

Pantheon Report

Generated at 2018-01-18 13:41:03 (UTC).

Data path: AWS Brazil 2 Ethernet (*local*) → Colombia ppp0 (*remote*).

Repeated the test of 17 congestion control schemes 3 times.

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

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

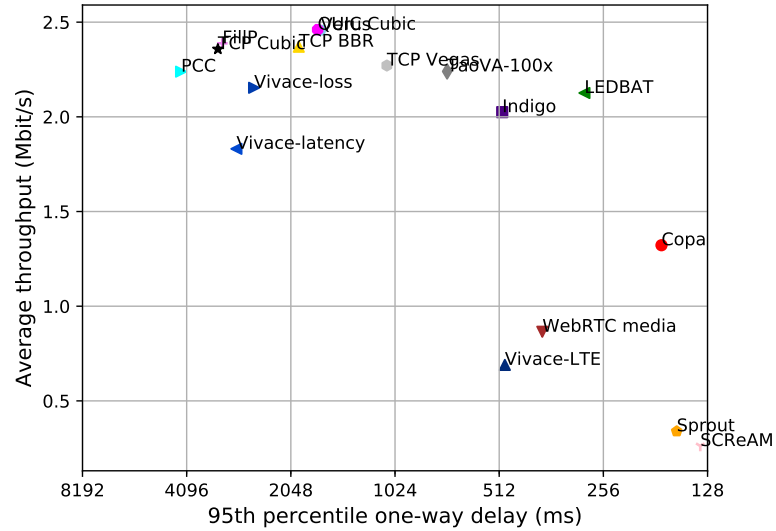
Tested BBR with qdisc of Fair Queuing (*fq*), and other schemes with the default Linux qdisc (*pfifo_fast*).

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

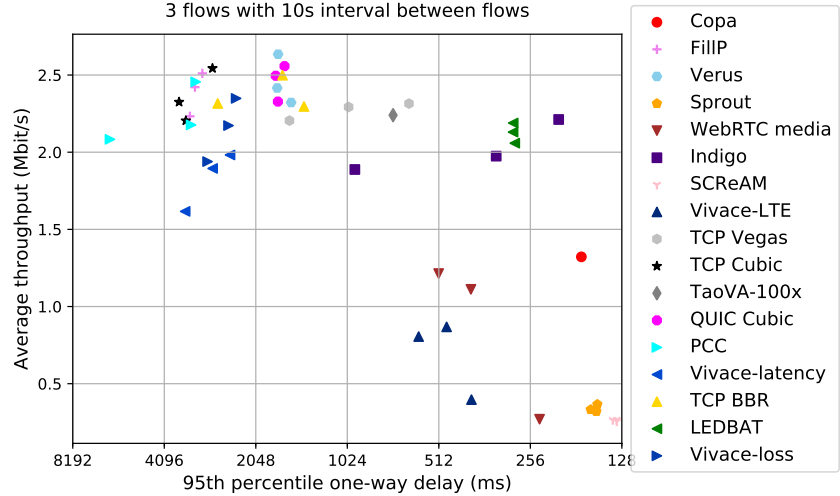
Git summary:

```
branch: master @ 54510ce29f849c716ac5c8199ca1604b6abdfbc3
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ ec9585325218d5048c4d4152fa42240af54c6e67
third_party/genericCC @ 80b516c448f795fd6e9675f7177b69c622f07da8
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaaeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 423cbca3e8ea1d599e7b5cf725835e8a2b6bfac6
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

test from AWS Brazil 2 Ethernet to Colombia ppp0, 3 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS Brazil 2 Ethernet to Colombia ppp0, 3 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	3	1.58	0.87	0.86	1501.46	1903.09	2025.74	3.55	5.74	18.99
TCP Cubic	3	2.27	0.12	0.05	3331.79	2999.12	3071.13	12.05	39.79	51.43
LEDBAT	3	1.74	0.37	0.41	283.99	295.81	316.65	0.35	0.37	3.75
PCC	3	1.54	0.90	0.43	4030.81	4207.06	3735.75	59.76	63.40	44.38
QUIC Cubic	3	1.86	0.77	0.25	1689.74	1742.87	1784.00	4.54	8.51	26.96
SCReAM	3	0.08	0.15	0.20	130.72	130.27	134.62	0.09	0.00	0.34
WebRTC media	3	0.59	0.20	0.08	388.01	378.23	334.09	0.28	0.14	1.82
Sprout	3	0.15	0.18	0.19	163.99	153.38	155.69	0.00	0.23	1.08
TaoVA-100x	1	1.23	1.01	1.05	454.78	574.20	1308.76	0.74	1.13	4.08
TCP Vegas	3	1.59	0.78	0.57	1023.73	1093.82	1168.04	1.89	4.04	8.55
Verus	3	2.44	0.01	0.01	1679.17	1644.43	1717.97	5.13	4.84	9.09
Copa	1	2.58	1.57	0.80	3103.55	170.30	180.70	0.00	0.15	0.61
FillP	3	2.02	0.62	0.19	3205.13	3242.13	3116.50	94.36	99.46	99.86
Indigo	3	1.00	0.77	1.60	230.18	355.47	551.35	0.07	0.26	0.64
Vivace-latency	3	1.04	1.18	0.00	2926.52	2958.50	2884.25	22.88	33.08	19.52
Vivace-loss	3	2.15	0.00	0.00	2614.82	2583.19	2202.06	39.69	24.84	37.36
Vivace-LTE	3	0.31	0.29	0.57	482.23	433.78	521.82	1.98	0.01	0.07

Run 1: Statistics of TCP BBR

Start at: 2018-01-18 12:51:54

End at: 2018-01-18 12:52:24

Local clock offset: -0.67 ms

Remote clock offset: 1.01 ms

Below is generated by plot.py at 2018-01-18 13:40:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.32 Mbit/s

95th percentile per-packet one-way delay: 2733.130 ms

Loss rate: 9.95%

-- Flow 1:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 1582.056 ms

Loss rate: 5.39%

-- Flow 2:

Average throughput: 0.80 Mbit/s

95th percentile per-packet one-way delay: 2583.182 ms

Loss rate: 9.48%

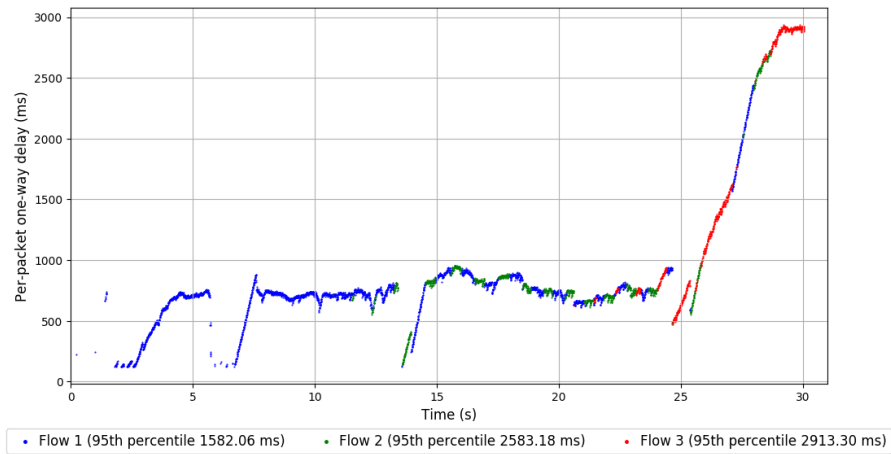
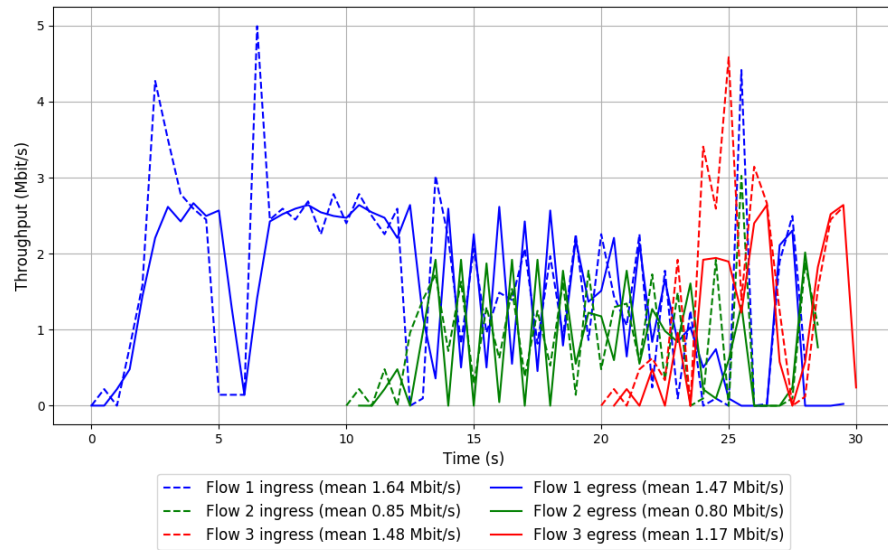
-- Flow 3:

Average throughput: 1.17 Mbit/s

95th percentile per-packet one-way delay: 2913.303 ms

Loss rate: 24.79%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-01-18 13:14:30

End at: 2018-01-18 13:15:00

Local clock offset: -0.358 ms

Remote clock offset: -3.9 ms

Below is generated by plot.py at 2018-01-18 13:40:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 1421.613 ms

Loss rate: 3.07%

-- Flow 1:

Average throughput: 1.61 Mbit/s

95th percentile per-packet one-way delay: 1269.678 ms

Loss rate: 1.80%

-- Flow 2:

Average throughput: 0.89 Mbit/s

95th percentile per-packet one-way delay: 1461.421 ms

Loss rate: 2.33%

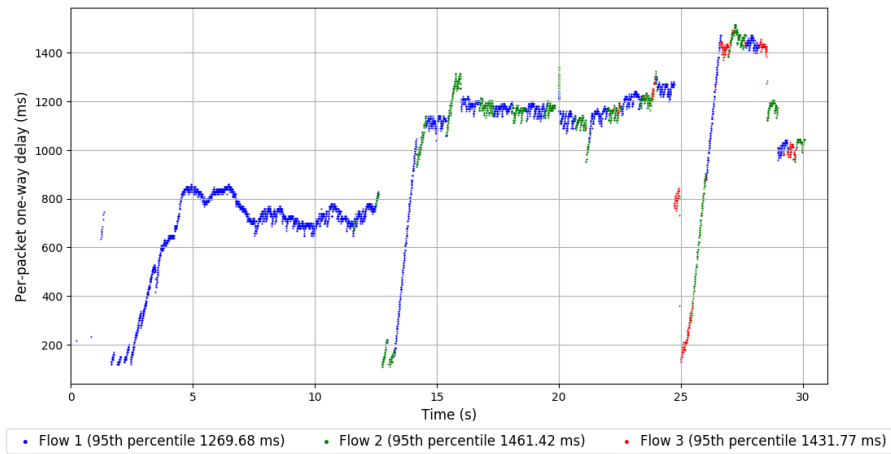
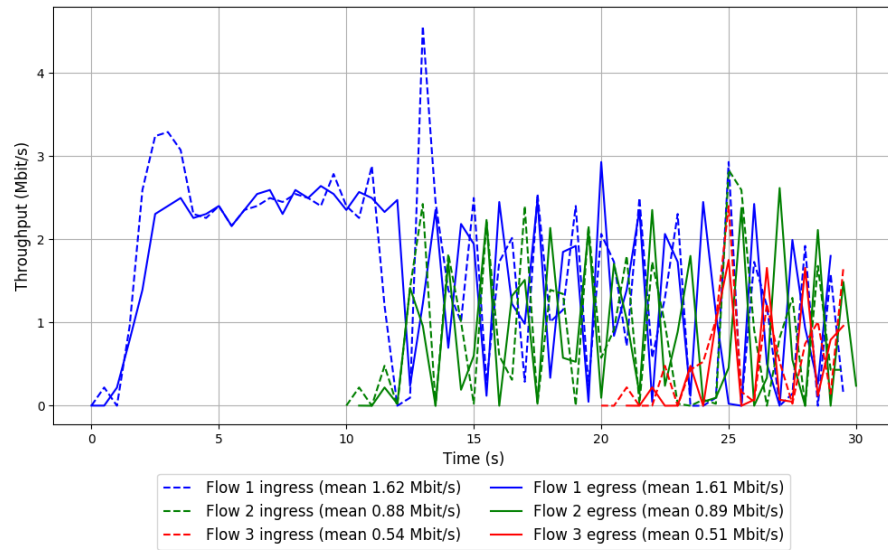
-- Flow 3:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 1431.773 ms

Loss rate: 16.92%

Run 2: Report of TCP BBR — Data Link

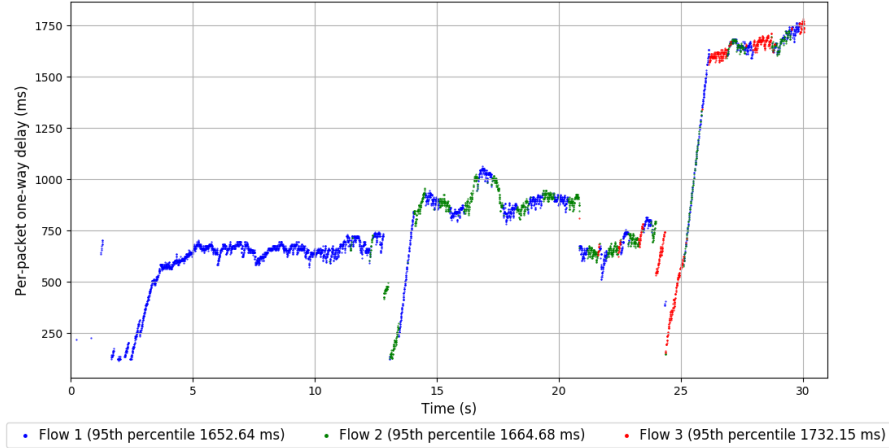
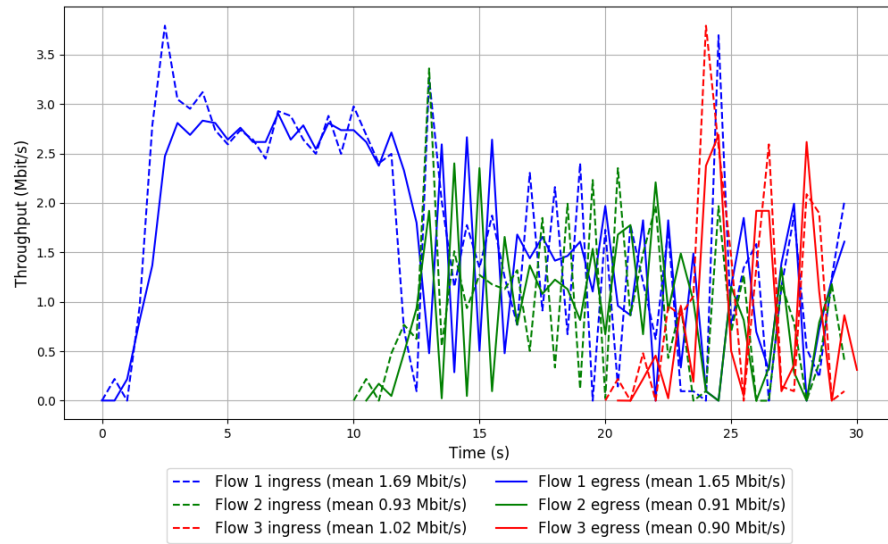


Run 3: Statistics of TCP BBR

Start at: 2018-01-18 13:37:06
End at: 2018-01-18 13:37:36
Local clock offset: -0.384 ms
Remote clock offset: -3.611 ms

Below is generated by plot.py at 2018-01-18 13:40:08
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.50 Mbit/s
95th percentile per-packet one-way delay: 1672.861 ms
Loss rate: 5.38%
-- Flow 1:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 1652.645 ms
Loss rate: 3.45%
-- Flow 2:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 1664.677 ms
Loss rate: 5.40%
-- Flow 3:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 1732.155 ms
Loss rate: 15.26%

Run 3: Report of TCP BBR — Data Link

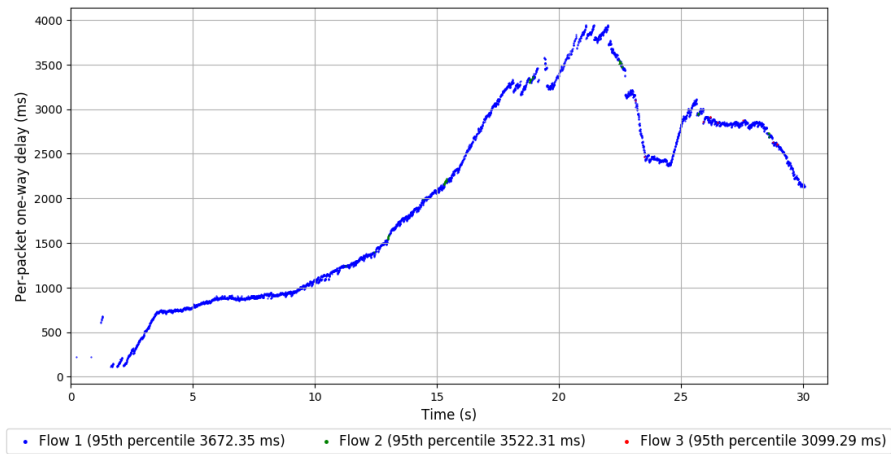
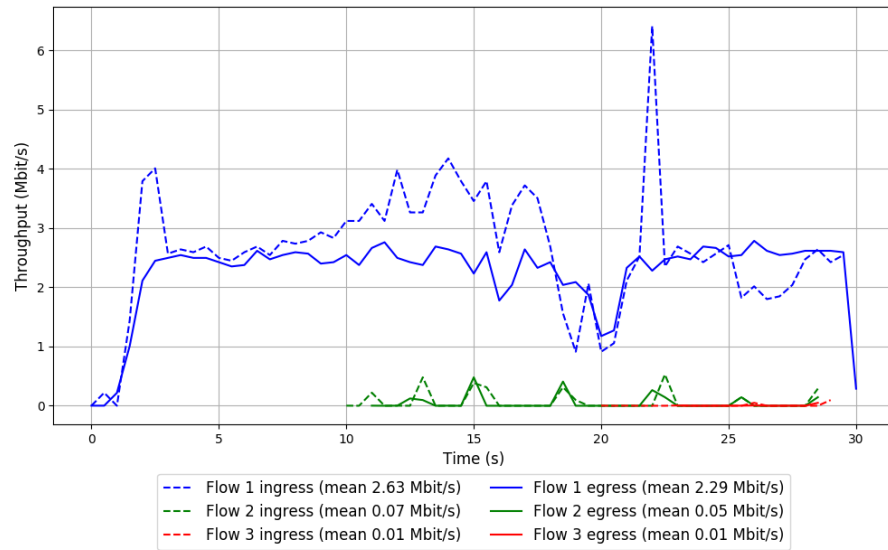


Run 1: Statistics of TCP Cubic

Start at: 2018-01-18 12:33:06
End at: 2018-01-18 12:33:36
Local clock offset: -0.959 ms
Remote clock offset: -3.758 ms

Below is generated by plot.py at 2018-01-18 13:40:08
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 3661.781 ms
Loss rate: 13.54%
-- Flow 1:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 3672.347 ms
Loss rate: 13.12%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3522.306 ms
Loss rate: 34.68%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 3099.292 ms
Loss rate: 61.45%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-01-18 12:55:39

End at: 2018-01-18 12:56:09

Local clock offset: -0.527 ms

Remote clock offset: 0.967 ms

Below is generated by plot.py at 2018-01-18 13:40:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.54 Mbit/s

95th percentile per-packet one-way delay: 2843.185 ms

Loss rate: 9.68%

-- Flow 1:

Average throughput: 2.50 Mbit/s

95th percentile per-packet one-way delay: 2843.209 ms

Loss rate: 8.79%

-- Flow 2:

Average throughput: 0.02 Mbit/s

95th percentile per-packet one-way delay: 2043.558 ms

Loss rate: 49.78%

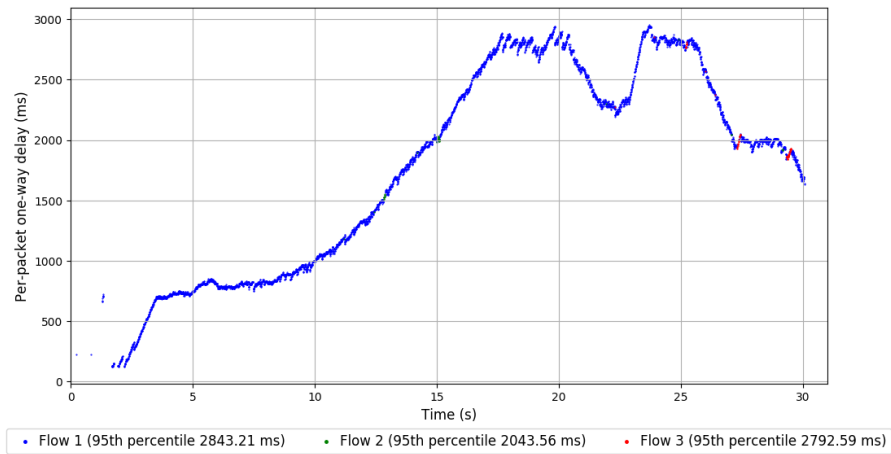
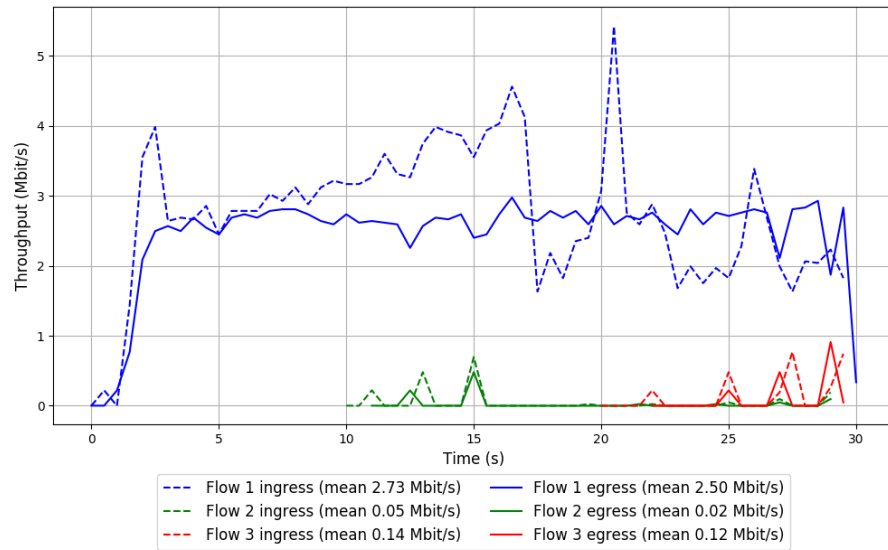
-- Flow 3:

Average throughput: 0.12 Mbit/s

95th percentile per-packet one-way delay: 2792.592 ms

Loss rate: 37.71%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-01-18 13:18:15

End at: 2018-01-18 13:18:45

Local clock offset: -0.385 ms

Remote clock offset: 0.978 ms

Below is generated by plot.py at 2018-01-18 13:40:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.20 Mbit/s

95th percentile per-packet one-way delay: 3479.222 ms

Loss rate: 16.41%

-- Flow 1:

Average throughput: 2.03 Mbit/s

95th percentile per-packet one-way delay: 3479.827 ms

Loss rate: 14.23%

-- Flow 2:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 3431.507 ms

Loss rate: 34.92%

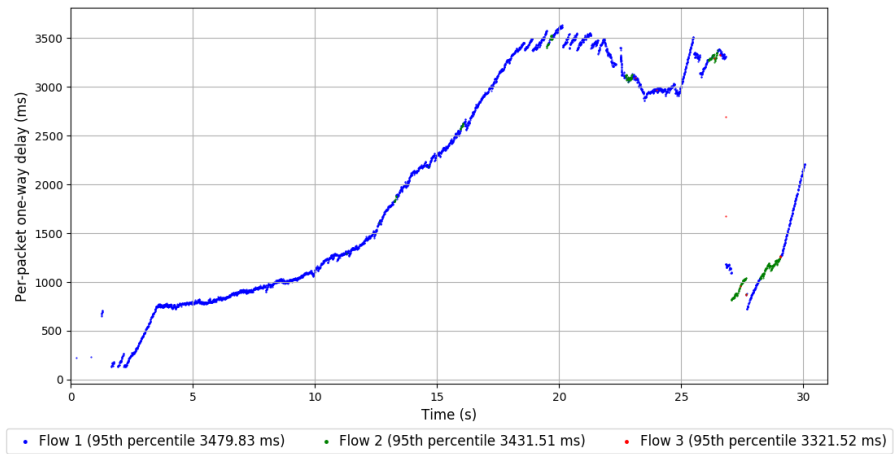
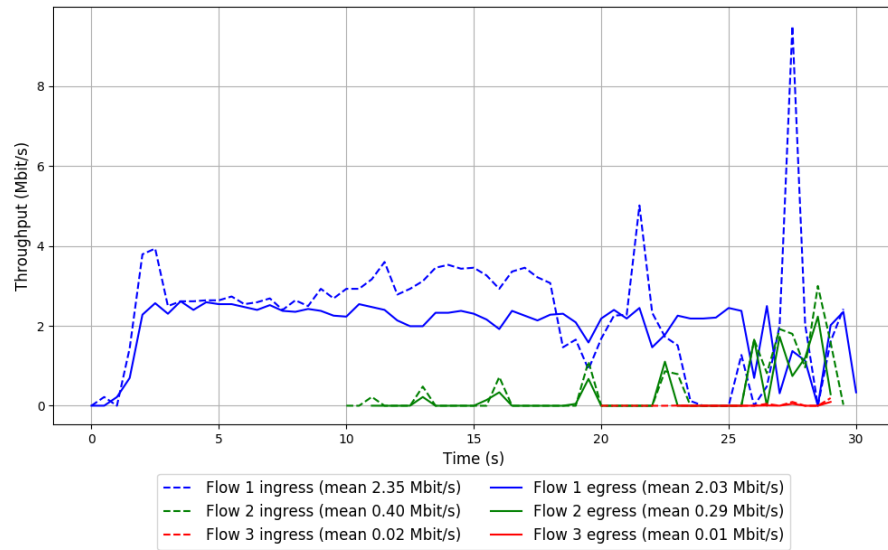
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 3321.518 ms

Loss rate: 55.14%

Run 3: Report of TCP Cubic — Data Link



Run 1: Statistics of LEDBAT

Start at: 2018-01-18 12:53:09

End at: 2018-01-18 12:53:39

Local clock offset: -0.621 ms

Remote clock offset: 0.911 ms

Below is generated by plot.py at 2018-01-18 13:40:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 291.528 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 1.81 Mbit/s

95th percentile per-packet one-way delay: 281.842 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 300.621 ms

Loss rate: 0.96%

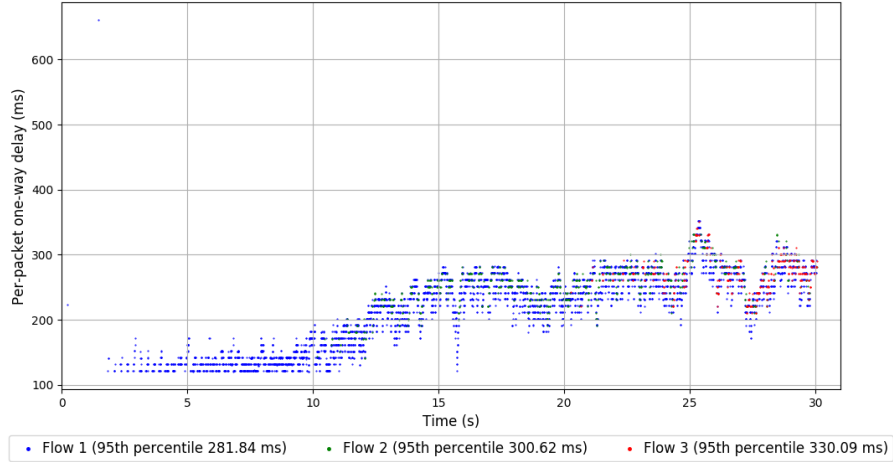
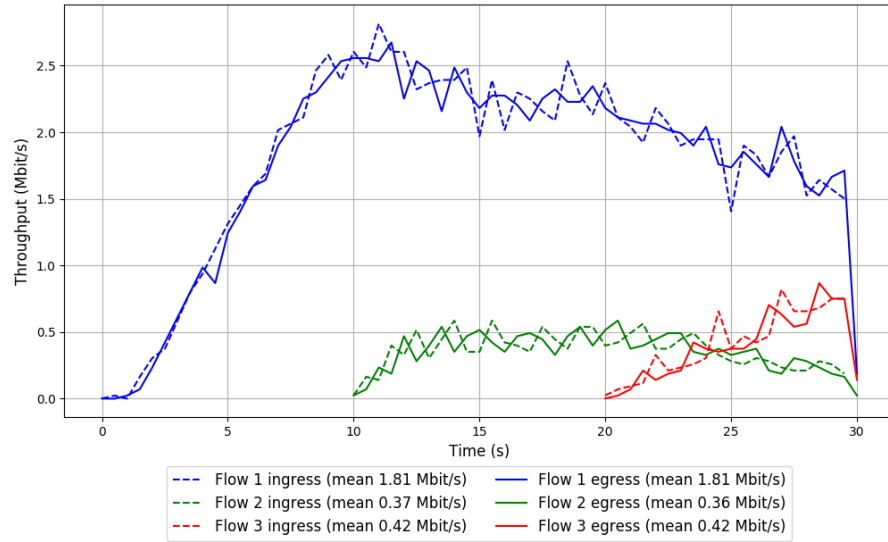
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 330.094 ms

Loss rate: 2.53%

Run 1: Report of LEDBAT — Data Link

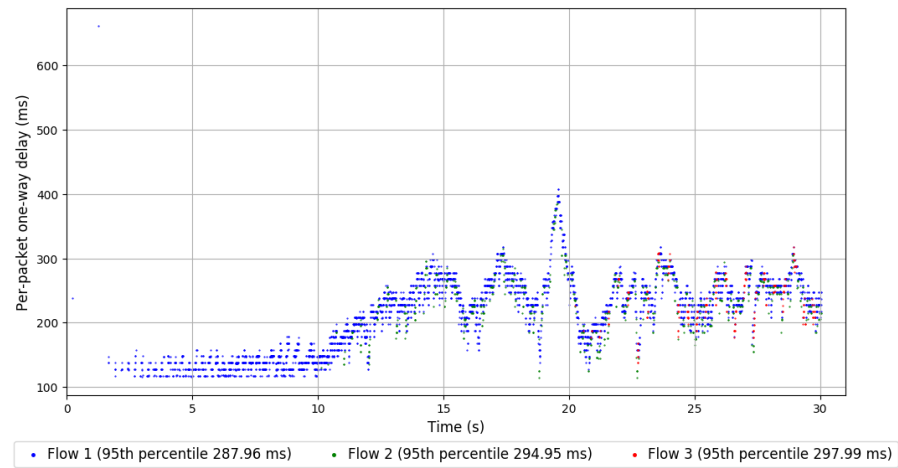
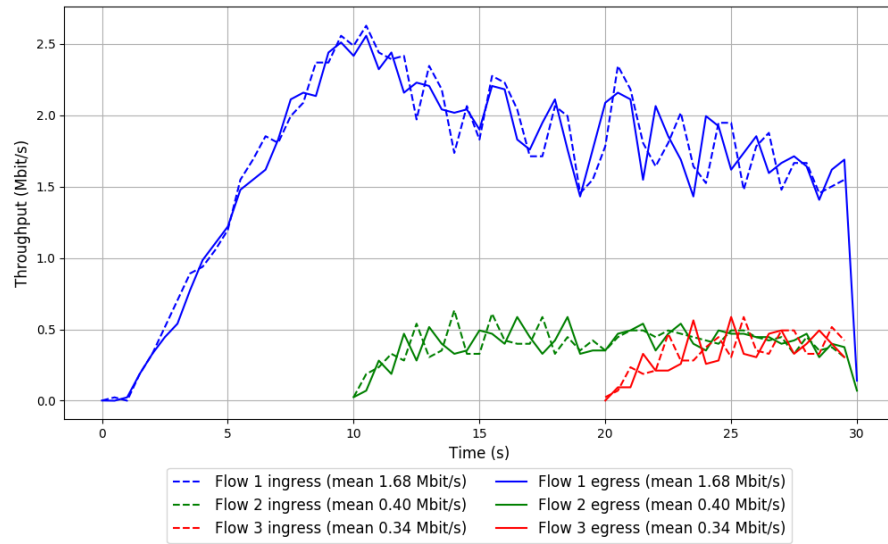


Run 2: Statistics of LEDBAT

Start at: 2018-01-18 13:15:45
End at: 2018-01-18 13:16:15
Local clock offset: -0.291 ms
Remote clock offset: -3.822 ms

Below is generated by plot.py at 2018-01-18 13:40:08
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 288.033 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 287.961 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 294.953 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 297.994 ms
Loss rate: 4.88%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-01-18 13:38:21

End at: 2018-01-18 13:38:51

Local clock offset: -0.273 ms

Remote clock offset: 1.186 ms

Below is generated by plot.py at 2018-01-18 13:40:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 291.849 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 1.74 Mbit/s

95th percentile per-packet one-way delay: 282.180 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 291.849 ms

Loss rate: 0.00%

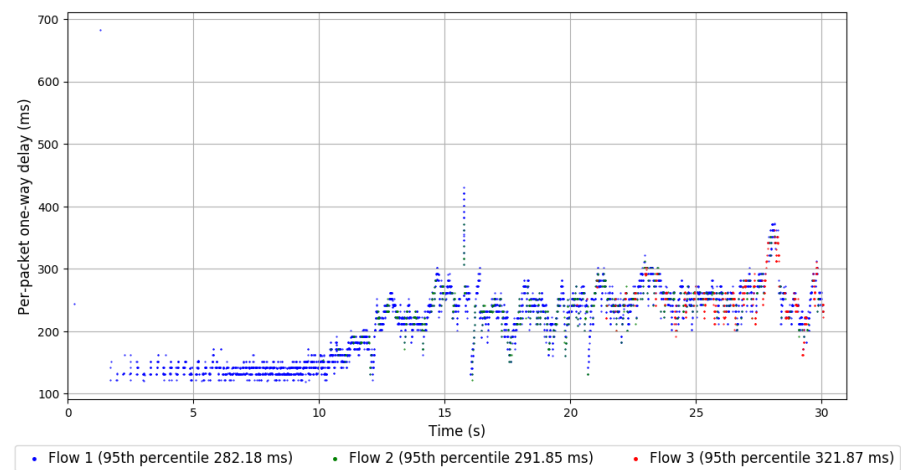
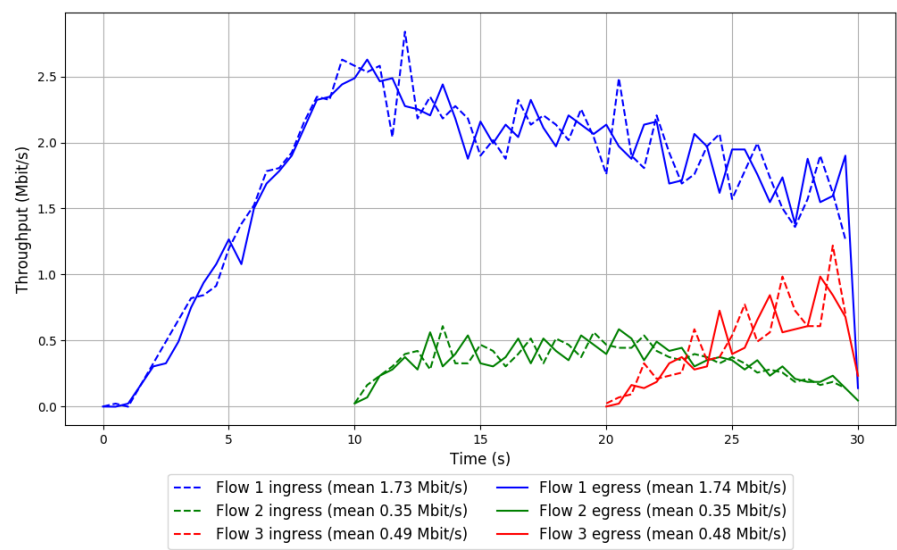
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 321.870 ms

Loss rate: 3.85%

Run 3: Report of LEDBAT — Data Link

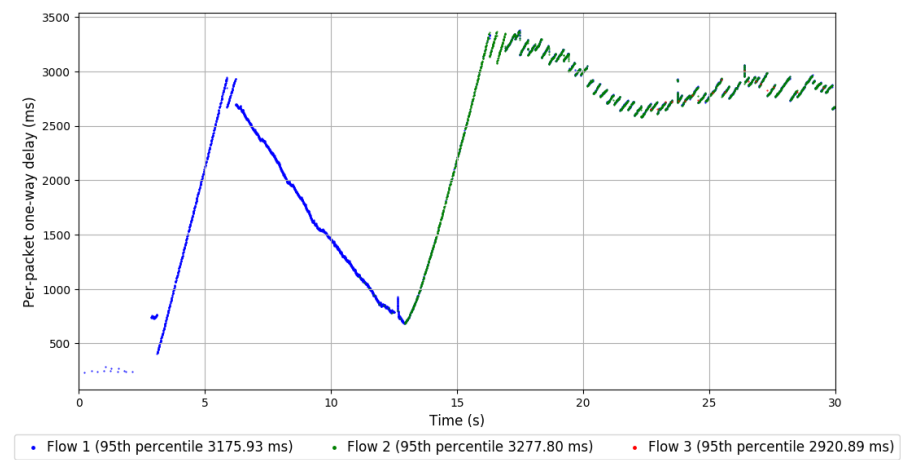
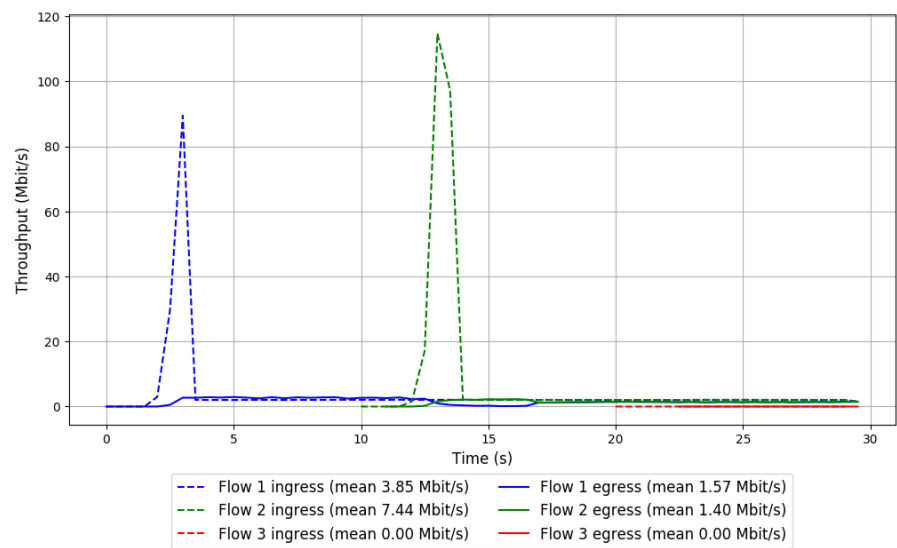


```
Run 1: Statistics of PCC

Start at: 2018-01-18 12:36:51
End at: 2018-01-18 12:37:21
Local clock offset: -0.753 ms
Remote clock offset: 1.022 ms

# Below is generated by plot.py at 2018-01-18 13:40:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.46 Mbit/s
95th percentile per-packet one-way delay: 3228.988 ms
Loss rate: 72.23%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 3175.930 ms
Loss rate: 59.50%
-- Flow 2:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 3277.800 ms
Loss rate: 82.15%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2920.895 ms
Loss rate: 20.53%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2018-01-18 12:59:25

End at: 2018-01-18 12:59:55

Local clock offset: -0.474 ms

Remote clock offset: 0.85 ms

Below is generated by plot.py at 2018-01-18 13:40:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 6179.871 ms

Loss rate: 93.16%

-- Flow 1:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 5627.541 ms

Loss rate: 65.23%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 6393.898 ms

Loss rate: 96.91%

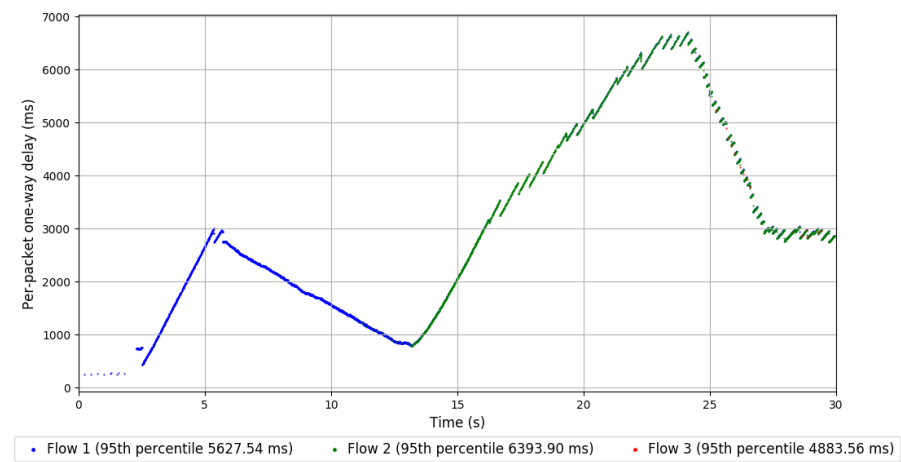
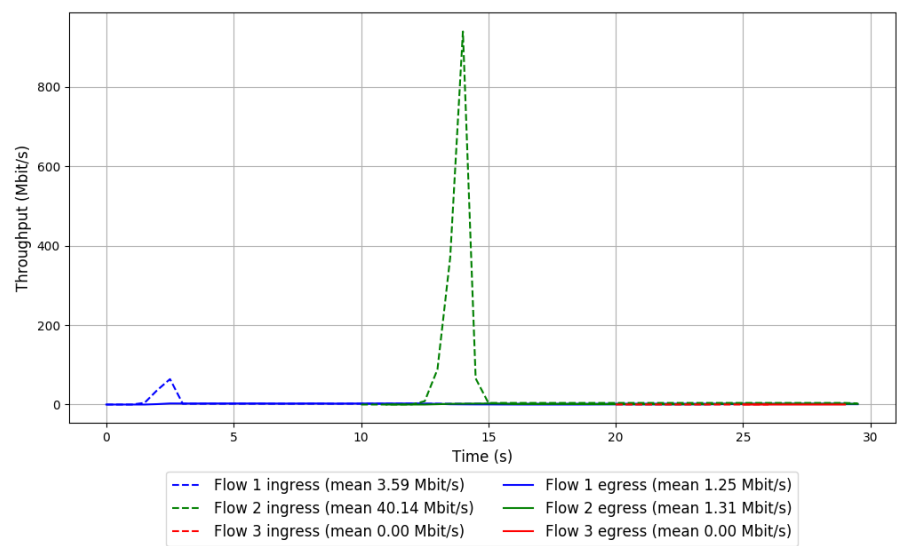
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4883.555 ms

Loss rate: 14.61%

Run 2: Report of PCC — Data Link

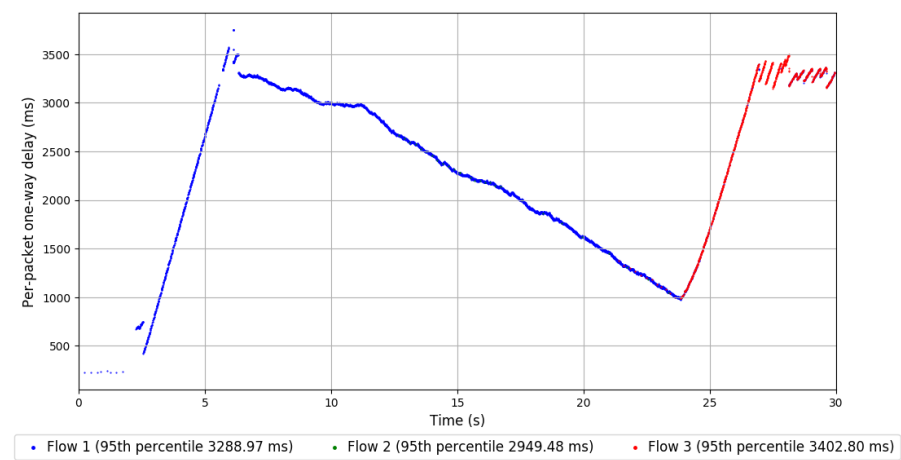
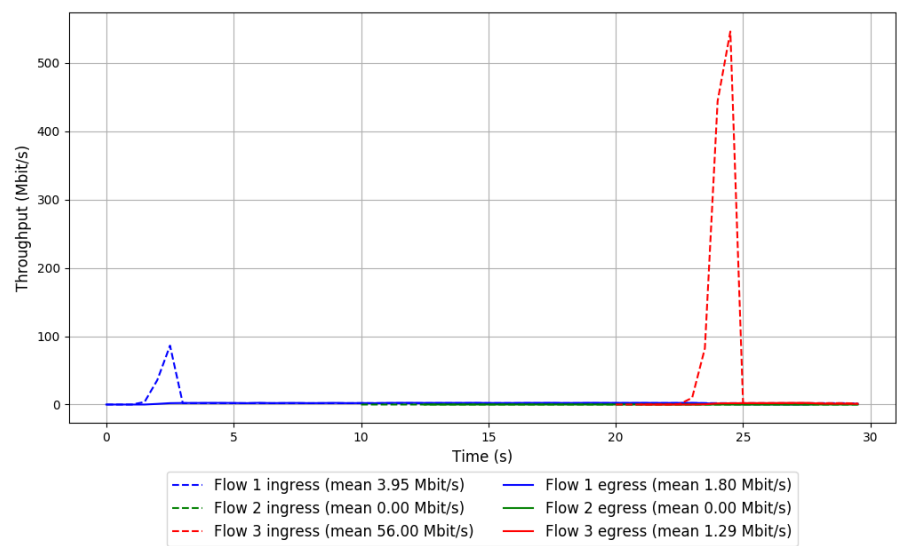


Run 3: Statistics of PCC

Start at: 2018-01-18 13:21:59
End at: 2018-01-18 13:22:29
Local clock offset: -0.361 ms
Remote clock offset: -3.813 ms

Below is generated by plot.py at 2018-01-18 13:40:35
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 3343.116 ms
Loss rate: 90.33%
-- Flow 1:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 3288.971 ms
Loss rate: 54.55%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2949.484 ms
Loss rate: 11.15%
-- Flow 3:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 3402.799 ms
Loss rate: 98.00%

Run 3: Report of PCC — Data Link

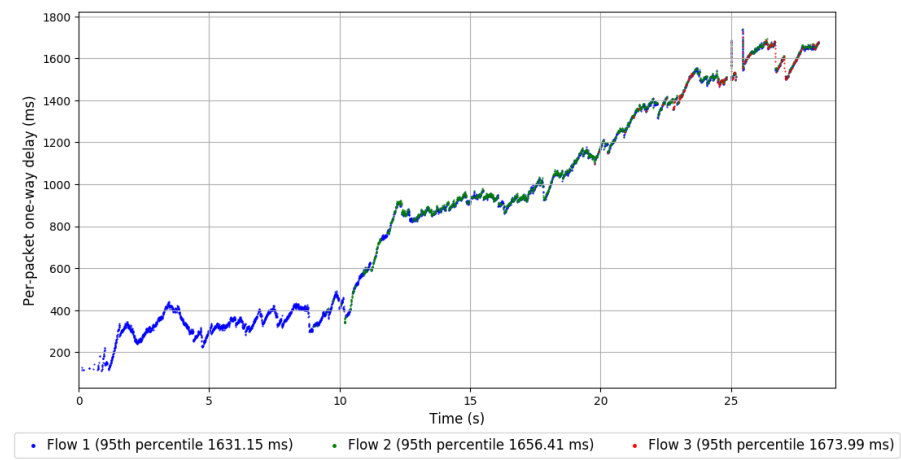
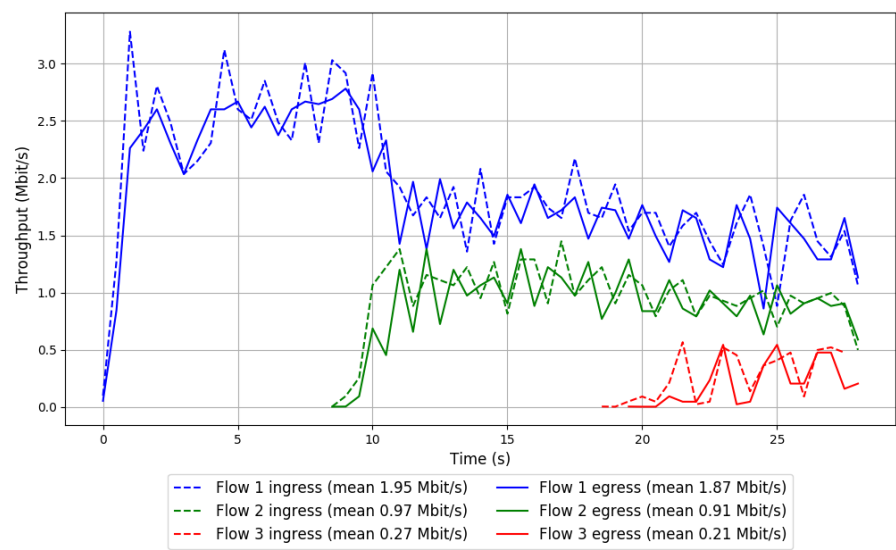


Run 1: Statistics of QUIC Cubic

Start at: 2018-01-18 12:45:39
End at: 2018-01-18 12:46:09
Local clock offset: -0.688 ms
Remote clock offset: -3.913 ms

Below is generated by plot.py at 2018-01-18 13:40:35
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 1647.493 ms
Loss rate: 5.91%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 1631.146 ms
Loss rate: 4.35%
-- Flow 2:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 1656.415 ms
Loss rate: 7.76%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 1673.993 ms
Loss rate: 26.41%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-01-18 13:08:13

End at: 2018-01-18 13:08:43

Local clock offset: -0.307 ms

Remote clock offset: 0.985 ms

Below is generated by plot.py at 2018-01-18 13:40:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.50 Mbit/s

95th percentile per-packet one-way delay: 1761.023 ms

Loss rate: 6.36%

-- Flow 1:

Average throughput: 1.98 Mbit/s

95th percentile per-packet one-way delay: 1741.137 ms

Loss rate: 4.74%

-- Flow 2:

Average throughput: 0.61 Mbit/s

95th percentile per-packet one-way delay: 1770.185 ms

Loss rate: 8.58%

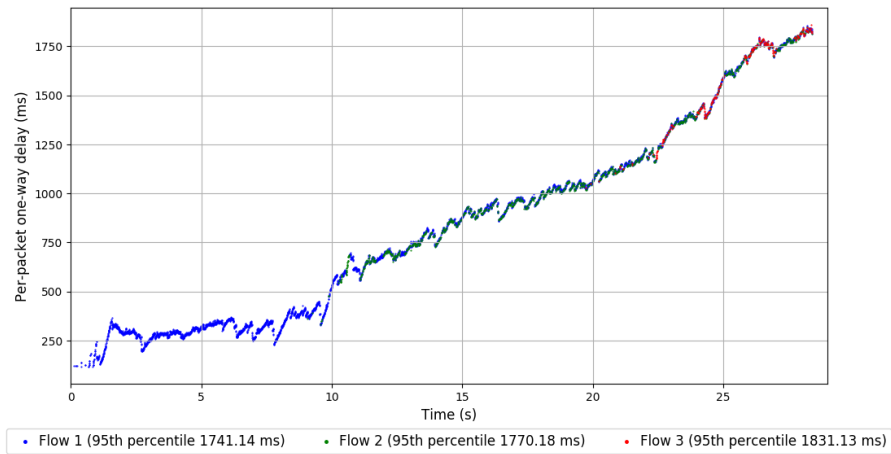
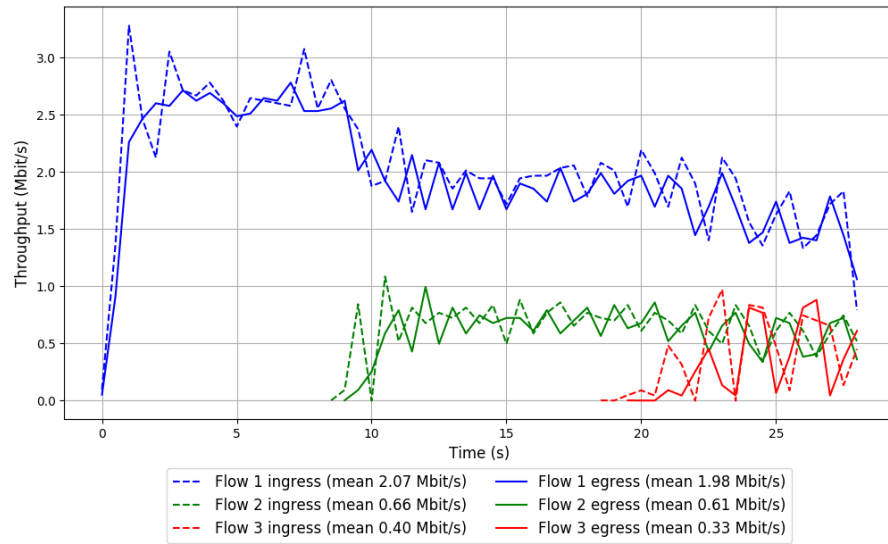
-- Flow 3:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 1831.128 ms

Loss rate: 23.83%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-01-18 13:30:49

End at: 2018-01-18 13:31:19

Local clock offset: -0.368 ms

Remote clock offset: 1.054 ms

Below is generated by plot.py at 2018-01-18 13:40:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.33 Mbit/s

95th percentile per-packet one-way delay: 1732.512 ms

Loss rate: 6.54%

-- Flow 1:

Average throughput: 1.74 Mbit/s

95th percentile per-packet one-way delay: 1696.936 ms

Loss rate: 4.54%

-- Flow 2:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 1802.011 ms

Loss rate: 9.20%

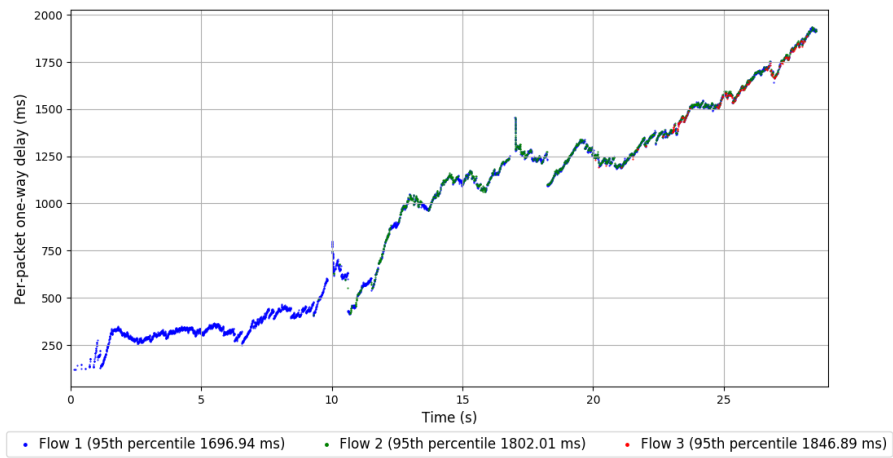
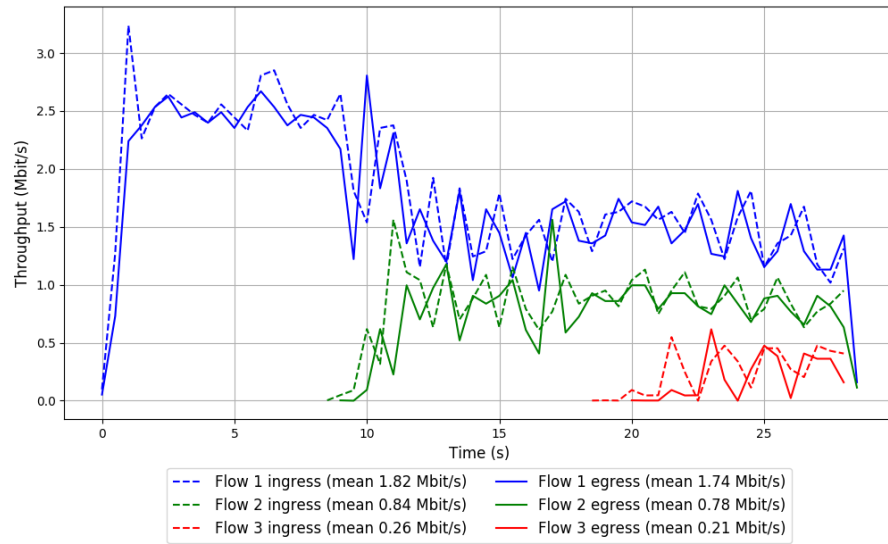
-- Flow 3:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 1846.887 ms

Loss rate: 30.64%

Run 3: Report of QUIC Cubic — Data Link

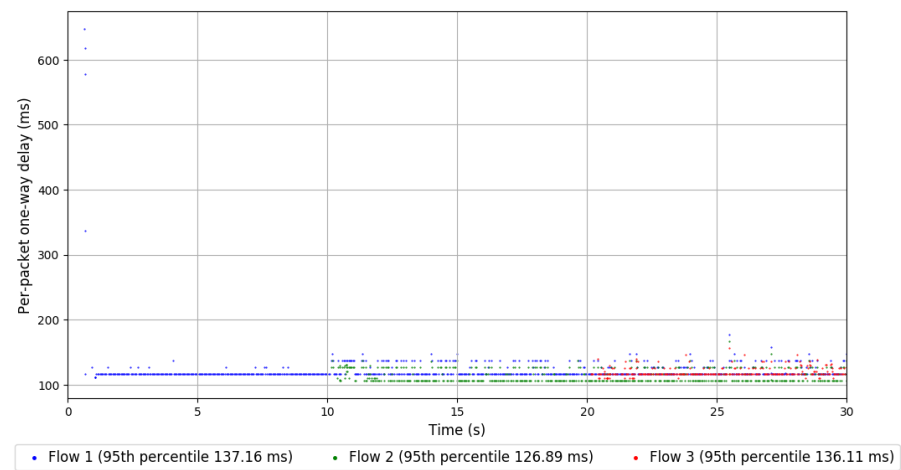
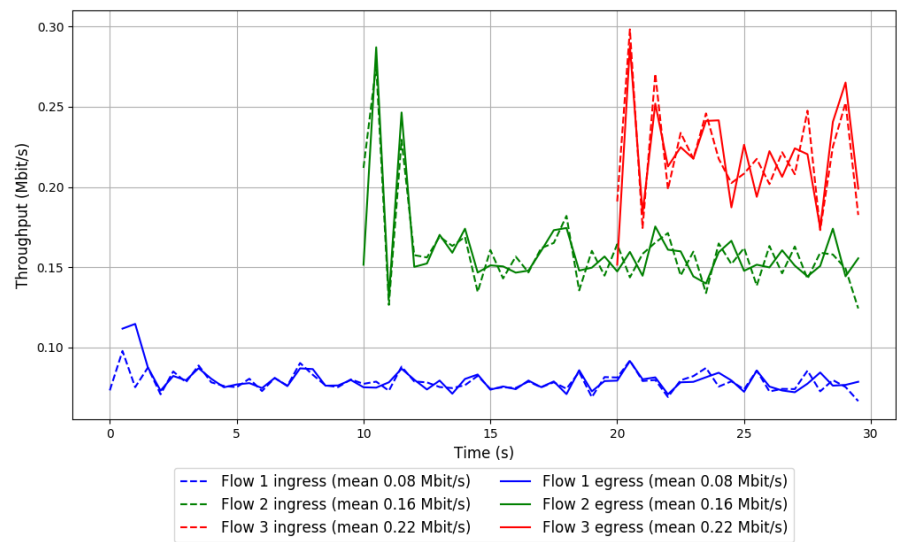


Run 1: Statistics of SReAM

Start at: 2018-01-18 12:35:36
End at: 2018-01-18 12:36:06
Local clock offset: -0.815 ms
Remote clock offset: -3.899 ms

Below is generated by plot.py at 2018-01-18 13:40:35
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 137.091 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 137.159 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 126.887 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.113 ms
Loss rate: 0.35%

Run 1: Report of SCSReAM — Data Link

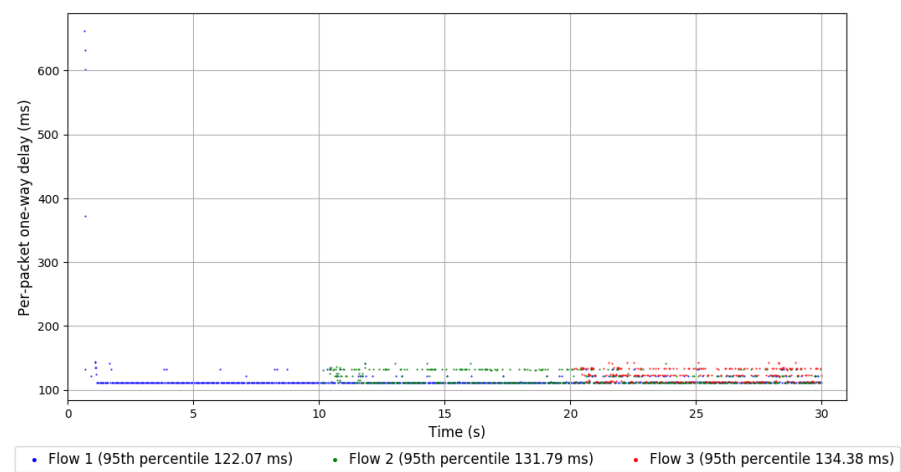
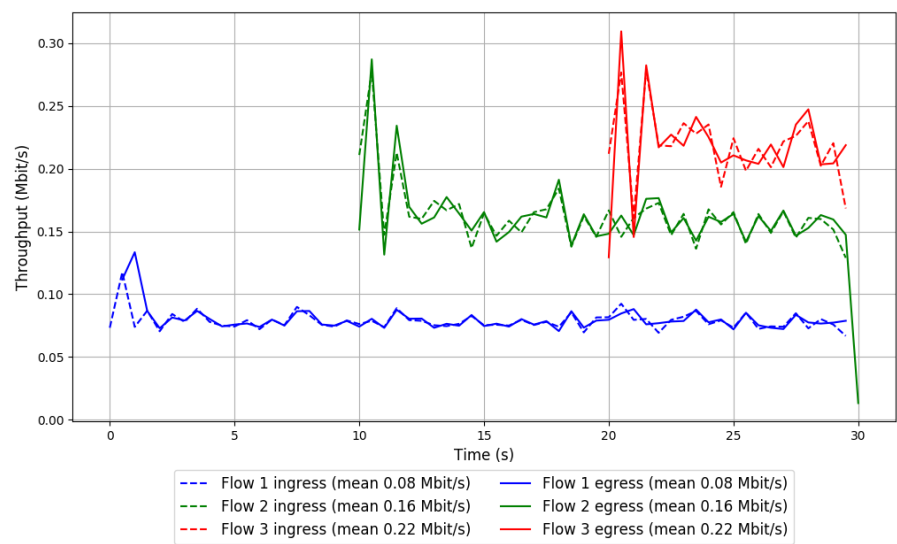


Run 2: Statistics of SCReAM

Start at: 2018-01-18 12:58:10
End at: 2018-01-18 12:58:40
Local clock offset: -0.535 ms
Remote clock offset: 0.974 ms

Below is generated by plot.py at 2018-01-18 13:40:35
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 133.076 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 122.067 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 131.792 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 134.385 ms
Loss rate: 0.35%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-01-18 13:20:45

End at: 2018-01-18 13:21:15

Local clock offset: -0.314 ms

Remote clock offset: 1.006 ms

Below is generated by plot.py at 2018-01-18 13:40:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 132.931 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 132.921 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 132.127 ms

Loss rate: 0.00%

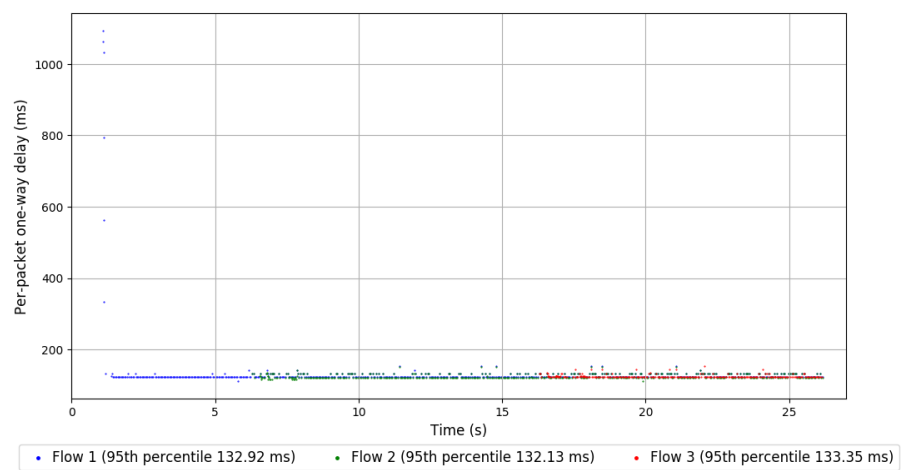
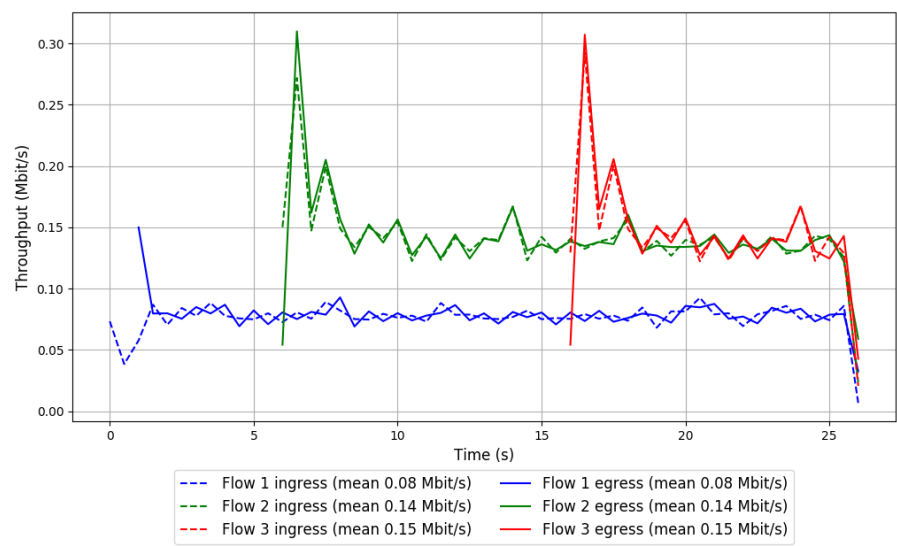
-- Flow 3:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 133.350 ms

Loss rate: 0.33%

Run 3: Report of SReAM — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-01-18 12:38:08

End at: 2018-01-18 12:38:38

Local clock offset: -0.733 ms

Remote clock offset: 0.934 ms

Below is generated by plot.py at 2018-01-18 13:40:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.27 Mbit/s

95th percentile per-packet one-way delay: 238.735 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 246.660 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 0.10 Mbit/s

95th percentile per-packet one-way delay: 237.736 ms

Loss rate: 0.00%

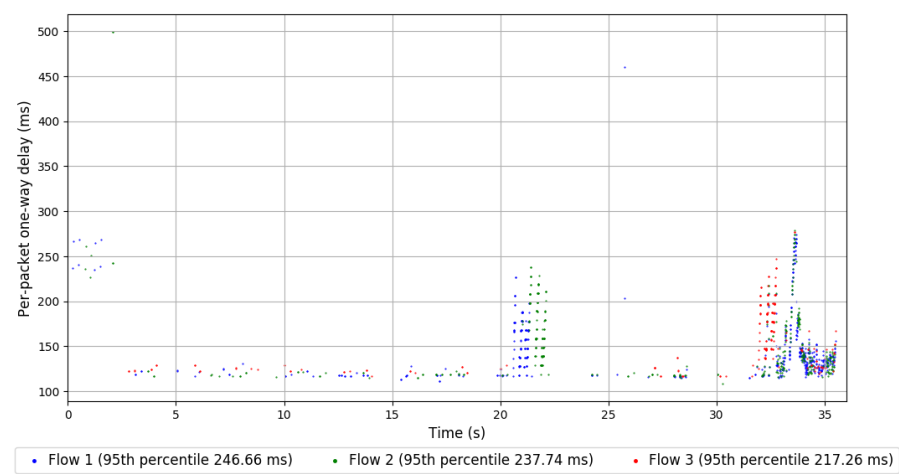
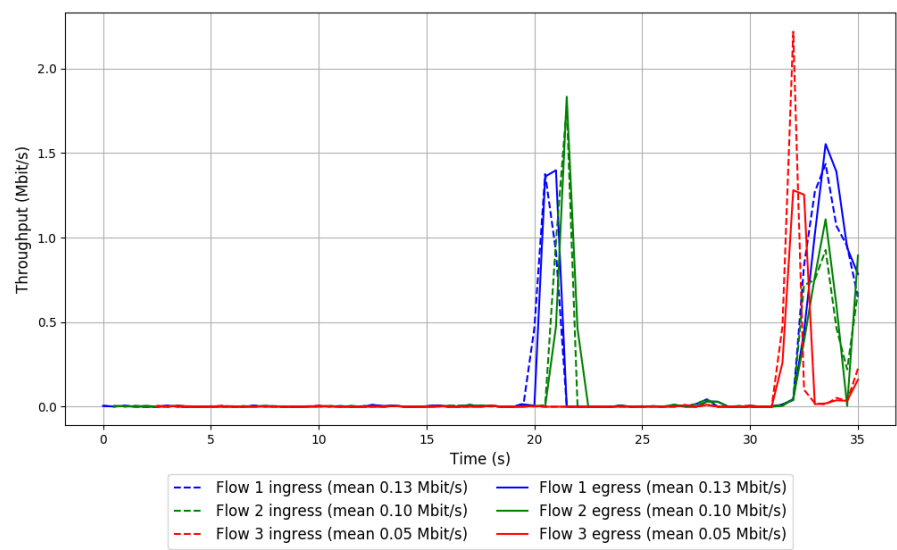
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 217.260 ms

Loss rate: 2.42%

Run 1: Report of WebRTC media — Data Link

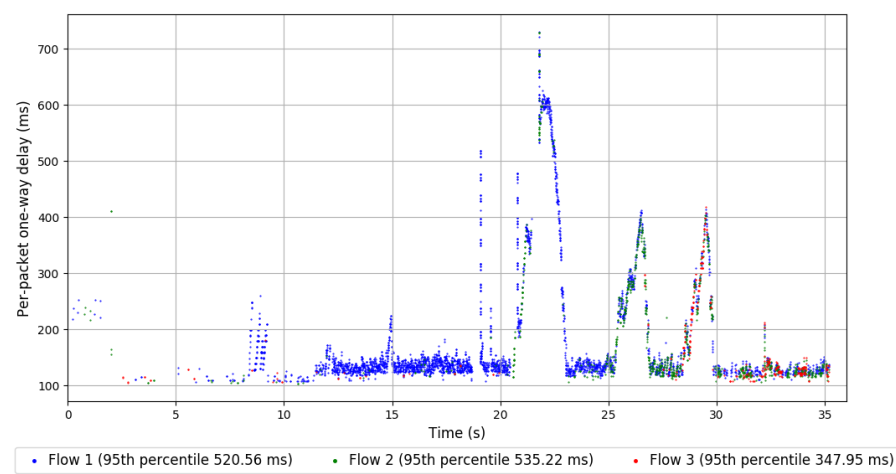
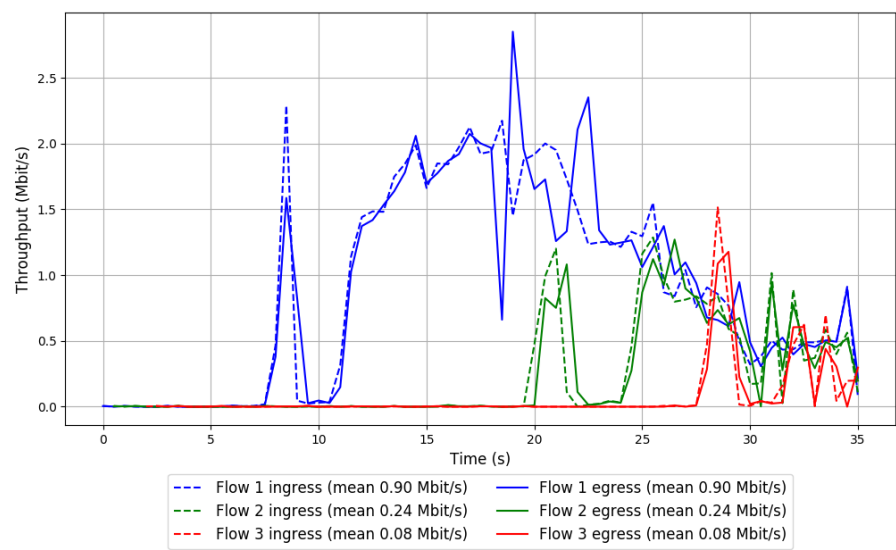


Run 2: Statistics of WebRTC media

Start at: 2018-01-18 13:00:41
End at: 2018-01-18 13:01:11
Local clock offset: -0.412 ms
Remote clock offset: -3.948 ms

Below is generated by plot.py at 2018-01-18 13:40:35
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 512.691 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 520.559 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 535.218 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 347.946 ms
Loss rate: 1.84%

Run 2: Report of WebRTC media — Data Link

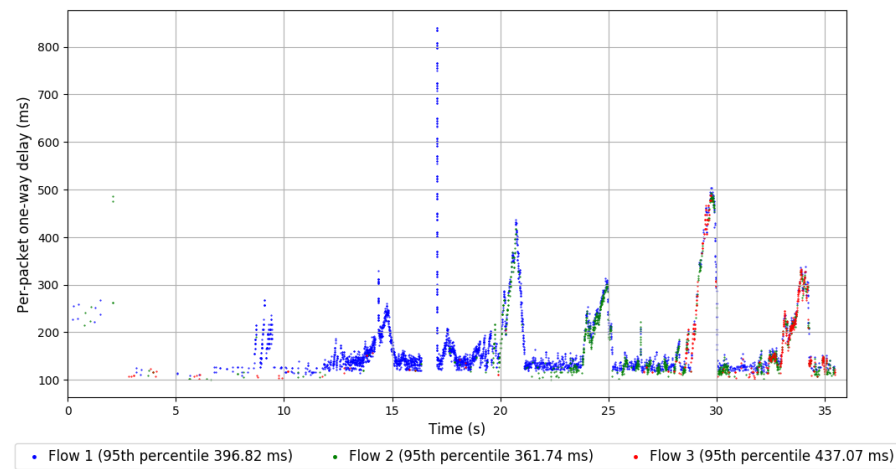
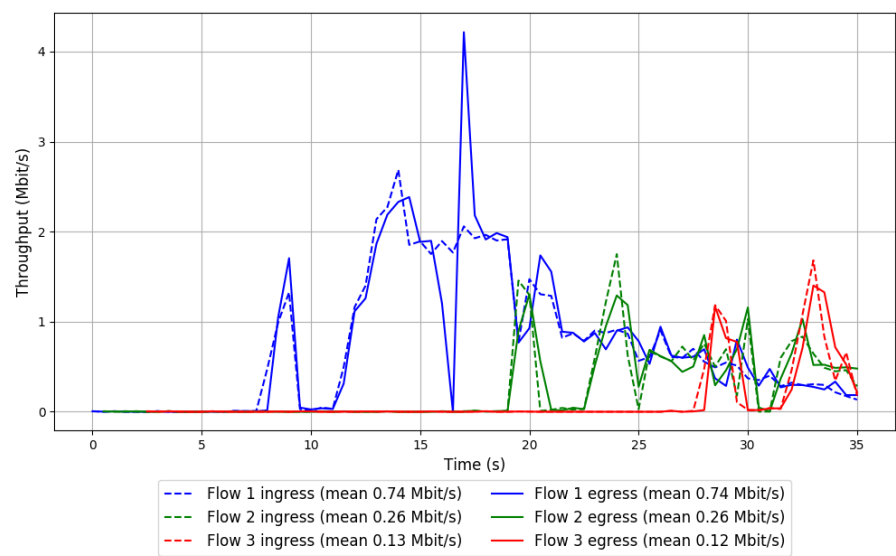


Run 3: Statistics of WebRTC media

Start at: 2018-01-18 13:23:16
End at: 2018-01-18 13:23:46
Local clock offset: -0.294 ms
Remote clock offset: -3.827 ms

Below is generated by plot.py at 2018-01-18 13:40:35
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 401.503 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 396.819 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 361.741 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 437.066 ms
Loss rate: 1.19%

Run 3: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-01-18 12:48:09

End at: 2018-01-18 12:48:39

Local clock offset: -0.691 ms

Remote clock offset: 0.954 ms

Below is generated by plot.py at 2018-01-18 13:40:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 155.236 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 164.794 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 154.711 ms

Loss rate: 0.02%

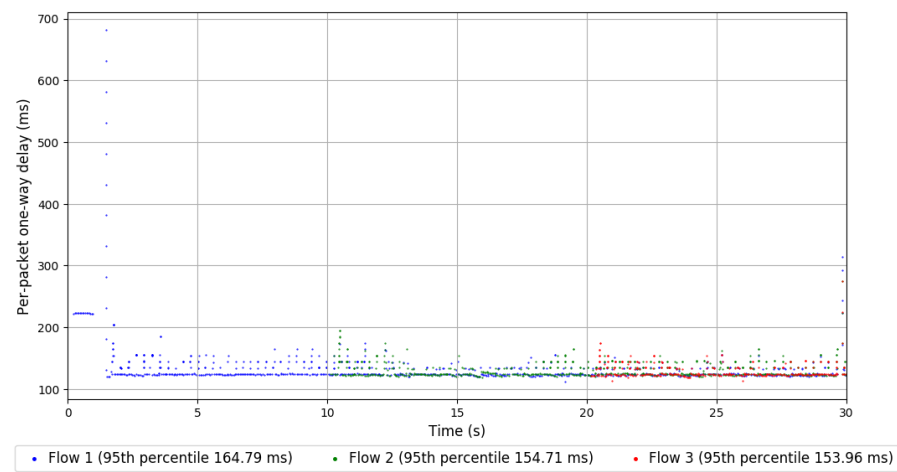
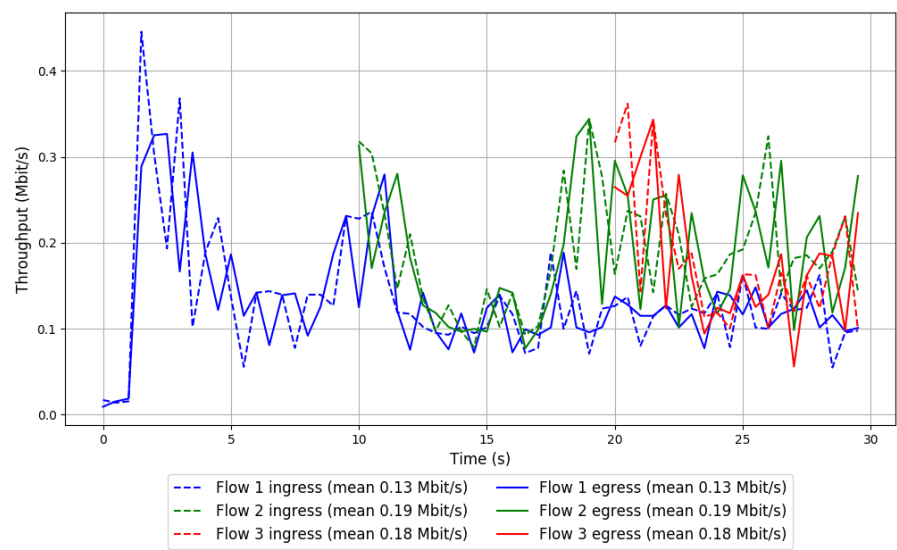
-- Flow 3:

Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 153.960 ms

Loss rate: 0.04%

Run 1: Report of Sprout — Data Link

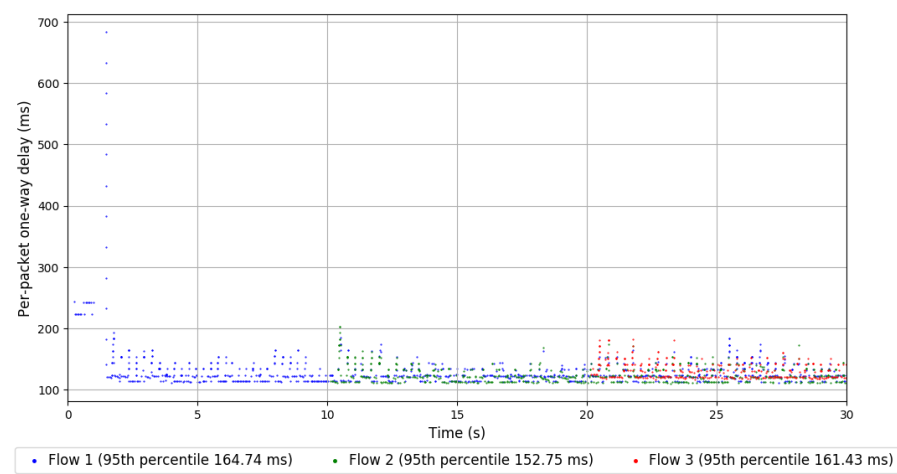
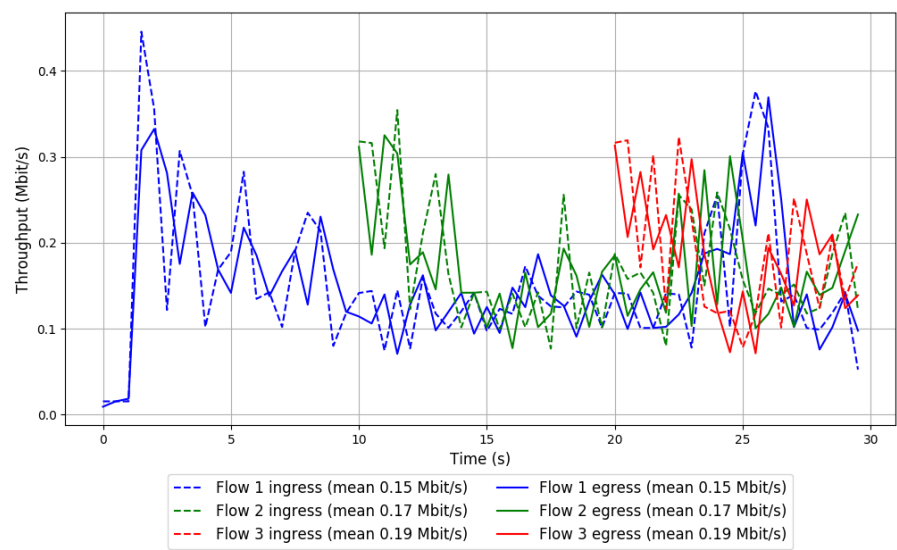


Run 2: Statistics of Sprout

Start at: 2018-01-18 13:10:43
End at: 2018-01-18 13:11:13
Local clock offset: -0.292 ms
Remote clock offset: 0.969 ms

```
# Below is generated by plot.py at 2018-01-18 13:40:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 162.066 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 164.741 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 152.749 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 161.434 ms
Loss rate: 1.36%
```


Run 2: Report of Sprout — Data Link

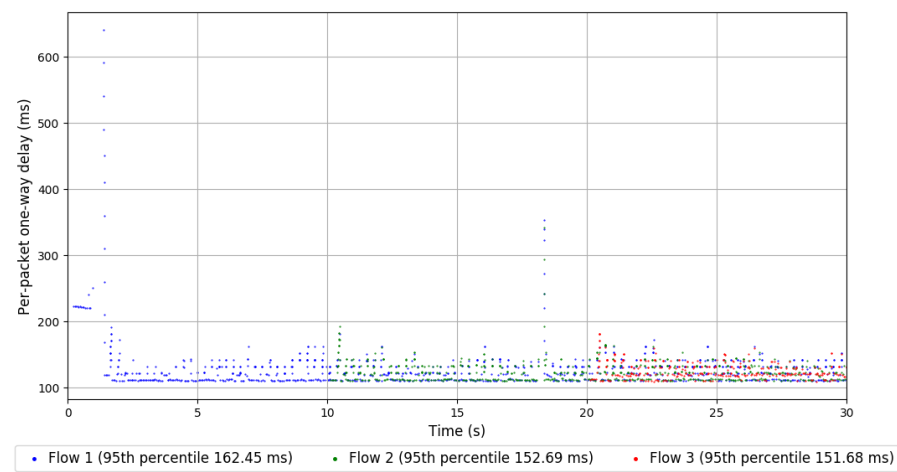
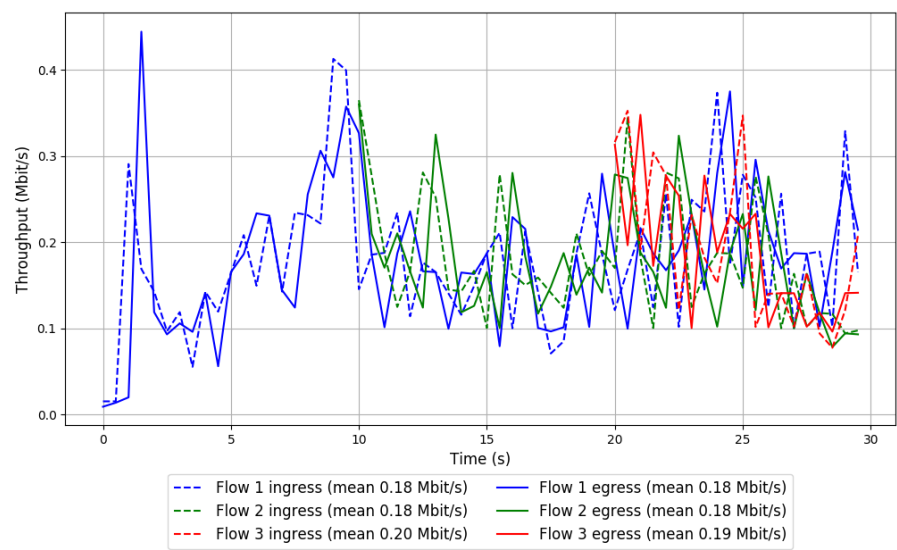


Run 3: Statistics of Sprout

Start at: 2018-01-18 13:33:20
End at: 2018-01-18 13:33:50
Local clock offset: -0.356 ms
Remote clock offset: 1.2 ms

```
# Below is generated by plot.py at 2018-01-18 13:40:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 154.120 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 162.448 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 152.688 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 151.678 ms
Loss rate: 1.84%
```

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-01-18 12:50:39

End at: 2018-01-18 12:51:09

Local clock offset: -0.703 ms

Remote clock offset: 0.904 ms

Below is generated by plot.py at 2018-01-18 13:40:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.24 Mbit/s

95th percentile per-packet one-way delay: 724.013 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 1.23 Mbit/s

95th percentile per-packet one-way delay: 454.778 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 1.01 Mbit/s

95th percentile per-packet one-way delay: 574.198 ms

Loss rate: 1.13%

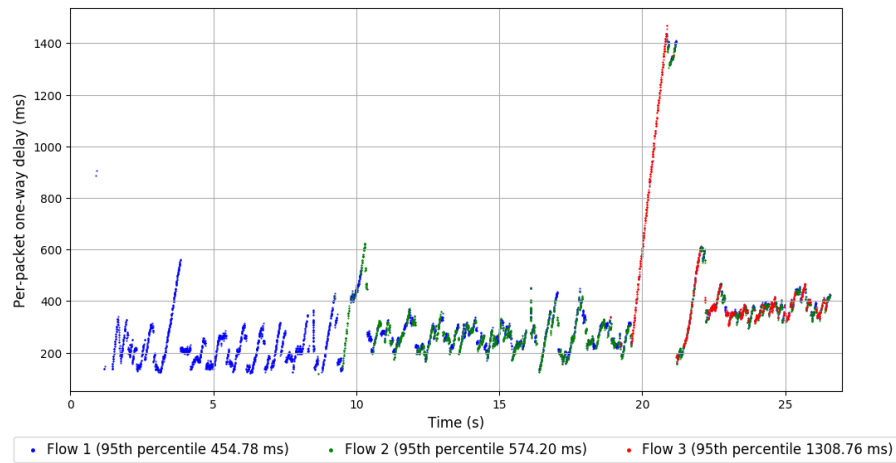
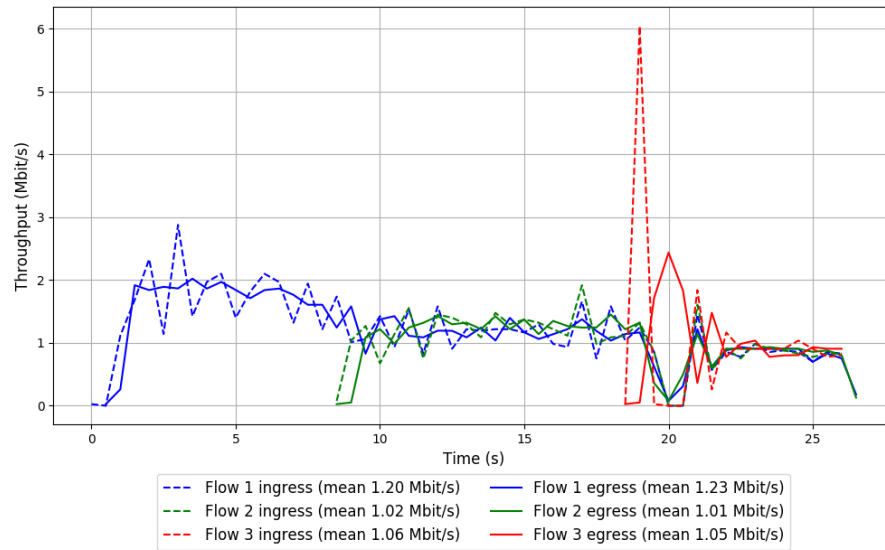
-- Flow 3:

Average throughput: 1.05 Mbit/s

95th percentile per-packet one-way delay: 1308.758 ms

Loss rate: 4.08%

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



Run 2: Statistics of TaoVA-100x

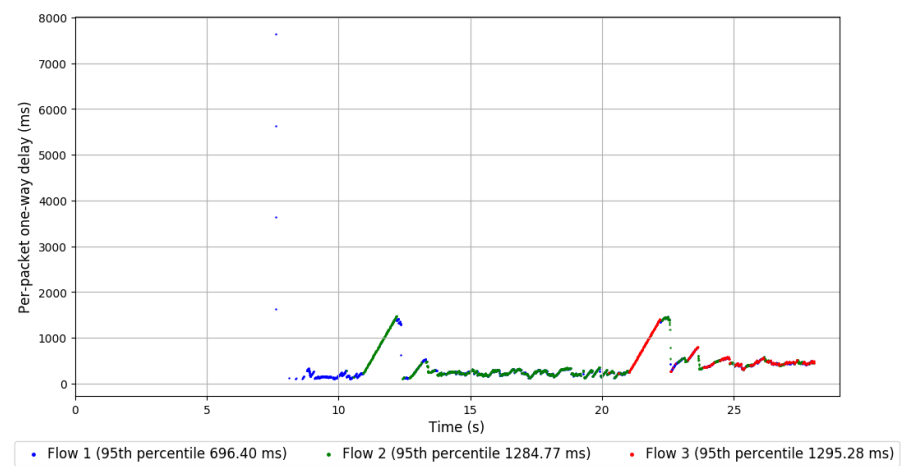
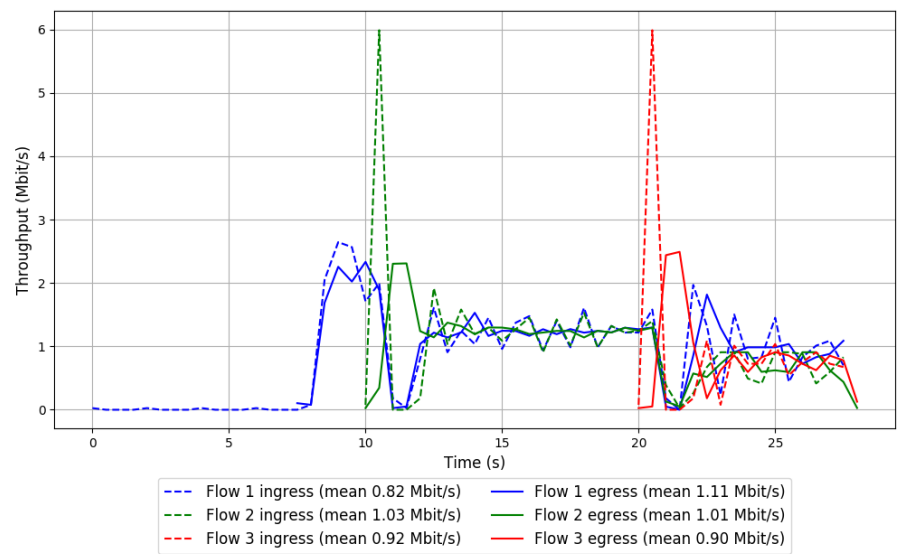
Start at: 2018-01-18 13:13:15

End at: 2018-01-18 13:13:45

Local clock offset: -0.29 ms

Remote clock offset: -3.838 ms

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



Run 3: Statistics of TaoVA-100x

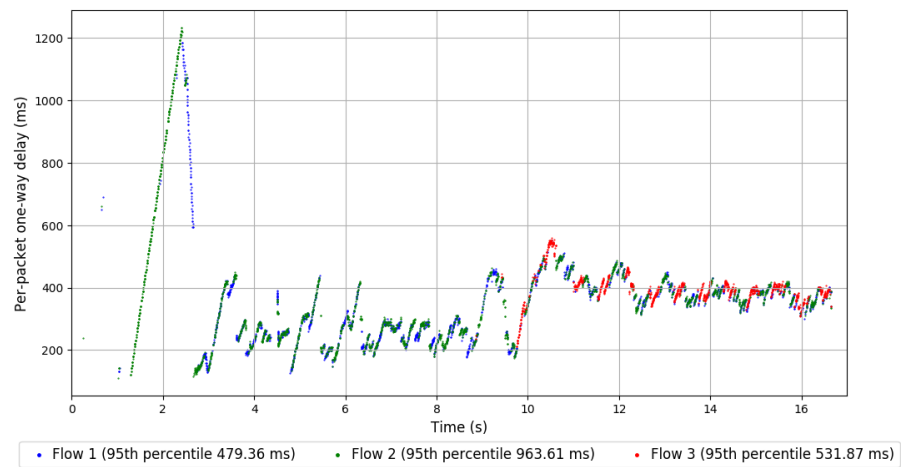
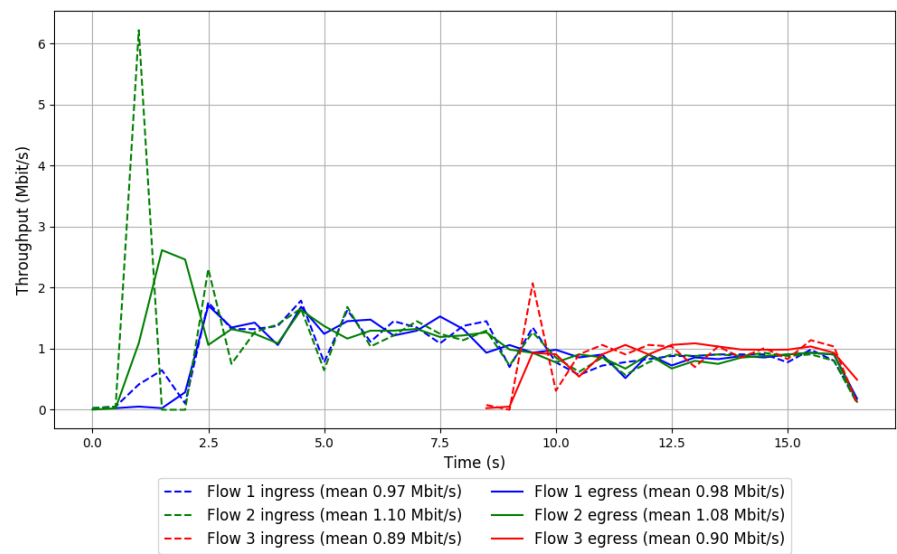
Start at: 2018-01-18 13:35:51

End at: 2018-01-18 13:36:21

Local clock offset: -0.305 ms

Remote clock offset: 1.226 ms

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



Run 1: Statistics of TCP Vegas

Start at: 2018-01-18 12:46:54

End at: 2018-01-18 12:47:24

Local clock offset: -0.685 ms

Remote clock offset: 0.944 ms

Below is generated by plot.py at 2018-01-18 13:40:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.31 Mbit/s

95th percentile per-packet one-way delay: 641.916 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 561.483 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 1.10 Mbit/s

95th percentile per-packet one-way delay: 660.275 ms

Loss rate: 0.92%

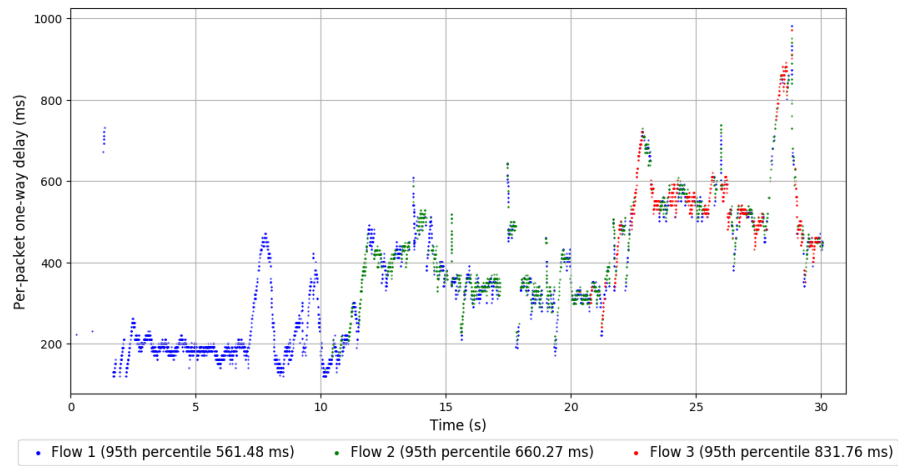
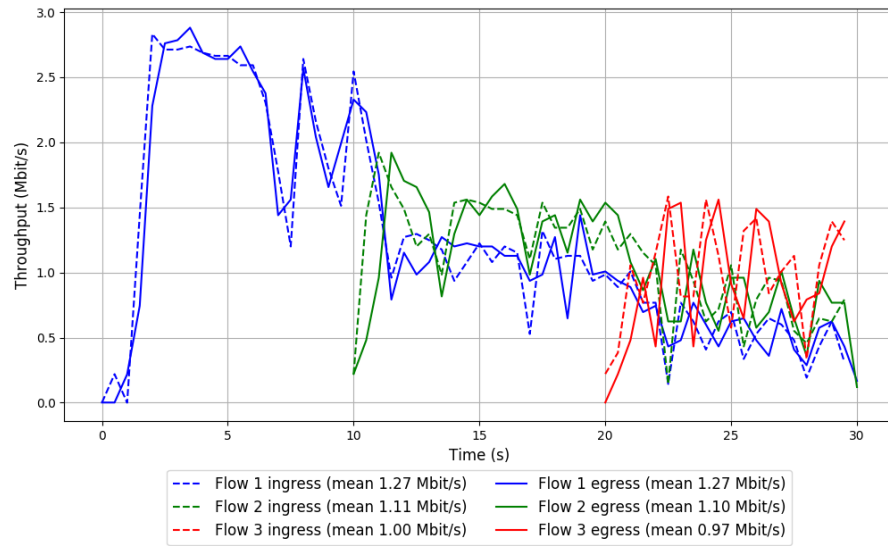
-- Flow 3:

Average throughput: 0.97 Mbit/s

95th percentile per-packet one-way delay: 831.761 ms

Loss rate: 6.30%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-01-18 13:09:28

End at: 2018-01-18 13:09:58

Local clock offset: -0.314 ms

Remote clock offset: 0.975 ms

Below is generated by plot.py at 2018-01-18 13:40:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.20 Mbit/s

95th percentile per-packet one-way delay: 1587.213 ms

Loss rate: 4.46%

-- Flow 1:

Average throughput: 1.76 Mbit/s

95th percentile per-packet one-way delay: 1497.054 ms

Loss rate: 3.77%

-- Flow 2:

Average throughput: 0.56 Mbit/s

95th percentile per-packet one-way delay: 1626.731 ms

Loss rate: 7.09%

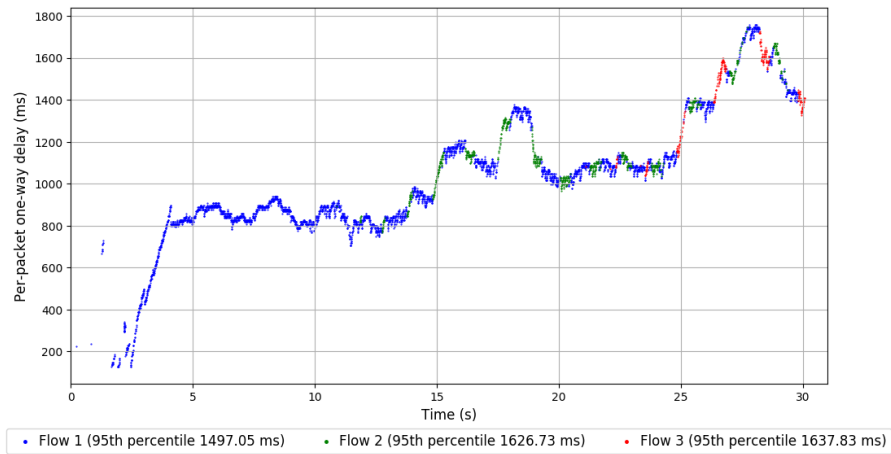
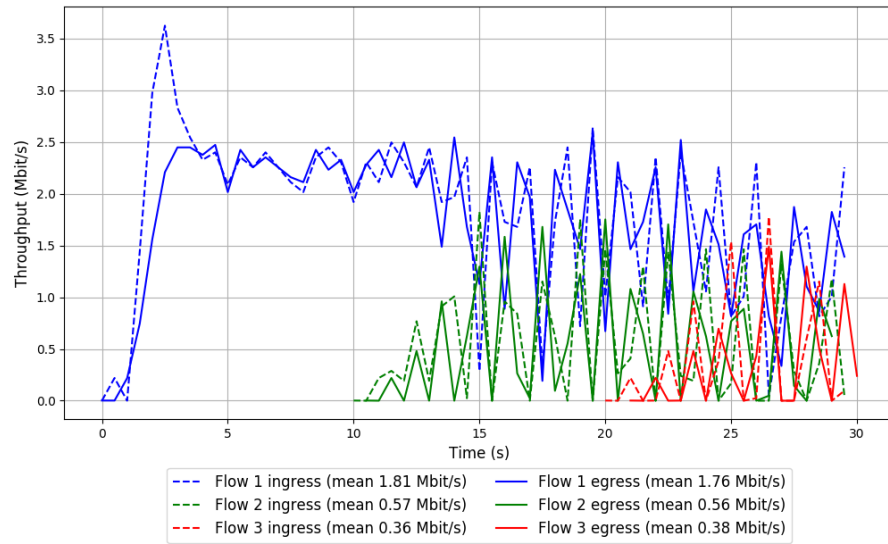
-- Flow 3:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 1637.826 ms

Loss rate: 6.64%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-01-18 13:32:04

End at: 2018-01-18 13:32:34

Local clock offset: -0.332 ms

Remote clock offset: 1.517 ms

Below is generated by plot.py at 2018-01-18 13:40:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 1013.984 ms

Loss rate: 2.75%

-- Flow 1:

Average throughput: 1.74 Mbit/s

95th percentile per-packet one-way delay: 1012.655 ms

Loss rate: 1.72%

-- Flow 2:

Average throughput: 0.68 Mbit/s

95th percentile per-packet one-way delay: 994.467 ms

Loss rate: 4.12%

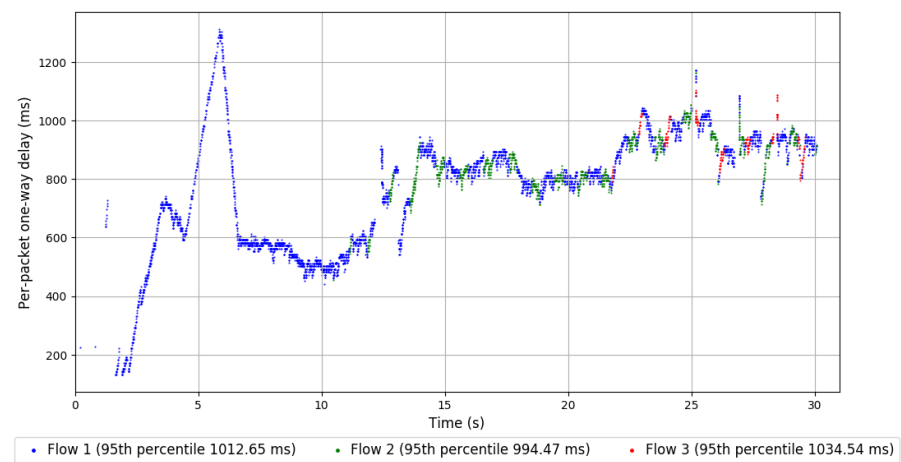
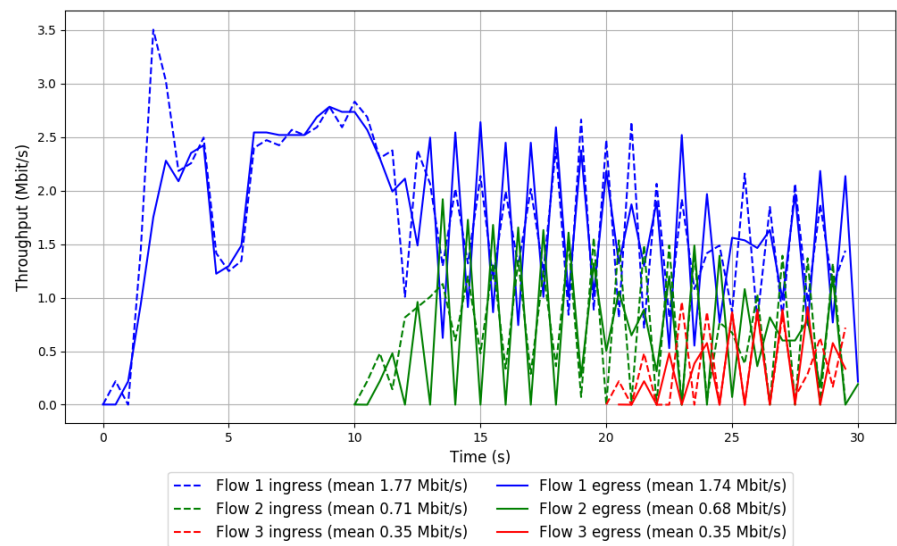
-- Flow 3:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 1034.536 ms

Loss rate: 12.70%

Run 3: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-01-18 12:34:21

End at: 2018-01-18 12:34:51

Local clock offset: -0.853 ms

Remote clock offset: 1.031 ms

Below is generated by plot.py at 2018-01-18 13:40:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.63 Mbit/s

95th percentile per-packet one-way delay: 1729.390 ms

Loss rate: 4.21%

-- Flow 1:

Average throughput: 2.62 Mbit/s

95th percentile per-packet one-way delay: 1729.241 ms

Loss rate: 4.20%

-- Flow 2:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1703.829 ms

Loss rate: 5.00%

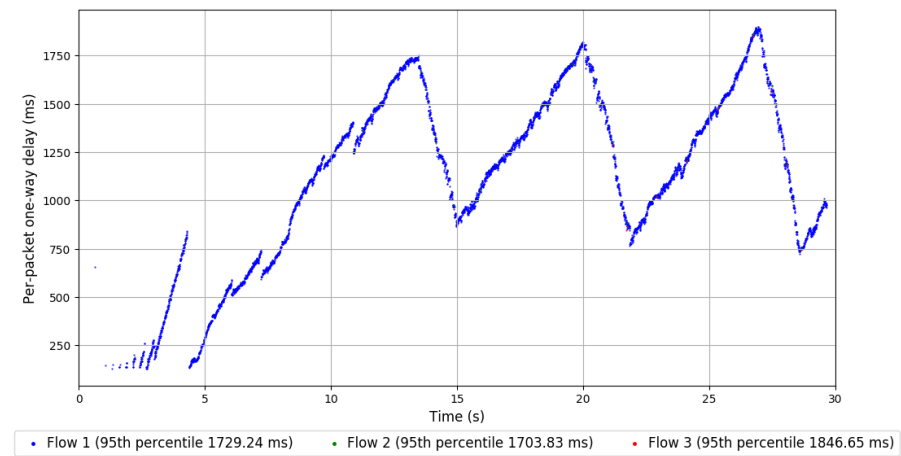
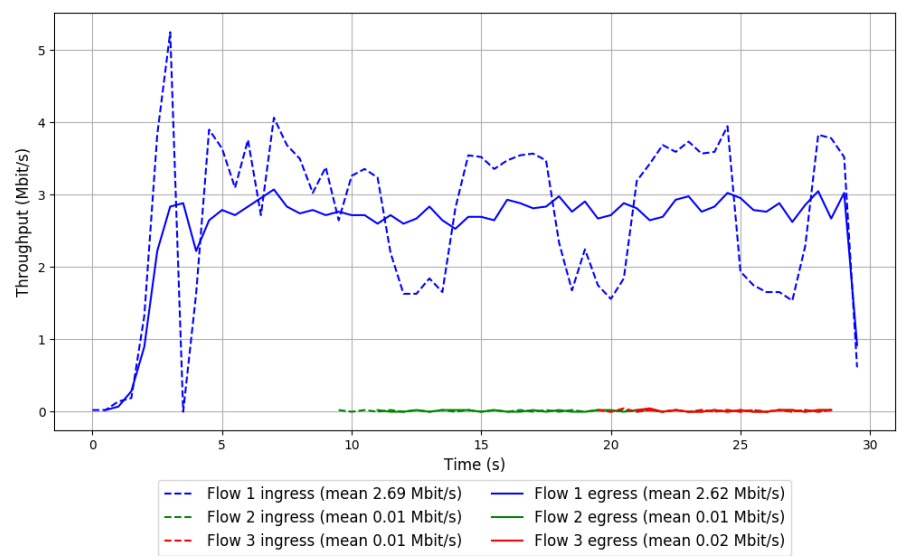
-- Flow 3:

Average throughput: 0.02 Mbit/s

95th percentile per-packet one-way delay: 1846.651 ms

Loss rate: 9.09%

Run 1: Report of Verus — Data Link

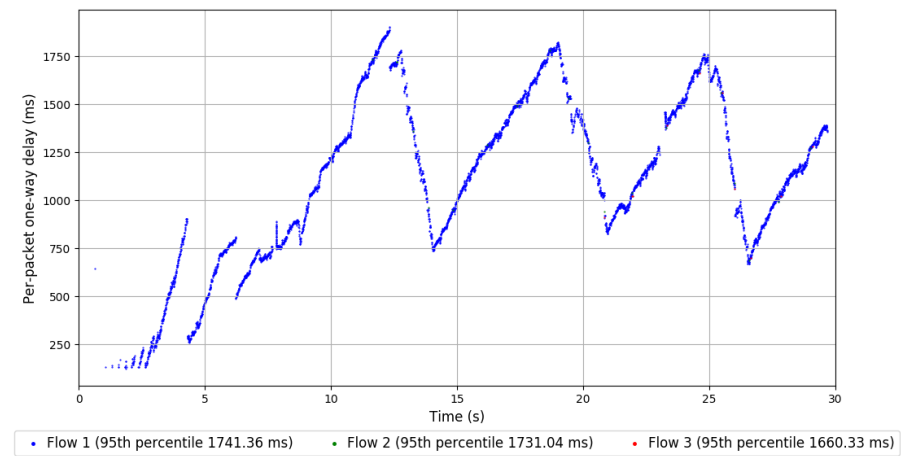
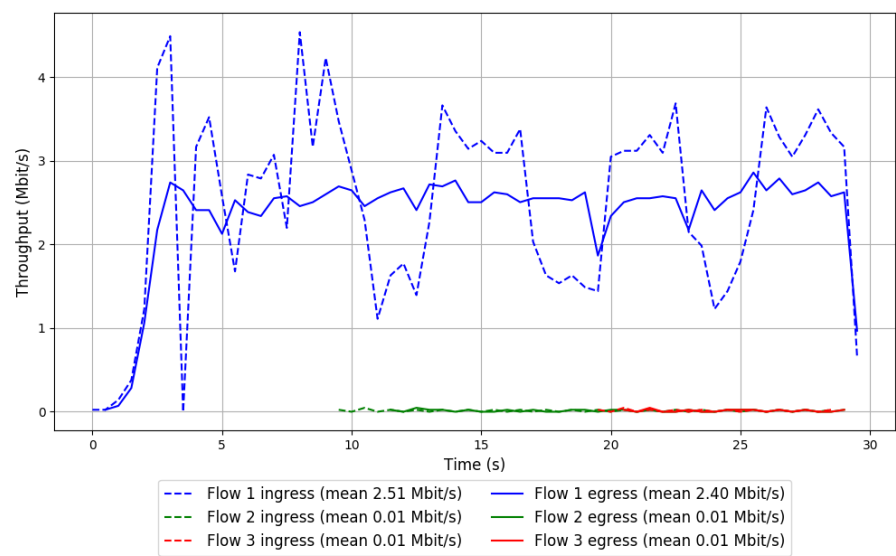


Run 2: Statistics of Verus

Start at: 2018-01-18 12:56:54
End at: 2018-01-18 12:57:24
Local clock offset: -0.575 ms
Remote clock offset: 0.921 ms

Below is generated by plot.py at 2018-01-18 13:40:37
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 1741.282 ms
Loss rate: 5.87%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 1741.361 ms
Loss rate: 5.87%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1731.039 ms
Loss rate: 4.76%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1660.331 ms
Loss rate: 9.09%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-01-18 13:19:30

End at: 2018-01-18 13:20:00

Local clock offset: -0.278 ms

Remote clock offset: 1.033 ms

Below is generated by plot.py at 2018-01-18 13:40:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.32 Mbit/s

95th percentile per-packet one-way delay: 1566.924 ms

Loss rate: 5.33%

-- Flow 1:

Average throughput: 2.31 Mbit/s

95th percentile per-packet one-way delay: 1566.905 ms

Loss rate: 5.33%

-- Flow 2:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1498.413 ms

Loss rate: 4.76%

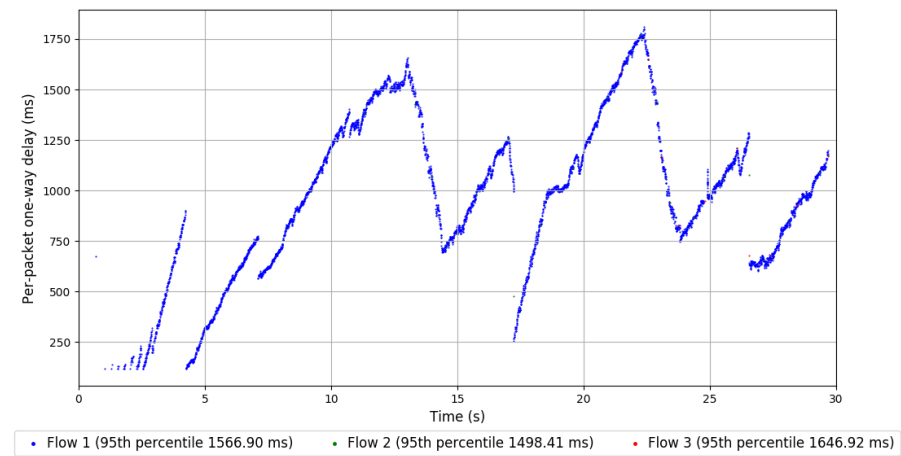
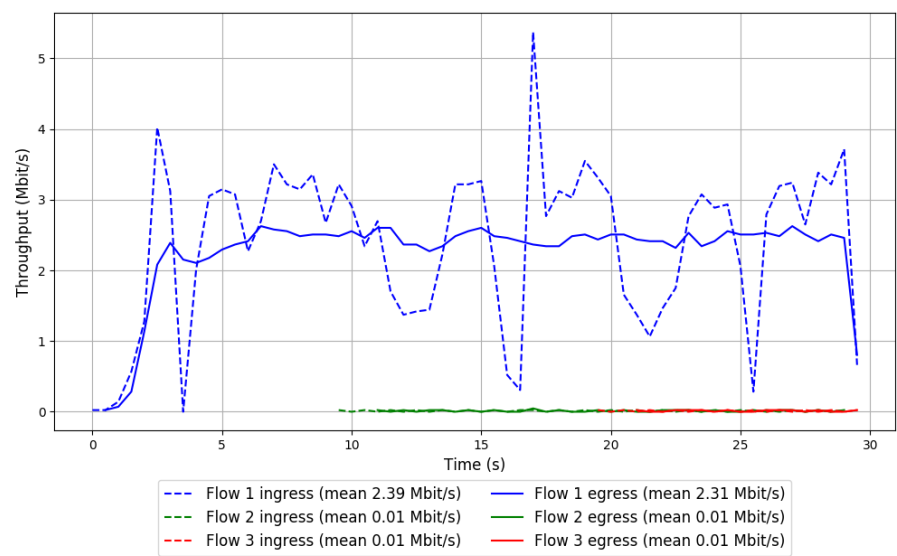
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1646.923 ms

Loss rate: 9.09%

Run 3: Report of Verus — Data Link



Run 1: Statistics of Copa

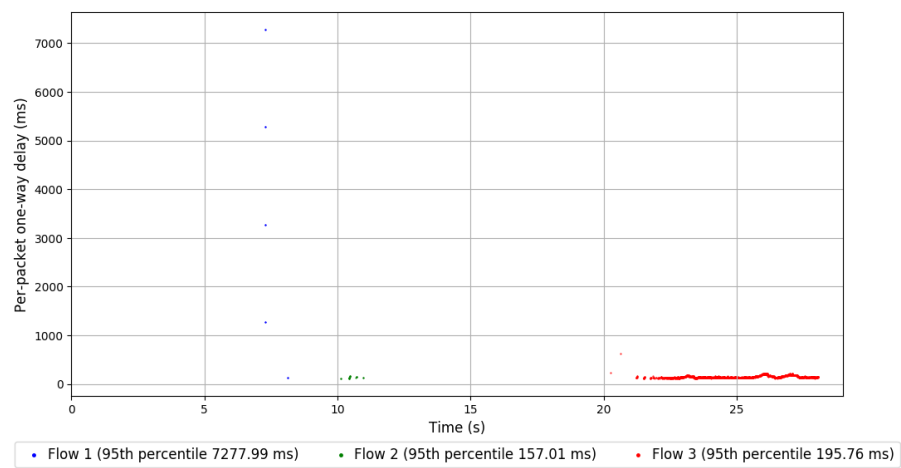
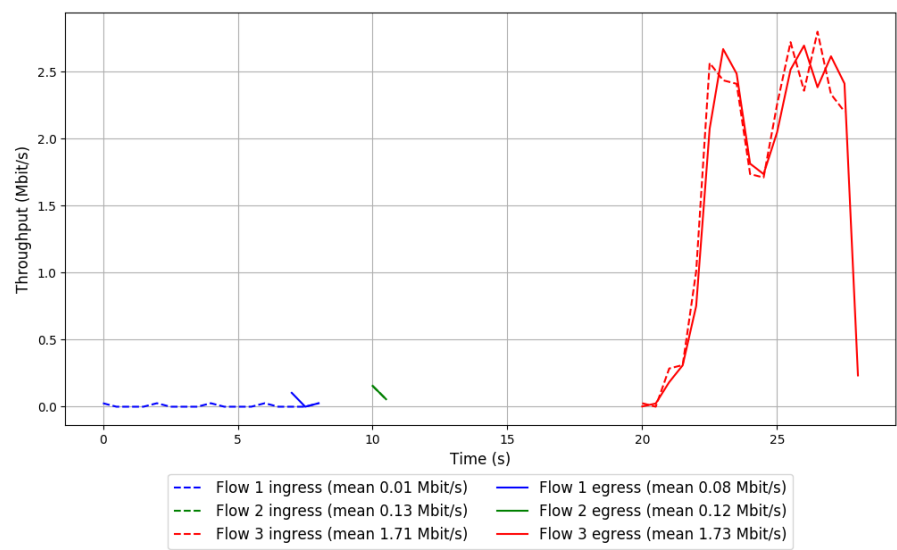
Start at: 2018-01-18 12:44:24

End at: 2018-01-18 12:44:54

Local clock offset: -0.702 ms

Remote clock offset: 0.874 ms

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

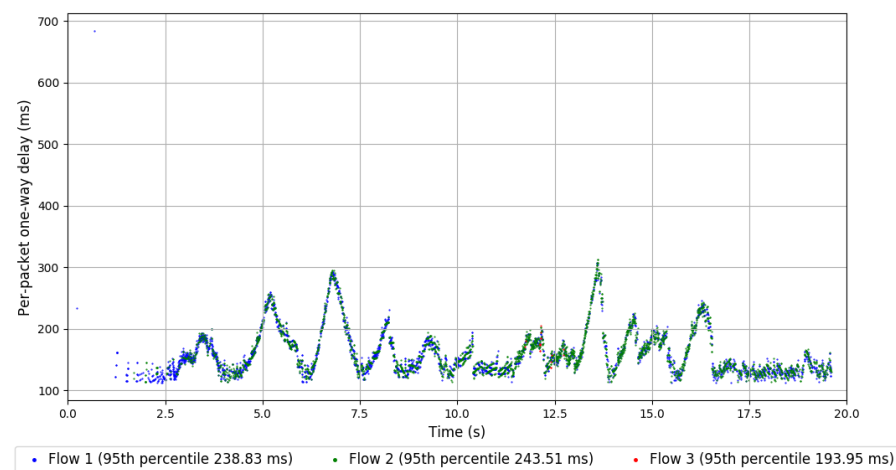
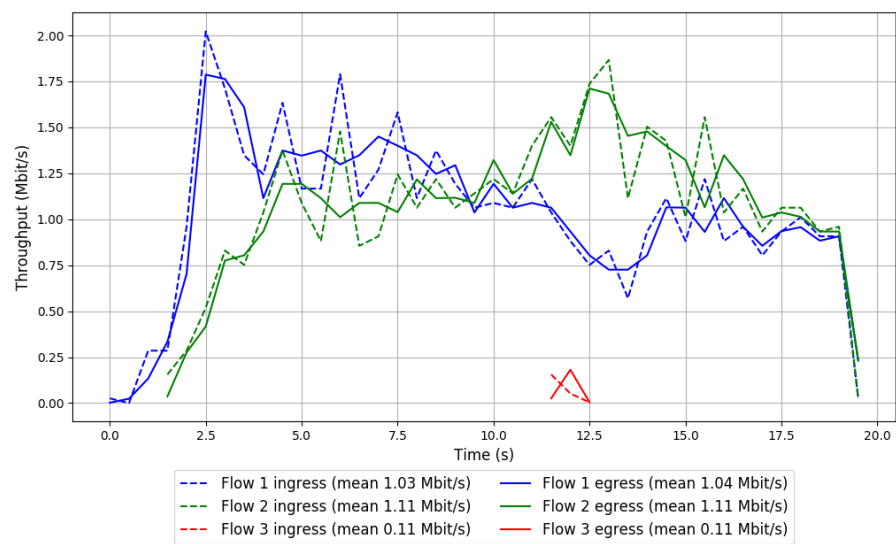
Start at: 2018-01-18 13:06:58

End at: 2018-01-18 13:07:28

Local clock offset: -0.334 ms

Remote clock offset: 0.909 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-01-18 13:29:33

End at: 2018-01-18 13:30:03

Local clock offset: -0.384 ms

Remote clock offset: -3.73 ms

Below is generated by plot.py at 2018-01-18 13:40:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 173.915 ms

Loss rate: 0.24%

-- Flow 1:

Average throughput: 2.58 Mbit/s

95th percentile per-packet one-way delay: 3103.555 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.57 Mbit/s

95th percentile per-packet one-way delay: 170.301 ms

Loss rate: 0.15%

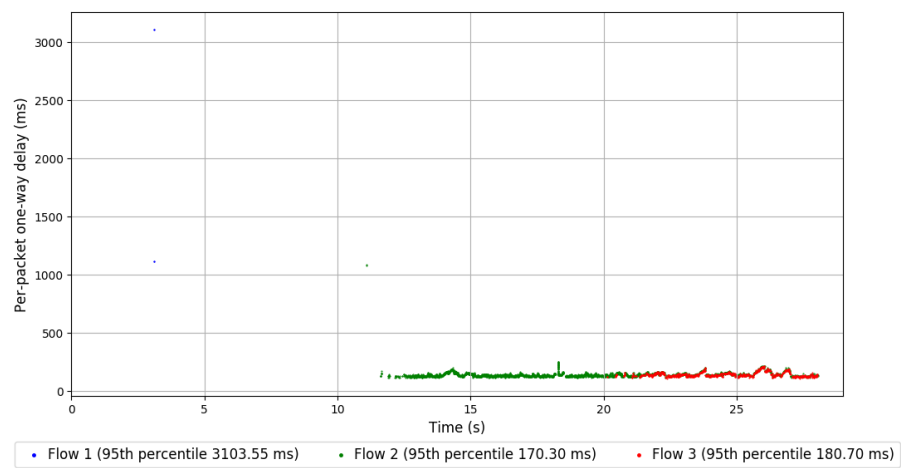
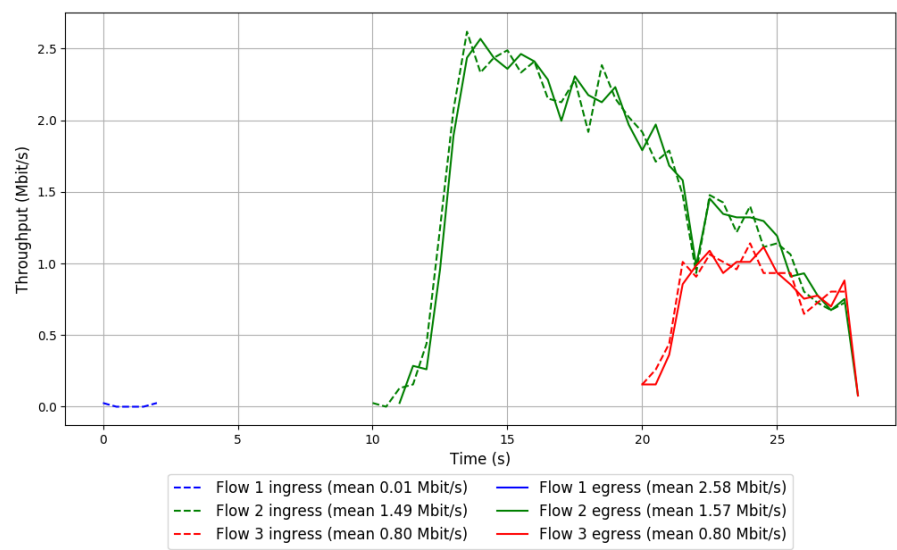
-- Flow 3:

Average throughput: 0.80 Mbit/s

95th percentile per-packet one-way delay: 180.697 ms

Loss rate: 0.61%

Run 3: Report of Copa — Data Link

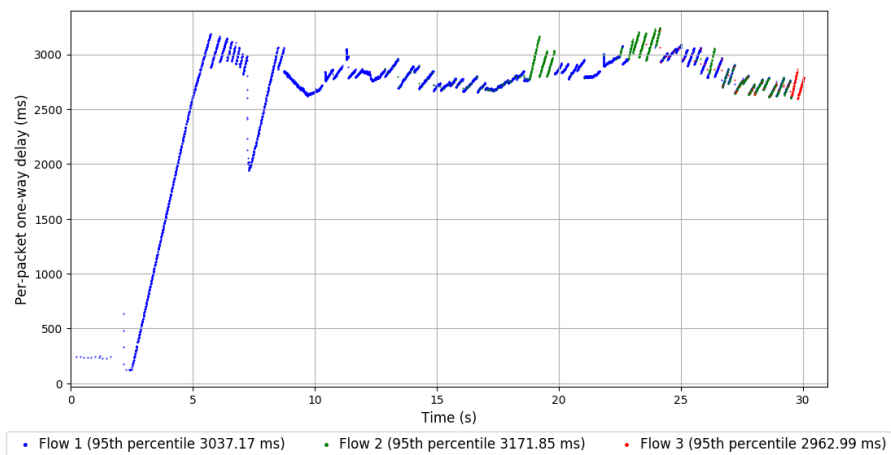
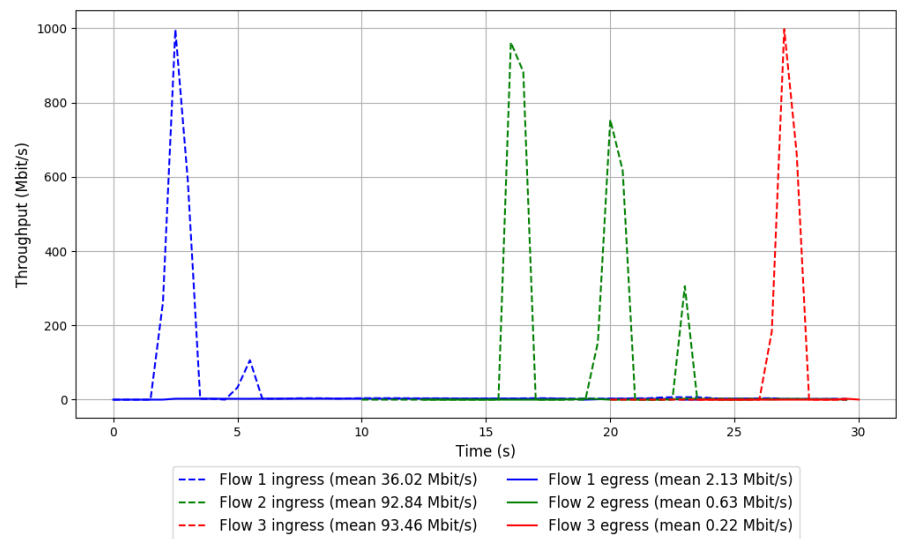


```
Run 1: Statistics of FillP

Start at: 2018-01-18 12:43:07
End at: 2018-01-18 12:43:37
Local clock offset: -0.675 ms
Remote clock offset: 0.987 ms

# Below is generated by plot.py at 2018-01-18 13:41:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.51 Mbit/s
95th percentile per-packet one-way delay: 3069.992 ms
Loss rate: 98.06%
-- Flow 1:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 3037.172 ms
Loss rate: 94.18%
-- Flow 2:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 3171.848 ms
Loss rate: 99.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2962.995 ms
Loss rate: 99.84%
```

Run 1: Report of FillP — Data Link

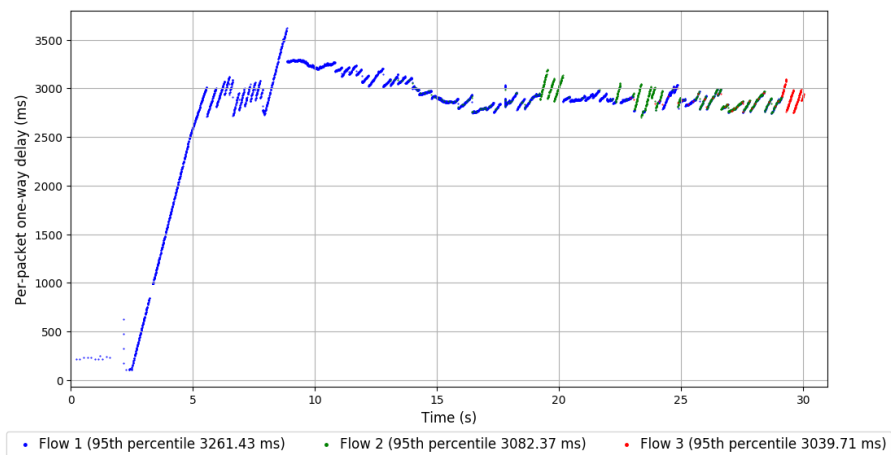
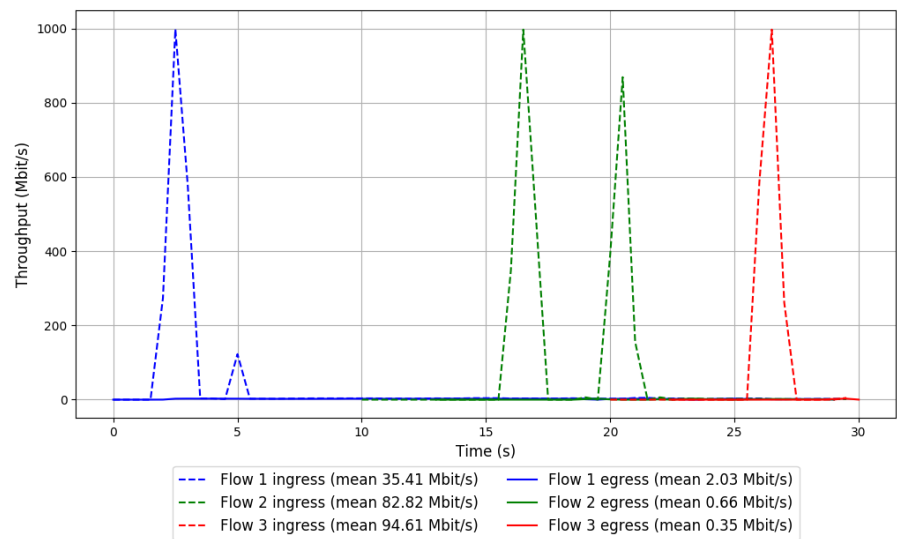


Run 2: Statistics of FillP

Start at: 2018-01-18 13:05:41
End at: 2018-01-18 13:06:11
Local clock offset: -0.412 ms
Remote clock offset: -3.952 ms

Below is generated by plot.py at 2018-01-18 13:41:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 3247.546 ms
Loss rate: 98.01%
-- Flow 1:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 3261.430 ms
Loss rate: 94.42%
-- Flow 2:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 3082.374 ms
Loss rate: 99.36%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 3039.713 ms
Loss rate: 99.73%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-01-18 13:28:16

End at: 2018-01-18 13:28:46

Local clock offset: -0.382 ms

Remote clock offset: 1.128 ms

Below is generated by plot.py at 2018-01-18 13:41:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 3373.579 ms

Loss rate: 98.43%

-- Flow 1:

Average throughput: 1.91 Mbit/s

95th percentile per-packet one-way delay: 3316.775 ms

Loss rate: 94.47%

-- Flow 2:

Average throughput: 0.56 Mbit/s

95th percentile per-packet one-way delay: 3472.170 ms

Loss rate: 99.58%

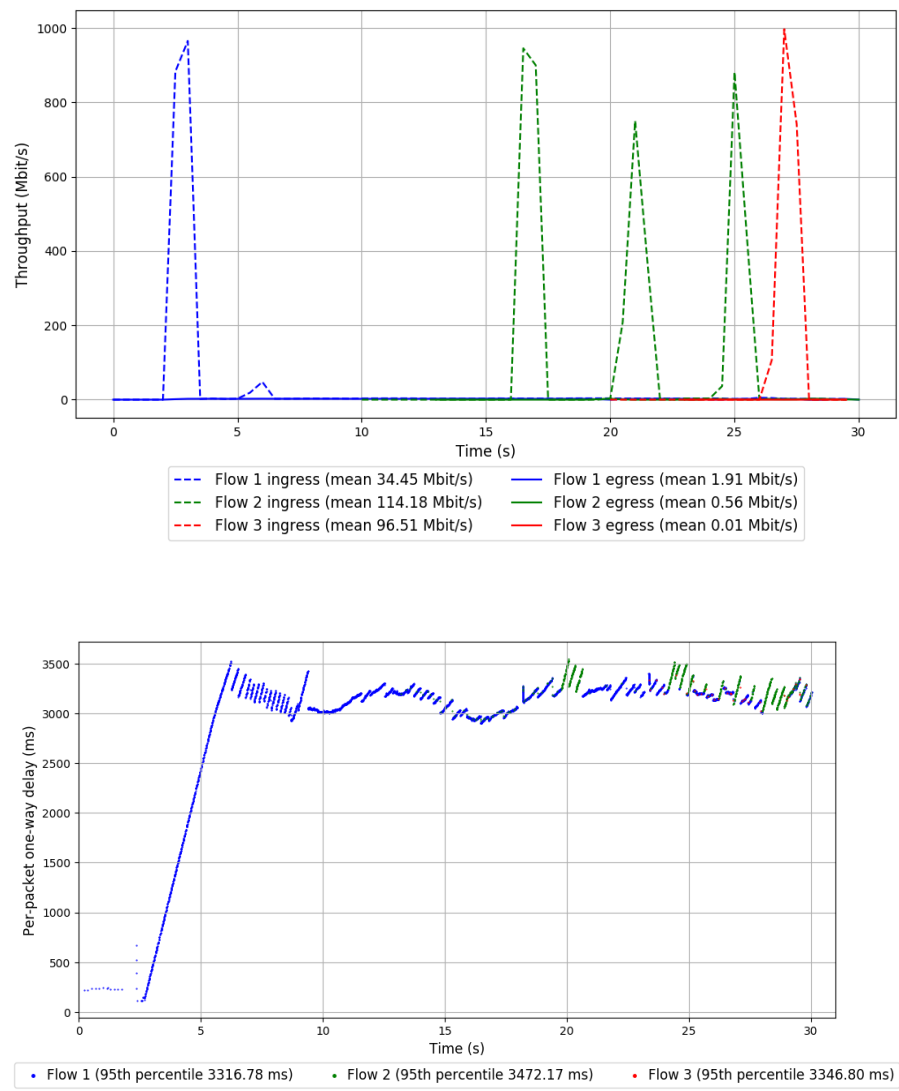
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 3346.797 ms

Loss rate: 100.00%

Run 3: Report of FillP — Data Link

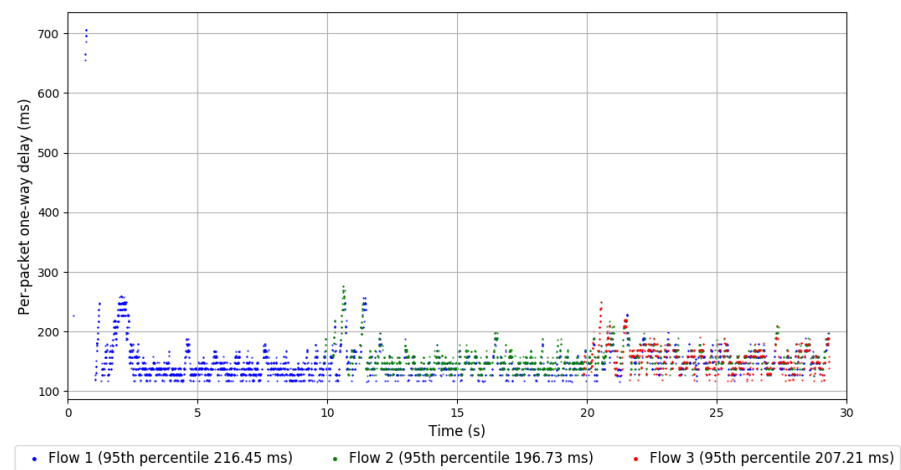
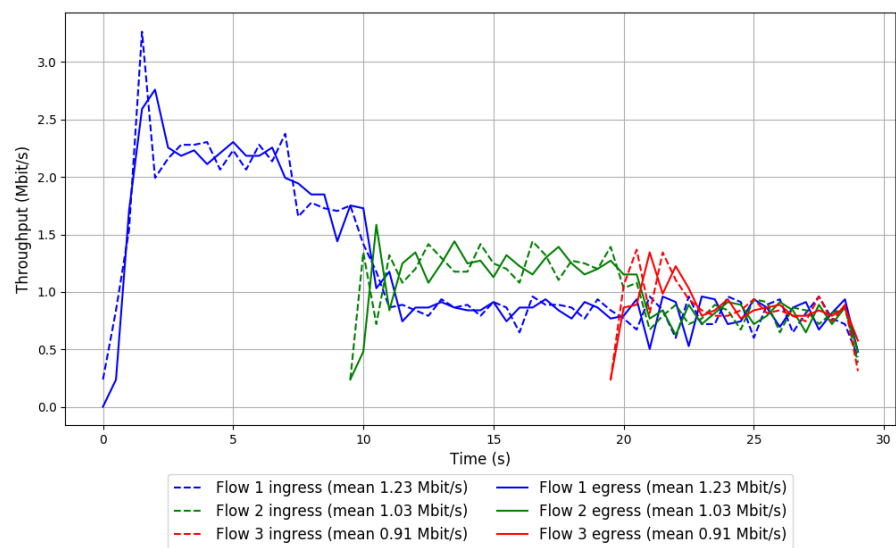


```
Run 1: Statistics of Indigo

Start at: 2018-01-18 12:39:22
End at: 2018-01-18 12:39:52
Local clock offset: -0.705 ms
Remote clock offset: 1.042 ms

# Below is generated by plot.py at 2018-01-18 13:41:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 206.585 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 216.446 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 196.729 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 207.205 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-01-18 13:01:56

End at: 2018-01-18 13:02:26

Local clock offset: -0.38 ms

Remote clock offset: 0.945 ms

Below is generated by plot.py at 2018-01-18 13:41:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.97 Mbit/s

95th percentile per-packet one-way delay: 331.558 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 0.79 Mbit/s

95th percentile per-packet one-way delay: 256.854 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 342.009 ms

Loss rate: 0.00%

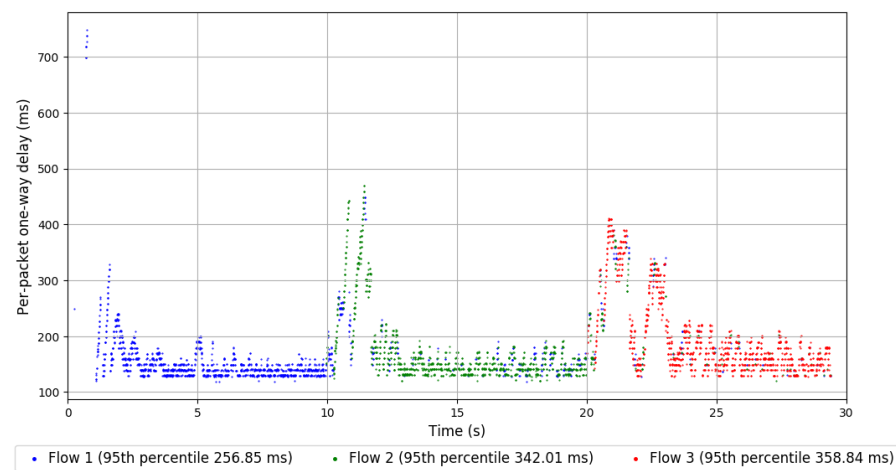
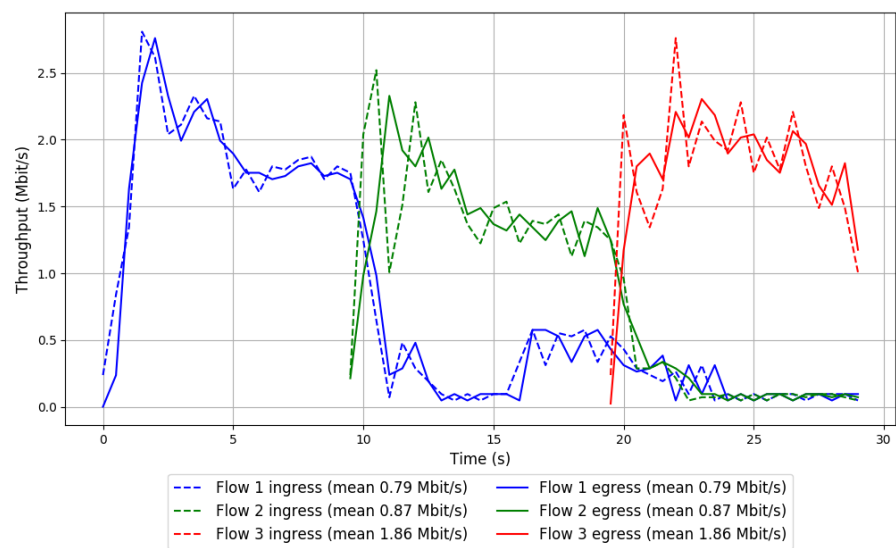
-- Flow 3:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 358.844 ms

Loss rate: 0.48%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-01-18 13:24:31

End at: 2018-01-18 13:25:01

Local clock offset: -0.324 ms

Remote clock offset: 1.143 ms

Below is generated by plot.py at 2018-01-18 13:41:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.89 Mbit/s

95th percentile per-packet one-way delay: 967.156 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 0.98 Mbit/s

95th percentile per-packet one-way delay: 217.240 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 527.661 ms

Loss rate: 0.31%

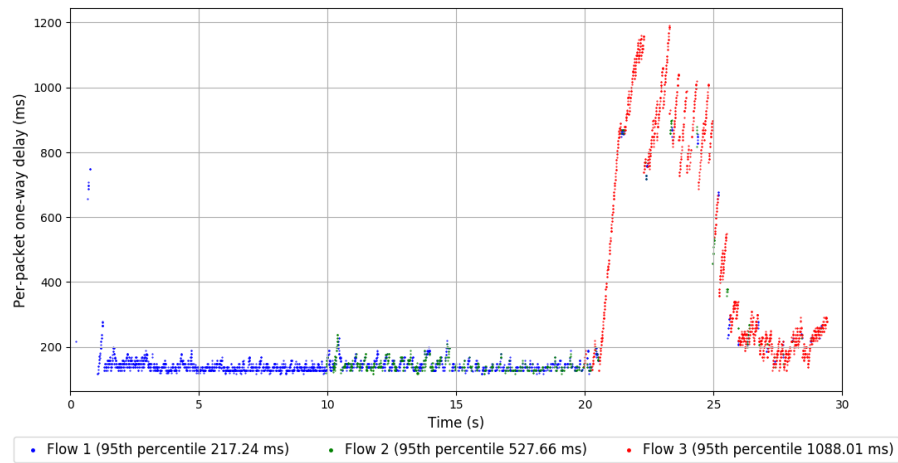
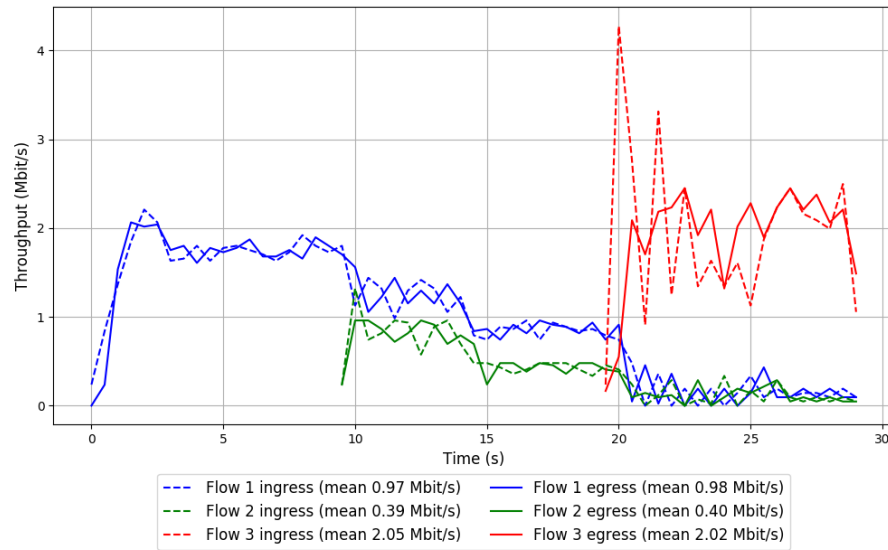
-- Flow 3:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 1088.013 ms

Loss rate: 1.43%

Run 3: Report of Indigo — Data Link

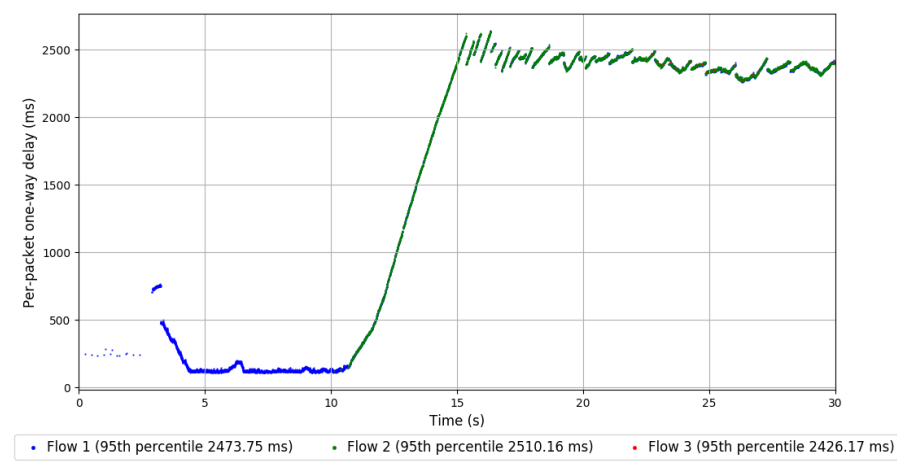
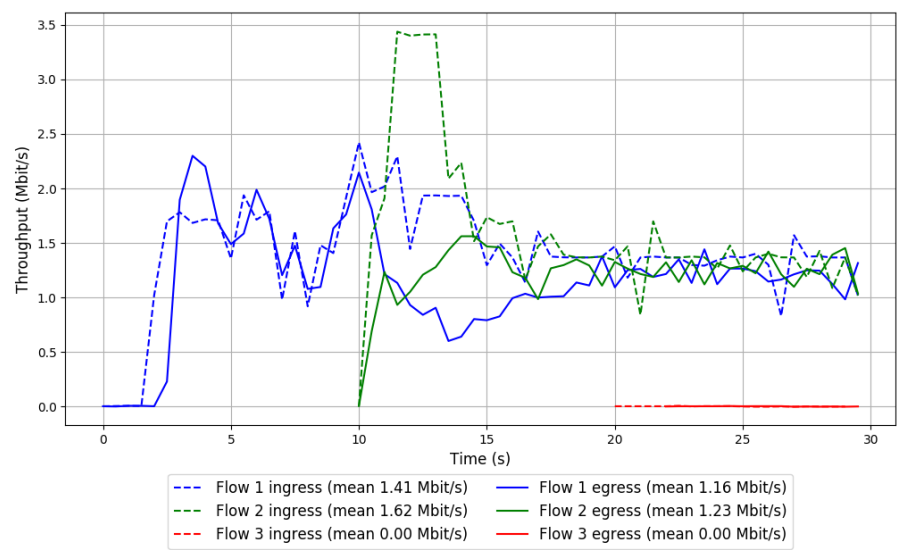


Run 1: Statistics of Vivace-latency

Start at: 2018-01-18 12:41:52
End at: 2018-01-18 12:42:22
Local clock offset: -0.772 ms
Remote clock offset: -3.769 ms

Below is generated by plot.py at 2018-01-18 13:41:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 2489.451 ms
Loss rate: 20.85%
-- Flow 1:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 2473.754 ms
Loss rate: 18.37%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 2510.157 ms
Loss rate: 24.12%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2426.167 ms
Loss rate: 11.92%

Run 1: Report of Vivace-latency — Data Link

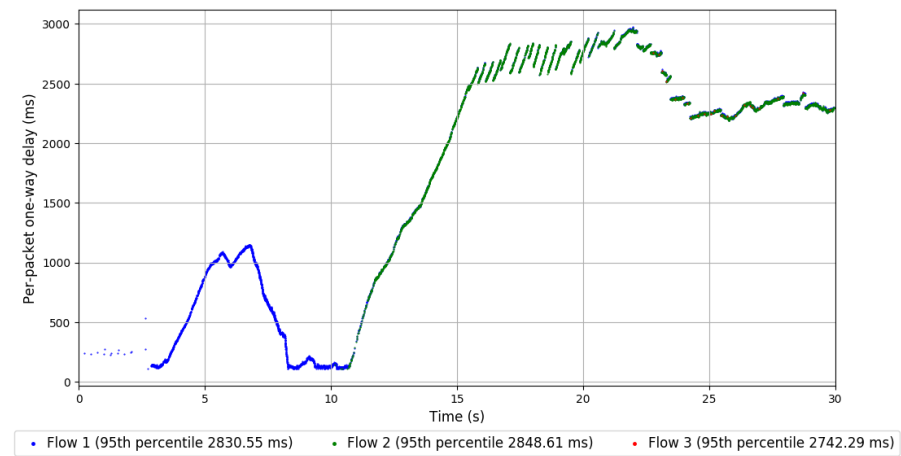
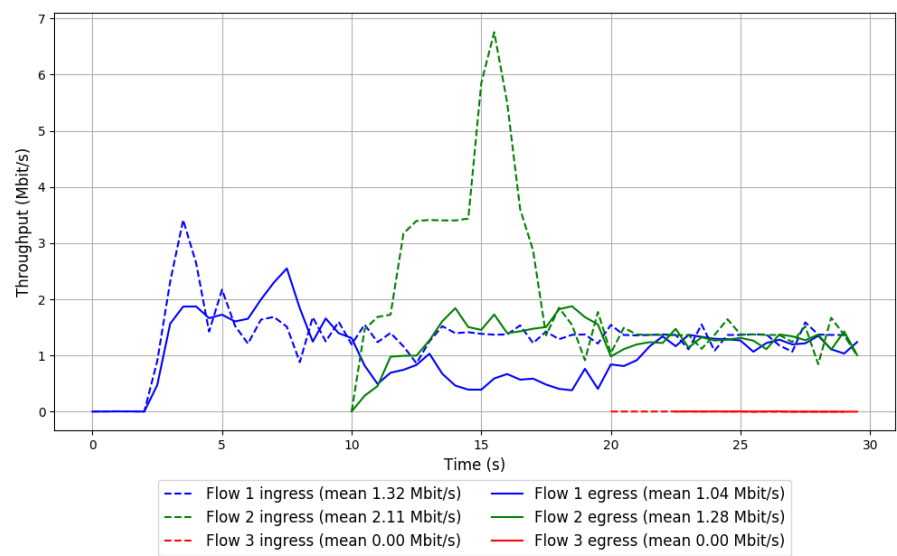


Run 2: Statistics of Vivace-latency

Start at: 2018-01-18 13:04:26
End at: 2018-01-18 13:04:56
Local clock offset: -0.358 ms
Remote clock offset: -3.873 ms

Below is generated by plot.py at 2018-01-18 13:41:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 2840.524 ms
Loss rate: 30.92%
-- Flow 1:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 2830.546 ms
Loss rate: 21.93%
-- Flow 2:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 2848.610 ms
Loss rate: 39.42%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2742.291 ms
Loss rate: 11.40%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-01-18 13:27:01

End at: 2018-01-18 13:27:31

Local clock offset: -0.362 ms

Remote clock offset: 1.077 ms

Below is generated by plot.py at 2018-01-18 13:41:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 3497.599 ms

Loss rate: 31.67%

-- Flow 1:

Average throughput: 0.93 Mbit/s

95th percentile per-packet one-way delay: 3475.262 ms

Loss rate: 28.33%

-- Flow 2:

Average throughput: 1.03 Mbit/s

95th percentile per-packet one-way delay: 3516.718 ms

Loss rate: 35.71%

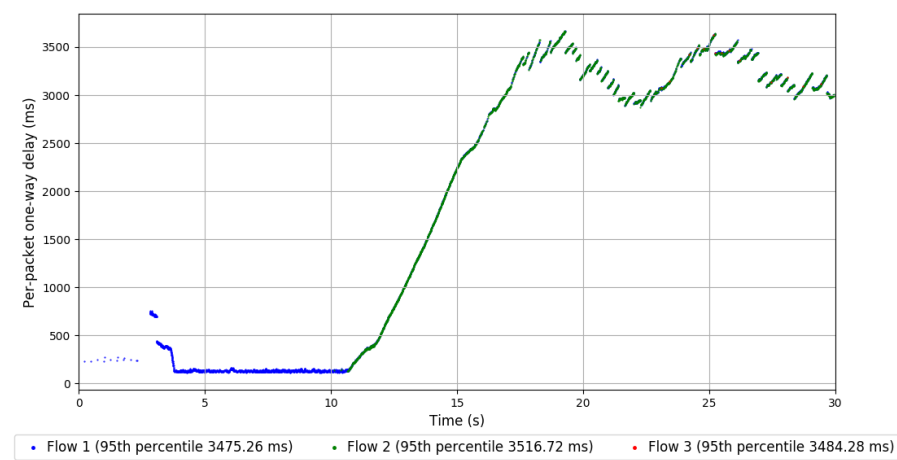
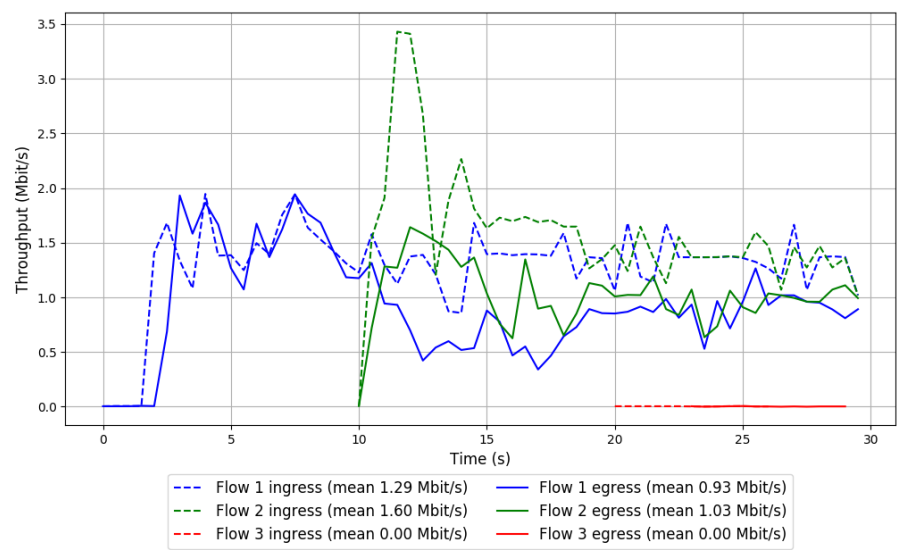
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 3484.281 ms

Loss rate: 35.24%

Run 3: Report of Vivace-latency — Data Link

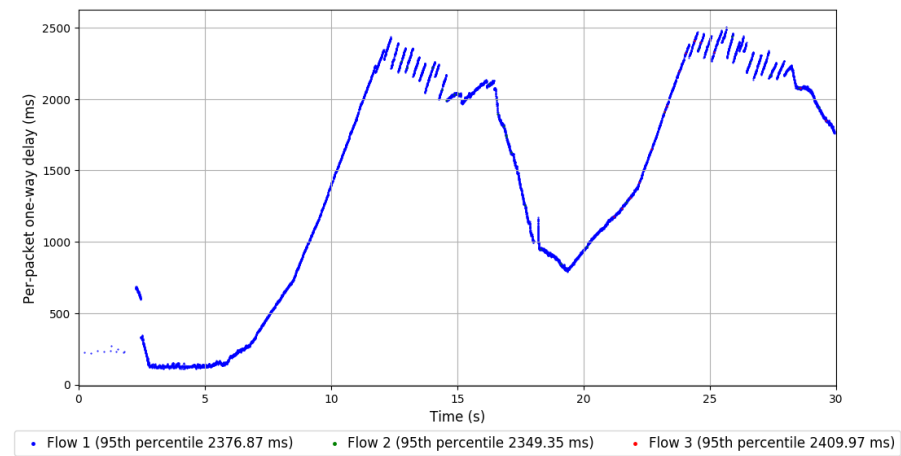
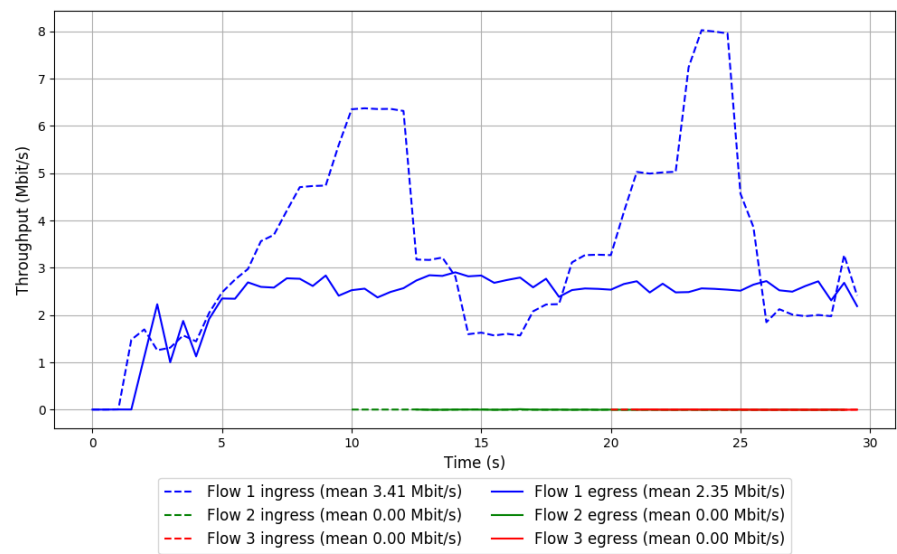


Run 1: Statistics of Vivace-loss

Start at: 2018-01-18 12:49:24
End at: 2018-01-18 12:49:54
Local clock offset: -0.781 ms
Remote clock offset: -3.837 ms

Below is generated by plot.py at 2018-01-18 13:41:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 2376.975 ms
Loss rate: 31.41%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 2376.866 ms
Loss rate: 31.41%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2349.353 ms
Loss rate: 22.65%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2409.973 ms
Loss rate: 42.42%

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-01-18 13:11:58

End at: 2018-01-18 13:12:28

Local clock offset: -0.351 ms

Remote clock offset: 0.992 ms

Below is generated by plot.py at 2018-01-18 13:41:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 2517.465 ms

Loss rate: 35.03%

-- Flow 1:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 2517.294 ms

Loss rate: 35.03%

-- Flow 2:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 2499.439 ms

Loss rate: 27.51%

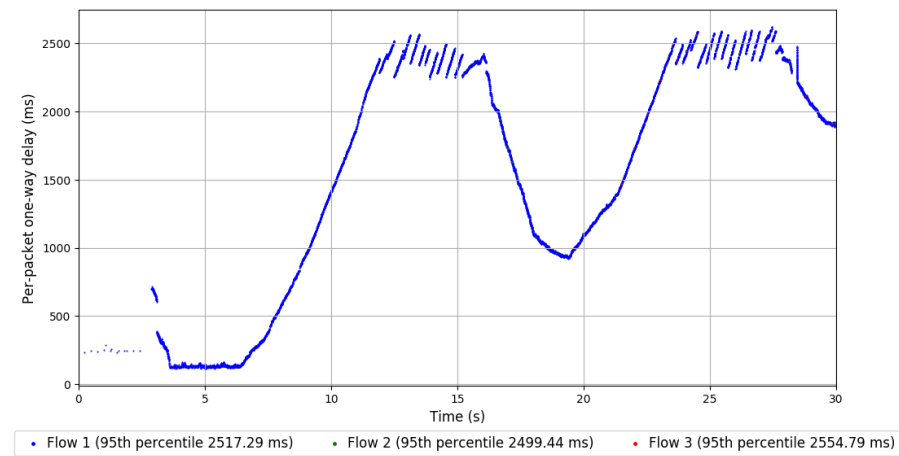
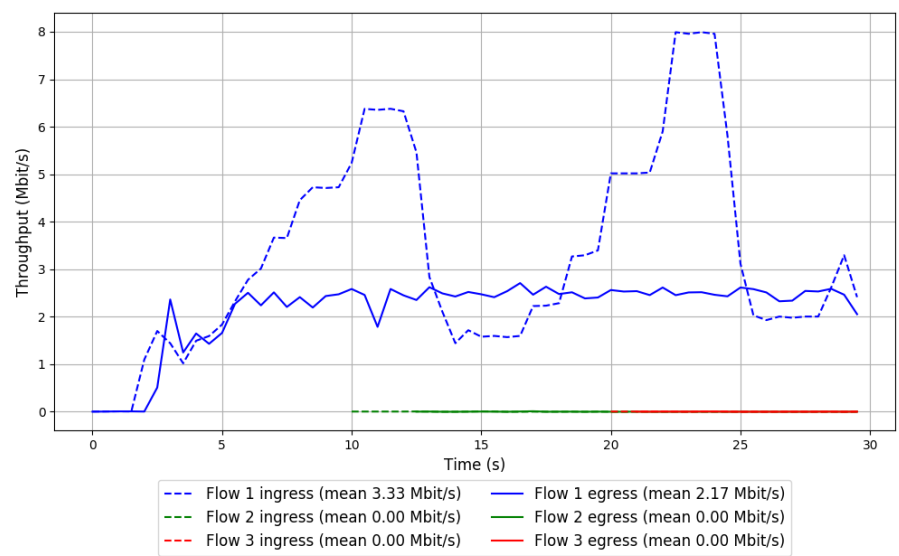
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 2554.791 ms

Loss rate: 54.35%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-01-18 13:34:35

End at: 2018-01-18 13:35:05

Local clock offset: -0.313 ms

Remote clock offset: -3.72 ms

Below is generated by plot.py at 2018-01-18 13:41:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 2950.273 ms

Loss rate: 52.62%

-- Flow 1:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 2950.307 ms

Loss rate: 52.63%

-- Flow 2:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 2900.781 ms

Loss rate: 24.35%

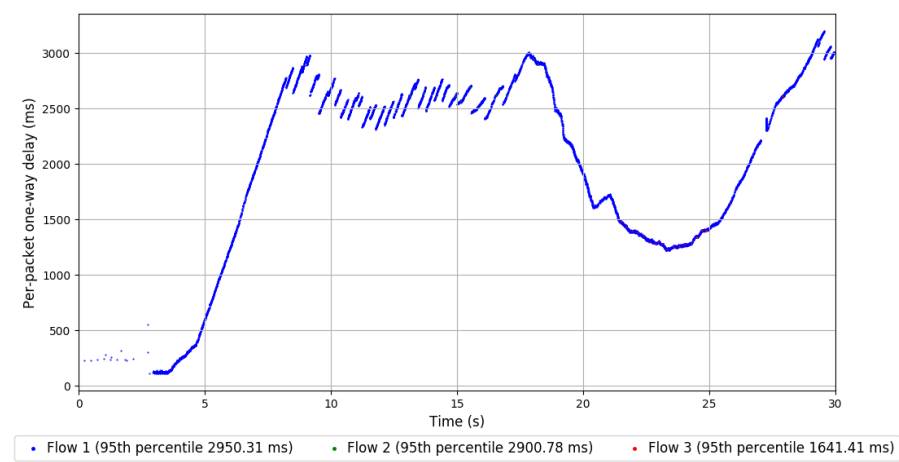
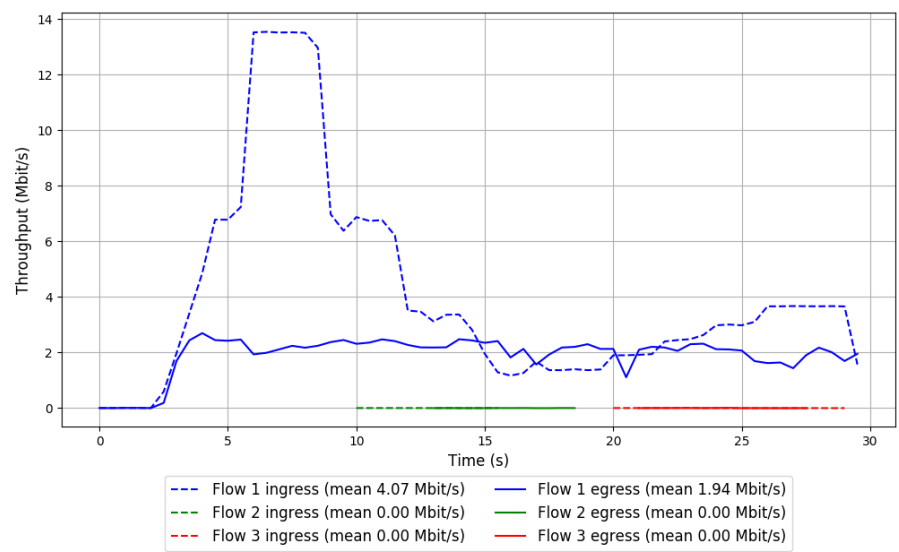
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1641.413 ms

Loss rate: 15.30%

Run 3: Report of Vivace-loss — Data Link



Run 1: Statistics of Vivace-LTE

Start at: 2018-01-18 12:40:37

End at: 2018-01-18 12:41:07

Local clock offset: -0.68 ms

Remote clock offset: 1.048 ms

Below is generated by plot.py at 2018-01-18 13:41:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 482.683 ms

Loss rate: 1.65%

-- Flow 1:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 509.919 ms

Loss rate: 2.92%

-- Flow 2:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 400.947 ms

Loss rate: 0.00%

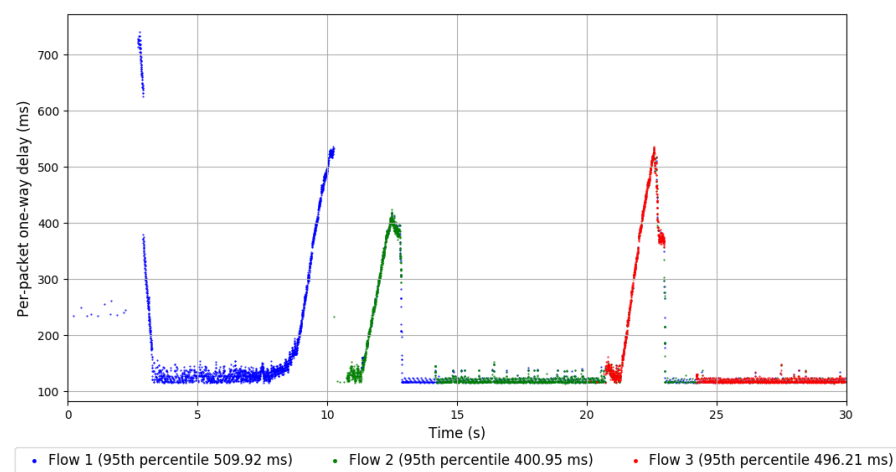
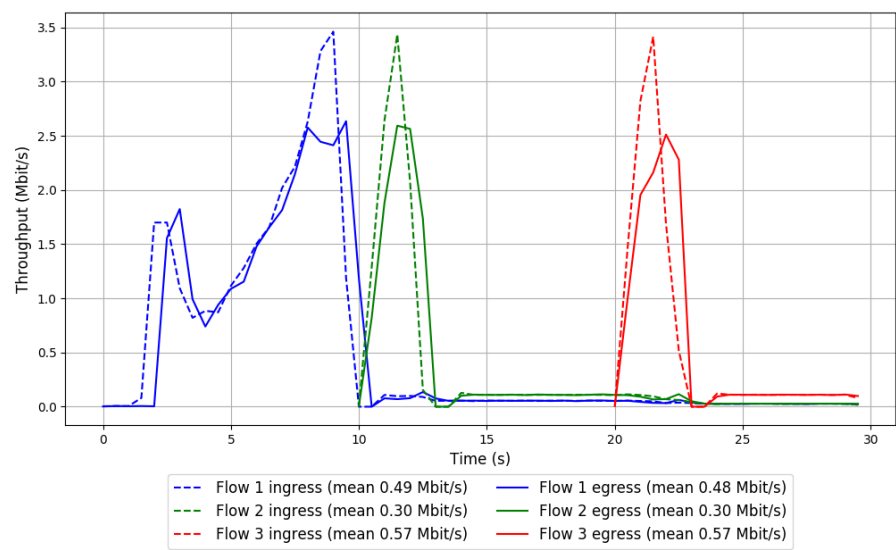
-- Flow 3:

Average throughput: 0.57 Mbit/s

95th percentile per-packet one-way delay: 496.210 ms

Loss rate: 0.06%

Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-01-18 13:03:11

End at: 2018-01-18 13:03:41

Local clock offset: -0.375 ms

Remote clock offset: 0.942 ms

Below is generated by plot.py at 2018-01-18 13:41:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.81 Mbit/s

95th percentile per-packet one-way delay: 596.566 ms

Loss rate: 1.73%

-- Flow 1:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 547.685 ms

Loss rate: 3.03%

-- Flow 2:

Average throughput: 0.27 Mbit/s

95th percentile per-packet one-way delay: 496.699 ms

Loss rate: 0.01%

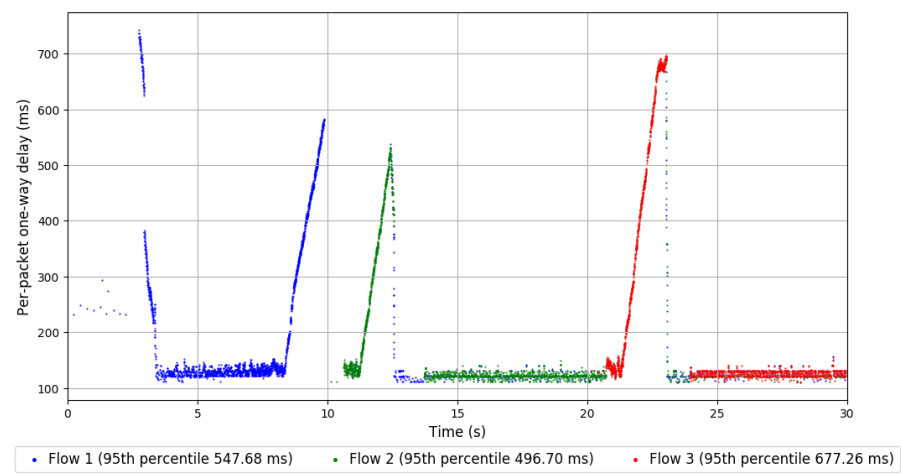
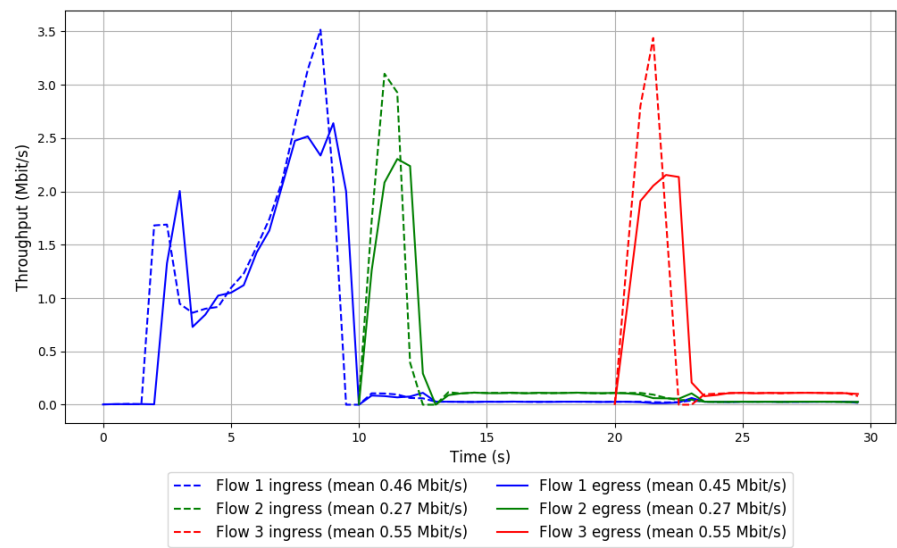
-- Flow 3:

Average throughput: 0.55 Mbit/s

95th percentile per-packet one-way delay: 677.265 ms

Loss rate: 0.09%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-01-18 13:25:46

End at: 2018-01-18 13:26:16

Local clock offset: -0.411 ms

Remote clock offset: 1.024 ms

Below is generated by plot.py at 2018-01-18 13:41:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 399.916 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 389.077 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 403.688 ms

Loss rate: 0.03%

-- Flow 3:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 392.000 ms

Loss rate: 0.06%

Run 3: Report of Vivace-LTE — Data Link

