

Pantheon Report

Generated at 2018-03-20 10:42:41 (UTC).

Data path: AWS California 1 Ethernet (*local*) → Stanford 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).

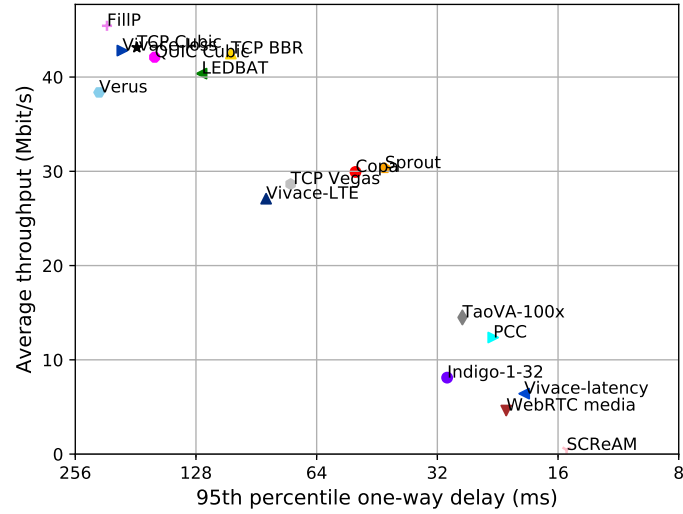
Tested BBR with qdisc of Fair Queuing (*fq*), and other schemes with the default Linux qdisc (*pfifo_fast*).

NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.

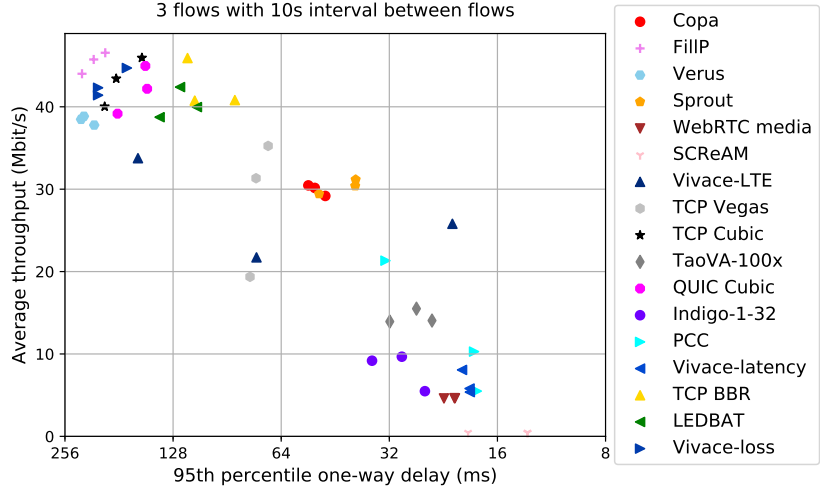
Git summary:

```
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5cec90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecd9c077e64d
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 @ f1a14bffe749737437f61b1eae30b267cde681
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 AWS California 1 Ethernet to Stanford ppp0, 3 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS California 1 Ethernet to Stanford ppp0, 3 runs of 30s each per scheme
3 flows with 10s interval between flows



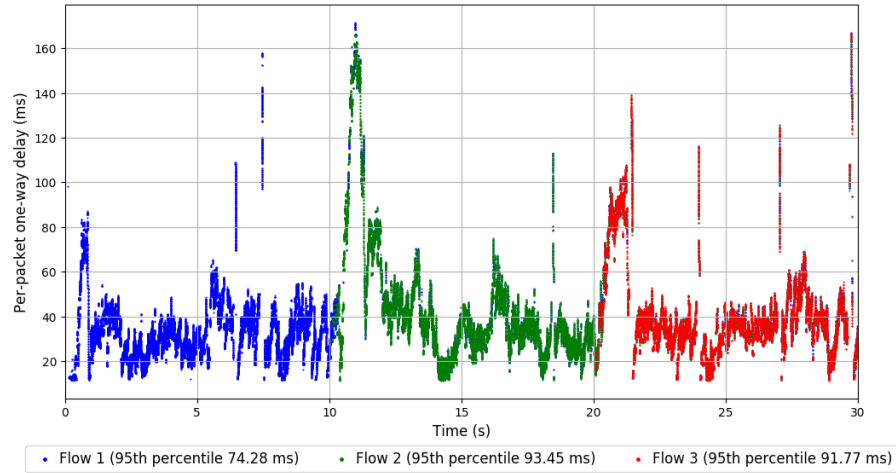
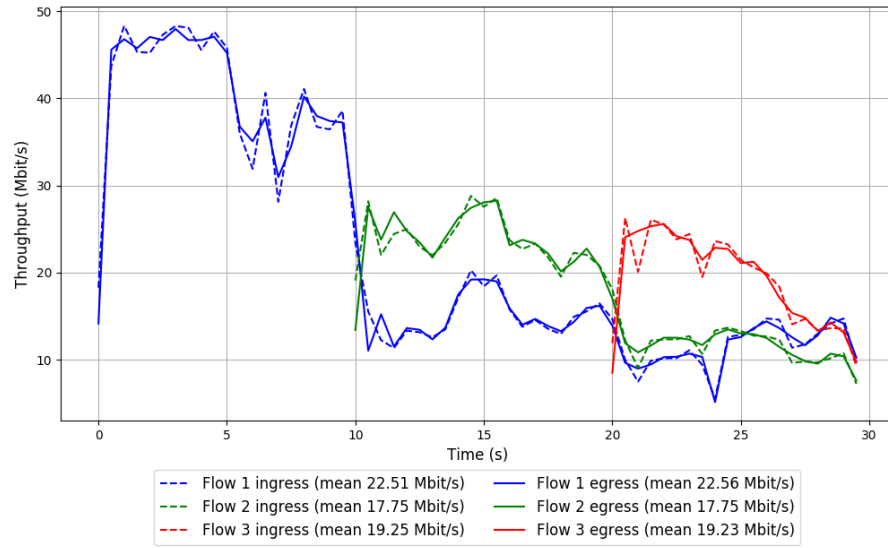
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	23.85	15.63	24.84	87.73	110.20	117.64	0.05	0.08	0.23
TCP Cubic	3	33.13	10.84	8.59	176.13	184.76	189.76	0.32	0.75	1.38
LEDBAT	3	31.28	11.37	4.61	120.18	127.53	133.68	0.28	0.48	0.73
PCC	3	3.29	9.97	7.28	21.33	22.80	25.37	0.00	0.00	0.00
QUIC Cubic	3	30.63	14.05	6.65	158.69	167.29	170.03	0.37	0.89	2.27
SCReAM	3	0.22	0.22	0.22	15.32	13.95	15.45	0.00	0.00	0.00
WebRTC media	3	2.37	1.55	0.70	21.32	21.18	23.25	0.00	0.00	0.00
Sprout	3	15.61	15.05	13.89	39.73	42.81	56.80	0.03	0.13	0.06
TaoVA-100x	3	5.93	7.66	10.43	22.34	29.86	38.88	0.02	0.02	0.35
TCP Vegas	3	8.64	11.98	35.68	53.44	56.88	83.34	0.02	0.02	0.45
Verus	3	22.82	18.85	10.63	203.77	233.89	211.57	21.40	41.07	34.99
Copa	3	18.43	12.80	8.98	47.92	52.27	65.09	0.12	0.22	0.52
FillP	3	27.02	15.79	24.43	190.71	236.25	246.55	44.27	57.43	64.51
Indigo-1-32	3	2.75	4.04	8.28	26.79	31.08	31.35	0.00	0.00	0.00
Vivace-latency	3	2.60	3.65	4.14	18.67	19.08	20.44	0.00	0.00	0.00
Vivace-loss	3	31.46	14.06	6.16	196.80	189.60	189.52	18.19	14.77	12.72
Vivace-LTE	3	17.67	12.08	4.13	88.81	73.49	33.02	1.27	0.46	0.03

Run 1: Statistics of TCP BBR

Start at: 2018-03-20 09:42:51
End at: 2018-03-20 09:43:21
Local clock offset: 4.095 ms
Remote clock offset: -6.554 ms

Below is generated by plot.py at 2018-03-20 10:39:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 40.81 Mbit/s
95th percentile per-packet one-way delay: 86.142 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 22.56 Mbit/s
95th percentile per-packet one-way delay: 74.279 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 17.75 Mbit/s
95th percentile per-packet one-way delay: 93.452 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 19.23 Mbit/s
95th percentile per-packet one-way delay: 91.766 ms
Loss rate: 0.13%

Run 1: Report of TCP BBR — Data Link

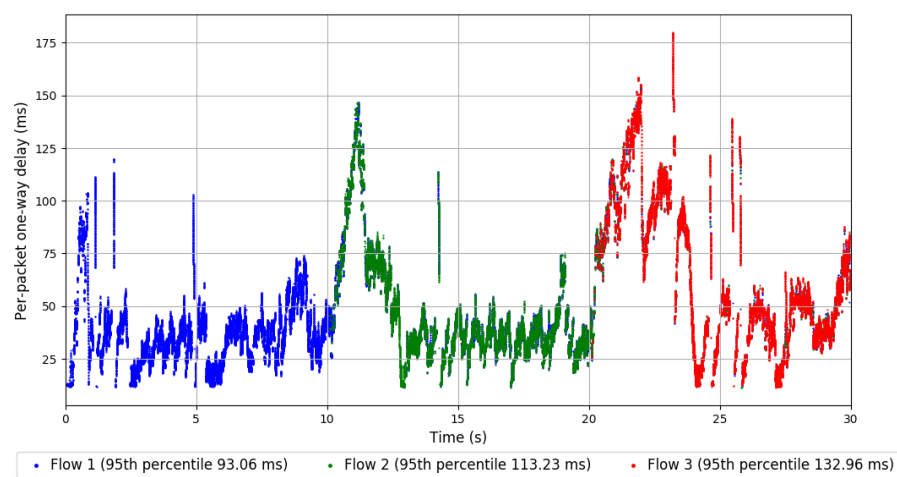
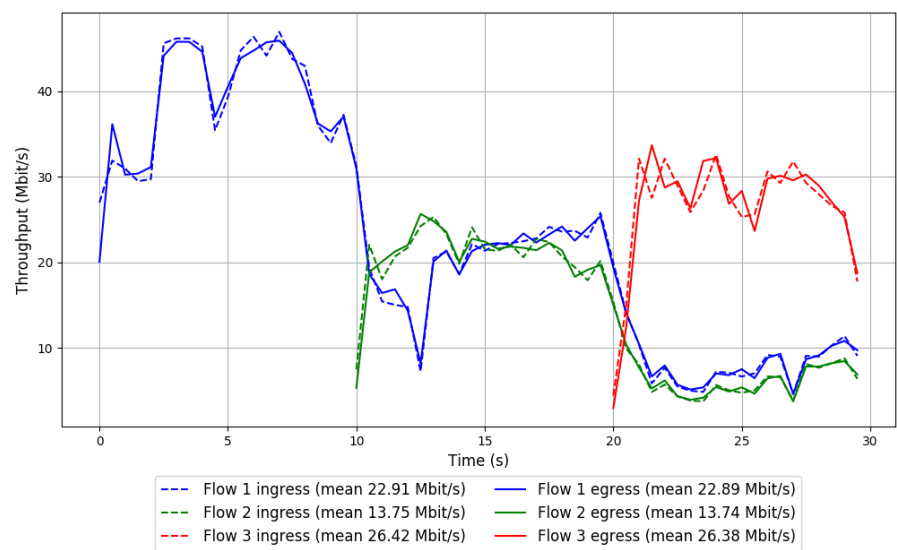


Run 2: Statistics of TCP BBR

Start at: 2018-03-20 10:06:53
End at: 2018-03-20 10:07:23
Local clock offset: 2.473 ms
Remote clock offset: -6.333 ms

Below is generated by plot.py at 2018-03-20 10:39:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 40.75 Mbit/s
95th percentile per-packet one-way delay: 111.420 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 22.89 Mbit/s
95th percentile per-packet one-way delay: 93.062 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 13.74 Mbit/s
95th percentile per-packet one-way delay: 113.232 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 26.38 Mbit/s
95th percentile per-packet one-way delay: 132.955 ms
Loss rate: 0.26%

Run 2: Report of TCP BBR — Data Link

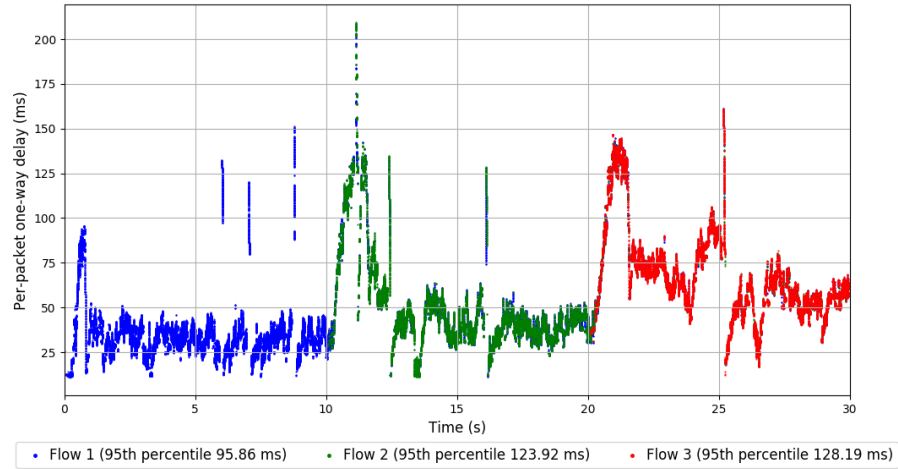
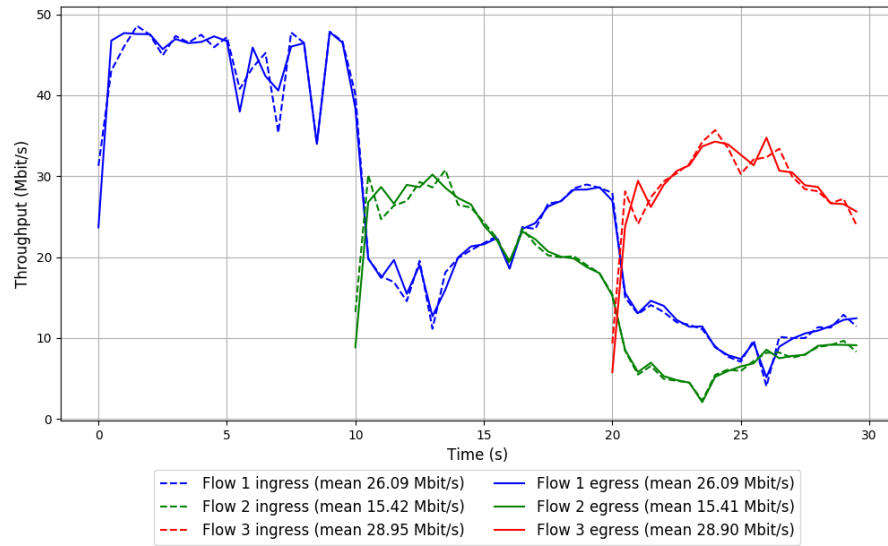


Run 3: Statistics of TCP BBR

Start at: 2018-03-20 10:30:56
End at: 2018-03-20 10:31:26
Local clock offset: 0.93 ms
Remote clock offset: -4.568 ms

Below is generated by plot.py at 2018-03-20 10:39:56
Datalink statistics
-- Total of 3 flows:
Average throughput: 45.92 Mbit/s
95th percentile per-packet one-way delay: 116.680 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 26.09 Mbit/s
95th percentile per-packet one-way delay: 95.856 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 15.41 Mbit/s
95th percentile per-packet one-way delay: 123.918 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 28.90 Mbit/s
95th percentile per-packet one-way delay: 128.190 ms
Loss rate: 0.30%

Run 3: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-03-20 09:32:12

End at: 2018-03-20 09:32:42

Local clock offset: 3.662 ms

Remote clock offset: -6.44 ms

Below is generated by plot.py at 2018-03-20 10:39:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 43.42 Mbit/s

95th percentile per-packet one-way delay: 184.320 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 35.18 Mbit/s

95th percentile per-packet one-way delay: 177.586 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 7.06 Mbit/s

95th percentile per-packet one-way delay: 192.197 ms

Loss rate: 0.85%

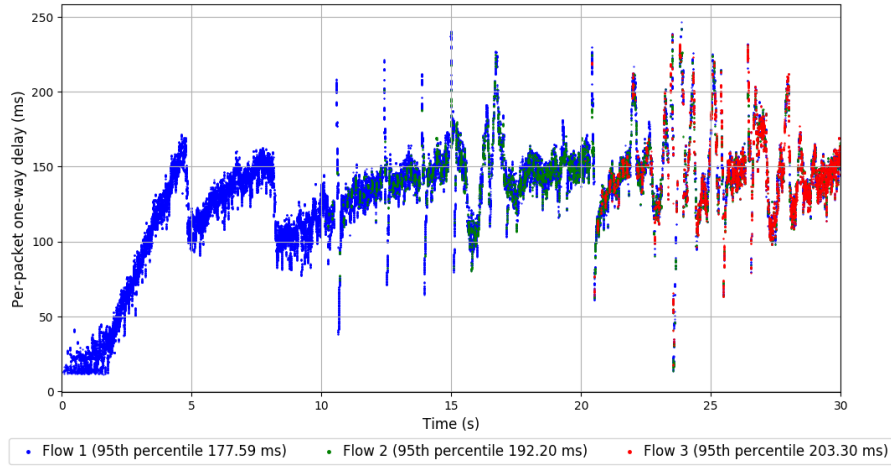
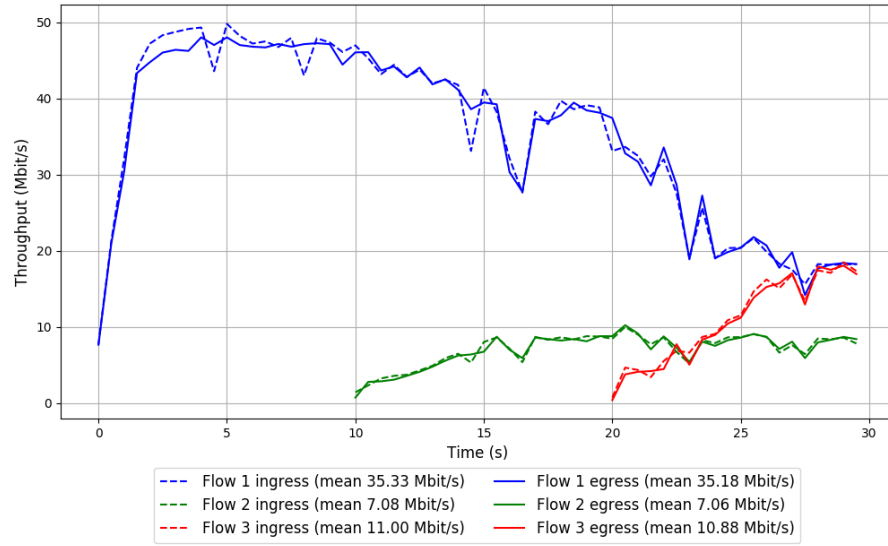
-- Flow 3:

Average throughput: 10.88 Mbit/s

95th percentile per-packet one-way delay: 203.299 ms

Loss rate: 2.30%

Run 1: Report of TCP Cubic — Data Link

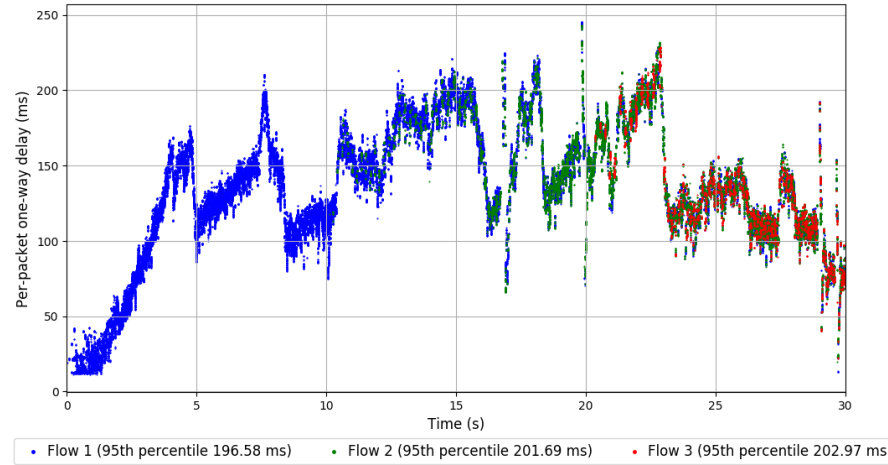
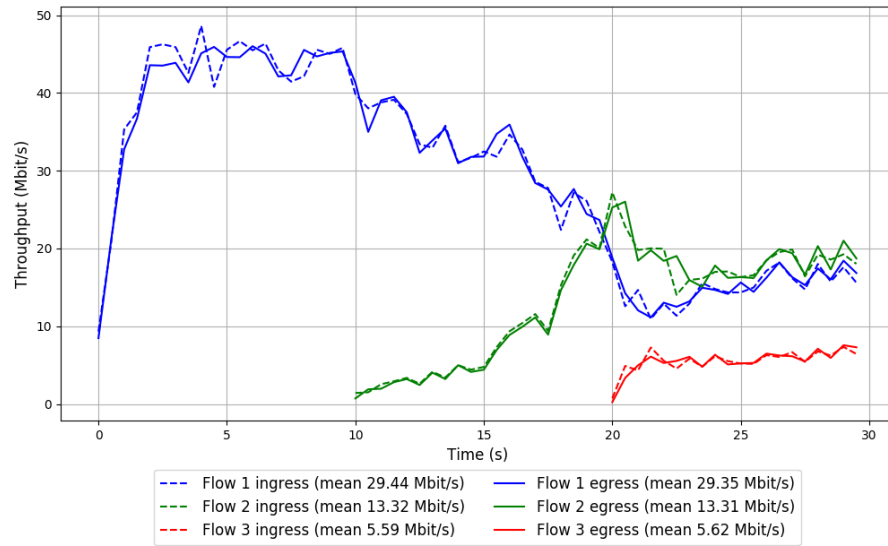


Run 2: Statistics of TCP Cubic

Start at: 2018-03-20 09:56:14
End at: 2018-03-20 09:56:44
Local clock offset: 2.799 ms
Remote clock offset: -6.285 ms

Below is generated by plot.py at 2018-03-20 10:39:56
Datalink statistics
-- Total of 3 flows:
Average throughput: 40.02 Mbit/s
95th percentile per-packet one-way delay: 198.484 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 29.35 Mbit/s
95th percentile per-packet one-way delay: 196.577 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 13.31 Mbit/s
95th percentile per-packet one-way delay: 201.690 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 5.62 Mbit/s
95th percentile per-packet one-way delay: 202.969 ms
Loss rate: 0.63%

Run 2: Report of TCP Cubic — Data Link

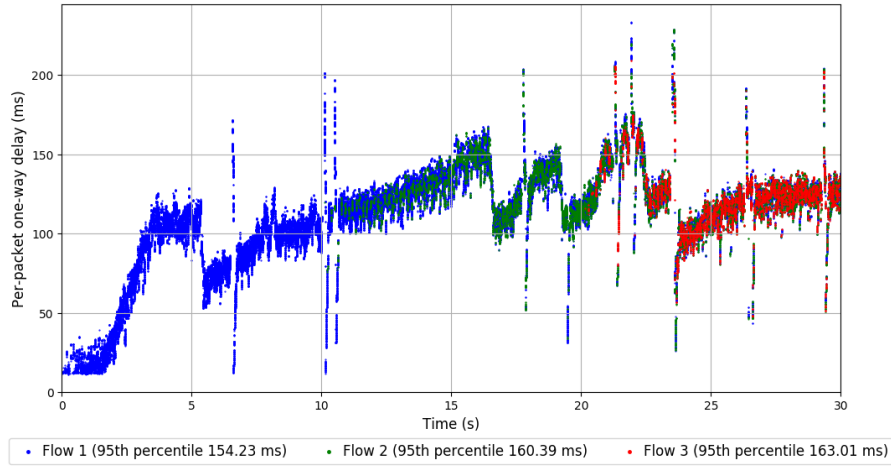
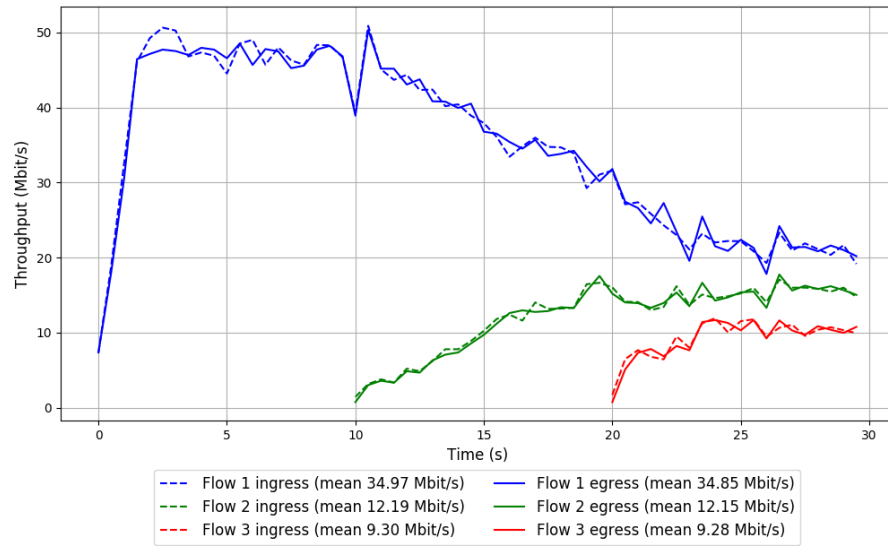


Run 3: Statistics of TCP Cubic

Start at: 2018-03-20 10:20:17
End at: 2018-03-20 10:20:47
Local clock offset: 1.755 ms
Remote clock offset: -5.589 ms

Below is generated by plot.py at 2018-03-20 10:39:58
Datalink statistics
-- Total of 3 flows:
Average throughput: 45.94 Mbit/s
95th percentile per-packet one-way delay: 156.315 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 34.85 Mbit/s
95th percentile per-packet one-way delay: 154.234 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 12.15 Mbit/s
95th percentile per-packet one-way delay: 160.386 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 9.28 Mbit/s
95th percentile per-packet one-way delay: 163.014 ms
Loss rate: 1.21%

Run 3: Report of TCP Cubic — Data Link

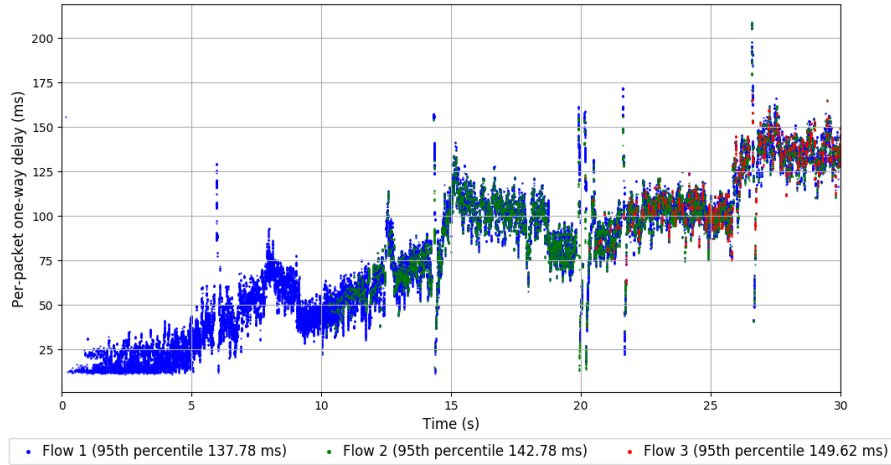
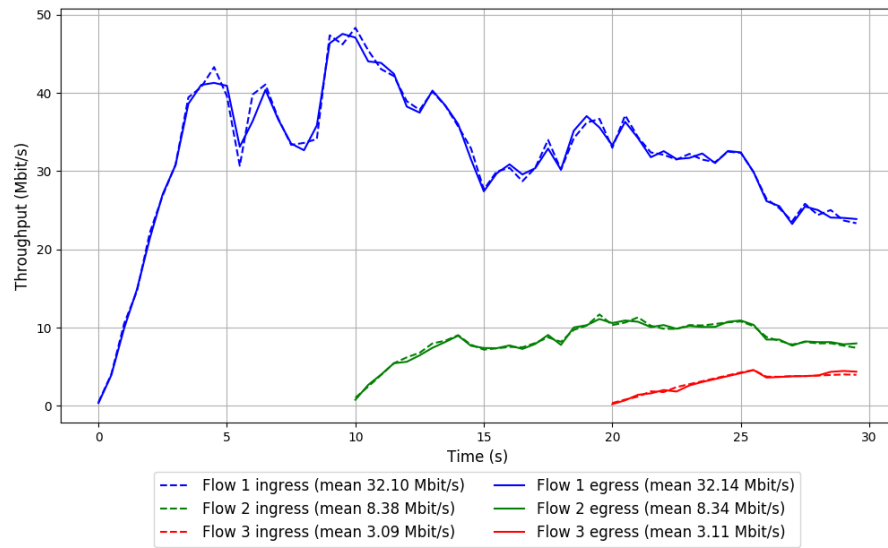


Run 1: Statistics of LEDBAT

Start at: 2018-03-20 09:48:12
End at: 2018-03-20 09:48:42
Local clock offset: 3.396 ms
Remote clock offset: -6.391 ms

Below is generated by plot.py at 2018-03-20 10:39:58
Datalink statistics
-- Total of 3 flows:
Average throughput: 38.74 Mbit/s
95th percentile per-packet one-way delay: 139.582 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 32.14 Mbit/s
95th percentile per-packet one-way delay: 137.776 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 8.34 Mbit/s
95th percentile per-packet one-way delay: 142.782 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 149.623 ms
Loss rate: 0.04%

Run 1: Report of LEDBAT — Data Link

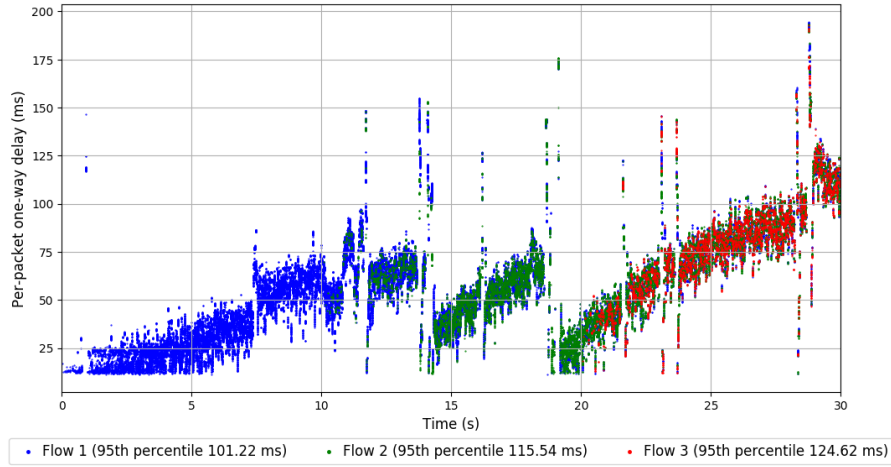
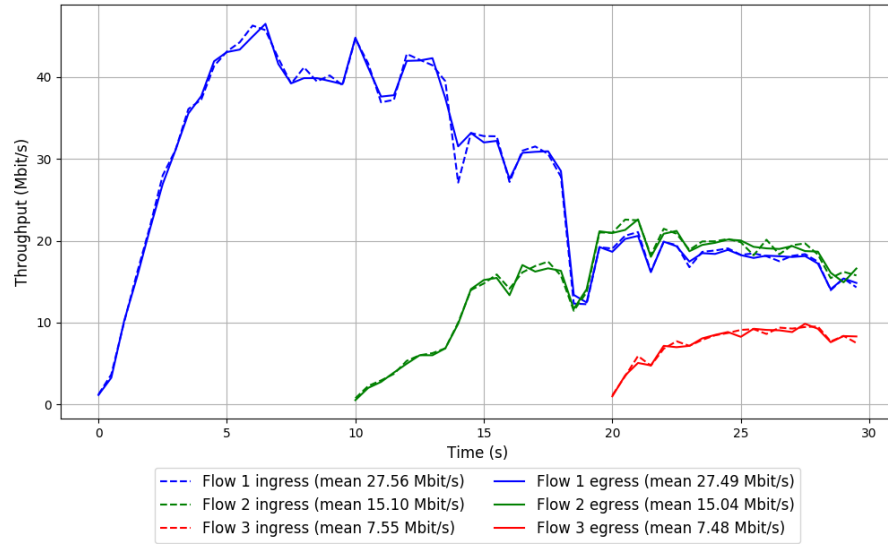


Run 2: Statistics of LEDBAT

Start at: 2018-03-20 10:12:15
End at: 2018-03-20 10:12:45
Local clock offset: 2.49 ms
Remote clock offset: -6.272 ms

Below is generated by plot.py at 2018-03-20 10:39:58
Datalink statistics
-- Total of 3 flows:
Average throughput: 39.96 Mbit/s
95th percentile per-packet one-way delay: 109.864 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 27.49 Mbit/s
95th percentile per-packet one-way delay: 101.217 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 15.04 Mbit/s
95th percentile per-packet one-way delay: 115.538 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 7.48 Mbit/s
95th percentile per-packet one-way delay: 124.624 ms
Loss rate: 0.75%

Run 2: Report of LEDBAT — Data Link

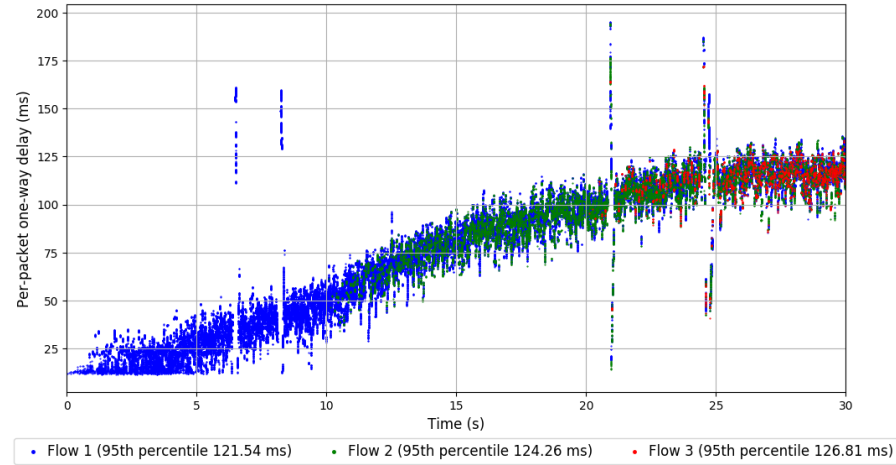
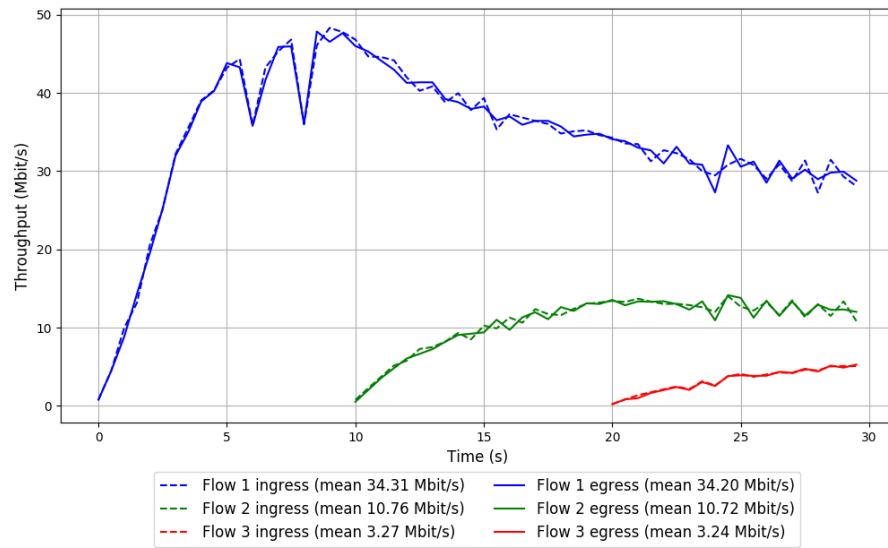


Run 3: Statistics of LEDBAT

Start at: 2018-03-20 10:36:18
End at: 2018-03-20 10:36:48
Local clock offset: 0.583 ms
Remote clock offset: -4.312 ms

Below is generated by plot.py at 2018-03-20 10:40:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 42.39 Mbit/s
95th percentile per-packet one-way delay: 122.410 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 34.20 Mbit/s
95th percentile per-packet one-way delay: 121.544 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 10.72 Mbit/s
95th percentile per-packet one-way delay: 124.256 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 3.24 Mbit/s
95th percentile per-packet one-way delay: 126.806 ms
Loss rate: 1.41%

Run 3: Report of LEDBAT — Data Link

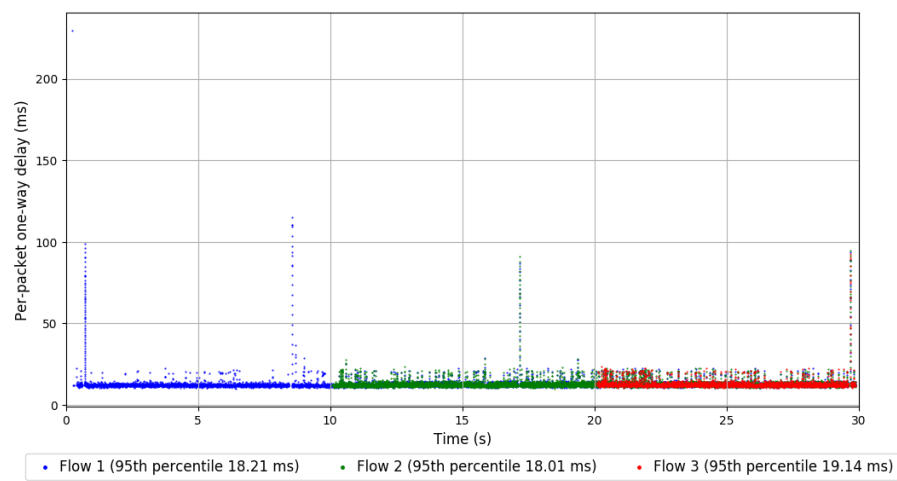
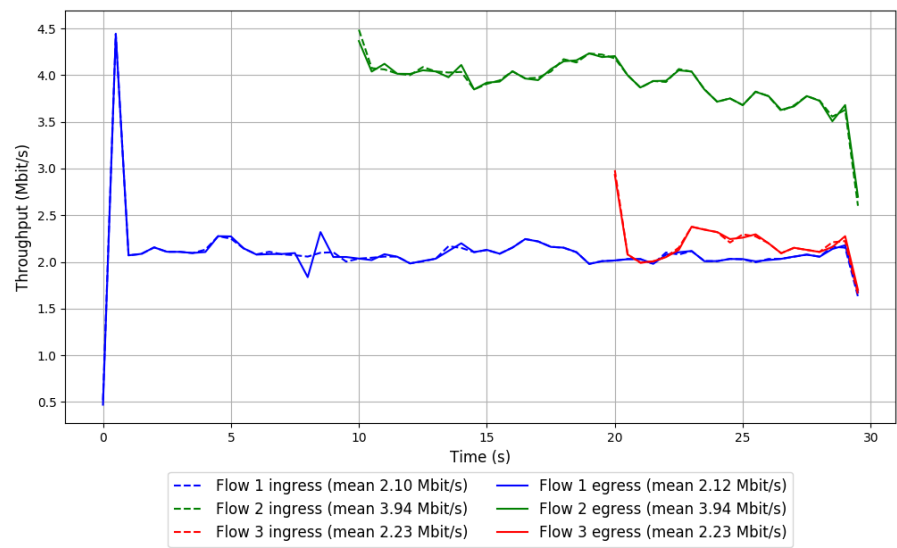


Run 1: Statistics of PCC

Start at: 2018-03-20 09:46:53
End at: 2018-03-20 09:47:23
Local clock offset: 3.54 ms
Remote clock offset: -6.442 ms

Below is generated by plot.py at 2018-03-20 10:40:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.49 Mbit/s
95th percentile per-packet one-way delay: 18.260 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 18.211 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.94 Mbit/s
95th percentile per-packet one-way delay: 18.014 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 19.139 ms
Loss rate: 0.00%

Run 1: Report of PCC — Data Link

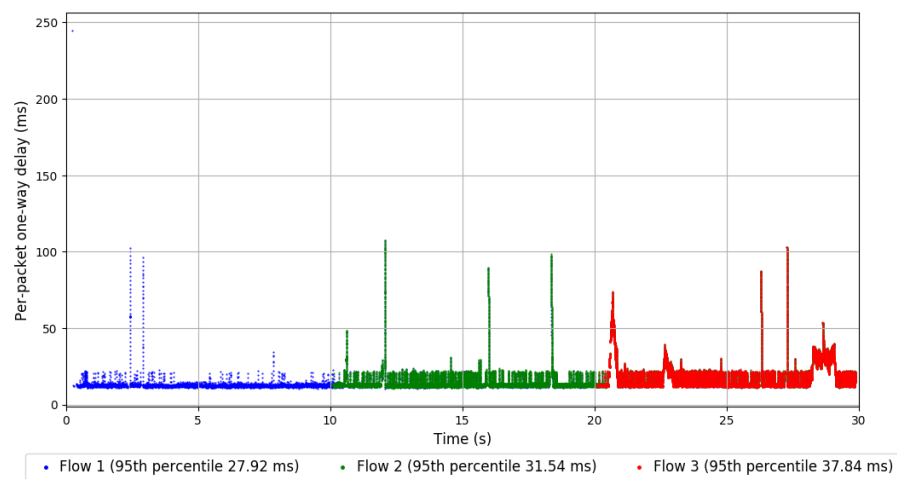
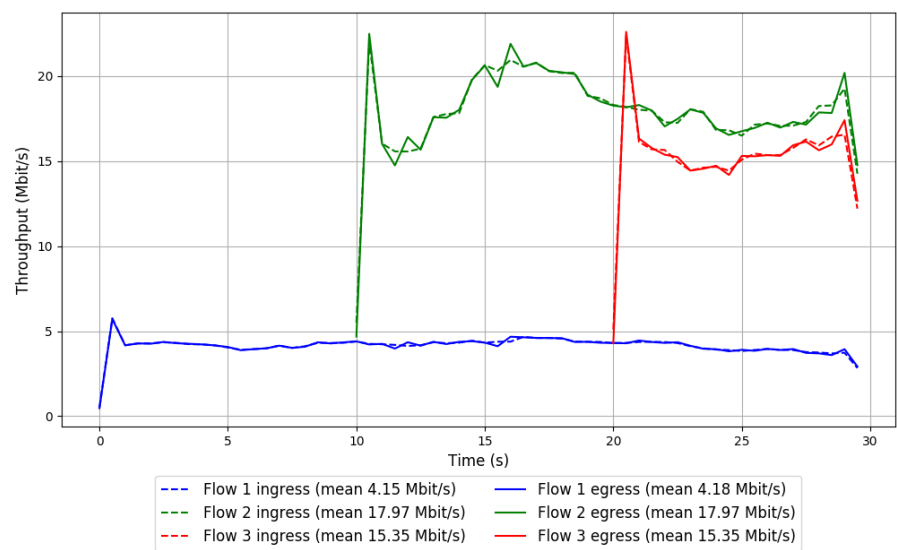


Run 2: Statistics of PCC

Start at: 2018-03-20 10:10:55
End at: 2018-03-20 10:11:25
Local clock offset: 2.417 ms
Remote clock offset: -6.317 ms

Below is generated by plot.py at 2018-03-20 10:40:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 21.32 Mbit/s
95th percentile per-packet one-way delay: 32.792 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 27.922 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 17.97 Mbit/s
95th percentile per-packet one-way delay: 31.541 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.35 Mbit/s
95th percentile per-packet one-way delay: 37.845 ms
Loss rate: 0.00%

Run 2: Report of PCC — Data Link

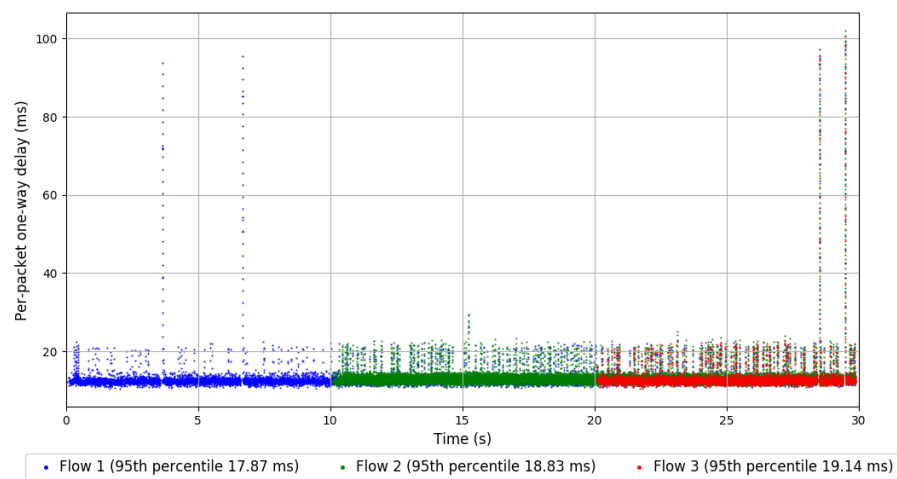
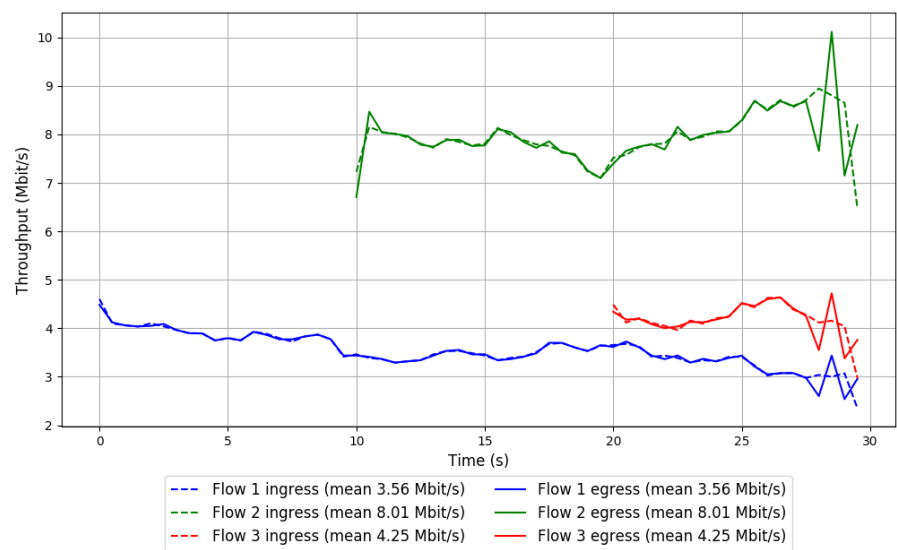


Run 3: Statistics of PCC

Start at: 2018-03-20 10:34:59
End at: 2018-03-20 10:35:29
Local clock offset: 0.711 ms
Remote clock offset: -4.392 ms

Below is generated by plot.py at 2018-03-20 10:40:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 10.29 Mbit/s
95th percentile per-packet one-way delay: 18.588 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 17.871 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.01 Mbit/s
95th percentile per-packet one-way delay: 18.833 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.25 Mbit/s
95th percentile per-packet one-way delay: 19.138 ms
Loss rate: 0.00%

Run 3: Report of PCC — Data Link

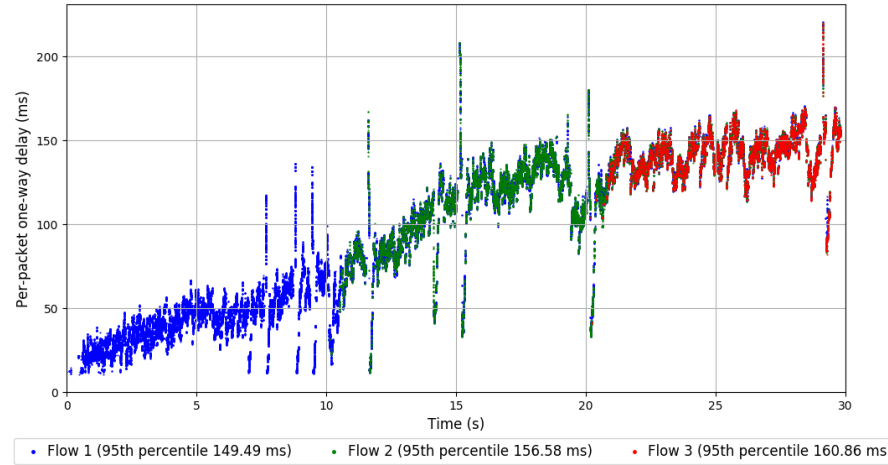
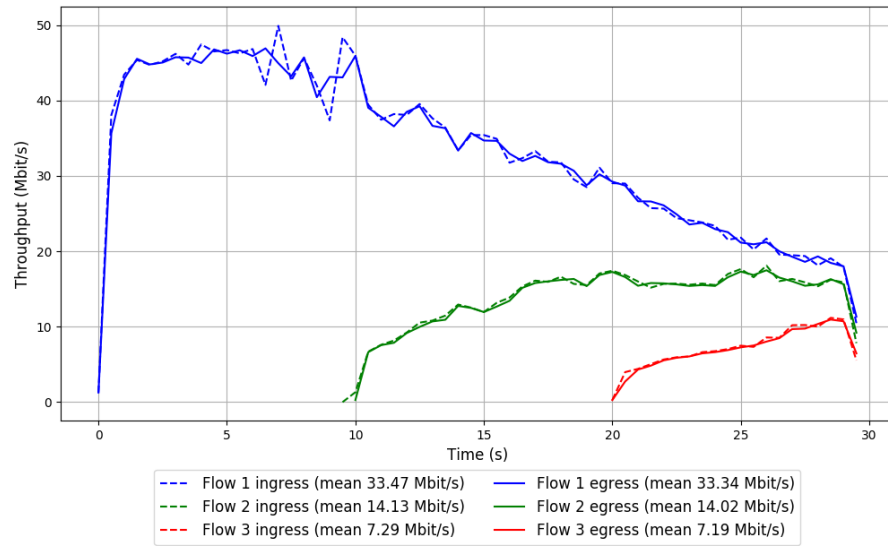


Run 1: Statistics of QUIC Cubic

Start at: 2018-03-20 09:26:52
End at: 2018-03-20 09:27:22
Local clock offset: 3.4 ms
Remote clock offset: -6.202 ms

Below is generated by plot.py at 2018-03-20 10:40:43
Datalink statistics
-- Total of 3 flows:
Average throughput: 44.96 Mbit/s
95th percentile per-packet one-way delay: 152.909 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 33.34 Mbit/s
95th percentile per-packet one-way delay: 149.490 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 14.02 Mbit/s
95th percentile per-packet one-way delay: 156.579 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 7.19 Mbit/s
95th percentile per-packet one-way delay: 160.859 ms
Loss rate: 2.09%

Run 1: Report of QUIC Cubic — Data Link

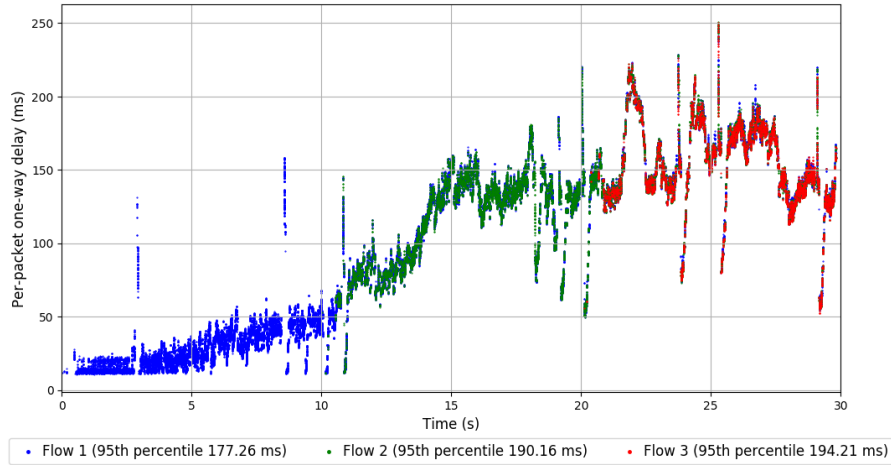
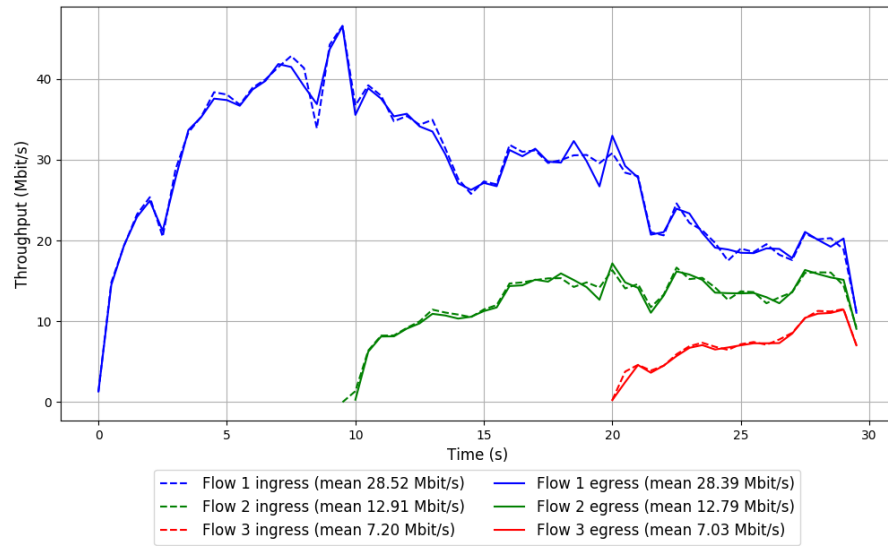


Run 2: Statistics of QUIC Cubic

Start at: 2018-03-20 09:50:54
End at: 2018-03-20 09:51:24
Local clock offset: 3.057 ms
Remote clock offset: -6.351 ms

Below is generated by plot.py at 2018-03-20 10:40:43
Datalink statistics
-- Total of 3 flows:
Average throughput: 39.17 Mbit/s
95th percentile per-packet one-way delay: 182.740 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 28.39 Mbit/s
95th percentile per-packet one-way delay: 177.263 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 12.79 Mbit/s
95th percentile per-packet one-way delay: 190.157 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 7.03 Mbit/s
95th percentile per-packet one-way delay: 194.208 ms
Loss rate: 2.55%

Run 2: Report of QUIC Cubic — Data Link

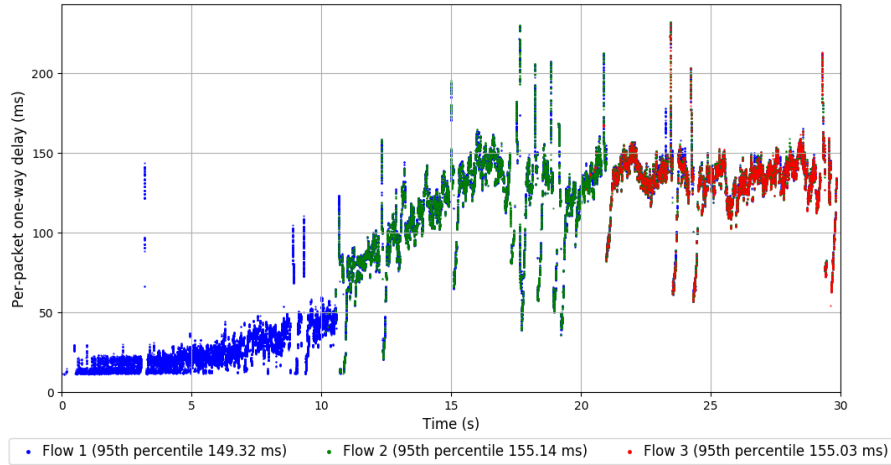
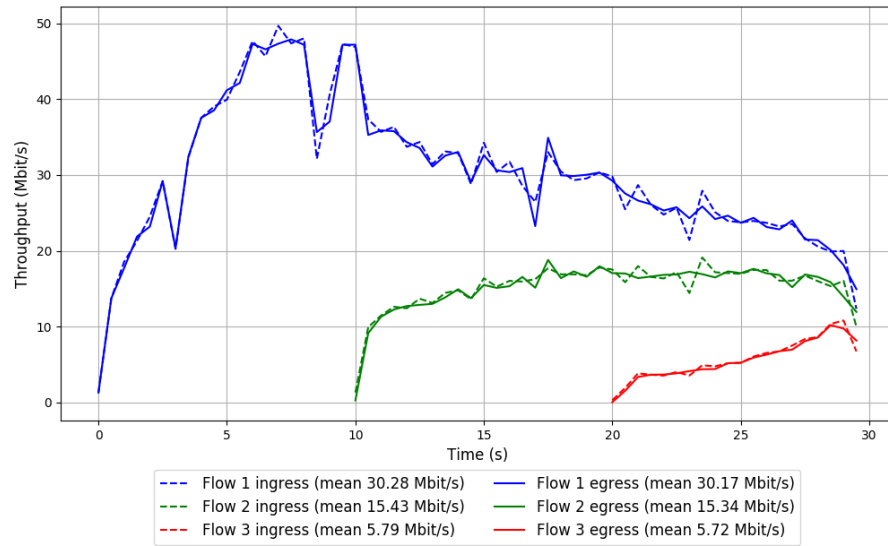


Run 3: Statistics of QUIC Cubic

Start at: 2018-03-20 10:14:57
End at: 2018-03-20 10:15:27
Local clock offset: 2.358 ms
Remote clock offset: -6.292 ms

Below is generated by plot.py at 2018-03-20 10:40:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 42.18 Mbit/s
95th percentile per-packet one-way delay: 151.167 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 30.17 Mbit/s
95th percentile per-packet one-way delay: 149.324 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 15.34 Mbit/s
95th percentile per-packet one-way delay: 155.143 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 5.72 Mbit/s
95th percentile per-packet one-way delay: 155.032 ms
Loss rate: 2.17%

Run 3: Report of QUIC Cubic — Data Link

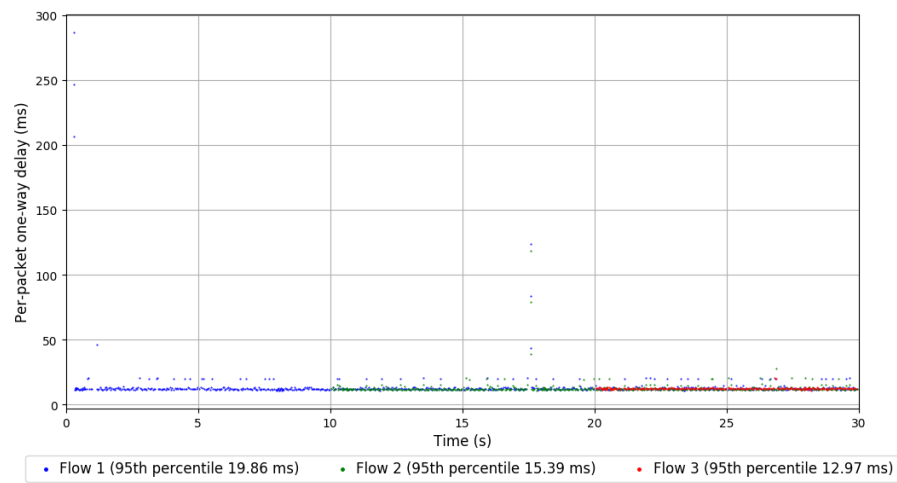
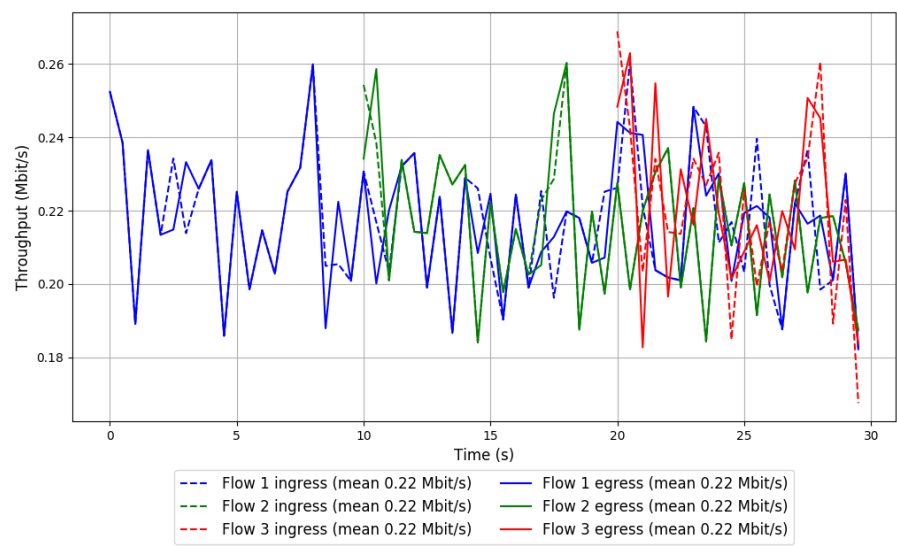


Run 1: Statistics of SReAM

Start at: 2018-03-20 09:38:53
End at: 2018-03-20 09:39:23
Local clock offset: 4.106 ms
Remote clock offset: -6.591 ms

Below is generated by plot.py at 2018-03-20 10:40:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 19.314 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 19.861 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 15.387 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 12.973 ms
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

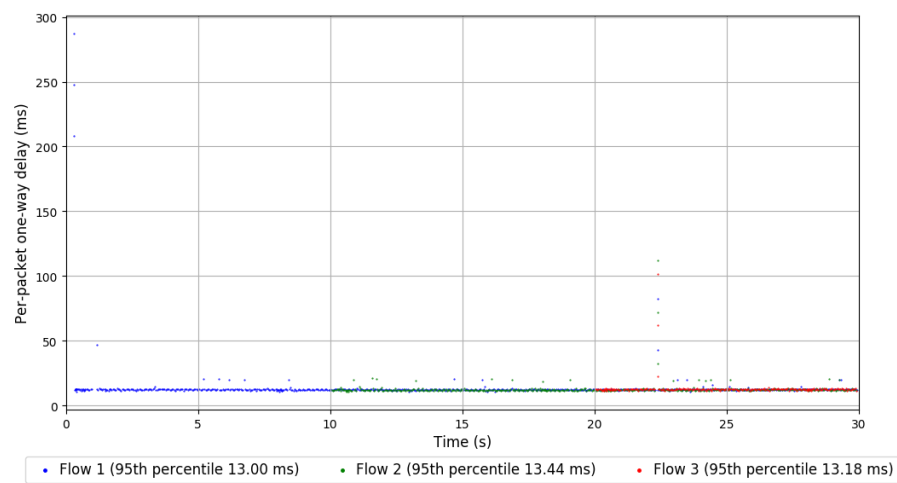
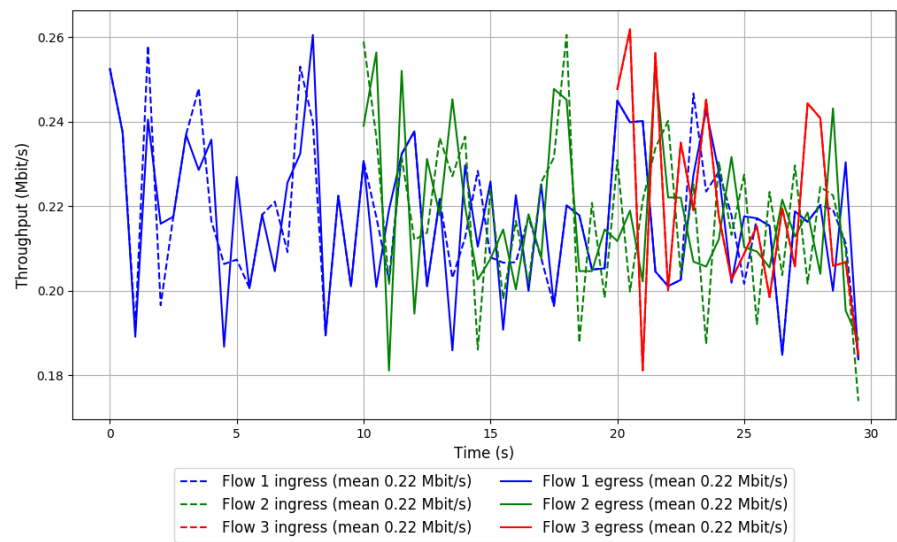


Run 2: Statistics of SReAM

Start at: 2018-03-20 10:02:55
End at: 2018-03-20 10:03:25
Local clock offset: 2.546 ms
Remote clock offset: -6.288 ms

Below is generated by plot.py at 2018-03-20 10:40:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 13.214 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 12.997 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 13.442 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 13.175 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

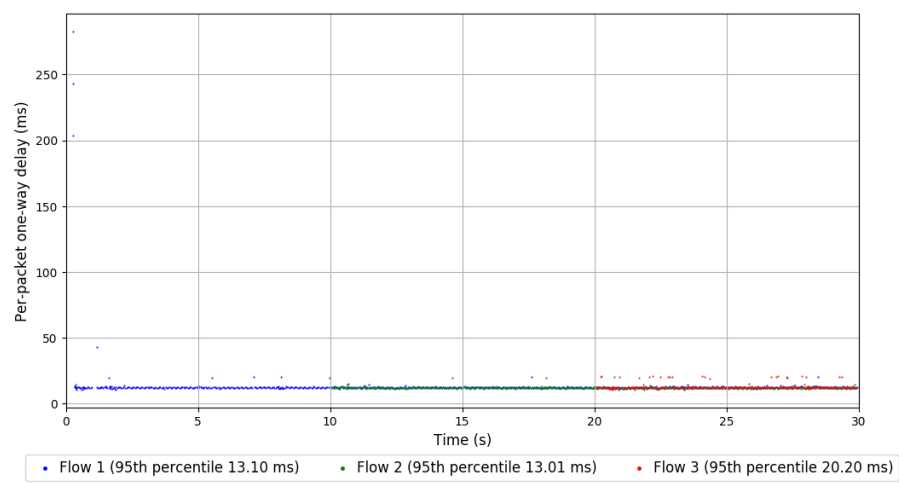
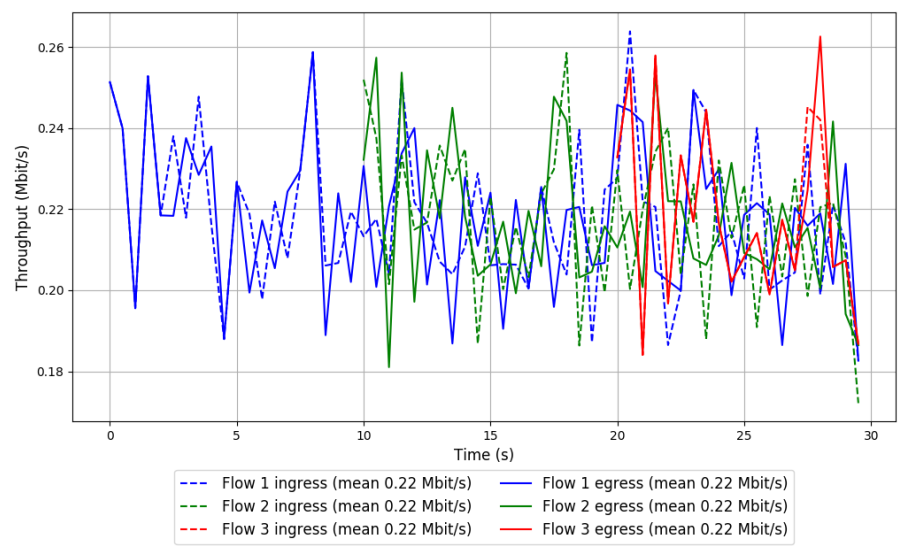


Run 3: Statistics of SCReAM

Start at: 2018-03-20 10:26:58
End at: 2018-03-20 10:27:28
Local clock offset: 1.159 ms
Remote clock offset: -4.856 ms

Below is generated by plot.py at 2018-03-20 10:40:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 13.178 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 13.098 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 13.008 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 20.204 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-03-20 09:41:32

End at: 2018-03-20 09:42:02

Local clock offset: 4.203 ms

Remote clock offset: -6.66 ms

Below is generated by plot.py at 2018-03-20 10:40:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.60 Mbit/s

95th percentile per-packet one-way delay: 22.542 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.36 Mbit/s

95th percentile per-packet one-way delay: 21.776 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 21.731 ms

Loss rate: 0.00%

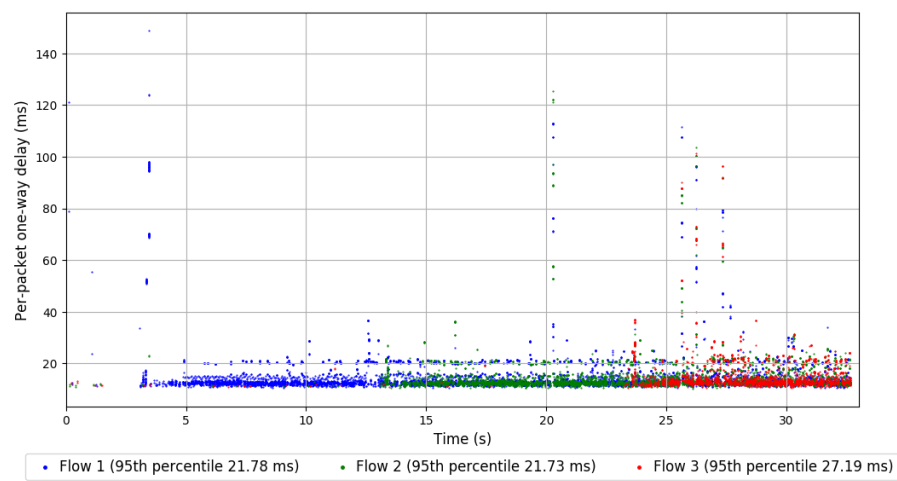
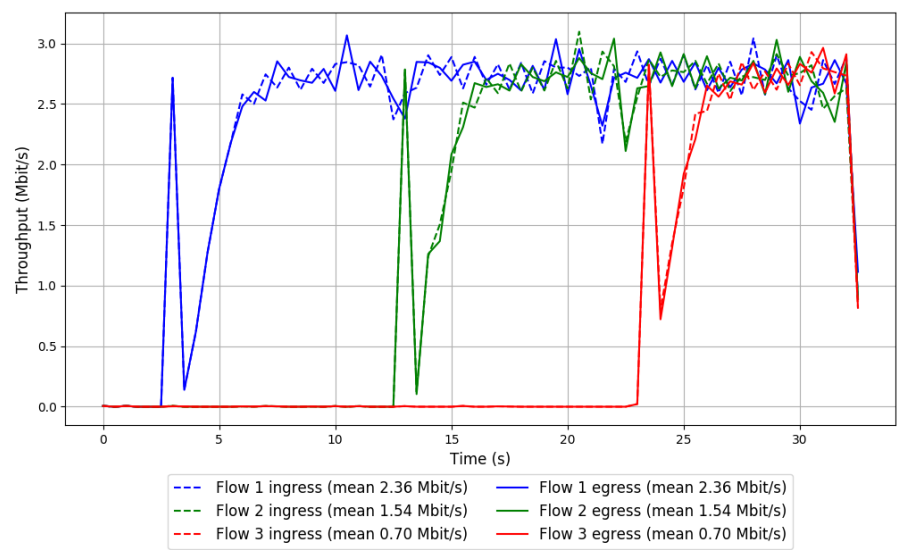
-- Flow 3:

Average throughput: 0.70 Mbit/s

95th percentile per-packet one-way delay: 27.188 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

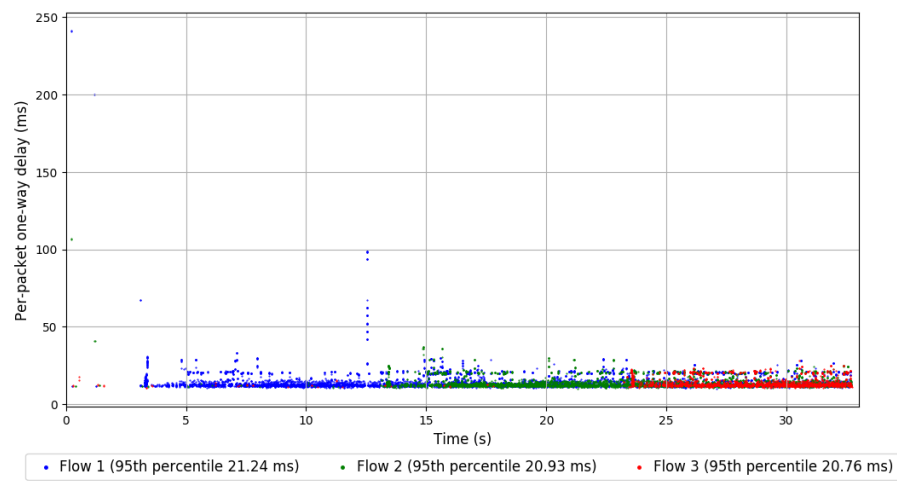
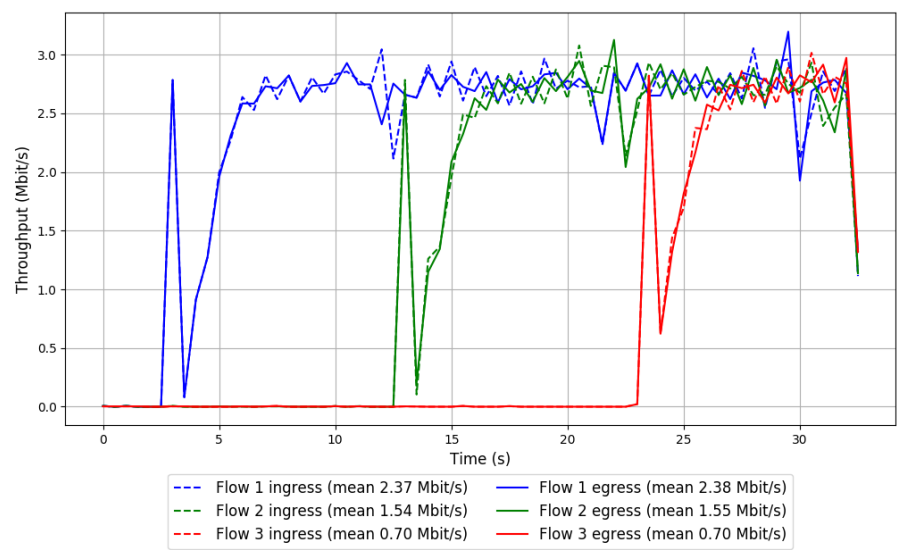


Run 2: Statistics of WebRTC media

Start at: 2018-03-20 10:05:34
End at: 2018-03-20 10:06:04
Local clock offset: 2.573 ms
Remote clock offset: -6.323 ms

Below is generated by plot.py at 2018-03-20 10:40:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 21.075 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 21.243 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 20.927 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 20.756 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

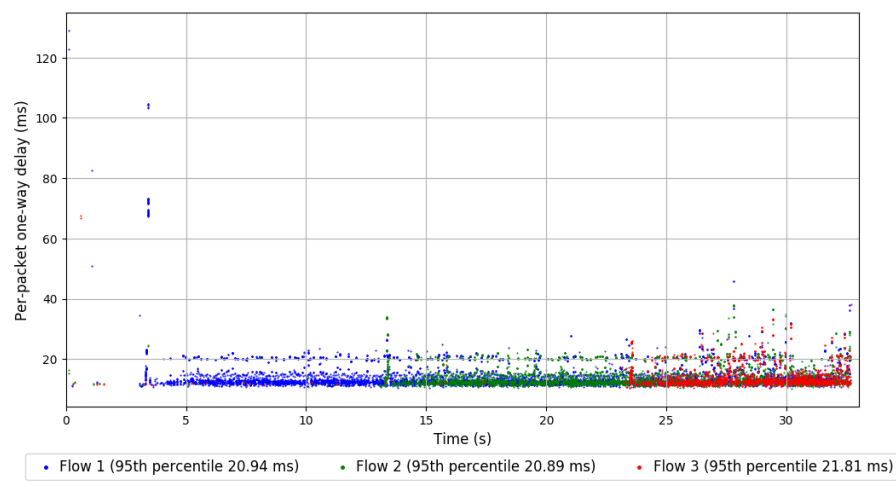
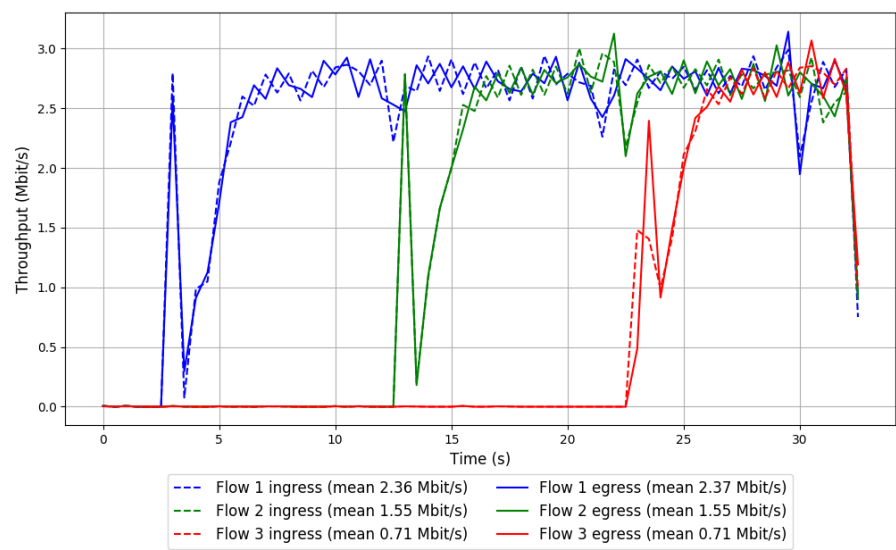


Run 3: Statistics of WebRTC media

Start at: 2018-03-20 10:29:37
End at: 2018-03-20 10:30:07
Local clock offset: 0.914 ms
Remote clock offset: -4.676 ms

Below is generated by plot.py at 2018-03-20 10:40:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.62 Mbit/s
95th percentile per-packet one-way delay: 21.011 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 20.944 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 20.890 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 21.810 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

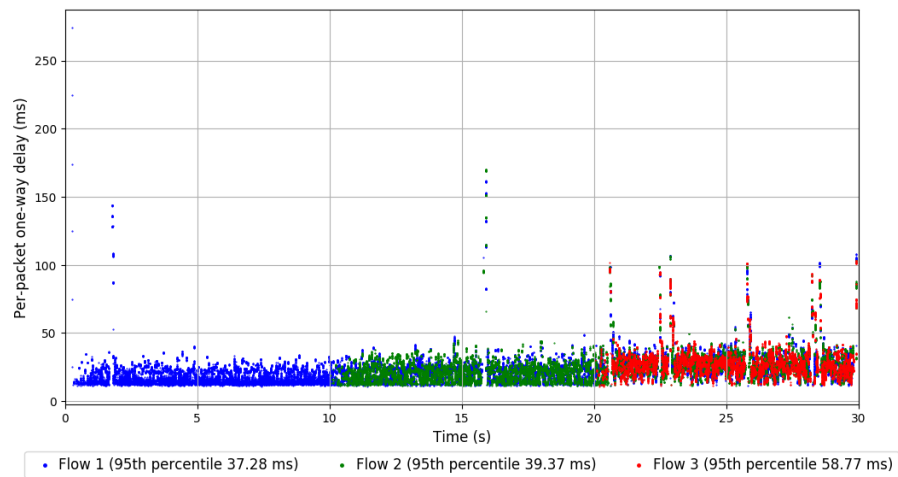
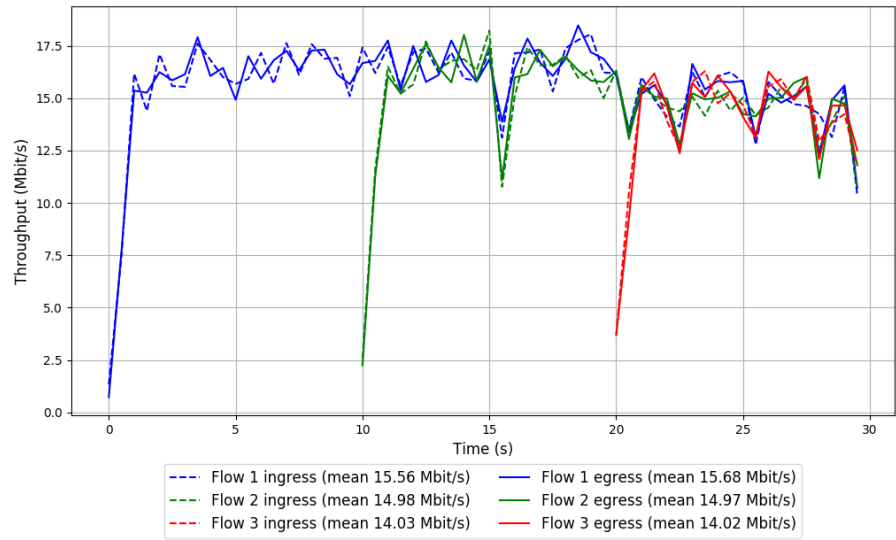


Run 1: Statistics of Sprout

Start at: 2018-03-20 09:37:34
End at: 2018-03-20 09:38:04
Local clock offset: 4.029 ms
Remote clock offset: -6.566 ms

Below is generated by plot.py at 2018-03-20 10:40:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 30.39 Mbit/s
95th percentile per-packet one-way delay: 39.828 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 15.68 Mbit/s
95th percentile per-packet one-way delay: 37.277 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 14.97 Mbit/s
95th percentile per-packet one-way delay: 39.370 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 14.02 Mbit/s
95th percentile per-packet one-way delay: 58.767 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

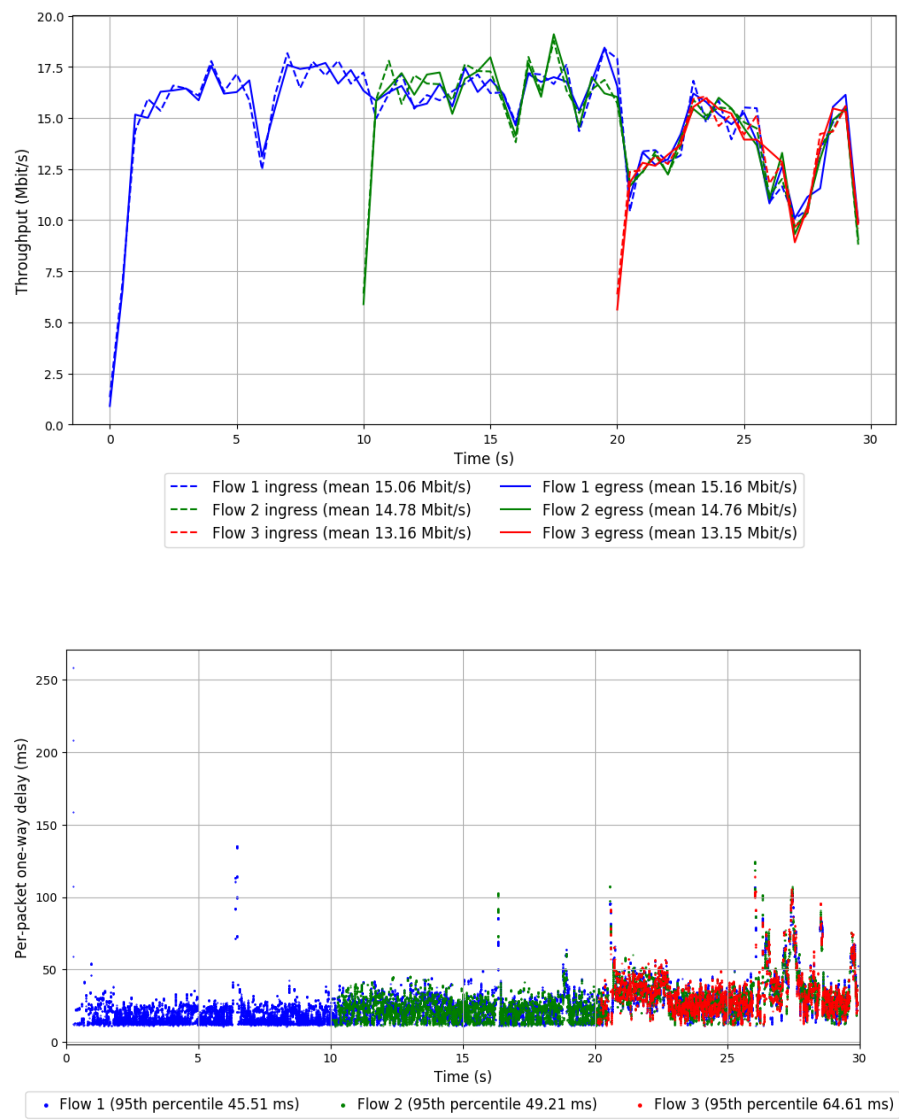


Run 2: Statistics of Sprout

Start at: 2018-03-20 10:01:35
End at: 2018-03-20 10:02:05
Local clock offset: 2.626 ms
Remote clock offset: -6.229 ms

Below is generated by plot.py at 2018-03-20 10:40:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 29.43 Mbit/s
95th percentile per-packet one-way delay: 50.201 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 15.16 Mbit/s
95th percentile per-packet one-way delay: 45.508 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 14.76 Mbit/s
95th percentile per-packet one-way delay: 49.213 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 13.15 Mbit/s
95th percentile per-packet one-way delay: 64.607 ms
Loss rate: 0.14%

Run 2: Report of Sprout — Data Link

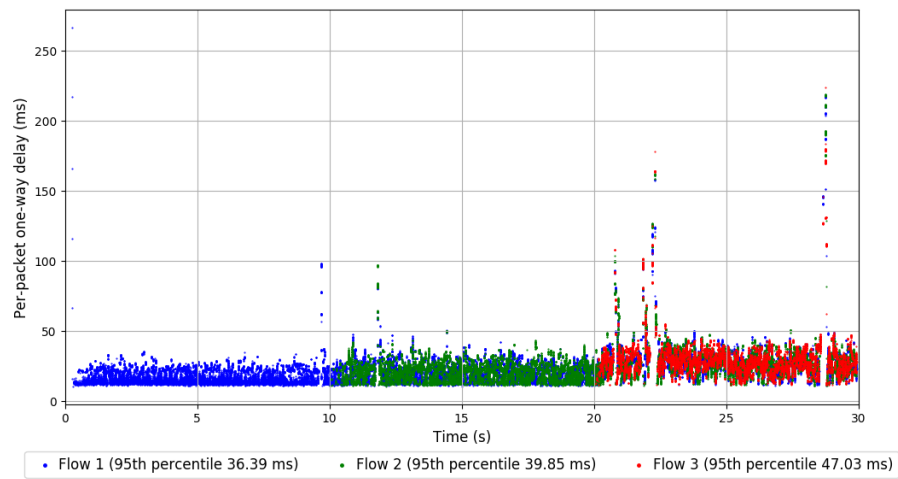
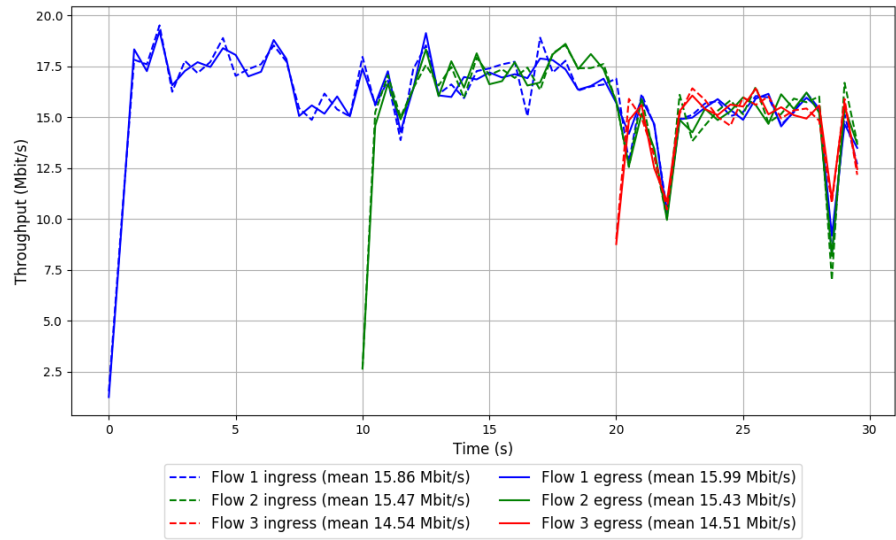


Run 3: Statistics of Sprout

Start at: 2018-03-20 10:25:38
End at: 2018-03-20 10:26:08
Local clock offset: 1.276 ms
Remote clock offset: -4.956 ms

```
# Below is generated by plot.py at 2018-03-20 10:40:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 31.17 Mbit/s
95th percentile per-packet one-way delay: 39.712 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 15.99 Mbit/s
95th percentile per-packet one-way delay: 36.391 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 15.43 Mbit/s
95th percentile per-packet one-way delay: 39.847 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 14.51 Mbit/s
95th percentile per-packet one-way delay: 47.026 ms
Loss rate: 0.05%
```

Run 3: Report of Sprout — Data Link

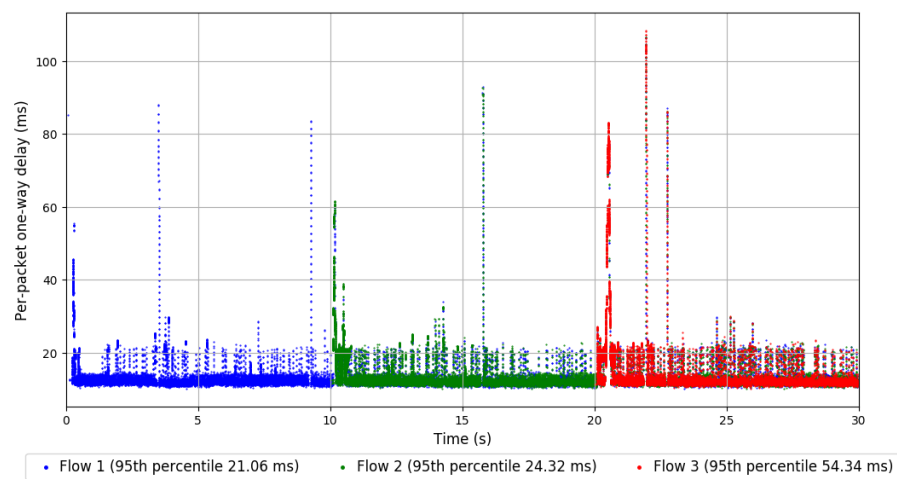
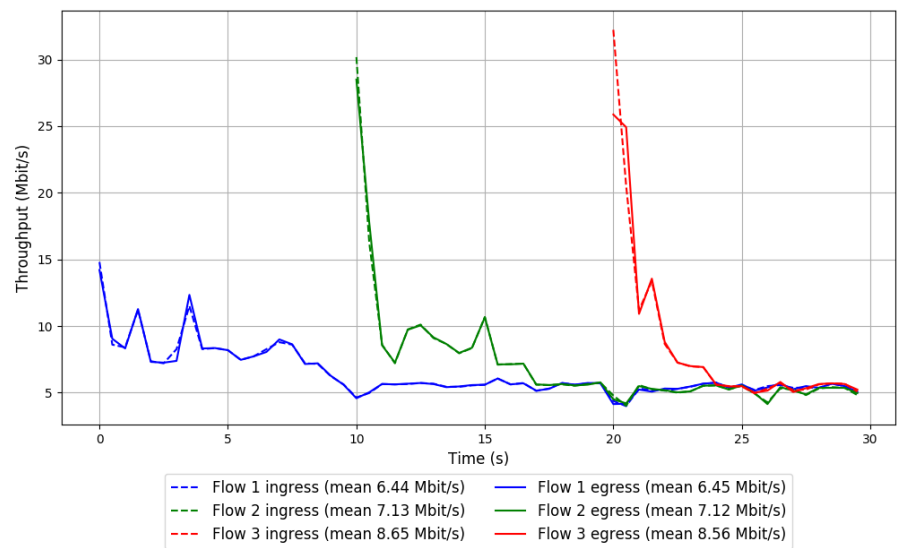


Run 1: Statistics of TaoVA-100x

Start at: 2018-03-20 09:45:33
End at: 2018-03-20 09:46:03
Local clock offset: 3.687 ms
Remote clock offset: -6.467 ms

Below is generated by plot.py at 2018-03-20 10:40:48
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.05 Mbit/s
95th percentile per-packet one-way delay: 24.338 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 6.45 Mbit/s
95th percentile per-packet one-way delay: 21.058 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 7.12 Mbit/s
95th percentile per-packet one-way delay: 24.319 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 8.56 Mbit/s
95th percentile per-packet one-way delay: 54.337 ms
Loss rate: 0.99%

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

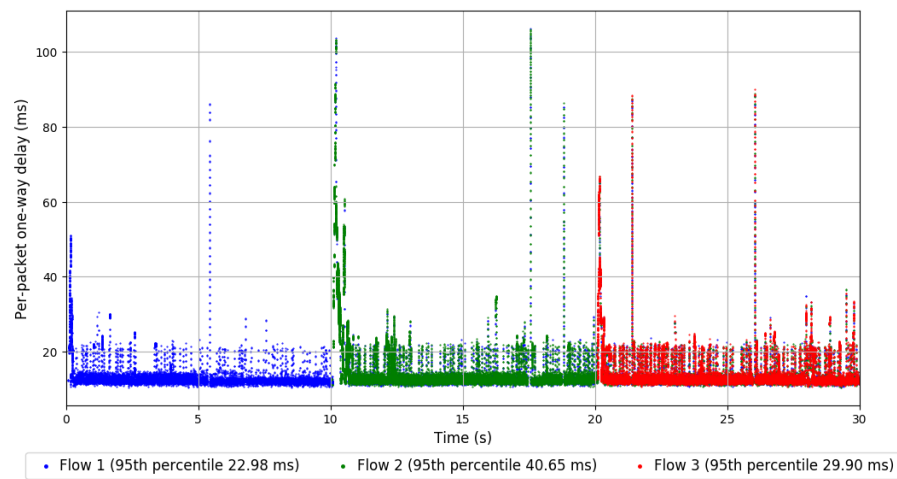
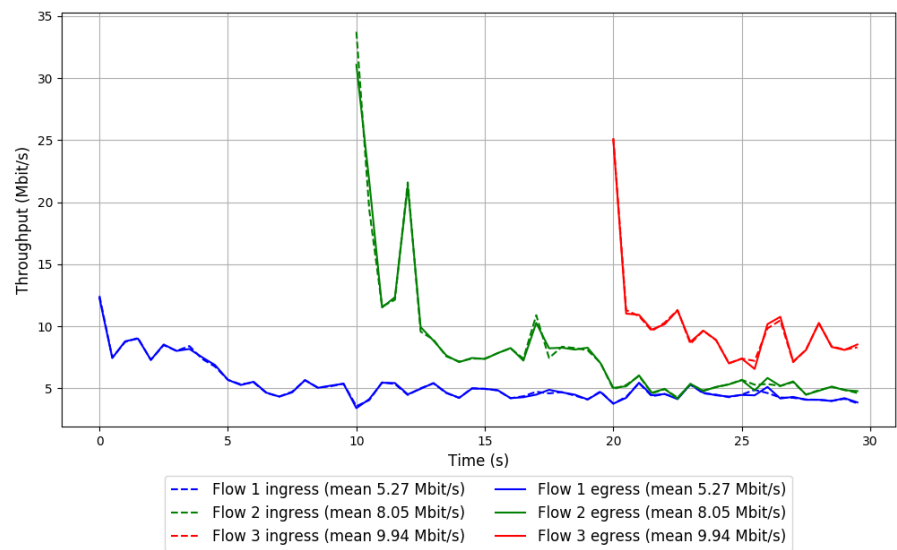


Run 2: Statistics of TaoVA-100x

Start at: 2018-03-20 10:09:35
End at: 2018-03-20 10:10:05
Local clock offset: 2.421 ms
Remote clock offset: -6.265 ms

Below is generated by plot.py at 2018-03-20 10:41:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 13.93 Mbit/s
95th percentile per-packet one-way delay: 31.908 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.27 Mbit/s
95th percentile per-packet one-way delay: 22.982 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.05 Mbit/s
95th percentile per-packet one-way delay: 40.645 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.94 Mbit/s
95th percentile per-packet one-way delay: 29.904 ms
Loss rate: 0.00%

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

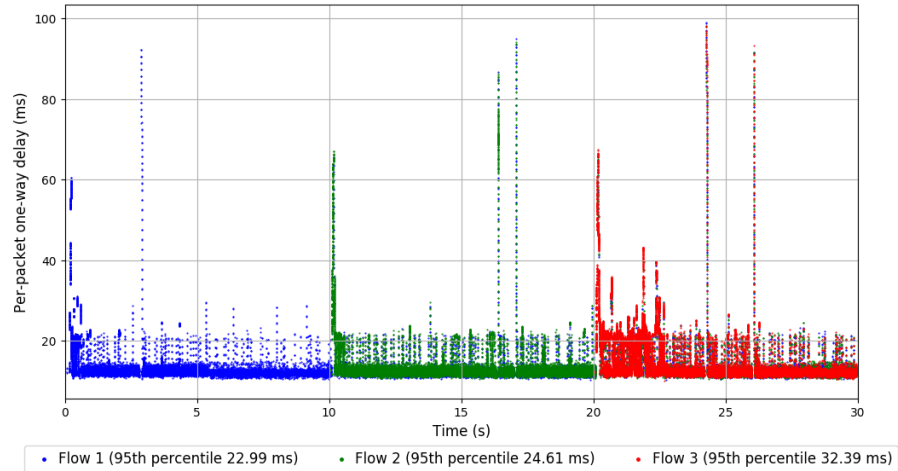
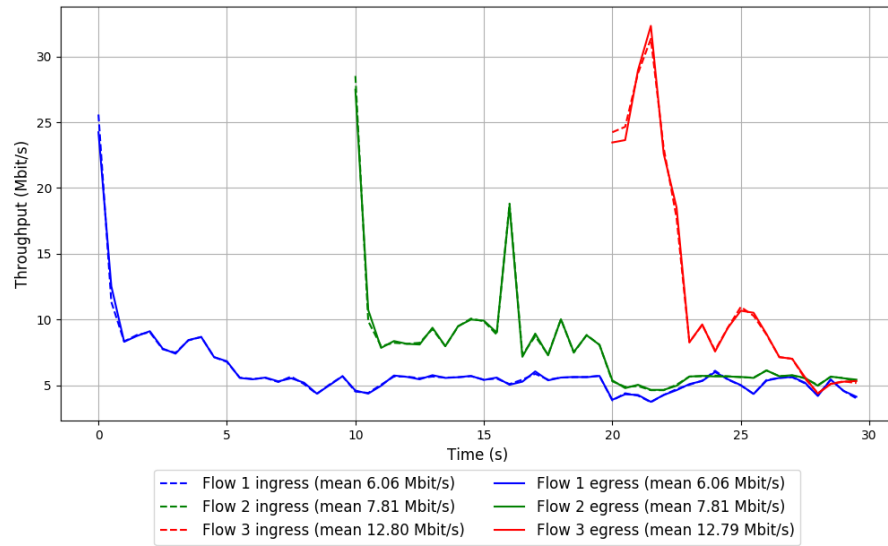


Run 3: Statistics of TaoVA-100x

Start at: 2018-03-20 10:33:39
End at: 2018-03-20 10:34:09
Local clock offset: 0.782 ms
Remote clock offset: -4.443 ms

Below is generated by plot.py at 2018-03-20 10:41:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 15.50 Mbit/s
95th percentile per-packet one-way delay: 26.889 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 6.06 Mbit/s
95th percentile per-packet one-way delay: 22.991 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 7.81 Mbit/s
95th percentile per-packet one-way delay: 24.605 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 12.79 Mbit/s
95th percentile per-packet one-way delay: 32.388 ms
Loss rate: 0.05%

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

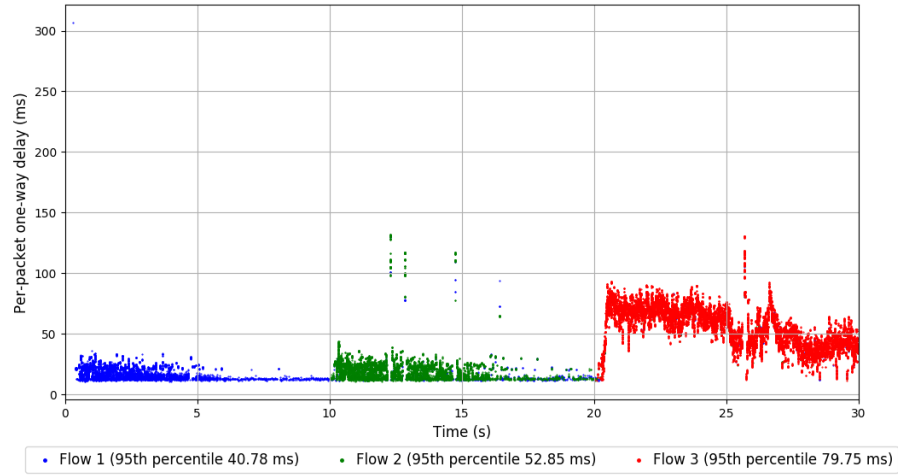
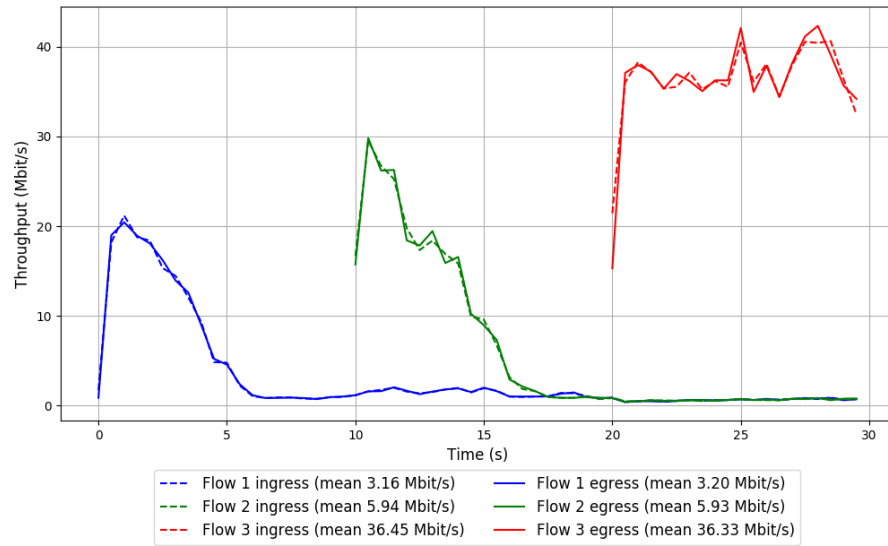


Run 1: Statistics of TCP Vegas

Start at: 2018-03-20 09:40:12
End at: 2018-03-20 09:40:42
Local clock offset: 4.137 ms
Remote clock offset: -6.629 ms

Below is generated by plot.py at 2018-03-20 10:41:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 19.36 Mbit/s
95th percentile per-packet one-way delay: 78.166 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 3.20 Mbit/s
95th percentile per-packet one-way delay: 40.781 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 5.93 Mbit/s
95th percentile per-packet one-way delay: 52.848 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 36.33 Mbit/s
95th percentile per-packet one-way delay: 79.752 ms
Loss rate: 0.26%

Run 1: Report of TCP Vegas — Data Link

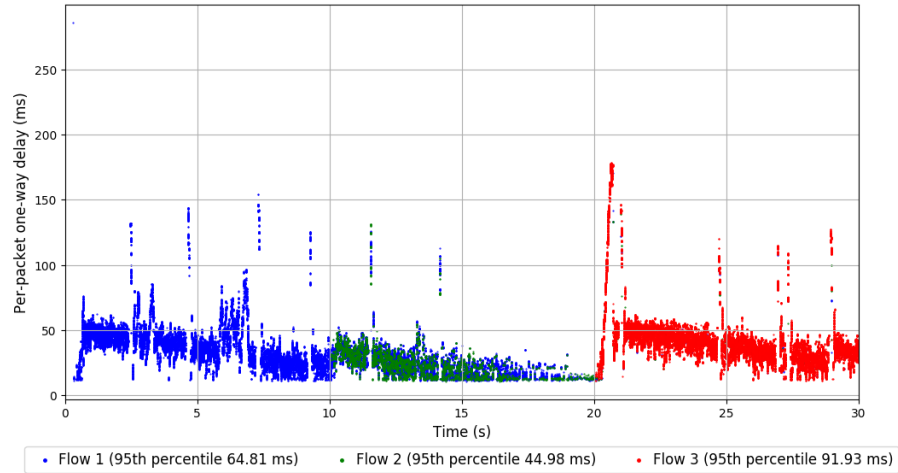
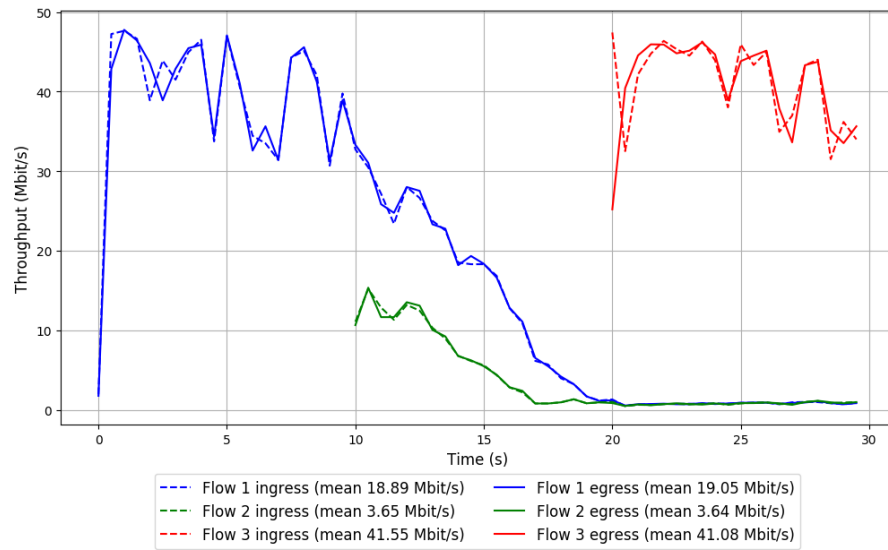


Run 2: Statistics of TCP Vegas

Start at: 2018-03-20 10:04:14
End at: 2018-03-20 10:04:44
Local clock offset: 2.595 ms
Remote clock offset: -6.213 ms

Below is generated by plot.py at 2018-03-20 10:41:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 35.25 Mbit/s
95th percentile per-packet one-way delay: 69.595 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 19.05 Mbit/s
95th percentile per-packet one-way delay: 64.805 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 44.976 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 41.08 Mbit/s
95th percentile per-packet one-way delay: 91.930 ms
Loss rate: 1.02%

Run 2: Report of TCP Vegas — Data Link

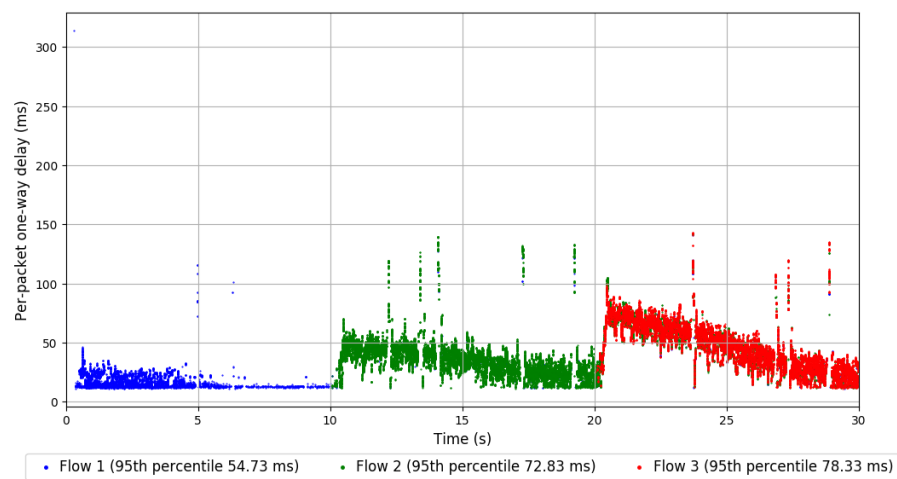
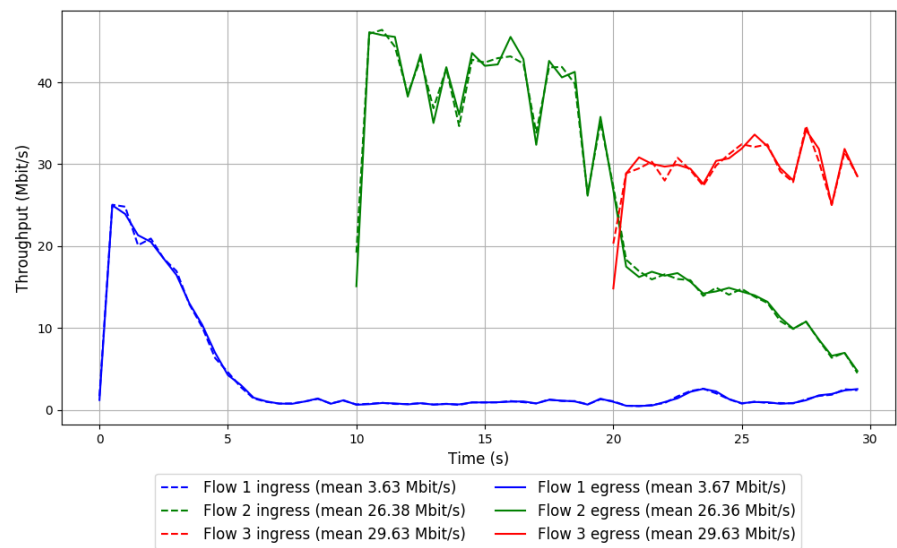


Run 3: Statistics of TCP Vegas

Start at: 2018-03-20 10:28:17
End at: 2018-03-20 10:28:47
Local clock offset: 1.009 ms
Remote clock offset: -4.756 ms

Below is generated by plot.py at 2018-03-20 10:41:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 31.33 Mbit/s
95th percentile per-packet one-way delay: 75.202 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 3.67 Mbit/s
95th percentile per-packet one-way delay: 54.725 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.36 Mbit/s
95th percentile per-packet one-way delay: 72.829 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.63 Mbit/s
95th percentile per-packet one-way delay: 78.334 ms
Loss rate: 0.06%

Run 3: Report of TCP Vegas — Data Link

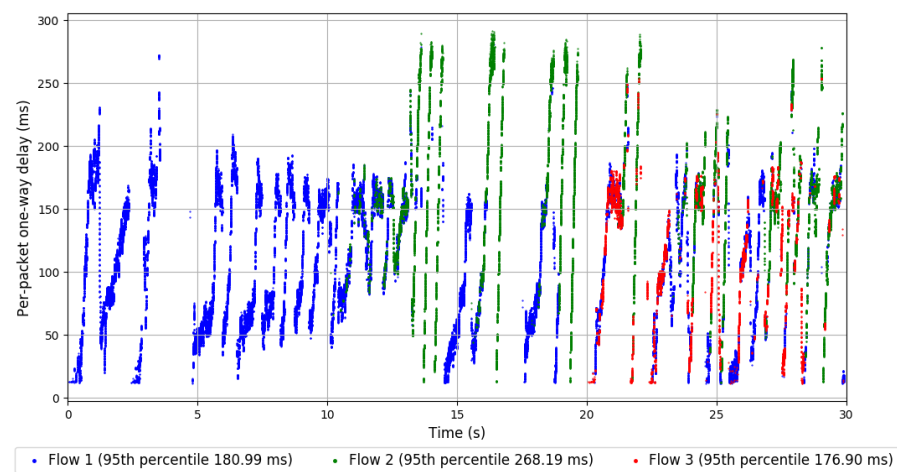
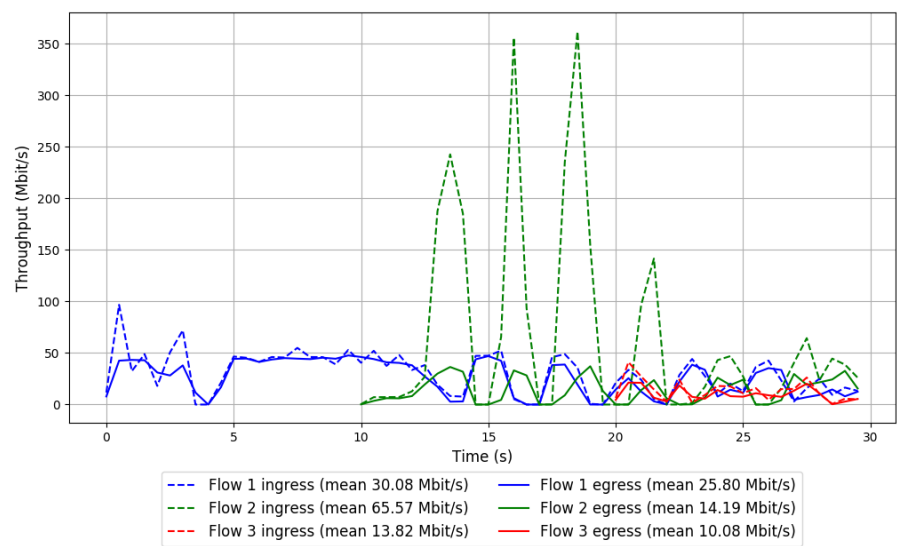


Run 1: Statistics of Verus

Start at: 2018-03-20 09:25:30
End at: 2018-03-20 09:26:00
Local clock offset: 3.295 ms
Remote clock offset: -6.197 ms

Below is generated by plot.py at 2018-03-20 10:41:32
Datalink statistics
-- Total of 3 flows:
Average throughput: 38.48 Mbit/s
95th percentile per-packet one-way delay: 230.891 ms
Loss rate: 50.42%
-- Flow 1:
Average throughput: 25.80 Mbit/s
95th percentile per-packet one-way delay: 180.993 ms
Loss rate: 14.20%
-- Flow 2:
Average throughput: 14.19 Mbit/s
95th percentile per-packet one-way delay: 268.188 ms
Loss rate: 78.23%
-- Flow 3:
Average throughput: 10.08 Mbit/s
95th percentile per-packet one-way delay: 176.900 ms
Loss rate: 27.07%

Run 1: Report of Verus — Data Link

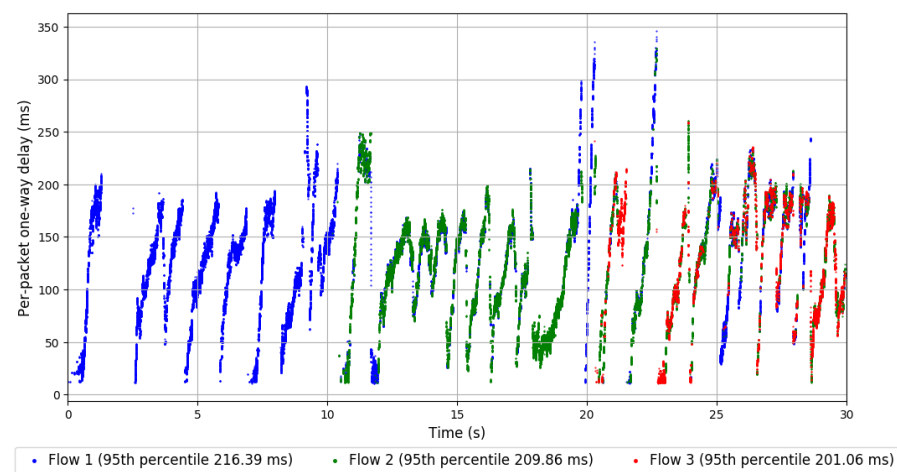
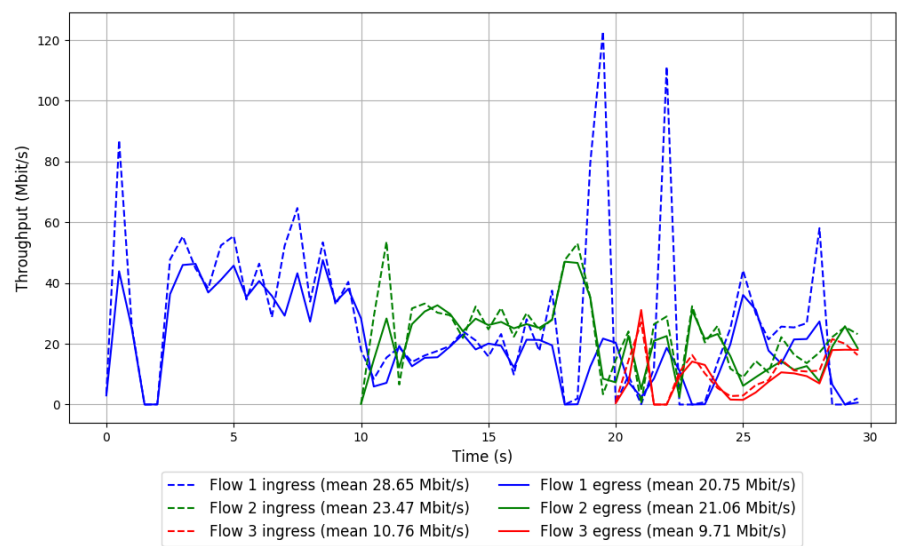


Run 2: Statistics of Verus

Start at: 2018-03-20 09:49:33
End at: 2018-03-20 09:50:03
Local clock offset: 3.234 ms
Remote clock offset: -6.352 ms

Below is generated by plot.py at 2018-03-20 10:41:32
Datalink statistics
-- Total of 3 flows:
Average throughput: 37.78 Mbit/s
95th percentile per-packet one-way delay: 212.220 ms
Loss rate: 20.88%
-- Flow 1:
Average throughput: 20.75 Mbit/s
95th percentile per-packet one-way delay: 216.394 ms
Loss rate: 27.54%
-- Flow 2:
Average throughput: 21.06 Mbit/s
95th percentile per-packet one-way delay: 209.859 ms
Loss rate: 10.83%
-- Flow 3:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 201.062 ms
Loss rate: 11.35%

Run 2: Report of Verus — Data Link

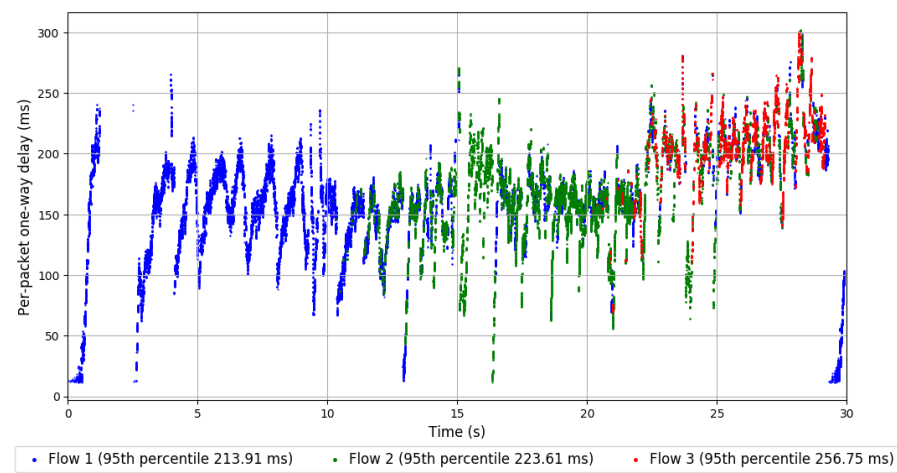
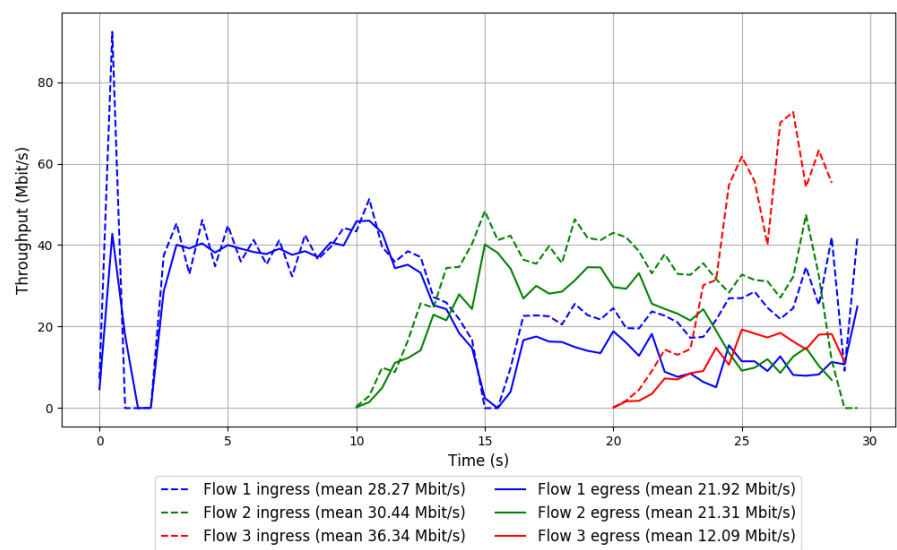


Run 3: Statistics of Verus

Start at: 2018-03-20 10:13:36
End at: 2018-03-20 10:14:06
Local clock offset: 2.464 ms
Remote clock offset: -6.385 ms

Below is generated by plot.py at 2018-03-20 10:41:32
Datalink statistics
-- Total of 3 flows:
Average throughput: 38.85 Mbit/s
95th percentile per-packet one-way delay: 226.733 ms
Loss rate: 34.49%
-- Flow 1:
Average throughput: 21.92 Mbit/s
95th percentile per-packet one-way delay: 213.909 ms
Loss rate: 22.46%
-- Flow 2:
Average throughput: 21.31 Mbit/s
95th percentile per-packet one-way delay: 223.613 ms
Loss rate: 34.16%
-- Flow 3:
Average throughput: 12.09 Mbit/s
95th percentile per-packet one-way delay: 256.752 ms
Loss rate: 66.56%

Run 3: Report of Verus — Data Link

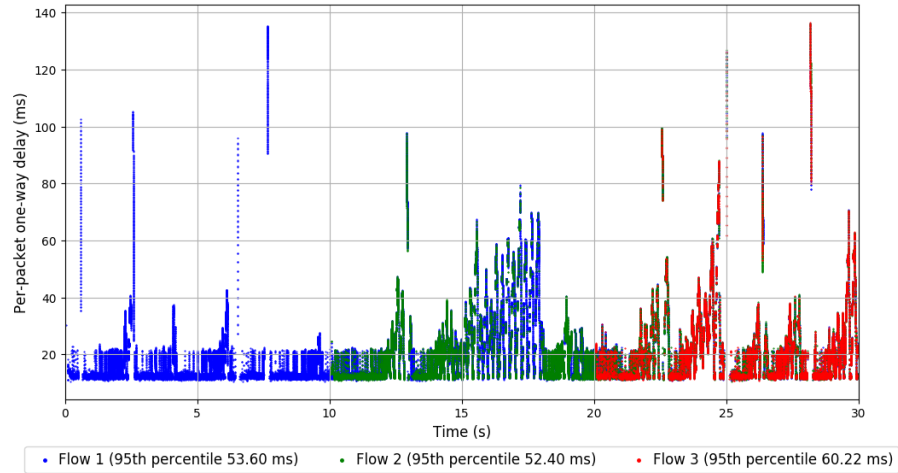
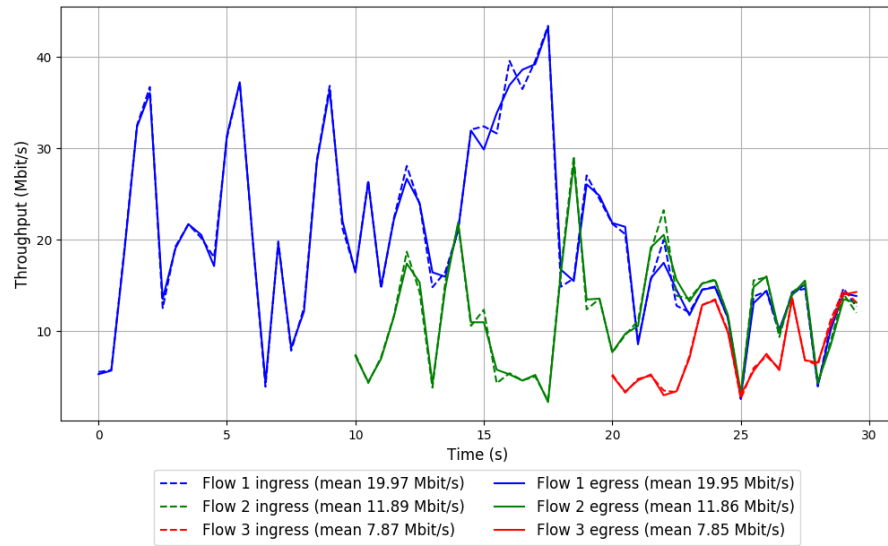


Run 1: Statistics of Copa

Start at: 2018-03-20 09:28:12
End at: 2018-03-20 09:28:42
Local clock offset: 3.504 ms
Remote clock offset: -6.313 ms

Below is generated by plot.py at 2018-03-20 10:41:56
Datalink statistics
-- Total of 3 flows:
Average throughput: 30.46 Mbit/s
95th percentile per-packet one-way delay: 53.778 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 19.95 Mbit/s
95th percentile per-packet one-way delay: 53.596 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 11.86 Mbit/s
95th percentile per-packet one-way delay: 52.403 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 60.223 ms
Loss rate: 0.31%

Run 1: Report of Copa — Data Link

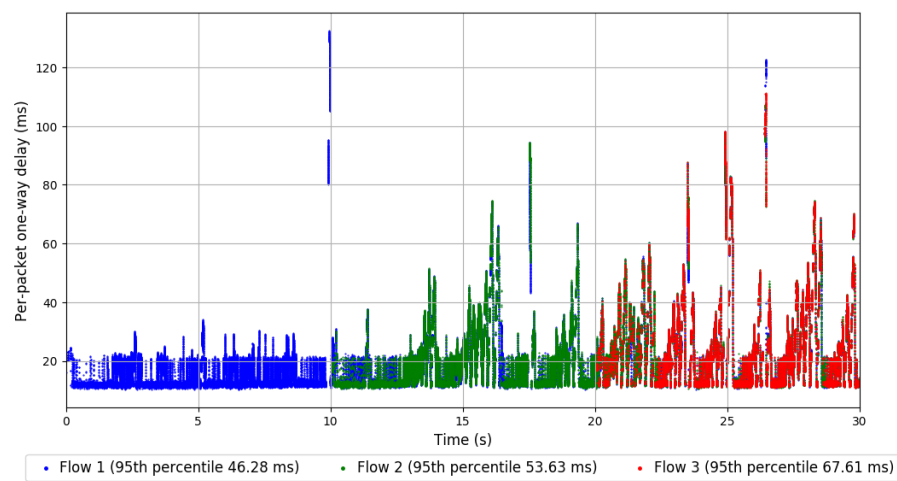
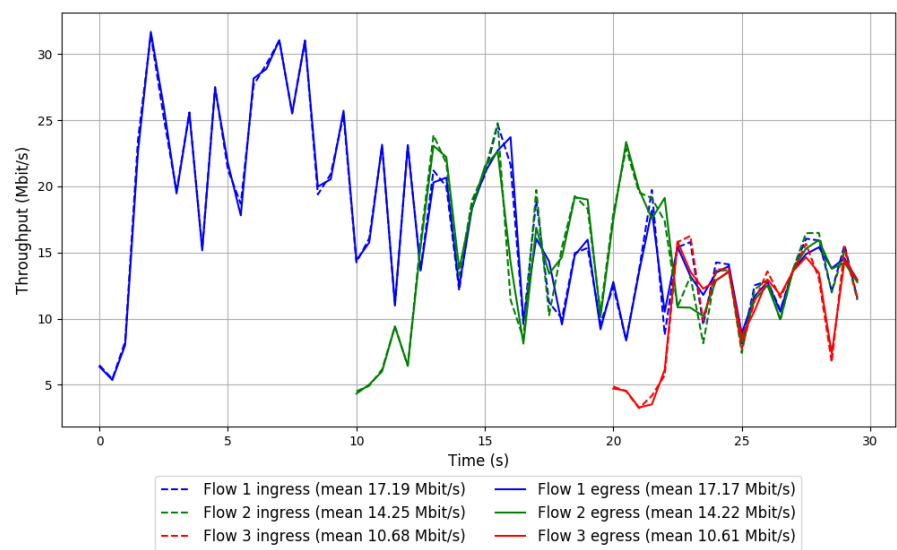


Run 2: Statistics of Copa

Start at: 2018-03-20 09:52:15
End at: 2018-03-20 09:52:45
Local clock offset: 3.039 ms
Remote clock offset: -6.321 ms

Below is generated by plot.py at 2018-03-20 10:41:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 30.15 Mbit/s
95th percentile per-packet one-way delay: 51.603 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 17.17 Mbit/s
95th percentile per-packet one-way delay: 46.277 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 14.22 Mbit/s
95th percentile per-packet one-way delay: 53.628 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 10.61 Mbit/s
95th percentile per-packet one-way delay: 67.613 ms
Loss rate: 0.65%

Run 2: Report of Copa — Data Link

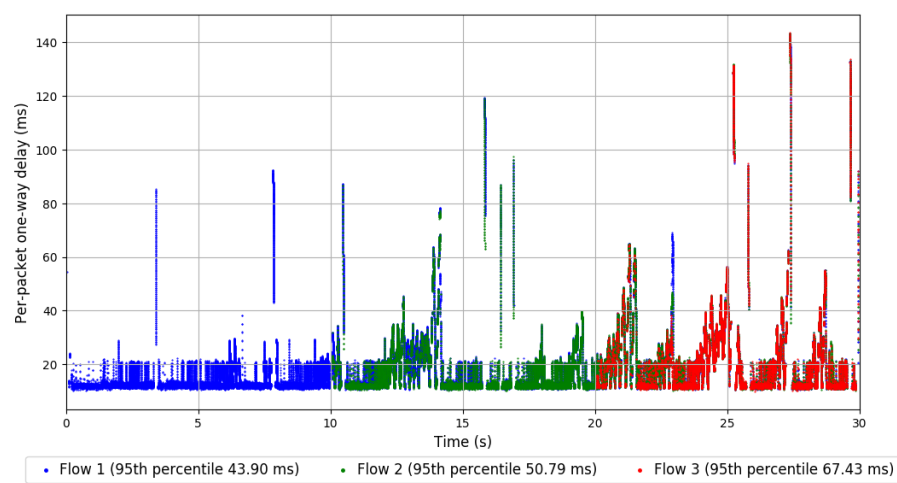
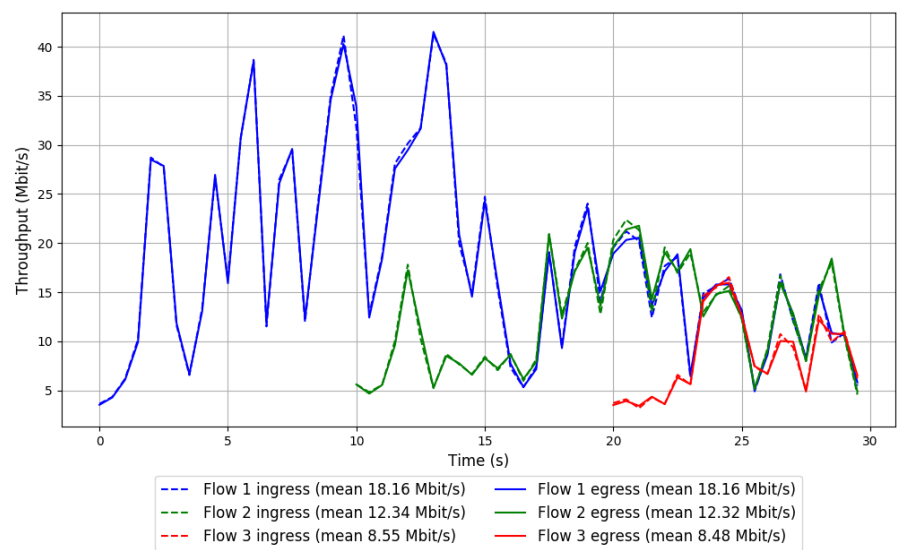


Run 3: Statistics of Copa

Start at: 2018-03-20 10:16:18
End at: 2018-03-20 10:16:48
Local clock offset: 2.445 ms
Remote clock offset: -6.346 ms

```
# Below is generated by plot.py at 2018-03-20 10:42:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 29.18 Mbit/s
95th percentile per-packet one-way delay: 48.237 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 18.16 Mbit/s
95th percentile per-packet one-way delay: 43.898 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 12.32 Mbit/s
95th percentile per-packet one-way delay: 50.789 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 67.428 ms
Loss rate: 0.60%
```

Run 3: Report of Copa — Data Link

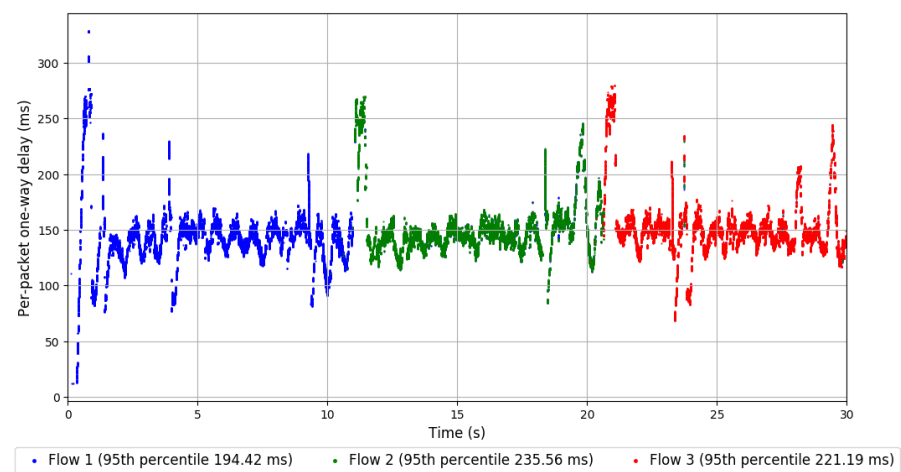
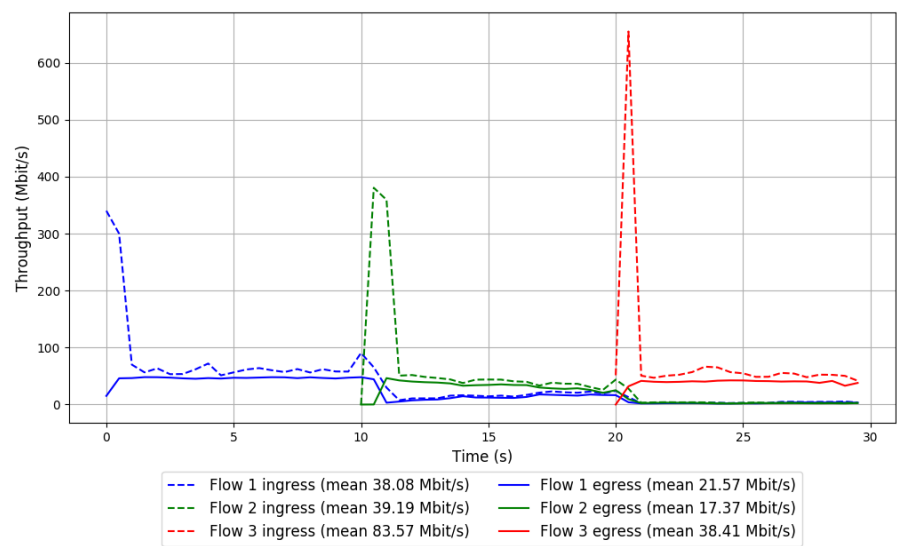


Run 1: Statistics of FillP

Start at: 2018-03-20 09:34:52
End at: 2018-03-20 09:35:22
Local clock offset: 3.828 ms
Remote clock offset: -6.498 ms

Below is generated by plot.py at 2018-03-20 10:42:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 45.74 Mbit/s
95th percentile per-packet one-way delay: 212.907 ms
Loss rate: 50.35%
-- Flow 1:
Average throughput: 21.57 Mbit/s
95th percentile per-packet one-way delay: 194.418 ms
Loss rate: 43.53%
-- Flow 2:
Average throughput: 17.37 Mbit/s
95th percentile per-packet one-way delay: 235.557 ms
Loss rate: 55.90%
-- Flow 3:
Average throughput: 38.41 Mbit/s
95th percentile per-packet one-way delay: 221.187 ms
Loss rate: 54.50%

Run 1: Report of FillP — Data Link

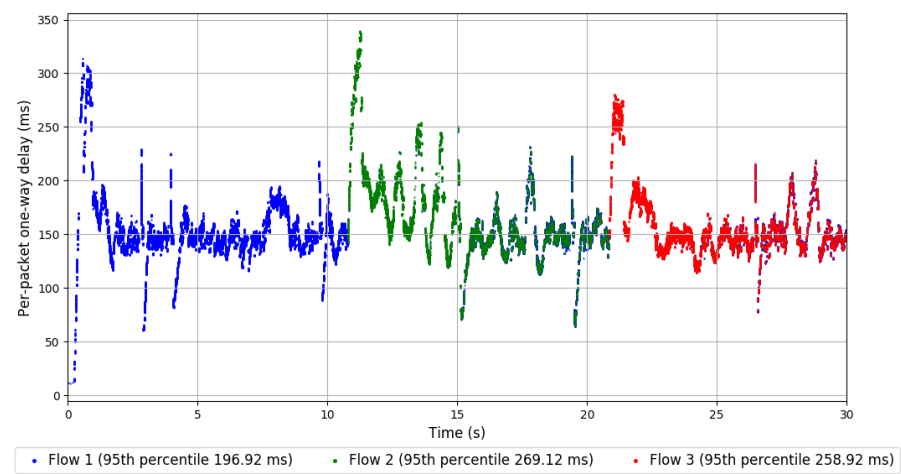
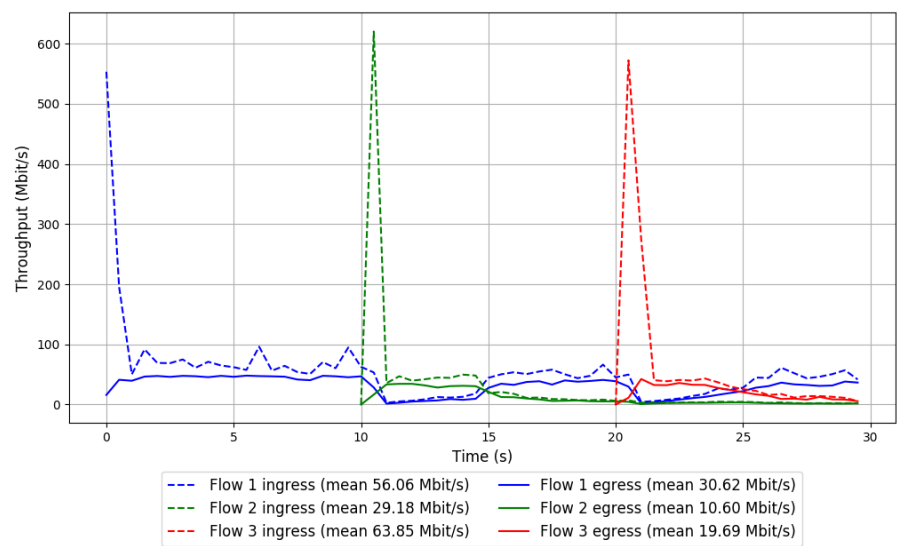


Run 2: Statistics of FillP

Start at: 2018-03-20 09:58:54
End at: 2018-03-20 09:59:24
Local clock offset: 2.712 ms
Remote clock offset: -6.279 ms

Below is generated by plot.py at 2018-03-20 10:42:22
Datalink statistics
-- Total of 3 flows:
Average throughput: 44.01 Mbit/s
95th percentile per-packet one-way delay: 229.498 ms
Loss rate: 54.43%
-- Flow 1:
Average throughput: 30.62 Mbit/s
95th percentile per-packet one-way delay: 196.917 ms
Loss rate: 45.34%
-- Flow 2:
Average throughput: 10.60 Mbit/s
95th percentile per-packet one-way delay: 269.121 ms
Loss rate: 64.17%
-- Flow 3:
Average throughput: 19.69 Mbit/s
95th percentile per-packet one-way delay: 258.924 ms
Loss rate: 69.55%

Run 2: Report of FillP — Data Link

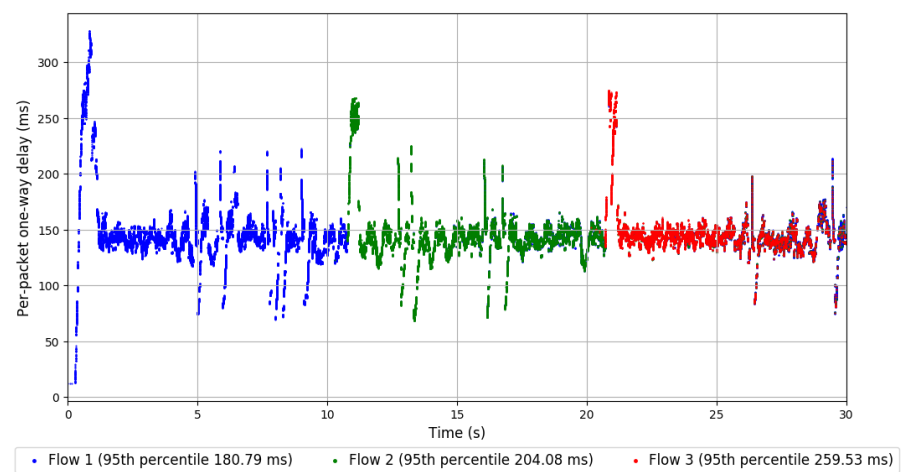
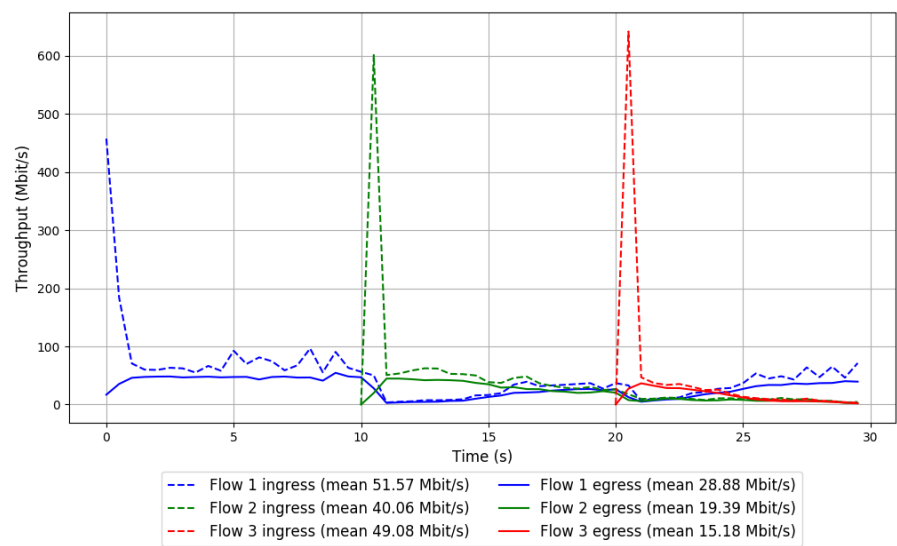


Run 3: Statistics of FillP

Start at: 2018-03-20 10:22:57
End at: 2018-03-20 10:23:27
Local clock offset: 1.516 ms
Remote clock offset: -5.192 ms

Below is generated by plot.py at 2018-03-20 10:42:31
Datalink statistics
-- Total of 3 flows:
Average throughput: 46.56 Mbit/s
95th percentile per-packet one-way delay: 197.734 ms
Loss rate: 50.67%
-- Flow 1:
Average throughput: 28.88 Mbit/s
95th percentile per-packet one-way delay: 180.795 ms
Loss rate: 43.94%
-- Flow 2:
Average throughput: 19.39 Mbit/s
95th percentile per-packet one-way delay: 204.080 ms
Loss rate: 52.23%
-- Flow 3:
Average throughput: 15.18 Mbit/s
95th percentile per-packet one-way delay: 259.526 ms
Loss rate: 69.48%

Run 3: Report of FillP — Data Link



Run 1: Statistics of Indigo-1-32

Start at: 2018-03-20 09:33:33

End at: 2018-03-20 09:34:03

Local clock offset: 3.768 ms

Remote clock offset: -6.42 ms

Below is generated by plot.py at 2018-03-20 10:42:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.67 Mbit/s

95th percentile per-packet one-way delay: 29.532 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 4.11 Mbit/s

95th percentile per-packet one-way delay: 28.287 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 3.42 Mbit/s

95th percentile per-packet one-way delay: 28.521 ms

Loss rate: 0.00%

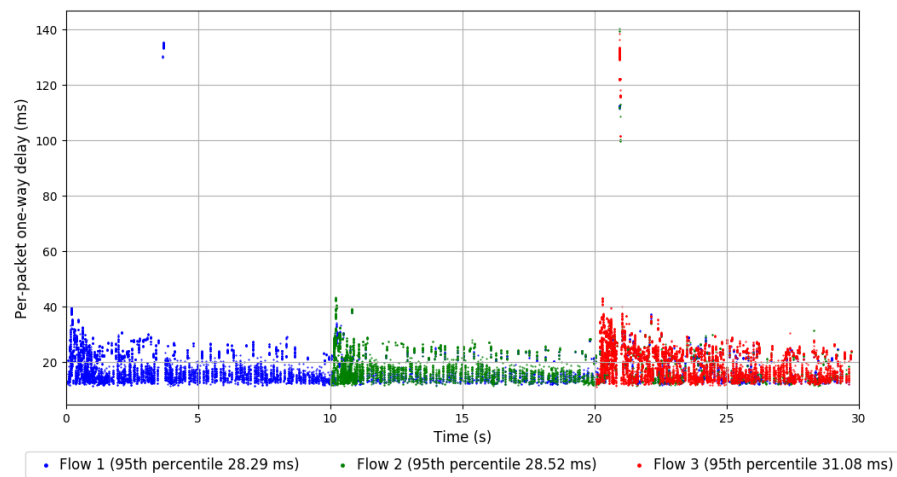
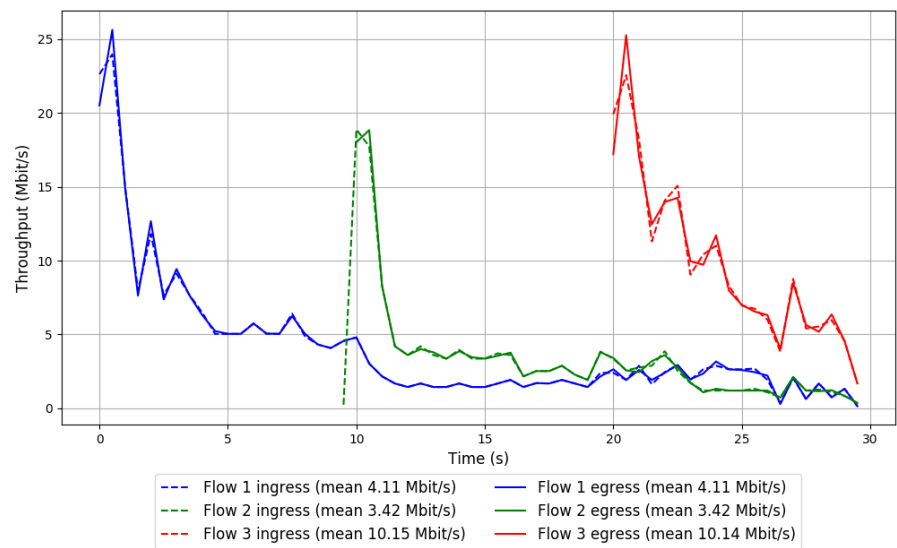
-- Flow 3:

Average throughput: 10.14 Mbit/s

95th percentile per-packet one-way delay: 31.081 ms

Loss rate: 0.00%

Run 1: Report of Indigo-1-32 — Data Link

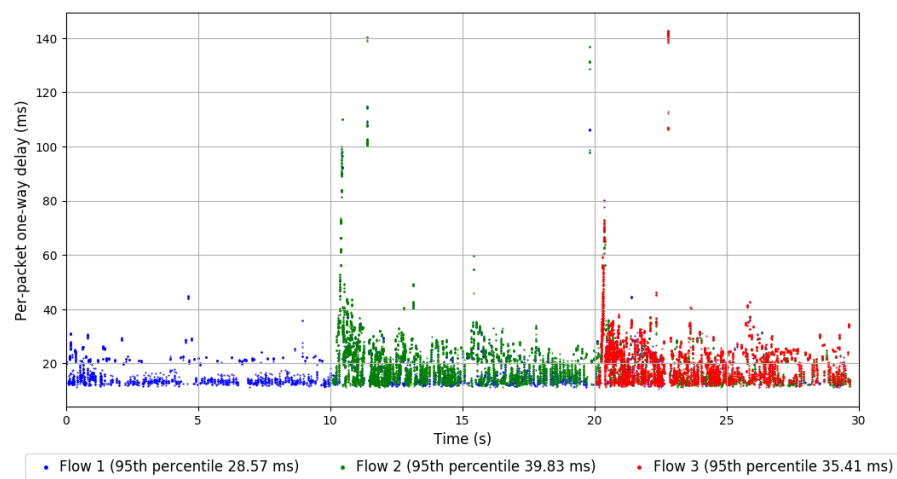
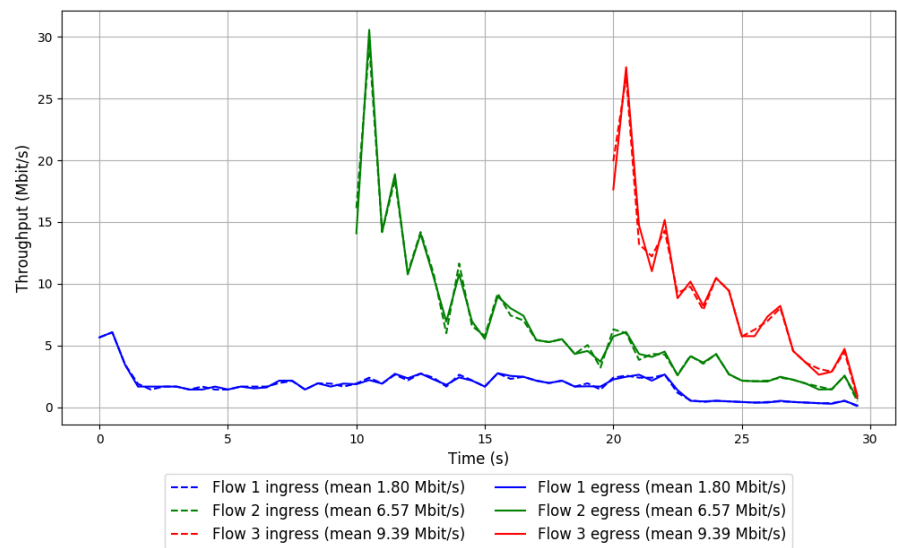


Run 2: Statistics of Indigo-1-32

Start at: 2018-03-20 09:57:35
End at: 2018-03-20 09:58:05
Local clock offset: 2.668 ms
Remote clock offset: -6.228 ms

Below is generated by plot.py at 2018-03-20 10:42:31
Datalink statistics
-- Total of 3 flows:
Average throughput: 9.18 Mbit/s
95th percentile per-packet one-way delay: 35.752 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 28.574 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 39.829 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 35.412 ms
Loss rate: 0.00%

Run 2: Report of Indigo-1-32 — Data Link

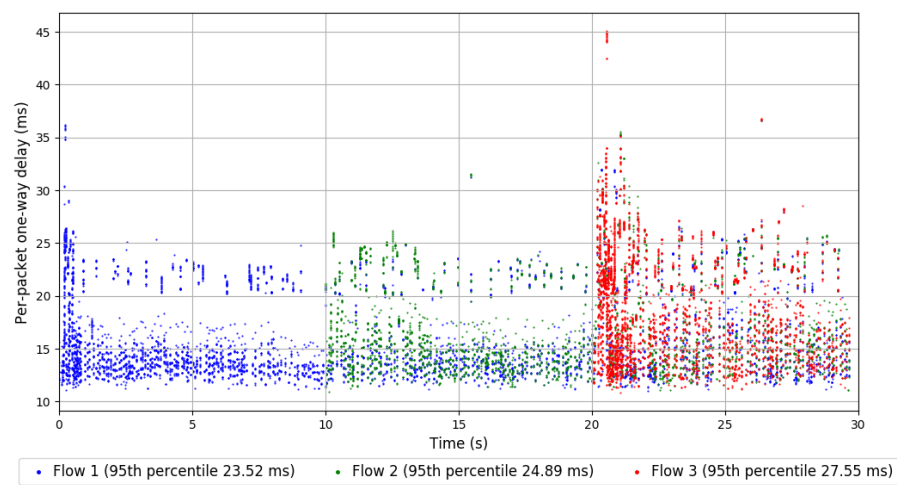
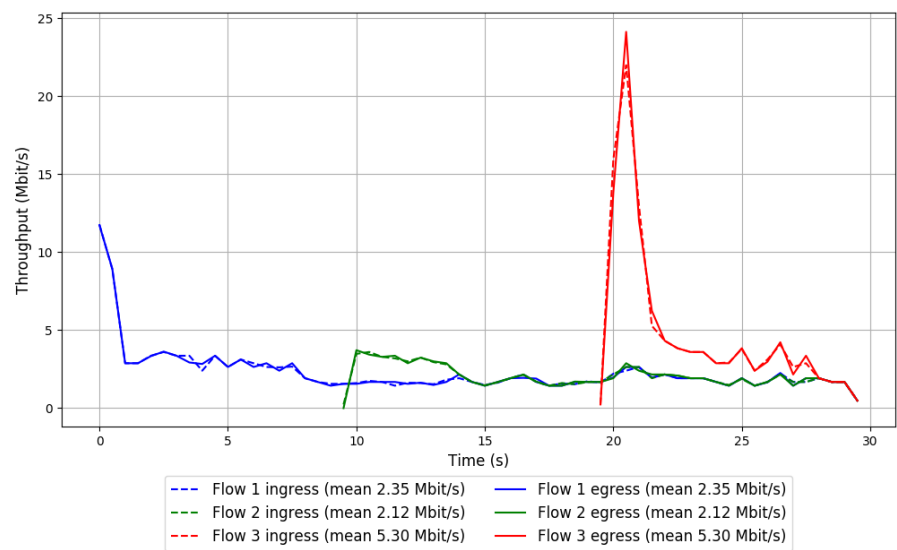


Run 3: Statistics of Indigo-1-32

Start at: 2018-03-20 10:21:38
End at: 2018-03-20 10:22:08
Local clock offset: 1.669 ms
Remote clock offset: -5.394 ms

Below is generated by plot.py at 2018-03-20 10:42:31
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.48 Mbit/s
95th percentile per-packet one-way delay: 25.474 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 23.522 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 24.890 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.30 Mbit/s
95th percentile per-packet one-way delay: 27.555 ms
Loss rate: 0.00%

Run 3: Report of Indigo-1-32 — Data Link

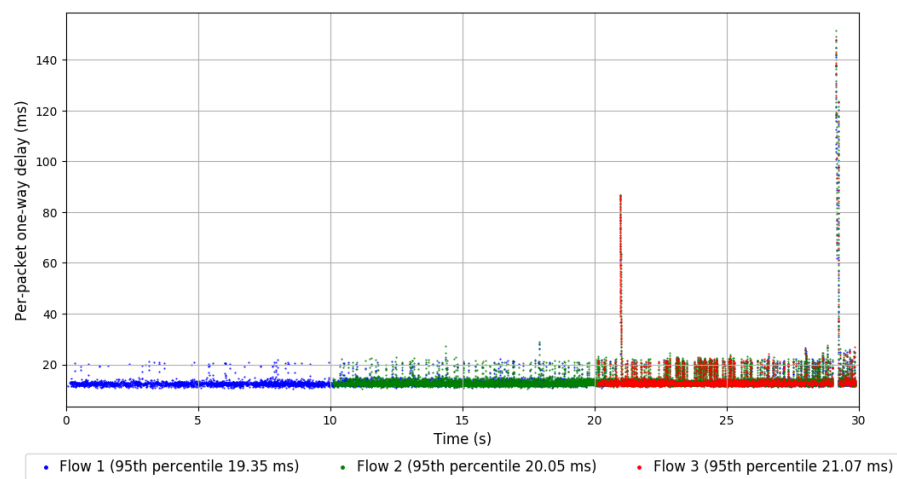
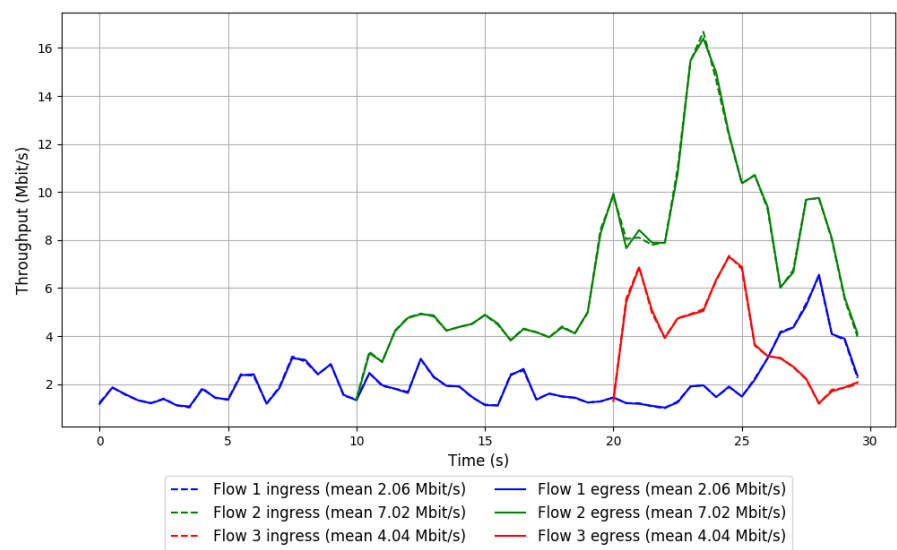


Run 1: Statistics of Vivace-latency

Start at: 2018-03-20 09:29:33
End at: 2018-03-20 09:30:03
Local clock offset: 3.527 ms
Remote clock offset: -6.359 ms

Below is generated by plot.py at 2018-03-20 10:42:31
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.06 Mbit/s
95th percentile per-packet one-way delay: 20.077 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 19.350 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.02 Mbit/s
95th percentile per-packet one-way delay: 20.049 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.04 Mbit/s
95th percentile per-packet one-way delay: 21.074 ms
Loss rate: 0.00%

Run 1: Report of Vivace-latency — Data Link

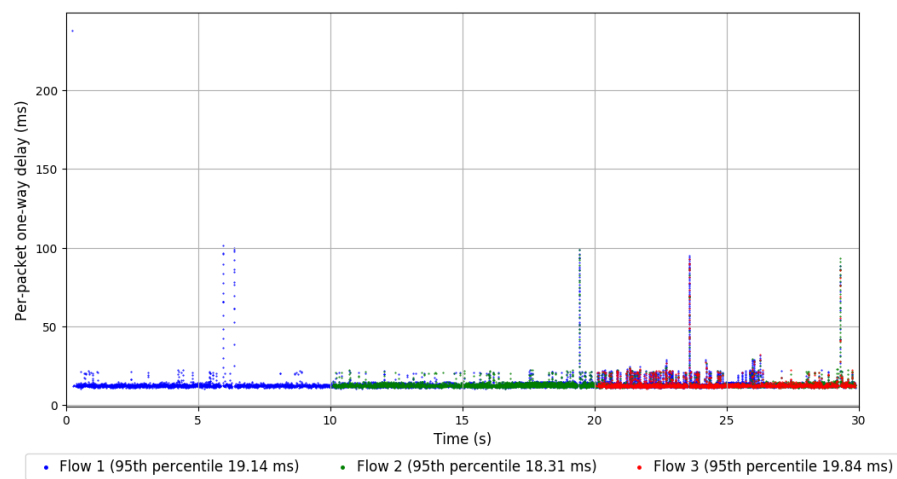
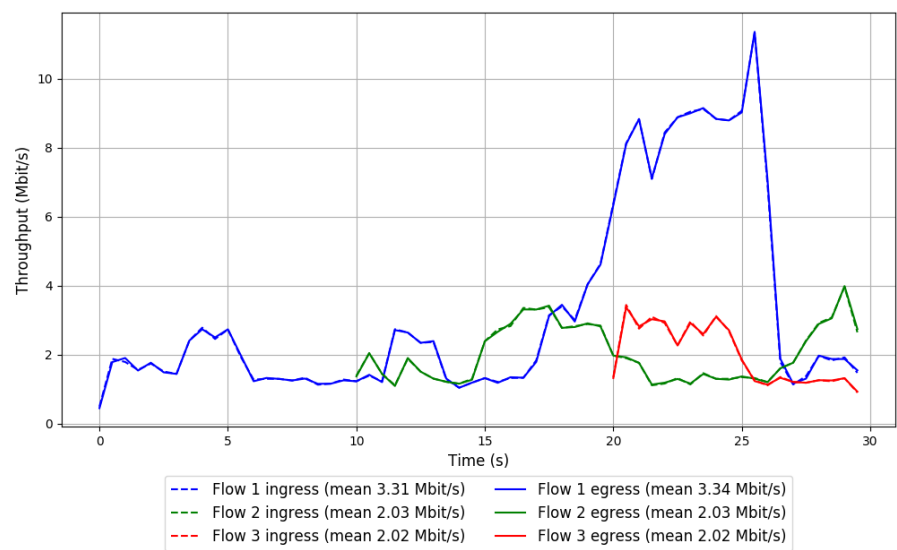


Run 2: Statistics of Vivace-latency

Start at: 2018-03-20 09:53:35
End at: 2018-03-20 09:54:05
Local clock offset: 2.958 ms
Remote clock offset: -6.206 ms

Below is generated by plot.py at 2018-03-20 10:42:31
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.37 Mbit/s
95th percentile per-packet one-way delay: 19.099 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.34 Mbit/s
95th percentile per-packet one-way delay: 19.142 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 18.311 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 19.835 ms
Loss rate: 0.00%

Run 2: Report of Vivace-latency — Data Link

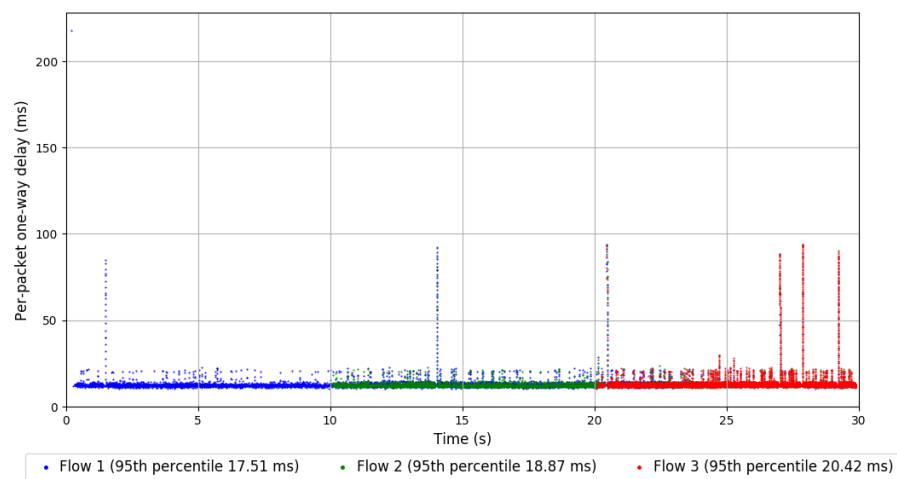
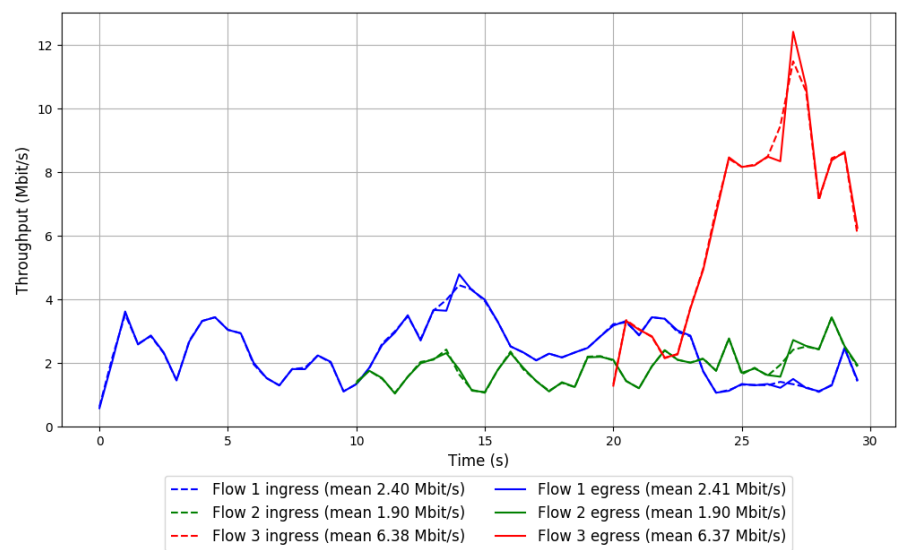


Run 3: Statistics of Vivace-latency

Start at: 2018-03-20 10:17:39
End at: 2018-03-20 10:18:09
Local clock offset: 2.26 ms
Remote clock offset: -5.955 ms

Below is generated by plot.py at 2018-03-20 10:42:31
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.80 Mbit/s
95th percentile per-packet one-way delay: 19.136 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 17.512 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 18.871 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.37 Mbit/s
95th percentile per-packet one-way delay: 20.422 ms
Loss rate: 0.00%

Run 3: Report of Vivace-latency — Data Link

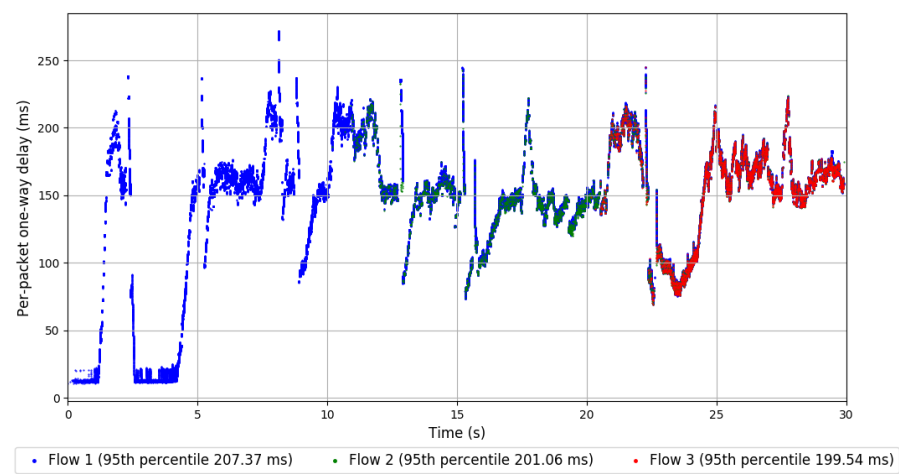
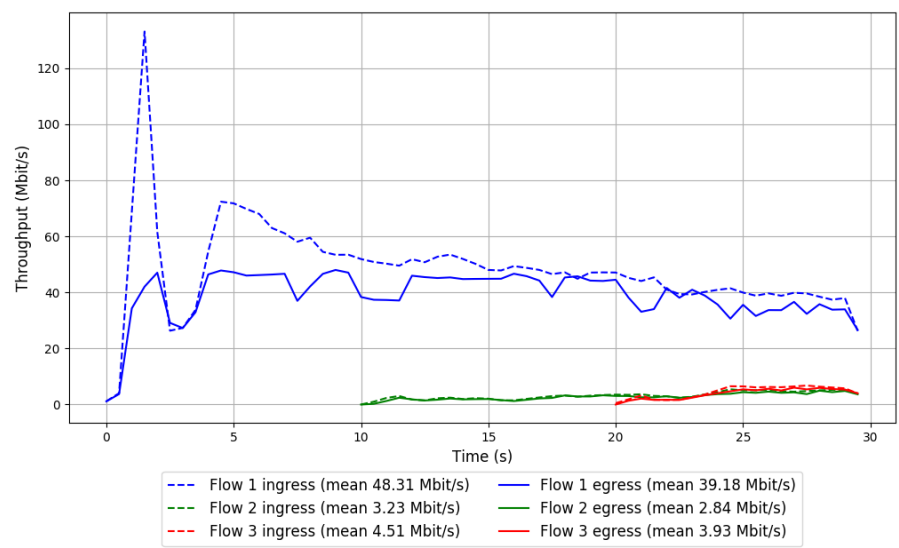


Run 1: Statistics of Vivace-loss

Start at: 2018-03-20 09:44:12
End at: 2018-03-20 09:44:42
Local clock offset: 3.863 ms
Remote clock offset: -6.548 ms

Below is generated by plot.py at 2018-03-20 10:42:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 42.31 Mbit/s
95th percentile per-packet one-way delay: 206.992 ms
Loss rate: 18.48%
-- Flow 1:
Average throughput: 39.18 Mbit/s
95th percentile per-packet one-way delay: 207.369 ms
Loss rate: 18.87%
-- Flow 2:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 201.064 ms
Loss rate: 12.76%
-- Flow 3:
Average throughput: 3.93 Mbit/s
95th percentile per-packet one-way delay: 199.539 ms
Loss rate: 14.00%

Run 1: Report of Vivace-loss — Data Link

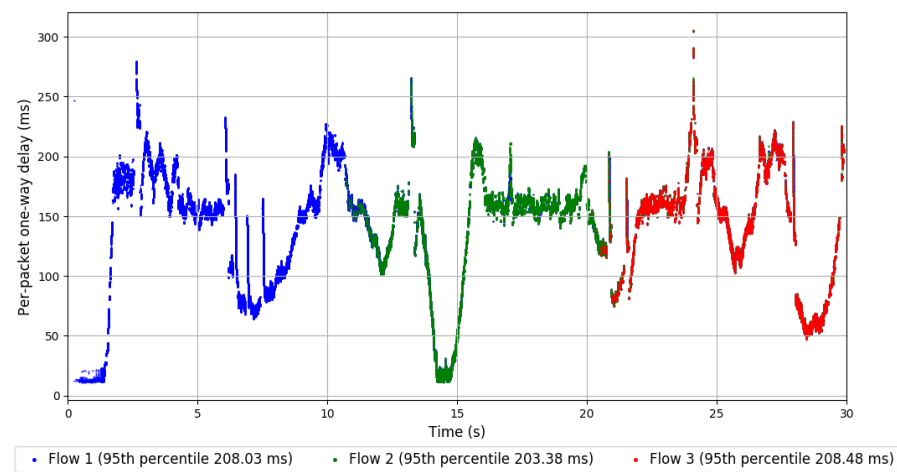
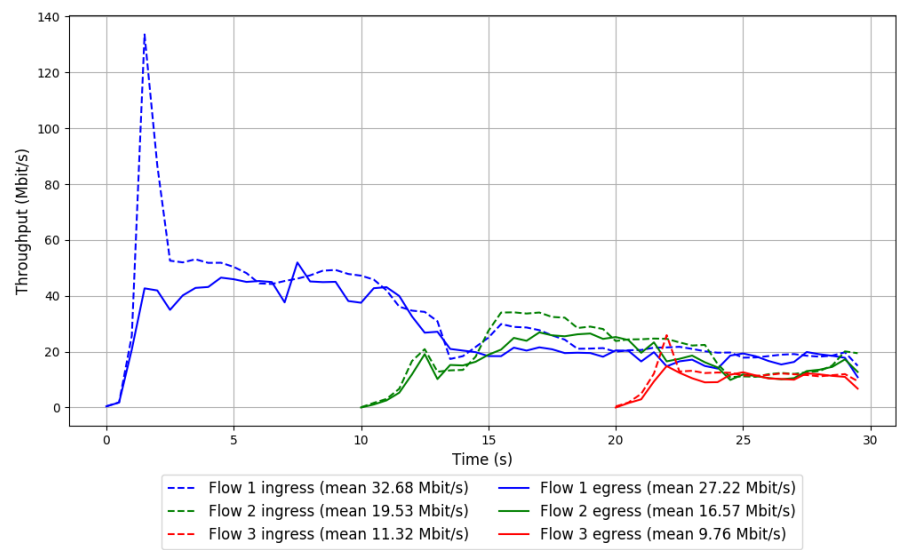


Run 2: Statistics of Vivace-loss

Start at: 2018-03-20 10:08:14
End at: 2018-03-20 10:08:44
Local clock offset: 2.454 ms
Remote clock offset: -6.265 ms

Below is generated by plot.py at 2018-03-20 10:42:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 41.40 Mbit/s
95th percentile per-packet one-way delay: 207.002 ms
Loss rate: 16.83%
-- Flow 1:
Average throughput: 27.22 Mbit/s
95th percentile per-packet one-way delay: 208.029 ms
Loss rate: 17.37%
-- Flow 2:
Average throughput: 16.57 Mbit/s
95th percentile per-packet one-way delay: 203.376 ms
Loss rate: 15.97%
-- Flow 3:
Average throughput: 9.76 Mbit/s
95th percentile per-packet one-way delay: 208.478 ms
Loss rate: 15.04%

Run 2: Report of Vivace-loss — Data Link

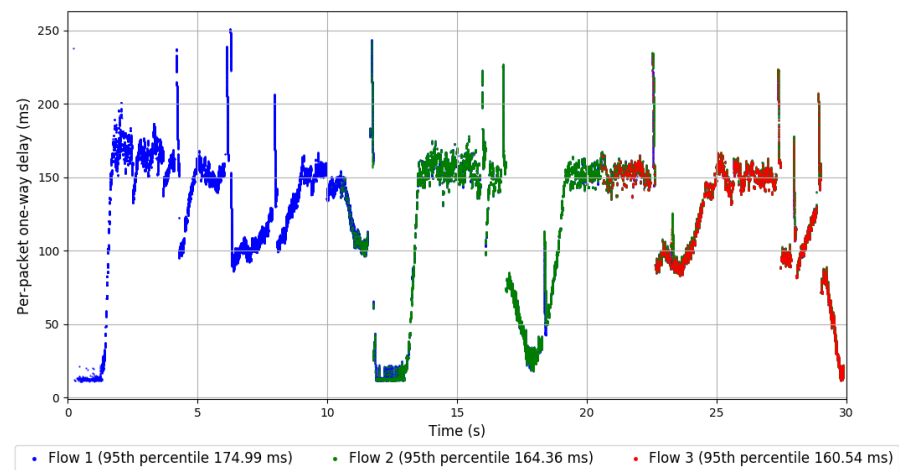
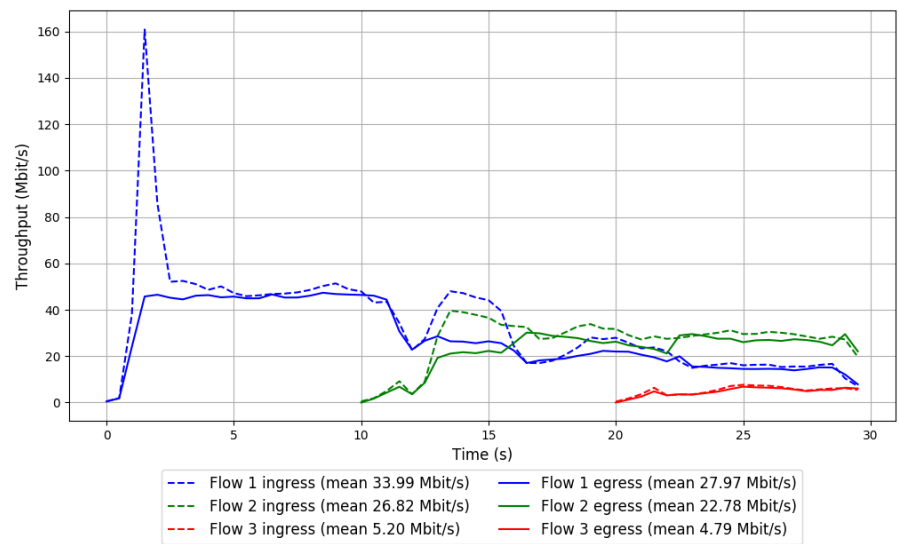


Run 3: Statistics of Vivace-loss

Start at: 2018-03-20 10:32:17
End at: 2018-03-20 10:32:47
Local clock offset: 0.865 ms
Remote clock offset: -4.421 ms

Below is generated by plot.py at 2018-03-20 10:42:39
Datalink statistics
-- Total of 3 flows:
Average throughput: 44.71 Mbit/s
95th percentile per-packet one-way delay: 172.112 ms
Loss rate: 17.12%
-- Flow 1:
Average throughput: 27.97 Mbit/s
95th percentile per-packet one-way delay: 174.991 ms
Loss rate: 18.32%
-- Flow 2:
Average throughput: 22.78 Mbit/s
95th percentile per-packet one-way delay: 164.359 ms
Loss rate: 15.59%
-- Flow 3:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 160.540 ms
Loss rate: 9.13%

Run 3: Report of Vivace-loss — Data Link

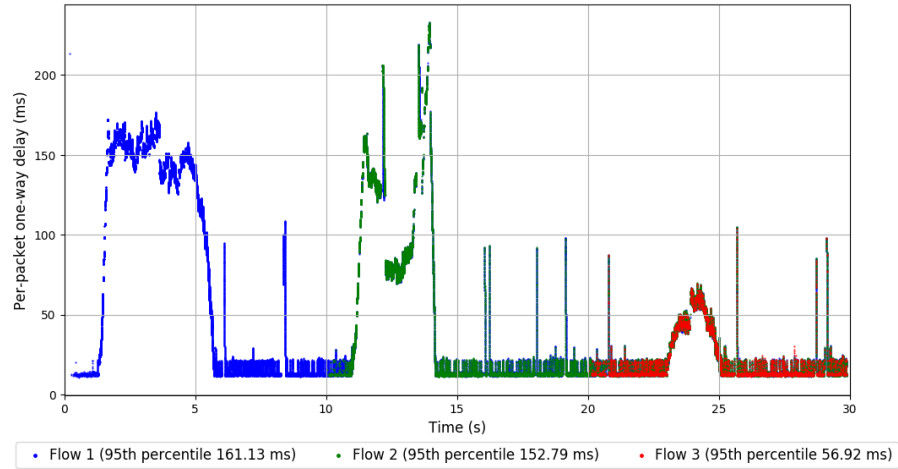
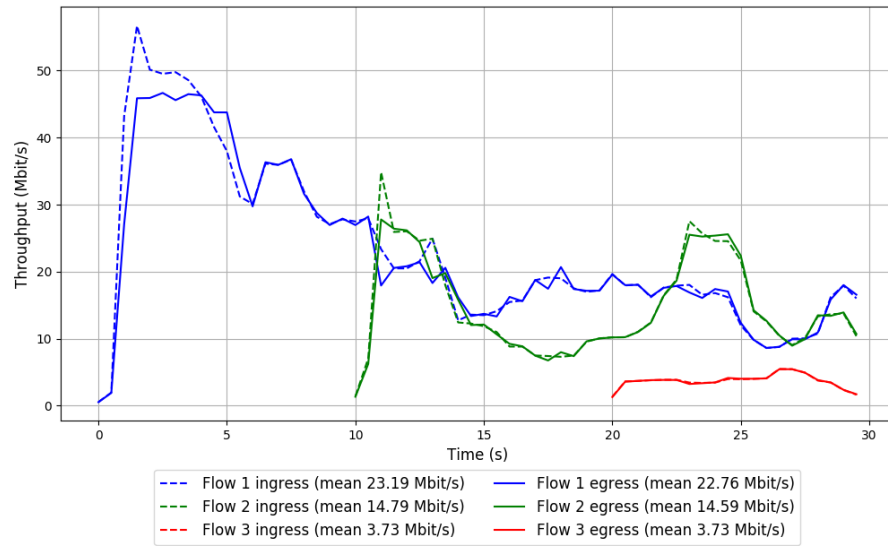


Run 1: Statistics of Vivace-LTE

Start at: 2018-03-20 09:36:13
End at: 2018-03-20 09:36:43
Local clock offset: 3.912 ms
Remote clock offset: -6.526 ms

Below is generated by plot.py at 2018-03-20 10:42:39
Datalink statistics
-- Total of 3 flows:
Average throughput: 33.76 Mbit/s
95th percentile per-packet one-way delay: 160.327 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 22.76 Mbit/s
95th percentile per-packet one-way delay: 161.131 ms
Loss rate: 2.50%
-- Flow 2:
Average throughput: 14.59 Mbit/s
95th percentile per-packet one-way delay: 152.786 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 56.925 ms
Loss rate: 0.03%

Run 1: Report of Vivace-LTE — Data Link

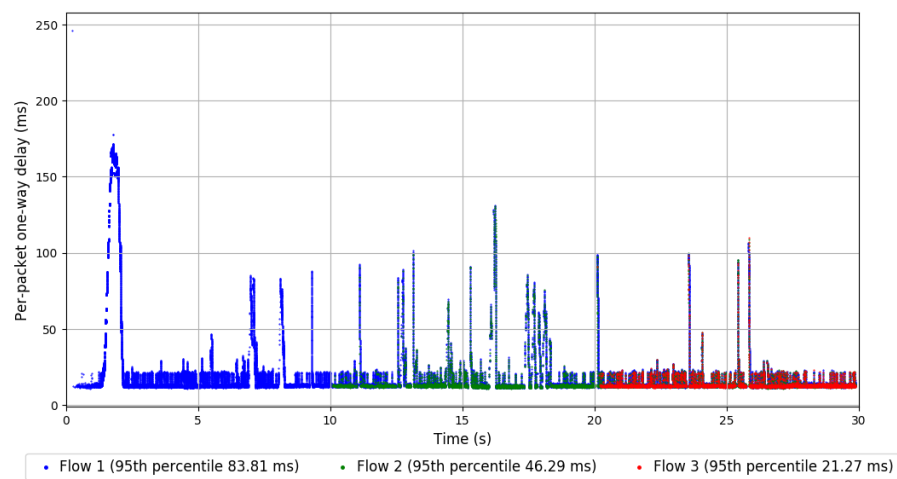
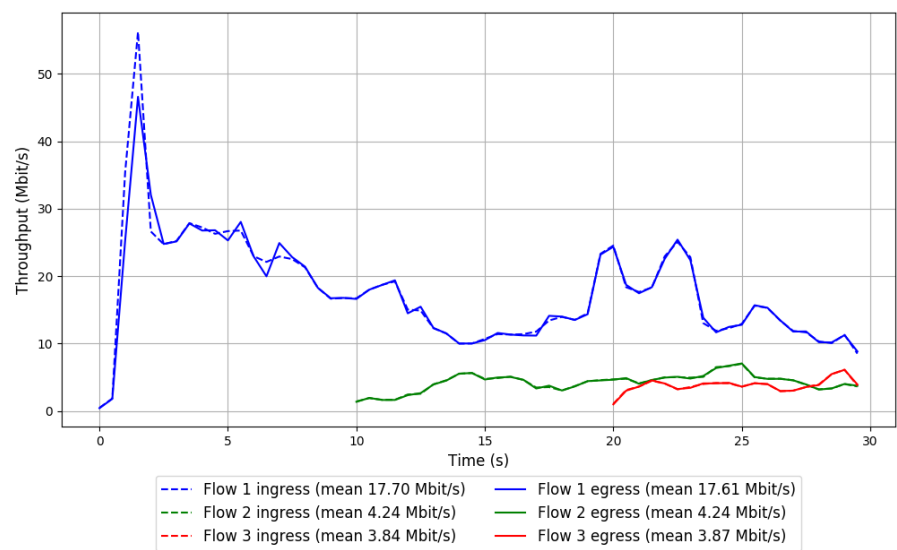


Run 2: Statistics of Vivace-LTE

Start at: 2018-03-20 10:00:15
End at: 2018-03-20 10:00:45
Local clock offset: 2.588 ms
Remote clock offset: -6.196 ms

Below is generated by plot.py at 2018-03-20 10:42:39
Datalink statistics
-- Total of 3 flows:
Average throughput: 21.72 Mbit/s
95th percentile per-packet one-way delay: 74.988 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 17.61 Mbit/s
95th percentile per-packet one-way delay: 83.811 ms
Loss rate: 1.31%
-- Flow 2:
Average throughput: 4.24 Mbit/s
95th percentile per-packet one-way delay: 46.290 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 21.272 ms
Loss rate: 0.00%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-03-20 10:24:18

End at: 2018-03-20 10:24:48

Local clock offset: 1.387 ms

Remote clock offset: -5.07 ms

Below is generated by plot.py at 2018-03-20 10:42:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 25.80 Mbit/s

95th percentile per-packet one-way delay: 21.355 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 12.64 Mbit/s

95th percentile per-packet one-way delay: 21.496 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 17.42 Mbit/s

95th percentile per-packet one-way delay: 21.401 ms

Loss rate: 0.03%

-- Flow 3:

Average throughput: 4.80 Mbit/s

95th percentile per-packet one-way delay: 20.863 ms

Loss rate: 0.07%

Run 3: Report of Vivace-LTE — Data Link

