

Pantheon Report

Generated at 2018-03-13 00:45:25 (UTC).

Data path: Stanford ppp0 (*remote*) → AWS California 1 Ethernet (*local*).

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).

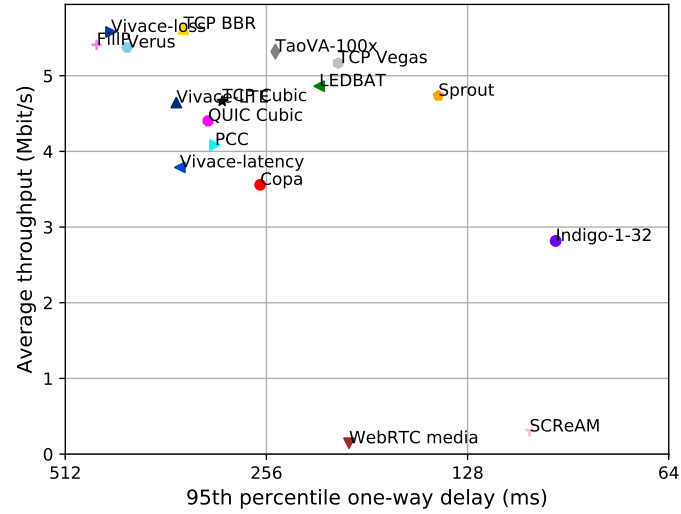
Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo_fast**).

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

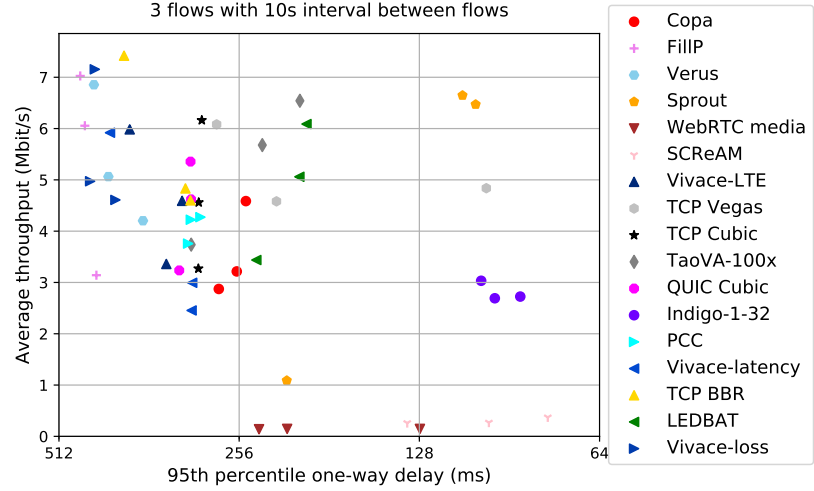
Git summary:

```
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 Stanford ppp0 to AWS California 1 Ethernet, 3 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



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



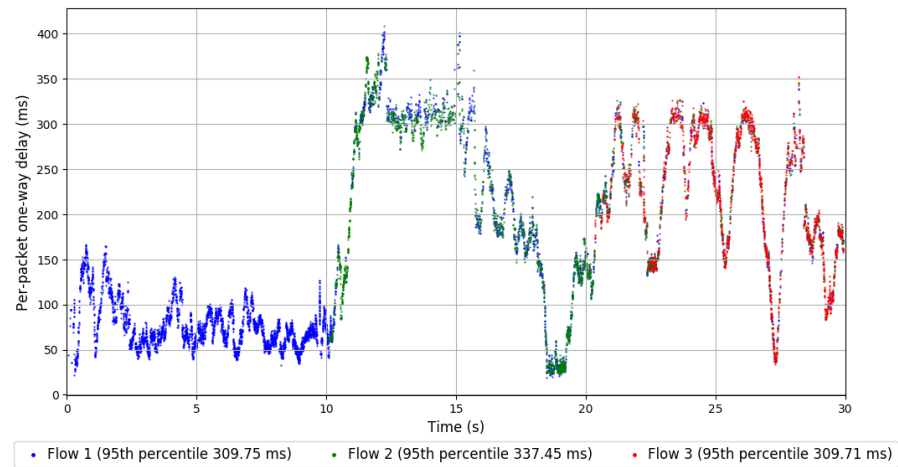
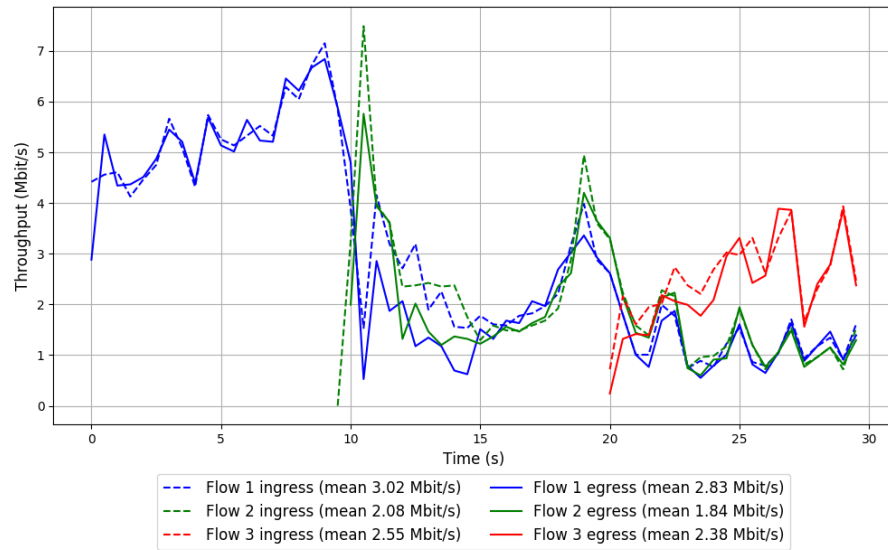
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	3.23	2.45	2.33	309.85	349.35	347.06	4.18	8.37	12.62
TCP Cubic	3	2.83	1.95	1.67	296.88	298.86	300.03	1.67	2.61	3.60
LEDBAT	3	3.00	2.11	1.49	193.34	232.43	225.11	0.05	0.84	2.94
PCC	3	2.17	1.96	1.85	293.58	305.33	311.22	5.63	7.82	15.76
QUIC Cubic	3	3.10	1.30	1.38	310.95	317.52	316.49	5.29	7.34	12.57
SCReAM	3	0.13	0.17	0.18	109.92	96.82	96.23	0.44	0.32	0.59
WebRTC media	3	0.05	0.05	0.05	143.61	146.45	169.57	0.31	0.43	1.12
Sprout	3	2.71	2.15	1.85	151.92	134.65	129.64	1.55	1.23	2.36
TaoVA-100x	3	3.09	2.38	1.96	238.05	251.06	261.94	3.40	3.99	11.72
TCP Vegas	3	2.60	2.46	2.83	189.13	207.87	153.88	0.23	0.39	0.27
Verus	3	3.39	2.76	0.95	389.21	431.77	455.40	13.39	35.76	41.87
Copa	3	2.08	1.39	1.67	206.67	254.53	293.66	0.53	2.24	3.27
FillP	3	3.90	1.47	1.80	442.81	476.08	501.00	74.51	95.34	97.12
Indigo-1-32	3	1.36	1.44	1.52	98.25	88.94	98.29	0.66	0.37	0.52
Vivace-latency	3	2.23	1.52	1.71	333.78	349.26	257.23	5.53	9.58	12.31
Vivace-loss	3	3.78	2.08	1.37	440.97	427.87	432.62	27.73	23.16	27.16
Vivace-LTE	3	2.84	1.94	1.64	336.88	350.76	391.53	8.26	11.89	18.06

Run 1: Statistics of TCP BBR

Start at: 2018-03-12 22:34:50
End at: 2018-03-12 22:35:20
Local clock offset: -1.091 ms
Remote clock offset: -6.422 ms

Below is generated by plot.py at 2018-03-13 00:44:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 314.767 ms
Loss rate: 8.13%
-- Flow 1:
Average throughput: 2.83 Mbit/s
95th percentile per-packet one-way delay: 309.752 ms
Loss rate: 6.44%
-- Flow 2:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 337.449 ms
Loss rate: 11.74%
-- Flow 3:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 309.709 ms
Loss rate: 8.29%

Run 1: Report of TCP BBR — Data Link

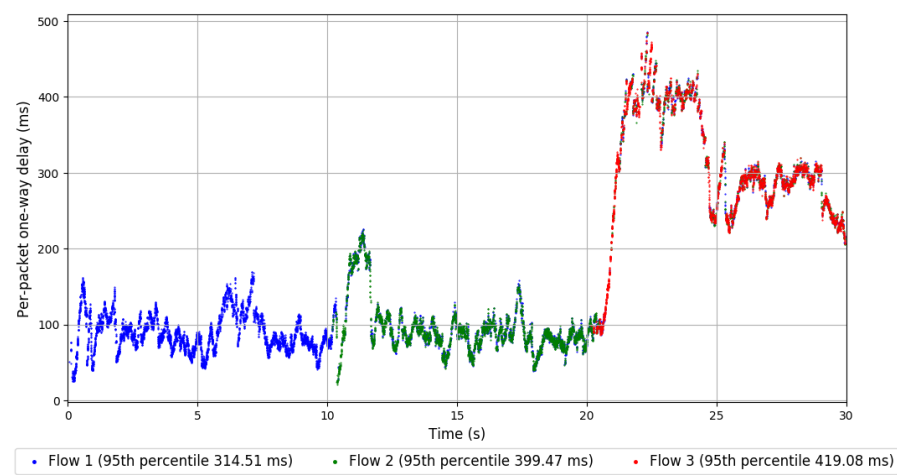
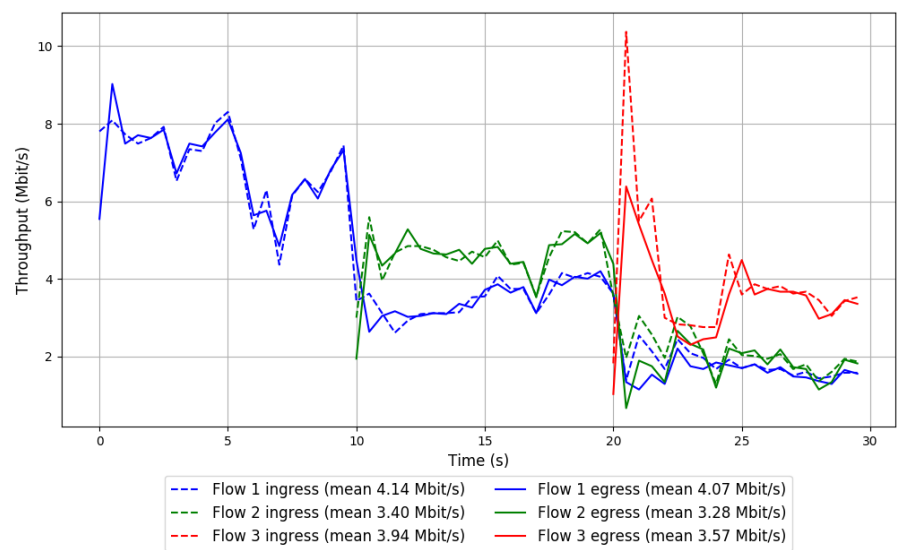


Run 2: Statistics of TCP BBR

Start at: 2018-03-12 22:58:37
End at: 2018-03-12 22:59:07
Local clock offset: 0.426 ms
Remote clock offset: -5.572 ms

Below is generated by plot.py at 2018-03-13 00:44:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 7.42 Mbit/s
95th percentile per-packet one-way delay: 398.613 ms
Loss rate: 3.94%
-- Flow 1:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 314.515 ms
Loss rate: 1.73%
-- Flow 2:
Average throughput: 3.28 Mbit/s
95th percentile per-packet one-way delay: 399.472 ms
Loss rate: 4.05%
-- Flow 3:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 419.083 ms
Loss rate: 10.72%

Run 2: Report of TCP BBR — Data Link

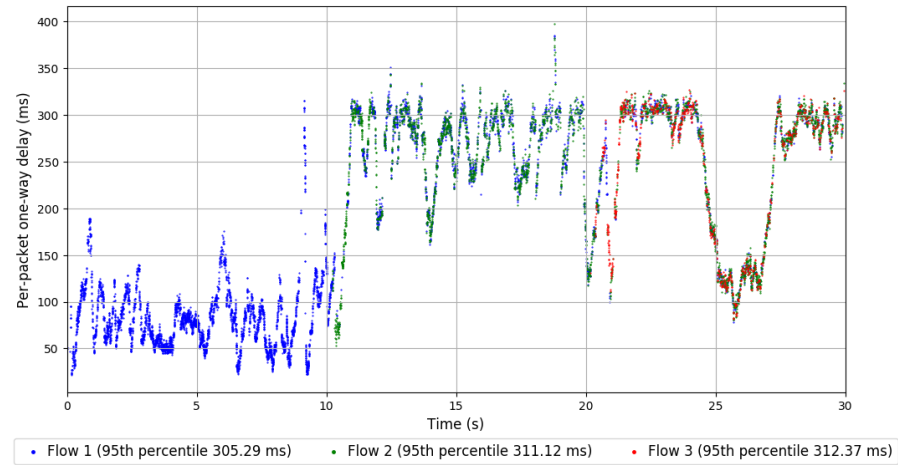
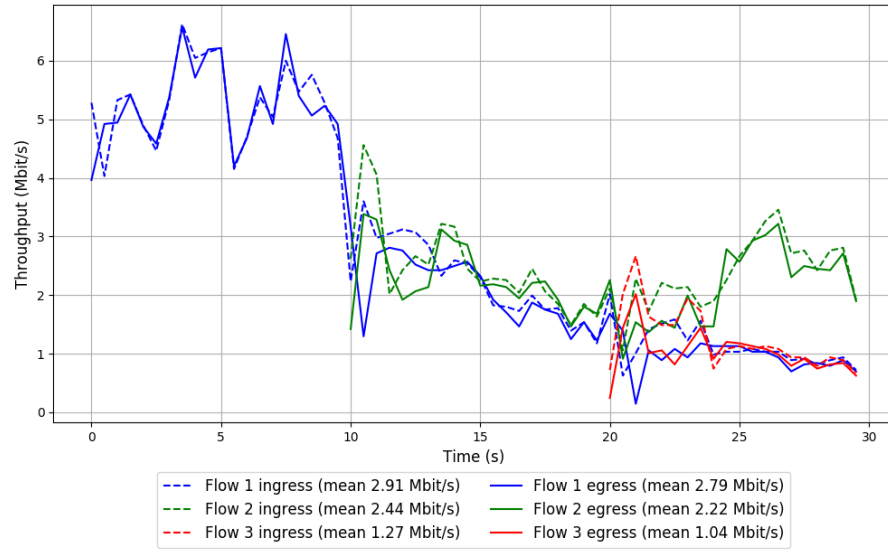


Run 3: Statistics of TCP BBR

Start at: 2018-03-12 23:22:24
End at: 2018-03-12 23:22:54
Local clock offset: 0.802 ms
Remote clock offset: -4.323 ms

Below is generated by plot.py at 2018-03-13 00:44:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.60 Mbit/s
95th percentile per-packet one-way delay: 308.728 ms
Loss rate: 7.21%
-- Flow 1:
Average throughput: 2.79 Mbit/s
95th percentile per-packet one-way delay: 305.286 ms
Loss rate: 4.37%
-- Flow 2:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 311.115 ms
Loss rate: 9.32%
-- Flow 3:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 312.374 ms
Loss rate: 18.85%

Run 3: Report of TCP BBR — Data Link

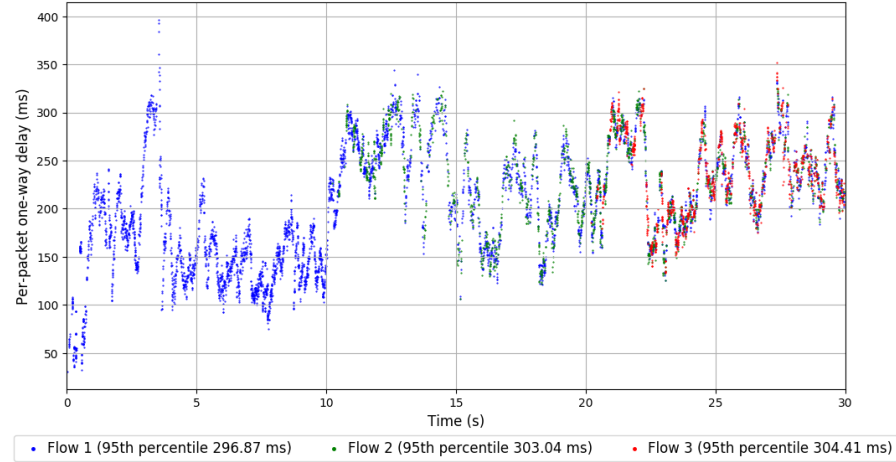
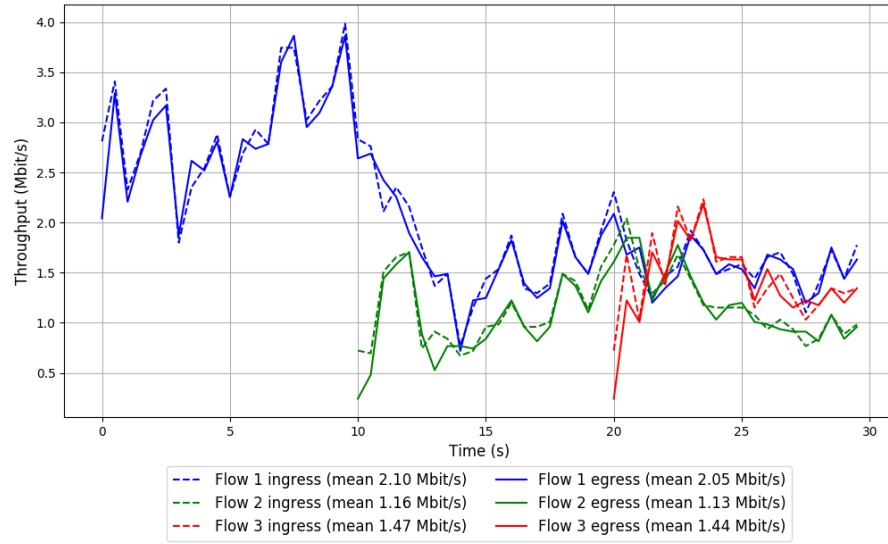


Run 1: Statistics of TCP Cubic

Start at: 2018-03-12 22:41:27
End at: 2018-03-12 22:41:57
Local clock offset: -1.48 ms
Remote clock offset: -6.253 ms

Below is generated by plot.py at 2018-03-13 00:44:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.27 Mbit/s
95th percentile per-packet one-way delay: 299.480 ms
Loss rate: 2.79%
-- Flow 1:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 296.872 ms
Loss rate: 2.27%
-- Flow 2:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 303.044 ms
Loss rate: 3.32%
-- Flow 3:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 304.411 ms
Loss rate: 4.18%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-03-12 23:05:15

End at: 2018-03-12 23:05:45

Local clock offset: 0.458 ms

Remote clock offset: -5.09 ms

Below is generated by plot.py at 2018-03-13 00:44:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.56 Mbit/s

95th percentile per-packet one-way delay: 299.113 ms

Loss rate: 2.04%

-- Flow 1:

Average throughput: 2.47 Mbit/s

95th percentile per-packet one-way delay: 300.041 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 2.62 Mbit/s

95th percentile per-packet one-way delay: 296.406 ms

Loss rate: 2.41%

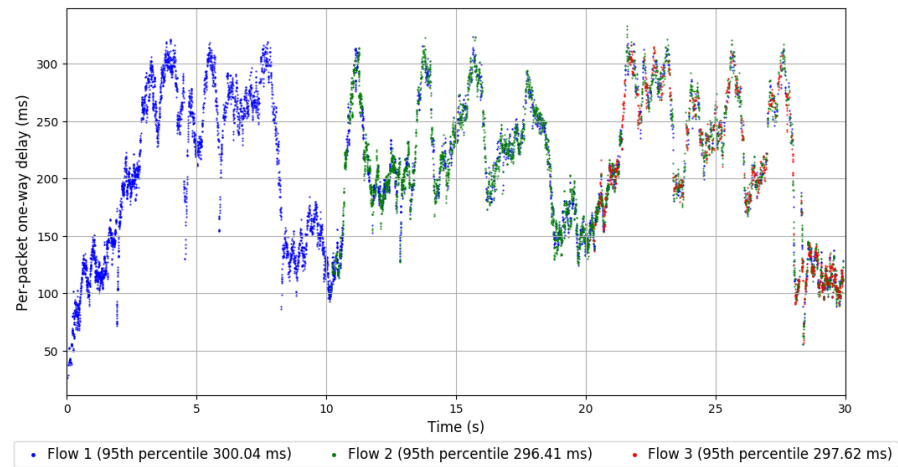
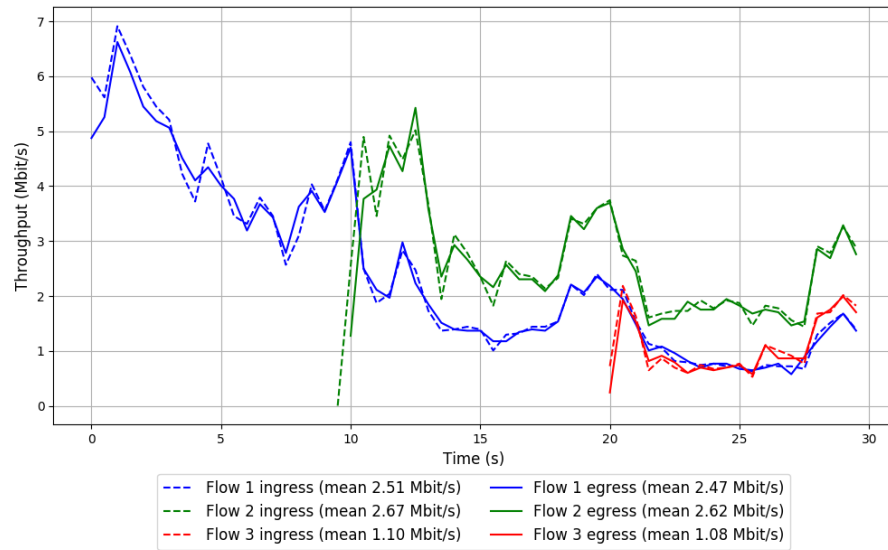
-- Flow 3:

Average throughput: 1.08 Mbit/s

95th percentile per-packet one-way delay: 297.616 ms

Loss rate: 3.86%

Run 2: Report of TCP Cubic — Data Link

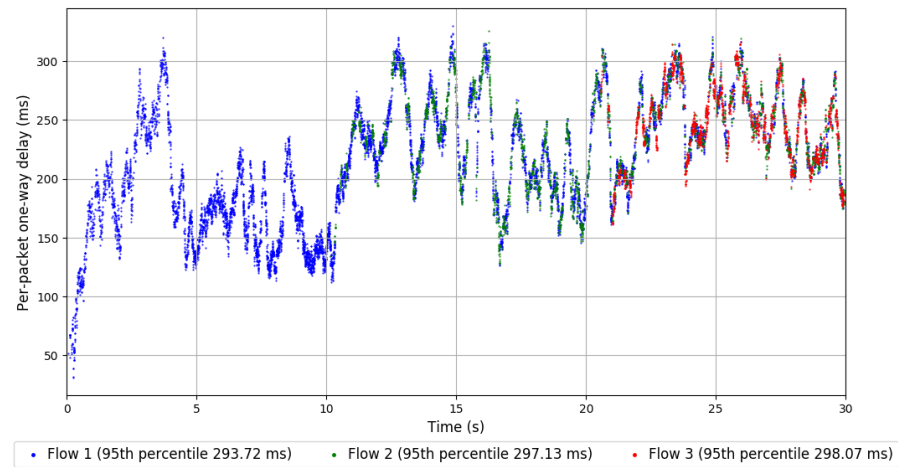
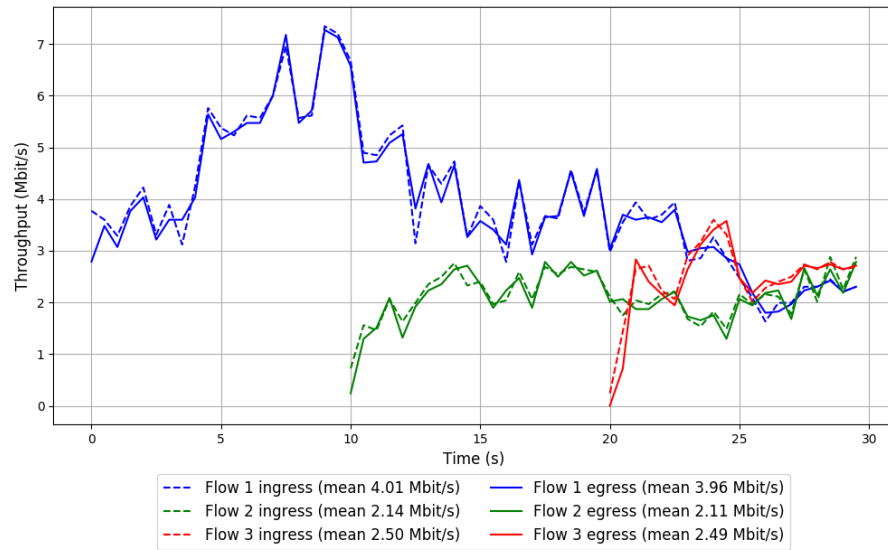


Run 3: Statistics of TCP Cubic

Start at: 2018-03-12 23:29:01
End at: 2018-03-12 23:29:31
Local clock offset: 1.263 ms
Remote clock offset: -4.382 ms

Below is generated by plot.py at 2018-03-13 00:44:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.16 Mbit/s
95th percentile per-packet one-way delay: 295.583 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 3.96 Mbit/s
95th percentile per-packet one-way delay: 293.721 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 297.131 ms
Loss rate: 2.11%
-- Flow 3:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 298.067 ms
Loss rate: 2.77%

Run 3: Report of TCP Cubic — Data Link

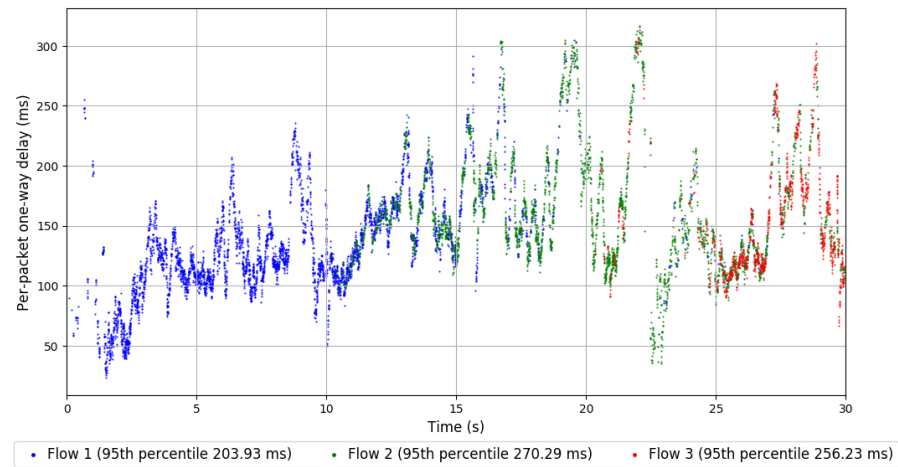
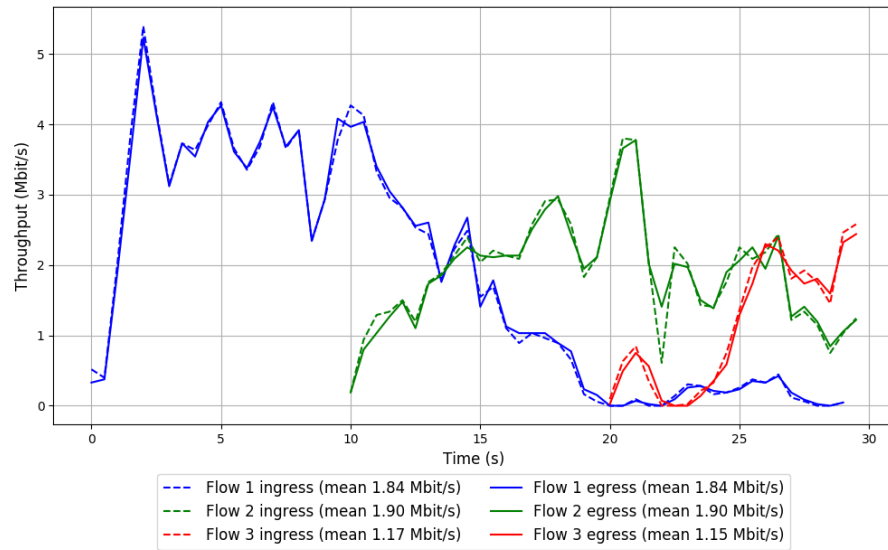


```
Run 1: Statistics of LEDBAT

Start at: 2018-03-12 22:21:40
End at: 2018-03-12 22:22:10
Local clock offset: -1.027 ms
Remote clock offset: -6.533 ms

# Below is generated by plot.py at 2018-03-13 00:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 239.661 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 203.930 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 270.291 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 256.231 ms
Loss rate: 3.74%
```

Run 1: Report of LEDBAT — Data Link

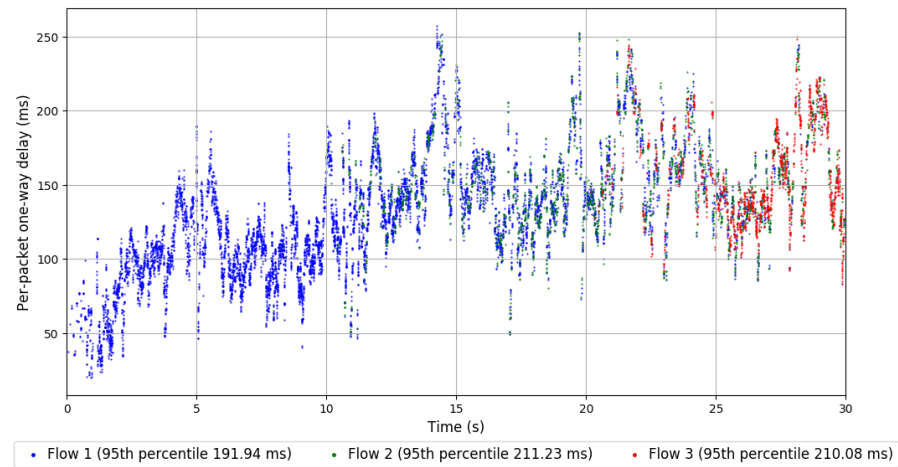
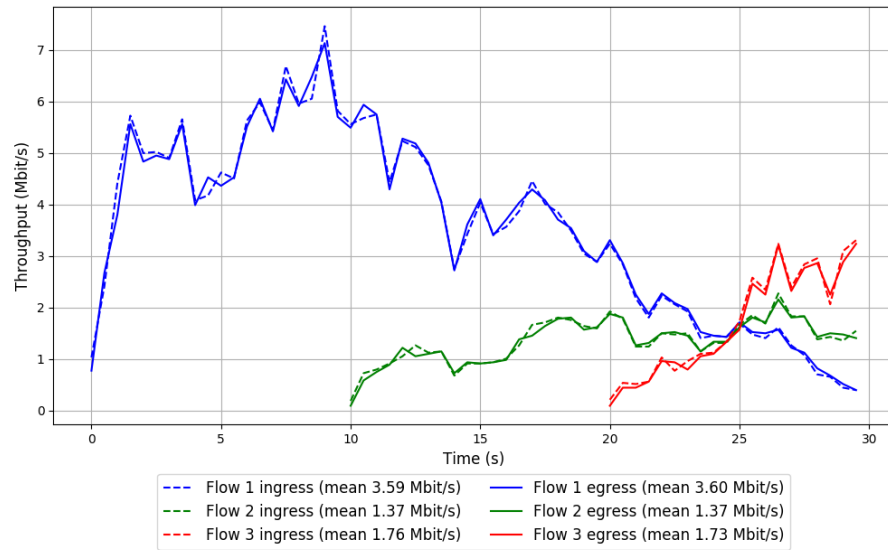


Run 2: Statistics of LEDBAT

Start at: 2018-03-12 22:45:25
End at: 2018-03-12 22:45:55
Local clock offset: -1.239 ms
Remote clock offset: -6.448 ms

Below is generated by plot.py at 2018-03-13 00:44:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 203.083 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 3.60 Mbit/s
95th percentile per-packet one-way delay: 191.938 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 211.231 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 210.079 ms
Loss rate: 3.31%

Run 2: Report of LEDBAT — Data Link

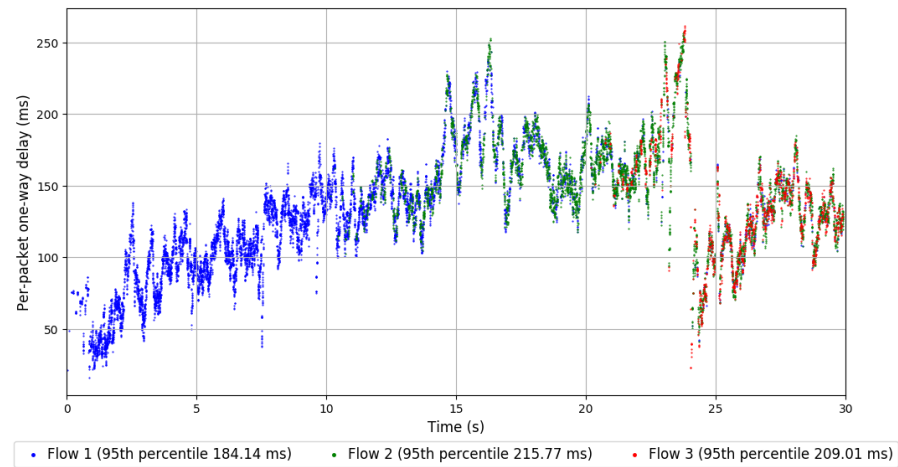
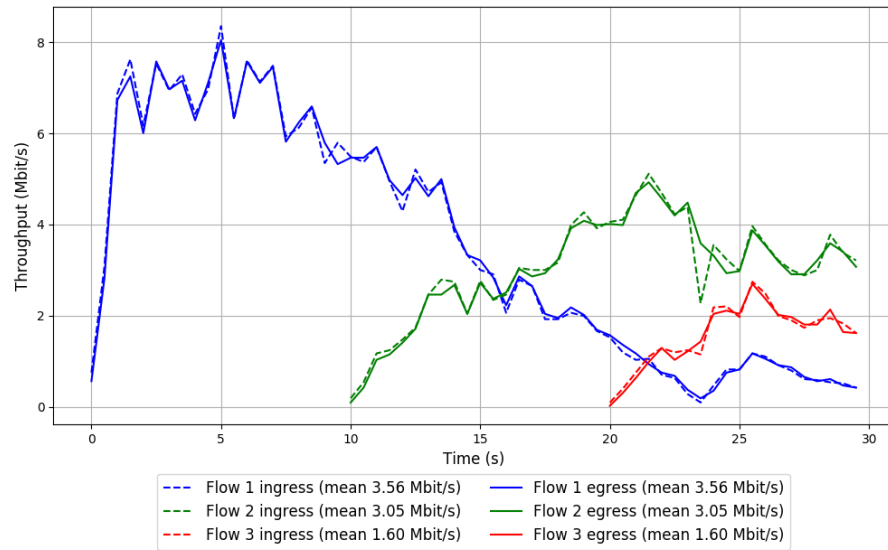


Run 3: Statistics of LEDBAT

Start at: 2018-03-12 23:09:13
End at: 2018-03-12 23:09:43
Local clock offset: 0.483 ms
Remote clock offset: -4.867 ms

Below is generated by plot.py at 2018-03-13 00:44:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.09 Mbit/s
95th percentile per-packet one-way delay: 197.609 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 184.138 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 3.05 Mbit/s
95th percentile per-packet one-way delay: 215.774 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 209.011 ms
Loss rate: 1.77%

Run 3: Report of LEDBAT — Data Link

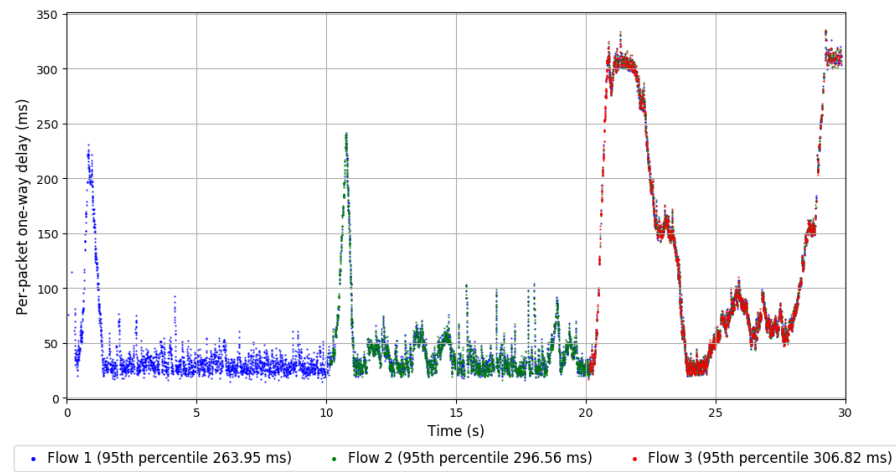
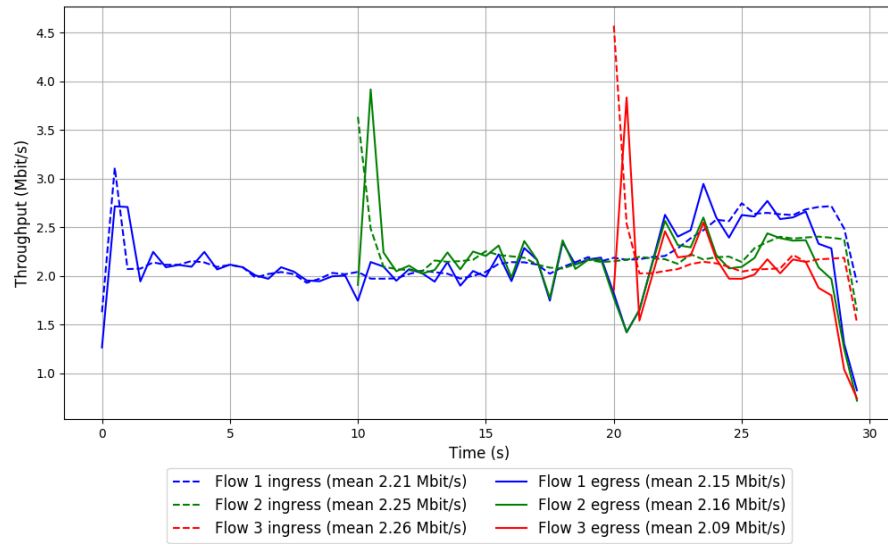


Run 1: Statistics of PCC

Start at: 2018-03-12 22:24:19
End at: 2018-03-12 22:24:49
Local clock offset: -0.868 ms
Remote clock offset: -6.449 ms

Below is generated by plot.py at 2018-03-13 00:44:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 297.107 ms
Loss rate: 4.36%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 263.952 ms
Loss rate: 3.10%
-- Flow 2:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 296.562 ms
Loss rate: 4.25%
-- Flow 3:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 306.822 ms
Loss rate: 8.32%

Run 1: Report of PCC — Data Link

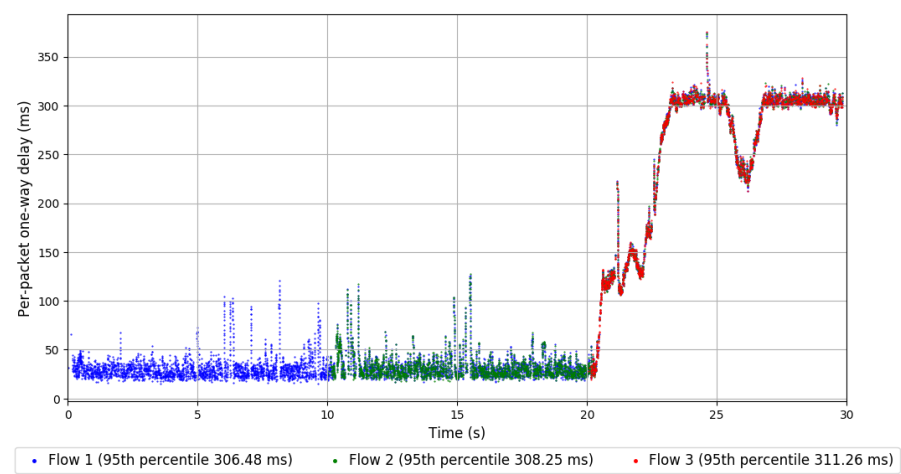
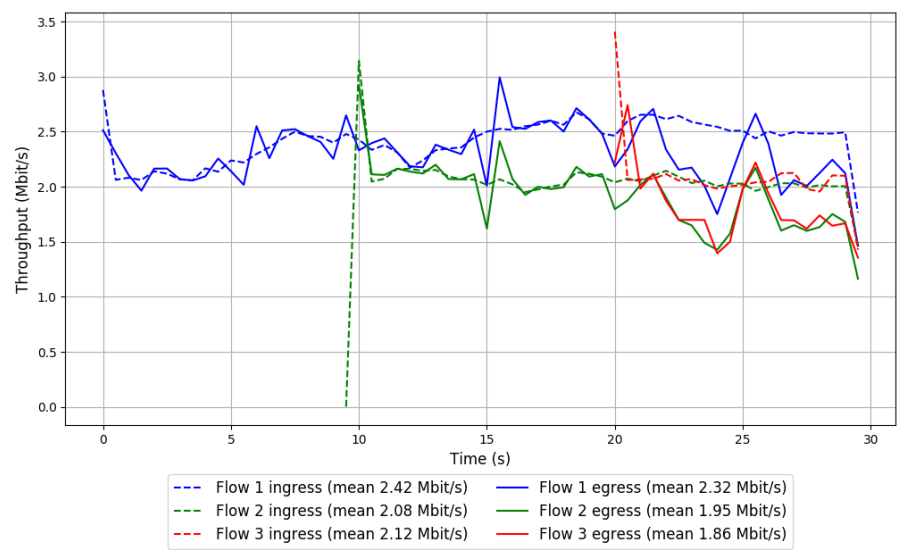


Run 2: Statistics of PCC

Start at: 2018-03-12 22:48:03
End at: 2018-03-12 22:48:33
Local clock offset: -0.647 ms
Remote clock offset: -6.432 ms

Below is generated by plot.py at 2018-03-13 00:44:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 308.310 ms
Loss rate: 6.41%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 306.475 ms
Loss rate: 4.41%
-- Flow 2:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 308.250 ms
Loss rate: 6.77%
-- Flow 3:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 311.256 ms
Loss rate: 12.62%

Run 2: Report of PCC — Data Link

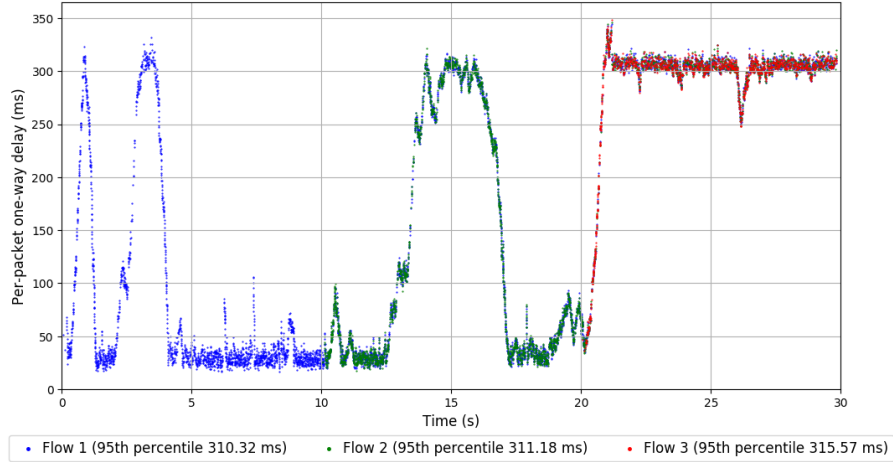
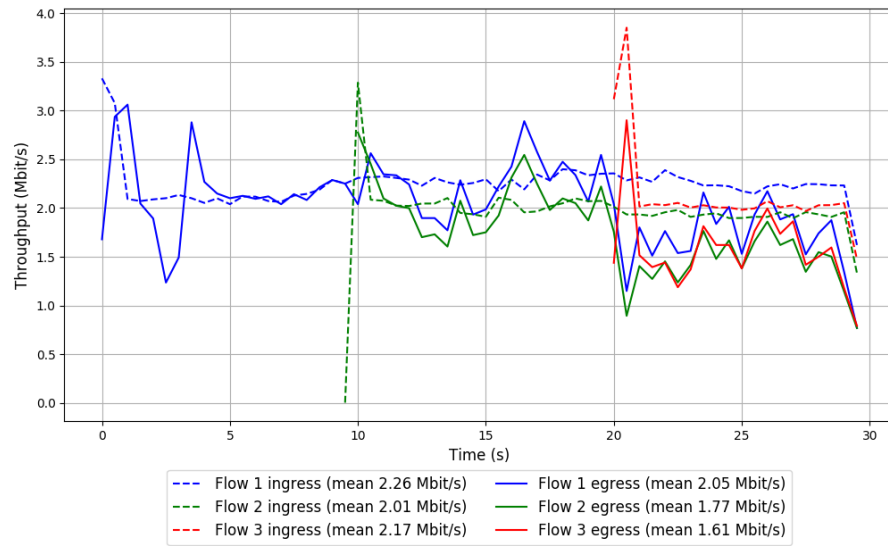


Run 3: Statistics of PCC

Start at: 2018-03-12 23:11:51
End at: 2018-03-12 23:12:21
Local clock offset: 0.549 ms
Remote clock offset: -4.632 ms

Below is generated by plot.py at 2018-03-13 00:44:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.76 Mbit/s
95th percentile per-packet one-way delay: 311.544 ms
Loss rate: 13.14%
-- Flow 1:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 310.323 ms
Loss rate: 9.37%
-- Flow 2:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 311.175 ms
Loss rate: 12.44%
-- Flow 3:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 315.573 ms
Loss rate: 26.33%

Run 3: Report of PCC — Data Link

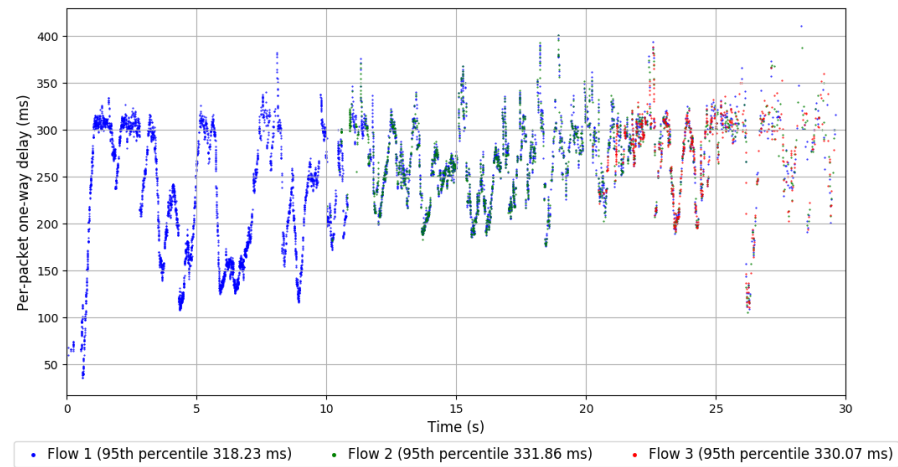
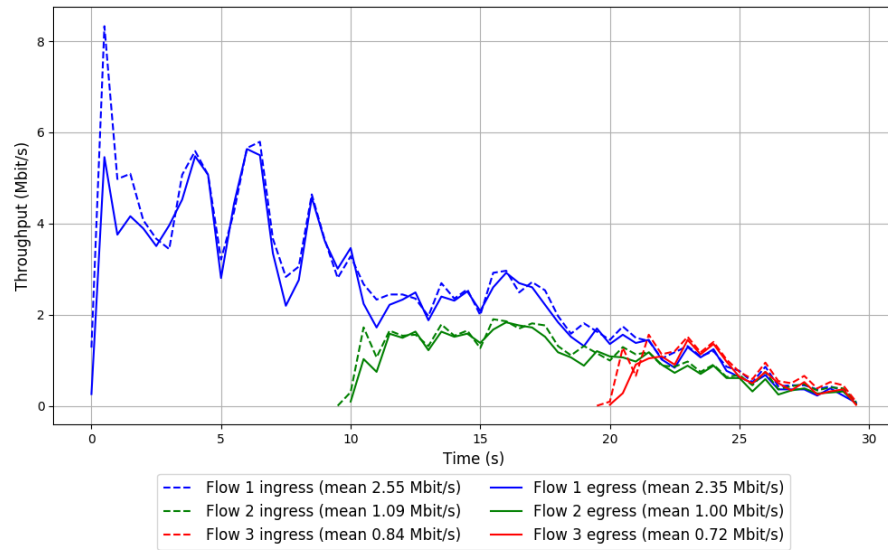


Run 1: Statistics of QUIC Cubic

Start at: 2018-03-12 22:30:53
End at: 2018-03-12 22:31:23
Local clock offset: -0.802 ms
Remote clock offset: -6.381 ms

Below is generated by plot.py at 2018-03-13 00:44:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.24 Mbit/s
95th percentile per-packet one-way delay: 322.350 ms
Loss rate: 9.38%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 318.228 ms
Loss rate: 8.30%
-- Flow 2:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 331.862 ms
Loss rate: 9.52%
-- Flow 3:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 330.069 ms
Loss rate: 18.97%

Run 1: Report of QUIC Cubic — Data Link

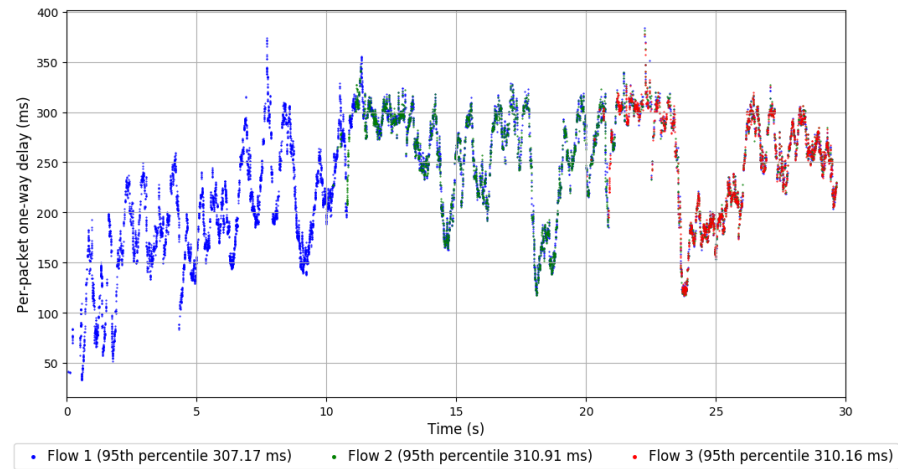
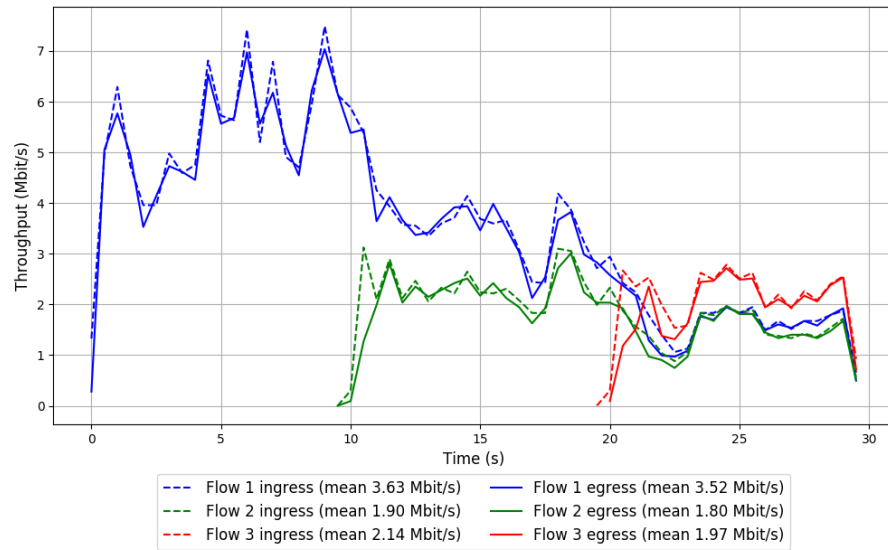


Run 2: Statistics of QUIC Cubic

Start at: 2018-03-12 22:54:39
End at: 2018-03-12 22:55:09
Local clock offset: 0.17 ms
Remote clock offset: -6.091 ms

Below is generated by plot.py at 2018-03-13 00:44:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.36 Mbit/s
95th percentile per-packet one-way delay: 308.669 ms
Loss rate: 4.84%
-- Flow 1:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 307.174 ms
Loss rate: 3.27%
-- Flow 2:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 310.911 ms
Loss rate: 6.32%
-- Flow 3:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 310.161 ms
Loss rate: 10.22%

Run 2: Report of QUIC Cubic — Data Link

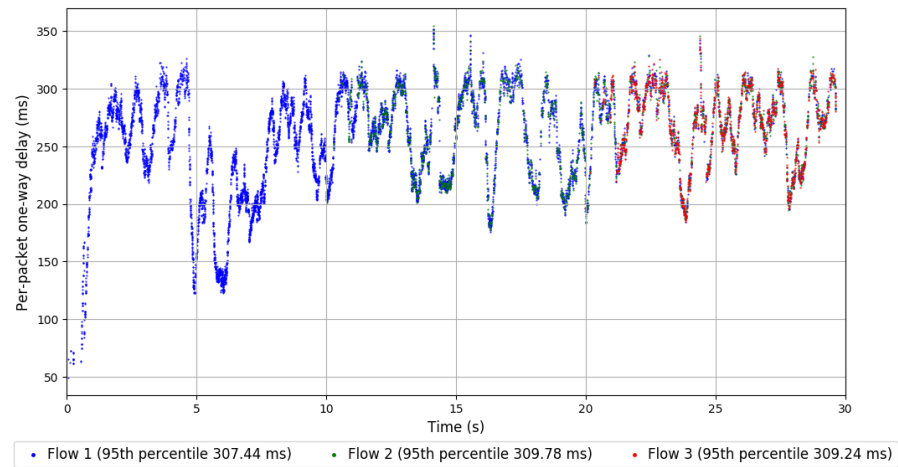
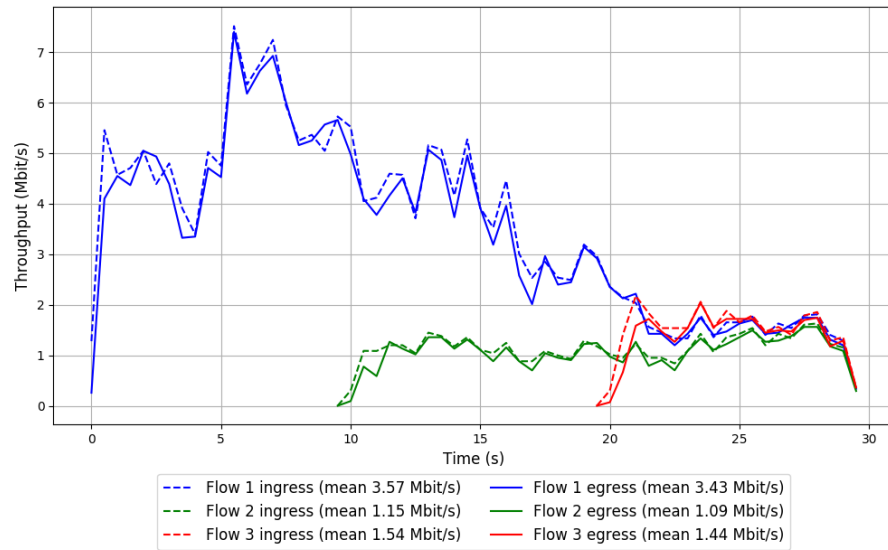


Run 3: Statistics of QUIC Cubic

Start at: 2018-03-12 23:18:26
End at: 2018-03-12 23:18:56
Local clock offset: 0.403 ms
Remote clock offset: -4.385 ms

Below is generated by plot.py at 2018-03-13 00:44:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.62 Mbit/s
95th percentile per-packet one-way delay: 308.064 ms
Loss rate: 5.05%
-- Flow 1:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 307.438 ms
Loss rate: 4.30%
-- Flow 2:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 309.780 ms
Loss rate: 6.19%
-- Flow 3:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 309.237 ms
Loss rate: 8.51%

Run 3: Report of QUIC Cubic — Data Link

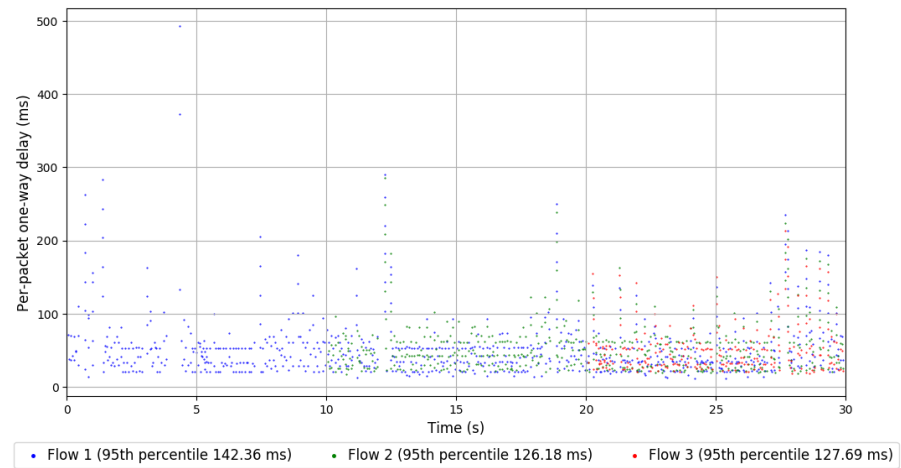
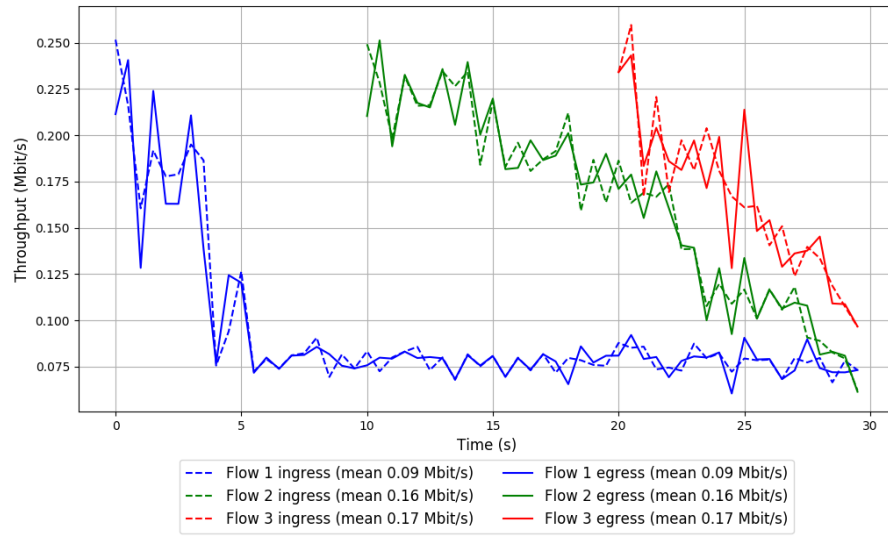


```
Run 1: Statistics of SCReAM

Start at: 2018-03-12 22:28:16
End at: 2018-03-12 22:28:46
Local clock offset: -0.856 ms
Remote clock offset: -6.42 ms

# Below is generated by plot.py at 2018-03-13 00:44:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 134.120 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 142.359 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 126.177 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 127.686 ms
Loss rate: 0.24%
```

Run 1: Report of SCReAM — Data Link

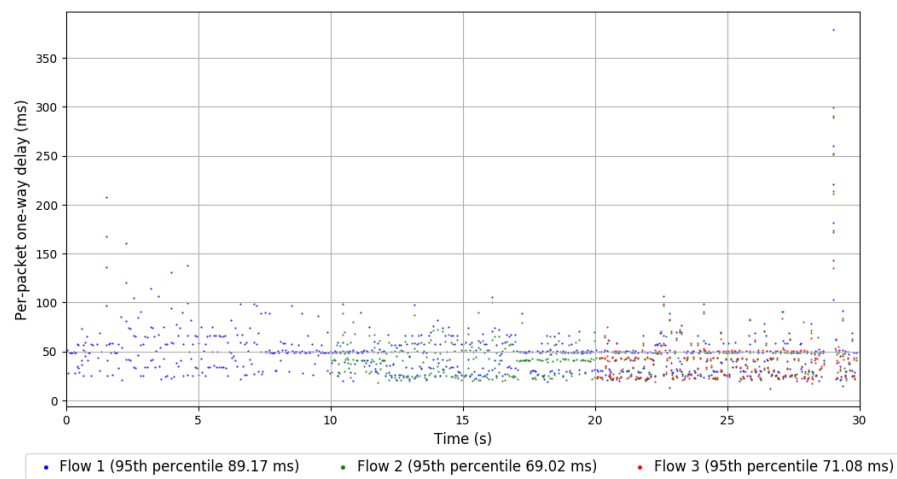
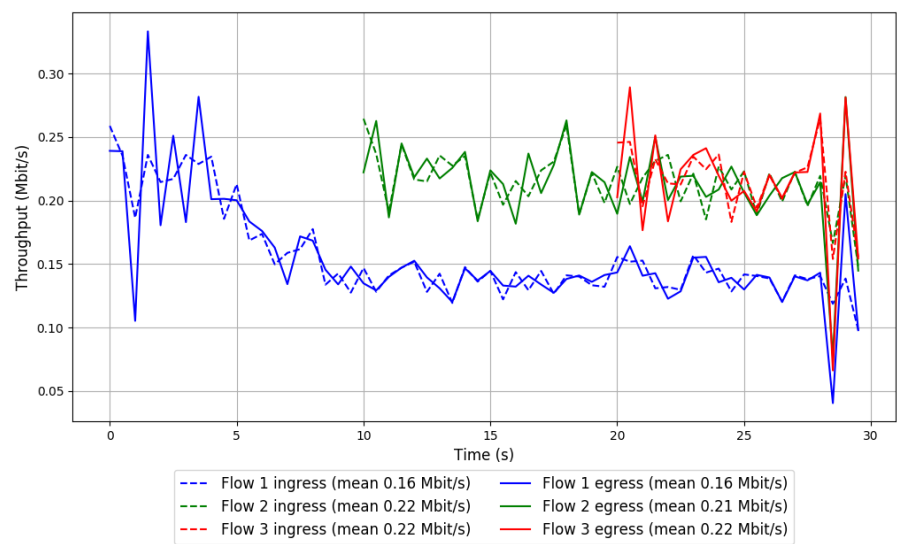


Run 2: Statistics of SCReAM

Start at: 2018-03-12 22:52:01
End at: 2018-03-12 22:52:31
Local clock offset: -0.053 ms
Remote clock offset: -6.439 ms

Below is generated by plot.py at 2018-03-13 00:44:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 78.100 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 89.167 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 69.020 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 71.076 ms
Loss rate: 1.09%

Run 2: Report of SReAM — Data Link

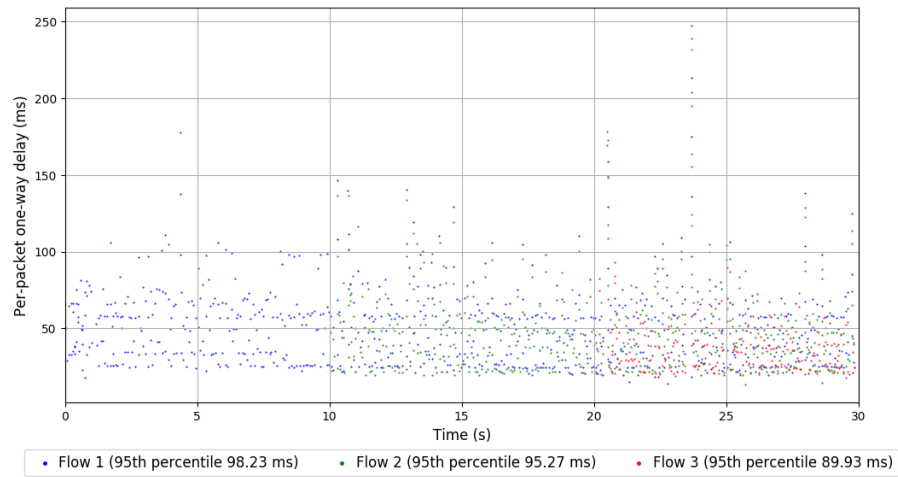
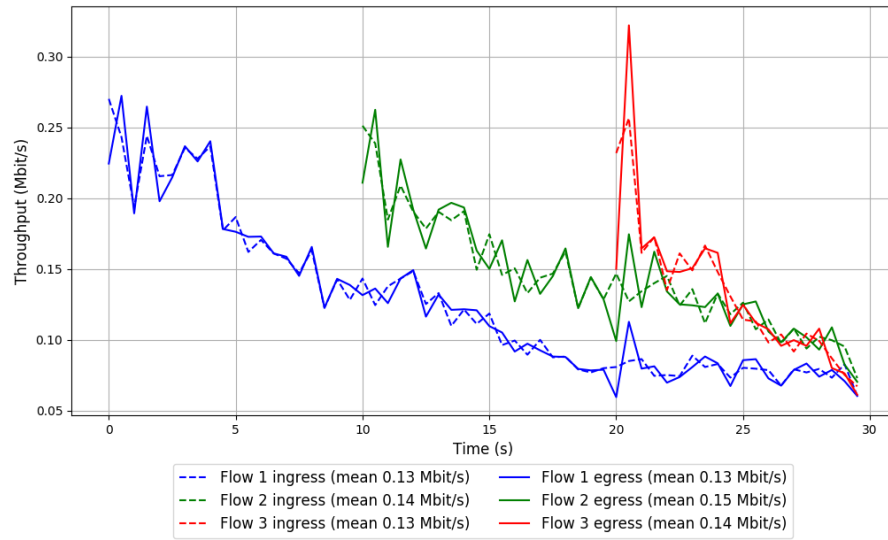


Run 3: Statistics of SCReAM

Start at: 2018-03-12 23:15:48
End at: 2018-03-12 23:16:18
Local clock offset: 0.495 ms
Remote clock offset: -4.519 ms

Below is generated by plot.py at 2018-03-13 00:44:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 97.963 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 98.231 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 95.273 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 89.932 ms
Loss rate: 0.44%

Run 3: Report of SReAM — Data Link

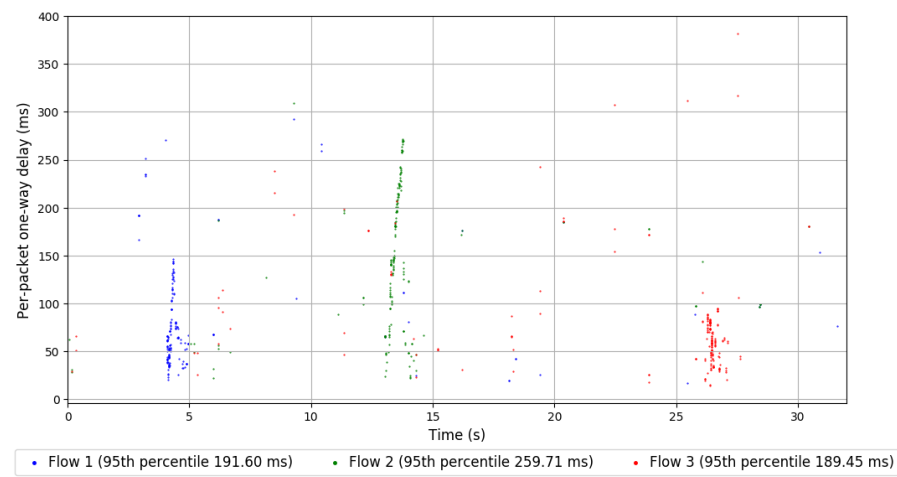
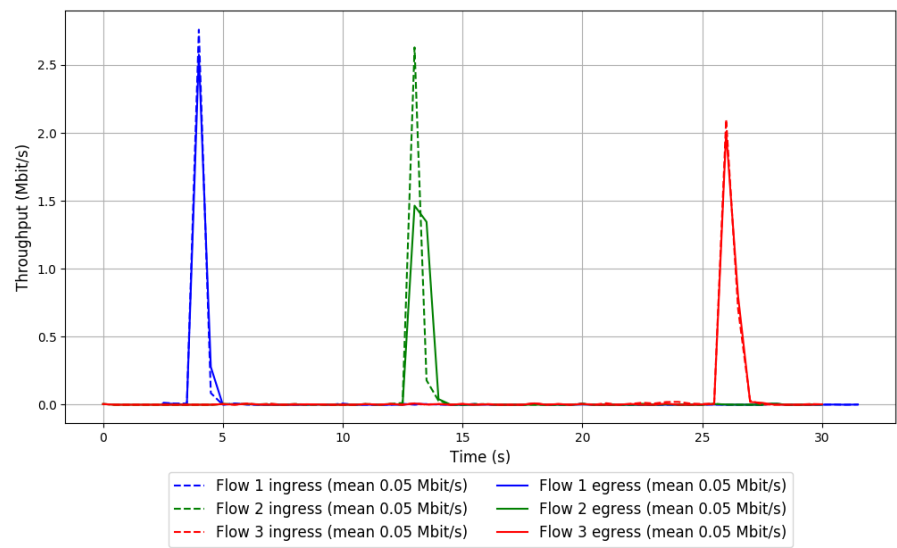


Run 1: Statistics of WebRTC media

Start at: 2018-03-12 22:33:31
End at: 2018-03-12 22:34:01
Local clock offset: -0.986 ms
Remote clock offset: -6.324 ms

Below is generated by plot.py at 2018-03-13 00:44:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 237.148 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 191.603 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 259.713 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 189.454 ms
Loss rate: 3.19%

Run 1: Report of WebRTC media — Data Link

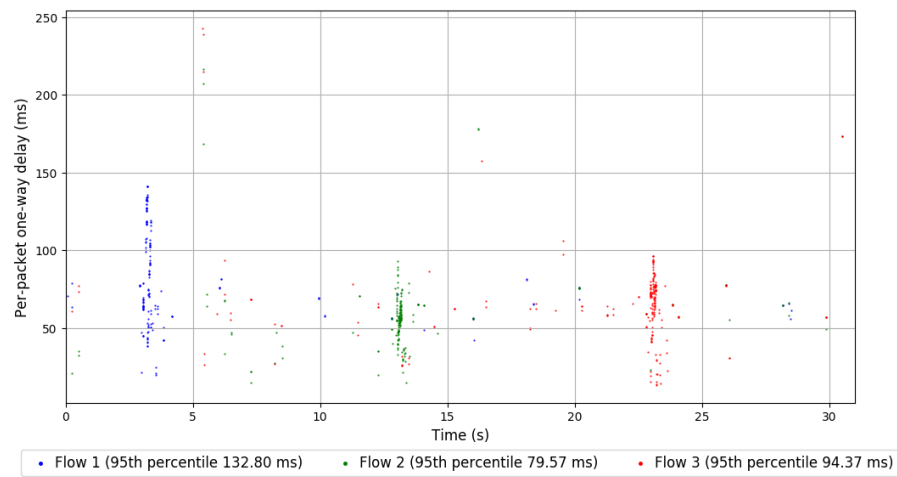
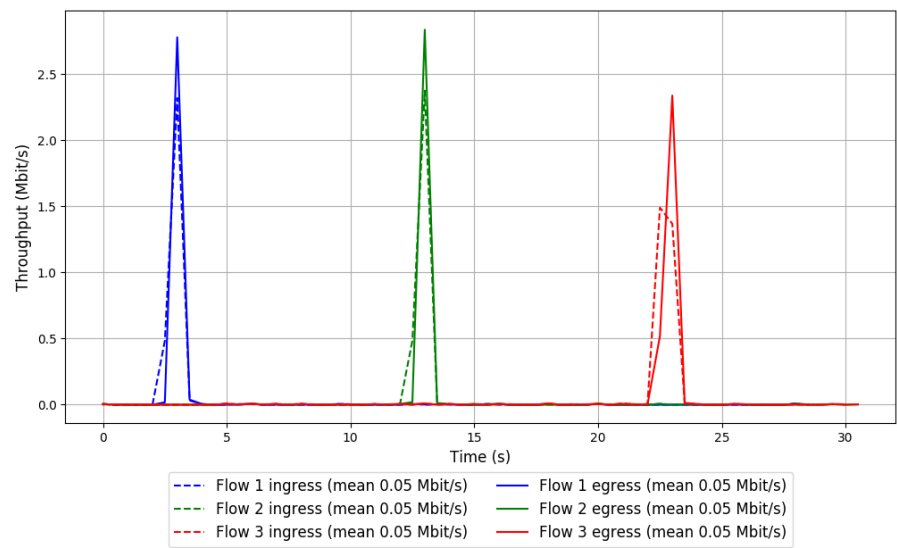


Run 2: Statistics of WebRTC media

Start at: 2018-03-12 22:57:18
End at: 2018-03-12 22:57:48
Local clock offset: 0.351 ms
Remote clock offset: -5.756 ms

Below is generated by plot.py at 2018-03-13 00:44:39
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 127.726 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.803 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 79.570 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 94.370 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

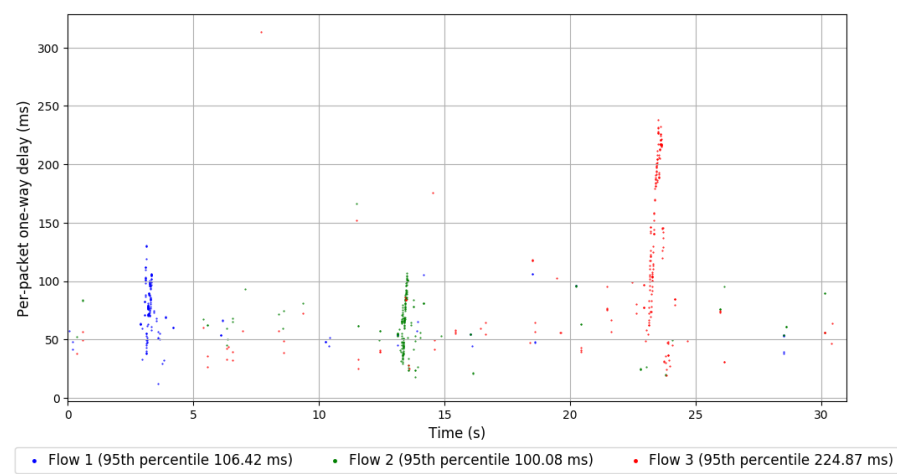
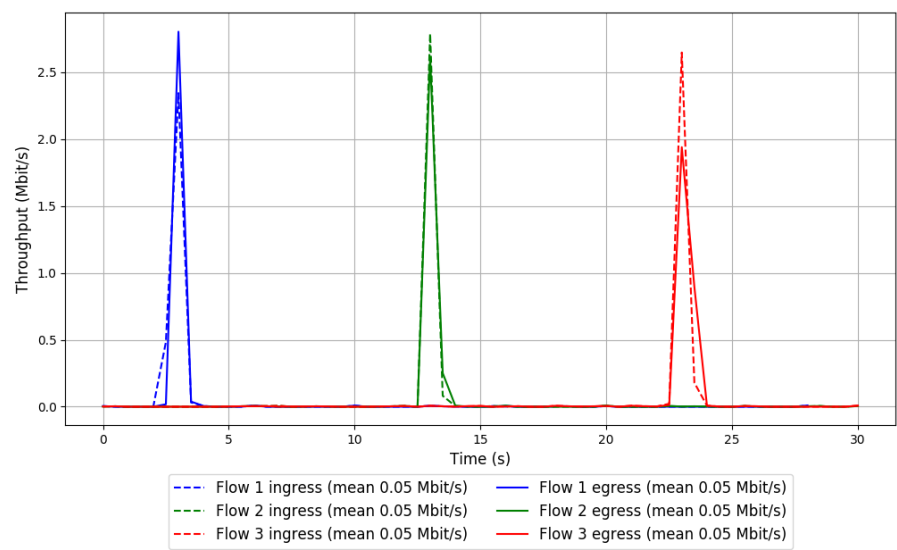


Run 3: Statistics of WebRTC media

Start at: 2018-03-12 23:21:05
End at: 2018-03-12 23:21:35
Local clock offset: 0.773 ms
Remote clock offset: -4.375 ms

Below is generated by plot.py at 2018-03-13 00:44:39
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 212.855 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 106.420 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 100.078 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 224.874 ms
Loss rate: 0.18%

Run 3: Report of WebRTC media — Data Link

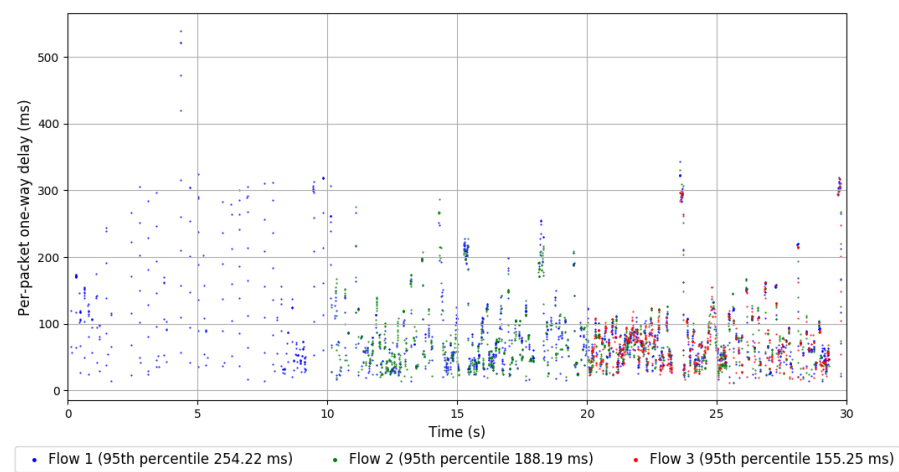
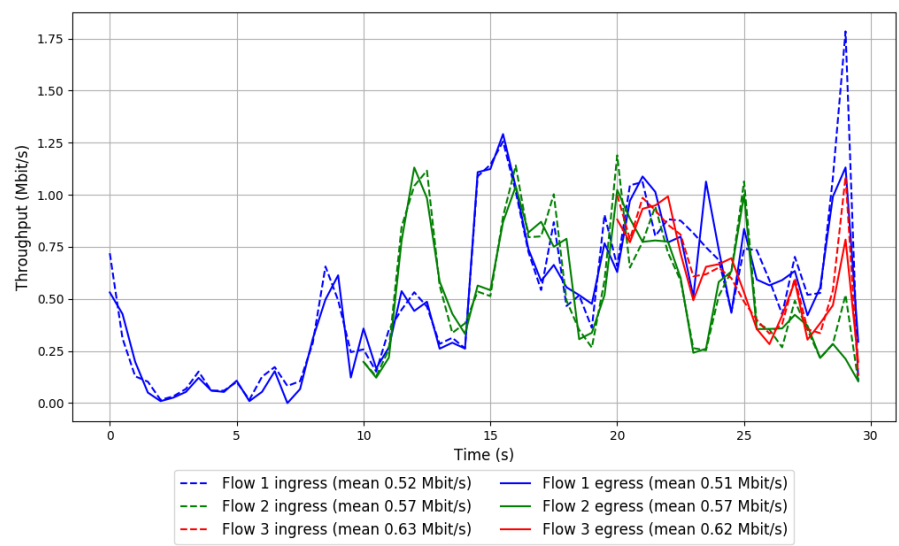


Run 1: Statistics of Sprout

Start at: 2018-03-12 22:32:12
End at: 2018-03-12 22:32:42
Local clock offset: -0.956 ms
Remote clock offset: -6.355 ms

Below is generated by plot.py at 2018-03-13 00:44:40
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 213.160 ms
Loss rate: 2.85%
-- Flow 1:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 254.216 ms
Loss rate: 3.48%
-- Flow 2:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 188.187 ms
Loss rate: 1.75%
-- Flow 3:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 155.252 ms
Loss rate: 3.32%

Run 1: Report of Sprout — Data Link

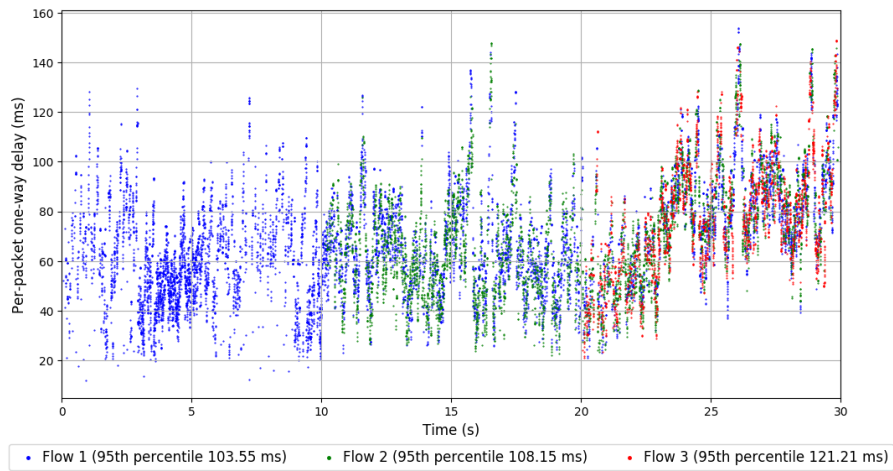
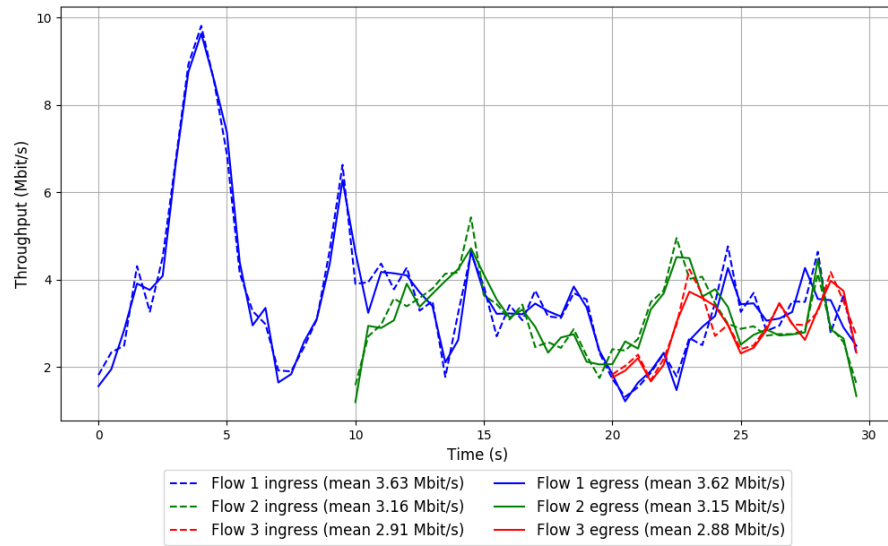


Run 2: Statistics of Sprout

Start at: 2018-03-12 22:55:59
End at: 2018-03-12 22:56:29
Local clock offset: 0.198 ms
Remote clock offset: -5.909 ms

```
# Below is generated by plot.py at 2018-03-13 00:44:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.65 Mbit/s
95th percentile per-packet one-way delay: 108.427 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 103.548 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 3.15 Mbit/s
95th percentile per-packet one-way delay: 108.147 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 121.211 ms
Loss rate: 1.90%
```

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-03-12 23:19:46

End at: 2018-03-12 23:20:16

Local clock offset: 0.565 ms

Remote clock offset: -4.37 ms

Below is generated by plot.py at 2018-03-13 00:44:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.47 Mbit/s

95th percentile per-packet one-way delay: 103.081 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 3.99 Mbit/s

95th percentile per-packet one-way delay: 98.004 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 2.73 Mbit/s

95th percentile per-packet one-way delay: 107.611 ms

Loss rate: 1.11%

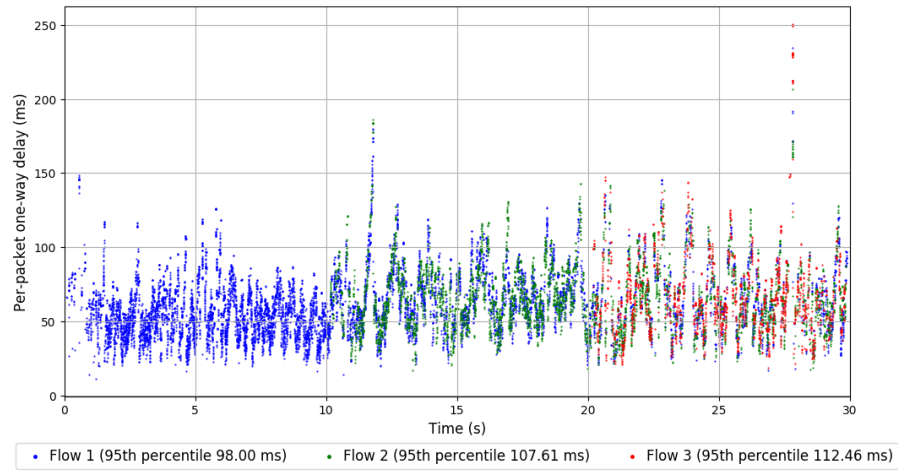
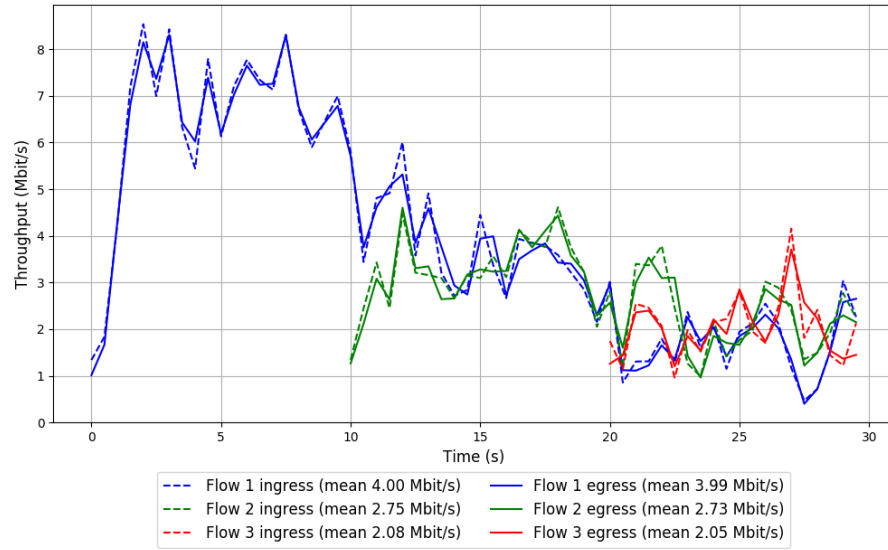
-- Flow 3:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 112.463 ms

Loss rate: 1.87%

Run 3: Report of Sprout — Data Link

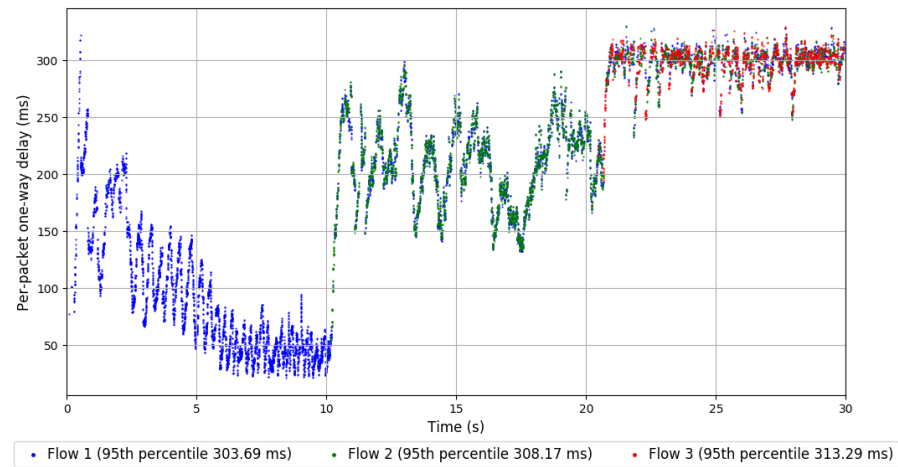
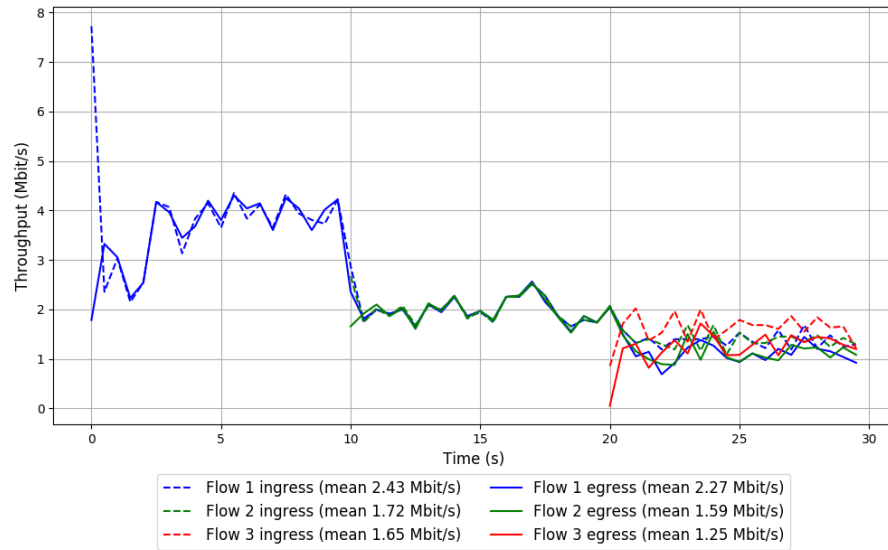


Run 1: Statistics of TaoVA-100x

Start at: 2018-03-12 22:42:46
End at: 2018-03-12 22:43:16
Local clock offset: -1.546 ms
Remote clock offset: -6.406 ms

Below is generated by plot.py at 2018-03-13 00:44:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 307.869 ms
Loss rate: 9.48%
-- Flow 1:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 303.688 ms
Loss rate: 6.75%
-- Flow 2:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 308.174 ms
Loss rate: 8.14%
-- Flow 3:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 313.290 ms
Loss rate: 24.61%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-03-12 23:06:34

End at: 2018-03-12 23:07:04

Local clock offset: 0.527 ms

Remote clock offset: -5.0 ms

Below is generated by plot.py at 2018-03-13 00:44:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.68 Mbit/s

95th percentile per-packet one-way delay: 234.186 ms

Loss rate: 2.61%

-- Flow 1:

Average throughput: 3.26 Mbit/s

95th percentile per-packet one-way delay: 216.362 ms

Loss rate: 1.89%

-- Flow 2:

Average throughput: 2.57 Mbit/s

95th percentile per-packet one-way delay: 237.996 ms

Loss rate: 1.24%

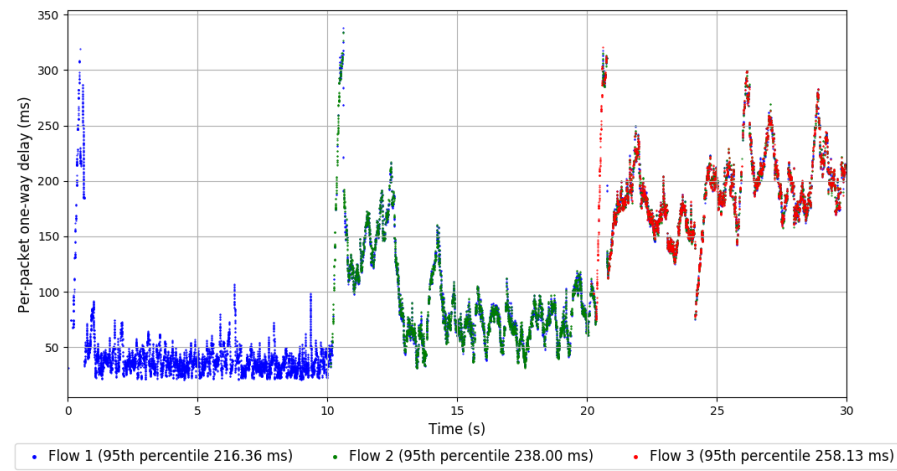
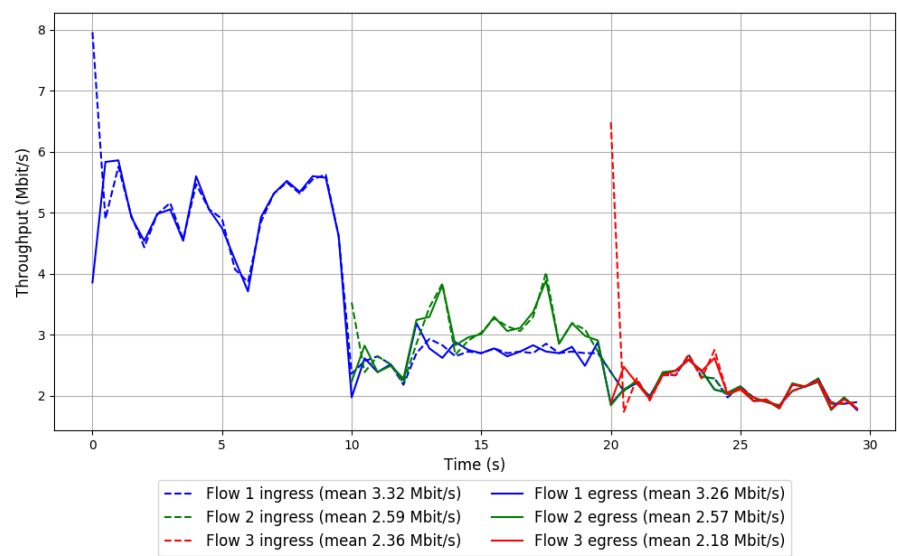
-- Flow 3:

Average throughput: 2.18 Mbit/s

95th percentile per-packet one-way delay: 258.133 ms

Loss rate: 8.68%

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

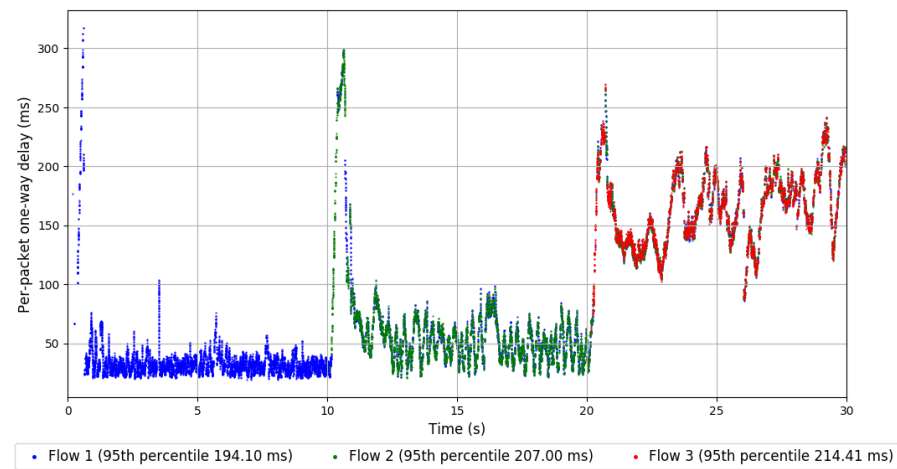
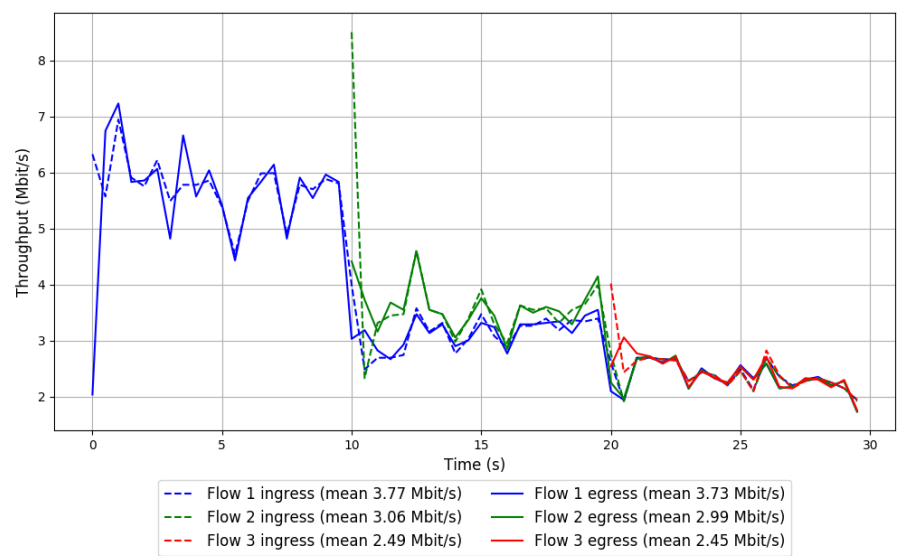


Run 3: Statistics of TaoVA-100x

Start at: 2018-03-12 23:30:20
End at: 2018-03-12 23:30:50
Local clock offset: 1.29 ms
Remote clock offset: -4.544 ms

Below is generated by plot.py at 2018-03-13 00:44:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.54 Mbit/s
95th percentile per-packet one-way delay: 202.677 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 194.102 ms
Loss rate: 1.56%
-- Flow 2:
Average throughput: 2.99 Mbit/s
95th percentile per-packet one-way delay: 207.002 ms
Loss rate: 2.58%
-- Flow 3:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 214.410 ms
Loss rate: 1.86%

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

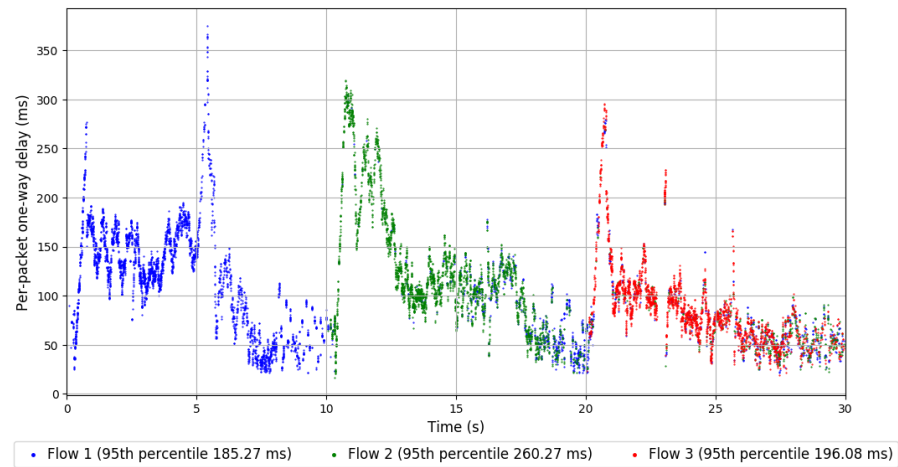
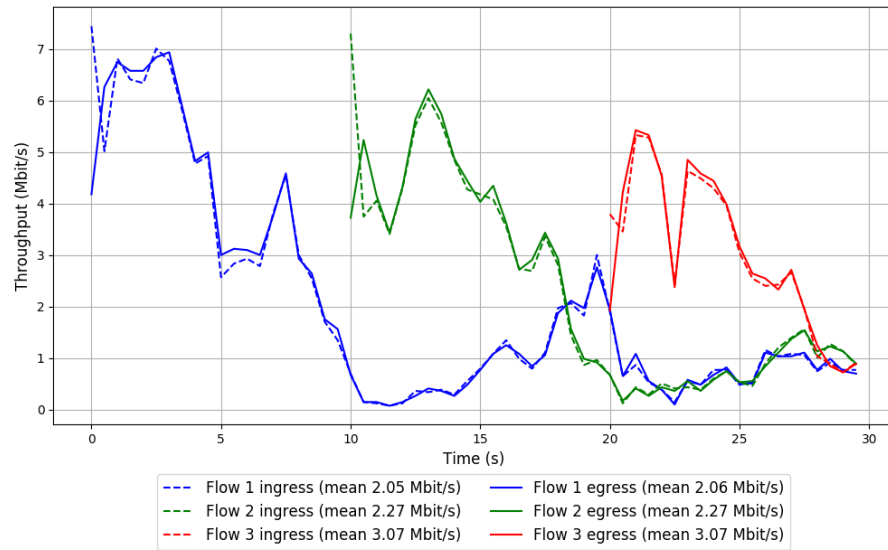


Run 1: Statistics of TCP Vegas

Start at: 2018-03-12 22:37:29
End at: 2018-03-12 22:37:59
Local clock offset: -1.123 ms
Remote clock offset: -6.426 ms

Below is generated by plot.py at 2018-03-13 00:44:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.58 Mbit/s
95th percentile per-packet one-way delay: 221.761 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 185.266 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 260.267 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 3.07 Mbit/s
95th percentile per-packet one-way delay: 196.081 ms
Loss rate: 0.20%

Run 1: Report of TCP Vegas — Data Link

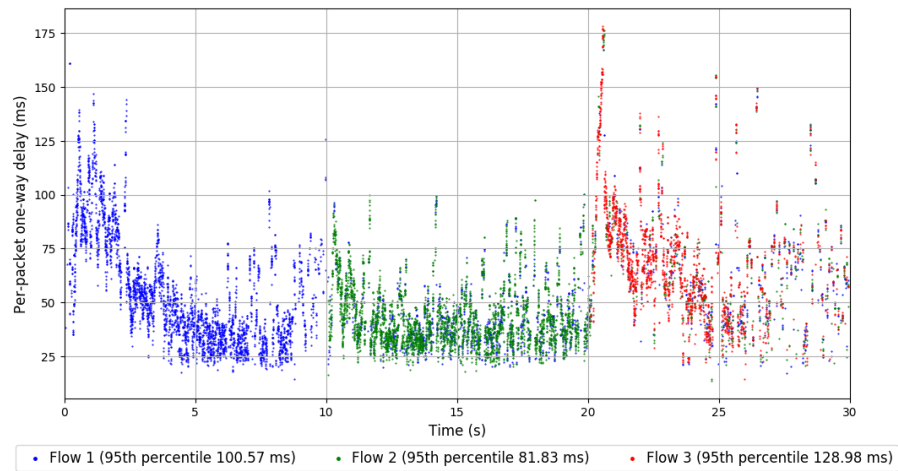
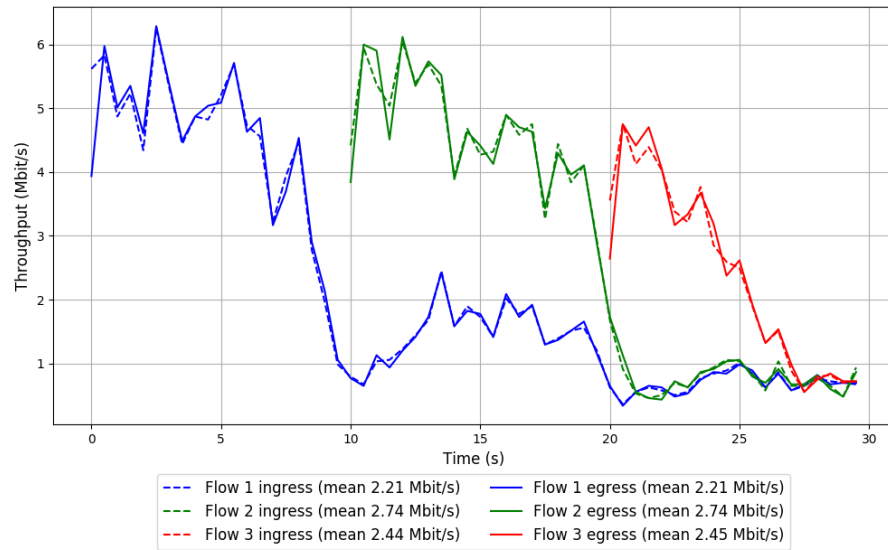


Run 2: Statistics of TCP Vegas

Start at: 2018-03-12 23:01:17
End at: 2018-03-12 23:01:47
Local clock offset: 0.481 ms
Remote clock offset: -5.386 ms

Below is generated by plot.py at 2018-03-13 00:44:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.84 Mbit/s
95th percentile per-packet one-way delay: 98.937 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 100.568 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 81.826 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 128.984 ms
Loss rate: 0.20%

Run 2: Report of TCP Vegas — Data Link

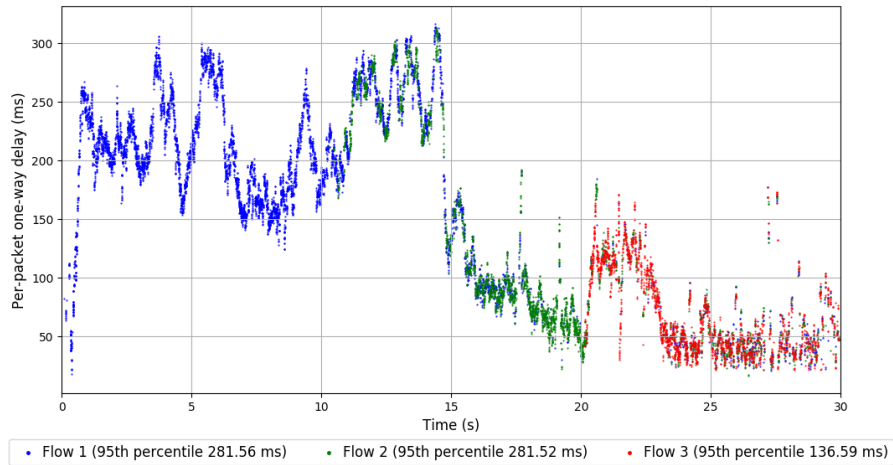
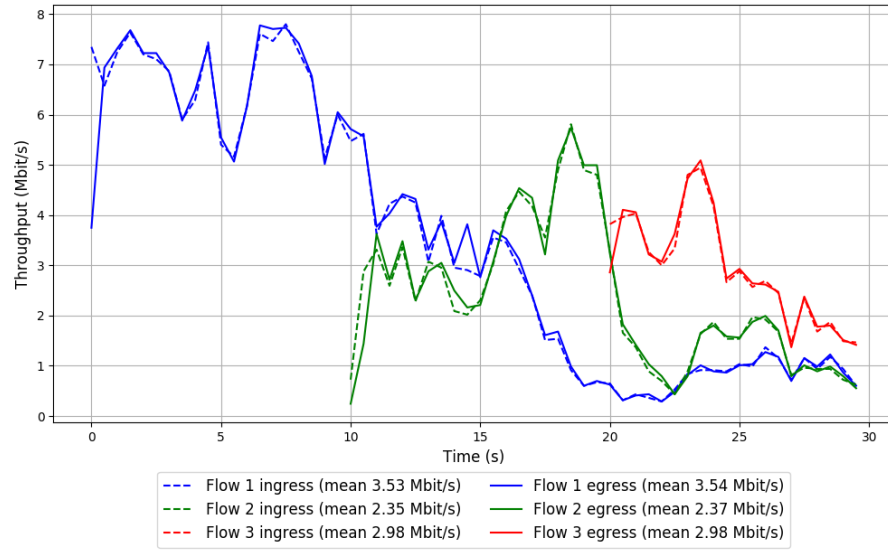


Run 3: Statistics of TCP Vegas

Start at: 2018-03-12 23:25:04
End at: 2018-03-12 23:25:34
Local clock offset: 1.107 ms
Remote clock offset: -4.263 ms

Below is generated by plot.py at 2018-03-13 00:44:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.08 Mbit/s
95th percentile per-packet one-way delay: 279.178 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 281.556 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 281.519 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 136.585 ms
Loss rate: 0.41%

Run 3: Report of TCP Vegas — Data Link

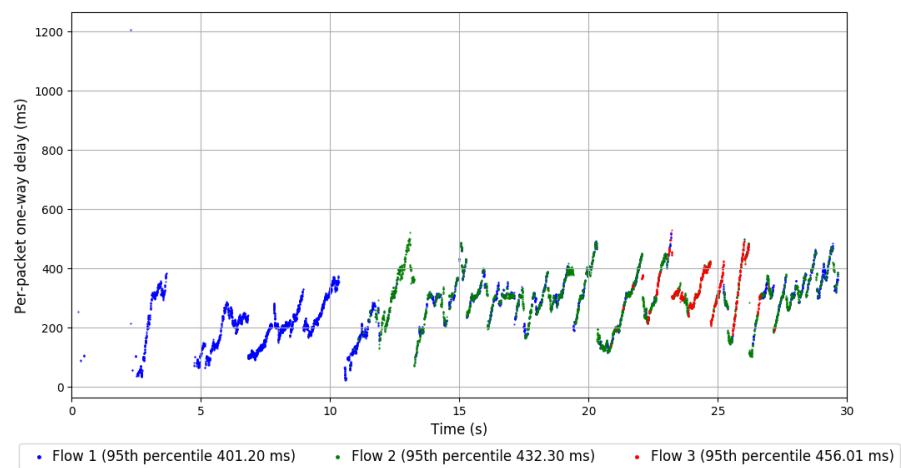
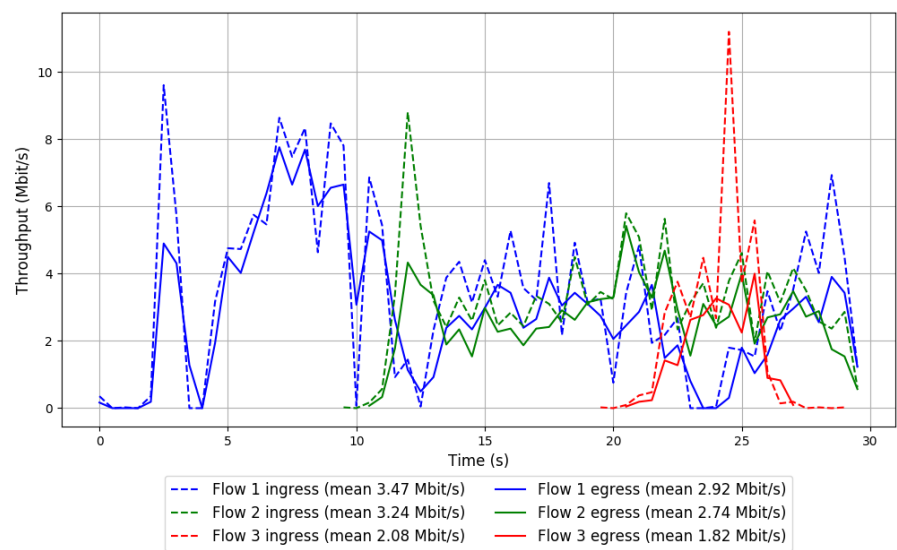


Run 1: Statistics of Verus

Start at: 2018-03-12 22:29:34
End at: 2018-03-12 22:30:04
Local clock offset: -0.787 ms
Remote clock offset: -6.452 ms

Below is generated by plot.py at 2018-03-13 00:44:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 423.339 ms
Loss rate: 20.50%
-- Flow 1:
Average throughput: 2.92 Mbit/s
95th percentile per-packet one-way delay: 401.203 ms
Loss rate: 16.71%
-- Flow 2:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 432.301 ms
Loss rate: 20.09%
-- Flow 3:
Average throughput: 1.82 Mbit/s
95th percentile per-packet one-way delay: 456.006 ms
Loss rate: 41.65%

Run 1: Report of Verus — Data Link

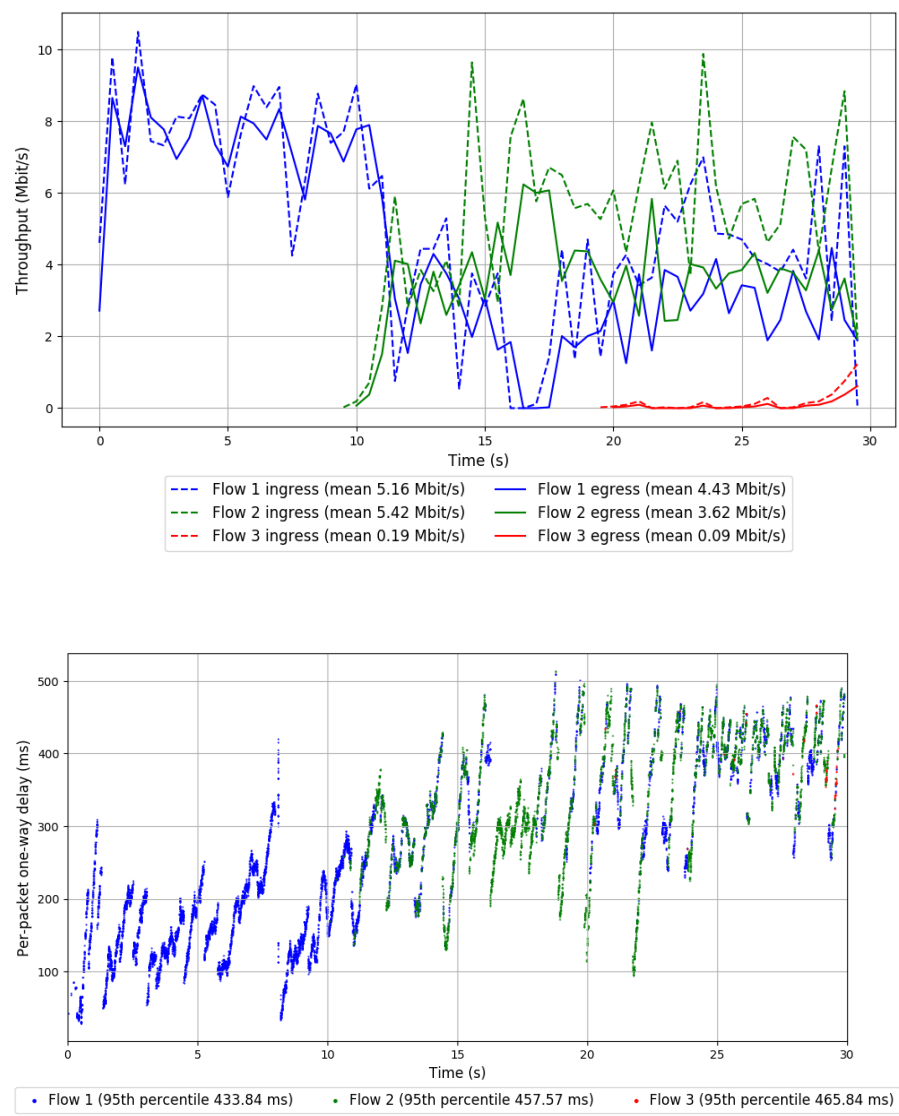


Run 2: Statistics of Verus

Start at: 2018-03-12 22:53:20
End at: 2018-03-12 22:53:50
Local clock offset: 0.003 ms
Remote clock offset: -6.359 ms

Below is generated by plot.py at 2018-03-13 00:45:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 447.562 ms
Loss rate: 22.61%
-- Flow 1:
Average throughput: 4.43 Mbit/s
95th percentile per-packet one-way delay: 433.840 ms
Loss rate: 14.37%
-- Flow 2:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 457.572 ms
Loss rate: 33.83%
-- Flow 3:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 465.838 ms
Loss rate: 52.83%

Run 2: Report of Verus — Data Link

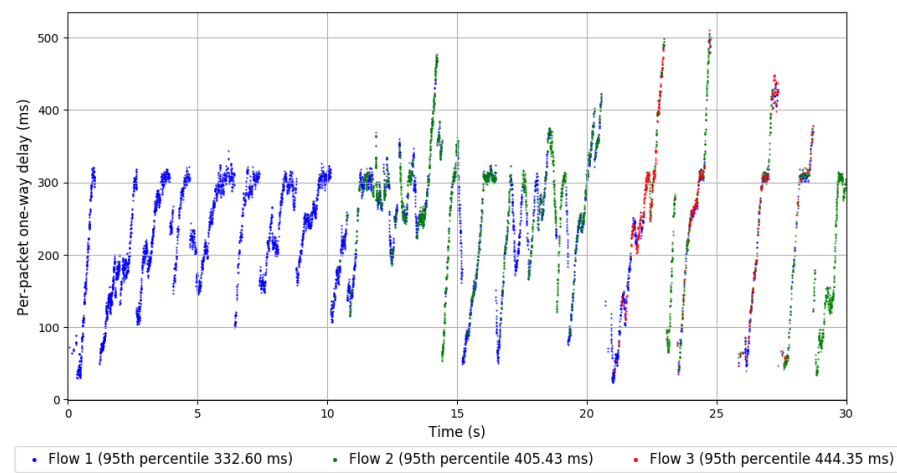
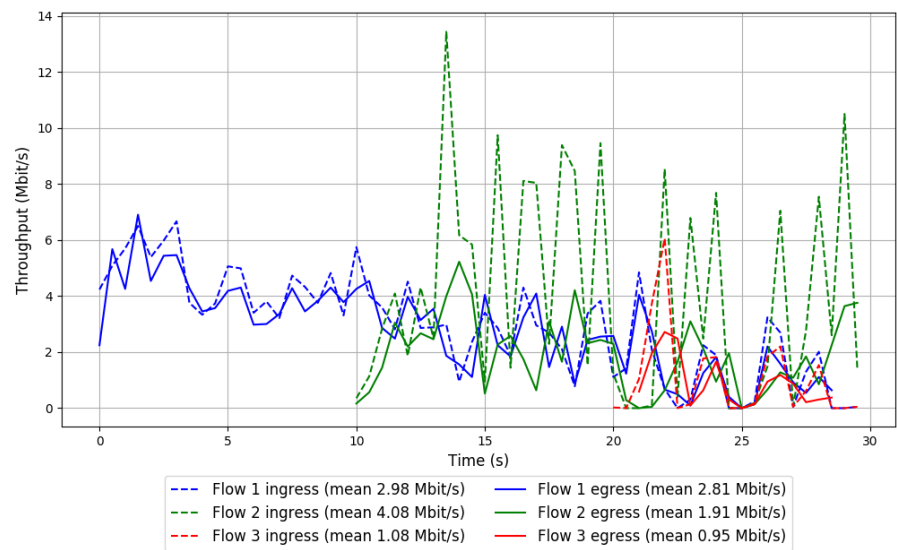


Run 3: Statistics of Verus

Start at: 2018-03-12 23:17:07
End at: 2018-03-12 23:17:37
Local clock offset: 0.507 ms
Remote clock offset: -4.534 ms

Below is generated by plot.py at 2018-03-13 00:45:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.20 Mbit/s
95th percentile per-packet one-way delay: 370.621 ms
Loss rate: 30.35%
-- Flow 1:
Average throughput: 2.81 Mbit/s
95th percentile per-packet one-way delay: 332.600 ms
Loss rate: 9.09%
-- Flow 2:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 405.433 ms
Loss rate: 53.37%
-- Flow 3:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 444.351 ms
Loss rate: 31.12%

Run 3: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-03-12 22:22:59

End at: 2018-03-12 22:23:29

Local clock offset: -0.827 ms

Remote clock offset: -6.46 ms

Below is generated by plot.py at 2018-03-13 00:45:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.87 Mbit/s

95th percentile per-packet one-way delay: 276.862 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 1.85 Mbit/s

95th percentile per-packet one-way delay: 253.188 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 289.034 ms

Loss rate: 1.73%

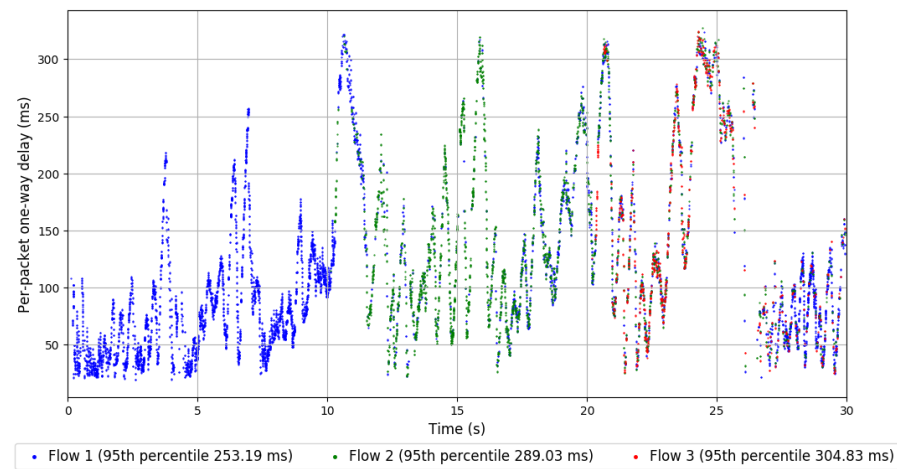
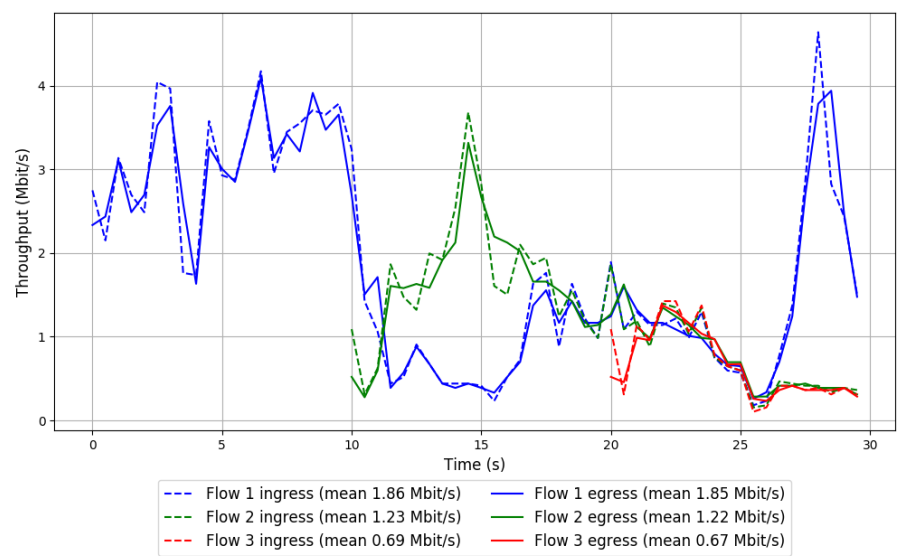
-- Flow 3:

Average throughput: 0.67 Mbit/s

95th percentile per-packet one-way delay: 304.832 ms

Loss rate: 3.81%

Run 1: Report of Copa — Data Link

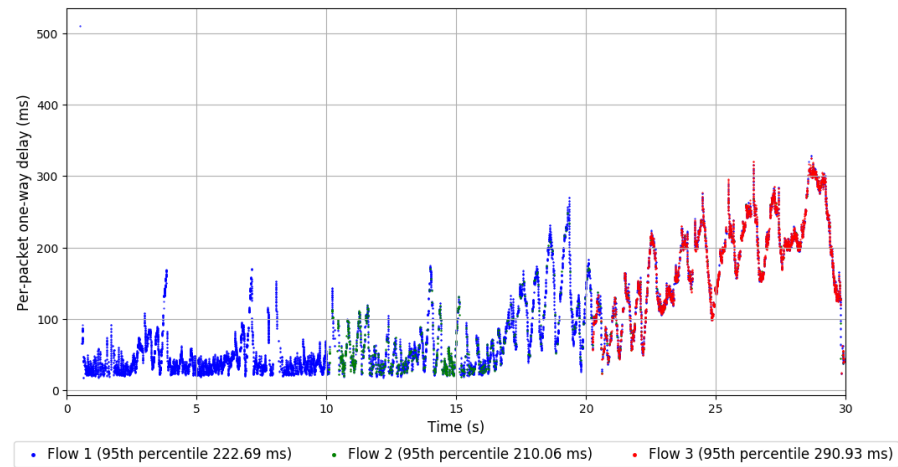
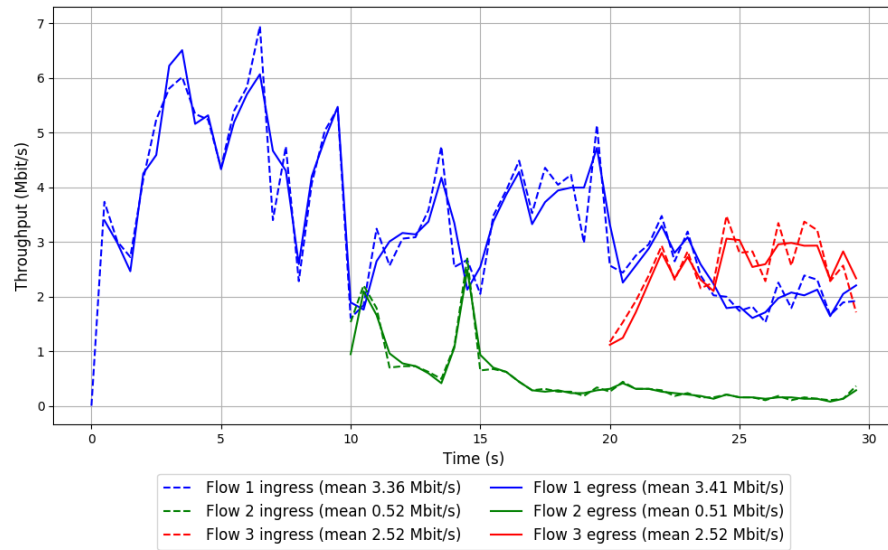


Run 2: Statistics of Copa

Start at: 2018-03-12 22:46:44
End at: 2018-03-12 22:47:14
Local clock offset: -0.886 ms
Remote clock offset: -6.394 ms

Below is generated by plot.py at 2018-03-13 00:45:04
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.59 Mbit/s
95th percentile per-packet one-way delay: 249.477 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 222.693 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 210.056 ms
Loss rate: 3.08%
-- Flow 3:
Average throughput: 2.52 Mbit/s
95th percentile per-packet one-way delay: 290.929 ms
Loss rate: 1.65%

Run 2: Report of Copa — Data Link

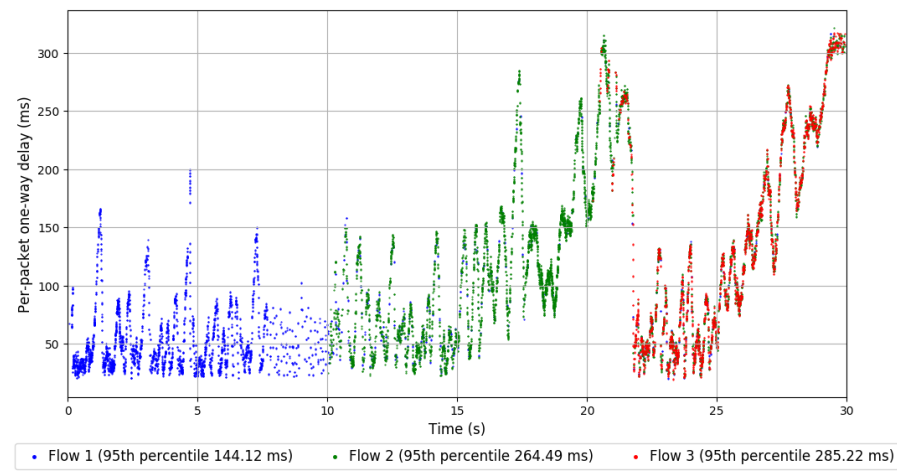
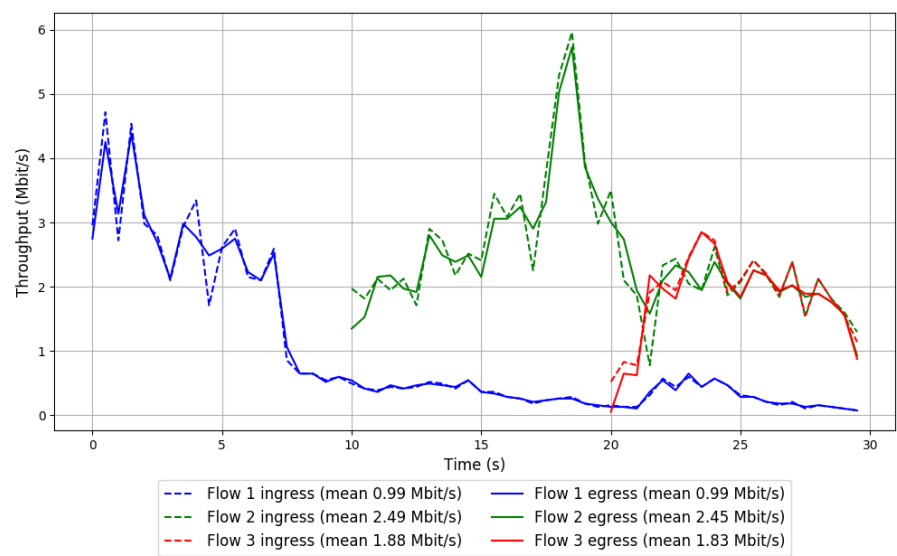


Run 3: Statistics of Copa

Start at: 2018-03-12 23:10:32
End at: 2018-03-12 23:11:02
Local clock offset: 0.563 ms
Remote clock offset: -4.71 ms

Below is generated by plot.py at 2018-03-13 00:45:04
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 258.379 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 144.121 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 264.489 ms
Loss rate: 1.90%
-- Flow 3:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 285.224 ms
Loss rate: 4.34%

Run 3: Report of Copa — Data Link

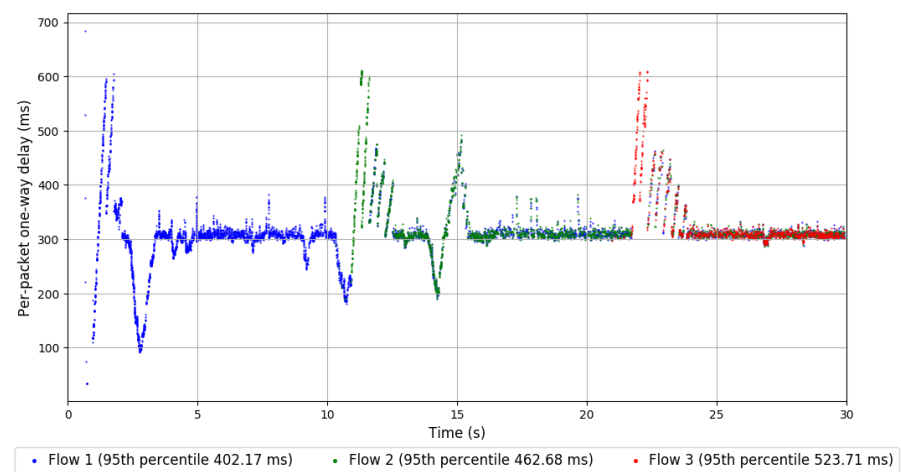
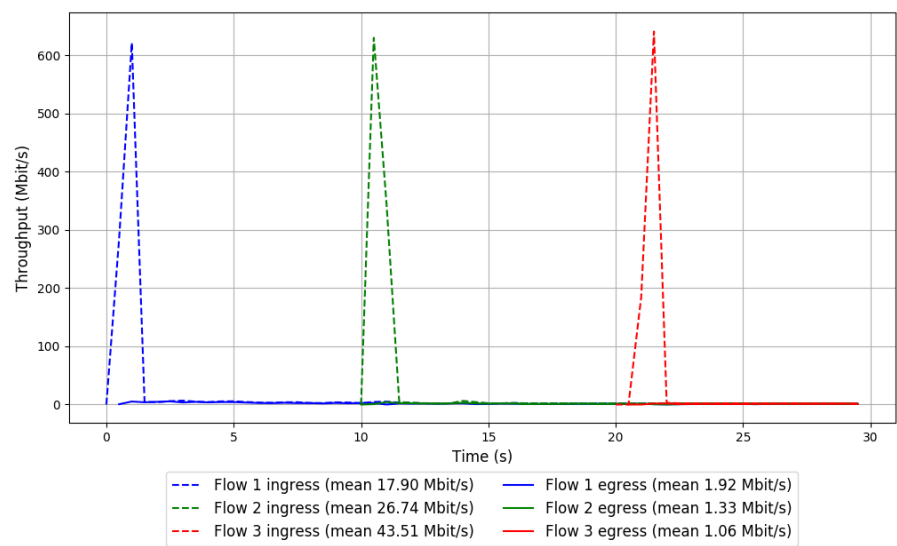


Run 1: Statistics of FillP

Start at: 2018-03-12 22:36:09
End at: 2018-03-12 22:36:39
Local clock offset: -1.046 ms
Remote clock offset: -6.432 ms

Below is generated by plot.py at 2018-03-13 00:45:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.14 Mbit/s
95th percentile per-packet one-way delay: 443.329 ms
Loss rate: 93.87%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 402.169 ms
Loss rate: 89.51%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 462.676 ms
Loss rate: 95.09%
-- Flow 3:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 523.711 ms
Loss rate: 97.79%

Run 1: Report of FillP — Data Link

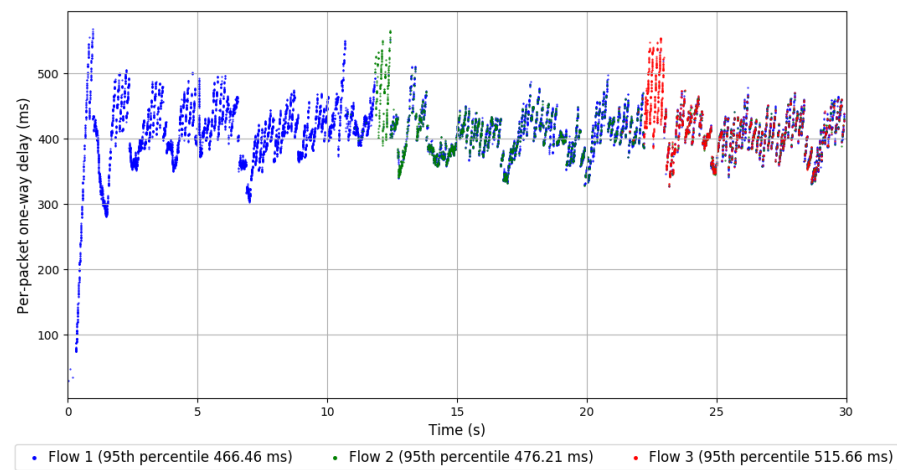
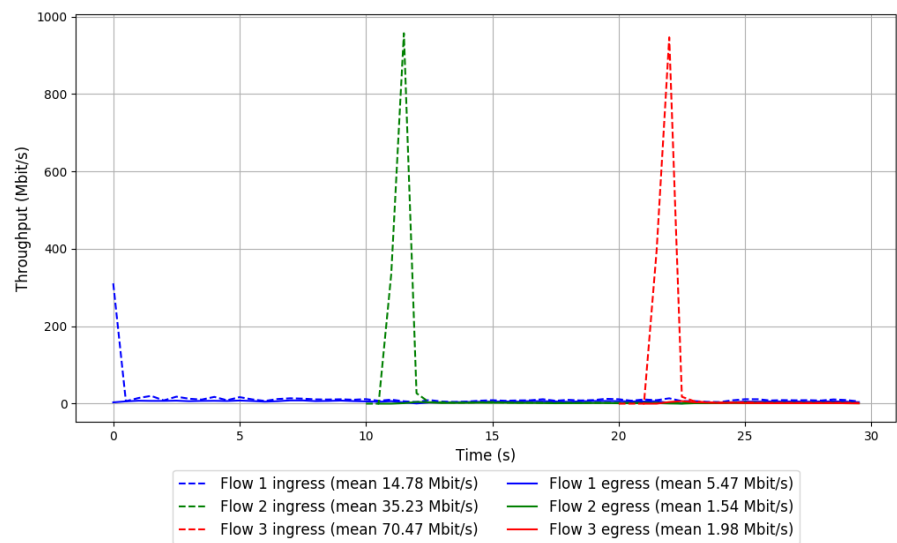


Run 2: Statistics of FillP

Start at: 2018-03-12 22:59:57
End at: 2018-03-12 23:00:27
Local clock offset: 0.433 ms
Remote clock offset: -5.494 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 7.03 Mbit/s
95th percentile per-packet one-way delay: 471.775 ms
Loss rate: 88.60%
-- Flow 1:
Average throughput: 5.47 Mbit/s
95th percentile per-packet one-way delay: 466.456 ms
Loss rate: 63.08%
-- Flow 2:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 476.210 ms
Loss rate: 95.80%
-- Flow 3:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 515.662 ms
Loss rate: 97.54%

Run 2: Report of FillP — Data Link

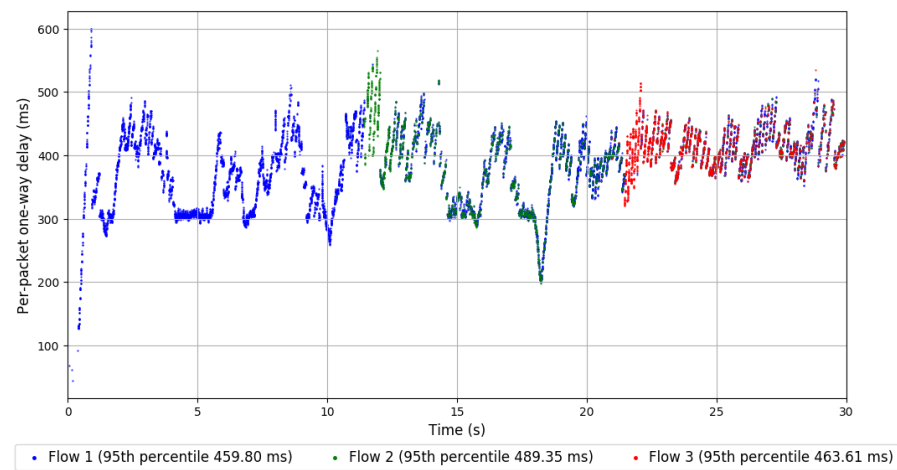
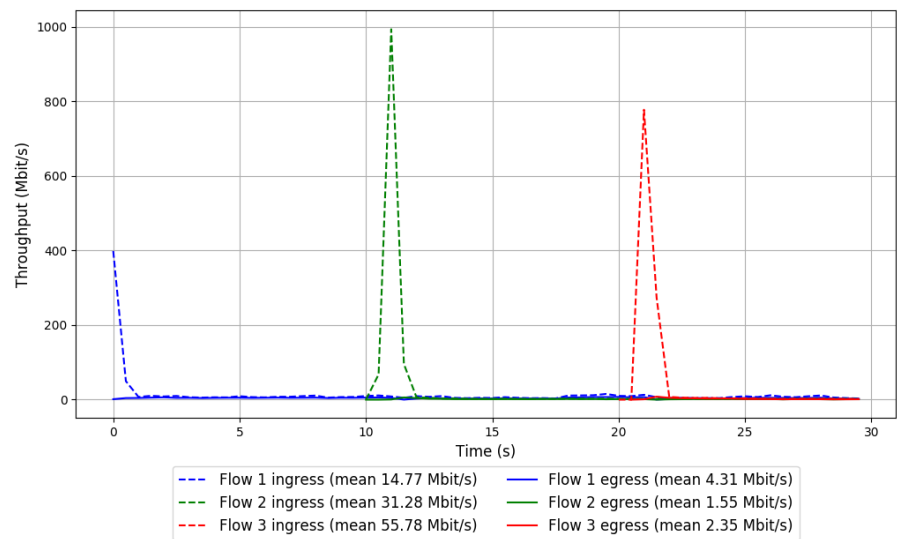


Run 3: Statistics of FillP

Start at: 2018-03-12 23:23:43
End at: 2018-03-12 23:24:13
Local clock offset: 0.977 ms
Remote clock offset: -4.243 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.06 Mbit/s
95th percentile per-packet one-way delay: 463.446 ms
Loss rate: 88.82%
-- Flow 1:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 459.795 ms
Loss rate: 70.94%
-- Flow 2:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 489.353 ms
Loss rate: 95.13%
-- Flow 3:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 463.612 ms
Loss rate: 96.02%

Run 3: Report of FillP — Data Link

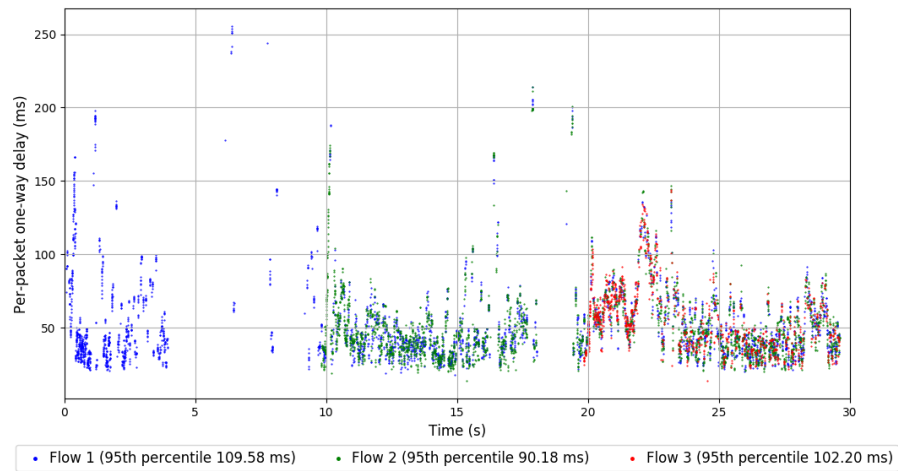
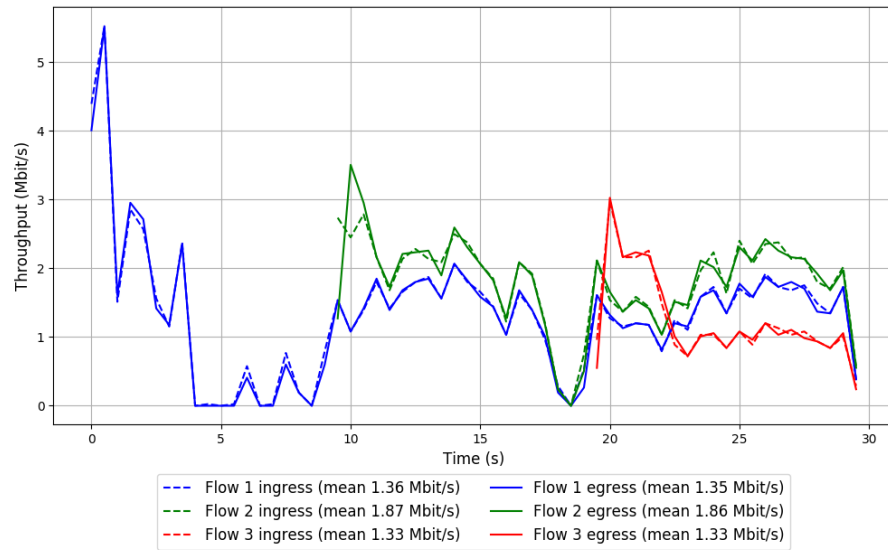


Run 1: Statistics of Indigo-1-32

Start at: 2018-03-12 22:25:37
End at: 2018-03-12 22:26:07
Local clock offset: -0.74 ms
Remote clock offset: -6.394 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.03 Mbit/s
95th percentile per-packet one-way delay: 100.917 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 109.578 ms
Loss rate: 1.31%
-- Flow 2:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 90.177 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 102.202 ms
Loss rate: 0.46%

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

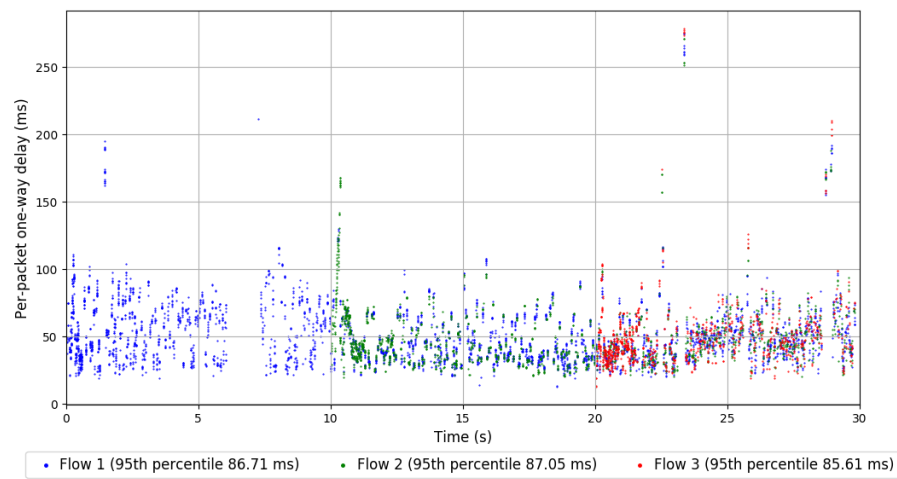
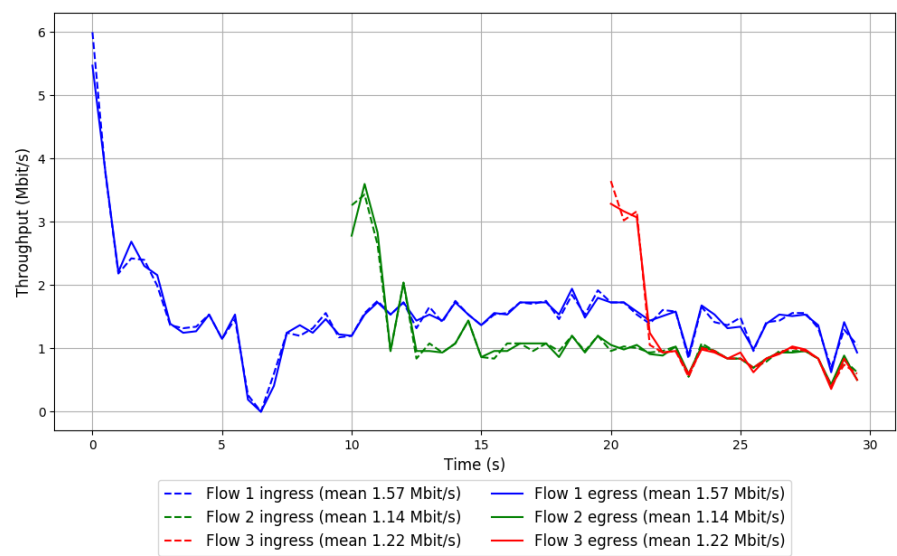


Run 2: Statistics of Indigo-1-32

Start at: 2018-03-12 22:49:22
End at: 2018-03-12 22:49:52
Local clock offset: -0.529 ms
Remote clock offset: -6.349 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.72 Mbit/s
95th percentile per-packet one-way delay: 86.820 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 86.711 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 87.045 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 85.611 ms
Loss rate: 0.50%

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

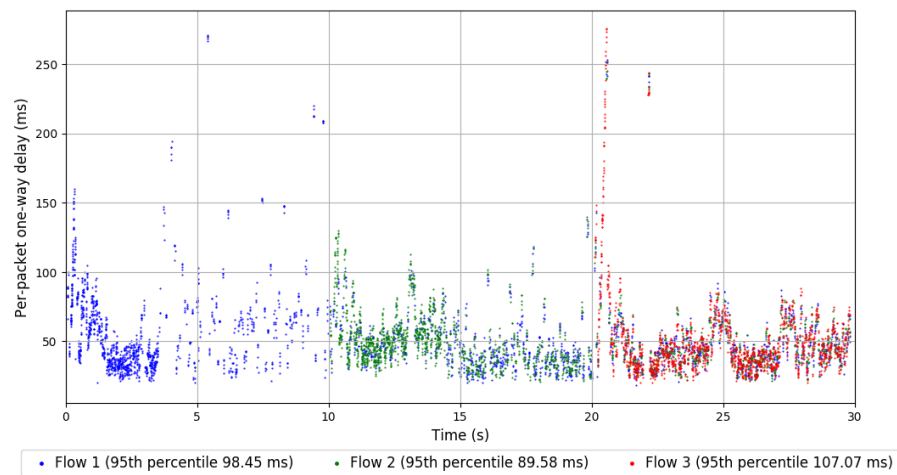
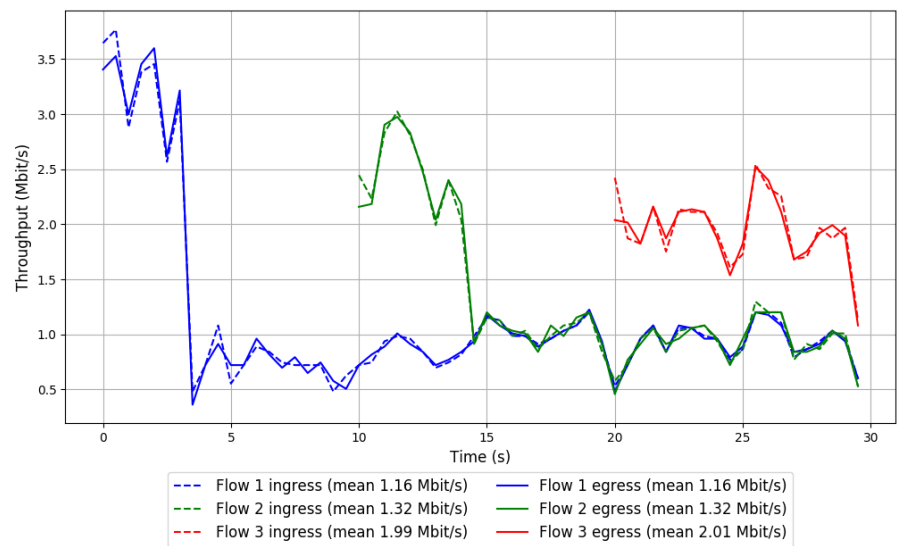


Run 3: Statistics of Indigo-1-32

Start at: 2018-03-12 23:13:10
End at: 2018-03-12 23:13:40
Local clock offset: 0.518 ms
Remote clock offset: -4.623 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.69 Mbit/s
95th percentile per-packet one-way delay: 95.757 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 98.447 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 89.583 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 107.066 ms
Loss rate: 0.61%

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

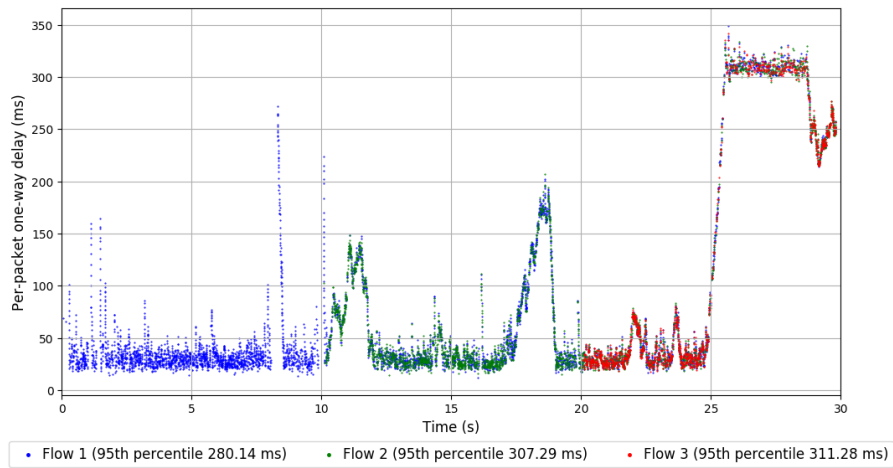
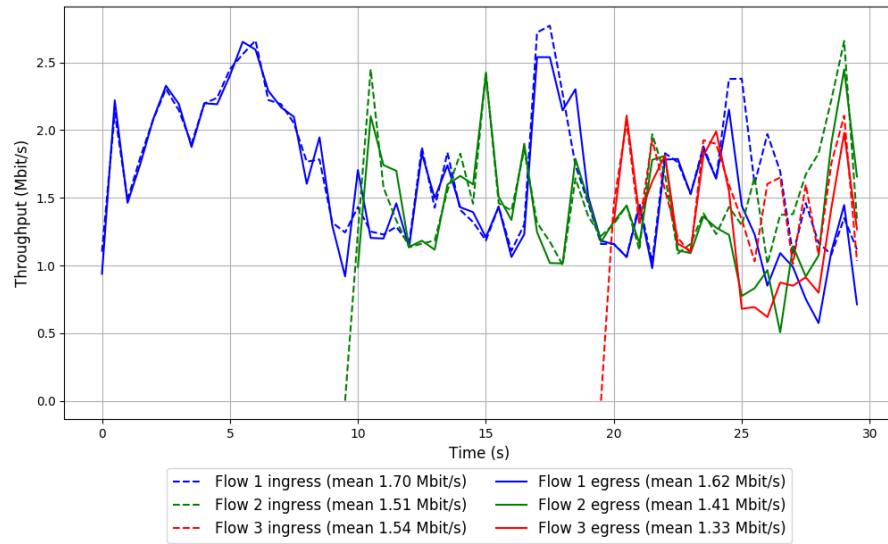


Run 1: Statistics of Vivace-latency

Start at: 2018-03-12 22:26:56
End at: 2018-03-12 22:27:26
Local clock offset: -0.831 ms
Remote clock offset: -6.469 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.99 Mbit/s
95th percentile per-packet one-way delay: 306.704 ms
Loss rate: 7.23%
-- Flow 1:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 280.138 ms
Loss rate: 5.02%
-- Flow 2:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 307.289 ms
Loss rate: 7.51%
-- Flow 3:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 311.279 ms
Loss rate: 14.13%

Run 1: Report of Vivace-latency — Data Link

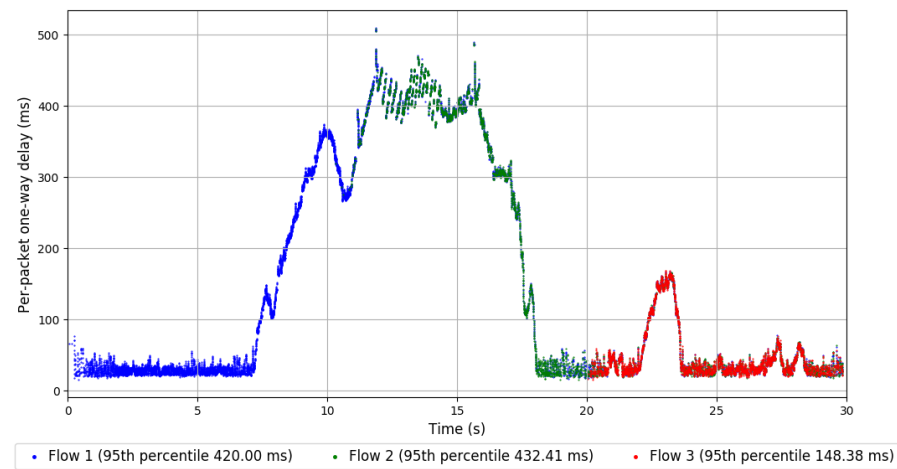
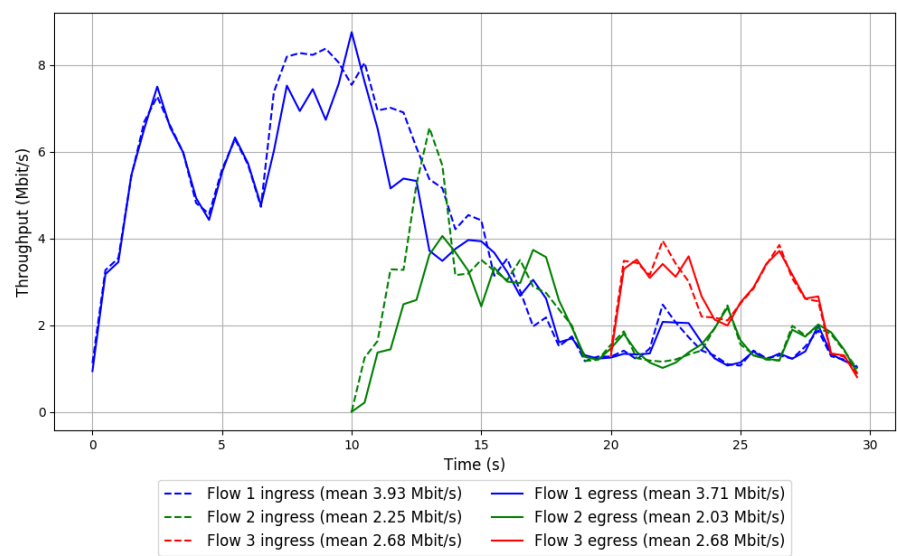


Run 2: Statistics of Vivace-latency

Start at: 2018-03-12 22:50:41
End at: 2018-03-12 22:51:11
Local clock offset: -0.285 ms
Remote clock offset: -6.443 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.92 Mbit/s
95th percentile per-packet one-way delay: 420.783 ms
Loss rate: 6.35%
-- Flow 1:
Average throughput: 3.71 Mbit/s
95th percentile per-packet one-way delay: 419.998 ms
Loss rate: 5.75%
-- Flow 2:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 432.410 ms
Loss rate: 11.53%
-- Flow 3:
Average throughput: 2.68 Mbit/s
95th percentile per-packet one-way delay: 148.378 ms
Loss rate: 0.27%

Run 2: Report of Vivace-latency — Data Link

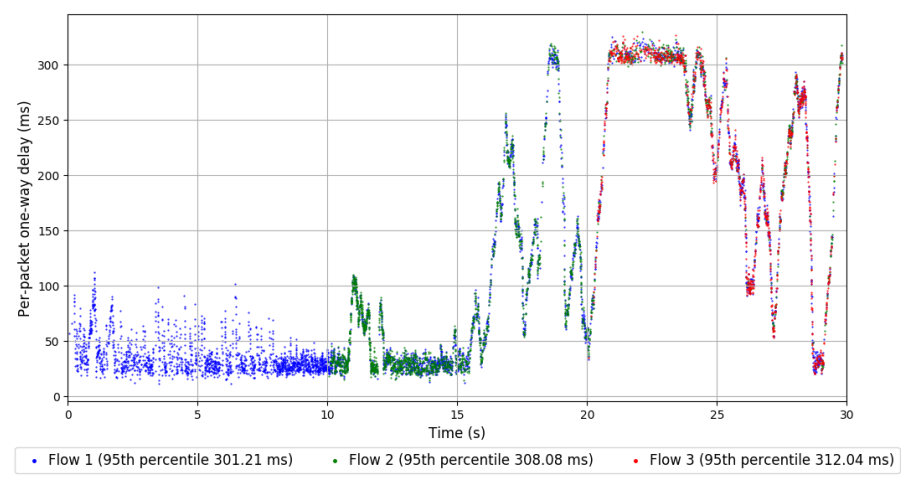
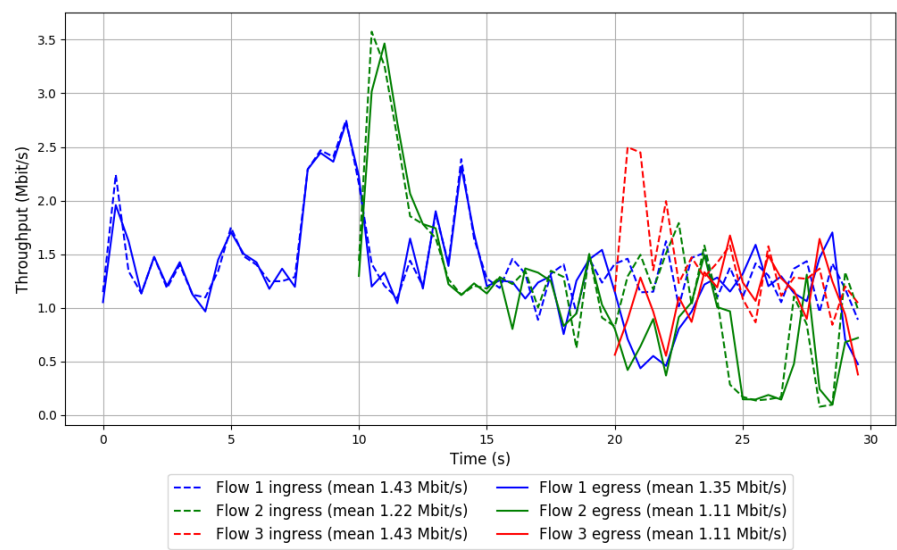


Run 3: Statistics of Vivace-latency

Start at: 2018-03-12 23:14:29
End at: 2018-03-12 23:14:59
Local clock offset: 0.401 ms
Remote clock offset: -4.636 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 307.440 ms
Loss rate: 9.88%
-- Flow 1:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 301.208 ms
Loss rate: 5.82%
-- Flow 2:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 308.083 ms
Loss rate: 9.71%
-- Flow 3:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 312.037 ms
Loss rate: 22.54%

Run 3: Report of Vivace-latency — Data Link

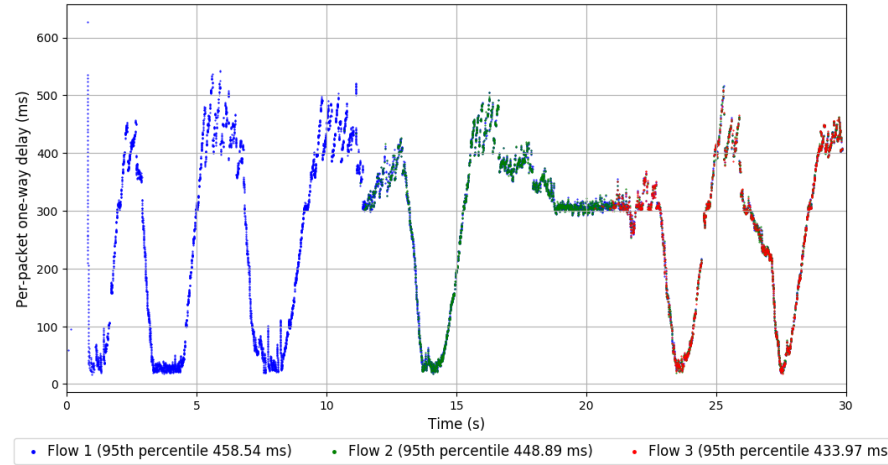
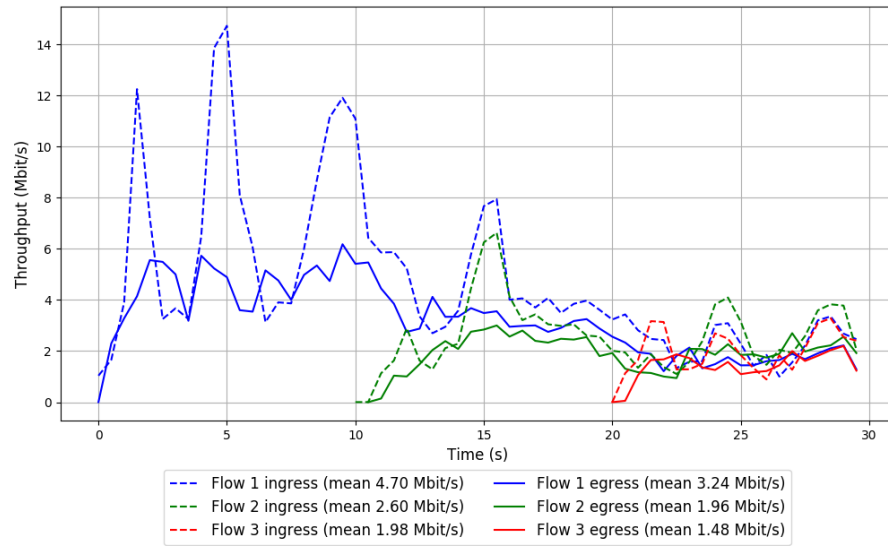


Run 1: Statistics of Vivace-loss

Start at: 2018-03-12 22:44:05
End at: 2018-03-12 22:44:35
Local clock offset: -1.662 ms
Remote clock offset: -6.439 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.97 Mbit/s
95th percentile per-packet one-way delay: 454.154 ms
Loss rate: 29.94%
-- Flow 1:
Average throughput: 3.24 Mbit/s
95th percentile per-packet one-way delay: 458.539 ms
Loss rate: 31.13%
-- Flow 2:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 448.893 ms
Loss rate: 27.43%
-- Flow 3:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 433.973 ms
Loss rate: 27.98%

Run 1: Report of Vivace-loss — Data Link

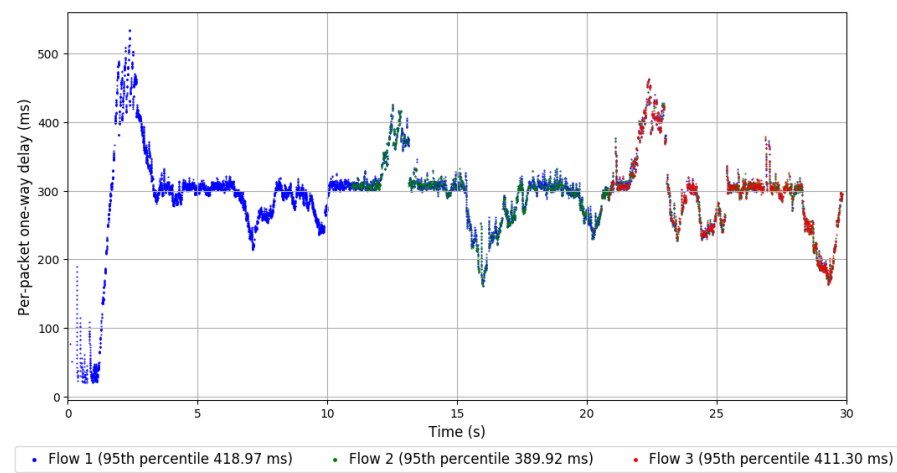
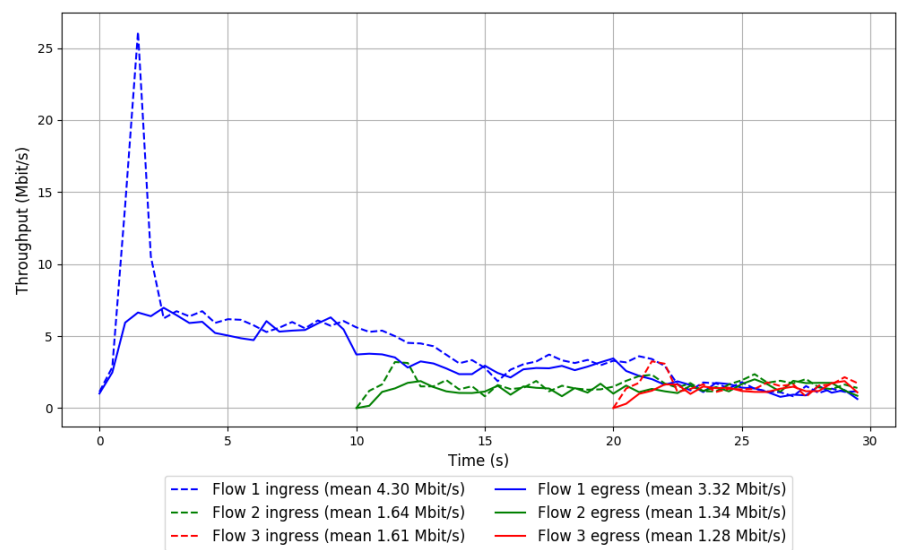


Run 2: Statistics of Vivace-loss

Start at: 2018-03-12 23:07:54
End at: 2018-03-12 23:08:24
Local clock offset: 0.455 ms
Remote clock offset: -4.949 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.61 Mbit/s
95th percentile per-packet one-way delay: 412.035 ms
Loss rate: 22.42%
-- Flow 1:
Average throughput: 3.32 Mbit/s
95th percentile per-packet one-way delay: 418.971 ms
Loss rate: 23.13%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 389.918 ms
Loss rate: 19.56%
-- Flow 3:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 411.295 ms
Loss rate: 22.51%

Run 2: Report of Vivace-loss — Data Link

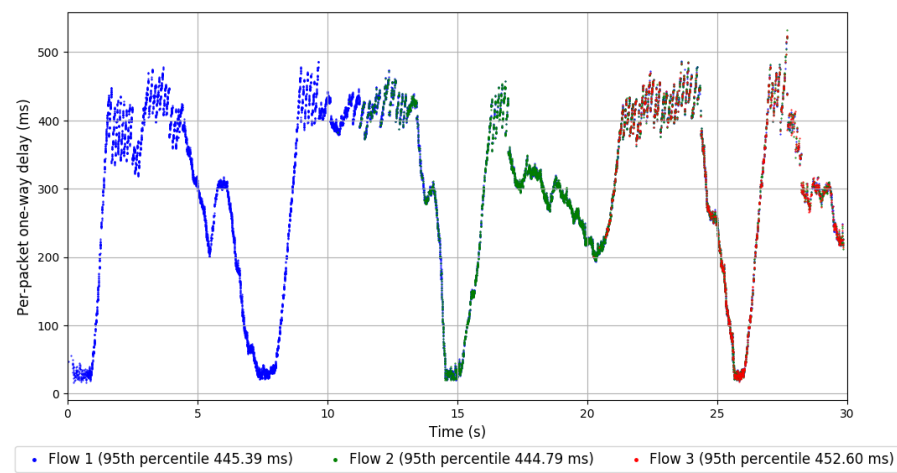
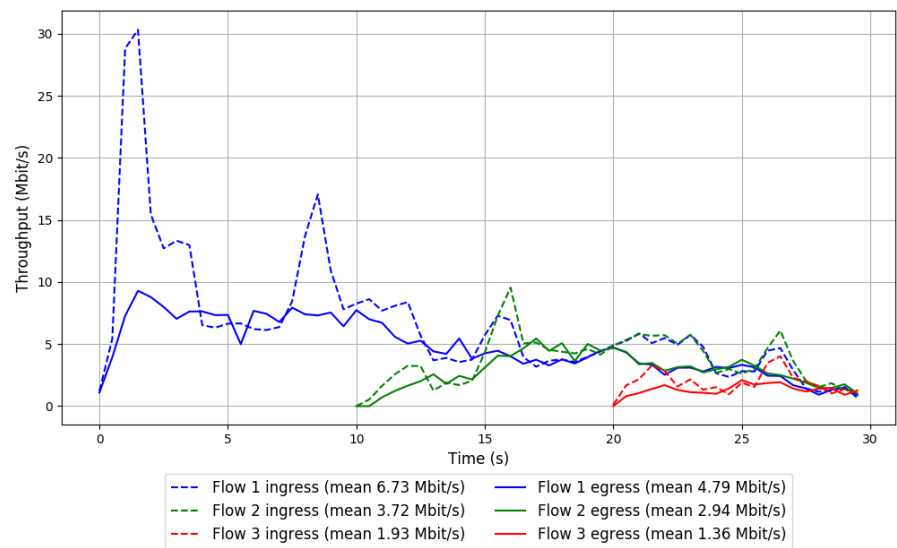


Run 3: Statistics of Vivace-loss

Start at: 2018-03-12 23:31:40
End at: 2018-03-12 23:32:10
Local clock offset: 1.229 ms
Remote clock offset: -4.646 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 7.15 Mbit/s
95th percentile per-packet one-way delay: 446.038 ms
Loss rate: 27.44%
-- Flow 1:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 445.391 ms
Loss rate: 28.93%
-- Flow 2:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 444.790 ms
Loss rate: 22.49%
-- Flow 3:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 452.600 ms
Loss rate: 31.00%

Run 3: Report of Vivace-loss — Data Link

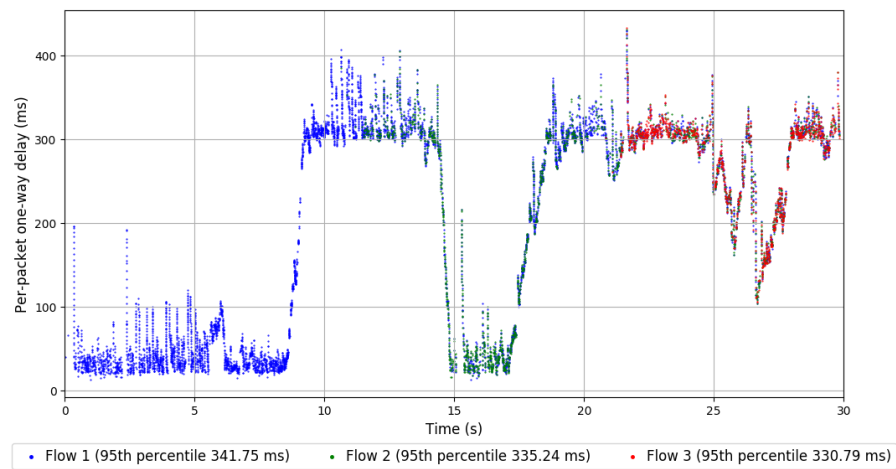
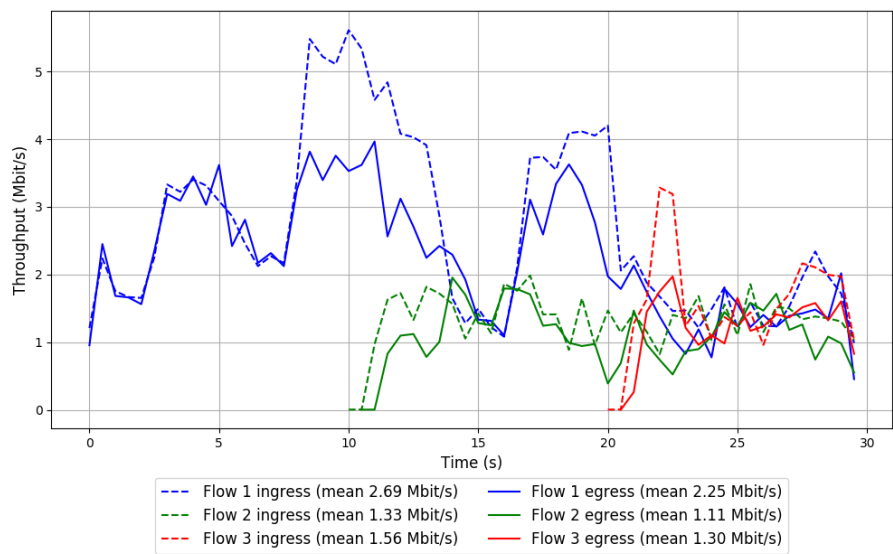


Run 1: Statistics of Vivace-LTE

Start at: 2018-03-12 22:40:07
End at: 2018-03-12 22:40:37
Local clock offset: -1.286 ms
Remote clock offset: -6.351 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 338.774 ms
Loss rate: 18.10%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 341.748 ms
Loss rate: 16.56%
-- Flow 2:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 335.237 ms
Loss rate: 19.40%
-- Flow 3:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 330.793 ms
Loss rate: 23.88%

Run 1: Report of Vivace-LTE — Data Link

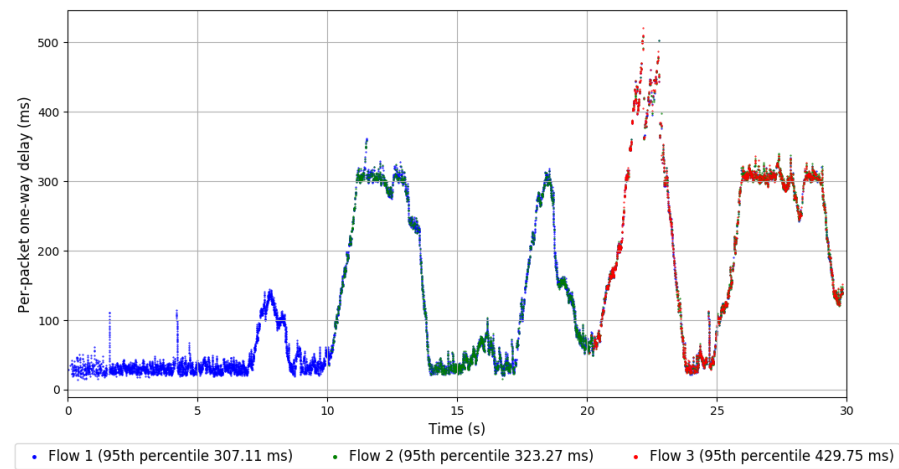
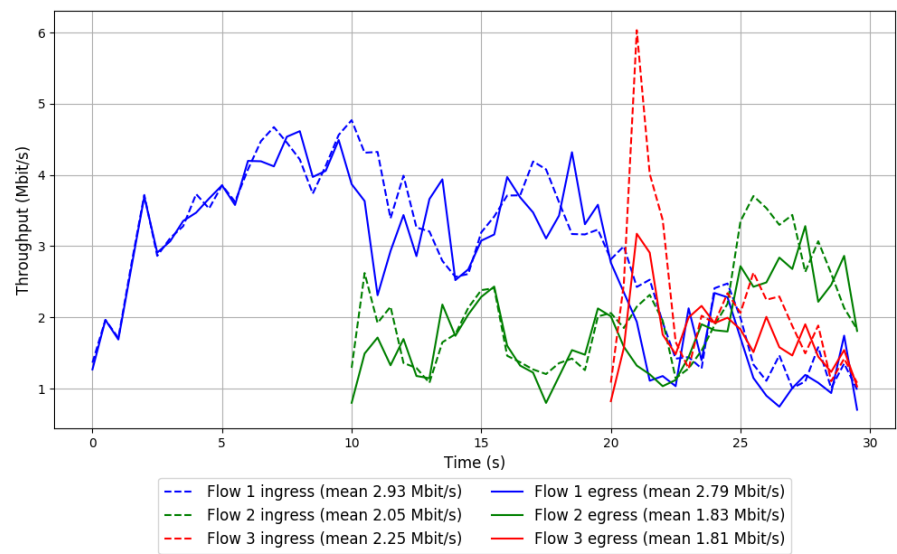


Run 2: Statistics of Vivace-LTE

Start at: 2018-03-12 23:03:56
End at: 2018-03-12 23:04:26
Local clock offset: 0.521 ms
Remote clock offset: -5.165 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.59 Mbit/s
95th percentile per-packet one-way delay: 318.809 ms
Loss rate: 9.03%
-- Flow 1:
Average throughput: 2.79 Mbit/s
95th percentile per-packet one-way delay: 307.112 ms
Loss rate: 5.22%
-- Flow 2:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 323.272 ms
Loss rate: 11.14%
-- Flow 3:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 429.746 ms
Loss rate: 20.18%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-03-12 23:27:42
End at: 2018-03-12 23:28:12
Local clock offset: 1.098 ms
Remote clock offset: -4.302 ms

Below is generated by plot.py at 2018-03-13 00:45:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.98 Mbit/s
95th percentile per-packet one-way delay: 390.037 ms
Loss rate: 4.42%
-- Flow 1:
Average throughput: 3.49 Mbit/s
95th percentile per-packet one-way delay: 361.792 ms
Loss rate: 3.00%
-- Flow 2:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 393.777 ms
Loss rate: 5.13%
-- Flow 3:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 414.059 ms
Loss rate: 10.13%

Run 3: Report of Vivace-LTE — Data Link

