

Pantheon Report

Generated at 2018-01-18 13:33:29 (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).

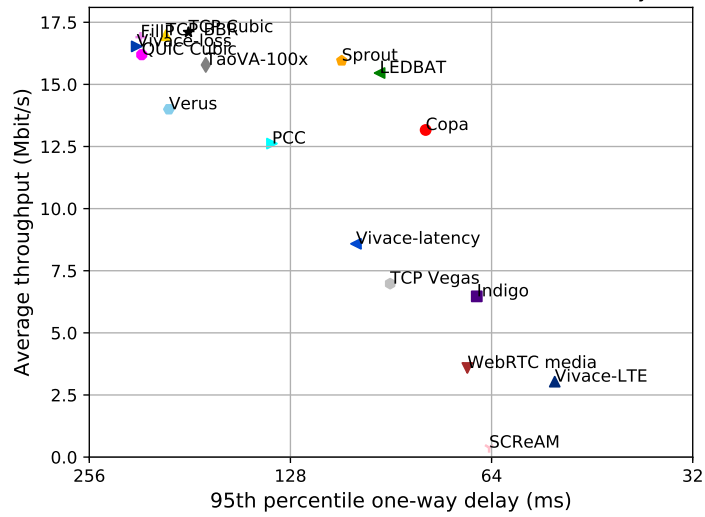
Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo_fast**).

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

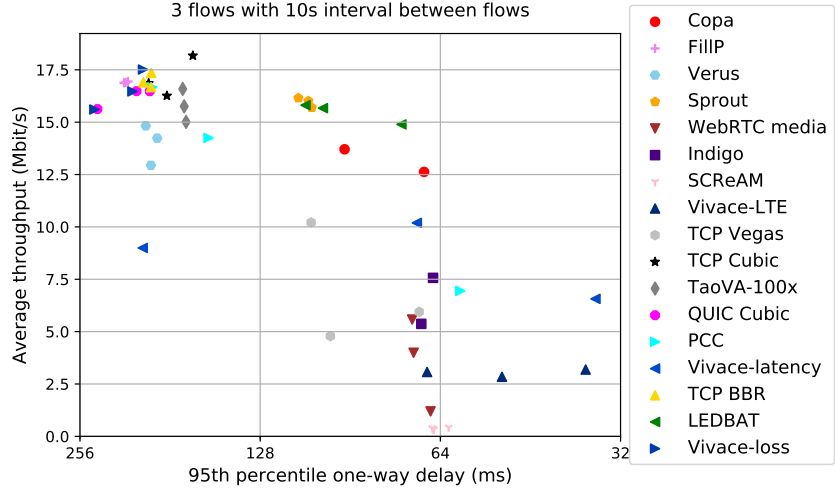
Git summary:

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

test from 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



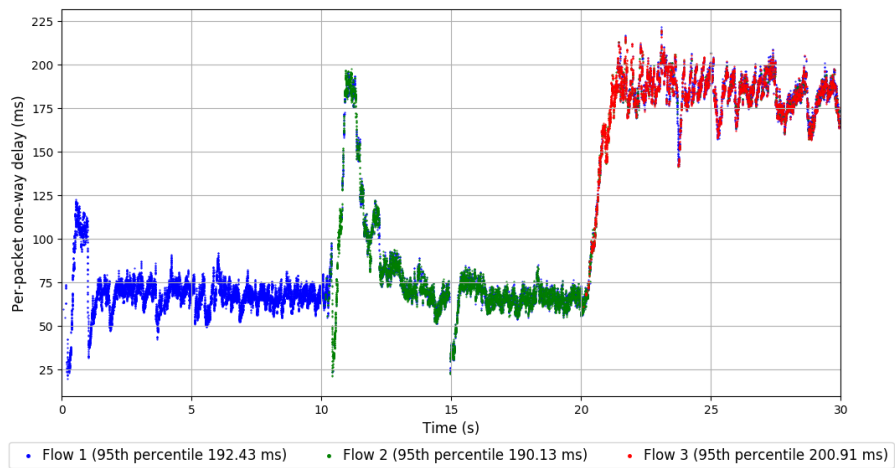
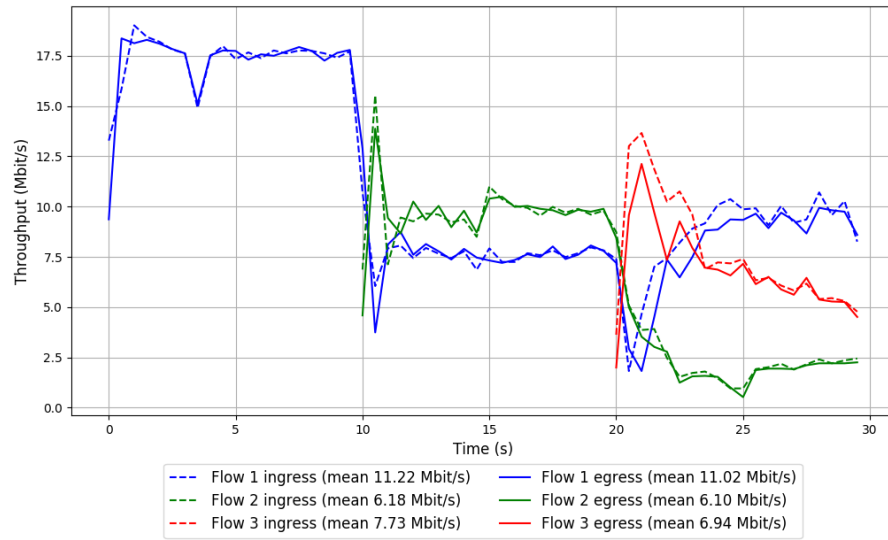
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	10.43	6.41	6.96	191.00	194.78	206.66	2.01	3.07	11.52
TCP Cubic	3	12.40	5.53	3.19	181.37	180.70	177.93	0.26	0.65	1.31
LEDBAT	3	10.15	5.38	5.31	97.42	84.60	82.68	0.47	0.92	0.91
PCC	3	9.21	2.93	4.44	128.20	135.03	152.08	1.50	1.60	3.15
QUIC Cubic	3	12.30	4.21	3.35	214.34	211.09	210.23	1.27	2.10	3.48
SCReAM	3	0.17	0.22	0.22	64.73	56.86	56.27	0.13	0.27	0.48
WebRTC media	3	1.92	1.27	0.40	69.02	68.60	69.43	0.97	0.79	1.69
Sprout	3	9.67	6.84	5.35	102.22	108.35	116.55	2.21	2.84	3.95
TaoVA-100x	3	9.20	6.86	6.44	174.17	61.77	55.33	0.62	0.91	2.26
TCP Vegas	3	2.81	3.50	5.58	86.91	74.31	83.80	0.12	0.12	0.17
Verus	3	7.03	8.07	5.11	192.21	187.72	200.67	31.52	11.38	36.12
Copa	2	9.48	3.89	5.23	78.18	79.81	82.87	0.20	0.17	1.00
FillP	3	14.23	2.14	4.04	213.54	230.54	224.96	46.92	88.65	89.66
Indigo	2	3.30	2.50	4.52	69.73	67.81	56.62	0.11	0.25	0.28
Vivace-latency	3	5.33	1.91	6.06	101.83	102.40	93.80	1.78	3.04	6.74
Vivace-loss	3	12.76	4.07	3.32	219.12	211.82	216.18	18.71	15.93	16.30
Vivace-LTE	3	17.06	1.58	4.76	1456.24	51.57	84.90	0.01	0.63	0.71

Run 1: Statistics of TCP BBR

Start at: 2018-01-18 11:39:09
End at: 2018-01-18 11:39:39
Local clock offset: 2.181 ms
Remote clock offset: -2.599 ms

Below is generated by plot.py at 2018-01-18 13:31:48
Datalink statistics
-- Total of 3 flows:
Average throughput: 17.36 Mbit/s
95th percentile per-packet one-way delay: 194.560 ms
Loss rate: 3.25%
-- Flow 1:
Average throughput: 11.02 Mbit/s
95th percentile per-packet one-way delay: 192.431 ms
Loss rate: 2.05%
-- Flow 2:
Average throughput: 6.10 Mbit/s
95th percentile per-packet one-way delay: 190.132 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 6.94 Mbit/s
95th percentile per-packet one-way delay: 200.912 ms
Loss rate: 10.90%

Run 1: Report of TCP BBR — Data Link

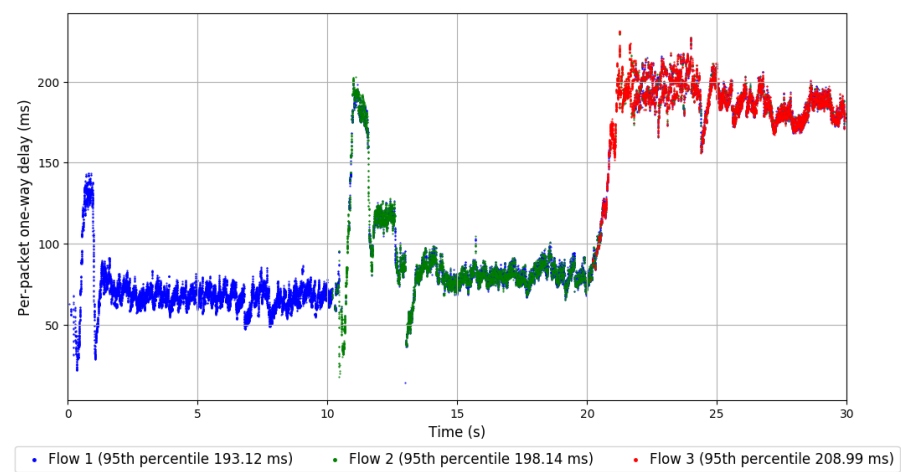
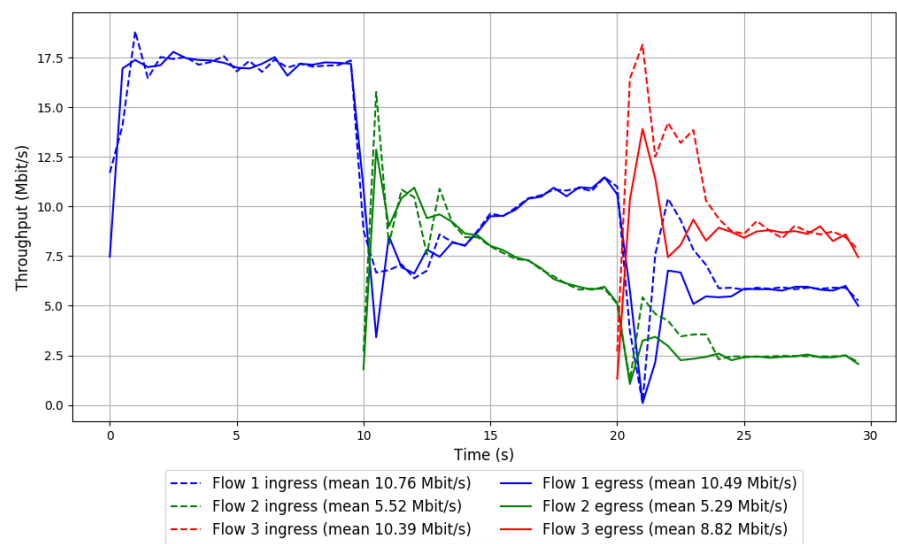


Run 2: Statistics of TCP BBR

Start at: 2018-01-18 12:00:41
End at: 2018-01-18 12:01:11
Local clock offset: 1.961 ms
Remote clock offset: -2.471 ms

Below is generated by plot.py at 2018-01-18 13:31:48
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.90 Mbit/s
95th percentile per-packet one-way delay: 200.598 ms
Loss rate: 5.66%
-- Flow 1:
Average throughput: 10.49 Mbit/s
95th percentile per-packet one-way delay: 193.122 ms
Loss rate: 2.74%
-- Flow 2:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 198.137 ms
Loss rate: 4.58%
-- Flow 3:
Average throughput: 8.82 Mbit/s
95th percentile per-packet one-way delay: 208.985 ms
Loss rate: 15.96%

Run 2: Report of TCP BBR — Data Link

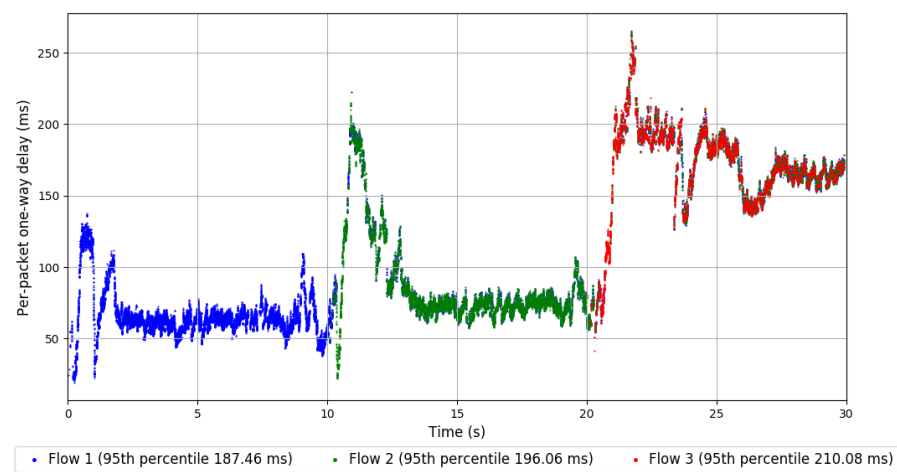
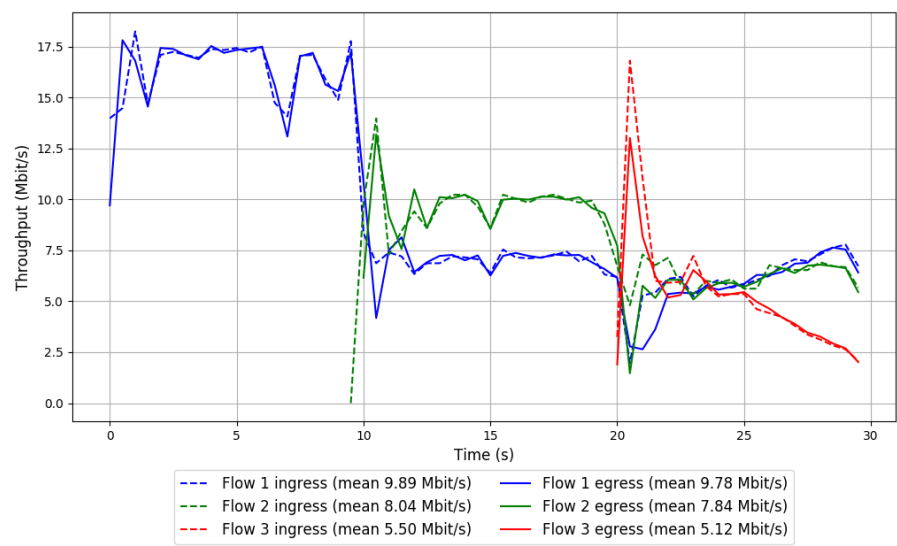


Run 3: Statistics of TCP BBR

Start at: 2018-01-18 12:22:10
End at: 2018-01-18 12:22:40
Local clock offset: 1.811 ms
Remote clock offset: -2.218 ms

Below is generated by plot.py at 2018-01-18 13:31:48
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.67 Mbit/s
95th percentile per-packet one-way delay: 194.812 ms
Loss rate: 2.44%
-- Flow 1:
Average throughput: 9.78 Mbit/s
95th percentile per-packet one-way delay: 187.458 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 196.061 ms
Loss rate: 2.89%
-- Flow 3:
Average throughput: 5.12 Mbit/s
95th percentile per-packet one-way delay: 210.076 ms
Loss rate: 7.71%

Run 3: Report of TCP BBR — Data Link

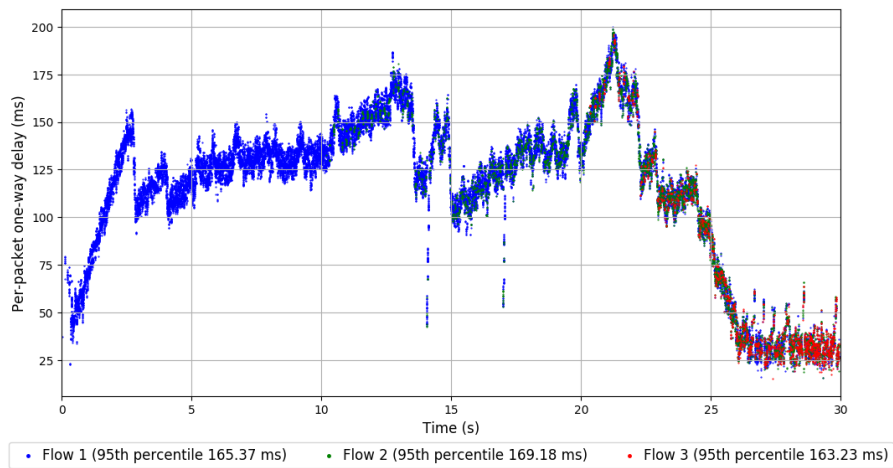
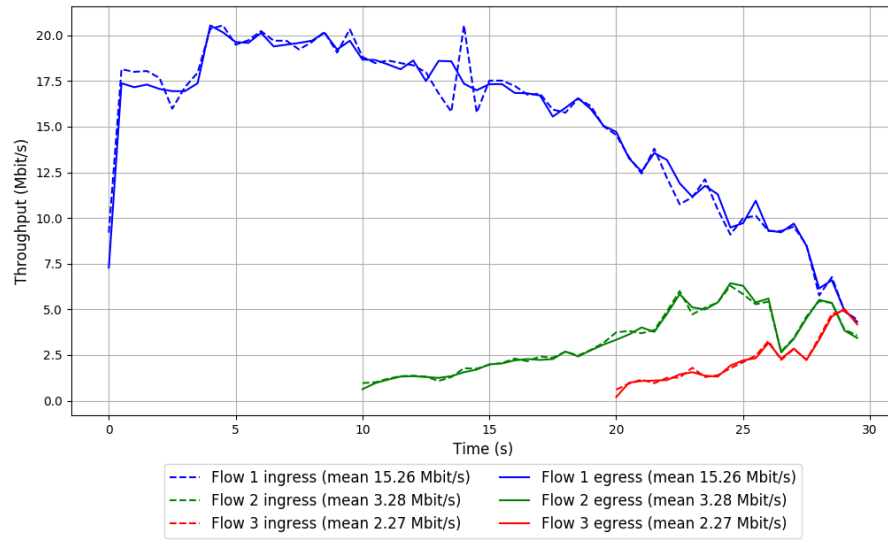


Run 1: Statistics of TCP Cubic

Start at: 2018-01-18 11:30:44
End at: 2018-01-18 11:31:14
Local clock offset: 2.277 ms
Remote clock offset: -2.673 ms

Below is generated by plot.py at 2018-01-18 13:31:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 18.18 Mbit/s
95th percentile per-packet one-way delay: 165.830 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 15.26 Mbit/s
95th percentile per-packet one-way delay: 165.368 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 3.28 Mbit/s
95th percentile per-packet one-way delay: 169.182 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 163.229 ms
Loss rate: 1.44%

Run 1: Report of TCP Cubic — Data Link

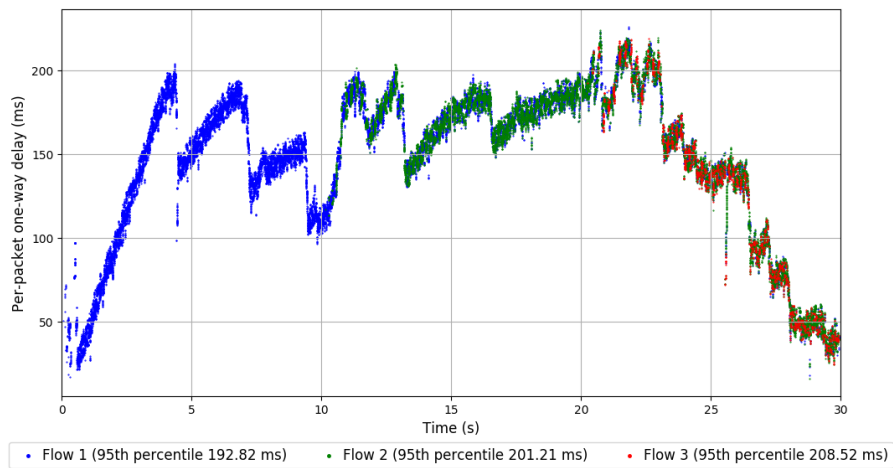
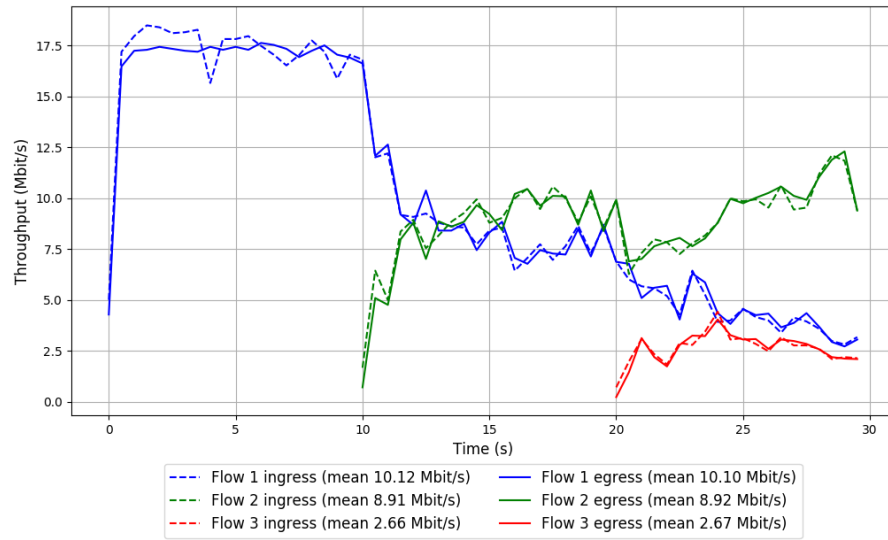


Run 2: Statistics of TCP Cubic

Start at: 2018-01-18 11:52:16
End at: 2018-01-18 11:52:46
Local clock offset: 2.047 ms
Remote clock offset: -2.435 ms

Below is generated by plot.py at 2018-01-18 13:31:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.86 Mbit/s
95th percentile per-packet one-way delay: 196.590 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 10.10 Mbit/s
95th percentile per-packet one-way delay: 192.823 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 8.92 Mbit/s
95th percentile per-packet one-way delay: 201.214 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 208.522 ms
Loss rate: 1.55%

Run 2: Report of TCP Cubic — Data Link

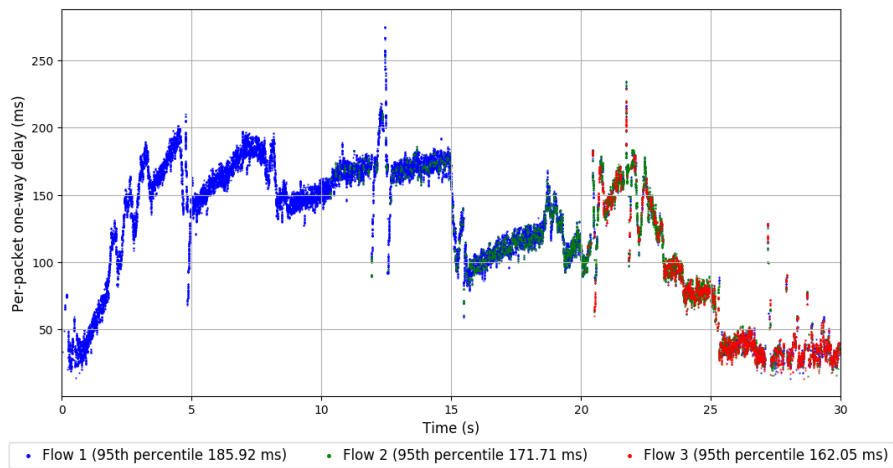
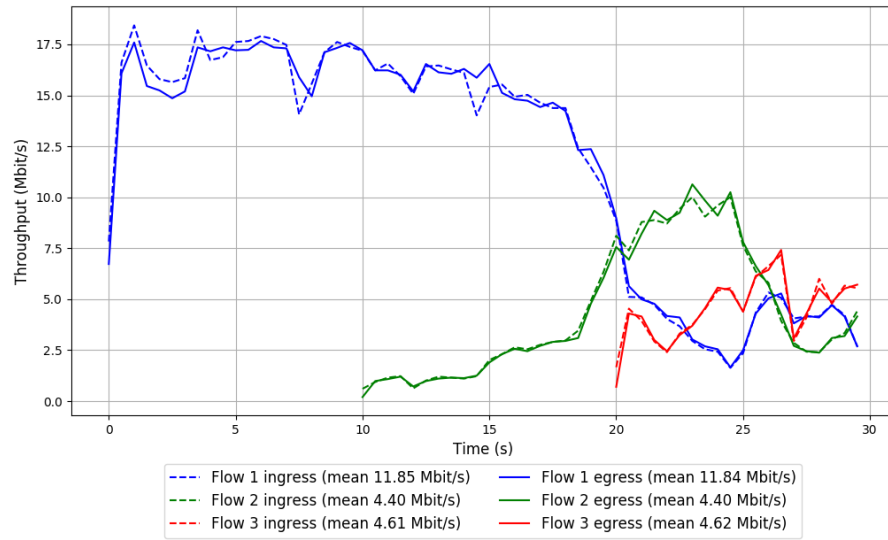


Run 3: Statistics of TCP Cubic

Start at: 2018-01-18 12:13:49
End at: 2018-01-18 12:14:19
Local clock offset: 1.968 ms
Remote clock offset: -2.585 ms

Below is generated by plot.py at 2018-01-18 13:31:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.26 Mbit/s
95th percentile per-packet one-way delay: 183.249 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 11.84 Mbit/s
95th percentile per-packet one-way delay: 185.922 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 171.706 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 4.62 Mbit/s
95th percentile per-packet one-way delay: 162.054 ms
Loss rate: 0.95%

Run 3: Report of TCP Cubic — Data Link

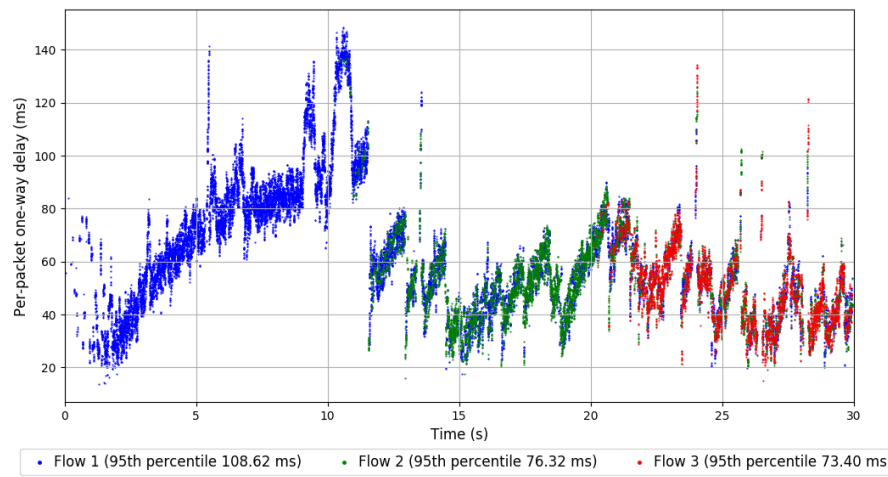
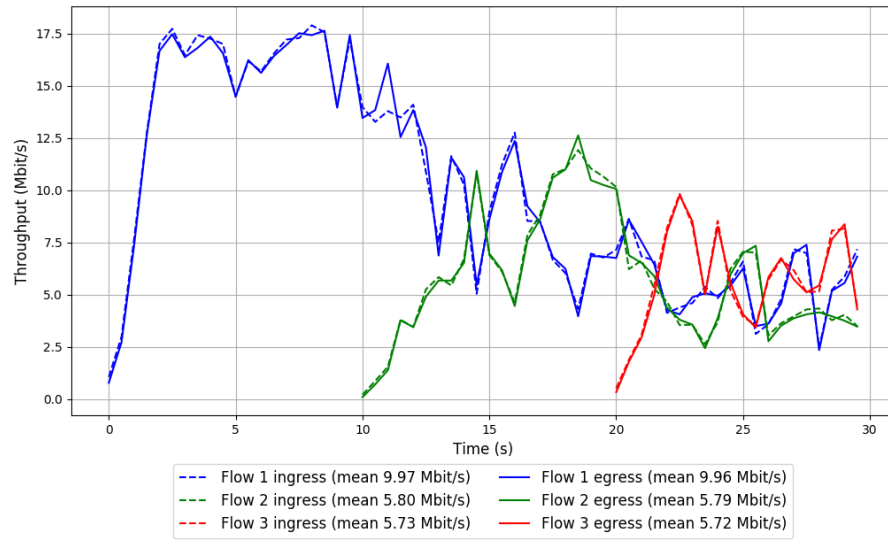


Run 1: Statistics of LEDBAT

Start at: 2018-01-18 11:42:45
End at: 2018-01-18 11:43:15
Local clock offset: 2.135 ms
Remote clock offset: -2.469 ms

Below is generated by plot.py at 2018-01-18 13:31:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 15.67 Mbit/s
95th percentile per-packet one-way delay: 100.549 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 9.96 Mbit/s
95th percentile per-packet one-way delay: 108.624 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 5.79 Mbit/s
95th percentile per-packet one-way delay: 76.316 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 5.72 Mbit/s
95th percentile per-packet one-way delay: 73.401 ms
Loss rate: 1.00%

Run 1: Report of LEDBAT — Data Link

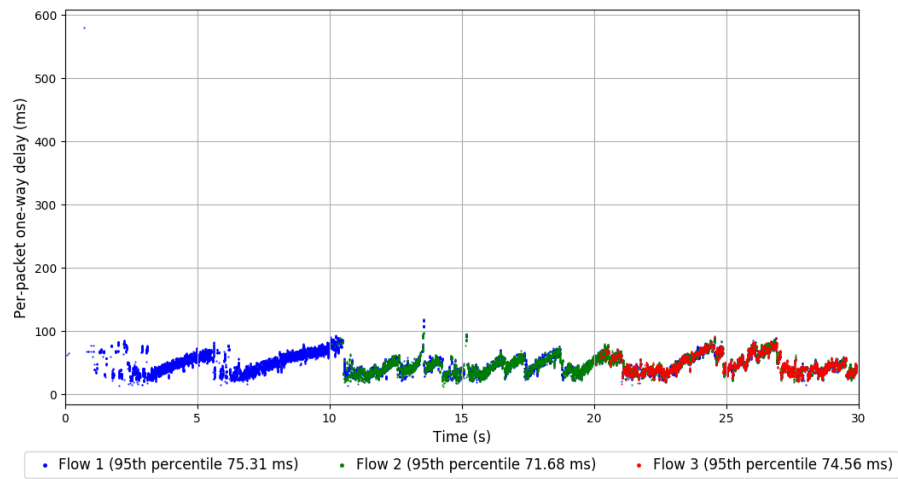
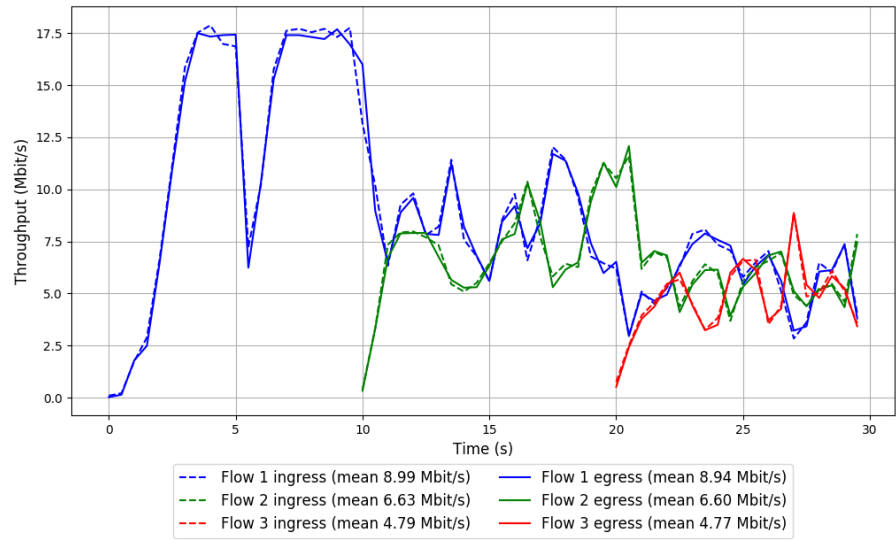


Run 2: Statistics of LEDBAT

Start at: 2018-01-18 12:04:17
End at: 2018-01-18 12:04:47
Local clock offset: 2.057 ms
Remote clock offset: -2.462 ms

Below is generated by plot.py at 2018-01-18 13:31:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.89 Mbit/s
95th percentile per-packet one-way delay: 74.342 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 8.94 Mbit/s
95th percentile per-packet one-way delay: 75.310 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 6.60 Mbit/s
95th percentile per-packet one-way delay: 71.679 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 4.77 Mbit/s
95th percentile per-packet one-way delay: 74.562 ms
Loss rate: 1.04%

Run 2: Report of LEDBAT — Data Link

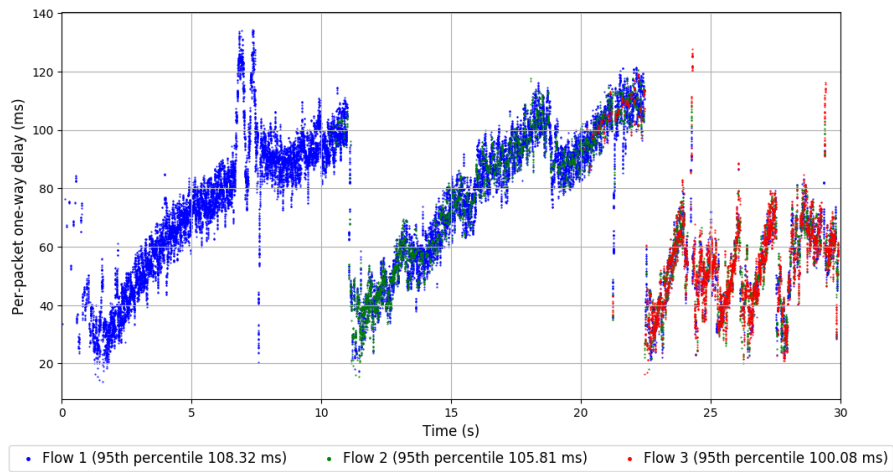
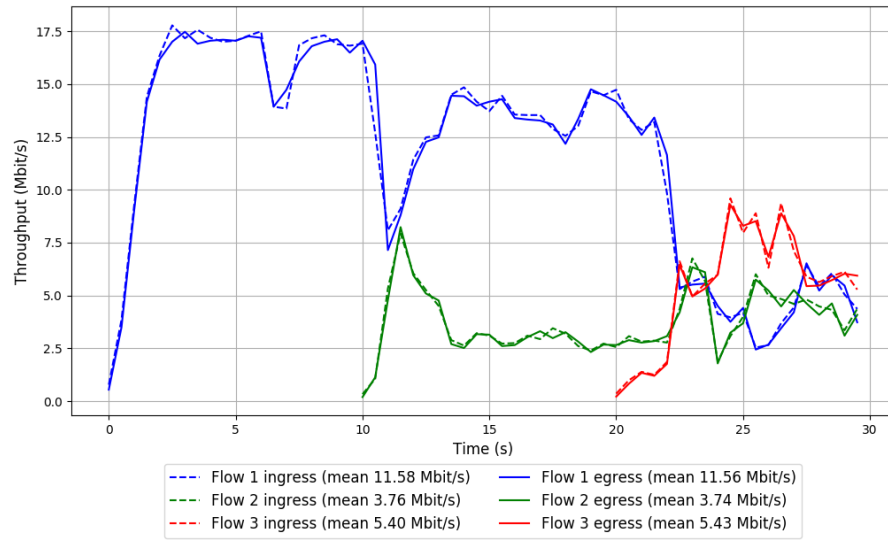


Run 3: Statistics of LEDBAT

Start at: 2018-01-18 12:25:45
End at: 2018-01-18 12:26:15
Local clock offset: 1.751 ms
Remote clock offset: -2.293 ms

Below is generated by plot.py at 2018-01-18 13:32:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 15.81 Mbit/s
95th percentile per-packet one-way delay: 107.519 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 11.56 Mbit/s
95th percentile per-packet one-way delay: 108.321 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 105.805 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 5.43 Mbit/s
95th percentile per-packet one-way delay: 100.080 ms
Loss rate: 0.68%

Run 3: Report of LEDBAT — Data Link

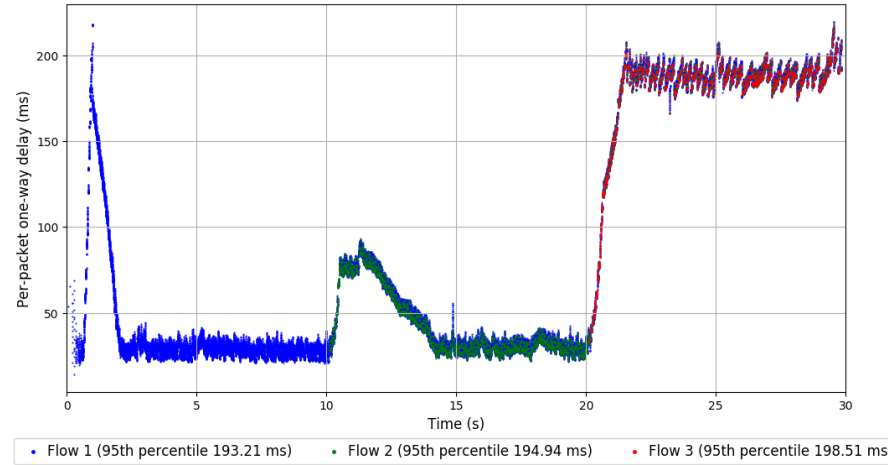
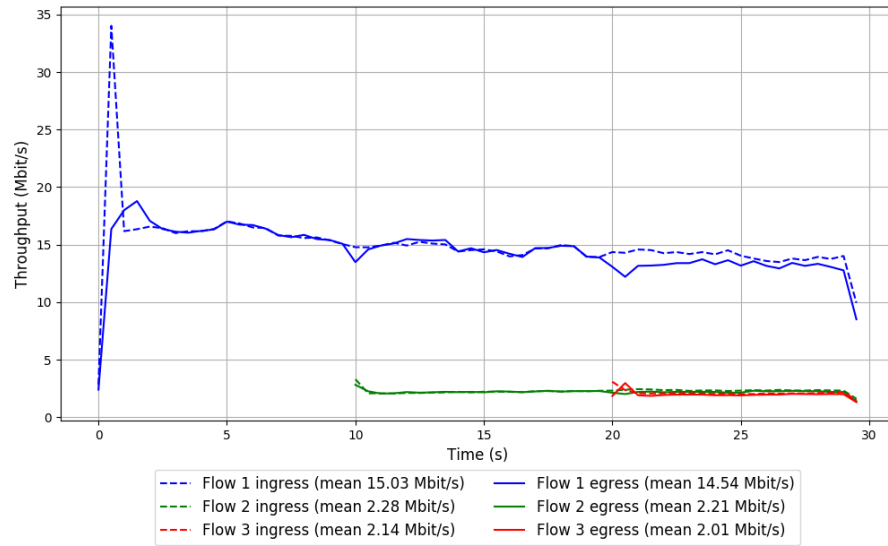


Run 1: Statistics of PCC

Start at: 2018-01-18 11:33:09
End at: 2018-01-18 11:33:39
Local clock offset: 2.154 ms
Remote clock offset: -2.675 ms

Below is generated by plot.py at 2018-01-18 13:32:11
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.66 Mbit/s
95th percentile per-packet one-way delay: 193.798 ms
Loss rate: 3.63%
-- Flow 1:
Average throughput: 14.54 Mbit/s
95th percentile per-packet one-way delay: 193.206 ms
Loss rate: 3.51%
-- Flow 2:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 194.942 ms
Loss rate: 3.36%
-- Flow 3:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 198.515 ms
Loss rate: 6.65%

Run 1: Report of PCC — Data Link

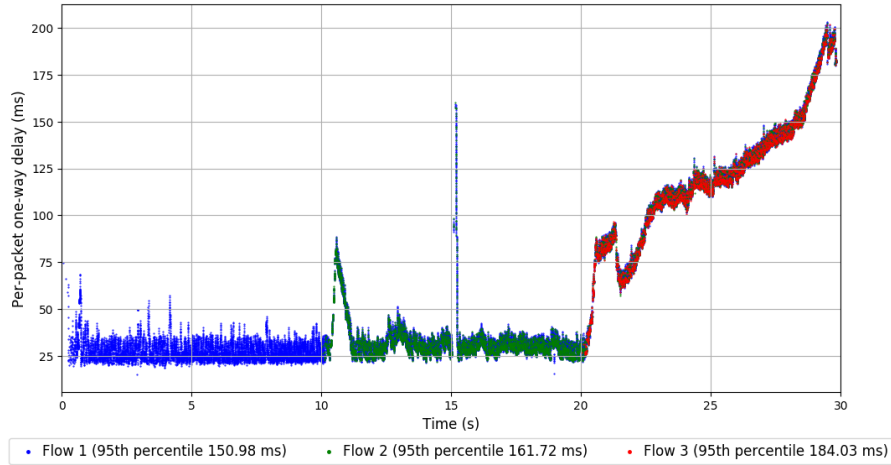
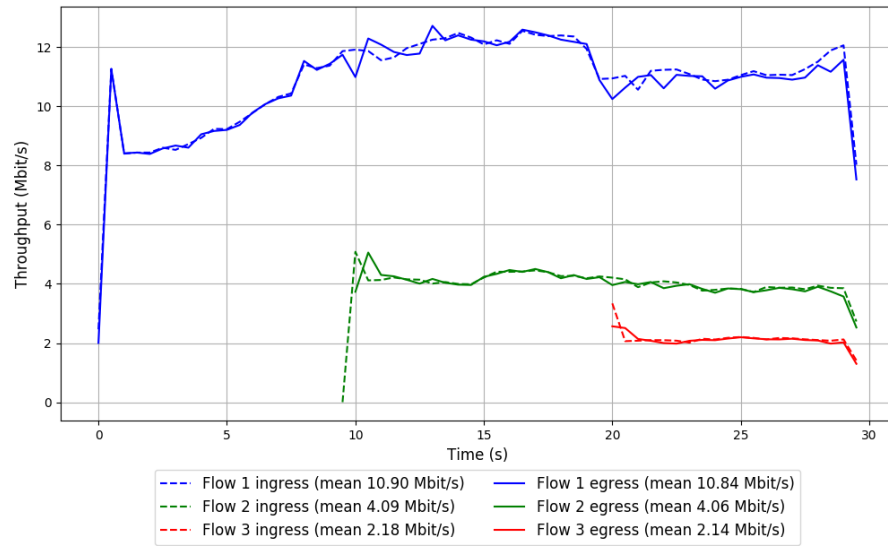


Run 2: Statistics of PCC

Start at: 2018-01-18 11:54:40
End at: 2018-01-18 11:55:10
Local clock offset: 2.076 ms
Remote clock offset: -2.509 ms

Below is generated by plot.py at 2018-01-18 13:32:11
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.25 Mbit/s
95th percentile per-packet one-way delay: 156.114 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 10.84 Mbit/s
95th percentile per-packet one-way delay: 150.981 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 161.722 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 184.028 ms
Loss rate: 2.22%

Run 2: Report of PCC — Data Link

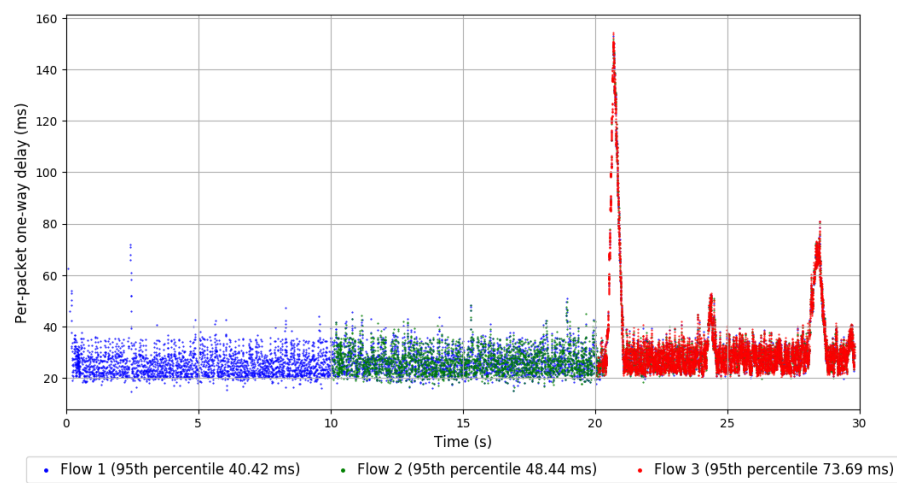
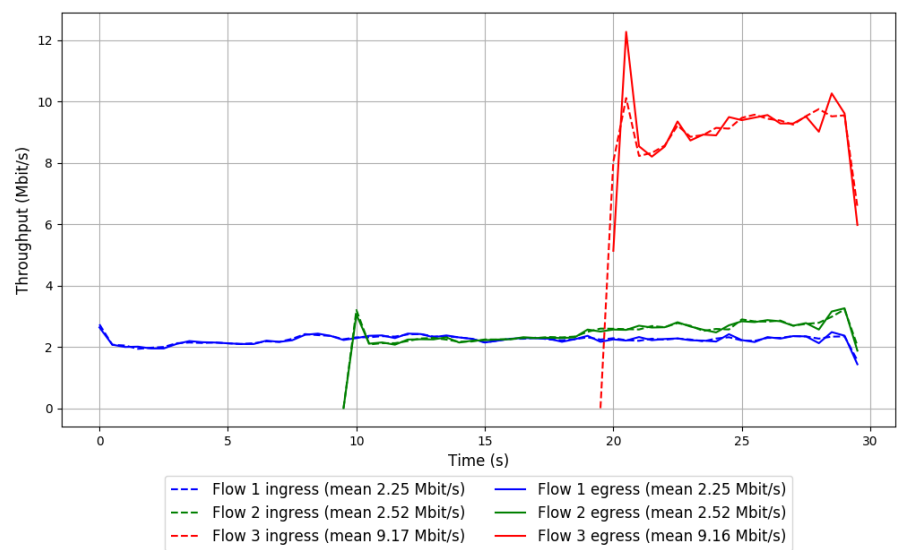


Run 3: Statistics of PCC

Start at: 2018-01-18 12:16:13
End at: 2018-01-18 12:16:43
Local clock offset: 1.848 ms
Remote clock offset: -2.364 ms

Below is generated by plot.py at 2018-01-18 13:32:11
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.95 Mbit/s
95th percentile per-packet one-way delay: 59.259 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 40.423 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 2.52 Mbit/s
95th percentile per-packet one-way delay: 48.441 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 9.16 Mbit/s
95th percentile per-packet one-way delay: 73.688 ms
Loss rate: 0.59%

Run 3: Report of PCC — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-01-18 11:37:57

End at: 2018-01-18 11:38:27

Local clock offset: 2.187 ms

Remote clock offset: -2.7 ms

Below is generated by plot.py at 2018-01-18 13:32:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.63 Mbit/s

95th percentile per-packet one-way delay: 239.383 ms

Loss rate: 1.88%

-- Flow 1:

Average throughput: 11.19 Mbit/s

95th percentile per-packet one-way delay: 241.819 ms

Loss rate: 1.55%

-- Flow 2:

Average throughput: 4.88 Mbit/s

95th percentile per-packet one-way delay: 231.829 ms

Loss rate: 2.33%

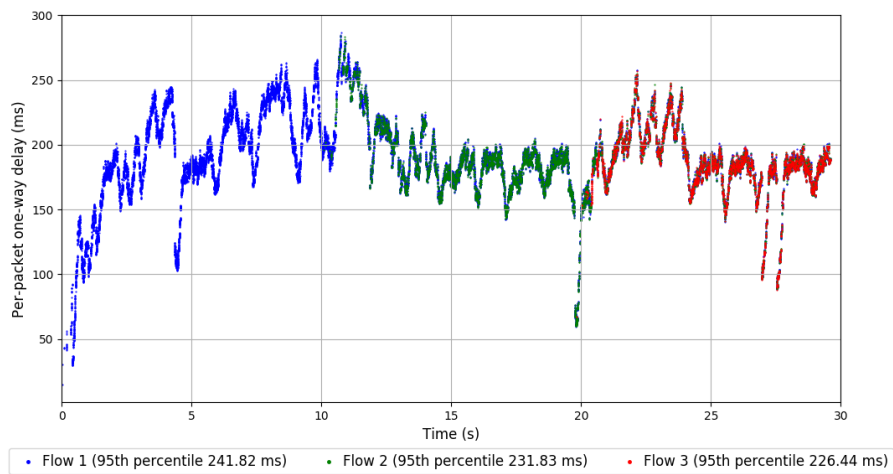
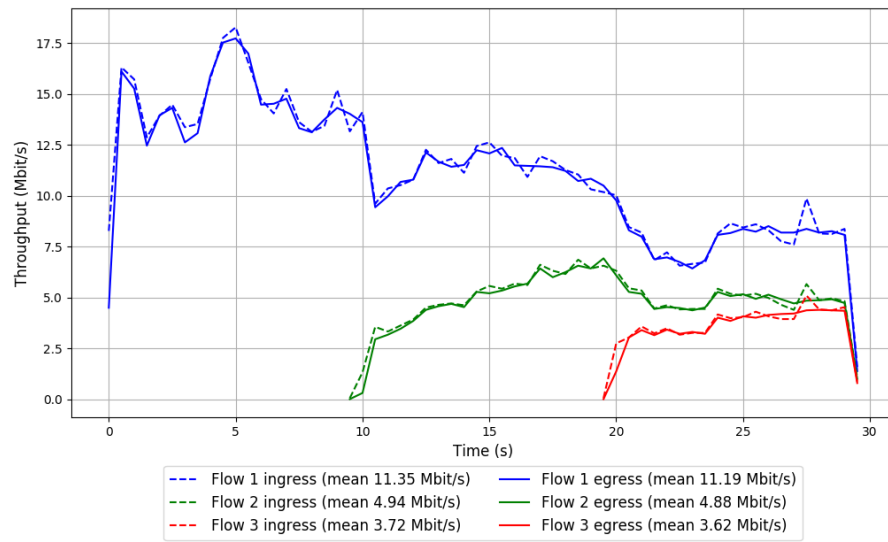
-- Flow 3:

Average throughput: 3.62 Mbit/s

95th percentile per-packet one-way delay: 226.435 ms

Loss rate: 3.63%

Run 1: Report of QUIC Cubic — Data Link

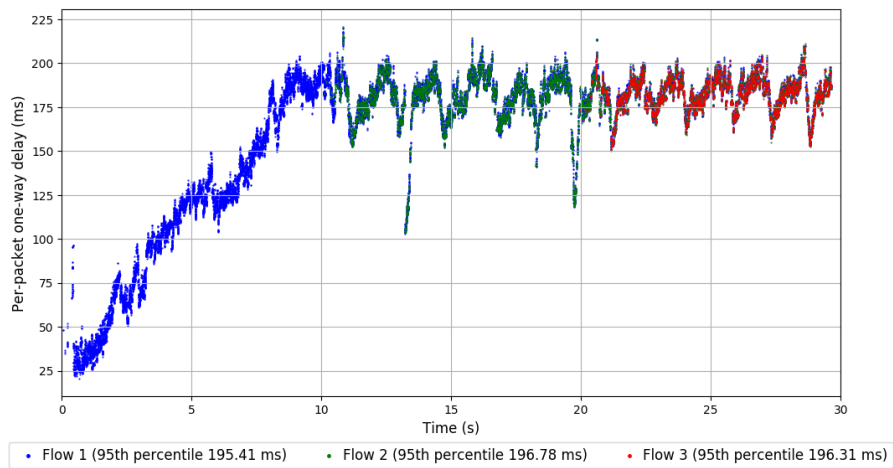
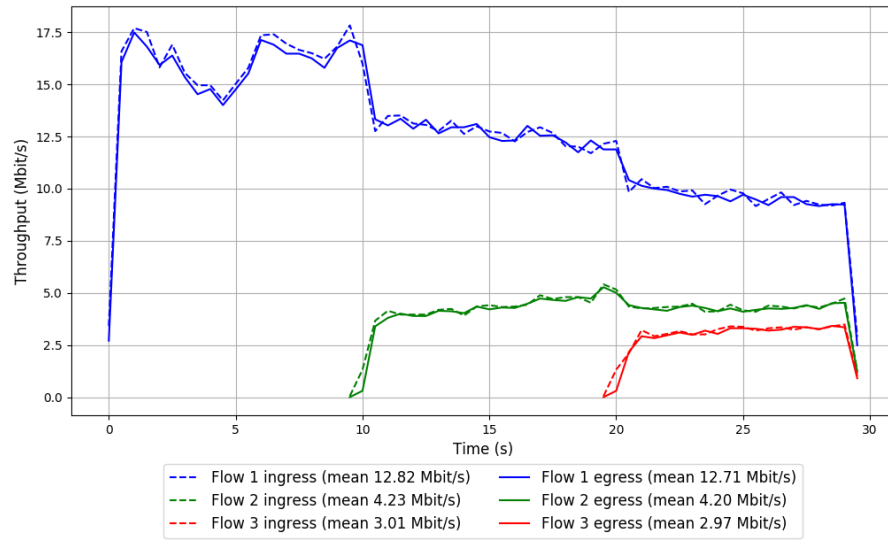


Run 2: Statistics of QUIC Cubic

Start at: 2018-01-18 11:59:29
End at: 2018-01-18 11:59:59
Local clock offset: 2.039 ms
Remote clock offset: -2.524 ms

Below is generated by plot.py at 2018-01-18 13:32:12
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.48 Mbit/s
95th percentile per-packet one-way delay: 195.713 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 195.406 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 4.20 Mbit/s
95th percentile per-packet one-way delay: 196.778 ms
Loss rate: 1.96%
-- Flow 3:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 196.308 ms
Loss rate: 3.31%

Run 2: Report of QUIC Cubic — Data Link

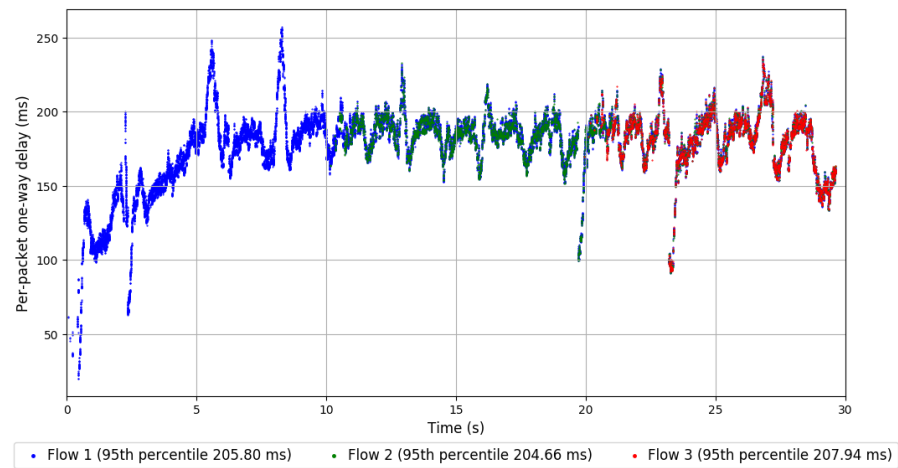
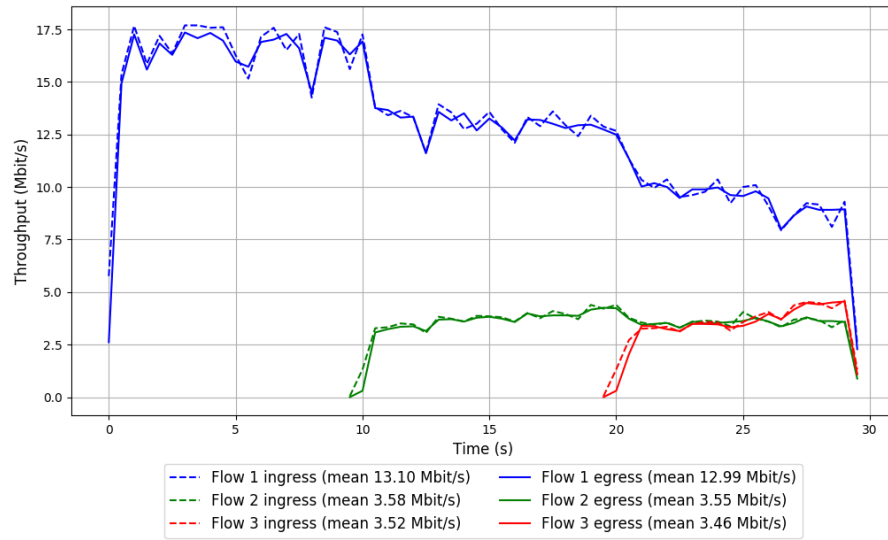


Run 3: Statistics of QUIC Cubic

Start at: 2018-01-18 12:20:58
End at: 2018-01-18 12:21:28
Local clock offset: 1.739 ms
Remote clock offset: -2.333 ms

Below is generated by plot.py at 2018-01-18 13:32:12
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.48 Mbit/s
95th percentile per-packet one-way delay: 205.923 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 12.99 Mbit/s
95th percentile per-packet one-way delay: 205.798 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 204.663 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 3.46 Mbit/s
95th percentile per-packet one-way delay: 207.941 ms
Loss rate: 3.51%

Run 3: Report of QUIC Cubic — Data Link

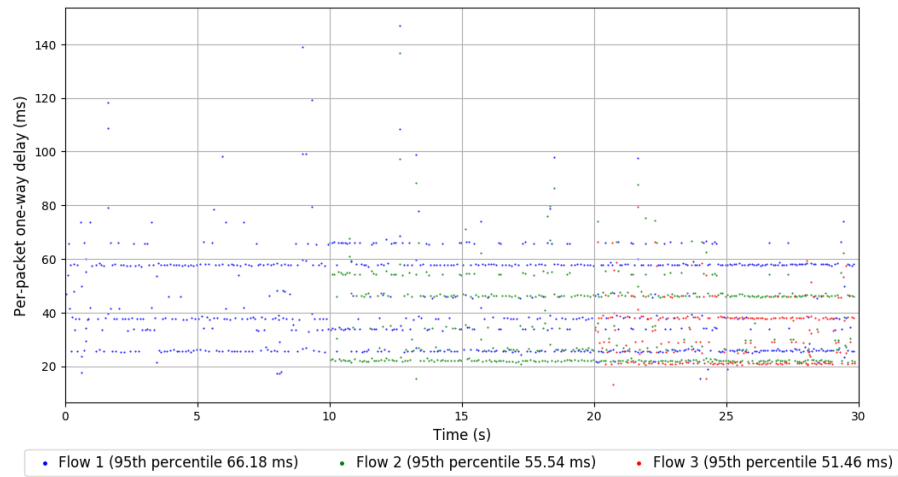
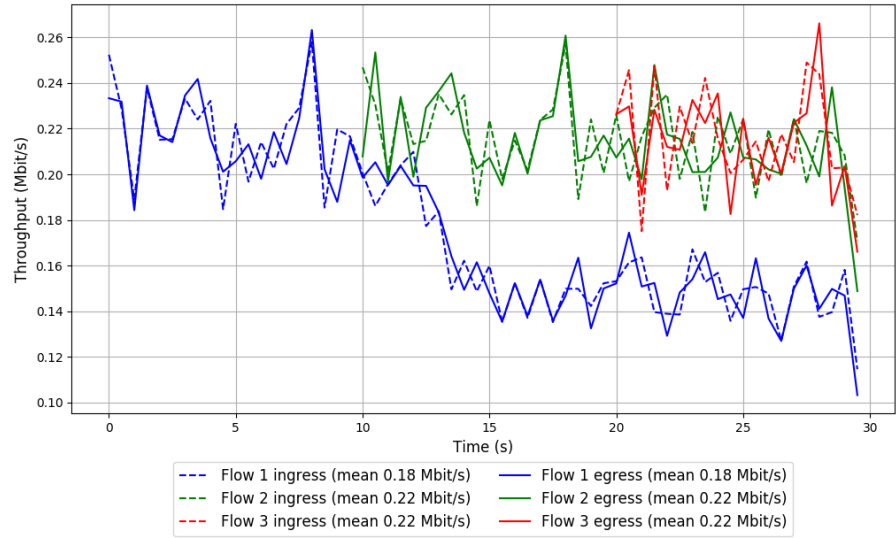


```
Run 1: Statistics of SReAM

Start at: 2018-01-18 11:28:22
End at: 2018-01-18 11:28:52
Local clock offset: 2.292 ms
Remote clock offset: -2.645 ms

# Below is generated by plot.py at 2018-01-18 13:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 66.023 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 66.182 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 55.541 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.458 ms
Loss rate: 0.74%
```

Run 1: Report of SReAM — Data Link

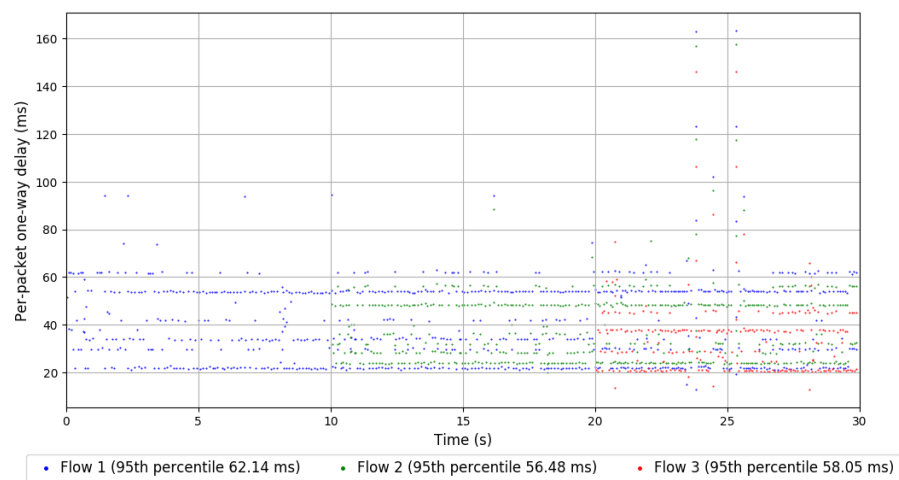
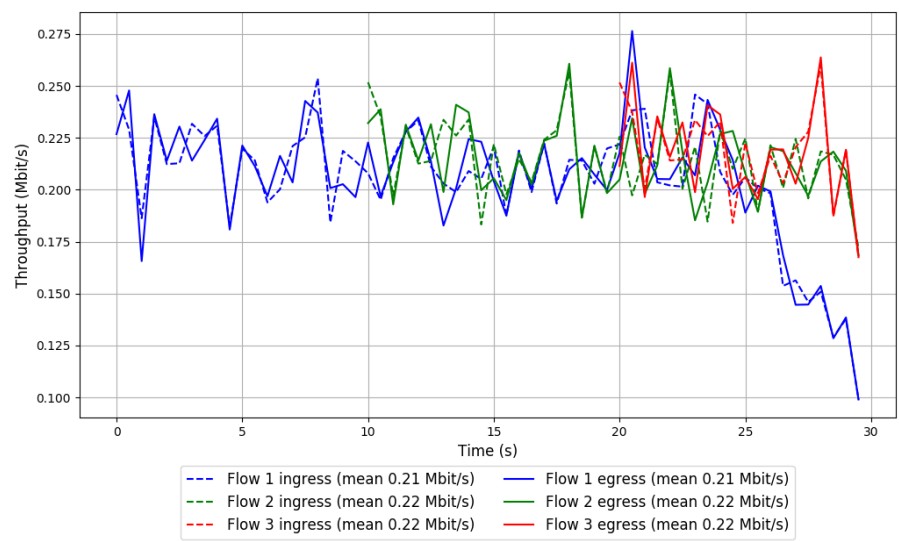


Run 2: Statistics of SReAM

Start at: 2018-01-18 11:49:54
End at: 2018-01-18 11:50:24
Local clock offset: 2.002 ms
Remote clock offset: -2.458 ms

Below is generated by plot.py at 2018-01-18 13:32:12
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 61.995 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 62.143 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.478 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.052 ms
Loss rate: 0.35%

Run 2: Report of SReAM — Data Link

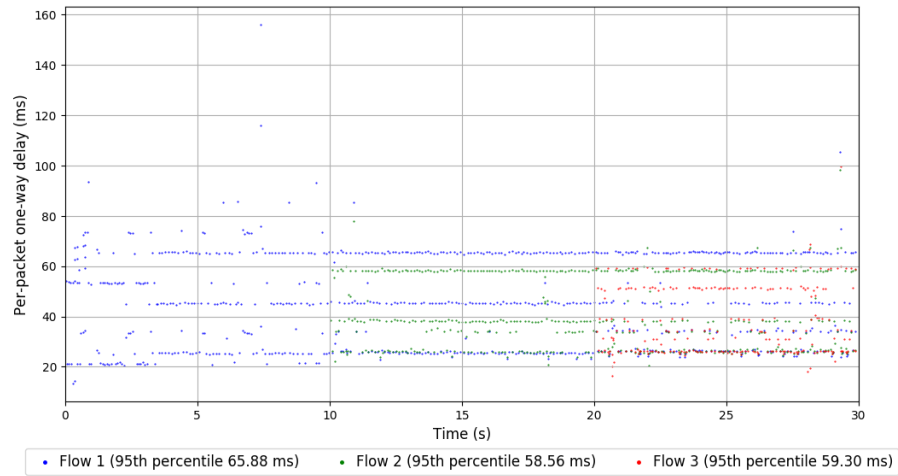
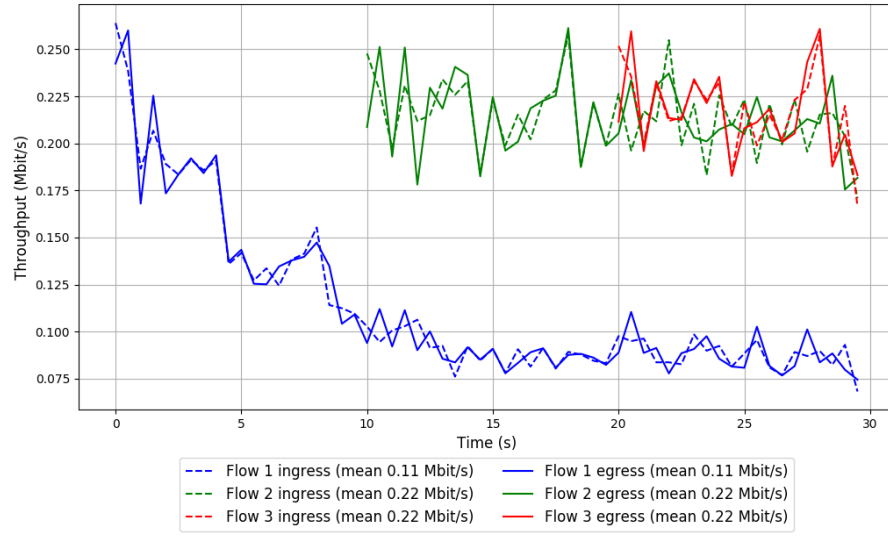


Run 3: Statistics of SReAM

Start at: 2018-01-18 12:11:26
End at: 2018-01-18 12:11:56
Local clock offset: 1.996 ms
Remote clock offset: -2.588 ms

Below is generated by plot.py at 2018-01-18 13:32:12
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 65.634 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 65.879 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.556 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.297 ms
Loss rate: 0.35%

Run 3: Report of SReAM — Data Link

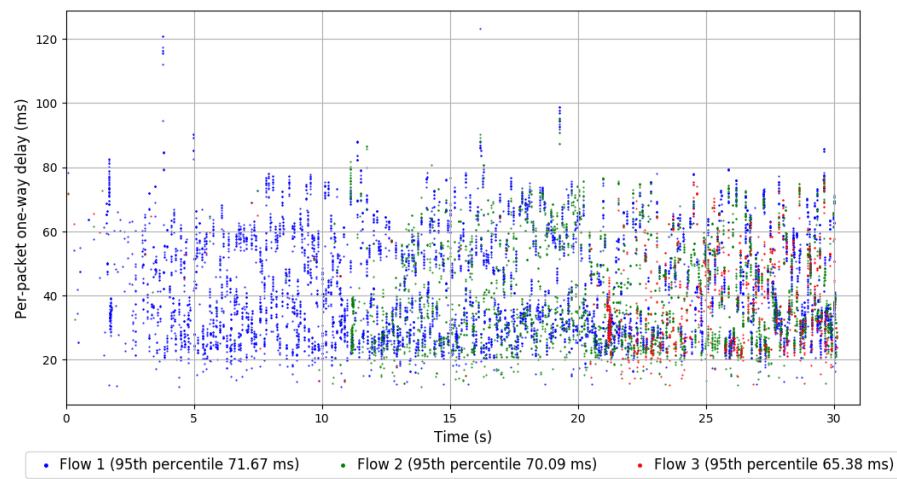
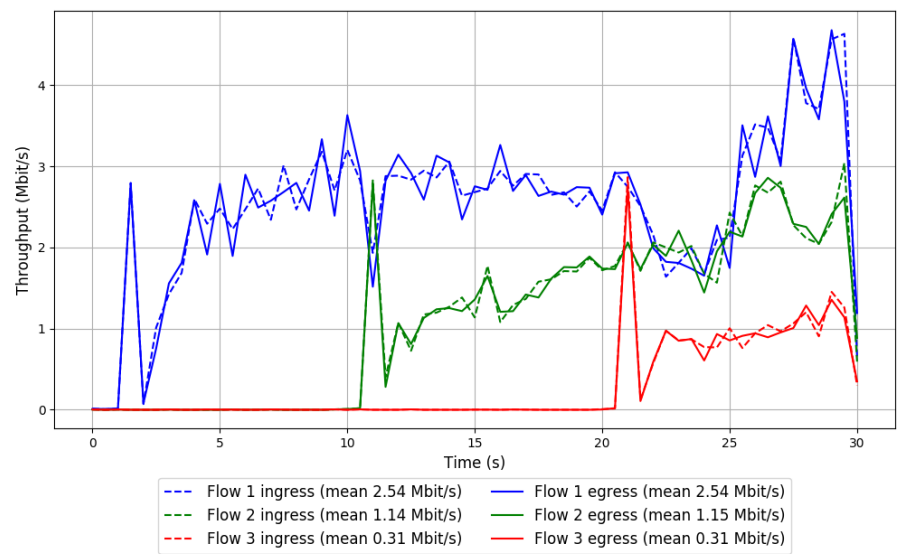


Run 1: Statistics of WebRTC media

Start at: 2018-01-18 11:36:46
End at: 2018-01-18 11:37:16
Local clock offset: 2.126 ms
Remote clock offset: -2.674 ms

Below is generated by plot.py at 2018-01-18 13:32:12
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.99 Mbit/s
95th percentile per-packet one-way delay: 70.940 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 2.54 Mbit/s
95th percentile per-packet one-way delay: 71.672 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 70.090 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 65.382 ms
Loss rate: 1.57%

Run 1: Report of WebRTC media — Data Link

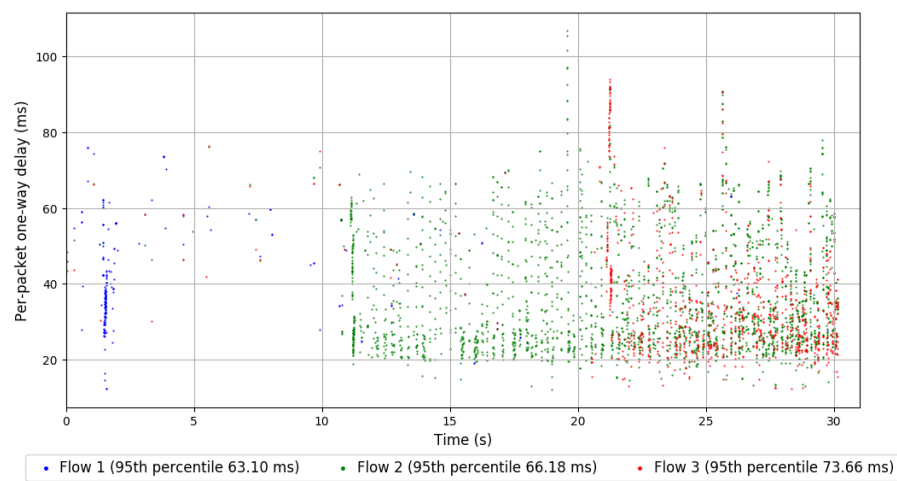
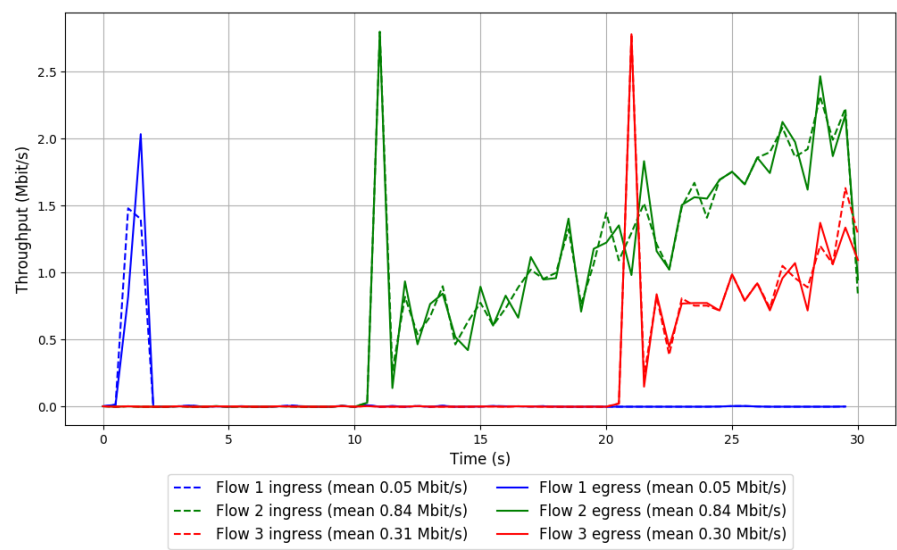


Run 2: Statistics of WebRTC media

Start at: 2018-01-18 11:58:18
End at: 2018-01-18 11:58:48
Local clock offset: 1.954 ms
Remote clock offset: -2.478 ms

Below is generated by plot.py at 2018-01-18 13:32:12
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 66.459 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.100 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 66.182 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 73.663 ms
Loss rate: 2.59%

Run 2: Report of WebRTC media — Data Link

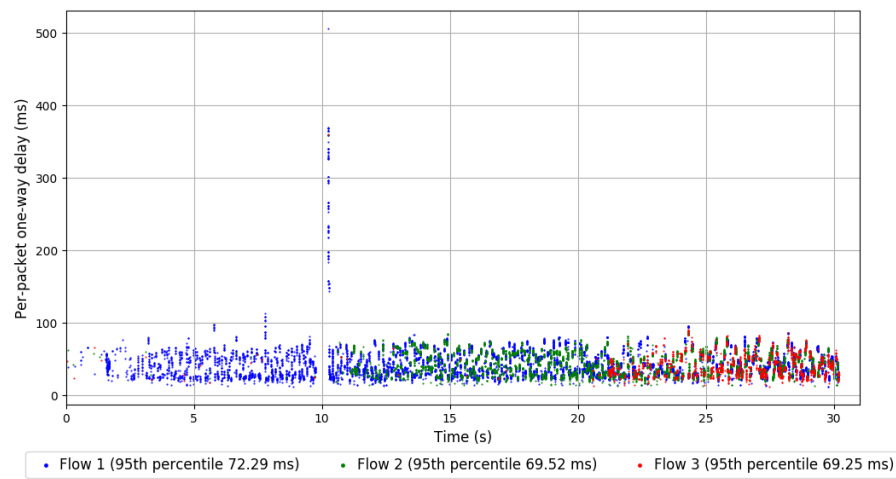
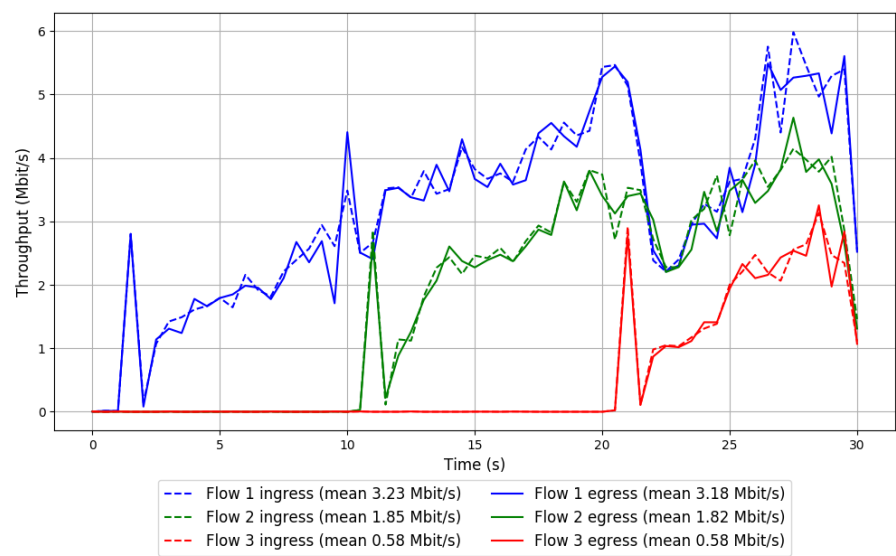


Run 3: Statistics of WebRTC media

Start at: 2018-01-18 12:19:47
End at: 2018-01-18 12:20:17
Local clock offset: 1.792 ms
Remote clock offset: -2.374 ms

Below is generated by plot.py at 2018-01-18 13:32:12
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.58 Mbit/s
95th percentile per-packet one-way delay: 71.320 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 72.292 ms
Loss rate: 1.57%
-- Flow 2:
Average throughput: 1.82 Mbit/s
95th percentile per-packet one-way delay: 69.521 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 69.252 ms
Loss rate: 0.91%

Run 3: Report of WebRTC media — Data Link

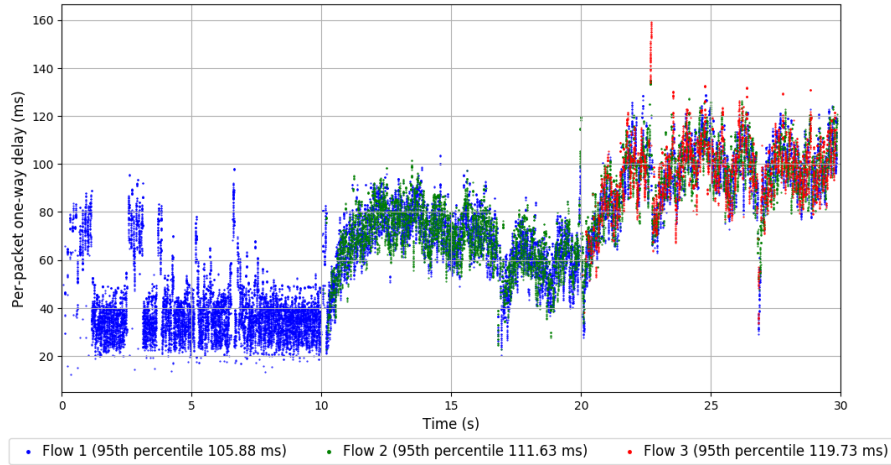
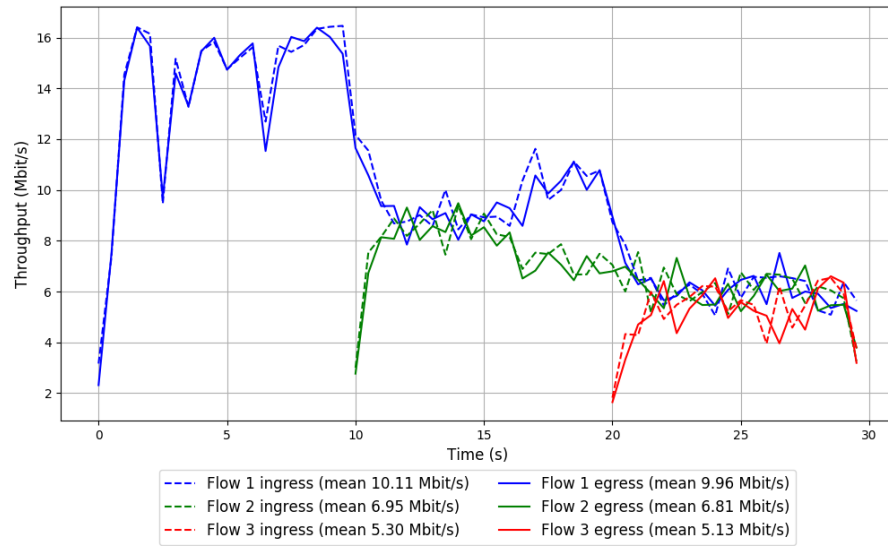


Run 1: Statistics of Sprout

Start at: 2018-01-18 11:23:35
End at: 2018-01-18 11:24:05
Local clock offset: 2.372 ms
Remote clock offset: -2.633 ms

Below is generated by plot.py at 2018-01-18 13:32:22
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.15 Mbit/s
95th percentile per-packet one-way delay: 110.496 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 9.96 Mbit/s
95th percentile per-packet one-way delay: 105.875 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 6.81 Mbit/s
95th percentile per-packet one-way delay: 111.632 ms
Loss rate: 2.26%
-- Flow 3:
Average throughput: 5.13 Mbit/s
95th percentile per-packet one-way delay: 119.733 ms
Loss rate: 3.93%

Run 1: Report of Sprout — Data Link

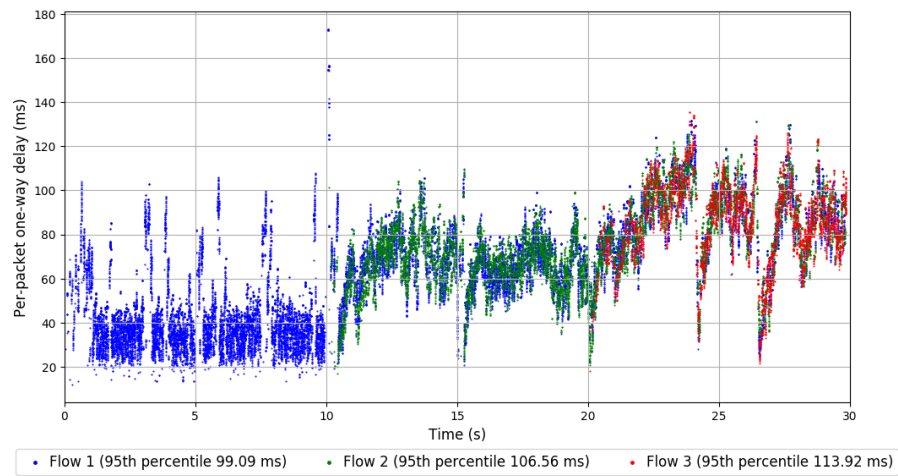
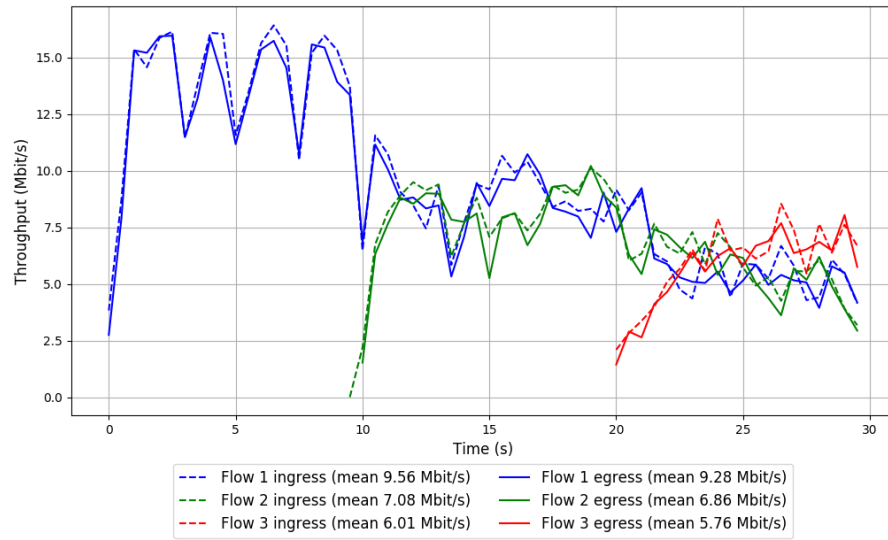


Run 2: Statistics of Sprout

Start at: 2018-01-18 11:45:08
End at: 2018-01-18 11:45:38
Local clock offset: 2.134 ms
Remote clock offset: -2.358 ms

Below is generated by plot.py at 2018-01-18 13:32:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 15.70 Mbit/s
95th percentile per-packet one-way delay: 104.939 ms
Loss rate: 3.45%
-- Flow 1:
Average throughput: 9.28 Mbit/s
95th percentile per-packet one-way delay: 99.089 ms
Loss rate: 3.14%
-- Flow 2:
Average throughput: 6.86 Mbit/s
95th percentile per-packet one-way delay: 106.555 ms
Loss rate: 3.64%
-- Flow 3:
Average throughput: 5.76 Mbit/s
95th percentile per-packet one-way delay: 113.919 ms
Loss rate: 4.51%

Run 2: Report of Sprout — Data Link

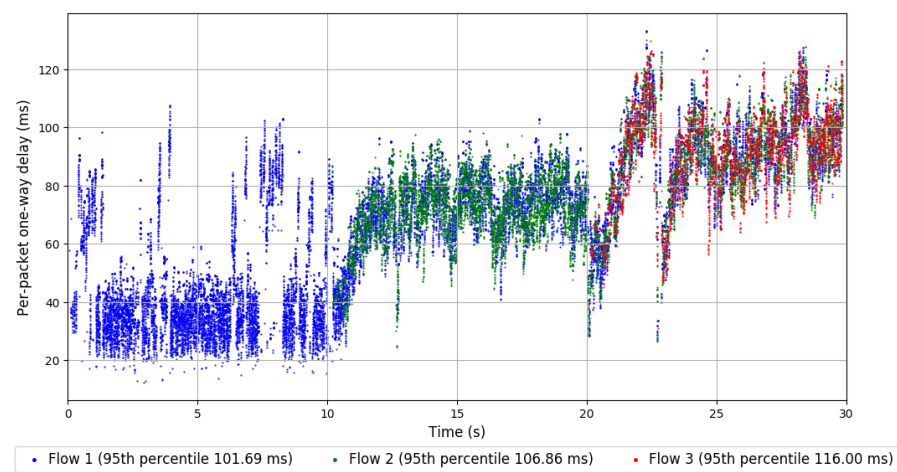
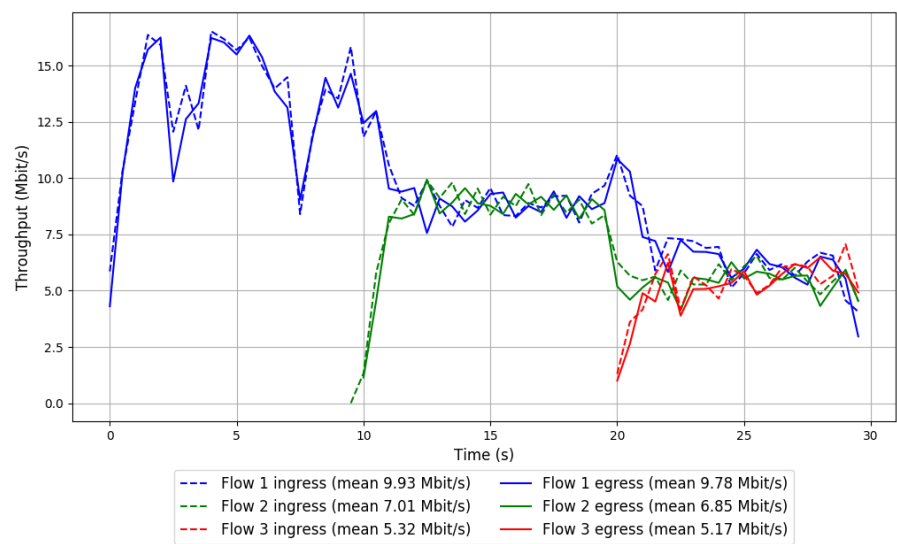


Run 3: Statistics of Sprout

Start at: 2018-01-18 12:06:40
End at: 2018-01-18 12:07:10
Local clock offset: 2.046 ms
Remote clock offset: -2.482 ms

```
# Below is generated by plot.py at 2018-01-18 13:32:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.01 Mbit/s
95th percentile per-packet one-way delay: 106.334 ms
Loss rate: 2.21%
-- Flow 1:
Average throughput: 9.78 Mbit/s
95th percentile per-packet one-way delay: 101.685 ms
Loss rate: 1.80%
-- Flow 2:
Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 106.864 ms
Loss rate: 2.62%
-- Flow 3:
Average throughput: 5.17 Mbit/s
95th percentile per-packet one-way delay: 116.003 ms
Loss rate: 3.40%
```

Run 3: Report of Sprout — Data Link

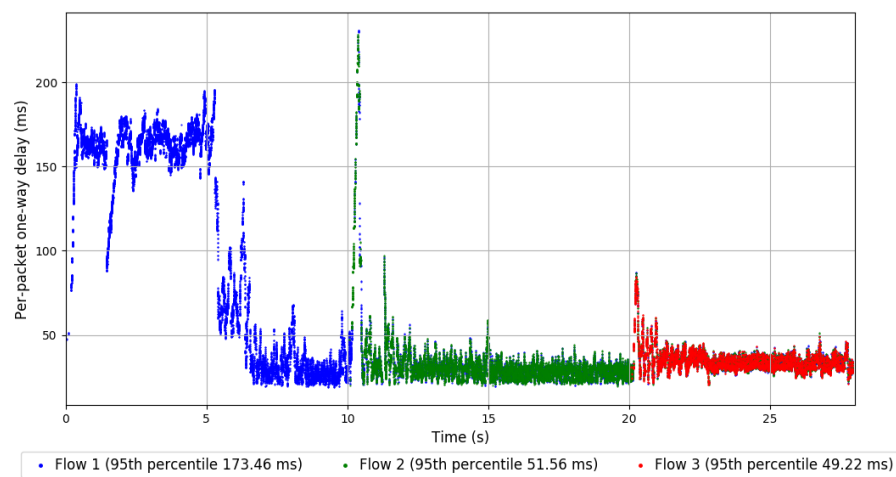
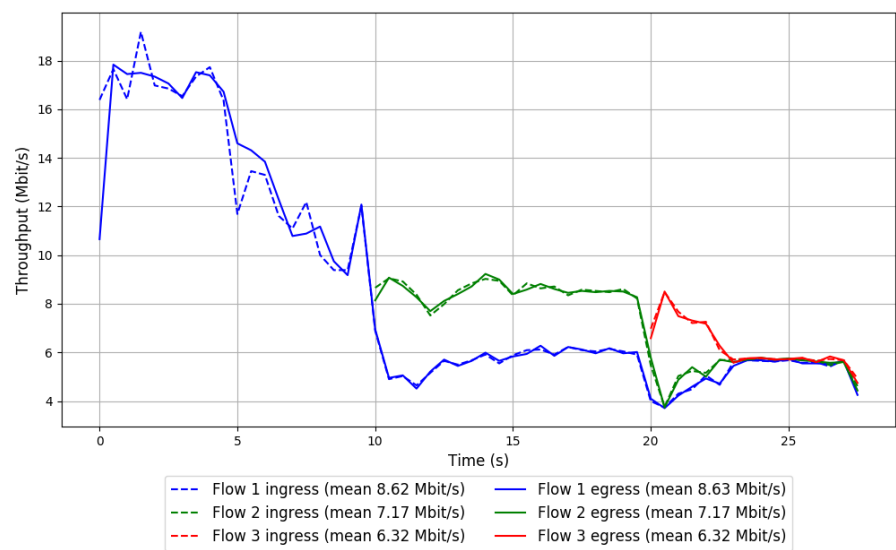


Run 1: Statistics of TaoVA-100x

Start at: 2018-01-18 11:41:33
End at: 2018-01-18 11:42:03
Local clock offset: 2.07 ms
Remote clock offset: -2.488 ms

Below is generated by plot.py at 2018-01-18 13:32:39
Datalink statistics
-- Total of 3 flows:
Average throughput: 15.01 Mbit/s
95th percentile per-packet one-way delay: 170.213 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 8.63 Mbit/s
95th percentile per-packet one-way delay: 173.460 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 7.17 Mbit/s
95th percentile per-packet one-way delay: 51.556 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 6.32 Mbit/s
95th percentile per-packet one-way delay: 49.222 ms
Loss rate: 0.55%

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

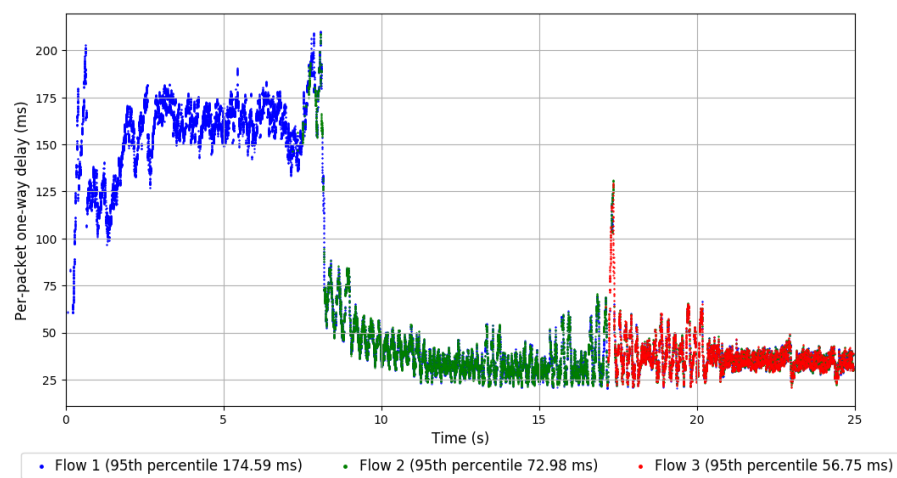
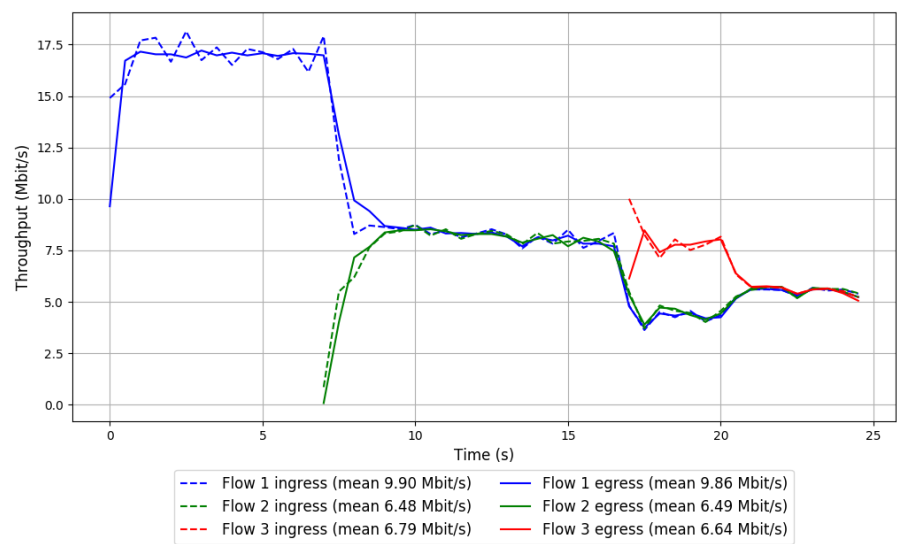


Run 2: Statistics of TaoVA-100x

Start at: 2018-01-18 12:03:05
End at: 2018-01-18 12:03:35
Local clock offset: 2.067 ms
Remote clock offset: -2.531 ms

Below is generated by plot.py at 2018-01-18 13:32:40
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.59 Mbit/s
95th percentile per-packet one-way delay: 172.409 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 9.86 Mbit/s
95th percentile per-packet one-way delay: 174.591 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 72.980 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 6.64 Mbit/s
95th percentile per-packet one-way delay: 56.752 ms
Loss rate: 3.21%

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

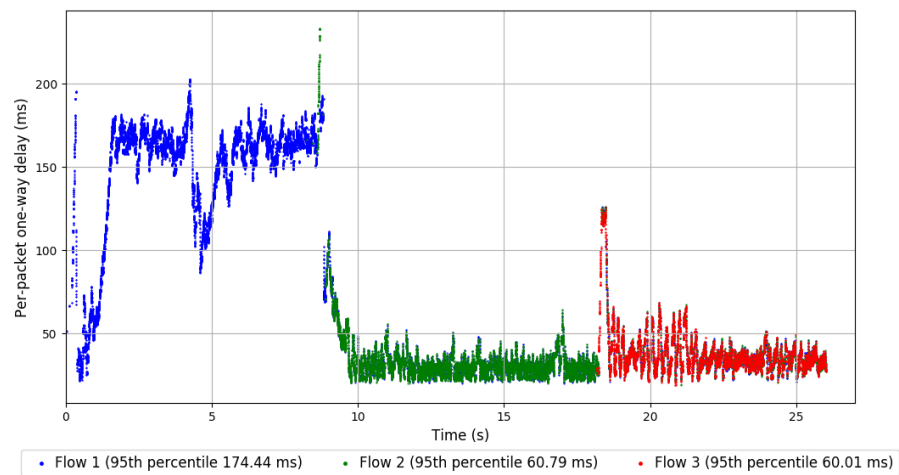
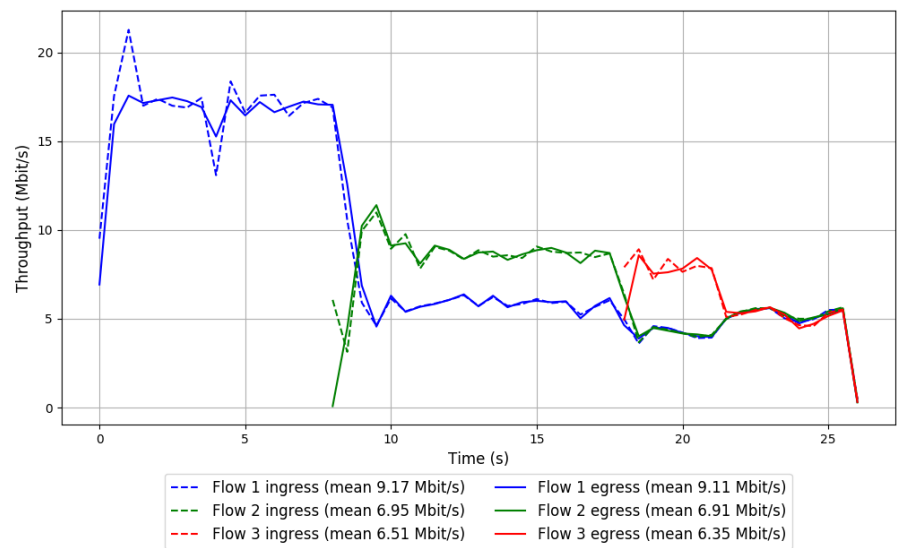


Run 3: Statistics of TaoVA-100x

Start at: 2018-01-18 12:24:33
End at: 2018-01-18 12:25:03
Local clock offset: 1.708 ms
Remote clock offset: -2.345 ms

Below is generated by plot.py at 2018-01-18 13:32:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 15.76 Mbit/s
95th percentile per-packet one-way delay: 171.437 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 9.11 Mbit/s
95th percentile per-packet one-way delay: 174.445 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 6.91 Mbit/s
95th percentile per-packet one-way delay: 60.789 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 60.008 ms
Loss rate: 3.02%

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

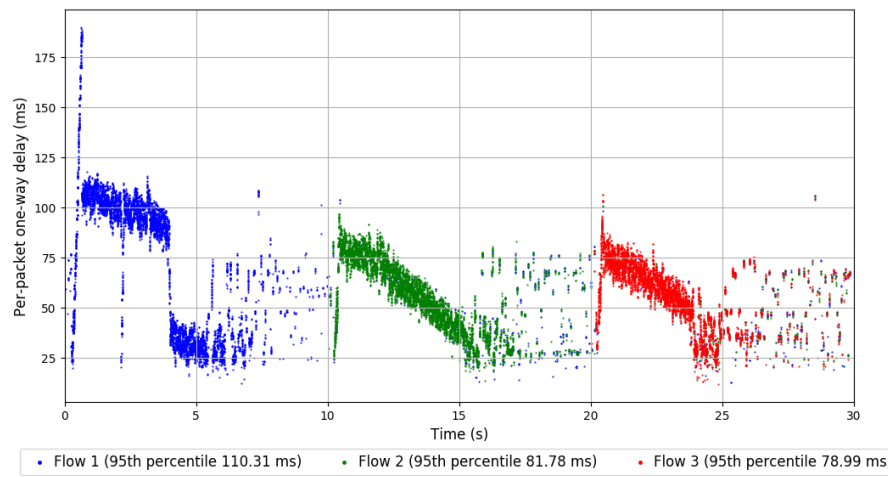
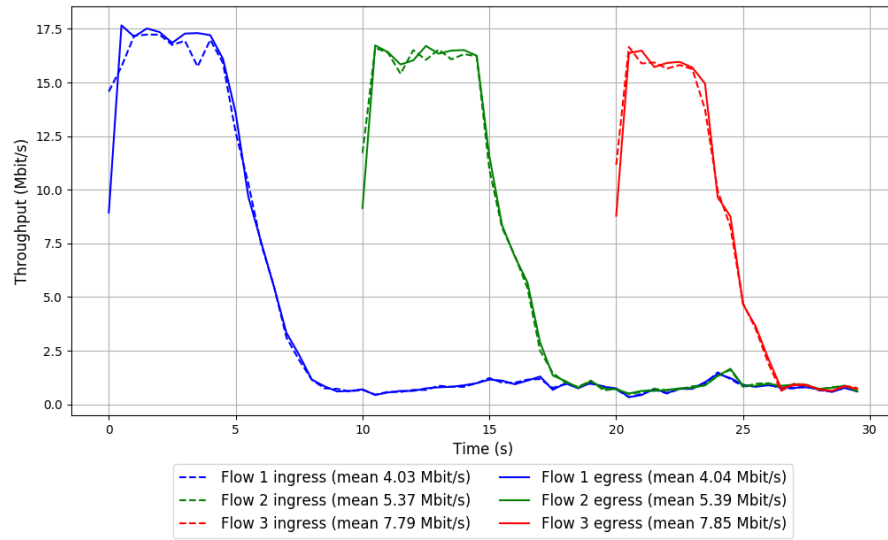


Run 1: Statistics of TCP Vegas

Start at: 2018-01-18 11:22:24
End at: 2018-01-18 11:22:54
Local clock offset: 2.275 ms
Remote clock offset: -2.758 ms

Below is generated by plot.py at 2018-01-18 13:32:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 10.21 Mbit/s
95th percentile per-packet one-way delay: 105.204 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 4.04 Mbit/s
95th percentile per-packet one-way delay: 110.312 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 5.39 Mbit/s
95th percentile per-packet one-way delay: 81.784 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 78.993 ms
Loss rate: 0.11%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-01-18 11:43:57

End at: 2018-01-18 11:44:27

Local clock offset: 2.061 ms

Remote clock offset: -2.37 ms

Below is generated by plot.py at 2018-01-18 13:32:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.94 Mbit/s

95th percentile per-packet one-way delay: 69.428 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 2.65 Mbit/s

95th percentile per-packet one-way delay: 73.942 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 3.42 Mbit/s

95th percentile per-packet one-way delay: 66.855 ms

Loss rate: 0.11%

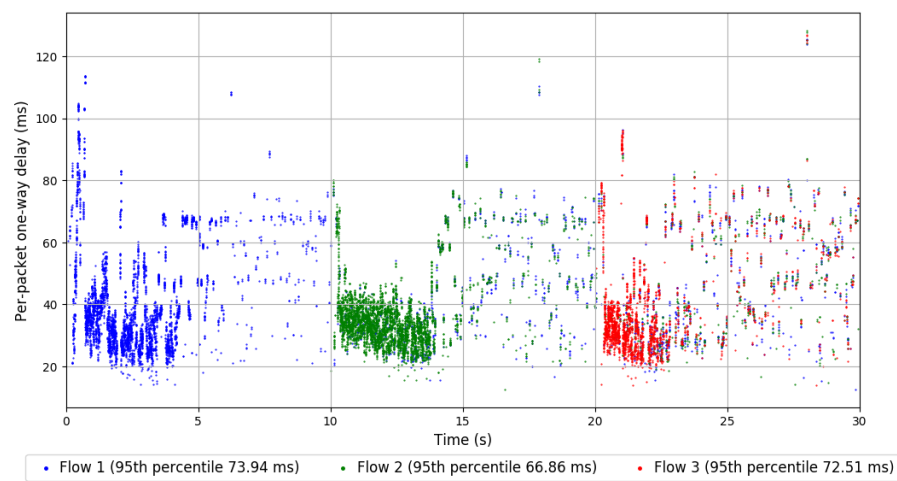
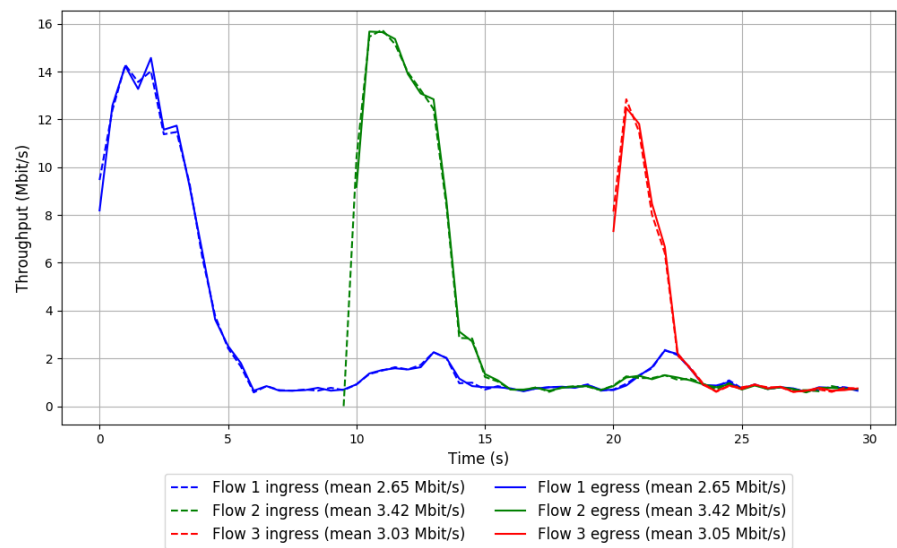
-- Flow 3:

Average throughput: 3.05 Mbit/s

95th percentile per-packet one-way delay: 72.513 ms

Loss rate: 0.20%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-01-18 12:05:29

End at: 2018-01-18 12:05:59

Local clock offset: 2.036 ms

Remote clock offset: -2.53 ms

Below is generated by plot.py at 2018-01-18 13:32:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.78 Mbit/s

95th percentile per-packet one-way delay: 97.700 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 1.74 Mbit/s

95th percentile per-packet one-way delay: 76.466 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 1.68 Mbit/s

95th percentile per-packet one-way delay: 74.285 ms

Loss rate: 0.18%

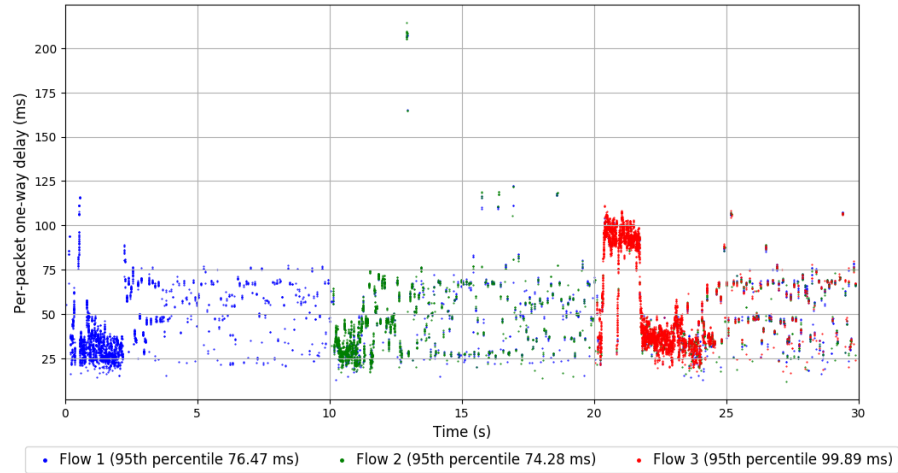
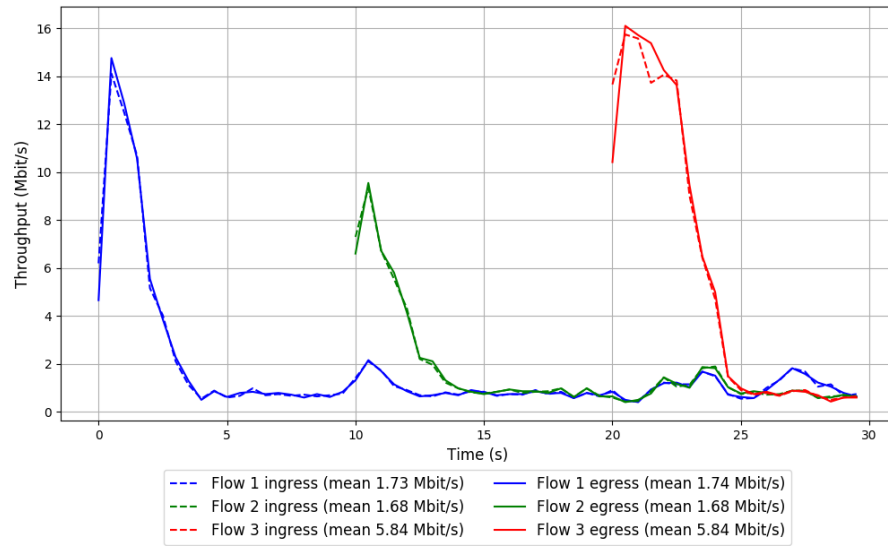
-- Flow 3:

Average throughput: 5.84 Mbit/s

95th percentile per-packet one-way delay: 99.889 ms

Loss rate: 0.21%

Run 3: Report of TCP Vegas — Data Link

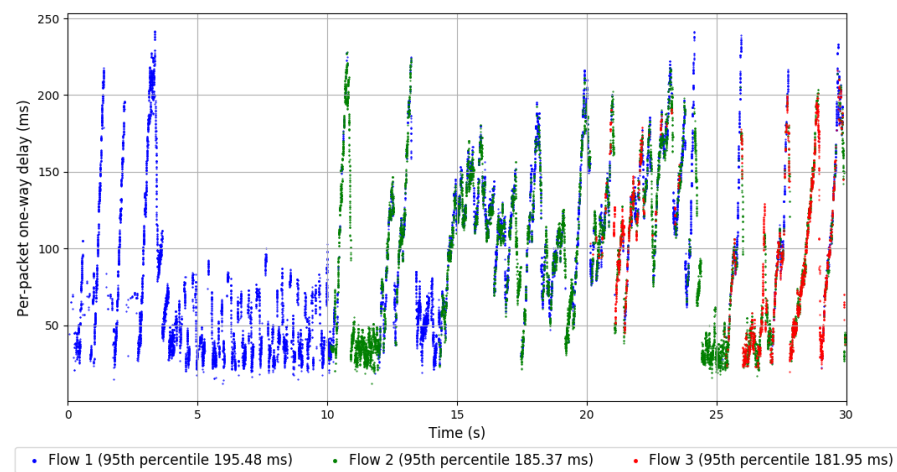
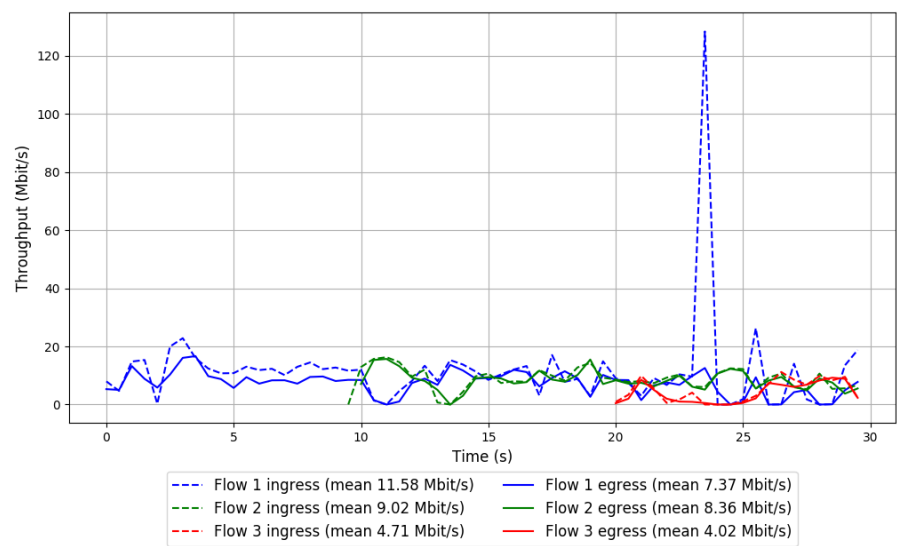


Run 1: Statistics of Verus

Start at: 2018-01-18 11:29:32
End at: 2018-01-18 11:30:02
Local clock offset: 2.284 ms
Remote clock offset: -2.603 ms

Below is generated by plot.py at 2018-01-18 13:32:42
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.24 Mbit/s
95th percentile per-packet one-way delay: 190.198 ms
Loss rate: 25.82%
-- Flow 1:
Average throughput: 7.37 Mbit/s
95th percentile per-packet one-way delay: 195.481 ms
Loss rate: 36.69%
-- Flow 2:
Average throughput: 8.36 Mbit/s
95th percentile per-packet one-way delay: 185.372 ms
Loss rate: 7.50%
-- Flow 3:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 181.946 ms
Loss rate: 15.81%

Run 1: Report of Verus — Data Link

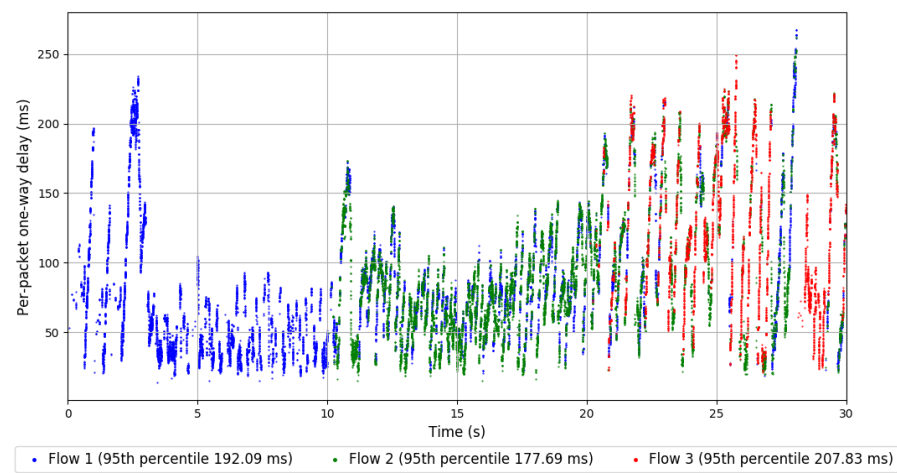
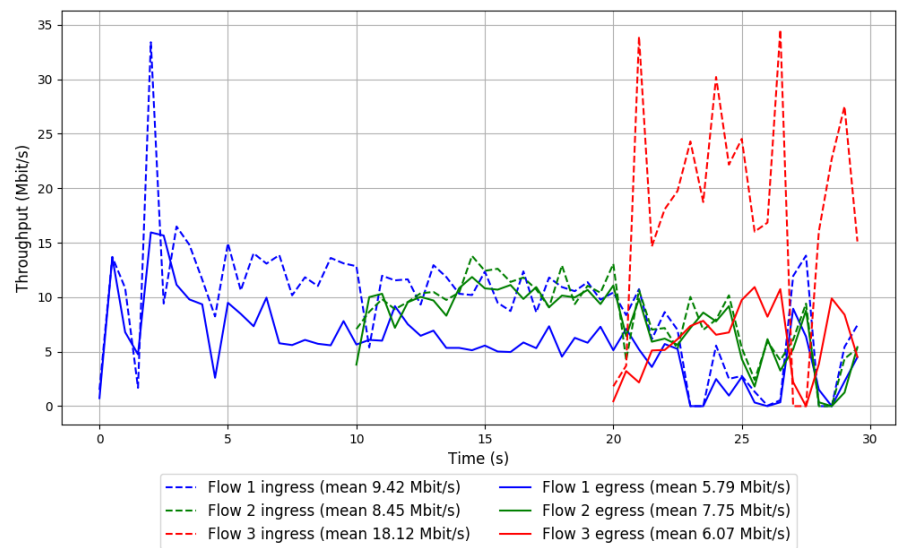


Run 2: Statistics of Verus

Start at: 2018-01-18 11:51:05
End at: 2018-01-18 11:51:35
Local clock offset: 2.094 ms
Remote clock offset: -2.481 ms

Below is generated by plot.py at 2018-01-18 13:32:43
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.94 Mbit/s
95th percentile per-packet one-way delay: 194.848 ms
Loss rate: 38.63%
-- Flow 1:
Average throughput: 5.79 Mbit/s
95th percentile per-packet one-way delay: 192.090 ms
Loss rate: 38.67%
-- Flow 2:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 177.690 ms
Loss rate: 8.20%
-- Flow 3:
Average throughput: 6.07 Mbit/s
95th percentile per-packet one-way delay: 207.828 ms
Loss rate: 66.93%

Run 2: Report of Verus — Data Link

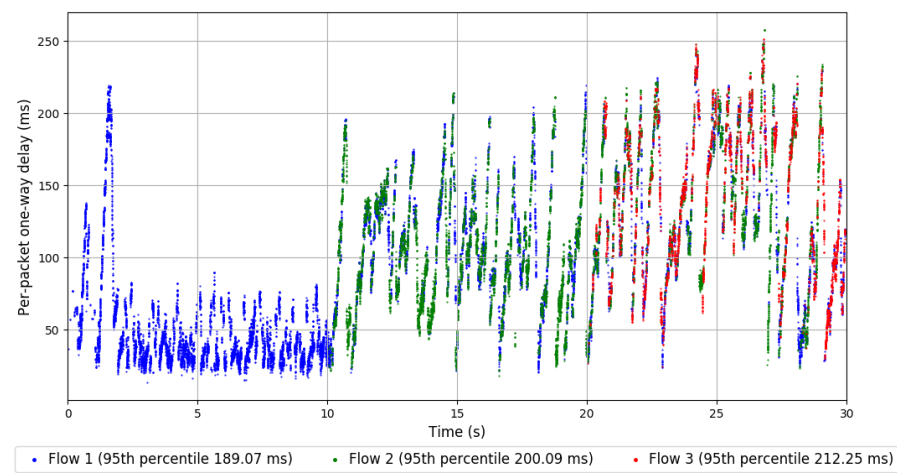
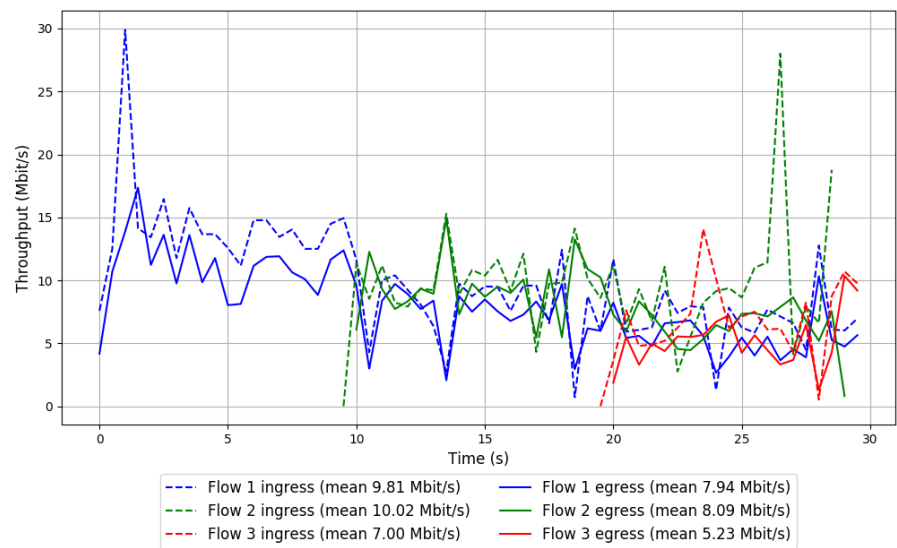


Run 3: Statistics of Verus

Start at: 2018-01-18 12:12:37
End at: 2018-01-18 12:13:07
Local clock offset: 1.986 ms
Remote clock offset: -2.583 ms

Below is generated by plot.py at 2018-01-18 13:32:44
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.82 Mbit/s
95th percentile per-packet one-way delay: 198.721 ms
Loss rate: 19.75%
-- Flow 1:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 189.068 ms
Loss rate: 19.20%
-- Flow 2:
Average throughput: 8.09 Mbit/s
95th percentile per-packet one-way delay: 200.094 ms
Loss rate: 18.43%
-- Flow 3:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 212.251 ms
Loss rate: 25.61%

Run 3: Report of Verus — Data Link

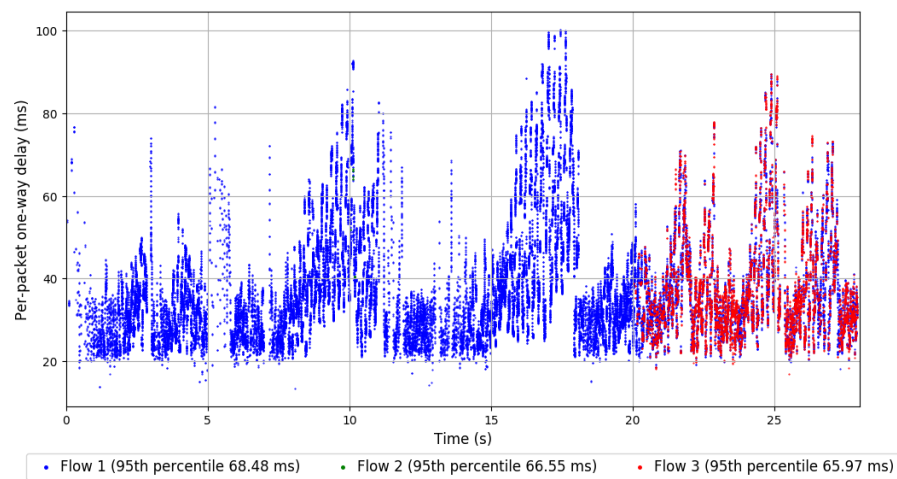
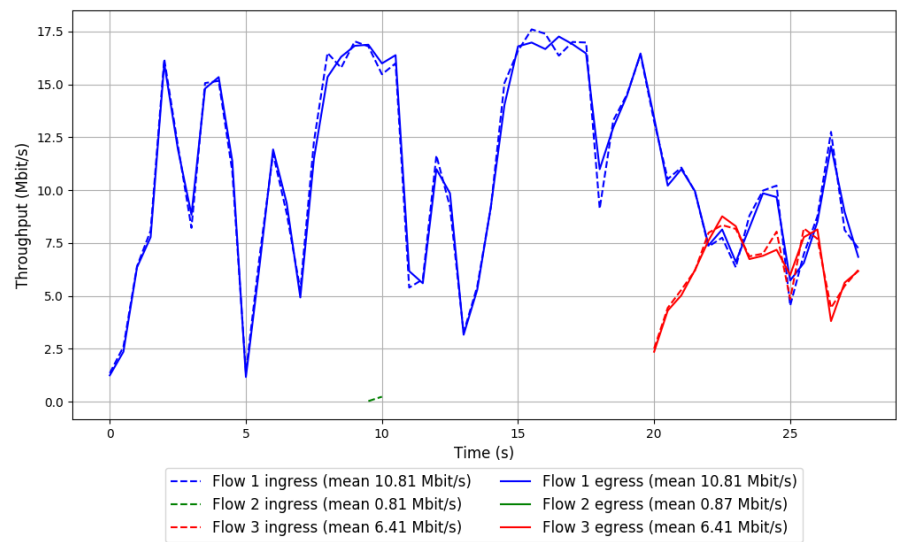


Run 1: Statistics of Copa

Start at: 2018-01-18 11:40:21
End at: 2018-01-18 11:40:51
Local clock offset: 2.176 ms
Remote clock offset: -2.509 ms

Below is generated by plot.py at 2018-01-18 13:32:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.63 Mbit/s
95th percentile per-packet one-way delay: 68.136 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 10.81 Mbit/s
95th percentile per-packet one-way delay: 68.481 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 66.550 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.41 Mbit/s
95th percentile per-packet one-way delay: 65.970 ms
Loss rate: 0.76%

Run 1: Report of Copa — Data Link

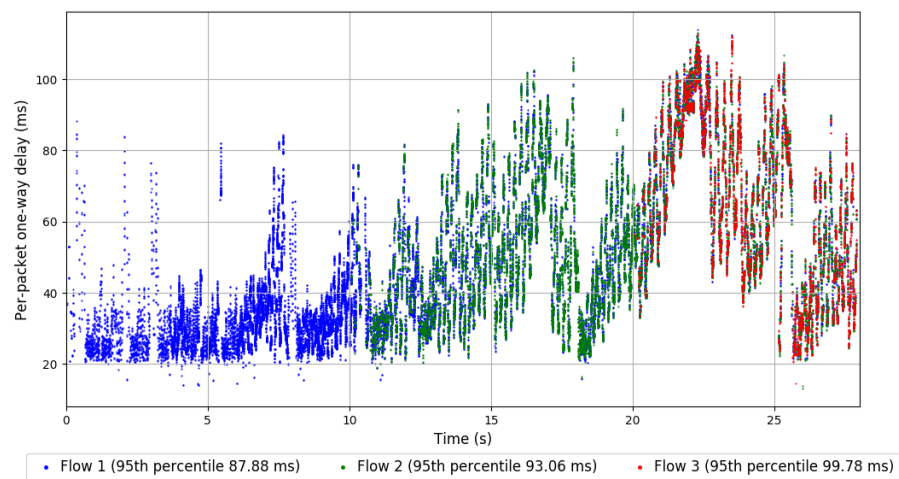
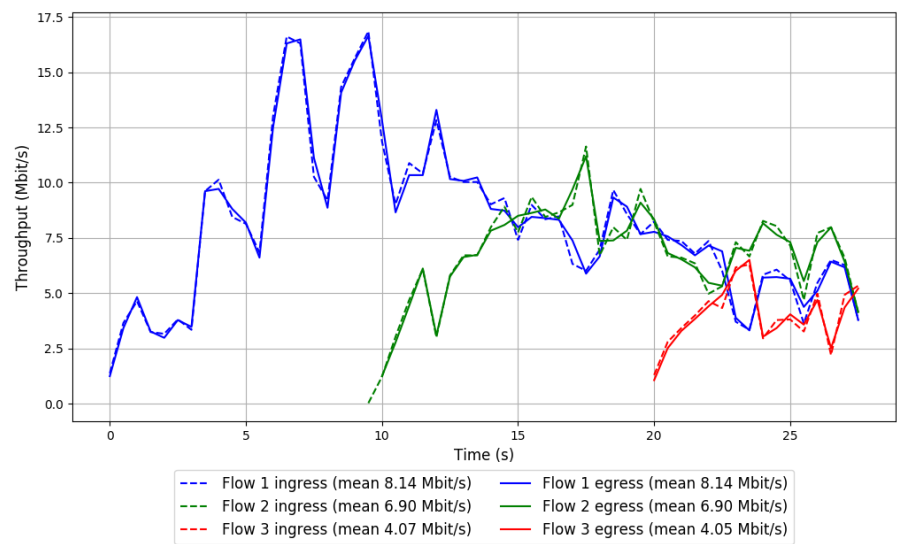


Run 2: Statistics of Copa

Start at: 2018-01-18 12:01:53
End at: 2018-01-18 12:02:23
Local clock offset: 2.061 ms
Remote clock offset: -2.432 ms

Below is generated by plot.py at 2018-01-18 13:32:56
Datalink statistics
-- Total of 3 flows:
Average throughput: 13.70 Mbit/s
95th percentile per-packet one-way delay: 92.509 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 87.882 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 6.90 Mbit/s
95th percentile per-packet one-way delay: 93.062 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 99.777 ms
Loss rate: 1.25%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

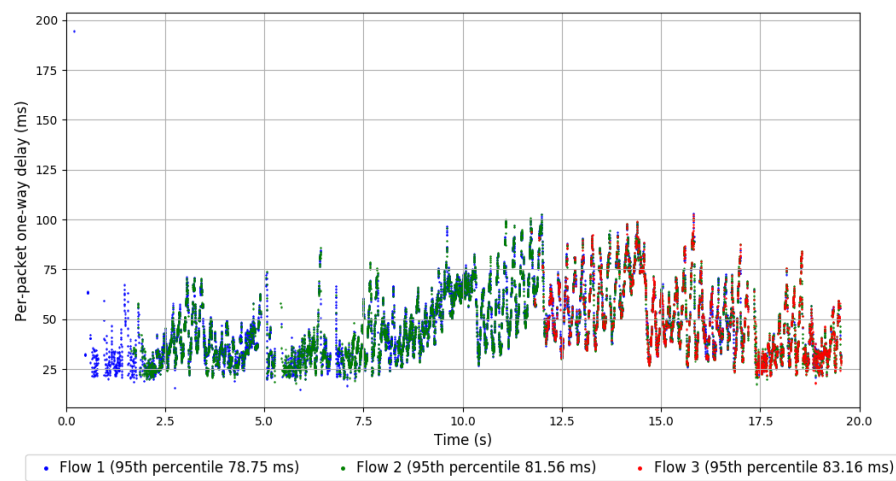
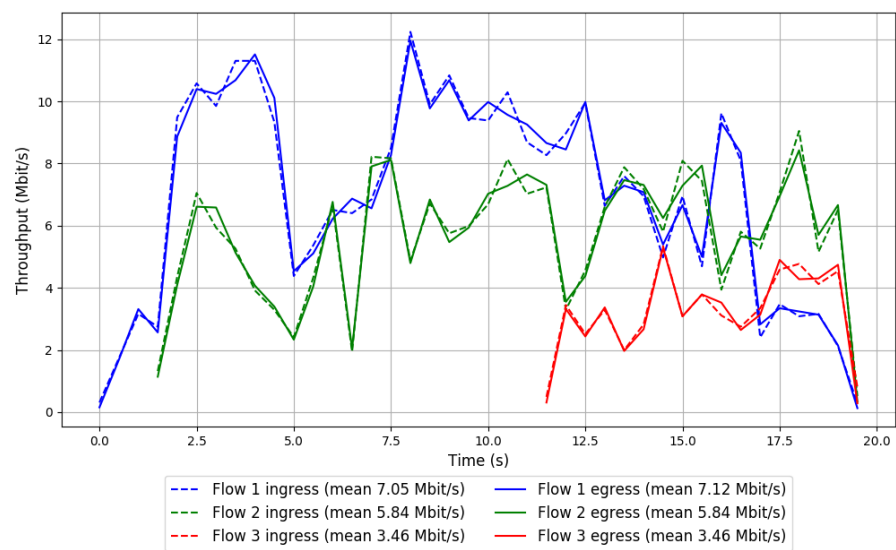
Start at: 2018-01-18 12:23:21

End at: 2018-01-18 12:23:51

Local clock offset: 1.708 ms

Remote clock offset: -2.264 ms

Run 3: Report of Copa — Data Link

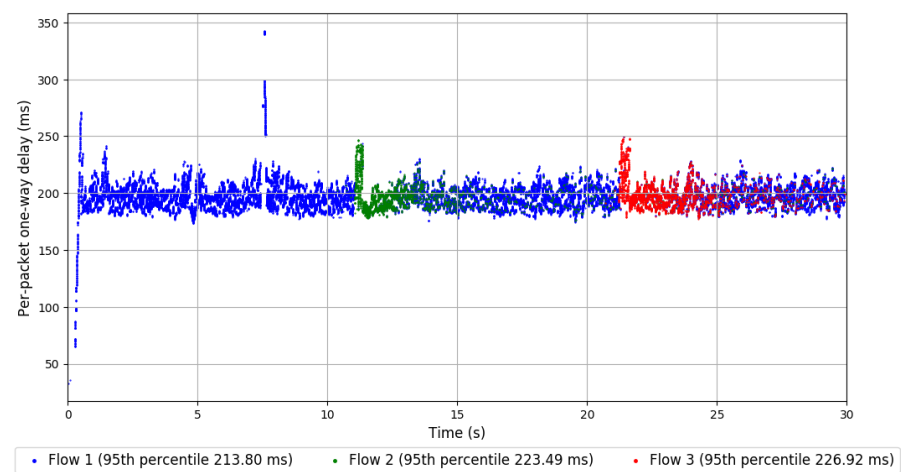
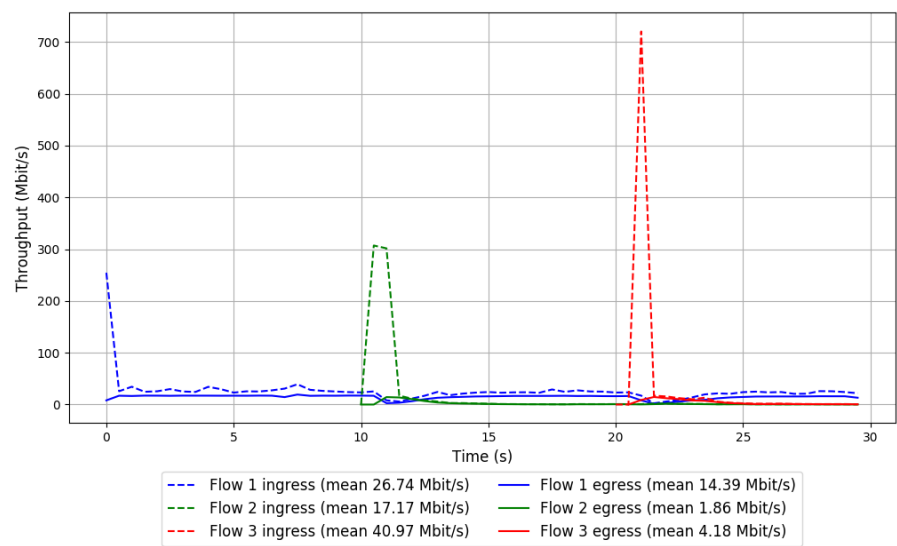


Run 1: Statistics of FillP

Start at: 2018-01-18 11:24:47
End at: 2018-01-18 11:25:17
Local clock offset: 2.327 ms
Remote clock offset: -2.613 ms

Below is generated by plot.py at 2018-01-18 13:33:15
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.89 Mbit/s
95th percentile per-packet one-way delay: 214.816 ms
Loss rate: 67.39%
-- Flow 1:
Average throughput: 14.39 Mbit/s
95th percentile per-packet one-way delay: 213.801 ms
Loss rate: 46.31%
-- Flow 2:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 223.486 ms
Loss rate: 89.39%
-- Flow 3:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 226.919 ms
Loss rate: 90.49%

Run 1: Report of FillP — Data Link

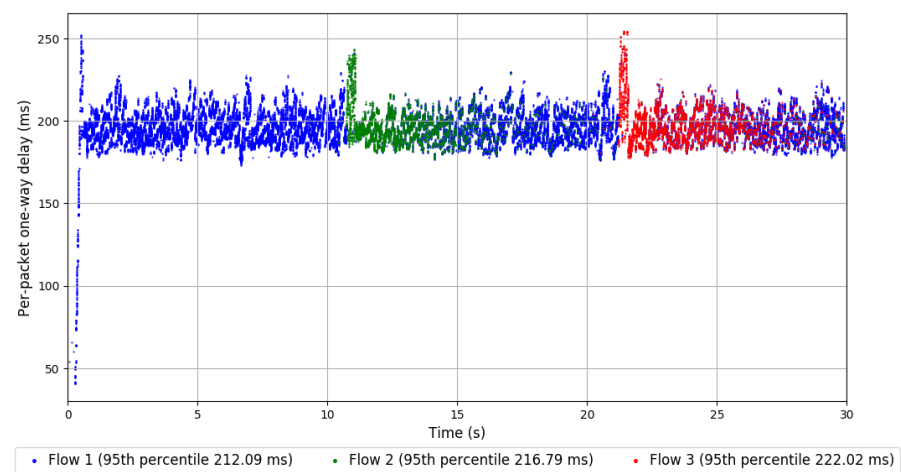
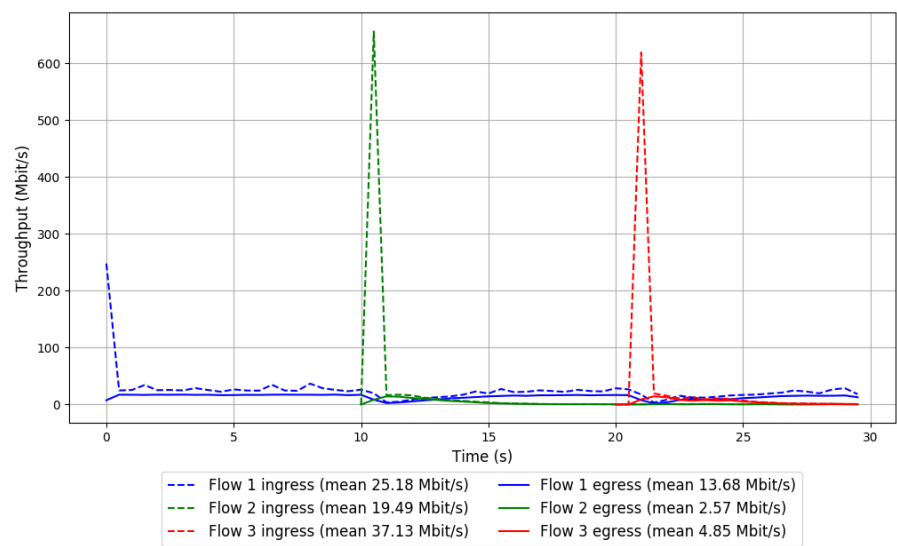


Run 2: Statistics of FillP

Start at: 2018-01-18 11:46:19
End at: 2018-01-18 11:46:49
Local clock offset: 2.133 ms
Remote clock offset: -2.395 ms

Below is generated by plot.py at 2018-01-18 13:33:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.94 Mbit/s
95th percentile per-packet one-way delay: 212.864 ms
Loss rate: 66.48%
-- Flow 1:
Average throughput: 13.68 Mbit/s
95th percentile per-packet one-way delay: 212.089 ms
Loss rate: 45.81%
-- Flow 2:
Average throughput: 2.57 Mbit/s
95th percentile per-packet one-way delay: 216.795 ms
Loss rate: 86.95%
-- Flow 3:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 222.017 ms
Loss rate: 87.29%

Run 2: Report of FillP — Data Link

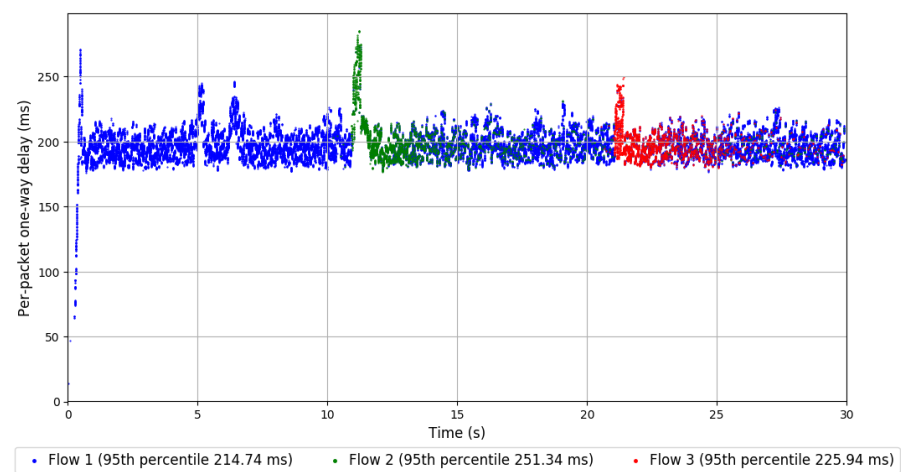
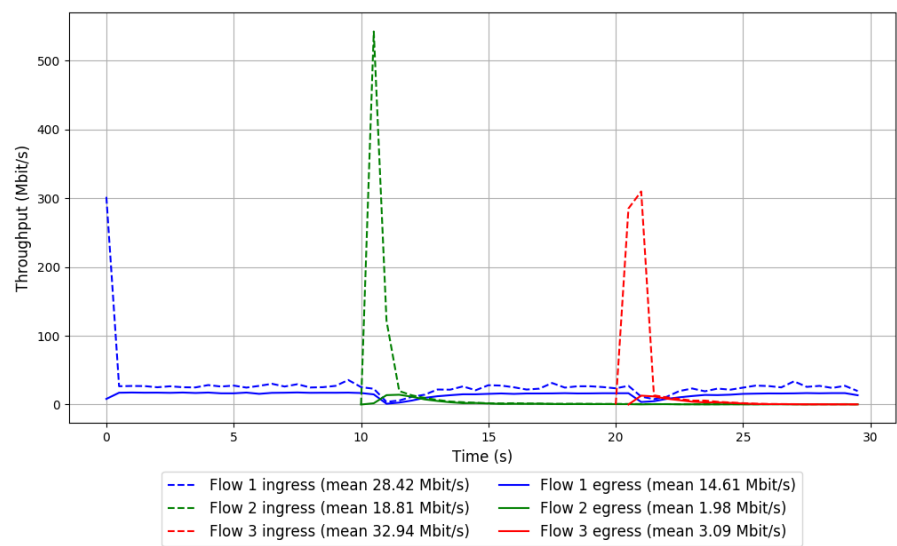


Run 3: Statistics of FillP

Start at: 2018-01-18 12:07:51
End at: 2018-01-18 12:08:21
Local clock offset: 2.026 ms
Remote clock offset: -2.537 ms

Below is generated by plot.py at 2018-01-18 13:33:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.88 Mbit/s
95th percentile per-packet one-way delay: 216.090 ms
Loss rate: 67.47%
-- Flow 1:
Average throughput: 14.61 Mbit/s
95th percentile per-packet one-way delay: 214.740 ms
Loss rate: 48.63%
-- Flow 2:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 251.335 ms
Loss rate: 89.61%
-- Flow 3:
Average throughput: 3.09 Mbit/s
95th percentile per-packet one-way delay: 225.944 ms
Loss rate: 91.19%

Run 3: Report of FillP — Data Link

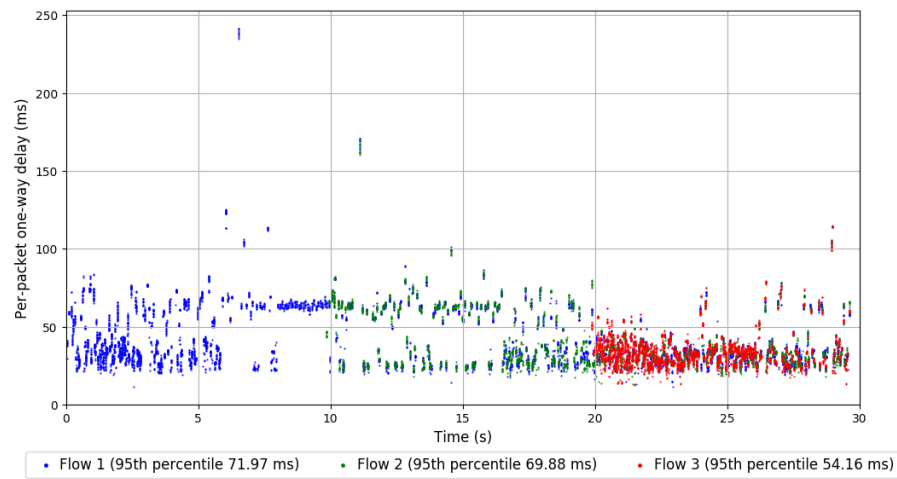
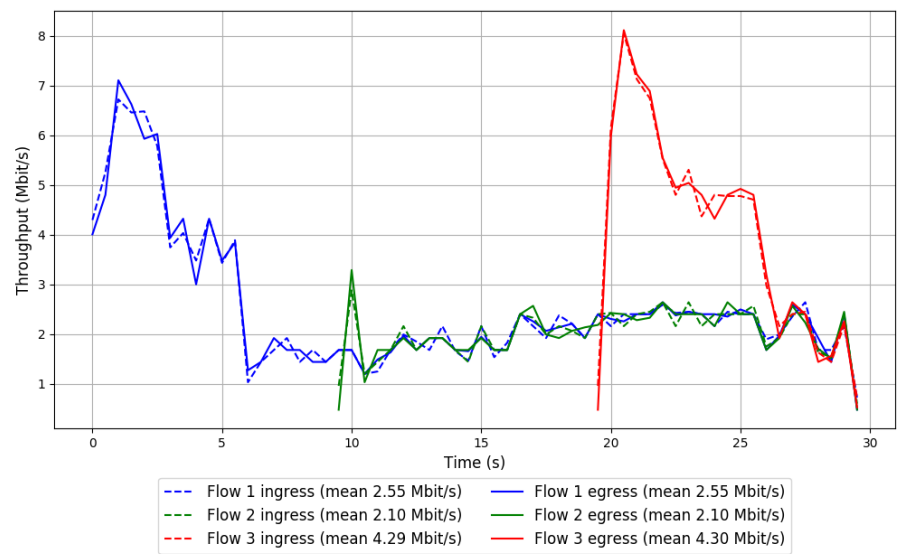


```
Run 1: Statistics of Indigo

Start at: 2018-01-18 11:34:20
End at: 2018-01-18 11:34:50
Local clock offset: 2.254 ms
Remote clock offset: -2.634 ms

# Below is generated by plot.py at 2018-01-18 13:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.37 Mbit/s
95th percentile per-packet one-way delay: 68.874 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 71.972 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 69.881 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 4.30 Mbit/s
95th percentile per-packet one-way delay: 54.158 ms
Loss rate: 0.29%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

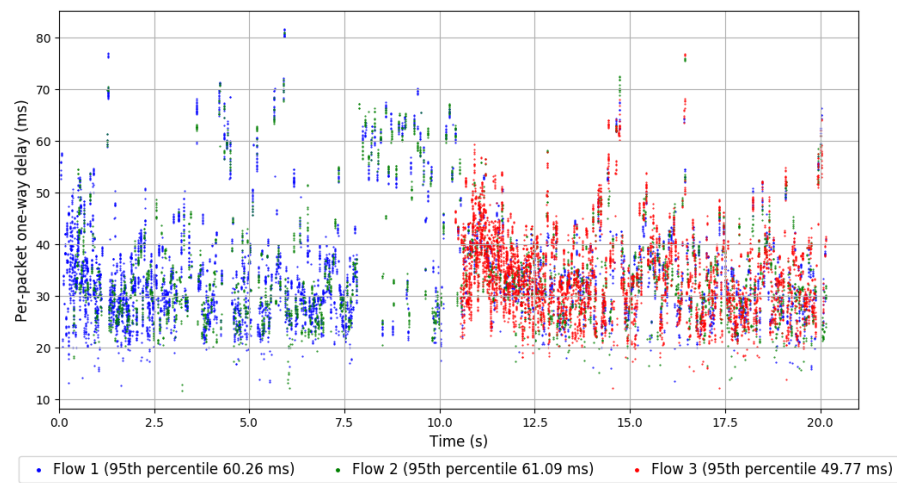
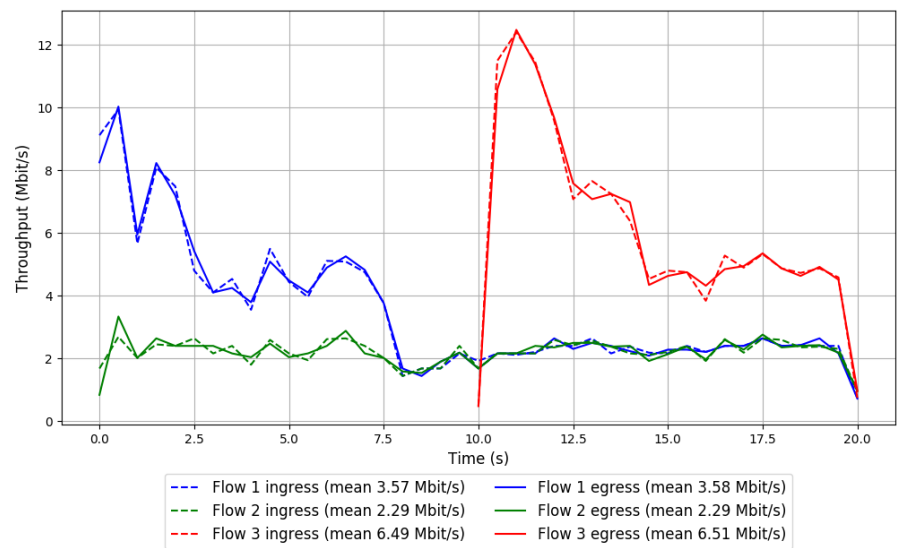
Start at: 2018-01-18 11:55:51

End at: 2018-01-18 11:56:21

Local clock offset: 2.056 ms

Remote clock offset: -2.489 ms

Run 2: Report of Indigo — Data Link

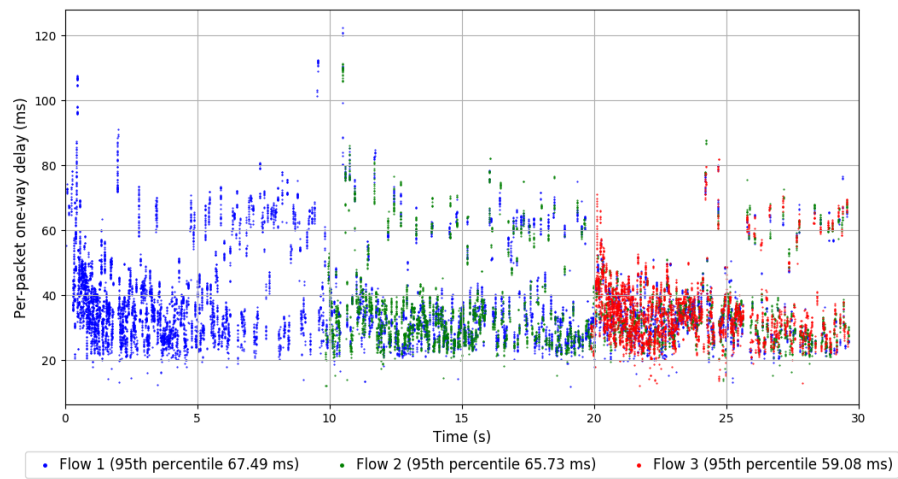
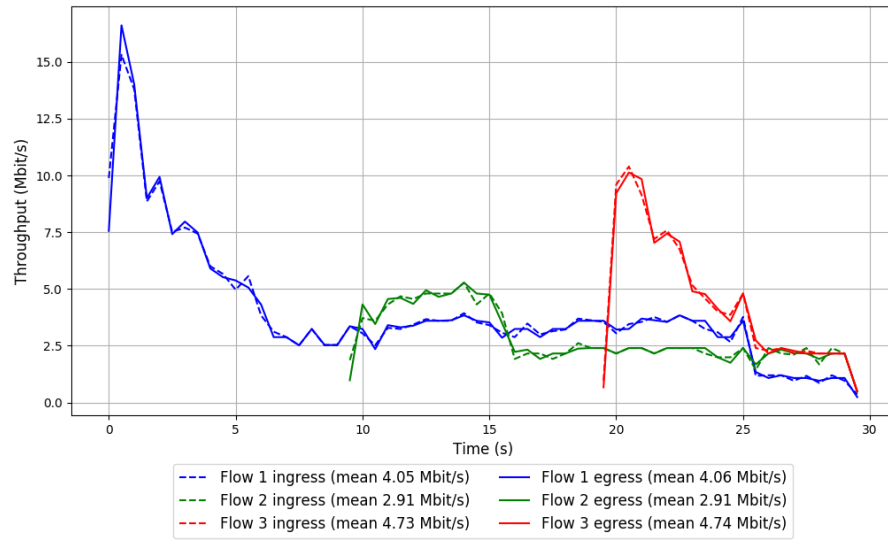


Run 3: Statistics of Indigo

Start at: 2018-01-18 12:17:24
End at: 2018-01-18 12:17:54
Local clock offset: 1.904 ms
Remote clock offset: -2.357 ms

Below is generated by plot.py at 2018-01-18 13:33:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 7.57 Mbit/s
95th percentile per-packet one-way delay: 65.828 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 67.494 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 2.91 Mbit/s
95th percentile per-packet one-way delay: 65.733 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 4.74 Mbit/s
95th percentile per-packet one-way delay: 59.075 ms
Loss rate: 0.26%

Run 3: Report of Indigo — Data Link

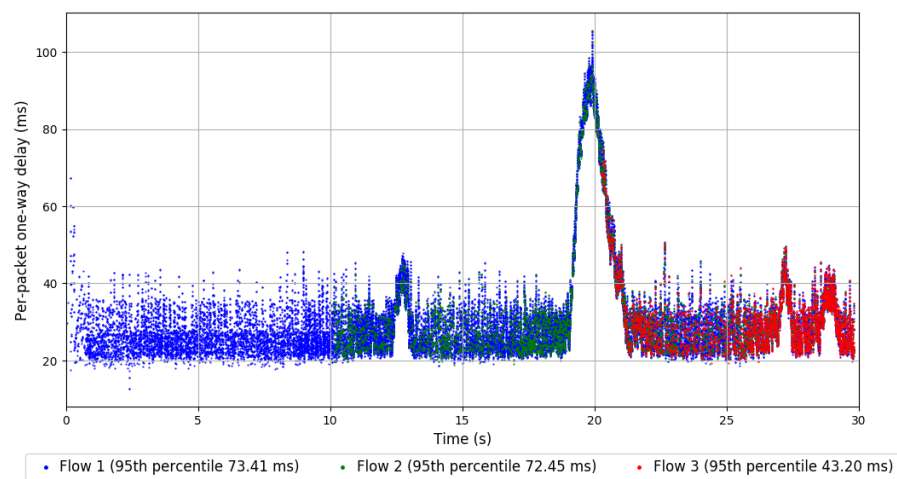
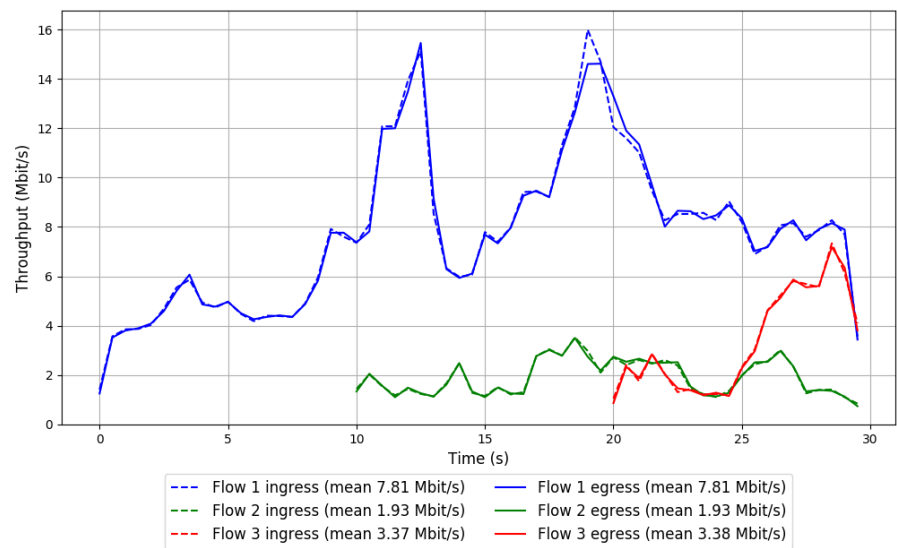


Run 1: Statistics of Vivace-latency

Start at: 2018-01-18 11:27:10
End at: 2018-01-18 11:27:40
Local clock offset: 2.205 ms
Remote clock offset: -2.665 ms

Below is generated by plot.py at 2018-01-18 13:33:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 10.19 Mbit/s
95th percentile per-packet one-way delay: 70.066 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 7.81 Mbit/s
95th percentile per-packet one-way delay: 73.414 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 72.451 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 3.38 Mbit/s
95th percentile per-packet one-way delay: 43.195 ms
Loss rate: 0.89%

Run 1: Report of Vivace-latency — Data Link

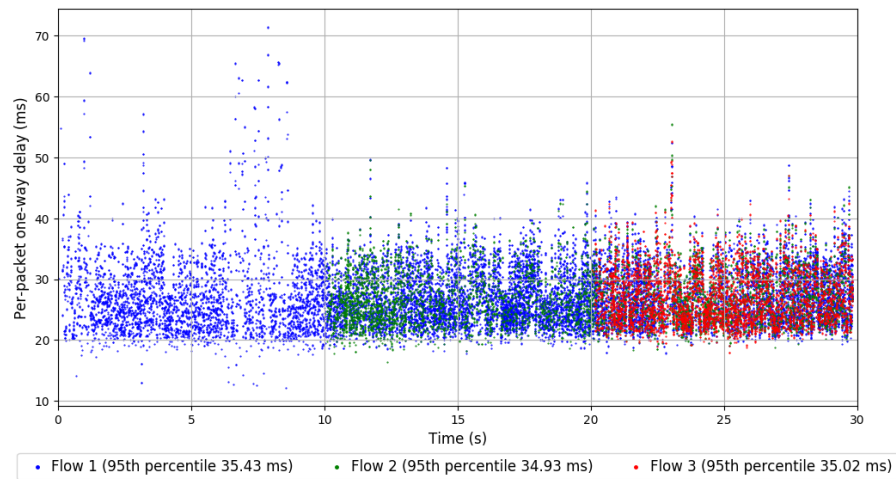
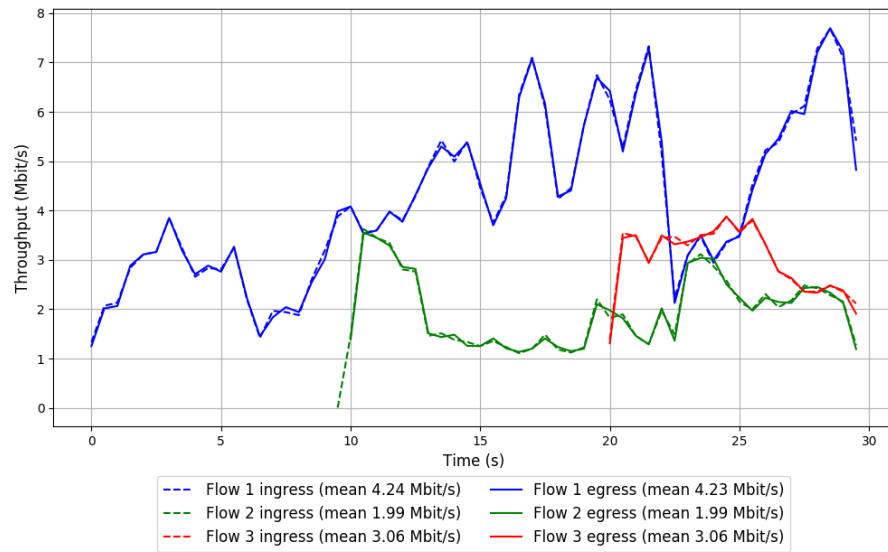


Run 2: Statistics of Vivace-latency

Start at: 2018-01-18 11:48:42
End at: 2018-01-18 11:49:12
Local clock offset: 2.077 ms
Remote clock offset: -2.441 ms

Below is generated by plot.py at 2018-01-18 13:33:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.56 Mbit/s
95th percentile per-packet one-way delay: 35.244 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 4.23 Mbit/s
95th percentile per-packet one-way delay: 35.430 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 34.934 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 3.06 Mbit/s
95th percentile per-packet one-way delay: 35.015 ms
Loss rate: 0.56%

Run 2: Report of Vivace-latency — Data Link

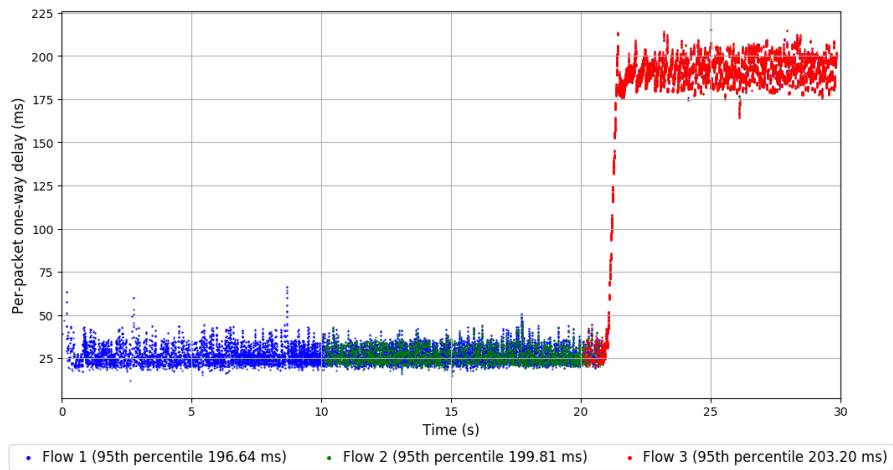
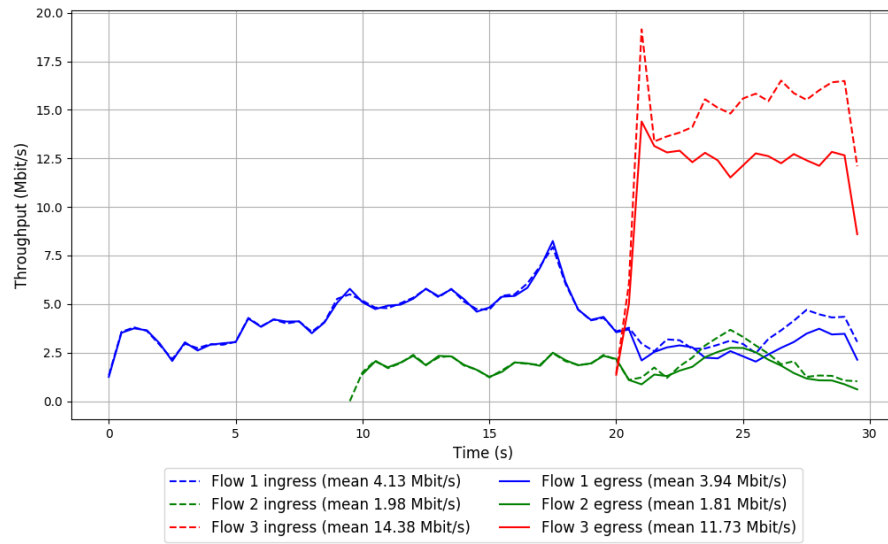


Run 3: Statistics of Vivace-latency

Start at: 2018-01-18 12:10:15
End at: 2018-01-18 12:10:45
Local clock offset: 2.013 ms
Remote clock offset: -2.481 ms

Below is generated by plot.py at 2018-01-18 13:33:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 201.093 ms
Loss rate: 11.82%
-- Flow 1:
Average throughput: 3.94 Mbit/s
95th percentile per-packet one-way delay: 196.636 ms
Loss rate: 4.86%
-- Flow 2:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 199.812 ms
Loss rate: 8.62%
-- Flow 3:
Average throughput: 11.73 Mbit/s
95th percentile per-packet one-way delay: 203.197 ms
Loss rate: 18.77%

Run 3: Report of Vivace-latency — Data Link

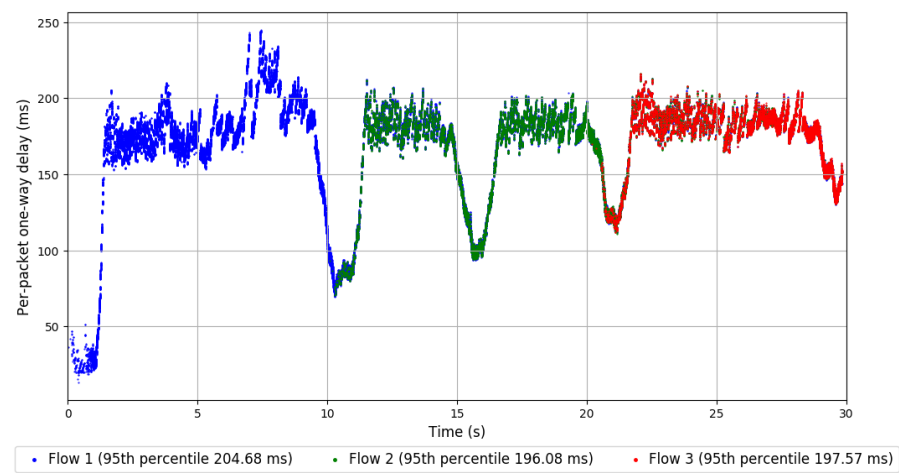
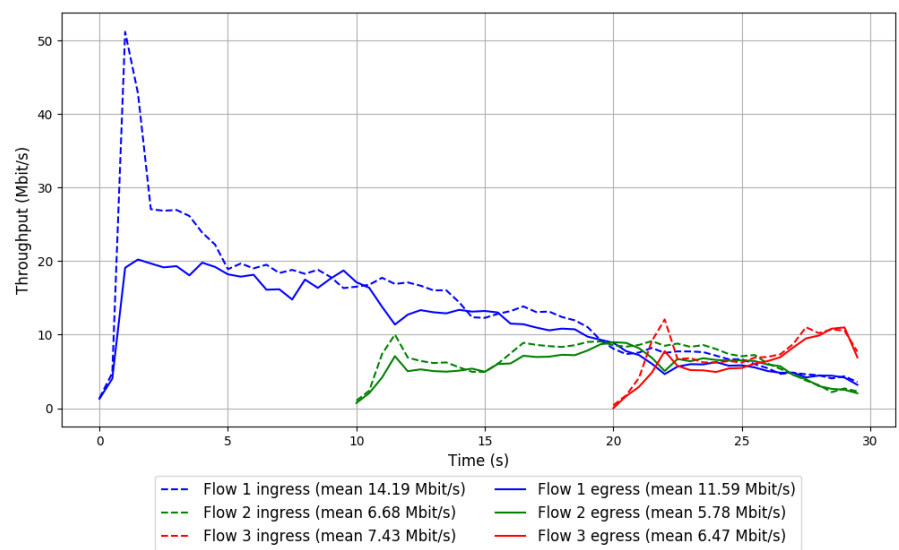


Run 1: Statistics of Vivace-loss

Start at: 2018-01-18 11:31:56
End at: 2018-01-18 11:32:26
Local clock offset: 2.26 ms
Remote clock offset: -2.583 ms

Below is generated by plot.py at 2018-01-18 13:33:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 17.51 Mbit/s
95th percentile per-packet one-way delay: 200.882 ms
Loss rate: 17.05%
-- Flow 1:
Average throughput: 11.59 Mbit/s
95th percentile per-packet one-way delay: 204.675 ms
Loss rate: 18.44%
-- Flow 2:
Average throughput: 5.78 Mbit/s
95th percentile per-packet one-way delay: 196.084 ms
Loss rate: 13.96%
-- Flow 3:
Average throughput: 6.47 Mbit/s
95th percentile per-packet one-way delay: 197.569 ms
Loss rate: 14.60%

Run 1: Report of Vivace-loss — Data Link

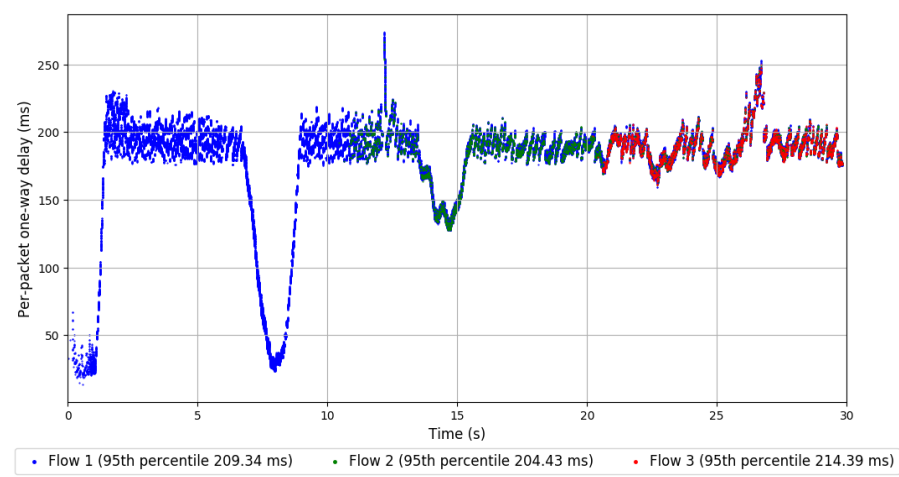
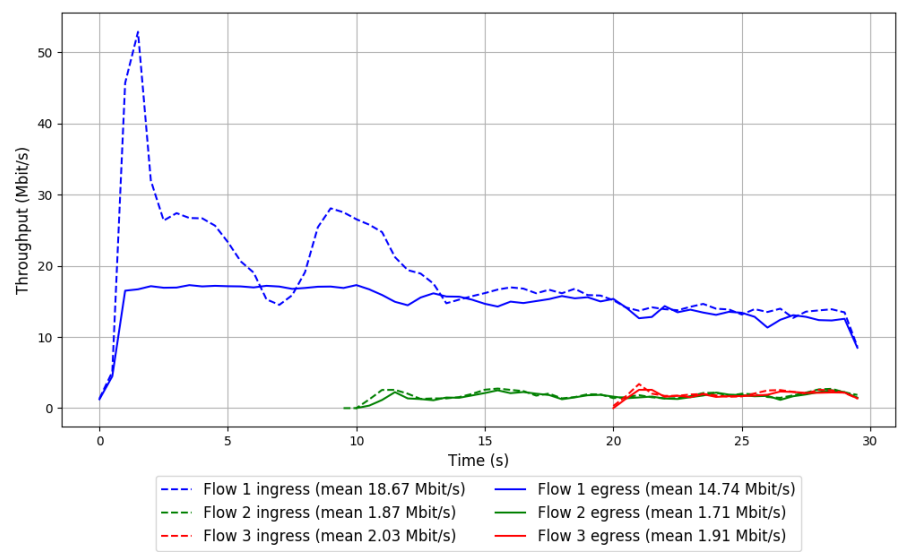


Run 2: Statistics of Vivace-loss

Start at: 2018-01-18 11:53:28
End at: 2018-01-18 11:53:58
Local clock offset: 2.057 ms
Remote clock offset: -2.428 ms

Below is generated by plot.py at 2018-01-18 13:33:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.47 Mbit/s
95th percentile per-packet one-way delay: 209.199 ms
Loss rate: 20.13%
-- Flow 1:
Average throughput: 14.74 Mbit/s
95th percentile per-packet one-way delay: 209.345 ms
Loss rate: 21.19%
-- Flow 2:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 204.425 ms
Loss rate: 10.58%
-- Flow 3:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 214.388 ms
Loss rate: 8.25%

Run 2: Report of Vivace-loss — Data Link

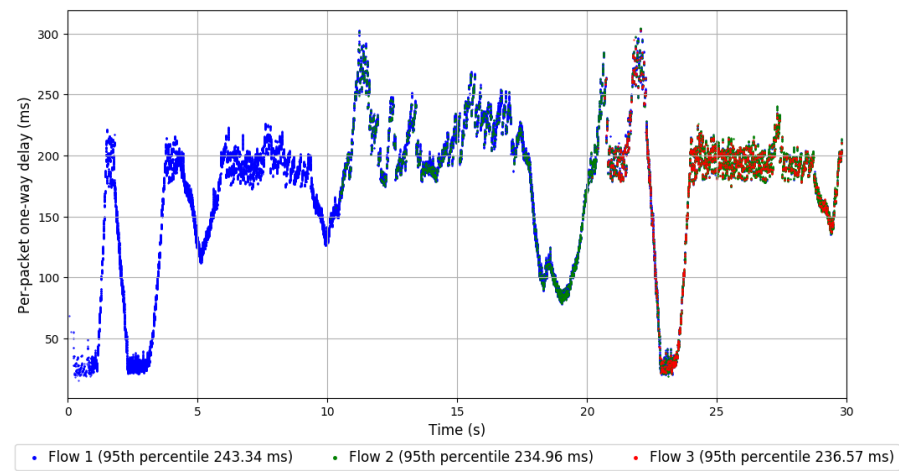
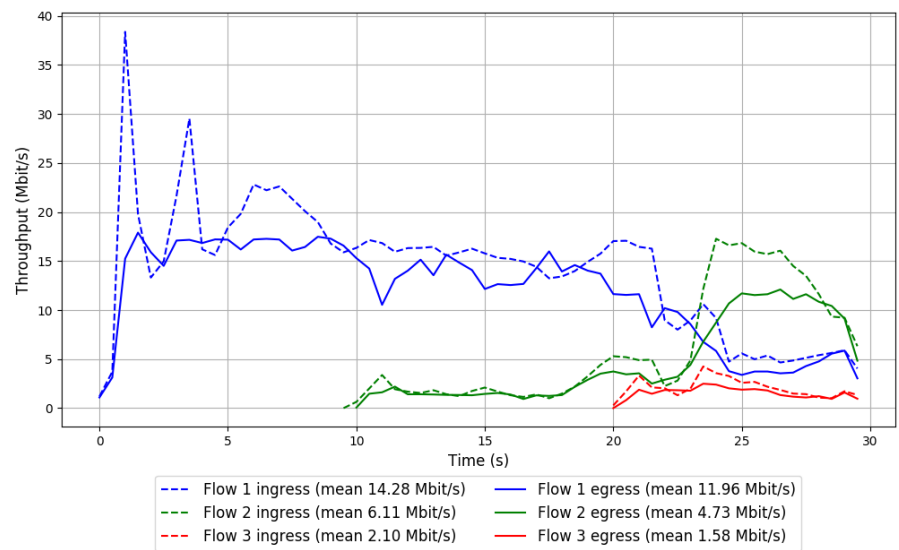


Run 3: Statistics of Vivace-loss

Start at: 2018-01-18 12:15:01
End at: 2018-01-18 12:15:31
Local clock offset: 1.941 ms
Remote clock offset: -2.467 ms

Below is generated by plot.py at 2018-01-18 13:33:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 15.61 Mbit/s
95th percentile per-packet one-way delay: 242.196 ms
Loss rate: 18.30%
-- Flow 1:
Average throughput: 11.96 Mbit/s
95th percentile per-packet one-way delay: 243.337 ms
Loss rate: 16.51%
-- Flow 2:
Average throughput: 4.73 Mbit/s
95th percentile per-packet one-way delay: 234.959 ms
Loss rate: 23.26%
-- Flow 3:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 236.571 ms
Loss rate: 26.06%

Run 3: Report of Vivace-loss — Data Link

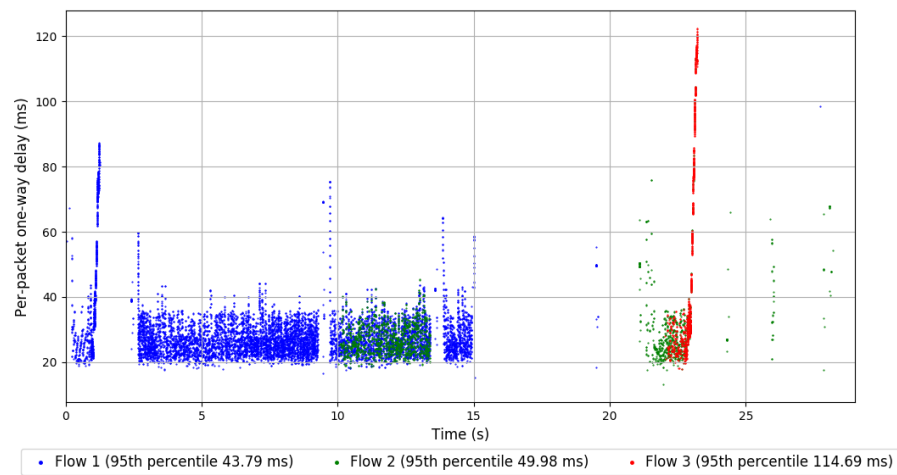
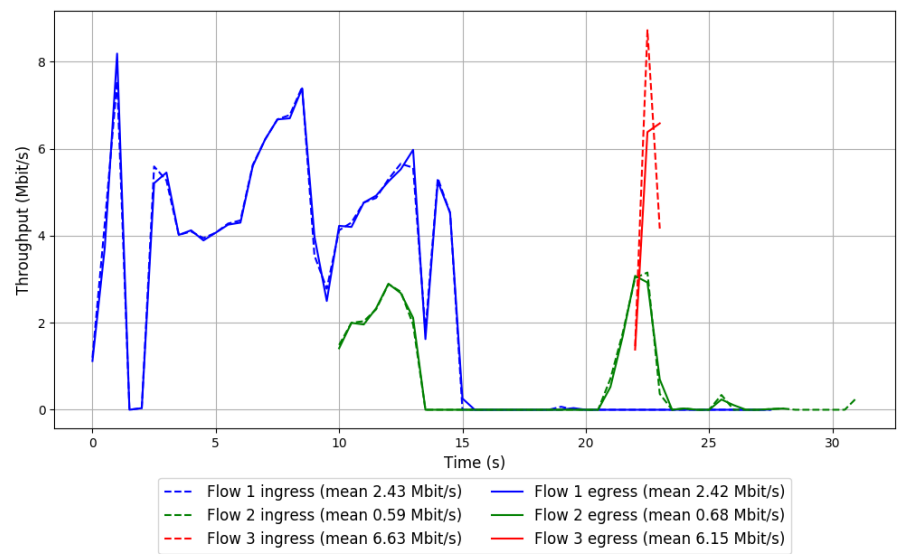


Run 1: Statistics of Vivace-LTE

Start at: 2018-01-18 11:35:31
End at: 2018-01-18 11:36:01
Local clock offset: 2.237 ms
Remote clock offset: -2.588 ms

Below is generated by plot.py at 2018-01-18 13:33:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.07 Mbit/s
95th percentile per-packet one-way delay: 67.348 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 43.791 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 49.977 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 6.15 Mbit/s
95th percentile per-packet one-way delay: 114.686 ms
Loss rate: 0.00%

Run 1: Report of Vivace-LTE — Data Link

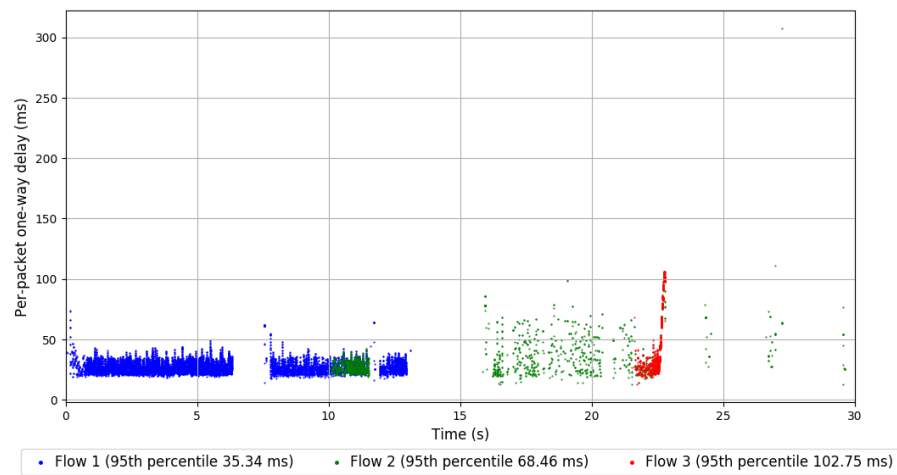
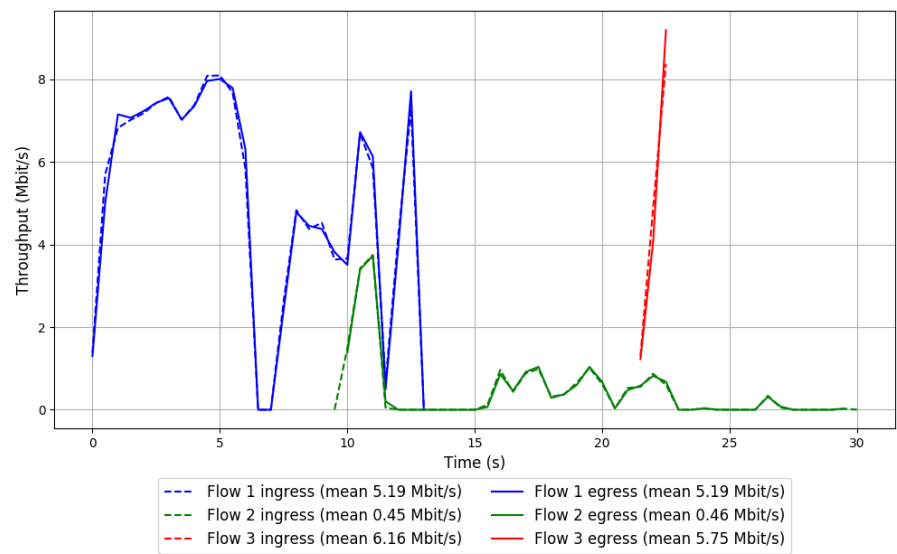


Run 2: Statistics of Vivace-LTE

Start at: 2018-01-18 11:57:03
End at: 2018-01-18 11:57:33
Local clock offset: 1.953 ms
Remote clock offset: -2.496 ms

Below is generated by plot.py at 2018-01-18 13:33:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 50.498 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 5.19 Mbit/s
95th percentile per-packet one-way delay: 35.340 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 68.458 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 102.753 ms
Loss rate: 0.57%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-01-18 12:18:36
End at: 2018-01-18 12:19:06
Local clock offset: 1.878 ms
Remote clock offset: -2.373 ms

Below is generated by plot.py at 2018-01-18 13:33:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 36.599 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 43.57 Mbit/s
95th percentile per-packet one-way delay: 4289.588 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 36.281 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 37.253 ms
Loss rate: 1.55%

Run 3: Report of Vivace-LTE — Data Link

