

Pantheon Report

Generated at 2018-03-21 13:58:03 (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.

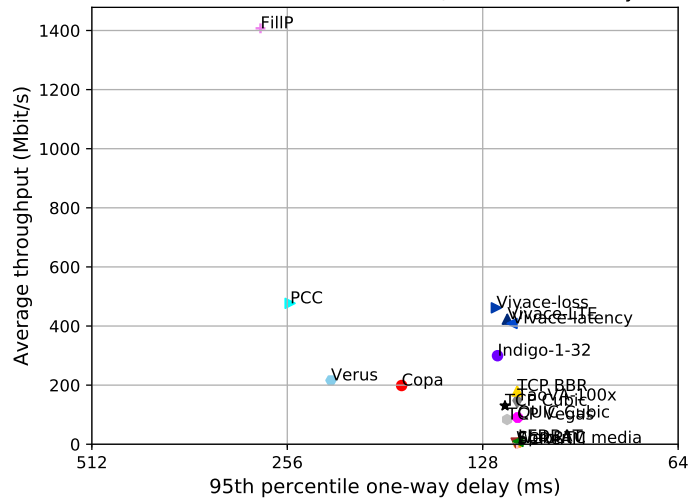
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

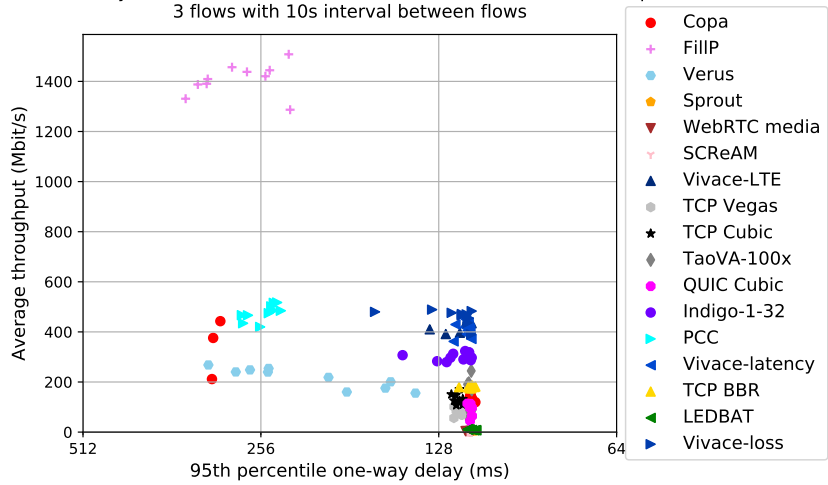
Git summary:

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

test from 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	92.98	90.88	82.61	112.58	112.80	114.81	0.77	1.21	2.88
TCP Cubic	10	72.02	59.39	58.37	118.25	117.51	119.40	0.95	2.10	2.85
LEDBAT	10	5.96	4.32	2.13	112.98	112.95	112.36	1.67	2.37	4.70
PCC	10	434.59	53.06	21.79	253.24	250.82	241.74	2.83	2.80	4.58
QUIC Cubic	10	41.22	48.93	51.70	112.88	112.28	111.98	0.92	1.27	2.42
SCReAM	10	0.22	0.20	0.21	112.50	112.43	111.86	0.68	1.07	2.16
WebRTC media	10	2.10	1.33	0.48	113.10	112.71	112.47	0.94	1.48	3.75
Sprout	10	2.33	2.22	1.62	113.15	112.86	112.68	0.95	1.31	4.02
TaoVA-100x	10	61.33	98.44	66.23	112.56	113.44	113.96	0.49	1.27	2.43
TCP Vegas	10	40.20	44.62	42.63	116.72	116.56	116.40	0.72	1.61	2.96
Verus	10	129.66	105.84	53.66	208.85	218.95	204.09	1.52	2.02	5.13
Copa	10	128.12	82.96	47.61	169.87	145.10	152.01	8.91	5.38	6.08
FillP	10	745.38	693.74	620.68	256.95	276.11	258.60	7.28	9.07	9.46
Indigo-1-32	10	161.99	146.88	125.85	118.12	121.94	124.93	0.68	1.10	2.65
Vivace-latency	10	248.16	182.32	123.06	115.51	124.73	114.46	0.72	1.29	3.75
Vivace-loss	10	269.26	220.00	144.39	121.36	126.15	119.34	0.96	1.42	3.62
Vivace-LTE	10	258.23	183.00	135.88	115.27	125.31	119.21	0.80	1.25	3.50

Run 1: Statistics of TCP BBR

Start at: 2018-03-21 05:28:55

End at: 2018-03-21 05:29:25

Below is generated by plot.py at 2018-03-21 12:13:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 174.79 Mbit/s

95th percentile per-packet one-way delay: 113.491 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 90.89 Mbit/s

95th percentile per-packet one-way delay: 113.301 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 88.20 Mbit/s

95th percentile per-packet one-way delay: 113.422 ms

Loss rate: 1.43%

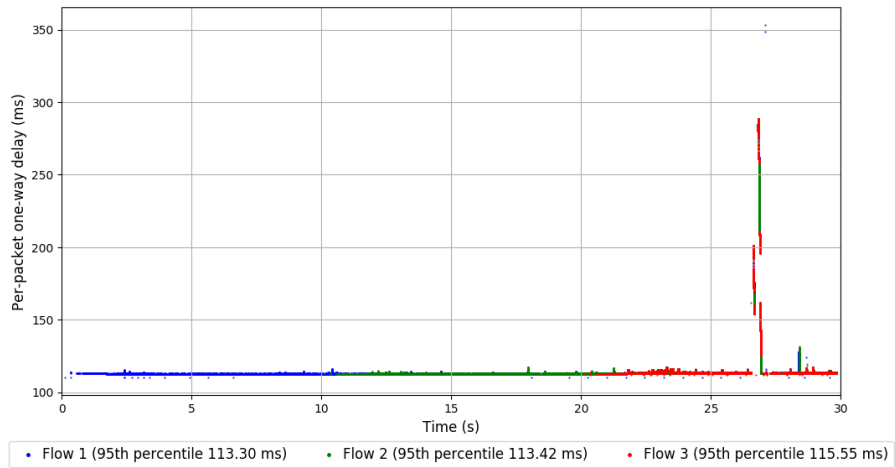
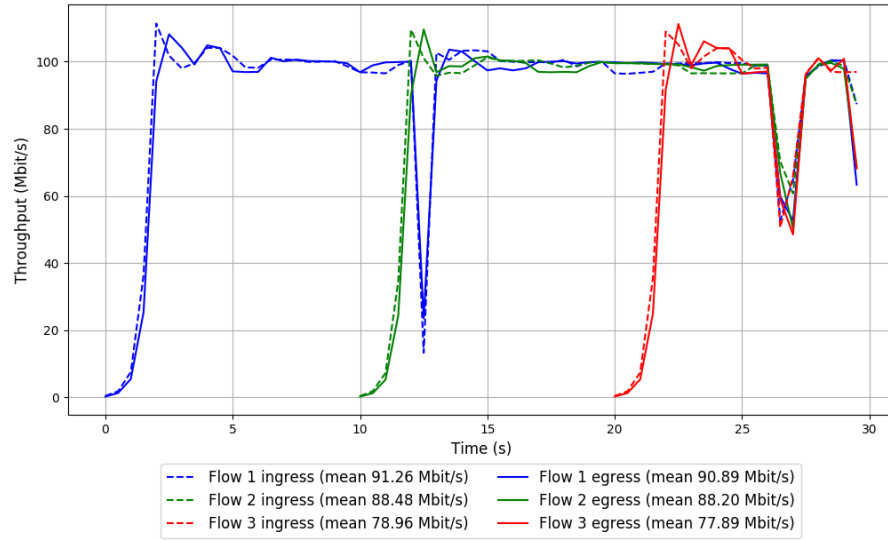
-- Flow 3:

Average throughput: 77.89 Mbit/s

95th percentile per-packet one-way delay: 115.550 ms

Loss rate: 3.76%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-03-21 05:48:05

End at: 2018-03-21 05:48:35

Below is generated by plot.py at 2018-03-21 12:13:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.51 Mbit/s

95th percentile per-packet one-way delay: 118.256 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 90.90 Mbit/s

95th percentile per-packet one-way delay: 116.081 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 91.17 Mbit/s

95th percentile per-packet one-way delay: 116.852 ms

Loss rate: 1.17%

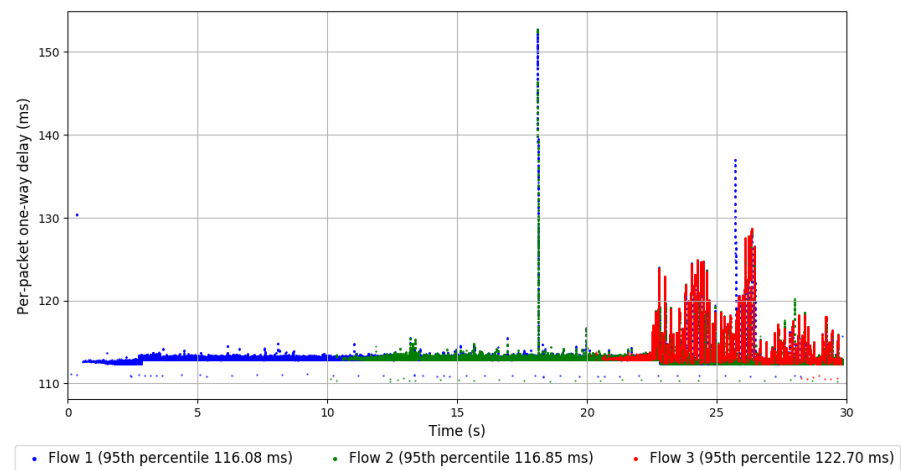
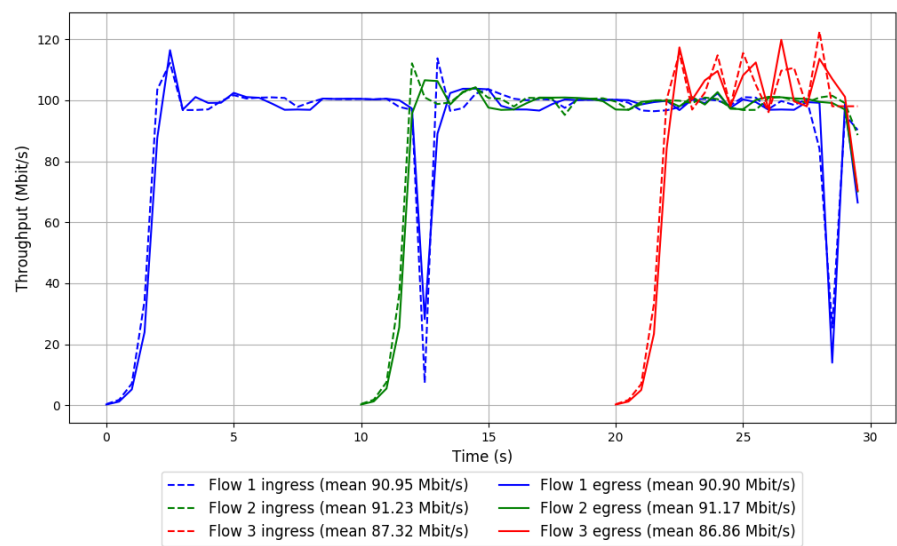
-- Flow 3:

Average throughput: 86.86 Mbit/s

95th percentile per-packet one-way delay: 122.700 ms

Loss rate: 2.85%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-03-21 06:07:12

End at: 2018-03-21 06:07:42

Below is generated by plot.py at 2018-03-21 12:13:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 182.76 Mbit/s

95th percentile per-packet one-way delay: 113.039 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 94.13 Mbit/s

95th percentile per-packet one-way delay: 113.154 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 90.03 Mbit/s

95th percentile per-packet one-way delay: 110.428 ms

Loss rate: 1.23%

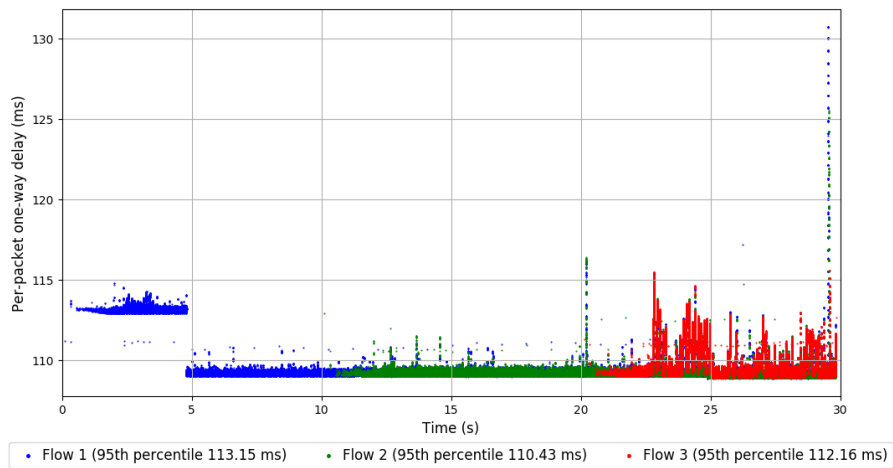
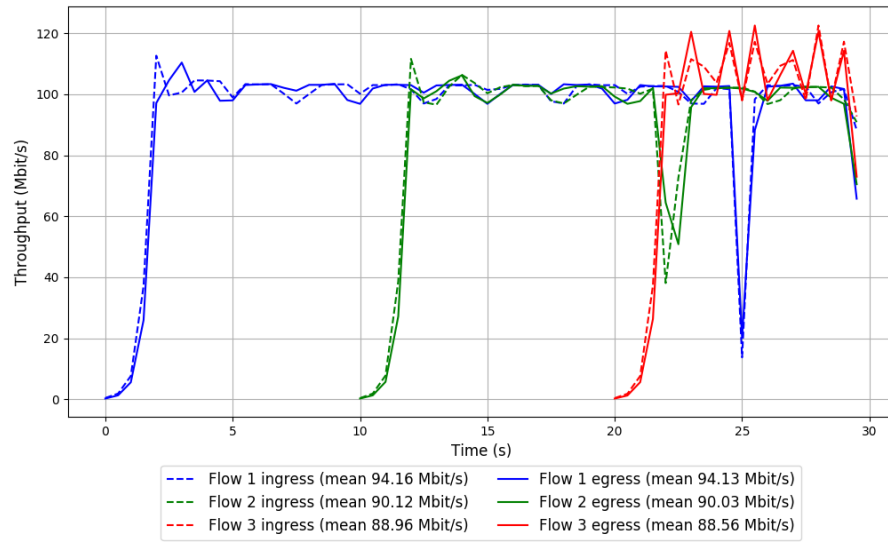
-- Flow 3:

Average throughput: 88.56 Mbit/s

95th percentile per-packet one-way delay: 112.162 ms

Loss rate: 2.67%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-03-21 06:26:16

End at: 2018-03-21 06:26:46

Below is generated by plot.py at 2018-03-21 12:13:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.26 Mbit/s

95th percentile per-packet one-way delay: 114.062 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 91.97 Mbit/s

95th percentile per-packet one-way delay: 111.571 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 89.80 Mbit/s

95th percentile per-packet one-way delay: 113.094 ms

Loss rate: 1.35%

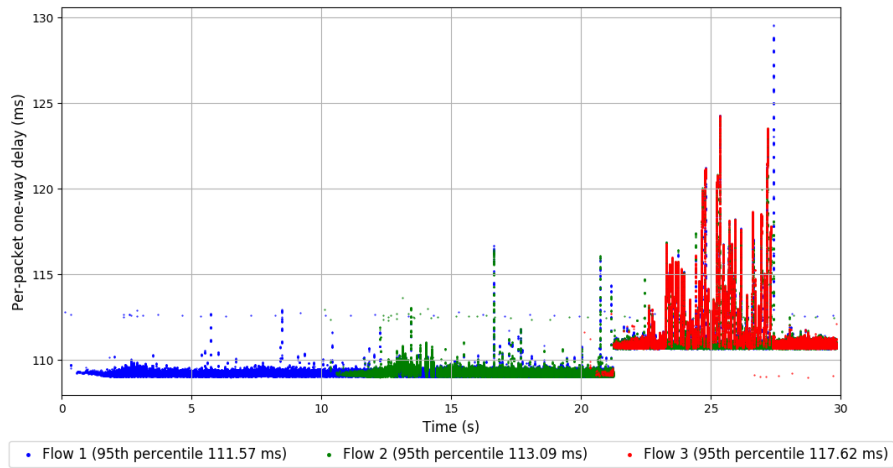
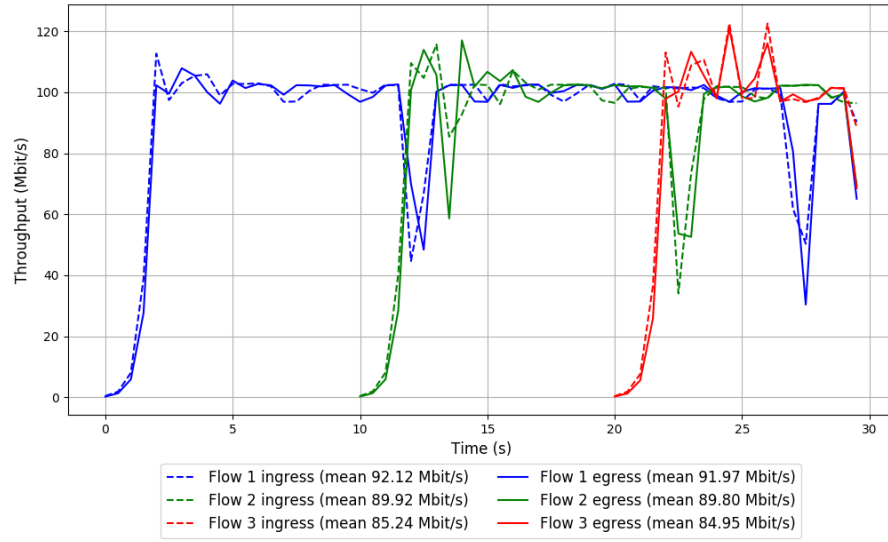
-- Flow 3:

Average throughput: 84.95 Mbit/s

95th percentile per-packet one-way delay: 117.616 ms

Loss rate: 2.56%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-03-21 06:45:36

End at: 2018-03-21 06:46:06

Below is generated by plot.py at 2018-03-21 12:13:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 182.20 Mbit/s

95th percentile per-packet one-way delay: 110.957 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 94.26 Mbit/s

95th percentile per-packet one-way delay: 111.001 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 91.04 Mbit/s

95th percentile per-packet one-way delay: 109.651 ms

Loss rate: 1.20%

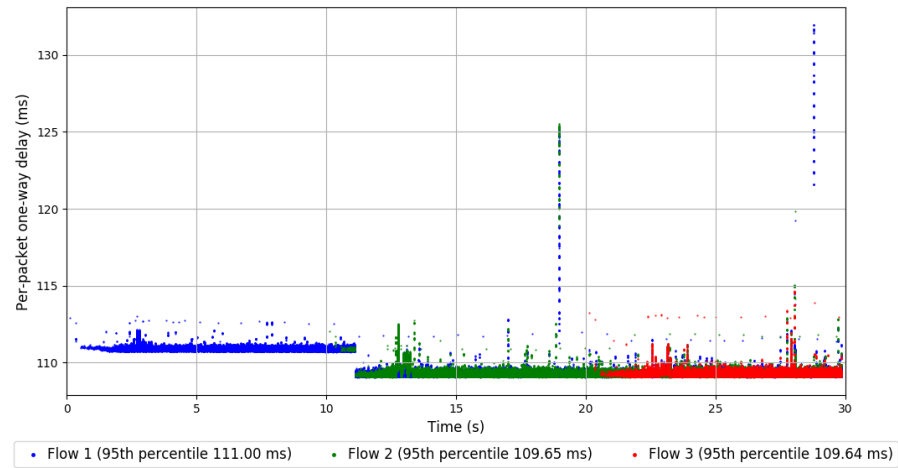
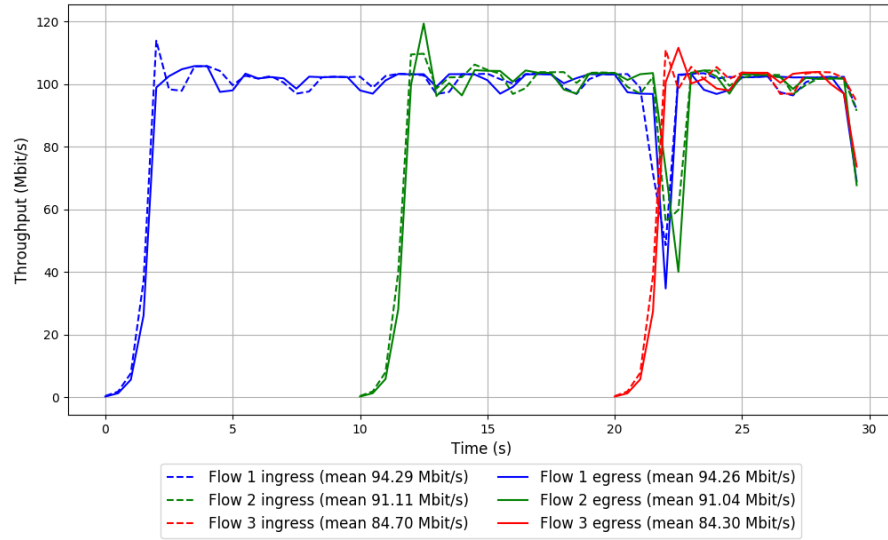
-- Flow 3:

Average throughput: 84.30 Mbit/s

95th percentile per-packet one-way delay: 109.636 ms

Loss rate: 2.73%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-03-21 07:05:06

End at: 2018-03-21 07:05:36

Below is generated by plot.py at 2018-03-21 12:13:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.29 Mbit/s

95th percentile per-packet one-way delay: 112.634 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 94.04 Mbit/s

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

Loss rate: 0.86%

-- Flow 2:

Average throughput: 90.75 Mbit/s

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

Loss rate: 1.28%

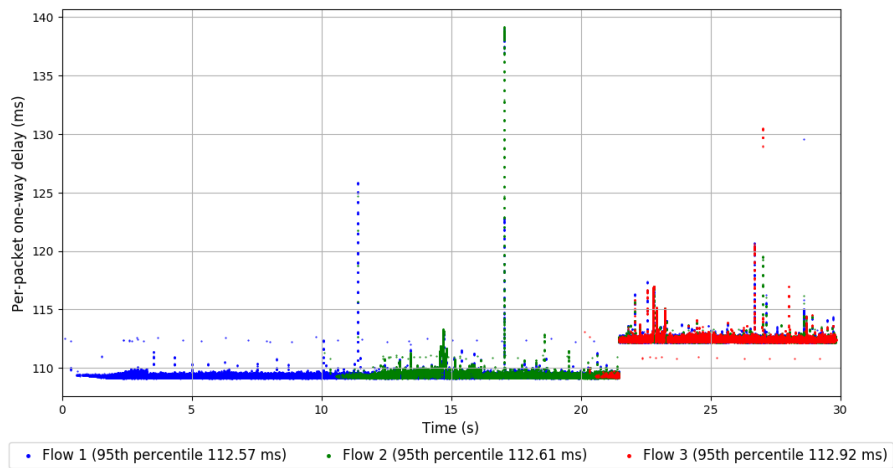
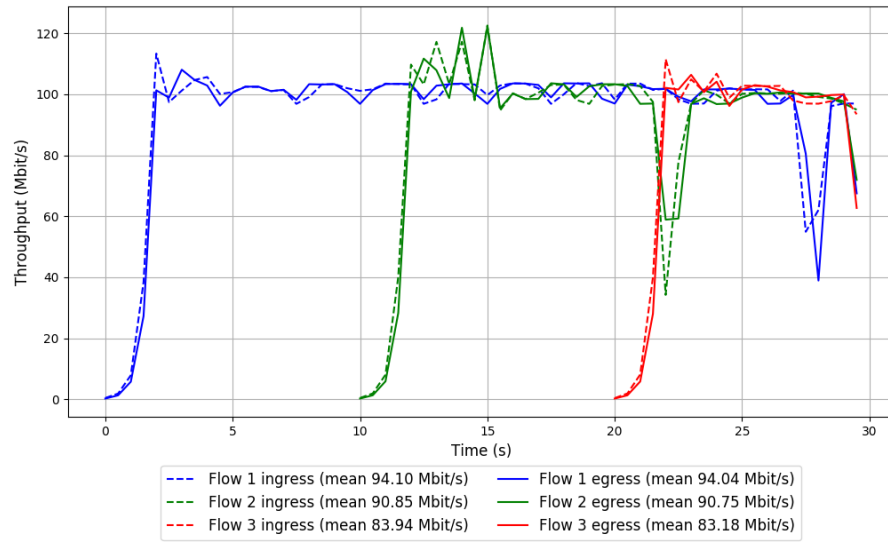
-- Flow 3:

Average throughput: 83.18 Mbit/s

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

Loss rate: 2.90%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-03-21 07:24:42

End at: 2018-03-21 07:25:12

Below is generated by plot.py at 2018-03-21 12:13:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 175.03 Mbit/s

95th percentile per-packet one-way delay: 112.707 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 92.93 Mbit/s

95th percentile per-packet one-way delay: 112.532 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 89.19 Mbit/s

95th percentile per-packet one-way delay: 112.611 ms

Loss rate: 1.23%

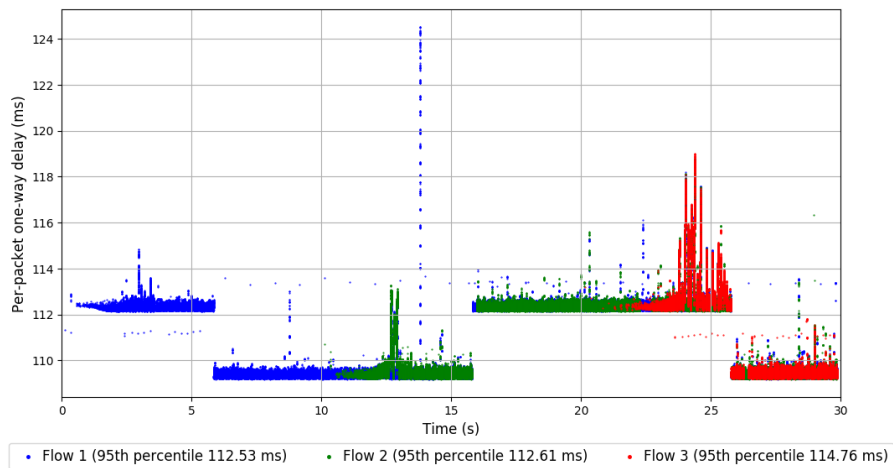
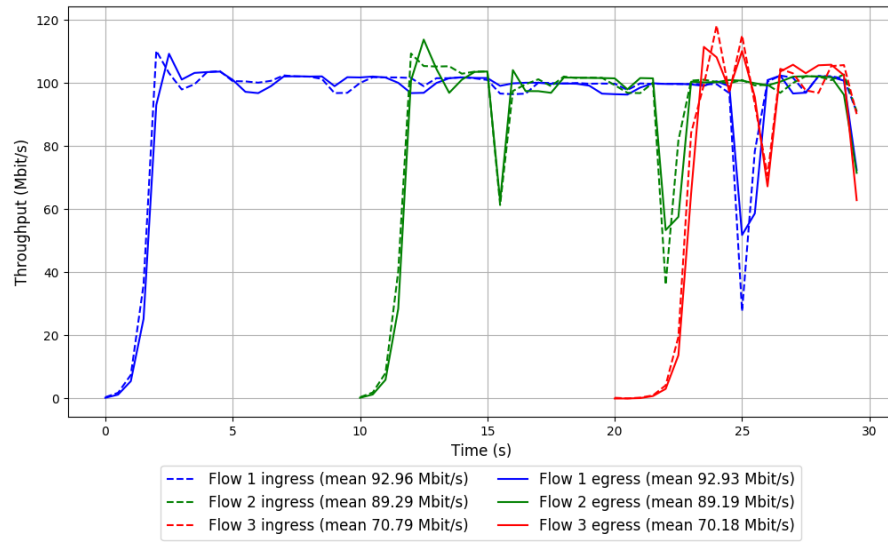
-- Flow 3:

Average throughput: 70.18 Mbit/s

95th percentile per-packet one-way delay: 114.756 ms

Loss rate: 3.11%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-03-21 07:44:06

End at: 2018-03-21 07:44:36

Below is generated by plot.py at 2018-03-21 12:13:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 185.93 Mbit/s

95th percentile per-packet one-way delay: 112.309 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 96.05 Mbit/s

95th percentile per-packet one-way delay: 111.064 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 94.29 Mbit/s

95th percentile per-packet one-way delay: 113.380 ms

Loss rate: 1.17%

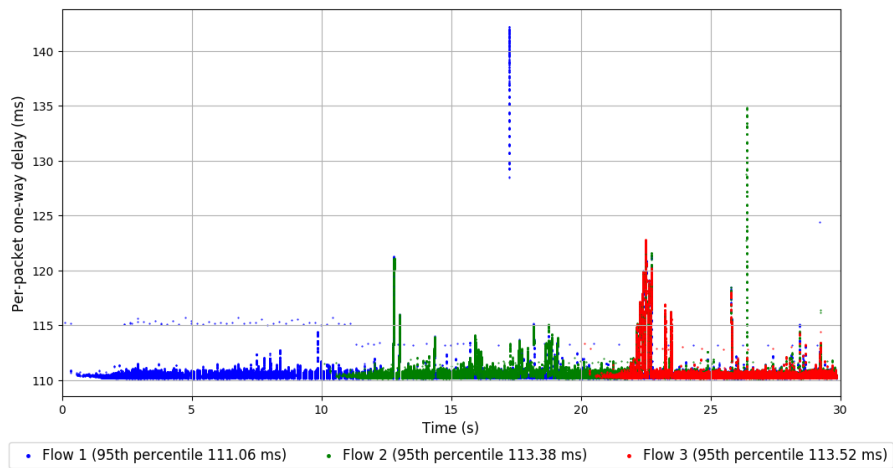
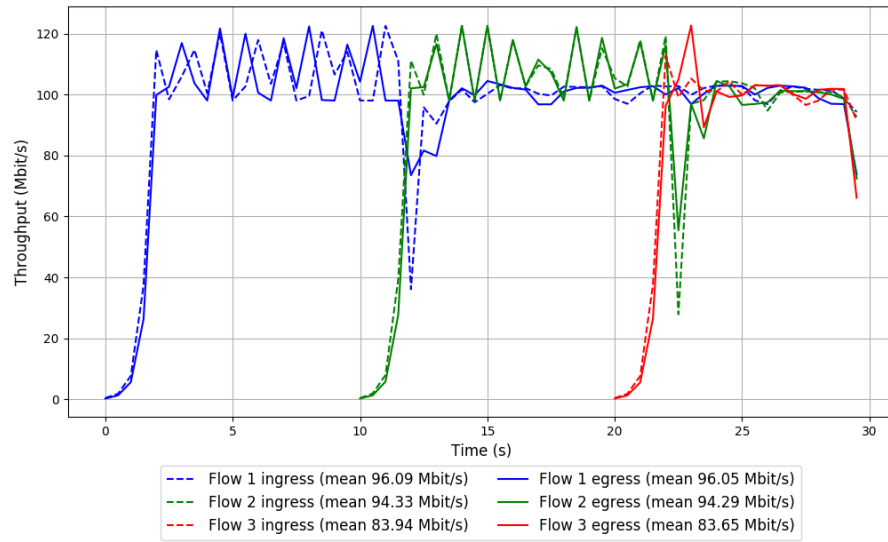
-- Flow 3:

Average throughput: 83.65 Mbit/s

95th percentile per-packet one-way delay: 113.519 ms

Loss rate: 2.61%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-03-21 08:09:50

End at: 2018-03-21 08:10:20

Below is generated by plot.py at 2018-03-21 12:16:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 180.99 Mbit/s

95th percentile per-packet one-way delay: 113.958 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 92.04 Mbit/s

95th percentile per-packet one-way delay: 113.336 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 93.11 Mbit/s

95th percentile per-packet one-way delay: 114.578 ms

Loss rate: 1.17%

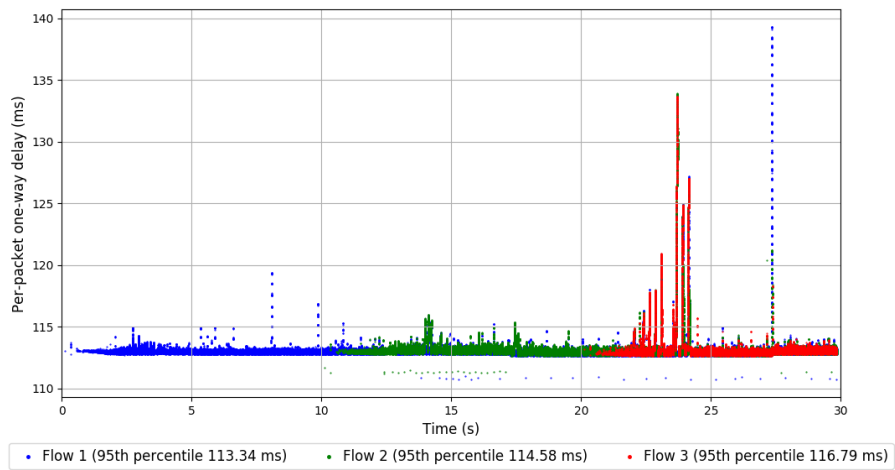
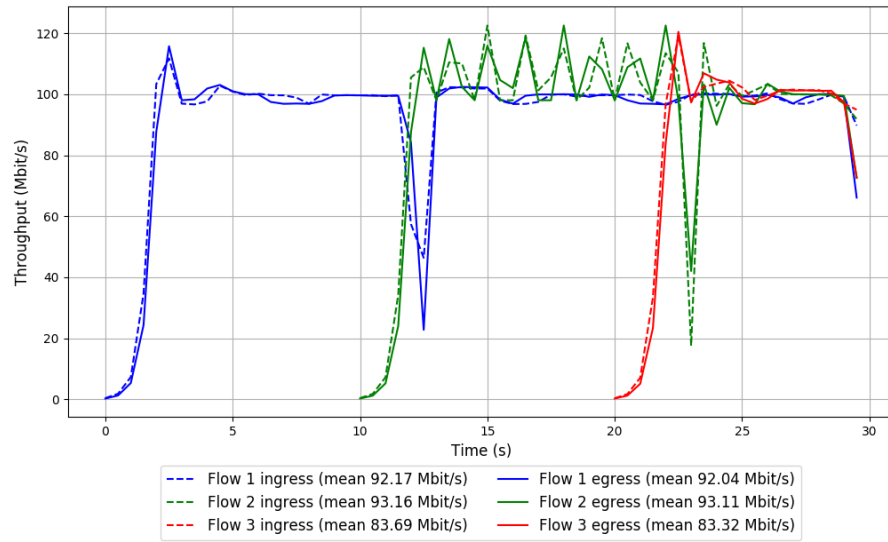
-- Flow 3:

Average throughput: 83.32 Mbit/s

95th percentile per-packet one-way delay: 116.791 ms

Loss rate: 2.79%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-03-21 08:35:05

End at: 2018-03-21 08:35:35

Below is generated by plot.py at 2018-03-21 12:16:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.89 Mbit/s

95th percentile per-packet one-way delay: 111.352 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 92.64 Mbit/s

95th percentile per-packet one-way delay: 111.181 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 91.26 Mbit/s

95th percentile per-packet one-way delay: 111.381 ms

Loss rate: 0.83%

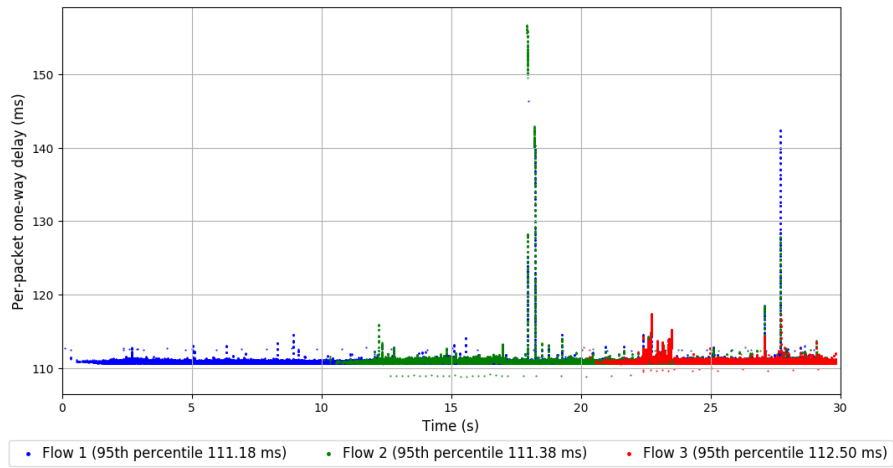
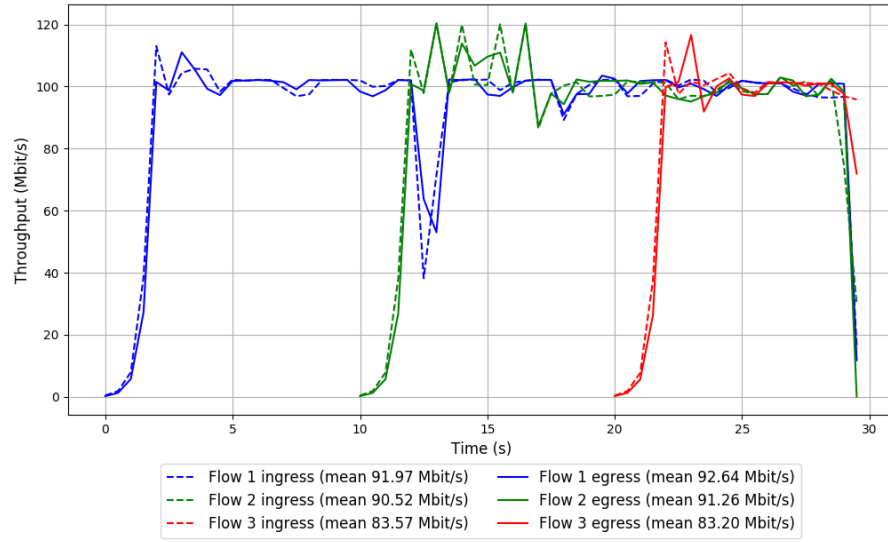
-- Flow 3:

Average throughput: 83.20 Mbit/s

95th percentile per-packet one-way delay: 112.495 ms

Loss rate: 2.85%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-03-21 05:16:19

End at: 2018-03-21 05:16:49

Below is generated by plot.py at 2018-03-21 12:16:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 120.62 Mbit/s

95th percentile per-packet one-way delay: 115.404 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 60.23 Mbit/s

95th percentile per-packet one-way delay: 116.372 ms

Loss rate: 1.29%

-- Flow 2:

Average throughput: 70.14 Mbit/s

95th percentile per-packet one-way delay: 114.954 ms

Loss rate: 1.34%

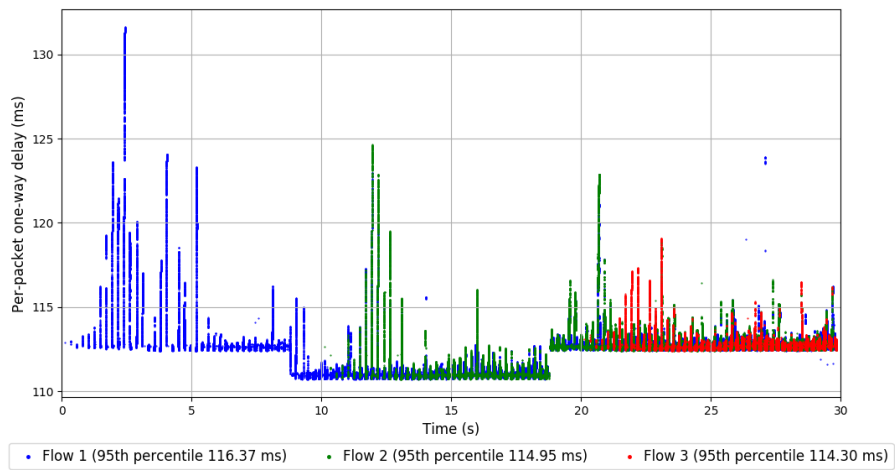
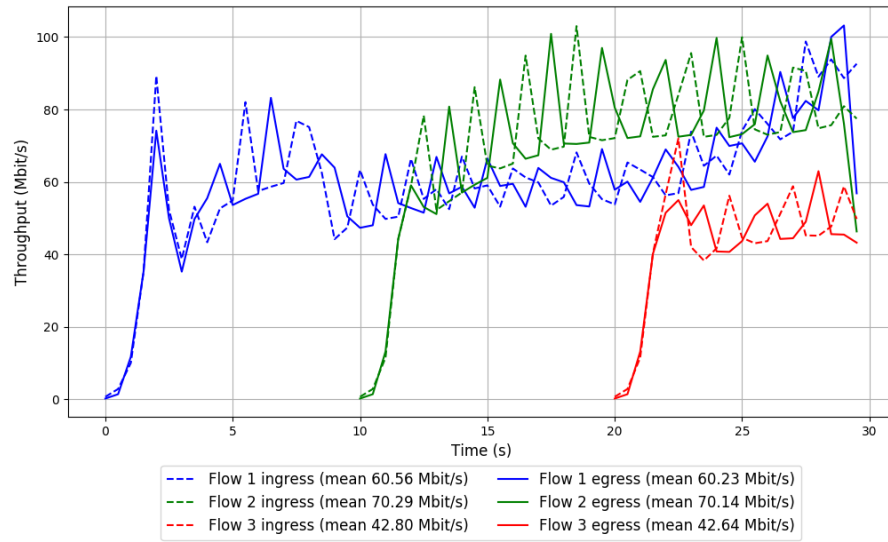
-- Flow 3:

Average throughput: 42.64 Mbit/s

95th percentile per-packet one-way delay: 114.303 ms

Loss rate: 2.63%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-03-21 05:35:41

End at: 2018-03-21 05:36:11

Below is generated by plot.py at 2018-03-21 12:16:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.76 Mbit/s

95th percentile per-packet one-way delay: 120.548 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 62.92 Mbit/s

95th percentile per-packet one-way delay: 118.999 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 67.43 Mbit/s

95th percentile per-packet one-way delay: 120.739 ms

Loss rate: 1.17%

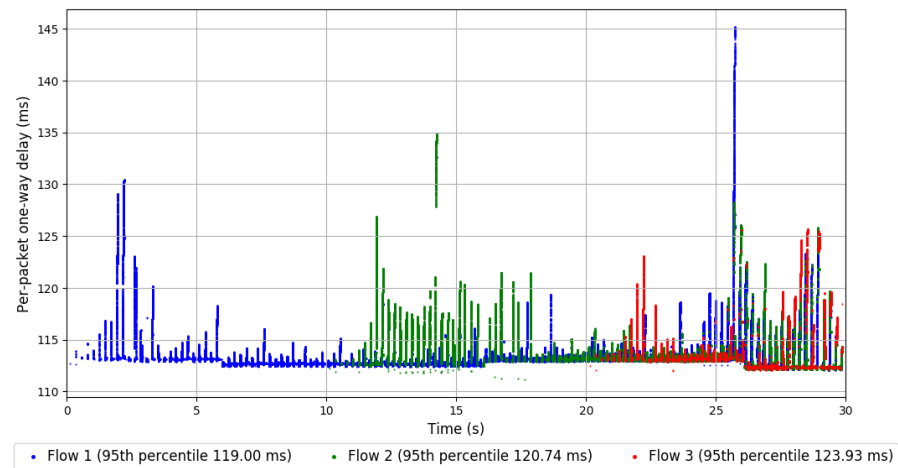
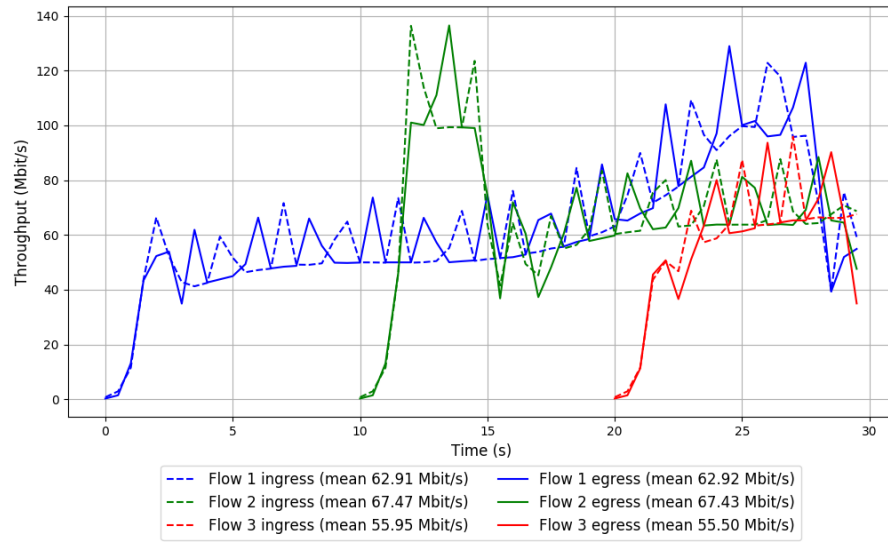
-- Flow 3:

Average throughput: 55.50 Mbit/s

95th percentile per-packet one-way delay: 123.931 ms

Loss rate: 2.98%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-03-21 05:55:01

End at: 2018-03-21 05:55:31

Below is generated by plot.py at 2018-03-21 12:16:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.20 Mbit/s

95th percentile per-packet one-way delay: 119.548 ms

Loss rate: 1.76%

-- Flow 1:

Average throughput: 76.23 Mbit/s

95th percentile per-packet one-way delay: 119.797 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 21.17 Mbit/s

95th percentile per-packet one-way delay: 118.557 ms

Loss rate: 5.08%

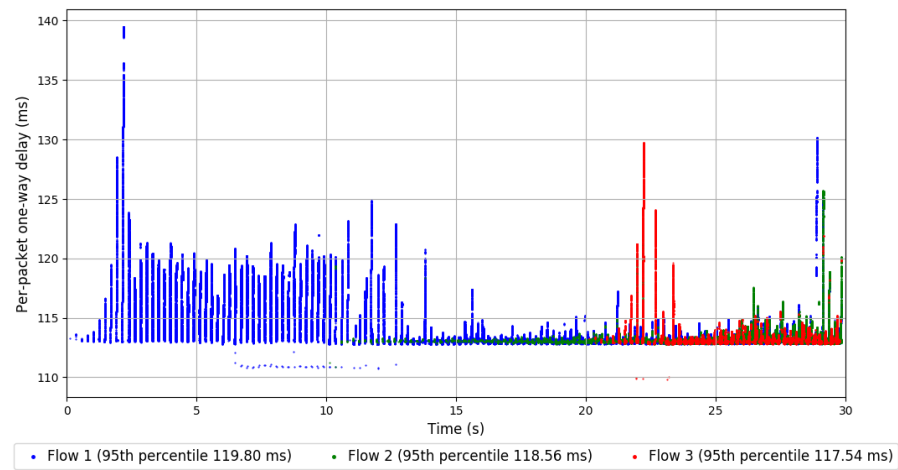
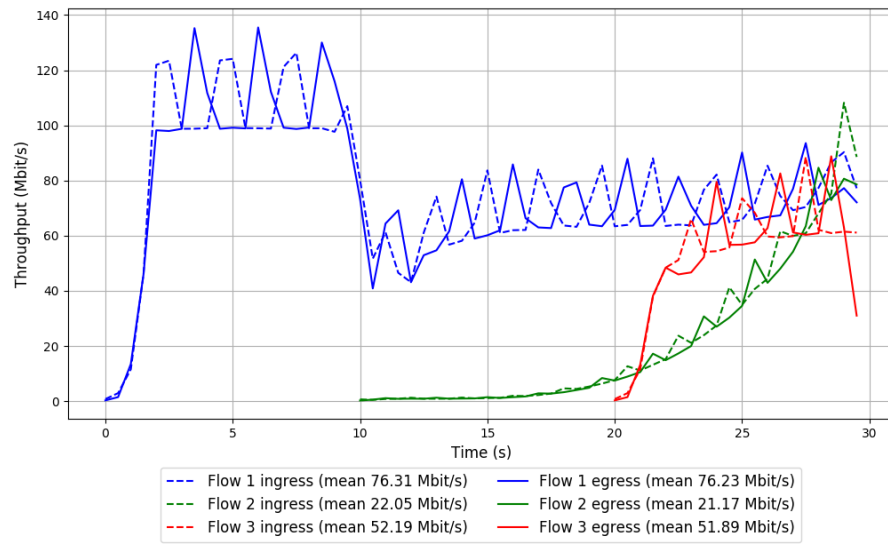
-- Flow 3:

Average throughput: 51.89 Mbit/s

95th percentile per-packet one-way delay: 117.538 ms

Loss rate: 2.94%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-03-21 06:13:50

End at: 2018-03-21 06:14:20

Below is generated by plot.py at 2018-03-21 12:16:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 148.17 Mbit/s

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

Loss rate: 1.88%

-- Flow 1:

Average throughput: 73.14 Mbit/s

95th percentile per-packet one-way delay: 119.652 ms

Loss rate: 1.38%

-- Flow 2:

Average throughput: 83.40 Mbit/s

95th percentile per-packet one-way delay: 119.671 ms

Loss rate: 1.94%

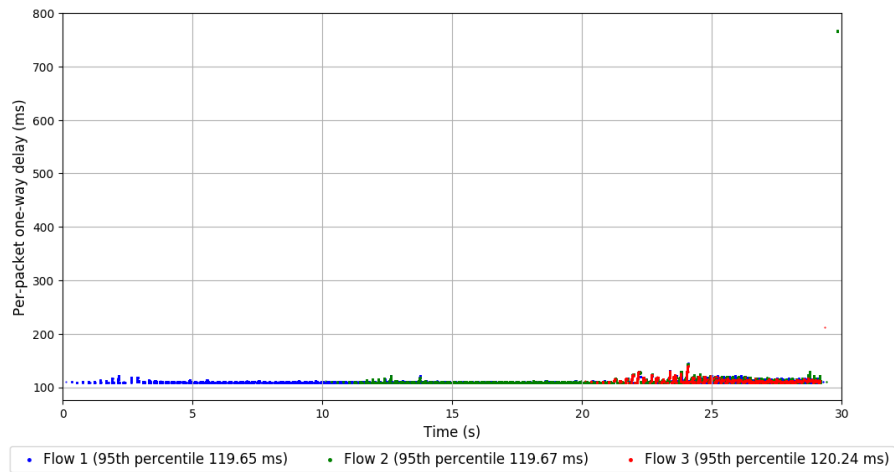
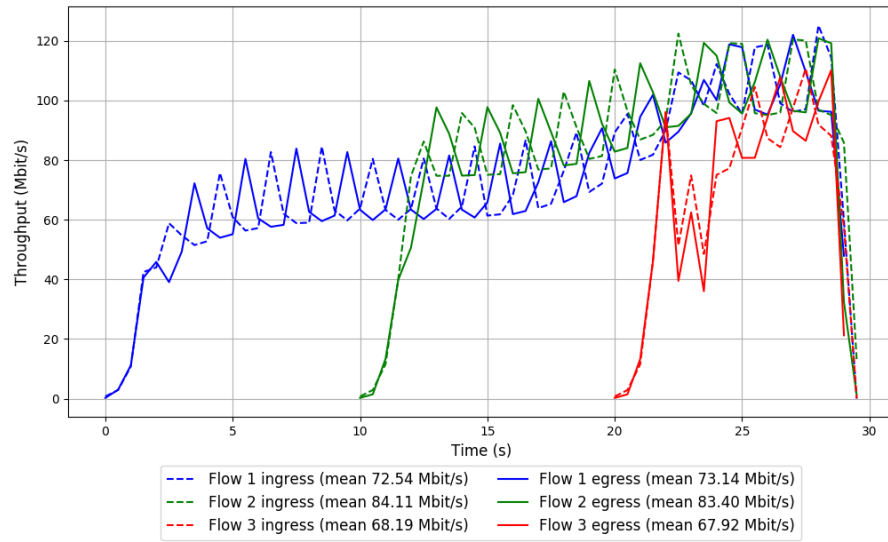
-- Flow 3:

Average throughput: 67.92 Mbit/s

95th percentile per-packet one-way delay: 120.237 ms

Loss rate: 3.41%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-03-21 06:33:12

End at: 2018-03-21 06:33:42

Below is generated by plot.py at 2018-03-21 12:16:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.76 Mbit/s

95th percentile per-packet one-way delay: 116.551 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 80.33 Mbit/s

95th percentile per-packet one-way delay: 116.304 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 21.38 Mbit/s

95th percentile per-packet one-way delay: 116.367 ms

Loss rate: 5.11%

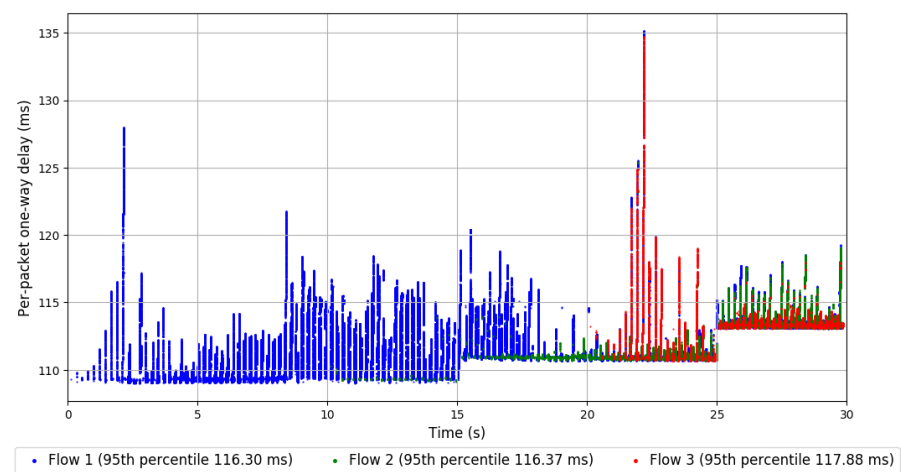
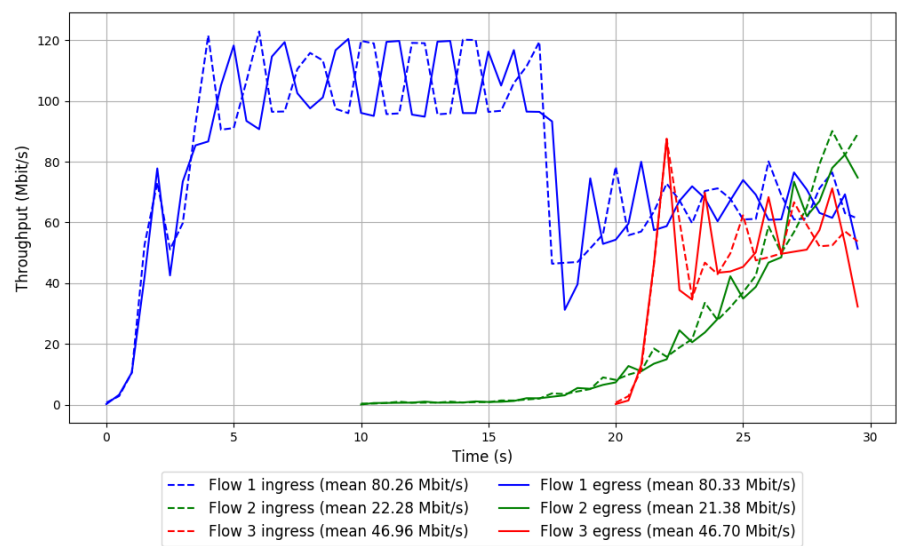
-- Flow 3:

Average throughput: 46.70 Mbit/s

95th percentile per-packet one-way delay: 117.884 ms

Loss rate: 2.83%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-03-21 06:52:28

End at: 2018-03-21 06:52:58

Below is generated by plot.py at 2018-03-21 12:16:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 131.59 Mbit/s

95th percentile per-packet one-way delay: 116.575 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 70.63 Mbit/s

95th percentile per-packet one-way delay: 117.863 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 69.84 Mbit/s

95th percentile per-packet one-way delay: 115.497 ms

Loss rate: 1.41%

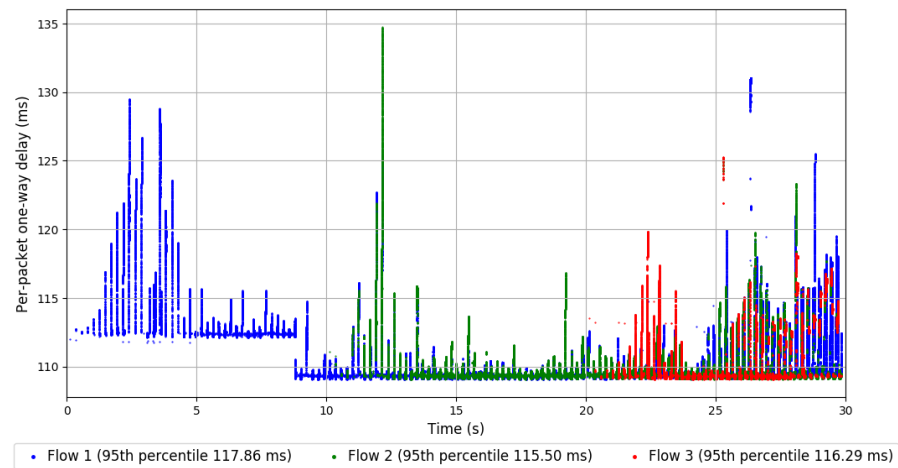
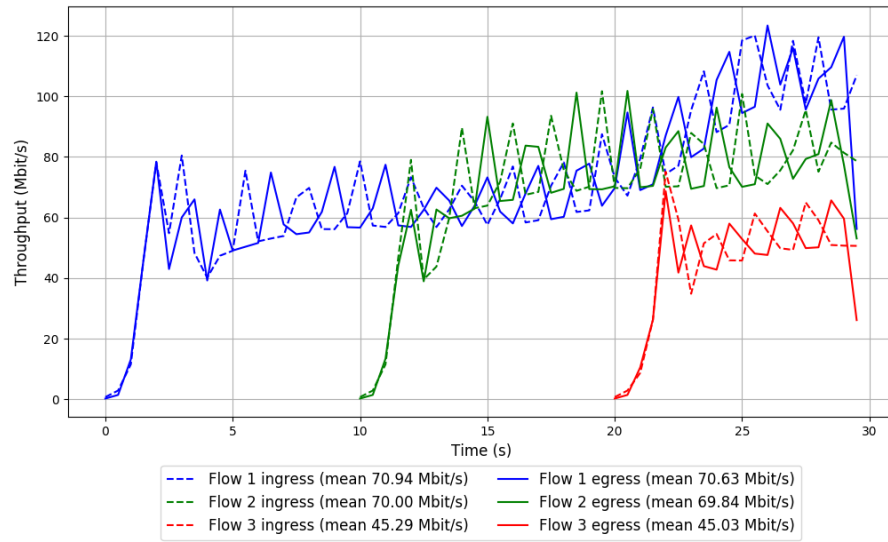
-- Flow 3:

Average throughput: 45.03 Mbit/s

95th percentile per-packet one-way delay: 116.289 ms

Loss rate: 2.82%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-03-21 07:11:59

End at: 2018-03-21 07:12:29

Below is generated by plot.py at 2018-03-21 12:17:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 150.58 Mbit/s

95th percentile per-packet one-way delay: 121.842 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 87.32 Mbit/s

95th percentile per-packet one-way delay: 120.842 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 51.16 Mbit/s

95th percentile per-packet one-way delay: 121.450 ms

Loss rate: 1.50%

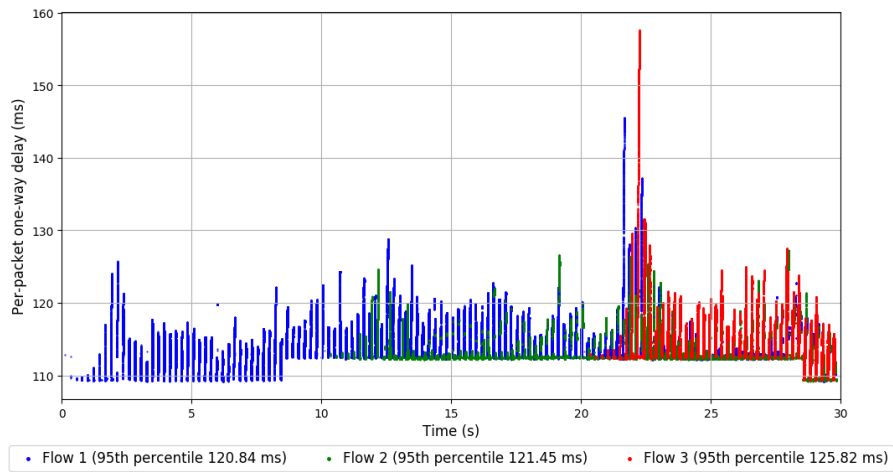
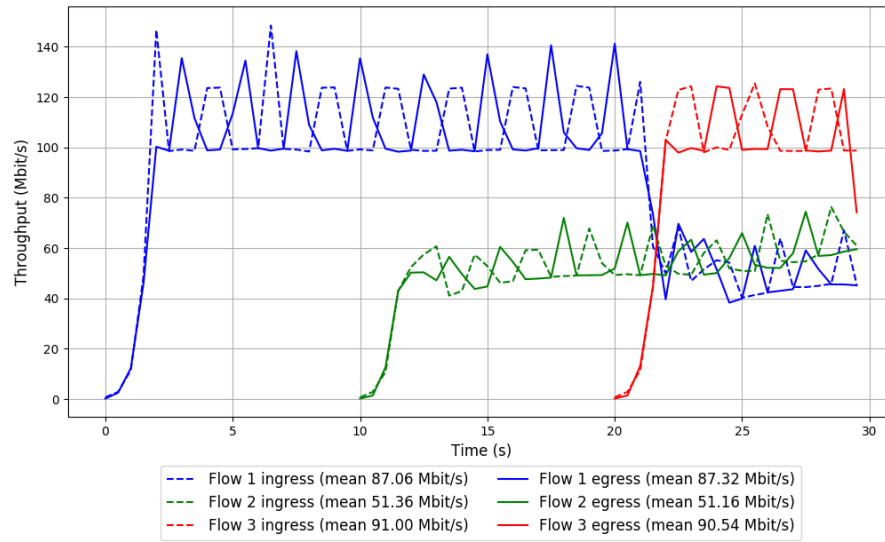
-- Flow 3:

Average throughput: 90.54 Mbit/s

95th percentile per-packet one-way delay: 125.824 ms

Loss rate: 2.75%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-03-21 07:31:31

End at: 2018-03-21 07:32:01

Below is generated by plot.py at 2018-03-21 12:17:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.38 Mbit/s

95th percentile per-packet one-way delay: 118.034 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 73.35 Mbit/s

95th percentile per-packet one-way delay: 117.934 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 57.00 Mbit/s

95th percentile per-packet one-way delay: 116.294 ms

Loss rate: 1.51%

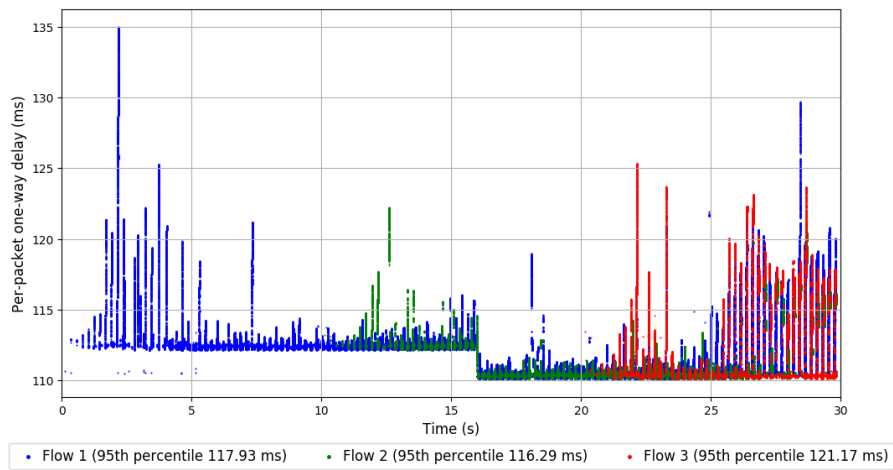
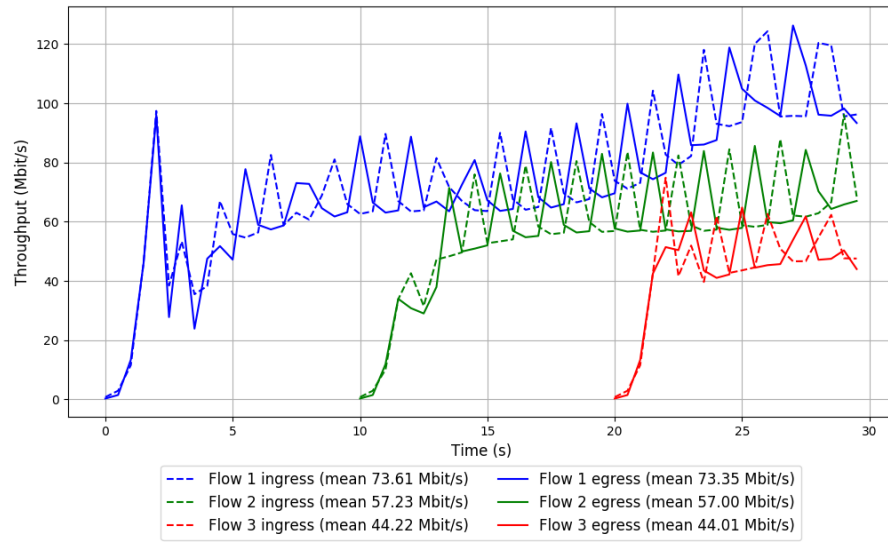
-- Flow 3:

Average throughput: 44.01 Mbit/s

95th percentile per-packet one-way delay: 121.175 ms

Loss rate: 2.70%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-03-21 07:50:59

End at: 2018-03-21 07:51:29

Below is generated by plot.py at 2018-03-21 12:17:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.34 Mbit/s

95th percentile per-packet one-way delay: 116.466 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 54.93 Mbit/s

95th percentile per-packet one-way delay: 117.292 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 61.70 Mbit/s

95th percentile per-packet one-way delay: 115.394 ms

Loss rate: 1.47%

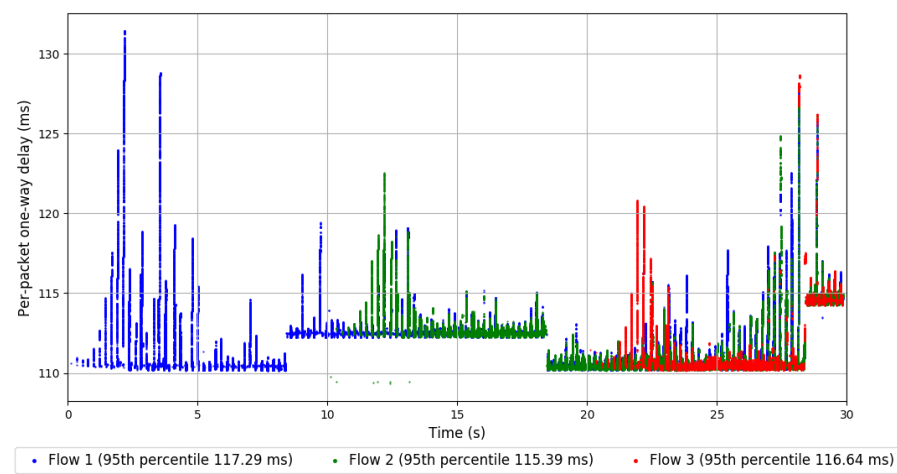
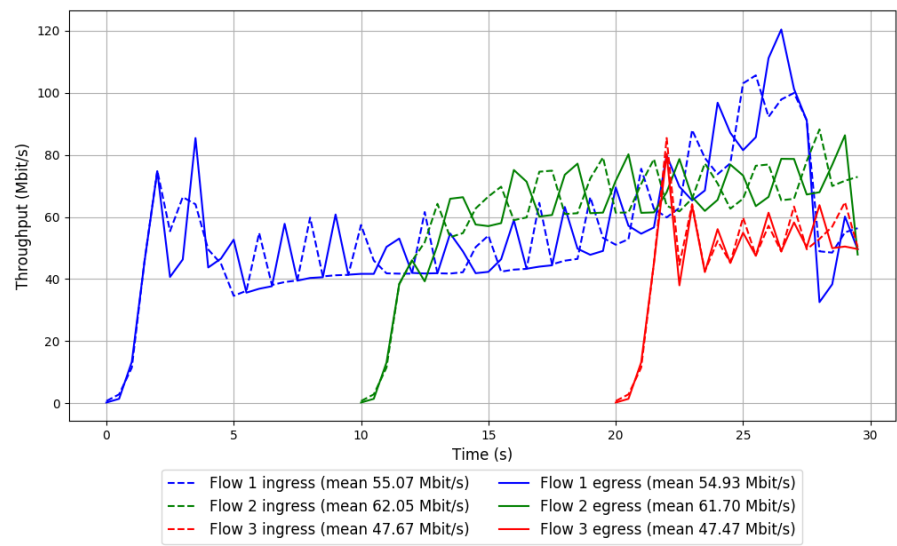
-- Flow 3:

Average throughput: 47.47 Mbit/s

95th percentile per-packet one-way delay: 116.637 ms

Loss rate: 2.66%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-03-21 08:22:28

End at: 2018-03-21 08:22:58

Below is generated by plot.py at 2018-03-21 12:18:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 170.84 Mbit/s

95th percentile per-packet one-way delay: 118.072 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 81.13 Mbit/s

95th percentile per-packet one-way delay: 117.409 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 90.72 Mbit/s

95th percentile per-packet one-way delay: 116.197 ms

Loss rate: 0.42%

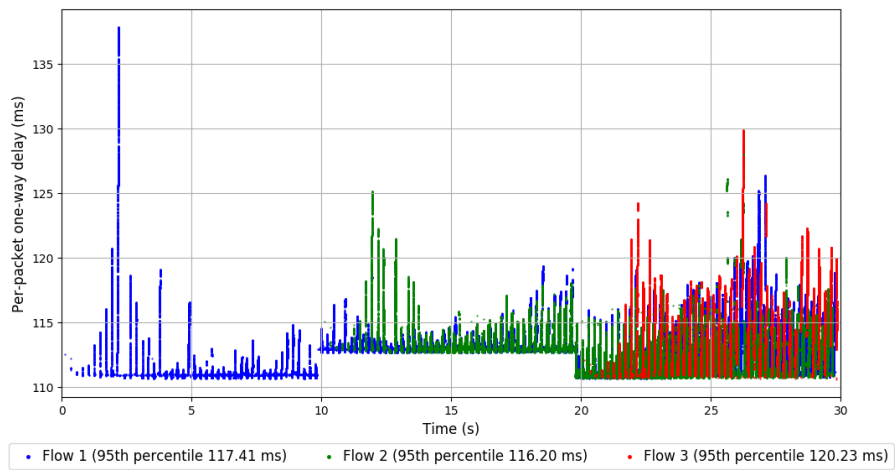
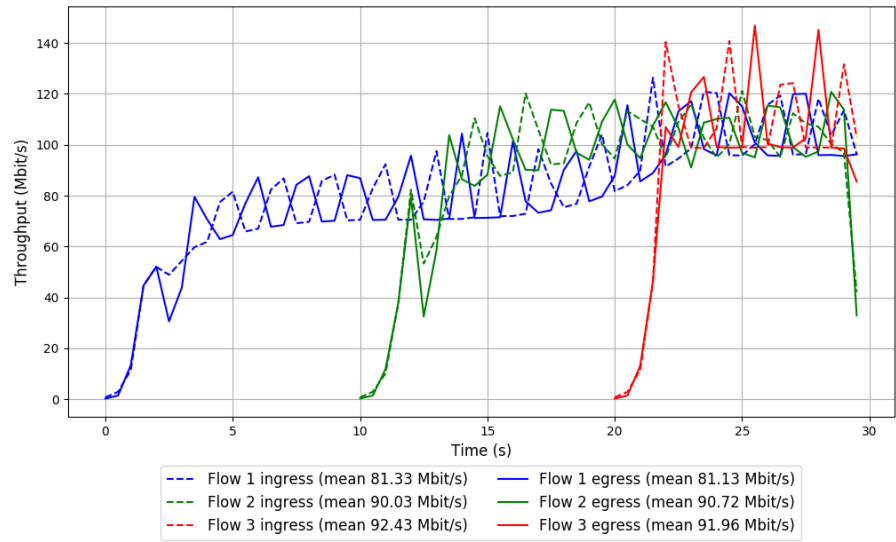
-- Flow 3:

Average throughput: 91.96 Mbit/s

95th percentile per-packet one-way delay: 120.229 ms

Loss rate: 2.75%

Run 10: Report of TCP Cubic — Data Link

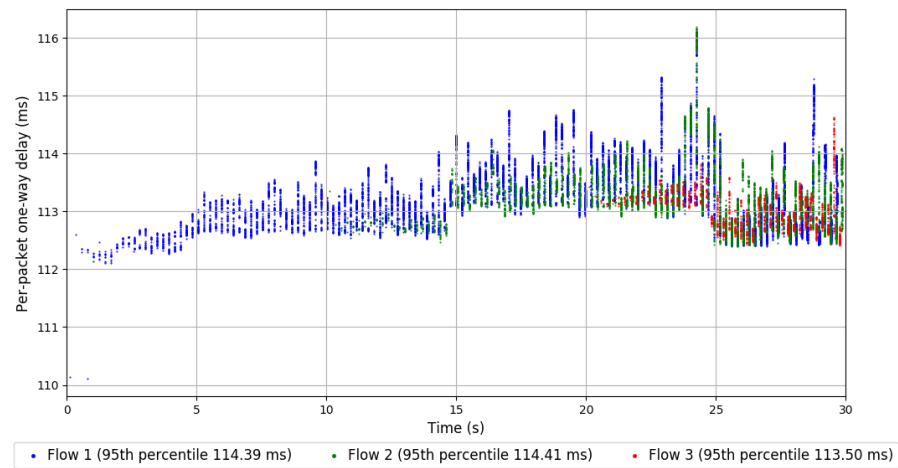
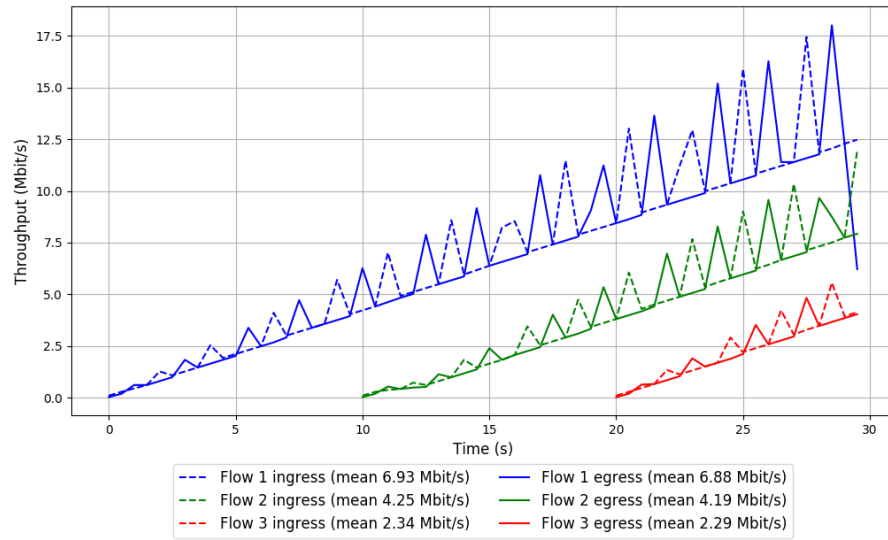


```
Run 1: Statistics of LEDBAT

Start at: 2018-03-21 05:30:53
End at: 2018-03-21 05:31:23

# Below is generated by plot.py at 2018-03-21 12:18:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.36 Mbit/s
95th percentile per-packet one-way delay: 114.369 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 6.88 Mbit/s
95th percentile per-packet one-way delay: 114.385 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 4.19 Mbit/s
95th percentile per-packet one-way delay: 114.414 ms
Loss rate: 2.38%
-- Flow 3:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 113.498 ms
Loss rate: 4.52%
```


Run 1: Report of LEDBAT — Data Link

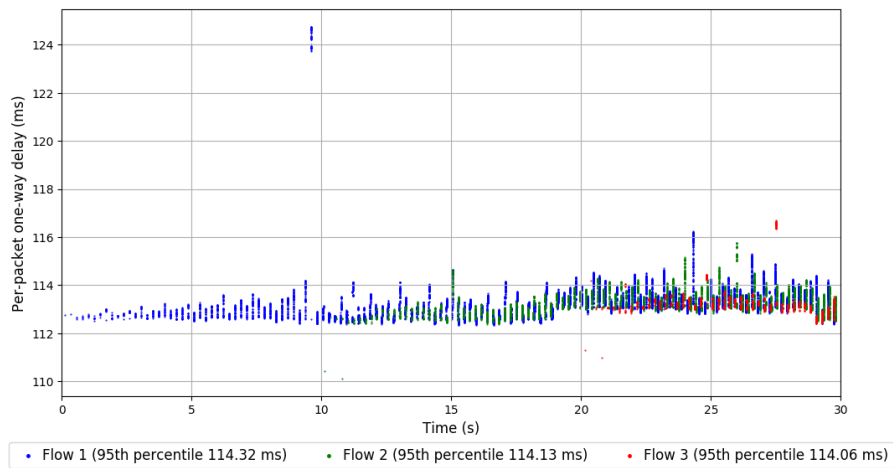
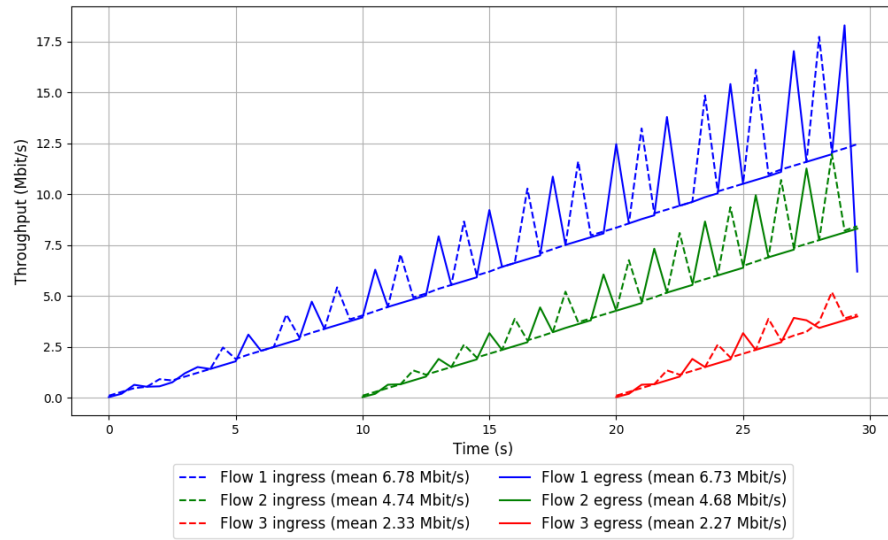


```
Run 2: Statistics of LEDBAT

Start at: 2018-03-21 05:50:08
End at: 2018-03-21 05:50:38

# Below is generated by plot.py at 2018-03-21 12:18:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.55 Mbit/s
95th percentile per-packet one-way delay: 114.261 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 6.73 Mbit/s
95th percentile per-packet one-way delay: 114.322 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 4.68 Mbit/s
95th percentile per-packet one-way delay: 114.128 ms
Loss rate: 2.25%
-- Flow 3:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 114.058 ms
Loss rate: 4.52%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-03-21 06:09:13

End at: 2018-03-21 06:09:43

Below is generated by plot.py at 2018-03-21 12:18:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.31 Mbit/s

95th percentile per-packet one-way delay: 110.737 ms

Loss rate: 2.18%

-- Flow 1:

Average throughput: 4.78 Mbit/s

95th percentile per-packet one-way delay: 110.561 ms

Loss rate: 1.80%

-- Flow 2:

Average throughput: 4.63 Mbit/s

95th percentile per-packet one-way delay: 111.185 ms

Loss rate: 2.25%

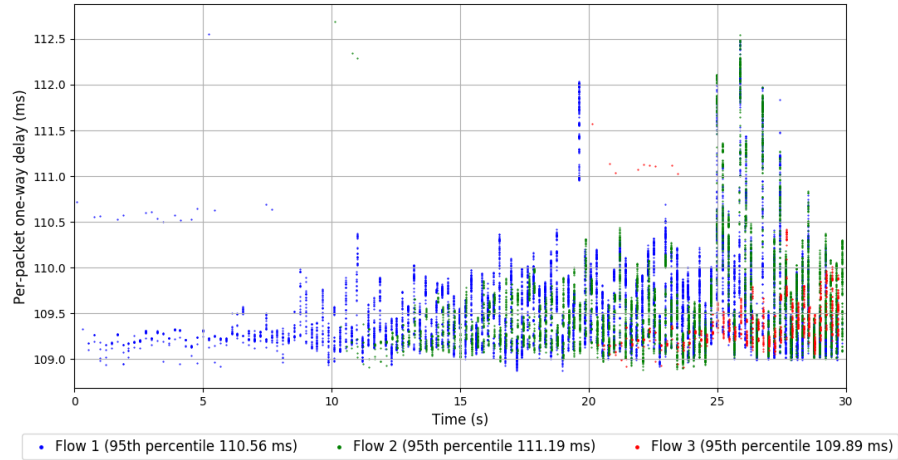
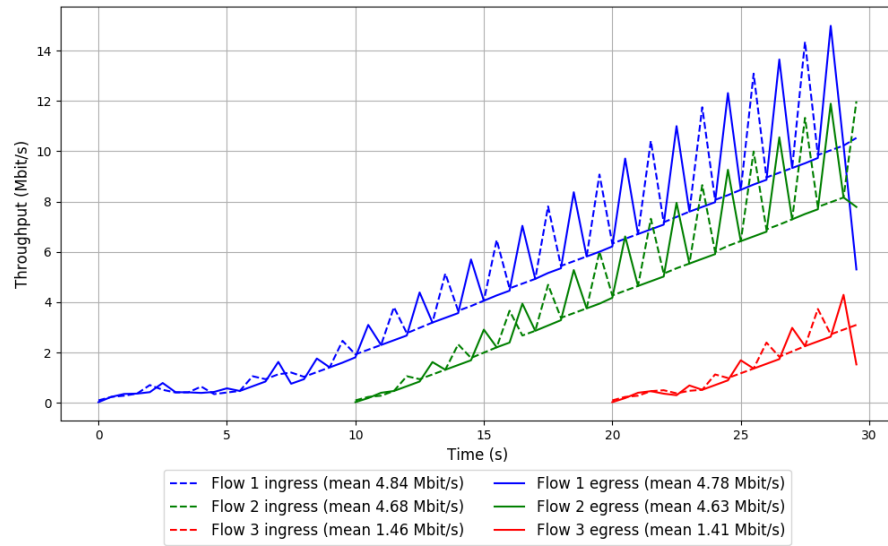
-- Flow 3:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 109.885 ms

Loss rate: 5.50%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-03-21 06:28:20

End at: 2018-03-21 06:28:50

Below is generated by plot.py at 2018-03-21 12:18:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.85 Mbit/s

95th percentile per-packet one-way delay: 114.227 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 7.03 Mbit/s

95th percentile per-packet one-way delay: 113.976 ms

Loss rate: 1.51%

-- Flow 2:

Average throughput: 4.78 Mbit/s

95th percentile per-packet one-way delay: 114.240 ms

Loss rate: 2.24%

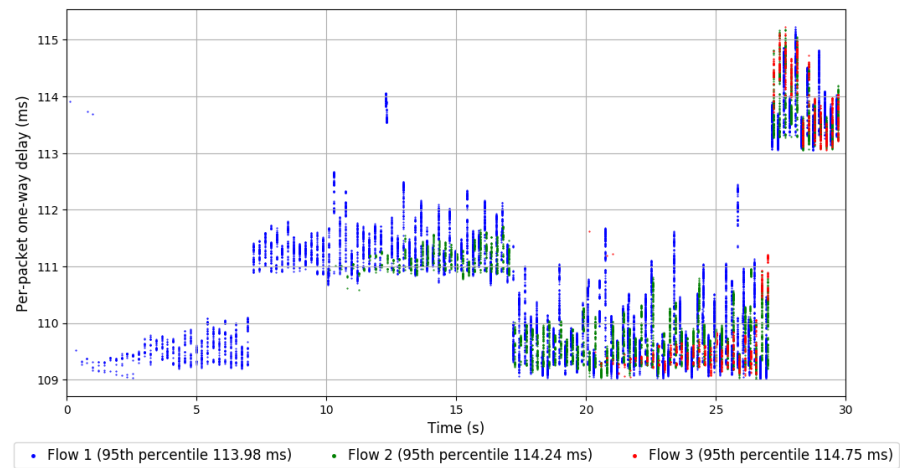
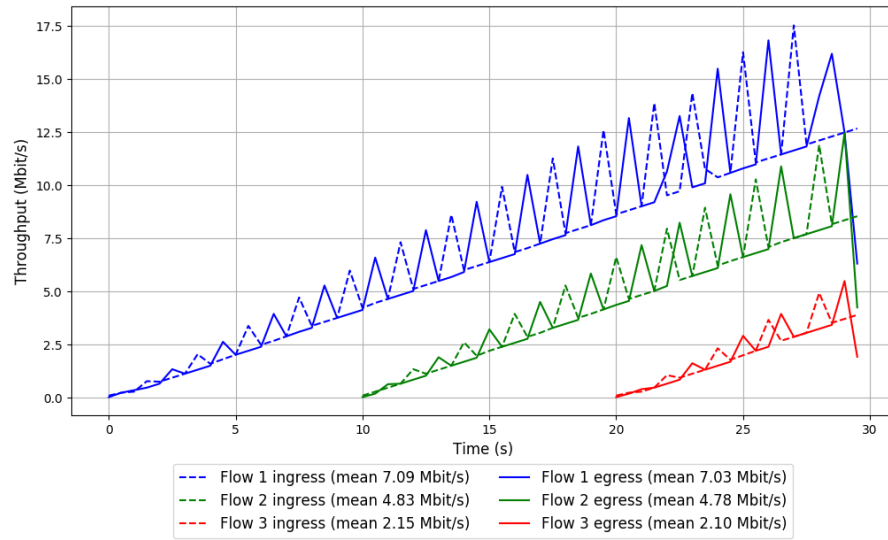
-- Flow 3:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 114.751 ms

Loss rate: 4.68%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-03-21 06:47:40

End at: 2018-03-21 06:48:10

Below is generated by plot.py at 2018-03-21 12:18:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.67 Mbit/s

95th percentile per-packet one-way delay: 111.373 ms

Loss rate: 2.52%

-- Flow 1:

Average throughput: 3.71 Mbit/s

95th percentile per-packet one-way delay: 111.502 ms

Loss rate: 2.04%

-- Flow 2:

Average throughput: 3.47 Mbit/s

95th percentile per-packet one-way delay: 111.181 ms

Loss rate: 2.61%

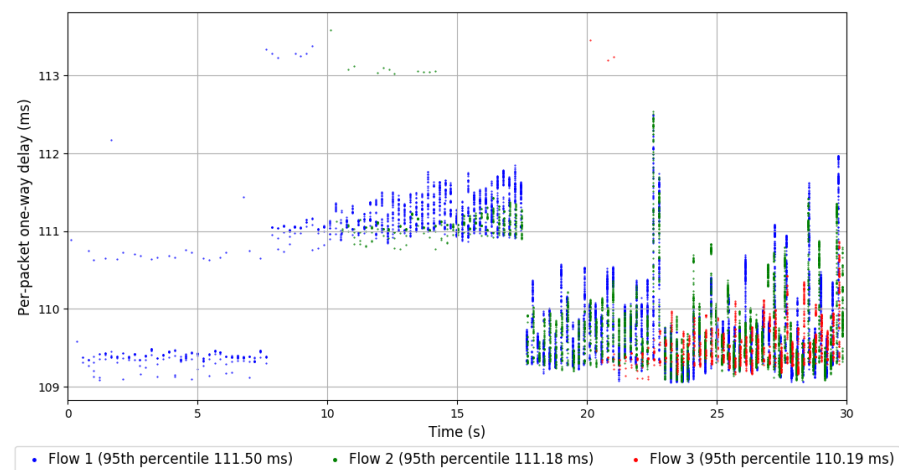
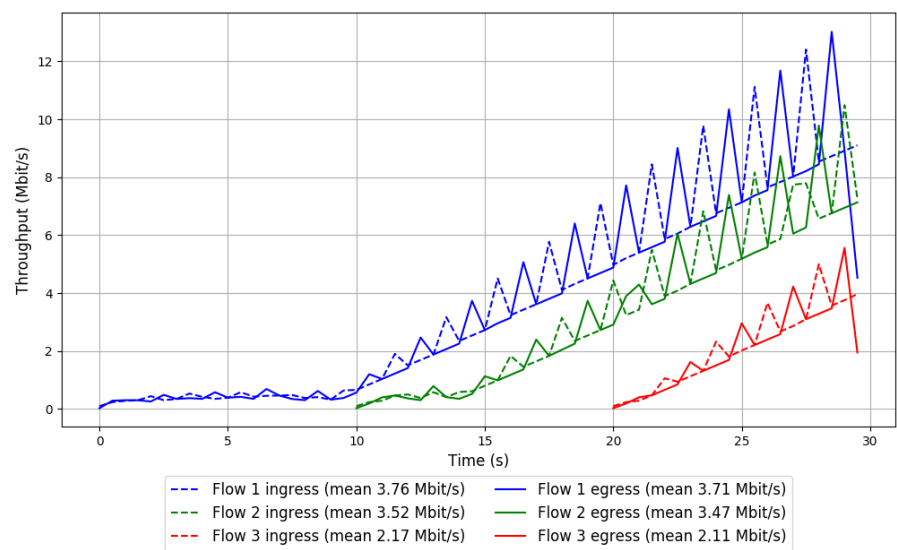
-- Flow 3:

Average throughput: 2.11 Mbit/s

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

Loss rate: 4.75%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-03-21 07:07:08

End at: 2018-03-21 07:07:38

Below is generated by plot.py at 2018-03-21 12:18:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.11 Mbit/s

95th percentile per-packet one-way delay: 110.532 ms

Loss rate: 2.45%

-- Flow 1:

Average throughput: 3.41 Mbit/s

95th percentile per-packet one-way delay: 110.627 ms

Loss rate: 2.14%

-- Flow 2:

Average throughput: 4.58 Mbit/s

95th percentile per-packet one-way delay: 110.489 ms

Loss rate: 2.29%

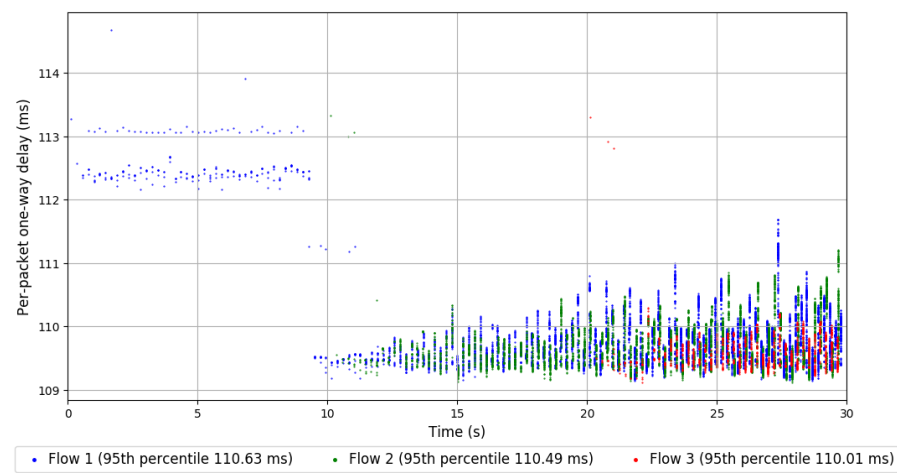
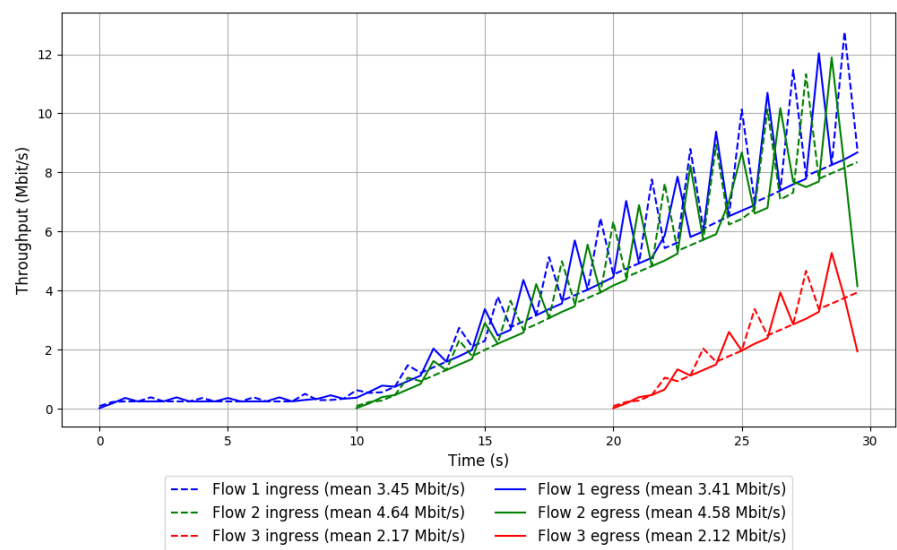
-- Flow 3:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 110.010 ms

Loss rate: 4.71%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-03-21 07:26:38

End at: 2018-03-21 07:27:09

Below is generated by plot.py at 2018-03-21 12:18:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.96 Mbit/s

95th percentile per-packet one-way delay: 113.951 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 7.11 Mbit/s

95th percentile per-packet one-way delay: 113.960 ms

Loss rate: 1.51%

-- Flow 2:

Average throughput: 4.77 Mbit/s

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

Loss rate: 2.25%

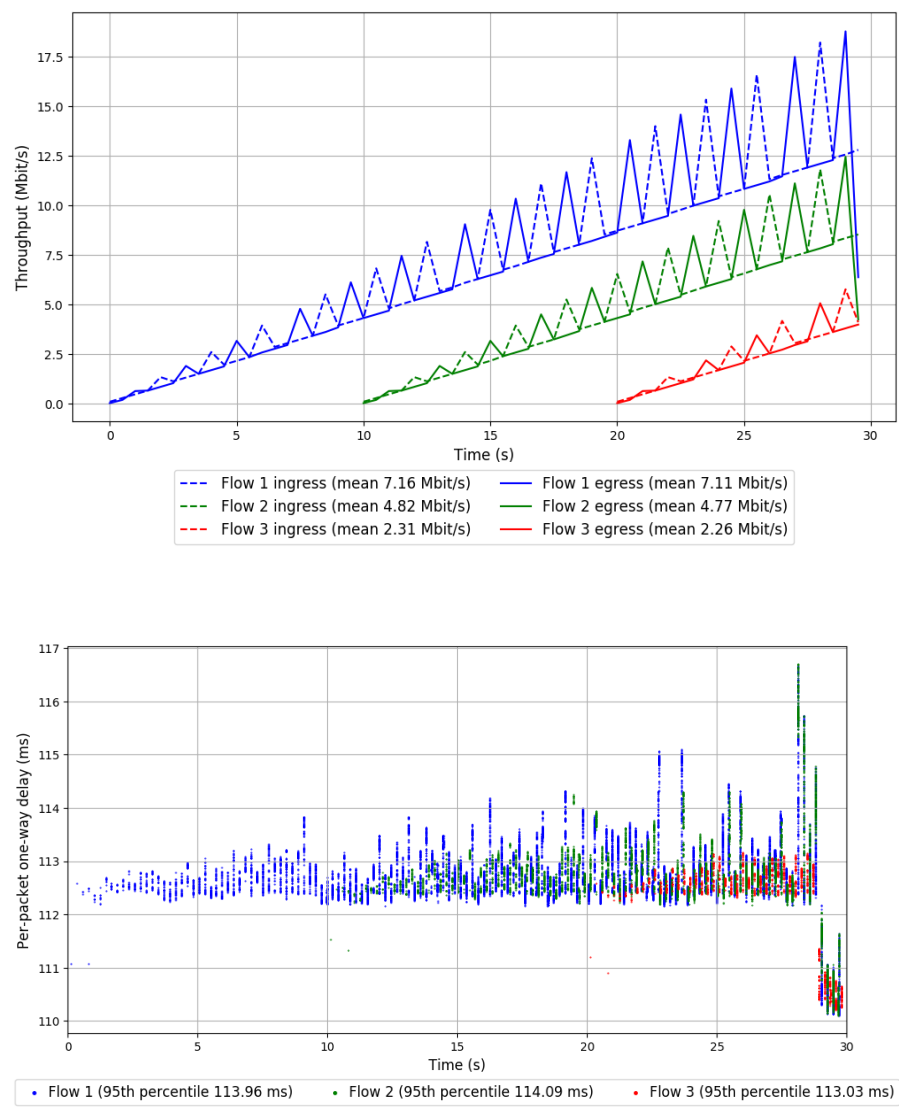
-- Flow 3:

Average throughput: 2.26 Mbit/s

95th percentile per-packet one-way delay: 113.035 ms

Loss rate: 4.56%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-03-21 07:46:04

End at: 2018-03-21 07:46:34

Below is generated by plot.py at 2018-03-21 12:18:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.91 Mbit/s

95th percentile per-packet one-way delay: 113.427 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 7.19 Mbit/s

95th percentile per-packet one-way delay: 113.614 ms

Loss rate: 1.49%

-- Flow 2:

Average throughput: 4.51 Mbit/s

95th percentile per-packet one-way delay: 113.155 ms

Loss rate: 2.30%

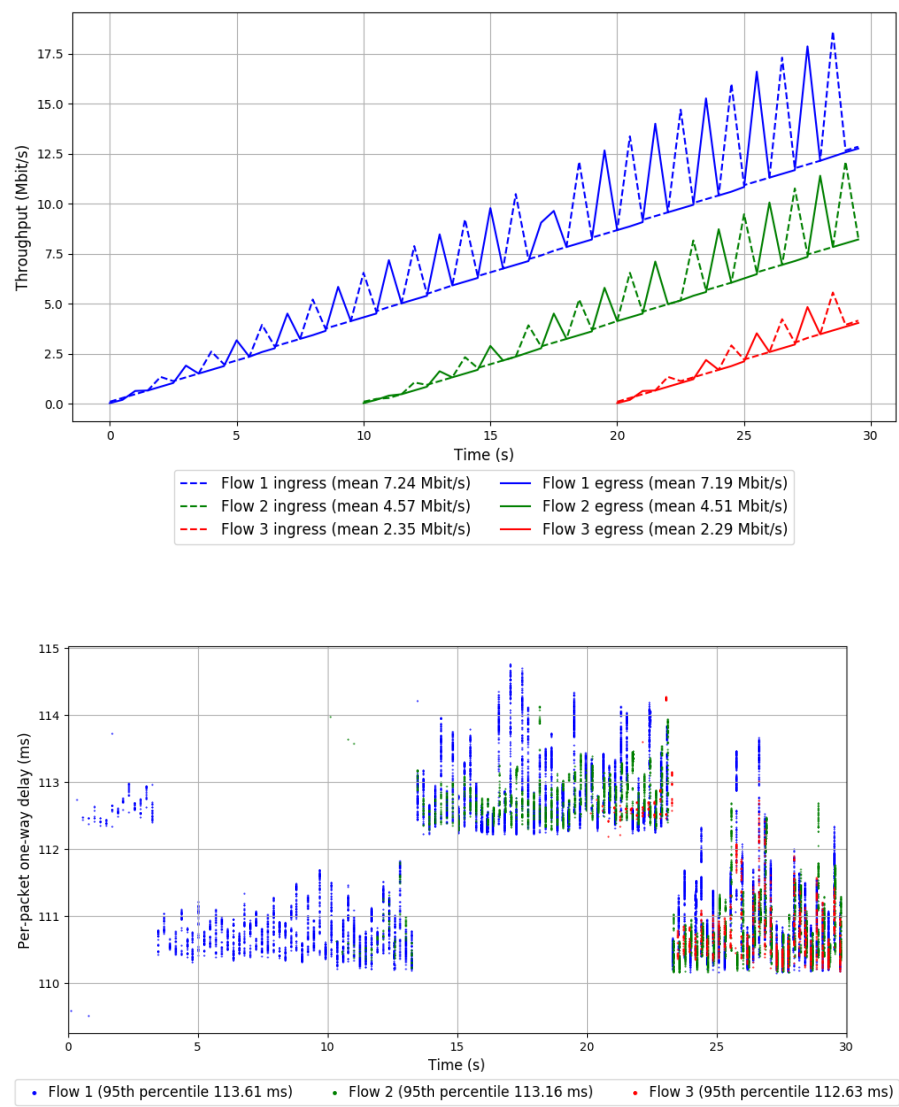
-- Flow 3:

Average throughput: 2.29 Mbit/s

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

Loss rate: 4.57%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-03-21 08:13:33

End at: 2018-03-21 08:14:03

Below is generated by plot.py at 2018-03-21 12:18:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.73 Mbit/s

95th percentile per-packet one-way delay: 114.290 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 6.93 Mbit/s

95th percentile per-packet one-way delay: 114.305 ms

Loss rate: 1.51%

-- Flow 2:

Average throughput: 4.68 Mbit/s

95th percentile per-packet one-way delay: 114.310 ms

Loss rate: 2.28%

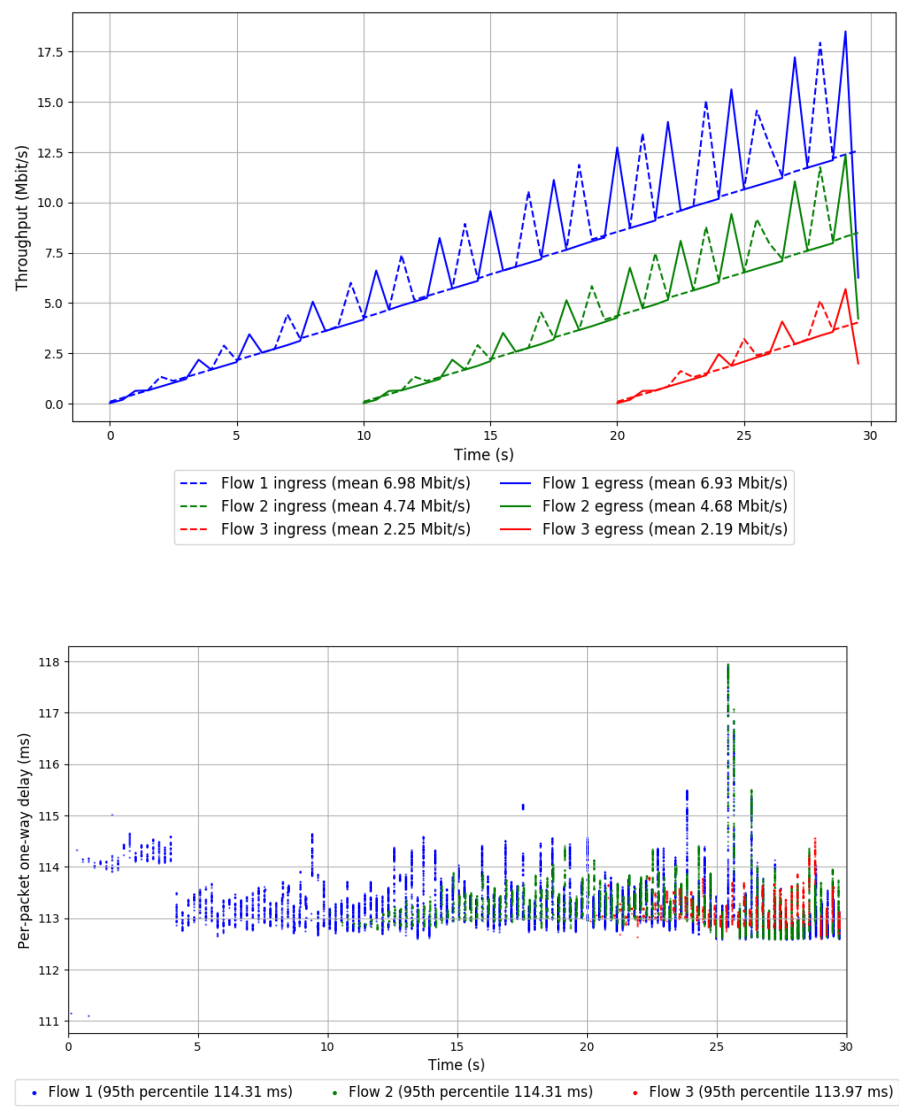
-- Flow 3:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 113.965 ms

Loss rate: 4.63%

Run 9: Report of LEDBAT — Data Link

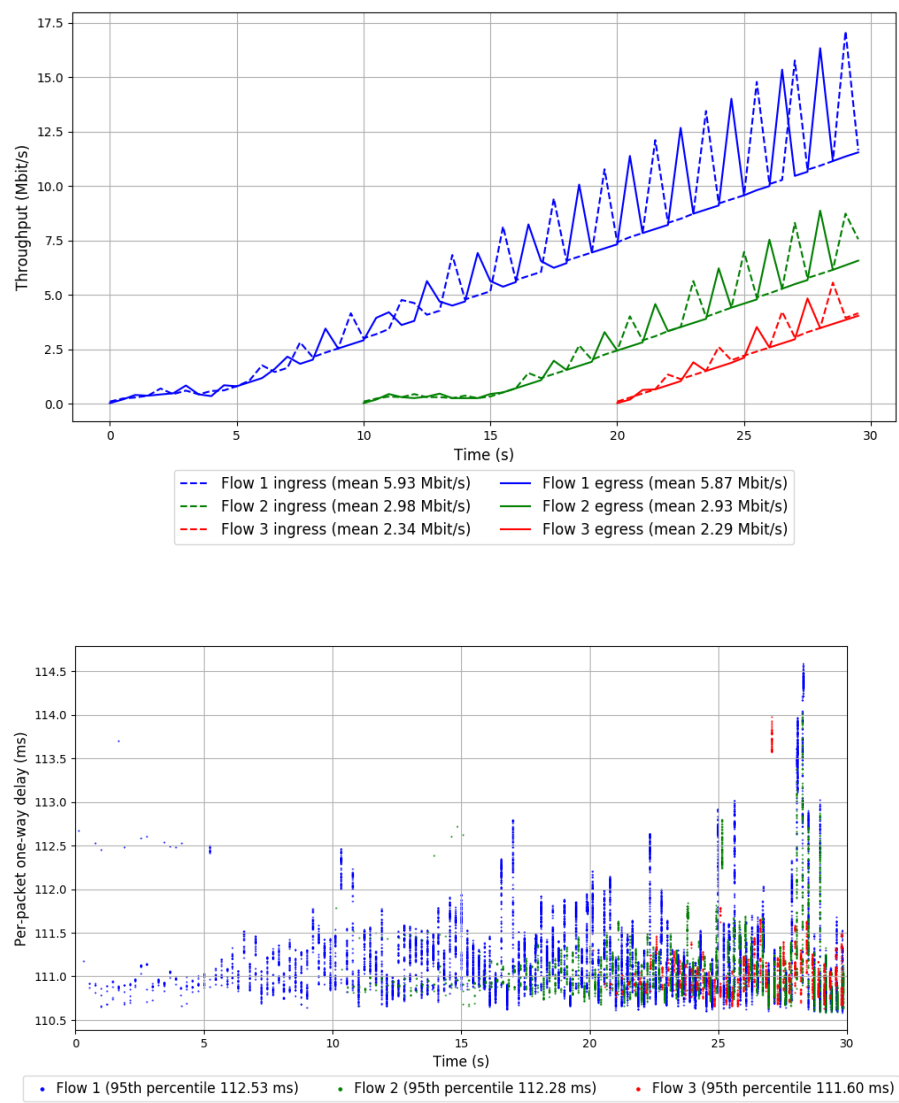


```
Run 10: Statistics of LEDBAT

Start at: 2018-03-21 08:37:08
End at: 2018-03-21 08:37:38

# Below is generated by plot.py at 2018-03-21 12:18:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.56 Mbit/s
95th percentile per-packet one-way delay: 112.436 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 5.87 Mbit/s
95th percentile per-packet one-way delay: 112.529 ms
Loss rate: 1.65%
-- Flow 2:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 112.280 ms
Loss rate: 2.82%
-- Flow 3:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 111.600 ms
Loss rate: 4.57%
```

Run 10: Report of LEDBAT — Data Link

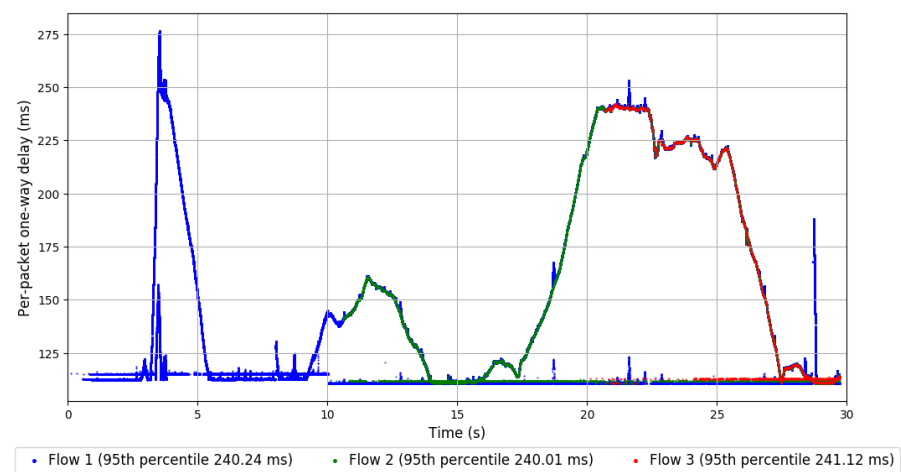
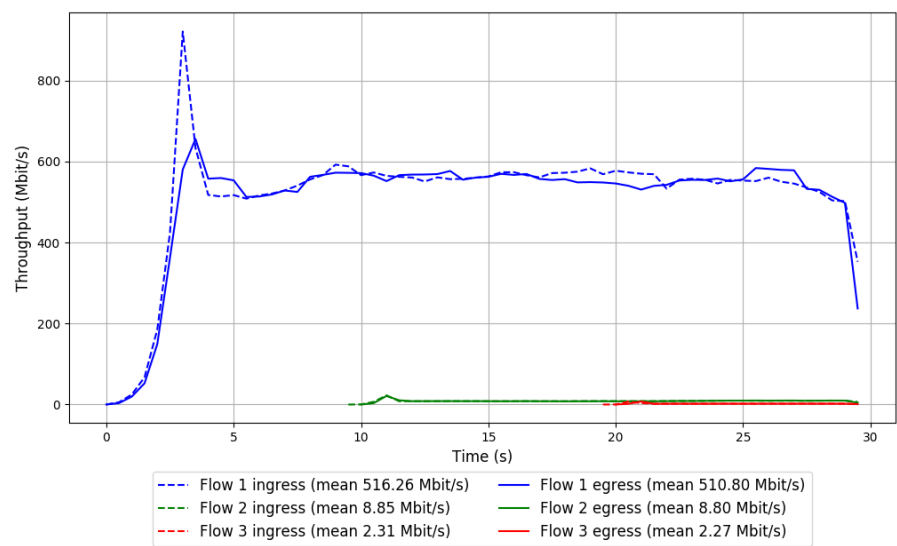


```
Run 1: Statistics of PCC

Start at: 2018-03-21 05:21:47
End at: 2018-03-21 05:22:17

# Below is generated by plot.py at 2018-03-21 12:24:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 517.37 Mbit/s
95th percentile per-packet one-way delay: 240.235 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 510.80 Mbit/s
95th percentile per-packet one-way delay: 240.235 ms
Loss rate: 1.81%
-- Flow 2:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 240.015 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 241.124 ms
Loss rate: 3.76%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2018-03-21 05:41:02

End at: 2018-03-21 05:41:32

Below is generated by plot.py at 2018-03-21 12:24:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 516.09 Mbit/s

95th percentile per-packet one-way delay: 243.432 ms

Loss rate: 2.03%

-- Flow 1:

Average throughput: 492.49 Mbit/s

95th percentile per-packet one-way delay: 243.569 ms

Loss rate: 1.99%

-- Flow 2:

Average throughput: 4.19 Mbit/s

95th percentile per-packet one-way delay: 242.985 ms

Loss rate: 1.97%

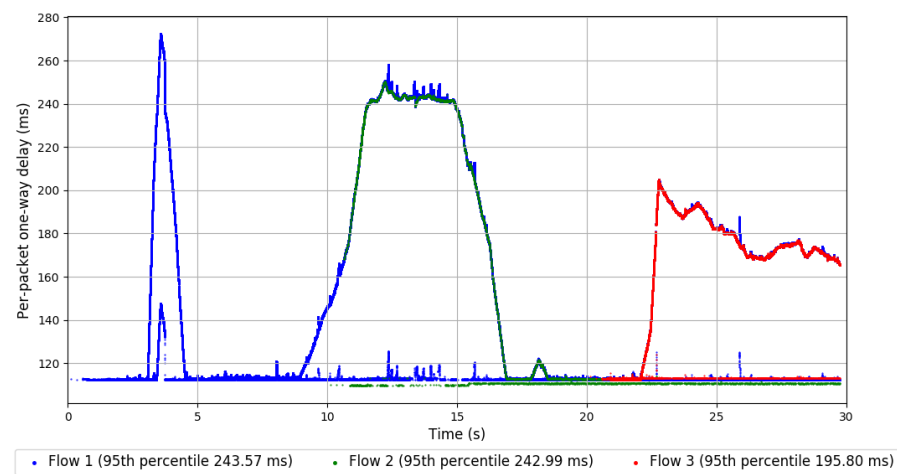
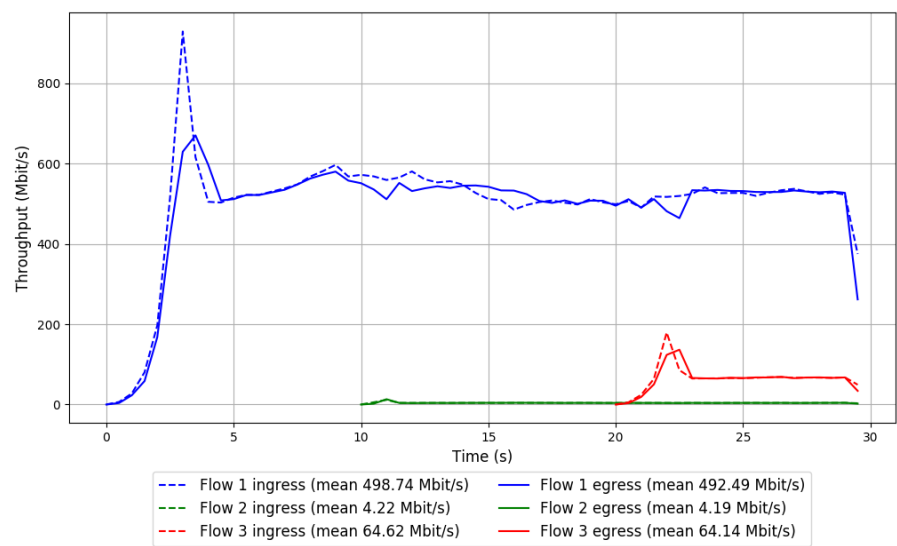
-- Flow 3:

Average throughput: 64.14 Mbit/s

95th percentile per-packet one-way delay: 195.800 ms

Loss rate: 3.00%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-03-21 06:00:05

End at: 2018-03-21 06:00:35

Below is generated by plot.py at 2018-03-21 12:24:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 434.37 Mbit/s

95th percentile per-packet one-way delay: 274.321 ms

Loss rate: 3.74%

-- Flow 1:

Average throughput: 431.42 Mbit/s

95th percentile per-packet one-way delay: 274.328 ms

Loss rate: 3.74%

-- Flow 2:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 274.223 ms

Loss rate: 3.32%

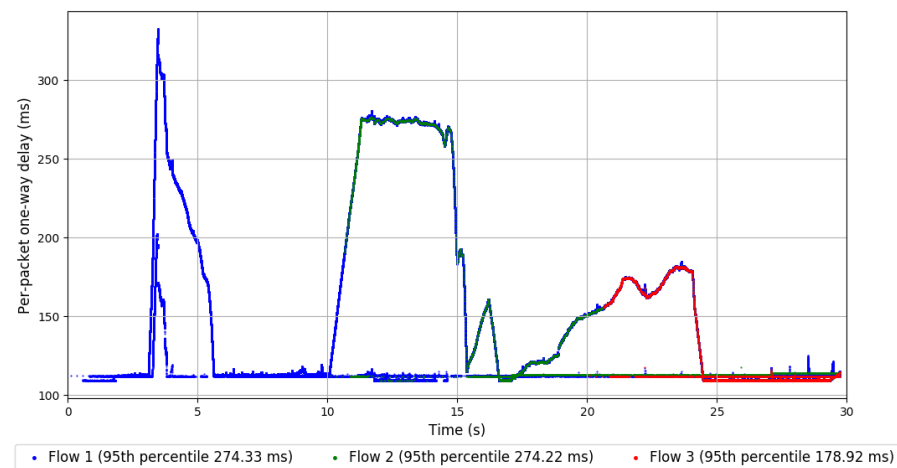
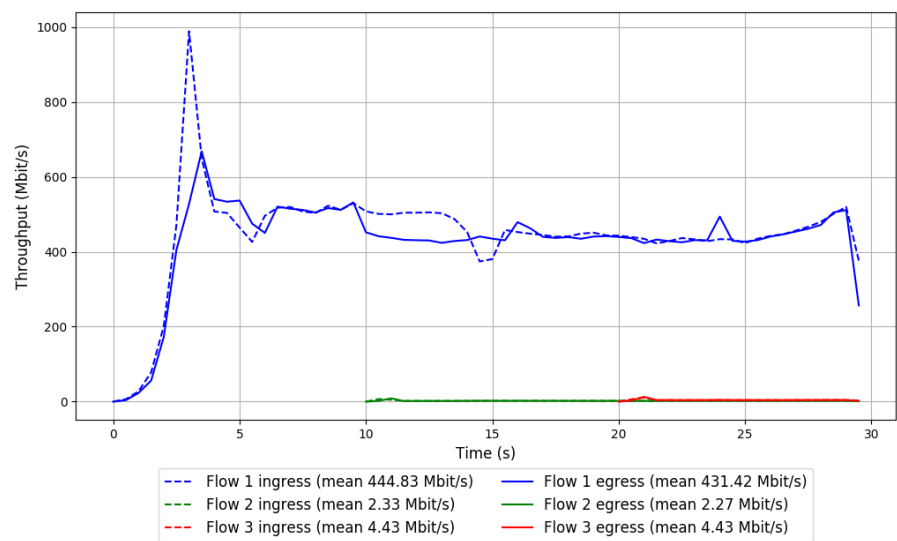
-- Flow 3:

Average throughput: 4.43 Mbit/s

95th percentile per-packet one-way delay: 178.922 ms

Loss rate: 2.25%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-03-21 06:19:00

End at: 2018-03-21 06:19:30

Below is generated by plot.py at 2018-03-21 12:24:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 502.05 Mbit/s

95th percentile per-packet one-way delay: 245.823 ms

Loss rate: 3.34%

-- Flow 1:

Average throughput: 461.21 Mbit/s

95th percentile per-packet one-way delay: 245.811 ms

Loss rate: 3.37%

-- Flow 2:

Average throughput: 60.50 Mbit/s

95th percentile per-packet one-way delay: 245.864 ms

Loss rate: 2.88%

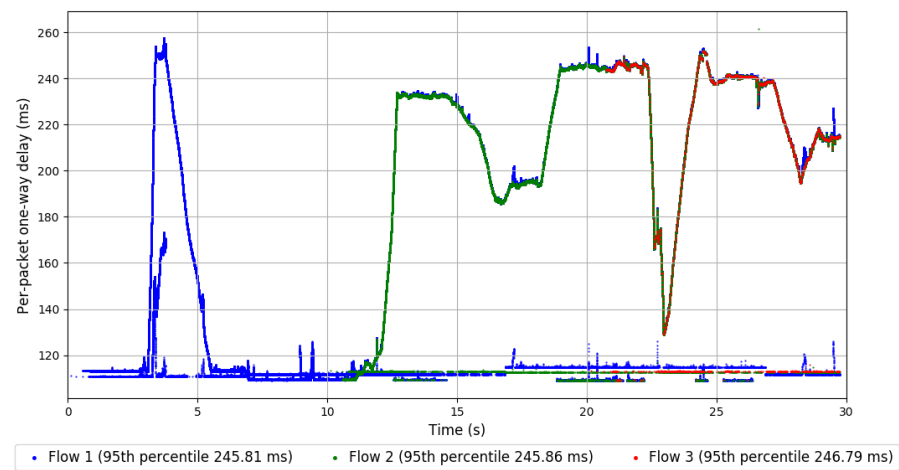
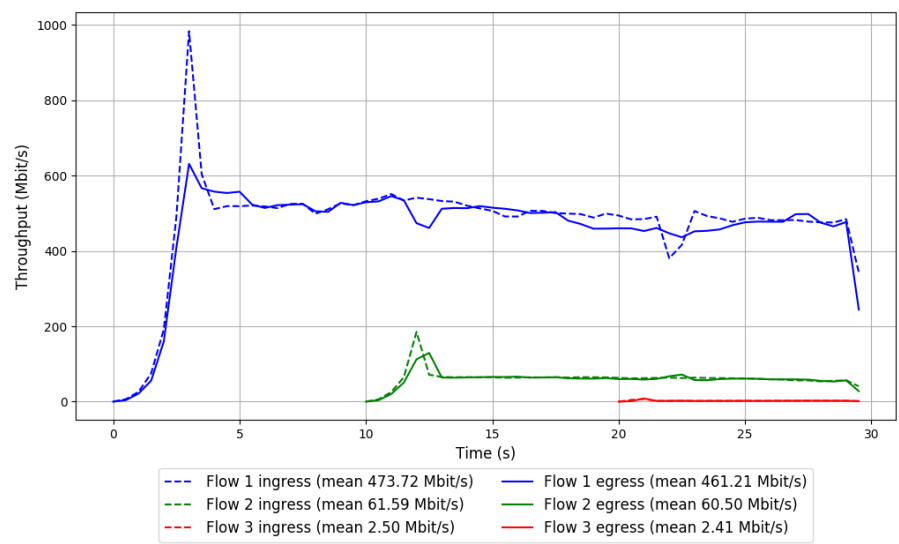
-- Flow 3:

Average throughput: 2.41 Mbit/s

95th percentile per-packet one-way delay: 246.786 ms

Loss rate: 5.86%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-03-21 06:38:28

End at: 2018-03-21 06:38:58

Below is generated by plot.py at 2018-03-21 12:24:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 466.28 Mbit/s

95th percentile per-packet one-way delay: 269.180 ms

Loss rate: 3.21%

-- Flow 1:

Average throughput: 421.07 Mbit/s

95th percentile per-packet one-way delay: 269.125 ms

Loss rate: 3.18%

-- Flow 2:

Average throughput: 60.59 Mbit/s

95th percentile per-packet one-way delay: 269.386 ms

Loss rate: 3.10%

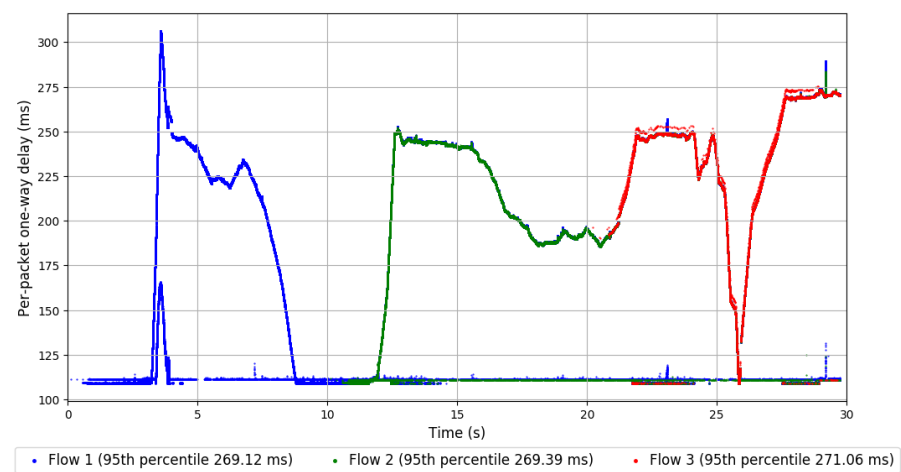
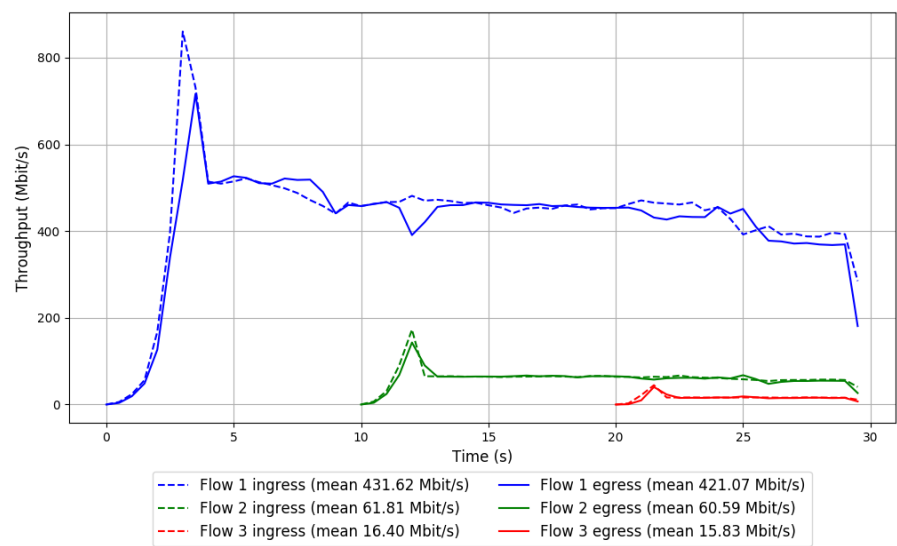
-- Flow 3:

Average throughput: 15.83 Mbit/s

95th percentile per-packet one-way delay: 271.061 ms

Loss rate: 6.56%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-03-21 06:57:41

End at: 2018-03-21 06:58:11

Below is generated by plot.py at 2018-03-21 12:25:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 466.83 Mbit/s

95th percentile per-packet one-way delay: 275.644 ms

Loss rate: 4.92%

-- Flow 1:

Average throughput: 427.37 Mbit/s

95th percentile per-packet one-way delay: 275.481 ms

Loss rate: 4.69%

-- Flow 2:

Average throughput: 31.17 Mbit/s

95th percentile per-packet one-way delay: 275.854 ms

Loss rate: 5.03%

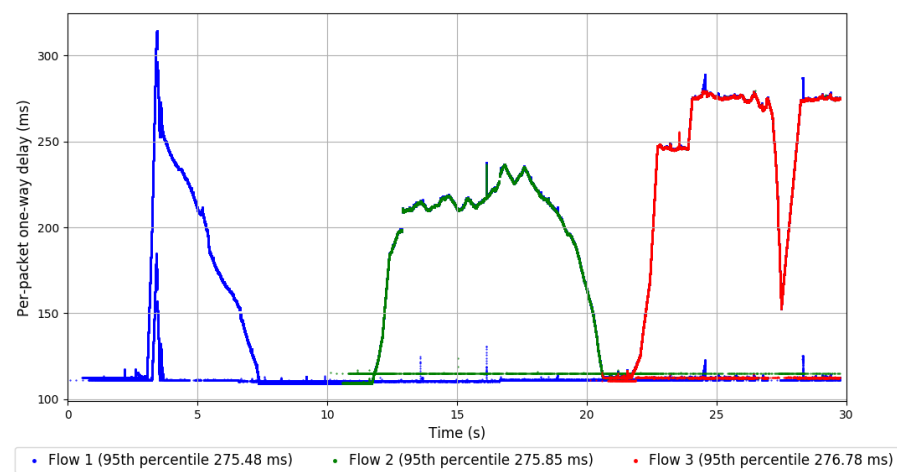
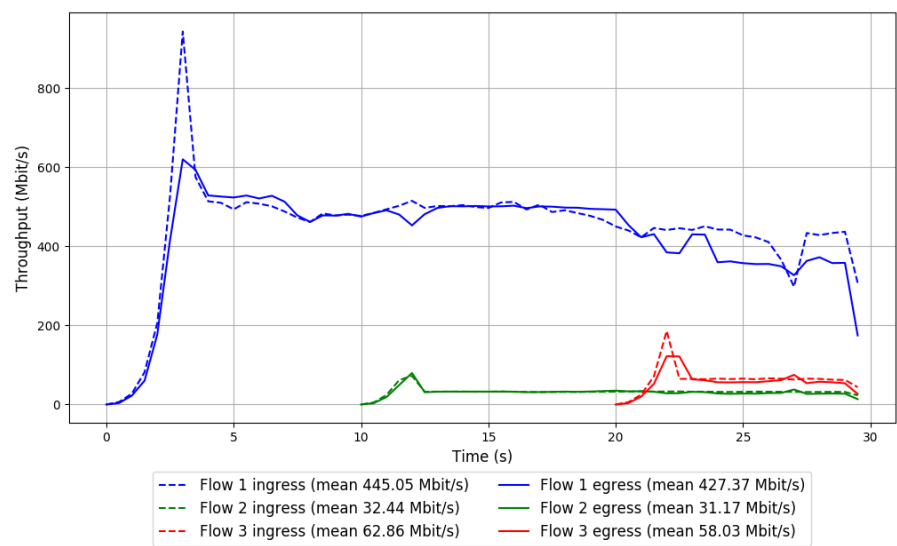
-- Flow 3:

Average throughput: 58.03 Mbit/s

95th percentile per-packet one-way delay: 276.776 ms

Loss rate: 9.78%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-03-21 07:17:07

End at: 2018-03-21 07:17:37

Below is generated by plot.py at 2018-03-21 12:25:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 485.61 Mbit/s

95th percentile per-packet one-way delay: 243.860 ms

Loss rate: 1.99%

-- Flow 1:

Average throughput: 432.01 Mbit/s

95th percentile per-packet one-way delay: 244.040 ms

Loss rate: 2.02%

-- Flow 2:

Average throughput: 65.34 Mbit/s

95th percentile per-packet one-way delay: 243.292 ms

Loss rate: 1.54%

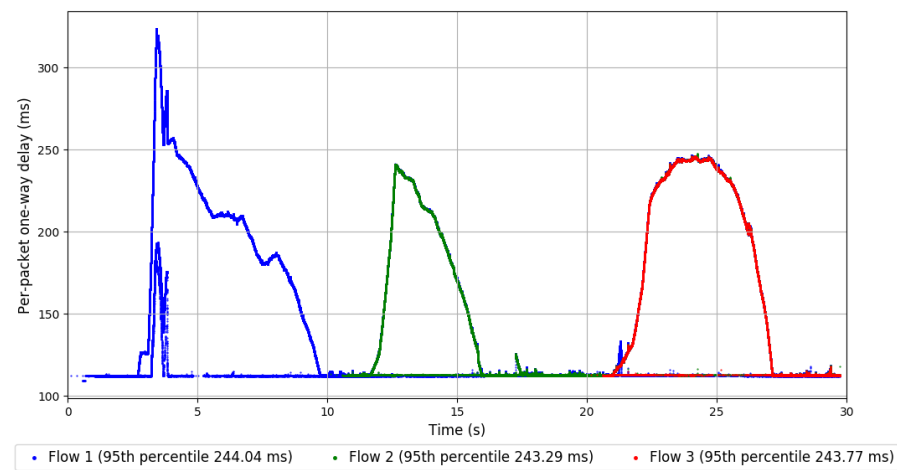
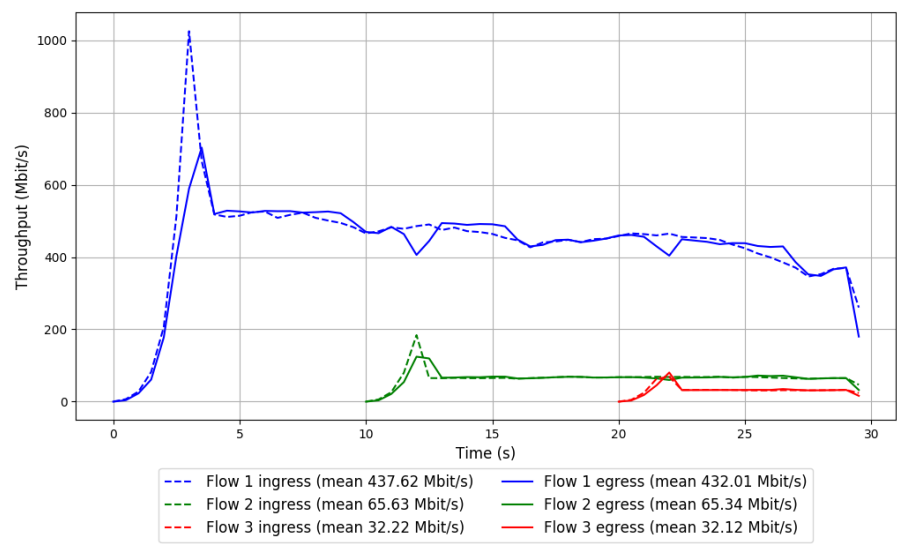
-- Flow 3:

Average throughput: 32.12 Mbit/s

95th percentile per-packet one-way delay: 243.769 ms

Loss rate: 2.57%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-03-21 07:36:51

End at: 2018-03-21 07:37:21

Below is generated by plot.py at 2018-03-21 12:25:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 419.91 Mbit/s

95th percentile per-packet one-way delay: 256.709 ms

Loss rate: 4.21%

-- Flow 1:

Average throughput: 267.22 Mbit/s

95th percentile per-packet one-way delay: 254.808 ms

Loss rate: 3.53%

-- Flow 2:

Average throughput: 229.45 Mbit/s

95th percentile per-packet one-way delay: 258.093 ms

Loss rate: 5.38%

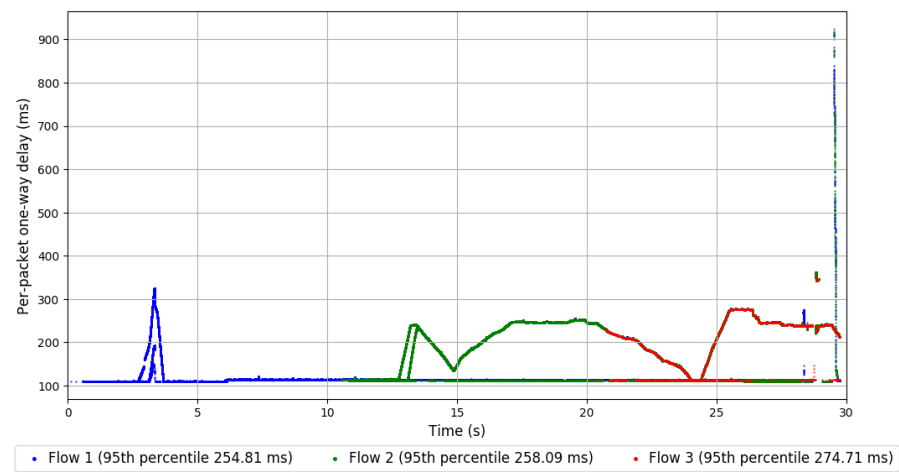
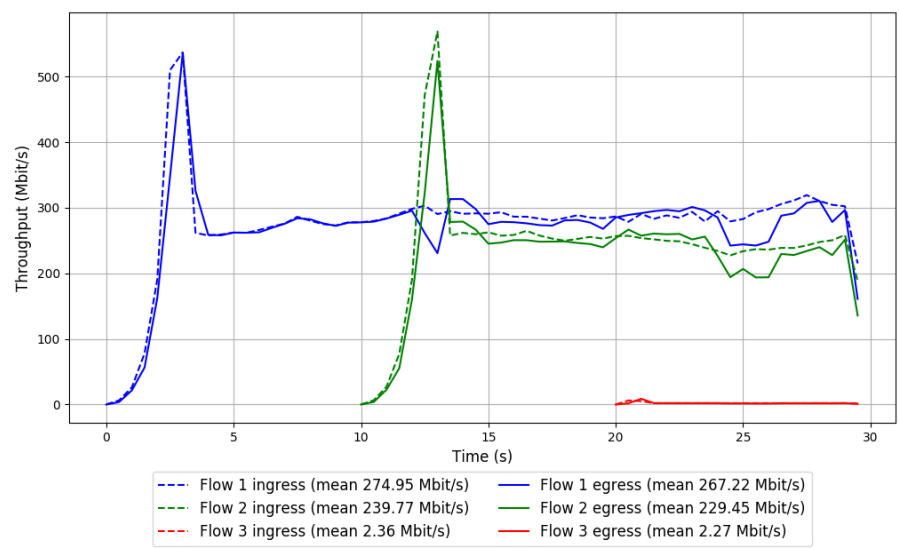
-- Flow 3:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 274.707 ms

Loss rate: 6.25%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-03-21 07:59:30

End at: 2018-03-21 08:00:00

Below is generated by plot.py at 2018-03-21 12:32:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 474.75 Mbit/s

95th percentile per-packet one-way delay: 248.227 ms

Loss rate: 2.11%

-- Flow 1:

Average throughput: 430.83 Mbit/s

95th percentile per-packet one-way delay: 248.204 ms

Loss rate: 2.12%

-- Flow 2:

Average throughput: 64.22 Mbit/s

95th percentile per-packet one-way delay: 248.379 ms

Loss rate: 1.97%

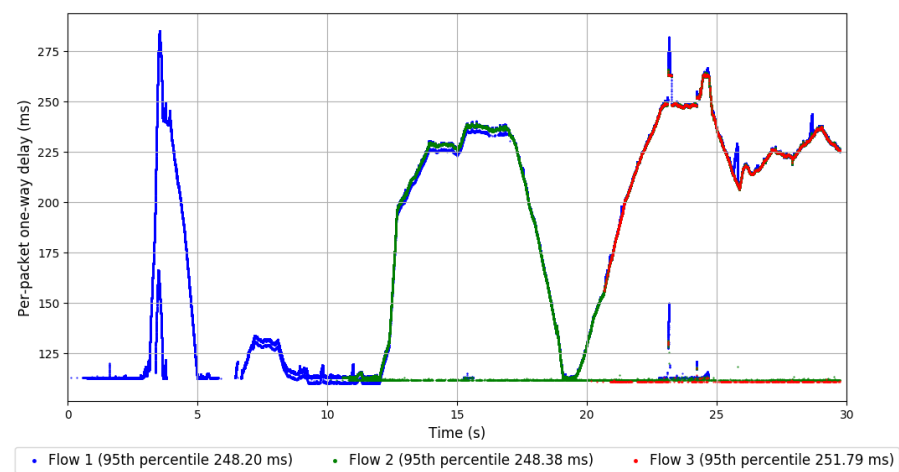
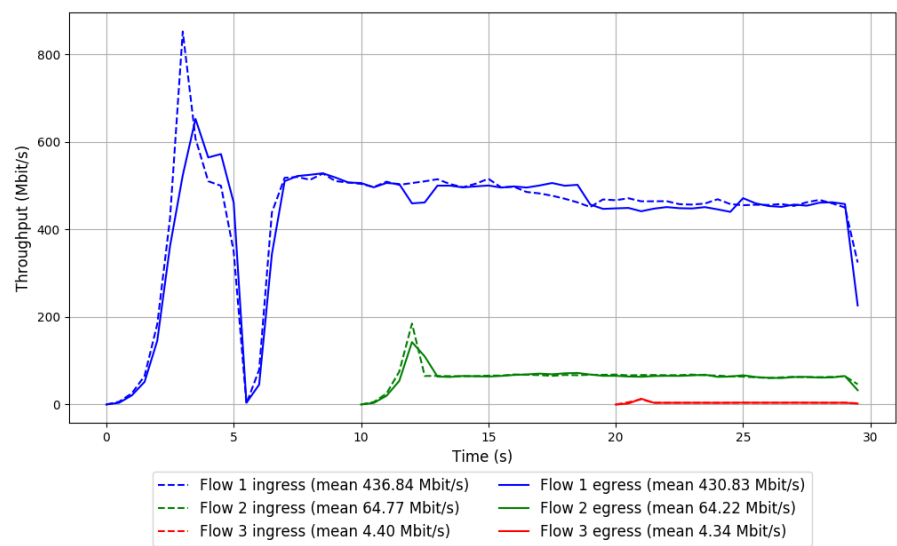
-- Flow 3:

Average throughput: 4.34 Mbit/s

95th percentile per-packet one-way delay: 251.794 ms

Loss rate: 3.58%

Run 9: Report of PCC — Data Link



Run 10: Statistics of PCC

Start at: 2018-03-21 08:27:59

End at: 2018-03-21 08:28:29

Below is generated by plot.py at 2018-03-21 12:33:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 484.50 Mbit/s

95th percentile per-packet one-way delay: 236.810 ms

Loss rate: 1.89%

-- Flow 1:

Average throughput: 471.47 Mbit/s

95th percentile per-packet one-way delay: 236.834 ms

Loss rate: 1.89%

-- Flow 2:

Average throughput: 4.08 Mbit/s

95th percentile per-packet one-way delay: 210.128 ms

Loss rate: 1.15%

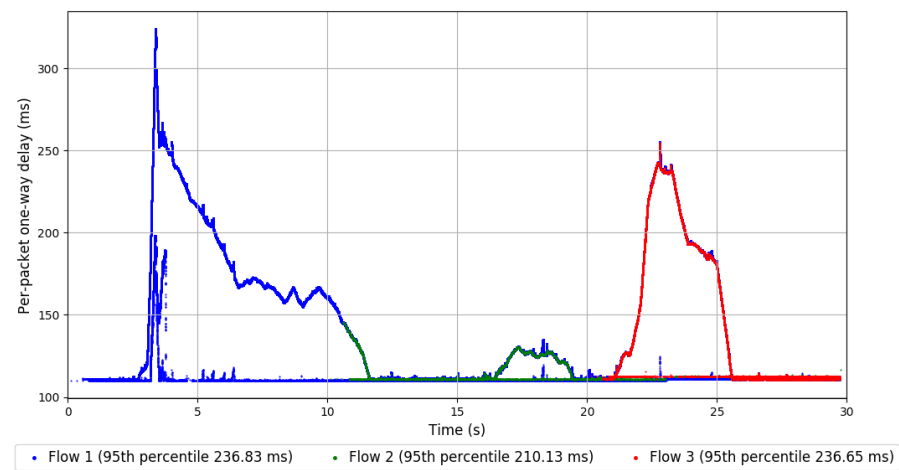
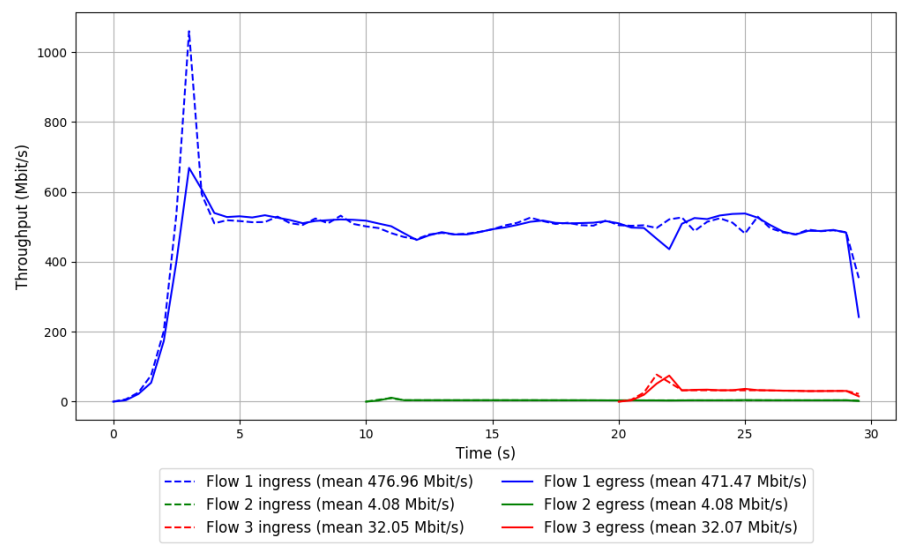
-- Flow 3:

Average throughput: 32.07 Mbit/s

95th percentile per-packet one-way delay: 236.648 ms

Loss rate: 2.21%

Run 10: Report of PCC — Data Link

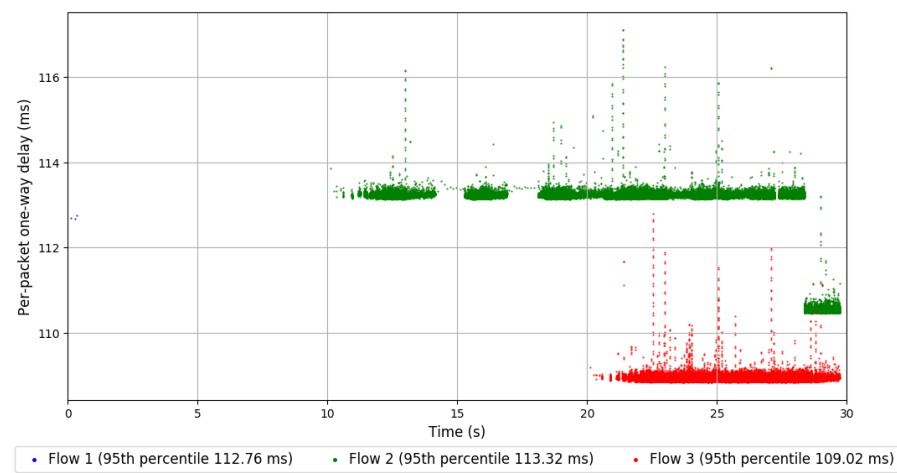
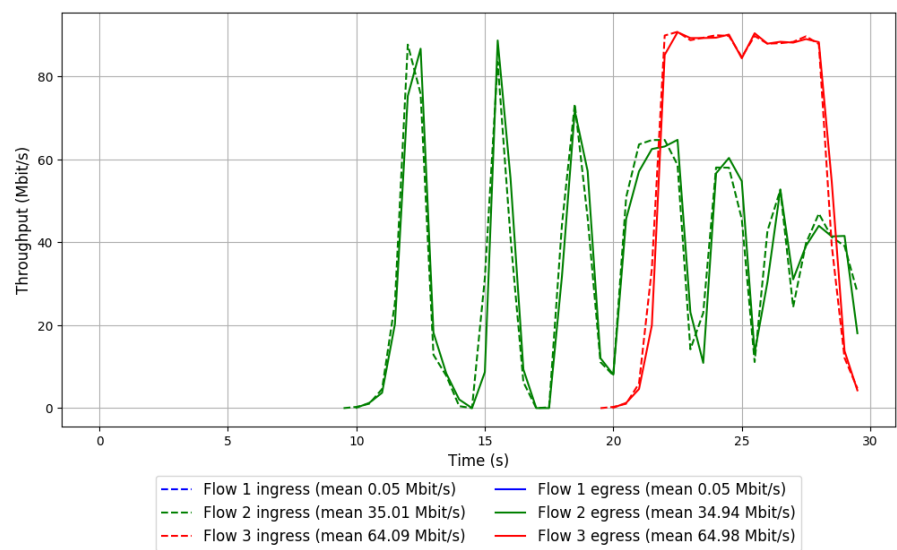


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-21 05:15:29
End at: 2018-03-21 05:15:59

# Below is generated by plot.py at 2018-03-21 12:33:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.25 Mbit/s
95th percentile per-packet one-way delay: 113.286 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 112.762 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.94 Mbit/s
95th percentile per-packet one-way delay: 113.319 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 64.98 Mbit/s
95th percentile per-packet one-way delay: 109.022 ms
Loss rate: 0.21%
```


Run 1: Report of QUIC Cubic — Data Link

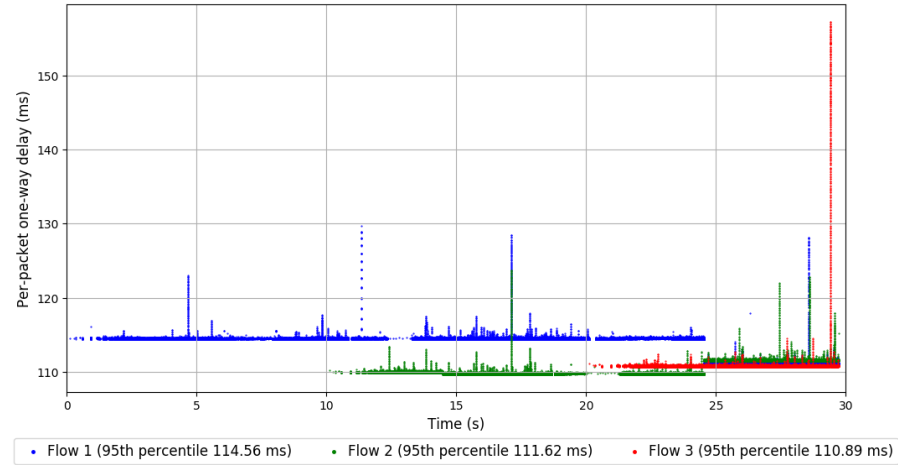
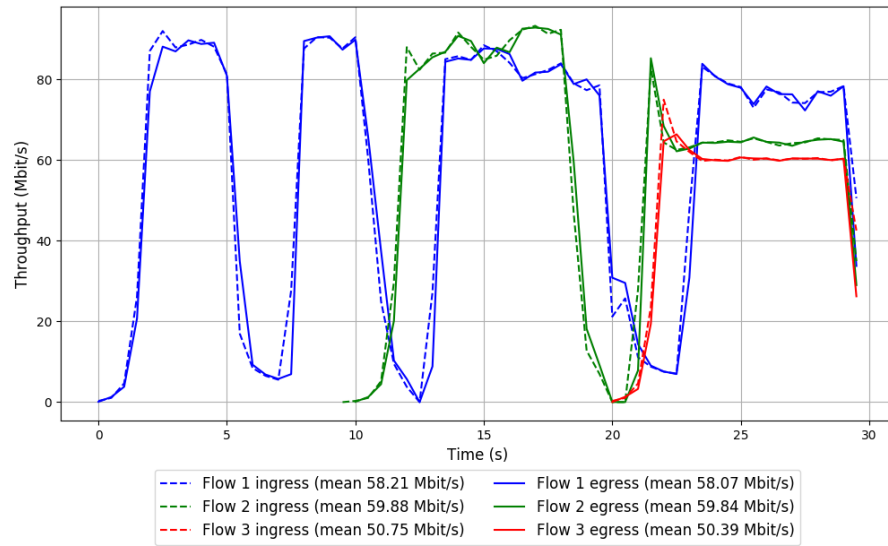


```
Run 2: Statistics of QUIC Cubic

Start at: 2018-03-21 05:34:48
End at: 2018-03-21 05:35:18

# Below is generated by plot.py at 2018-03-21 12:33:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 114.03 Mbit/s
95th percentile per-packet one-way delay: 114.523 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 58.07 Mbit/s
95th percentile per-packet one-way delay: 114.559 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 59.84 Mbit/s
95th percentile per-packet one-way delay: 111.619 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 50.39 Mbit/s
95th percentile per-packet one-way delay: 110.890 ms
Loss rate: 2.96%
```

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-03-21 05:54:08

End at: 2018-03-21 05:54:38

Below is generated by plot.py at 2018-03-21 12:33:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.13 Mbit/s

95th percentile per-packet one-way delay: 113.478 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 59.51 Mbit/s

95th percentile per-packet one-way delay: 113.016 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 34.37 Mbit/s

95th percentile per-packet one-way delay: 113.127 ms

Loss rate: 1.36%

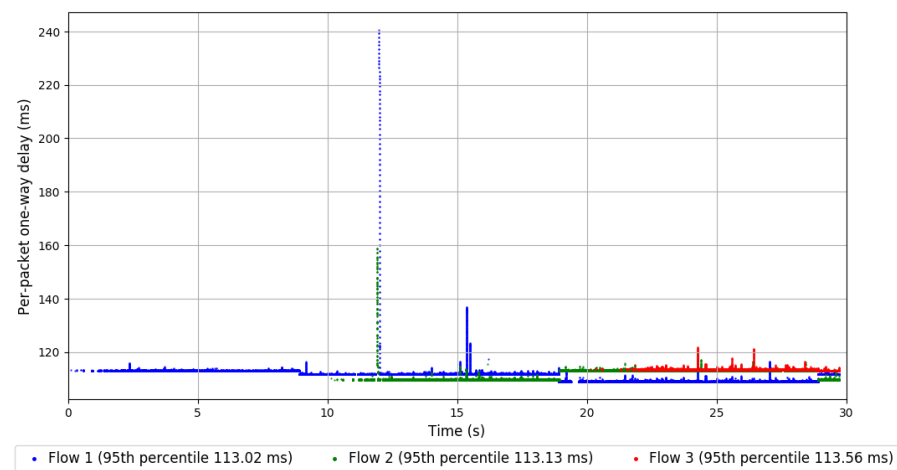
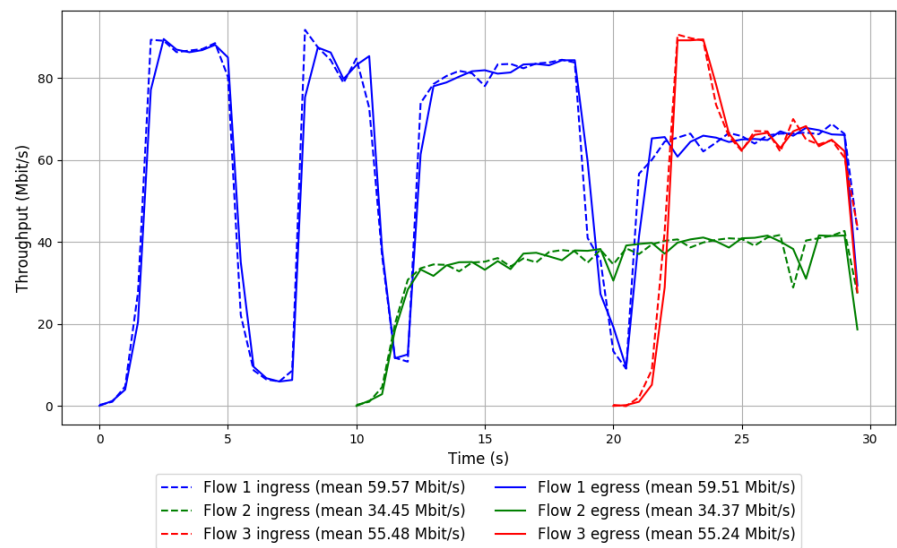
-- Flow 3:

Average throughput: 55.24 Mbit/s

95th percentile per-packet one-way delay: 113.557 ms

Loss rate: 2.69%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-03-21 06:13:00

End at: 2018-03-21 06:13:30

Below is generated by plot.py at 2018-03-21 12:33:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 63.47 Mbit/s

95th percentile per-packet one-way delay: 112.414 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 7.83 Mbit/s

95th percentile per-packet one-way delay: 111.289 ms

Loss rate: 1.57%

-- Flow 2:

Average throughput: 52.40 Mbit/s

95th percentile per-packet one-way delay: 112.445 ms

Loss rate: 1.39%

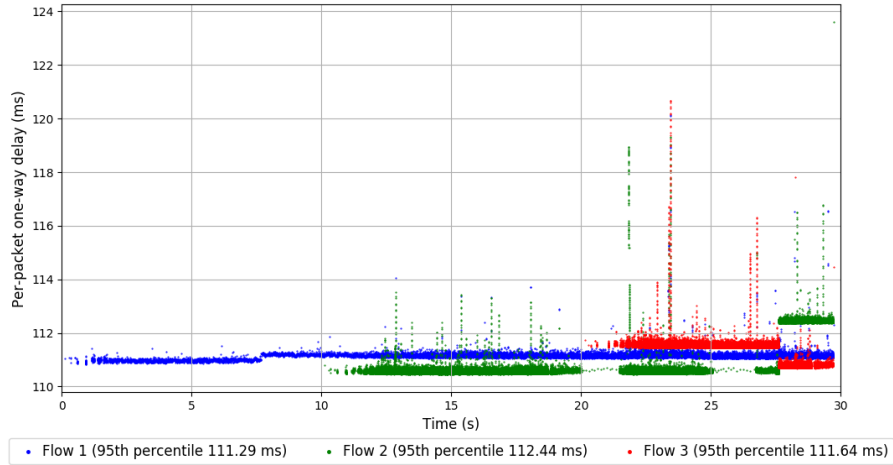
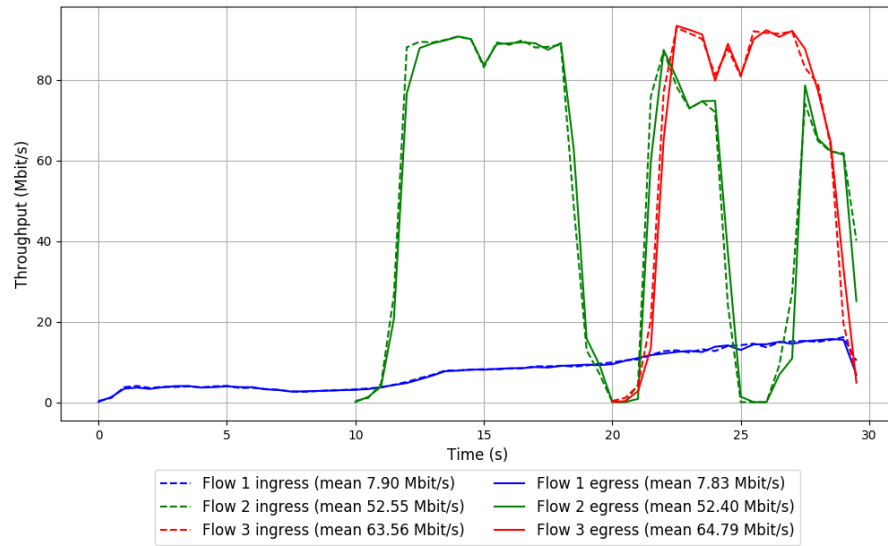
-- Flow 3:

Average throughput: 64.79 Mbit/s

95th percentile per-packet one-way delay: 111.636 ms

Loss rate: 0.35%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-03-21 06:32:22

End at: 2018-03-21 06:32:52

Below is generated by plot.py at 2018-03-21 12:33:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.63 Mbit/s

95th percentile per-packet one-way delay: 112.538 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 11.54 Mbit/s

95th percentile per-packet one-way delay: 112.654 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 62.11 Mbit/s

95th percentile per-packet one-way delay: 111.732 ms

Loss rate: 0.14%

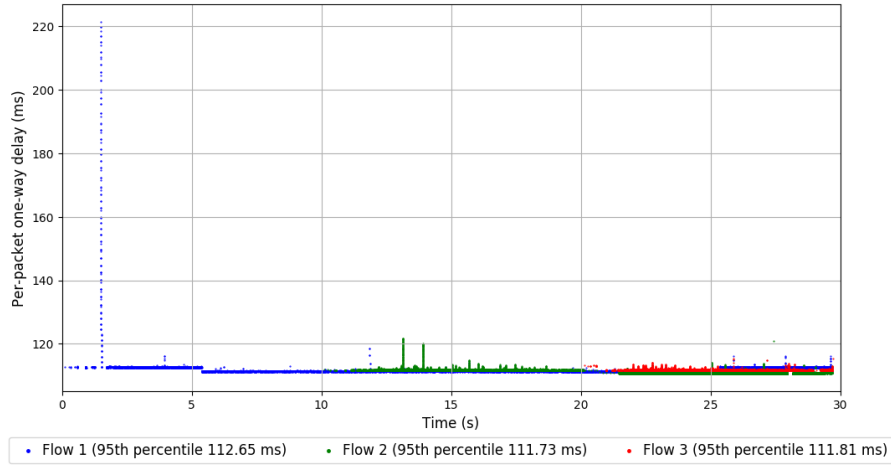
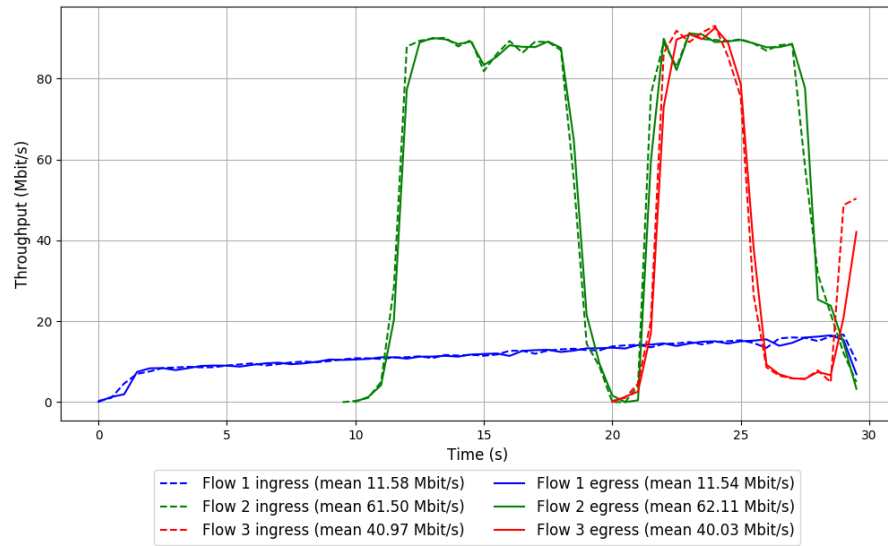
-- Flow 3:

Average throughput: 40.03 Mbit/s

95th percentile per-packet one-way delay: 111.808 ms

Loss rate: 4.50%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-03-21 06:51:35

End at: 2018-03-21 06:52:05

Below is generated by plot.py at 2018-03-21 12:33:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.15 Mbit/s

95th percentile per-packet one-way delay: 113.077 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 59.93 Mbit/s

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

Loss rate: 0.99%

-- Flow 2:

Average throughput: 50.33 Mbit/s

95th percentile per-packet one-way delay: 111.448 ms

Loss rate: 1.36%

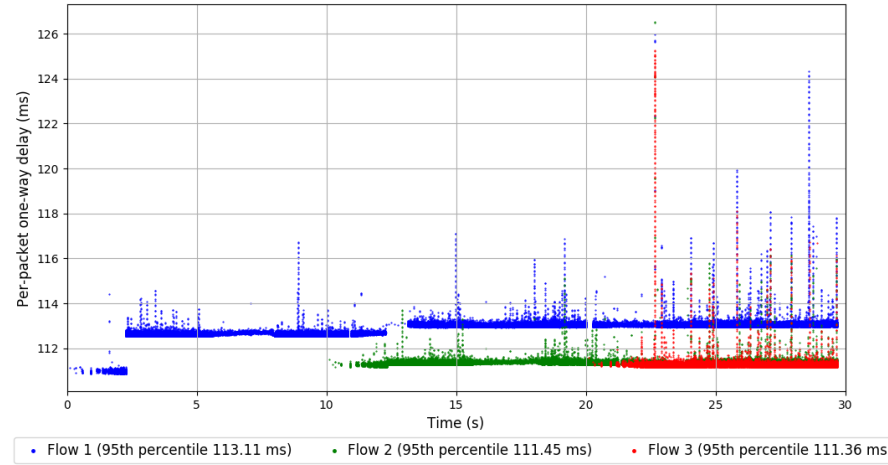
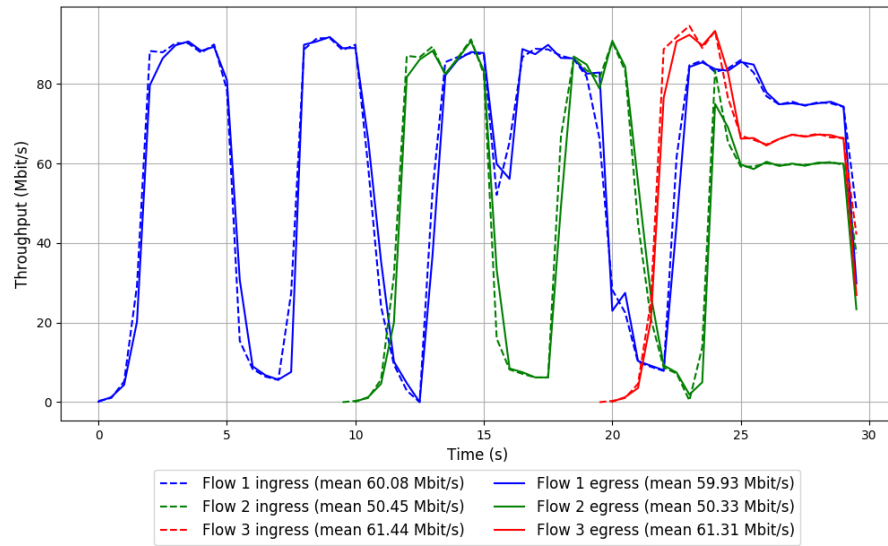
-- Flow 3:

Average throughput: 61.31 Mbit/s

95th percentile per-packet one-way delay: 111.355 ms

Loss rate: 2.49%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-03-21 07:11:06

End at: 2018-03-21 07:11:36

Below is generated by plot.py at 2018-03-21 12:33:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.08 Mbit/s

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

Loss rate: 1.25%

-- Flow 1:

Average throughput: 51.40 Mbit/s

95th percentile per-packet one-way delay: 112.699 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 43.66 Mbit/s

95th percentile per-packet one-way delay: 112.698 ms

Loss rate: 1.97%

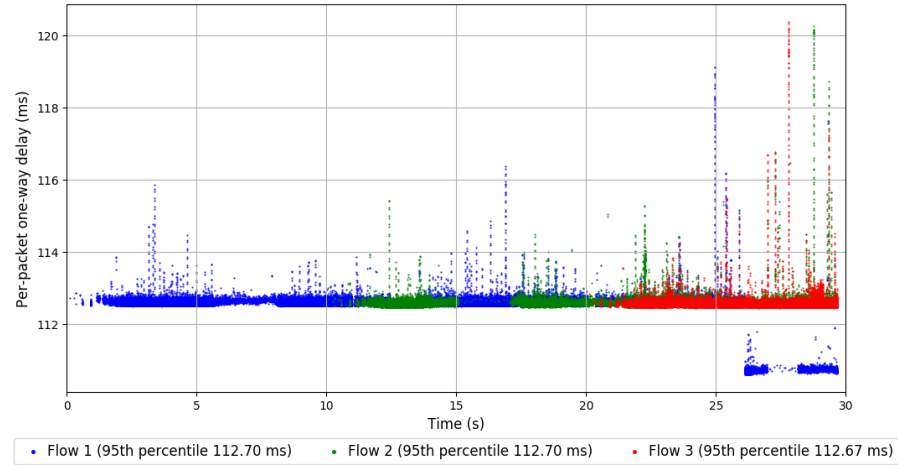
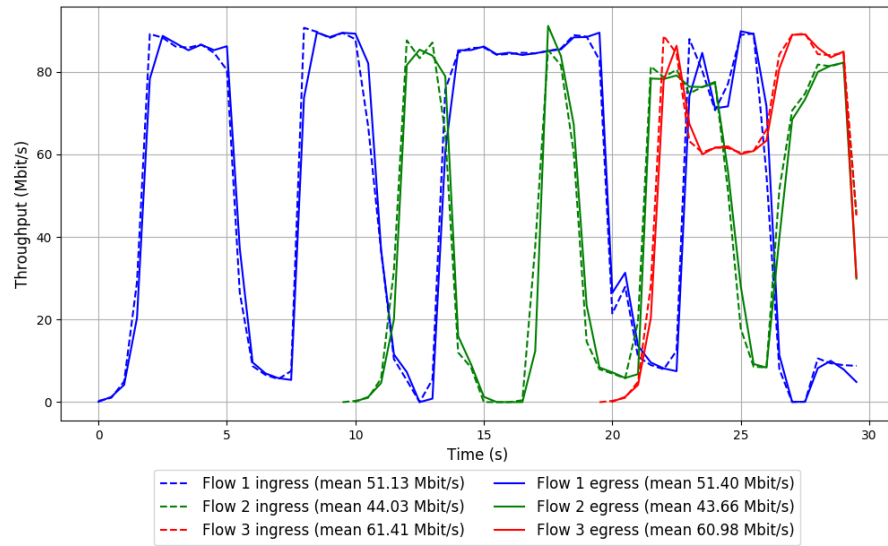
-- Flow 3:

Average throughput: 60.98 Mbit/s

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

Loss rate: 2.81%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-03-21 07:30:38

End at: 2018-03-21 07:31:08

Below is generated by plot.py at 2018-03-21 12:33:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.51 Mbit/s

95th percentile per-packet one-way delay: 113.184 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 58.15 Mbit/s

95th percentile per-packet one-way delay: 113.101 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 52.33 Mbit/s

95th percentile per-packet one-way delay: 112.214 ms

Loss rate: 1.50%

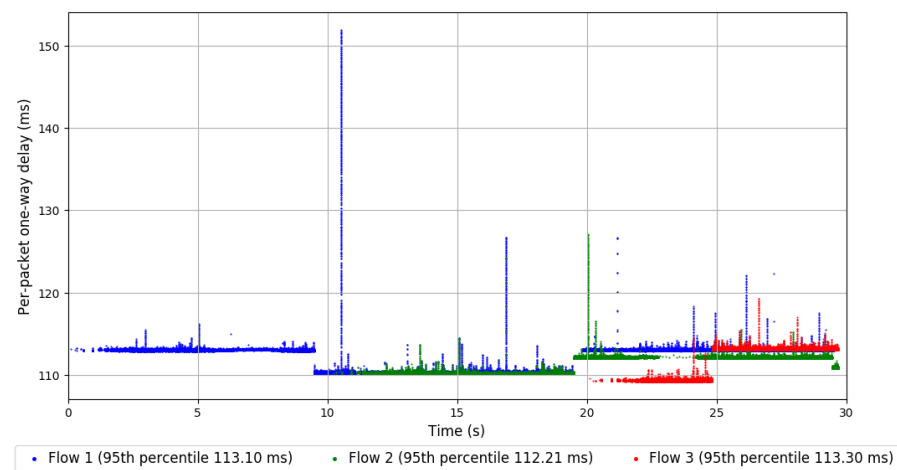
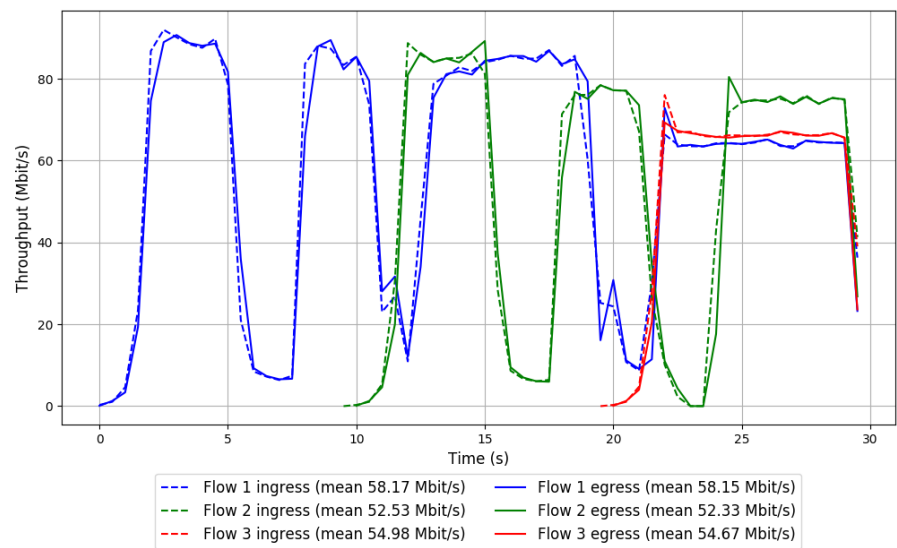
-- Flow 3:

Average throughput: 54.67 Mbit/s

95th percentile per-packet one-way delay: 113.295 ms

Loss rate: 2.82%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-03-21 07:50:06

End at: 2018-03-21 07:50:36

Below is generated by plot.py at 2018-03-21 12:33:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.10 Mbit/s

95th percentile per-packet one-way delay: 113.219 ms

Loss rate: 1.78%

-- Flow 1:

Average throughput: 45.37 Mbit/s

95th percentile per-packet one-way delay: 113.154 ms

Loss rate: 1.69%

-- Flow 2:

Average throughput: 48.70 Mbit/s

95th percentile per-packet one-way delay: 112.260 ms

Loss rate: 1.49%

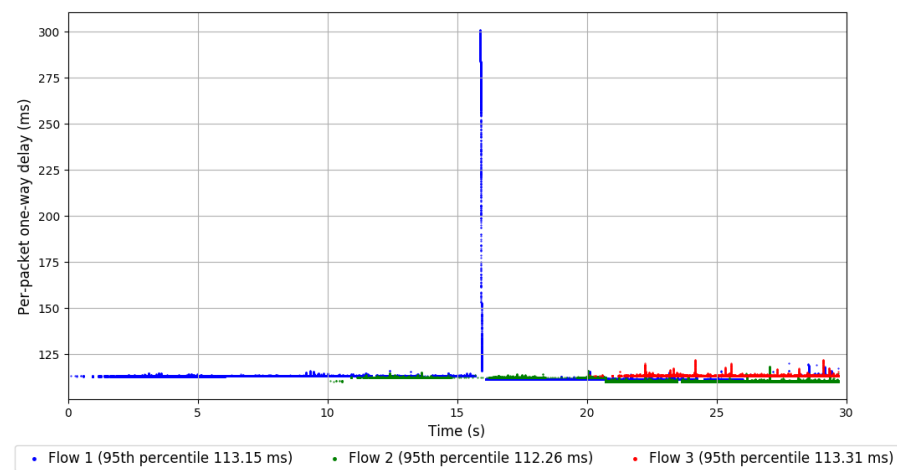
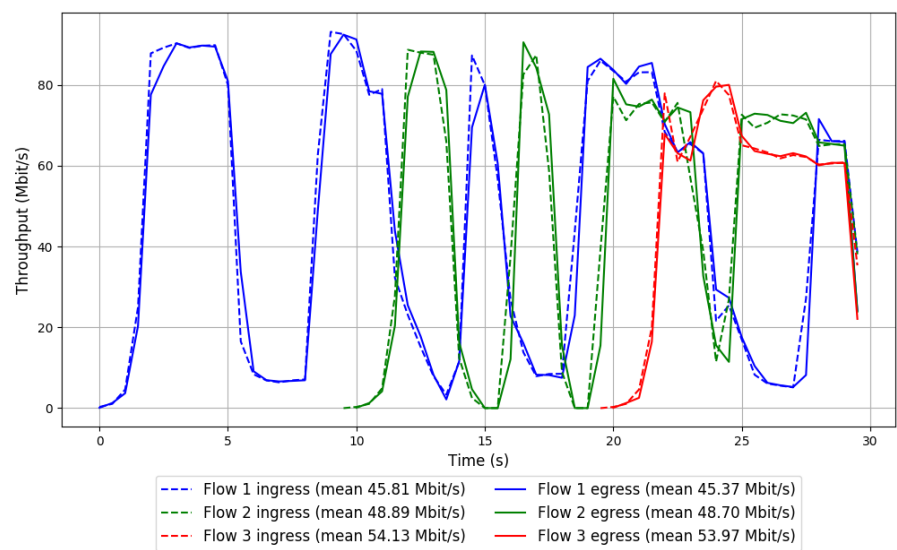
-- Flow 3:

Average throughput: 53.97 Mbit/s

95th percentile per-packet one-way delay: 113.309 ms

Loss rate: 2.56%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-03-21 08:21:18

End at: 2018-03-21 08:21:48

Below is generated by plot.py at 2018-03-21 12:33:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.38 Mbit/s

95th percentile per-packet one-way delay: 112.445 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 60.39 Mbit/s

95th percentile per-packet one-way delay: 112.468 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 50.66 Mbit/s

95th percentile per-packet one-way delay: 111.960 ms

Loss rate: 1.27%

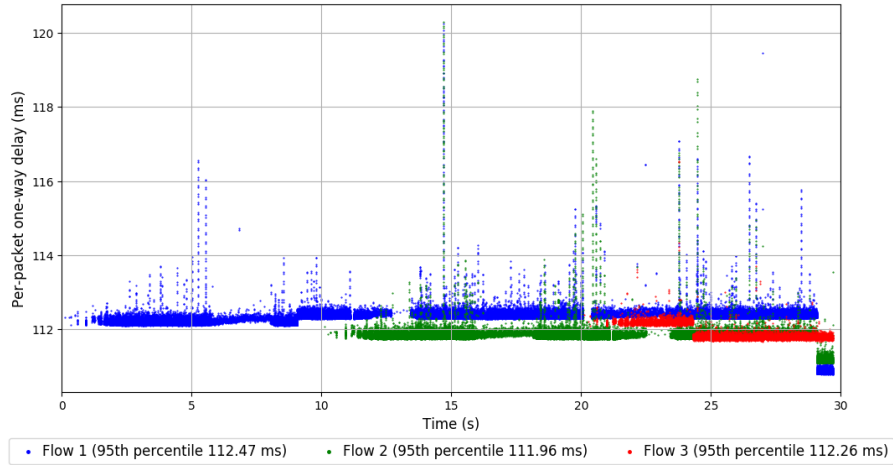
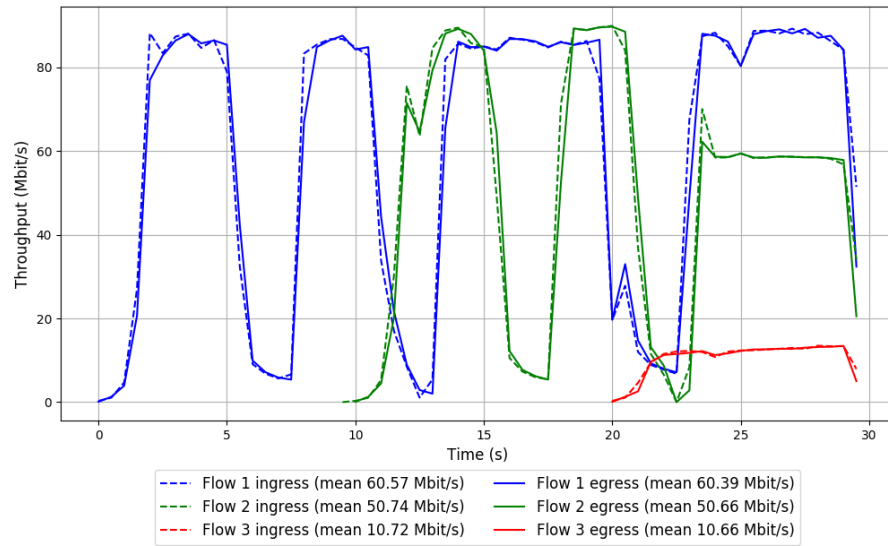
-- Flow 3:

Average throughput: 10.66 Mbit/s

95th percentile per-packet one-way delay: 112.260 ms

Loss rate: 2.85%

Run 10: Report of QUIC Cubic — Data Link

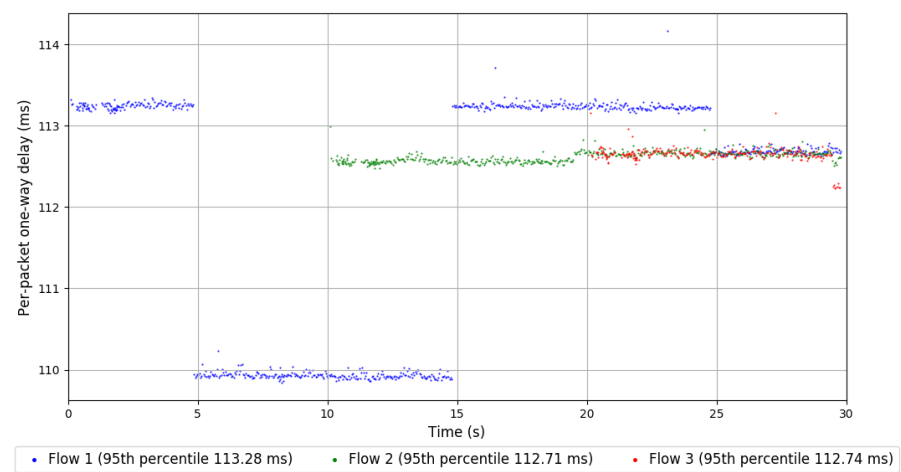
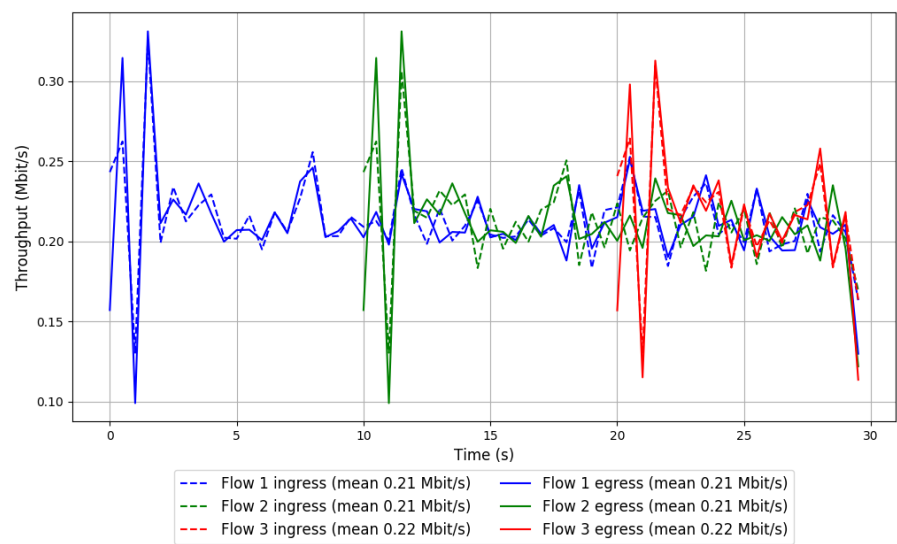


```
Run 1: Statistics of SCReAM

Start at: 2018-03-21 05:23:48
End at: 2018-03-21 05:24:18

# Below is generated by plot.py at 2018-03-21 12:33:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.268 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 113.284 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.707 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.736 ms
Loss rate: 2.23%
```

Run 1: Report of SReAM — Data Link

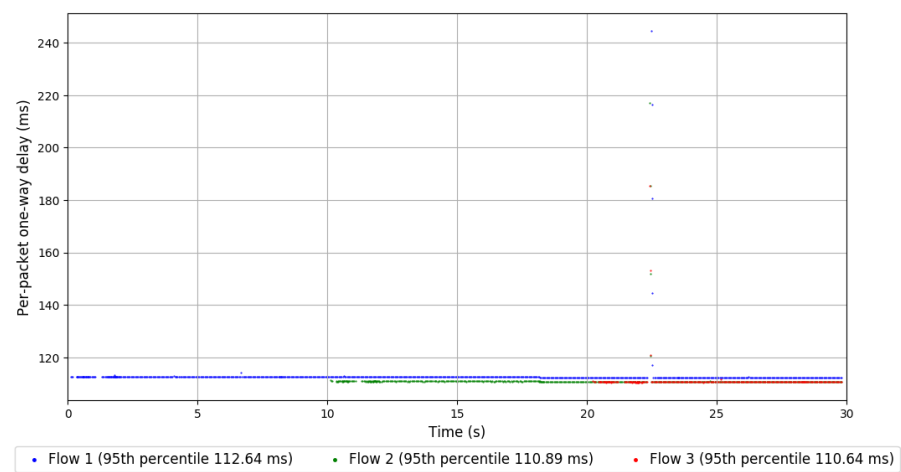
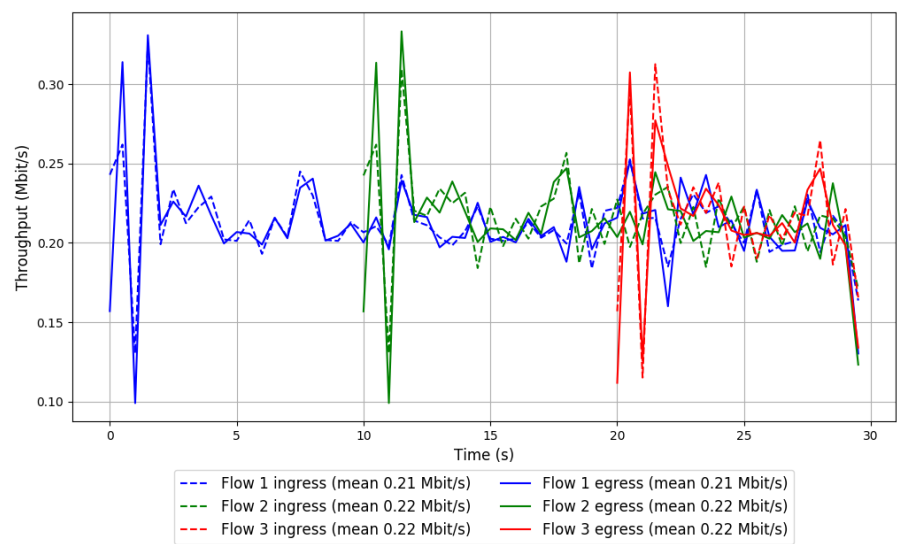


```
Run 2: Statistics of SReAM

Start at: 2018-03-21 05:42:59
End at: 2018-03-21 05:43:29

# Below is generated by plot.py at 2018-03-21 12:33:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.621 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.640 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.886 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.640 ms
Loss rate: 1.95%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-03-21 06:02:03

End at: 2018-03-21 06:02:33

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.962 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.118 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.997 ms

Loss rate: 1.05%

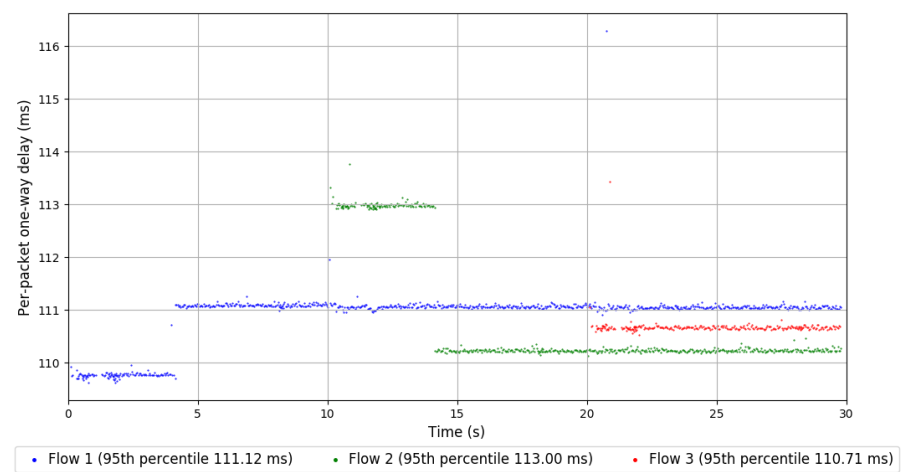
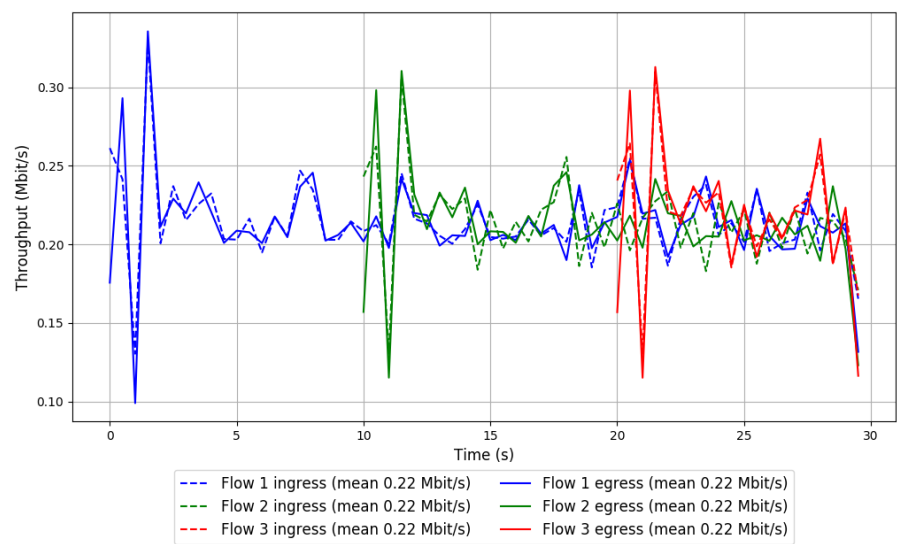
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.714 ms

Loss rate: 2.26%

Run 3: Report of SReAM — Data Link

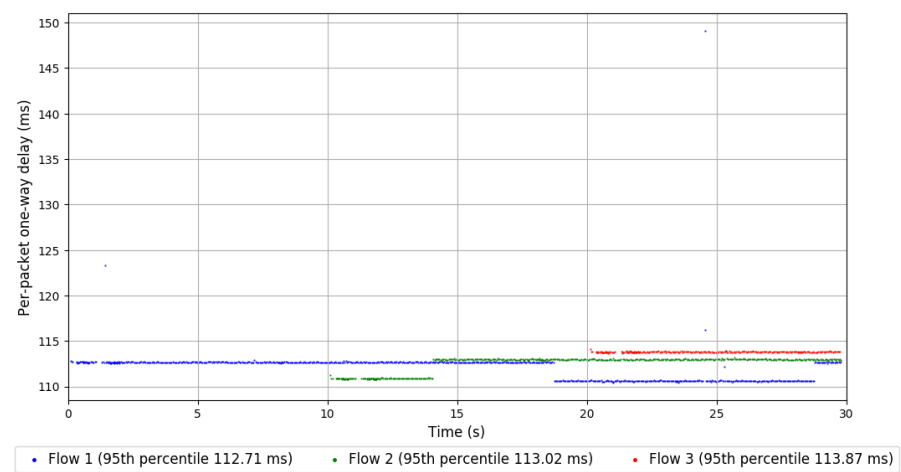
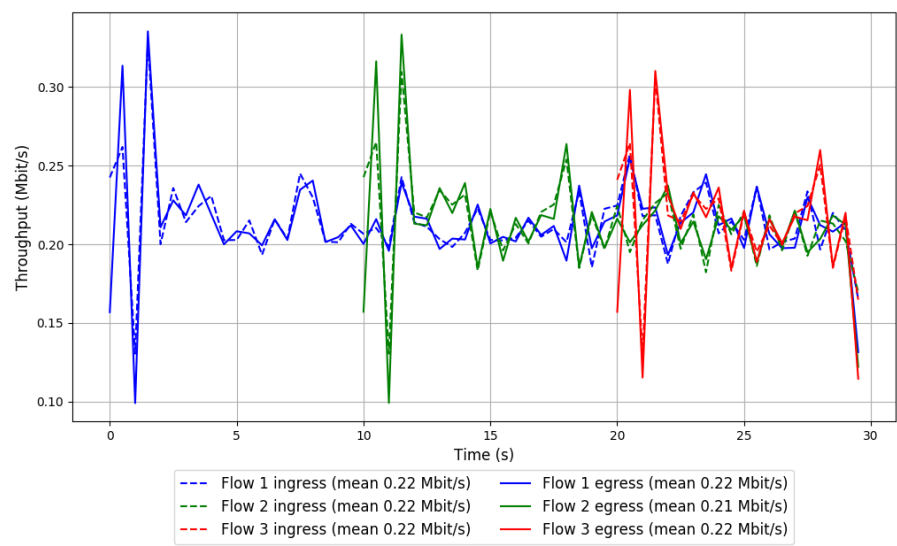


```
Run 4: Statistics of SCReAM

Start at: 2018-03-21 06:20:58
End at: 2018-03-21 06:21:28

# Below is generated by plot.py at 2018-03-21 12:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.803 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.713 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 113.023 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.866 ms
Loss rate: 2.25%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2018-03-21 06:40:28

End at: 2018-03-21 06:40:58

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 112.807 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.825 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 112.793 ms

Loss rate: 1.33%

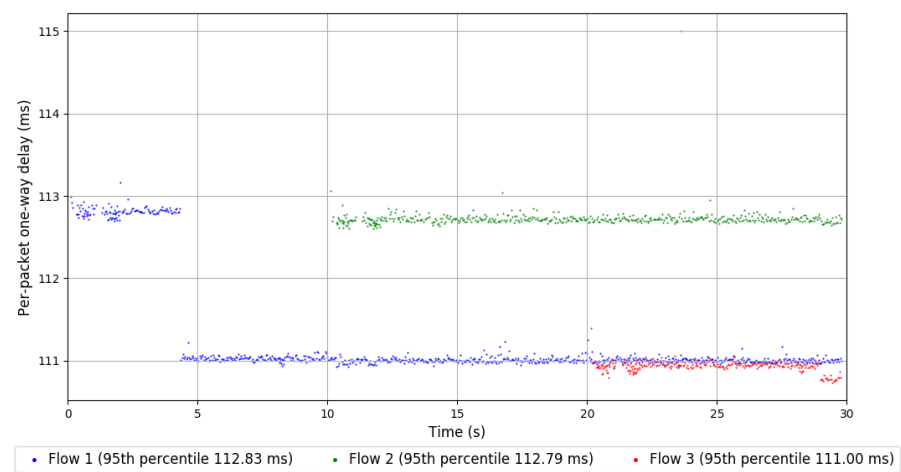
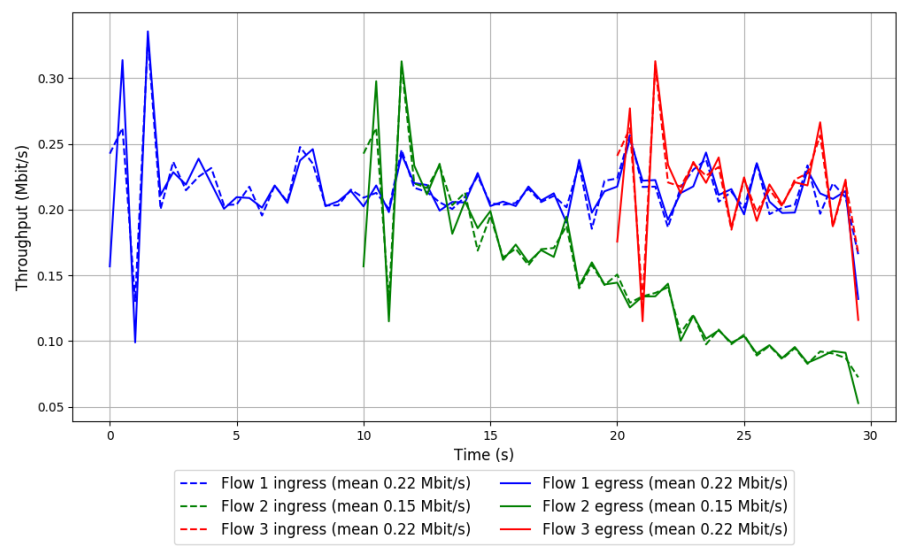
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.004 ms

Loss rate: 2.26%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-03-21 06:59:38

End at: 2018-03-21 07:00:08

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 113.051 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 113.074 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.008 ms

Loss rate: 1.06%

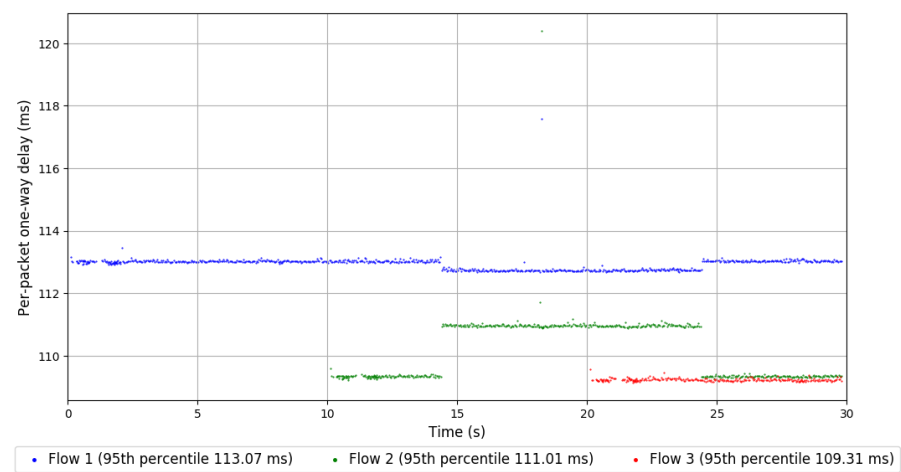
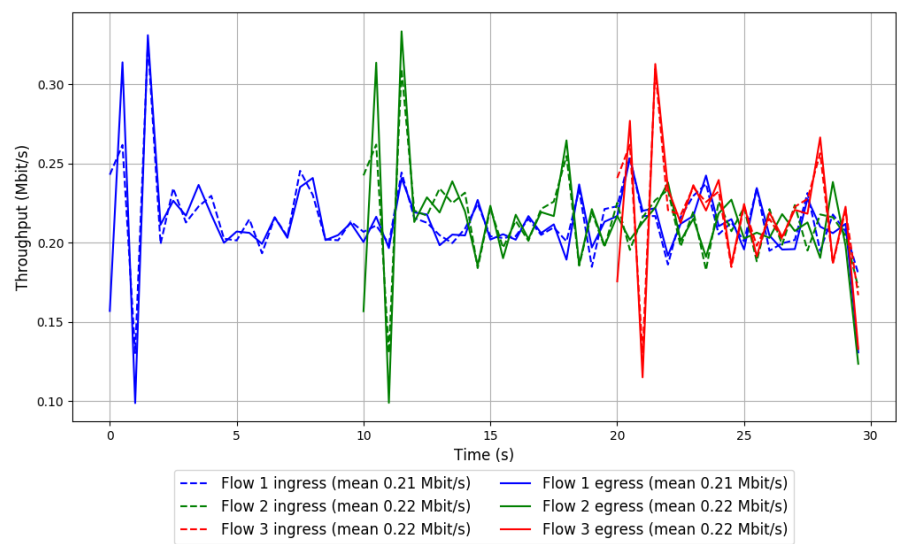
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 109.307 ms

Loss rate: 1.87%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2018-03-21 07:19:04

End at: 2018-03-21 07:19:34

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 114.355 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.323 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.950 ms

Loss rate: 1.05%

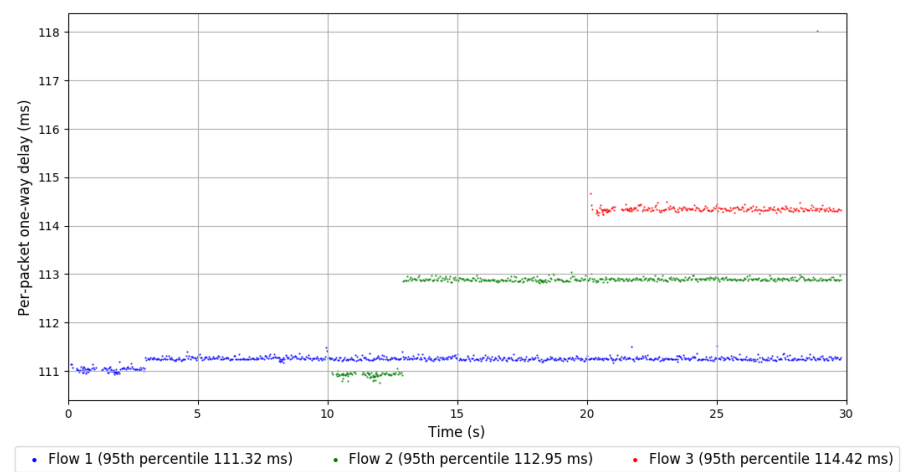
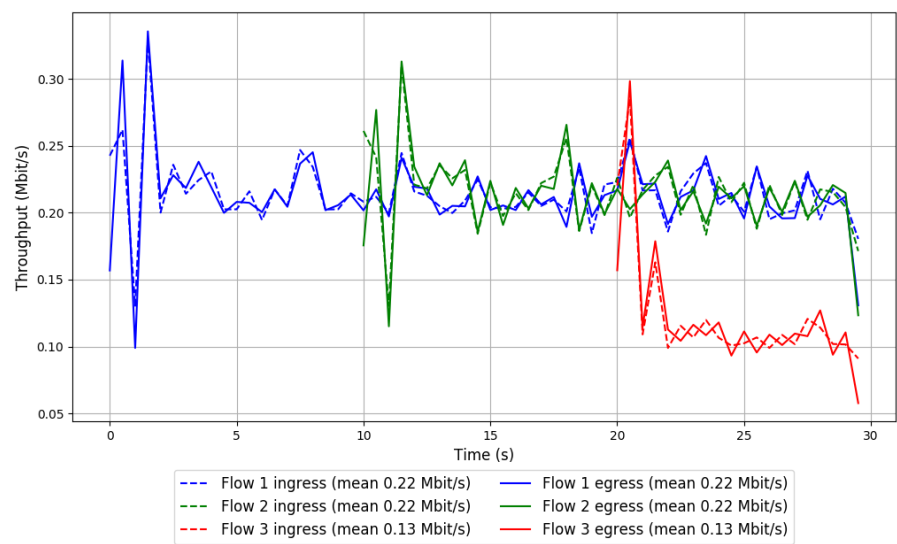
-- Flow 3:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 114.421 ms

Loss rate: 1.99%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2018-03-21 07:38:48

End at: 2018-03-21 07:39:18

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 113.545 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.760 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 113.569 ms

Loss rate: 1.04%

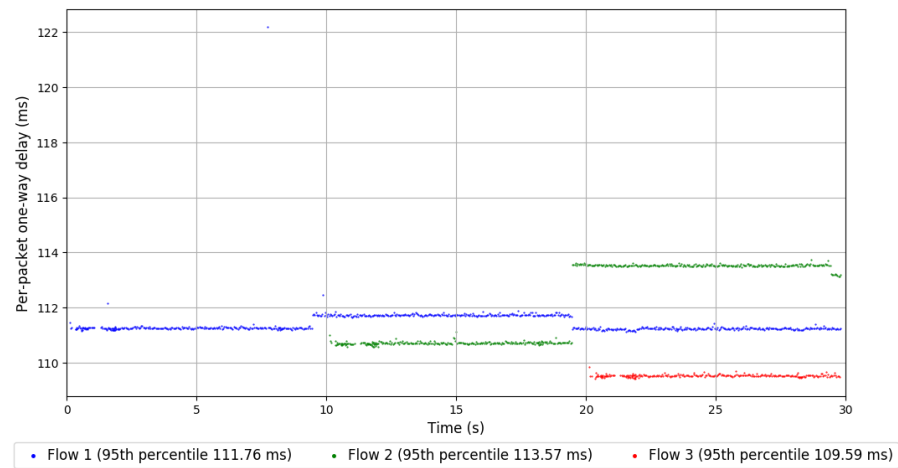
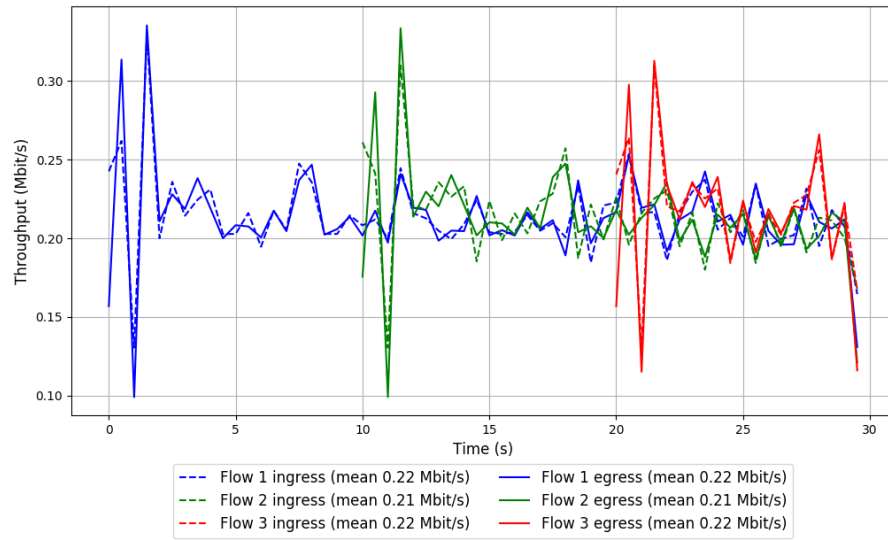
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 109.594 ms

Loss rate: 2.26%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-03-21 08:02:26

End at: 2018-03-21 08:02:56

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 113.266 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 113.259 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.11 Mbit/s

95th percentile per-packet one-way delay: 112.084 ms

Loss rate: 0.97%

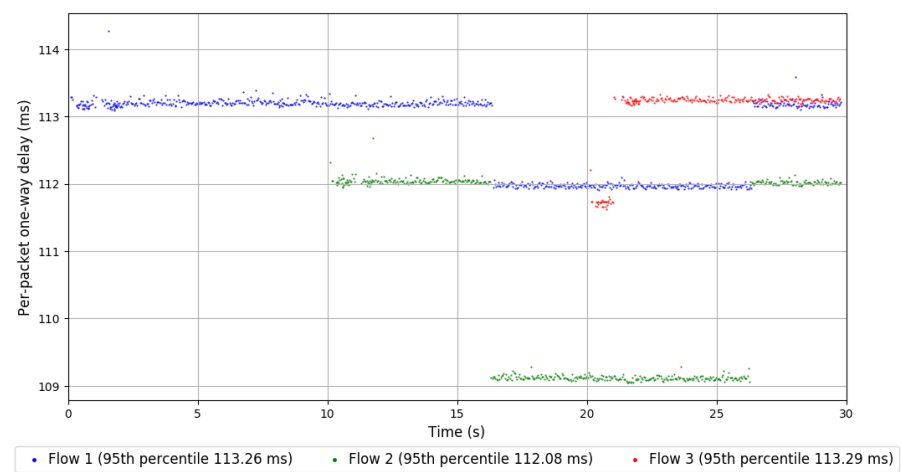
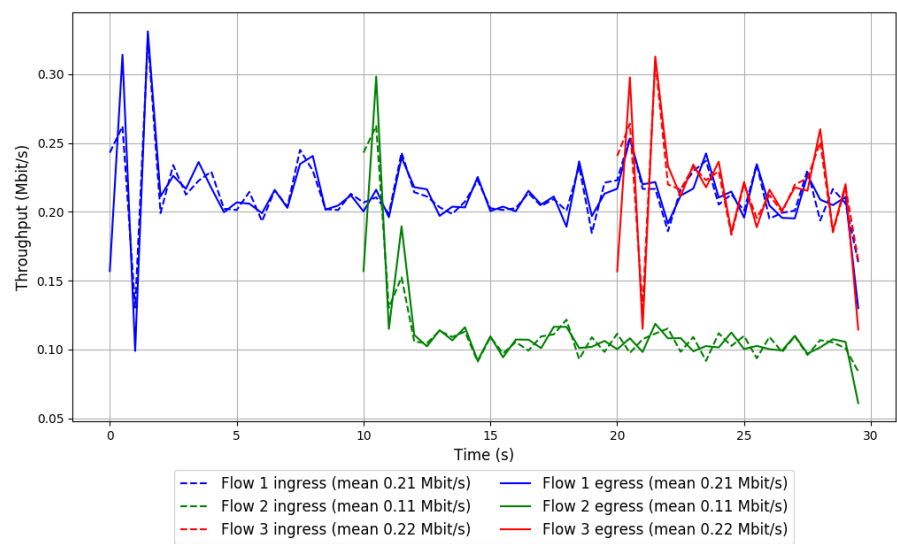
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 2.25%

Run 9: Report of SReAM — Data Link



Run 10: Statistics of SReAM

Start at: 2018-03-21 08:29:58

End at: 2018-03-21 08:30:28

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.980 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.991 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.313 ms

Loss rate: 1.04%

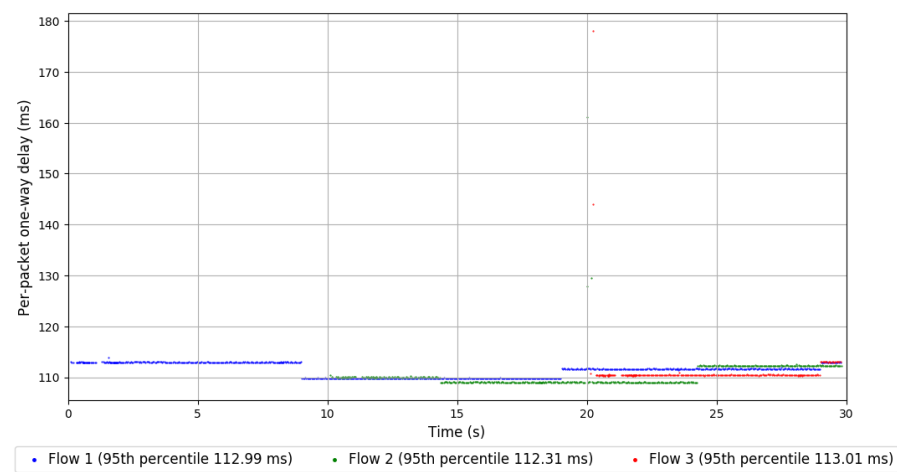
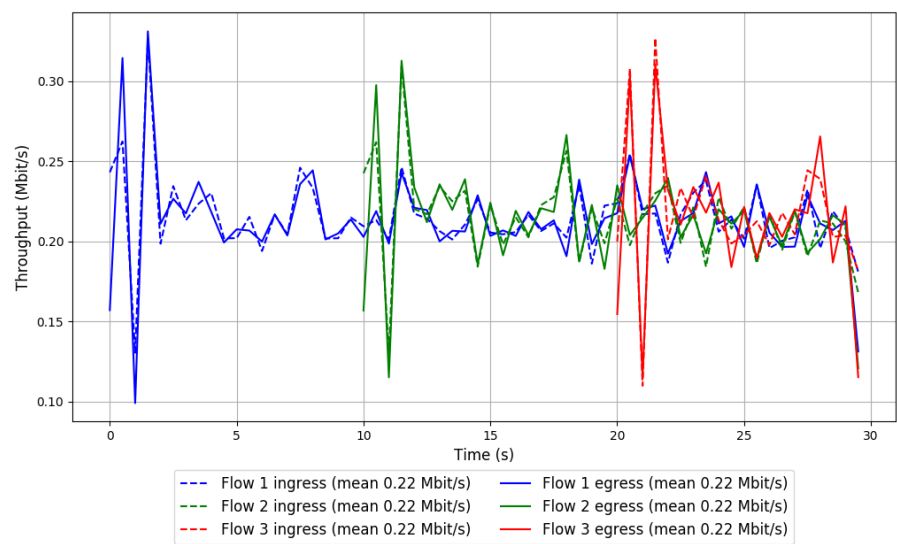
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 2.25%

Run 10: Report of SReAM — Data Link

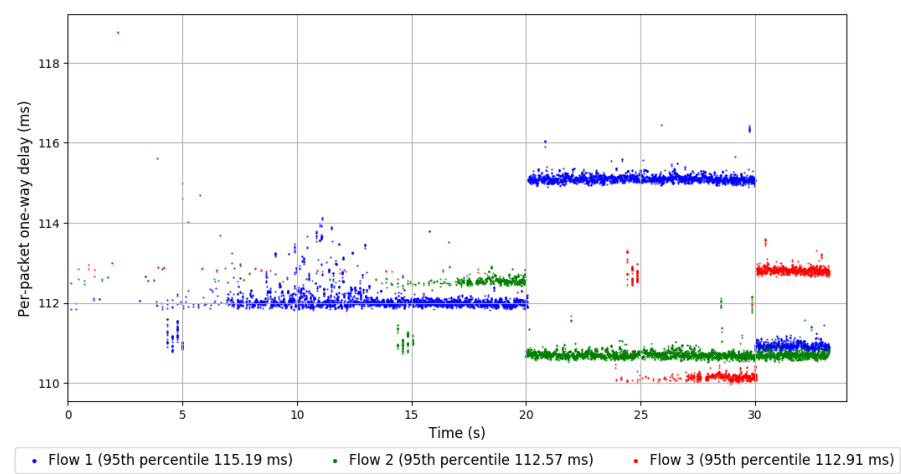
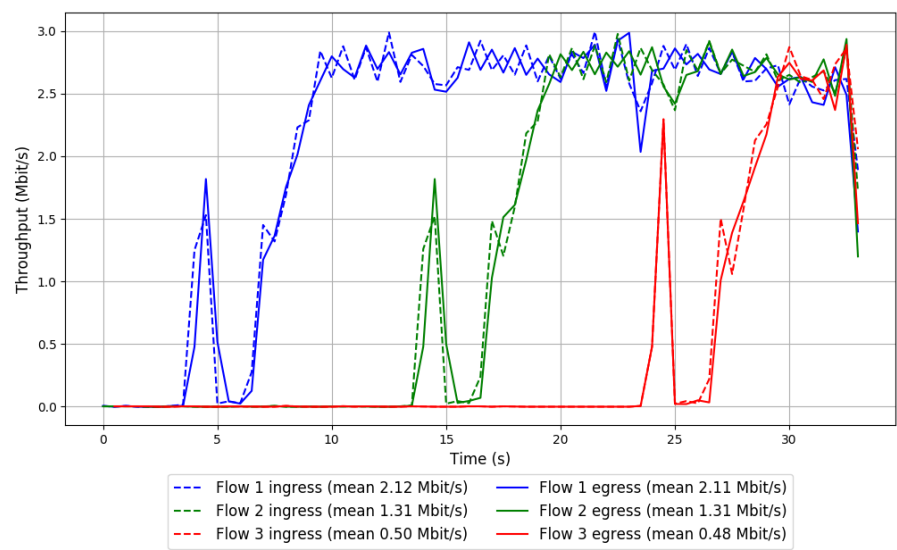


```
Run 1: Statistics of WebRTC media

Start at: 2018-03-21 05:21:01
End at: 2018-03-21 05:21:31

# Below is generated by plot.py at 2018-03-21 12:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 115.151 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 115.188 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 112.569 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 112.913 ms
Loss rate: 4.18%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-03-21 05:40:15

End at: 2018-03-21 05:40:45

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 114.731 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 112.323 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 114.784 ms

Loss rate: 1.03%

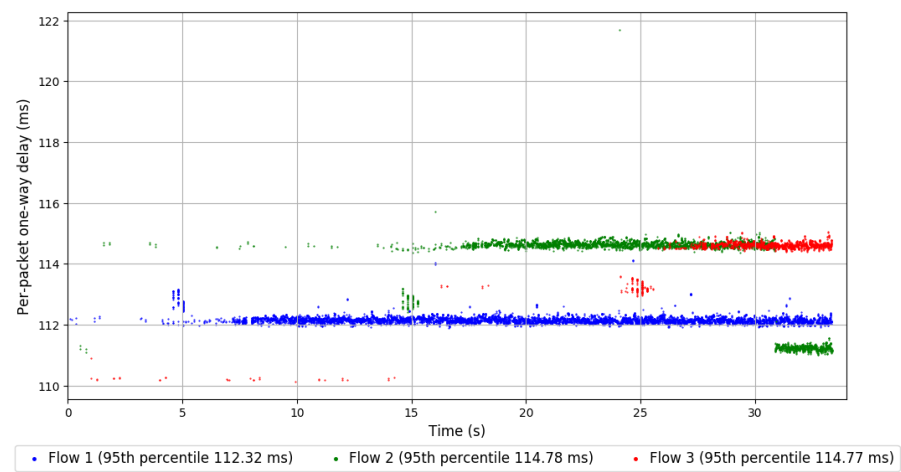
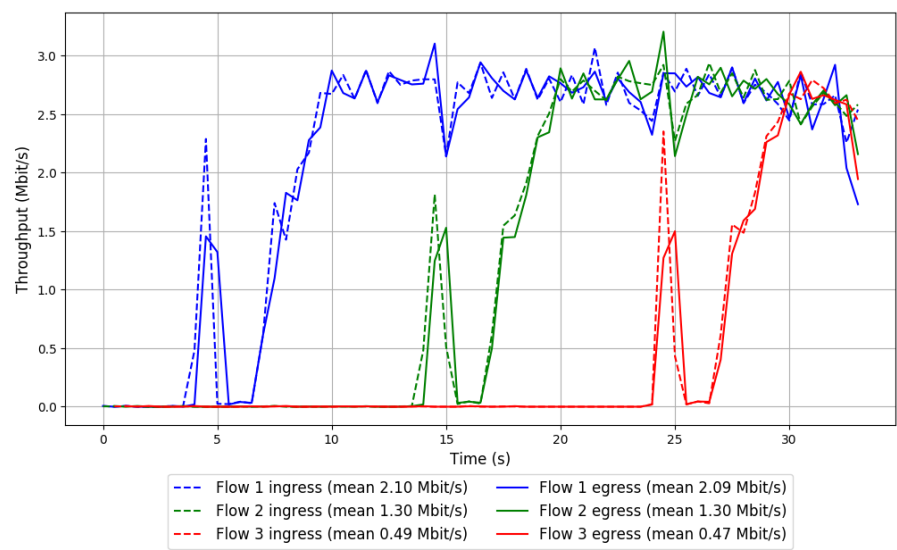
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 114.765 ms

Loss rate: 3.69%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-03-21 05:59:19

End at: 2018-03-21 05:59:49

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 113.556 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 112.568 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 112.700 ms

Loss rate: 1.29%

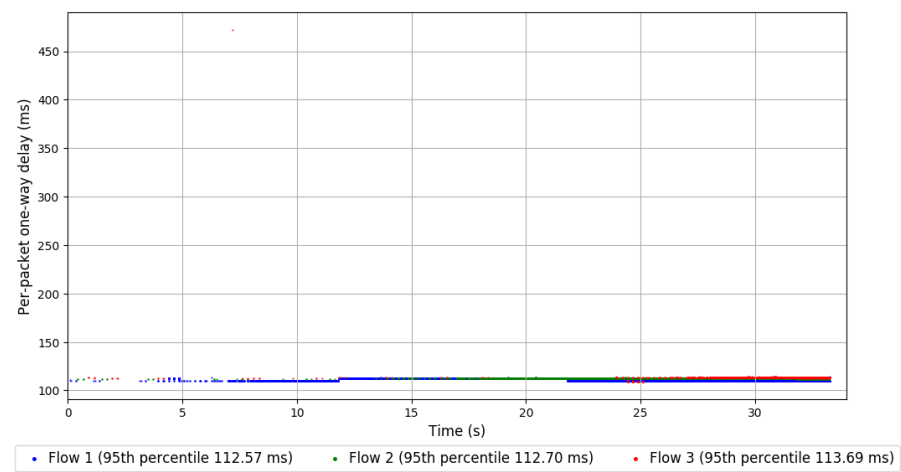
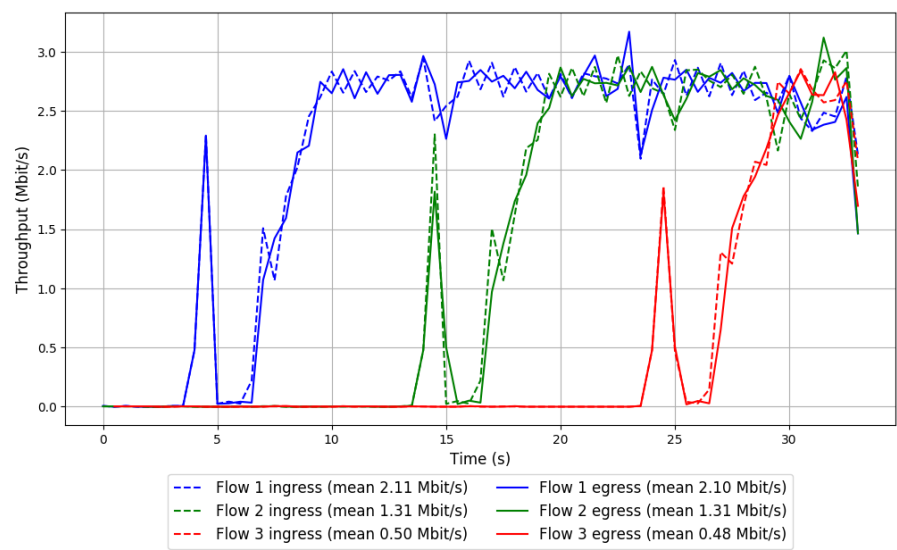
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 113.685 ms

Loss rate: 3.52%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-03-21 06:18:14

End at: 2018-03-21 06:18:44

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 113.272 ms

Loss rate: 1.71%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 113.303 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 110.067 ms

Loss rate: 2.00%

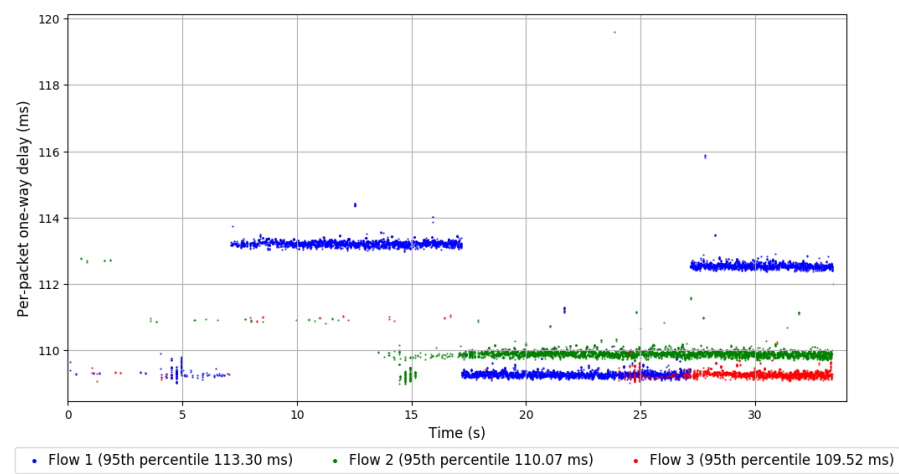
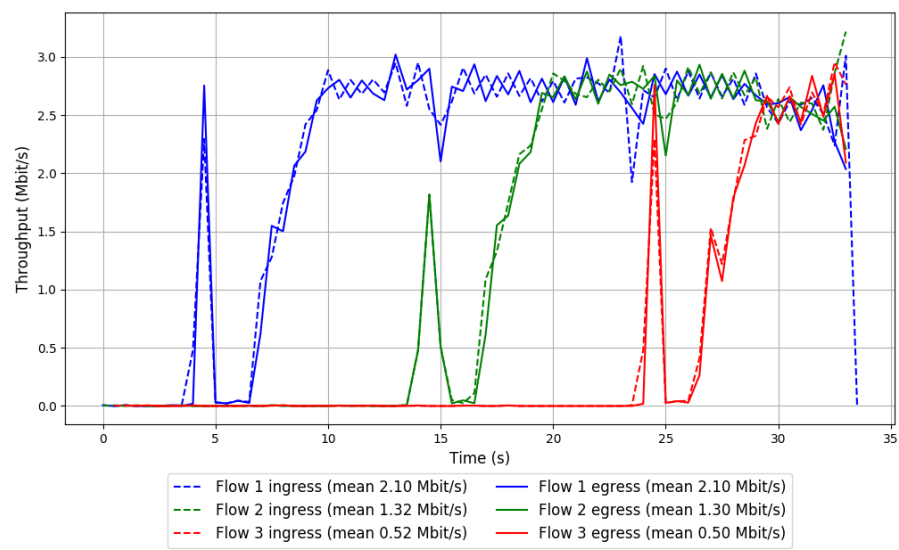
-- Flow 3:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 109.517 ms

Loss rate: 3.82%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-03-21 06:37:42

End at: 2018-03-21 06:38:12

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 115.266 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 115.303 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 113.944 ms

Loss rate: 1.30%

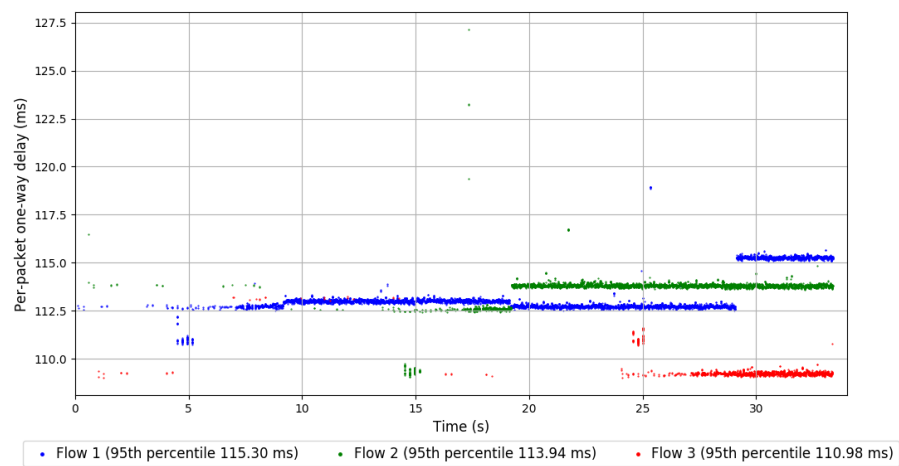
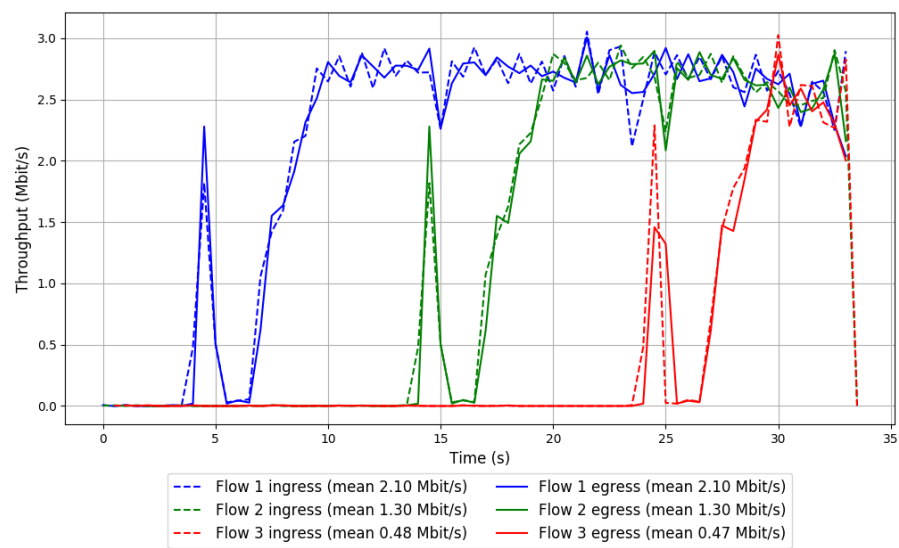
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 110.980 ms

Loss rate: 4.09%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-03-21 06:56:54

End at: 2018-03-21 06:57:24

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 113.170 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 111.218 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 113.227 ms

Loss rate: 2.00%

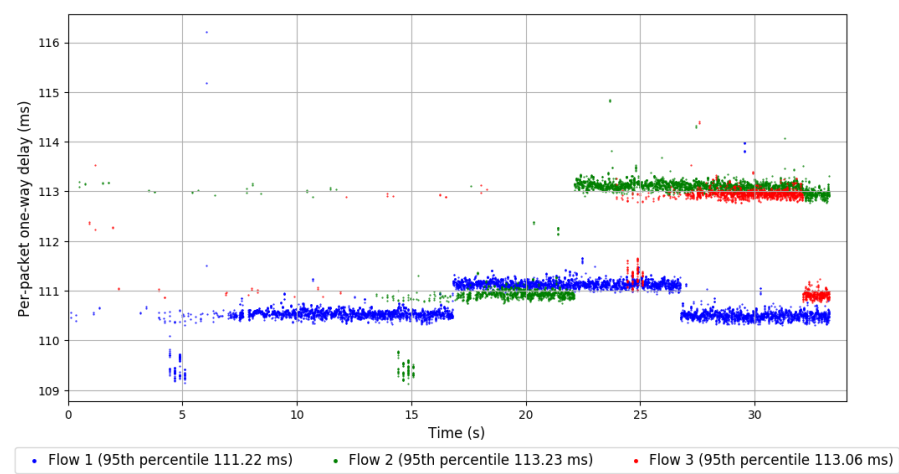
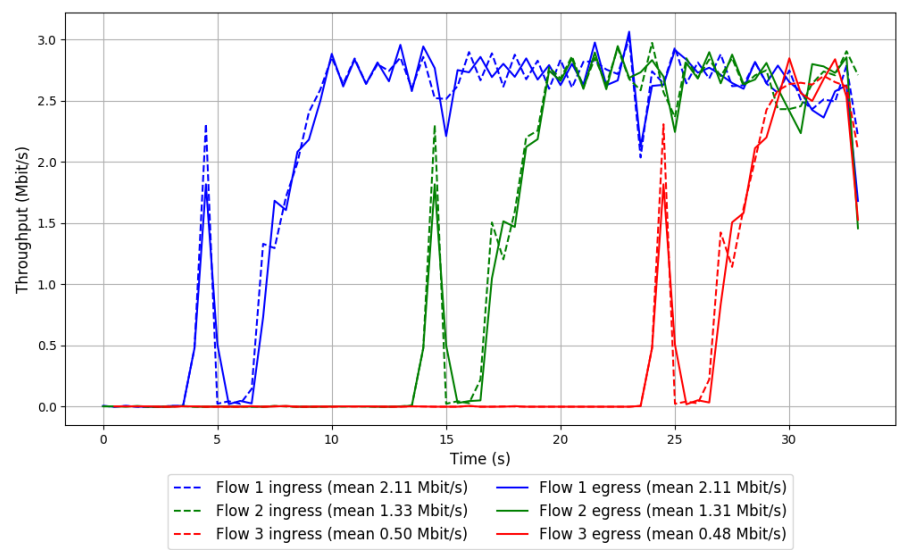
-- Flow 3:

Average throughput: 0.48 Mbit/s

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

Loss rate: 3.58%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-03-21 07:16:20

End at: 2018-03-21 07:16:50

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.08 Mbit/s

95th percentile per-packet one-way delay: 113.010 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 113.033 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 1.53 Mbit/s

95th percentile per-packet one-way delay: 112.851 ms

Loss rate: 1.76%

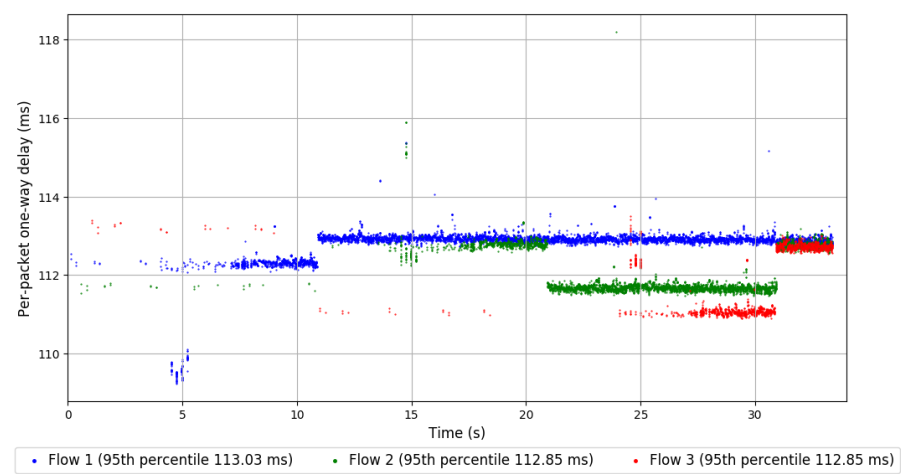
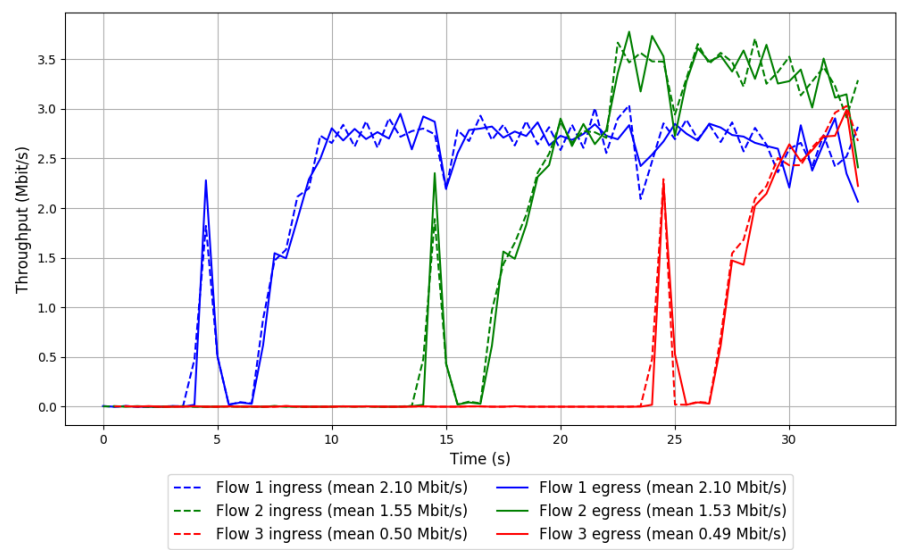
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 112.848 ms

Loss rate: 3.58%

Run 7: Report of WebRTC media — Data Link



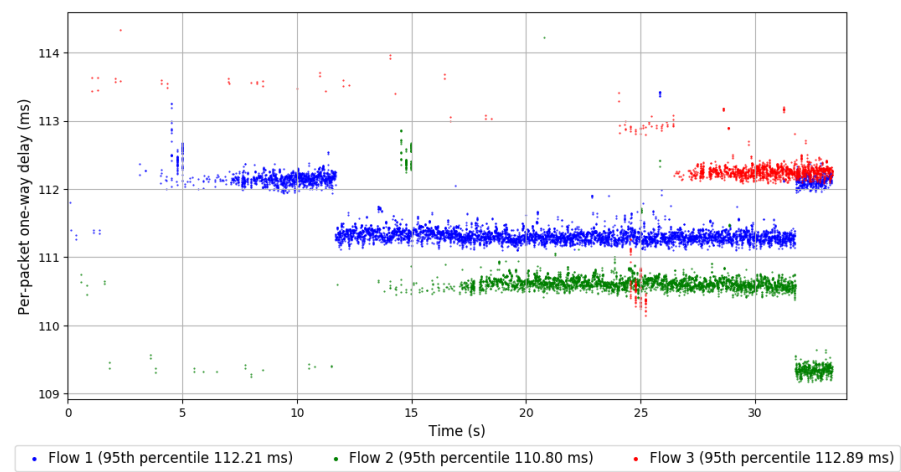
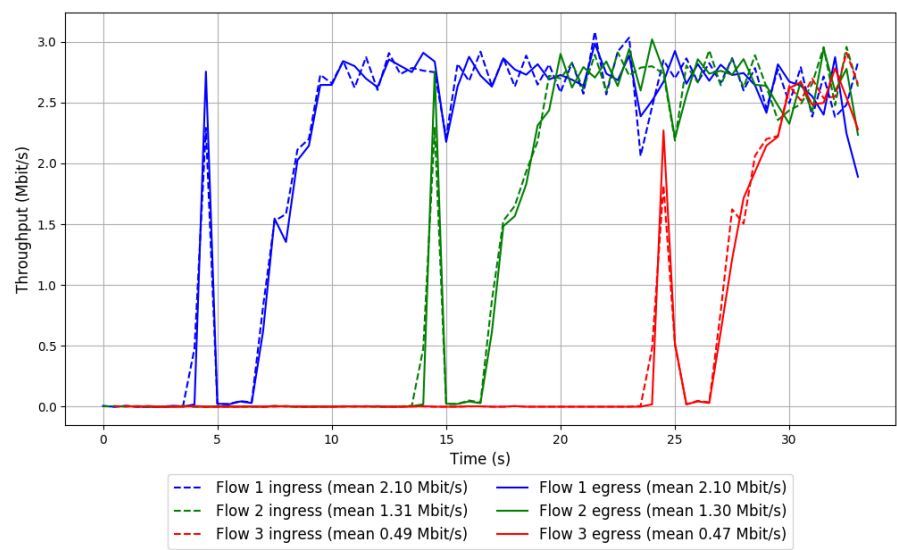
Run 8: Statistics of WebRTC media

Start at: 2018-03-21 07:36:04

End at: 2018-03-21 07:36:34

```
# Below is generated by plot.py at 2018-03-21 12:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 112.301 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 112.213 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 110.796 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 112.891 ms
Loss rate: 3.76%
```

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-03-21 07:58:42

End at: 2018-03-21 07:59:12

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 113.367 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 113.391 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 113.073 ms

Loss rate: 1.48%

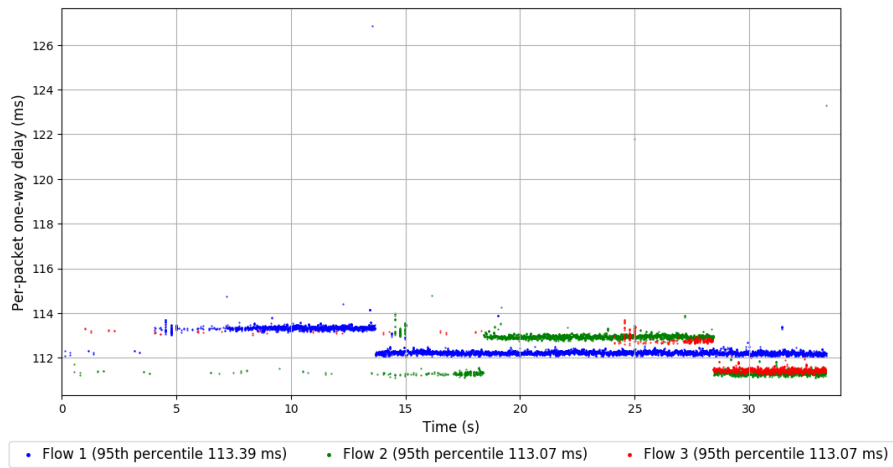
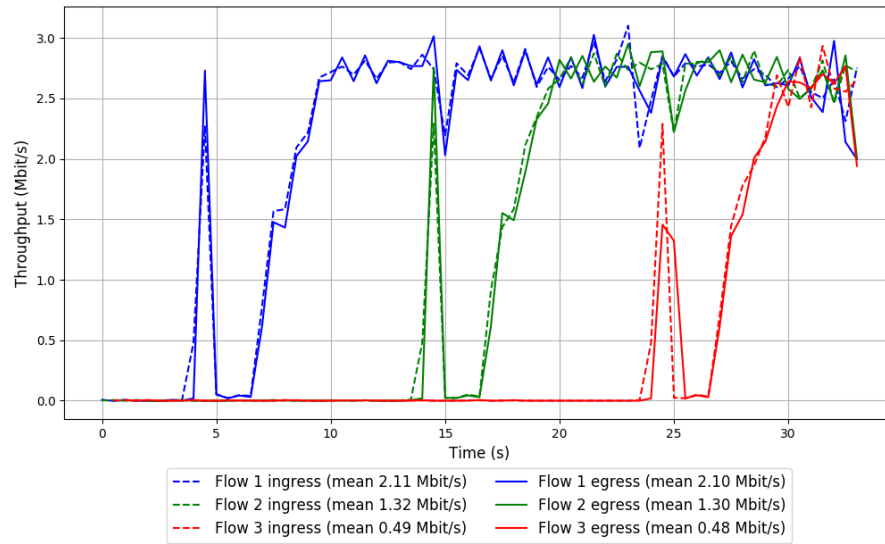
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 113.069 ms

Loss rate: 3.67%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-03-21 08:27:13

End at: 2018-03-21 08:27:43

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.84 Mbit/s

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

Loss rate: 1.37%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 112.507 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 113.061 ms

Loss rate: 1.38%

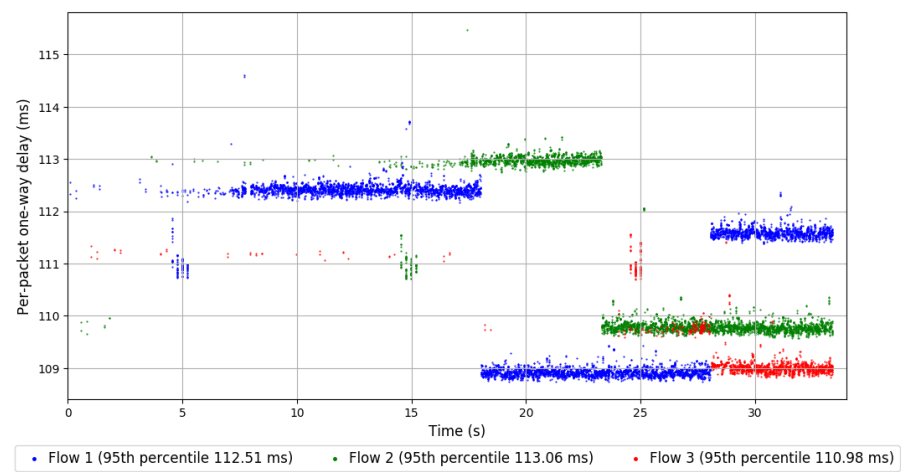
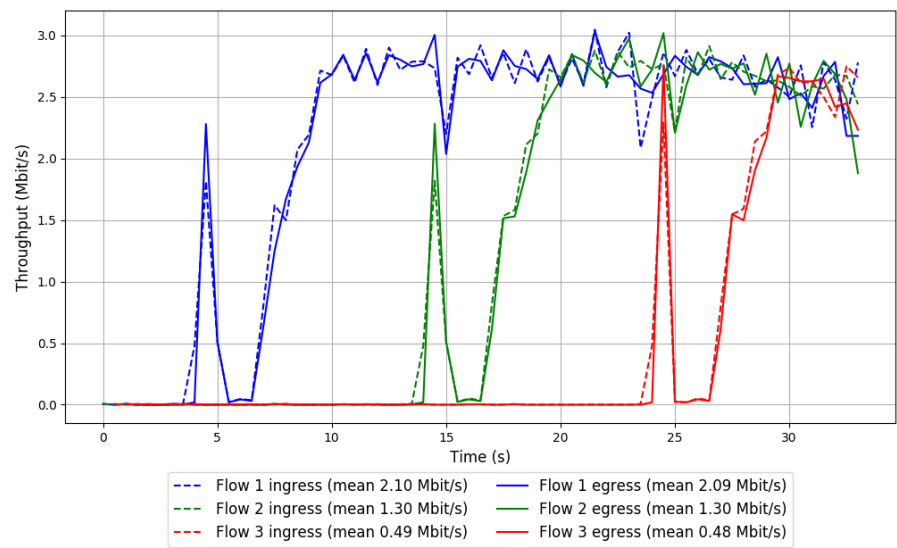
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 110.984 ms

Loss rate: 3.57%

Run 10: Report of WebRTC media — Data Link

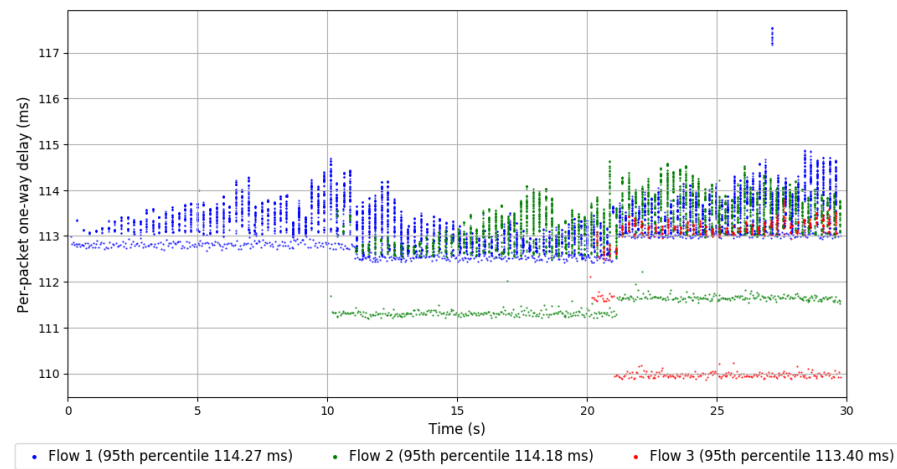
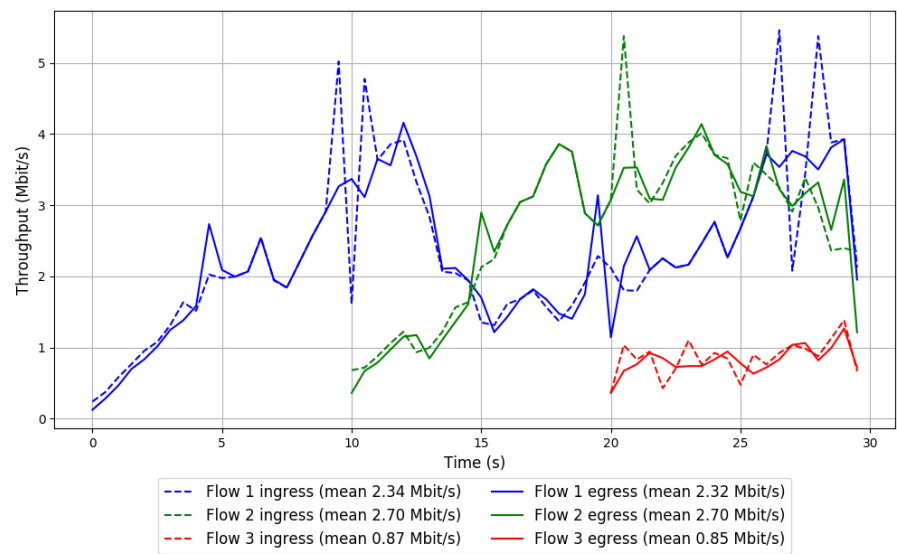


```
Run 1: Statistics of Sprout

Start at: 2018-03-21 05:25:56
End at: 2018-03-21 05:26:26

# Below is generated by plot.py at 2018-03-21 12:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 114.211 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 114.269 ms
Loss rate: 1.51%
-- Flow 2:
Average throughput: 2.70 Mbit/s
95th percentile per-packet one-way delay: 114.176 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 113.398 ms
Loss rate: 3.87%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-03-21 05:45:03

End at: 2018-03-21 05:45:33

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.30 Mbit/s

95th percentile per-packet one-way delay: 113.829 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 113.762 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 113.924 ms

Loss rate: 1.40%

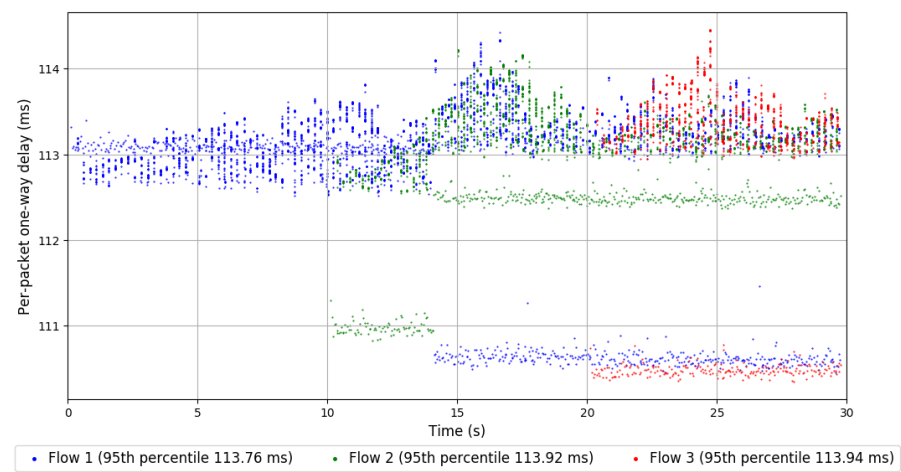
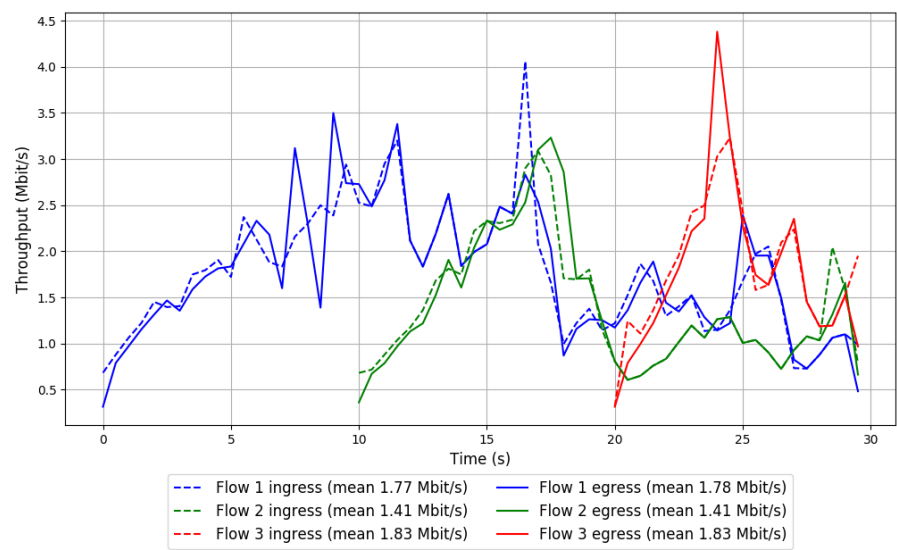
-- Flow 3:

Average throughput: 1.83 Mbit/s

95th percentile per-packet one-way delay: 113.939 ms

Loss rate: 2.73%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-03-21 06:04:13

End at: 2018-03-21 06:04:43

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.89 Mbit/s

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

Loss rate: 1.78%

-- Flow 1:

Average throughput: 2.40 Mbit/s

95th percentile per-packet one-way delay: 112.386 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 2.98 Mbit/s

95th percentile per-packet one-way delay: 111.123 ms

Loss rate: 1.52%

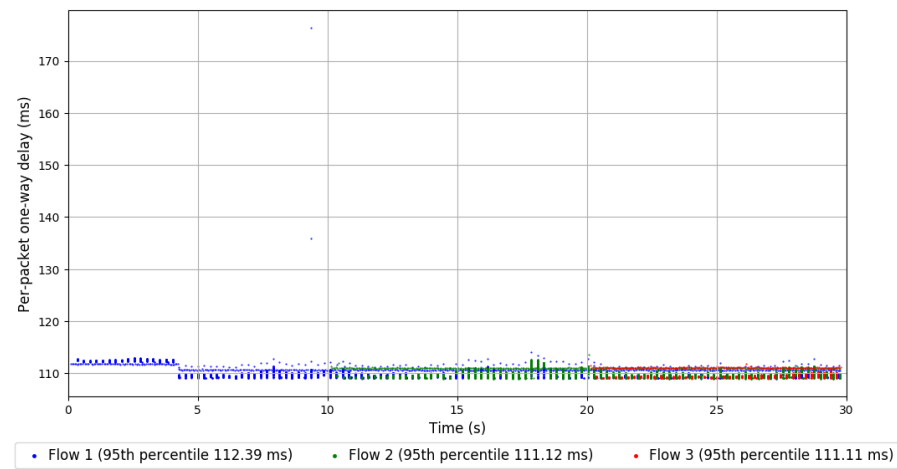
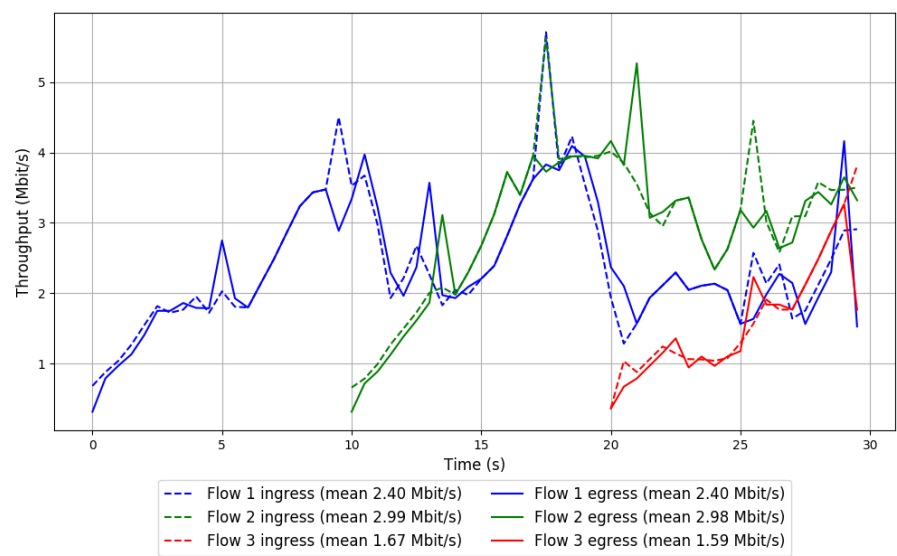
-- Flow 3:

Average throughput: 1.59 Mbit/s

95th percentile per-packet one-way delay: 111.105 ms

Loss rate: 6.24%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-03-21 06:23:10

End at: 2018-03-21 06:23:40

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.21 Mbit/s

95th percentile per-packet one-way delay: 114.079 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 3.18 Mbit/s

95th percentile per-packet one-way delay: 113.800 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 114.381 ms

Loss rate: 0.01%

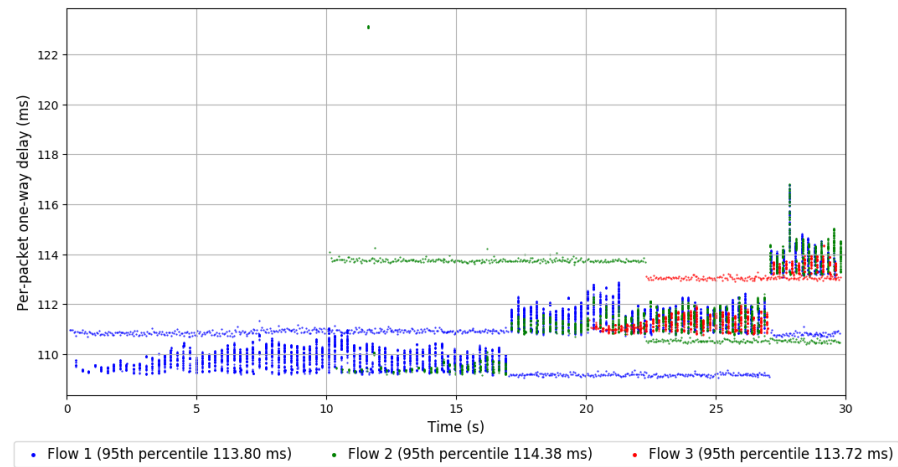
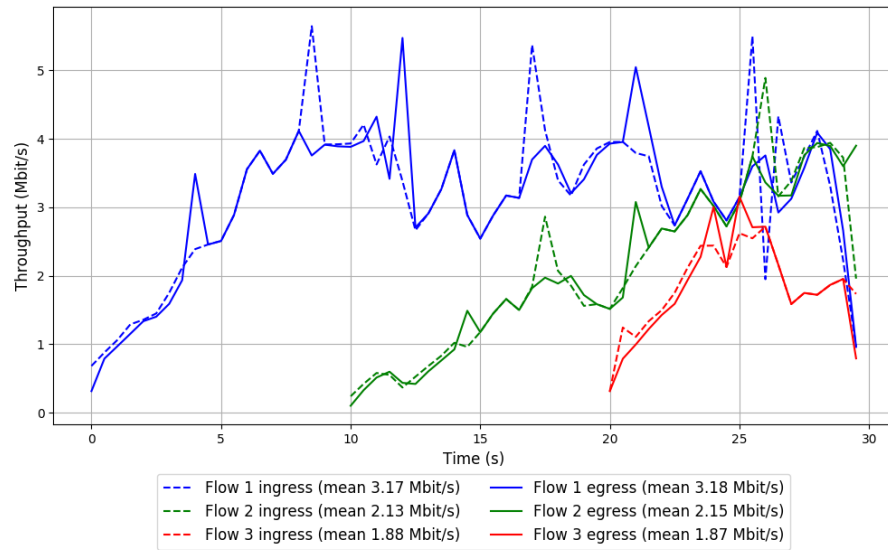
-- Flow 3:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 113.718 ms

Loss rate: 2.55%

Run 4: Report of Sprout — Data Link



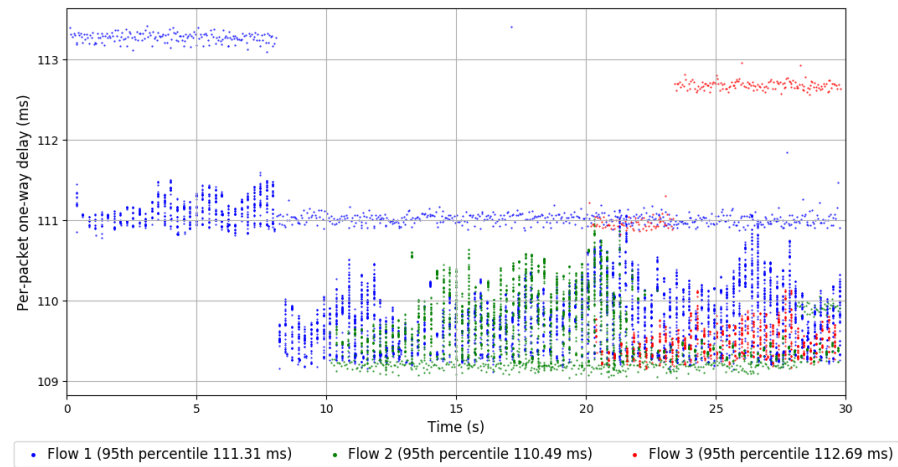
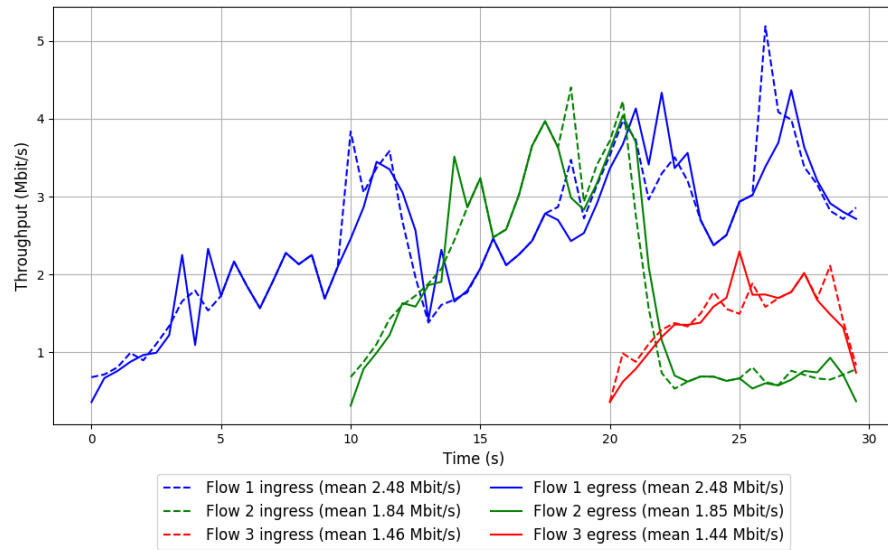
Run 5: Statistics of Sprout

Start at: 2018-03-21 06:42:39

End at: 2018-03-21 06:43:09

```
# Below is generated by plot.py at 2018-03-21 12:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.17 Mbit/s
95th percentile per-packet one-way delay: 111.230 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 111.306 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 110.486 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 112.689 ms
Loss rate: 2.89%
```

Run 5: Report of Sprout — Data Link



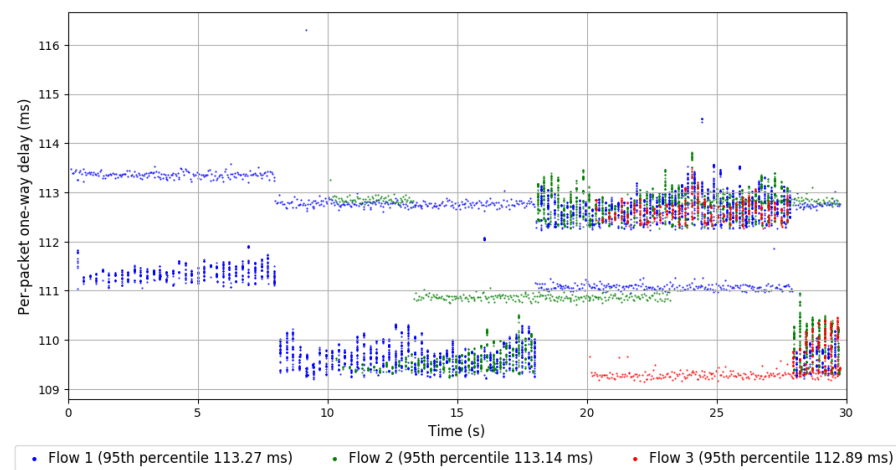
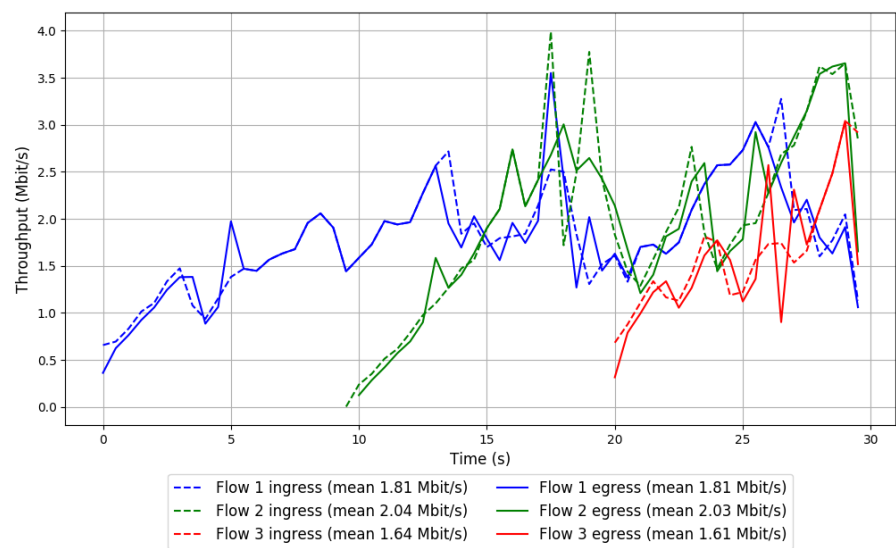
Run 6: Statistics of Sprout

Start at: 2018-03-21 07:01:49

End at: 2018-03-21 07:02:19

```
# Below is generated by plot.py at 2018-03-21 12:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.67 Mbit/s
95th percentile per-packet one-way delay: 113.140 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 113.269 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 113.139 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 112.894 ms
Loss rate: 4.33%
```

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-03-21 07:21:15

End at: 2018-03-21 07:21:45

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.41 Mbit/s

95th percentile per-packet one-way delay: 113.178 ms

Loss rate: 1.79%

-- Flow 1:

Average throughput: 2.35 Mbit/s

95th percentile per-packet one-way delay: 113.354 ms

Loss rate: 1.38%

-- Flow 2:

Average throughput: 2.40 Mbit/s

95th percentile per-packet one-way delay: 112.056 ms

Loss rate: 1.51%

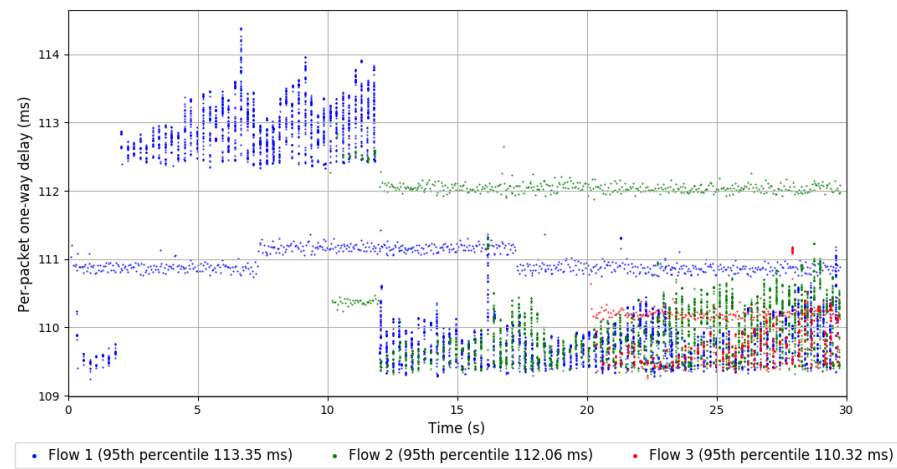
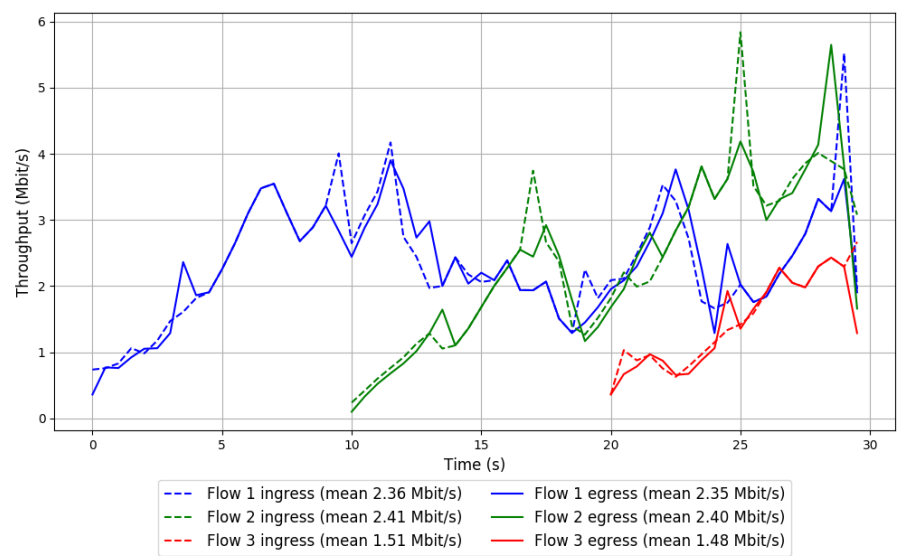
-- Flow 3:

Average throughput: 1.48 Mbit/s

95th percentile per-packet one-way delay: 110.322 ms

Loss rate: 4.64%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-03-21 07:41:01

End at: 2018-03-21 07:41:31

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.15 Mbit/s

95th percentile per-packet one-way delay: 113.679 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 2.83 Mbit/s

95th percentile per-packet one-way delay: 113.626 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 2.74 Mbit/s

95th percentile per-packet one-way delay: 113.752 ms

Loss rate: 1.23%

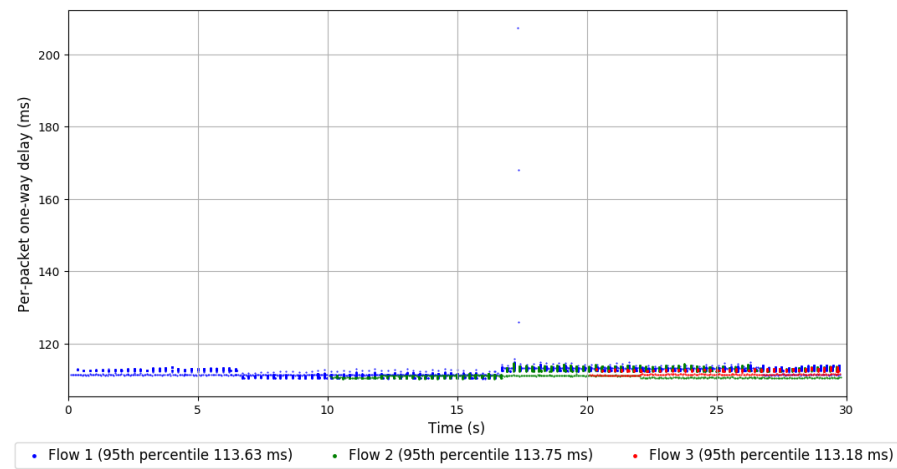
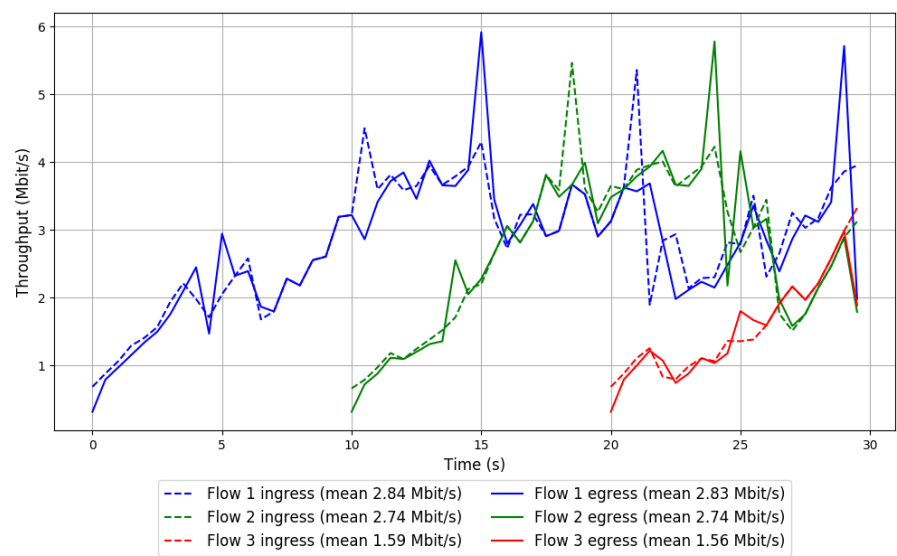
-- Flow 3:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 113.180 ms

Loss rate: 4.57%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-03-21 08:05:09

End at: 2018-03-21 08:05:39

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.77 Mbit/s

95th percentile per-packet one-way delay: 113.630 ms

Loss rate: 2.09%

-- Flow 1:

Average throughput: 1.16 Mbit/s

95th percentile per-packet one-way delay: 113.610 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 113.671 ms

Loss rate: 2.15%

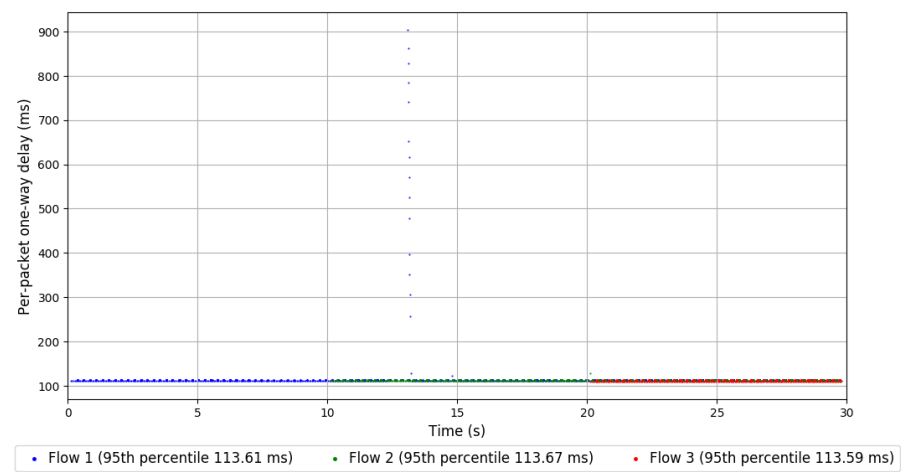
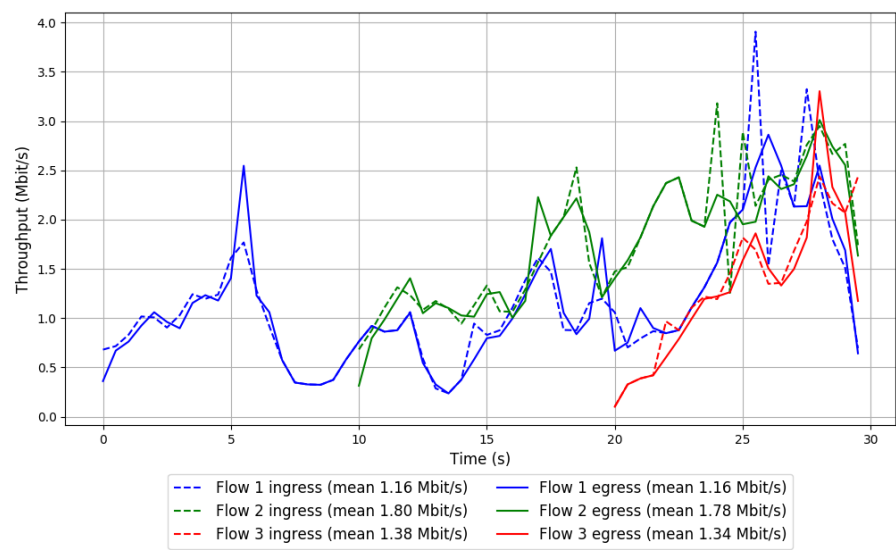
-- Flow 3:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 113.592 ms

Loss rate: 4.67%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-03-21 08:32:06

End at: 2018-03-21 08:32:36

Below is generated by plot.py at 2018-03-21 12:33:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.20 Mbit/s

95th percentile per-packet one-way delay: 112.062 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 2.94 Mbit/s

95th percentile per-packet one-way delay: 112.122 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 111.866 ms

Loss rate: 2.04%

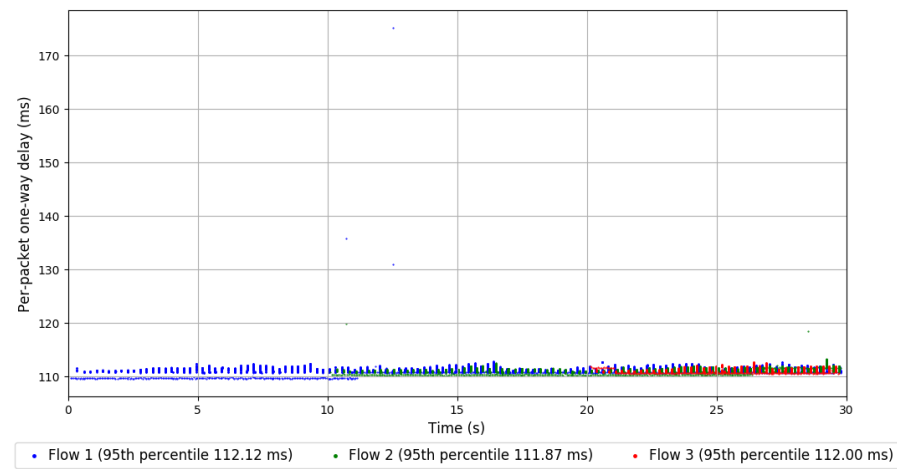
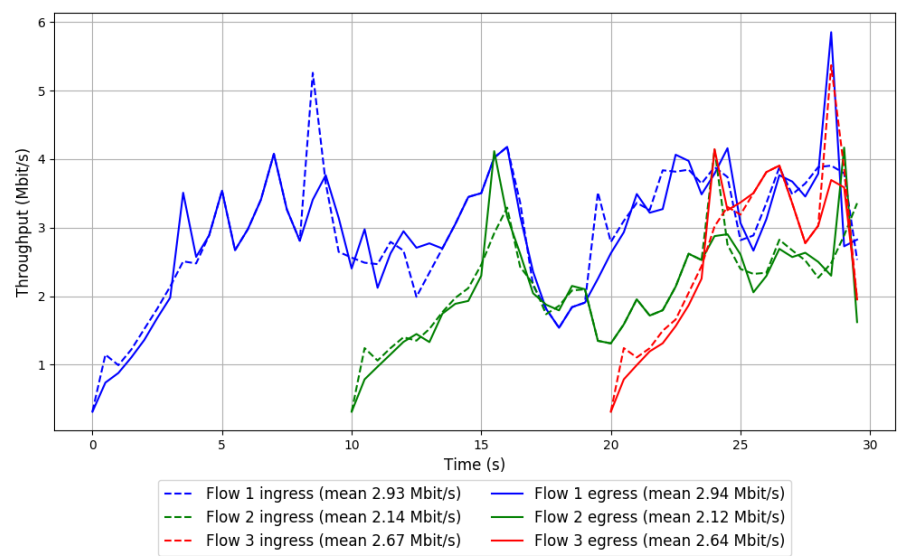
-- Flow 3:

Average throughput: 2.64 Mbit/s

95th percentile per-packet one-way delay: 111.997 ms

Loss rate: 3.71%

Run 10: Report of Sprout — Data Link

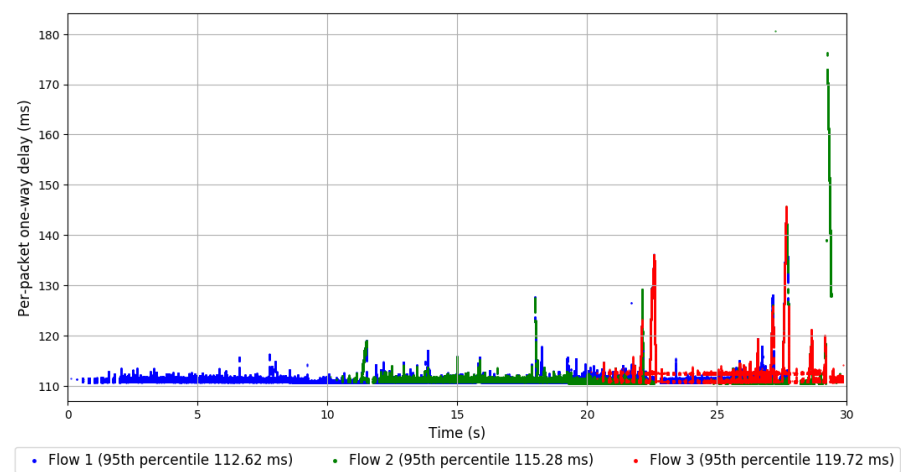
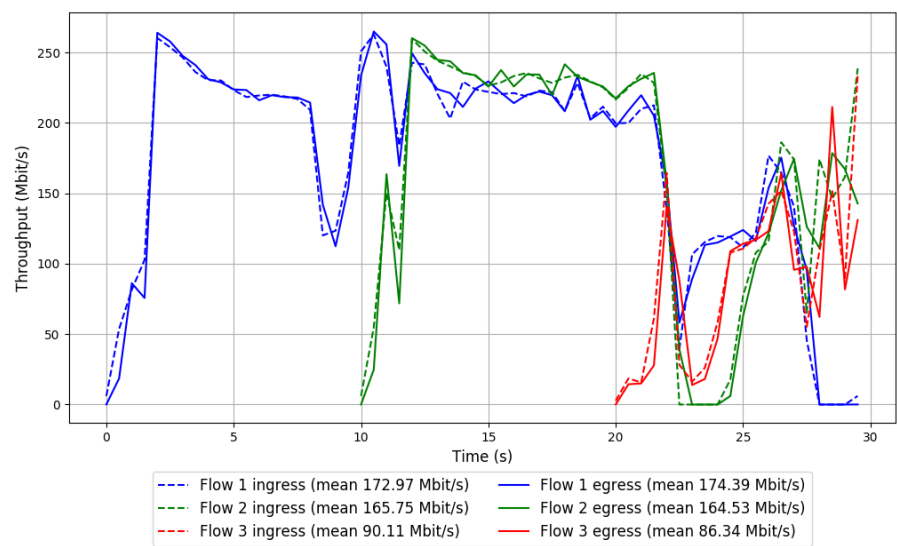


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-03-21 05:19:38
End at: 2018-03-21 05:20:08

# Below is generated by plot.py at 2018-03-21 12:38:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 311.05 Mbit/s
95th percentile per-packet one-way delay: 113.322 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 174.39 Mbit/s
95th percentile per-packet one-way delay: 112.619 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 164.53 Mbit/s
95th percentile per-packet one-way delay: 115.283 ms
Loss rate: 1.84%
-- Flow 3:
Average throughput: 86.34 Mbit/s
95th percentile per-packet one-way delay: 119.715 ms
Loss rate: 6.34%
```


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

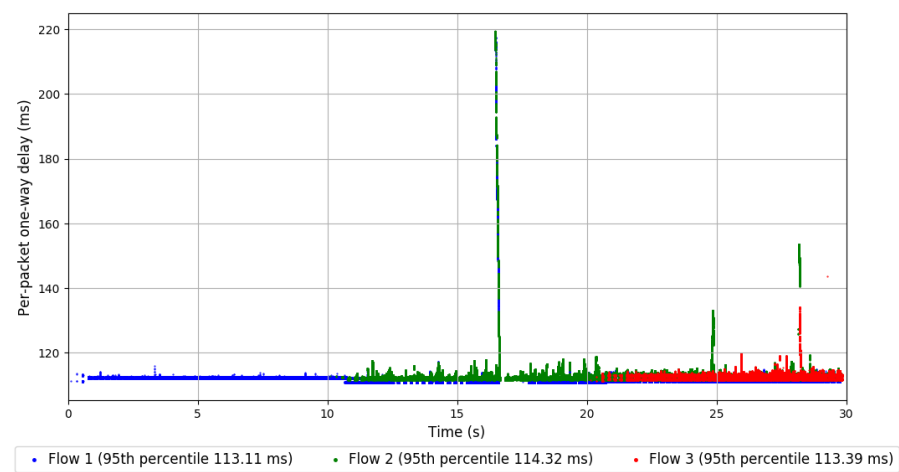
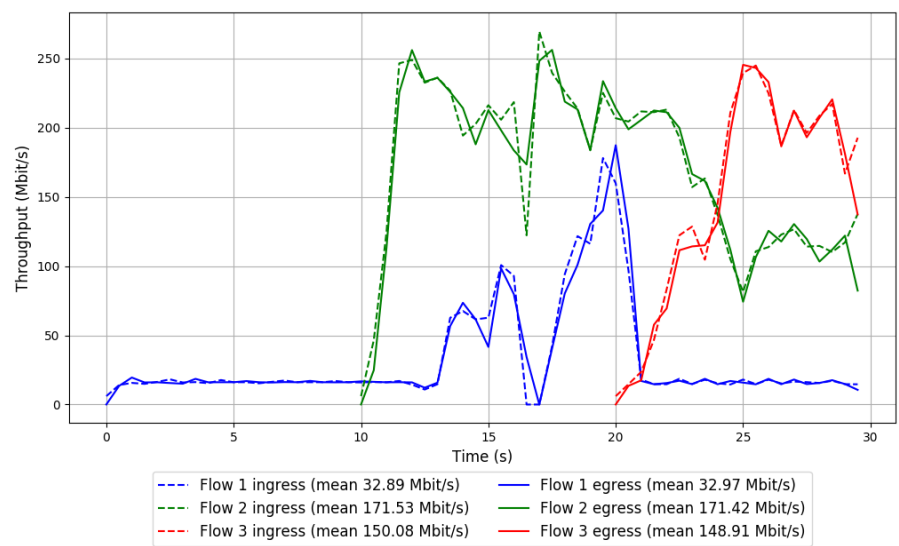


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-03-21 05:39:07
End at: 2018-03-21 05:39:37

# Below is generated by plot.py at 2018-03-21 12:38:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 194.98 Mbit/s
95th percentile per-packet one-way delay: 113.849 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 32.97 Mbit/s
95th percentile per-packet one-way delay: 113.105 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 171.42 Mbit/s
95th percentile per-packet one-way delay: 114.324 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 148.91 Mbit/s
95th percentile per-packet one-way delay: 113.392 ms
Loss rate: 3.01%
```

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

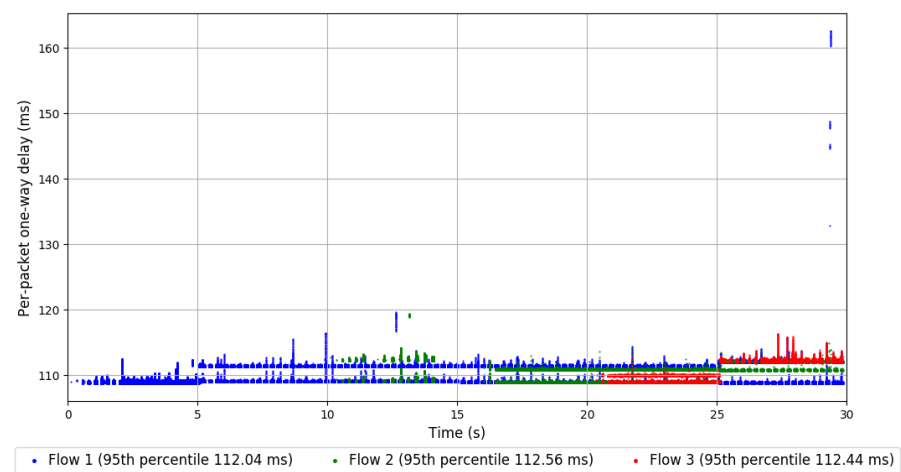
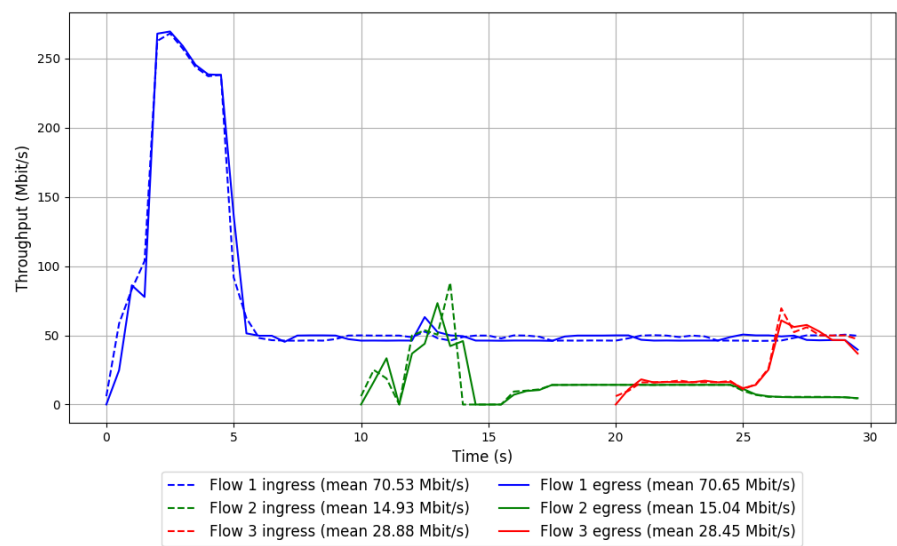


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-03-21 05:58:22
End at: 2018-03-21 05:58:52

# Below is generated by plot.py at 2018-03-21 12:38:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.89 Mbit/s
95th percentile per-packet one-way delay: 112.328 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 70.65 Mbit/s
95th percentile per-packet one-way delay: 112.038 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 15.04 Mbit/s
95th percentile per-packet one-way delay: 112.563 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 28.45 Mbit/s
95th percentile per-packet one-way delay: 112.445 ms
Loss rate: 3.88%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-03-21 06:17:21

End at: 2018-03-21 06:17:51

Below is generated by plot.py at 2018-03-21 12:38:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.89 Mbit/s

95th percentile per-packet one-way delay: 113.073 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 20.53 Mbit/s

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

Loss rate: 0.17%

-- Flow 2:

Average throughput: 22.11 Mbit/s

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

Loss rate: 2.78%

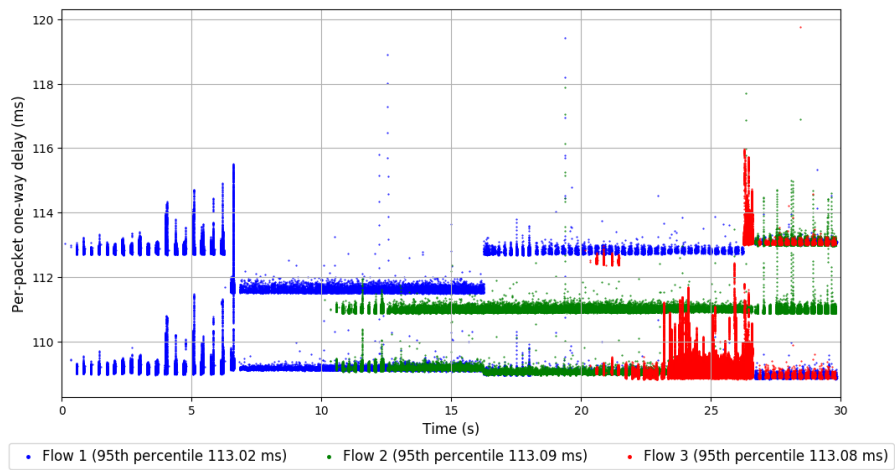
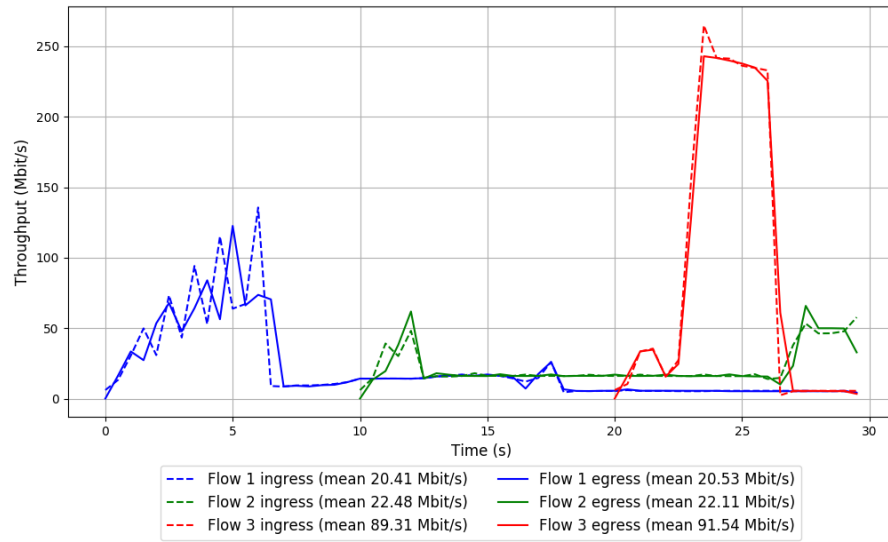
-- Flow 3:

Average throughput: 91.54 Mbit/s

95th percentile per-packet one-way delay: 113.082 ms

Loss rate: 0.16%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-03-21 06:36:37

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

Below is generated by plot.py at 2018-03-21 12:38:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 170.28 Mbit/s

95th percentile per-packet one-way delay: 112.547 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 47.96 Mbit/s

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

Loss rate: 0.25%

-- Flow 2:

Average throughput: 178.05 Mbit/s

95th percentile per-packet one-way delay: 111.289 ms

Loss rate: 1.42%

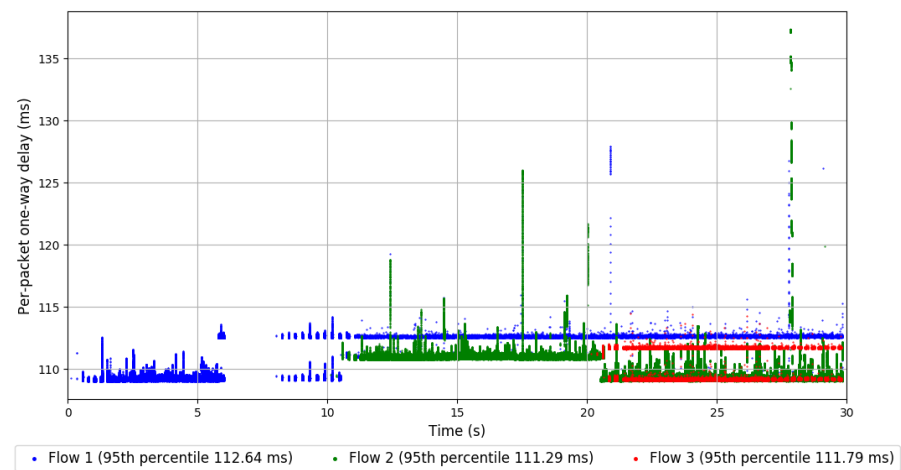
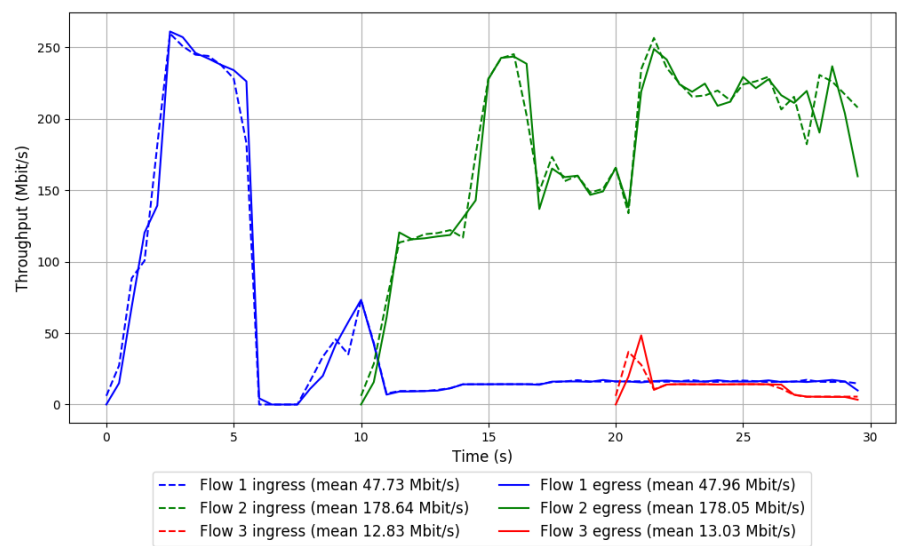
-- Flow 3:

Average throughput: 13.03 Mbit/s

95th percentile per-packet one-way delay: 111.792 ms

Loss rate: 1.09%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-03-21 06:55:58

End at: 2018-03-21 06:56:28

Below is generated by plot.py at 2018-03-21 12:38:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.25 Mbit/s

95th percentile per-packet one-way delay: 113.206 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 15.87 Mbit/s

95th percentile per-packet one-way delay: 111.142 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 78.05 Mbit/s

95th percentile per-packet one-way delay: 114.287 ms

Loss rate: 0.33%

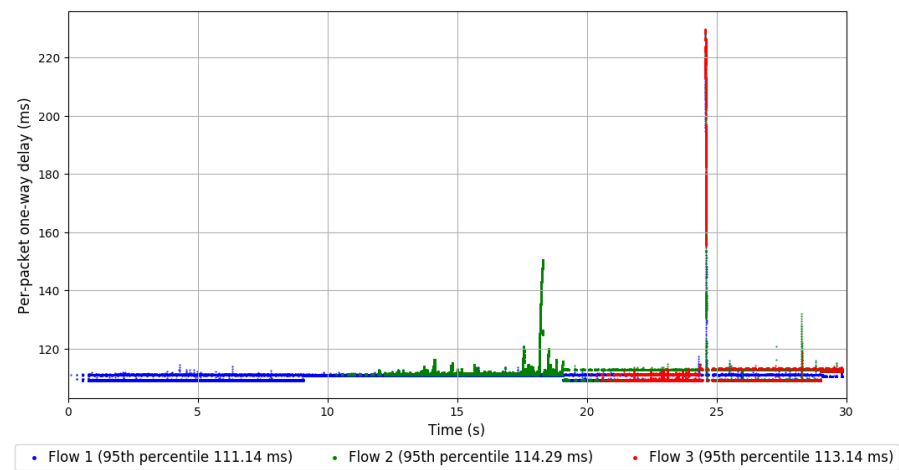
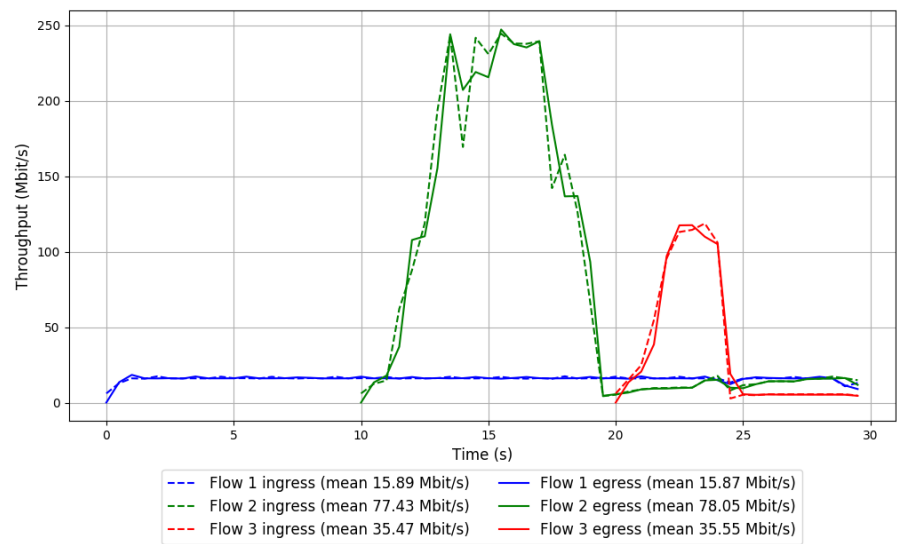
-- Flow 3:

Average throughput: 35.55 Mbit/s

95th percentile per-packet one-way delay: 113.136 ms

Loss rate: 2.04%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-03-21 07:15:29

End at: 2018-03-21 07:15:59

Below is generated by plot.py at 2018-03-21 12:38:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 49.04 Mbit/s

95th percentile per-packet one-way delay: 113.668 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 15.47 Mbit/s

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

Loss rate: 0.79%

-- Flow 2:

Average throughput: 31.19 Mbit/s

95th percentile per-packet one-way delay: 113.062 ms

Loss rate: 0.60%

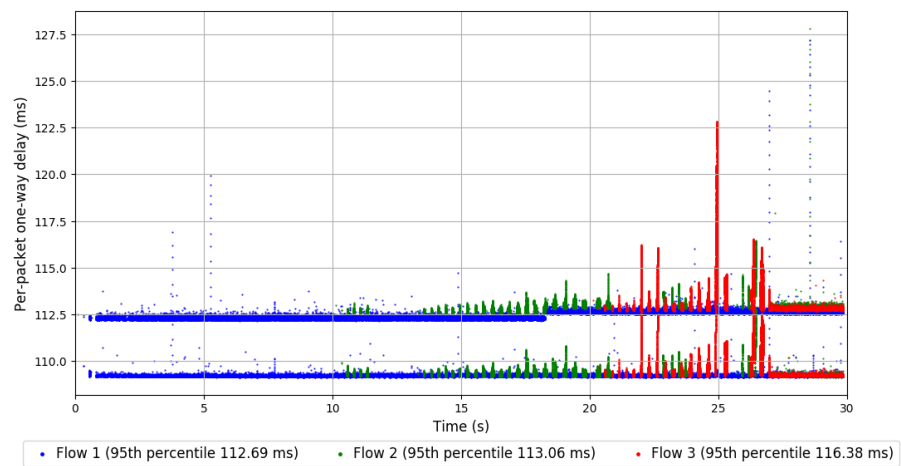
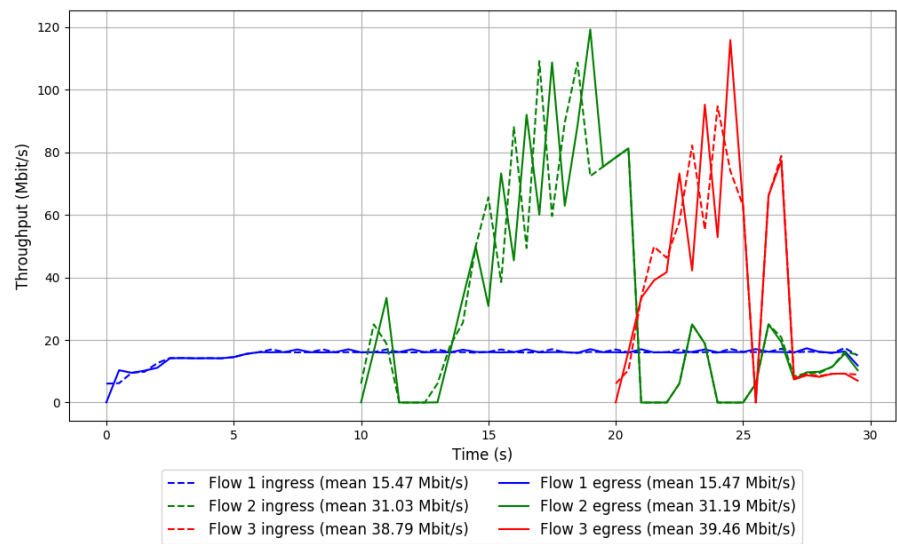
-- Flow 3:

Average throughput: 39.46 Mbit/s

95th percentile per-packet one-way delay: 116.376 ms

Loss rate: 0.57%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-03-21 07:34:57

End at: 2018-03-21 07:35:27

Below is generated by plot.py at 2018-03-21 12:38:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 190.74 Mbit/s

95th percentile per-packet one-way delay: 114.409 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 106.09 Mbit/s

95th percentile per-packet one-way delay: 112.467 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 101.10 Mbit/s

95th percentile per-packet one-way delay: 114.431 ms

Loss rate: 1.13%

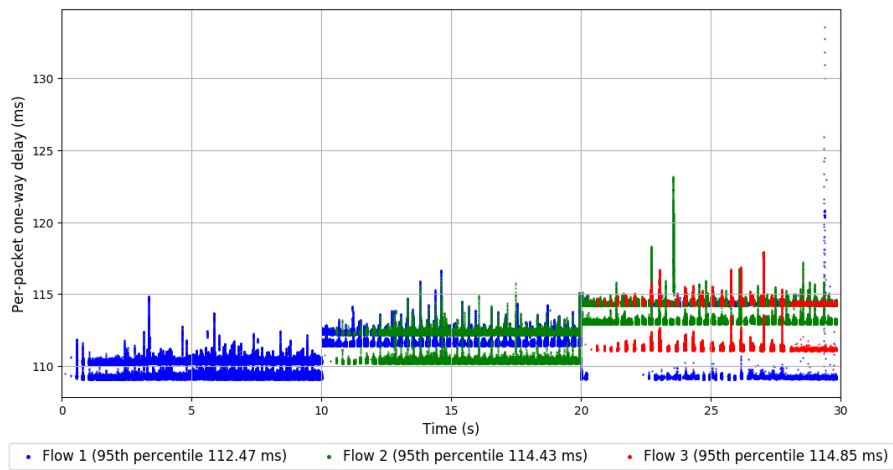
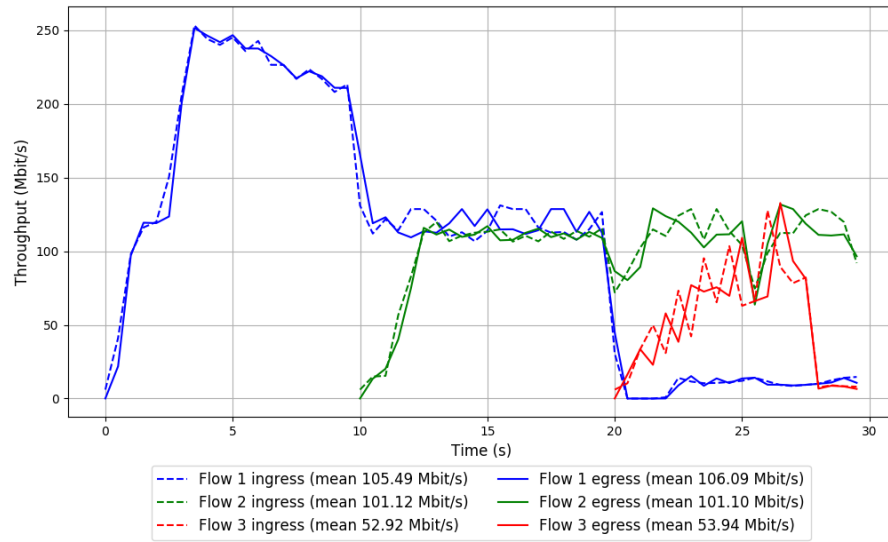
-- Flow 3:

Average throughput: 53.94 Mbit/s

95th percentile per-packet one-way delay: 114.851 ms

Loss rate: 0.36%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-03-21 07:57:09

End at: 2018-03-21 07:57:39

Below is generated by plot.py at 2018-03-21 12:38:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.68 Mbit/s

95th percentile per-packet one-way delay: 113.481 ms

Loss rate: 2.38%

-- Flow 1:

Average throughput: 15.95 Mbit/s

95th percentile per-packet one-way delay: 113.128 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 30.60 Mbit/s

95th percentile per-packet one-way delay: 113.110 ms

Loss rate: 1.52%

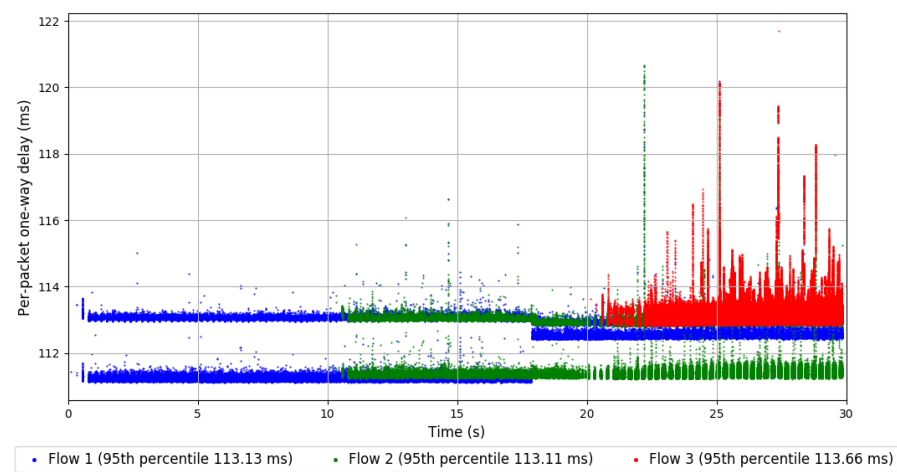
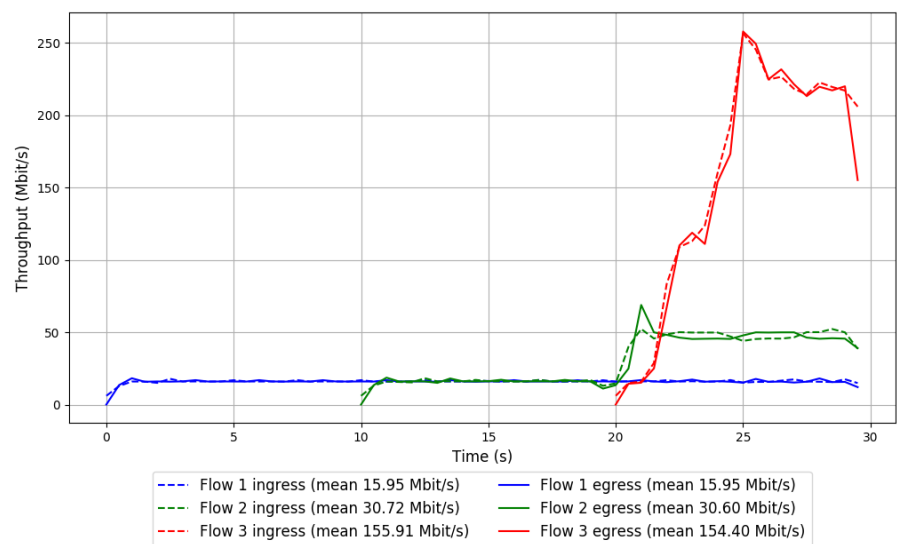
-- Flow 3:

Average throughput: 154.40 Mbit/s

95th percentile per-packet one-way delay: 113.661 ms

Loss rate: 3.22%

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

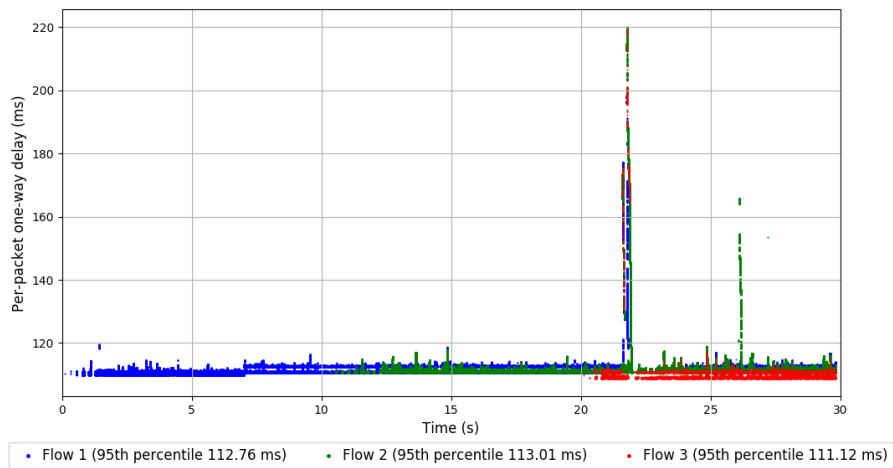
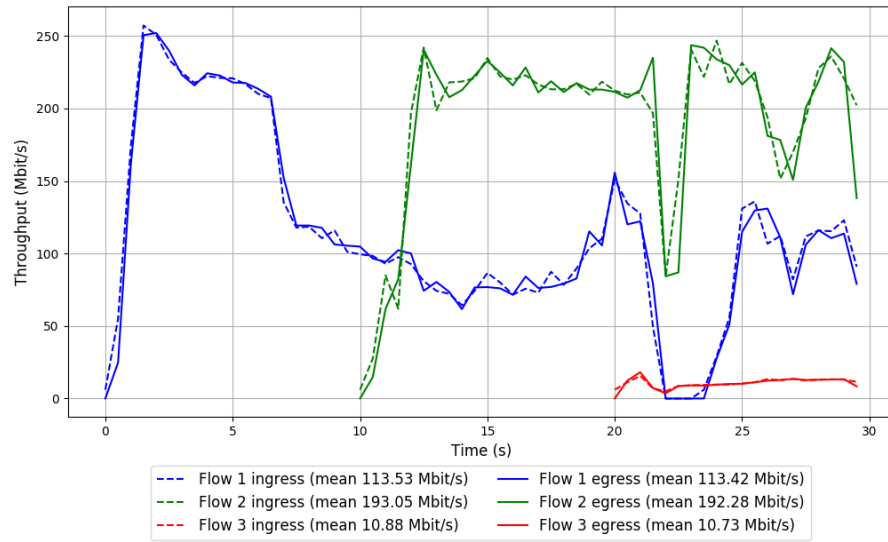


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-03-21 08:26:00
End at: 2018-03-21 08:26:30

# Below is generated by plot.py at 2018-03-21 12:39:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 244.50 Mbit/s
95th percentile per-packet one-way delay: 112.774 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 113.42 Mbit/s
95th percentile per-packet one-way delay: 112.759 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 192.28 Mbit/s
95th percentile per-packet one-way delay: 113.006 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 10.73 Mbit/s
95th percentile per-packet one-way delay: 111.120 ms
Loss rate: 3.60%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-03-21 05:22:55

End at: 2018-03-21 05:23:25

Below is generated by plot.py at 2018-03-21 12:39:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.40 Mbit/s

95th percentile per-packet one-way delay: 120.619 ms

Loss rate: 1.63%

-- Flow 1:

Average throughput: 90.18 Mbit/s

95th percentile per-packet one-way delay: 120.710 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 1.82 Mbit/s

95th percentile per-packet one-way delay: 119.077 ms

Loss rate: 3.77%

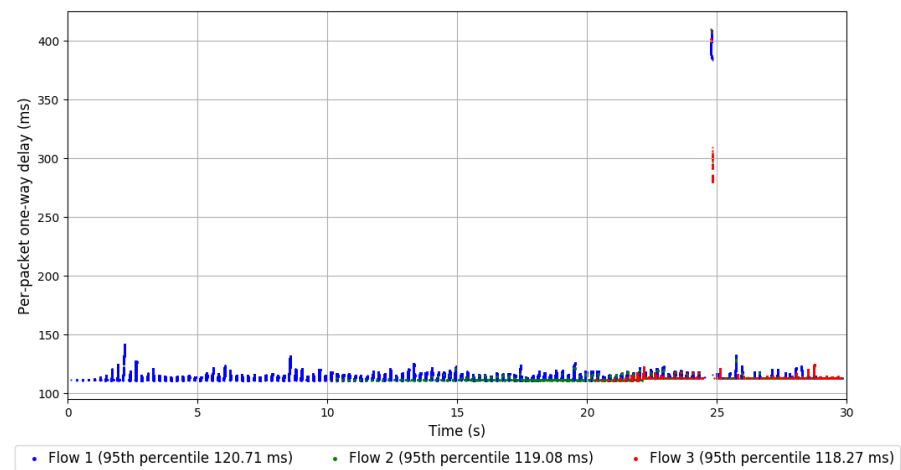
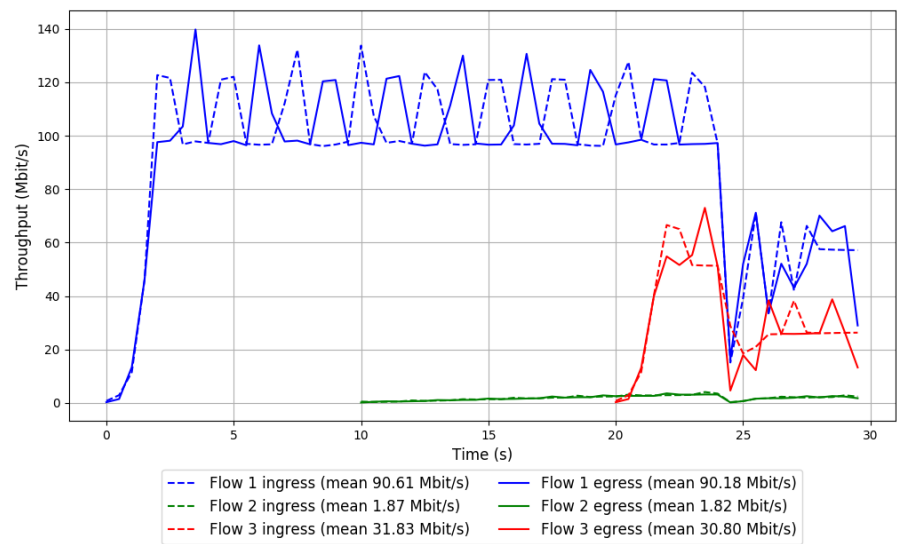
-- Flow 3:

Average throughput: 30.80 Mbit/s

95th percentile per-packet one-way delay: 118.268 ms

Loss rate: 5.46%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-03-21 05:42:09

End at: 2018-03-21 05:42:39

Below is generated by plot.py at 2018-03-21 12:39:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 56.18 Mbit/s

95th percentile per-packet one-way delay: 120.677 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 18.89 Mbit/s

95th percentile per-packet one-way delay: 115.758 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 42.96 Mbit/s

95th percentile per-packet one-way delay: 123.028 ms

Loss rate: 1.35%

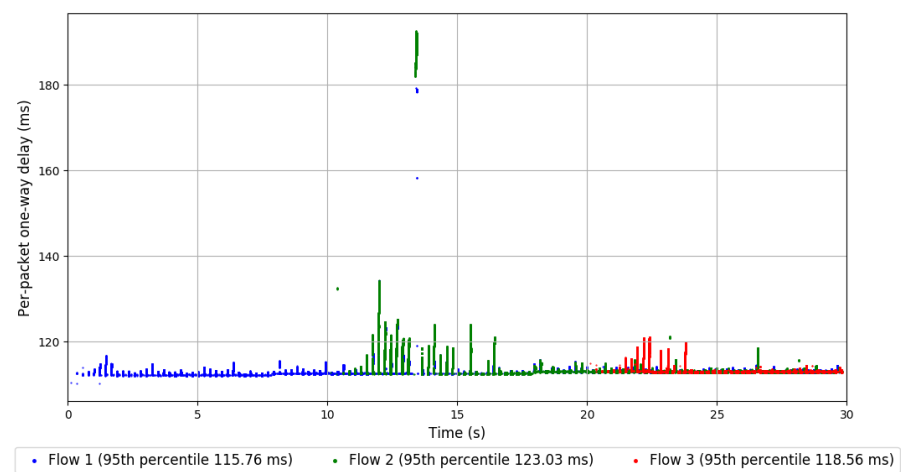
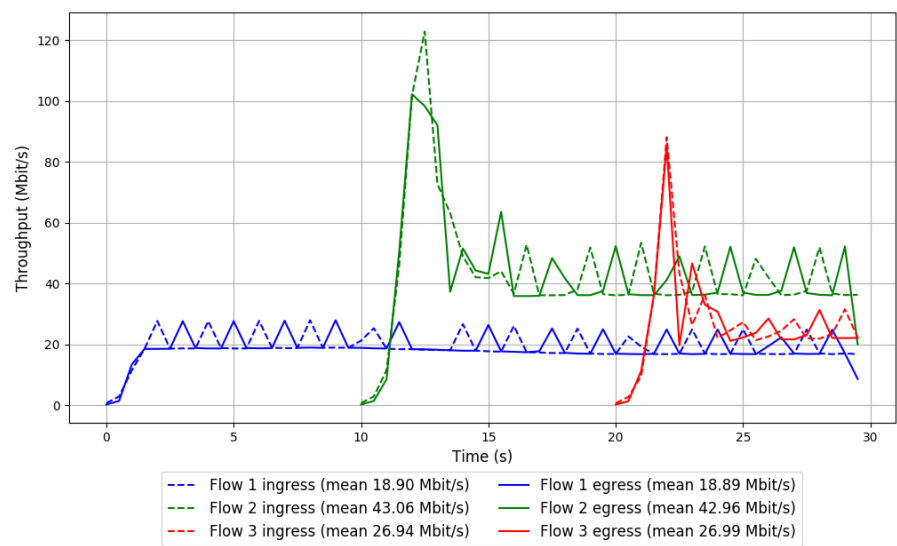
-- Flow 3:

Average throughput: 26.99 Mbit/s

95th percentile per-packet one-way delay: 118.565 ms

Loss rate: 2.08%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-03-21 06:01:10

End at: 2018-03-21 06:01:40

Below is generated by plot.py at 2018-03-21 12:39:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.26 Mbit/s

95th percentile per-packet one-way delay: 116.924 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 23.11 Mbit/s

95th percentile per-packet one-way delay: 115.318 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 100.04 Mbit/s

95th percentile per-packet one-way delay: 117.741 ms

Loss rate: 1.21%

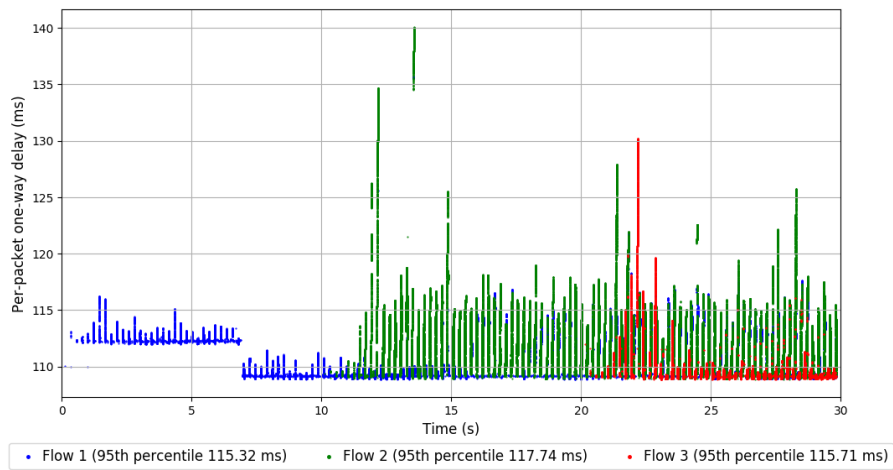
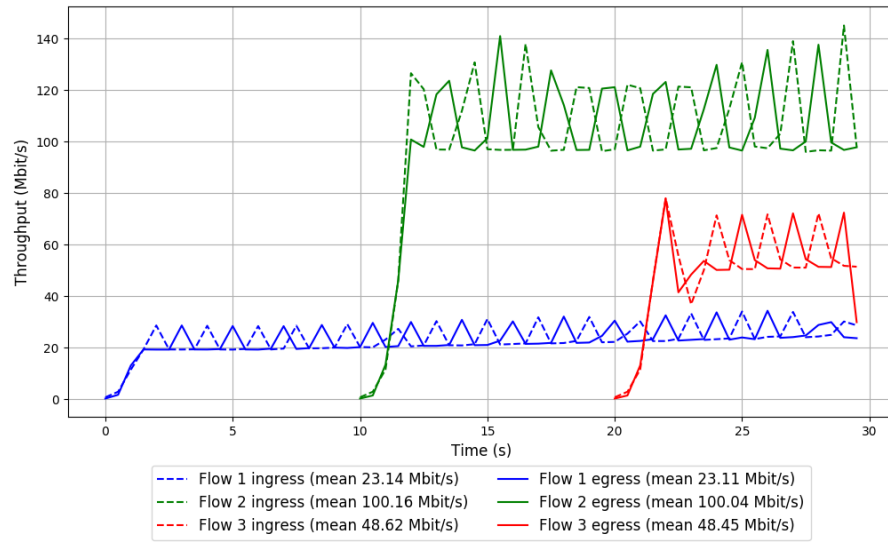
-- Flow 3:

Average throughput: 48.45 Mbit/s

95th percentile per-packet one-way delay: 115.711 ms

Loss rate: 2.66%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-03-21 06:20:08

End at: 2018-03-21 06:20:38

Below is generated by plot.py at 2018-03-21 12:39:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.33 Mbit/s

95th percentile per-packet one-way delay: 117.124 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 30.60 Mbit/s

95th percentile per-packet one-way delay: 115.953 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 16.71 Mbit/s

95th percentile per-packet one-way delay: 116.783 ms

Loss rate: 1.30%

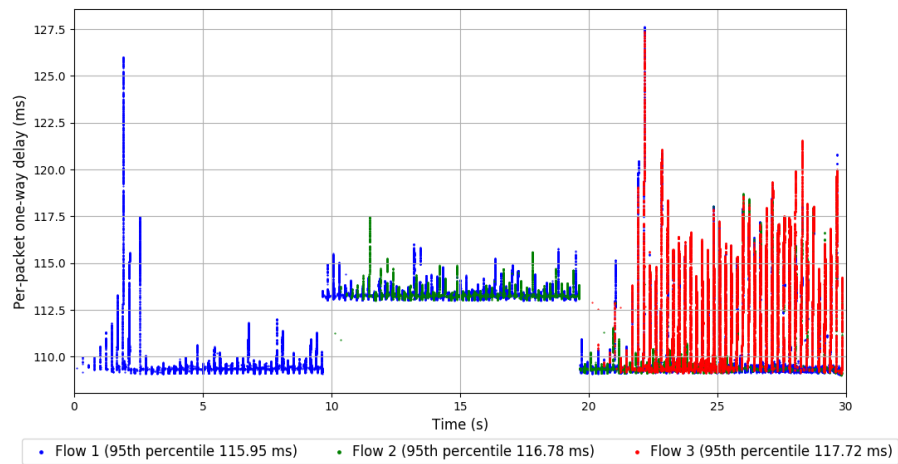
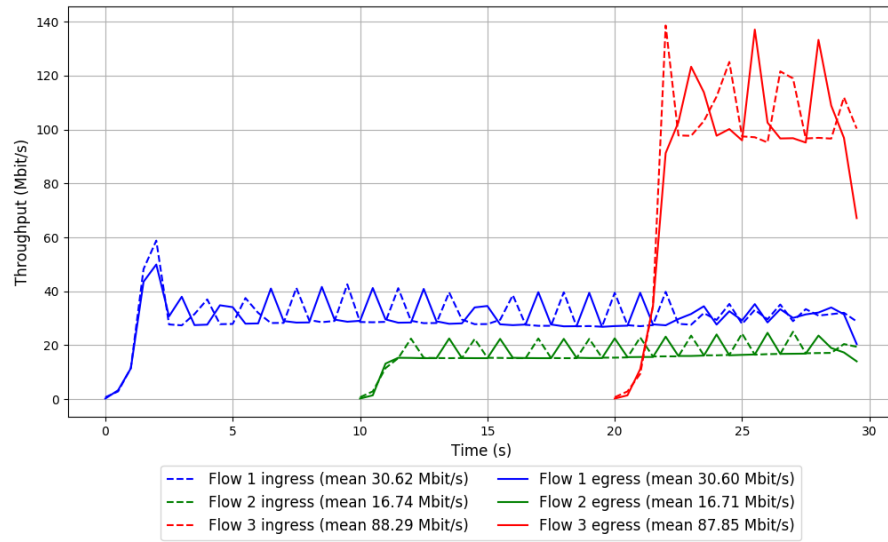
-- Flow 3:

Average throughput: 87.85 Mbit/s

95th percentile per-packet one-way delay: 117.715 ms

Loss rate: 2.75%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-03-21 06:39:35

End at: 2018-03-21 06:40:05

Below is generated by plot.py at 2018-03-21 12:39:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.10 Mbit/s

95th percentile per-packet one-way delay: 115.867 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 74.37 Mbit/s

95th percentile per-packet one-way delay: 116.694 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 38.29 Mbit/s

95th percentile per-packet one-way delay: 111.530 ms

Loss rate: 1.18%

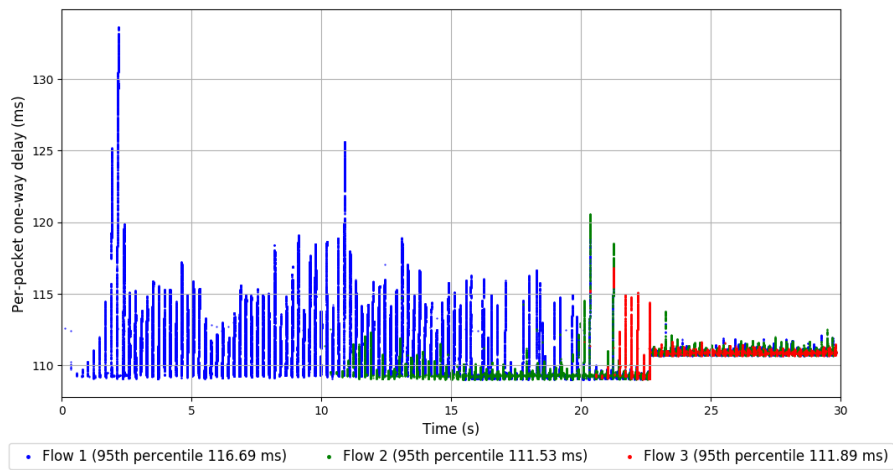
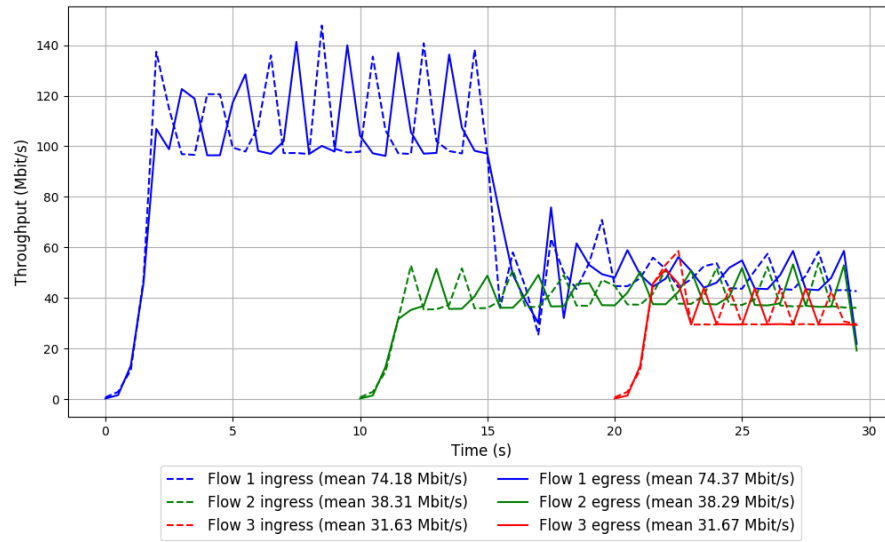
-- Flow 3:

Average throughput: 31.67 Mbit/s

95th percentile per-packet one-way delay: 111.887 ms

Loss rate: 2.36%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-03-21 06:58:47

End at: 2018-03-21 06:59:17

Below is generated by plot.py at 2018-03-21 12:39:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.95 Mbit/s

95th percentile per-packet one-way delay: 116.227 ms

Loss rate: 1.63%

-- Flow 1:

Average throughput: 30.31 Mbit/s

95th percentile per-packet one-way delay: 114.545 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 28.29 Mbit/s

95th percentile per-packet one-way delay: 113.942 ms

Loss rate: 1.21%

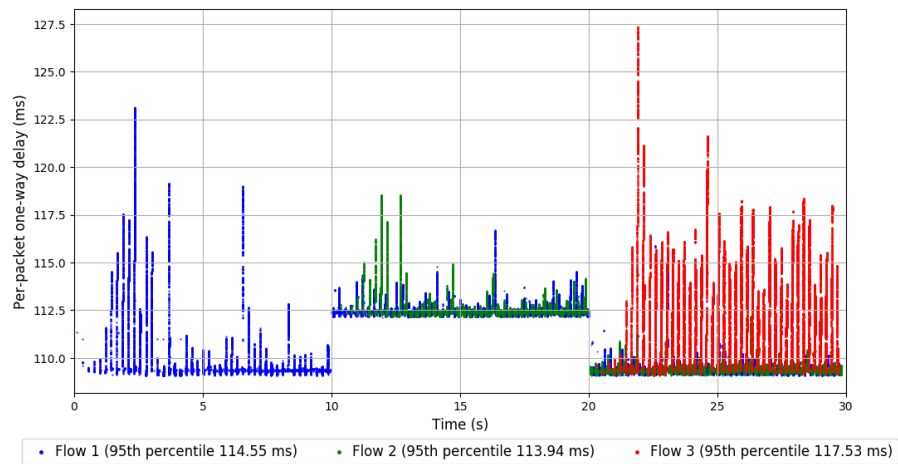
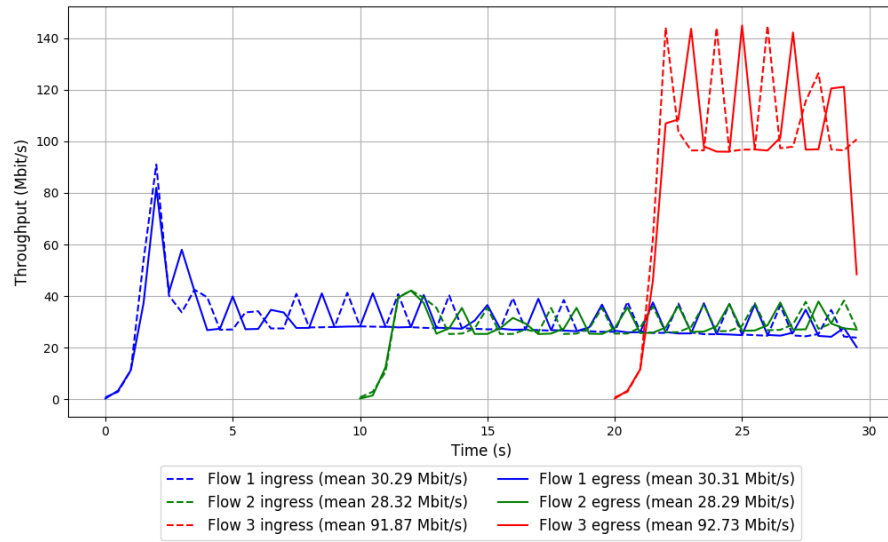
-- Flow 3:

Average throughput: 92.73 Mbit/s

95th percentile per-packet one-way delay: 117.530 ms

Loss rate: 2.86%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-03-21 07:18:14

End at: 2018-03-21 07:18:44

Below is generated by plot.py at 2018-03-21 12:39:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.88 Mbit/s

95th percentile per-packet one-way delay: 116.728 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 30.86 Mbit/s

95th percentile per-packet one-way delay: 117.891 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 34.49 Mbit/s

95th percentile per-packet one-way delay: 115.626 ms

Loss rate: 1.23%

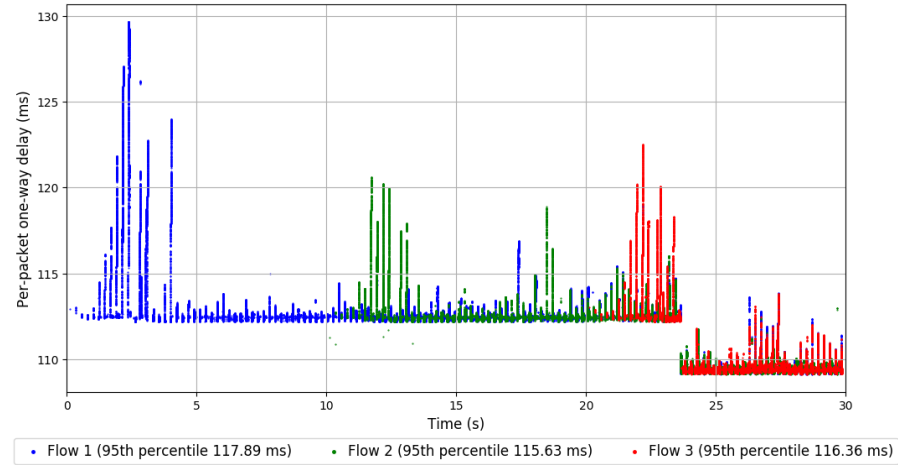
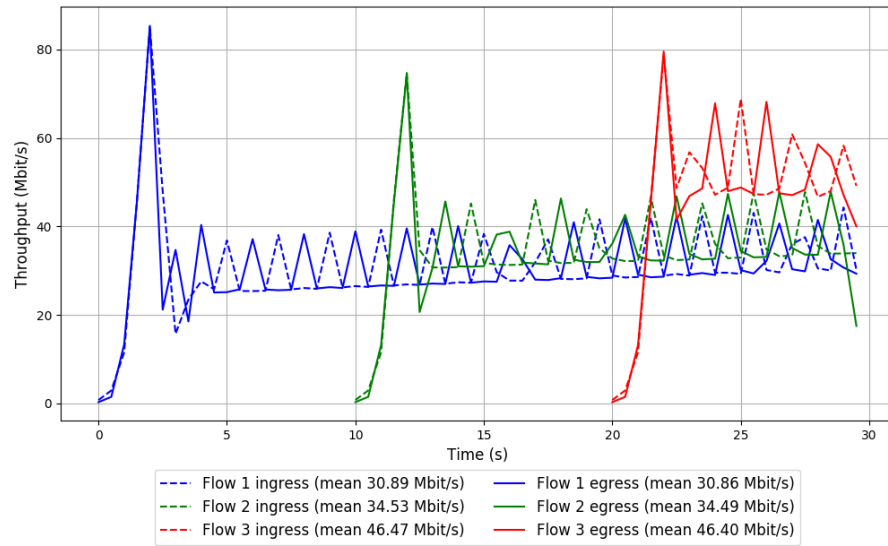
-- Flow 3:

Average throughput: 46.40 Mbit/s

95th percentile per-packet one-way delay: 116.361 ms

Loss rate: 2.41%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-03-21 07:37:56

End at: 2018-03-21 07:38:26

Below is generated by plot.py at 2018-03-21 12:39:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.16 Mbit/s

95th percentile per-packet one-way delay: 112.926 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 36.11 Mbit/s

95th percentile per-packet one-way delay: 113.494 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 67.51 Mbit/s

95th percentile per-packet one-way delay: 111.894 ms

Loss rate: 1.24%

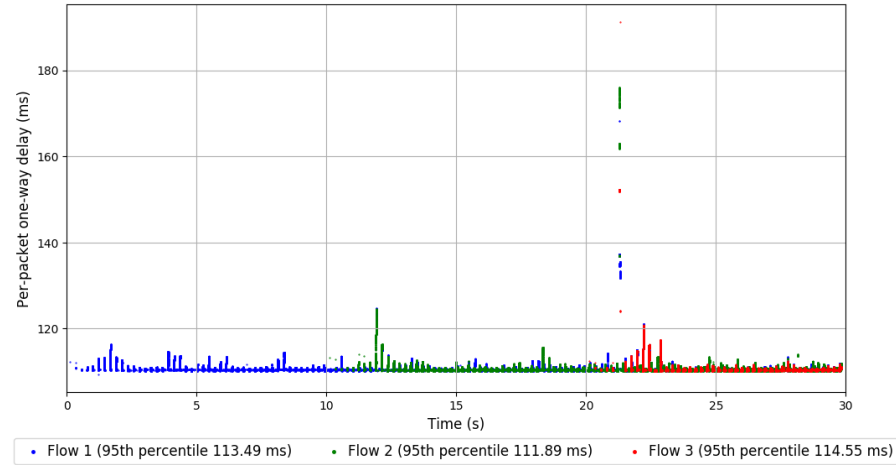
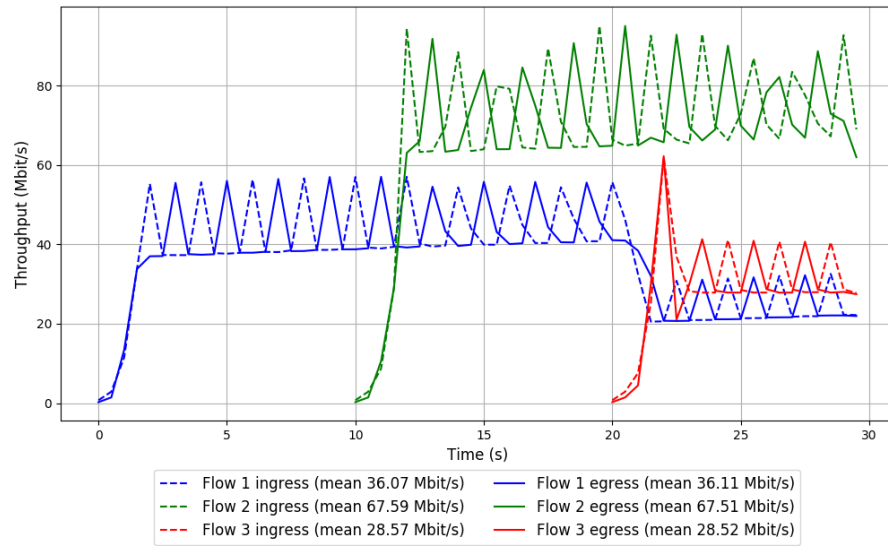
-- Flow 3:

Average throughput: 28.52 Mbit/s

95th percentile per-packet one-way delay: 114.552 ms

Loss rate: 2.45%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-03-21 08:01:24

End at: 2018-03-21 08:01:54

Below is generated by plot.py at 2018-03-21 12:39:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 69.19 Mbit/s

95th percentile per-packet one-way delay: 117.288 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 28.04 Mbit/s

95th percentile per-packet one-way delay: 116.279 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 46.65 Mbit/s

95th percentile per-packet one-way delay: 117.382 ms

Loss rate: 1.19%

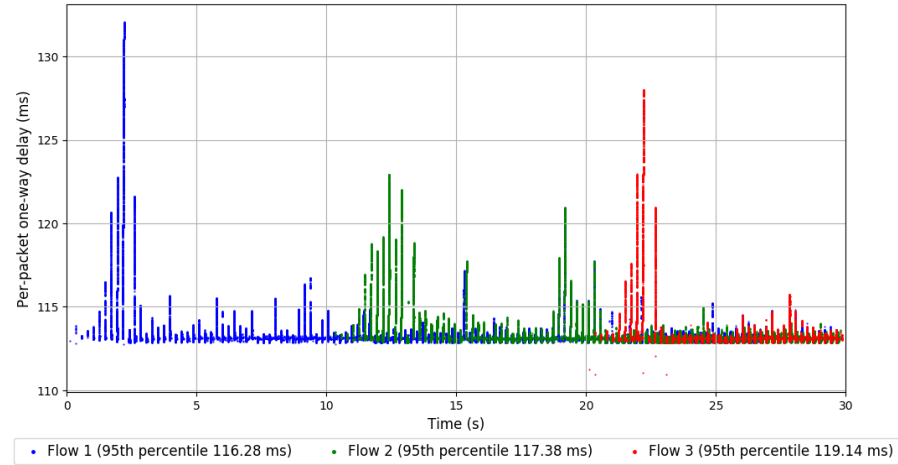
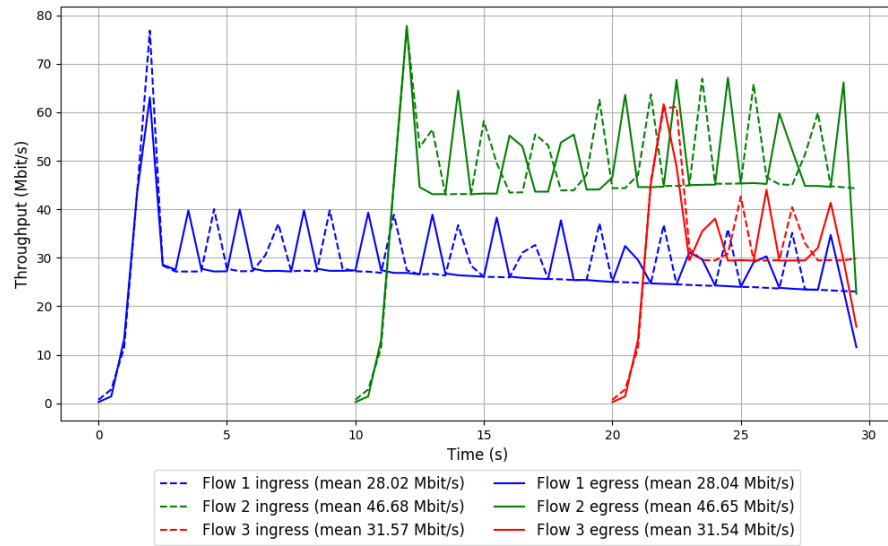
-- Flow 3:

Average throughput: 31.54 Mbit/s

95th percentile per-packet one-way delay: 119.138 ms

Loss rate: 2.29%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-03-21 08:29:07

End at: 2018-03-21 08:29:37

Below is generated by plot.py at 2018-03-21 12:39:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.00 Mbit/s

95th percentile per-packet one-way delay: 119.604 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 39.54 Mbit/s

95th percentile per-packet one-way delay: 120.531 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 69.45 Mbit/s

95th percentile per-packet one-way delay: 118.613 ms

Loss rate: 2.41%

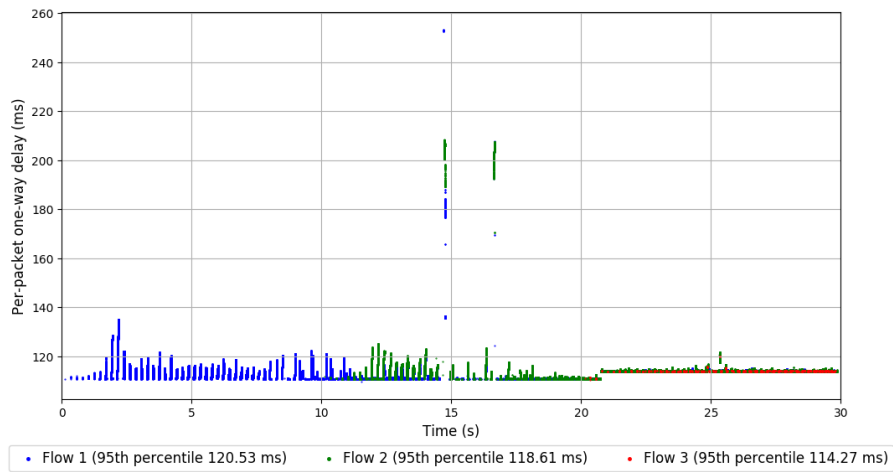
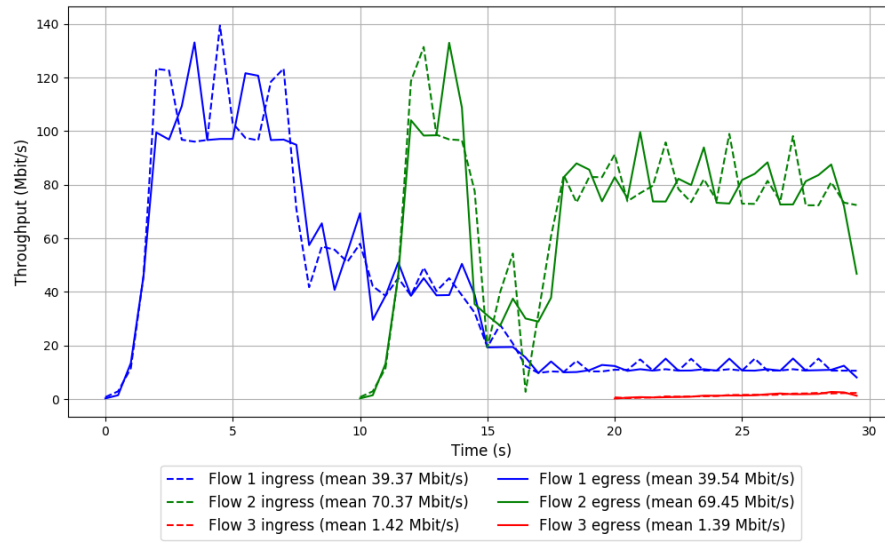
-- Flow 3:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 114.267 ms

Loss rate: 4.28%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-03-21 05:29:52

End at: 2018-03-21 05:30:22

Below is generated by plot.py at 2018-03-21 12:39:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 175.64 Mbit/s

95th percentile per-packet one-way delay: 157.587 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 124.71 Mbit/s

95th percentile per-packet one-way delay: 159.512 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 62.01 Mbit/s

95th percentile per-packet one-way delay: 141.241 ms

Loss rate: 2.56%

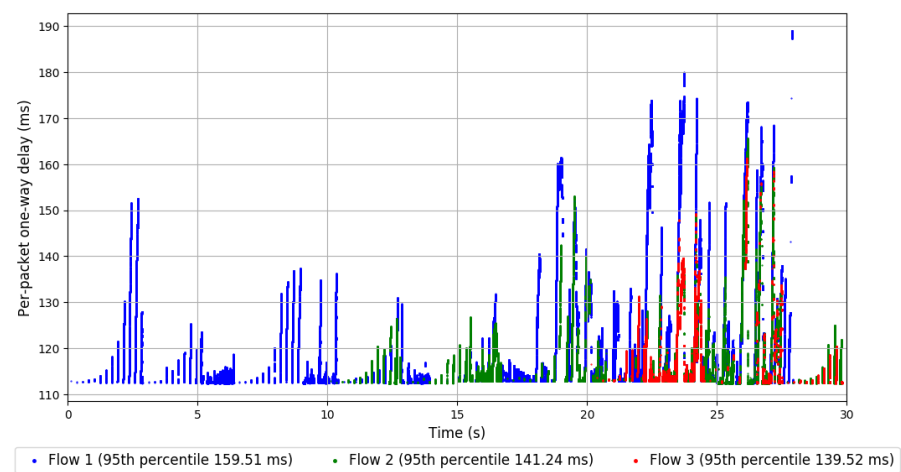
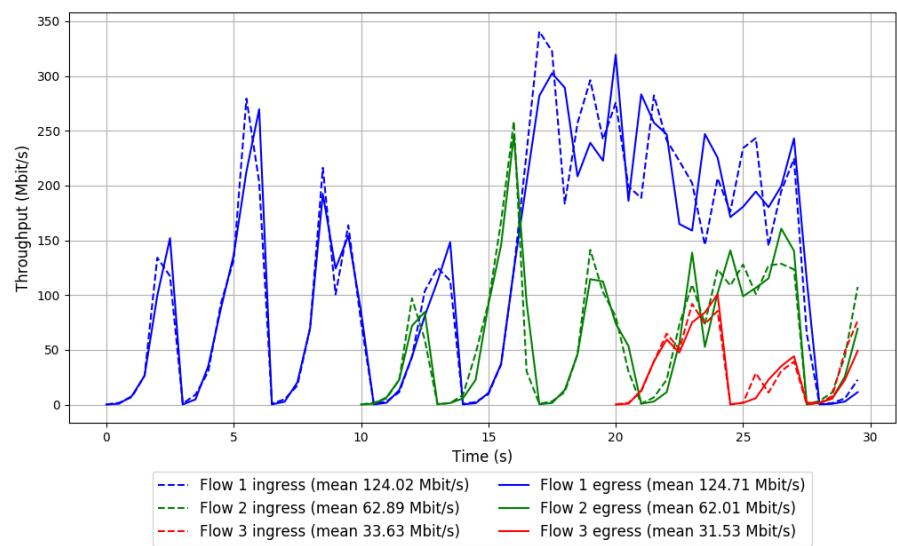
-- Flow 3:

Average throughput: 31.53 Mbit/s

95th percentile per-packet one-way delay: 139.518 ms

Loss rate: 8.39%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-03-21 05:49:02

End at: 2018-03-21 05:49:32

Below is generated by plot.py at 2018-03-21 12:40:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 248.37 Mbit/s

95th percentile per-packet one-way delay: 267.080 ms

Loss rate: 2.17%

-- Flow 1:

Average throughput: 94.38 Mbit/s

95th percentile per-packet one-way delay: 221.736 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 217.57 Mbit/s

95th percentile per-packet one-way delay: 292.146 ms

Loss rate: 2.55%

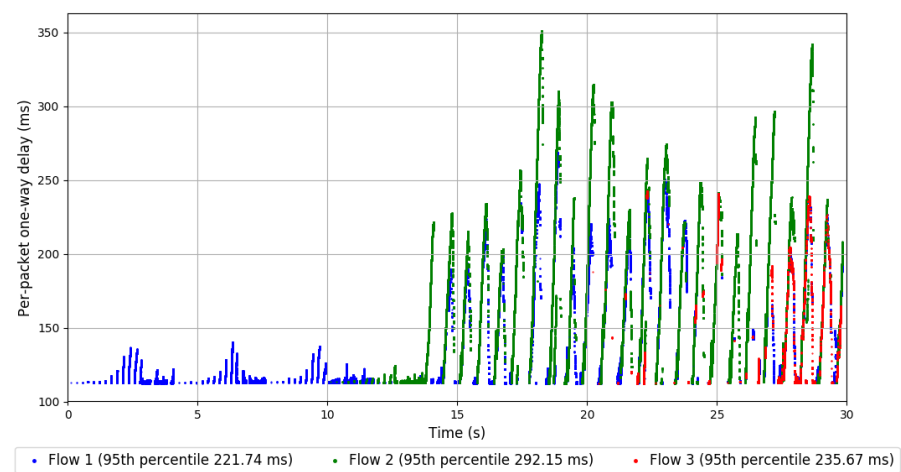
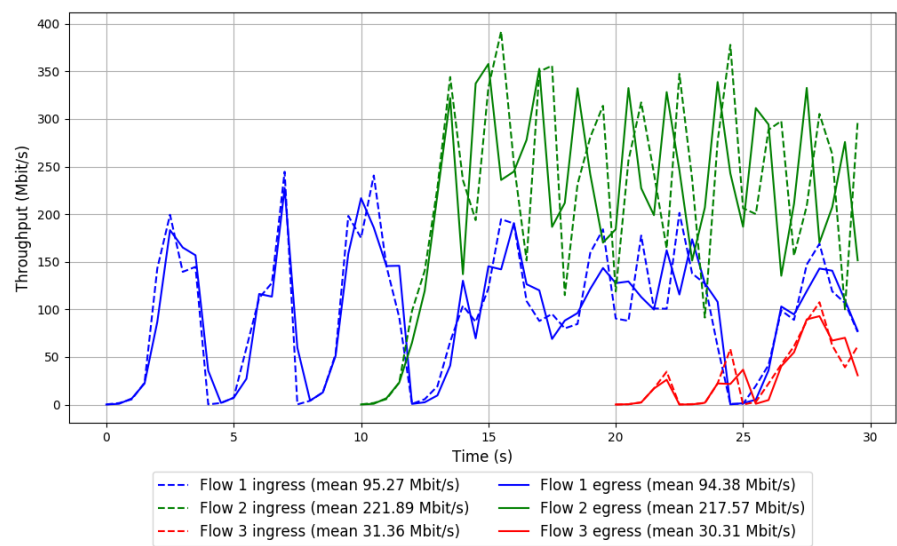
-- Flow 3:

Average throughput: 30.31 Mbit/s

95th percentile per-packet one-way delay: 235.666 ms

Loss rate: 6.98%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-03-21 06:08:10

End at: 2018-03-21 06:08:40

Below is generated by plot.py at 2018-03-21 12:40:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 200.74 Mbit/s

95th percentile per-packet one-way delay: 154.367 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 152.66 Mbit/s

95th percentile per-packet one-way delay: 154.340 ms

Loss rate: 1.37%

-- Flow 2:

Average throughput: 56.24 Mbit/s

95th percentile per-packet one-way delay: 153.576 ms

Loss rate: 2.11%

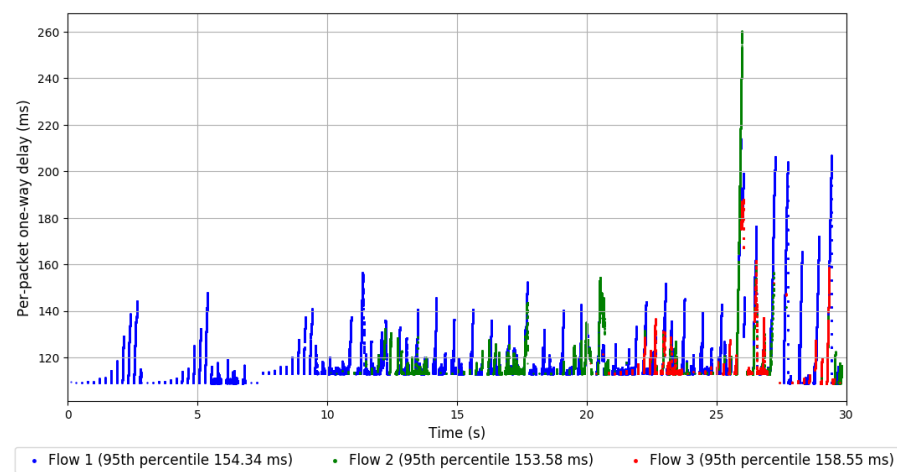
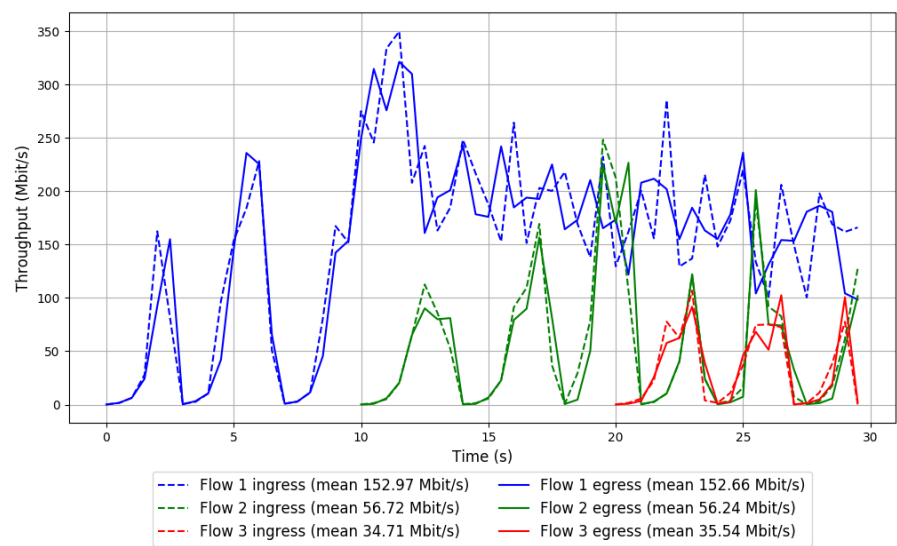
-- Flow 3:

Average throughput: 35.54 Mbit/s

95th percentile per-packet one-way delay: 158.548 ms

Loss rate: 0.01%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-03-21 06:27:13

End at: 2018-03-21 06:27:43

Below is generated by plot.py at 2018-03-21 12:41:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 254.18 Mbit/s

95th percentile per-packet one-way delay: 248.375 ms

Loss rate: 3.08%

-- Flow 1:

Average throughput: 156.78 Mbit/s

95th percentile per-packet one-way delay: 212.490 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 106.31 Mbit/s

95th percentile per-packet one-way delay: 266.927 ms

Loss rate: 5.74%

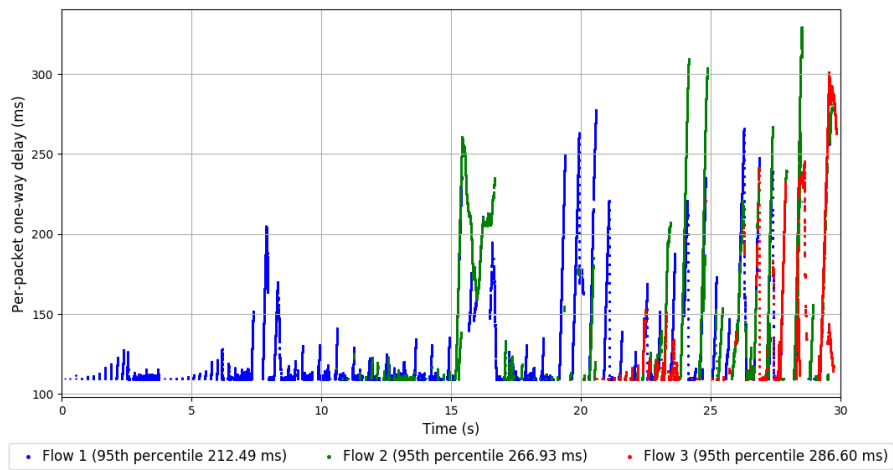
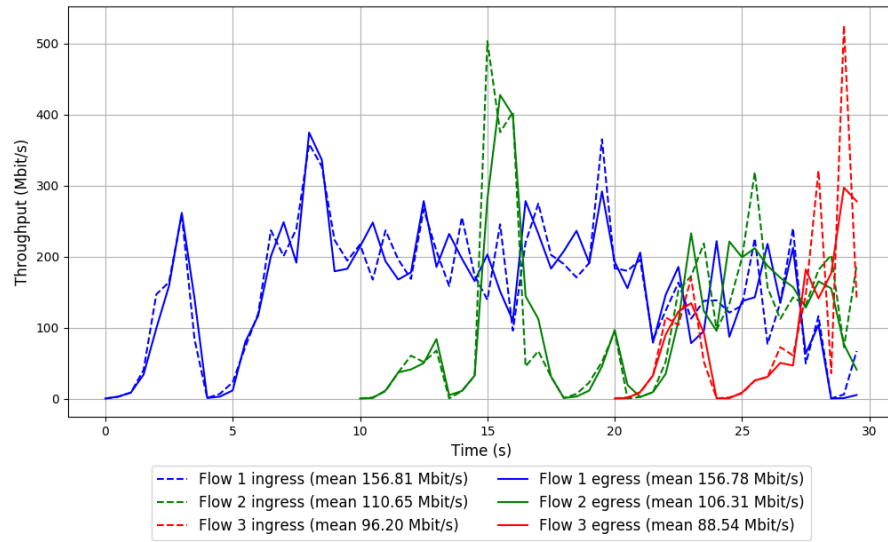
-- Flow 3:

Average throughput: 88.54 Mbit/s

95th percentile per-packet one-way delay: 286.598 ms

Loss rate: 7.01%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-03-21 06:46:34

End at: 2018-03-21 06:47:04

Below is generated by plot.py at 2018-03-21 12:41:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 239.67 Mbit/s

95th percentile per-packet one-way delay: 249.099 ms

Loss rate: 2.71%

-- Flow 1:

Average throughput: 128.00 Mbit/s

95th percentile per-packet one-way delay: 229.126 ms

Loss rate: 2.29%

-- Flow 2:

Average throughput: 141.91 Mbit/s

95th percentile per-packet one-way delay: 258.531 ms

Loss rate: 2.85%

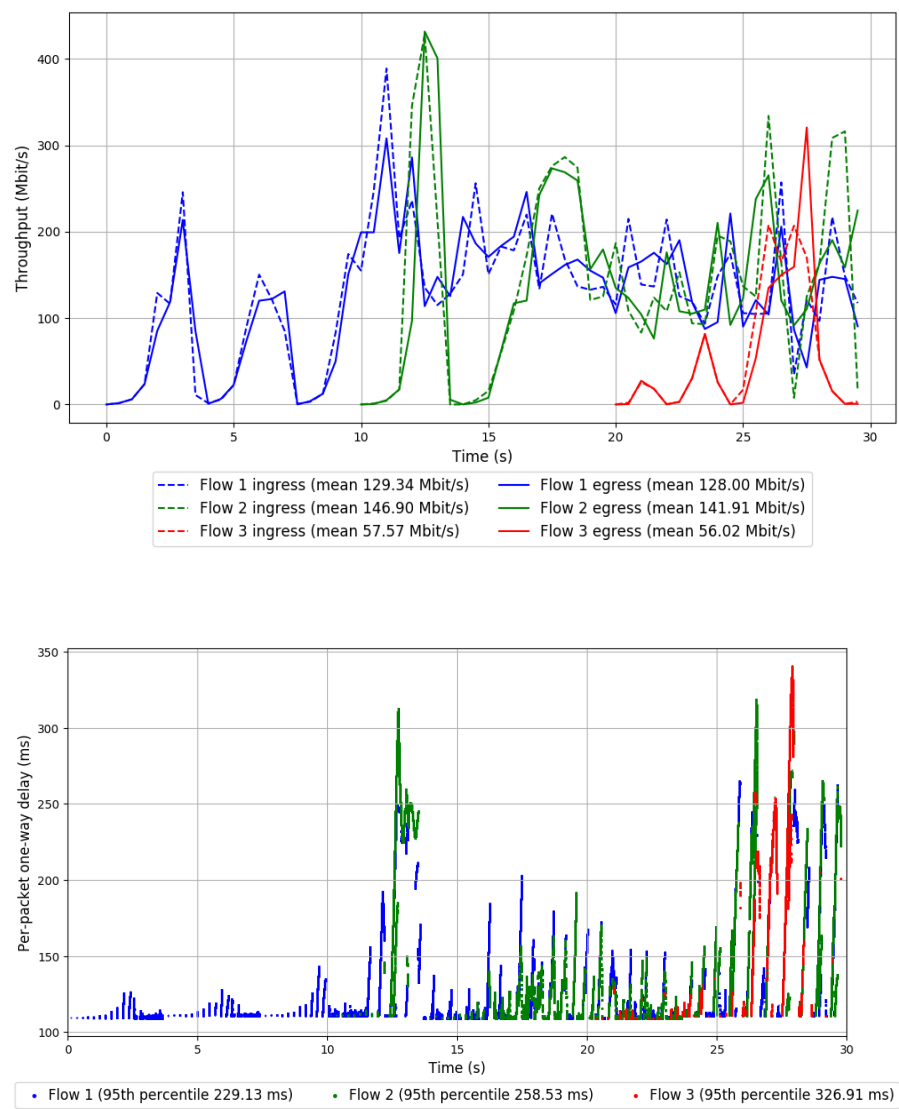
-- Flow 3:

Average throughput: 56.02 Mbit/s

95th percentile per-packet one-way delay: 326.913 ms

Loss rate: 4.87%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-03-21 07:06:03

End at: 2018-03-21 07:06:33

Below is generated by plot.py at 2018-03-21 12:41:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 218.47 Mbit/s

95th percentile per-packet one-way delay: 196.683 ms

Loss rate: 1.81%

-- Flow 1:

Average throughput: 68.56 Mbit/s

95th percentile per-packet one-way delay: 204.797 ms

Loss rate: 2.26%

-- Flow 2:

Average throughput: 163.34 Mbit/s

95th percentile per-packet one-way delay: 175.642 ms

Loss rate: 1.79%

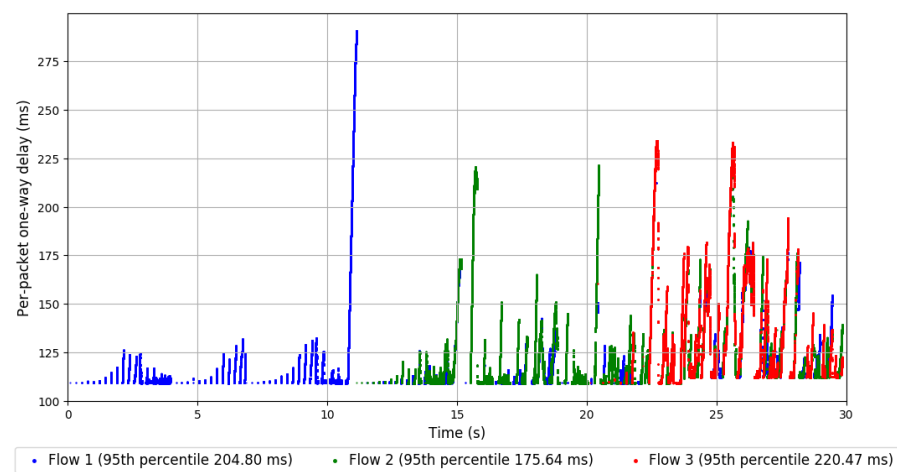
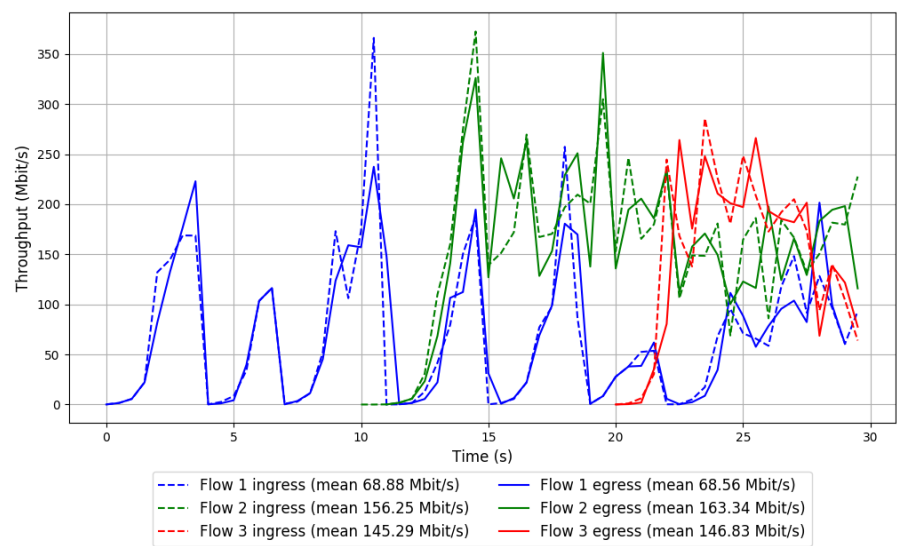
-- Flow 3:

Average throughput: 146.83 Mbit/s

95th percentile per-packet one-way delay: 220.468 ms

Loss rate: 1.19%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-03-21 07:25:39

End at: 2018-03-21 07:26:09

Below is generated by plot.py at 2018-03-21 12:41:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 160.05 Mbit/s

95th percentile per-packet one-way delay: 183.130 ms

Loss rate: 2.37%

-- Flow 1:

Average throughput: 84.06 Mbit/s

95th percentile per-packet one-way delay: 152.849 ms

Loss rate: 1.57%

-- Flow 2:

Average throughput: 93.91 Mbit/s

95th percentile per-packet one-way delay: 193.740 ms

Loss rate: 1.45%

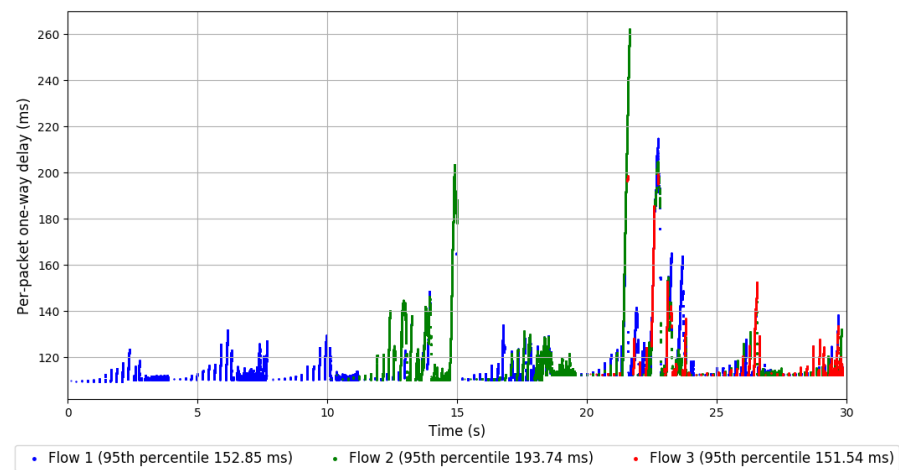
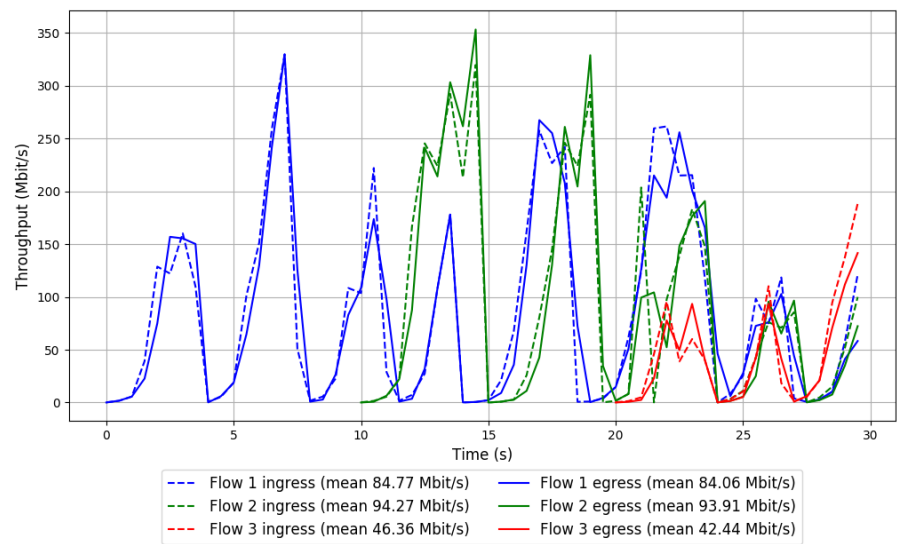
-- Flow 3:

Average throughput: 42.44 Mbit/s

95th percentile per-packet one-way delay: 151.542 ms

Loss rate: 10.48%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-03-21 07:45:04

End at: 2018-03-21 07:45:34

Below is generated by plot.py at 2018-03-21 12:41:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 155.60 Mbit/s

95th percentile per-packet one-way delay: 140.154 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 98.61 Mbit/s

95th percentile per-packet one-way delay: 132.866 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 62.85 Mbit/s

95th percentile per-packet one-way delay: 254.939 ms

Loss rate: 0.08%

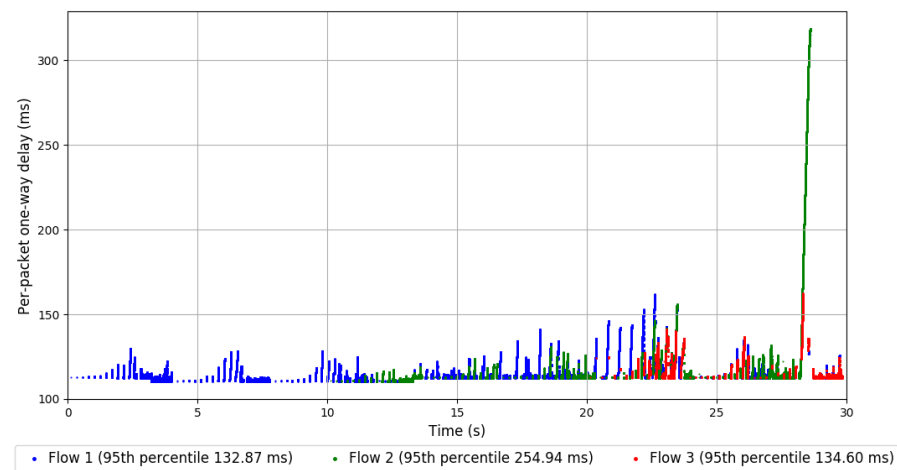
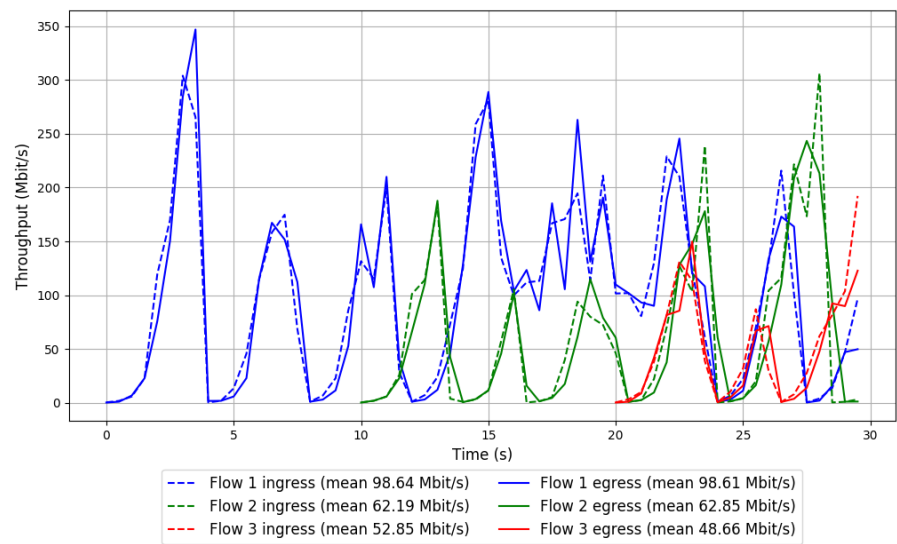
-- Flow 3:

Average throughput: 48.66 Mbit/s

95th percentile per-packet one-way delay: 134.605 ms

Loss rate: 10.00%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-03-21 08:11:28

End at: 2018-03-21 08:11:58

Below is generated by plot.py at 2018-03-21 12:44:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 267.99 Mbit/s

95th percentile per-packet one-way delay: 314.095 ms

Loss rate: 2.19%

-- Flow 1:

Average throughput: 223.52 Mbit/s

95th percentile per-packet one-way delay: 322.100 ms

Loss rate: 2.39%

-- Flow 2:

Average throughput: 61.30 Mbit/s

95th percentile per-packet one-way delay: 227.870 ms

Loss rate: 1.04%

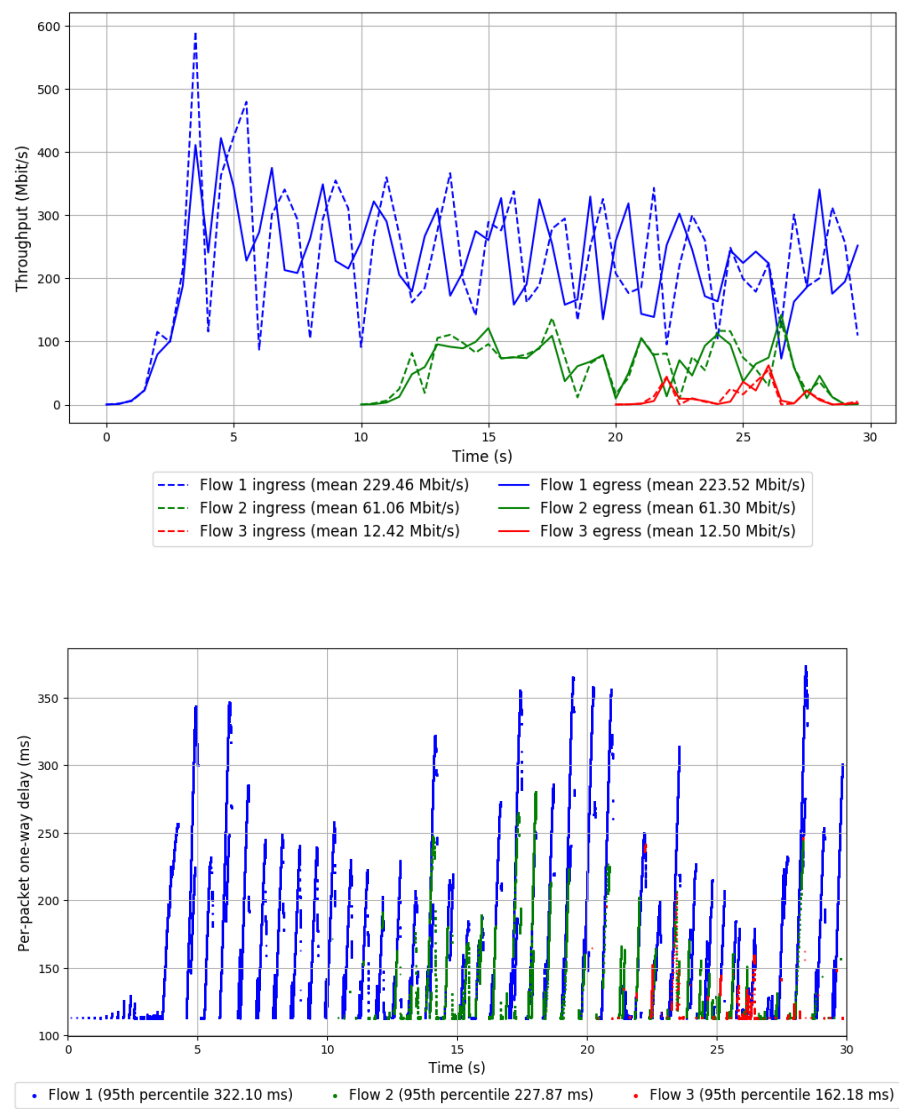
-- Flow 3:

Average throughput: 12.50 Mbit/s

95th percentile per-packet one-way delay: 162.181 ms

Loss rate: 2.19%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-03-21 08:36:03

End at: 2018-03-21 08:36:33

Below is generated by plot.py at 2018-03-21 12:44:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 240.20 Mbit/s

95th percentile per-packet one-way delay: 282.279 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 165.29 Mbit/s

95th percentile per-packet one-way delay: 298.720 ms

Loss rate: 2.23%

-- Flow 2:

Average throughput: 93.01 Mbit/s

95th percentile per-packet one-way delay: 224.890 ms

Loss rate: 0.02%

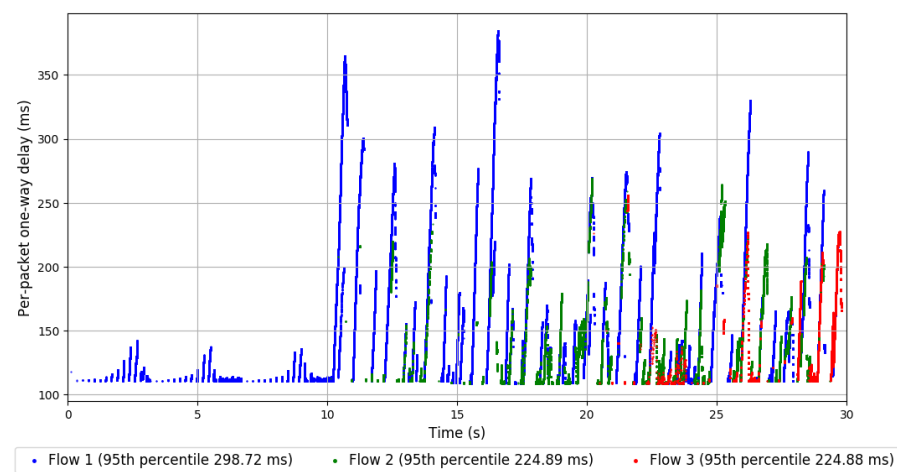
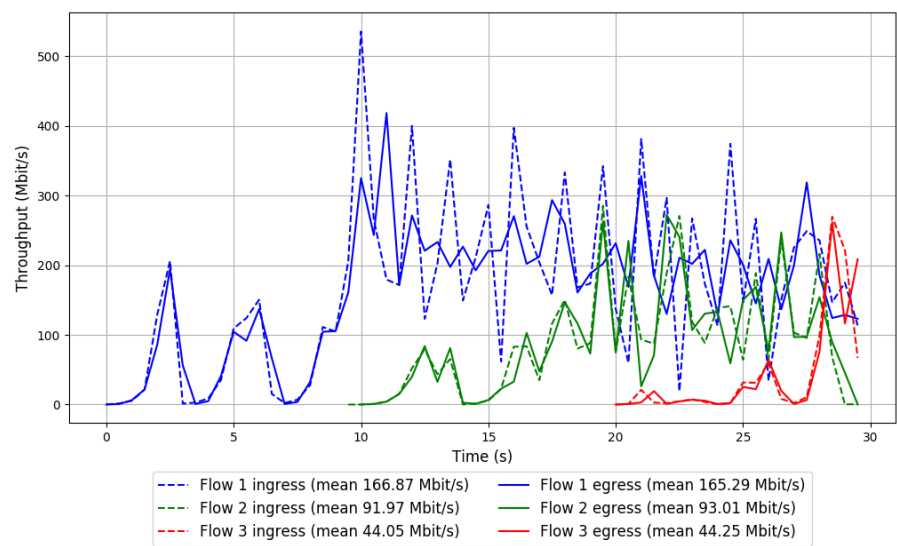
-- Flow 3:

Average throughput: 44.25 Mbit/s

95th percentile per-packet one-way delay: 224.881 ms

Loss rate: 0.18%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-03-21 05:26:43

End at: 2018-03-21 05:27:13

Below is generated by plot.py at 2018-03-21 12:44:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 143.61 Mbit/s

95th percentile per-packet one-way delay: 113.267 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 73.60 Mbit/s

95th percentile per-packet one-way delay: 113.211 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 68.50 Mbit/s

95th percentile per-packet one-way delay: 113.101 ms

Loss rate: 1.07%

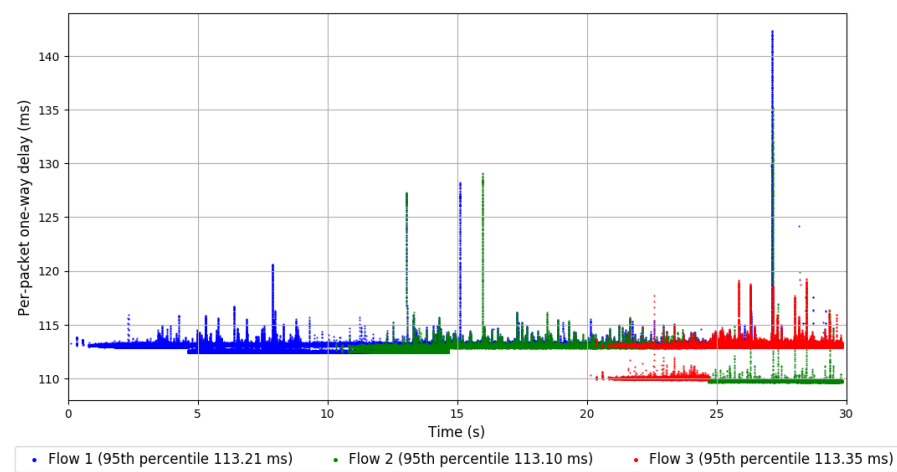
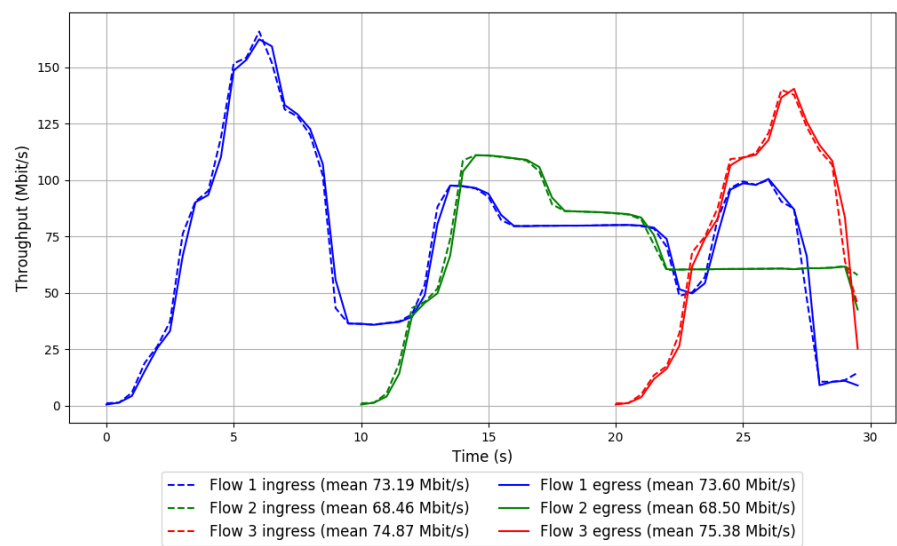
-- Flow 3:

Average throughput: 75.38 Mbit/s

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

Loss rate: 1.57%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-03-21 05:45:50

End at: 2018-03-21 05:46:20

Below is generated by plot.py at 2018-03-21 12:45:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.30 Mbit/s

95th percentile per-packet one-way delay: 113.072 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 71.20 Mbit/s

95th percentile per-packet one-way delay: 112.999 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 67.88 Mbit/s

95th percentile per-packet one-way delay: 113.055 ms

Loss rate: 1.20%

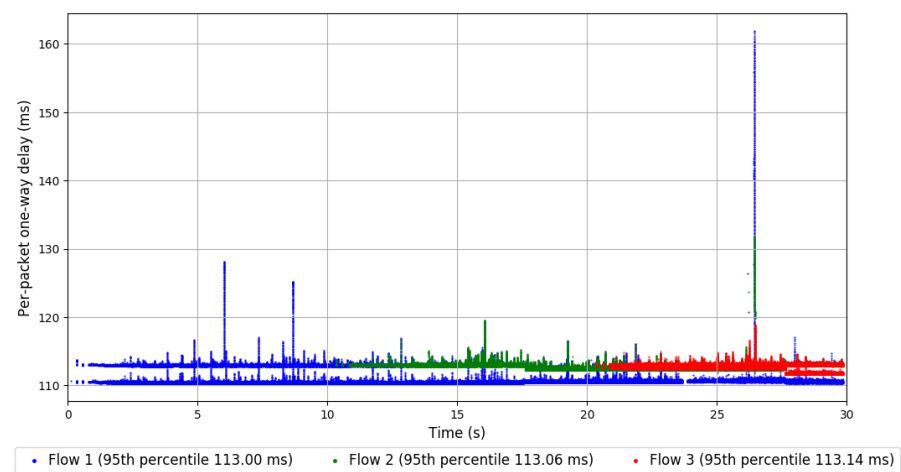
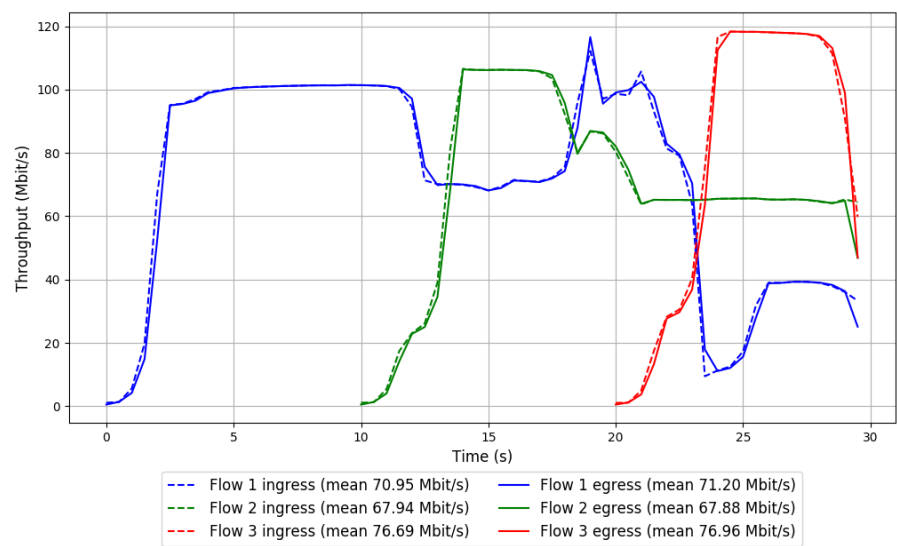
-- Flow 3:

Average throughput: 76.96 Mbit/s

95th percentile per-packet one-way delay: 113.137 ms

Loss rate: 1.91%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-03-21 06:05:00

End at: 2018-03-21 06:05:30

Below is generated by plot.py at 2018-03-21 12:45:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.99 Mbit/s

95th percentile per-packet one-way delay: 112.403 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 66.90 Mbit/s

95th percentile per-packet one-way delay: 111.872 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 68.85 Mbit/s

95th percentile per-packet one-way delay: 111.593 ms

Loss rate: 0.56%

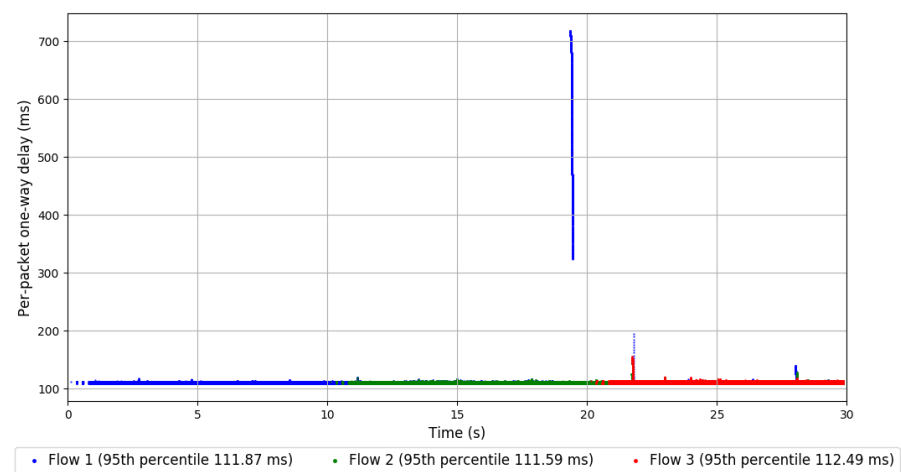
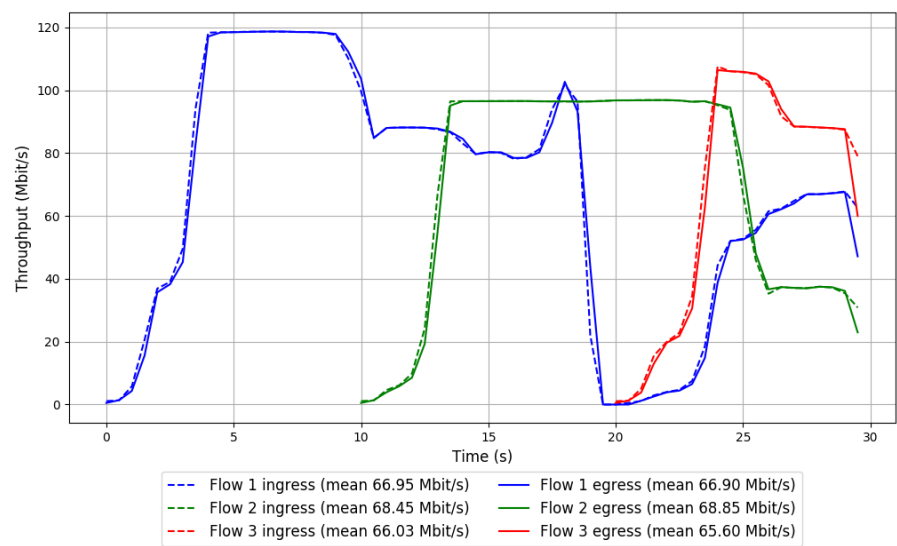
-- Flow 3:

Average throughput: 65.60 Mbit/s

95th percentile per-packet one-way delay: 112.491 ms

Loss rate: 2.90%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-03-21 06:23:57

End at: 2018-03-21 06:24:27

Below is generated by plot.py at 2018-03-21 12:48:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 211.67 Mbit/s

95th percentile per-packet one-way delay: 309.767 ms

Loss rate: 28.07%

-- Flow 1:

Average throughput: 181.31 Mbit/s

95th percentile per-packet one-way delay: 310.675 ms

Loss rate: 31.29%

-- Flow 2:

Average throughput: 45.23 Mbit/s

95th percentile per-packet one-way delay: 112.724 ms

Loss rate: 0.05%

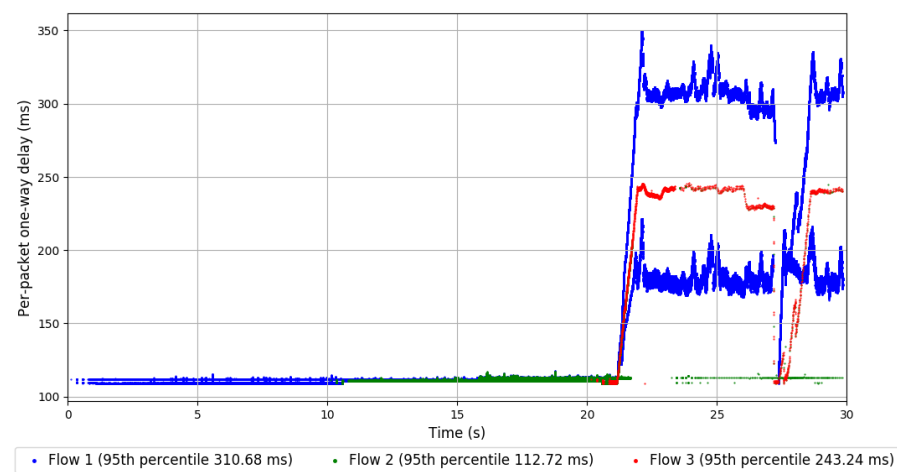
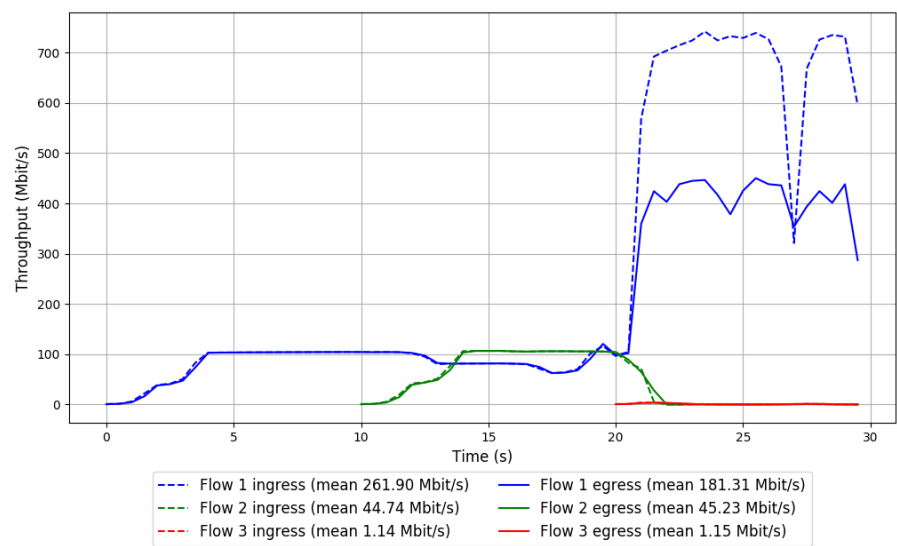
-- Flow 3:

Average throughput: 1.15 Mbit/s

95th percentile per-packet one-way delay: 243.237 ms

Loss rate: 1.89%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-03-21 06:43:26

End at: 2018-03-21 06:43:56

Below is generated by plot.py at 2018-03-21 12:48:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 119.42 Mbit/s

95th percentile per-packet one-way delay: 110.977 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 60.20 Mbit/s

95th percentile per-packet one-way delay: 111.004 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 49.98 Mbit/s

95th percentile per-packet one-way delay: 110.866 ms

Loss rate: 0.33%

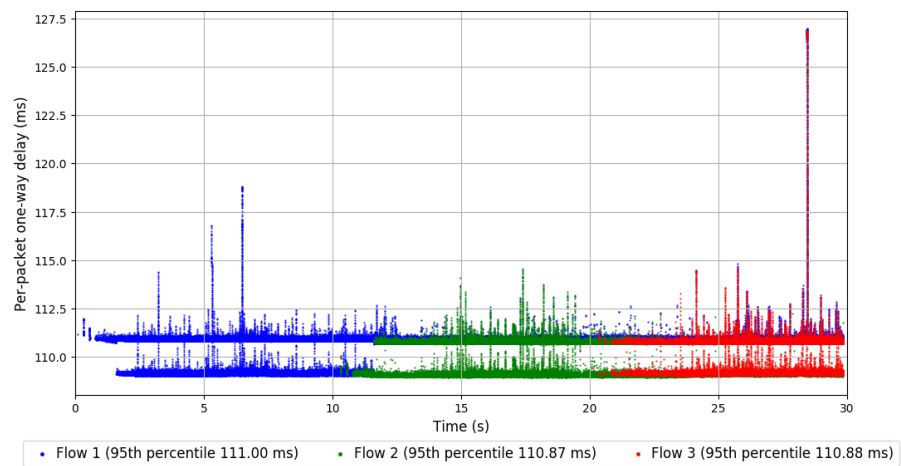
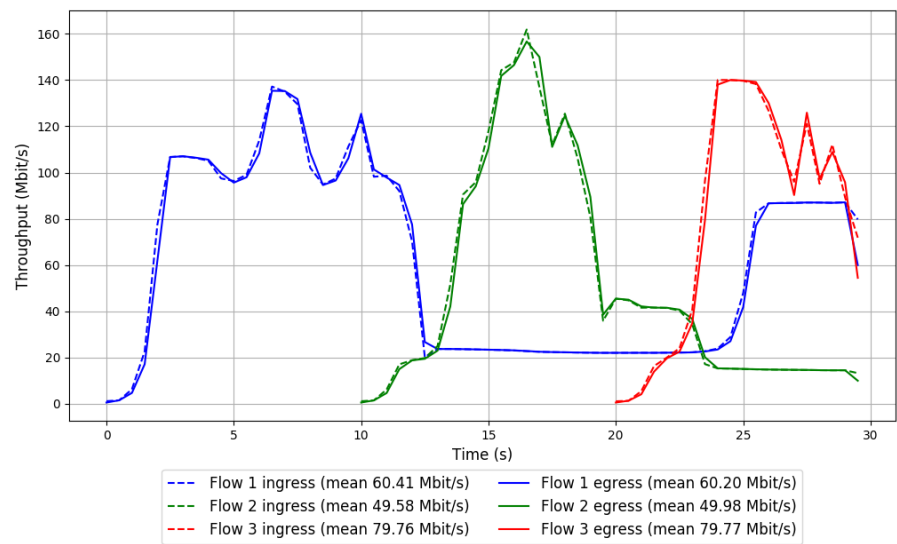
-- Flow 3:

Average throughput: 79.77 Mbit/s

95th percentile per-packet one-way delay: 110.877 ms

Loss rate: 2.22%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-03-21 07:02:36

End at: 2018-03-21 07:03:06

Below is generated by plot.py at 2018-03-21 12:53:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 375.88 Mbit/s

95th percentile per-packet one-way delay: 308.302 ms

Loss rate: 26.89%

-- Flow 1:

Average throughput: 375.35 Mbit/s

95th percentile per-packet one-way delay: 308.313 ms

Loss rate: 26.90%

-- Flow 2:

Average throughput: 0.55 Mbit/s

95th percentile per-packet one-way delay: 244.002 ms

Loss rate: 10.87%

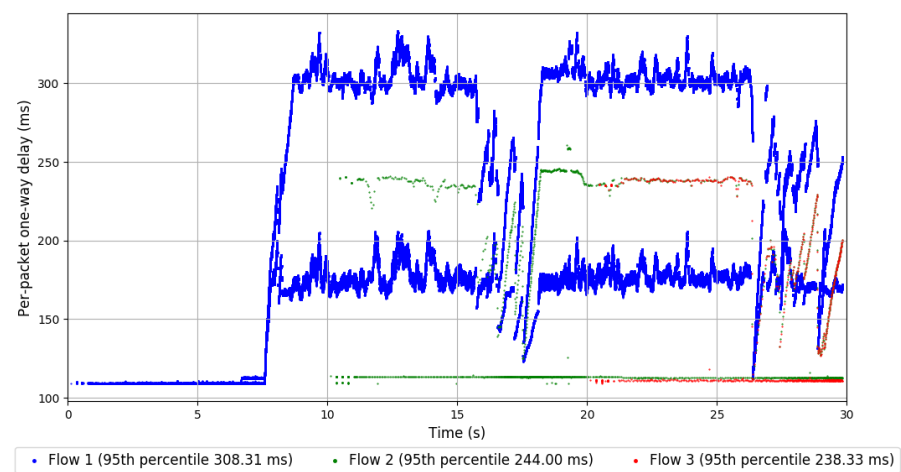
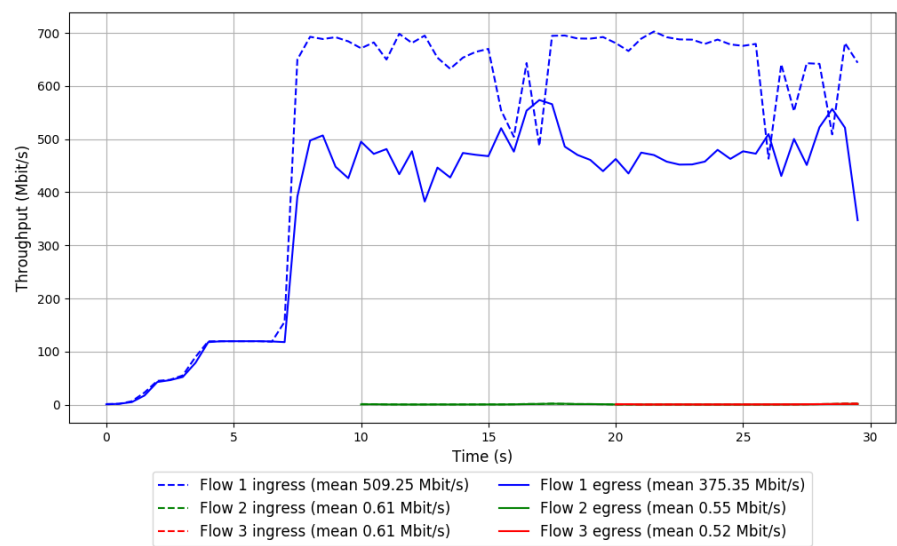
-- Flow 3:

Average throughput: 0.52 Mbit/s

95th percentile per-packet one-way delay: 238.334 ms

Loss rate: 16.05%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-03-21 07:22:02

End at: 2018-03-21 07:22:32

Below is generated by plot.py at 2018-03-21 12:58:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 442.82 Mbit/s

95th percentile per-packet one-way delay: 299.808 ms

Loss rate: 31.86%

-- Flow 1:

Average throughput: 228.00 Mbit/s

95th percentile per-packet one-way delay: 293.105 ms

Loss rate: 26.94%

-- Flow 2:

Average throughput: 323.72 Mbit/s

95th percentile per-packet one-way delay: 307.070 ms

Loss rate: 36.40%

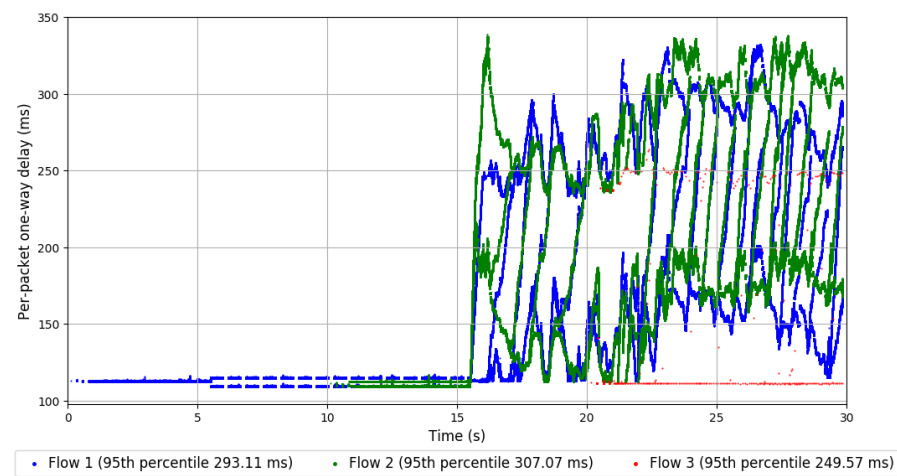
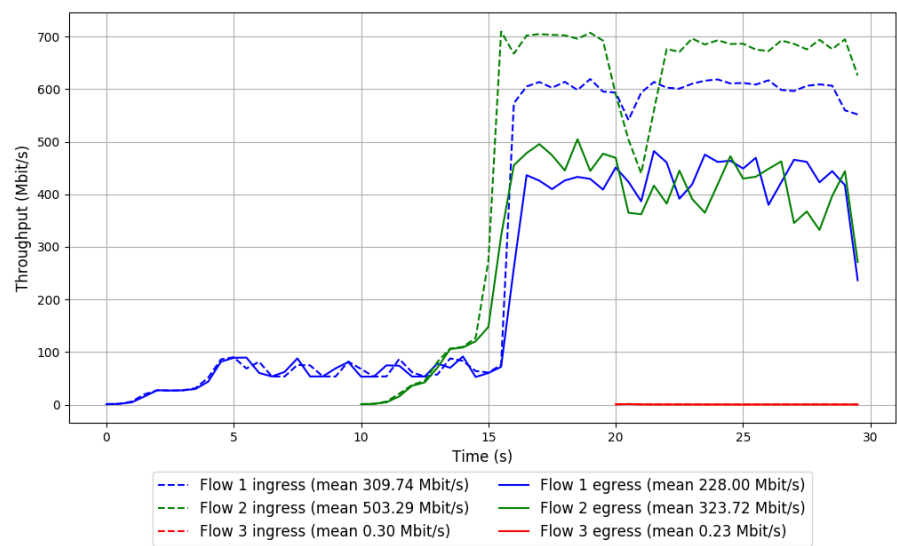
-- Flow 3:

Average throughput: 0.23 Mbit/s

95th percentile per-packet one-way delay: 249.570 ms

Loss rate: 24.88%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-03-21 07:41:47

End at: 2018-03-21 07:42:17

Below is generated by plot.py at 2018-03-21 12:58:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 138.98 Mbit/s

95th percentile per-packet one-way delay: 113.412 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 73.34 Mbit/s

95th percentile per-packet one-way delay: 112.825 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 69.60 Mbit/s

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

Loss rate: 0.55%

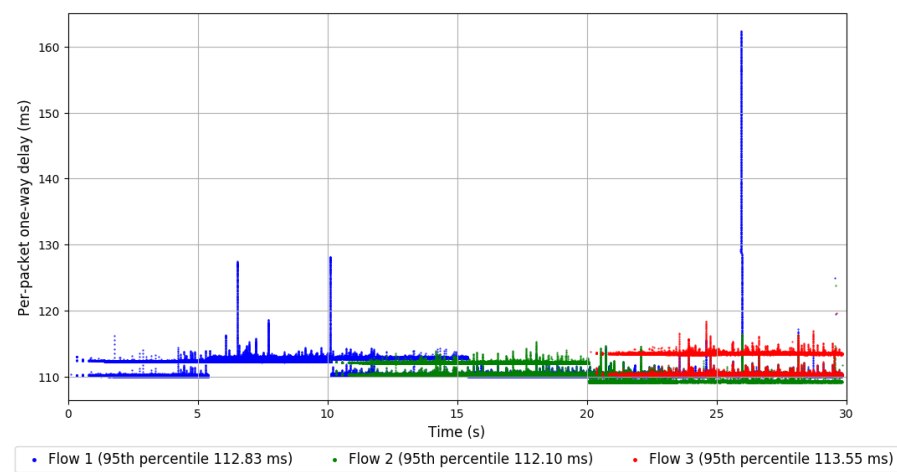
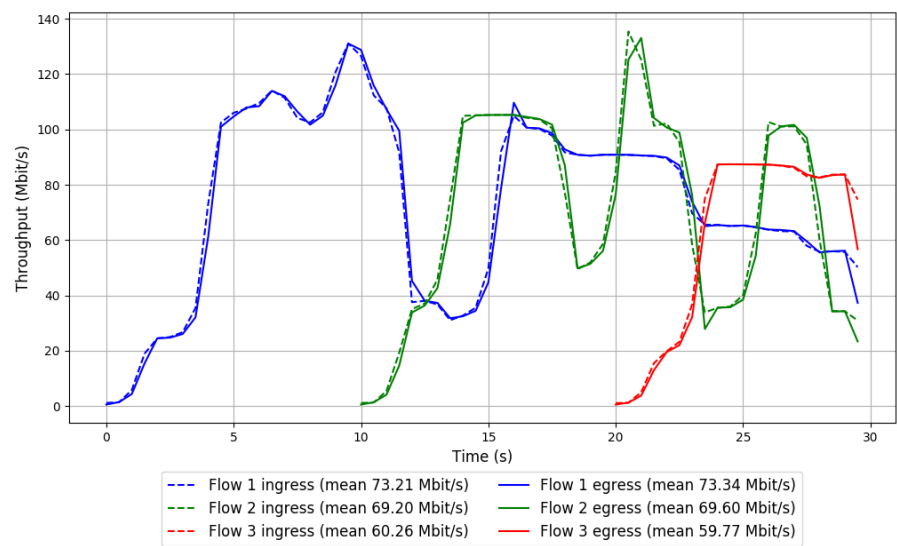
-- Flow 3:

Average throughput: 59.77 Mbit/s

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

Loss rate: 3.05%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-03-21 08:05:56

End at: 2018-03-21 08:06:26

Below is generated by plot.py at 2018-03-21 12:58:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 149.53 Mbit/s

95th percentile per-packet one-way delay: 113.018 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 86.83 Mbit/s

95th percentile per-packet one-way delay: 113.002 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 68.00 Mbit/s

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

Loss rate: 1.59%

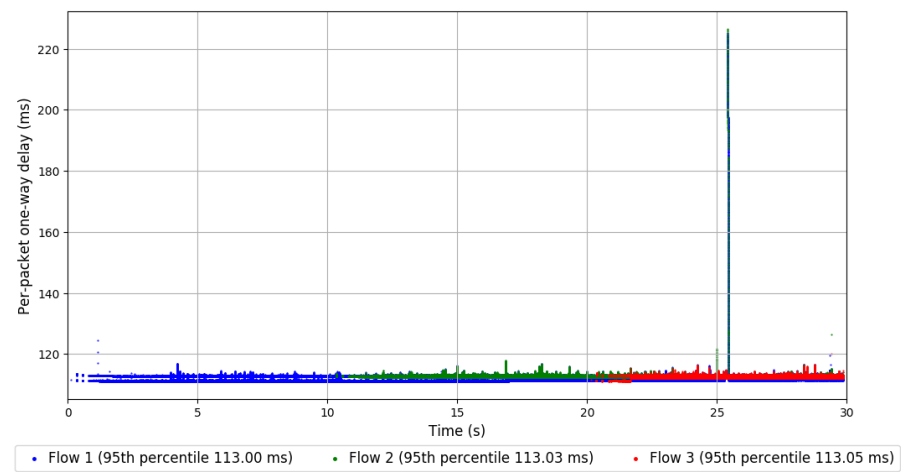
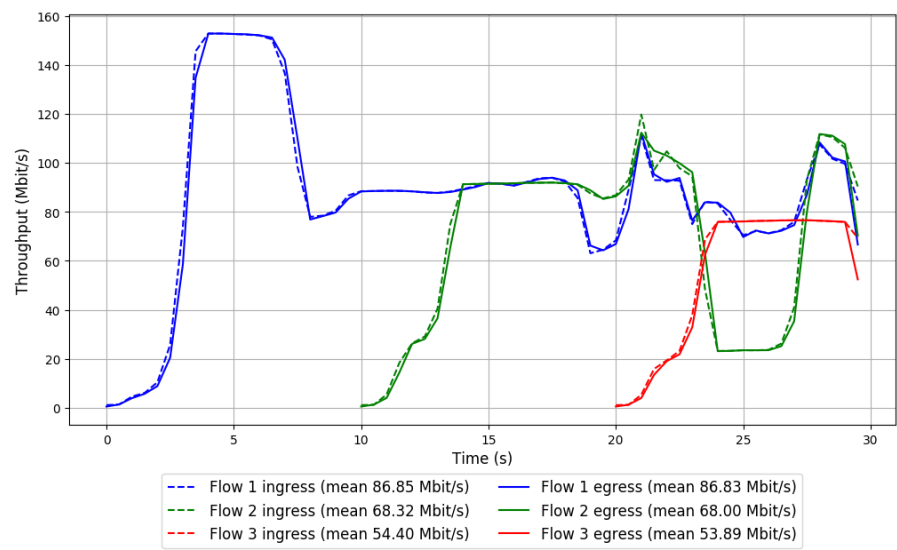
-- Flow 3:

Average throughput: 53.89 Mbit/s

95th percentile per-packet one-way delay: 113.046 ms

Loss rate: 3.15%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-03-21 08:32:53

End at: 2018-03-21 08:33:23

Below is generated by plot.py at 2018-03-21 12:58:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.66 Mbit/s

95th percentile per-packet one-way delay: 112.530 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 64.52 Mbit/s

95th percentile per-packet one-way delay: 111.689 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 67.26 Mbit/s

95th percentile per-packet one-way delay: 113.482 ms

Loss rate: 1.22%

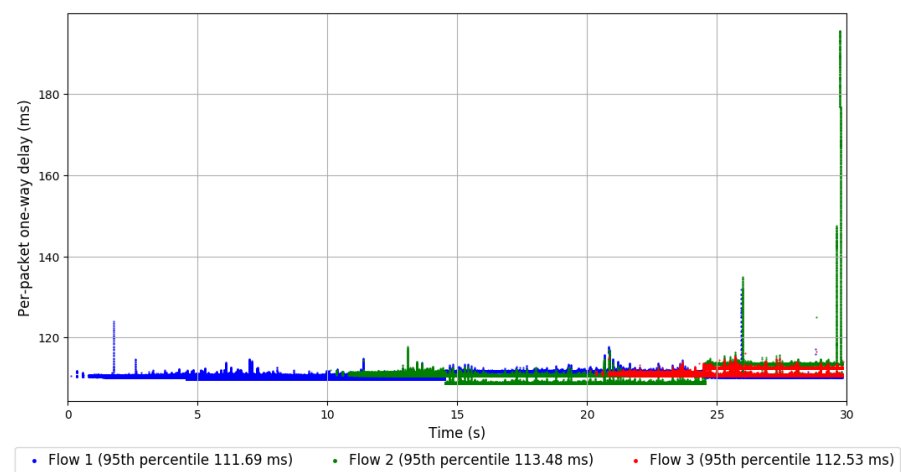
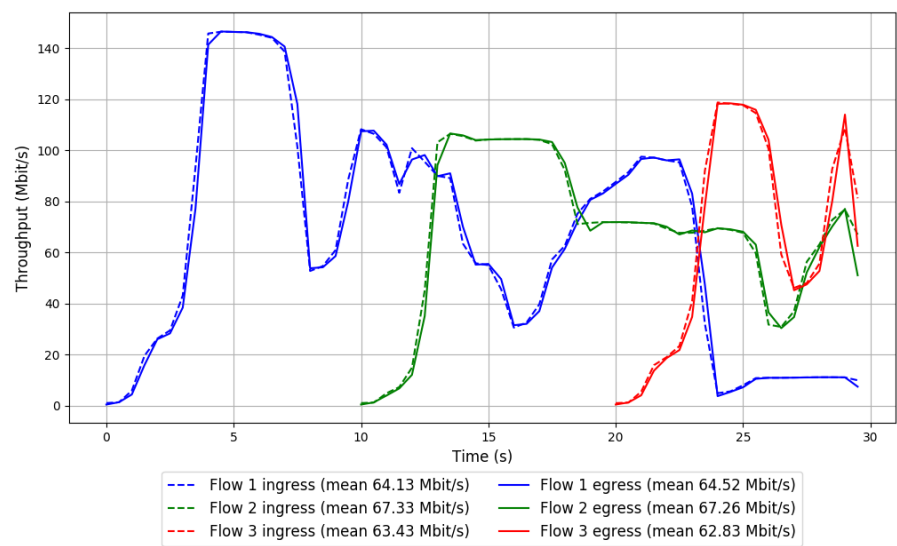
-- Flow 3:

Average throughput: 62.83 Mbit/s

95th percentile per-packet one-way delay: 112.535 ms

Loss rate: 3.16%

Run 10: Report of Copa — Data Link

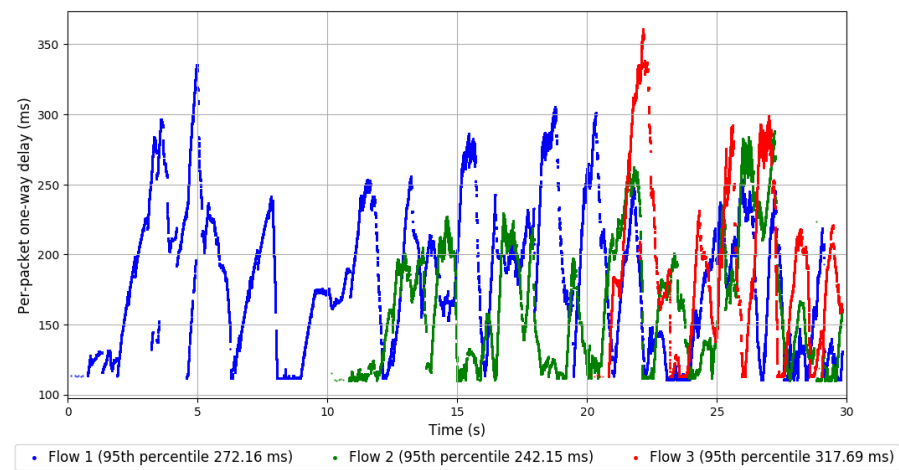
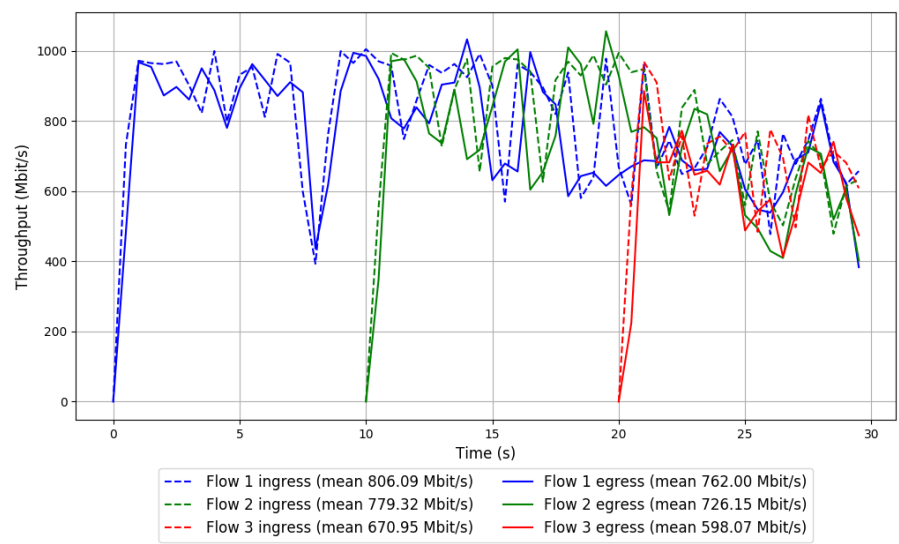


```
Run 1: Statistics of FillP

Start at: 2018-03-21 05:31:40
End at: 2018-03-21 05:32:10

# Below is generated by plot.py at 2018-03-21 13:10:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1438.05 Mbit/s
95th percentile per-packet one-way delay: 270.264 ms
Loss rate: 7.71%
-- Flow 1:
Average throughput: 762.00 Mbit/s
95th percentile per-packet one-way delay: 272.159 ms
Loss rate: 6.17%
-- Flow 2:
Average throughput: 726.15 Mbit/s
95th percentile per-packet one-way delay: 242.147 ms
Loss rate: 7.88%
-- Flow 3:
Average throughput: 598.07 Mbit/s
95th percentile per-packet one-way delay: 317.692 ms
Loss rate: 12.88%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-03-21 05:50:55

End at: 2018-03-21 05:51:25

Below is generated by plot.py at 2018-03-21 13:11:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 1508.19 Mbit/s

95th percentile per-packet one-way delay: 229.668 ms

Loss rate: 7.37%

-- Flow 1:

Average throughput: 808.11 Mbit/s

95th percentile per-packet one-way delay: 221.722 ms

Loss rate: 6.63%

-- Flow 2:

Average throughput: 725.84 Mbit/s

95th percentile per-packet one-way delay: 213.141 ms

Loss rate: 8.72%

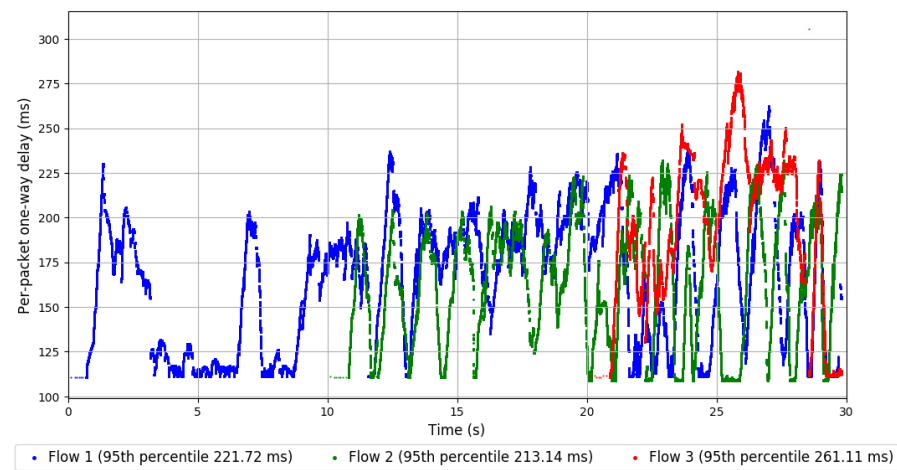
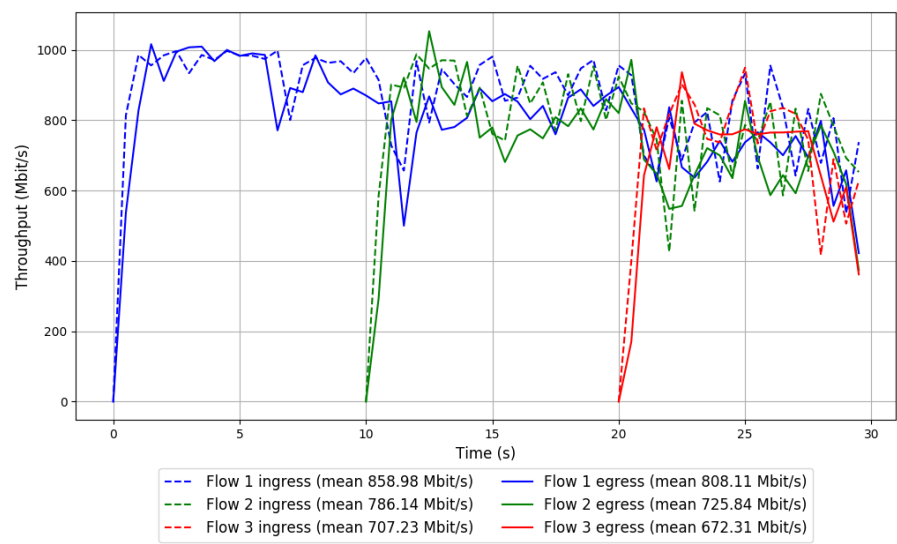
-- Flow 3:

Average throughput: 672.31 Mbit/s

95th percentile per-packet one-way delay: 261.107 ms

Loss rate: 7.11%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-03-21 06:10:00

End at: 2018-03-21 06:10:30

Below is generated by plot.py at 2018-03-21 13:11:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 1286.87 Mbit/s

95th percentile per-packet one-way delay: 228.431 ms

Loss rate: 7.04%

-- Flow 1:

Average throughput: 598.93 Mbit/s

95th percentile per-packet one-way delay: 232.277 ms

Loss rate: 7.67%

-- Flow 2:

Average throughput: 743.66 Mbit/s

95th percentile per-packet one-way delay: 198.747 ms

Loss rate: 4.04%

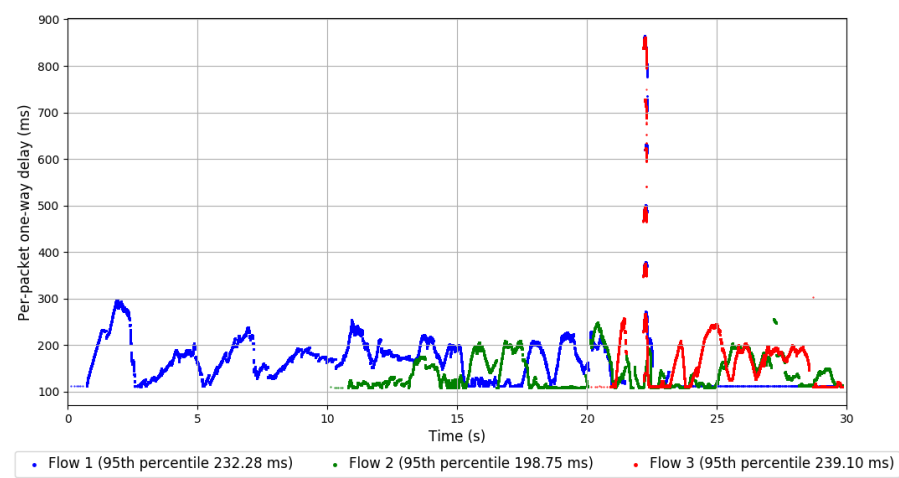
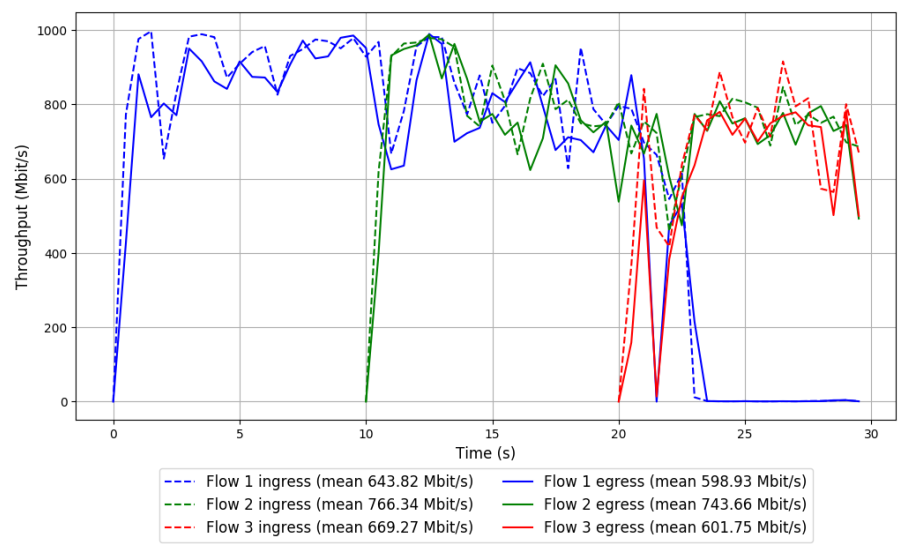
-- Flow 3:

Average throughput: 601.75 Mbit/s

95th percentile per-packet one-way delay: 239.103 ms

Loss rate: 12.13%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-03-21 06:29:07

End at: 2018-03-21 06:29:37

Below is generated by plot.py at 2018-03-21 13:13:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 1390.53 Mbit/s

95th percentile per-packet one-way delay: 316.236 ms

Loss rate: 7.63%

-- Flow 1:

Average throughput: 802.53 Mbit/s

95th percentile per-packet one-way delay: 246.725 ms

Loss rate: 5.46%

-- Flow 2:

Average throughput: 624.14 Mbit/s

95th percentile per-packet one-way delay: 341.336 ms

Loss rate: 11.05%

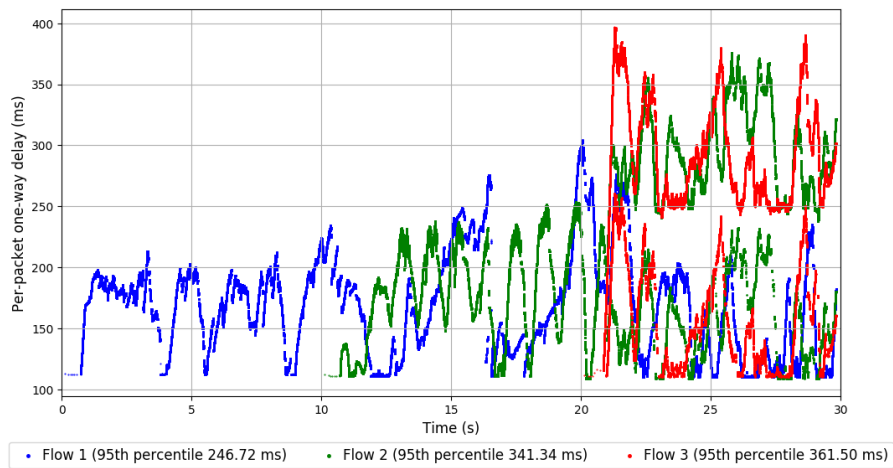
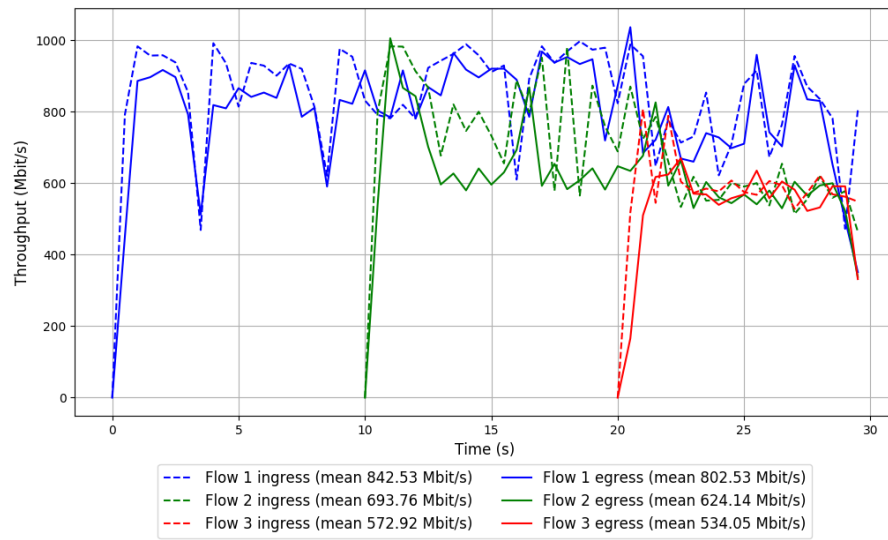
-- Flow 3:

Average throughput: 534.05 Mbit/s

95th percentile per-packet one-way delay: 361.504 ms

Loss rate: 8.90%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-03-21 06:48:27

End at: 2018-03-21 06:48:57

Below is generated by plot.py at 2018-03-21 13:14:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1456.65 Mbit/s

95th percentile per-packet one-way delay: 286.449 ms

Loss rate: 8.66%

-- Flow 1:

Average throughput: 781.95 Mbit/s

95th percentile per-packet one-way delay: 202.371 ms

Loss rate: 8.45%

-- Flow 2:

Average throughput: 693.52 Mbit/s

95th percentile per-packet one-way delay: 325.170 ms

Loss rate: 10.33%

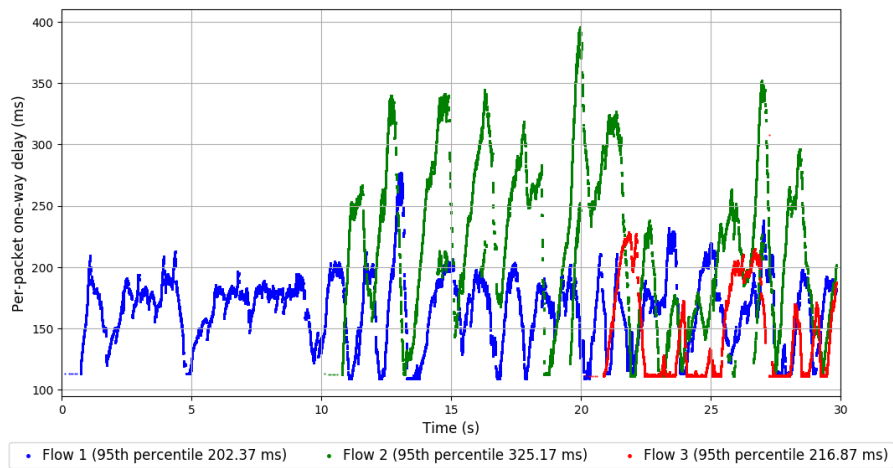
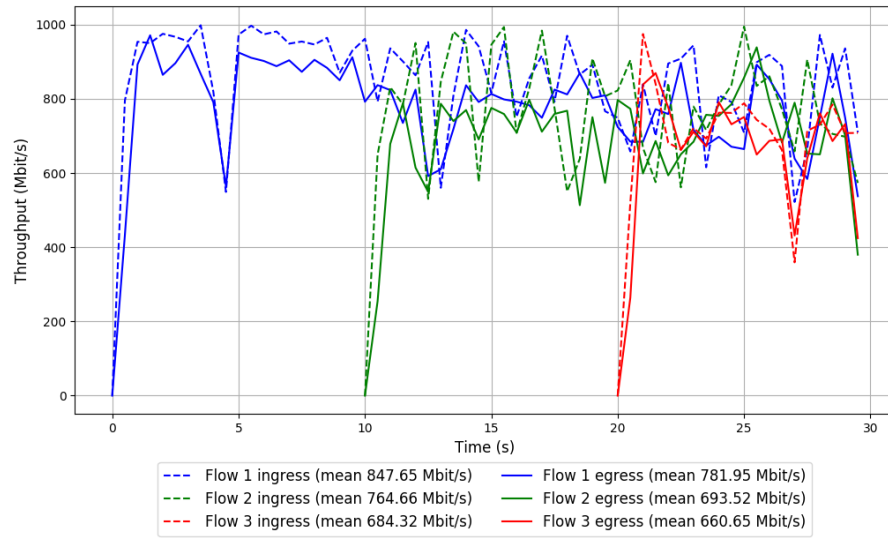
-- Flow 3:

Average throughput: 660.65 Mbit/s

95th percentile per-packet one-way delay: 216.873 ms

Loss rate: 5.65%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-03-21 07:07:55

End at: 2018-03-21 07:08:25

Below is generated by plot.py at 2018-03-21 13:14:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1387.74 Mbit/s

95th percentile per-packet one-way delay: 327.296 ms

Loss rate: 9.53%

-- Flow 1:

Average throughput: 730.20 Mbit/s

95th percentile per-packet one-way delay: 353.662 ms

Loss rate: 7.56%

-- Flow 2:

Average throughput: 721.85 Mbit/s

95th percentile per-packet one-way delay: 226.227 ms

Loss rate: 10.43%

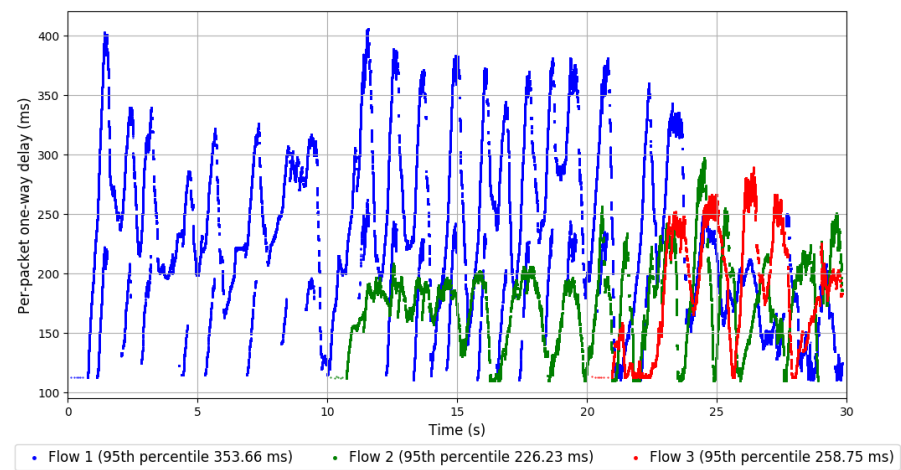
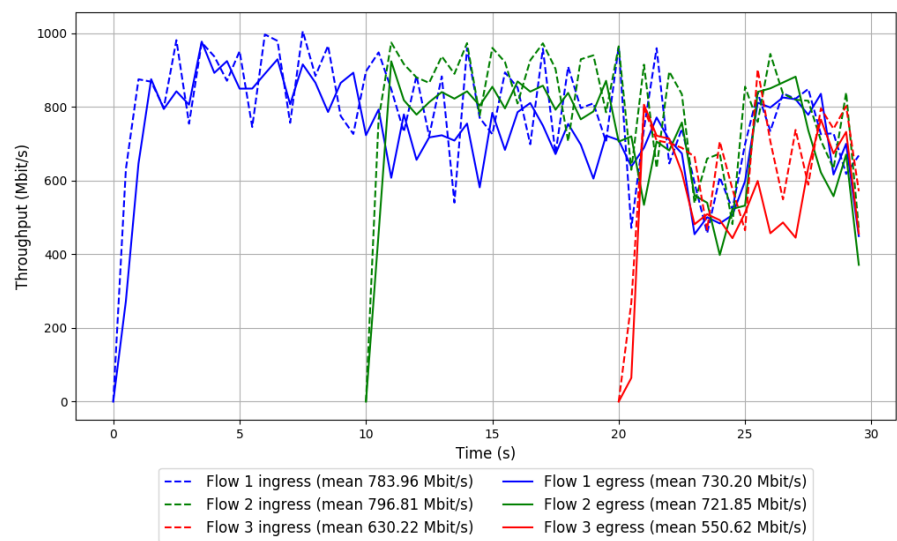
-- Flow 3:

Average throughput: 550.62 Mbit/s

95th percentile per-packet one-way delay: 258.746 ms

Loss rate: 14.63%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-03-21 07:27:26

End at: 2018-03-21 07:27:56

Below is generated by plot.py at 2018-03-21 13:21:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 1409.38 Mbit/s

95th percentile per-packet one-way delay: 314.918 ms

Loss rate: 7.36%

-- Flow 1:

Average throughput: 757.61 Mbit/s

95th percentile per-packet one-way delay: 246.845 ms

Loss rate: 7.01%

-- Flow 2:

Average throughput: 686.16 Mbit/s

95th percentile per-packet one-way delay: 349.531 ms

Loss rate: 7.16%

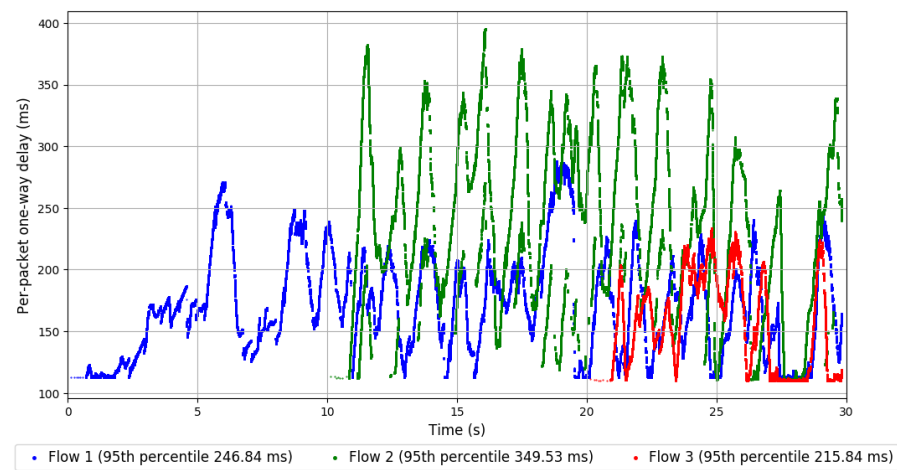
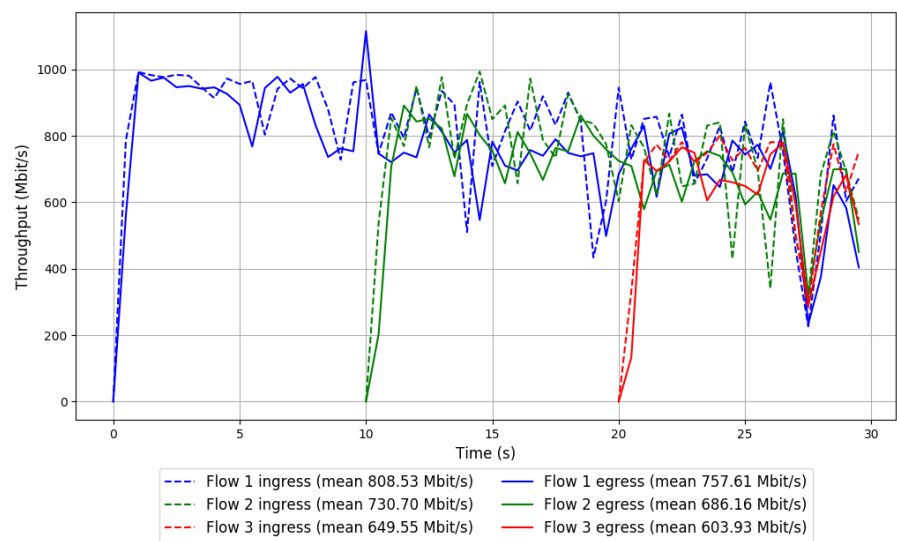
-- Flow 3:

Average throughput: 603.93 Mbit/s

95th percentile per-packet one-way delay: 215.840 ms

Loss rate: 9.13%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-03-21 07:46:51

End at: 2018-03-21 07:47:21

Below is generated by plot.py at 2018-03-21 13:27:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 1420.59 Mbit/s

95th percentile per-packet one-way delay: 251.535 ms

Loss rate: 8.23%

-- Flow 1:

Average throughput: 748.36 Mbit/s

95th percentile per-packet one-way delay: 217.382 ms

Loss rate: 7.15%

-- Flow 2:

Average throughput: 695.21 Mbit/s

95th percentile per-packet one-way delay: 282.350 ms

Loss rate: 9.56%

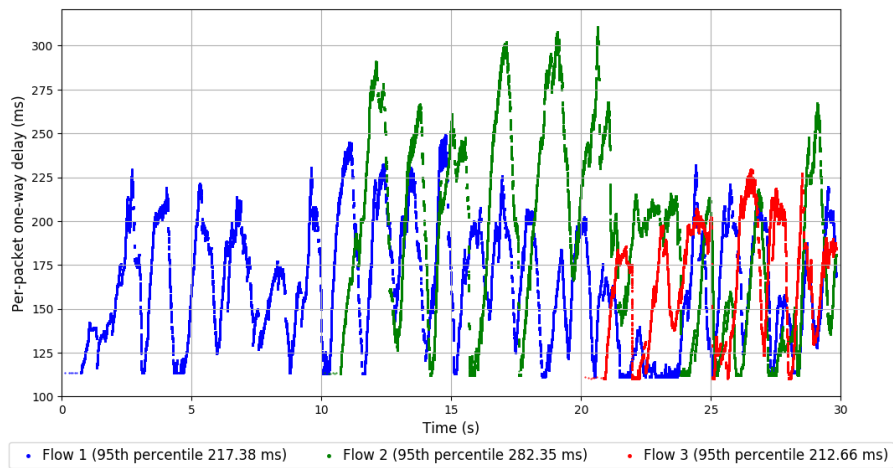
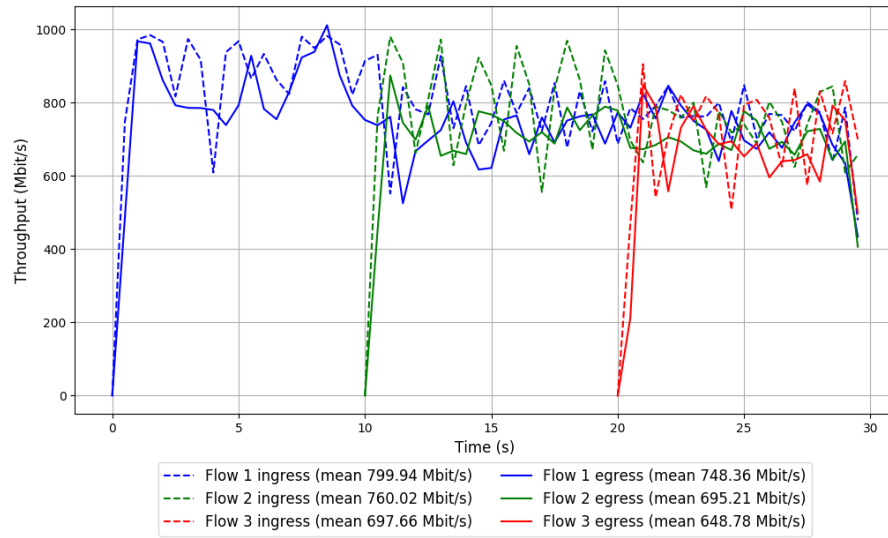
-- Flow 3:

Average throughput: 648.78 Mbit/s

95th percentile per-packet one-way delay: 212.657 ms

Loss rate: 9.09%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-03-21 08:14:20

End at: 2018-03-21 08:14:50

Below is generated by plot.py at 2018-03-21 13:36:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 1330.84 Mbit/s

95th percentile per-packet one-way delay: 343.227 ms

Loss rate: 7.79%

-- Flow 1:

Average throughput: 703.59 Mbit/s

95th percentile per-packet one-way delay: 342.326 ms

Loss rate: 7.39%

-- Flow 2:

Average throughput: 604.68 Mbit/s

95th percentile per-packet one-way delay: 352.725 ms

Loss rate: 10.51%

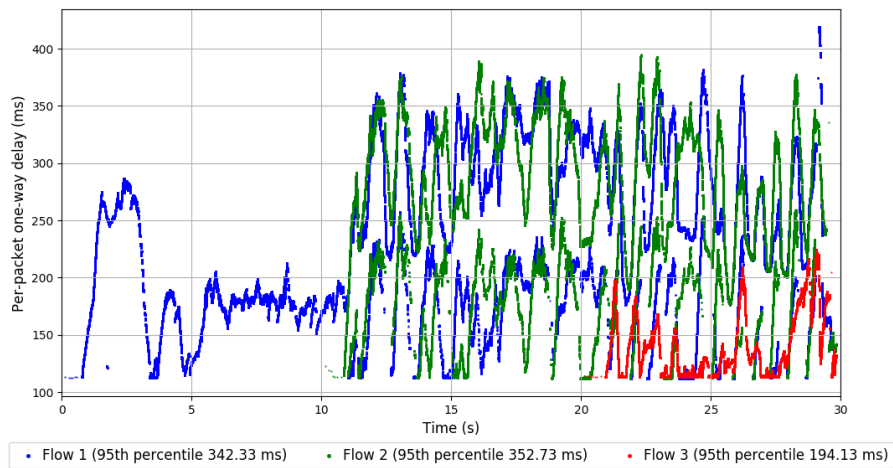
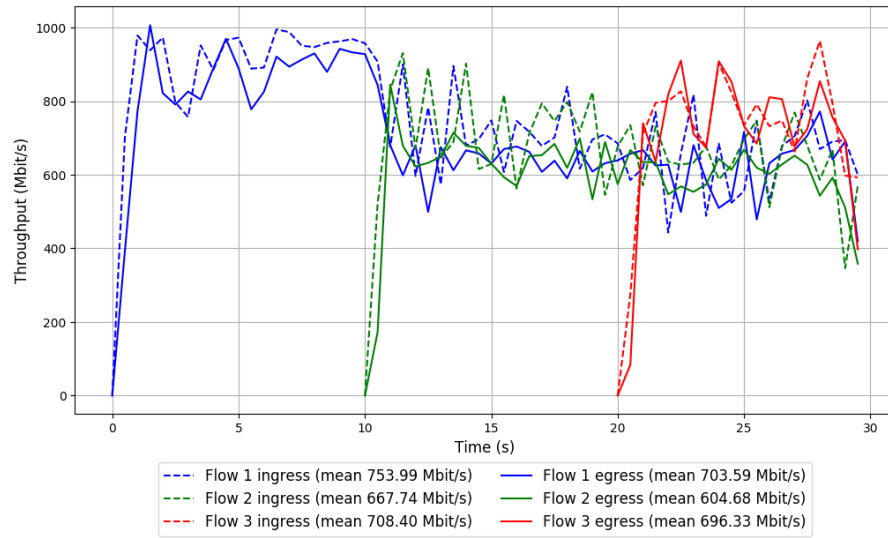
-- Flow 3:

Average throughput: 696.33 Mbit/s

95th percentile per-packet one-way delay: 194.129 ms

Loss rate: 3.95%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-03-21 08:37:55

End at: 2018-03-21 08:38:25

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 1444.47 Mbit/s

95th percentile per-packet one-way delay: 247.339 ms

Loss rate: 10.12%

-- Flow 1:

Average throughput: 760.50 Mbit/s

95th percentile per-packet one-way delay: 234.055 ms

Loss rate: 9.29%

-- Flow 2:

Average throughput: 716.22 Mbit/s

95th percentile per-packet one-way delay: 229.713 ms

Loss rate: 11.00%

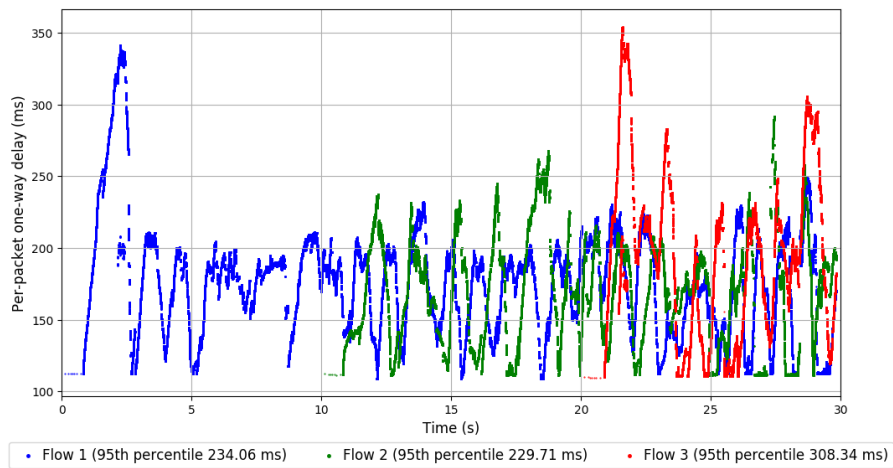
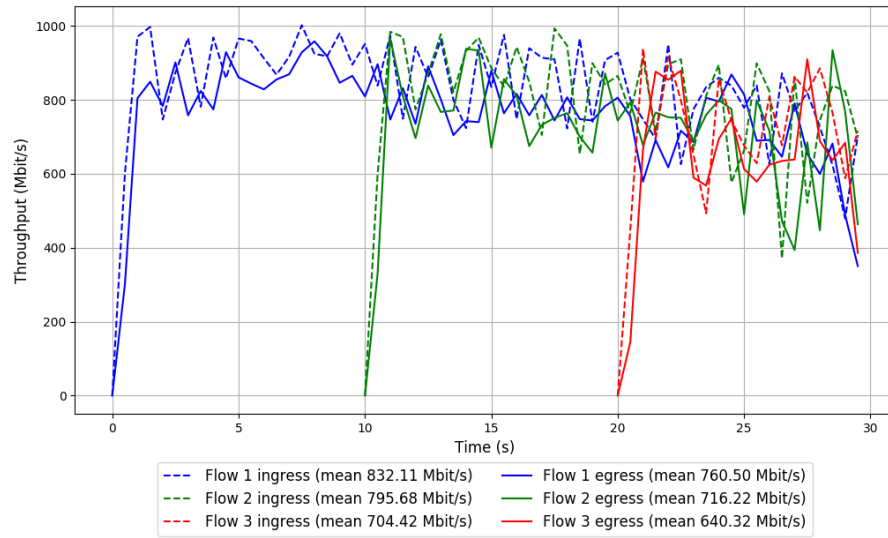
-- Flow 3:

Average throughput: 640.32 Mbit/s

95th percentile per-packet one-way delay: 308.344 ms

Loss rate: 11.13%

Run 10: Report of FillP — Data Link

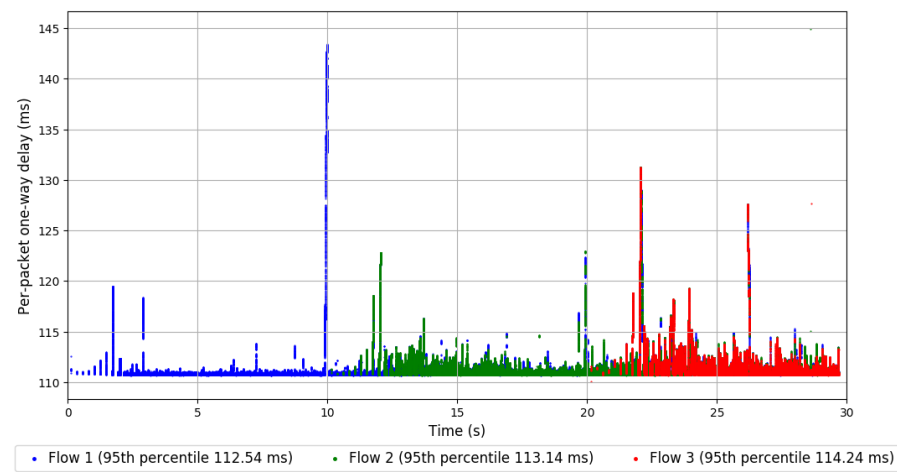
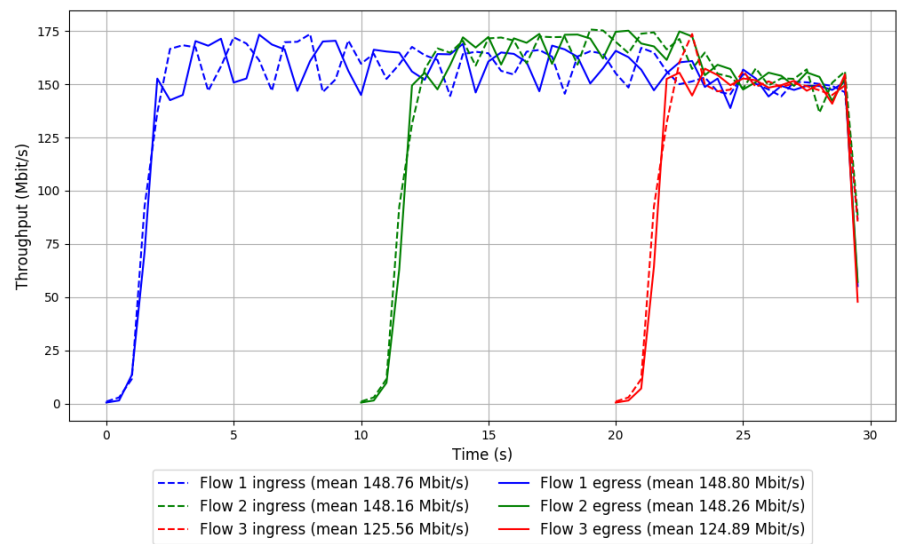


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-03-21 05:18:30
End at: 2018-03-21 05:19:00

# Below is generated by plot.py at 2018-03-21 13:39:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 287.04 Mbit/s
95th percentile per-packet one-way delay: 112.991 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 148.80 Mbit/s
95th percentile per-packet one-way delay: 112.538 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 148.26 Mbit/s
95th percentile per-packet one-way delay: 113.144 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 124.89 Mbit/s
95th percentile per-packet one-way delay: 114.243 ms
Loss rate: 2.77%
```

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

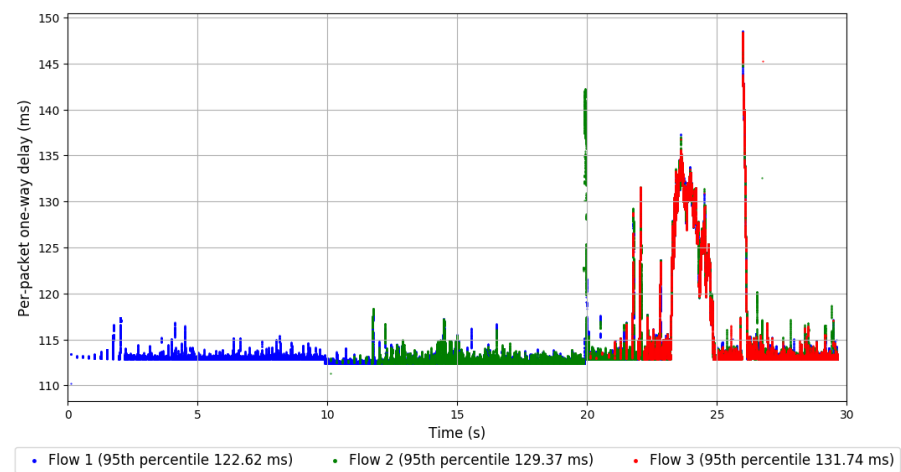
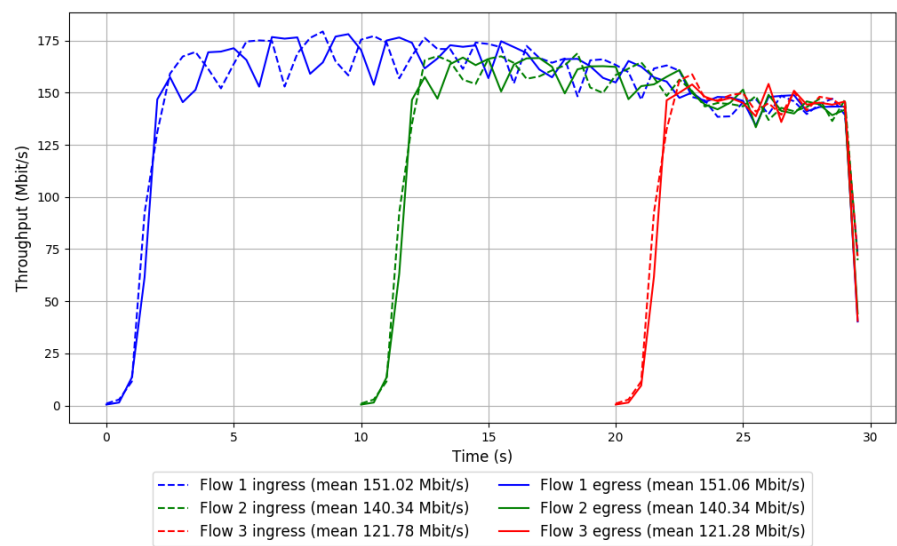


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-03-21 05:37:57
End at: 2018-03-21 05:38:27

# Below is generated by plot.py at 2018-03-21 13:39:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 282.98 Mbit/s
95th percentile per-packet one-way delay: 128.786 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 151.06 Mbit/s
95th percentile per-packet one-way delay: 122.620 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 140.34 Mbit/s
95th percentile per-packet one-way delay: 129.368 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 121.28 Mbit/s
95th percentile per-packet one-way delay: 131.738 ms
Loss rate: 2.69%
```

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



Run 3: Statistics of Indigo-1-32

Start at: 2018-03-21 05:57:13

End at: 2018-03-21 05:57:43

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 297.17 Mbit/s

95th percentile per-packet one-way delay: 122.284 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 156.27 Mbit/s

95th percentile per-packet one-way delay: 118.577 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 145.84 Mbit/s

95th percentile per-packet one-way delay: 121.894 ms

Loss rate: 1.07%

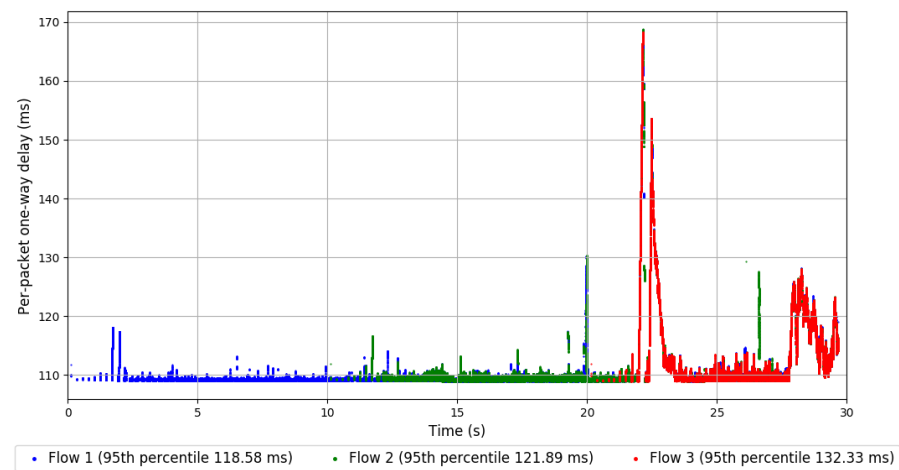
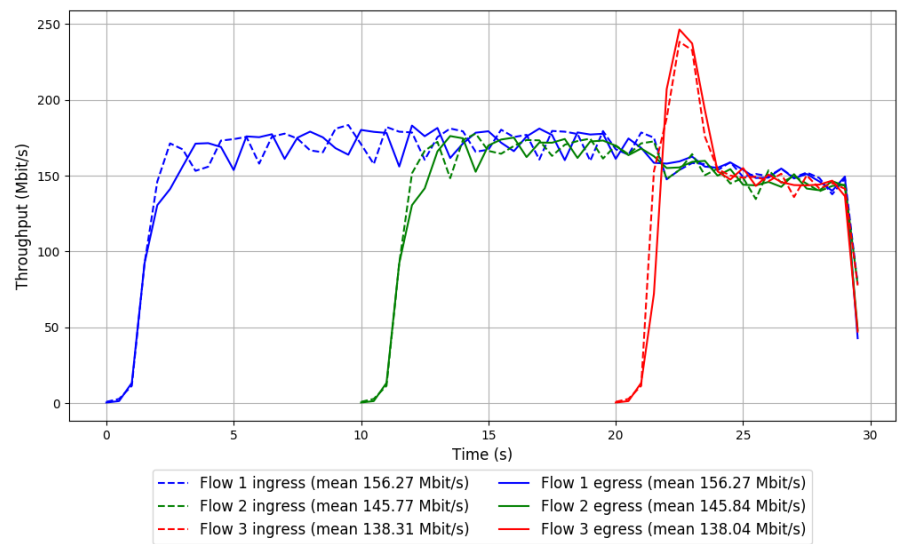
-- Flow 3:

Average throughput: 138.04 Mbit/s

95th percentile per-packet one-way delay: 132.333 ms

Loss rate: 2.46%

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



Run 4: Statistics of Indigo-1-32

Start at: 2018-03-21 06:16:09

End at: 2018-03-21 06:16:39

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 323.57 Mbit/s

95th percentile per-packet one-way delay: 115.465 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 188.69 Mbit/s

95th percentile per-packet one-way delay: 113.305 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 143.64 Mbit/s

95th percentile per-packet one-way delay: 116.230 ms

Loss rate: 1.18%

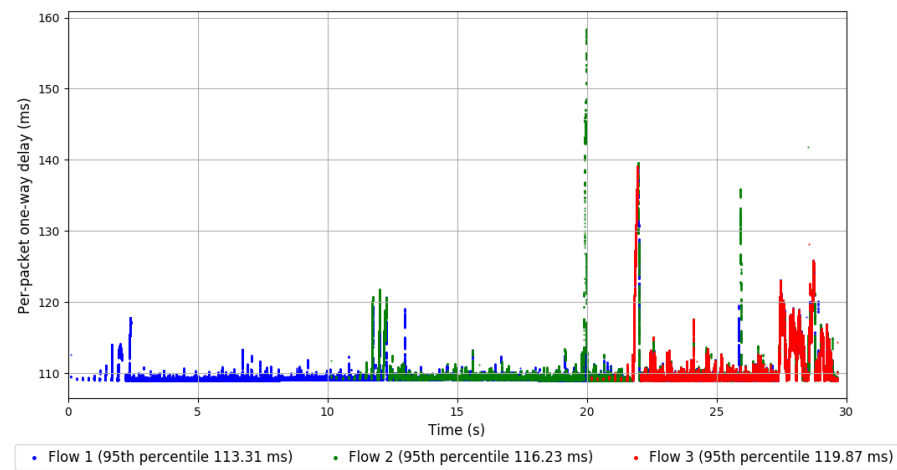
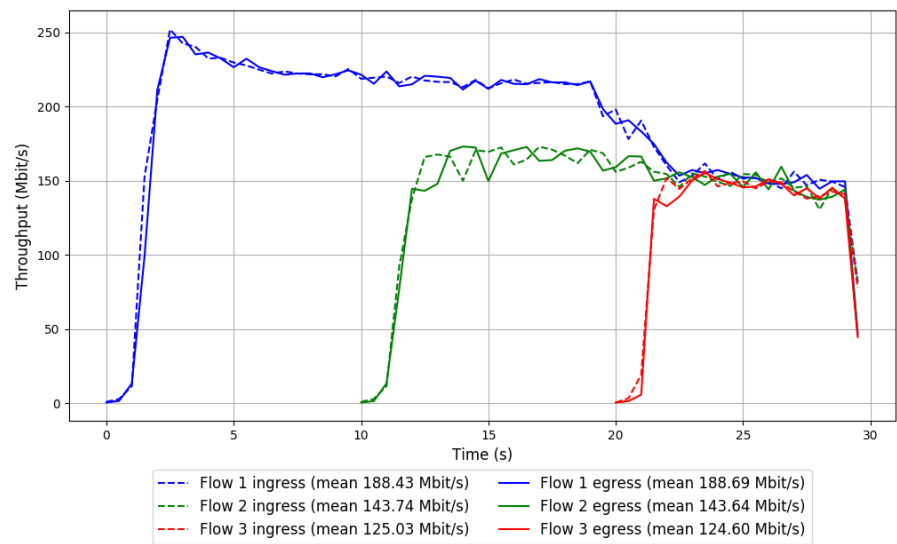
-- Flow 3:

Average throughput: 124.60 Mbit/s

95th percentile per-packet one-way delay: 119.870 ms

Loss rate: 2.58%

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



Run 5: Statistics of Indigo-1-32

Start at: 2018-03-21 06:35:26

End at: 2018-03-21 06:35:56

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 297.10 Mbit/s

95th percentile per-packet one-way delay: 112.576 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 160.96 Mbit/s

95th percentile per-packet one-way delay: 112.049 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 147.03 Mbit/s

95th percentile per-packet one-way delay: 112.878 ms

Loss rate: 1.16%

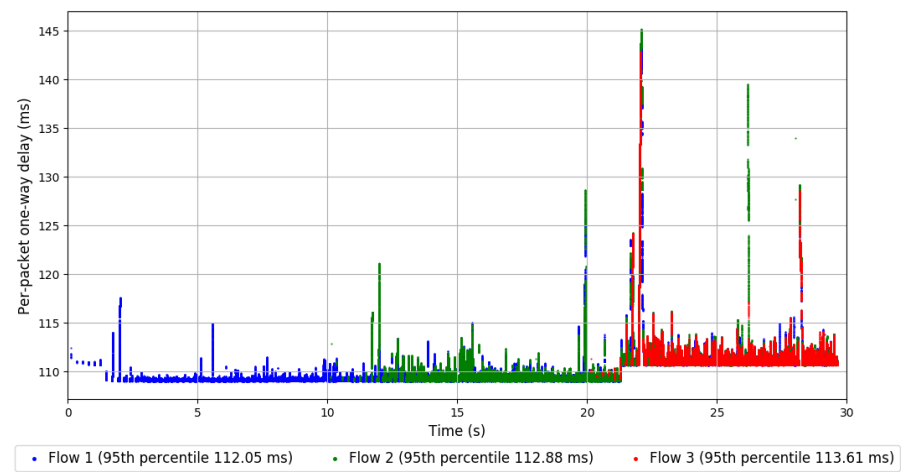
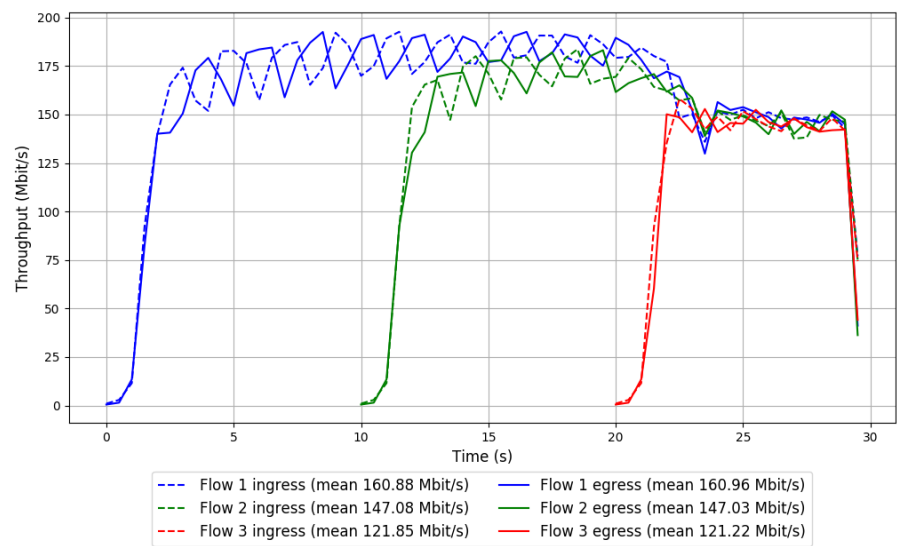
-- Flow 3:

Average throughput: 121.22 Mbit/s

95th percentile per-packet one-way delay: 113.605 ms

Loss rate: 2.80%

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



Run 6: Statistics of Indigo-1-32

Start at: 2018-03-21 06:54:46

End at: 2018-03-21 06:55:16

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 307.08 Mbit/s

95th percentile per-packet one-way delay: 147.367 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 165.33 Mbit/s

95th percentile per-packet one-way delay: 132.008 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 151.78 Mbit/s

95th percentile per-packet one-way delay: 146.788 ms

Loss rate: 1.08%

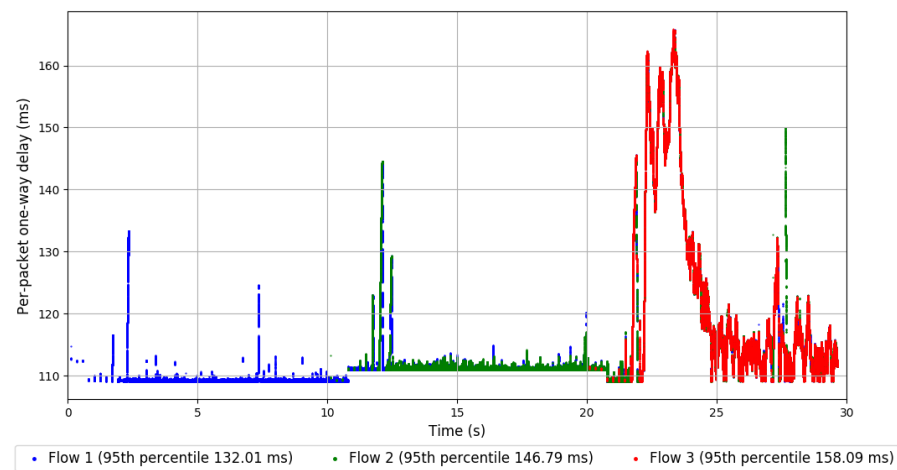
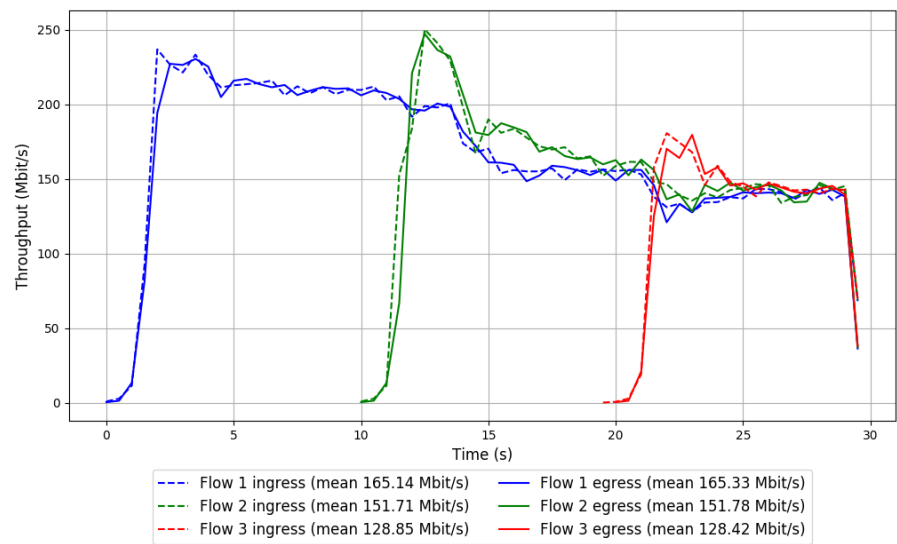
-- Flow 3:

Average throughput: 128.42 Mbit/s

95th percentile per-packet one-way delay: 158.092 ms

Loss rate: 2.61%

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



Run 7: Statistics of Indigo-1-32

Start at: 2018-03-21 07:14:17

End at: 2018-03-21 07:14:47

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 318.50 Mbit/s

95th percentile per-packet one-way delay: 113.693 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 175.50 Mbit/s

95th percentile per-packet one-way delay: 113.395 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 156.87 Mbit/s

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

Loss rate: 1.03%

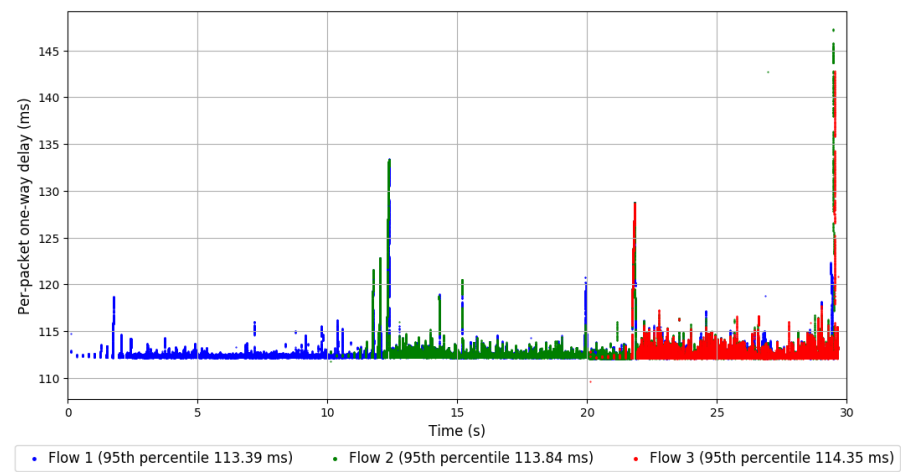
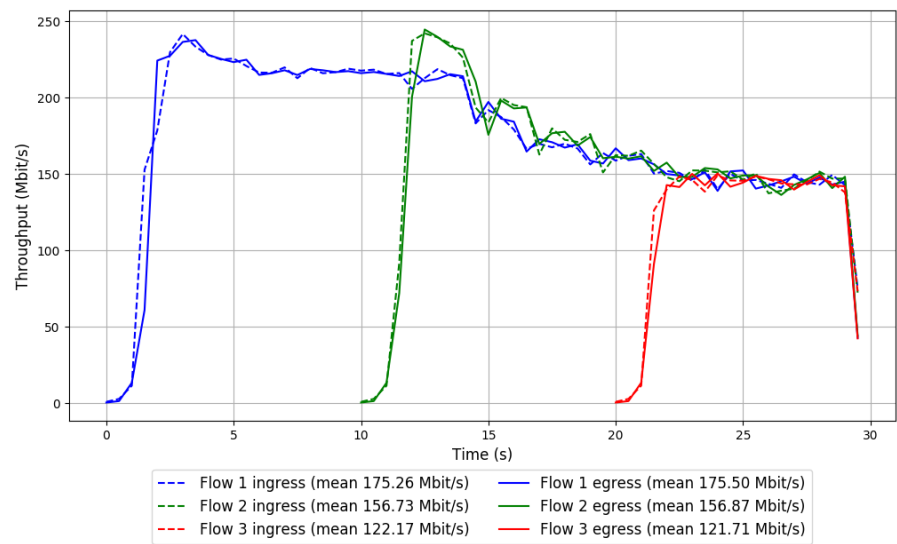
-- Flow 3:

Average throughput: 121.71 Mbit/s

95th percentile per-packet one-way delay: 114.354 ms

Loss rate: 2.53%

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



Run 8: Statistics of Indigo-1-32

Start at: 2018-03-21 07:33:47

End at: 2018-03-21 07:34:17

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 290.18 Mbit/s

95th percentile per-packet one-way delay: 116.257 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 153.05 Mbit/s

95th percentile per-packet one-way delay: 114.013 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 144.22 Mbit/s

95th percentile per-packet one-way delay: 116.537 ms

Loss rate: 1.10%

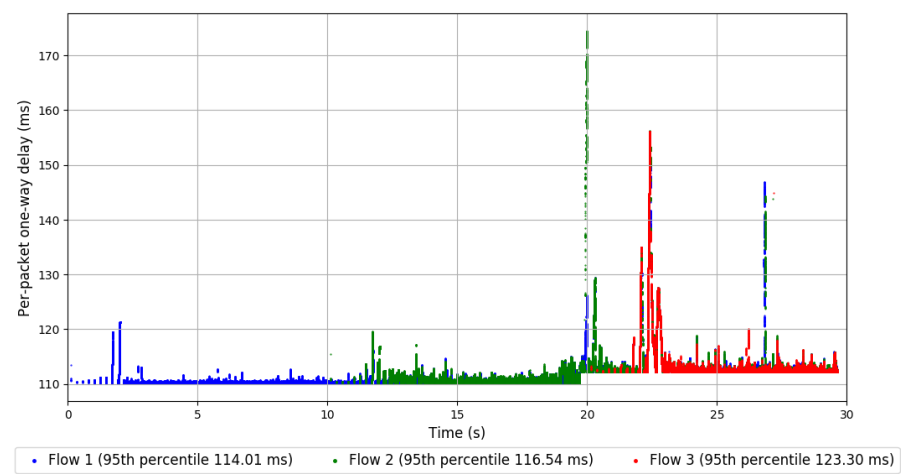
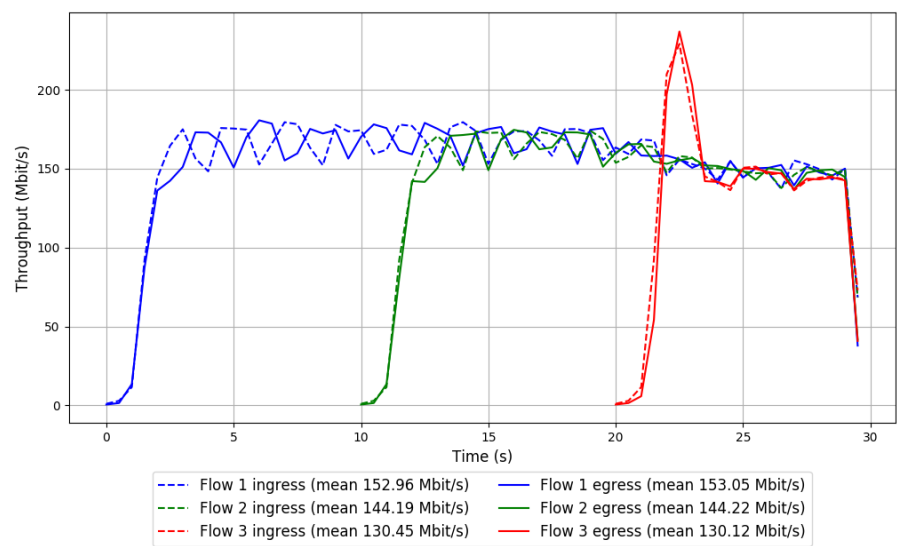
-- Flow 3:

Average throughput: 130.12 Mbit/s

95th percentile per-packet one-way delay: 123.298 ms

Loss rate: 2.57%

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



Run 9: Statistics of Indigo-1-32

Start at: 2018-03-21 07:54:55

End at: 2018-03-21 07:55:25

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 279.38 Mbit/s

95th percentile per-packet one-way delay: 124.111 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 148.96 Mbit/s

95th percentile per-packet one-way delay: 122.775 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 137.77 Mbit/s

95th percentile per-packet one-way delay: 124.219 ms

Loss rate: 1.14%

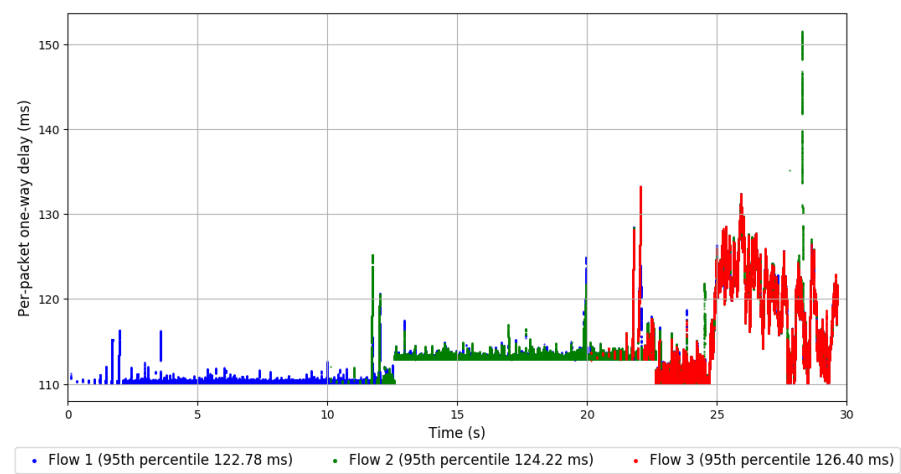
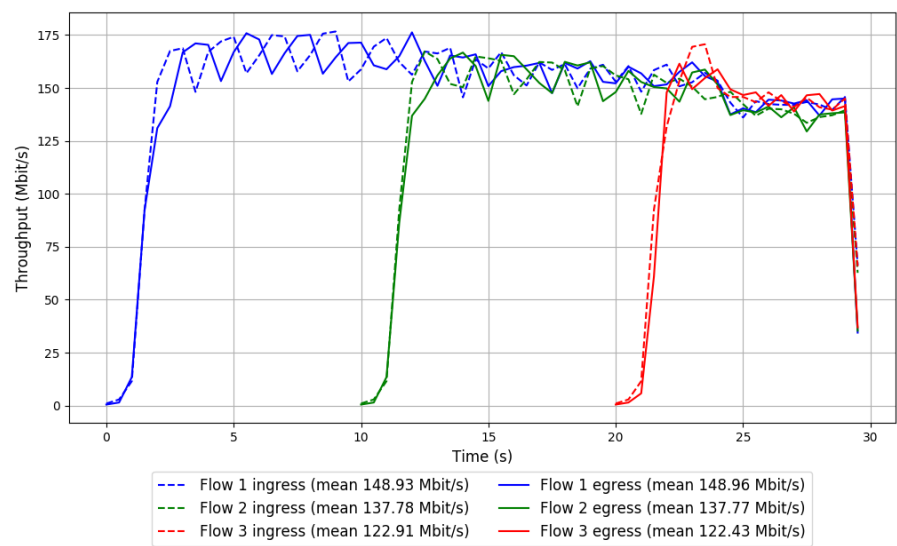
-- Flow 3:

Average throughput: 122.43 Mbit/s

95th percentile per-packet one-way delay: 126.396 ms

Loss rate: 2.68%

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



Run 10: Statistics of Indigo-1-32

Start at: 2018-03-21 08:24:49

End at: 2018-03-21 08:25:19

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 312.62 Mbit/s

95th percentile per-packet one-way delay: 121.000 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 171.23 Mbit/s

95th percentile per-packet one-way delay: 119.926 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 153.03 Mbit/s

95th percentile per-packet one-way delay: 124.475 ms

Loss rate: 1.07%

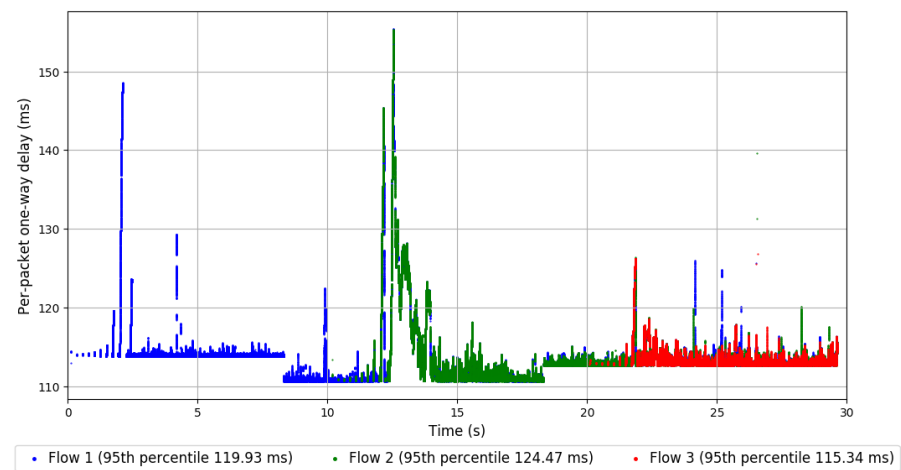
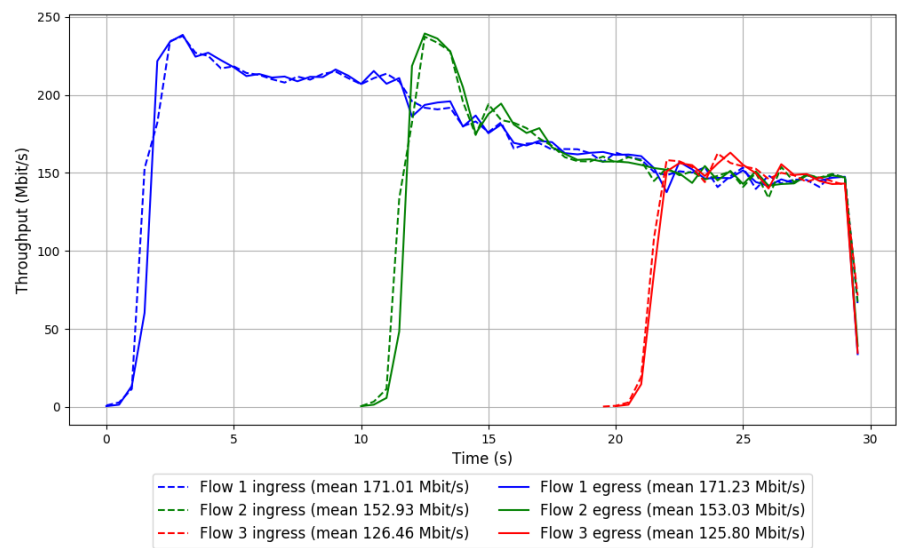
-- Flow 3:

Average throughput: 125.80 Mbit/s

95th percentile per-packet one-way delay: 115.345 ms

Loss rate: 2.80%

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



Run 1: Statistics of Vivace-latency

Start at: 2018-03-21 05:33:28

End at: 2018-03-21 05:33:58

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 405.87 Mbit/s

95th percentile per-packet one-way delay: 113.189 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 233.57 Mbit/s

95th percentile per-packet one-way delay: 112.340 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 191.37 Mbit/s

95th percentile per-packet one-way delay: 113.461 ms

Loss rate: 0.87%

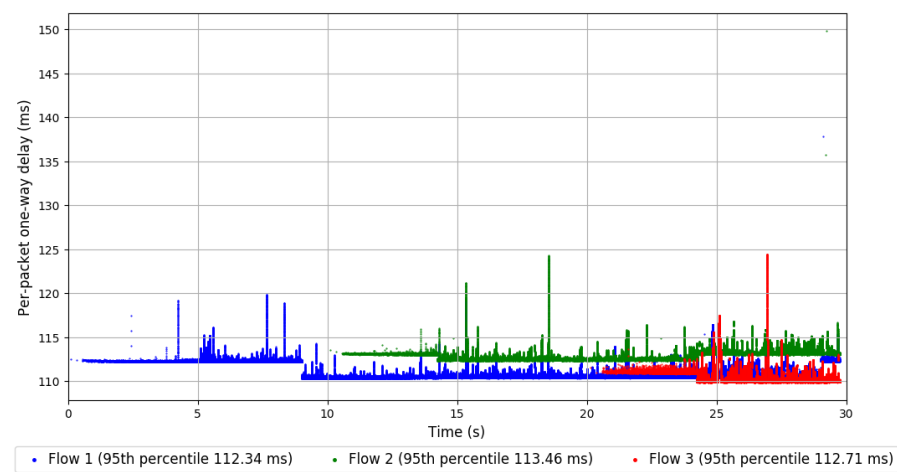
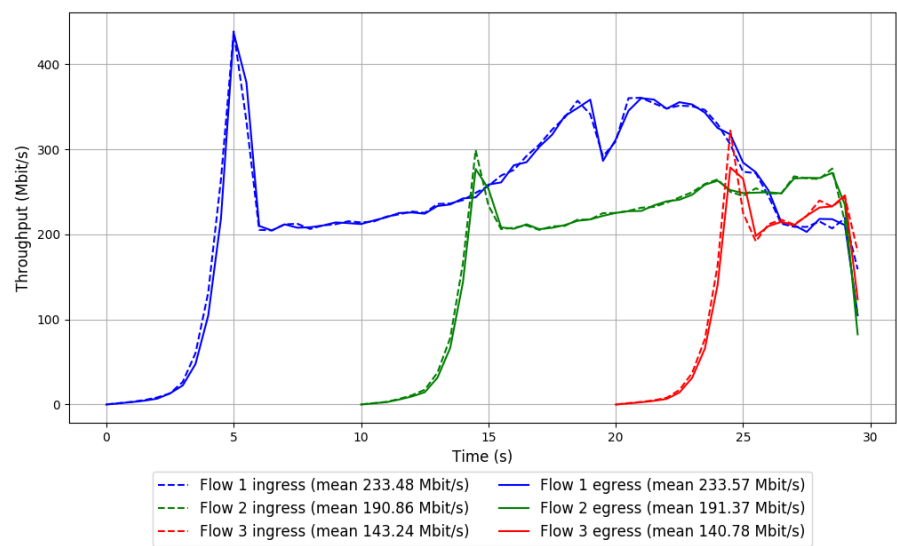
-- Flow 3:

Average throughput: 140.78 Mbit/s

95th percentile per-packet one-way delay: 112.709 ms

Loss rate: 3.93%

Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-03-21 05:52:47

End at: 2018-03-21 05:53:17

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 418.80 Mbit/s

95th percentile per-packet one-way delay: 115.540 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 251.43 Mbit/s

95th percentile per-packet one-way delay: 114.573 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 187.01 Mbit/s

95th percentile per-packet one-way delay: 215.363 ms

Loss rate: 1.96%

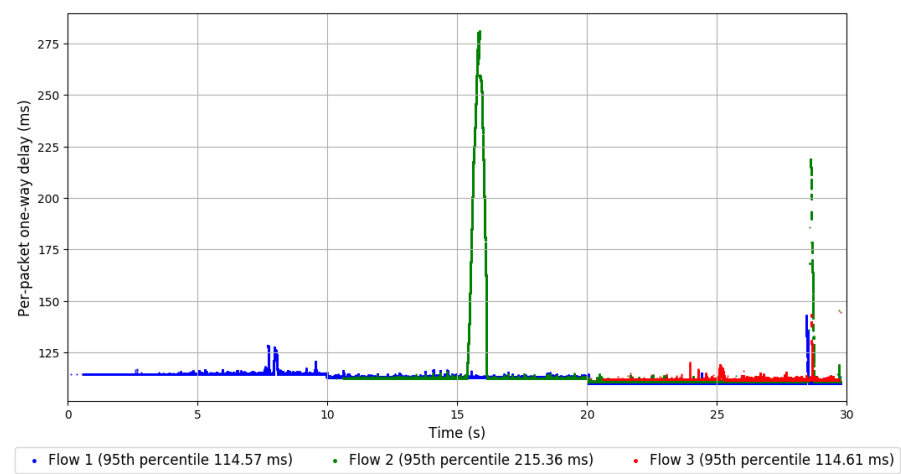
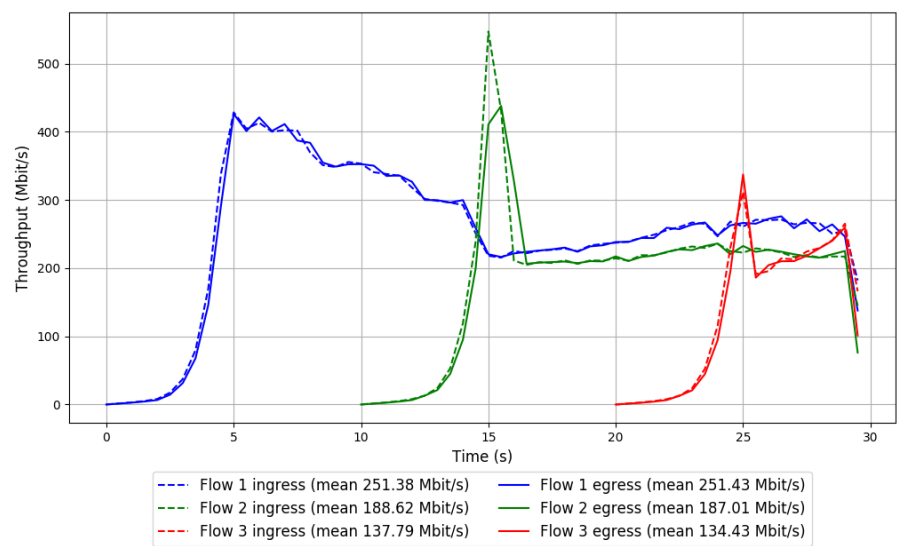
-- Flow 3:

Average throughput: 134.43 Mbit/s

95th percentile per-packet one-way delay: 114.611 ms

Loss rate: 4.63%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-03-21 06:11:43

End at: 2018-03-21 06:12:13

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 362.01 Mbit/s

95th percentile per-packet one-way delay: 120.812 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 209.48 Mbit/s

95th percentile per-packet one-way delay: 127.092 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 167.72 Mbit/s

95th percentile per-packet one-way delay: 118.382 ms

Loss rate: 1.22%

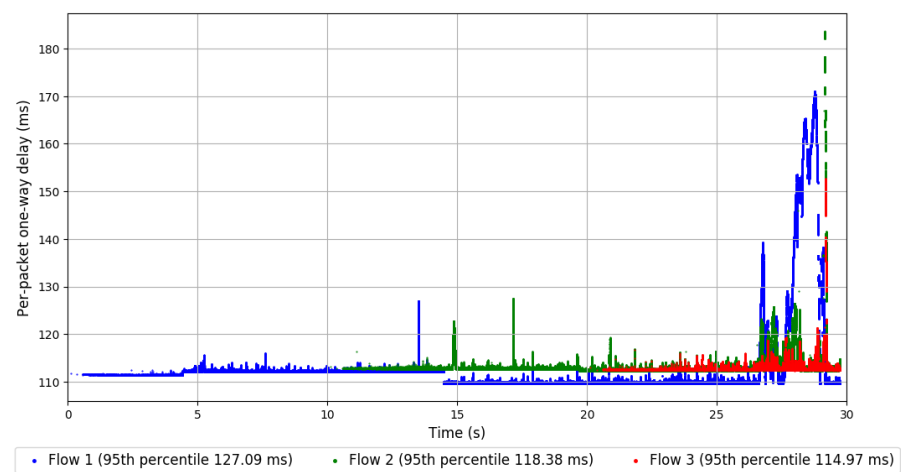
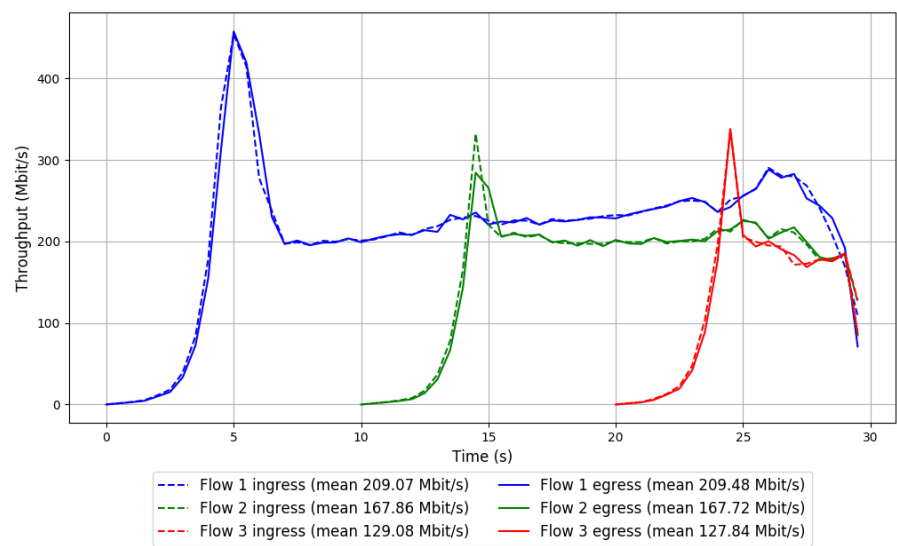
-- Flow 3:

Average throughput: 127.84 Mbit/s

95th percentile per-packet one-way delay: 114.974 ms

Loss rate: 3.24%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-03-21 06:30:58

End at: 2018-03-21 06:31:28

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 450.32 Mbit/s

95th percentile per-packet one-way delay: 115.108 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 285.04 Mbit/s

95th percentile per-packet one-way delay: 114.938 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 183.39 Mbit/s

95th percentile per-packet one-way delay: 114.750 ms

Loss rate: 1.40%

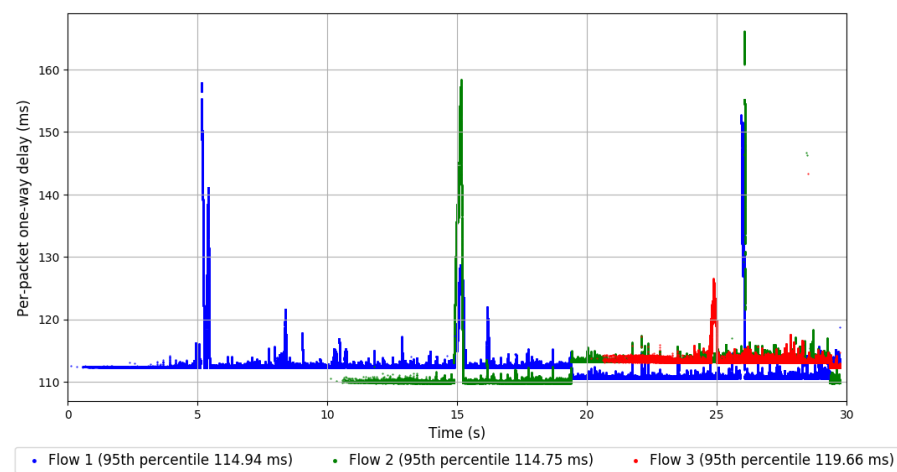
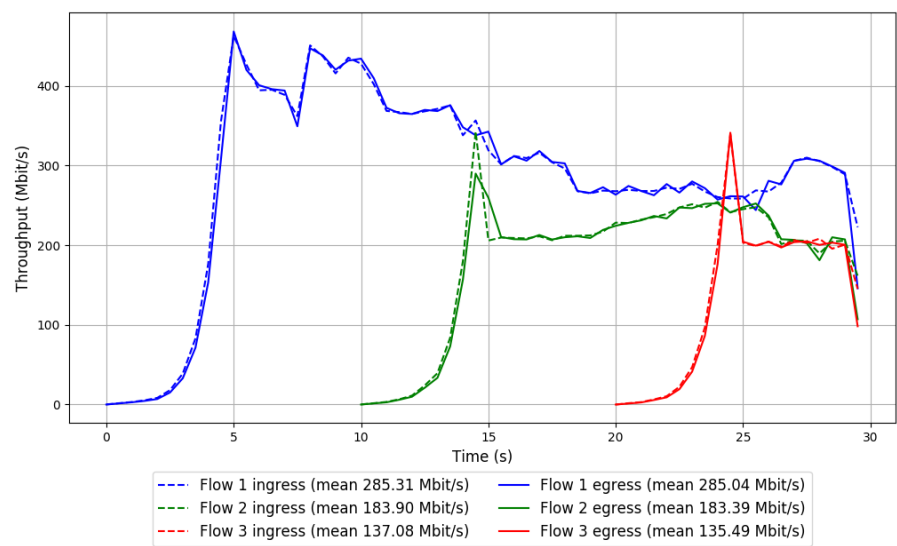
-- Flow 3:

Average throughput: 135.49 Mbit/s

95th percentile per-packet one-way delay: 119.664 ms

Loss rate: 3.42%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-03-21 06:50:17

End at: 2018-03-21 06:50:47

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 371.82 Mbit/s

95th percentile per-packet one-way delay: 112.676 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 230.37 Mbit/s

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

Loss rate: 0.93%

-- Flow 2:

Average throughput: 179.18 Mbit/s

95th percentile per-packet one-way delay: 113.396 ms

Loss rate: 1.46%

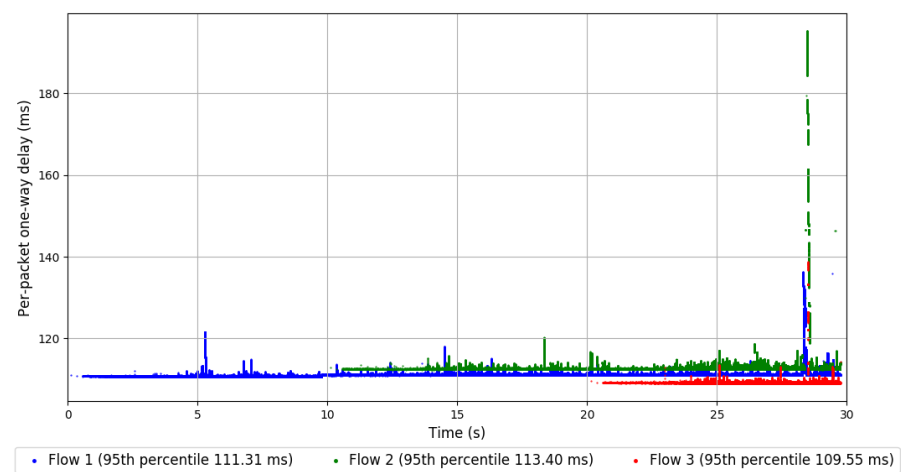
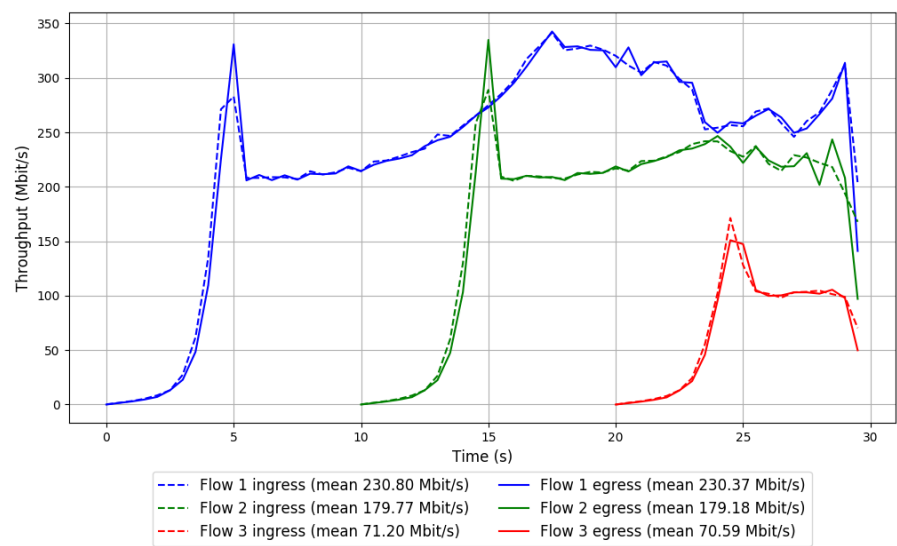
-- Flow 3:

Average throughput: 70.59 Mbit/s

95th percentile per-packet one-way delay: 109.547 ms

Loss rate: 3.06%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-03-21 07:09:46

End at: 2018-03-21 07:10:16

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 405.94 Mbit/s

95th percentile per-packet one-way delay: 114.382 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 238.15 Mbit/s

95th percentile per-packet one-way delay: 112.375 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 181.84 Mbit/s

95th percentile per-packet one-way delay: 113.644 ms

Loss rate: 0.97%

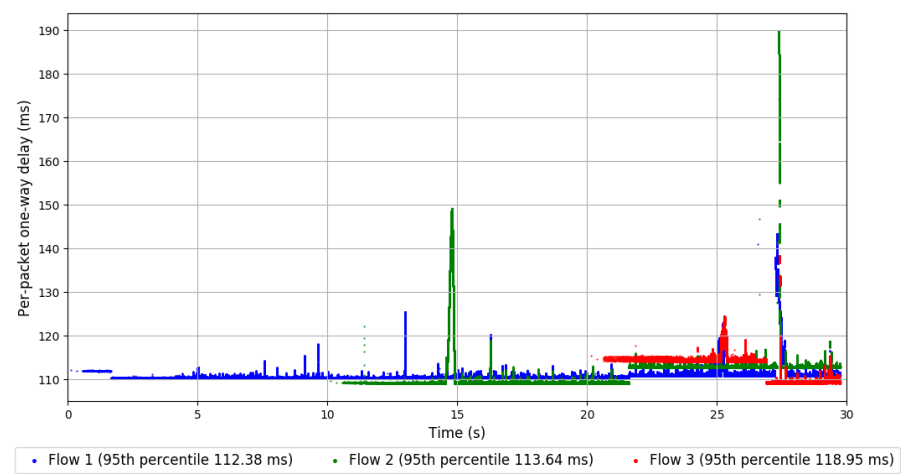
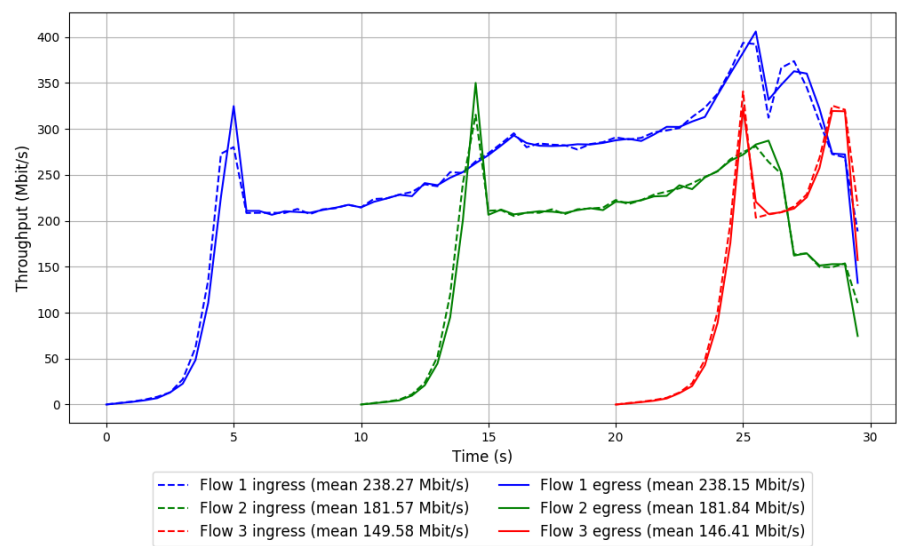
-- Flow 3:

Average throughput: 146.41 Mbit/s

95th percentile per-packet one-way delay: 118.948 ms

Loss rate: 4.38%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-03-21 07:29:16

End at: 2018-03-21 07:29:46

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 414.31 Mbit/s

95th percentile per-packet one-way delay: 113.348 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 245.48 Mbit/s

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

Loss rate: 0.71%

-- Flow 2:

Average throughput: 188.95 Mbit/s

95th percentile per-packet one-way delay: 111.123 ms

Loss rate: 1.35%

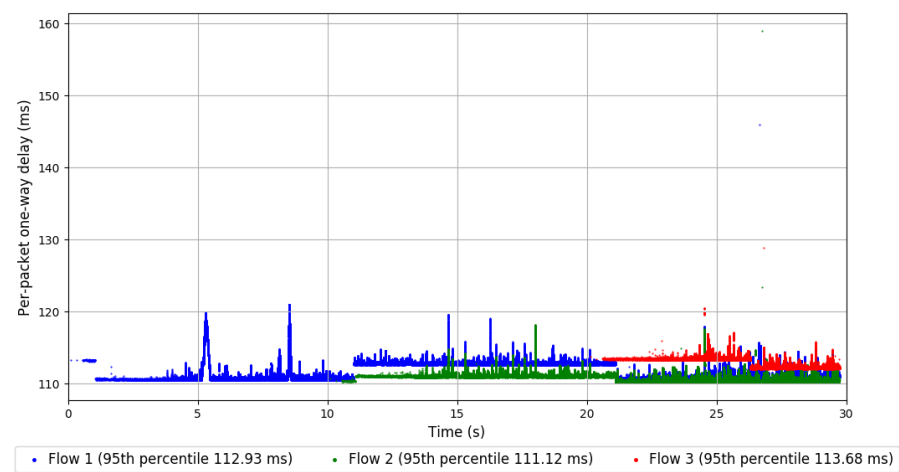
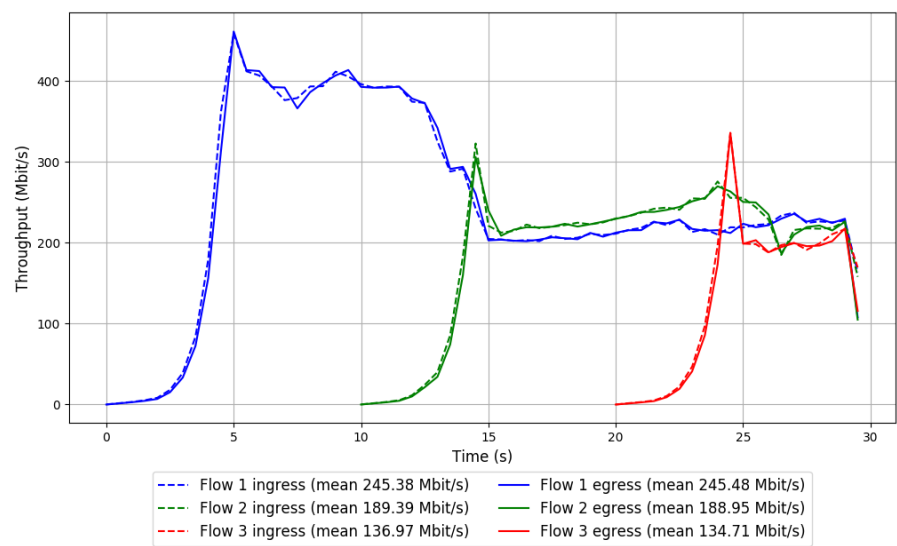
-- Flow 3:

Average throughput: 134.71 Mbit/s

95th percentile per-packet one-way delay: 113.679 ms

Loss rate: 3.91%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-03-21 07:48:44

End at: 2018-03-21 07:49:14

Below is generated by plot.py at 2018-03-21 13:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 429.51 Mbit/s

95th percentile per-packet one-way delay: 119.953 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 264.28 Mbit/s

95th percentile per-packet one-way delay: 122.378 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 184.47 Mbit/s

95th percentile per-packet one-way delay: 116.918 ms

Loss rate: 0.74%

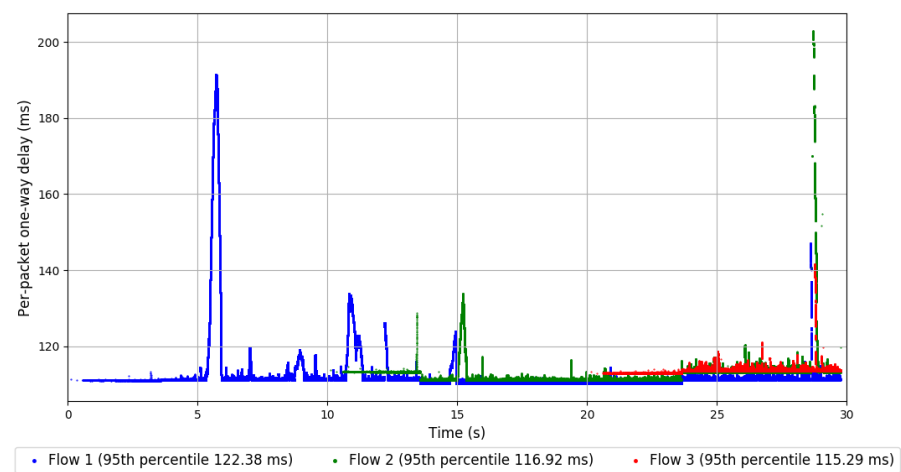
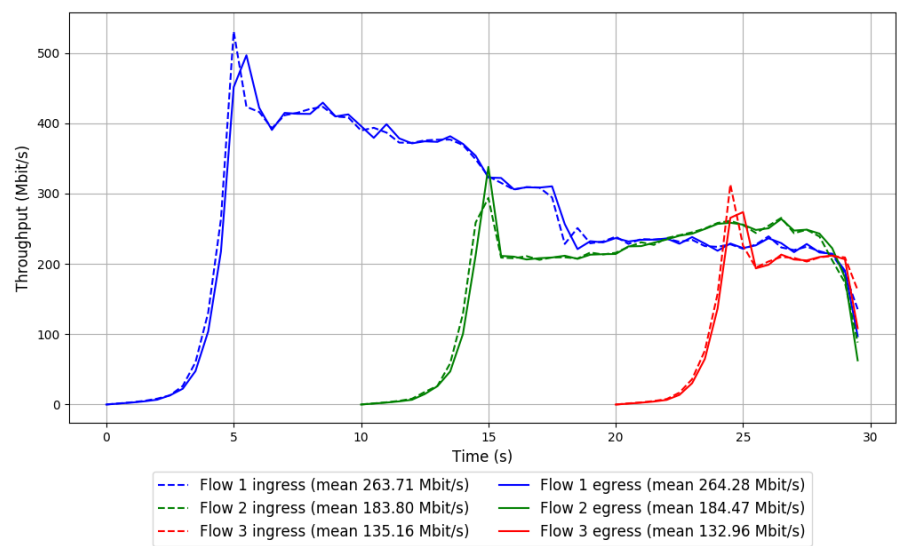
-- Flow 3:

Average throughput: 132.96 Mbit/s

95th percentile per-packet one-way delay: 115.286 ms

Loss rate: 3.87%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-03-21 08:18:32

End at: 2018-03-21 08:19:02

Below is generated by plot.py at 2018-03-21 13:40:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 437.88 Mbit/s

95th percentile per-packet one-way delay: 113.939 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 296.87 Mbit/s

95th percentile per-packet one-way delay: 114.101 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 177.93 Mbit/s

95th percentile per-packet one-way delay: 113.771 ms

Loss rate: 1.39%

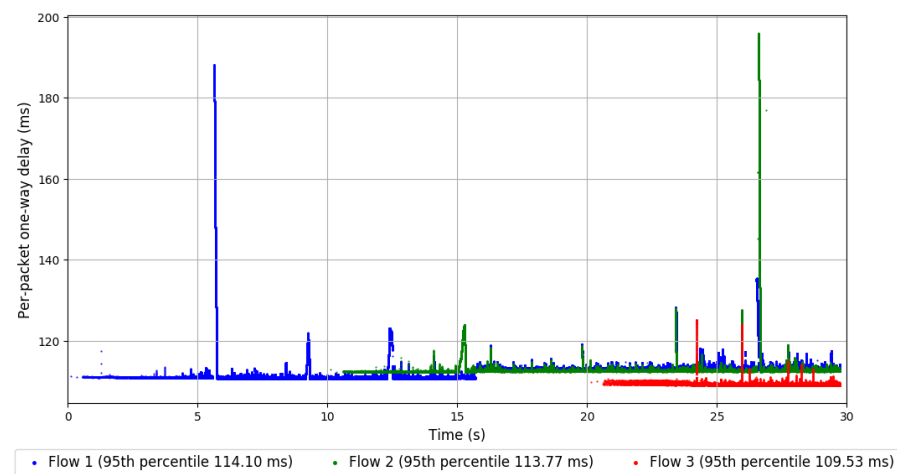
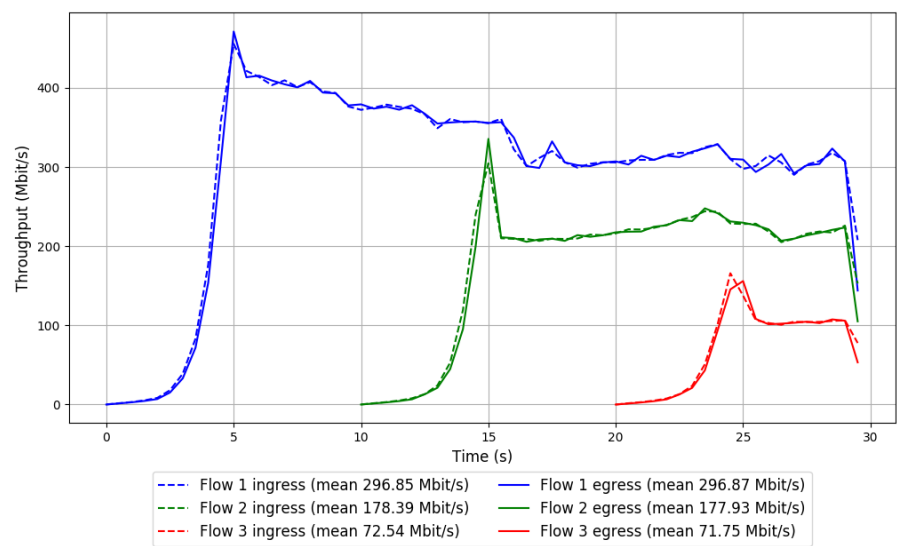
-- Flow 3:

Average throughput: 71.75 Mbit/s

95th percentile per-packet one-way delay: 109.534 ms

Loss rate: 3.32%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-03-21 08:39:46

End at: 2018-03-21 08:40:16

Below is generated by plot.py at 2018-03-21 13:41:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 390.92 Mbit/s

95th percentile per-packet one-way delay: 114.727 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 226.88 Mbit/s

95th percentile per-packet one-way delay: 113.087 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 181.36 Mbit/s

95th percentile per-packet one-way delay: 116.450 ms

Loss rate: 1.58%

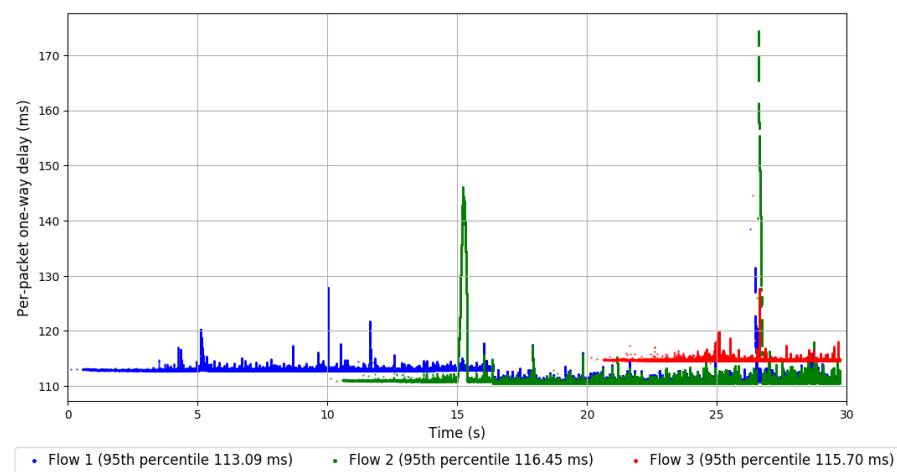
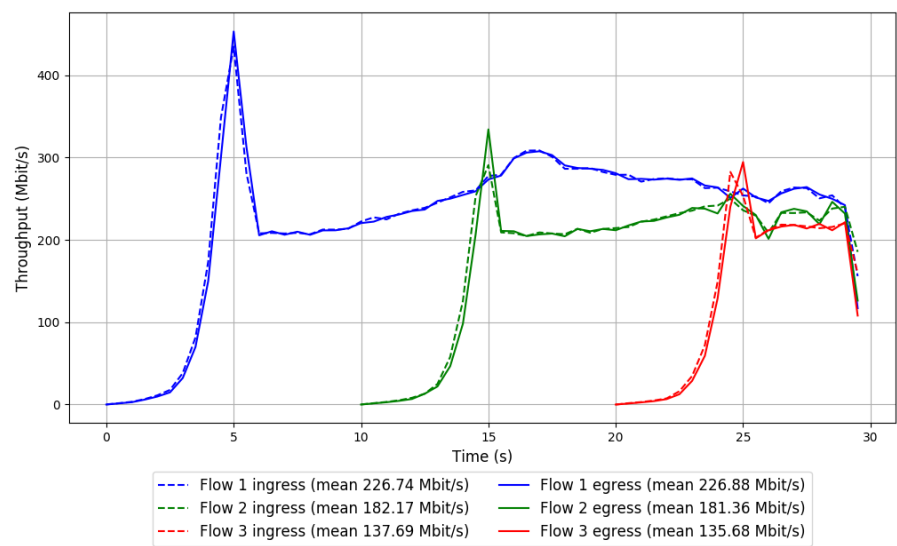
-- Flow 3:

Average throughput: 135.68 Mbit/s

95th percentile per-packet one-way delay: 115.696 ms

Loss rate: 3.75%

Run 10: Report of Vivace-latency — Data Link

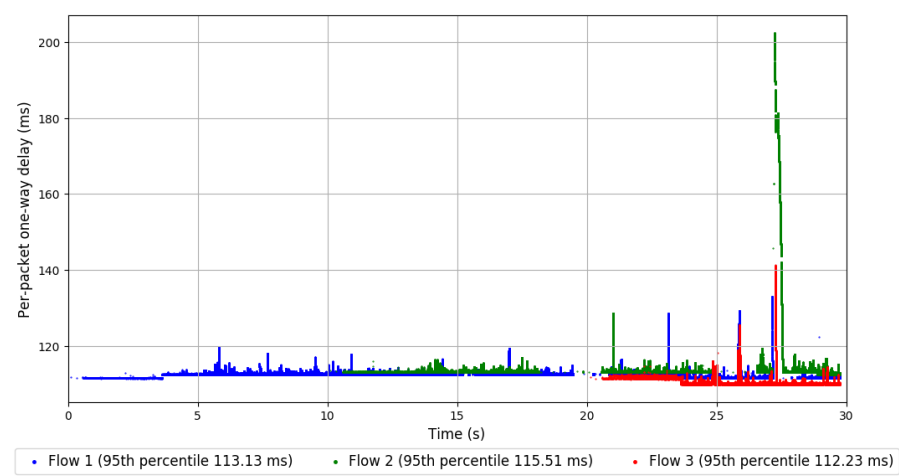
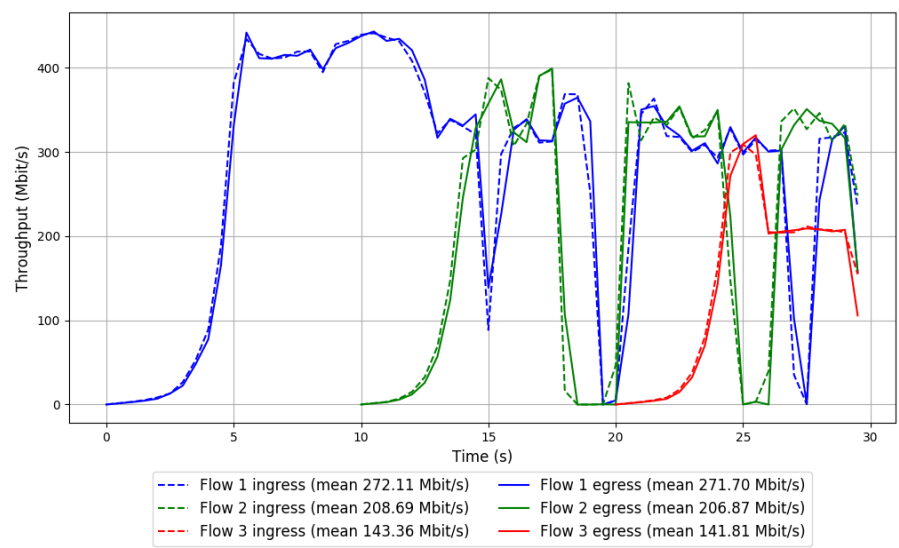


```
Run 1: Statistics of Vivace-loss

Start at: 2018-03-21 05:24:34
End at: 2018-03-21 05:25:04

# Below is generated by plot.py at 2018-03-21 13:42:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 454.73 Mbit/s
95th percentile per-packet one-way delay: 113.844 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 271.70 Mbit/s
95th percentile per-packet one-way delay: 113.134 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 206.87 Mbit/s
95th percentile per-packet one-way delay: 115.512 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 141.81 Mbit/s
95th percentile per-packet one-way delay: 112.226 ms
Loss rate: 3.32%
```

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-03-21 05:43:45

End at: 2018-03-21 05:44:15

Below is generated by plot.py at 2018-03-21 13:43:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 389.94 Mbit/s

95th percentile per-packet one-way delay: 112.799 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 173.34 Mbit/s

95th percentile per-packet one-way delay: 112.076 ms

Loss rate: 1.43%

-- Flow 2:

Average throughput: 252.21 Mbit/s

95th percentile per-packet one-way delay: 113.493 ms

Loss rate: 1.38%

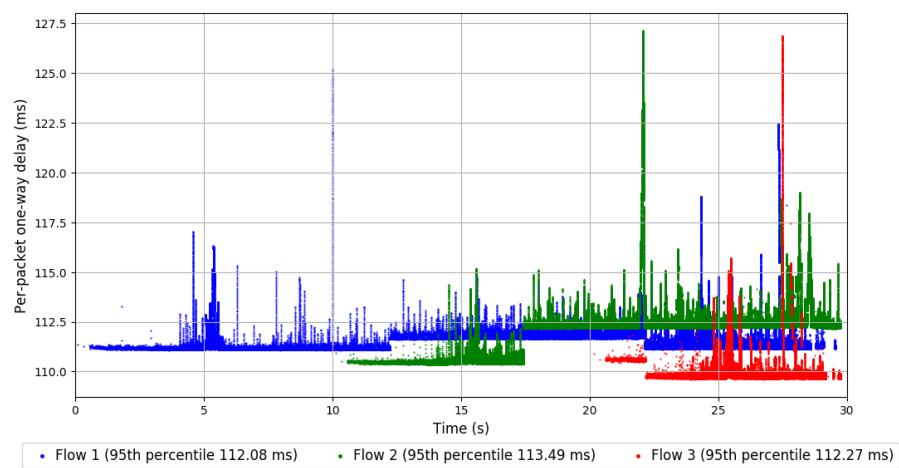
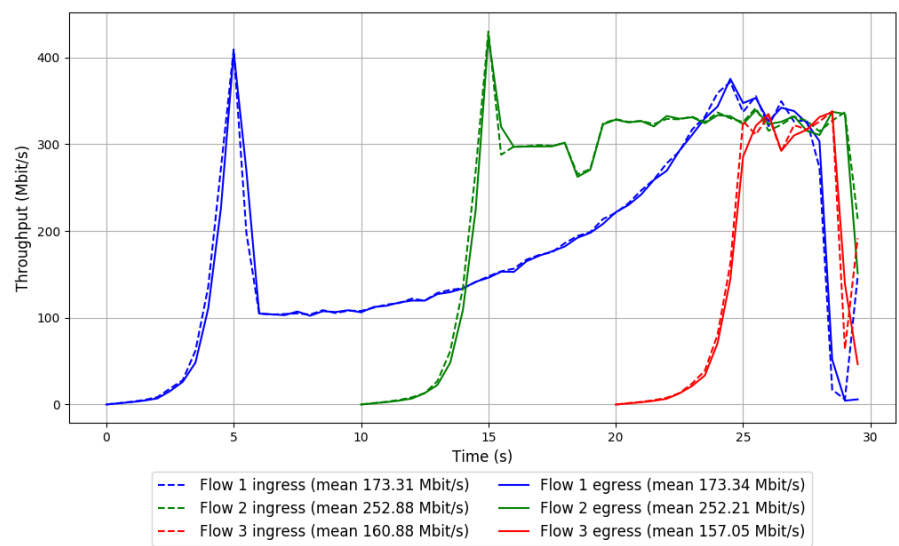
-- Flow 3:

Average throughput: 157.05 Mbit/s

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

Loss rate: 4.59%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-03-21 06:02:49

End at: 2018-03-21 06:03:19

Below is generated by plot.py at 2018-03-21 13:45:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 469.99 Mbit/s

95th percentile per-packet one-way delay: 114.799 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 316.41 Mbit/s

95th percentile per-packet one-way delay: 115.688 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 184.05 Mbit/s

95th percentile per-packet one-way delay: 112.682 ms

Loss rate: 1.14%

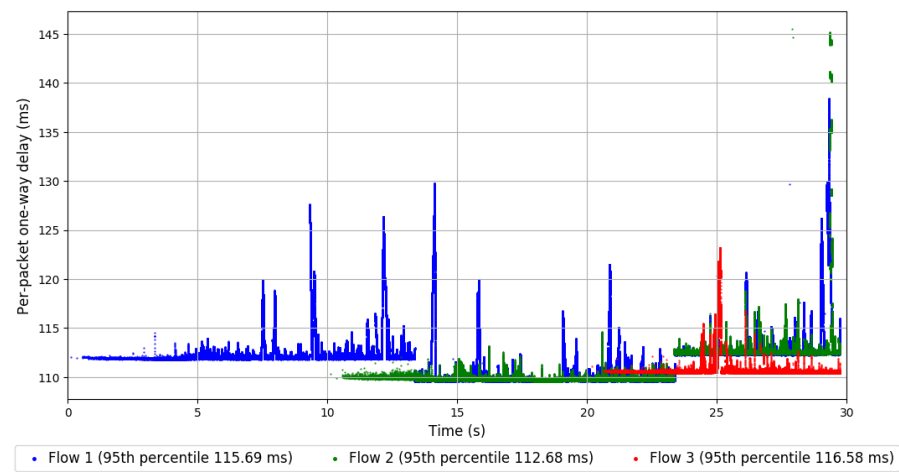
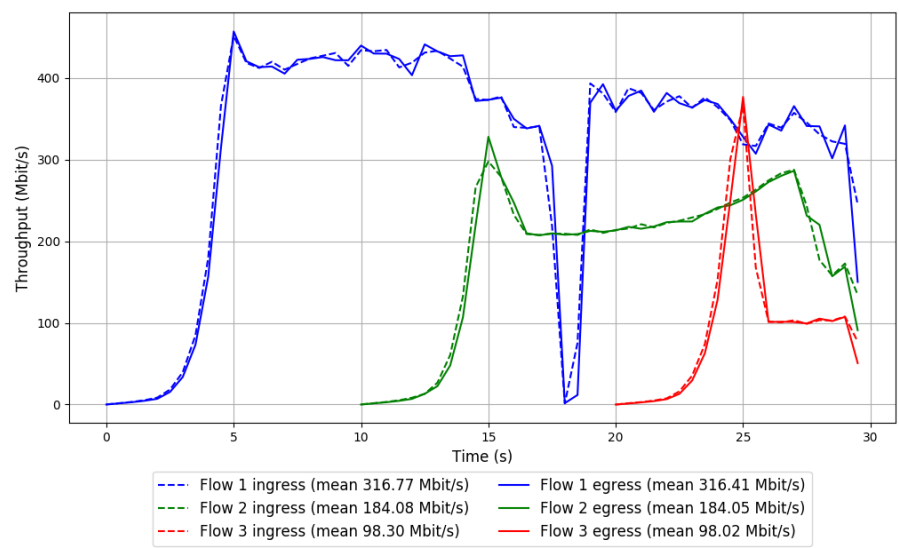
-- Flow 3:

Average throughput: 98.02 Mbit/s

95th percentile per-packet one-way delay: 116.577 ms

Loss rate: 2.56%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-03-21 06:21:44

End at: 2018-03-21 06:22:14

Below is generated by plot.py at 2018-03-21 13:47:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 488.91 Mbit/s

95th percentile per-packet one-way delay: 131.344 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 279.15 Mbit/s

95th percentile per-packet one-way delay: 133.156 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 222.92 Mbit/s

95th percentile per-packet one-way delay: 119.138 ms

Loss rate: 1.70%

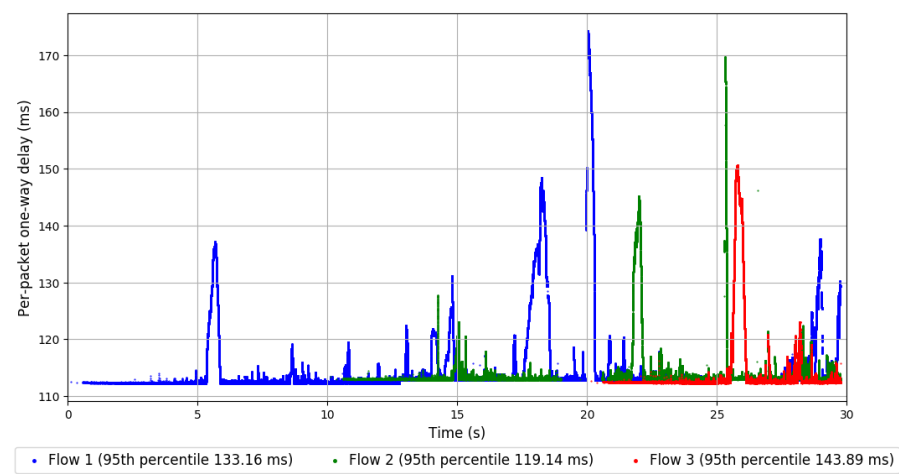
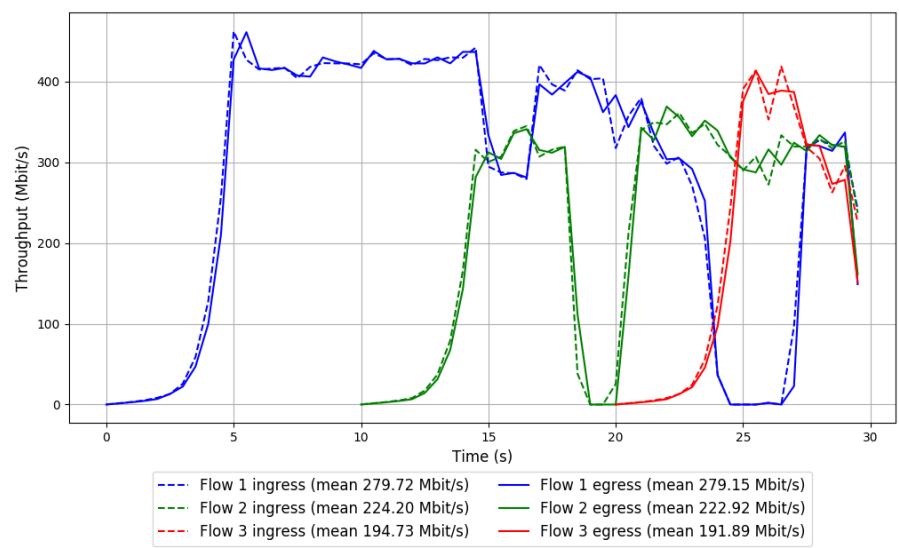
-- Flow 3:

Average throughput: 191.89 Mbit/s

95th percentile per-packet one-way delay: 143.886 ms

Loss rate: 3.68%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-03-21 06:41:14

End at: 2018-03-21 06:41:44

Below is generated by plot.py at 2018-03-21 13:48:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 483.09 Mbit/s

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

Loss rate: 1.30%

-- Flow 1:

Average throughput: 281.45 Mbit/s

95th percentile per-packet one-way delay: 111.590 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 237.42 Mbit/s

95th percentile per-packet one-way delay: 111.131 ms

Loss rate: 1.43%

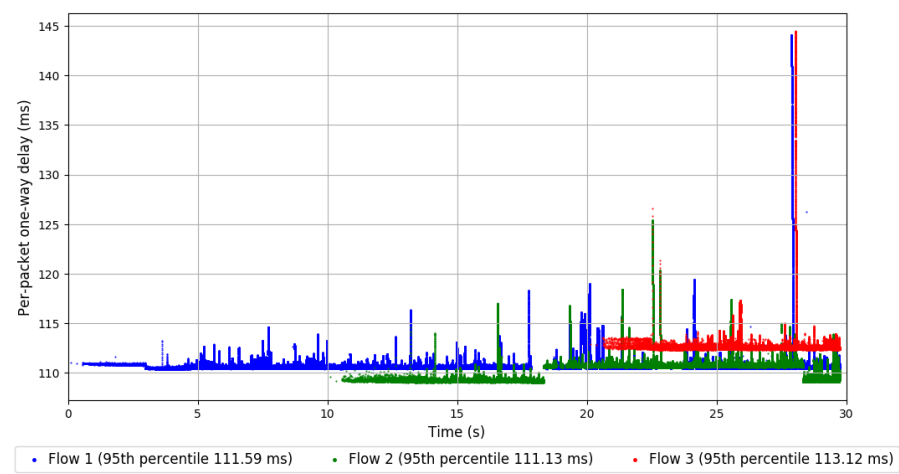
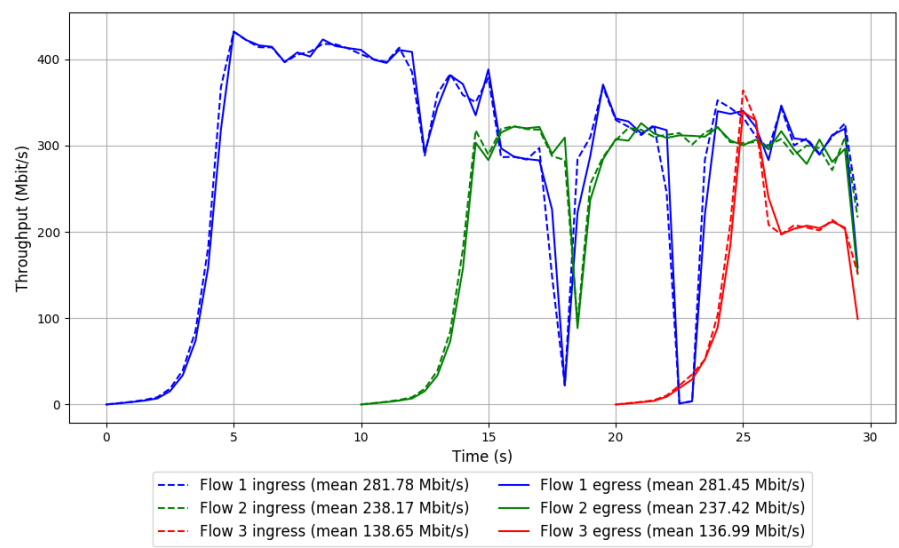
-- Flow 3:

Average throughput: 136.99 Mbit/s

95th percentile per-packet one-way delay: 113.119 ms

Loss rate: 3.56%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-03-21 07:00:25

End at: 2018-03-21 07:00:55

Below is generated by plot.py at 2018-03-21 13:48:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 471.28 Mbit/s

95th percentile per-packet one-way delay: 116.978 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 292.46 Mbit/s

95th percentile per-packet one-way delay: 118.599 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 201.35 Mbit/s

95th percentile per-packet one-way delay: 115.183 ms

Loss rate: 0.57%

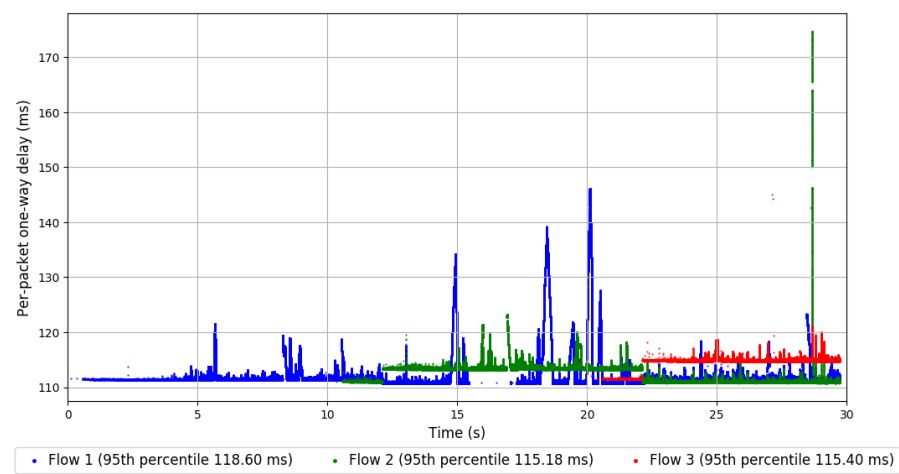
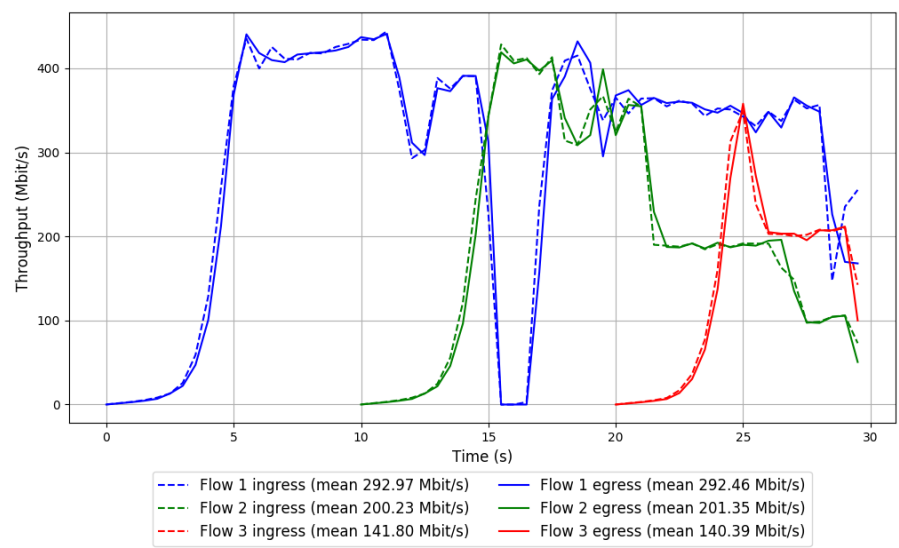
-- Flow 3:

Average throughput: 140.39 Mbit/s

95th percentile per-packet one-way delay: 115.398 ms

Loss rate: 3.24%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-03-21 07:19:50

End at: 2018-03-21 07:20:20

Below is generated by plot.py at 2018-03-21 13:48:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 476.17 Mbit/s

95th percentile per-packet one-way delay: 121.695 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 272.23 Mbit/s

95th percentile per-packet one-way delay: 115.122 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 242.26 Mbit/s

95th percentile per-packet one-way delay: 174.013 ms

Loss rate: 2.02%

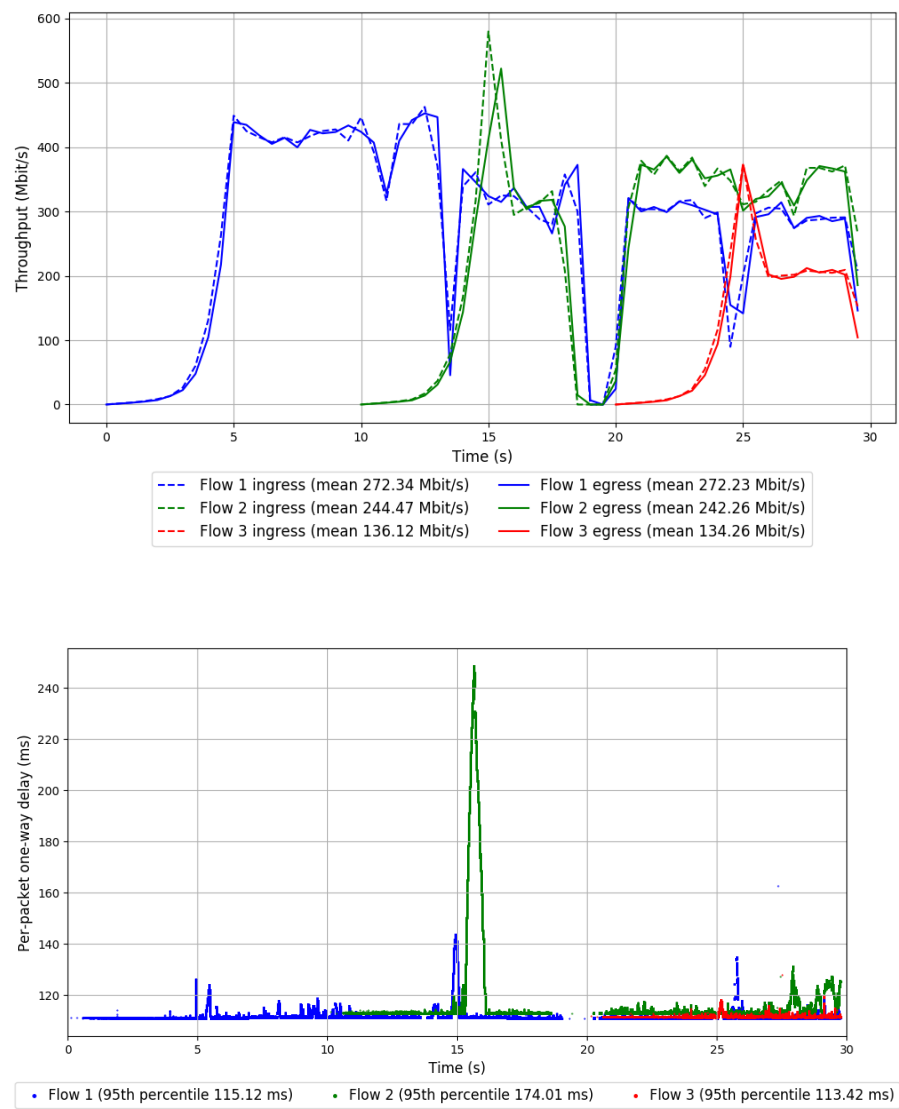
-- Flow 3:

Average throughput: 134.26 Mbit/s

95th percentile per-packet one-way delay: 113.415 ms

Loss rate: 3.60%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-03-21 07:39:34

End at: 2018-03-21 07:40:04

Below is generated by plot.py at 2018-03-21 13:49:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 465.40 Mbit/s

95th percentile per-packet one-way delay: 117.059 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 280.13 Mbit/s

95th percentile per-packet one-way delay: 115.869 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 194.88 Mbit/s

95th percentile per-packet one-way delay: 116.051 ms

Loss rate: 1.56%

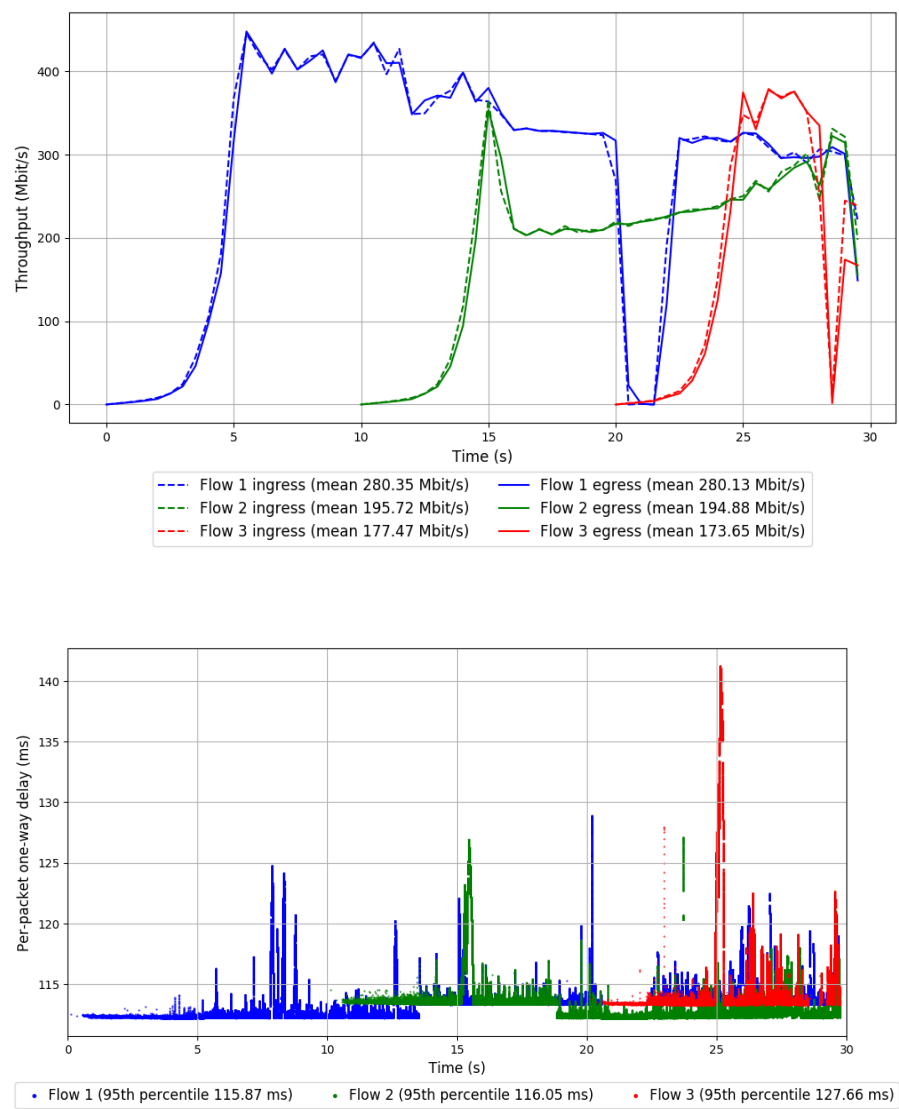
-- Flow 3:

Average throughput: 173.65 Mbit/s

95th percentile per-packet one-way delay: 127.663 ms

Loss rate: 4.39%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-03-21 08:03:12

End at: 2018-03-21 08:03:42

Below is generated by plot.py at 2018-03-21 13:51:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 479.93 Mbit/s

95th percentile per-packet one-way delay: 164.066 ms

Loss rate: 1.41%

-- Flow 1:

Average throughput: 283.75 Mbit/s

95th percentile per-packet one-way delay: 166.583 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 229.50 Mbit/s

95th percentile per-packet one-way delay: 164.537 ms

Loss rate: 1.38%

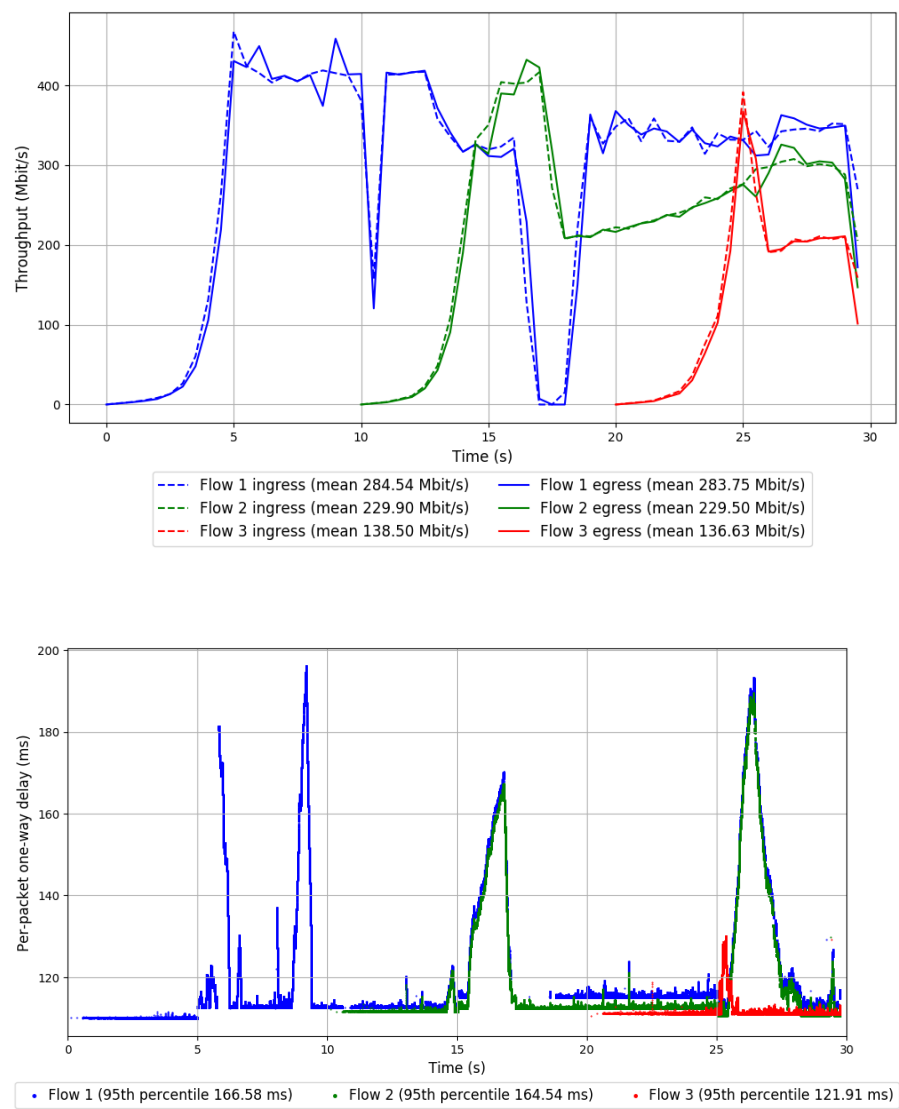
-- Flow 3:

Average throughput: 136.63 Mbit/s

95th percentile per-packet one-way delay: 121.906 ms

Loss rate: 3.73%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-03-21 08:30:44

End at: 2018-03-21 08:31:14

Below is generated by plot.py at 2018-03-21 13:51:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 436.39 Mbit/s

95th percentile per-packet one-way delay: 114.356 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 241.98 Mbit/s

95th percentile per-packet one-way delay: 111.756 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 228.52 Mbit/s

95th percentile per-packet one-way delay: 119.731 ms

Loss rate: 1.01%

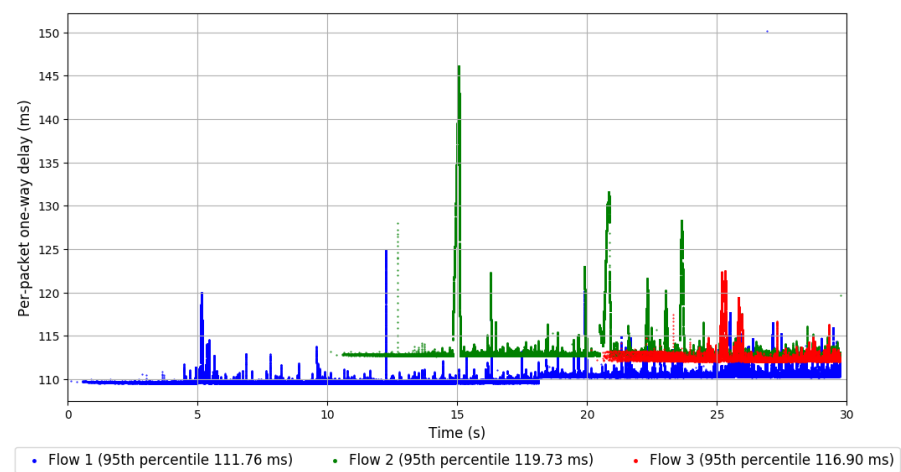
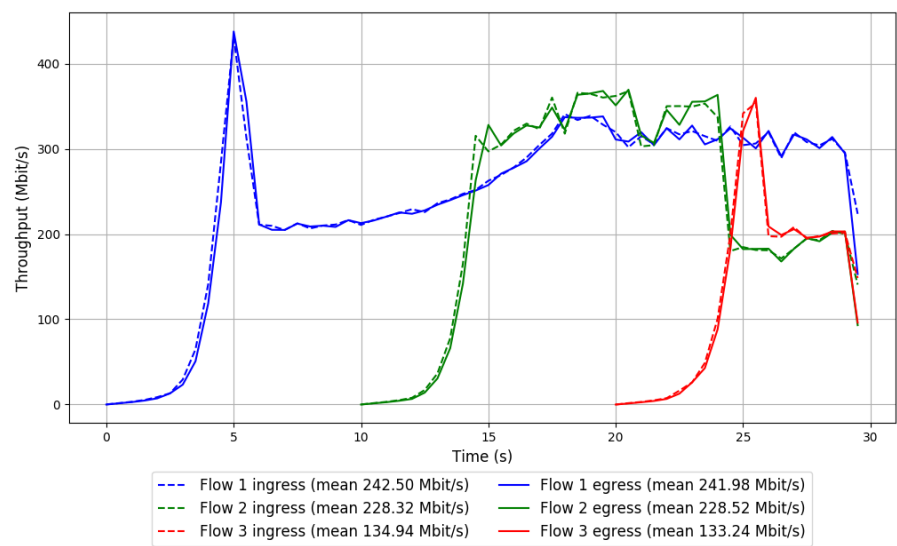
-- Flow 3:

Average throughput: 133.24 Mbit/s

95th percentile per-packet one-way delay: 116.901 ms

Loss rate: 3.52%

Run 10: Report of Vivace-loss — Data Link

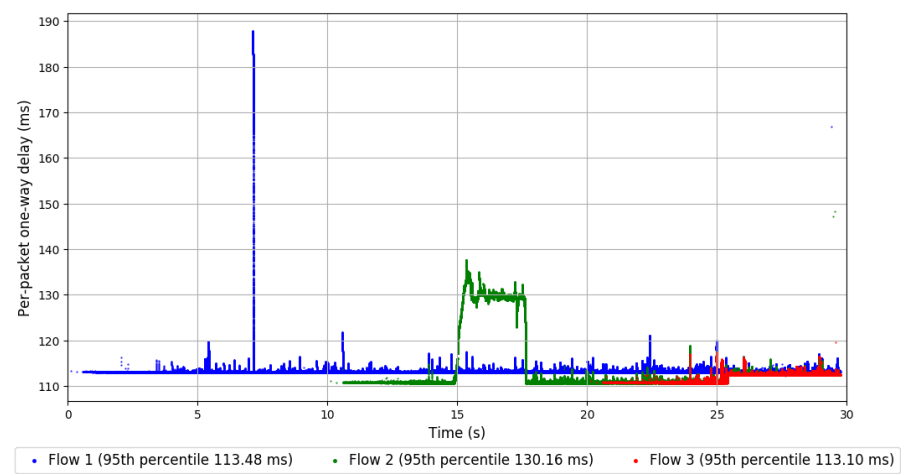
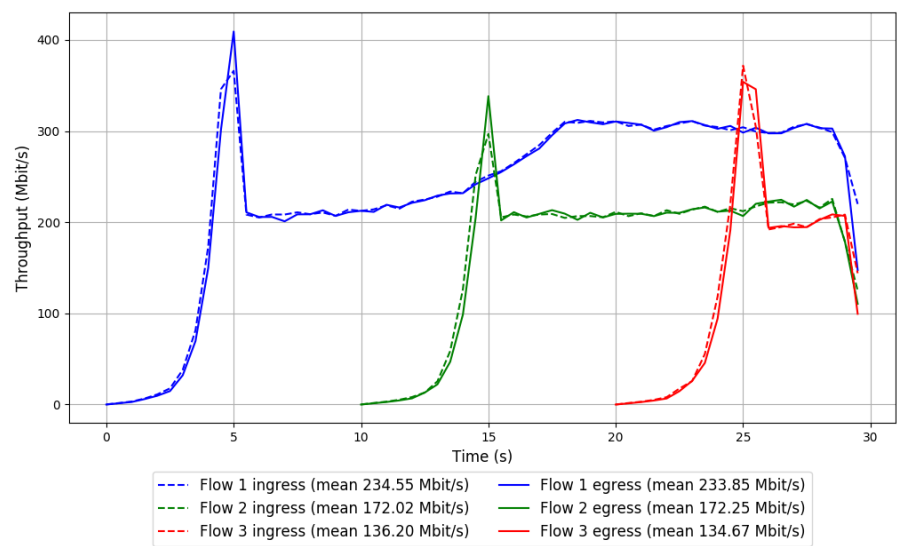


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-03-21 05:17:12
End at: 2018-03-21 05:17:42

# Below is generated by plot.py at 2018-03-21 13:52:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 391.48 Mbit/s
95th percentile per-packet one-way delay: 124.537 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 233.85 Mbit/s
95th percentile per-packet one-way delay: 113.485 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 172.25 Mbit/s
95th percentile per-packet one-way delay: 130.156 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 134.67 Mbit/s
95th percentile per-packet one-way delay: 113.098 ms
Loss rate: 3.36%
```


Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-03-21 05:36:35

End at: 2018-03-21 05:37:05

Below is generated by plot.py at 2018-03-21 13:54:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 434.68 Mbit/s

95th percentile per-packet one-way delay: 112.603 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 281.68 Mbit/s

95th percentile per-packet one-way delay: 111.395 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 166.21 Mbit/s

95th percentile per-packet one-way delay: 113.091 ms

Loss rate: 0.88%

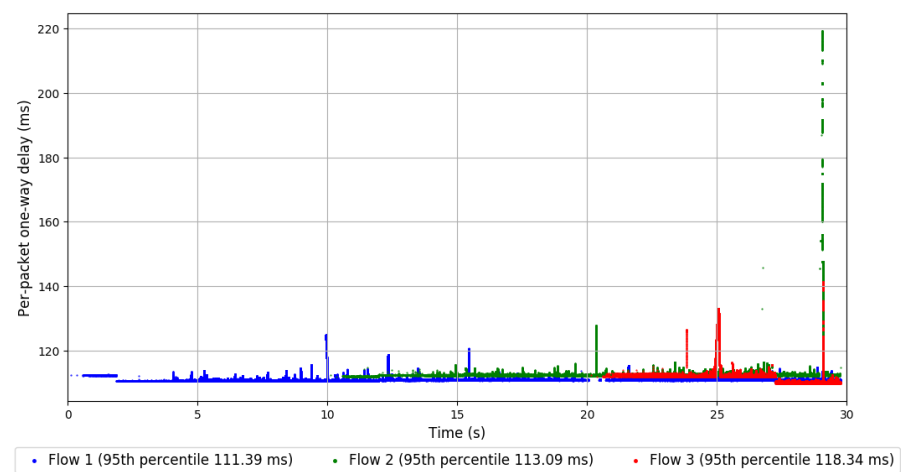
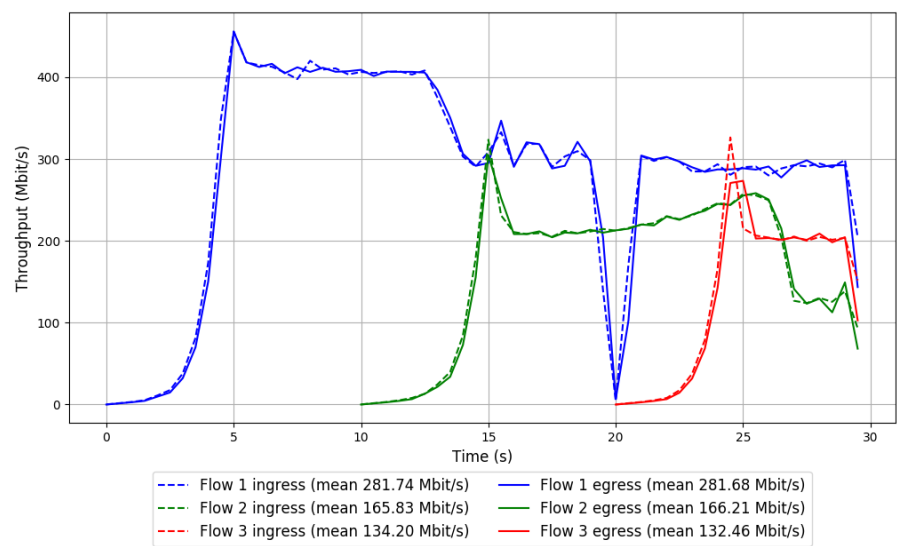
-- Flow 3:

Average throughput: 132.46 Mbit/s

95th percentile per-packet one-way delay: 118.339 ms

Loss rate: 3.55%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-03-21 05:55:54

End at: 2018-03-21 05:56:24

Below is generated by plot.py at 2018-03-21 13:55:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 396.61 Mbit/s

95th percentile per-packet one-way delay: 117.896 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 257.65 Mbit/s

95th percentile per-packet one-way delay: 121.396 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 174.83 Mbit/s

95th percentile per-packet one-way delay: 114.667 ms

Loss rate: 1.46%

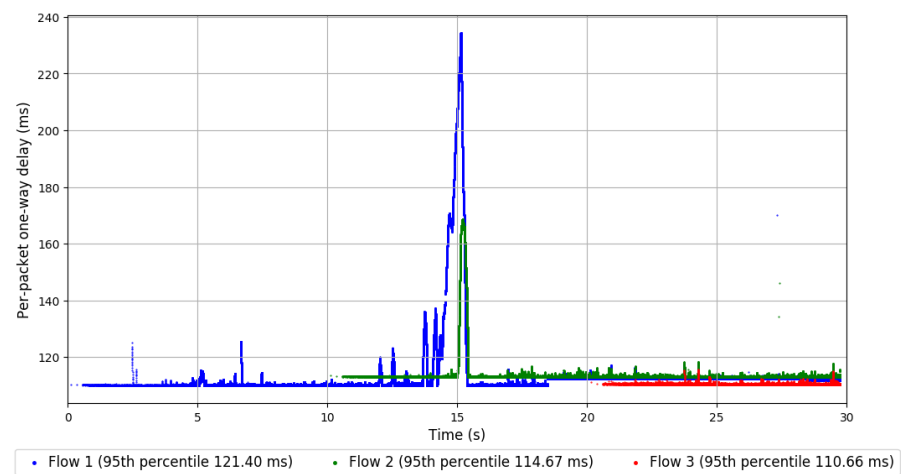
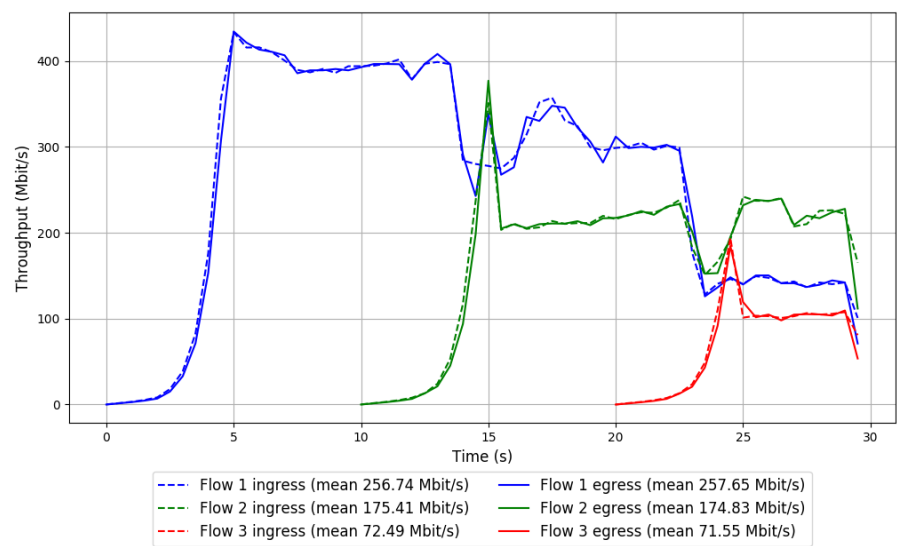
-- Flow 3:

Average throughput: 71.55 Mbit/s

95th percentile per-packet one-way delay: 110.661 ms

Loss rate: 3.54%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-03-21 06:14:46

End at: 2018-03-21 06:15:16

Below is generated by plot.py at 2018-03-21 13:55:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 442.65 Mbit/s

95th percentile per-packet one-way delay: 114.500 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 264.31 Mbit/s

95th percentile per-packet one-way delay: 114.853 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 201.75 Mbit/s

95th percentile per-packet one-way delay: 113.479 ms

Loss rate: 1.59%

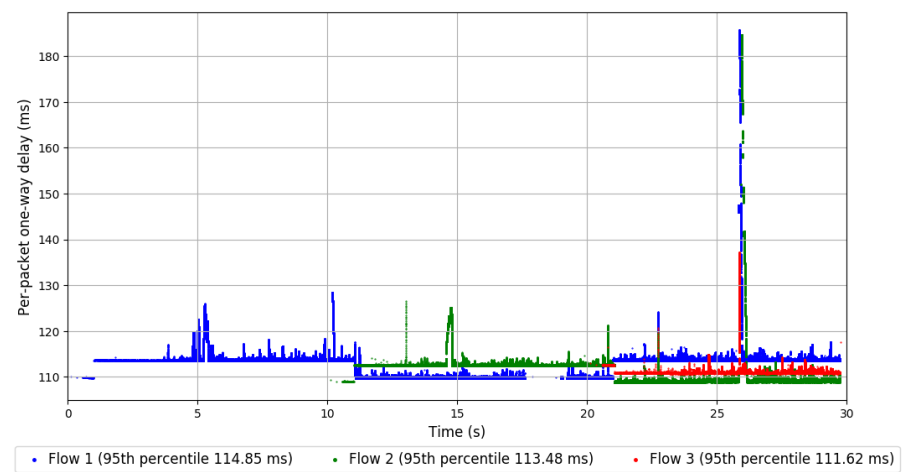
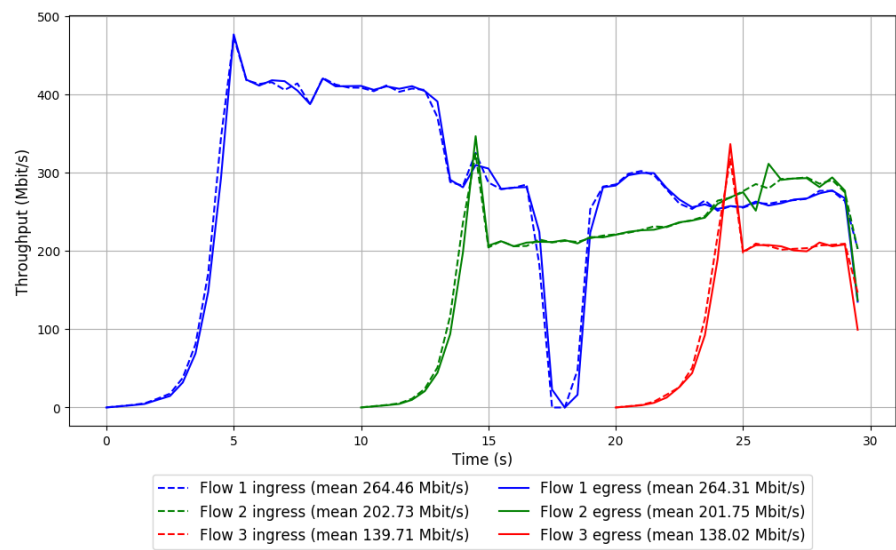
-- Flow 3:

Average throughput: 138.02 Mbit/s

95th percentile per-packet one-way delay: 111.622 ms

Loss rate: 3.40%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-03-21 06:34:05

End at: 2018-03-21 06:34:35

Below is generated by plot.py at 2018-03-21 13:55:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 413.58 Mbit/s

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

Loss rate: 1.10%

-- Flow 1:

Average throughput: 256.65 Mbit/s

95th percentile per-packet one-way delay: 109.711 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 168.77 Mbit/s

95th percentile per-packet one-way delay: 113.076 ms

Loss rate: 0.87%

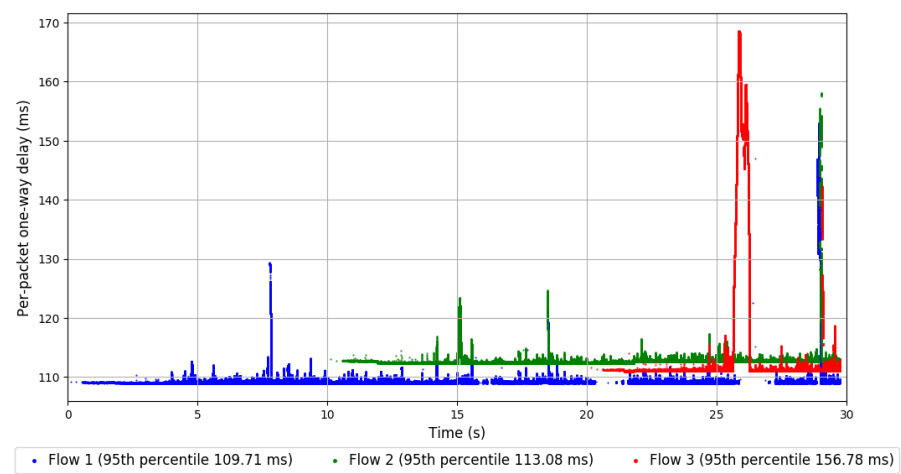
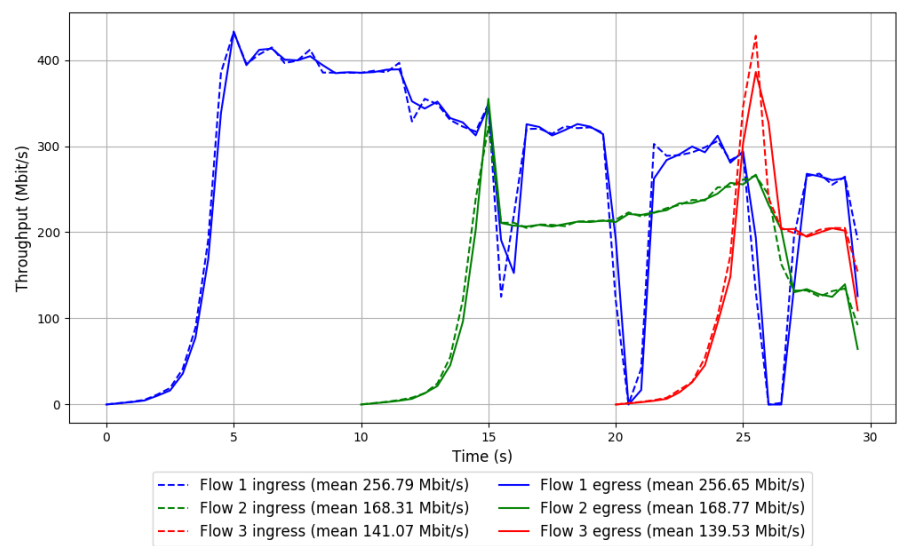
-- Flow 3:

Average throughput: 139.53 Mbit/s

95th percentile per-packet one-way delay: 156.783 ms

Loss rate: 3.35%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-03-21 06:53:23

End at: 2018-03-21 06:53:53

Below is generated by plot.py at 2018-03-21 13:57:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 453.17 Mbit/s

95th percentile per-packet one-way delay: 114.489 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 239.31 Mbit/s

95th percentile per-packet one-way delay: 113.032 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 262.10 Mbit/s

95th percentile per-packet one-way delay: 116.404 ms

Loss rate: 1.40%

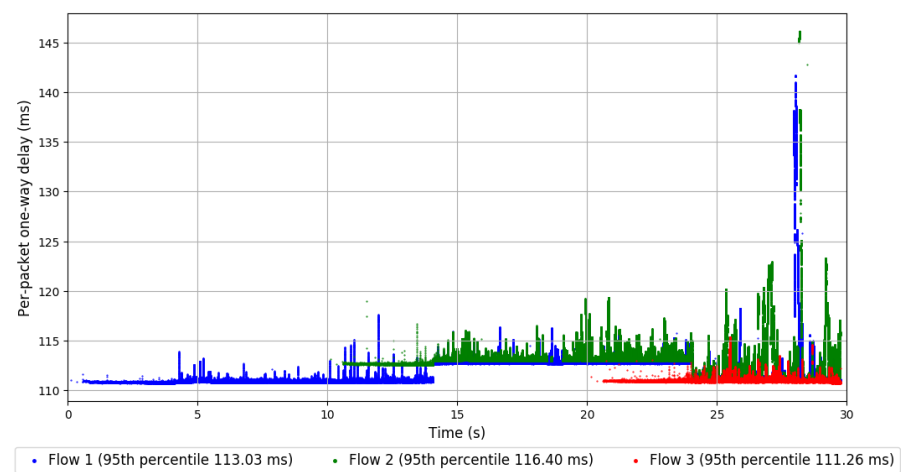
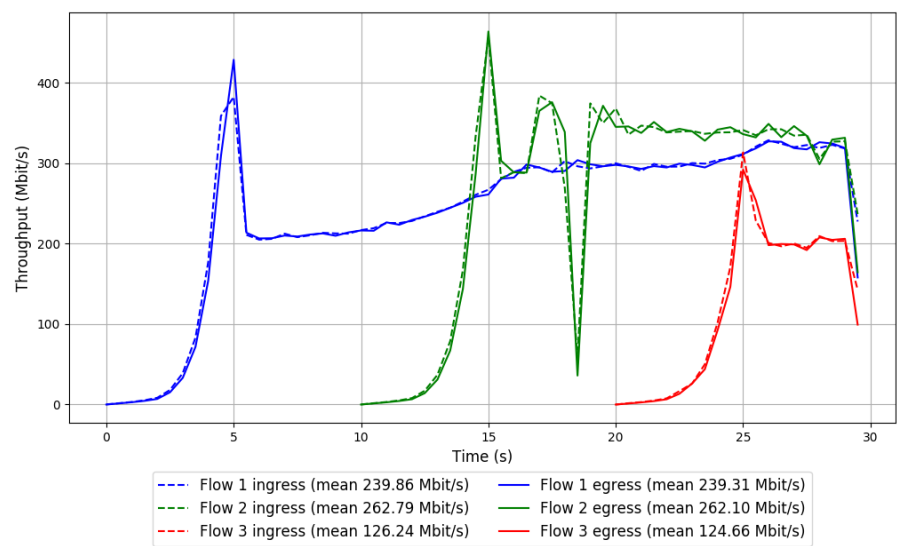
-- Flow 3:

Average throughput: 124.66 Mbit/s

95th percentile per-packet one-way delay: 111.258 ms

Loss rate: 3.50%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-03-21 07:12:55

End at: 2018-03-21 07:13:25

Below is generated by plot.py at 2018-03-21 13:57:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 439.45 Mbit/s

95th percentile per-packet one-way delay: 114.982 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 271.89 Mbit/s

95th percentile per-packet one-way delay: 115.130 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 185.78 Mbit/s

95th percentile per-packet one-way delay: 115.957 ms

Loss rate: 1.04%

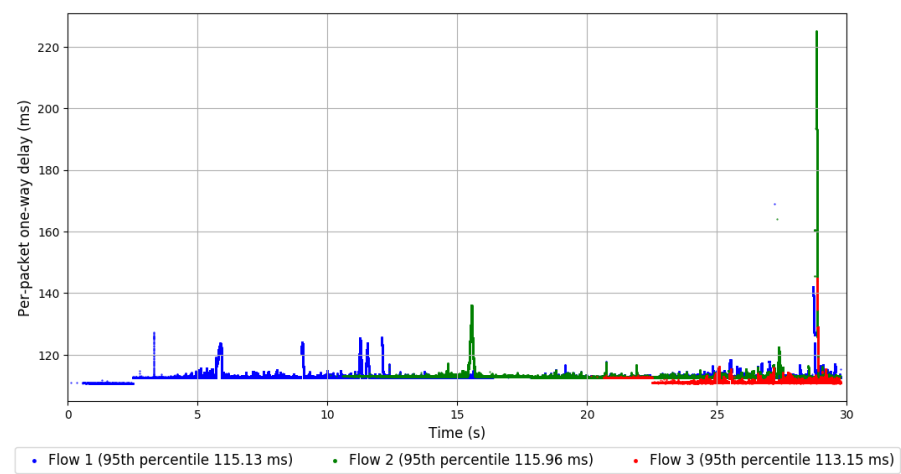
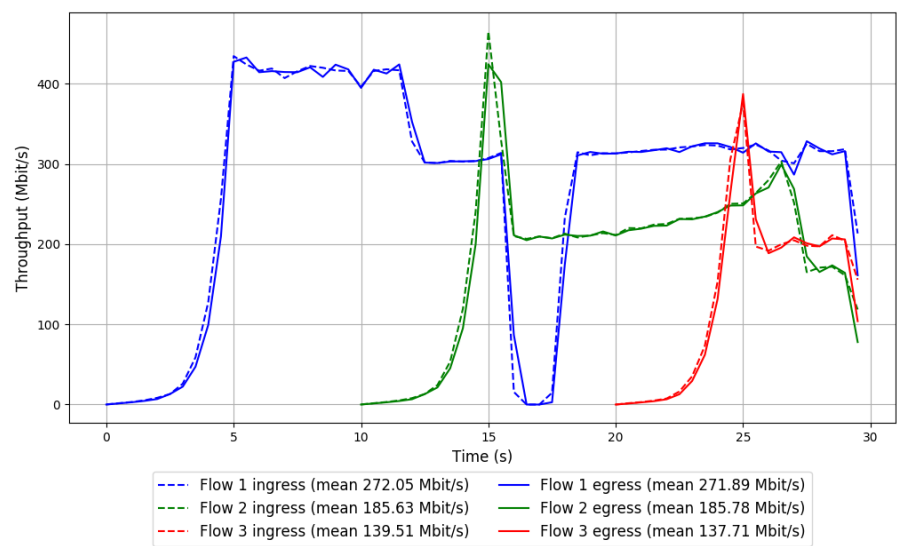
-- Flow 3:

Average throughput: 137.71 Mbit/s

95th percentile per-packet one-way delay: 113.148 ms

Loss rate: 3.54%

Run 7: Report of Vivace-LTE — Data Link



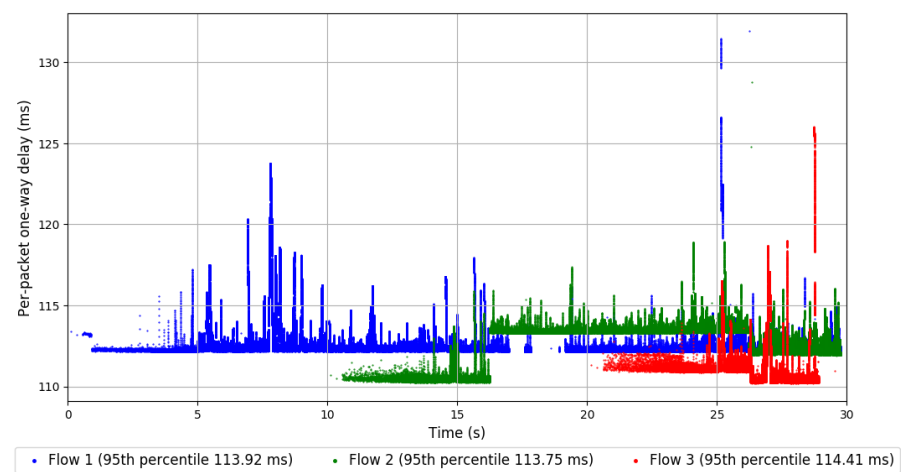
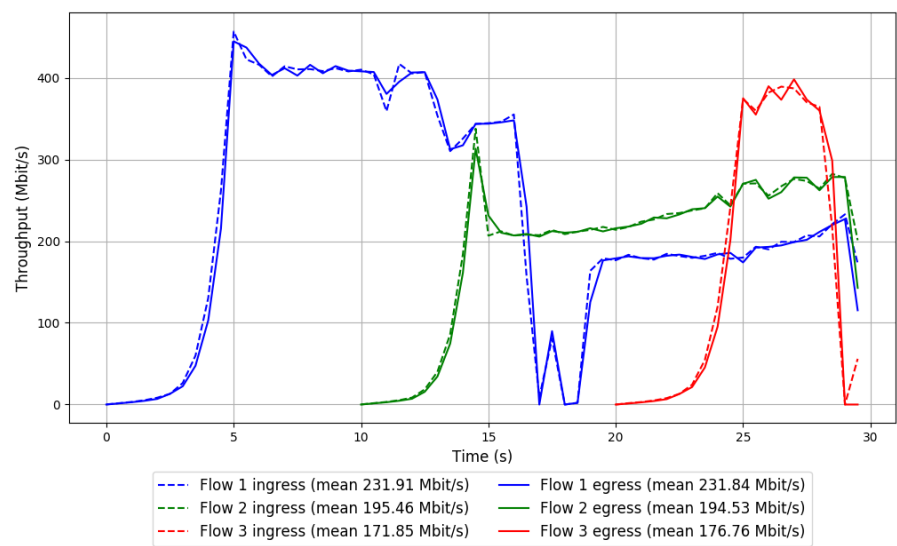
Run 8: Statistics of Vivace-LTE

Start at: 2018-03-21 07:32:26

End at: 2018-03-21 07:32:56

```
# Below is generated by plot.py at 2018-03-21 13:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 416.55 Mbit/s
95th percentile per-packet one-way delay: 113.820 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 231.84 Mbit/s
95th percentile per-packet one-way delay: 113.921 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 194.53 Mbit/s
95th percentile per-packet one-way delay: 113.747 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 176.76 Mbit/s
95th percentile per-packet one-way delay: 114.407 ms
Loss rate: 1.66%
```

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-03-21 07:52:03

End at: 2018-03-21 07:52:33

Below is generated by plot.py at 2018-03-21 13:57:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 410.35 Mbit/s

95th percentile per-packet one-way delay: 132.581 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 287.73 Mbit/s

95th percentile per-packet one-way delay: 125.168 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 120.82 Mbit/s

95th percentile per-packet one-way delay: 212.396 ms

Loss rate: 1.83%

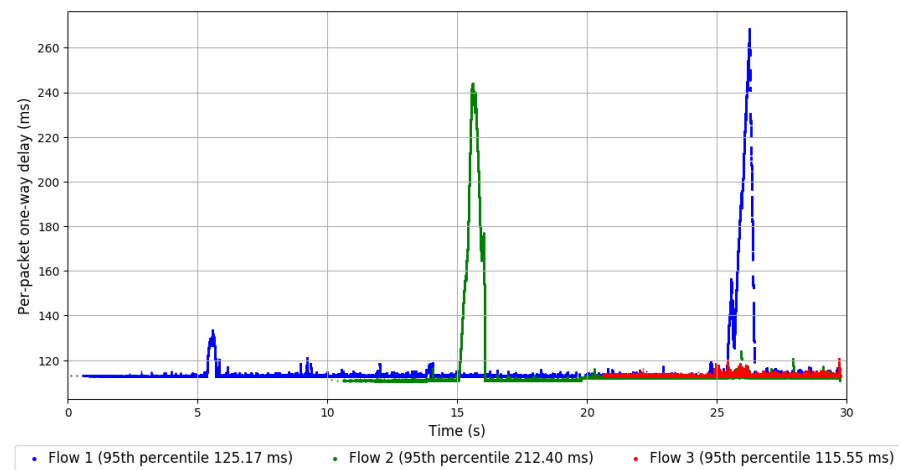
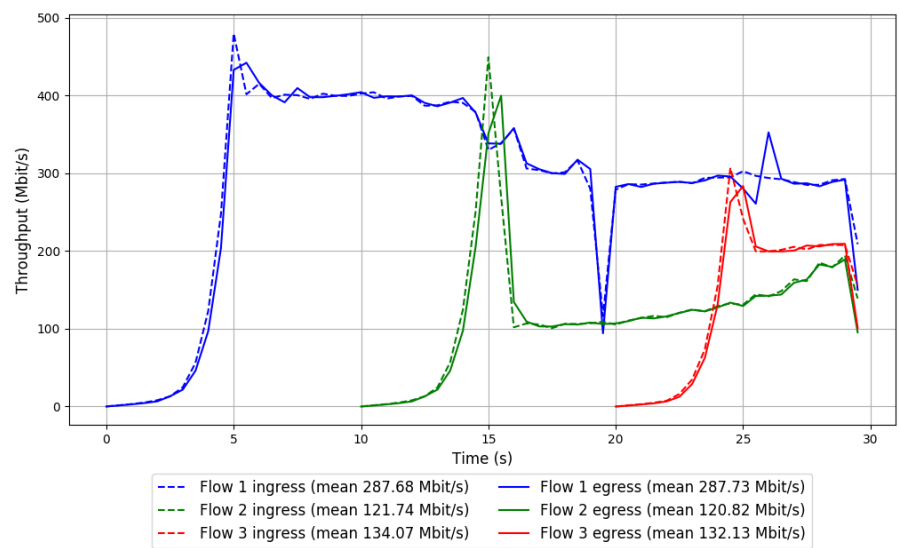
-- Flow 3:

Average throughput: 132.13 Mbit/s

95th percentile per-packet one-way delay: 115.549 ms

Loss rate: 3.72%

Run 9: Report of Vivace-LTE — Data Link



```
Run 10: Statistics of Vivace-LTE

Start at: 2018-03-21 08:23:26
End at: 2018-03-21 08:23:56

# Below is generated by plot.py at 2018-03-21 13:58:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 434.06 Mbit/s
95th percentile per-packet one-way delay: 114.789 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 257.38 Mbit/s
95th percentile per-packet one-way delay: 114.624 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 182.99 Mbit/s
95th percentile per-packet one-way delay: 110.122 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 171.35 Mbit/s
95th percentile per-packet one-way delay: 127.253 ms
Loss rate: 5.42%
```

Run 10: Report of Vivace-LTE — Data Link

