

Pantheon Report

Generated at 2017-09-01 00:50:32 (UTC).

Data path: GCE Tokyo Ethernet (*remote*) → GCE Sydney Ethernet (*local*).

Repeated the test of 15 congestion control schemes 10 times.

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

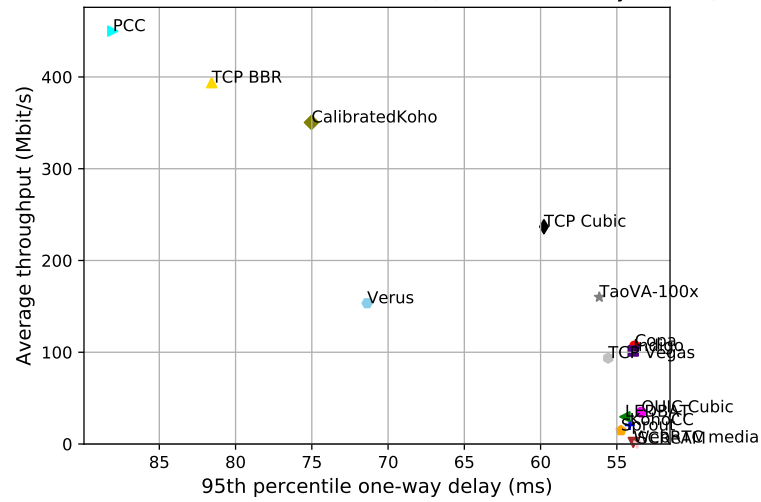
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

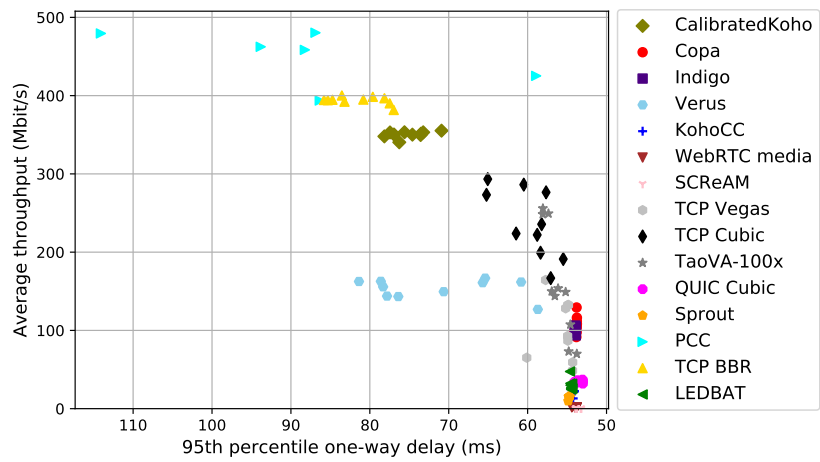
Git summary:

```
branch: master @ 5ea146acdebe79f5b9acfb2d9044554a7d2582ea
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/genericCC @ f7ca42f251bf49b432bb71de6d13fa903515c366
third_party/indigo @ 7ddb4adf480966042c0438984cb22a298bfa635f
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaaeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

test from GCE Tokyo Ethernet to GCE Sydney Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE Tokyo Ethernet to GCE Sydney 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	10	201.58	197.65	185.68	77.47	81.46	87.83	0.36	0.56	1.32
CalibratedKoho	10	220.96	148.82	94.03	75.67	74.04	73.48	0.24	0.54	1.85
Copa	10	64.02	53.70	48.95	53.81	53.82	53.81	0.18	0.37	1.35
TCP Cubic	10	130.04	105.35	111.09	59.13	58.91	61.71	0.34	0.83	1.12
Indigo	10	51.00	57.68	38.77	53.91	53.96	53.87	0.32	0.59	1.33
KohoCC	6	12.22	11.02	10.89	918.13	54.15	54.19	0.29	0.54	1.11
LEDBAT	10	17.25	14.83	7.99	54.46	54.49	54.42	0.64	1.07	1.88
PCC	6	230.58	228.80	174.57	859.18	76.83	59.34	0.80	0.42	0.96
QUIC Cubic	10	0.06	38.67	27.49	52.19	52.34	52.52	0.00	0.41	1.61
SCReAM	10	0.21	0.21	0.22	52.26	52.52	51.90	0.29	0.44	1.03
Sprout	10	7.20	7.67	7.37	54.76	54.71	54.72	0.77	0.65	1.14
TaoVA-100x	10	83.30	111.49	87.67	54.87	56.22	55.78	0.15	0.36	1.36
TCP Vegas	10	40.10	58.13	45.28	54.61	55.70	54.87	0.34	0.57	1.24
Verus	10	99.86	58.88	45.37	74.42	67.81	66.77	0.22	0.57	1.60
WebRTC media	10	0.05	1.49	0.40	54.26	52.09	54.01	0.03	0.78	2.45

Run 1: Statistics of TCP BBR

Start at: 2017-08-31 19:02:28

End at: 2017-08-31 19:02:58

Below is generated by plot.py at 2017-09-01 00:14:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 390.16 Mbit/s

95th percentile per-packet one-way delay: 77.476 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 202.87 Mbit/s

95th percentile per-packet one-way delay: 71.933 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 192.73 Mbit/s

95th percentile per-packet one-way delay: 76.611 ms

Loss rate: 0.63%

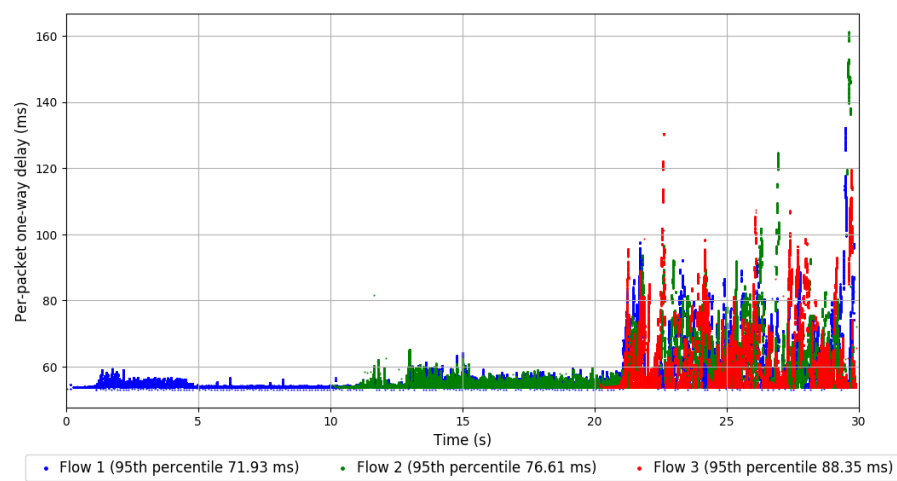
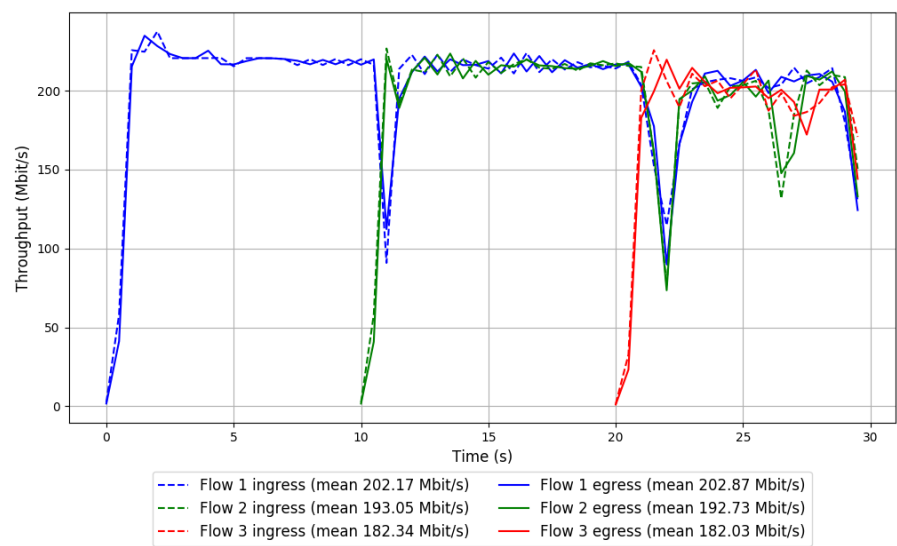
-- Flow 3:

Average throughput: 182.03 Mbit/s

95th percentile per-packet one-way delay: 88.347 ms

Loss rate: 1.33%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-08-31 19:14:49

End at: 2017-08-31 19:15:19

Below is generated by plot.py at 2017-09-01 00:14:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 381.71 Mbit/s

95th percentile per-packet one-way delay: 76.973 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 192.11 Mbit/s

95th percentile per-packet one-way delay: 73.974 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 195.12 Mbit/s

95th percentile per-packet one-way delay: 76.949 ms

Loss rate: 0.69%

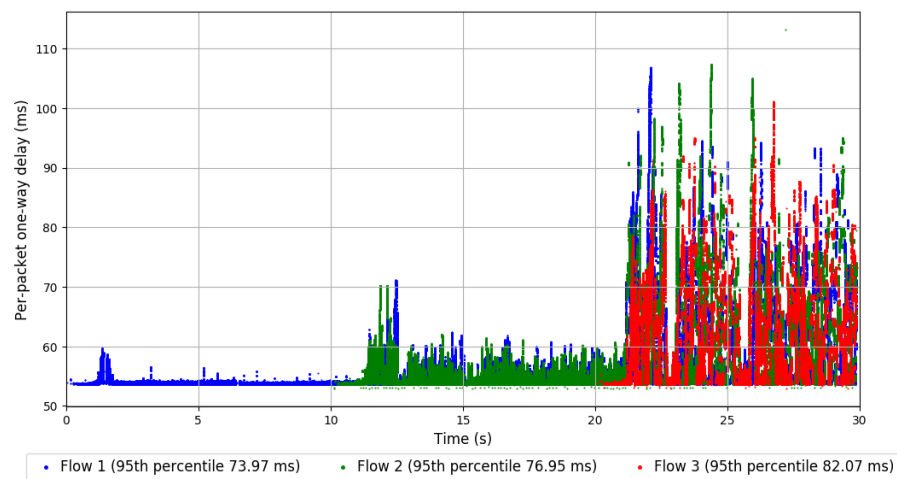
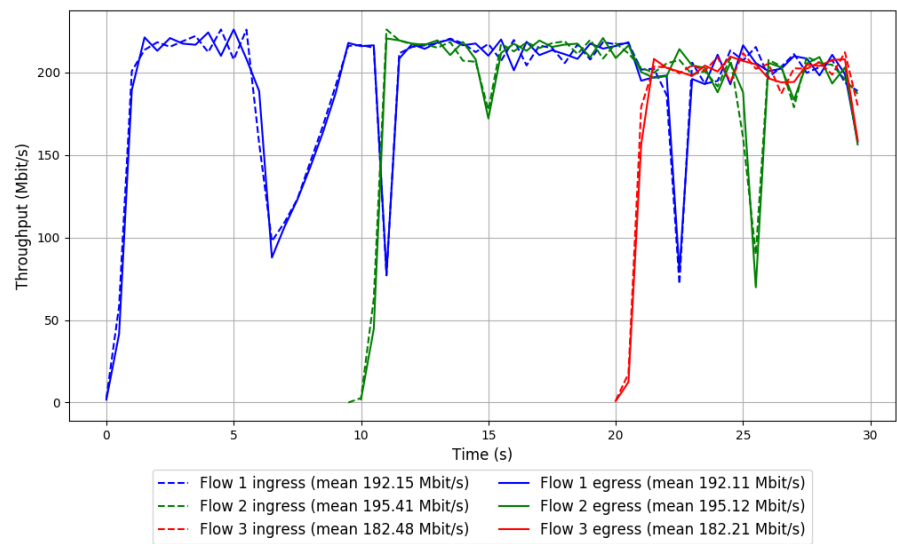
-- Flow 3:

Average throughput: 182.21 Mbit/s

95th percentile per-packet one-way delay: 82.073 ms

Loss rate: 1.32%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-08-31 19:26:46

End at: 2017-08-31 19:27:16

Below is generated by plot.py at 2017-09-01 00:15:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 398.51 Mbit/s

95th percentile per-packet one-way delay: 79.625 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 207.45 Mbit/s

95th percentile per-packet one-way delay: 76.645 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 196.36 Mbit/s

95th percentile per-packet one-way delay: 77.993 ms

Loss rate: 0.62%

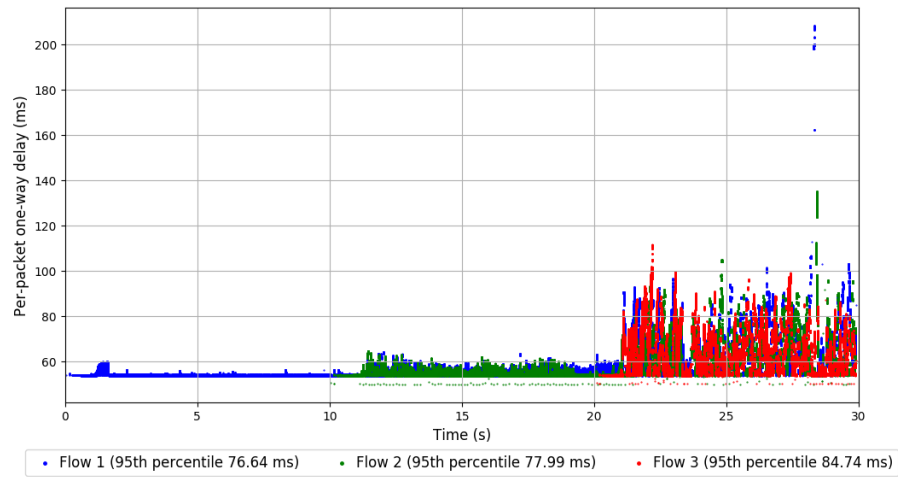
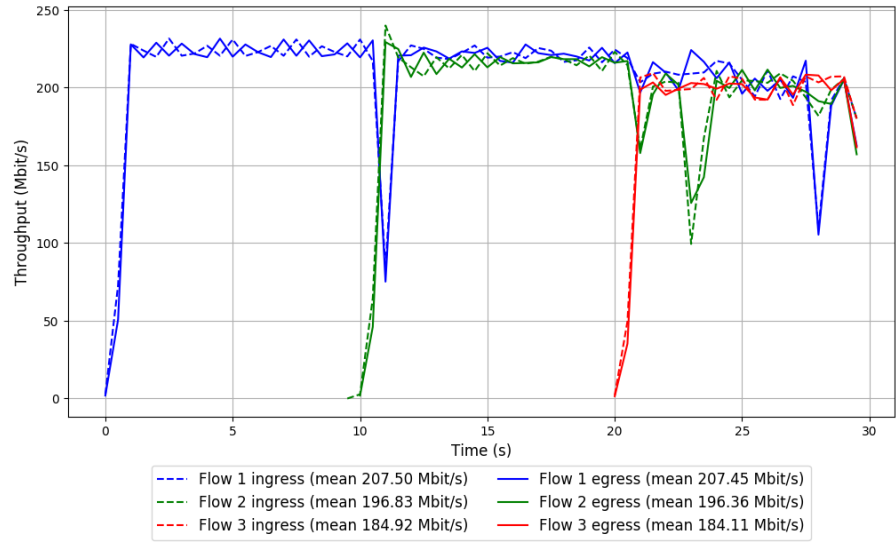
-- Flow 3:

Average throughput: 184.11 Mbit/s

95th percentile per-packet one-way delay: 84.744 ms

Loss rate: 1.29%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-08-31 19:38:52

End at: 2017-08-31 19:39:22

Below is generated by plot.py at 2017-09-01 00:15:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 396.67 Mbit/s

95th percentile per-packet one-way delay: 78.147 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 204.37 Mbit/s

95th percentile per-packet one-way delay: 75.884 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 194.43 Mbit/s

95th percentile per-packet one-way delay: 76.387 ms

Loss rate: 0.59%

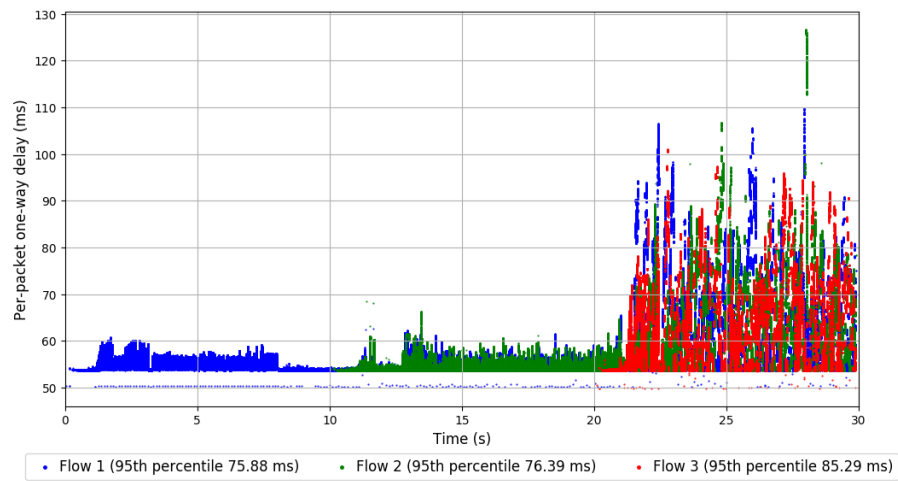
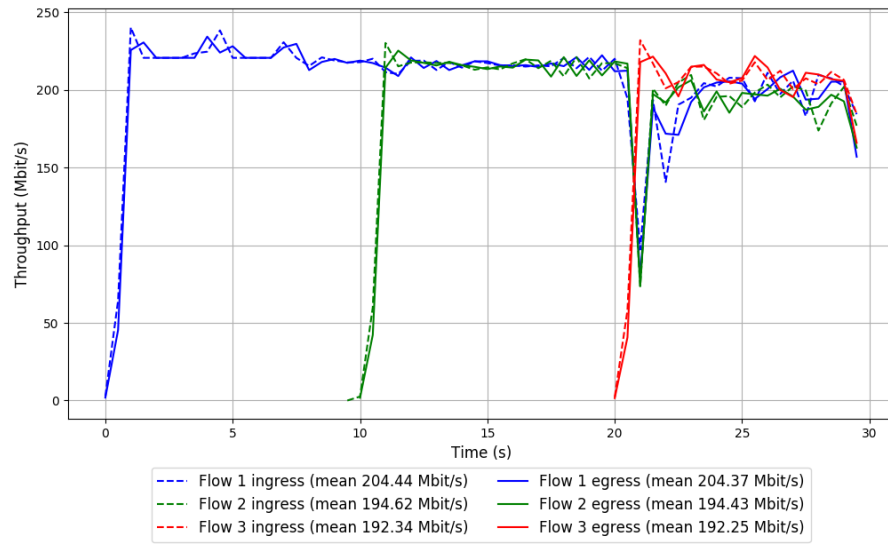
-- Flow 3:

Average throughput: 192.25 Mbit/s

95th percentile per-packet one-way delay: 85.293 ms

Loss rate: 1.24%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-08-31 19:50:53

End at: 2017-08-31 19:51:23

Below is generated by plot.py at 2017-09-01 00:16:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 392.28 Mbit/s

95th percentile per-packet one-way delay: 83.208 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 200.87 Mbit/s

95th percentile per-packet one-way delay: 81.301 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 196.36 Mbit/s

95th percentile per-packet one-way delay: 82.184 ms

Loss rate: 0.62%

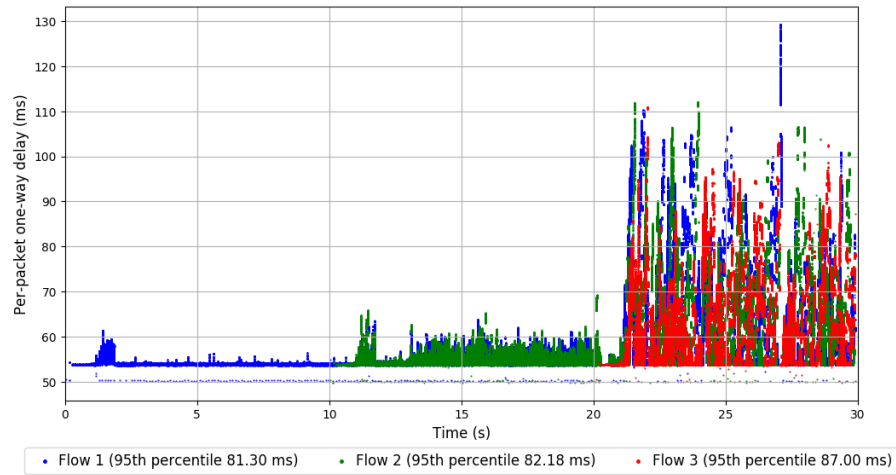
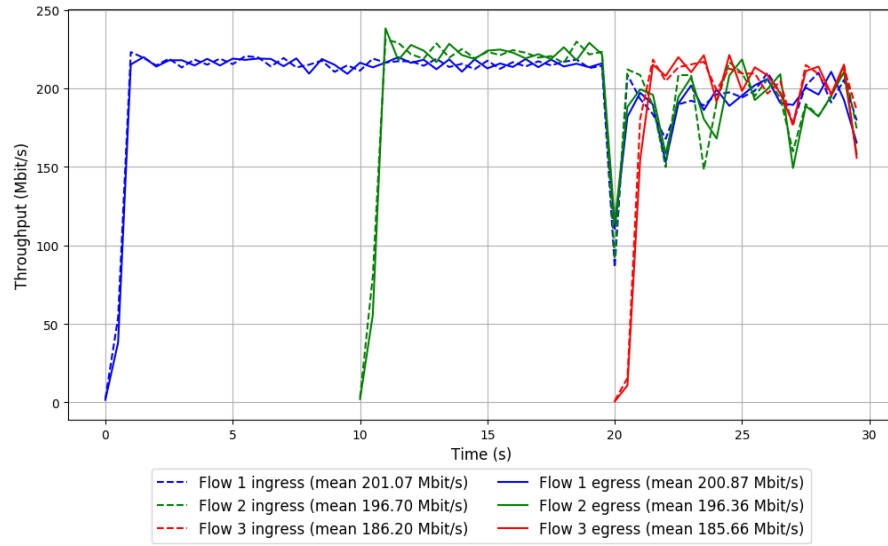
-- Flow 3:

Average throughput: 185.66 Mbit/s

95th percentile per-packet one-way delay: 87.001 ms

Loss rate: 1.44%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-08-31 20:02:56

End at: 2017-08-31 20:03:26

Below is generated by plot.py at 2017-09-01 00:16:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 394.74 Mbit/s

95th percentile per-packet one-way delay: 84.734 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 202.69 Mbit/s

95th percentile per-packet one-way delay: 77.465 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 198.54 Mbit/s

95th percentile per-packet one-way delay: 84.160 ms

Loss rate: 0.67%

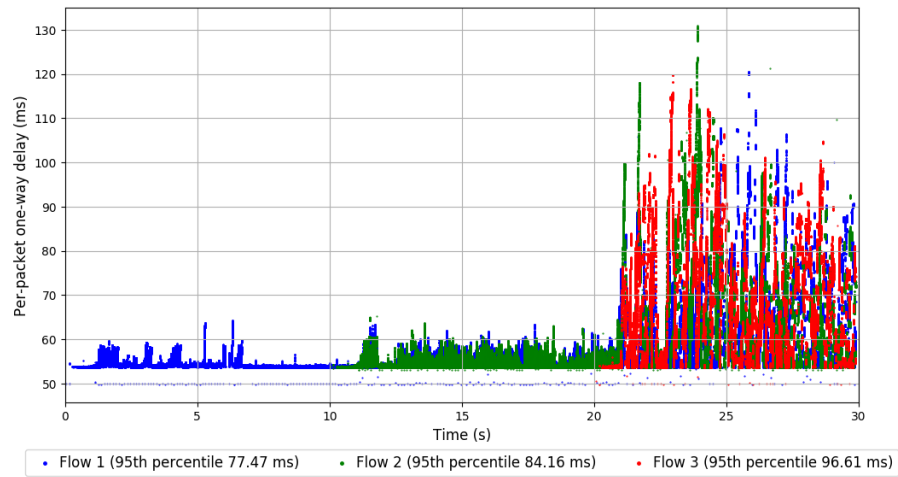
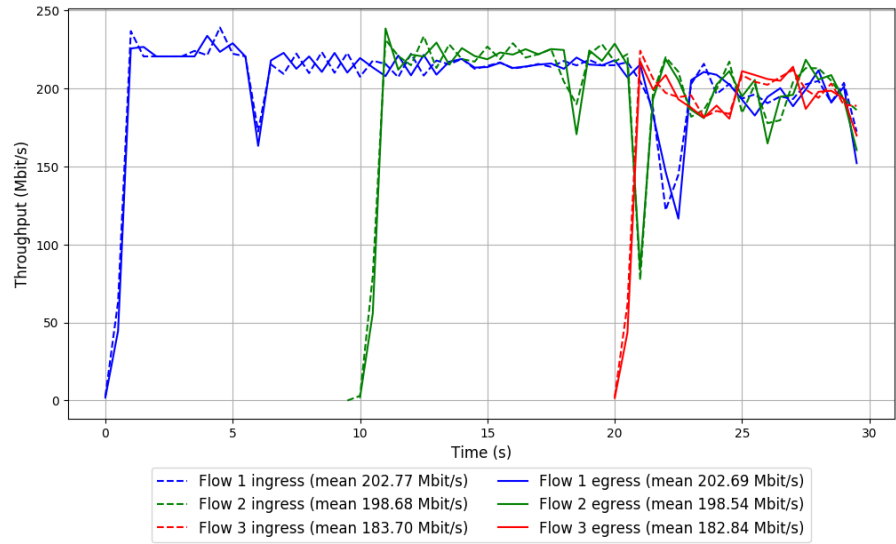
-- Flow 3:

Average throughput: 182.84 Mbit/s

95th percentile per-packet one-way delay: 96.610 ms

Loss rate: 1.33%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-08-31 20:15:07

End at: 2017-08-31 20:15:37

Below is generated by plot.py at 2017-09-01 00:17:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 394.46 Mbit/s

95th percentile per-packet one-way delay: 85.805 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 202.25 Mbit/s

95th percentile per-packet one-way delay: 84.171 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 198.08 Mbit/s

95th percentile per-packet one-way delay: 82.913 ms

Loss rate: 0.60%

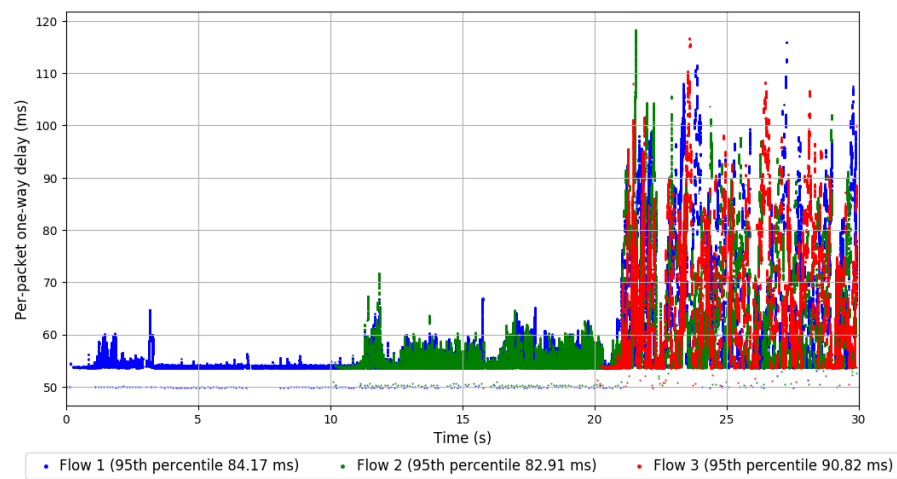
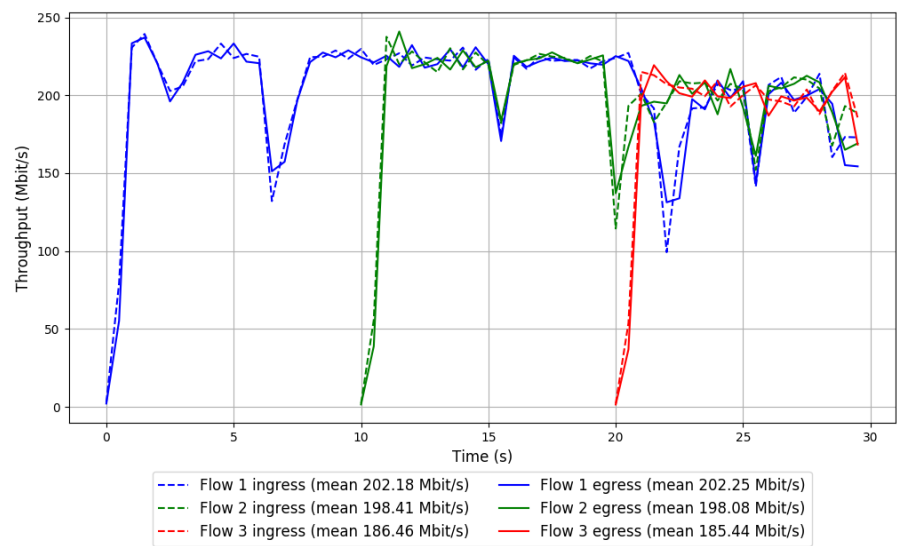
-- Flow 3:

Average throughput: 185.44 Mbit/s

95th percentile per-packet one-way delay: 90.823 ms

Loss rate: 1.37%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-08-31 20:27:02

End at: 2017-08-31 20:27:32

Below is generated by plot.py at 2017-09-01 00:17:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 394.19 Mbit/s

95th percentile per-packet one-way delay: 85.318 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 200.21 Mbit/s

95th percentile per-packet one-way delay: 81.261 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 200.47 Mbit/s

95th percentile per-packet one-way delay: 89.338 ms

Loss rate: 0.59%

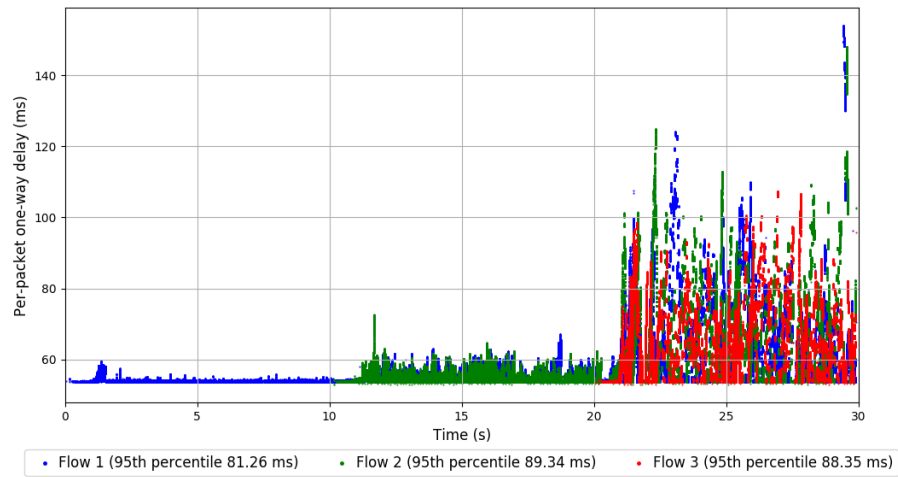
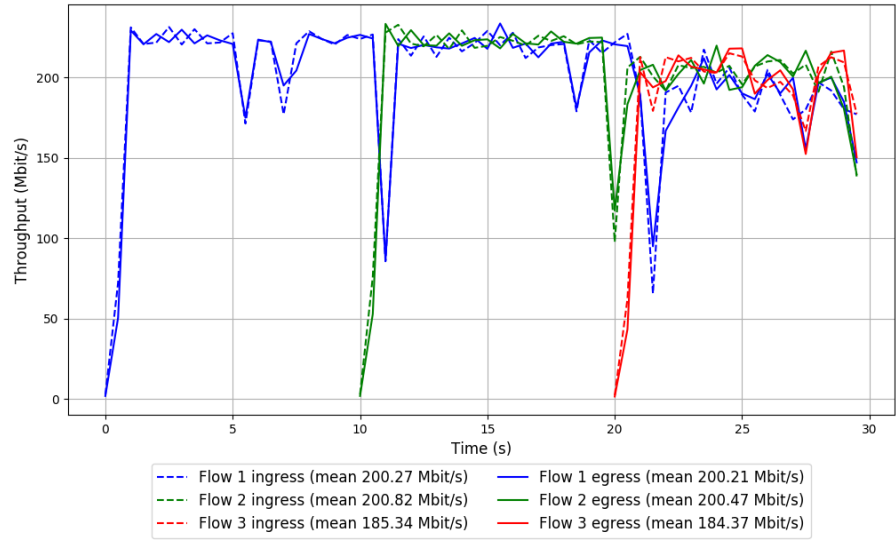
-- Flow 3:

Average throughput: 184.37 Mbit/s

95th percentile per-packet one-way delay: 88.346 ms

Loss rate: 1.37%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-08-31 20:39:11

End at: 2017-08-31 20:39:41

Below is generated by plot.py at 2017-09-01 00:19:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 400.20 Mbit/s

95th percentile per-packet one-way delay: 83.545 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 202.96 Mbit/s

95th percentile per-packet one-way delay: 78.057 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 203.96 Mbit/s

95th percentile per-packet one-way delay: 85.579 ms

Loss rate: 0.00%

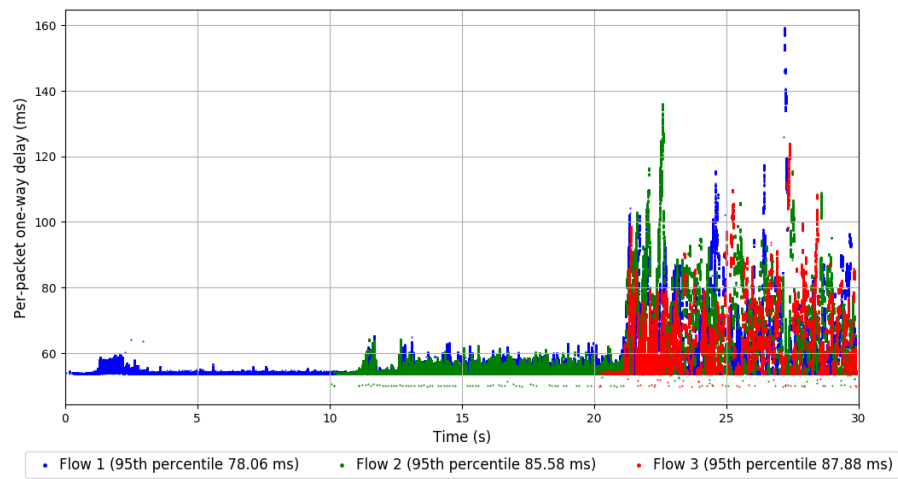
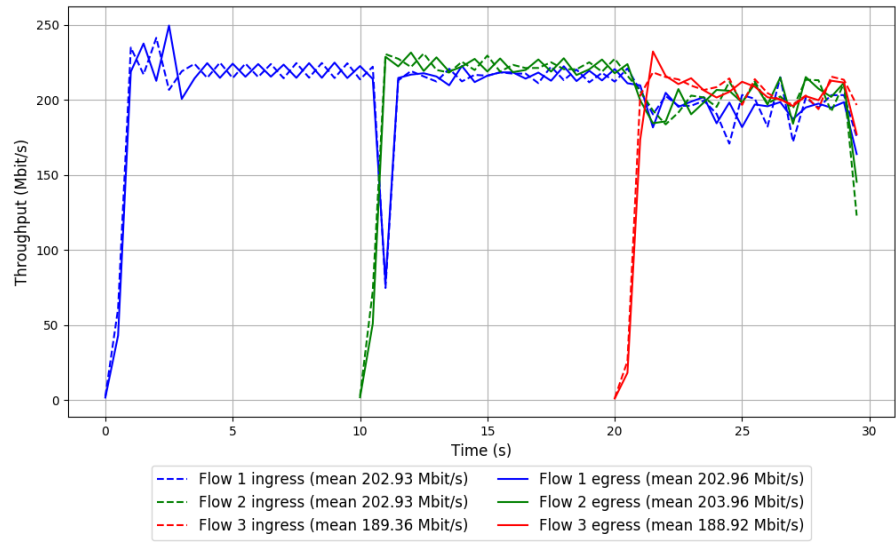
-- Flow 3:

Average throughput: 188.92 Mbit/s

95th percentile per-packet one-way delay: 87.876 ms

Loss rate: 1.29%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-08-31 20:51:14

End at: 2017-08-31 20:51:44

Below is generated by plot.py at 2017-09-01 00:19:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 394.97 Mbit/s

95th percentile per-packet one-way delay: 80.821 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 200.03 Mbit/s

95th percentile per-packet one-way delay: 74.031 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 200.45 Mbit/s

95th percentile per-packet one-way delay: 82.532 ms

Loss rate: 0.63%

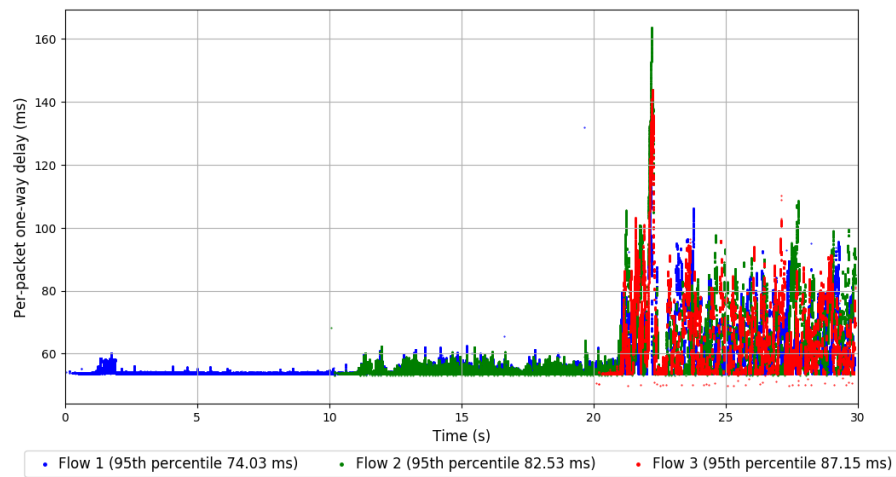
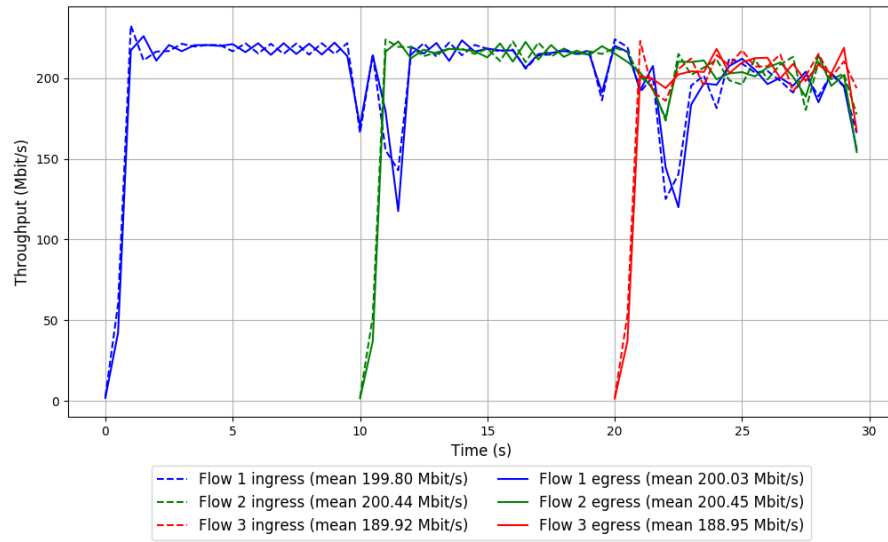
-- Flow 3:

Average throughput: 188.95 Mbit/s

95th percentile per-packet one-way delay: 87.147 ms

Loss rate: 1.25%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of CalibratedKoho

Start at: 2017-08-31 19:03:29

End at: 2017-08-31 19:03:59

Below is generated by plot.py at 2017-09-01 00:20:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 351.34 Mbit/s

95th percentile per-packet one-way delay: 73.518 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 223.37 Mbit/s

95th percentile per-packet one-way delay: 75.134 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 148.47 Mbit/s

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

Loss rate: 0.52%

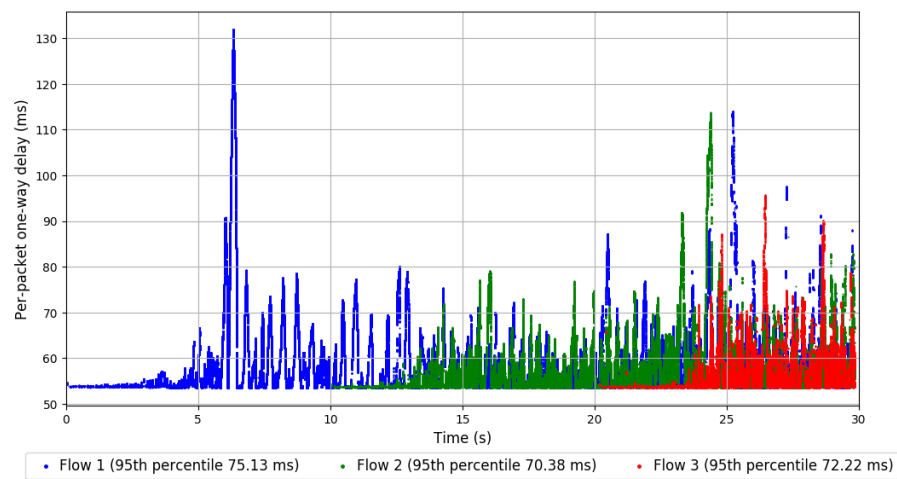
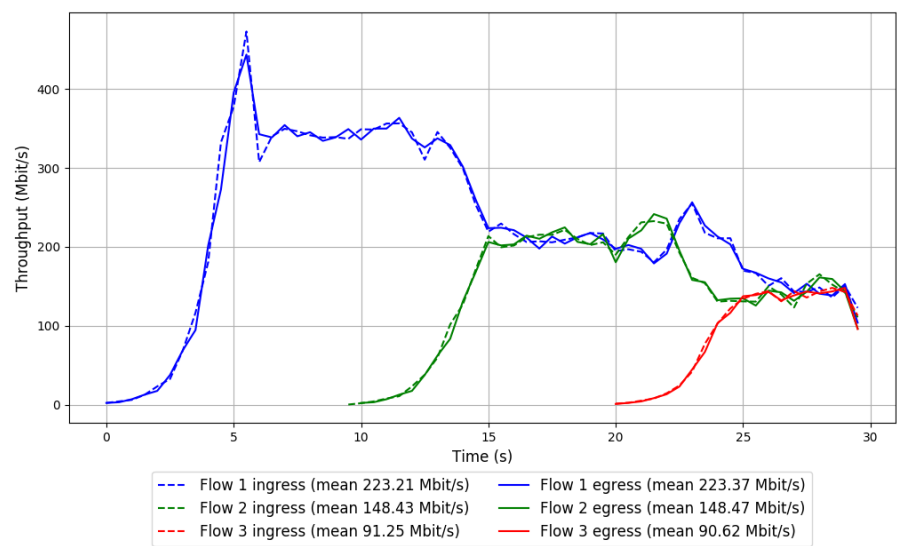
-- Flow 3:

Average throughput: 90.62 Mbit/s

95th percentile per-packet one-way delay: 72.216 ms

Loss rate: 1.75%

Run 1: Report of CalibratedKoho — Data Link



Run 2: Statistics of CalibratedKoho

Start at: 2017-08-31 19:15:50

End at: 2017-08-31 19:16:20

Below is generated by plot.py at 2017-09-01 00:20:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 340.39 Mbit/s

95th percentile per-packet one-way delay: 76.268 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 201.18 Mbit/s

95th percentile per-packet one-way delay: 78.335 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 163.34 Mbit/s

95th percentile per-packet one-way delay: 71.753 ms

Loss rate: 0.50%

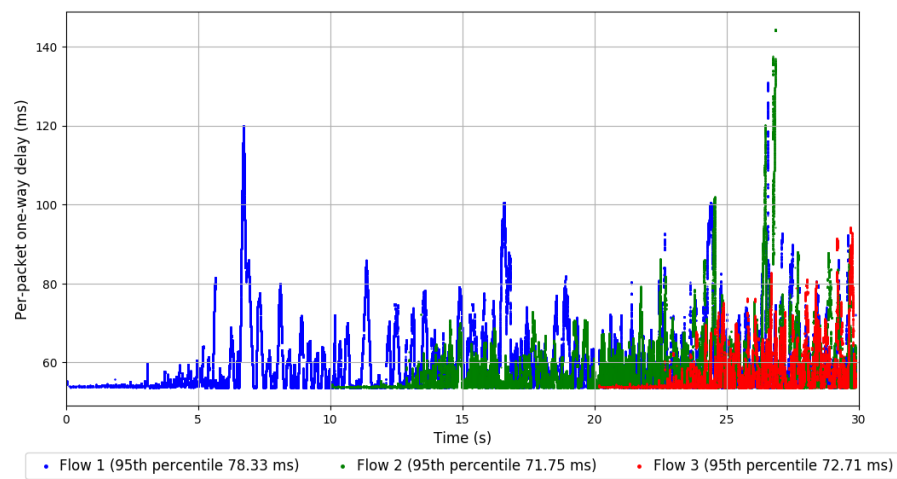
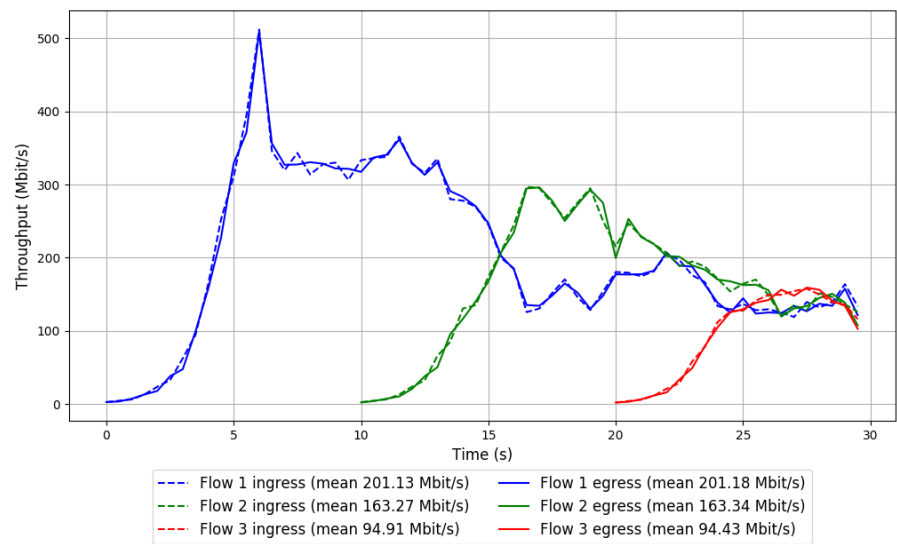
-- Flow 3:

Average throughput: 94.43 Mbit/s

95th percentile per-packet one-way delay: 72.712 ms

Loss rate: 1.55%

Run 2: Report of CalibratedKoho — Data Link



Run 3: Statistics of CalibratedKoho

Start at: 2017-08-31 19:27:47

End at: 2017-08-31 19:28:17

Below is generated by plot.py at 2017-09-01 00:21:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 352.98 Mbit/s

95th percentile per-packet one-way delay: 77.443 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 218.81 Mbit/s

95th percentile per-packet one-way delay: 77.347 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 153.65 Mbit/s

95th percentile per-packet one-way delay: 78.180 ms

Loss rate: 0.49%

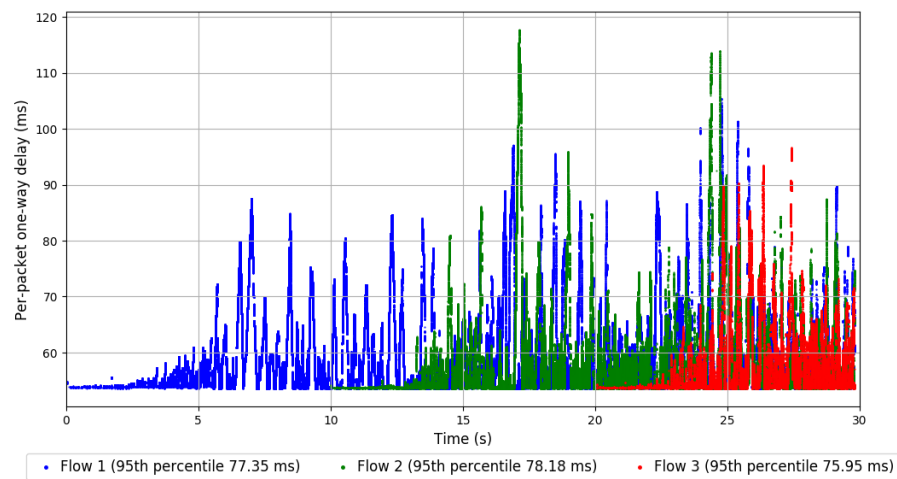
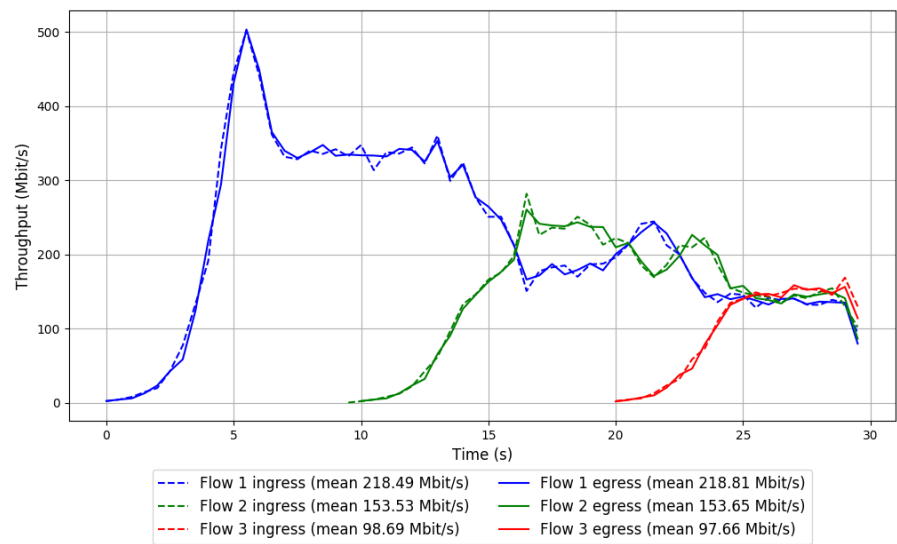
-- Flow 3:

Average throughput: 97.66 Mbit/s

95th percentile per-packet one-way delay: 75.948 ms

Loss rate: 2.10%

Run 3: Report of CalibratedKoho — Data Link



Run 4: Statistics of CalibratedKoho

Start at: 2017-08-31 19:39:53

End at: 2017-08-31 19:40:23

Below is generated by plot.py at 2017-09-01 00:21:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 347.93 Mbit/s

95th percentile per-packet one-way delay: 78.154 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 214.47 Mbit/s

95th percentile per-packet one-way delay: 78.865 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 157.40 Mbit/s

95th percentile per-packet one-way delay: 78.651 ms

Loss rate: 0.59%

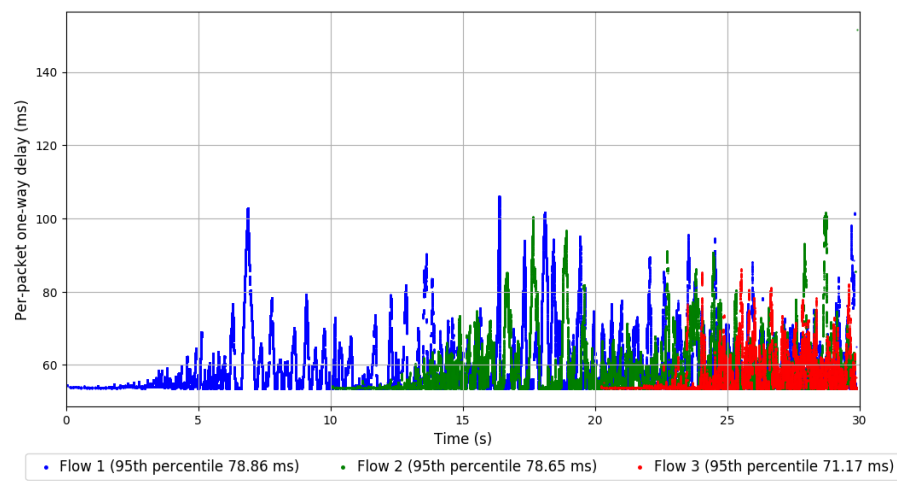
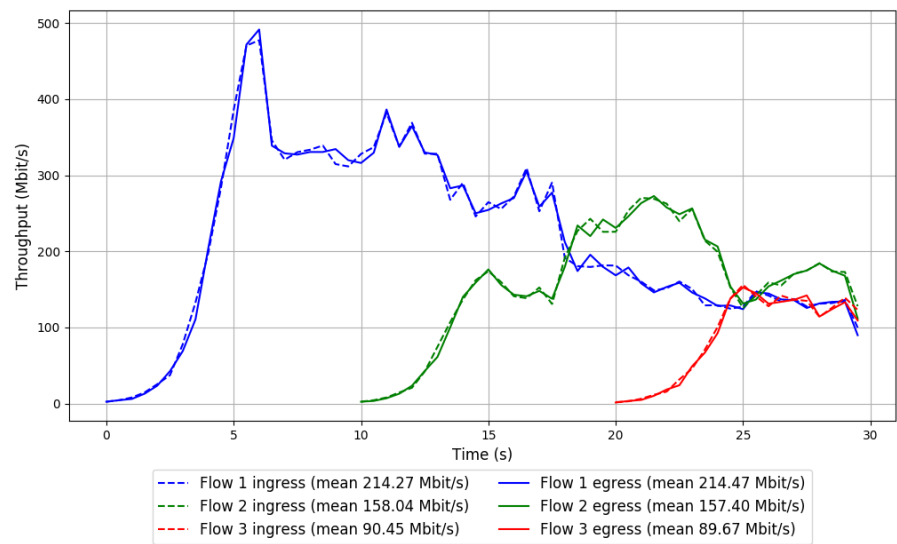
-- Flow 3:

Average throughput: 89.67 Mbit/s

95th percentile per-packet one-way delay: 71.172 ms

Loss rate: 2.00%

Run 4: Report of CalibratedKoho — Data Link



Run 5: Statistics of CalibratedKoho

Start at: 2017-08-31 19:51:54

End at: 2017-08-31 19:52:24

Below is generated by plot.py at 2017-09-01 00:22:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 350.33 Mbit/s

95th percentile per-packet one-way delay: 76.940 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 211.32 Mbit/s

95th percentile per-packet one-way delay: 78.835 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 162.02 Mbit/s

95th percentile per-packet one-way delay: 72.618 ms

Loss rate: 0.52%

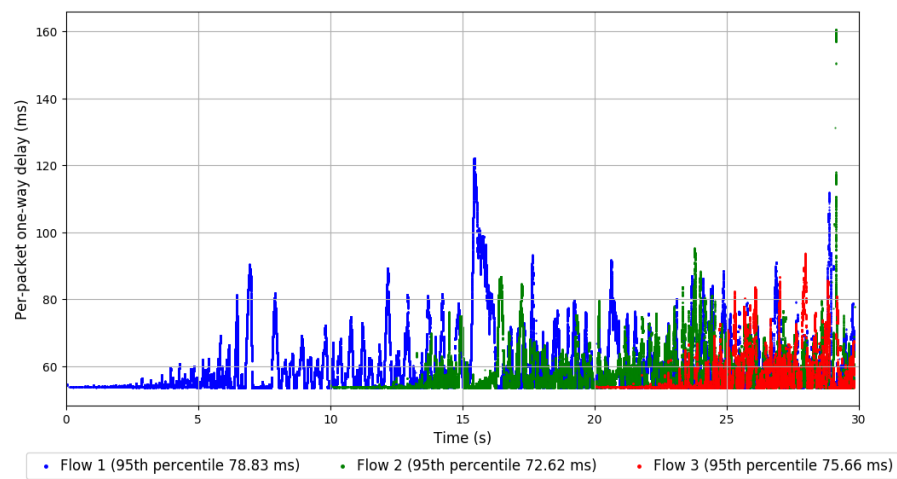
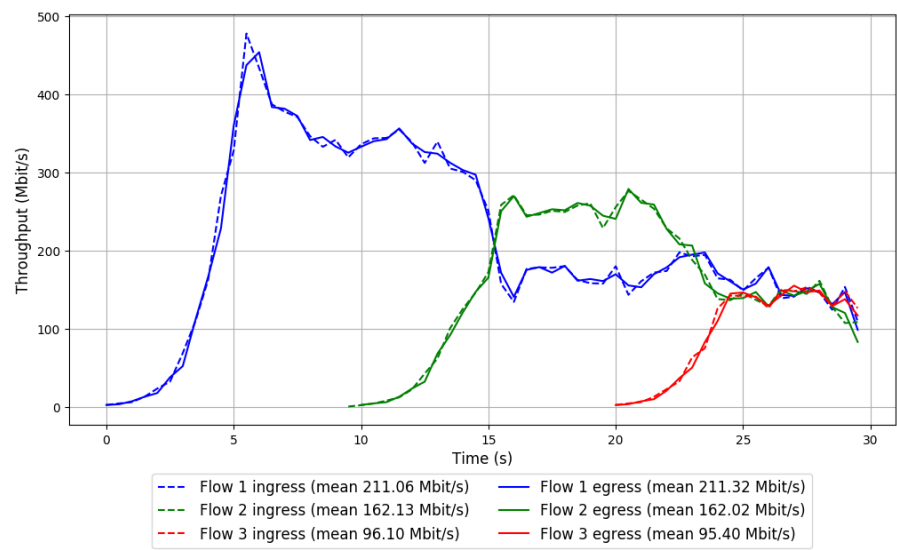
-- Flow 3:

Average throughput: 95.40 Mbit/s

95th percentile per-packet one-way delay: 75.658 ms

Loss rate: 1.89%

Run 5: Report of CalibratedKoho — Data Link



Run 6: Statistics of CalibratedKoho

Start at: 2017-08-31 20:03:57

End at: 2017-08-31 20:04:27

Below is generated by plot.py at 2017-09-01 00:22:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 349.65 Mbit/s

95th percentile per-packet one-way delay: 73.562 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 242.84 Mbit/s

95th percentile per-packet one-way delay: 72.606 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 115.16 Mbit/s

95th percentile per-packet one-way delay: 77.243 ms

Loss rate: 0.57%

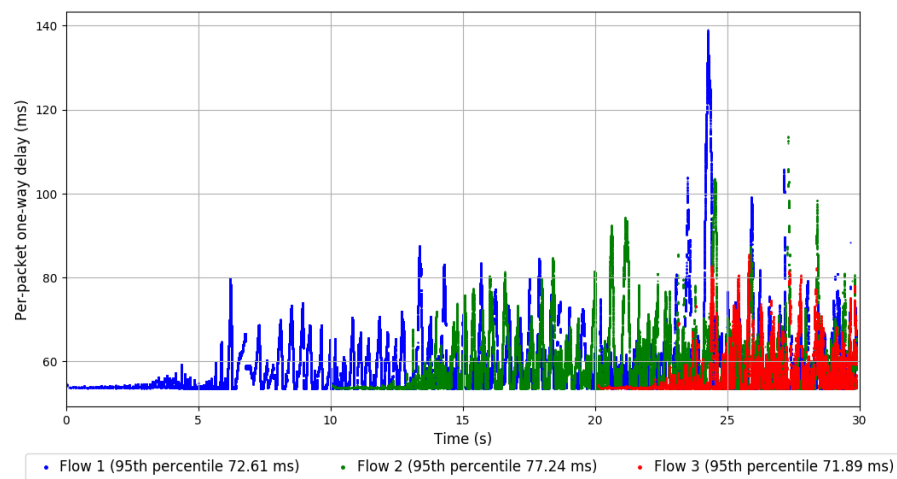
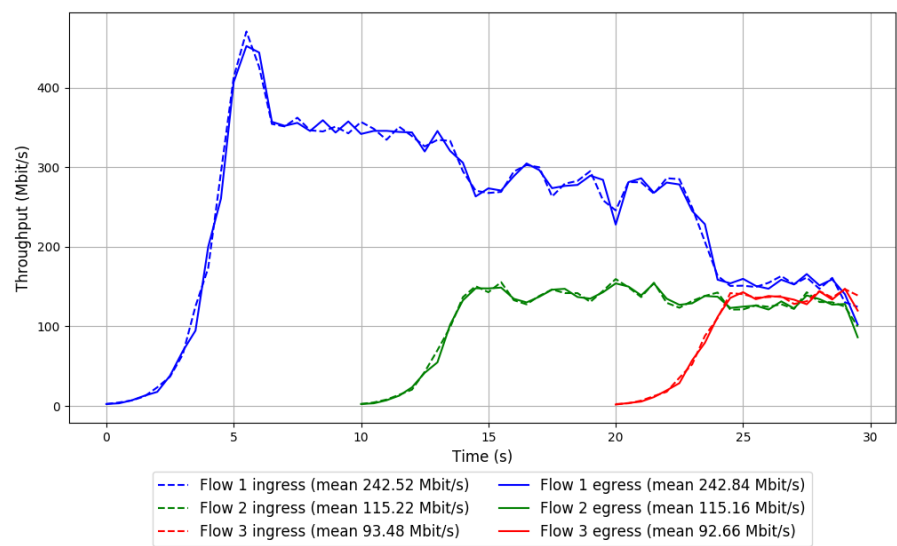
-- Flow 3:

Average throughput: 92.66 Mbit/s

95th percentile per-packet one-way delay: 71.895 ms

Loss rate: 1.87%

Run 6: Report of CalibratedKoho — Data Link



Run 7: Statistics of CalibratedKoho

Start at: 2017-08-31 20:16:08

End at: 2017-08-31 20:16:38

Below is generated by plot.py at 2017-09-01 00:23:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 353.23 Mbit/s

95th percentile per-packet one-way delay: 75.609 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 233.14 Mbit/s

95th percentile per-packet one-way delay: 75.327 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 133.19 Mbit/s

95th percentile per-packet one-way delay: 77.248 ms

Loss rate: 0.51%

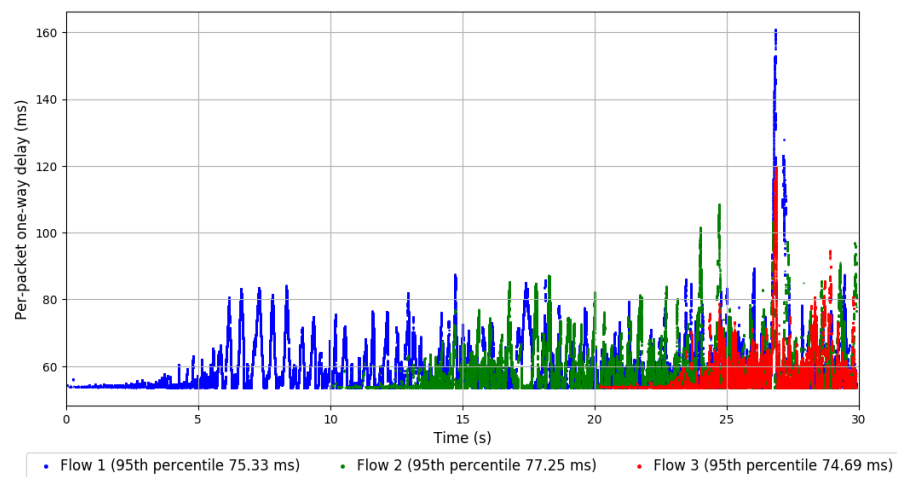
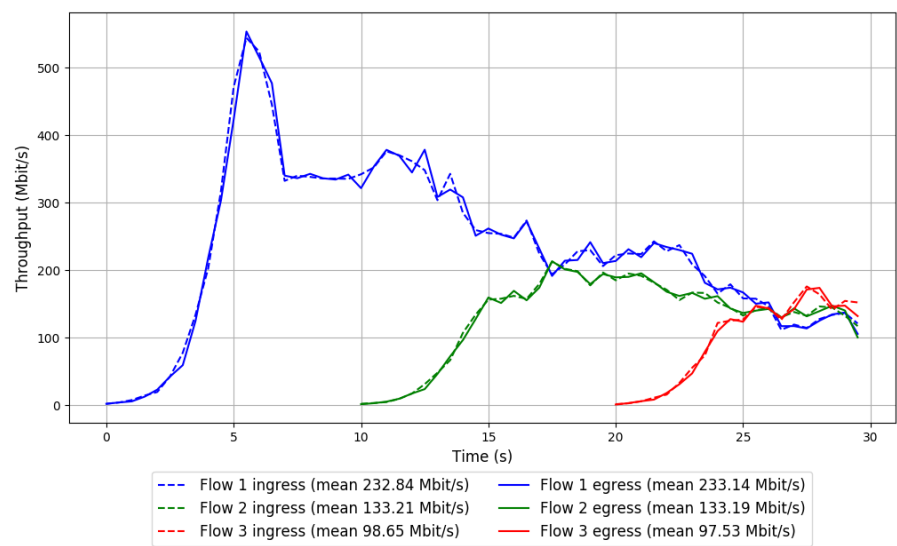
-- Flow 3:

Average throughput: 97.53 Mbit/s

95th percentile per-packet one-way delay: 74.688 ms

Loss rate: 2.15%

Run 7: Report of CalibratedKoho — Data Link



Run 8: Statistics of CalibratedKoho

Start at: 2017-08-31 20:28:03

End at: 2017-08-31 20:28:33

Below is generated by plot.py at 2017-09-01 00:23:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 350.15 Mbit/s

95th percentile per-packet one-way delay: 74.603 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 215.96 Mbit/s

95th percentile per-packet one-way delay: 76.241 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 156.73 Mbit/s

95th percentile per-packet one-way delay: 71.323 ms

Loss rate: 0.60%

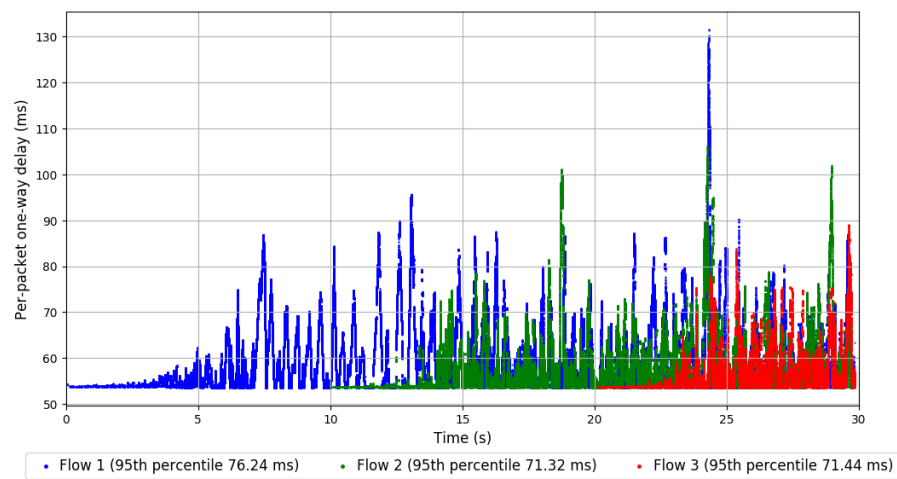
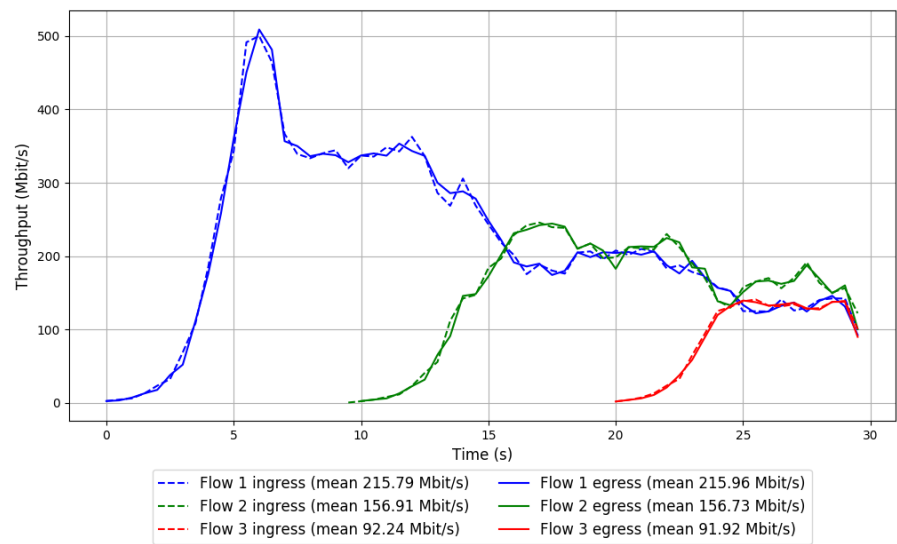
-- Flow 3:

Average throughput: 91.92 Mbit/s

95th percentile per-packet one-way delay: 71.444 ms

Loss rate: 1.49%

Run 8: Report of CalibratedKoho — Data Link



Run 9: Statistics of CalibratedKoho

Start at: 2017-08-31 20:40:12

End at: 2017-08-31 20:40:42

Below is generated by plot.py at 2017-09-01 00:24:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 355.24 Mbit/s

95th percentile per-packet one-way delay: 70.913 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 224.59 Mbit/s

95th percentile per-packet one-way delay: 70.184 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 152.72 Mbit/s

95th percentile per-packet one-way delay: 70.929 ms

Loss rate: 0.55%

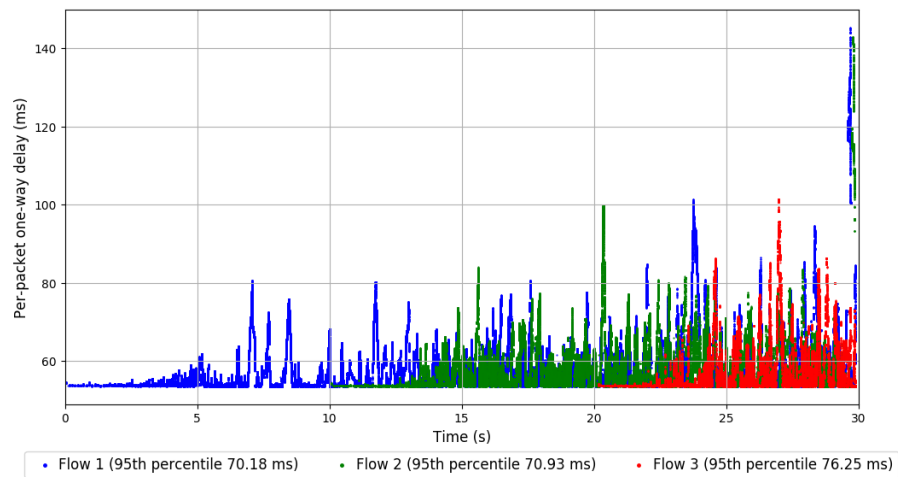
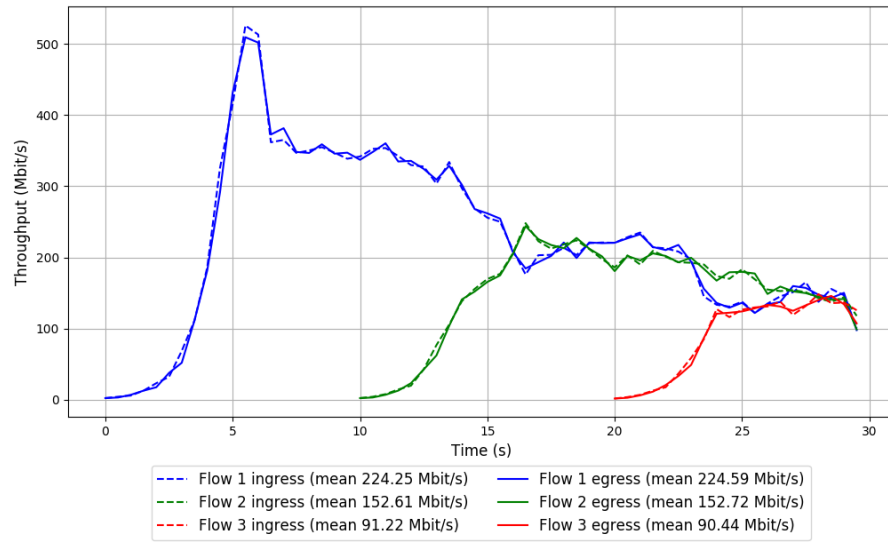
-- Flow 3:

Average throughput: 90.44 Mbit/s

95th percentile per-packet one-way delay: 76.254 ms

Loss rate: 1.80%

Run 9: Report of CalibratedKoho — Data Link



Run 10: Statistics of CalibratedKoho

Start at: 2017-08-31 20:52:14

End at: 2017-08-31 20:52:44

Below is generated by plot.py at 2017-09-01 00:24:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 353.15 Mbit/s

95th percentile per-packet one-way delay: 73.233 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 223.91 Mbit/s

95th percentile per-packet one-way delay: 73.805 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 145.50 Mbit/s

95th percentile per-packet one-way delay: 72.070 ms

Loss rate: 0.54%

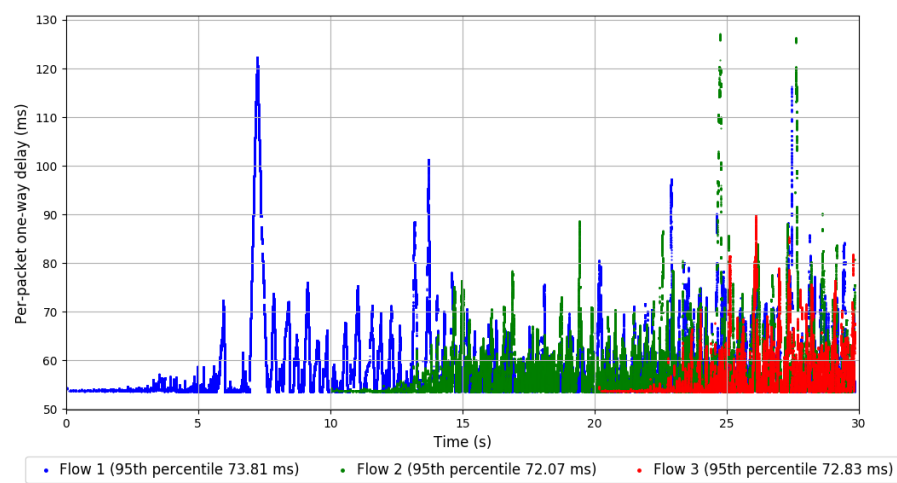
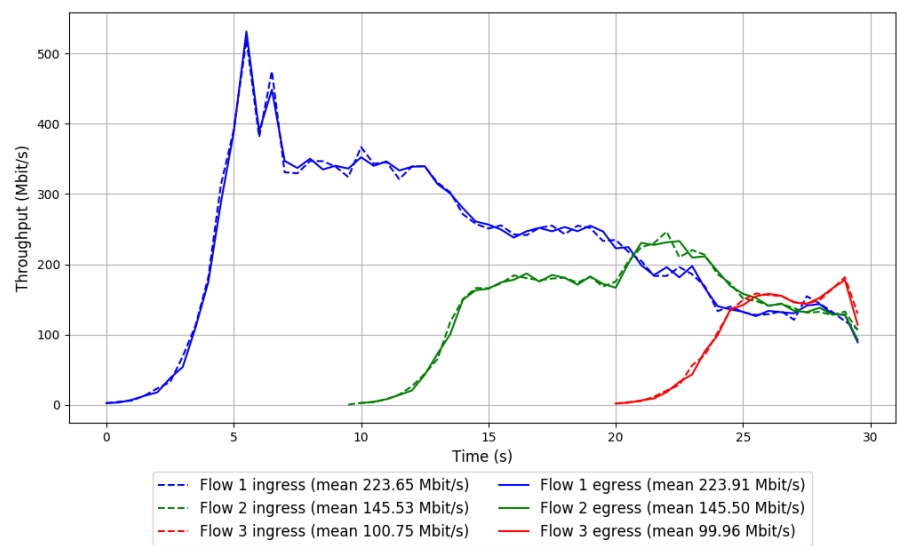
-- Flow 3:

Average throughput: 99.96 Mbit/s

95th percentile per-packet one-way delay: 72.835 ms

Loss rate: 1.86%

Run 10: Report of CalibratedKoho — Data Link



Run 1: Statistics of Copa

Start at: 2017-08-31 19:00:51

End at: 2017-08-31 19:01:21

Below is generated by plot.py at 2017-09-01 00:25:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.58 Mbit/s

95th percentile per-packet one-way delay: 53.789 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 56.10 Mbit/s

95th percentile per-packet one-way delay: 53.764 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 47.64 Mbit/s

95th percentile per-packet one-way delay: 53.760 ms

Loss rate: 0.53%

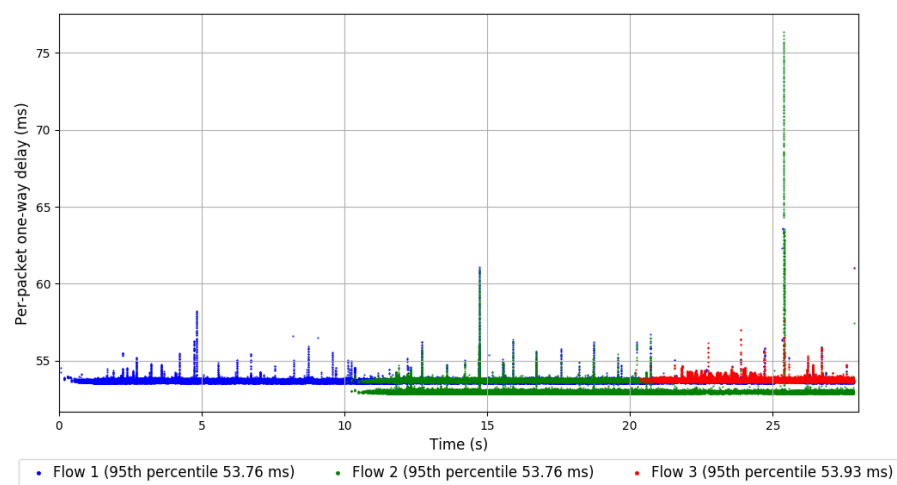
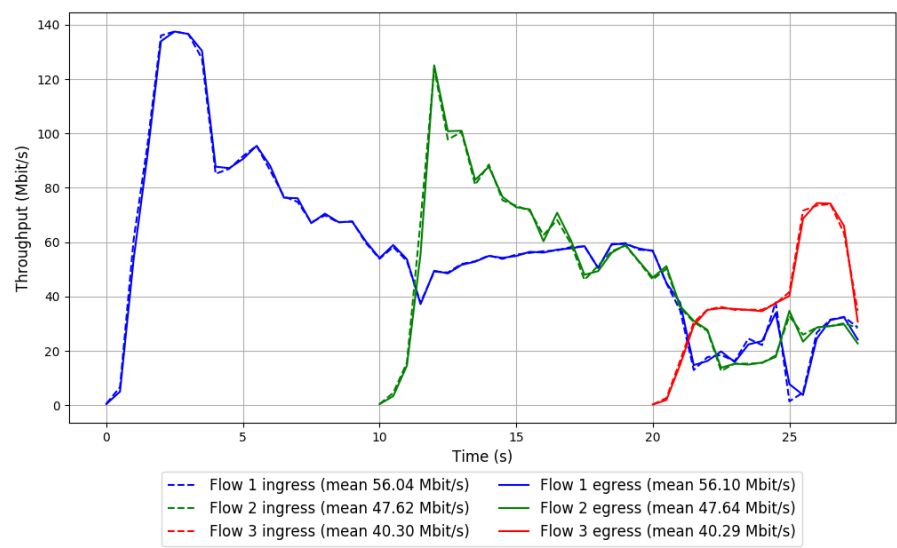
-- Flow 3:

Average throughput: 40.29 Mbit/s

95th percentile per-packet one-way delay: 53.934 ms

Loss rate: 1.37%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-08-31 19:13:12

End at: 2017-08-31 19:13:42

Below is generated by plot.py at 2017-09-01 00:25:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.79 Mbit/s

95th percentile per-packet one-way delay: 54.143 ms

Loss rate: 0.37%

-- Flow 1:

Average throughput: 54.86 Mbit/s

95th percentile per-packet one-way delay: 54.175 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 47.08 Mbit/s

95th percentile per-packet one-way delay: 53.902 ms

Loss rate: 0.44%

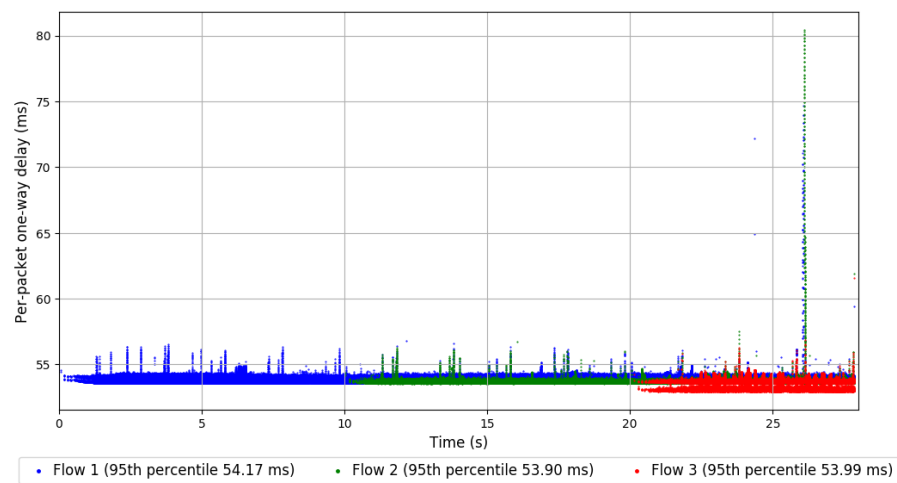
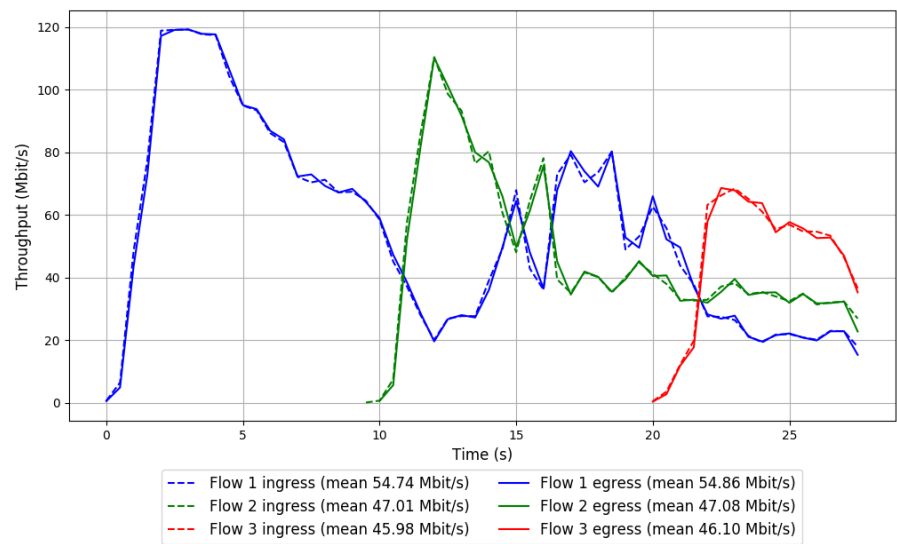
-- Flow 3:

Average throughput: 46.10 Mbit/s

95th percentile per-packet one-way delay: 53.994 ms

Loss rate: 1.09%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-08-31 19:25:12

End at: 2017-08-31 19:25:42

Below is generated by plot.py at 2017-09-01 00:26:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.46 Mbit/s

95th percentile per-packet one-way delay: 53.757 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 63.27 Mbit/s

95th percentile per-packet one-way delay: 53.748 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 49.47 Mbit/s

95th percentile per-packet one-way delay: 53.758 ms

Loss rate: 0.36%

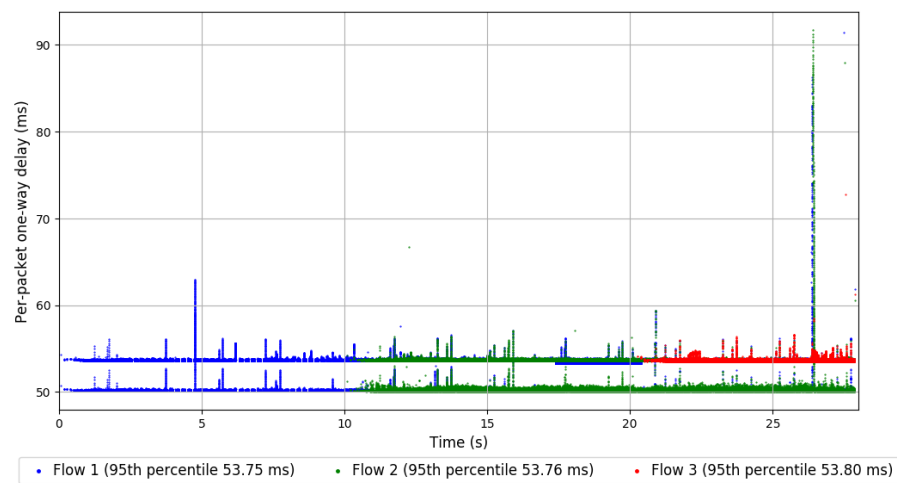
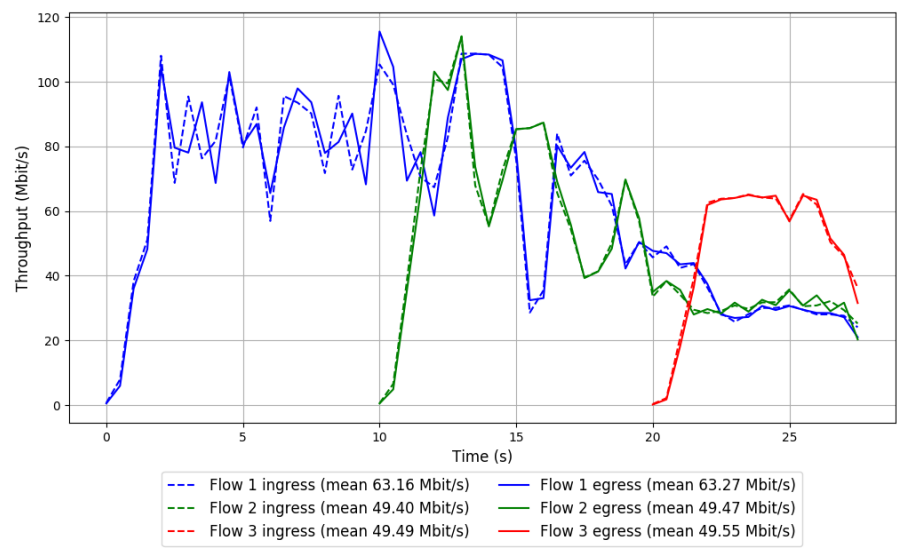
-- Flow 3:

Average throughput: 49.55 Mbit/s

95th percentile per-packet one-way delay: 53.804 ms

Loss rate: 1.15%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-08-31 19:37:15

End at: 2017-08-31 19:37:45

Below is generated by plot.py at 2017-09-01 00:26:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 103.27 Mbit/s

95th percentile per-packet one-way delay: 53.793 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 60.99 Mbit/s

95th percentile per-packet one-way delay: 53.783 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 50.24 Mbit/s

95th percentile per-packet one-way delay: 53.812 ms

Loss rate: 0.36%

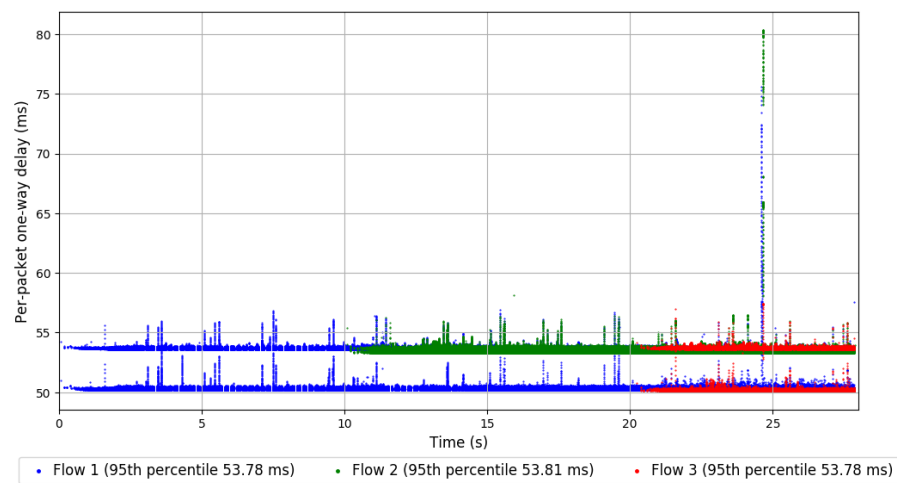
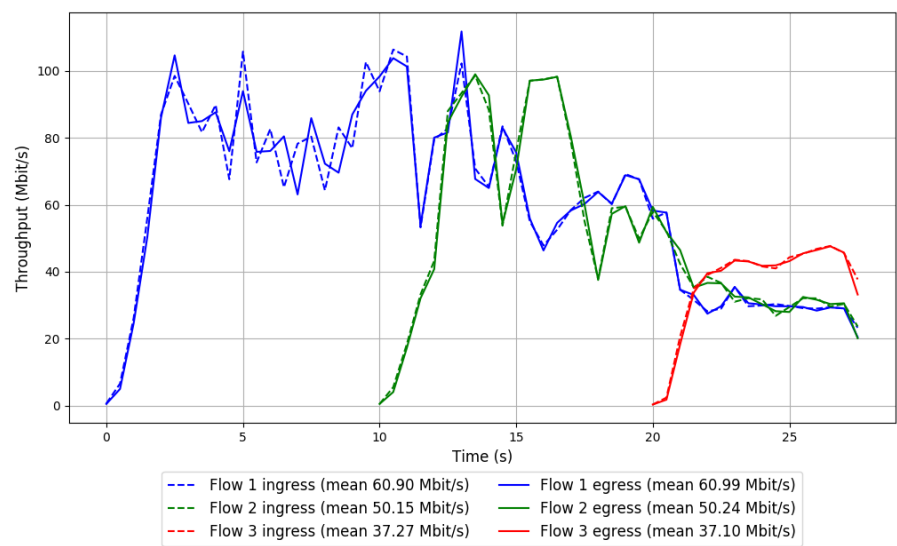
-- Flow 3:

Average throughput: 37.10 Mbit/s

95th percentile per-packet one-way delay: 53.784 ms

Loss rate: 1.67%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-08-31 19:49:21

End at: 2017-08-31 19:49:51

Below is generated by plot.py at 2017-09-01 00:26:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.30 Mbit/s

95th percentile per-packet one-way delay: 53.795 ms

Loss rate: 0.34%

-- Flow 1:

Average throughput: 82.01 Mbit/s

95th percentile per-packet one-way delay: 53.794 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 72.02 Mbit/s

95th percentile per-packet one-way delay: 53.804 ms

Loss rate: 0.00%

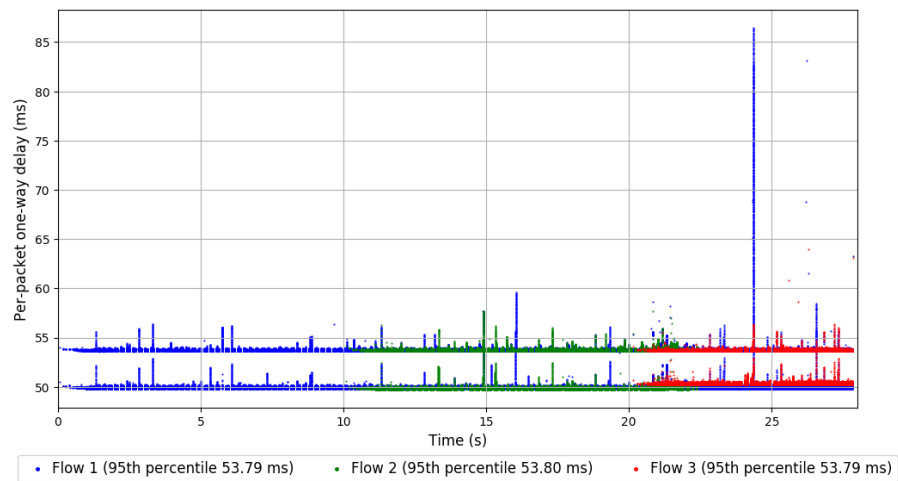
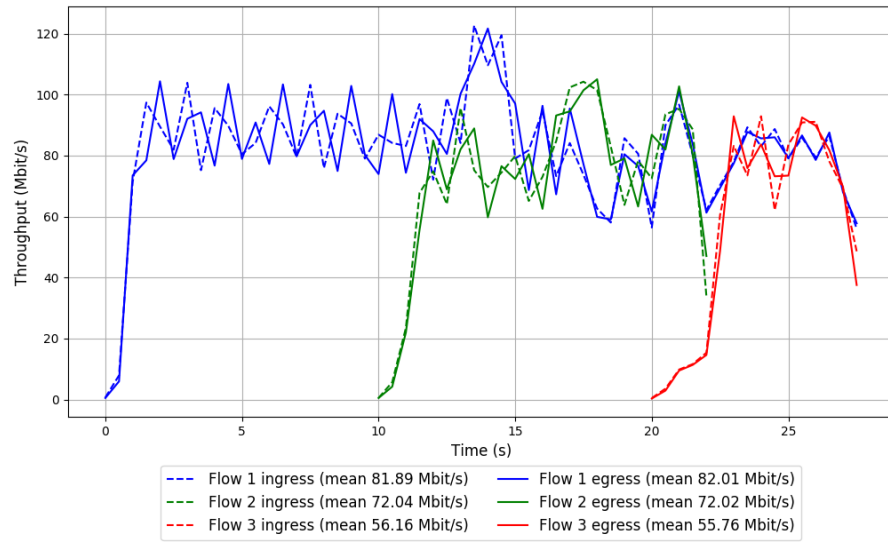
-- Flow 3:

Average throughput: 55.76 Mbit/s

95th percentile per-packet one-way delay: 53.791 ms

Loss rate: 1.90%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-08-31 20:01:25

End at: 2017-08-31 20:01:55

Below is generated by plot.py at 2017-09-01 00:26:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 103.23 Mbit/s

95th percentile per-packet one-way delay: 53.844 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 57.04 Mbit/s

95th percentile per-packet one-way delay: 53.746 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 49.11 Mbit/s

95th percentile per-packet one-way delay: 53.985 ms

Loss rate: 0.42%

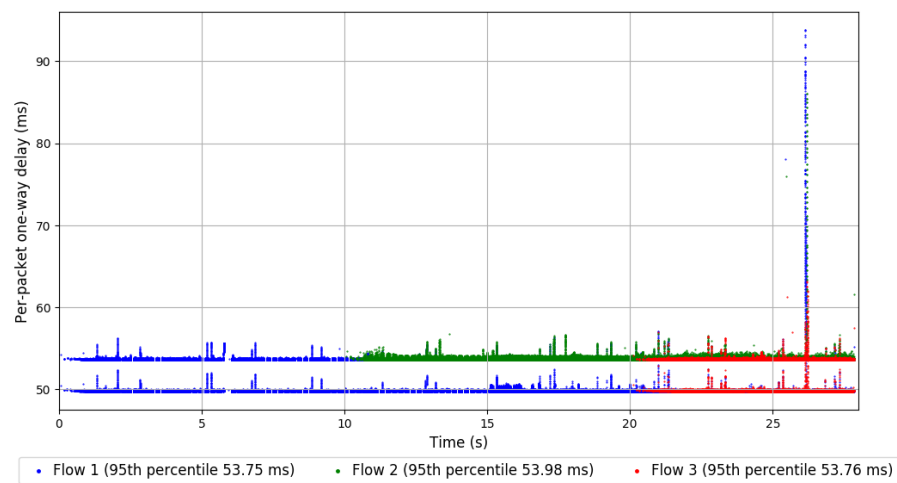
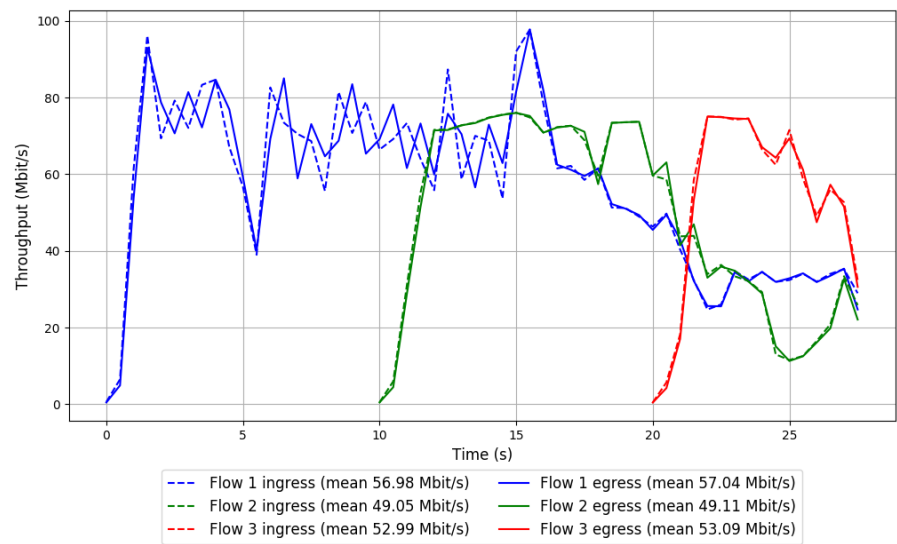
-- Flow 3:

Average throughput: 53.09 Mbit/s

95th percentile per-packet one-way delay: 53.755 ms

Loss rate: 1.04%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-08-31 20:13:38

End at: 2017-08-31 20:14:08

Below is generated by plot.py at 2017-09-01 00:27:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.52 Mbit/s

95th percentile per-packet one-way delay: 53.825 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 70.02 Mbit/s

95th percentile per-packet one-way delay: 53.793 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 66.33 Mbit/s

95th percentile per-packet one-way delay: 53.875 ms

Loss rate: 0.48%

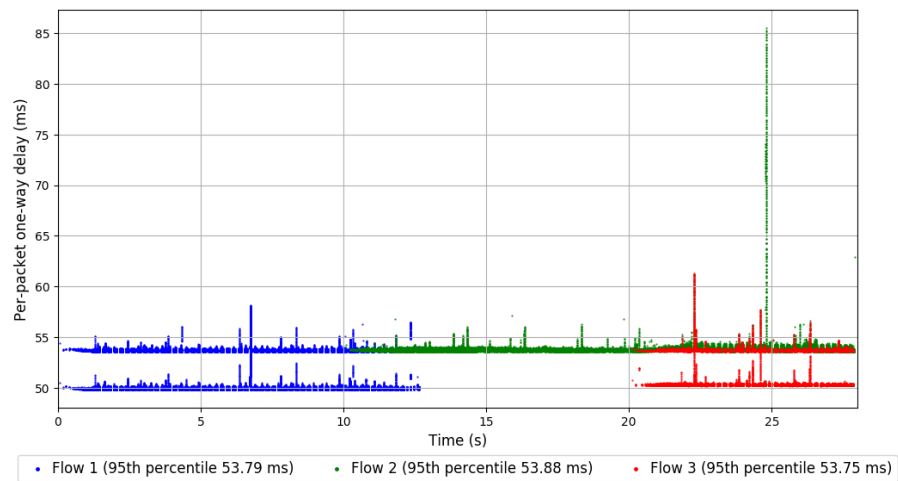
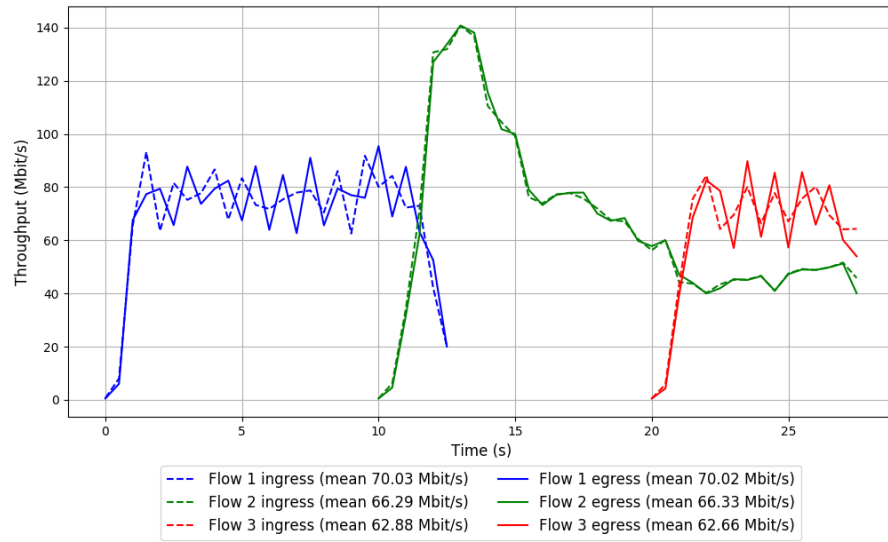
-- Flow 3:

Average throughput: 62.66 Mbit/s

95th percentile per-packet one-way delay: 53.748 ms

Loss rate: 1.76%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-08-31 20:25:30

End at: 2017-08-31 20:26:00

Below is generated by plot.py at 2017-09-01 00:27:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.24 Mbit/s

95th percentile per-packet one-way delay: 53.757 ms

Loss rate: 0.37%

-- Flow 1:

Average throughput: 69.36 Mbit/s

95th percentile per-packet one-way delay: 53.760 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 51.39 Mbit/s

95th percentile per-packet one-way delay: 53.754 ms

Loss rate: 0.42%

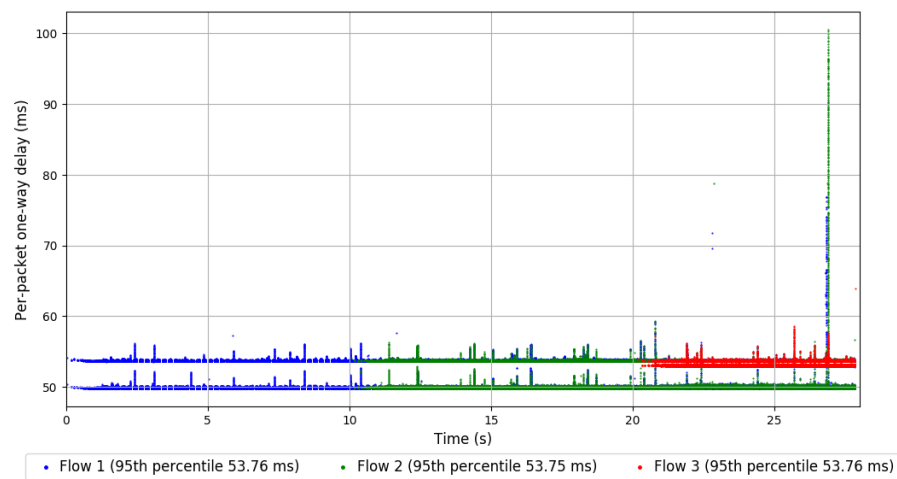
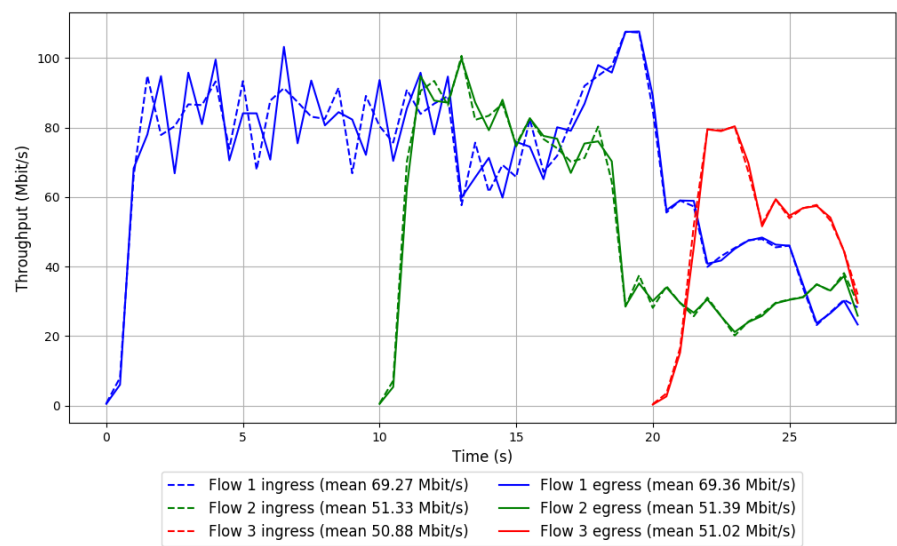
-- Flow 3:

Average throughput: 51.02 Mbit/s

95th percentile per-packet one-way delay: 53.755 ms

Loss rate: 0.99%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-08-31 20:37:36

End at: 2017-08-31 20:38:06

Below is generated by plot.py at 2017-09-01 00:27:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.71 Mbit/s

95th percentile per-packet one-way delay: 53.765 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 66.27 Mbit/s

95th percentile per-packet one-way delay: 53.771 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 50.57 Mbit/s

95th percentile per-packet one-way delay: 53.757 ms

Loss rate: 0.38%

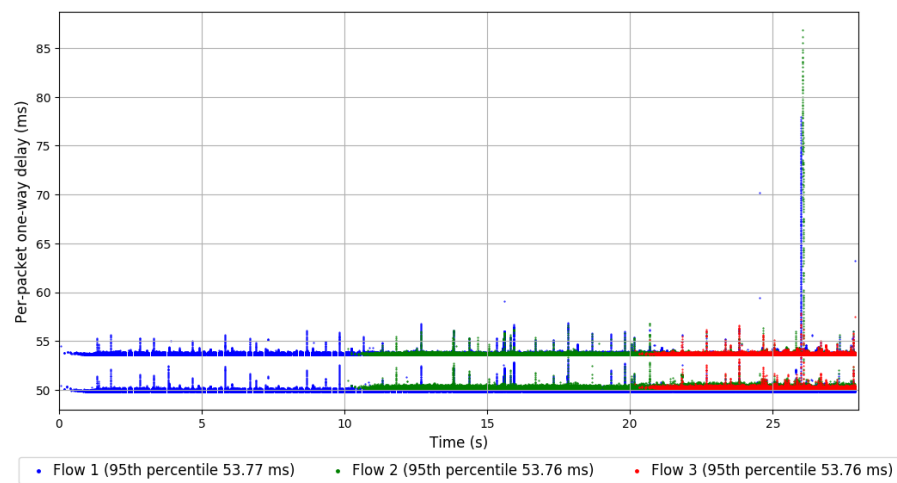
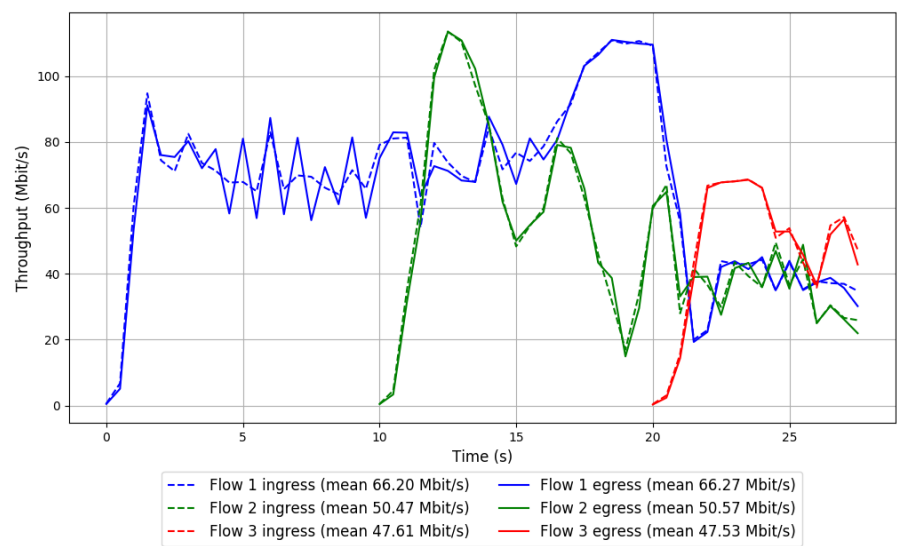
-- Flow 3:

Average throughput: 47.53 Mbit/s

95th percentile per-packet one-way delay: 53.755 ms

Loss rate: 1.50%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-08-31 20:49:37

End at: 2017-08-31 20:50:07

Below is generated by plot.py at 2017-09-01 00:28:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.07 Mbit/s

95th percentile per-packet one-way delay: 53.771 ms

Loss rate: 0.31%

-- Flow 1:

Average throughput: 60.30 Mbit/s

95th percentile per-packet one-way delay: 53.767 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 53.20 Mbit/s

95th percentile per-packet one-way delay: 53.766 ms

Loss rate: 0.31%

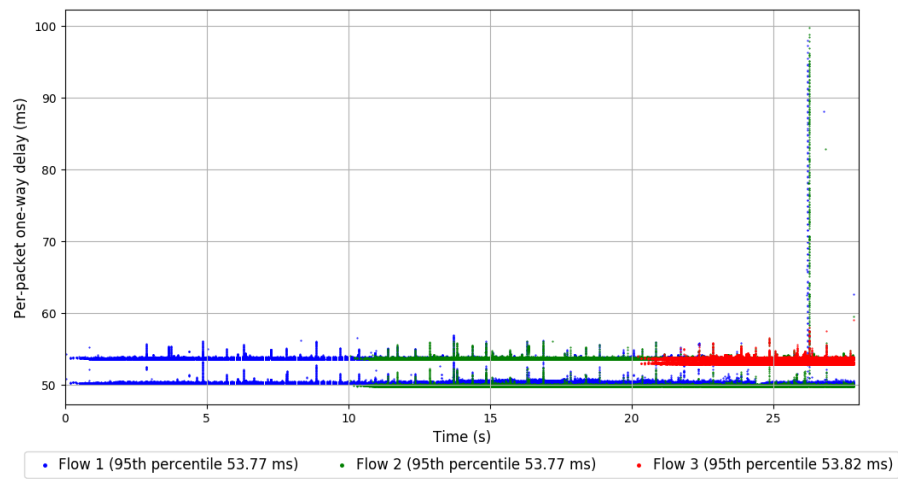
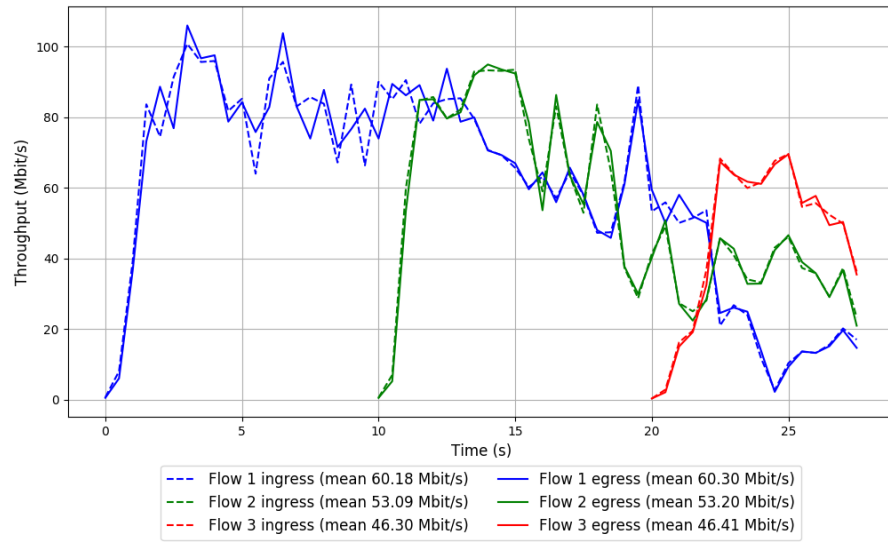
-- Flow 3:

Average throughput: 46.41 Mbit/s

95th percentile per-packet one-way delay: 53.821 ms

Loss rate: 1.08%

Run 10: Report of Copa — Data Link

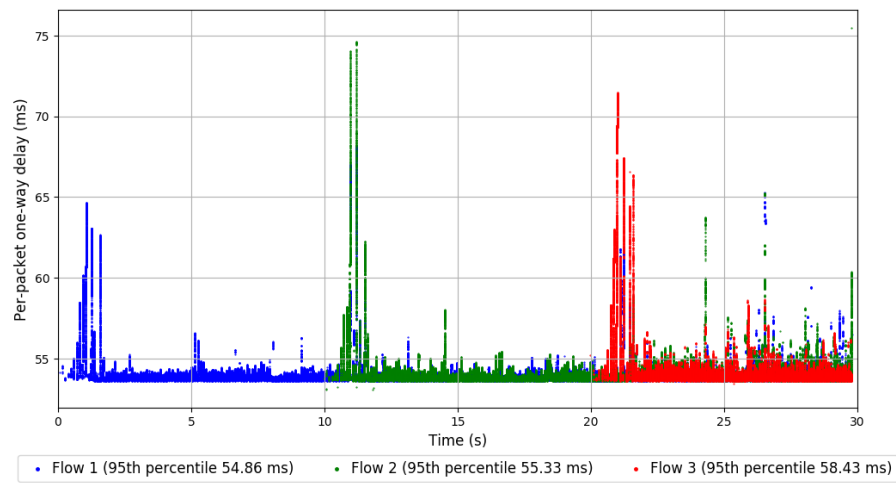
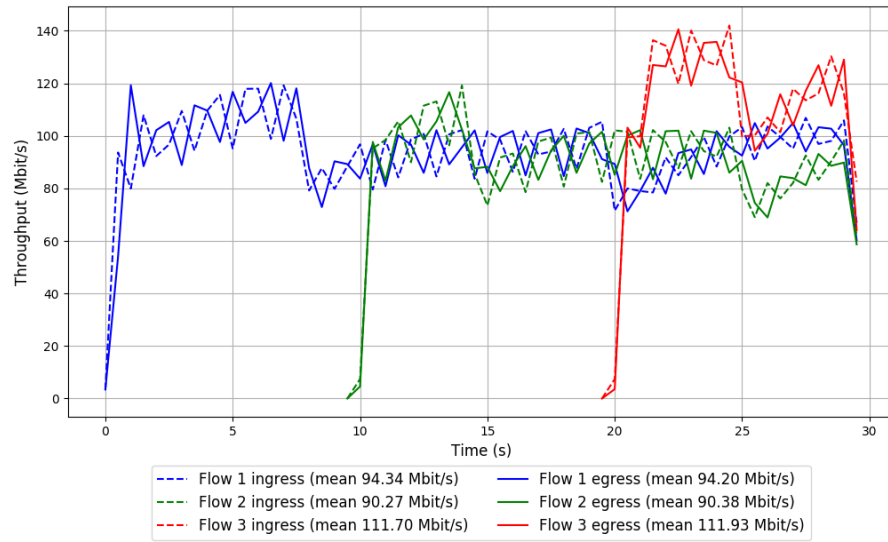


```
Run 1: Statistics of TCP Cubic

Start at: 2017-08-31 18:57:53
End at: 2017-08-31 18:58:23

# Below is generated by plot.py at 2017-09-01 00:28:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 191.21 Mbit/s
95th percentile per-packet one-way delay: 55.485 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 94.20 Mbit/s
95th percentile per-packet one-way delay: 54.858 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 90.38 Mbit/s
95th percentile per-packet one-way delay: 55.327 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 111.93 Mbit/s
95th percentile per-packet one-way delay: 58.432 ms
Loss rate: 1.23%
```

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-08-31 19:10:13

End at: 2017-08-31 19:10:43

Below is generated by plot.py at 2017-09-01 00:28:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 199.28 Mbit/s

95th percentile per-packet one-way delay: 58.365 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 130.00 Mbit/s

95th percentile per-packet one-way delay: 58.706 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 49.86 Mbit/s

95th percentile per-packet one-way delay: 56.197 ms

Loss rate: 2.29%

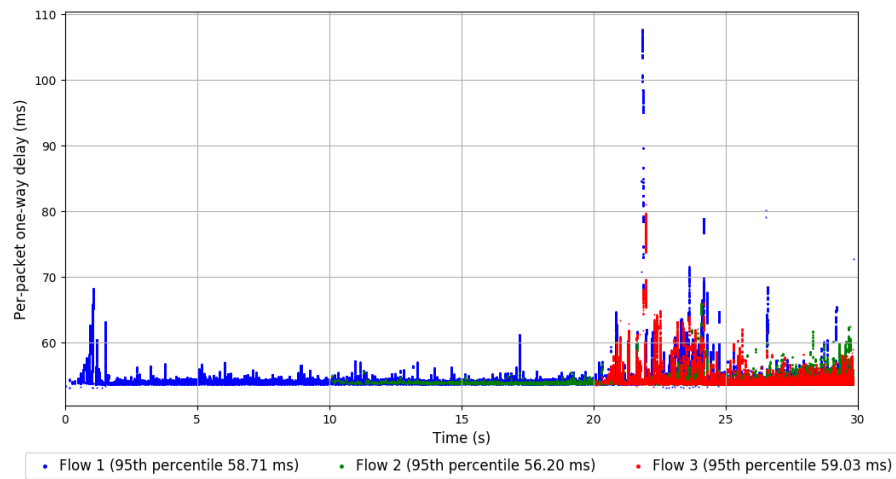
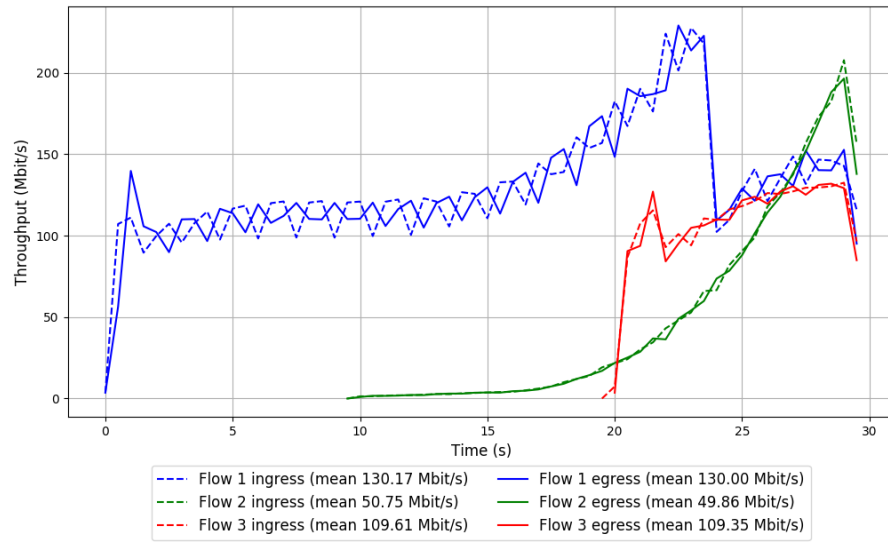
-- Flow 3:

Average throughput: 109.35 Mbit/s

95th percentile per-packet one-way delay: 59.033 ms

Loss rate: 1.30%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-08-31 19:22:13

End at: 2017-08-31 19:22:43

Below is generated by plot.py at 2017-09-01 00:29:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 222.09 Mbit/s

95th percentile per-packet one-way delay: 58.785 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 120.81 Mbit/s

95th percentile per-packet one-way delay: 58.023 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 99.53 Mbit/s

95th percentile per-packet one-way delay: 59.065 ms

Loss rate: 0.54%

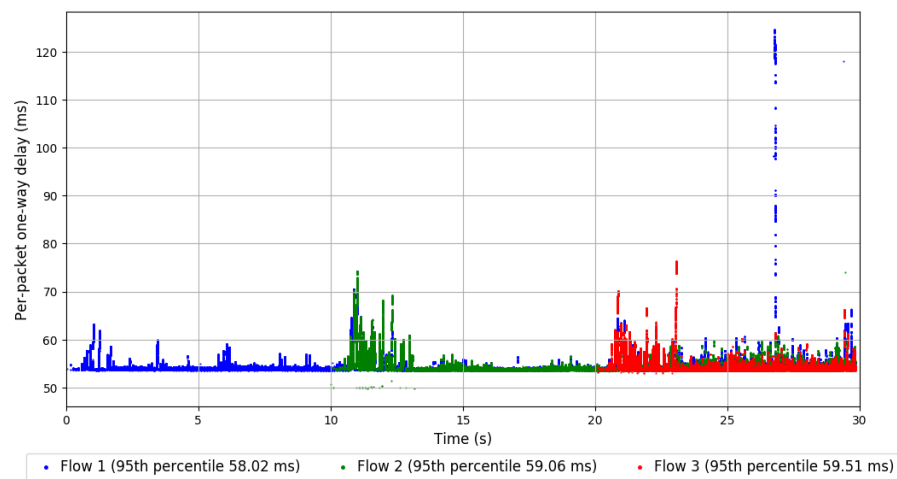
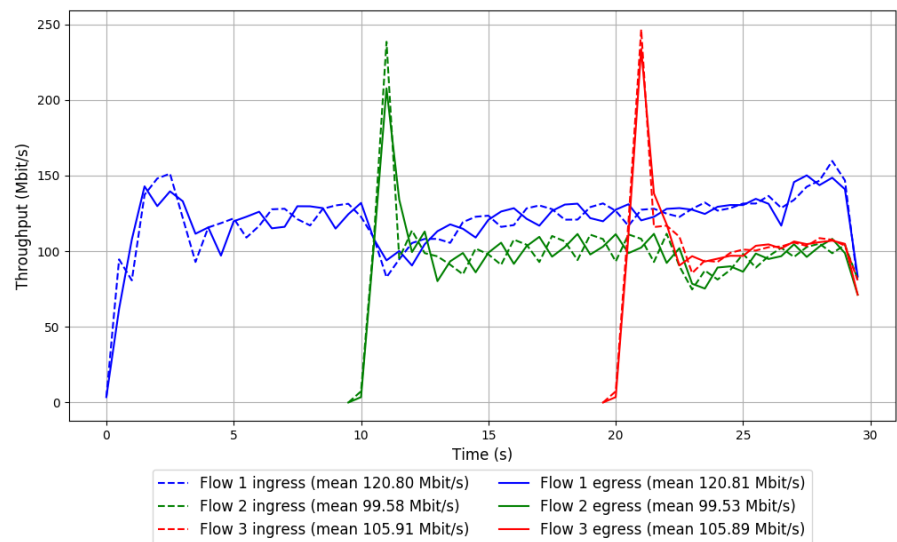
-- Flow 3:

Average throughput: 105.89 Mbit/s

95th percentile per-packet one-way delay: 59.506 ms

Loss rate: 1.00%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-08-31 19:34:19

End at: 2017-08-31 19:34:49

Below is generated by plot.py at 2017-09-01 00:29:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 166.79 Mbit/s

95th percentile per-packet one-way delay: 57.073 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 110.27 Mbit/s

95th percentile per-packet one-way delay: 56.004 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 26.26 Mbit/s

95th percentile per-packet one-way delay: 55.571 ms

Loss rate: 1.47%

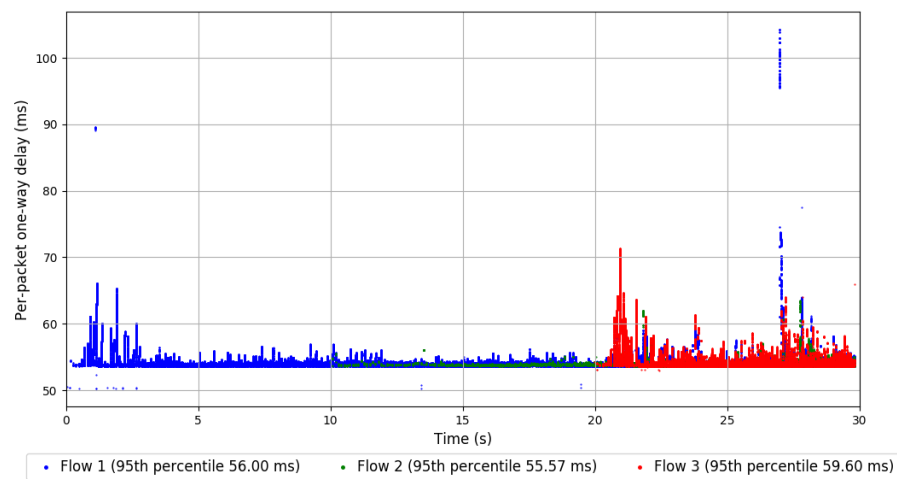
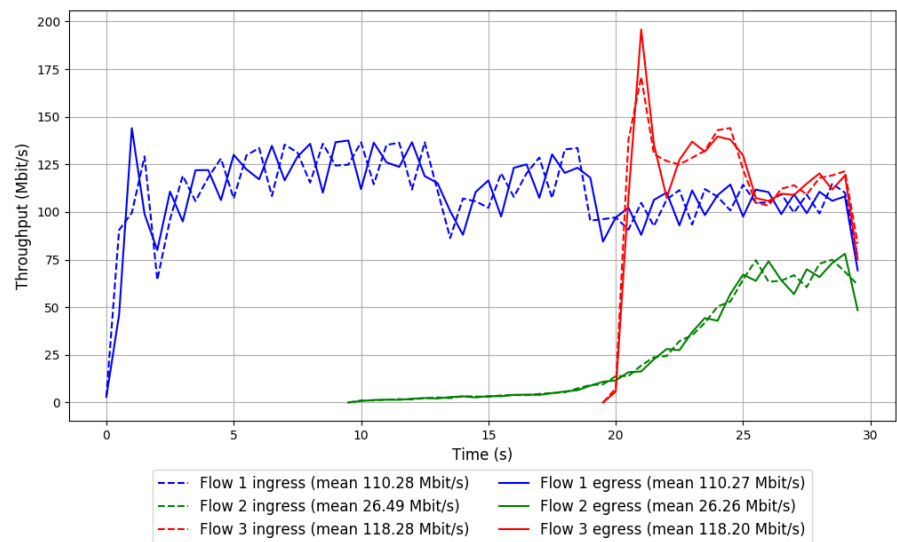
-- Flow 3:

Average throughput: 118.20 Mbit/s

95th percentile per-packet one-way delay: 59.604 ms

Loss rate: 1.07%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-08-31 19:46:18

End at: 2017-08-31 19:46:48

Below is generated by plot.py at 2017-09-01 00:30:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 273.25 Mbit/s

95th percentile per-packet one-way delay: 65.213 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 148.31 Mbit/s

95th percentile per-packet one-way delay: 60.239 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 123.88 Mbit/s

95th percentile per-packet one-way delay: 67.000 ms

Loss rate: 0.52%

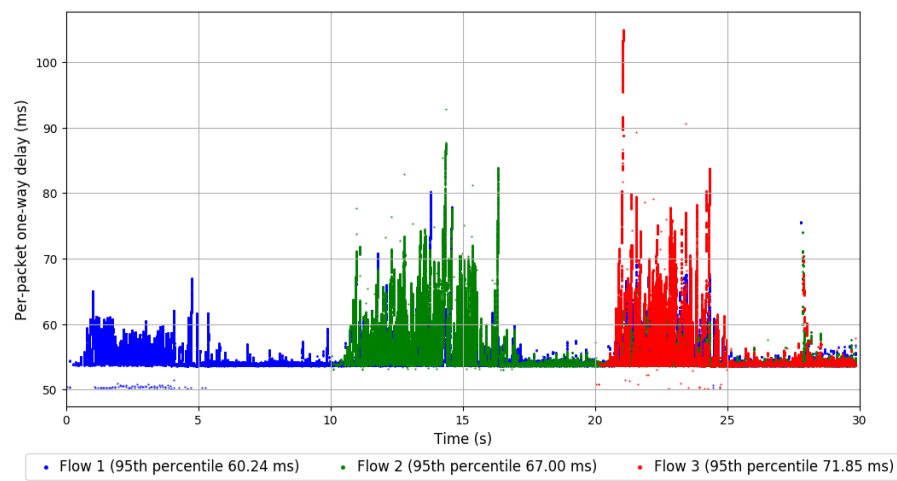
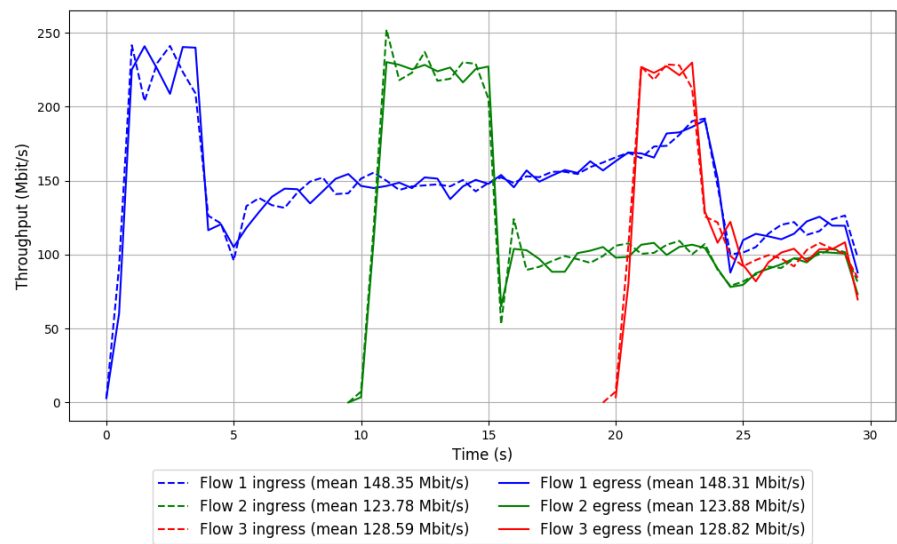
-- Flow 3:

Average throughput: 128.82 Mbit/s

95th percentile per-packet one-way delay: 71.853 ms

Loss rate: 0.96%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-08-31 19:58:18

End at: 2017-08-31 19:58:48

Below is generated by plot.py at 2017-09-01 00:30:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 293.34 Mbit/s

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

Loss rate: 0.43%

-- Flow 1:

Average throughput: 163.95 Mbit/s

95th percentile per-packet one-way delay: 66.430 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 144.56 Mbit/s

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

Loss rate: 0.61%

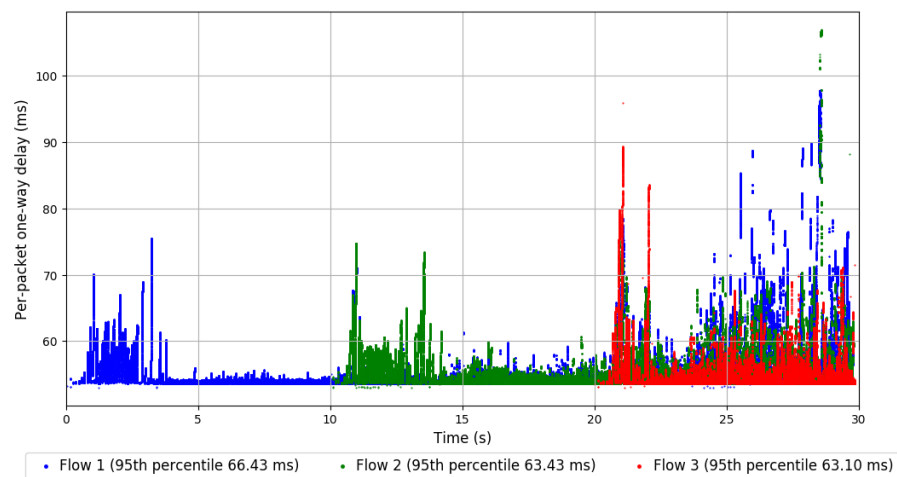
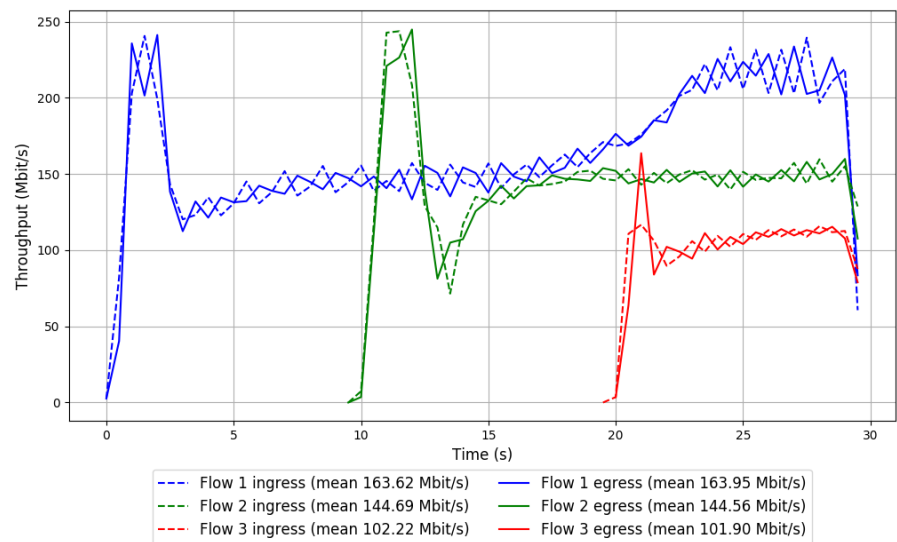
-- Flow 3:

Average throughput: 101.90 Mbit/s

95th percentile per-packet one-way delay: 63.102 ms

Loss rate: 1.20%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-08-31 20:10:38

End at: 2017-08-31 20:11:08

Below is generated by plot.py at 2017-09-01 00:30:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 235.69 Mbit/s

95th percentile per-packet one-way delay: 58.225 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 108.57 Mbit/s

95th percentile per-packet one-way delay: 57.385 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 133.53 Mbit/s

95th percentile per-packet one-way delay: 58.131 ms

Loss rate: 0.35%

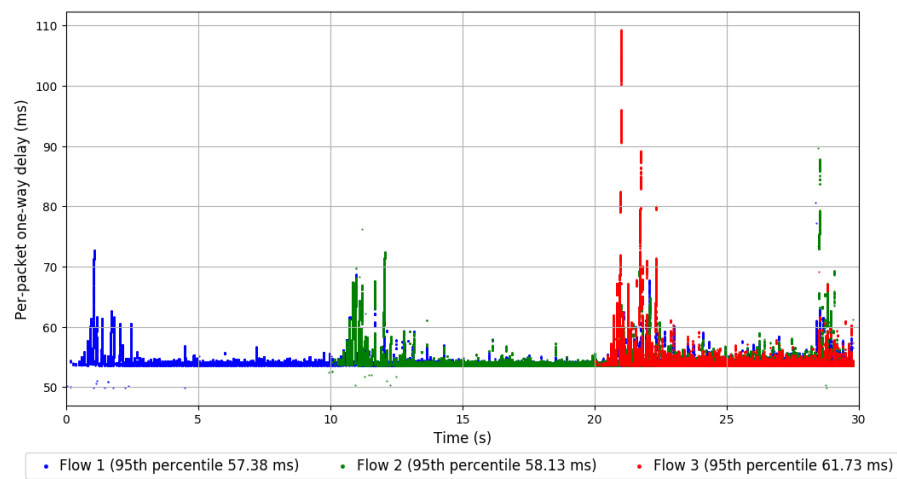
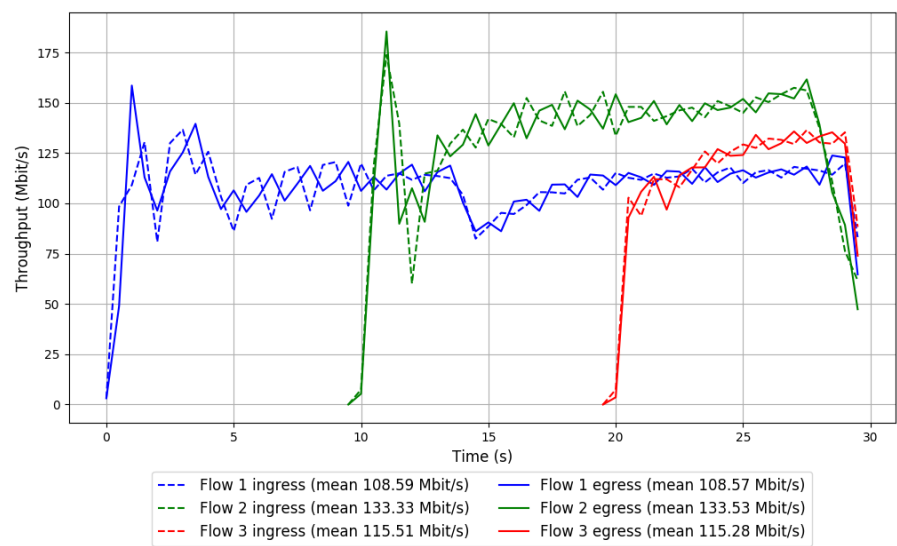
-- Flow 3:

Average throughput: 115.28 Mbit/s

95th percentile per-packet one-way delay: 61.733 ms

Loss rate: 1.25%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-08-31 20:22:27

End at: 2017-08-31 20:22:57

Below is generated by plot.py at 2017-09-01 00:31:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 276.46 Mbit/s

95th percentile per-packet one-way delay: 57.661 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 115.42 Mbit/s

95th percentile per-packet one-way delay: 57.105 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 182.64 Mbit/s

95th percentile per-packet one-way delay: 57.803 ms

Loss rate: 0.64%

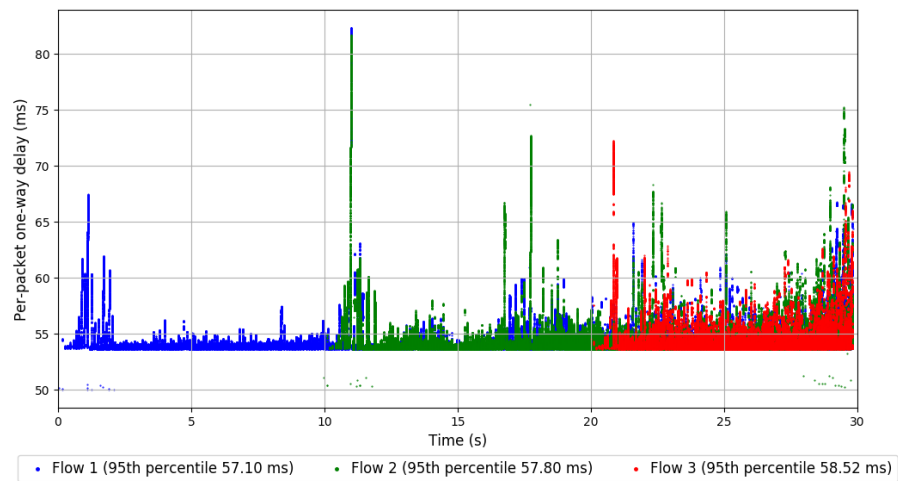
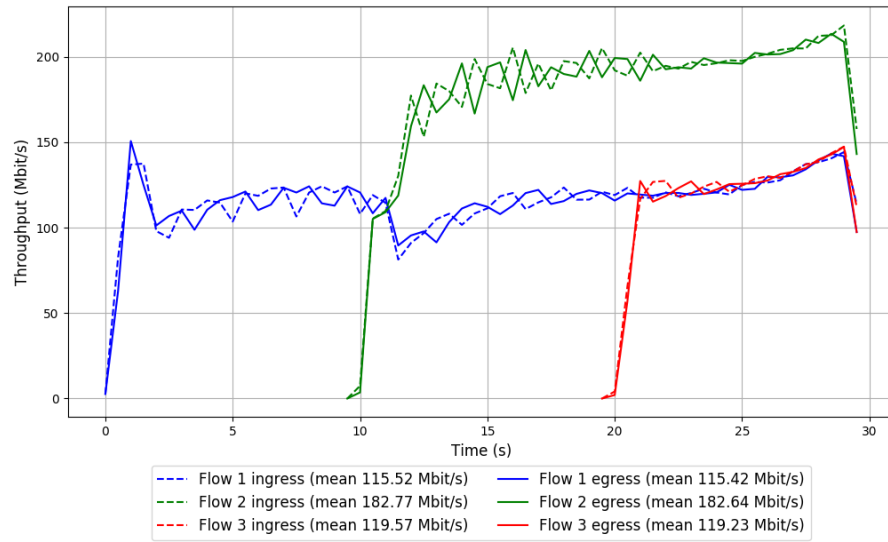
-- Flow 3:

Average throughput: 119.23 Mbit/s

95th percentile per-packet one-way delay: 58.515 ms

Loss rate: 1.31%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-08-31 20:34:33

End at: 2017-08-31 20:35:03

Below is generated by plot.py at 2017-09-01 00:31:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 286.25 Mbit/s

95th percentile per-packet one-way delay: 60.490 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 177.82 Mbit/s

95th percentile per-packet one-way delay: 60.305 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 106.91 Mbit/s

95th percentile per-packet one-way delay: 57.147 ms

Loss rate: 0.79%

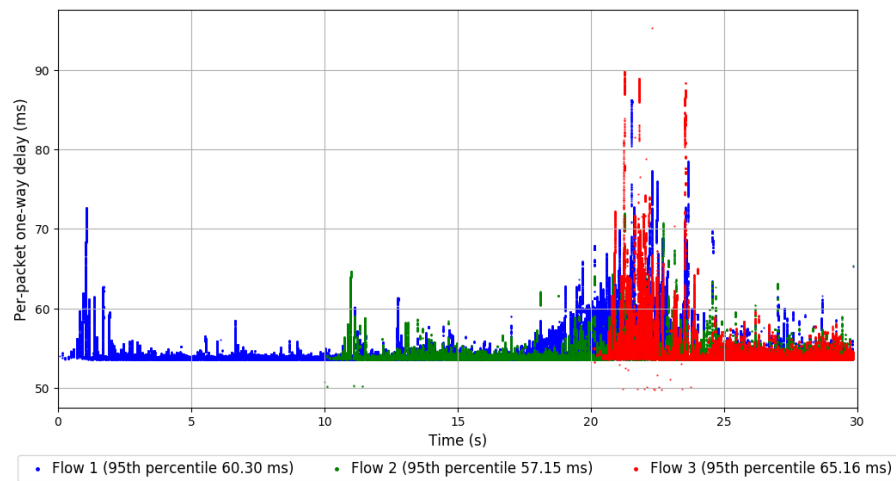
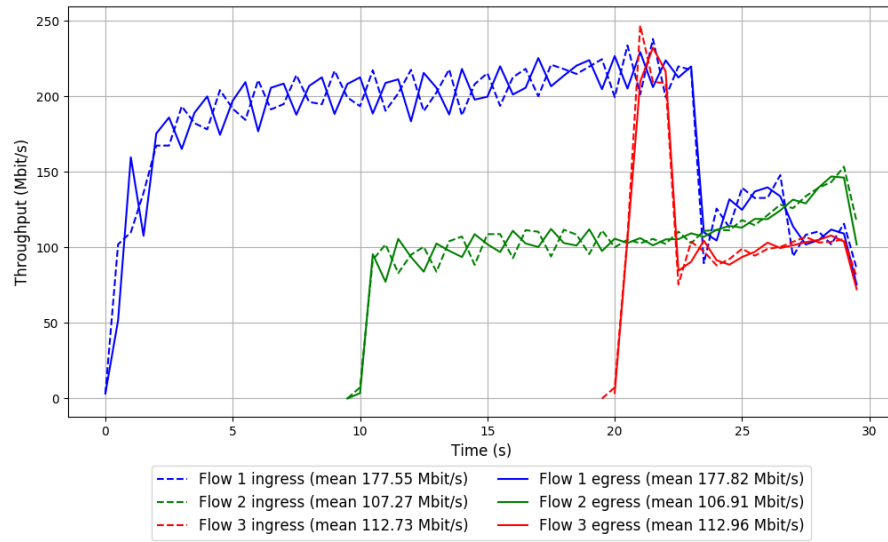
-- Flow 3:

Average throughput: 112.96 Mbit/s

95th percentile per-packet one-way delay: 65.157 ms

Loss rate: 0.85%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-08-31 20:46:38

End at: 2017-08-31 20:47:08

Below is generated by plot.py at 2017-09-01 00:31:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 223.80 Mbit/s

95th percentile per-packet one-way delay: 61.457 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 131.02 Mbit/s

95th percentile per-packet one-way delay: 62.224 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 95.93 Mbit/s

95th percentile per-packet one-way delay: 59.445 ms

Loss rate: 0.53%

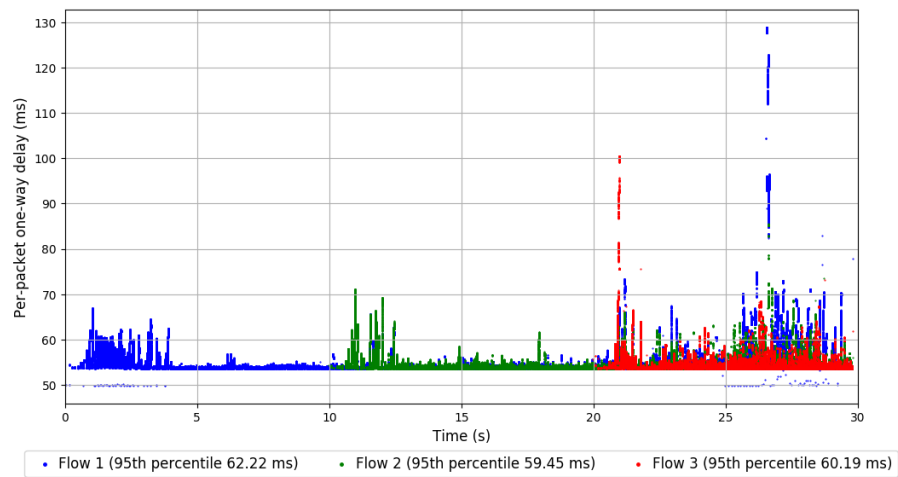
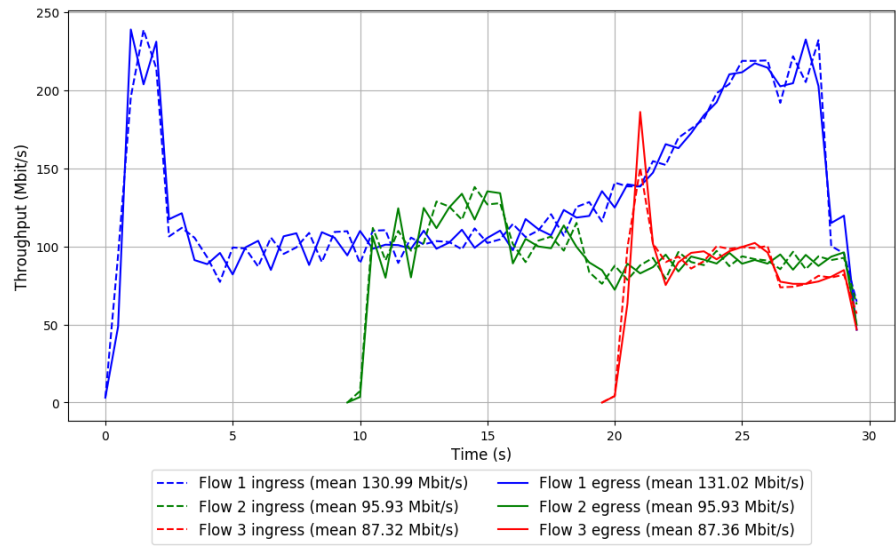
-- Flow 3:

Average throughput: 87.36 Mbit/s

95th percentile per-packet one-way delay: 60.188 ms

Loss rate: 1.01%

Run 10: Report of TCP Cubic — Data Link

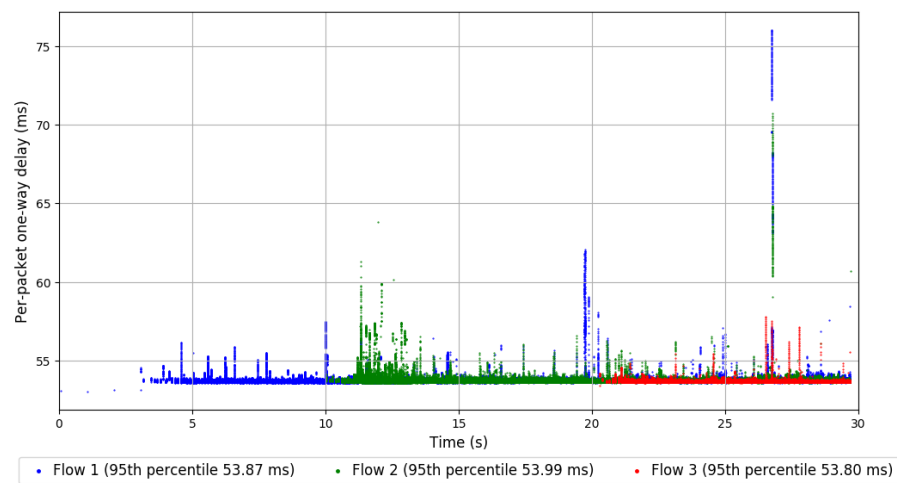
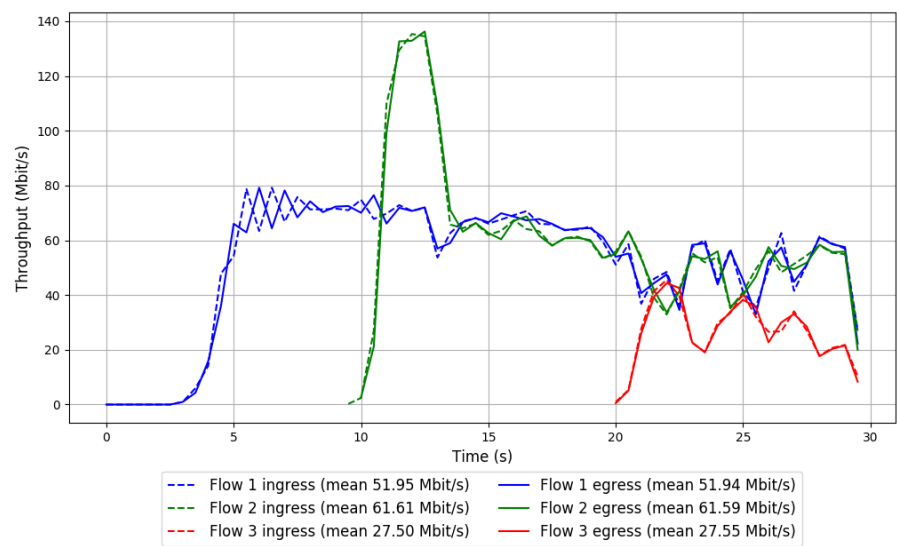


```
Run 1: Statistics of Indigo

Start at: 2017-08-31 18:58:43
End at: 2017-08-31 18:59:13

# Below is generated by plot.py at 2017-09-01 00:32:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 101.51 Mbit/s
95th percentile per-packet one-way delay: 53.915 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 51.94 Mbit/s
95th percentile per-packet one-way delay: 53.871 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 61.59 Mbit/s
95th percentile per-packet one-way delay: 53.993 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 27.55 Mbit/s
95th percentile per-packet one-way delay: 53.805 ms
Loss rate: 0.88%
```


Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2017-08-31 19:11:04

End at: 2017-08-31 19:11:34

Below is generated by plot.py at 2017-09-01 00:32:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.57 Mbit/s

95th percentile per-packet one-way delay: 53.892 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 58.05 Mbit/s

95th percentile per-packet one-way delay: 53.899 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 46.44 Mbit/s

95th percentile per-packet one-way delay: 53.848 ms

Loss rate: 0.60%

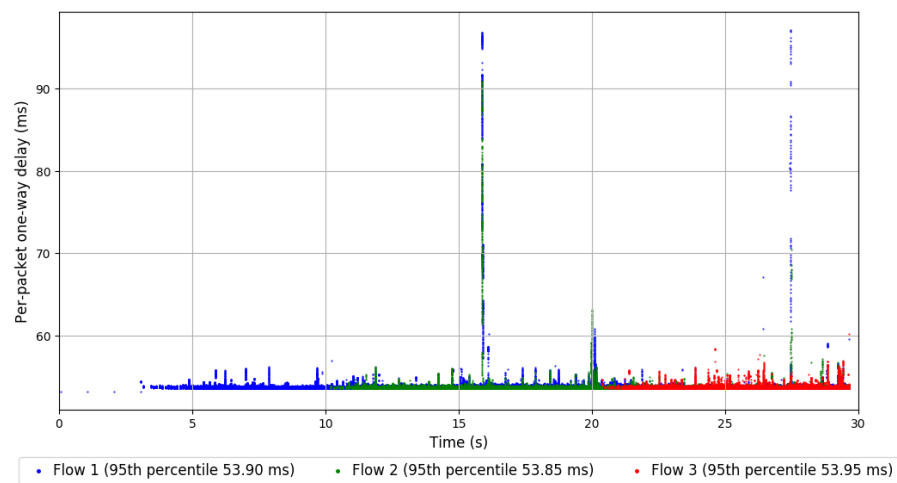
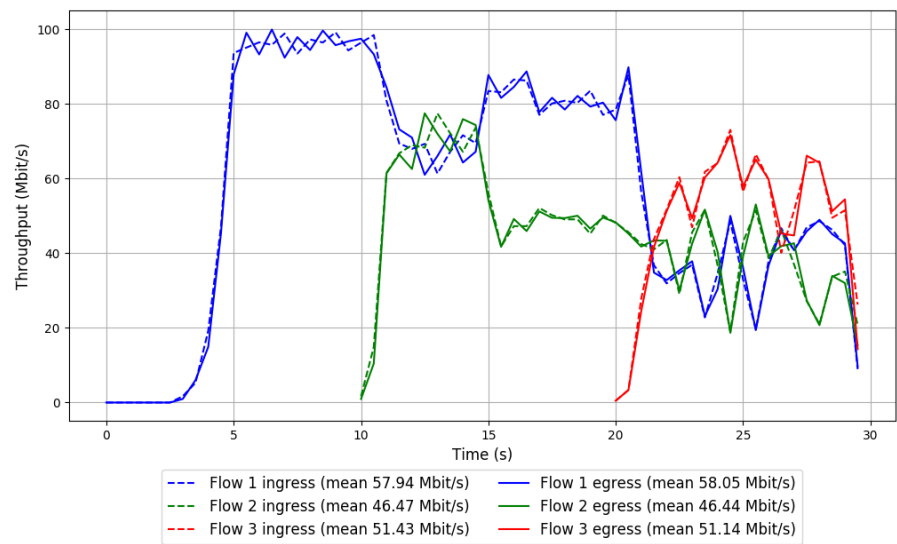
-- Flow 3:

Average throughput: 51.14 Mbit/s

95th percentile per-packet one-way delay: 53.946 ms

Loss rate: 1.54%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2017-08-31 19:23:05

End at: 2017-08-31 19:23:35

Below is generated by plot.py at 2017-09-01 00:32:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.45 Mbit/s

95th percentile per-packet one-way delay: 53.880 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 49.17 Mbit/s

95th percentile per-packet one-way delay: 53.860 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 59.16 Mbit/s

95th percentile per-packet one-way delay: 53.919 ms

Loss rate: 0.42%

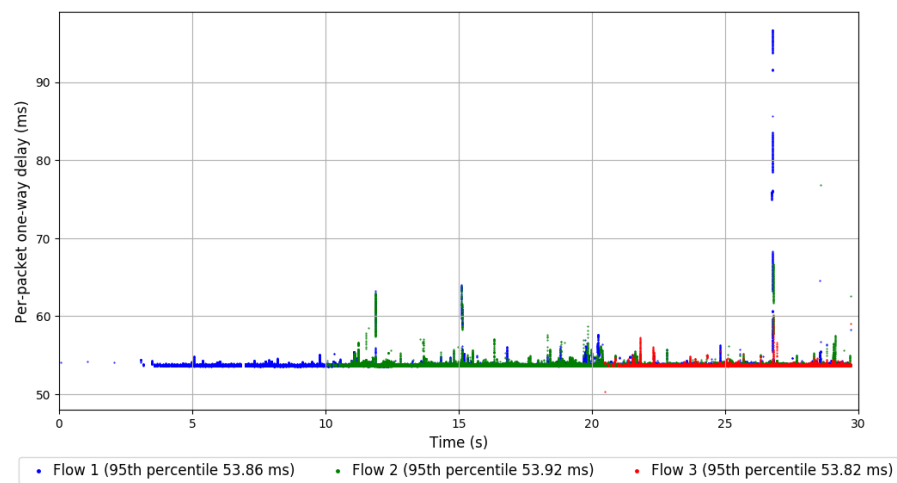
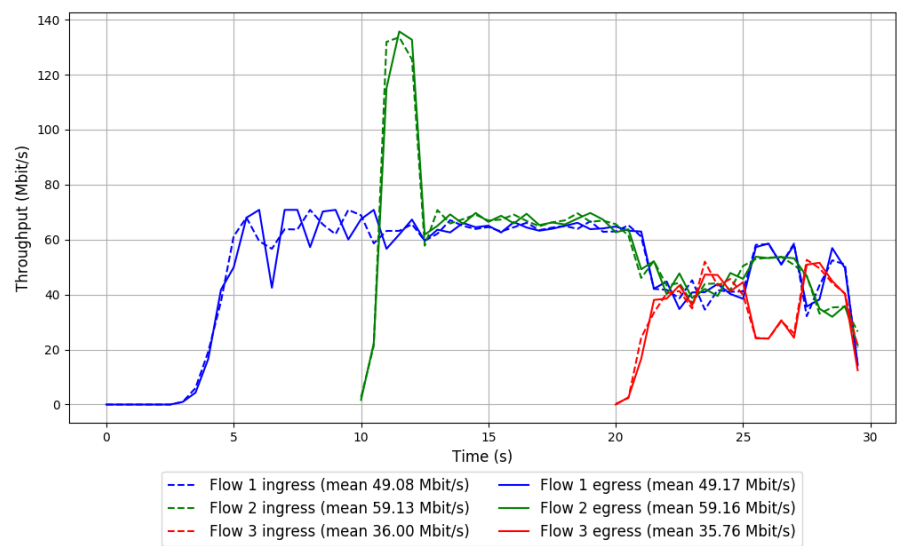
-- Flow 3:

Average throughput: 35.76 Mbit/s

95th percentile per-packet one-way delay: 53.820 ms

Loss rate: 1.72%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2017-08-31 19:35:07

End at: 2017-08-31 19:35:37

Below is generated by plot.py at 2017-09-01 00:32:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.27 Mbit/s

95th percentile per-packet one-way delay: 53.952 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 46.39 Mbit/s

95th percentile per-packet one-way delay: 53.898 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 61.67 Mbit/s

95th percentile per-packet one-way delay: 54.062 ms

Loss rate: 0.37%

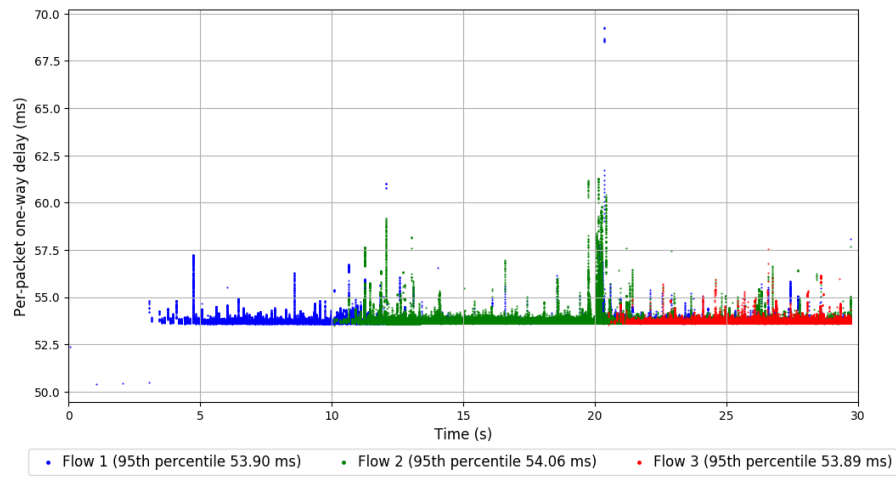
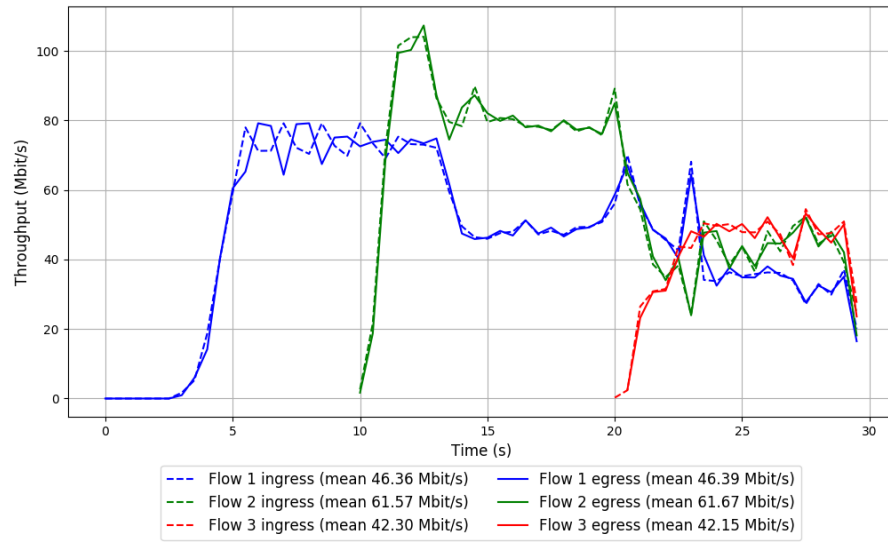
-- Flow 3:

Average throughput: 42.15 Mbit/s

95th percentile per-packet one-way delay: 53.890 ms

Loss rate: 1.51%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2017-08-31 19:47:14

End at: 2017-08-31 19:47:44

Below is generated by plot.py at 2017-09-01 00:32:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.50 Mbit/s

95th percentile per-packet one-way delay: 53.916 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 52.42 Mbit/s

95th percentile per-packet one-way delay: 53.901 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 55.93 Mbit/s

95th percentile per-packet one-way delay: 53.962 ms

Loss rate: 0.36%

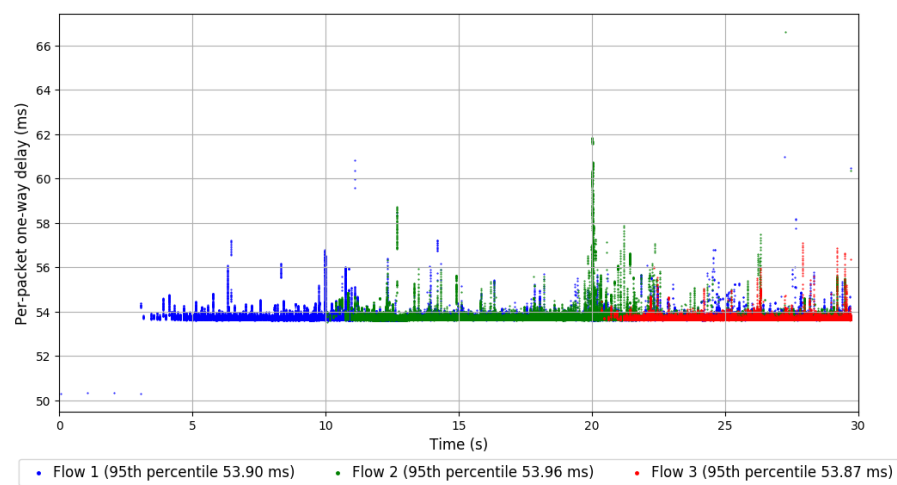
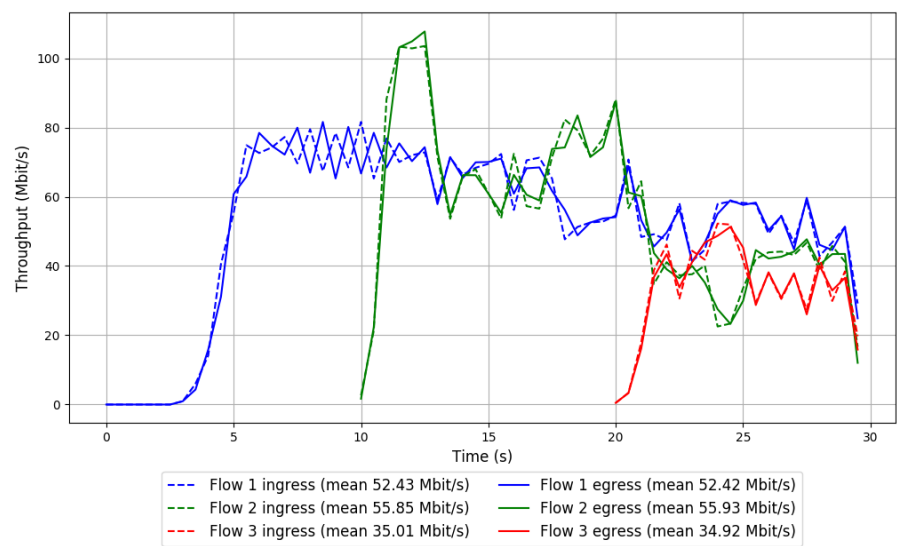
-- Flow 3:

Average throughput: 34.92 Mbit/s

95th percentile per-packet one-way delay: 53.869 ms

Loss rate: 1.27%

Run 5: Report of Indigo — Data Link



Run 6: Statistics of Indigo

Start at: 2017-08-31 19:59:16

End at: 2017-08-31 19:59:46

Below is generated by plot.py at 2017-09-01 00:32:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.00 Mbit/s

95th percentile per-packet one-way delay: 54.049 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 60.91 Mbit/s

95th percentile per-packet one-way delay: 54.097 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 46.58 Mbit/s

95th percentile per-packet one-way delay: 54.052 ms

Loss rate: 0.45%

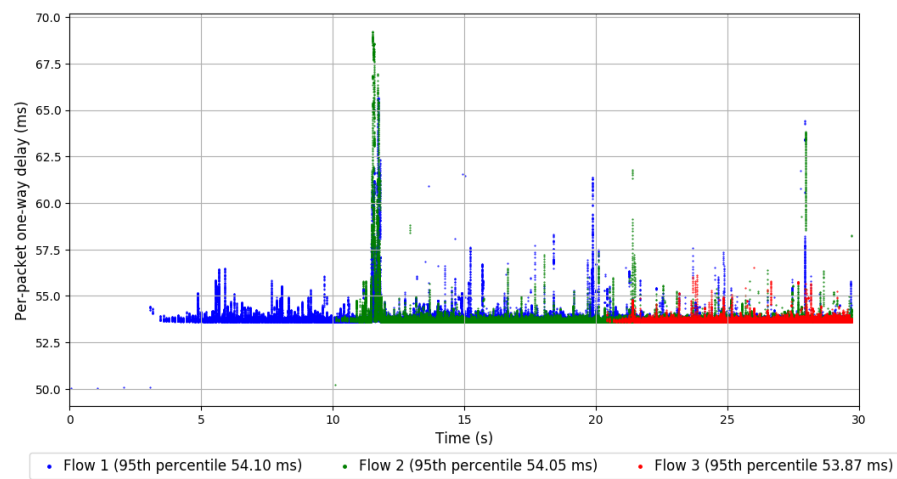
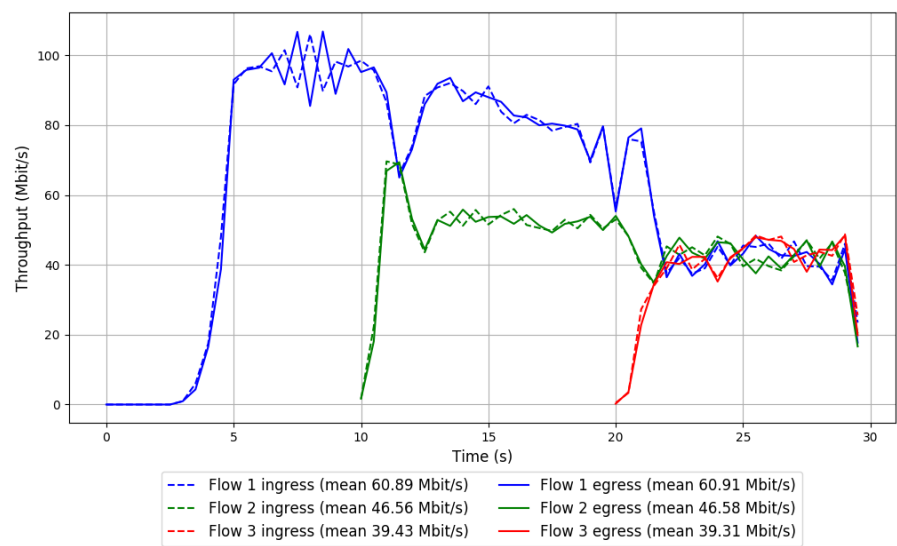
-- Flow 3:

Average throughput: 39.31 Mbit/s

95th percentile per-packet one-way delay: 53.871 ms

Loss rate: 1.47%

Run 6: Report of Indigo — Data Link



Run 7: Statistics of Indigo

Start at: 2017-08-31 20:11:31

End at: 2017-08-31 20:12:01

Below is generated by plot.py at 2017-09-01 00:33:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.75 Mbit/s

95th percentile per-packet one-way delay: 53.898 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 50.49 Mbit/s

95th percentile per-packet one-way delay: 53.923 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 52.33 Mbit/s

95th percentile per-packet one-way delay: 53.889 ms

Loss rate: 1.65%

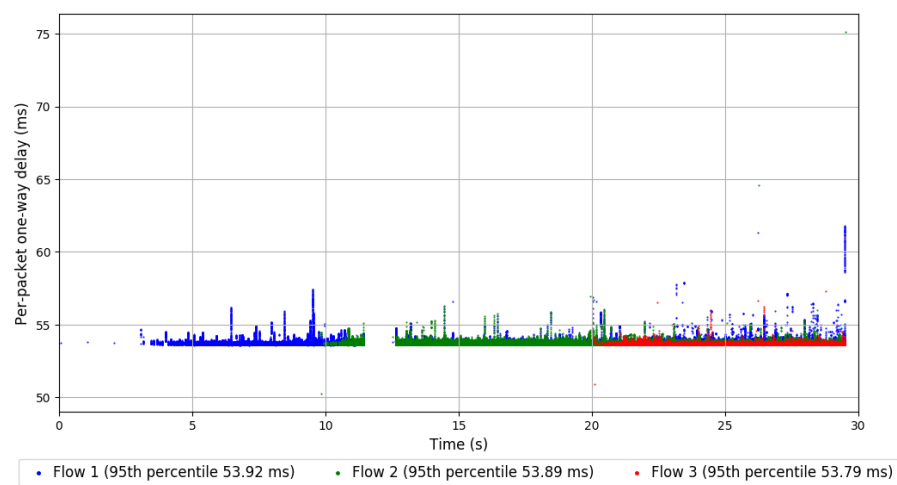
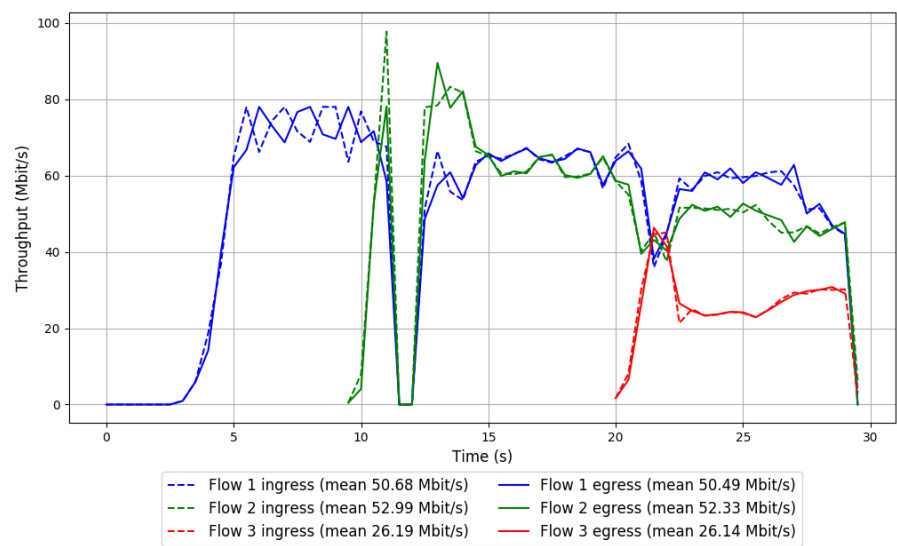
-- Flow 3:

Average throughput: 26.14 Mbit/s

95th percentile per-packet one-way delay: 53.792 ms

Loss rate: 1.32%

Run 7: Report of Indigo — Data Link



Run 8: Statistics of Indigo

Start at: 2017-08-31 20:23:22

End at: 2017-08-31 20:23:52

Below is generated by plot.py at 2017-09-01 00:33:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.24 Mbit/s

95th percentile per-packet one-way delay: 53.955 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 40.52 Mbit/s

95th percentile per-packet one-way delay: 53.888 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 77.35 Mbit/s

95th percentile per-packet one-way delay: 54.019 ms

Loss rate: 0.52%

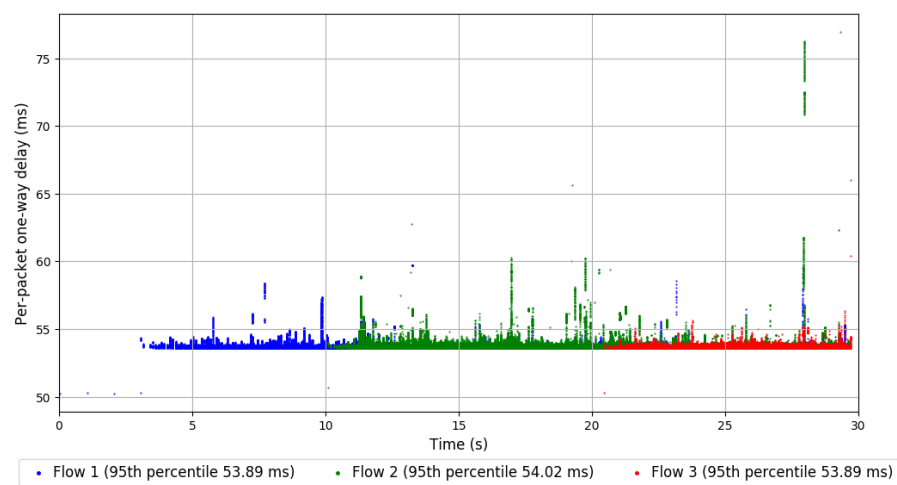
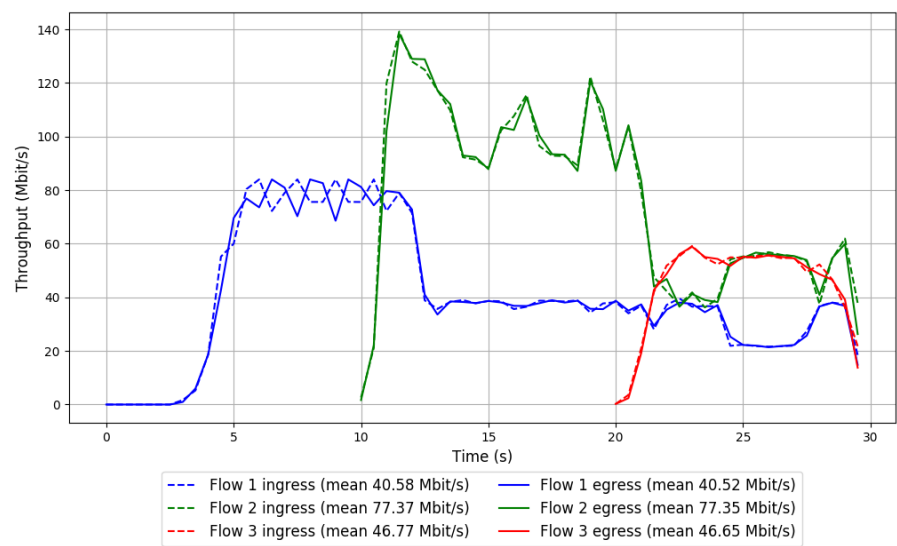
-- Flow 3:

Average throughput: 46.65 Mbit/s

95th percentile per-packet one-way delay: 53.887 ms

Loss rate: 1.47%

Run 8: Report of Indigo — Data Link



Run 9: Statistics of Indigo

Start at: 2017-08-31 20:35:29

End at: 2017-08-31 20:35:59

Below is generated by plot.py at 2017-09-01 00:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.95 Mbit/s

95th percentile per-packet one-way delay: 53.896 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 50.27 Mbit/s

95th percentile per-packet one-way delay: 53.872 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 61.13 Mbit/s

95th percentile per-packet one-way delay: 53.925 ms

Loss rate: 0.61%

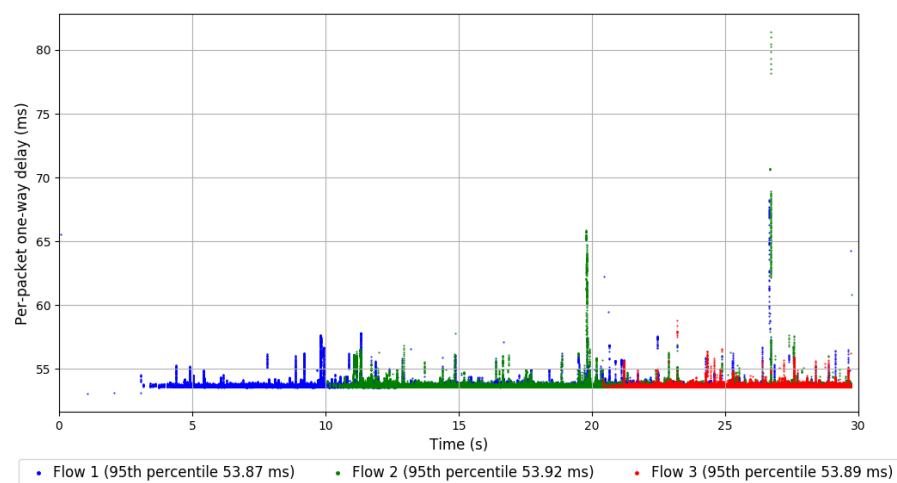
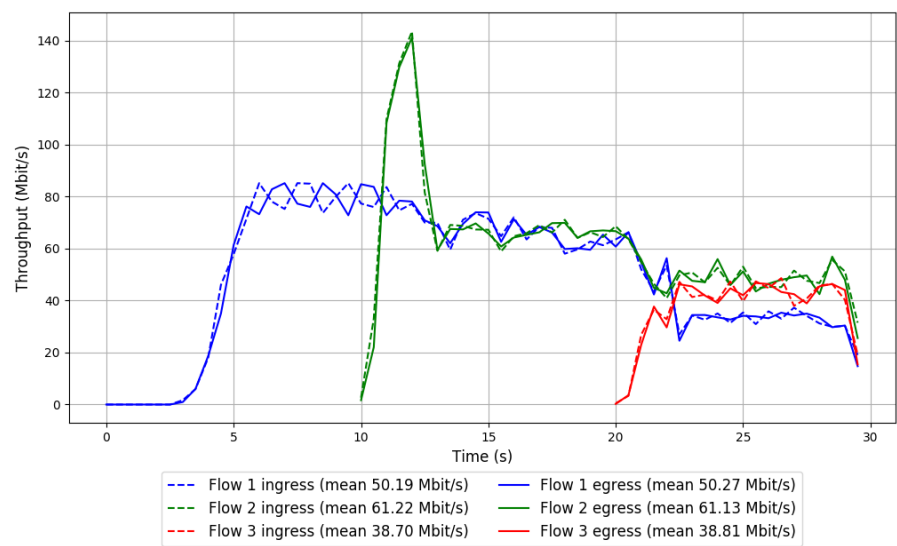
-- Flow 3:

Average throughput: 38.81 Mbit/s

95th percentile per-packet one-way delay: 53.894 ms

Loss rate: 0.85%

Run 9: Report of Indigo — Data Link



Run 10: Statistics of Indigo

Start at: 2017-08-31 20:47:30

End at: 2017-08-31 20:48:00

Below is generated by plot.py at 2017-09-01 00:33:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.04 Mbit/s

95th percentile per-packet one-way delay: 53.907 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 49.86 Mbit/s

95th percentile per-packet one-way delay: 53.905 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 54.60 Mbit/s

95th percentile per-packet one-way delay: 53.916 ms

Loss rate: 0.45%

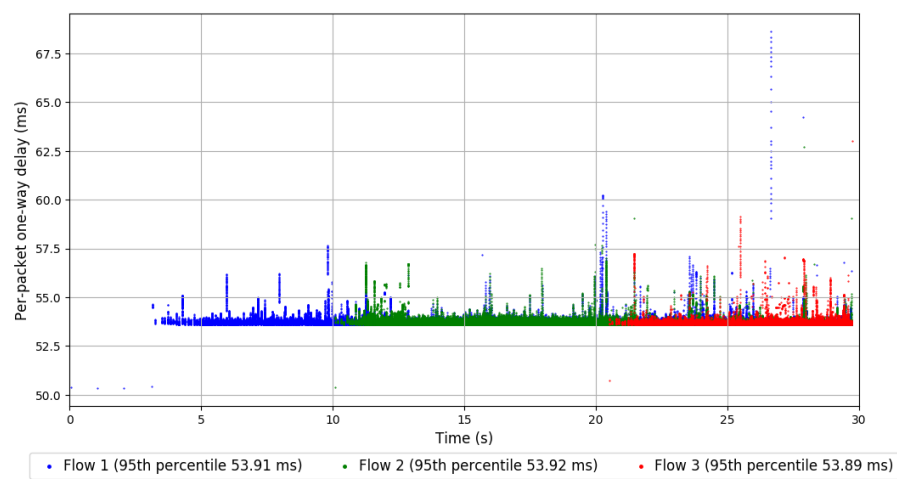
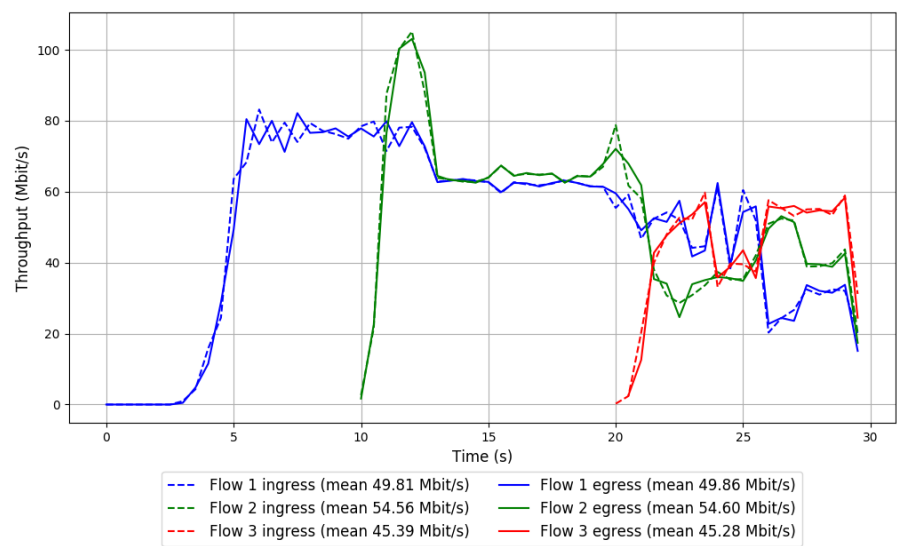
-- Flow 3:

Average throughput: 45.28 Mbit/s

95th percentile per-packet one-way delay: 53.892 ms

Loss rate: 1.28%

Run 10: Report of Indigo — Data Link

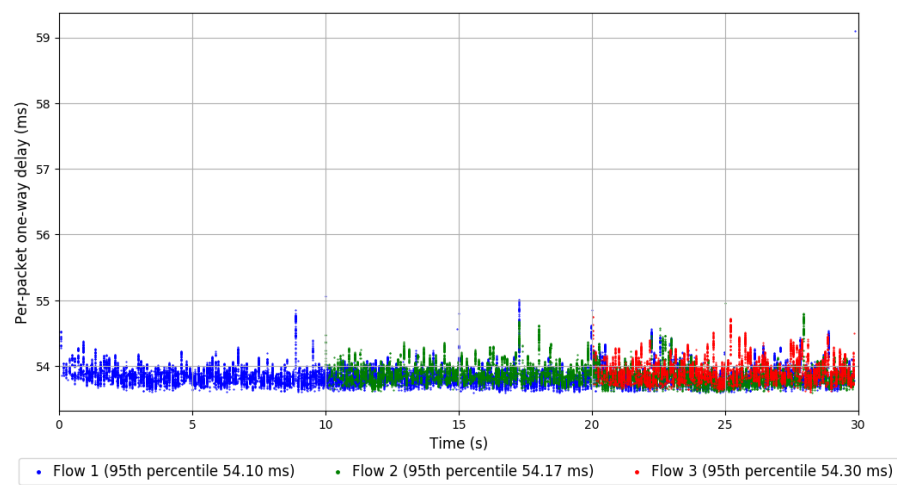
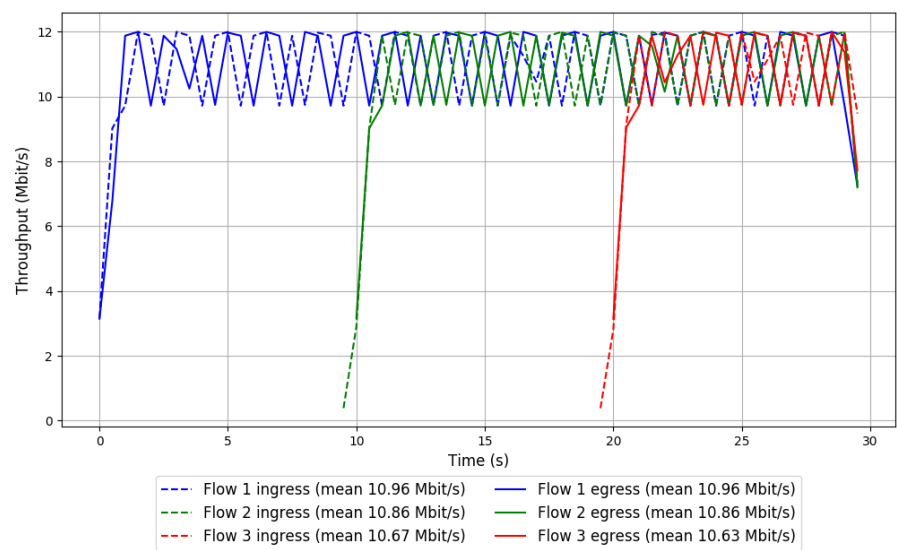


```
Run 1: Statistics of KohoCC

Start at: 2017-08-31 19:07:26
End at: 2017-08-31 19:07:56

# Below is generated by plot.py at 2017-09-01 00:33:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.68 Mbit/s
95th percentile per-packet one-way delay: 54.185 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 10.96 Mbit/s
95th percentile per-packet one-way delay: 54.104 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 10.86 Mbit/s
95th percentile per-packet one-way delay: 54.175 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 10.63 Mbit/s
95th percentile per-packet one-way delay: 54.296 ms
Loss rate: 1.12%
```

Run 1: Report of KohoCC — Data Link

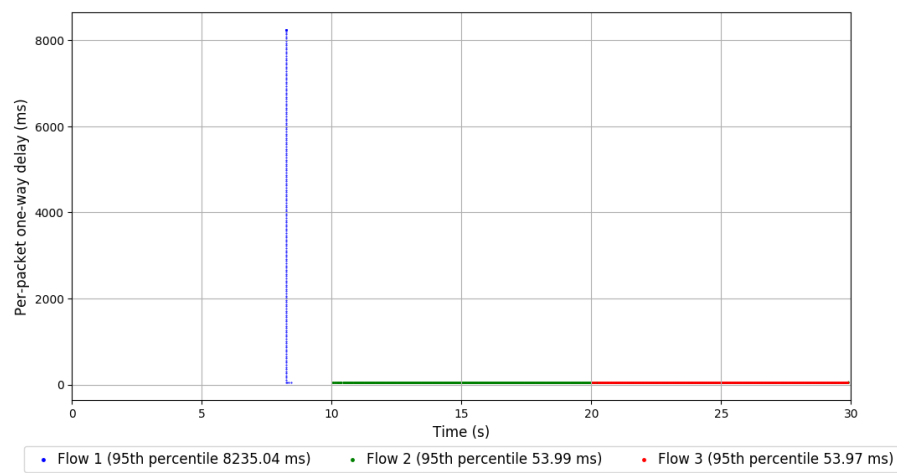
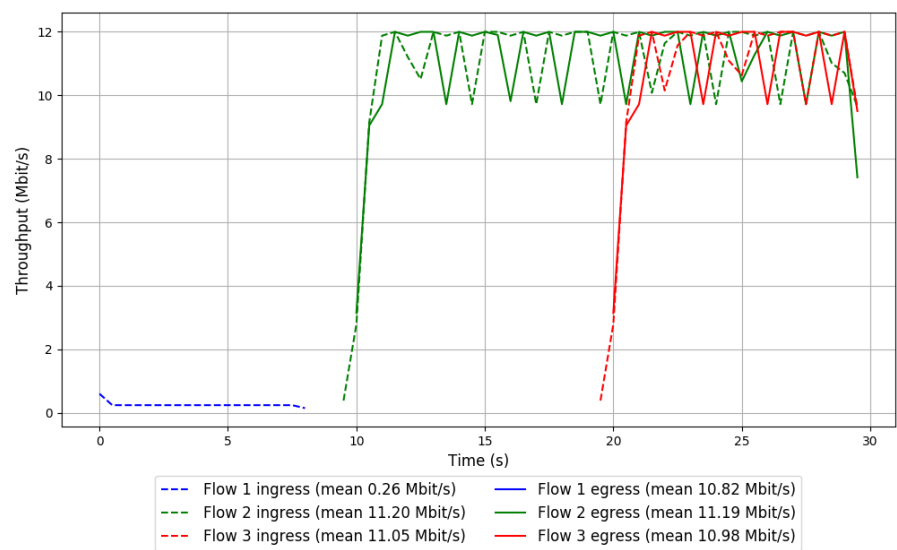


Run 2: Statistics of KohoCC

Start at: 2017-08-31 19:19:28

End at: 2017-08-31 19:19:58

Run 2: Report of KohoCC — Data Link



Run 3: Statistics of KohoCC

Start at: 2017-08-31 19:31:33

End at: 2017-08-31 19:32:03

Below is generated by plot.py at 2017-09-01 00:33:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.48 Mbit/s

95th percentile per-packet one-way delay: 54.093 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 11.36 Mbit/s

95th percentile per-packet one-way delay: 54.139 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 11.26 Mbit/s

95th percentile per-packet one-way delay: 54.042 ms

Loss rate: 0.53%

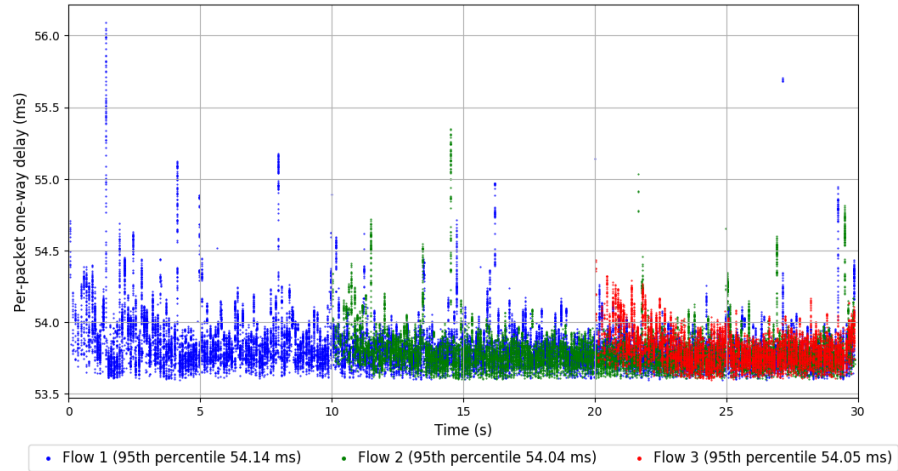
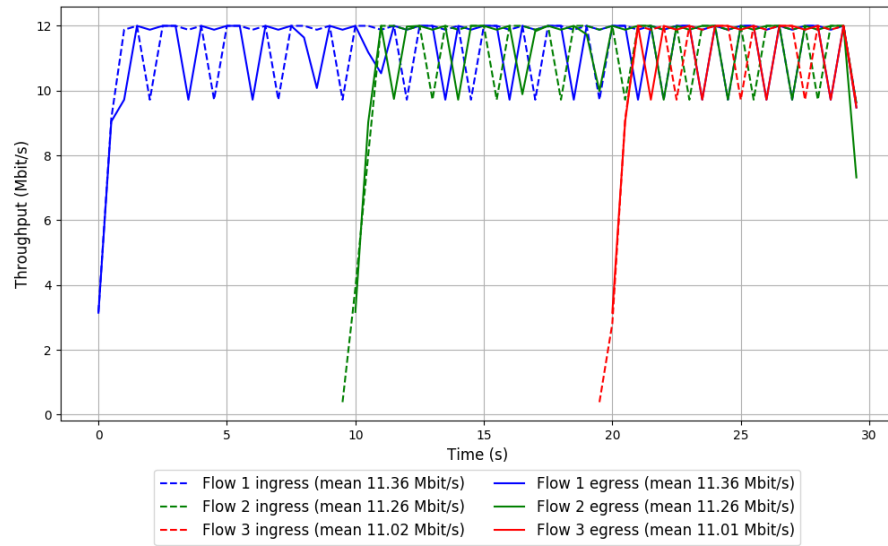
-- Flow 3:

Average throughput: 11.01 Mbit/s

95th percentile per-packet one-way delay: 54.052 ms

Loss rate: 1.10%

Run 3: Report of KohoCC — Data Link



Run 4: Statistics of KohoCC

Start at: 2017-08-31 19:43:33

End at: 2017-08-31 19:44:03

Below is generated by plot.py at 2017-09-01 00:33:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.46 Mbit/s

95th percentile per-packet one-way delay: 54.099 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 11.36 Mbit/s

95th percentile per-packet one-way delay: 54.104 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 11.27 Mbit/s

95th percentile per-packet one-way delay: 54.099 ms

Loss rate: 0.50%

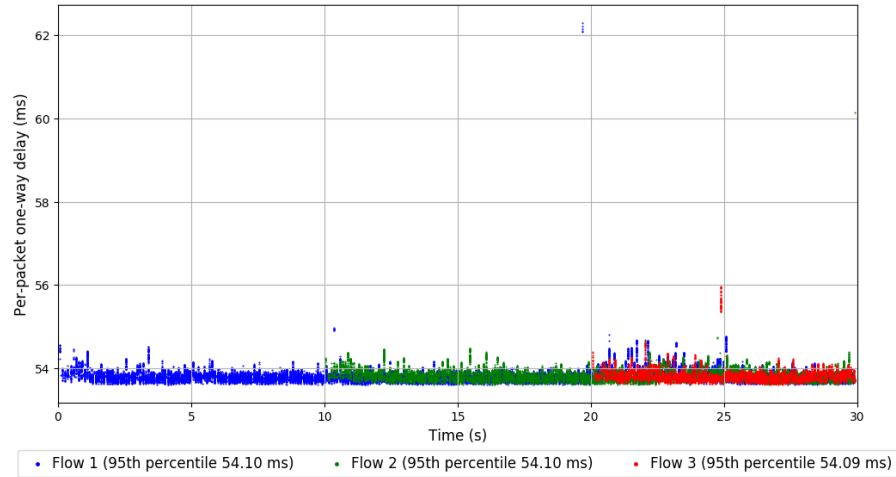
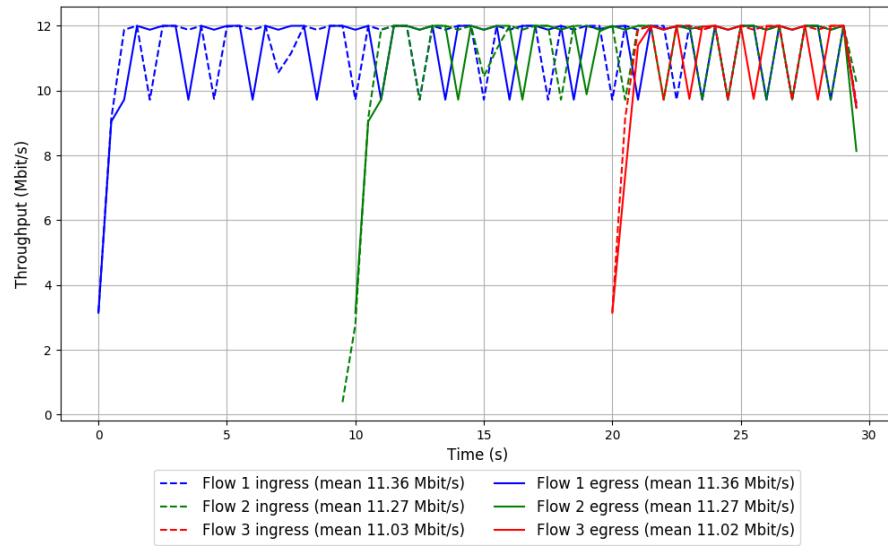
-- Flow 3:

Average throughput: 11.02 Mbit/s

95th percentile per-packet one-way delay: 54.085 ms

Loss rate: 1.10%

Run 4: Report of KohoCC — Data Link

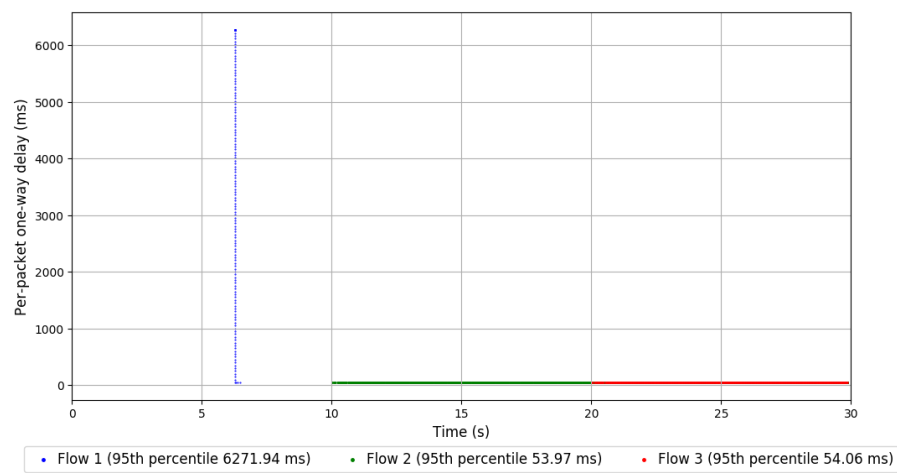
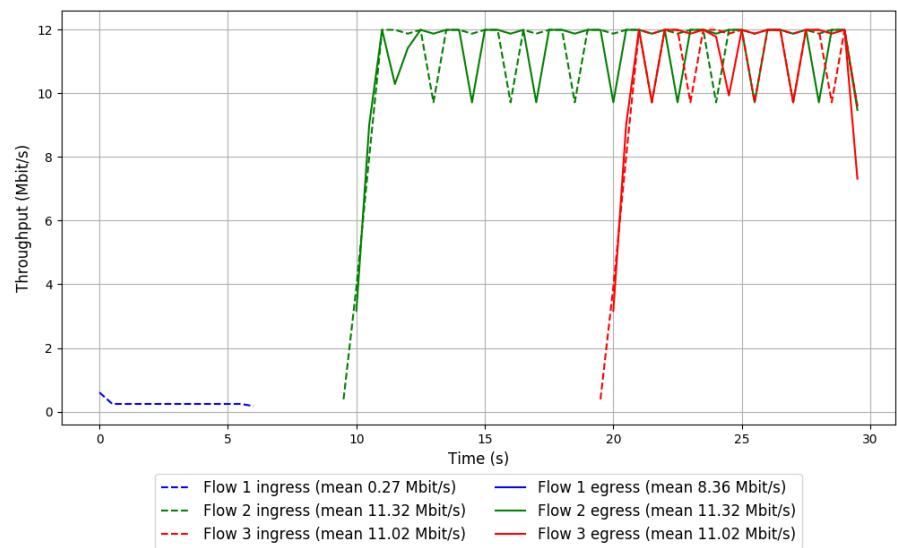


Run 5: Statistics of KohoCC

Start at: 2017-08-31 19:55:32

End at: 2017-08-31 19:56:02

Run 5: Report of KohoCC — Data Link



Run 6: Statistics of KohoCC

Start at: 2017-08-31 20:07:53

End at: 2017-08-31 20:08:23

Below is generated by plot.py at 2017-09-01 00:33:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.27 Mbit/s

95th percentile per-packet one-way delay: 54.221 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 11.40 Mbit/s

95th percentile per-packet one-way delay: 54.094 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 10.90 Mbit/s

95th percentile per-packet one-way delay: 54.342 ms

Loss rate: 0.55%

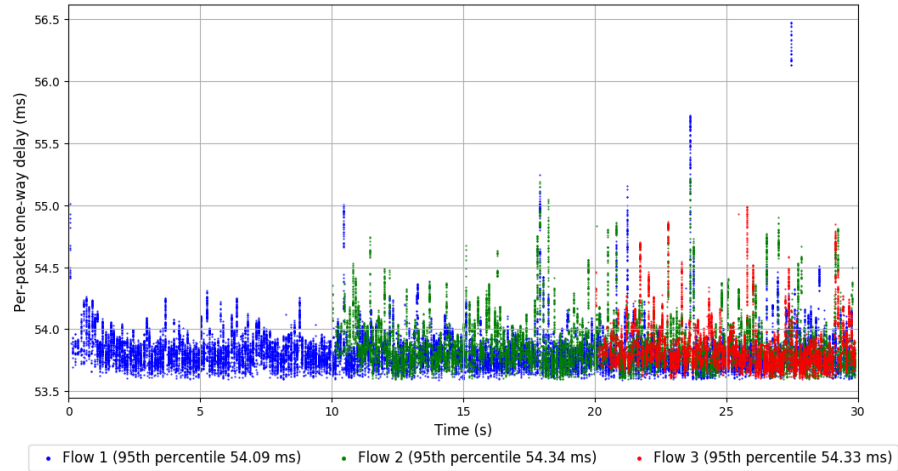
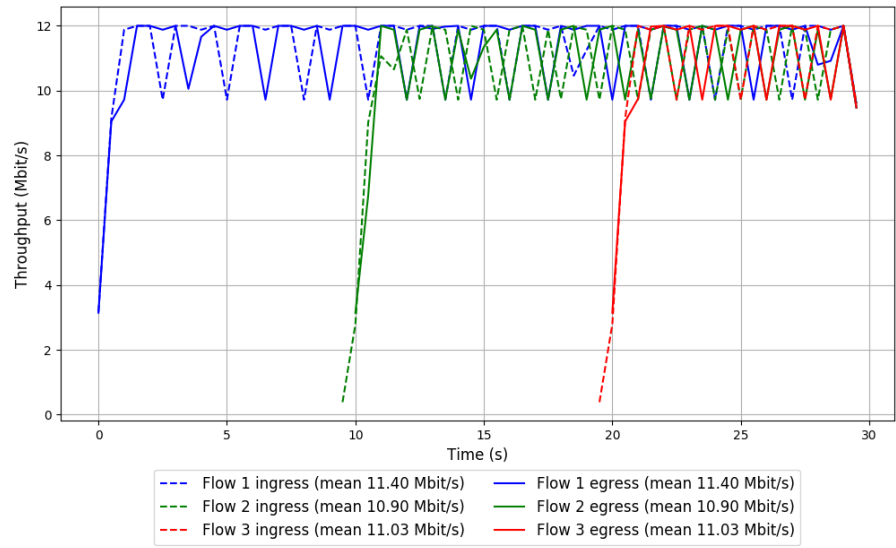
-- Flow 3:

Average throughput: 11.03 Mbit/s

95th percentile per-packet one-way delay: 54.328 ms

Loss rate: 1.10%

Run 6: Report of KohoCC — Data Link



Run 7: Statistics of KohoCC

Start at: 2017-08-31 20:19:42

End at: 2017-08-31 20:20:12

Below is generated by plot.py at 2017-09-01 00:33:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 54.227 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 17.31 Mbit/s

95th percentile per-packet one-way delay: 5238.213 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 10.97 Mbit/s

95th percentile per-packet one-way delay: 54.130 ms

Loss rate: 0.56%

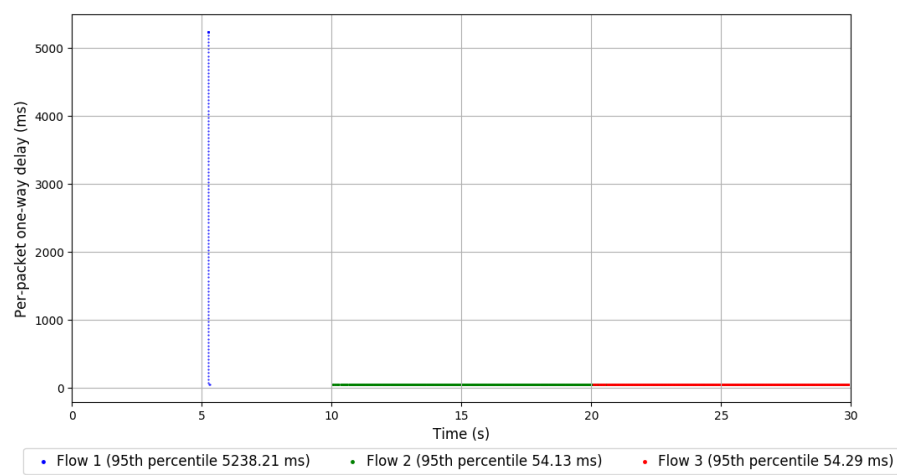
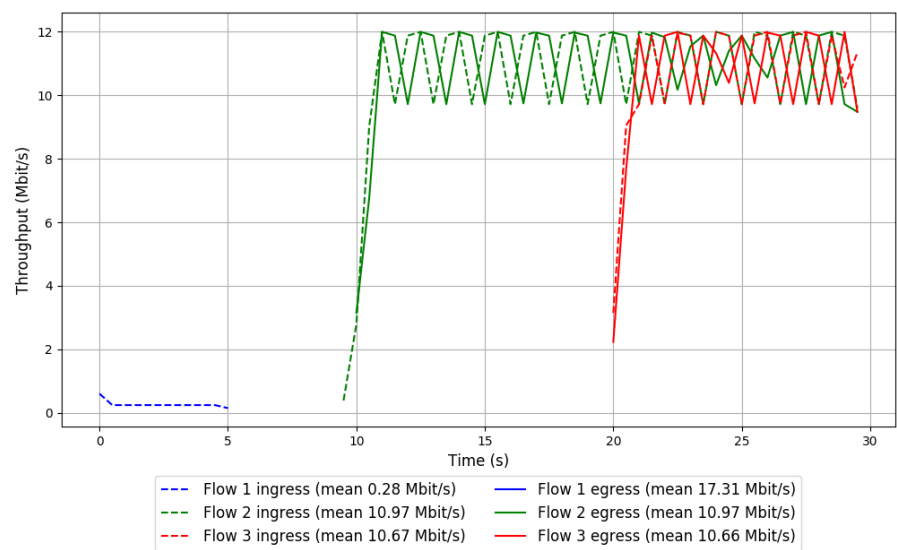
-- Flow 3:

Average throughput: 10.66 Mbit/s

95th percentile per-packet one-way delay: 54.289 ms

Loss rate: 1.14%

Run 7: Report of KohoCC — Data Link



Run 8: Statistics of KohoCC

Start at: 2017-08-31 20:31:48

End at: 2017-08-31 20:32:18

Below is generated by plot.py at 2017-09-01 00:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 21.78 Mbit/s

95th percentile per-packet one-way delay: 54.128 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 10.95 Mbit/s

95th percentile per-packet one-way delay: 54.131 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 10.83 Mbit/s

95th percentile per-packet one-way delay: 54.140 ms

Loss rate: 0.56%

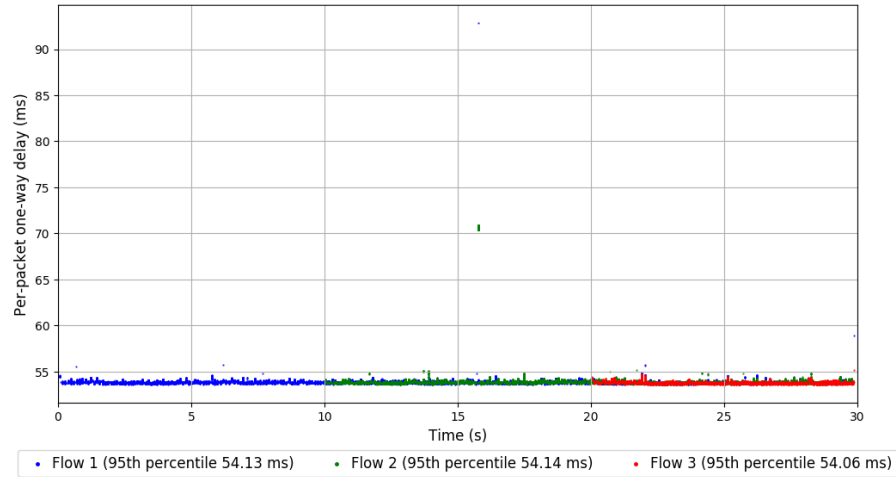
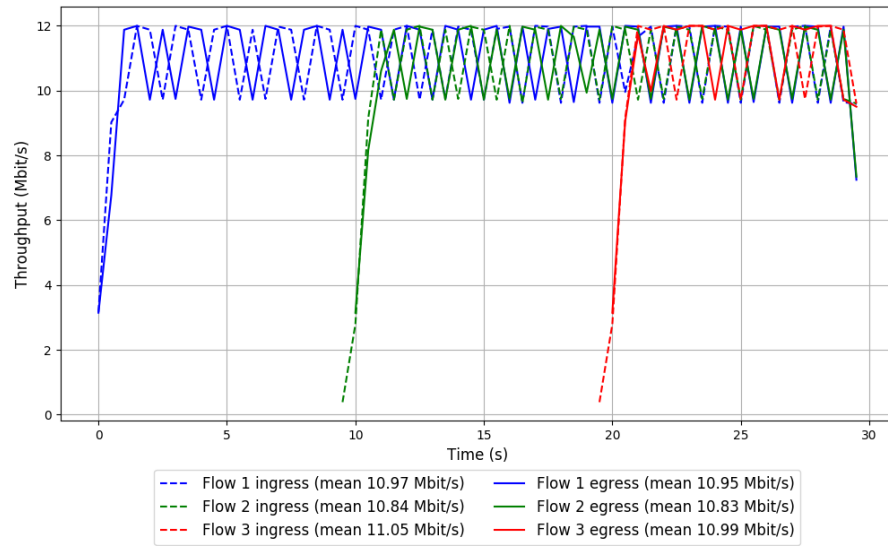
-- Flow 3:

Average throughput: 10.99 Mbit/s

95th percentile per-packet one-way delay: 54.064 ms

Loss rate: 1.09%

Run 8: Report of KohoCC — Data Link

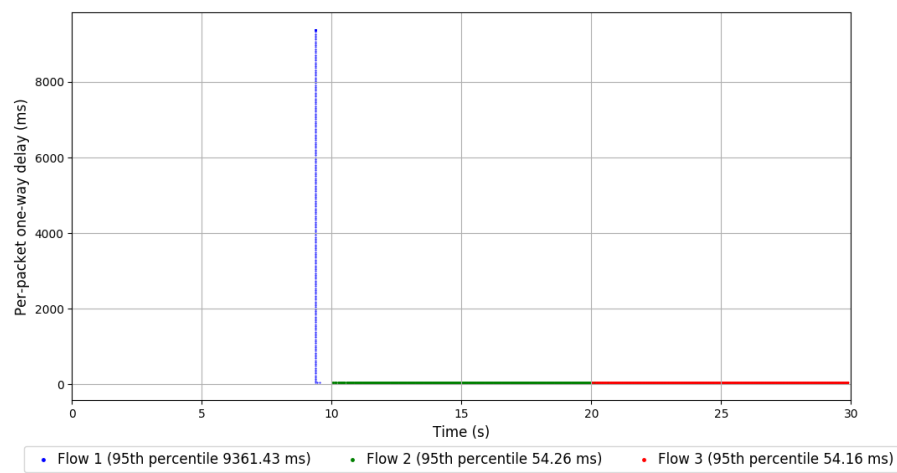
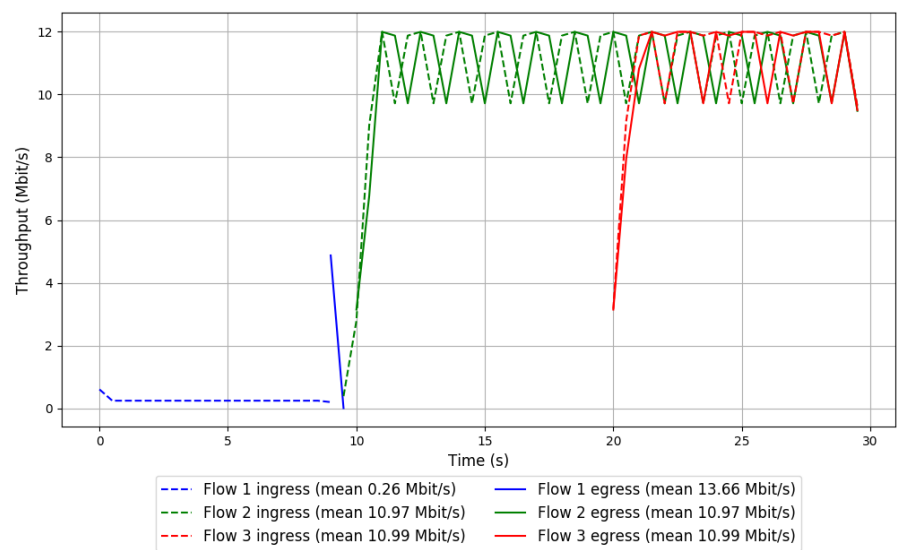


Run 9: Statistics of KohoCC

Start at: 2017-08-31 20:43:54

End at: 2017-08-31 20:44:24

Run 9: Report of KohoCC — Data Link

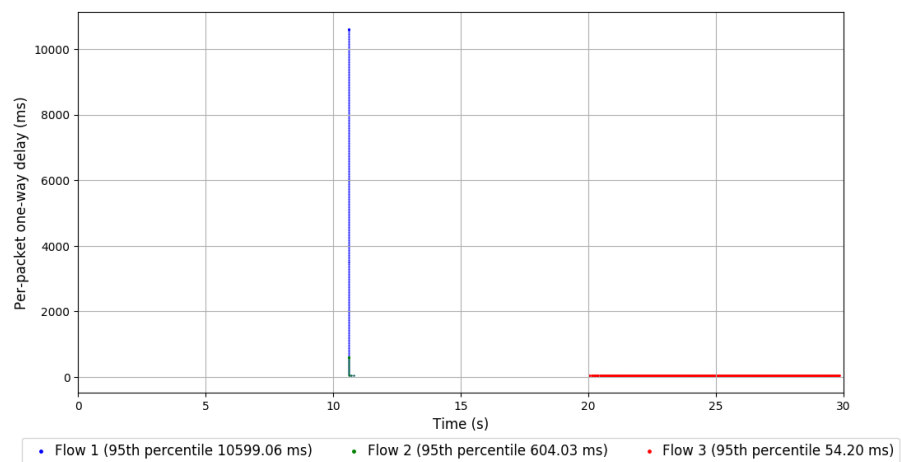
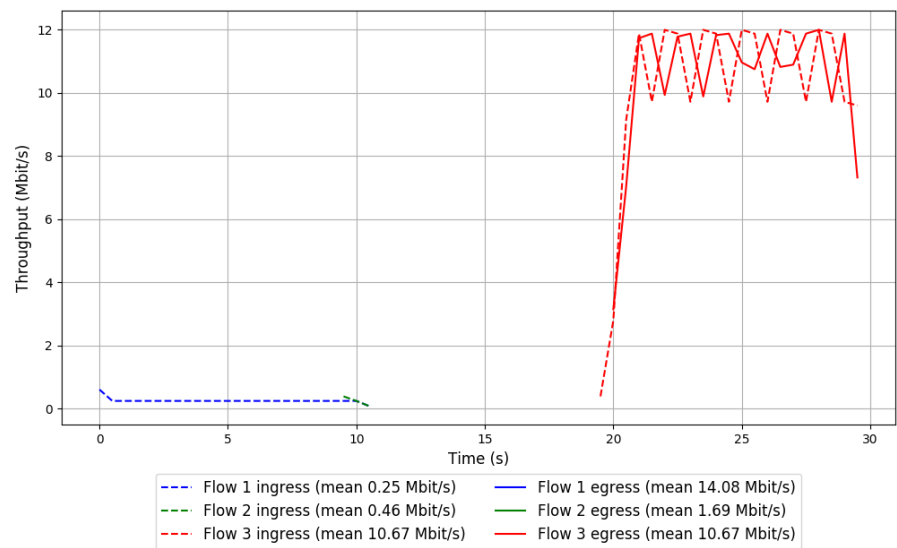


Run 10: Statistics of KohoCC

Start at: 2017-08-31 20:55:51

End at: 2017-08-31 20:56:21

Run 10: Report of KohoCC — Data Link

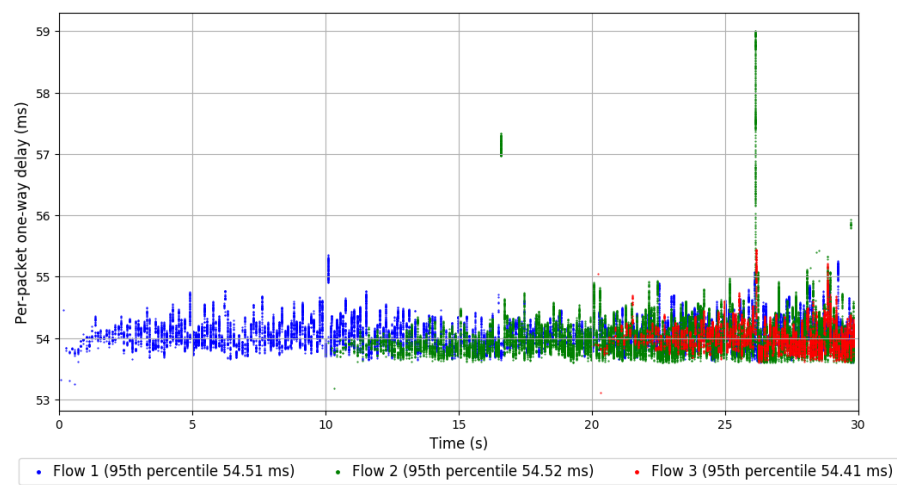
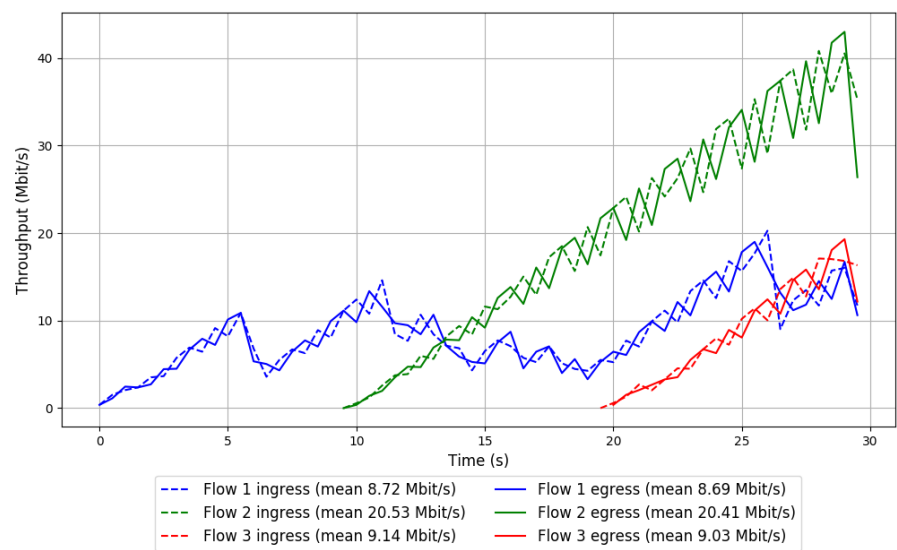


```
Run 1: Statistics of LEDBAT

Start at: 2017-08-31 19:08:08
End at: 2017-08-31 19:08:38

# Below is generated by plot.py at 2017-09-01 00:34:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.24 Mbit/s
95th percentile per-packet one-way delay: 54.508 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 8.69 Mbit/s
95th percentile per-packet one-way delay: 54.508 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 20.41 Mbit/s
95th percentile per-packet one-way delay: 54.522 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 9.03 Mbit/s
95th percentile per-packet one-way delay: 54.413 ms
Loss rate: 2.29%
```


Run 1: Report of LEDBAT — Data Link

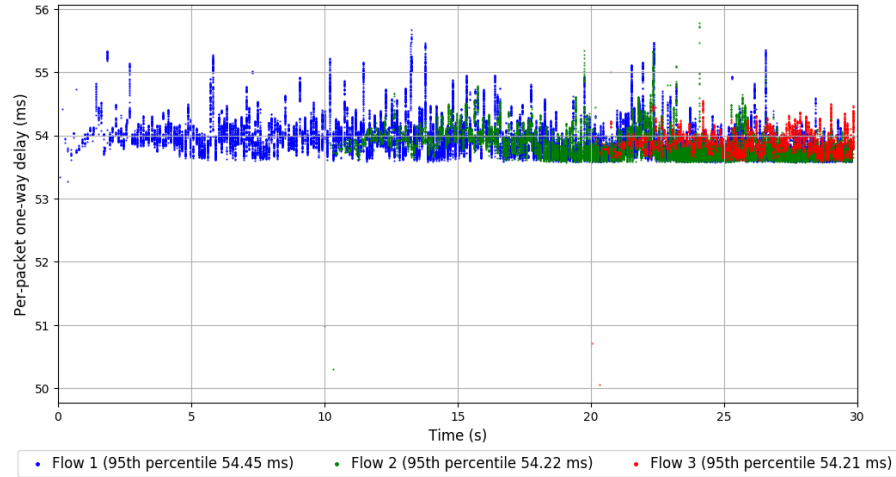
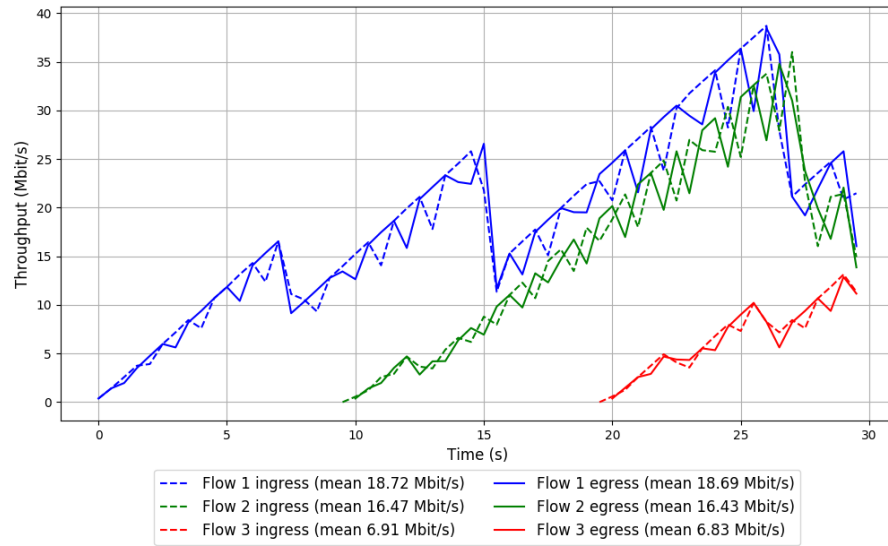


```
Run 2: Statistics of LEDBAT

Start at: 2017-08-31 19:20:08
End at: 2017-08-31 19:20:38

# Below is generated by plot.py at 2017-09-01 00:34:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 31.81 Mbit/s
95th percentile per-packet one-way delay: 54.352 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 18.69 Mbit/s
95th percentile per-packet one-way delay: 54.447 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 16.43 Mbit/s
95th percentile per-packet one-way delay: 54.218 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 6.83 Mbit/s
95th percentile per-packet one-way delay: 54.208 ms
Loss rate: 2.12%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-08-31 19:32:14

End at: 2017-08-31 19:32:44

Below is generated by plot.py at 2017-09-01 00:34:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 32.30 Mbit/s

95th percentile per-packet one-way delay: 54.592 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 23.85 Mbit/s

95th percentile per-packet one-way delay: 54.577 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 12.43 Mbit/s

95th percentile per-packet one-way delay: 54.632 ms

Loss rate: 1.24%

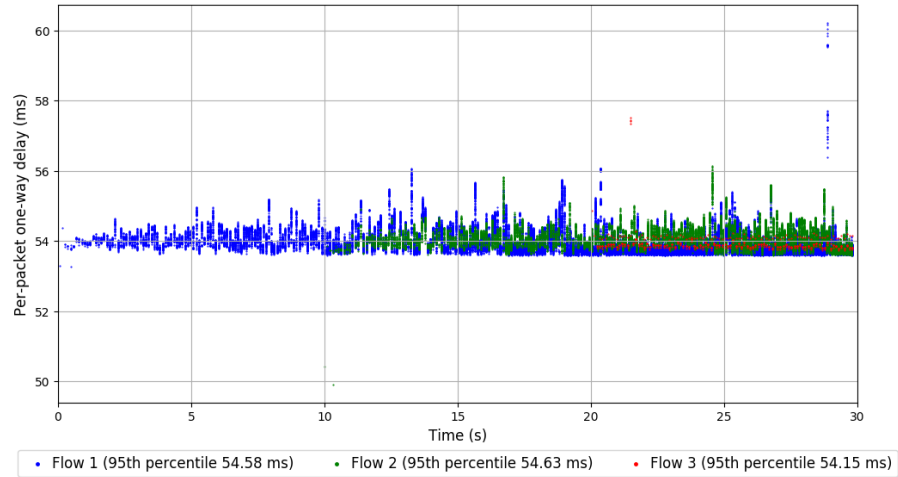
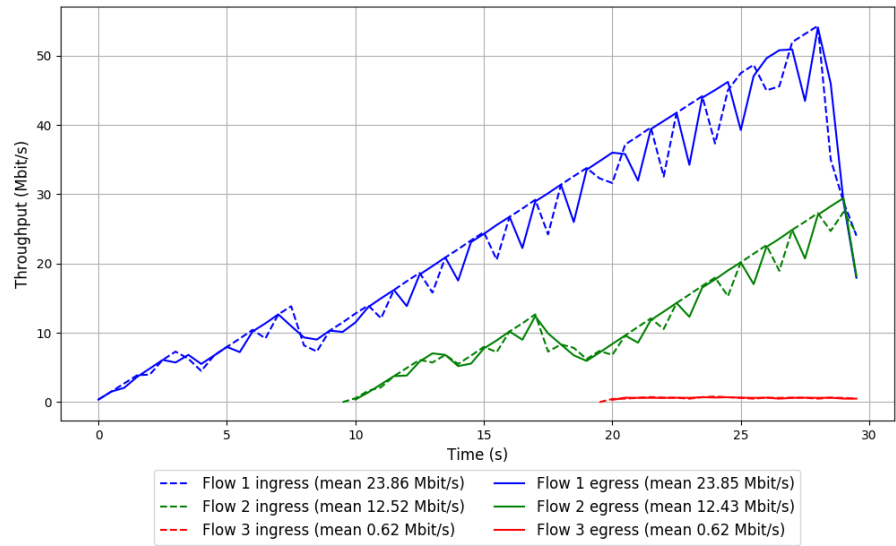
-- Flow 3:

Average throughput: 0.62 Mbit/s

95th percentile per-packet one-way delay: 54.154 ms

Loss rate: 0.94%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-08-31 19:44:15

End at: 2017-08-31 19:44:45

Below is generated by plot.py at 2017-09-01 00:34:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 26.80 Mbit/s

95th percentile per-packet one-way delay: 54.475 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 15.91 Mbit/s

95th percentile per-packet one-way delay: 54.475 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 13.39 Mbit/s

95th percentile per-packet one-way delay: 54.465 ms

Loss rate: 1.20%

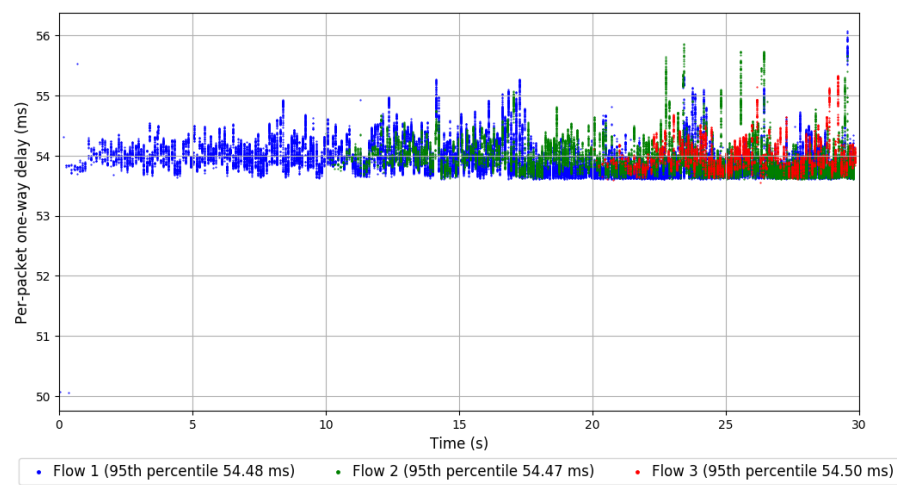
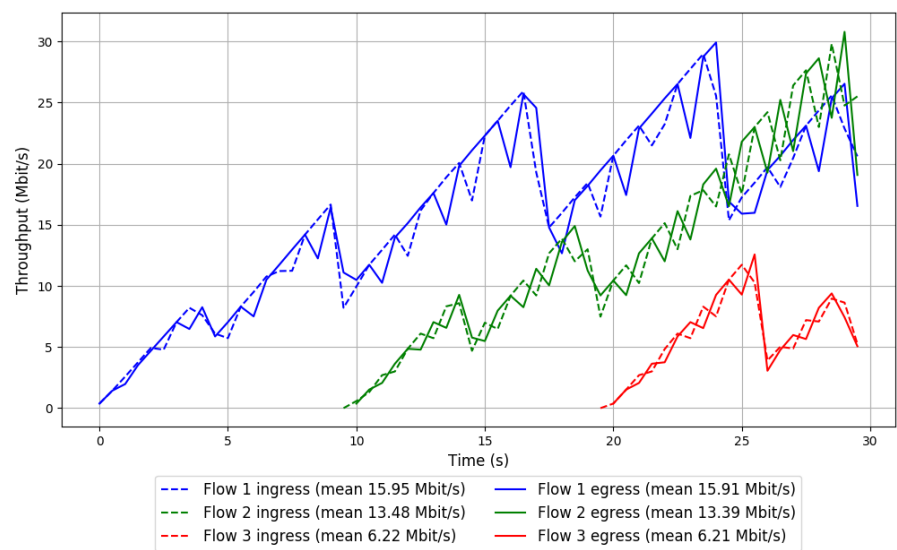
-- Flow 3:

Average throughput: 6.21 Mbit/s

95th percentile per-packet one-way delay: 54.503 ms

Loss rate: 1.23%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-08-31 19:56:13

End at: 2017-08-31 19:56:43

Below is generated by plot.py at 2017-09-01 00:34:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 26.47 Mbit/s

95th percentile per-packet one-way delay: 54.420 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 12.48 Mbit/s

95th percentile per-packet one-way delay: 54.418 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 16.94 Mbit/s

95th percentile per-packet one-way delay: 54.471 ms

Loss rate: 1.11%

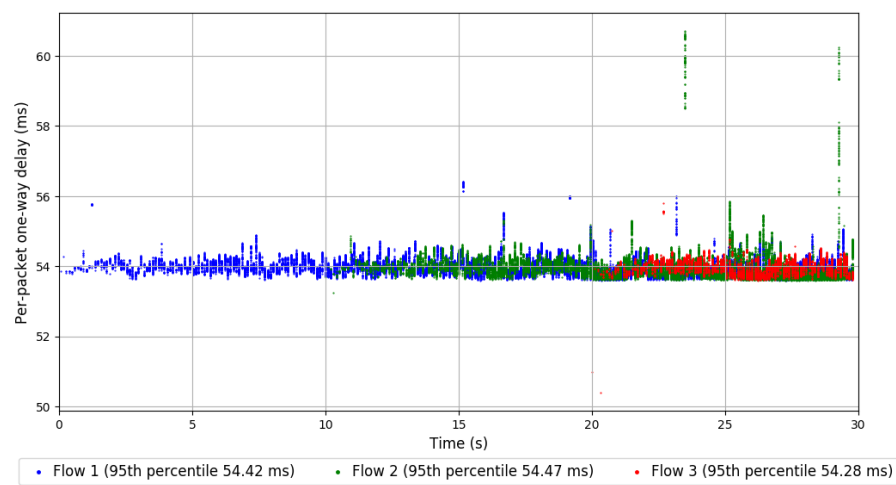
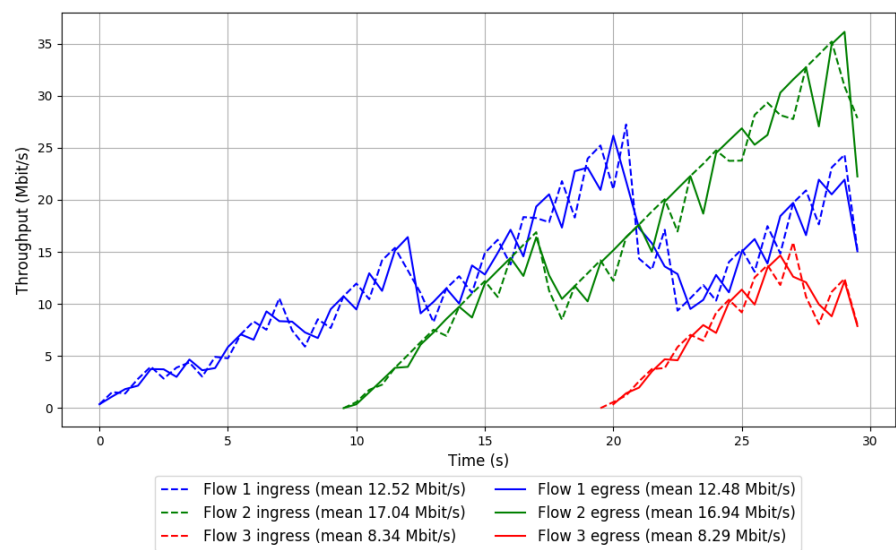
-- Flow 3:

Average throughput: 8.29 Mbit/s

95th percentile per-packet one-way delay: 54.281 ms

Loss rate: 1.65%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-08-31 20:08:34

End at: 2017-08-31 20:09:04

Below is generated by plot.py at 2017-09-01 00:34:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 24.56 Mbit/s

95th percentile per-packet one-way delay: 54.451 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 12.51 Mbit/s

95th percentile per-packet one-way delay: 54.438 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 12.89 Mbit/s

95th percentile per-packet one-way delay: 54.486 ms

Loss rate: 1.21%

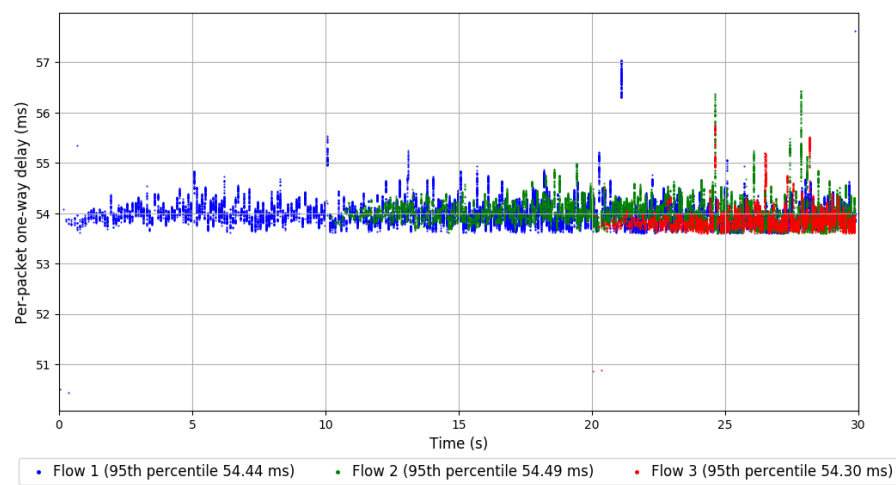
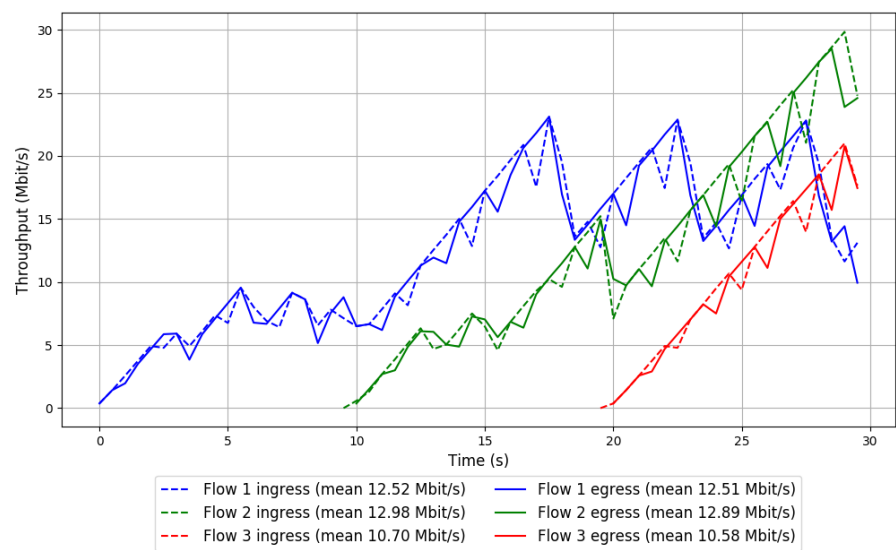
-- Flow 3:

Average throughput: 10.58 Mbit/s

95th percentile per-packet one-way delay: 54.300 ms

Loss rate: 2.11%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2017-08-31 20:20:22

End at: 2017-08-31 20:20:52

Below is generated by plot.py at 2017-09-01 00:34:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 47.49 Mbit/s

95th percentile per-packet one-way delay: 54.635 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 30.86 Mbit/s

95th percentile per-packet one-way delay: 54.588 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 19.96 Mbit/s

95th percentile per-packet one-way delay: 54.752 ms

Loss rate: 1.08%

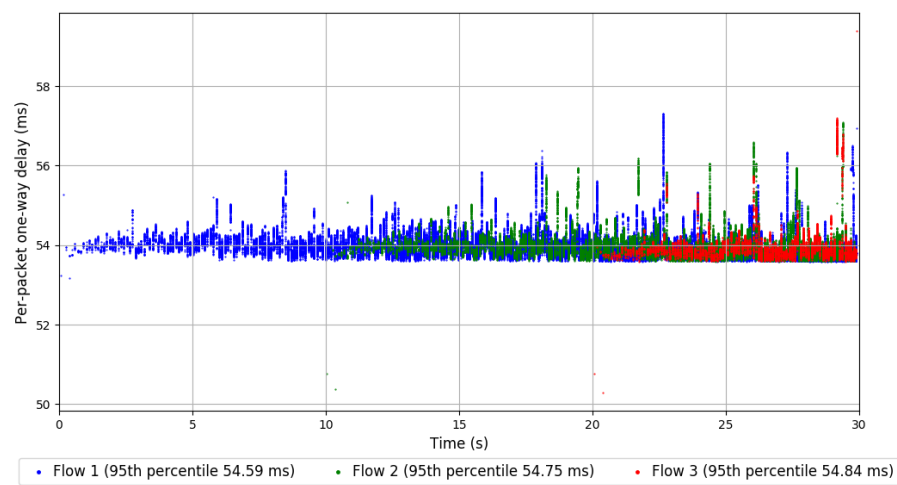
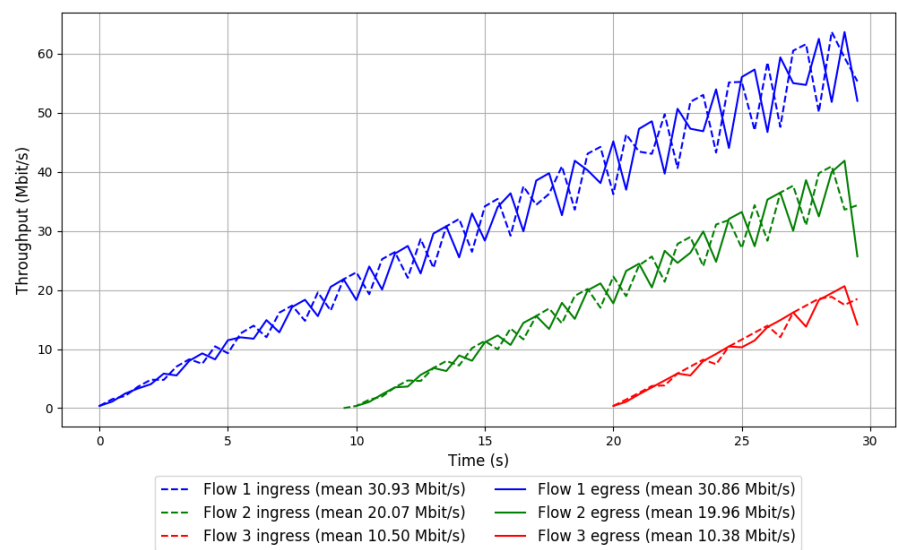
-- Flow 3:

Average throughput: 10.38 Mbit/s

95th percentile per-packet one-way delay: 54.842 ms

Loss rate: 2.08%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-08-31 20:32:29

End at: 2017-08-31 20:32:59

Below is generated by plot.py at 2017-09-01 00:34:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 29.95 Mbit/s

95th percentile per-packet one-way delay: 54.571 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 20.25 Mbit/s

95th percentile per-packet one-way delay: 54.439 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 10.49 Mbit/s

95th percentile per-packet one-way delay: 54.709 ms

Loss rate: 1.37%

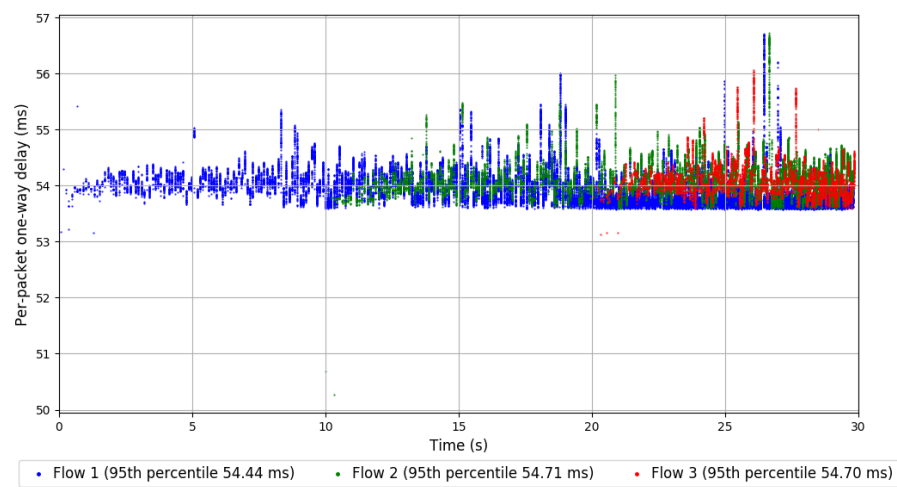
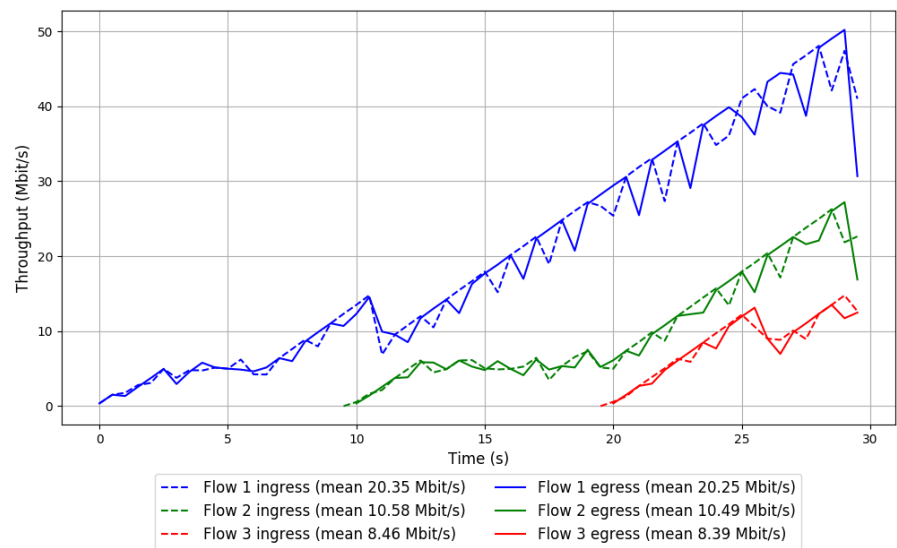
-- Flow 3:

Average throughput: 8.39 Mbit/s

95th percentile per-packet one-way delay: 54.698 ms

Loss rate: 1.93%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-08-31 20:44:34

End at: 2017-08-31 20:45:04

Below is generated by plot.py at 2017-09-01 00:34:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 26.77 Mbit/s

95th percentile per-packet one-way delay: 54.394 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 14.41 Mbit/s

95th percentile per-packet one-way delay: 54.422 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 14.32 Mbit/s

95th percentile per-packet one-way delay: 54.355 ms

Loss rate: 0.72%

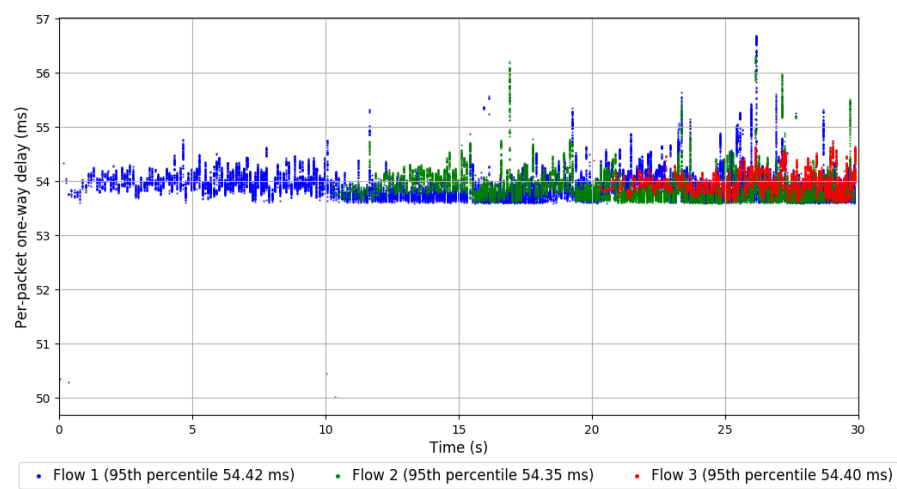
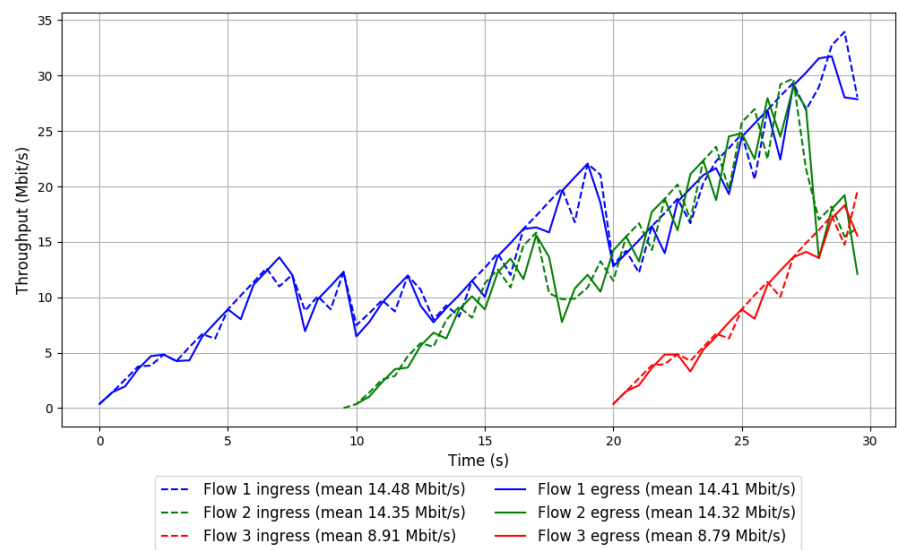
-- Flow 3:

Average throughput: 8.79 Mbit/s

95th percentile per-packet one-way delay: 54.402 ms

Loss rate: 2.29%

Run 9: Report of LEDBAT — Data Link

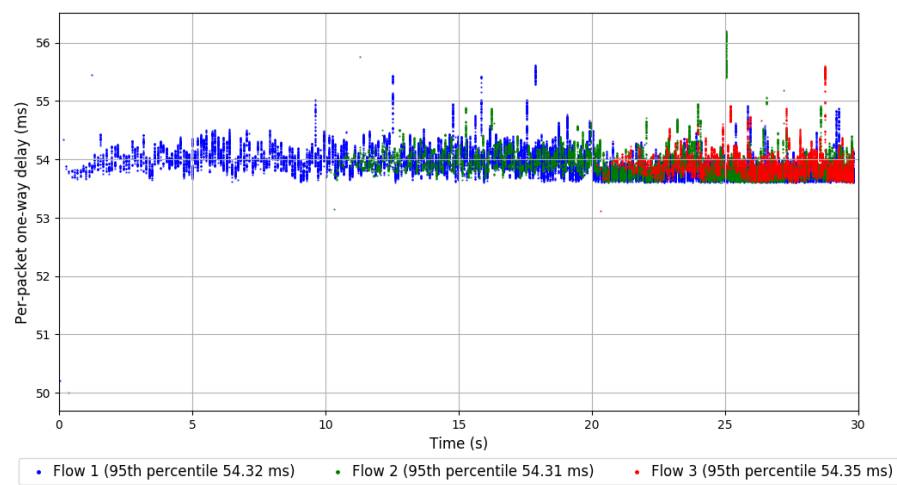
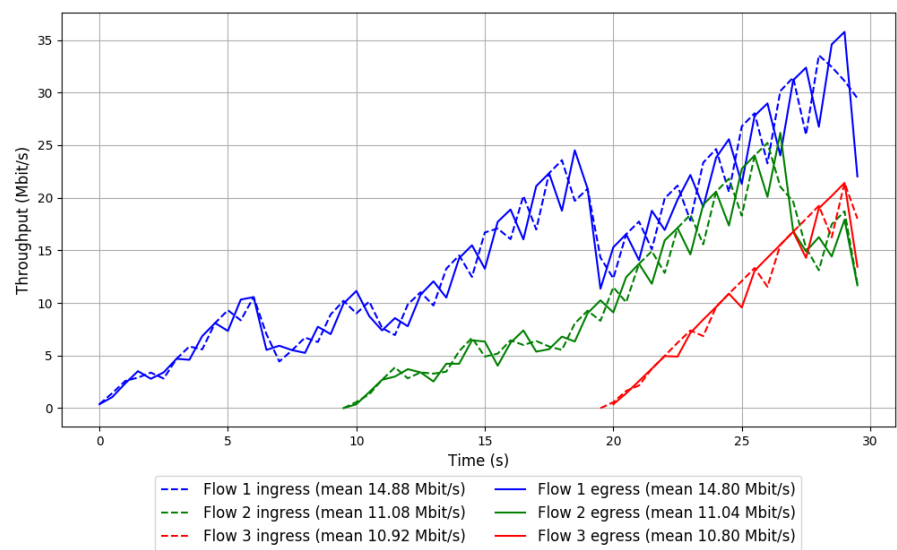


```
Run 10: Statistics of LEDBAT

Start at: 2017-08-31 20:56:31
End at: 2017-08-31 20:57:01

# Below is generated by plot.py at 2017-09-01 00:34:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.69 Mbit/s
95th percentile per-packet one-way delay: 54.322 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 14.80 Mbit/s
95th percentile per-packet one-way delay: 54.322 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 11.04 Mbit/s
95th percentile per-packet one-way delay: 54.309 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 10.80 Mbit/s
95th percentile per-packet one-way delay: 54.351 ms
Loss rate: 2.12%
```

Run 10: Report of LEDBAT — Data Link

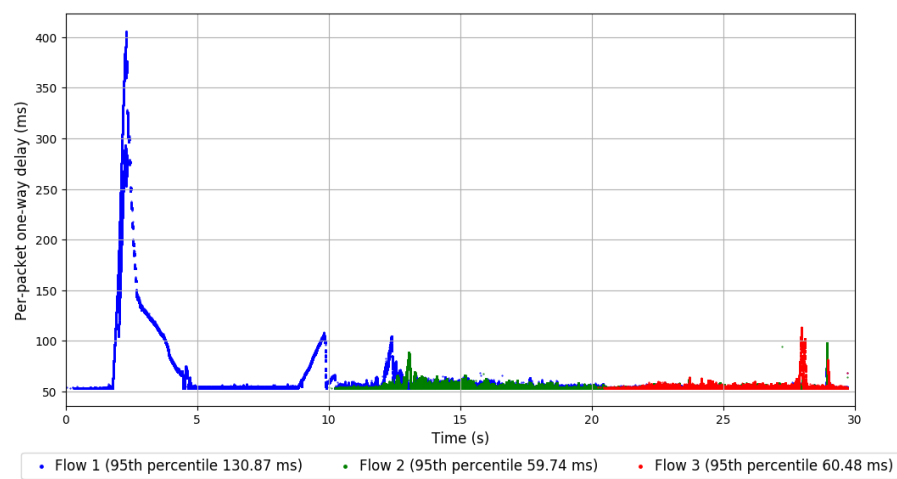
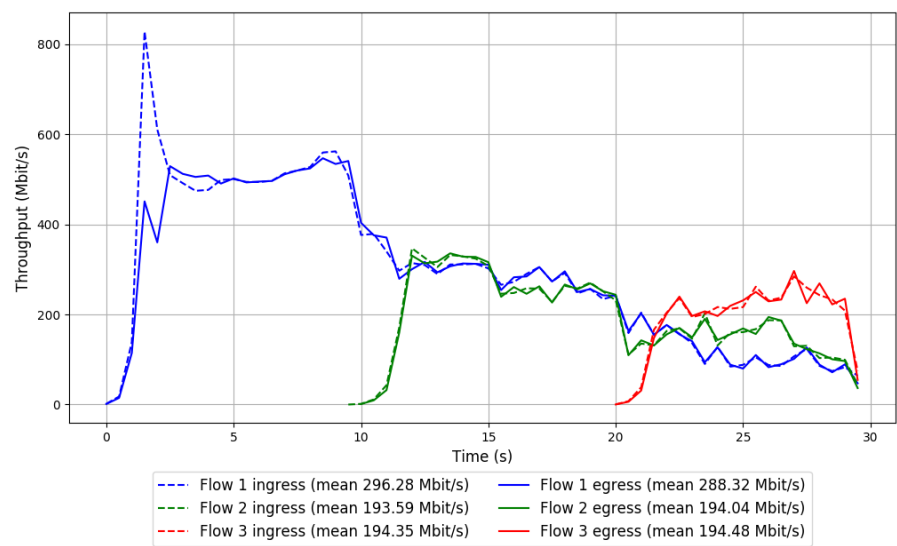


```
Run 1: Statistics of PCC

Start at: 2017-08-31 19:05:38
End at: 2017-08-31 19:06:08

# Below is generated by plot.py at 2017-09-01 00:36:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 479.47 Mbit/s
95th percentile per-packet one-way delay: 114.083 ms
Loss rate: 2.01%
-- Flow 1:
Average throughput: 288.32 Mbit/s
95th percentile per-packet one-way delay: 130.874 ms
Loss rate: 3.00%
-- Flow 2:
Average throughput: 194.04 Mbit/s
95th percentile per-packet one-way delay: 59.736 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 194.48 Mbit/s
95th percentile per-packet one-way delay: 60.481 ms
Loss rate: 0.93%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2017-08-31 19:17:58

End at: 2017-08-31 19:18:28

Run 2: Report of PCC — Data Link

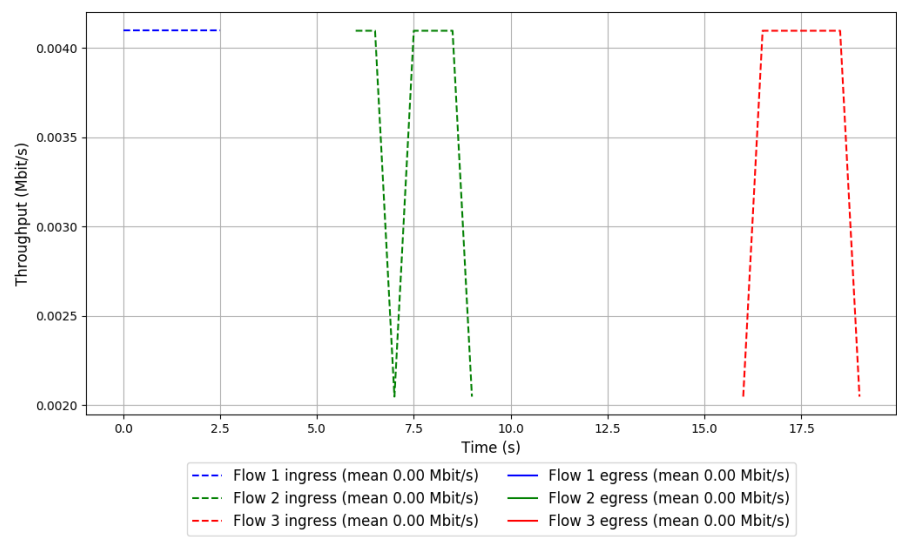


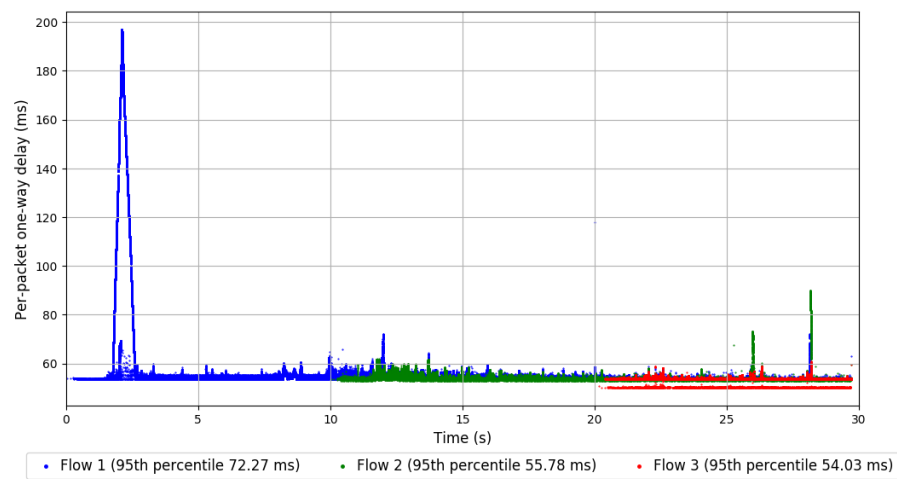
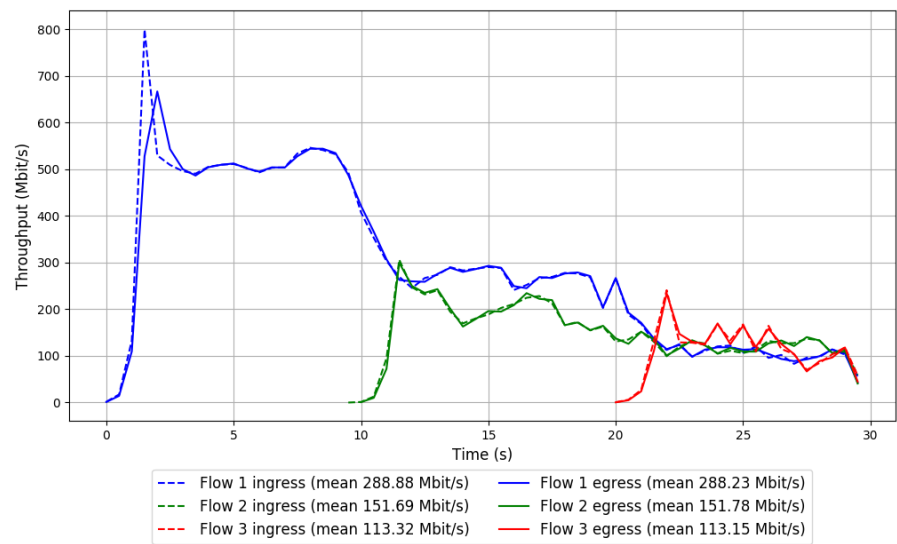
Figure is missing

```
Run 3: Statistics of PCC

Start at: 2017-08-31 19:29:44
End at: 2017-08-31 19:30:14

# Below is generated by plot.py at 2017-09-01 00:36:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 425.27 Mbit/s
95th percentile per-packet one-way delay: 58.917 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 288.23 Mbit/s
95th percentile per-packet one-way delay: 72.266 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 151.78 Mbit/s
95th percentile per-packet one-way delay: 55.777 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 113.15 Mbit/s
95th percentile per-packet one-way delay: 54.028 ms
Loss rate: 1.19%
```


Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-08-31 19:41:43

End at: 2017-08-31 19:42:13

Below is generated by plot.py at 2017-09-01 00:37:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 480.38 Mbit/s

95th percentile per-packet one-way delay: 86.885 ms

Loss rate: 0.34%

-- Flow 1:

Average throughput: 274.47 Mbit/s

95th percentile per-packet one-way delay: 89.373 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 220.95 Mbit/s

95th percentile per-packet one-way delay: 99.537 ms

Loss rate: 0.28%

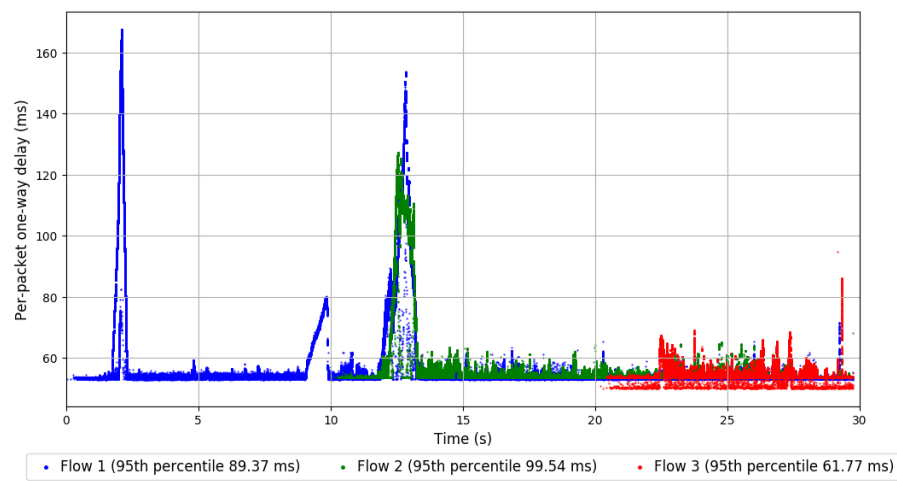
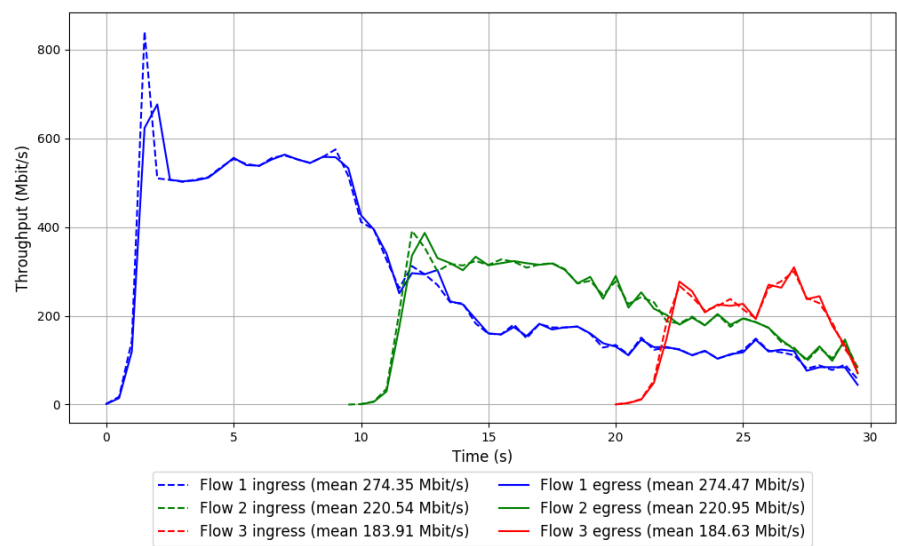
-- Flow 3:

Average throughput: 184.63 Mbit/s

95th percentile per-packet one-way delay: 61.769 ms

Loss rate: 0.66%

Run 4: Report of PCC — Data Link

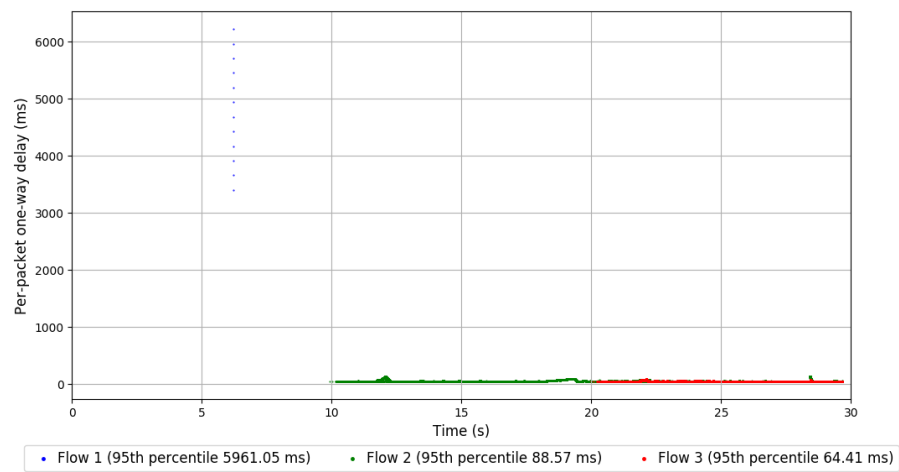
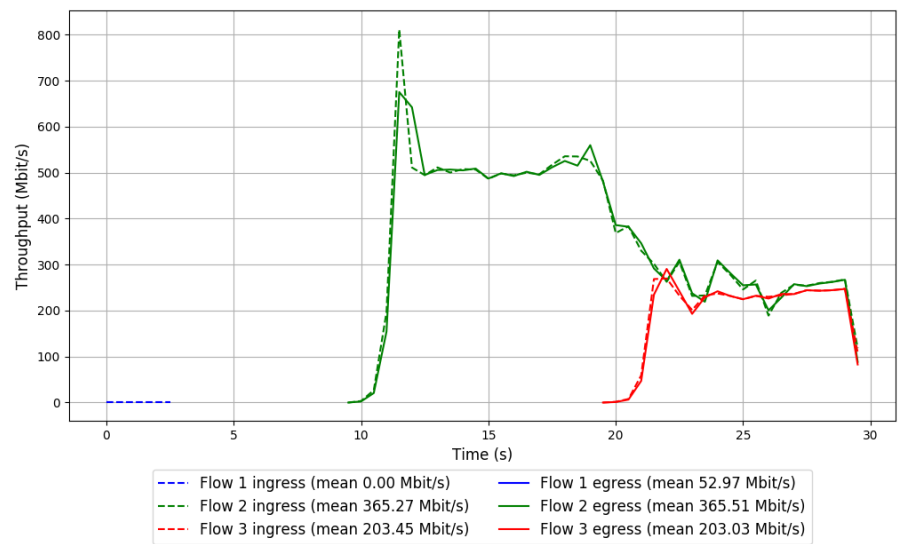


Run 5: Statistics of PCC

Start at: 2017-08-31 19:53:50

End at: 2017-08-31 19:54:20

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-08-31 20:06:03

End at: 2017-08-31 20:06:33

Below is generated by plot.py at 2017-09-01 00:38:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 458.44 Mbit/s

95th percentile per-packet one-way delay: 88.232 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 268.73 Mbit/s

95th percentile per-packet one-way delay: 93.874 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 201.94 Mbit/s

95th percentile per-packet one-way delay: 77.348 ms

Loss rate: 0.45%

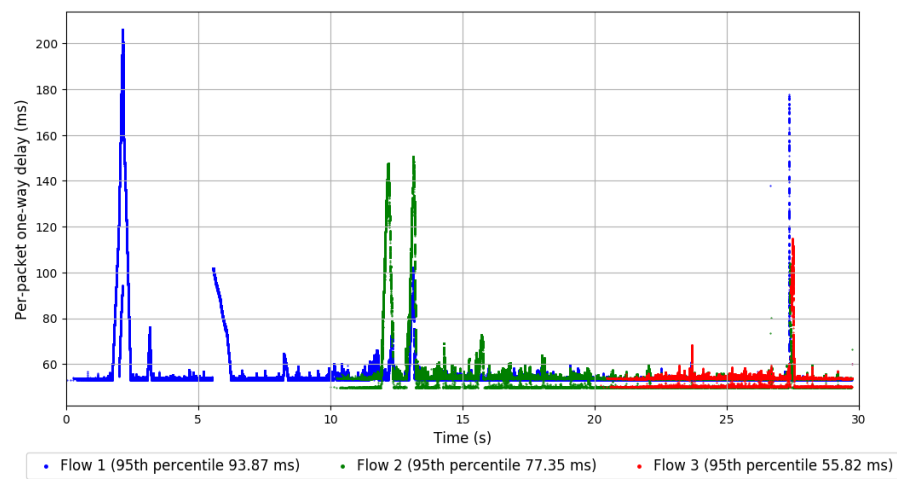
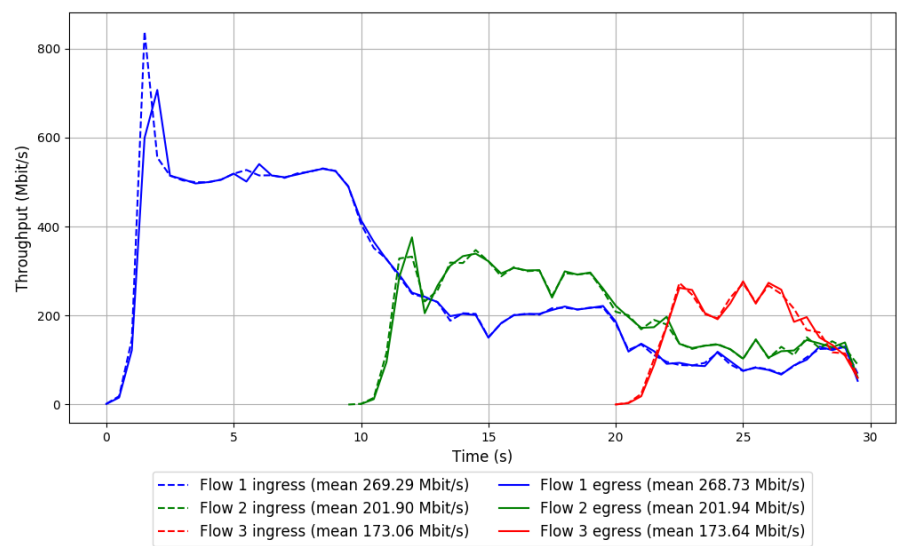
-- Flow 3:

Average throughput: 173.64 Mbit/s

95th percentile per-packet one-way delay: 55.818 ms

Loss rate: 0.69%

Run 6: Report of PCC — Data Link

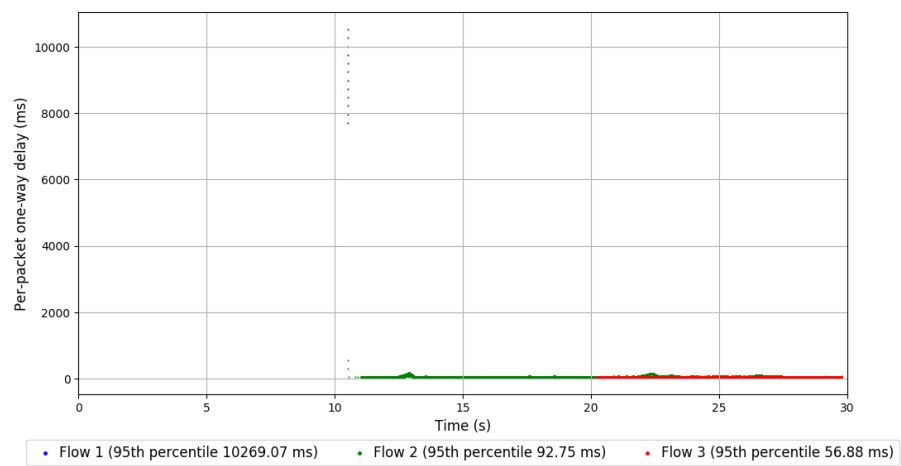
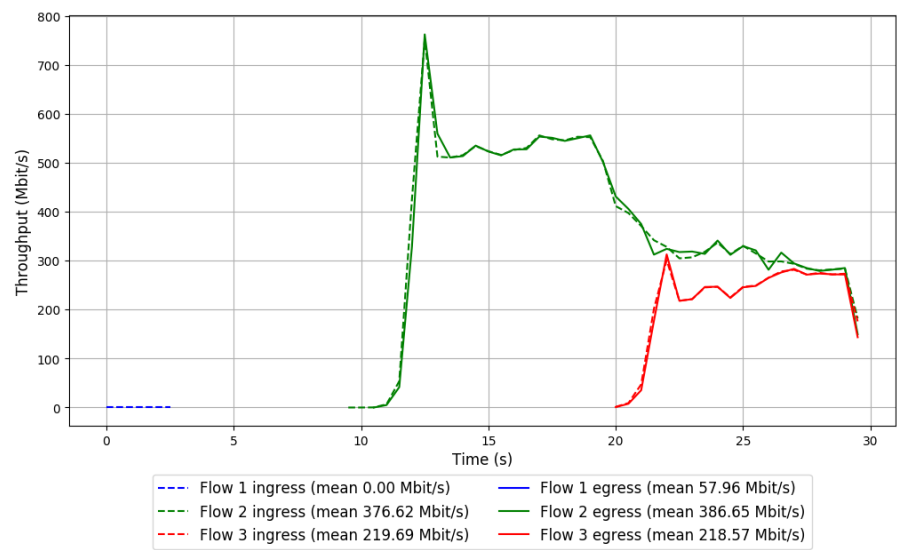


Run 7: Statistics of PCC

Start at: 2017-08-31 20:17:58

End at: 2017-08-31 20:18:28

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-08-31 20:30:01

End at: 2017-08-31 20:30:31

Below is generated by plot.py at 2017-09-01 00:39:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 462.41 Mbit/s

95th percentile per-packet one-way delay: 93.825 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 252.76 Mbit/s

95th percentile per-packet one-way delay: 114.507 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 233.21 Mbit/s

95th percentile per-packet one-way delay: 74.889 ms

Loss rate: 0.37%

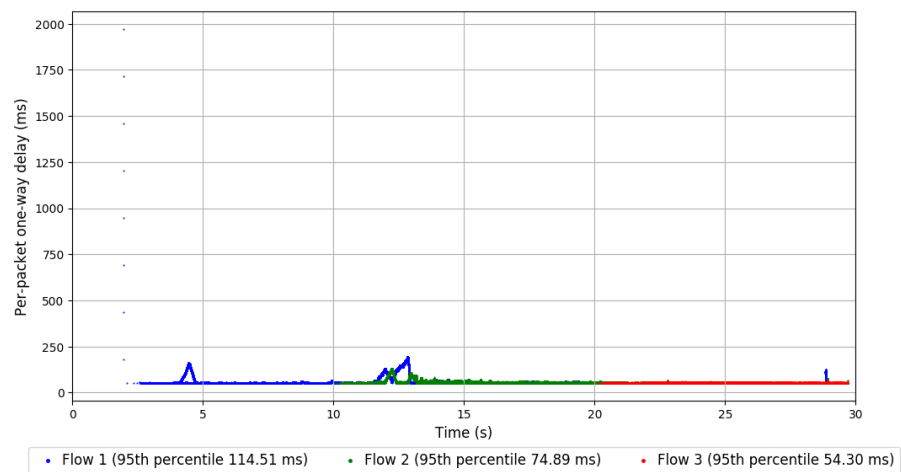
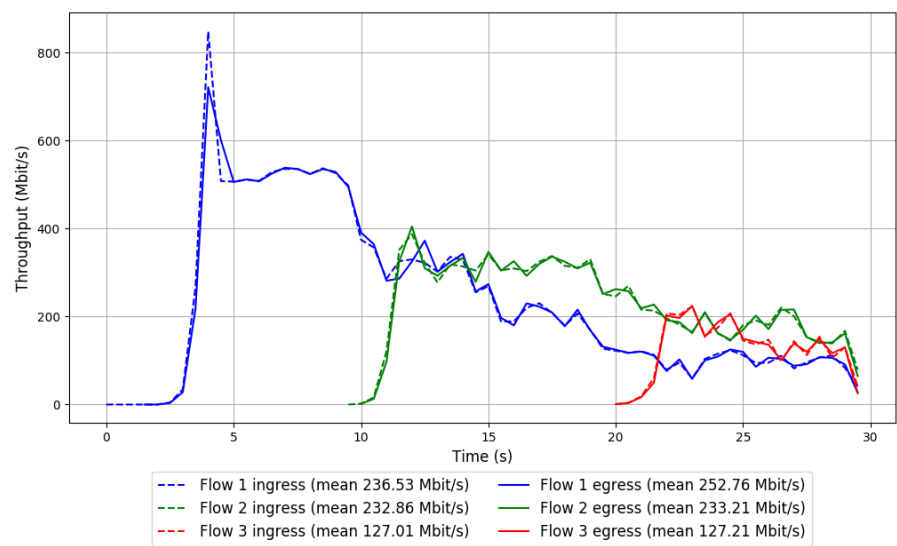
-- Flow 3:

Average throughput: 127.21 Mbit/s

95th percentile per-packet one-way delay: 54.296 ms

Loss rate: 0.93%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-08-31 20:42:09

End at: 2017-08-31 20:42:39

Below is generated by plot.py at 2017-09-01 00:39:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 393.71 Mbit/s

95th percentile per-packet one-way delay: 86.344 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 10.94 Mbit/s

95th percentile per-packet one-way delay: 4654.177 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 370.87 Mbit/s

95th percentile per-packet one-way delay: 93.666 ms

Loss rate: 0.70%

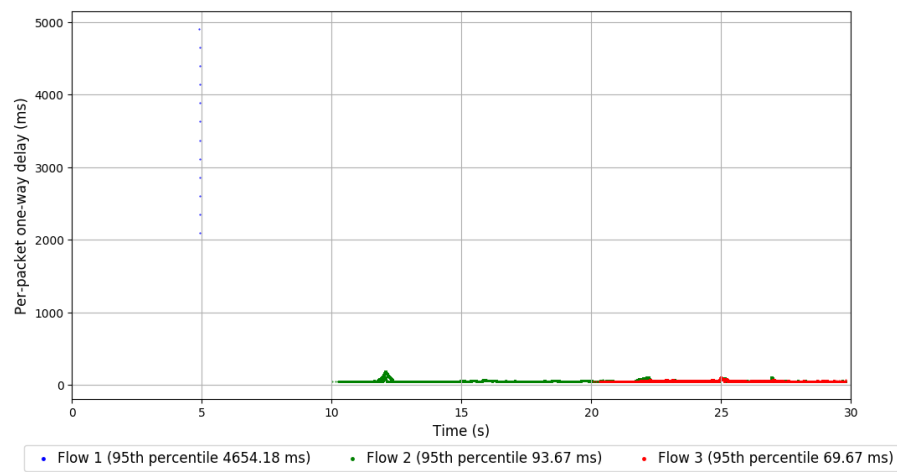
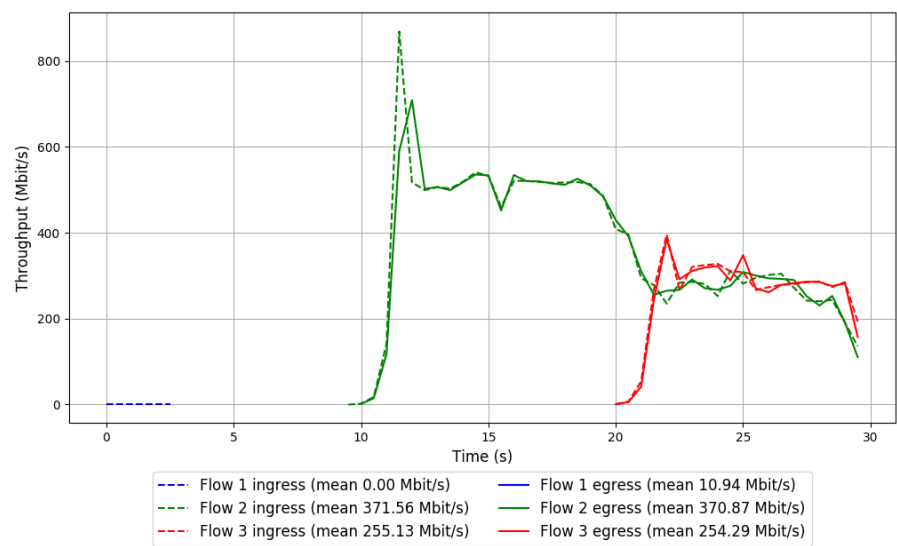
-- Flow 3:

Average throughput: 254.29 Mbit/s

95th percentile per-packet one-way delay: 69.671 ms

Loss rate: 1.33%

Run 9: Report of PCC — Data Link

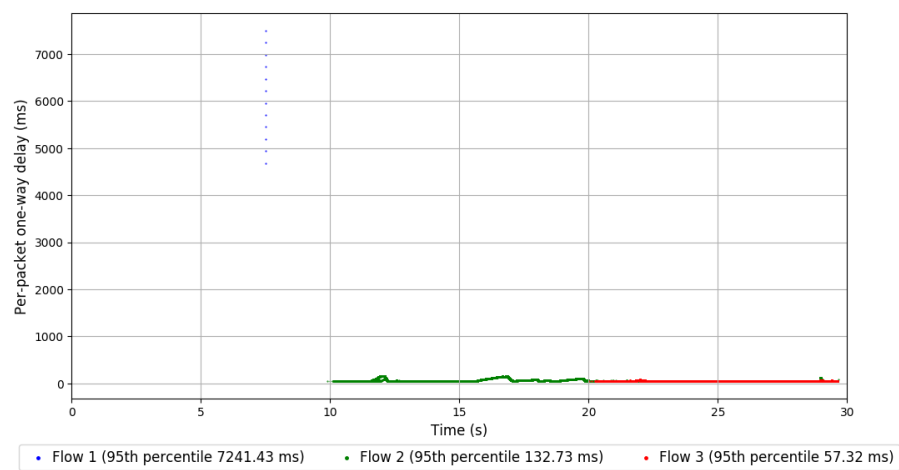
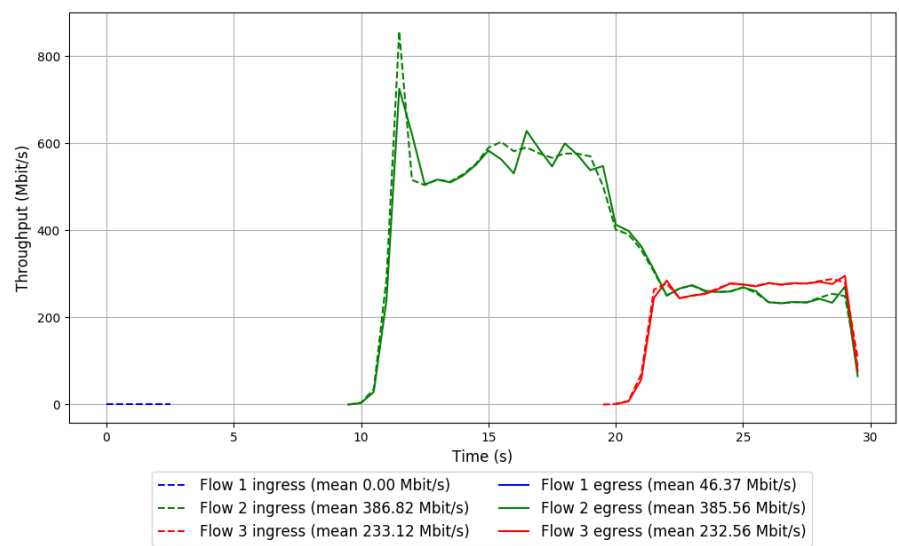


Run 10: Statistics of PCC

Start at: 2017-08-31 20:54:08

End at: 2017-08-31 20:54:38

Run 10: Report of PCC — Data Link

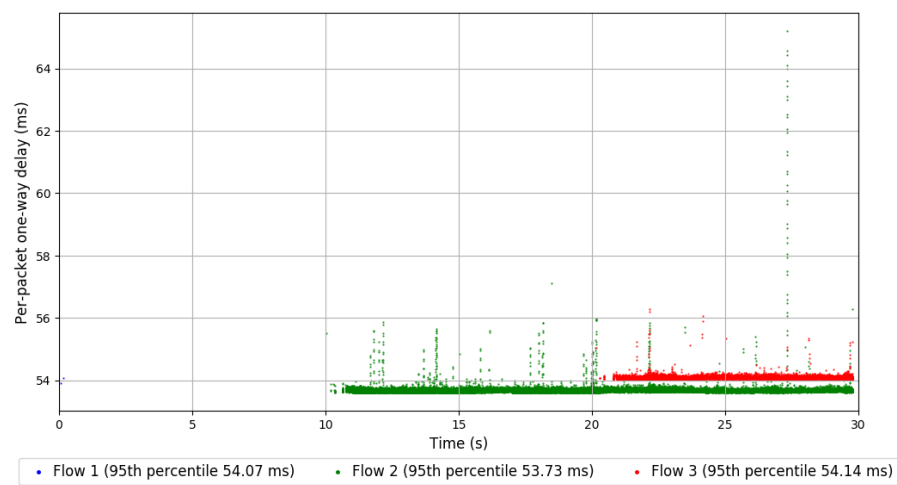
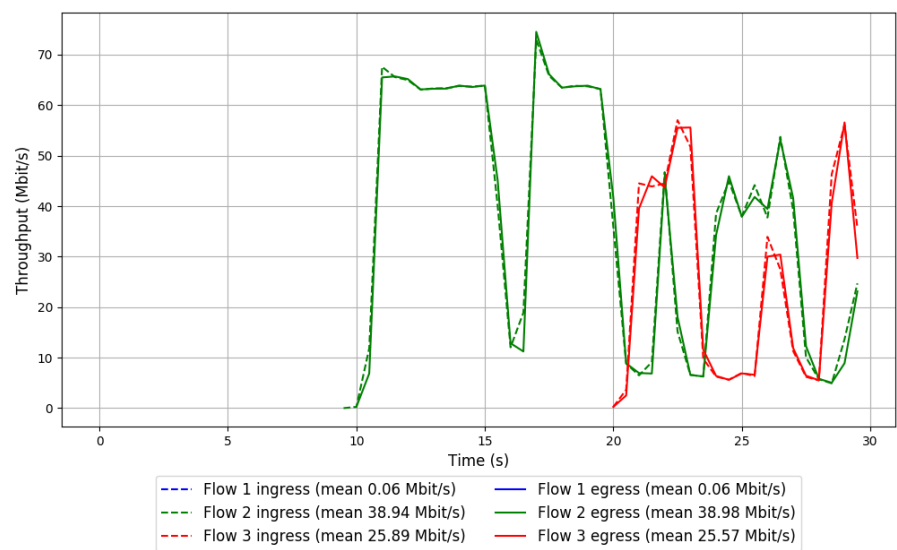


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-08-31 18:57:10
End at: 2017-08-31 18:57:40

# Below is generated by plot.py at 2017-09-01 00:40:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.14 Mbit/s
95th percentile per-packet one-way delay: 54.087 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 54.068 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.98 Mbit/s
95th percentile per-packet one-way delay: 53.729 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 25.57 Mbit/s
95th percentile per-packet one-way delay: 54.140 ms
Loss rate: 2.35%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-08-31 19:09:30

End at: 2017-08-31 19:10:00

Below is generated by plot.py at 2017-09-01 00:40:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.23 Mbit/s

95th percentile per-packet one-way delay: 53.659 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.850 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 36.79 Mbit/s

95th percentile per-packet one-way delay: 53.042 ms

Loss rate: 0.40%

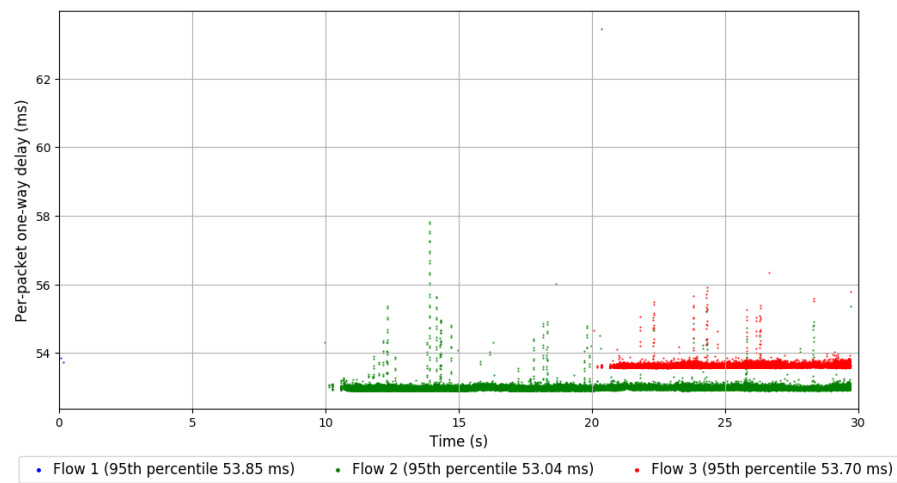
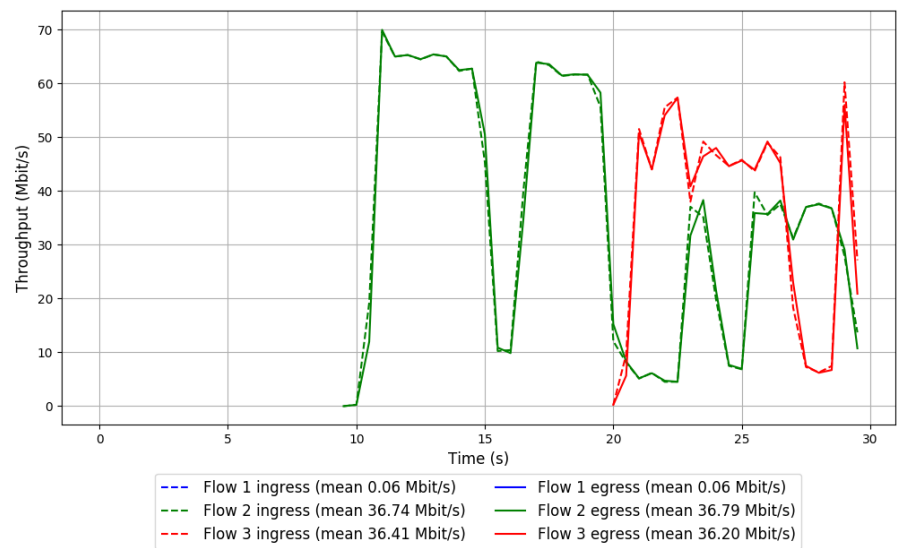
-- Flow 3:

Average throughput: 36.20 Mbit/s

95th percentile per-packet one-way delay: 53.701 ms

Loss rate: 1.69%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-08-31 19:21:30

End at: 2017-08-31 19:22:00

Below is generated by plot.py at 2017-09-01 00:40:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.54 Mbit/s

95th percentile per-packet one-way delay: 53.712 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.126 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 37.72 Mbit/s

95th percentile per-packet one-way delay: 53.705 ms

Loss rate: 0.08%

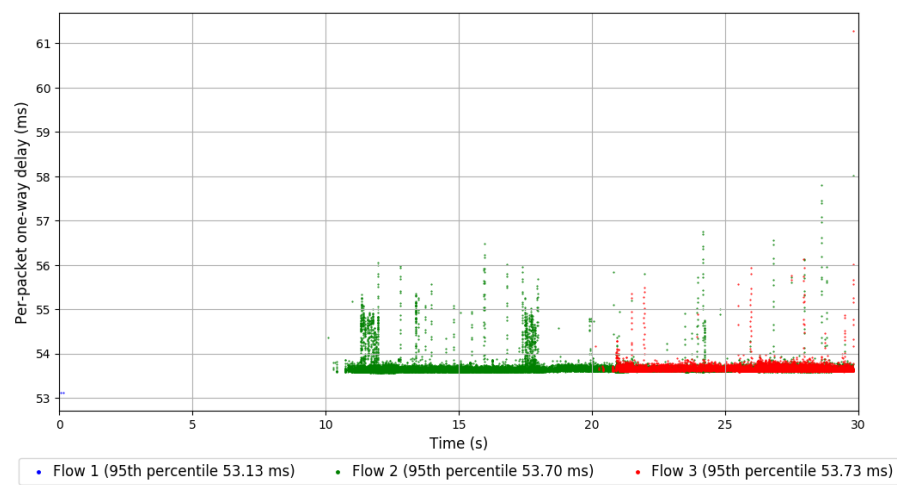
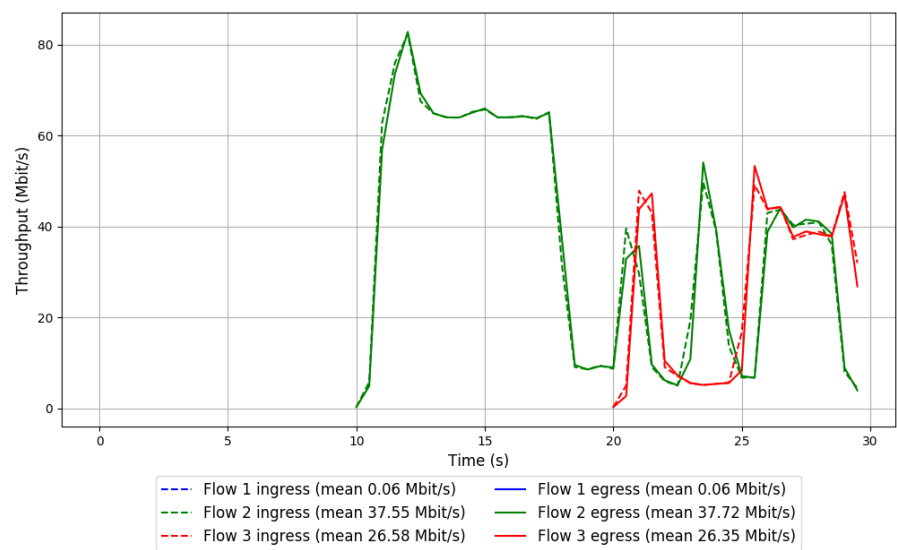
-- Flow 3:

Average throughput: 26.35 Mbit/s

95th percentile per-packet one-way delay: 53.726 ms

Loss rate: 1.91%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-08-31 19:33:35

End at: 2017-08-31 19:34:05

Below is generated by plot.py at 2017-09-01 00:40:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 35.92 Mbit/s

95th percentile per-packet one-way delay: 53.705 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.027 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 43.80 Mbit/s

95th percentile per-packet one-way delay: 53.714 ms

Loss rate: 0.57%

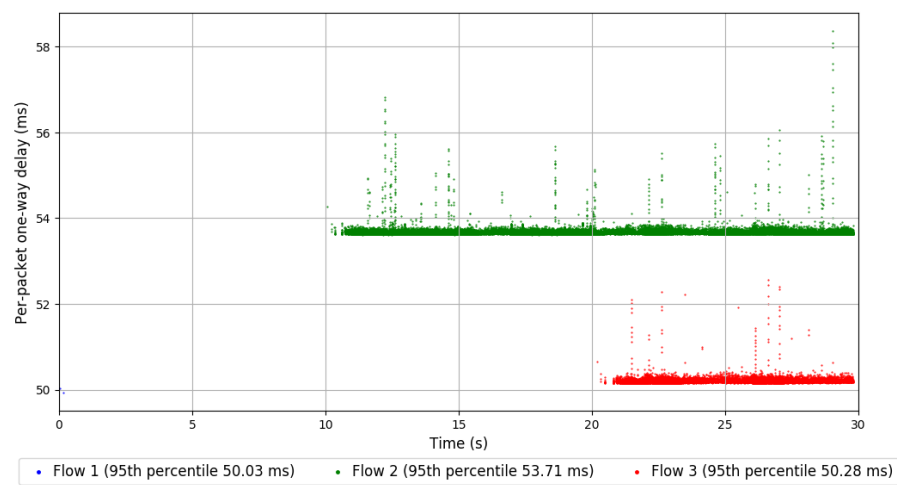
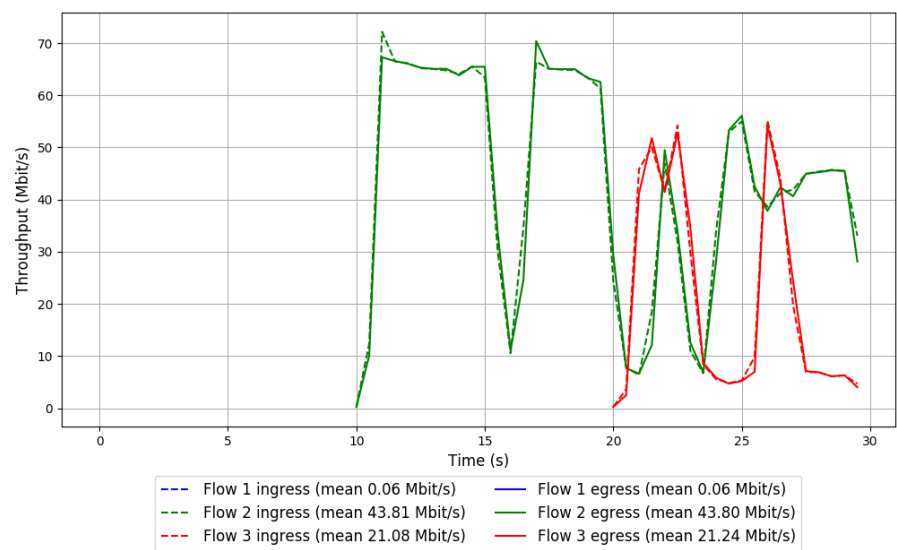
-- Flow 3:

Average throughput: 21.24 Mbit/s

95th percentile per-packet one-way delay: 50.278 ms

Loss rate: 0.31%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-08-31 19:45:36

End at: 2017-08-31 19:46:06

Below is generated by plot.py at 2017-09-01 00:40:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.15 Mbit/s

95th percentile per-packet one-way delay: 53.054 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.745 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 37.33 Mbit/s

95th percentile per-packet one-way delay: 49.888 ms

Loss rate: 0.56%

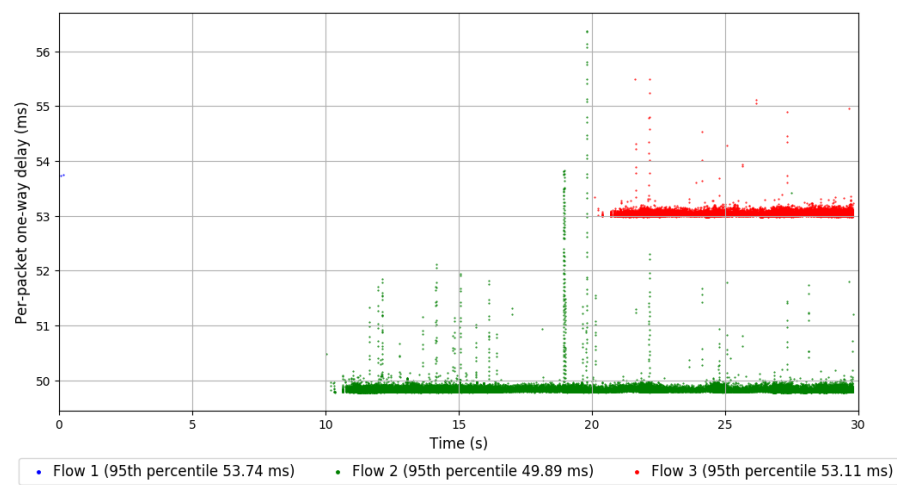
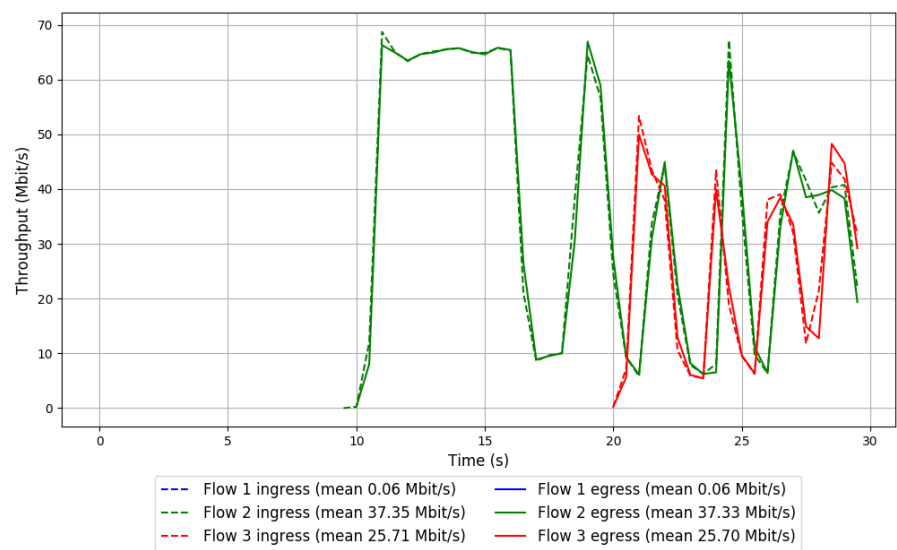
-- Flow 3:

Average throughput: 25.70 Mbit/s

95th percentile per-packet one-way delay: 53.106 ms

Loss rate: 1.10%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-08-31 19:57:35

End at: 2017-08-31 19:58:05

Below is generated by plot.py at 2017-09-01 00:40:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 37.16 Mbit/s

95th percentile per-packet one-way delay: 53.038 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 53.145 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.15 Mbit/s

95th percentile per-packet one-way delay: 53.053 ms

Loss rate: 0.52%

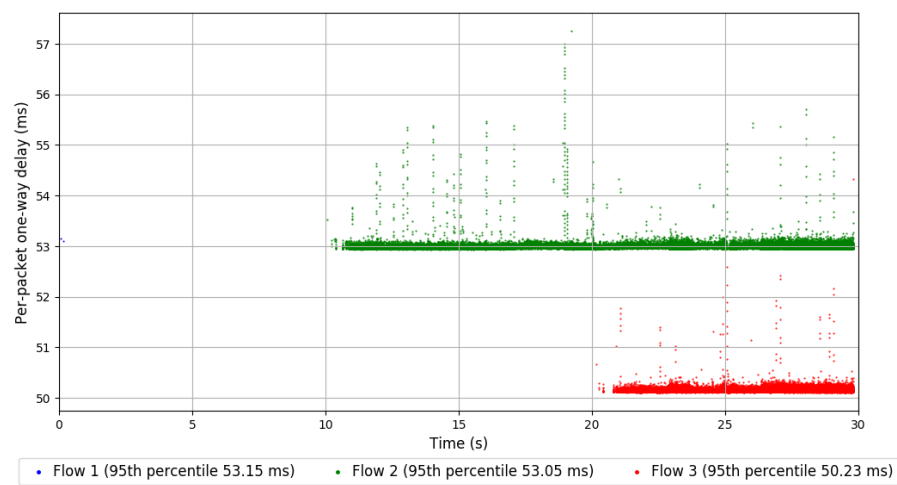
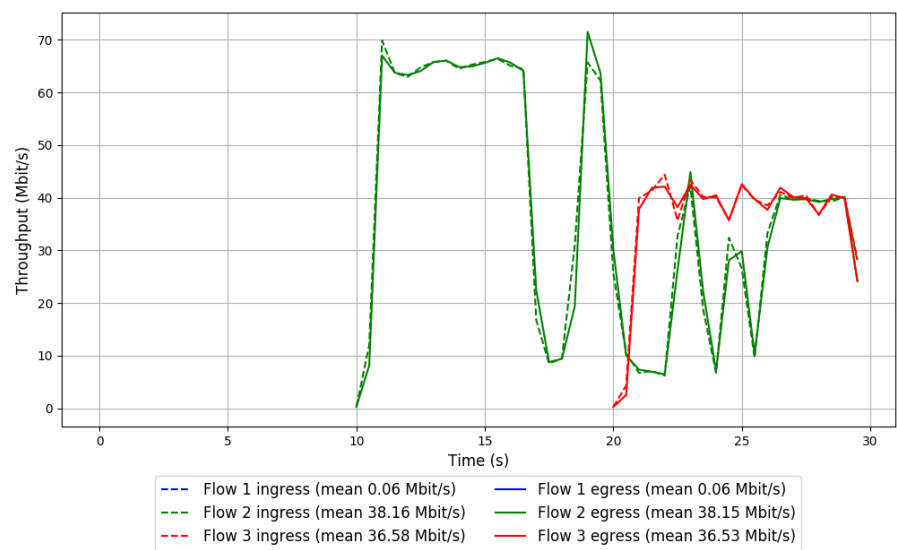
-- Flow 3:

Average throughput: 36.53 Mbit/s

95th percentile per-packet one-way delay: 50.226 ms

Loss rate: 1.12%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-08-31 20:09:55

End at: 2017-08-31 20:10:25

Below is generated by plot.py at 2017-09-01 00:40:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 35.58 Mbit/s

95th percentile per-packet one-way delay: 52.991 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.304 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.87 Mbit/s

95th percentile per-packet one-way delay: 50.005 ms

Loss rate: 0.15%

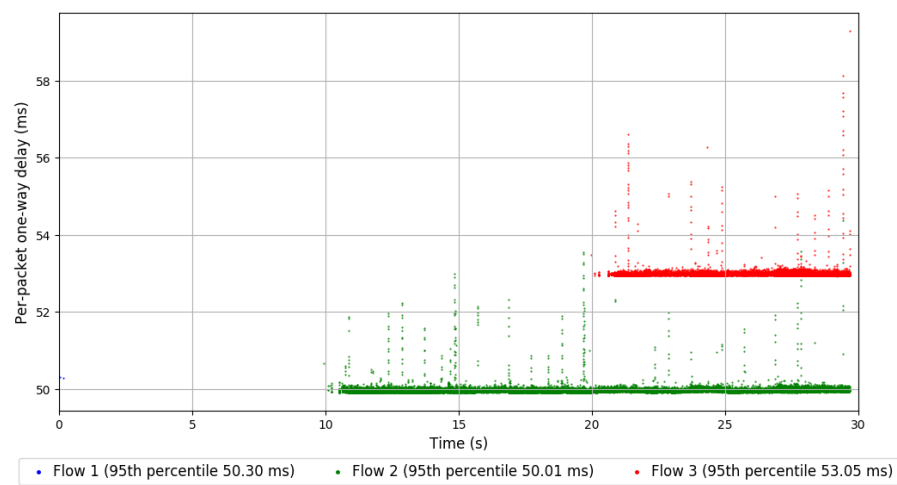
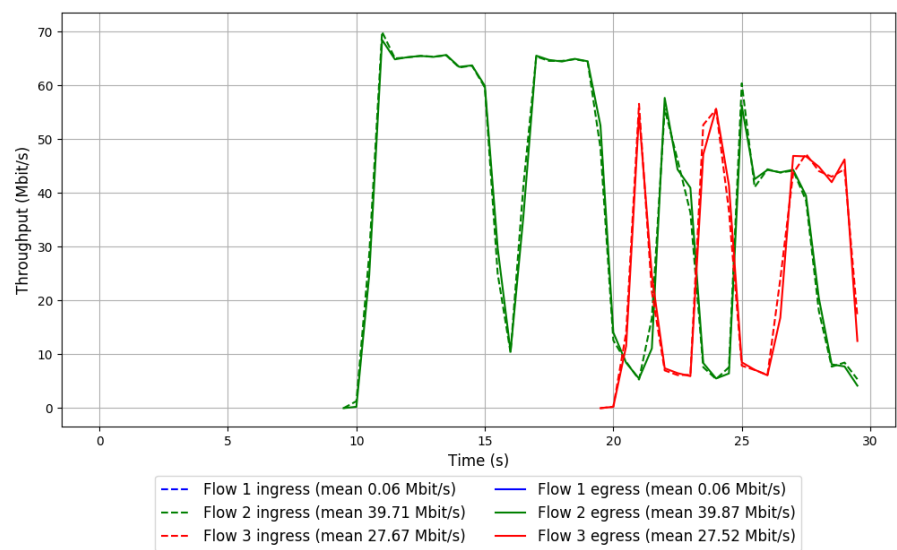
-- Flow 3:

Average throughput: 27.52 Mbit/s

95th percentile per-packet one-way delay: 53.046 ms

Loss rate: 1.47%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-08-31 20:21:45

End at: 2017-08-31 20:22:15

Below is generated by plot.py at 2017-09-01 00:41:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 34.61 Mbit/s

95th percentile per-packet one-way delay: 53.034 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.042 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 40.55 Mbit/s

95th percentile per-packet one-way delay: 53.044 ms

Loss rate: 0.45%

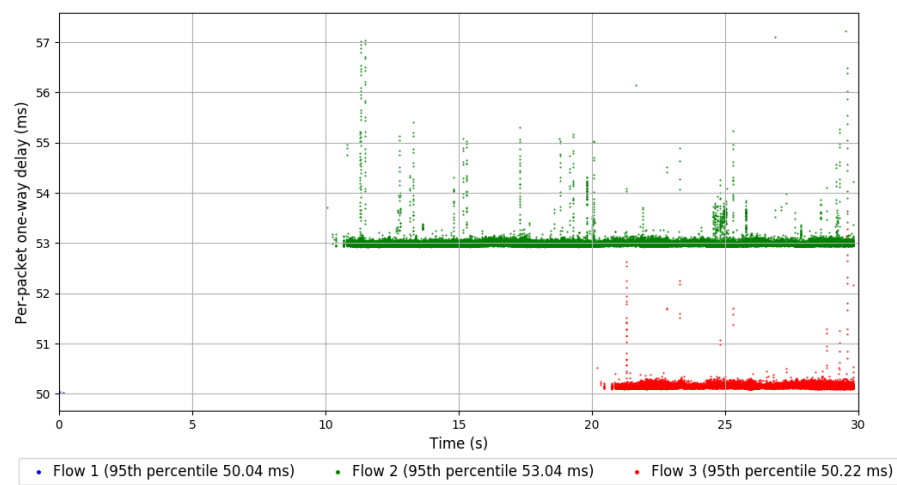
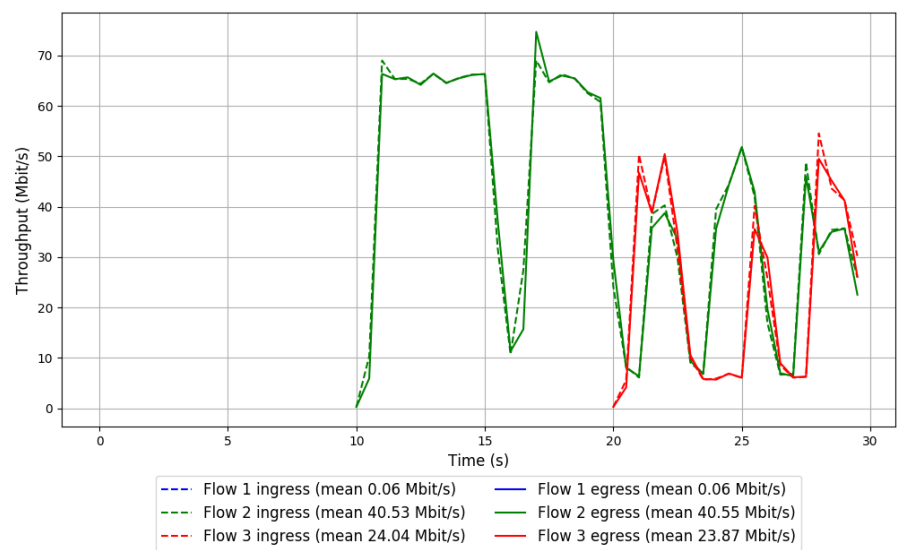
-- Flow 3:

Average throughput: 23.87 Mbit/s

95th percentile per-packet one-way delay: 50.221 ms

Loss rate: 1.78%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-08-31 20:33:51

End at: 2017-08-31 20:34:21

Below is generated by plot.py at 2017-09-01 00:41:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.57 Mbit/s

95th percentile per-packet one-way delay: 53.639 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 50.384 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 35.03 Mbit/s

95th percentile per-packet one-way delay: 53.011 ms

Loss rate: 0.42%

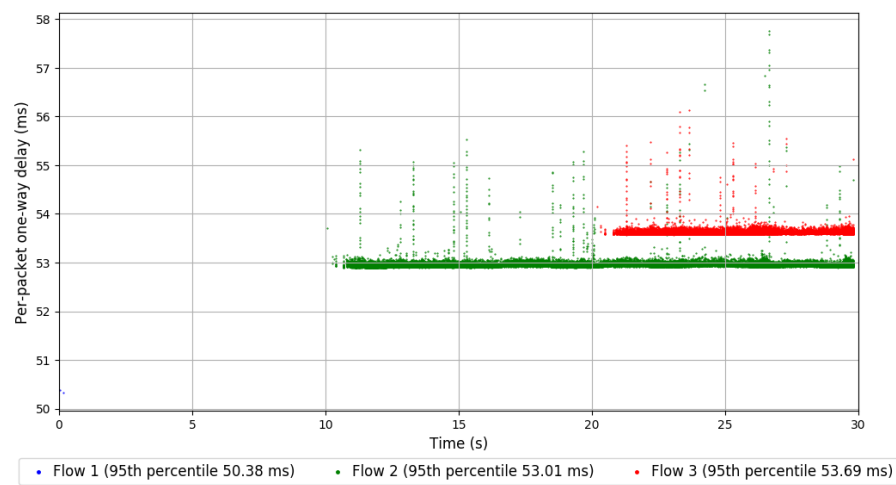
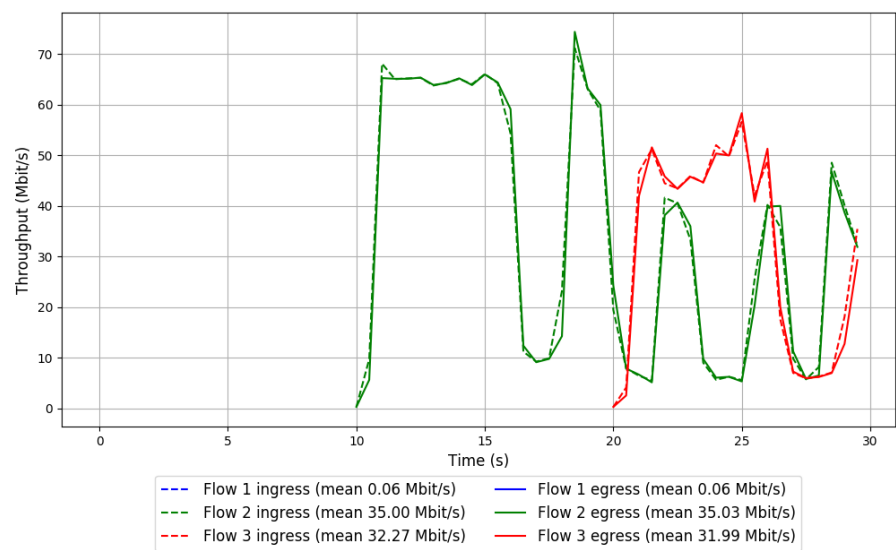
-- Flow 3:

Average throughput: 31.99 Mbit/s

95th percentile per-packet one-way delay: 53.687 ms

Loss rate: 1.97%

Run 9: Report of QUIC Cubic — Data Link

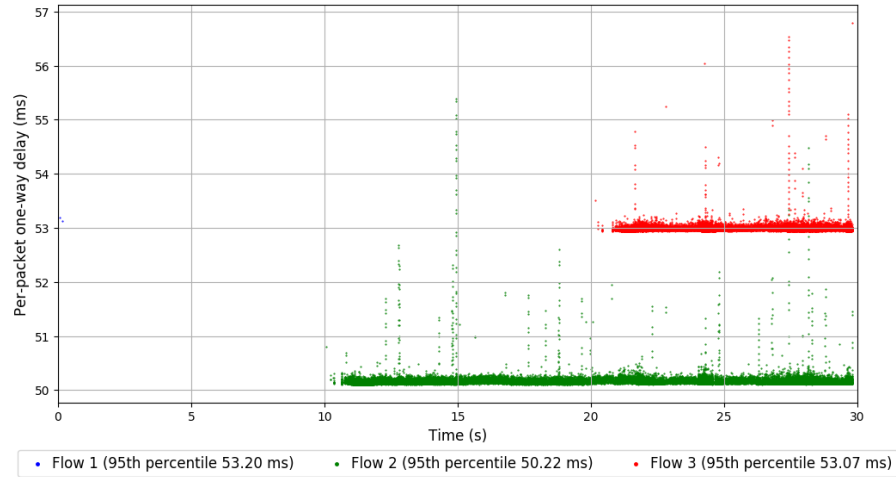
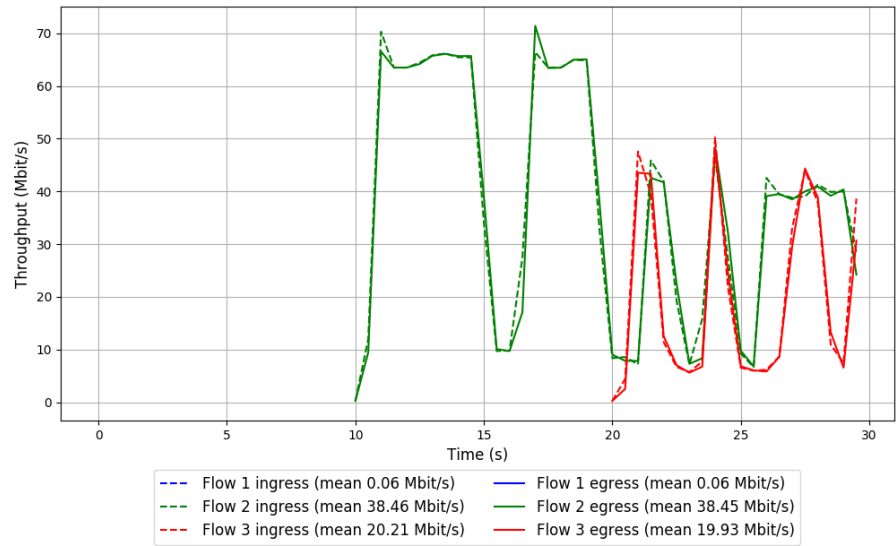


```
Run 10: Statistics of QUIC Cubic

Start at: 2017-08-31 20:45:55
End at: 2017-08-31 20:46:25

# Below is generated by plot.py at 2017-09-01 00:41:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 31.98 Mbit/s
95th percentile per-packet one-way delay: 53.000 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 53.199 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.45 Mbit/s
95th percentile per-packet one-way delay: 50.219 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 19.93 Mbit/s
95th percentile per-packet one-way delay: 53.067 ms
Loss rate: 2.44%
```

Run 10: Report of QUIC Cubic — Data Link

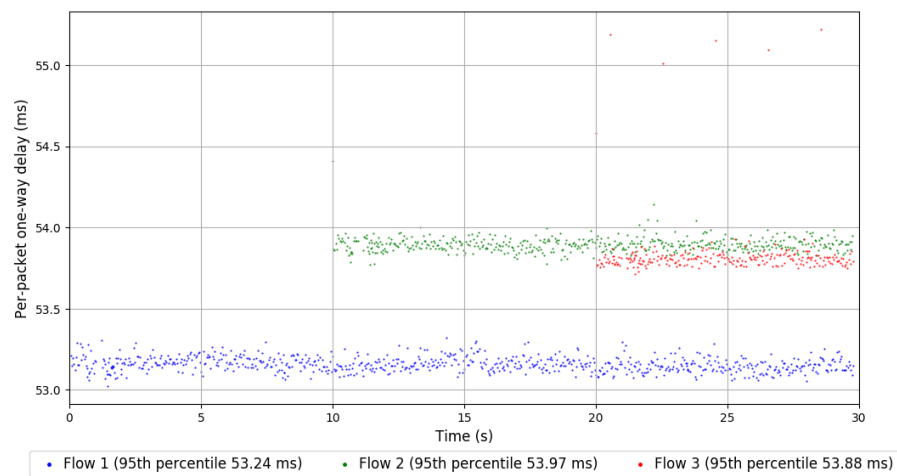
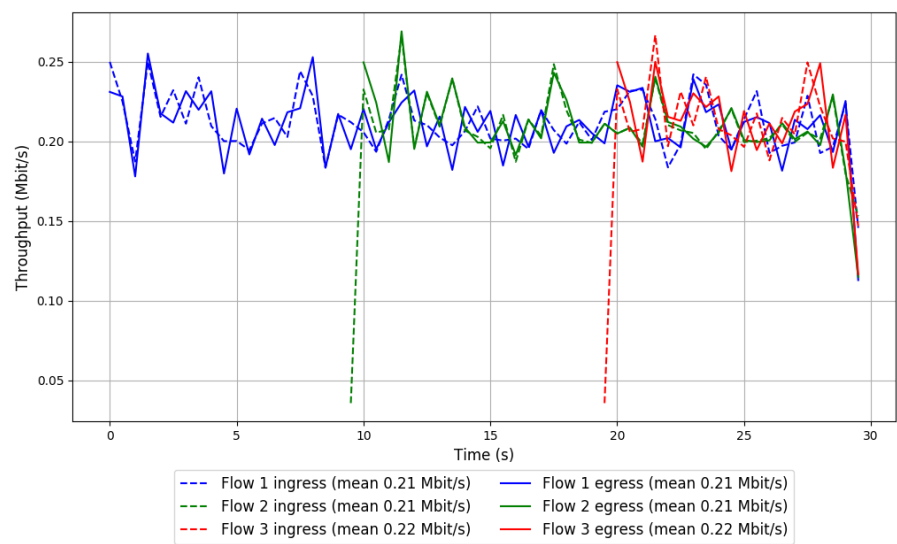


```
Run 1: Statistics of SCReAM

Start at: 2017-08-31 19:08:50
End at: 2017-08-31 19:09:20

# Below is generated by plot.py at 2017-09-01 00:41:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 53.935 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.241 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.965 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.884 ms
Loss rate: 1.11%
```

Run 1: Report of SReAM — Data Link

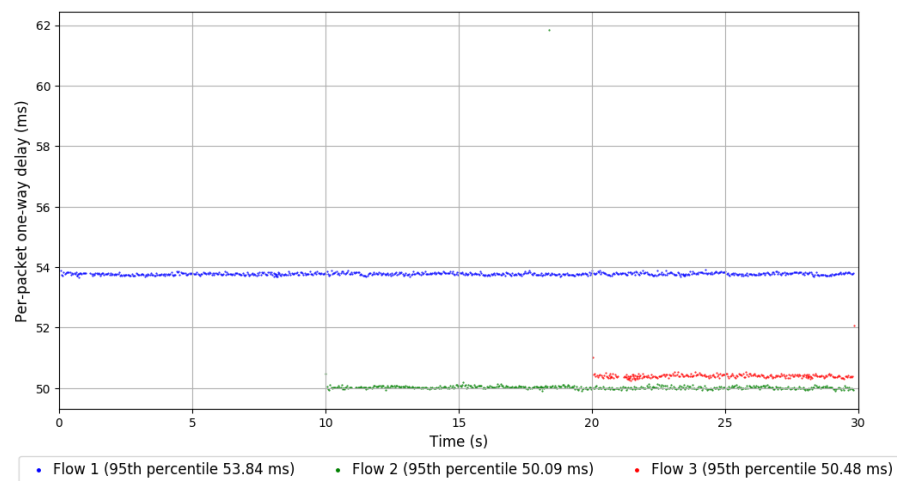
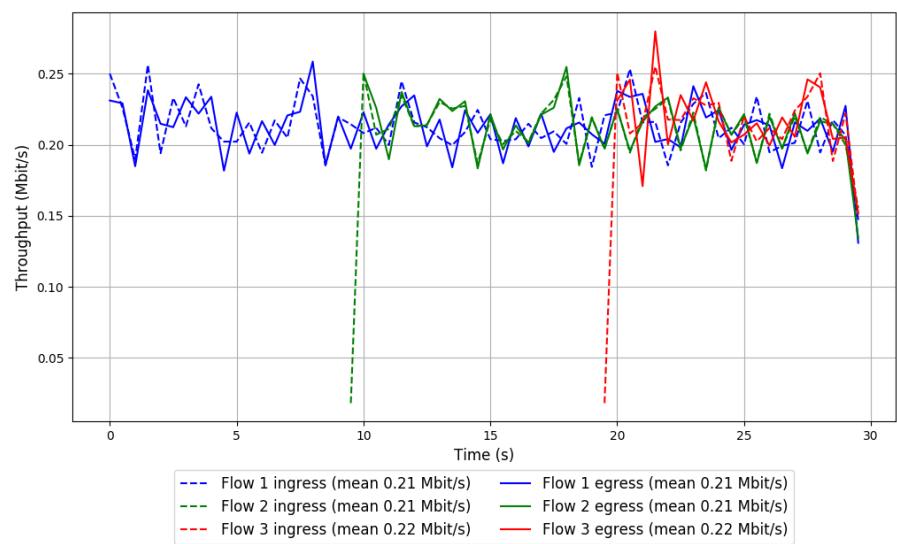


```
Run 2: Statistics of SReAM

Start at: 2017-08-31 19:20:50
End at: 2017-08-31 19:21:20

# Below is generated by plot.py at 2017-09-01 00:41:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.831 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.845 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.095 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.484 ms
Loss rate: 0.74%
```

Run 2: Report of SCReAM — Data Link



Run 3: Statistics of SReAM

Start at: 2017-08-31 19:32:56

End at: 2017-08-31 19:33:26

Below is generated by plot.py at 2017-09-01 00:41:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.789 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.576 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.814 ms

Loss rate: 0.42%

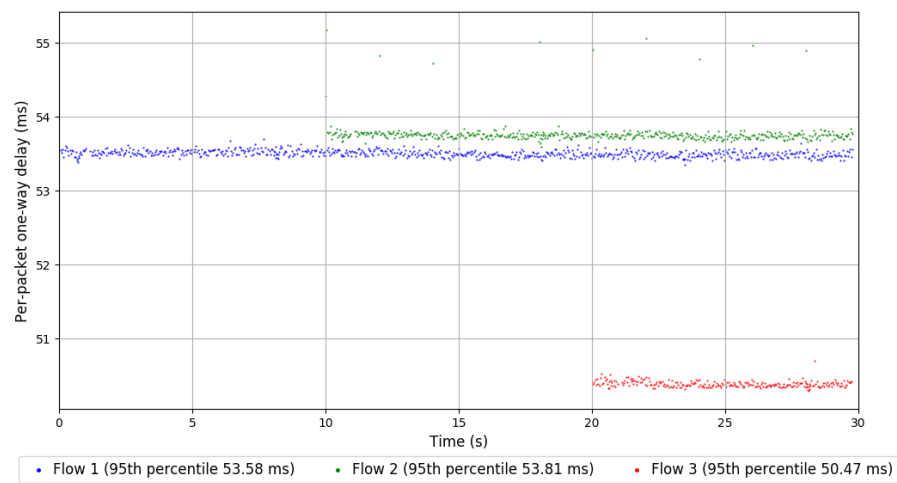
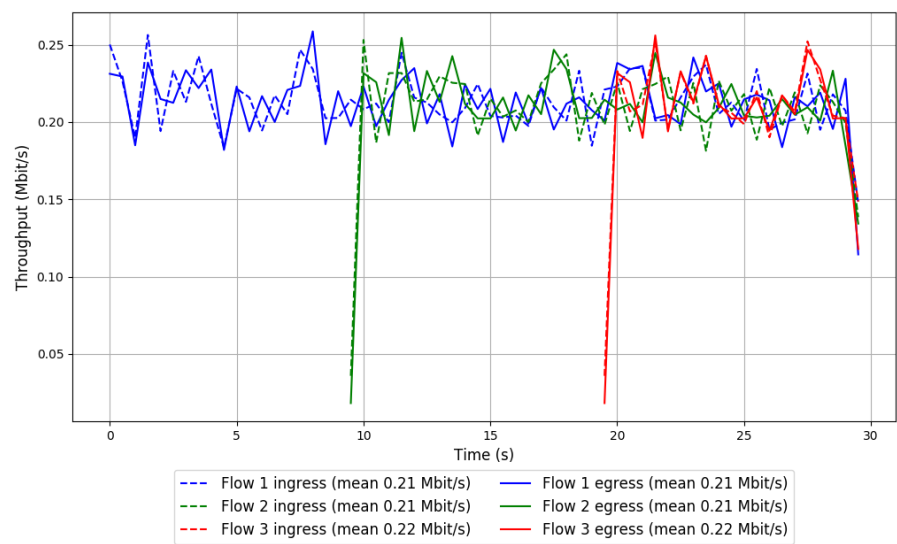
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.465 ms

Loss rate: 1.11%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2017-08-31 19:44:56

End at: 2017-08-31 19:45:26

Below is generated by plot.py at 2017-09-01 00:41:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.897 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.915 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.384 ms

Loss rate: 0.42%

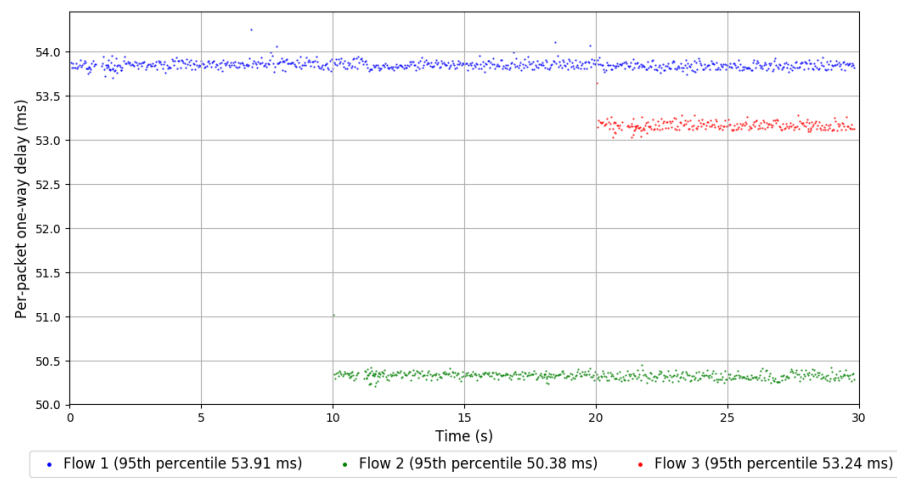
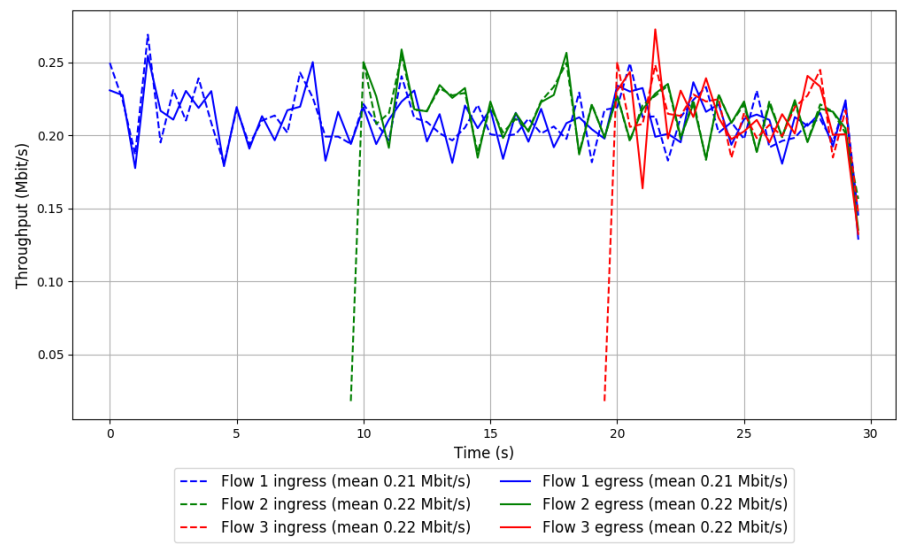
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.237 ms

Loss rate: 1.11%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2017-08-31 19:56:55

End at: 2017-08-31 19:57:25

Below is generated by plot.py at 2017-09-01 00:41:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.224 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.224 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.245 ms

Loss rate: 0.43%

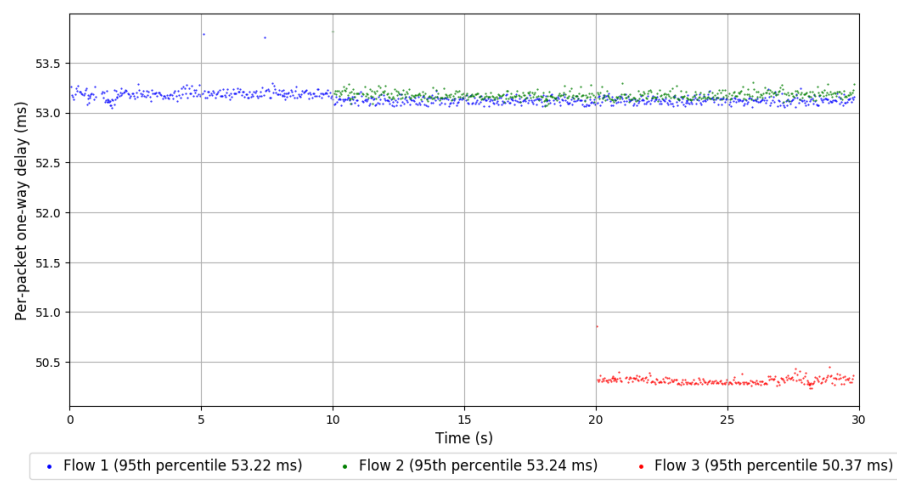
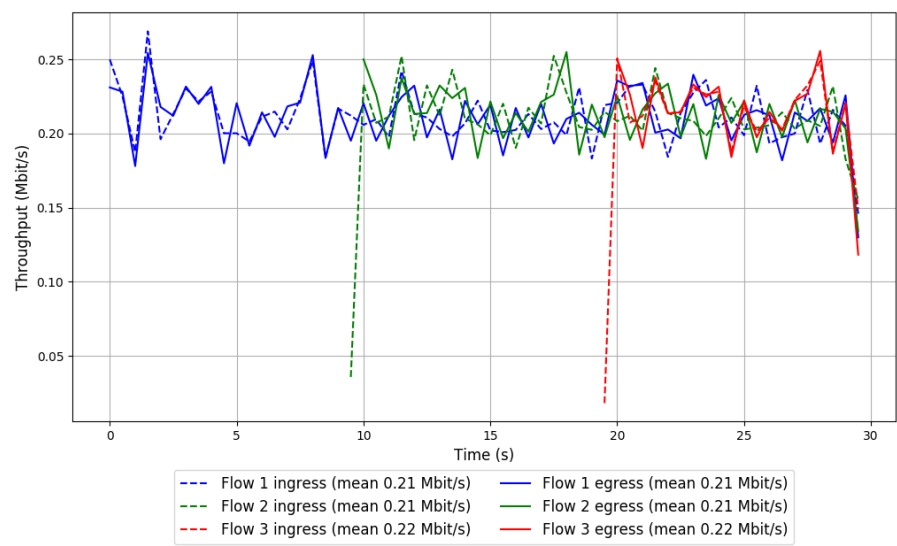
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.367 ms

Loss rate: 1.11%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2017-08-31 20:09:15

End at: 2017-08-31 20:09:45

Below is generated by plot.py at 2017-09-01 00:41:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.819 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 50.389 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.203 ms

Loss rate: 0.42%

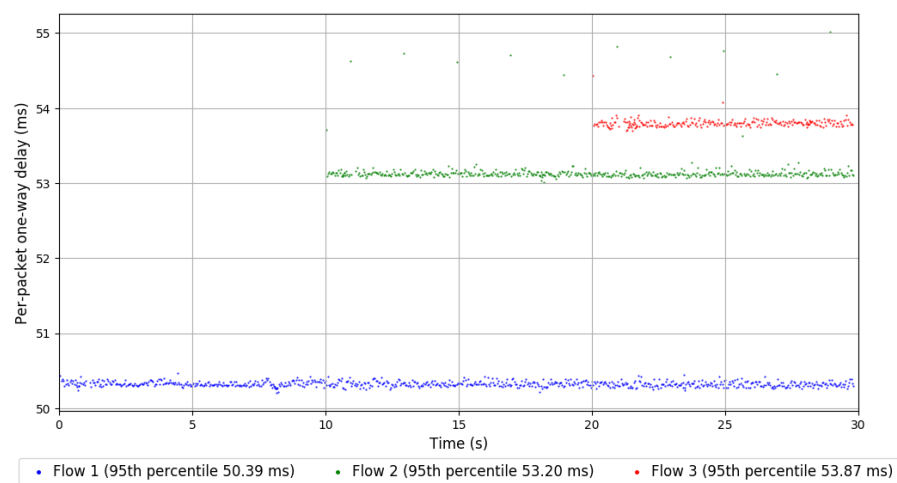
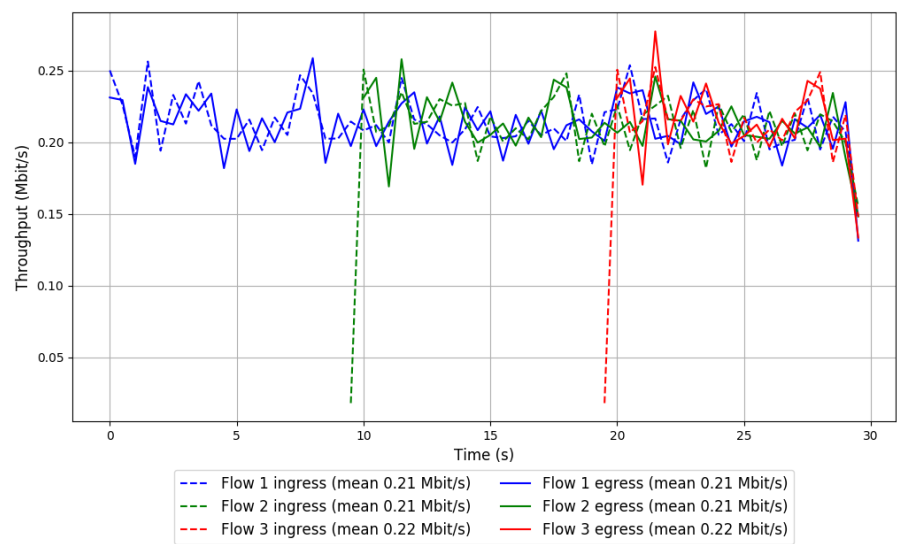
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.866 ms

Loss rate: 1.10%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SCReAM

Start at: 2017-08-31 20:21:05

End at: 2017-08-31 20:21:35

Below is generated by plot.py at 2017-09-01 00:41:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.218 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 50.017 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.248 ms

Loss rate: 0.42%

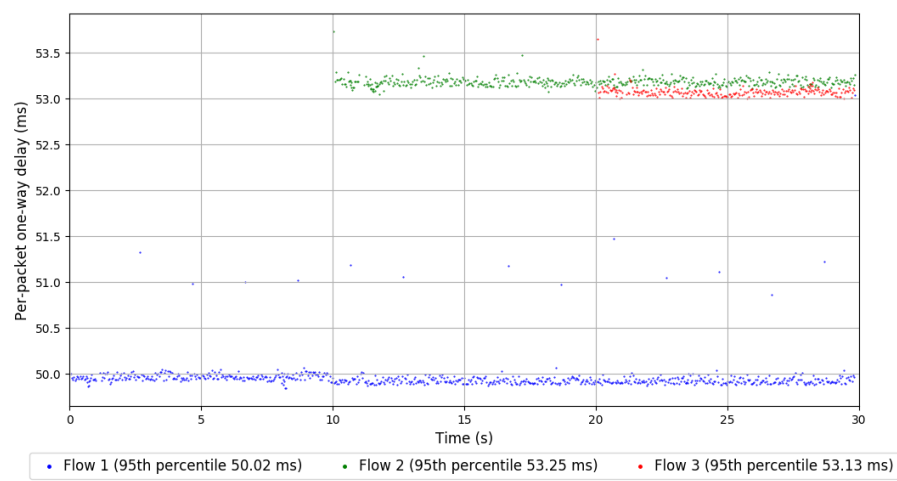
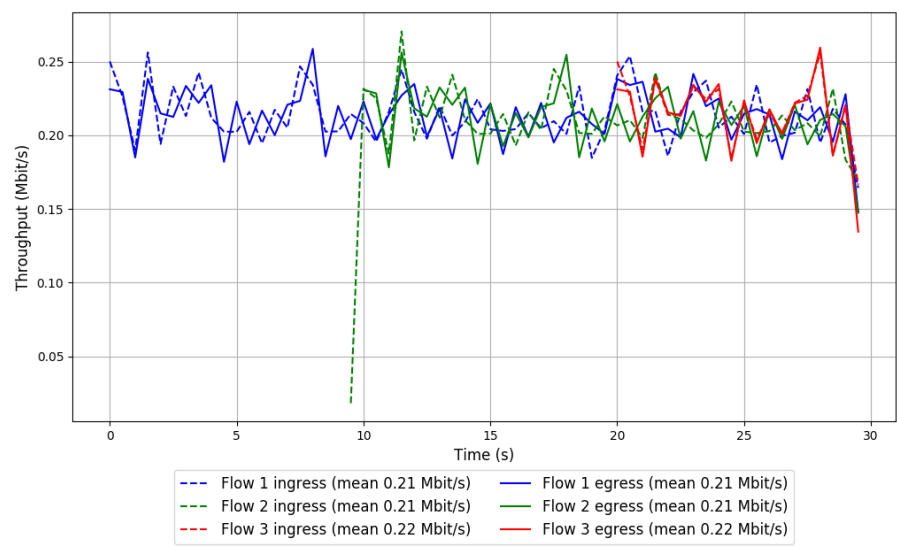
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.129 ms

Loss rate: 1.11%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2017-08-31 20:33:11

End at: 2017-08-31 20:33:41

Below is generated by plot.py at 2017-09-01 00:41:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.830 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.843 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.143 ms

Loss rate: 0.42%

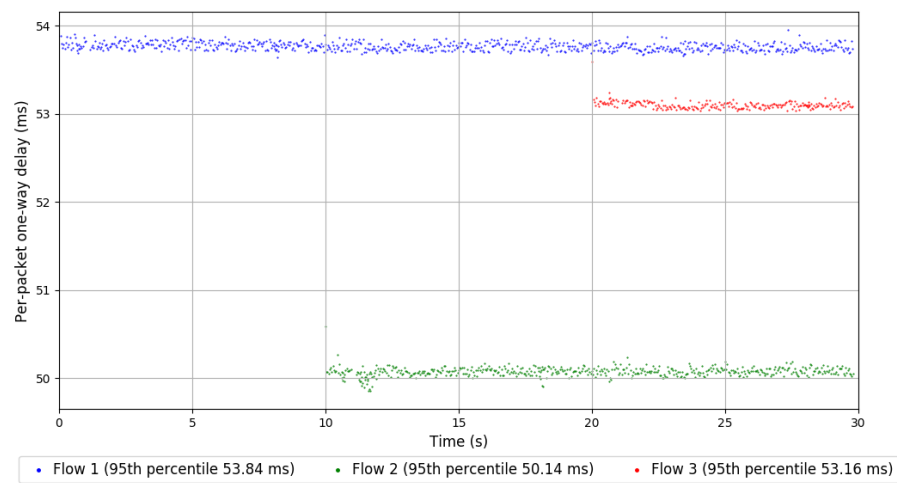
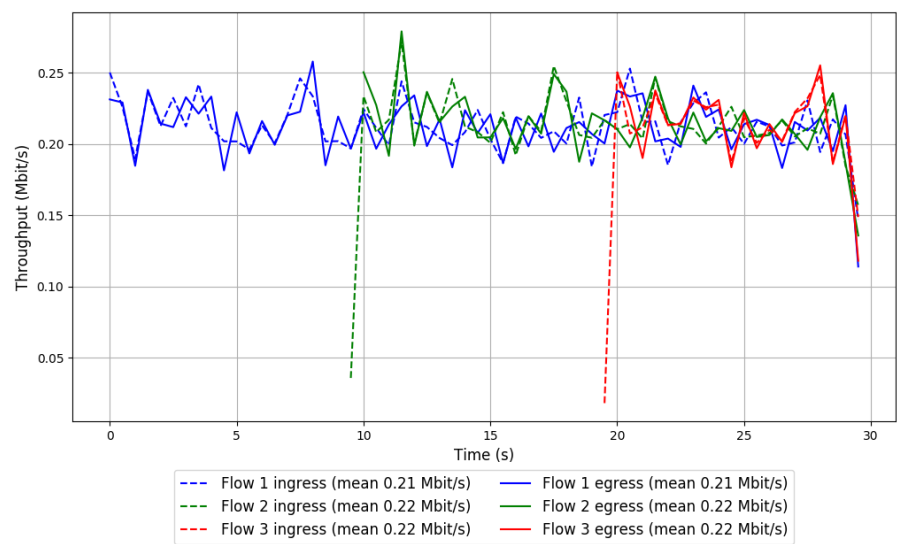
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.156 ms

Loss rate: 1.11%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2017-08-31 20:45:15

End at: 2017-08-31 20:45:45

Below is generated by plot.py at 2017-09-01 00:41:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.258 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.059 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.290 ms

Loss rate: 0.43%

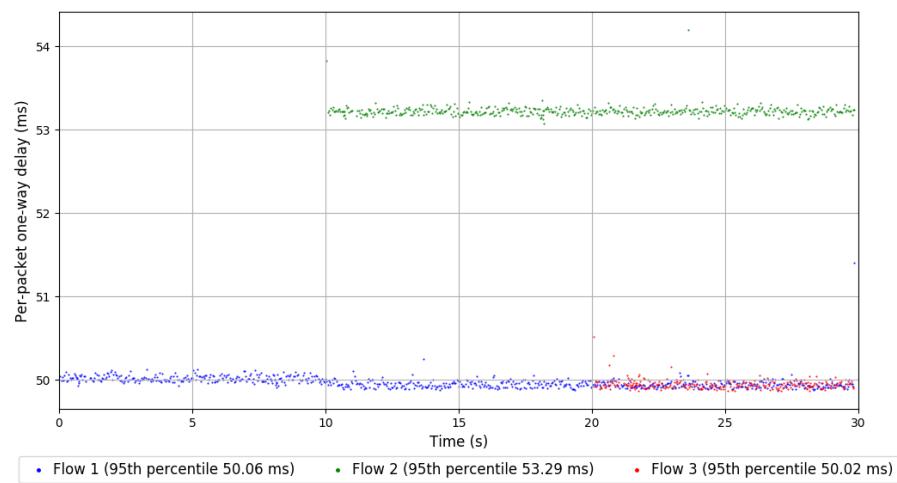
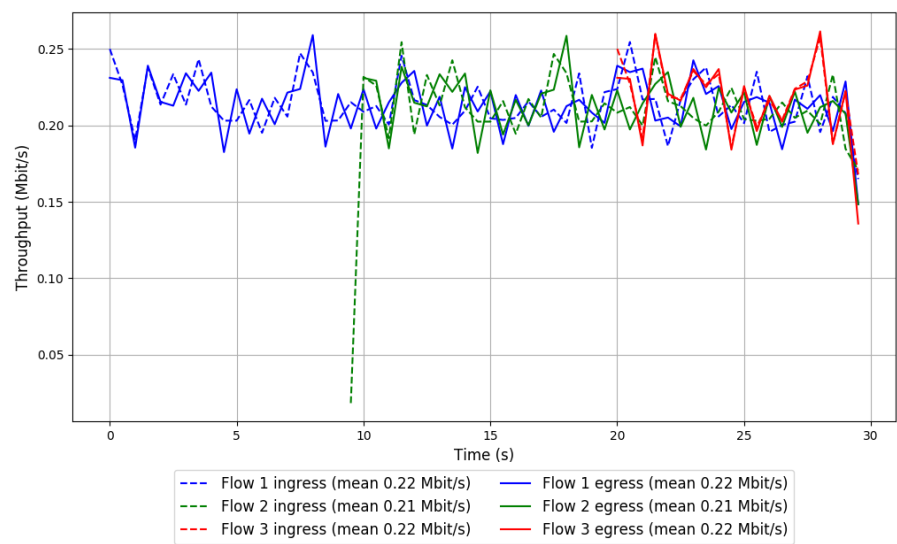
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.015 ms

Loss rate: 1.11%

Run 9: Report of SReAM — Data Link

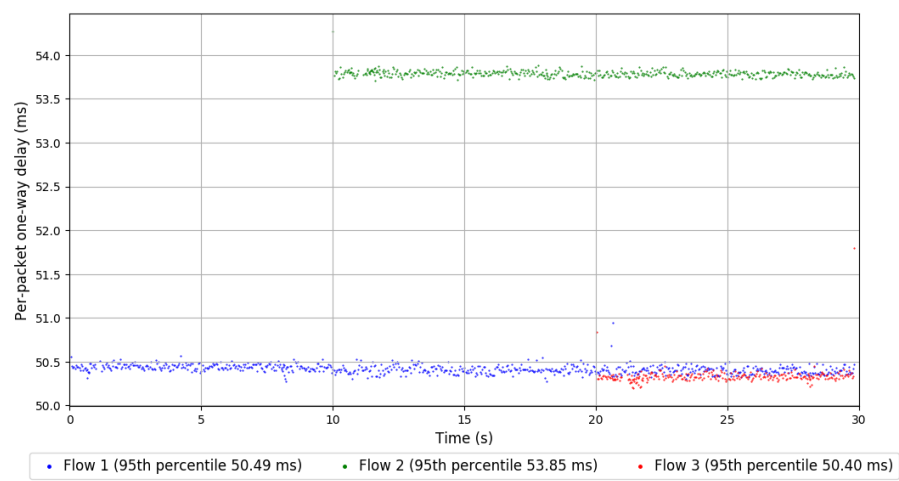
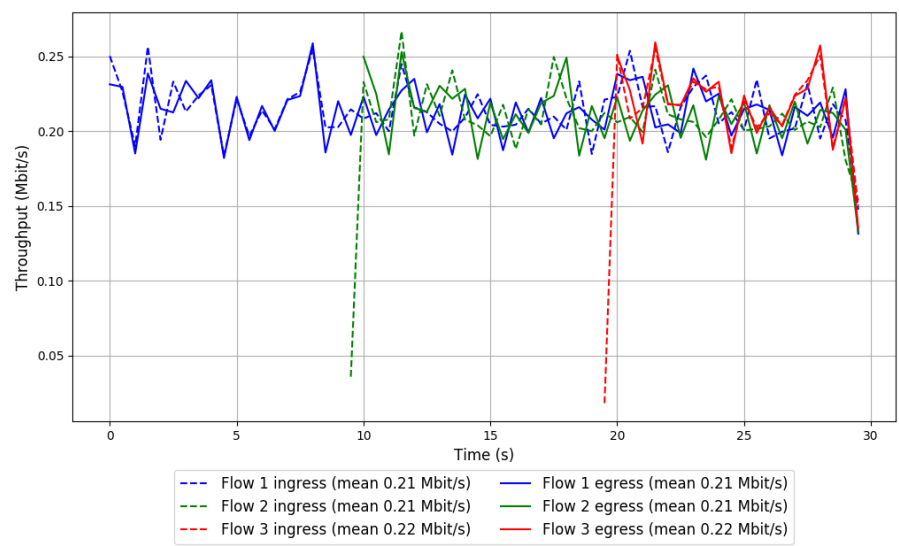


```
Run 10: Statistics of SReAM

Start at: 2017-08-31 20:57:13
End at: 2017-08-31 20:57:43

# Below is generated by plot.py at 2017-09-01 00:41:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.824 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.491 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.846 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.395 ms
Loss rate: 0.74%
```

Run 10: Report of SCReAM — Data Link

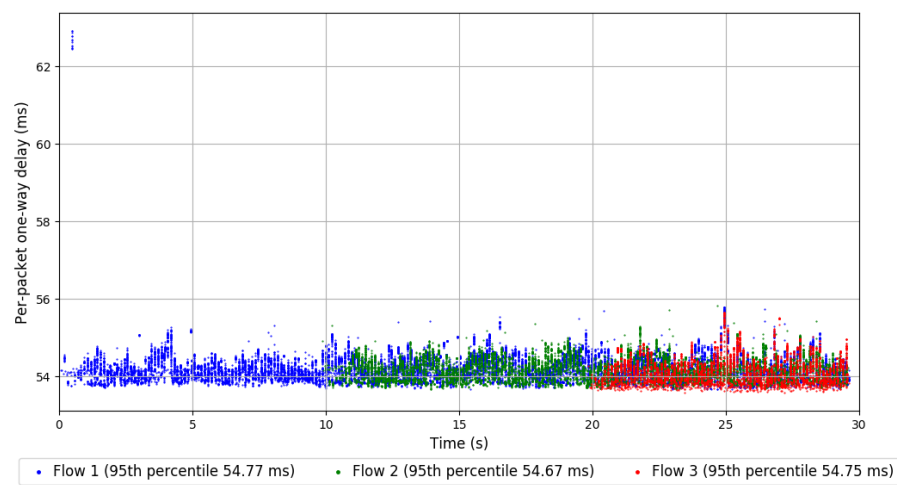
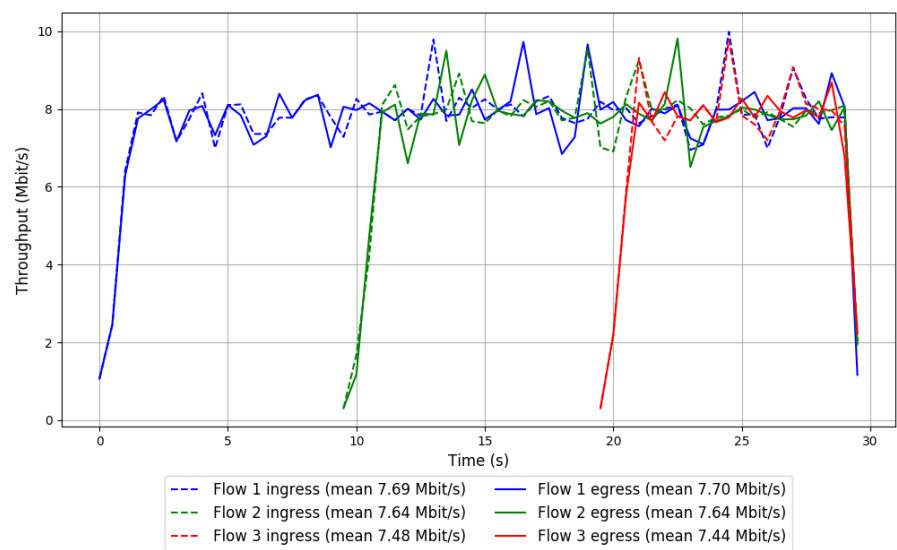


```
Run 1: Statistics of Sprout

Start at: 2017-08-31 18:59:31
End at: 2017-08-31 19:00:01

# Below is generated by plot.py at 2017-09-01 00:41:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.26 Mbit/s
95th percentile per-packet one-way delay: 54.733 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 54.766 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 7.64 Mbit/s
95th percentile per-packet one-way delay: 54.671 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 7.44 Mbit/s
95th percentile per-packet one-way delay: 54.751 ms
Loss rate: 1.32%
```


Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-08-31 19:11:52

End at: 2017-08-31 19:12:22

Below is generated by plot.py at 2017-09-01 00:41:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.28 Mbit/s

95th percentile per-packet one-way delay: 54.710 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 7.76 Mbit/s

95th percentile per-packet one-way delay: 54.734 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 7.68 Mbit/s

95th percentile per-packet one-way delay: 54.724 ms

Loss rate: 0.69%

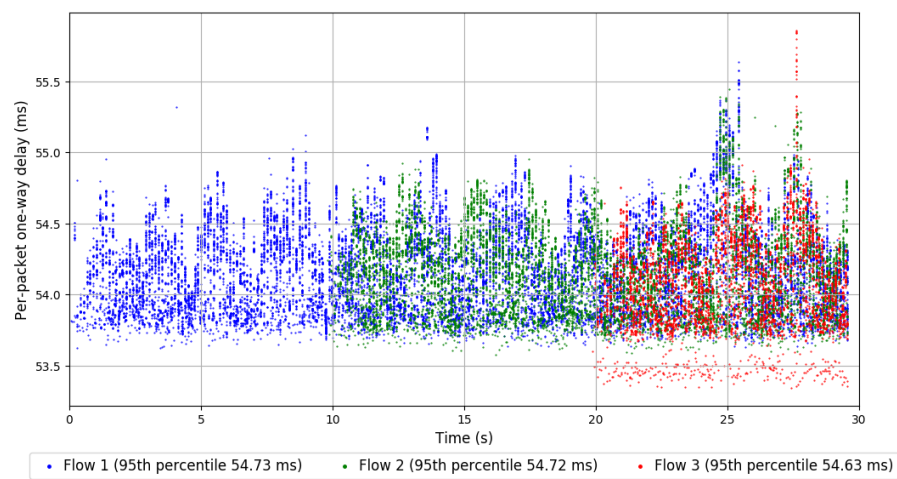
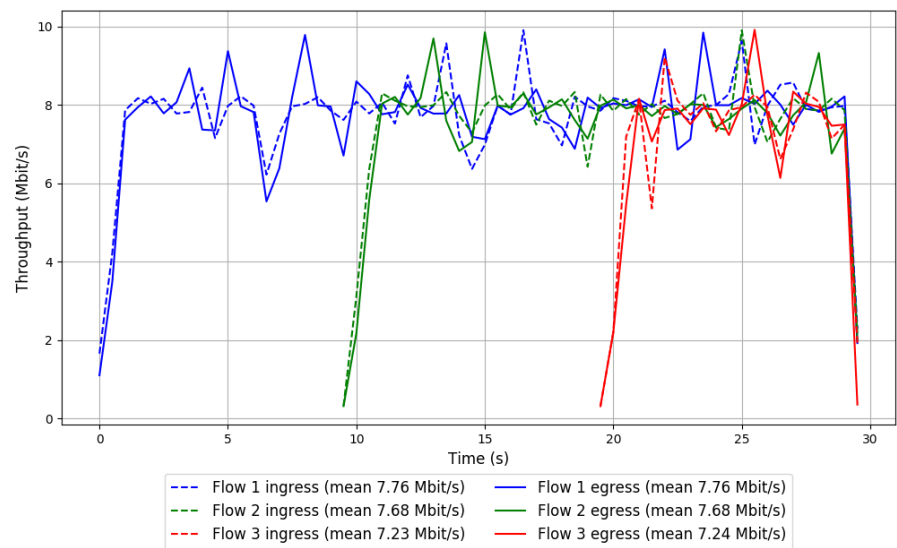
-- Flow 3:

Average throughput: 7.24 Mbit/s

95th percentile per-packet one-way delay: 54.629 ms

Loss rate: 1.15%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-08-31 19:23:52

End at: 2017-08-31 19:24:22

Below is generated by plot.py at 2017-09-01 00:41:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.21 Mbit/s

95th percentile per-packet one-way delay: 54.680 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 7.87 Mbit/s

95th percentile per-packet one-way delay: 54.714 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 7.52 Mbit/s

95th percentile per-packet one-way delay: 54.638 ms

Loss rate: 0.09%

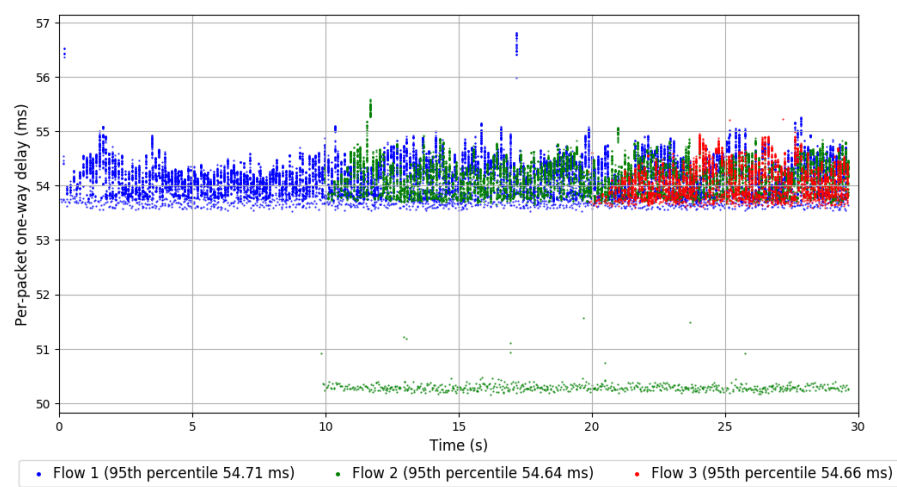
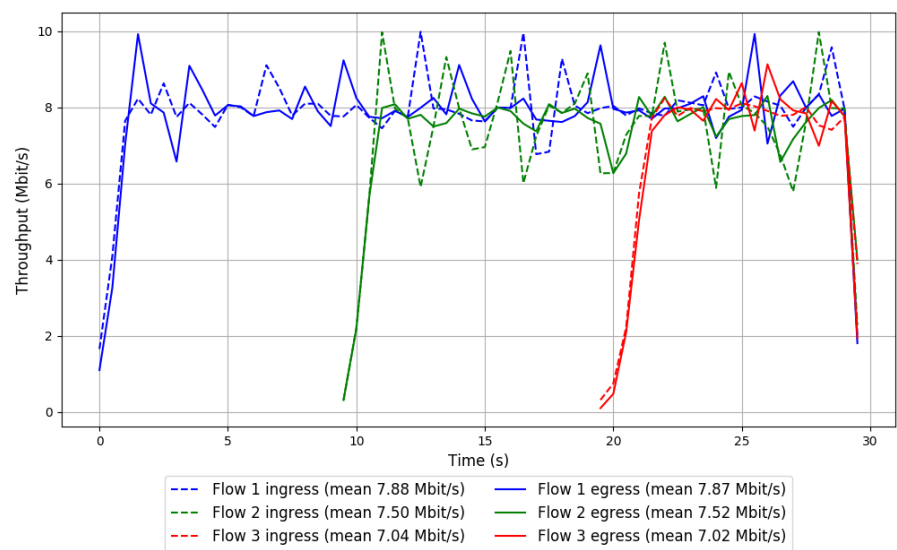
-- Flow 3:

Average throughput: 7.02 Mbit/s

95th percentile per-packet one-way delay: 54.659 ms

Loss rate: 1.55%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-08-31 19:35:54

End at: 2017-08-31 19:36:25

Below is generated by plot.py at 2017-09-01 00:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.45 Mbit/s

95th percentile per-packet one-way delay: 54.802 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 7.83 Mbit/s

95th percentile per-packet one-way delay: 54.803 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 7.77 Mbit/s

95th percentile per-packet one-way delay: 54.862 ms

Loss rate: 0.71%

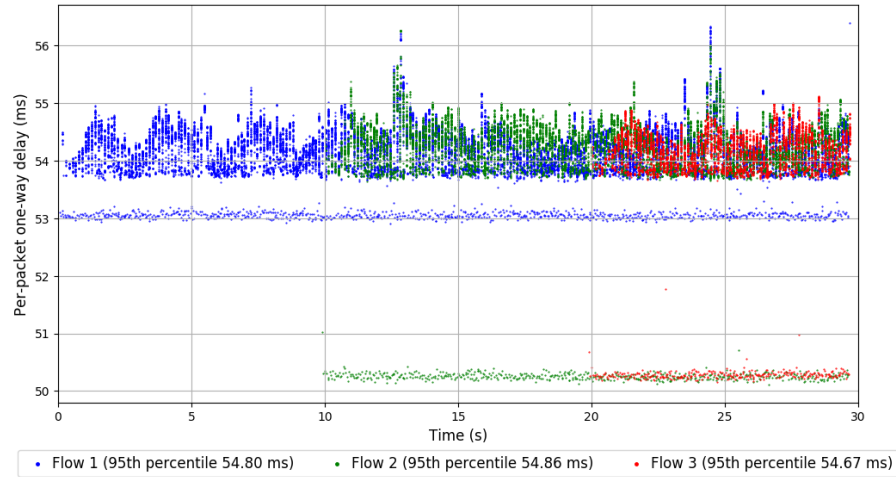
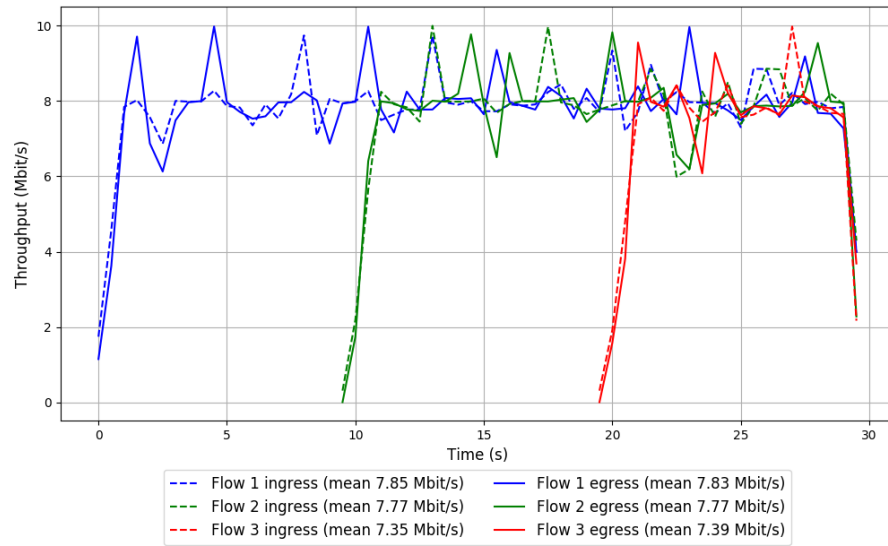
-- Flow 3:

Average throughput: 7.39 Mbit/s

95th percentile per-packet one-way delay: 54.674 ms

Loss rate: 0.12%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-08-31 19:48:01

End at: 2017-08-31 19:48:31

Below is generated by plot.py at 2017-09-01 00:41:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.38 Mbit/s

95th percentile per-packet one-way delay: 54.728 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 7.85 Mbit/s

95th percentile per-packet one-way delay: 54.755 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 7.51 Mbit/s

95th percentile per-packet one-way delay: 54.616 ms

Loss rate: 0.69%

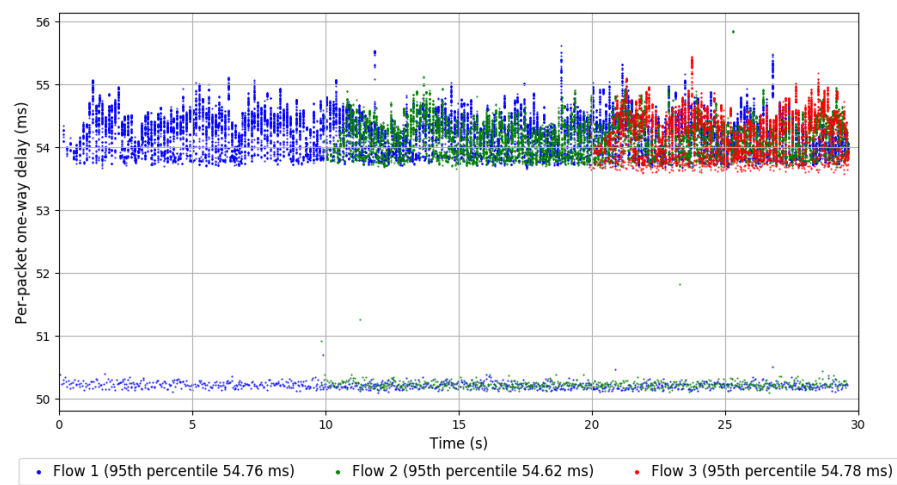
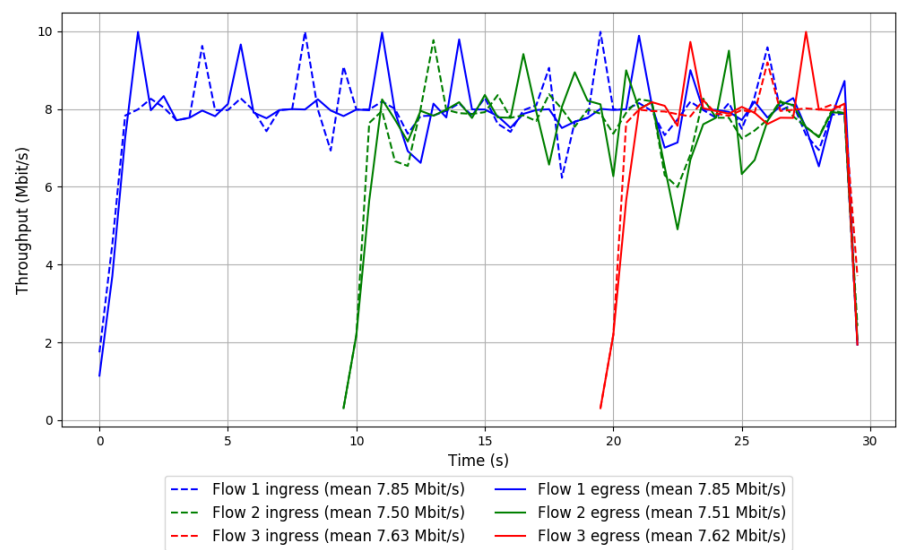
-- Flow 3:

Average throughput: 7.62 Mbit/s

95th percentile per-packet one-way delay: 54.781 ms

Loss rate: 1.17%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-08-31 20:00:05

End at: 2017-08-31 20:00:35

Below is generated by plot.py at 2017-09-01 00:41:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.36 Mbit/s

95th percentile per-packet one-way delay: 54.670 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 7.74 Mbit/s

95th percentile per-packet one-way delay: 54.691 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 7.73 Mbit/s

95th percentile per-packet one-way delay: 54.637 ms

Loss rate: 0.65%

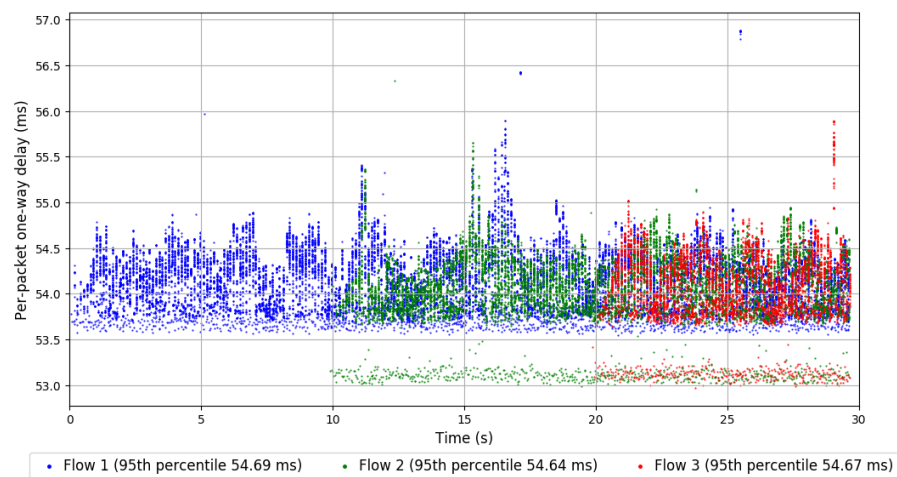
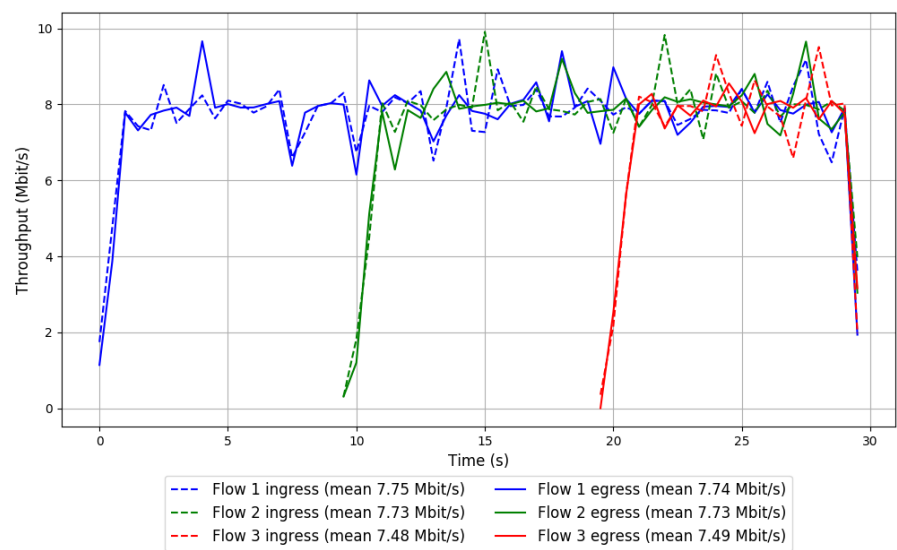
-- Flow 3:

Average throughput: 7.49 Mbit/s

95th percentile per-packet one-way delay: 54.668 ms

Loss rate: 0.60%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-08-31 20:12:18

End at: 2017-08-31 20:12:48

Below is generated by plot.py at 2017-09-01 00:41:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.20 Mbit/s

95th percentile per-packet one-way delay: 54.670 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 7.67 Mbit/s

95th percentile per-packet one-way delay: 54.693 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 7.66 Mbit/s

95th percentile per-packet one-way delay: 54.658 ms

Loss rate: 0.66%

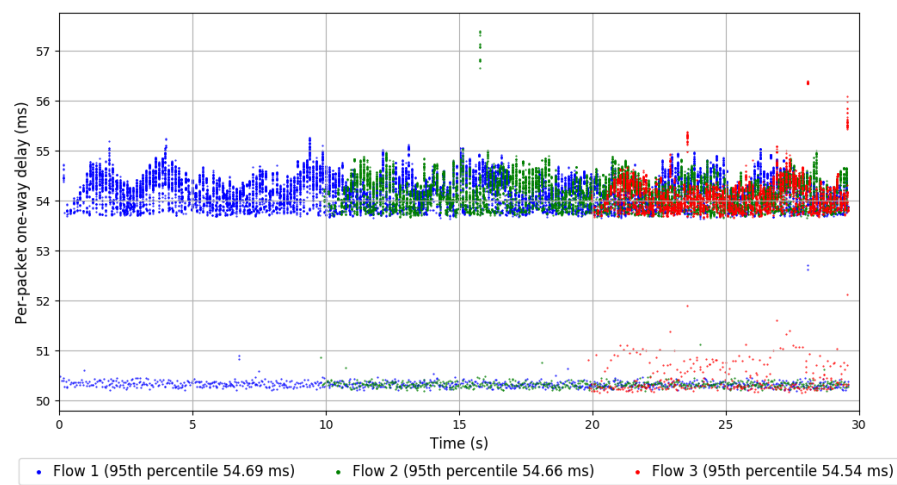
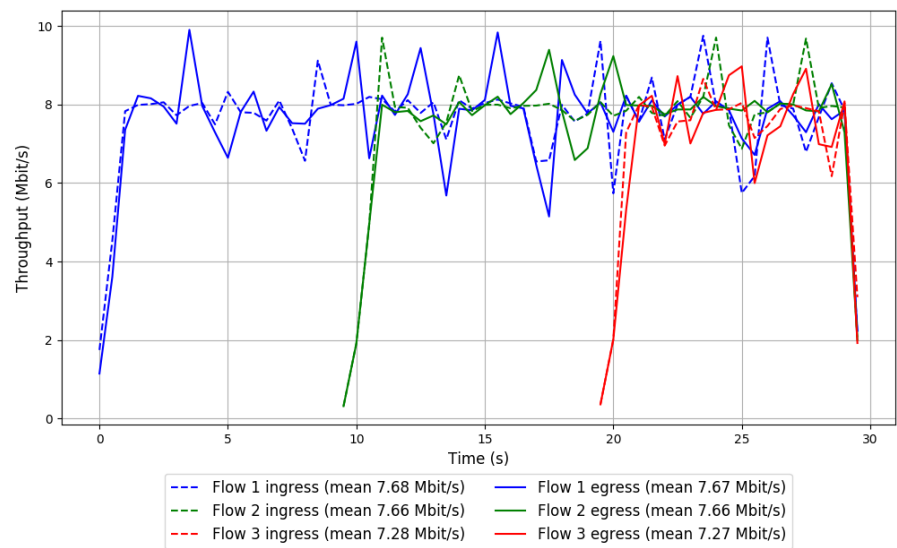
-- Flow 3:

Average throughput: 7.27 Mbit/s

95th percentile per-packet one-way delay: 54.544 ms

Loss rate: 1.34%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-08-31 20:24:10

End at: 2017-08-31 20:24:40

Below is generated by plot.py at 2017-09-01 00:41:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.73 Mbit/s

95th percentile per-packet one-way delay: 54.859 ms

Loss rate: 1.89%

-- Flow 1:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 55.031 ms

Loss rate: 4.16%

-- Flow 2:

Average throughput: 7.66 Mbit/s

95th percentile per-packet one-way delay: 54.814 ms

Loss rate: 1.17%

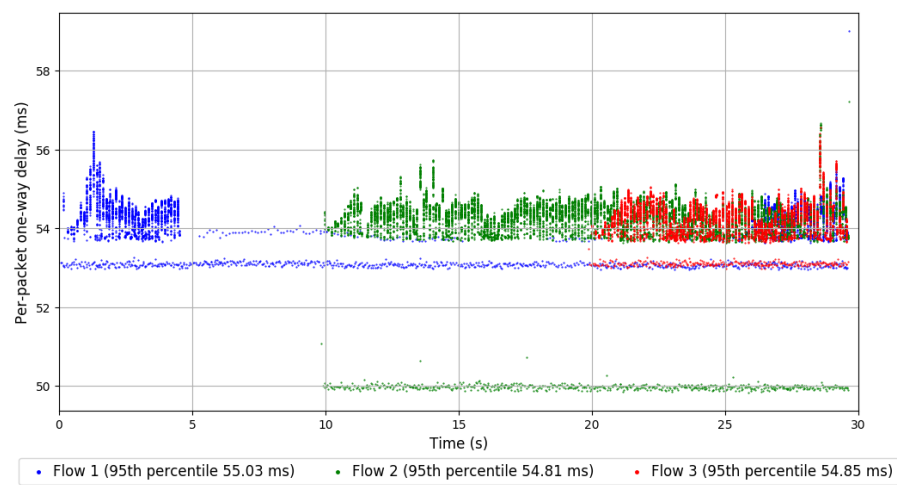
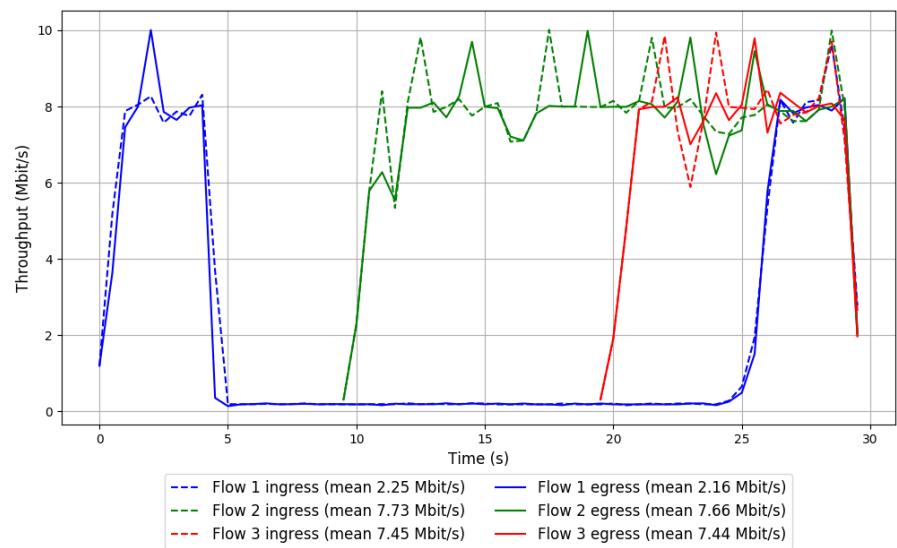
-- Flow 3:

Average throughput: 7.44 Mbit/s

95th percentile per-packet one-way delay: 54.848 ms

Loss rate: 1.34%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-08-31 20:36:16

End at: 2017-08-31 20:36:46

Below is generated by plot.py at 2017-09-01 00:41:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.24 Mbit/s

95th percentile per-packet one-way delay: 54.673 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 7.58 Mbit/s

95th percentile per-packet one-way delay: 54.654 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 7.83 Mbit/s

95th percentile per-packet one-way delay: 54.681 ms

Loss rate: 0.59%

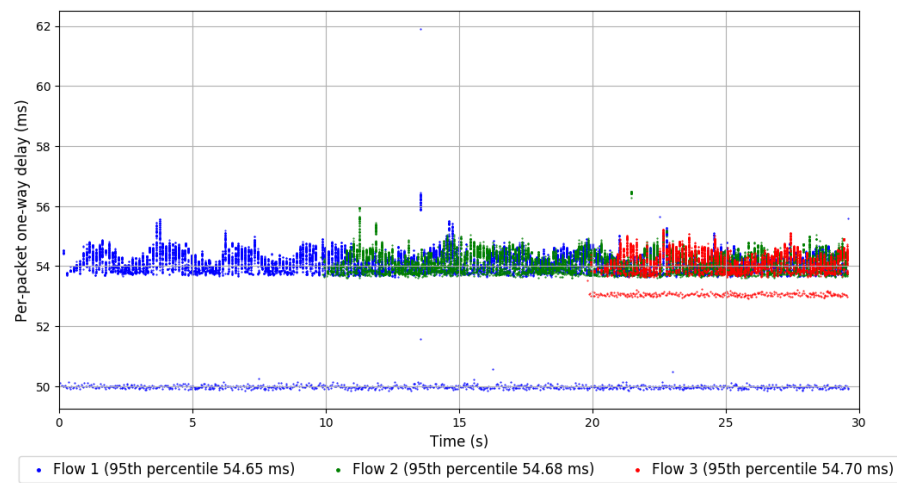
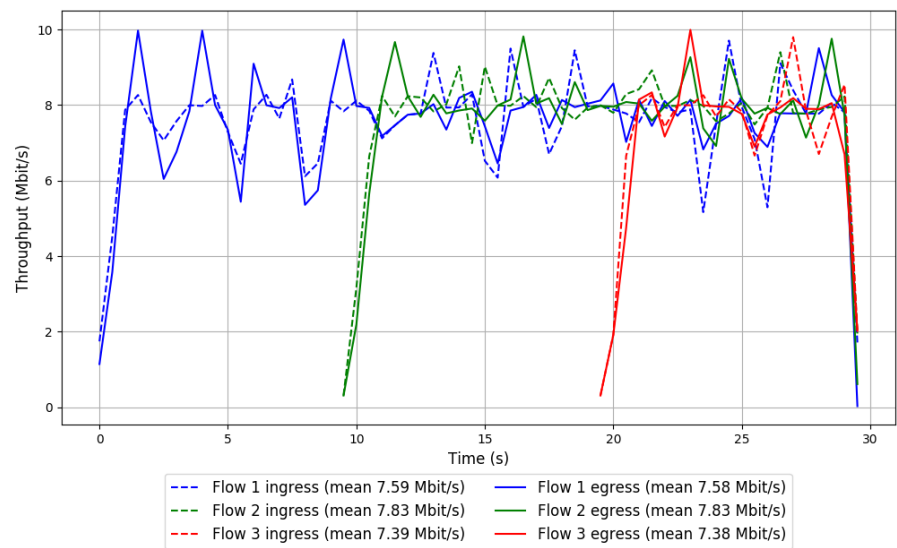
-- Flow 3:

Average throughput: 7.38 Mbit/s

95th percentile per-packet one-way delay: 54.705 ms

Loss rate: 1.37%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-08-31 20:48:17

End at: 2017-08-31 20:48:47

Below is generated by plot.py at 2017-09-01 00:41:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.43 Mbit/s

95th percentile per-packet one-way delay: 54.795 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 7.84 Mbit/s

95th percentile per-packet one-way delay: 54.784 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 7.70 Mbit/s

95th percentile per-packet one-way delay: 54.759 ms

Loss rate: 0.65%

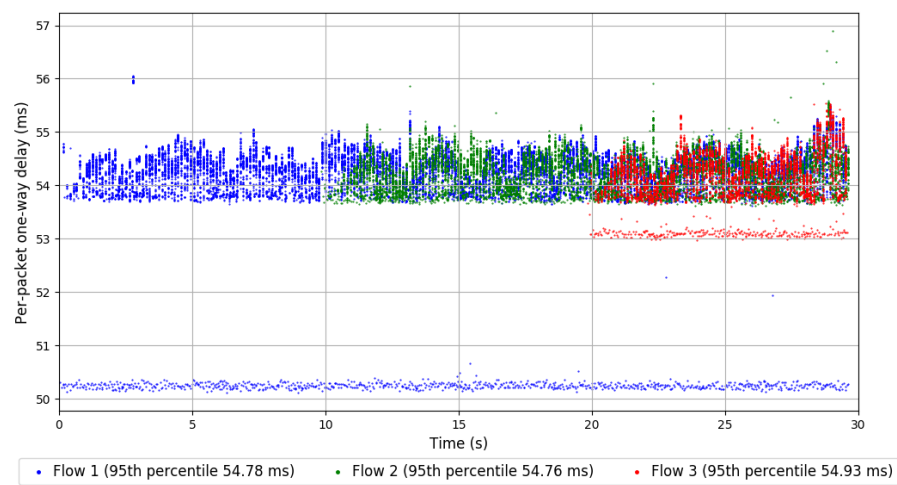
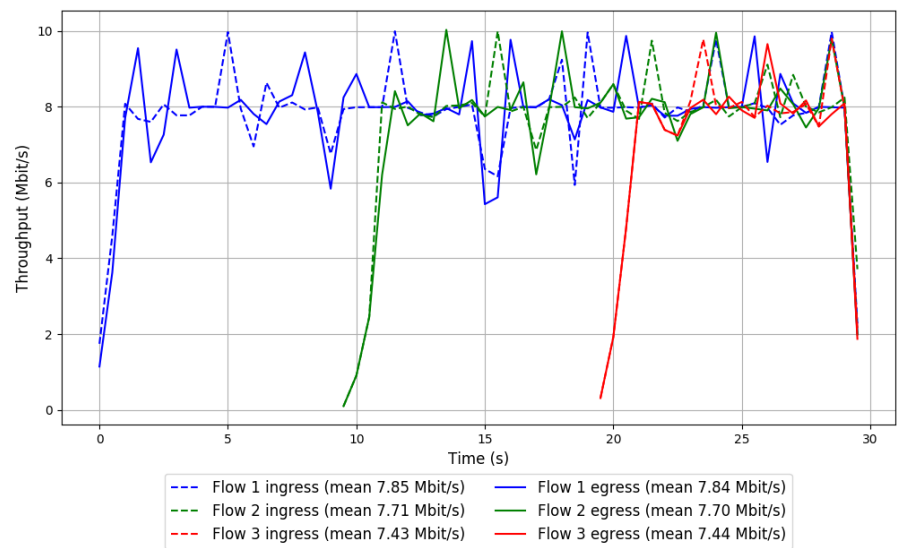
-- Flow 3:

Average throughput: 7.44 Mbit/s

95th percentile per-packet one-way delay: 54.933 ms

Loss rate: 1.47%

Run 10: Report of Sprout — Data Link

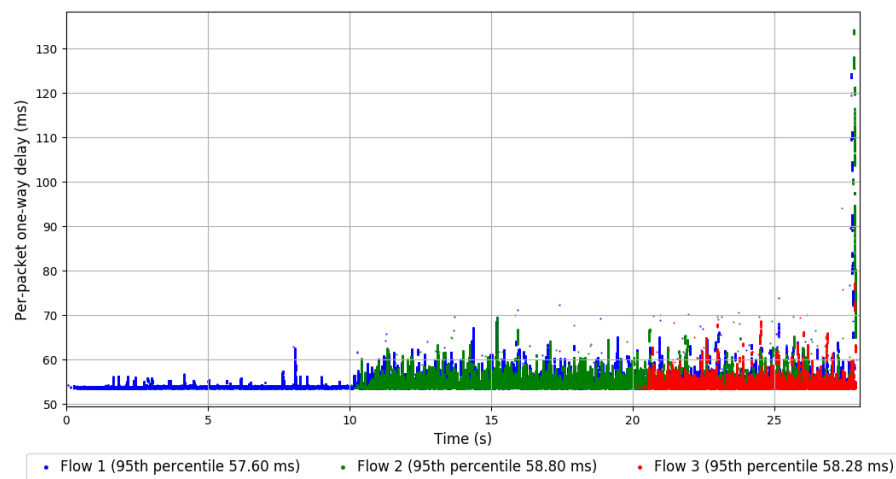
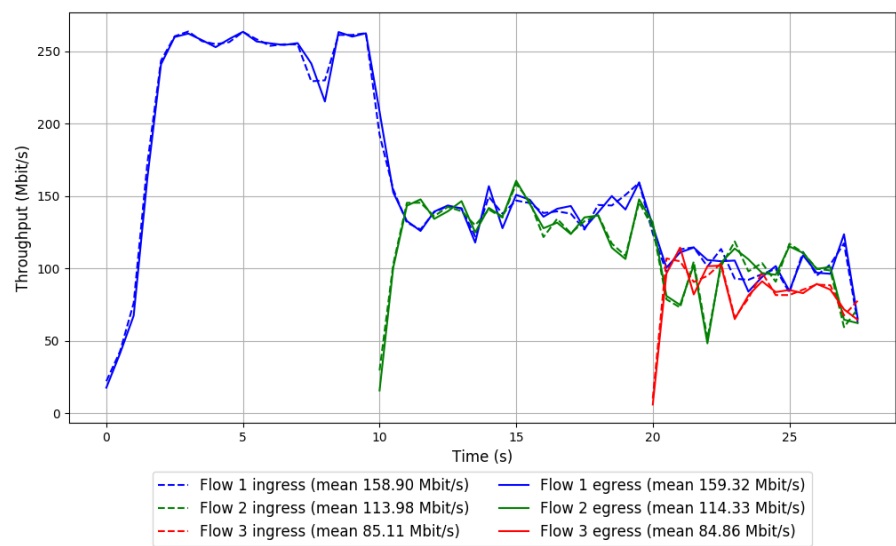


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-08-31 19:04:34
End at: 2017-08-31 19:05:04

# Below is generated by plot.py at 2017-09-01 00:43:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 255.89 Mbit/s
95th percentile per-packet one-way delay: 58.065 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 159.32 Mbit/s
95th percentile per-packet one-way delay: 57.602 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 114.33 Mbit/s
95th percentile per-packet one-way delay: 58.799 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 84.86 Mbit/s
95th percentile per-packet one-way delay: 58.278 ms
Loss rate: 1.67%
```

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

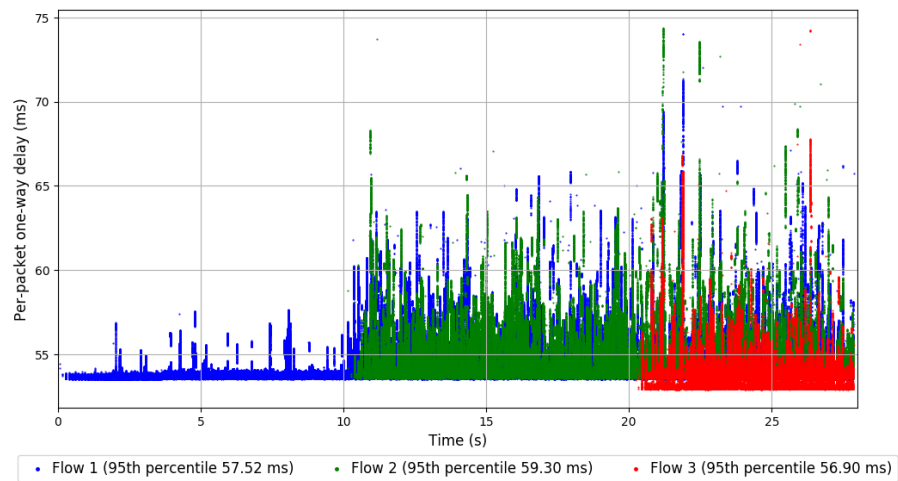
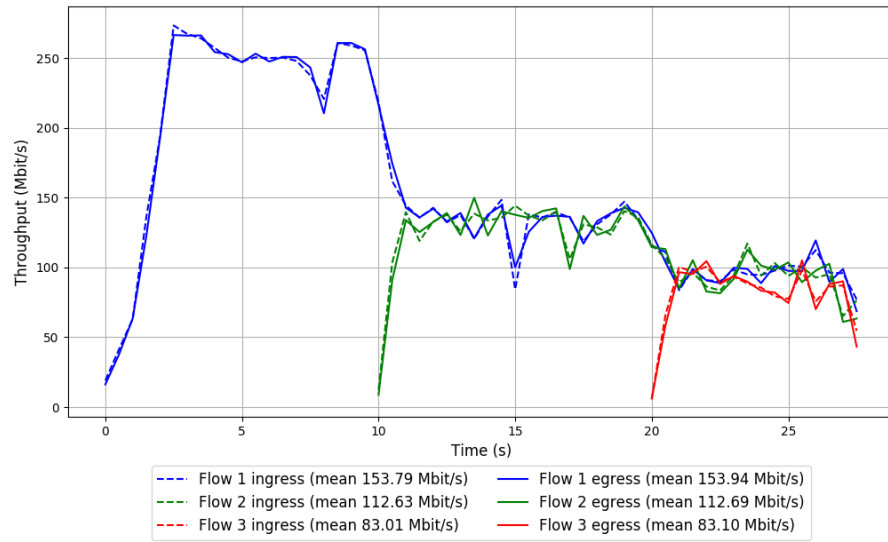


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-08-31 19:16:54
End at: 2017-08-31 19:17:24

# Below is generated by plot.py at 2017-09-01 00:43:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 248.47 Mbit/s
95th percentile per-packet one-way delay: 58.083 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 153.94 Mbit/s
95th percentile per-packet one-way delay: 57.518 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 112.69 Mbit/s
95th percentile per-packet one-way delay: 59.303 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 83.10 Mbit/s
95th percentile per-packet one-way delay: 56.900 ms
Loss rate: 1.25%
```

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

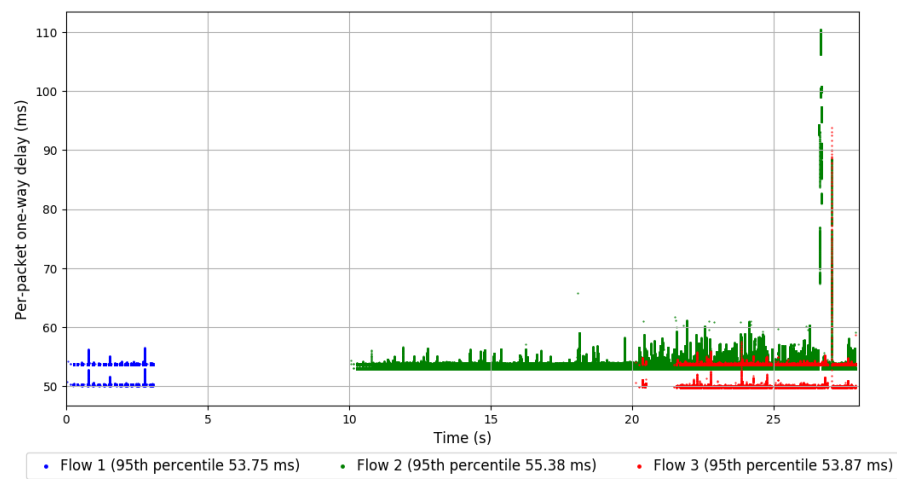
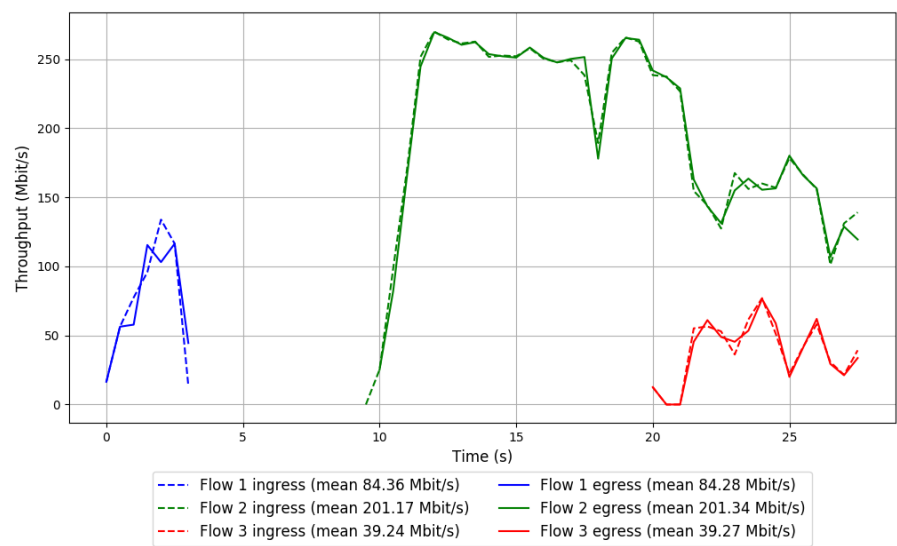


```
Run 3: Statistics of TaoVA-100x

Start at: 2017-08-31 19:28:51
End at: 2017-08-31 19:29:21

# Below is generated by plot.py at 2017-09-01 00:43:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 149.10 Mbit/s
95th percentile per-packet one-way delay: 55.185 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 84.28 Mbit/s
95th percentile per-packet one-way delay: 53.747 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 201.34 Mbit/s
95th percentile per-packet one-way delay: 55.383 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 39.27 Mbit/s
95th percentile per-packet one-way delay: 53.865 ms
Loss rate: 1.18%
```


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

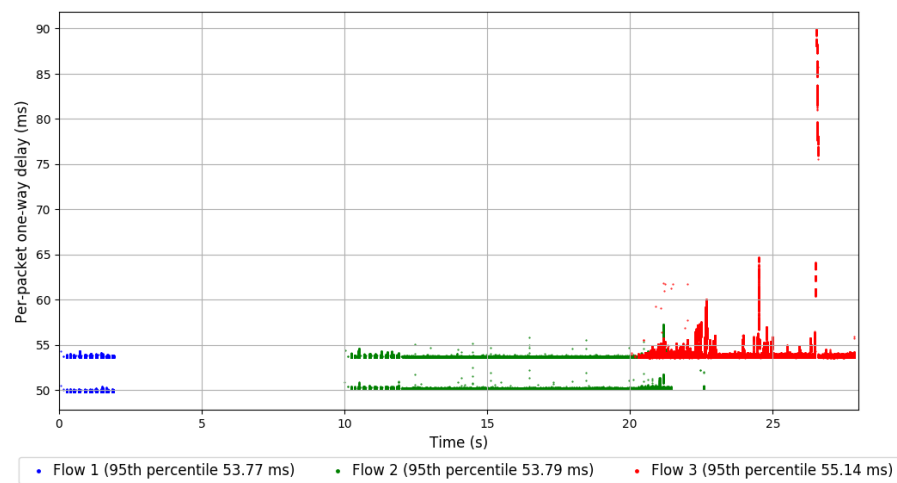
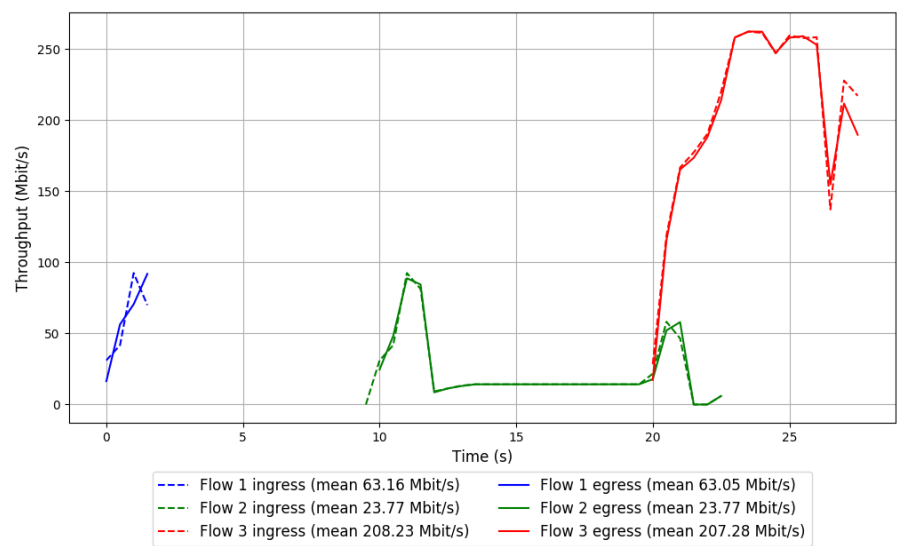


```
Run 4: Statistics of TaoVA-100x

Start at: 2017-08-31 19:40:58
End at: 2017-08-31 19:41:28

# Below is generated by plot.py at 2017-09-01 00:43:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.09 Mbit/s
95th percentile per-packet one-way delay: 54.797 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 63.05 Mbit/s
95th percentile per-packet one-way delay: 53.766 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.77 Mbit/s
95th percentile per-packet one-way delay: 53.789 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 207.28 Mbit/s
95th percentile per-packet one-way delay: 55.143 ms
Loss rate: 1.77%
```

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

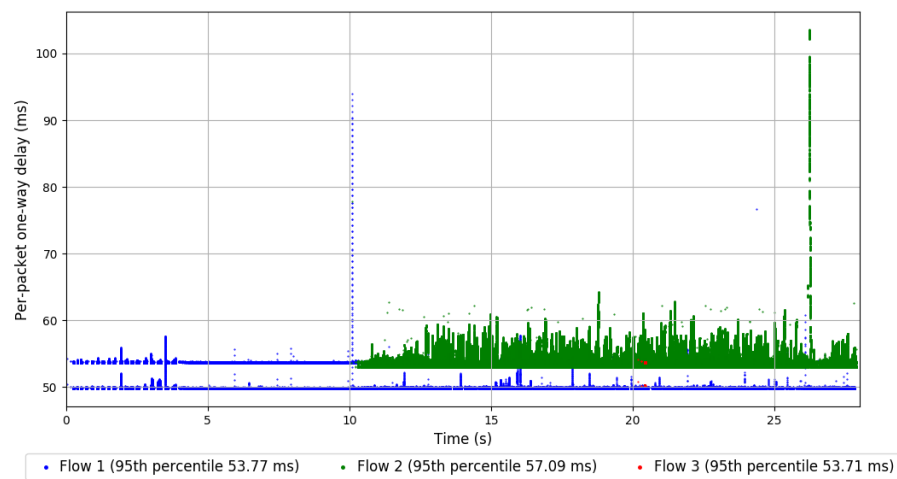
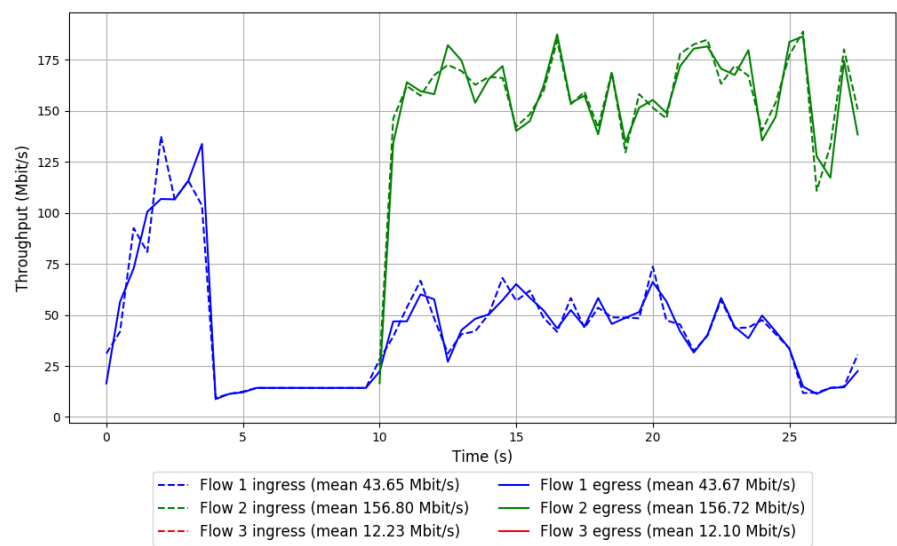


```
Run 5: Statistics of TaoVA-100x

Start at: 2017-08-31 19:52:58
End at: 2017-08-31 19:53:28

# Below is generated by plot.py at 2017-09-01 00:44:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 144.01 Mbit/s
95th percentile per-packet one-way delay: 56.550 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 43.67 Mbit/s
95th percentile per-packet one-way delay: 53.767 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 156.72 Mbit/s
95th percentile per-packet one-way delay: 57.089 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 12.10 Mbit/s
95th percentile per-packet one-way delay: 53.708 ms
Loss rate: 0.00%
```

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

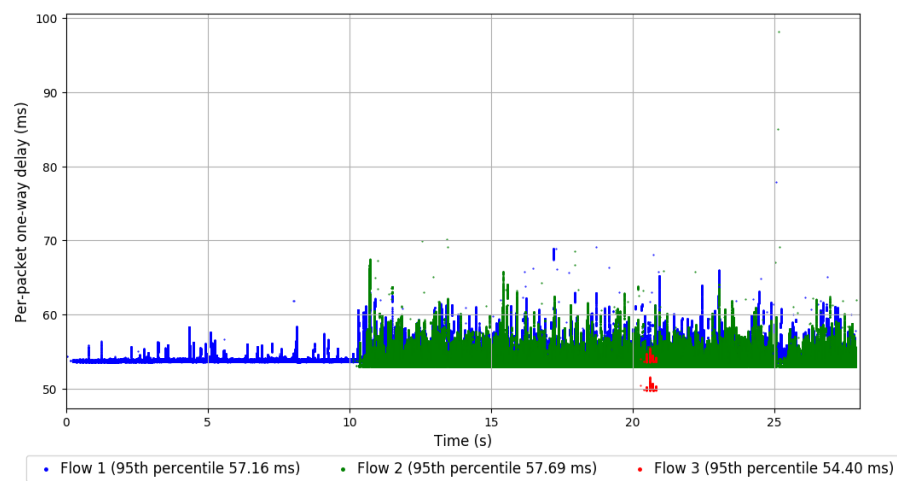
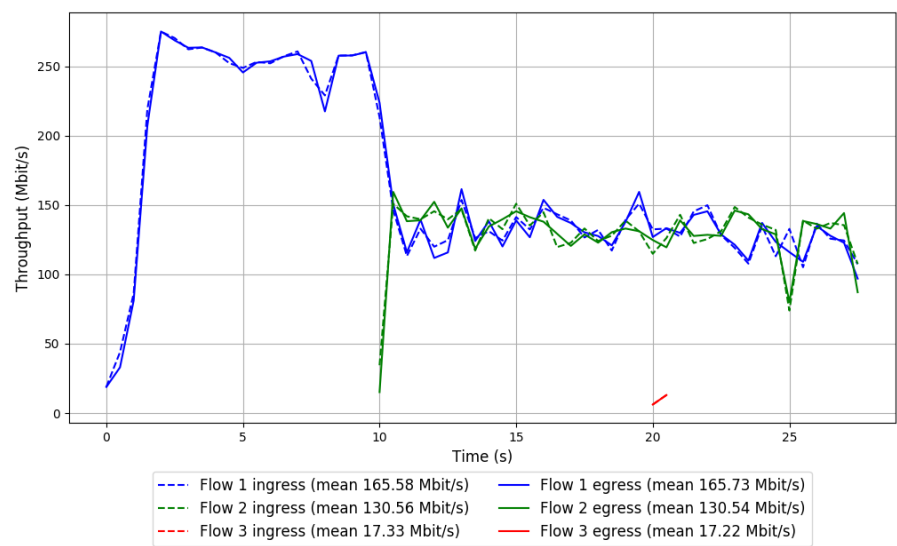


```
Run 6: Statistics of TaoVA-100x

Start at: 2017-08-31 20:05:01
End at: 2017-08-31 20:05:31

# Below is generated by plot.py at 2017-09-01 00:45:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 249.32 Mbit/s
95th percentile per-packet one-way delay: 57.360 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 165.73 Mbit/s
95th percentile per-packet one-way delay: 57.164 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 130.54 Mbit/s
95th percentile per-packet one-way delay: 57.690 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 17.22 Mbit/s
95th percentile per-packet one-way delay: 54.400 ms
Loss rate: 0.00%
```

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

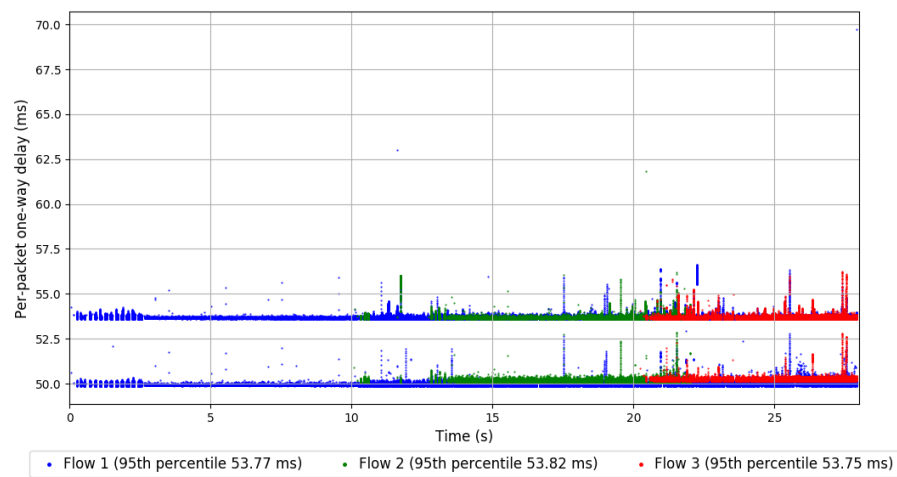
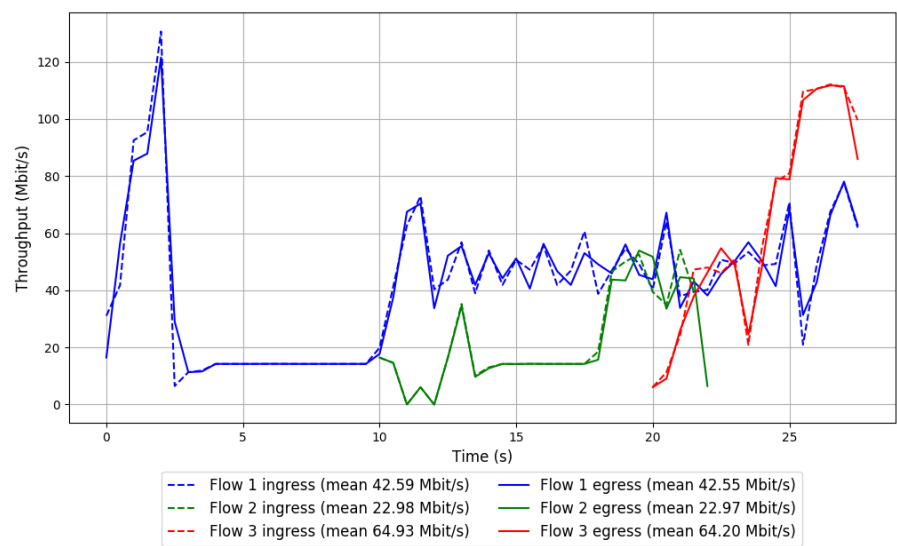


```
Run 7: Statistics of TaoVA-100x

Start at: 2017-08-31 20:17:13
End at: 2017-08-31 20:17:43

# Below is generated by plot.py at 2017-09-01 00:45:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.08 Mbit/s
95th percentile per-packet one-way delay: 53.772 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 42.55 Mbit/s
95th percentile per-packet one-way delay: 53.769 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 22.97 Mbit/s
95th percentile per-packet one-way delay: 53.822 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 64.20 Mbit/s
95th percentile per-packet one-way delay: 53.753 ms
Loss rate: 2.55%
```


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



Run 8: Statistics of TaoVA-100x

Start at: 2017-08-31 20:29:07

End at: 2017-08-31 20:29:37

Below is generated by plot.py at 2017-09-01 00:45:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 153.68 Mbit/s

95th percentile per-packet one-way delay: 56.138 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 36.06 Mbit/s

95th percentile per-packet one-way delay: 53.782 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 181.77 Mbit/s

95th percentile per-packet one-way delay: 55.745 ms

Loss rate: 0.40%

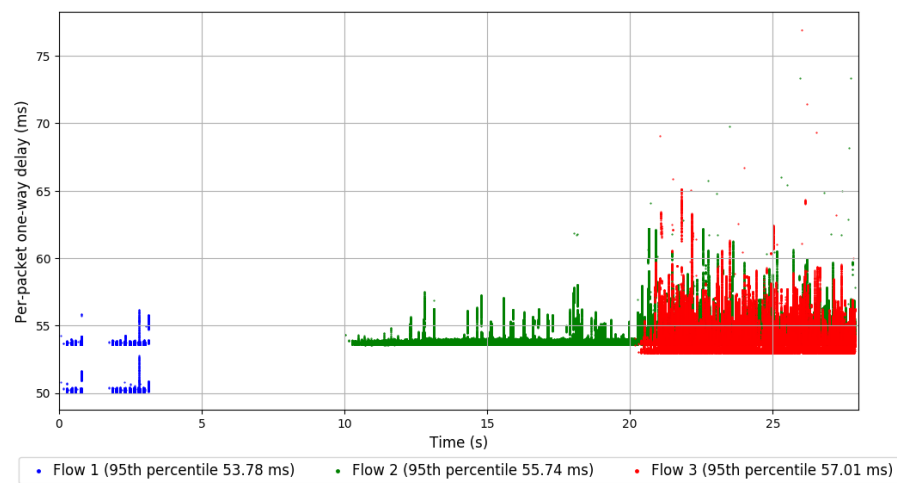
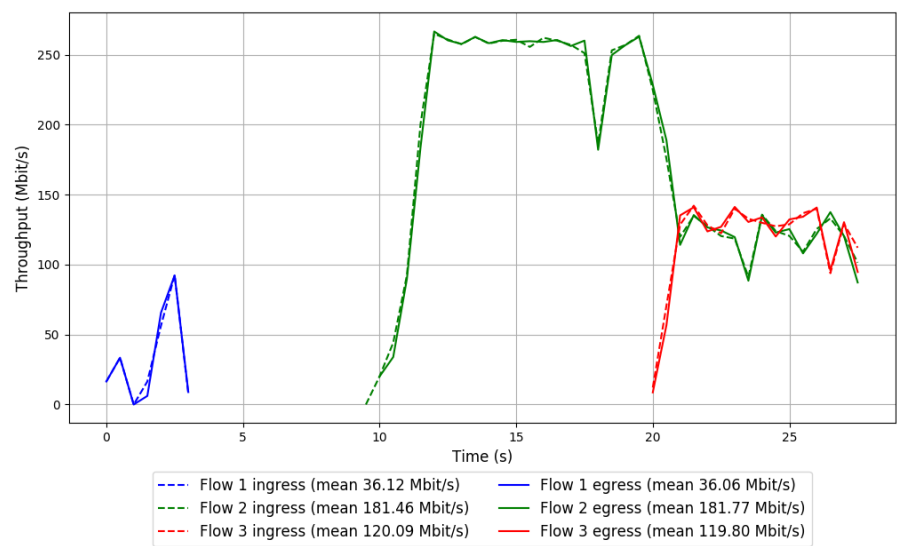
-- Flow 3:

Average throughput: 119.80 Mbit/s

95th percentile per-packet one-way delay: 57.014 ms

Loss rate: 1.52%

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

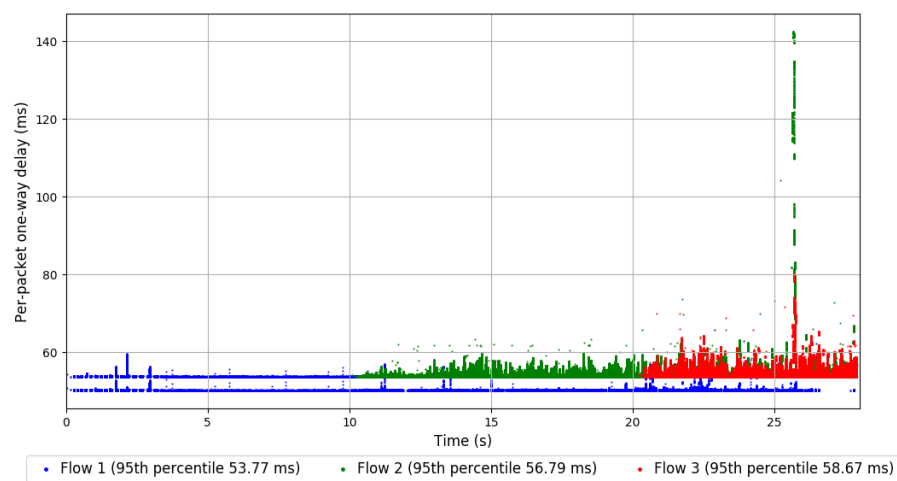
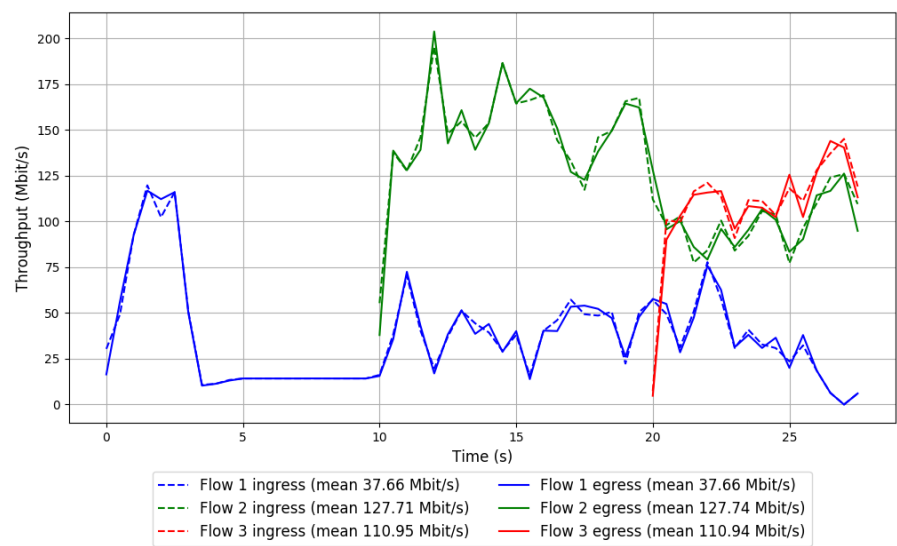


```
Run 9: Statistics of TaoVA-100x

Start at: 2017-08-31 20:41:16
End at: 2017-08-31 20:41:46

# Below is generated by plot.py at 2017-09-01 00:46:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 149.85 Mbit/s
95th percentile per-packet one-way delay: 56.947 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 37.66 Mbit/s
95th percentile per-packet one-way delay: 53.775 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 127.74 Mbit/s
95th percentile per-packet one-way delay: 56.786 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 110.94 Mbit/s
95th percentile per-packet one-way delay: 58.674 ms
Loss rate: 1.34%
```

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

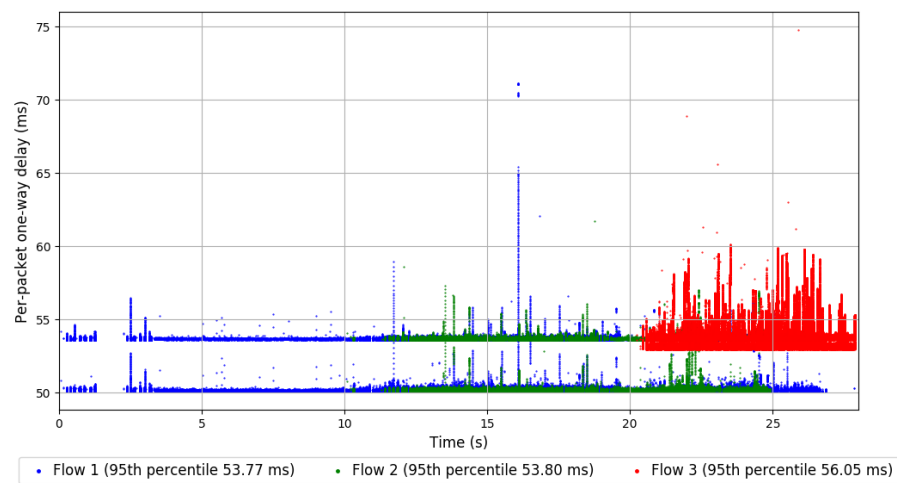
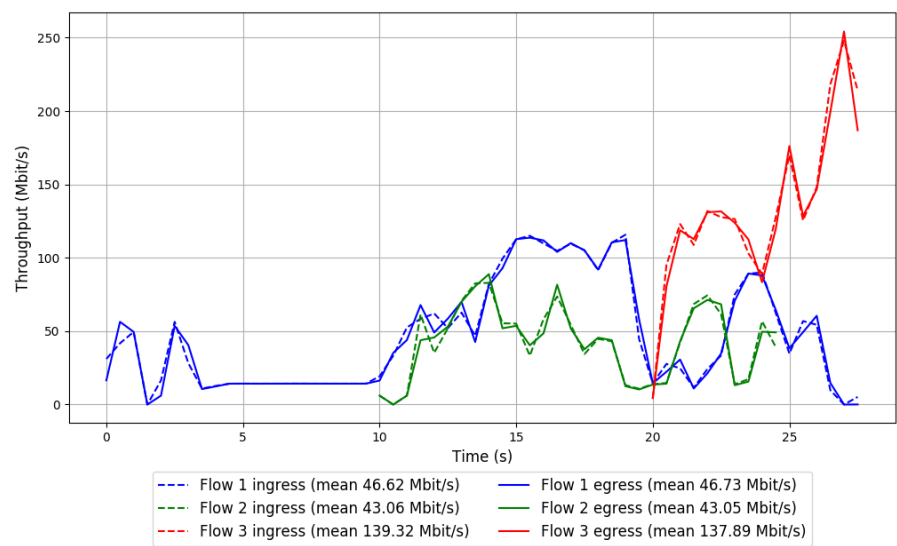


```
Run 10: Statistics of TaoVA-100x

Start at: 2017-08-31 20:53:19
End at: 2017-08-31 20:53:49

# Below is generated by plot.py at 2017-09-01 00:46:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 107.50 Mbit/s
95th percentile per-packet one-way delay: 54.586 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 46.73 Mbit/s
95th percentile per-packet one-way delay: 53.774 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 43.05 Mbit/s
95th percentile per-packet one-way delay: 53.795 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 137.89 Mbit/s
95th percentile per-packet one-way delay: 56.051 ms
Loss rate: 2.35%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2017-08-31 19:01:41

End at: 2017-08-31 19:02:11

Below is generated by plot.py at 2017-09-01 00:46:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.22 Mbit/s

95th percentile per-packet one-way delay: 55.183 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 53.62 Mbit/s

95th percentile per-packet one-way delay: 54.805 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 83.73 Mbit/s

95th percentile per-packet one-way delay: 55.113 ms

Loss rate: 0.62%

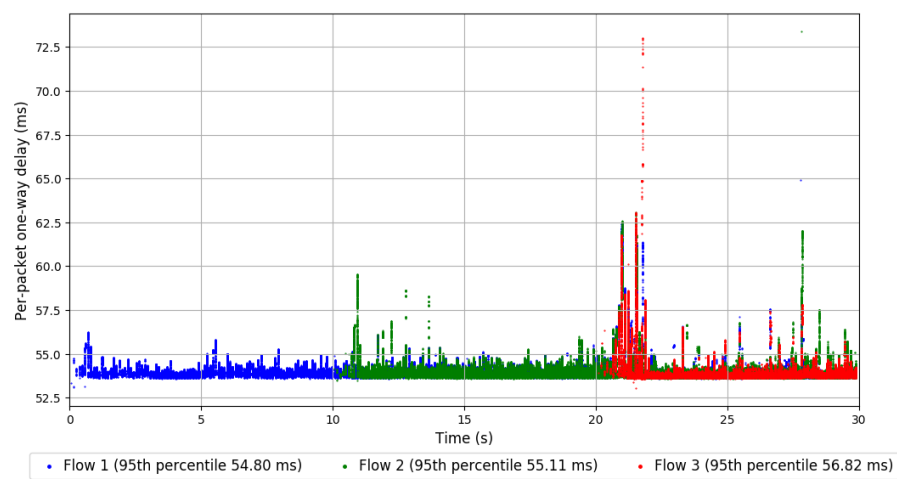
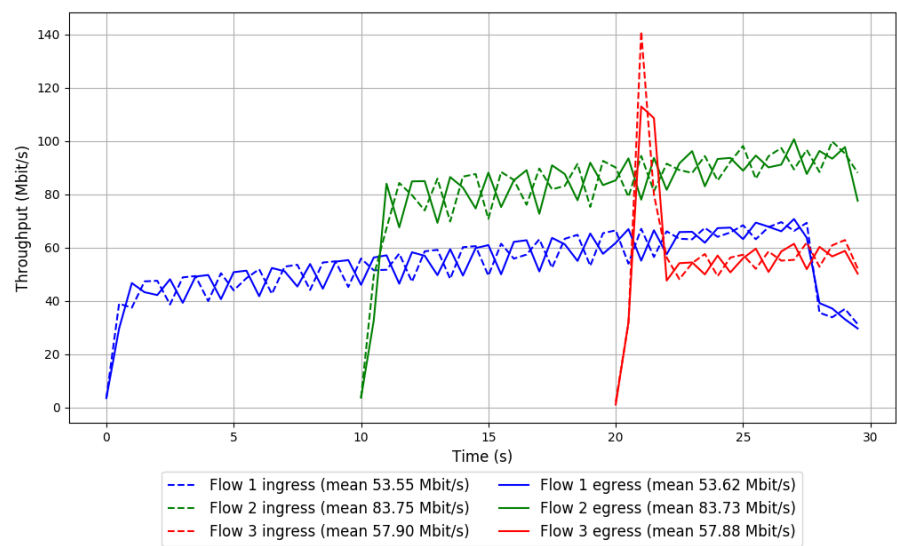
-- Flow 3:

Average throughput: 57.88 Mbit/s

95th percentile per-packet one-way delay: 56.820 ms

Loss rate: 1.12%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-08-31 19:14:02

End at: 2017-08-31 19:14:32

Below is generated by plot.py at 2017-09-01 00:46:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.38 Mbit/s

95th percentile per-packet one-way delay: 54.914 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 81.46 Mbit/s

95th percentile per-packet one-way delay: 54.749 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 10.33 Mbit/s

95th percentile per-packet one-way delay: 54.195 ms

Loss rate: 1.07%

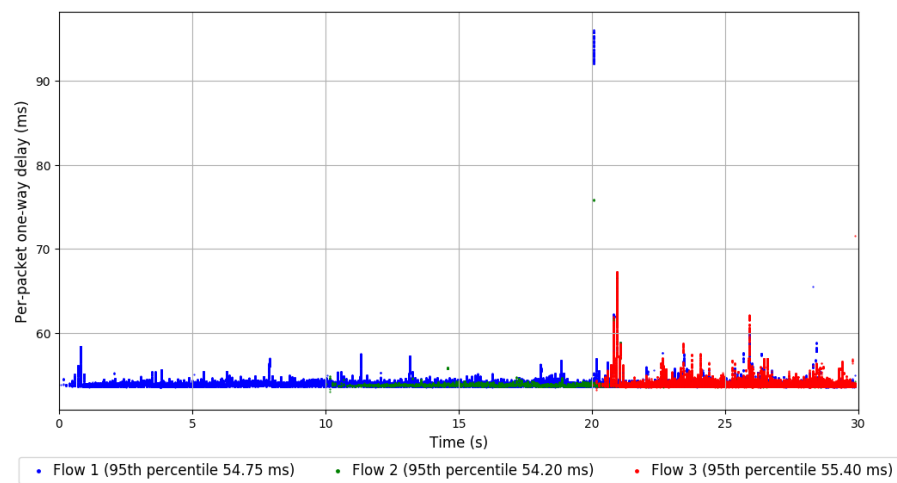
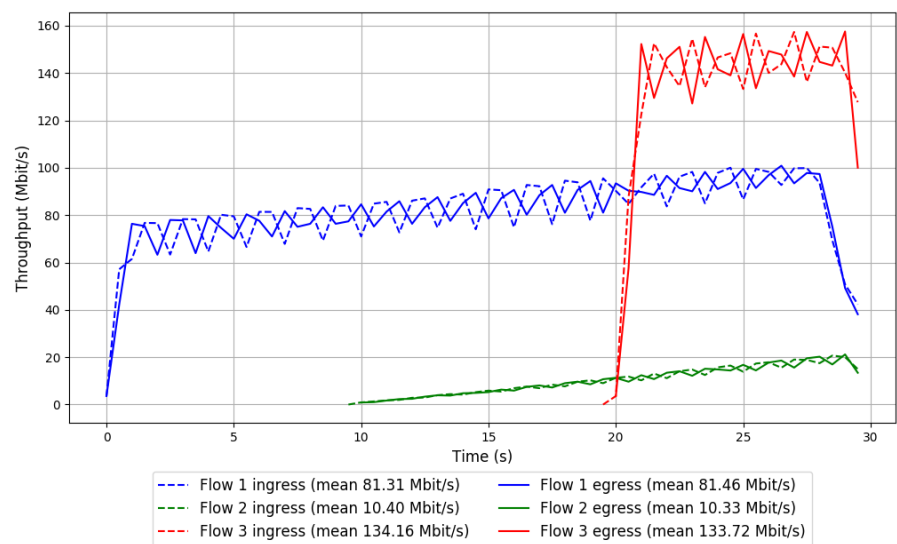
-- Flow 3:

Average throughput: 133.72 Mbit/s

95th percentile per-packet one-way delay: 55.395 ms

Loss rate: 1.21%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-08-31 19:26:01

End at: 2017-08-31 19:26:31

Below is generated by plot.py at 2017-09-01 00:46:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.88 Mbit/s

95th percentile per-packet one-way delay: 54.903 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 38.37 Mbit/s

95th percentile per-packet one-way delay: 55.071 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 68.70 Mbit/s

95th percentile per-packet one-way delay: 54.792 ms

Loss rate: 0.64%

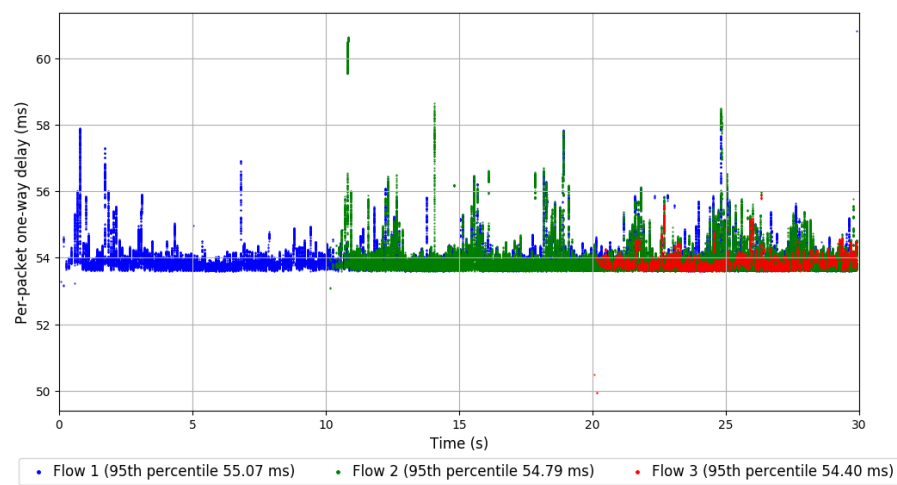
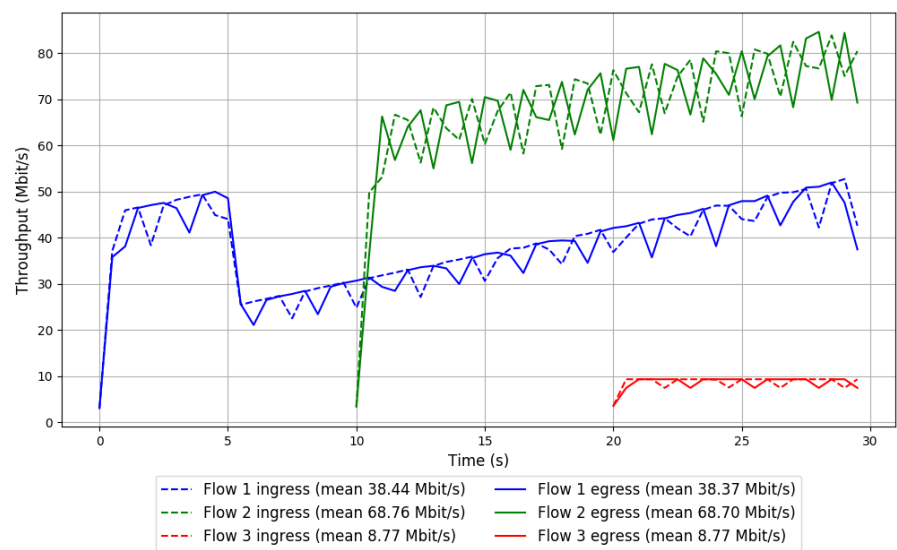
-- Flow 3:

Average throughput: 8.77 Mbit/s

95th percentile per-packet one-way delay: 54.398 ms

Loss rate: 1.08%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-08-31 19:38:03

End at: 2017-08-31 19:38:33

Below is generated by plot.py at 2017-09-01 00:47:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 164.40 Mbit/s

95th percentile per-packet one-way delay: 57.722 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 80.49 Mbit/s

95th percentile per-packet one-way delay: 55.445 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 92.41 Mbit/s

95th percentile per-packet one-way delay: 59.964 ms

Loss rate: 0.51%

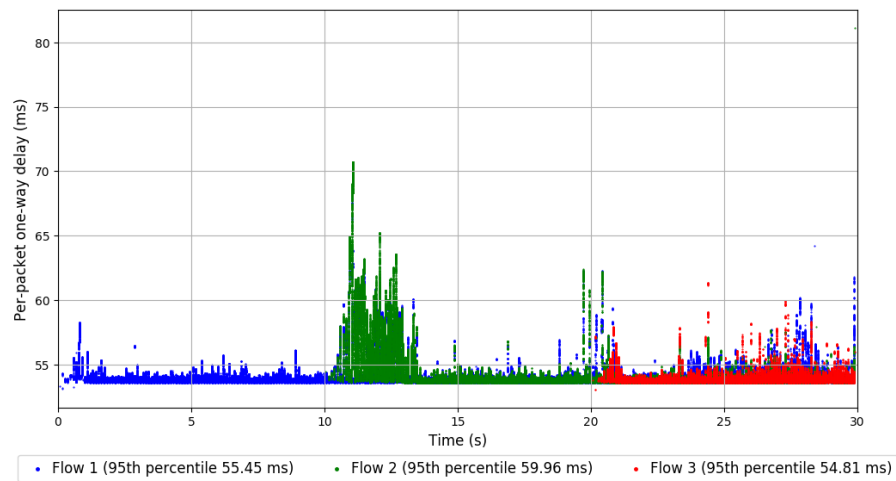
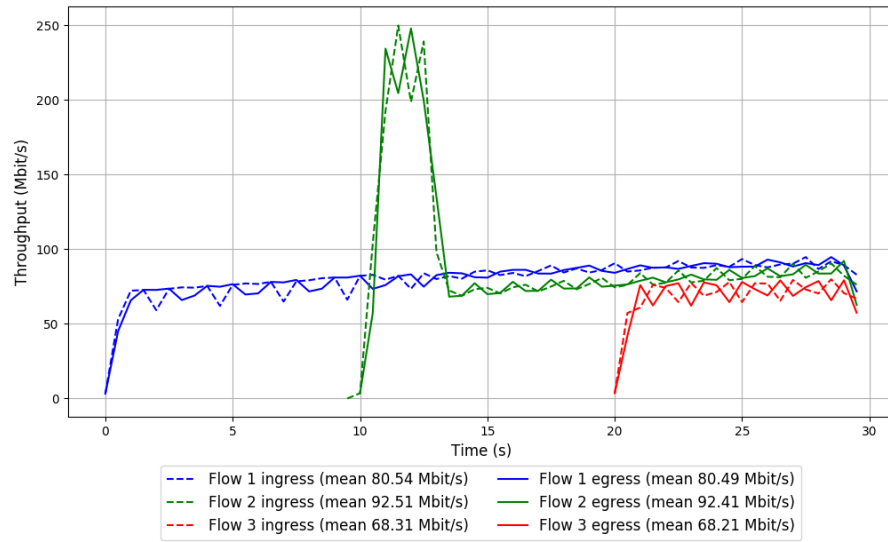
-- Flow 3:

Average throughput: 68.21 Mbit/s

95th percentile per-packet one-way delay: 54.808 ms

Loss rate: 1.17%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-08-31 19:50:10

End at: 2017-08-31 19:50:40

Below is generated by plot.py at 2017-09-01 00:47:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.13 Mbit/s

95th percentile per-packet one-way delay: 60.112 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 7.34 Mbit/s

95th percentile per-packet one-way delay: 54.308 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 82.60 Mbit/s

95th percentile per-packet one-way delay: 60.326 ms

Loss rate: 0.31%

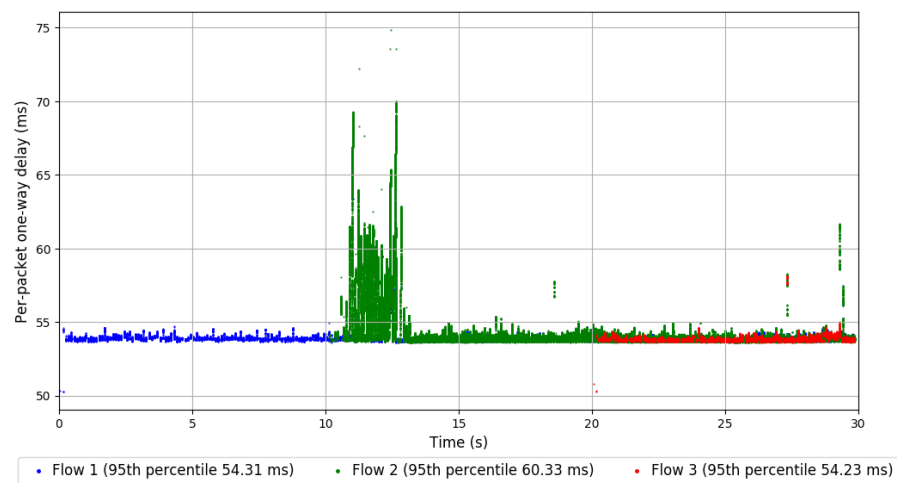
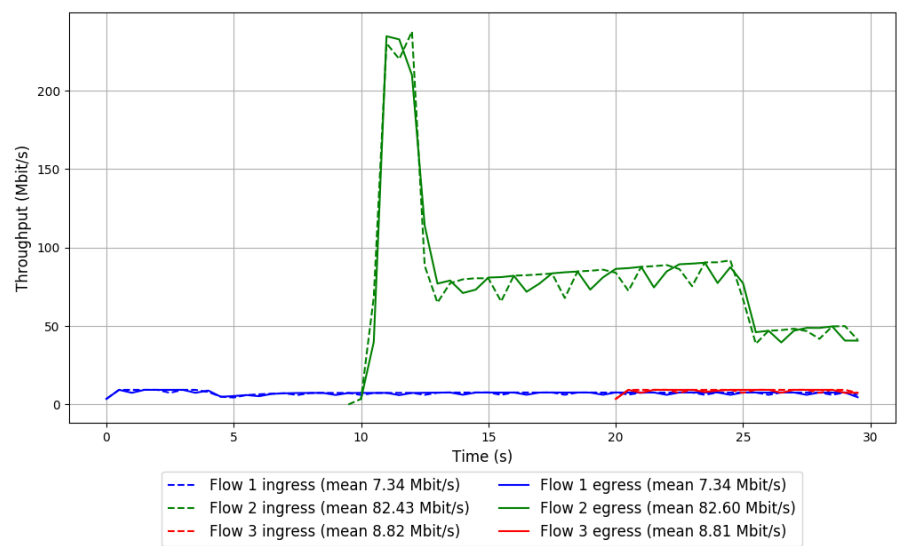
-- Flow 3:

Average throughput: 8.81 Mbit/s

95th percentile per-packet one-way delay: 54.227 ms

Loss rate: 1.08%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-08-31 20:02:14

End at: 2017-08-31 20:02:44

Below is generated by plot.py at 2017-09-01 00:47:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 26.02 Mbit/s

95th percentile per-packet one-way delay: 54.493 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 7.35 Mbit/s

95th percentile per-packet one-way delay: 54.213 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 8.62 Mbit/s

95th percentile per-packet one-way delay: 54.330 ms

Loss rate: 0.54%

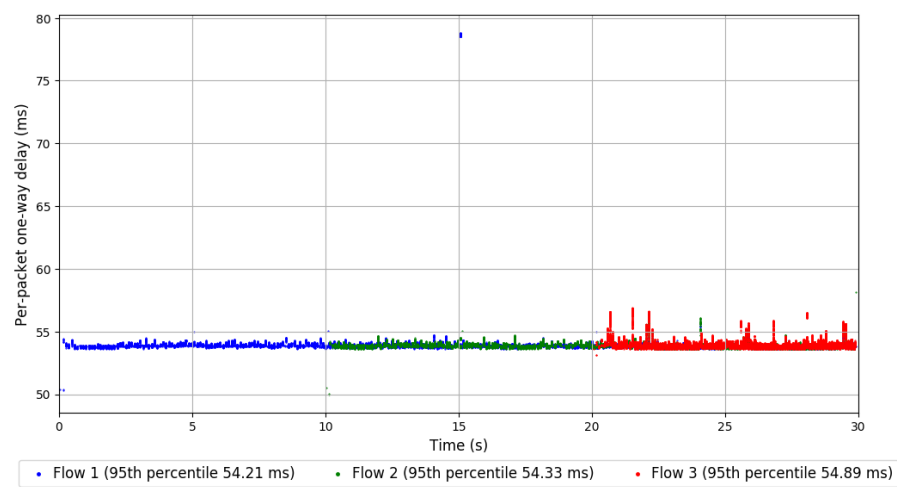
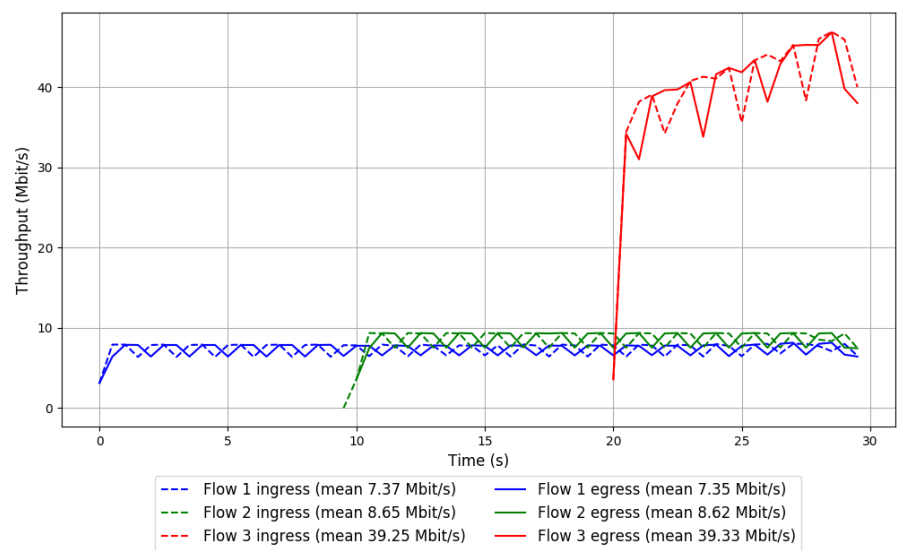
-- Flow 3:

Average throughput: 39.33 Mbit/s

95th percentile per-packet one-way delay: 54.894 ms

Loss rate: 1.24%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-08-31 20:14:25

End at: 2017-08-31 20:14:55

Below is generated by plot.py at 2017-09-01 00:47:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.63 Mbit/s

95th percentile per-packet one-way delay: 54.310 ms

Loss rate: 0.40%

-- Flow 1:

Average throughput: 40.91 Mbit/s

95th percentile per-packet one-way delay: 54.355 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 8.88 Mbit/s

95th percentile per-packet one-way delay: 54.173 ms

Loss rate: 0.53%

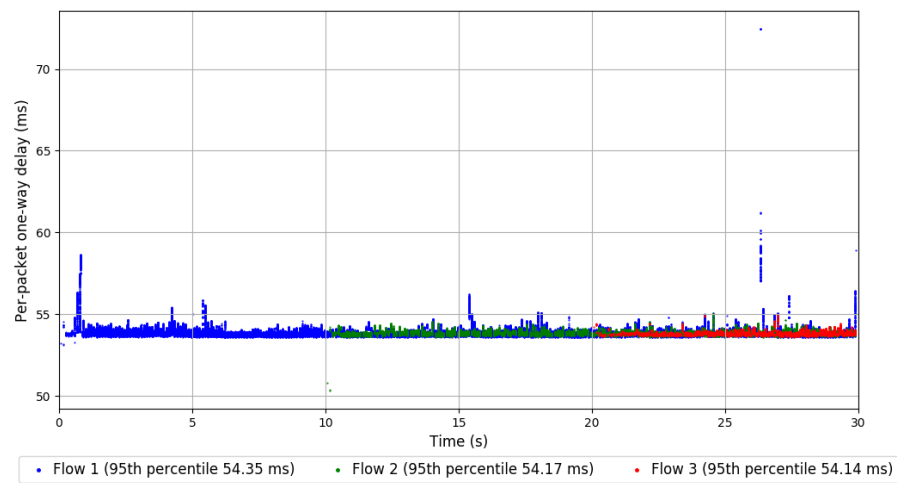
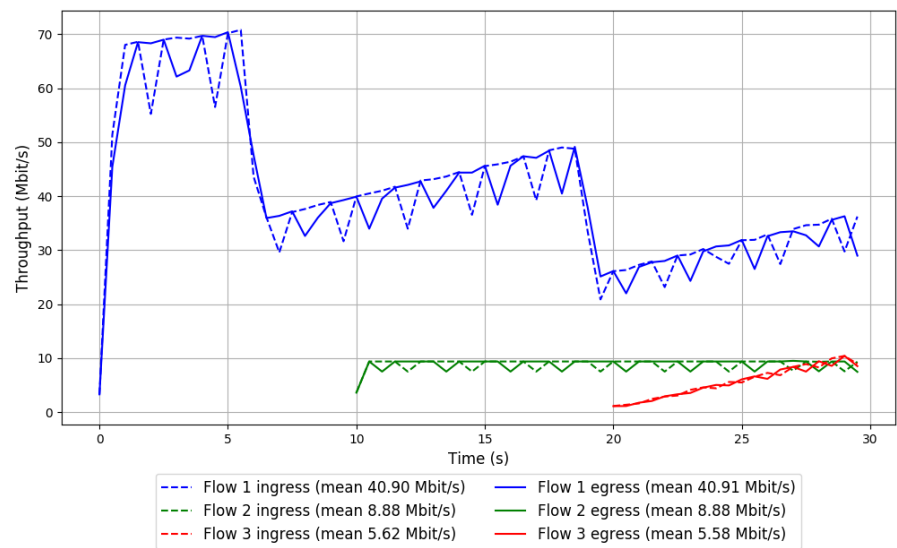
-- Flow 3:

Average throughput: 5.58 Mbit/s

95th percentile per-packet one-way delay: 54.142 ms

Loss rate: 2.06%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-08-31 20:26:19

End at: 2017-08-31 20:26:49

Below is generated by plot.py at 2017-09-01 00:47:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 59.25 Mbit/s

95th percentile per-packet one-way delay: 54.293 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 51.64 Mbit/s

95th percentile per-packet one-way delay: 54.317 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 7.11 Mbit/s

95th percentile per-packet one-way delay: 54.169 ms

Loss rate: 0.55%

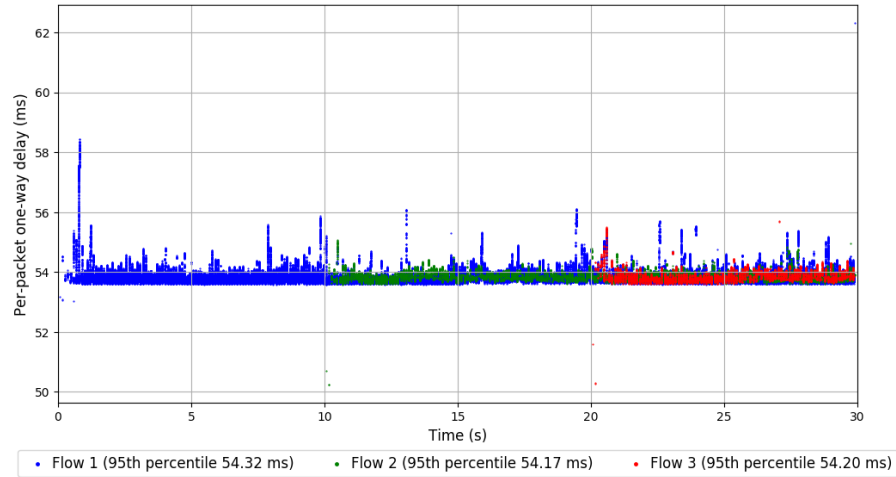
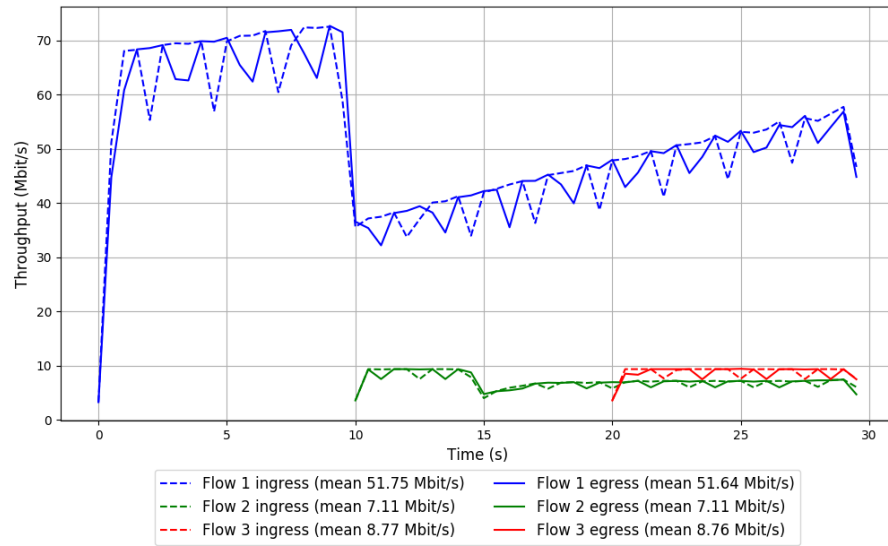
-- Flow 3:

Average throughput: 8.76 Mbit/s

95th percentile per-packet one-way delay: 54.197 ms

Loss rate: 1.08%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-08-31 20:38:25

End at: 2017-08-31 20:38:55

Below is generated by plot.py at 2017-09-01 00:47:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.82 Mbit/s

95th percentile per-packet one-way delay: 54.929 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 11.01 Mbit/s

95th percentile per-packet one-way delay: 54.413 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 82.45 Mbit/s

95th percentile per-packet one-way delay: 54.980 ms

Loss rate: 0.35%

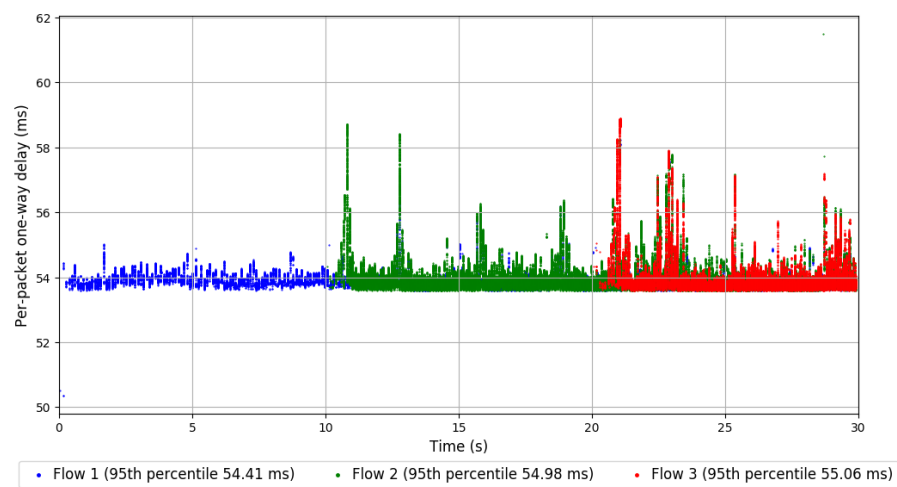
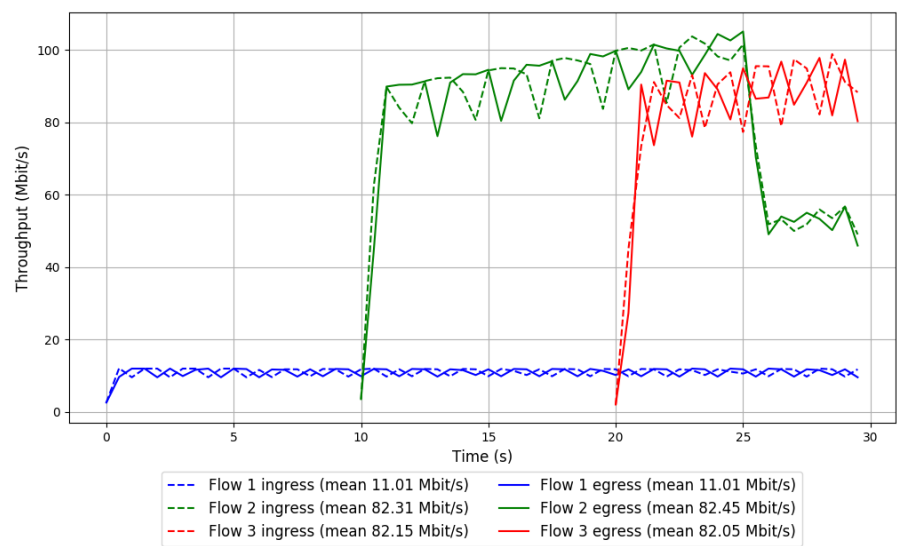
-- Flow 3:

Average throughput: 82.05 Mbit/s

95th percentile per-packet one-way delay: 55.061 ms

Loss rate: 1.21%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-08-31 20:50:26

End at: 2017-08-31 20:50:56

Below is generated by plot.py at 2017-09-01 00:47:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.56 Mbit/s

95th percentile per-packet one-way delay: 54.824 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 28.77 Mbit/s

95th percentile per-packet one-way delay: 54.462 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 136.49 Mbit/s

95th percentile per-packet one-way delay: 55.007 ms

Loss rate: 0.58%

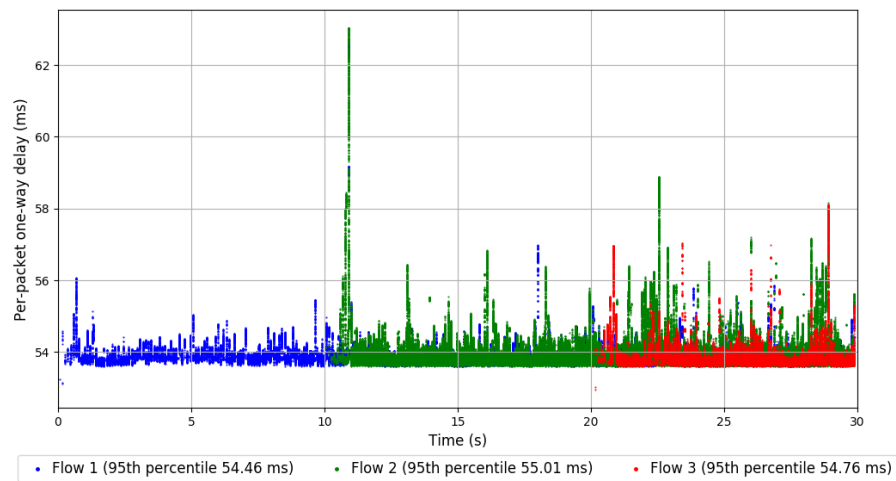
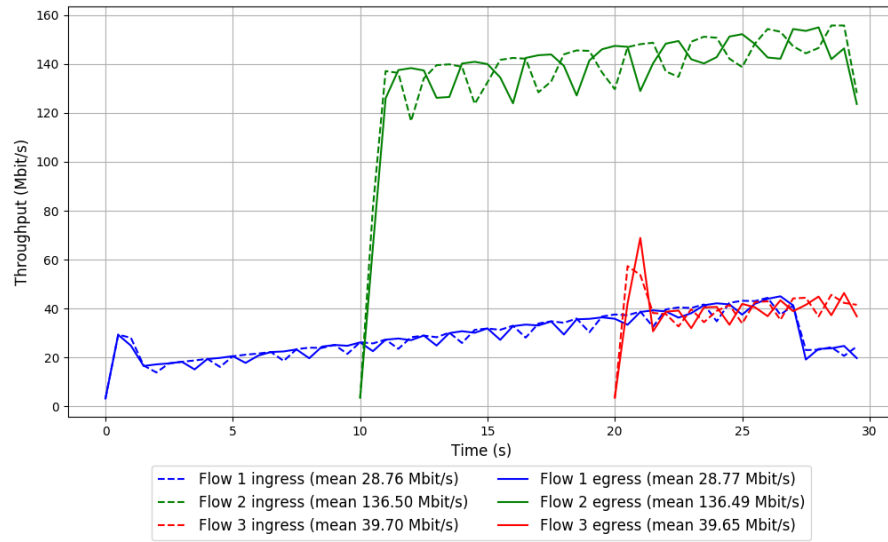
-- Flow 3:

Average throughput: 39.65 Mbit/s

95th percentile per-packet one-way delay: 54.757 ms

Loss rate: 1.20%

Run 10: Report of TCP Vegas — Data Link

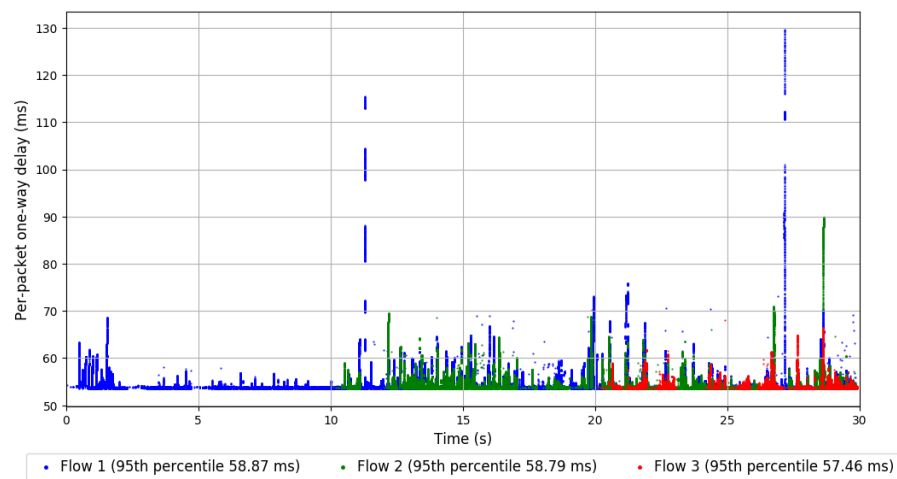
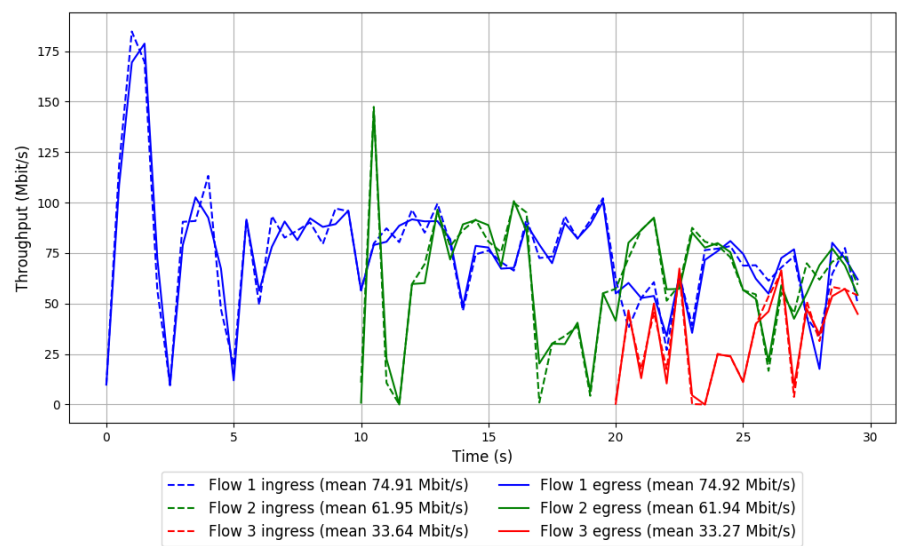


```
Run 1: Statistics of Verus

Start at: 2017-08-31 19:06:37
End at: 2017-08-31 19:07:07

# Below is generated by plot.py at 2017-09-01 00:47:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 126.86 Mbit/s
95th percentile per-packet one-way delay: 58.707 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 74.92 Mbit/s
95th percentile per-packet one-way delay: 58.865 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 61.94 Mbit/s
95th percentile per-packet one-way delay: 58.786 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 33.27 Mbit/s
95th percentile per-packet one-way delay: 57.457 ms
Loss rate: 2.23%
```

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-08-31 19:18:37

End at: 2017-08-31 19:19:07

Below is generated by plot.py at 2017-09-01 00:48:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 149.49 Mbit/s

95th percentile per-packet one-way delay: 70.636 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 105.07 Mbit/s

95th percentile per-packet one-way delay: 73.418 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 42.65 Mbit/s

95th percentile per-packet one-way delay: 68.054 ms

Loss rate: 0.00%

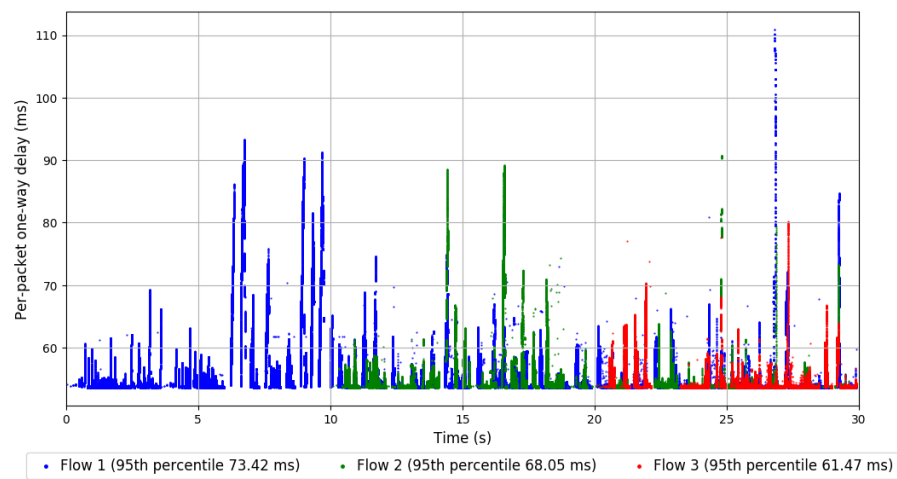
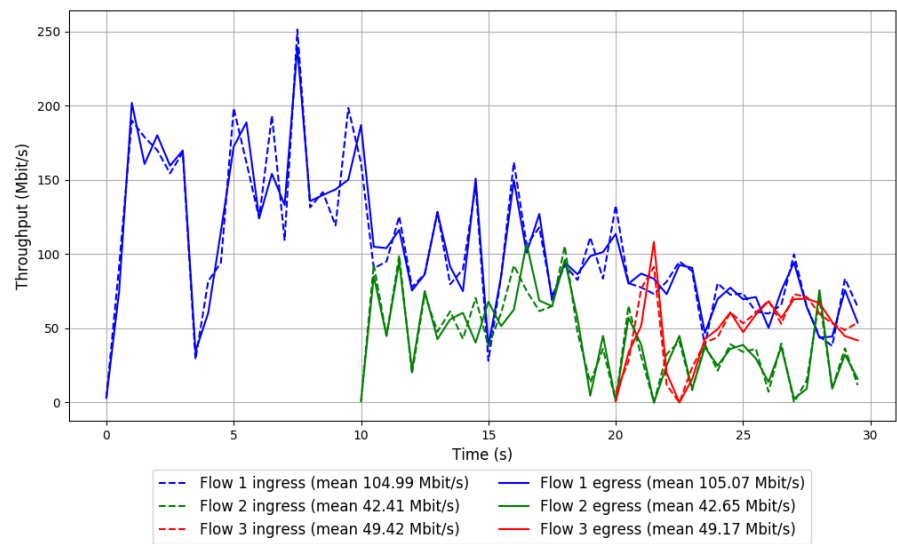
-- Flow 3:

Average throughput: 49.17 Mbit/s

95th percentile per-packet one-way delay: 61.472 ms

Loss rate: 1.64%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-08-31 19:30:41

End at: 2017-08-31 19:31:11

Below is generated by plot.py at 2017-09-01 00:48:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 166.77 Mbit/s

95th percentile per-packet one-way delay: 65.382 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 100.52 Mbit/s

95th percentile per-packet one-way delay: 64.474 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 74.80 Mbit/s

95th percentile per-packet one-way delay: 63.480 ms

Loss rate: 1.05%

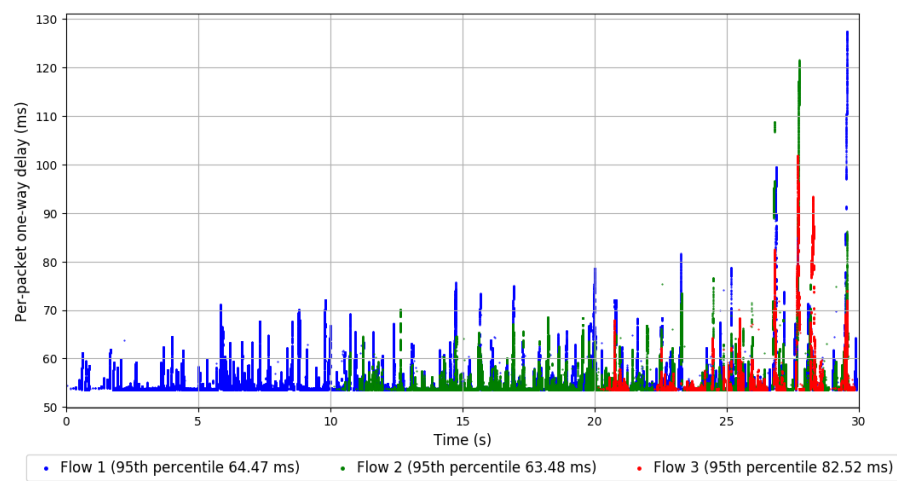
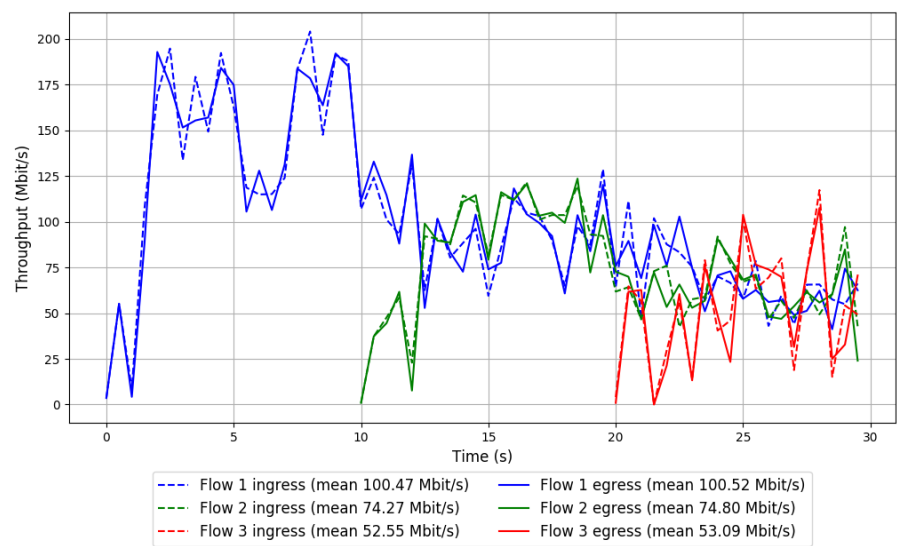
-- Flow 3:

Average throughput: 53.09 Mbit/s

95th percentile per-packet one-way delay: 82.522 ms

Loss rate: 0.00%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-08-31 19:42:42

End at: 2017-08-31 19:43:12

Below is generated by plot.py at 2017-09-01 00:48:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 160.99 Mbit/s

95th percentile per-packet one-way delay: 65.695 ms

Loss rate: 0.31%

-- Flow 1:

Average throughput: 110.72 Mbit/s

95th percentile per-packet one-way delay: 67.397 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 60.51 Mbit/s

95th percentile per-packet one-way delay: 63.375 ms

Loss rate: 0.59%

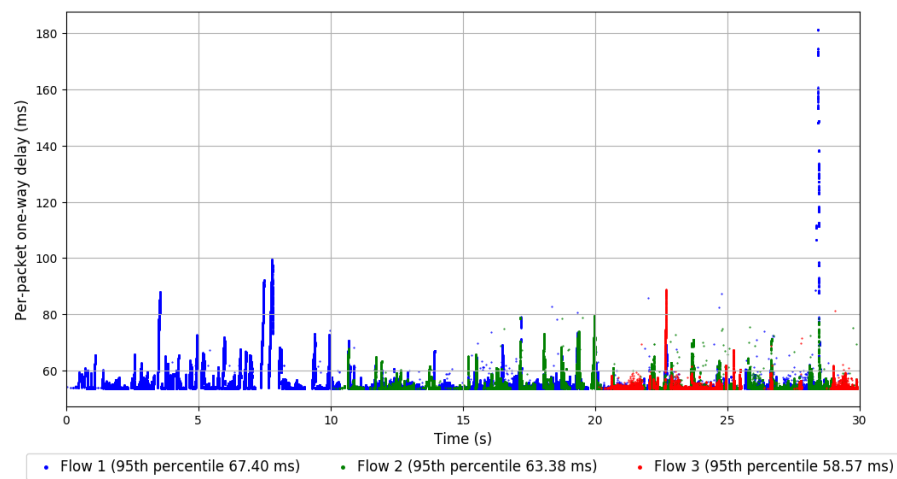
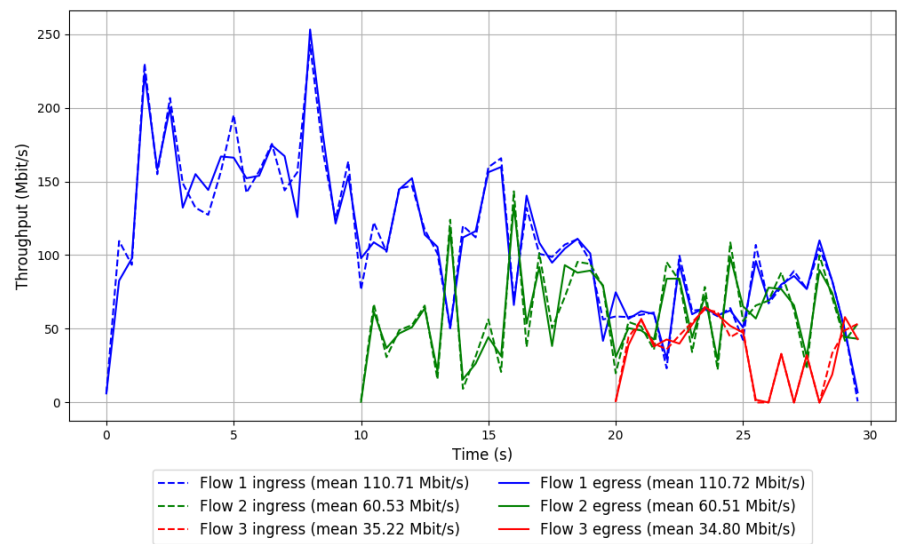
-- Flow 3:

Average throughput: 34.80 Mbit/s

95th percentile per-packet one-way delay: 58.570 ms

Loss rate: 2.29%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-08-31 19:54:42

End at: 2017-08-31 19:55:12

Below is generated by plot.py at 2017-09-01 00:49:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 143.27 Mbit/s

95th percentile per-packet one-way delay: 76.389 ms

Loss rate: 0.38%

-- Flow 1:

Average throughput: 83.00 Mbit/s

95th percentile per-packet one-way delay: 91.991 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 67.50 Mbit/s

95th percentile per-packet one-way delay: 68.292 ms

Loss rate: 0.62%

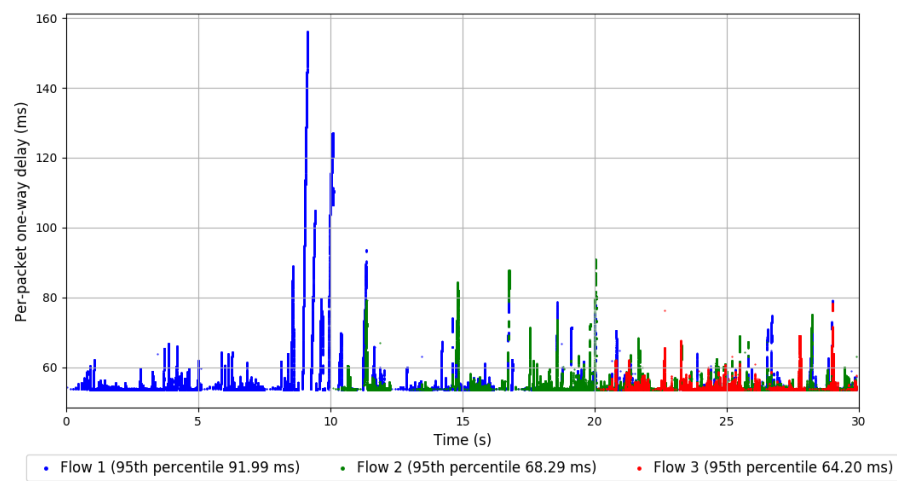
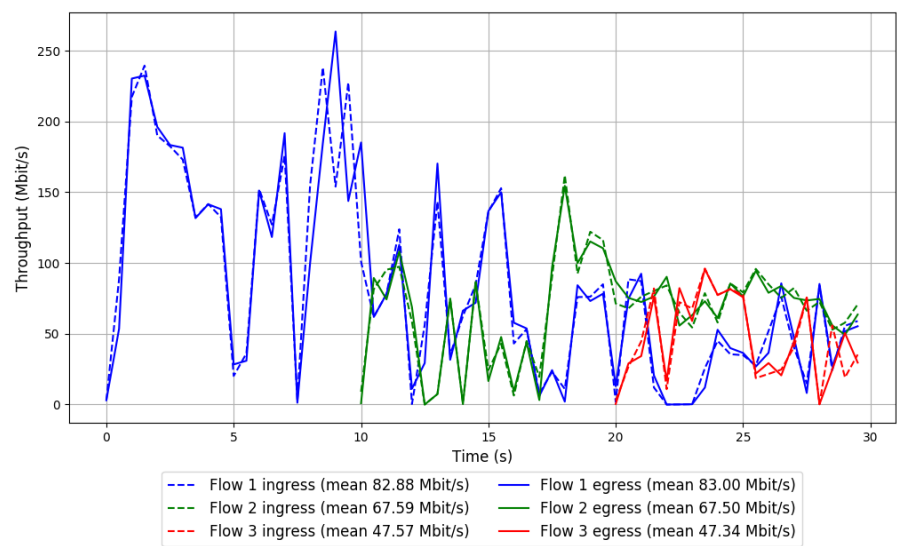
-- Flow 3:

Average throughput: 47.34 Mbit/s

95th percentile per-packet one-way delay: 64.200 ms

Loss rate: 0.62%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-08-31 20:07:01

End at: 2017-08-31 20:07:31

Below is generated by plot.py at 2017-09-01 00:49:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 162.73 Mbit/s

95th percentile per-packet one-way delay: 78.604 ms

Loss rate: 0.28%

-- Flow 1:

Average throughput: 101.26 Mbit/s

95th percentile per-packet one-way delay: 82.117 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 64.22 Mbit/s

95th percentile per-packet one-way delay: 77.150 ms

Loss rate: 1.07%

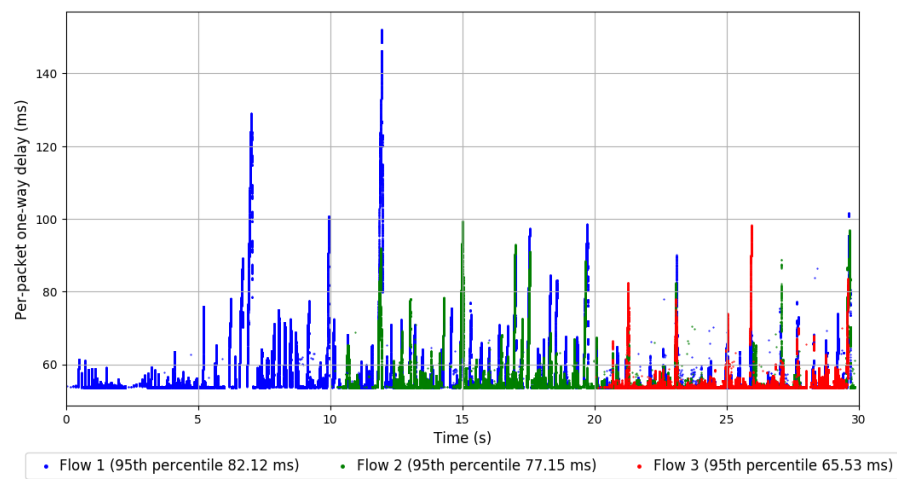
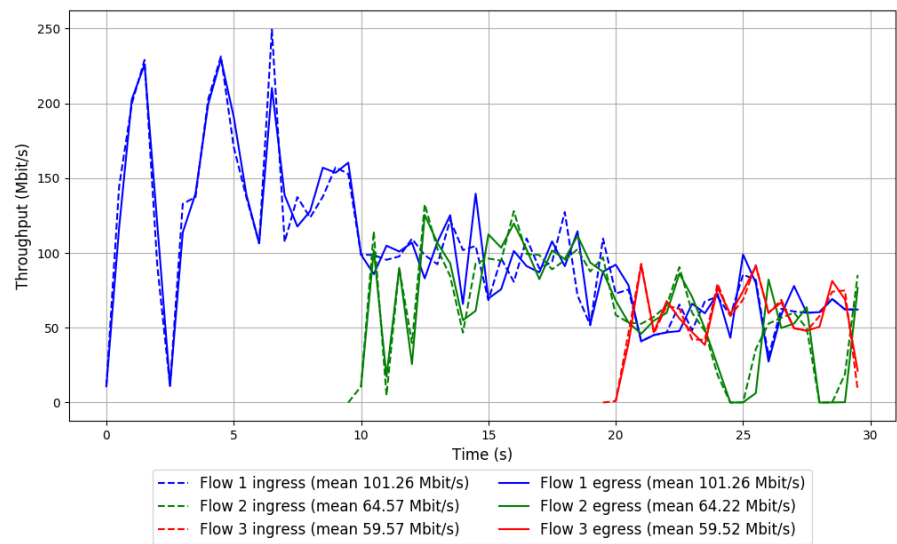
-- Flow 3:

Average throughput: 59.52 Mbit/s

95th percentile per-packet one-way delay: 65.527 ms

Loss rate: 0.00%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-08-31 20:18:50

End at: 2017-08-31 20:19:20

Below is generated by plot.py at 2017-09-01 00:49:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 161.81 Mbit/s

95th percentile per-packet one-way delay: 60.820 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 103.16 Mbit/s

95th percentile per-packet one-way delay: 60.944 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 64.59 Mbit/s

95th percentile per-packet one-way delay: 63.271 ms

Loss rate: 0.58%

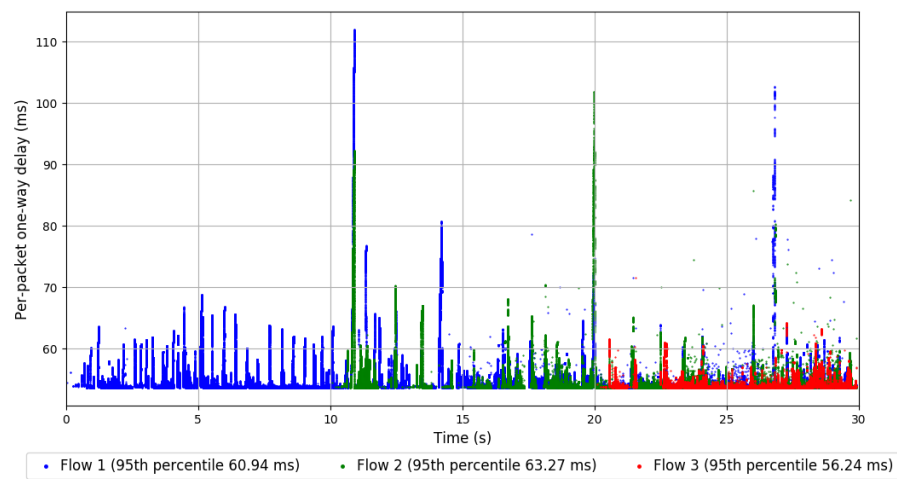
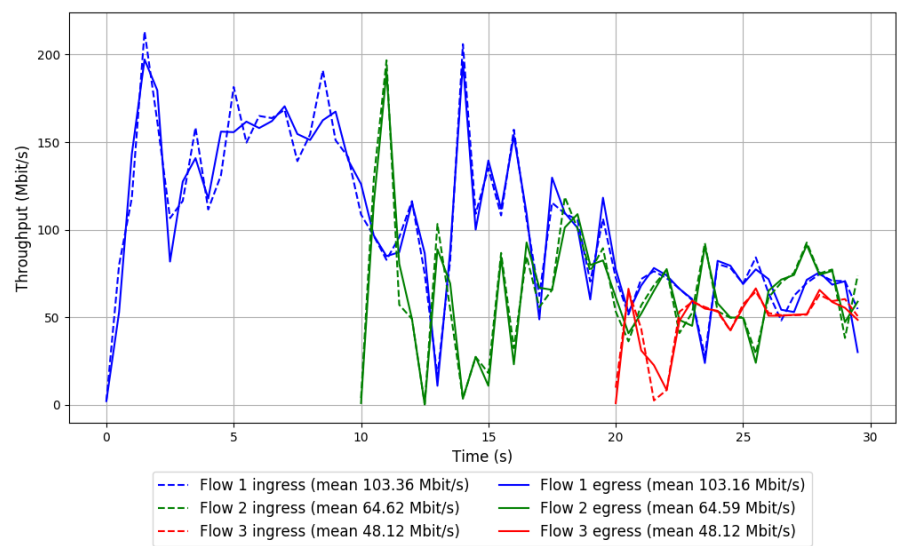
-- Flow 3:

Average throughput: 48.12 Mbit/s

95th percentile per-packet one-way delay: 56.240 ms

Loss rate: 1.12%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-08-31 20:30:58

End at: 2017-08-31 20:31:28

Below is generated by plot.py at 2017-09-01 00:49:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 143.87 Mbit/s

95th percentile per-packet one-way delay: 77.820 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 112.79 Mbit/s

95th percentile per-packet one-way delay: 78.524 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 26.33 Mbit/s

95th percentile per-packet one-way delay: 78.110 ms

Loss rate: 0.00%

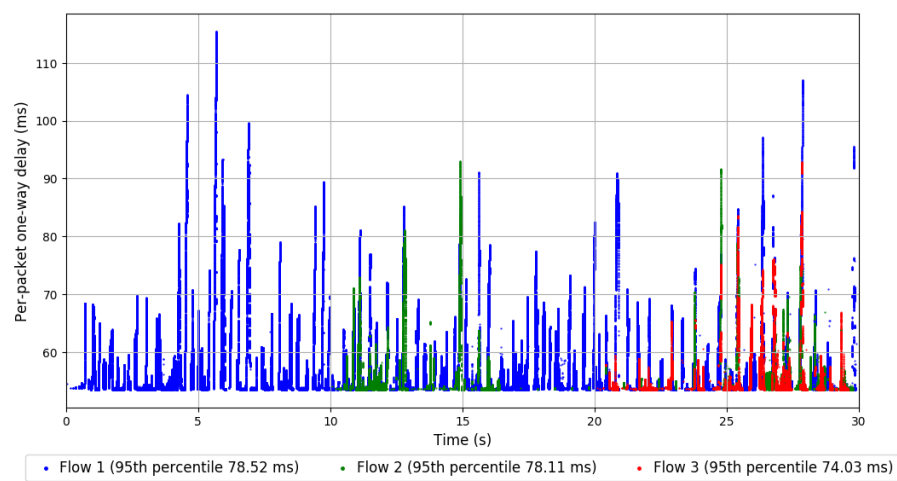
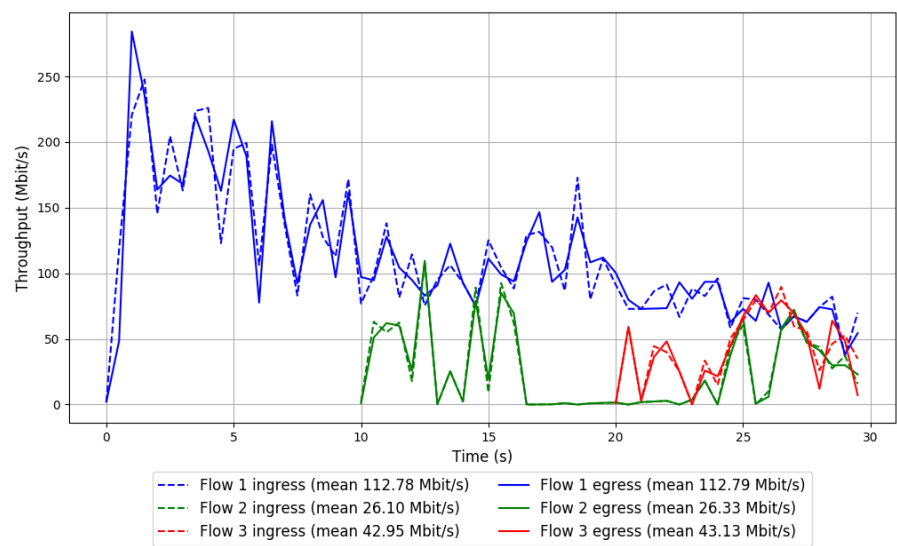
-- Flow 3:

Average throughput: 43.13 Mbit/s

95th percentile per-packet one-way delay: 74.030 ms

Loss rate: 3.76%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2017-08-31 20:43:02

End at: 2017-08-31 20:43:32

Below is generated by plot.py at 2017-09-01 00:50:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 162.52 Mbit/s

95th percentile per-packet one-way delay: 81.375 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 110.28 Mbit/s

95th percentile per-packet one-way delay: 86.300 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 54.14 Mbit/s

95th percentile per-packet one-way delay: 61.631 ms

Loss rate: 0.67%

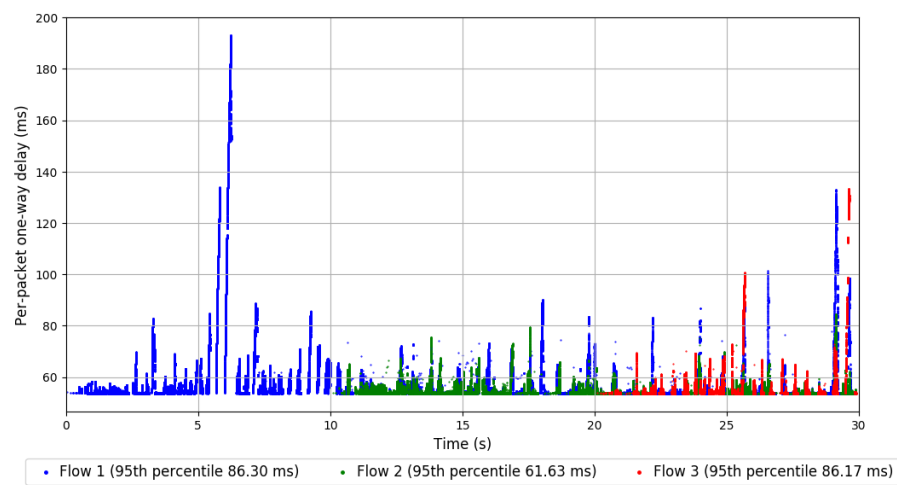
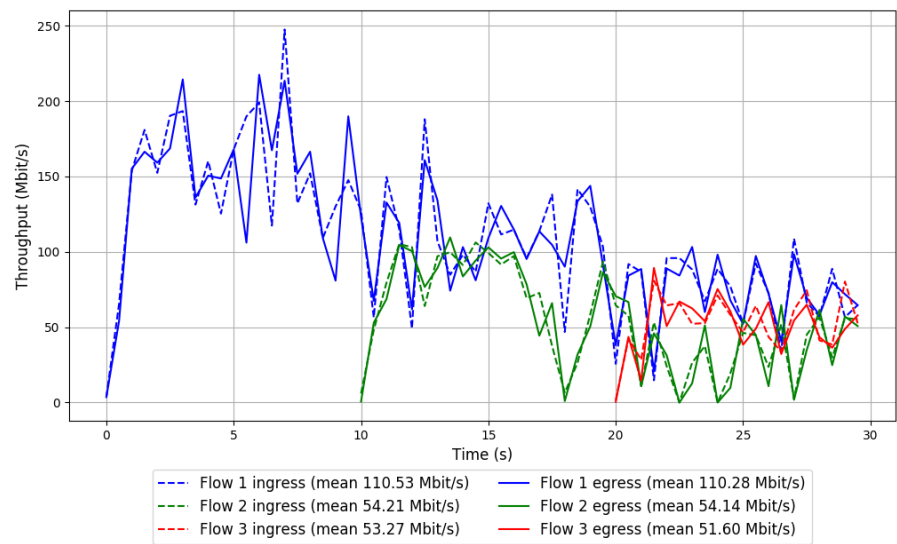
-- Flow 3:

Average throughput: 51.60 Mbit/s

95th percentile per-packet one-way delay: 86.171 ms

Loss rate: 4.20%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-08-31 20:55:00

End at: 2017-08-31 20:55:30

Below is generated by plot.py at 2017-09-01 00:50:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 155.71 Mbit/s

95th percentile per-packet one-way delay: 78.315 ms

Loss rate: 0.37%

-- Flow 1:

Average throughput: 96.88 Mbit/s

95th percentile per-packet one-way delay: 80.157 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 72.11 Mbit/s

95th percentile per-packet one-way delay: 75.980 ms

Loss rate: 0.57%

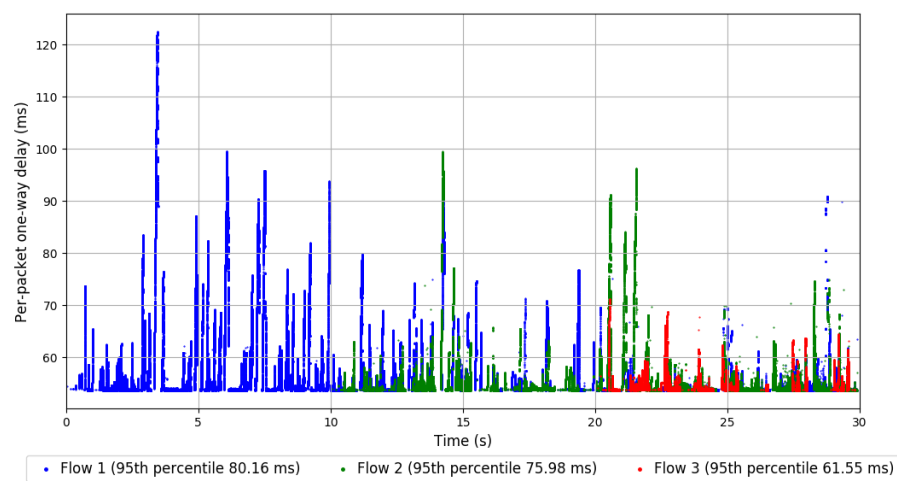
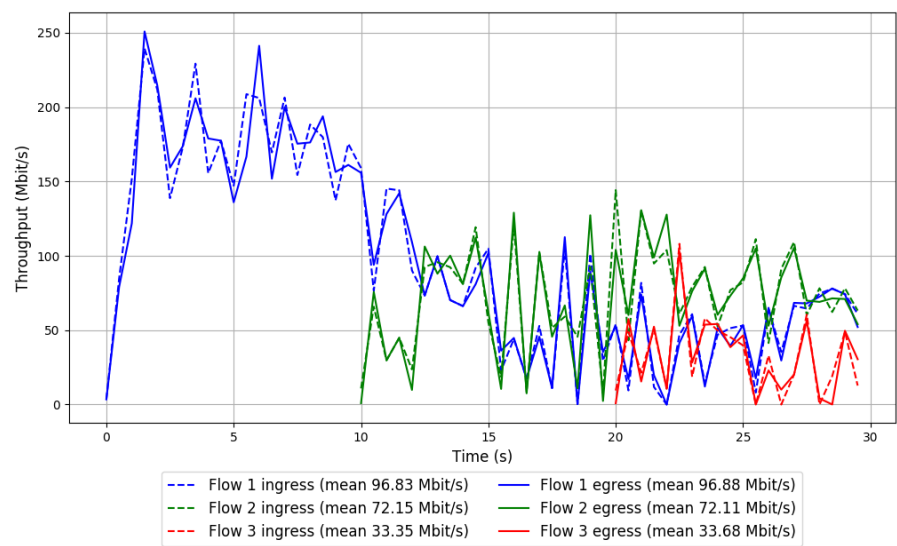
-- Flow 3:

Average throughput: 33.68 Mbit/s

95th percentile per-packet one-way delay: 61.555 ms

Loss rate: 0.11%

Run 10: Report of Verus — Data Link

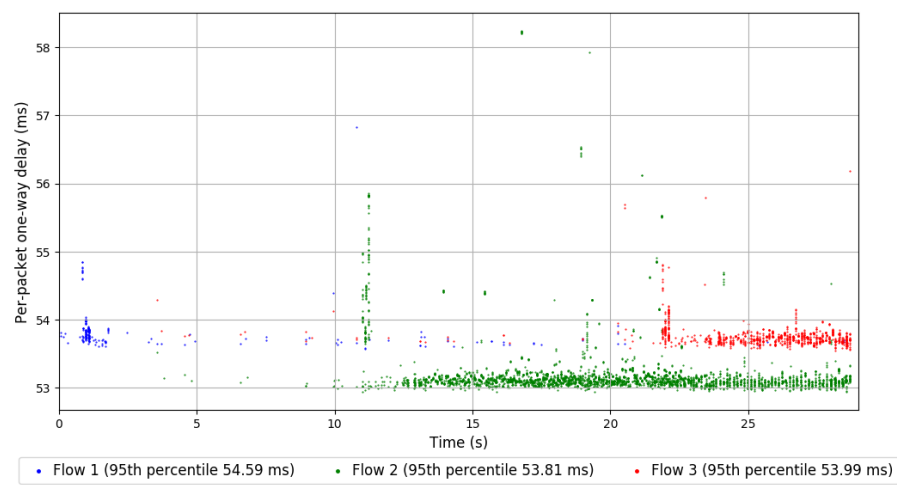
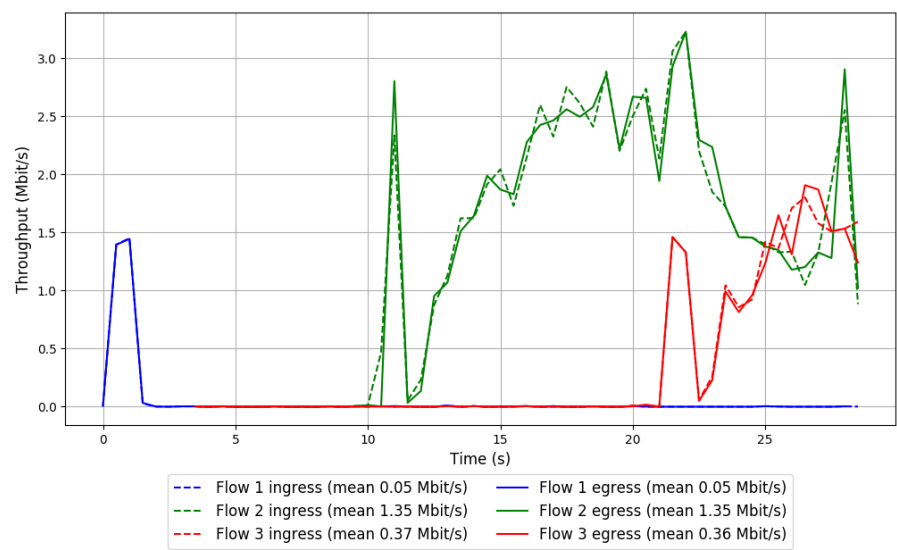


```
Run 1: Statistics of WebRTC media

Start at: 2017-08-31 19:00:12
End at: 2017-08-31 19:00:42

# Below is generated by plot.py at 2017-09-01 00:50:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 53.955 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 54.587 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 53.812 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 53.989 ms
Loss rate: 1.90%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-08-31 19:12:32

End at: 2017-08-31 19:13:03

Below is generated by plot.py at 2017-09-01 00:50:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 54.010 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 54.104 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.49 Mbit/s

95th percentile per-packet one-way delay: 53.926 ms

Loss rate: 0.00%

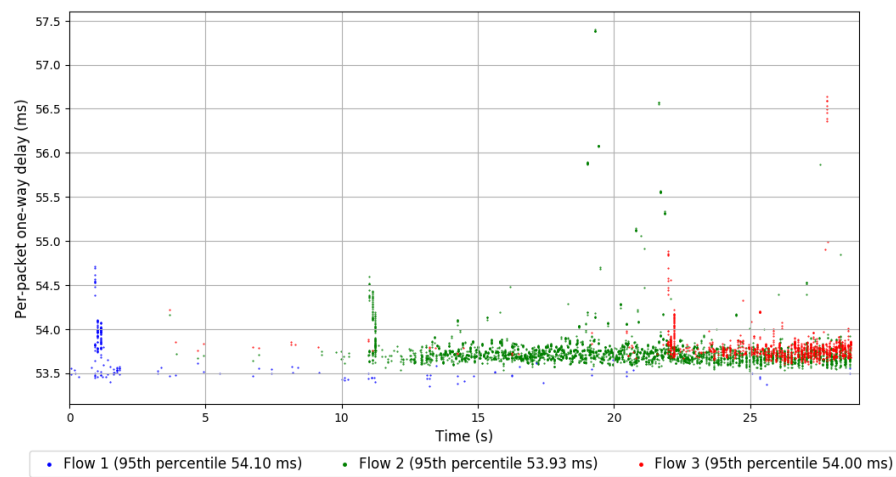
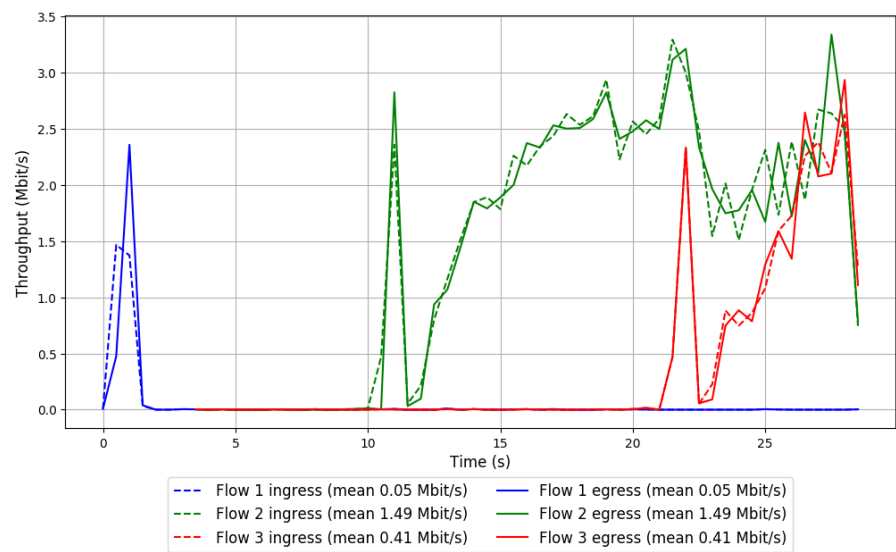
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 54.003 ms

Loss rate: 0.76%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-08-31 19:24:33

End at: 2017-08-31 19:25:03

Below is generated by plot.py at 2017-09-01 00:50:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.58 Mbit/s

95th percentile per-packet one-way delay: 53.786 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 54.006 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.45 Mbit/s

95th percentile per-packet one-way delay: 50.745 ms

Loss rate: 0.98%

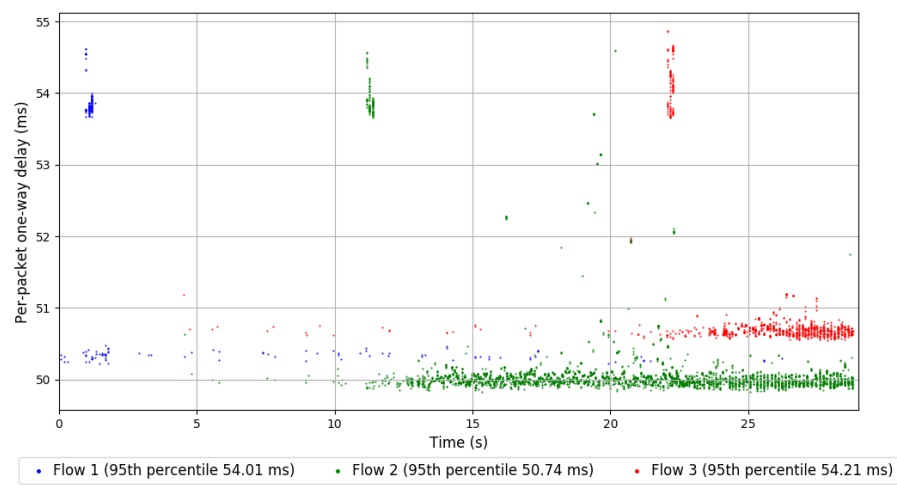
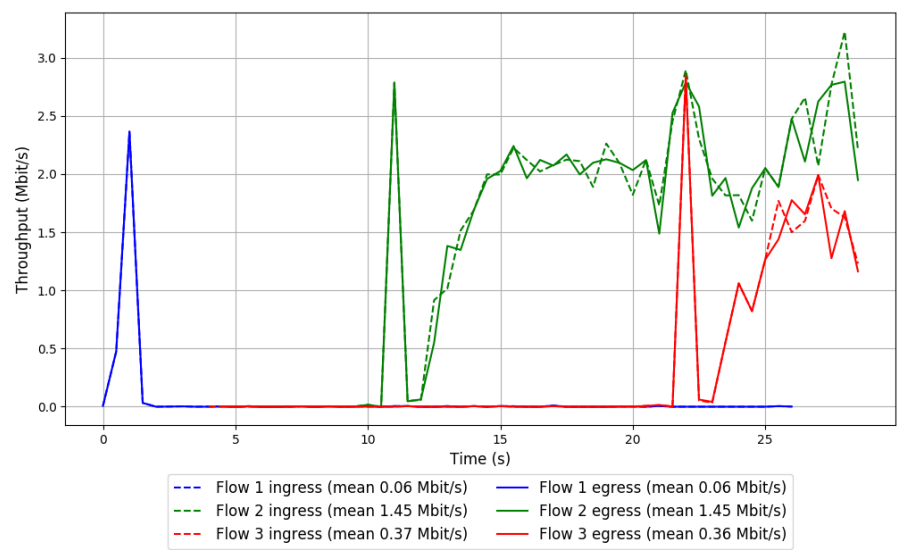
-- Flow 3:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 54.214 ms

Loss rate: 2.44%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-08-31 19:36:35

End at: 2017-08-31 19:37:05

Below is generated by plot.py at 2017-09-01 00:50:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 54.397 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 54.218 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 54.439 ms

Loss rate: 0.66%

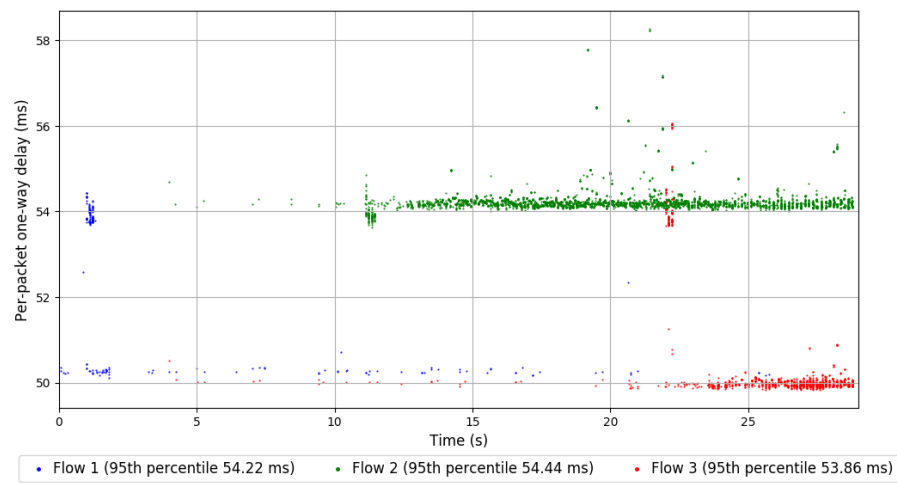
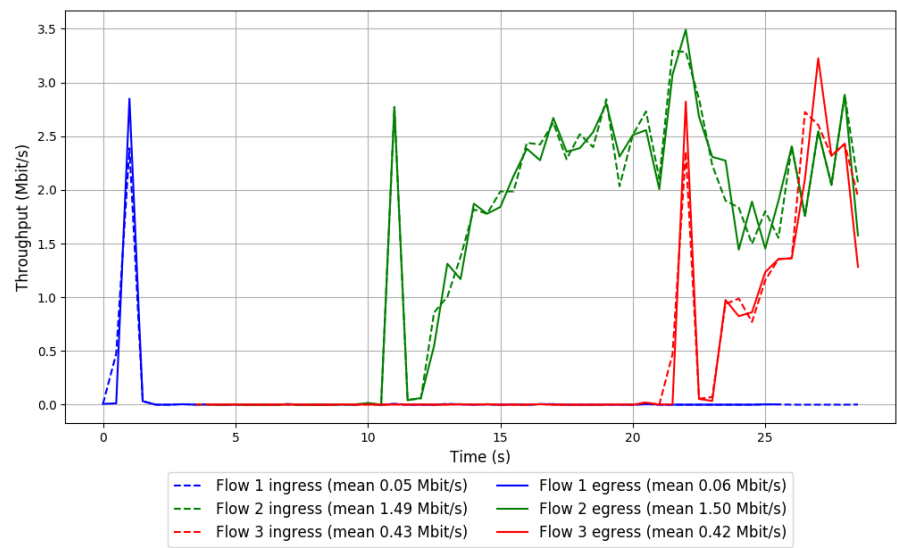
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 53.861 ms

Loss rate: 3.03%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-08-31 19:48:41

End at: 2017-08-31 19:49:11

Below is generated by plot.py at 2017-09-01 00:50:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.68 Mbit/s

95th percentile per-packet one-way delay: 53.842 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 54.240 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.49 Mbit/s

95th percentile per-packet one-way delay: 50.472 ms

Loss rate: 0.86%

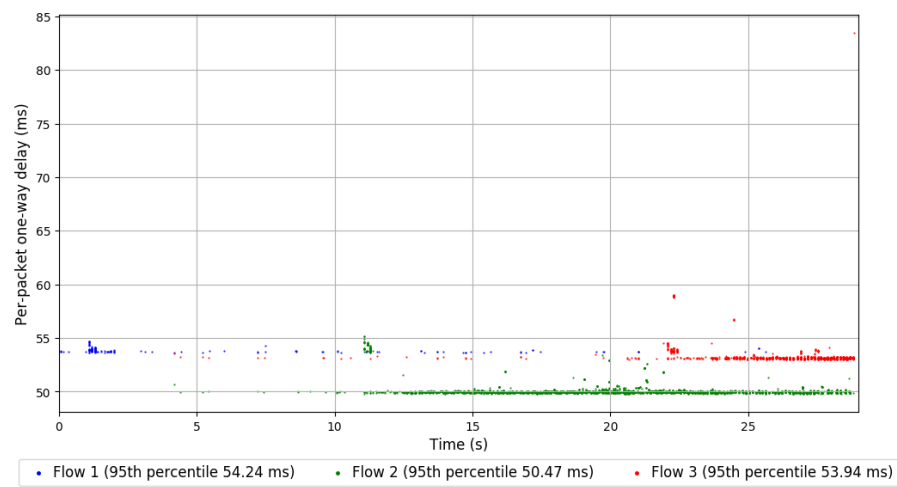
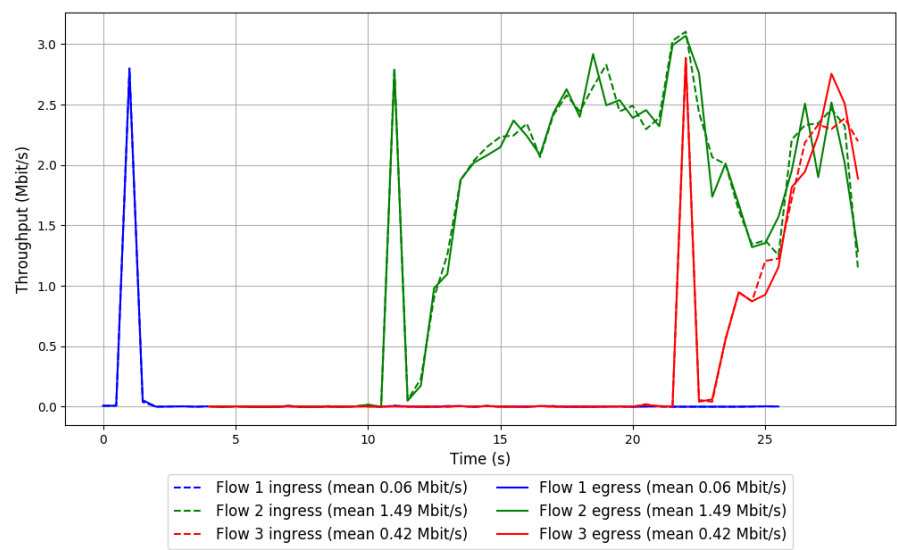
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 53.937 ms

Loss rate: 1.48%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-08-31 20:00:45

End at: 2017-08-31 20:01:15

Below is generated by plot.py at 2017-09-01 00:50:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.67 Mbit/s

95th percentile per-packet one-way delay: 53.968 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 54.138 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 53.990 ms

Loss rate: 1.11%

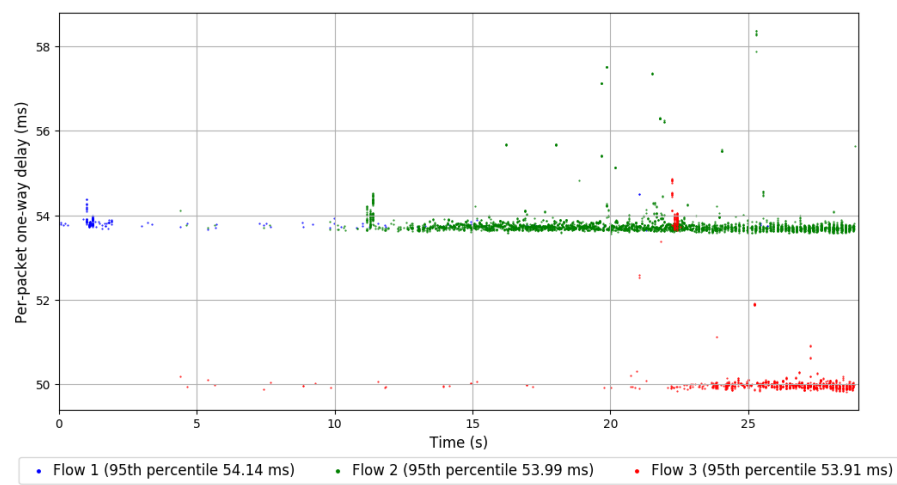
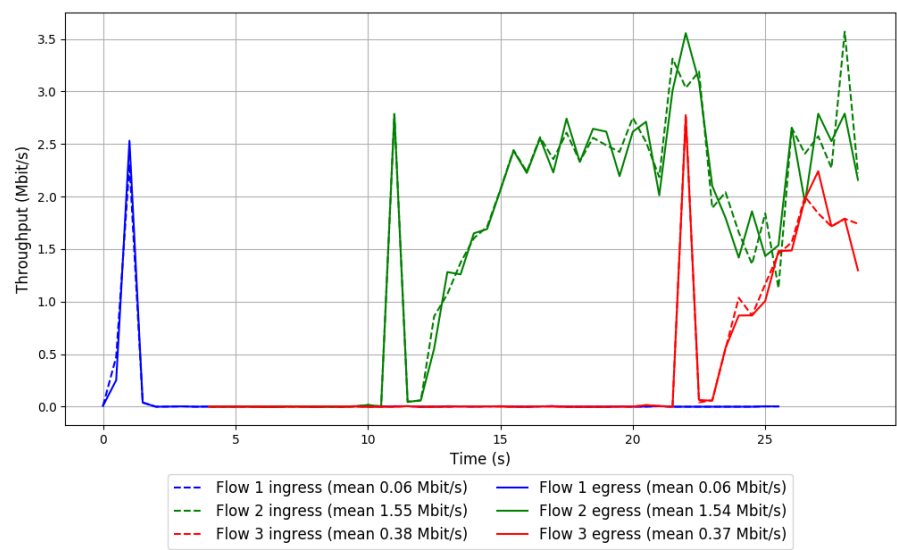
-- Flow 3:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 53.914 ms

Loss rate: 2.38%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-08-31 20:12:58

End at: 2017-08-31 20:13:28

Below is generated by plot.py at 2017-09-01 00:50:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 53.800 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 54.202 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 51.327 ms

Loss rate: 1.28%

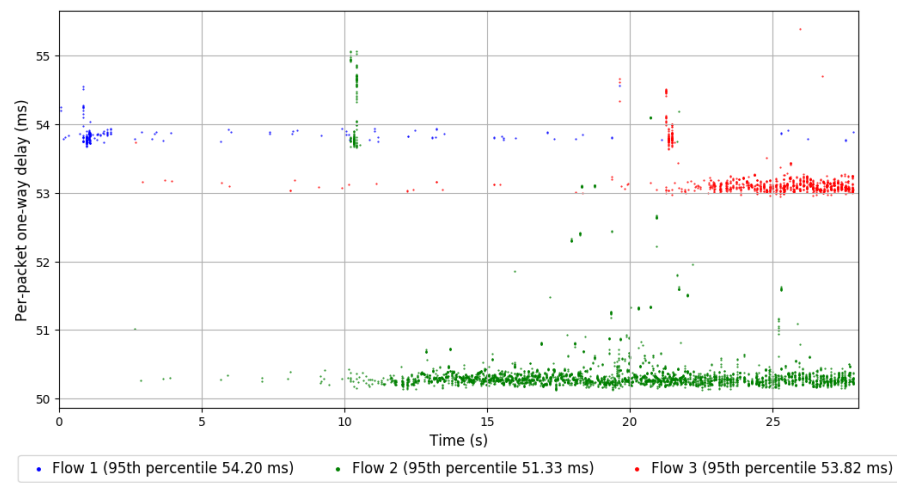
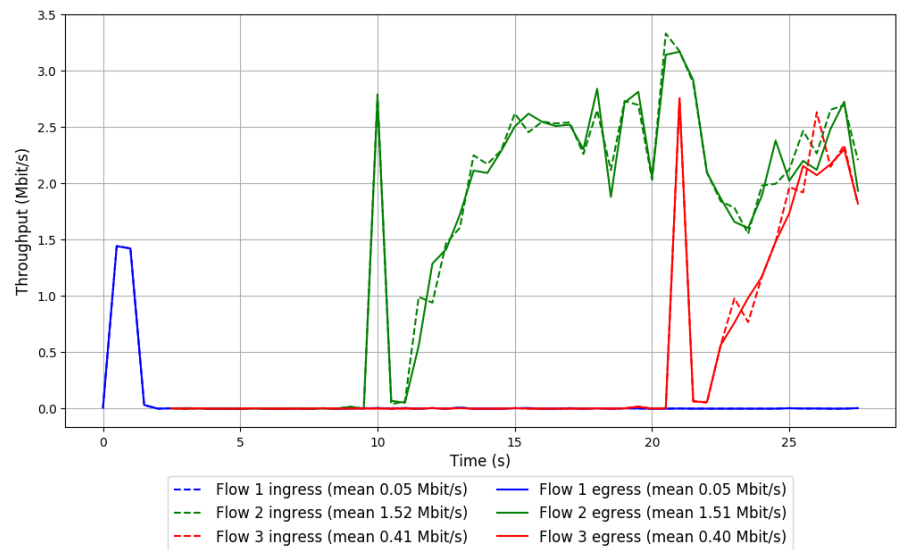
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 53.817 ms

Loss rate: 2.74%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2017-08-31 20:24:50

End at: 2017-08-31 20:25:20

Below is generated by plot.py at 2017-09-01 00:50:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.80 Mbit/s

95th percentile per-packet one-way delay: 53.804 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 54.797 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.58 Mbit/s

95th percentile per-packet one-way delay: 50.794 ms

Loss rate: 0.90%

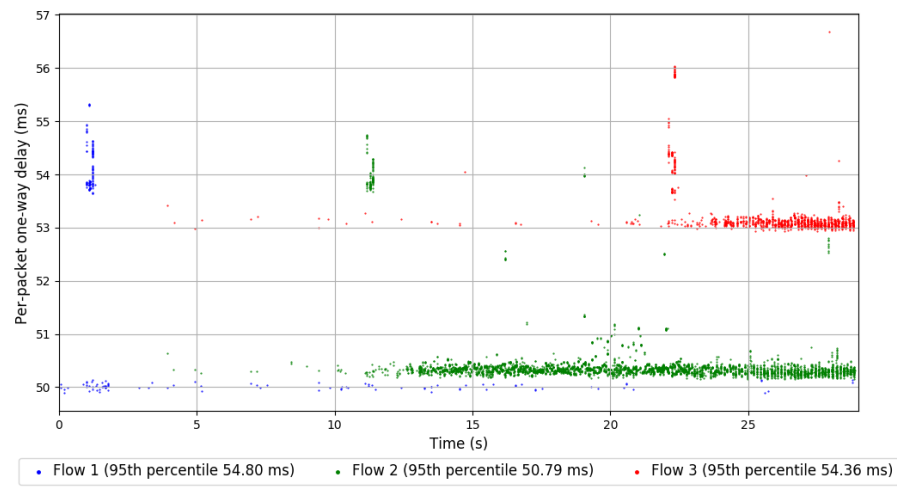
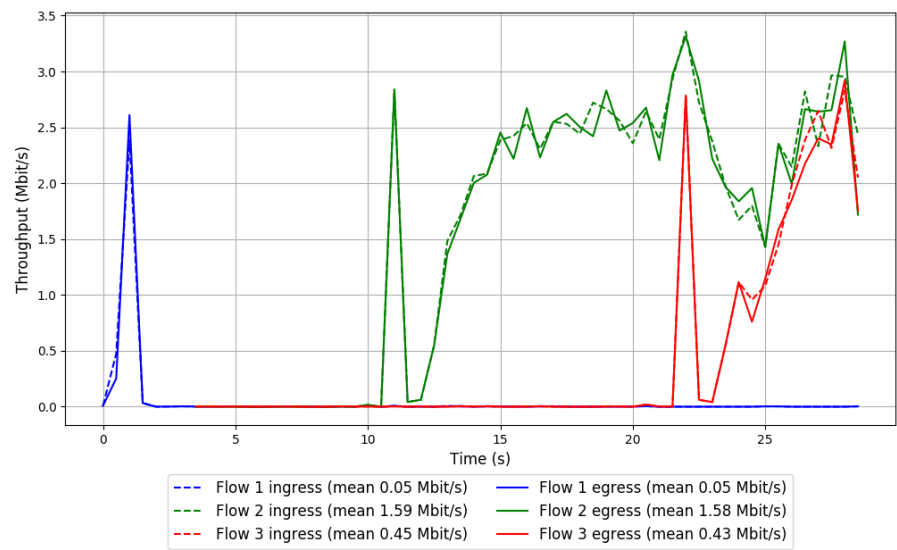
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 54.358 ms

Loss rate: 3.45%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-08-31 20:36:57

End at: 2017-08-31 20:37:27

Below is generated by plot.py at 2017-09-01 00:50:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.67 Mbit/s

95th percentile per-packet one-way delay: 53.778 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 54.123 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 50.542 ms

Loss rate: 0.99%

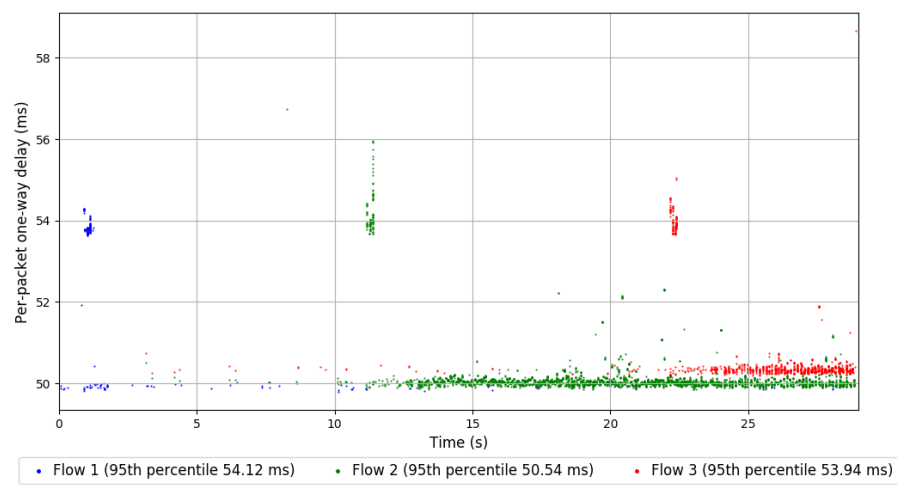
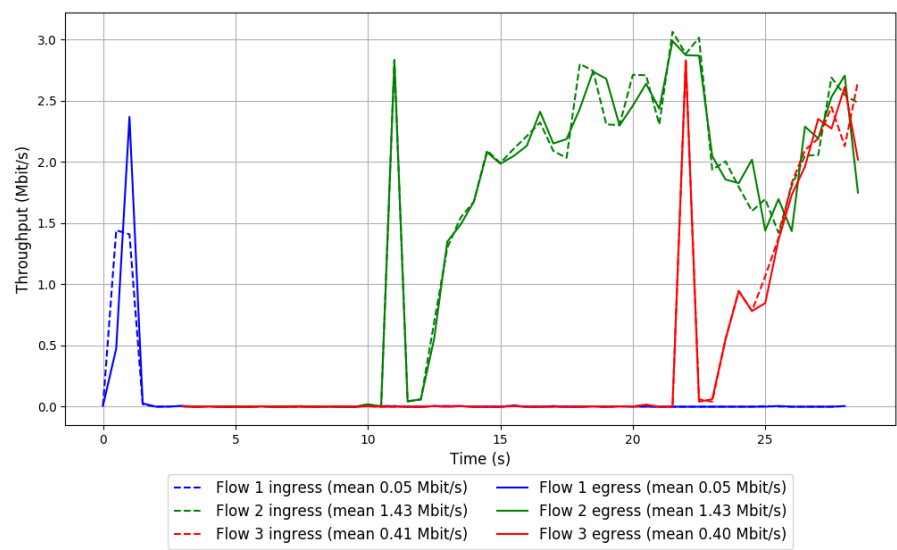
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 53.935 ms

Loss rate: 3.03%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-08-31 20:48:58

End at: 2017-08-31 20:49:28

Below is generated by plot.py at 2017-09-01 00:50:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.73 Mbit/s

95th percentile per-packet one-way delay: 53.877 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 54.154 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 50.897 ms

Loss rate: 0.81%

-- Flow 3:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 54.031 ms

Loss rate: 3.33%

Run 10: Report of WebRTC media — Data Link

