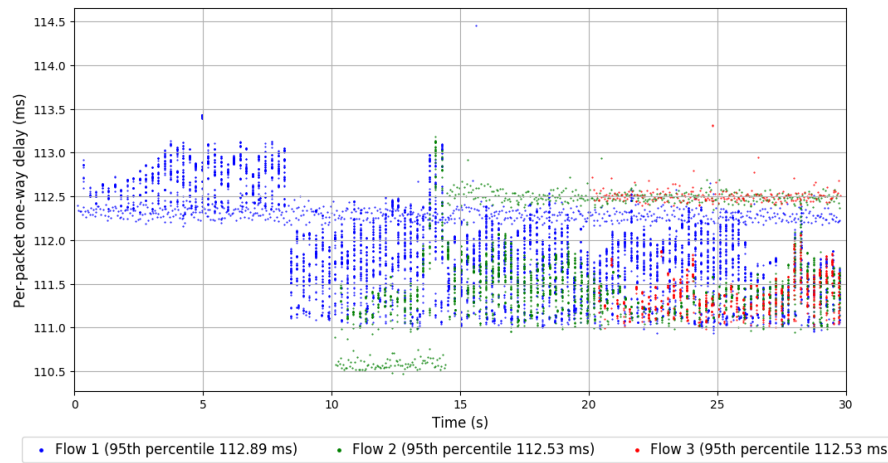
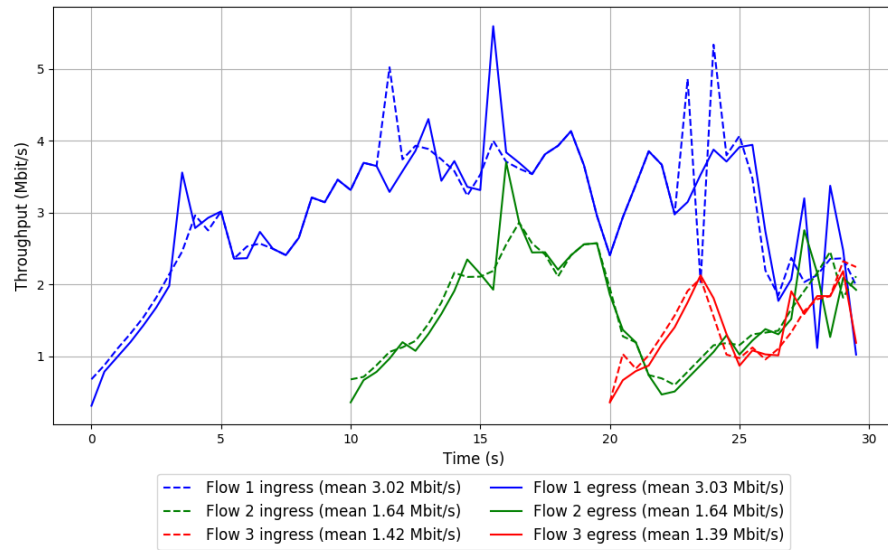
-- Flow 3:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 112.527 ms

Loss rate: 4.27%

Run 10: Report of Sprout — Data Link

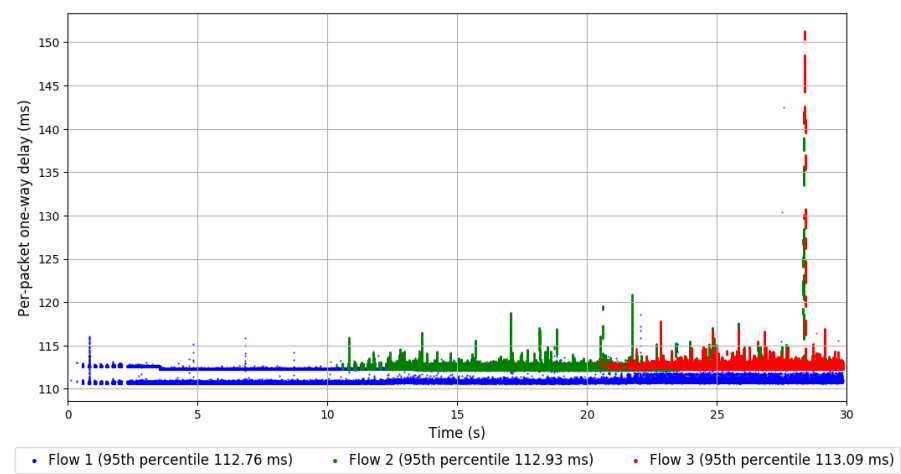
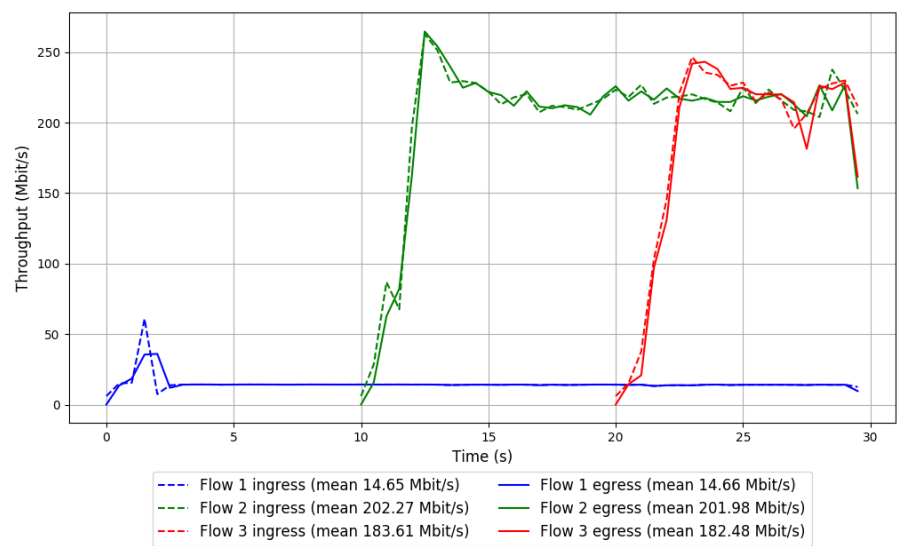


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-02-20 17:11:21
End at: 2018-02-20 17:11:51

# Below is generated by plot.py at 2018-02-21 00:15:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 208.16 Mbit/s
95th percentile per-packet one-way delay: 112.971 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 14.66 Mbit/s
95th percentile per-packet one-way delay: 112.761 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 201.98 Mbit/s
95th percentile per-packet one-way delay: 112.928 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 182.48 Mbit/s
95th percentile per-packet one-way delay: 113.088 ms
Loss rate: 2.89%
```


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

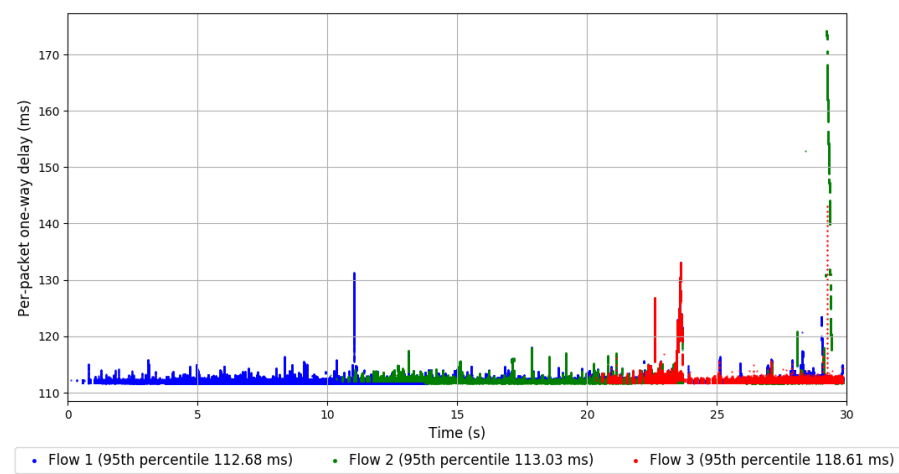
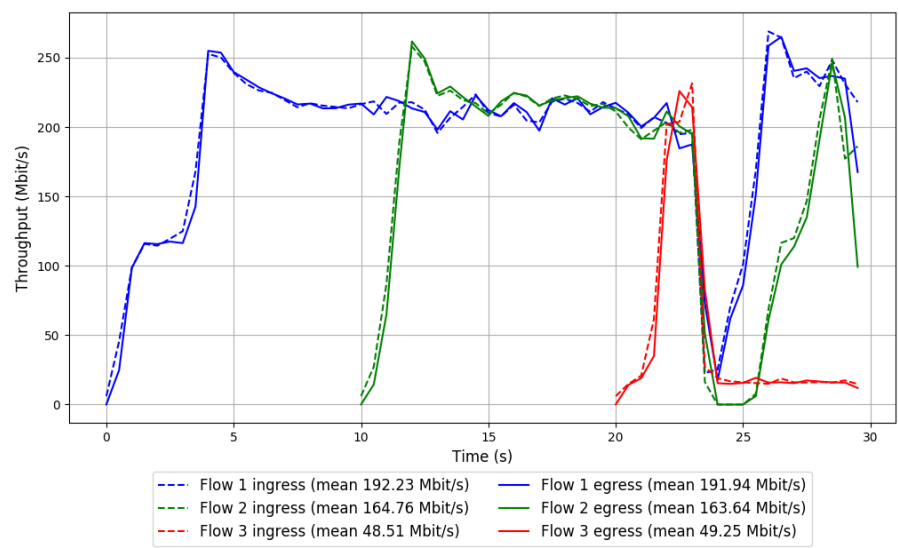


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-02-20 17:30:50
End at: 2018-02-20 17:31:20

# Below is generated by plot.py at 2018-02-21 00:19:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.58 Mbit/s
95th percentile per-packet one-way delay: 112.899 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 191.94 Mbit/s
95th percentile per-packet one-way delay: 112.677 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 163.64 Mbit/s
95th percentile per-packet one-way delay: 113.026 ms
Loss rate: 1.80%
-- Flow 3:
Average throughput: 49.25 Mbit/s
95th percentile per-packet one-way delay: 118.609 ms
Loss rate: 0.76%
```

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

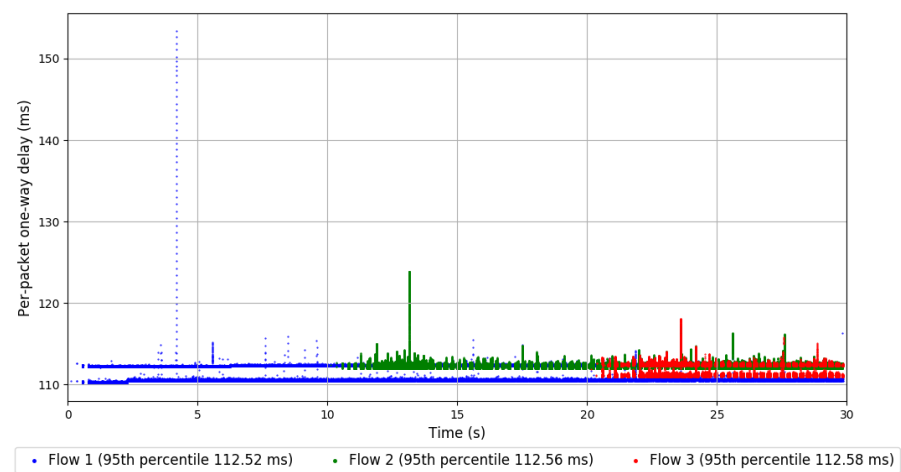
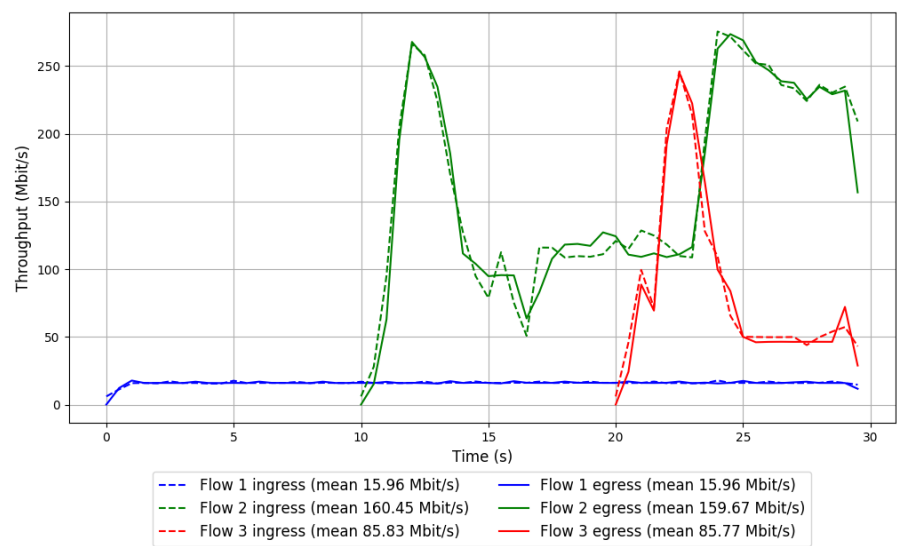


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-02-20 17:51:12
End at: 2018-02-20 17:51:42

# Below is generated by plot.py at 2018-02-21 00:19:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 149.81 Mbit/s
95th percentile per-packet one-way delay: 112.562 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 15.96 Mbit/s
95th percentile per-packet one-way delay: 112.517 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 159.67 Mbit/s
95th percentile per-packet one-way delay: 112.563 ms
Loss rate: 1.67%
-- Flow 3:
Average throughput: 85.77 Mbit/s
95th percentile per-packet one-way delay: 112.583 ms
Loss rate: 1.32%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-02-20 18:11:28

End at: 2018-02-20 18:11:58

Below is generated by plot.py at 2018-02-21 00:19:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.03 Mbit/s

95th percentile per-packet one-way delay: 112.465 ms

Loss rate: 1.92%

-- Flow 1:

Average throughput: 15.92 Mbit/s

95th percentile per-packet one-way delay: 112.515 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 15.86 Mbit/s

95th percentile per-packet one-way delay: 111.980 ms

Loss rate: 1.01%

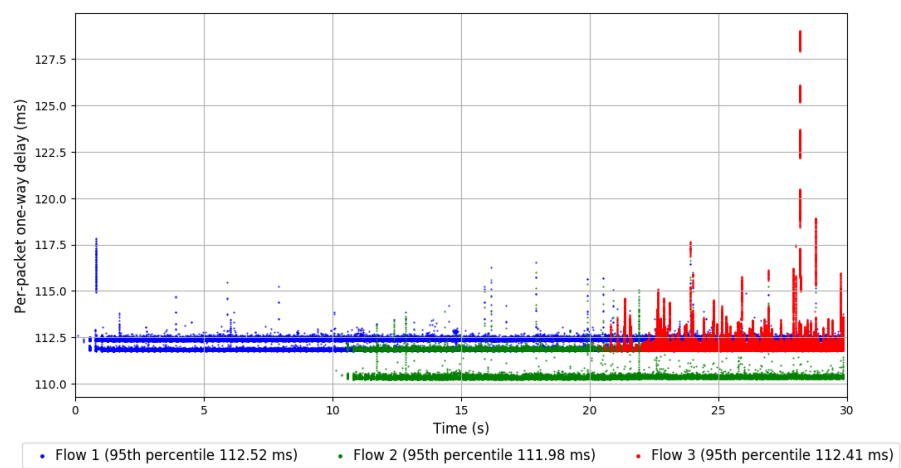
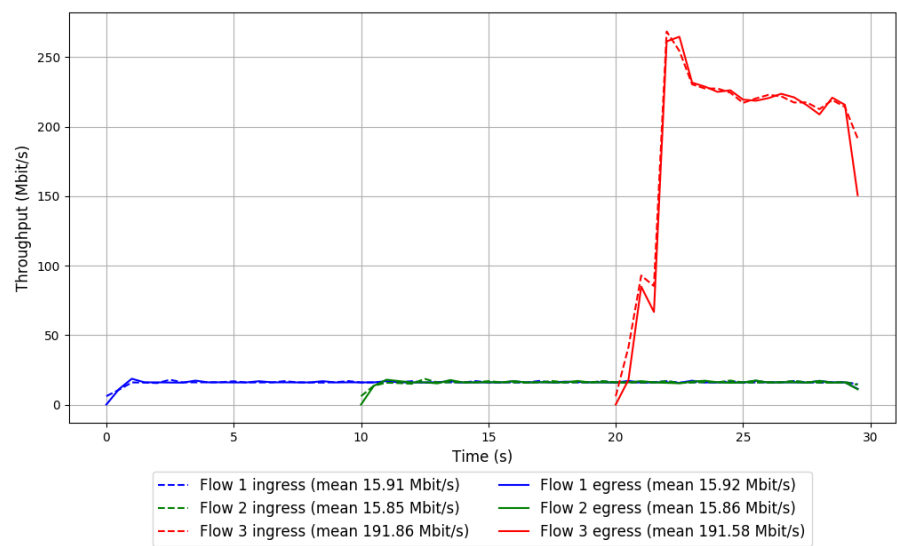
-- Flow 3:

Average throughput: 191.58 Mbit/s

95th percentile per-packet one-way delay: 112.408 ms

Loss rate: 2.37%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-02-20 18:30:57

End at: 2018-02-20 18:31:27

Below is generated by plot.py at 2018-02-21 00:19:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 251.76 Mbit/s

95th percentile per-packet one-way delay: 112.969 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 141.80 Mbit/s

95th percentile per-packet one-way delay: 112.923 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 79.10 Mbit/s

95th percentile per-packet one-way delay: 112.849 ms

Loss rate: 0.25%

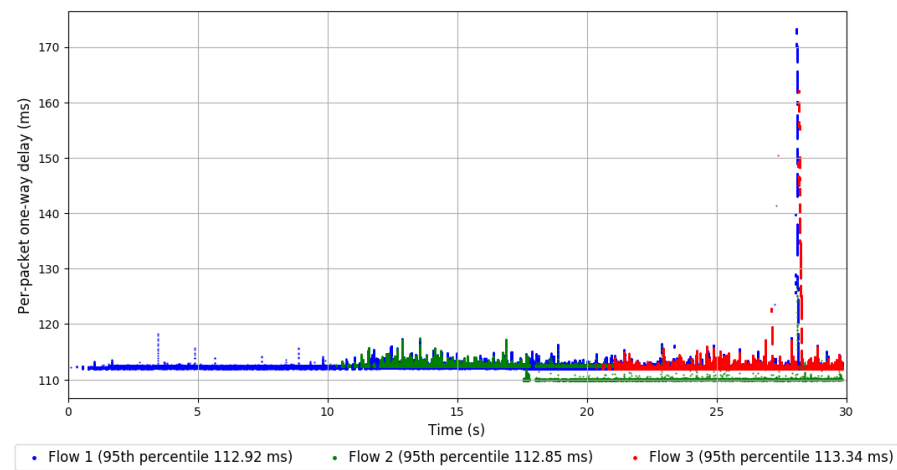
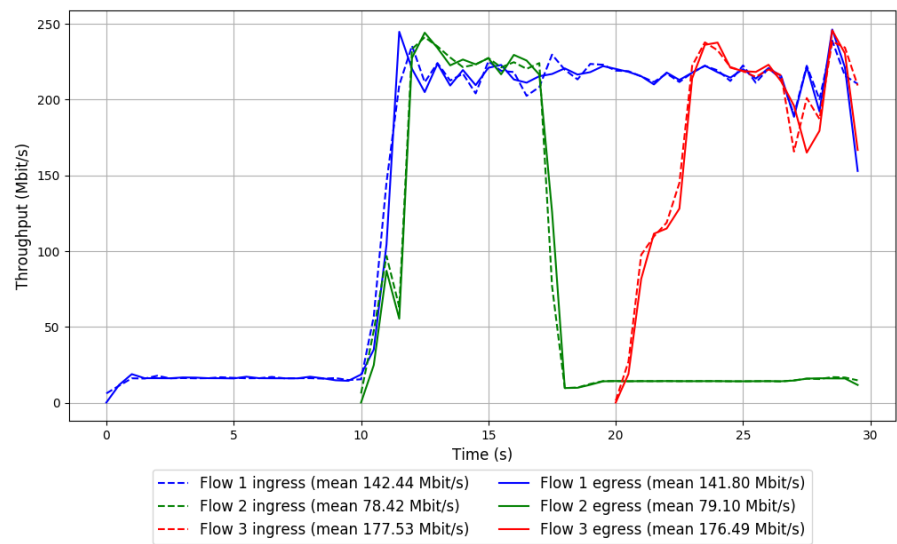
-- Flow 3:

Average throughput: 176.49 Mbit/s

95th percentile per-packet one-way delay: 113.345 ms

Loss rate: 2.84%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-02-20 18:50:55

End at: 2018-02-20 18:51:25

Below is generated by plot.py at 2018-02-21 00:19:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 206.38 Mbit/s

95th percentile per-packet one-way delay: 112.552 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 15.90 Mbit/s

95th percentile per-packet one-way delay: 112.557 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 200.24 Mbit/s

95th percentile per-packet one-way delay: 112.541 ms

Loss rate: 1.20%

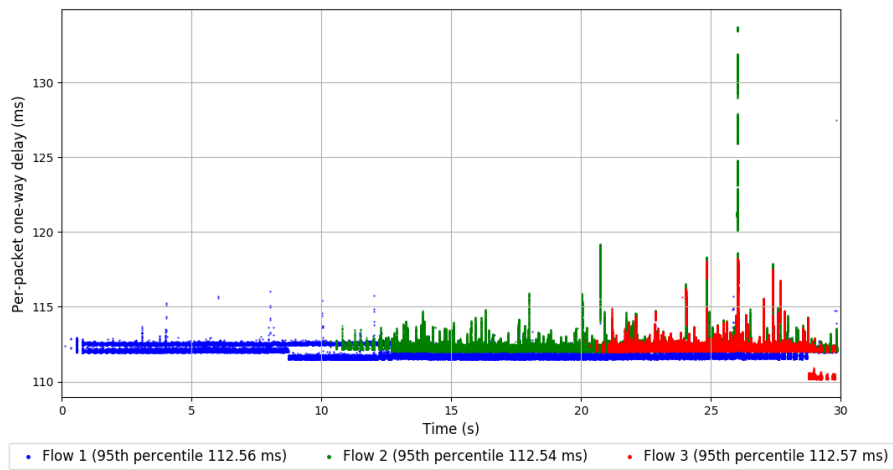
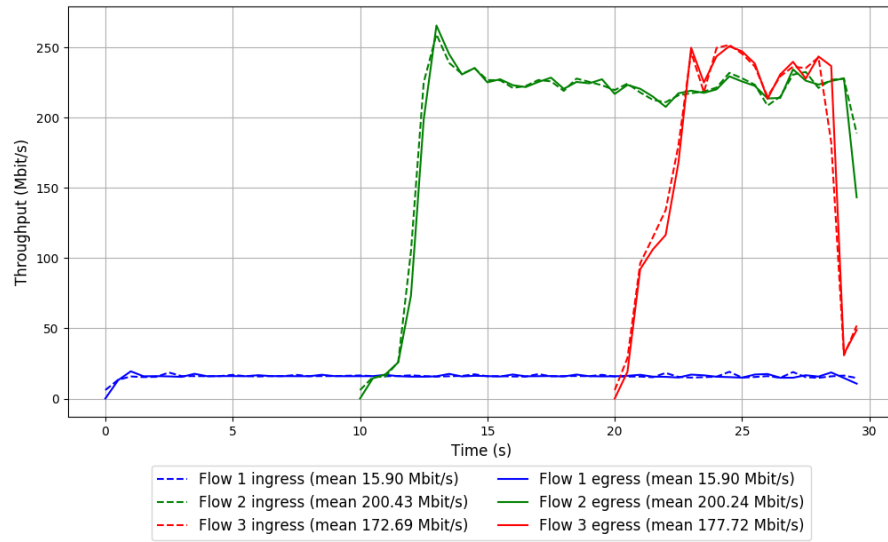
-- Flow 3:

Average throughput: 177.72 Mbit/s

95th percentile per-packet one-way delay: 112.571 ms

Loss rate: 0.09%

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

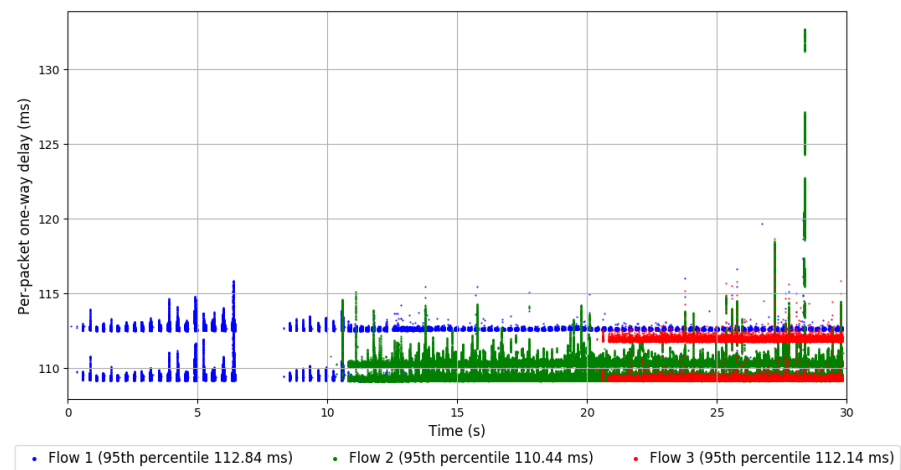
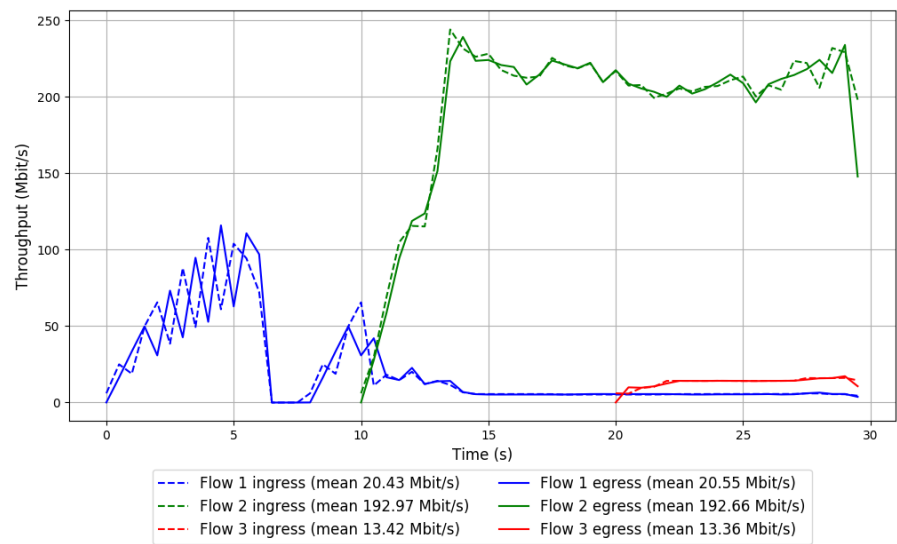


```
Run 7: Statistics of TaoVA-100x

Start at: 2018-02-20 19:10:42
End at: 2018-02-20 19:11:12

# Below is generated by plot.py at 2018-02-21 00:19:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 152.73 Mbit/s
95th percentile per-packet one-way delay: 112.616 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 20.55 Mbit/s
95th percentile per-packet one-way delay: 112.836 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 192.66 Mbit/s
95th percentile per-packet one-way delay: 110.435 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 13.36 Mbit/s
95th percentile per-packet one-way delay: 112.137 ms
Loss rate: 2.63%
```

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-02-20 19:30:11

End at: 2018-02-20 19:30:41

Below is generated by plot.py at 2018-02-21 00:19:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 49.01 Mbit/s

95th percentile per-packet one-way delay: 113.819 ms

Loss rate: 2.19%

-- Flow 1:

Average throughput: 32.73 Mbit/s

95th percentile per-packet one-way delay: 113.845 ms

Loss rate: 2.53%

-- Flow 2:

Average throughput: 15.86 Mbit/s

95th percentile per-packet one-way delay: 112.480 ms

Loss rate: 1.15%

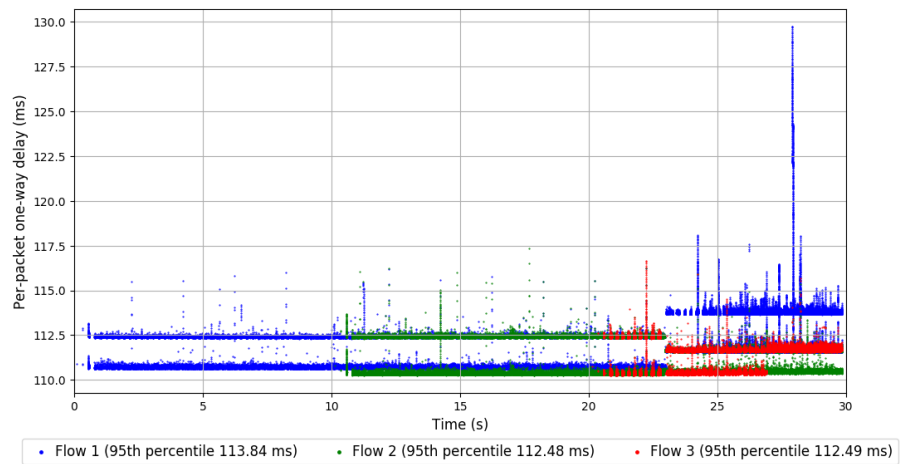
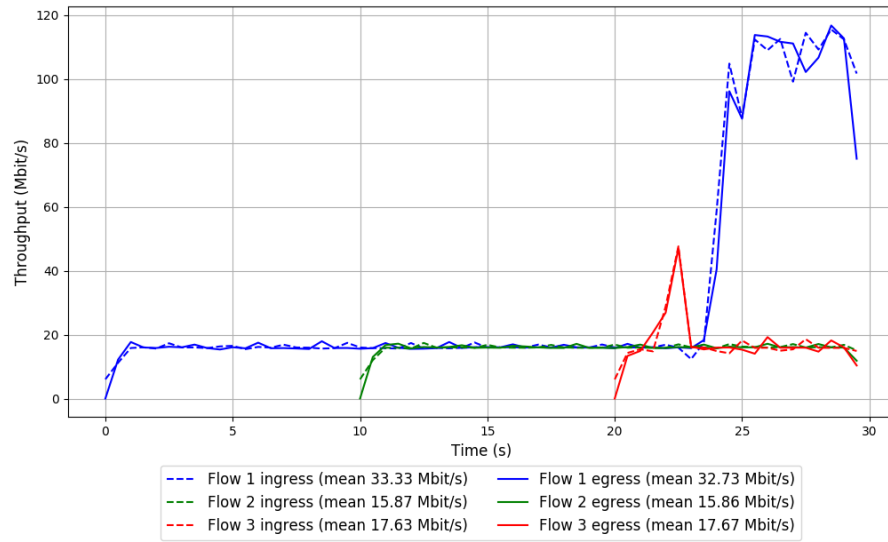
-- Flow 3:

Average throughput: 17.67 Mbit/s

95th percentile per-packet one-way delay: 112.489 ms

Loss rate: 2.13%

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

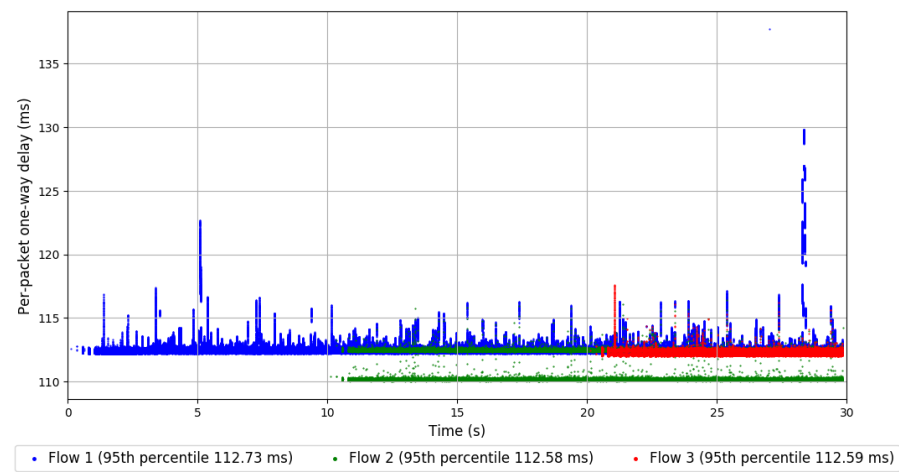
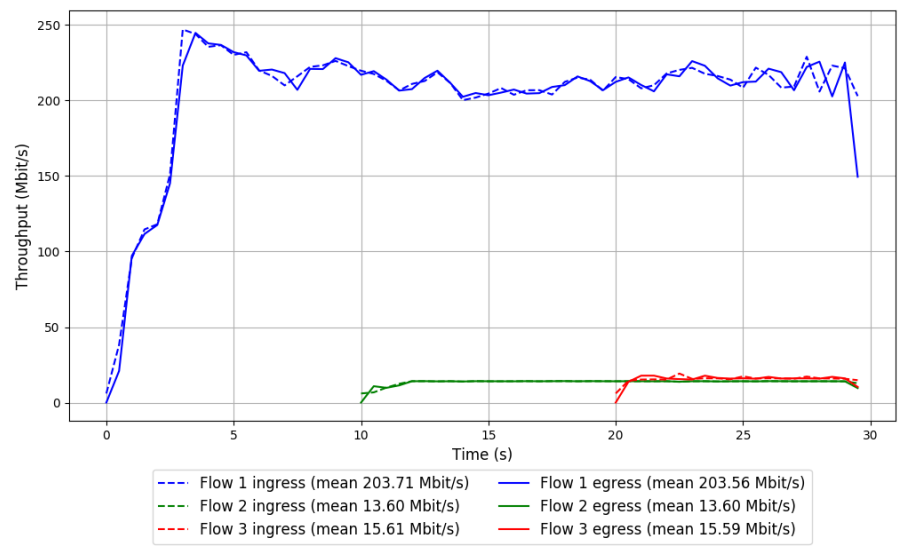


```
Run 9: Statistics of TaoVA-100x

Start at: 2018-02-20 19:50:02
End at: 2018-02-20 19:50:32

# Below is generated by plot.py at 2018-02-21 00:21:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 217.67 Mbit/s
95th percentile per-packet one-way delay: 112.717 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 203.56 Mbit/s
95th percentile per-packet one-way delay: 112.731 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 13.60 Mbit/s
95th percentile per-packet one-way delay: 112.582 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 15.59 Mbit/s
95th percentile per-packet one-way delay: 112.593 ms
Loss rate: 2.40%
```


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

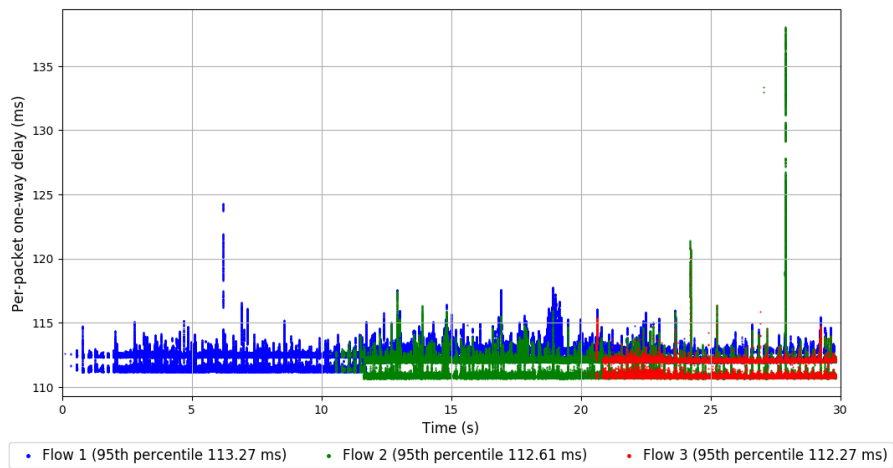
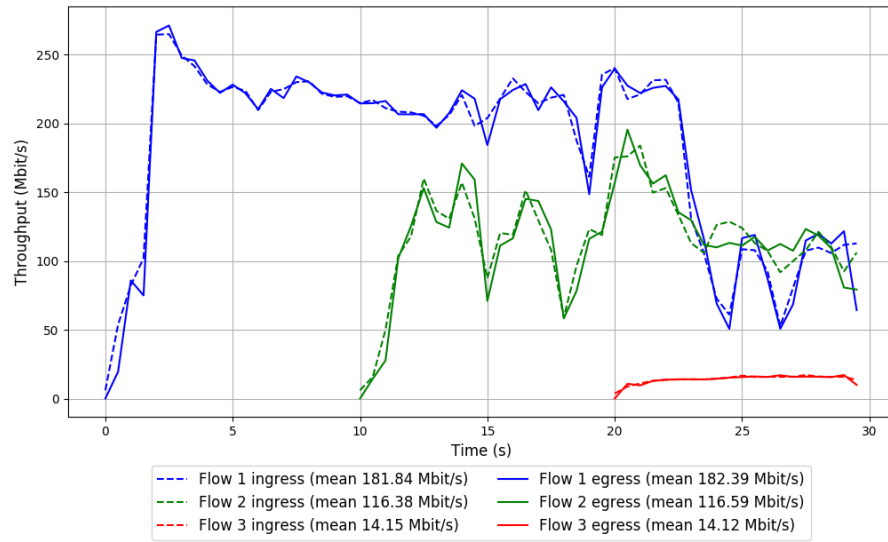


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-02-20 20:09:43
End at: 2018-02-20 20:10:13

# Below is generated by plot.py at 2018-02-21 00:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 263.94 Mbit/s
95th percentile per-packet one-way delay: 113.157 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 182.39 Mbit/s
95th percentile per-packet one-way delay: 113.272 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 116.59 Mbit/s
95th percentile per-packet one-way delay: 112.614 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 14.12 Mbit/s
95th percentile per-packet one-way delay: 112.271 ms
Loss rate: 2.45%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-02-20 17:17:57

End at: 2018-02-20 17:18:27

Below is generated by plot.py at 2018-02-21 00:23:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.74 Mbit/s

95th percentile per-packet one-way delay: 115.032 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 55.51 Mbit/s

95th percentile per-packet one-way delay: 114.856 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 40.35 Mbit/s

95th percentile per-packet one-way delay: 115.764 ms

Loss rate: 1.22%

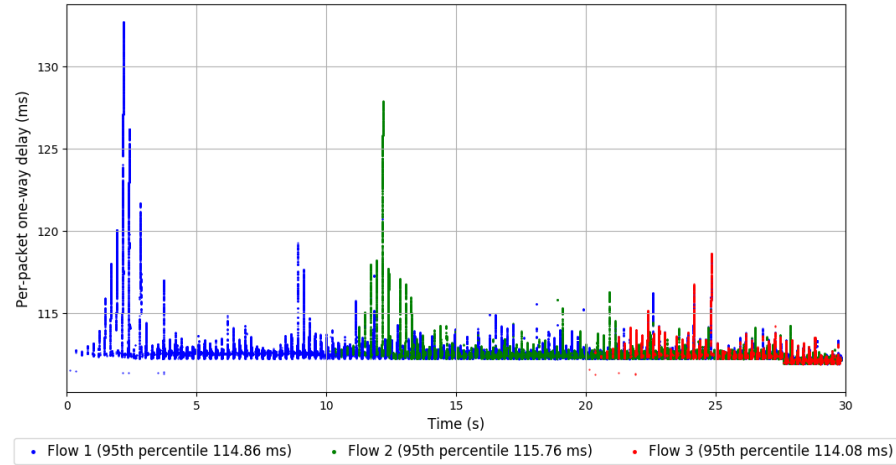
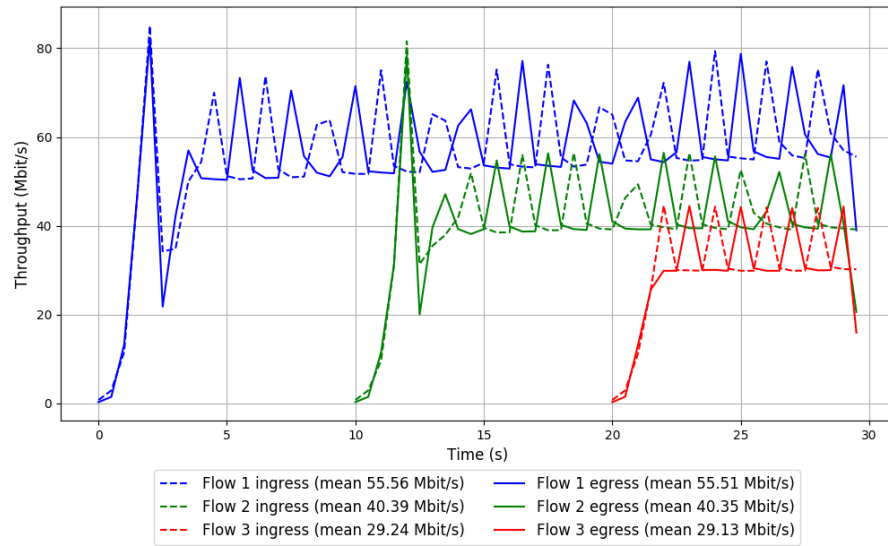
-- Flow 3:

Average throughput: 29.13 Mbit/s

95th percentile per-packet one-way delay: 114.081 ms

Loss rate: 2.61%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-02-20 17:37:35

End at: 2018-02-20 17:38:05

Below is generated by plot.py at 2018-02-21 00:23:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.34 Mbit/s

95th percentile per-packet one-way delay: 112.773 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 30.06 Mbit/s

95th percentile per-packet one-way delay: 113.086 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 64.32 Mbit/s

95th percentile per-packet one-way delay: 112.266 ms

Loss rate: 1.25%

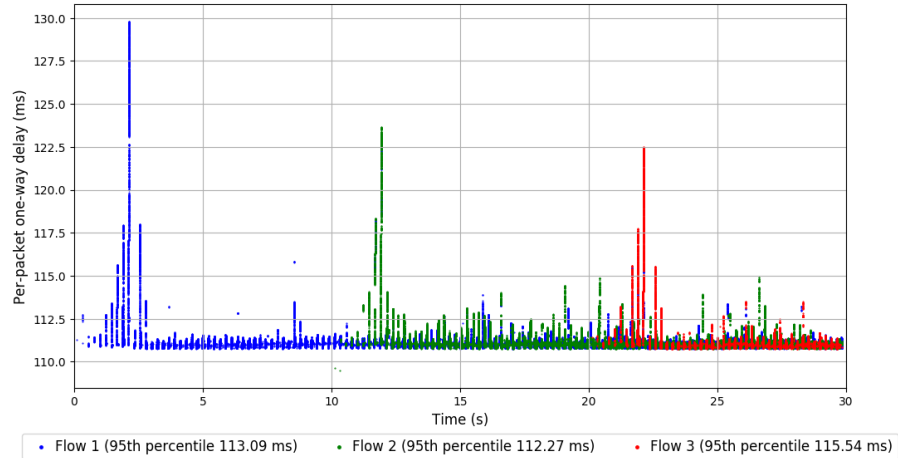
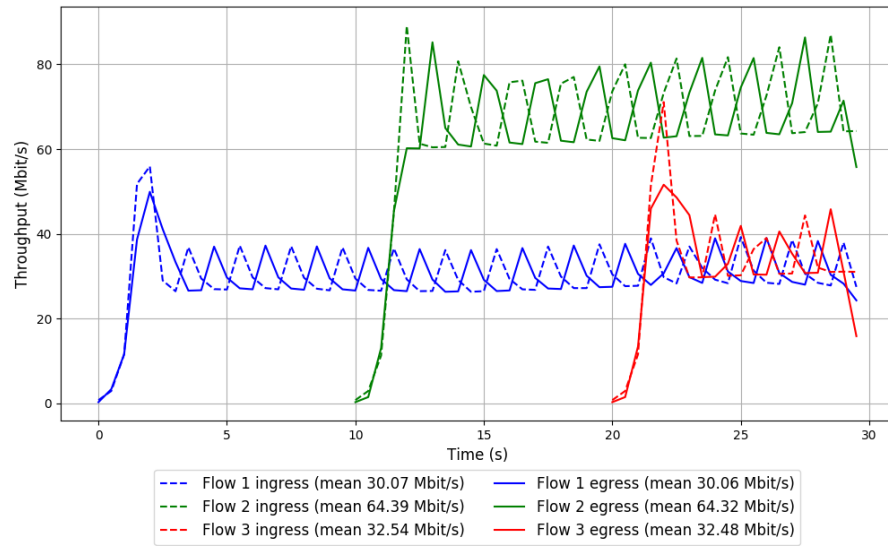
-- Flow 3:

Average throughput: 32.48 Mbit/s

95th percentile per-packet one-way delay: 115.543 ms

Loss rate: 2.40%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-02-20 17:57:46

End at: 2018-02-20 17:58:16

Below is generated by plot.py at 2018-02-21 00:23:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 52.92 Mbit/s

95th percentile per-packet one-way delay: 120.289 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 16.47 Mbit/s

95th percentile per-packet one-way delay: 118.294 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 11.72 Mbit/s

95th percentile per-packet one-way delay: 113.757 ms

Loss rate: 1.21%

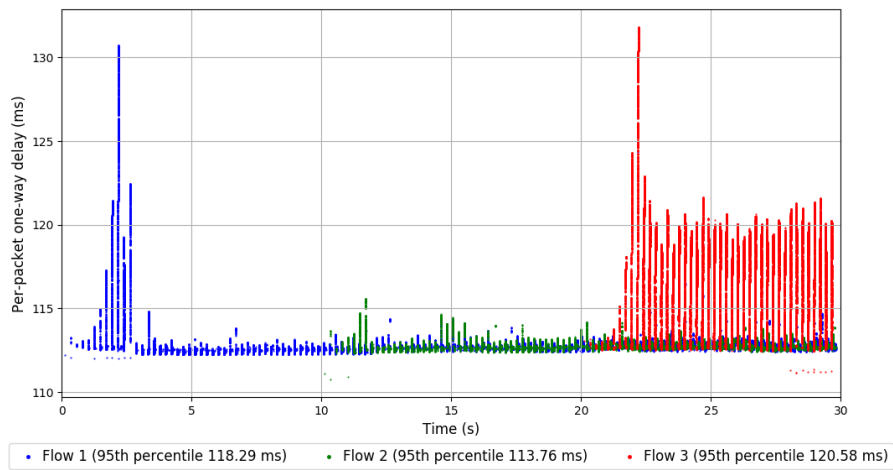
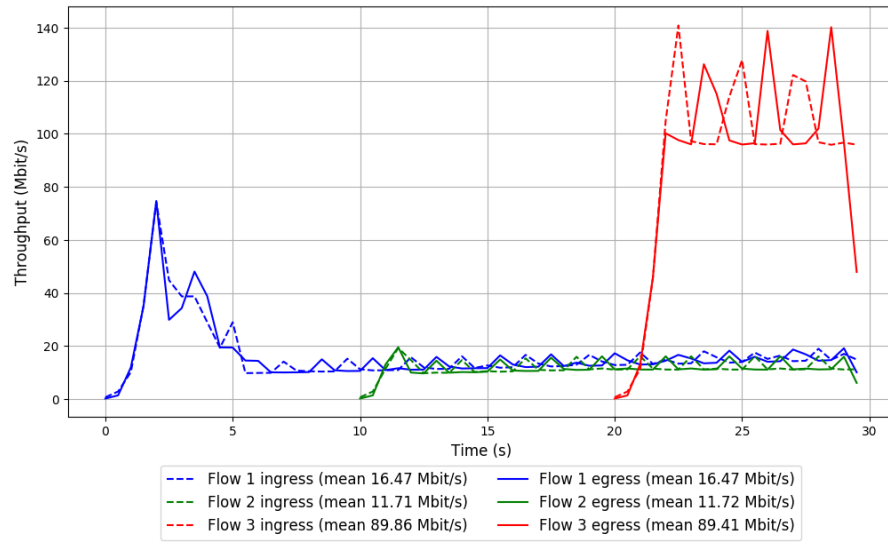
-- Flow 3:

Average throughput: 89.41 Mbit/s

95th percentile per-packet one-way delay: 120.585 ms

Loss rate: 2.74%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-02-20 18:17:45

End at: 2018-02-20 18:18:15

Below is generated by plot.py at 2018-02-21 00:23:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 143.97 Mbit/s

95th percentile per-packet one-way delay: 120.247 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 60.46 Mbit/s

95th percentile per-packet one-way delay: 117.865 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 98.27 Mbit/s

95th percentile per-packet one-way delay: 120.860 ms

Loss rate: 1.24%

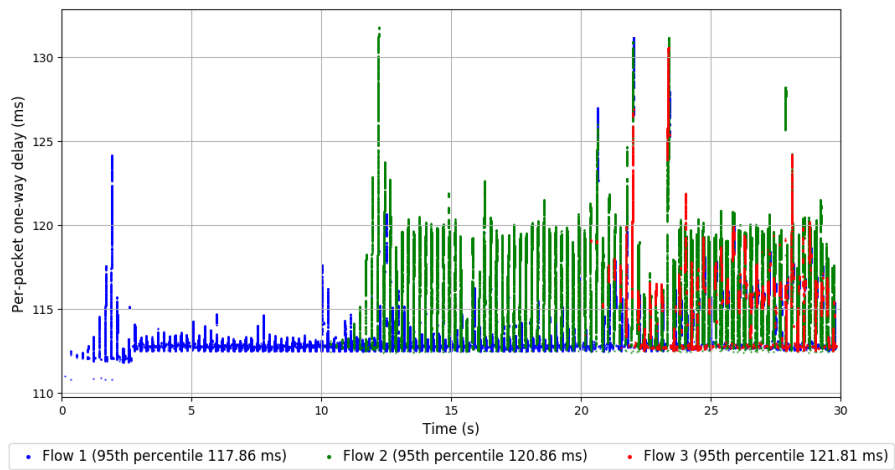
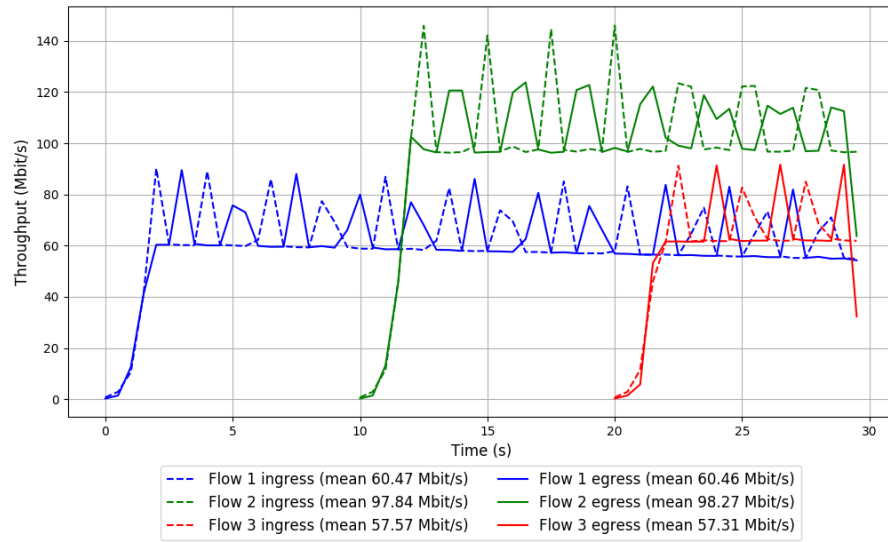
-- Flow 3:

Average throughput: 57.31 Mbit/s

95th percentile per-packet one-way delay: 121.815 ms

Loss rate: 2.71%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-02-20 18:37:44

End at: 2018-02-20 18:38:14

Below is generated by plot.py at 2018-02-21 00:23:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.92 Mbit/s

95th percentile per-packet one-way delay: 120.215 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 99.87 Mbit/s

95th percentile per-packet one-way delay: 120.382 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 64.70 Mbit/s

95th percentile per-packet one-way delay: 120.029 ms

Loss rate: 1.25%

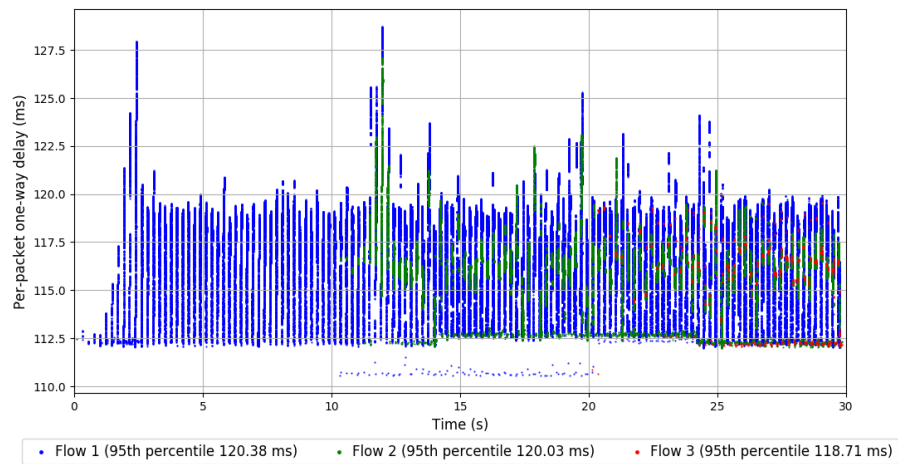
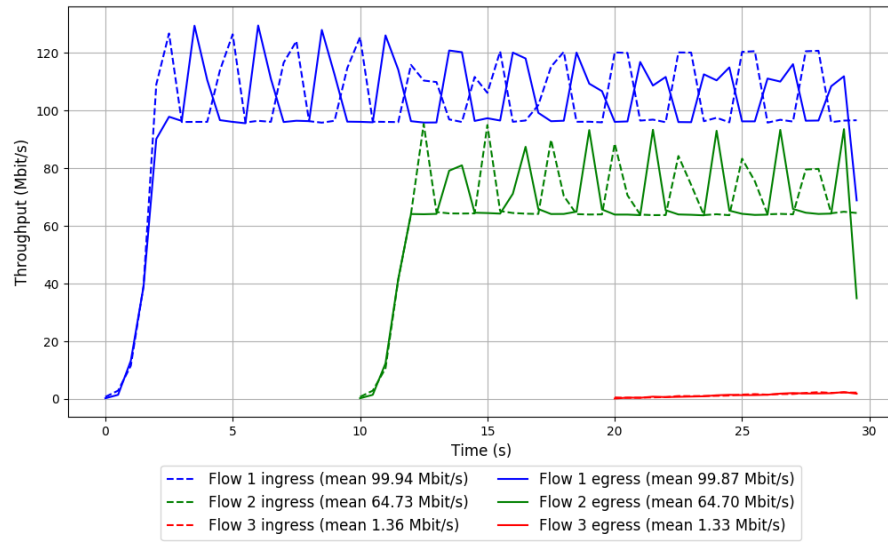
-- Flow 3:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 118.707 ms

Loss rate: 4.54%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-02-20 18:57:33

End at: 2018-02-20 18:58:03

Below is generated by plot.py at 2018-02-21 00:23:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.73 Mbit/s

95th percentile per-packet one-way delay: 117.481 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 41.96 Mbit/s

95th percentile per-packet one-way delay: 114.694 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 76.20 Mbit/s

95th percentile per-packet one-way delay: 118.918 ms

Loss rate: 1.22%

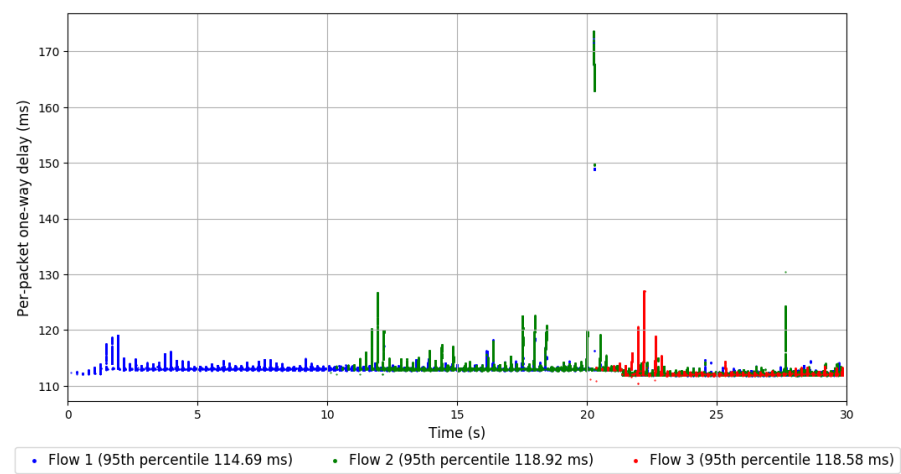
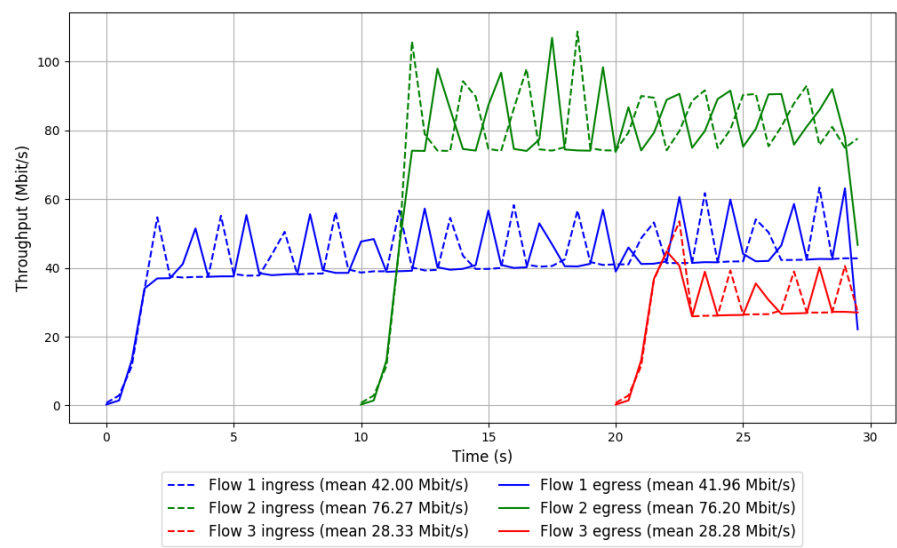
-- Flow 3:

Average throughput: 28.28 Mbit/s

95th percentile per-packet one-way delay: 118.582 ms

Loss rate: 2.42%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-02-20 19:17:13

End at: 2018-02-20 19:17:43

Below is generated by plot.py at 2018-02-21 00:23:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.30 Mbit/s

95th percentile per-packet one-way delay: 114.802 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 29.24 Mbit/s

95th percentile per-packet one-way delay: 116.737 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 69.91 Mbit/s

95th percentile per-packet one-way delay: 113.570 ms

Loss rate: 1.20%

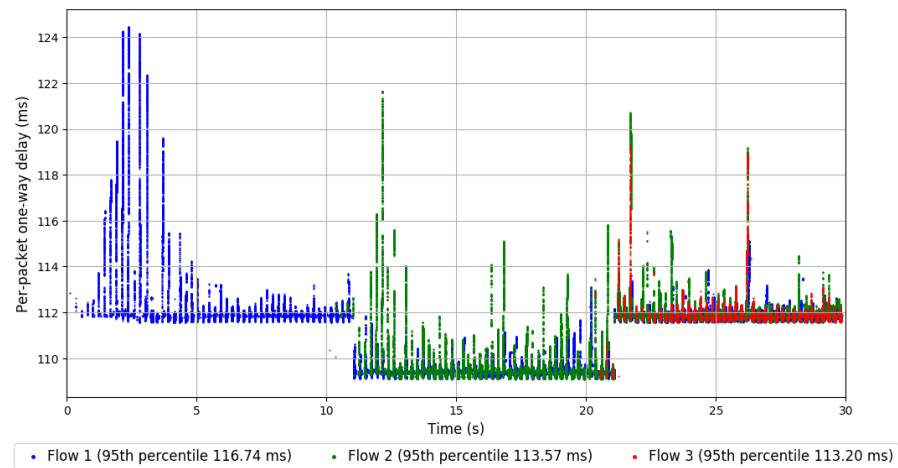
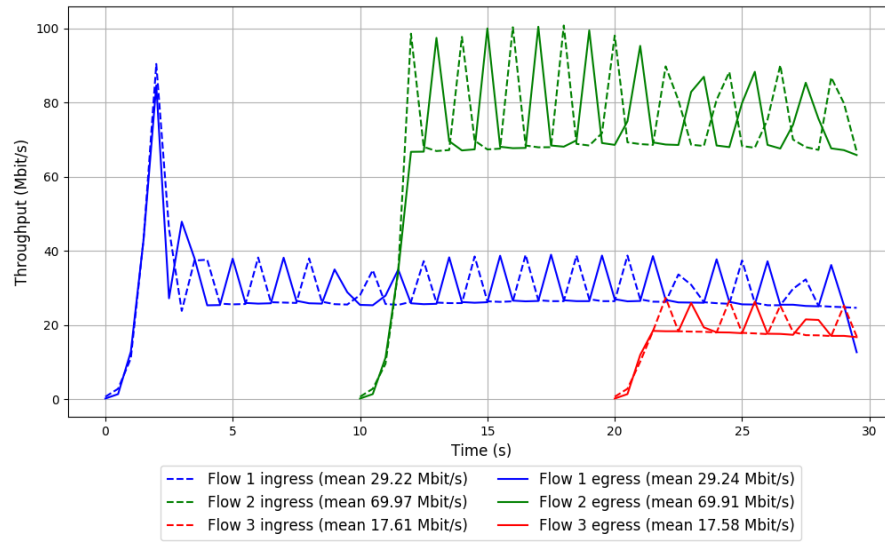
-- Flow 3:

Average throughput: 17.58 Mbit/s

95th percentile per-packet one-way delay: 113.203 ms

Loss rate: 2.41%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-02-20 19:36:43

End at: 2018-02-20 19:37:13

Below is generated by plot.py at 2018-02-21 00:23:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 114.24 Mbit/s

95th percentile per-packet one-way delay: 121.246 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 66.25 Mbit/s

95th percentile per-packet one-way delay: 122.633 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 43.61 Mbit/s

95th percentile per-packet one-way delay: 116.113 ms

Loss rate: 1.17%

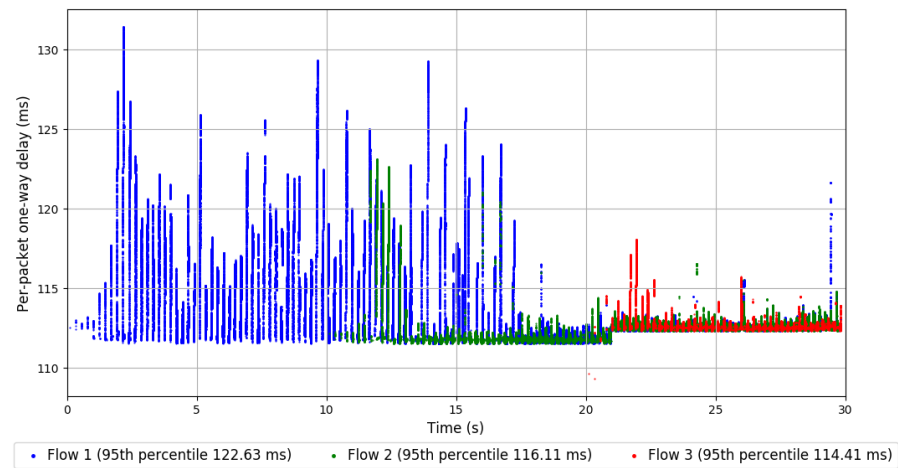
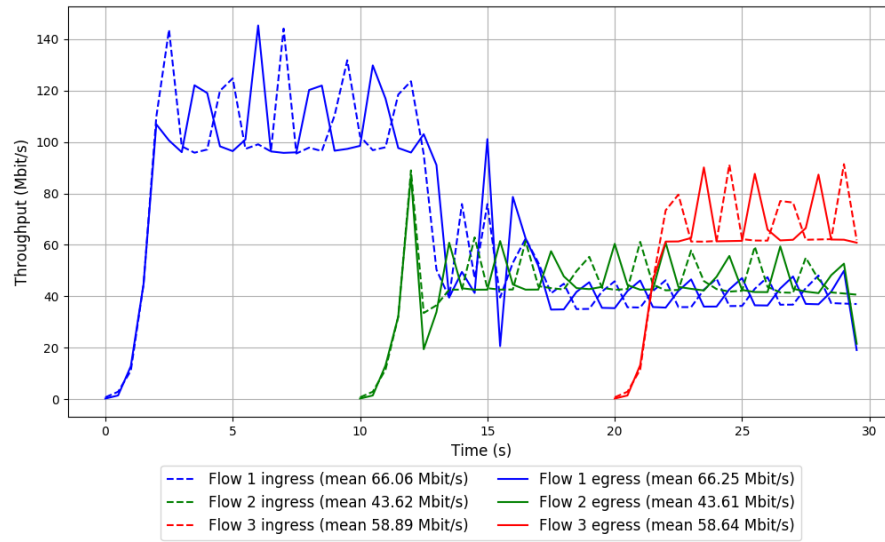
-- Flow 3:

Average throughput: 58.64 Mbit/s

95th percentile per-packet one-way delay: 114.412 ms

Loss rate: 2.65%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-02-20 19:56:46

End at: 2018-02-20 19:57:16

Below is generated by plot.py at 2018-02-21 00:23:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.61 Mbit/s

95th percentile per-packet one-way delay: 119.050 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 39.09 Mbit/s

95th percentile per-packet one-way delay: 114.295 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 54.00 Mbit/s

95th percentile per-packet one-way delay: 122.182 ms

Loss rate: 0.93%

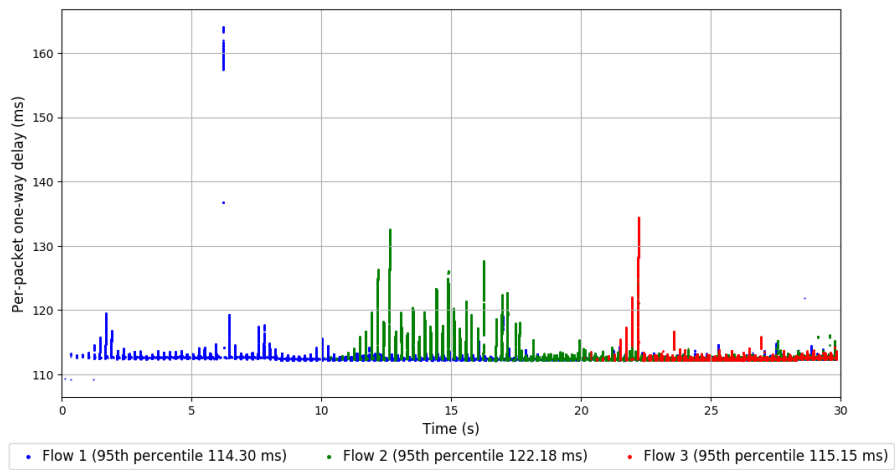
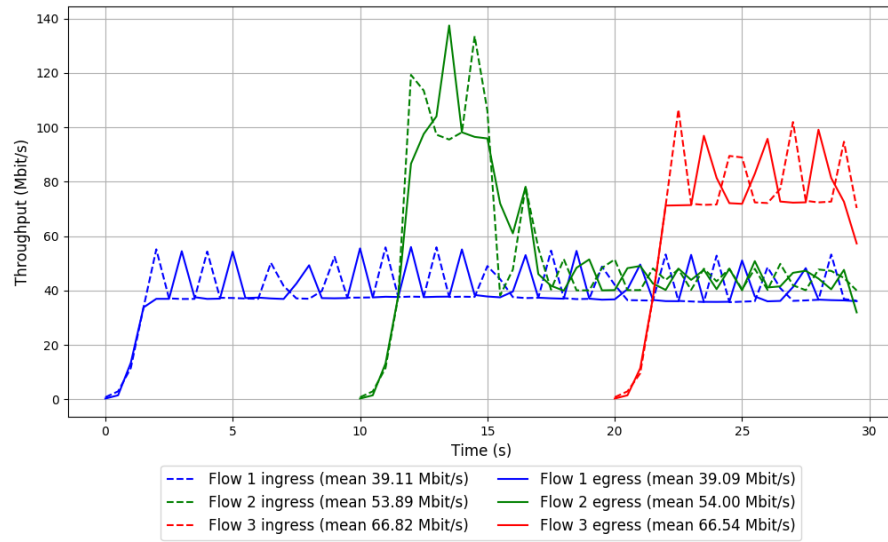
-- Flow 3:

Average throughput: 66.54 Mbit/s

95th percentile per-packet one-way delay: 115.152 ms

Loss rate: 2.67%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-02-20 20:16:35

End at: 2018-02-20 20:17:05

Below is generated by plot.py at 2018-02-21 00:23:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.61 Mbit/s

95th percentile per-packet one-way delay: 120.779 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 49.07 Mbit/s

95th percentile per-packet one-way delay: 121.684 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 40.50 Mbit/s

95th percentile per-packet one-way delay: 116.922 ms

Loss rate: 1.23%

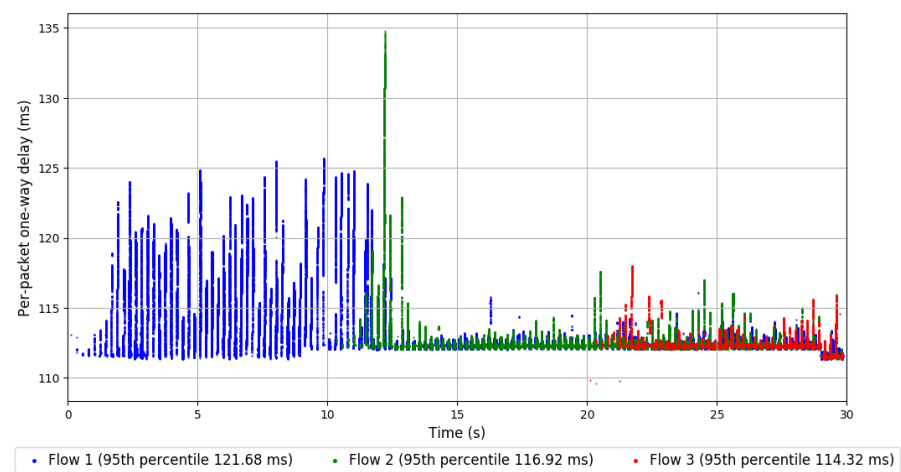
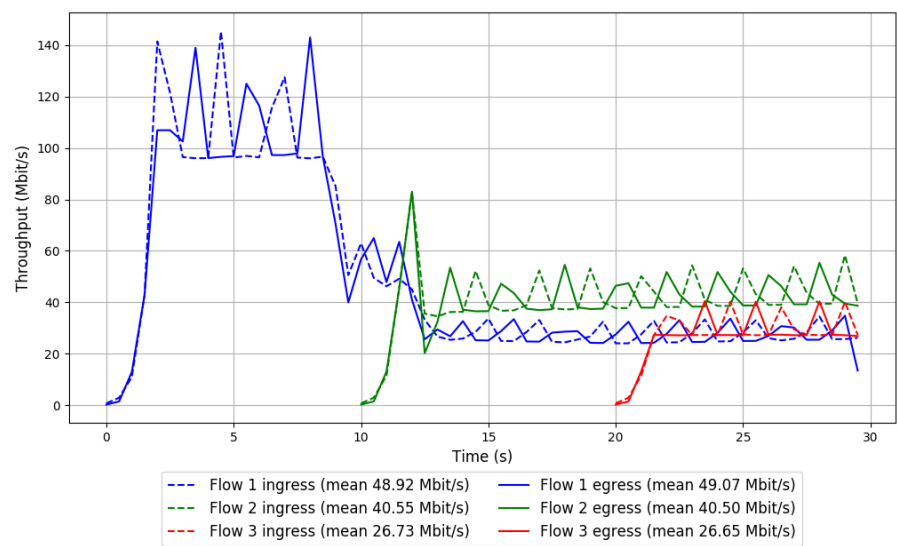
-- Flow 3:

Average throughput: 26.65 Mbit/s

95th percentile per-packet one-way delay: 114.320 ms

Loss rate: 2.56%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-02-20 17:18:48

End at: 2018-02-20 17:19:18

Below is generated by plot.py at 2018-02-21 00:23:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 239.78 Mbit/s

95th percentile per-packet one-way delay: 248.989 ms

Loss rate: 4.04%

-- Flow 1:

Average throughput: 199.23 Mbit/s

95th percentile per-packet one-way delay: 253.712 ms

Loss rate: 4.54%

-- Flow 2:

Average throughput: 50.26 Mbit/s

95th percentile per-packet one-way delay: 207.771 ms

Loss rate: 1.05%

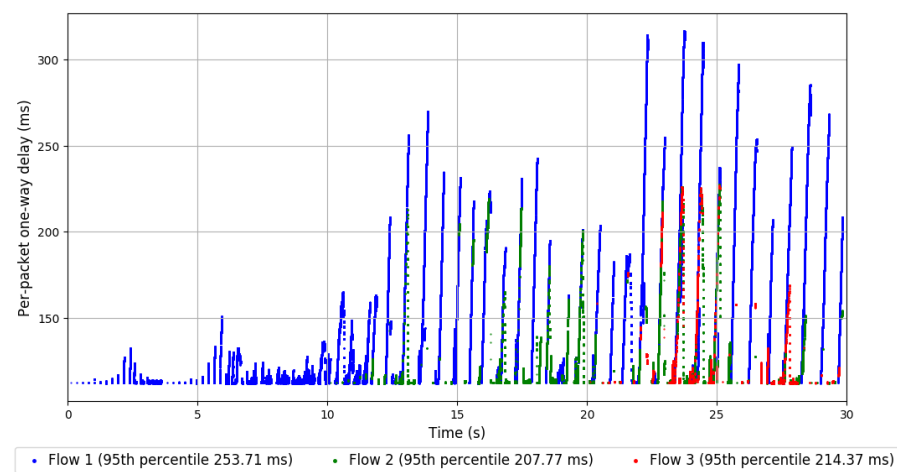
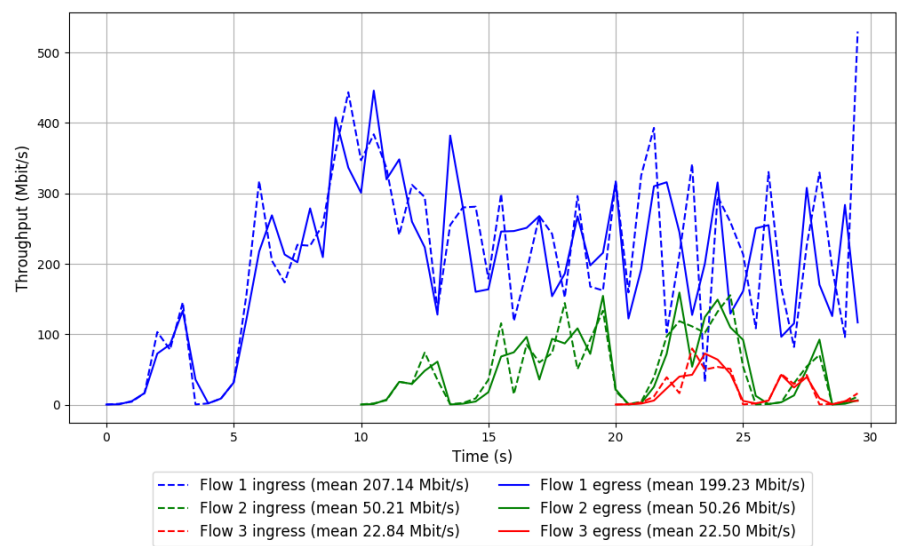
-- Flow 3:

Average throughput: 22.50 Mbit/s

95th percentile per-packet one-way delay: 214.374 ms

Loss rate: 3.75%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-02-20 17:38:26

End at: 2018-02-20 17:38:56

Below is generated by plot.py at 2018-02-21 00:24:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 281.62 Mbit/s

95th percentile per-packet one-way delay: 159.017 ms

Loss rate: 1.77%

-- Flow 1:

Average throughput: 181.15 Mbit/s

95th percentile per-packet one-way delay: 154.323 ms

Loss rate: 1.59%

-- Flow 2:

Average throughput: 136.36 Mbit/s

95th percentile per-packet one-way delay: 154.731 ms

Loss rate: 0.93%

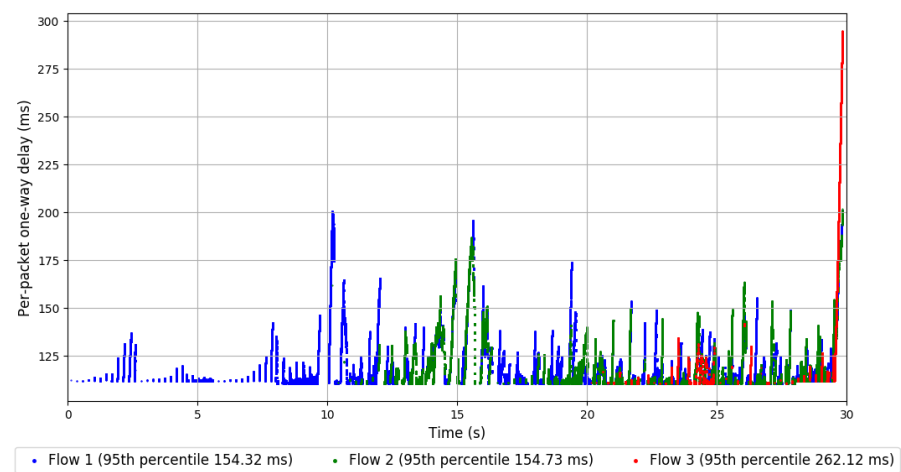
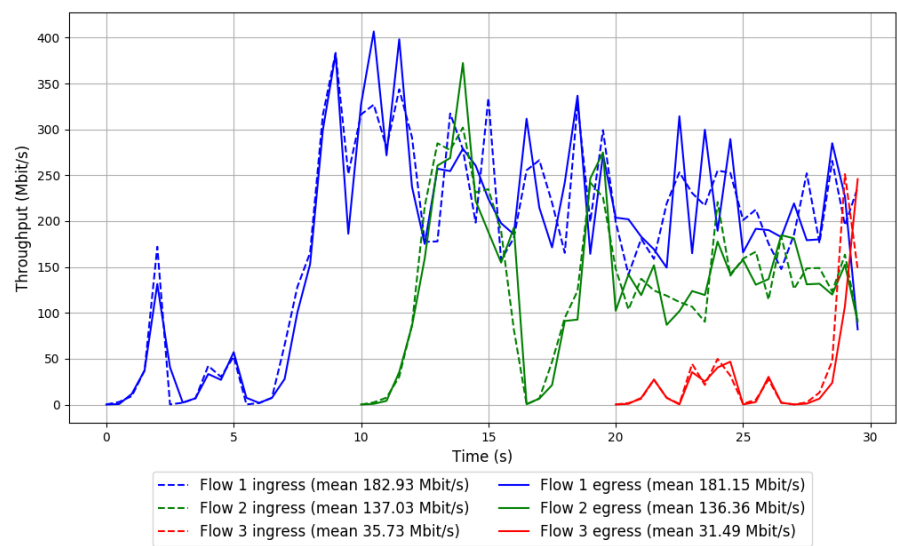
-- Flow 3:

Average throughput: 31.49 Mbit/s

95th percentile per-packet one-way delay: 262.117 ms

Loss rate: 11.20%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-02-20 17:58:37

End at: 2018-02-20 17:59:07

Below is generated by plot.py at 2018-02-21 00:24:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 148.67 Mbit/s

95th percentile per-packet one-way delay: 158.293 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 55.98 Mbit/s

95th percentile per-packet one-way delay: 200.874 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 97.77 Mbit/s

95th percentile per-packet one-way delay: 143.636 ms

Loss rate: 2.17%

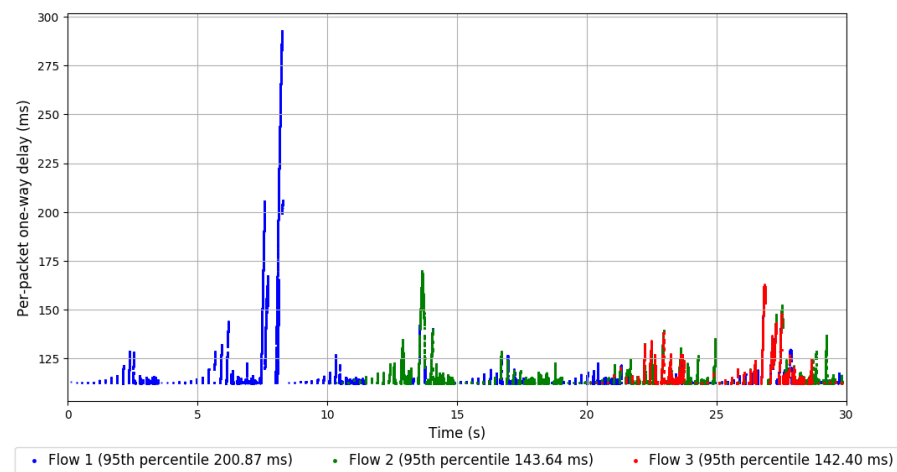
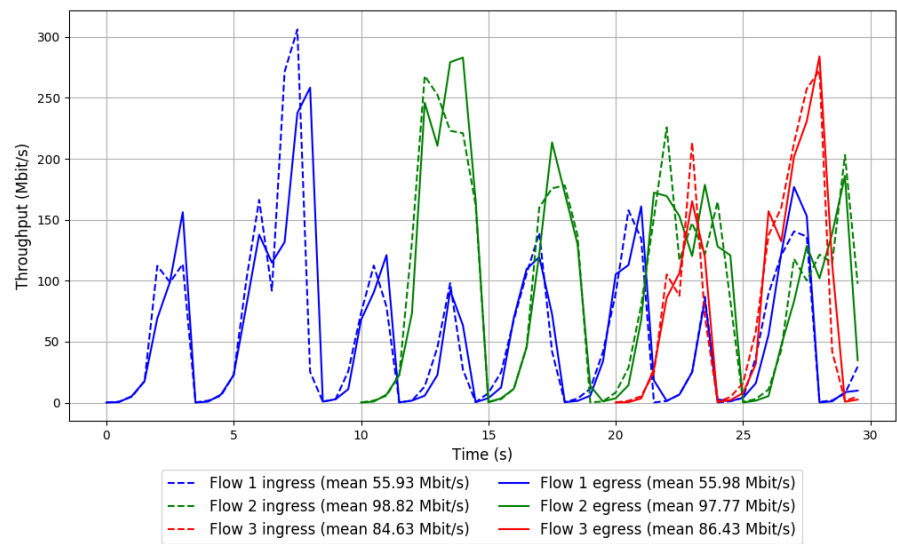
-- Flow 3:

Average throughput: 86.43 Mbit/s

95th percentile per-packet one-way delay: 142.404 ms

Loss rate: 0.22%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-02-20 18:18:41

End at: 2018-02-20 18:19:11

Below is generated by plot.py at 2018-02-21 00:24:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 300.00 Mbit/s

95th percentile per-packet one-way delay: 170.549 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 214.34 Mbit/s

95th percentile per-packet one-way delay: 168.419 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 65.45 Mbit/s

95th percentile per-packet one-way delay: 166.975 ms

Loss rate: 0.01%

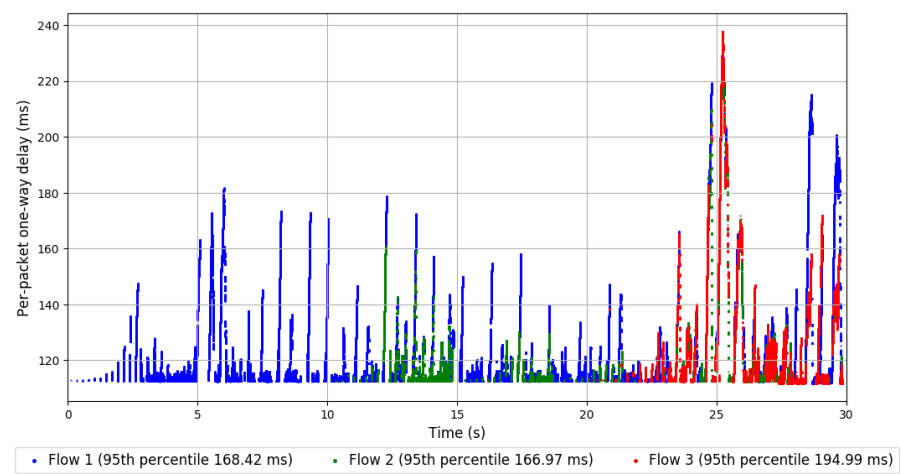
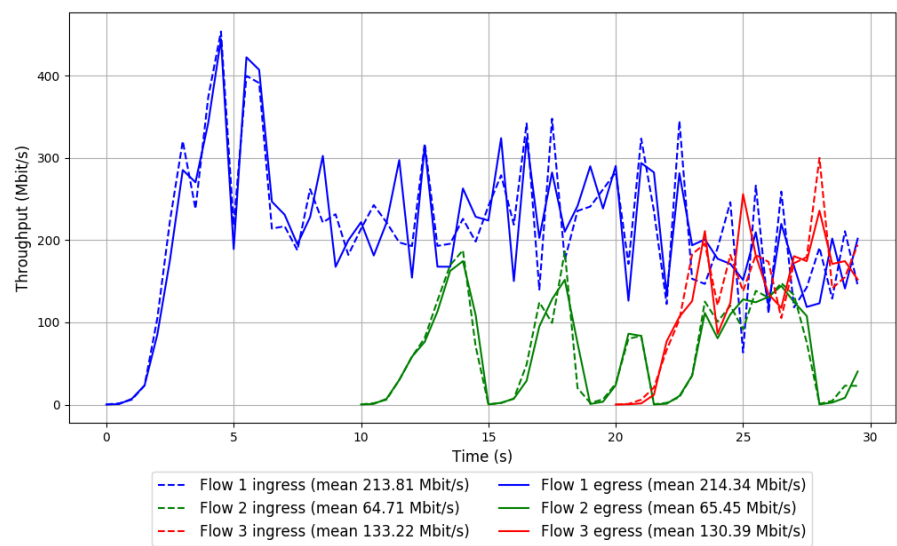
-- Flow 3:

Average throughput: 130.39 Mbit/s

95th percentile per-packet one-way delay: 194.989 ms

Loss rate: 3.73%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-02-20 18:38:39

End at: 2018-02-20 18:39:09

Below is generated by plot.py at 2018-02-21 00:24:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 215.87 Mbit/s

95th percentile per-packet one-way delay: 159.305 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 129.27 Mbit/s

95th percentile per-packet one-way delay: 136.175 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 101.32 Mbit/s

95th percentile per-packet one-way delay: 163.906 ms

Loss rate: 1.21%

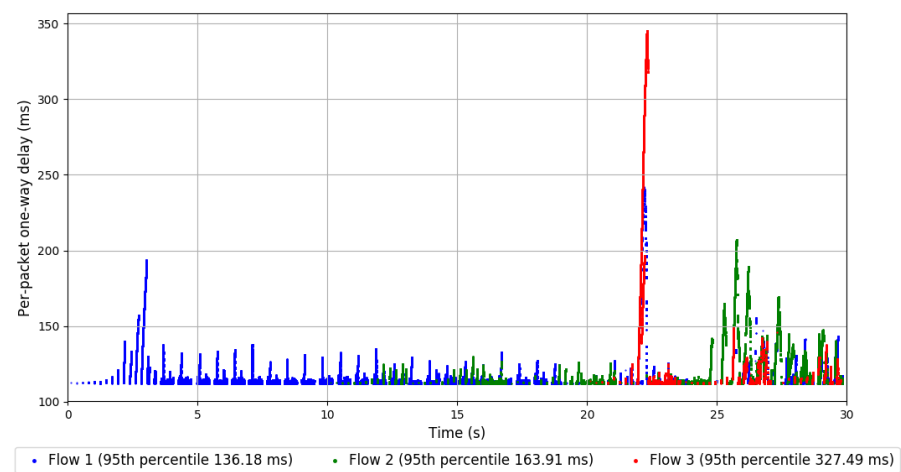
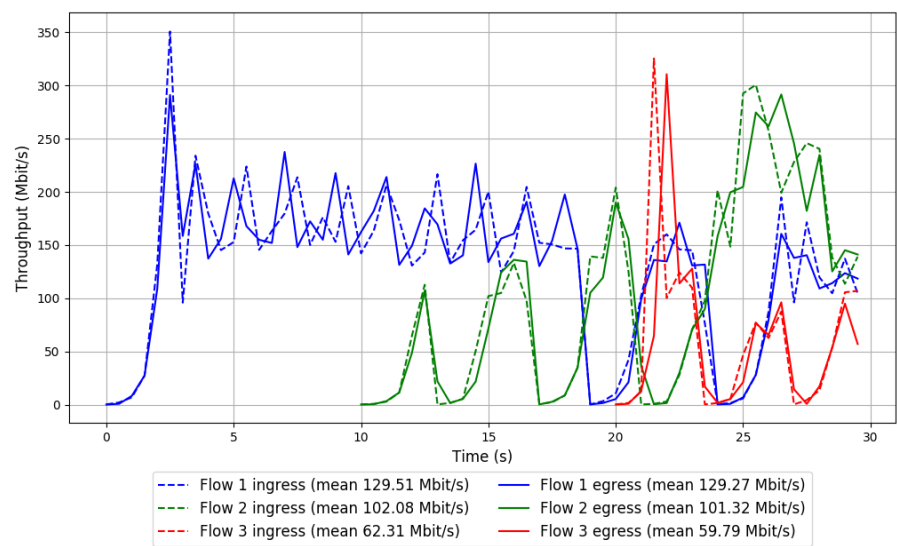
-- Flow 3:

Average throughput: 59.79 Mbit/s

95th percentile per-packet one-way delay: 327.485 ms

Loss rate: 6.98%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-02-20 18:58:25

End at: 2018-02-20 18:58:55

Below is generated by plot.py at 2018-02-21 00:25:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 264.14 Mbit/s

95th percentile per-packet one-way delay: 188.271 ms

Loss rate: 3.97%

-- Flow 1:

Average throughput: 179.97 Mbit/s

95th percentile per-packet one-way delay: 153.142 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 84.40 Mbit/s

95th percentile per-packet one-way delay: 291.147 ms

Loss rate: 6.74%

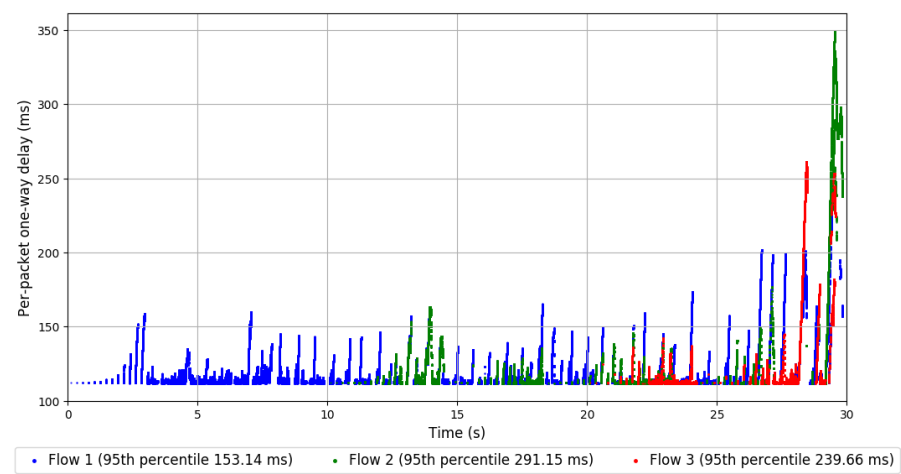
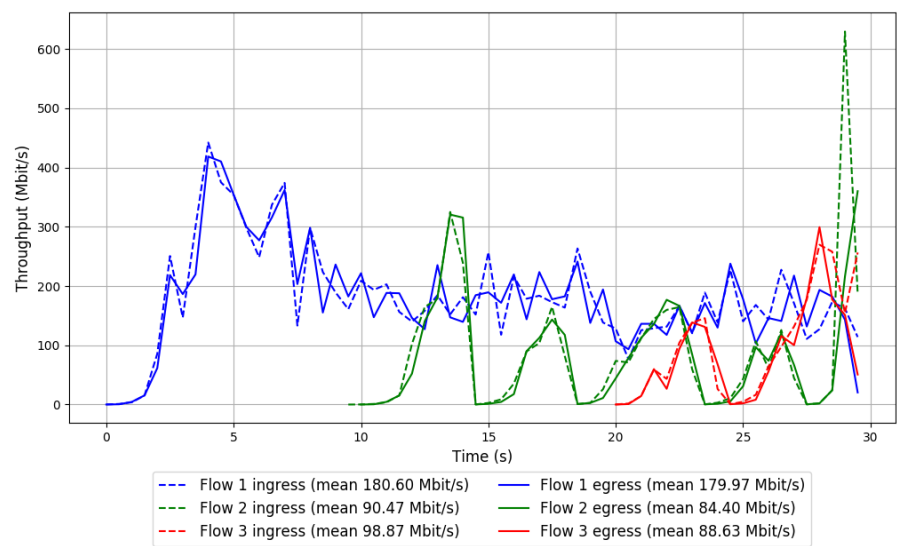
-- Flow 3:

Average throughput: 88.63 Mbit/s

95th percentile per-packet one-way delay: 239.664 ms

Loss rate: 14.76%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-02-20 19:18:05

End at: 2018-02-20 19:18:35

Below is generated by plot.py at 2018-02-21 00:25:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 166.89 Mbit/s

95th percentile per-packet one-way delay: 265.669 ms

Loss rate: 4.77%

-- Flow 1:

Average throughput: 122.21 Mbit/s

95th percentile per-packet one-way delay: 278.138 ms

Loss rate: 4.80%

-- Flow 2:

Average throughput: 55.29 Mbit/s

95th percentile per-packet one-way delay: 167.692 ms

Loss rate: 3.66%

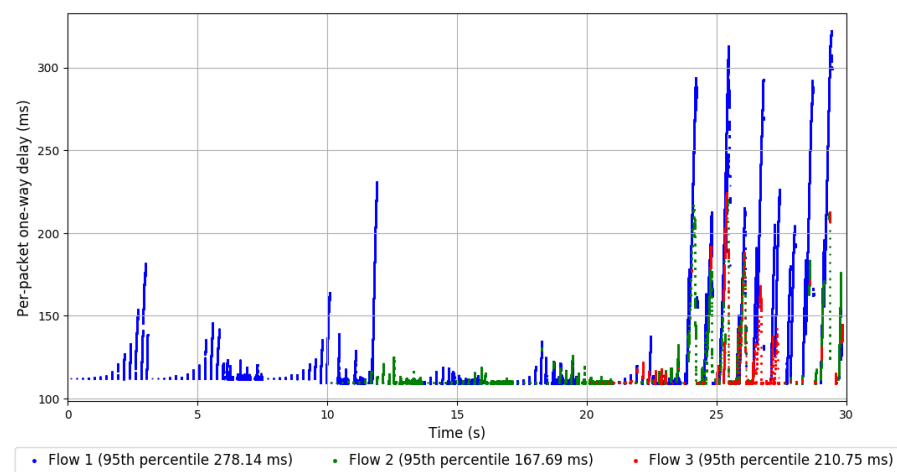
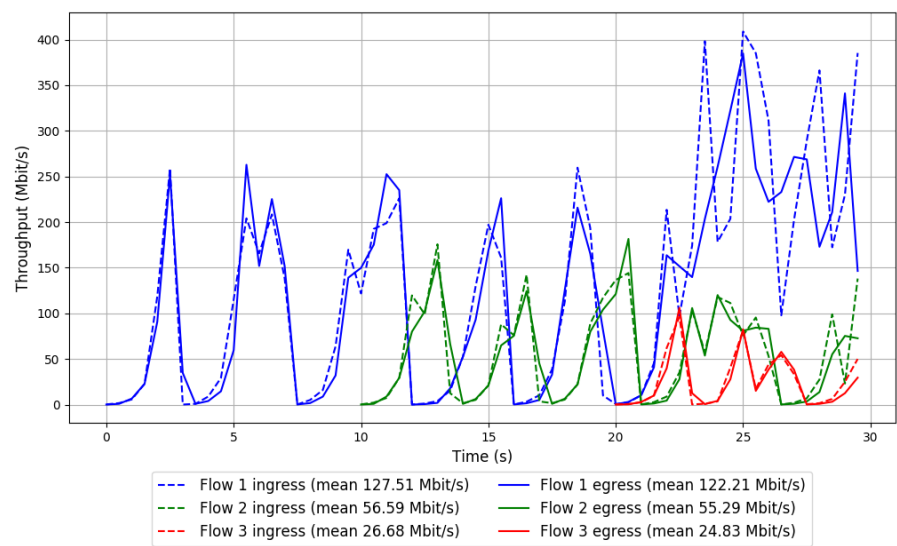
-- Flow 3:

Average throughput: 24.83 Mbit/s

95th percentile per-packet one-way delay: 210.745 ms

Loss rate: 9.03%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-02-20 19:37:37

End at: 2018-02-20 19:38:07

Below is generated by plot.py at 2018-02-21 00:25:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 220.62 Mbit/s

95th percentile per-packet one-way delay: 191.966 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 149.31 Mbit/s

95th percentile per-packet one-way delay: 197.837 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 48.38 Mbit/s

95th percentile per-packet one-way delay: 163.627 ms

Loss rate: 2.59%

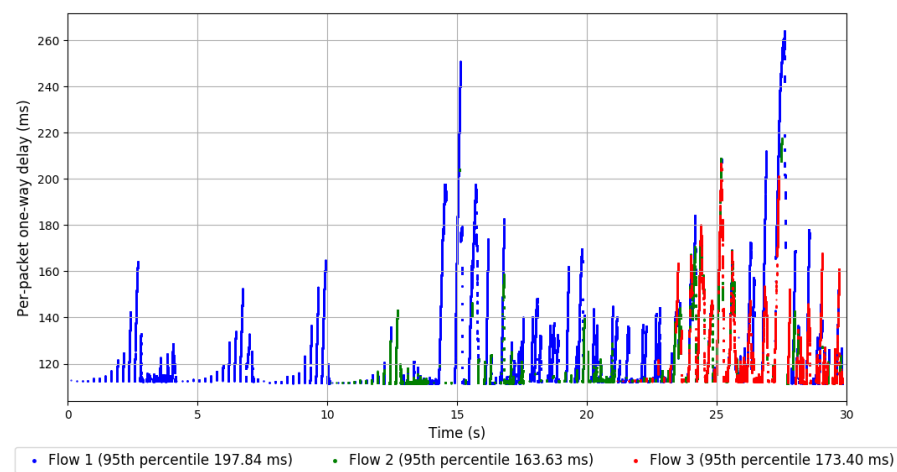
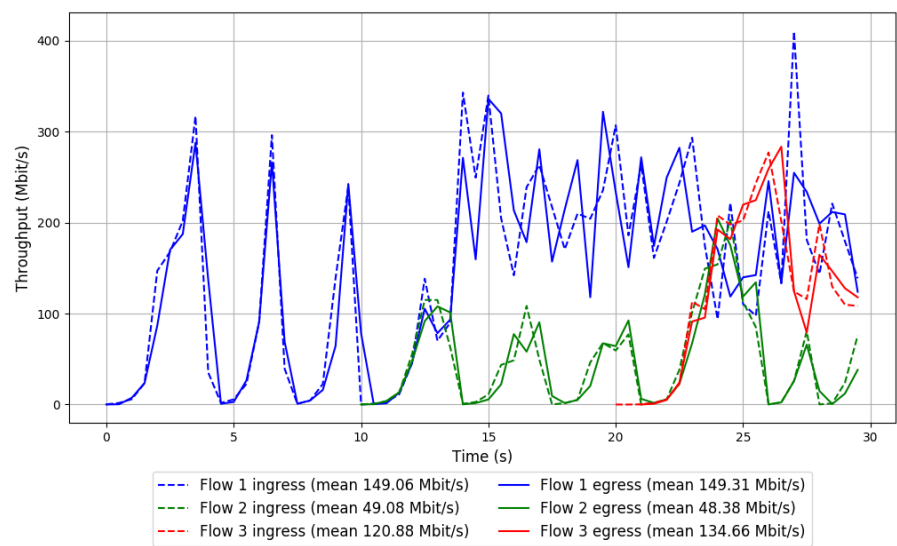
-- Flow 3:

Average throughput: 134.66 Mbit/s

95th percentile per-packet one-way delay: 173.402 ms

Loss rate: 1.10%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-02-20 19:57:38

End at: 2018-02-20 19:58:08

Below is generated by plot.py at 2018-02-21 00:26:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 201.46 Mbit/s

95th percentile per-packet one-way delay: 201.356 ms

Loss rate: 2.38%

-- Flow 1:

Average throughput: 66.26 Mbit/s

95th percentile per-packet one-way delay: 167.670 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 173.97 Mbit/s

95th percentile per-packet one-way delay: 188.014 ms

Loss rate: 2.48%

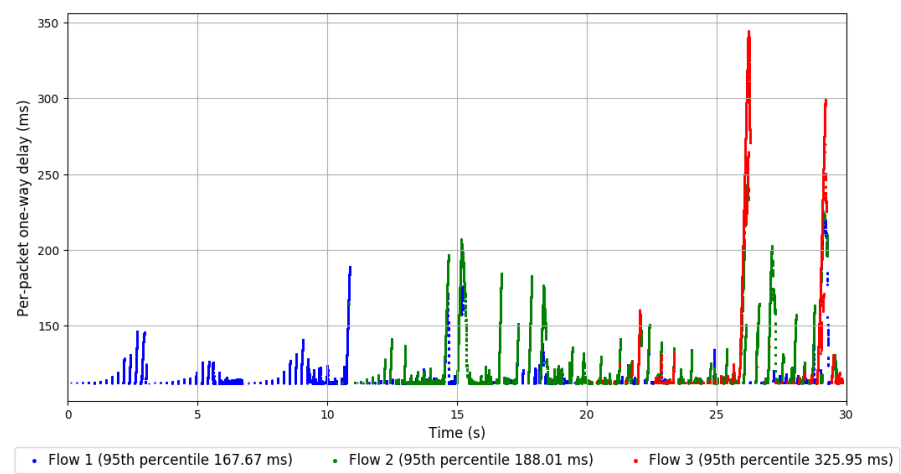
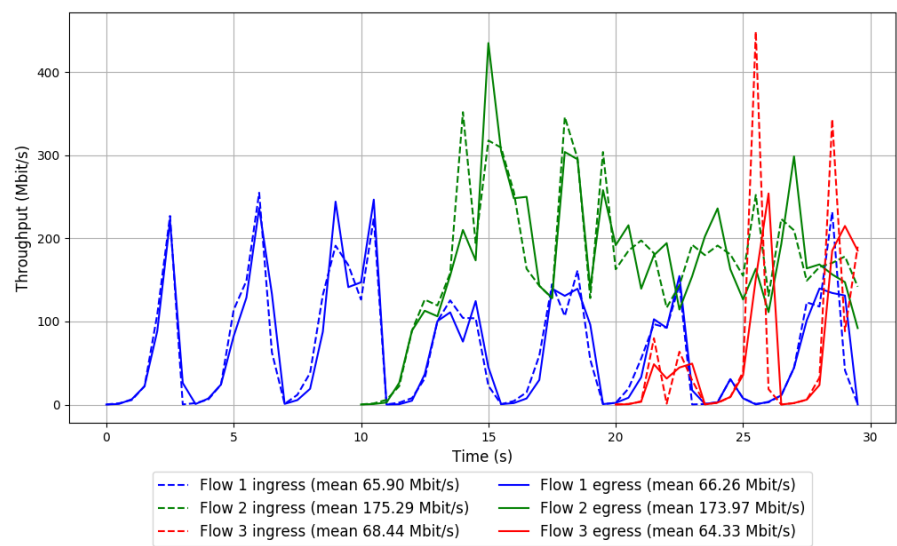
-- Flow 3:

Average throughput: 64.33 Mbit/s

95th percentile per-packet one-way delay: 325.948 ms

Loss rate: 8.15%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-02-20 20:17:27

End at: 2018-02-20 20:17:57

Below is generated by plot.py at 2018-02-21 00:27:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 243.71 Mbit/s

95th percentile per-packet one-way delay: 154.136 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 163.56 Mbit/s

95th percentile per-packet one-way delay: 146.334 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 96.23 Mbit/s

95th percentile per-packet one-way delay: 164.923 ms

Loss rate: 1.65%

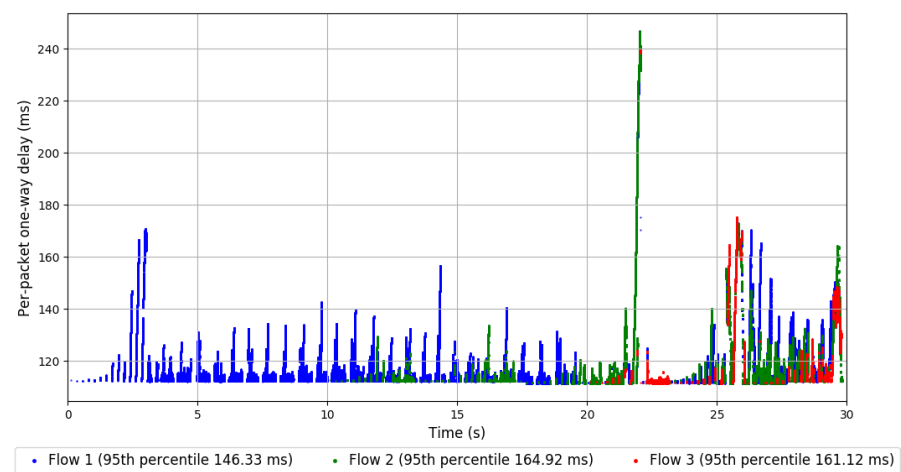
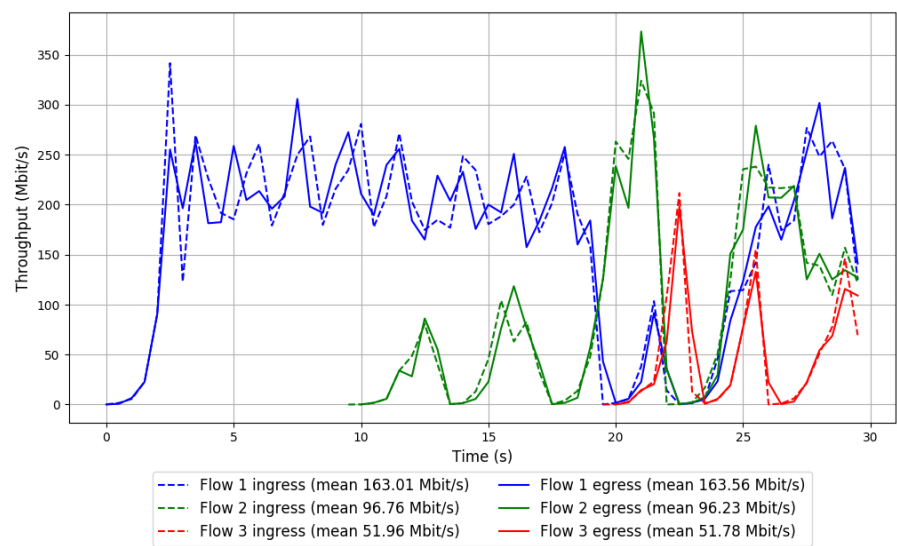
-- Flow 3:

Average throughput: 51.78 Mbit/s

95th percentile per-packet one-way delay: 161.122 ms

Loss rate: 0.16%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-02-20 17:01:14

End at: 2018-02-20 17:01:44

Below is generated by plot.py at 2018-02-21 00:28:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.93 Mbit/s

95th percentile per-packet one-way delay: 112.946 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 80.36 Mbit/s

95th percentile per-packet one-way delay: 112.996 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 62.79 Mbit/s

95th percentile per-packet one-way delay: 112.330 ms

Loss rate: 0.85%

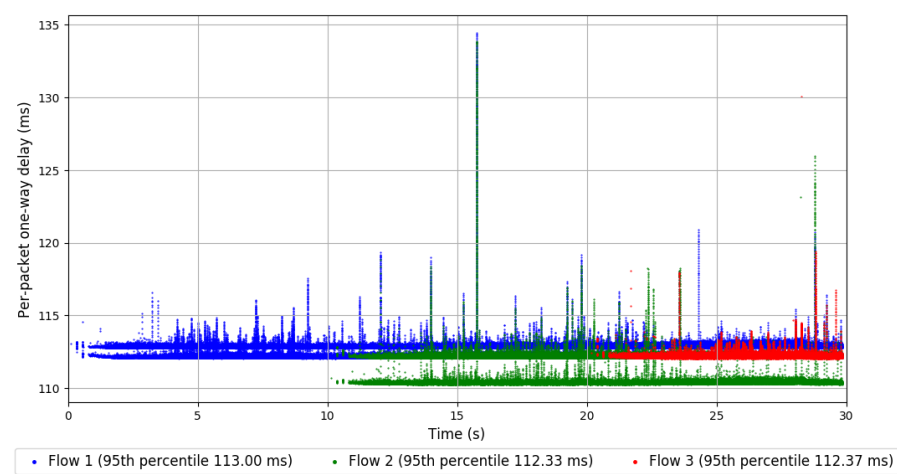
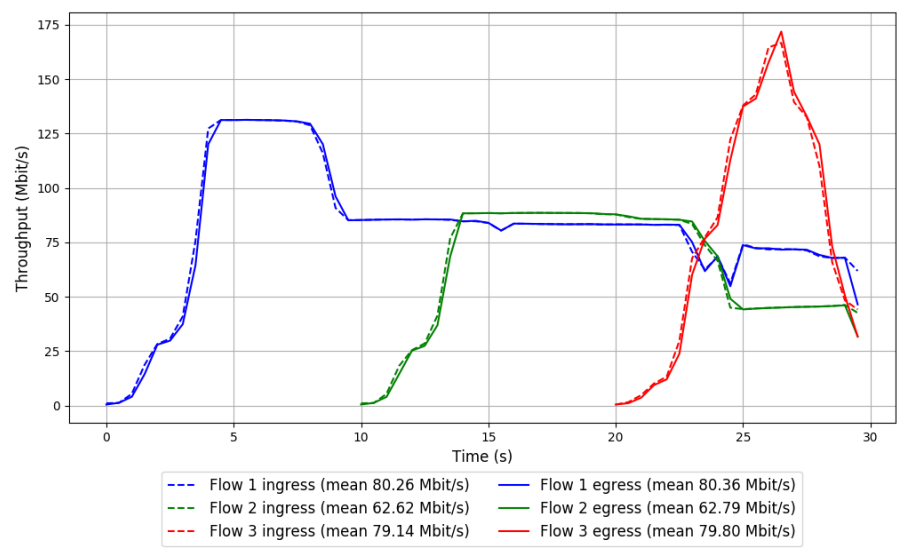
-- Flow 3:

Average throughput: 79.80 Mbit/s

95th percentile per-packet one-way delay: 112.366 ms

Loss rate: 1.46%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-02-20 17:20:46

End at: 2018-02-20 17:21:16

Below is generated by plot.py at 2018-02-21 00:28:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.25 Mbit/s

95th percentile per-packet one-way delay: 112.595 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 70.41 Mbit/s

95th percentile per-packet one-way delay: 112.604 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 67.58 Mbit/s

95th percentile per-packet one-way delay: 112.412 ms

Loss rate: 0.83%

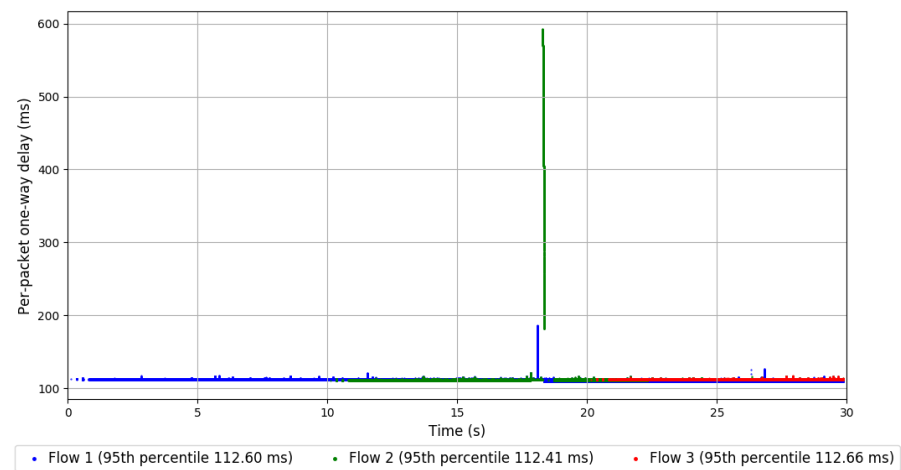
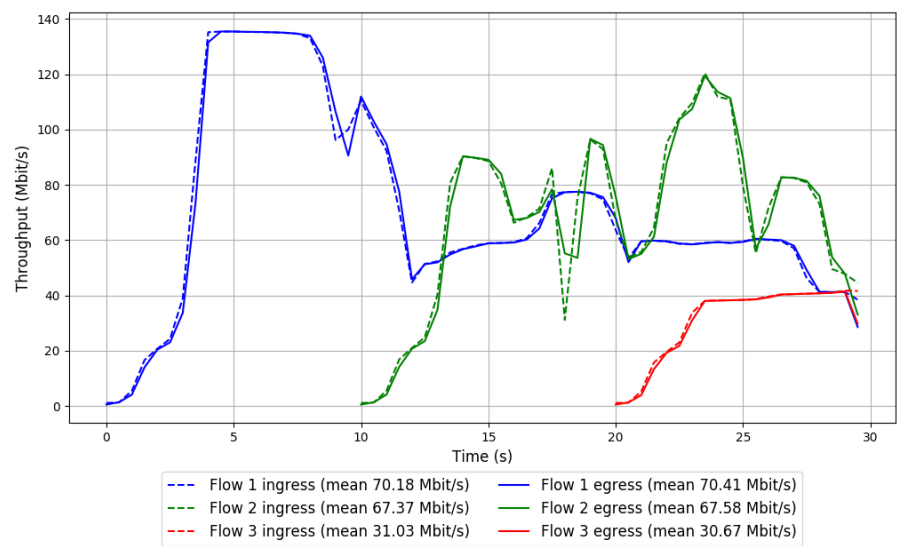
-- Flow 3:

Average throughput: 30.67 Mbit/s

95th percentile per-packet one-way delay: 112.660 ms

Loss rate: 3.46%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-02-20 17:40:28

End at: 2018-02-20 17:40:58

Below is generated by plot.py at 2018-02-21 00:28:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.26 Mbit/s

95th percentile per-packet one-way delay: 113.990 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 72.60 Mbit/s

95th percentile per-packet one-way delay: 112.355 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 63.55 Mbit/s

95th percentile per-packet one-way delay: 114.085 ms

Loss rate: 0.74%

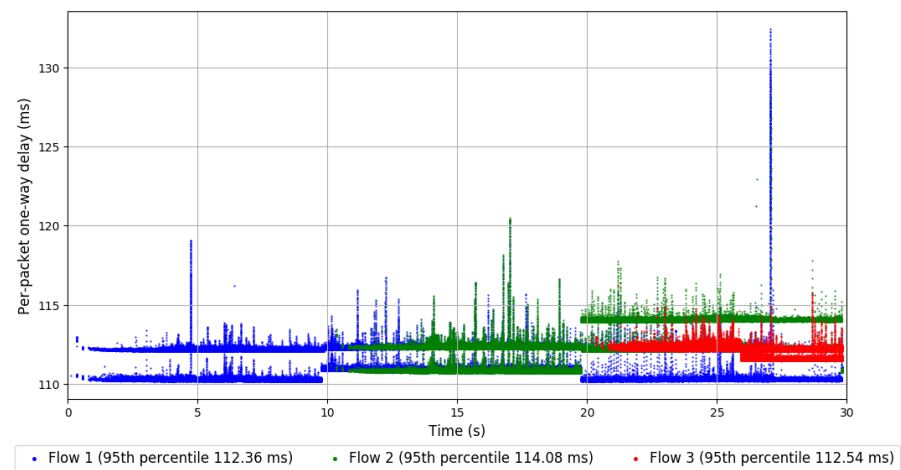
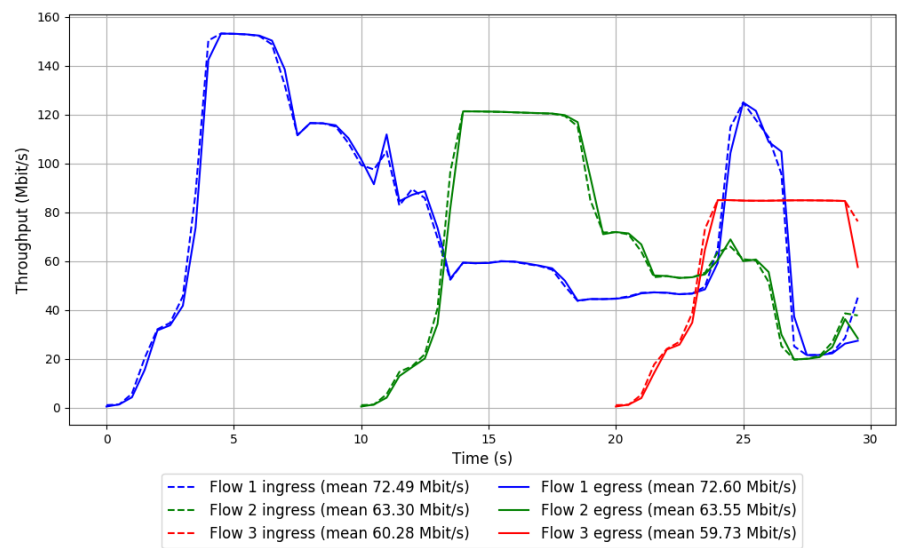
-- Flow 3:

Average throughput: 59.73 Mbit/s

95th percentile per-packet one-way delay: 112.543 ms

Loss rate: 3.15%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-02-20 18:00:38

End at: 2018-02-20 18:01:08

Below is generated by plot.py at 2018-02-21 00:28:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.01 Mbit/s

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

Loss rate: 0.91%

-- Flow 1:

Average throughput: 74.69 Mbit/s

95th percentile per-packet one-way delay: 112.607 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 58.43 Mbit/s

95th percentile per-packet one-way delay: 112.639 ms

Loss rate: 1.63%

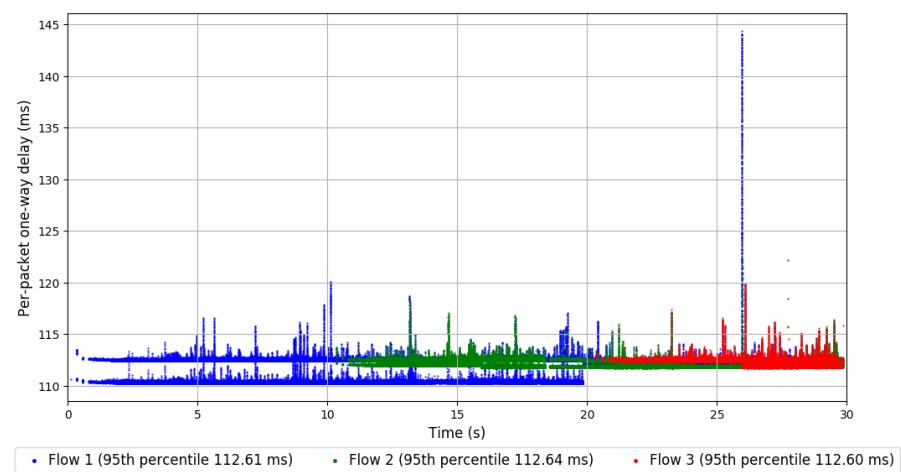
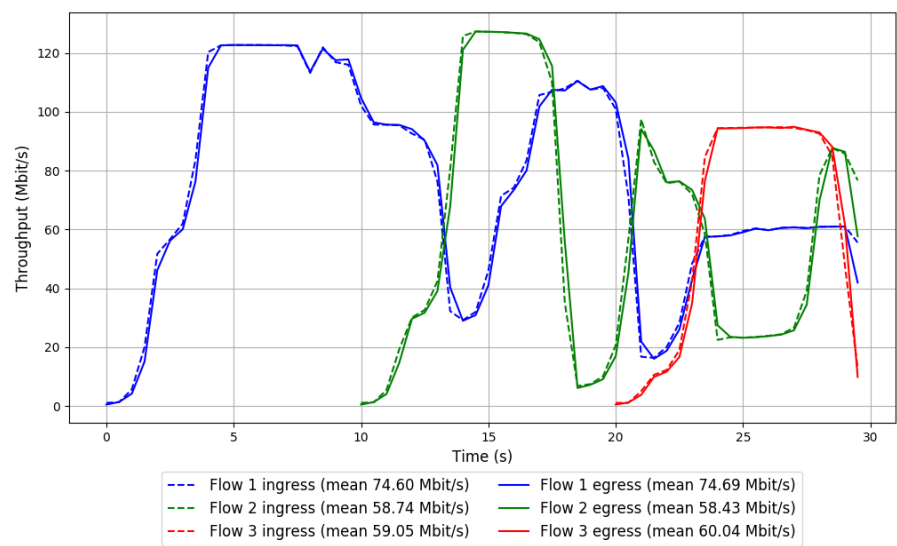
-- Flow 3:

Average throughput: 60.04 Mbit/s

95th percentile per-packet one-way delay: 112.600 ms

Loss rate: 0.59%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-02-20 18:20:44

End at: 2018-02-20 18:21:14

Below is generated by plot.py at 2018-02-21 00:29:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.40 Mbit/s

95th percentile per-packet one-way delay: 112.665 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 76.72 Mbit/s

95th percentile per-packet one-way delay: 112.684 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 79.38 Mbit/s

95th percentile per-packet one-way delay: 112.649 ms

Loss rate: 1.33%

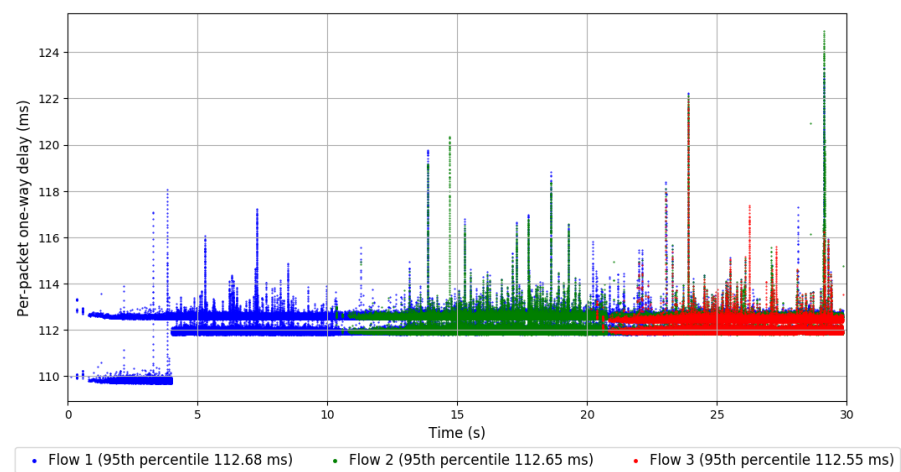
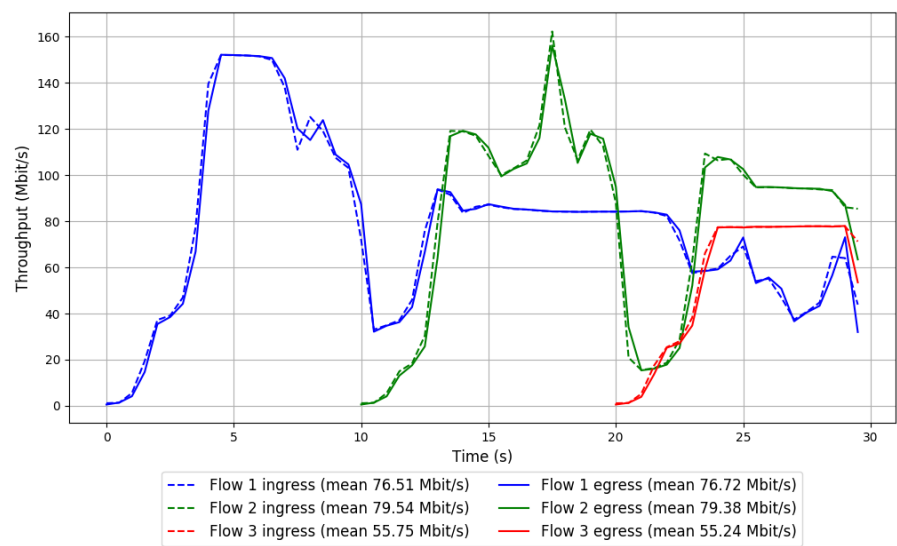
-- Flow 3:

Average throughput: 55.24 Mbit/s

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

Loss rate: 3.17%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-02-20 18:40:37

End at: 2018-02-20 18:41:07

Below is generated by plot.py at 2018-02-21 00:30:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.91 Mbit/s

95th percentile per-packet one-way delay: 112.630 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 62.47 Mbit/s

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

Loss rate: 0.53%

-- Flow 2:

Average throughput: 70.00 Mbit/s

95th percentile per-packet one-way delay: 112.630 ms

Loss rate: 1.01%

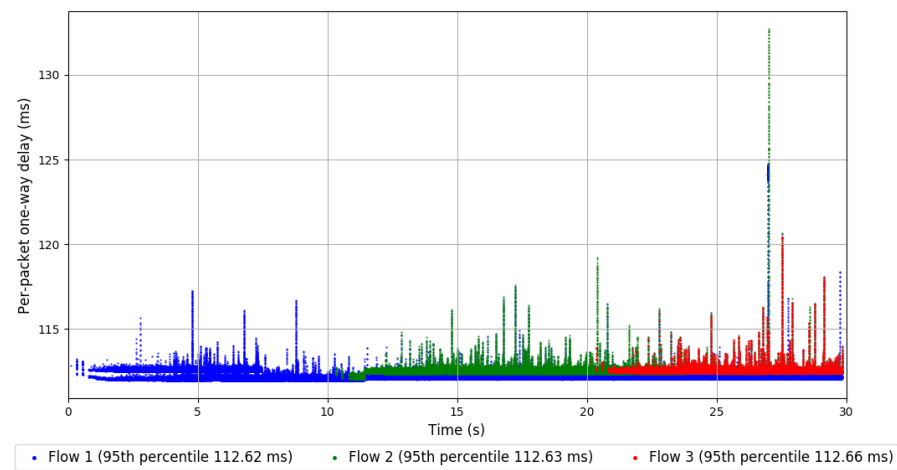
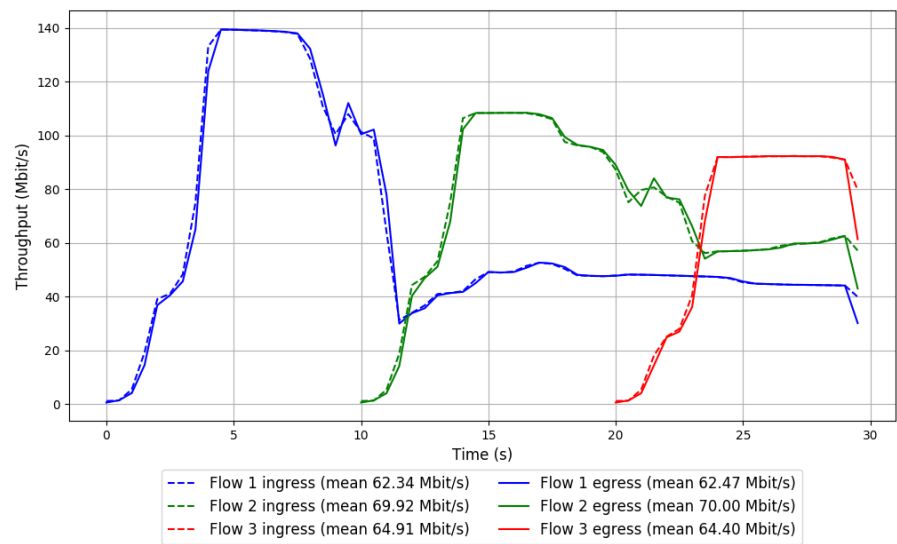
-- Flow 3:

Average throughput: 64.40 Mbit/s

95th percentile per-packet one-way delay: 112.658 ms

Loss rate: 3.01%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-02-20 19:00:27

End at: 2018-02-20 19:00:57

Below is generated by plot.py at 2018-02-21 00:31:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.47 Mbit/s

95th percentile per-packet one-way delay: 112.228 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 82.61 Mbit/s

95th percentile per-packet one-way delay: 112.014 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 62.02 Mbit/s

95th percentile per-packet one-way delay: 112.051 ms

Loss rate: 1.07%

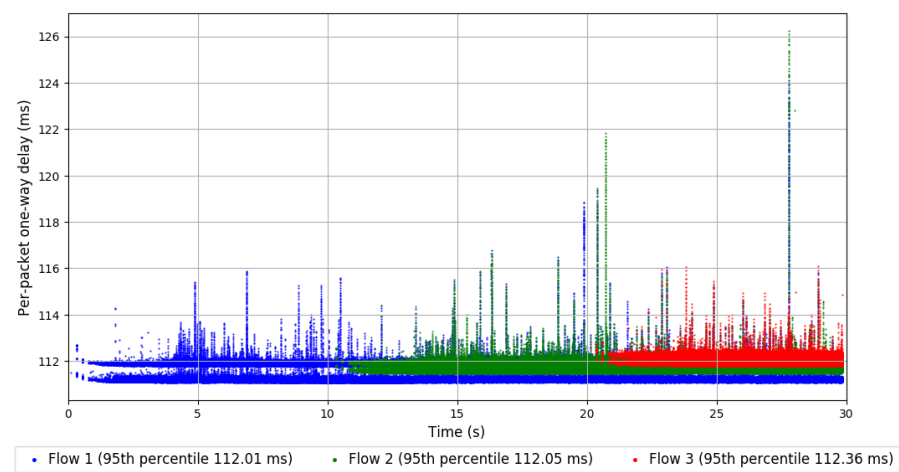
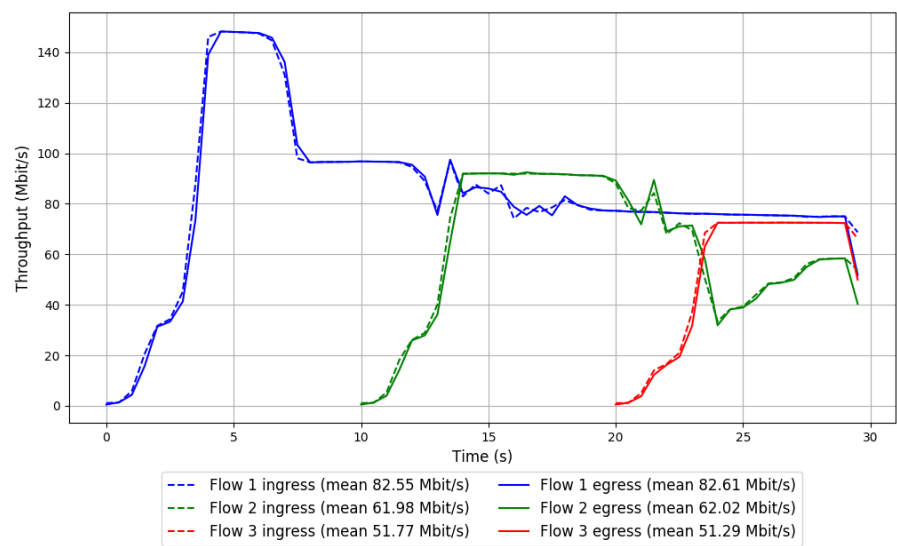
-- Flow 3:

Average throughput: 51.29 Mbit/s

95th percentile per-packet one-way delay: 112.355 ms

Loss rate: 3.16%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-02-20 19:19:59

End at: 2018-02-20 19:20:29

Below is generated by plot.py at 2018-02-21 00:31:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.20 Mbit/s

95th percentile per-packet one-way delay: 112.579 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 82.88 Mbit/s

95th percentile per-packet one-way delay: 111.706 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 56.36 Mbit/s

95th percentile per-packet one-way delay: 112.660 ms

Loss rate: 1.07%

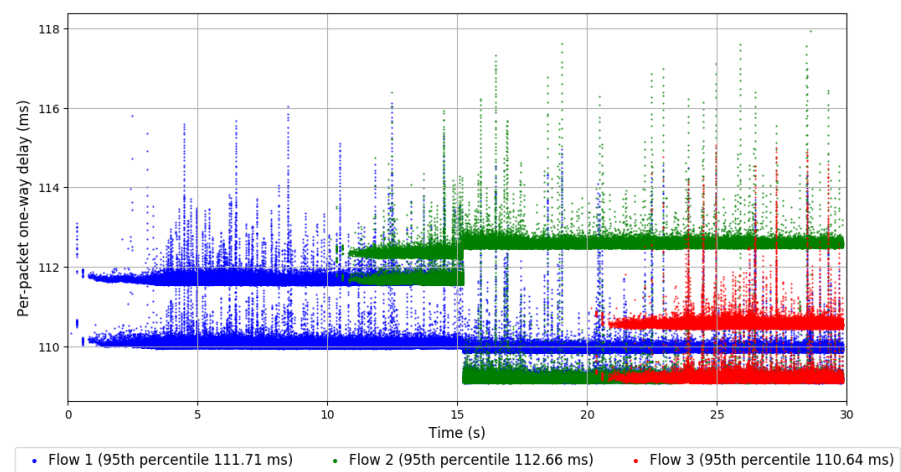
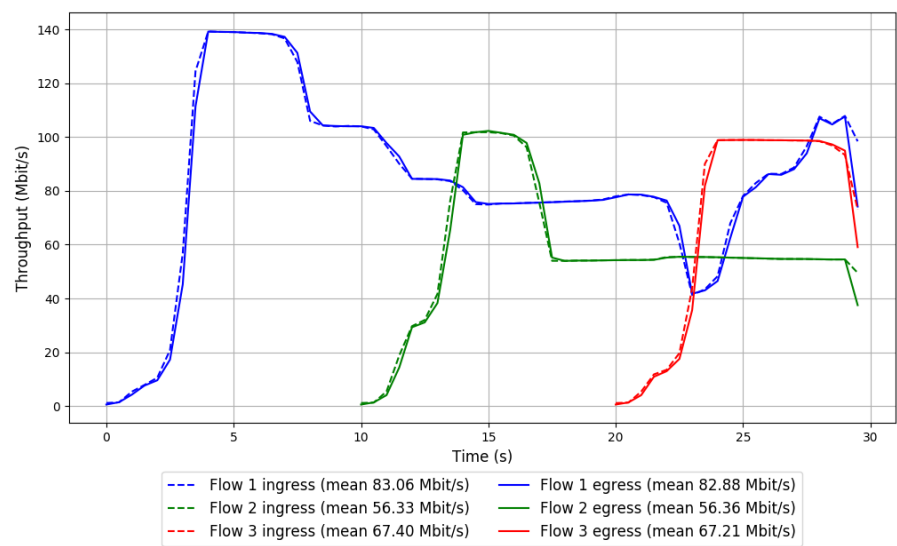
-- Flow 3:

Average throughput: 67.21 Mbit/s

95th percentile per-packet one-way delay: 110.645 ms

Loss rate: 2.50%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-02-20 19:39:34

End at: 2018-02-20 19:40:04

Below is generated by plot.py at 2018-02-21 00:38:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 333.84 Mbit/s

95th percentile per-packet one-way delay: 297.085 ms

Loss rate: 31.25%

-- Flow 1:

Average throughput: 199.44 Mbit/s

95th percentile per-packet one-way delay: 295.079 ms

Loss rate: 31.80%

-- Flow 2:

Average throughput: 289.78 Mbit/s

95th percentile per-packet one-way delay: 298.150 ms

Loss rate: 30.43%

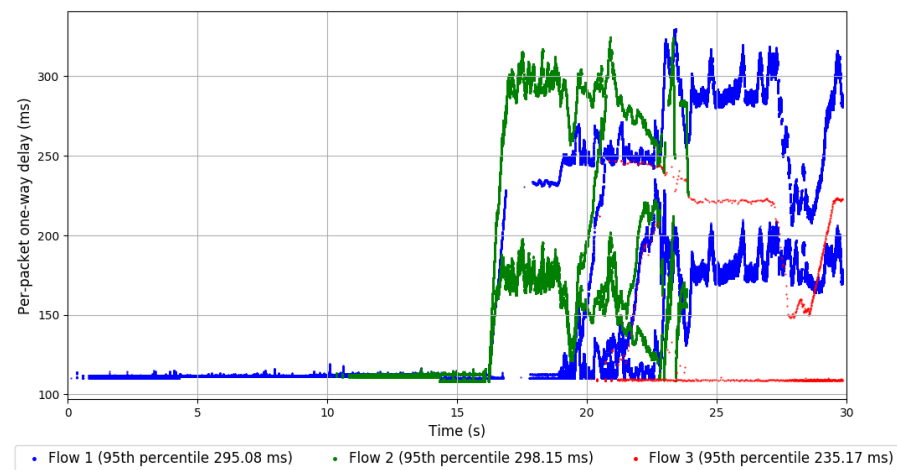
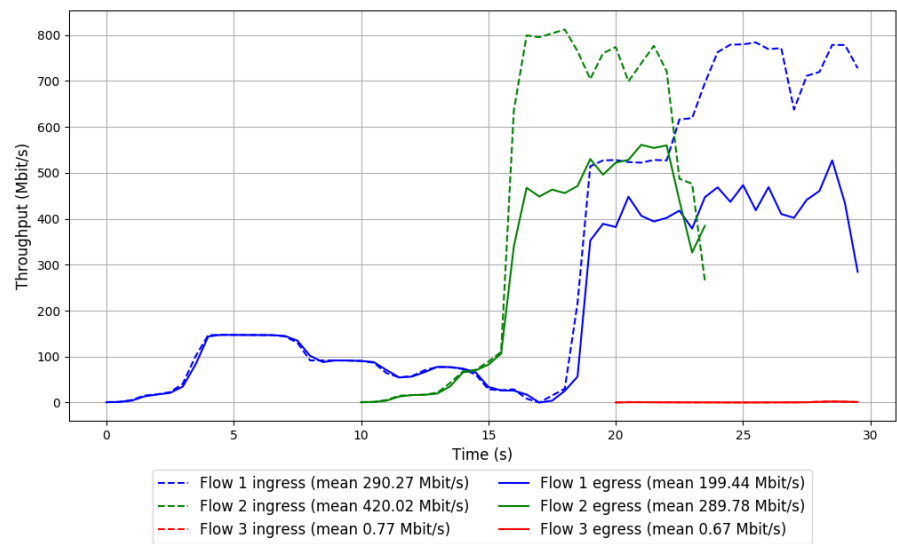
-- Flow 3:

Average throughput: 0.67 Mbit/s

95th percentile per-packet one-way delay: 235.169 ms

Loss rate: 15.11%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-02-20 19:59:34

End at: 2018-02-20 20:00:04

Below is generated by plot.py at 2018-02-21 00:38:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 155.13 Mbit/s

95th percentile per-packet one-way delay: 112.562 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 89.16 Mbit/s

95th percentile per-packet one-way delay: 112.551 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 67.20 Mbit/s

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

Loss rate: 0.88%

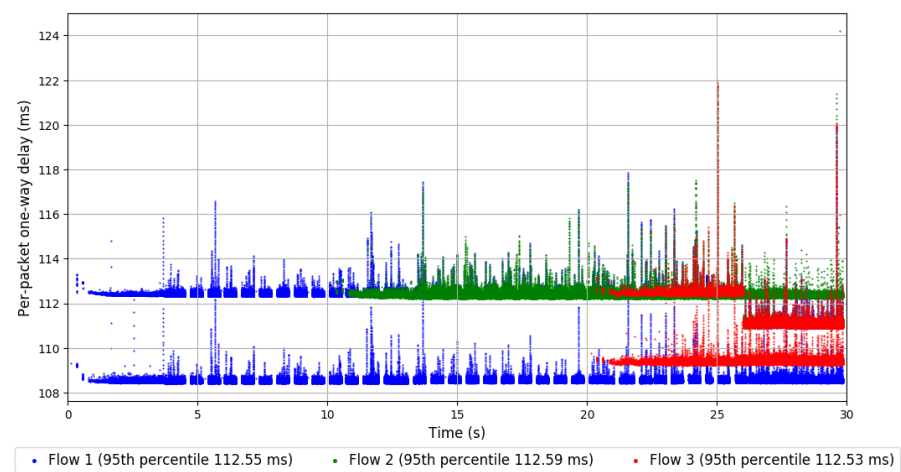
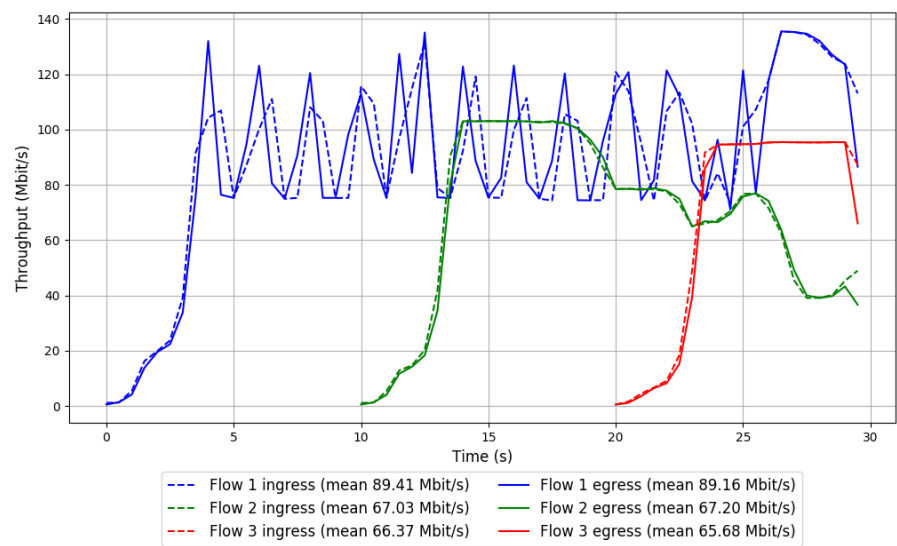
-- Flow 3:

Average throughput: 65.68 Mbit/s

95th percentile per-packet one-way delay: 112.534 ms

Loss rate: 3.22%

Run 10: Report of Copa — Data Link

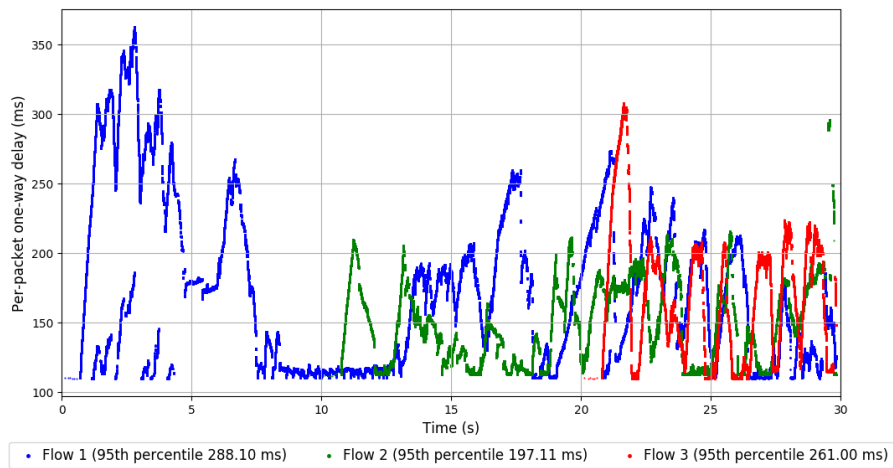
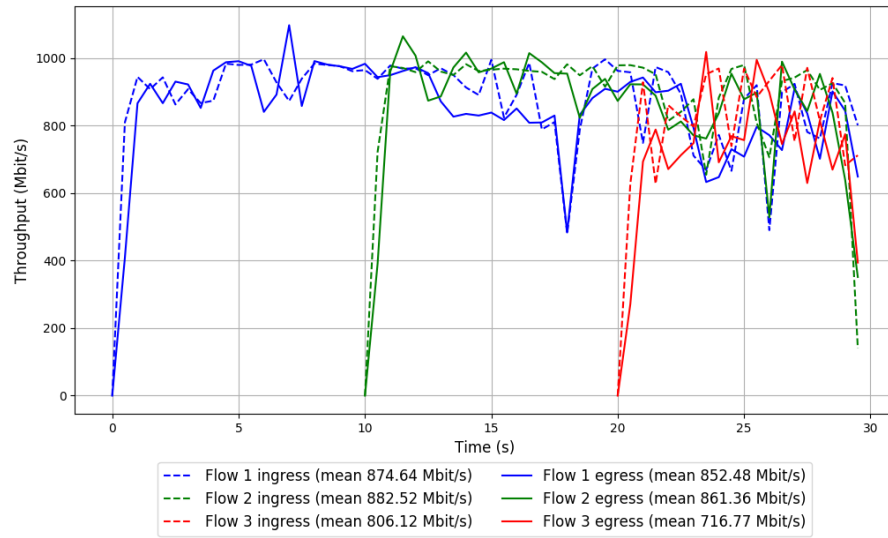


```
Run 1: Statistics of FillP

Start at: 2018-02-20 17:08:38
End at: 2018-02-20 17:09:08

# Below is generated by plot.py at 2018-02-21 00:57:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1657.34 Mbit/s
95th percentile per-packet one-way delay: 264.672 ms
Loss rate: 4.85%
-- Flow 1:
Average throughput: 852.48 Mbit/s
95th percentile per-packet one-way delay: 288.101 ms
Loss rate: 3.25%
-- Flow 2:
Average throughput: 861.36 Mbit/s
95th percentile per-packet one-way delay: 197.108 ms
Loss rate: 3.49%
-- Flow 3:
Average throughput: 716.77 Mbit/s
95th percentile per-packet one-way delay: 260.998 ms
Loss rate: 13.07%
```


Run 1: Report of FillP — Data Link

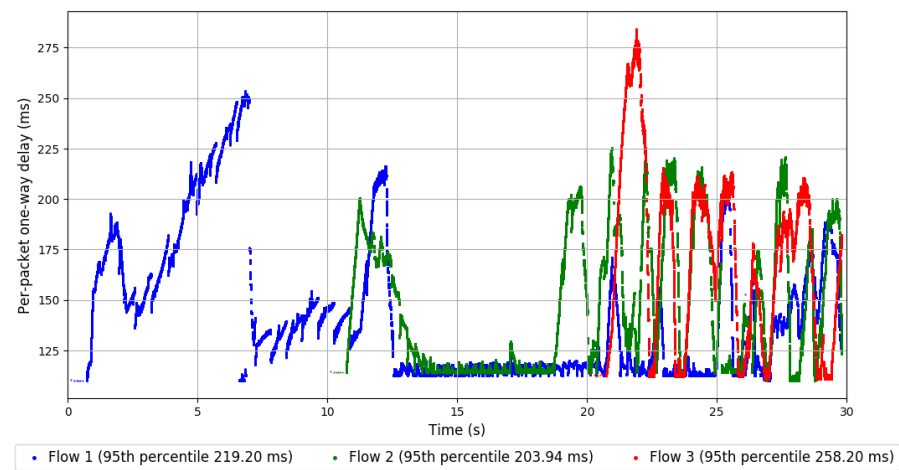
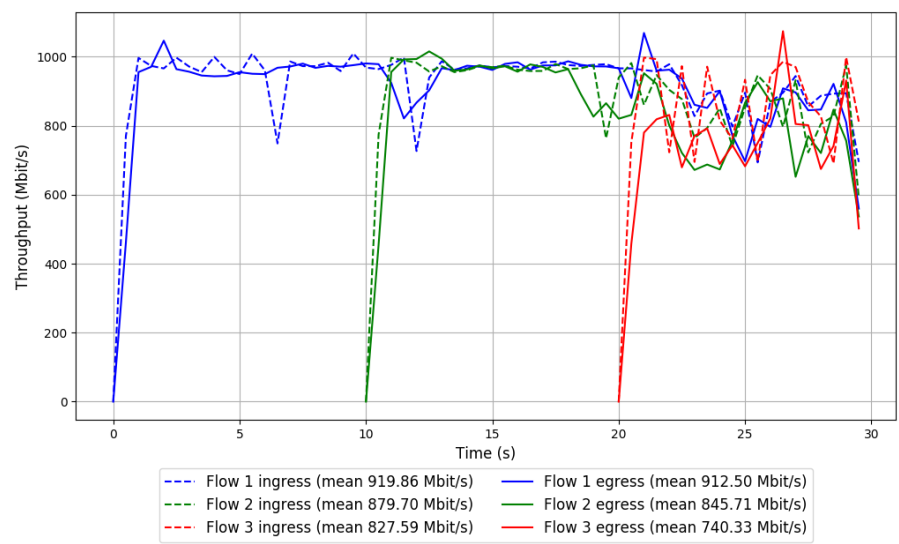


```
Run 2: Statistics of FillP

Start at: 2018-02-20 17:28:07
End at: 2018-02-20 17:28:37

# Below is generated by plot.py at 2018-02-21 00:58:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1714.82 Mbit/s
95th percentile per-packet one-way delay: 215.117 ms
Loss rate: 4.36%
-- Flow 1:
Average throughput: 912.50 Mbit/s
95th percentile per-packet one-way delay: 219.196 ms
Loss rate: 1.54%
-- Flow 2:
Average throughput: 845.71 Mbit/s
95th percentile per-packet one-way delay: 203.936 ms
Loss rate: 4.96%
-- Flow 3:
Average throughput: 740.33 Mbit/s
95th percentile per-packet one-way delay: 258.197 ms
Loss rate: 12.58%
```

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-02-20 17:48:18

End at: 2018-02-20 17:48:48

Below is generated by plot.py at 2018-02-21 00:58:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 1654.33 Mbit/s

95th percentile per-packet one-way delay: 324.912 ms

Loss rate: 3.78%

-- Flow 1:

Average throughput: 851.53 Mbit/s

95th percentile per-packet one-way delay: 336.135 ms

Loss rate: 2.78%

-- Flow 2:

Average throughput: 838.99 Mbit/s

95th percentile per-packet one-way delay: 196.286 ms

Loss rate: 2.53%

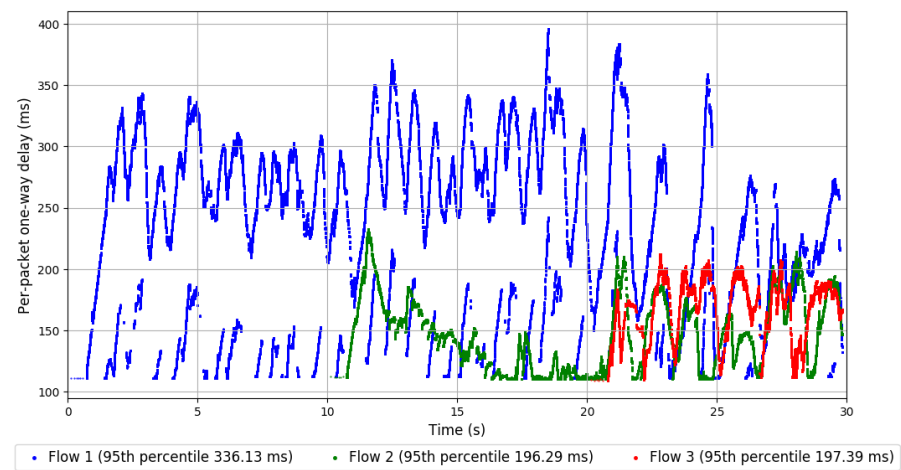
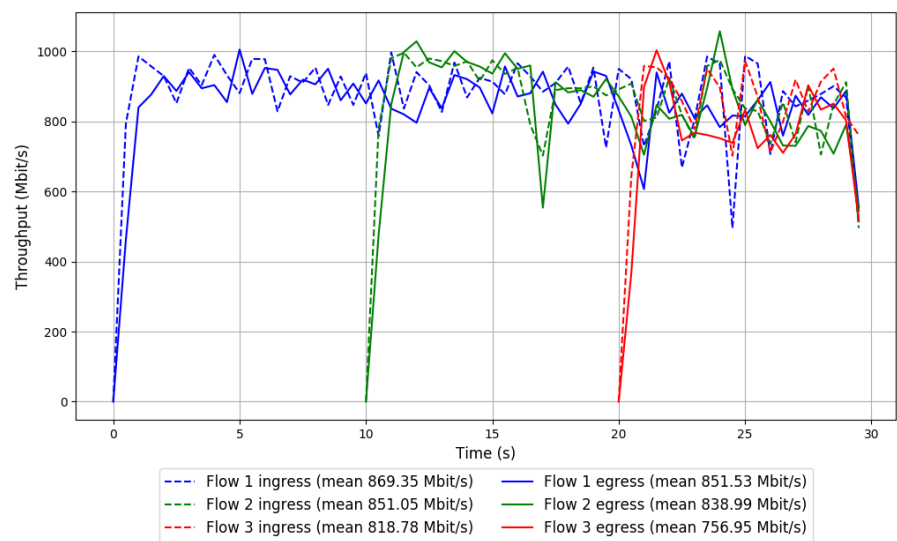
-- Flow 3:

Average throughput: 756.95 Mbit/s

95th percentile per-packet one-way delay: 197.387 ms

Loss rate: 9.62%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-02-20 18:08:48

End at: 2018-02-20 18:09:18

Below is generated by plot.py at 2018-02-21 00:58:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 1162.24 Mbit/s

95th percentile per-packet one-way delay: 402.356 ms

Loss rate: 5.68%

-- Flow 1:

Average throughput: 673.22 Mbit/s

95th percentile per-packet one-way delay: 386.315 ms

Loss rate: 4.99%

-- Flow 2:

Average throughput: 523.15 Mbit/s

95th percentile per-packet one-way delay: 402.316 ms

Loss rate: 7.08%

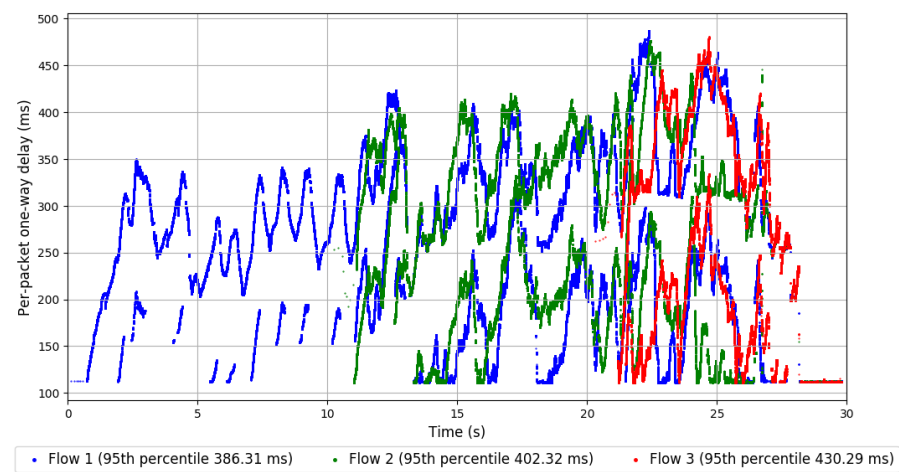
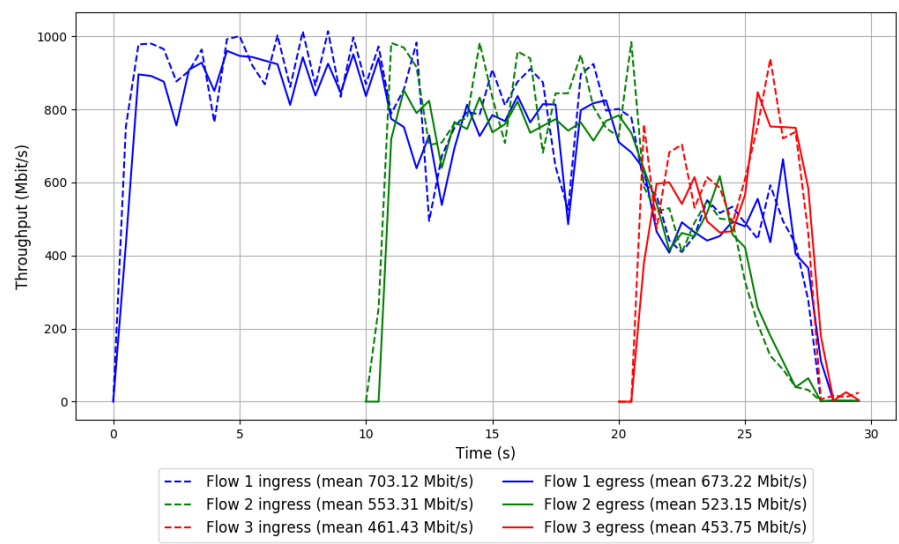
-- Flow 3:

Average throughput: 453.75 Mbit/s

95th percentile per-packet one-way delay: 430.285 ms

Loss rate: 5.47%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-02-20 18:28:13

End at: 2018-02-20 18:28:43

Below is generated by plot.py at 2018-02-21 01:00:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 1698.07 Mbit/s

95th percentile per-packet one-way delay: 239.905 ms

Loss rate: 4.73%

-- Flow 1:

Average throughput: 876.91 Mbit/s

95th percentile per-packet one-way delay: 241.667 ms

Loss rate: 3.77%

-- Flow 2:

Average throughput: 867.21 Mbit/s

95th percentile per-packet one-way delay: 191.368 ms

Loss rate: 3.90%

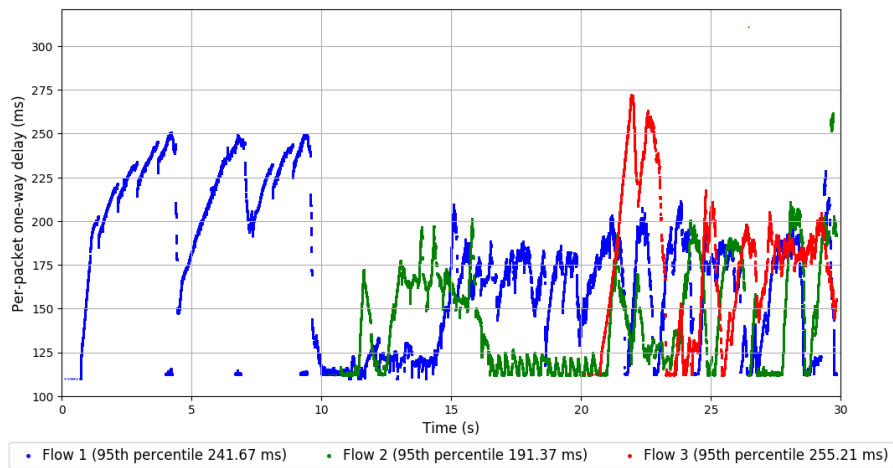
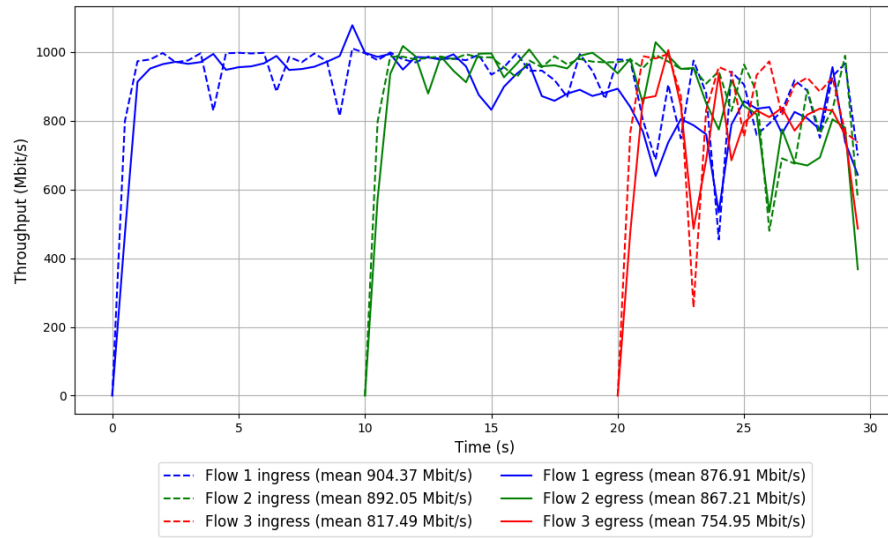
-- Flow 3:

Average throughput: 754.95 Mbit/s

95th percentile per-packet one-way delay: 255.211 ms

Loss rate: 9.77%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-02-20 18:48:12

End at: 2018-02-20 18:48:42

Below is generated by plot.py at 2018-02-21 01:02:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 1686.57 Mbit/s

95th percentile per-packet one-way delay: 233.559 ms

Loss rate: 4.71%

-- Flow 1:

Average throughput: 899.34 Mbit/s

95th percentile per-packet one-way delay: 190.408 ms

Loss rate: 3.04%

-- Flow 2:

Average throughput: 851.24 Mbit/s

95th percentile per-packet one-way delay: 277.134 ms

Loss rate: 5.50%

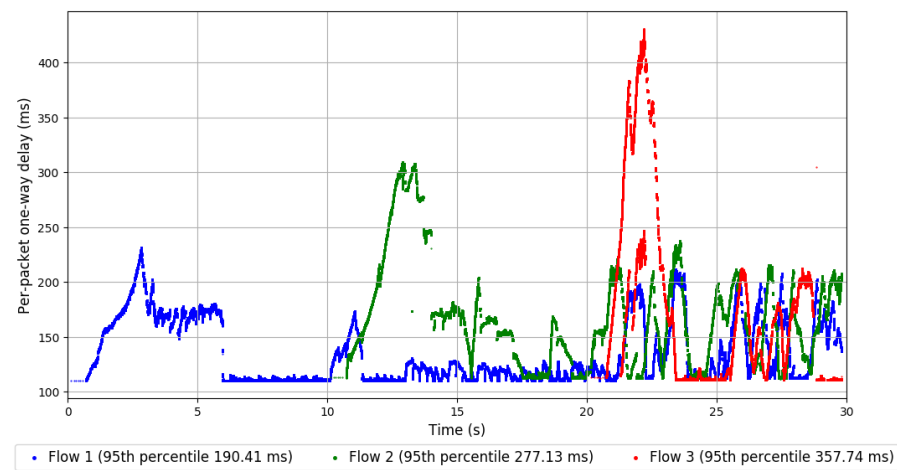
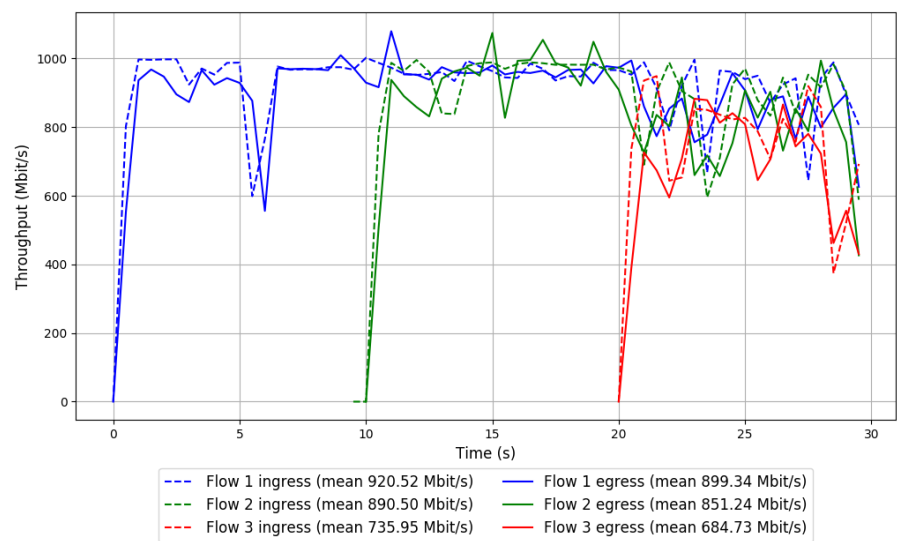
-- Flow 3:

Average throughput: 684.73 Mbit/s

95th percentile per-packet one-way delay: 357.742 ms

Loss rate: 9.08%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-02-20 19:07:57

End at: 2018-02-20 19:08:27

Below is generated by plot.py at 2018-02-21 01:02:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 1474.93 Mbit/s

95th percentile per-packet one-way delay: 328.559 ms

Loss rate: 6.22%

-- Flow 1:

Average throughput: 778.33 Mbit/s

95th percentile per-packet one-way delay: 323.530 ms

Loss rate: 3.13%

-- Flow 2:

Average throughput: 675.40 Mbit/s

95th percentile per-packet one-way delay: 340.092 ms

Loss rate: 9.66%

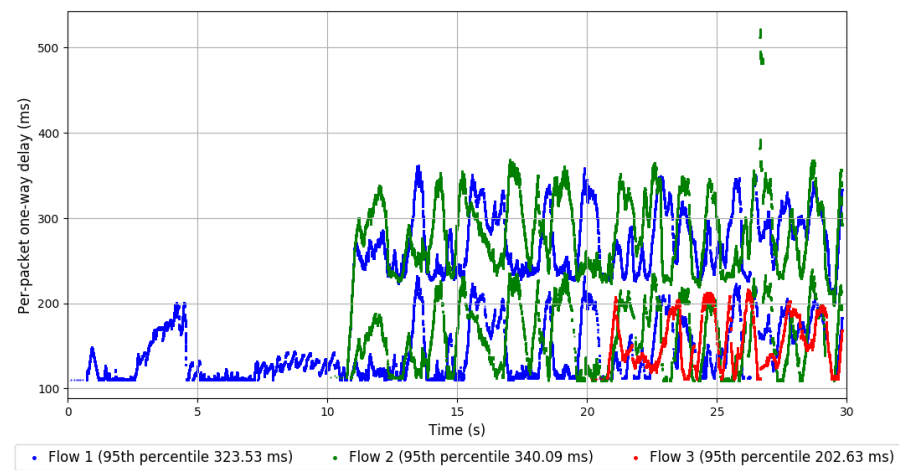
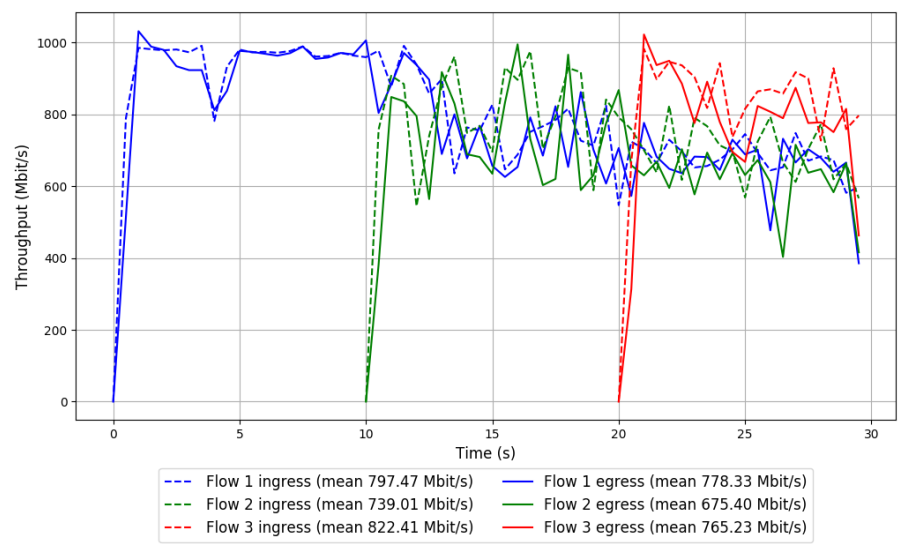
-- Flow 3:

Average throughput: 765.23 Mbit/s

95th percentile per-packet one-way delay: 202.627 ms

Loss rate: 9.09%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-02-20 19:27:27

End at: 2018-02-20 19:27:57

Below is generated by plot.py at 2018-02-21 01:10:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 1619.25 Mbit/s

95th percentile per-packet one-way delay: 208.019 ms

Loss rate: 7.75%

-- Flow 1:

Average throughput: 876.73 Mbit/s

95th percentile per-packet one-way delay: 196.542 ms

Loss rate: 4.71%

-- Flow 2:

Average throughput: 787.82 Mbit/s

95th percentile per-packet one-way delay: 204.387 ms

Loss rate: 10.29%

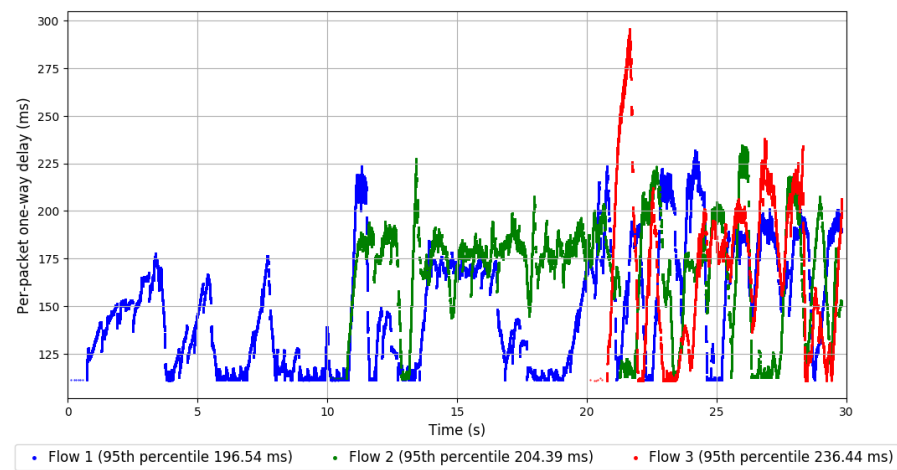
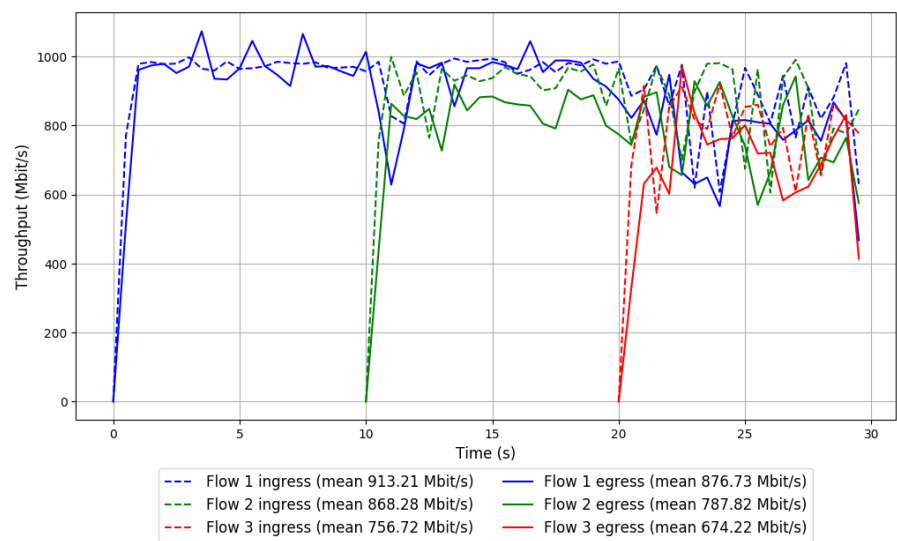
-- Flow 3:

Average throughput: 674.22 Mbit/s

95th percentile per-packet one-way delay: 236.435 ms

Loss rate: 12.92%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-02-20 19:47:19

End at: 2018-02-20 19:47:49

Below is generated by plot.py at 2018-02-21 01:21:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 1597.25 Mbit/s

95th percentile per-packet one-way delay: 309.112 ms

Loss rate: 4.14%

-- Flow 1:

Average throughput: 838.54 Mbit/s

95th percentile per-packet one-way delay: 307.203 ms

Loss rate: 3.08%

-- Flow 2:

Average throughput: 844.46 Mbit/s

95th percentile per-packet one-way delay: 206.453 ms

Loss rate: 3.98%

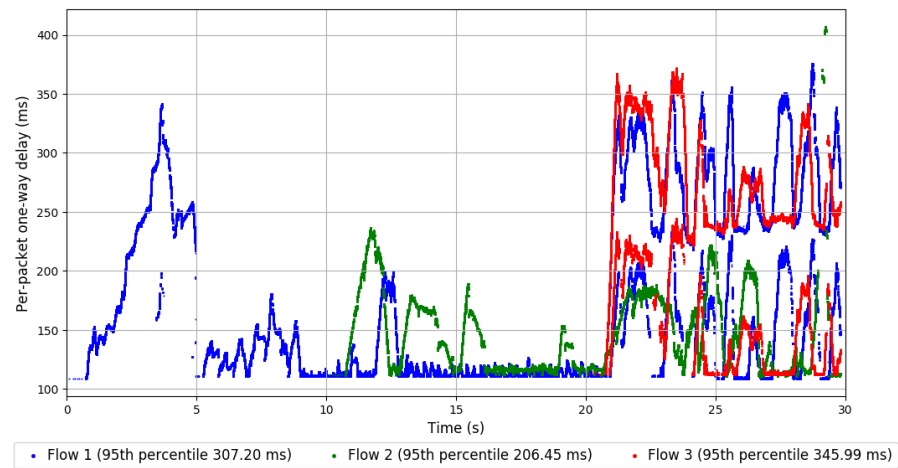
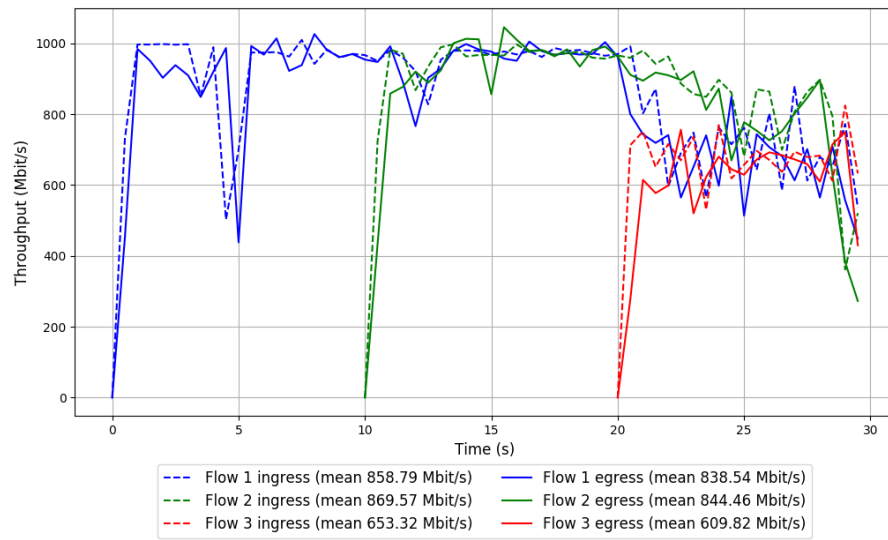
-- Flow 3:

Average throughput: 609.82 Mbit/s

95th percentile per-packet one-way delay: 345.985 ms

Loss rate: 8.78%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-02-20 20:06:56

End at: 2018-02-20 20:07:26

Below is generated by plot.py at 2018-02-21 01:29:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 1729.40 Mbit/s

95th percentile per-packet one-way delay: 204.736 ms

Loss rate: 4.86%

-- Flow 1:

Average throughput: 888.26 Mbit/s

95th percentile per-packet one-way delay: 193.261 ms

Loss rate: 4.19%

-- Flow 2:

Average throughput: 875.82 Mbit/s

95th percentile per-packet one-way delay: 189.751 ms

Loss rate: 4.23%

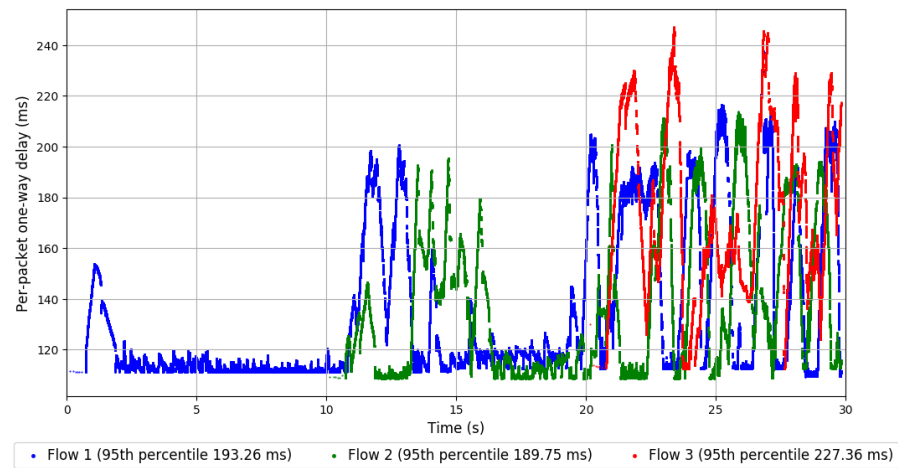
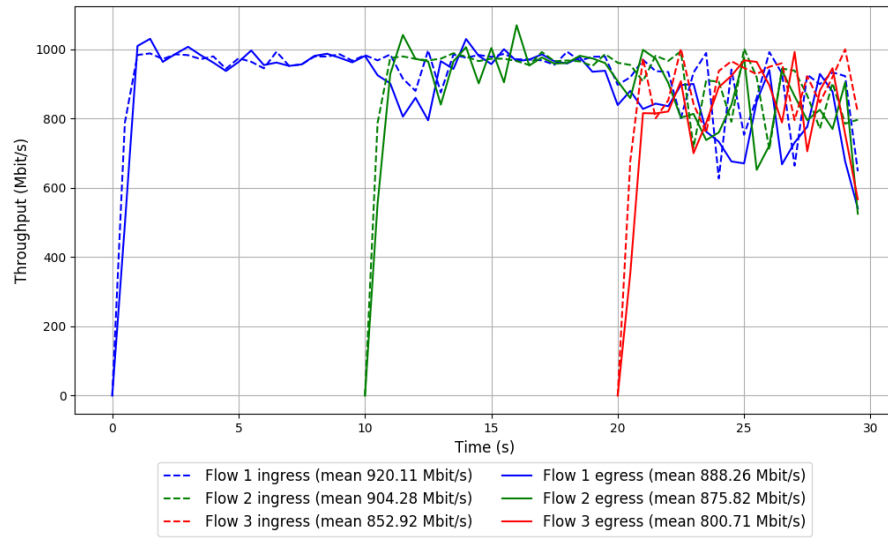
-- Flow 3:

Average throughput: 800.71 Mbit/s

95th percentile per-packet one-way delay: 227.358 ms

Loss rate: 8.41%

Run 10: Report of FillP — Data Link

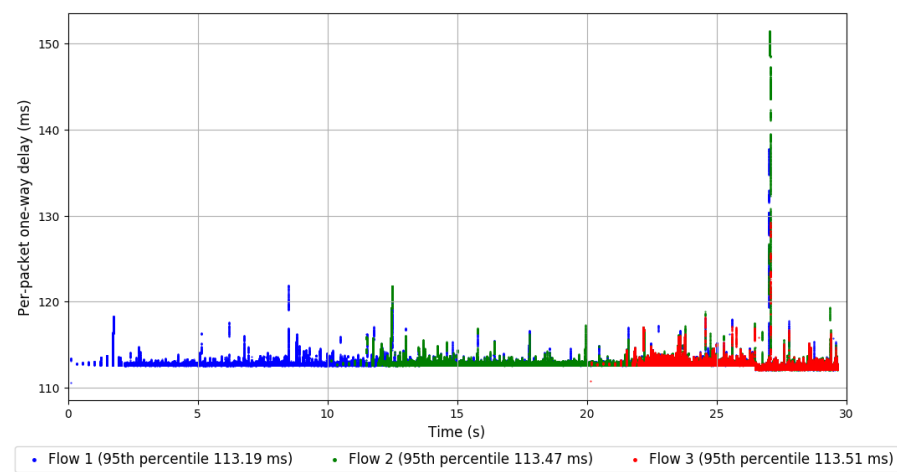
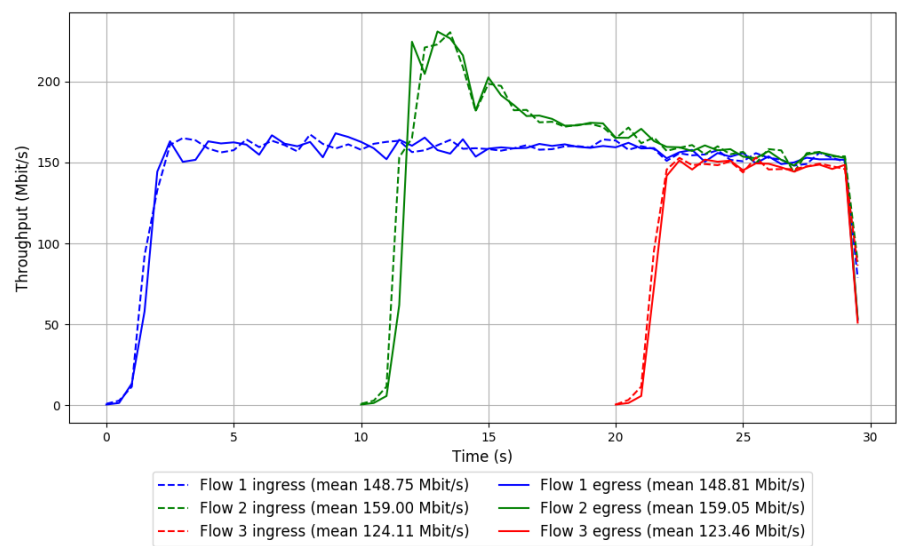


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-02-20 17:05:07
End at: 2018-02-20 17:05:37

# Below is generated by plot.py at 2018-02-21 01:29:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.61 Mbit/s
95th percentile per-packet one-way delay: 113.346 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 148.81 Mbit/s
95th percentile per-packet one-way delay: 113.187 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 159.05 Mbit/s
95th percentile per-packet one-way delay: 113.469 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 123.46 Mbit/s
95th percentile per-packet one-way delay: 113.507 ms
Loss rate: 2.80%
```

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

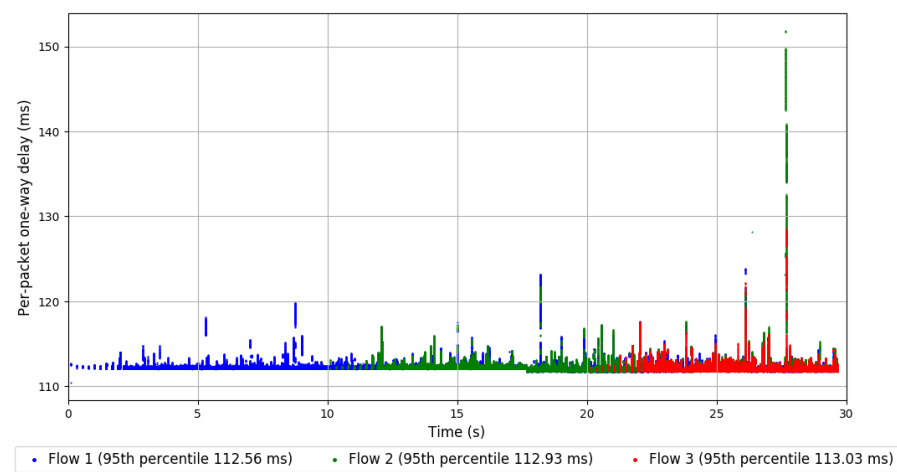
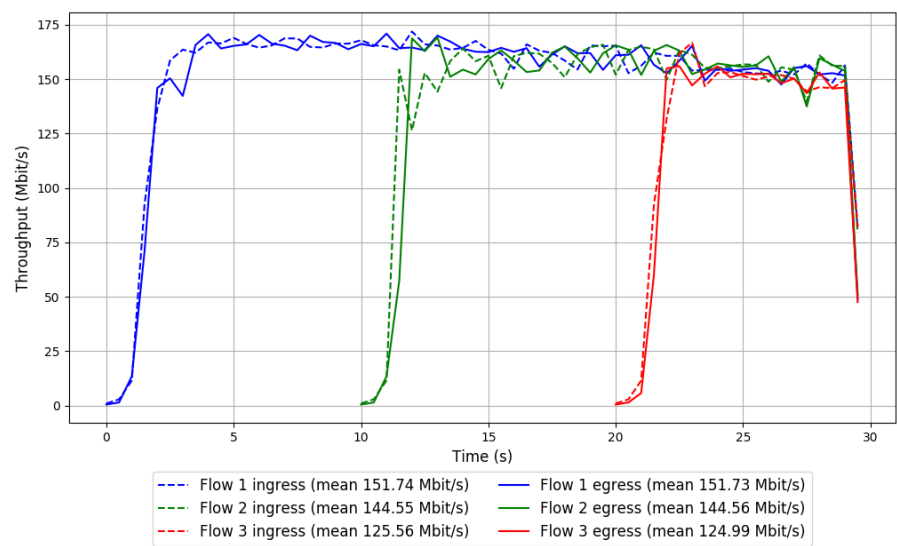


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-02-20 17:24:36
End at: 2018-02-20 17:25:06

# Below is generated by plot.py at 2018-02-21 01:29:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 287.51 Mbit/s
95th percentile per-packet one-way delay: 112.765 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 151.73 Mbit/s
95th percentile per-packet one-way delay: 112.561 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 144.56 Mbit/s
95th percentile per-packet one-way delay: 112.928 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 124.99 Mbit/s
95th percentile per-packet one-way delay: 113.035 ms
Loss rate: 2.74%
```

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



Run 3: Statistics of Indigo-1-32

Start at: 2018-02-20 17:44:18

End at: 2018-02-20 17:44:48

Below is generated by plot.py at 2018-02-21 01:29:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 331.37 Mbit/s

95th percentile per-packet one-way delay: 114.486 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 180.73 Mbit/s

95th percentile per-packet one-way delay: 113.710 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 161.97 Mbit/s

95th percentile per-packet one-way delay: 114.642 ms

Loss rate: 1.10%

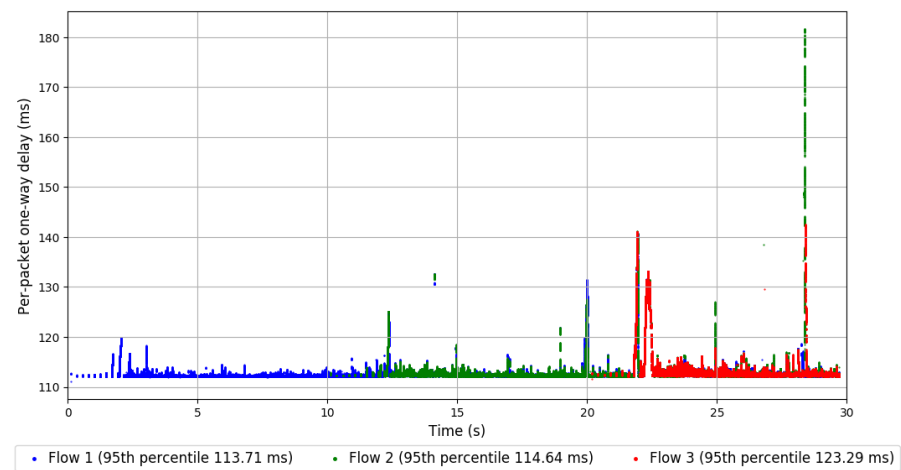
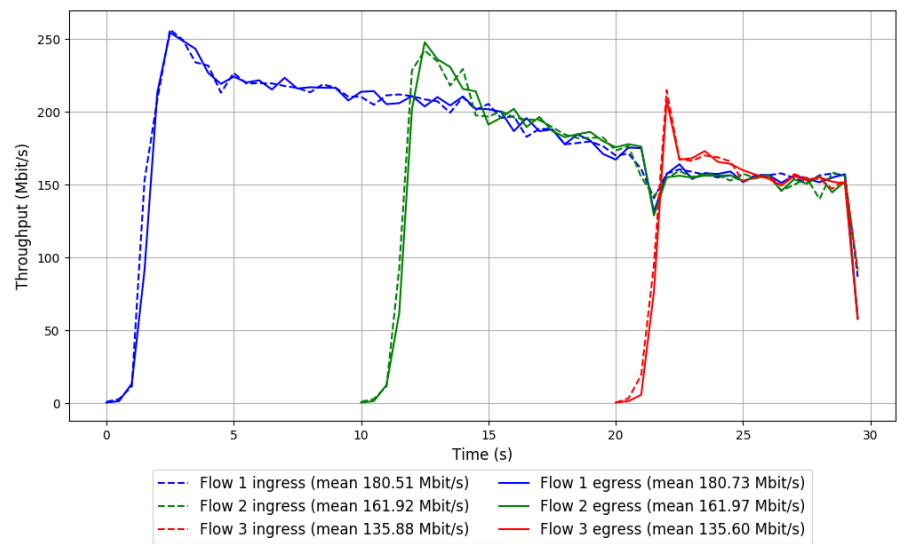
-- Flow 3:

Average throughput: 135.60 Mbit/s

95th percentile per-packet one-way delay: 123.287 ms

Loss rate: 2.51%

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



Run 4: Statistics of Indigo-1-32

Start at: 2018-02-20 18:05:02

End at: 2018-02-20 18:05:32

Below is generated by plot.py at 2018-02-21 01:29:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 330.32 Mbit/s

95th percentile per-packet one-way delay: 113.447 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 192.79 Mbit/s

95th percentile per-packet one-way delay: 113.223 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 146.35 Mbit/s

95th percentile per-packet one-way delay: 113.506 ms

Loss rate: 1.16%

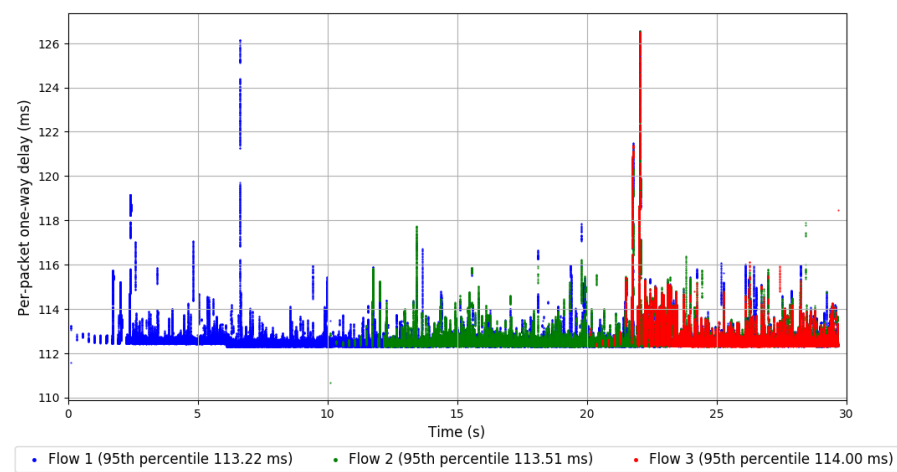
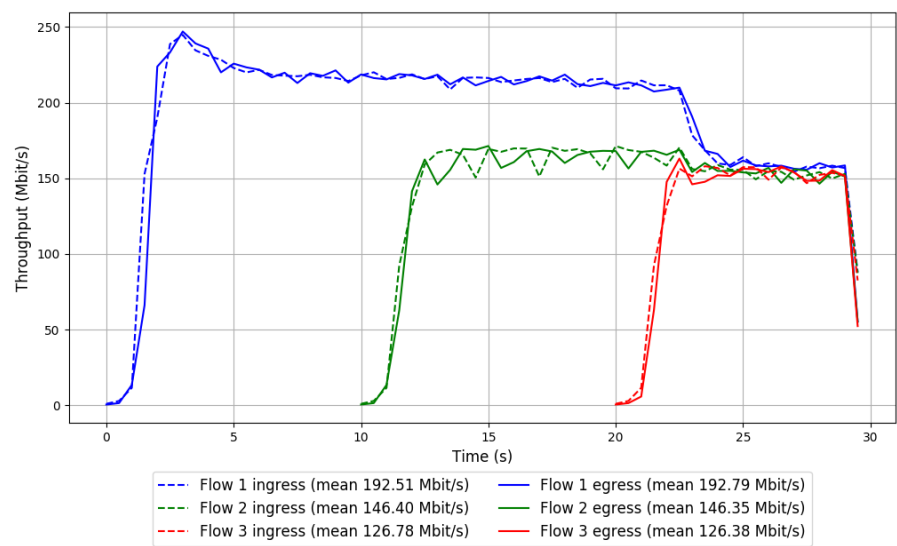
-- Flow 3:

Average throughput: 126.38 Mbit/s

95th percentile per-packet one-way delay: 113.996 ms

Loss rate: 2.55%

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



Run 5: Statistics of Indigo-1-32

Start at: 2018-02-20 18:24:40

End at: 2018-02-20 18:25:10

Below is generated by plot.py at 2018-02-21 01:29:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 324.86 Mbit/s

95th percentile per-packet one-way delay: 113.191 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 178.94 Mbit/s

95th percentile per-packet one-way delay: 112.961 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 161.43 Mbit/s

95th percentile per-packet one-way delay: 113.448 ms

Loss rate: 0.77%

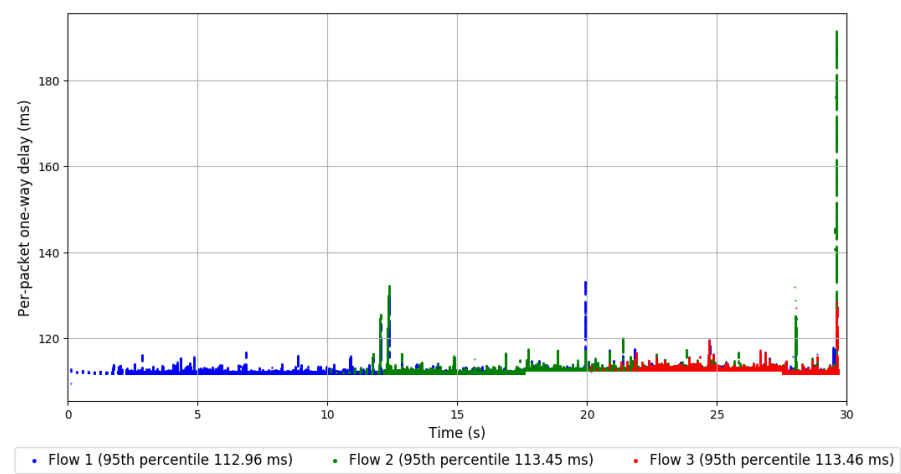
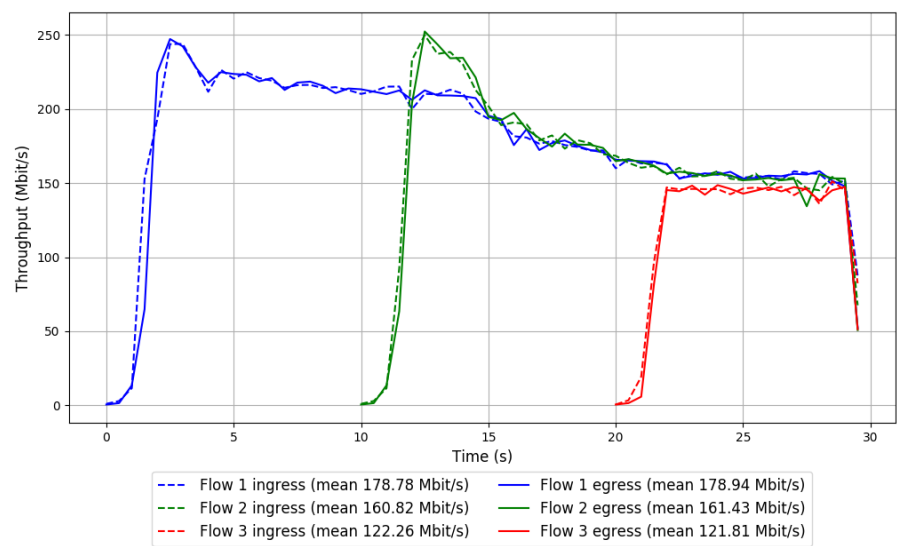
-- Flow 3:

Average throughput: 121.81 Mbit/s

95th percentile per-packet one-way delay: 113.460 ms

Loss rate: 2.68%

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



Run 6: Statistics of Indigo-1-32

Start at: 2018-02-20 18:44:32

End at: 2018-02-20 18:45:02

Below is generated by plot.py at 2018-02-21 01:29:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 330.43 Mbit/s

95th percentile per-packet one-way delay: 120.133 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 174.87 Mbit/s

95th percentile per-packet one-way delay: 114.445 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 167.64 Mbit/s

95th percentile per-packet one-way delay: 121.231 ms

Loss rate: 1.03%

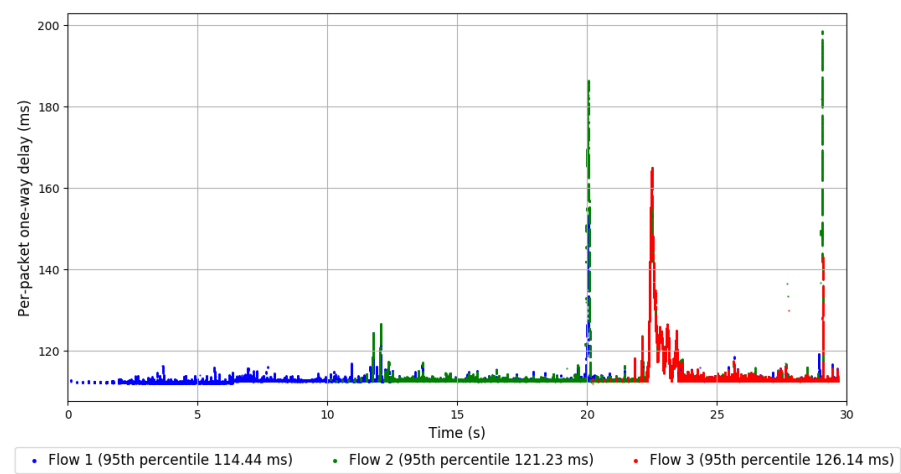
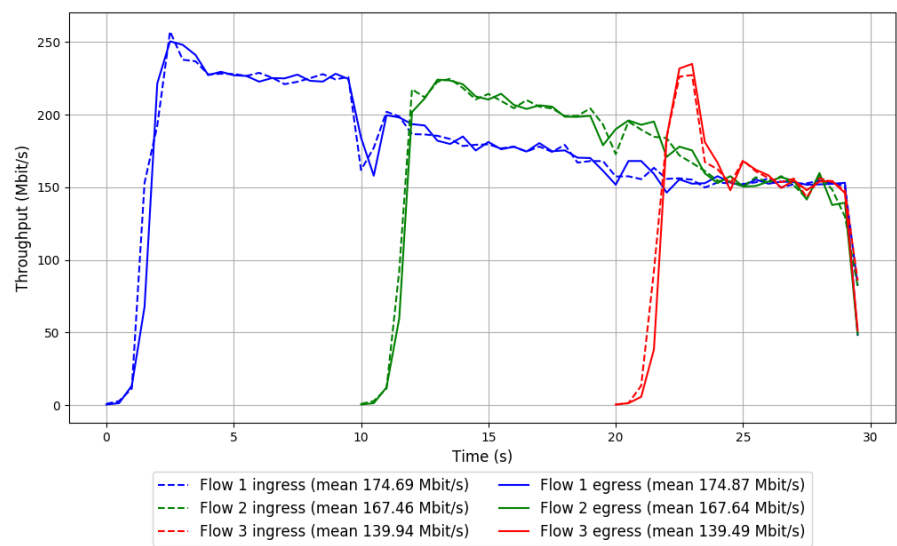
-- Flow 3:

Average throughput: 139.49 Mbit/s

95th percentile per-packet one-way delay: 126.135 ms

Loss rate: 2.62%

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



Run 7: Statistics of Indigo-1-32

Start at: 2018-02-20 19:04:20

End at: 2018-02-20 19:04:50

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 310.28 Mbit/s

95th percentile per-packet one-way delay: 112.551 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 181.08 Mbit/s

95th percentile per-packet one-way delay: 112.335 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 135.69 Mbit/s

95th percentile per-packet one-way delay: 112.478 ms

Loss rate: 1.18%

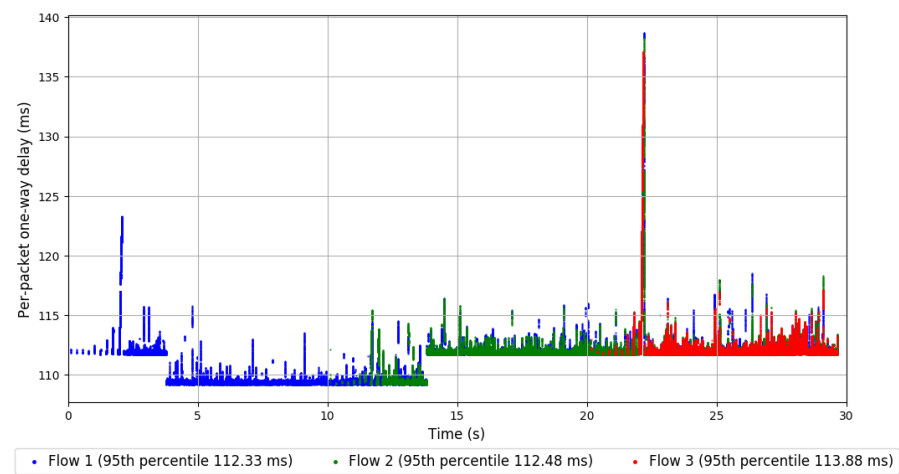
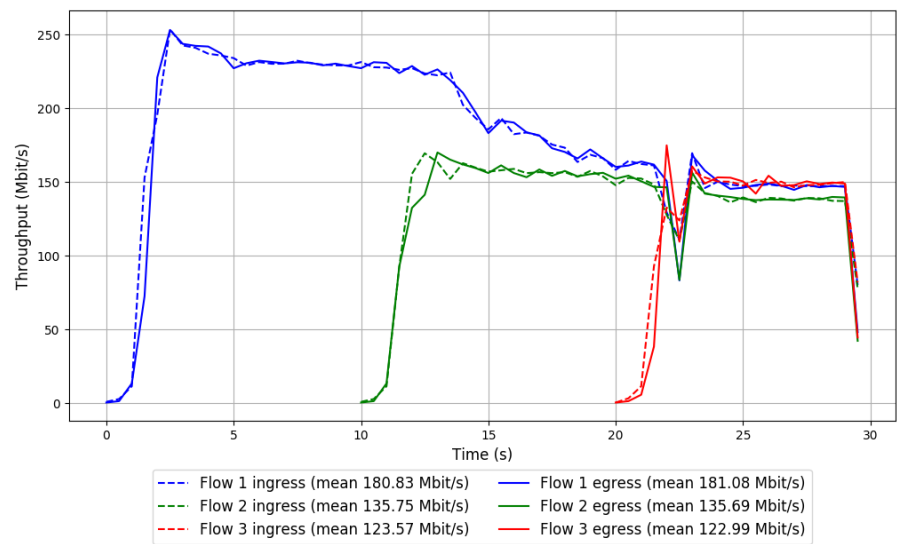
-- Flow 3:

Average throughput: 122.99 Mbit/s

95th percentile per-packet one-way delay: 113.879 ms

Loss rate: 2.82%

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



Run 8: Statistics of Indigo-1-32

Start at: 2018-02-20 19:23:55

End at: 2018-02-20 19:24:25

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 288.45 Mbit/s

95th percentile per-packet one-way delay: 111.824 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 152.08 Mbit/s

95th percentile per-packet one-way delay: 111.819 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 143.30 Mbit/s

95th percentile per-packet one-way delay: 111.908 ms

Loss rate: 0.92%

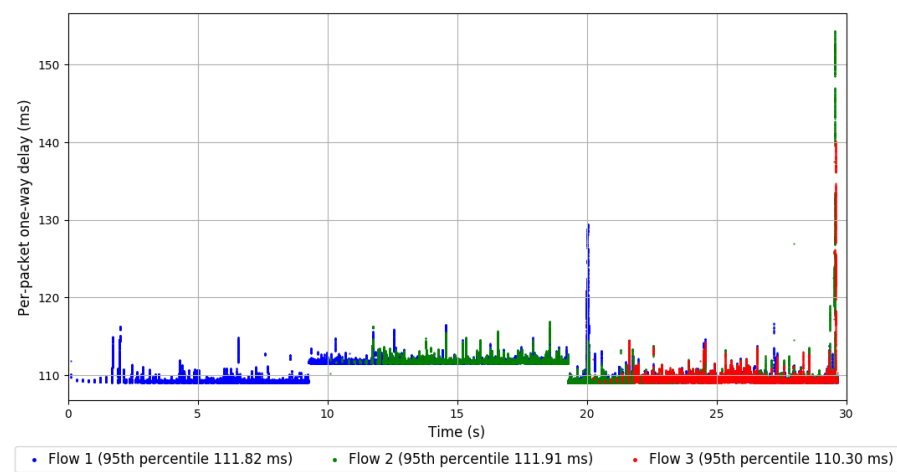
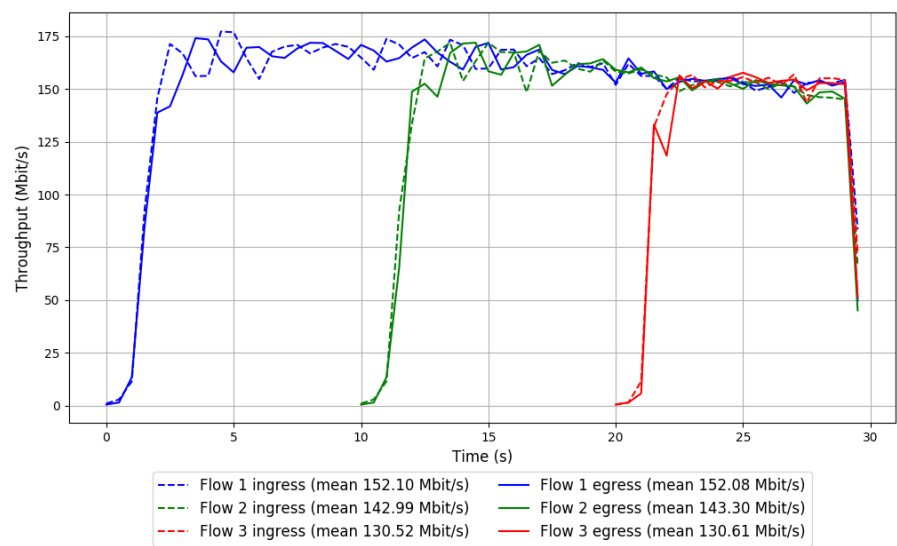
-- Flow 3:

Average throughput: 130.61 Mbit/s

95th percentile per-packet one-way delay: 110.300 ms

Loss rate: 2.27%

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



Run 9: Statistics of Indigo-1-32

Start at: 2018-02-20 19:43:45

End at: 2018-02-20 19:44:15

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 292.09 Mbit/s

95th percentile per-packet one-way delay: 113.219 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 150.44 Mbit/s

95th percentile per-packet one-way delay: 113.008 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 154.69 Mbit/s

95th percentile per-packet one-way delay: 113.387 ms

Loss rate: 1.09%

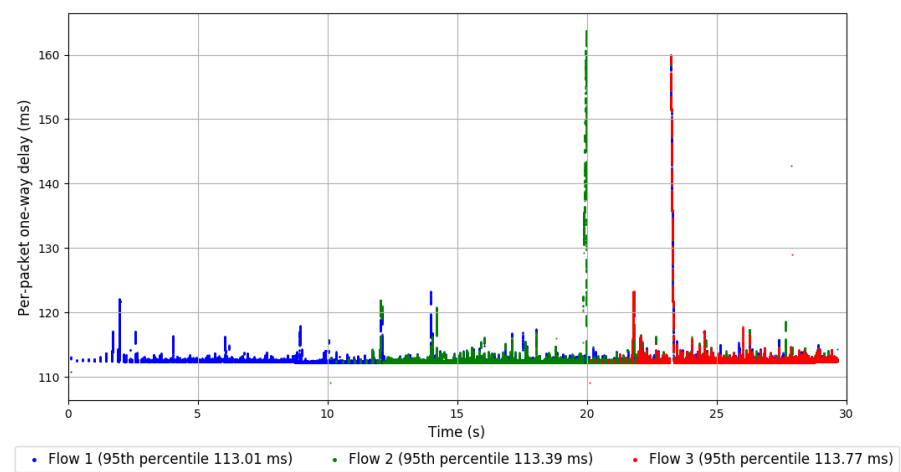
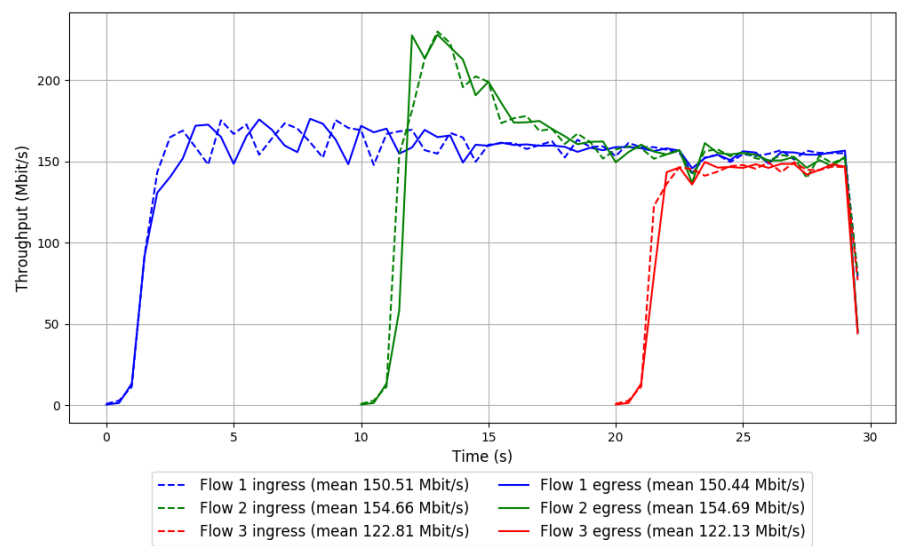
-- Flow 3:

Average throughput: 122.13 Mbit/s

95th percentile per-packet one-way delay: 113.765 ms

Loss rate: 2.79%

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



Run 10: Statistics of Indigo-1-32

Start at: 2018-02-20 20:03:26

End at: 2018-02-20 20:03:56

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 286.65 Mbit/s

95th percentile per-packet one-way delay: 113.352 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 149.55 Mbit/s

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

Loss rate: 0.77%

-- Flow 2:

Average throughput: 146.17 Mbit/s

95th percentile per-packet one-way delay: 113.451 ms

Loss rate: 1.21%

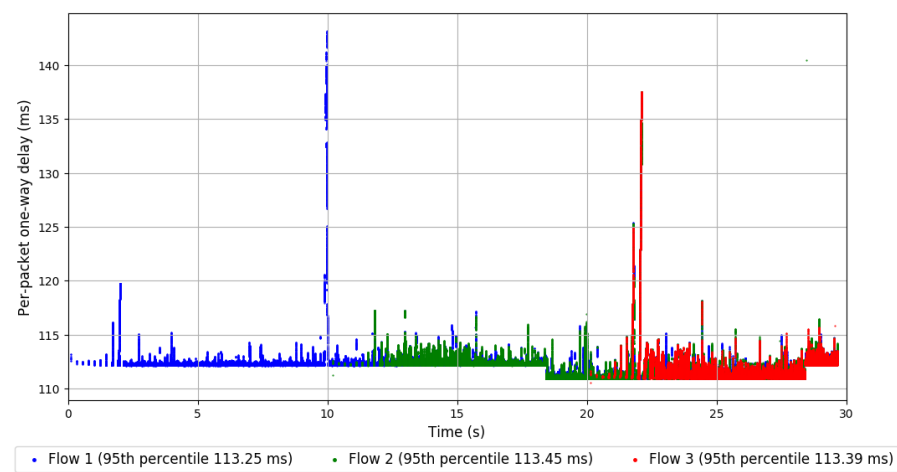
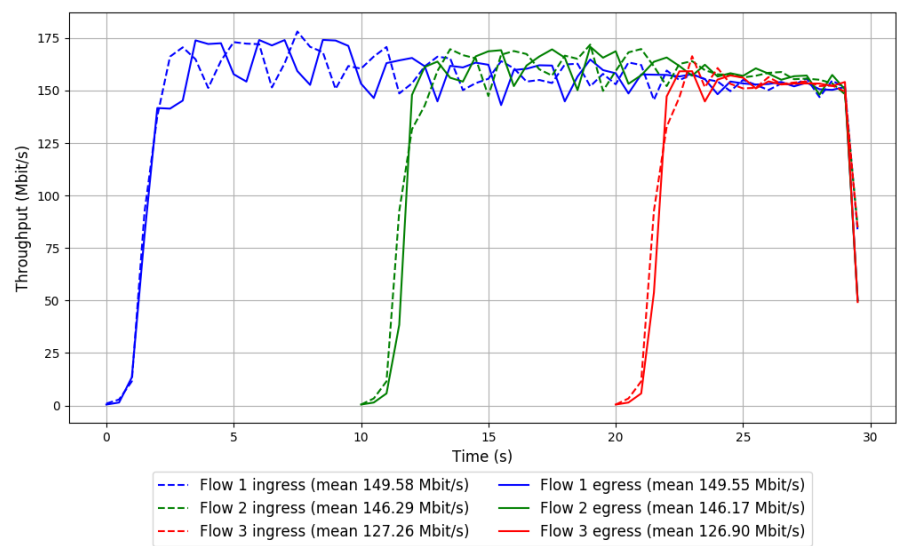
-- Flow 3:

Average throughput: 126.90 Mbit/s

95th percentile per-packet one-way delay: 113.390 ms

Loss rate: 2.56%

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



Run 1: Statistics of Vivace-latency

Start at: 2018-02-20 17:16:37

End at: 2018-02-20 17:17:07

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 420.01 Mbit/s

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

Loss rate: 1.18%

-- Flow 1:

Average throughput: 318.71 Mbit/s

95th percentile per-packet one-way delay: 125.779 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 84.00 Mbit/s

95th percentile per-packet one-way delay: 112.519 ms

Loss rate: 2.60%

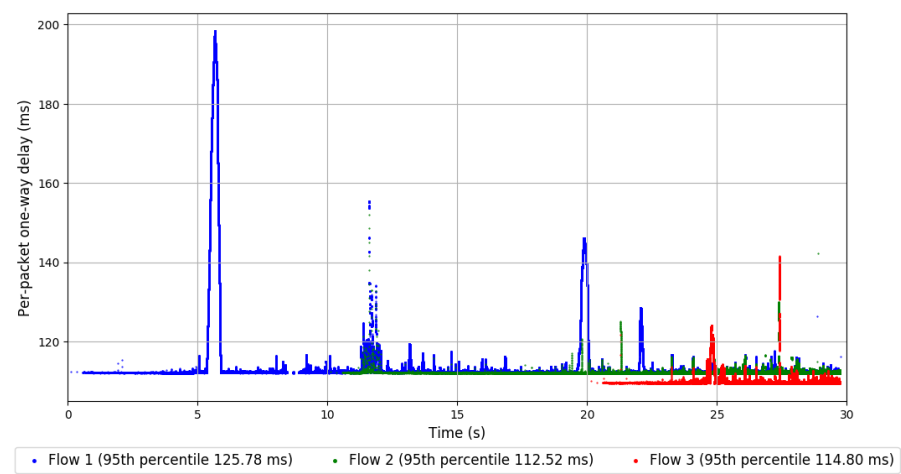
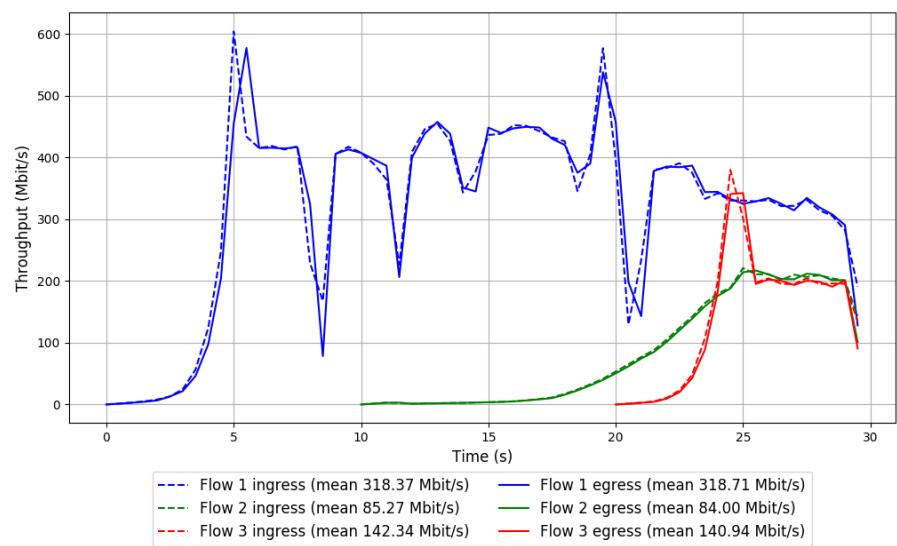
-- Flow 3:

Average throughput: 140.94 Mbit/s

95th percentile per-packet one-way delay: 114.804 ms

Loss rate: 3.22%

Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-02-20 17:36:16

End at: 2018-02-20 17:36:46

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 414.16 Mbit/s

95th percentile per-packet one-way delay: 112.533 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 249.92 Mbit/s

95th percentile per-packet one-way delay: 112.362 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 185.53 Mbit/s

95th percentile per-packet one-way delay: 111.734 ms

Loss rate: 1.47%

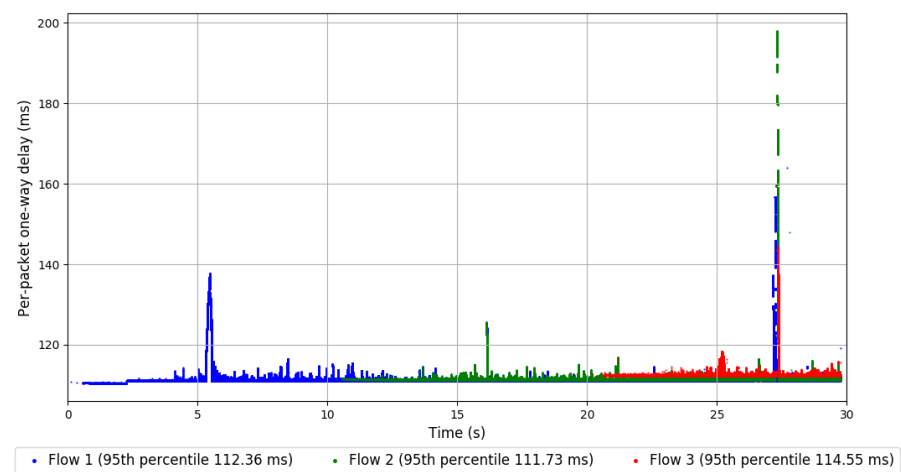
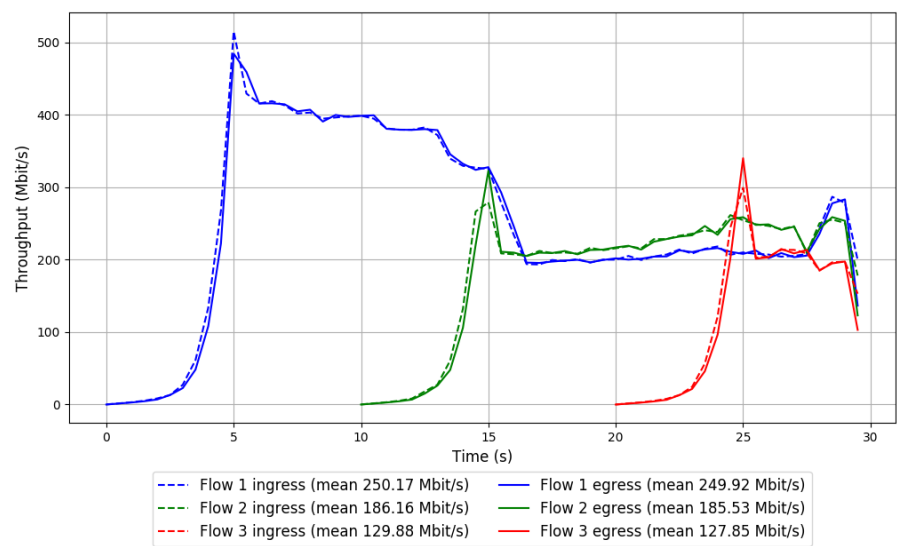
-- Flow 3:

Average throughput: 127.85 Mbit/s

95th percentile per-packet one-way delay: 114.547 ms

Loss rate: 3.75%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-02-20 17:56:26

End at: 2018-02-20 17:56:56

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 418.53 Mbit/s

95th percentile per-packet one-way delay: 113.384 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 256.74 Mbit/s

95th percentile per-packet one-way delay: 113.583 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 179.73 Mbit/s

95th percentile per-packet one-way delay: 112.848 ms

Loss rate: 0.84%

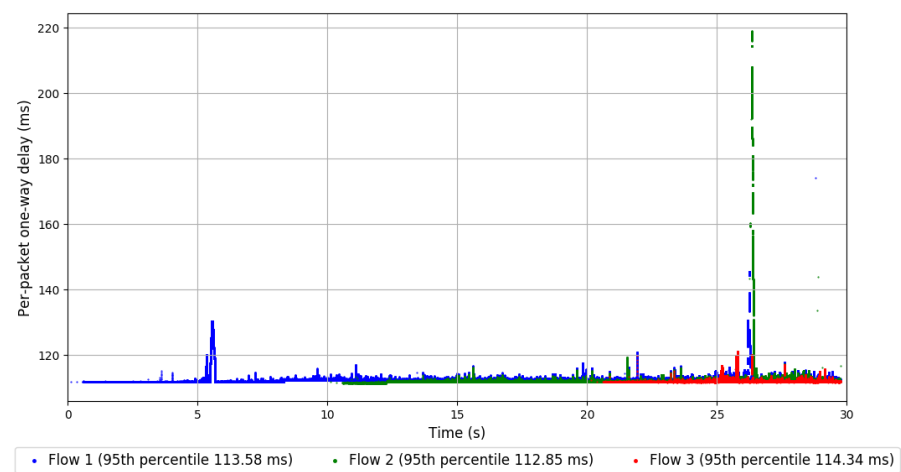
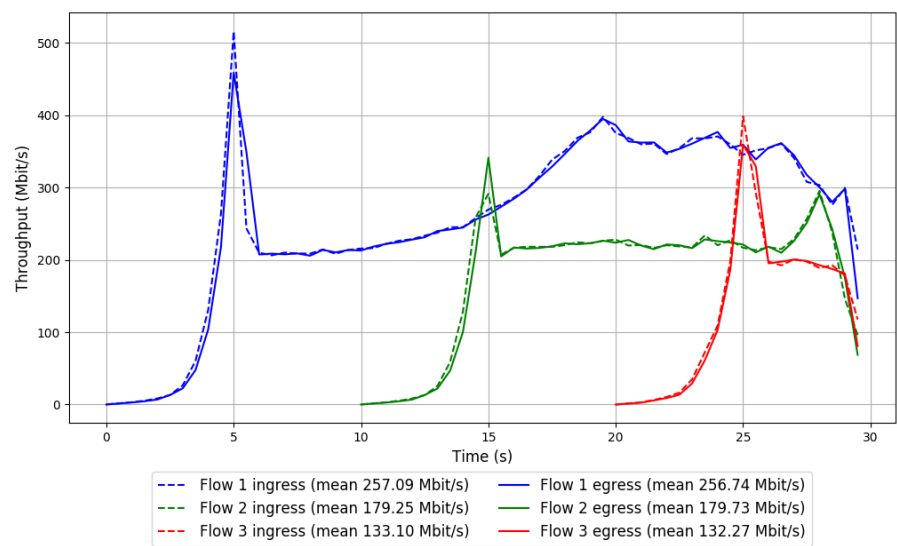
-- Flow 3:

Average throughput: 132.27 Mbit/s

95th percentile per-packet one-way delay: 114.344 ms

Loss rate: 2.89%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-02-20 18:16:23

End at: 2018-02-20 18:16:53

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 468.01 Mbit/s

95th percentile per-packet one-way delay: 113.397 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 294.78 Mbit/s

95th percentile per-packet one-way delay: 114.115 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 193.79 Mbit/s

95th percentile per-packet one-way delay: 112.013 ms

Loss rate: 1.54%

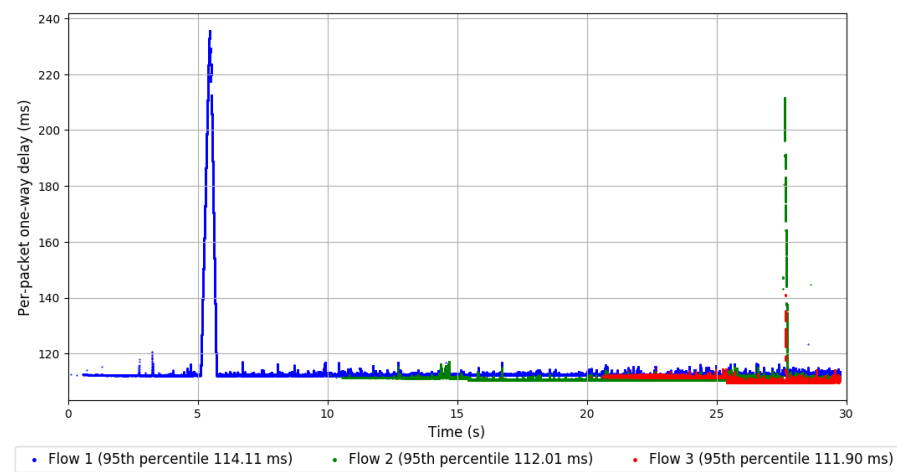
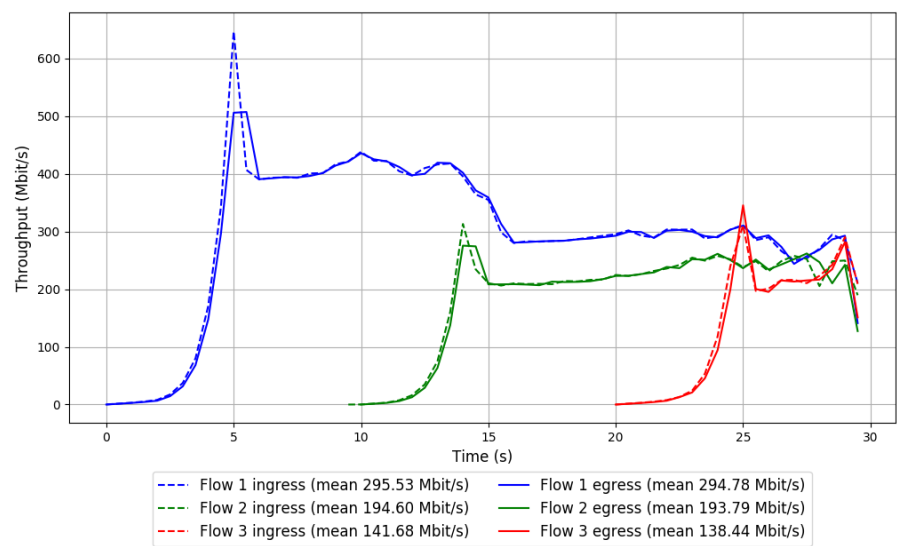
-- Flow 3:

Average throughput: 138.44 Mbit/s

95th percentile per-packet one-way delay: 111.896 ms

Loss rate: 4.51%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-02-20 18:36:24

End at: 2018-02-20 18:36:54

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 427.10 Mbit/s

95th percentile per-packet one-way delay: 113.158 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 254.63 Mbit/s

95th percentile per-packet one-way delay: 112.556 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 192.30 Mbit/s

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

Loss rate: 1.53%

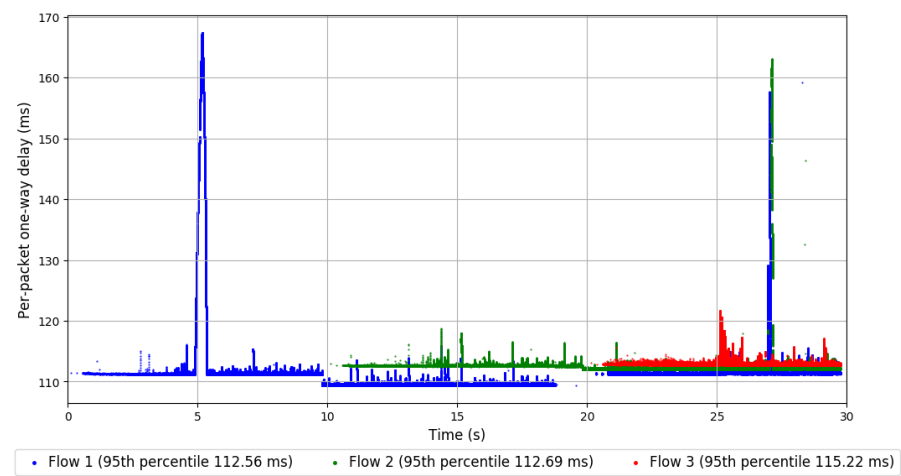
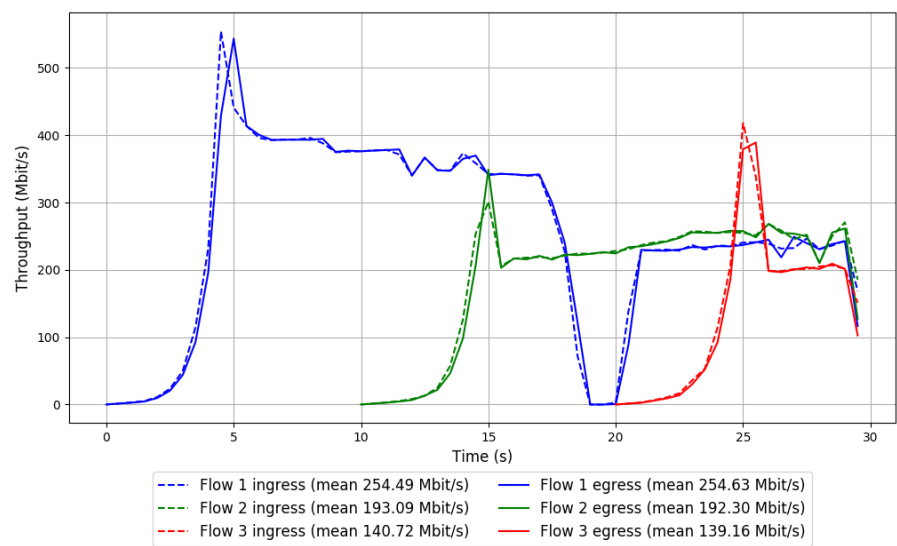
-- Flow 3:

Average throughput: 139.16 Mbit/s

95th percentile per-packet one-way delay: 115.216 ms

Loss rate: 3.36%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-02-20 18:56:08

End at: 2018-02-20 18:56:38

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 477.79 Mbit/s

95th percentile per-packet one-way delay: 126.825 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 280.99 Mbit/s

95th percentile per-packet one-way delay: 116.095 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 216.02 Mbit/s

95th percentile per-packet one-way delay: 120.059 ms

Loss rate: 1.88%

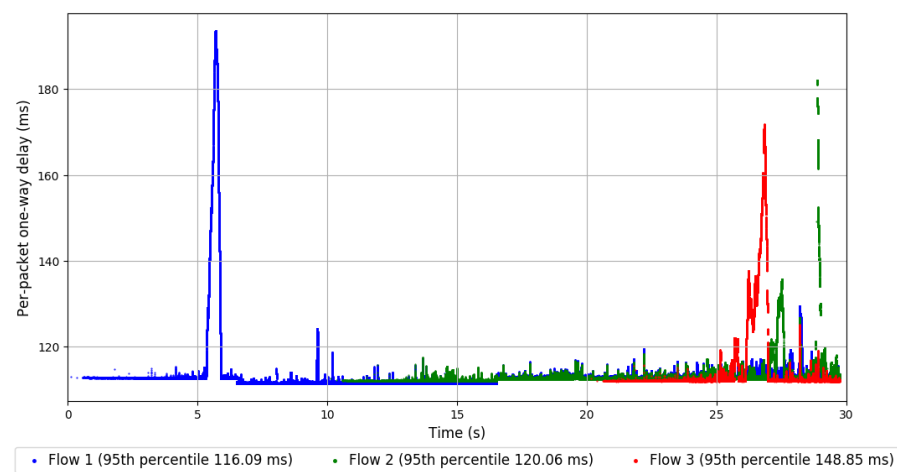
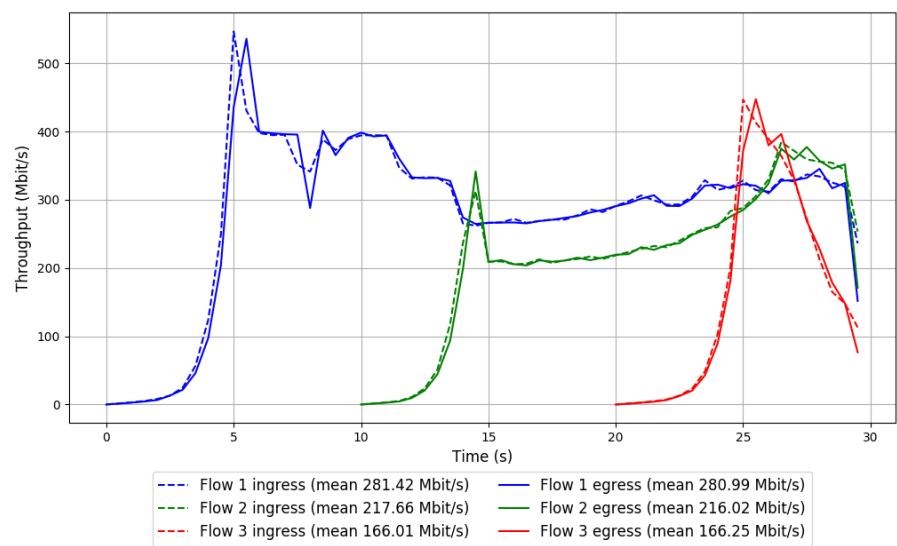
-- Flow 3:

Average throughput: 166.25 Mbit/s

95th percentile per-packet one-way delay: 148.850 ms

Loss rate: 2.16%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-02-20 19:15:50

End at: 2018-02-20 19:16:20

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 446.14 Mbit/s

95th percentile per-packet one-way delay: 112.579 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 298.75 Mbit/s

95th percentile per-packet one-way delay: 111.905 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 187.91 Mbit/s

95th percentile per-packet one-way delay: 112.706 ms

Loss rate: 1.54%

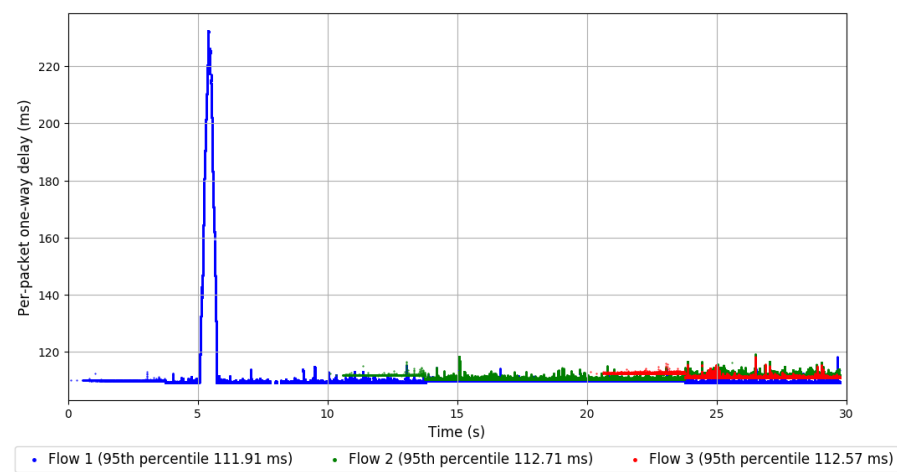
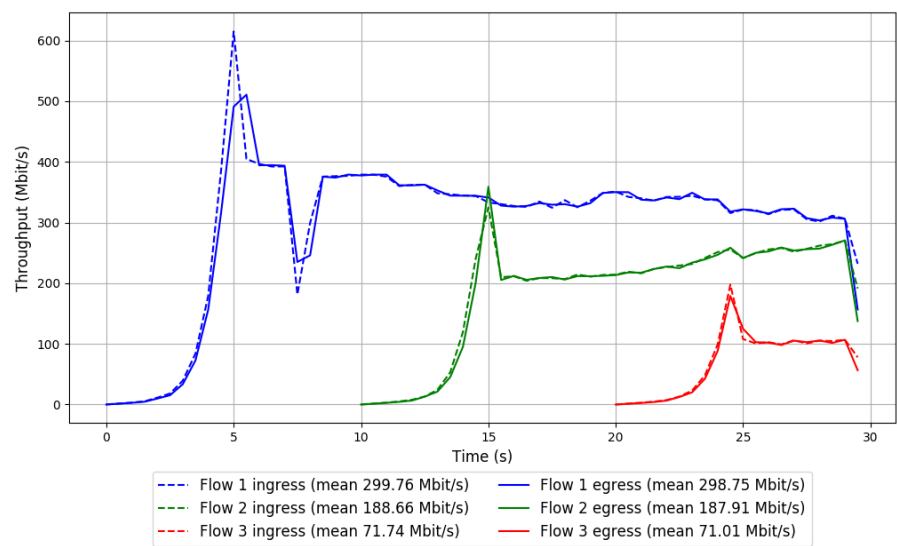
-- Flow 3:

Average throughput: 71.01 Mbit/s

95th percentile per-packet one-way delay: 112.574 ms

Loss rate: 3.30%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-02-20 19:35:19

End at: 2018-02-20 19:35:49

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 470.31 Mbit/s

95th percentile per-packet one-way delay: 113.999 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 287.08 Mbit/s

95th percentile per-packet one-way delay: 115.344 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 214.95 Mbit/s

95th percentile per-packet one-way delay: 113.776 ms

Loss rate: 1.59%

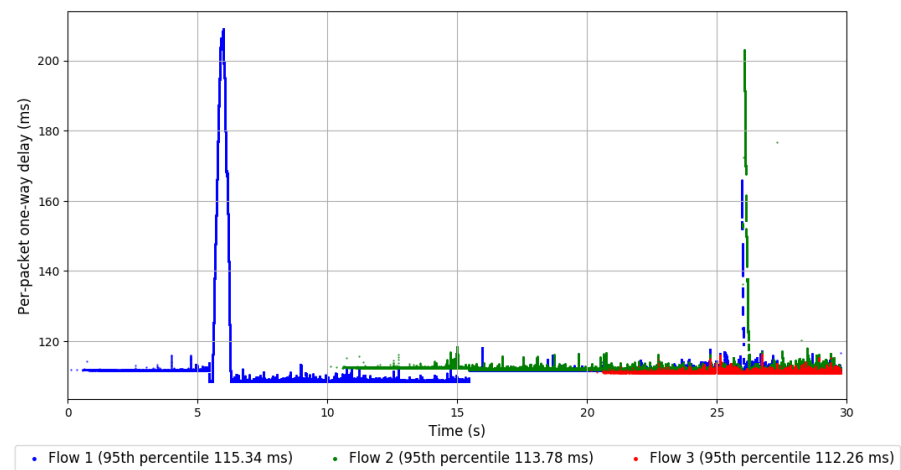
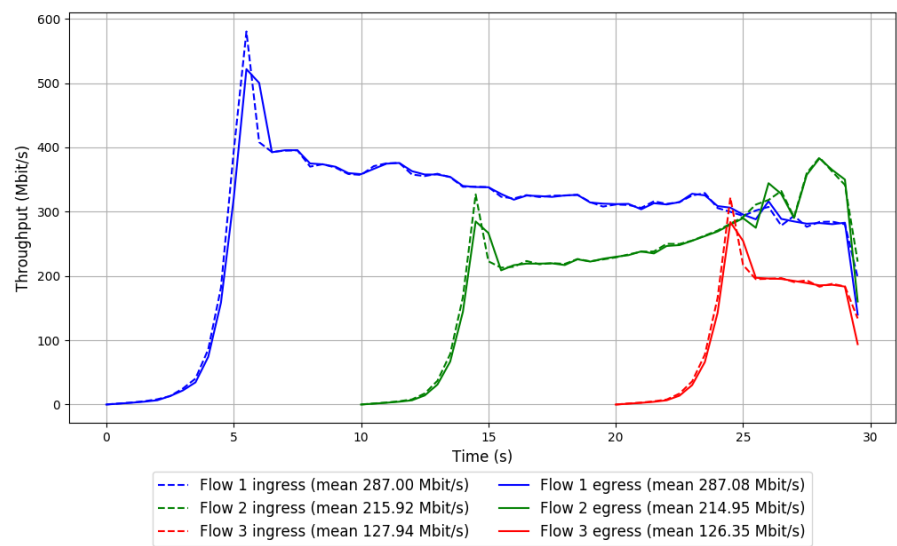
-- Flow 3:

Average throughput: 126.35 Mbit/s

95th percentile per-packet one-way delay: 112.259 ms

Loss rate: 3.51%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-02-20 19:55:20

End at: 2018-02-20 19:55:50

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 493.85 Mbit/s

95th percentile per-packet one-way delay: 113.122 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 305.17 Mbit/s

95th percentile per-packet one-way delay: 113.519 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 189.67 Mbit/s

95th percentile per-packet one-way delay: 111.391 ms

Loss rate: 1.45%

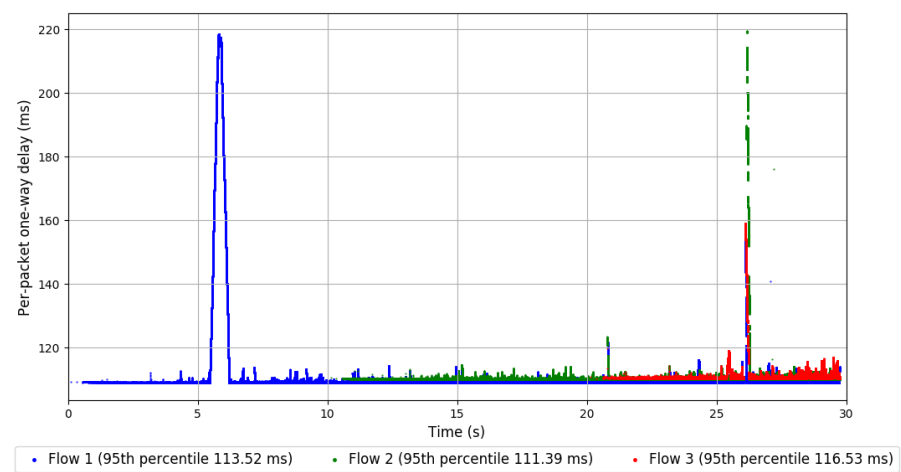
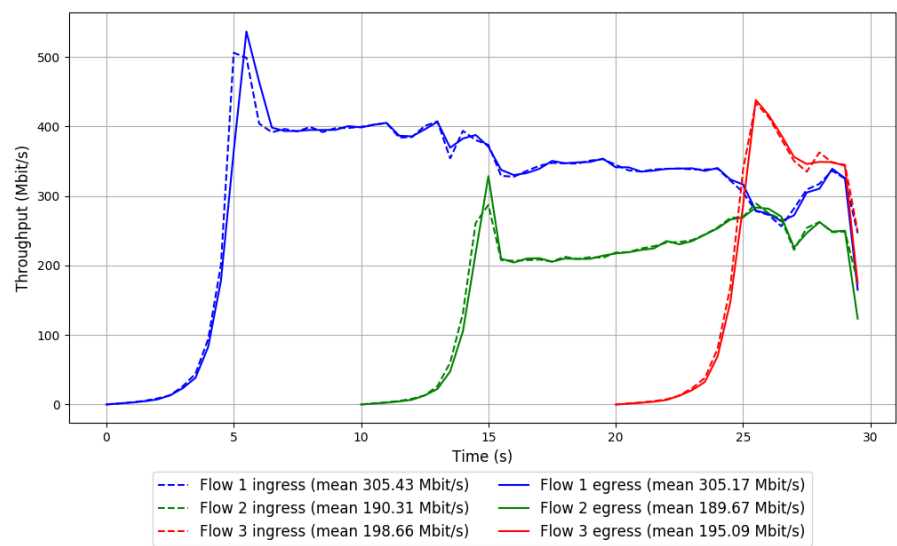
-- Flow 3:

Average throughput: 195.09 Mbit/s

95th percentile per-packet one-way delay: 116.534 ms

Loss rate: 4.02%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-02-20 20:15:07

End at: 2018-02-20 20:15:37

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 524.01 Mbit/s

95th percentile per-packet one-way delay: 118.924 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 290.20 Mbit/s

95th percentile per-packet one-way delay: 117.264 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 288.09 Mbit/s

95th percentile per-packet one-way delay: 152.172 ms

Loss rate: 1.56%

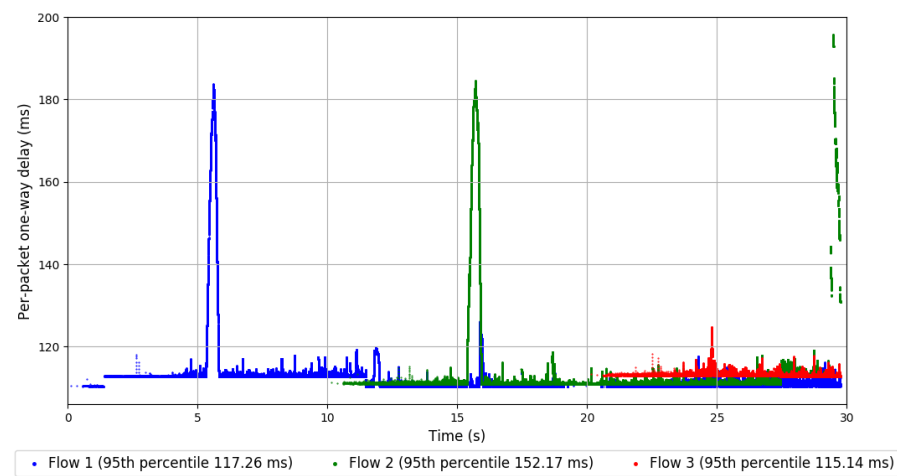
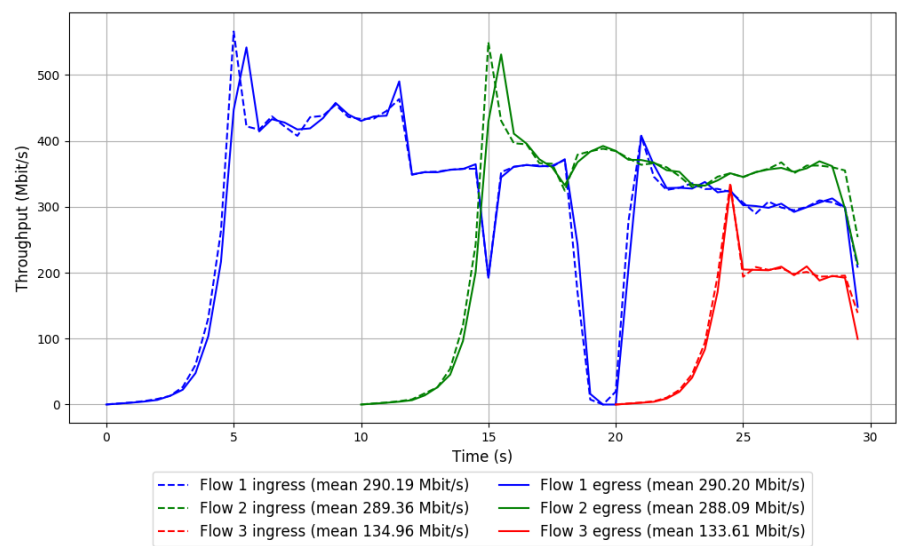
-- Flow 3:

Average throughput: 133.61 Mbit/s

95th percentile per-packet one-way delay: 115.145 ms

Loss rate: 3.27%

Run 10: Report of Vivace-latency — Data Link

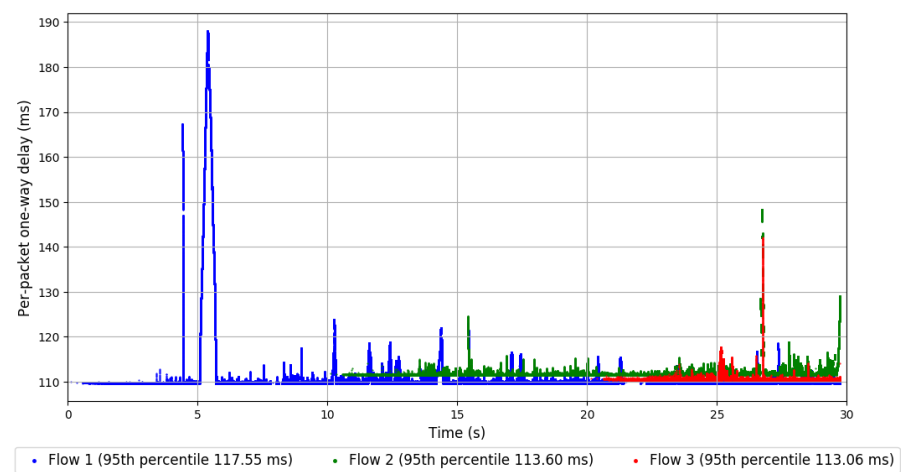
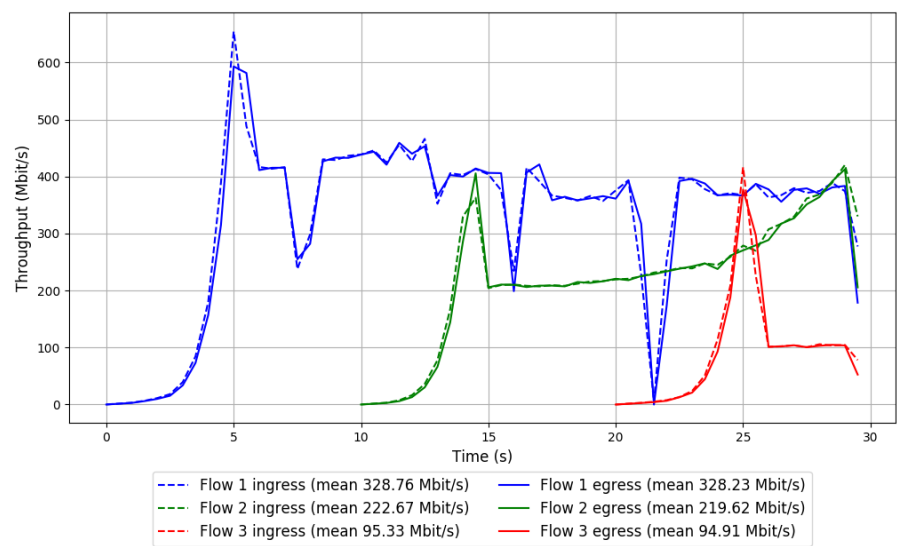


```
Run 1: Statistics of Vivace-loss

Start at: 2018-02-20 17:14:02
End at: 2018-02-20 17:14:32

# Below is generated by plot.py at 2018-02-21 01:29:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 504.26 Mbit/s
95th percentile per-packet one-way delay: 114.895 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 328.23 Mbit/s
95th percentile per-packet one-way delay: 117.550 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 219.62 Mbit/s
95th percentile per-packet one-way delay: 113.602 ms
Loss rate: 2.48%
-- Flow 3:
Average throughput: 94.91 Mbit/s
95th percentile per-packet one-way delay: 113.058 ms
Loss rate: 2.65%
```

Run 1: Report of Vivace-loss — Data Link

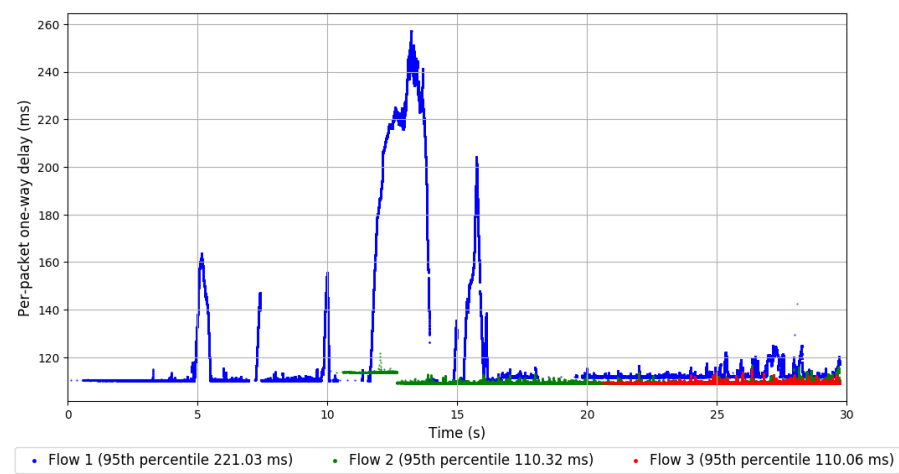
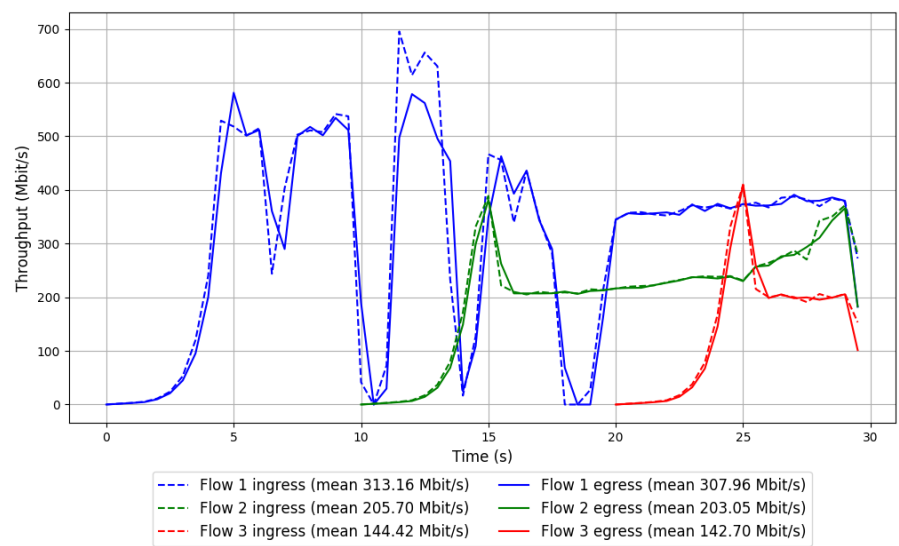


```
Run 2: Statistics of Vivace-loss

Start at: 2018-02-20 17:33:41
End at: 2018-02-20 17:34:11

# Below is generated by plot.py at 2018-02-21 01:29:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 488.62 Mbit/s
95th percentile per-packet one-way delay: 216.607 ms
Loss rate: 2.50%
-- Flow 1:
Average throughput: 307.96 Mbit/s
95th percentile per-packet one-way delay: 221.030 ms
Loss rate: 2.39%
-- Flow 2:
Average throughput: 203.05 Mbit/s
95th percentile per-packet one-way delay: 110.322 ms
Loss rate: 2.41%
-- Flow 3:
Average throughput: 142.70 Mbit/s
95th percentile per-packet one-way delay: 110.060 ms
Loss rate: 3.43%
```

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-02-20 17:53:50

End at: 2018-02-20 17:54:20

Below is generated by plot.py at 2018-02-21 01:29:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 430.29 Mbit/s

95th percentile per-packet one-way delay: 151.334 ms

Loss rate: 1.61%

-- Flow 1:

Average throughput: 202.54 Mbit/s

95th percentile per-packet one-way delay: 193.929 ms

Loss rate: 1.67%

-- Flow 2:

Average throughput: 294.67 Mbit/s

95th percentile per-packet one-way delay: 115.794 ms

Loss rate: 1.42%

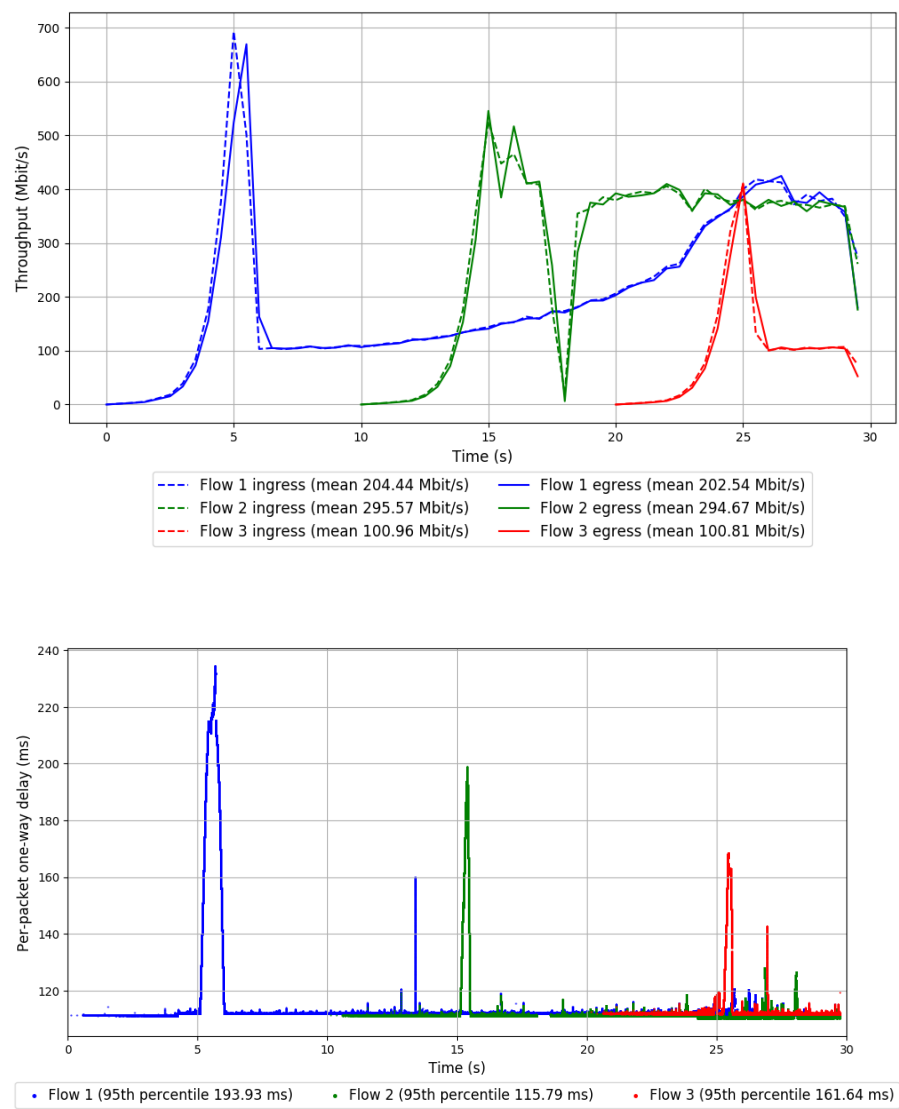
-- Flow 3:

Average throughput: 100.81 Mbit/s

95th percentile per-packet one-way delay: 161.640 ms

Loss rate: 2.36%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-02-20 18:13:55

End at: 2018-02-20 18:14:25

Below is generated by plot.py at 2018-02-21 01:30:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 400.03 Mbit/s

95th percentile per-packet one-way delay: 113.693 ms

Loss rate: 1.70%

-- Flow 1:

Average throughput: 180.29 Mbit/s

95th percentile per-packet one-way delay: 114.191 ms

Loss rate: 1.45%

-- Flow 2:

Average throughput: 262.89 Mbit/s

95th percentile per-packet one-way delay: 112.991 ms

Loss rate: 1.50%

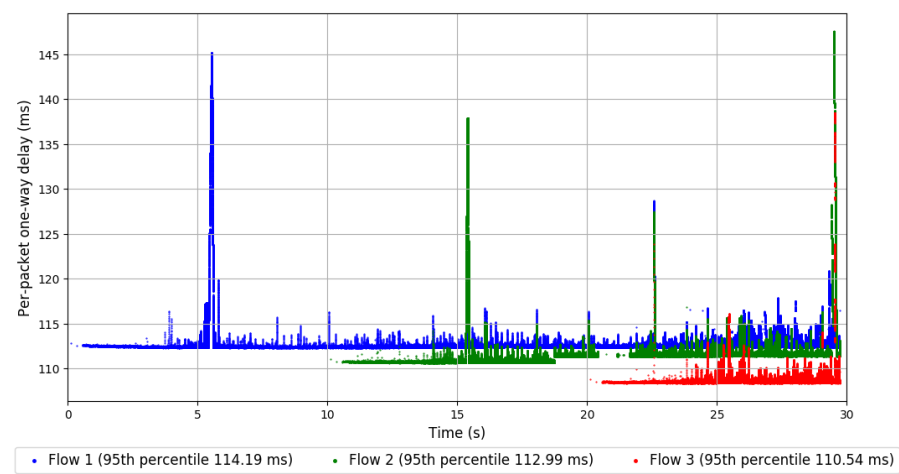
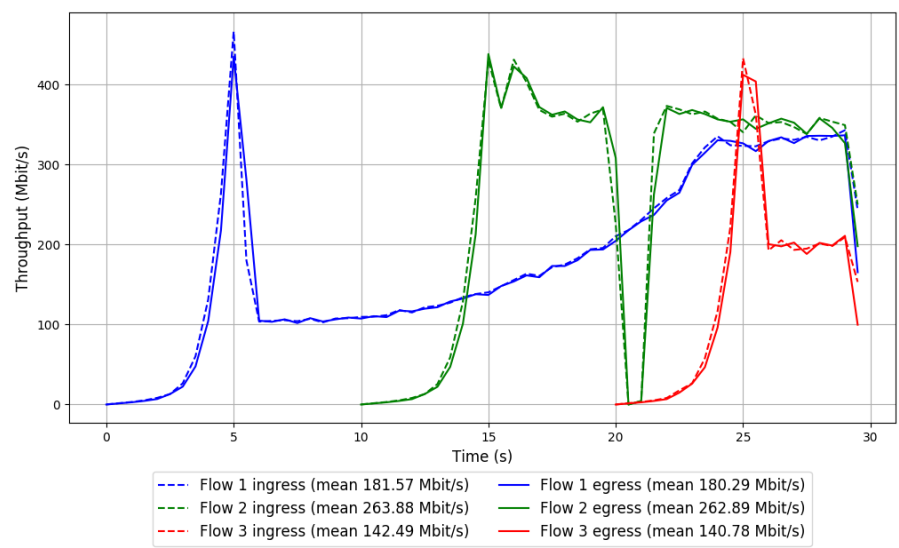
-- Flow 3:

Average throughput: 140.78 Mbit/s

95th percentile per-packet one-way delay: 110.544 ms

Loss rate: 3.42%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-02-20 18:33:42

End at: 2018-02-20 18:34:12

Below is generated by plot.py at 2018-02-21 01:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 597.83 Mbit/s

95th percentile per-packet one-way delay: 148.860 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 360.61 Mbit/s

95th percentile per-packet one-way delay: 171.659 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 291.11 Mbit/s

95th percentile per-packet one-way delay: 136.097 ms

Loss rate: 1.72%

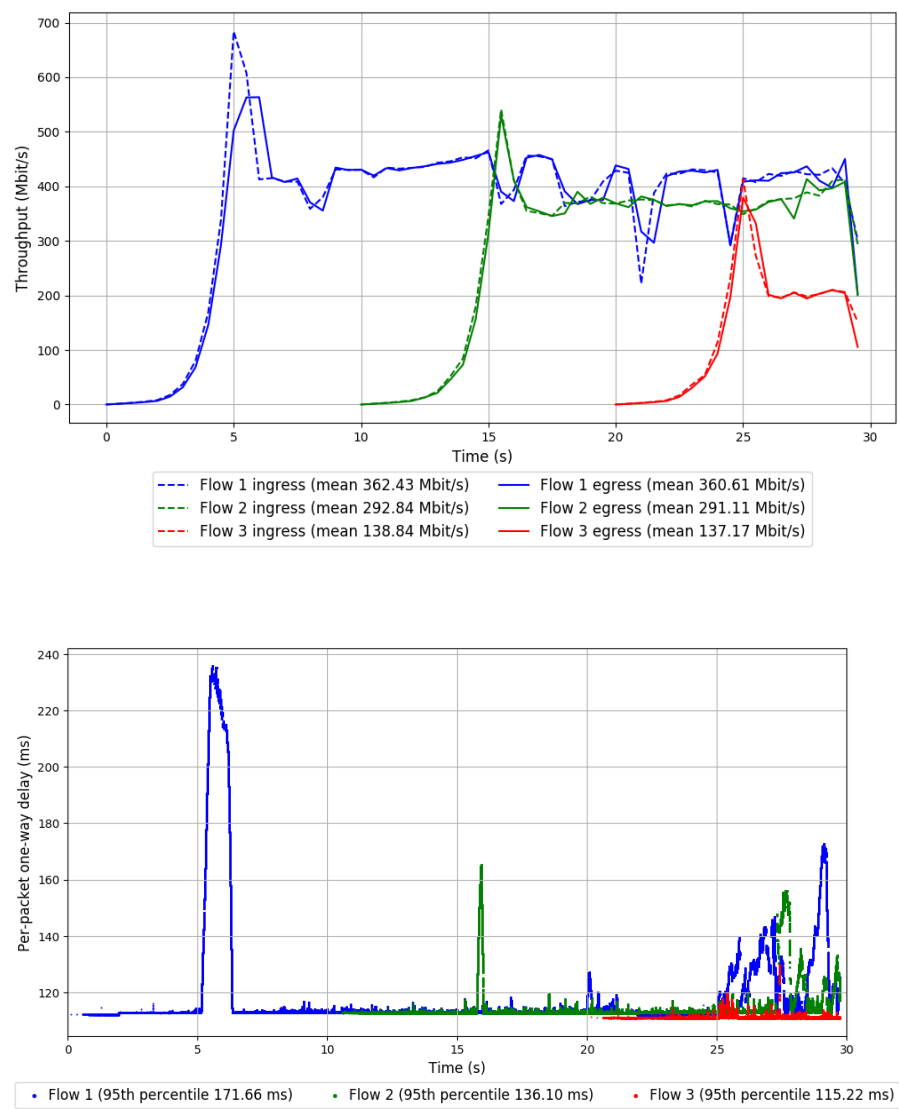
-- Flow 3:

Average throughput: 137.17 Mbit/s

95th percentile per-packet one-way delay: 115.216 ms

Loss rate: 3.46%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-02-20 18:53:36

End at: 2018-02-20 18:54:06

Below is generated by plot.py at 2018-02-21 01:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 439.08 Mbit/s

95th percentile per-packet one-way delay: 126.429 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 280.46 Mbit/s

95th percentile per-packet one-way delay: 133.940 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 193.10 Mbit/s

95th percentile per-packet one-way delay: 113.098 ms

Loss rate: 1.09%

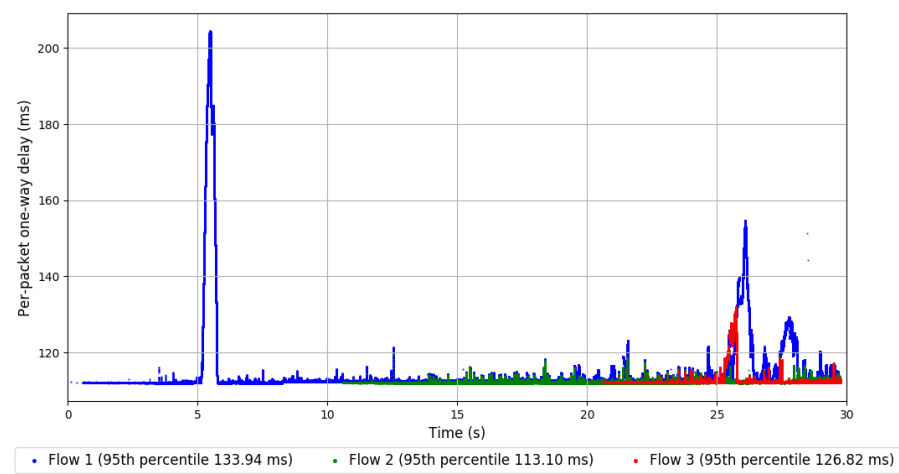
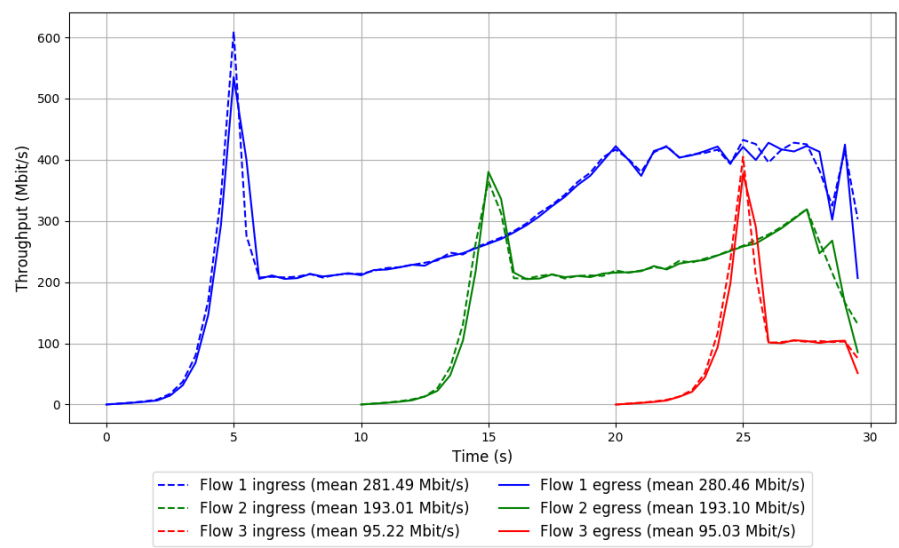
-- Flow 3:

Average throughput: 95.03 Mbit/s

95th percentile per-packet one-way delay: 126.823 ms

Loss rate: 2.49%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-02-20 19:13:17

End at: 2018-02-20 19:13:47

Below is generated by plot.py at 2018-02-21 01:35:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 468.18 Mbit/s

95th percentile per-packet one-way delay: 117.070 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 275.31 Mbit/s

95th percentile per-packet one-way delay: 112.768 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 182.16 Mbit/s

95th percentile per-packet one-way delay: 155.265 ms

Loss rate: 1.13%

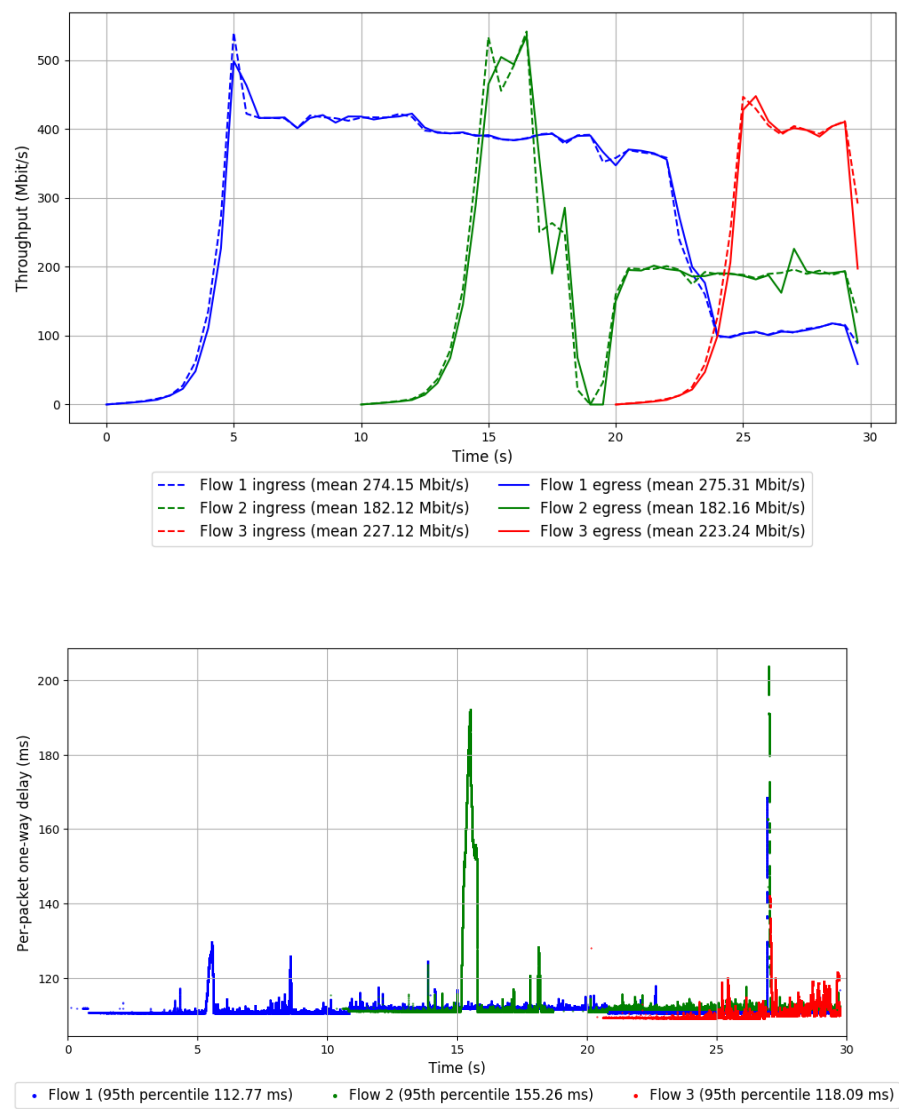
-- Flow 3:

Average throughput: 223.24 Mbit/s

95th percentile per-packet one-way delay: 118.090 ms

Loss rate: 4.12%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-02-20 19:32:37

End at: 2018-02-20 19:33:07

Below is generated by plot.py at 2018-02-21 01:37:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 561.10 Mbit/s

95th percentile per-packet one-way delay: 118.822 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 341.36 Mbit/s

95th percentile per-packet one-way delay: 117.677 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 260.57 Mbit/s

95th percentile per-packet one-way delay: 113.359 ms

Loss rate: 1.46%

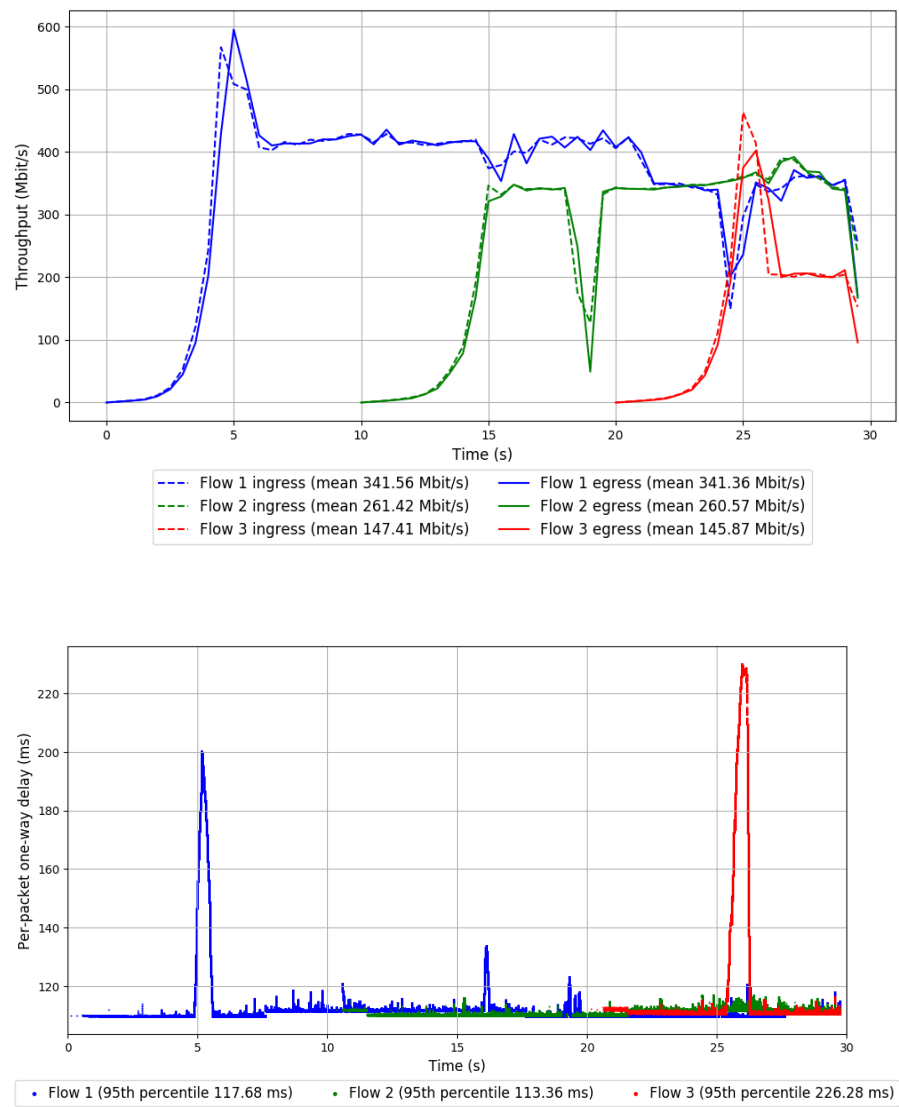
-- Flow 3:

Average throughput: 145.87 Mbit/s

95th percentile per-packet one-way delay: 226.283 ms

Loss rate: 3.32%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-02-20 19:52:45

End at: 2018-02-20 19:53:15

Below is generated by plot.py at 2018-02-21 01:37:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 493.80 Mbit/s

95th percentile per-packet one-way delay: 172.843 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 269.51 Mbit/s

95th percentile per-packet one-way delay: 195.541 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 274.32 Mbit/s

95th percentile per-packet one-way delay: 159.721 ms

Loss rate: 1.84%

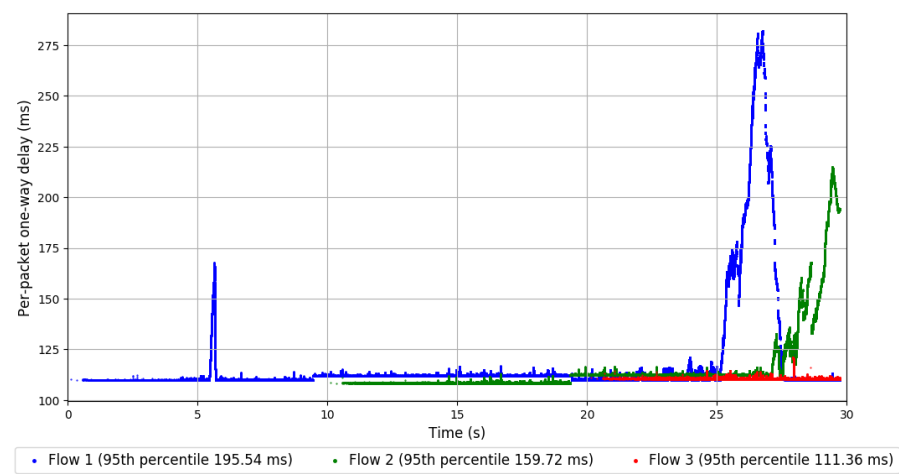
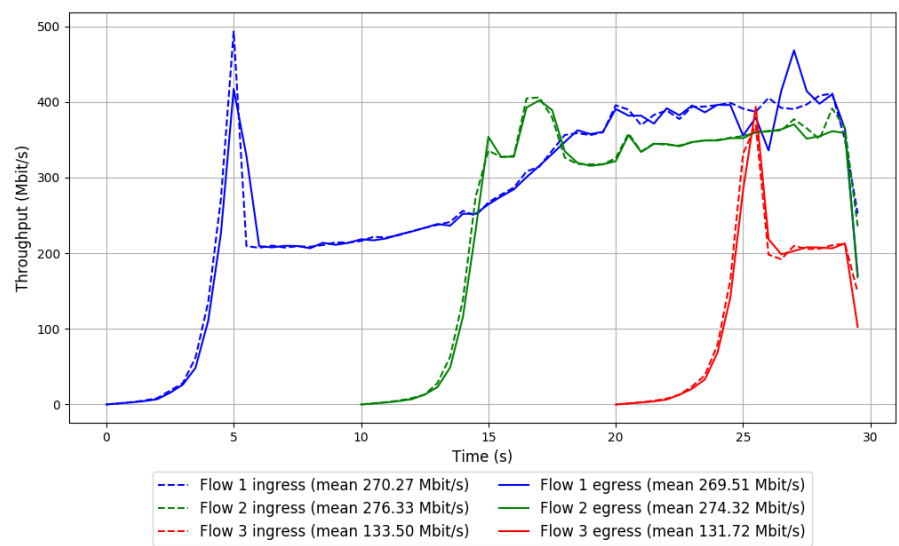
-- Flow 3:

Average throughput: 131.72 Mbit/s

95th percentile per-packet one-way delay: 111.355 ms

Loss rate: 3.58%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-02-20 20:12:30

End at: 2018-02-20 20:13:00

Below is generated by plot.py at 2018-02-21 01:37:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 498.92 Mbit/s

95th percentile per-packet one-way delay: 135.965 ms

Loss rate: 1.67%

-- Flow 1:

Average throughput: 281.03 Mbit/s

95th percentile per-packet one-way delay: 140.029 ms

Loss rate: 1.23%

-- Flow 2:

Average throughput: 254.42 Mbit/s

95th percentile per-packet one-way delay: 134.549 ms

Loss rate: 1.94%

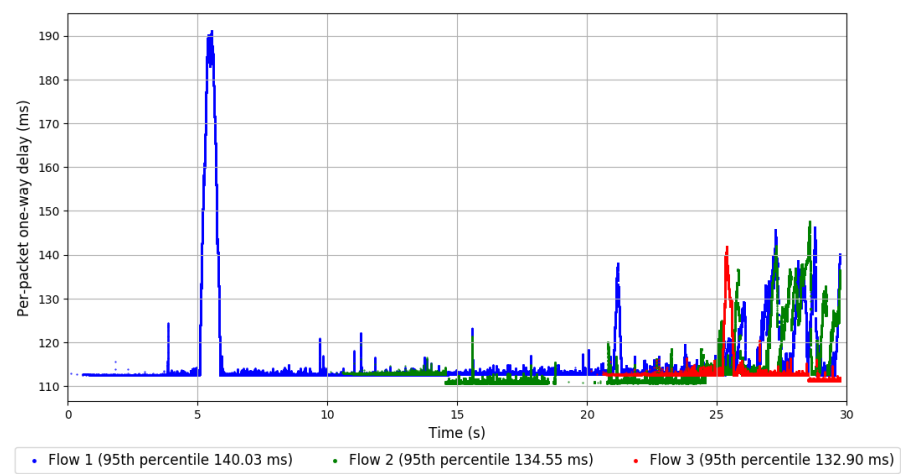
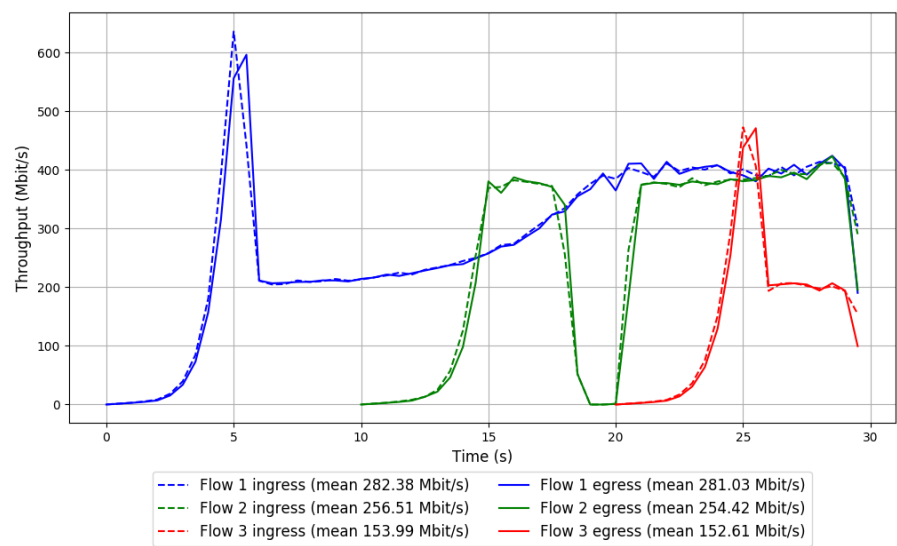
-- Flow 3:

Average throughput: 152.61 Mbit/s

95th percentile per-packet one-way delay: 132.896 ms

Loss rate: 3.18%

Run 10: Report of Vivace-loss — Data Link

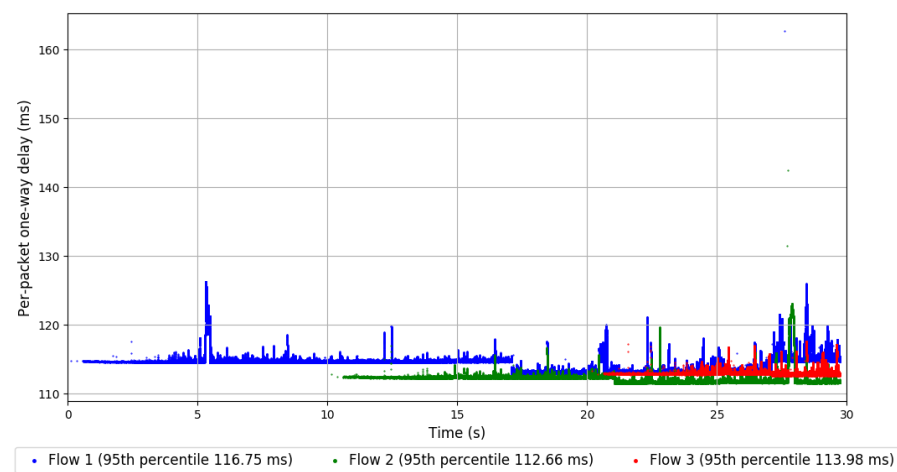
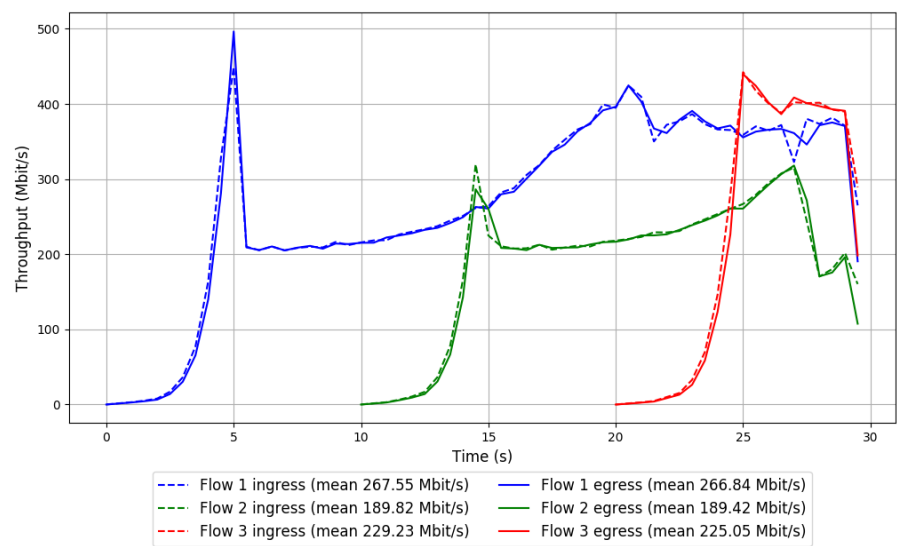


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-02-20 17:06:17
End at: 2018-02-20 17:06:47

# Below is generated by plot.py at 2018-02-21 01:37:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 464.79 Mbit/s
95th percentile per-packet one-way delay: 115.822 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 266.84 Mbit/s
95th percentile per-packet one-way delay: 116.752 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 189.42 Mbit/s
95th percentile per-packet one-way delay: 112.664 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 225.05 Mbit/s
95th percentile per-packet one-way delay: 113.978 ms
Loss rate: 4.09%
```


Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-02-20 17:25:45

End at: 2018-02-20 17:26:15

Below is generated by plot.py at 2018-02-21 01:39:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 498.62 Mbit/s

95th percentile per-packet one-way delay: 118.171 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 341.76 Mbit/s

95th percentile per-packet one-way delay: 122.324 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 174.76 Mbit/s

95th percentile per-packet one-way delay: 112.917 ms

Loss rate: 1.49%

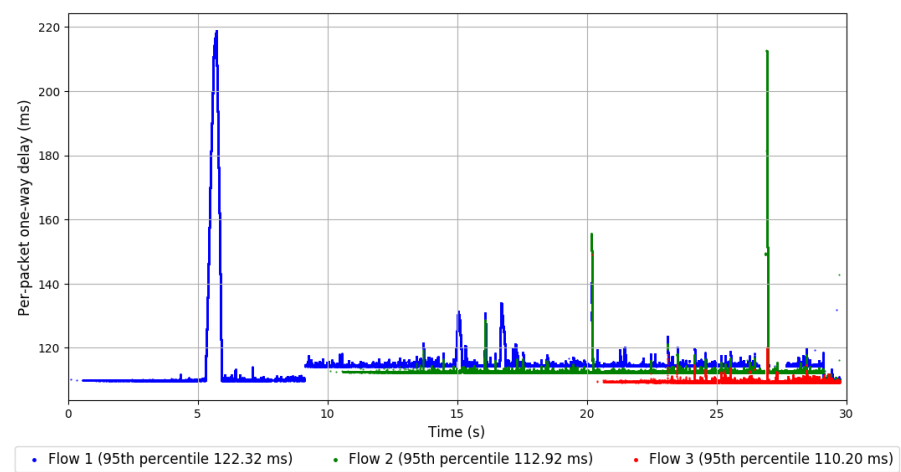
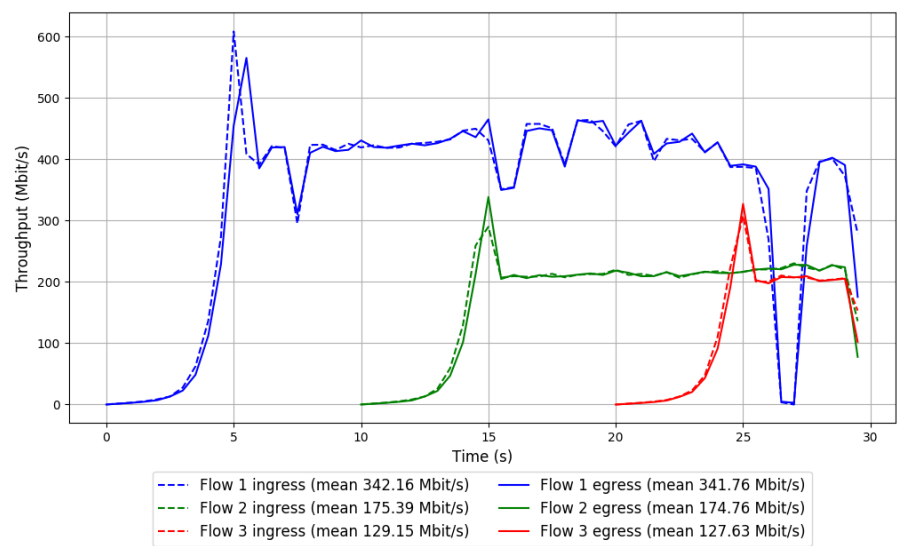
-- Flow 3:

Average throughput: 127.63 Mbit/s

95th percentile per-packet one-way delay: 110.198 ms

Loss rate: 3.81%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-02-20 17:45:41

End at: 2018-02-20 17:46:11

Below is generated by plot.py at 2018-02-21 01:42:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 509.79 Mbit/s

95th percentile per-packet one-way delay: 116.497 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 307.21 Mbit/s

95th percentile per-packet one-way delay: 118.142 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 199.36 Mbit/s

95th percentile per-packet one-way delay: 114.518 ms

Loss rate: 1.57%

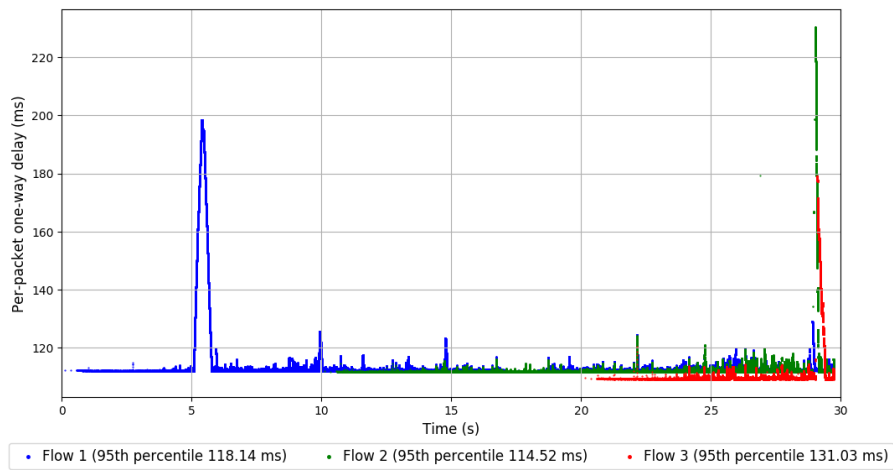
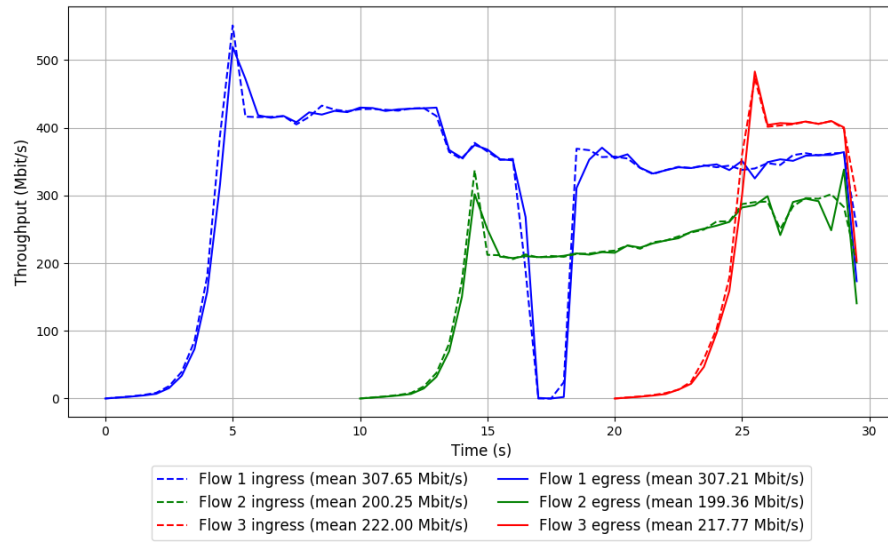
-- Flow 3:

Average throughput: 217.77 Mbit/s

95th percentile per-packet one-way delay: 131.030 ms

Loss rate: 4.12%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-02-20 18:06:16

End at: 2018-02-20 18:06:46

Below is generated by plot.py at 2018-02-21 01:42:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 477.38 Mbit/s

95th percentile per-packet one-way delay: 116.370 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 246.11 Mbit/s

95th percentile per-packet one-way delay: 113.914 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 241.72 Mbit/s

95th percentile per-packet one-way delay: 109.639 ms

Loss rate: 1.46%

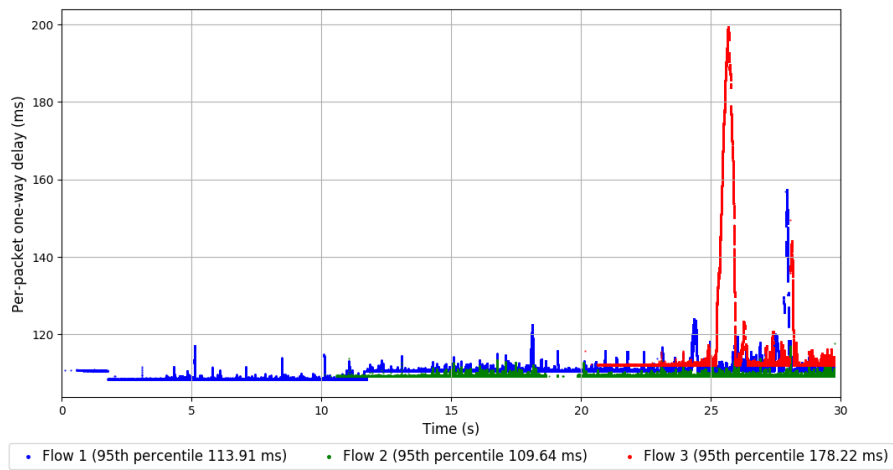
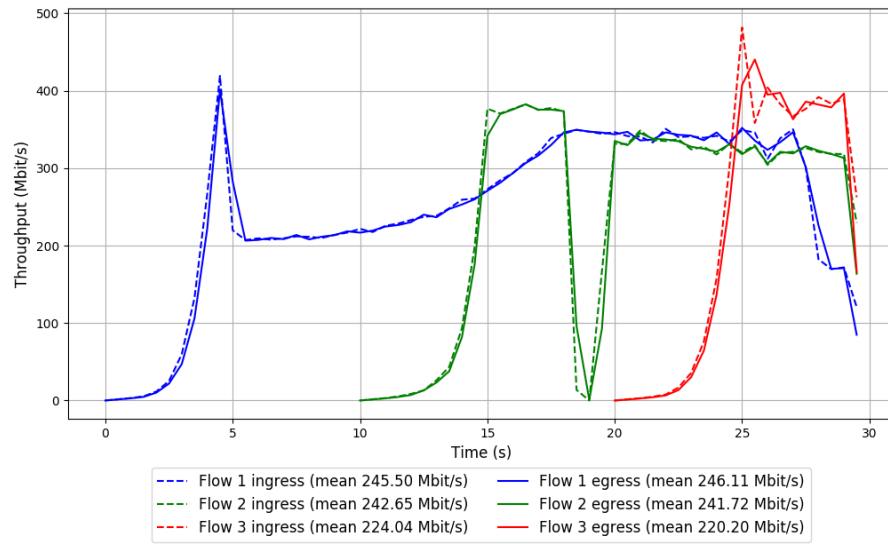
-- Flow 3:

Average throughput: 220.20 Mbit/s

95th percentile per-packet one-way delay: 178.223 ms

Loss rate: 4.00%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-02-20 18:25:52

End at: 2018-02-20 18:26:22

Below is generated by plot.py at 2018-02-21 01:43:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 467.70 Mbit/s

95th percentile per-packet one-way delay: 113.383 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 296.07 Mbit/s

95th percentile per-packet one-way delay: 114.266 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 187.84 Mbit/s

95th percentile per-packet one-way delay: 112.292 ms

Loss rate: 0.97%

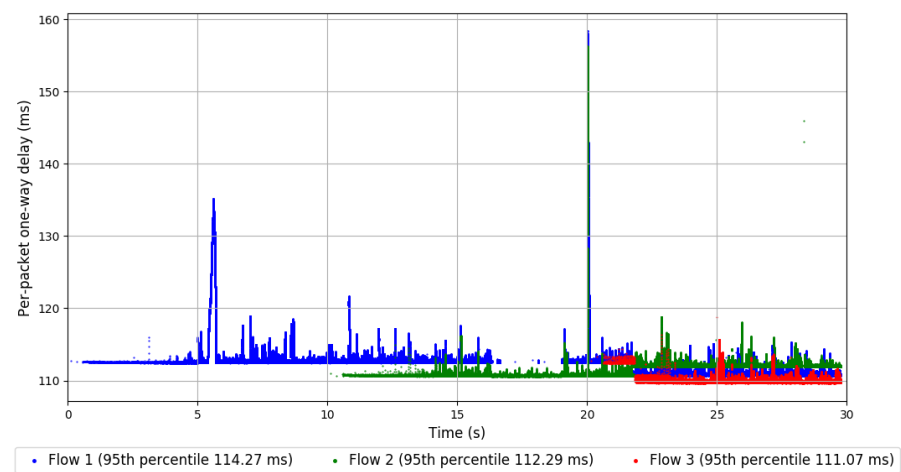
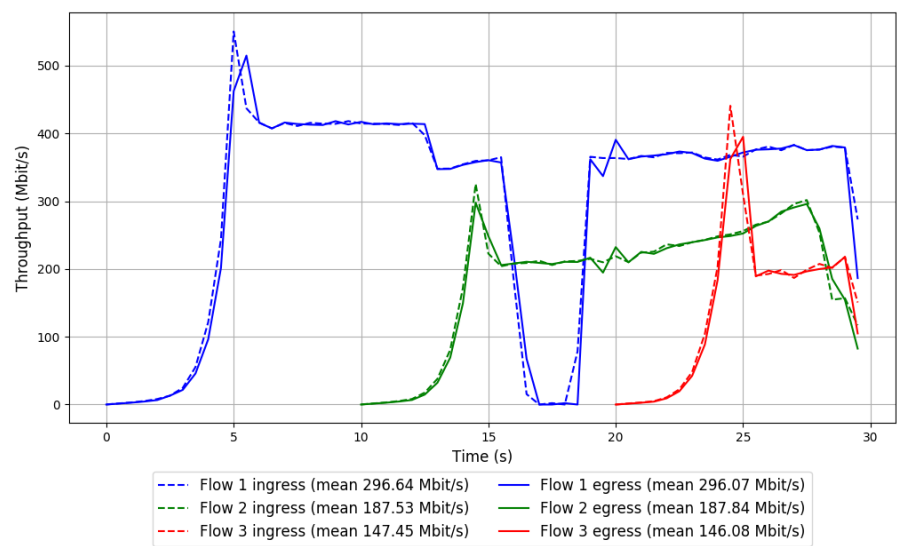
-- Flow 3:

Average throughput: 146.08 Mbit/s

95th percentile per-packet one-way delay: 111.073 ms

Loss rate: 3.21%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-02-20 18:45:43

End at: 2018-02-20 18:46:13

Below is generated by plot.py at 2018-02-21 01:45:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 580.56 Mbit/s

95th percentile per-packet one-way delay: 150.088 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 305.57 Mbit/s

95th percentile per-packet one-way delay: 115.168 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 301.69 Mbit/s

95th percentile per-packet one-way delay: 208.056 ms

Loss rate: 0.85%

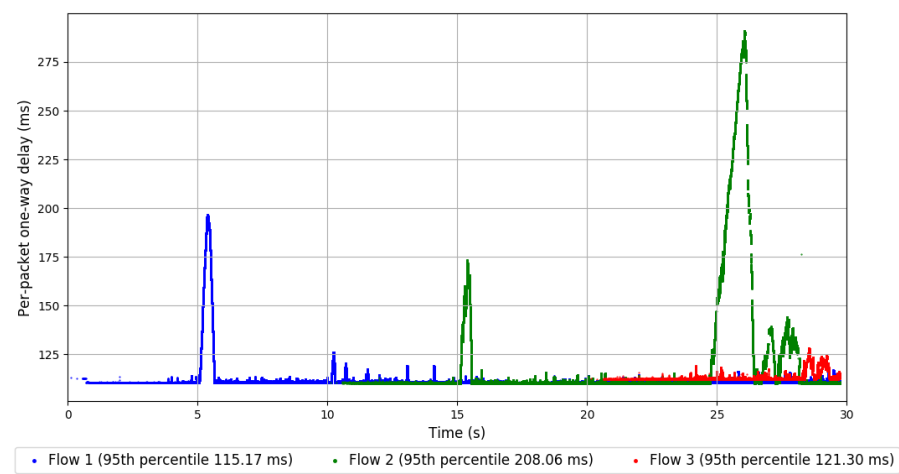
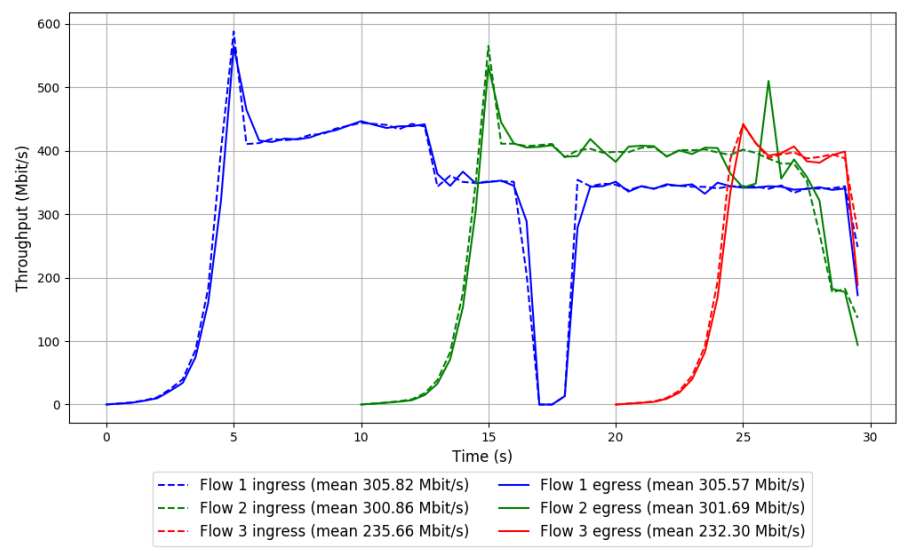
-- Flow 3:

Average throughput: 232.30 Mbit/s

95th percentile per-packet one-way delay: 121.295 ms

Loss rate: 3.68%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-02-20 19:05:31

End at: 2018-02-20 19:06:01

Below is generated by plot.py at 2018-02-21 01:45:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 521.18 Mbit/s

95th percentile per-packet one-way delay: 119.347 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 313.13 Mbit/s

95th percentile per-packet one-way delay: 123.215 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 207.68 Mbit/s

95th percentile per-packet one-way delay: 118.338 ms

Loss rate: 1.70%

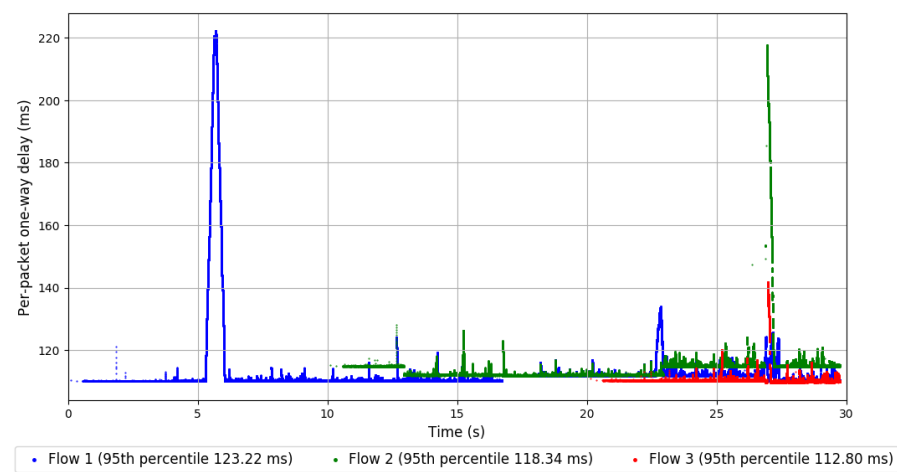
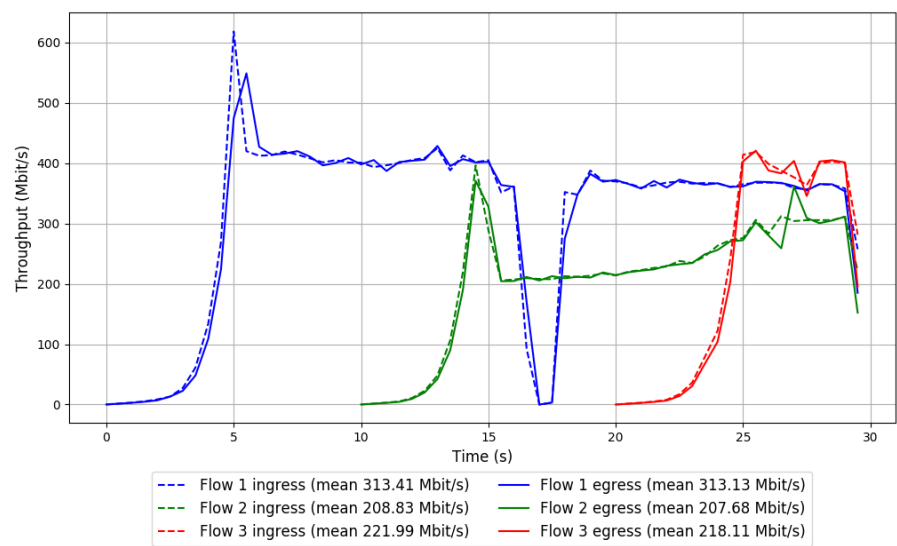
-- Flow 3:

Average throughput: 218.11 Mbit/s

95th percentile per-packet one-way delay: 112.803 ms

Loss rate: 3.99%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-02-20 19:25:04

End at: 2018-02-20 19:25:34

Below is generated by plot.py at 2018-02-21 01:45:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 461.66 Mbit/s

95th percentile per-packet one-way delay: 120.349 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 301.99 Mbit/s

95th percentile per-packet one-way delay: 117.837 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 126.19 Mbit/s

95th percentile per-packet one-way delay: 158.861 ms

Loss rate: 1.58%

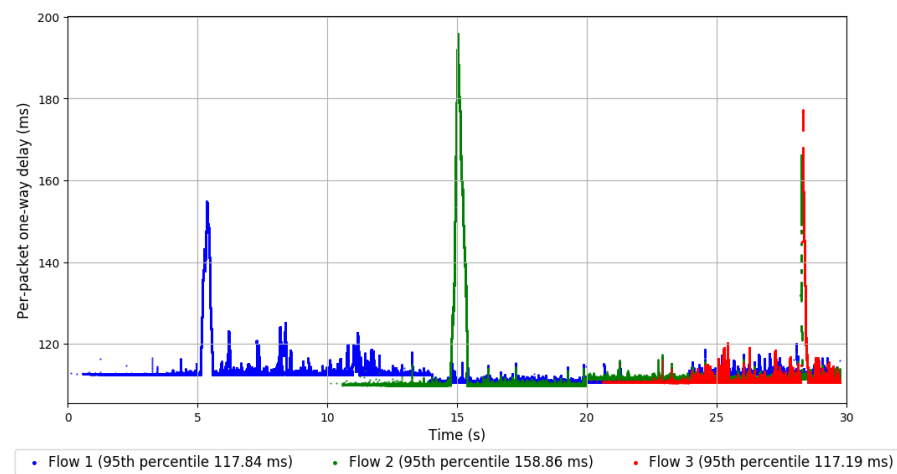
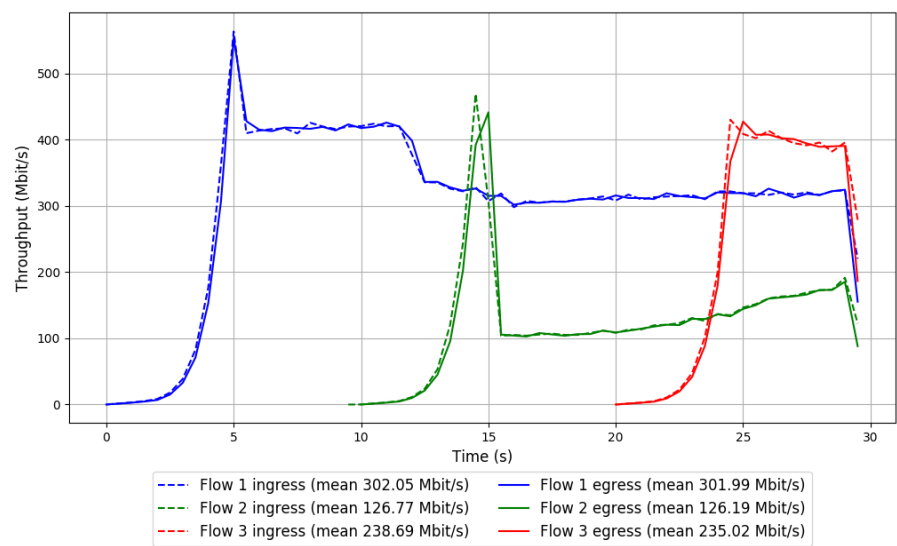
-- Flow 3:

Average throughput: 235.02 Mbit/s

95th percentile per-packet one-way delay: 117.188 ms

Loss rate: 3.78%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-02-20 19:44:54

End at: 2018-02-20 19:45:24

Below is generated by plot.py at 2018-02-21 01:45:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 503.60 Mbit/s

95th percentile per-packet one-way delay: 114.671 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 331.68 Mbit/s

95th percentile per-packet one-way delay: 116.710 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 194.13 Mbit/s

95th percentile per-packet one-way delay: 113.475 ms

Loss rate: 1.60%

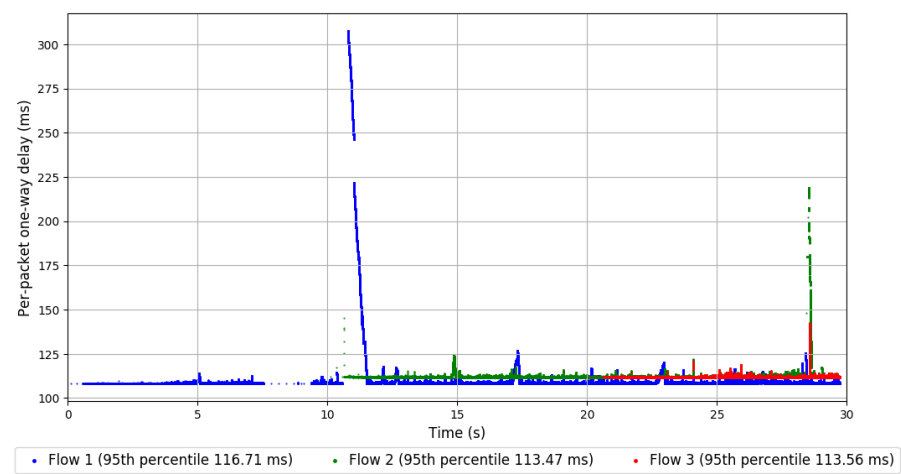
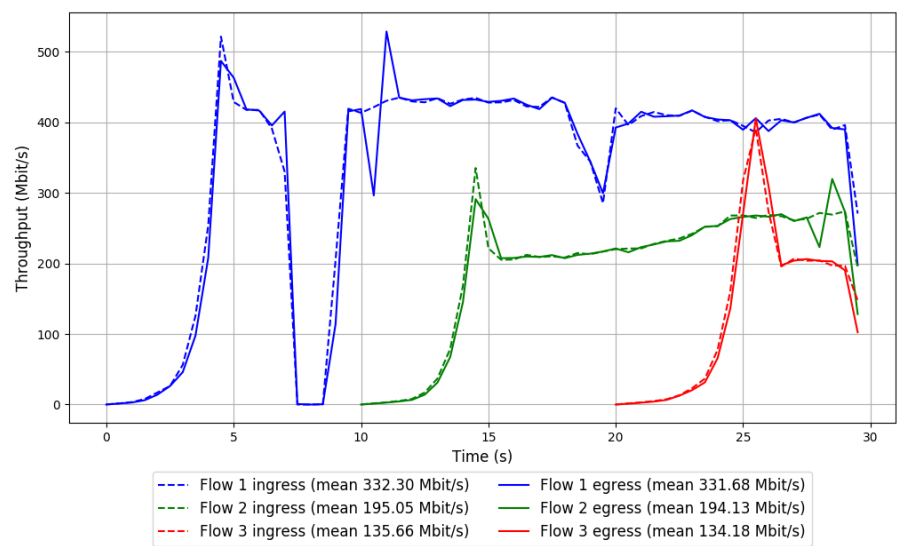
-- Flow 3:

Average throughput: 134.18 Mbit/s

95th percentile per-packet one-way delay: 113.555 ms

Loss rate: 3.37%

Run 9: Report of Vivace-LTE — Data Link



```
Run 10: Statistics of Vivace-LTE

Start at: 2018-02-20 20:04:35
End at: 2018-02-20 20:05:05

# Below is generated by plot.py at 2018-02-21 01:45:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 466.28 Mbit/s
95th percentile per-packet one-way delay: 131.454 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 247.33 Mbit/s
95th percentile per-packet one-way delay: 172.618 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 261.67 Mbit/s
95th percentile per-packet one-way delay: 113.319 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 140.88 Mbit/s
95th percentile per-packet one-way delay: 118.679 ms
Loss rate: 3.13%
```

Run 10: Report of Vivace-LTE — Data Link

