

Pantheon Report

Generated at 2018-03-14 05:04:16 (UTC).

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

Repeated the test of 17 congestion control schemes 10 times.

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

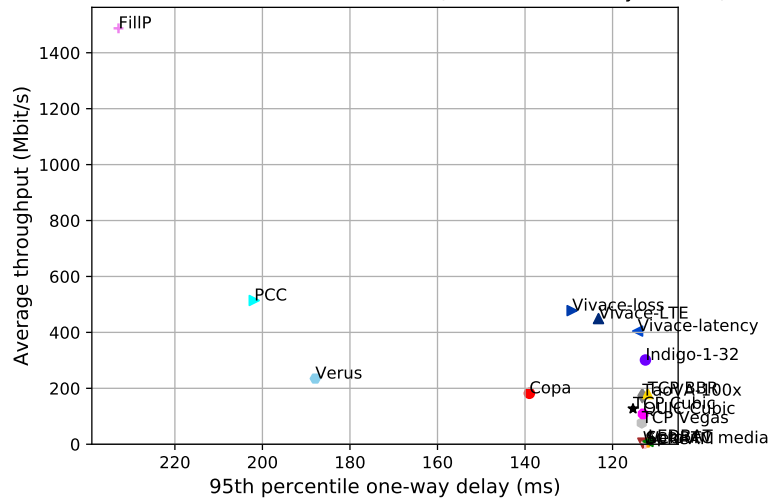
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

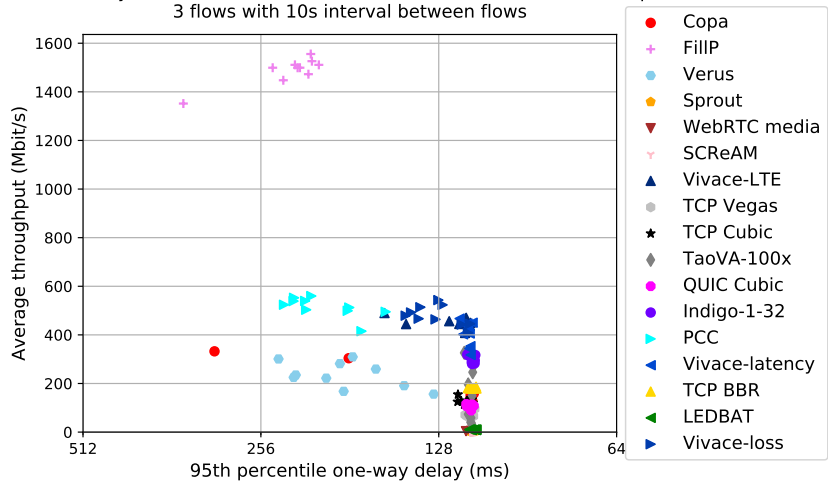
Git summary:

```
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5ce90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

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



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



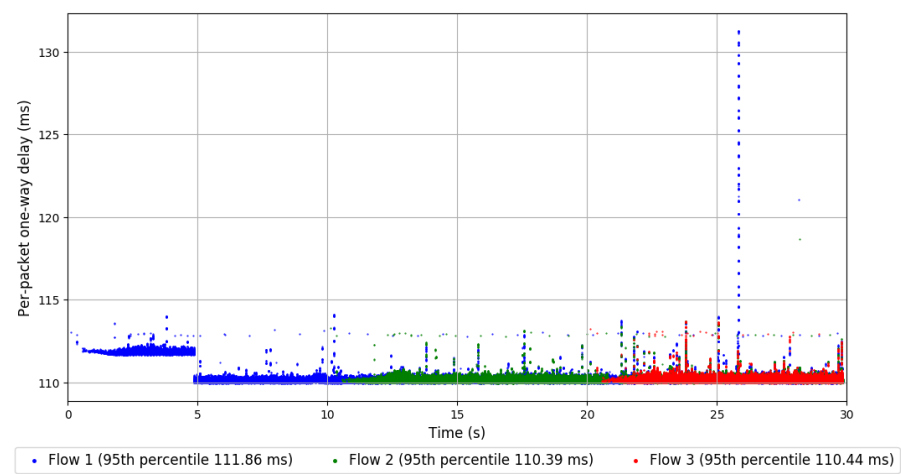
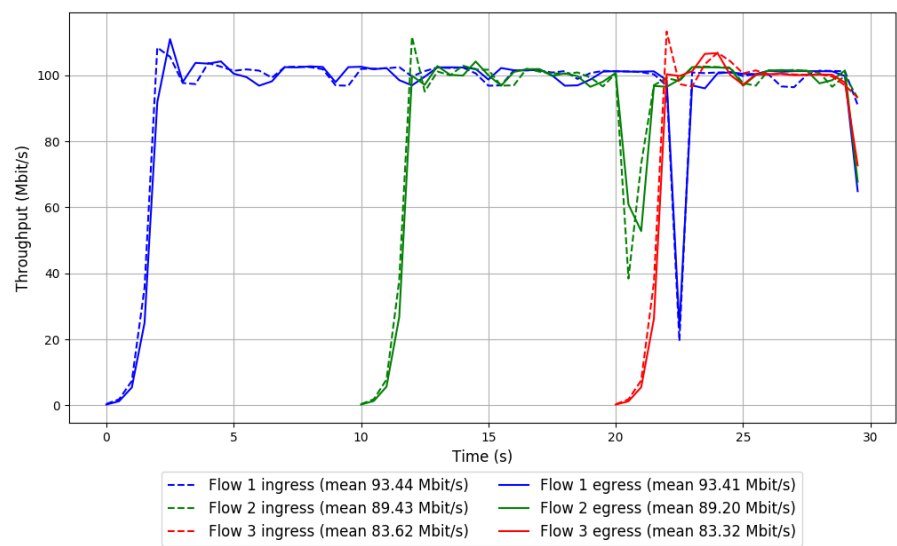
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	93.31	90.93	84.60	111.80	111.81	112.31	0.81	1.20	2.69
TCP Cubic	10	74.05	63.29	33.54	115.17	115.44	114.86	0.97	1.39	5.36
LEDBAT	10	6.96	3.63	1.70	111.90	111.95	111.80	1.47	2.07	4.27
PCC	10	472.13	49.70	28.00	202.54	197.00	181.56	1.71	1.43	2.43
QUIC Cubic	10	57.39	53.05	49.20	112.62	112.06	112.42	0.90	1.25	2.07
SCReAM	10	0.22	0.22	0.22	112.12	112.14	112.28	0.65	1.09	2.21
WebRTC media	10	2.11	1.31	0.48	112.18	112.61	111.79	0.92	1.65	3.50
Sprout	10	2.62	2.52	1.91	112.35	112.58	112.10	0.99	1.55	3.05
TaoVA-100x	10	95.52	97.71	43.04	112.88	113.74	113.16	0.85	1.11	1.86
TCP Vegas	10	40.11	39.15	30.08	113.17	113.79	114.53	0.79	1.20	2.68
Verus	10	146.29	106.22	58.96	180.24	198.38	175.52	0.87	2.51	3.59
Copa	10	123.06	62.39	60.37	138.96	126.68	125.70	3.92	1.42	4.30
FillP	10	784.09	726.01	681.63	235.58	226.28	232.51	6.71	8.92	10.95
Indigo-1-32	10	164.02	144.42	129.64	112.05	112.88	115.23	0.70	1.13	2.68
Vivace-latency	10	240.46	185.91	126.63	115.61	115.37	121.85	1.06	1.44	3.74
Vivace-loss	10	285.80	224.26	134.27	140.17	118.56	116.84	1.15	1.62	3.35
Vivace-LTE	10	285.83	188.42	119.72	124.41	125.75	127.61	0.92	1.42	2.99

```
Run 1: Statistics of TCP BBR

Start at: 2018-03-13 20:39:44
End at: 2018-03-13 20:40:14

# Below is generated by plot.py at 2018-03-14 03:11:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 179.78 Mbit/s
95th percentile per-packet one-way delay: 111.763 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 93.41 Mbit/s
95th percentile per-packet one-way delay: 111.863 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 89.20 Mbit/s
95th percentile per-packet one-way delay: 110.395 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 83.32 Mbit/s
95th percentile per-packet one-way delay: 110.440 ms
Loss rate: 2.69%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-03-13 20:59:15

End at: 2018-03-13 20:59:45

Below is generated by plot.py at 2018-03-14 03:11:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.55 Mbit/s

95th percentile per-packet one-way delay: 110.499 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 92.30 Mbit/s

95th percentile per-packet one-way delay: 110.412 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 89.49 Mbit/s

95th percentile per-packet one-way delay: 110.471 ms

Loss rate: 1.23%

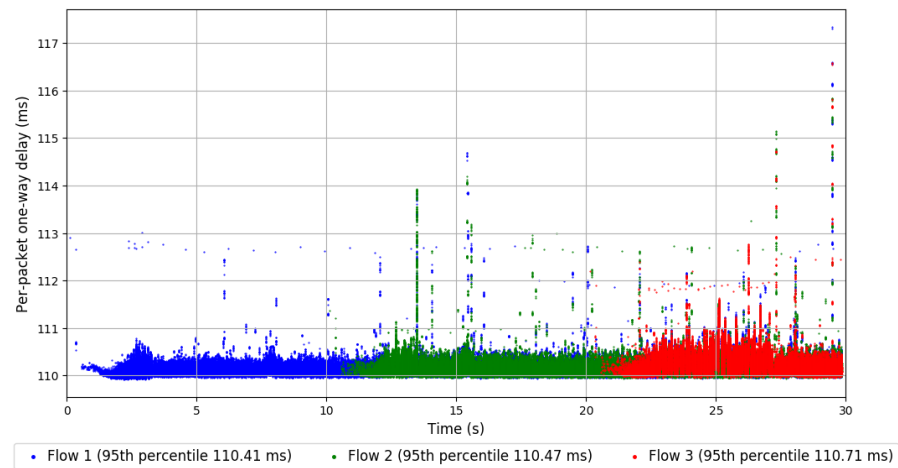
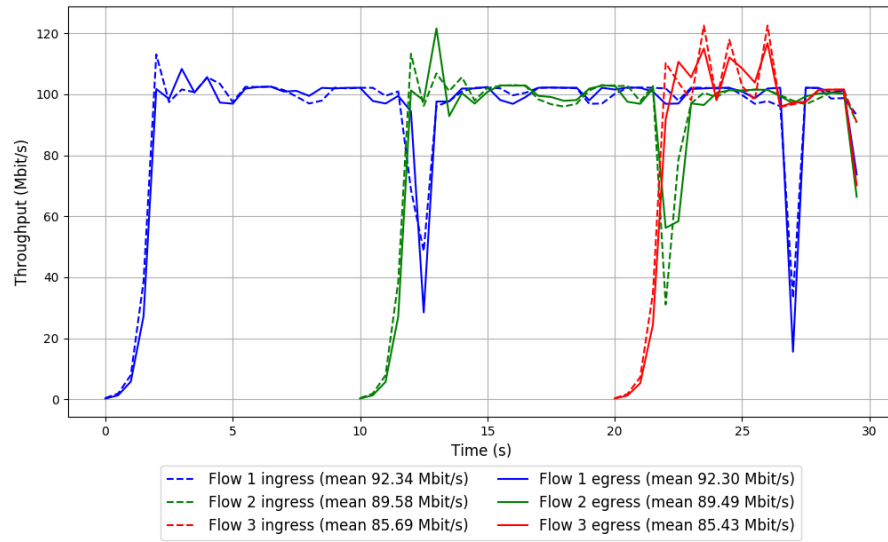
-- Flow 3:

Average throughput: 85.43 Mbit/s

95th percentile per-packet one-way delay: 110.710 ms

Loss rate: 2.59%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-03-13 21:18:45

End at: 2018-03-13 21:19:15

Below is generated by plot.py at 2018-03-14 03:11:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 186.88 Mbit/s

95th percentile per-packet one-way delay: 110.682 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 94.29 Mbit/s

95th percentile per-packet one-way delay: 110.427 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 95.76 Mbit/s

95th percentile per-packet one-way delay: 110.988 ms

Loss rate: 1.14%

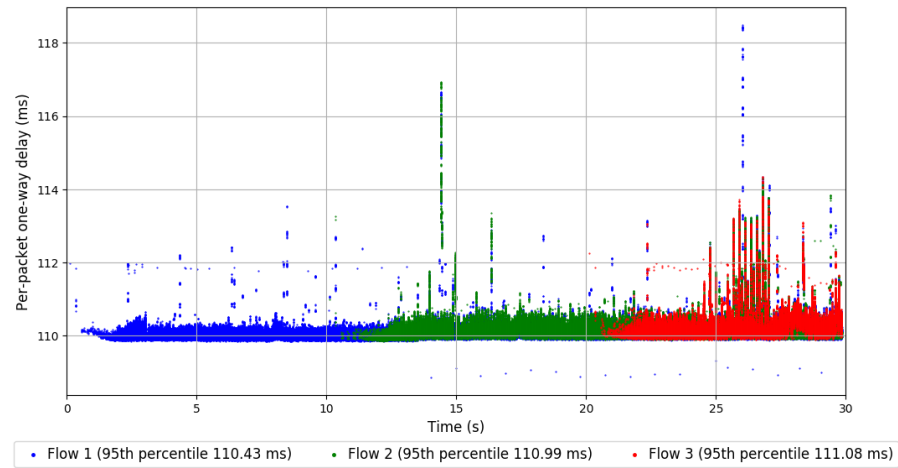
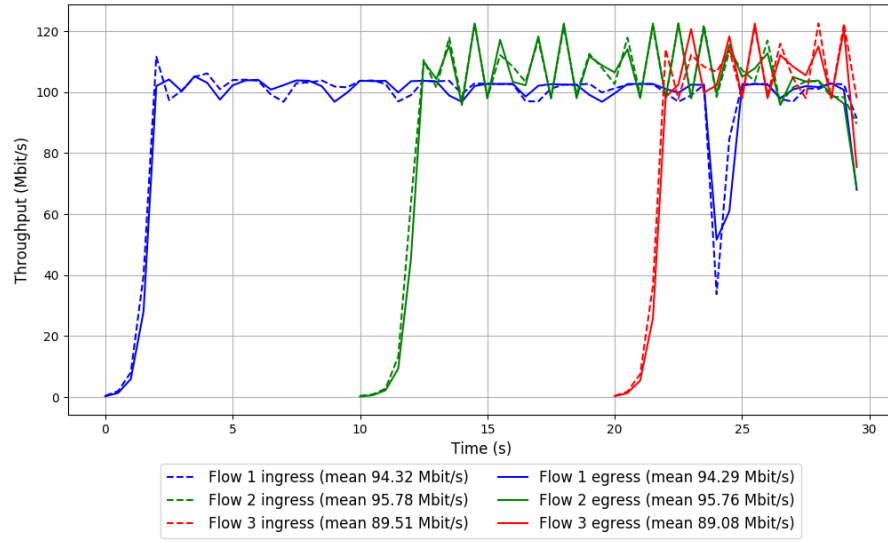
-- Flow 3:

Average throughput: 89.08 Mbit/s

95th percentile per-packet one-way delay: 111.083 ms

Loss rate: 2.76%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-03-13 21:38:20

End at: 2018-03-13 21:38:50

Below is generated by plot.py at 2018-03-14 03:11:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 182.26 Mbit/s

95th percentile per-packet one-way delay: 110.795 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 93.94 Mbit/s

95th percentile per-packet one-way delay: 110.792 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 92.07 Mbit/s

95th percentile per-packet one-way delay: 110.822 ms

Loss rate: 1.18%

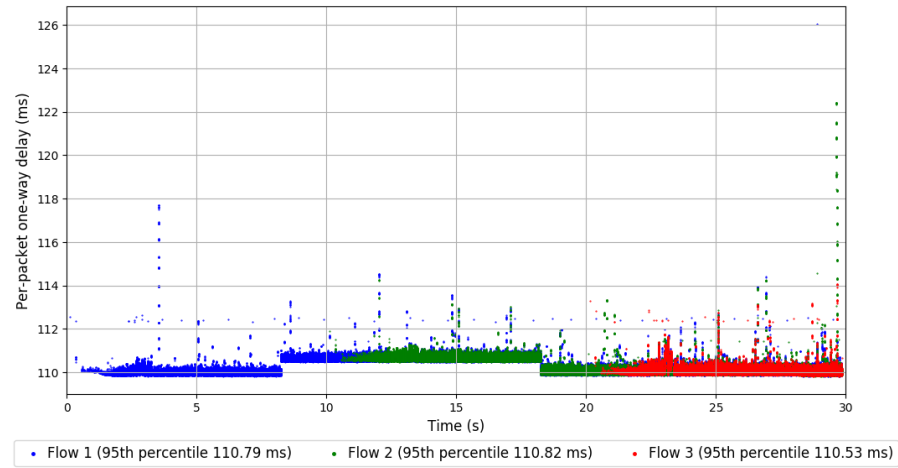
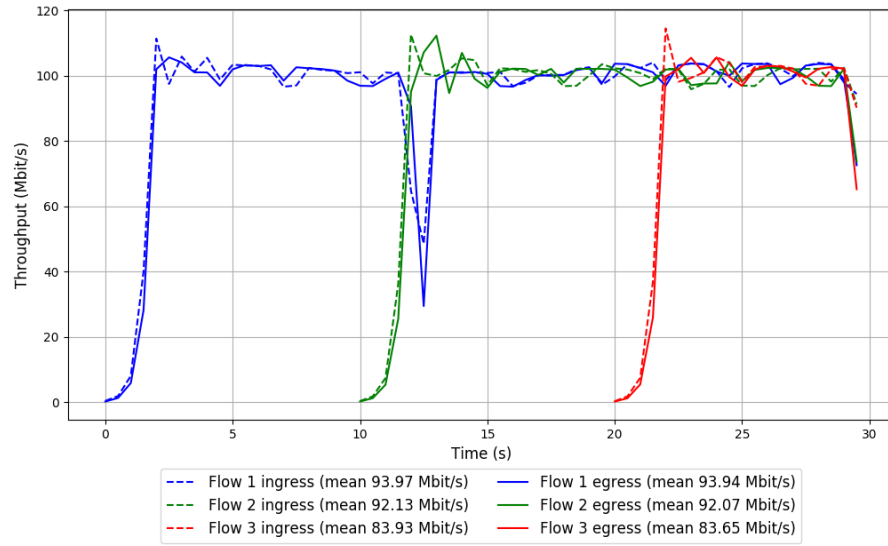
-- Flow 3:

Average throughput: 83.65 Mbit/s

95th percentile per-packet one-way delay: 110.529 ms

Loss rate: 2.58%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-03-13 21:57:52

End at: 2018-03-13 21:58:22

Below is generated by plot.py at 2018-03-14 03:11:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 180.05 Mbit/s

95th percentile per-packet one-way delay: 114.021 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 93.06 Mbit/s

95th percentile per-packet one-way delay: 113.484 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 88.67 Mbit/s

95th percentile per-packet one-way delay: 113.809 ms

Loss rate: 1.23%

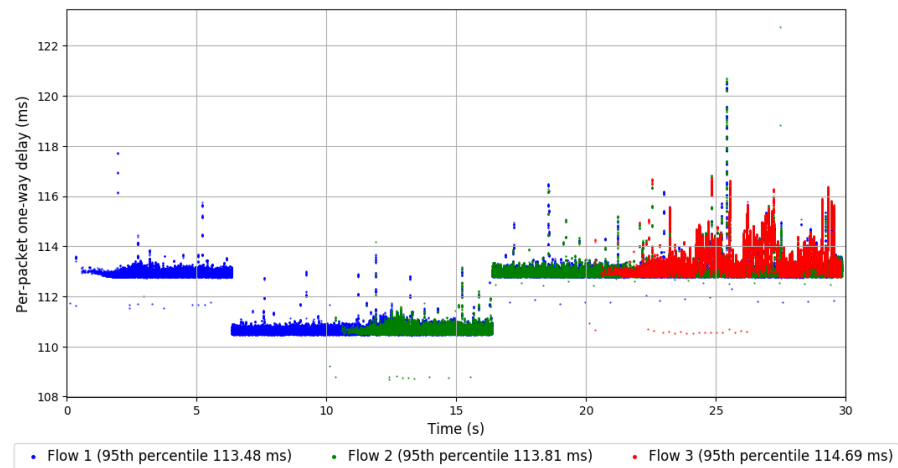
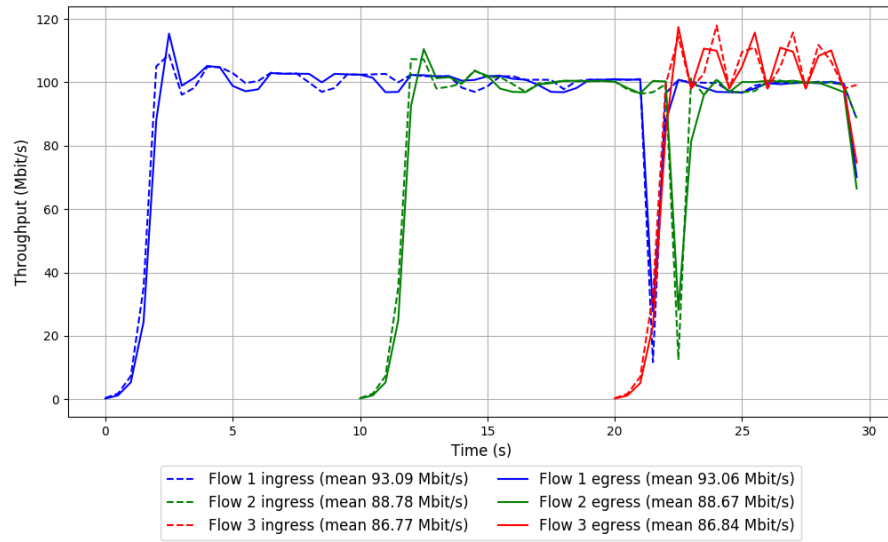
-- Flow 3:

Average throughput: 86.84 Mbit/s

95th percentile per-packet one-way delay: 114.693 ms

Loss rate: 2.84%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-03-13 22:16:45

End at: 2018-03-13 22:17:15

Below is generated by plot.py at 2018-03-14 03:11:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 182.20 Mbit/s

95th percentile per-packet one-way delay: 114.187 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 93.00 Mbit/s

95th percentile per-packet one-way delay: 113.596 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 91.28 Mbit/s

95th percentile per-packet one-way delay: 113.946 ms

Loss rate: 1.21%

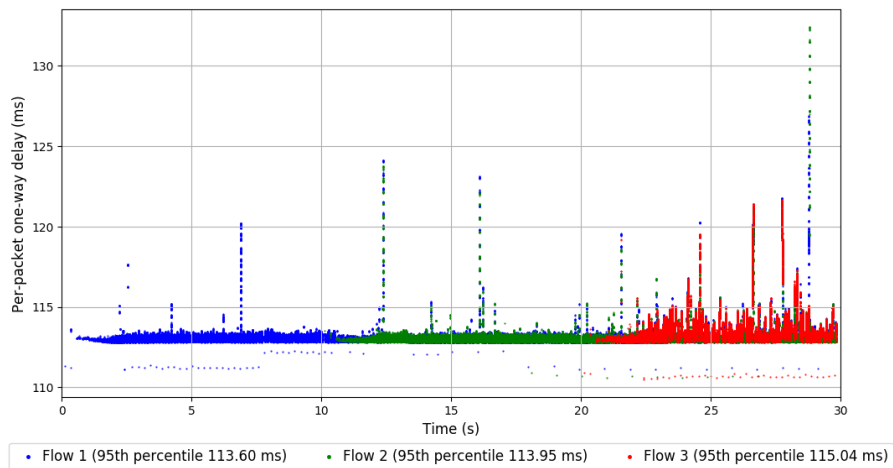
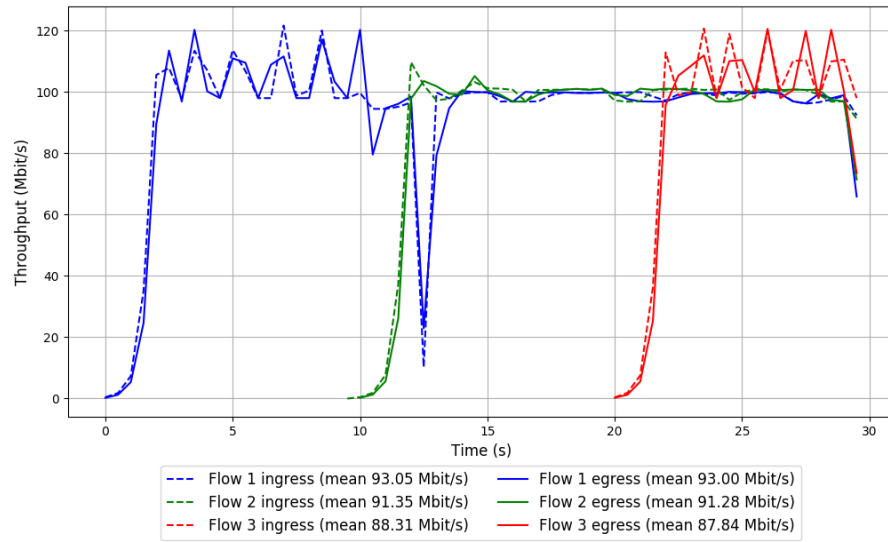
-- Flow 3:

Average throughput: 87.84 Mbit/s

95th percentile per-packet one-way delay: 115.041 ms

Loss rate: 2.80%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-03-13 22:35:50

End at: 2018-03-13 22:36:20

Below is generated by plot.py at 2018-03-14 03:11:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.68 Mbit/s

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

Loss rate: 1.20%

-- Flow 1:

Average throughput: 93.90 Mbit/s

95th percentile per-packet one-way delay: 112.833 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 88.86 Mbit/s

95th percentile per-packet one-way delay: 112.942 ms

Loss rate: 1.20%

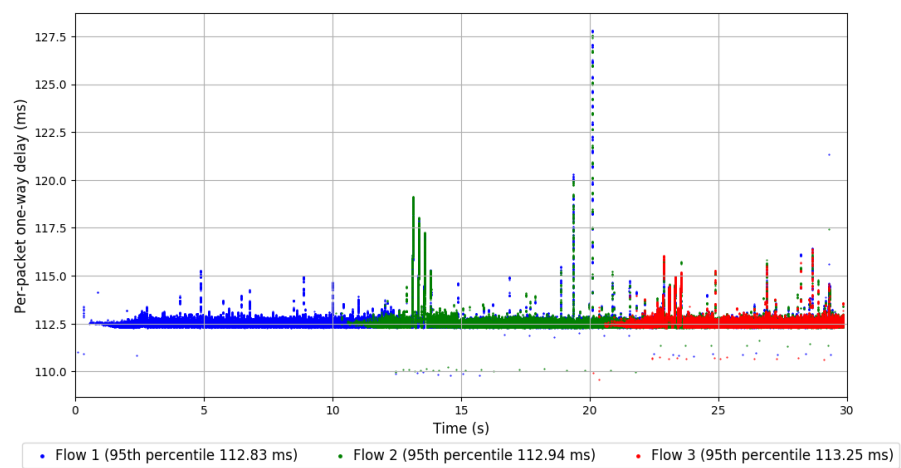
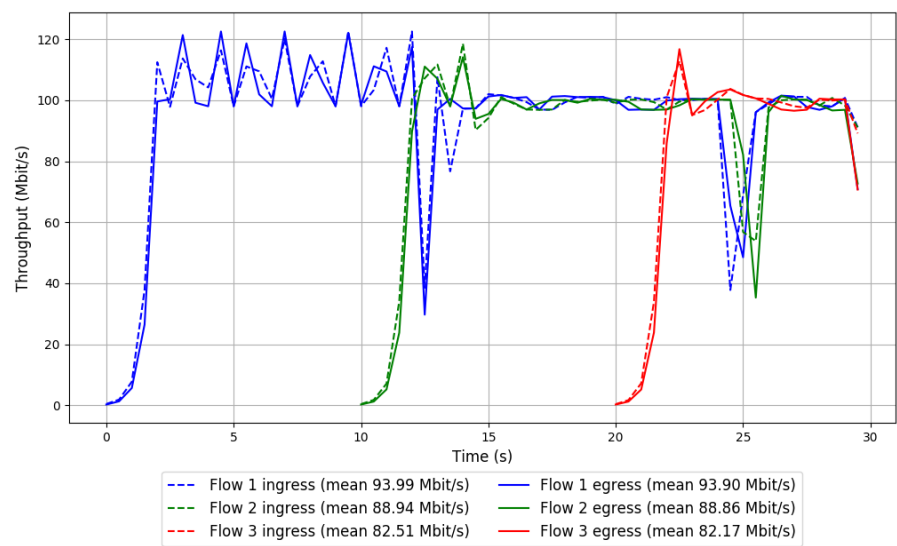
-- Flow 3:

Average throughput: 82.17 Mbit/s

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

Loss rate: 2.60%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-03-13 22:55:20

End at: 2018-03-13 22:55:50

Below is generated by plot.py at 2018-03-14 03:11:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.46 Mbit/s

95th percentile per-packet one-way delay: 112.708 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 92.44 Mbit/s

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

Loss rate: 0.78%

-- Flow 2:

Average throughput: 91.56 Mbit/s

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

Loss rate: 1.18%

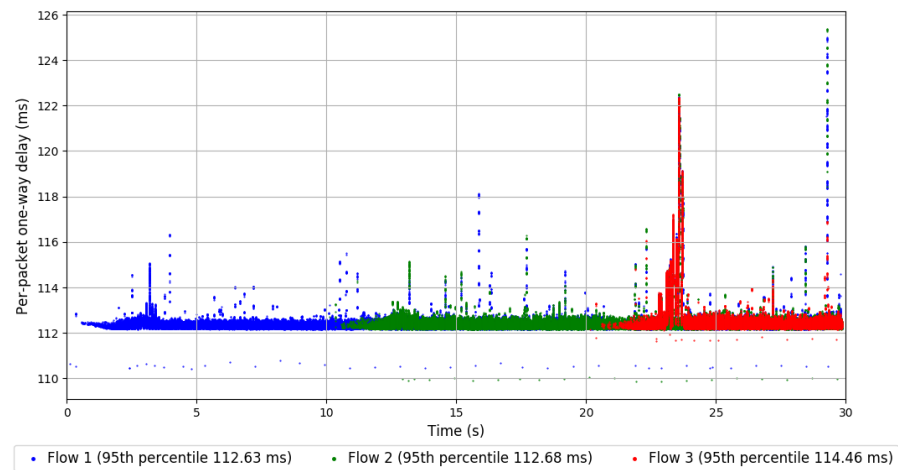
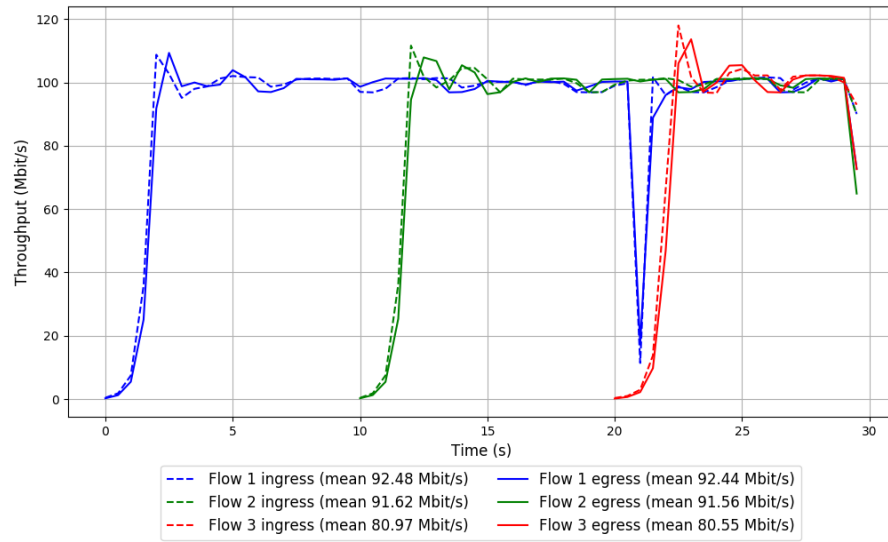
-- Flow 3:

Average throughput: 80.55 Mbit/s

95th percentile per-packet one-way delay: 114.461 ms

Loss rate: 2.78%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-03-13 23:14:20

End at: 2018-03-13 23:14:50

Below is generated by plot.py at 2018-03-14 03:14:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.26 Mbit/s

95th percentile per-packet one-way delay: 110.798 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 93.88 Mbit/s

95th percentile per-packet one-way delay: 110.775 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 90.17 Mbit/s

95th percentile per-packet one-way delay: 110.838 ms

Loss rate: 1.21%

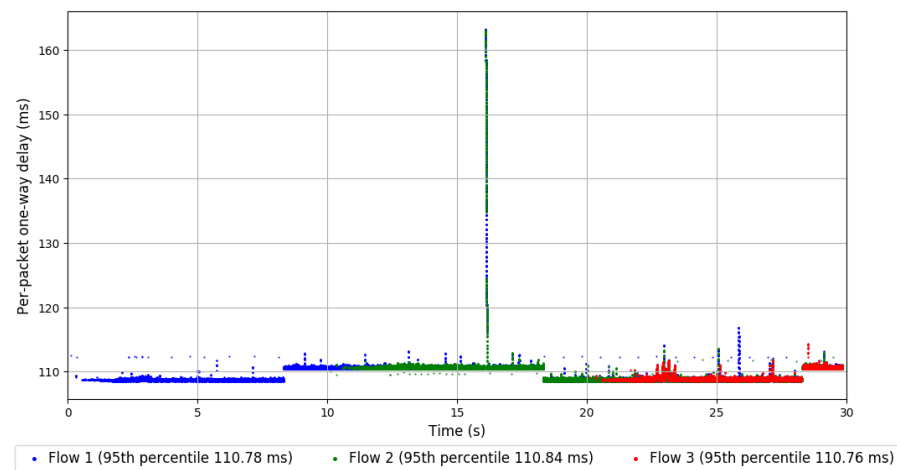
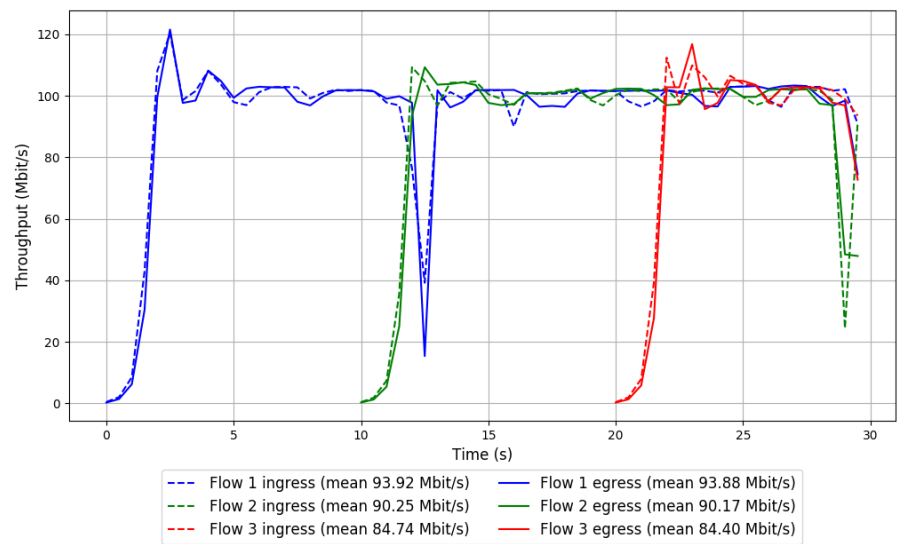
-- Flow 3:

Average throughput: 84.40 Mbit/s

95th percentile per-packet one-way delay: 110.763 ms

Loss rate: 2.67%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-03-13 23:33:50

End at: 2018-03-13 23:34:20

Below is generated by plot.py at 2018-03-14 03:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.02 Mbit/s

95th percentile per-packet one-way delay: 111.249 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 92.93 Mbit/s

95th percentile per-packet one-way delay: 111.194 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 92.28 Mbit/s

95th percentile per-packet one-way delay: 111.249 ms

Loss rate: 1.17%

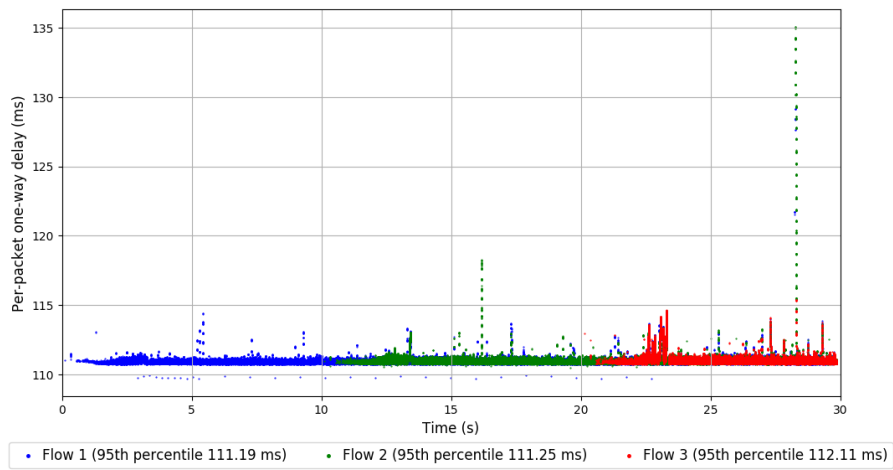
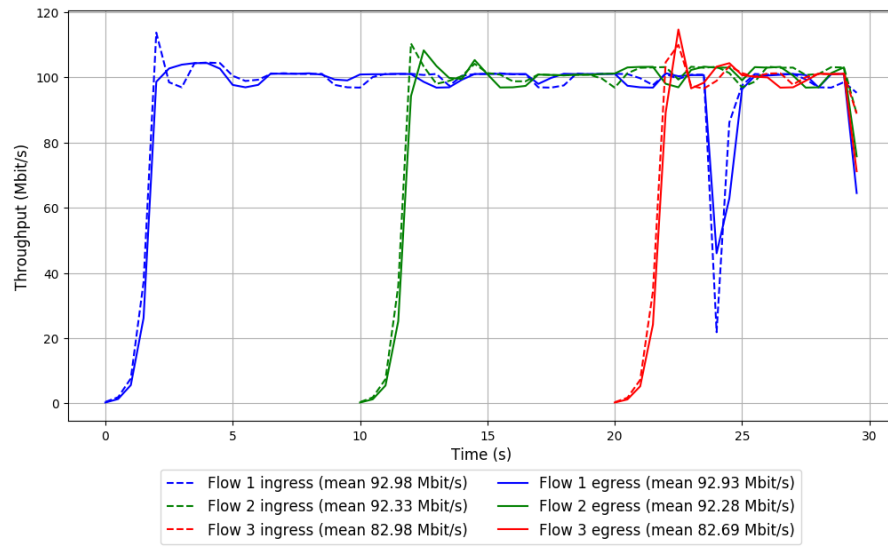
-- Flow 3:

Average throughput: 82.69 Mbit/s

95th percentile per-packet one-way delay: 112.108 ms

Loss rate: 2.61%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-03-13 20:28:40

End at: 2018-03-13 20:29:10

Below is generated by plot.py at 2018-03-14 03:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 154.68 Mbit/s

95th percentile per-packet one-way delay: 118.769 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 85.15 Mbit/s

95th percentile per-packet one-way delay: 117.121 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 60.41 Mbit/s

95th percentile per-packet one-way delay: 119.523 ms

Loss rate: 1.40%

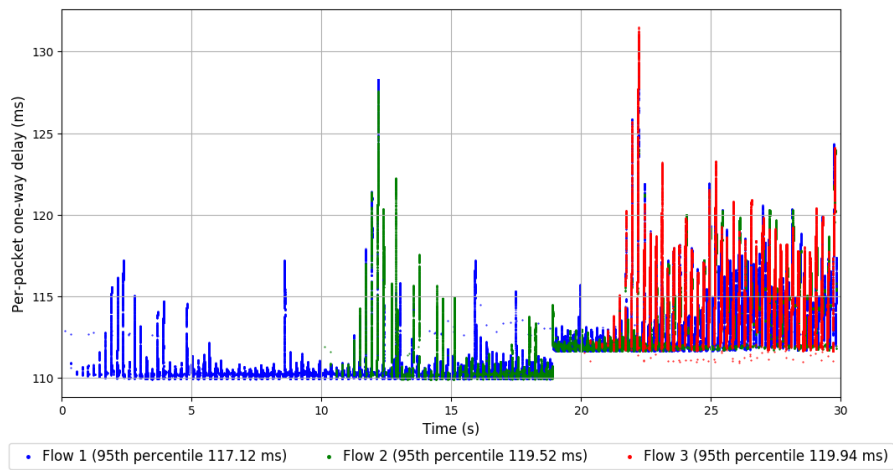
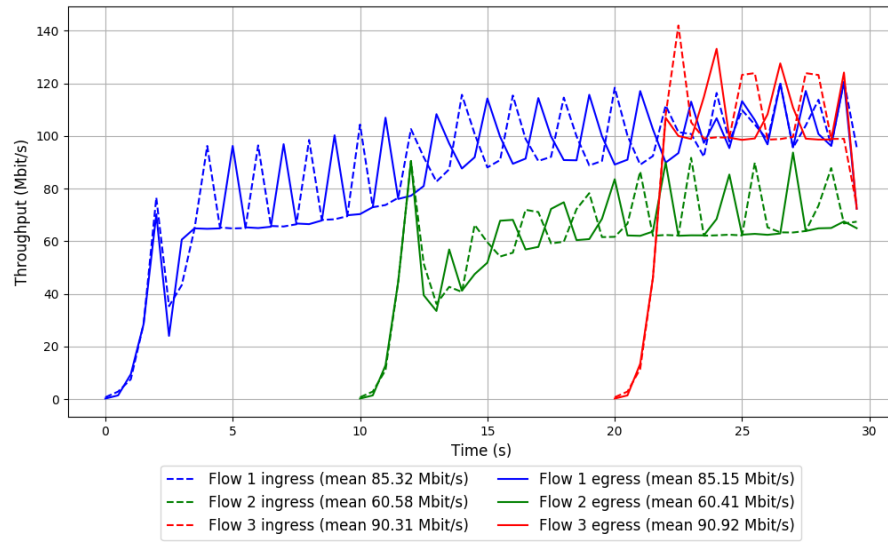
-- Flow 3:

Average throughput: 90.92 Mbit/s

95th percentile per-packet one-way delay: 119.939 ms

Loss rate: 1.45%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-03-13 20:48:17

End at: 2018-03-13 20:48:47

Below is generated by plot.py at 2018-03-14 03:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 126.51 Mbit/s

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

Loss rate: 1.12%

-- Flow 1:

Average throughput: 67.86 Mbit/s

95th percentile per-packet one-way delay: 113.092 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 65.04 Mbit/s

95th percentile per-packet one-way delay: 113.042 ms

Loss rate: 1.05%

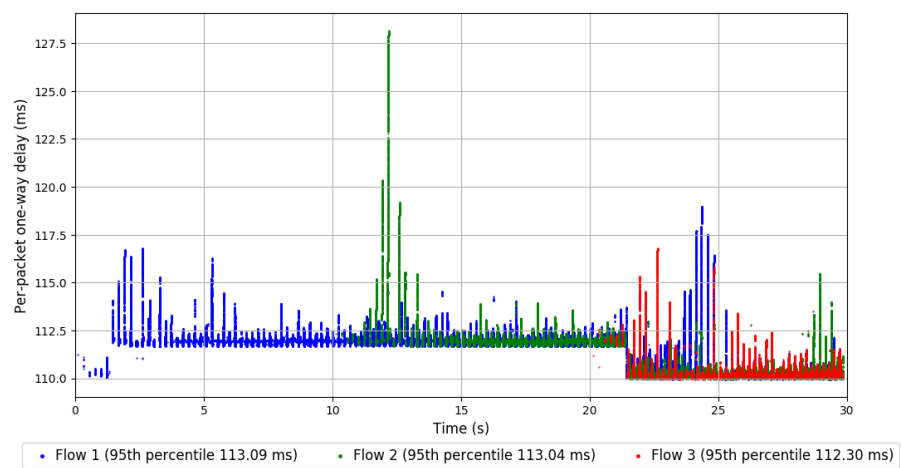
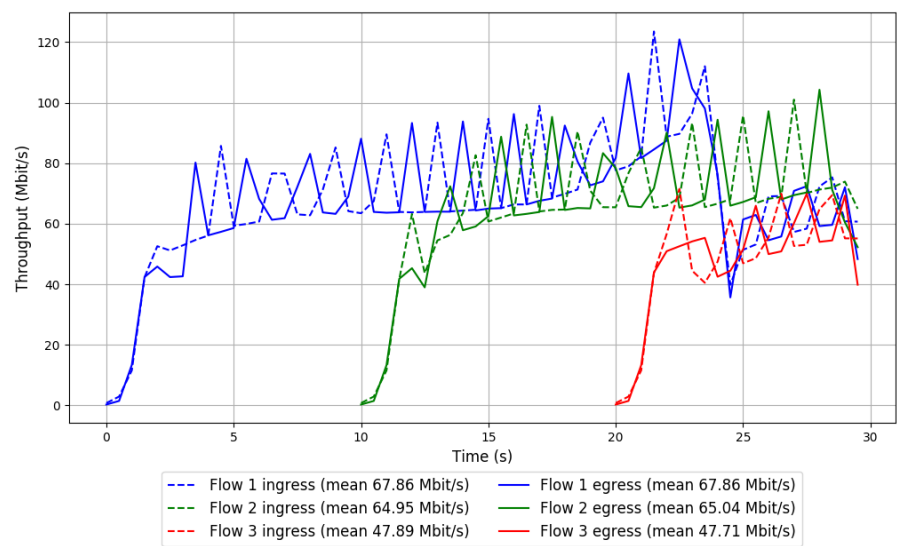
-- Flow 3:

Average throughput: 47.71 Mbit/s

95th percentile per-packet one-way delay: 112.301 ms

Loss rate: 2.90%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-03-13 21:07:57

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

Below is generated by plot.py at 2018-03-14 03:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 120.79 Mbit/s

95th percentile per-packet one-way delay: 112.080 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 77.87 Mbit/s

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

Loss rate: 0.96%

-- Flow 2:

Average throughput: 63.96 Mbit/s

95th percentile per-packet one-way delay: 112.089 ms

Loss rate: 1.45%

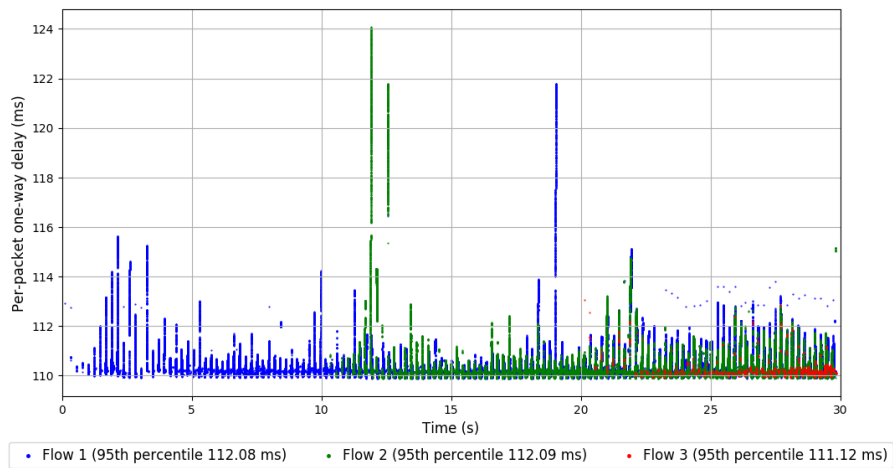
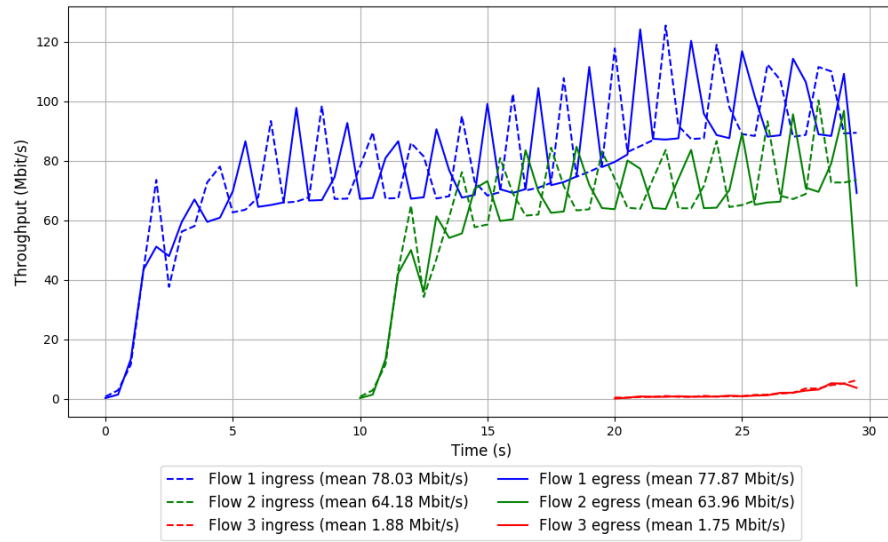
-- Flow 3:

Average throughput: 1.75 Mbit/s

95th percentile per-packet one-way delay: 111.125 ms

Loss rate: 9.06%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-03-13 21:27:23

End at: 2018-03-13 21:27:53

Below is generated by plot.py at 2018-03-14 03:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.71 Mbit/s

95th percentile per-packet one-way delay: 114.912 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 82.89 Mbit/s

95th percentile per-packet one-way delay: 114.846 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 62.51 Mbit/s

95th percentile per-packet one-way delay: 114.967 ms

Loss rate: 1.46%

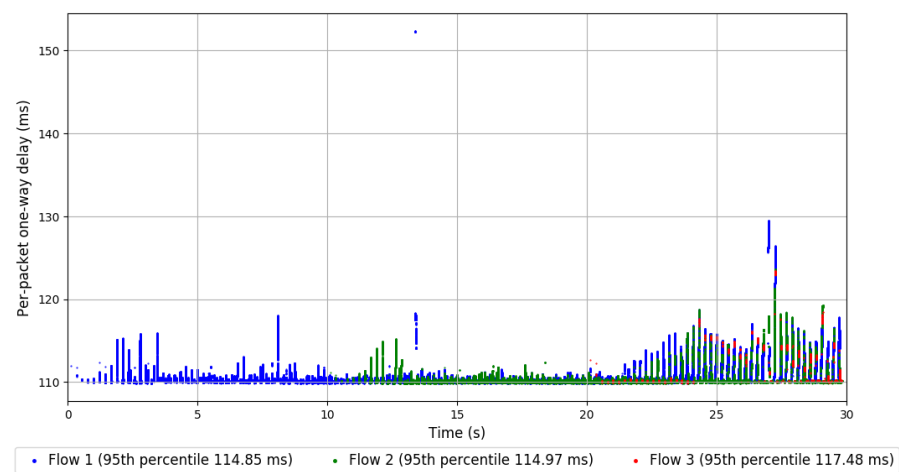
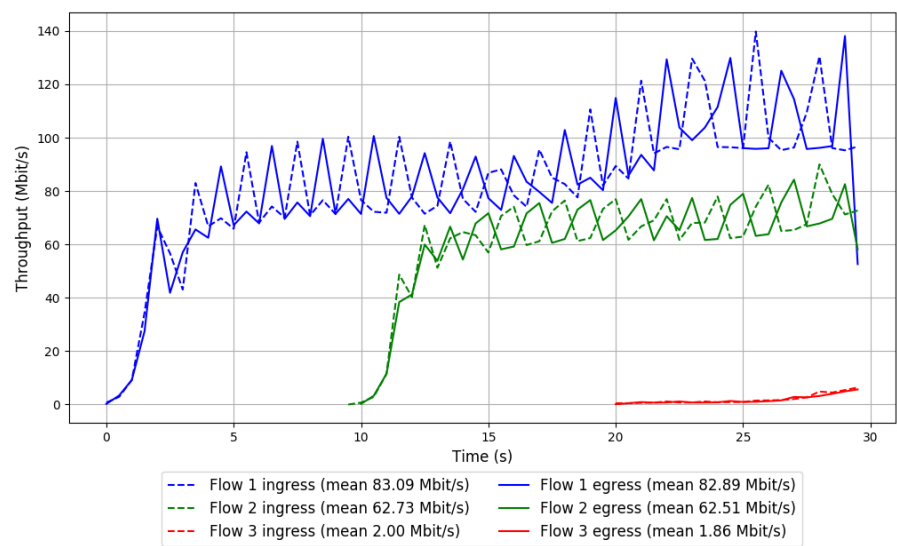
-- Flow 3:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 117.478 ms

Loss rate: 8.79%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-03-13 21:47:01

End at: 2018-03-13 21:47:31

Below is generated by plot.py at 2018-03-14 03:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.36 Mbit/s

95th percentile per-packet one-way delay: 115.949 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 61.76 Mbit/s

95th percentile per-packet one-way delay: 115.416 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 57.39 Mbit/s

95th percentile per-packet one-way delay: 116.397 ms

Loss rate: 1.51%

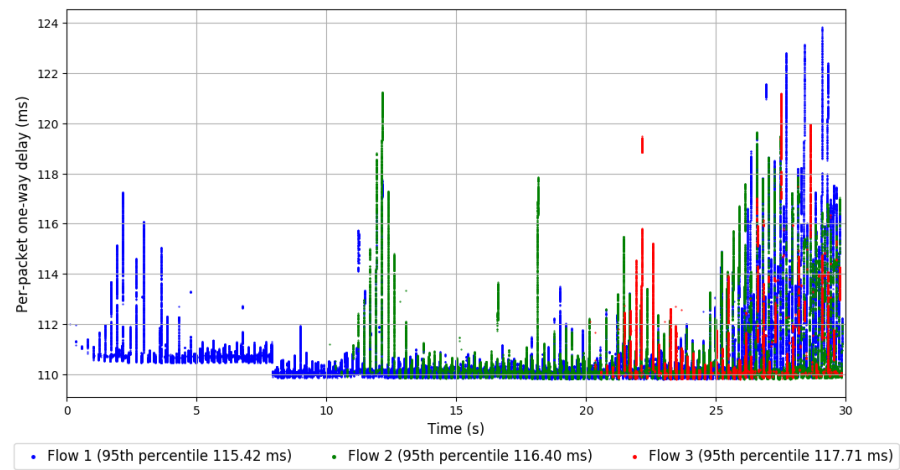
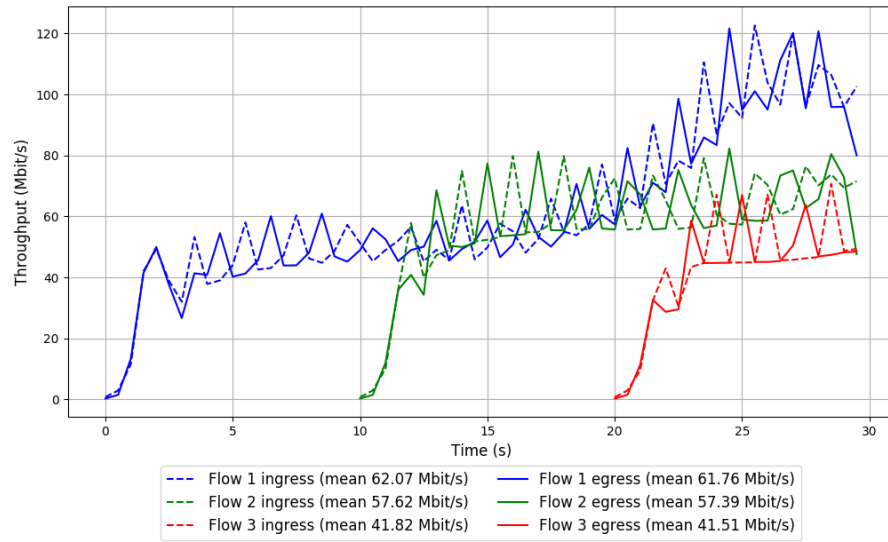
-- Flow 3:

Average throughput: 41.51 Mbit/s

95th percentile per-packet one-way delay: 117.710 ms

Loss rate: 2.99%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-03-13 22:05:57

End at: 2018-03-13 22:06:27

Below is generated by plot.py at 2018-03-14 03:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.03 Mbit/s

95th percentile per-packet one-way delay: 117.262 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 84.54 Mbit/s

95th percentile per-packet one-way delay: 117.305 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 64.93 Mbit/s

95th percentile per-packet one-way delay: 117.195 ms

Loss rate: 1.45%

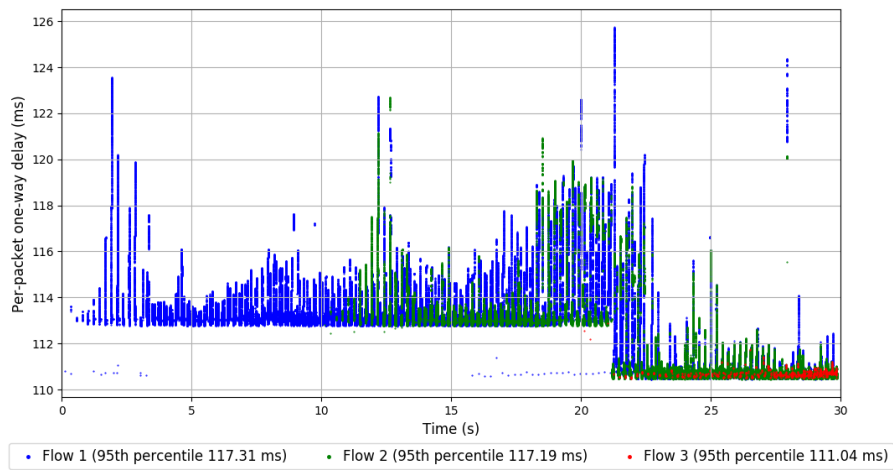
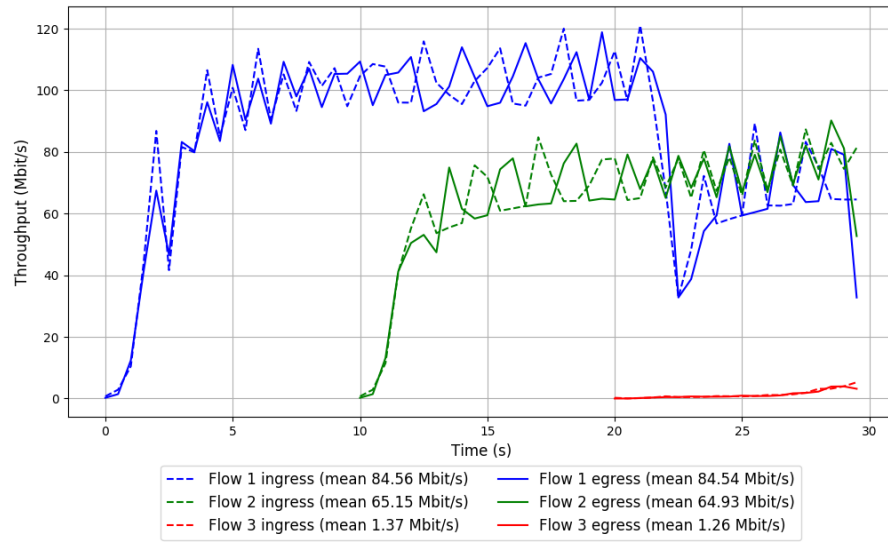
-- Flow 3:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 111.042 ms

Loss rate: 10.25%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-03-13 22:24:56

End at: 2018-03-13 22:25:26

Below is generated by plot.py at 2018-03-14 03:15:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.83 Mbit/s

95th percentile per-packet one-way delay: 118.930 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 58.16 Mbit/s

95th percentile per-packet one-way delay: 119.531 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 100.15 Mbit/s

95th percentile per-packet one-way delay: 118.349 ms

Loss rate: 1.26%

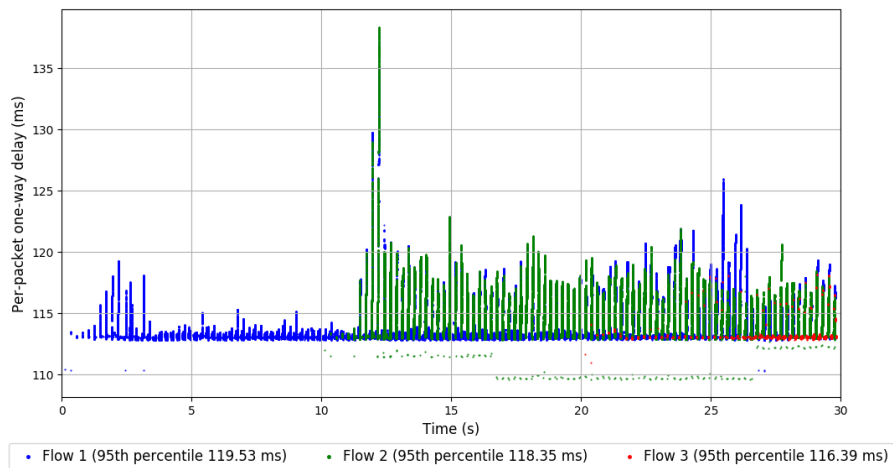
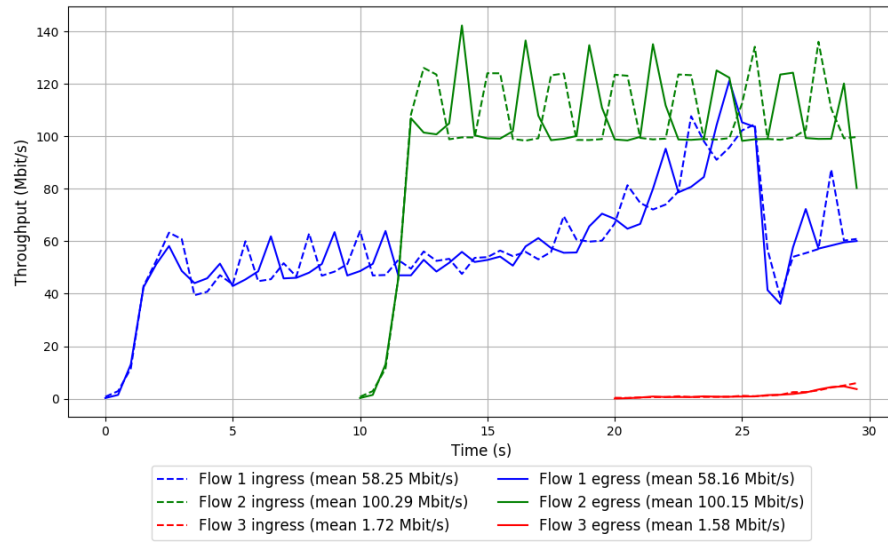
-- Flow 3:

Average throughput: 1.58 Mbit/s

95th percentile per-packet one-way delay: 116.393 ms

Loss rate: 9.74%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-03-13 22:44:23

End at: 2018-03-13 22:44:53

Below is generated by plot.py at 2018-03-14 03:15:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.19 Mbit/s

95th percentile per-packet one-way delay: 114.609 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 79.38 Mbit/s

95th percentile per-packet one-way delay: 114.587 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 48.84 Mbit/s

95th percentile per-packet one-way delay: 114.652 ms

Loss rate: 1.50%

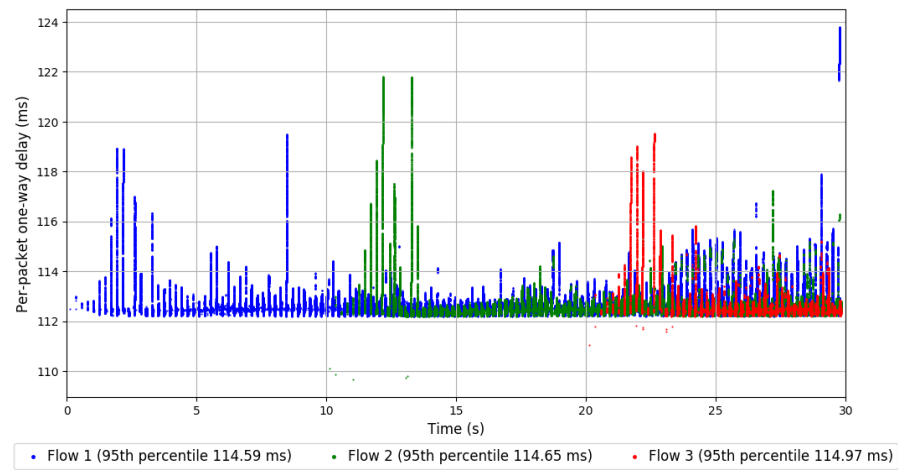
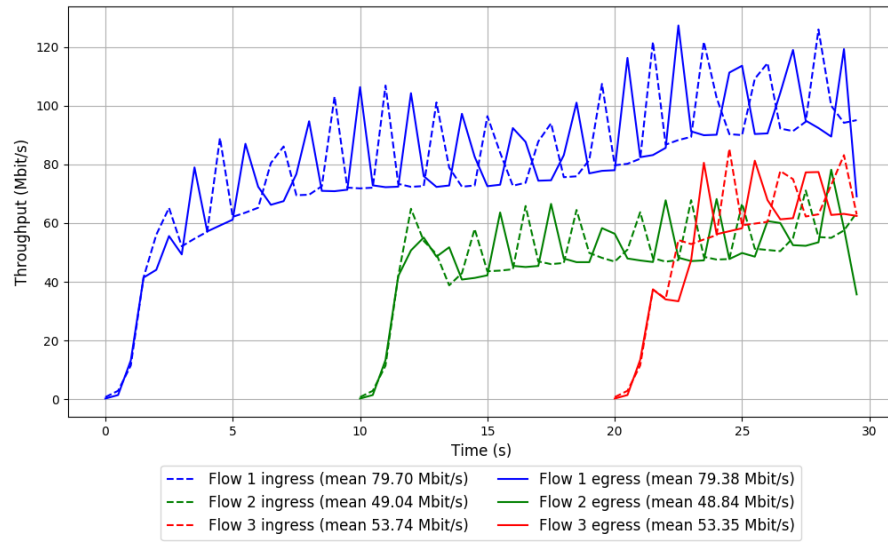
-- Flow 3:

Average throughput: 53.35 Mbit/s

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

Loss rate: 2.95%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

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

End at: 2018-03-13 23:03:57

Below is generated by plot.py at 2018-03-14 03:15:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.22 Mbit/s

95th percentile per-packet one-way delay: 112.427 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 78.17 Mbit/s

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

Loss rate: 1.00%

-- Flow 2:

Average throughput: 60.73 Mbit/s

95th percentile per-packet one-way delay: 112.271 ms

Loss rate: 1.47%

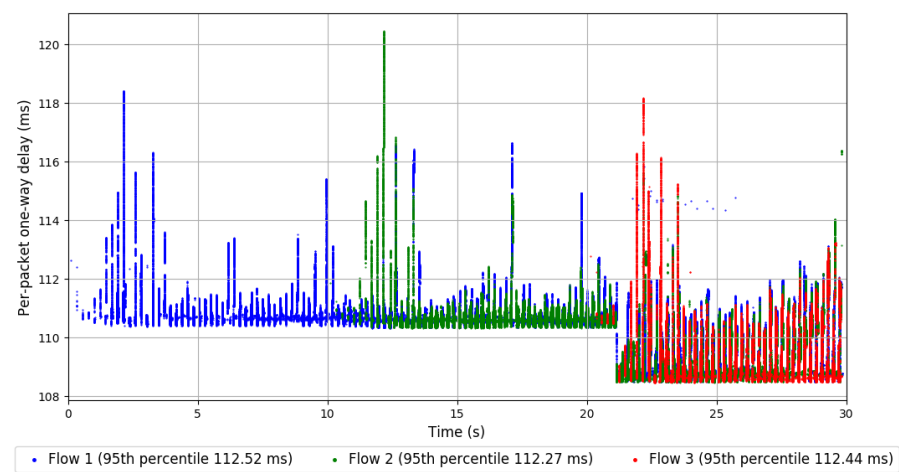
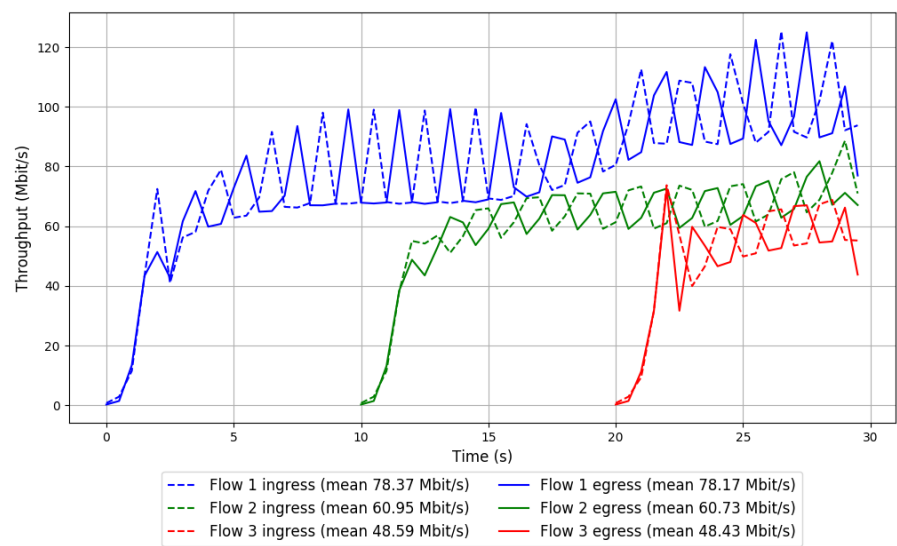
-- Flow 3:

Average throughput: 48.43 Mbit/s

95th percentile per-packet one-way delay: 112.441 ms

Loss rate: 2.86%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-03-13 23:23:07

End at: 2018-03-13 23:23:37

Below is generated by plot.py at 2018-03-14 03:15:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.31 Mbit/s

95th percentile per-packet one-way delay: 115.332 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 64.70 Mbit/s

95th percentile per-packet one-way delay: 115.187 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 48.93 Mbit/s

95th percentile per-packet one-way delay: 115.913 ms

Loss rate: 1.37%

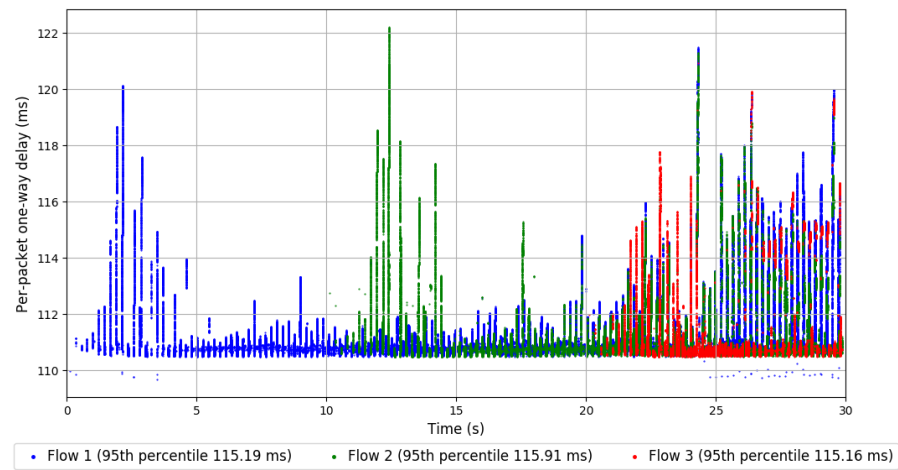
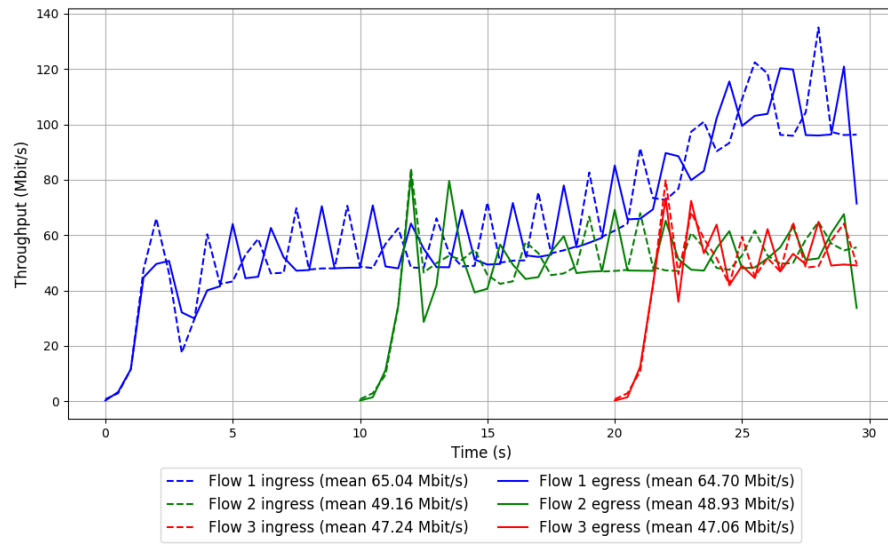
-- Flow 3:

Average throughput: 47.06 Mbit/s

95th percentile per-packet one-way delay: 115.162 ms

Loss rate: 2.63%

Run 10: Report of TCP Cubic — Data Link

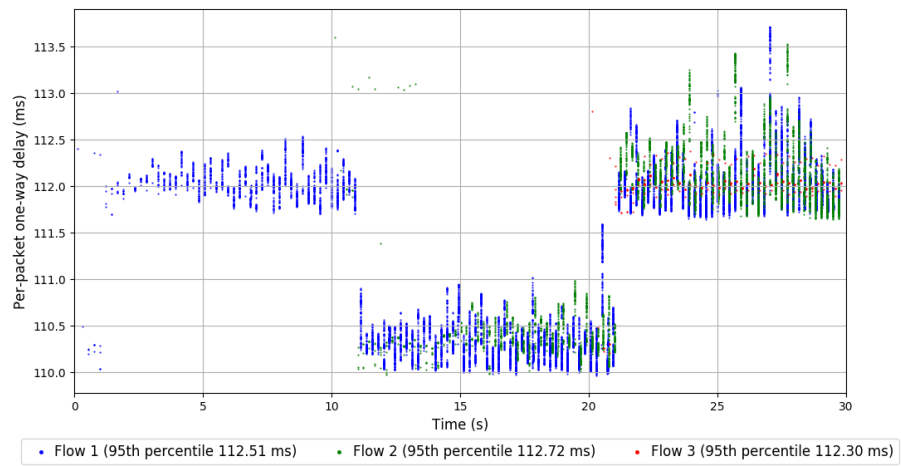
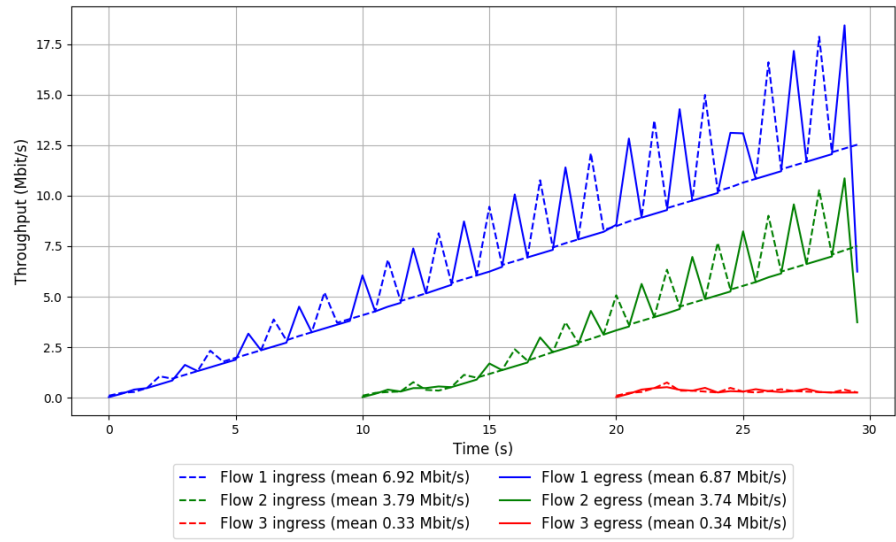


```
Run 1: Statistics of LEDBAT

Start at: 2018-03-13 20:31:37
End at: 2018-03-13 20:32:07

# Below is generated by plot.py at 2018-03-14 03:15:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.43 Mbit/s
95th percentile per-packet one-way delay: 112.561 ms
Loss rate: 1.79%
-- Flow 1:
Average throughput: 6.87 Mbit/s
95th percentile per-packet one-way delay: 112.511 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 112.724 ms
Loss rate: 2.52%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 112.302 ms
Loss rate: 2.09%
```


Run 1: Report of LEDBAT — Data Link

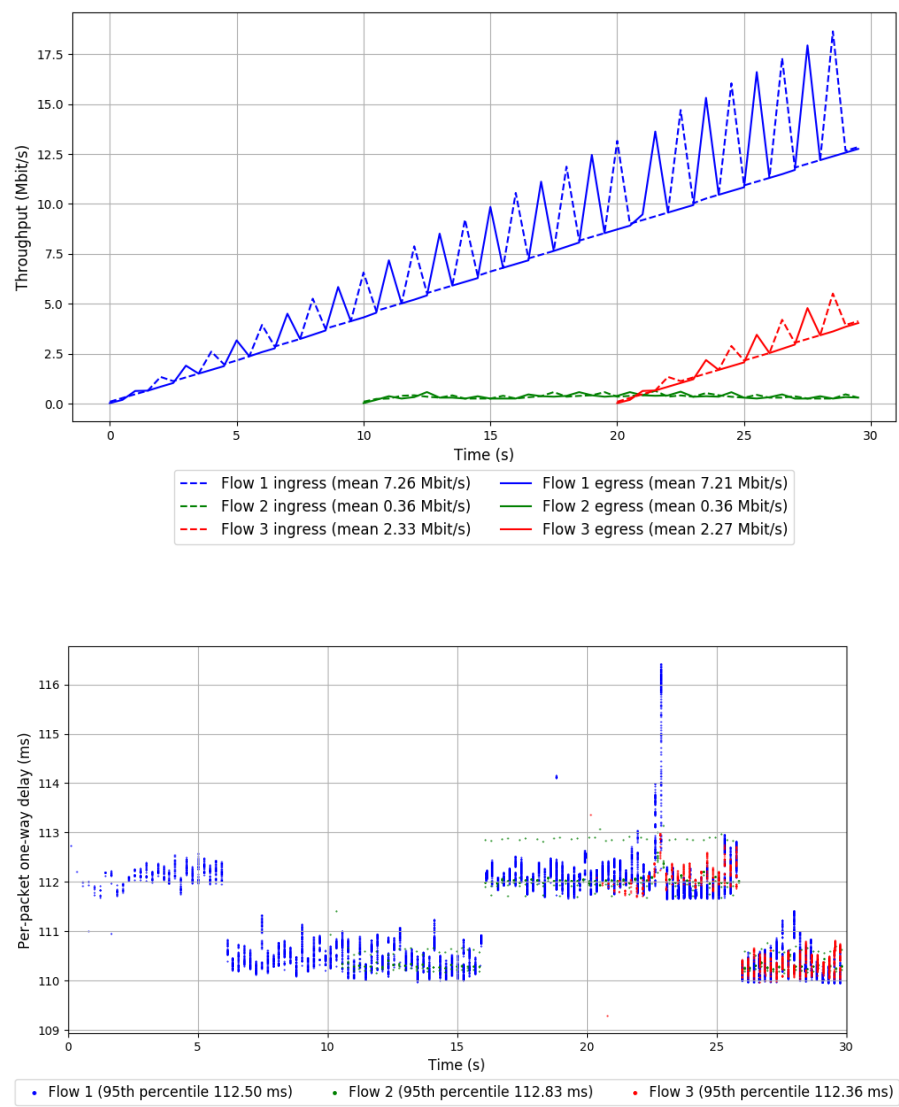


```
Run 2: Statistics of LEDBAT

Start at: 2018-03-13 20:51:13
End at: 2018-03-13 20:51:43

# Below is generated by plot.py at 2018-03-14 03:15:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 112.493 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 7.21 Mbit/s
95th percentile per-packet one-way delay: 112.502 ms
Loss rate: 1.49%
-- Flow 2:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 112.835 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 112.364 ms
Loss rate: 4.55%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-03-13 21:10:51

End at: 2018-03-13 21:11:21

Below is generated by plot.py at 2018-03-14 03:15:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.92 Mbit/s

95th percentile per-packet one-way delay: 110.606 ms

Loss rate: 2.01%

-- Flow 1:

Average throughput: 6.75 Mbit/s

95th percentile per-packet one-way delay: 110.601 ms

Loss rate: 1.54%

-- Flow 2:

Average throughput: 3.68 Mbit/s

95th percentile per-packet one-way delay: 110.641 ms

Loss rate: 2.53%

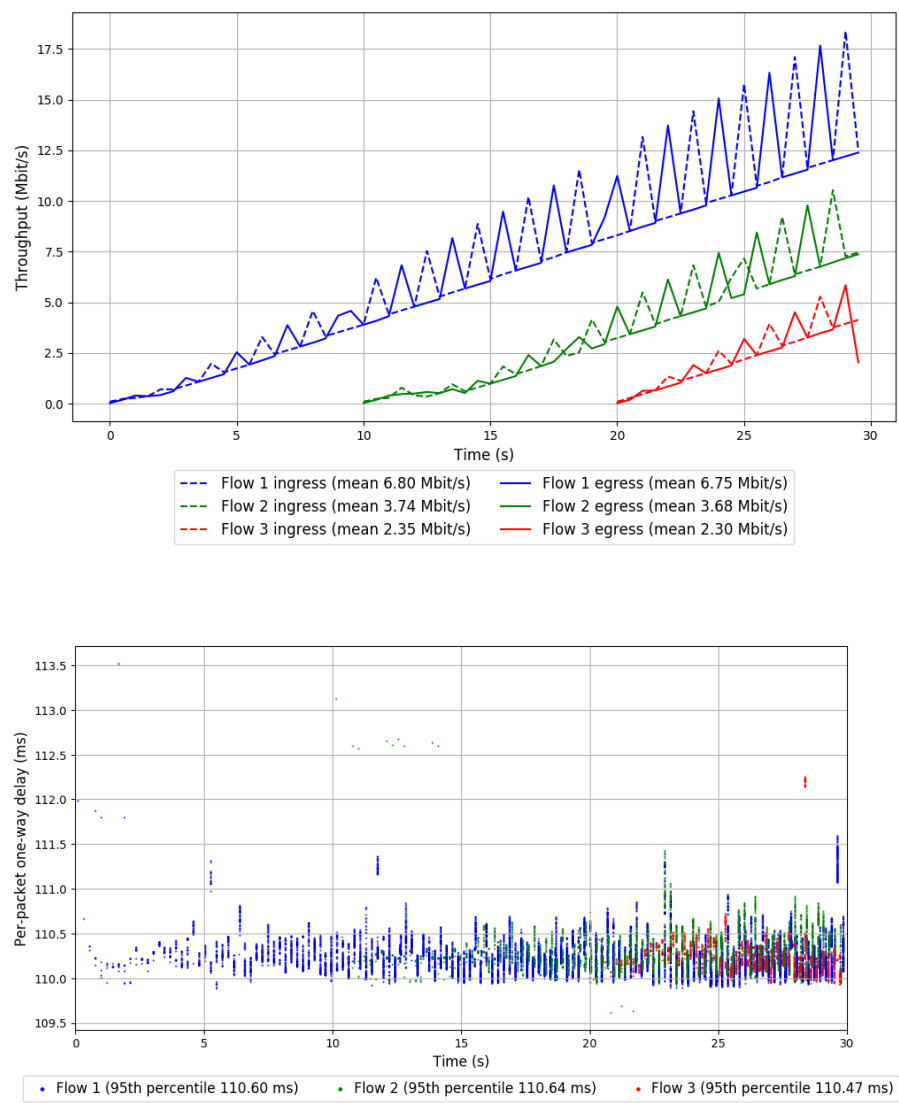
-- Flow 3:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 110.474 ms

Loss rate: 4.53%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-03-13 21:30:20

End at: 2018-03-13 21:30:50

Below is generated by plot.py at 2018-03-14 03:15:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.50 Mbit/s

95th percentile per-packet one-way delay: 110.541 ms

Loss rate: 1.72%

-- Flow 1:

Average throughput: 7.27 Mbit/s

95th percentile per-packet one-way delay: 110.495 ms

Loss rate: 1.49%

-- Flow 2:

Average throughput: 4.76 Mbit/s

95th percentile per-packet one-way delay: 110.568 ms

Loss rate: 2.24%

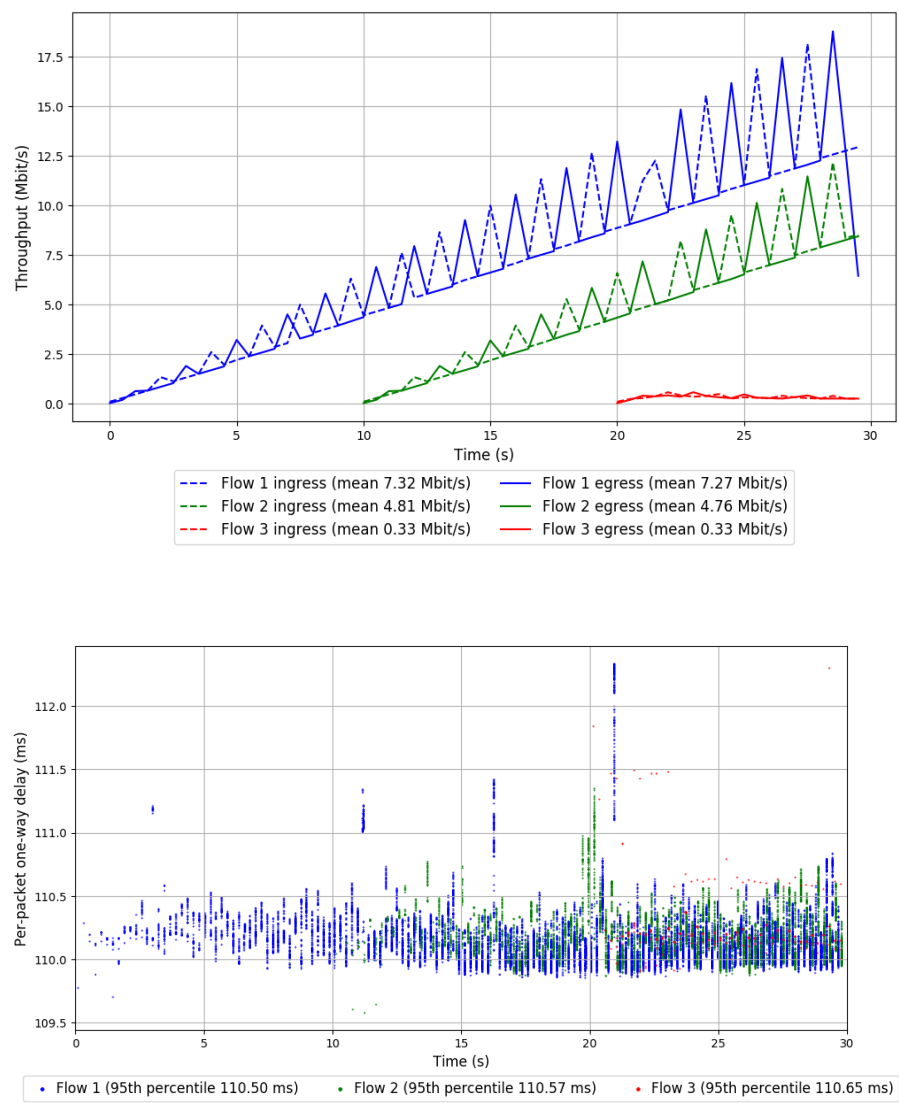
-- Flow 3:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 110.651 ms

Loss rate: 2.14%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-03-13 21:49:55

End at: 2018-03-13 21:50:25

Below is generated by plot.py at 2018-03-14 03:15:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.12 Mbit/s

95th percentile per-packet one-way delay: 110.679 ms

Loss rate: 1.77%

-- Flow 1:

Average throughput: 7.21 Mbit/s

95th percentile per-packet one-way delay: 110.688 ms

Loss rate: 1.49%

-- Flow 2:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 110.642 ms

Loss rate: 1.18%

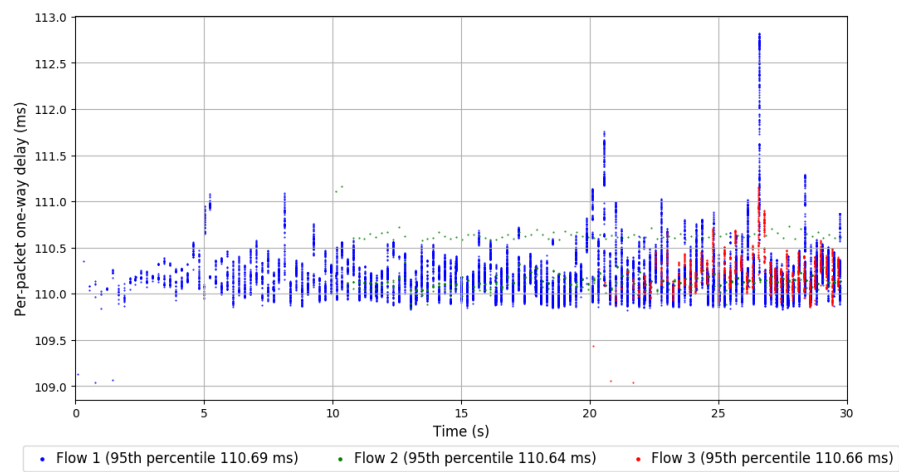
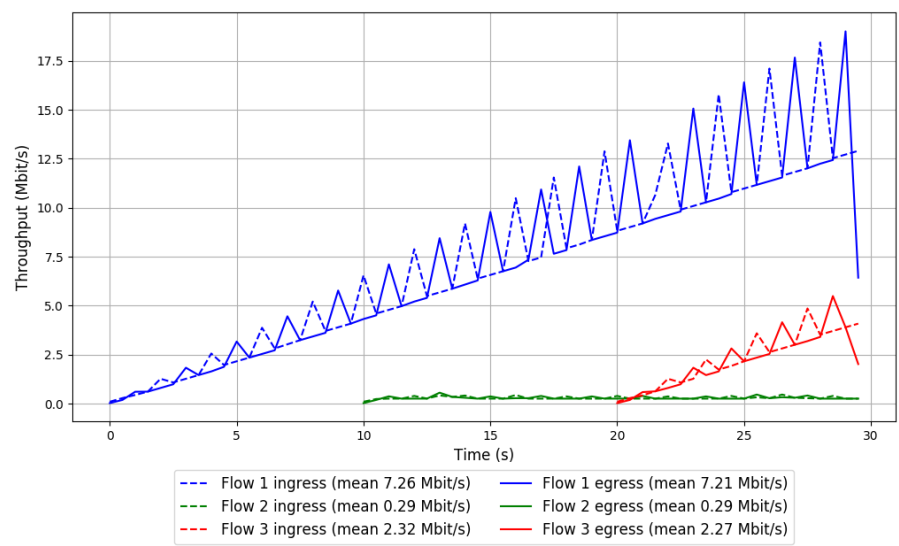
-- Flow 3:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 110.657 ms

Loss rate: 4.57%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-03-13 22:08:53

End at: 2018-03-13 22:09:23

Below is generated by plot.py at 2018-03-14 03:15:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.42 Mbit/s

95th percentile per-packet one-way delay: 113.689 ms

Loss rate: 1.85%

-- Flow 1:

Average throughput: 7.06 Mbit/s

95th percentile per-packet one-way delay: 113.662 ms

Loss rate: 1.51%

-- Flow 2:

Average throughput: 4.74 Mbit/s

95th percentile per-packet one-way delay: 113.746 ms

Loss rate: 2.21%

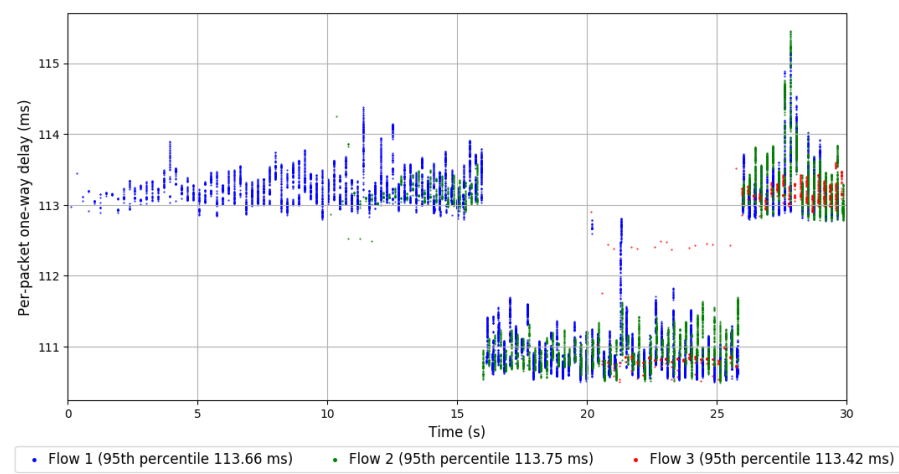
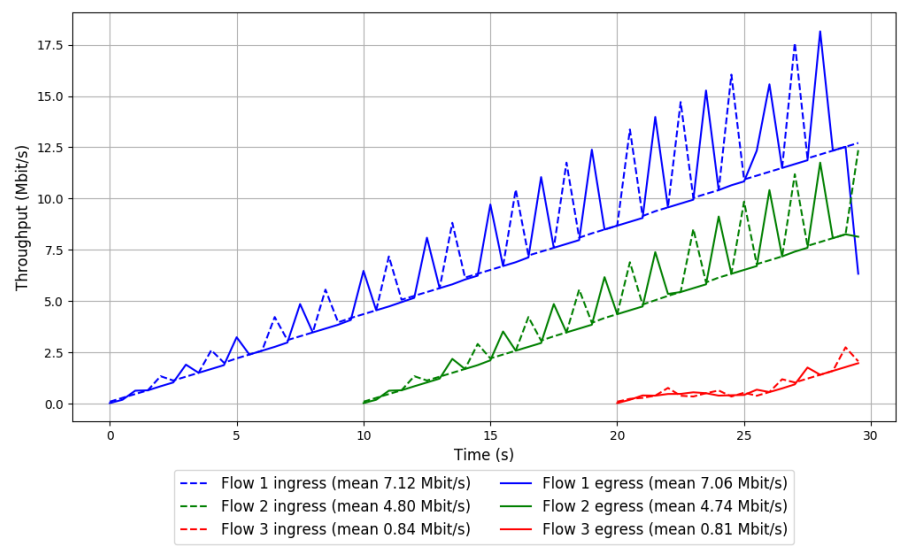
-- Flow 3:

Average throughput: 0.81 Mbit/s

95th percentile per-packet one-way delay: 113.415 ms

Loss rate: 6.32%

Run 6: Report of LEDBAT — Data Link

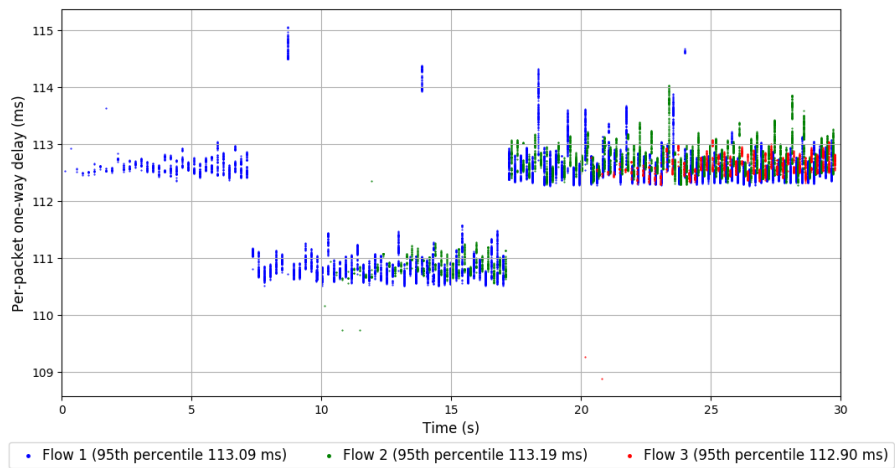
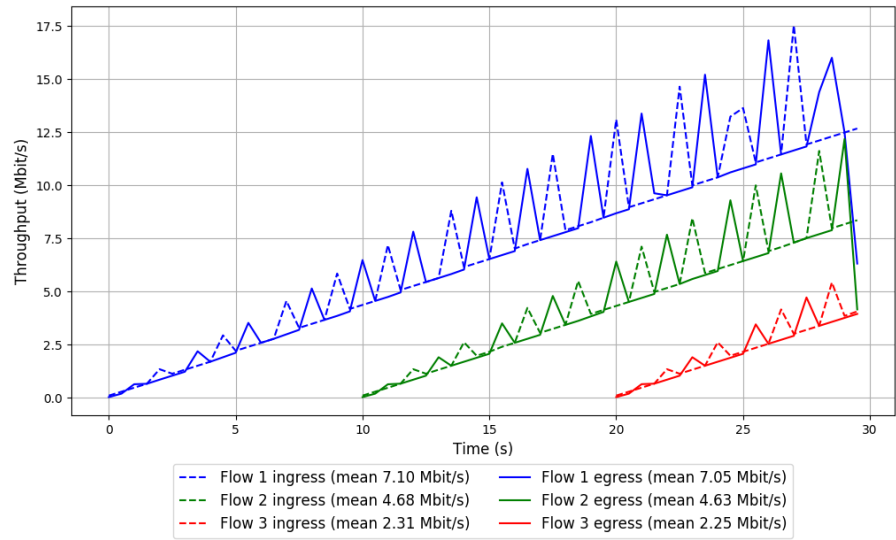


```
Run 7: Statistics of LEDBAT

Start at: 2018-03-13 22:27:51
End at: 2018-03-13 22:28:21

# Below is generated by plot.py at 2018-03-14 03:15:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.80 Mbit/s
95th percentile per-packet one-way delay: 113.152 ms
Loss rate: 1.93%
-- Flow 1:
Average throughput: 7.05 Mbit/s
95th percentile per-packet one-way delay: 113.092 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 113.193 ms
Loss rate: 2.27%
-- Flow 3:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 112.904 ms
Loss rate: 4.54%
```

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-03-13 22:47:18

End at: 2018-03-13 22:47:48

Below is generated by plot.py at 2018-03-14 03:15:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.89 Mbit/s

95th percentile per-packet one-way delay: 112.887 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 7.13 Mbit/s

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

Loss rate: 1.50%

-- Flow 2:

Average throughput: 4.58 Mbit/s

95th percentile per-packet one-way delay: 112.761 ms

Loss rate: 2.27%

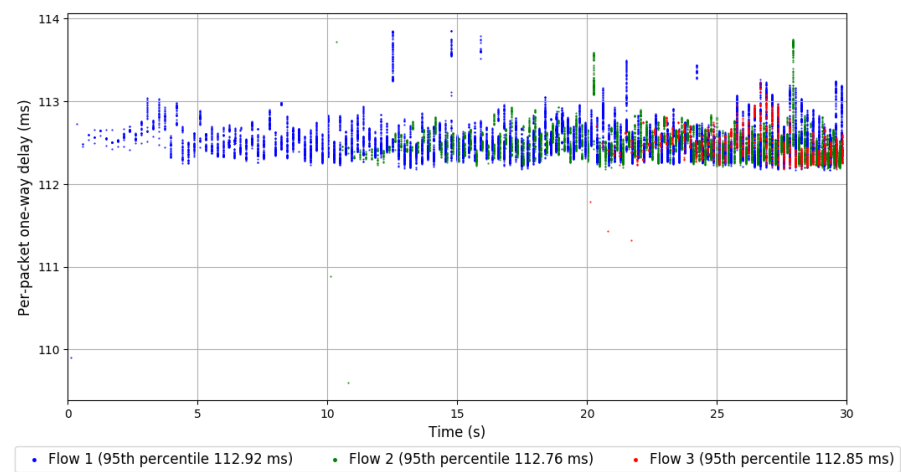
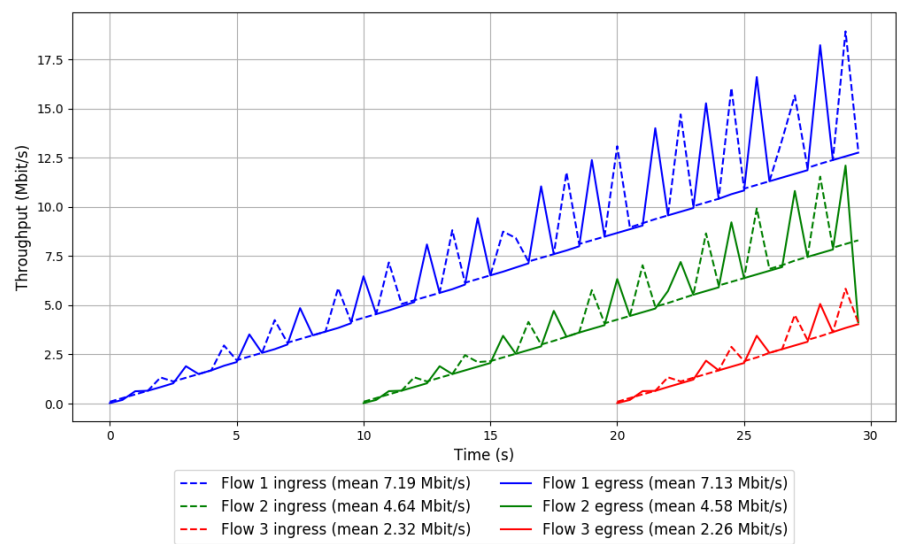
-- Flow 3:

Average throughput: 2.26 Mbit/s

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

Loss rate: 4.54%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-03-13 23:06:23

End at: 2018-03-13 23:06:53

Below is generated by plot.py at 2018-03-14 03:15:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.06 Mbit/s

95th percentile per-packet one-way delay: 111.290 ms

Loss rate: 1.60%

-- Flow 1:

Average throughput: 7.23 Mbit/s

95th percentile per-packet one-way delay: 111.340 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 4.78 Mbit/s

95th percentile per-packet one-way delay: 111.081 ms

Loss rate: 2.25%

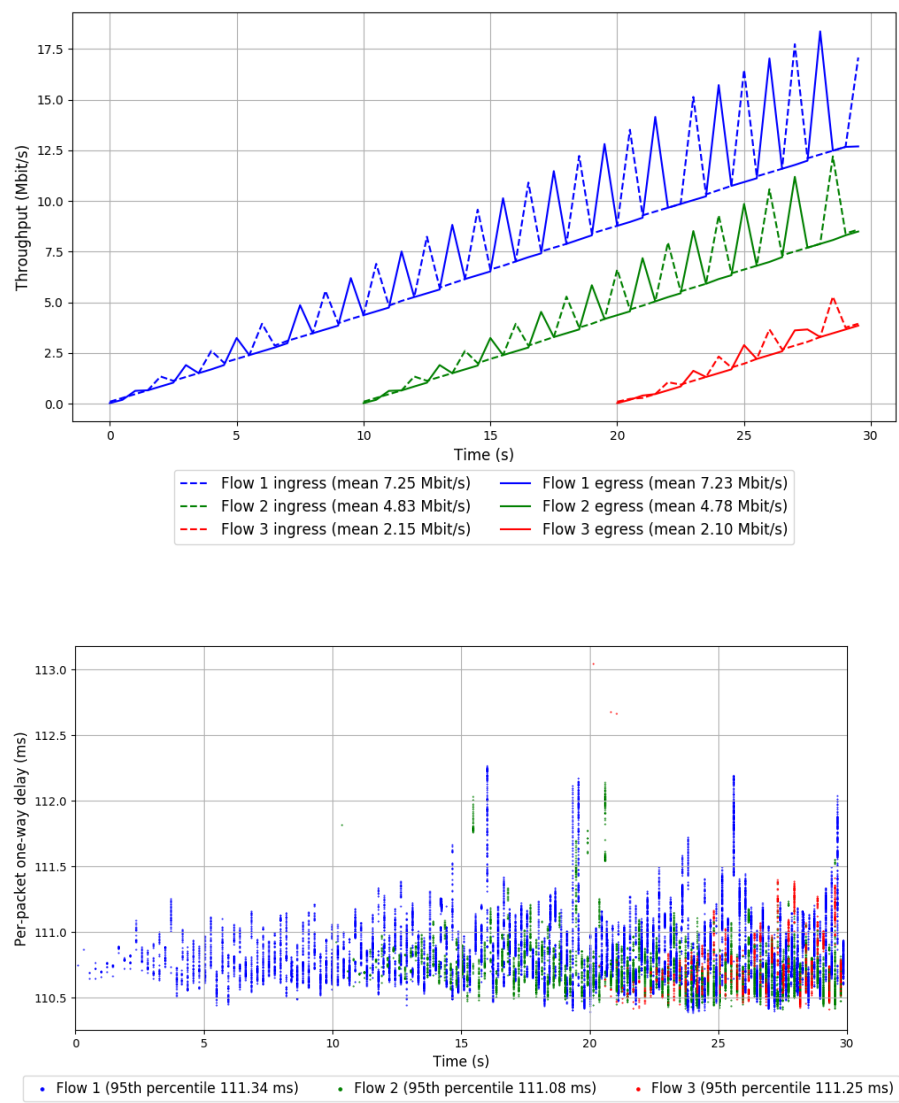
-- Flow 3:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 111.253 ms

Loss rate: 4.71%

Run 9: Report of LEDBAT — Data Link

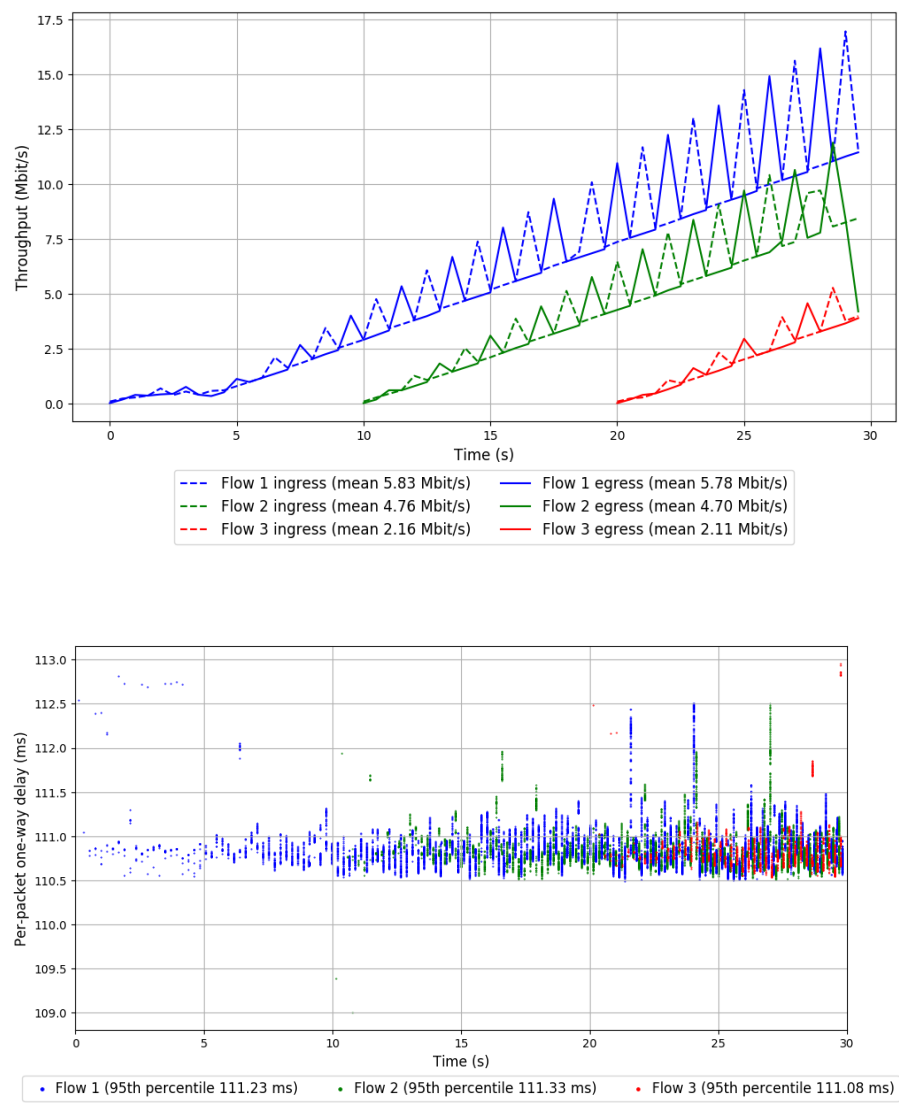


```
Run 10: Statistics of LEDBAT

Start at: 2018-03-13 23:26:02
End at: 2018-03-13 23:26:32

# Below is generated by plot.py at 2018-03-14 03:15:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 111.247 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 5.78 Mbit/s
95th percentile per-packet one-way delay: 111.227 ms
Loss rate: 1.66%
-- Flow 2:
Average throughput: 4.70 Mbit/s
95th percentile per-packet one-way delay: 111.326 ms
Loss rate: 2.26%
-- Flow 3:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 111.085 ms
Loss rate: 4.74%
```

Run 10: Report of LEDBAT — Data Link

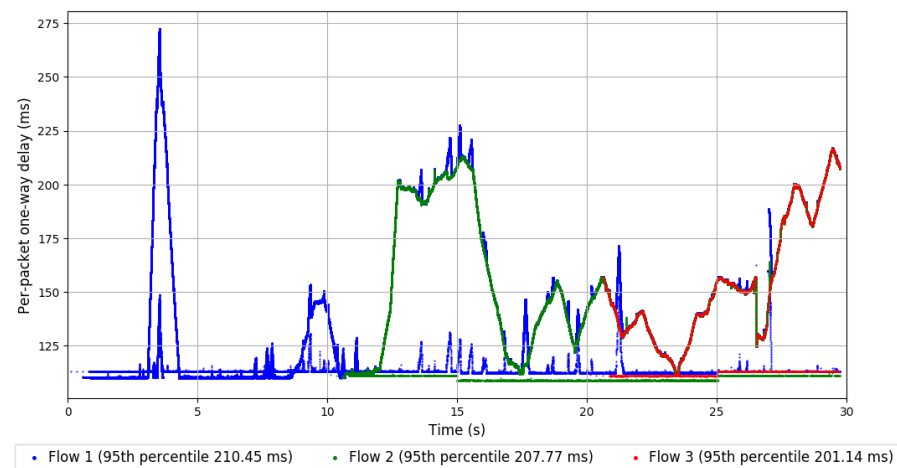
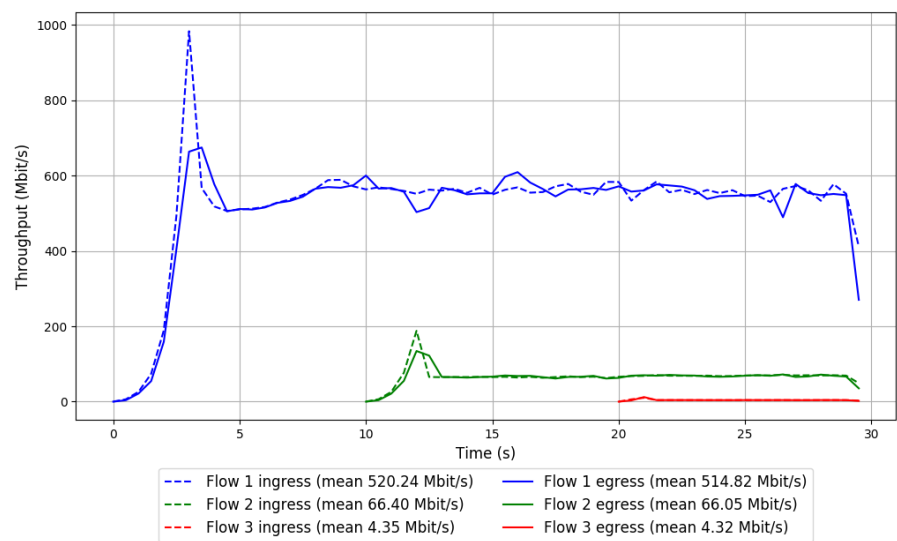


```
Run 1: Statistics of PCC

Start at: 2018-03-13 20:35:08
End at: 2018-03-13 20:35:38

# Below is generated by plot.py at 2018-03-14 03:24:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 559.89 Mbit/s
95th percentile per-packet one-way delay: 210.299 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 514.82 Mbit/s
95th percentile per-packet one-way delay: 210.453 ms
Loss rate: 1.79%
-- Flow 2:
Average throughput: 66.05 Mbit/s
95th percentile per-packet one-way delay: 207.769 ms
Loss rate: 1.65%
-- Flow 3:
Average throughput: 4.32 Mbit/s
95th percentile per-packet one-way delay: 201.136 ms
Loss rate: 2.97%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2018-03-13 20:54:41

End at: 2018-03-13 20:55:11

Below is generated by plot.py at 2018-03-14 03:24:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 538.90 Mbit/s

95th percentile per-packet one-way delay: 225.356 ms

Loss rate: 2.11%

-- Flow 1:

Average throughput: 476.56 Mbit/s

95th percentile per-packet one-way delay: 227.912 ms

Loss rate: 2.17%

-- Flow 2:

Average throughput: 63.73 Mbit/s

95th percentile per-packet one-way delay: 209.953 ms

Loss rate: 1.22%

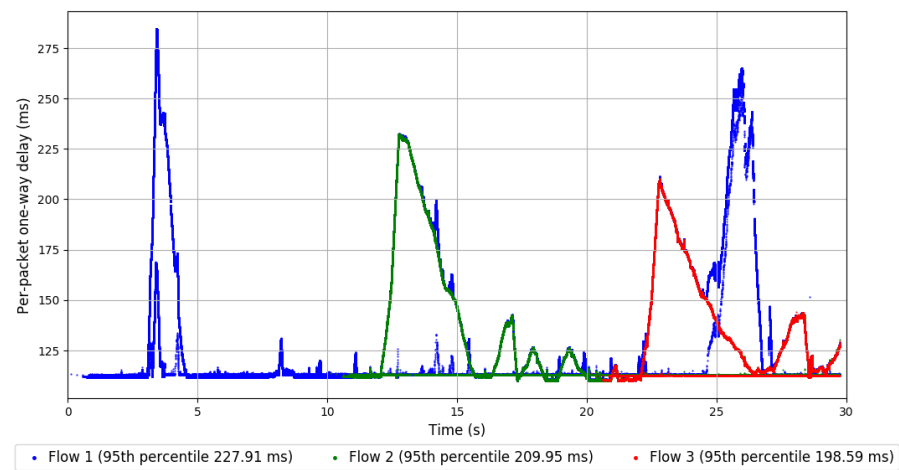
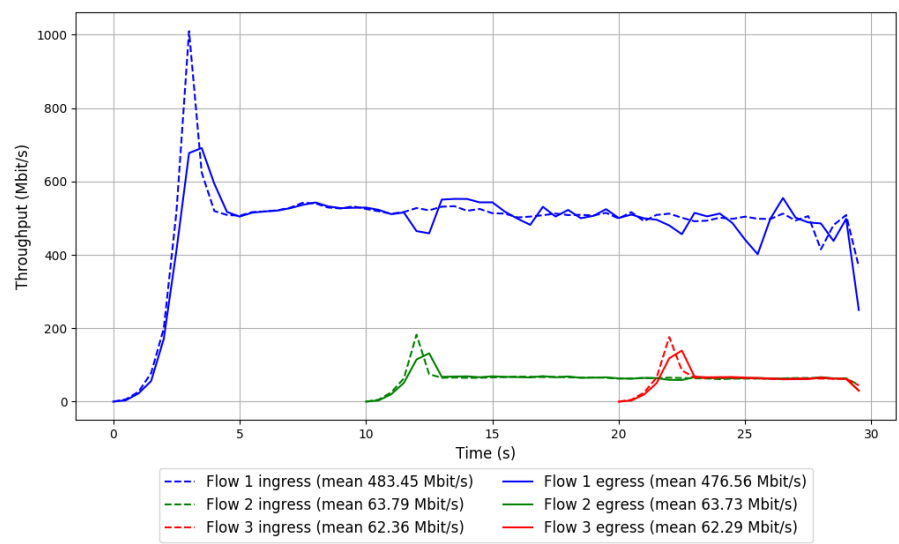
-- Flow 3:

Average throughput: 62.29 Mbit/s

95th percentile per-packet one-way delay: 198.591 ms

Loss rate: 2.41%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-03-13 21:14:20

End at: 2018-03-13 21:14:50

Below is generated by plot.py at 2018-03-14 03:24:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 552.65 Mbit/s

95th percentile per-packet one-way delay: 224.930 ms

Loss rate: 1.67%

-- Flow 1:

Average throughput: 499.95 Mbit/s

95th percentile per-packet one-way delay: 226.756 ms

Loss rate: 1.67%

-- Flow 2:

Average throughput: 63.53 Mbit/s

95th percentile per-packet one-way delay: 222.439 ms

Loss rate: 1.54%

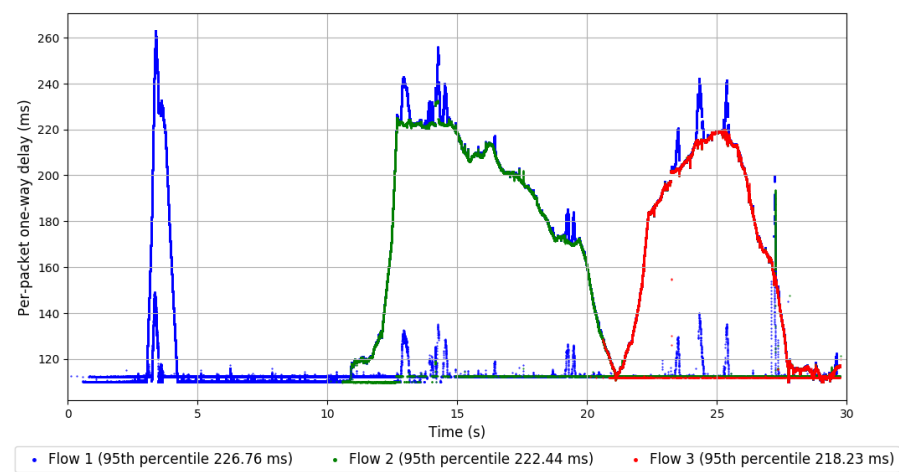
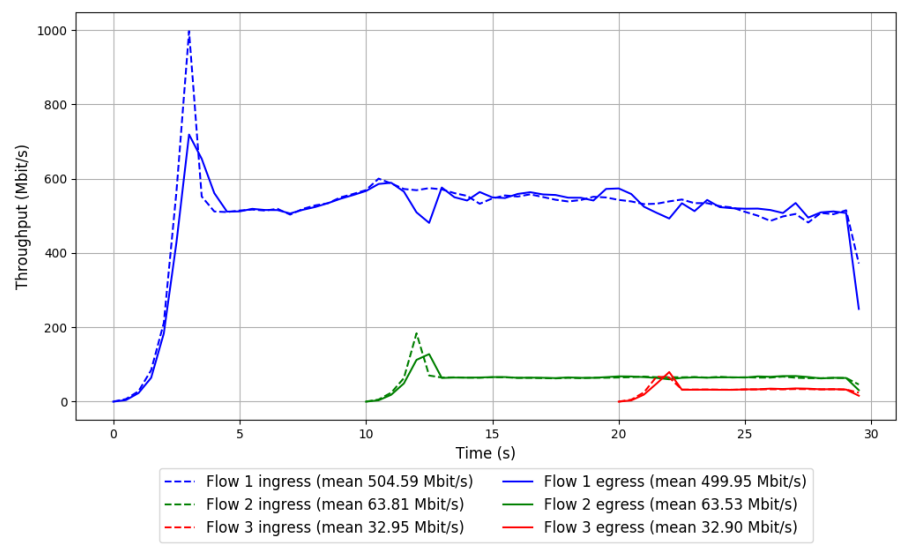
-- Flow 3:

Average throughput: 32.90 Mbit/s

95th percentile per-packet one-way delay: 218.233 ms

Loss rate: 2.41%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-03-13 21:33:49

End at: 2018-03-13 21:34:19

Below is generated by plot.py at 2018-03-14 03:24:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 539.84 Mbit/s

95th percentile per-packet one-way delay: 215.404 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 506.62 Mbit/s

95th percentile per-packet one-way delay: 214.988 ms

Loss rate: 1.64%

-- Flow 2:

Average throughput: 18.05 Mbit/s

95th percentile per-packet one-way delay: 212.079 ms

Loss rate: 1.21%

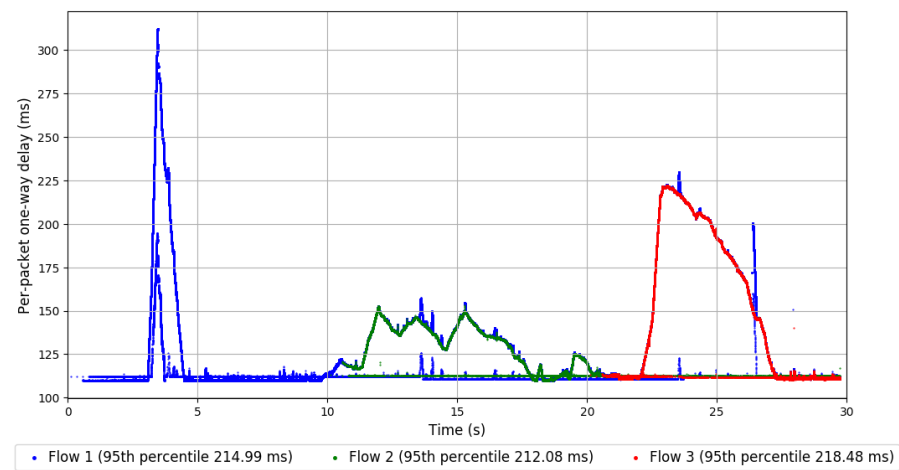
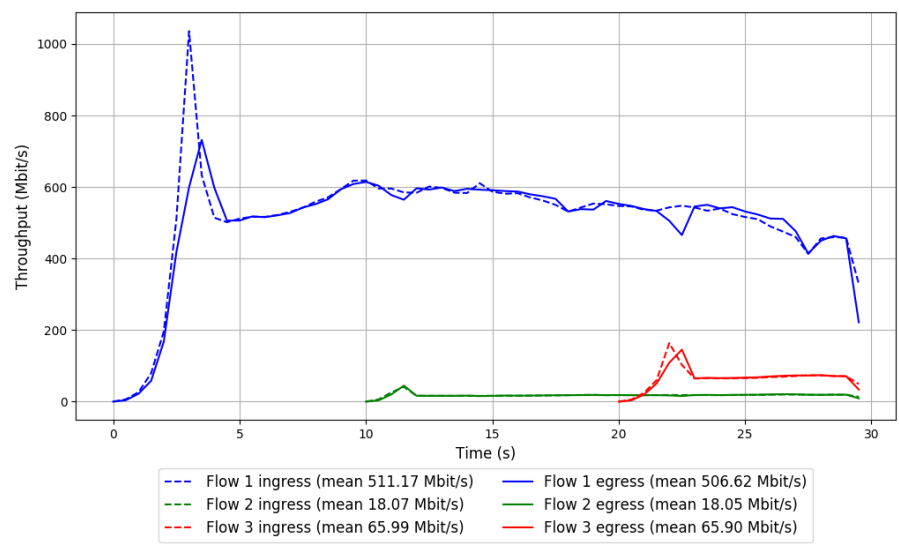
-- Flow 3:

Average throughput: 65.90 Mbit/s

95th percentile per-packet one-way delay: 218.476 ms

Loss rate: 2.43%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-03-13 21:53:26

End at: 2018-03-13 21:53:56

Below is generated by plot.py at 2018-03-14 03:24:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 503.36 Mbit/s

95th percentile per-packet one-way delay: 214.551 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 460.61 Mbit/s

95th percentile per-packet one-way delay: 216.014 ms

Loss rate: 1.44%

-- Flow 2:

Average throughput: 62.45 Mbit/s

95th percentile per-packet one-way delay: 210.202 ms

Loss rate: 1.24%

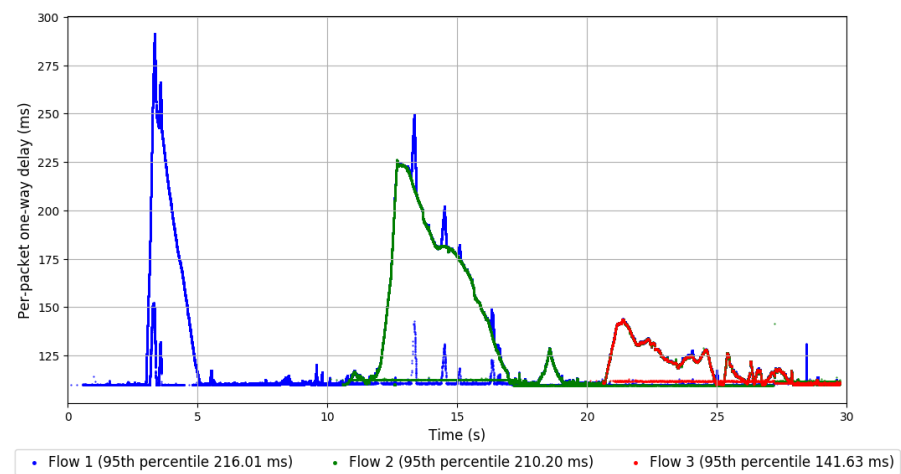
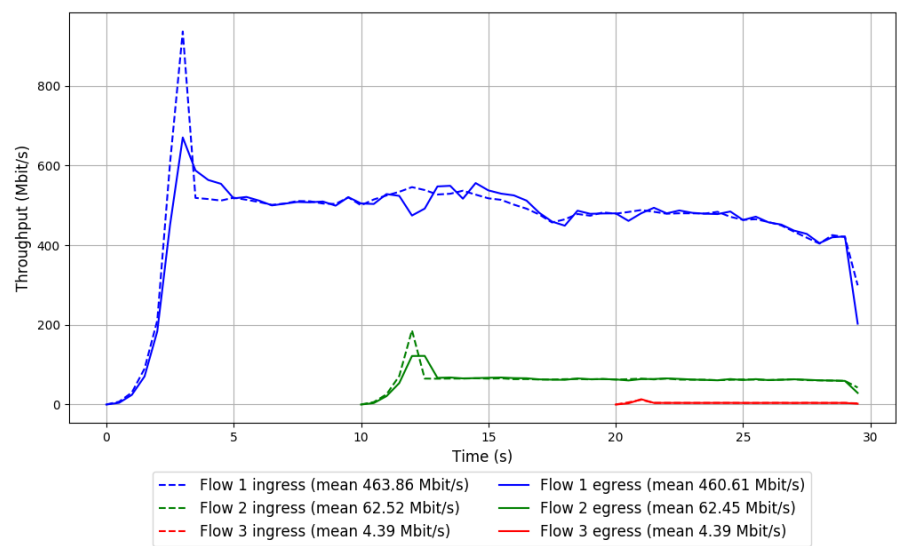
-- Flow 3:

Average throughput: 4.39 Mbit/s

95th percentile per-packet one-way delay: 141.630 ms

Loss rate: 2.22%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-03-13 22:12:24

End at: 2018-03-13 22:12:54

Below is generated by plot.py at 2018-03-14 03:24:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 415.21 Mbit/s

95th percentile per-packet one-way delay: 172.963 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 350.03 Mbit/s

95th percentile per-packet one-way delay: 171.619 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 82.48 Mbit/s

95th percentile per-packet one-way delay: 174.493 ms

Loss rate: 1.34%

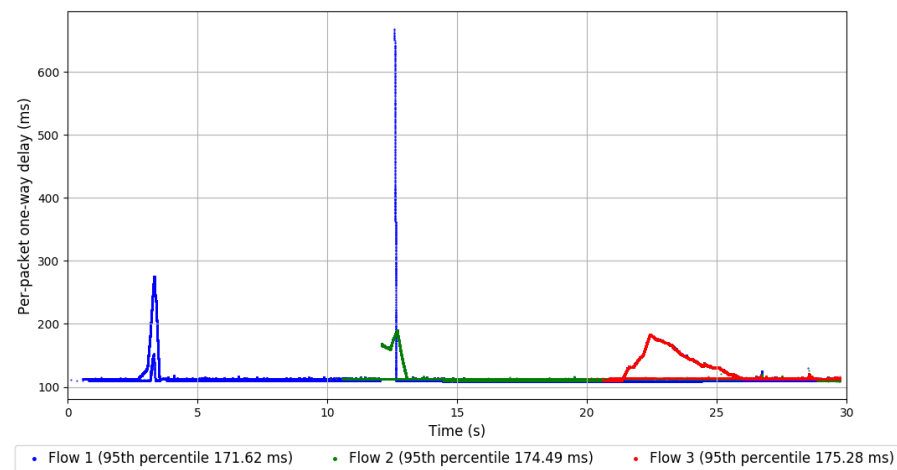
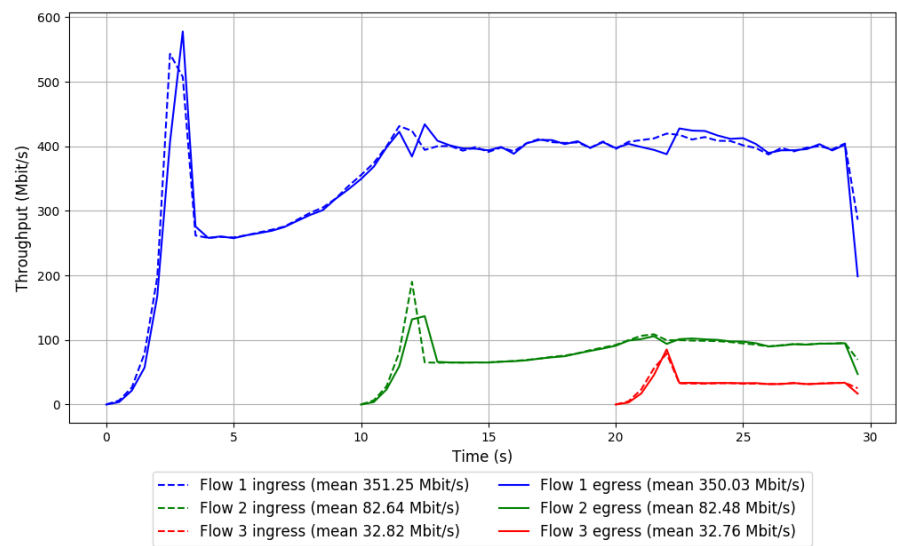
-- Flow 3:

Average throughput: 32.76 Mbit/s

95th percentile per-packet one-way delay: 175.284 ms

Loss rate: 2.47%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-03-13 22:31:22

End at: 2018-03-13 22:31:52

Below is generated by plot.py at 2018-03-14 03:24:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 512.58 Mbit/s

95th percentile per-packet one-way delay: 181.376 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 479.86 Mbit/s

95th percentile per-packet one-way delay: 181.565 ms

Loss rate: 1.69%

-- Flow 2:

Average throughput: 33.27 Mbit/s

95th percentile per-packet one-way delay: 176.578 ms

Loss rate: 1.08%

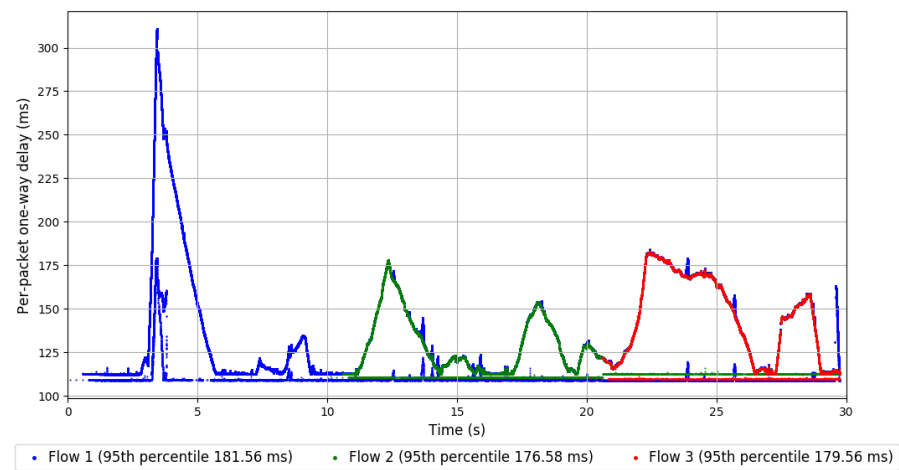
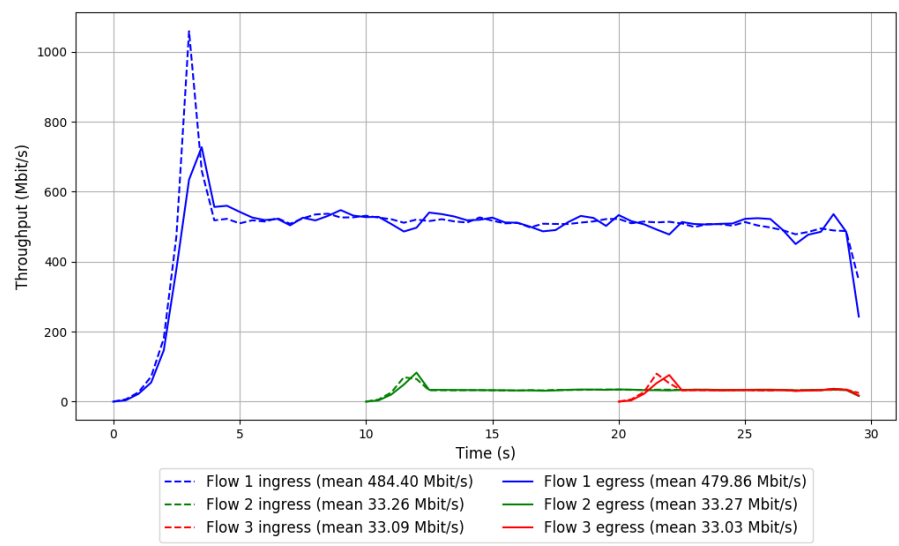
-- Flow 3:

Average throughput: 33.03 Mbit/s

95th percentile per-packet one-way delay: 179.565 ms

Loss rate: 2.40%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-03-13 22:50:49

End at: 2018-03-13 22:51:19

Below is generated by plot.py at 2018-03-14 03:24:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 524.03 Mbit/s

95th percentile per-packet one-way delay: 233.929 ms

Loss rate: 2.52%

-- Flow 1:

Average throughput: 468.10 Mbit/s

95th percentile per-packet one-way delay: 235.397 ms

Loss rate: 2.51%

-- Flow 2:

Average throughput: 69.15 Mbit/s

95th percentile per-packet one-way delay: 230.051 ms

Loss rate: 2.60%

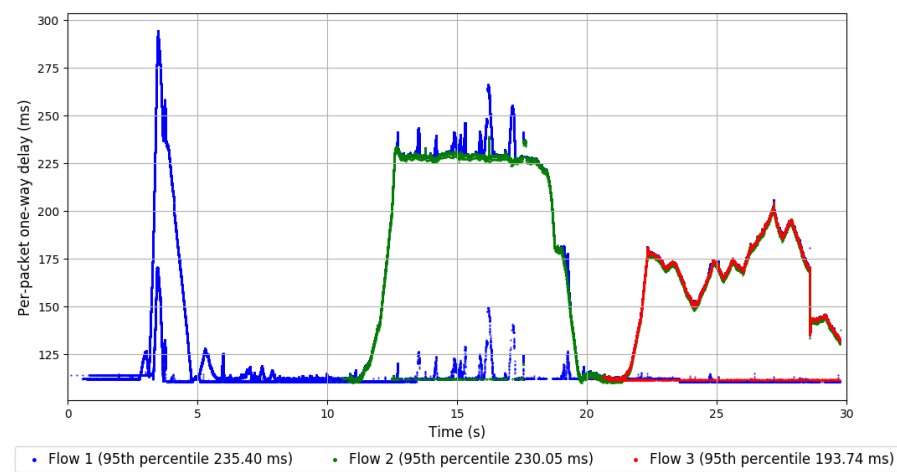
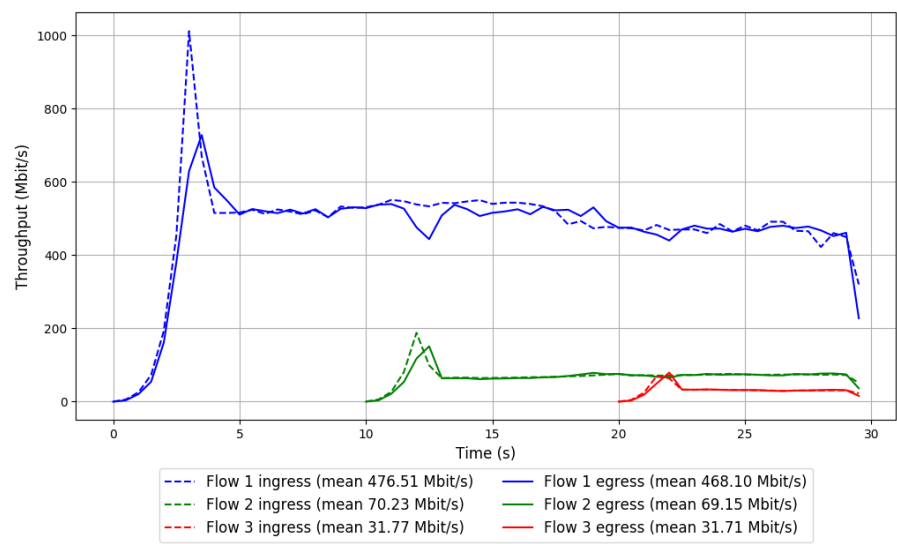
-- Flow 3:

Average throughput: 31.71 Mbit/s

95th percentile per-packet one-way delay: 193.741 ms

Loss rate: 2.46%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-03-13 23:09:52

End at: 2018-03-13 23:10:22

Below is generated by plot.py at 2018-03-14 03:31:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 499.11 Mbit/s

95th percentile per-packet one-way delay: 182.484 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 475.26 Mbit/s

95th percentile per-packet one-way delay: 182.904 ms

Loss rate: 1.48%

-- Flow 2:

Average throughput: 34.00 Mbit/s

95th percentile per-packet one-way delay: 177.995 ms

Loss rate: 1.33%

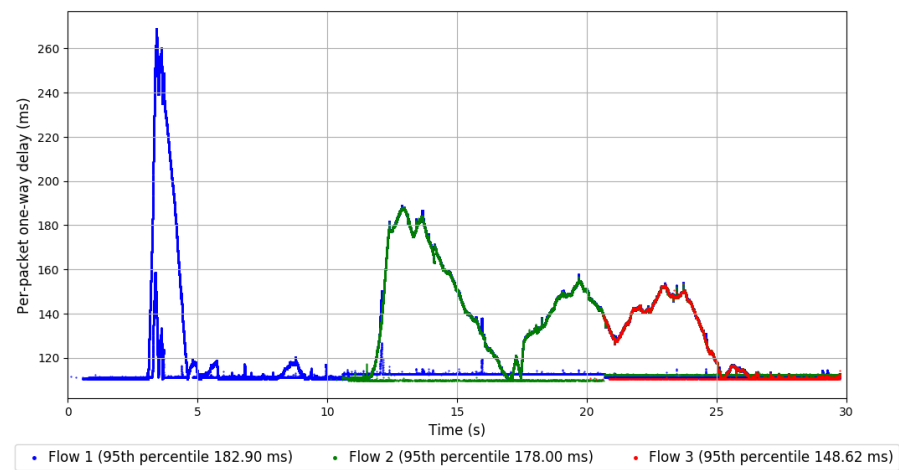
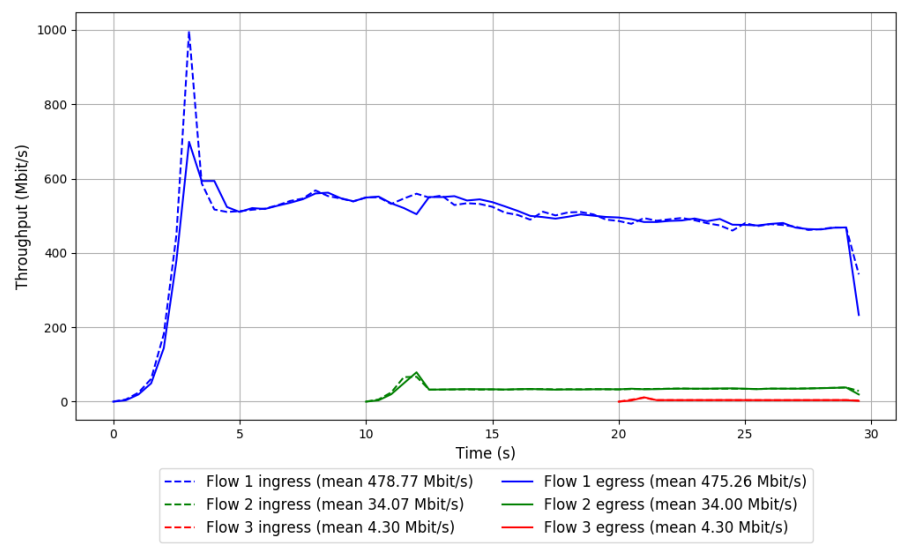
-- Flow 3:

Average throughput: 4.30 Mbit/s

95th percentile per-packet one-way delay: 148.624 ms

Loss rate: 2.20%

Run 9: Report of PCC — Data Link

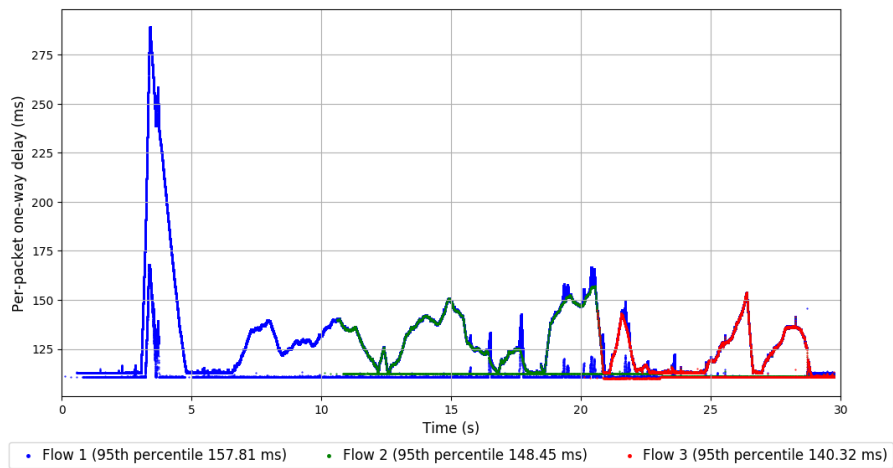
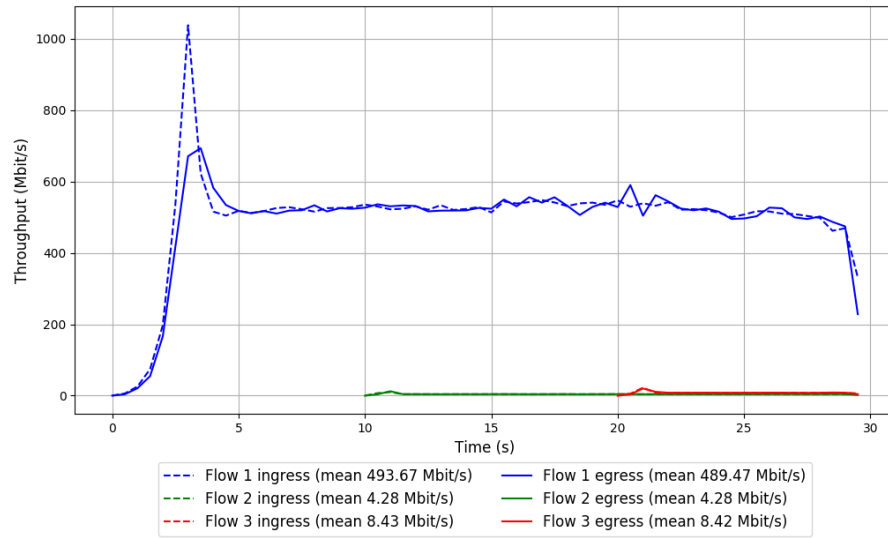


```
Run 10: Statistics of PCC

Start at: 2018-03-13 23:29:30
End at: 2018-03-13 23:30:00

# Below is generated by plot.py at 2018-03-14 03:32:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 494.99 Mbit/s
95th percentile per-packet one-way delay: 157.395 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 489.47 Mbit/s
95th percentile per-packet one-way delay: 157.806 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 4.28 Mbit/s
95th percentile per-packet one-way delay: 148.449 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 8.42 Mbit/s
95th percentile per-packet one-way delay: 140.316 ms
Loss rate: 2.29%
```

Run 10: Report of PCC — Data Link

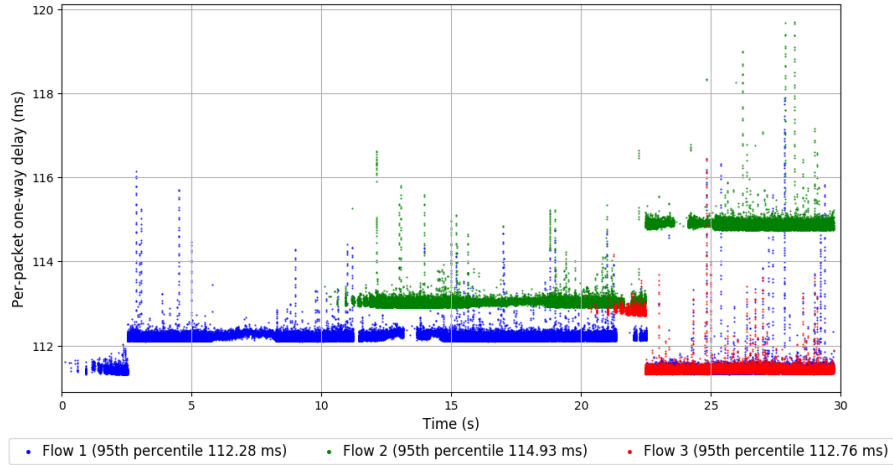
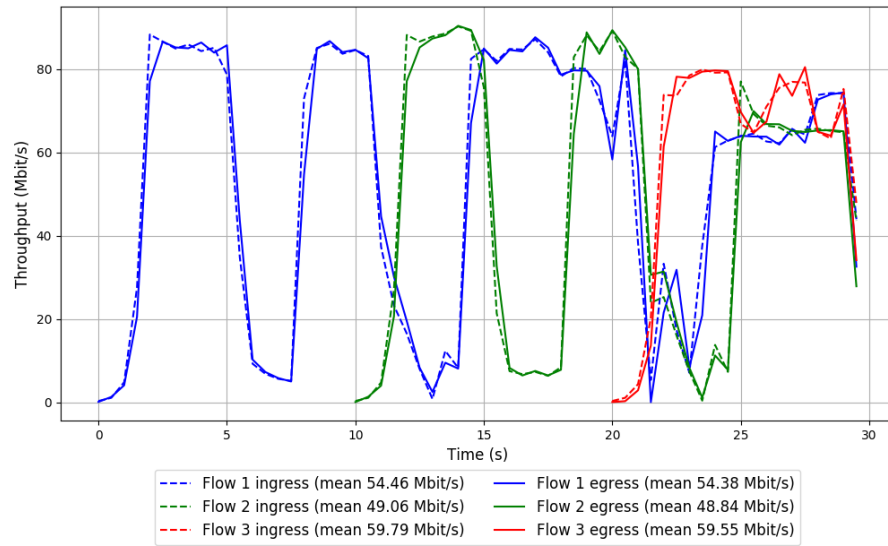


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-13 20:38:50
End at: 2018-03-13 20:39:20

# Below is generated by plot.py at 2018-03-14 03:32:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 105.99 Mbit/s
95th percentile per-packet one-way delay: 114.851 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 54.38 Mbit/s
95th percentile per-packet one-way delay: 112.277 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 48.84 Mbit/s
95th percentile per-packet one-way delay: 114.927 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 59.55 Mbit/s
95th percentile per-packet one-way delay: 112.758 ms
Loss rate: 2.66%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-03-13 20:58:21

End at: 2018-03-13 20:58:51

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 115.80 Mbit/s

95th percentile per-packet one-way delay: 115.035 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 68.62 Mbit/s

95th percentile per-packet one-way delay: 112.818 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 53.34 Mbit/s

95th percentile per-packet one-way delay: 113.104 ms

Loss rate: 1.60%

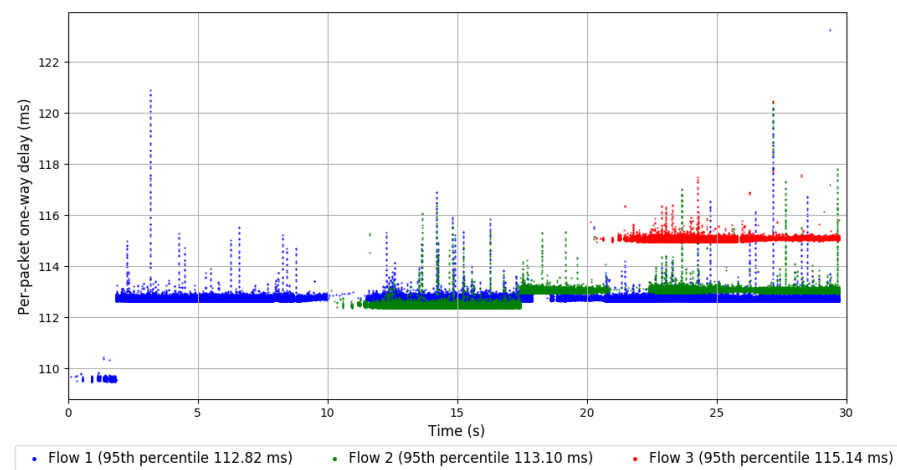
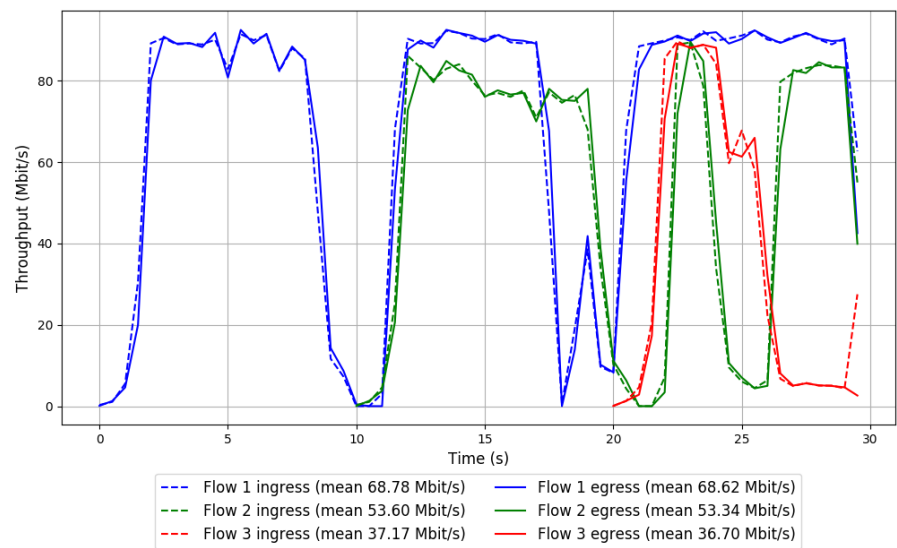
-- Flow 3:

Average throughput: 36.70 Mbit/s

95th percentile per-packet one-way delay: 115.143 ms

Loss rate: 3.54%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-03-13 21:17:51

End at: 2018-03-13 21:18:21

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.39 Mbit/s

95th percentile per-packet one-way delay: 113.838 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 59.63 Mbit/s

95th percentile per-packet one-way delay: 113.870 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 58.73 Mbit/s

95th percentile per-packet one-way delay: 108.888 ms

Loss rate: 1.45%

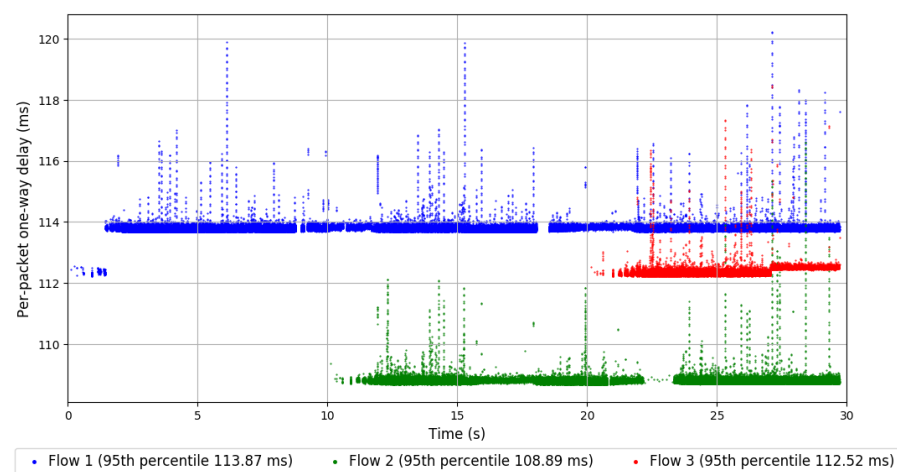
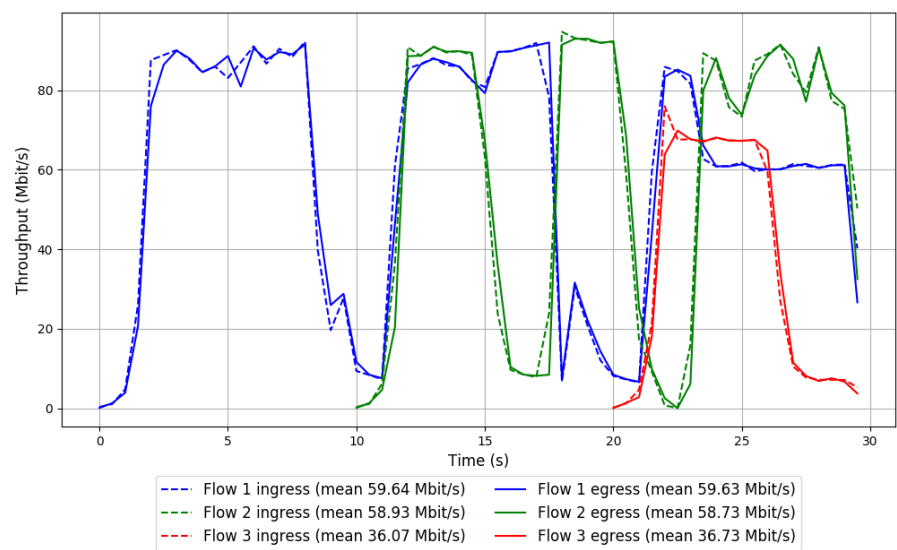
-- Flow 3:

Average throughput: 36.73 Mbit/s

95th percentile per-packet one-way delay: 112.518 ms

Loss rate: 0.51%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-03-13 21:37:26

End at: 2018-03-13 21:37:56

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 114.00 Mbit/s

95th percentile per-packet one-way delay: 112.842 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 57.94 Mbit/s

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

Loss rate: 1.06%

-- Flow 2:

Average throughput: 58.08 Mbit/s

95th percentile per-packet one-way delay: 112.889 ms

Loss rate: 1.21%

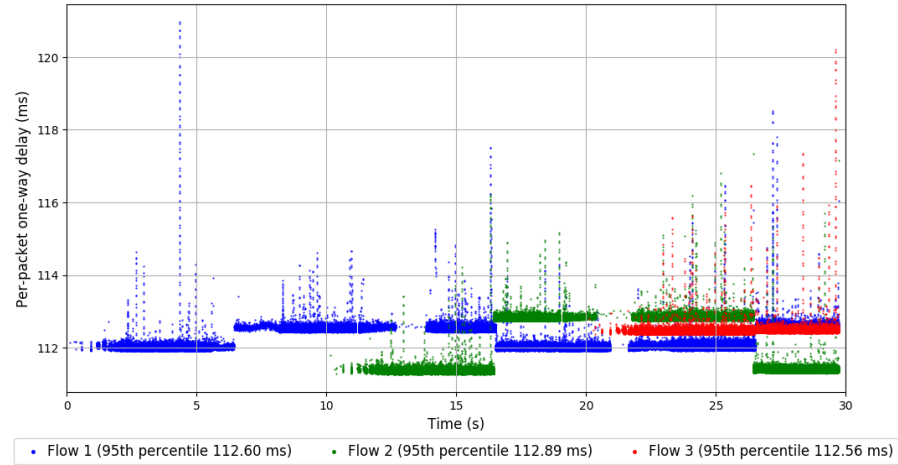
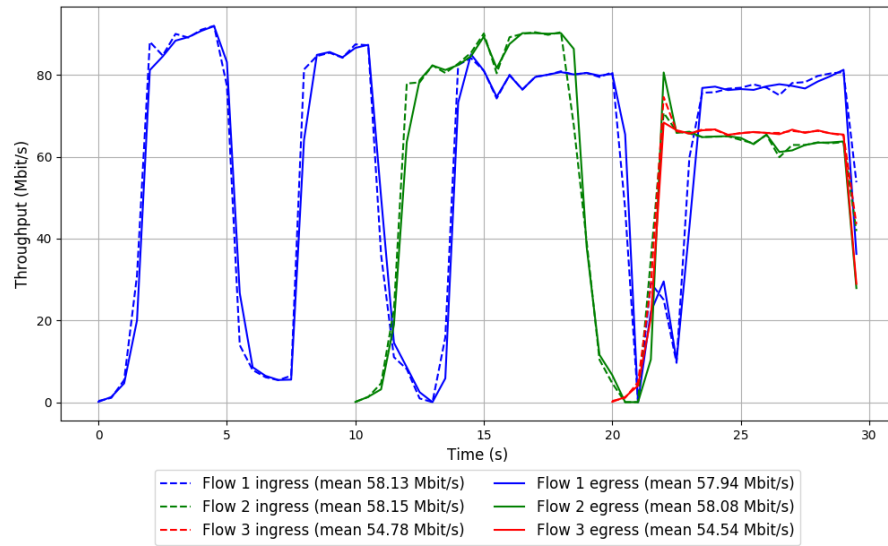
-- Flow 3:

Average throughput: 54.54 Mbit/s

95th percentile per-packet one-way delay: 112.561 ms

Loss rate: 2.72%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-03-13 21:56:59

End at: 2018-03-13 21:57:29

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.25 Mbit/s

95th percentile per-packet one-way delay: 111.646 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 53.39 Mbit/s

95th percentile per-packet one-way delay: 114.025 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 56.64 Mbit/s

95th percentile per-packet one-way delay: 110.968 ms

Loss rate: 1.33%

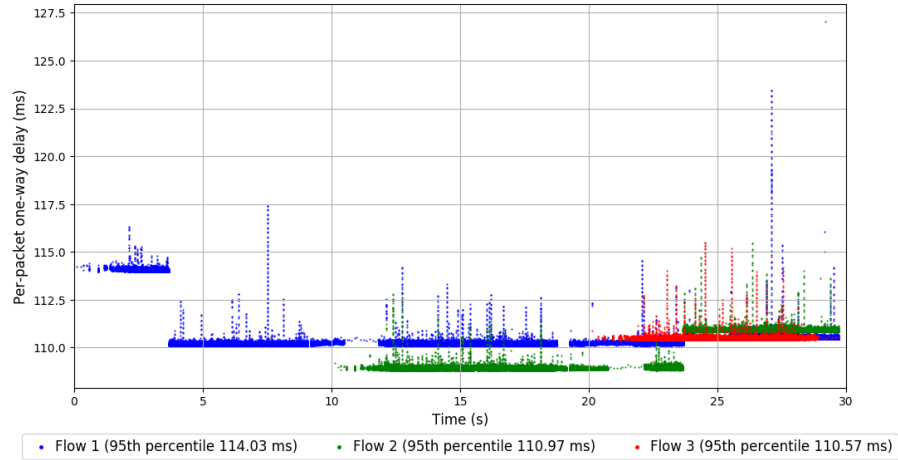
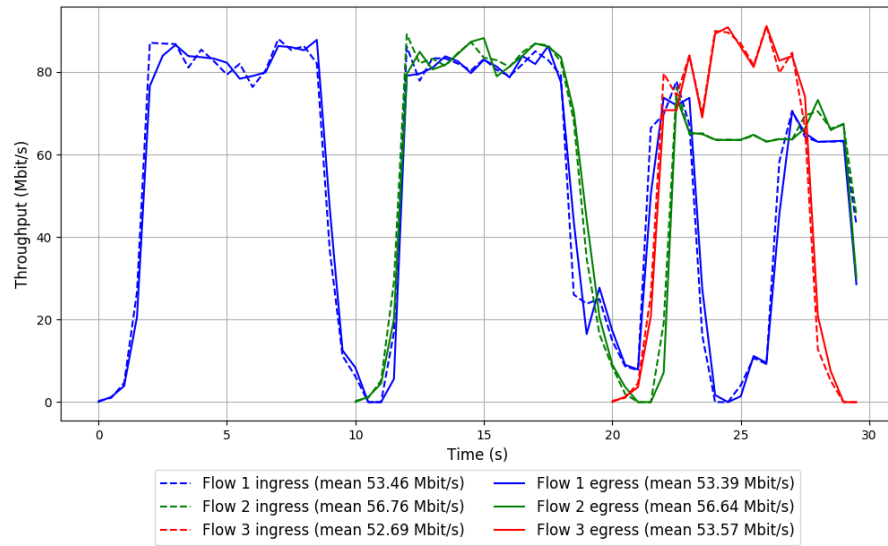
-- Flow 3:

Average throughput: 53.57 Mbit/s

95th percentile per-packet one-way delay: 110.573 ms

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-03-13 22:15:51

End at: 2018-03-13 22:16:21

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.31 Mbit/s

95th percentile per-packet one-way delay: 112.105 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 66.61 Mbit/s

95th percentile per-packet one-way delay: 112.092 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 37.50 Mbit/s

95th percentile per-packet one-way delay: 111.348 ms

Loss rate: 2.12%

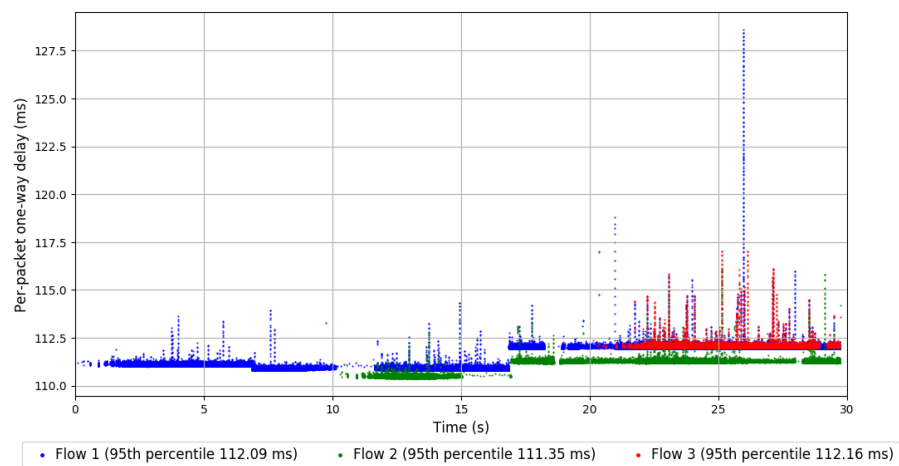
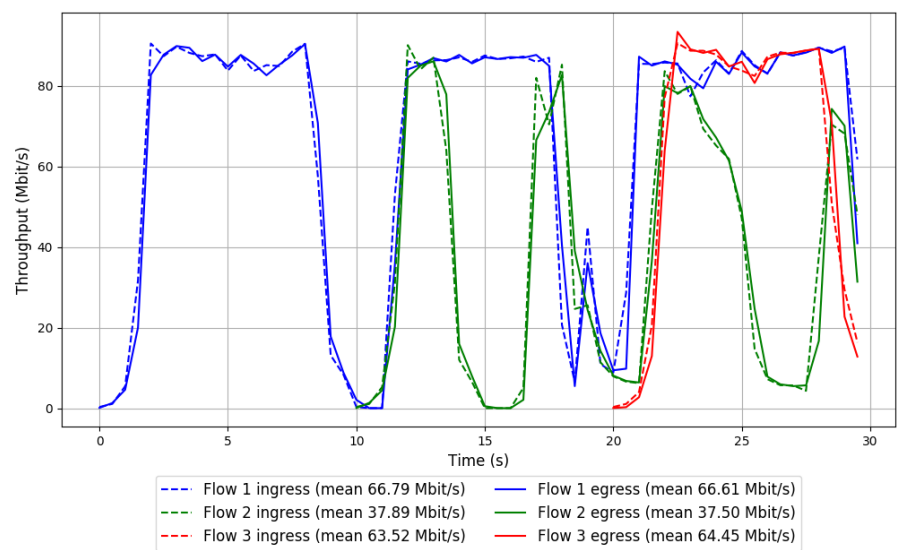
-- Flow 3:

Average throughput: 64.45 Mbit/s

95th percentile per-packet one-way delay: 112.155 ms

Loss rate: 0.82%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-03-13 22:34:57

End at: 2018-03-13 22:35:27

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.01 Mbit/s

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

Loss rate: 1.21%

-- Flow 1:

Average throughput: 58.31 Mbit/s

95th percentile per-packet one-way delay: 111.888 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 44.79 Mbit/s

95th percentile per-packet one-way delay: 110.893 ms

Loss rate: 1.91%

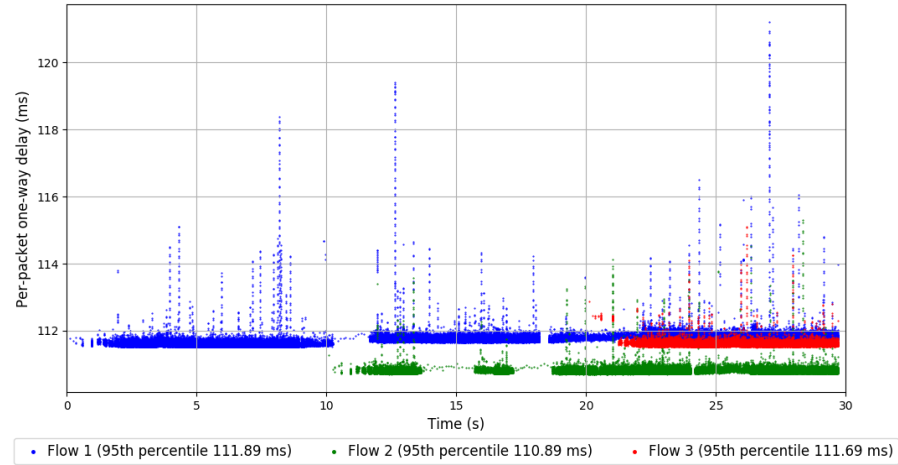
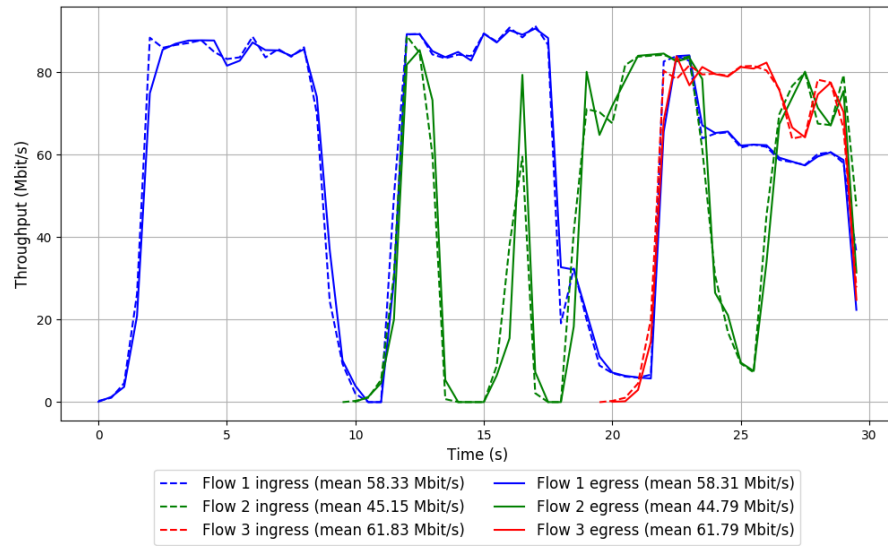
-- Flow 3:

Average throughput: 61.79 Mbit/s

95th percentile per-packet one-way delay: 111.685 ms

Loss rate: 1.44%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-03-13 22:54:26

End at: 2018-03-13 22:54:56

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.71 Mbit/s

95th percentile per-packet one-way delay: 112.475 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 56.72 Mbit/s

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

Loss rate: 1.17%

-- Flow 2:

Average throughput: 59.28 Mbit/s

95th percentile per-packet one-way delay: 112.179 ms

Loss rate: 1.13%

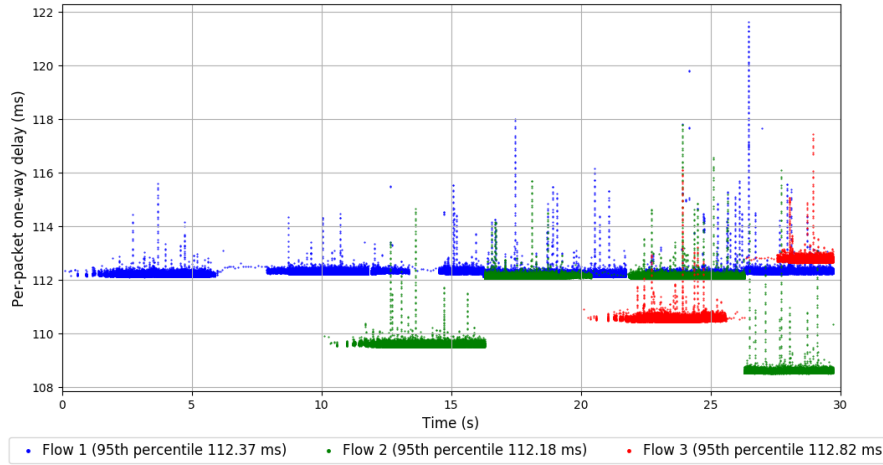
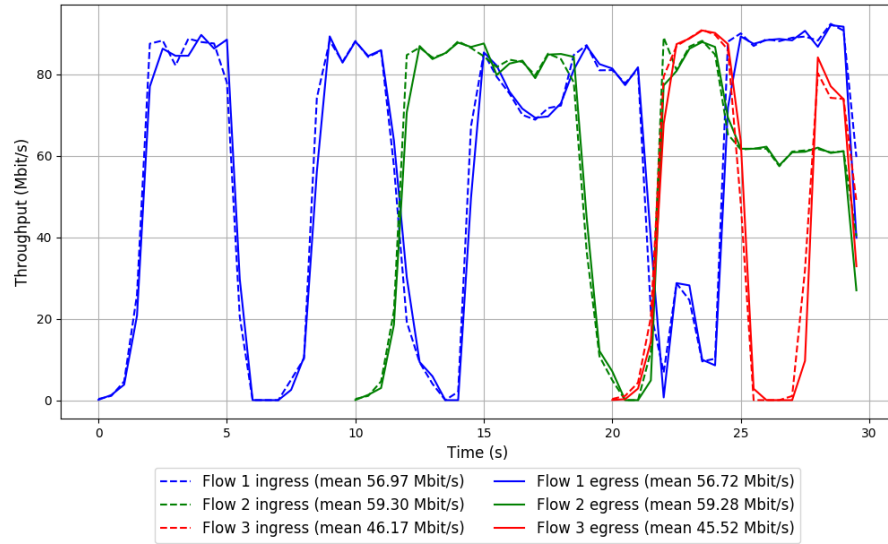
-- Flow 3:

Average throughput: 45.52 Mbit/s

95th percentile per-packet one-way delay: 112.818 ms

Loss rate: 3.61%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-03-13 23:13:28

End at: 2018-03-13 23:13:58

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.46 Mbit/s

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

Loss rate: 1.00%

-- Flow 1:

Average throughput: 32.94 Mbit/s

95th percentile per-packet one-way delay: 112.897 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 61.92 Mbit/s

95th percentile per-packet one-way delay: 112.652 ms

Loss rate: 0.18%

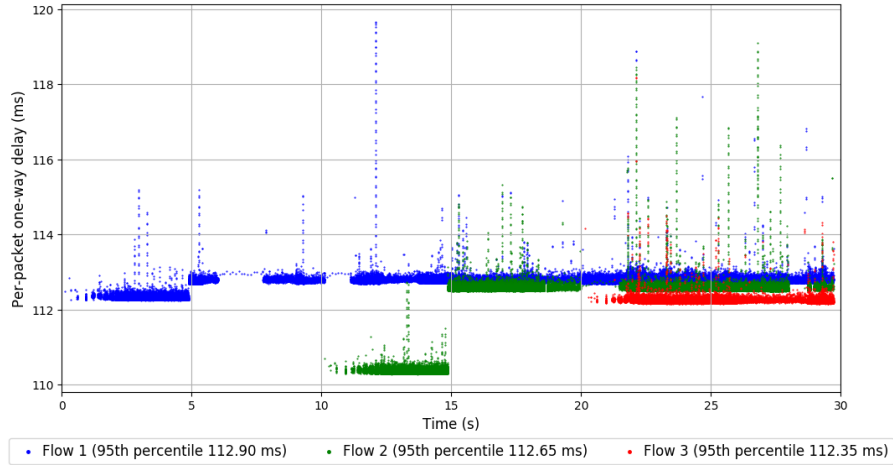
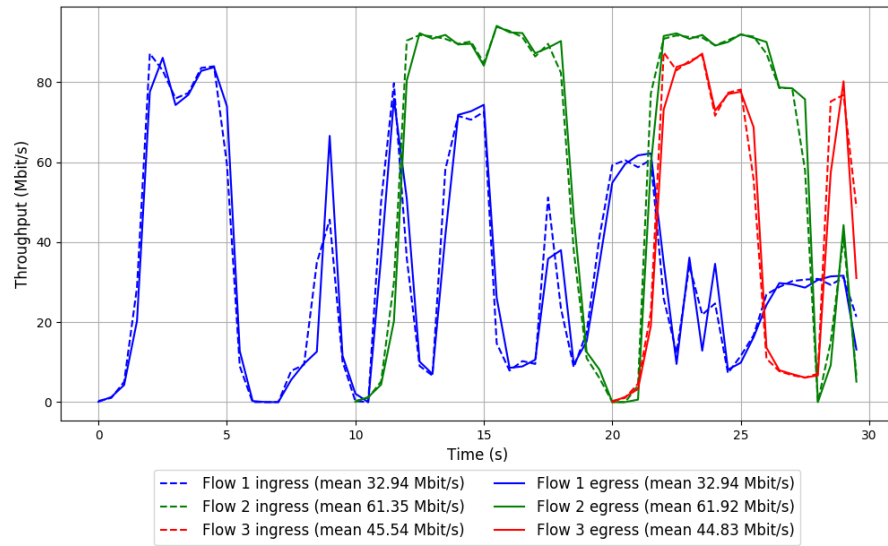
-- Flow 3:

Average throughput: 44.83 Mbit/s

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

Loss rate: 3.81%

Run 9: Report of QUIC Cubic — Data Link

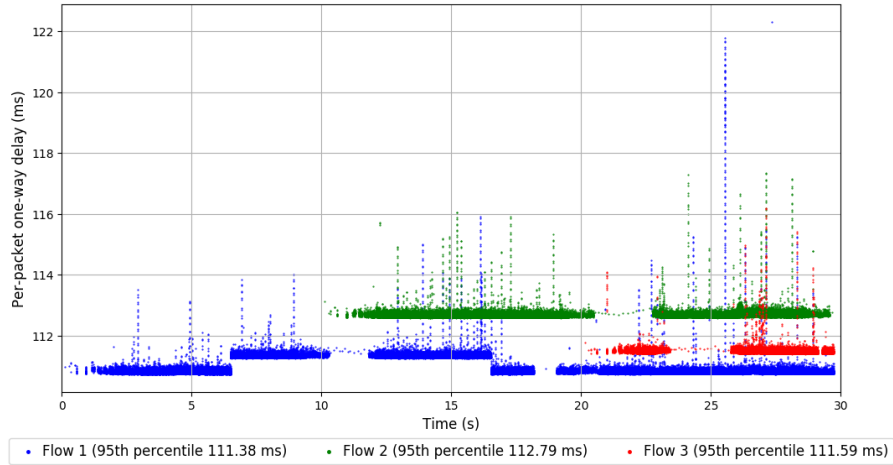
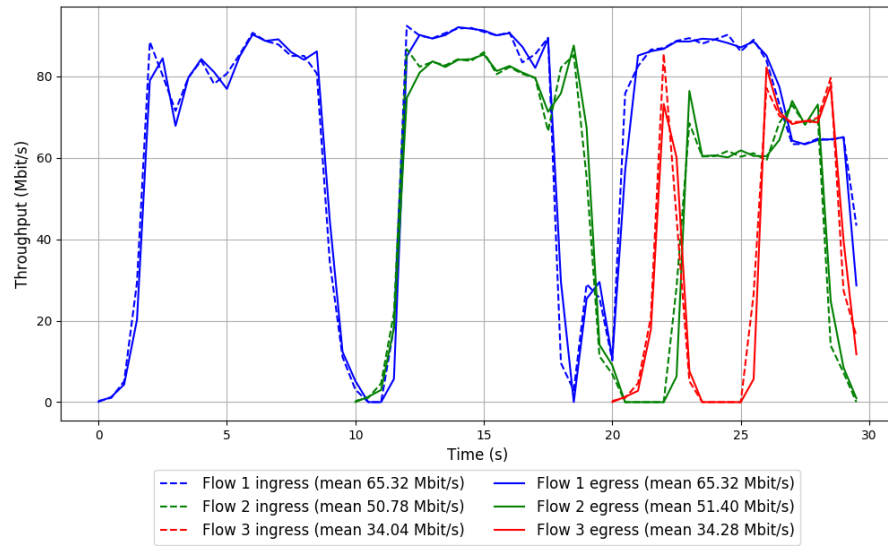


```
Run 10: Statistics of QUIC Cubic

Start at: 2018-03-13 23:32:56
End at: 2018-03-13 23:33:26

# Below is generated by plot.py at 2018-03-14 03:32:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 110.33 Mbit/s
95th percentile per-packet one-way delay: 112.726 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 65.32 Mbit/s
95th percentile per-packet one-way delay: 111.380 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 51.40 Mbit/s
95th percentile per-packet one-way delay: 112.789 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.28 Mbit/s
95th percentile per-packet one-way delay: 111.593 ms
Loss rate: 1.55%
```

Run 10: Report of QUIC Cubic — Data Link

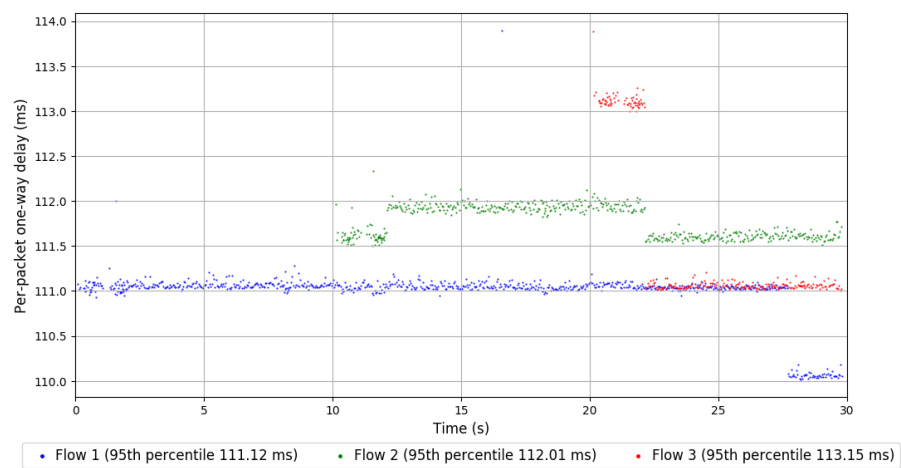
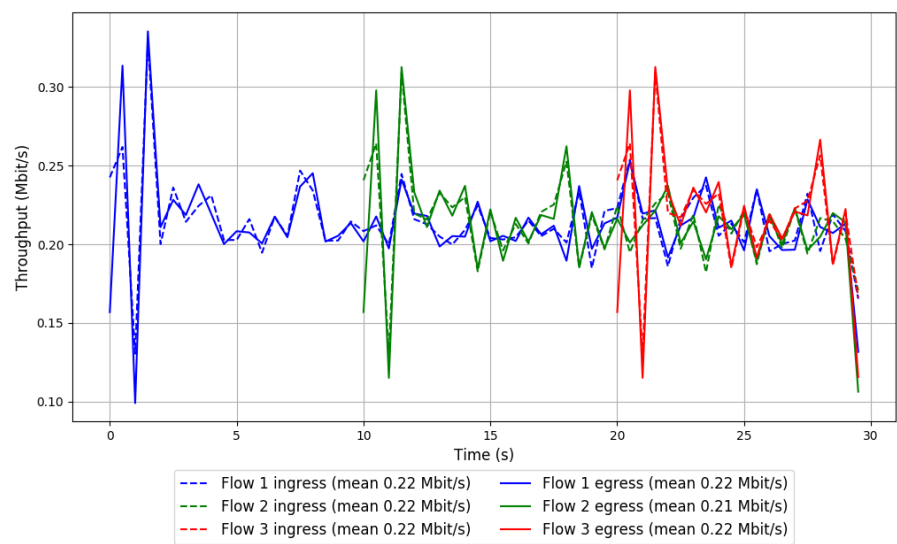


```
Run 1: Statistics of SCReAM

Start at: 2018-03-13 20:40:41
End at: 2018-03-13 20:41:11

# Below is generated by plot.py at 2018-03-14 03:32:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.049 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.120 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.006 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.146 ms
Loss rate: 2.25%
```

Run 1: Report of SReAM — Data Link

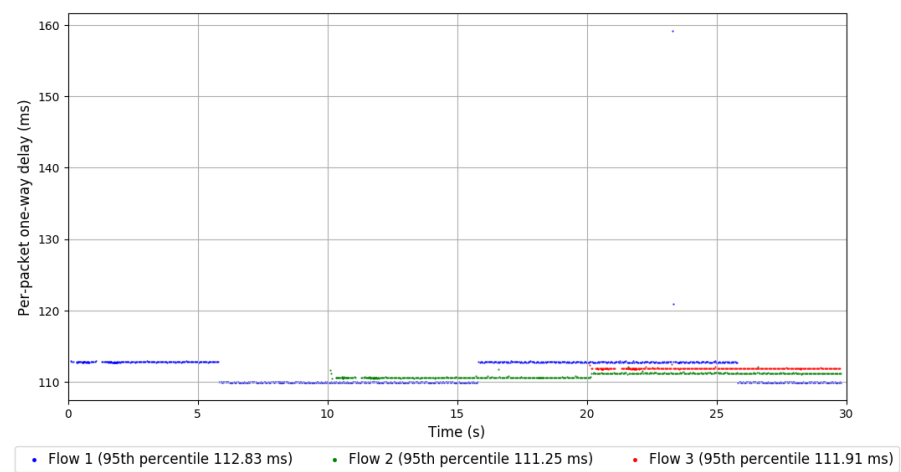
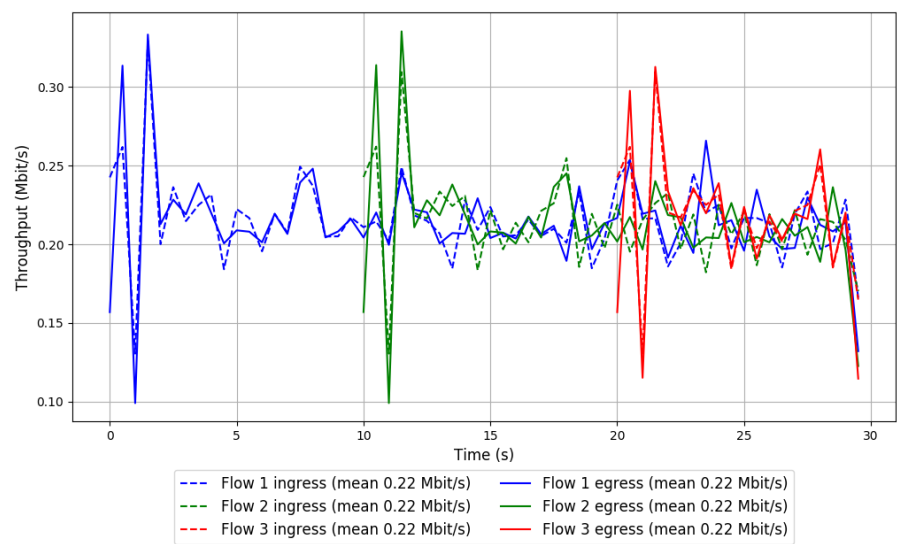


```
Run 2: Statistics of SReAM

Start at: 2018-03-13 21:00:13
End at: 2018-03-13 21:00:43

# Below is generated by plot.py at 2018-03-14 03:32:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.808 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.833 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.245 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.911 ms
Loss rate: 2.24%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-03-13 21:19:42

End at: 2018-03-13 21:20:12

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 112.880 ms

Loss rate: 1.05%

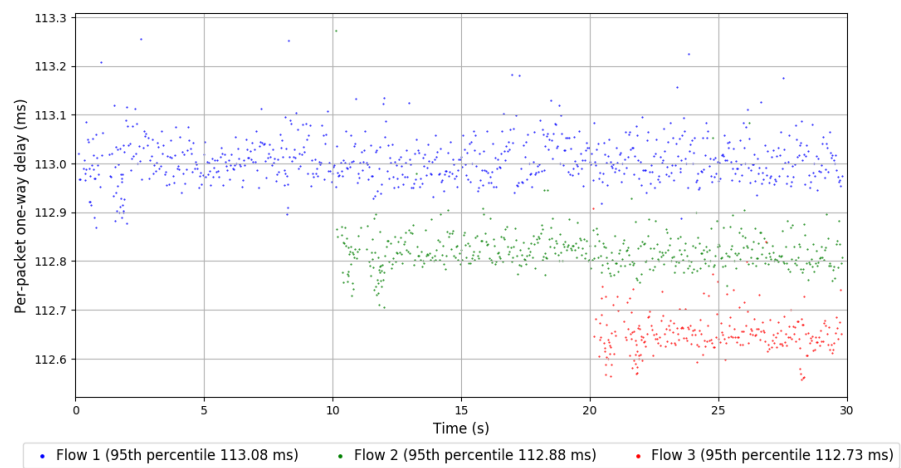
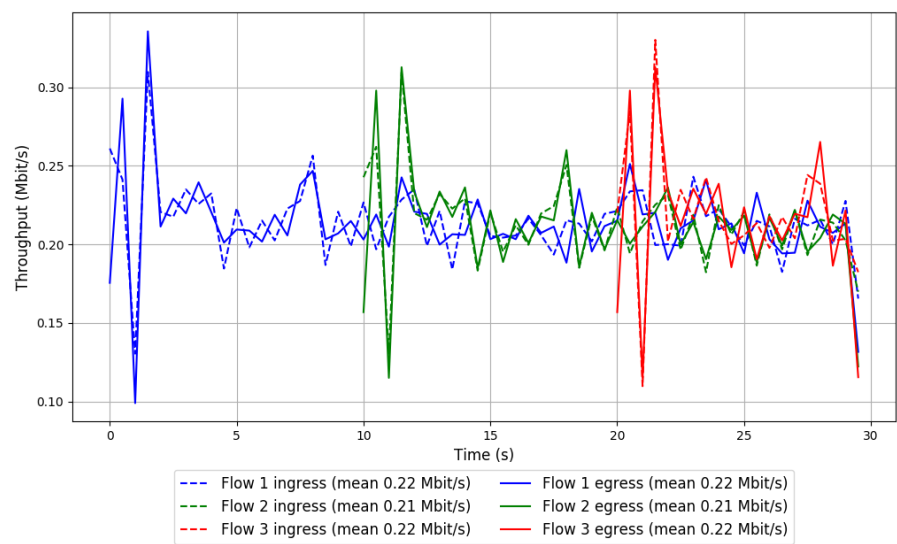
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.729 ms

Loss rate: 2.25%

Run 3: Report of SReAM — Data Link

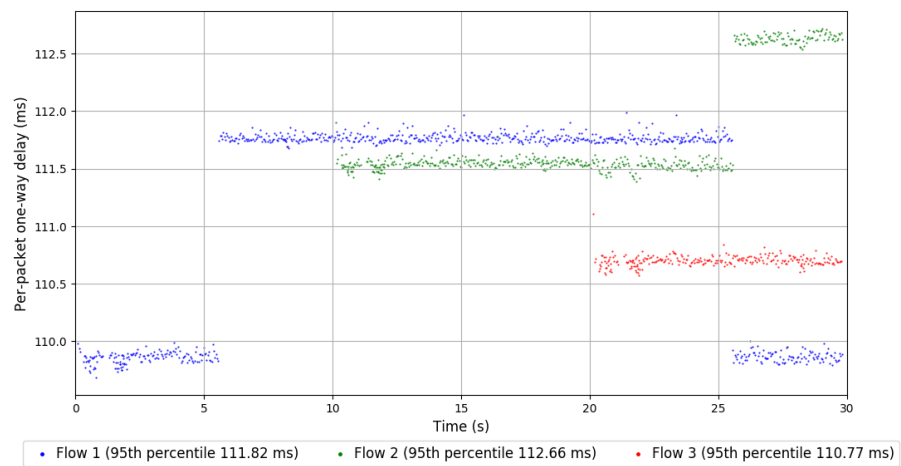
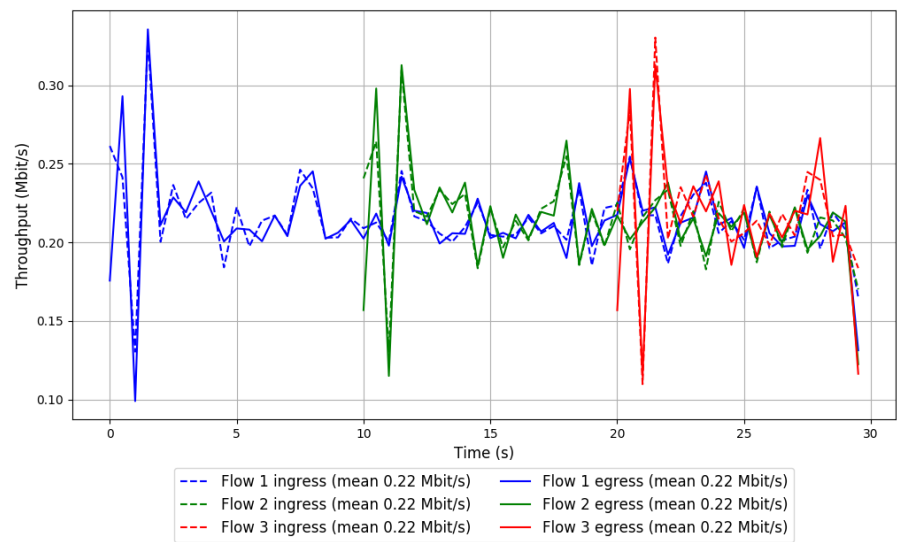


```
Run 4: Statistics of SCReAM

Start at: 2018-03-13 21:39:17
End at: 2018-03-13 21:39:47

# Below is generated by plot.py at 2018-03-14 03:32:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.607 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.824 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.663 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.765 ms
Loss rate: 2.26%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2018-03-13 21:58:49

End at: 2018-03-13 21:59:19

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 113.005 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.826 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

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

Loss rate: 1.05%

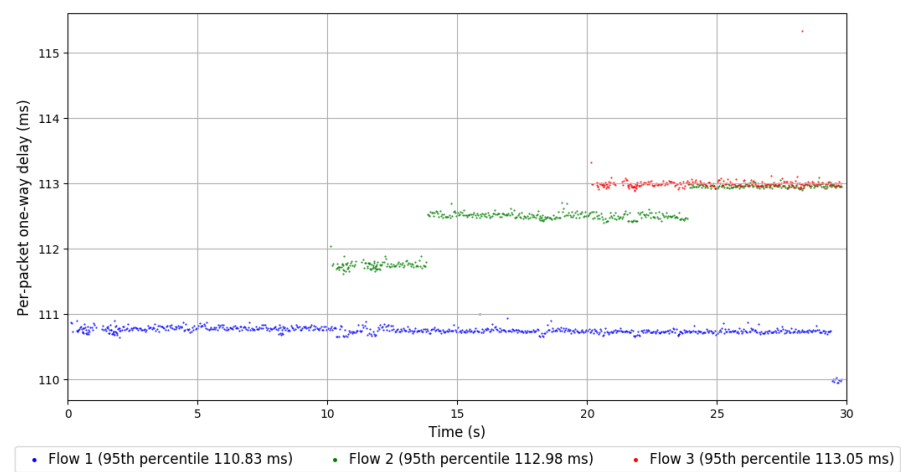
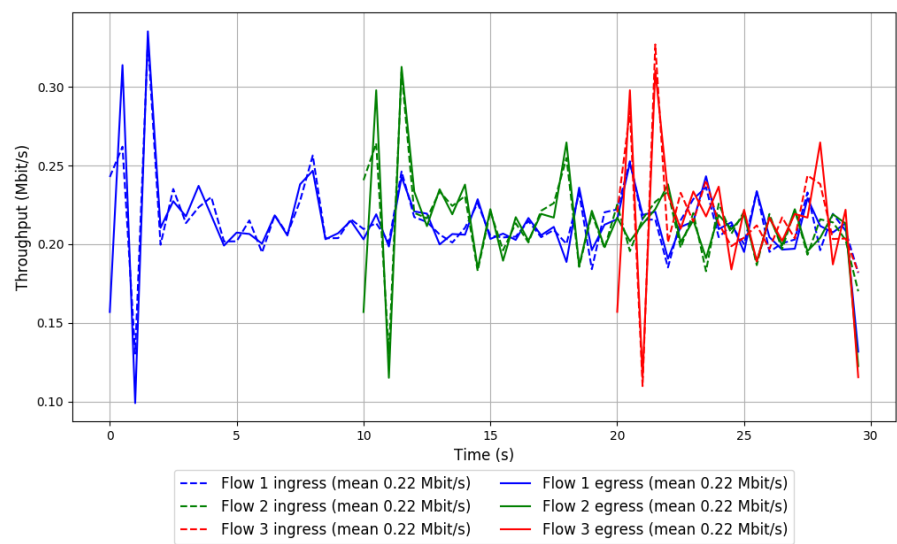
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 2.26%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-03-13 22:17:42

End at: 2018-03-13 22:18:12

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 113.147 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 113.079 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

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

Loss rate: 1.25%

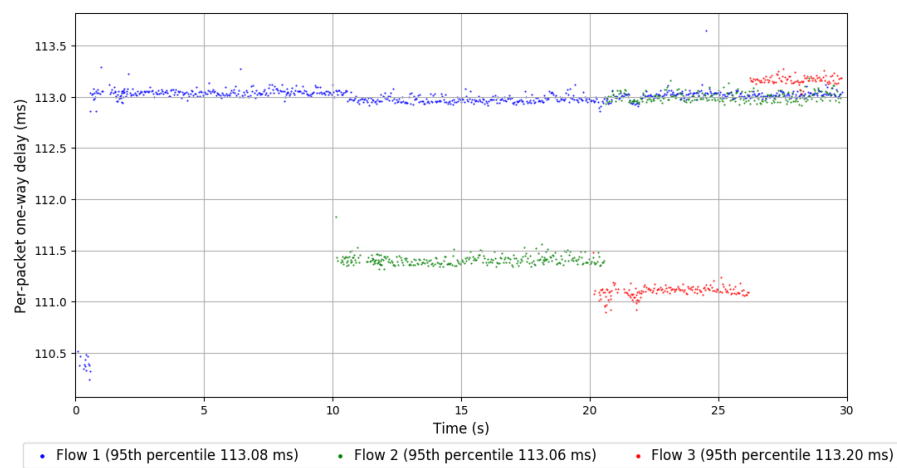
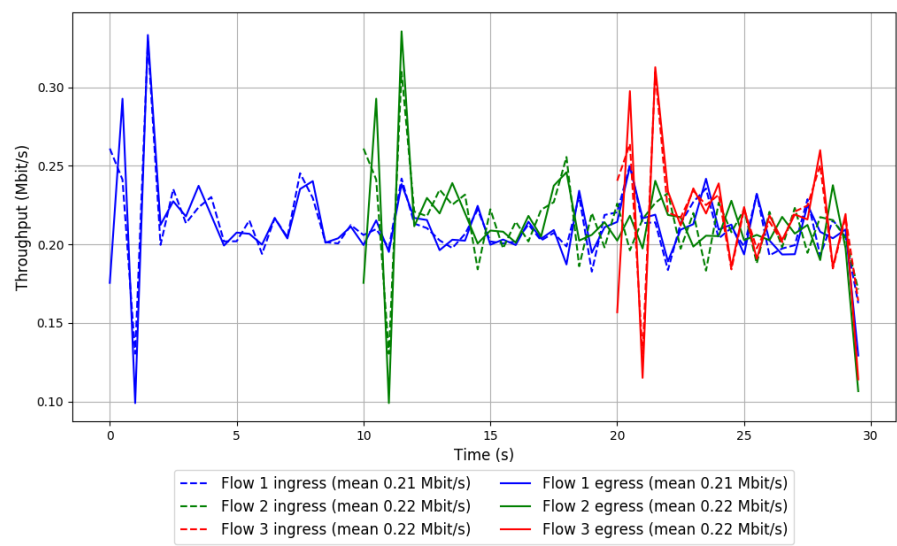
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.205 ms

Loss rate: 2.23%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SCReAM

Start at: 2018-03-13 22:36:47

End at: 2018-03-13 22:37:17

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 111.976 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.633 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.819 ms

Loss rate: 1.06%

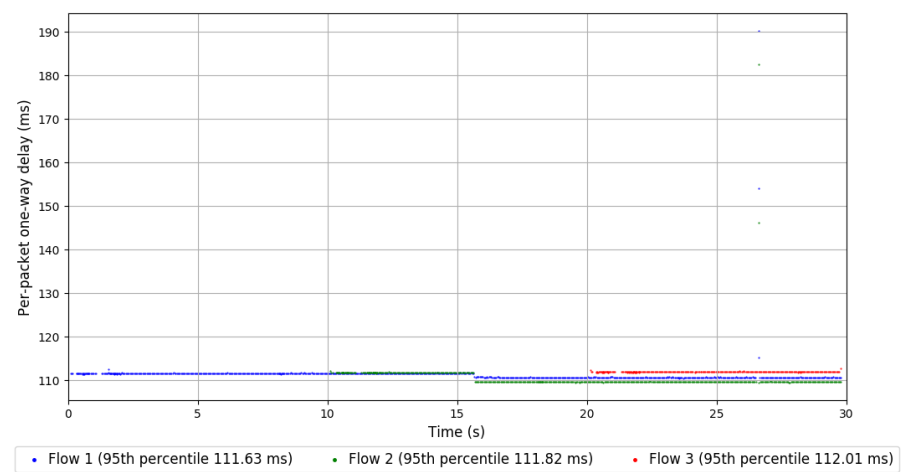
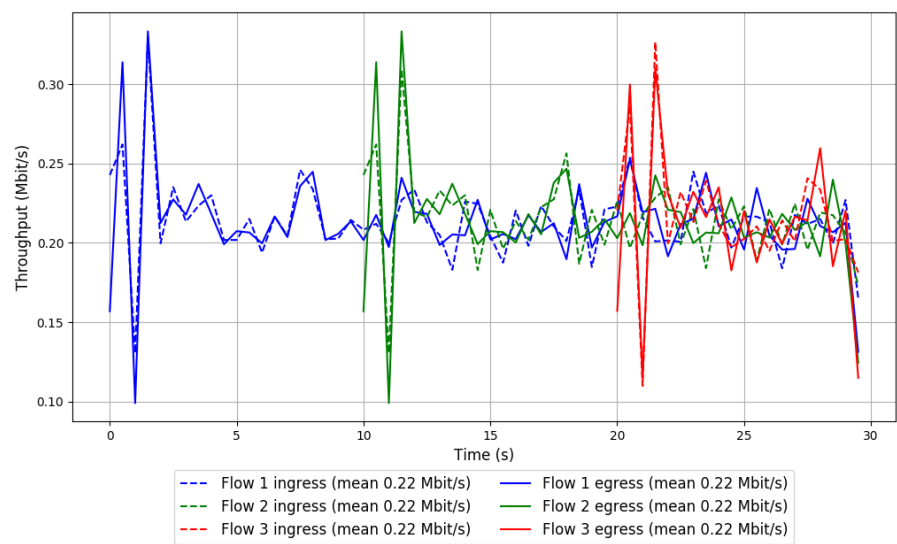
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 2.26%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2018-03-13 22:56:17

End at: 2018-03-13 22:56:47

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.99%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 111.421 ms

Loss rate: 1.05%

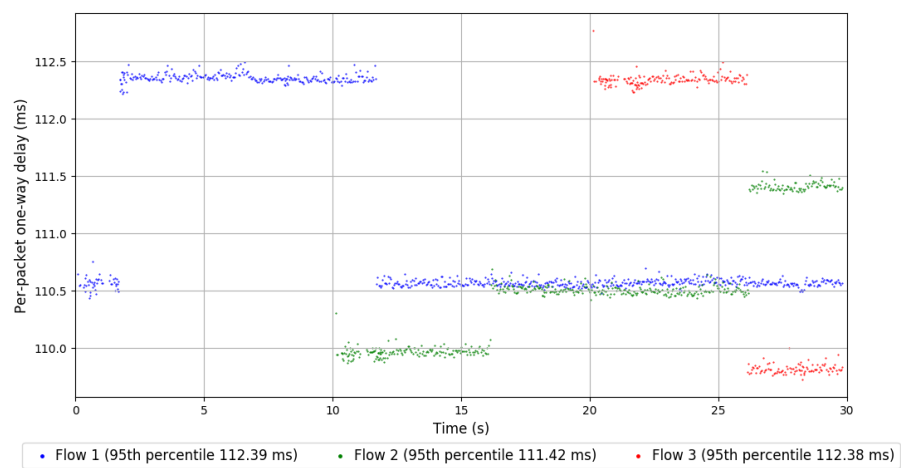
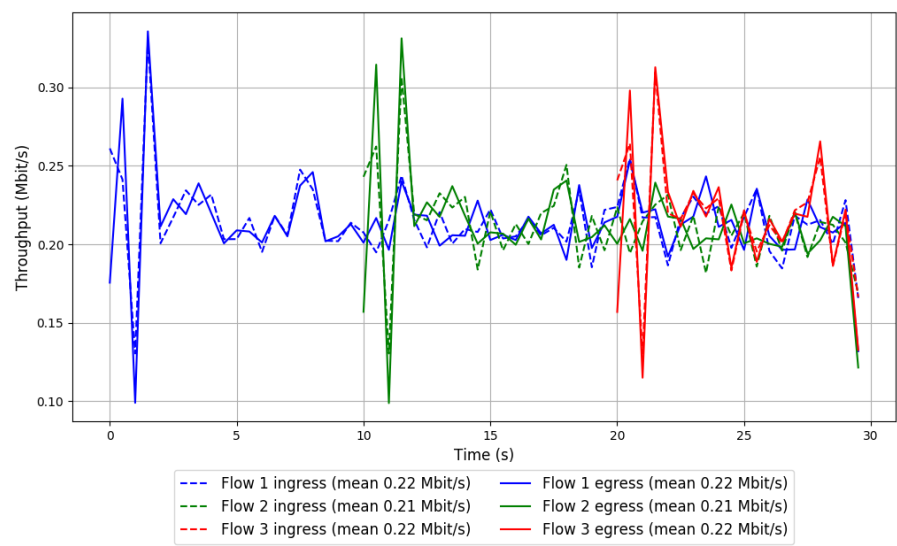
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.381 ms

Loss rate: 1.87%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2018-03-13 23:15:17

End at: 2018-03-13 23:15:47

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 111.339 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.367 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.683 ms

Loss rate: 1.05%

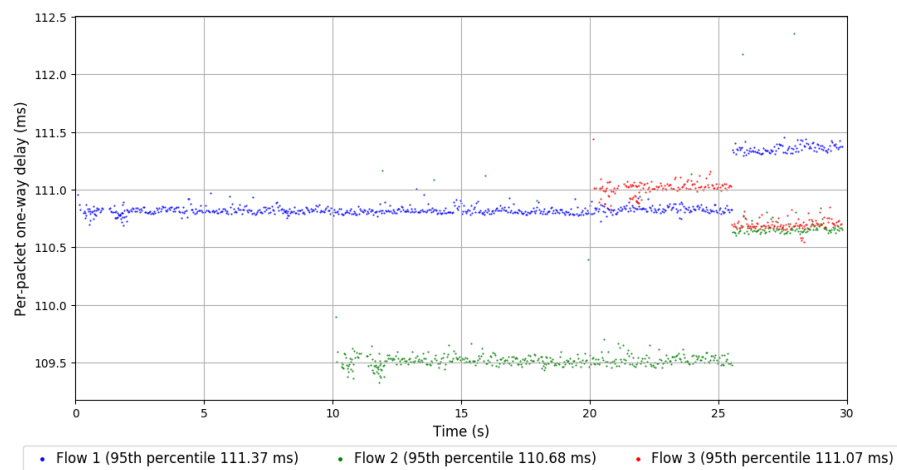
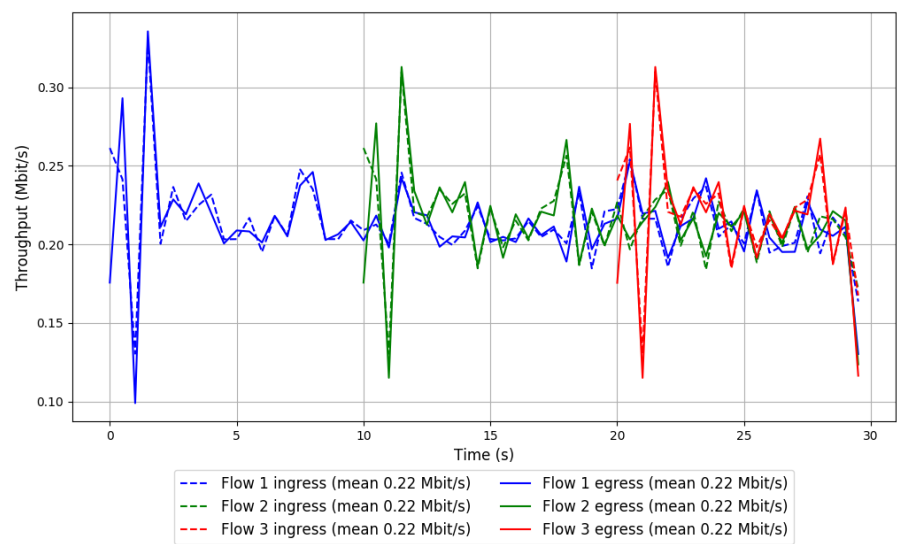
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.071 ms

Loss rate: 2.26%

Run 9: Report of SReAM — Data Link

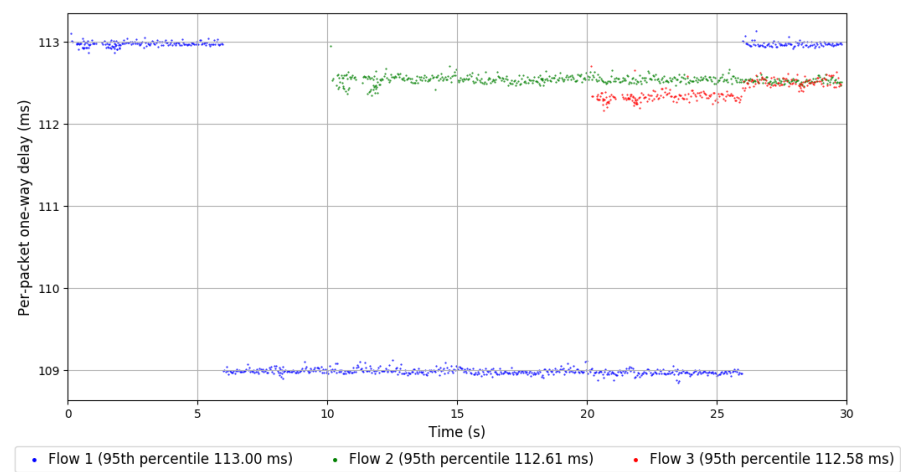
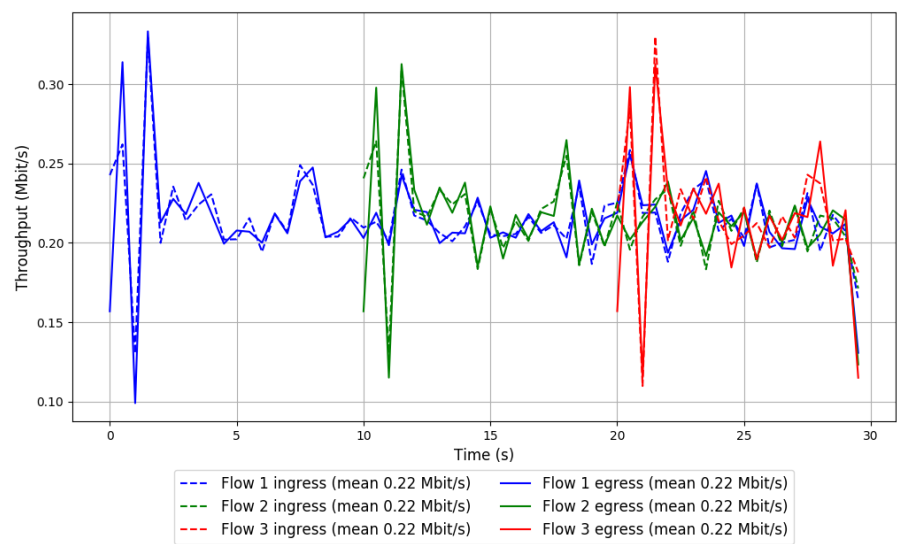


```
Run 10: Statistics of SReAM

Start at: 2018-03-13 23:34:47
End at: 2018-03-13 23:35:17

# Below is generated by plot.py at 2018-03-14 03:32:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.984 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.998 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.605 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.577 ms
Loss rate: 2.25%
```

Run 10: Report of SReAM — Data Link

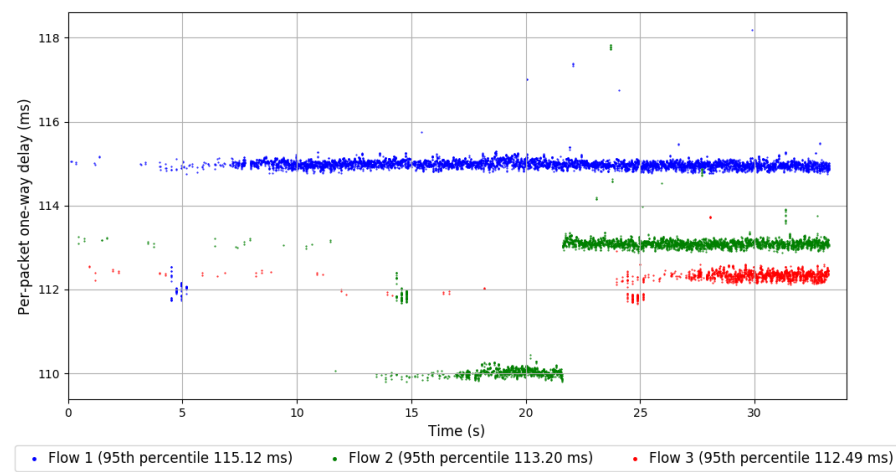
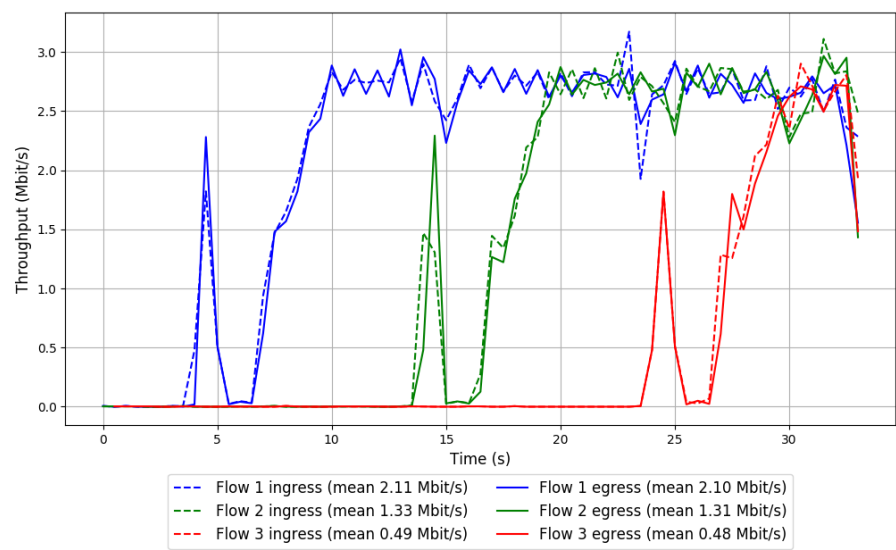


```
Run 1: Statistics of WebRTC media

Start at: 2018-03-13 20:33:35
End at: 2018-03-13 20:34:05

# Below is generated by plot.py at 2018-03-14 03:32:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.86 Mbit/s
95th percentile per-packet one-way delay: 115.090 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 115.121 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 113.204 ms
Loss rate: 1.79%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 112.494 ms
Loss rate: 3.78%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-03-13 20:53:08

End at: 2018-03-13 20:53:38

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 112.827 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 2.10 Mbit/s

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

Loss rate: 1.00%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 110.892 ms

Loss rate: 1.72%

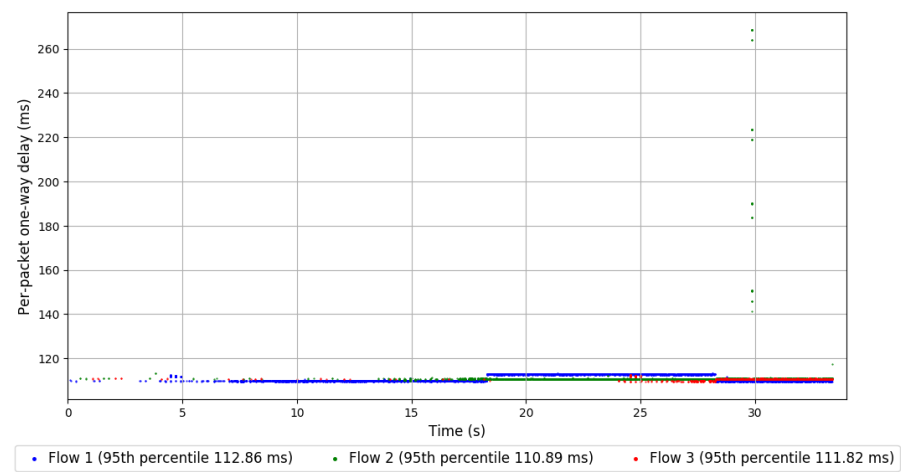
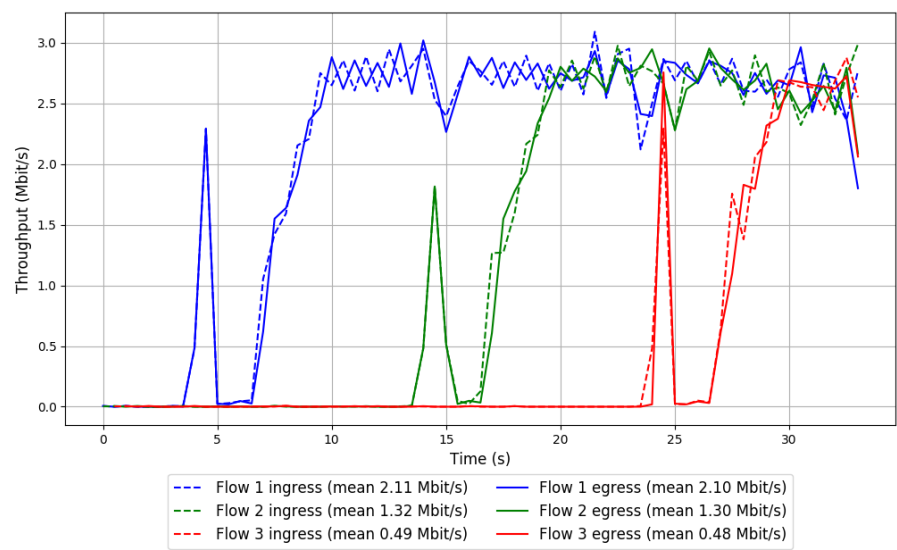
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 111.819 ms

Loss rate: 3.52%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-03-13 21:12:47

End at: 2018-03-13 21:13:17

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.88 Mbit/s

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

Loss rate: 1.51%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 110.738 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 113.079 ms

Loss rate: 1.89%

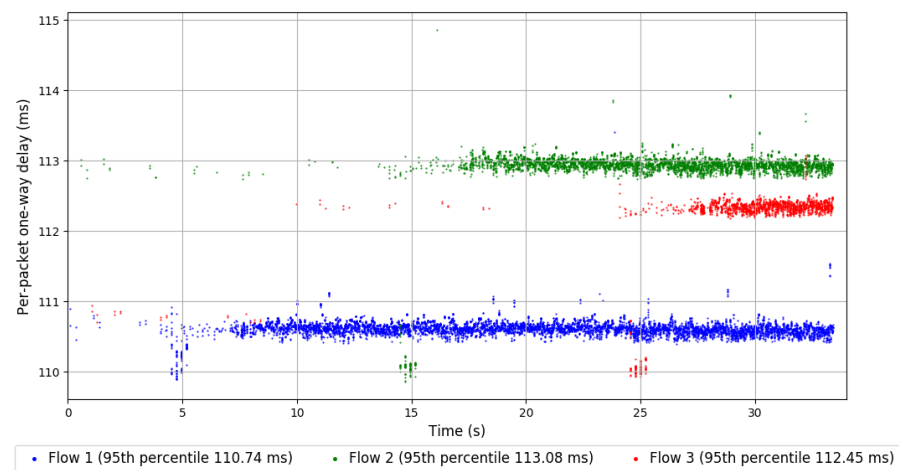
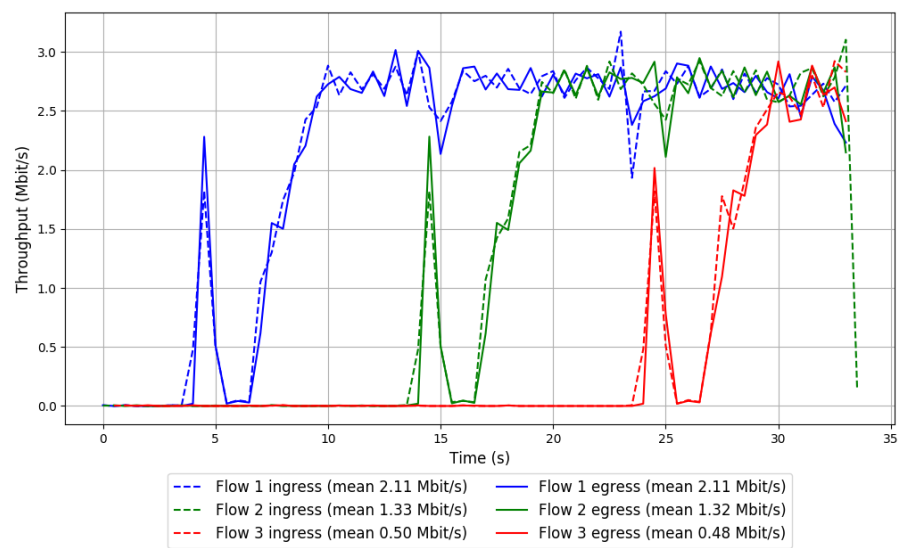
-- Flow 3:

Average throughput: 0.48 Mbit/s

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

Loss rate: 3.50%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-03-13 21:32:16

End at: 2018-03-13 21:32:46

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 112.689 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 111.624 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 112.803 ms

Loss rate: 1.40%

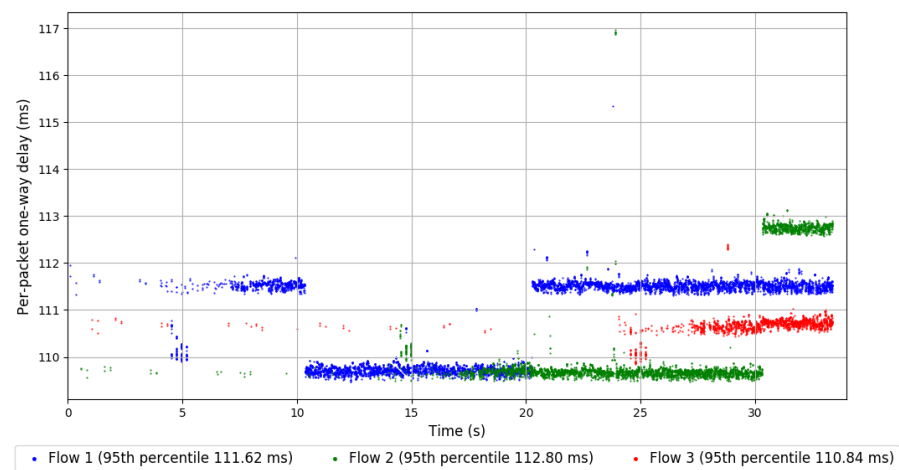
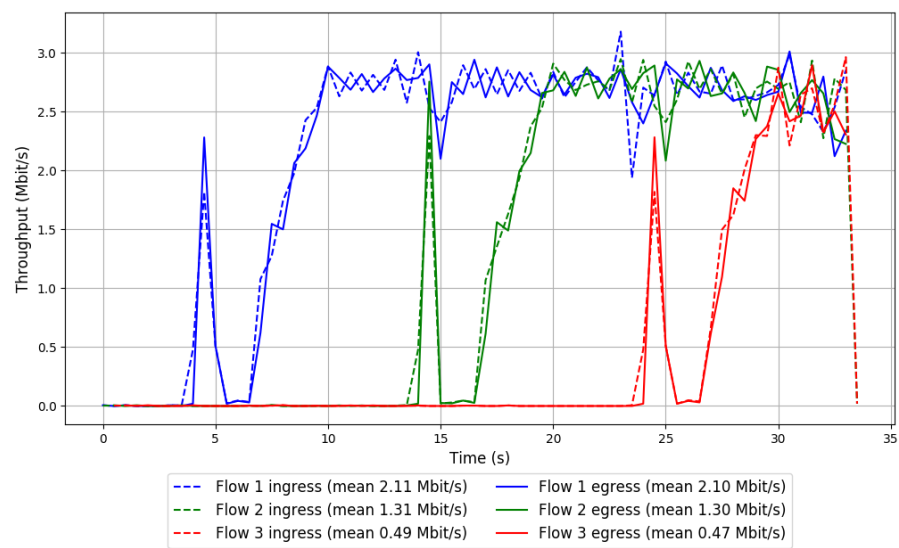
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 110.841 ms

Loss rate: 3.69%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-03-13 21:51:53

End at: 2018-03-13 21:52:23

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 113.044 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 113.071 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 1.31 Mbit/s

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

Loss rate: 1.69%

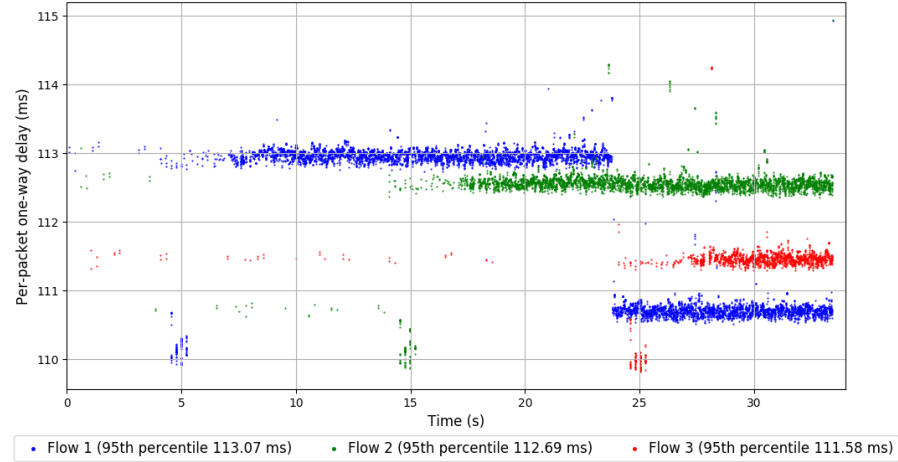
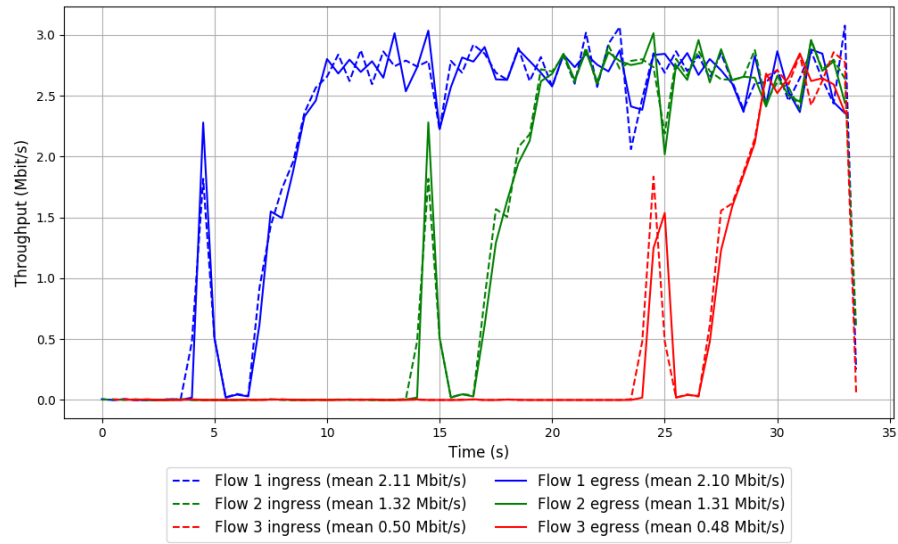
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 111.585 ms

Loss rate: 3.59%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-03-13 22:10:51

End at: 2018-03-13 22:11:21

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.89 Mbit/s

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

Loss rate: 1.37%

-- Flow 1:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 110.880 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 113.123 ms

Loss rate: 1.23%

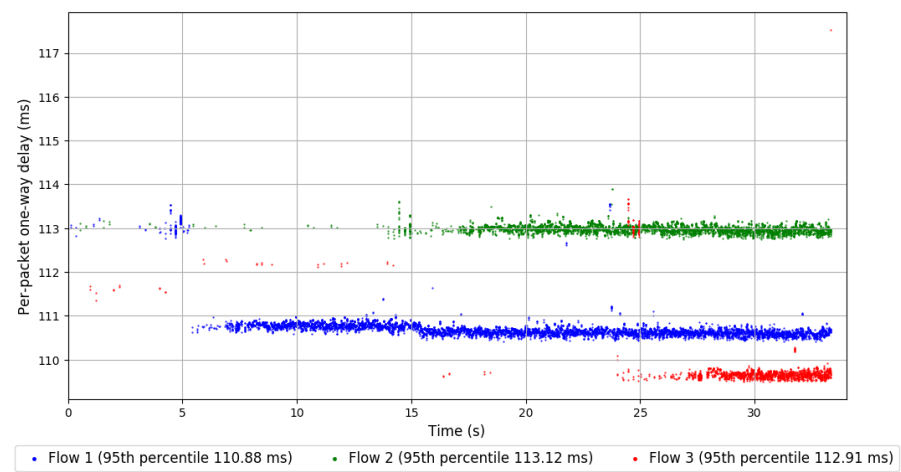
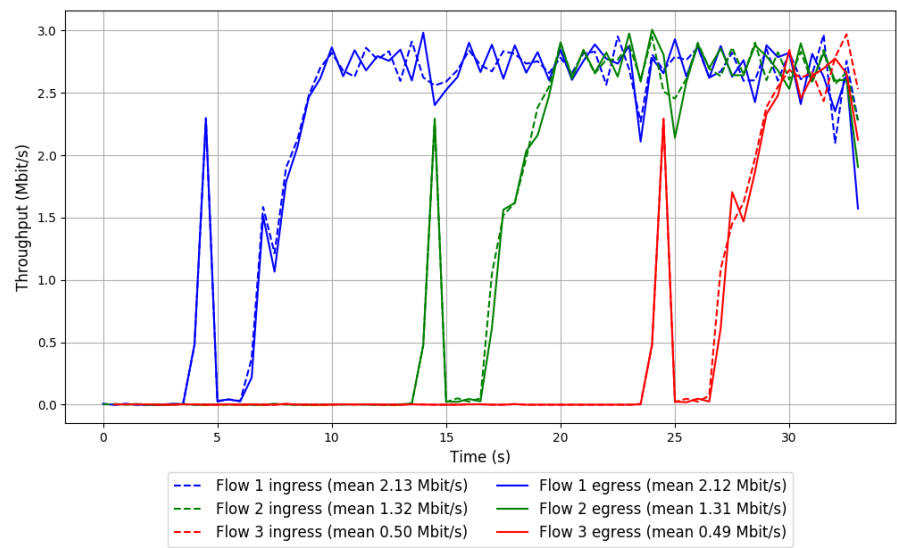
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 112.910 ms

Loss rate: 3.53%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-03-13 22:29:49

End at: 2018-03-13 22:30:19

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.86 Mbit/s

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

Loss rate: 1.40%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 110.842 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 1.30 Mbit/s

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

Loss rate: 1.72%

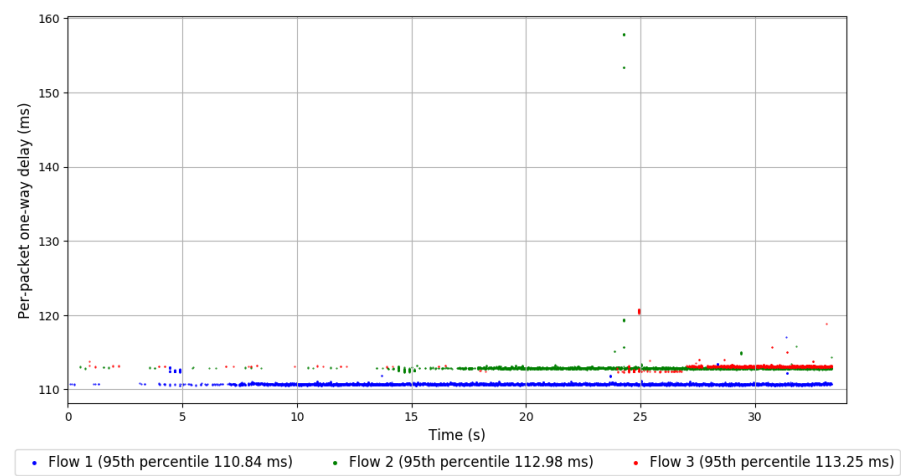
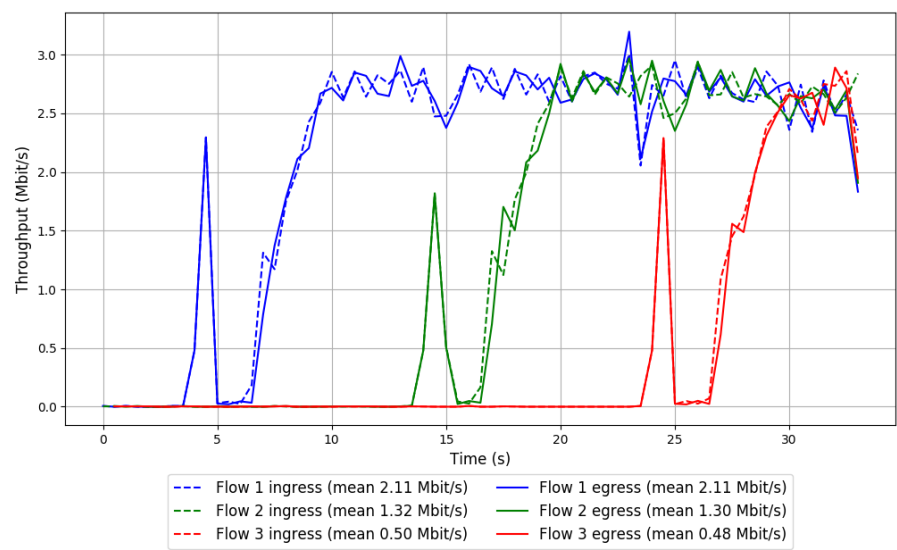
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 113.248 ms

Loss rate: 2.94%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-03-13 22:49:16

End at: 2018-03-13 22:49:46

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.86 Mbit/s

95th percentile per-packet one-way delay: 112.582 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 2.11 Mbit/s

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

Loss rate: 0.94%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 111.736 ms

Loss rate: 1.57%

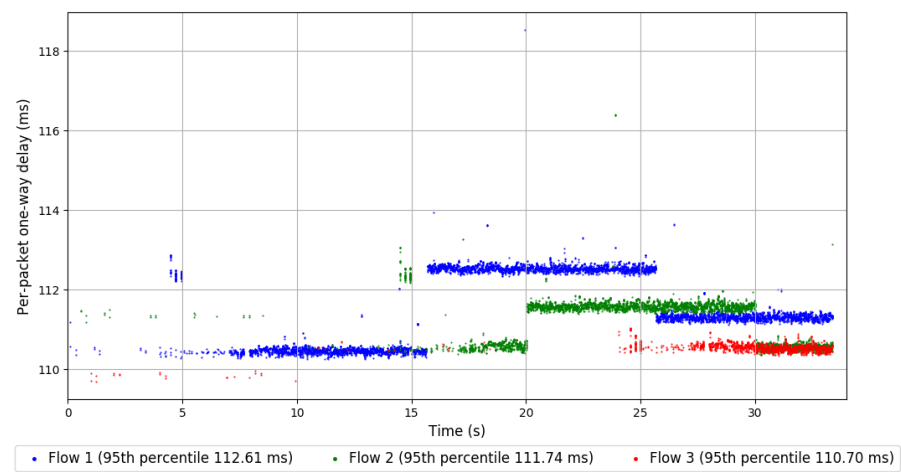
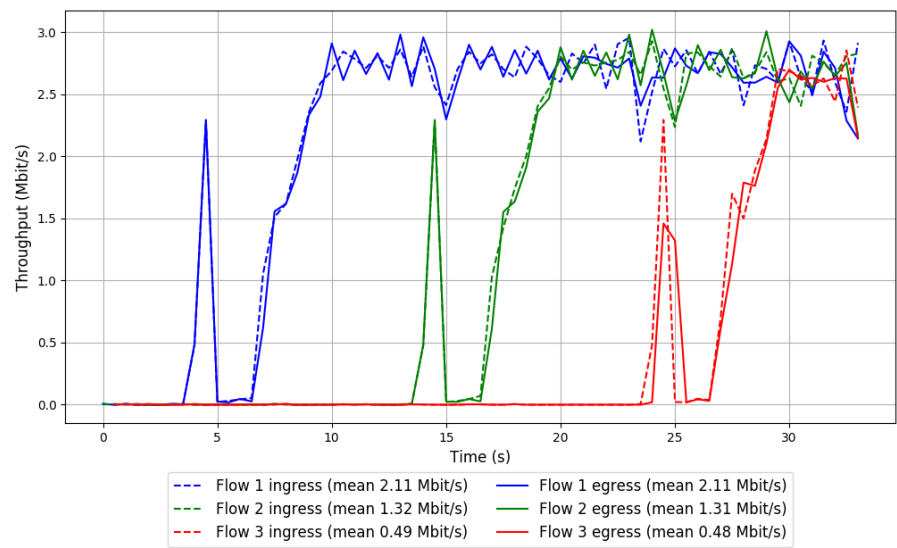
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 110.698 ms

Loss rate: 2.96%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-03-13 23:08:19

End at: 2018-03-13 23:08:49

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.88 Mbit/s

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

Loss rate: 1.48%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 111.143 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 1.31 Mbit/s

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

Loss rate: 1.82%

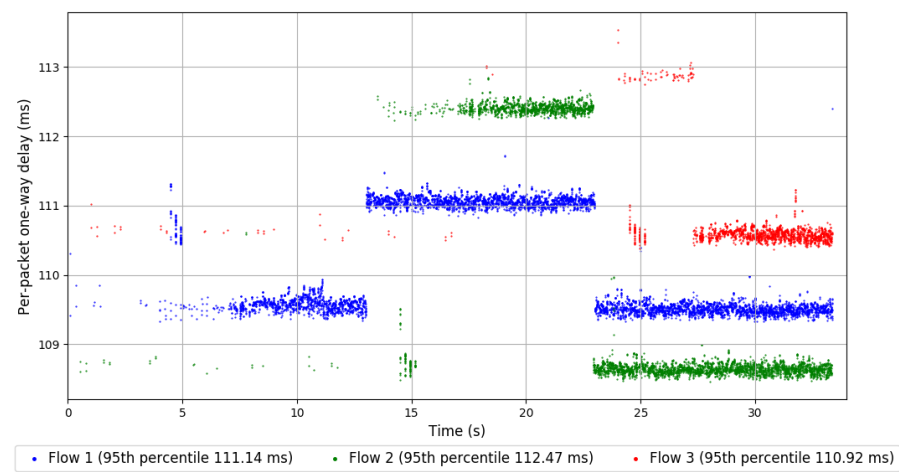
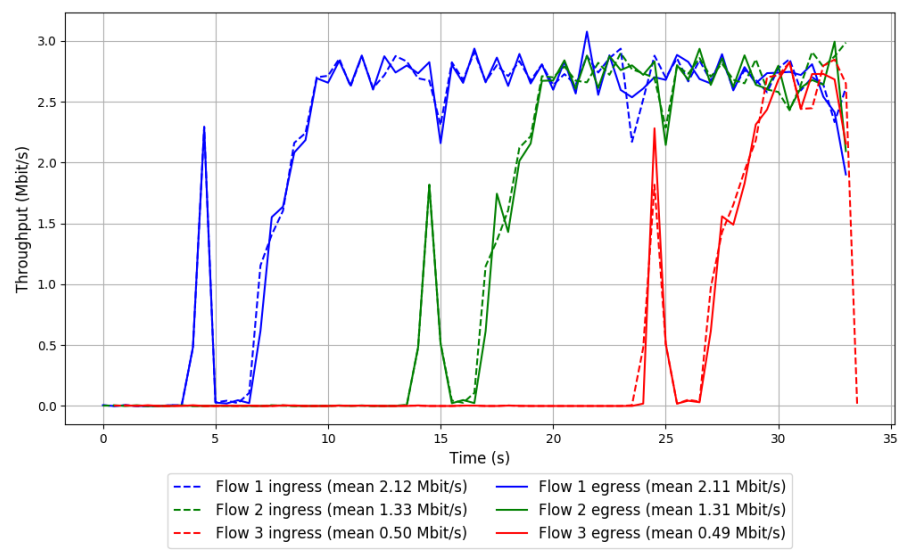
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 110.922 ms

Loss rate: 3.52%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-03-13 23:27:57

End at: 2018-03-13 23:28:27

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.88 Mbit/s

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

Loss rate: 1.60%

-- Flow 1:

Average throughput: 2.11 Mbit/s

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

Loss rate: 1.00%

-- Flow 2:

Average throughput: 1.32 Mbit/s

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

Loss rate: 1.67%

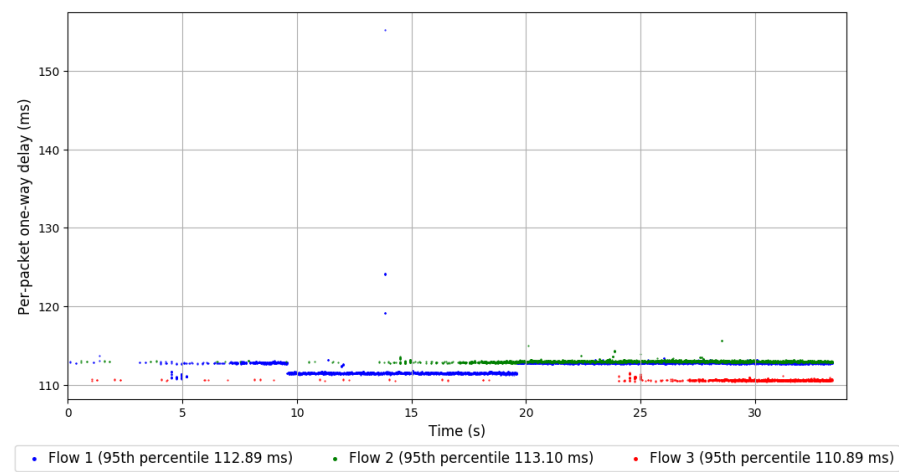
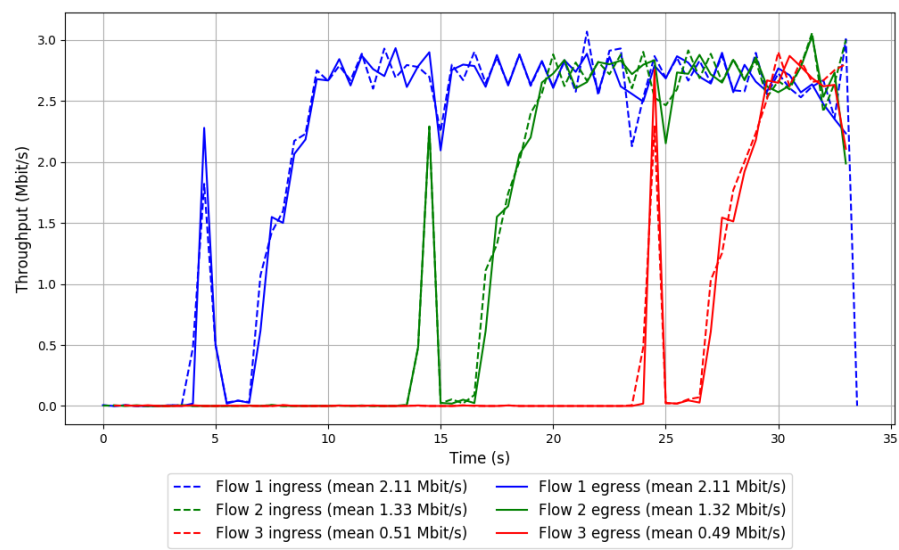
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 110.892 ms

Loss rate: 3.99%

Run 10: Report of WebRTC media — Data Link

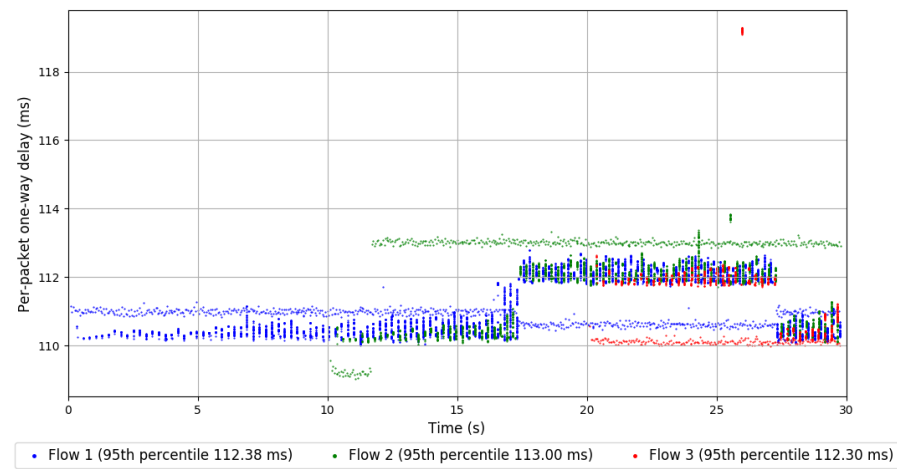
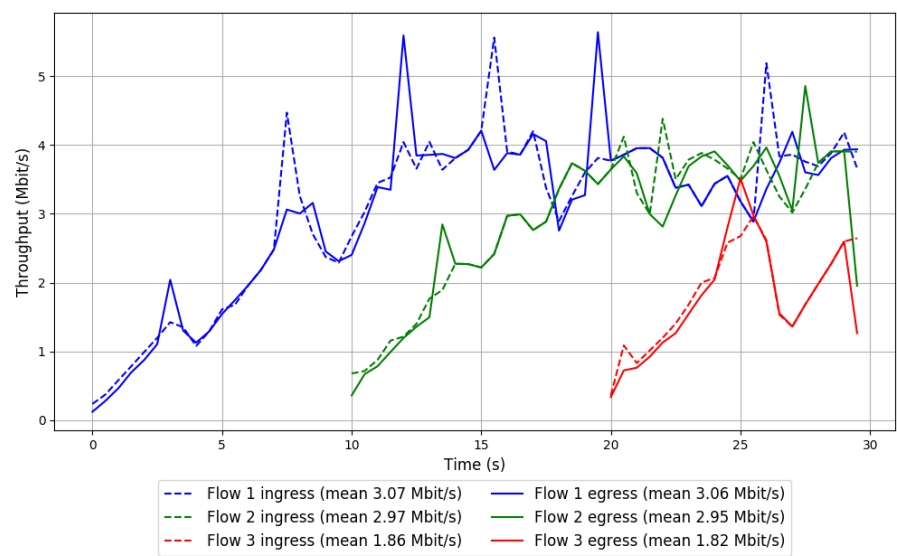


```
Run 1: Statistics of Sprout

Start at: 2018-03-13 20:34:21
End at: 2018-03-13 20:34:51

# Below is generated by plot.py at 2018-03-14 03:32:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.60 Mbit/s
95th percentile per-packet one-way delay: 112.506 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 3.06 Mbit/s
95th percentile per-packet one-way delay: 112.378 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 2.95 Mbit/s
95th percentile per-packet one-way delay: 112.997 ms
Loss rate: 1.65%
-- Flow 3:
Average throughput: 1.82 Mbit/s
95th percentile per-packet one-way delay: 112.296 ms
Loss rate: 3.84%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-03-13 20:53:55

End at: 2018-03-13 20:54:25

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.63 Mbit/s

95th percentile per-packet one-way delay: 112.832 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 2.37 Mbit/s

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

Loss rate: 0.68%

-- Flow 2:

Average throughput: 2.31 Mbit/s

95th percentile per-packet one-way delay: 114.943 ms

Loss rate: 1.75%

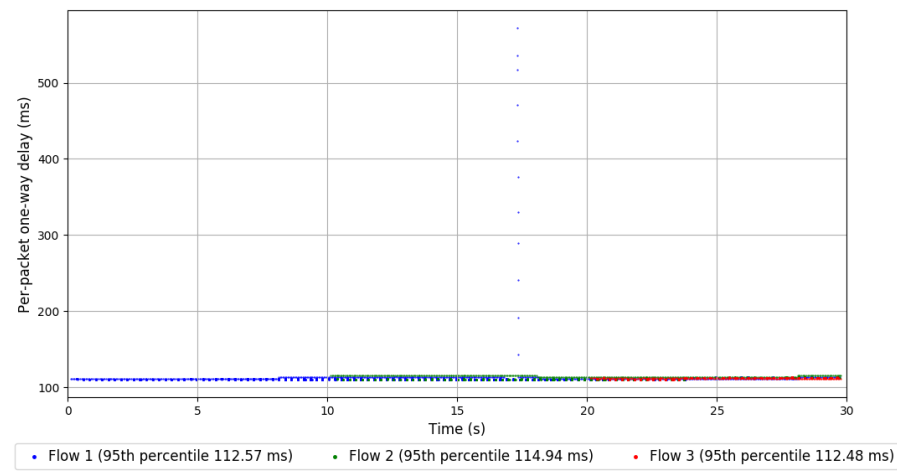
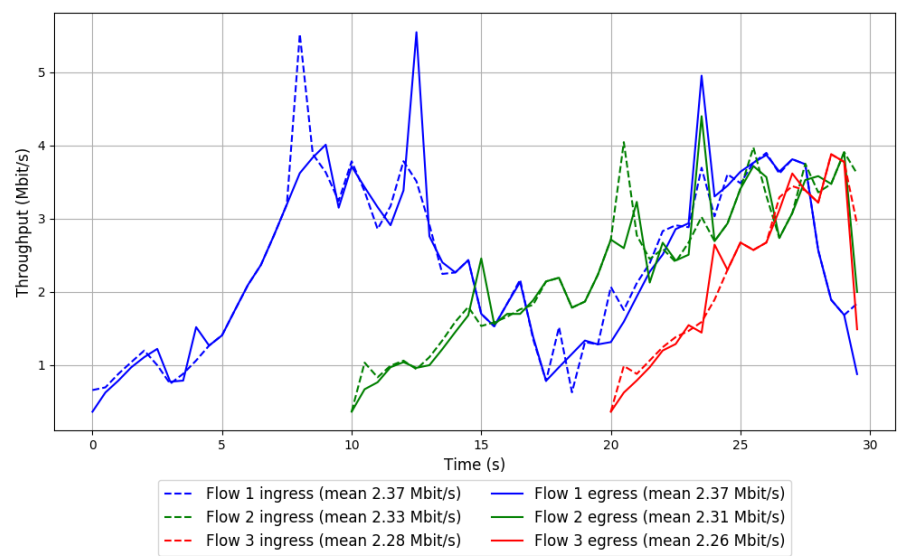
-- Flow 3:

Average throughput: 2.26 Mbit/s

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

Loss rate: 3.19%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

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

End at: 2018-03-13 21:14:03

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.51 Mbit/s

95th percentile per-packet one-way delay: 110.818 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 2.90 Mbit/s

95th percentile per-packet one-way delay: 110.762 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 3.18 Mbit/s

95th percentile per-packet one-way delay: 110.872 ms

Loss rate: 1.32%

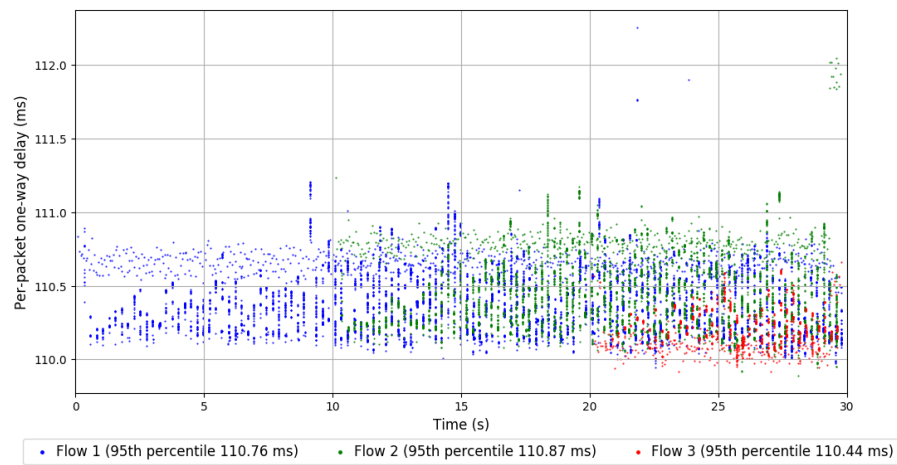
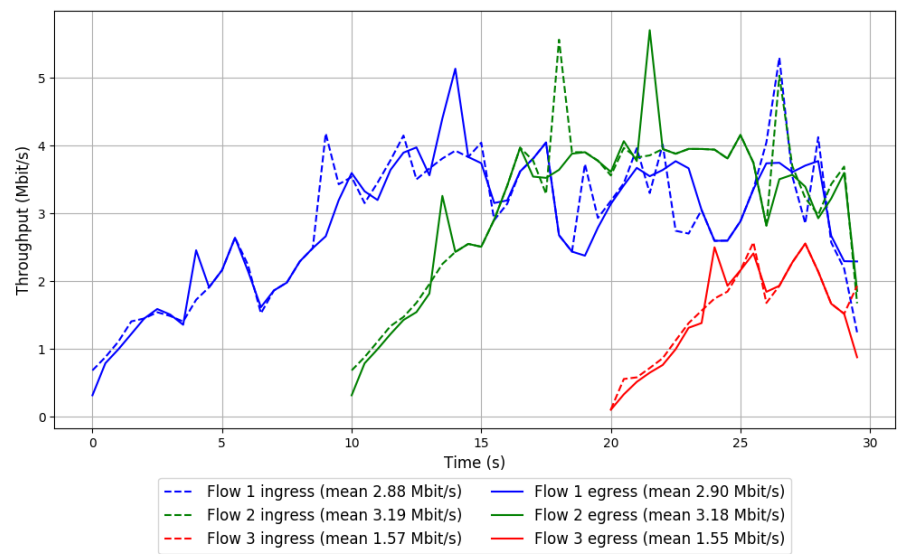
-- Flow 3:

Average throughput: 1.55 Mbit/s

95th percentile per-packet one-way delay: 110.445 ms

Loss rate: 3.42%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

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

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

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.86 Mbit/s

95th percentile per-packet one-way delay: 110.926 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 2.65 Mbit/s

95th percentile per-packet one-way delay: 110.855 ms

Loss rate: 1.21%

-- Flow 2:

Average throughput: 2.43 Mbit/s

95th percentile per-packet one-way delay: 111.208 ms

Loss rate: 1.84%

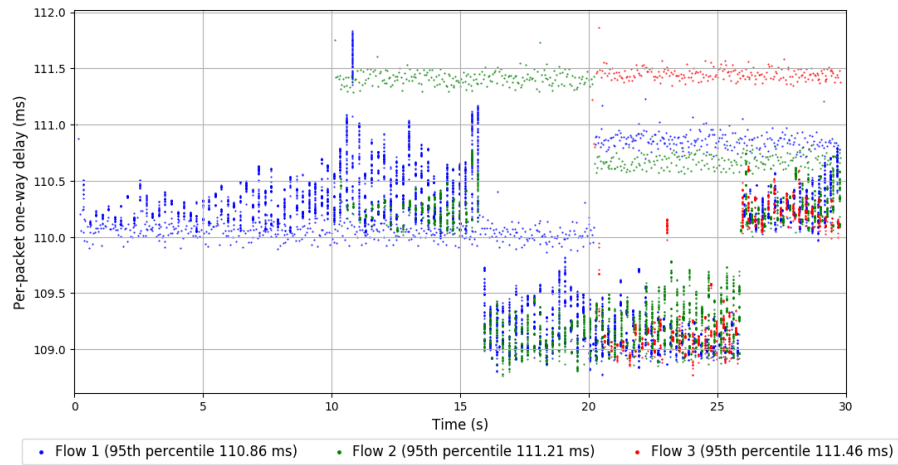
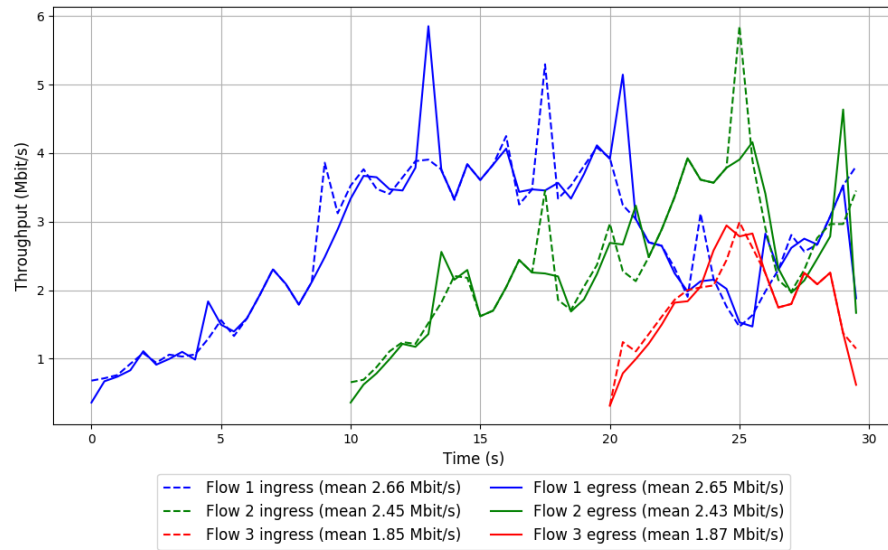
-- Flow 3:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 111.461 ms

Loss rate: 1.45%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-03-13 21:52:39

End at: 2018-03-13 21:53:09

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.81 Mbit/s

95th percentile per-packet one-way delay: 112.821 ms

Loss rate: 1.76%

-- Flow 1:

Average throughput: 2.56 Mbit/s

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

Loss rate: 1.35%

-- Flow 2:

Average throughput: 2.50 Mbit/s

95th percentile per-packet one-way delay: 112.304 ms

Loss rate: 1.25%

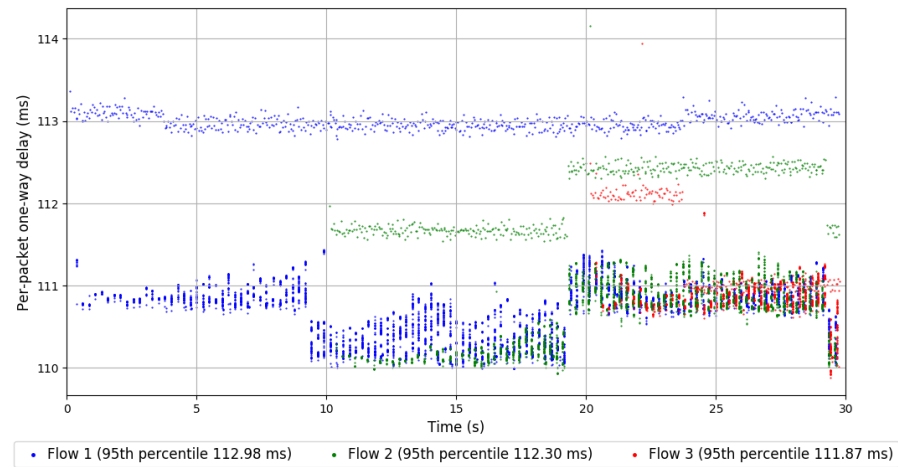
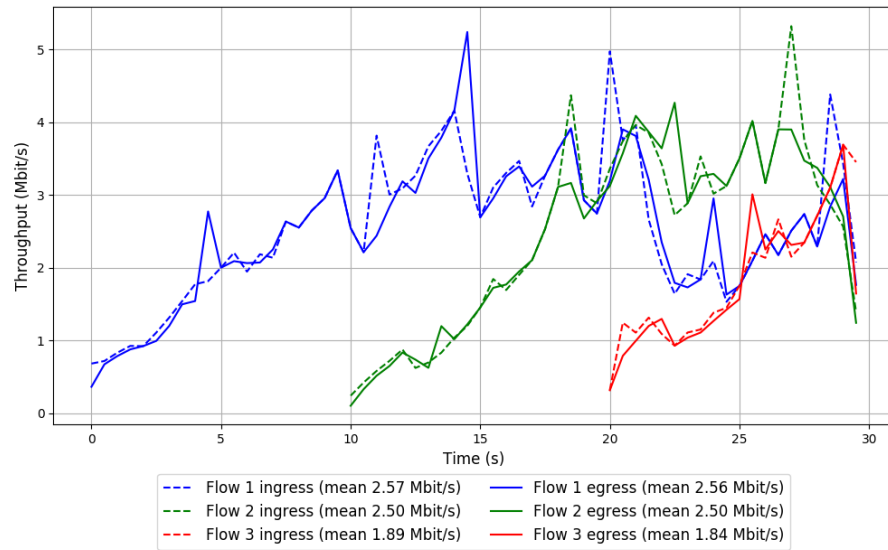
-- Flow 3:

Average throughput: 1.84 Mbit/s

95th percentile per-packet one-way delay: 111.874 ms

Loss rate: 4.86%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-03-13 22:11:37

End at: 2018-03-13 22:12:07

Below is generated by plot.py at 2018-03-14 03:32:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 113.571 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 2.54 Mbit/s

95th percentile per-packet one-way delay: 113.659 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 1.65 Mbit/s

95th percentile per-packet one-way delay: 113.398 ms

Loss rate: 0.98%

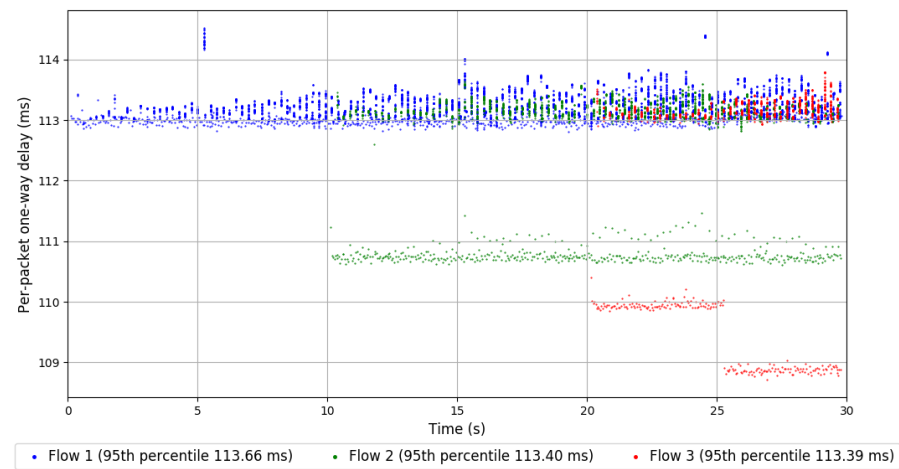
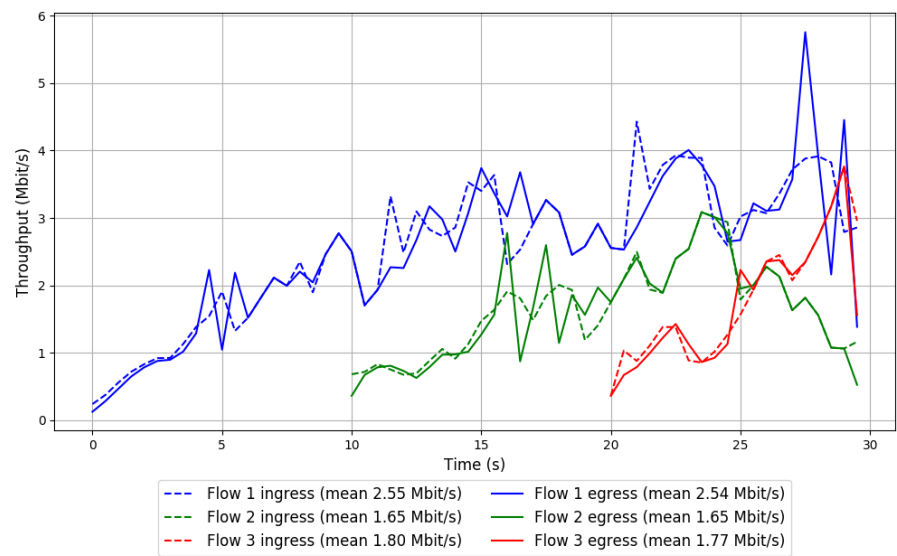
-- Flow 3:

Average throughput: 1.77 Mbit/s

95th percentile per-packet one-way delay: 113.395 ms

Loss rate: 3.96%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-03-13 22:30:36

End at: 2018-03-13 22:31:06

Below is generated by plot.py at 2018-03-14 03:32:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.55 Mbit/s

95th percentile per-packet one-way delay: 113.081 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 2.10 Mbit/s

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

Loss rate: 1.52%

-- Flow 2:

Average throughput: 2.90 Mbit/s

95th percentile per-packet one-way delay: 113.144 ms

Loss rate: 1.20%

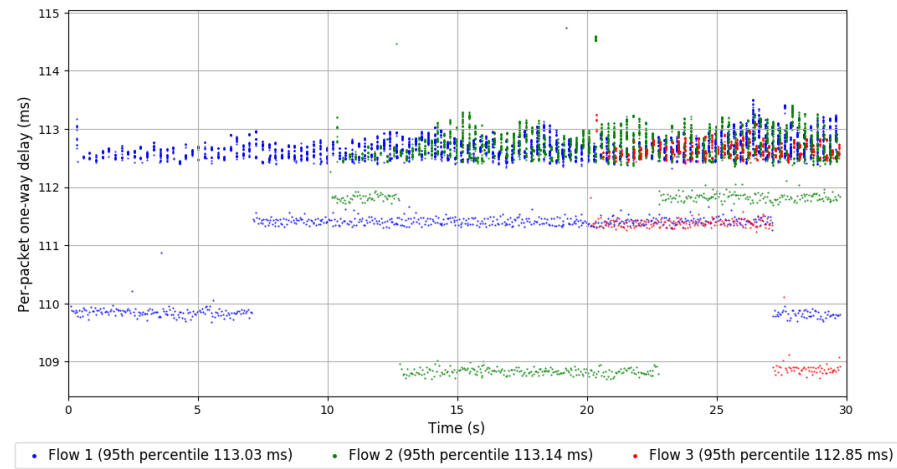
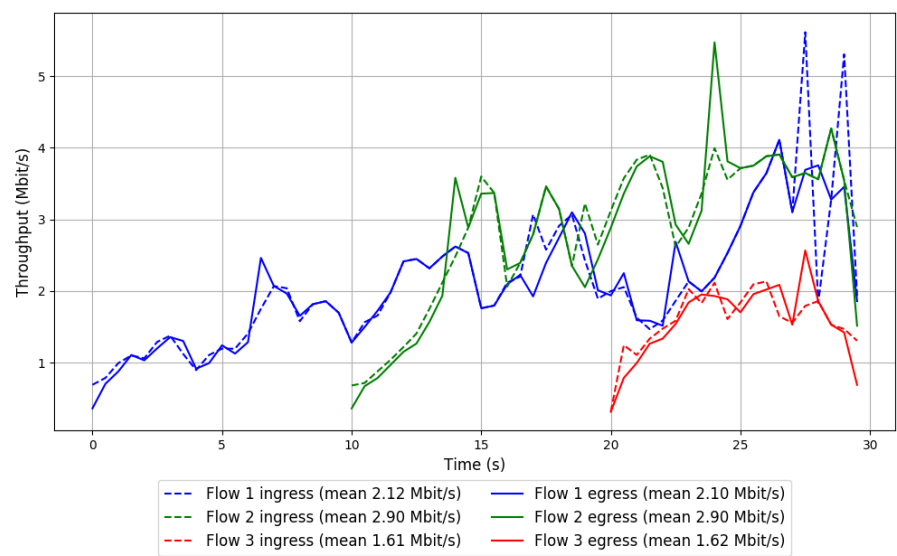
-- Flow 3:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 112.847 ms

Loss rate: 2.09%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-03-13 22:50:03

End at: 2018-03-13 22:50:33

Below is generated by plot.py at 2018-03-14 03:32:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.88 Mbit/s

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

Loss rate: 1.71%

-- Flow 1:

Average throughput: 2.42 Mbit/s

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

Loss rate: 1.36%

-- Flow 2:

Average throughput: 2.68 Mbit/s

95th percentile per-packet one-way delay: 113.012 ms

Loss rate: 1.69%

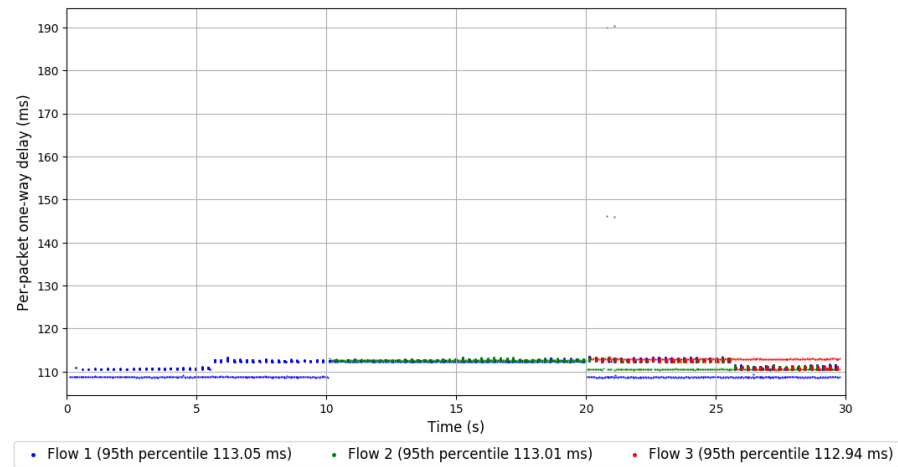
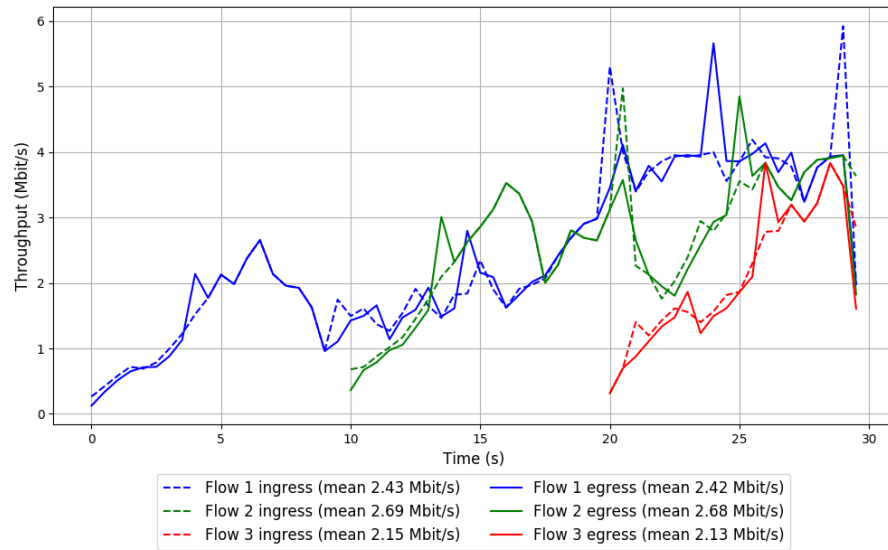
-- Flow 3:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 112.945 ms

Loss rate: 2.95%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-03-13 23:09:06

End at: 2018-03-13 23:09:36

Below is generated by plot.py at 2018-03-14 03:32:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.01 Mbit/s

95th percentile per-packet one-way delay: 111.432 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 2.93 Mbit/s

95th percentile per-packet one-way delay: 111.283 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 2.35 Mbit/s

95th percentile per-packet one-way delay: 112.353 ms

Loss rate: 2.05%

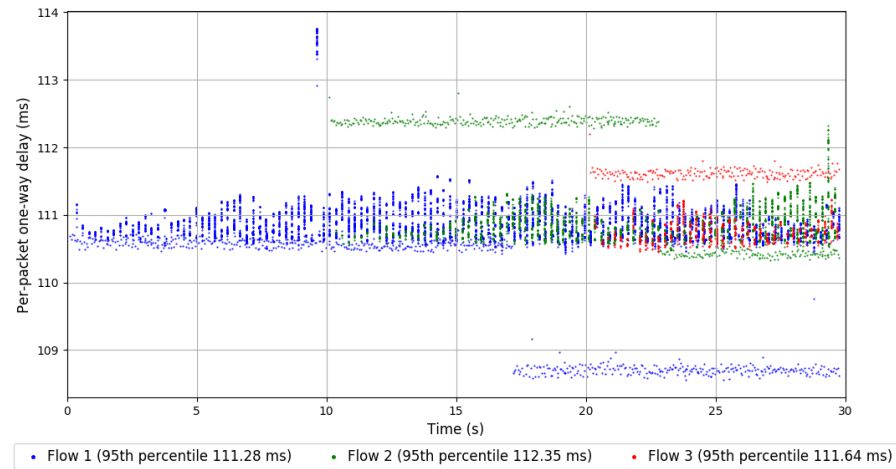
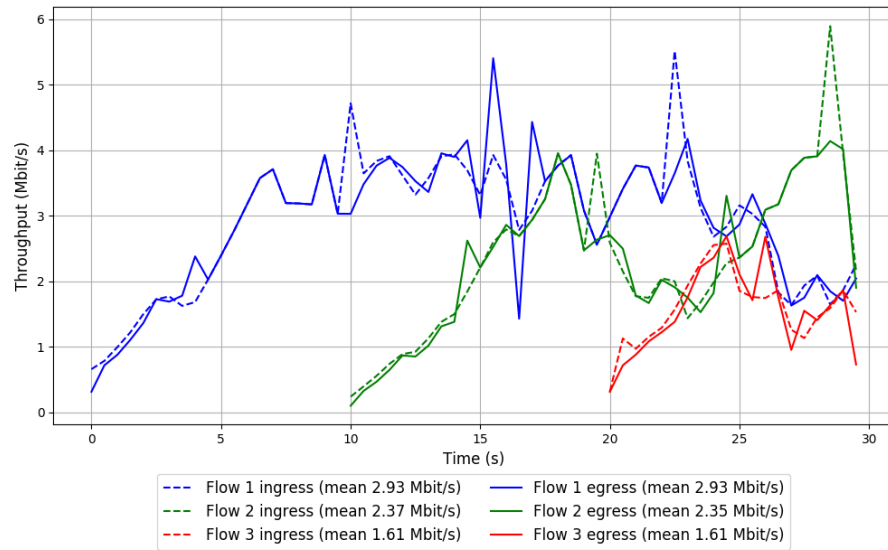
-- Flow 3:

Average throughput: 1.61 Mbit/s

95th percentile per-packet one-way delay: 111.641 ms

Loss rate: 2.53%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-03-13 23:28:43

End at: 2018-03-13 23:29:13

Below is generated by plot.py at 2018-03-14 03:32:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.02 Mbit/s

95th percentile per-packet one-way delay: 111.978 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 2.69 Mbit/s

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

Loss rate: 1.07%

-- Flow 2:

Average throughput: 2.24 Mbit/s

95th percentile per-packet one-way delay: 111.549 ms

Loss rate: 1.73%

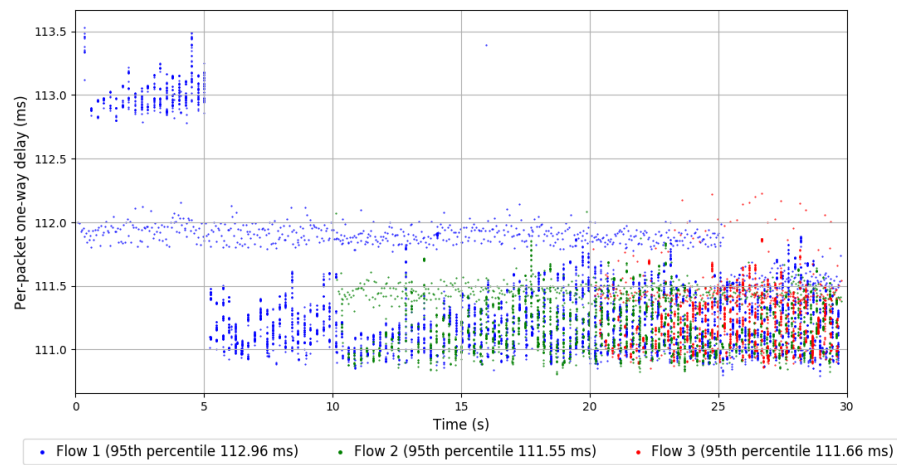
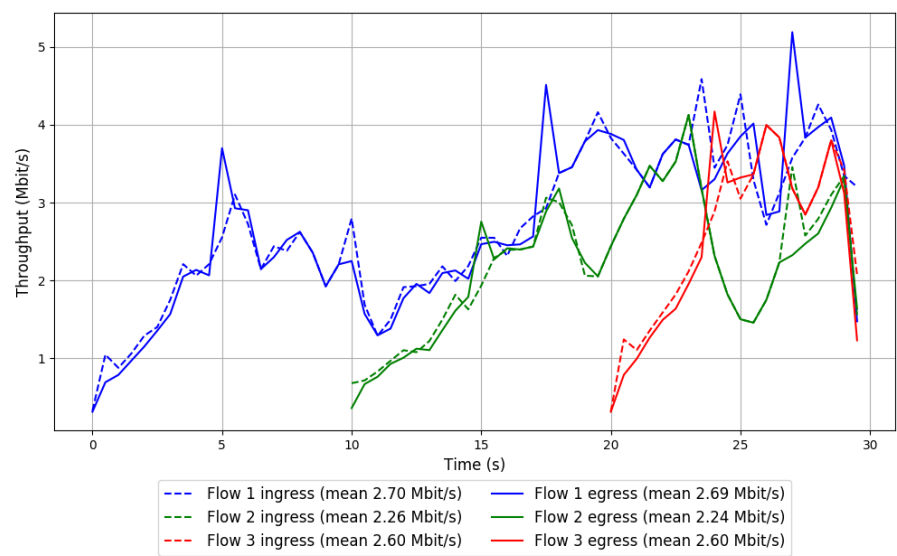
-- Flow 3:

Average throughput: 2.60 Mbit/s

95th percentile per-packet one-way delay: 111.661 ms

Loss rate: 2.21%

Run 10: Report of Sprout — Data Link

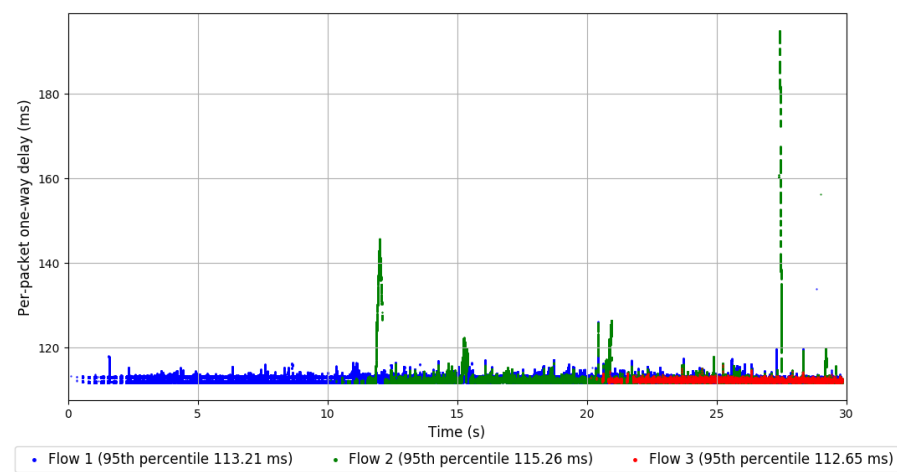
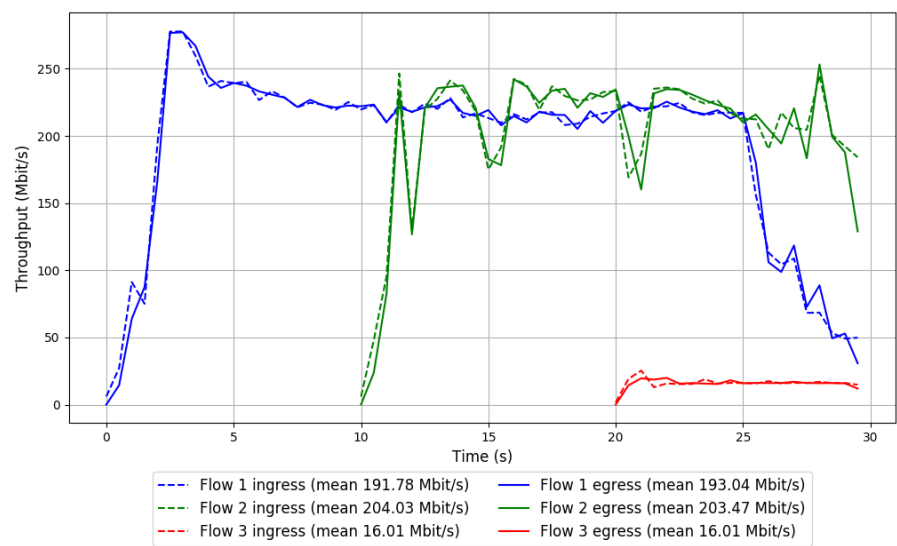


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-03-13 20:43:49
End at: 2018-03-13 20:44:19

# Below is generated by plot.py at 2018-03-14 03:38:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.92 Mbit/s
95th percentile per-packet one-way delay: 113.466 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 193.04 Mbit/s
95th percentile per-packet one-way delay: 113.214 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 203.47 Mbit/s
95th percentile per-packet one-way delay: 115.259 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 16.01 Mbit/s
95th percentile per-packet one-way delay: 112.650 ms
Loss rate: 2.29%
```


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

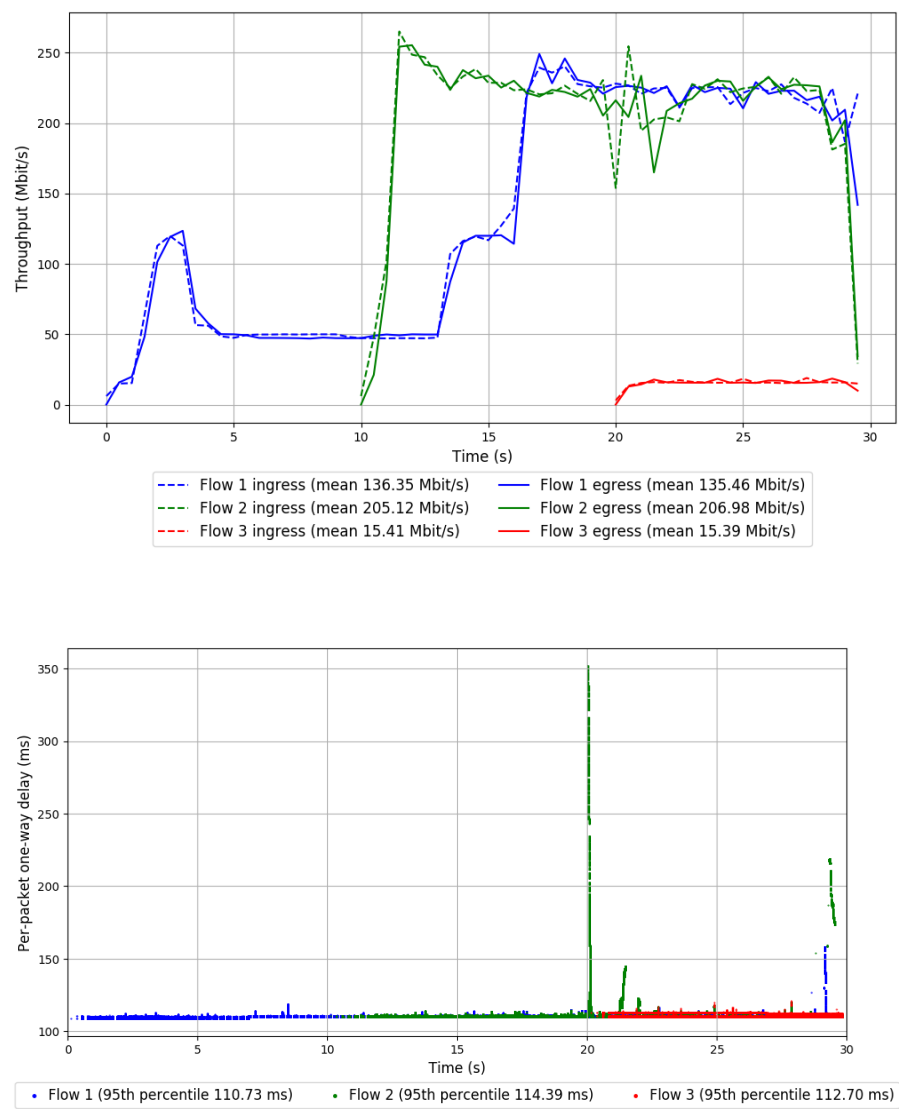


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-03-13 21:03:26
End at: 2018-03-13 21:03:56

# Below is generated by plot.py at 2018-03-14 03:38:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 277.76 Mbit/s
95th percentile per-packet one-way delay: 111.479 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 135.46 Mbit/s
95th percentile per-packet one-way delay: 110.730 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 206.98 Mbit/s
95th percentile per-packet one-way delay: 114.394 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 15.39 Mbit/s
95th percentile per-packet one-way delay: 112.699 ms
Loss rate: 2.43%
```

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

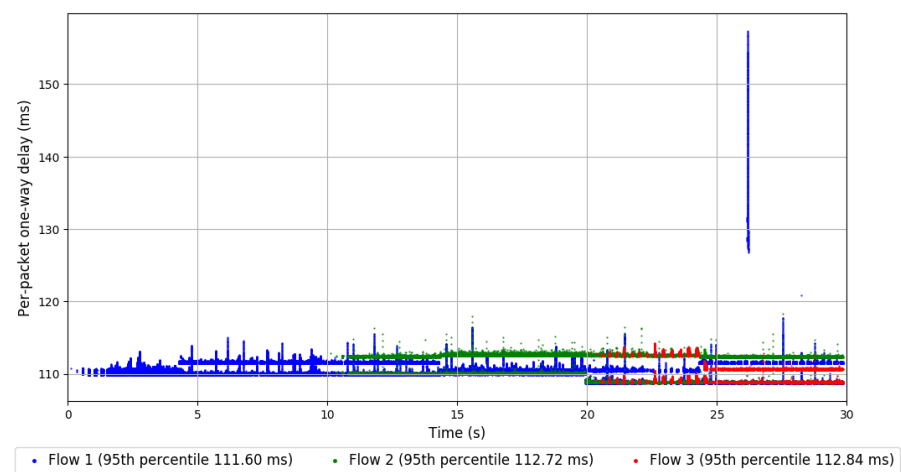
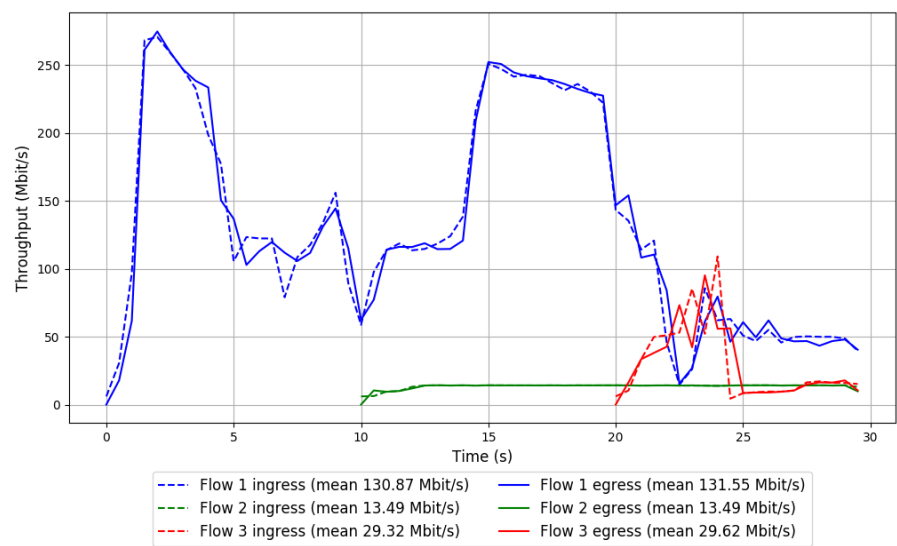


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-03-13 21:23:09
End at: 2018-03-13 21:23:39

# Below is generated by plot.py at 2018-03-14 03:38:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 150.17 Mbit/s
95th percentile per-packet one-way delay: 112.352 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 131.55 Mbit/s
95th percentile per-packet one-way delay: 111.599 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 13.49 Mbit/s
95th percentile per-packet one-way delay: 112.718 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 29.62 Mbit/s
95th percentile per-packet one-way delay: 112.839 ms
Loss rate: 1.27%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-03-13 21:42:36

End at: 2018-03-13 21:43:06

Below is generated by plot.py at 2018-03-14 03:38:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 246.18 Mbit/s

95th percentile per-packet one-way delay: 112.134 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 122.20 Mbit/s

95th percentile per-packet one-way delay: 112.070 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 168.43 Mbit/s

95th percentile per-packet one-way delay: 113.220 ms

Loss rate: 0.75%

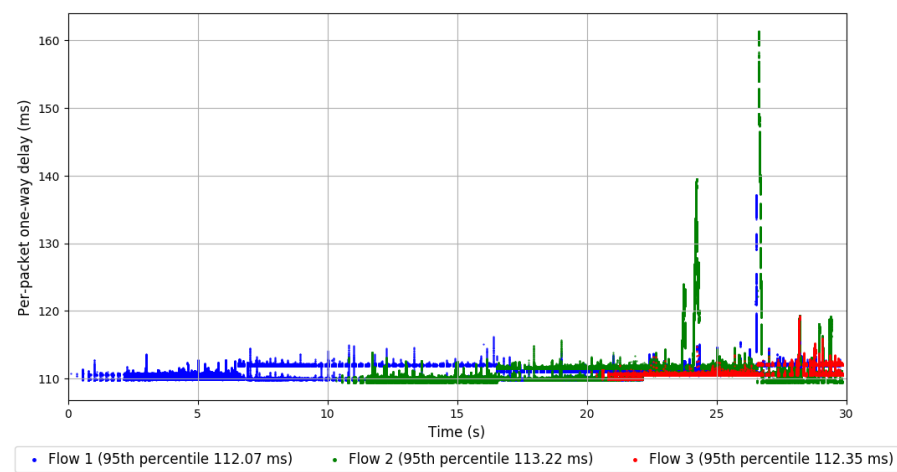
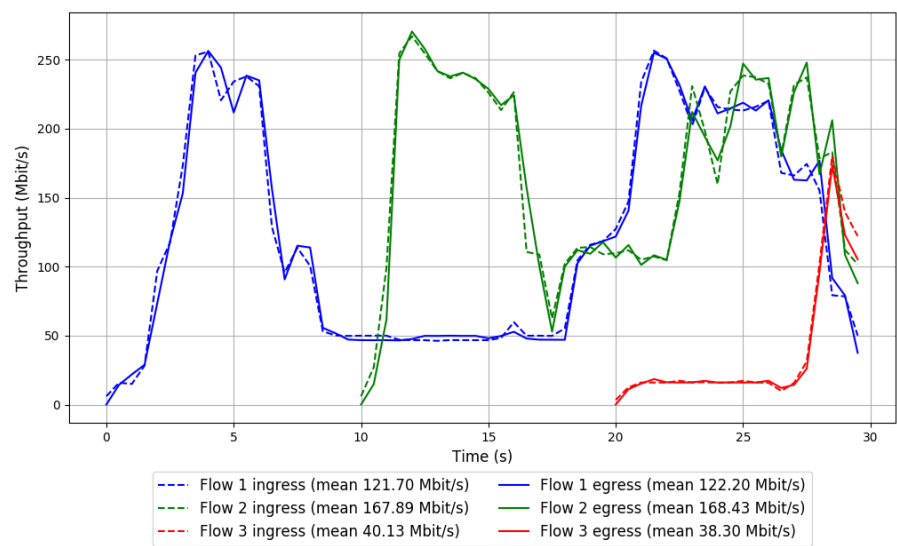
-- Flow 3:

Average throughput: 38.30 Mbit/s

95th percentile per-packet one-way delay: 112.353 ms

Loss rate: 6.73%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-03-13 22:01:56

End at: 2018-03-13 22:02:26

Below is generated by plot.py at 2018-03-14 03:38:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.60 Mbit/s

95th percentile per-packet one-way delay: 114.113 ms

Loss rate: 3.00%

-- Flow 1:

Average throughput: 45.82 Mbit/s

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

Loss rate: 3.85%

-- Flow 2:

Average throughput: 23.12 Mbit/s

95th percentile per-packet one-way delay: 114.172 ms

Loss rate: 0.81%

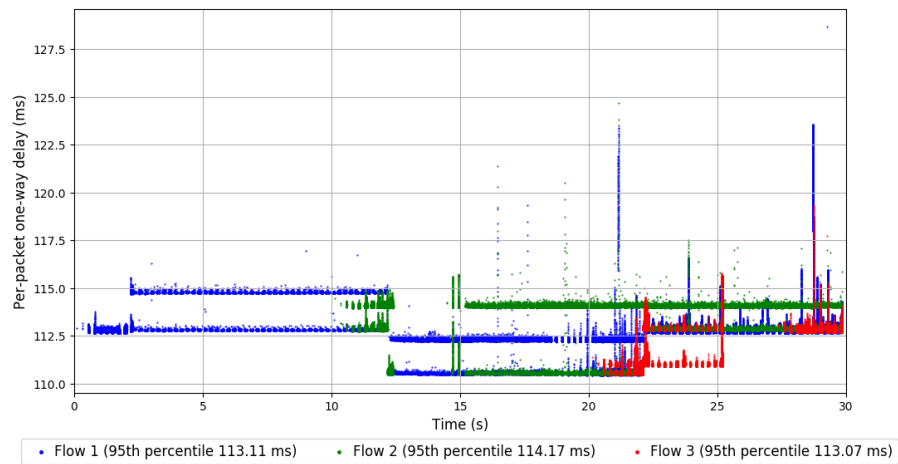
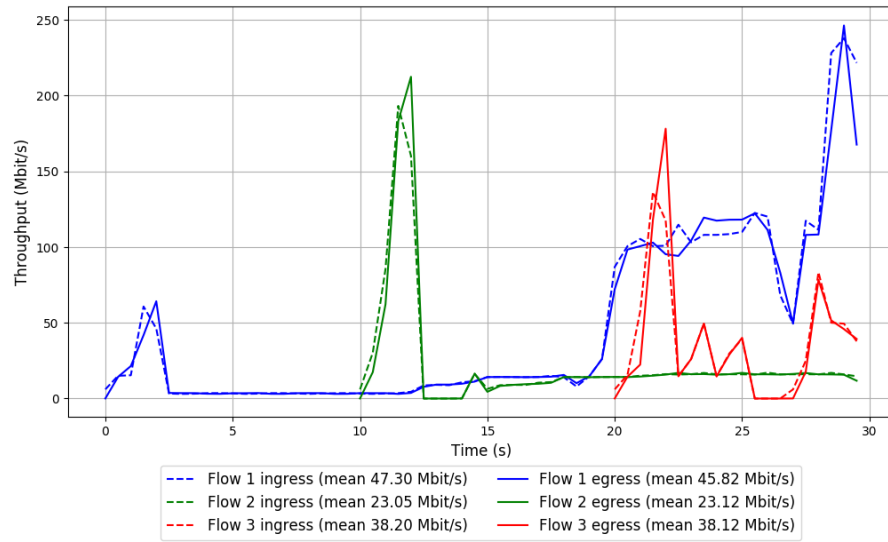
-- Flow 3:

Average throughput: 38.12 Mbit/s

95th percentile per-packet one-way delay: 113.070 ms

Loss rate: 2.47%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-03-13 22:20:55

End at: 2018-03-13 22:21:25

Below is generated by plot.py at 2018-03-14 03:38:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 40.46 Mbit/s

95th percentile per-packet one-way delay: 113.017 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 24.91 Mbit/s

95th percentile per-packet one-way delay: 113.041 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 15.84 Mbit/s

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

Loss rate: 1.16%

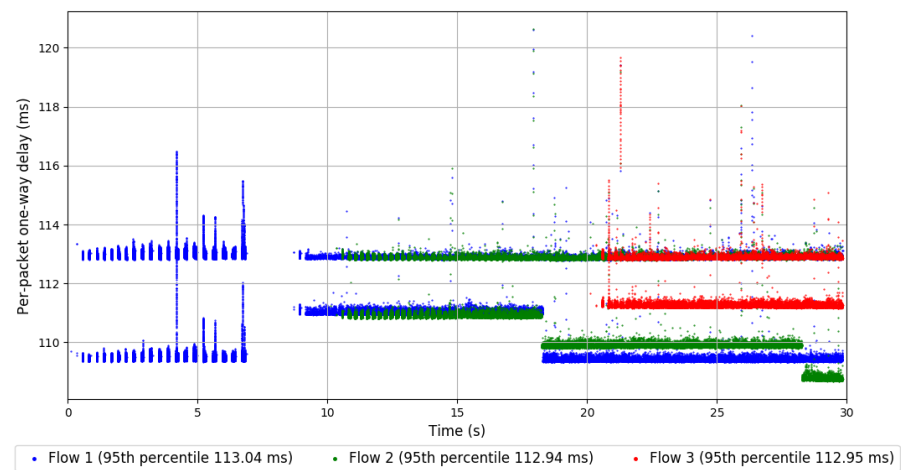
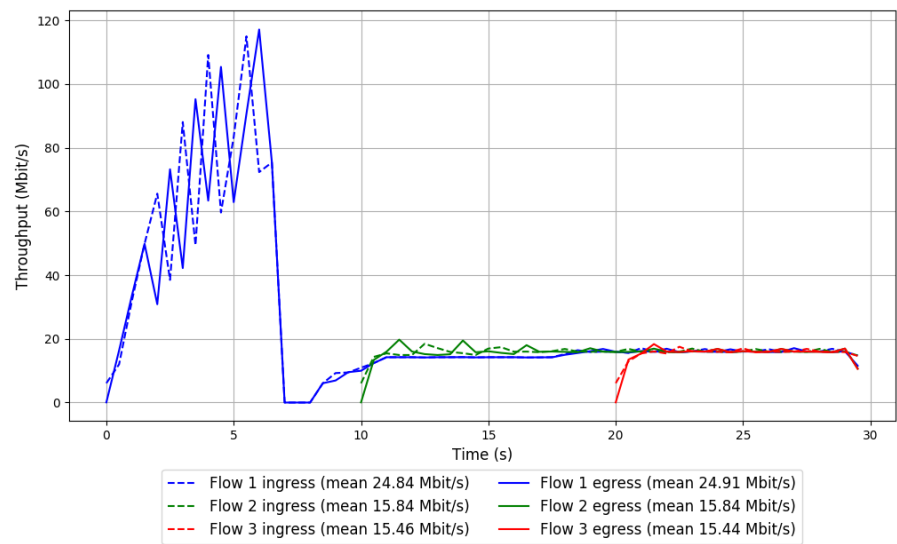
-- Flow 3:

Average throughput: 15.44 Mbit/s

95th percentile per-packet one-way delay: 112.953 ms

Loss rate: 2.35%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-03-13 22:40:04

End at: 2018-03-13 22:40:34

Below is generated by plot.py at 2018-03-14 03:38:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 196.25 Mbit/s

95th percentile per-packet one-way delay: 114.102 ms

Loss rate: 0.30%

-- Flow 1:

Average throughput: 70.56 Mbit/s

95th percentile per-packet one-way delay: 114.620 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 136.33 Mbit/s

95th percentile per-packet one-way delay: 113.306 ms

Loss rate: 0.11%

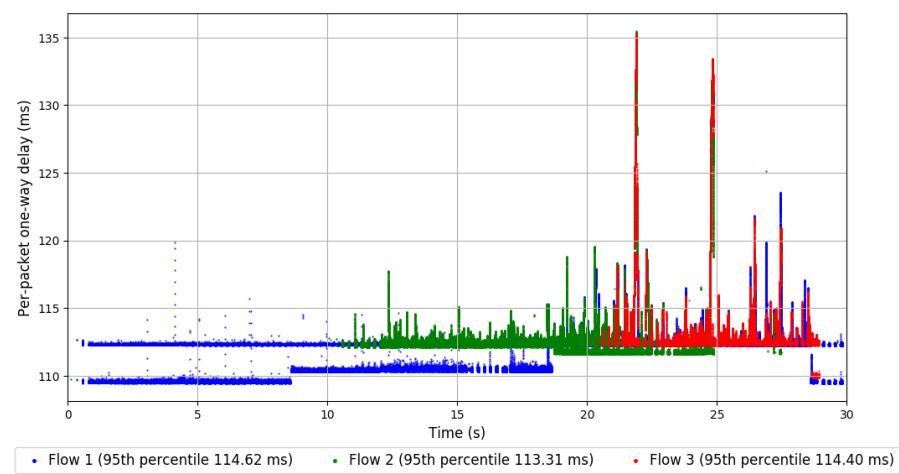
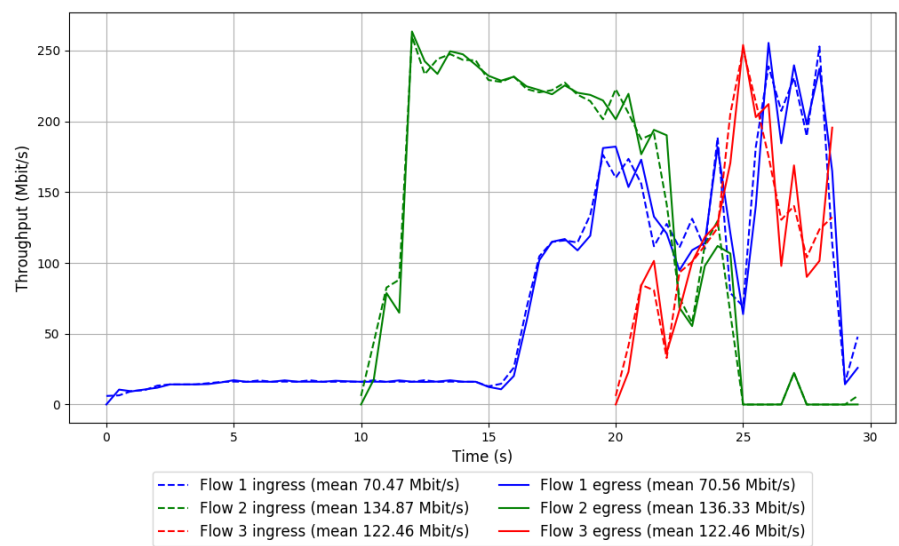
-- Flow 3:

Average throughput: 122.46 Mbit/s

95th percentile per-packet one-way delay: 114.402 ms

Loss rate: 0.00%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-03-13 22:59:32

End at: 2018-03-13 23:00:02

Below is generated by plot.py at 2018-03-14 03:38:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.17 Mbit/s

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

Loss rate: 0.75%

-- Flow 1:

Average throughput: 16.16 Mbit/s

95th percentile per-packet one-way delay: 111.493 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 14.84 Mbit/s

95th percentile per-packet one-way delay: 112.747 ms

Loss rate: 1.06%

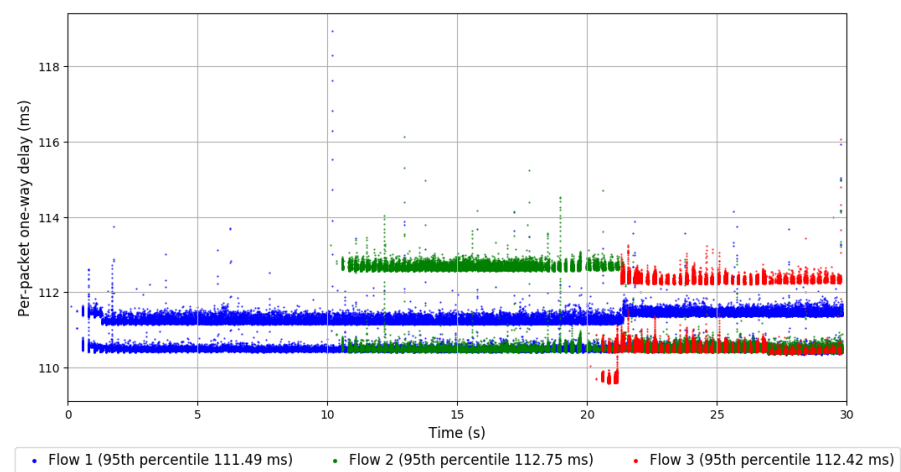
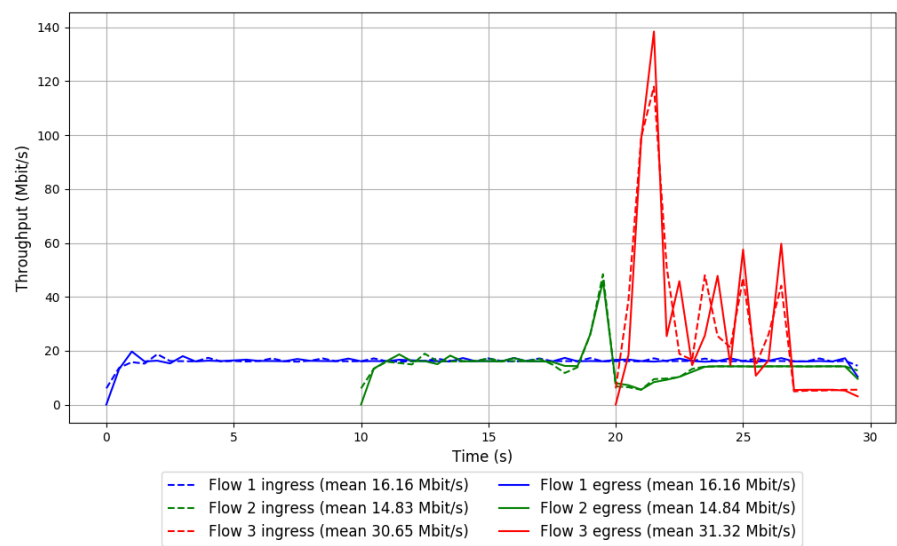
-- Flow 3:

Average throughput: 31.32 Mbit/s

95th percentile per-packet one-way delay: 112.421 ms

Loss rate: 0.46%

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

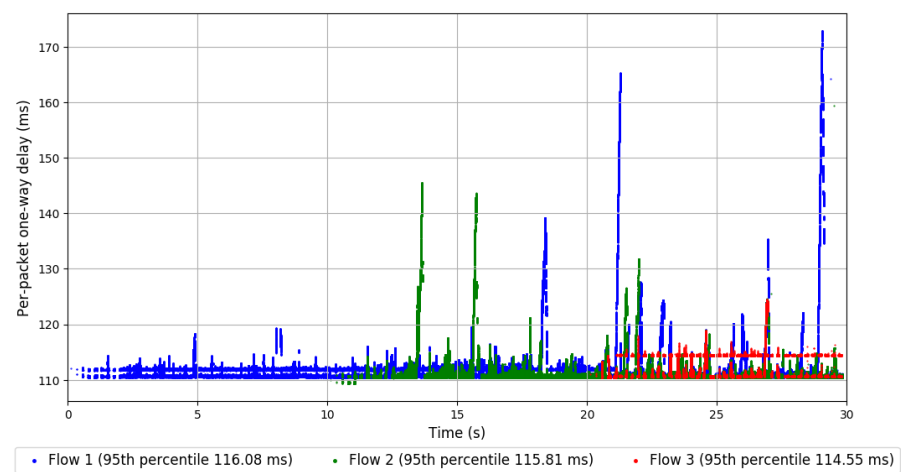
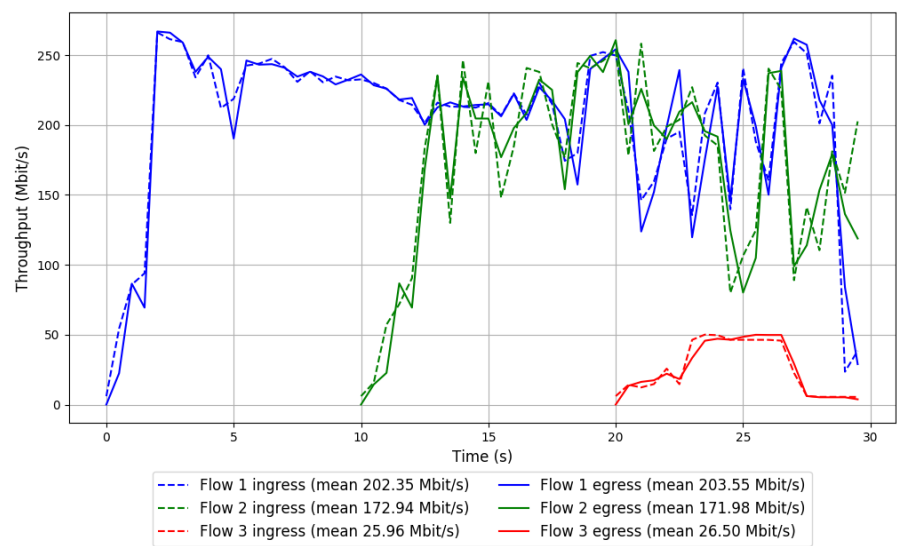


```
Run 9: Statistics of TaoVA-100x

Start at: 2018-03-13 23:18:32
End at: 2018-03-13 23:19:02

# Below is generated by plot.py at 2018-03-14 03:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.27 Mbit/s
95th percentile per-packet one-way delay: 115.877 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 203.55 Mbit/s
95th percentile per-packet one-way delay: 116.076 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 171.98 Mbit/s
95th percentile per-packet one-way delay: 115.808 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 26.50 Mbit/s
95th percentile per-packet one-way delay: 114.546 ms
Loss rate: 0.53%
```


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

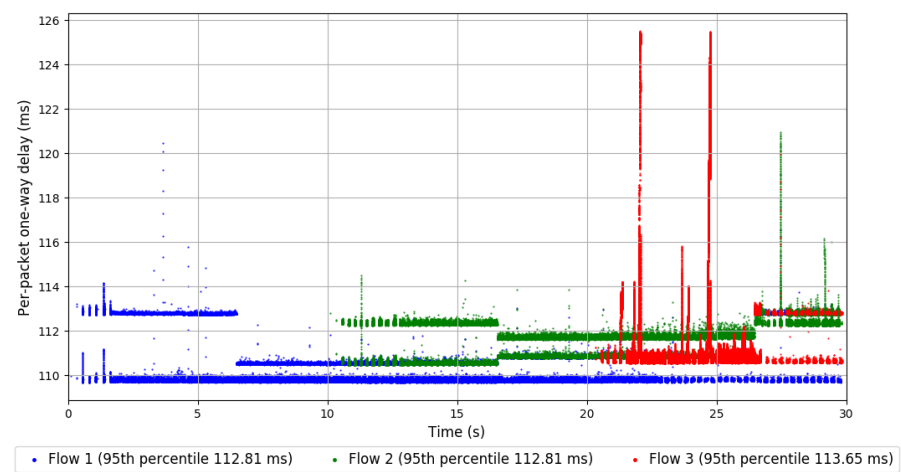
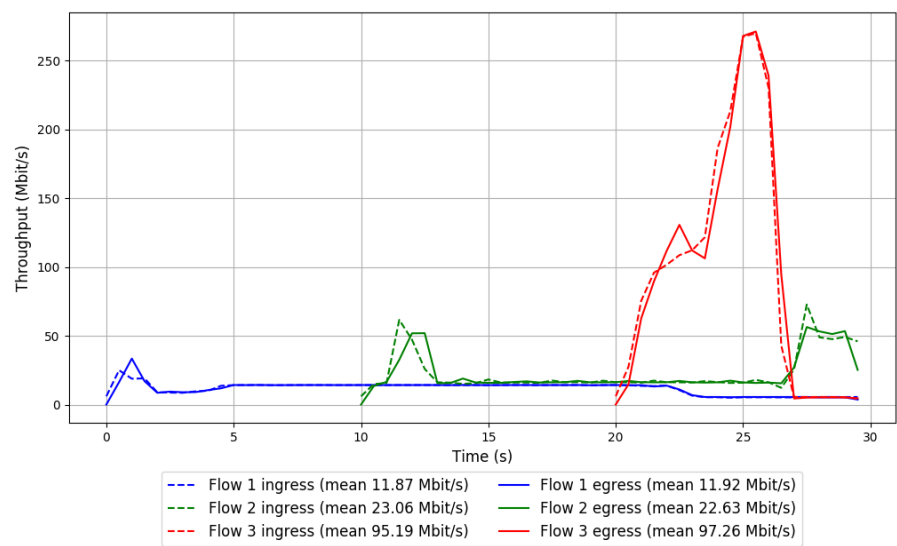


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-03-13 23:38:02
End at: 2018-03-13 23:38:32

# Below is generated by plot.py at 2018-03-14 03:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.67 Mbit/s
95th percentile per-packet one-way delay: 112.901 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 11.92 Mbit/s
95th percentile per-packet one-way delay: 112.813 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 22.63 Mbit/s
95th percentile per-packet one-way delay: 112.806 ms
Loss rate: 2.71%
-- Flow 3:
Average throughput: 97.26 Mbit/s
95th percentile per-packet one-way delay: 113.647 ms
Loss rate: 0.11%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-03-13 20:29:35

End at: 2018-03-13 20:30:05

Below is generated by plot.py at 2018-03-14 03:42:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.51 Mbit/s

95th percentile per-packet one-way delay: 113.383 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 54.90 Mbit/s

95th percentile per-packet one-way delay: 112.319 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 29.51 Mbit/s

95th percentile per-packet one-way delay: 118.090 ms

Loss rate: 1.14%

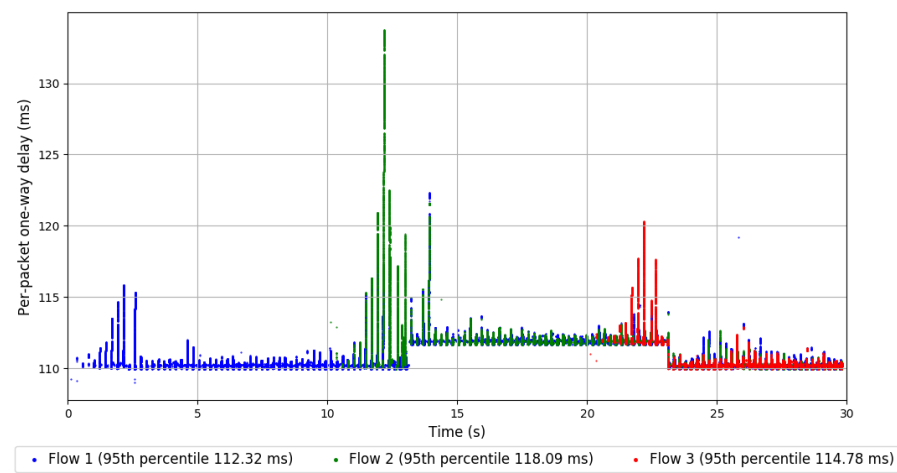
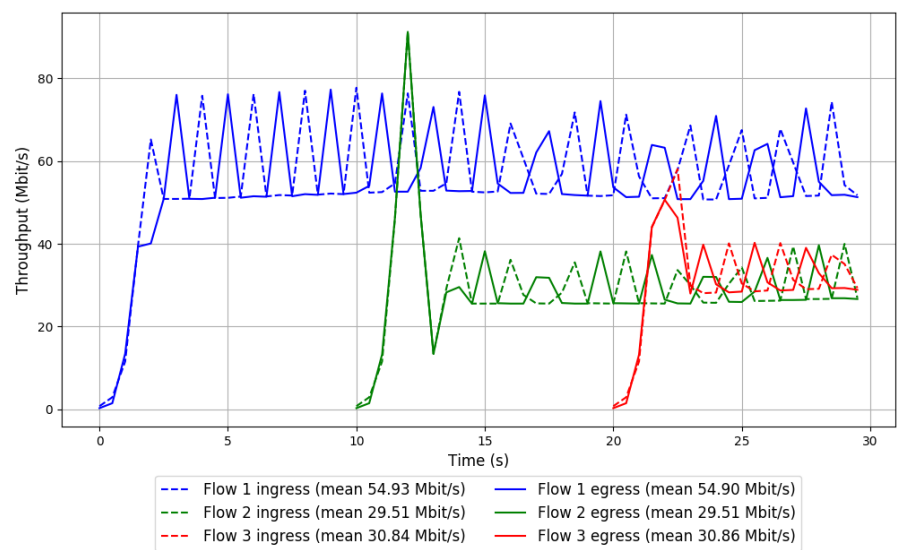
-- Flow 3:

Average throughput: 30.86 Mbit/s

95th percentile per-packet one-way delay: 114.779 ms

Loss rate: 2.39%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-03-13 20:49:11

End at: 2018-03-13 20:49:41

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.12 Mbit/s

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

Loss rate: 1.18%

-- Flow 1:

Average throughput: 47.76 Mbit/s

95th percentile per-packet one-way delay: 113.310 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 29.26 Mbit/s

95th percentile per-packet one-way delay: 111.531 ms

Loss rate: 1.22%

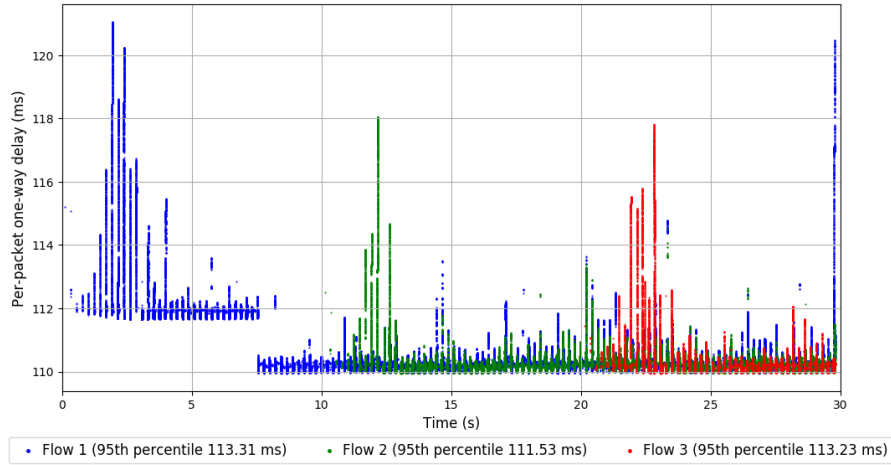
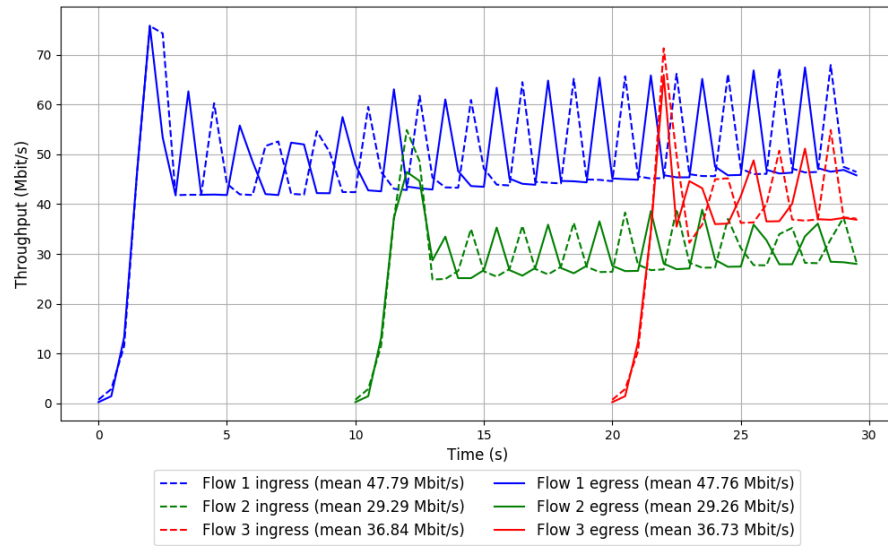
-- Flow 3:

Average throughput: 36.73 Mbit/s

95th percentile per-packet one-way delay: 113.235 ms

Loss rate: 2.54%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-03-13 21:08:51

End at: 2018-03-13 21:09:21

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 63.97 Mbit/s

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

Loss rate: 1.26%

-- Flow 1:

Average throughput: 32.02 Mbit/s

95th percentile per-packet one-way delay: 111.570 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 30.19 Mbit/s

95th percentile per-packet one-way delay: 113.487 ms

Loss rate: 1.22%

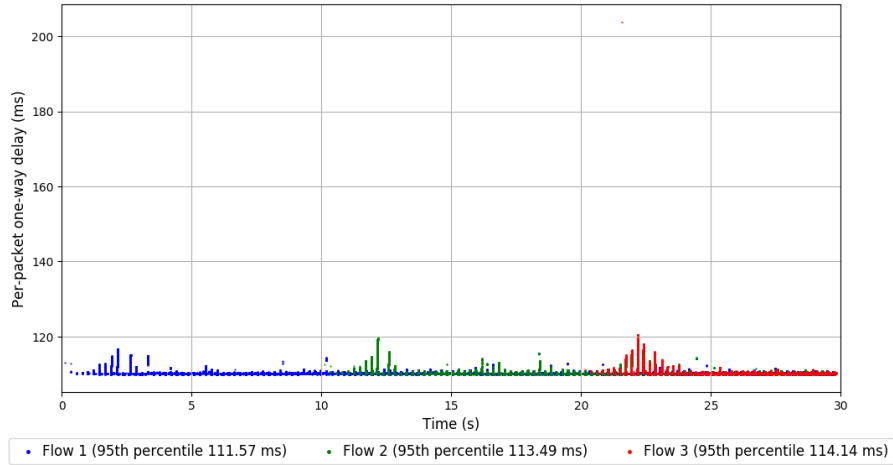
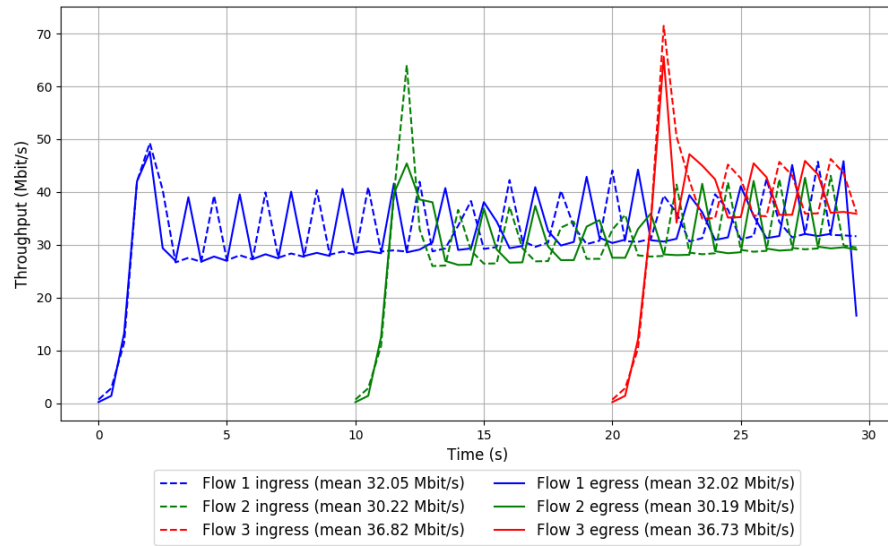
-- Flow 3:

Average throughput: 36.73 Mbit/s

95th percentile per-packet one-way delay: 114.145 ms

Loss rate: 2.49%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-03-13 21:28:17

End at: 2018-03-13 21:28:47

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.15 Mbit/s

95th percentile per-packet one-way delay: 111.246 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 48.36 Mbit/s

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

Loss rate: 0.77%

-- Flow 2:

Average throughput: 55.88 Mbit/s

95th percentile per-packet one-way delay: 110.817 ms

Loss rate: 1.18%

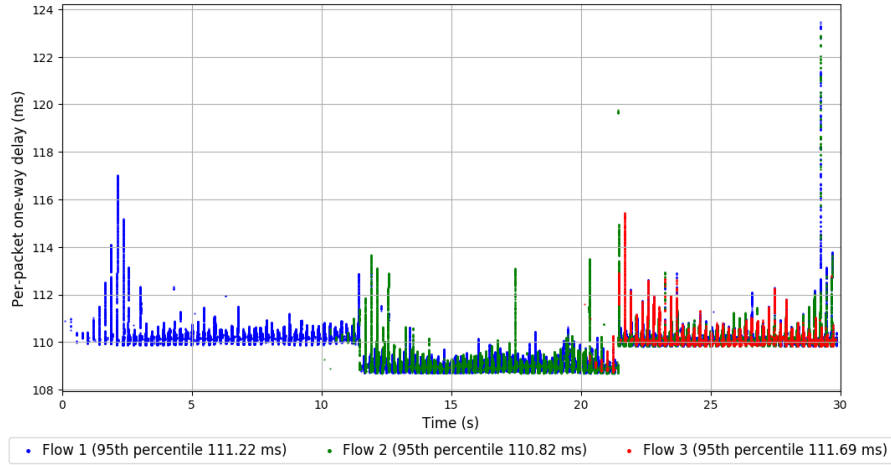
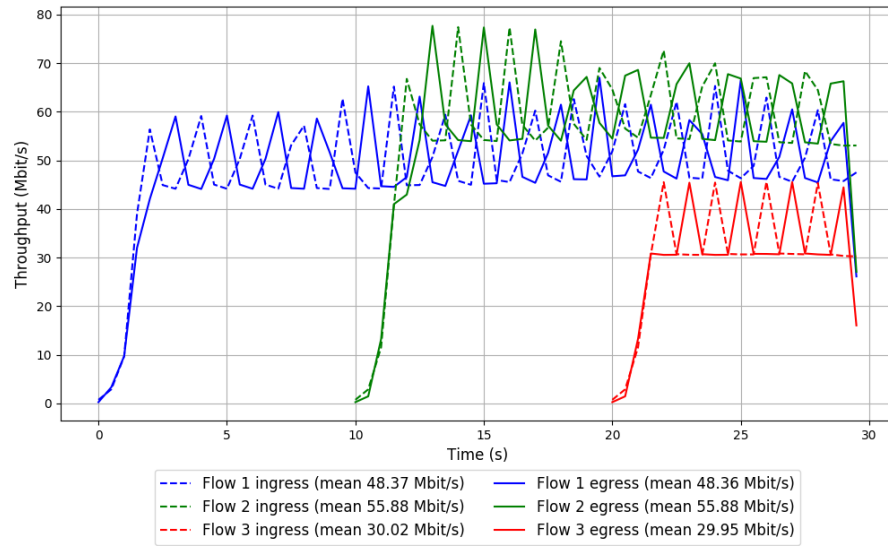
-- Flow 3:

Average throughput: 29.95 Mbit/s

95th percentile per-packet one-way delay: 111.694 ms

Loss rate: 2.54%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-03-13 21:47:53

End at: 2018-03-13 21:48:23

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.48 Mbit/s

95th percentile per-packet one-way delay: 111.778 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 32.13 Mbit/s

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

Loss rate: 0.82%

-- Flow 2:

Average throughput: 35.14 Mbit/s

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

Loss rate: 1.07%

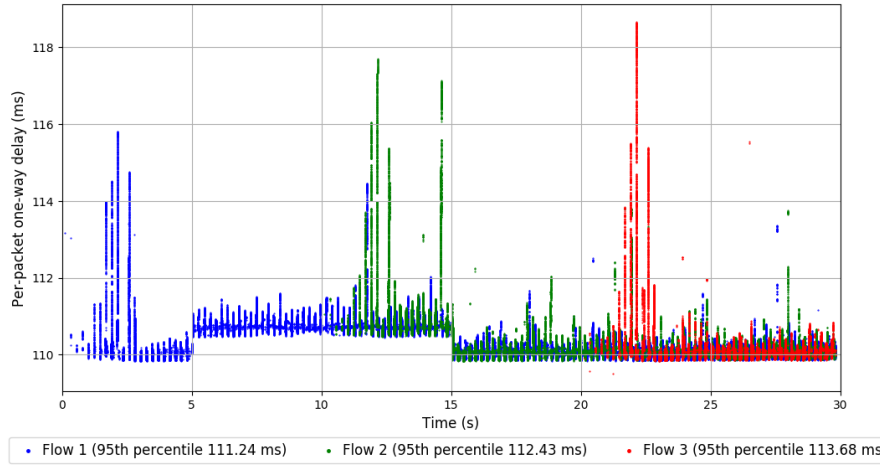
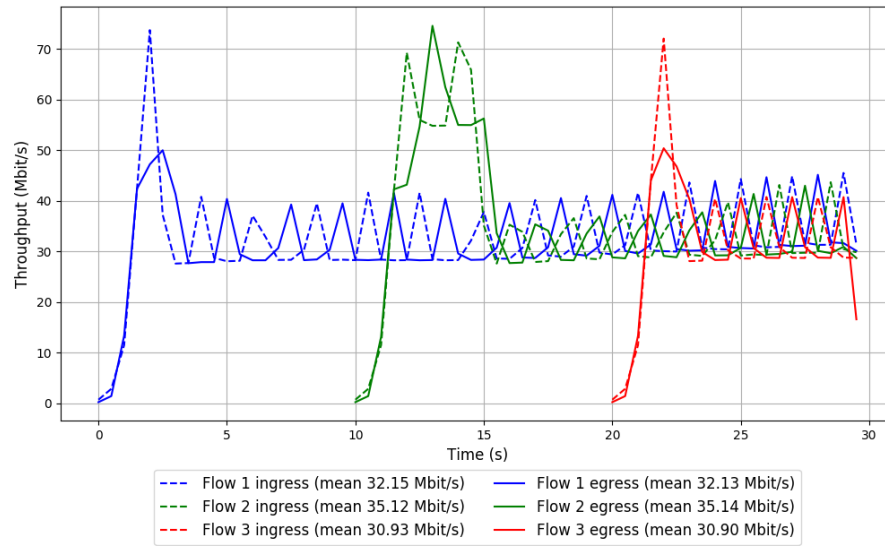
-- Flow 3:

Average throughput: 30.90 Mbit/s

95th percentile per-packet one-way delay: 113.684 ms

Loss rate: 2.35%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-03-13 22:06:51

End at: 2018-03-13 22:07:21

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.08 Mbit/s

95th percentile per-packet one-way delay: 115.523 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 27.91 Mbit/s

95th percentile per-packet one-way delay: 116.682 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 50.02 Mbit/s

95th percentile per-packet one-way delay: 114.097 ms

Loss rate: 1.22%

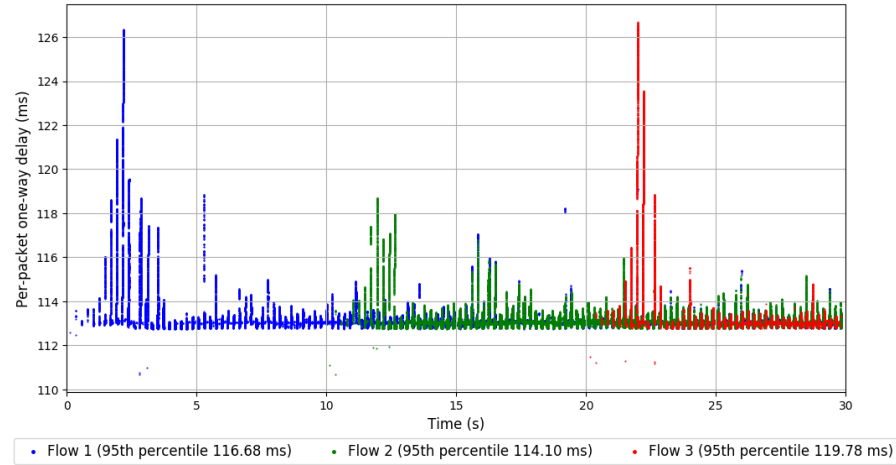
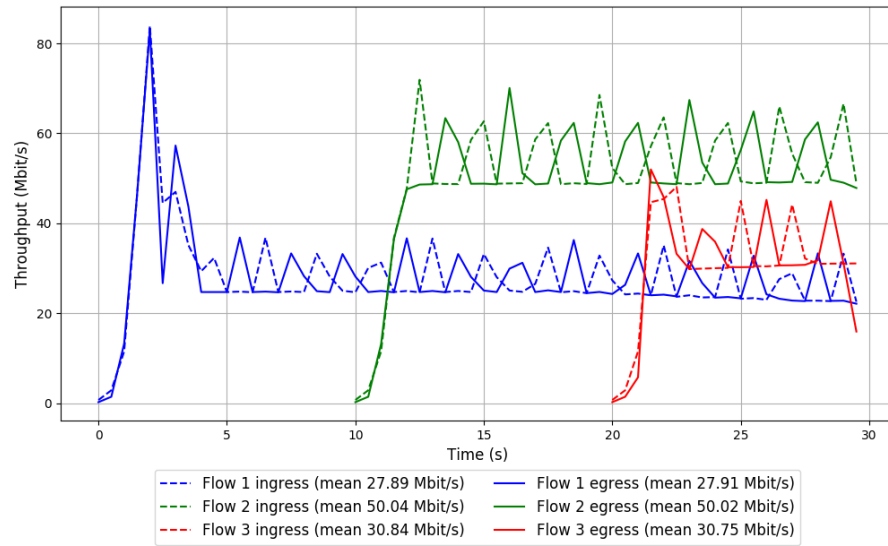
-- Flow 3:

Average throughput: 30.75 Mbit/s

95th percentile per-packet one-way delay: 119.778 ms

Loss rate: 2.55%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-03-13 22:25:50

End at: 2018-03-13 22:26:20

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.87 Mbit/s

95th percentile per-packet one-way delay: 114.816 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 32.32 Mbit/s

95th percentile per-packet one-way delay: 114.696 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 34.19 Mbit/s

95th percentile per-packet one-way delay: 115.957 ms

Loss rate: 1.24%

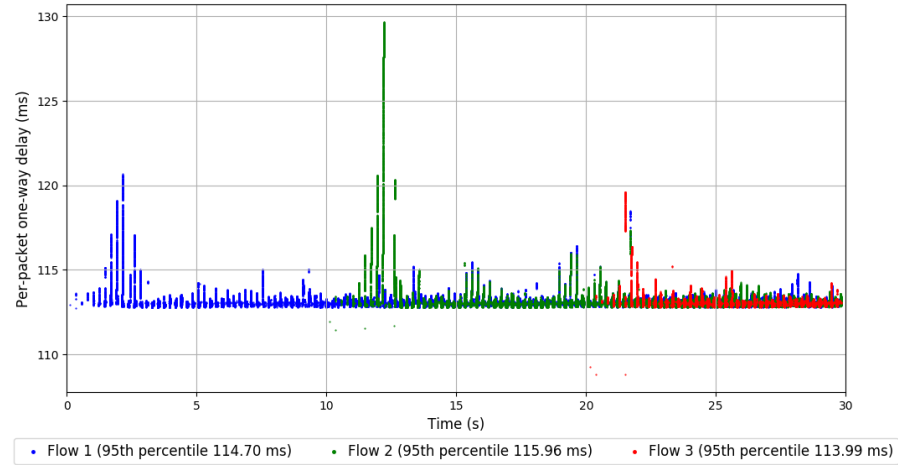
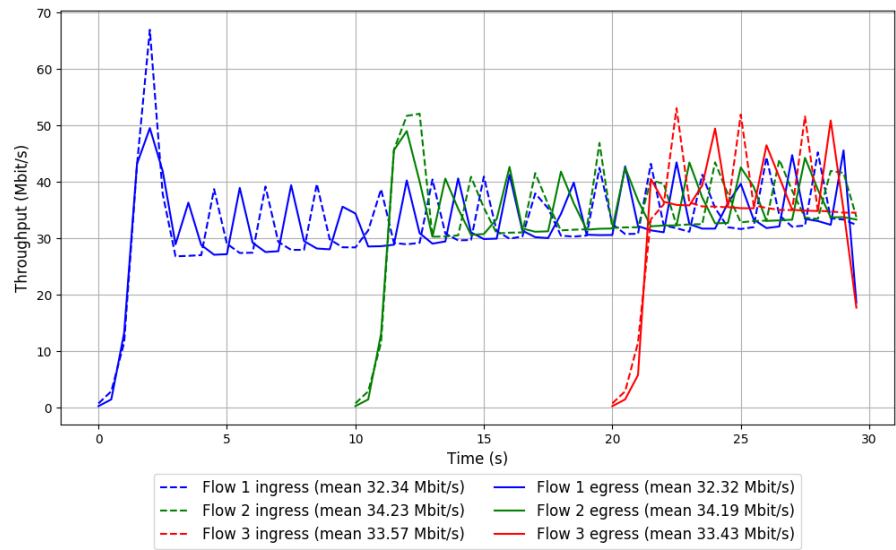
-- Flow 3:

Average throughput: 33.43 Mbit/s

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

Loss rate: 2.60%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-03-13 22:45:17

End at: 2018-03-13 22:45:47

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.48 Mbit/s

95th percentile per-packet one-way delay: 113.812 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 40.32 Mbit/s

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

Loss rate: 0.79%

-- Flow 2:

Average throughput: 37.66 Mbit/s

95th percentile per-packet one-way delay: 113.559 ms

Loss rate: 1.19%

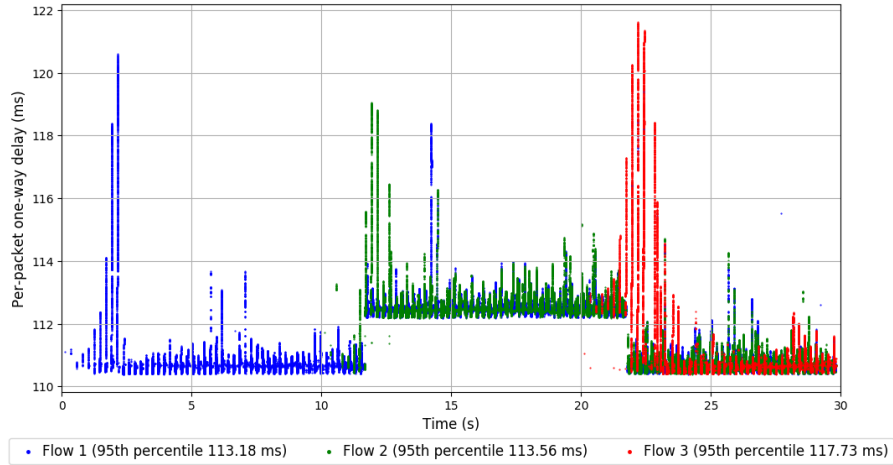
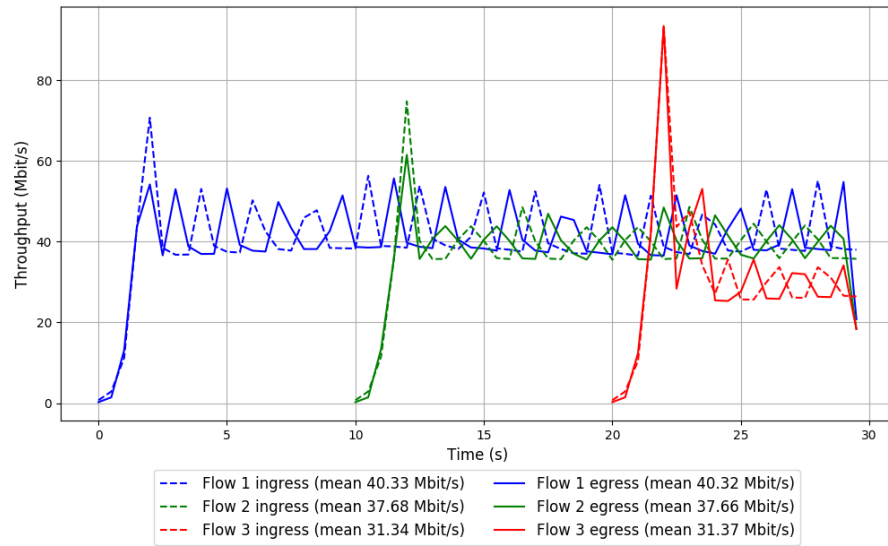
-- Flow 3:

Average throughput: 31.37 Mbit/s

95th percentile per-packet one-way delay: 117.733 ms

Loss rate: 2.12%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-03-13 23:04:22

End at: 2018-03-13 23:04:52

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.86 Mbit/s

95th percentile per-packet one-way delay: 112.811 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 56.98 Mbit/s

95th percentile per-packet one-way delay: 112.032 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 38.39 Mbit/s

95th percentile per-packet one-way delay: 114.435 ms

Loss rate: 1.22%

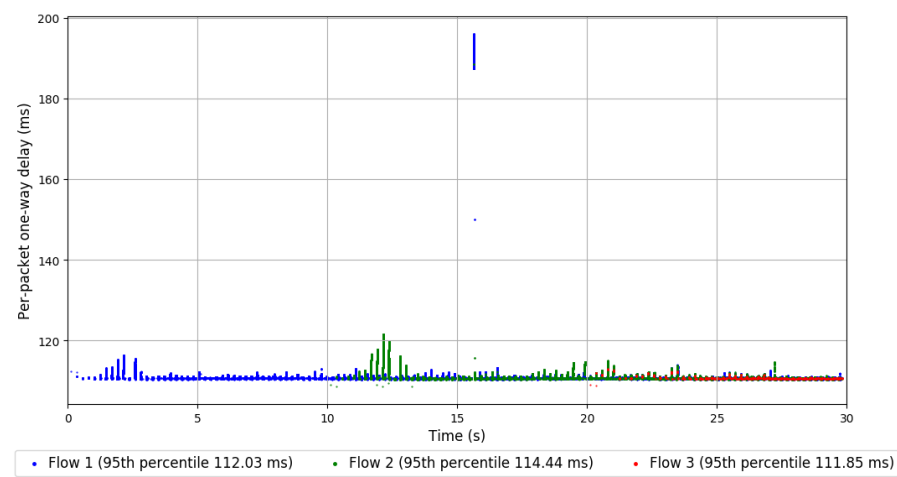
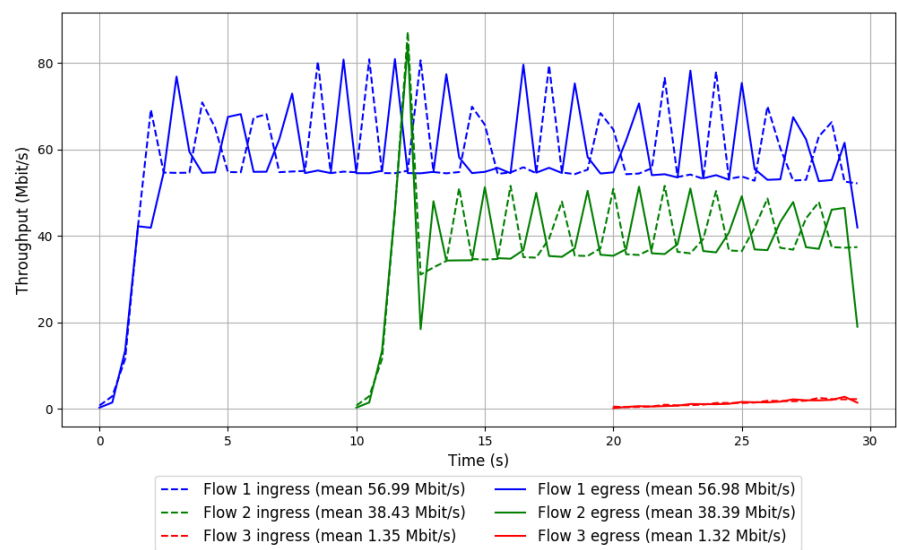
-- Flow 3:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 111.848 ms

Loss rate: 4.65%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-03-13 23:24:00

End at: 2018-03-13 23:24:30

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.99 Mbit/s

95th percentile per-packet one-way delay: 114.362 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 28.38 Mbit/s

95th percentile per-packet one-way delay: 115.479 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 51.24 Mbit/s

95th percentile per-packet one-way delay: 113.493 ms

Loss rate: 1.25%

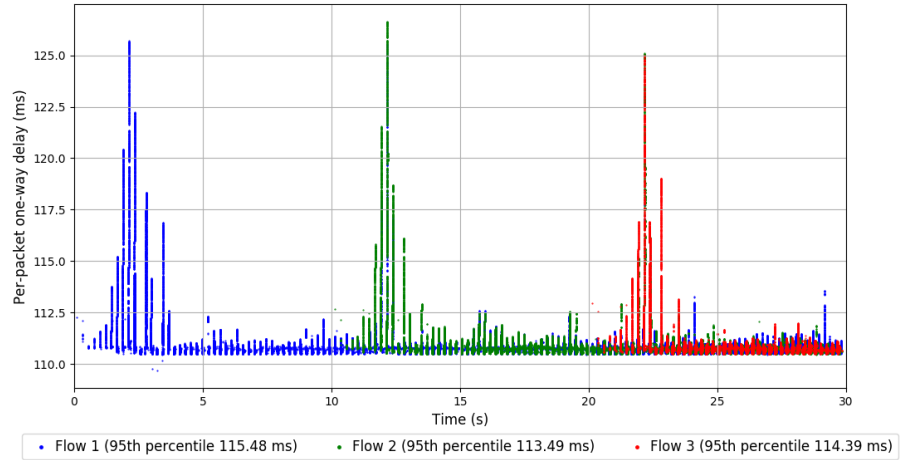
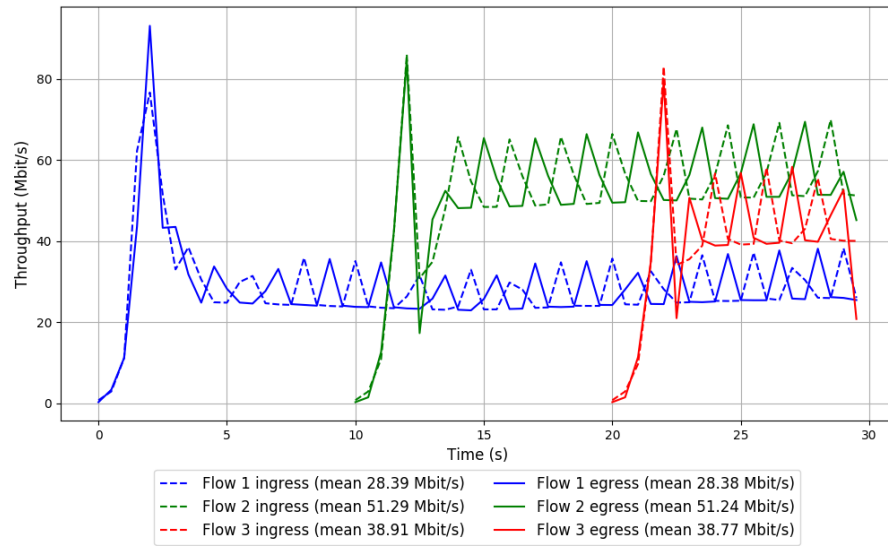
-- Flow 3:

Average throughput: 38.77 Mbit/s

95th percentile per-packet one-way delay: 114.386 ms

Loss rate: 2.59%

Run 10: Report of TCP Vegas — Data Link

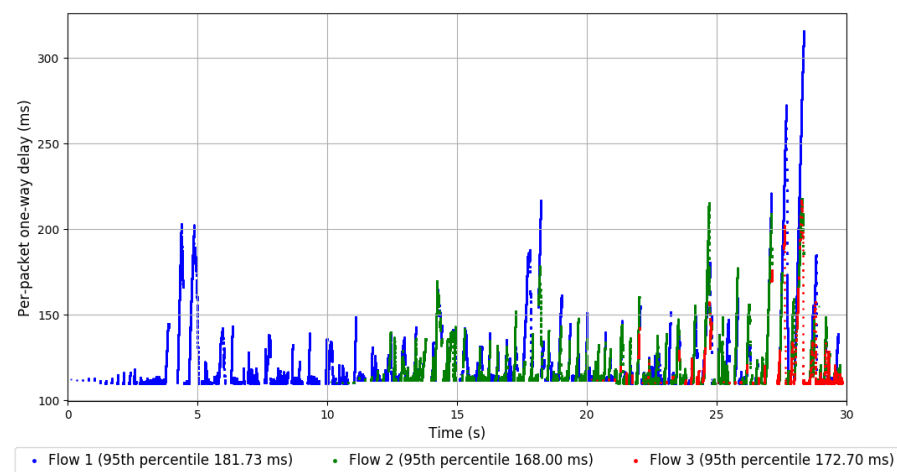
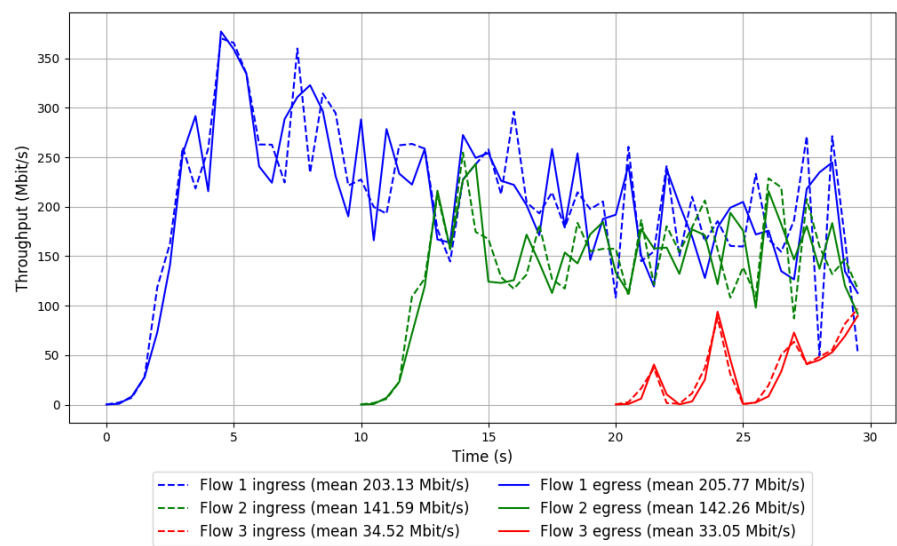


```
Run 1: Statistics of Verus

Start at: 2018-03-13 20:36:17
End at: 2018-03-13 20:36:47

# Below is generated by plot.py at 2018-03-14 03:42:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 309.46 Mbit/s
95th percentile per-packet one-way delay: 178.987 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 205.77 Mbit/s
95th percentile per-packet one-way delay: 181.729 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 142.26 Mbit/s
95th percentile per-packet one-way delay: 168.002 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 33.05 Mbit/s
95th percentile per-packet one-way delay: 172.702 ms
Loss rate: 6.48%
```


Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-03-13 20:55:50

End at: 2018-03-13 20:56:20

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 300.90 Mbit/s

95th percentile per-packet one-way delay: 238.982 ms

Loss rate: 3.08%

-- Flow 1:

Average throughput: 226.99 Mbit/s

95th percentile per-packet one-way delay: 191.306 ms

Loss rate: 1.85%

-- Flow 2:

Average throughput: 100.70 Mbit/s

95th percentile per-packet one-way delay: 348.649 ms

Loss rate: 7.20%

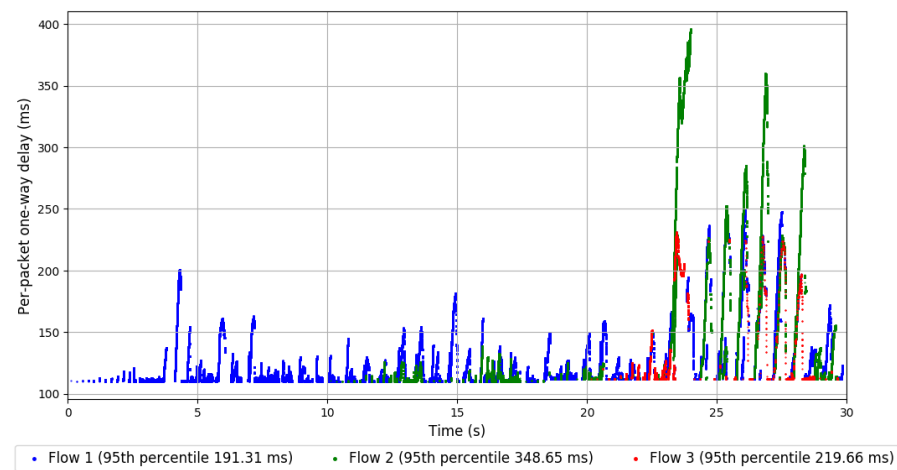
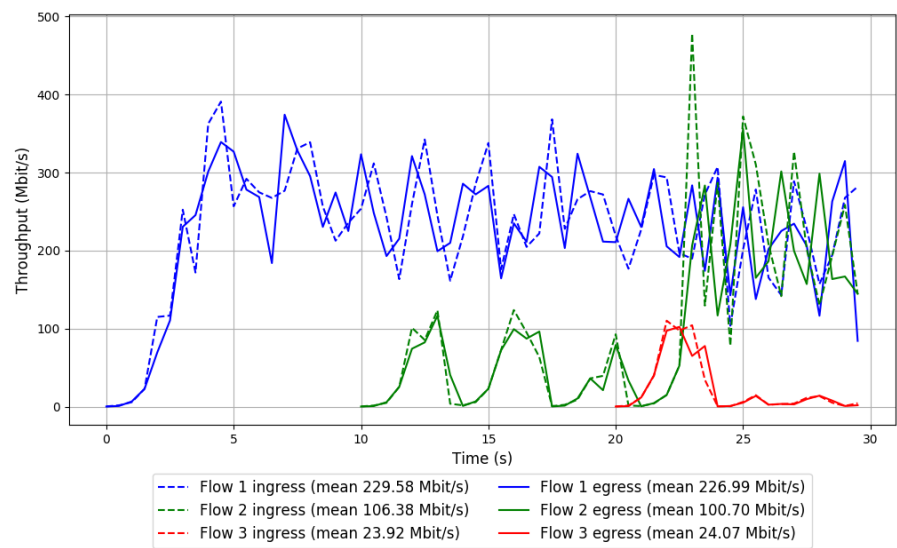
-- Flow 3:

Average throughput: 24.07 Mbit/s

95th percentile per-packet one-way delay: 219.656 ms

Loss rate: 1.72%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-03-13 21:15:30

End at: 2018-03-13 21:16:00

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 190.94 Mbit/s

95th percentile per-packet one-way delay: 146.469 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 96.38 Mbit/s

95th percentile per-packet one-way delay: 160.024 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 122.17 Mbit/s

95th percentile per-packet one-way delay: 134.387 ms

Loss rate: 1.92%

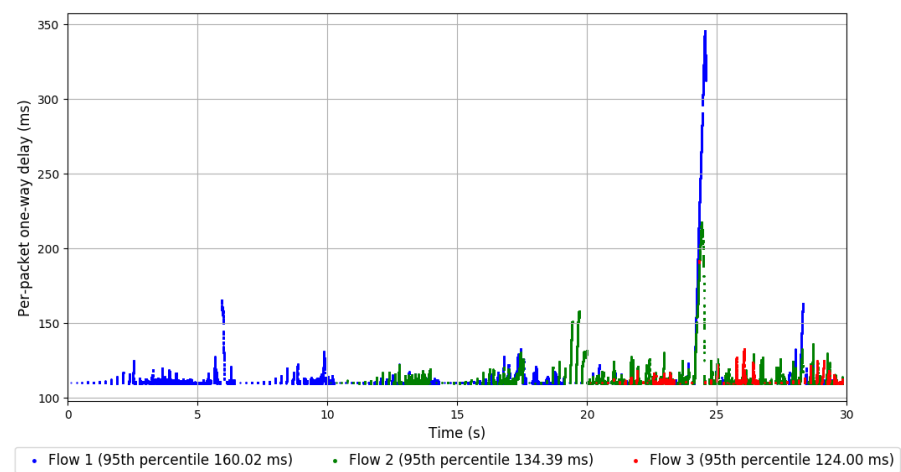
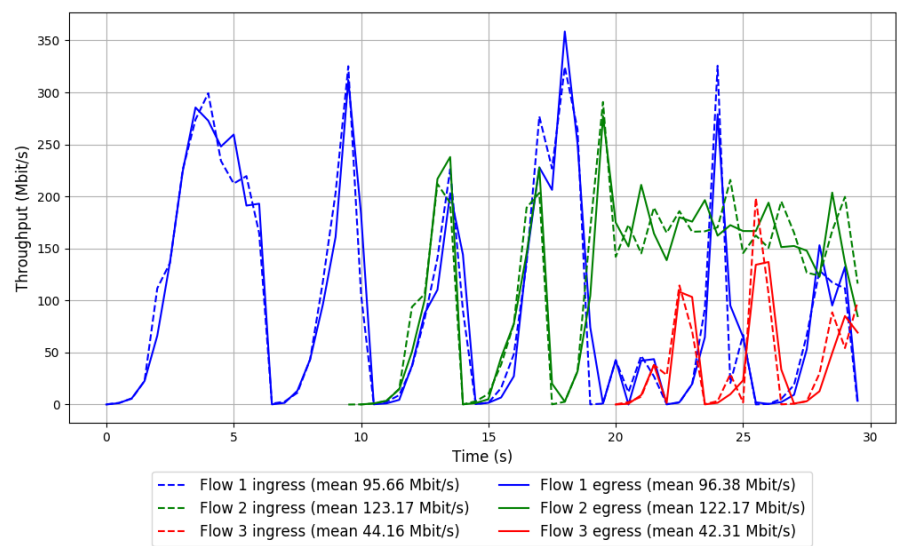
-- Flow 3:

Average throughput: 42.31 Mbit/s

95th percentile per-packet one-way delay: 123.998 ms

Loss rate: 6.27%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-03-13 21:34:58

End at: 2018-03-13 21:35:28

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 234.93 Mbit/s

95th percentile per-packet one-way delay: 223.440 ms

Loss rate: 2.47%

-- Flow 1:

Average throughput: 140.13 Mbit/s

95th percentile per-packet one-way delay: 231.971 ms

Loss rate: 1.93%

-- Flow 2:

Average throughput: 135.71 Mbit/s

95th percentile per-packet one-way delay: 206.854 ms

Loss rate: 2.87%

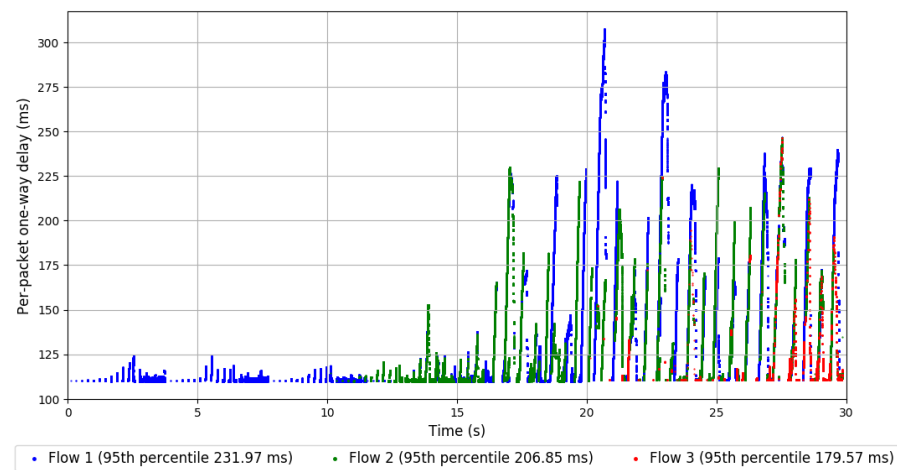
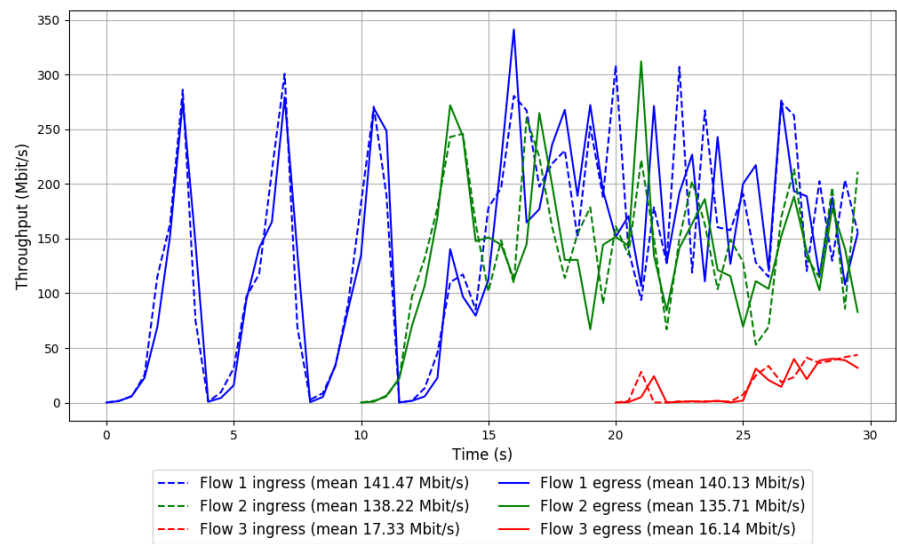
-- Flow 3:

Average throughput: 16.14 Mbit/s

95th percentile per-packet one-way delay: 179.568 ms

Loss rate: 9.05%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-03-13 21:54:33

End at: 2018-03-13 21:55:03

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 225.20 Mbit/s

95th percentile per-packet one-way delay: 225.293 ms

Loss rate: 2.45%

-- Flow 1:

Average throughput: 104.56 Mbit/s

95th percentile per-packet one-way delay: 146.041 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 112.99 Mbit/s

95th percentile per-packet one-way delay: 249.662 ms

Loss rate: 2.38%

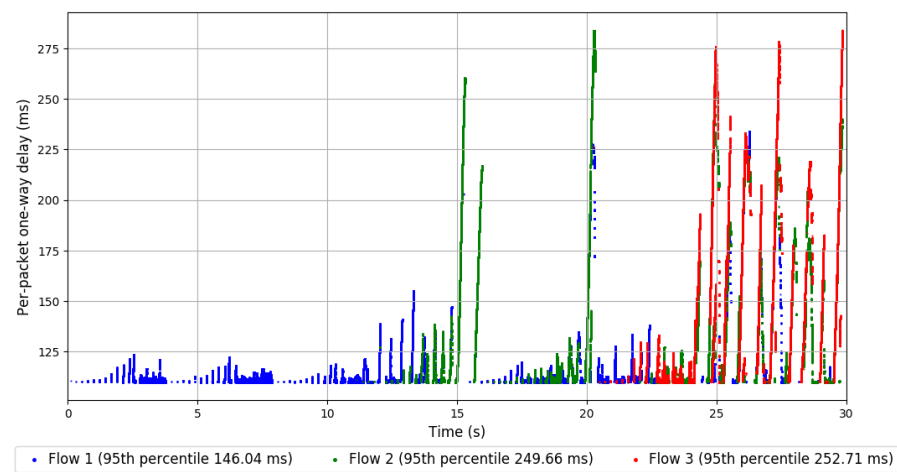
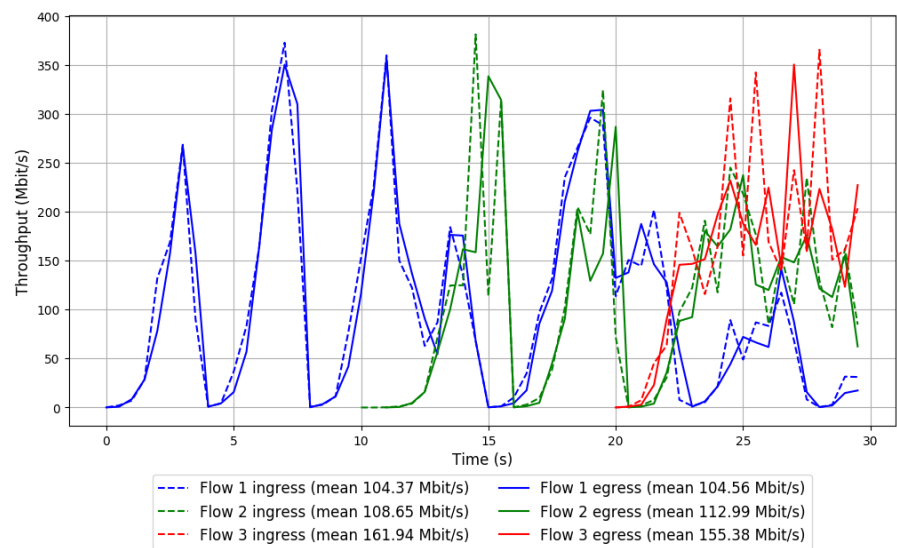
-- Flow 3:

Average throughput: 155.38 Mbit/s

95th percentile per-packet one-way delay: 252.711 ms

Loss rate: 5.84%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-03-13 22:13:28

End at: 2018-03-13 22:13:58

Below is generated by plot.py at 2018-03-14 03:42:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 167.77 Mbit/s

95th percentile per-packet one-way delay: 185.410 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 125.05 Mbit/s

95th percentile per-packet one-way delay: 220.805 ms

Loss rate: 1.35%

-- Flow 2:

Average throughput: 45.72 Mbit/s

95th percentile per-packet one-way delay: 160.126 ms

Loss rate: 1.31%

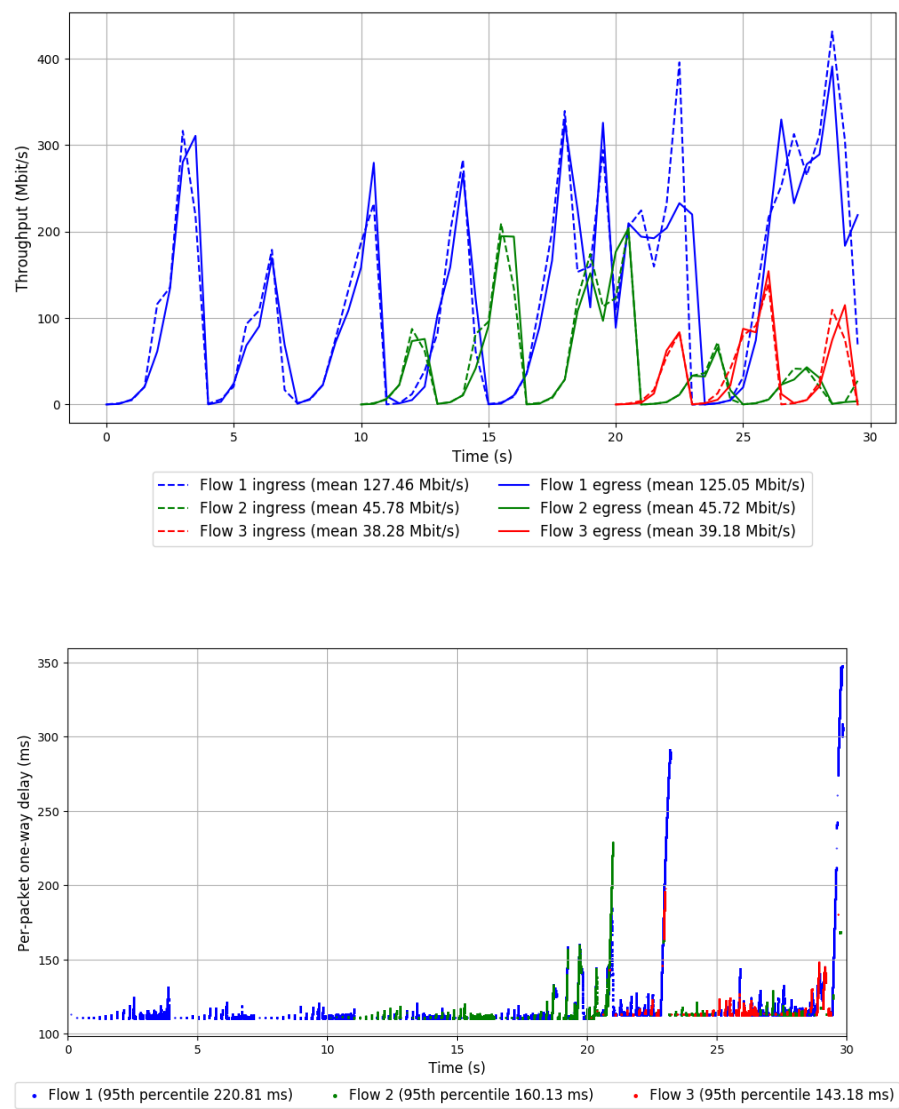
-- Flow 3:

Average throughput: 39.18 Mbit/s

95th percentile per-packet one-way delay: 143.175 ms

Loss rate: 0.01%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-03-13 22:32:29

End at: 2018-03-13 22:32:59

Below is generated by plot.py at 2018-03-14 03:44:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 259.33 Mbit/s

95th percentile per-packet one-way delay: 163.550 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 126.72 Mbit/s

95th percentile per-packet one-way delay: 153.234 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 188.37 Mbit/s

95th percentile per-packet one-way delay: 175.040 ms

Loss rate: 0.34%

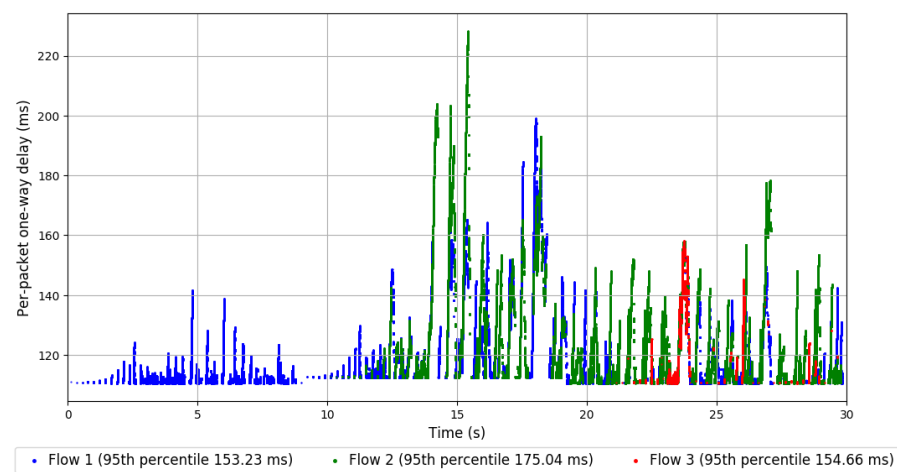
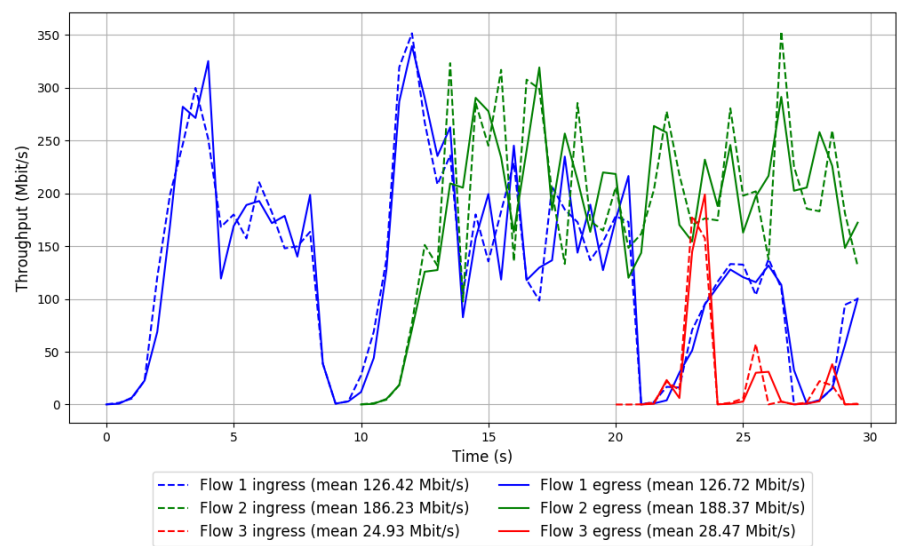
-- Flow 3:

Average throughput: 28.47 Mbit/s

95th percentile per-packet one-way delay: 154.664 ms

Loss rate: 0.12%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-03-13 22:51:57

End at: 2018-03-13 22:52:27

Below is generated by plot.py at 2018-03-14 03:45:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 281.67 Mbit/s

95th percentile per-packet one-way delay: 188.150 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 183.84 Mbit/s

95th percentile per-packet one-way delay: 189.674 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 99.53 Mbit/s

95th percentile per-packet one-way delay: 175.795 ms

Loss rate: 0.09%

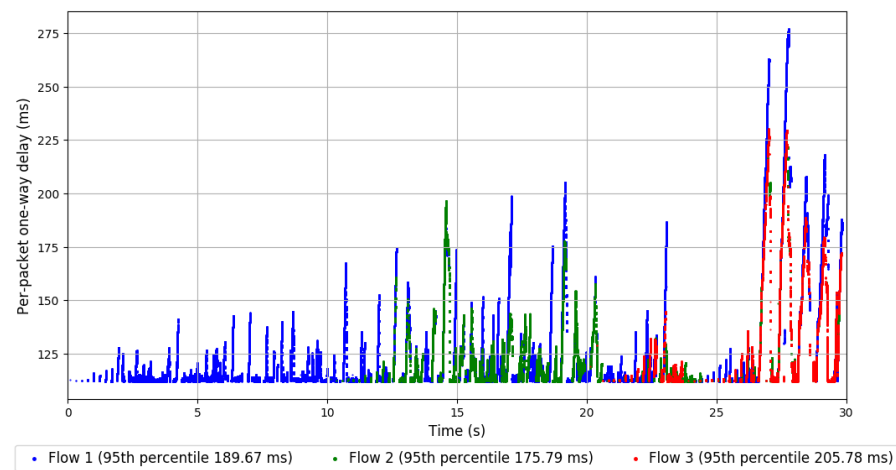
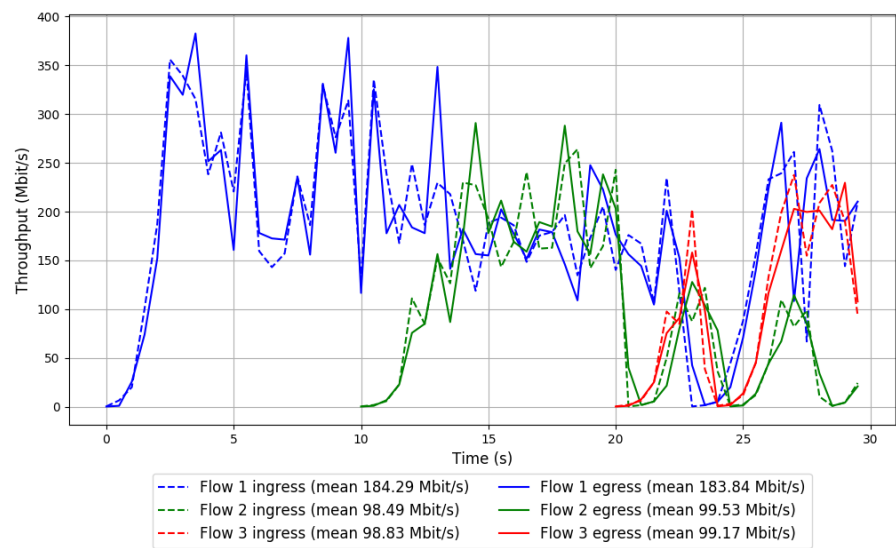
-- Flow 3:

Average throughput: 99.17 Mbit/s

95th percentile per-packet one-way delay: 205.784 ms

Loss rate: 2.28%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-03-13 23:10:59

End at: 2018-03-13 23:11:29

Below is generated by plot.py at 2018-03-14 03:45:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 221.93 Mbit/s

95th percentile per-packet one-way delay: 198.430 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 162.92 Mbit/s

95th percentile per-packet one-way delay: 206.557 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 48.55 Mbit/s

95th percentile per-packet one-way delay: 158.231 ms

Loss rate: 0.22%

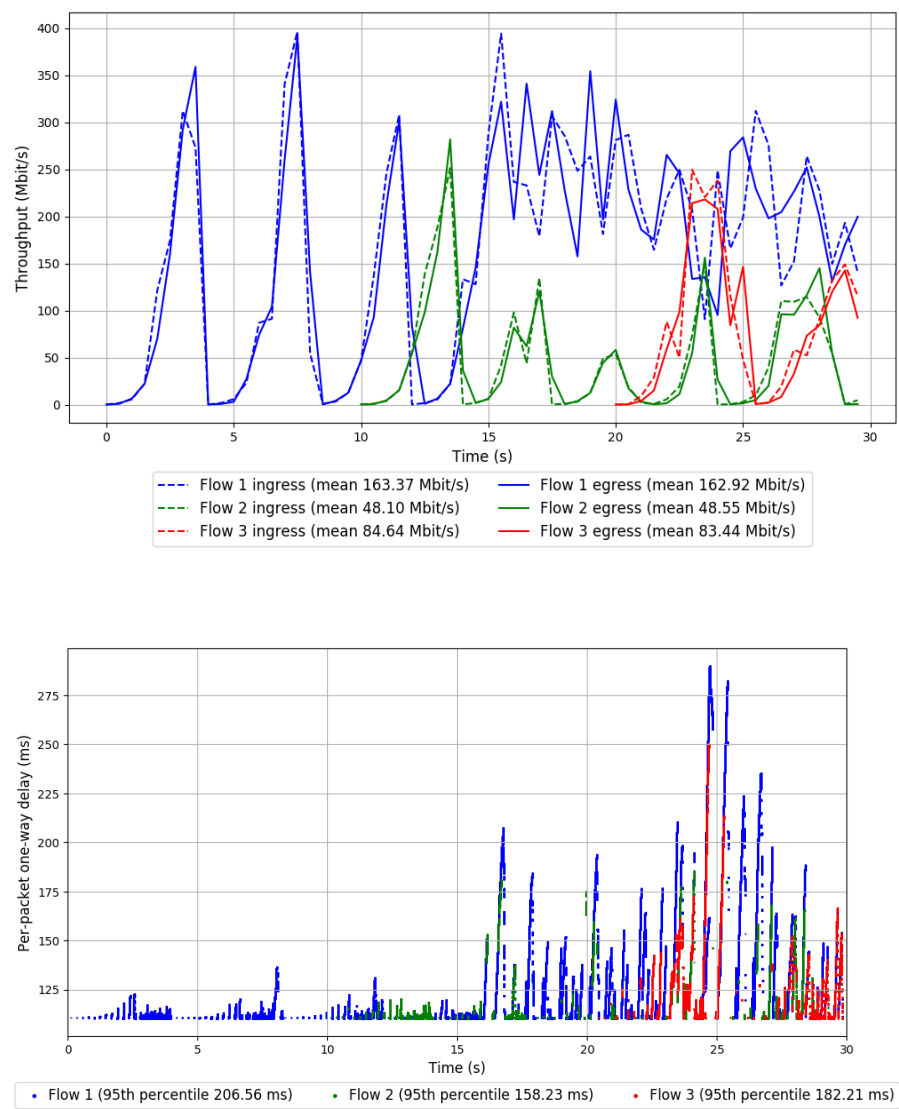
-- Flow 3:

Average throughput: 83.44 Mbit/s

95th percentile per-packet one-way delay: 182.214 ms

Loss rate: 3.96%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-03-13 23:30:36

End at: 2018-03-13 23:31:06

Below is generated by plot.py at 2018-03-14 03:45:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 156.25 Mbit/s

95th percentile per-packet one-way delay: 130.548 ms

Loss rate: 2.99%

-- Flow 1:

Average throughput: 90.57 Mbit/s

95th percentile per-packet one-way delay: 121.046 ms

Loss rate: 1.13%

-- Flow 2:

Average throughput: 66.25 Mbit/s

95th percentile per-packet one-way delay: 207.037 ms

Loss rate: 7.83%

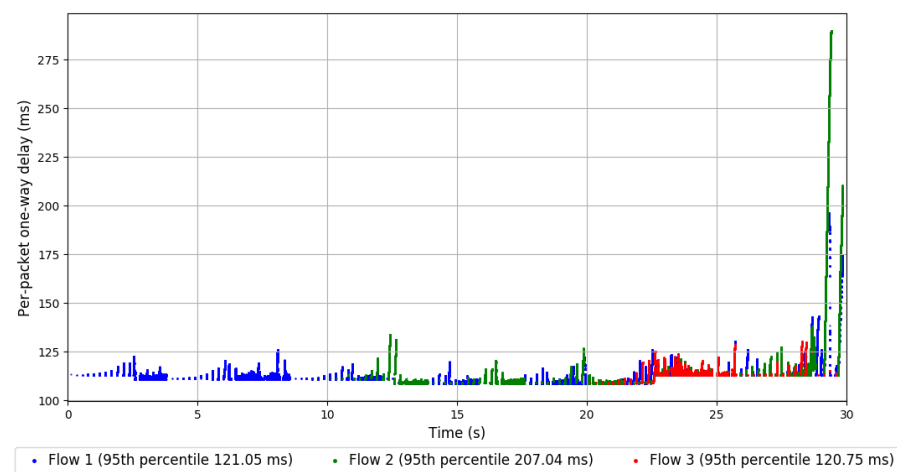
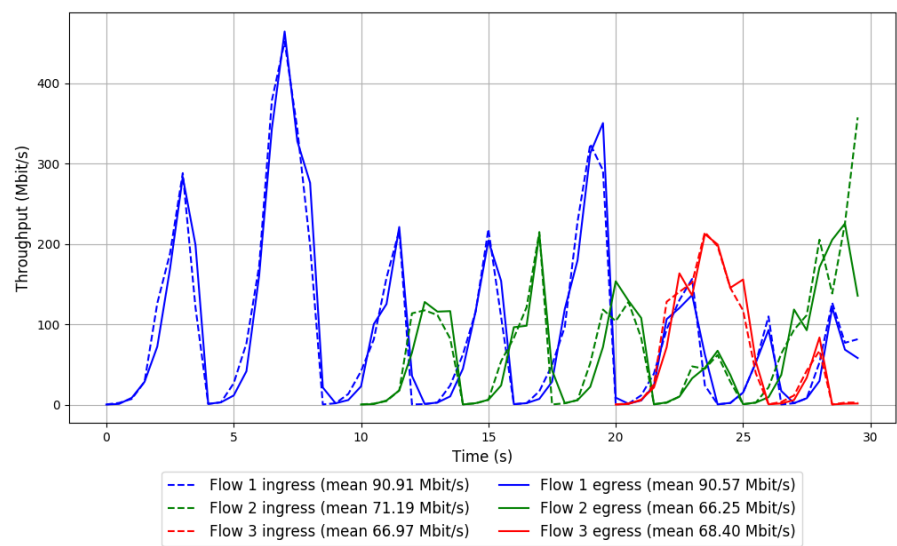
-- Flow 3:

Average throughput: 68.40 Mbit/s

95th percentile per-packet one-way delay: 120.754 ms

Loss rate: 0.20%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-03-13 20:41:27

End at: 2018-03-13 20:41:57

Below is generated by plot.py at 2018-03-14 03:45:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.65 Mbit/s

95th percentile per-packet one-way delay: 113.050 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 74.19 Mbit/s

95th percentile per-packet one-way delay: 111.769 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 59.54 Mbit/s

95th percentile per-packet one-way delay: 112.945 ms

Loss rate: 1.20%

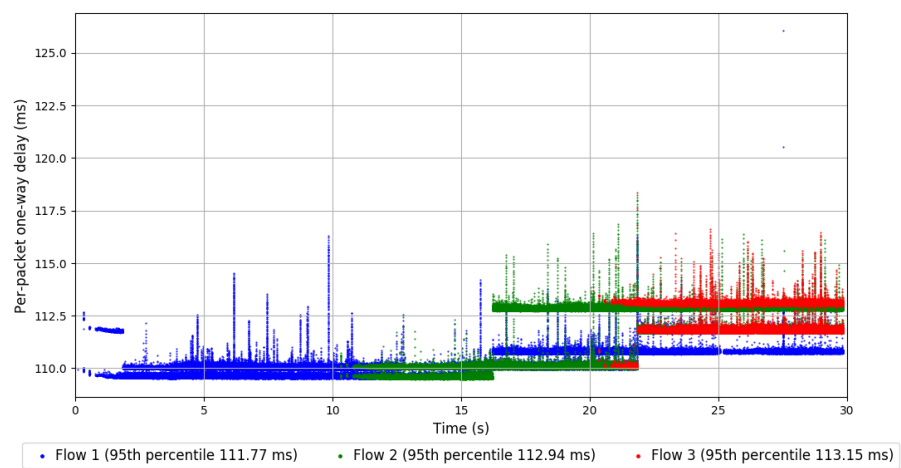
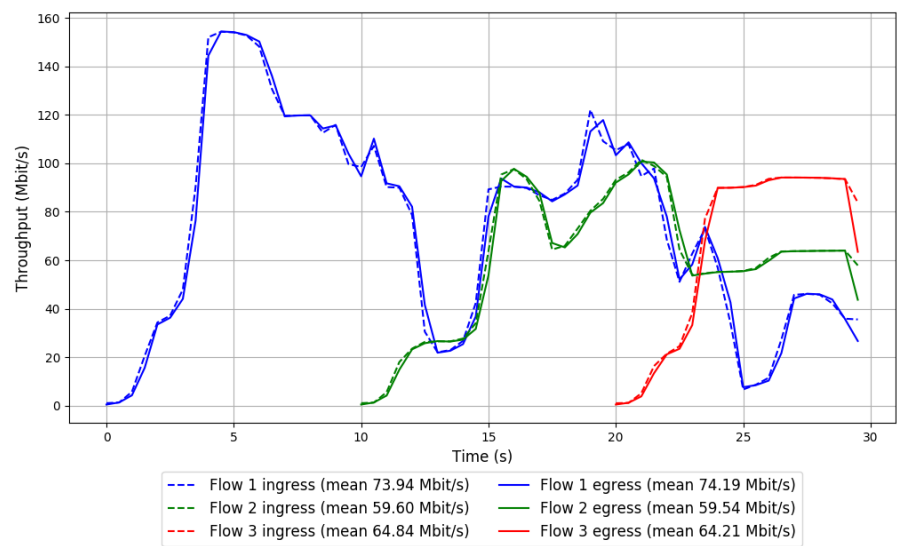
-- Flow 3:

Average throughput: 64.21 Mbit/s

95th percentile per-packet one-way delay: 113.153 ms

Loss rate: 3.20%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-03-13 21:00:59

End at: 2018-03-13 21:01:29

Below is generated by plot.py at 2018-03-14 03:46:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.31 Mbit/s

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

Loss rate: 1.19%

-- Flow 1:

Average throughput: 75.98 Mbit/s

95th percentile per-packet one-way delay: 112.972 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 68.85 Mbit/s

95th percentile per-packet one-way delay: 110.901 ms

Loss rate: 1.17%

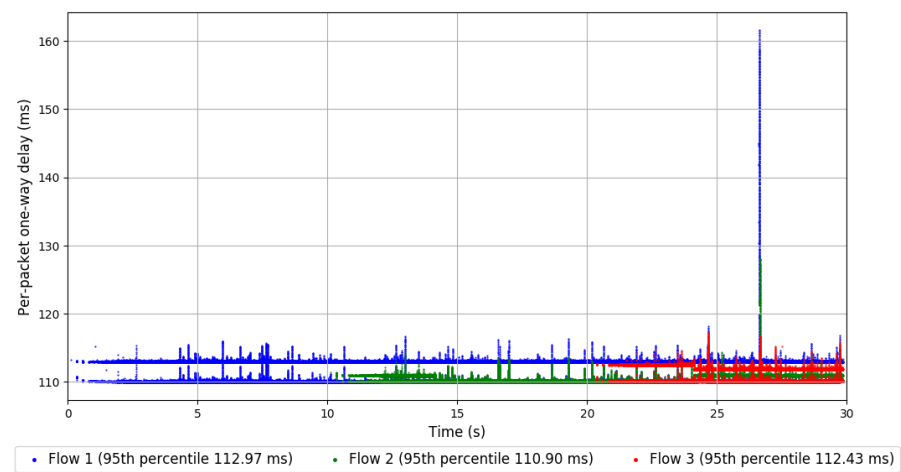
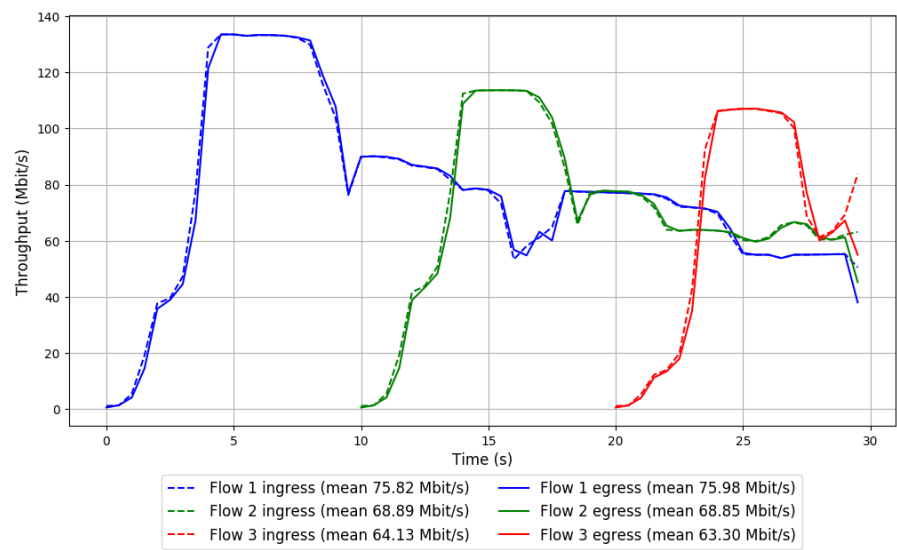
-- Flow 3:

Average throughput: 63.30 Mbit/s

95th percentile per-packet one-way delay: 112.430 ms

Loss rate: 3.53%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-03-13 21:20:29

End at: 2018-03-13 21:20:59

Below is generated by plot.py at 2018-03-14 03:54:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 332.30 Mbit/s

95th percentile per-packet one-way delay: 306.723 ms

Loss rate: 30.85%

-- Flow 1:

Average throughput: 331.96 Mbit/s

95th percentile per-packet one-way delay: 306.728 ms

Loss rate: 30.87%

-- Flow 2:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 240.833 ms

Loss rate: 5.37%

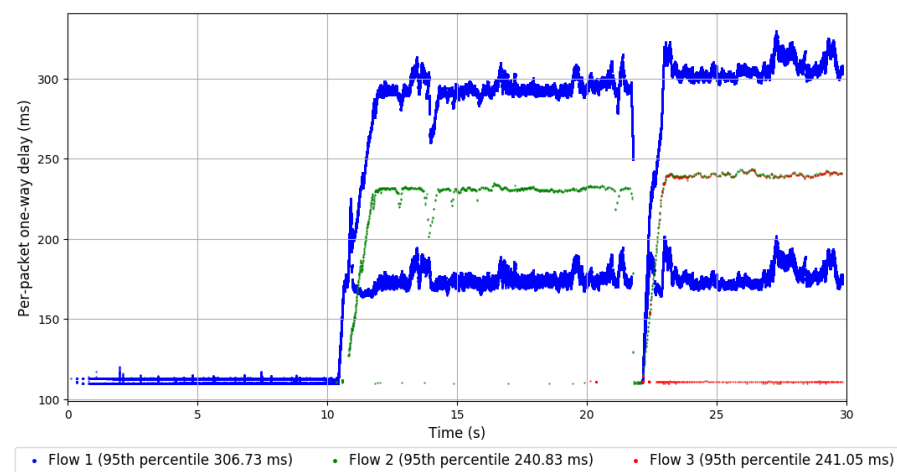
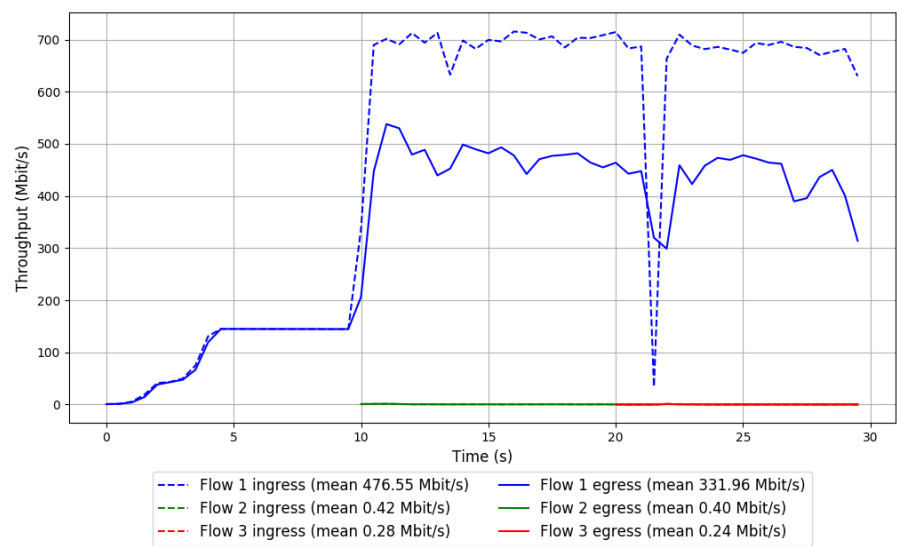
-- Flow 3:

Average throughput: 0.24 Mbit/s

95th percentile per-packet one-way delay: 241.048 ms

Loss rate: 18.52%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-03-13 21:40:03

End at: 2018-03-13 21:40:33

Below is generated by plot.py at 2018-03-14 03:54:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 158.83 Mbit/s

95th percentile per-packet one-way delay: 111.660 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 86.63 Mbit/s

95th percentile per-packet one-way delay: 111.621 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 75.50 Mbit/s

95th percentile per-packet one-way delay: 111.720 ms

Loss rate: 1.03%

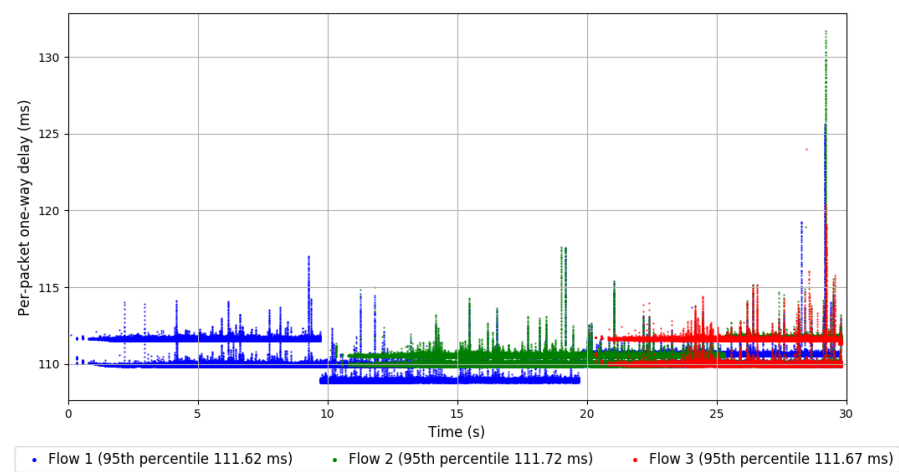
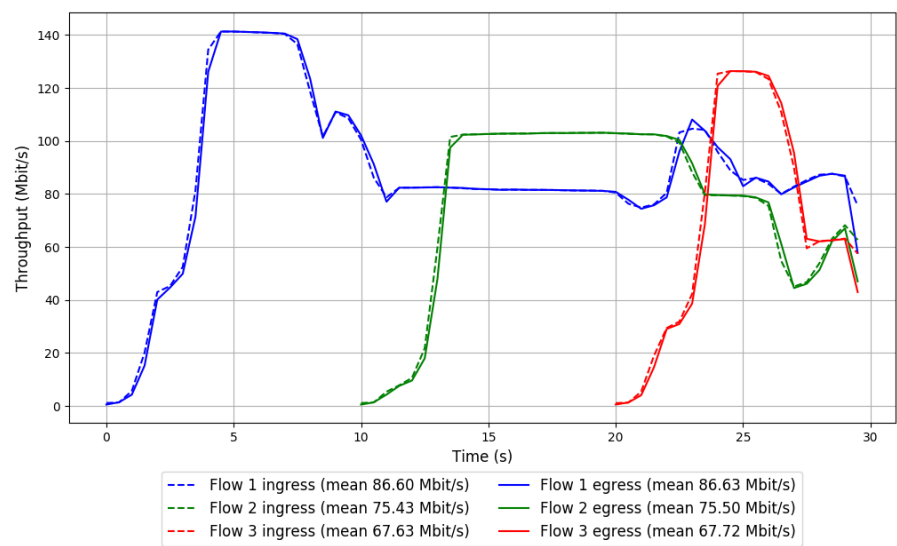
-- Flow 3:

Average throughput: 67.72 Mbit/s

95th percentile per-packet one-way delay: 111.667 ms

Loss rate: 2.12%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-03-13 21:59:35

End at: 2018-03-13 22:00:05

Below is generated by plot.py at 2018-03-14 03:54:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 145.40 Mbit/s

95th percentile per-packet one-way delay: 112.925 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 73.67 Mbit/s

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

Loss rate: 0.34%

-- Flow 2:

Average throughput: 68.52 Mbit/s

95th percentile per-packet one-way delay: 112.936 ms

Loss rate: 0.81%

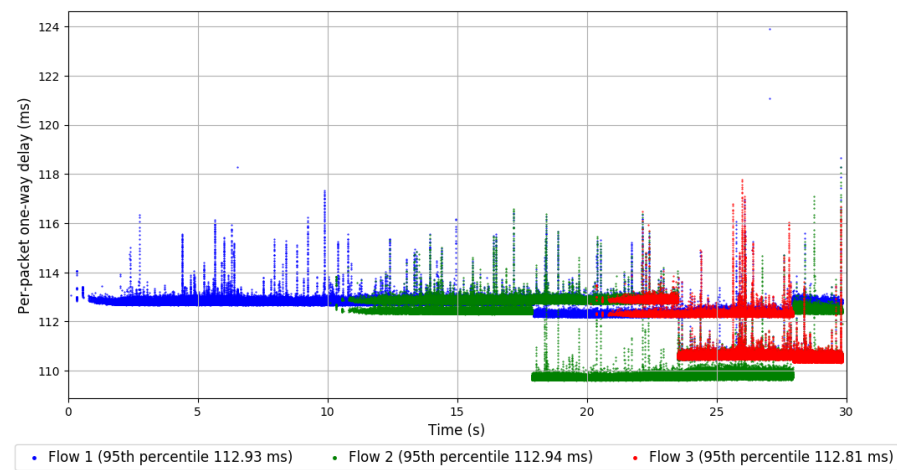
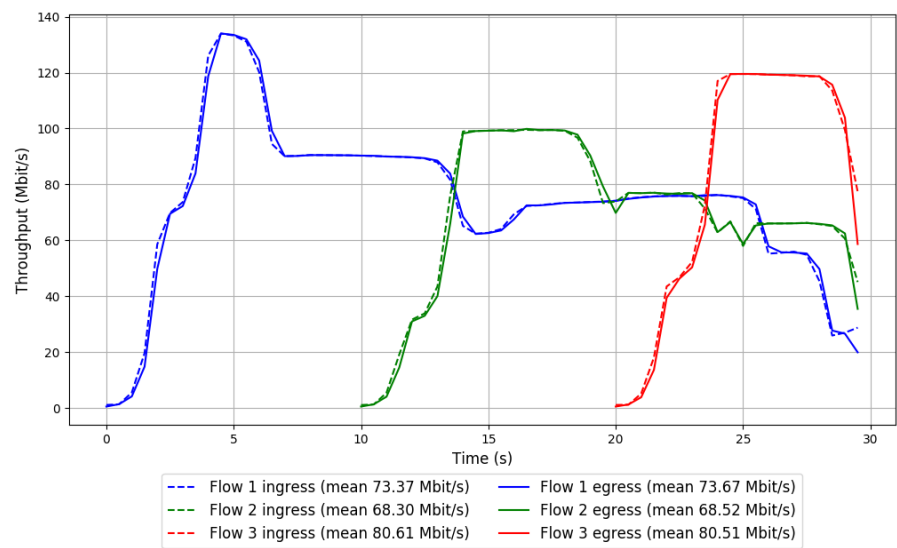
-- Flow 3:

Average throughput: 80.51 Mbit/s

95th percentile per-packet one-way delay: 112.806 ms

Loss rate: 2.40%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-03-13 22:18:28

End at: 2018-03-13 22:18:58

Below is generated by plot.py at 2018-03-14 03:54:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 154.25 Mbit/s

95th percentile per-packet one-way delay: 113.031 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 86.06 Mbit/s

95th percentile per-packet one-way delay: 113.048 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 65.04 Mbit/s

95th percentile per-packet one-way delay: 112.971 ms

Loss rate: 1.39%

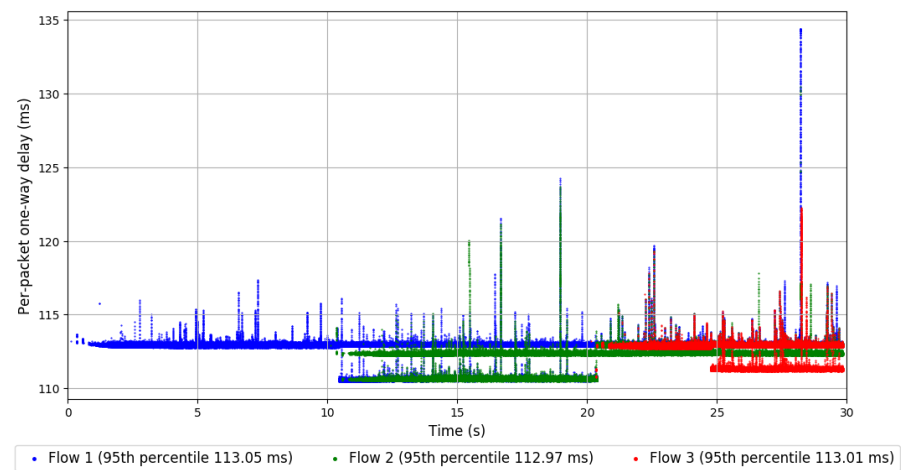
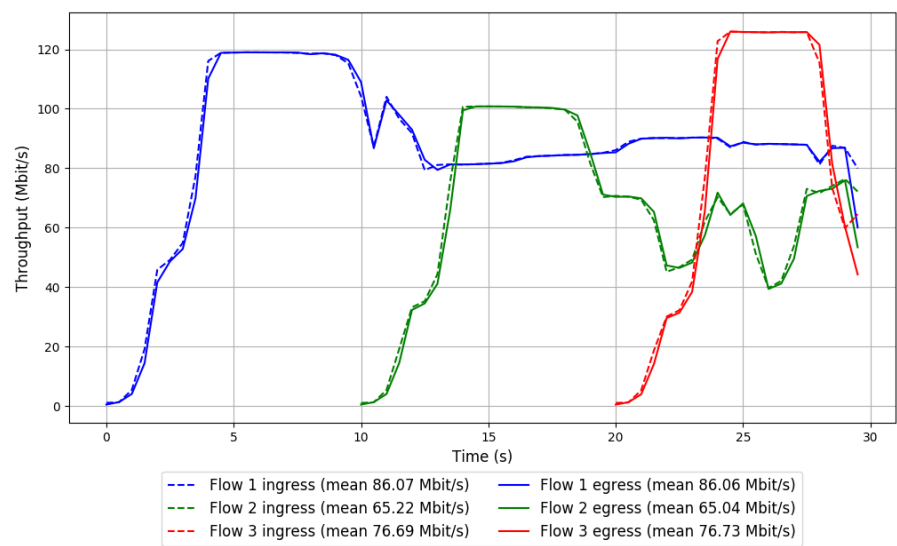
-- Flow 3:

Average throughput: 76.73 Mbit/s

95th percentile per-packet one-way delay: 113.014 ms

Loss rate: 2.23%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-03-13 22:37:33

End at: 2018-03-13 22:38:03

Below is generated by plot.py at 2018-03-14 03:54:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 303.95 Mbit/s

95th percentile per-packet one-way delay: 181.808 ms

Loss rate: 3.15%

-- Flow 1:

Average throughput: 279.05 Mbit/s

95th percentile per-packet one-way delay: 182.534 ms

Loss rate: 3.30%

-- Flow 2:

Average throughput: 55.10 Mbit/s

95th percentile per-packet one-way delay: 128.364 ms

Loss rate: 0.00%

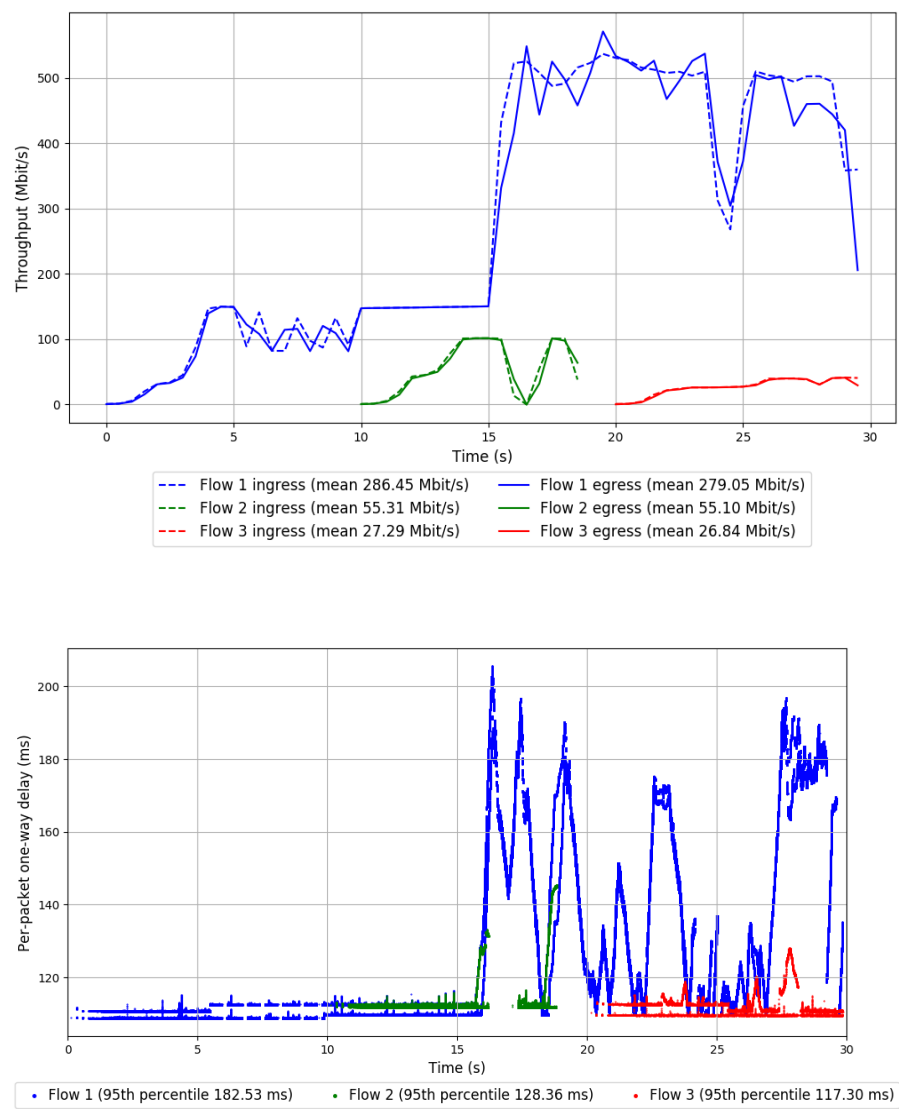
-- Flow 3:

Average throughput: 26.84 Mbit/s

95th percentile per-packet one-way delay: 117.300 ms

Loss rate: 3.84%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-03-13 22:57:03

End at: 2018-03-13 22:57:33

Below is generated by plot.py at 2018-03-14 03:54:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 155.94 Mbit/s

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

Loss rate: 1.05%

-- Flow 1:

Average throughput: 81.14 Mbit/s

95th percentile per-packet one-way delay: 112.753 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 78.27 Mbit/s

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

Loss rate: 1.01%

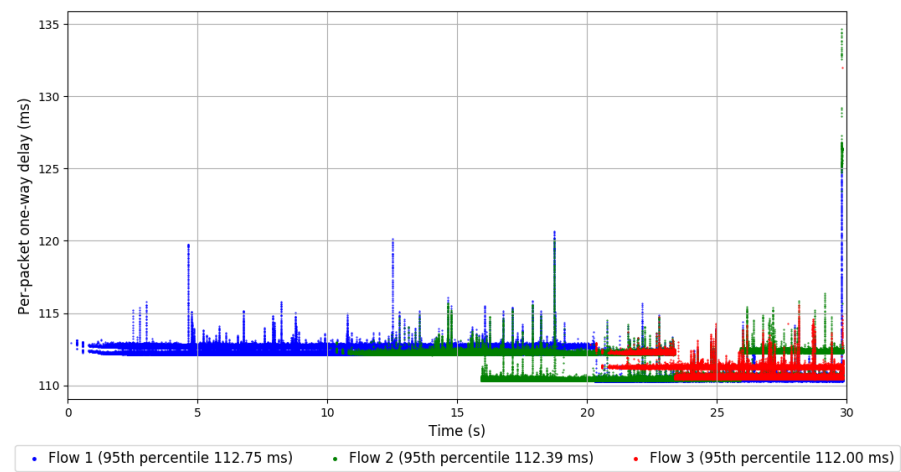
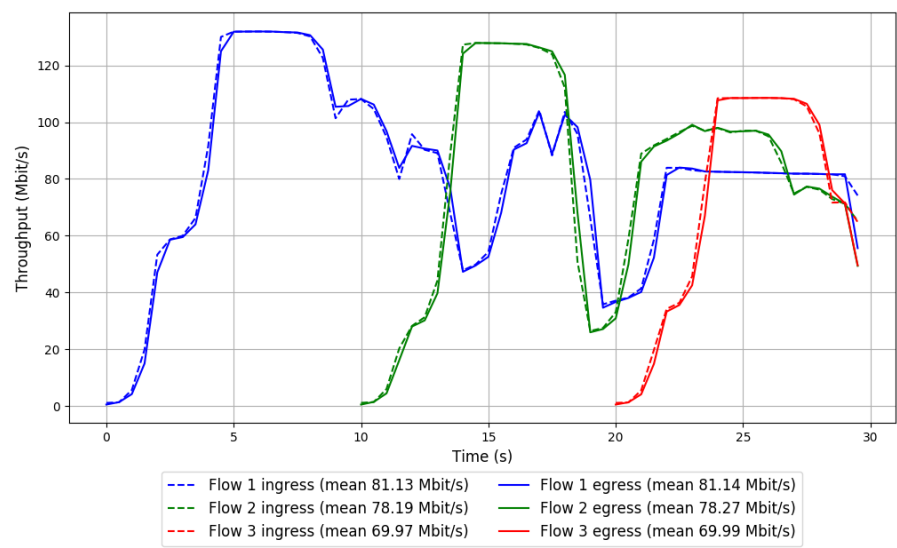
-- Flow 3:

Average throughput: 69.99 Mbit/s

95th percentile per-packet one-way delay: 112.001 ms

Loss rate: 2.24%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-03-13 23:16:03

End at: 2018-03-13 23:16:33

Below is generated by plot.py at 2018-03-14 03:54:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.88 Mbit/s

95th percentile per-packet one-way delay: 112.291 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 52.84 Mbit/s

95th percentile per-packet one-way delay: 112.378 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 76.44 Mbit/s

95th percentile per-packet one-way delay: 110.803 ms

Loss rate: 0.91%

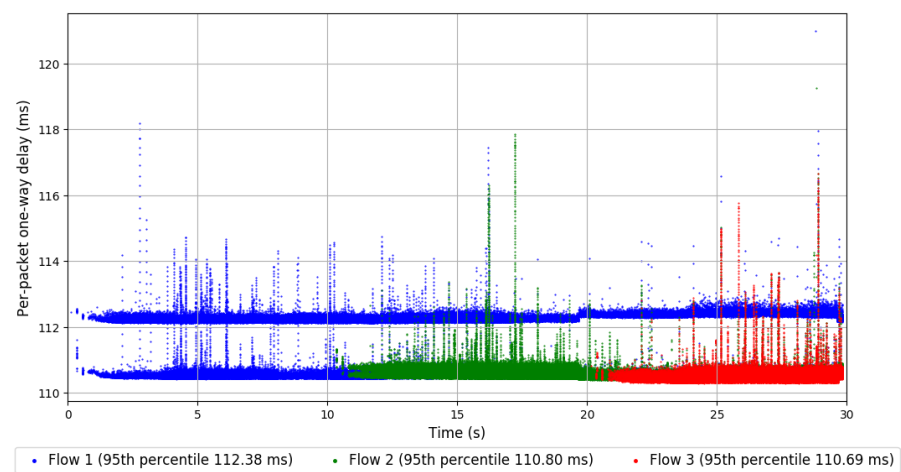
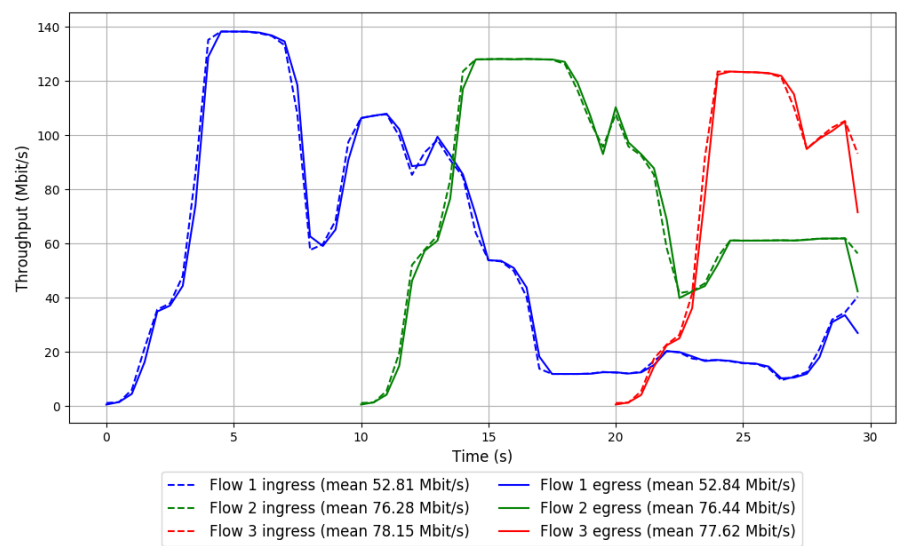
-- Flow 3:

Average throughput: 77.62 Mbit/s

95th percentile per-packet one-way delay: 110.685 ms

Loss rate: 2.92%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-03-13 23:35:33

End at: 2018-03-13 23:36:03

Below is generated by plot.py at 2018-03-14 03:54:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 164.60 Mbit/s

95th percentile per-packet one-way delay: 112.879 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 89.04 Mbit/s

95th percentile per-packet one-way delay: 112.865 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 76.23 Mbit/s

95th percentile per-packet one-way delay: 112.894 ms

Loss rate: 1.34%

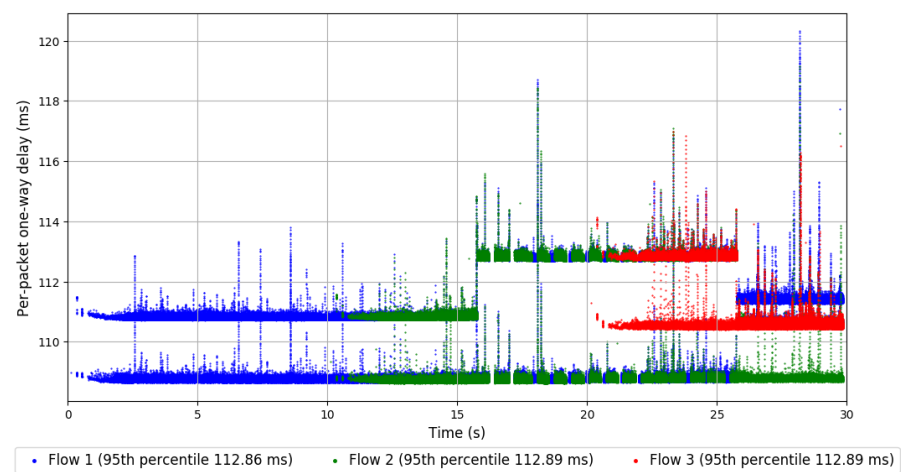
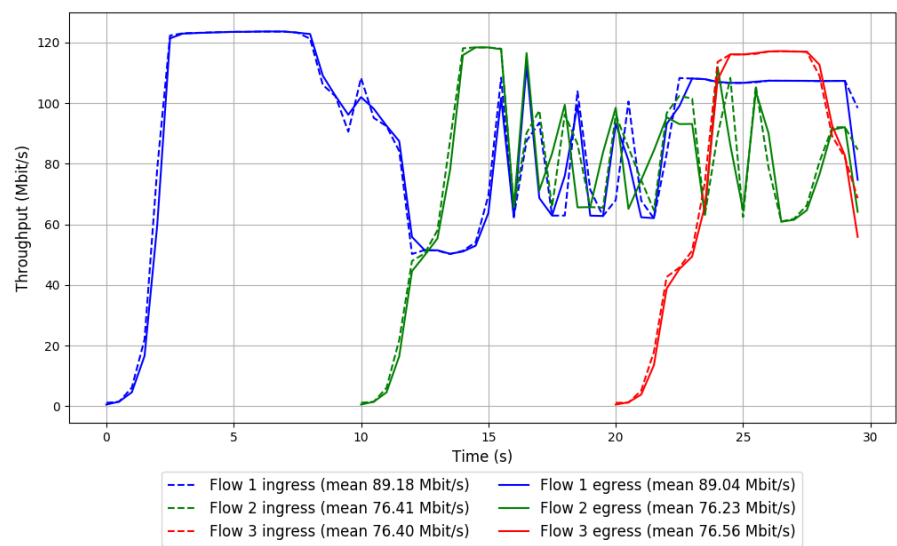
-- Flow 3:

Average throughput: 76.56 Mbit/s

95th percentile per-packet one-way delay: 112.885 ms

Loss rate: 2.03%

Run 10: Report of Copa — Data Link

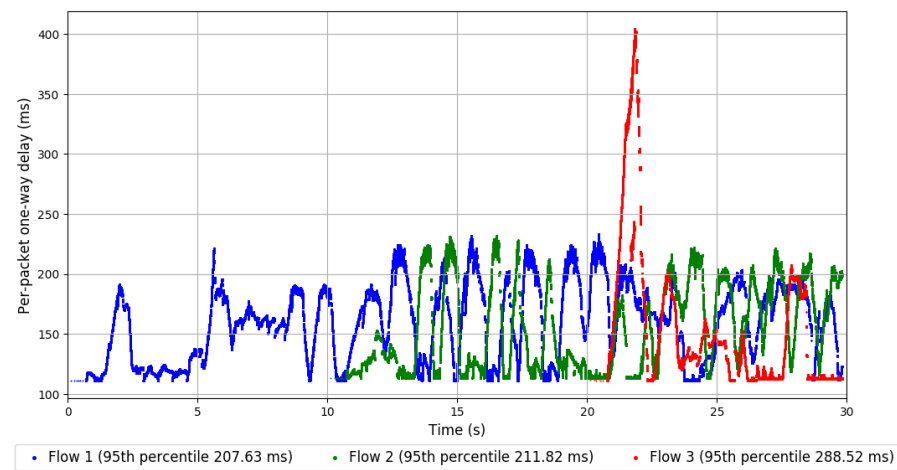
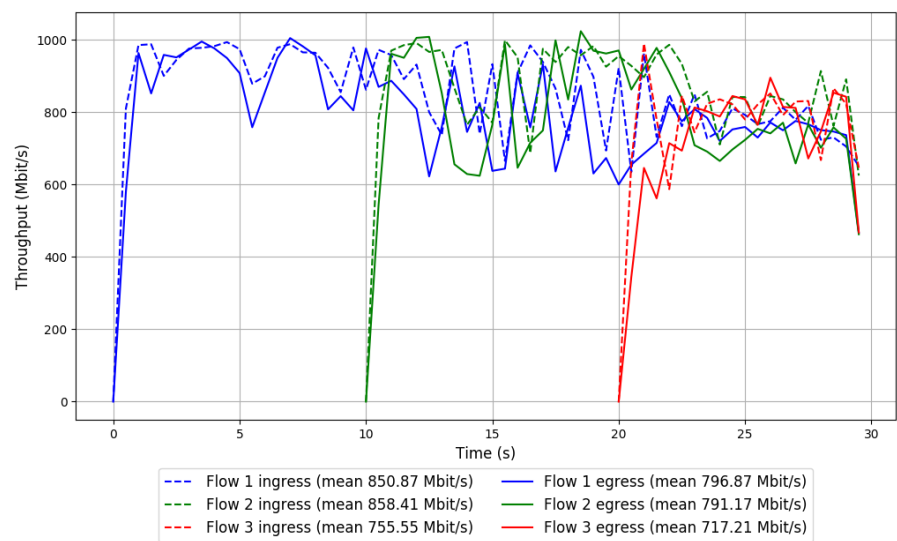


```
Run 1: Statistics of FillP

Start at: 2018-03-13 20:26:46
End at: 2018-03-13 20:27:16

# Below is generated by plot.py at 2018-03-14 04:16:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1555.61 Mbit/s
95th percentile per-packet one-way delay: 210.787 ms
Loss rate: 7.69%
-- Flow 1:
Average throughput: 796.87 Mbit/s
95th percentile per-packet one-way delay: 207.635 ms
Loss rate: 7.04%
-- Flow 2:
Average throughput: 791.17 Mbit/s
95th percentile per-packet one-way delay: 211.825 ms
Loss rate: 8.87%
-- Flow 3:
Average throughput: 717.21 Mbit/s
95th percentile per-packet one-way delay: 288.525 ms
Loss rate: 7.21%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-03-13 20:46:26

End at: 2018-03-13 20:46:56

Below is generated by plot.py at 2018-03-14 04:16:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 1499.02 Mbit/s

95th percentile per-packet one-way delay: 221.859 ms

Loss rate: 8.99%

-- Flow 1:

Average throughput: 777.60 Mbit/s

95th percentile per-packet one-way delay: 217.334 ms

Loss rate: 8.28%

-- Flow 2:

Average throughput: 707.28 Mbit/s

95th percentile per-packet one-way delay: 216.980 ms

Loss rate: 11.01%

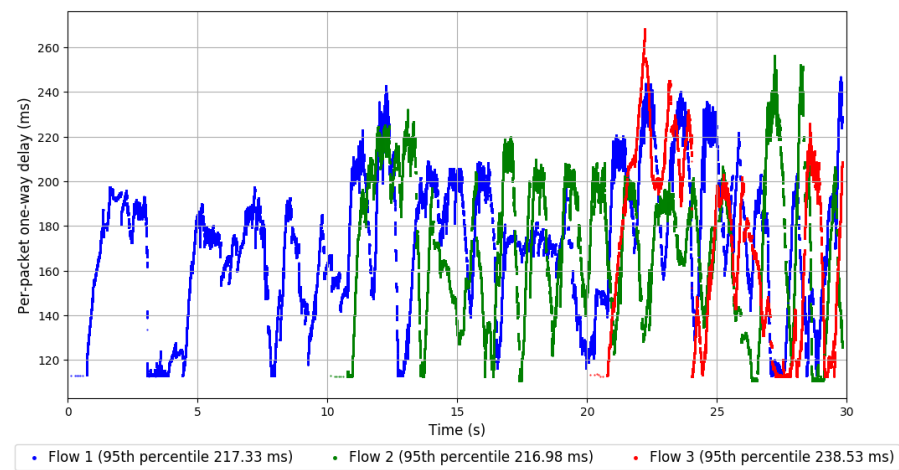
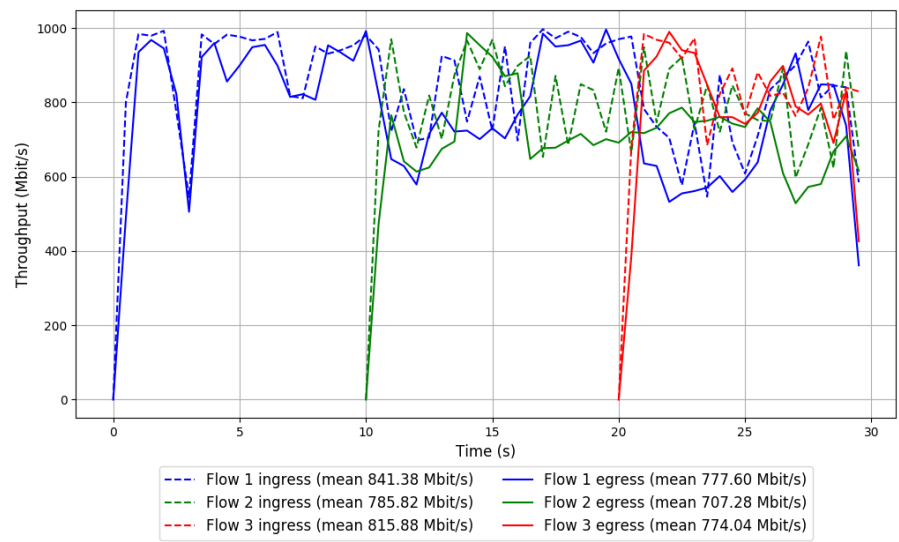
-- Flow 3:

Average throughput: 774.04 Mbit/s

95th percentile per-packet one-way delay: 238.525 ms

Loss rate: 7.29%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-03-13 21:06:05

End at: 2018-03-13 21:06:35

Below is generated by plot.py at 2018-03-14 04:17:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 1499.20 Mbit/s

95th percentile per-packet one-way delay: 244.482 ms

Loss rate: 7.59%

-- Flow 1:

Average throughput: 759.43 Mbit/s

95th percentile per-packet one-way delay: 256.447 ms

Loss rate: 8.26%

-- Flow 2:

Average throughput: 770.07 Mbit/s

95th percentile per-packet one-way delay: 216.543 ms

Loss rate: 5.71%

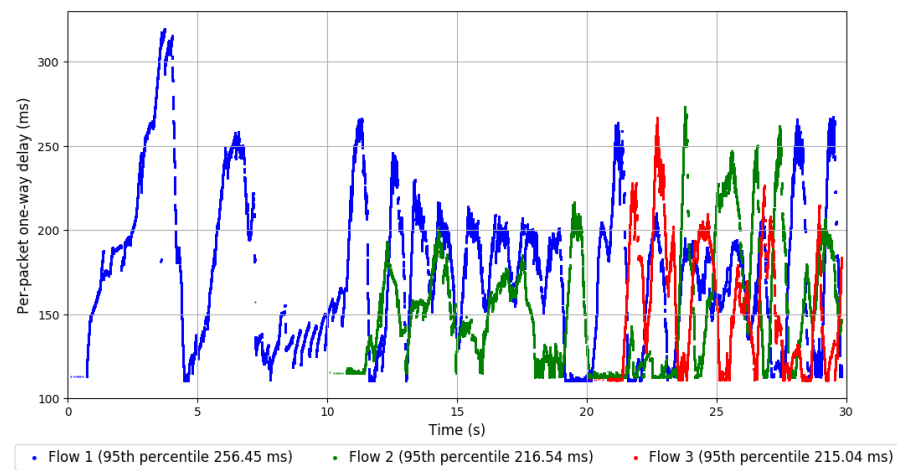
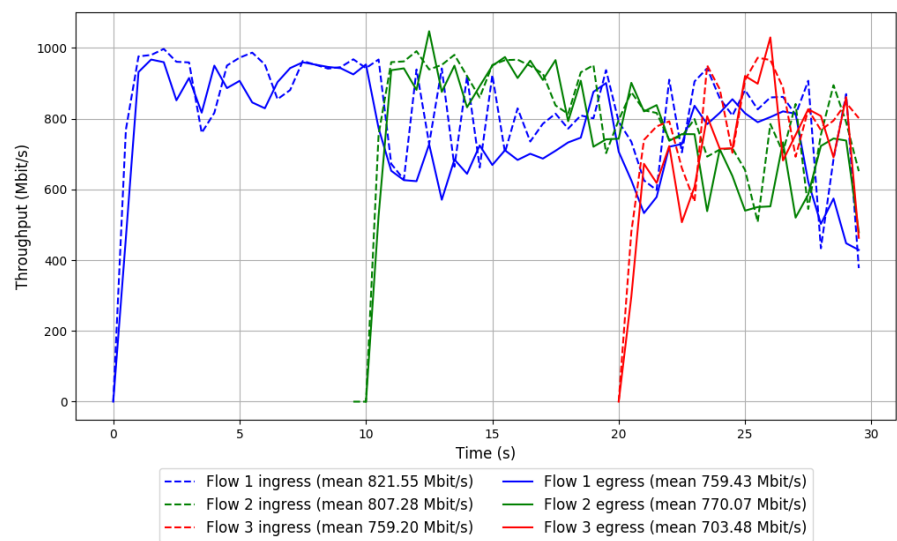
-- Flow 3:

Average throughput: 703.48 Mbit/s

95th percentile per-packet one-way delay: 215.037 ms

Loss rate: 9.45%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-03-13 21:25:34

End at: 2018-03-13 21:26:04

Below is generated by plot.py at 2018-03-14 04:17:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 1447.63 Mbit/s

95th percentile per-packet one-way delay: 234.578 ms

Loss rate: 7.27%

-- Flow 1:

Average throughput: 751.29 Mbit/s

95th percentile per-packet one-way delay: 274.764 ms

Loss rate: 7.69%

-- Flow 2:

Average throughput: 733.00 Mbit/s

95th percentile per-packet one-way delay: 202.868 ms

Loss rate: 4.05%

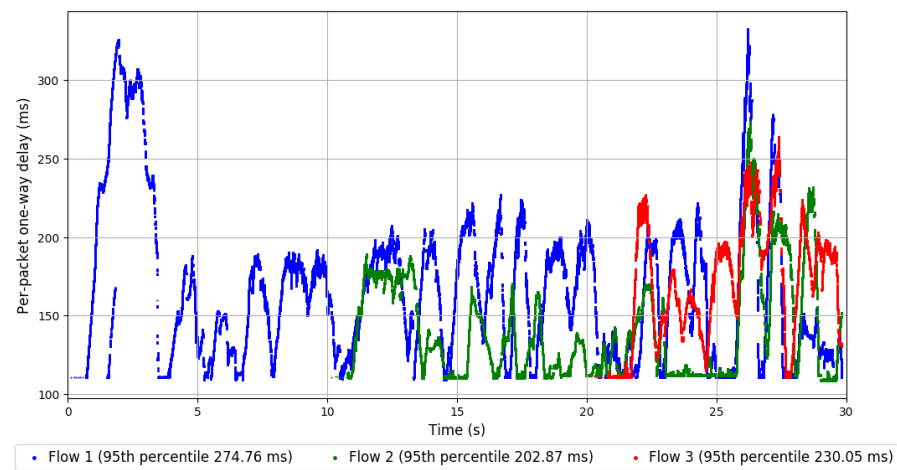
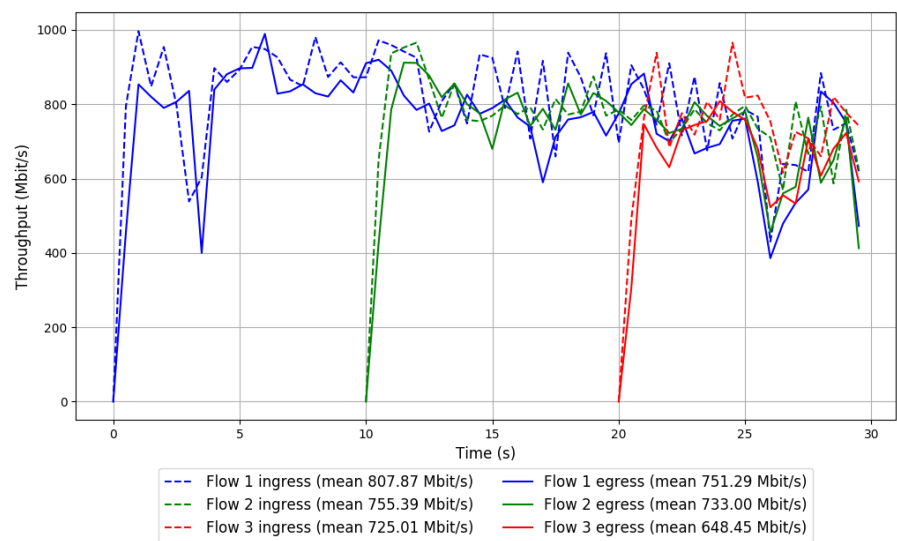
-- Flow 3:

Average throughput: 648.45 Mbit/s

95th percentile per-packet one-way delay: 230.050 ms

Loss rate: 12.57%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-03-13 21:45:11

End at: 2018-03-13 21:45:41

Below is generated by plot.py at 2018-03-14 04:18:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 1472.66 Mbit/s

95th percentile per-packet one-way delay: 212.707 ms

Loss rate: 9.65%

-- Flow 1:

Average throughput: 791.92 Mbit/s

95th percentile per-packet one-way delay: 207.620 ms

Loss rate: 7.12%

-- Flow 2:

Average throughput: 712.61 Mbit/s

95th percentile per-packet one-way delay: 205.758 ms

Loss rate: 11.67%

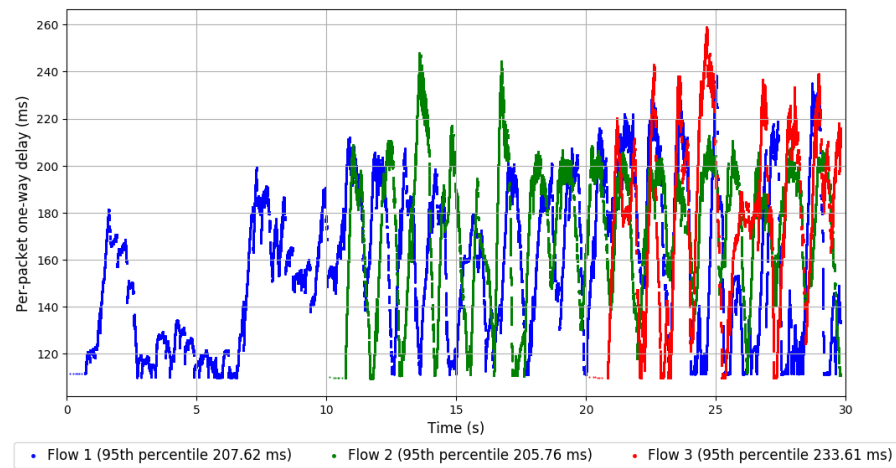
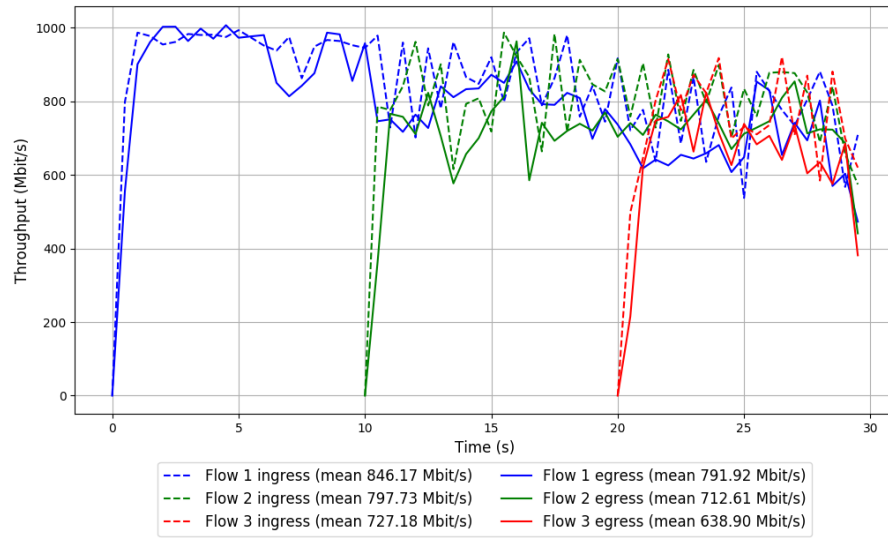
-- Flow 3:

Average throughput: 638.90 Mbit/s

95th percentile per-packet one-way delay: 233.612 ms

Loss rate: 14.12%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-03-13 22:04:06

End at: 2018-03-13 22:04:36

Below is generated by plot.py at 2018-03-14 04:20:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 1511.00 Mbit/s

95th percentile per-packet one-way delay: 204.248 ms

Loss rate: 7.47%

-- Flow 1:

Average throughput: 792.57 Mbit/s

95th percentile per-packet one-way delay: 198.089 ms

Loss rate: 6.36%

-- Flow 2:

Average throughput: 743.16 Mbit/s

95th percentile per-packet one-way delay: 203.304 ms

Loss rate: 8.09%

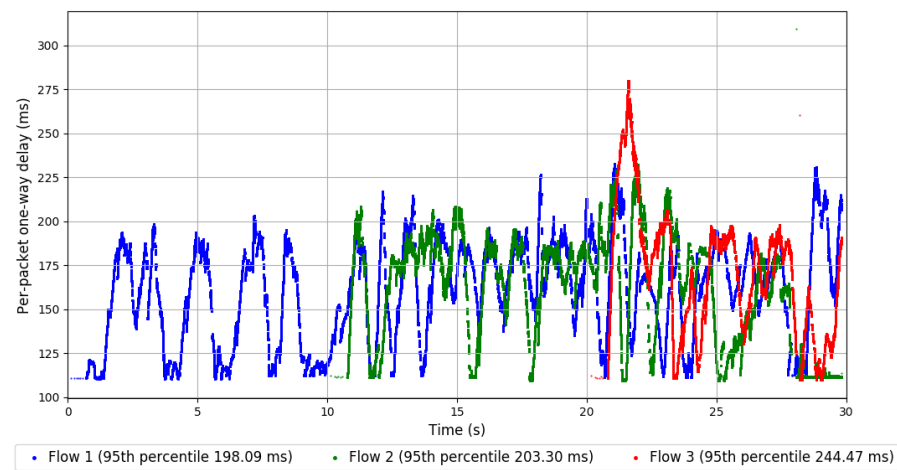
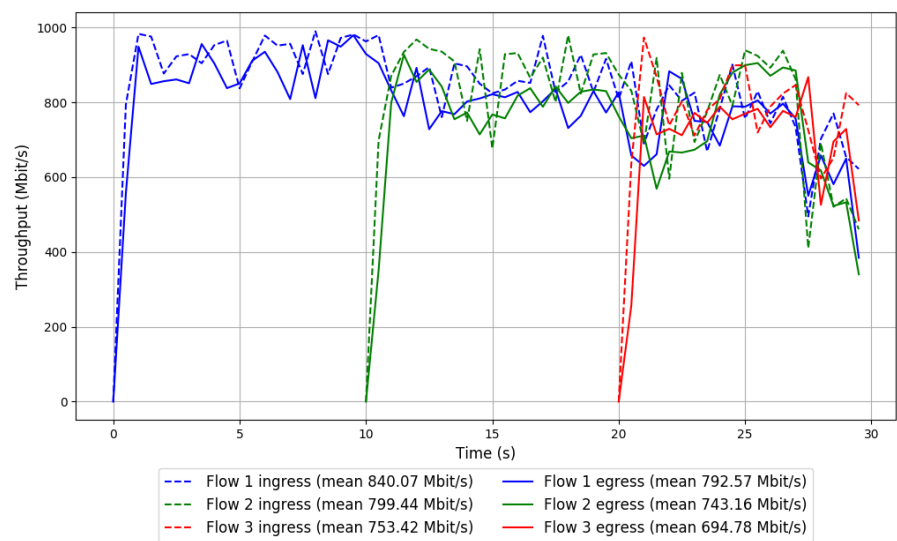
-- Flow 3:

Average throughput: 694.78 Mbit/s

95th percentile per-packet one-way delay: 244.471 ms

Loss rate: 9.89%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-03-13 22:23:05

End at: 2018-03-13 22:23:35

Below is generated by plot.py at 2018-03-14 04:20:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 1351.84 Mbit/s

95th percentile per-packet one-way delay: 346.298 ms

Loss rate: 8.31%

-- Flow 1:

Average throughput: 729.22 Mbit/s

95th percentile per-packet one-way delay: 338.071 ms

Loss rate: 6.18%

-- Flow 2:

Average throughput: 627.45 Mbit/s

95th percentile per-packet one-way delay: 361.595 ms

Loss rate: 9.26%

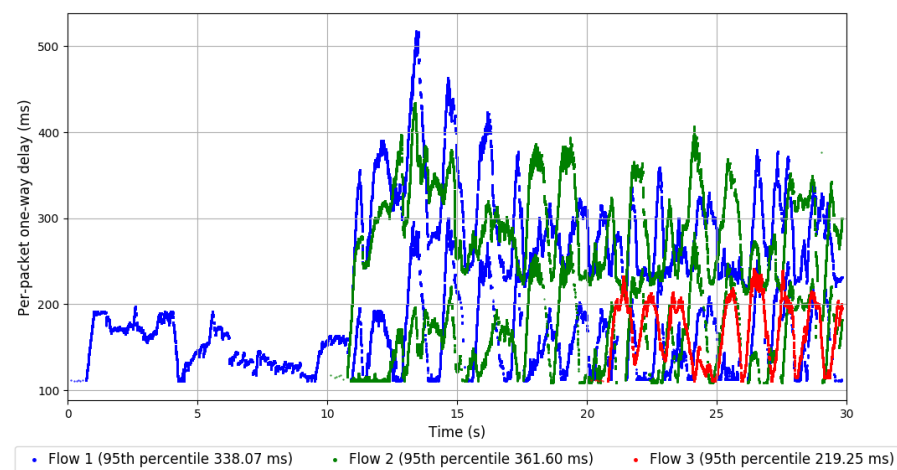
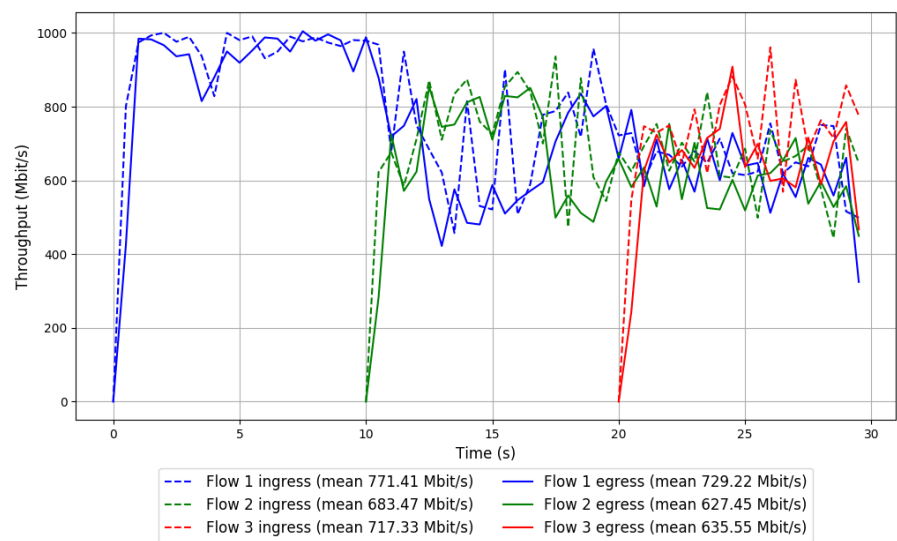
-- Flow 3:

Average throughput: 635.55 Mbit/s

95th percentile per-packet one-way delay: 219.249 ms

Loss rate: 13.42%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-03-13 22:42:31

End at: 2018-03-13 22:43:01

Below is generated by plot.py at 2018-03-14 04:24:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 1511.08 Mbit/s

95th percentile per-packet one-way delay: 224.179 ms

Loss rate: 7.08%

-- Flow 1:

Average throughput: 809.22 Mbit/s

95th percentile per-packet one-way delay: 244.553 ms

Loss rate: 5.26%

-- Flow 2:

Average throughput: 706.68 Mbit/s

95th percentile per-packet one-way delay: 212.072 ms

Loss rate: 8.73%

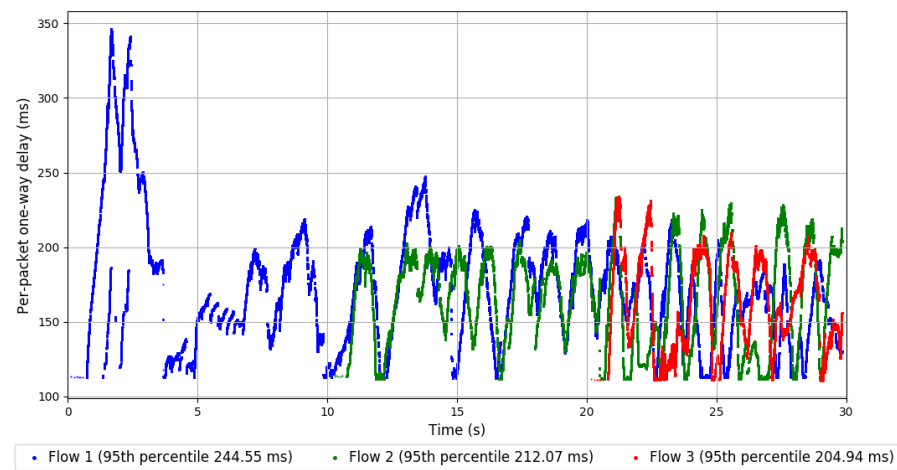
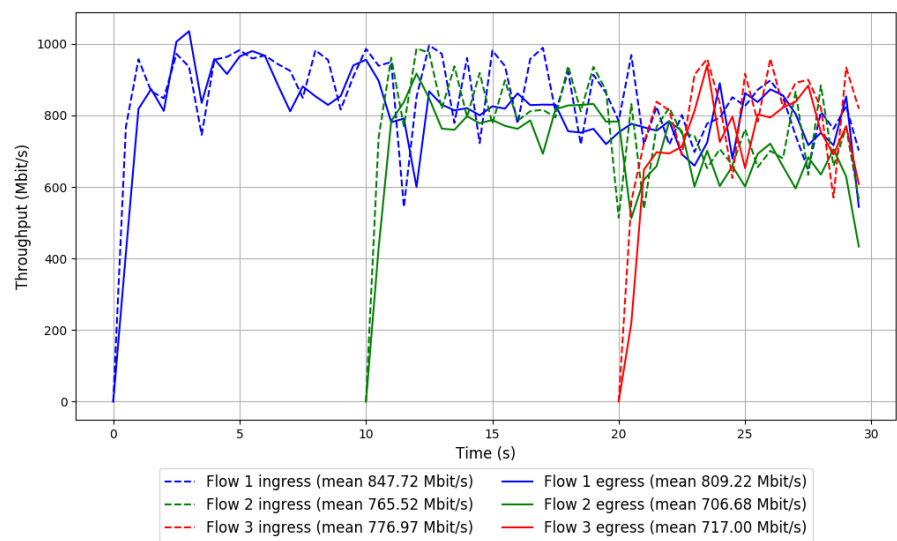
-- Flow 3:

Average throughput: 717.00 Mbit/s

95th percentile per-packet one-way delay: 204.943 ms

Loss rate: 9.80%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-03-13 23:01:35

End at: 2018-03-13 23:02:05

Below is generated by plot.py at 2018-03-14 04:46:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 1499.20 Mbit/s

95th percentile per-packet one-way delay: 219.871 ms

Loss rate: 7.89%

-- Flow 1:

Average throughput: 782.97 Mbit/s

95th percentile per-packet one-way delay: 215.928 ms

Loss rate: 5.67%

-- Flow 2:

Average throughput: 790.85 Mbit/s

95th percentile per-packet one-way delay: 209.514 ms

Loss rate: 7.93%

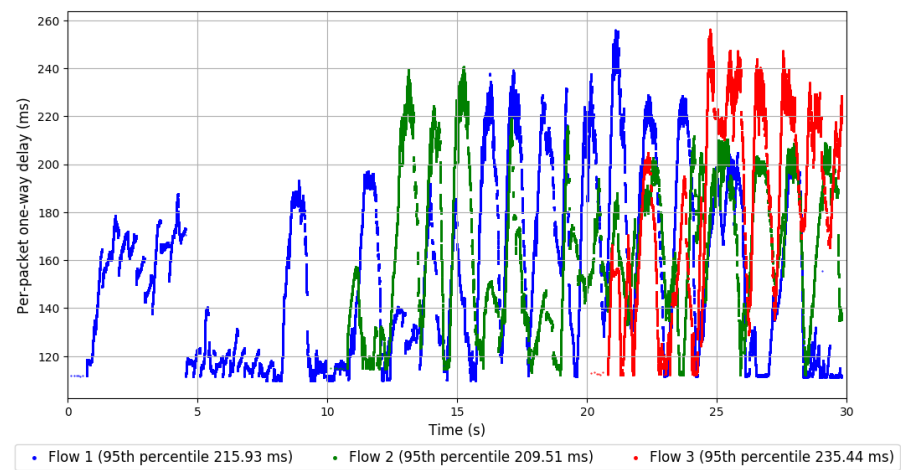
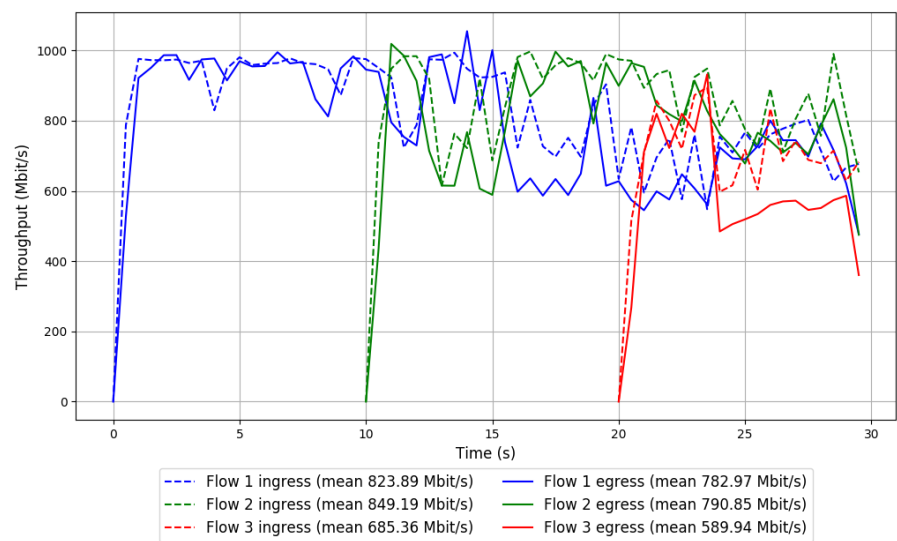
-- Flow 3:

Average throughput: 589.94 Mbit/s

95th percentile per-packet one-way delay: 235.436 ms

Loss rate: 15.87%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-03-13 23:21:16

End at: 2018-03-13 23:21:46

Below is generated by plot.py at 2018-03-14 04:46:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 1526.14 Mbit/s

95th percentile per-packet one-way delay: 209.820 ms

Loss rate: 8.62%

-- Flow 1:

Average throughput: 849.83 Mbit/s

95th percentile per-packet one-way delay: 195.408 ms

Loss rate: 5.23%

-- Flow 2:

Average throughput: 677.85 Mbit/s

95th percentile per-packet one-way delay: 222.379 ms

Loss rate: 13.84%

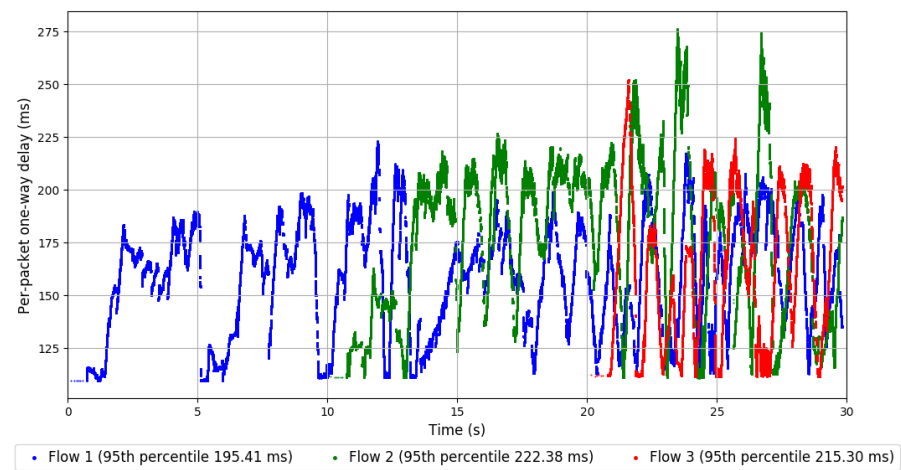
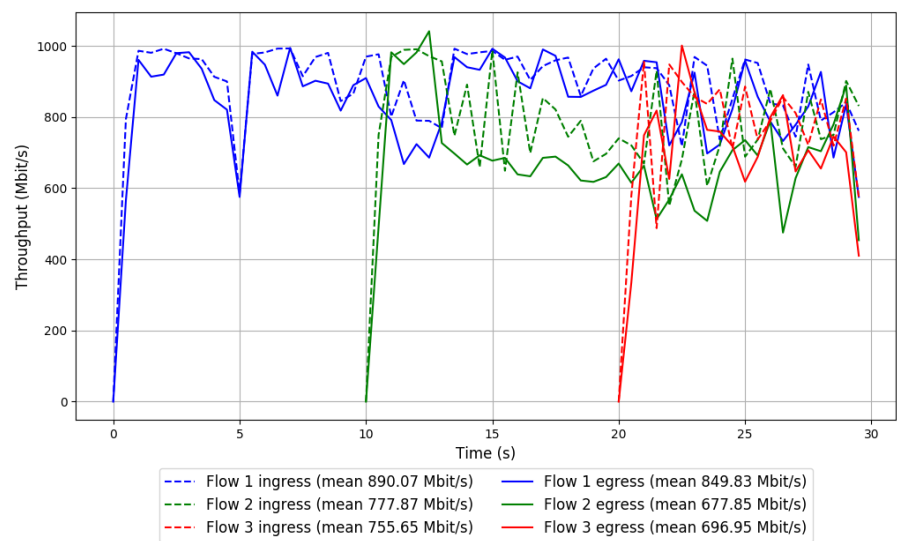
-- Flow 3:

Average throughput: 696.95 Mbit/s

95th percentile per-packet one-way delay: 215.301 ms

Loss rate: 9.87%

Run 10: Report of FillP — Data Link

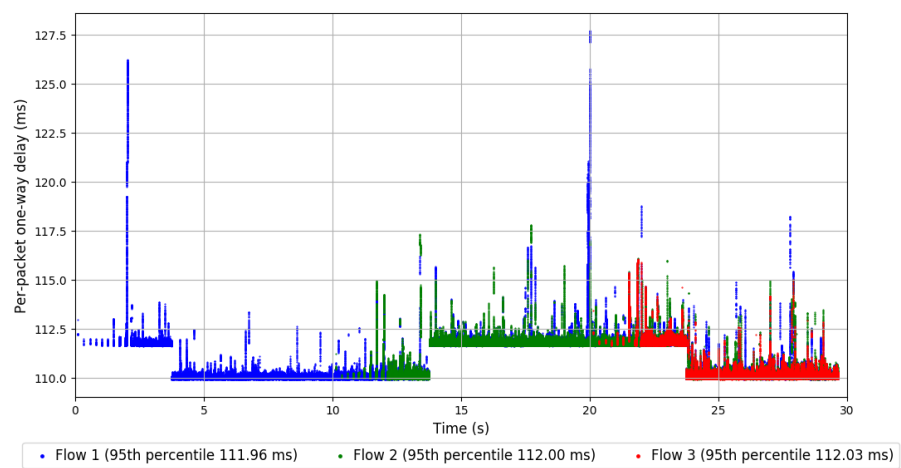
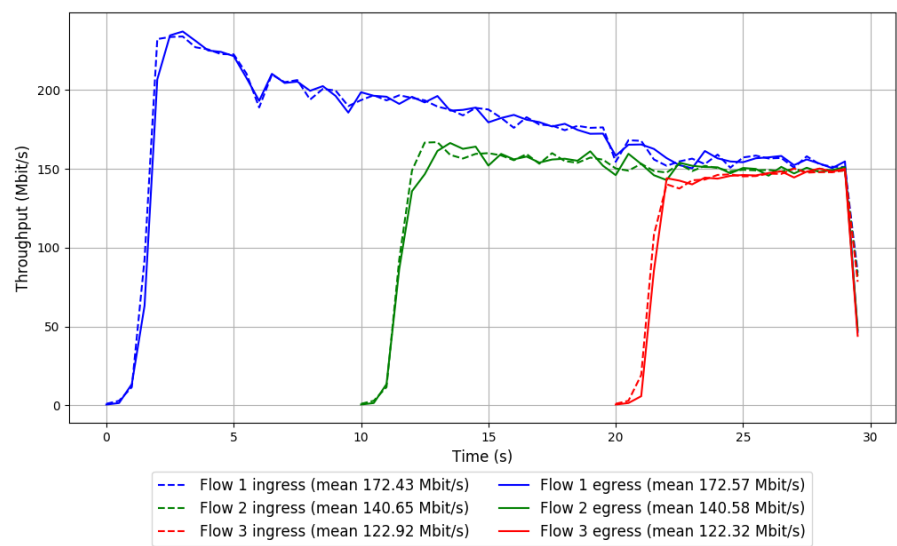


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-03-13 20:32:24
End at: 2018-03-13 20:32:55

# Below is generated by plot.py at 2018-03-14 04:46:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 304.88 Mbit/s
95th percentile per-packet one-way delay: 111.981 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 172.57 Mbit/s
95th percentile per-packet one-way delay: 111.958 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 140.58 Mbit/s
95th percentile per-packet one-way delay: 112.005 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 122.32 Mbit/s
95th percentile per-packet one-way delay: 112.027 ms
Loss rate: 2.78%
```

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

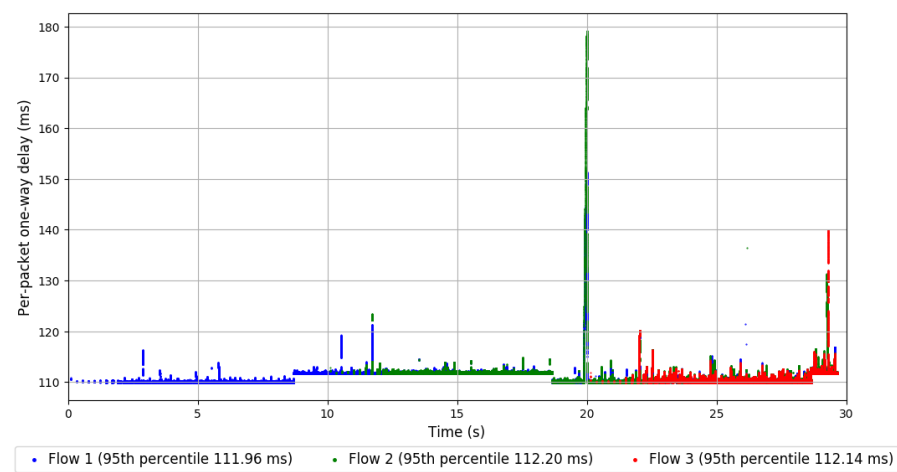
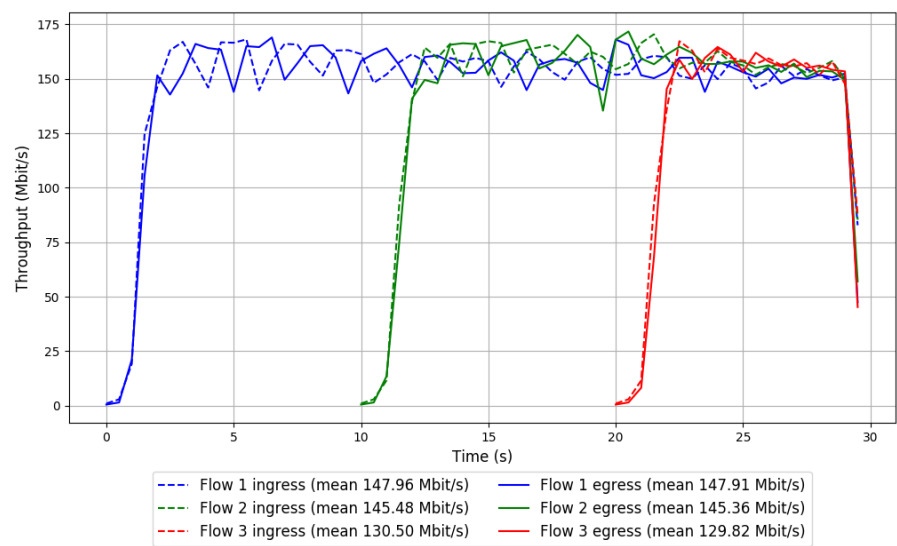


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-03-13 20:52:00
End at: 2018-03-13 20:52:30

# Below is generated by plot.py at 2018-03-14 04:46:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 285.77 Mbit/s
95th percentile per-packet one-way delay: 112.058 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 147.91 Mbit/s
95th percentile per-packet one-way delay: 111.964 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 145.36 Mbit/s
95th percentile per-packet one-way delay: 112.203 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 129.82 Mbit/s
95th percentile per-packet one-way delay: 112.144 ms
Loss rate: 2.77%
```

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



Run 3: Statistics of Indigo-1-32

Start at: 2018-03-13 21:11:38

End at: 2018-03-13 21:12:08

Below is generated by plot.py at 2018-03-14 04:46:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 282.58 Mbit/s

95th percentile per-packet one-way delay: 111.316 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 150.58 Mbit/s

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

Loss rate: 0.76%

-- Flow 2:

Average throughput: 135.18 Mbit/s

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

Loss rate: 1.03%

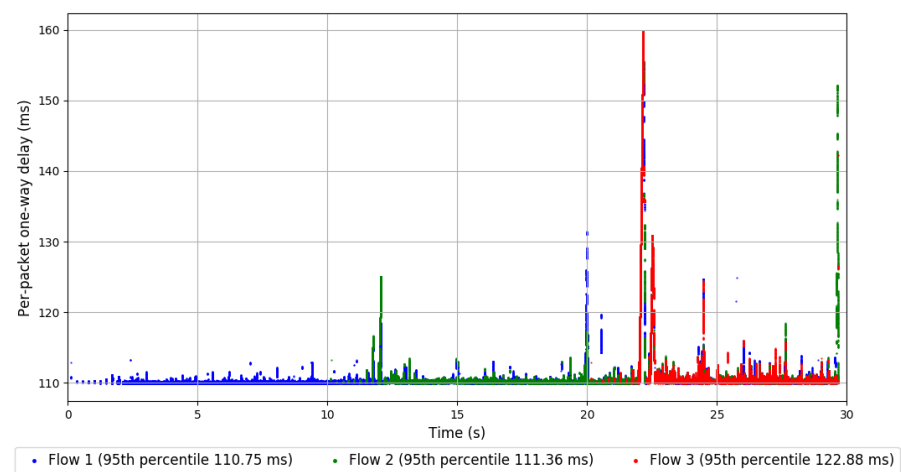
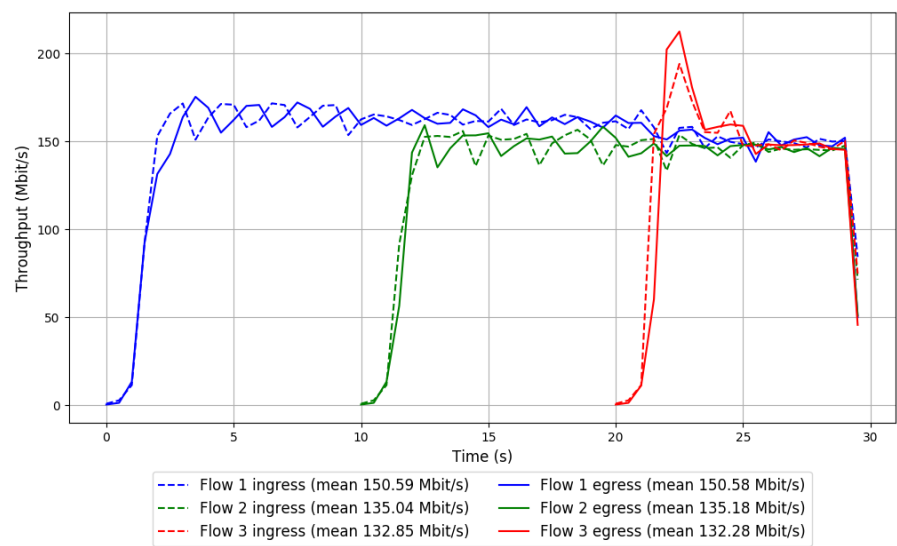
-- Flow 3:

Average throughput: 132.28 Mbit/s

95th percentile per-packet one-way delay: 122.883 ms

Loss rate: 2.55%

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



Run 4: Statistics of Indigo-1-32

Start at: 2018-03-13 21:31:07

End at: 2018-03-13 21:31:37

Below is generated by plot.py at 2018-03-14 04:46:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 295.22 Mbit/s

95th percentile per-packet one-way delay: 111.262 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 151.41 Mbit/s

95th percentile per-packet one-way delay: 110.763 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 154.57 Mbit/s

95th percentile per-packet one-way delay: 111.694 ms

Loss rate: 1.06%

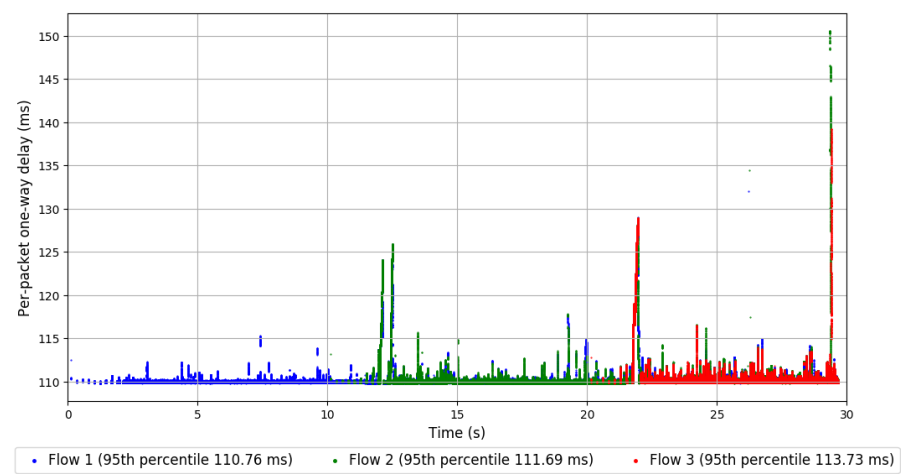
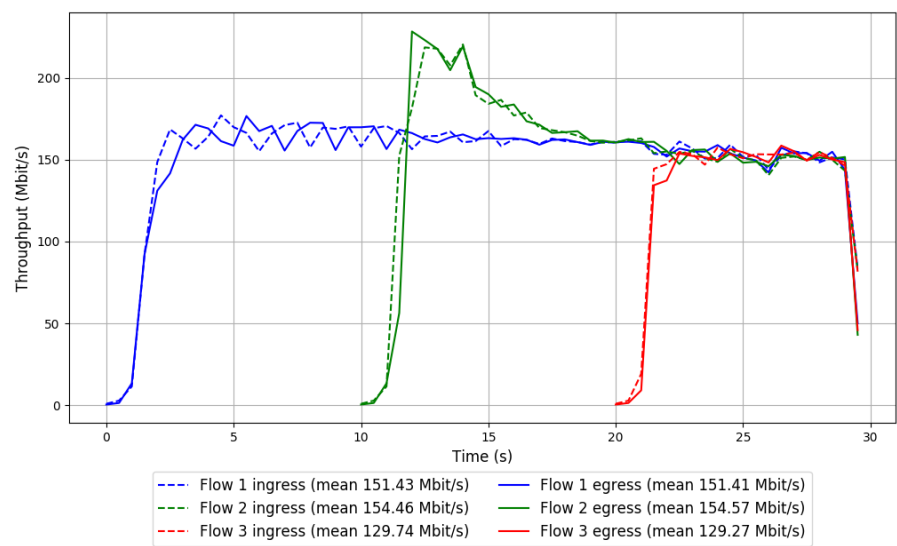
-- Flow 3:

Average throughput: 129.27 Mbit/s

95th percentile per-packet one-way delay: 113.727 ms

Loss rate: 2.65%

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



Run 5: Statistics of Indigo-1-32

Start at: 2018-03-13 21:50:42

End at: 2018-03-13 21:51:12

Below is generated by plot.py at 2018-03-14 04:46:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 317.10 Mbit/s

95th percentile per-packet one-way delay: 111.015 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 180.13 Mbit/s

95th percentile per-packet one-way delay: 110.655 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 143.01 Mbit/s

95th percentile per-packet one-way delay: 111.183 ms

Loss rate: 1.21%

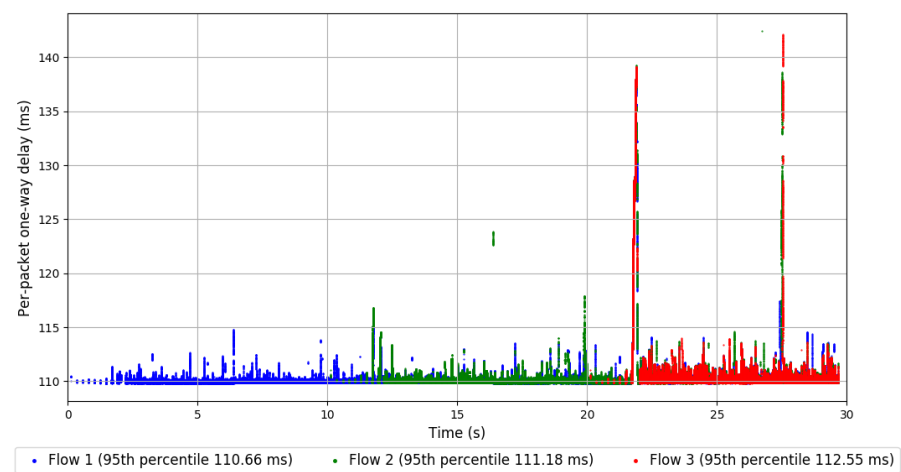
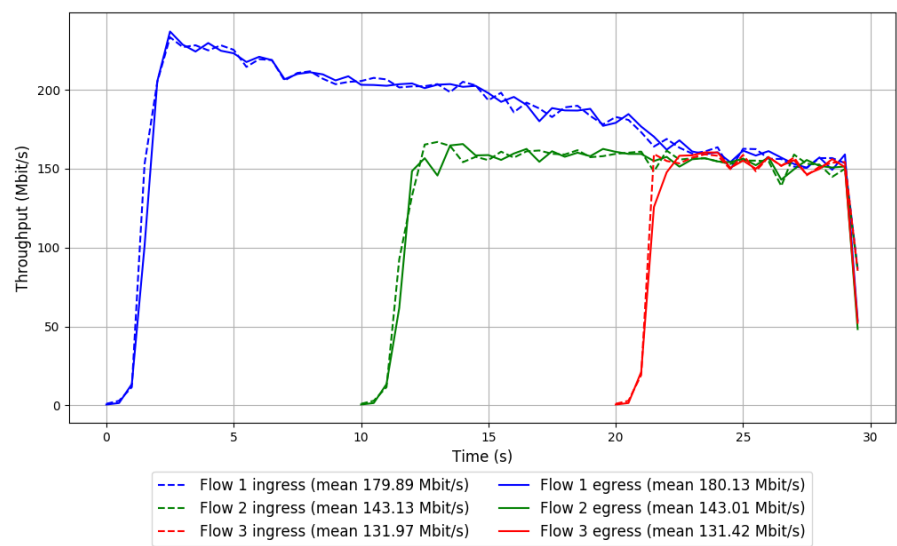
-- Flow 3:

Average throughput: 131.42 Mbit/s

95th percentile per-packet one-way delay: 112.549 ms

Loss rate: 2.67%

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



Run 6: Statistics of Indigo-1-32

Start at: 2018-03-13 22:09:40

End at: 2018-03-13 22:10:10

Below is generated by plot.py at 2018-03-14 04:46:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 324.85 Mbit/s

95th percentile per-packet one-way delay: 113.818 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 182.91 Mbit/s

95th percentile per-packet one-way delay: 113.423 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 143.22 Mbit/s

95th percentile per-packet one-way delay: 114.580 ms

Loss rate: 1.20%

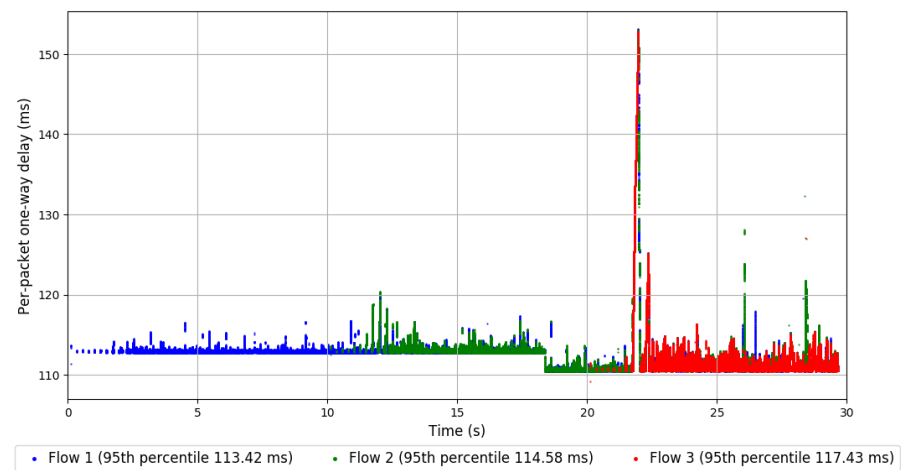
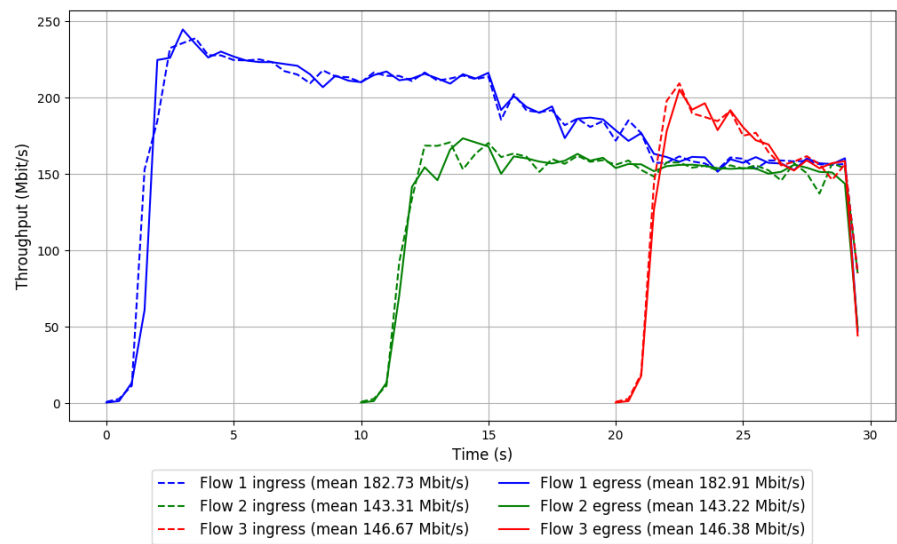
-- Flow 3:

Average throughput: 146.38 Mbit/s

95th percentile per-packet one-way delay: 117.434 ms

Loss rate: 2.46%

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



Run 7: Statistics of Indigo-1-32

Start at: 2018-03-13 22:28:38

End at: 2018-03-13 22:29:08

Below is generated by plot.py at 2018-03-14 04:46:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 314.82 Mbit/s

95th percentile per-packet one-way delay: 113.941 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 181.19 Mbit/s

95th percentile per-packet one-way delay: 113.526 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 142.73 Mbit/s

95th percentile per-packet one-way delay: 114.411 ms

Loss rate: 1.08%

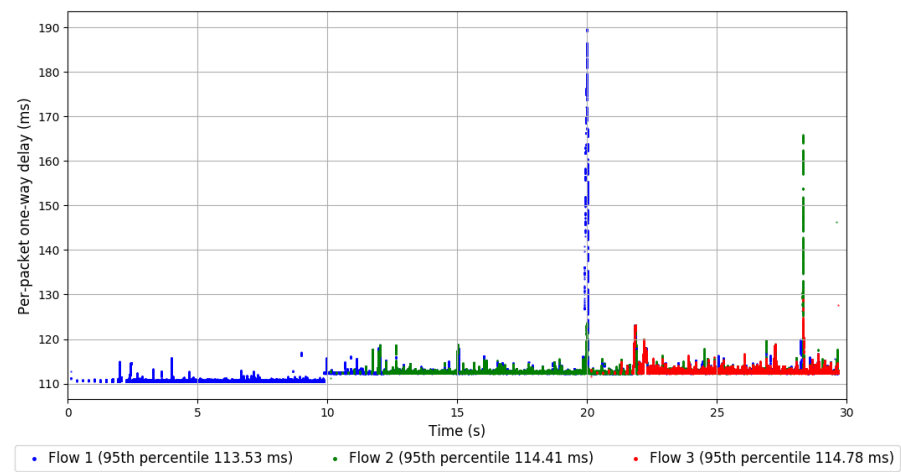
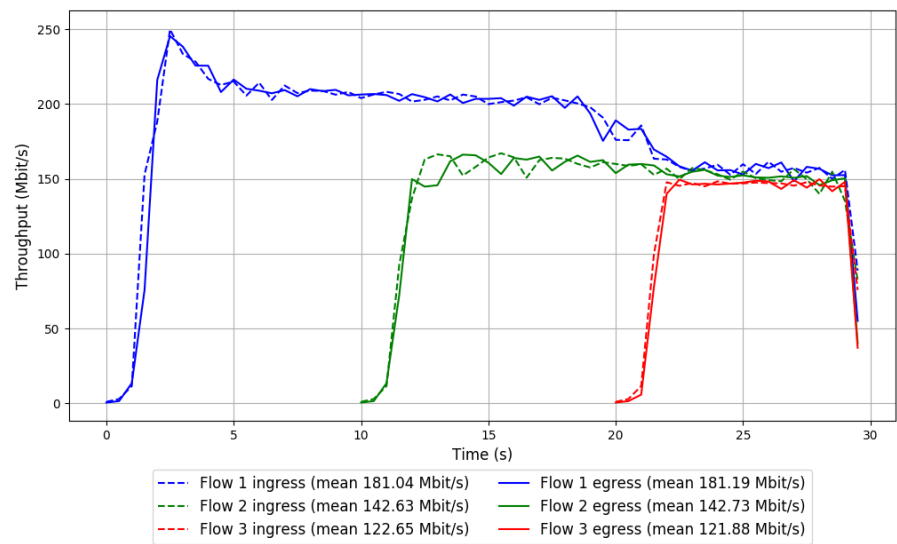
-- Flow 3:

Average throughput: 121.88 Mbit/s

95th percentile per-packet one-way delay: 114.785 ms

Loss rate: 2.92%

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



Run 8: Statistics of Indigo-1-32

Start at: 2018-03-13 22:48:05

End at: 2018-03-13 22:48:35

Below is generated by plot.py at 2018-03-14 04:46:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 319.18 Mbit/s

95th percentile per-packet one-way delay: 114.547 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 174.62 Mbit/s

95th percentile per-packet one-way delay: 113.759 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 158.20 Mbit/s

95th percentile per-packet one-way delay: 115.444 ms

Loss rate: 1.05%

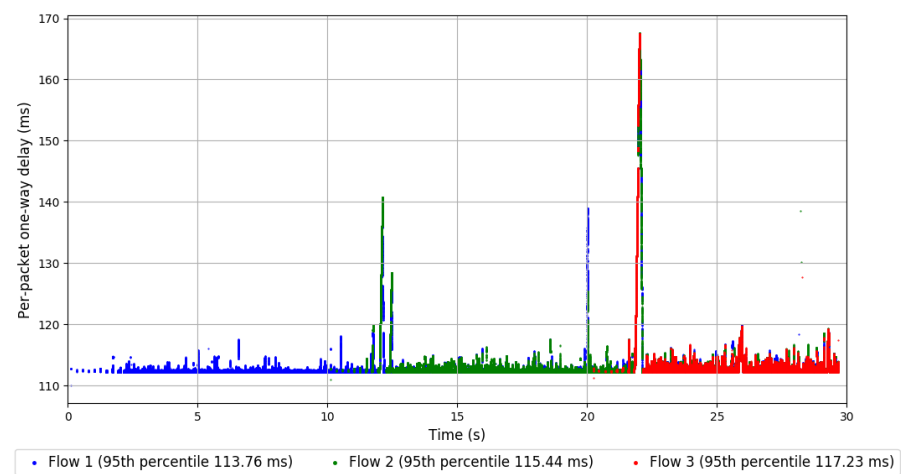
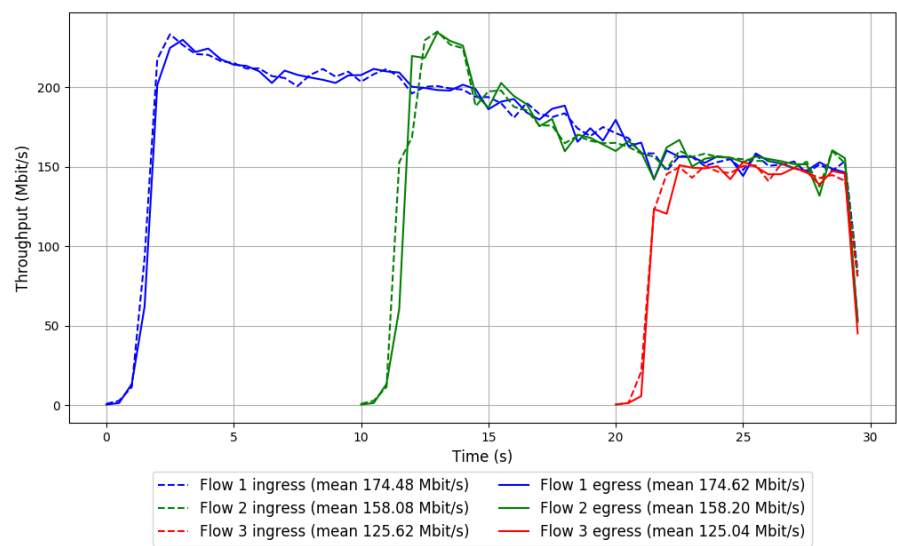
-- Flow 3:

Average throughput: 125.04 Mbit/s

95th percentile per-packet one-way delay: 117.233 ms

Loss rate: 2.71%

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



Run 9: Statistics of Indigo-1-32

Start at: 2018-03-13 23:07:11

End at: 2018-03-13 23:07:41

Below is generated by plot.py at 2018-03-14 04:46:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 287.63 Mbit/s

95th percentile per-packet one-way delay: 112.544 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 150.21 Mbit/s

95th percentile per-packet one-way delay: 111.825 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 144.45 Mbit/s

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

Loss rate: 1.16%

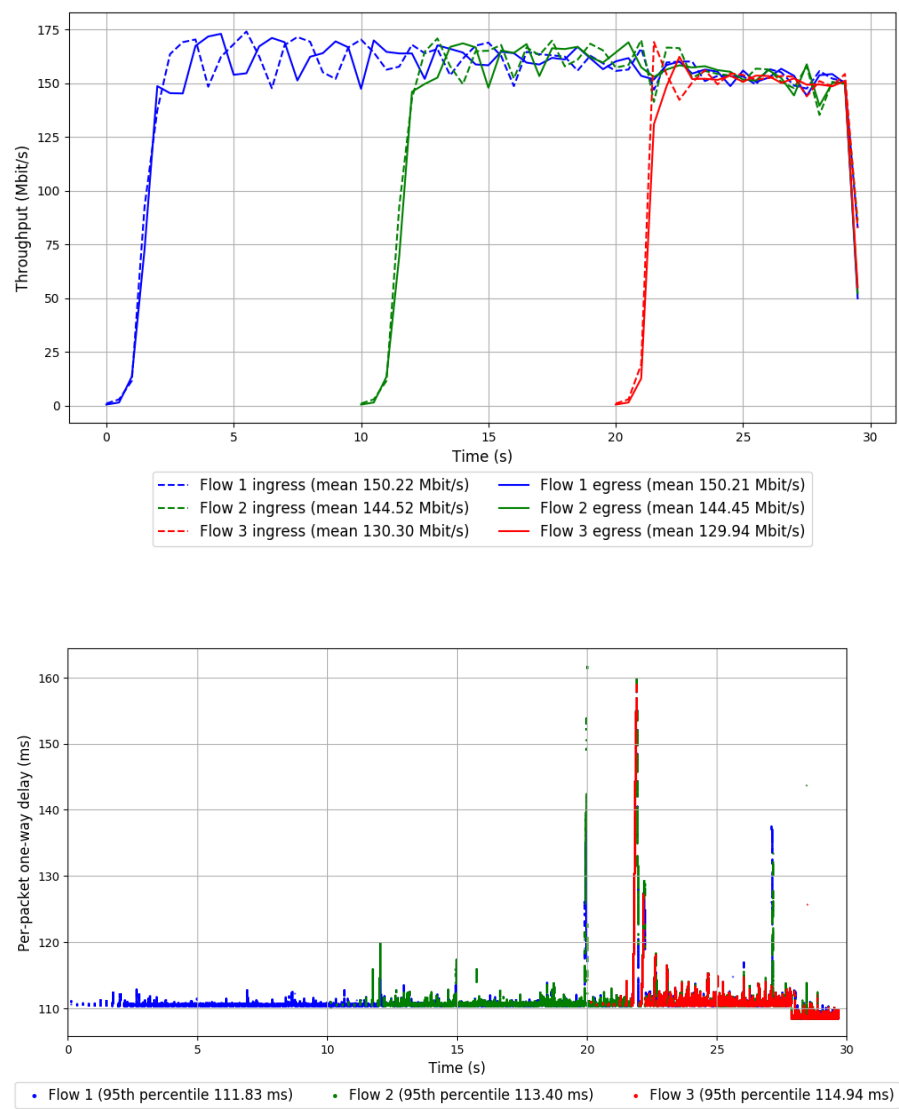
-- Flow 3:

Average throughput: 129.94 Mbit/s

95th percentile per-packet one-way delay: 114.941 ms

Loss rate: 2.55%

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



Run 10: Statistics of Indigo-1-32

Start at: 2018-03-13 23:26:49

End at: 2018-03-13 23:27:19

Below is generated by plot.py at 2018-03-14 04:46:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 280.42 Mbit/s

95th percentile per-packet one-way delay: 112.405 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 148.69 Mbit/s

95th percentile per-packet one-way delay: 111.886 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 136.92 Mbit/s

95th percentile per-packet one-way delay: 112.482 ms

Loss rate: 1.10%

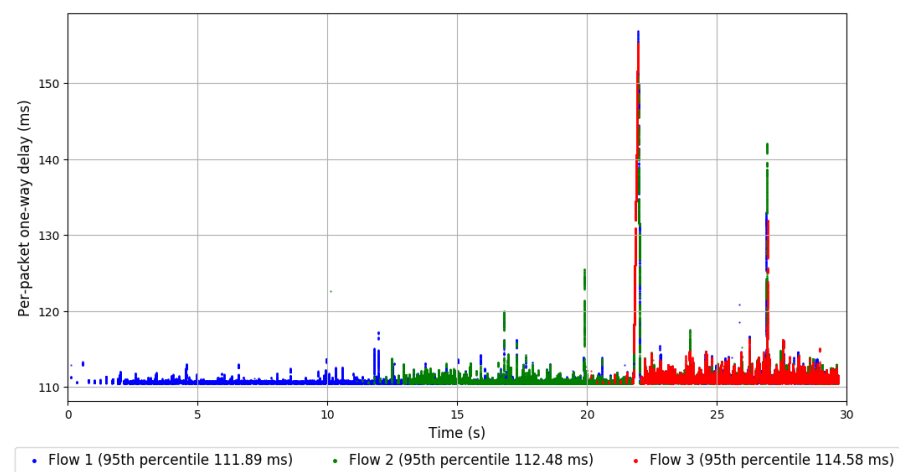
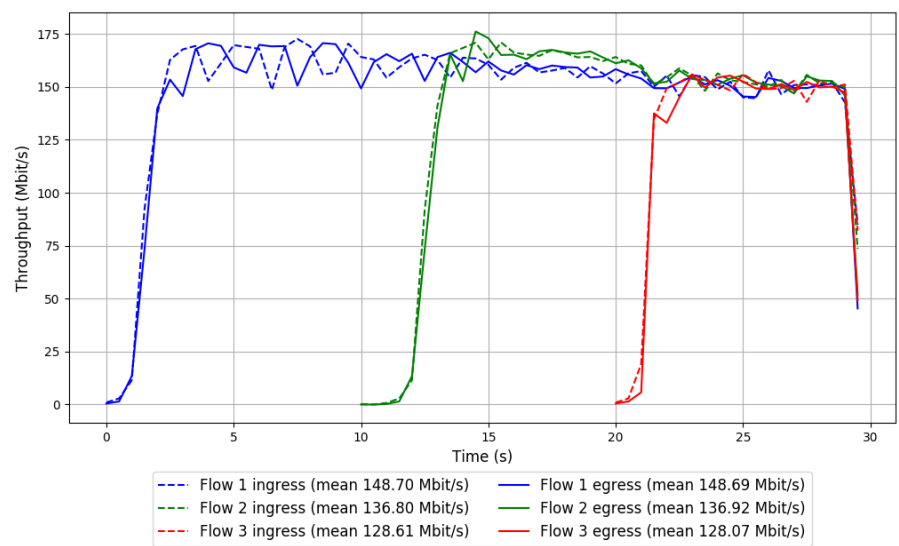
-- Flow 3:

Average throughput: 128.07 Mbit/s

95th percentile per-packet one-way delay: 114.577 ms

Loss rate: 2.72%

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

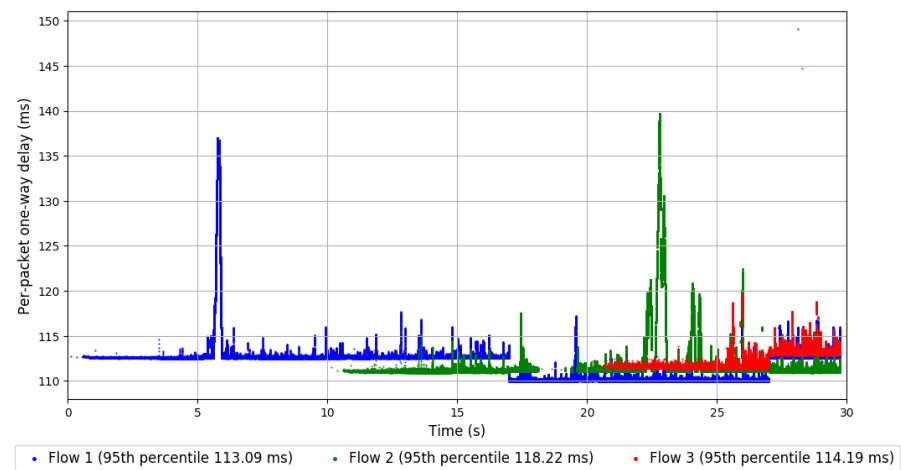
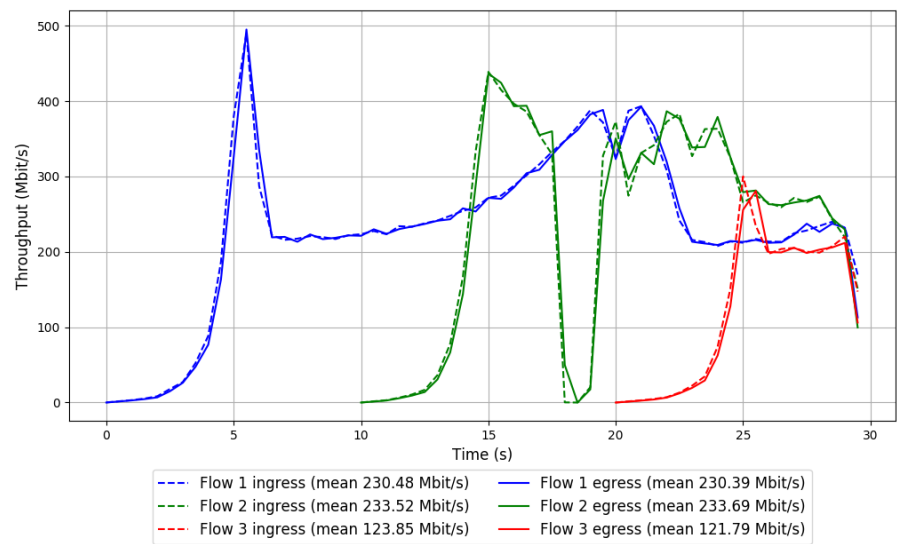


```
Run 1: Statistics of Vivace-latency

Start at: 2018-03-13 20:25:26
End at: 2018-03-13 20:25:56

# Below is generated by plot.py at 2018-03-14 04:46:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 424.33 Mbit/s
95th percentile per-packet one-way delay: 114.264 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 230.39 Mbit/s
95th percentile per-packet one-way delay: 113.091 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 233.69 Mbit/s
95th percentile per-packet one-way delay: 118.215 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 121.79 Mbit/s
95th percentile per-packet one-way delay: 114.193 ms
Loss rate: 3.92%
```


Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-03-13 20:45:11

End at: 2018-03-13 20:45:41

Below is generated by plot.py at 2018-03-14 04:46:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 353.53 Mbit/s

95th percentile per-packet one-way delay: 113.148 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 206.45 Mbit/s

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

Loss rate: 0.86%

-- Flow 2:

Average throughput: 184.93 Mbit/s

95th percentile per-packet one-way delay: 113.485 ms

Loss rate: 0.82%

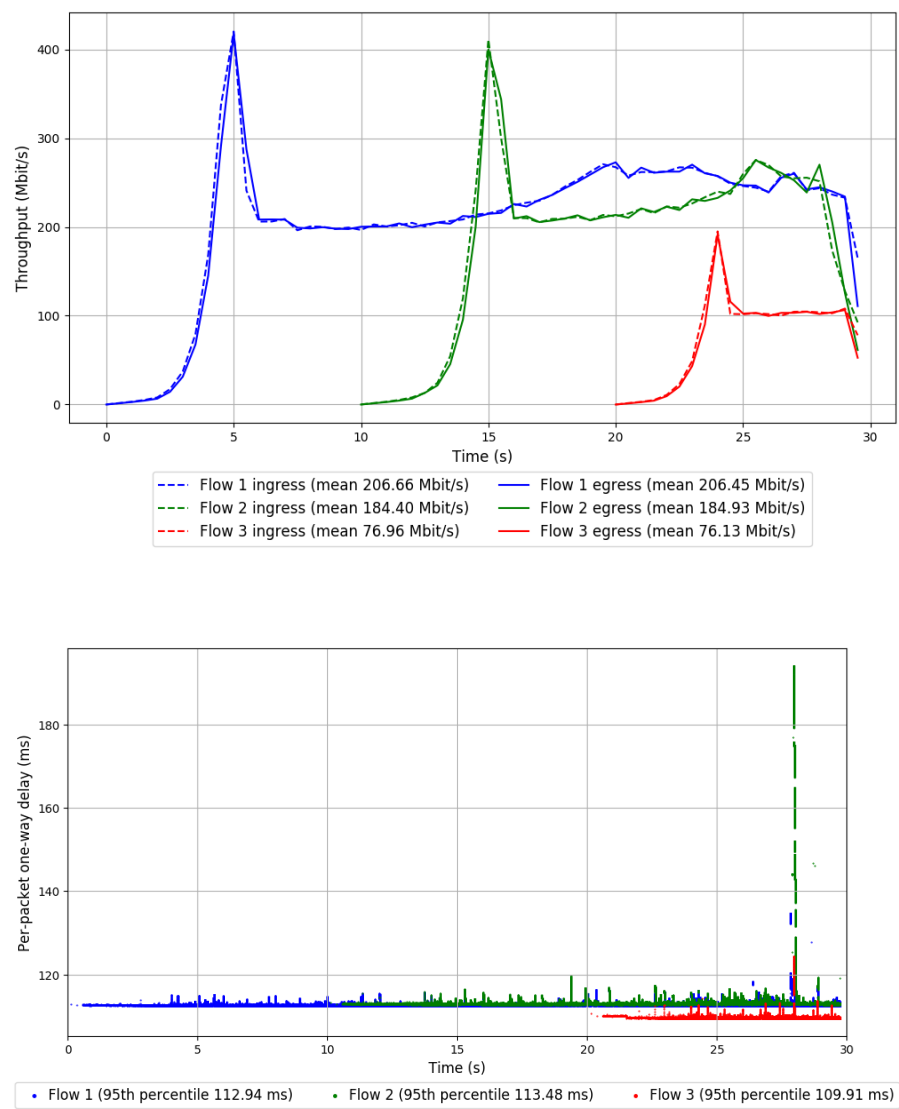
-- Flow 3:

Average throughput: 76.13 Mbit/s

95th percentile per-packet one-way delay: 109.906 ms

Loss rate: 3.32%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-03-13 21:04:43

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

Below is generated by plot.py at 2018-03-14 04:46:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 446.51 Mbit/s

95th percentile per-packet one-way delay: 114.437 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 278.26 Mbit/s

95th percentile per-packet one-way delay: 117.082 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 191.88 Mbit/s

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

Loss rate: 1.50%

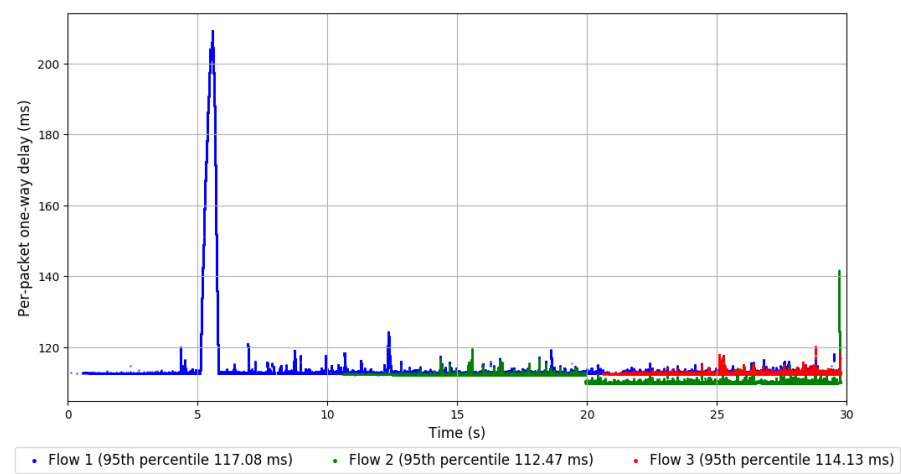
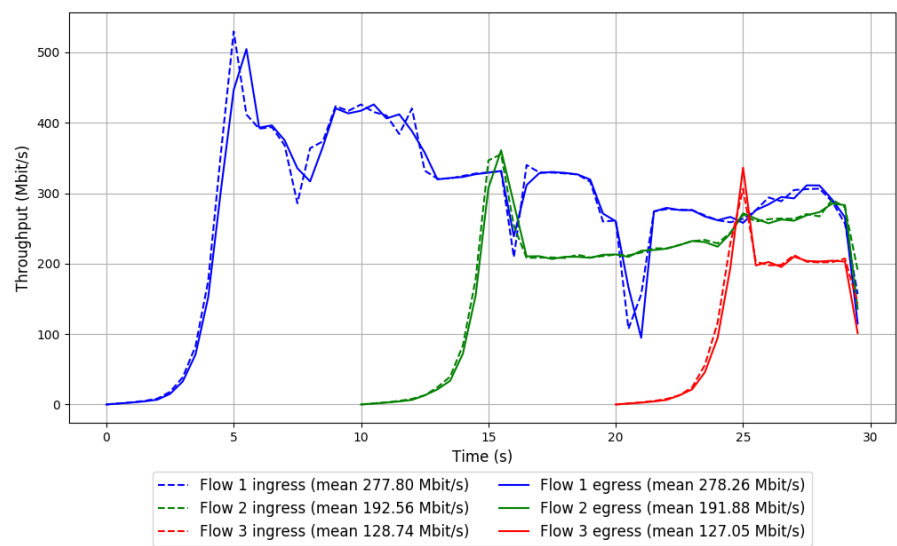
-- Flow 3:

Average throughput: 127.05 Mbit/s

95th percentile per-packet one-way delay: 114.134 ms

Loss rate: 3.60%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-03-13 21:24:12

End at: 2018-03-13 21:24:42

Below is generated by plot.py at 2018-03-14 04:46:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 450.13 Mbit/s

95th percentile per-packet one-way delay: 112.182 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 277.15 Mbit/s

95th percentile per-packet one-way delay: 111.606 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 191.62 Mbit/s

95th percentile per-packet one-way delay: 111.654 ms

Loss rate: 1.66%

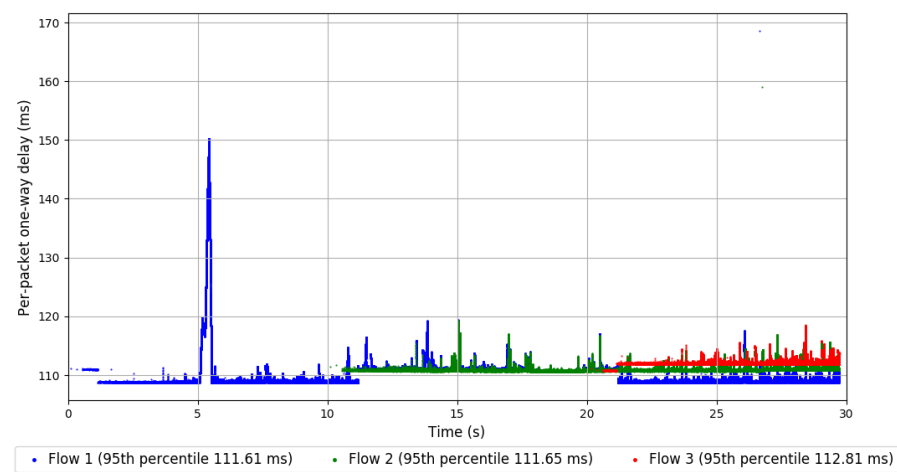
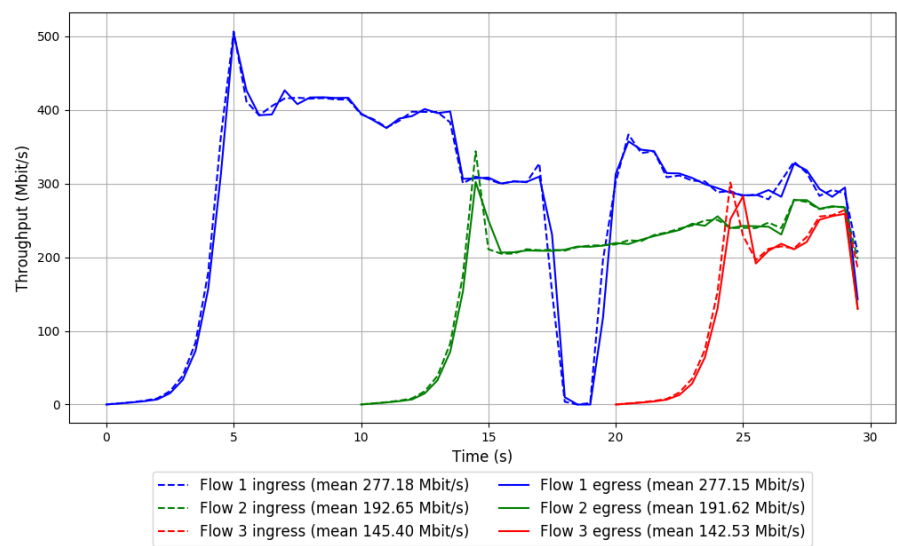
-- Flow 3:

Average throughput: 142.53 Mbit/s

95th percentile per-packet one-way delay: 112.811 ms

Loss rate: 4.21%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-03-13 21:43:50

End at: 2018-03-13 21:44:20

Below is generated by plot.py at 2018-03-14 04:46:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 434.82 Mbit/s

95th percentile per-packet one-way delay: 114.127 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 274.86 Mbit/s

95th percentile per-packet one-way delay: 112.872 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 178.34 Mbit/s

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

Loss rate: 1.16%

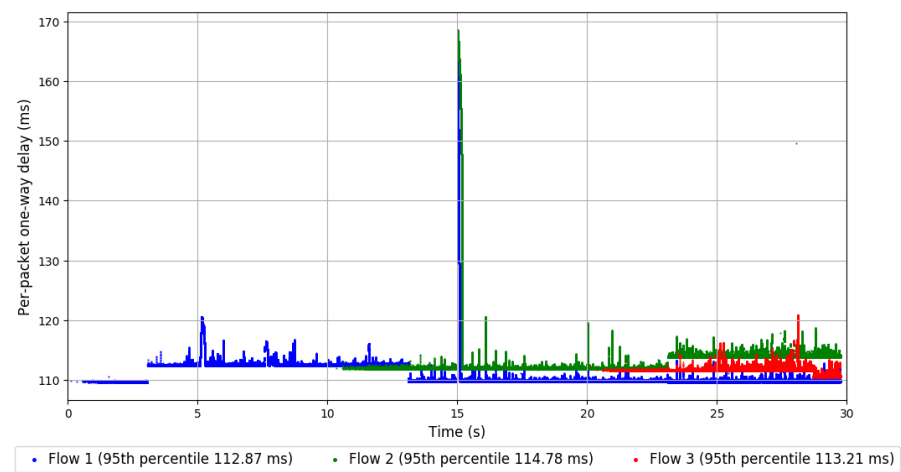
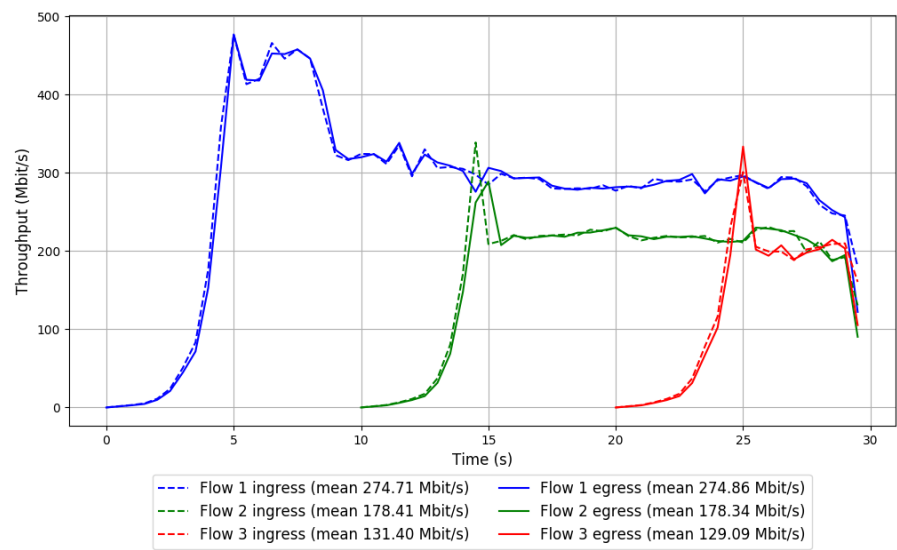
-- Flow 3:

Average throughput: 129.09 Mbit/s

95th percentile per-packet one-way delay: 113.207 ms

Loss rate: 3.98%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-03-13 22:02:52

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

Below is generated by plot.py at 2018-03-14 04:46:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 344.00 Mbit/s

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

Loss rate: 1.61%

-- Flow 1:

Average throughput: 176.93 Mbit/s

95th percentile per-packet one-way delay: 112.744 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 184.99 Mbit/s

95th percentile per-packet one-way delay: 113.342 ms

Loss rate: 1.60%

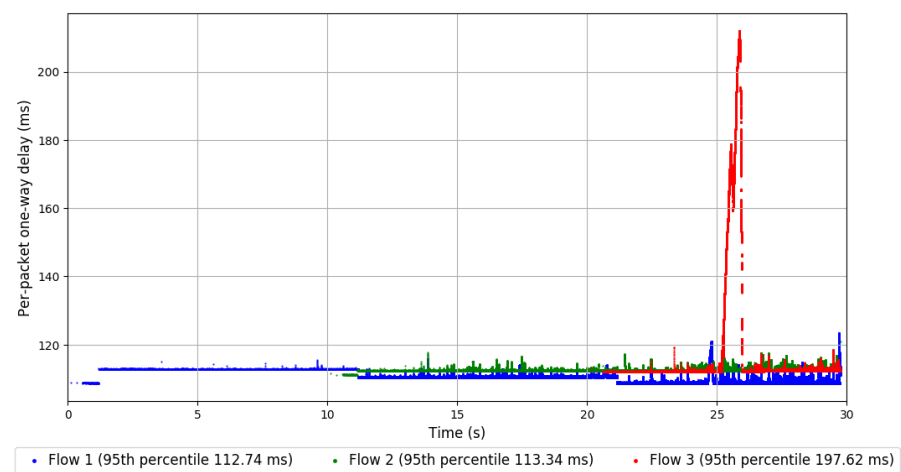
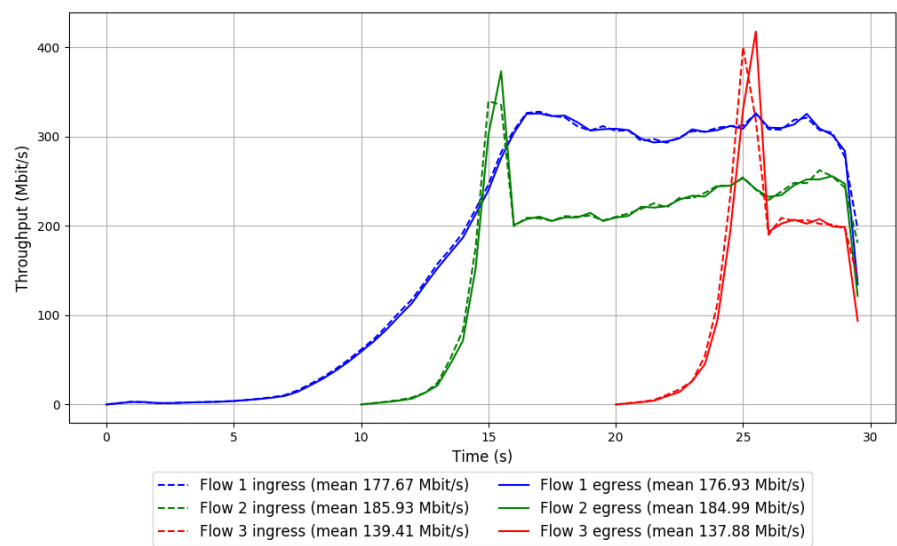
-- Flow 3:

Average throughput: 137.88 Mbit/s

95th percentile per-packet one-way delay: 197.621 ms

Loss rate: 3.40%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-03-13 22:21:46

End at: 2018-03-13 22:22:16

Below is generated by plot.py at 2018-03-14 04:46:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 402.12 Mbit/s

95th percentile per-packet one-way delay: 116.405 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 223.27 Mbit/s

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

Loss rate: 0.77%

-- Flow 2:

Average throughput: 206.44 Mbit/s

95th percentile per-packet one-way delay: 133.469 ms

Loss rate: 1.56%

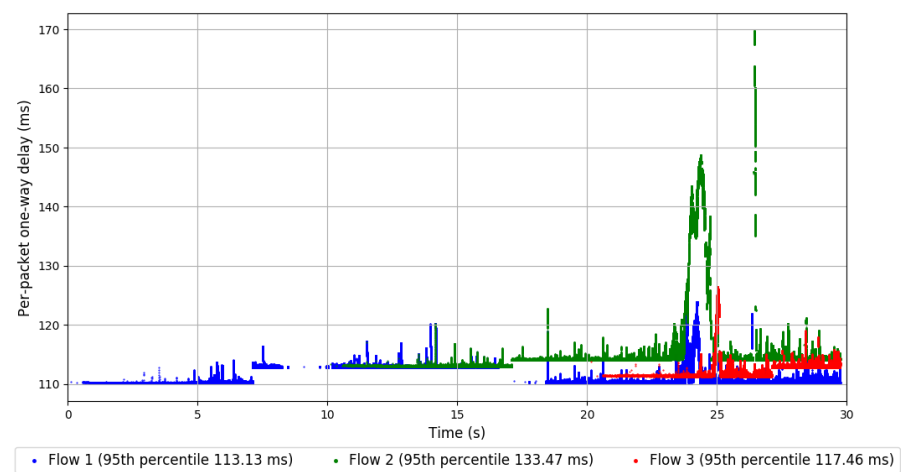
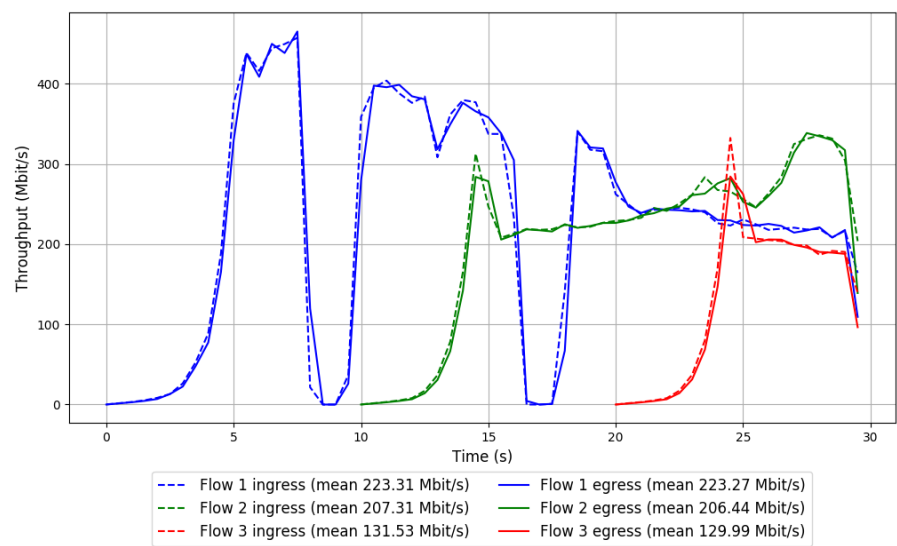
-- Flow 3:

Average throughput: 129.99 Mbit/s

95th percentile per-packet one-way delay: 117.459 ms

Loss rate: 3.45%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-03-13 22:41:13

End at: 2018-03-13 22:41:43

Below is generated by plot.py at 2018-03-14 04:46:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 405.51 Mbit/s

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

Loss rate: 1.42%

-- Flow 1:

Average throughput: 297.09 Mbit/s

95th percentile per-packet one-way delay: 114.004 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 98.03 Mbit/s

95th percentile per-packet one-way delay: 111.628 ms

Loss rate: 2.69%

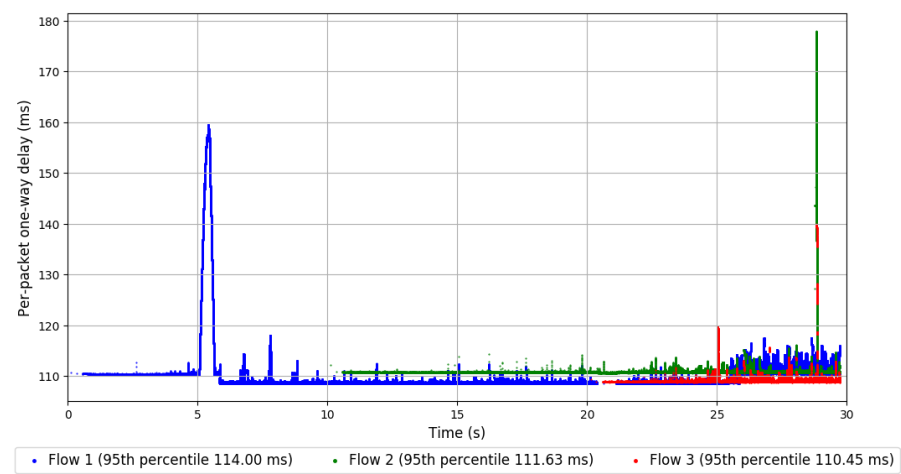
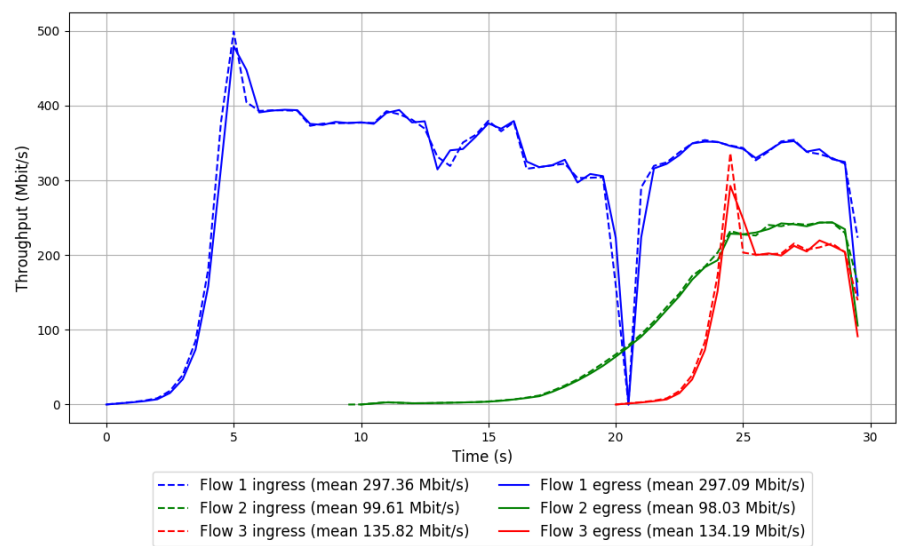
-- Flow 3:

Average throughput: 134.19 Mbit/s

95th percentile per-packet one-way delay: 110.450 ms

Loss rate: 3.42%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-03-13 23:00:23

End at: 2018-03-13 23:00:53

Below is generated by plot.py at 2018-03-14 04:46:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 317.40 Mbit/s

95th percentile per-packet one-way delay: 113.052 ms

Loss rate: 2.62%

-- Flow 1:

Average throughput: 148.80 Mbit/s

95th percentile per-packet one-way delay: 111.112 ms

Loss rate: 3.81%

-- Flow 2:

Average throughput: 191.86 Mbit/s

95th percentile per-packet one-way delay: 112.440 ms

Loss rate: 0.85%

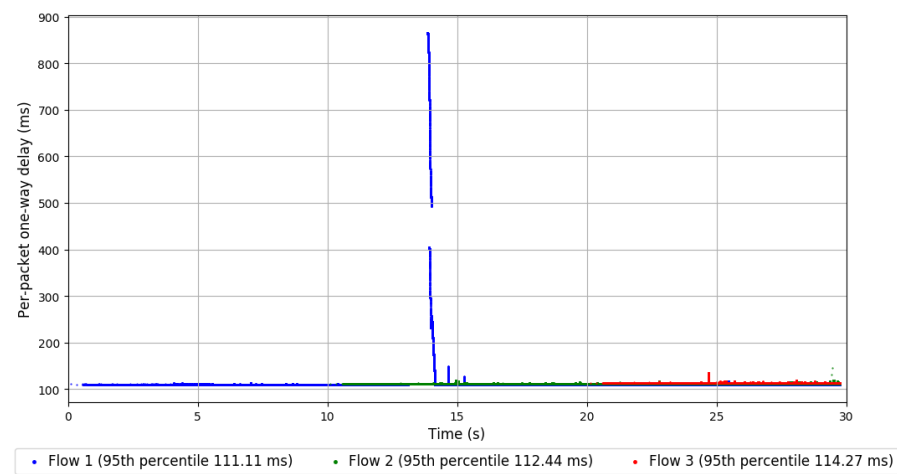
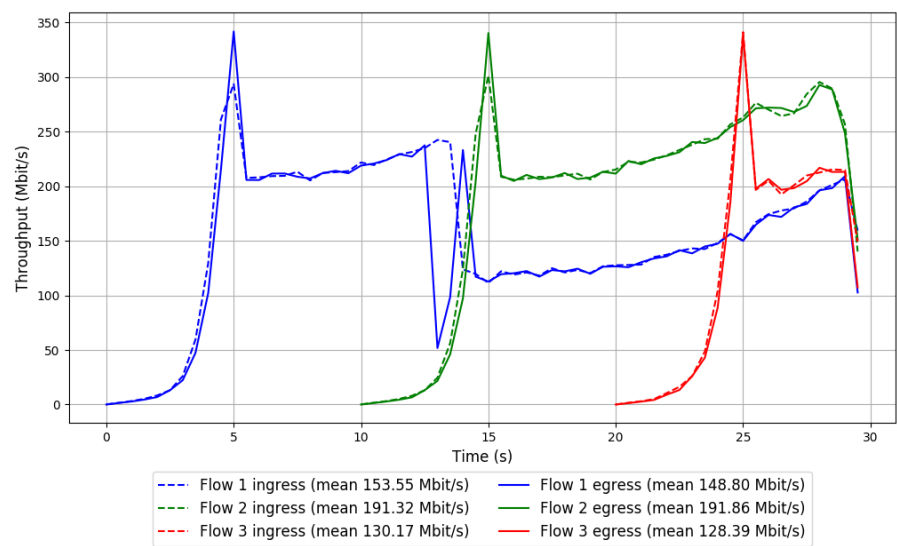
-- Flow 3:

Average throughput: 128.39 Mbit/s

95th percentile per-packet one-way delay: 114.271 ms

Loss rate: 3.61%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-03-13 23:19:53

End at: 2018-03-13 23:20:23

Below is generated by plot.py at 2018-03-14 04:46:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 467.11 Mbit/s

95th percentile per-packet one-way delay: 118.022 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 291.40 Mbit/s

95th percentile per-packet one-way delay: 137.472 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 197.33 Mbit/s

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

Loss rate: 1.51%

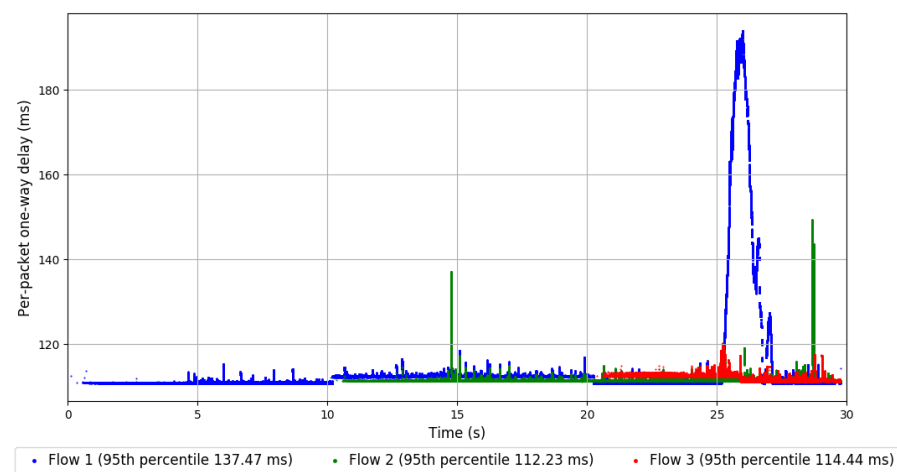
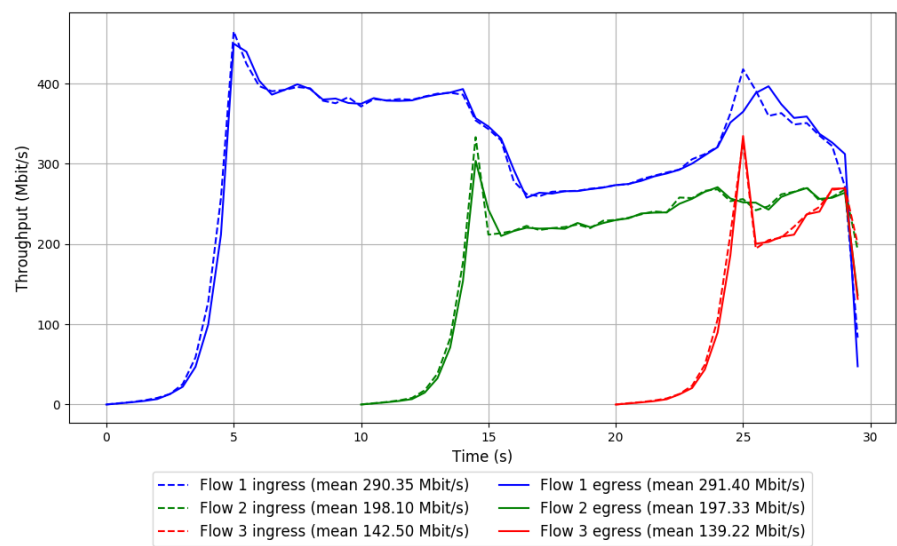
-- Flow 3:

Average throughput: 139.22 Mbit/s

95th percentile per-packet one-way delay: 114.445 ms

Loss rate: 4.53%

Run 10: Report of Vivace-latency — Data Link

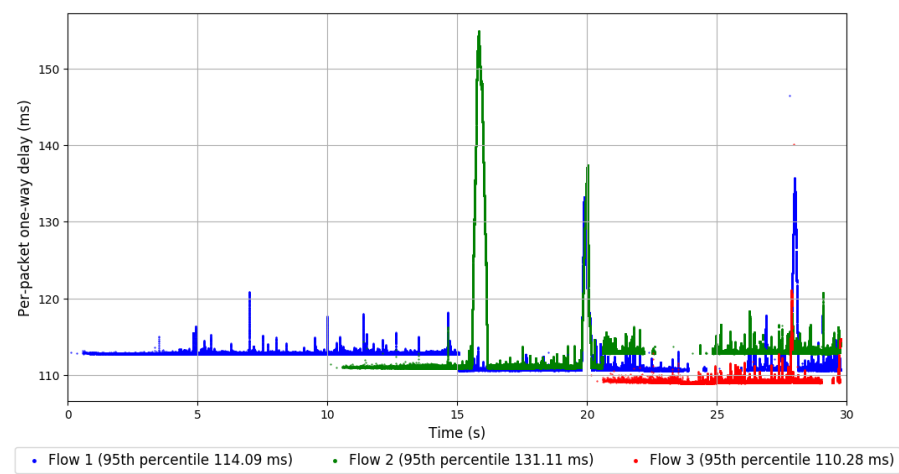
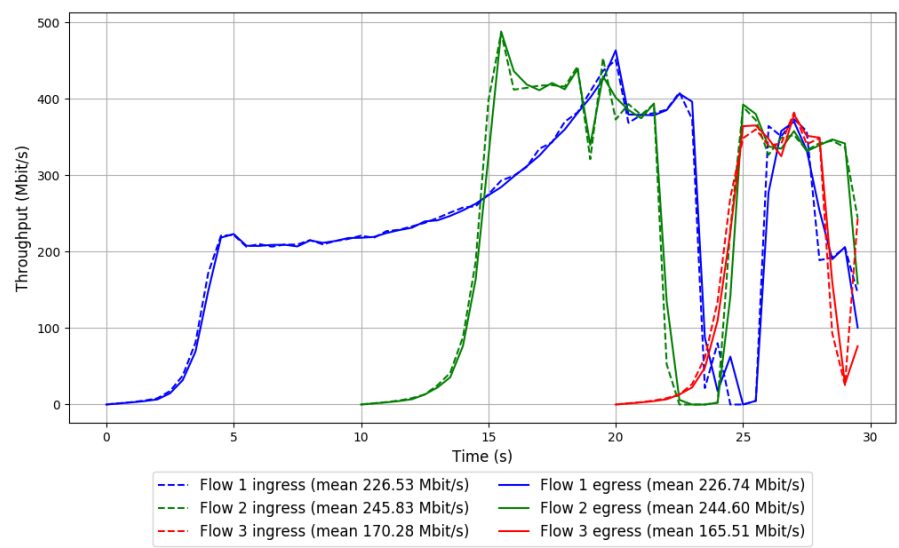


```
Run 1: Statistics of Vivace-loss

Start at: 2018-03-13 20:42:28
End at: 2018-03-13 20:42:58

# Below is generated by plot.py at 2018-03-14 04:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 442.42 Mbit/s
95th percentile per-packet one-way delay: 117.039 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 226.74 Mbit/s
95th percentile per-packet one-way delay: 114.086 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 244.60 Mbit/s
95th percentile per-packet one-way delay: 131.106 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 165.51 Mbit/s
95th percentile per-packet one-way delay: 110.284 ms
Loss rate: 5.00%
```

Run 1: Report of Vivace-loss — Data Link

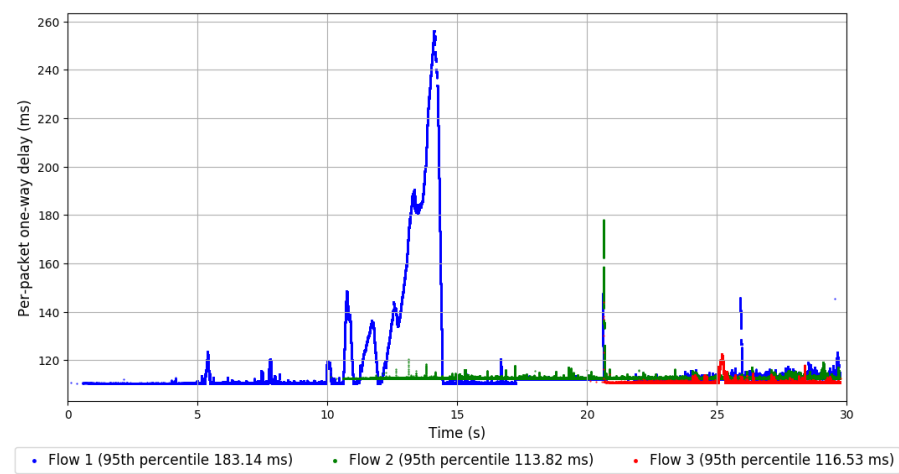
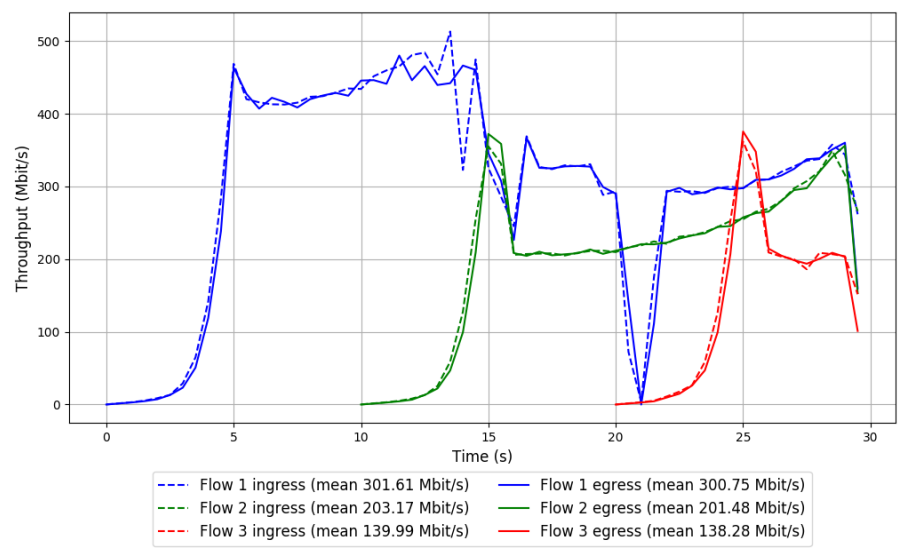


```
Run 2: Statistics of Vivace-loss

Start at: 2018-03-13 21:02:01
End at: 2018-03-13 21:02:31

# Below is generated by plot.py at 2018-03-14 04:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 478.99 Mbit/s
95th percentile per-packet one-way delay: 145.602 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 300.75 Mbit/s
95th percentile per-packet one-way delay: 183.140 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 201.48 Mbit/s
95th percentile per-packet one-way delay: 113.824 ms
Loss rate: 1.96%
-- Flow 3:
Average throughput: 138.28 Mbit/s
95th percentile per-packet one-way delay: 116.534 ms
Loss rate: 3.45%
```

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-03-13 21:21:44

End at: 2018-03-13 21:22:14

Below is generated by plot.py at 2018-03-14 04:49:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 466.64 Mbit/s

95th percentile per-packet one-way delay: 138.416 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 275.34 Mbit/s

95th percentile per-packet one-way delay: 186.363 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 241.30 Mbit/s

95th percentile per-packet one-way delay: 115.263 ms

Loss rate: 1.42%

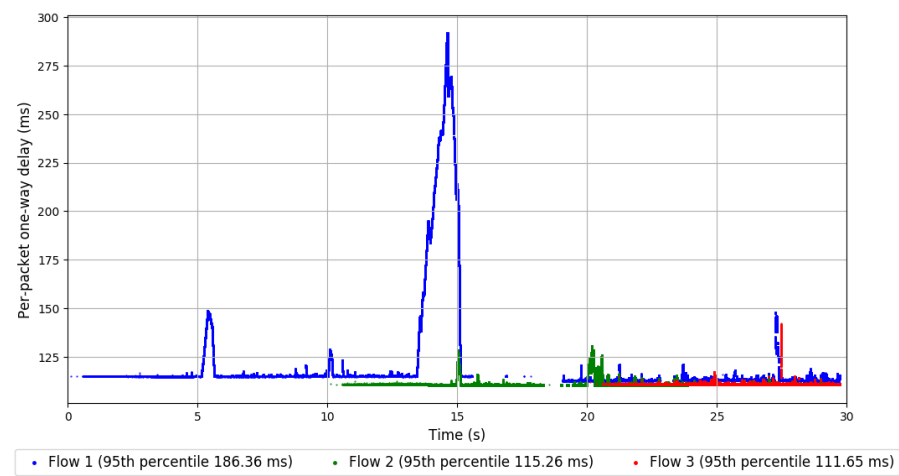
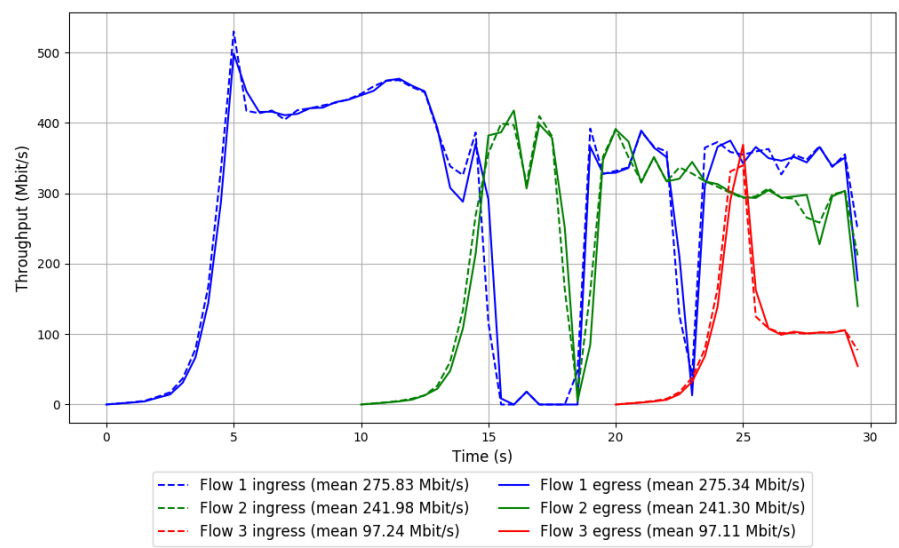
-- Flow 3:

Average throughput: 97.11 Mbit/s

95th percentile per-packet one-way delay: 111.651 ms

Loss rate: 2.44%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-03-13 21:41:08

End at: 2018-03-13 21:41:38

Below is generated by plot.py at 2018-03-14 04:51:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 543.13 Mbit/s

95th percentile per-packet one-way delay: 128.176 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 312.75 Mbit/s

95th percentile per-packet one-way delay: 118.870 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 278.30 Mbit/s

95th percentile per-packet one-way delay: 135.315 ms

Loss rate: 1.41%

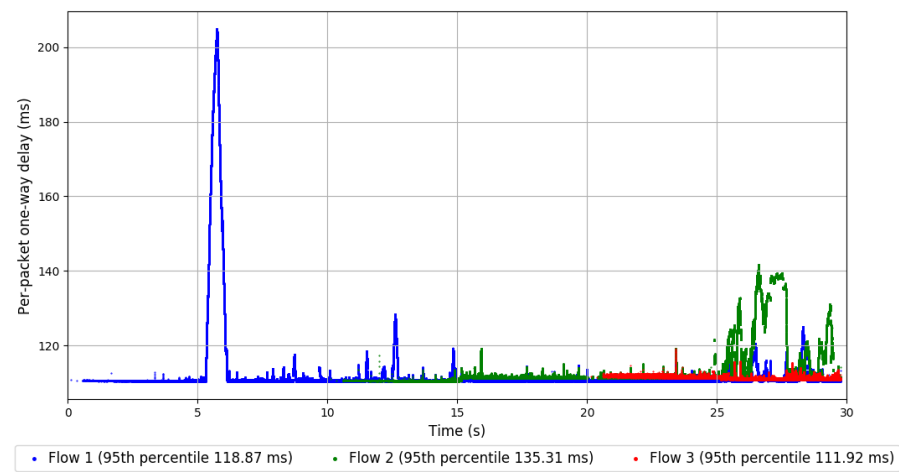
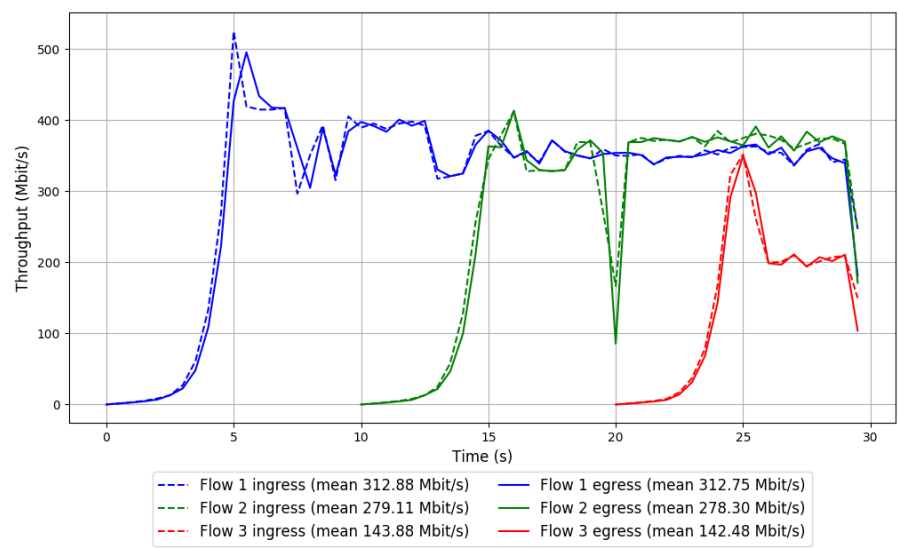
-- Flow 3:

Average throughput: 142.48 Mbit/s

95th percentile per-packet one-way delay: 111.916 ms

Loss rate: 3.25%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-03-13 22:00:37

End at: 2018-03-13 22:01:07

Below is generated by plot.py at 2018-03-14 04:51:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 408.38 Mbit/s

95th percentile per-packet one-way delay: 114.198 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 236.62 Mbit/s

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

Loss rate: 1.14%

-- Flow 2:

Average throughput: 190.34 Mbit/s

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

Loss rate: 1.54%

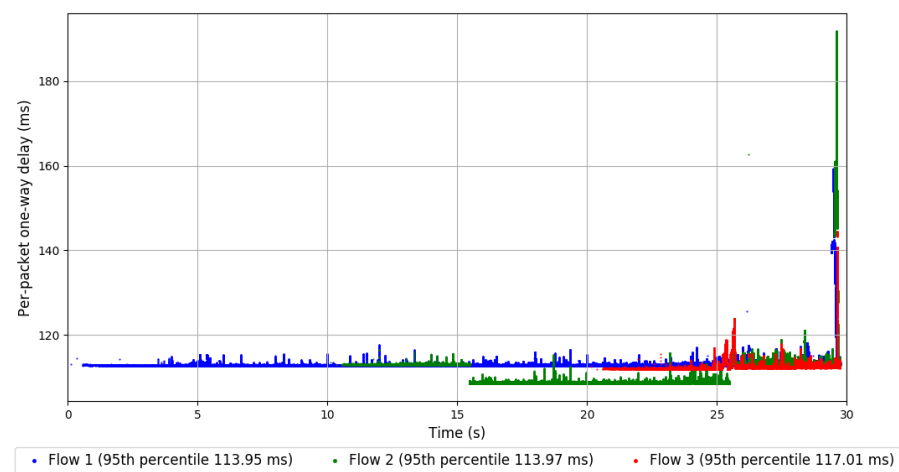
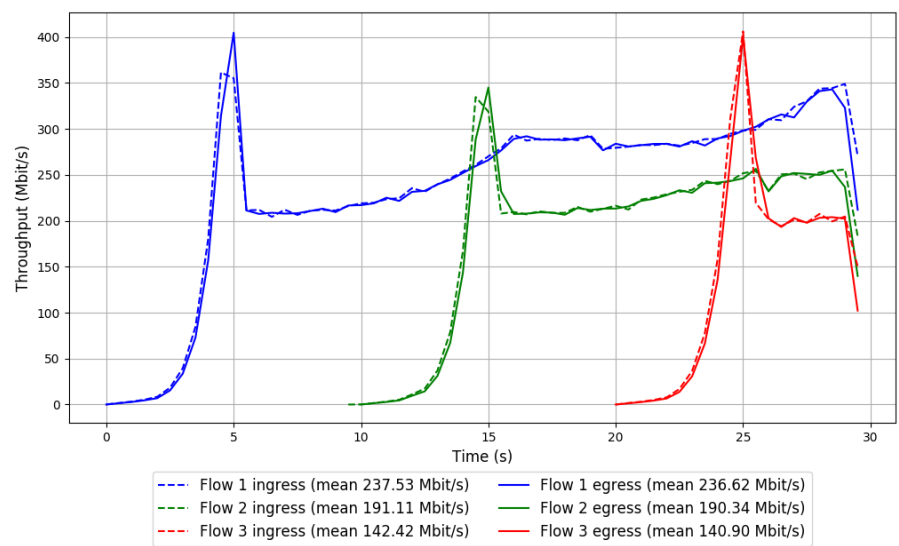
-- Flow 3:

Average throughput: 140.90 Mbit/s

95th percentile per-packet one-way delay: 117.010 ms

Loss rate: 3.38%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-03-13 22:19:32

End at: 2018-03-13 22:20:02

Below is generated by plot.py at 2018-03-14 04:53:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 463.79 Mbit/s

95th percentile per-packet one-way delay: 129.607 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 294.36 Mbit/s

95th percentile per-packet one-way delay: 135.179 ms

Loss rate: 2.03%

-- Flow 2:

Average throughput: 208.81 Mbit/s

95th percentile per-packet one-way delay: 113.625 ms

Loss rate: 1.25%

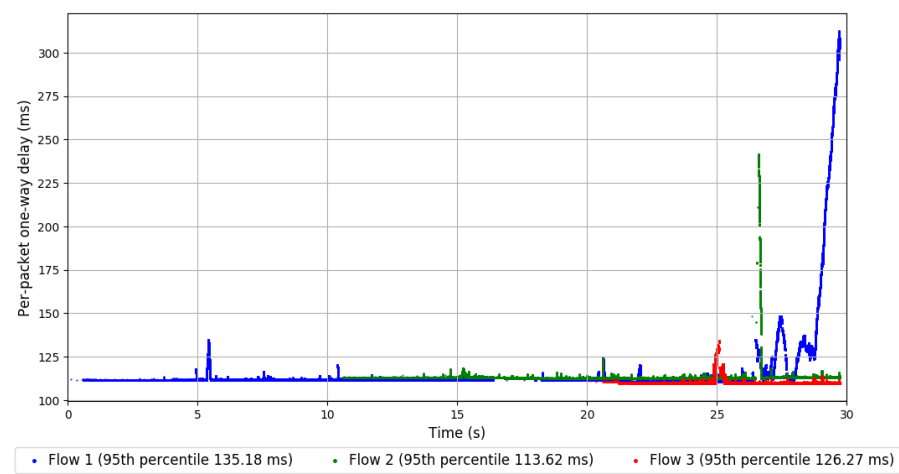
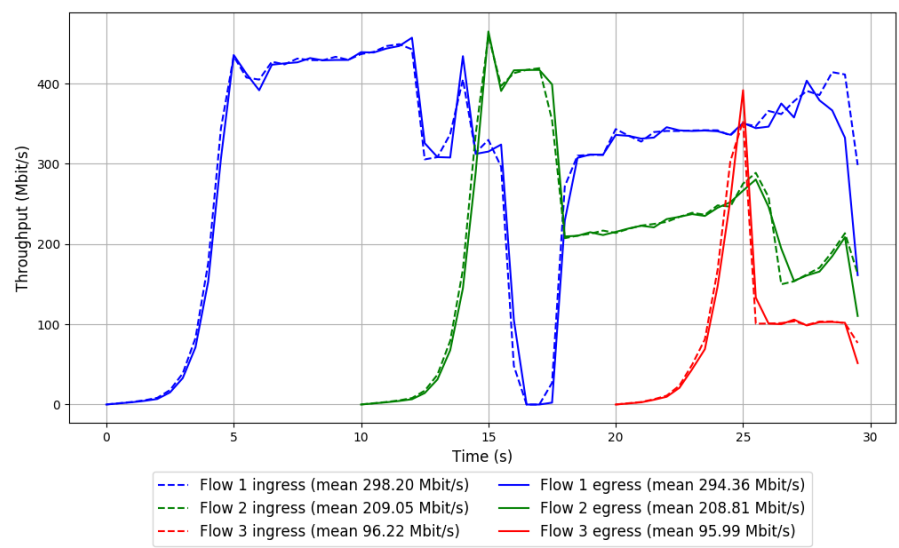
-- Flow 3:

Average throughput: 95.99 Mbit/s

95th percentile per-packet one-way delay: 126.272 ms

Loss rate: 2.51%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-03-13 22:38:42

End at: 2018-03-13 22:39:12

Below is generated by plot.py at 2018-03-14 04:53:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 445.56 Mbit/s

95th percentile per-packet one-way delay: 113.246 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 268.32 Mbit/s

95th percentile per-packet one-way delay: 111.285 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 201.75 Mbit/s

95th percentile per-packet one-way delay: 114.169 ms

Loss rate: 1.99%

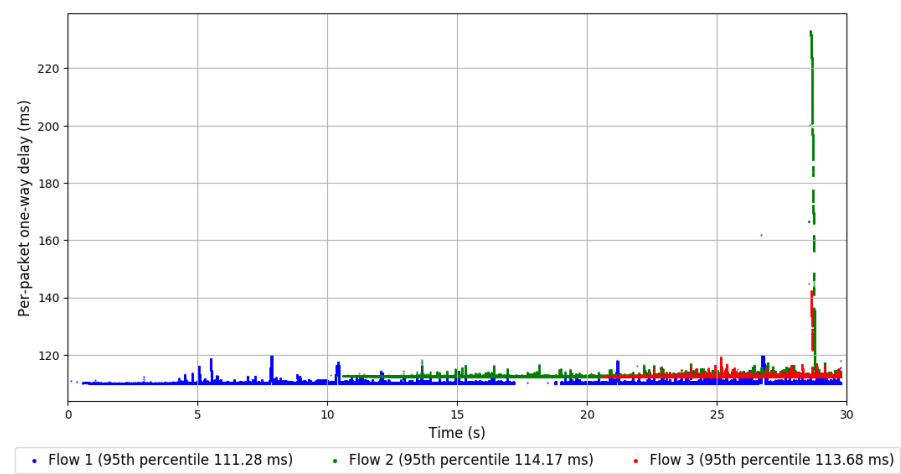
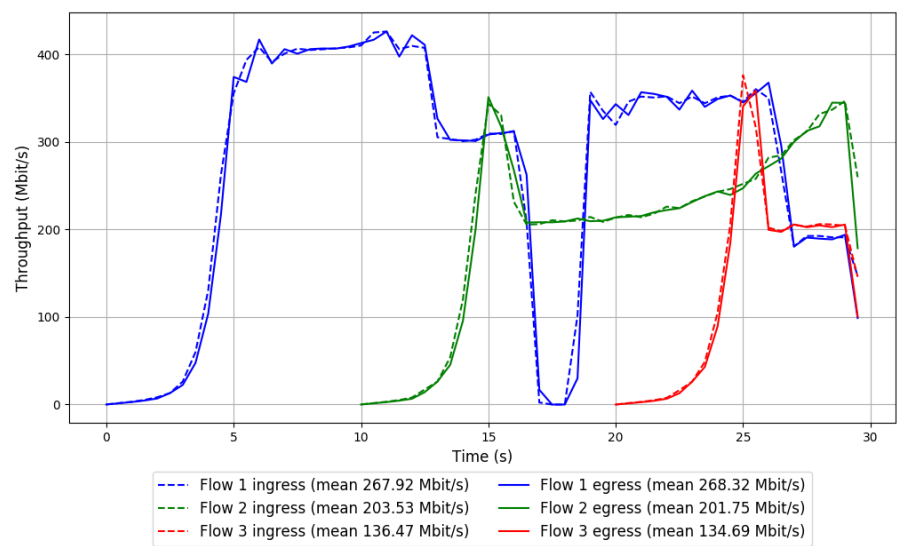
-- Flow 3:

Average throughput: 134.69 Mbit/s

95th percentile per-packet one-way delay: 113.678 ms

Loss rate: 3.50%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-03-13 22:58:06

End at: 2018-03-13 22:58:36

Below is generated by plot.py at 2018-03-14 04:55:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 492.29 Mbit/s

95th percentile per-packet one-way delay: 142.566 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 293.53 Mbit/s

95th percentile per-packet one-way delay: 166.406 ms

Loss rate: 1.28%

-- Flow 2:

Average throughput: 233.82 Mbit/s

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

Loss rate: 1.59%

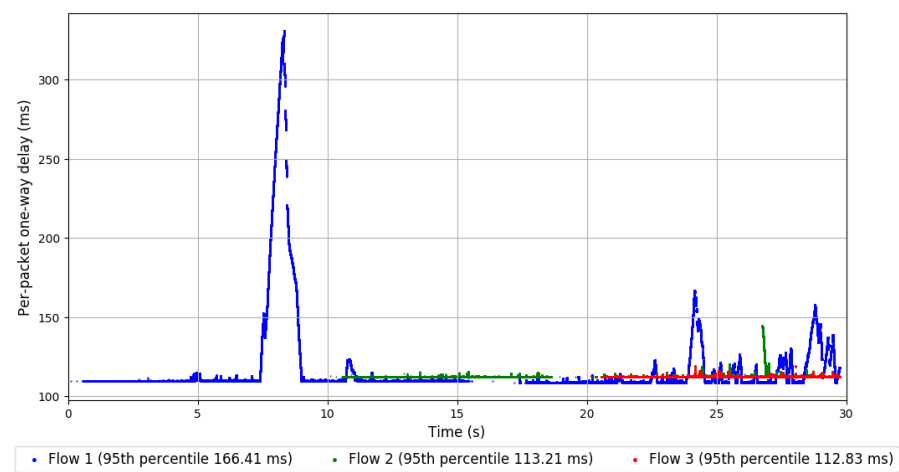
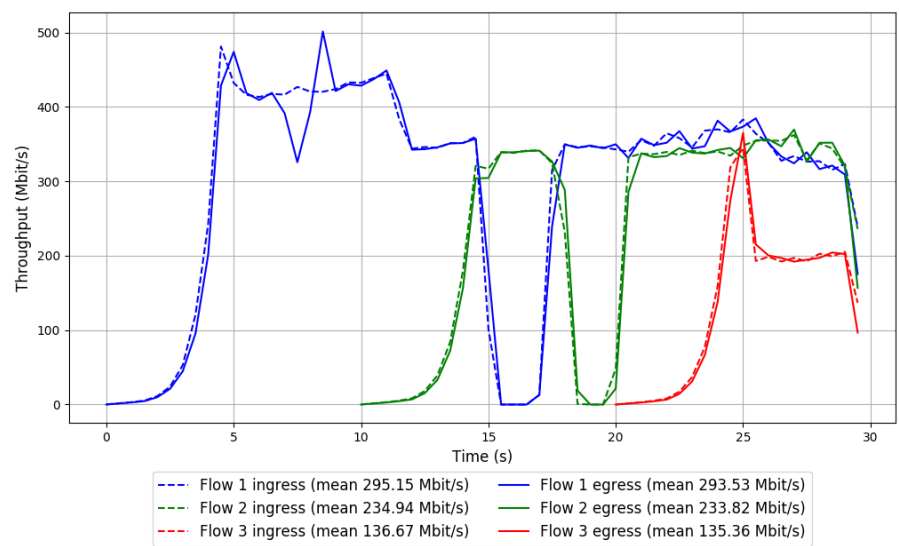
-- Flow 3:

Average throughput: 135.36 Mbit/s

95th percentile per-packet one-way delay: 112.826 ms

Loss rate: 3.20%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-03-13 23:17:04

End at: 2018-03-13 23:17:34

Below is generated by plot.py at 2018-03-14 04:56:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 523.40 Mbit/s

95th percentile per-packet one-way delay: 126.069 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 344.33 Mbit/s

95th percentile per-packet one-way delay: 127.208 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 222.19 Mbit/s

95th percentile per-packet one-way delay: 119.218 ms

Loss rate: 1.68%

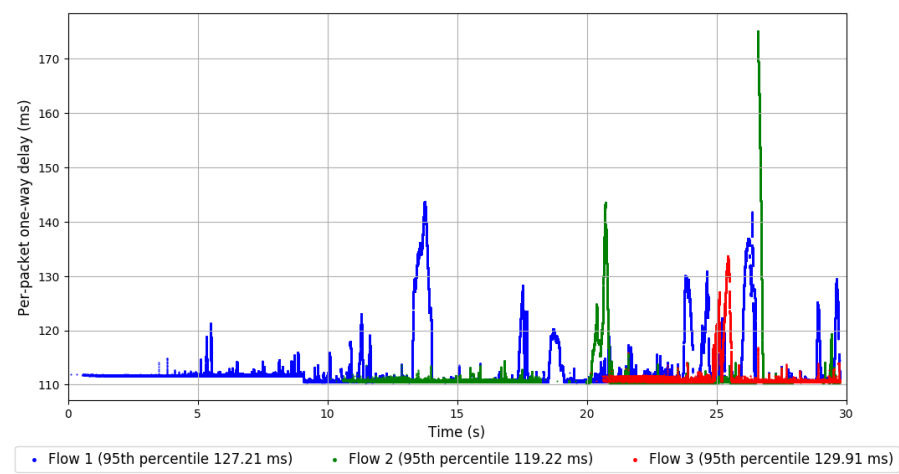
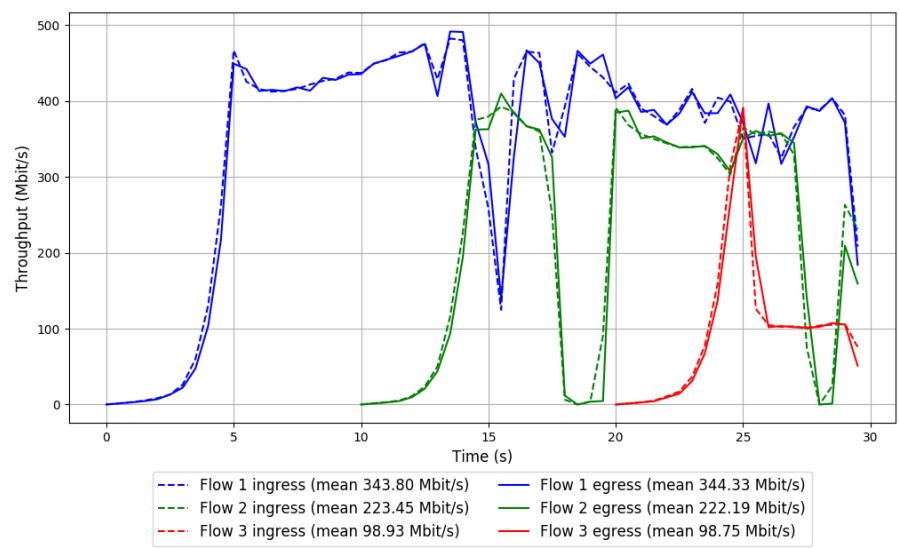
-- Flow 3:

Average throughput: 98.75 Mbit/s

95th percentile per-packet one-way delay: 129.911 ms

Loss rate: 2.45%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-03-13 23:36:35

End at: 2018-03-13 23:37:05

Below is generated by plot.py at 2018-03-14 04:56:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 513.79 Mbit/s

95th percentile per-packet one-way delay: 137.485 ms

Loss rate: 2.52%

-- Flow 1:

Average throughput: 305.28 Mbit/s

95th percentile per-packet one-way delay: 145.210 ms

Loss rate: 2.51%

-- Flow 2:

Average throughput: 219.97 Mbit/s

95th percentile per-packet one-way delay: 115.874 ms

Loss rate: 1.75%

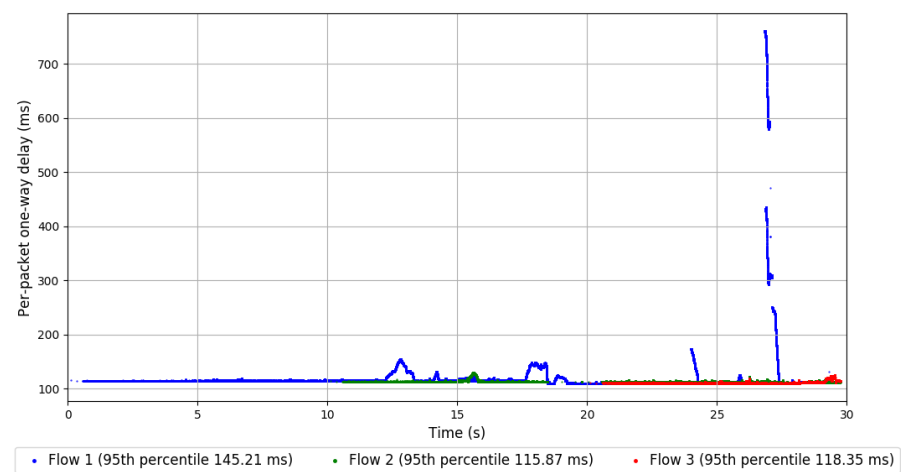
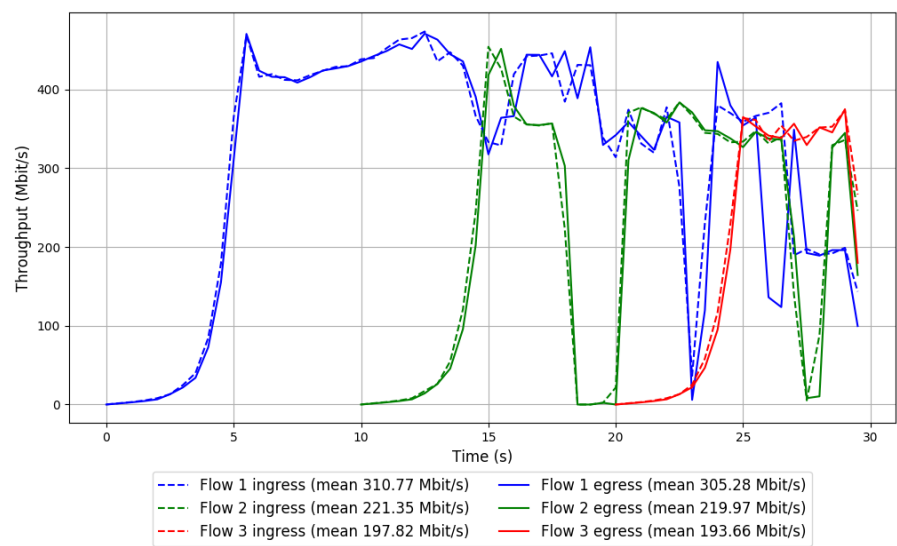
-- Flow 3:

Average throughput: 193.66 Mbit/s

95th percentile per-packet one-way delay: 118.349 ms

Loss rate: 4.31%

Run 10: Report of Vivace-loss — Data Link

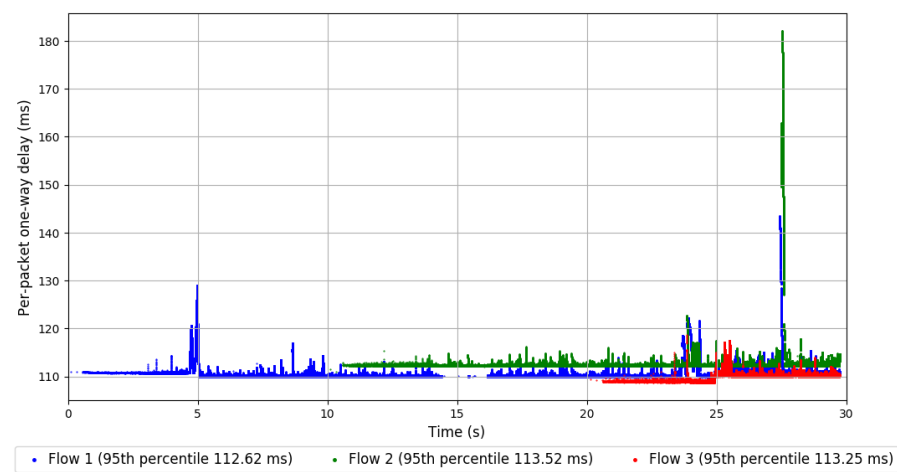
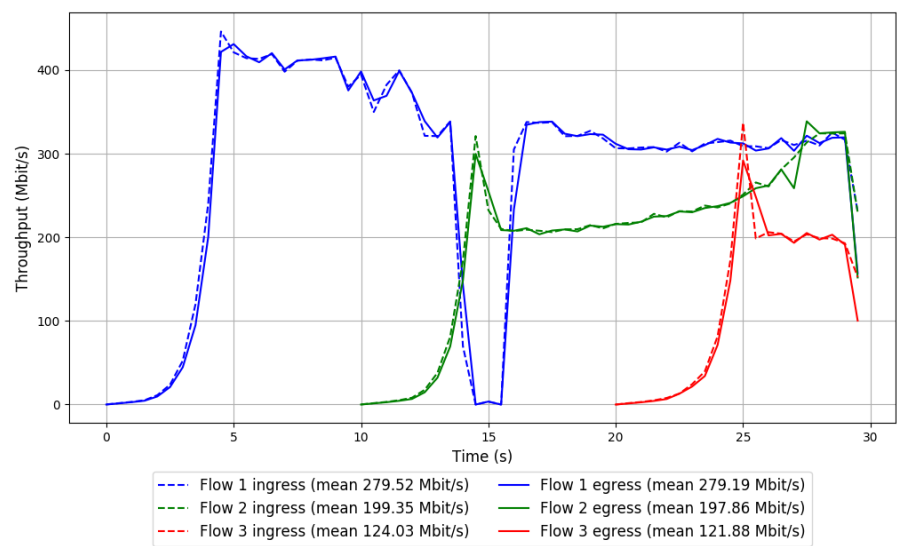


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-03-13 20:37:28
End at: 2018-03-13 20:37:58

# Below is generated by plot.py at 2018-03-14 04:58:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 449.68 Mbit/s
95th percentile per-packet one-way delay: 113.113 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 279.19 Mbit/s
95th percentile per-packet one-way delay: 112.622 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 197.86 Mbit/s
95th percentile per-packet one-way delay: 113.524 ms
Loss rate: 1.86%
-- Flow 3:
Average throughput: 121.88 Mbit/s
95th percentile per-packet one-way delay: 113.254 ms
Loss rate: 3.95%
```


Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-03-13 20:56:59

End at: 2018-03-13 20:57:29

Below is generated by plot.py at 2018-03-14 04:58:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 447.19 Mbit/s

95th percentile per-packet one-way delay: 114.270 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 294.06 Mbit/s

95th percentile per-packet one-way delay: 114.998 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 194.97 Mbit/s

95th percentile per-packet one-way delay: 112.536 ms

Loss rate: 1.03%

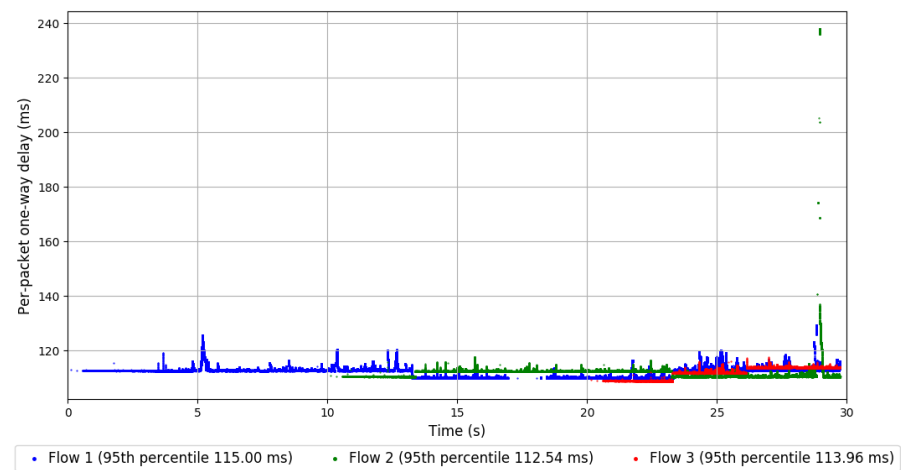
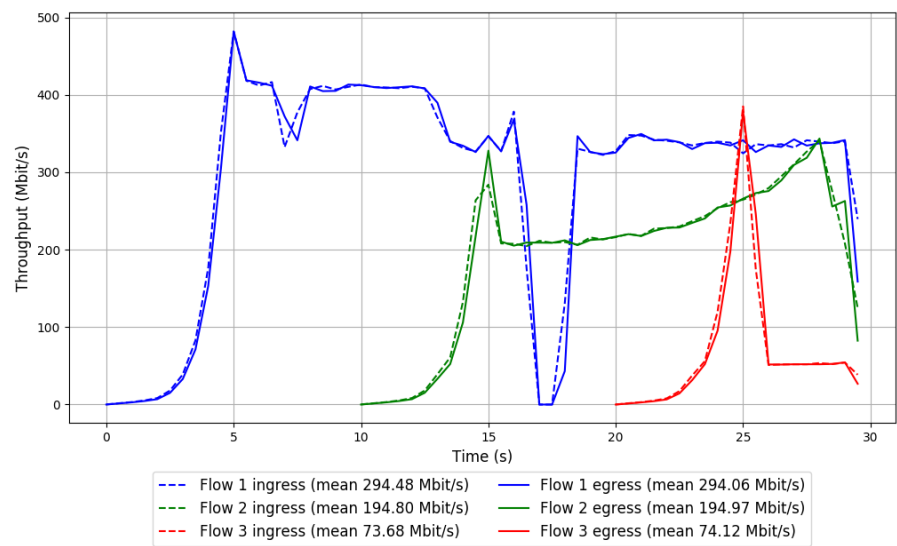
-- Flow 3:

Average throughput: 74.12 Mbit/s

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

Loss rate: 1.67%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-03-13 21:16:32

End at: 2018-03-13 21:17:02

Below is generated by plot.py at 2018-03-14 04:59:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 408.01 Mbit/s

95th percentile per-packet one-way delay: 115.503 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 237.94 Mbit/s

95th percentile per-packet one-way delay: 116.981 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 193.46 Mbit/s

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

Loss rate: 1.56%

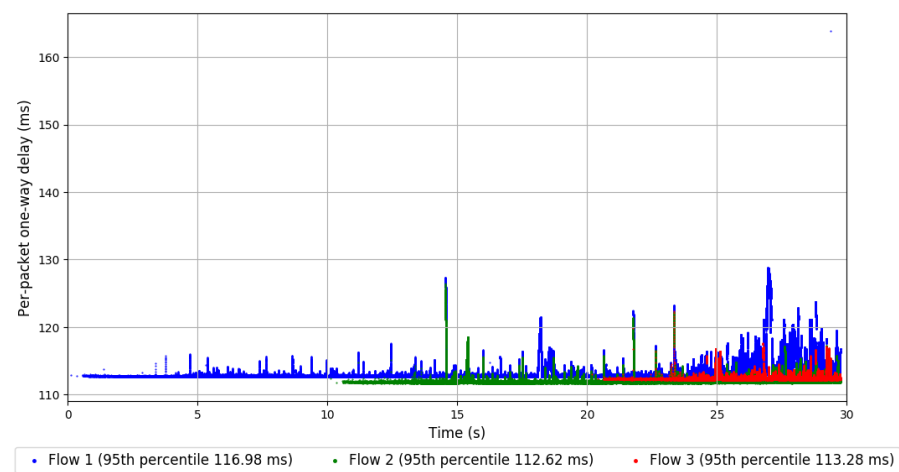
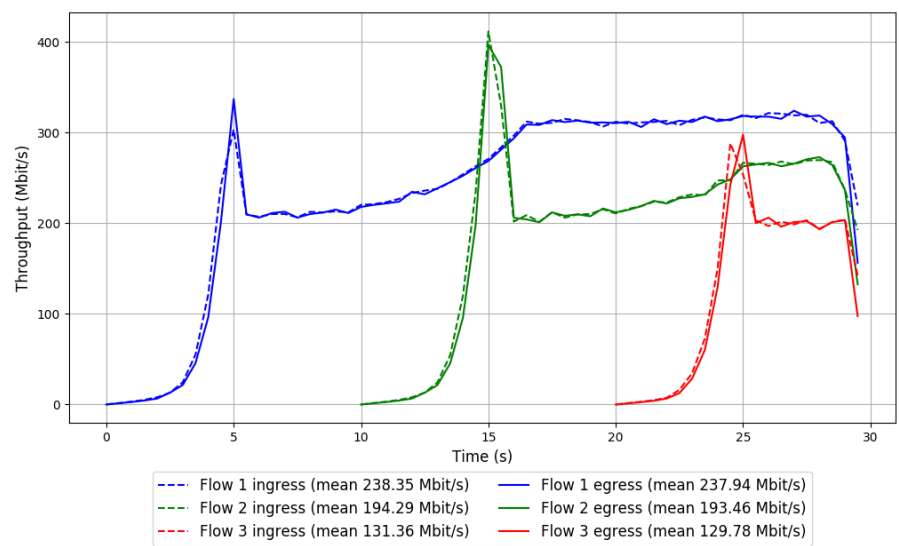
-- Flow 3:

Average throughput: 129.78 Mbit/s

95th percentile per-packet one-way delay: 113.285 ms

Loss rate: 3.48%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-03-13 21:36:03

End at: 2018-03-13 21:36:33

Below is generated by plot.py at 2018-03-14 05:01:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 456.35 Mbit/s

95th percentile per-packet one-way delay: 122.886 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 293.39 Mbit/s

95th percentile per-packet one-way delay: 114.223 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 183.52 Mbit/s

95th percentile per-packet one-way delay: 195.128 ms

Loss rate: 0.78%

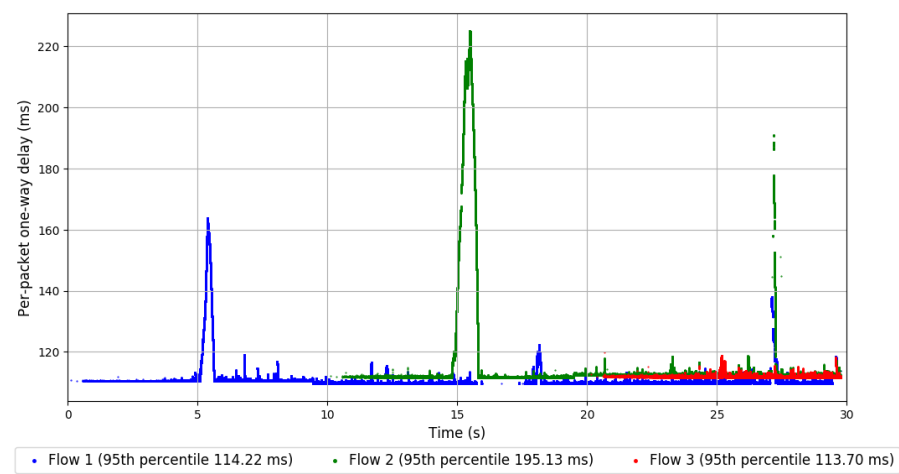
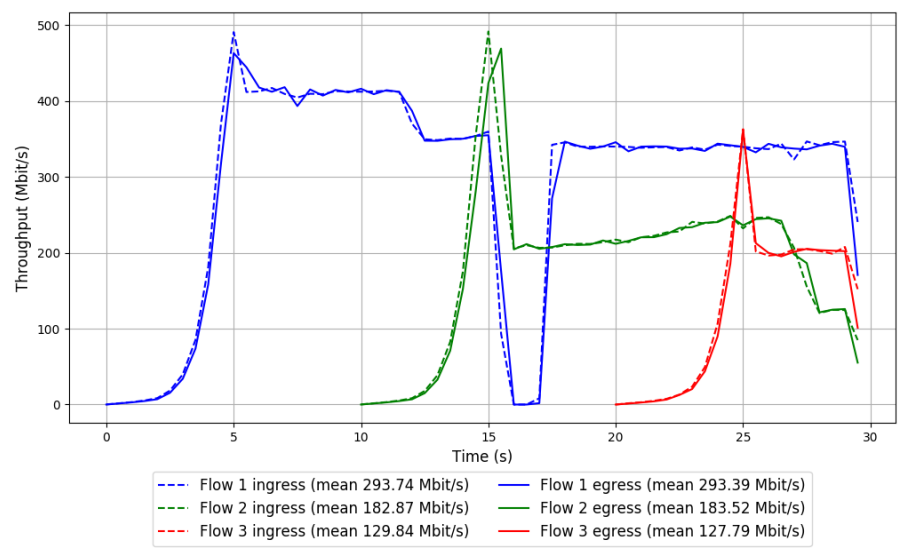
-- Flow 3:

Average throughput: 127.79 Mbit/s

95th percentile per-packet one-way delay: 113.696 ms

Loss rate: 3.83%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-03-13 21:55:38

End at: 2018-03-13 21:56:08

Below is generated by plot.py at 2018-03-14 05:01:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 445.06 Mbit/s

95th percentile per-packet one-way delay: 118.151 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 288.99 Mbit/s

95th percentile per-packet one-way delay: 122.929 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 189.54 Mbit/s

95th percentile per-packet one-way delay: 112.723 ms

Loss rate: 0.92%

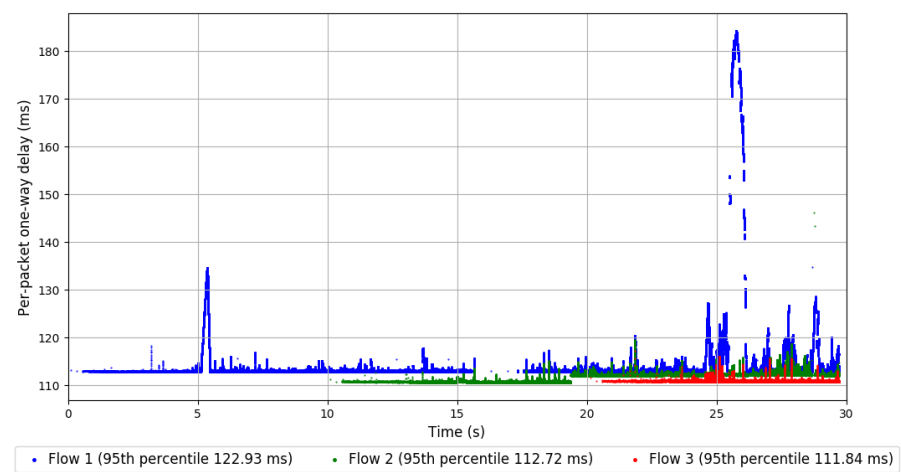
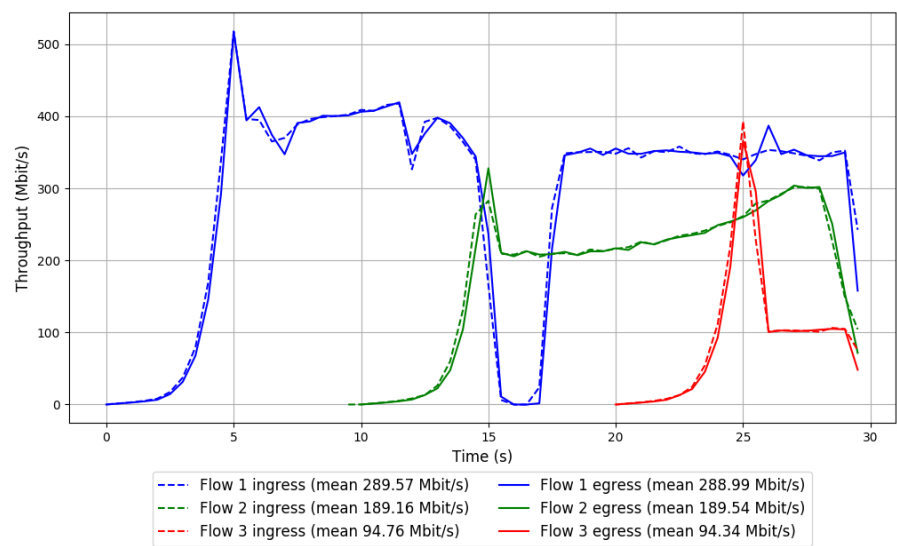
-- Flow 3:

Average throughput: 94.34 Mbit/s

95th percentile per-packet one-way delay: 111.843 ms

Loss rate: 2.72%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-03-13 22:14:28

End at: 2018-03-13 22:14:58

Below is generated by plot.py at 2018-03-14 05:03:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 470.36 Mbit/s

95th percentile per-packet one-way delay: 115.021 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 314.24 Mbit/s

95th percentile per-packet one-way delay: 116.145 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 188.42 Mbit/s

95th percentile per-packet one-way delay: 113.040 ms

Loss rate: 0.85%

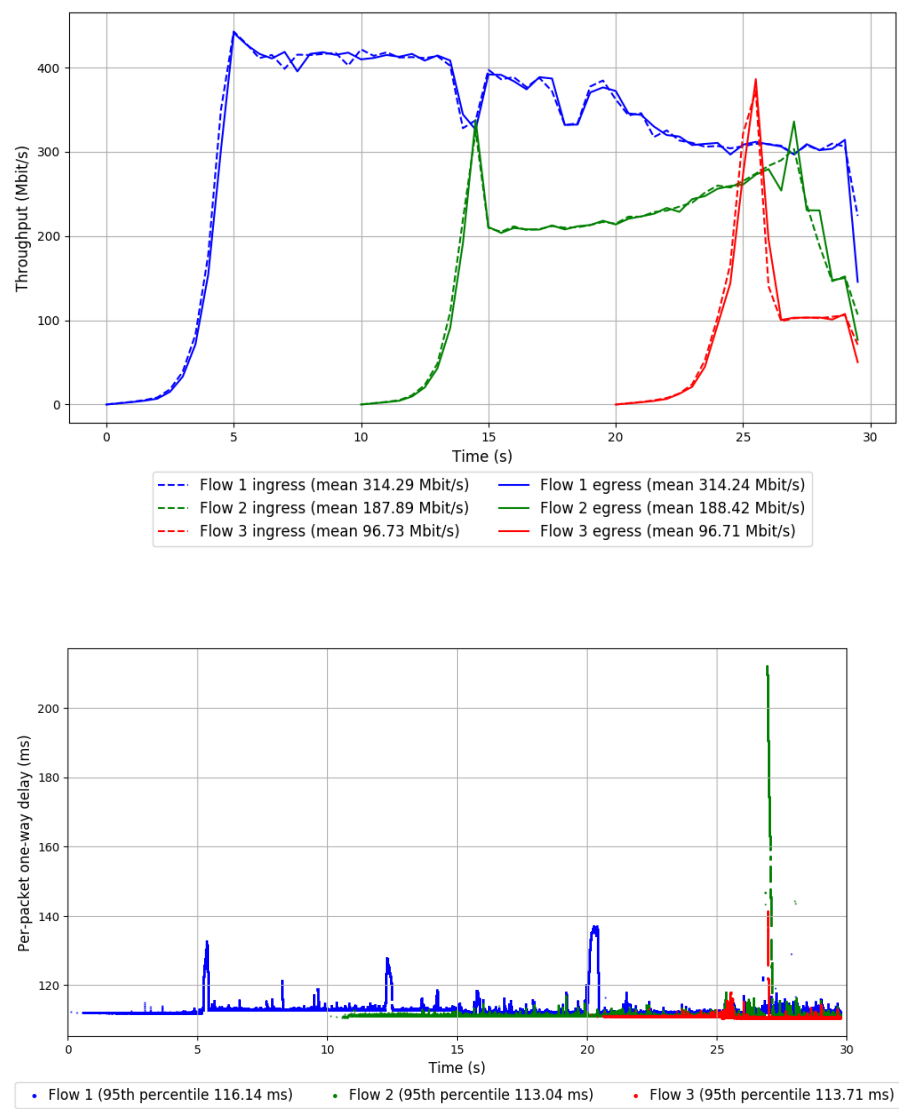
-- Flow 3:

Average throughput: 96.71 Mbit/s

95th percentile per-packet one-way delay: 113.711 ms

Loss rate: 2.30%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-03-13 22:33:36

End at: 2018-03-13 22:34:06

Below is generated by plot.py at 2018-03-14 05:03:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 437.42 Mbit/s

95th percentile per-packet one-way delay: 113.444 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 311.94 Mbit/s

95th percentile per-packet one-way delay: 114.377 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 120.37 Mbit/s

95th percentile per-packet one-way delay: 111.788 ms

Loss rate: 1.74%

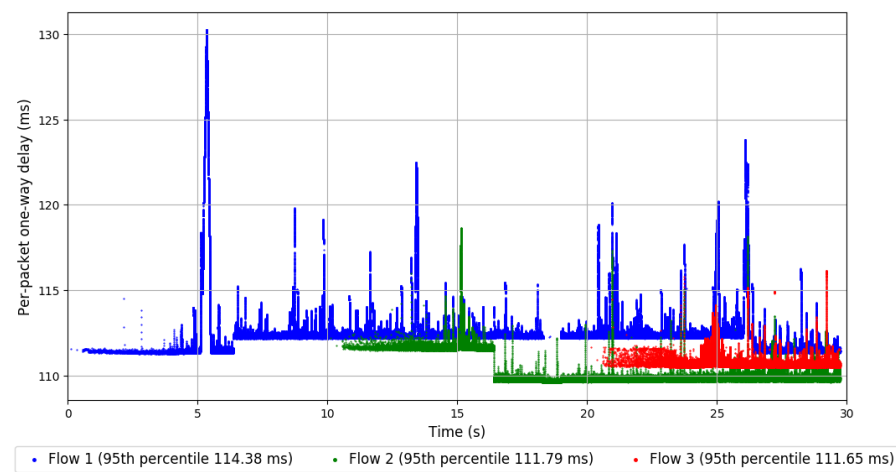
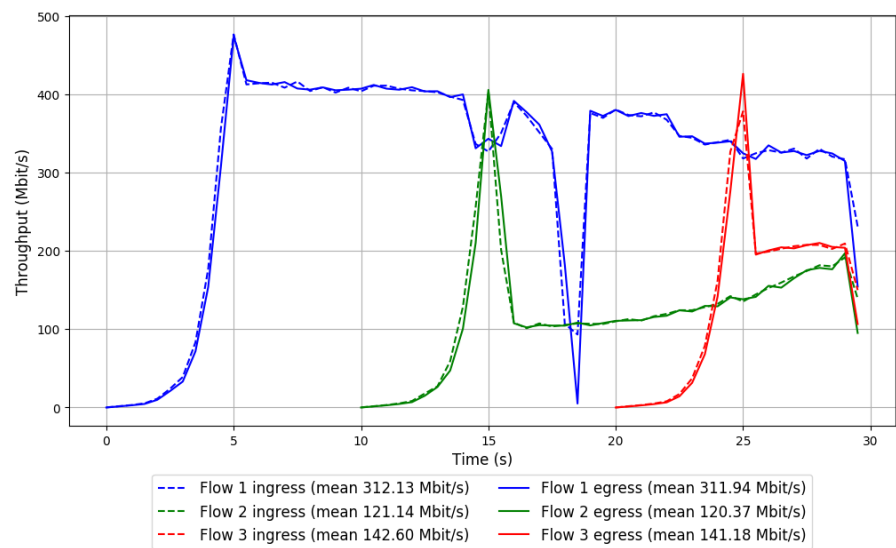
-- Flow 3:

Average throughput: 141.18 Mbit/s

95th percentile per-packet one-way delay: 111.649 ms

Loss rate: 3.22%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-03-13 22:53:05

End at: 2018-03-13 22:53:35

Below is generated by plot.py at 2018-03-14 05:03:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 444.42 Mbit/s

95th percentile per-packet one-way delay: 145.378 ms

Loss rate: 1.72%

-- Flow 1:

Average throughput: 219.12 Mbit/s

95th percentile per-packet one-way delay: 112.026 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 249.51 Mbit/s

95th percentile per-packet one-way delay: 162.709 ms

Loss rate: 2.46%

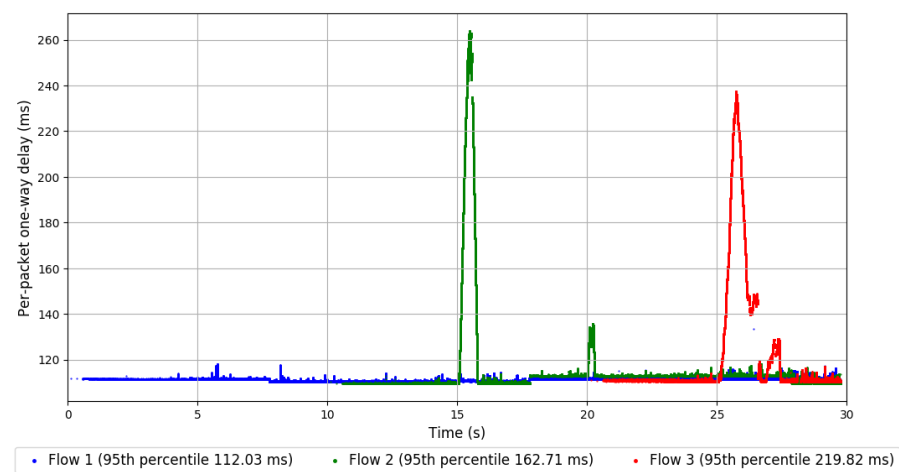
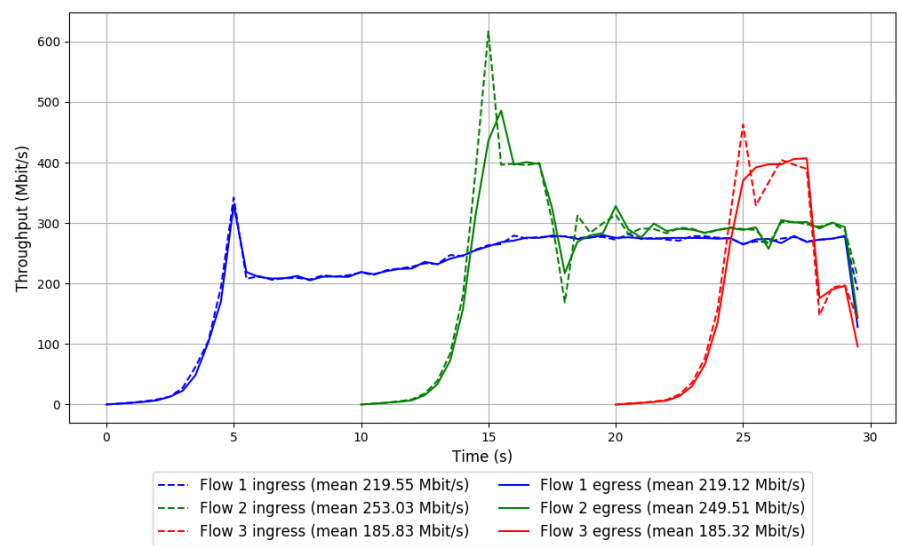
-- Flow 3:

Average throughput: 185.32 Mbit/s

95th percentile per-packet one-way delay: 219.817 ms

Loss rate: 2.47%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-03-13 23:12:03

End at: 2018-03-13 23:12:33

Below is generated by plot.py at 2018-03-14 05:04:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 489.87 Mbit/s

95th percentile per-packet one-way delay: 158.114 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 336.61 Mbit/s

95th percentile per-packet one-way delay: 203.227 ms

Loss rate: 1.43%

-- Flow 2:

Average throughput: 185.43 Mbit/s

95th percentile per-packet one-way delay: 111.276 ms

Loss rate: 1.48%

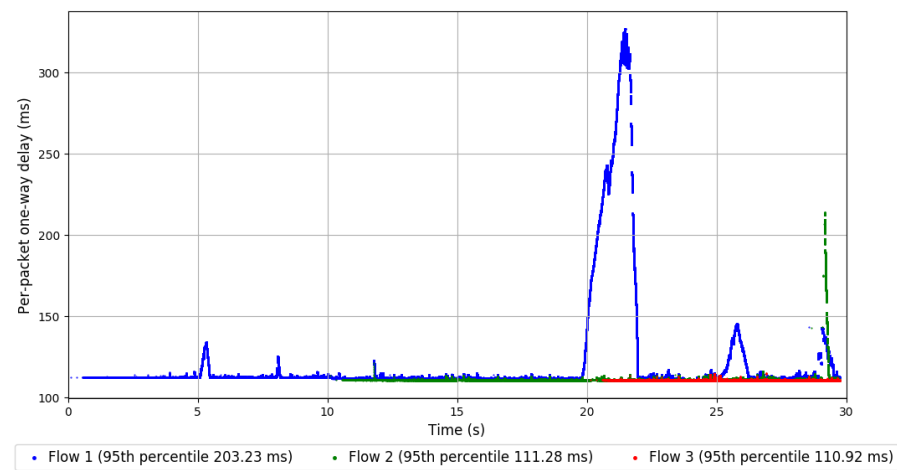
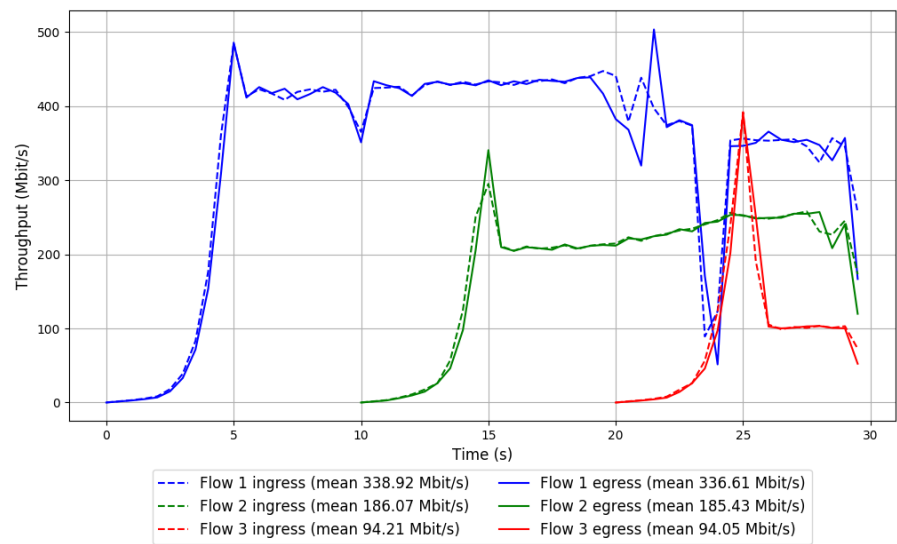
-- Flow 3:

Average throughput: 94.05 Mbit/s

95th percentile per-packet one-way delay: 110.916 ms

Loss rate: 2.45%

Run 9: Report of Vivace-LTE — Data Link



```
Run 10: Statistics of Vivace-LTE

Start at: 2018-03-13 23:31:35
End at: 2018-03-13 23:32:05

# Below is generated by plot.py at 2018-03-14 05:04:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.51 Mbit/s
95th percentile per-packet one-way delay: 116.278 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 282.84 Mbit/s
95th percentile per-packet one-way delay: 116.603 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 181.12 Mbit/s
95th percentile per-packet one-way delay: 112.167 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 132.03 Mbit/s
95th percentile per-packet one-way delay: 153.926 ms
Loss rate: 3.78%
```

Run 10: Report of Vivace-LTE — Data Link

