

Pantheon Report

Generated at 2018-04-11 02:44:46 (UTC).

Data path: China Ethernet (*remote*) → AWS Korea Ethernet (*local*).

Repeated the test of 17 congestion control schemes 10 times.

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

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

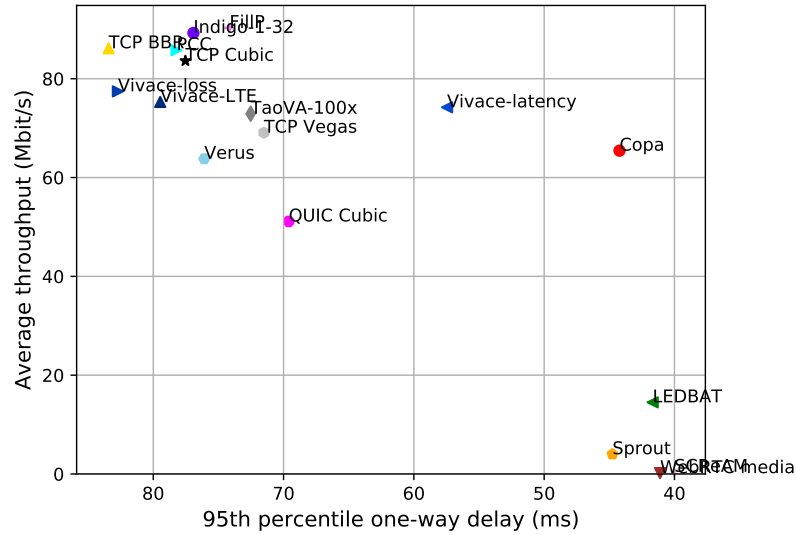
Tested BBR with qdisc of Fair Queuing (*fq*), and other schemes with the default Linux qdisc (*pfifo_fast*).

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

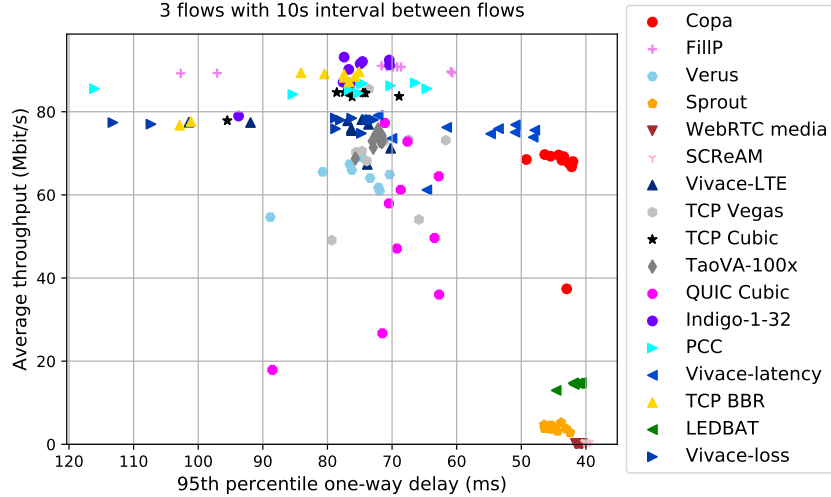
Git summary:

```
branch: master @ eb420b5be9bafccd22cf68b99ff5a2000462fc59
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822eee5d0031620f4bebf38aedc5581
```

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



test from China Ethernet to AWS Korea Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	9	52.54	36.84	28.26	81.85	83.83	86.06	0.59	1.36	3.14
TCP Cubic	9	49.72	38.45	25.76	75.96	77.65	80.33	0.58	1.39	4.08
LEDBAT	10	9.44	6.22	2.92	41.53	41.76	41.78	1.19	1.87	3.77
PCC	9	57.29	31.81	24.51	75.91	79.14	82.42	2.01	3.46	6.78
QUIC Cubic	10	21.30	35.45	19.47	55.66	68.54	70.69	0.46	1.10	3.70
SCReAM	9	0.22	0.22	0.22	39.95	39.90	39.79	0.64	1.03	1.87
WebRTC media	10	0.07	0.07	0.06	41.24	41.04	40.98	0.00	0.00	0.15
Sprout	10	2.22	1.91	1.61	44.03	44.76	44.04	0.73	1.55	3.39
TaoVA-100x	9	44.57	34.88	15.99	70.66	73.41	77.44	1.80	3.10	4.65
TCP Vegas	10	36.31	33.78	31.71	67.87	72.47	73.35	0.56	0.90	2.36
Verus	9	36.10	33.30	17.50	74.34	76.36	80.30	0.95	1.36	4.00
Copa	10	43.76	25.56	14.43	44.62	44.19	43.13	0.39	1.10	2.81
FillP	10	50.35	44.31	32.44	70.64	74.48	76.34	1.02	2.61	10.13
Indigo-1-32	9	61.36	30.48	24.03	75.88	77.05	77.94	0.67	1.22	2.80
Vivace-latency	10	62.17	15.24	5.98	57.17	57.77	57.57	1.00	2.50	3.96
Vivace-loss	10	51.56	28.74	21.10	81.54	83.60	83.32	1.76	6.33	9.42
Vivace-LTE	9	52.04	25.90	18.83	78.09	80.05	82.07	1.38	2.47	5.18

Run 1: Statistics of TCP BBR

Start at: 2018-04-10 18:30:38

End at: 2018-04-10 18:31:08

Local clock offset: 1.049 ms

Remote clock offset: 0.37 ms

Below is generated by plot.py at 2018-04-11 02:24:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.98 Mbit/s

95th percentile per-packet one-way delay: 77.422 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 54.17 Mbit/s

95th percentile per-packet one-way delay: 75.764 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 38.04 Mbit/s

95th percentile per-packet one-way delay: 77.647 ms

Loss rate: 1.10%

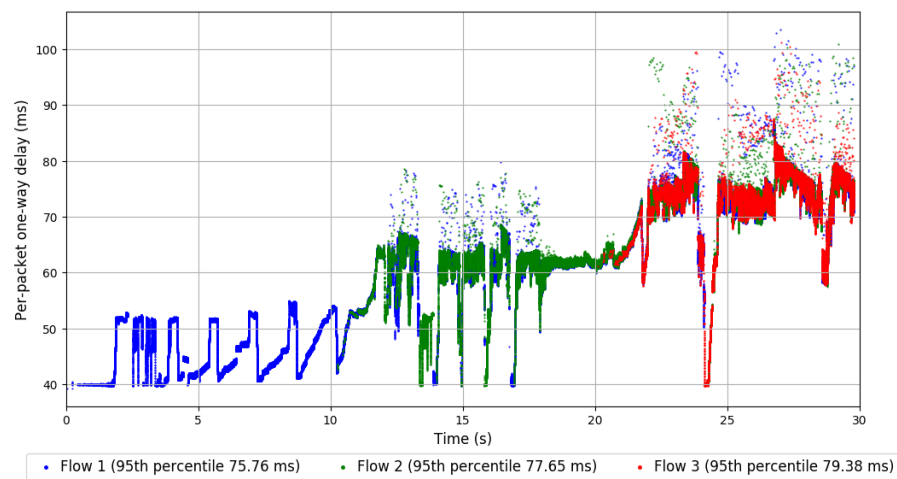
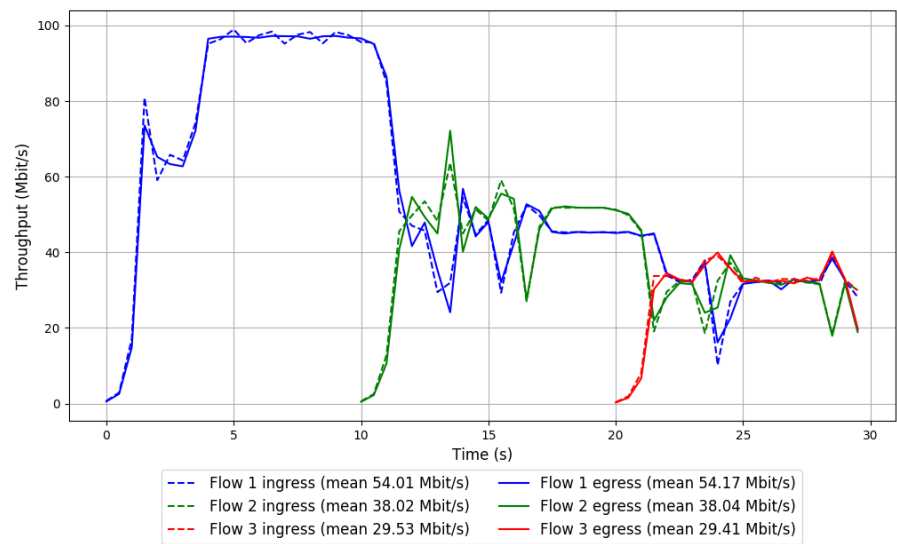
-- Flow 3:

Average throughput: 29.41 Mbit/s

95th percentile per-packet one-way delay: 79.383 ms

Loss rate: 2.67%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-04-10 18:55:00

End at: 2018-04-10 18:55:30

Local clock offset: 1.308 ms

Remote clock offset: 0.775 ms

Below is generated by plot.py at 2018-04-11 02:24:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.11 Mbit/s

95th percentile per-packet one-way delay: 80.450 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 54.48 Mbit/s

95th percentile per-packet one-way delay: 78.289 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 37.76 Mbit/s

95th percentile per-packet one-way delay: 81.046 ms

Loss rate: 1.04%

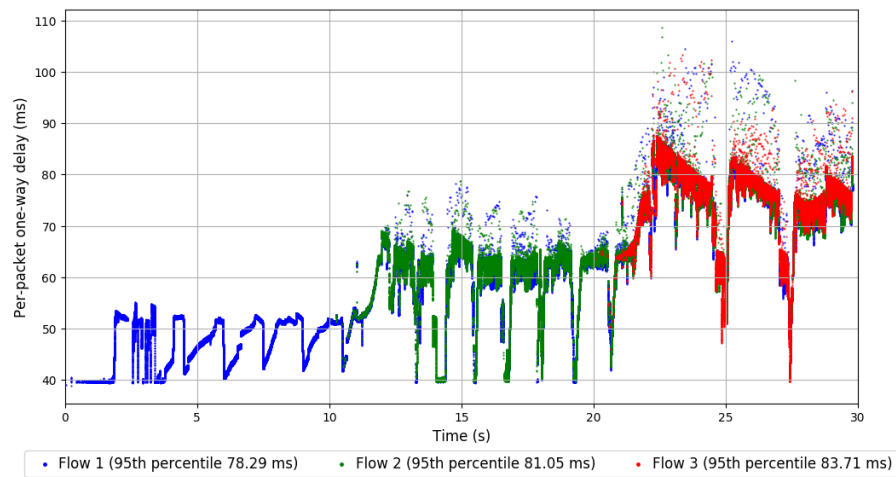
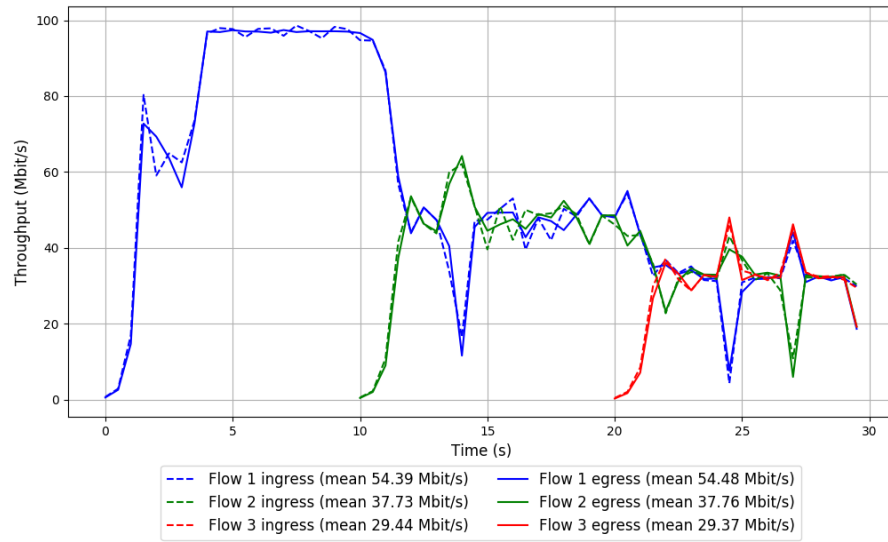
-- Flow 3:

Average throughput: 29.37 Mbit/s

95th percentile per-packet one-way delay: 83.708 ms

Loss rate: 2.60%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-04-10 19:19:27

End at: 2018-04-10 19:19:57

Local clock offset: 1.255 ms

Remote clock offset: 0.785 ms

Below is generated by plot.py at 2018-04-11 02:24:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.52 Mbit/s

95th percentile per-packet one-way delay: 75.747 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 53.11 Mbit/s

95th percentile per-packet one-way delay: 74.755 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 39.27 Mbit/s

95th percentile per-packet one-way delay: 75.846 ms

Loss rate: 0.92%

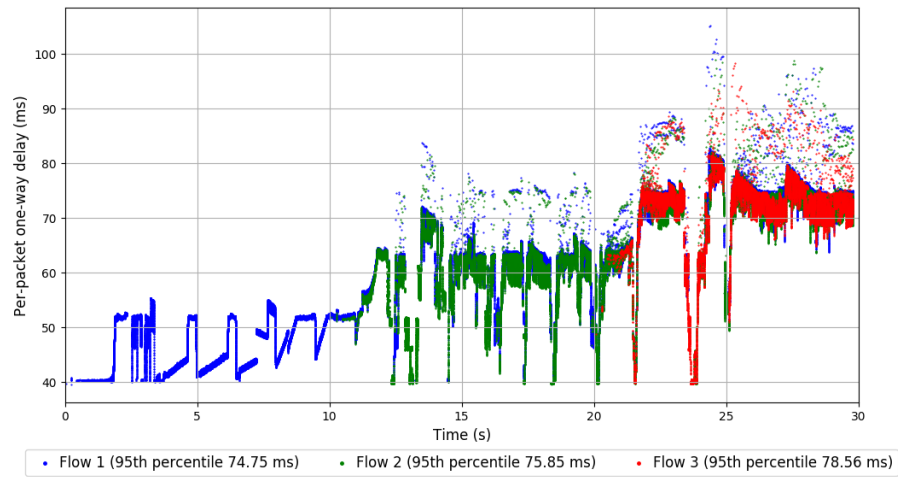
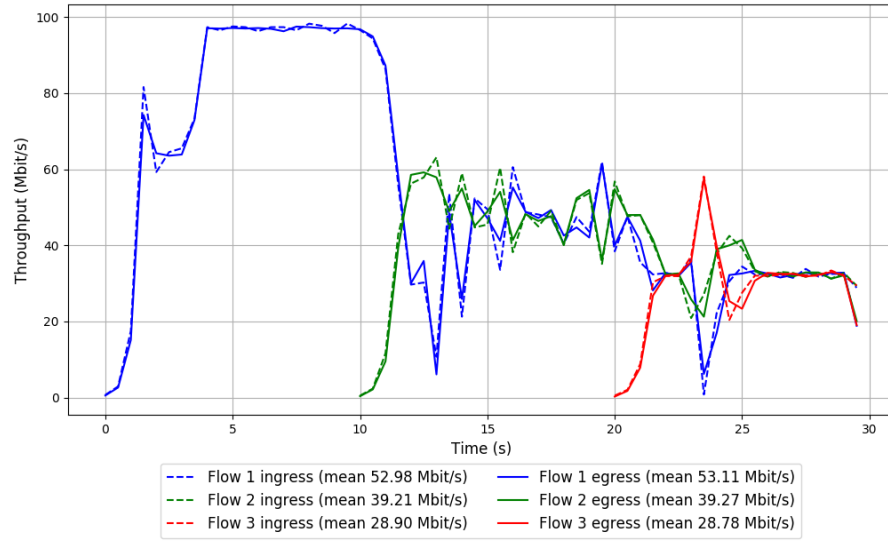
-- Flow 3:

Average throughput: 28.78 Mbit/s

95th percentile per-packet one-way delay: 78.556 ms

Loss rate: 2.64%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-04-10 19:44:20

End at: 2018-04-10 19:44:50

Local clock offset: 2.19 ms

Remote clock offset: 0.591 ms

Below is generated by plot.py at 2018-04-11 02:24:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.59 Mbit/s

95th percentile per-packet one-way delay: 75.091 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 54.01 Mbit/s

95th percentile per-packet one-way delay: 74.620 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 39.51 Mbit/s

95th percentile per-packet one-way delay: 75.033 ms

Loss rate: 1.64%

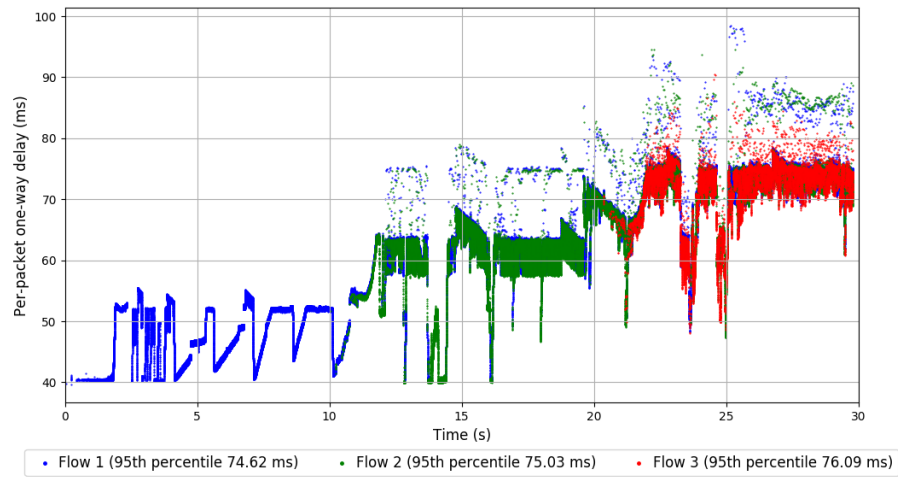
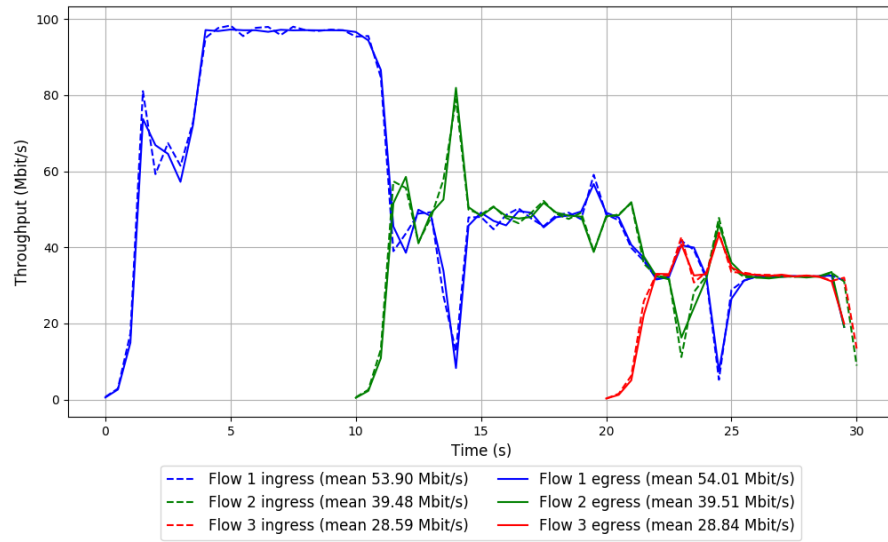
-- Flow 3:

Average throughput: 28.84 Mbit/s

95th percentile per-packet one-way delay: 76.091 ms

Loss rate: 5.15%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-04-10 20:08:46

End at: 2018-04-10 20:09:16

Local clock offset: 1.281 ms

Remote clock offset: 7.534 ms

Below is generated by plot.py at 2018-04-11 02:24:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.28 Mbit/s

95th percentile per-packet one-way delay: 77.394 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 54.39 Mbit/s

95th percentile per-packet one-way delay: 75.920 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 37.28 Mbit/s

95th percentile per-packet one-way delay: 77.984 ms

Loss rate: 0.97%

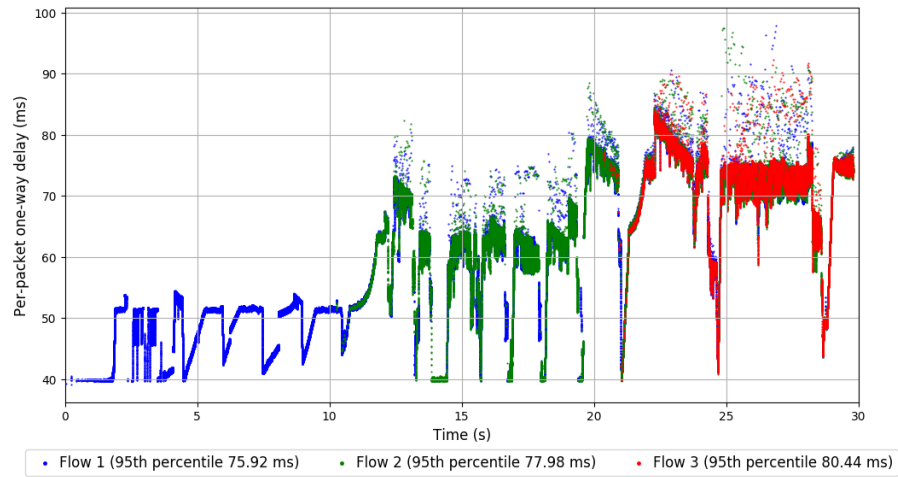
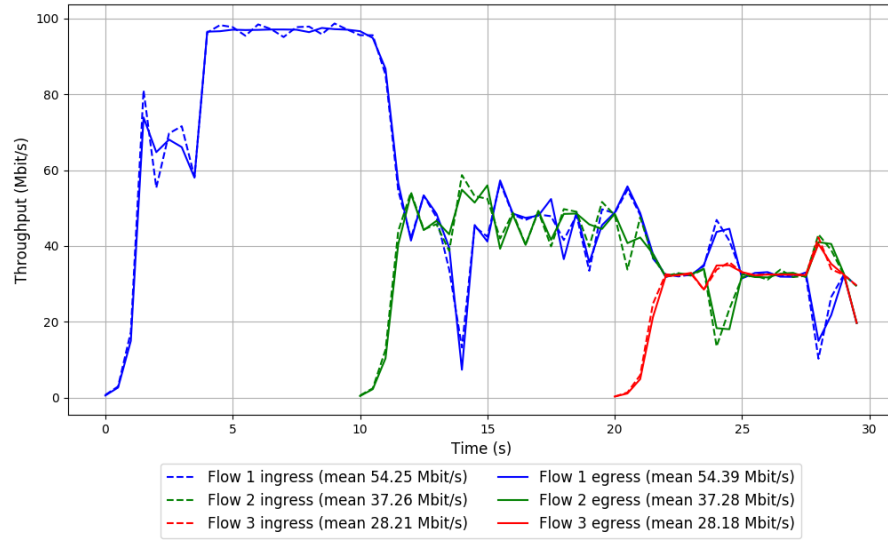
-- Flow 3:

Average throughput: 28.18 Mbit/s

95th percentile per-packet one-way delay: 80.439 ms

Loss rate: 2.61%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

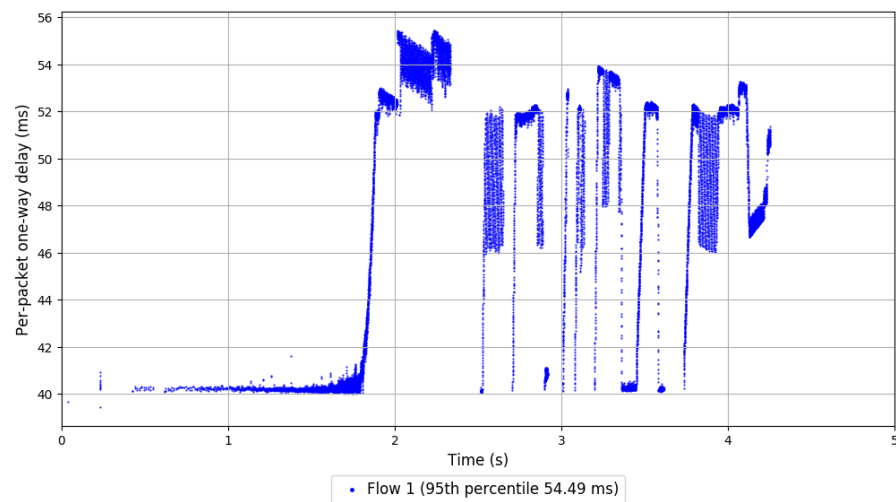
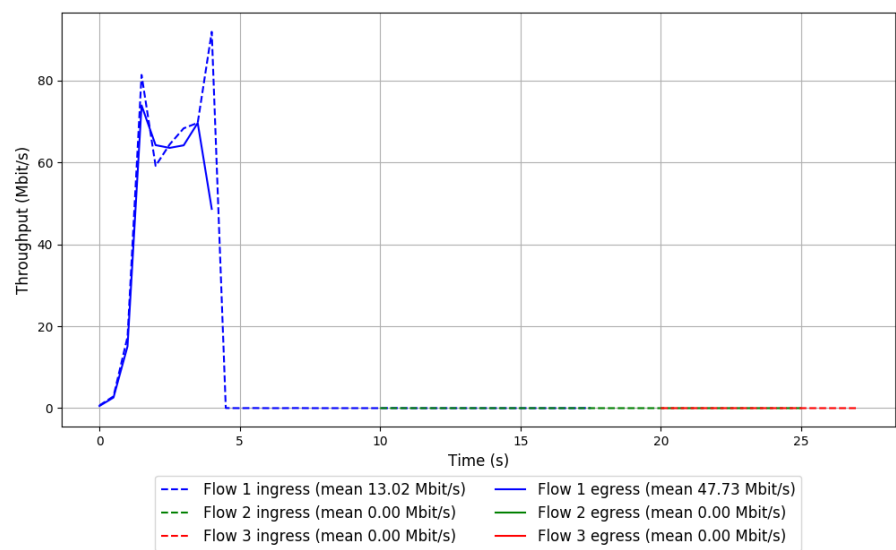
Start at: 2018-04-10 20:33:09

End at: 2018-04-10 20:33:39

Local clock offset: 1.062 ms

Remote clock offset: 14.561 ms

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-04-10 20:58:03

End at: 2018-04-10 20:58:33

Local clock offset: 1.147 ms

Remote clock offset: 13.41 ms

Below is generated by plot.py at 2018-04-11 02:24:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.20 Mbit/s

95th percentile per-packet one-way delay: 76.634 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 53.10 Mbit/s

95th percentile per-packet one-way delay: 74.446 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 37.33 Mbit/s

95th percentile per-packet one-way delay: 77.203 ms

Loss rate: 1.06%

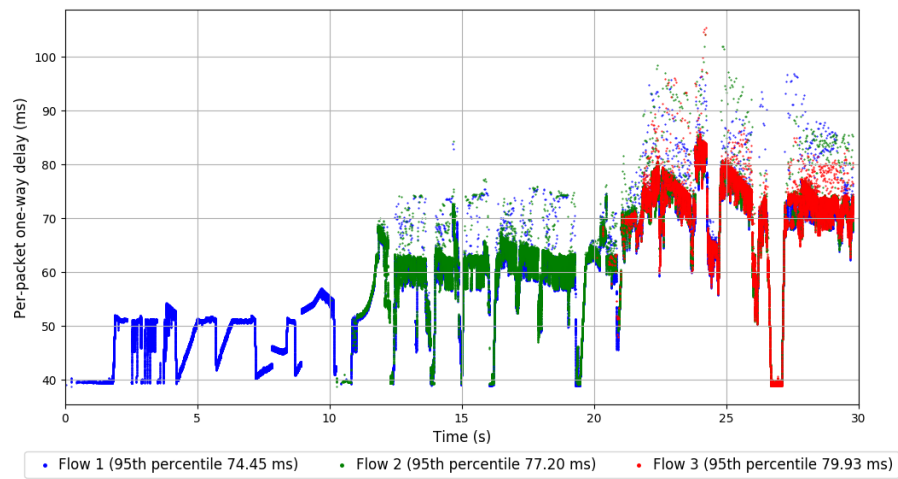
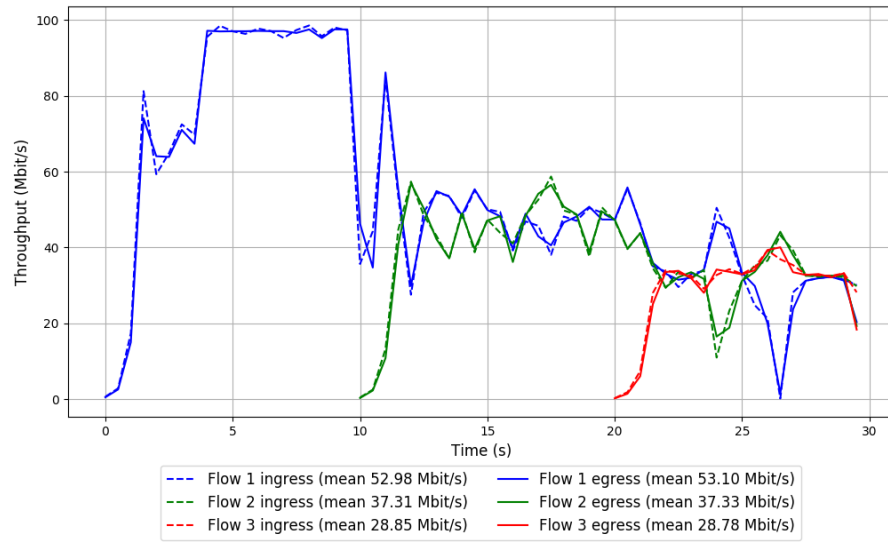
-- Flow 3:

Average throughput: 28.78 Mbit/s

95th percentile per-packet one-way delay: 79.934 ms

Loss rate: 2.61%

Run 7: Report of TCP BBR — Data Link

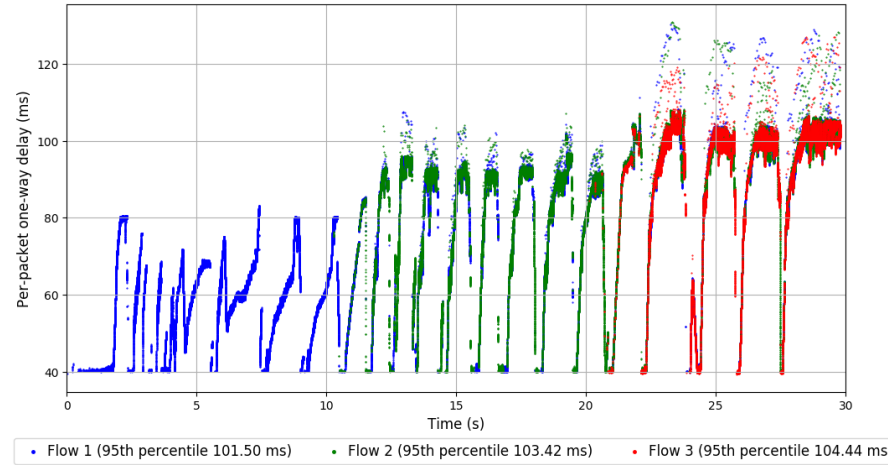
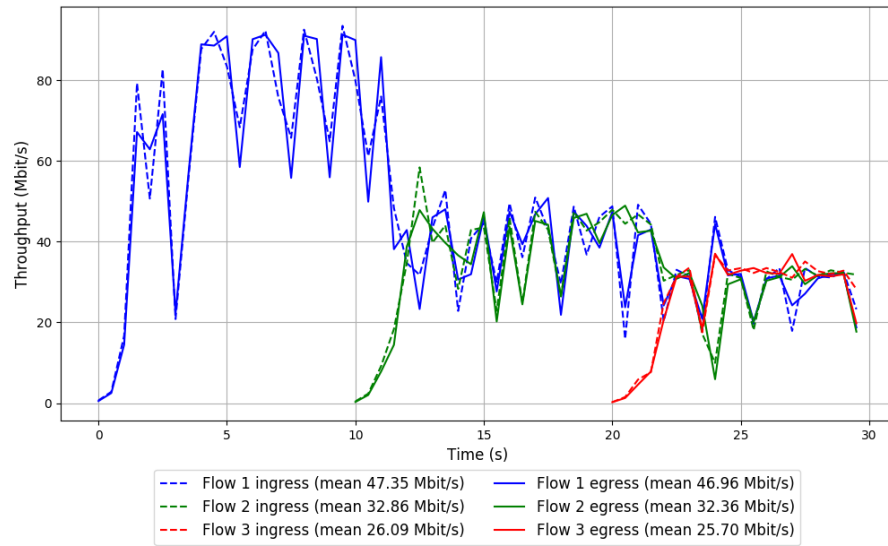


Run 8: Statistics of TCP BBR

Start at: 2018-04-10 21:22:31
End at: 2018-04-10 21:23:01
Local clock offset: 2.144 ms
Remote clock offset: -4.237 ms

Below is generated by plot.py at 2018-04-11 02:24:30
Datalink statistics
-- Total of 3 flows:
Average throughput: 76.74 Mbit/s
95th percentile per-packet one-way delay: 102.870 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 46.96 Mbit/s
95th percentile per-packet one-way delay: 101.501 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 32.36 Mbit/s
95th percentile per-packet one-way delay: 103.425 ms
Loss rate: 2.68%
-- Flow 3:
Average throughput: 25.70 Mbit/s
95th percentile per-packet one-way delay: 104.441 ms
Loss rate: 3.55%

Run 8: Report of TCP BBR — Data Link

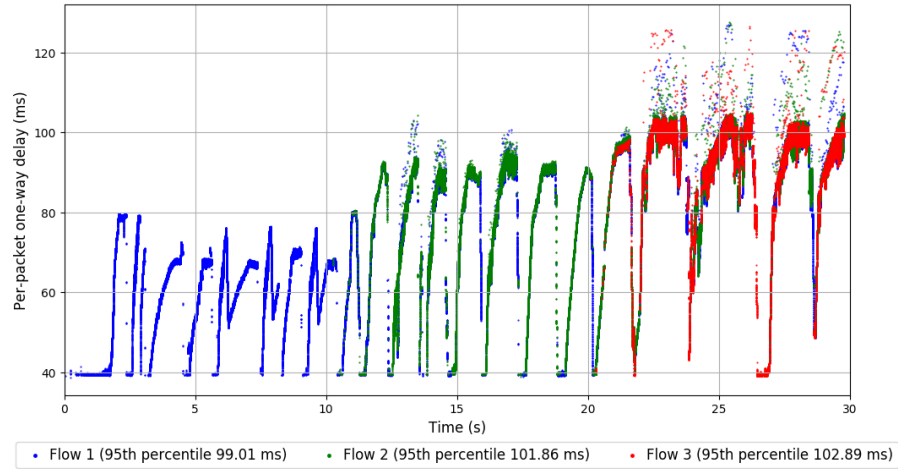
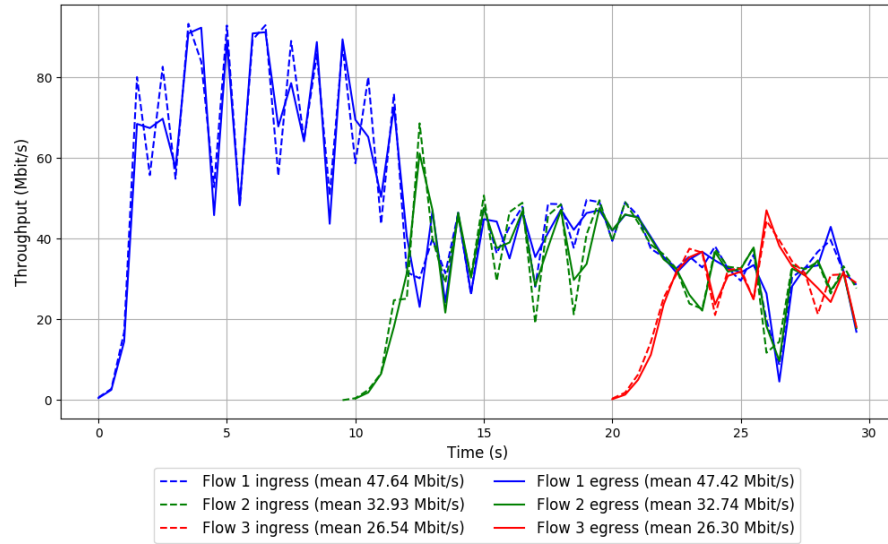


Run 9: Statistics of TCP BBR

Start at: 2018-04-10 21:47:34
End at: 2018-04-10 21:48:04
Local clock offset: 2.007 ms
Remote clock offset: -8.289 ms

Below is generated by plot.py at 2018-04-11 02:24:30
Datalink statistics
-- Total of 3 flows:
Average throughput: 77.66 Mbit/s
95th percentile per-packet one-way delay: 101.116 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 47.42 Mbit/s
95th percentile per-packet one-way delay: 99.013 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 32.74 Mbit/s
95th percentile per-packet one-way delay: 101.860 ms
Loss rate: 1.81%
-- Flow 3:
Average throughput: 26.30 Mbit/s
95th percentile per-packet one-way delay: 102.885 ms
Loss rate: 3.52%

Run 9: Report of TCP BBR — Data Link

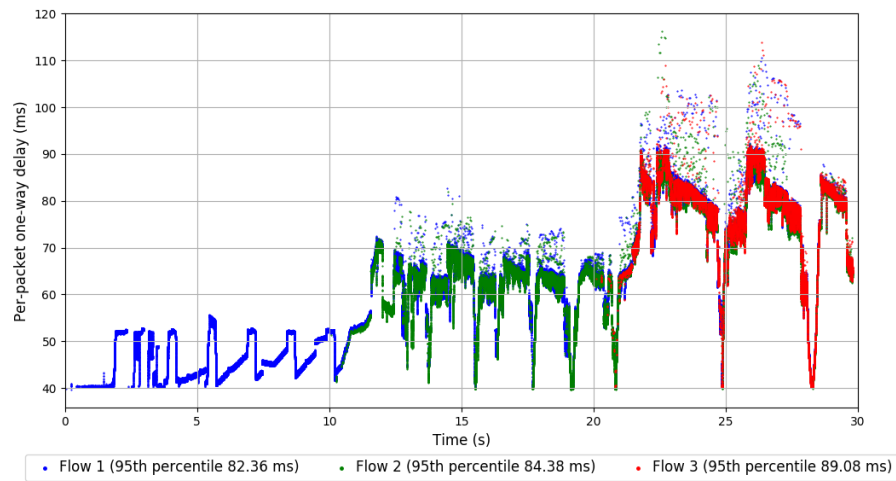
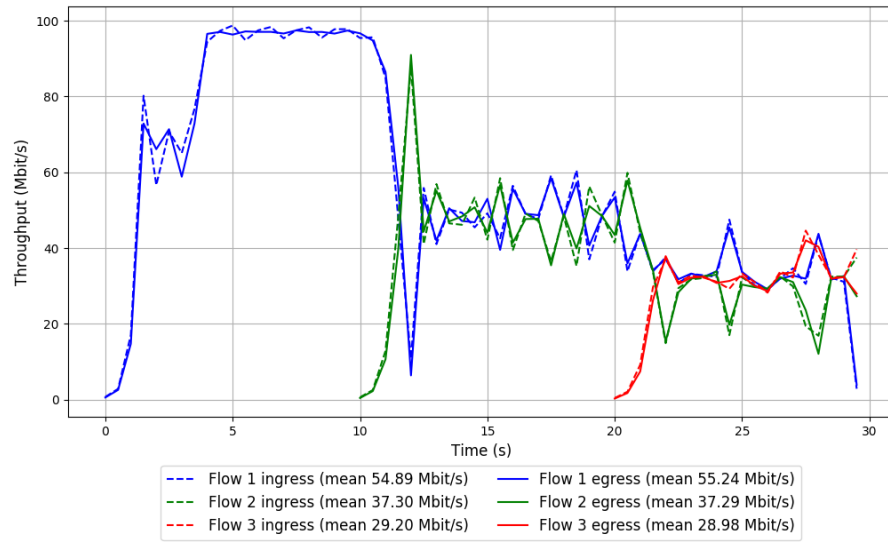


Run 10: Statistics of TCP BBR

Start at: 2018-04-10 22:12:37
End at: 2018-04-10 22:13:07
Local clock offset: 1.977 ms
Remote clock offset: -2.015 ms

Below is generated by plot.py at 2018-04-11 02:25:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 89.38 Mbit/s
95th percentile per-packet one-way delay: 84.084 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 55.24 Mbit/s
95th percentile per-packet one-way delay: 82.361 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 37.29 Mbit/s
95th percentile per-packet one-way delay: 84.383 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 28.98 Mbit/s
95th percentile per-packet one-way delay: 89.085 ms
Loss rate: 2.91%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-04-10 18:10:07

End at: 2018-04-10 18:10:37

Local clock offset: -0.23 ms

Remote clock offset: 0.441 ms

Below is generated by plot.py at 2018-04-11 02:25:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.60 Mbit/s

95th percentile per-packet one-way delay: 76.186 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 48.72 Mbit/s

95th percentile per-packet one-way delay: 75.150 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 38.87 Mbit/s

95th percentile per-packet one-way delay: 76.366 ms

Loss rate: 1.48%

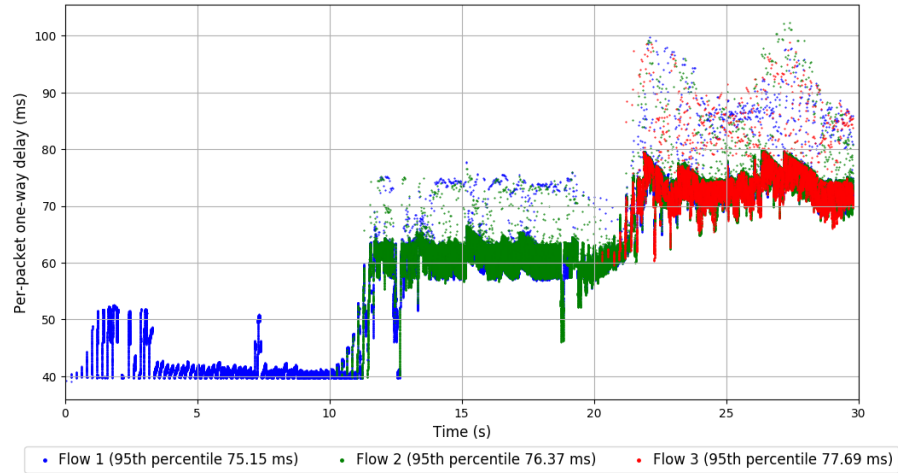
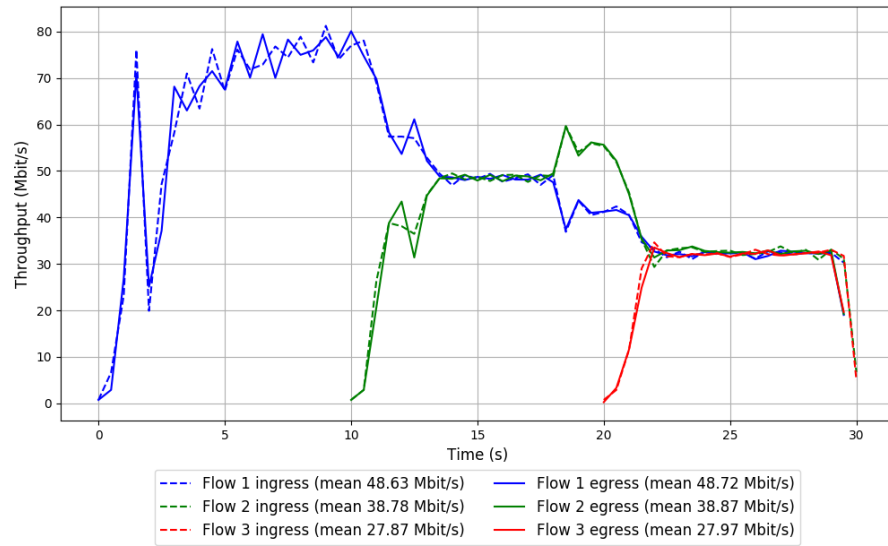
-- Flow 3:

Average throughput: 27.97 Mbit/s

95th percentile per-packet one-way delay: 77.692 ms

Loss rate: 3.97%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-04-10 18:34:39

End at: 2018-04-10 18:35:09

Local clock offset: 1.206 ms

Remote clock offset: 0.466 ms

Below is generated by plot.py at 2018-04-11 02:25:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.87 Mbit/s

95th percentile per-packet one-way delay: 95.500 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 47.47 Mbit/s

95th percentile per-packet one-way delay: 94.107 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 31.62 Mbit/s

95th percentile per-packet one-way delay: 95.301 ms

Loss rate: 1.34%

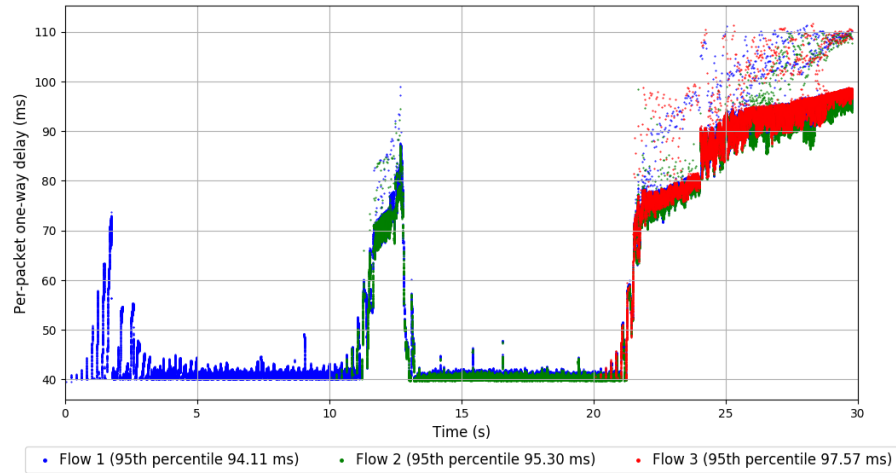
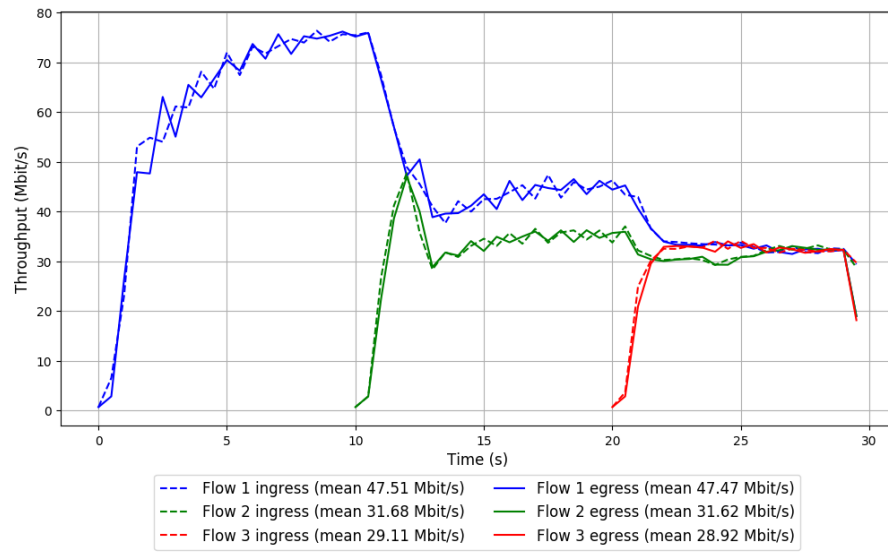
-- Flow 3:

Average throughput: 28.92 Mbit/s

95th percentile per-packet one-way delay: 97.571 ms

Loss rate: 3.02%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-04-10 18:59:00

End at: 2018-04-10 18:59:30

Local clock offset: 1.251 ms

Remote clock offset: 0.813 ms

Below is generated by plot.py at 2018-04-11 02:25:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.56 Mbit/s

95th percentile per-packet one-way delay: 76.217 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 49.43 Mbit/s

95th percentile per-packet one-way delay: 74.499 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 39.06 Mbit/s

95th percentile per-packet one-way delay: 76.538 ms

Loss rate: 1.11%

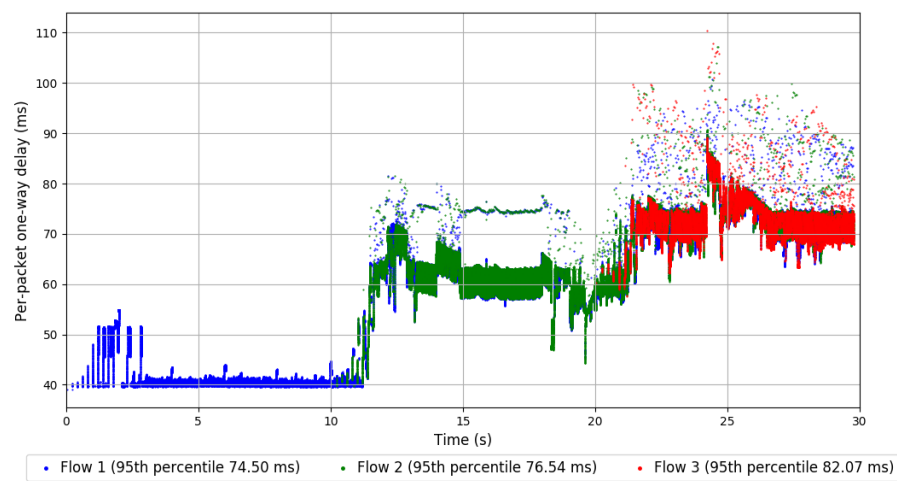
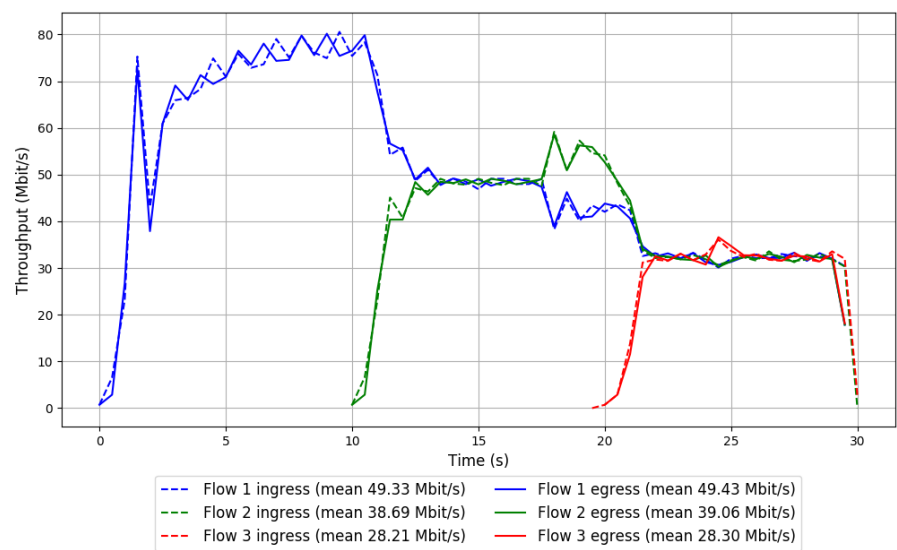
-- Flow 3:

Average throughput: 28.30 Mbit/s

95th percentile per-packet one-way delay: 82.071 ms

Loss rate: 3.85%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-04-10 19:23:28

End at: 2018-04-10 19:23:58

Local clock offset: 1.508 ms

Remote clock offset: 0.827 ms

Below is generated by plot.py at 2018-04-11 02:25:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.64 Mbit/s

95th percentile per-packet one-way delay: 78.559 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 50.37 Mbit/s

95th percentile per-packet one-way delay: 76.092 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 37.82 Mbit/s

95th percentile per-packet one-way delay: 78.544 ms

Loss rate: 1.51%

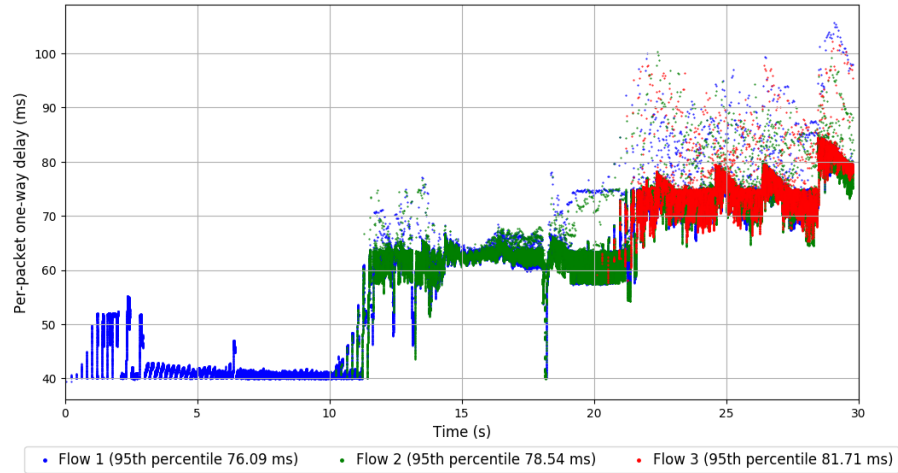
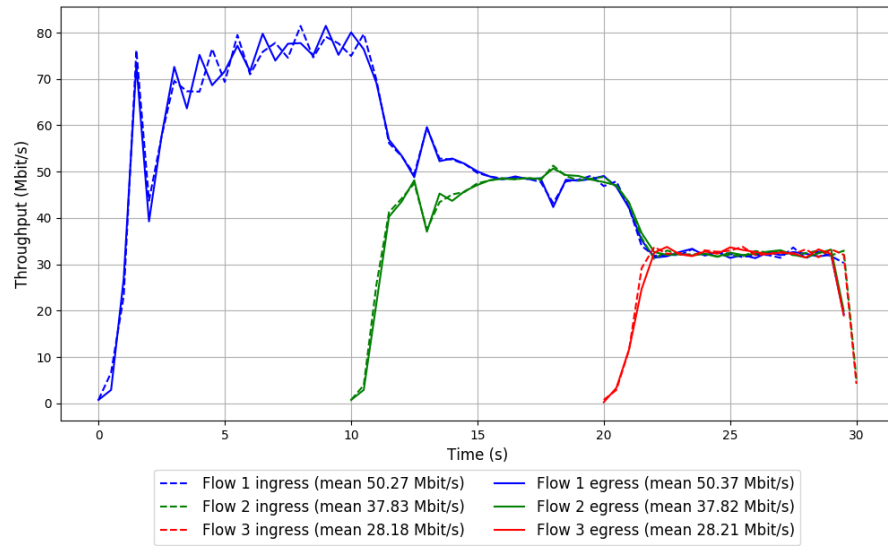
-- Flow 3:

Average throughput: 28.21 Mbit/s

95th percentile per-packet one-way delay: 81.708 ms

Loss rate: 4.01%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-04-10 19:48:21

End at: 2018-04-10 19:48:51

Local clock offset: 1.882 ms

Remote clock offset: 1.57 ms

Below is generated by plot.py at 2018-04-11 02:25:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.55 Mbit/s

95th percentile per-packet one-way delay: 74.497 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 49.41 Mbit/s

95th percentile per-packet one-way delay: 73.689 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 39.32 Mbit/s

95th percentile per-packet one-way delay: 74.275 ms

Loss rate: 1.44%

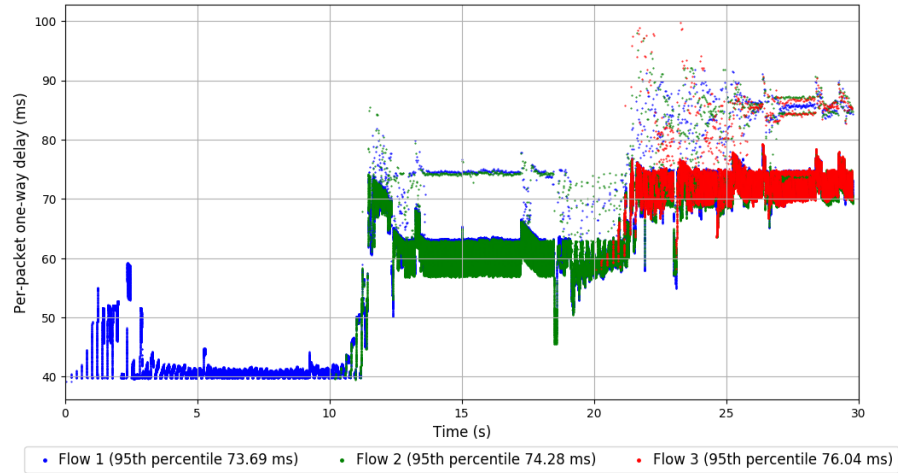
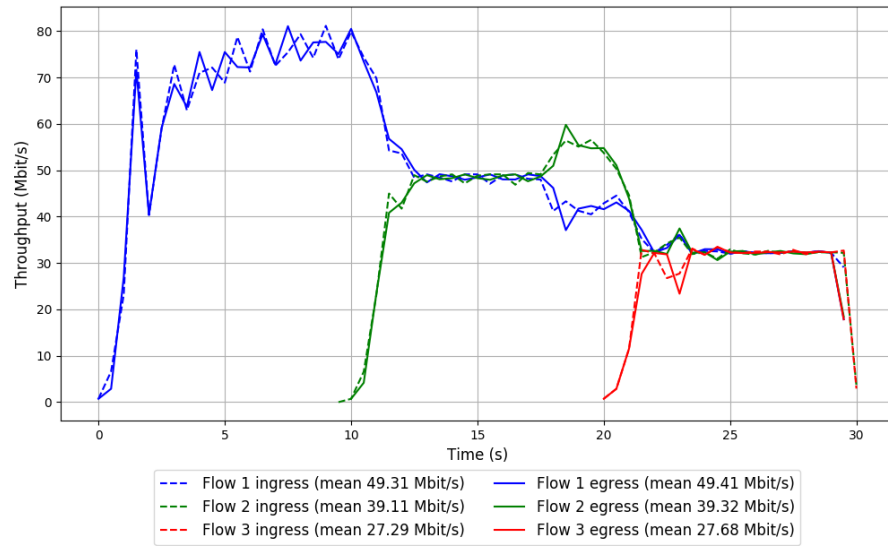
-- Flow 3:

Average throughput: 27.68 Mbit/s

95th percentile per-packet one-way delay: 76.036 ms

Loss rate: 3.98%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-04-10 20:12:46

End at: 2018-04-10 20:13:16

Local clock offset: 1.459 ms

Remote clock offset: 7.966 ms

Below is generated by plot.py at 2018-04-11 02:25:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.71 Mbit/s

95th percentile per-packet one-way delay: 68.913 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 52.71 Mbit/s

95th percentile per-packet one-way delay: 68.068 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 43.42 Mbit/s

95th percentile per-packet one-way delay: 69.319 ms

Loss rate: 1.61%

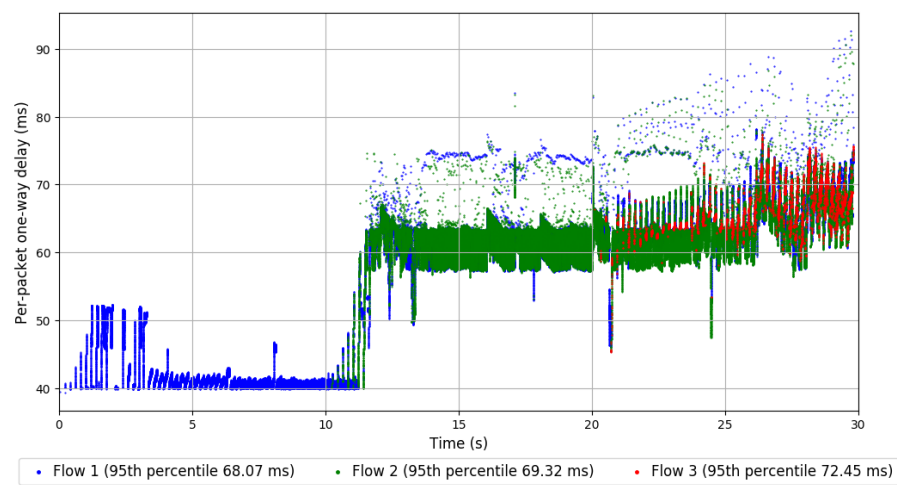
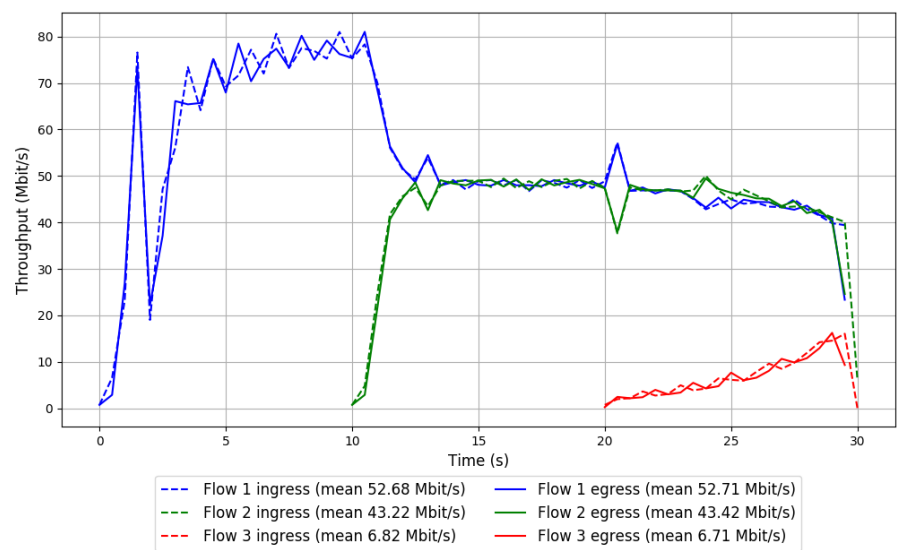
-- Flow 3:

Average throughput: 6.71 Mbit/s

95th percentile per-packet one-way delay: 72.451 ms

Loss rate: 5.85%

Run 6: Report of TCP Cubic — Data Link

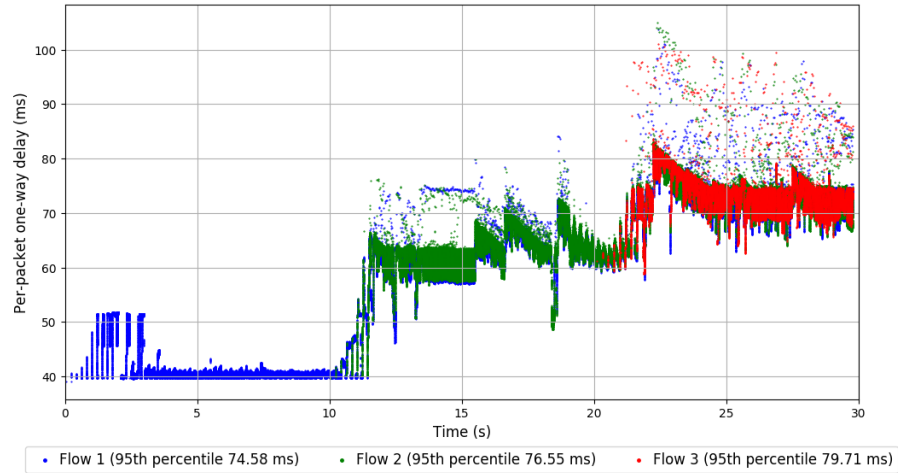
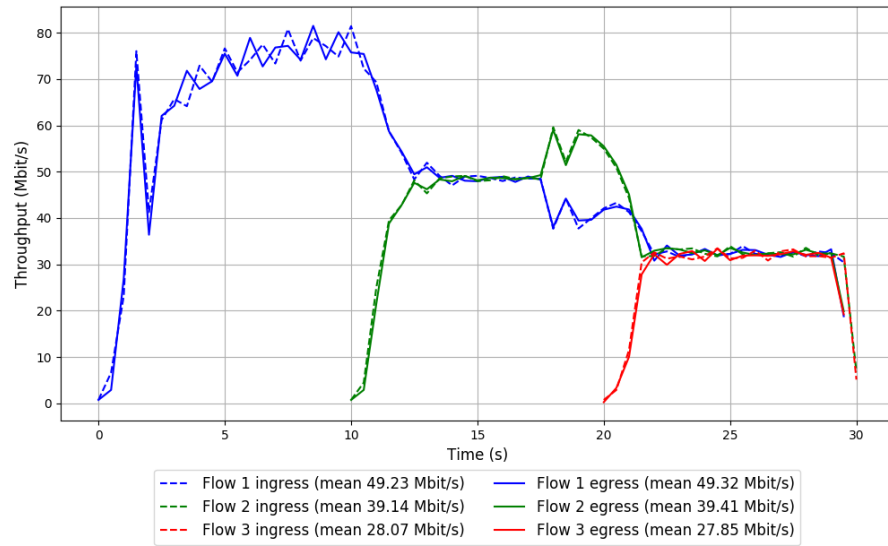


Run 7: Statistics of TCP Cubic

Start at: 2018-04-10 20:37:39
End at: 2018-04-10 20:38:09
Local clock offset: 1.114 ms
Remote clock offset: 15.855 ms

Below is generated by plot.py at 2018-04-11 02:25:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 84.53 Mbit/s
95th percentile per-packet one-way delay: 76.407 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 49.32 Mbit/s
95th percentile per-packet one-way delay: 74.584 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 39.41 Mbit/s
95th percentile per-packet one-way delay: 76.546 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 27.85 Mbit/s
95th percentile per-packet one-way delay: 79.712 ms
Loss rate: 4.05%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-04-10 21:02:05

End at: 2018-04-10 21:02:35

Local clock offset: 1.156 ms

Remote clock offset: 6.958 ms

Below is generated by plot.py at 2018-04-11 02:26:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.66 Mbit/s

95th percentile per-packet one-way delay: 77.376 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 50.04 Mbit/s

95th percentile per-packet one-way delay: 74.279 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 38.41 Mbit/s

95th percentile per-packet one-way delay: 77.784 ms

Loss rate: 1.27%

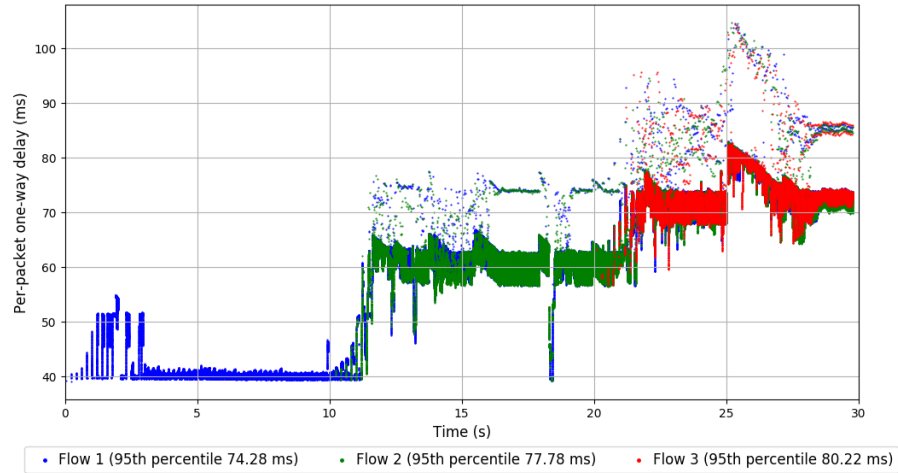
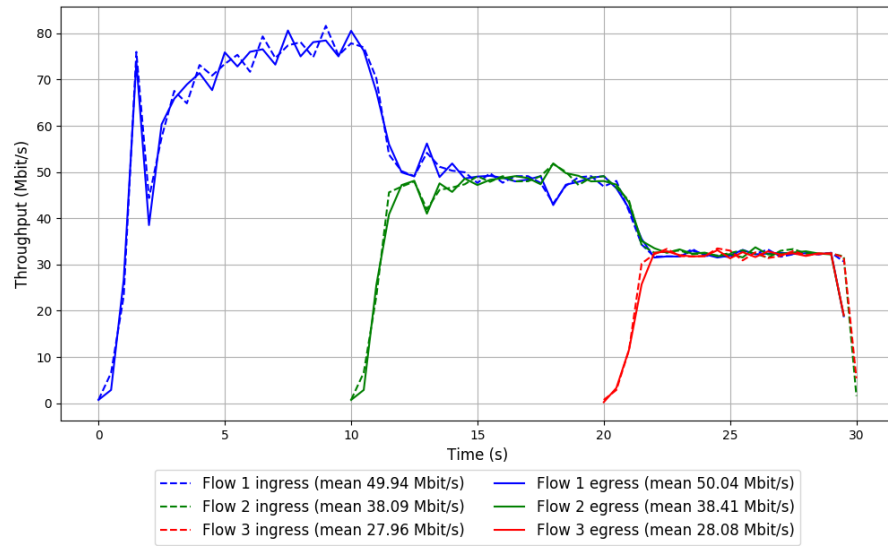
-- Flow 3:

Average throughput: 28.08 Mbit/s

95th percentile per-packet one-way delay: 80.222 ms

Loss rate: 3.99%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

/home/ubuntu/pantheon_data/2018-04-10T18-07-China-to-AWS-Korea-10-runs-3-flows/default_tcp_s

Run 9: Report of TCP Cubic — Data Link

Figure is missing

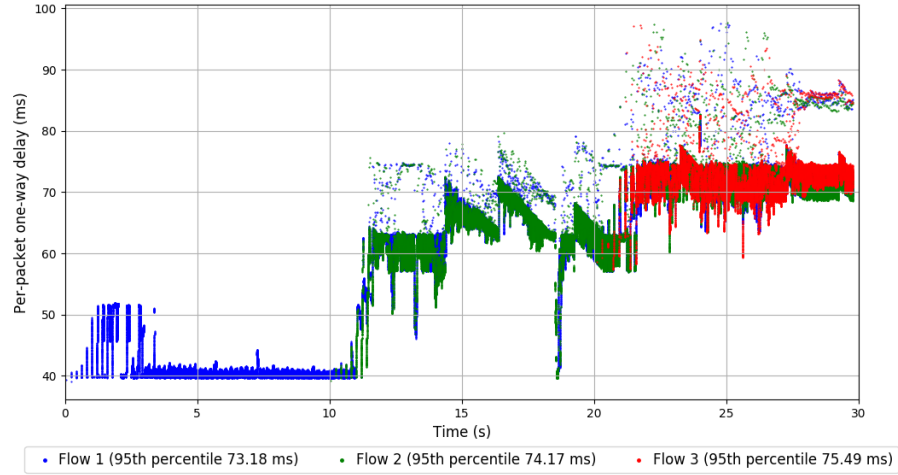
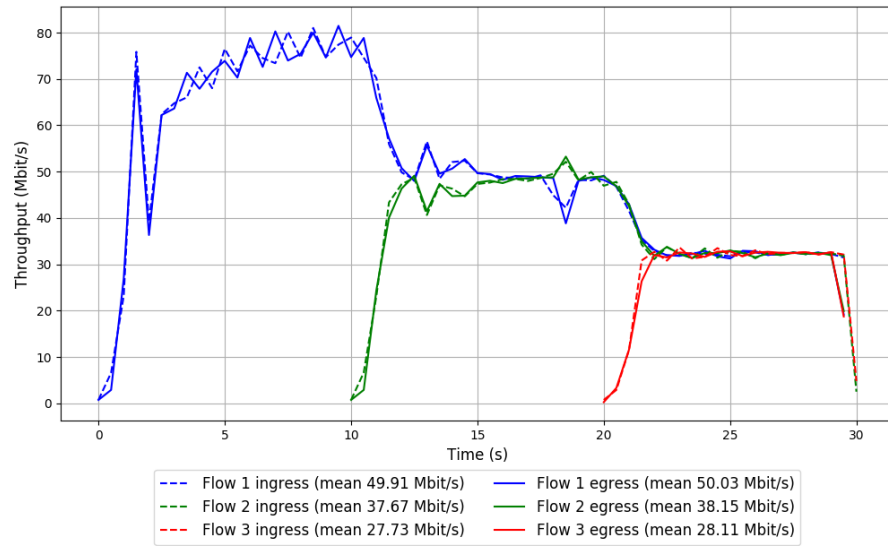
Figure is missing

Run 10: Statistics of TCP Cubic

Start at: 2018-04-10 21:51:35
End at: 2018-04-10 21:52:05
Local clock offset: 1.975 ms
Remote clock offset: -8.938 ms

Below is generated by plot.py at 2018-04-11 02:26:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 84.49 Mbit/s
95th percentile per-packet one-way delay: 74.143 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 50.03 Mbit/s
95th percentile per-packet one-way delay: 73.184 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 38.15 Mbit/s
95th percentile per-packet one-way delay: 74.172 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 28.11 Mbit/s
95th percentile per-packet one-way delay: 75.489 ms
Loss rate: 3.99%

Run 10: Report of TCP Cubic — Data Link

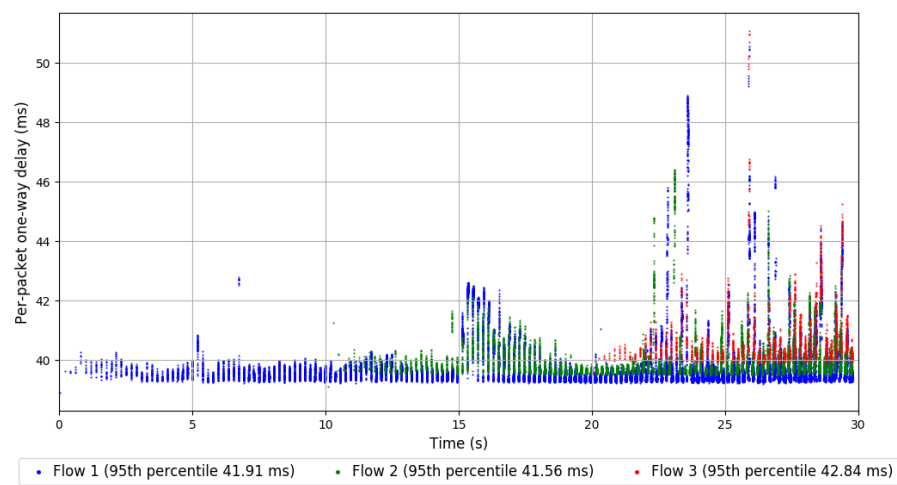
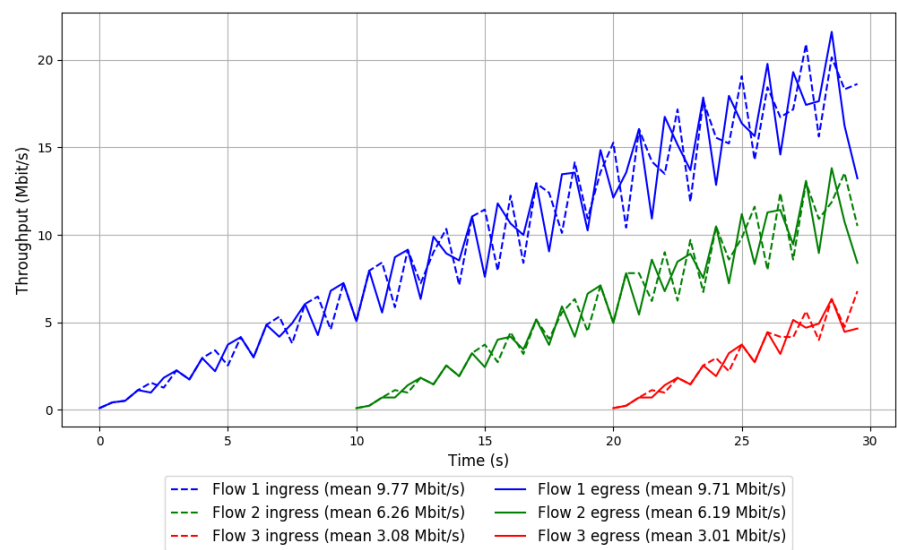


```
Run 1: Statistics of LEDBAT

Start at: 2018-04-10 18:21:04
End at: 2018-04-10 18:21:34
Local clock offset: 0.79 ms
Remote clock offset: 0.356 ms

# Below is generated by plot.py at 2018-04-11 02:26:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.79 Mbit/s
95th percentile per-packet one-way delay: 41.909 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 41.912 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 6.19 Mbit/s
95th percentile per-packet one-way delay: 41.564 ms
Loss rate: 1.97%
-- Flow 3:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 42.842 ms
Loss rate: 3.97%
```


Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-04-10 18:45:29

End at: 2018-04-10 18:45:59

Local clock offset: 0.915 ms

Remote clock offset: 0.487 ms

Below is generated by plot.py at 2018-04-11 02:26:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.96 Mbit/s

95th percentile per-packet one-way delay: 44.603 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 8.39 Mbit/s

95th percentile per-packet one-way delay: 43.815 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 5.74 Mbit/s

95th percentile per-packet one-way delay: 45.663 ms

Loss rate: 1.12%

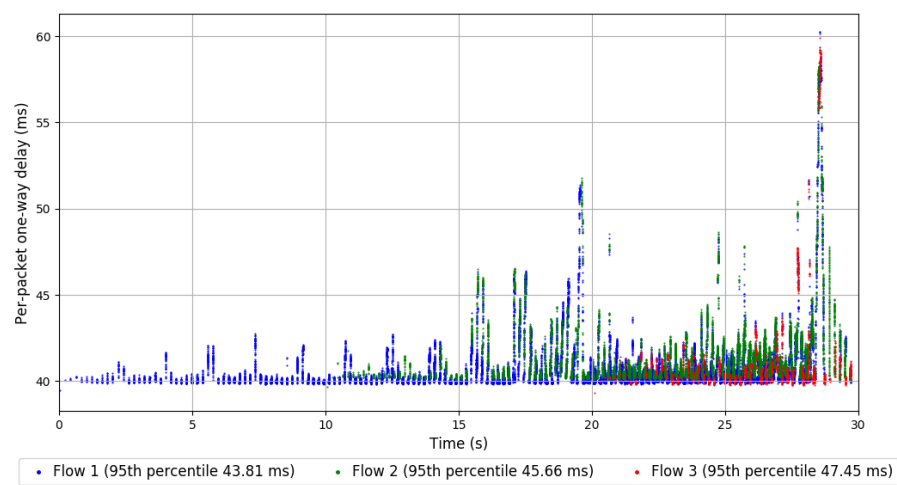
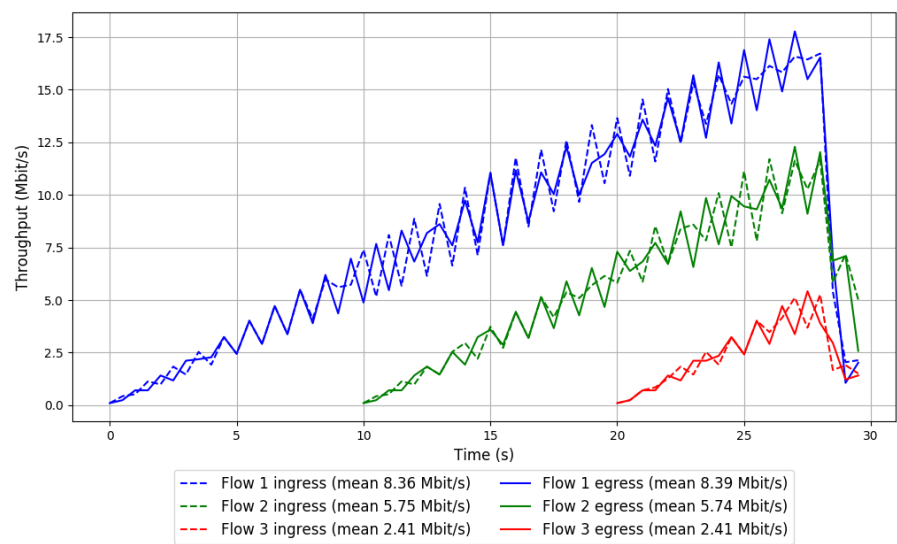
-- Flow 3:

Average throughput: 2.41 Mbit/s

95th percentile per-packet one-way delay: 47.454 ms

Loss rate: 1.79%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-04-10 19:09:52

End at: 2018-04-10 19:10:22

Local clock offset: 1.352 ms

Remote clock offset: 0.852 ms

Below is generated by plot.py at 2018-04-11 02:26:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.71 Mbit/s

95th percentile per-packet one-way delay: 41.192 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 9.59 Mbit/s

95th percentile per-packet one-way delay: 40.639 ms

Loss rate: 1.29%

-- Flow 2:

Average throughput: 6.33 Mbit/s

95th percentile per-packet one-way delay: 42.026 ms

Loss rate: 1.95%

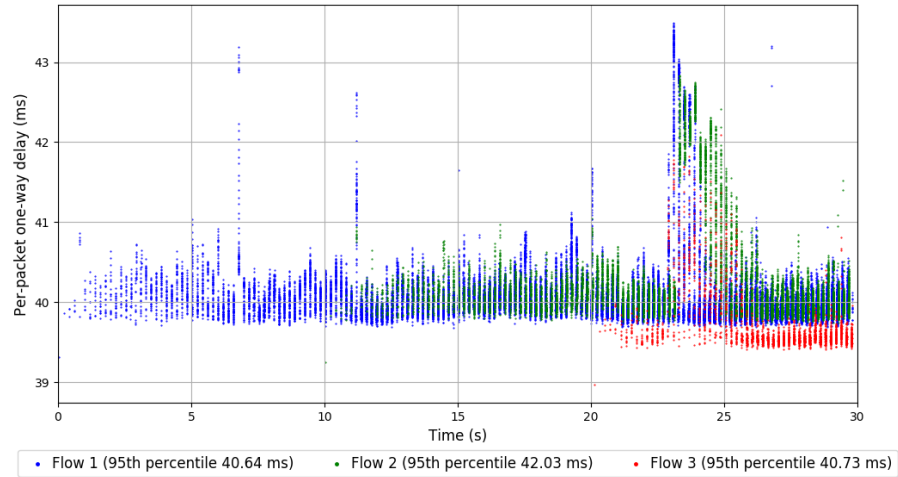
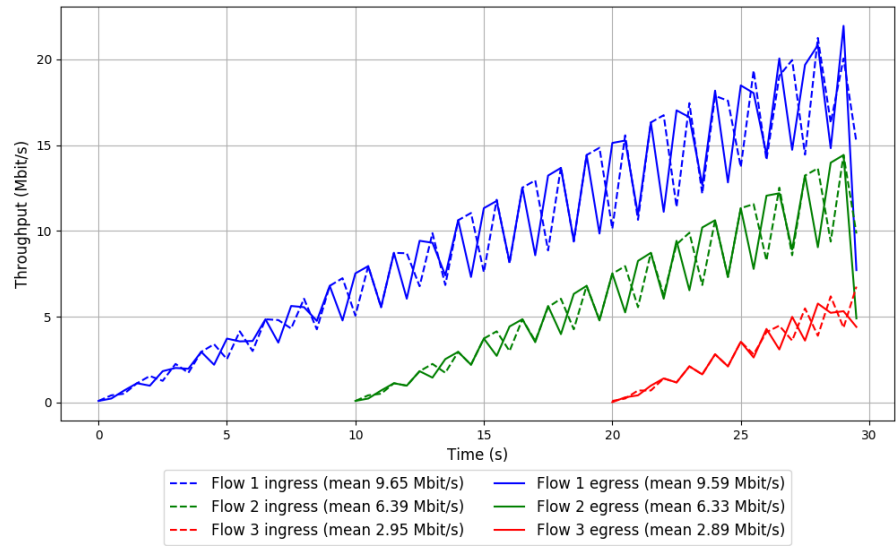
-- Flow 3:

Average throughput: 2.89 Mbit/s

95th percentile per-packet one-way delay: 40.732 ms

Loss rate: 4.03%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-04-10 19:34:45

End at: 2018-04-10 19:35:15

Local clock offset: 1.699 ms

Remote clock offset: 0.606 ms

Below is generated by plot.py at 2018-04-11 02:26:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.62 Mbit/s

95th percentile per-packet one-way delay: 41.208 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 9.48 Mbit/s

95th percentile per-packet one-way delay: 41.357 ms

Loss rate: 1.29%

-- Flow 2:

Average throughput: 6.26 Mbit/s

95th percentile per-packet one-way delay: 40.751 ms

Loss rate: 1.95%

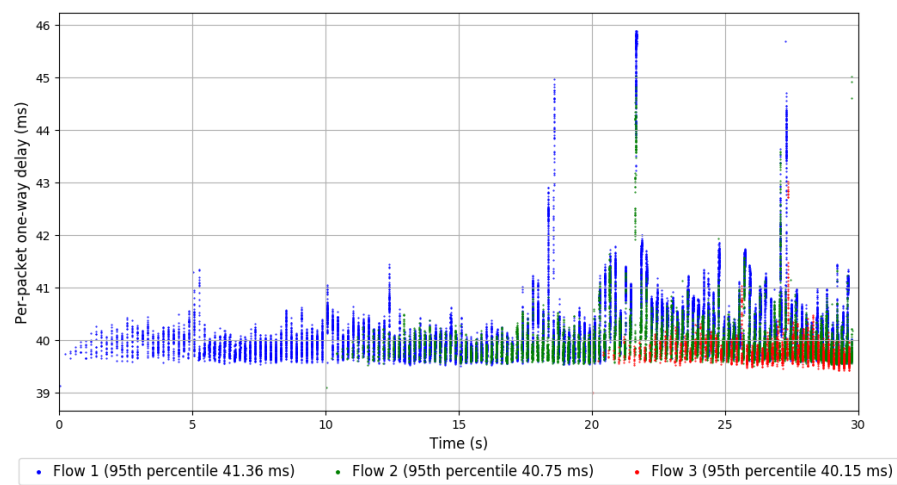
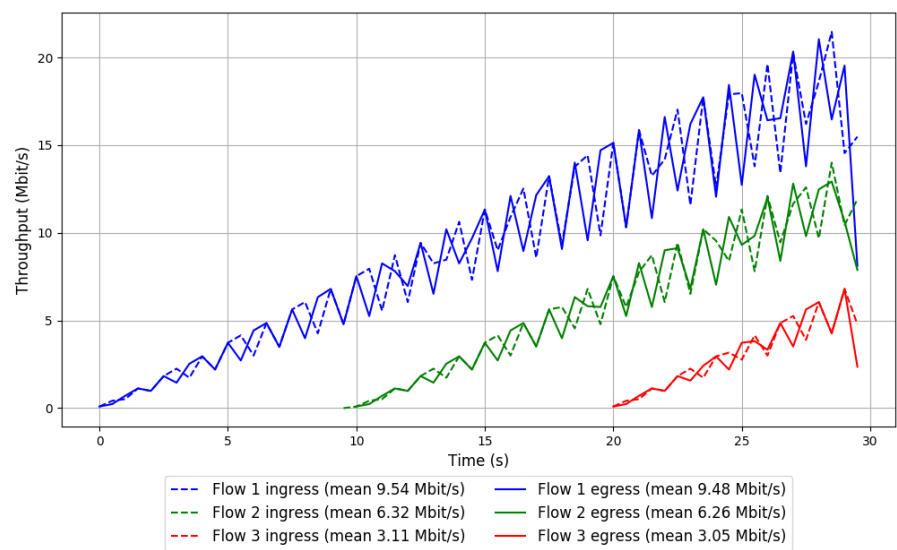
-- Flow 3:

Average throughput: 3.05 Mbit/s

95th percentile per-packet one-way delay: 40.146 ms

Loss rate: 3.97%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-04-10 19:59:12

End at: 2018-04-10 19:59:42

Local clock offset: 1.649 ms

Remote clock offset: 5.849 ms

Below is generated by plot.py at 2018-04-11 02:26:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.62 Mbit/s

95th percentile per-packet one-way delay: 41.932 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 9.58 Mbit/s

95th percentile per-packet one-way delay: 42.180 ms

Loss rate: 1.28%

-- Flow 2:

Average throughput: 6.20 Mbit/s

95th percentile per-packet one-way delay: 41.571 ms

Loss rate: 1.97%

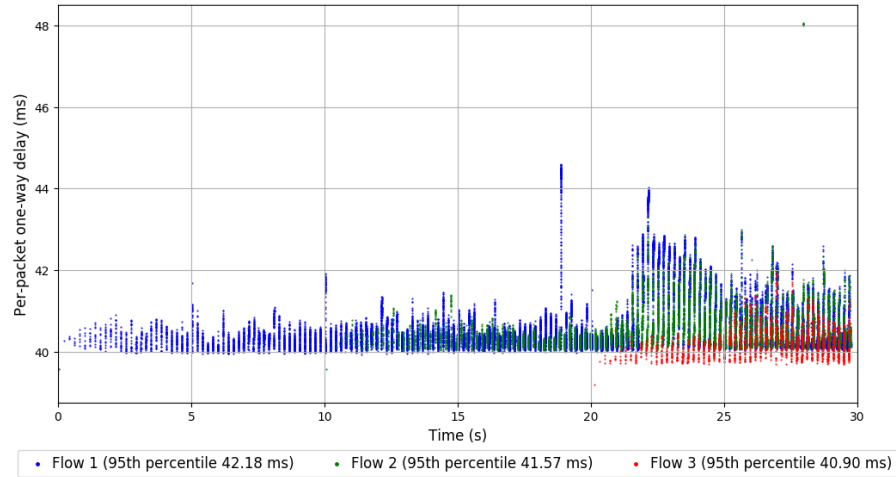
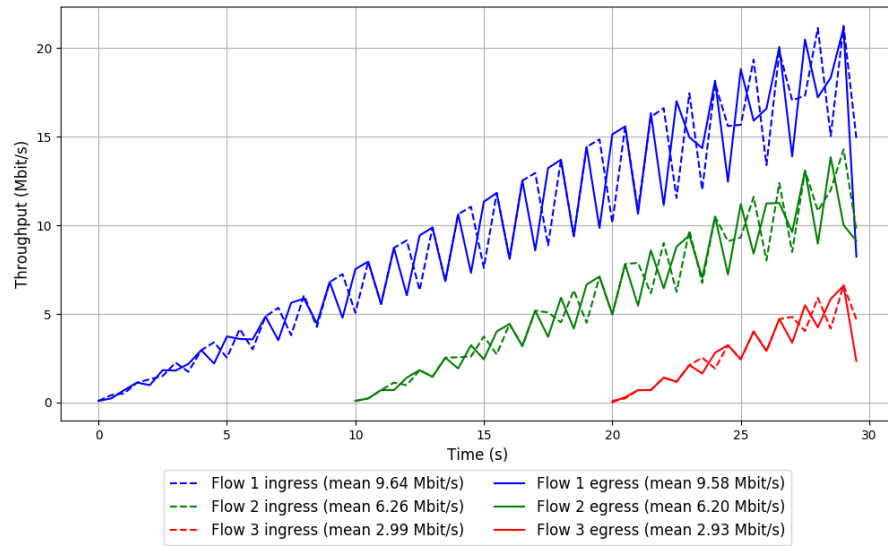
-- Flow 3:

Average throughput: 2.93 Mbit/s

95th percentile per-packet one-way delay: 40.904 ms

Loss rate: 4.05%

Run 5: Report of LEDBAT — Data Link

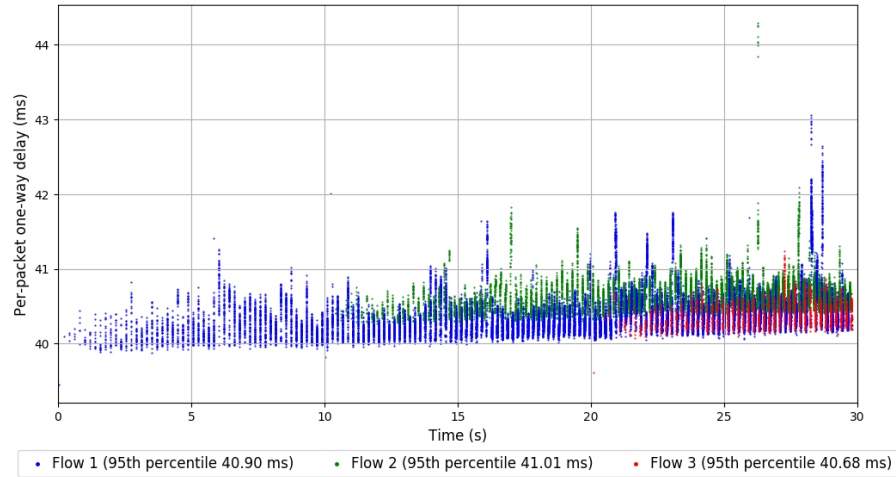
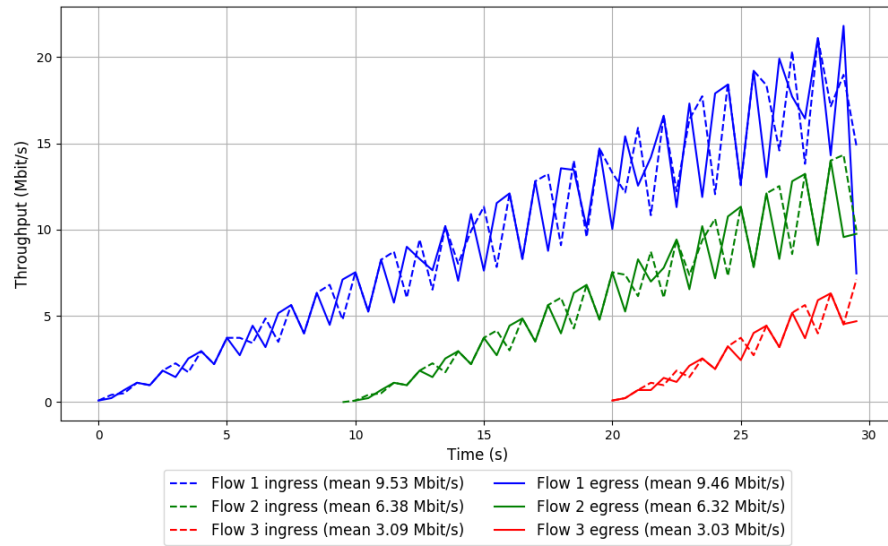


Run 6: Statistics of LEDBAT

Start at: 2018-04-10 20:23:36
End at: 2018-04-10 20:24:06
Local clock offset: 1.151 ms
Remote clock offset: 10.458 ms

Below is generated by plot.py at 2018-04-11 02:26:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.63 Mbit/s
95th percentile per-packet one-way delay: 40.945 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 9.46 Mbit/s
95th percentile per-packet one-way delay: 40.904 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 6.32 Mbit/s
95th percentile per-packet one-way delay: 41.010 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 3.03 Mbit/s
95th percentile per-packet one-way delay: 40.680 ms
Loss rate: 3.96%

Run 6: Report of LEDBAT — Data Link

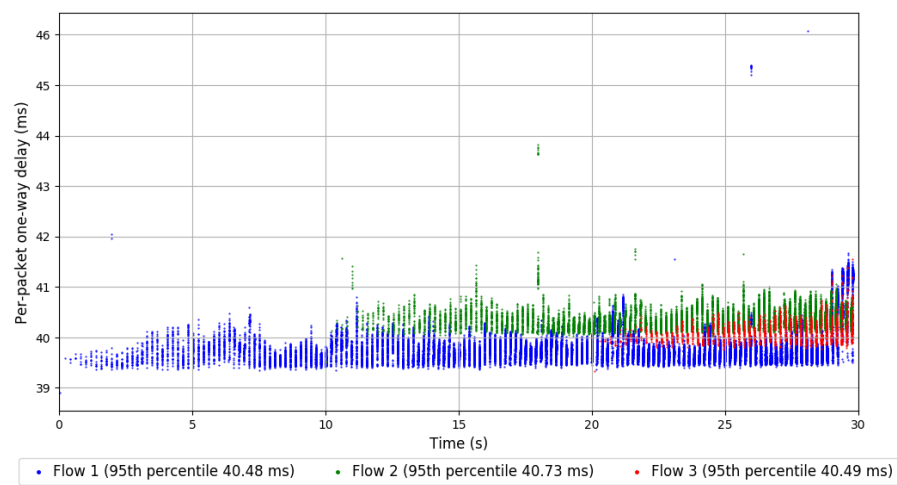
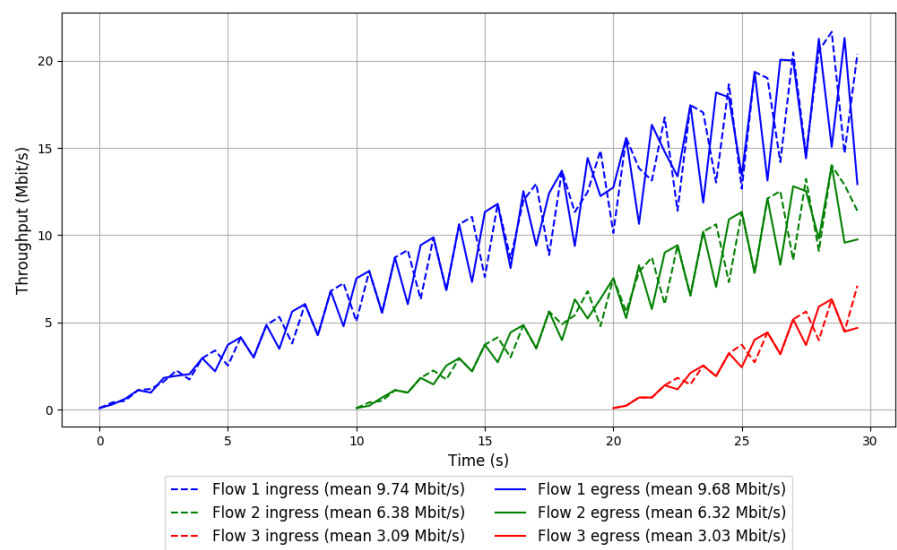


Run 7: Statistics of LEDBAT

Start at: 2018-04-10 20:48:29
End at: 2018-04-10 20:48:59
Local clock offset: 1.092 ms
Remote clock offset: 18.275 ms

Below is generated by plot.py at 2018-04-11 02:26:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.84 Mbit/s
95th percentile per-packet one-way delay: 40.671 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 9.68 Mbit/s
95th percentile per-packet one-way delay: 40.485 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 6.32 Mbit/s
95th percentile per-packet one-way delay: 40.731 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 3.03 Mbit/s
95th percentile per-packet one-way delay: 40.488 ms
Loss rate: 3.97%

Run 7: Report of LEDBAT — Data Link

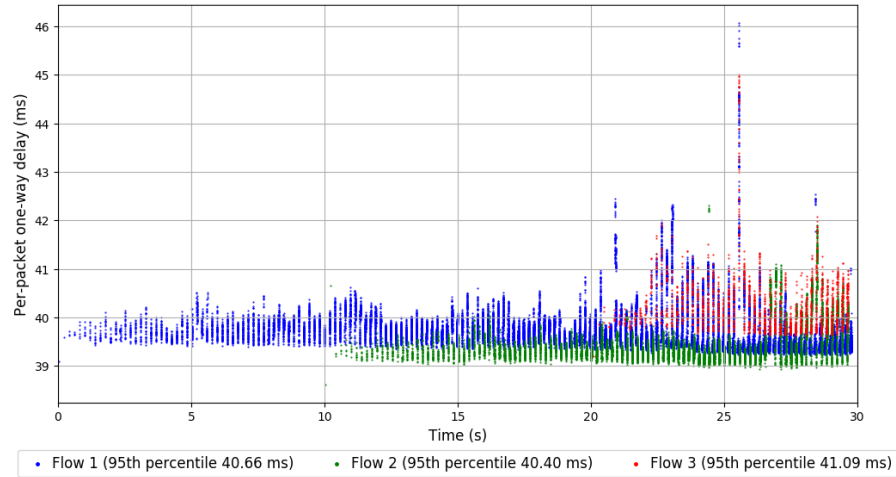
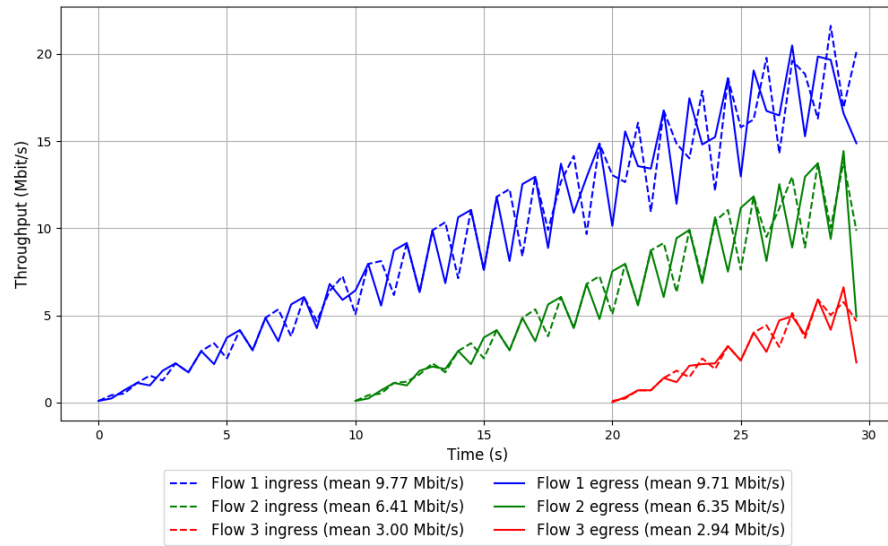


Run 8: Statistics of LEDBAT

Start at: 2018-04-10 21:12:58
End at: 2018-04-10 21:13:28
Local clock offset: 1.843 ms
Remote clock offset: -1.138 ms

Below is generated by plot.py at 2018-04-11 02:26:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.84 Mbit/s
95th percentile per-packet one-way delay: 40.687 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 40.657 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 40.404 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 41.094 ms
Loss rate: 4.06%

Run 8: Report of LEDBAT — Data Link

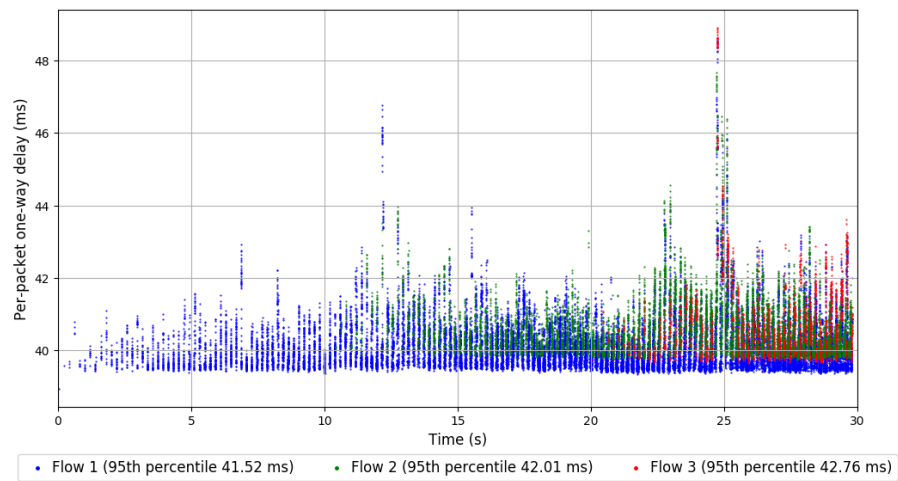
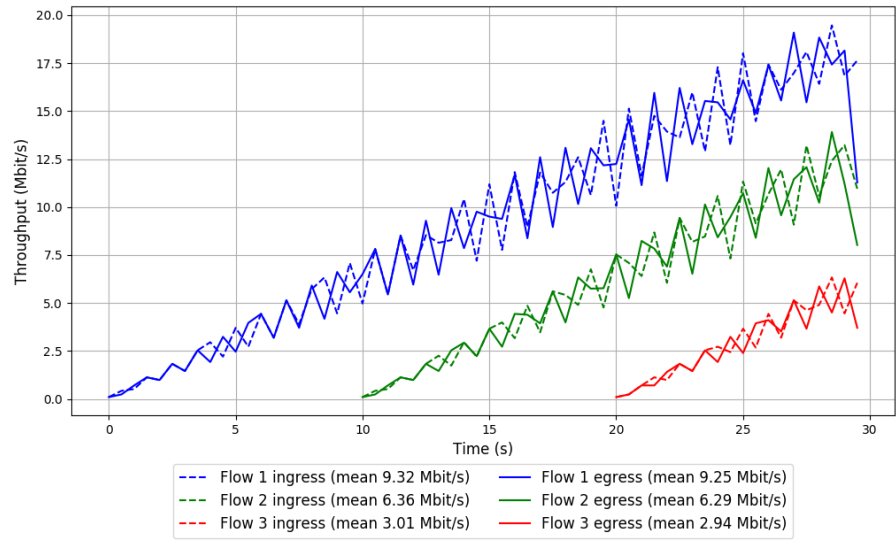


Run 9: Statistics of LEDBAT

Start at: 2018-04-10 21:38:04
End at: 2018-04-10 21:38:34
Local clock offset: 2.279 ms
Remote clock offset: -7.015 ms

Below is generated by plot.py at 2018-04-11 02:26:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.38 Mbit/s
95th percentile per-packet one-way delay: 41.806 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 9.25 Mbit/s
95th percentile per-packet one-way delay: 41.516 ms
Loss rate: 1.31%
-- Flow 2:
Average throughput: 6.29 Mbit/s
95th percentile per-packet one-way delay: 42.005 ms
Loss rate: 1.96%
-- Flow 3:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 42.758 ms
Loss rate: 3.94%

Run 9: Report of LEDBAT — Data Link

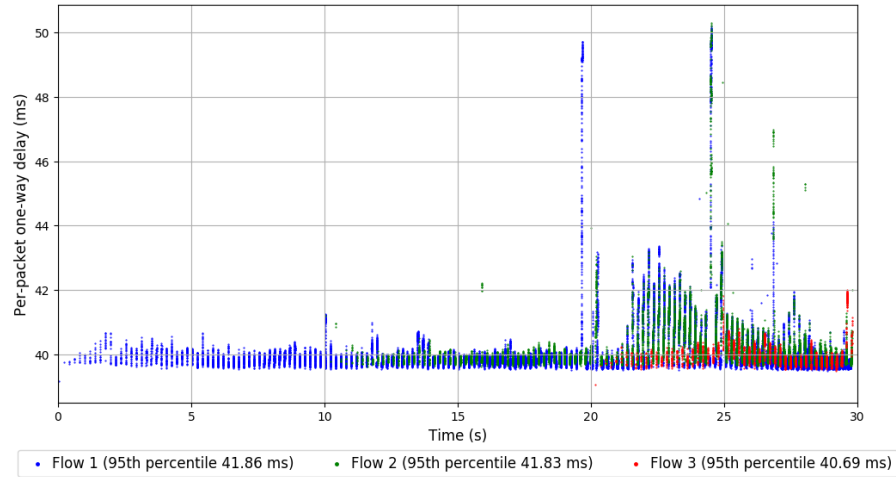
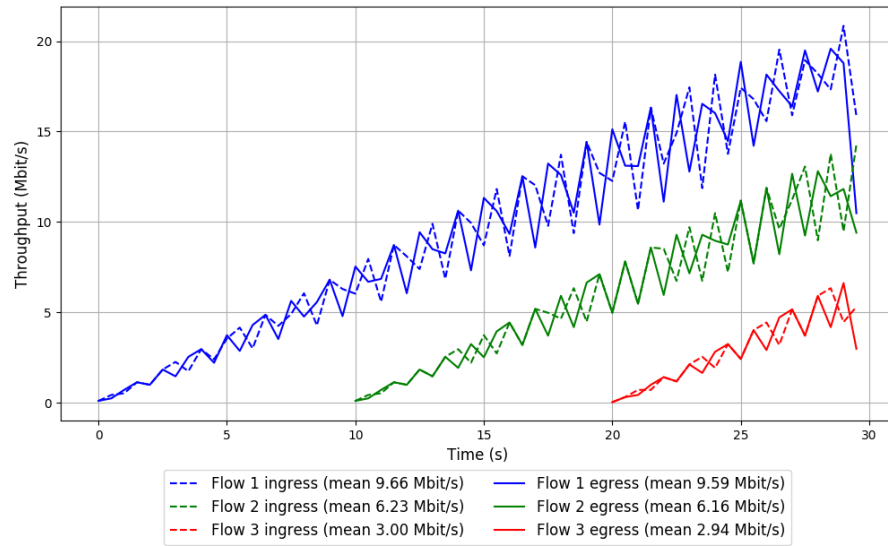


Run 10: Statistics of LEDBAT

Start at: 2018-04-10 22:02:29
End at: 2018-04-10 22:02:59
Local clock offset: 2.003 ms
Remote clock offset: -10.453 ms

Below is generated by plot.py at 2018-04-11 02:26:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.62 Mbit/s
95th percentile per-packet one-way delay: 41.813 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 9.59 Mbit/s
95th percentile per-packet one-way delay: 41.860 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 6.16 Mbit/s
95th percentile per-packet one-way delay: 41.831 ms
Loss rate: 1.96%
-- Flow 3:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 40.688 ms
Loss rate: 3.93%

Run 10: Report of LEDBAT — Data Link

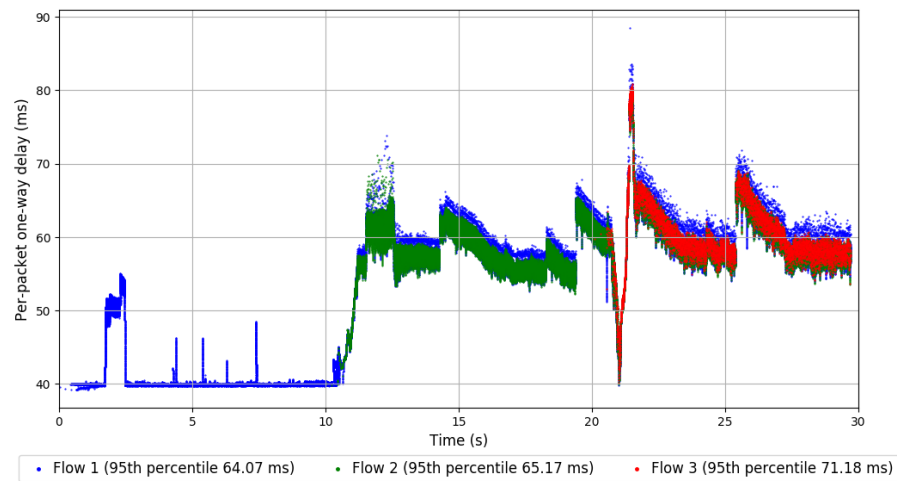
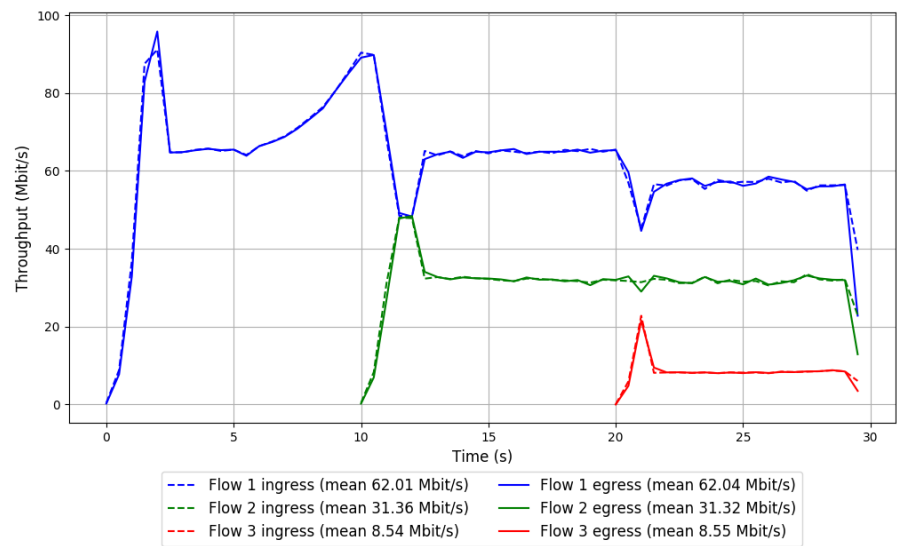


```
Run 1: Statistics of PCC

Start at: 2018-04-10 18:08:40
End at: 2018-04-10 18:09:10
Local clock offset: -0.227 ms
Remote clock offset: 0.35 ms

# Below is generated by plot.py at 2018-04-11 02:27:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.55 Mbit/s
95th percentile per-packet one-way delay: 64.629 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 62.04 Mbit/s
95th percentile per-packet one-way delay: 64.069 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 31.32 Mbit/s
95th percentile per-packet one-way delay: 65.166 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 8.55 Mbit/s
95th percentile per-packet one-way delay: 71.179 ms
Loss rate: 2.12%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2018-04-10 18:33:18

End at: 2018-04-10 18:33:48

Local clock offset: 1.072 ms

Remote clock offset: 0.44 ms

Below is generated by plot.py at 2018-04-11 02:27:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.54 Mbit/s

95th percentile per-packet one-way delay: 116.057 ms

Loss rate: 3.06%

-- Flow 1:

Average throughput: 55.28 Mbit/s

95th percentile per-packet one-way delay: 114.868 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 31.75 Mbit/s

95th percentile per-packet one-way delay: 116.410 ms

Loss rate: 5.30%

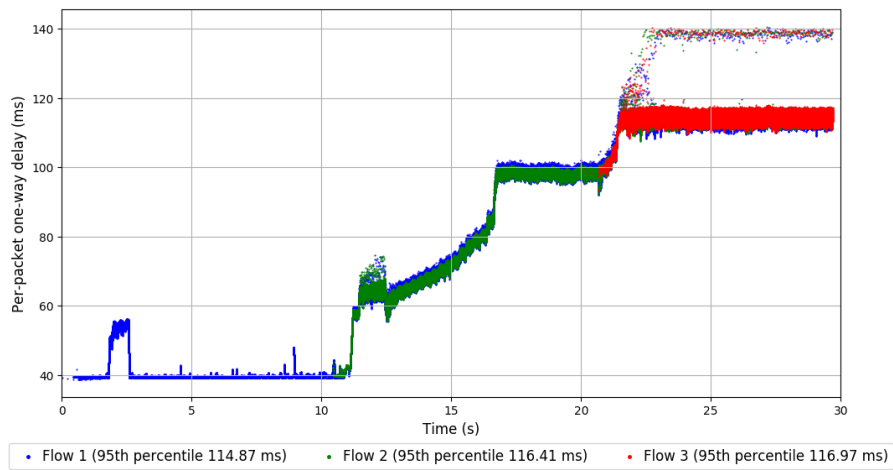
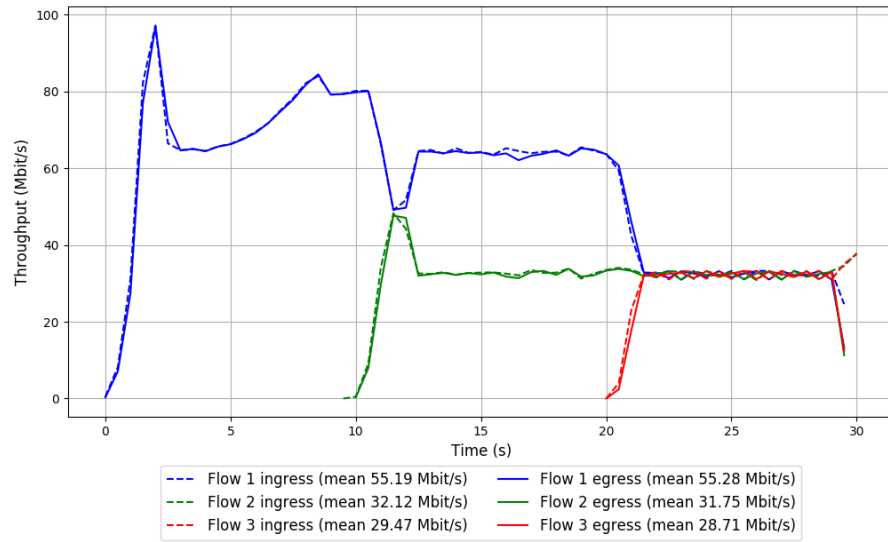
-- Flow 3:

Average throughput: 28.71 Mbit/s

95th percentile per-packet one-way delay: 116.968 ms

Loss rate: 10.96%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-04-10 18:57:40

End at: 2018-04-10 18:58:10

Local clock offset: 1.293 ms

Remote clock offset: 0.805 ms

Below is generated by plot.py at 2018-04-11 02:27:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.28 Mbit/s

95th percentile per-packet one-way delay: 76.642 ms

Loss rate: 2.01%

-- Flow 1:

Average throughput: 55.16 Mbit/s

95th percentile per-packet one-way delay: 74.520 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 31.01 Mbit/s

95th percentile per-packet one-way delay: 77.029 ms

Loss rate: 3.27%

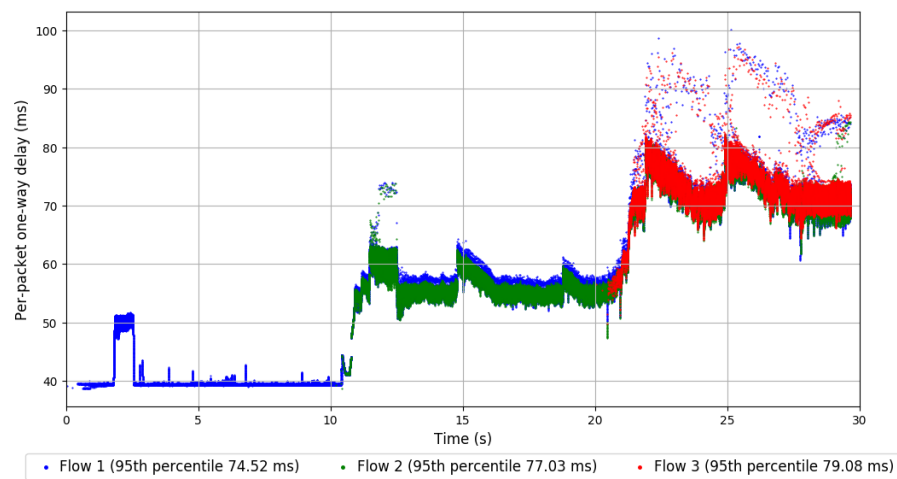
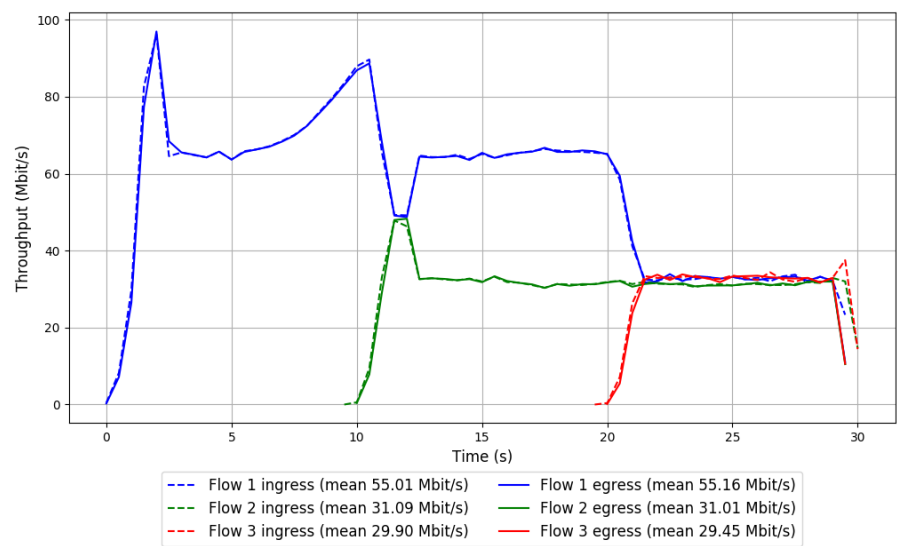
-- Flow 3:

Average throughput: 29.45 Mbit/s

95th percentile per-packet one-way delay: 79.082 ms

Loss rate: 7.47%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-04-10 19:22:07

End at: 2018-04-10 19:22:37

Local clock offset: 1.509 ms

Remote clock offset: 0.816 ms

Below is generated by plot.py at 2018-04-11 02:27:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.97 Mbit/s

95th percentile per-packet one-way delay: 66.400 ms

Loss rate: 2.52%

-- Flow 1:

Average throughput: 59.54 Mbit/s

95th percentile per-packet one-way delay: 64.537 ms

Loss rate: 2.50%

-- Flow 2:

Average throughput: 33.14 Mbit/s

95th percentile per-packet one-way delay: 67.766 ms

Loss rate: 1.31%

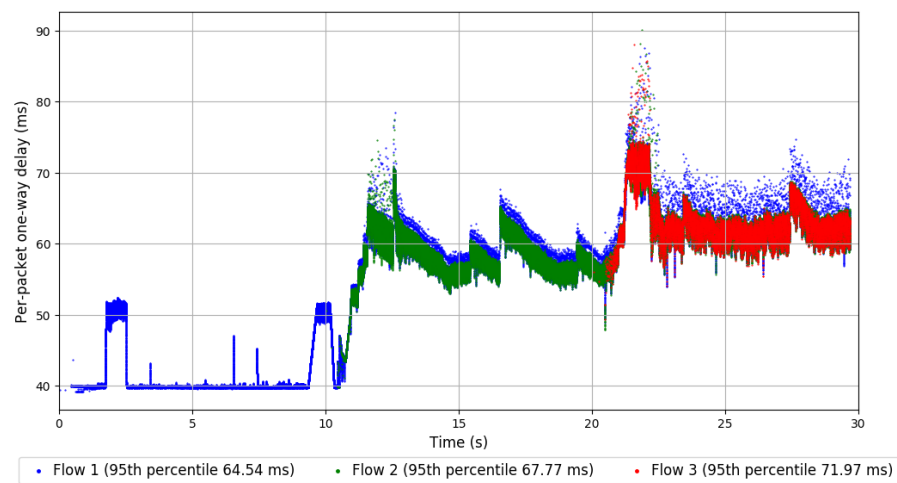
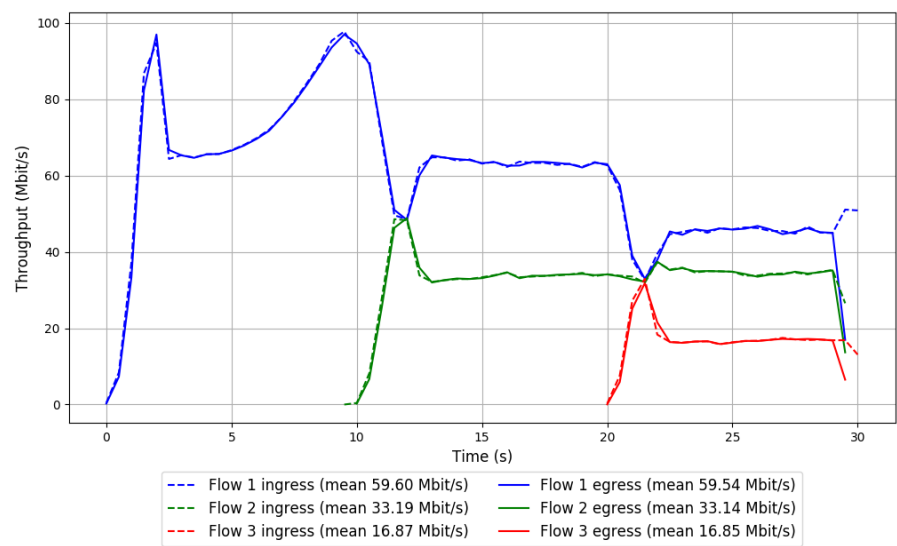
-- Flow 3:

Average throughput: 16.85 Mbit/s

95th percentile per-packet one-way delay: 71.970 ms

Loss rate: 7.30%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-04-10 19:46:59

End at: 2018-04-10 19:47:29

Local clock offset: 2.064 ms

Remote clock offset: 0.691 ms

Below is generated by plot.py at 2018-04-11 02:27:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.44 Mbit/s

95th percentile per-packet one-way delay: 75.230 ms

Loss rate: 4.88%

-- Flow 1:

Average throughput: 53.71 Mbit/s

95th percentile per-packet one-way delay: 74.018 ms

Loss rate: 3.93%

-- Flow 2:

Average throughput: 32.13 Mbit/s

95th percentile per-packet one-way delay: 75.688 ms

Loss rate: 7.95%

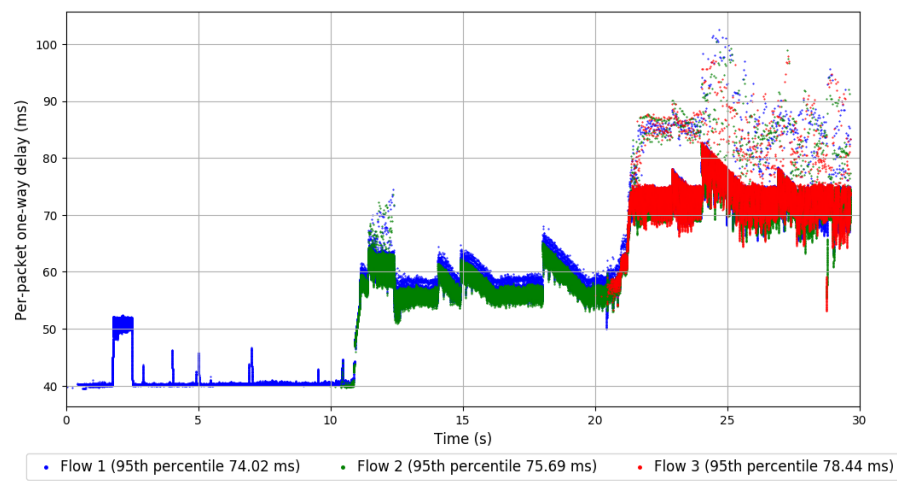
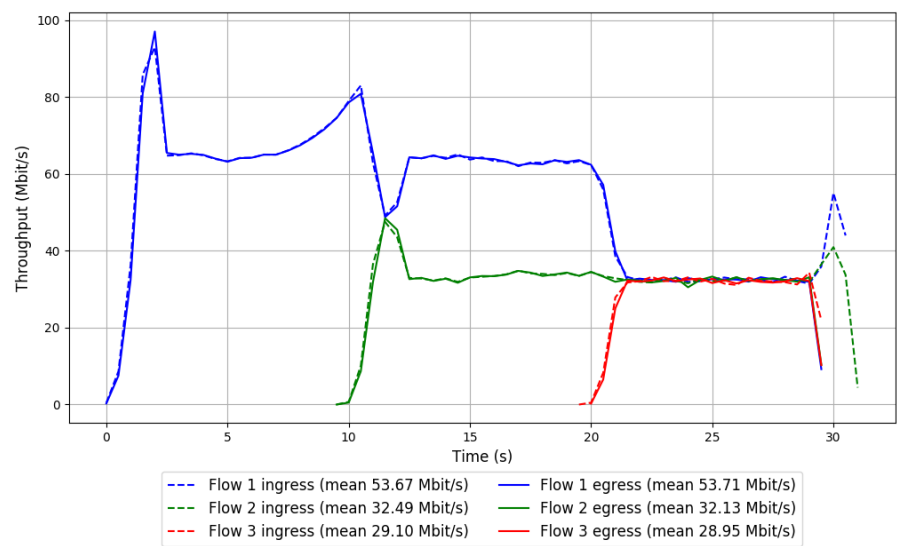
-- Flow 3:

Average throughput: 28.95 Mbit/s

95th percentile per-packet one-way delay: 78.443 ms

Loss rate: 3.01%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-04-10 20:11:25

End at: 2018-04-10 20:11:55

Local clock offset: 1.315 ms

Remote clock offset: 7.811 ms

Below is generated by plot.py at 2018-04-11 02:27:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.17 Mbit/s

95th percentile per-packet one-way delay: 85.353 ms

Loss rate: 3.93%

-- Flow 1:

Average throughput: 53.82 Mbit/s

95th percentile per-packet one-way delay: 83.140 ms

Loss rate: 3.67%

-- Flow 2:

Average throughput: 31.68 Mbit/s

95th percentile per-packet one-way delay: 86.431 ms

Loss rate: 4.94%

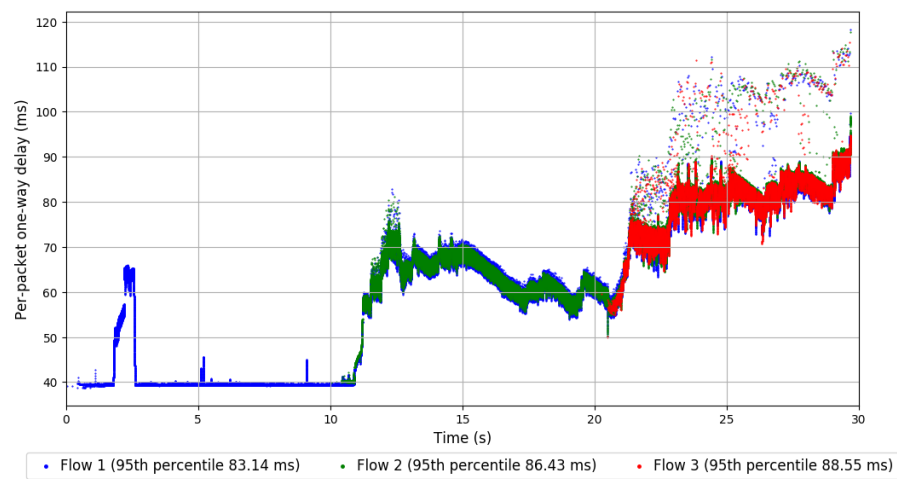
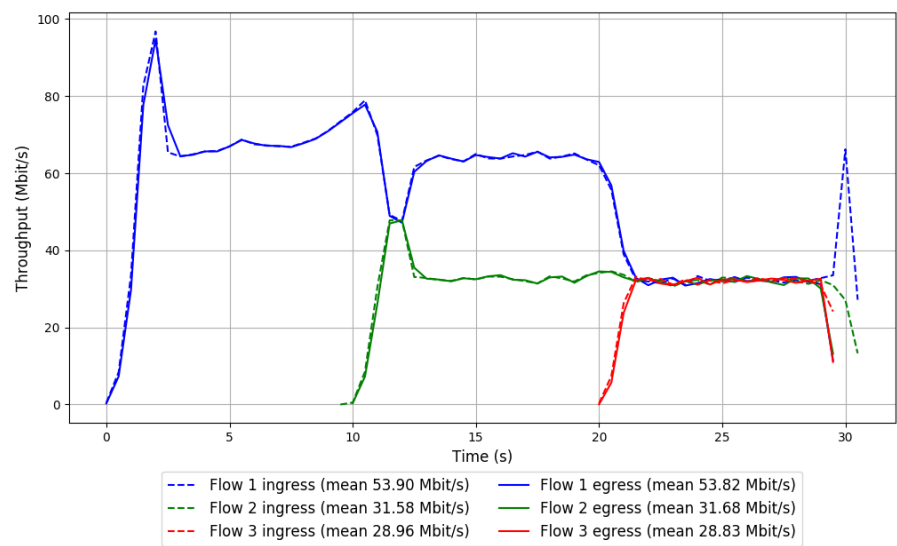
-- Flow 3:

Average throughput: 28.83 Mbit/s

95th percentile per-packet one-way delay: 88.549 ms

Loss rate: 3.06%

Run 6: Report of PCC — Data Link

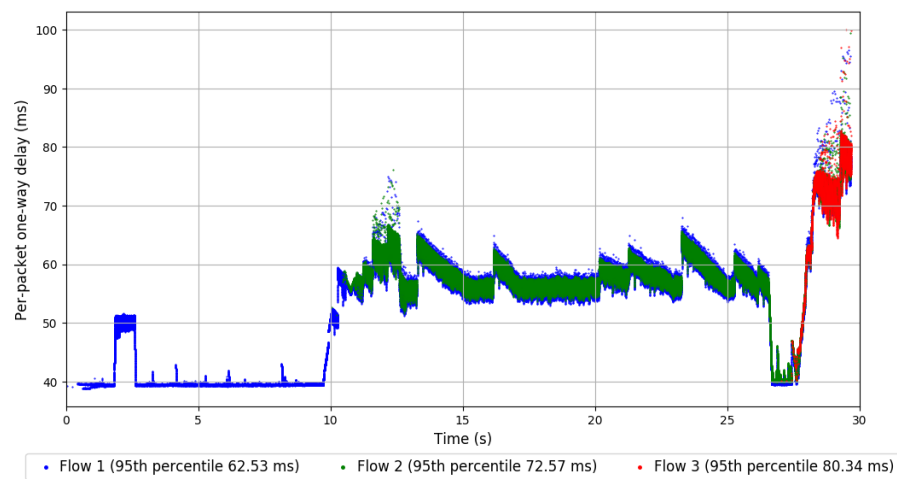
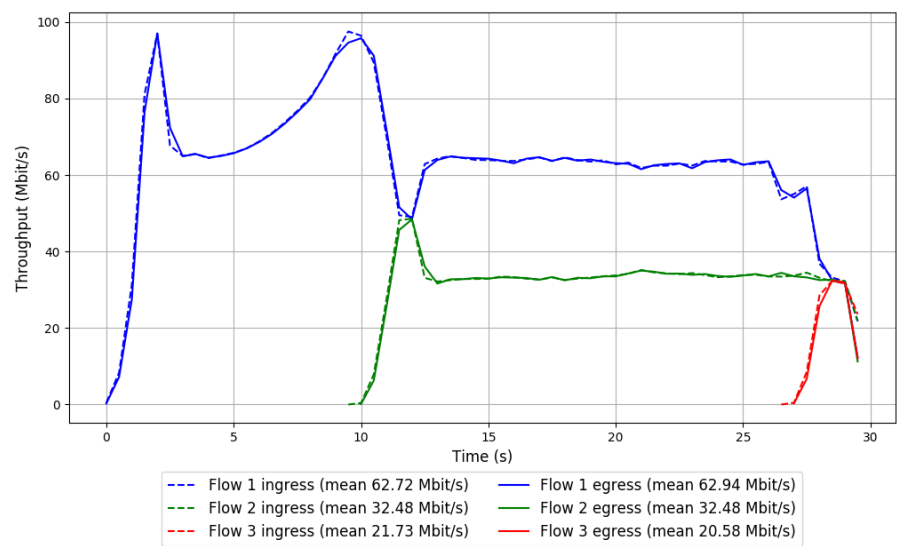


Run 7: Statistics of PCC

Start at: 2018-04-10 20:36:18
End at: 2018-04-10 20:36:48
Local clock offset: 1.052 ms
Remote clock offset: 15.403 ms

Below is generated by plot.py at 2018-04-11 02:28:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 86.26 Mbit/s
95th percentile per-packet one-way delay: 70.221 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 62.94 Mbit/s
95th percentile per-packet one-way delay: 62.533 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 32.48 Mbit/s
95th percentile per-packet one-way delay: 72.567 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 20.58 Mbit/s
95th percentile per-packet one-way delay: 80.343 ms
Loss rate: 12.68%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-04-10 21:00:43

End at: 2018-04-10 21:01:13

Local clock offset: 1.16 ms

Remote clock offset: 8.866 ms

Below is generated by plot.py at 2018-04-11 02:28:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.73 Mbit/s

95th percentile per-packet one-way delay: 74.561 ms

Loss rate: 3.46%

-- Flow 1:

Average throughput: 56.65 Mbit/s

95th percentile per-packet one-way delay: 72.287 ms

Loss rate: 3.09%

-- Flow 2:

Average throughput: 30.87 Mbit/s

95th percentile per-packet one-way delay: 75.560 ms

Loss rate: 4.79%

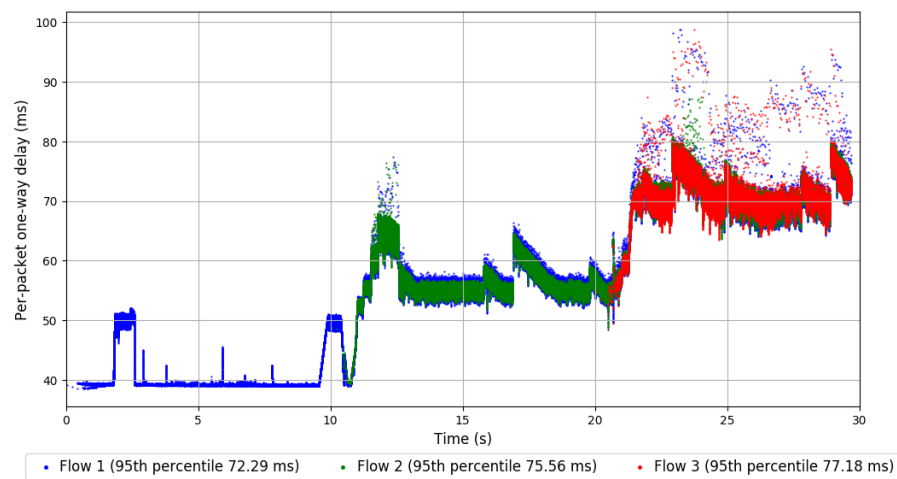
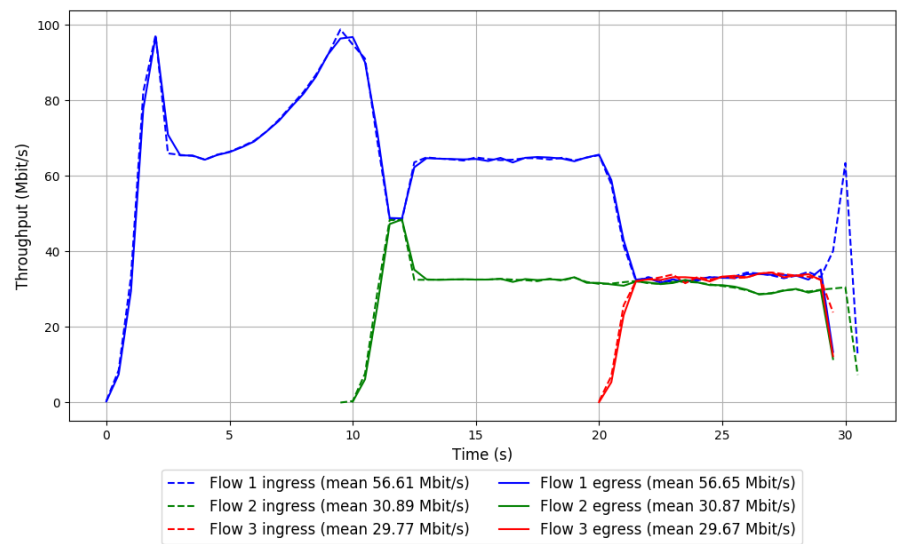
-- Flow 3:

Average throughput: 29.67 Mbit/s

95th percentile per-packet one-way delay: 77.178 ms

Loss rate: 2.78%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

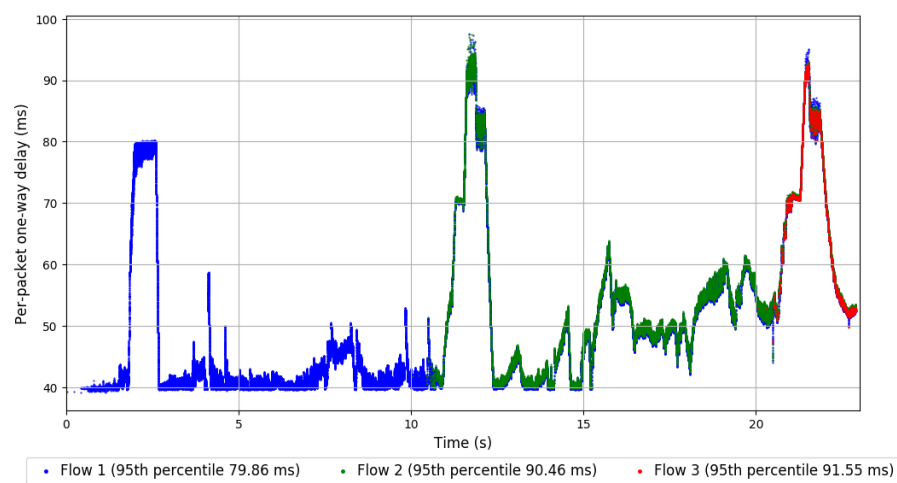
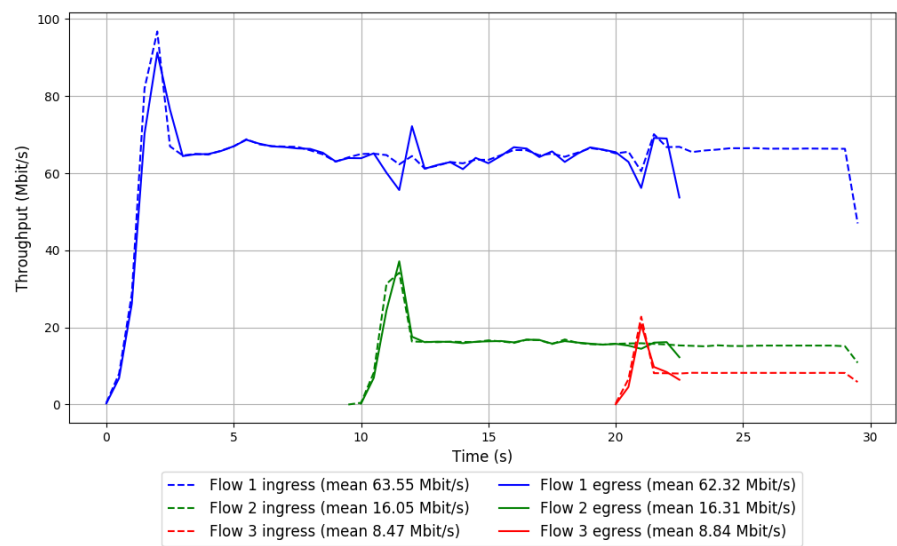
Start at: 2018-04-10 21:25:11

End at: 2018-04-10 21:25:41

Local clock offset: 2.159 ms

Remote clock offset: -4.758 ms

Run 9: Report of PCC — Data Link

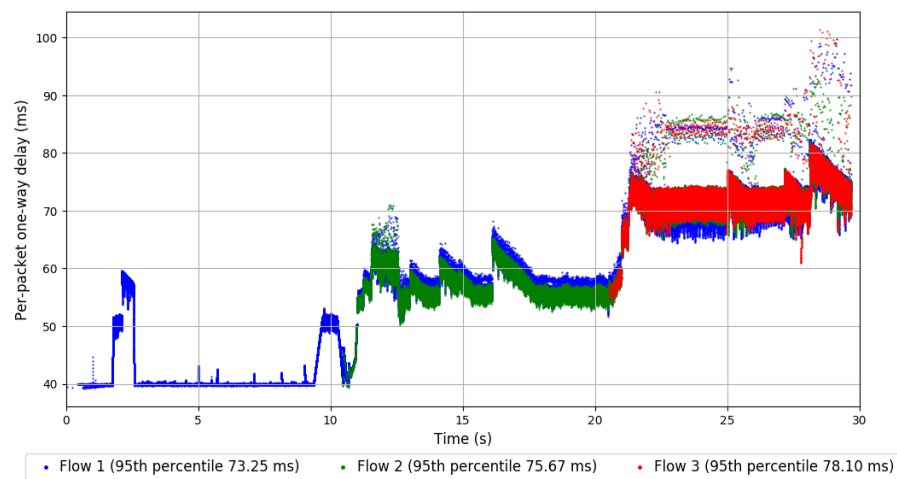
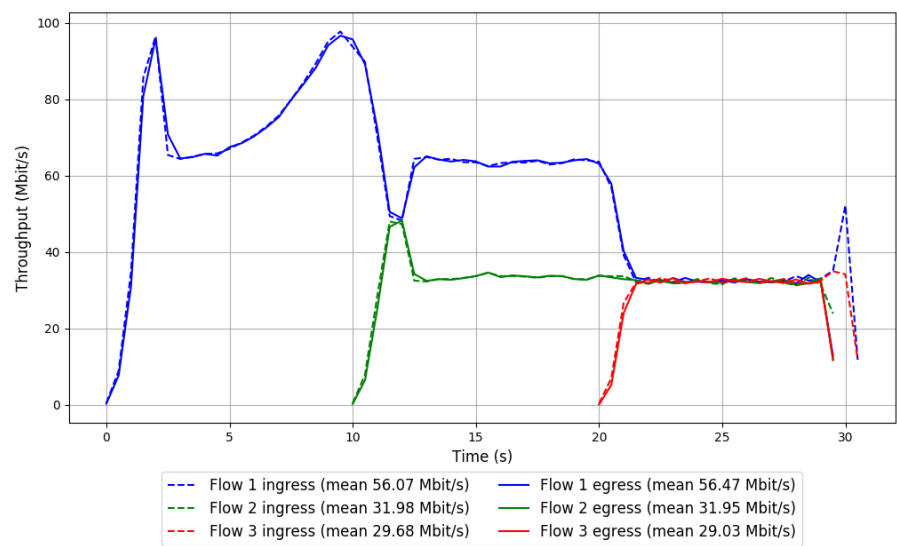


Run 10: Statistics of PCC

Start at: 2018-04-10 21:50:13
End at: 2018-04-10 21:50:43
Local clock offset: 1.896 ms
Remote clock offset: -8.693 ms

Below is generated by plot.py at 2018-04-11 02:28:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 87.02 Mbit/s
95th percentile per-packet one-way delay: 74.845 ms
Loss rate: 3.40%
-- Flow 1:
Average throughput: 56.47 Mbit/s
95th percentile per-packet one-way delay: 73.245 ms
Loss rate: 2.66%
-- Flow 2:
Average throughput: 31.95 Mbit/s
95th percentile per-packet one-way delay: 75.674 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 29.03 Mbit/s
95th percentile per-packet one-way delay: 78.097 ms
Loss rate: 11.67%

Run 10: Report of PCC — Data Link

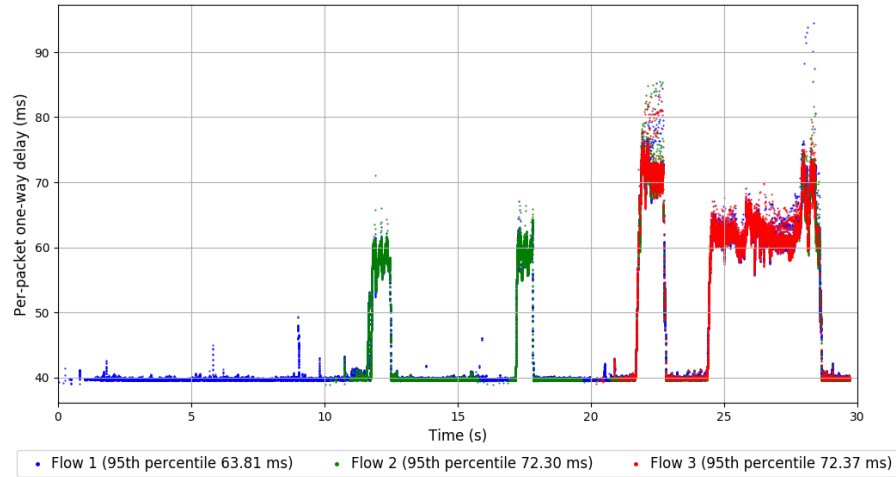
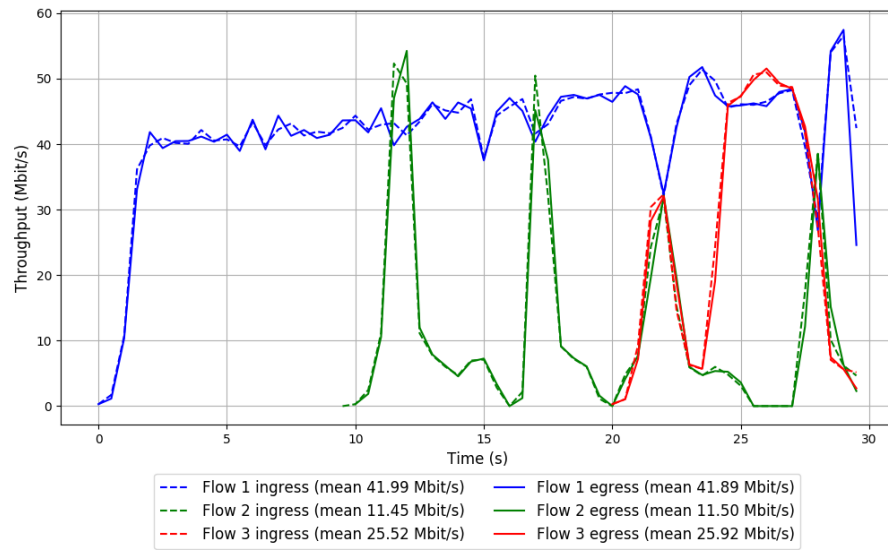


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-10 18:25:09
End at: 2018-04-10 18:25:39
Local clock offset: 0.922 ms
Remote clock offset: 0.396 ms

# Below is generated by plot.py at 2018-04-11 02:28:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.96 Mbit/s
95th percentile per-packet one-way delay: 70.484 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 41.89 Mbit/s
95th percentile per-packet one-way delay: 63.809 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 11.50 Mbit/s
95th percentile per-packet one-way delay: 72.302 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 25.92 Mbit/s
95th percentile per-packet one-way delay: 72.373 ms
Loss rate: 0.57%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-04-10 18:49:33

End at: 2018-04-10 18:50:03

Local clock offset: 1.28 ms

Remote clock offset: 0.579 ms

Below is generated by plot.py at 2018-04-11 02:28:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 26.71 Mbit/s

95th percentile per-packet one-way delay: 71.494 ms

Loss rate: 2.87%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 39.658 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 29.85 Mbit/s

95th percentile per-packet one-way delay: 66.638 ms

Loss rate: 1.77%

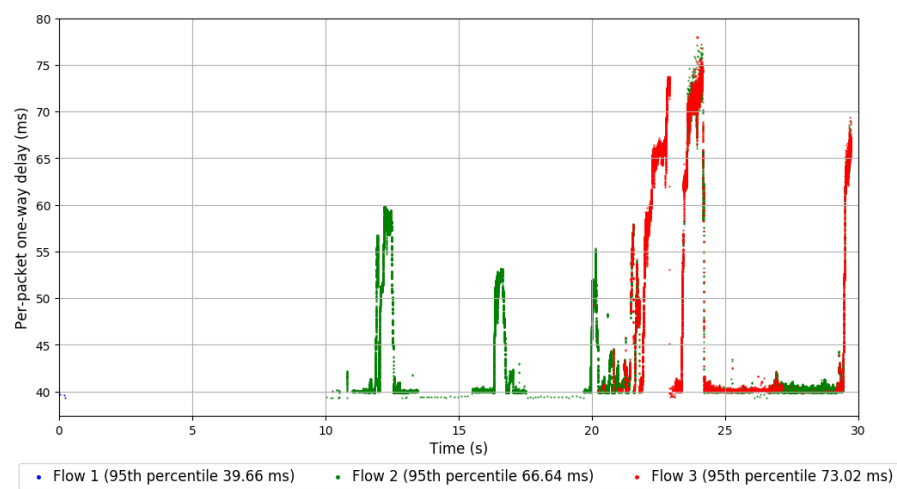
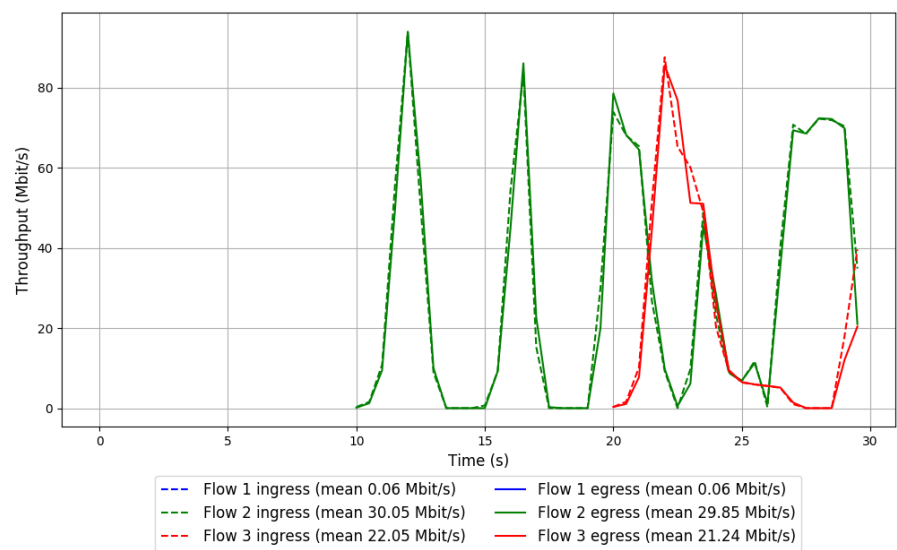
-- Flow 3:

Average throughput: 21.24 Mbit/s

95th percentile per-packet one-way delay: 73.019 ms

Loss rate: 5.89%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-04-10 19:13:58

End at: 2018-04-10 19:14:28

Local clock offset: 1.169 ms

Remote clock offset: 0.892 ms

Below is generated by plot.py at 2018-04-11 02:28:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.31 Mbit/s

95th percentile per-packet one-way delay: 71.113 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 40.96 Mbit/s

95th percentile per-packet one-way delay: 63.657 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 47.28 Mbit/s

95th percentile per-packet one-way delay: 69.444 ms

Loss rate: 1.30%

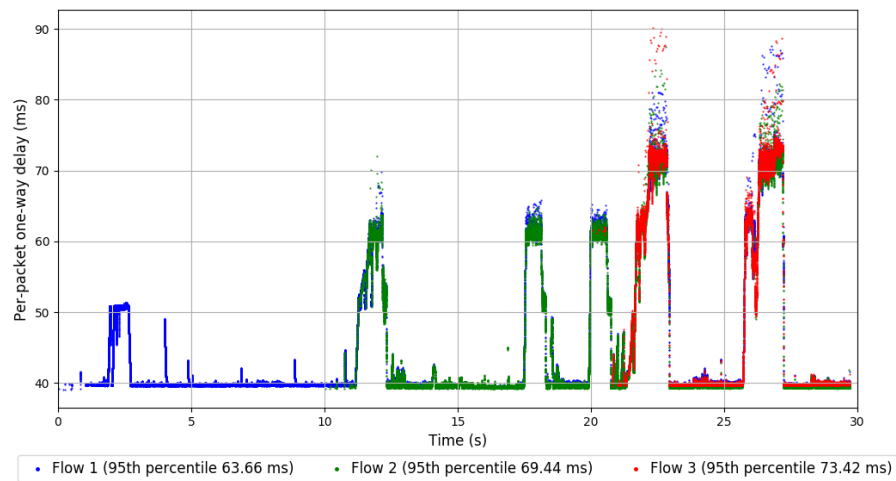
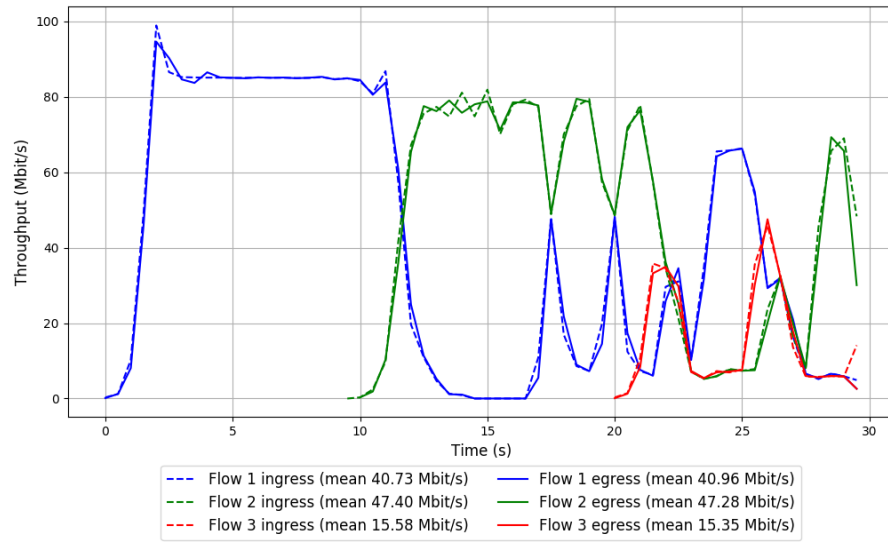
-- Flow 3:

Average throughput: 15.35 Mbit/s

95th percentile per-packet one-way delay: 73.419 ms

Loss rate: 3.88%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-04-10 19:38:50

End at: 2018-04-10 19:39:20

Local clock offset: 1.782 ms

Remote clock offset: 0.569 ms

Below is generated by plot.py at 2018-04-11 02:28:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 61.21 Mbit/s

95th percentile per-packet one-way delay: 68.660 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 28.88 Mbit/s

95th percentile per-packet one-way delay: 68.848 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 46.17 Mbit/s

95th percentile per-packet one-way delay: 68.122 ms

Loss rate: 1.16%

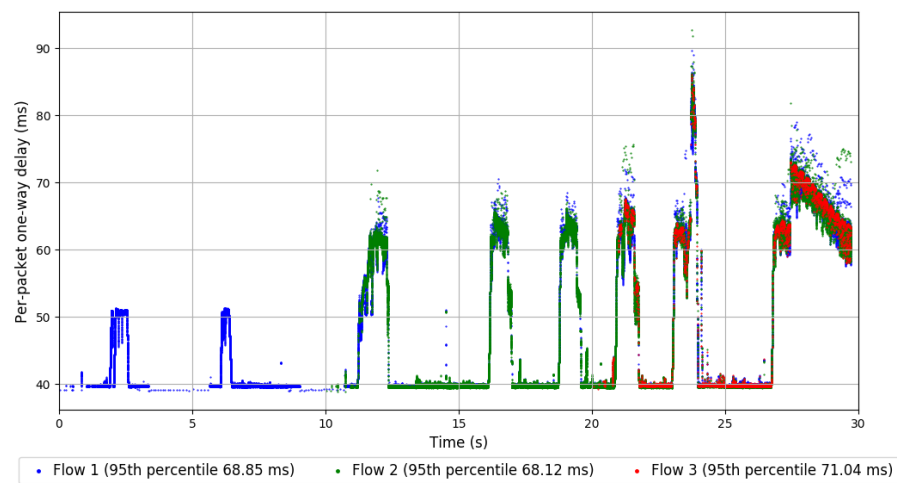
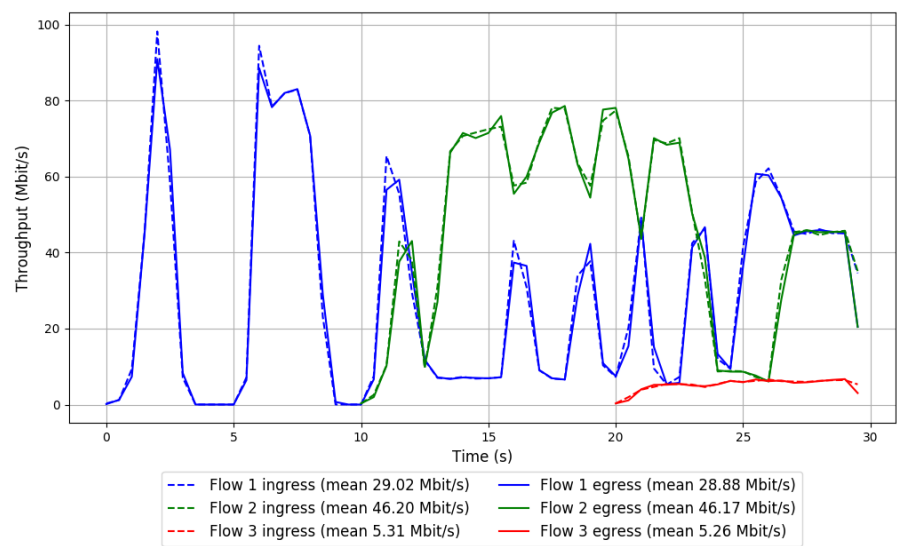
-- Flow 3:

Average throughput: 5.26 Mbit/s

95th percentile per-packet one-way delay: 71.038 ms

Loss rate: 2.86%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-04-10 20:03:17

End at: 2018-04-10 20:03:47

Local clock offset: 1.594 ms

Remote clock offset: 6.611 ms

Below is generated by plot.py at 2018-04-11 02:29:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 72.82 Mbit/s

95th percentile per-packet one-way delay: 67.618 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 38.91 Mbit/s

95th percentile per-packet one-way delay: 66.701 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 42.58 Mbit/s

95th percentile per-packet one-way delay: 67.971 ms

Loss rate: 1.52%

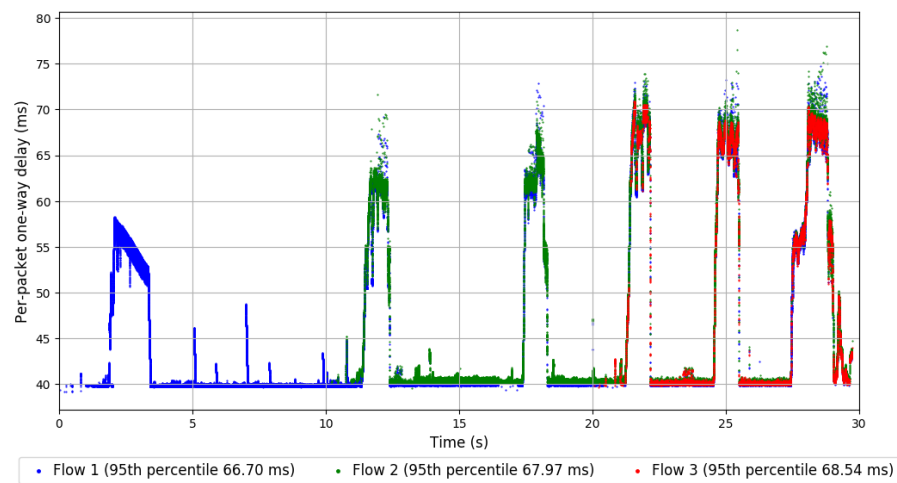
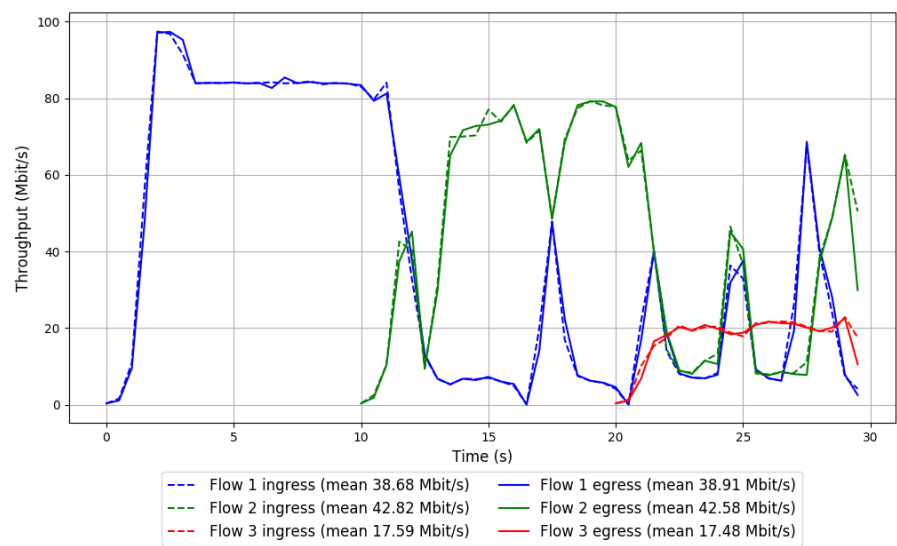
-- Flow 3:

Average throughput: 17.48 Mbit/s

95th percentile per-packet one-way delay: 68.539 ms

Loss rate: 2.56%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-04-10 20:27:41

End at: 2018-04-10 20:28:11

Local clock offset: 1.084 ms

Remote clock offset: 12.5 ms

Below is generated by plot.py at 2018-04-11 02:29:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 49.64 Mbit/s

95th percentile per-packet one-way delay: 63.426 ms

Loss rate: 0.34%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 39.224 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 51.03 Mbit/s

95th percentile per-packet one-way delay: 62.780 ms

Loss rate: 0.21%

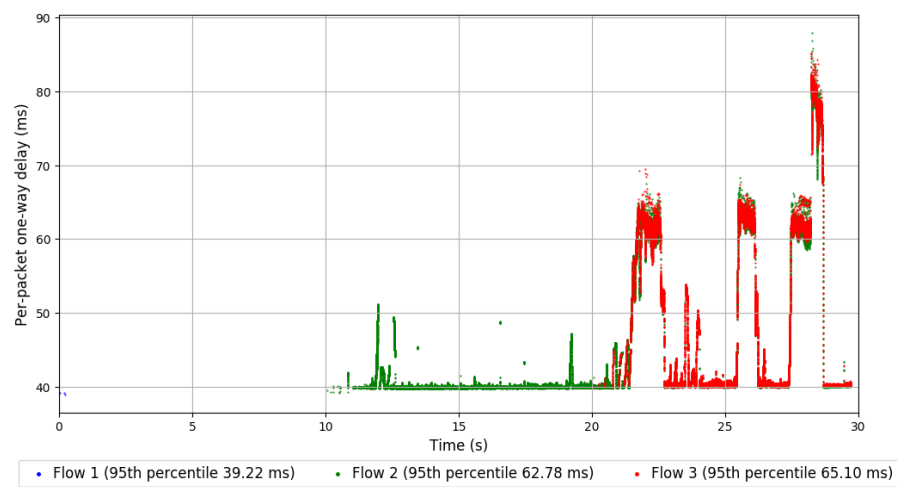
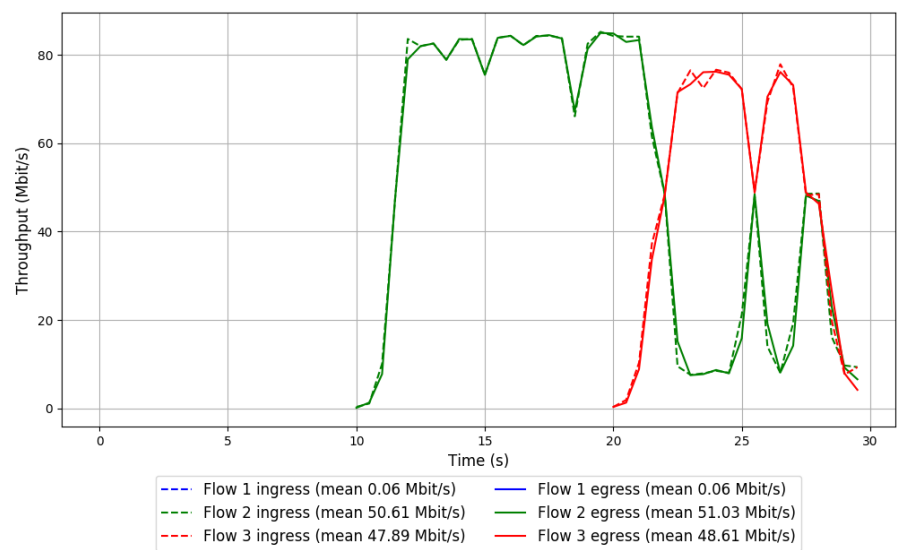
-- Flow 3:

Average throughput: 48.61 Mbit/s

95th percentile per-packet one-way delay: 65.104 ms

Loss rate: 0.62%

Run 6: Report of QUIC Cubic — Data Link

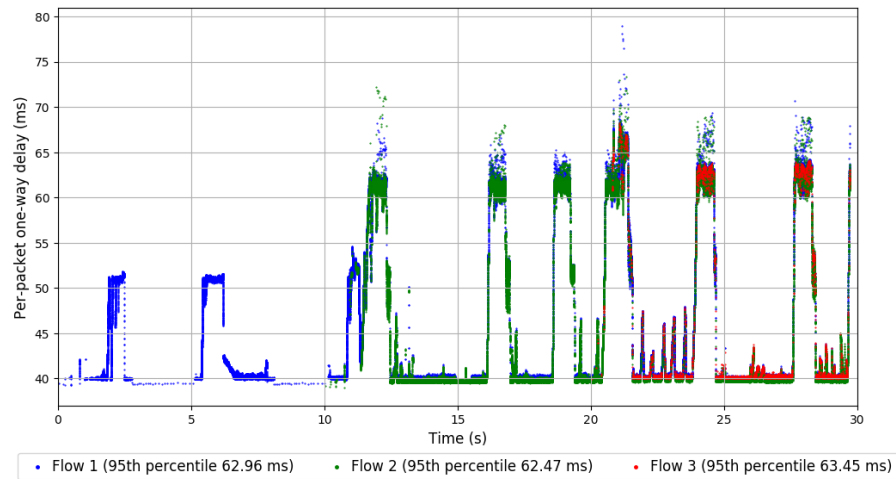
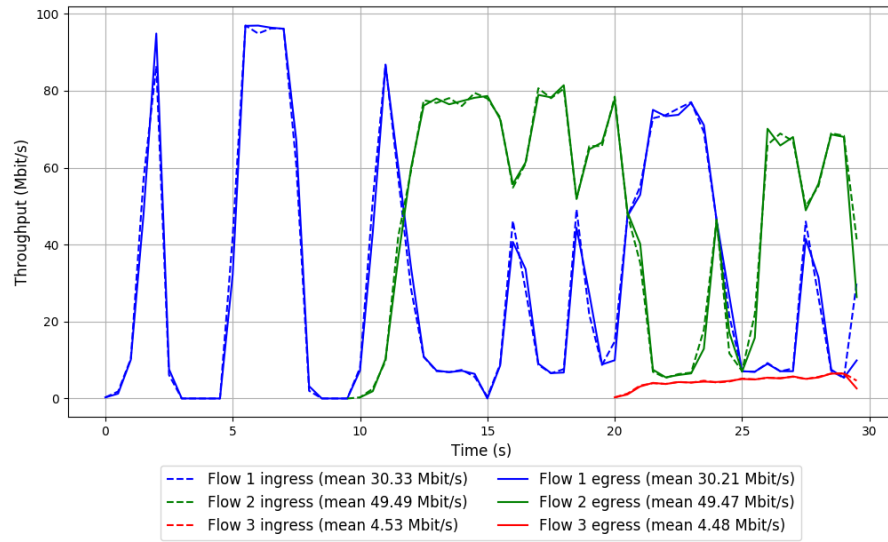


Run 7: Statistics of QUIC Cubic

Start at: 2018-04-10 20:52:33
End at: 2018-04-10 20:53:03
Local clock offset: 1.062 ms
Remote clock offset: 19.153 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 64.48 Mbit/s
95th percentile per-packet one-way delay: 62.769 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 30.21 Mbit/s
95th percentile per-packet one-way delay: 62.958 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 49.47 Mbit/s
95th percentile per-packet one-way delay: 62.471 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 63.452 ms
Loss rate: 2.99%

Run 7: Report of QUIC Cubic — Data Link

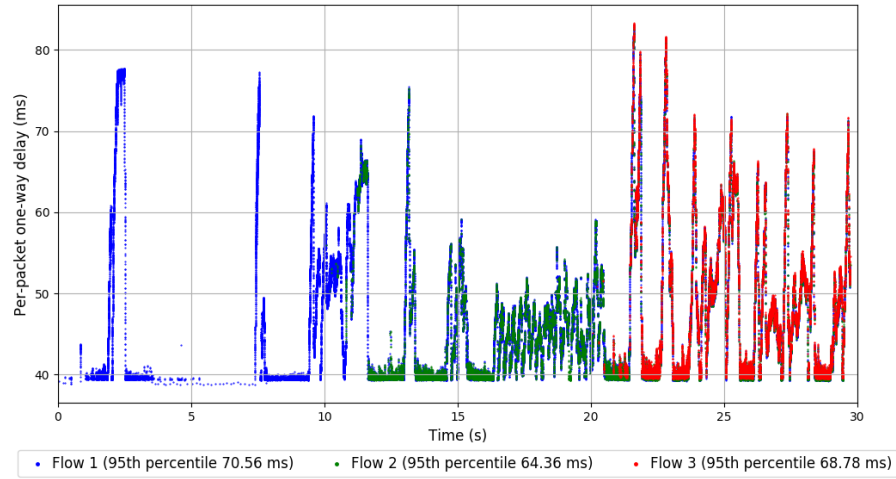
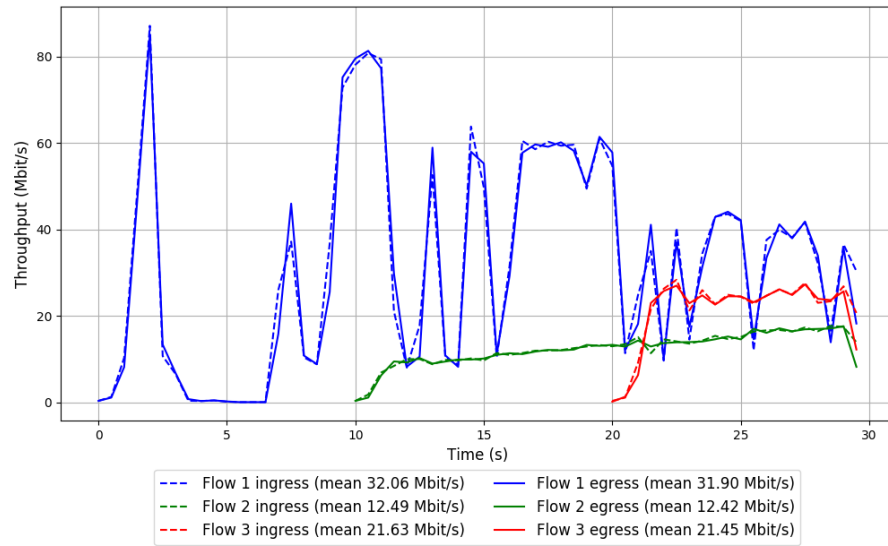


Run 8: Statistics of QUIC Cubic

Start at: 2018-04-10 21:17:04
End at: 2018-04-10 21:17:34
Local clock offset: 2.026 ms
Remote clock offset: -2.756 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 47.10 Mbit/s
95th percentile per-packet one-way delay: 69.258 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 31.90 Mbit/s
95th percentile per-packet one-way delay: 70.558 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 12.42 Mbit/s
95th percentile per-packet one-way delay: 64.359 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 21.45 Mbit/s
95th percentile per-packet one-way delay: 68.783 ms
Loss rate: 2.78%

Run 8: Report of QUIC Cubic — Data Link

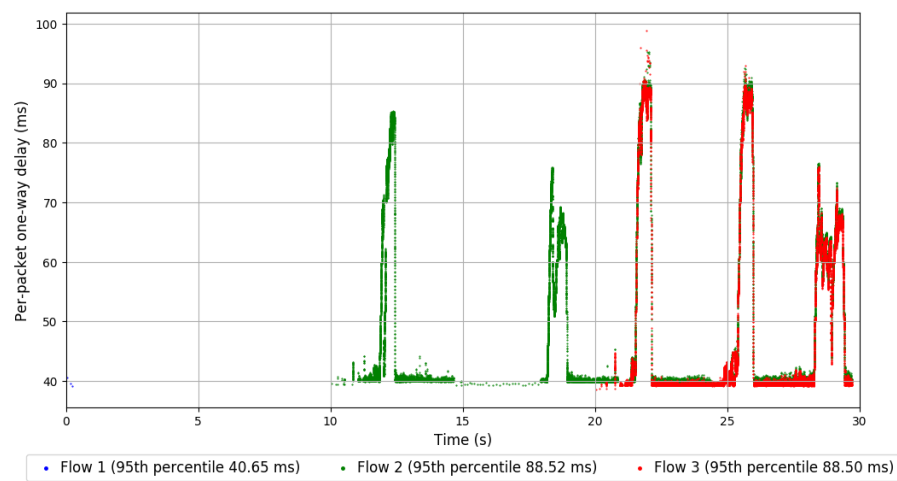
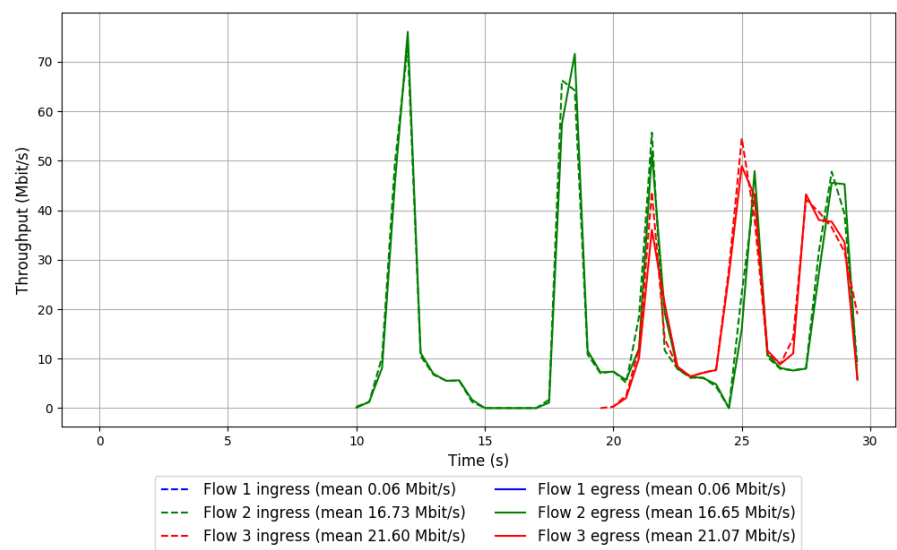


Run 9: Statistics of QUIC Cubic

Start at: 2018-04-10 21:42:09
End at: 2018-04-10 21:42:39
Local clock offset: 2.085 ms
Remote clock offset: -7.613 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 17.91 Mbit/s
95th percentile per-packet one-way delay: 88.513 ms
Loss rate: 2.63%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.649 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 16.65 Mbit/s
95th percentile per-packet one-way delay: 88.517 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 21.07 Mbit/s
95th percentile per-packet one-way delay: 88.502 ms
Loss rate: 4.28%

Run 9: Report of QUIC Cubic — Data Link

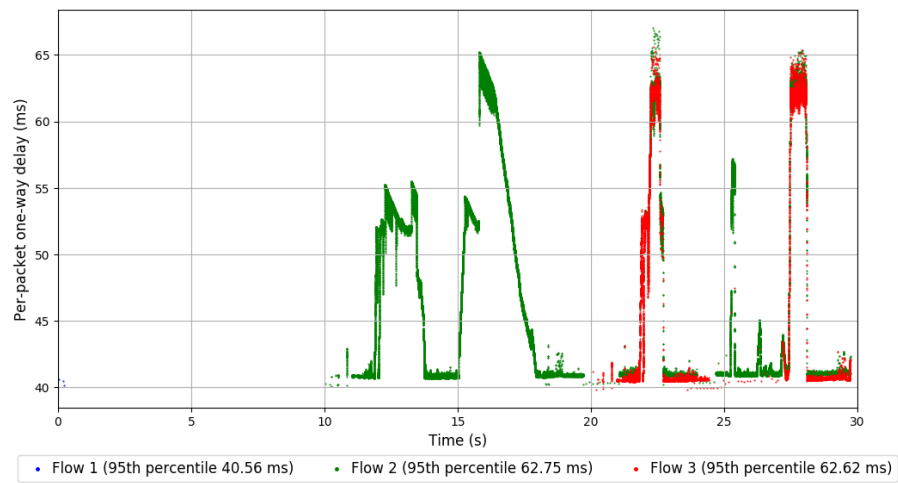
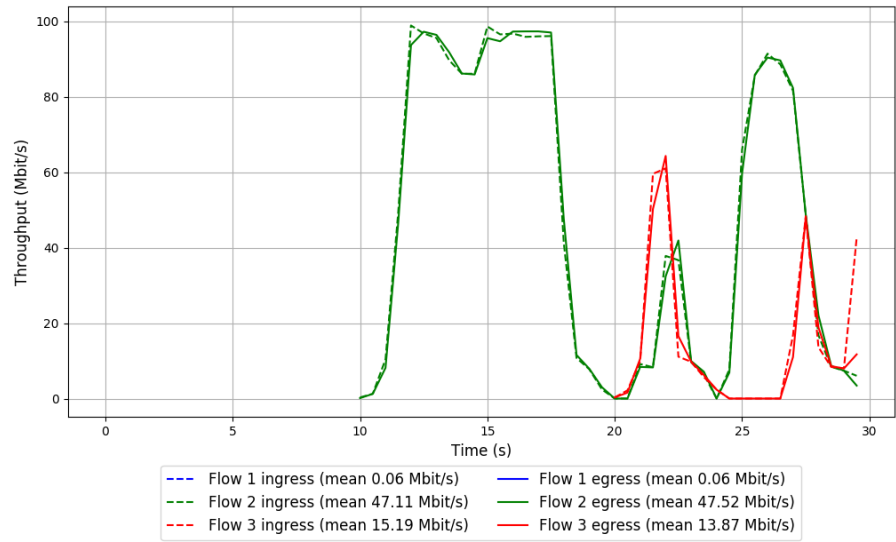


Run 10: Statistics of QUIC Cubic

Start at: 2018-04-10 22:07:09
End at: 2018-04-10 22:07:39
Local clock offset: 2.072 ms
Remote clock offset: -6.725 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 36.02 Mbit/s
95th percentile per-packet one-way delay: 62.719 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.557 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 47.52 Mbit/s
95th percentile per-packet one-way delay: 62.750 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 13.87 Mbit/s
95th percentile per-packet one-way delay: 62.622 ms
Loss rate: 10.54%

Run 10: Report of QUIC Cubic — Data Link

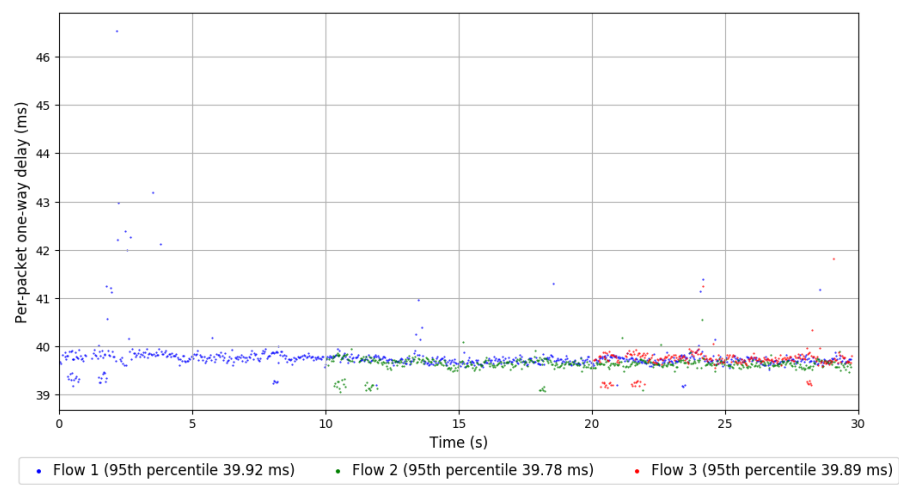
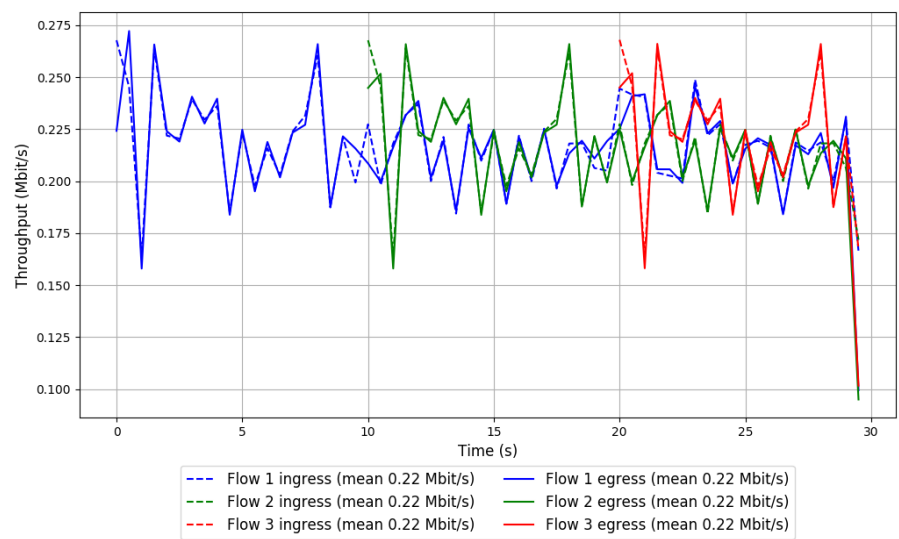


```
Run 1: Statistics of SCReAM

Start at: 2018-04-10 18:32:00
End at: 2018-04-10 18:32:31
Local clock offset: 1.111 ms
Remote clock offset: 0.486 ms

# Below is generated by plot.py at 2018-04-11 02:29:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 39.886 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.918 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.783 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.891 ms
Loss rate: 1.86%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SReAM

Start at: 2018-04-10 18:56:22

End at: 2018-04-10 18:56:52

Local clock offset: 1.266 ms

Remote clock offset: 0.795 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 40.167 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 40.196 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 39.484 ms

Loss rate: 1.05%

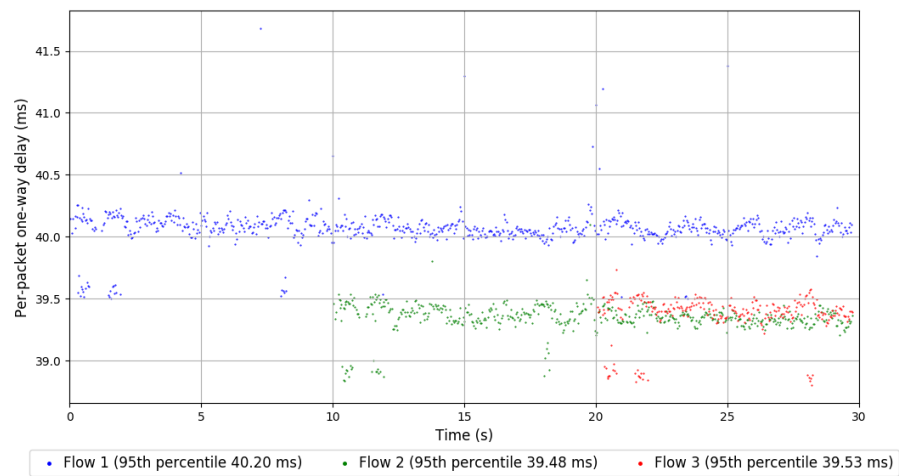
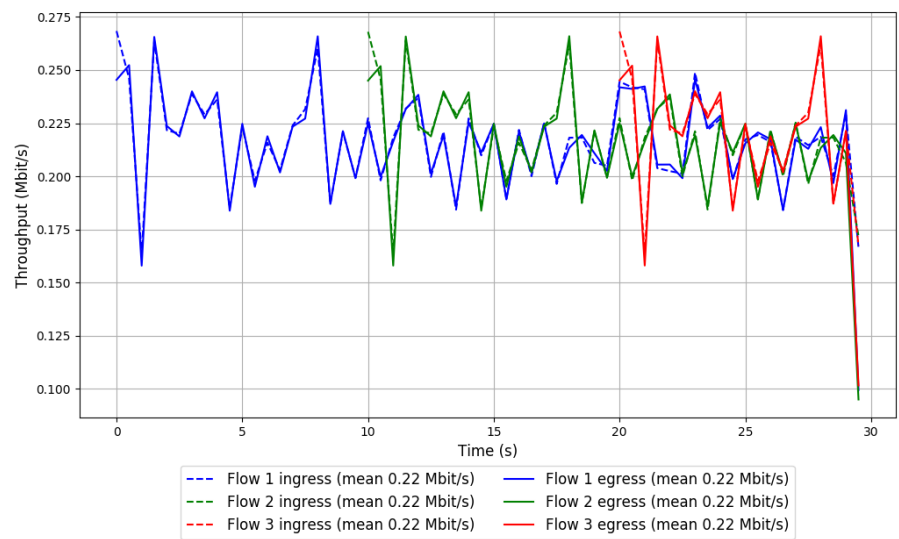
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 39.530 ms

Loss rate: 1.86%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SReAM

Start at: 2018-04-10 19:20:50

End at: 2018-04-10 19:21:20

Local clock offset: 1.394 ms

Remote clock offset: 0.819 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 40.225 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 39.929 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 40.278 ms

Loss rate: 1.05%

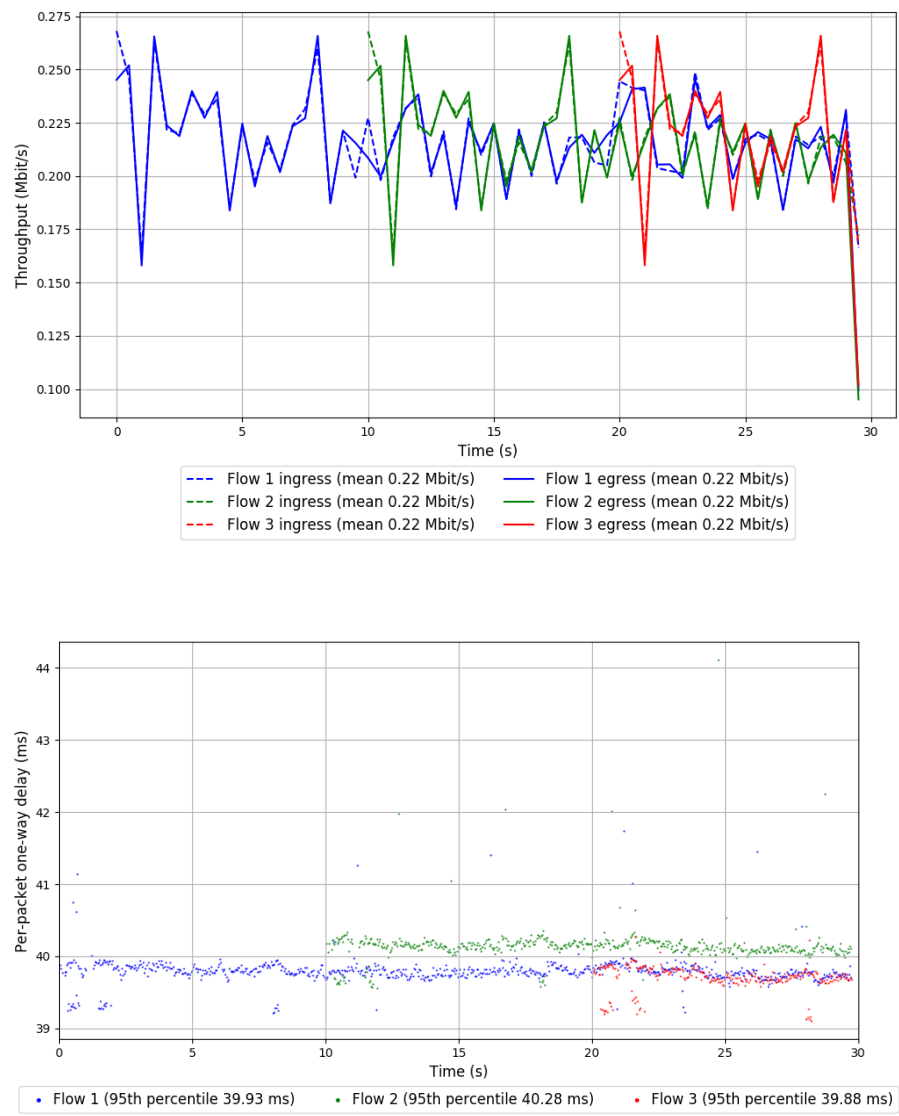
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 39.883 ms

Loss rate: 1.86%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SReAM

Start at: 2018-04-10 19:45:42

End at: 2018-04-10 19:46:12

Local clock offset: 1.958 ms

Remote clock offset: 0.603 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 39.827 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 39.835 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 39.467 ms

Loss rate: 0.85%

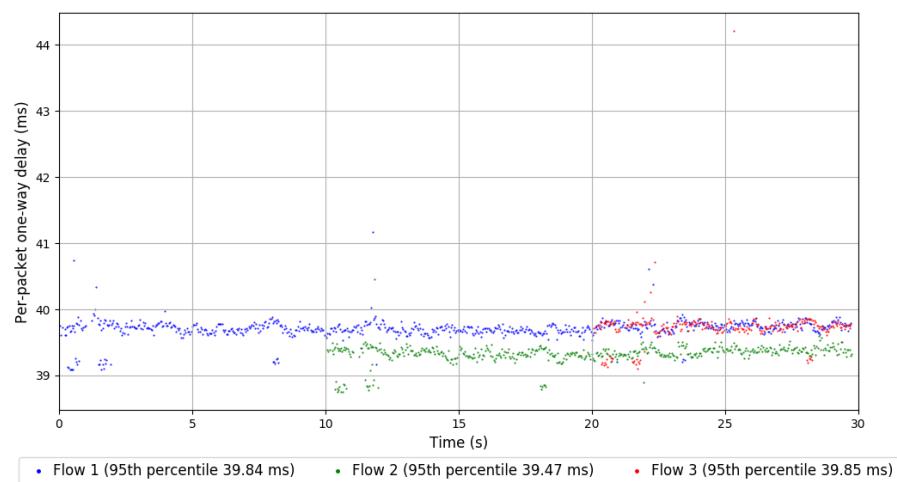
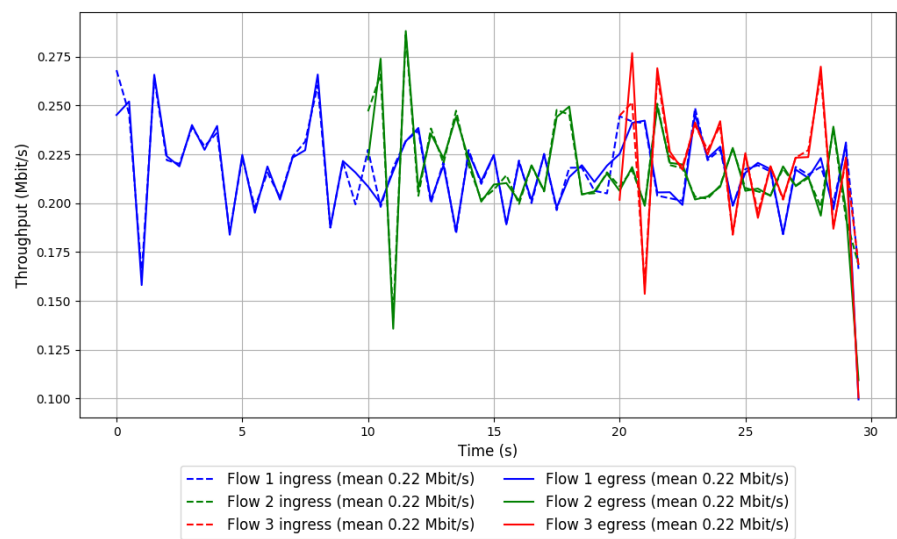
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 39.853 ms

Loss rate: 1.91%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2018-04-10 20:10:08

End at: 2018-04-10 20:10:38

Local clock offset: 1.341 ms

Remote clock offset: 7.697 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 40.223 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 40.248 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 40.183 ms

Loss rate: 1.05%

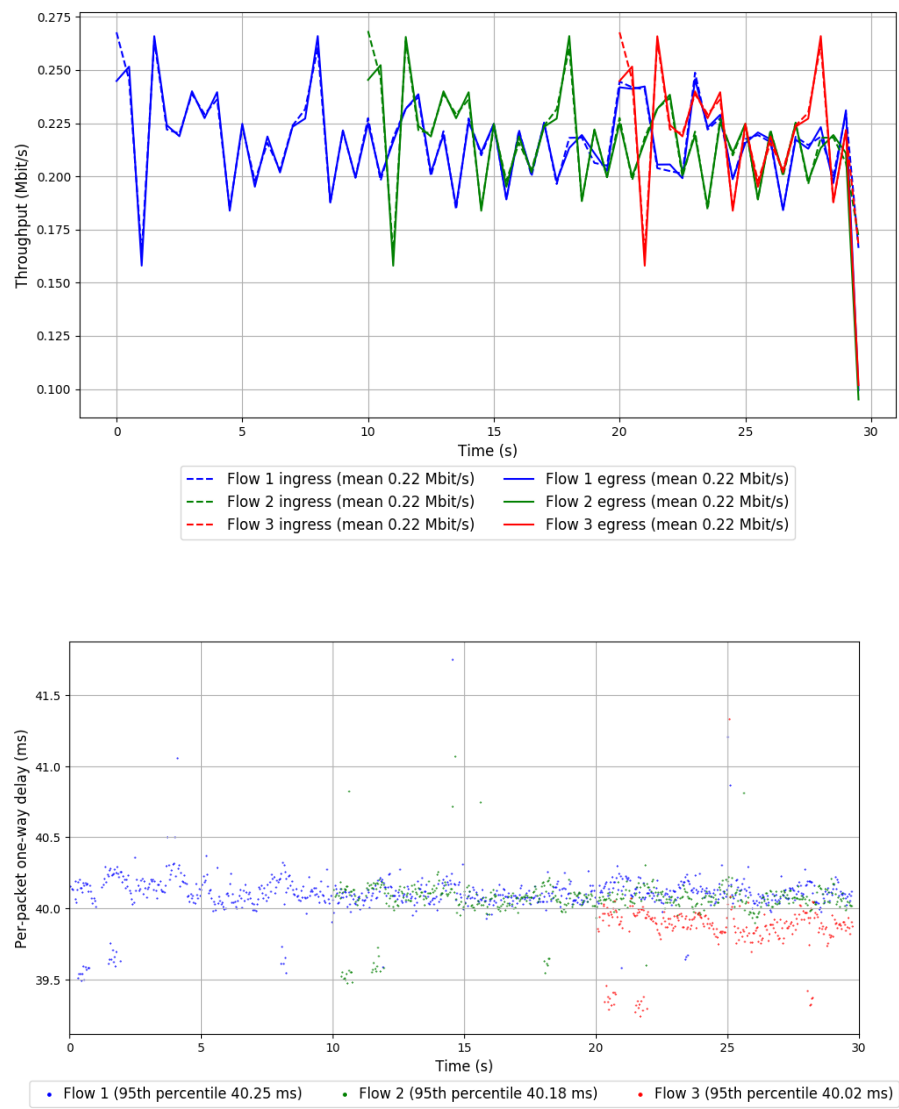
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 40.018 ms

Loss rate: 1.86%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

/home/ubuntu/pantheon_data/2018-04-10T18-07-China-to-AWS-Korea-10-runs-3-flows/scream_stats.

Run 6: Report of SReAM — Data Link

Figure is missing

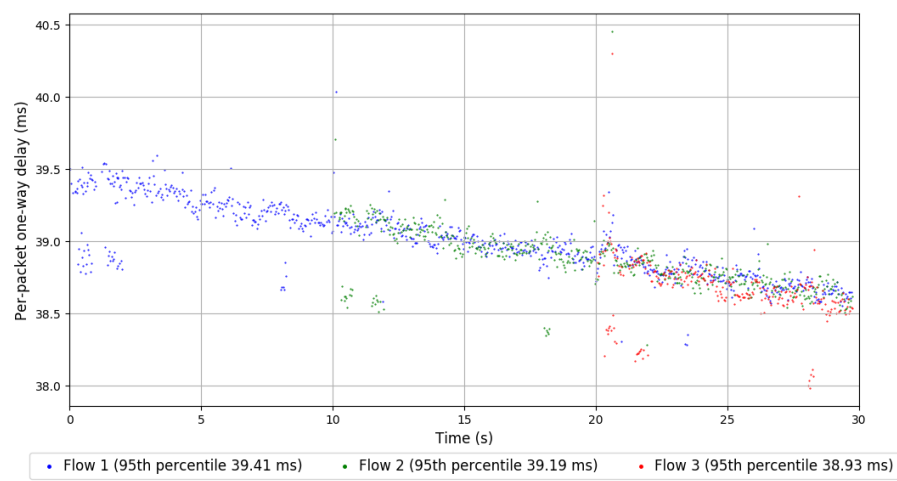
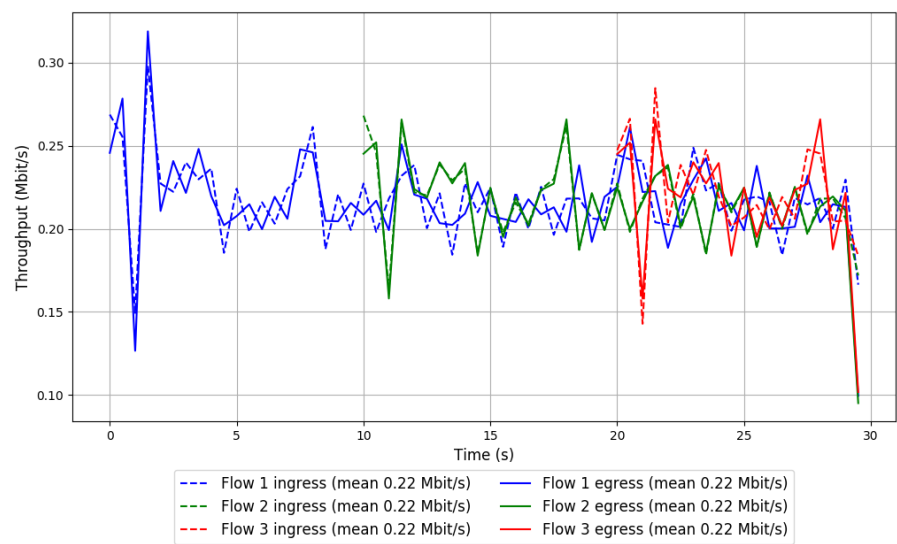
Figure is missing

Run 7: Statistics of SReAM

Start at: 2018-04-10 20:59:25
End at: 2018-04-10 20:59:55
Local clock offset: 1.128 ms
Remote clock offset: 11.041 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 39.352 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.407 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.187 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 38.934 ms
Loss rate: 1.86%

Run 7: Report of SReAM — Data Link

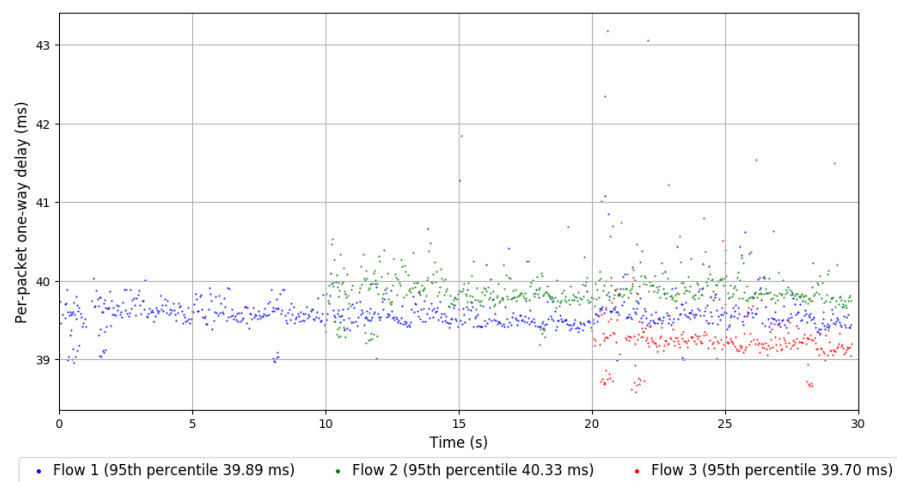
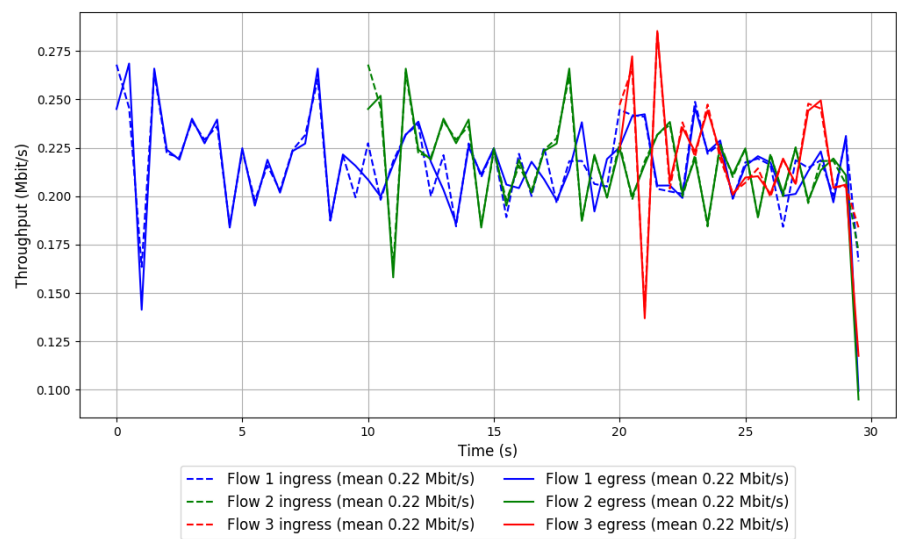


Run 8: Statistics of SCReAM

Start at: 2018-04-10 21:23:54
End at: 2018-04-10 21:24:24
Local clock offset: 1.918 ms
Remote clock offset: -4.566 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 40.102 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.891 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 40.332 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 39.702 ms
Loss rate: 1.87%

Run 8: Report of SReAM — Data Link

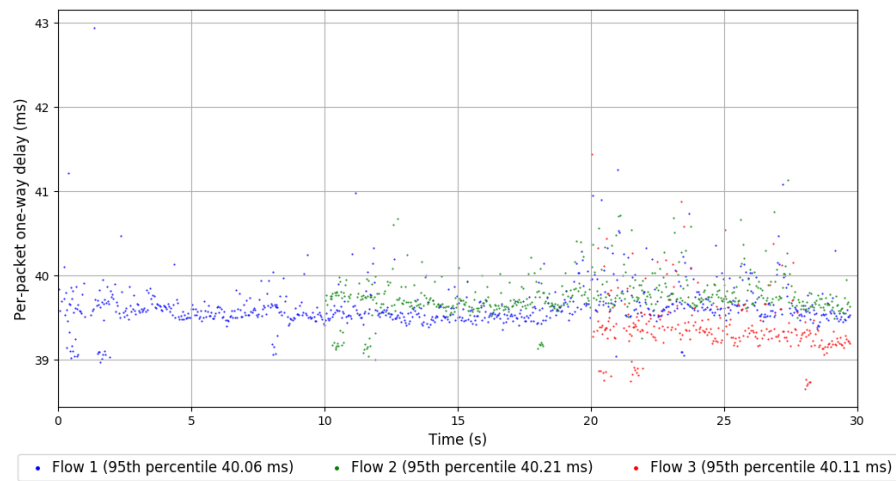
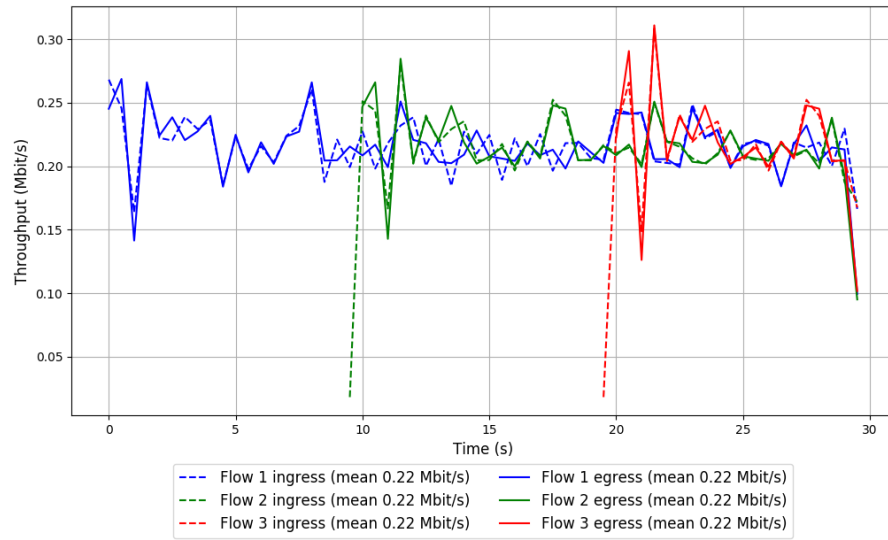


Run 9: Statistics of SReAM

Start at: 2018-04-10 21:48:56
End at: 2018-04-10 21:49:26
Local clock offset: 1.956 ms
Remote clock offset: -8.598 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 40.129 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 40.059 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 40.212 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 40.113 ms
Loss rate: 1.86%

Run 9: Report of SReAM — Data Link

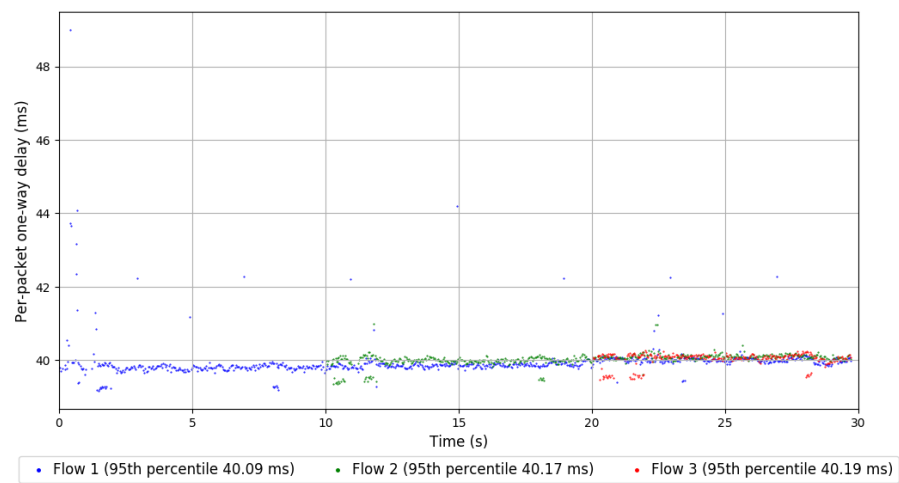
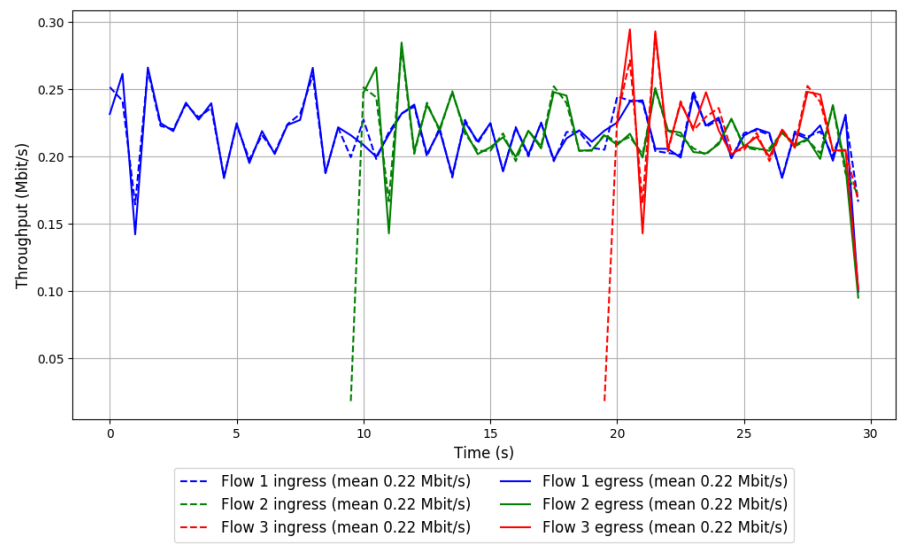


Run 10: Statistics of SReAM

Start at: 2018-04-10 22:14:00
End at: 2018-04-10 22:14:30
Local clock offset: 1.743 ms
Remote clock offset: -1.362 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 40.165 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 40.088 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 40.166 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 40.191 ms
Loss rate: 1.85%

Run 10: Report of SCReAM — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-04-10 18:12:55

End at: 2018-04-10 18:13:25

Local clock offset: 0.005 ms

Remote clock offset: 0.324 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 40.582 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 40.553 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 40.748 ms

Loss rate: 0.00%

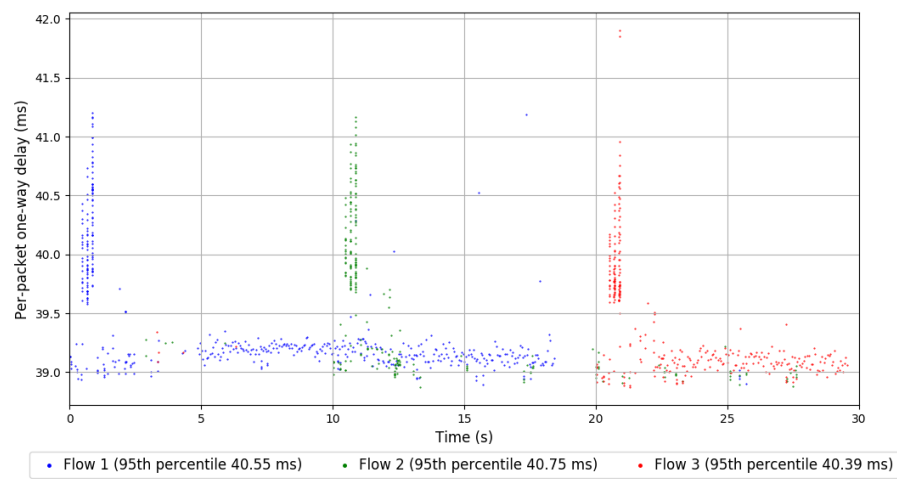
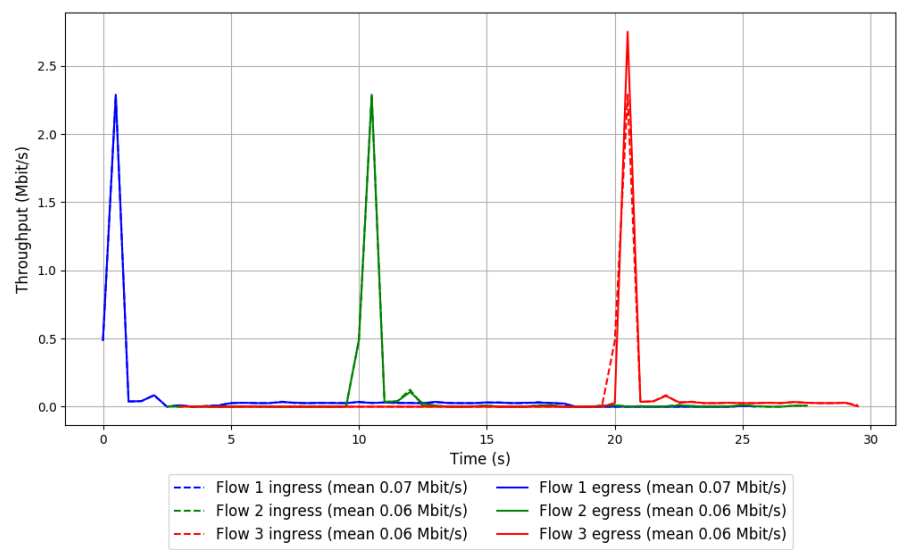
-- Flow 3:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 40.394 ms

Loss rate: 0.31%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-04-10 18:37:22

End at: 2018-04-10 18:37:52

Local clock offset: 1.047 ms

Remote clock offset: 0.368 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 41.561 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 41.407 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 41.932 ms

Loss rate: 0.00%

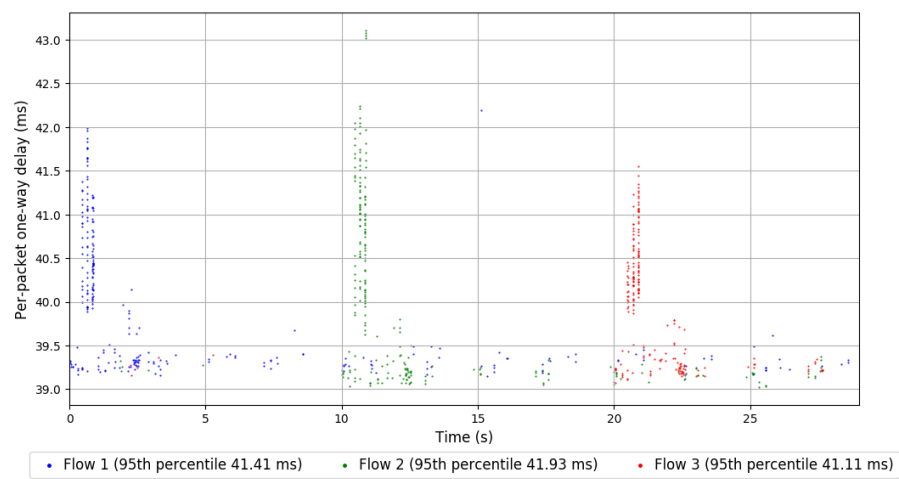
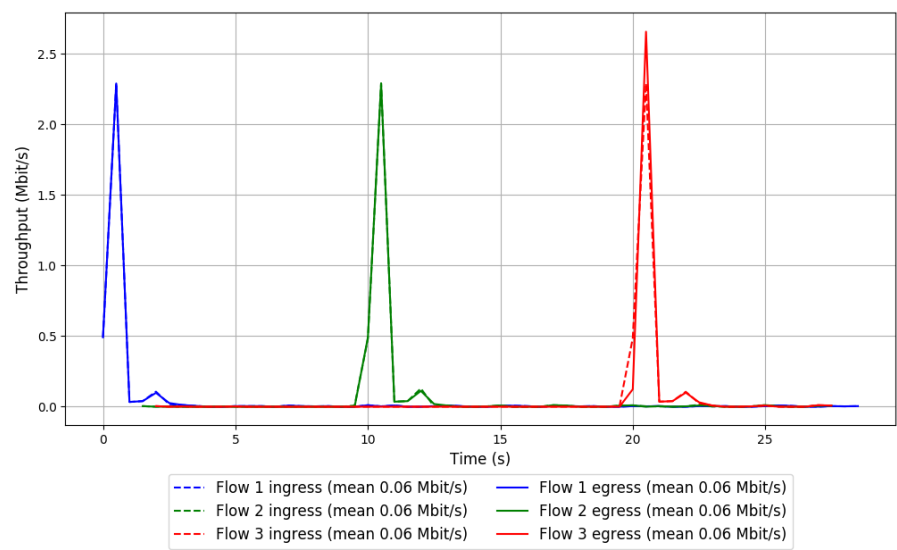
-- Flow 3:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 41.111 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-04-10 19:01:44

End at: 2018-04-10 19:02:14

Local clock offset: 1.283 ms

Remote clock offset: 0.793 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 40.886 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 41.518 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 40.662 ms

Loss rate: 0.00%

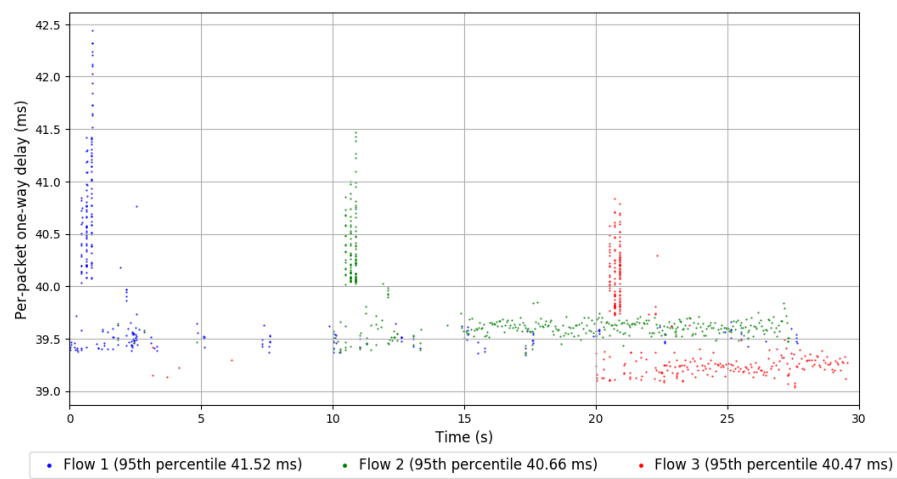
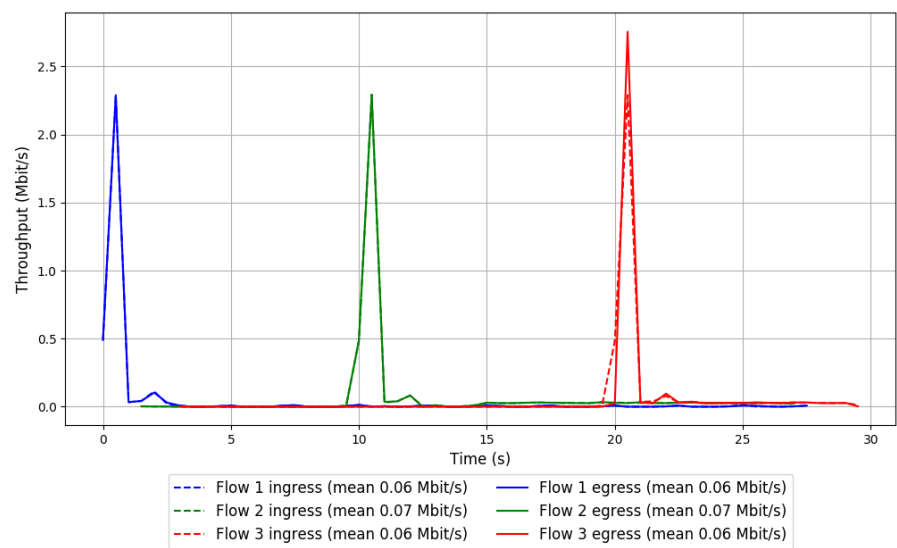
-- Flow 3:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 40.471 ms

Loss rate: 0.31%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-04-10 19:26:12

End at: 2018-04-10 19:26:42

Local clock offset: 1.628 ms

Remote clock offset: 0.712 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 41.462 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 41.636 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 41.440 ms

Loss rate: 0.00%

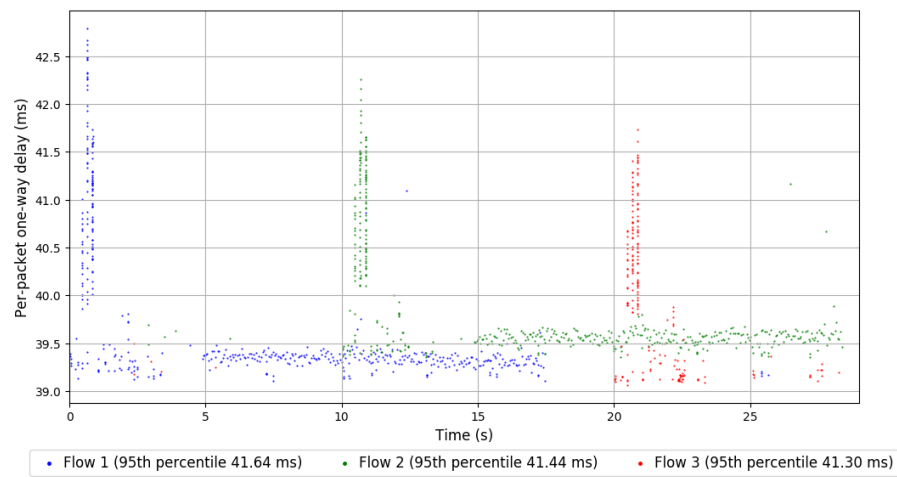
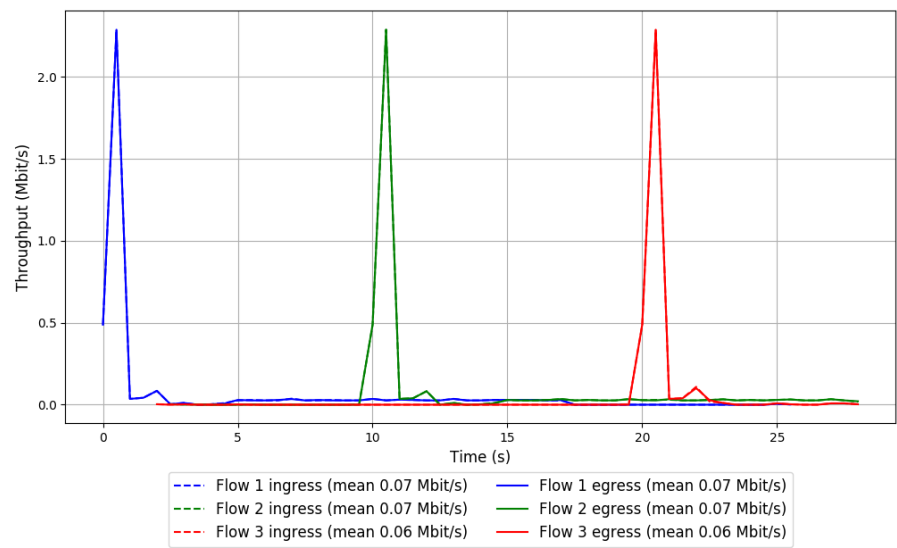
-- Flow 3:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 41.295 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-04-10 19:51:05

End at: 2018-04-10 19:51:35

Local clock offset: 2.148 ms

Remote clock offset: 2.994 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.17 Mbit/s

95th percentile per-packet one-way delay: 41.443 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 41.885 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 41.166 ms

Loss rate: 0.00%

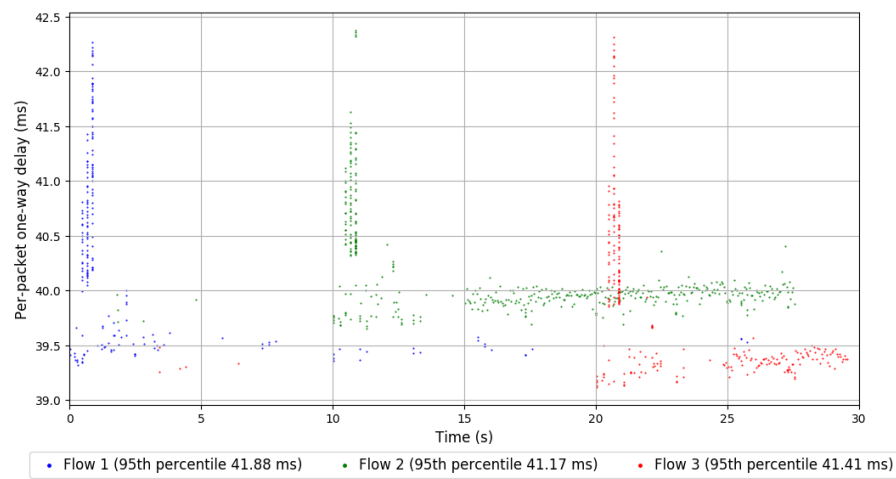
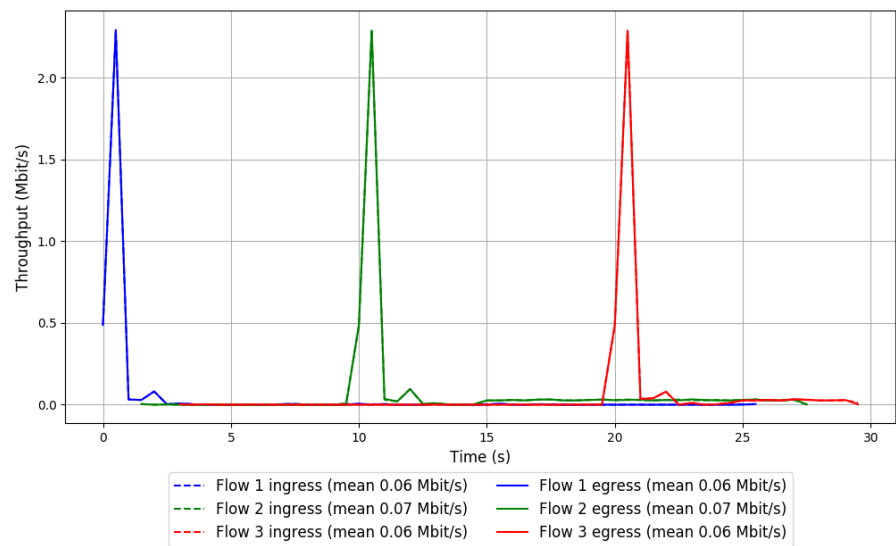
-- Flow 3:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 41.414 ms

Loss rate: 0.32%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-04-10 20:15:30

End at: 2018-04-10 20:16:00

Local clock offset: 1.167 ms

Remote clock offset: 8.257 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 41.032 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 40.873 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 41.284 ms

Loss rate: 0.00%

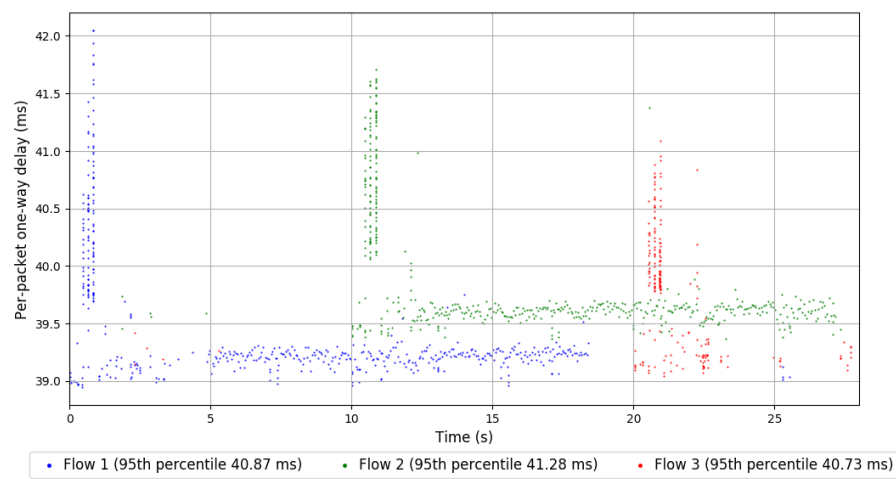
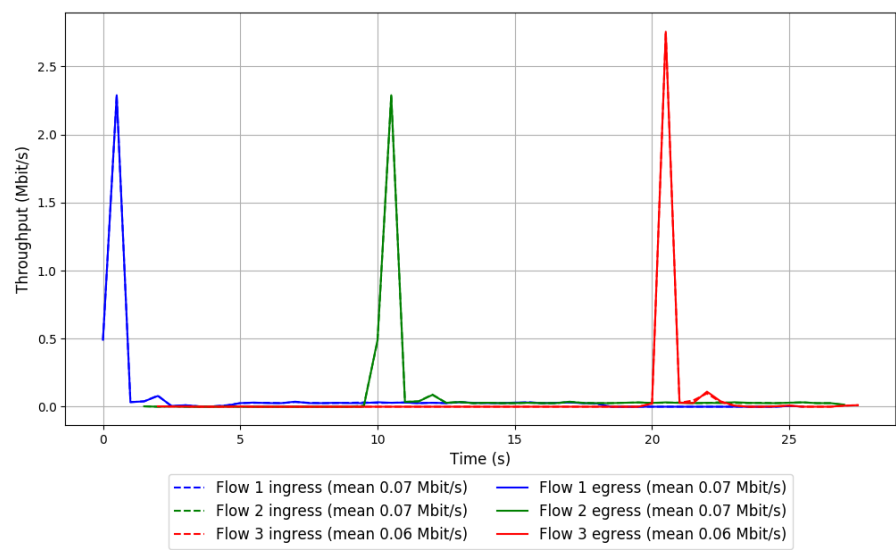
-- Flow 3:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 40.732 ms

Loss rate: 0.00%

Run 6: Report of WebRTC media — Data Link

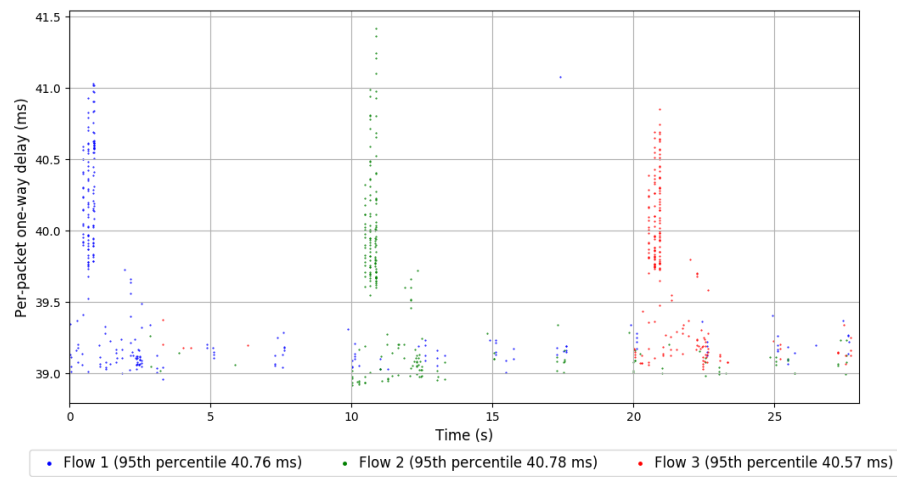
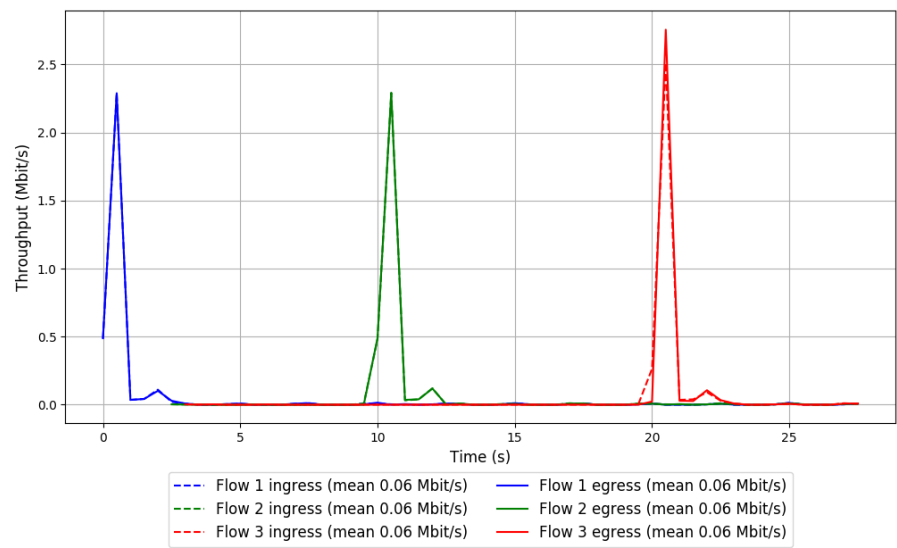


Run 7: Statistics of WebRTC media

Start at: 2018-04-10 20:40:22
End at: 2018-04-10 20:40:52
Local clock offset: 1.038 ms
Remote clock offset: 16.527 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 40.686 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.758 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.780 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.574 ms
Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-04-10 21:04:49

End at: 2018-04-10 21:05:19

Local clock offset: 1.458 ms

Remote clock offset: 4.066 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 40.520 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 40.712 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 40.262 ms

Loss rate: 0.00%

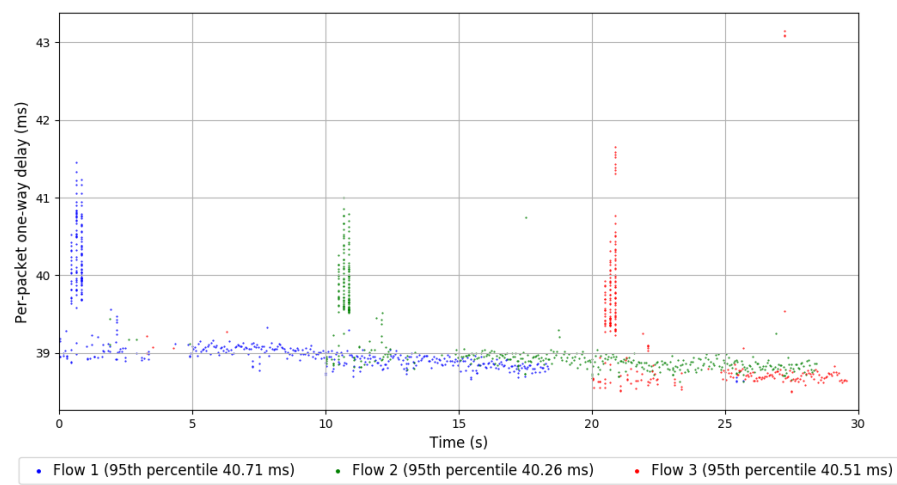
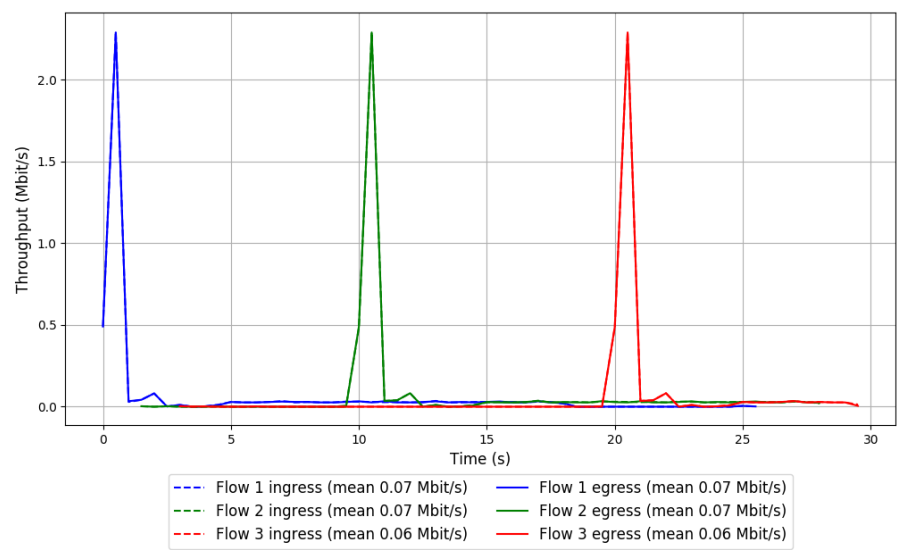
-- Flow 3:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 40.510 ms

Loss rate: 0.32%

Run 8: Report of WebRTC media — Data Link

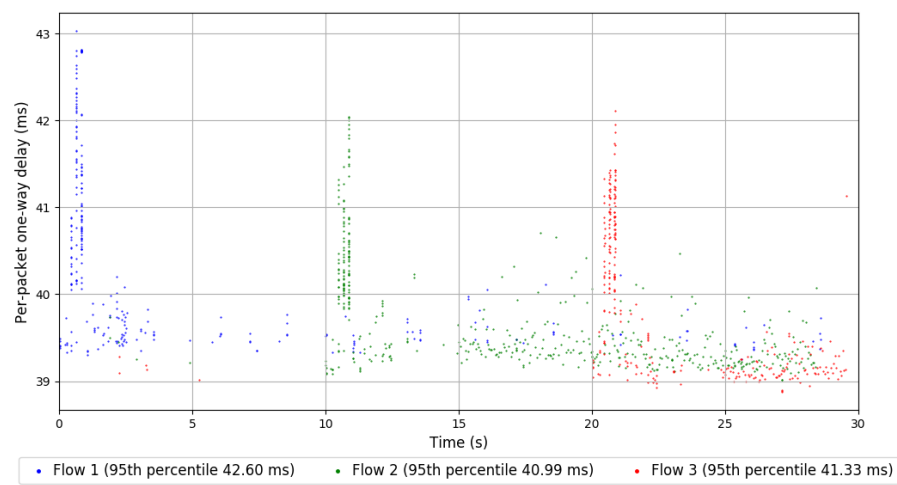
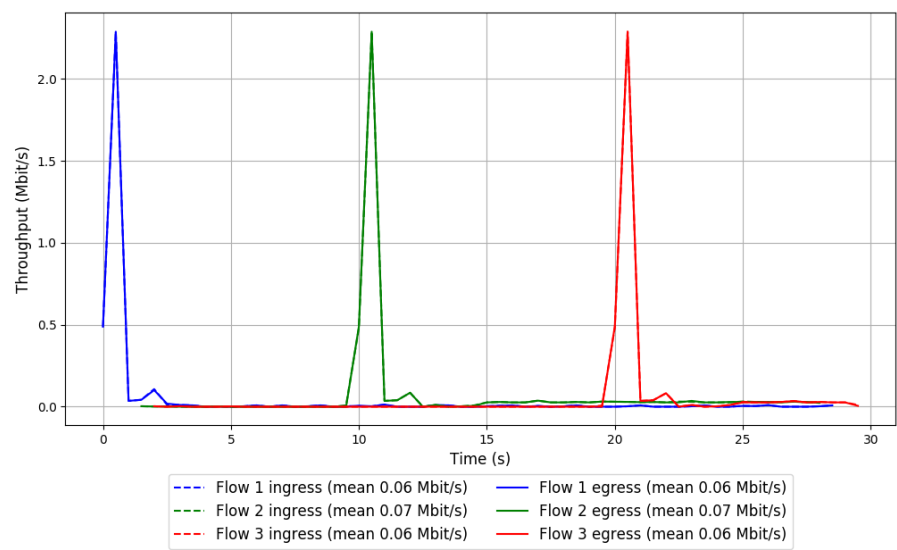


Run 9: Statistics of WebRTC media

Start at: 2018-04-10 21:30:01
End at: 2018-04-10 21:30:31
Local clock offset: 2.216 ms
Remote clock offset: -5.759 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 41.594 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 42.603 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 40.987 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 41.331 ms
Loss rate: 0.24%

Run 9: Report of WebRTC media — Data Link

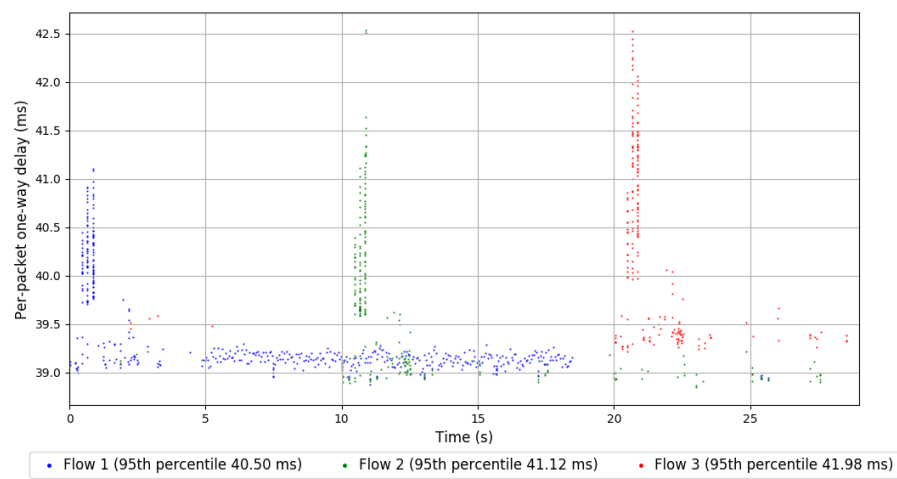
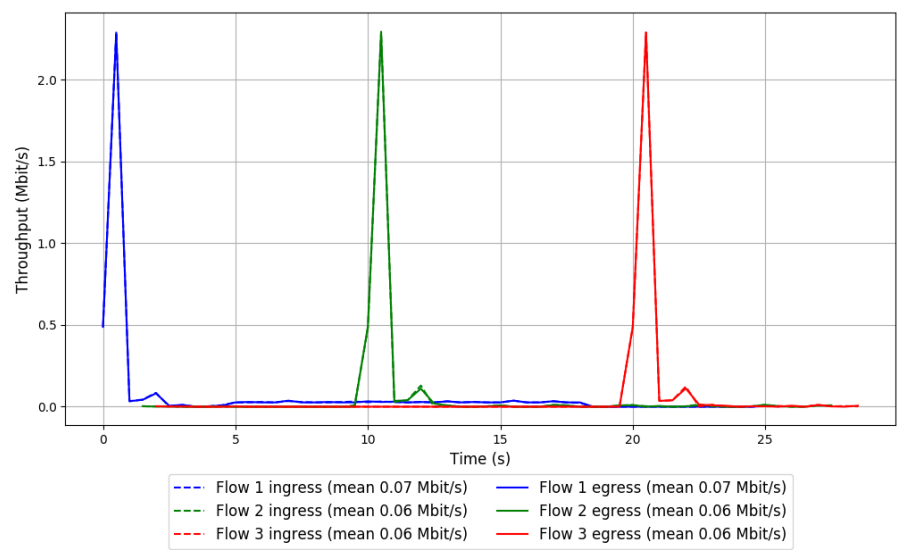


Run 10: Statistics of WebRTC media

Start at: 2018-04-10 21:54:20
End at: 2018-04-10 21:54:50
Local clock offset: 1.997 ms
Remote clock offset: -9.319 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 41.318 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 40.500 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 41.117 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 41.983 ms
Loss rate: 0.00%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-04-10 18:17:00

End at: 2018-04-10 18:17:30

Local clock offset: 0.503 ms

Remote clock offset: 0.352 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.81 Mbit/s

95th percentile per-packet one-way delay: 42.446 ms

Loss rate: 2.16%

-- Flow 1:

Average throughput: 1.49 Mbit/s

95th percentile per-packet one-way delay: 42.004 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 42.919 ms

Loss rate: 2.48%

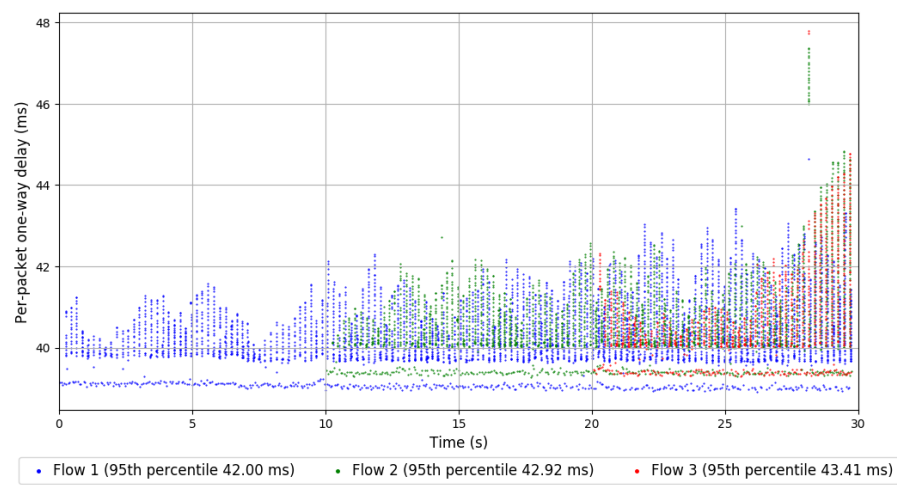
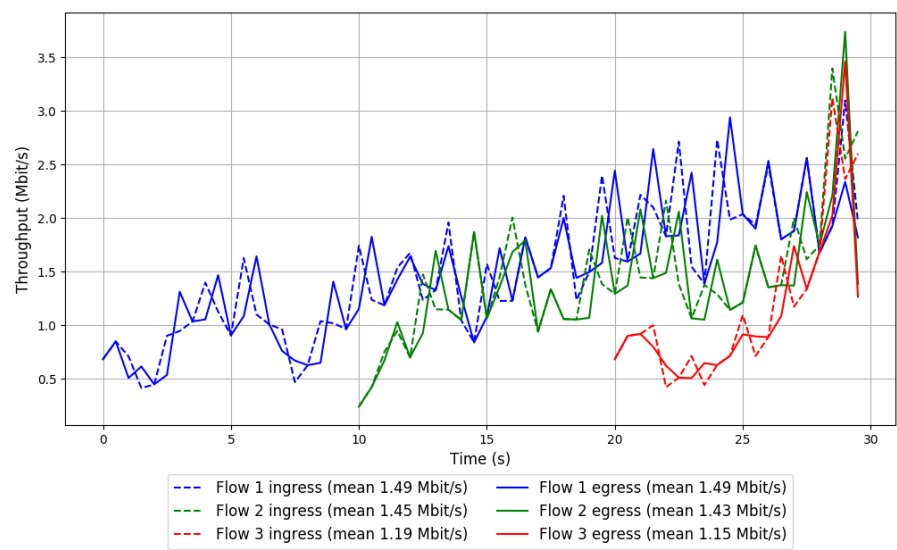
-- Flow 3:

Average throughput: 1.15 Mbit/s

95th percentile per-packet one-way delay: 43.407 ms

Loss rate: 5.67%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-04-10 18:41:25

End at: 2018-04-10 18:41:55

Local clock offset: 1.147 ms

Remote clock offset: 0.414 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.69 Mbit/s

95th percentile per-packet one-way delay: 46.472 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 3.39 Mbit/s

95th percentile per-packet one-way delay: 46.770 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 1.12 Mbit/s

95th percentile per-packet one-way delay: 41.710 ms

Loss rate: 0.13%

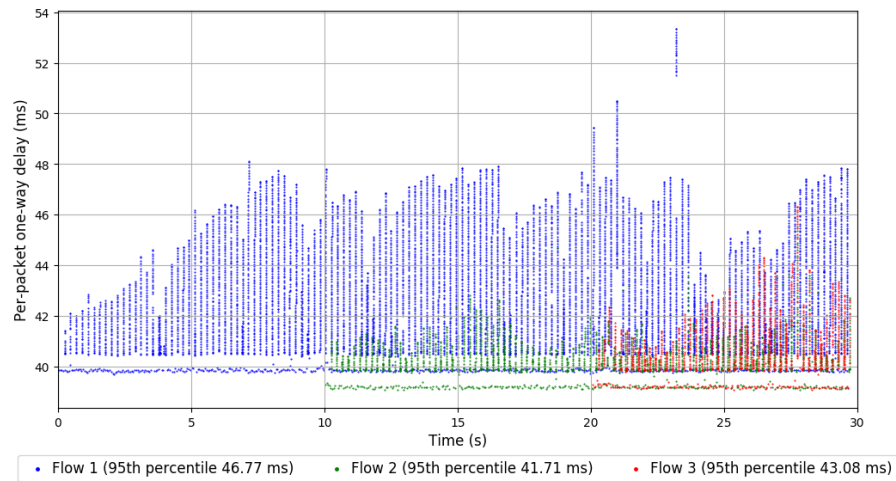
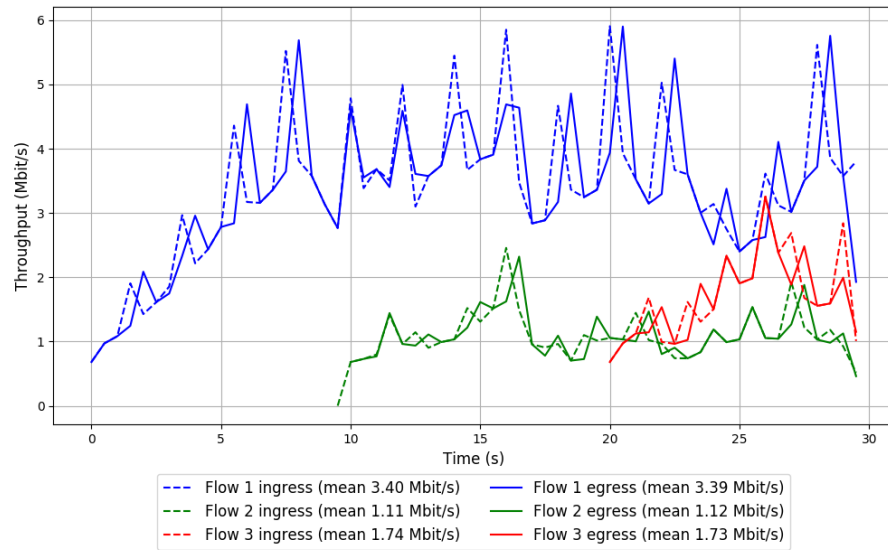
-- Flow 3:

Average throughput: 1.73 Mbit/s

95th percentile per-packet one-way delay: 43.082 ms

Loss rate: 2.07%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-04-10 19:05:49

End at: 2018-04-10 19:06:19

Local clock offset: 1.155 ms

Remote clock offset: 0.829 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.65 Mbit/s

95th percentile per-packet one-way delay: 45.391 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 1.81 Mbit/s

95th percentile per-packet one-way delay: 44.750 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 2.33 Mbit/s

95th percentile per-packet one-way delay: 47.035 ms

Loss rate: 1.68%

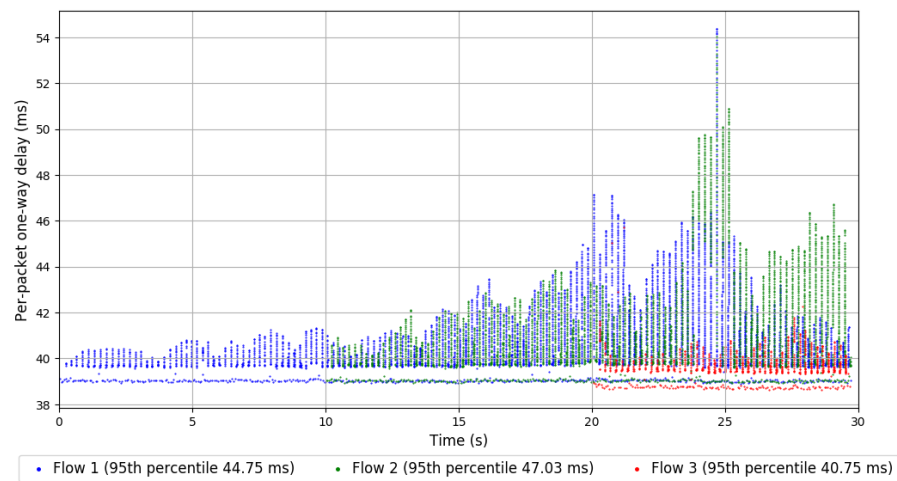
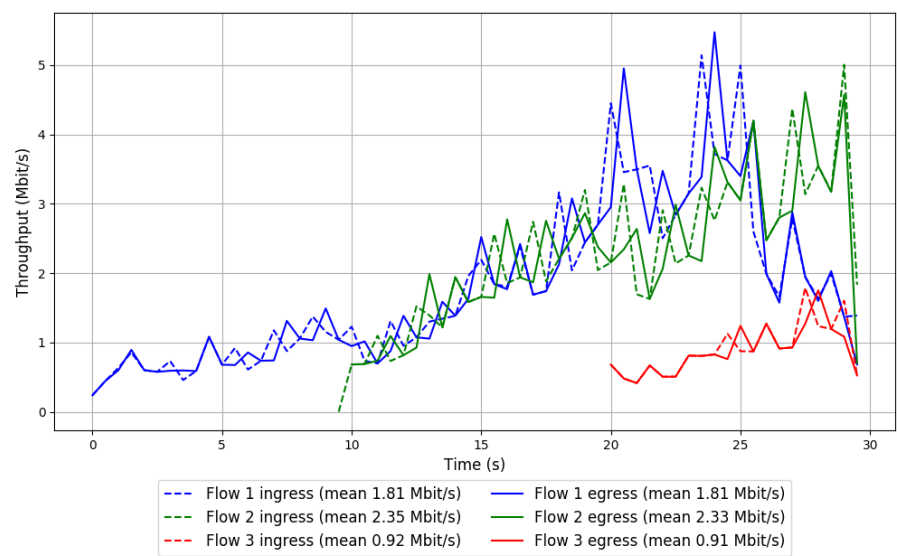
-- Flow 3:

Average throughput: 0.91 Mbit/s

95th percentile per-packet one-way delay: 40.752 ms

Loss rate: 2.91%

Run 3: Report of Sprout — Data Link

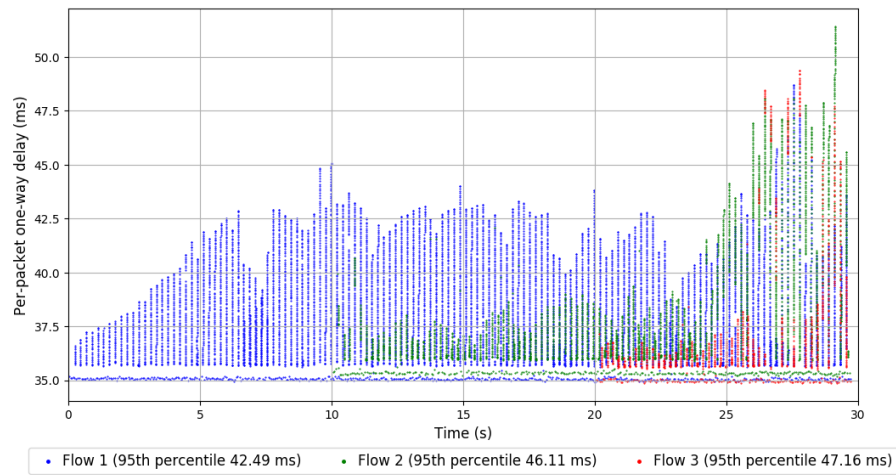
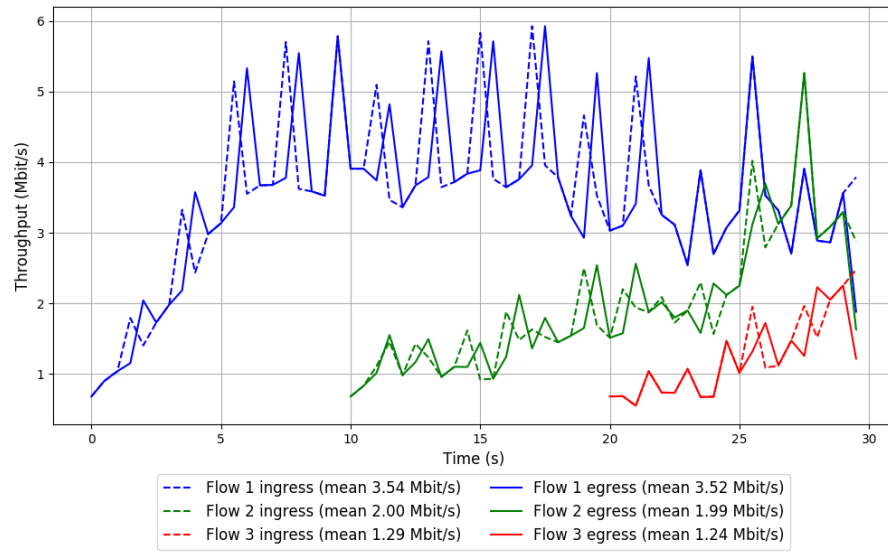


Run 4: Statistics of Sprout

Start at: 2018-04-10 19:30:15
End at: 2018-04-10 19:30:45
Local clock offset: 1.87 ms
Remote clock offset: 4.978 ms

```
# Below is generated by plot.py at 2018-04-11 02:29:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.24 Mbit/s
95th percentile per-packet one-way delay: 43.828 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 42.487 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 46.113 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 47.165 ms
Loss rate: 5.00%
```

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-04-10 19:55:08

End at: 2018-04-10 19:55:38

Local clock offset: 1.852 ms

Remote clock offset: 4.663 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.72 Mbit/s

95th percentile per-packet one-way delay: 43.022 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 1.97 Mbit/s

95th percentile per-packet one-way delay: 42.996 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 43.173 ms

Loss rate: 0.88%

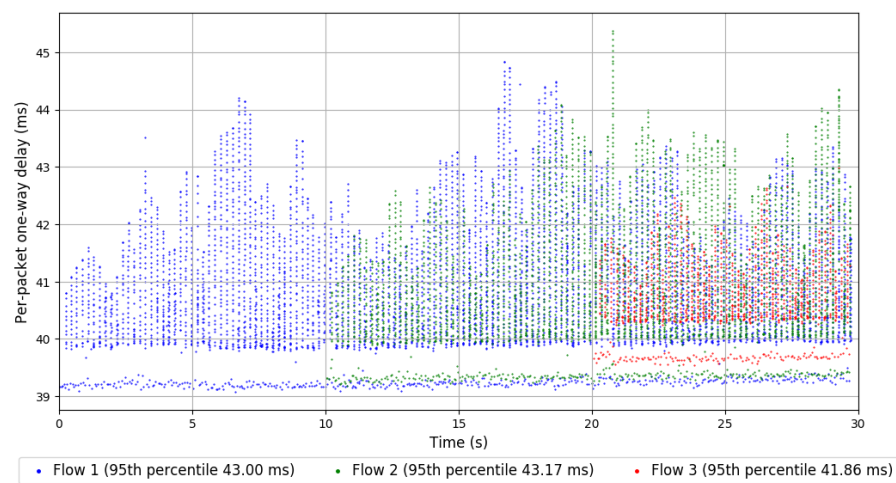
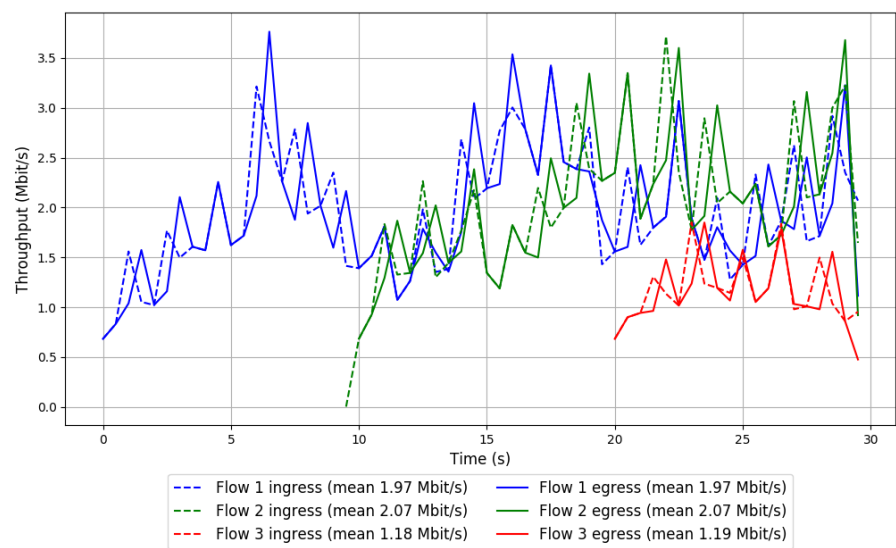
-- Flow 3:

Average throughput: 1.19 Mbit/s

95th percentile per-packet one-way delay: 41.864 ms

Loss rate: 2.06%

Run 5: Report of Sprout — Data Link

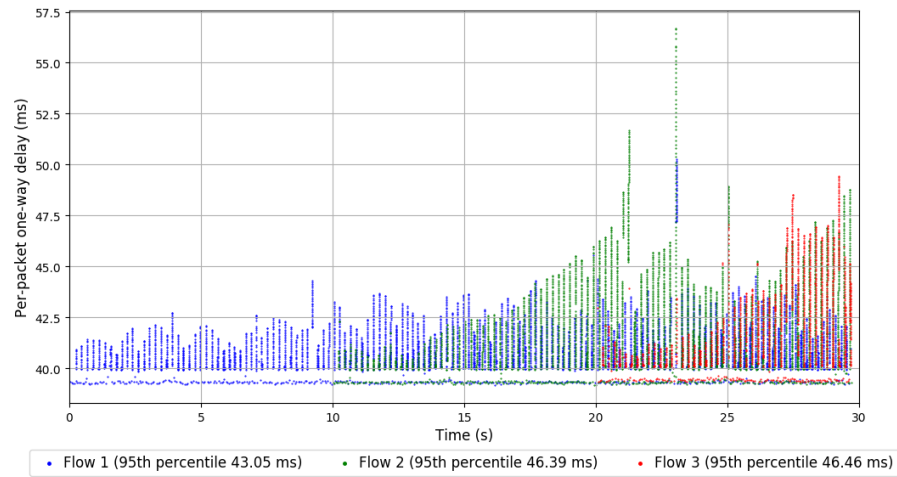
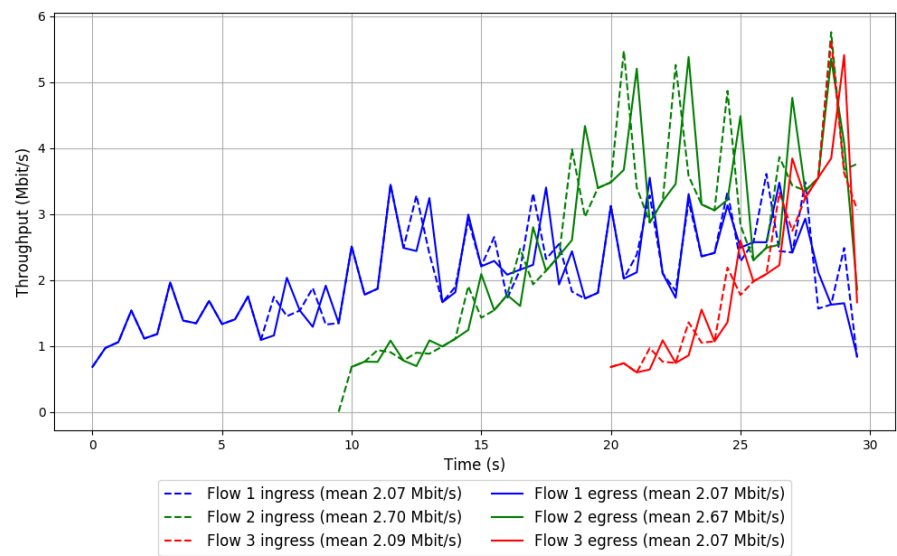


Run 6: Statistics of Sprout

Start at: 2018-04-10 20:19:33
End at: 2018-04-10 20:20:03
Local clock offset: 1.225 ms
Remote clock offset: 8.584 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 45.616 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 43.053 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 46.392 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 46.460 ms
Loss rate: 3.42%

Run 6: Report of Sprout — Data Link

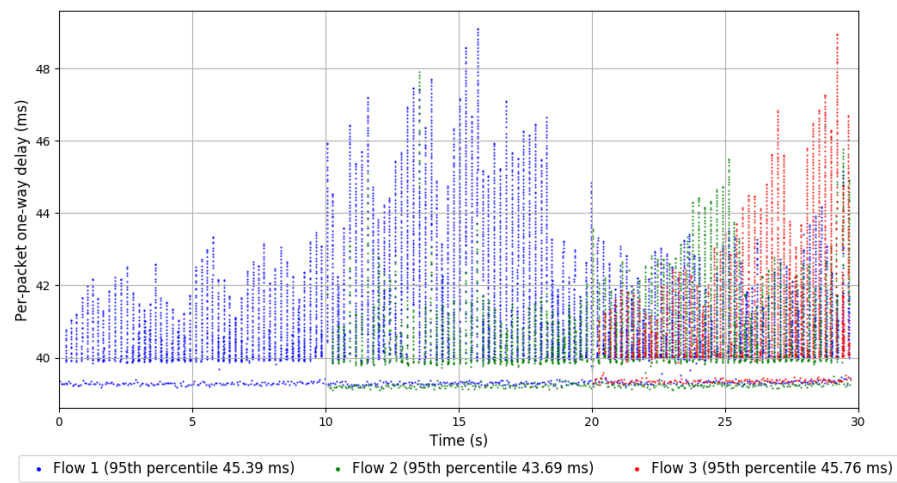
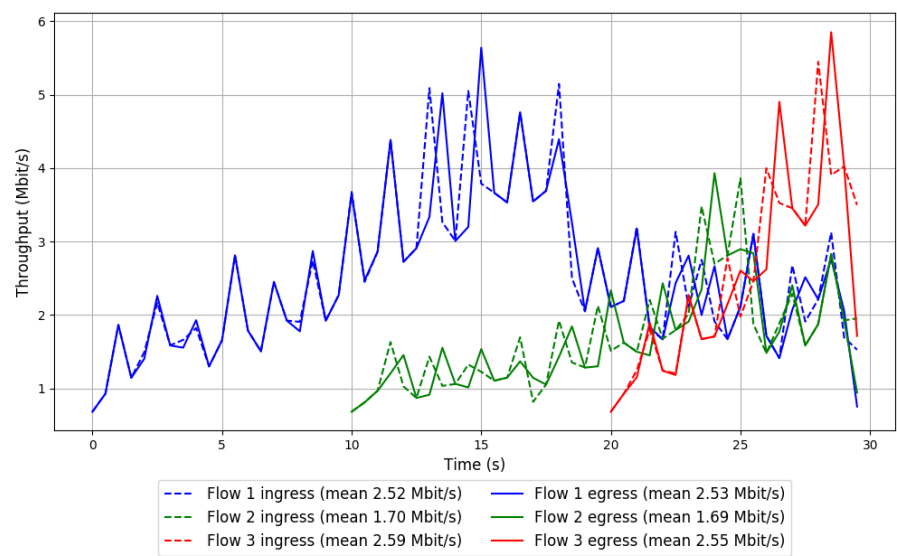


Run 7: Statistics of Sprout

Start at: 2018-04-10 20:44:25
End at: 2018-04-10 20:44:55
Local clock offset: 1.145 ms
Remote clock offset: 17.437 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 45.177 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 2.53 Mbit/s
95th percentile per-packet one-way delay: 45.394 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 43.685 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 45.756 ms
Loss rate: 3.50%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-04-10 21:08:54

End at: 2018-04-10 21:09:24

Local clock offset: 1.772 ms

Remote clock offset: 1.093 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.95 Mbit/s

95th percentile per-packet one-way delay: 44.909 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 43.969 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 2.45 Mbit/s

95th percentile per-packet one-way delay: 45.279 ms

Loss rate: 1.82%

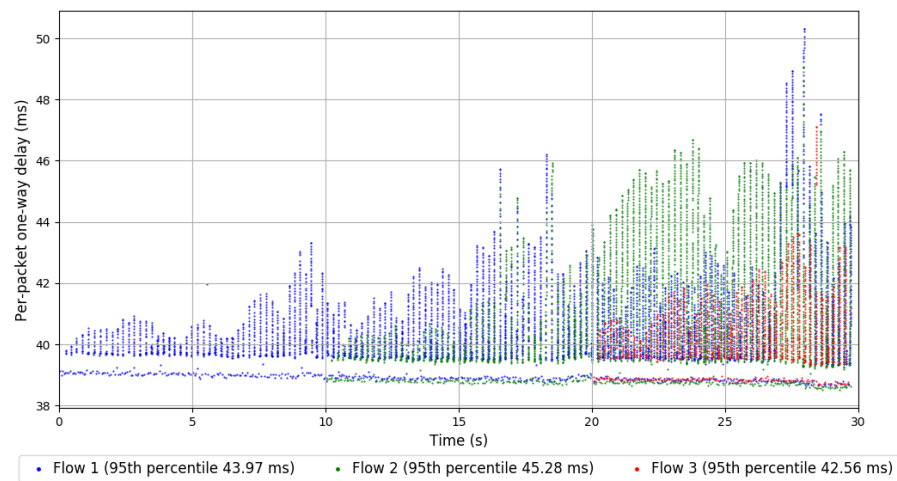
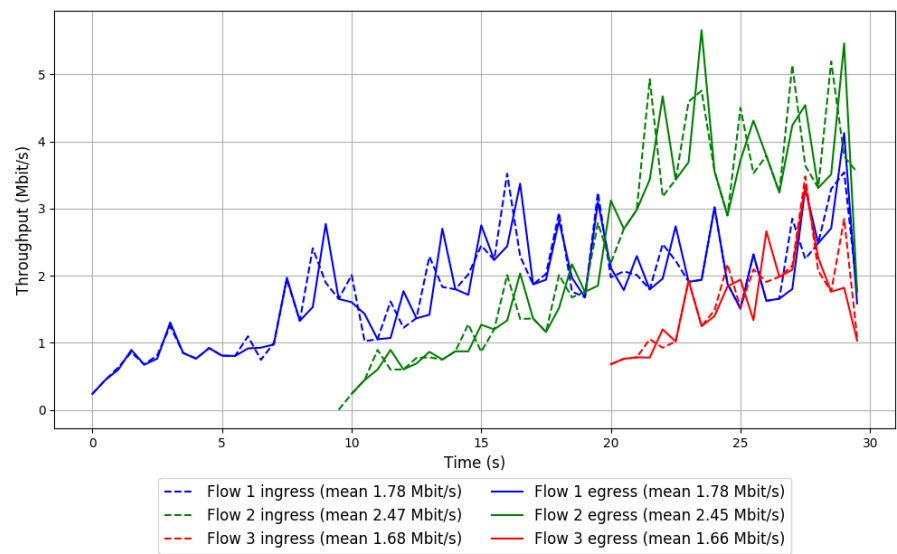
-- Flow 3:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 42.564 ms

Loss rate: 3.28%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-04-10 21:34:00

End at: 2018-04-10 21:34:30

Local clock offset: 2.31 ms

Remote clock offset: -6.46 ms

Below is generated by plot.py at 2018-04-11 02:29:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.81 Mbit/s

95th percentile per-packet one-way delay: 46.402 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 1.69 Mbit/s

95th percentile per-packet one-way delay: 44.925 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 1.83 Mbit/s

95th percentile per-packet one-way delay: 45.922 ms

Loss rate: 1.82%

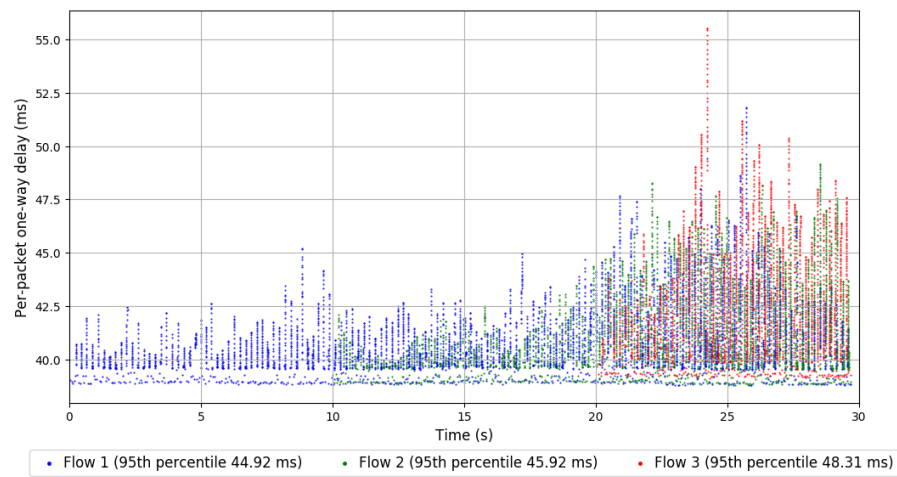
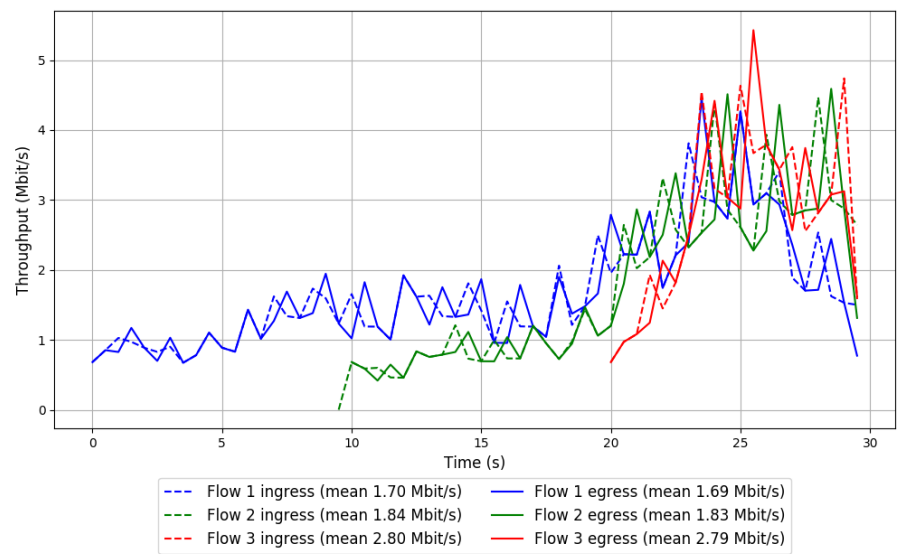
-- Flow 3:

Average throughput: 2.79 Mbit/s

95th percentile per-packet one-way delay: 48.307 ms

Loss rate: 2.86%

Run 9: Report of Sprout — Data Link

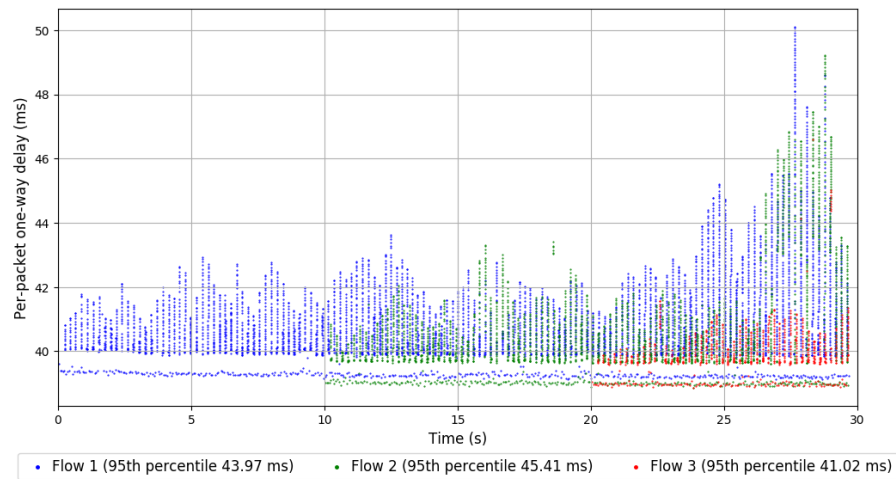
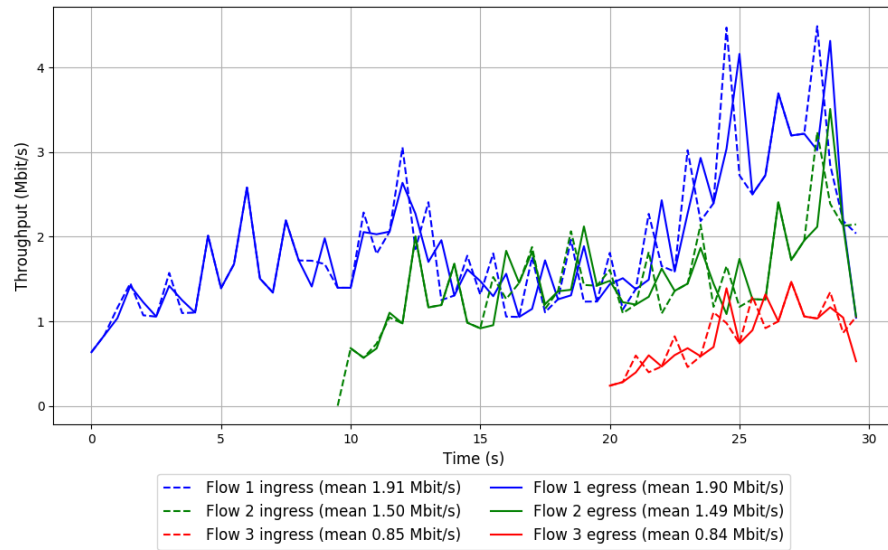


Run 10: Statistics of Sprout

Start at: 2018-04-10 21:58:24
End at: 2018-04-10 21:58:54
Local clock offset: 2.179 ms
Remote clock offset: -9.928 ms

Below is generated by plot.py at 2018-04-11 02:29:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.16 Mbit/s
95th percentile per-packet one-way delay: 44.364 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 43.974 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 45.406 ms
Loss rate: 1.83%
-- Flow 3:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 41.023 ms
Loss rate: 3.16%

Run 10: Report of Sprout — Data Link

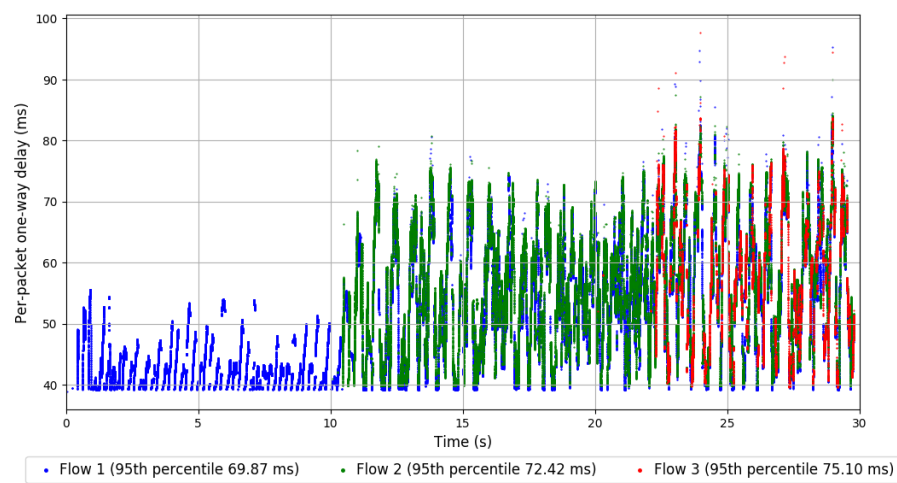
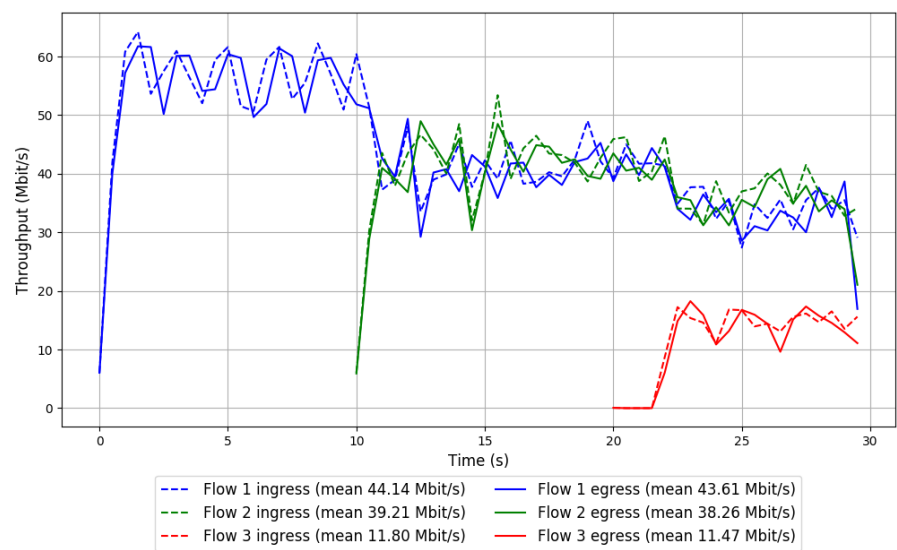


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-04-10 18:18:17
End at: 2018-04-10 18:18:47
Local clock offset: 0.602 ms
Remote clock offset: 0.372 ms

# Below is generated by plot.py at 2018-04-11 02:31:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.72 Mbit/s
95th percentile per-packet one-way delay: 71.586 ms
Loss rate: 2.57%
-- Flow 1:
Average throughput: 43.61 Mbit/s
95th percentile per-packet one-way delay: 69.874 ms
Loss rate: 1.85%
-- Flow 2:
Average throughput: 38.26 Mbit/s
95th percentile per-packet one-way delay: 72.422 ms
Loss rate: 3.44%
-- Flow 3:
Average throughput: 11.47 Mbit/s
95th percentile per-packet one-way delay: 75.103 ms
Loss rate: 4.86%
```


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



Run 2: Statistics of TaoVA-100x

Start at: 2018-04-10 18:42:43

End at: 2018-04-10 18:43:13

Local clock offset: 0.863 ms

Remote clock offset: 0.492 ms

Below is generated by plot.py at 2018-04-11 02:31:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.22 Mbit/s

95th percentile per-packet one-way delay: 71.542 ms

Loss rate: 2.50%

-- Flow 1:

Average throughput: 46.17 Mbit/s

95th percentile per-packet one-way delay: 69.330 ms

Loss rate: 1.82%

-- Flow 2:

Average throughput: 27.47 Mbit/s

95th percentile per-packet one-way delay: 72.335 ms

Loss rate: 2.51%

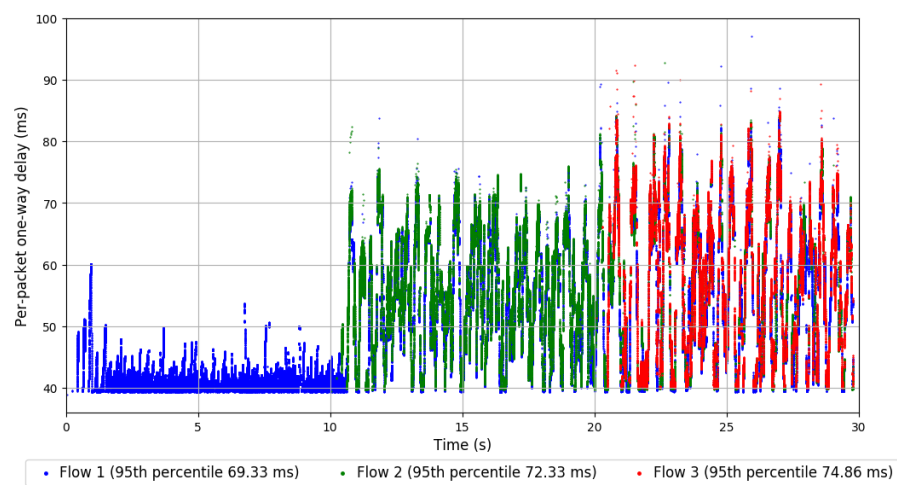
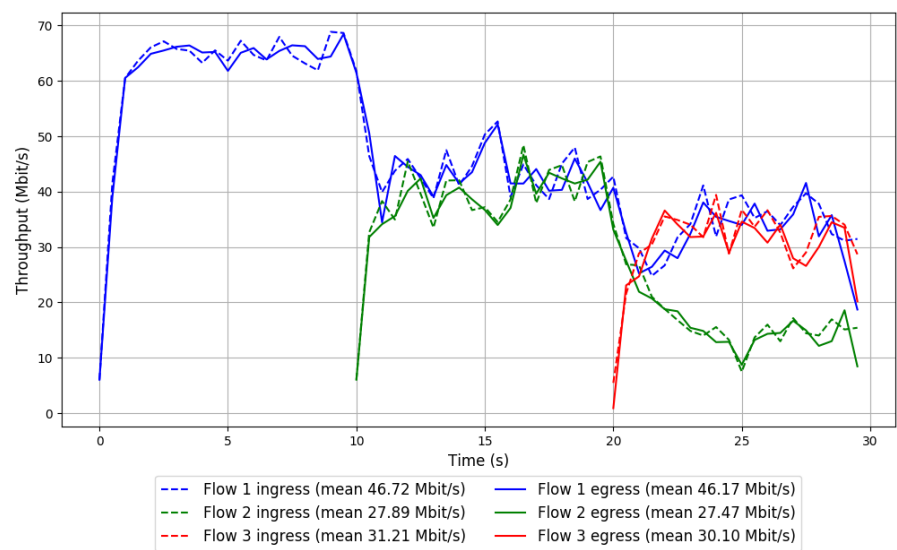
-- Flow 3:

Average throughput: 30.10 Mbit/s

95th percentile per-packet one-way delay: 74.856 ms

Loss rate: 5.51%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-04-10 19:07:06

End at: 2018-04-10 19:07:36

Local clock offset: 1.364 ms

Remote clock offset: 0.834 ms

Below is generated by plot.py at 2018-04-11 02:31:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.52 Mbit/s

95th percentile per-packet one-way delay: 72.516 ms

Loss rate: 2.26%

-- Flow 1:

Average throughput: 46.23 Mbit/s

95th percentile per-packet one-way delay: 70.715 ms

Loss rate: 1.71%

-- Flow 2:

Average throughput: 35.62 Mbit/s

95th percentile per-packet one-way delay: 73.060 ms

Loss rate: 2.87%

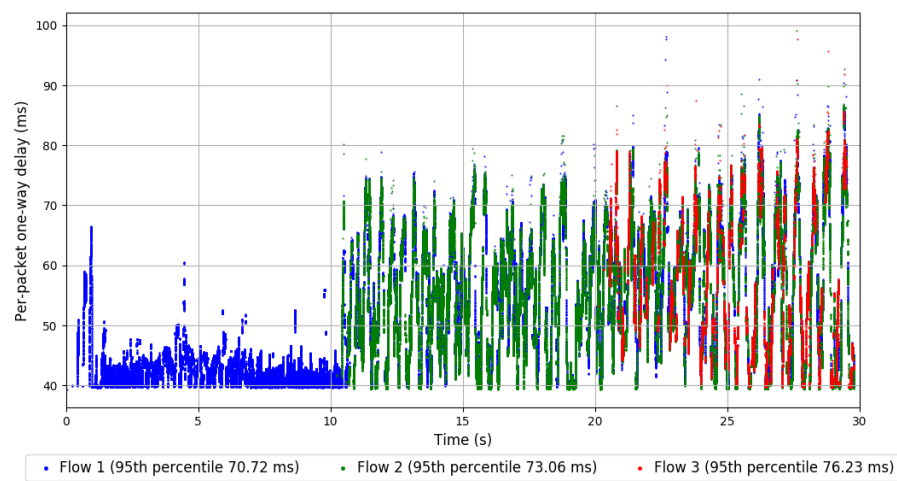
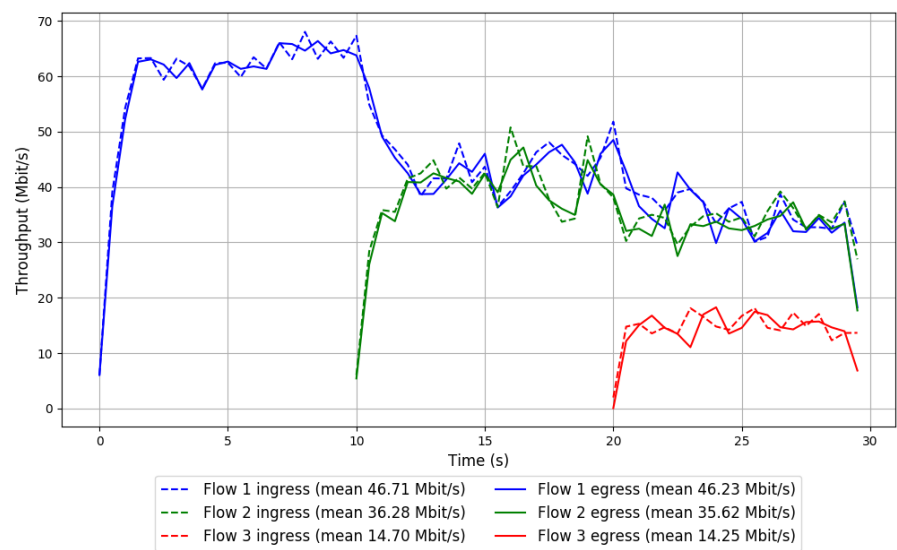
-- Flow 3:

Average throughput: 14.25 Mbit/s

95th percentile per-packet one-way delay: 76.234 ms

Loss rate: 4.58%

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



Run 4: Statistics of TaoVA-100x

/home/ubuntu/pantheon_data/2018-04-10T18-07-China-to-AWS-Korea-10-runs-3-flows/taova_stats_1

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

Figure is missing

Figure is missing

Run 5: Statistics of TaoVA-100x

Start at: 2018-04-10 19:56:25

End at: 2018-04-10 19:56:55

Local clock offset: 1.747 ms

Remote clock offset: 5.079 ms

Below is generated by plot.py at 2018-04-11 02:31:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 72.91 Mbit/s

95th percentile per-packet one-way delay: 73.067 ms

Loss rate: 2.10%

-- Flow 1:

Average throughput: 43.10 Mbit/s

95th percentile per-packet one-way delay: 71.145 ms

Loss rate: 1.59%

-- Flow 2:

Average throughput: 37.82 Mbit/s

95th percentile per-packet one-way delay: 73.821 ms

Loss rate: 2.53%

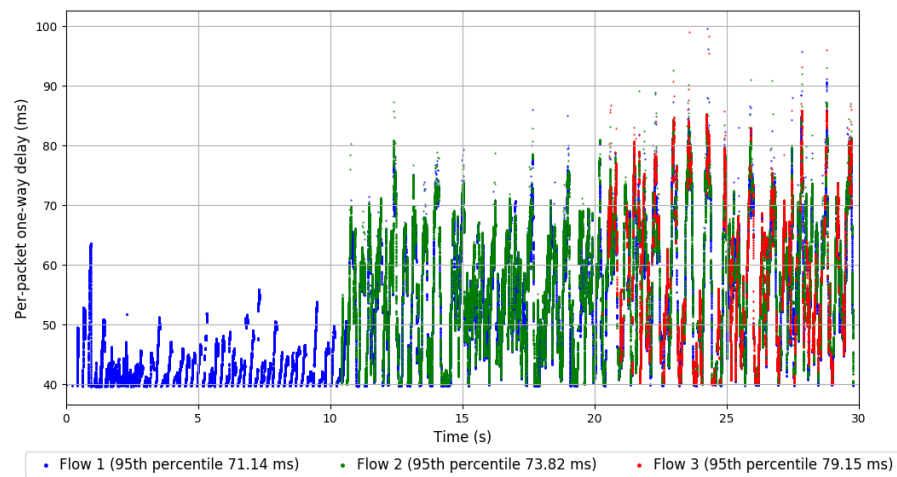
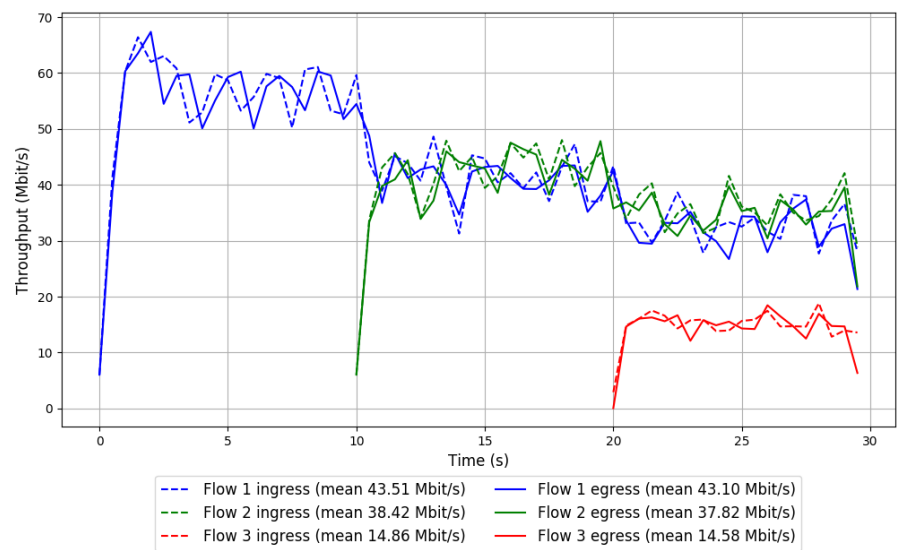
-- Flow 3:

Average throughput: 14.58 Mbit/s

95th percentile per-packet one-way delay: 79.153 ms

Loss rate: 4.40%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-04-10 20:20:50

End at: 2018-04-10 20:21:20

Local clock offset: 1.167 ms

Remote clock offset: 8.74 ms

Below is generated by plot.py at 2018-04-11 02:31:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.38 Mbit/s

95th percentile per-packet one-way delay: 72.900 ms

Loss rate: 2.83%

-- Flow 1:

Average throughput: 42.69 Mbit/s

95th percentile per-packet one-way delay: 71.360 ms

Loss rate: 1.85%

-- Flow 2:

Average throughput: 36.20 Mbit/s

95th percentile per-packet one-way delay: 73.600 ms

Loss rate: 4.35%

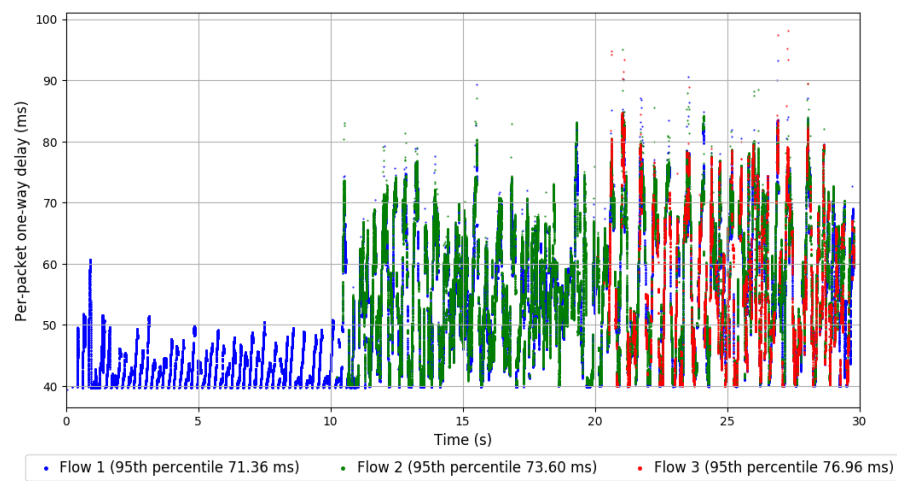
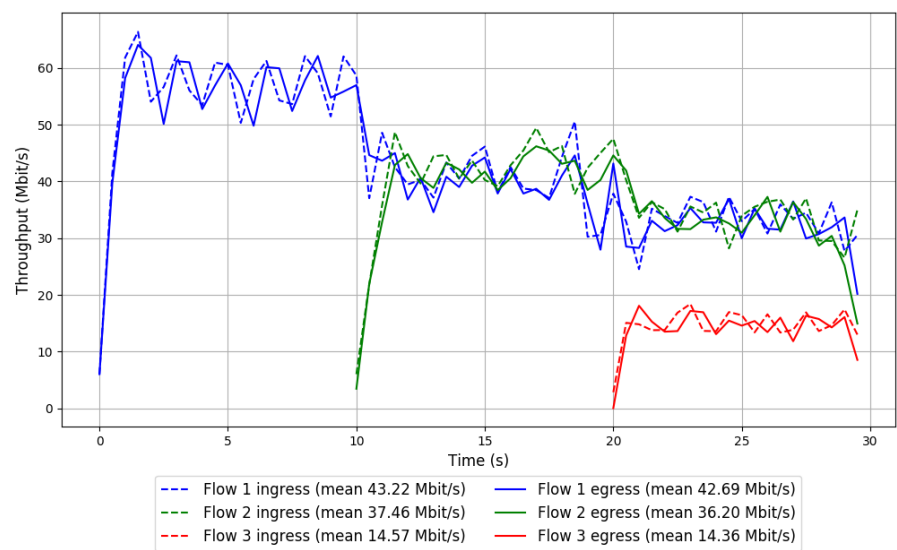
-- Flow 3:

Average throughput: 14.36 Mbit/s

95th percentile per-packet one-way delay: 76.960 ms

Loss rate: 3.73%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-04-10 20:45:42

End at: 2018-04-10 20:46:12

Local clock offset: 1.17 ms

Remote clock offset: 17.76 ms

Below is generated by plot.py at 2018-04-11 02:31:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 72.93 Mbit/s

95th percentile per-packet one-way delay: 71.868 ms

Loss rate: 2.16%

-- Flow 1:

Average throughput: 43.71 Mbit/s

95th percentile per-packet one-way delay: 70.101 ms

Loss rate: 1.64%

-- Flow 2:

Average throughput: 36.90 Mbit/s

95th percentile per-packet one-way delay: 72.680 ms

Loss rate: 2.66%

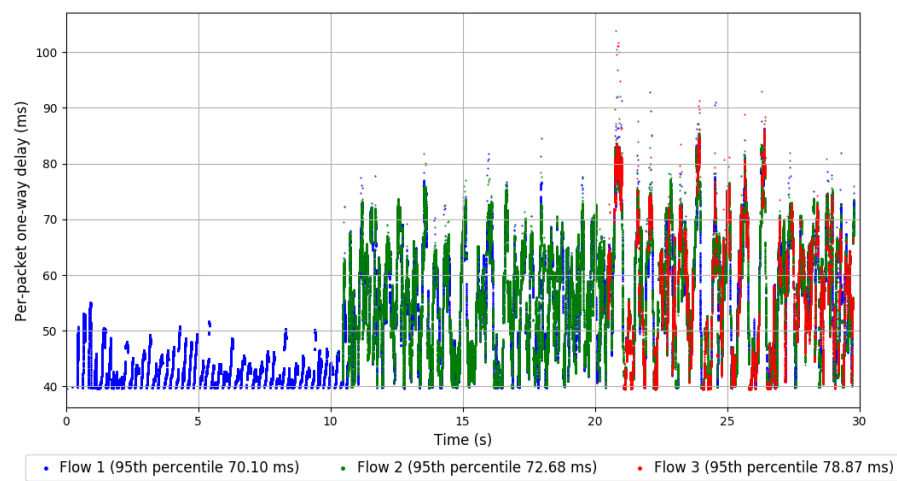
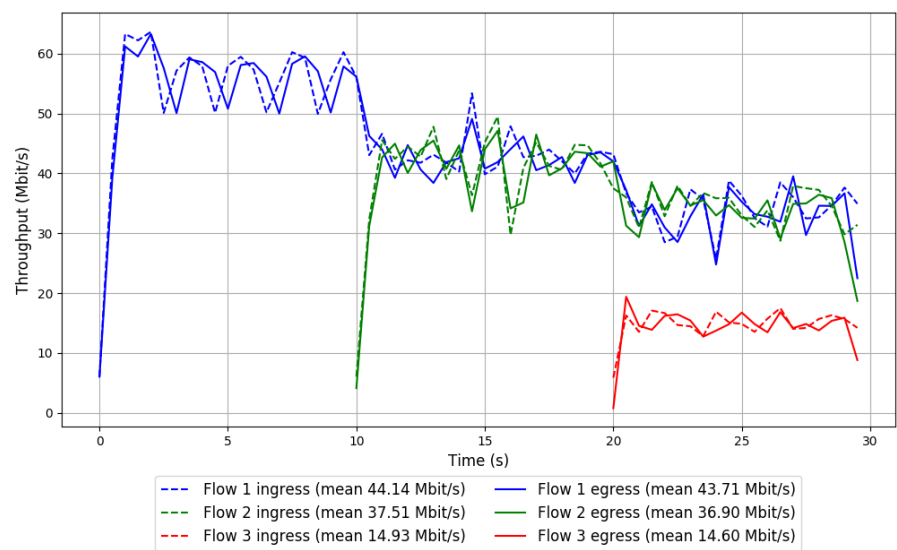
-- Flow 3:

Average throughput: 14.60 Mbit/s

95th percentile per-packet one-way delay: 78.869 ms

Loss rate: 4.21%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-04-10 21:10:11

End at: 2018-04-10 21:10:41

Local clock offset: 1.692 ms

Remote clock offset: 0.172 ms

Below is generated by plot.py at 2018-04-11 02:31:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.01 Mbit/s

95th percentile per-packet one-way delay: 71.425 ms

Loss rate: 2.49%

-- Flow 1:

Average throughput: 46.56 Mbit/s

95th percentile per-packet one-way delay: 69.533 ms

Loss rate: 1.97%

-- Flow 2:

Average throughput: 33.05 Mbit/s

95th percentile per-packet one-way delay: 72.623 ms

Loss rate: 3.26%

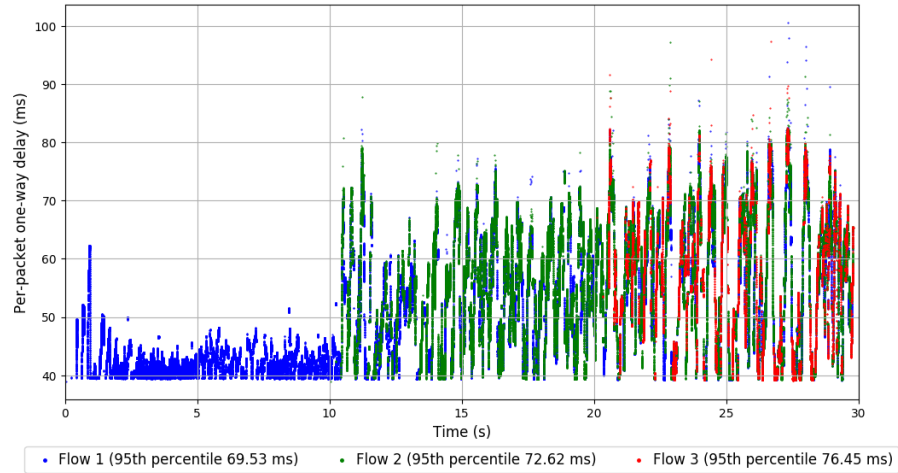
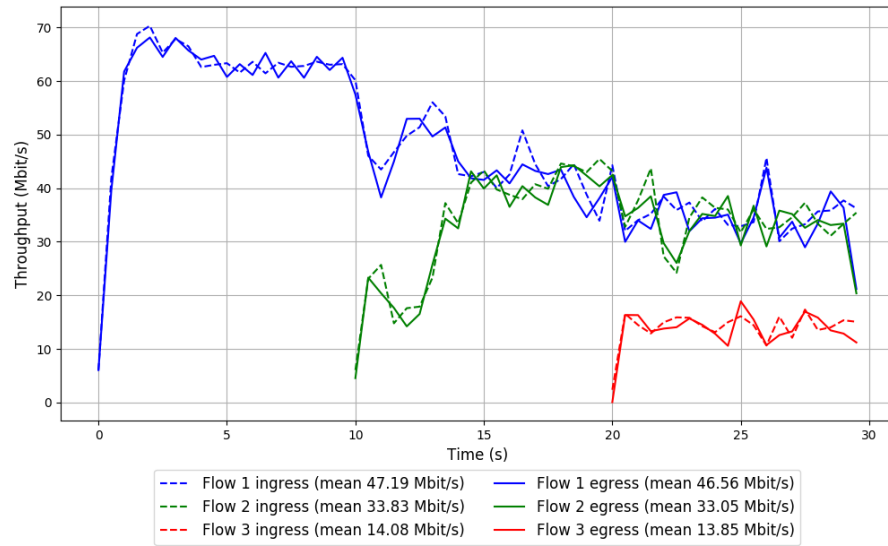
-- Flow 3:

Average throughput: 13.85 Mbit/s

95th percentile per-packet one-way delay: 76.447 ms

Loss rate: 3.99%

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

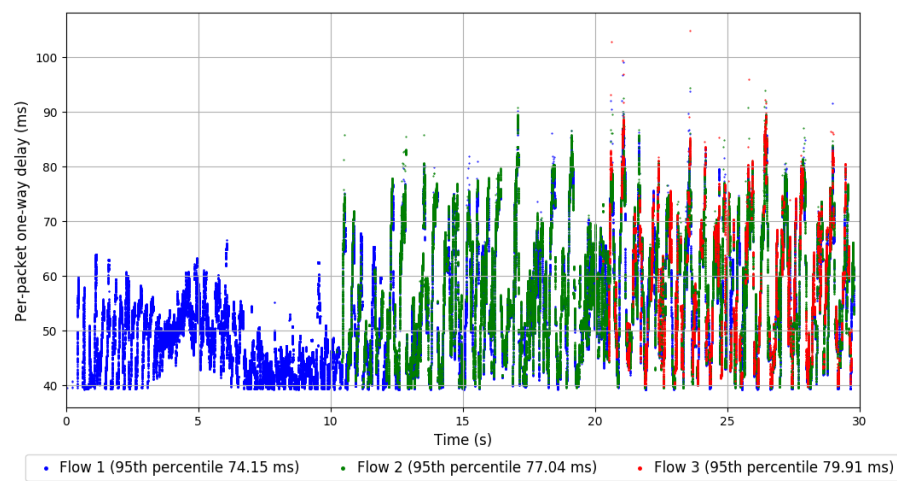
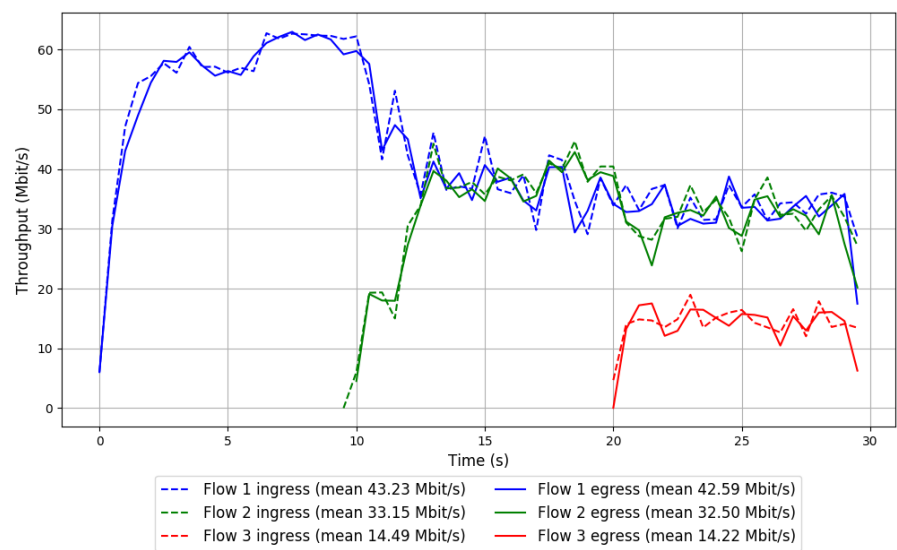


Run 9: Statistics of TaoVA-100x

Start at: 2018-04-10 21:35:18
End at: 2018-04-10 21:35:48
Local clock offset: 2.198 ms
Remote clock offset: -6.641 ms

Below is generated by plot.py at 2018-04-11 02:31:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 68.75 Mbit/s
95th percentile per-packet one-way delay: 75.670 ms
Loss rate: 2.54%
-- Flow 1:
Average throughput: 42.59 Mbit/s
95th percentile per-packet one-way delay: 74.154 ms
Loss rate: 2.15%
-- Flow 2:
Average throughput: 32.50 Mbit/s
95th percentile per-packet one-way delay: 77.040 ms
Loss rate: 2.98%
-- Flow 3:
Average throughput: 14.22 Mbit/s
95th percentile per-packet one-way delay: 79.911 ms
Loss rate: 4.07%

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

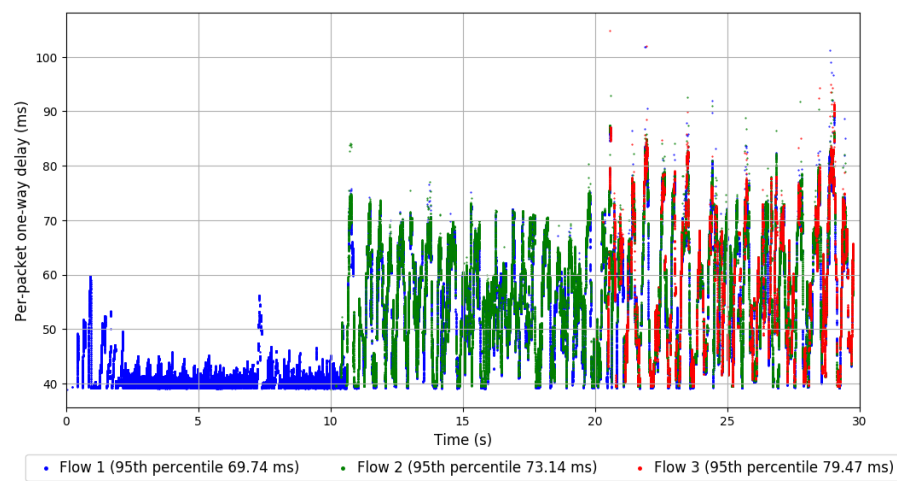
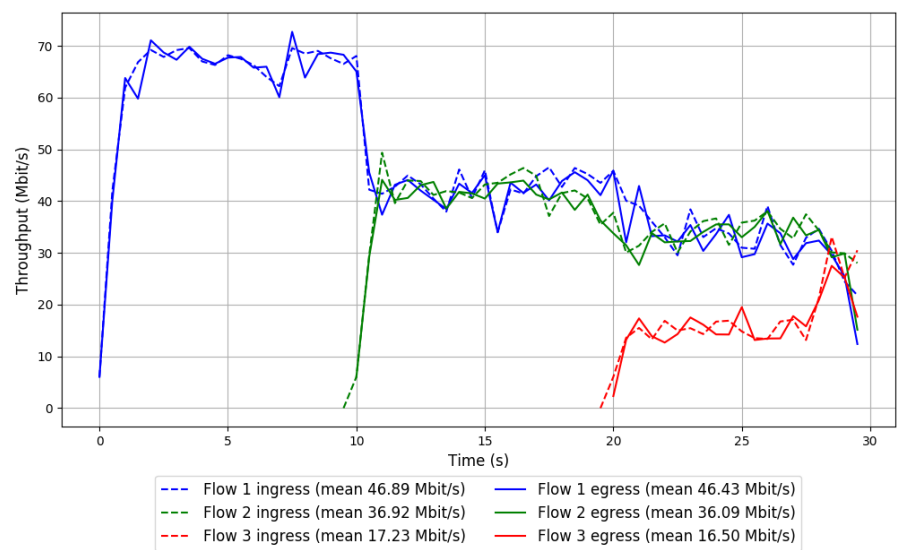


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-10 21:59:41
End at: 2018-04-10 22:00:11
Local clock offset: 1.859 ms
Remote clock offset: -10.063 ms

# Below is generated by plot.py at 2018-04-11 02:33:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.76 Mbit/s
95th percentile per-packet one-way delay: 72.156 ms
Loss rate: 2.51%
-- Flow 1:
Average throughput: 46.43 Mbit/s
95th percentile per-packet one-way delay: 69.741 ms
Loss rate: 1.62%
-- Flow 2:
Average throughput: 36.09 Mbit/s
95th percentile per-packet one-way delay: 73.139 ms
Loss rate: 3.27%
-- Flow 3:
Average throughput: 16.50 Mbit/s
95th percentile per-packet one-way delay: 79.470 ms
Loss rate: 6.46%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-04-10 18:26:29

End at: 2018-04-10 18:26:59

Local clock offset: 1.151 ms

Remote clock offset: 0.34 ms

Below is generated by plot.py at 2018-04-11 02:33:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.26 Mbit/s

95th percentile per-packet one-way delay: 67.436 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 32.62 Mbit/s

95th percentile per-packet one-way delay: 63.999 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 46.24 Mbit/s

95th percentile per-packet one-way delay: 65.999 ms

Loss rate: 0.71%

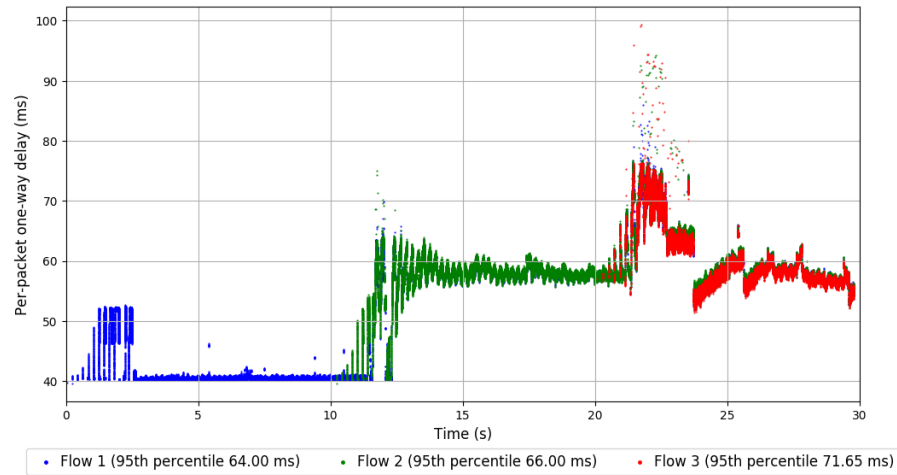
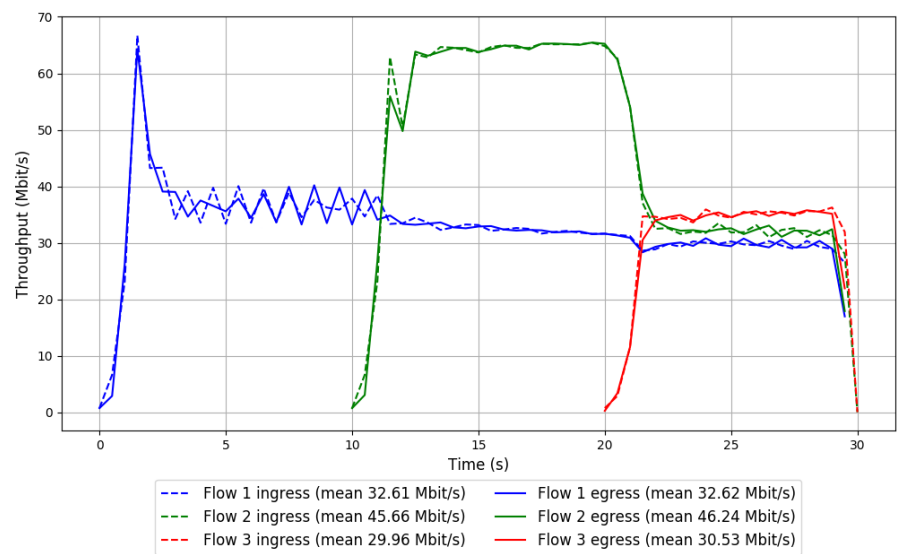
-- Flow 3:

Average throughput: 30.53 Mbit/s

95th percentile per-packet one-way delay: 71.650 ms

Loss rate: 2.49%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-04-10 18:50:52

End at: 2018-04-10 18:51:22

Local clock offset: 1.326 ms

Remote clock offset: 0.742 ms

Below is generated by plot.py at 2018-04-11 02:33:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 54.07 Mbit/s

95th percentile per-packet one-way delay: 65.832 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 22.78 Mbit/s

95th percentile per-packet one-way delay: 54.828 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 17.34 Mbit/s

95th percentile per-packet one-way delay: 72.531 ms

Loss rate: 1.33%

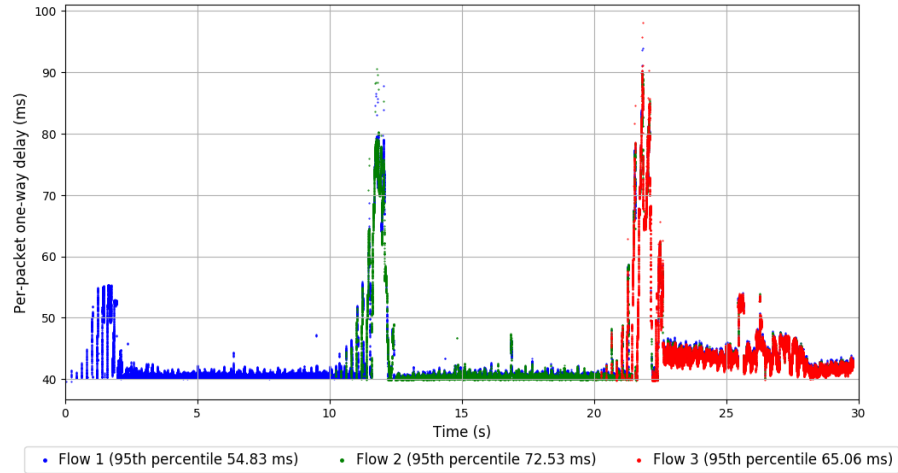
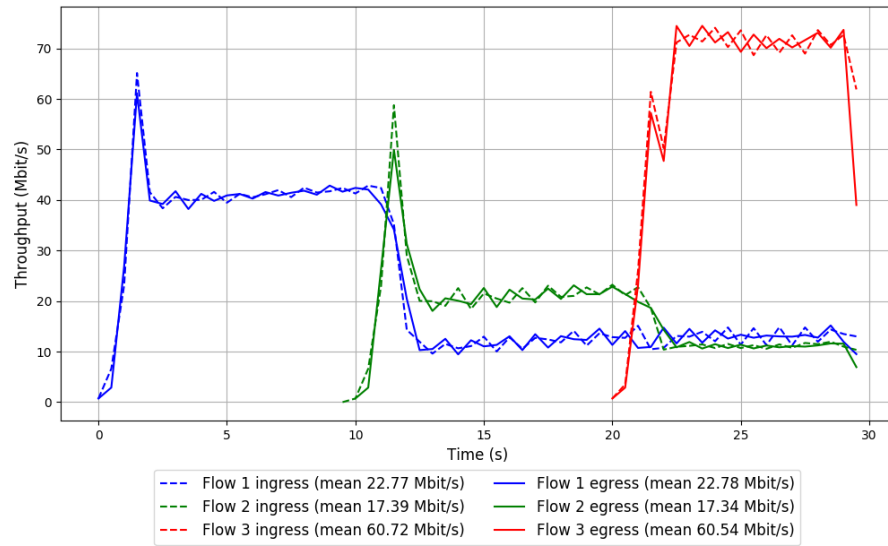
-- Flow 3:

Average throughput: 60.54 Mbit/s

95th percentile per-packet one-way delay: 65.055 ms

Loss rate: 2.38%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-04-10 19:15:19

End at: 2018-04-10 19:15:49

Local clock offset: 1.314 ms

Remote clock offset: 0.902 ms

Below is generated by plot.py at 2018-04-11 02:33:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.54 Mbit/s

95th percentile per-packet one-way delay: 74.660 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 37.42 Mbit/s

95th percentile per-packet one-way delay: 74.440 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 35.85 Mbit/s

95th percentile per-packet one-way delay: 74.288 ms

Loss rate: 1.03%

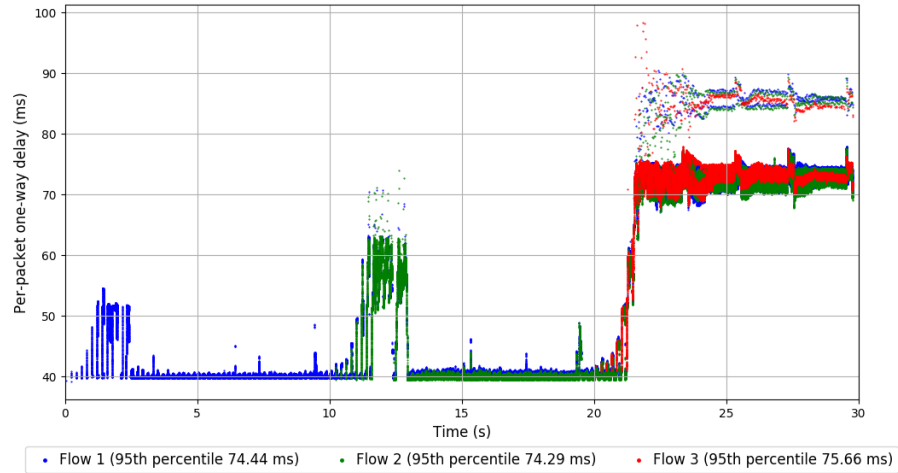
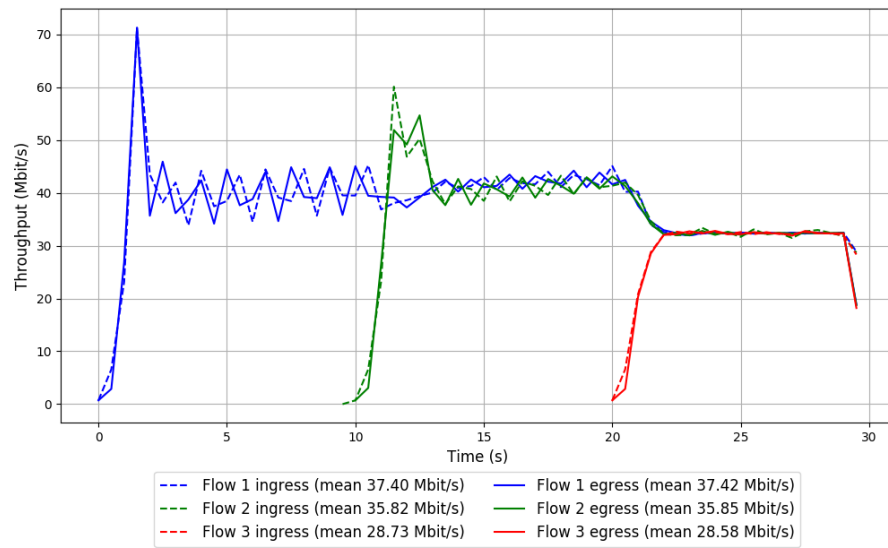
-- Flow 3:

Average throughput: 28.58 Mbit/s

95th percentile per-packet one-way delay: 75.659 ms

Loss rate: 2.52%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-04-10 19:40:11

End at: 2018-04-10 19:40:41

Local clock offset: 1.87 ms

Remote clock offset: 0.682 ms

Below is generated by plot.py at 2018-04-11 02:33:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.27 Mbit/s

95th percentile per-packet one-way delay: 75.581 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 37.25 Mbit/s

95th percentile per-packet one-way delay: 74.432 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 35.71 Mbit/s

95th percentile per-packet one-way delay: 75.962 ms

Loss rate: 1.00%

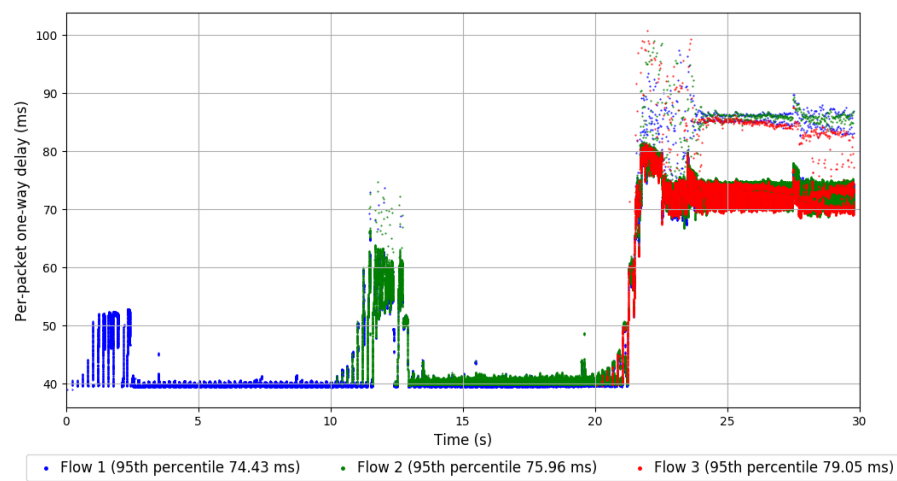
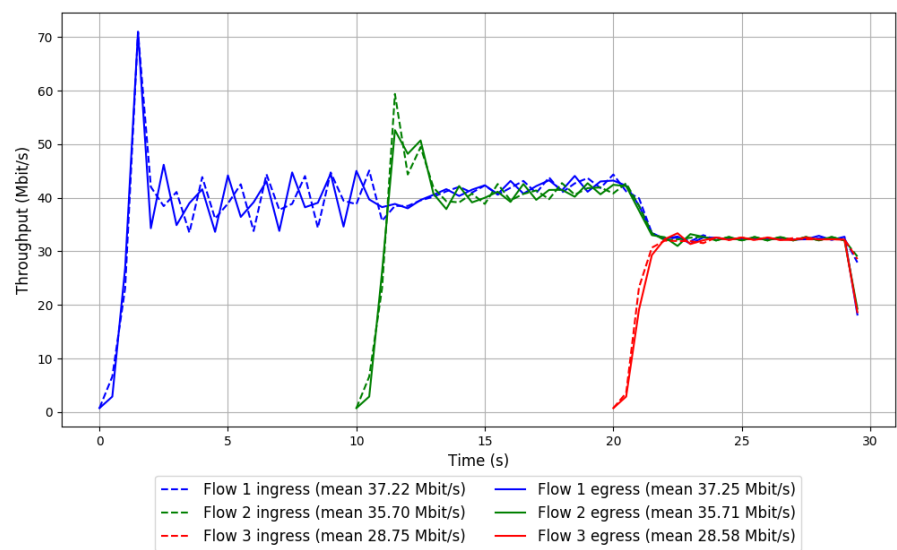
-- Flow 3:

Average throughput: 28.58 Mbit/s

95th percentile per-packet one-way delay: 79.048 ms

Loss rate: 2.53%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-04-10 20:04:38

End at: 2018-04-10 20:05:08

Local clock offset: 1.345 ms

Remote clock offset: 6.902 ms

Below is generated by plot.py at 2018-04-11 02:33:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.92 Mbit/s

95th percentile per-packet one-way delay: 71.873 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 34.85 Mbit/s

95th percentile per-packet one-way delay: 70.988 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 44.61 Mbit/s

95th percentile per-packet one-way delay: 71.928 ms

Loss rate: 0.77%

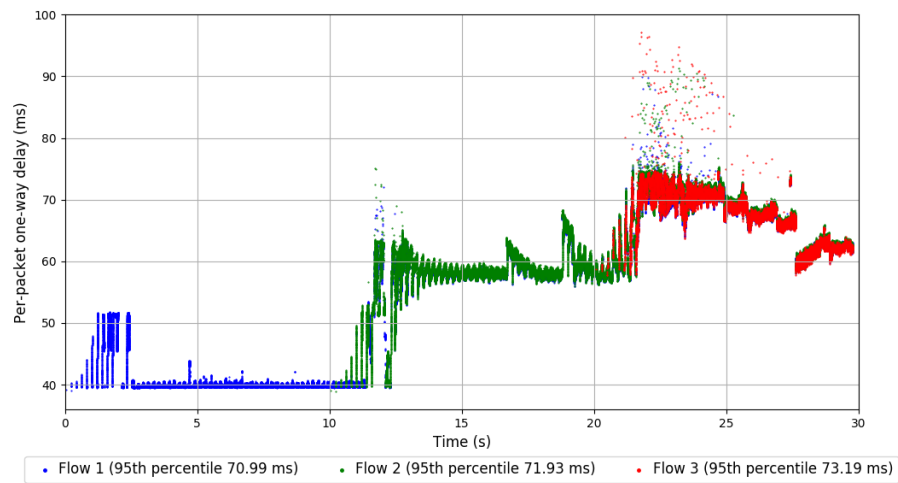
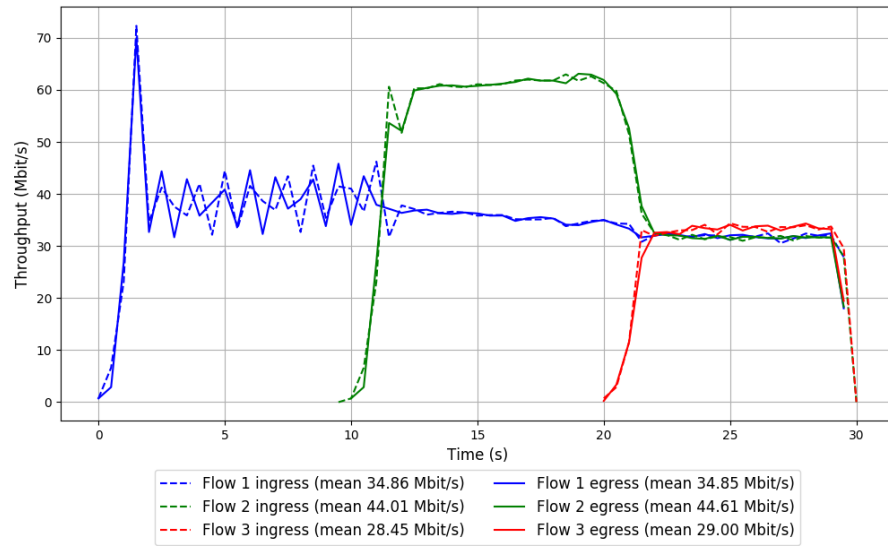
-- Flow 3:

Average throughput: 29.00 Mbit/s

95th percentile per-packet one-way delay: 73.195 ms

Loss rate: 2.52%

Run 5: Report of TCP Vegas — Data Link

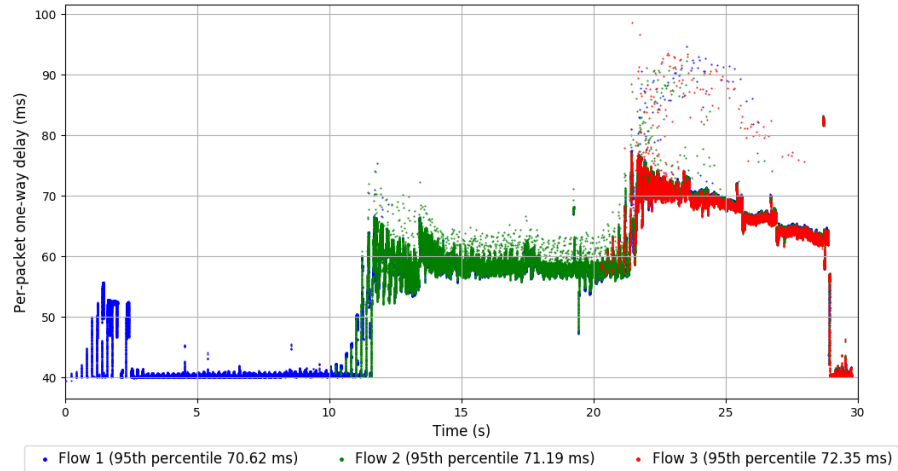
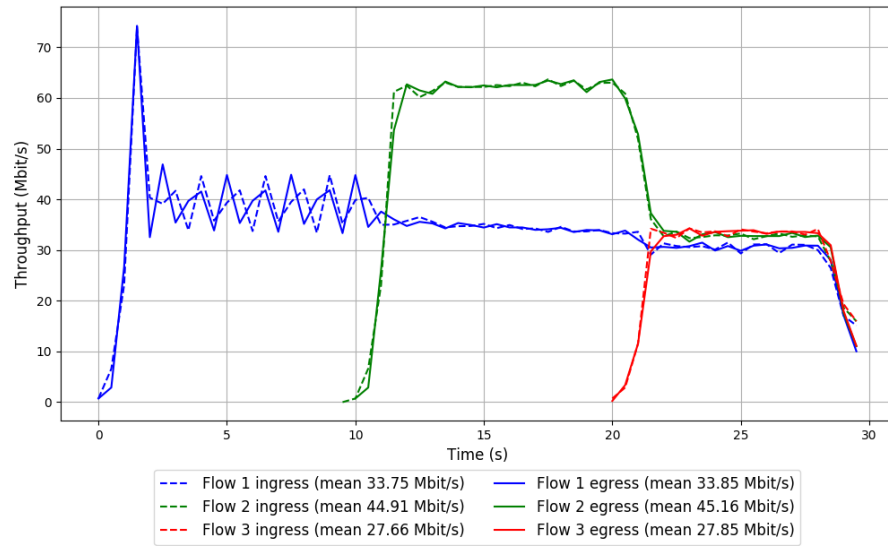


Run 6: Statistics of TCP Vegas

Start at: 2018-04-10 20:29:01
End at: 2018-04-10 20:29:31
Local clock offset: 1.13 ms
Remote clock offset: 13.096 ms

Below is generated by plot.py at 2018-04-11 02:33:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 72.90 Mbit/s
95th percentile per-packet one-way delay: 71.232 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 33.85 Mbit/s
95th percentile per-packet one-way delay: 70.616 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 45.16 Mbit/s
95th percentile per-packet one-way delay: 71.187 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 27.85 Mbit/s
95th percentile per-packet one-way delay: 72.347 ms
Loss rate: 1.43%

Run 6: Report of TCP Vegas — Data Link

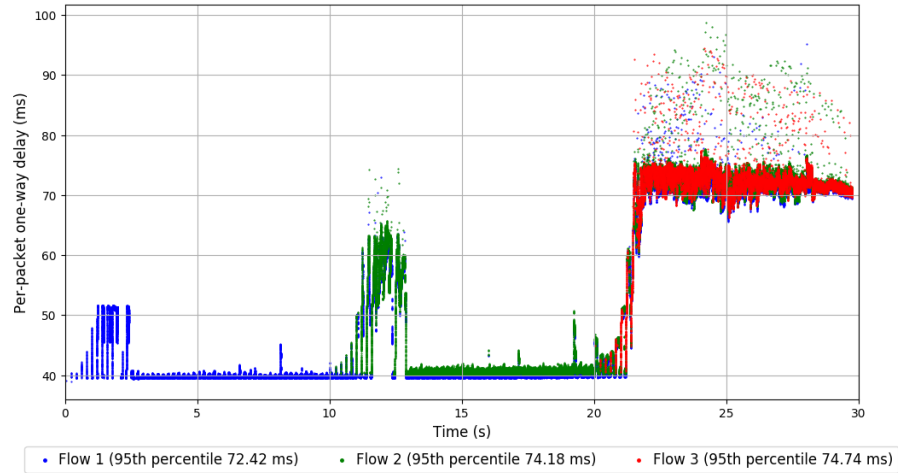
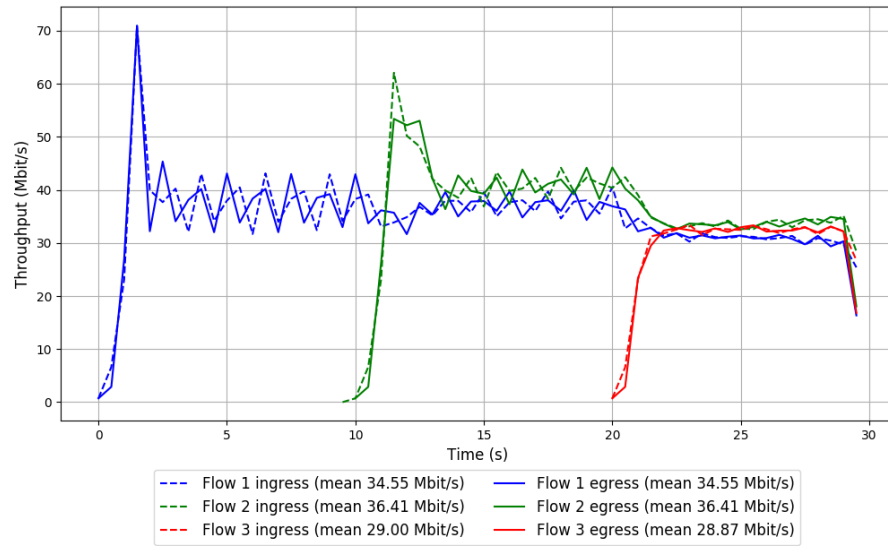


Run 7: Statistics of TCP Vegas

Start at: 2018-04-10 20:53:55
End at: 2018-04-10 20:54:25
Local clock offset: 1.187 ms
Remote clock offset: 19.401 ms

Below is generated by plot.py at 2018-04-11 02:33:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 68.14 Mbit/s
95th percentile per-packet one-way delay: 73.896 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 34.55 Mbit/s
95th percentile per-packet one-way delay: 72.423 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 36.41 Mbit/s
95th percentile per-packet one-way delay: 74.182 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 28.87 Mbit/s
95th percentile per-packet one-way delay: 74.737 ms
Loss rate: 2.49%

Run 7: Report of TCP Vegas — Data Link

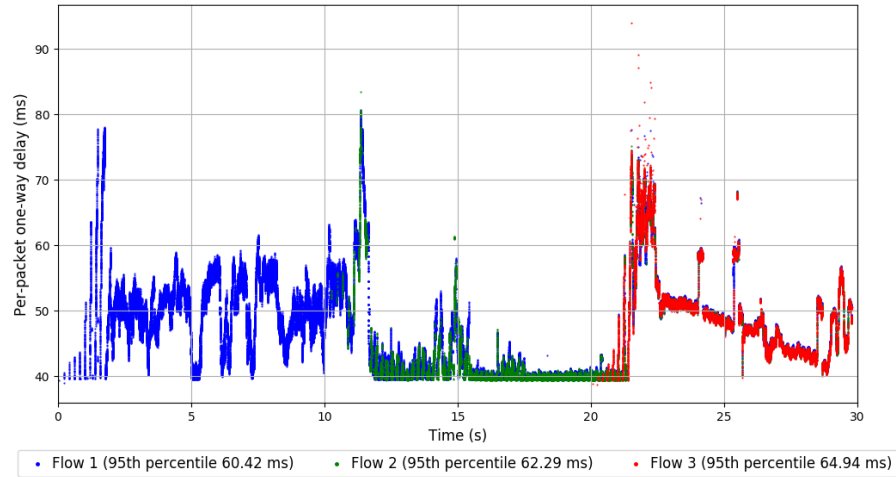
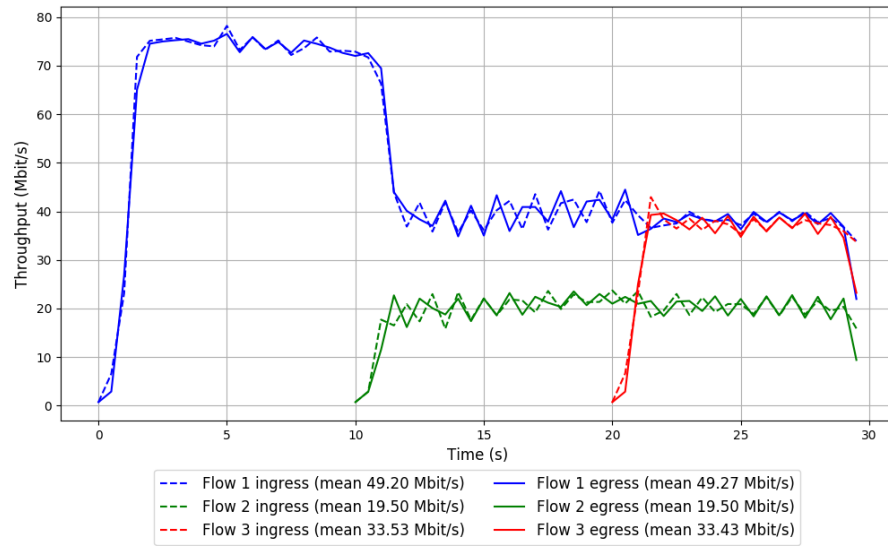


Run 8: Statistics of TCP Vegas

Start at: 2018-04-10 21:18:24
End at: 2018-04-10 21:18:54
Local clock offset: 1.968 ms
Remote clock offset: -3.005 ms

Below is generated by plot.py at 2018-04-11 02:33:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 73.14 Mbit/s
95th percentile per-packet one-way delay: 61.683 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 49.27 Mbit/s
95th percentile per-packet one-way delay: 60.419 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 19.50 Mbit/s
95th percentile per-packet one-way delay: 62.290 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 33.43 Mbit/s
95th percentile per-packet one-way delay: 64.937 ms
Loss rate: 2.19%

Run 8: Report of TCP Vegas — Data Link

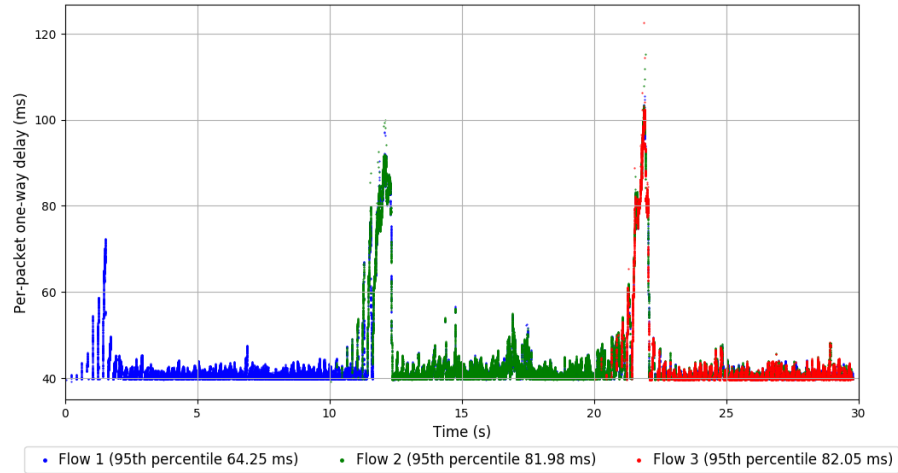
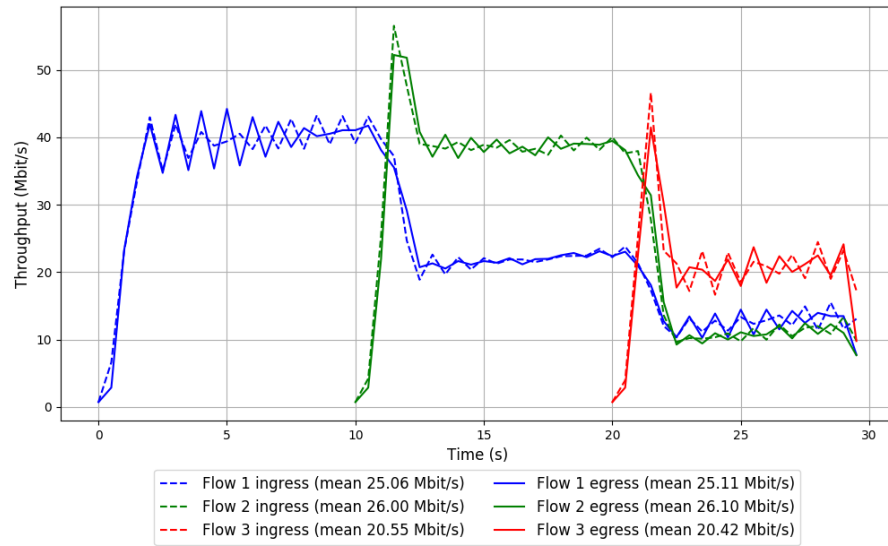


Run 9: Statistics of TCP Vegas

Start at: 2018-04-10 21:43:28
End at: 2018-04-10 21:43:58
Local clock offset: 2.14 ms
Remote clock offset: -7.715 ms

Below is generated by plot.py at 2018-04-11 02:33:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 49.09 Mbit/s
95th percentile per-packet one-way delay: 79.339 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 25.11 Mbit/s
95th percentile per-packet one-way delay: 64.249 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 26.10 Mbit/s
95th percentile per-packet one-way delay: 81.981 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 20.42 Mbit/s
95th percentile per-packet one-way delay: 82.050 ms
Loss rate: 2.56%

Run 9: Report of TCP Vegas — Data Link

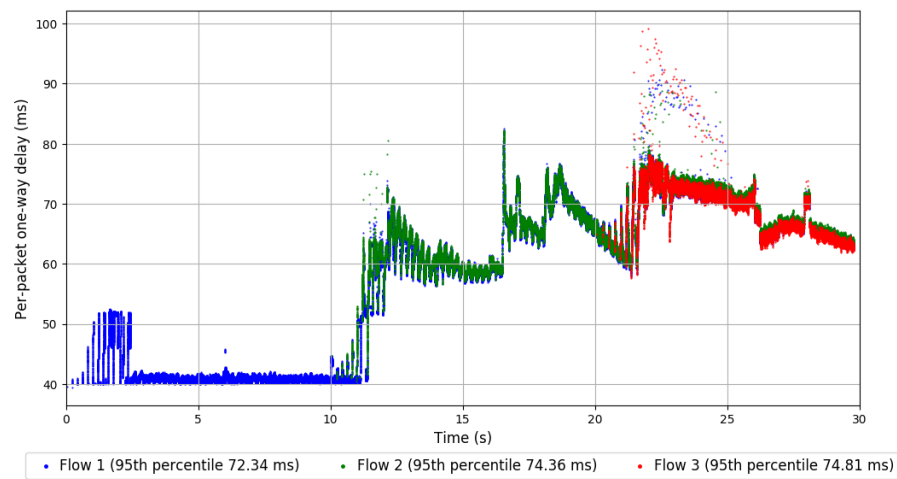
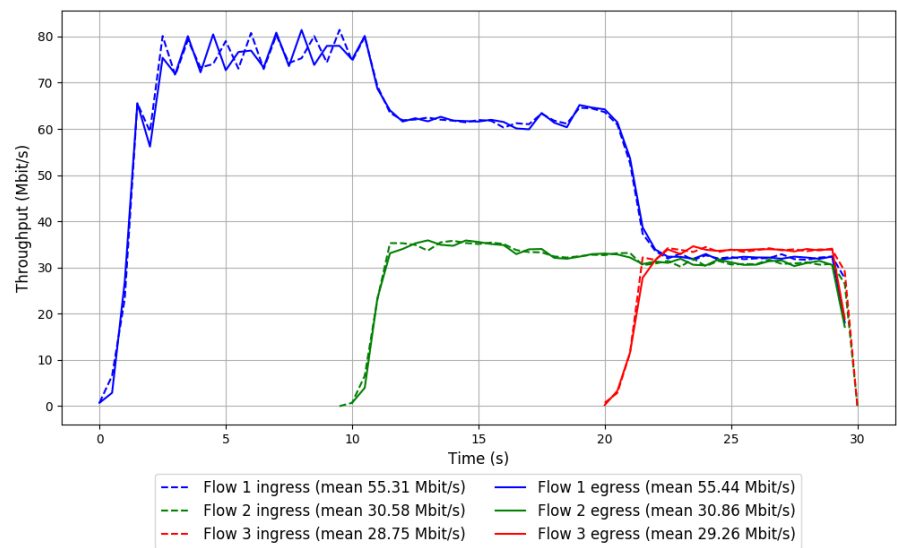


Run 10: Statistics of TCP Vegas

Start at: 2018-04-10 22:08:29
End at: 2018-04-10 22:08:59
Local clock offset: 2.101 ms
Remote clock offset: -4.951 ms

Below is generated by plot.py at 2018-04-11 02:34:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 85.46 Mbit/s
95th percentile per-packet one-way delay: 73.564 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 55.44 Mbit/s
95th percentile per-packet one-way delay: 72.345 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 30.86 Mbit/s
95th percentile per-packet one-way delay: 74.363 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 29.26 Mbit/s
95th percentile per-packet one-way delay: 74.814 ms
Loss rate: 2.50%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-04-10 18:19:42

End at: 2018-04-10 18:20:12

Local clock offset: 0.854 ms

Remote clock offset: 0.362 ms

Below is generated by plot.py at 2018-04-11 02:34:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.04 Mbit/s

95th percentile per-packet one-way delay: 73.386 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 34.53 Mbit/s

95th percentile per-packet one-way delay: 68.838 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 28.35 Mbit/s

95th percentile per-packet one-way delay: 74.033 ms

Loss rate: 1.41%

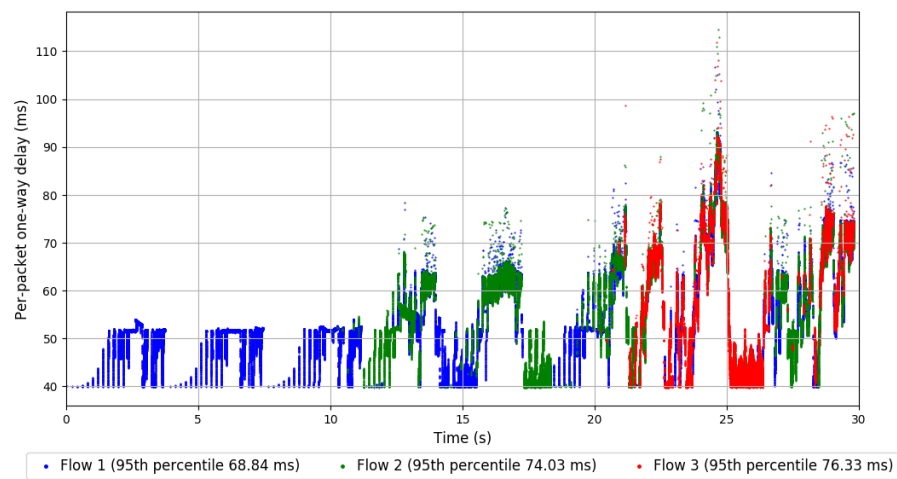
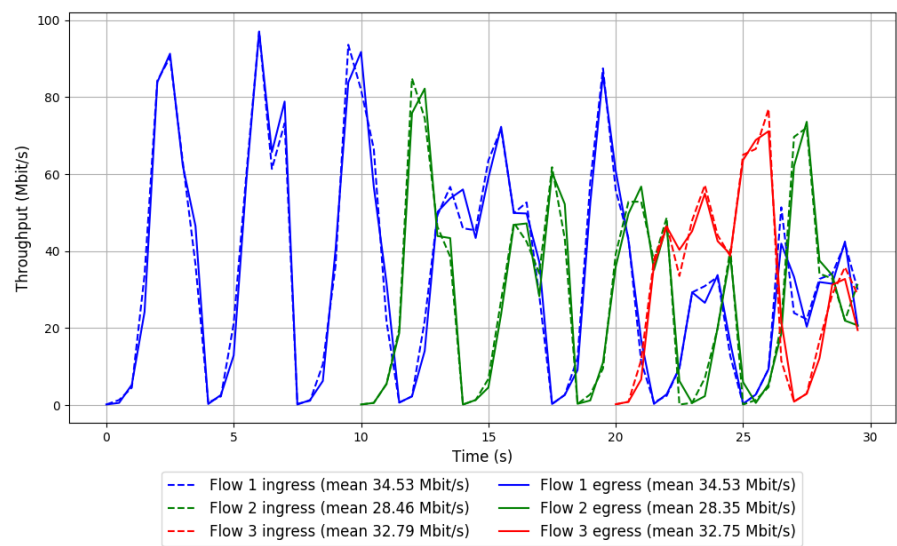
-- Flow 3:

Average throughput: 32.75 Mbit/s

95th percentile per-packet one-way delay: 76.332 ms

Loss rate: 2.33%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-04-10 18:44:07

End at: 2018-04-10 18:44:37

Local clock offset: 0.93 ms

Remote clock offset: 0.557 ms

Below is generated by plot.py at 2018-04-11 02:34:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 60.96 Mbit/s

95th percentile per-packet one-way delay: 71.929 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 34.11 Mbit/s

95th percentile per-packet one-way delay: 70.840 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 32.71 Mbit/s

95th percentile per-packet one-way delay: 70.481 ms

Loss rate: 1.43%

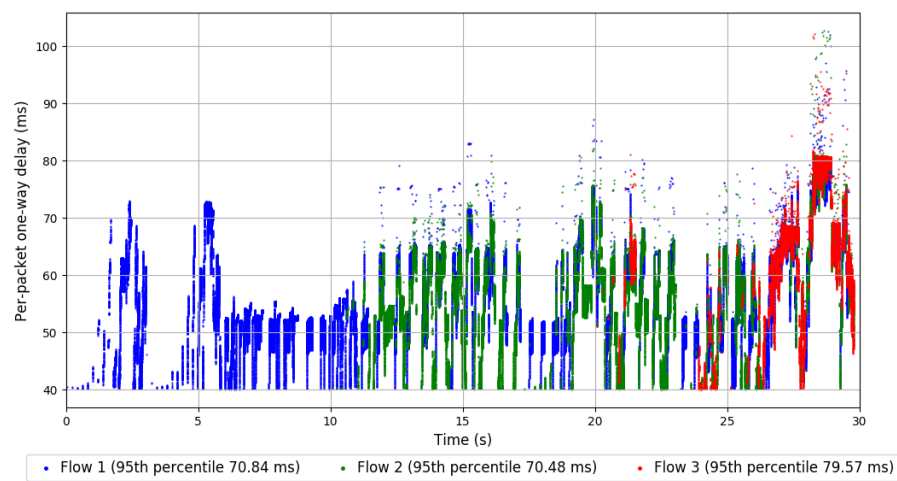
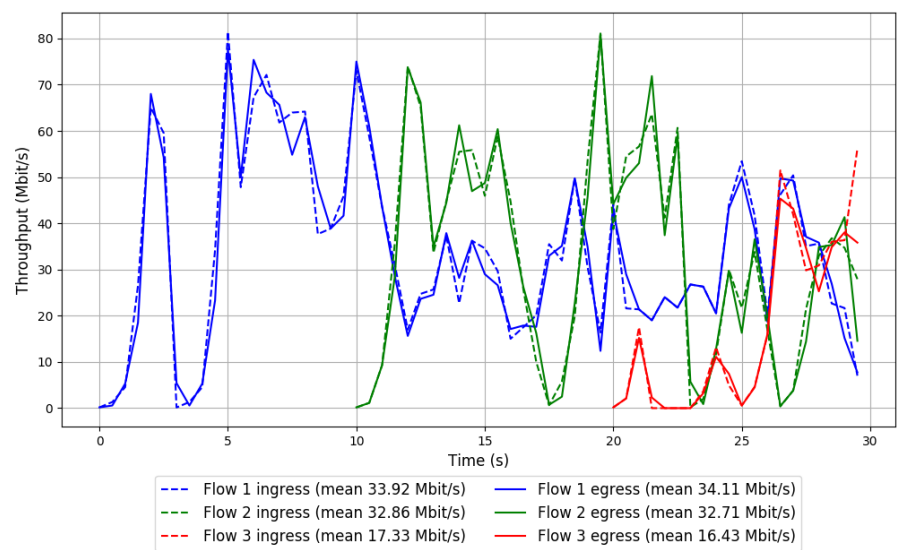
-- Flow 3:

Average throughput: 16.43 Mbit/s

95th percentile per-packet one-way delay: 79.566 ms

Loss rate: 7.37%

Run 2: Report of Verus — Data Link

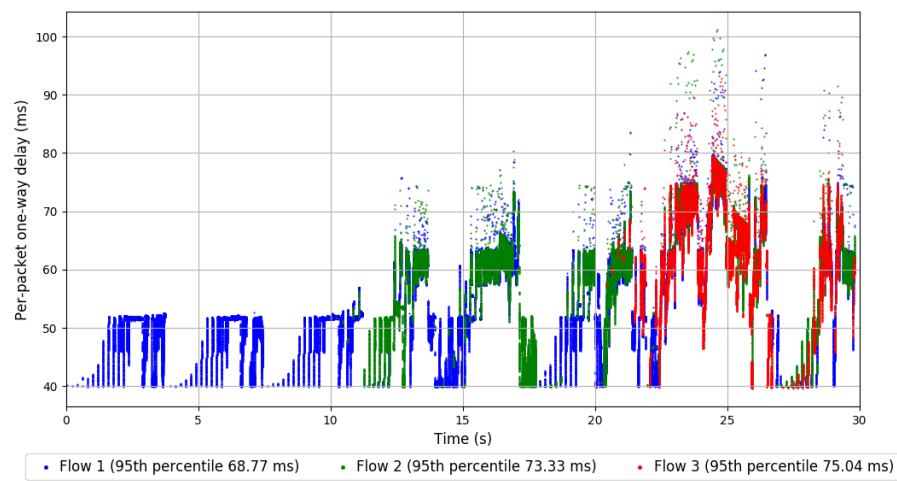
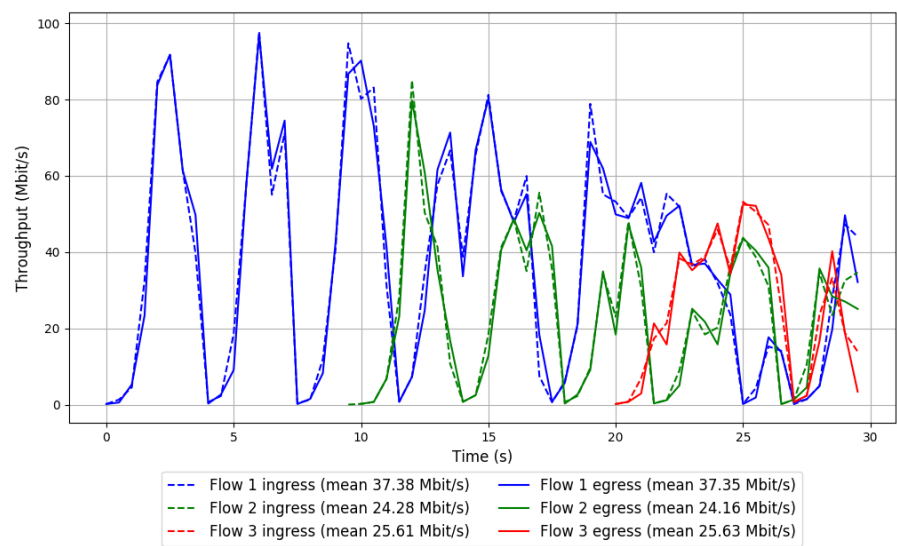


Run 3: Statistics of Verus

Start at: 2018-04-10 19:08:30
End at: 2018-04-10 19:09:00
Local clock offset: 1.456 ms
Remote clock offset: 0.824 ms

Below is generated by plot.py at 2018-04-11 02:34:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 61.79 Mbit/s
95th percentile per-packet one-way delay: 72.094 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 37.35 Mbit/s
95th percentile per-packet one-way delay: 68.769 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 24.16 Mbit/s
95th percentile per-packet one-way delay: 73.328 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 25.63 Mbit/s
95th percentile per-packet one-way delay: 75.037 ms
Loss rate: 2.08%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

/home/ubuntu/pantheon_data/2018-04-10T18-07-China-to-AWS-Korea-10-runs-3-flows/verus_stats_1

Run 4: Report of Verus — Data Link

Figure is missing

Figure is missing

Run 5: Statistics of Verus

Start at: 2018-04-10 19:57:50

End at: 2018-04-10 19:58:20

Local clock offset: 1.785 ms

Remote clock offset: 5.388 ms

Below is generated by plot.py at 2018-04-11 02:34:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.96 Mbit/s

95th percentile per-packet one-way delay: 76.226 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 40.46 Mbit/s

95th percentile per-packet one-way delay: 74.367 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 34.46 Mbit/s

95th percentile per-packet one-way delay: 76.443 ms

Loss rate: 1.42%

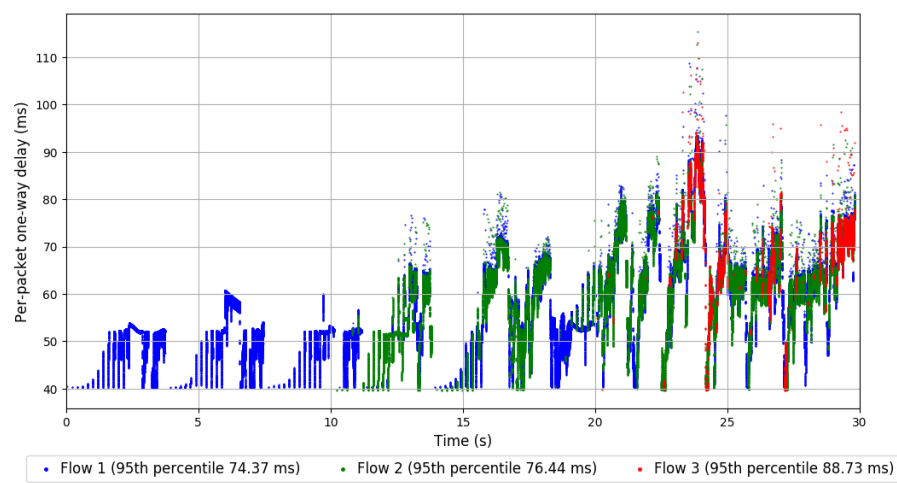
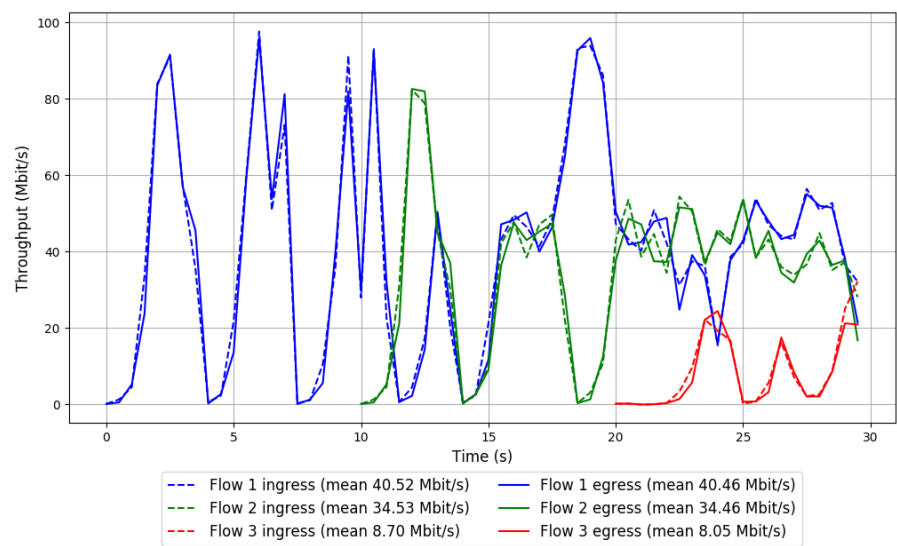
-- Flow 3:

Average throughput: 8.05 Mbit/s

95th percentile per-packet one-way delay: 88.732 ms

Loss rate: 9.58%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-04-10 20:22:15

End at: 2018-04-10 20:22:45

Local clock offset: 0.959 ms

Remote clock offset: 9.595 ms

Below is generated by plot.py at 2018-04-11 02:34:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.53 Mbit/s

95th percentile per-packet one-way delay: 80.726 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 30.03 Mbit/s

95th percentile per-packet one-way delay: 80.396 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 41.41 Mbit/s

95th percentile per-packet one-way delay: 80.484 ms

Loss rate: 1.01%

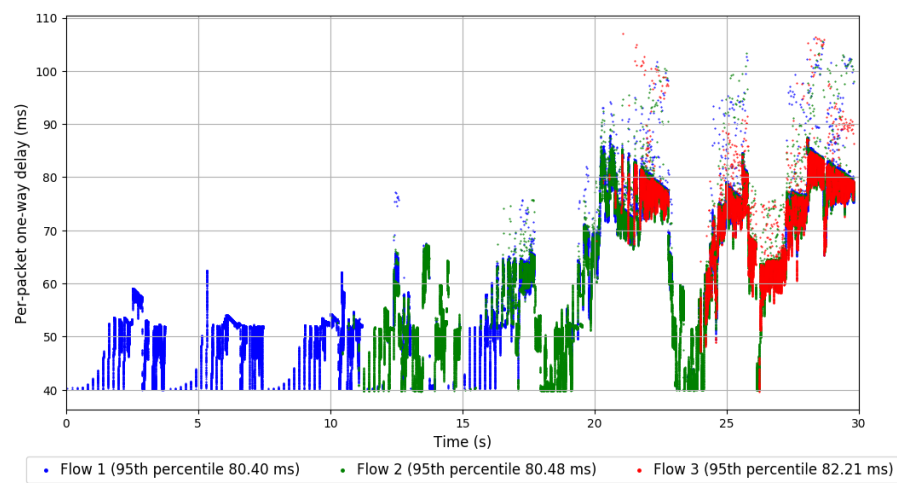
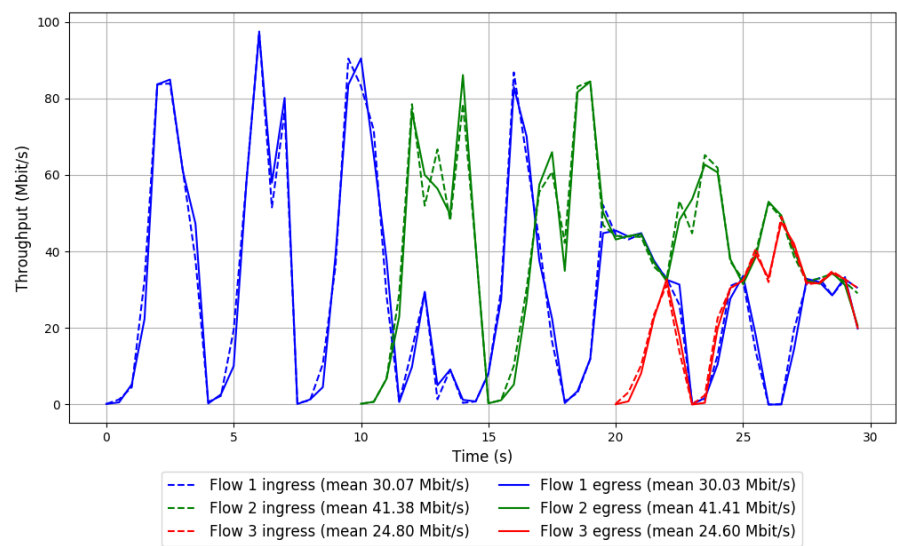
-- Flow 3:

Average throughput: 24.60 Mbit/s

95th percentile per-packet one-way delay: 82.213 ms

Loss rate: 3.20%

Run 6: Report of Verus — Data Link

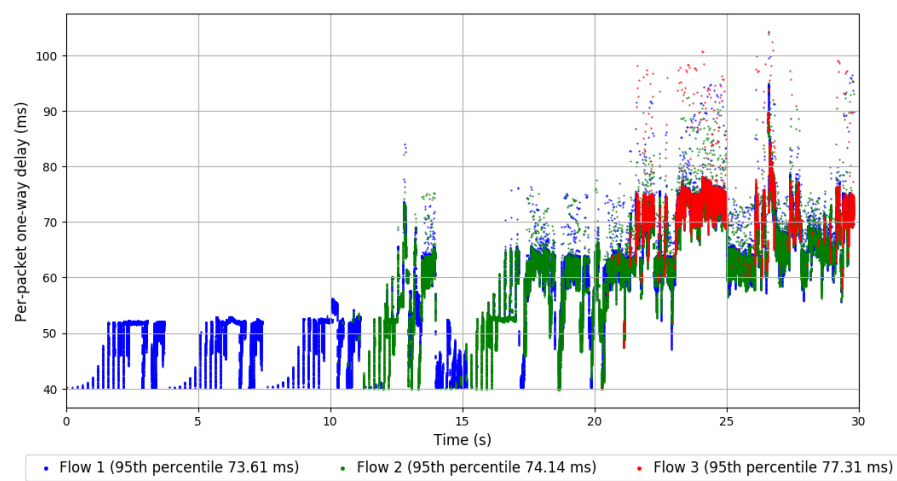
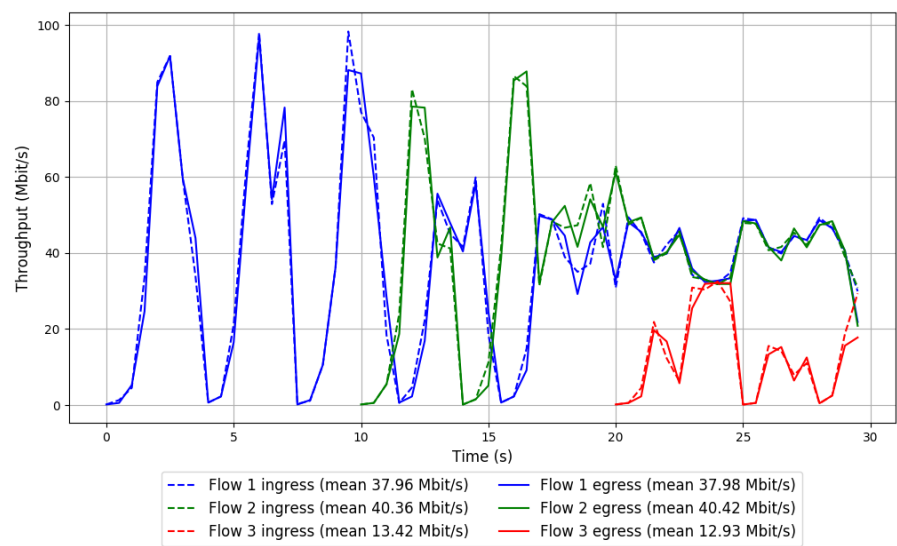


Run 7: Statistics of Verus

Start at: 2018-04-10 20:47:07
End at: 2018-04-10 20:47:37
Local clock offset: 1.221 ms
Remote clock offset: 18.046 ms

Below is generated by plot.py at 2018-04-11 02:34:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 69.01 Mbit/s
95th percentile per-packet one-way delay: 74.681 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 37.98 Mbit/s
95th percentile per-packet one-way delay: 73.613 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 40.42 Mbit/s
95th percentile per-packet one-way delay: 74.139 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 12.93 Mbit/s
95th percentile per-packet one-way delay: 77.307 ms
Loss rate: 5.92%

Run 7: Report of Verus — Data Link

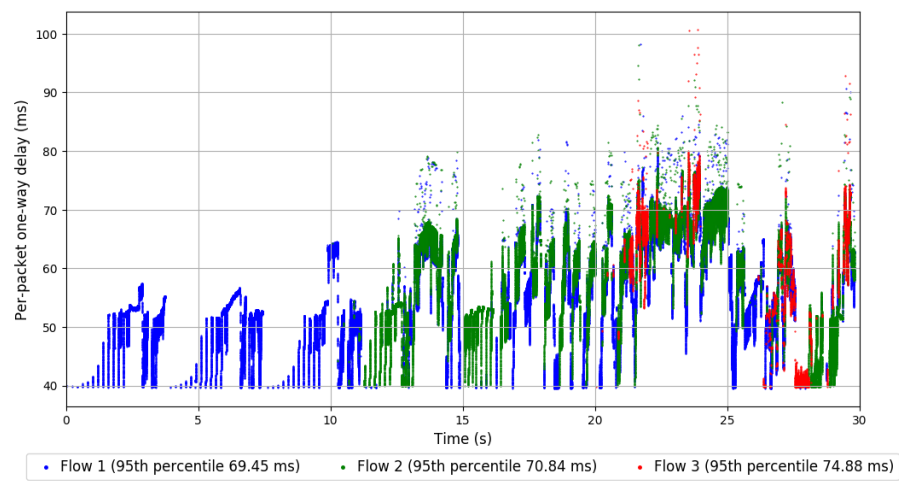
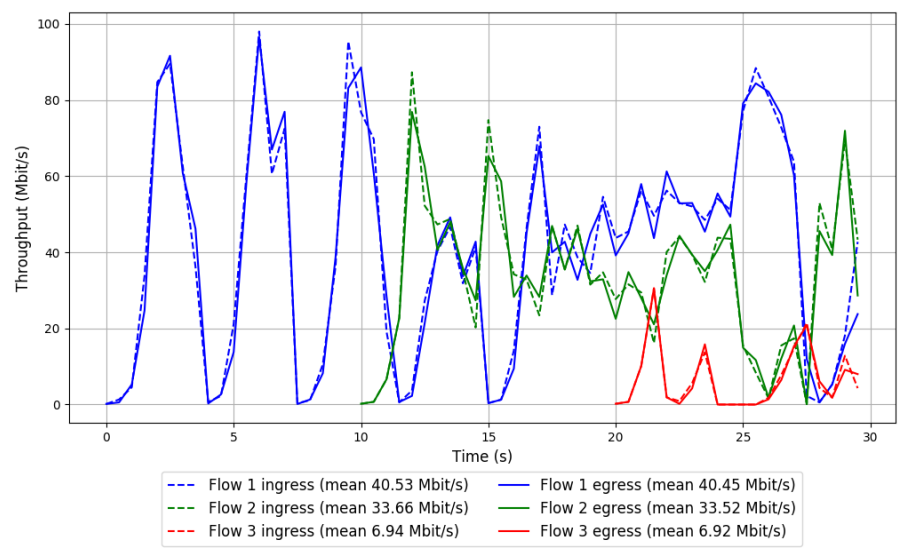


Run 8: Statistics of Verus

Start at: 2018-04-10 21:11:36
End at: 2018-04-10 21:12:06
Local clock offset: 1.859 ms
Remote clock offset: -0.579 ms

Below is generated by plot.py at 2018-04-11 02:34:43
Datalink statistics
-- Total of 3 flows:
Average throughput: 64.89 Mbit/s
95th percentile per-packet one-way delay: 70.365 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 40.45 Mbit/s
95th percentile per-packet one-way delay: 69.455 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 33.52 Mbit/s
95th percentile per-packet one-way delay: 70.843 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 6.92 Mbit/s
95th percentile per-packet one-way delay: 74.876 ms
Loss rate: 0.00%

Run 8: Report of Verus — Data Link

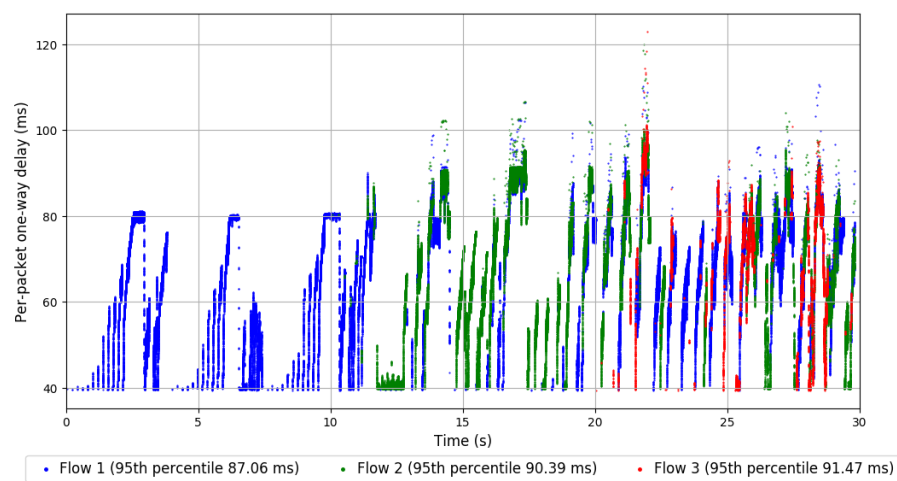
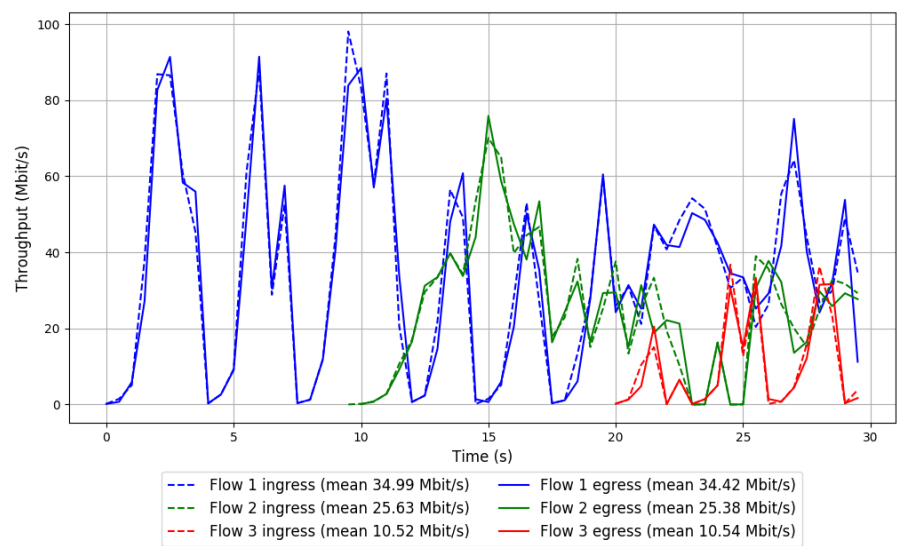


Run 9: Statistics of Verus

Start at: 2018-04-10 21:36:42
End at: 2018-04-10 21:37:12
Local clock offset: 2.375 ms
Remote clock offset: -6.825 ms

Below is generated by plot.py at 2018-04-11 02:34:43
Datalink statistics
-- Total of 3 flows:
Average throughput: 54.64 Mbit/s
95th percentile per-packet one-way delay: 88.840 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 34.42 Mbit/s
95th percentile per-packet one-way delay: 87.059 ms
Loss rate: 2.18%
-- Flow 2:
Average throughput: 25.38 Mbit/s
95th percentile per-packet one-way delay: 90.385 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 10.54 Mbit/s
95th percentile per-packet one-way delay: 91.475 ms
Loss rate: 1.80%

Run 9: Report of Verus — Data Link

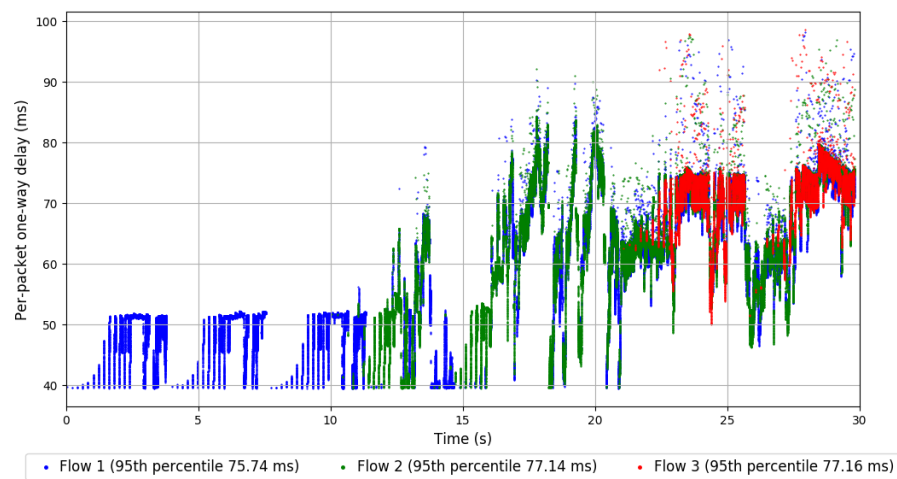
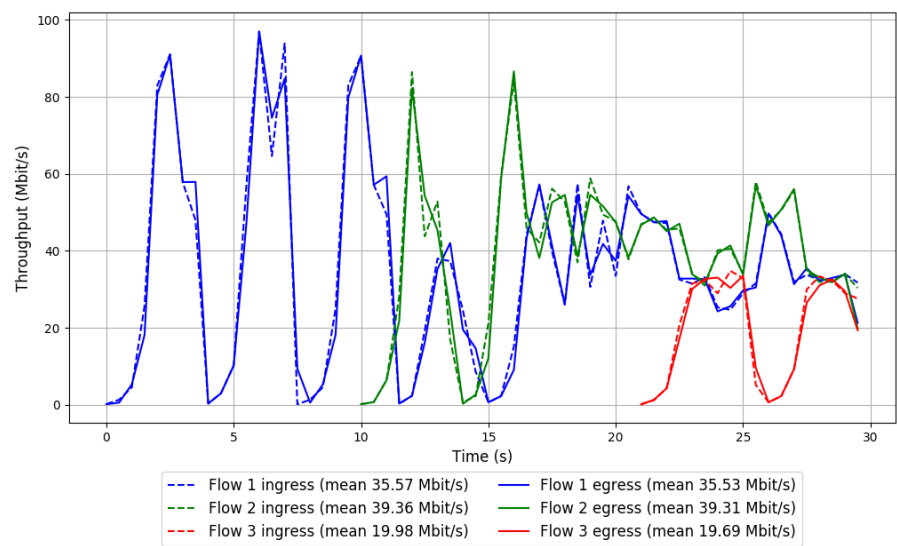


Run 10: Statistics of Verus

Start at: 2018-04-10 22:01:06
End at: 2018-04-10 22:01:36
Local clock offset: 1.899 ms
Remote clock offset: -10.159 ms

Below is generated by plot.py at 2018-04-11 02:34:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 67.38 Mbit/s
95th percentile per-packet one-way delay: 76.556 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 35.53 Mbit/s
95th percentile per-packet one-way delay: 75.741 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 39.31 Mbit/s
95th percentile per-packet one-way delay: 77.140 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 19.69 Mbit/s
95th percentile per-packet one-way delay: 77.160 ms
Loss rate: 3.68%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-04-10 18:14:11

End at: 2018-04-10 18:14:41

Local clock offset: 0.186 ms

Remote clock offset: 0.338 ms

Below is generated by plot.py at 2018-04-11 02:35:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 69.71 Mbit/s

95th percentile per-packet one-way delay: 46.368 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 47.88 Mbit/s

95th percentile per-packet one-way delay: 45.784 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 24.83 Mbit/s

95th percentile per-packet one-way delay: 47.374 ms

Loss rate: 1.09%

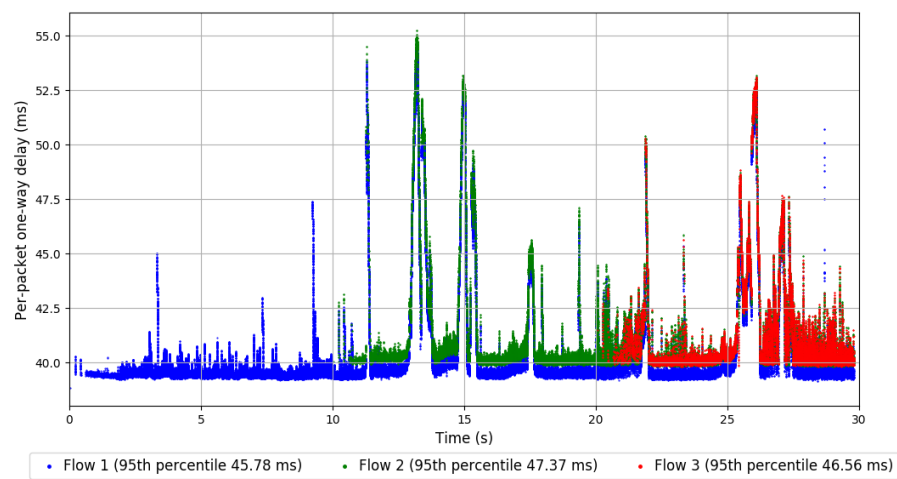
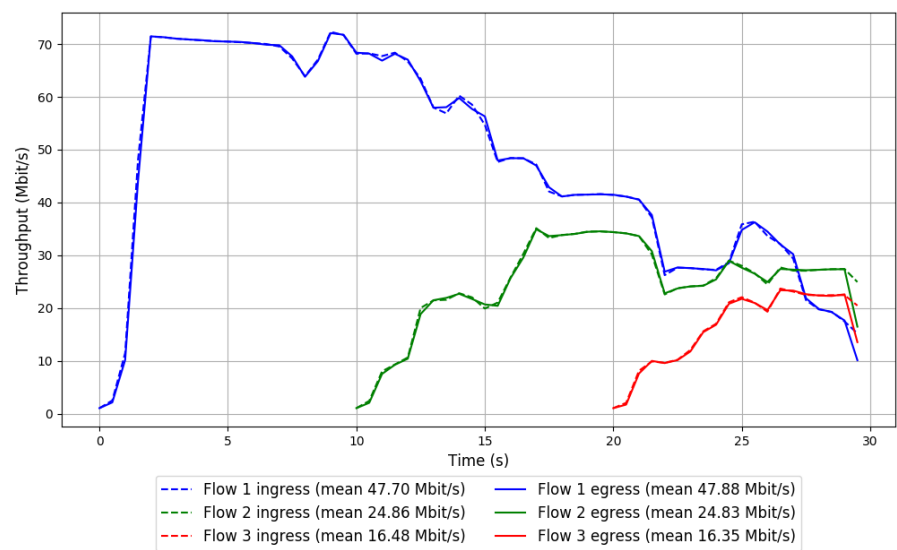
-- Flow 3:

Average throughput: 16.35 Mbit/s

95th percentile per-packet one-way delay: 46.556 ms

Loss rate: 2.68%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-04-10 18:38:39

End at: 2018-04-10 18:39:09

Local clock offset: 0.816 ms

Remote clock offset: 0.349 ms

Below is generated by plot.py at 2018-04-11 02:35:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.03 Mbit/s

95th percentile per-packet one-way delay: 41.996 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 43.91 Mbit/s

95th percentile per-packet one-way delay: 41.542 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 28.30 Mbit/s

95th percentile per-packet one-way delay: 42.779 ms

Loss rate: 1.08%

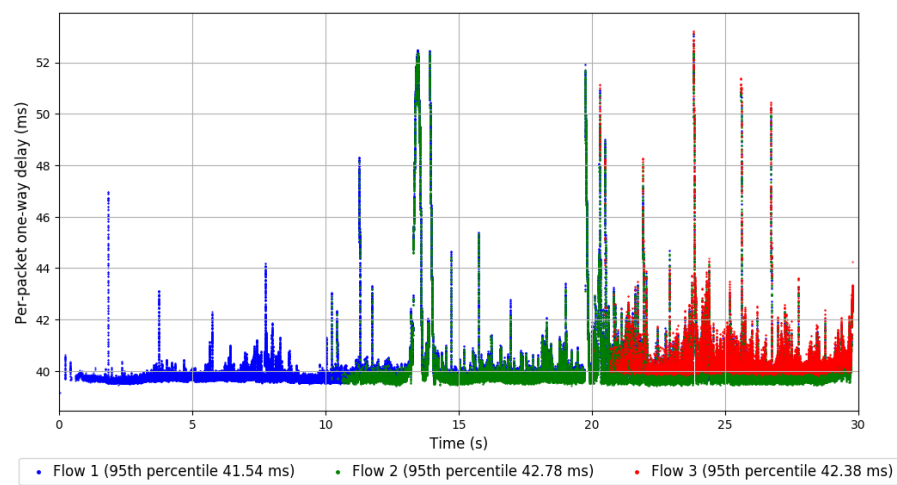
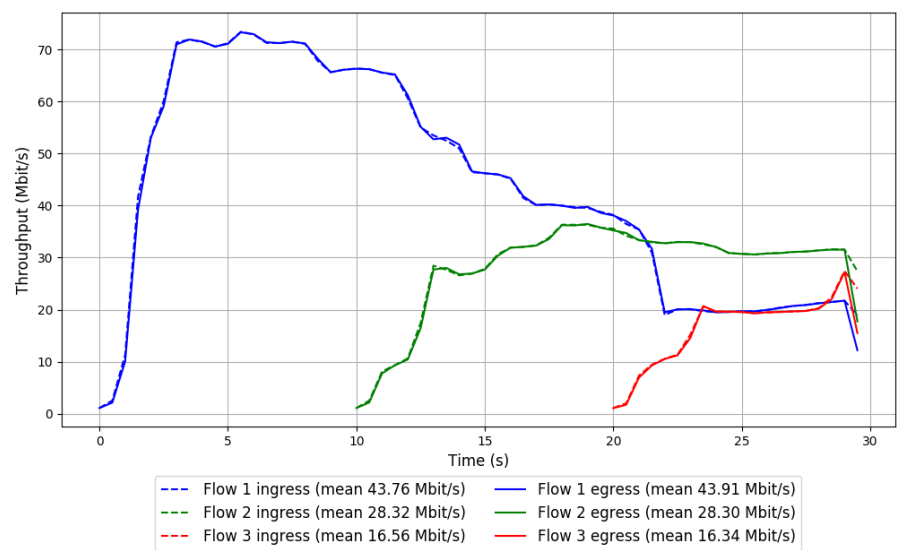
-- Flow 3:

Average throughput: 16.34 Mbit/s

95th percentile per-packet one-way delay: 42.384 ms

Loss rate: 3.29%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-04-10 19:03:00

End at: 2018-04-10 19:03:30

Local clock offset: 1.474 ms

Remote clock offset: 0.785 ms

Below is generated by plot.py at 2018-04-11 02:35:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.60 Mbit/s

95th percentile per-packet one-way delay: 42.619 ms

Loss rate: 0.73%

-- Flow 1:

Average throughput: 47.39 Mbit/s

95th percentile per-packet one-way delay: 42.251 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 22.60 Mbit/s

95th percentile per-packet one-way delay: 43.400 ms

Loss rate: 0.87%

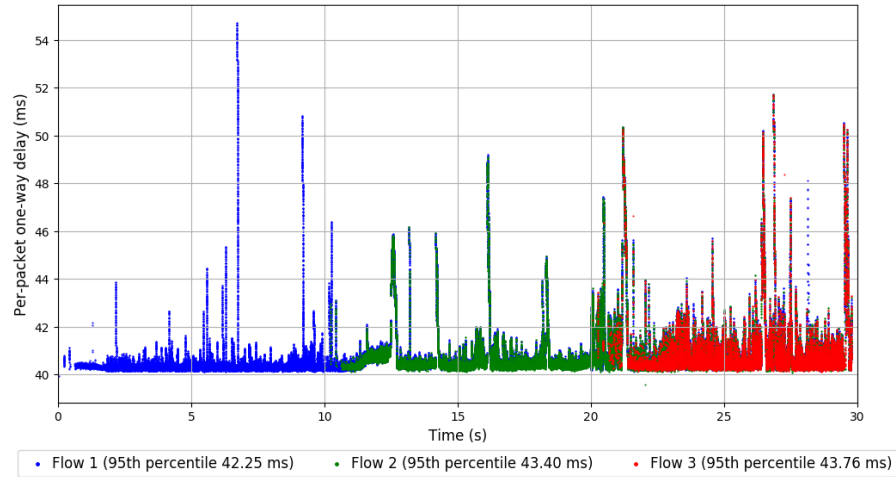
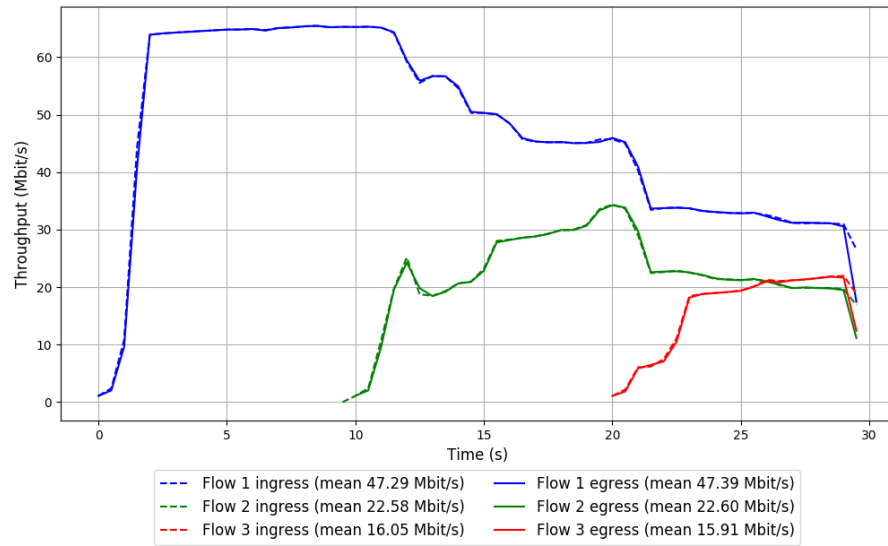
-- Flow 3:

Average throughput: 15.91 Mbit/s

95th percentile per-packet one-way delay: 43.760 ms

Loss rate: 2.82%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-04-10 19:27:28

End at: 2018-04-10 19:27:58

Local clock offset: 1.671 ms

Remote clock offset: 0.686 ms

Below is generated by plot.py at 2018-04-11 02:36:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 69.20 Mbit/s

95th percentile per-packet one-way delay: 43.418 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 44.96 Mbit/s

95th percentile per-packet one-way delay: 43.119 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 28.65 Mbit/s

95th percentile per-packet one-way delay: 44.246 ms

Loss rate: 1.23%

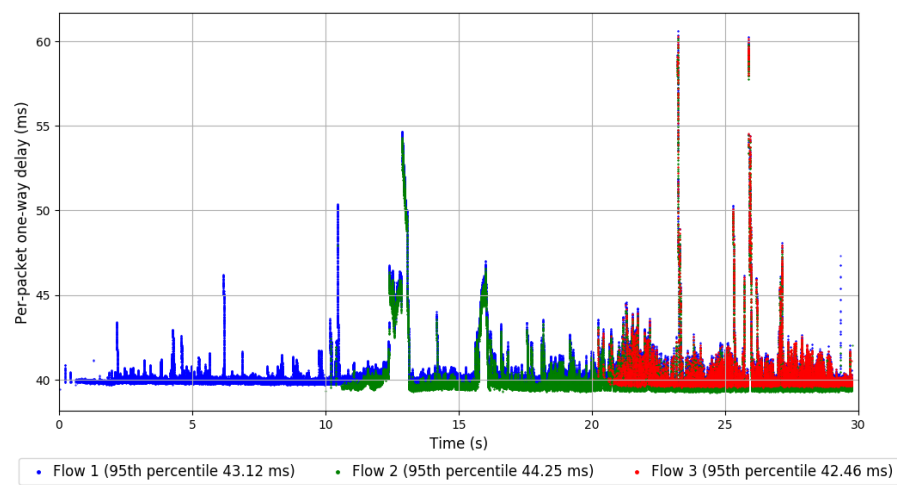
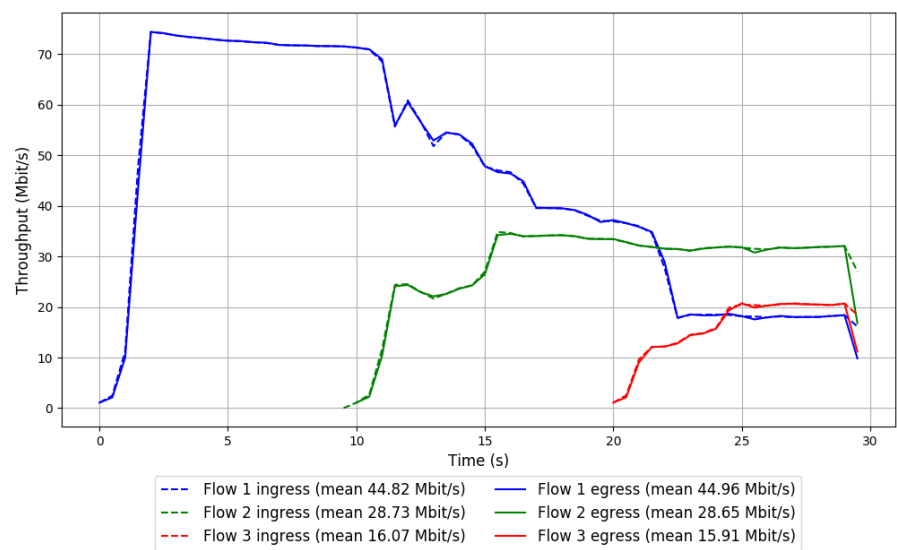
-- Flow 3:

Average throughput: 15.91 Mbit/s

95th percentile per-packet one-way delay: 42.456 ms

Loss rate: 2.95%

Run 4: Report of Copa — Data Link

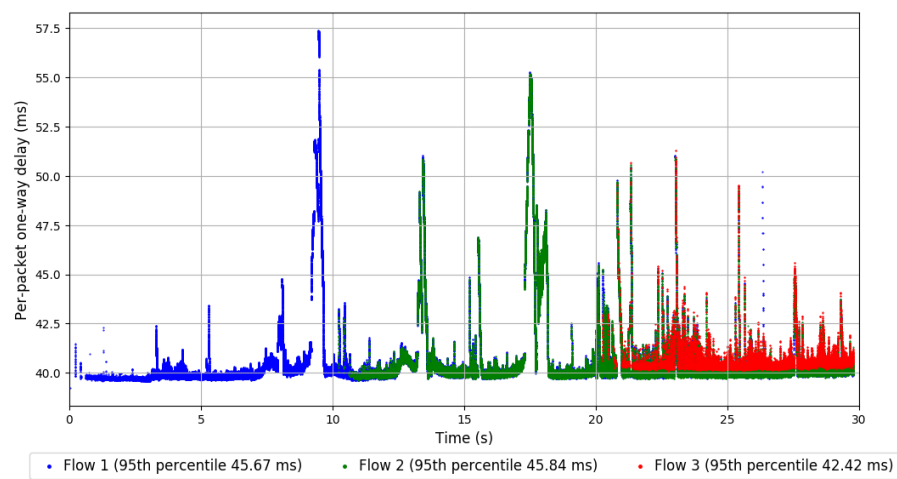
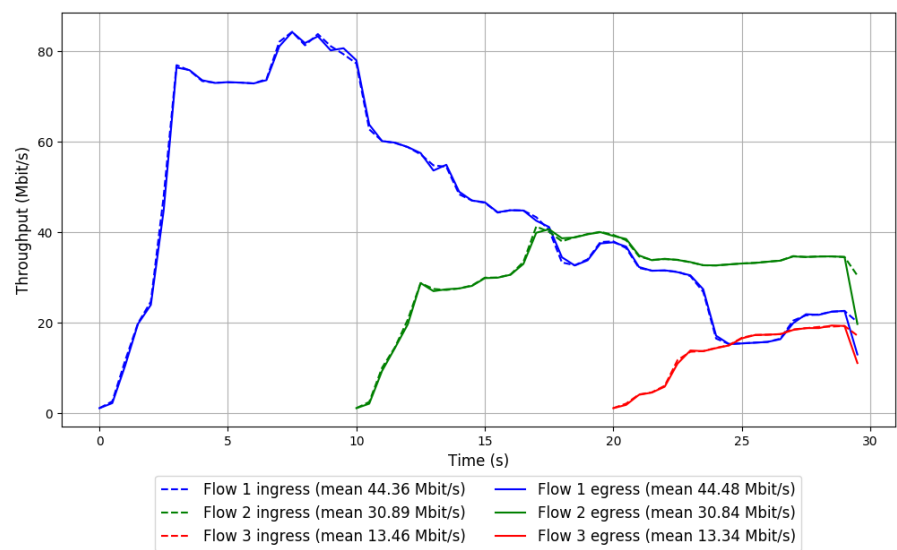


Run 5: Statistics of Copa

Start at: 2018-04-10 19:52:21
End at: 2018-04-10 19:52:51
Local clock offset: 2.126 ms
Remote clock offset: 3.5 ms

Below is generated by plot.py at 2018-04-11 02:36:33
Datalink statistics
-- Total of 3 flows:
Average throughput: 69.30 Mbit/s
95th percentile per-packet one-way delay: 45.466 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 44.48 Mbit/s
95th percentile per-packet one-way delay: 45.669 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 30.84 Mbit/s
95th percentile per-packet one-way delay: 45.840 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 13.34 Mbit/s
95th percentile per-packet one-way delay: 42.424 ms
Loss rate: 2.86%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-04-10 20:16:46

End at: 2018-04-10 20:17:16

Local clock offset: 1.279 ms

Remote clock offset: 8.377 ms

Below is generated by plot.py at 2018-04-11 02:36:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.51 Mbit/s

95th percentile per-packet one-way delay: 49.209 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 48.34 Mbit/s

95th percentile per-packet one-way delay: 55.771 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 24.40 Mbit/s

95th percentile per-packet one-way delay: 42.399 ms

Loss rate: 1.31%

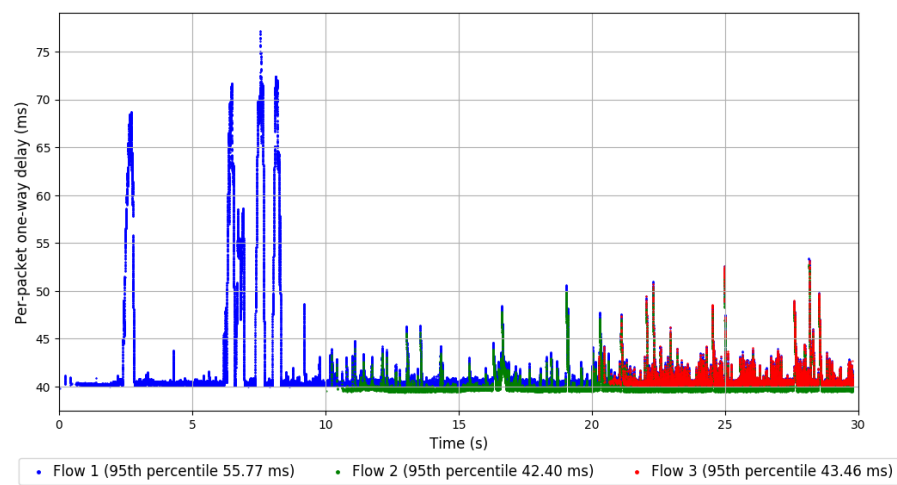
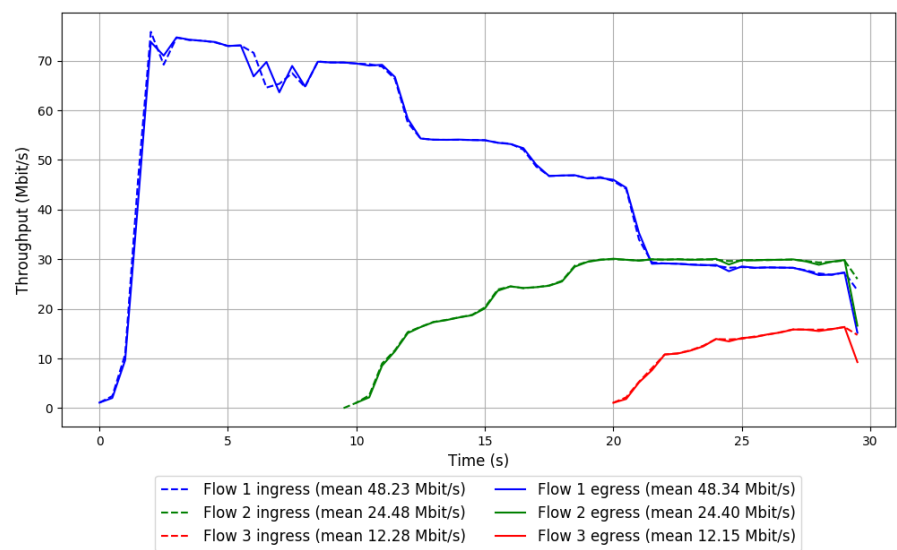
-- Flow 3:

Average throughput: 12.15 Mbit/s

95th percentile per-packet one-way delay: 43.464 ms

Loss rate: 2.97%

Run 6: Report of Copa — Data Link

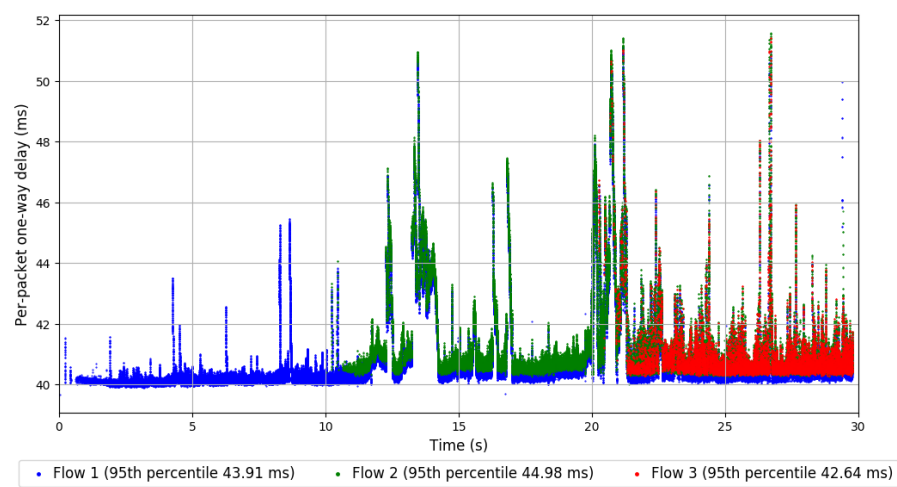
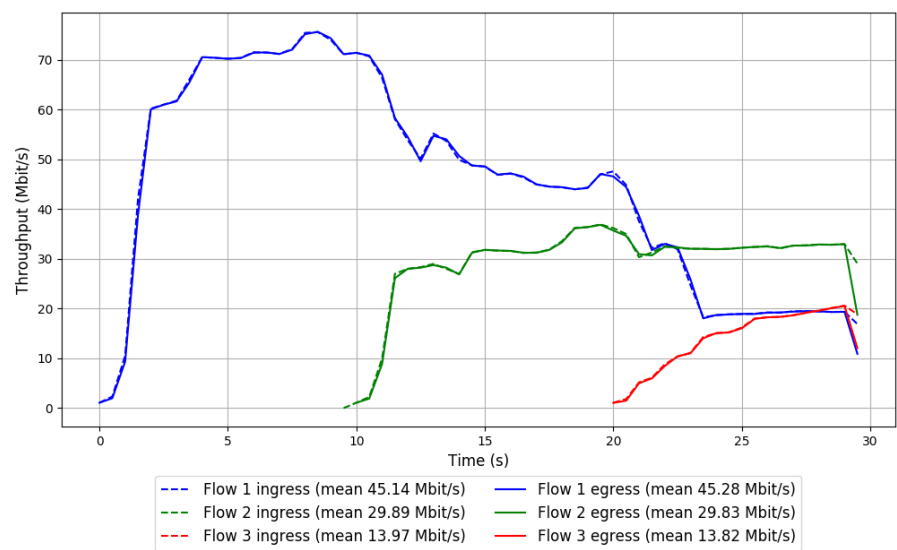


Run 7: Statistics of Copa

Start at: 2018-04-10 20:41:38
End at: 2018-04-10 20:42:08
Local clock offset: 1.358 ms
Remote clock offset: 16.769 ms

Below is generated by plot.py at 2018-04-11 02:36:40
Datalink statistics
-- Total of 3 flows:
Average throughput: 69.59 Mbit/s
95th percentile per-packet one-way delay: 44.207 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 45.28 Mbit/s
95th percentile per-packet one-way delay: 43.907 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 29.83 Mbit/s
95th percentile per-packet one-way delay: 44.981 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 13.82 Mbit/s
95th percentile per-packet one-way delay: 42.638 ms
Loss rate: 3.11%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-04-10 21:06:06

End at: 2018-04-10 21:06:36

Local clock offset: 1.398 ms

Remote clock offset: 2.909 ms

Below is generated by plot.py at 2018-04-11 02:36:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.35 Mbit/s

95th percentile per-packet one-way delay: 43.715 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 49.68 Mbit/s

95th percentile per-packet one-way delay: 43.182 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 21.68 Mbit/s

95th percentile per-packet one-way delay: 45.576 ms

Loss rate: 1.11%

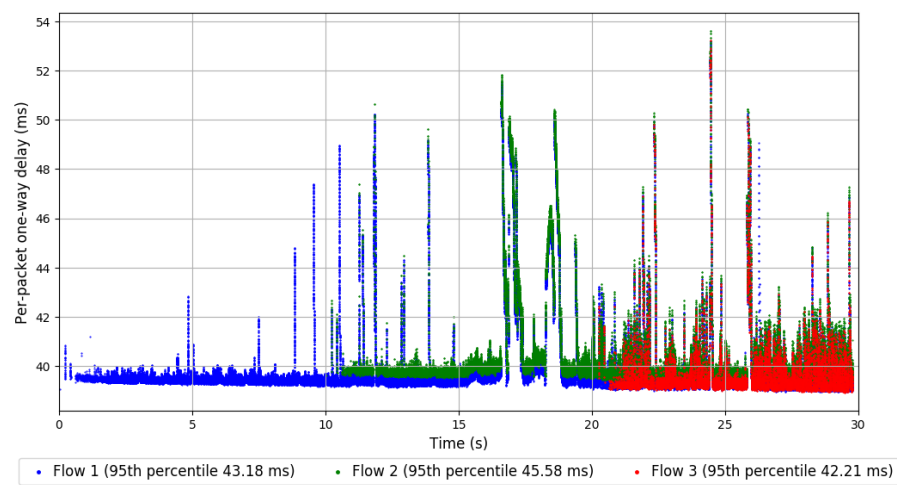
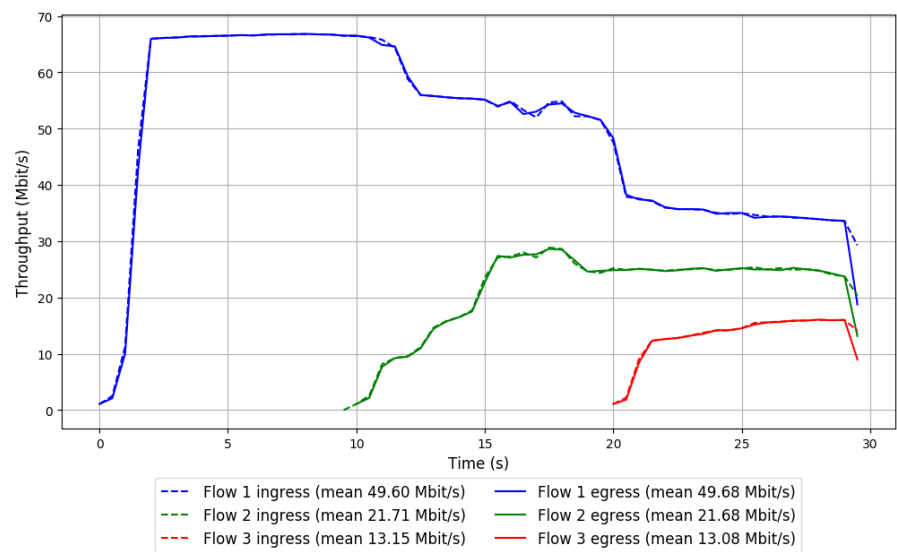
-- Flow 3:

Average throughput: 13.08 Mbit/s

95th percentile per-packet one-way delay: 42.208 ms

Loss rate: 2.51%

Run 8: Report of Copa — Data Link

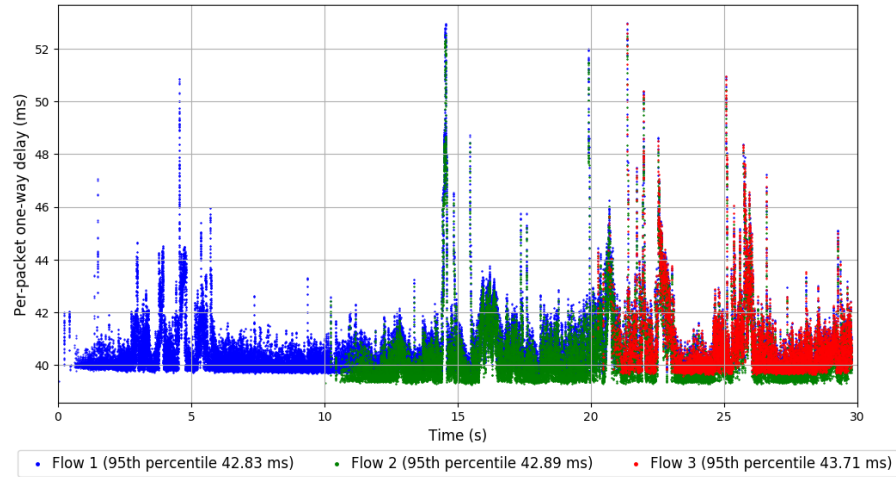
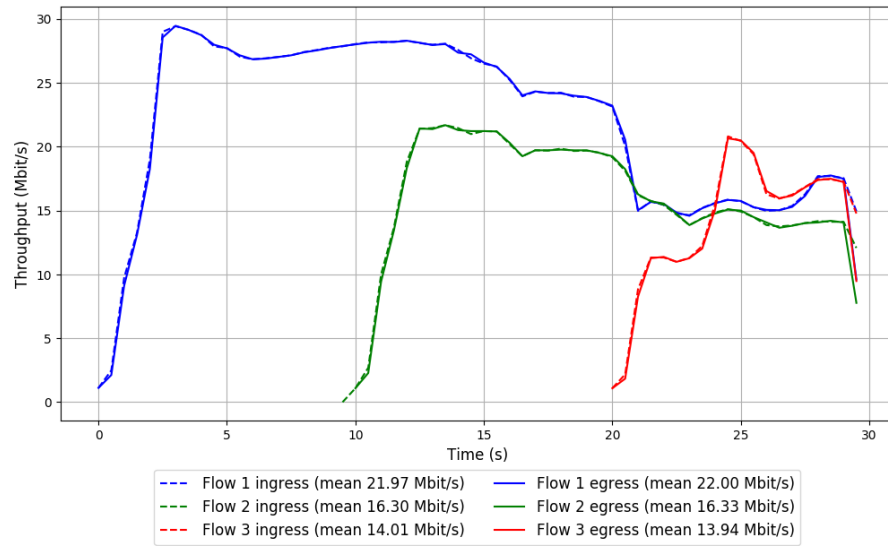


Run 9: Statistics of Copa

Start at: 2018-04-10 21:31:17
End at: 2018-04-10 21:31:47
Local clock offset: 2.274 ms
Remote clock offset: -5.965 ms

Below is generated by plot.py at 2018-04-11 02:36:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 37.40 Mbit/s
95th percentile per-packet one-way delay: 42.969 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 22.00 Mbit/s
95th percentile per-packet one-way delay: 42.829 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 16.33 Mbit/s
95th percentile per-packet one-way delay: 42.891 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 13.94 Mbit/s
95th percentile per-packet one-way delay: 43.706 ms
Loss rate: 2.43%

Run 9: Report of Copa — Data Link

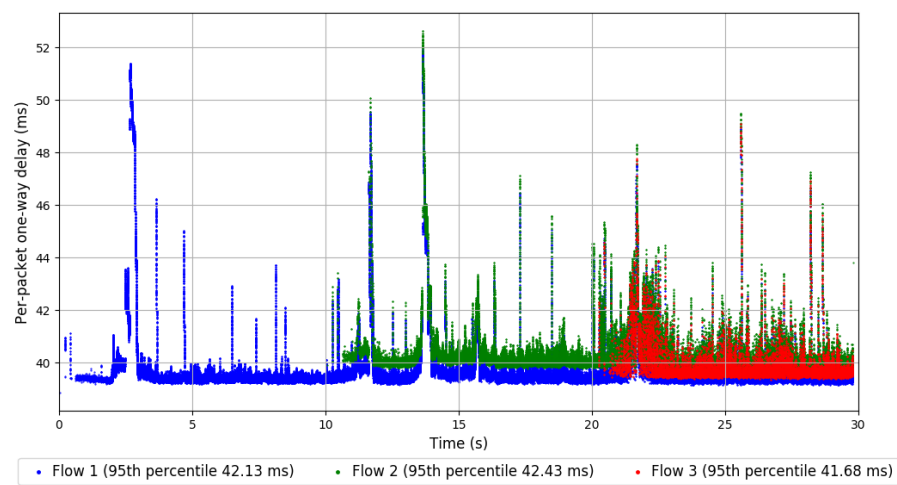
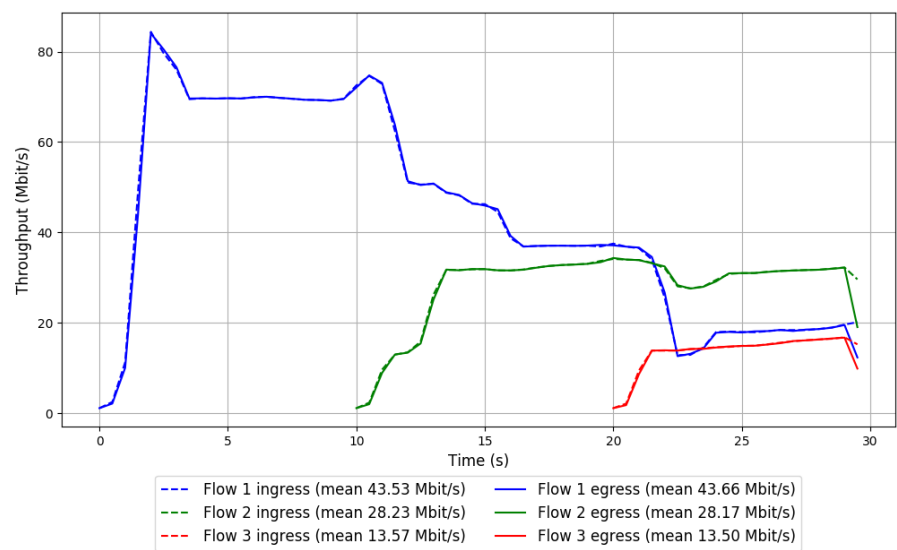


Run 10: Statistics of Copa

Start at: 2018-04-10 21:55:36
End at: 2018-04-10 21:56:06
Local clock offset: 1.92 ms
Remote clock offset: -9.549 ms

Below is generated by plot.py at 2018-04-11 02:37:35
Datalink statistics
-- Total of 3 flows:
Average throughput: 66.75 Mbit/s
95th percentile per-packet one-way delay: 42.206 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 43.66 Mbit/s
95th percentile per-packet one-way delay: 42.134 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 28.17 Mbit/s
95th percentile per-packet one-way delay: 42.428 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 13.50 Mbit/s
95th percentile per-packet one-way delay: 41.681 ms
Loss rate: 2.49%

Run 10: Report of Copa — Data Link

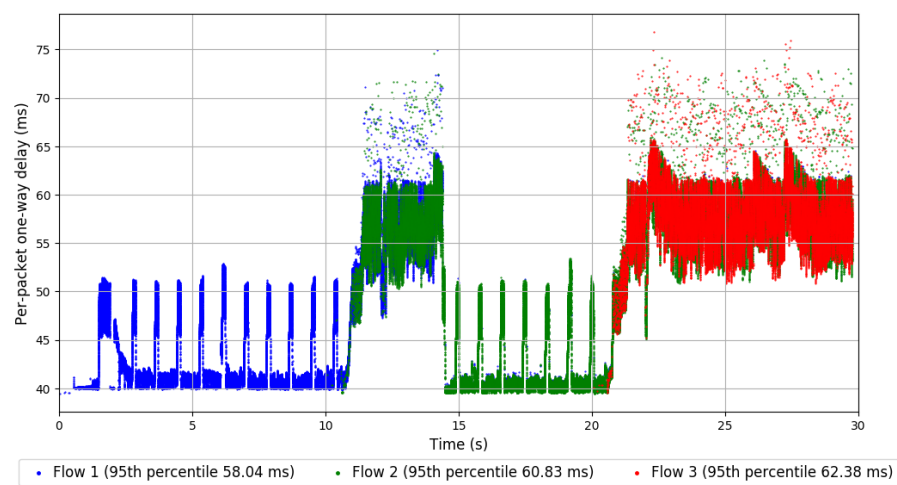
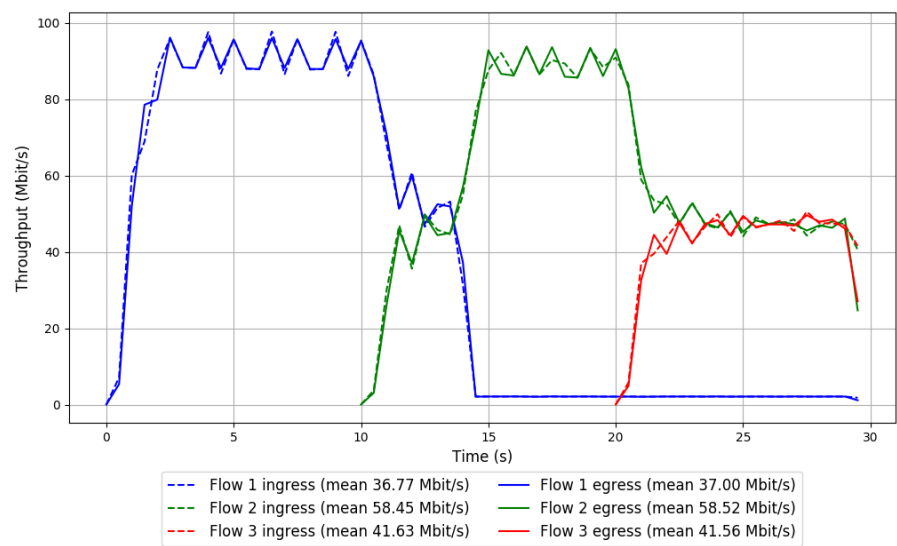


```
Run 1: Statistics of FillP

Start at: 2018-04-10 18:11:32
End at: 2018-04-10 18:12:02
Local clock offset: -0.289 ms
Remote clock offset: 0.322 ms

# Below is generated by plot.py at 2018-04-11 02:37:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.35 Mbit/s
95th percentile per-packet one-way delay: 60.671 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 37.00 Mbit/s
95th percentile per-packet one-way delay: 58.036 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 58.52 Mbit/s
95th percentile per-packet one-way delay: 60.828 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 41.56 Mbit/s
95th percentile per-packet one-way delay: 62.381 ms
Loss rate: 2.40%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-04-10 18:36:01

End at: 2018-04-10 18:36:31

Local clock offset: 0.958 ms

Remote clock offset: 0.265 ms

Below is generated by plot.py at 2018-04-11 02:37:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.29 Mbit/s

95th percentile per-packet one-way delay: 97.063 ms

Loss rate: 1.86%

-- Flow 1:

Average throughput: 38.26 Mbit/s

95th percentile per-packet one-way delay: 77.208 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 56.81 Mbit/s

95th percentile per-packet one-way delay: 97.739 ms

Loss rate: 1.59%

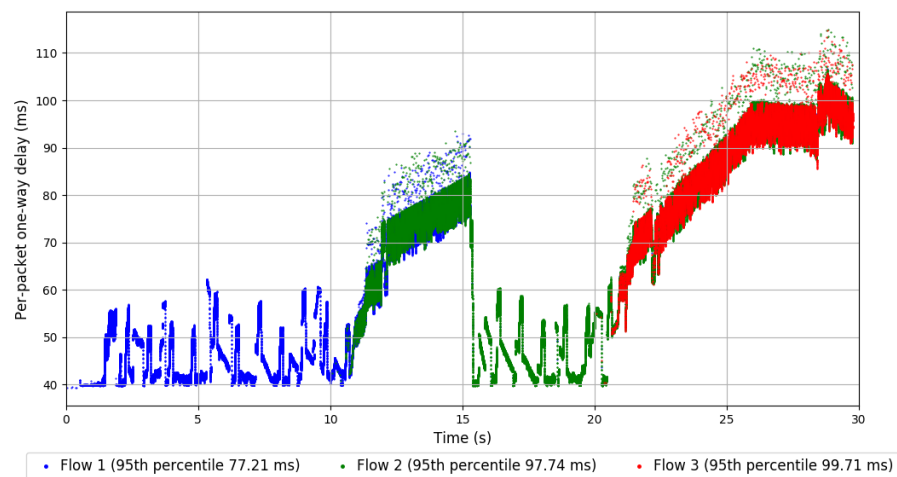
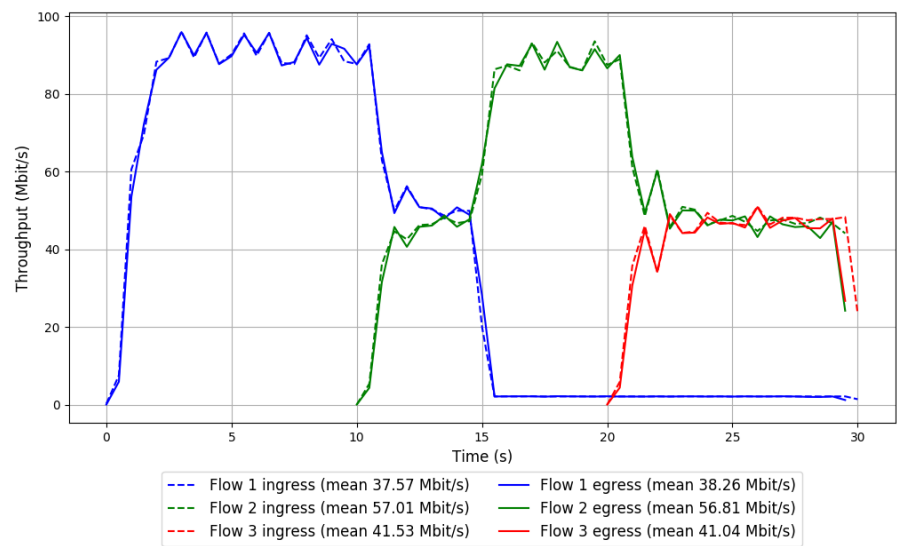
-- Flow 3:

Average throughput: 41.04 Mbit/s

95th percentile per-packet one-way delay: 99.709 ms

Loss rate: 7.07%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-04-10 19:00:22

End at: 2018-04-10 19:00:52

Local clock offset: 1.392 ms

Remote clock offset: 0.794 ms

Below is generated by plot.py at 2018-04-11 02:38:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.82 Mbit/s

95th percentile per-packet one-way delay: 70.836 ms

Loss rate: 3.31%

-- Flow 1:

Average throughput: 56.06 Mbit/s

95th percentile per-packet one-way delay: 69.199 ms

Loss rate: 2.53%

-- Flow 2:

Average throughput: 38.45 Mbit/s

95th percentile per-packet one-way delay: 71.078 ms

Loss rate: 1.02%

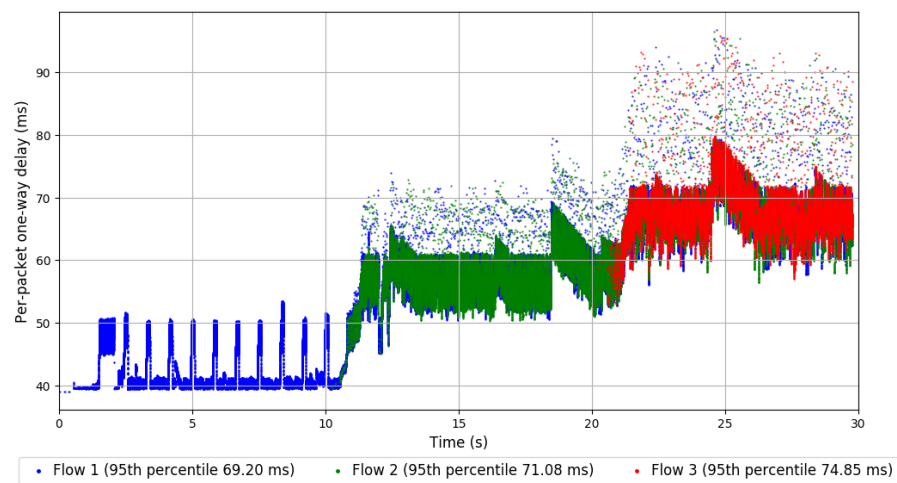
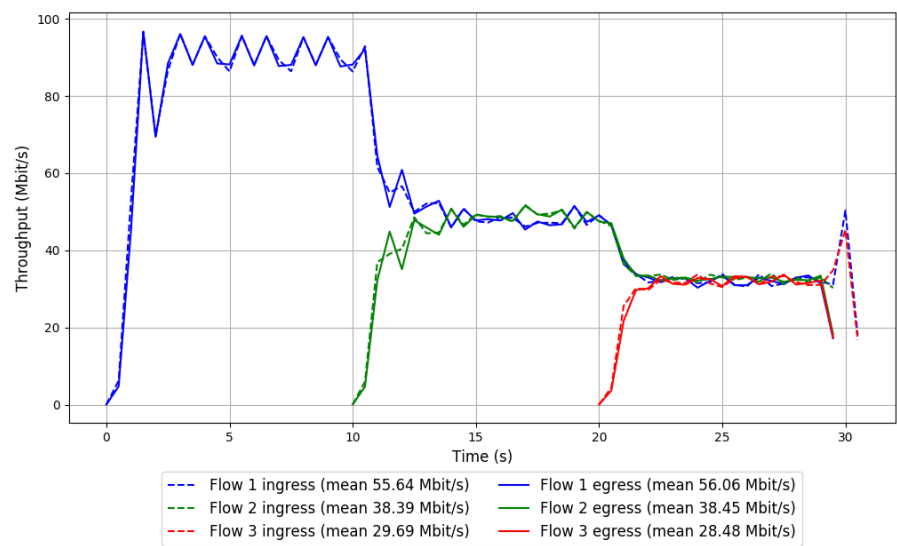
-- Flow 3:

Average throughput: 28.48 Mbit/s

95th percentile per-packet one-way delay: 74.847 ms

Loss rate: 13.06%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-04-10 19:24:50

End at: 2018-04-10 19:25:20

Local clock offset: 1.78 ms

Remote clock offset: 0.766 ms

Below is generated by plot.py at 2018-04-11 02:38:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.76 Mbit/s

95th percentile per-packet one-way delay: 69.860 ms

Loss rate: 3.47%

-- Flow 1:

Average throughput: 55.59 Mbit/s

95th percentile per-packet one-way delay: 68.458 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 38.74 Mbit/s

95th percentile per-packet one-way delay: 70.128 ms

Loss rate: 5.55%

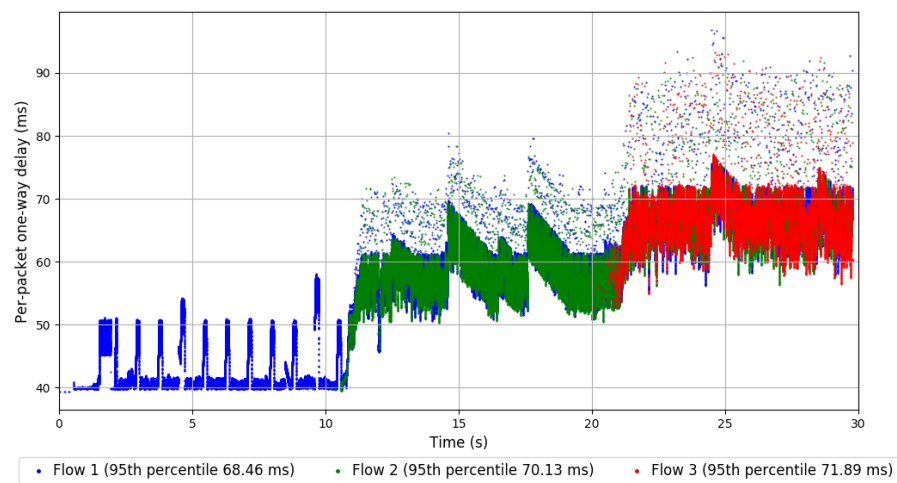
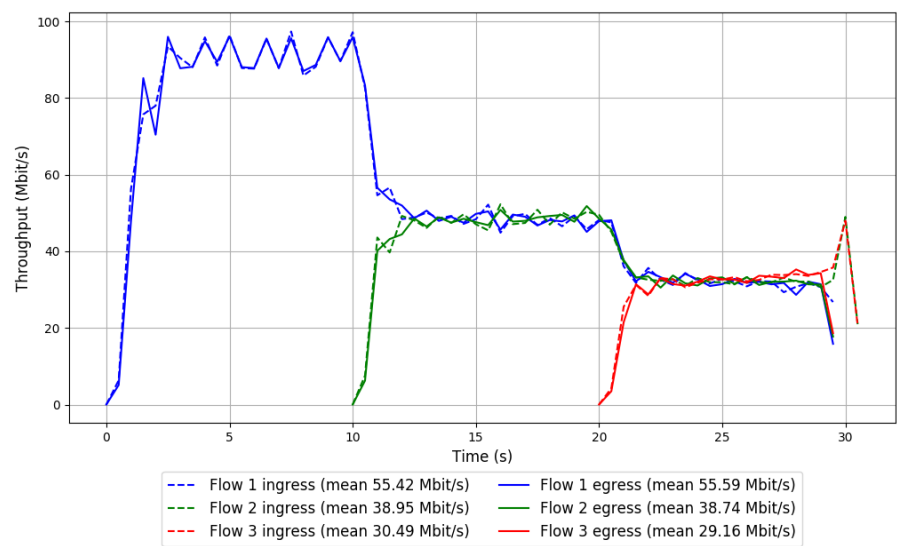
-- Flow 3:

Average throughput: 29.16 Mbit/s

95th percentile per-packet one-way delay: 71.888 ms

Loss rate: 13.72%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-04-10 19:49:43

End at: 2018-04-10 19:50:13

Local clock offset: 1.941 ms

Remote clock offset: 2.384 ms

Below is generated by plot.py at 2018-04-11 02:38:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.79 Mbit/s

95th percentile per-packet one-way delay: 69.200 ms

Loss rate: 3.11%

-- Flow 1:

Average throughput: 55.96 Mbit/s

95th percentile per-packet one-way delay: 67.842 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 38.18 Mbit/s

95th percentile per-packet one-way delay: 69.506 ms

Loss rate: 5.16%

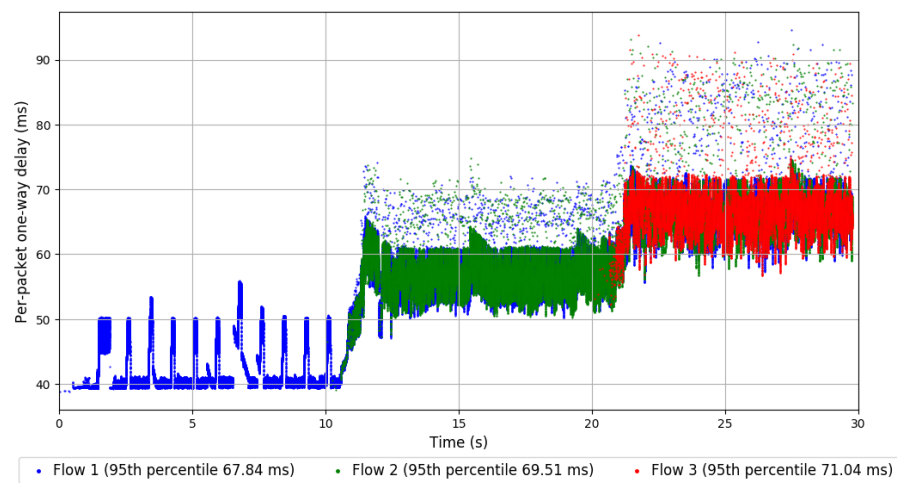
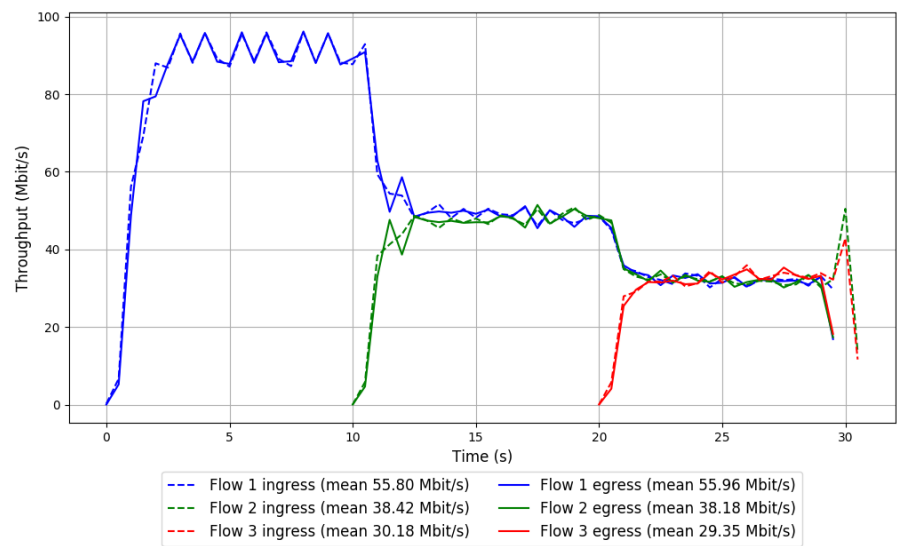
-- Flow 3:

Average throughput: 29.35 Mbit/s

95th percentile per-packet one-way delay: 71.040 ms

Loss rate: 11.50%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-04-10 20:14:08

End at: 2018-04-10 20:14:38

Local clock offset: 1.226 ms

Remote clock offset: 8.124 ms

Below is generated by plot.py at 2018-04-11 02:38:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.04 Mbit/s

95th percentile per-packet one-way delay: 71.628 ms

Loss rate: 3.19%

-- Flow 1:

Average throughput: 56.40 Mbit/s

95th percentile per-packet one-way delay: 69.884 ms

Loss rate: 2.51%

-- Flow 2:

Average throughput: 38.20 Mbit/s

95th percentile per-packet one-way delay: 72.420 ms

Loss rate: 1.00%

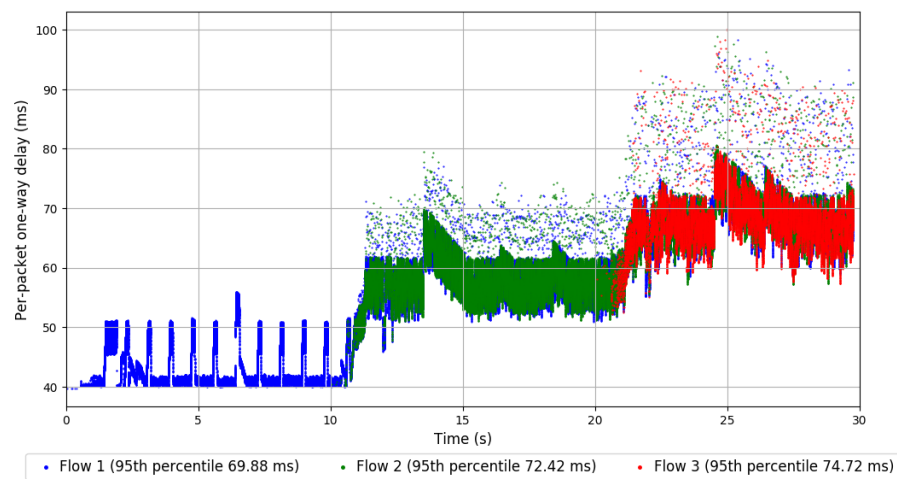
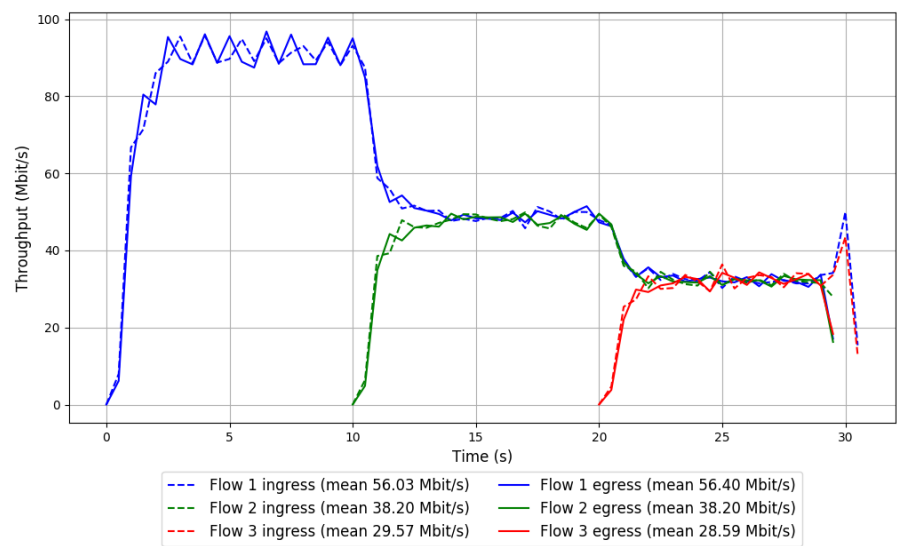
-- Flow 3:

Average throughput: 28.59 Mbit/s

95th percentile per-packet one-way delay: 74.715 ms

Loss rate: 12.15%

Run 6: Report of FillP — Data Link

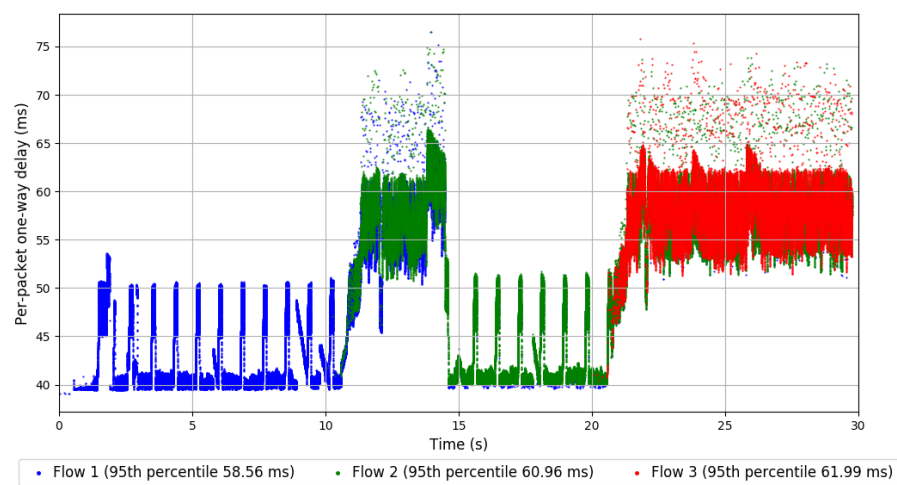
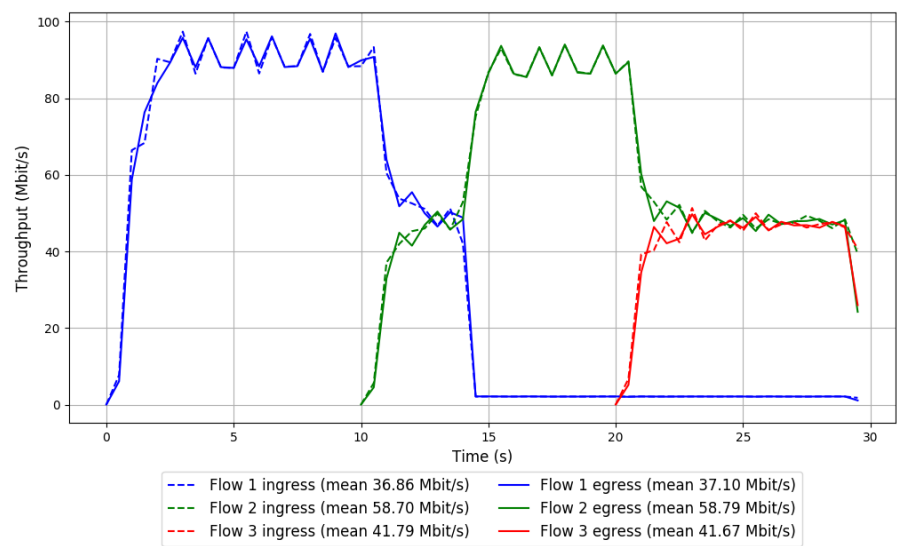


Run 7: Statistics of FillP

Start at: 2018-04-10 20:39:01
End at: 2018-04-10 20:39:31
Local clock offset: 1.238 ms
Remote clock offset: 16.162 ms

Below is generated by plot.py at 2018-04-11 02:38:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 89.66 Mbit/s
95th percentile per-packet one-way delay: 60.895 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 37.10 Mbit/s
95th percentile per-packet one-way delay: 58.564 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 58.79 Mbit/s
95th percentile per-packet one-way delay: 60.963 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 41.67 Mbit/s
95th percentile per-packet one-way delay: 61.987 ms
Loss rate: 2.47%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-04-10 21:03:27

End at: 2018-04-10 21:03:57

Local clock offset: 1.152 ms

Remote clock offset: 5.635 ms

Below is generated by plot.py at 2018-04-11 02:38:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.78 Mbit/s

95th percentile per-packet one-way delay: 68.598 ms

Loss rate: 3.40%

-- Flow 1:

Average throughput: 55.96 Mbit/s

95th percentile per-packet one-way delay: 67.027 ms

Loss rate: 2.52%

-- Flow 2:

Average throughput: 38.39 Mbit/s

95th percentile per-packet one-way delay: 69.214 ms

Loss rate: 1.02%

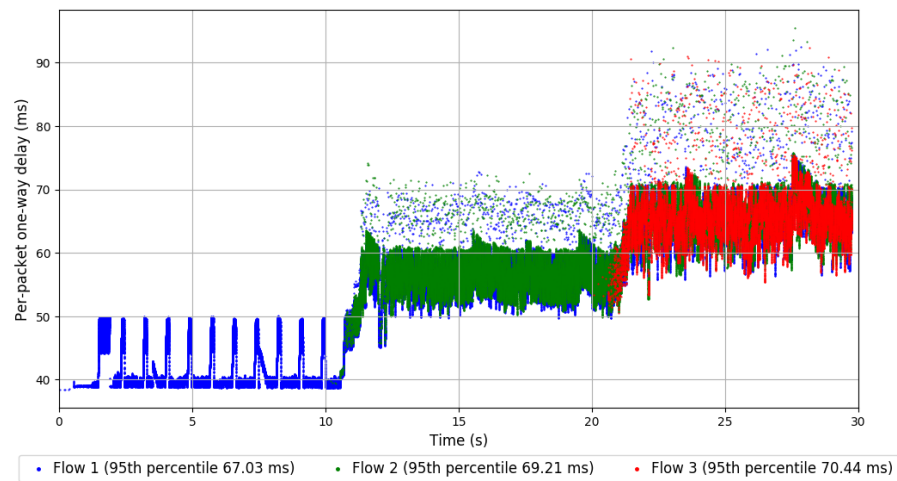
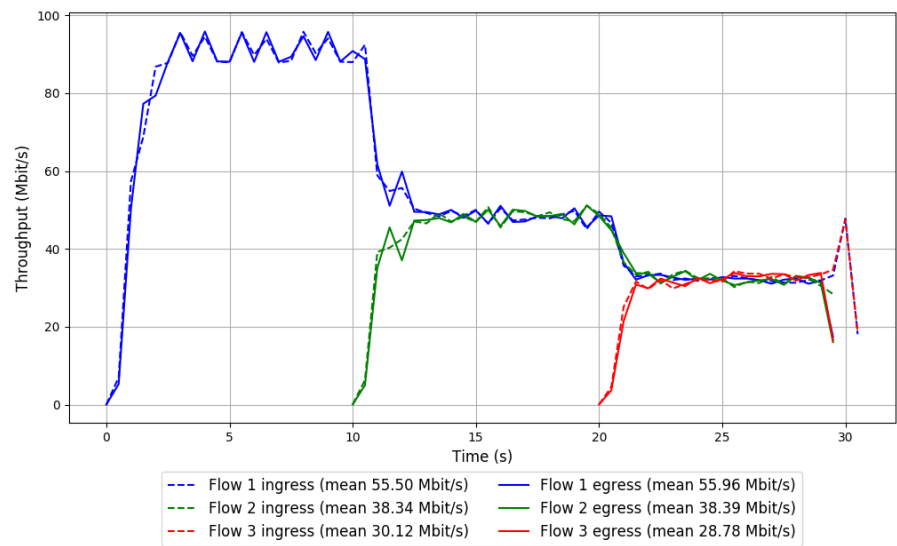
-- Flow 3:

Average throughput: 28.78 Mbit/s

95th percentile per-packet one-way delay: 70.444 ms

Loss rate: 13.65%

Run 8: Report of FillP — Data Link

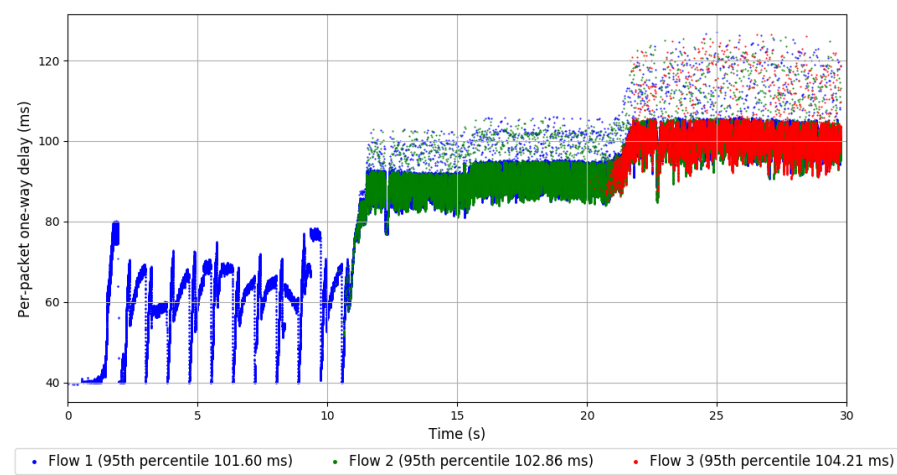
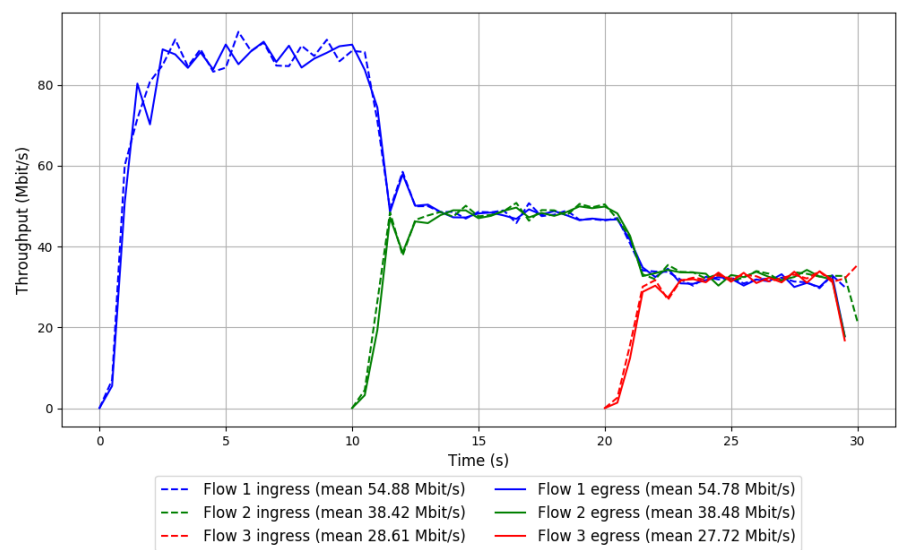


Run 9: Statistics of FillP

Start at: 2018-04-10 21:28:39
End at: 2018-04-10 21:29:09
Local clock offset: 2.237 ms
Remote clock offset: -5.367 ms

Below is generated by plot.py at 2018-04-11 02:39:04
Datalink statistics
-- Total of 3 flows:
Average throughput: 89.24 Mbit/s
95th percentile per-packet one-way delay: 102.704 ms
Loss rate: 2.63%
-- Flow 1:
Average throughput: 54.78 Mbit/s
95th percentile per-packet one-way delay: 101.604 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 38.48 Mbit/s
95th percentile per-packet one-way delay: 102.856 ms
Loss rate: 3.31%
-- Flow 3:
Average throughput: 27.72 Mbit/s
95th percentile per-packet one-way delay: 104.206 ms
Loss rate: 9.99%

Run 9: Report of FillP — Data Link

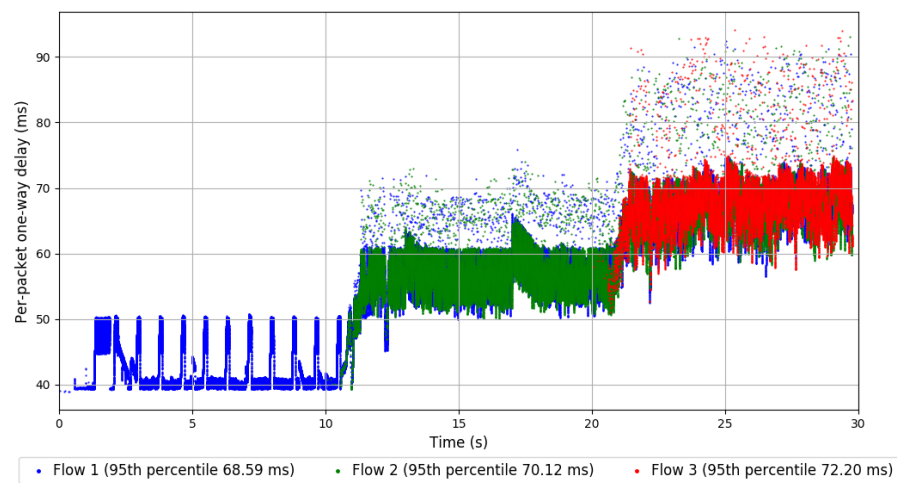
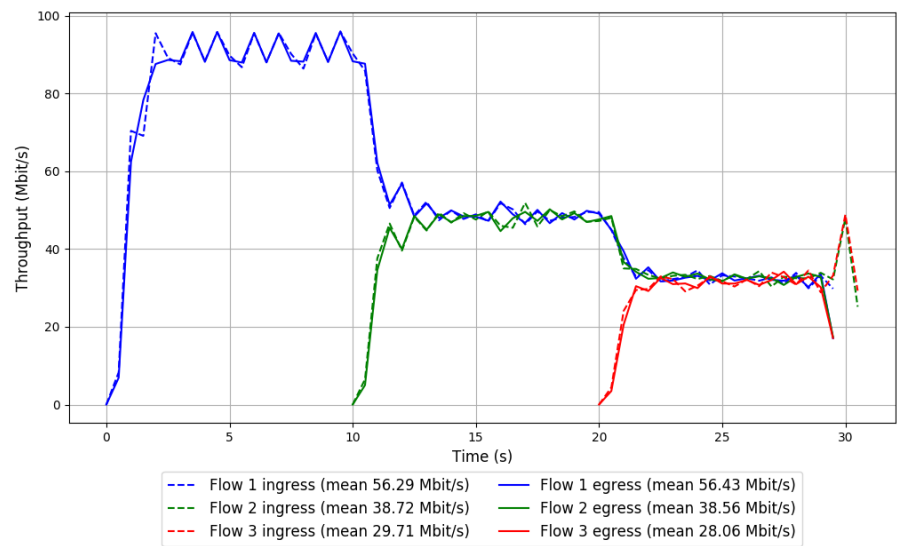


Run 10: Statistics of FillP

Start at: 2018-04-10 21:52:58
End at: 2018-04-10 21:53:28
Local clock offset: 1.996 ms
Remote clock offset: -9.138 ms

Below is generated by plot.py at 2018-04-11 02:39:32
Datalink statistics
-- Total of 3 flows:
Average throughput: 91.12 Mbit/s
95th percentile per-packet one-way delay: 70.067 ms
Loss rate: 3.69%
-- Flow 1:
Average throughput: 56.43 Mbit/s
95th percentile per-packet one-way delay: 68.589 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 38.56 Mbit/s
95th percentile per-packet one-way delay: 70.117 ms
Loss rate: 5.75%
-- Flow 3:
Average throughput: 28.06 Mbit/s
95th percentile per-packet one-way delay: 72.204 ms
Loss rate: 15.34%

Run 10: Report of FillP — Data Link

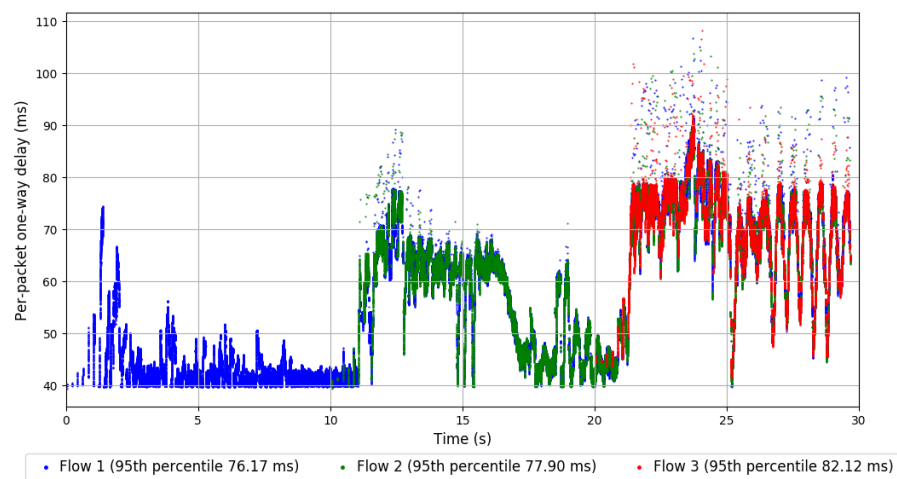
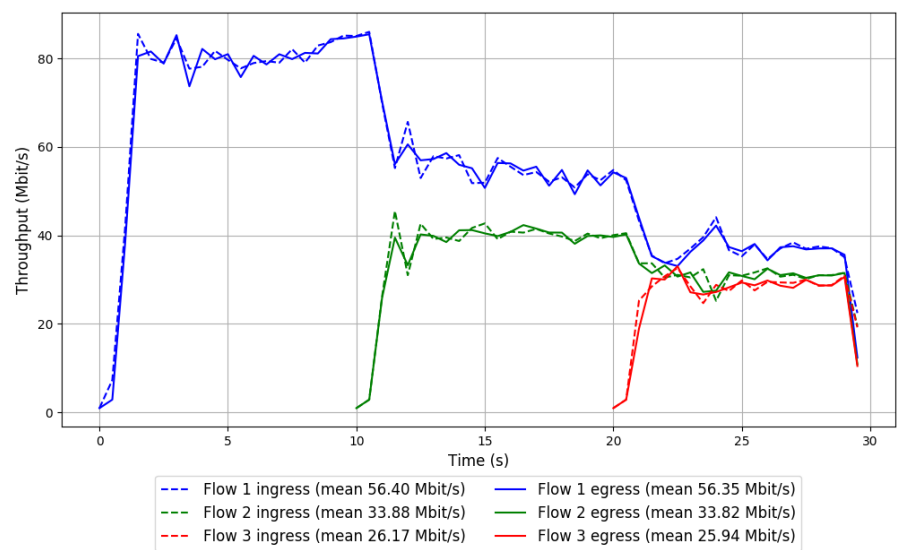


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-10 18:22:22
End at: 2018-04-10 18:22:52
Local clock offset: 1.063 ms
Remote clock offset: 0.424 ms

# Below is generated by plot.py at 2018-04-11 02:39:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.11 Mbit/s
95th percentile per-packet one-way delay: 77.576 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 56.35 Mbit/s
95th percentile per-packet one-way delay: 76.174 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 33.82 Mbit/s
95th percentile per-packet one-way delay: 77.902 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 25.94 Mbit/s
95th percentile per-packet one-way delay: 82.119 ms
Loss rate: 2.91%
```

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



Run 2: Statistics of Indigo-1-32

Start at: 2018-04-10 18:46:47

End at: 2018-04-10 18:47:17

Local clock offset: 0.993 ms

Remote clock offset: 0.652 ms

Below is generated by plot.py at 2018-04-11 02:39:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.44 Mbit/s

95th percentile per-packet one-way delay: 70.430 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 79.44 Mbit/s

95th percentile per-packet one-way delay: 71.537 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 9.18 Mbit/s

95th percentile per-packet one-way delay: 64.626 ms

Loss rate: 0.78%

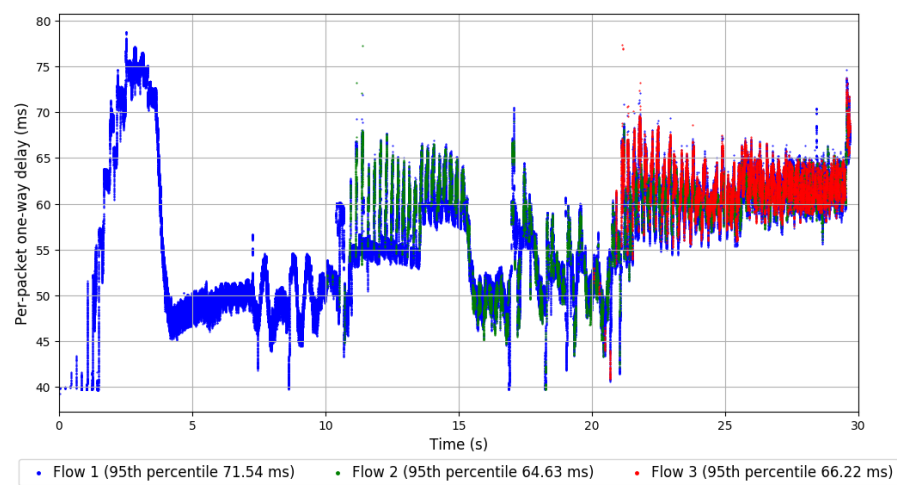
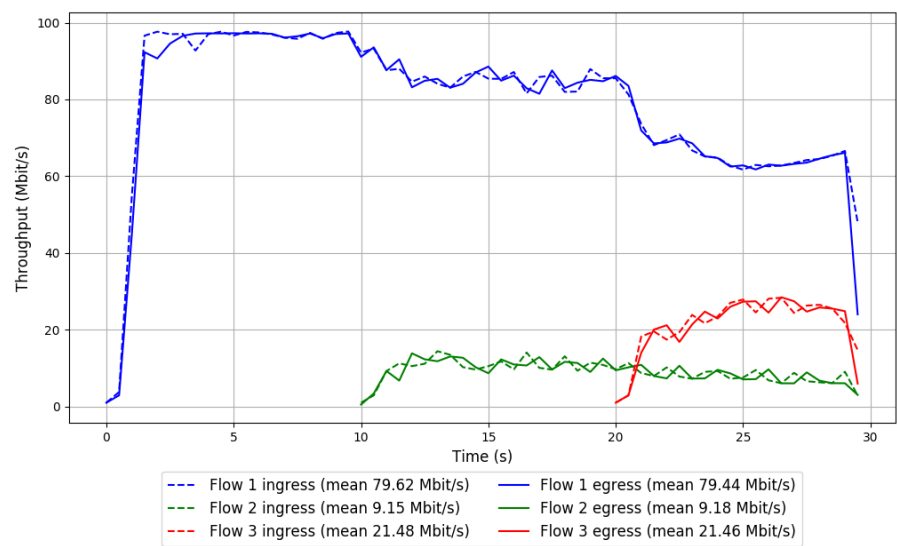
-- Flow 3:

Average throughput: 21.46 Mbit/s

95th percentile per-packet one-way delay: 66.219 ms

Loss rate: 2.28%

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



Run 3: Statistics of Indigo-1-32

Start at: 2018-04-10 19:11:10

End at: 2018-04-10 19:11:40

Local clock offset: 1.244 ms

Remote clock offset: 0.866 ms

Below is generated by plot.py at 2018-04-11 02:39:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.08 Mbit/s

95th percentile per-packet one-way delay: 74.577 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 61.85 Mbit/s

95th percentile per-packet one-way delay: 72.930 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 34.17 Mbit/s

95th percentile per-packet one-way delay: 75.557 ms

Loss rate: 1.05%

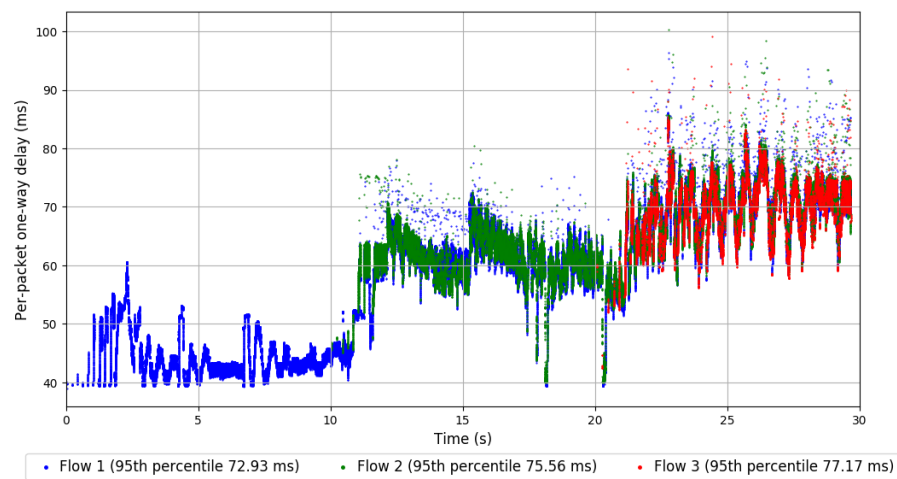
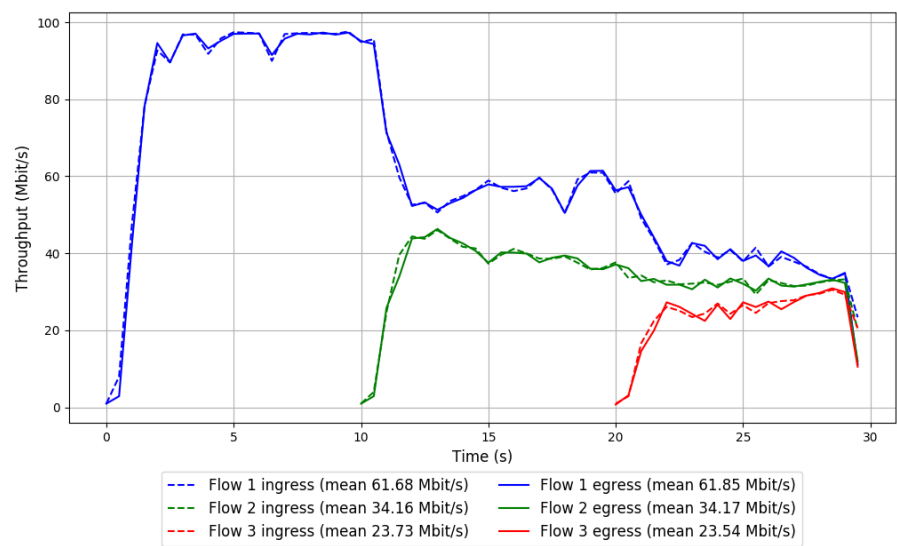
-- Flow 3:

Average throughput: 23.54 Mbit/s

95th percentile per-packet one-way delay: 77.168 ms

Loss rate: 2.96%

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



Run 4: Statistics of Indigo-1-32

Start at: 2018-04-10 19:36:03

End at: 2018-04-10 19:36:33

Local clock offset: 1.714 ms

Remote clock offset: 0.725 ms

Below is generated by plot.py at 2018-04-11 02:39:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.27 Mbit/s

95th percentile per-packet one-way delay: 70.382 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 63.19 Mbit/s

95th percentile per-packet one-way delay: 69.150 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 30.45 Mbit/s

95th percentile per-packet one-way delay: 70.239 ms

Loss rate: 1.04%

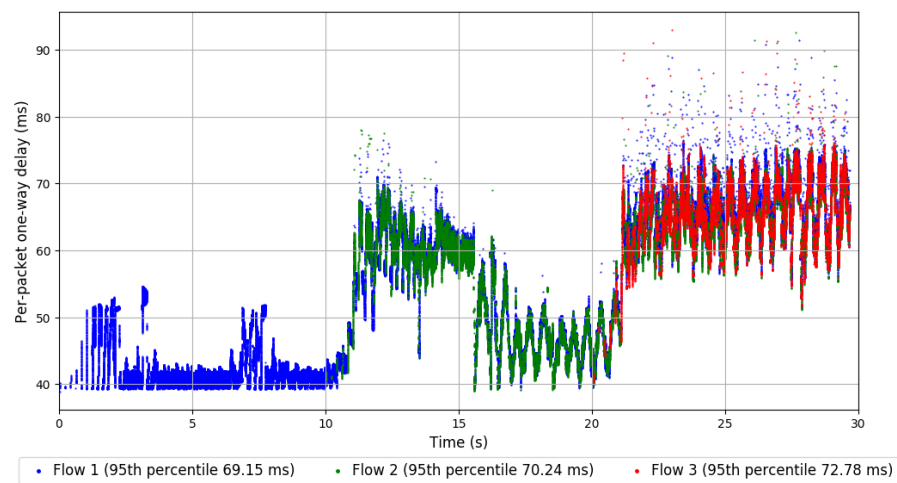
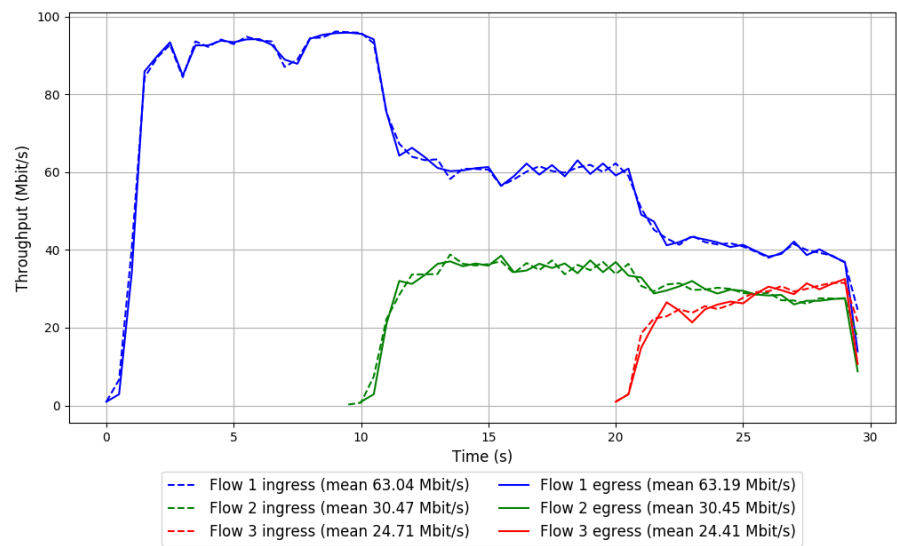
-- Flow 3:

Average throughput: 24.41 Mbit/s

95th percentile per-packet one-way delay: 72.779 ms

Loss rate: 3.12%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

Start at: 2018-04-10 20:00:30

End at: 2018-04-10 20:01:00

Local clock offset: 1.622 ms

Remote clock offset: 6.117 ms

Below is generated by plot.py at 2018-04-11 02:39:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.55 Mbit/s

95th percentile per-packet one-way delay: 74.936 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 65.95 Mbit/s

95th percentile per-packet one-way delay: 73.058 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 24.10 Mbit/s

95th percentile per-packet one-way delay: 76.009 ms

Loss rate: 1.46%

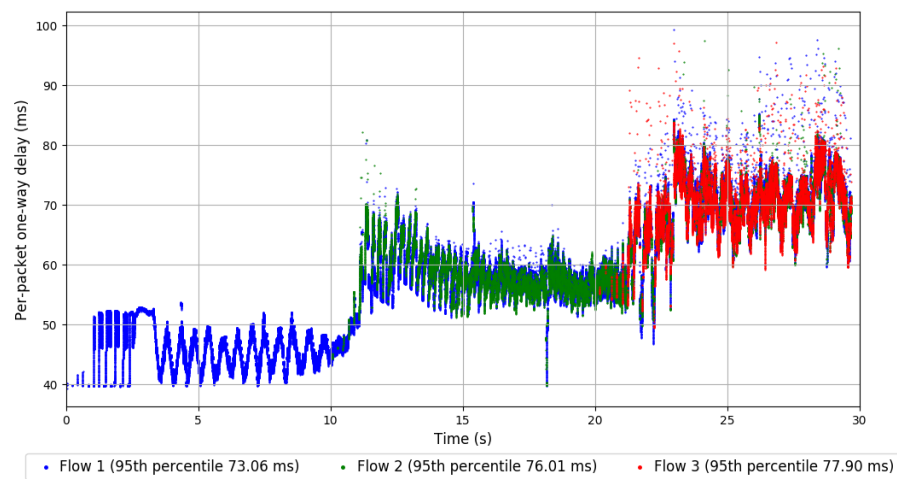
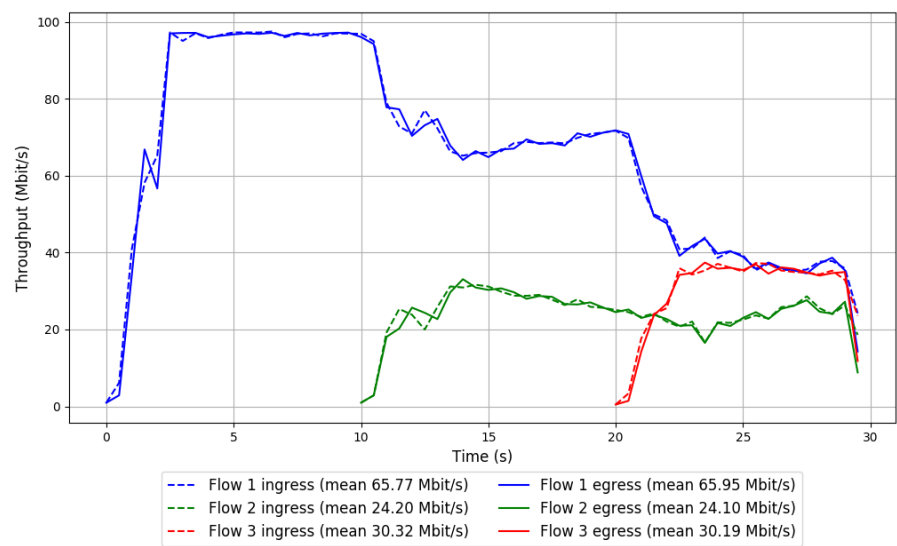
-- Flow 3:

Average throughput: 30.19 Mbit/s

95th percentile per-packet one-way delay: 77.897 ms

Loss rate: 2.80%

Run 5: Report of Indigo-1-32 — Data Link

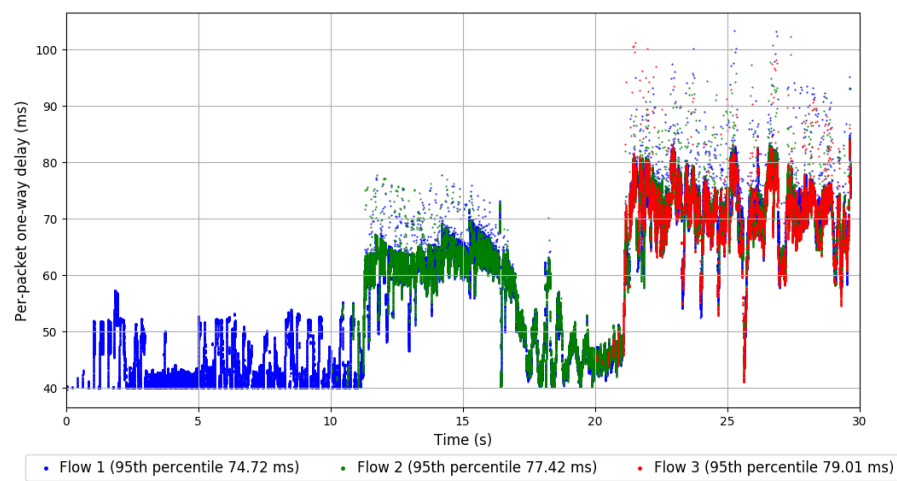
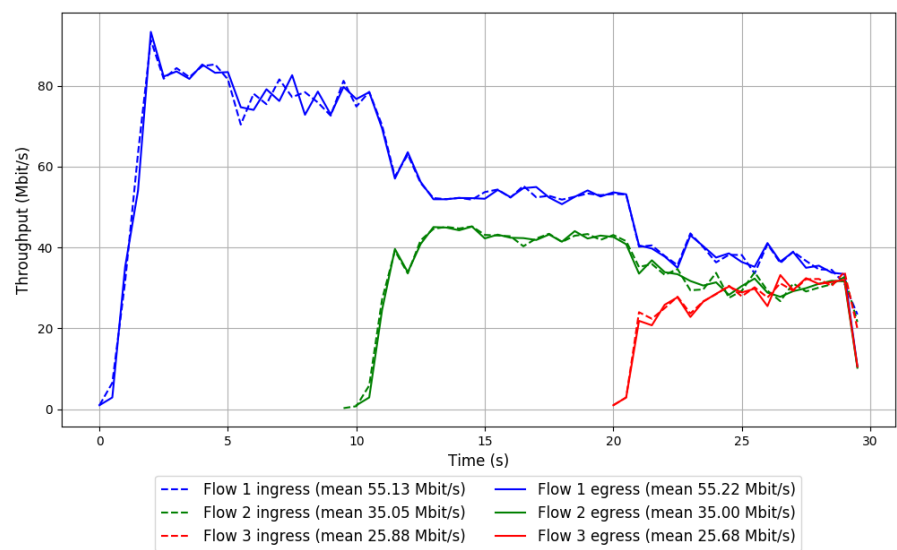


Run 6: Statistics of Indigo-1-32

Start at: 2018-04-10 20:24:55
End at: 2018-04-10 20:25:25
Local clock offset: 1.062 ms
Remote clock offset: 11.089 ms

Below is generated by plot.py at 2018-04-11 02:40:11
Datalink statistics
-- Total of 3 flows:
Average throughput: 86.71 Mbit/s
95th percentile per-packet one-way delay: 76.470 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 55.22 Mbit/s
95th percentile per-packet one-way delay: 74.722 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 35.00 Mbit/s
95th percentile per-packet one-way delay: 77.425 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 25.68 Mbit/s
95th percentile per-packet one-way delay: 79.007 ms
Loss rate: 2.91%

Run 6: Report of Indigo-1-32 — Data Link

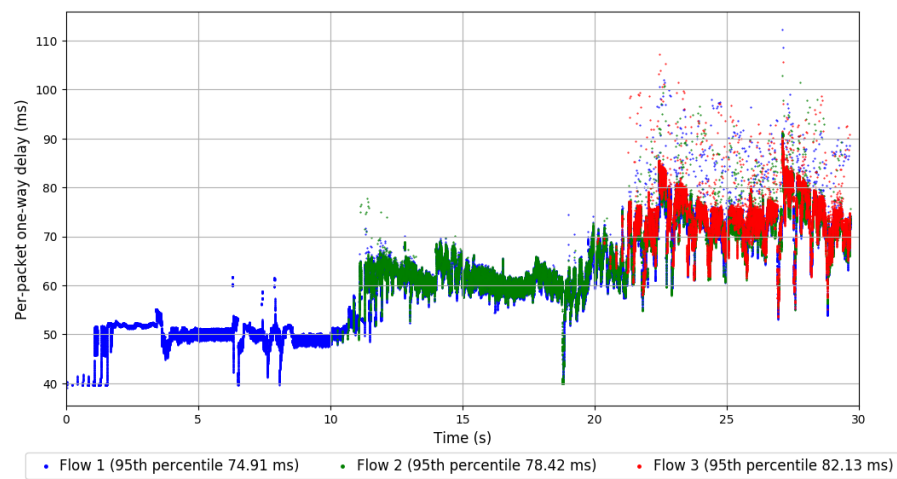
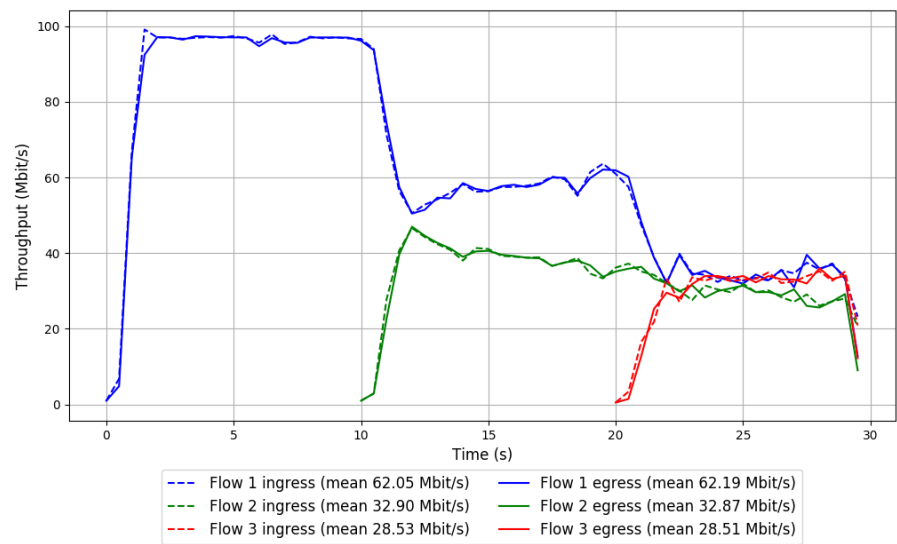


Run 7: Statistics of Indigo-1-32

Start at: 2018-04-10 20:49:47
End at: 2018-04-10 20:50:17
Local clock offset: 1.265 ms
Remote clock offset: 18.535 ms

Below is generated by plot.py at 2018-04-11 02:40:33
Datalink statistics
-- Total of 3 flows:
Average throughput: 93.14 Mbit/s
95th percentile per-packet one-way delay: 77.419 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 62.19 Mbit/s
95th percentile per-packet one-way delay: 74.908 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 32.87 Mbit/s
95th percentile per-packet one-way delay: 78.423 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 28.51 Mbit/s
95th percentile per-packet one-way delay: 82.130 ms
Loss rate: 2.59%

Run 7: Report of Indigo-1-32 — Data Link

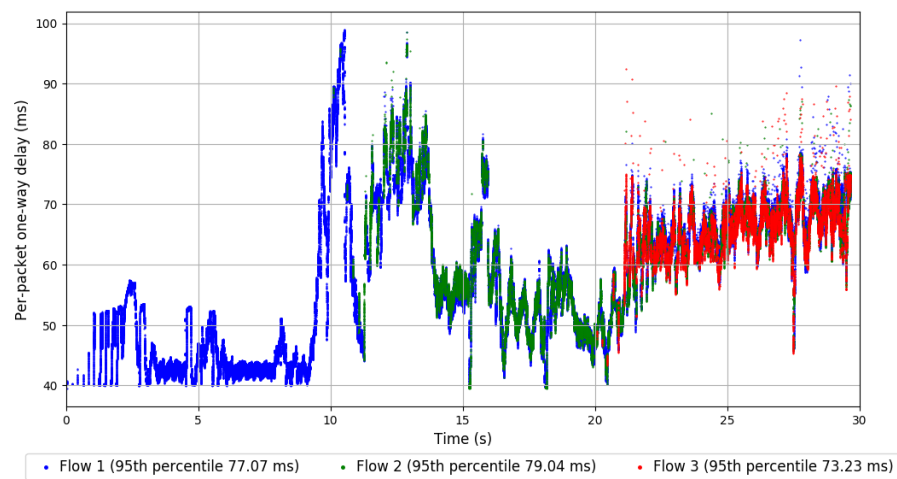
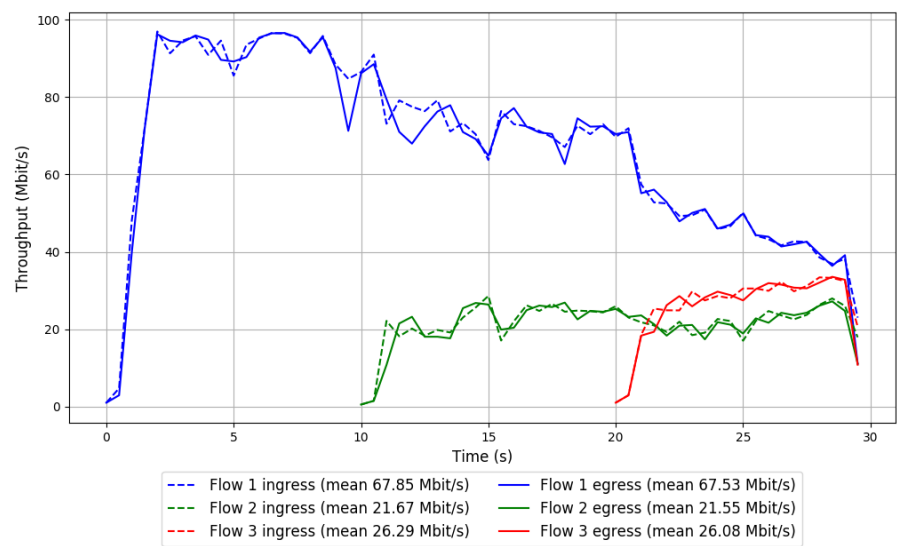


Run 8: Statistics of Indigo-1-32

Start at: 2018-04-10 21:14:17
End at: 2018-04-10 21:14:47
Local clock offset: 1.924 ms
Remote clock offset: -1.768 ms

Below is generated by plot.py at 2018-04-11 02:40:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 90.19 Mbit/s
95th percentile per-packet one-way delay: 76.711 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 67.53 Mbit/s
95th percentile per-packet one-way delay: 77.068 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 21.55 Mbit/s
95th percentile per-packet one-way delay: 79.044 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 26.08 Mbit/s
95th percentile per-packet one-way delay: 73.232 ms
Loss rate: 2.82%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-04-10 21:39:22

End at: 2018-04-10 21:39:52

Local clock offset: 2.169 ms

Remote clock offset: -7.14 ms

Below is generated by plot.py at 2018-04-11 02:40:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.97 Mbit/s

95th percentile per-packet one-way delay: 93.754 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 40.49 Mbit/s

95th percentile per-packet one-way delay: 93.343 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 53.14 Mbit/s

95th percentile per-packet one-way delay: 94.239 ms

Loss rate: 1.37%

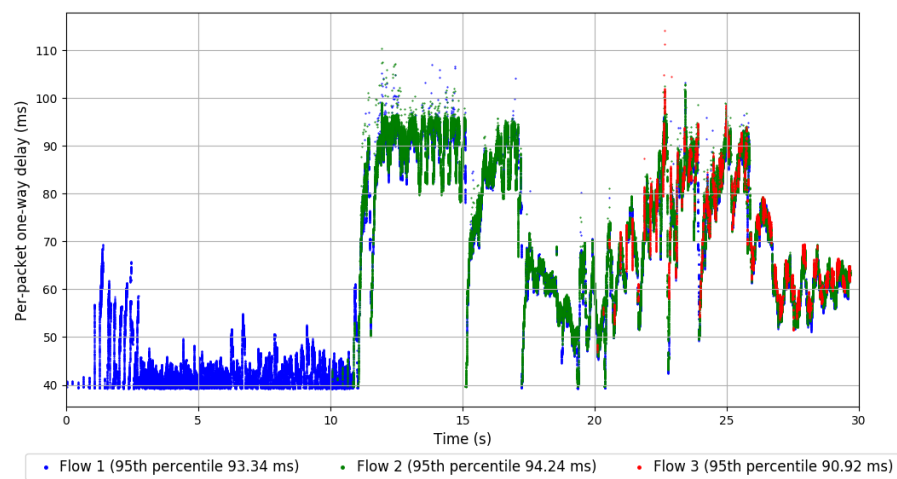
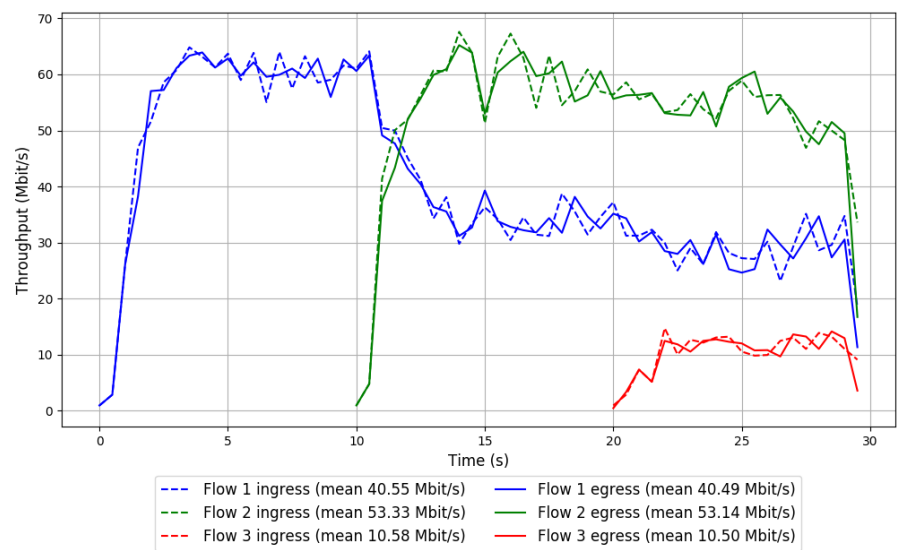
-- Flow 3:

Average throughput: 10.50 Mbit/s

95th percentile per-packet one-way delay: 90.916 ms

Loss rate: 2.79%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

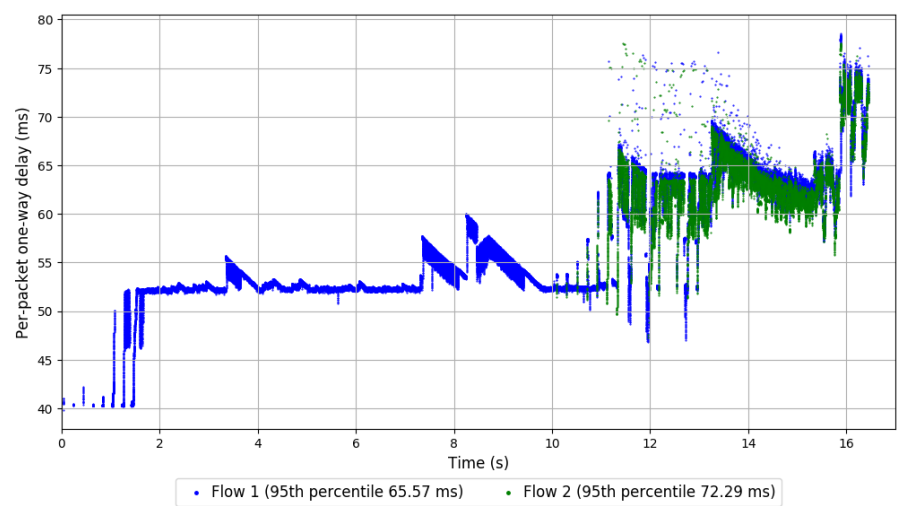
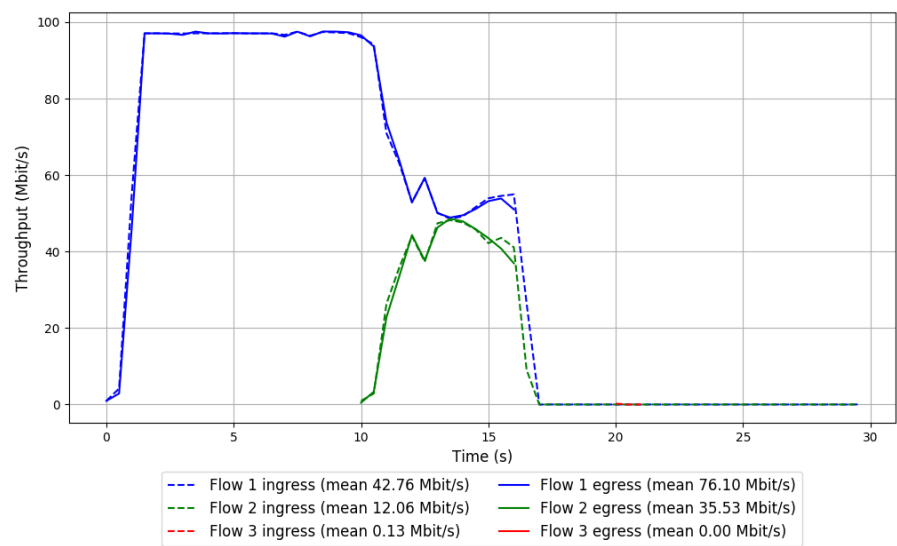
Start at: 2018-04-10 22:03:47

End at: 2018-04-10 22:04:17

Local clock offset: 1.944 ms

Remote clock offset: -10.195 ms

Run 10: Report of Indigo-1-32 — Data Link



Run 1: Statistics of Vivace-latency

Start at: 2018-04-10 18:15:37

End at: 2018-04-10 18:16:07

Local clock offset: 0.313 ms

Remote clock offset: 0.388 ms

Below is generated by plot.py at 2018-04-11 02:40:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.06 Mbit/s

95th percentile per-packet one-way delay: 50.956 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 65.59 Mbit/s

95th percentile per-packet one-way delay: 50.932 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 11.16 Mbit/s

95th percentile per-packet one-way delay: 50.403 ms

Loss rate: 1.49%

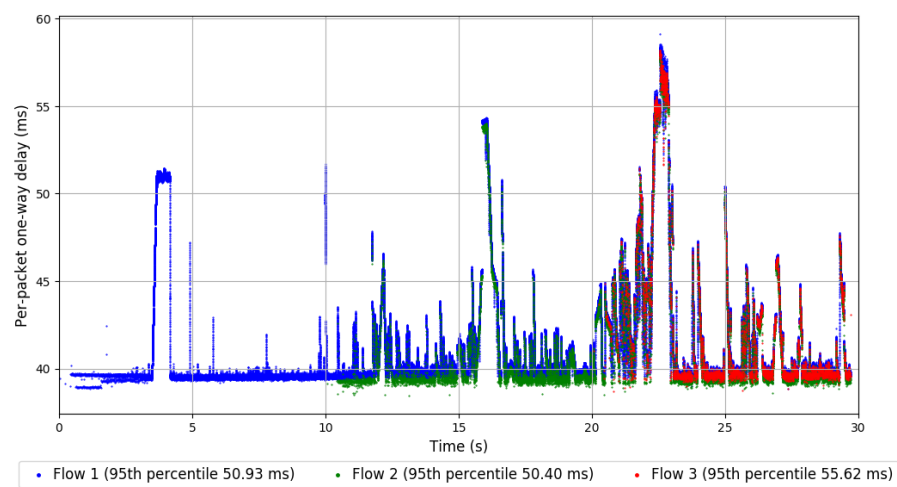
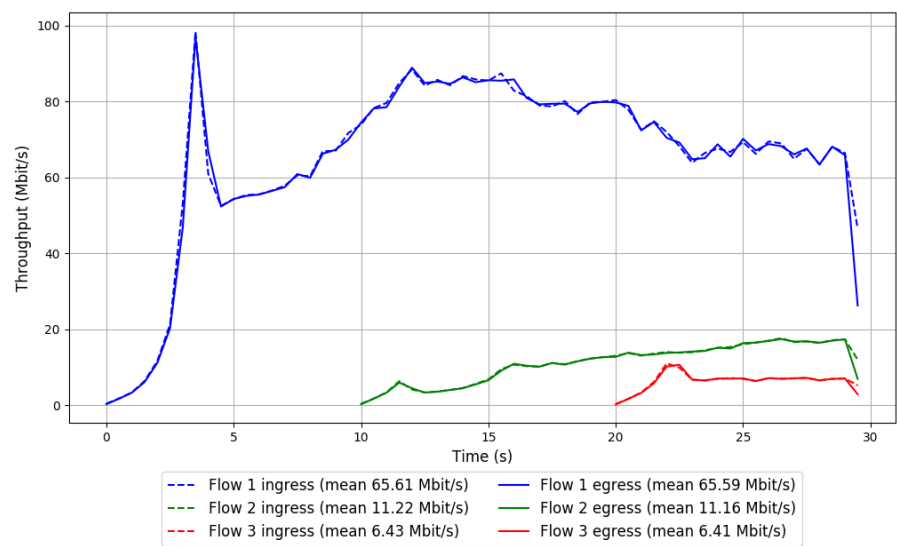
-- Flow 3:

Average throughput: 6.41 Mbit/s

95th percentile per-packet one-way delay: 55.624 ms

Loss rate: 2.32%

Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-04-10 18:40:03

End at: 2018-04-10 18:40:33

Local clock offset: 0.935 ms

Remote clock offset: 0.409 ms

Below is generated by plot.py at 2018-04-11 02:40:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.70 Mbit/s

95th percentile per-packet one-way delay: 54.753 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 58.51 Mbit/s

95th percentile per-packet one-way delay: 54.907 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 21.81 Mbit/s

95th percentile per-packet one-way delay: 54.364 ms

Loss rate: 1.28%

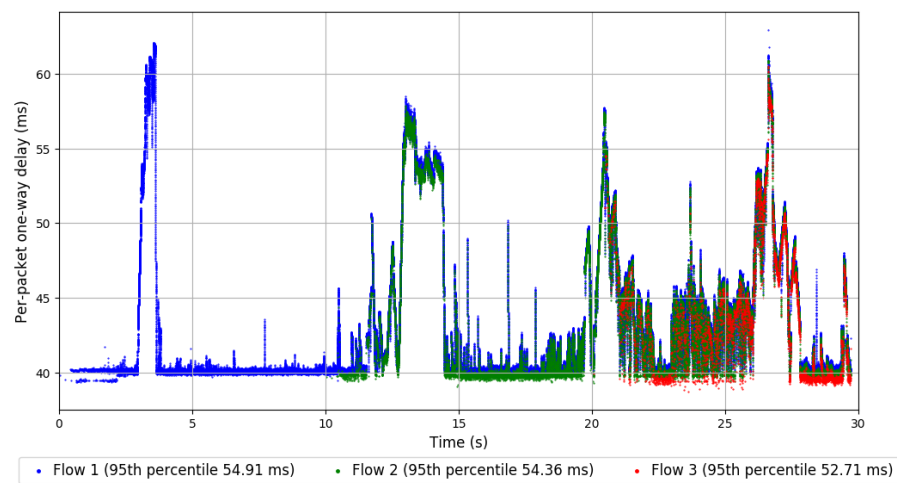
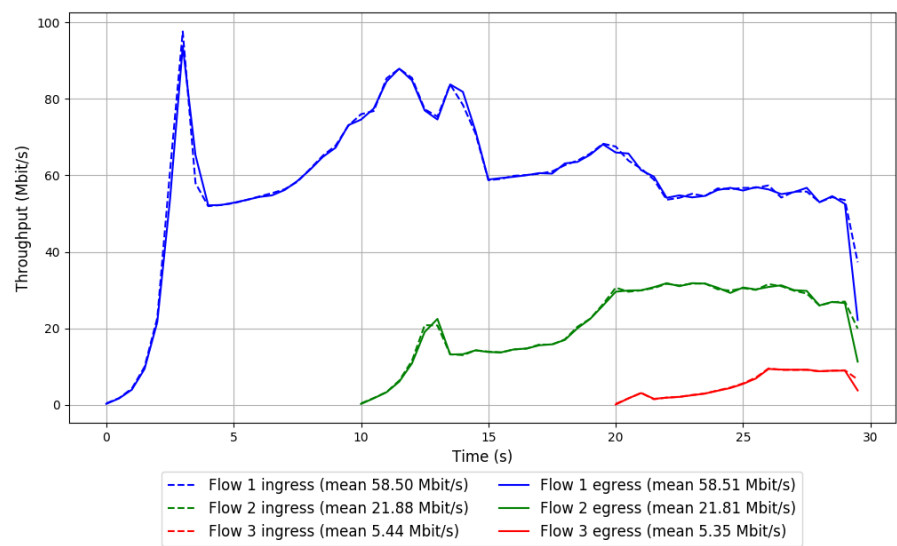
-- Flow 3:

Average throughput: 5.35 Mbit/s

95th percentile per-packet one-way delay: 52.711 ms

Loss rate: 3.43%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-04-10 19:04:24

End at: 2018-04-10 19:04:54

Local clock offset: 1.284 ms

Remote clock offset: 0.834 ms

Below is generated by plot.py at 2018-04-11 02:41:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.12 Mbit/s

95th percentile per-packet one-way delay: 72.158 ms

Loss rate: 5.26%

-- Flow 1:

Average throughput: 54.63 Mbit/s

95th percentile per-packet one-way delay: 70.589 ms

Loss rate: 3.42%

-- Flow 2:

Average throughput: 33.07 Mbit/s

95th percentile per-packet one-way delay: 72.736 ms

Loss rate: 9.13%

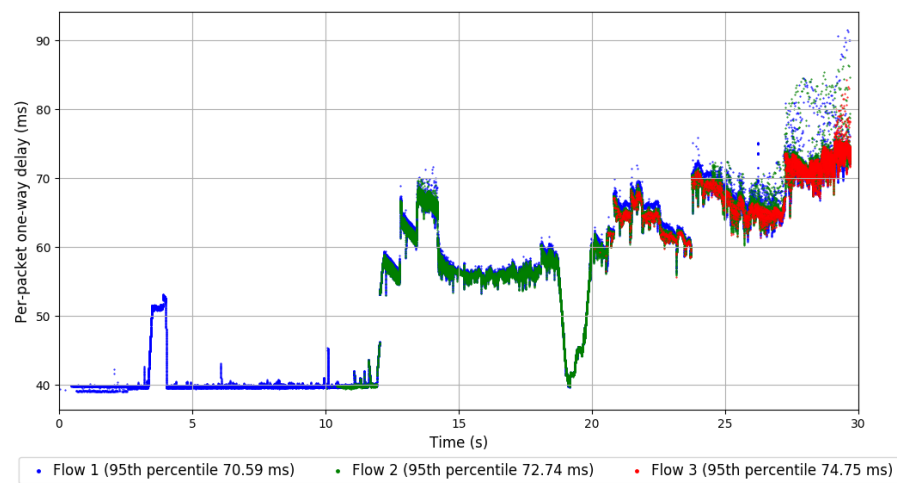
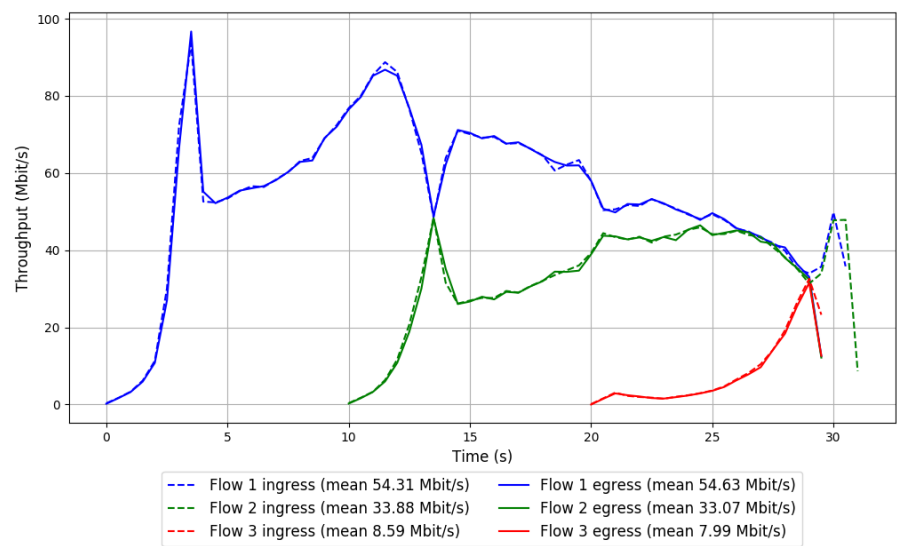
-- Flow 3:

Average throughput: 7.99 Mbit/s

95th percentile per-packet one-way delay: 74.746 ms

Loss rate: 9.21%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-04-10 19:28:52

End at: 2018-04-10 19:29:22

Local clock offset: 1.921 ms

Remote clock offset: 0.698 ms

Below is generated by plot.py at 2018-04-11 02:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.86 Mbit/s

95th percentile per-packet one-way delay: 48.150 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 59.44 Mbit/s

95th percentile per-packet one-way delay: 48.334 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 20.19 Mbit/s

95th percentile per-packet one-way delay: 47.798 ms

Loss rate: 1.48%

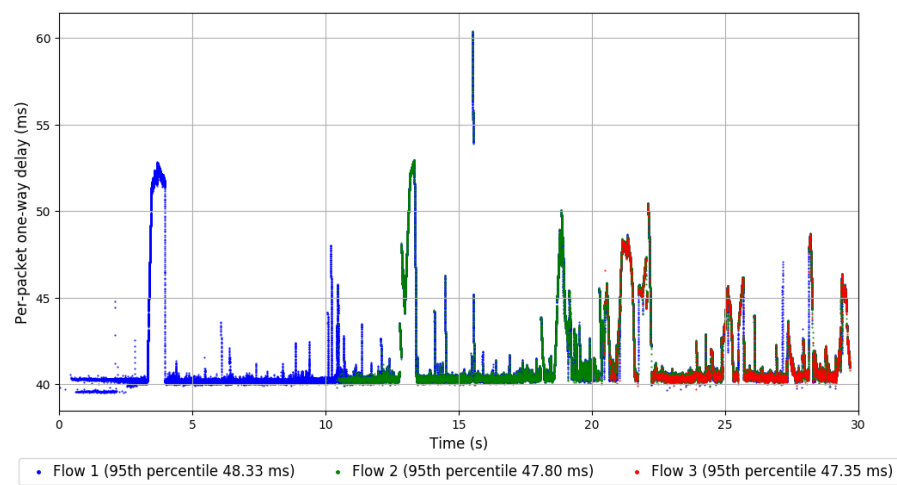
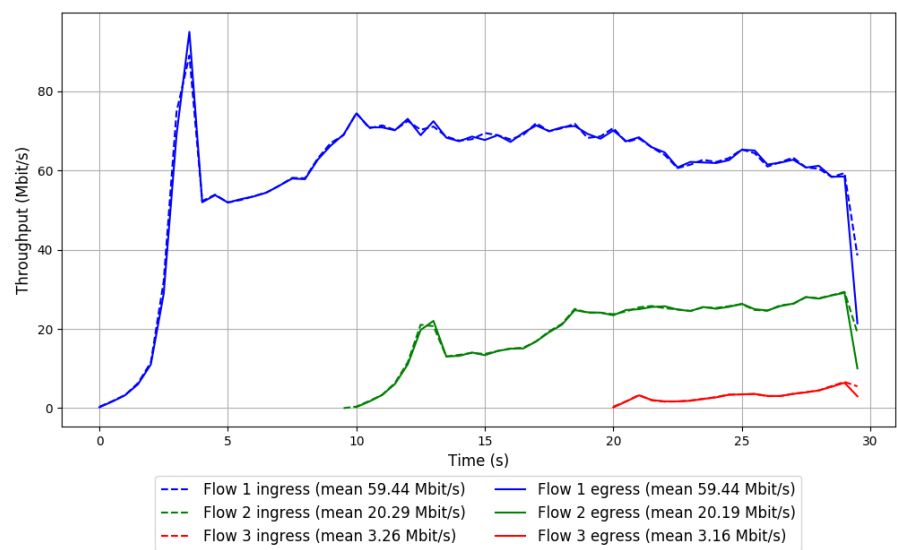
-- Flow 3:

Average throughput: 3.16 Mbit/s

95th percentile per-packet one-way delay: 47.354 ms

Loss rate: 5.07%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-04-10 19:53:45

End at: 2018-04-10 19:54:15

Local clock offset: 2.198 ms

Remote clock offset: 4.11 ms

Below is generated by plot.py at 2018-04-11 02:41:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.24 Mbit/s

95th percentile per-packet one-way delay: 61.549 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 67.01 Mbit/s

95th percentile per-packet one-way delay: 58.049 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 6.53 Mbit/s

95th percentile per-packet one-way delay: 62.334 ms

Loss rate: 1.90%

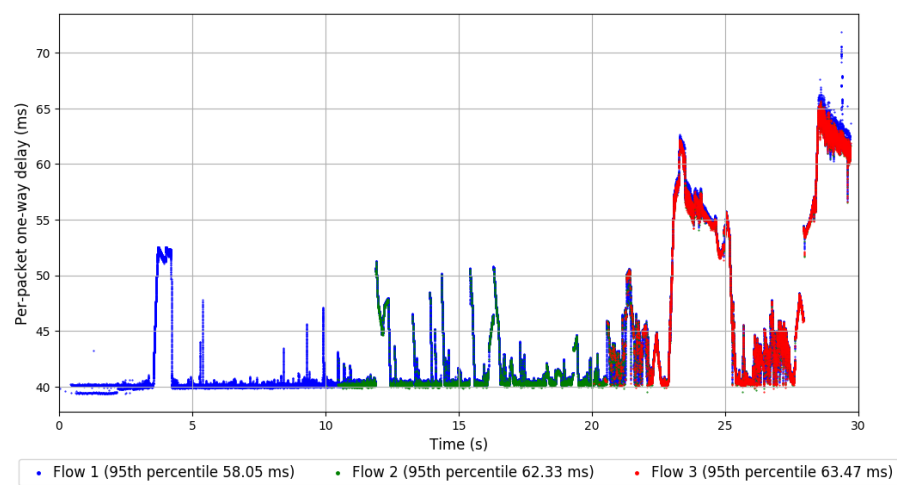
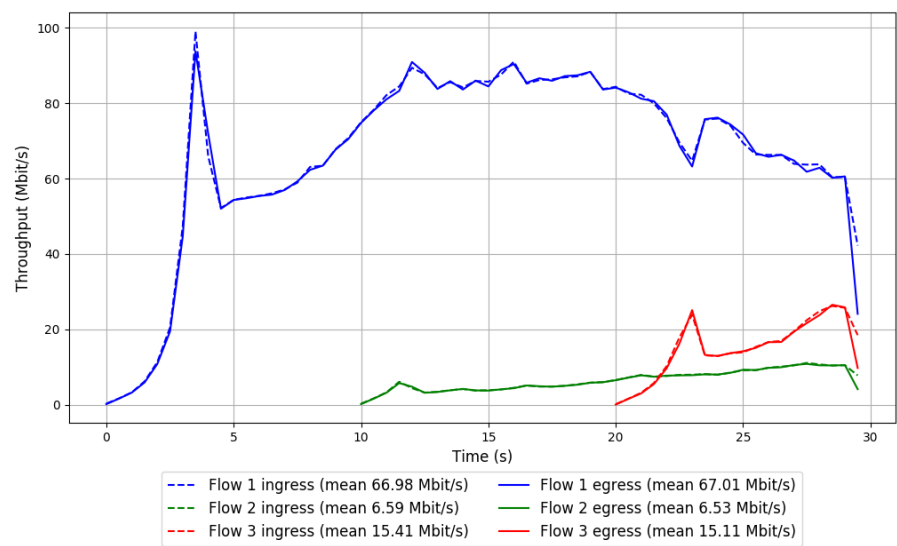
-- Flow 3:

Average throughput: 15.11 Mbit/s

95th percentile per-packet one-way delay: 63.468 ms

Loss rate: 3.91%

Run 5: Report of Vivace-latency — Data Link

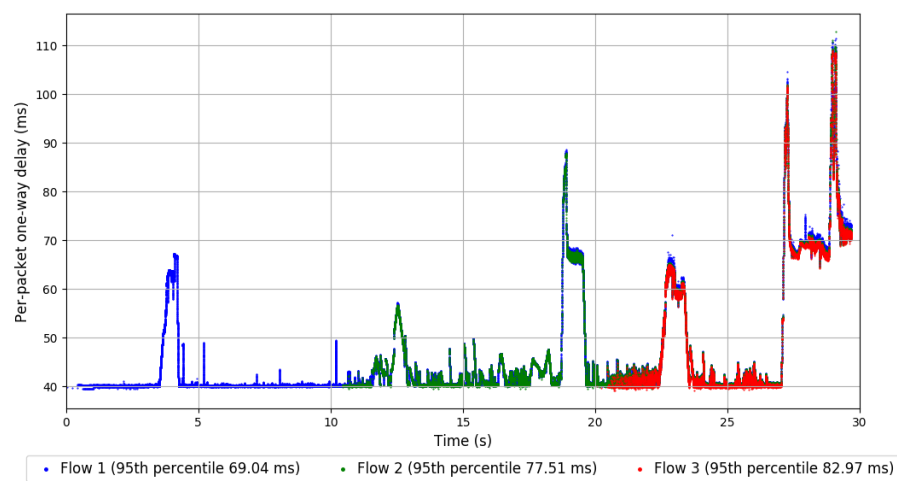
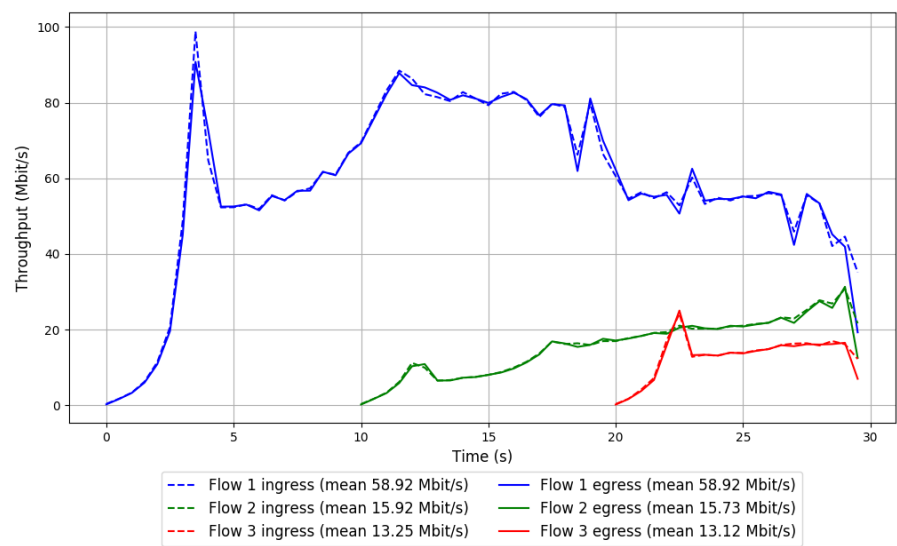


Run 6: Statistics of Vivace-latency

Start at: 2018-04-10 20:18:10
End at: 2018-04-10 20:18:40
Local clock offset: 1.253 ms
Remote clock offset: 8.505 ms

Below is generated by plot.py at 2018-04-11 02:41:48
Datalink statistics
-- Total of 3 flows:
Average throughput: 73.60 Mbit/s
95th percentile per-packet one-way delay: 70.010 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 58.92 Mbit/s
95th percentile per-packet one-way delay: 69.039 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 15.73 Mbit/s
95th percentile per-packet one-way delay: 77.509 ms
Loss rate: 2.15%
-- Flow 3:
Average throughput: 13.12 Mbit/s
95th percentile per-packet one-way delay: 82.967 ms
Loss rate: 2.97%

Run 6: Report of Vivace-latency — Data Link

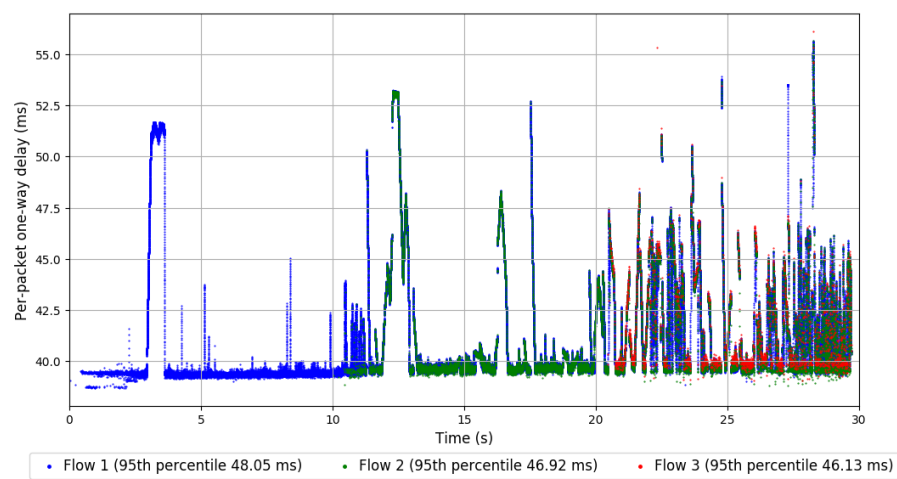
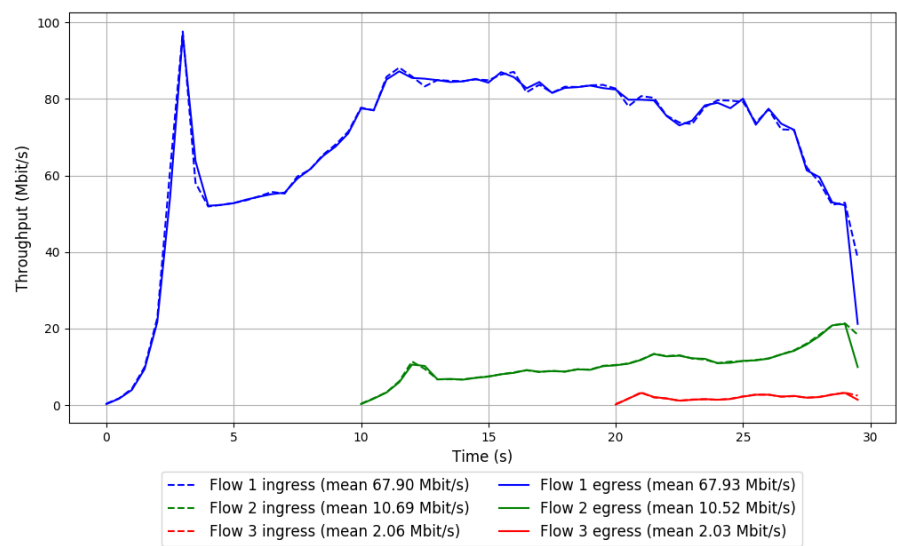


Run 7: Statistics of Vivace-latency

Start at: 2018-04-10 20:43:02
End at: 2018-04-10 20:43:32
Local clock offset: 1.163 ms
Remote clock offset: 17.129 ms

Below is generated by plot.py at 2018-04-11 02:42:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 75.57 Mbit/s
95th percentile per-packet one-way delay: 47.915 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 67.93 Mbit/s
95th percentile per-packet one-way delay: 48.052 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 10.52 Mbit/s
95th percentile per-packet one-way delay: 46.919 ms
Loss rate: 2.54%
-- Flow 3:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 46.128 ms
Loss rate: 3.62%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-04-10 21:07:31

End at: 2018-04-10 21:08:01

Local clock offset: 1.54 ms

Remote clock offset: 1.918 ms

Below is generated by plot.py at 2018-04-11 02:42:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.87 Mbit/s

95th percentile per-packet one-way delay: 50.903 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 70.36 Mbit/s

95th percentile per-packet one-way delay: 50.913 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 8.75 Mbit/s

95th percentile per-packet one-way delay: 50.297 ms

Loss rate: 1.87%

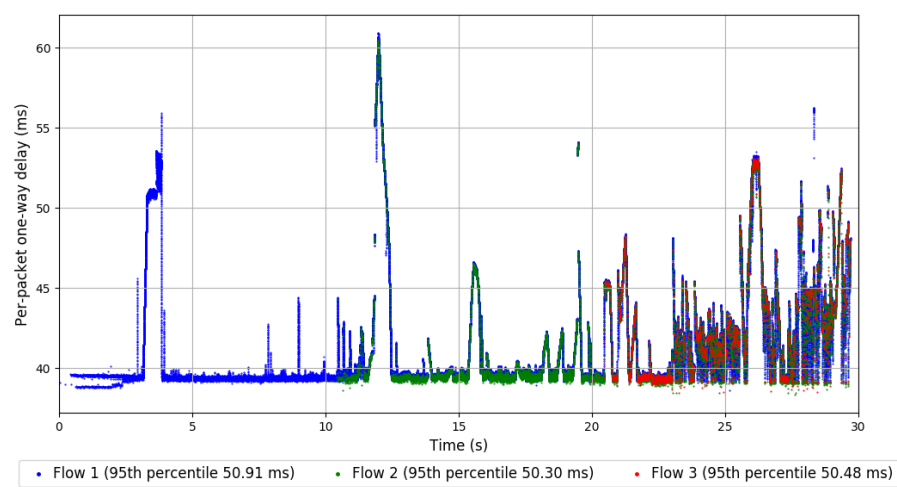
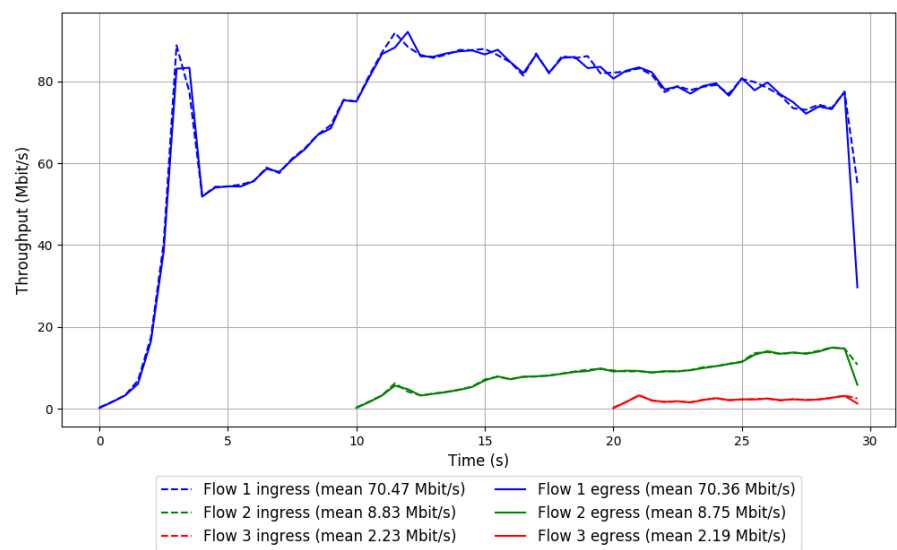
-- Flow 3:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 50.485 ms

Loss rate: 3.55%

Run 8: Report of Vivace-latency — Data Link

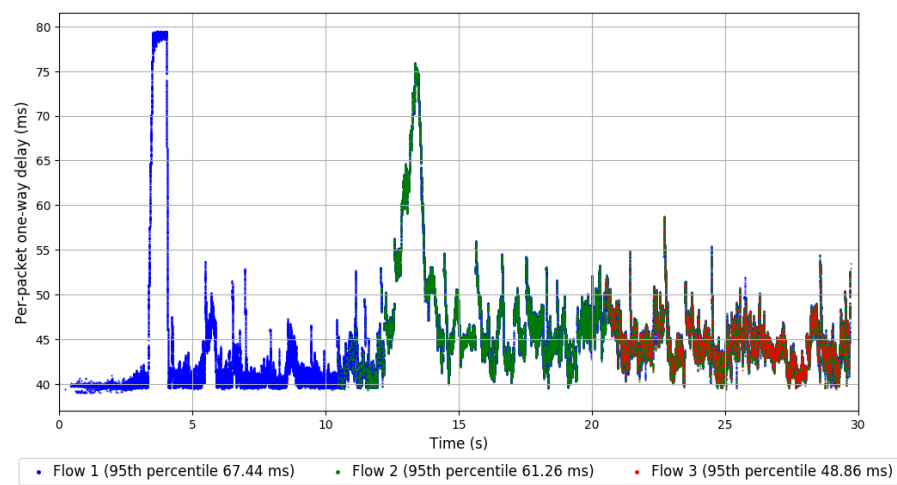
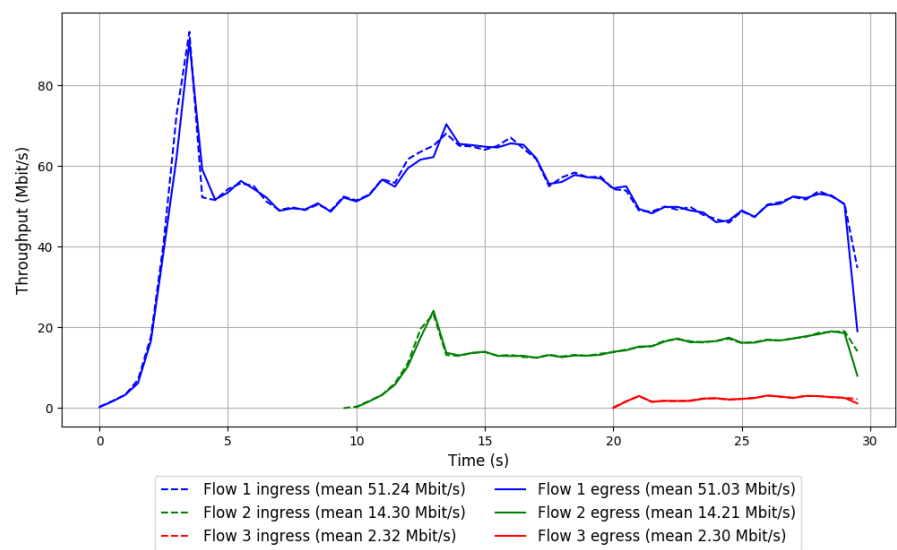


Run 9: Statistics of Vivace-latency

Start at: 2018-04-10 21:32:38
End at: 2018-04-10 21:33:08
Local clock offset: 2.248 ms
Remote clock offset: -6.191 ms

Below is generated by plot.py at 2018-04-11 02:42:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 61.20 Mbit/s
95th percentile per-packet one-way delay: 64.623 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 51.03 Mbit/s
95th percentile per-packet one-way delay: 67.440 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 14.21 Mbit/s
95th percentile per-packet one-way delay: 61.255 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 48.864 ms
Loss rate: 2.90%

Run 9: Report of Vivace-latency — Data Link

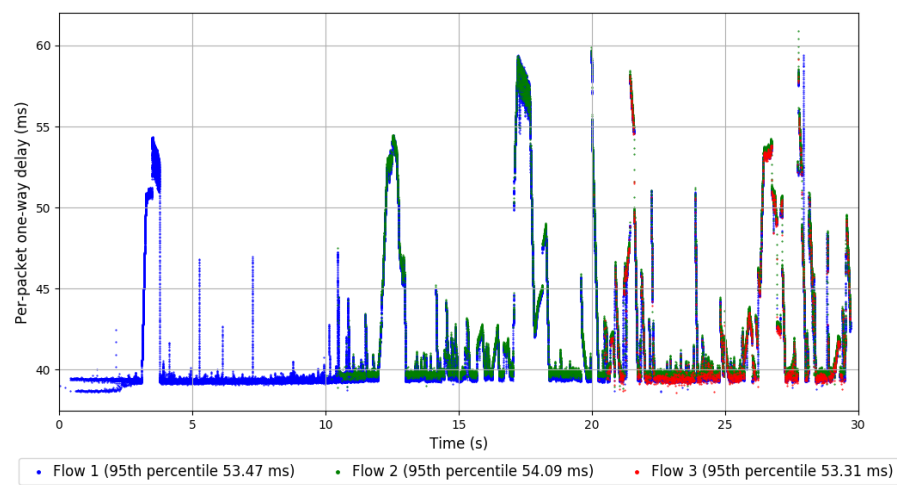
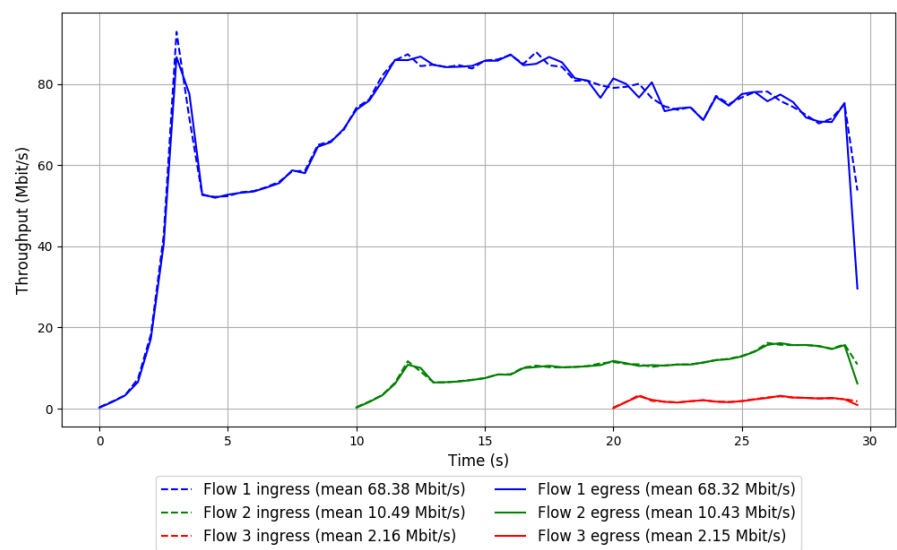


Run 10: Statistics of Vivace-latency

Start at: 2018-04-10 21:57:00
End at: 2018-04-10 21:57:30
Local clock offset: 1.983 ms
Remote clock offset: -9.741 ms

Below is generated by plot.py at 2018-04-11 02:42:11
Datalink statistics
-- Total of 3 flows:
Average throughput: 75.93 Mbit/s
95th percentile per-packet one-way delay: 53.529 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 68.32 Mbit/s
95th percentile per-packet one-way delay: 53.471 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 10.43 Mbit/s
95th percentile per-packet one-way delay: 54.088 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 53.314 ms
Loss rate: 2.63%

Run 10: Report of Vivace-latency — Data Link



Run 1: Statistics of Vivace-loss

Start at: 2018-04-10 18:29:14

End at: 2018-04-10 18:29:44

Local clock offset: 1.114 ms

Remote clock offset: 0.413 ms

Below is generated by plot.py at 2018-04-11 02:42:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.45 Mbit/s

95th percentile per-packet one-way delay: 76.240 ms

Loss rate: 3.75%

-- Flow 1:

Average throughput: 51.04 Mbit/s

95th percentile per-packet one-way delay: 74.902 ms

Loss rate: 2.41%

-- Flow 2:

Average throughput: 29.71 Mbit/s

95th percentile per-packet one-way delay: 76.697 ms

Loss rate: 7.17%

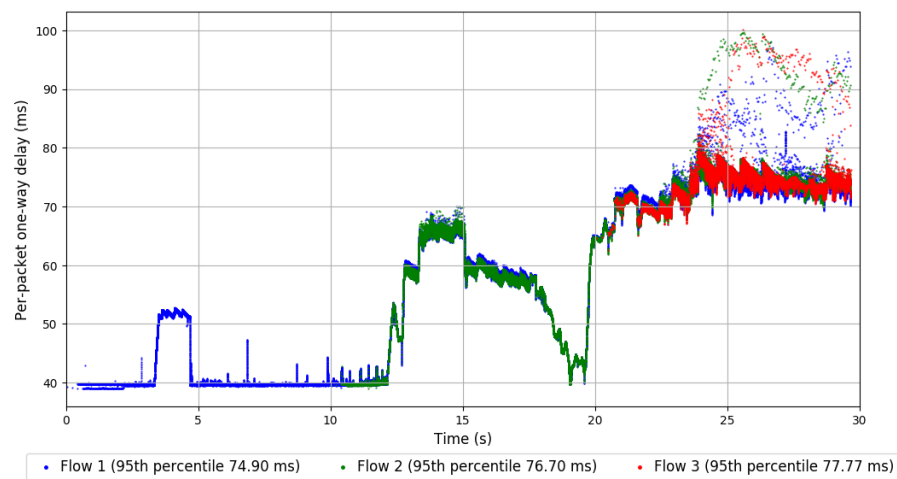
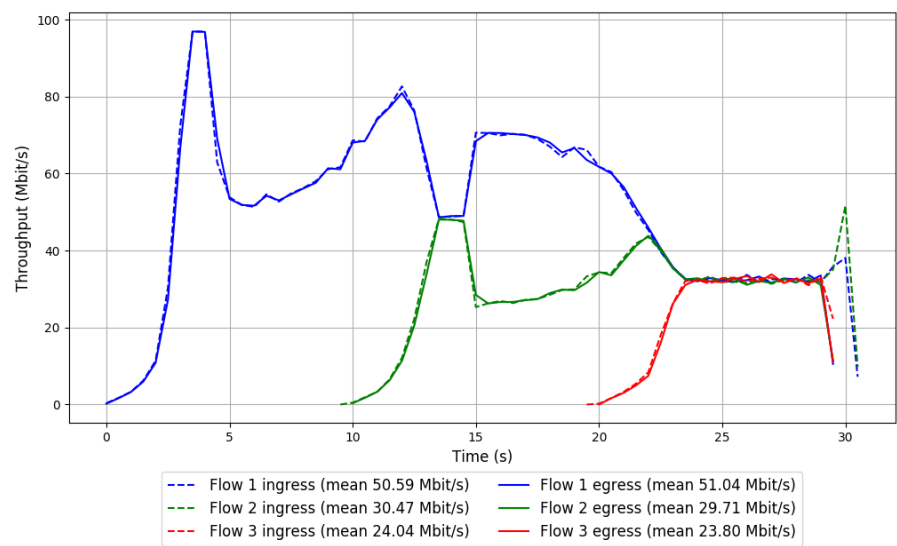
-- Flow 3:

Average throughput: 23.80 Mbit/s

95th percentile per-packet one-way delay: 77.772 ms

Loss rate: 3.37%

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-04-10 18:53:35

End at: 2018-04-10 18:54:05

Local clock offset: 1.302 ms

Remote clock offset: 0.734 ms

Below is generated by plot.py at 2018-04-11 02:42:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.00 Mbit/s

95th percentile per-packet one-way delay: 78.002 ms

Loss rate: 5.35%

-- Flow 1:

Average throughput: 50.77 Mbit/s

95th percentile per-packet one-way delay: 76.701 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 29.51 Mbit/s

95th percentile per-packet one-way delay: 78.507 ms

Loss rate: 10.27%

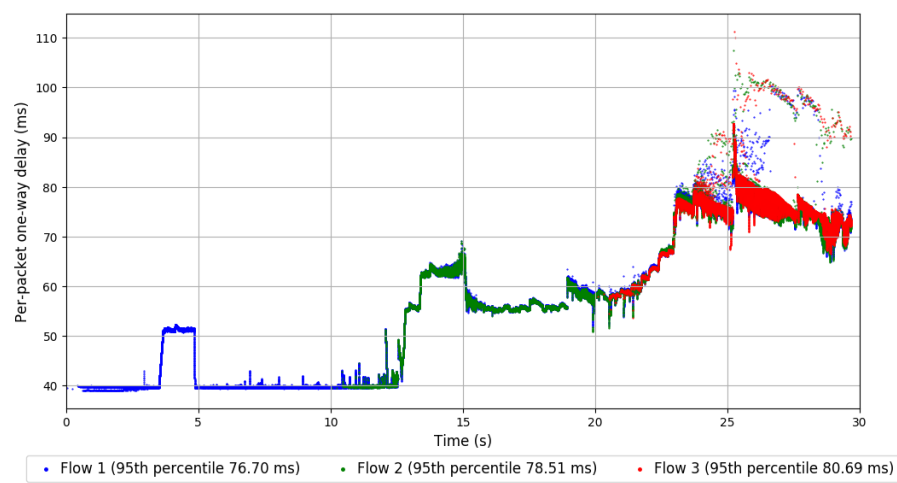
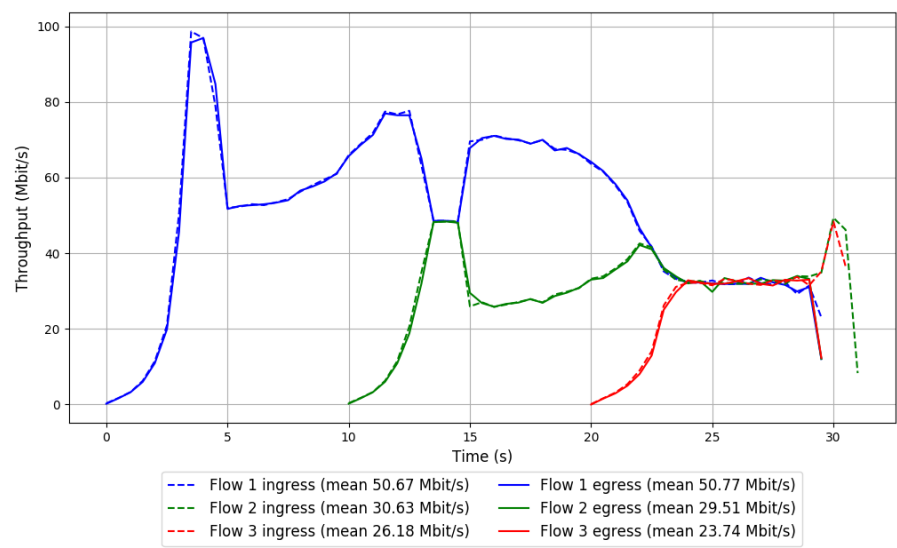
-- Flow 3:

Average throughput: 23.74 Mbit/s

95th percentile per-packet one-way delay: 80.685 ms

Loss rate: 19.76%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-04-10 19:18:04

End at: 2018-04-10 19:18:34

Local clock offset: 1.174 ms

Remote clock offset: 0.851 ms

Below is generated by plot.py at 2018-04-11 02:42:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.11 Mbit/s

95th percentile per-packet one-way delay: 73.875 ms

Loss rate: 3.41%

-- Flow 1:

Average throughput: 50.81 Mbit/s

95th percentile per-packet one-way delay: 73.226 ms

Loss rate: 2.08%

-- Flow 2:

Average throughput: 29.44 Mbit/s

95th percentile per-packet one-way delay: 74.077 ms

Loss rate: 6.67%

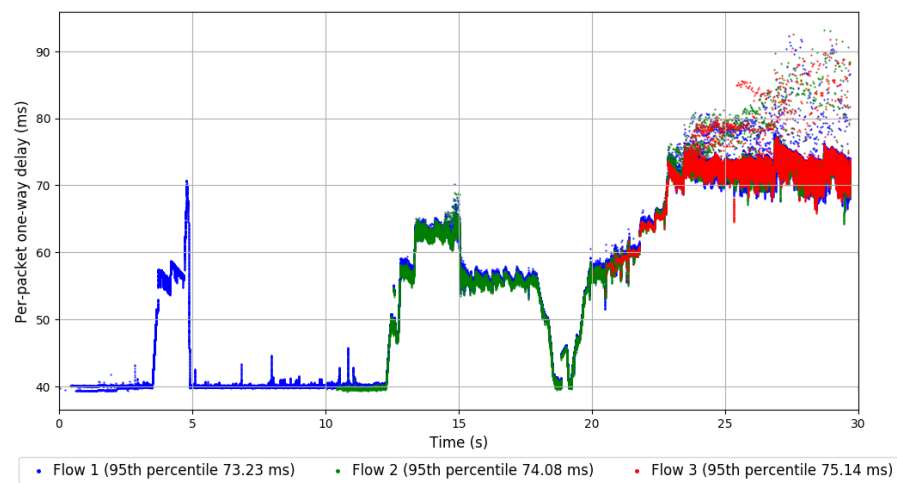
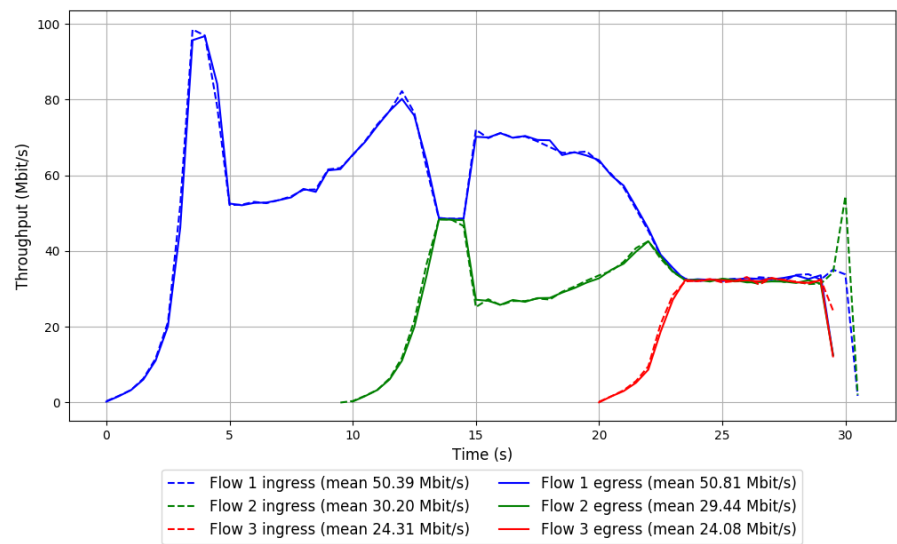
-- Flow 3:

Average throughput: 24.08 Mbit/s

95th percentile per-packet one-way delay: 75.136 ms

Loss rate: 3.47%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-04-10 19:42:55

End at: 2018-04-10 19:43:25

Local clock offset: 2.072 ms

Remote clock offset: 0.62 ms

Below is generated by plot.py at 2018-04-11 02:43:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.50 Mbit/s

95th percentile per-packet one-way delay: 78.778 ms

Loss rate: 5.64%

-- Flow 1:

Average throughput: 51.11 Mbit/s

95th percentile per-packet one-way delay: 76.874 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 29.40 Mbit/s

95th percentile per-packet one-way delay: 79.896 ms

Loss rate: 10.95%

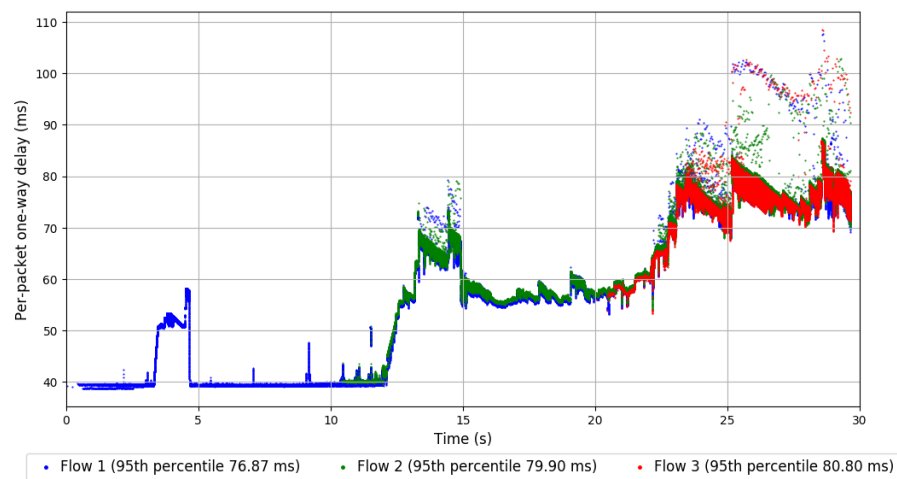
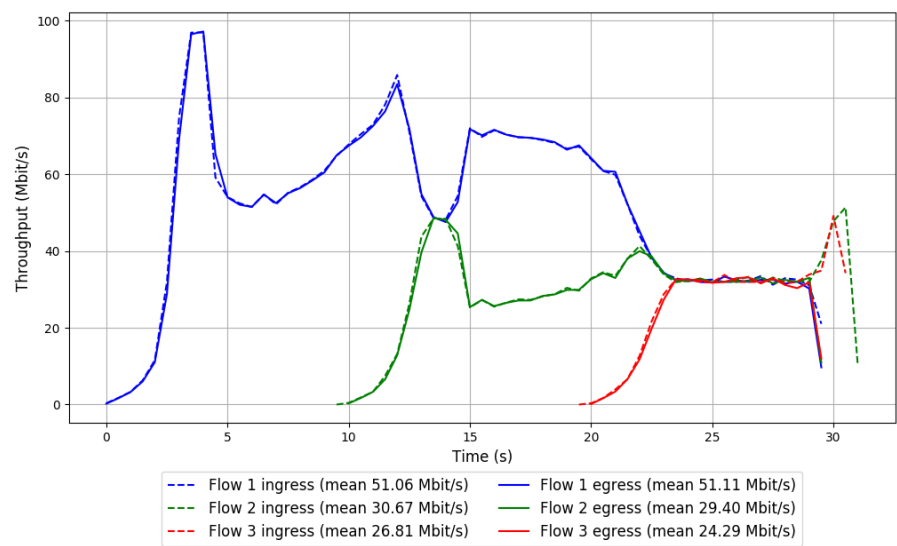
-- Flow 3:

Average throughput: 24.29 Mbit/s

95th percentile per-packet one-way delay: 80.800 ms

Loss rate: 19.71%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-04-10 20:07:22

End at: 2018-04-10 20:07:52

Local clock offset: 1.547 ms

Remote clock offset: 7.332 ms

Below is generated by plot.py at 2018-04-11 02:43:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.15 Mbit/s

95th percentile per-packet one-way delay: 73.344 ms

Loss rate: 5.84%

-- Flow 1:

Average throughput: 50.94 Mbit/s

95th percentile per-packet one-way delay: 72.771 ms

Loss rate: 3.64%

-- Flow 2:

Average throughput: 29.56 Mbit/s

95th percentile per-packet one-way delay: 73.655 ms

Loss rate: 11.91%

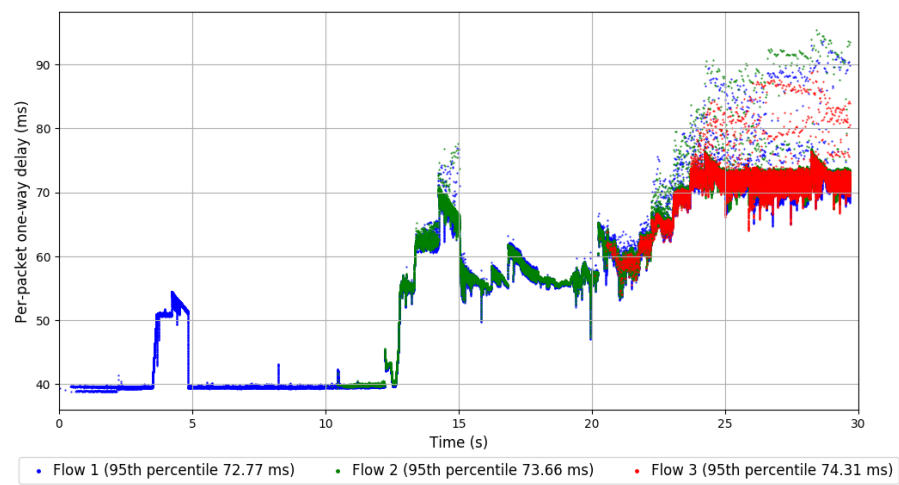
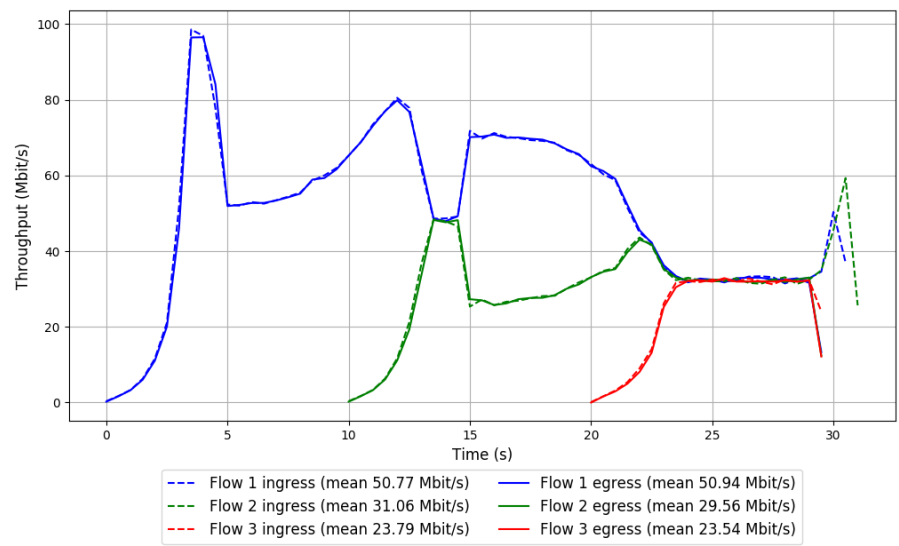
-- Flow 3:

Average throughput: 23.54 Mbit/s

95th percentile per-packet one-way delay: 74.312 ms

Loss rate: 3.51%

Run 5: Report of Vivace-loss — Data Link

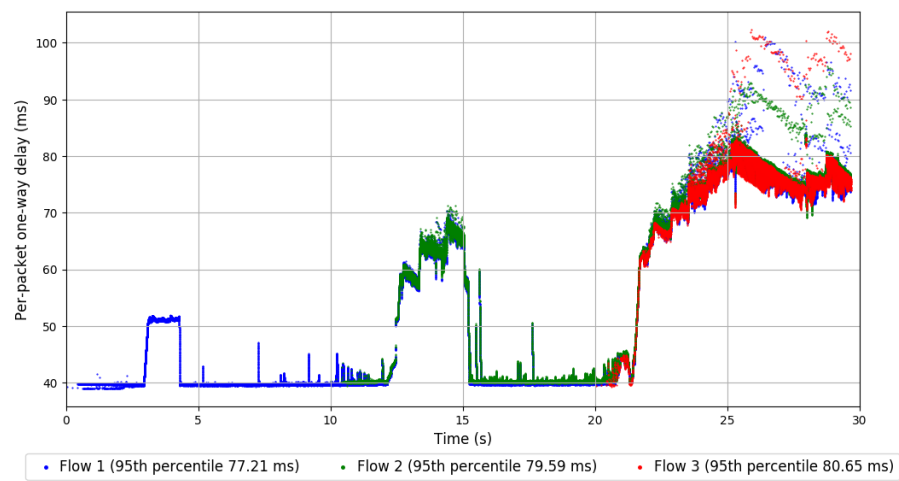
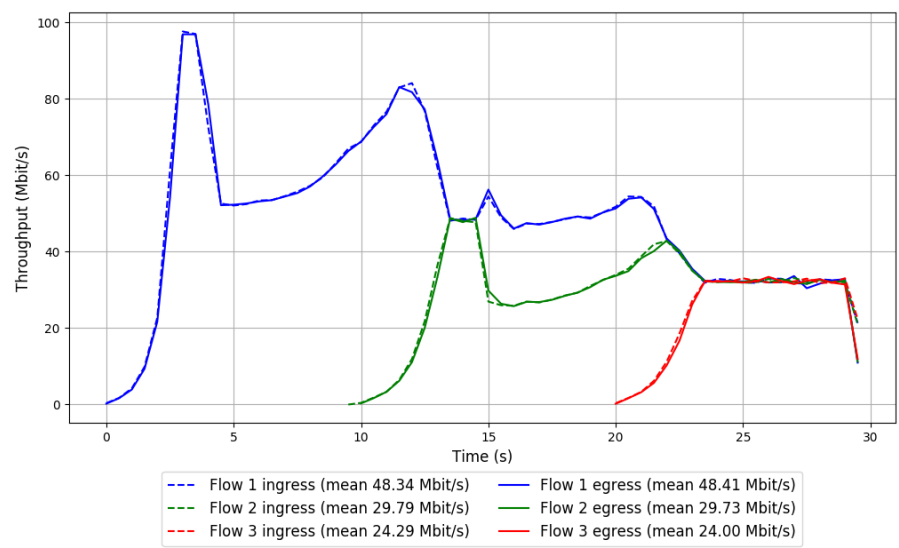


Run 6: Statistics of Vivace-loss

Start at: 2018-04-10 20:31:45
End at: 2018-04-10 20:32:15
Local clock offset: 1.028 ms
Remote clock offset: 14.108 ms

Below is generated by plot.py at 2018-04-11 02:43:19
Datalink statistics
-- Total of 3 flows:
Average throughput: 75.91 Mbit/s
95th percentile per-packet one-way delay: 78.740 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 48.41 Mbit/s
95th percentile per-packet one-way delay: 77.210 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 29.73 Mbit/s
95th percentile per-packet one-way delay: 79.586 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 24.00 Mbit/s
95th percentile per-packet one-way delay: 80.647 ms
Loss rate: 3.47%

Run 6: Report of Vivace-loss — Data Link

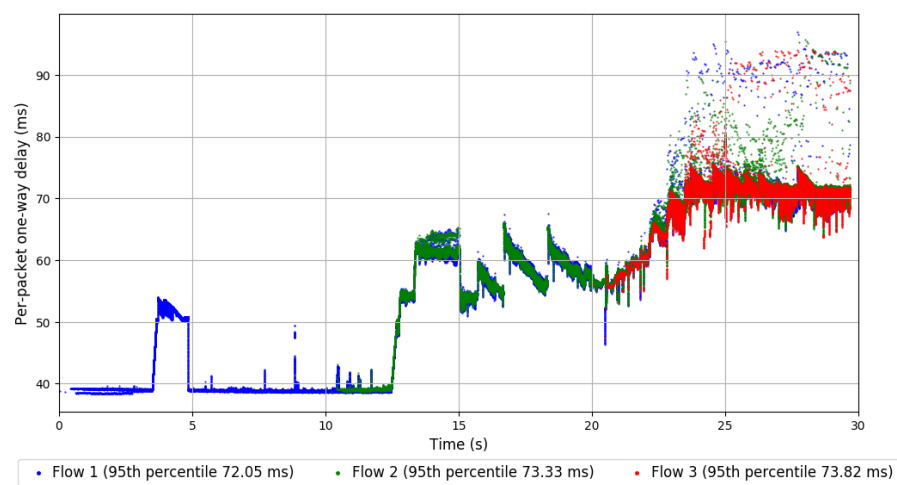
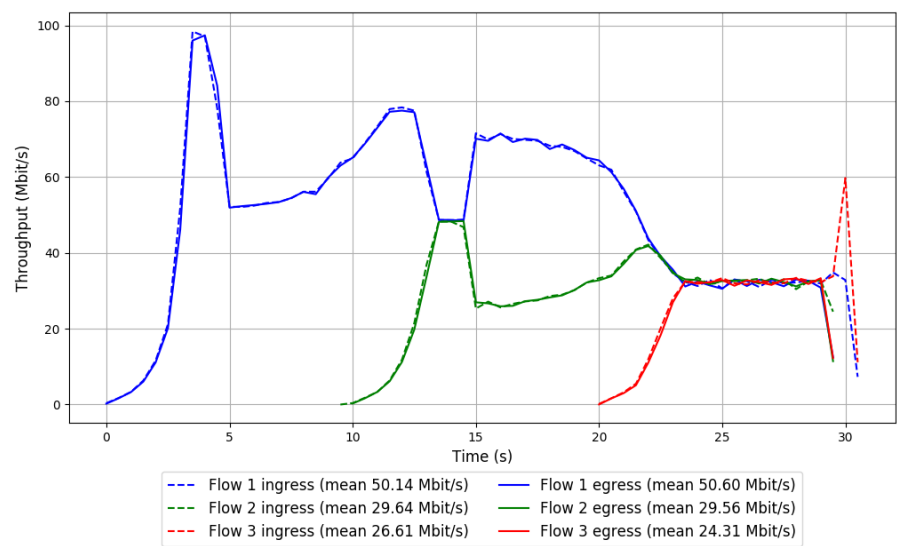


Run 7: Statistics of Vivace-loss

Start at: 2018-04-10 20:56:39
End at: 2018-04-10 20:57:09
Local clock offset: 1.091 ms
Remote clock offset: 16.455 ms

Below is generated by plot.py at 2018-04-11 02:43:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 78.07 Mbit/s
95th percentile per-packet one-way delay: 72.861 ms
Loss rate: 3.84%
-- Flow 1:
Average throughput: 50.60 Mbit/s
95th percentile per-packet one-way delay: 72.048 ms
Loss rate: 2.27%
-- Flow 2:
Average throughput: 29.56 Mbit/s
95th percentile per-packet one-way delay: 73.327 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 24.31 Mbit/s
95th percentile per-packet one-way delay: 73.823 ms
Loss rate: 17.23%

Run 7: Report of Vivace-loss — Data Link

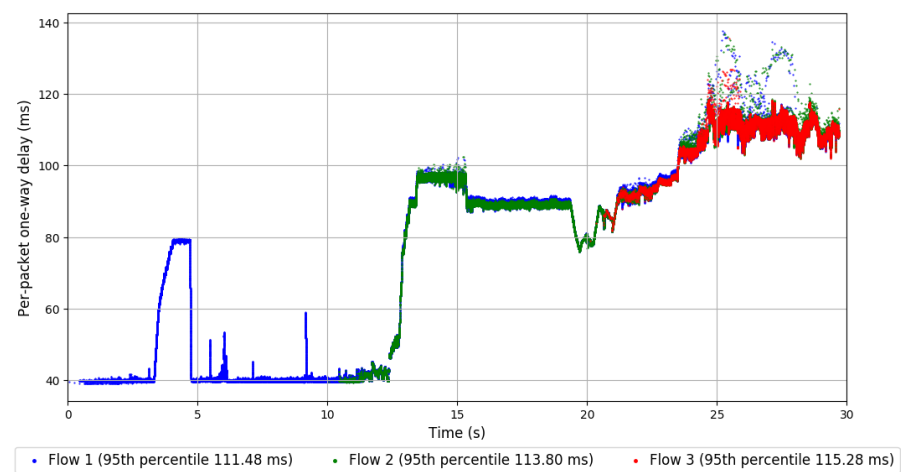
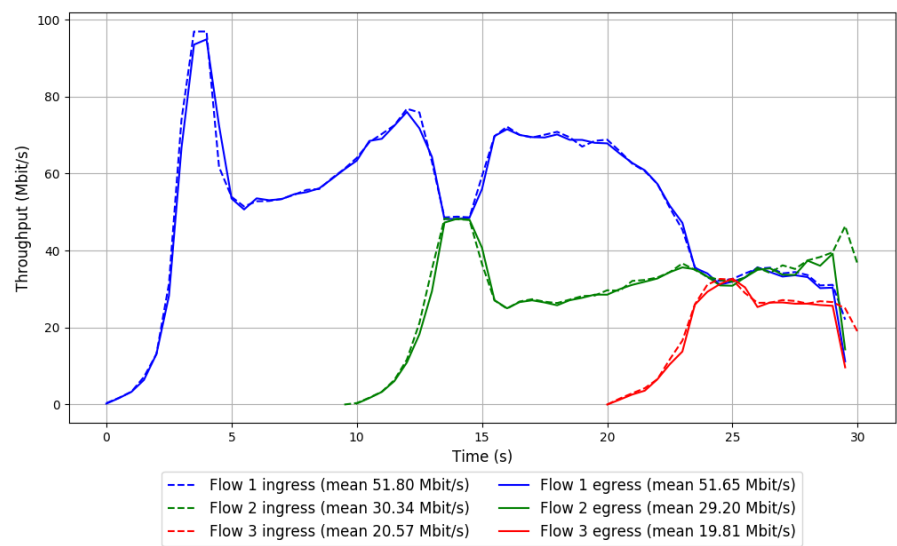


Run 8: Statistics of Vivace-loss

Start at: 2018-04-10 21:21:07
End at: 2018-04-10 21:21:37
Local clock offset: 2.24 ms
Remote clock offset: -3.911 ms

Below is generated by plot.py at 2018-04-11 02:43:30
Datalink statistics
-- Total of 3 flows:
Average throughput: 77.40 Mbit/s
95th percentile per-packet one-way delay: 113.211 ms
Loss rate: 3.53%
-- Flow 1:
Average throughput: 51.65 Mbit/s
95th percentile per-packet one-way delay: 111.480 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 29.20 Mbit/s
95th percentile per-packet one-way delay: 113.799 ms
Loss rate: 7.14%
-- Flow 3:
Average throughput: 19.81 Mbit/s
95th percentile per-packet one-way delay: 115.282 ms
Loss rate: 10.68%

Run 8: Report of Vivace-loss — Data Link

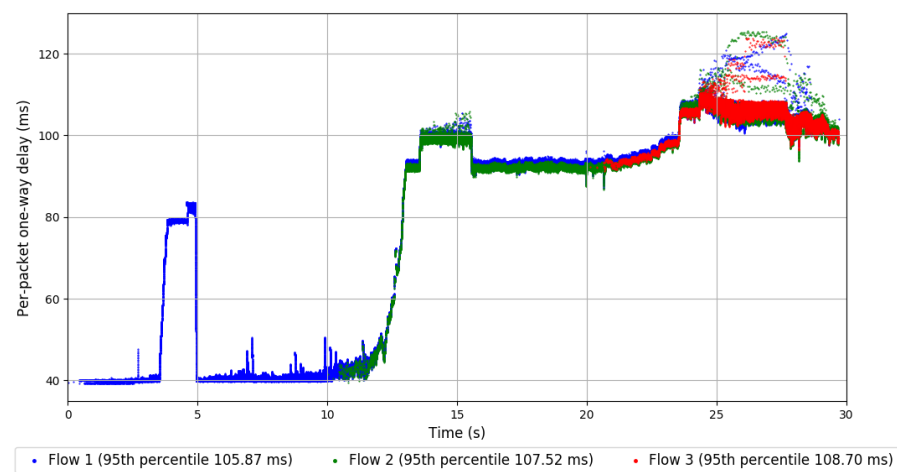
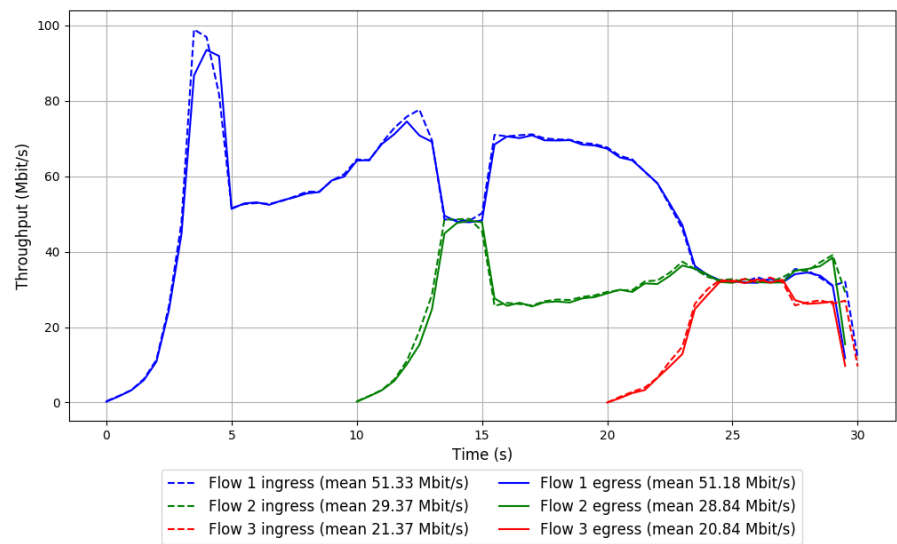


Run 9: Statistics of Vivace-loss

Start at: 2018-04-10 21:46:10
End at: 2018-04-10 21:46:40
Local clock offset: 1.967 ms
Remote clock offset: -8.178 ms

Below is generated by plot.py at 2018-04-11 02:43:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 77.01 Mbit/s
95th percentile per-packet one-way delay: 107.322 ms
Loss rate: 2.78%
-- Flow 1:
Average throughput: 51.18 Mbit/s
95th percentile per-packet one-way delay: 105.870 ms
Loss rate: 2.01%
-- Flow 2:
Average throughput: 28.84 Mbit/s
95th percentile per-packet one-way delay: 107.519 ms
Loss rate: 2.87%
-- Flow 3:
Average throughput: 20.84 Mbit/s
95th percentile per-packet one-way delay: 108.702 ms
Loss rate: 8.05%

Run 9: Report of Vivace-loss — Data Link

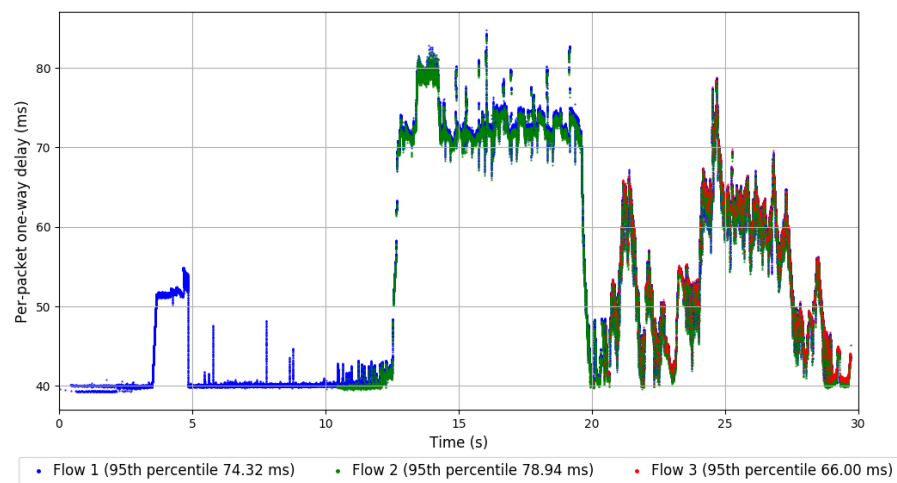
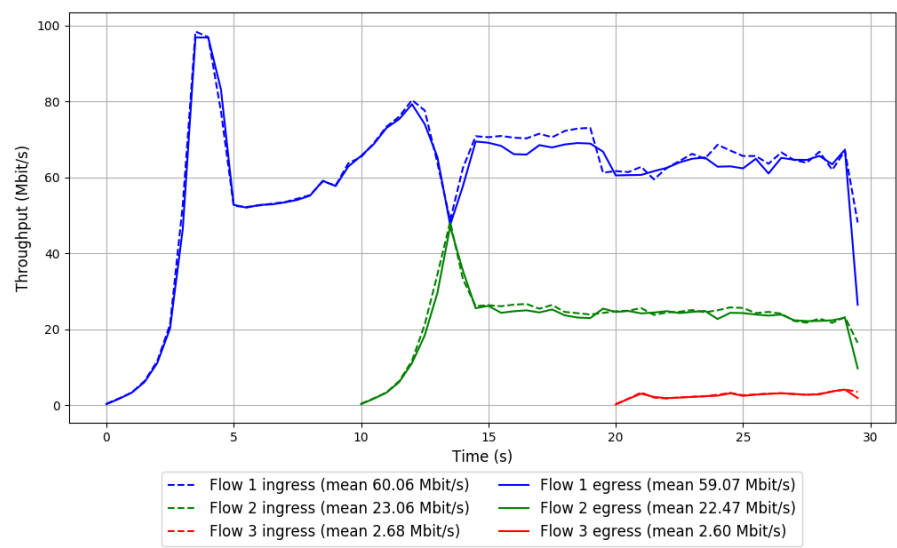


Run 10: Statistics of Vivace-loss

Start at: 2018-04-10 22:11:14
End at: 2018-04-10 22:11:44
Local clock offset: 1.994 ms
Remote clock offset: -2.929 ms

Below is generated by plot.py at 2018-04-11 02:44:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 74.81 Mbit/s
95th percentile per-packet one-way delay: 74.736 ms
Loss rate: 2.57%
-- Flow 1:
Average throughput: 59.07 Mbit/s
95th percentile per-packet one-way delay: 74.322 ms
Loss rate: 2.31%
-- Flow 2:
Average throughput: 22.47 Mbit/s
95th percentile per-packet one-way delay: 78.945 ms
Loss rate: 3.48%
-- Flow 3:
Average throughput: 2.60 Mbit/s
95th percentile per-packet one-way delay: 66.001 ms
Loss rate: 4.96%

Run 10: Report of Vivace-loss — Data Link



Run 1: Statistics of Vivace-LTE

Start at: 2018-04-10 18:23:46

End at: 2018-04-10 18:24:16

Local clock offset: 0.8 ms

Remote clock offset: 0.437 ms

Below is generated by plot.py at 2018-04-11 02:44:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.21 Mbit/s

95th percentile per-packet one-way delay: 70.218 ms

Loss rate: 1.71%

-- Flow 1:

Average throughput: 62.05 Mbit/s

95th percentile per-packet one-way delay: 69.288 ms

Loss rate: 1.53%

-- Flow 2:

Average throughput: 8.15 Mbit/s

95th percentile per-packet one-way delay: 70.888 ms

Loss rate: 2.32%

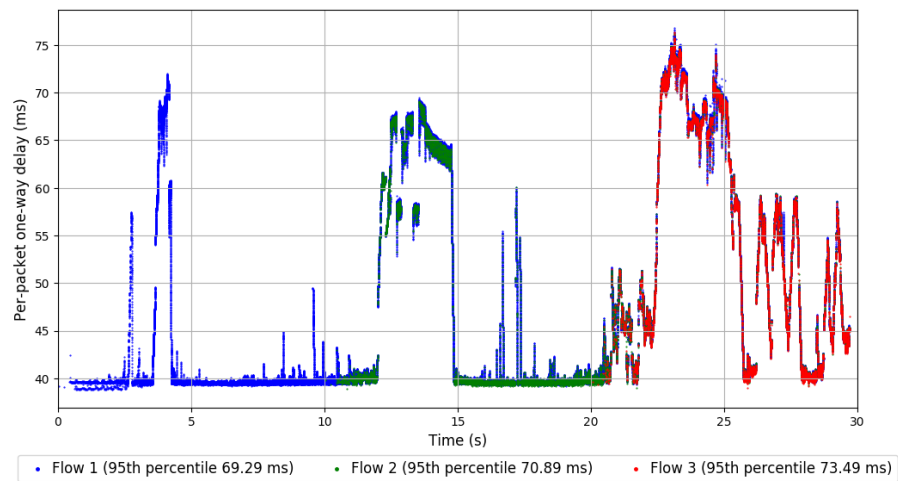
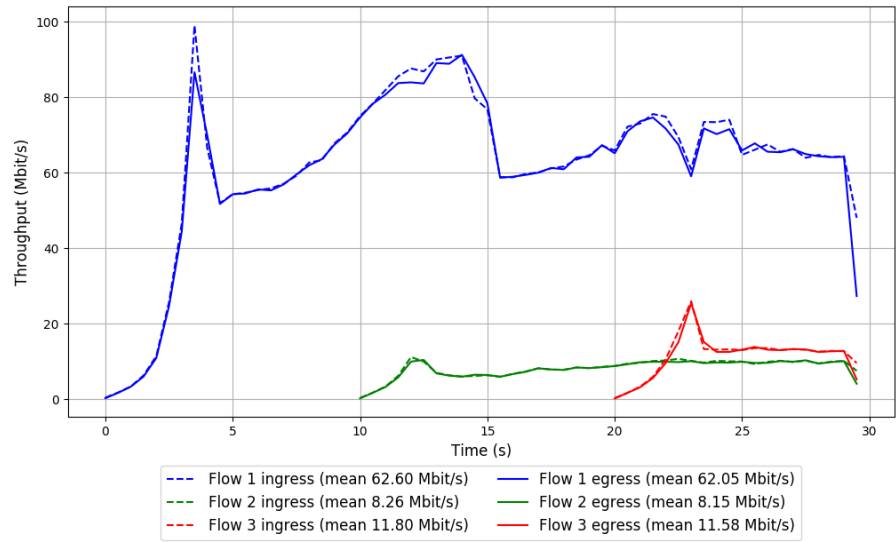
-- Flow 3:

Average throughput: 11.58 Mbit/s

95th percentile per-packet one-way delay: 73.489 ms

Loss rate: 3.81%

Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-04-10 18:48:11

End at: 2018-04-10 18:48:41

Local clock offset: 1.006 ms

Remote clock offset: 0.719 ms

Below is generated by plot.py at 2018-04-11 02:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.34 Mbit/s

95th percentile per-packet one-way delay: 73.839 ms

Loss rate: 1.69%

-- Flow 1:

Average throughput: 46.80 Mbit/s

95th percentile per-packet one-way delay: 72.661 ms

Loss rate: 1.22%

-- Flow 2:

Average throughput: 20.02 Mbit/s

95th percentile per-packet one-way delay: 74.455 ms

Loss rate: 2.43%

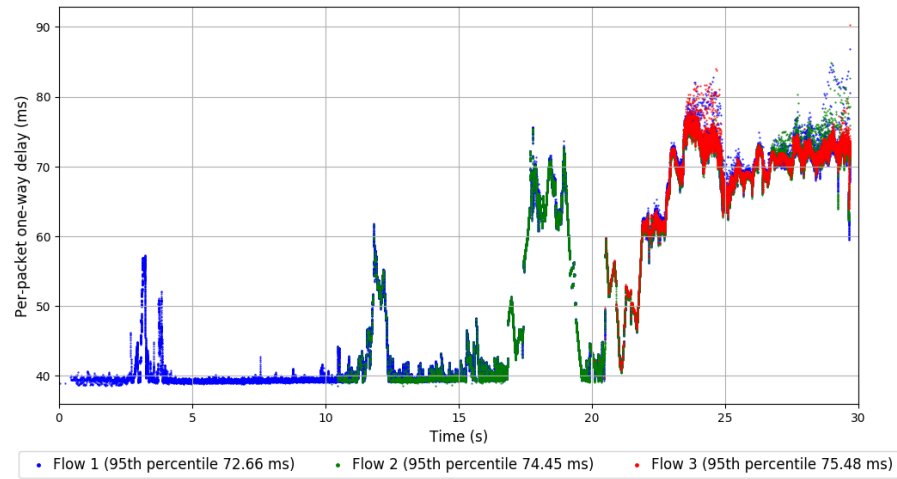
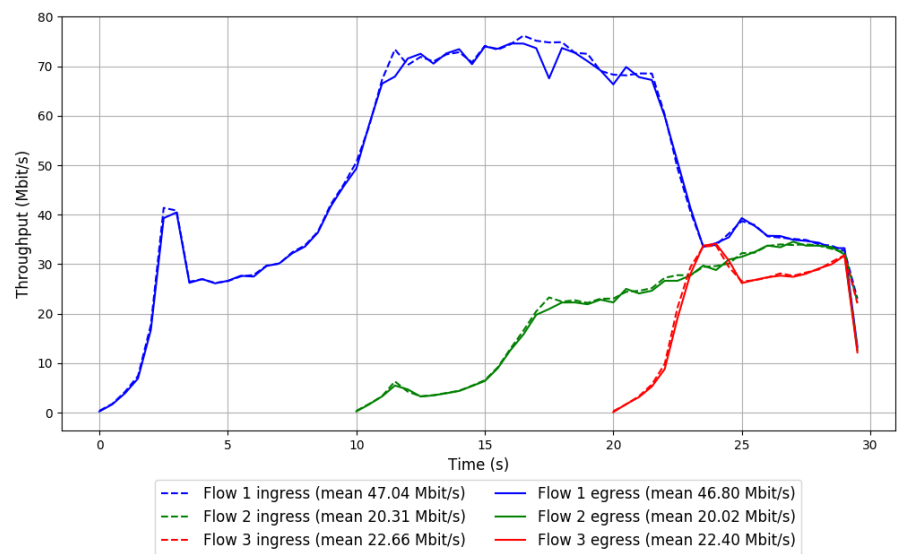
-- Flow 3:

Average throughput: 22.40 Mbit/s

95th percentile per-packet one-way delay: 75.485 ms

Loss rate: 3.32%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-04-10 19:12:34

End at: 2018-04-10 19:13:04

Local clock offset: 1.168 ms

Remote clock offset: 0.82 ms

Below is generated by plot.py at 2018-04-11 02:44:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.12 Mbit/s

95th percentile per-packet one-way delay: 74.662 ms

Loss rate: 2.69%

-- Flow 1:

Average throughput: 51.44 Mbit/s

95th percentile per-packet one-way delay: 72.882 ms

Loss rate: 1.85%

-- Flow 2:

Average throughput: 29.79 Mbit/s

95th percentile per-packet one-way delay: 75.211 ms

Loss rate: 4.45%

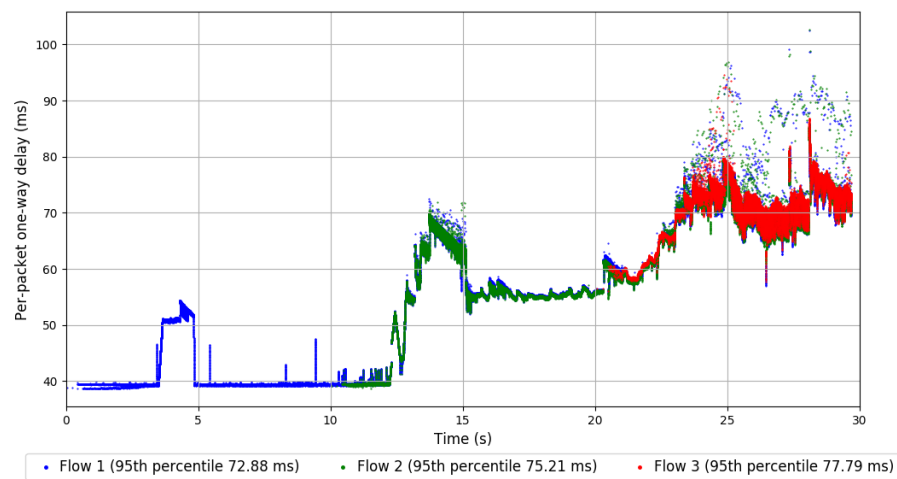
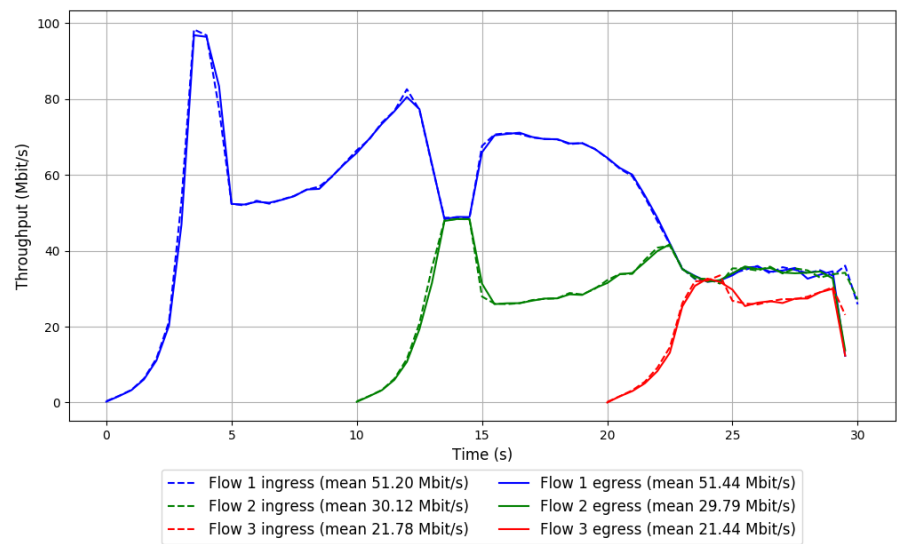
-- Flow 3:

Average throughput: 21.44 Mbit/s

95th percentile per-packet one-way delay: 77.793 ms

Loss rate: 3.77%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-04-10 19:37:27

End at: 2018-04-10 19:37:57

Local clock offset: 2.106 ms

Remote clock offset: 0.57 ms

Below is generated by plot.py at 2018-04-11 02:44:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.83 Mbit/s

95th percentile per-packet one-way delay: 76.871 ms

Loss rate: 2.88%

-- Flow 1:

Average throughput: 51.24 Mbit/s

95th percentile per-packet one-way delay: 75.216 ms

Loss rate: 2.38%

-- Flow 2:

Average throughput: 29.63 Mbit/s

95th percentile per-packet one-way delay: 77.653 ms

Loss rate: 1.39%

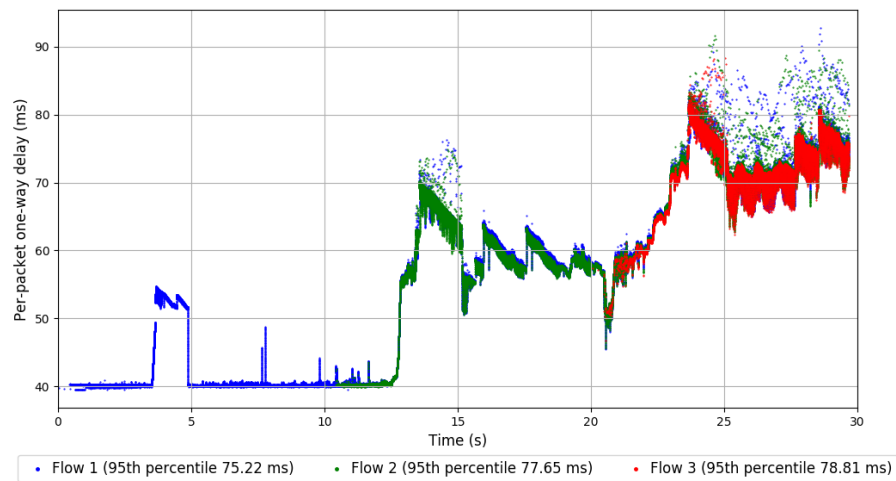
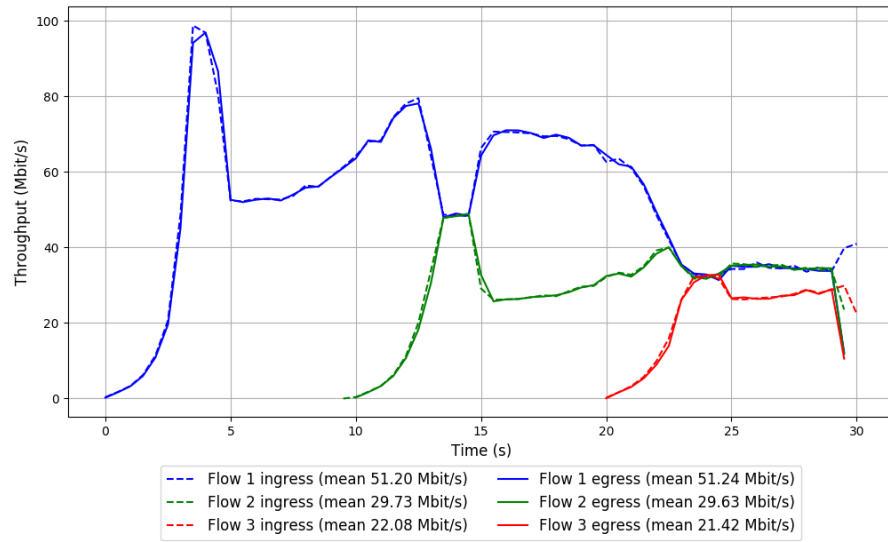
-- Flow 3:

Average throughput: 21.42 Mbit/s

95th percentile per-packet one-way delay: 78.809 ms

Loss rate: 10.06%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-04-10 20:01:54

End at: 2018-04-10 20:02:24

Local clock offset: 1.681 ms

Remote clock offset: 6.373 ms

Below is generated by plot.py at 2018-04-11 02:44:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.97 Mbit/s

95th percentile per-packet one-way delay: 73.651 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 51.39 Mbit/s

95th percentile per-packet one-way delay: 71.828 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 27.88 Mbit/s

95th percentile per-packet one-way delay: 74.405 ms

Loss rate: 1.45%

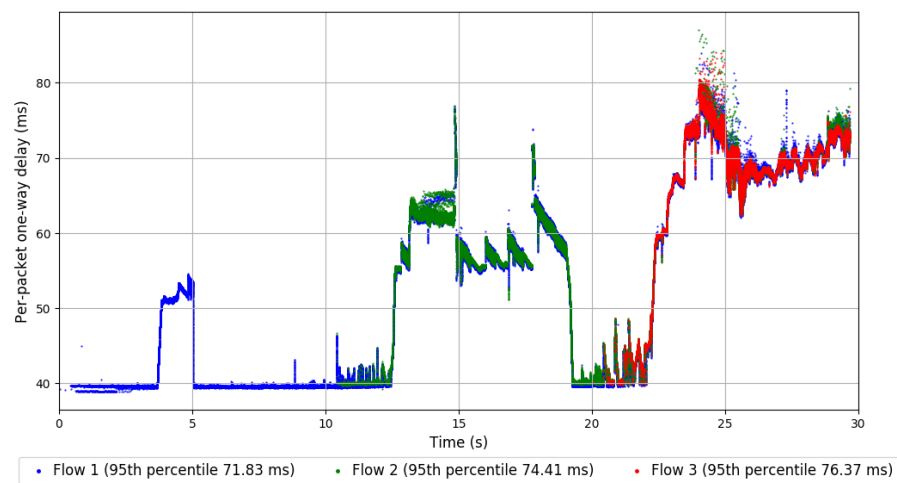
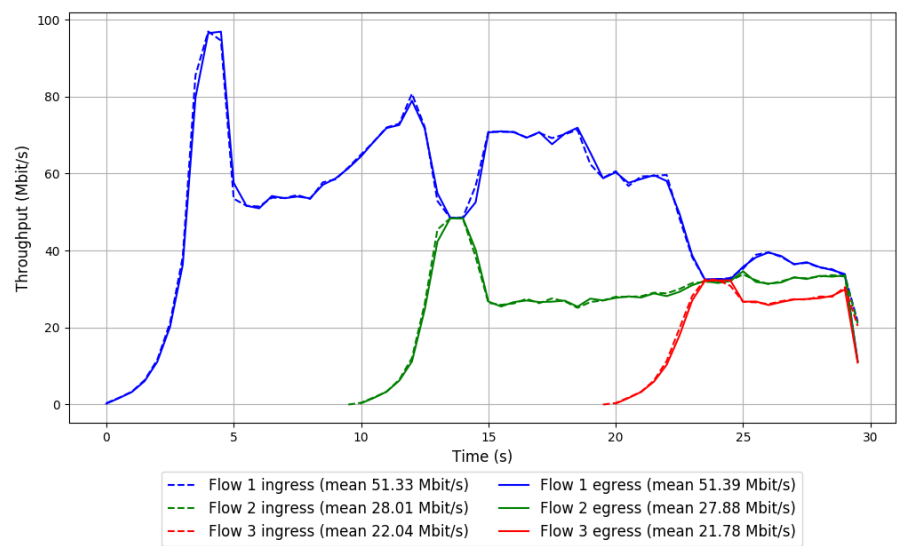
-- Flow 3:

Average throughput: 21.78 Mbit/s

95th percentile per-packet one-way delay: 76.373 ms

Loss rate: 3.27%

Run 5: Report of Vivace-LTE — Data Link

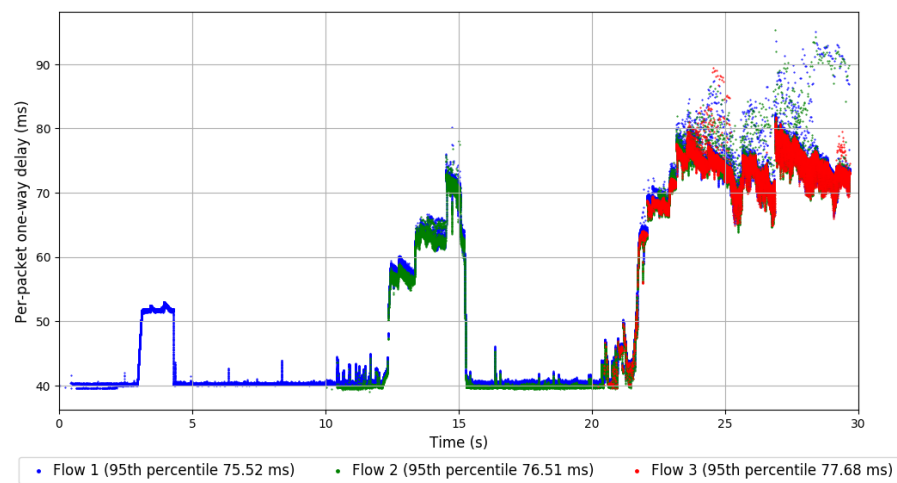
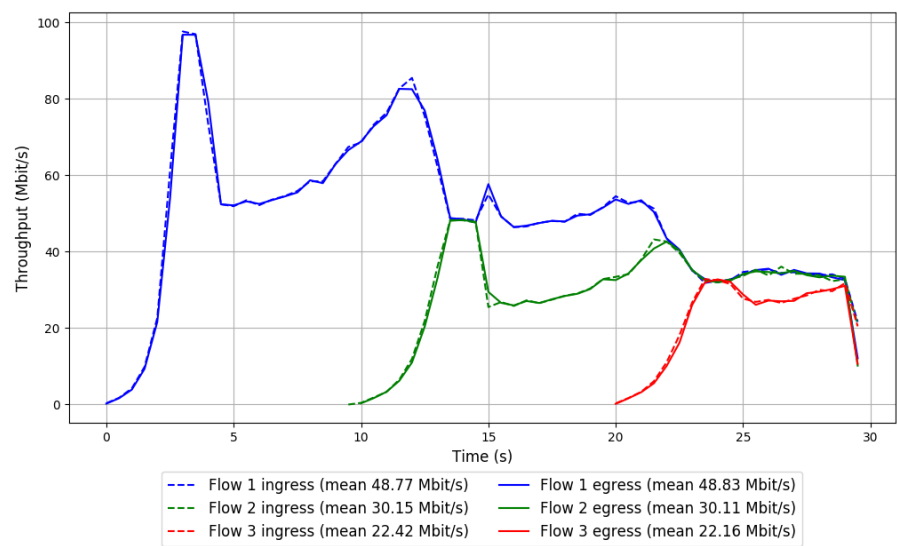


Run 6: Statistics of Vivace-LTE

Start at: 2018-04-10 20:26:18
End at: 2018-04-10 20:26:48
Local clock offset: 1.225 ms
Remote clock offset: 11.981 ms

Below is generated by plot.py at 2018-04-11 02:44:37
Datalink statistics
-- Total of 3 flows:
Average throughput: 75.97 Mbit/s
95th percentile per-packet one-way delay: 76.304 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 48.83 Mbit/s
95th percentile per-packet one-way delay: 75.521 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 30.11 Mbit/s
95th percentile per-packet one-way delay: 76.512 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 22.16 Mbit/s
95th percentile per-packet one-way delay: 77.677 ms
Loss rate: 3.26%

Run 6: Report of Vivace-LTE — Data Link

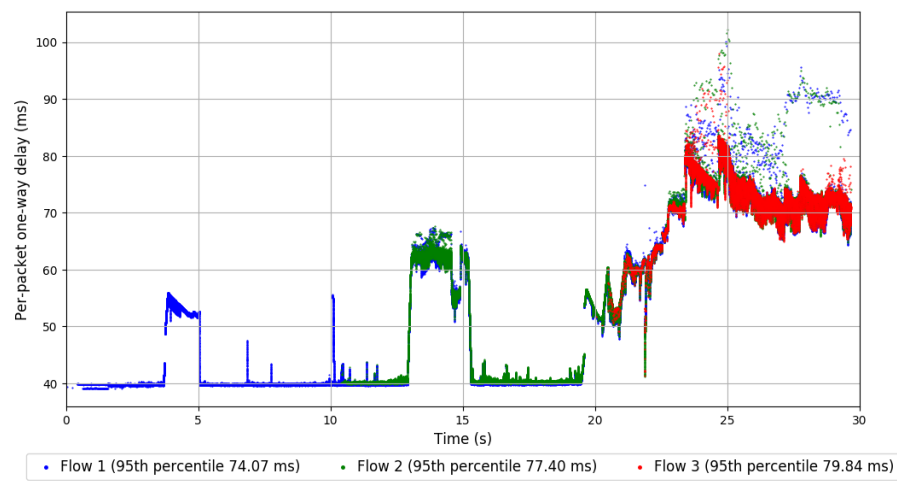
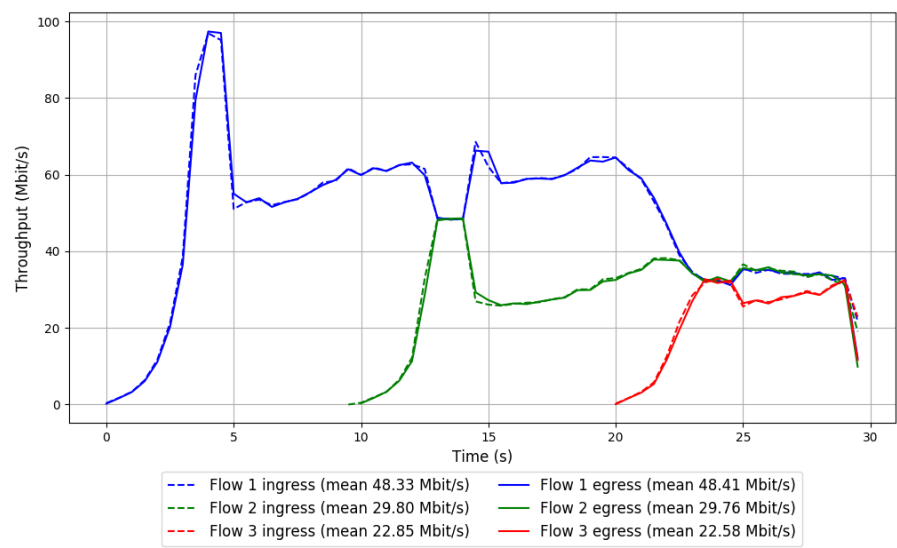


Run 7: Statistics of Vivace-LTE

Start at: 2018-04-10 20:51:11
End at: 2018-04-10 20:51:41
Local clock offset: 1.139 ms
Remote clock offset: 18.844 ms

Below is generated by plot.py at 2018-04-11 02:44:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 75.46 Mbit/s
95th percentile per-packet one-way delay: 76.298 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 48.41 Mbit/s
95th percentile per-packet one-way delay: 74.066 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 29.76 Mbit/s
95th percentile per-packet one-way delay: 77.403 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 22.58 Mbit/s
95th percentile per-packet one-way delay: 79.842 ms
Loss rate: 3.46%

Run 7: Report of Vivace-LTE — Data Link

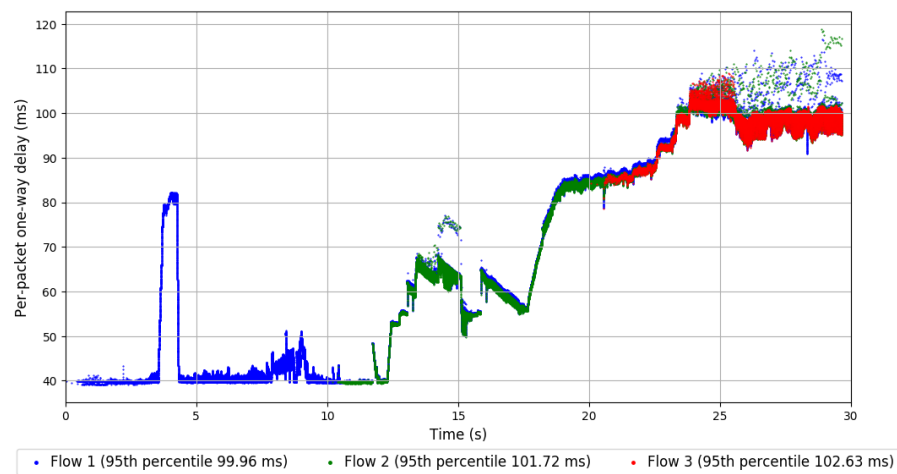
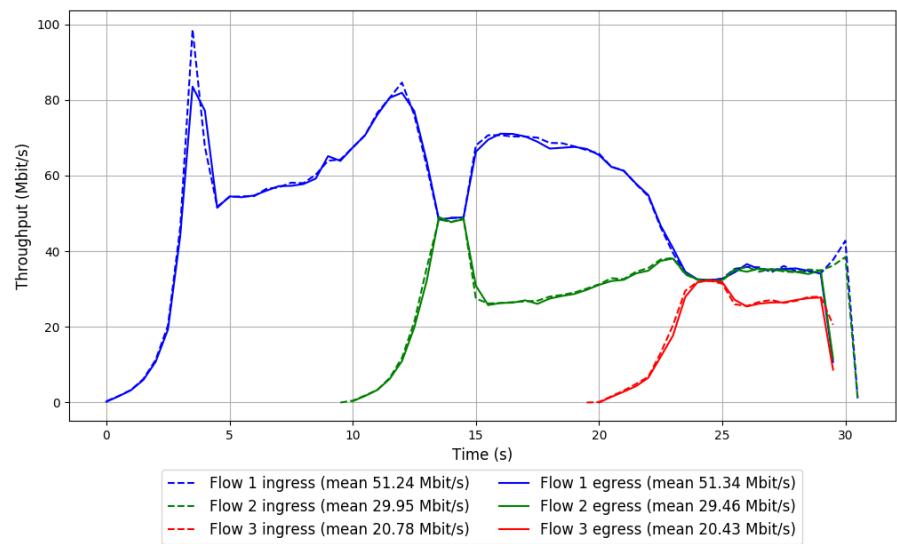


Run 8: Statistics of Vivace-LTE

Start at: 2018-04-10 21:15:40
End at: 2018-04-10 21:16:10
Local clock offset: 2.088 ms
Remote clock offset: -2.253 ms

Below is generated by plot.py at 2018-04-11 02:44:44
Datalink statistics
-- Total of 3 flows:
Average throughput: 77.49 Mbit/s
95th percentile per-packet one-way delay: 101.437 ms
Loss rate: 3.73%
-- Flow 1:
Average throughput: 51.34 Mbit/s
95th percentile per-packet one-way delay: 99.959 ms
Loss rate: 2.76%
-- Flow 2:
Average throughput: 29.46 Mbit/s
95th percentile per-packet one-way delay: 101.719 ms
Loss rate: 5.94%
-- Flow 3:
Average throughput: 20.43 Mbit/s
95th percentile per-packet one-way delay: 102.632 ms
Loss rate: 4.48%

Run 8: Report of Vivace-LTE — Data Link

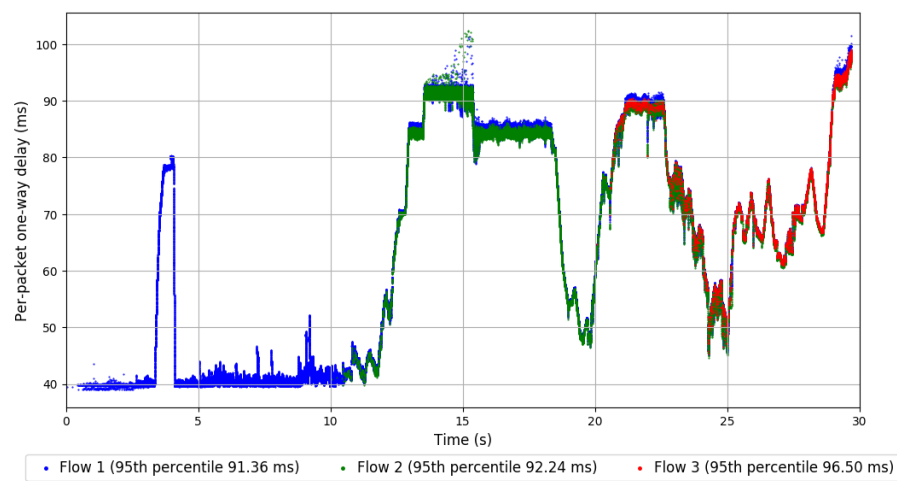
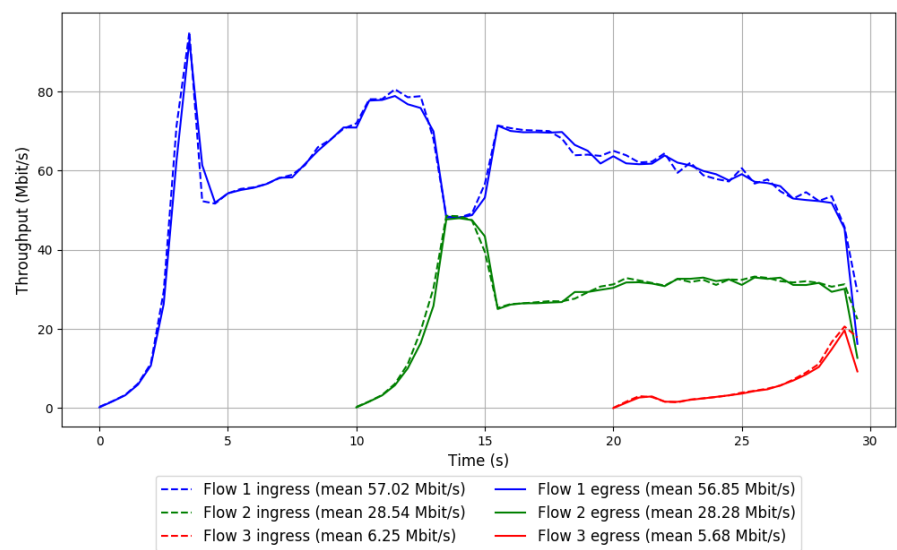


Run 9: Statistics of Vivace-LTE

Start at: 2018-04-10 21:40:45
End at: 2018-04-10 21:41:15
Local clock offset: 2.194 ms
Remote clock offset: -7.428 ms

Below is generated by plot.py at 2018-04-11 02:44:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 77.42 Mbit/s
95th percentile per-packet one-way delay: 91.906 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 56.85 Mbit/s
95th percentile per-packet one-way delay: 91.360 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 28.28 Mbit/s
95th percentile per-packet one-way delay: 92.236 ms
Loss rate: 1.94%
-- Flow 3:
Average throughput: 5.68 Mbit/s
95th percentile per-packet one-way delay: 96.497 ms
Loss rate: 11.22%

Run 9: Report of Vivace-LTE — Data Link



Run 10: Statistics of Vivace-LTE

/home/ubuntu/pantheon_data/2018-04-10T18-07-China-to-AWS-Korea-10-runs-3-flows/vivace_lte_st

Run 10: Report of Vivace-LTE — Data Link

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