

Pantheon Report

Generated at 2018-01-17 23:17:40 (UTC).

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

Repeated the test of 17 congestion control schemes 10 times.

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

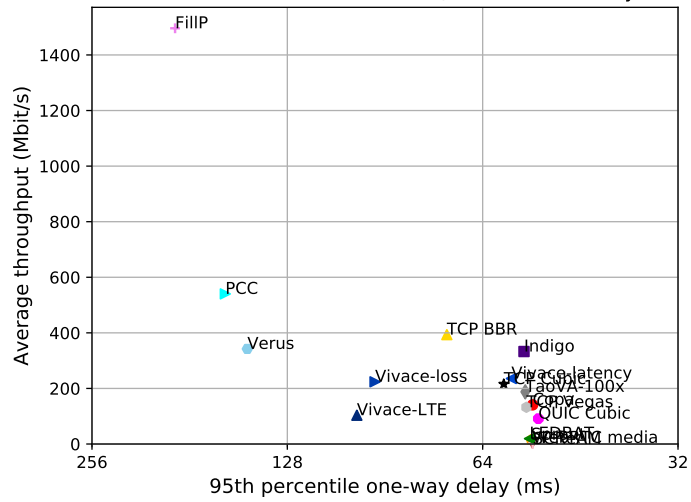
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

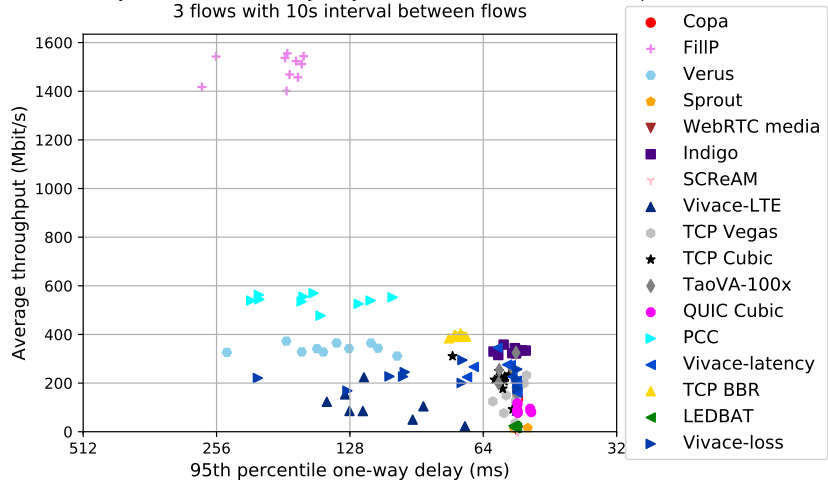
Git summary:

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

test from 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



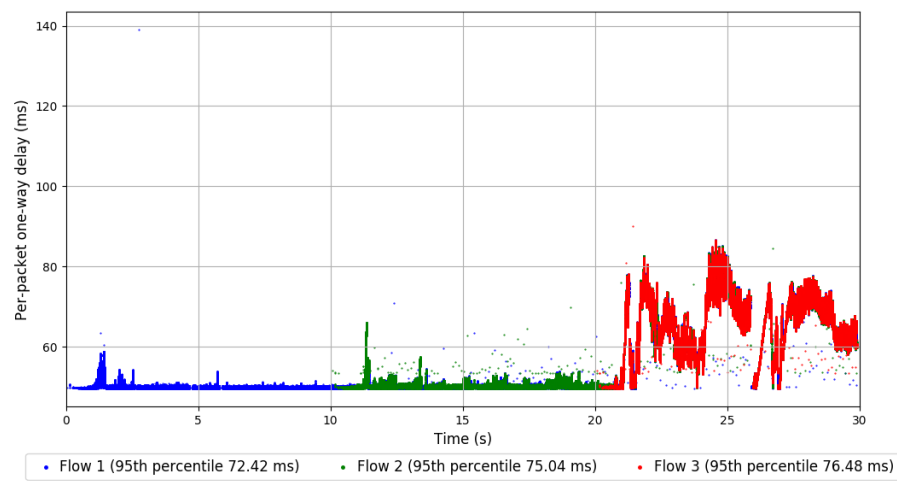
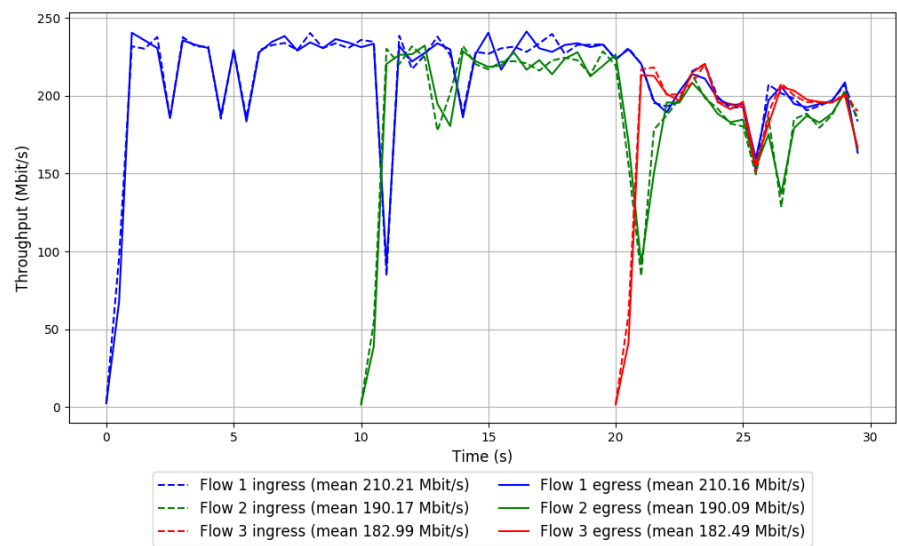
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	205.05	195.02	179.13	71.02	72.84	75.23	0.42	0.61	1.31
TCP Cubic	10	102.18	124.31	94.15	58.83	59.58	59.71	0.56	0.60	1.82
LEDBAT	10	9.97	9.99	8.47	54.25	53.65	53.49	0.80	1.23	1.75
PCC	10	490.83	63.17	22.77	159.74	146.75	127.77	1.13	0.96	1.58
QUIC Cubic	10	53.87	41.23	30.65	51.80	52.15	54.90	0.47	0.87	1.78
SCReAM	8	37.99	0.21	0.22	641.34	52.71	52.61	0.30	0.42	1.11
WebRTC media	10	2.25	1.42	0.59	52.29	53.66	53.26	0.44	0.61	1.67
Sprout	10	7.85	7.78	7.46	53.94	53.63	53.57	0.49	0.73	1.38
TaoVA-100x	10	94.75	125.73	73.86	54.30	55.45	54.64	0.25	0.74	2.04
TCP Vegas	10	55.17	88.39	55.35	54.10	55.31	52.85	0.35	0.43	1.18
Verus	10	196.56	156.51	123.45	139.35	140.70	183.11	1.18	1.17	5.14
Copa	10	78.84	76.42	46.75	52.85	53.31	52.79	0.30	0.59	1.62
FillP	10	783.26	754.85	642.49	177.48	178.05	190.47	12.07	12.84	18.47
Indigo	10	178.53	164.65	136.19	54.65	55.56	57.39	0.33	0.46	1.11
Vivace-latency	10	131.31	122.33	70.89	58.15	59.42	55.21	0.31	0.54	1.63
Vivace-loss	10	118.40	124.11	70.56	82.80	89.09	53.88	0.74	1.27	1.71
Vivace-LTE	10	58.52	41.54	54.73	85.05	92.65	59.97	0.17	0.15	0.73

```
Run 1: Statistics of TCP BBR

Start at: 2018-01-17 15:43:01
End at: 2018-01-17 15:43:31

# Below is generated by plot.py at 2018-01-17 21:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 396.61 Mbit/s
95th percentile per-packet one-way delay: 74.383 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 210.16 Mbit/s
95th percentile per-packet one-way delay: 72.418 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 190.09 Mbit/s
95th percentile per-packet one-way delay: 75.040 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 182.49 Mbit/s
95th percentile per-packet one-way delay: 76.482 ms
Loss rate: 1.35%
```

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-01-17 16:00:04

End at: 2018-01-17 16:00:34

Below is generated by plot.py at 2018-01-17 21:25:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 384.10 Mbit/s

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

Loss rate: 0.62%

-- Flow 1:

Average throughput: 201.68 Mbit/s

95th percentile per-packet one-way delay: 74.509 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 190.63 Mbit/s

95th percentile per-packet one-way delay: 76.540 ms

Loss rate: 0.63%

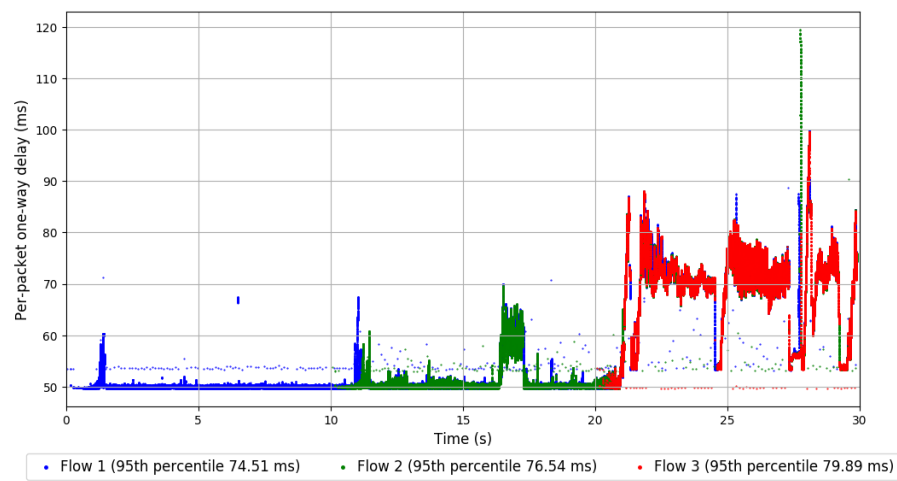
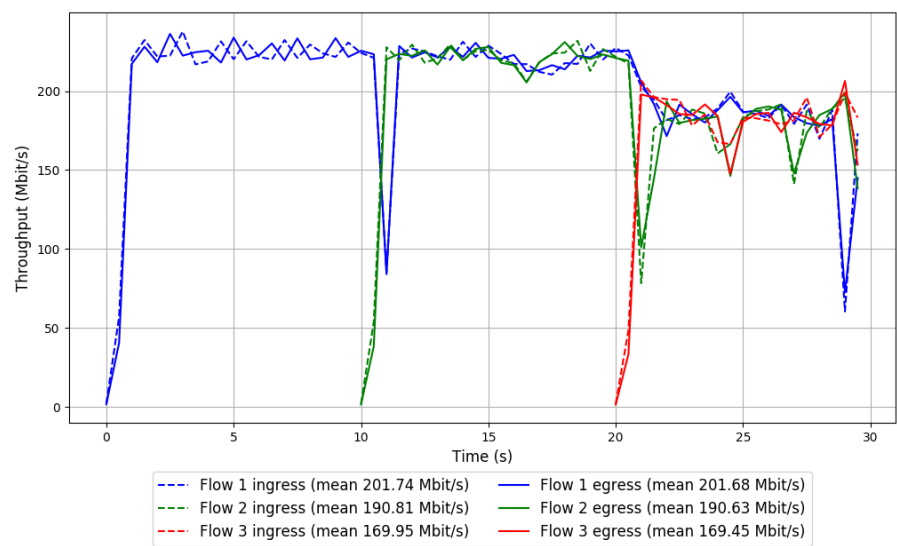
-- Flow 3:

Average throughput: 169.45 Mbit/s

95th percentile per-packet one-way delay: 79.894 ms

Loss rate: 1.45%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-01-17 16:16:52

End at: 2018-01-17 16:17:22

Below is generated by plot.py at 2018-01-17 21:25:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 393.49 Mbit/s

95th percentile per-packet one-way delay: 73.767 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 209.74 Mbit/s

95th percentile per-packet one-way delay: 72.303 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 192.71 Mbit/s

95th percentile per-packet one-way delay: 73.482 ms

Loss rate: 0.58%

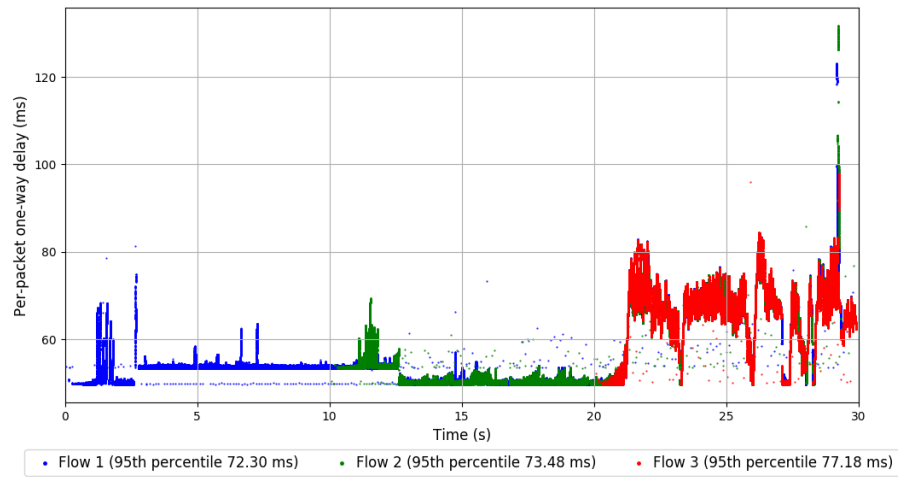
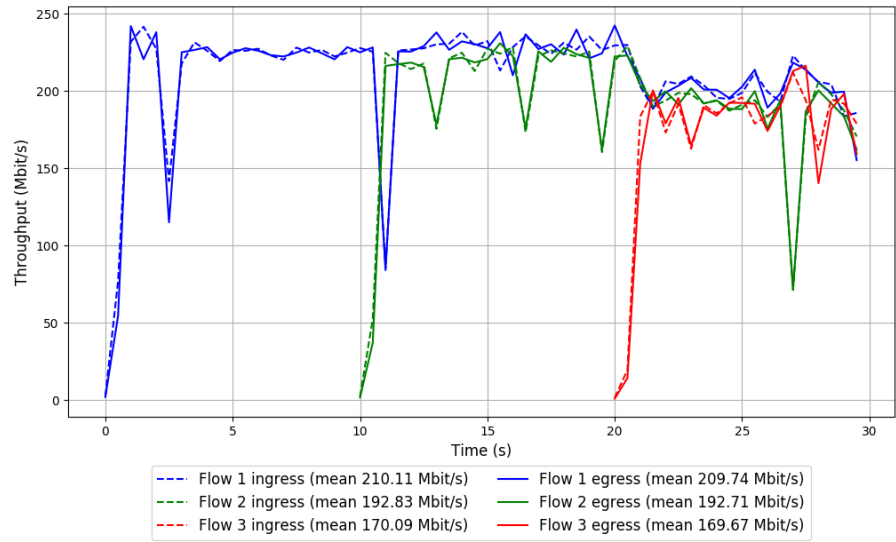
-- Flow 3:

Average throughput: 169.67 Mbit/s

95th percentile per-packet one-way delay: 77.184 ms

Loss rate: 1.32%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-01-17 16:34:02

End at: 2018-01-17 16:34:32

Below is generated by plot.py at 2018-01-17 21:25:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 391.10 Mbit/s

95th percentile per-packet one-way delay: 69.983 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 200.78 Mbit/s

95th percentile per-packet one-way delay: 67.822 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 198.94 Mbit/s

95th percentile per-packet one-way delay: 69.359 ms

Loss rate: 0.64%

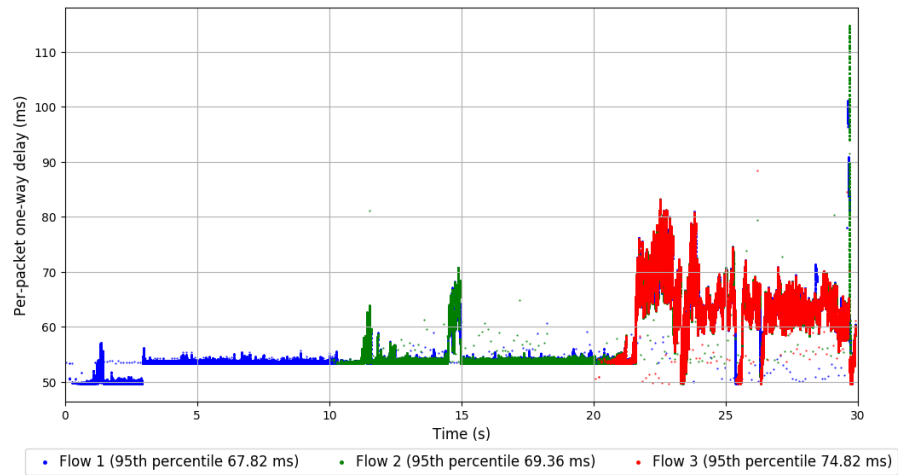
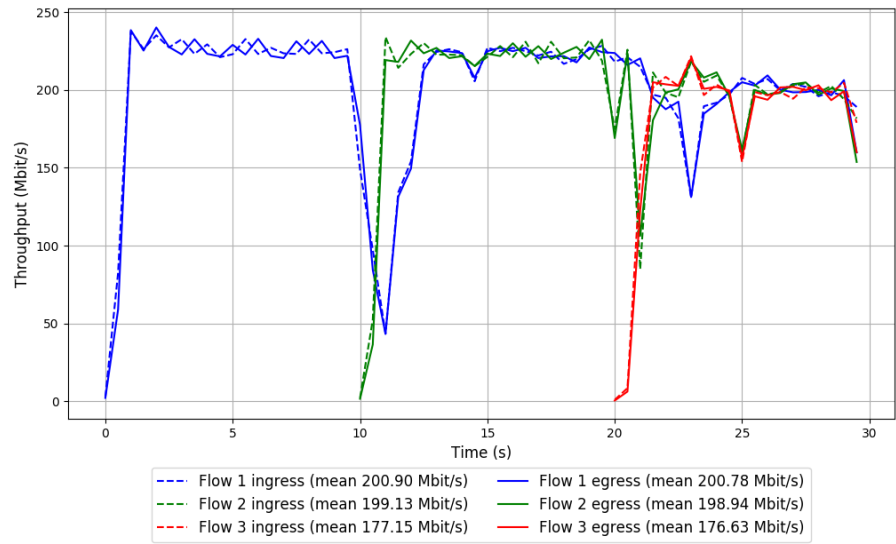
-- Flow 3:

Average throughput: 176.63 Mbit/s

95th percentile per-packet one-way delay: 74.816 ms

Loss rate: 1.33%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-01-17 16:51:10

End at: 2018-01-17 16:51:40

Below is generated by plot.py at 2018-01-17 21:25:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 392.16 Mbit/s

95th percentile per-packet one-way delay: 70.820 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 200.00 Mbit/s

95th percentile per-packet one-way delay: 69.447 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 198.63 Mbit/s

95th percentile per-packet one-way delay: 71.060 ms

Loss rate: 0.43%

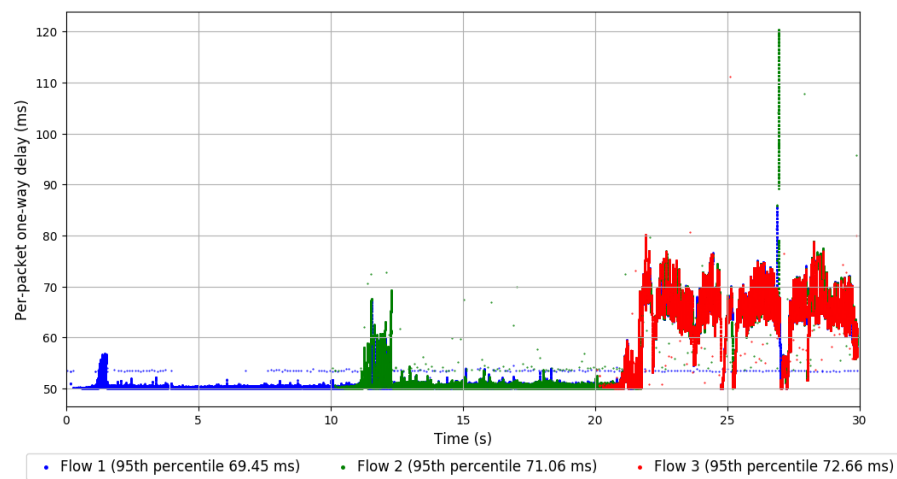
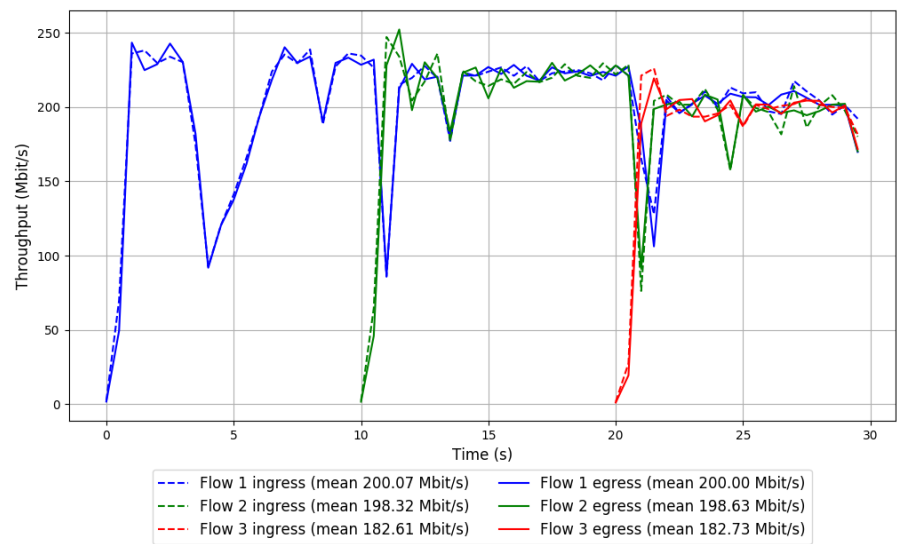
-- Flow 3:

Average throughput: 182.73 Mbit/s

95th percentile per-packet one-way delay: 72.656 ms

Loss rate: 1.01%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-01-17 17:08:01

End at: 2018-01-17 17:08:31

Below is generated by plot.py at 2018-01-17 21:25:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 394.07 Mbit/s

95th percentile per-packet one-way delay: 71.143 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 208.61 Mbit/s

95th percentile per-packet one-way delay: 69.972 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 186.37 Mbit/s

95th percentile per-packet one-way delay: 71.599 ms

Loss rate: 0.64%

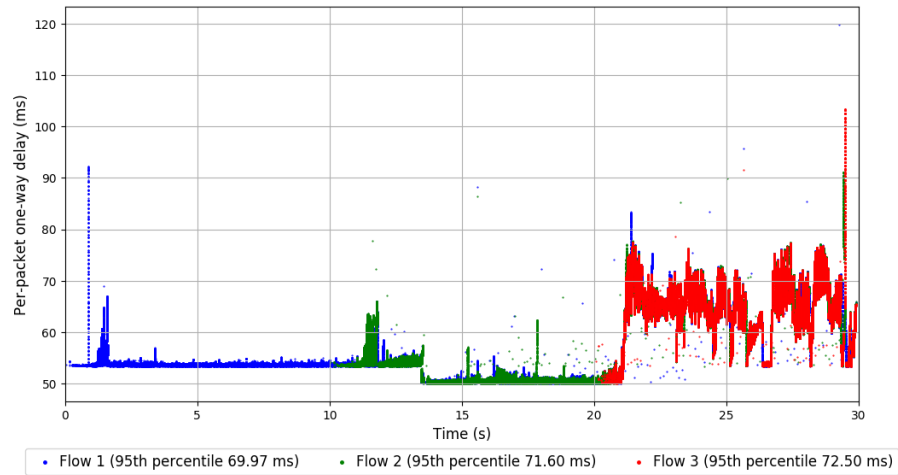
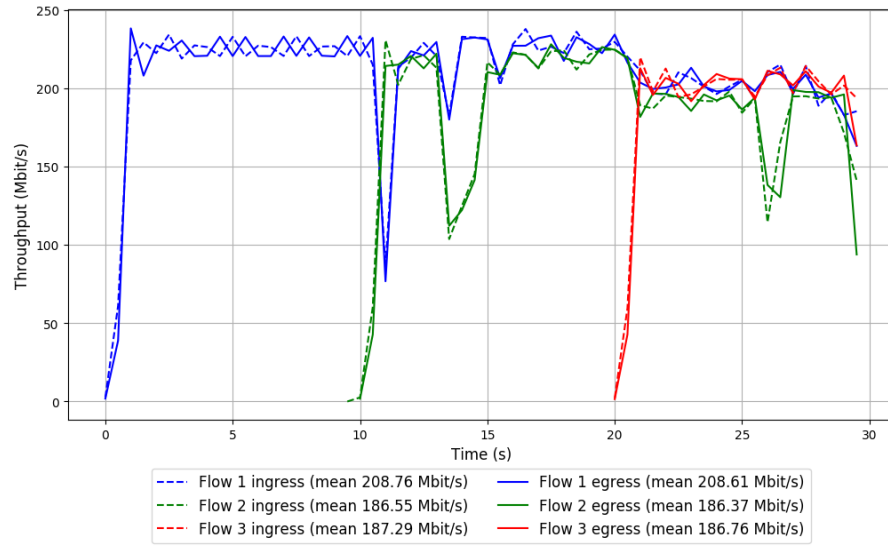
-- Flow 3:

Average throughput: 186.76 Mbit/s

95th percentile per-packet one-way delay: 72.500 ms

Loss rate: 1.37%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-01-17 17:25:10

End at: 2018-01-17 17:25:40

Below is generated by plot.py at 2018-01-17 21:25:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 405.06 Mbit/s

95th percentile per-packet one-way delay: 72.050 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 211.84 Mbit/s

95th percentile per-packet one-way delay: 70.676 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 198.42 Mbit/s

95th percentile per-packet one-way delay: 72.381 ms

Loss rate: 0.60%

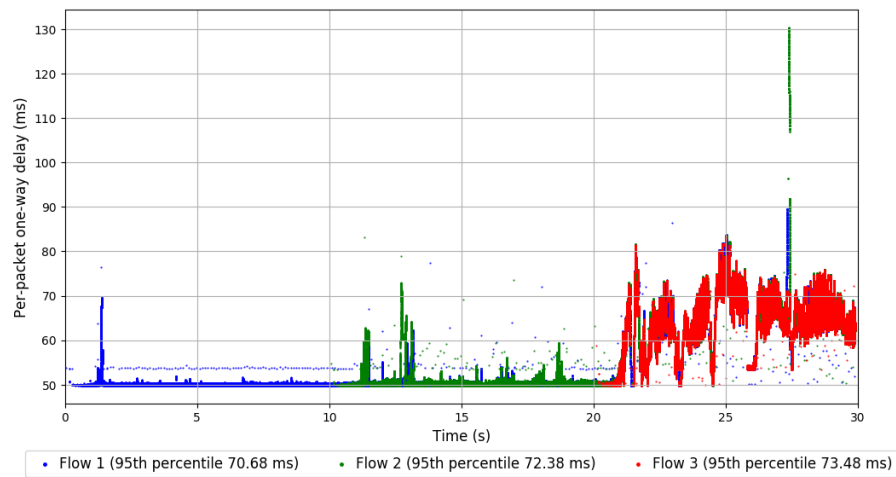
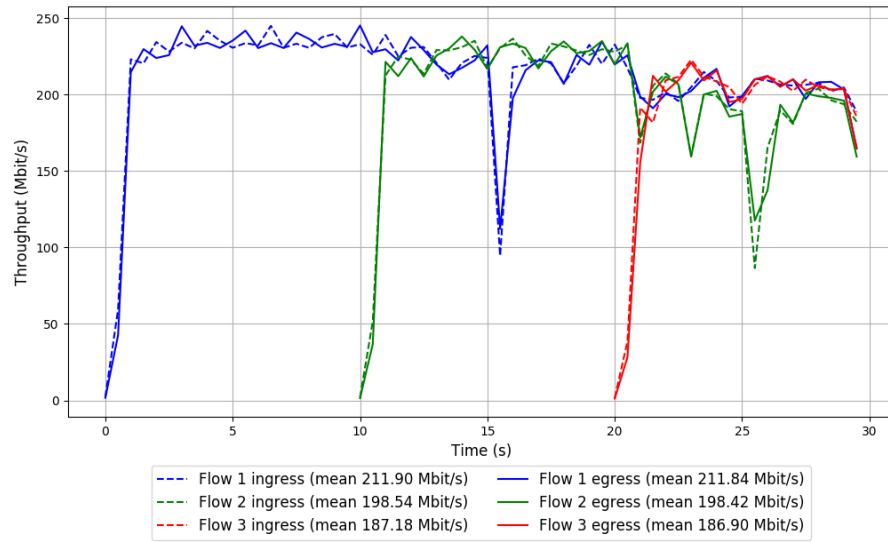
-- Flow 3:

Average throughput: 186.90 Mbit/s

95th percentile per-packet one-way delay: 73.478 ms

Loss rate: 1.29%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-01-17 17:41:48

End at: 2018-01-17 17:42:18

Below is generated by plot.py at 2018-01-17 21:25:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 389.72 Mbit/s

95th percentile per-packet one-way delay: 72.416 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 199.58 Mbit/s

95th percentile per-packet one-way delay: 71.340 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 199.96 Mbit/s

95th percentile per-packet one-way delay: 72.759 ms

Loss rate: 0.62%

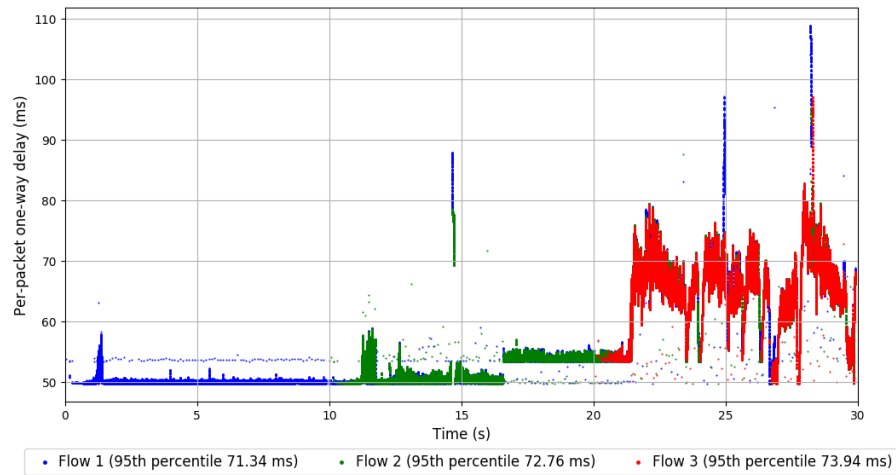
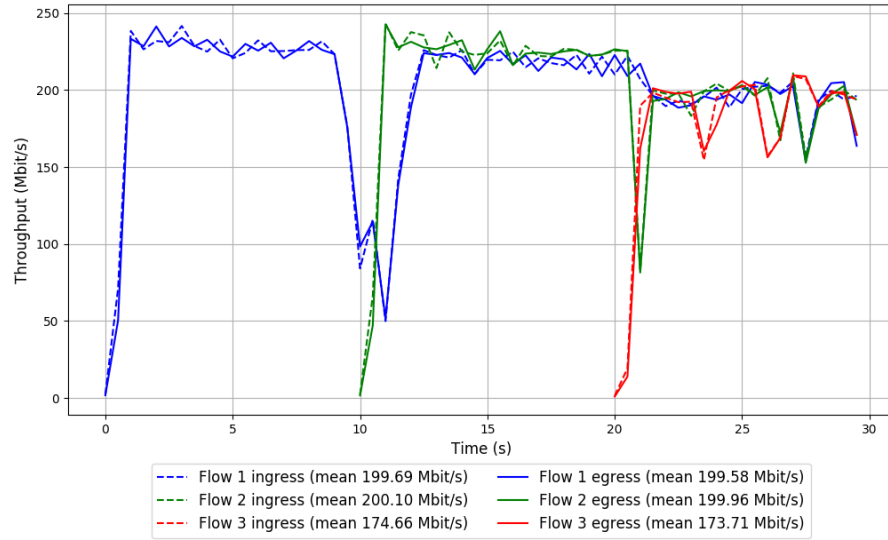
-- Flow 3:

Average throughput: 173.71 Mbit/s

95th percentile per-packet one-way delay: 73.937 ms

Loss rate: 1.38%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-01-17 17:58:58

End at: 2018-01-17 17:59:28

Below is generated by plot.py at 2018-01-17 21:31:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 392.37 Mbit/s

95th percentile per-packet one-way delay: 71.810 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 200.31 Mbit/s

95th percentile per-packet one-way delay: 70.416 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 200.10 Mbit/s

95th percentile per-packet one-way delay: 71.771 ms

Loss rate: 0.64%

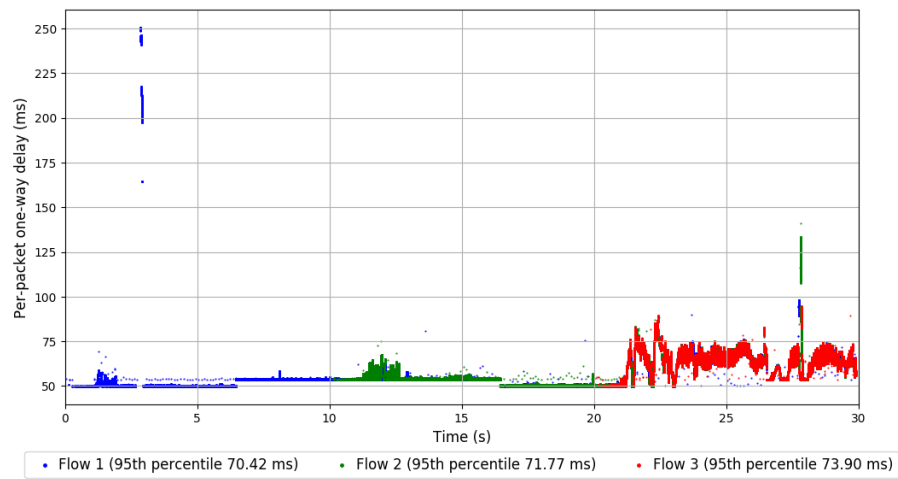
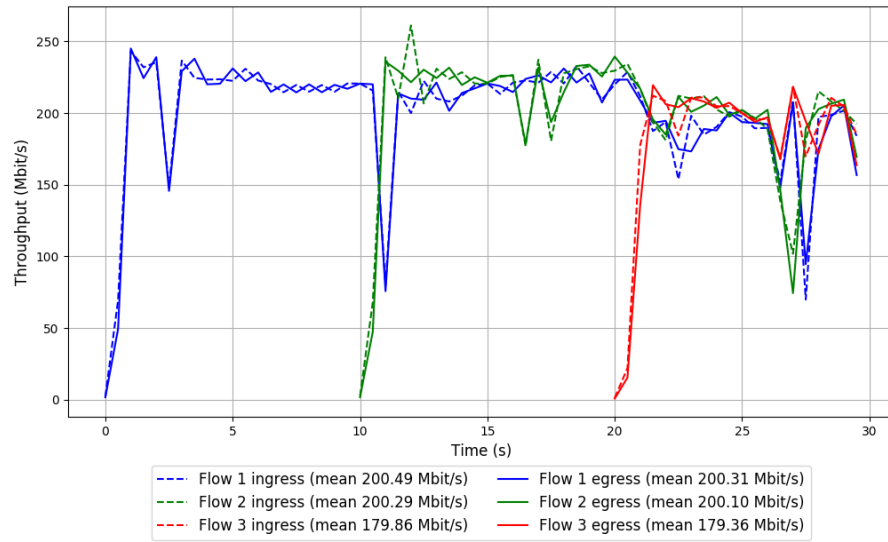
-- Flow 3:

Average throughput: 179.36 Mbit/s

95th percentile per-packet one-way delay: 73.896 ms

Loss rate: 1.36%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-01-17 18:15:47

End at: 2018-01-17 18:16:17

Below is generated by plot.py at 2018-01-17 21:32:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 397.50 Mbit/s

95th percentile per-packet one-way delay: 73.944 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 207.82 Mbit/s

95th percentile per-packet one-way delay: 71.339 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 194.37 Mbit/s

95th percentile per-packet one-way delay: 74.443 ms

Loss rate: 0.68%

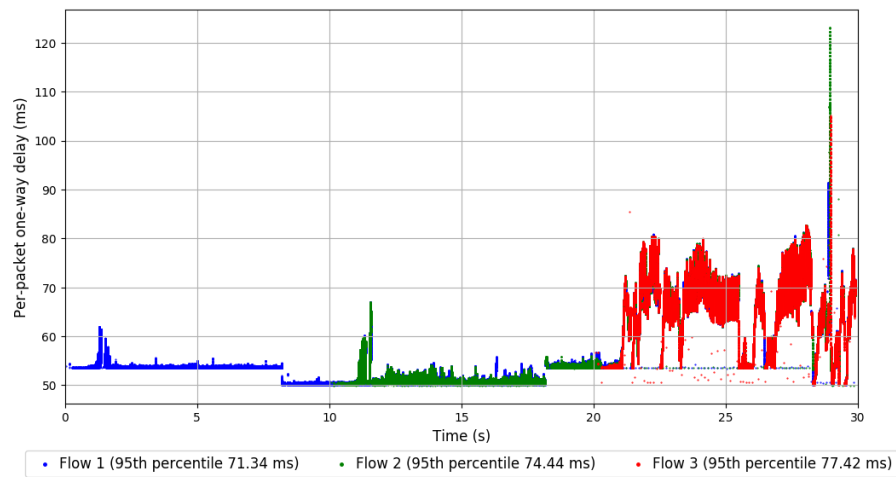
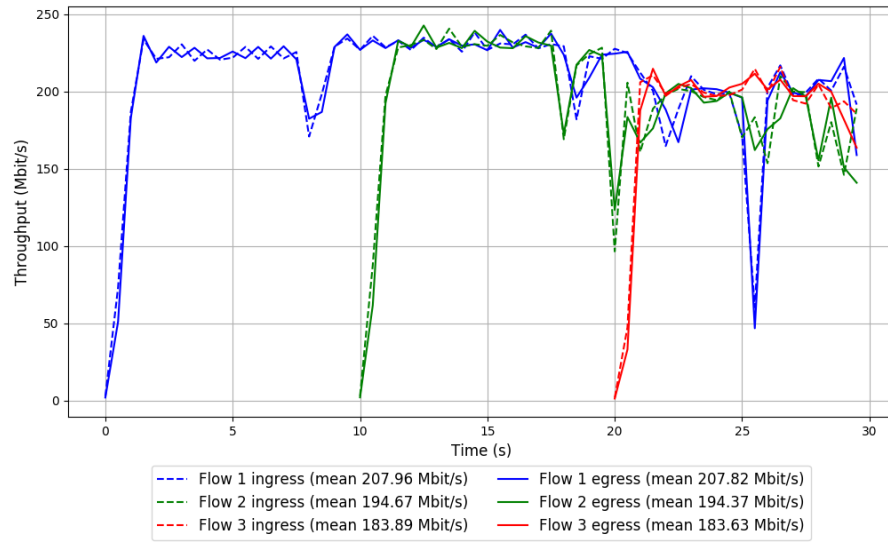
-- Flow 3:

Average throughput: 183.63 Mbit/s

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

Loss rate: 1.25%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-01-17 15:40:10

End at: 2018-01-17 15:40:40

Below is generated by plot.py at 2018-01-17 21:32:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 249.57 Mbit/s

95th percentile per-packet one-way delay: 58.991 ms

Loss rate: 0.38%

-- Flow 1:

Average throughput: 156.84 Mbit/s

95th percentile per-packet one-way delay: 58.750 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 137.07 Mbit/s

95th percentile per-packet one-way delay: 59.192 ms

Loss rate: 0.70%

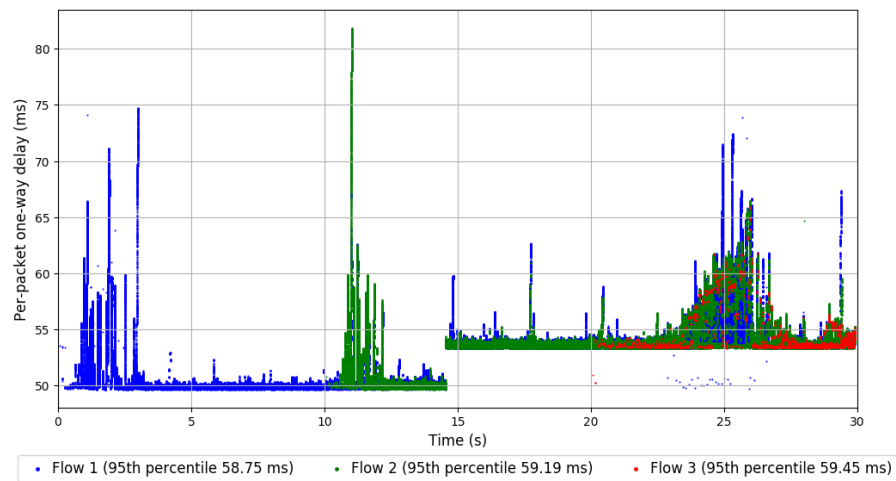
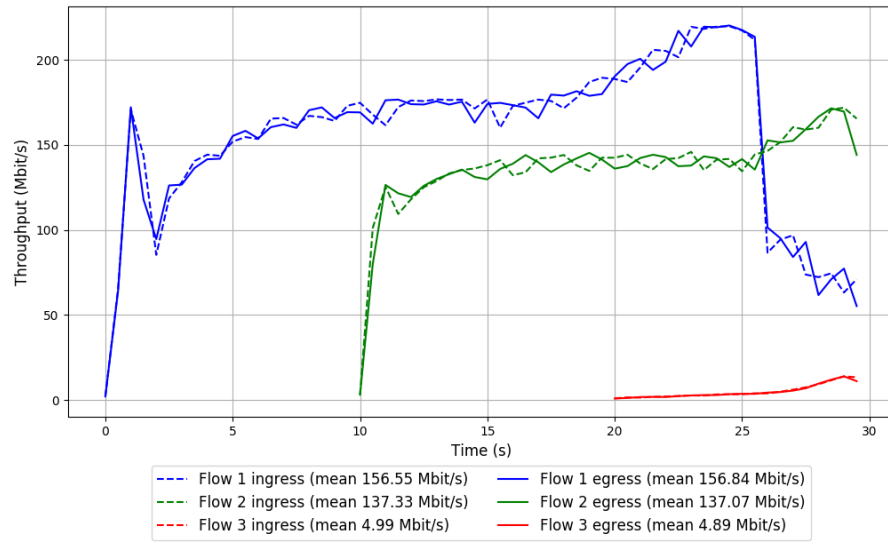
-- Flow 3:

Average throughput: 4.89 Mbit/s

95th percentile per-packet one-way delay: 59.454 ms

Loss rate: 3.12%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-01-17 15:57:19

End at: 2018-01-17 15:57:49

Below is generated by plot.py at 2018-01-17 21:32:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 222.10 Mbit/s

95th percentile per-packet one-way delay: 59.040 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 78.51 Mbit/s

95th percentile per-packet one-way delay: 58.312 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 110.98 Mbit/s

95th percentile per-packet one-way delay: 59.093 ms

Loss rate: 0.47%

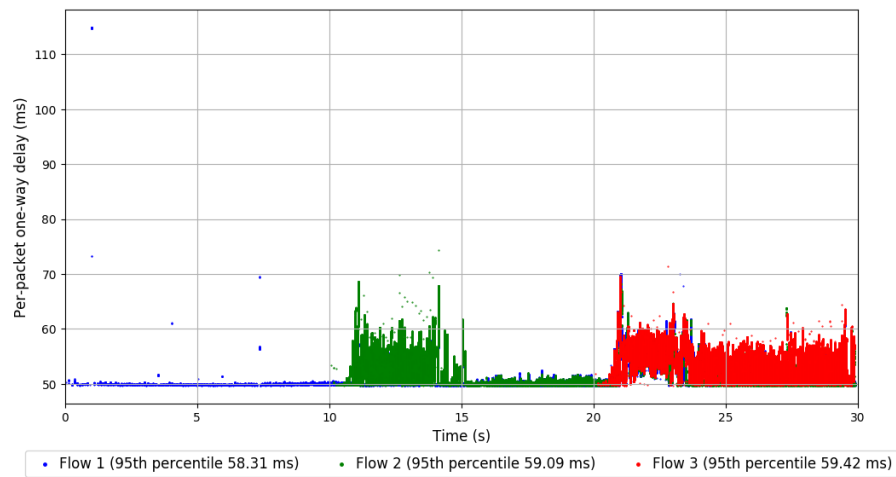
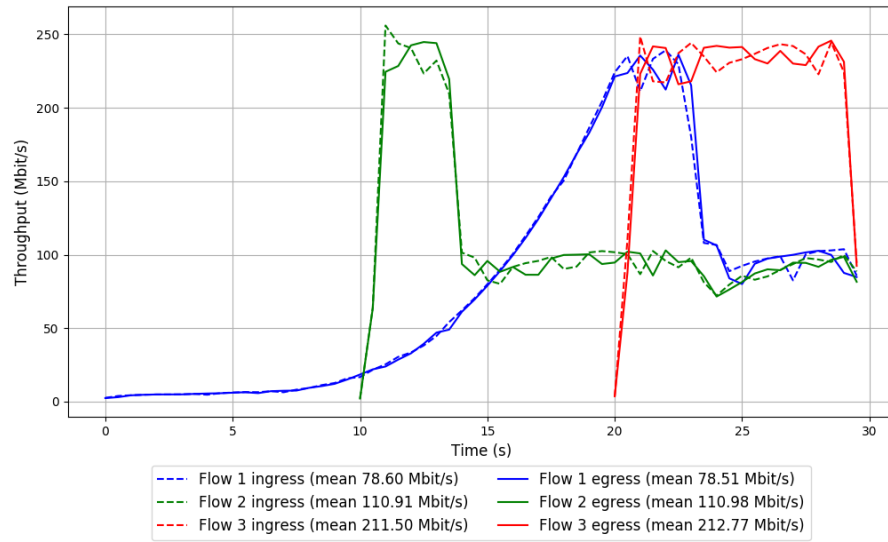
-- Flow 3:

Average throughput: 212.77 Mbit/s

95th percentile per-packet one-way delay: 59.419 ms

Loss rate: 0.44%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-01-17 16:14:01

End at: 2018-01-17 16:14:31

Below is generated by plot.py at 2018-01-17 21:32:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 226.79 Mbit/s

95th percentile per-packet one-way delay: 57.280 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 124.37 Mbit/s

95th percentile per-packet one-way delay: 55.716 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 103.15 Mbit/s

95th percentile per-packet one-way delay: 58.493 ms

Loss rate: 0.39%

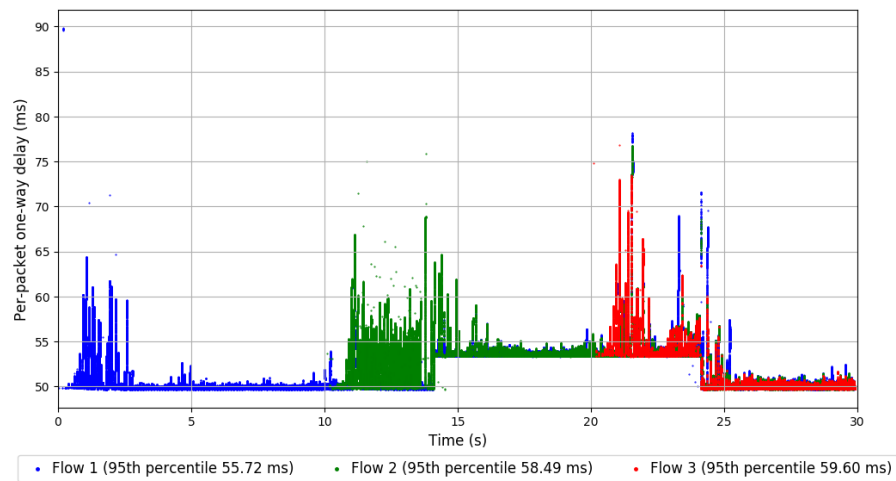
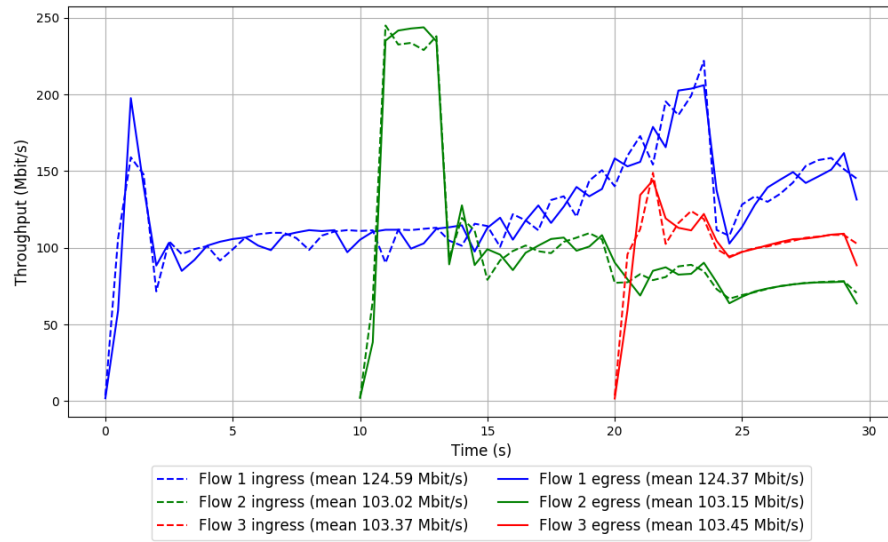
-- Flow 3:

Average throughput: 103.45 Mbit/s

95th percentile per-packet one-way delay: 59.598 ms

Loss rate: 1.17%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-01-17 16:31:13

End at: 2018-01-17 16:31:43

Below is generated by plot.py at 2018-01-17 21:32:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 234.97 Mbit/s

95th percentile per-packet one-way delay: 55.971 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 145.77 Mbit/s

95th percentile per-packet one-way delay: 56.415 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 131.62 Mbit/s

95th percentile per-packet one-way delay: 54.636 ms

Loss rate: 0.71%

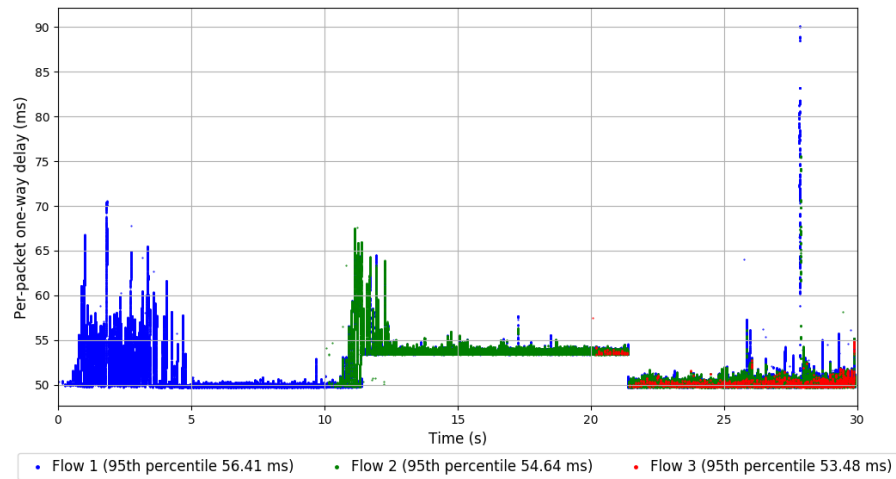
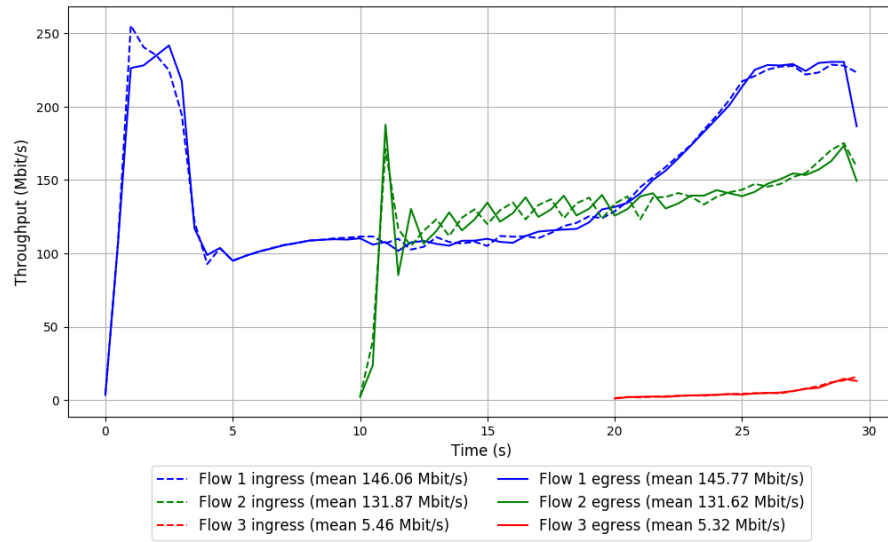
-- Flow 3:

Average throughput: 5.32 Mbit/s

95th percentile per-packet one-way delay: 53.482 ms

Loss rate: 3.53%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-01-17 16:48:24

End at: 2018-01-17 16:48:54

Below is generated by plot.py at 2018-01-17 21:32:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 176.93 Mbit/s

95th percentile per-packet one-way delay: 57.855 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 72.30 Mbit/s

95th percentile per-packet one-way delay: 56.174 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 109.15 Mbit/s

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

Loss rate: 0.44%

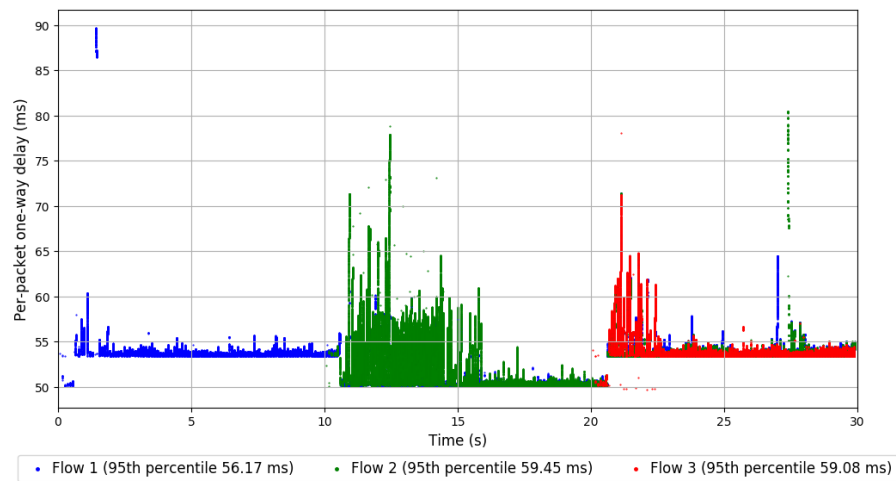
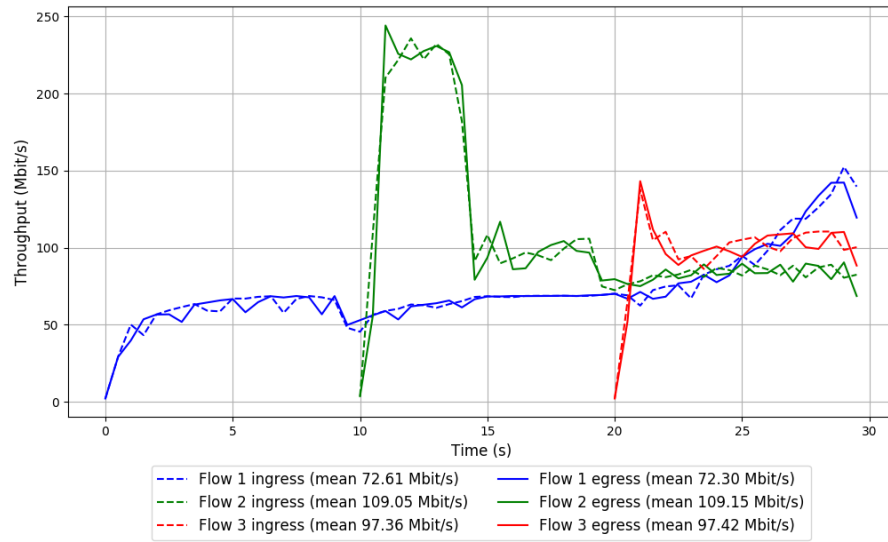
-- Flow 3:

Average throughput: 97.42 Mbit/s

95th percentile per-packet one-way delay: 59.075 ms

Loss rate: 1.14%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-01-17 17:05:06

End at: 2018-01-17 17:05:36

Below is generated by plot.py at 2018-01-17 21:32:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 310.64 Mbit/s

95th percentile per-packet one-way delay: 75.084 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 135.88 Mbit/s

95th percentile per-packet one-way delay: 75.257 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 168.76 Mbit/s

95th percentile per-packet one-way delay: 73.599 ms

Loss rate: 0.67%

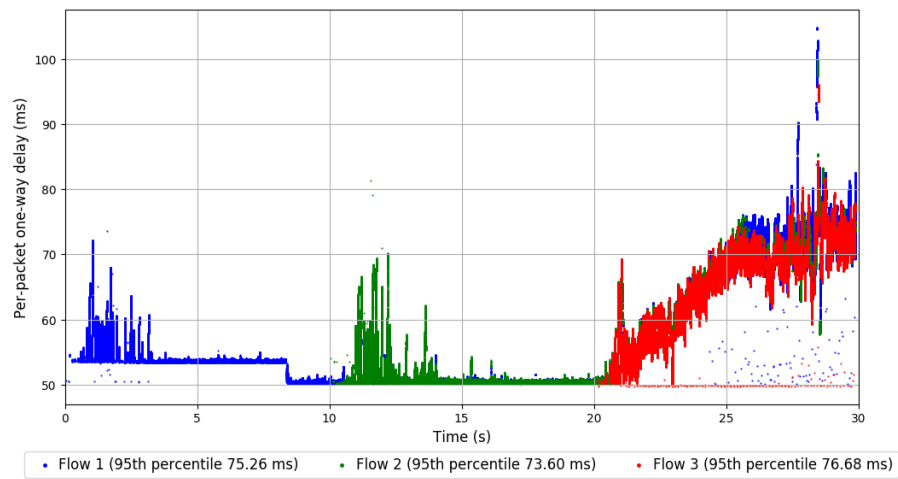
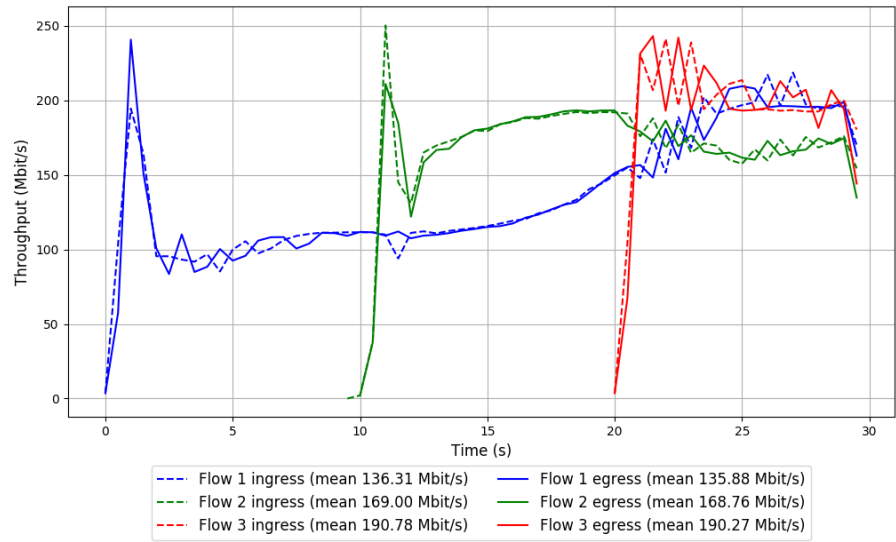
-- Flow 3:

Average throughput: 190.27 Mbit/s

95th percentile per-packet one-way delay: 76.684 ms

Loss rate: 1.27%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-01-17 17:22:21

End at: 2018-01-17 17:22:51

Below is generated by plot.py at 2018-01-17 21:32:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 207.54 Mbit/s

95th percentile per-packet one-way delay: 57.353 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 79.36 Mbit/s

95th percentile per-packet one-way delay: 55.493 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 133.15 Mbit/s

95th percentile per-packet one-way delay: 58.370 ms

Loss rate: 0.70%

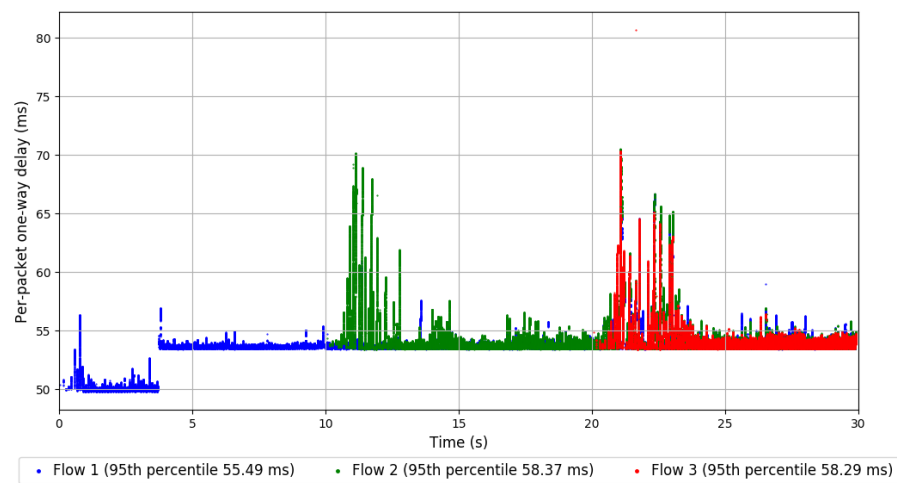
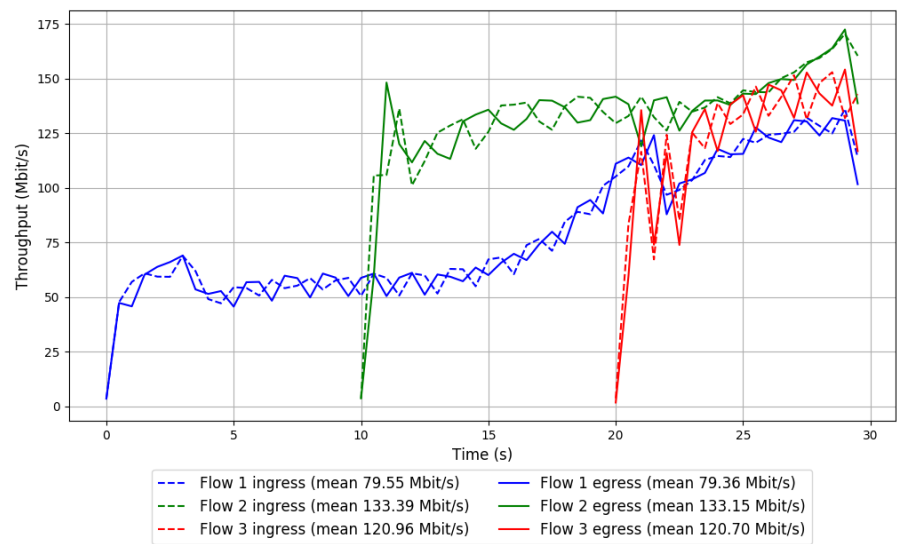
-- Flow 3:

Average throughput: 120.70 Mbit/s

95th percentile per-packet one-way delay: 58.286 ms

Loss rate: 1.30%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-01-17 17:39:09

End at: 2018-01-17 17:39:39

Below is generated by plot.py at 2018-01-17 21:32:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.09 Mbit/s

95th percentile per-packet one-way delay: 54.948 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 35.56 Mbit/s

95th percentile per-packet one-way delay: 54.851 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 82.34 Mbit/s

95th percentile per-packet one-way delay: 55.074 ms

Loss rate: 0.91%

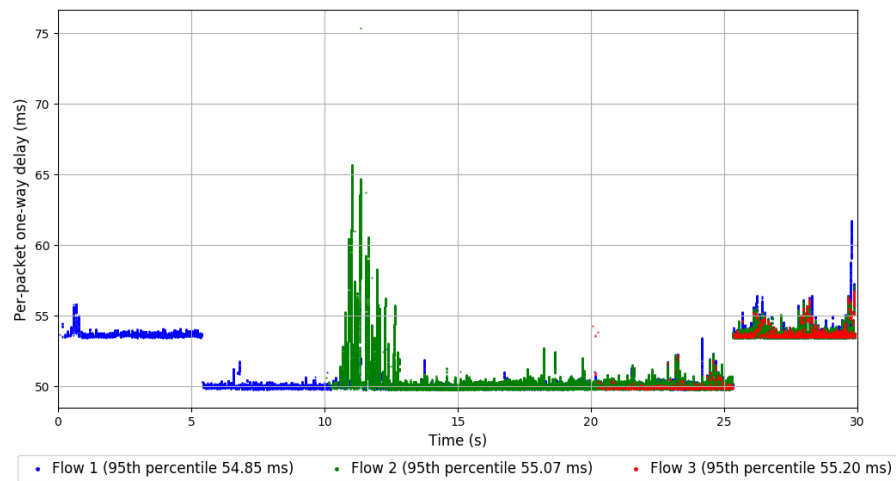
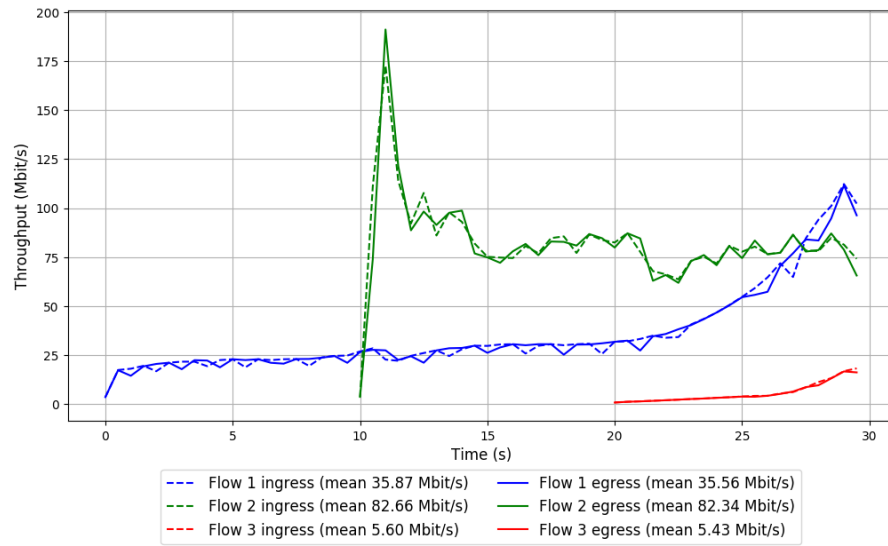
-- Flow 3:

Average throughput: 5.43 Mbit/s

95th percentile per-packet one-way delay: 55.203 ms

Loss rate: 4.01%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-01-17 17:56:08

End at: 2018-01-17 17:56:38

Below is generated by plot.py at 2018-01-17 21:32:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 213.83 Mbit/s

95th percentile per-packet one-way delay: 60.332 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 88.80 Mbit/s

95th percentile per-packet one-way delay: 60.418 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 139.55 Mbit/s

95th percentile per-packet one-way delay: 60.234 ms

Loss rate: 0.53%

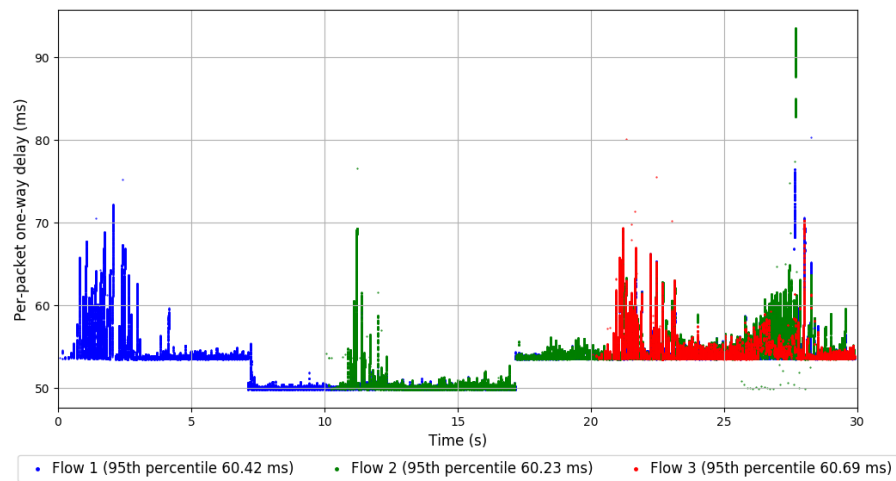
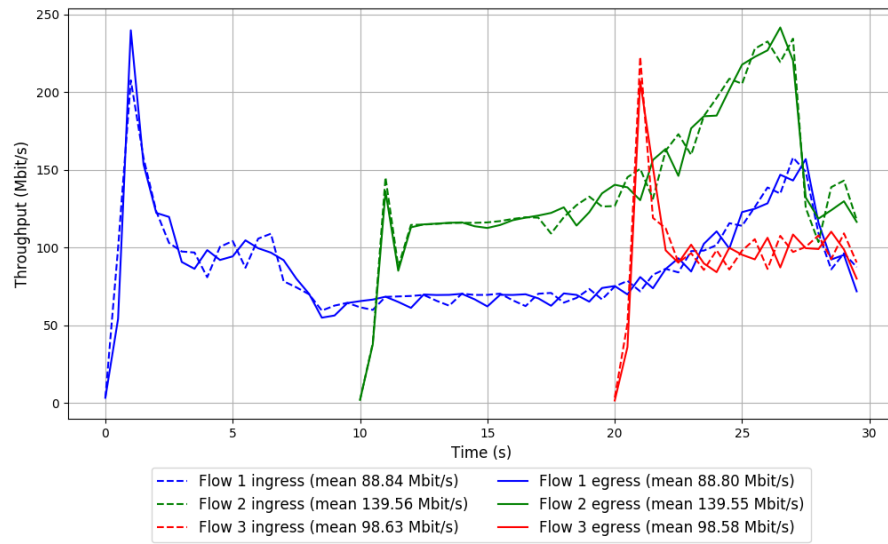
-- Flow 3:

Average throughput: 98.58 Mbit/s

95th percentile per-packet one-way delay: 60.693 ms

Loss rate: 1.14%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-01-17 18:12:58

End at: 2018-01-17 18:13:28

Below is generated by plot.py at 2018-01-17 21:33:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 222.71 Mbit/s

95th percentile per-packet one-way delay: 57.018 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 104.40 Mbit/s

95th percentile per-packet one-way delay: 56.927 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 127.29 Mbit/s

95th percentile per-packet one-way delay: 57.664 ms

Loss rate: 0.50%

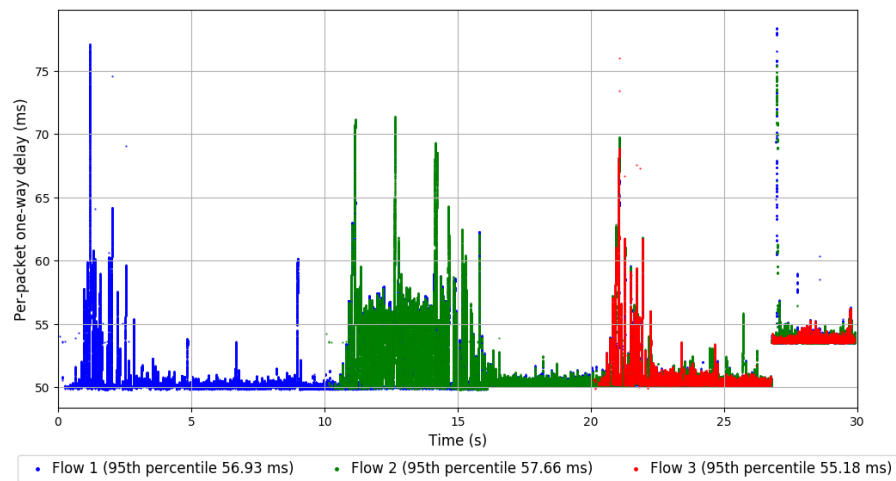
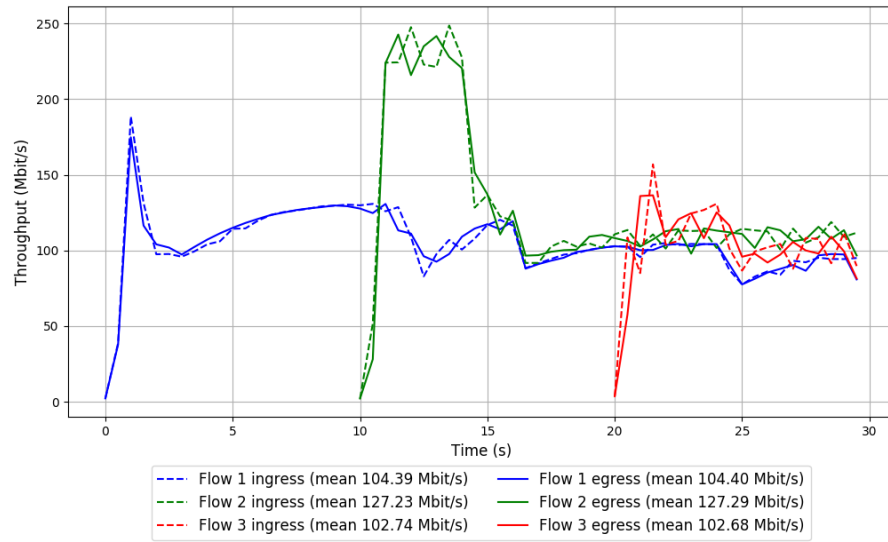
-- Flow 3:

Average throughput: 102.68 Mbit/s

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

Loss rate: 1.11%

Run 10: Report of TCP Cubic — Data Link

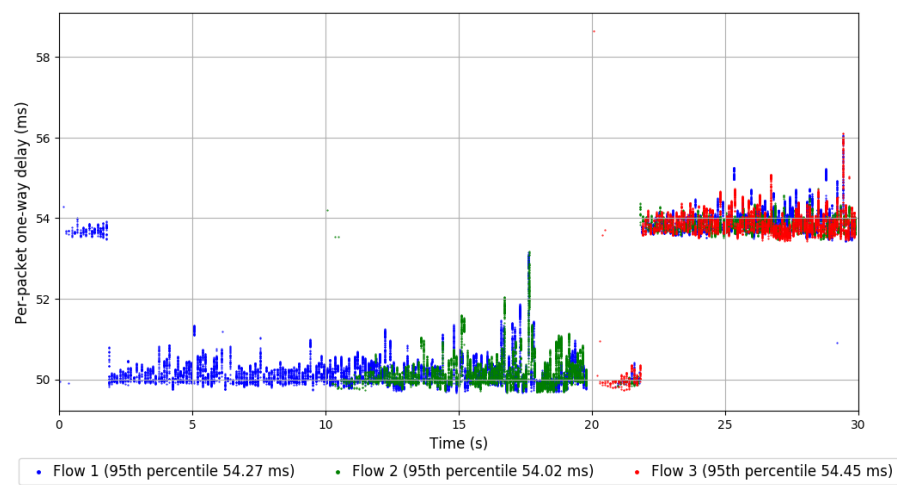
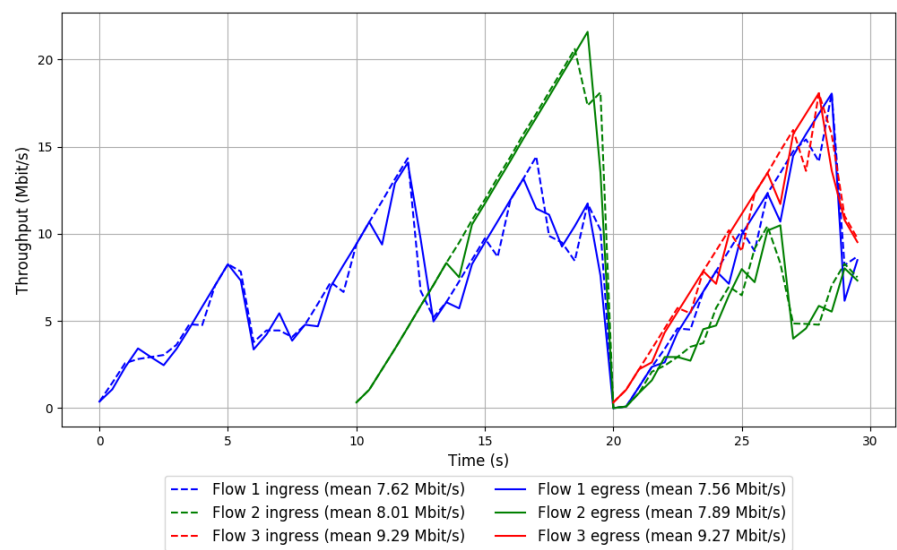


```
Run 1: Statistics of LEDBAT

Start at: 2018-01-17 15:32:43
End at: 2018-01-17 15:33:13

# Below is generated by plot.py at 2018-01-17 21:33:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.83 Mbit/s
95th percentile per-packet one-way delay: 54.254 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 7.56 Mbit/s
95th percentile per-packet one-way delay: 54.270 ms
Loss rate: 1.21%
-- Flow 2:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 54.021 ms
Loss rate: 2.07%
-- Flow 3:
Average throughput: 9.27 Mbit/s
95th percentile per-packet one-way delay: 54.445 ms
Loss rate: 1.37%
```

Run 1: Report of LEDBAT — Data Link

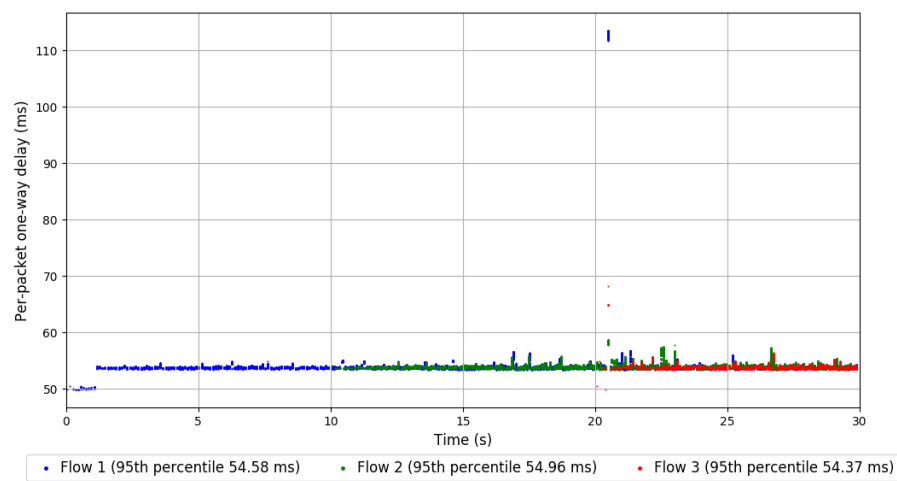
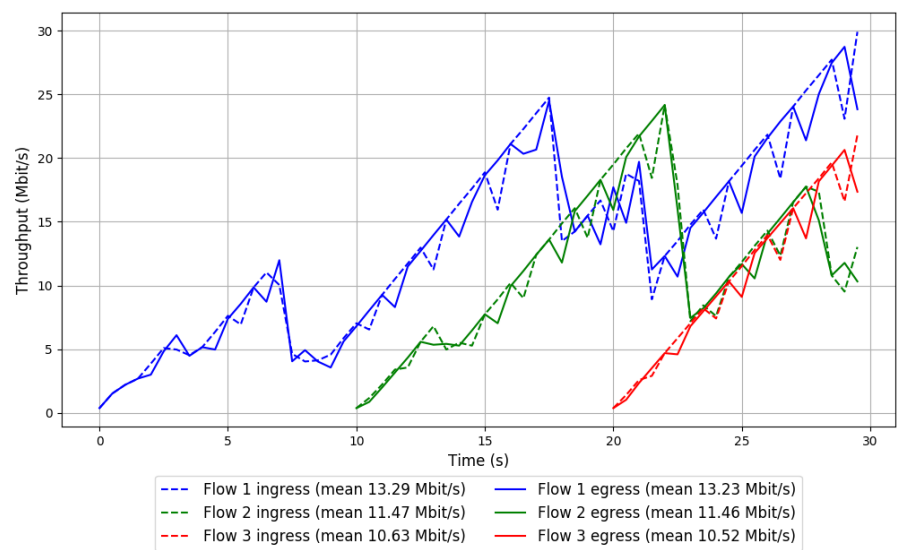


```
Run 2: Statistics of LEDBAT

Start at: 2018-01-17 15:49:44
End at: 2018-01-17 15:50:14

# Below is generated by plot.py at 2018-01-17 21:33:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.30 Mbit/s
95th percentile per-packet one-way delay: 54.707 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 13.23 Mbit/s
95th percentile per-packet one-way delay: 54.584 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 11.46 Mbit/s
95th percentile per-packet one-way delay: 54.957 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 10.52 Mbit/s
95th percentile per-packet one-way delay: 54.367 ms
Loss rate: 2.11%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-01-17 16:06:34

End at: 2018-01-17 16:07:04

Below is generated by plot.py at 2018-01-17 21:33:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.72 Mbit/s

95th percentile per-packet one-way delay: 53.715 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 7.68 Mbit/s

95th percentile per-packet one-way delay: 53.857 ms

Loss rate: 1.49%

-- Flow 2:

Average throughput: 8.45 Mbit/s

95th percentile per-packet one-way delay: 50.536 ms

Loss rate: 0.46%

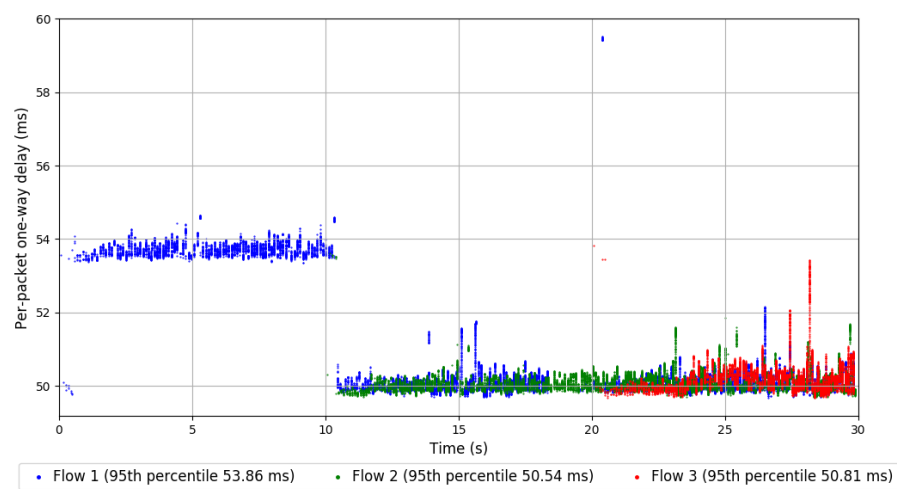
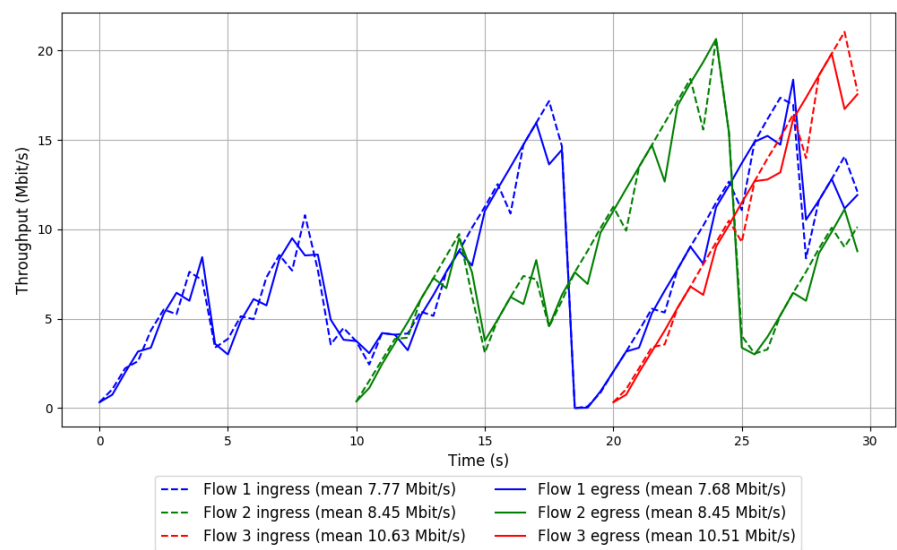
-- Flow 3:

Average throughput: 10.51 Mbit/s

95th percentile per-packet one-way delay: 50.807 ms

Loss rate: 2.15%

Run 3: Report of LEDBAT — Data Link

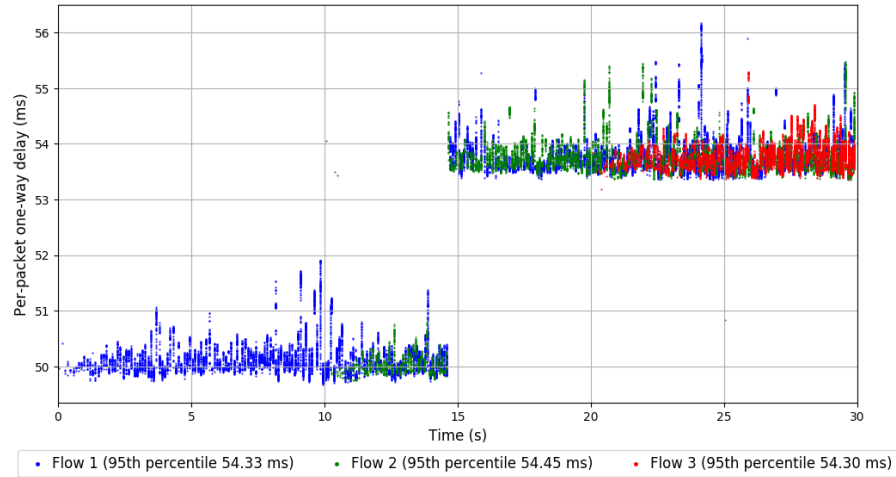
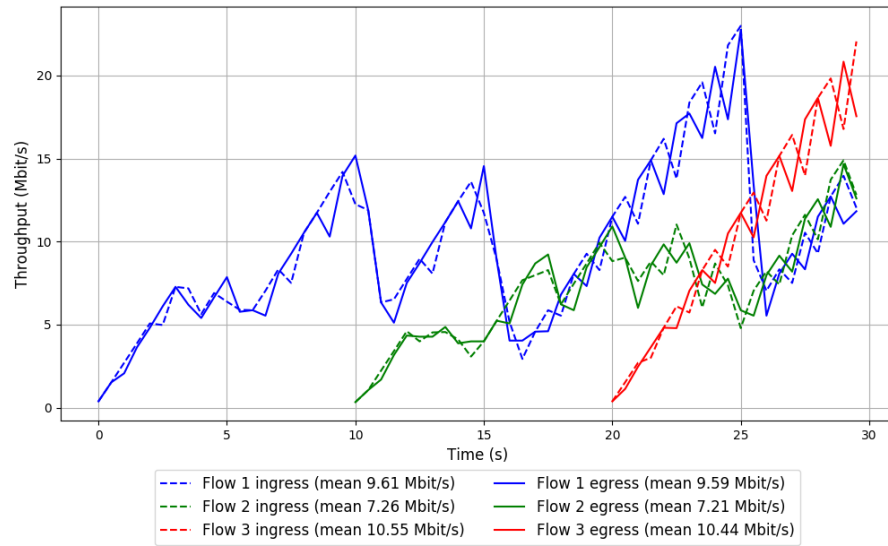


```
Run 4: Statistics of LEDBAT

Start at: 2018-01-17 16:23:30
End at: 2018-01-17 16:24:00

# Below is generated by plot.py at 2018-01-17 21:33:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.79 Mbit/s
95th percentile per-packet one-way delay: 54.351 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 9.59 Mbit/s
95th percentile per-packet one-way delay: 54.331 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 7.21 Mbit/s
95th percentile per-packet one-way delay: 54.448 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 10.44 Mbit/s
95th percentile per-packet one-way delay: 54.297 ms
Loss rate: 2.15%
```


Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-01-17 16:40:54

End at: 2018-01-17 16:41:24

Below is generated by plot.py at 2018-01-17 21:33:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 21.80 Mbit/s

95th percentile per-packet one-way delay: 54.314 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 11.64 Mbit/s

95th percentile per-packet one-way delay: 54.273 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 10.46 Mbit/s

95th percentile per-packet one-way delay: 54.447 ms

Loss rate: 0.86%

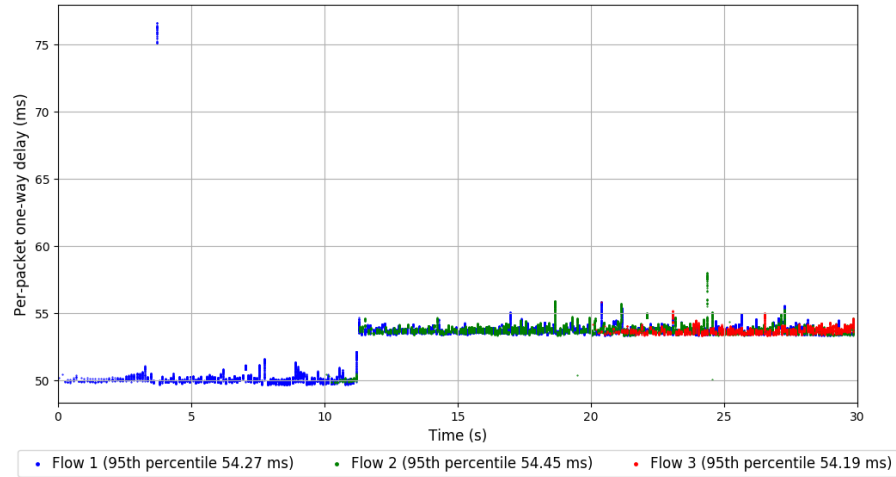
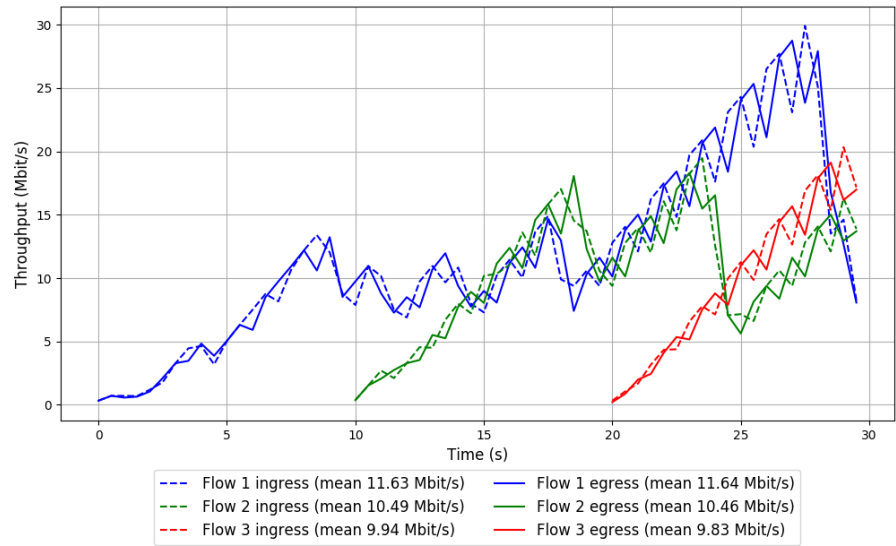
-- Flow 3:

Average throughput: 9.83 Mbit/s

95th percentile per-packet one-way delay: 54.186 ms

Loss rate: 2.22%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-01-17 16:57:53

End at: 2018-01-17 16:58:23

Below is generated by plot.py at 2018-01-17 21:33:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.25 Mbit/s

95th percentile per-packet one-way delay: 53.873 ms

Loss rate: 1.78%

-- Flow 1:

Average throughput: 6.77 Mbit/s

95th percentile per-packet one-way delay: 54.026 ms

Loss rate: 1.66%

-- Flow 2:

Average throughput: 9.27 Mbit/s

95th percentile per-packet one-way delay: 51.247 ms

Loss rate: 2.11%

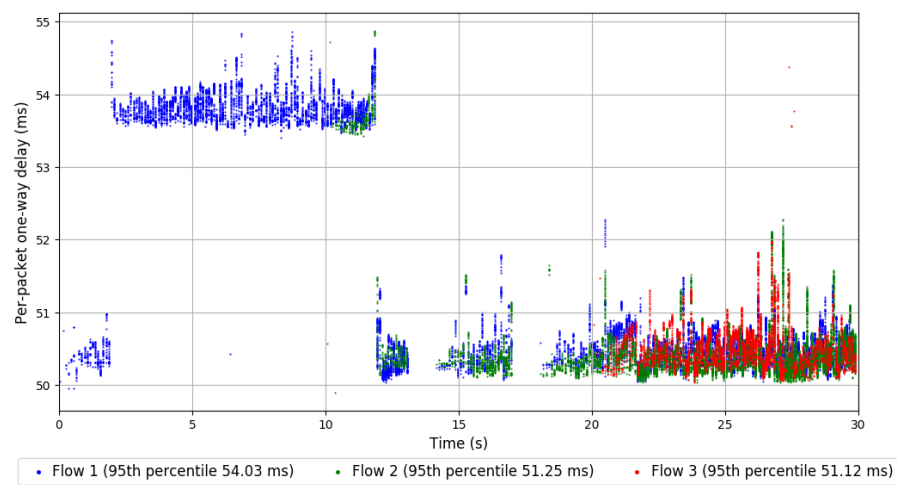
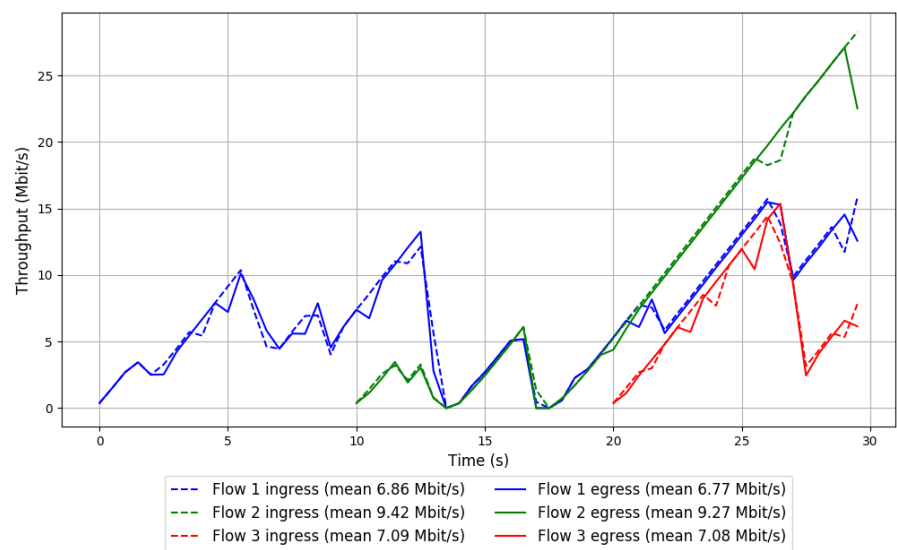
-- Flow 3:

Average throughput: 7.08 Mbit/s

95th percentile per-packet one-way delay: 51.124 ms

Loss rate: 1.27%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-01-17 17:14:47

End at: 2018-01-17 17:15:17

Below is generated by plot.py at 2018-01-17 21:33:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.66 Mbit/s

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

Loss rate: 0.88%

-- Flow 1:

Average throughput: 9.10 Mbit/s

95th percentile per-packet one-way delay: 54.298 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 9.82 Mbit/s

95th percentile per-packet one-way delay: 54.189 ms

Loss rate: 1.09%

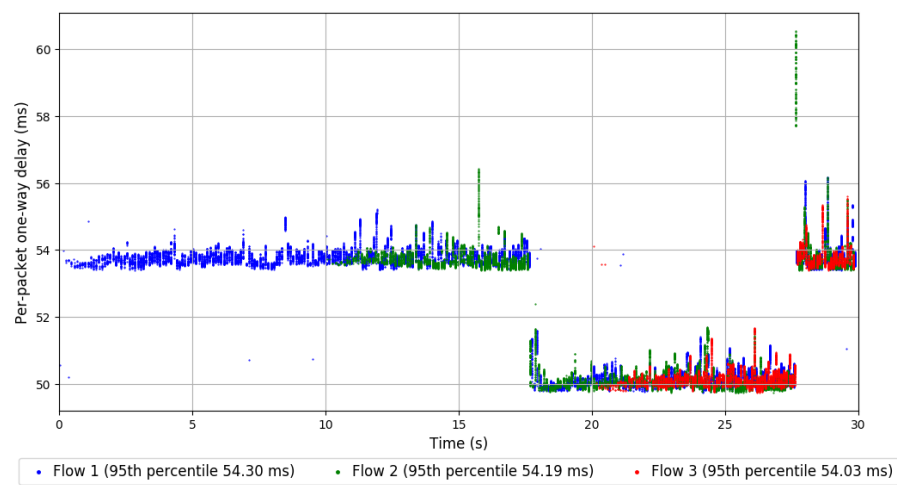
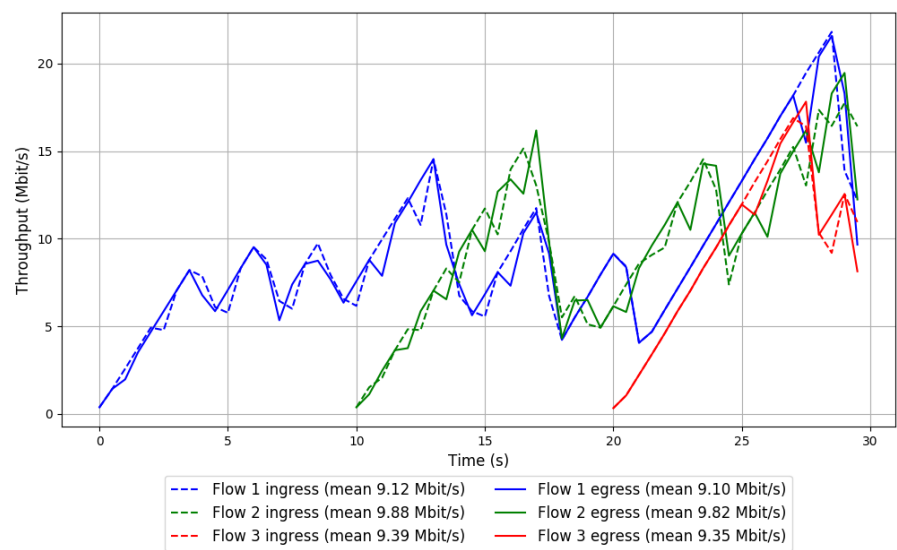
-- Flow 3:

Average throughput: 9.35 Mbit/s

95th percentile per-packet one-way delay: 54.035 ms

Loss rate: 1.52%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-01-17 17:31:41

End at: 2018-01-17 17:32:11

Below is generated by plot.py at 2018-01-17 21:33:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 23.67 Mbit/s

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

Loss rate: 0.52%

-- Flow 1:

Average throughput: 12.95 Mbit/s

95th percentile per-packet one-way delay: 54.218 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 13.56 Mbit/s

95th percentile per-packet one-way delay: 54.247 ms

Loss rate: 0.79%

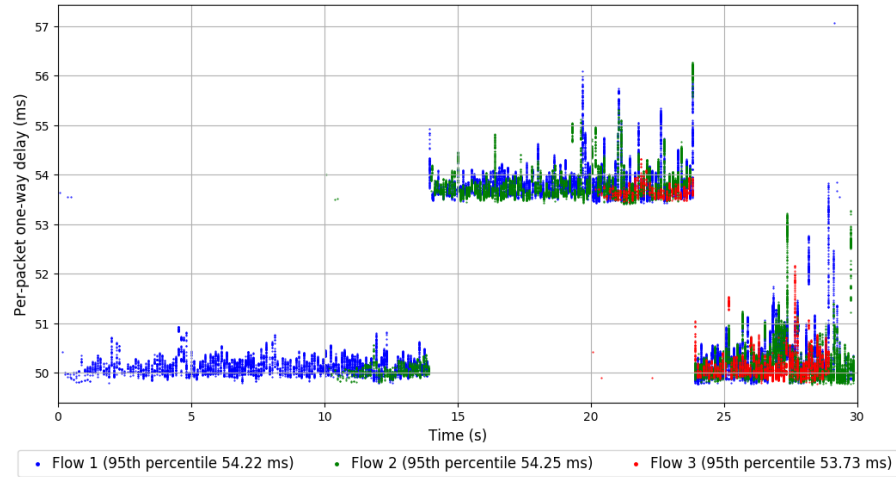
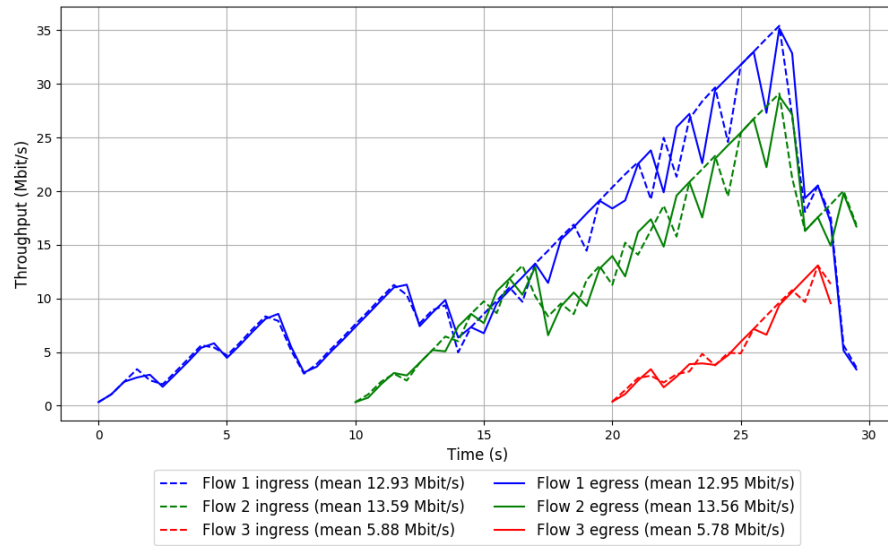
-- Flow 3:

Average throughput: 5.78 Mbit/s

95th percentile per-packet one-way delay: 53.734 ms

Loss rate: 1.74%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-01-17 17:48:41

End at: 2018-01-17 17:49:11

Below is generated by plot.py at 2018-01-17 21:33:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 20.64 Mbit/s

95th percentile per-packet one-way delay: 54.193 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 9.30 Mbit/s

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

Loss rate: 0.89%

-- Flow 2:

Average throughput: 13.64 Mbit/s

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

Loss rate: 1.00%

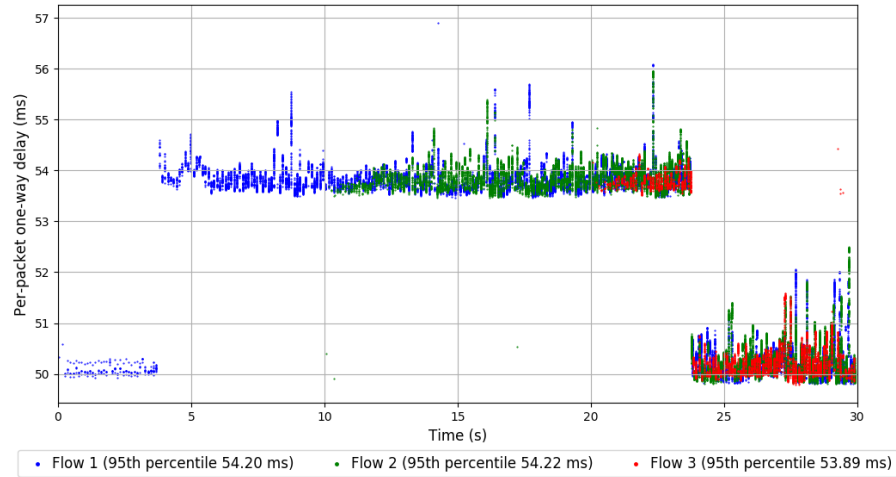
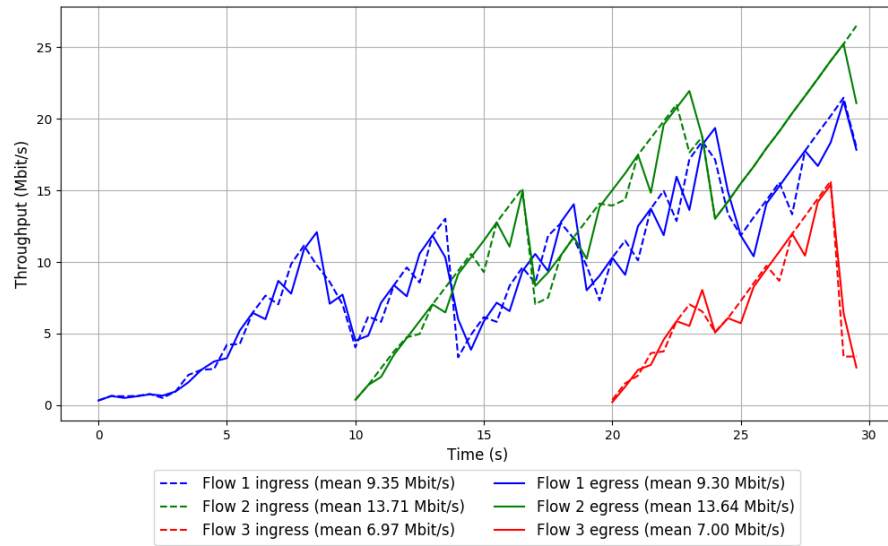
-- Flow 3:

Average throughput: 7.00 Mbit/s

95th percentile per-packet one-way delay: 53.886 ms

Loss rate: 0.73%

Run 9: Report of LEDBAT — Data Link

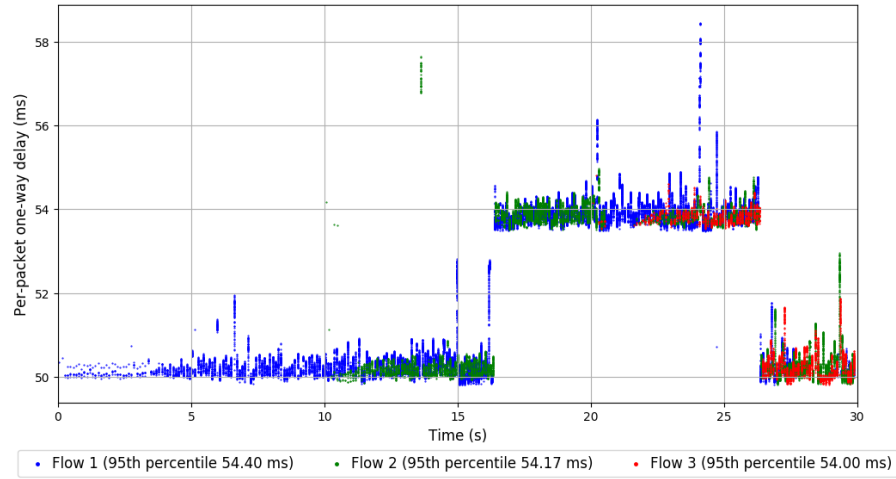
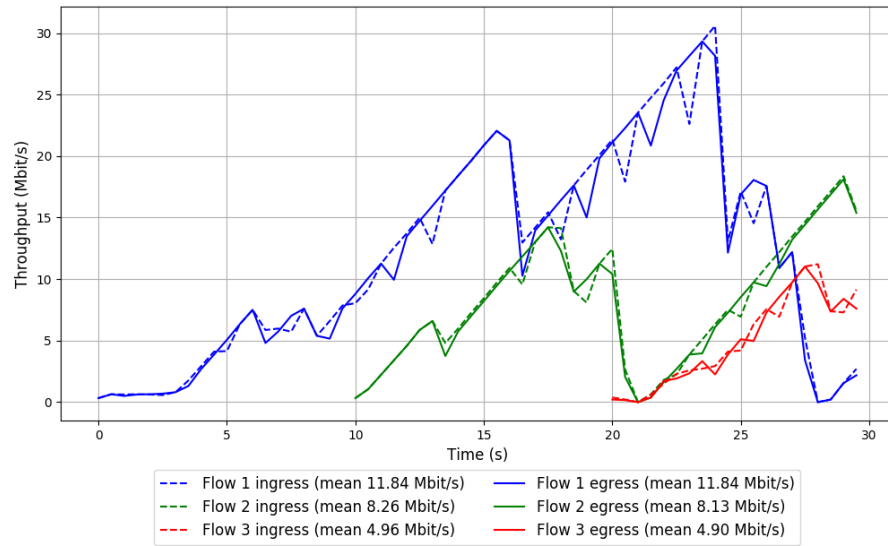


```
Run 10: Statistics of LEDBAT

Start at: 2018-01-17 18:05:19
End at: 2018-01-17 18:05:49

# Below is generated by plot.py at 2018-01-17 21:33:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.84 Mbit/s
95th percentile per-packet one-way delay: 54.310 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 11.84 Mbit/s
95th percentile per-packet one-way delay: 54.400 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 8.13 Mbit/s
95th percentile per-packet one-way delay: 54.167 ms
Loss rate: 2.02%
-- Flow 3:
Average throughput: 4.90 Mbit/s
95th percentile per-packet one-way delay: 54.004 ms
Loss rate: 2.27%
```

Run 10: Report of LEDBAT — Data Link

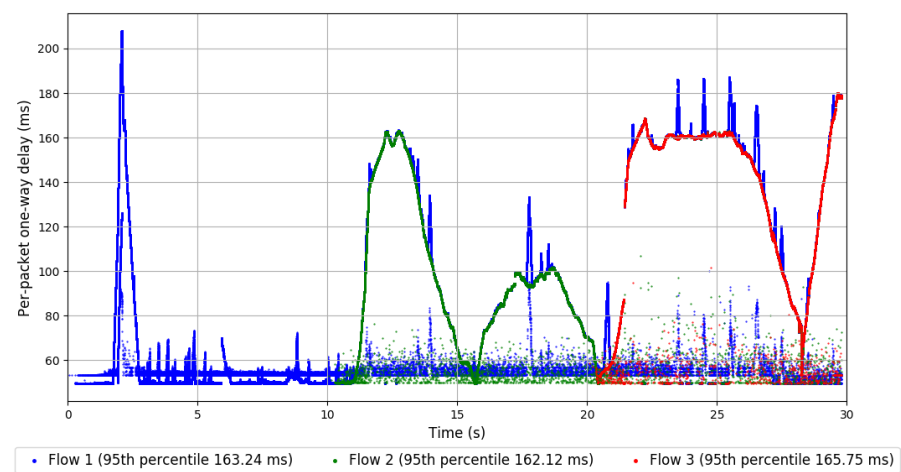
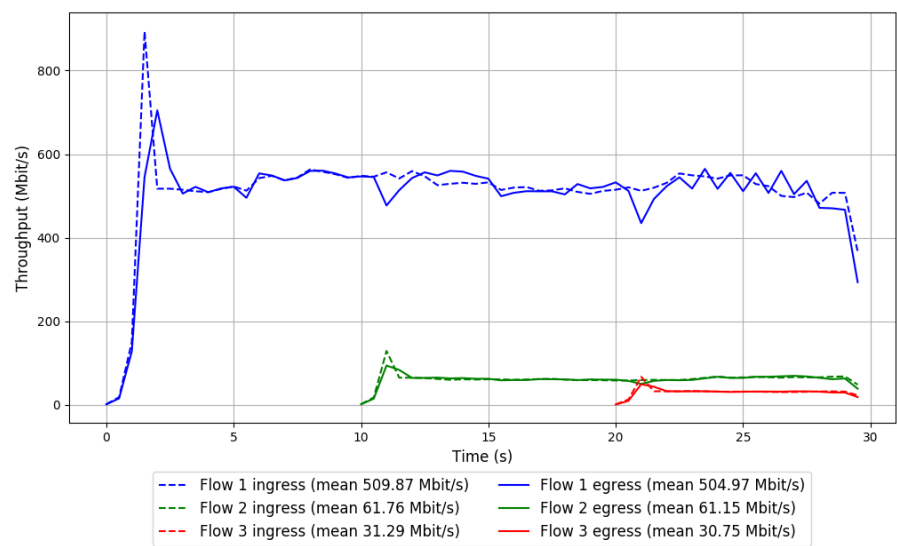


```
Run 1: Statistics of PCC

Start at: 2018-01-17 15:41:58
End at: 2018-01-17 15:42:28

# Below is generated by plot.py at 2018-01-17 21:41:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 555.57 Mbit/s
95th percentile per-packet one-way delay: 162.957 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 504.97 Mbit/s
95th percentile per-packet one-way delay: 163.241 ms
Loss rate: 1.32%
-- Flow 2:
Average throughput: 61.15 Mbit/s
95th percentile per-packet one-way delay: 162.116 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 30.75 Mbit/s
95th percentile per-packet one-way delay: 165.751 ms
Loss rate: 2.87%
```

Run 1: Report of PCC — Data Link

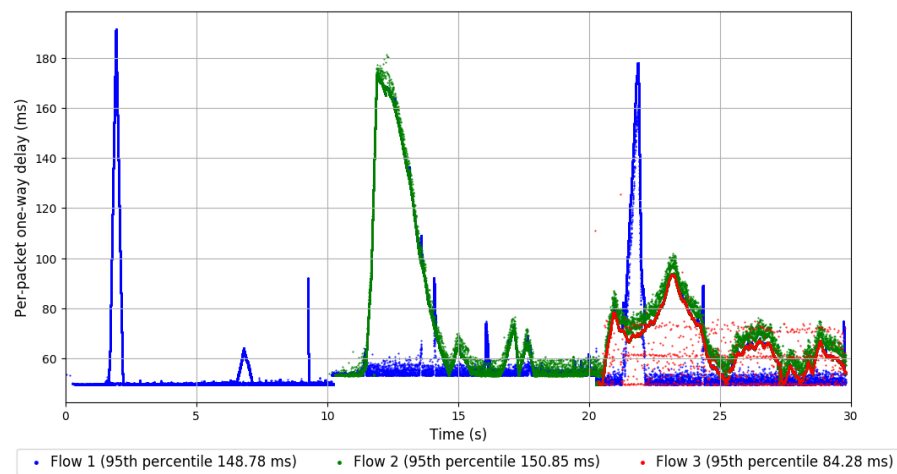
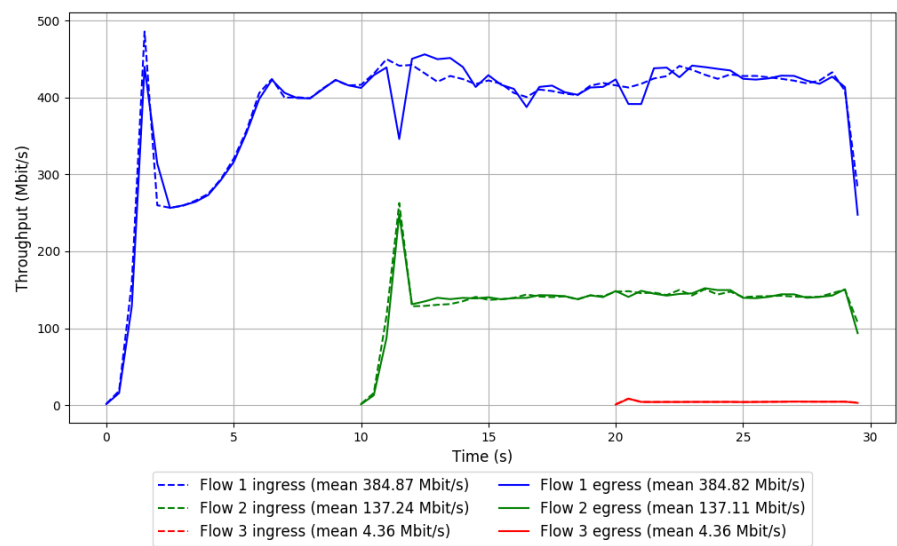


```
Run 2: Statistics of PCC

Start at: 2018-01-17 15:59:05
End at: 2018-01-17 15:59:35

# Below is generated by plot.py at 2018-01-17 21:41:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 477.20 Mbit/s
95th percentile per-packet one-way delay: 149.096 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 384.82 Mbit/s
95th percentile per-packet one-way delay: 148.780 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 137.11 Mbit/s
95th percentile per-packet one-way delay: 150.853 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 84.282 ms
Loss rate: 1.20%
```


Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-01-17 16:15:49

End at: 2018-01-17 16:16:19

Below is generated by plot.py at 2018-01-17 21:41:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 539.42 Mbit/s

95th percentile per-packet one-way delay: 114.943 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 507.97 Mbit/s

95th percentile per-packet one-way delay: 115.339 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 31.76 Mbit/s

95th percentile per-packet one-way delay: 112.684 ms

Loss rate: 0.58%

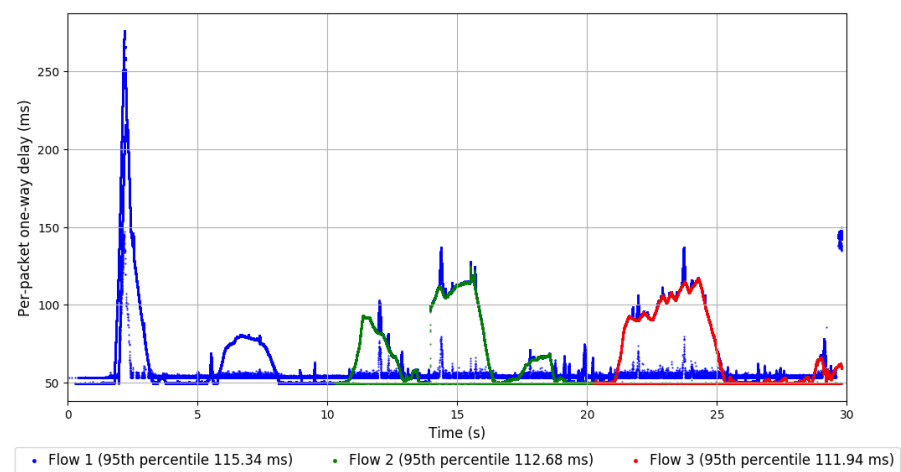
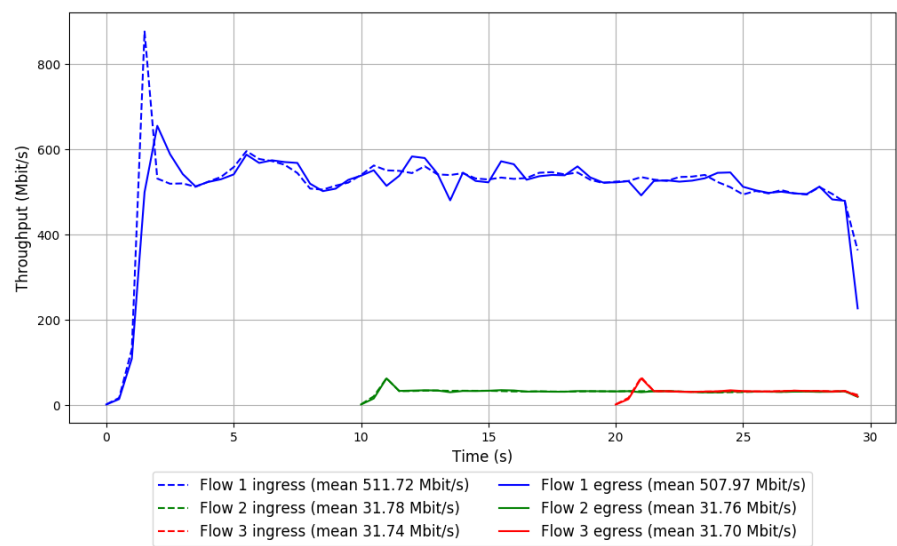
-- Flow 3:

Average throughput: 31.70 Mbit/s

95th percentile per-packet one-way delay: 111.938 ms

Loss rate: 1.18%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-01-17 16:33:00

End at: 2018-01-17 16:33:30

Below is generated by plot.py at 2018-01-17 21:41:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 539.24 Mbit/s

95th percentile per-packet one-way delay: 213.800 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 504.00 Mbit/s

95th percentile per-packet one-way delay: 214.232 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 37.77 Mbit/s

95th percentile per-packet one-way delay: 142.099 ms

Loss rate: 0.65%

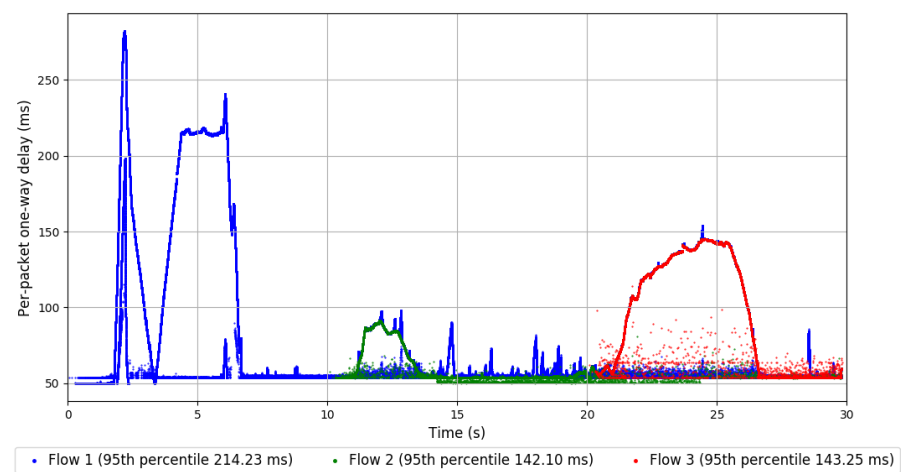
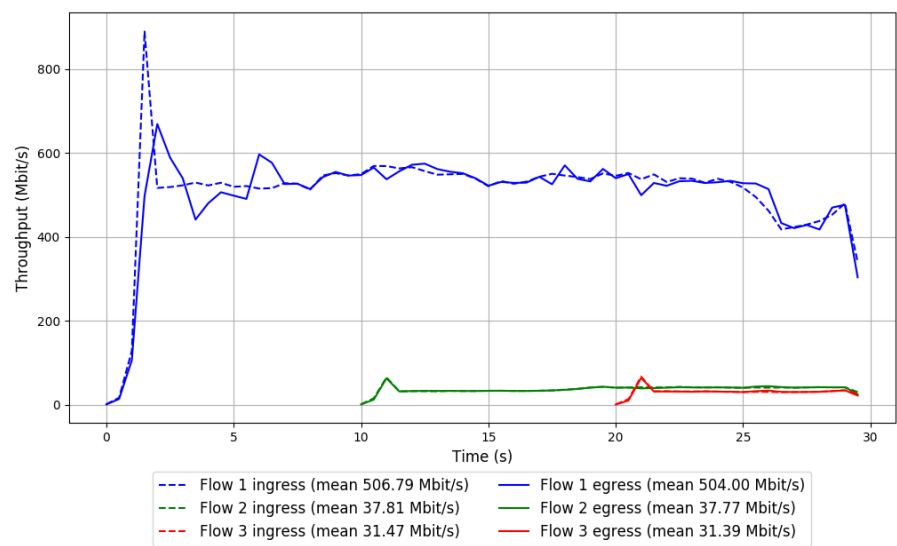
-- Flow 3:

Average throughput: 31.39 Mbit/s

95th percentile per-packet one-way delay: 143.246 ms

Loss rate: 1.39%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-01-17 16:50:08

End at: 2018-01-17 16:50:38

Below is generated by plot.py at 2018-01-17 21:41:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 535.21 Mbit/s

95th percentile per-packet one-way delay: 164.481 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 503.40 Mbit/s

95th percentile per-packet one-way delay: 164.034 ms

Loss rate: 1.38%

-- Flow 2:

Average throughput: 31.66 Mbit/s

95th percentile per-packet one-way delay: 162.505 ms

Loss rate: 1.29%

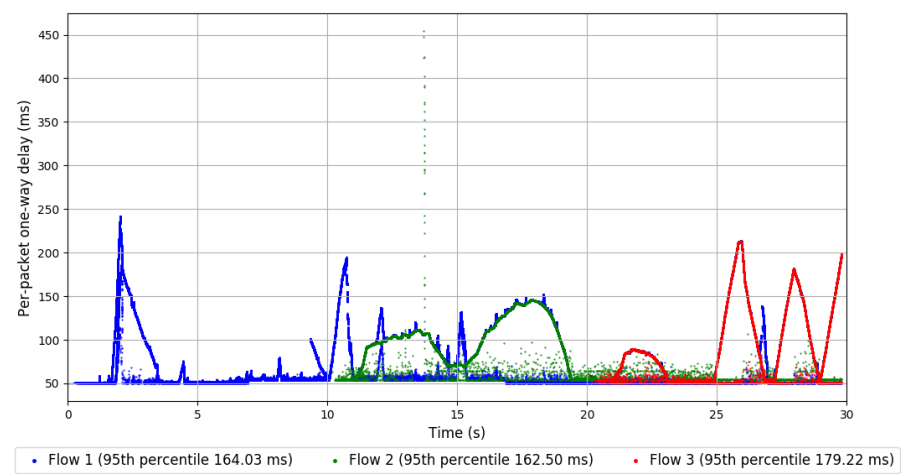
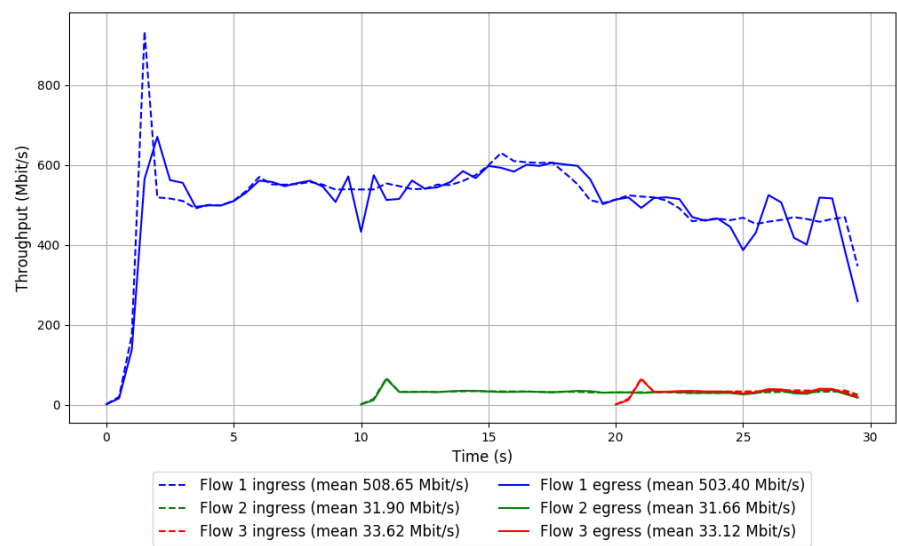
-- Flow 3:

Average throughput: 33.12 Mbit/s

95th percentile per-packet one-way delay: 179.219 ms

Loss rate: 2.62%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-01-17 17:06:59

End at: 2018-01-17 17:07:29

Below is generated by plot.py at 2018-01-17 21:41:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 525.81 Mbit/s

95th percentile per-packet one-way delay: 122.266 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 493.13 Mbit/s

95th percentile per-packet one-way delay: 122.446 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 34.62 Mbit/s

95th percentile per-packet one-way delay: 119.585 ms

Loss rate: 0.58%

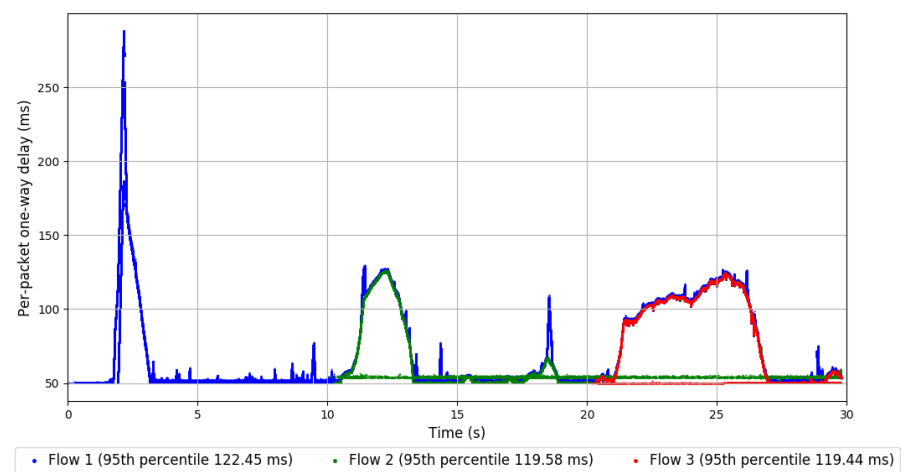
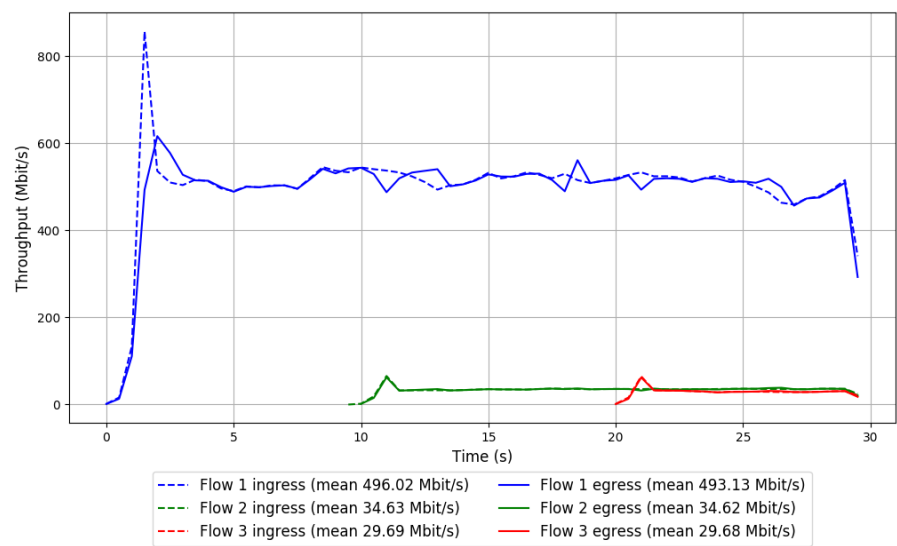
-- Flow 3:

Average throughput: 29.68 Mbit/s

95th percentile per-packet one-way delay: 119.443 ms

Loss rate: 1.11%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-01-17 17:24:06

End at: 2018-01-17 17:24:36

Below is generated by plot.py at 2018-01-17 21:43:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 569.70 Mbit/s

95th percentile per-packet one-way delay: 154.562 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 542.52 Mbit/s

95th percentile per-packet one-way delay: 154.666 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 33.10 Mbit/s

95th percentile per-packet one-way delay: 153.809 ms

Loss rate: 0.70%

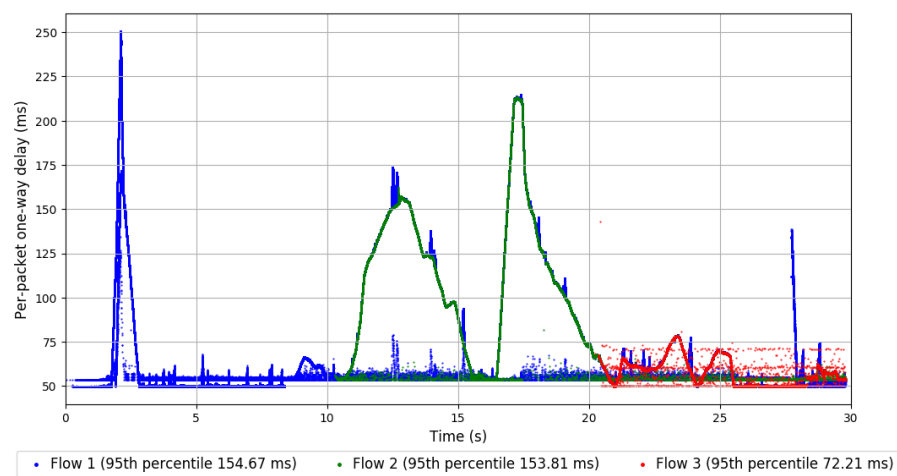
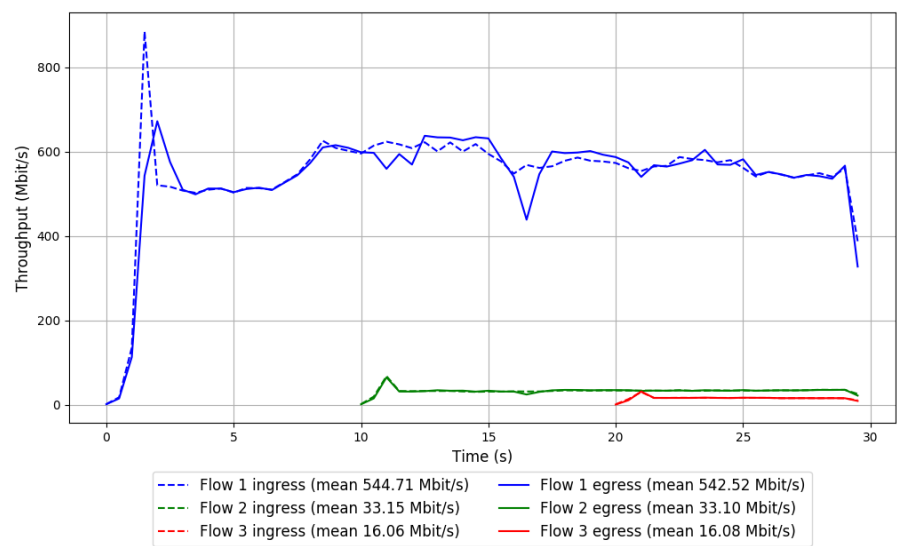
-- Flow 3:

Average throughput: 16.08 Mbit/s

95th percentile per-packet one-way delay: 72.210 ms

Loss rate: 1.02%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-01-17 17:40:46

End at: 2018-01-17 17:41:16

Below is generated by plot.py at 2018-01-17 21:43:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 562.56 Mbit/s

95th percentile per-packet one-way delay: 205.452 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 479.81 Mbit/s

95th percentile per-packet one-way delay: 205.830 ms

Loss rate: 1.24%

-- Flow 2:

Average throughput: 116.94 Mbit/s

95th percentile per-packet one-way delay: 169.753 ms

Loss rate: 0.63%

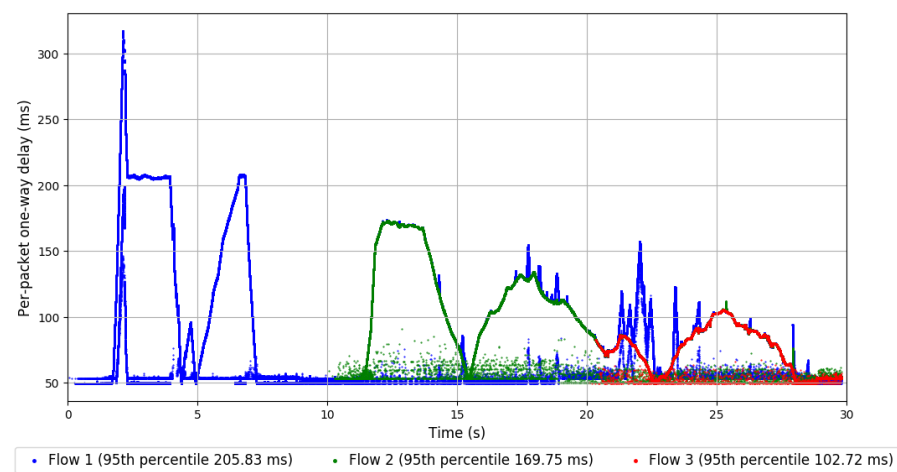
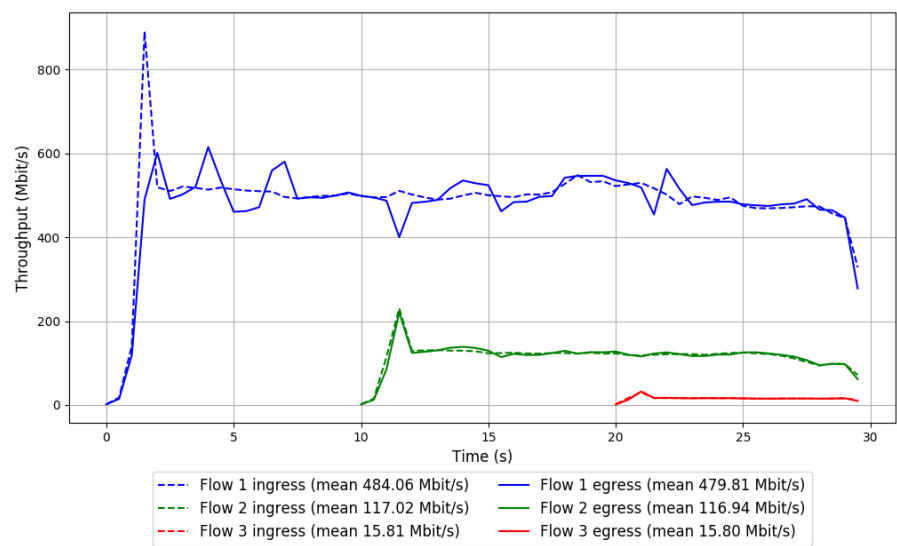
-- Flow 3:

Average throughput: 15.80 Mbit/s

95th percentile per-packet one-way delay: 102.715 ms

Loss rate: 1.11%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-01-17 17:57:56

End at: 2018-01-17 17:58:26

Below is generated by plot.py at 2018-01-17 21:50:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 544.39 Mbit/s

95th percentile per-packet one-way delay: 204.867 ms

Loss rate: 2.46%

-- Flow 1:

Average throughput: 468.38 Mbit/s

95th percentile per-packet one-way delay: 205.908 ms

Loss rate: 2.50%

-- Flow 2:

Average throughput: 112.60 Mbit/s

95th percentile per-packet one-way delay: 195.905 ms

Loss rate: 2.23%

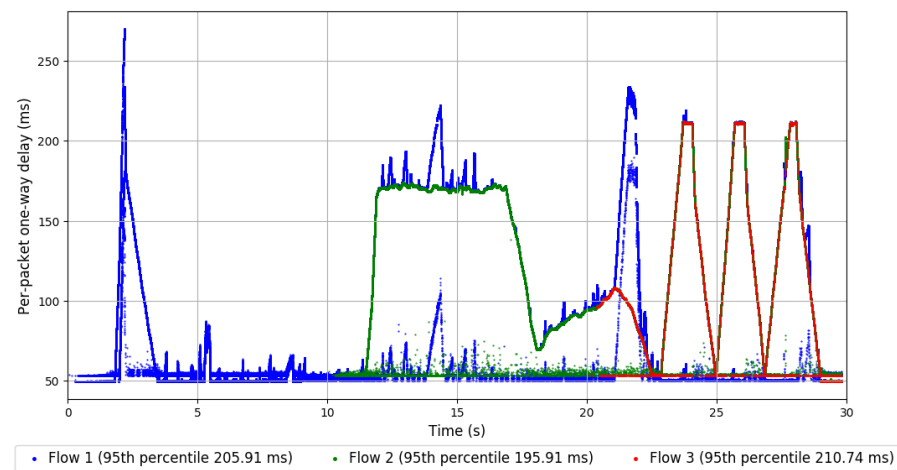
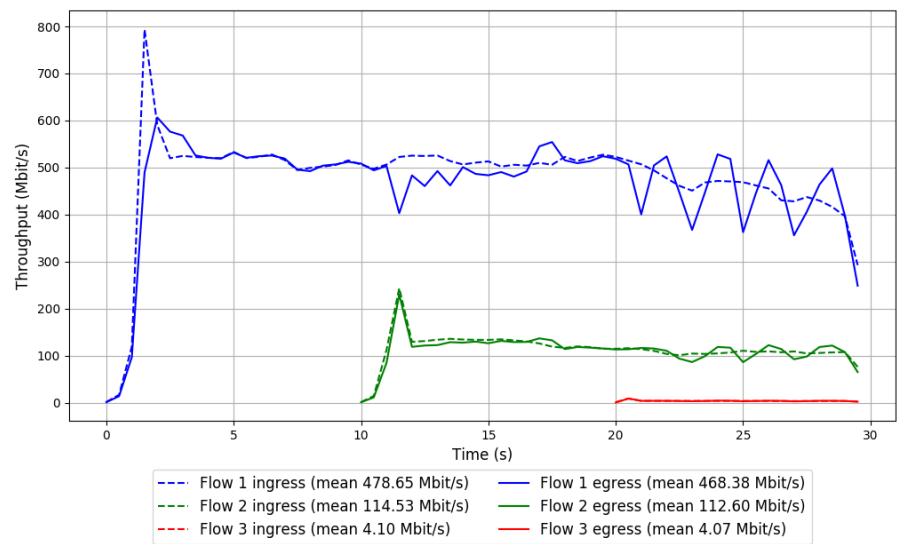
-- Flow 3:

Average throughput: 4.07 Mbit/s

95th percentile per-packet one-way delay: 210.744 ms

Loss rate: 1.80%

Run 9: Report of PCC — Data Link

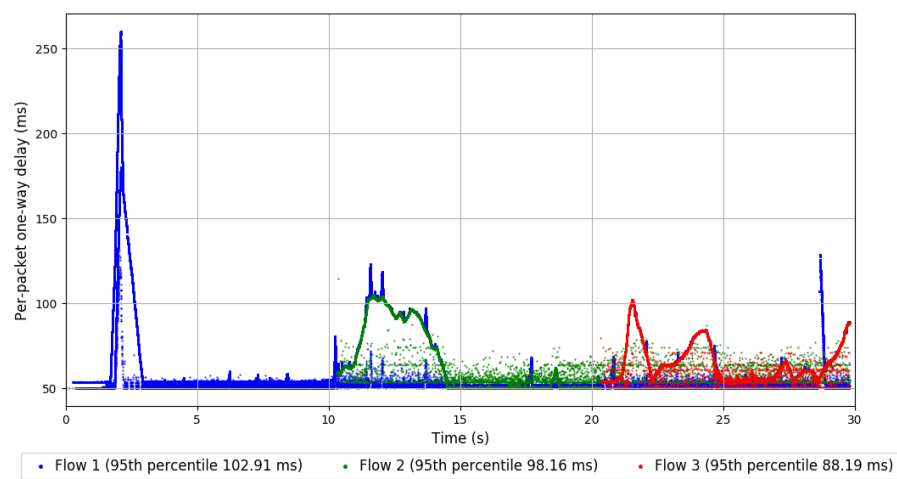
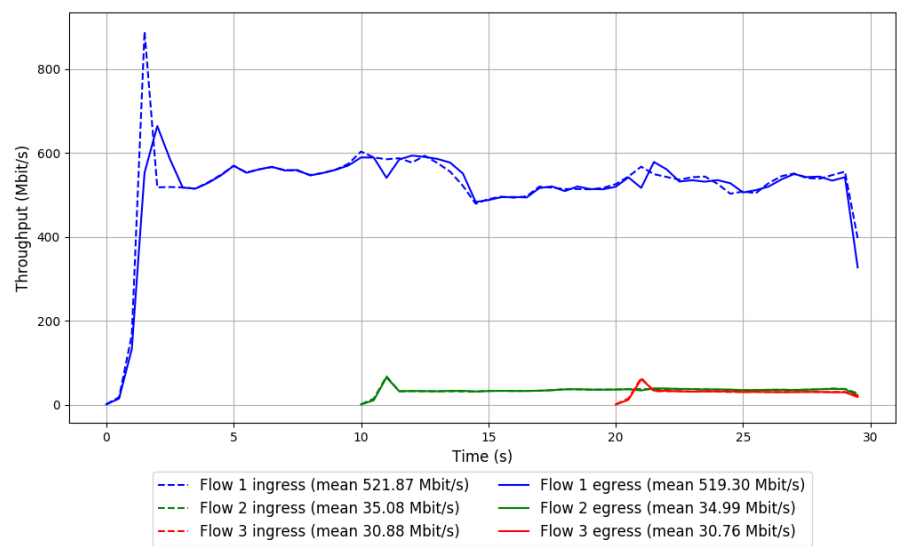


```
Run 10: Statistics of PCC

Start at: 2018-01-17 18:14:44
End at: 2018-01-17 18:15:14

# Below is generated by plot.py at 2018-01-17 21:51:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 552.58 Mbit/s
95th percentile per-packet one-way delay: 102.519 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 519.30 Mbit/s
95th percentile per-packet one-way delay: 102.914 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 34.99 Mbit/s
95th percentile per-packet one-way delay: 98.159 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 30.76 Mbit/s
95th percentile per-packet one-way delay: 88.191 ms
Loss rate: 1.51%
```


Run 10: Report of PCC — Data Link

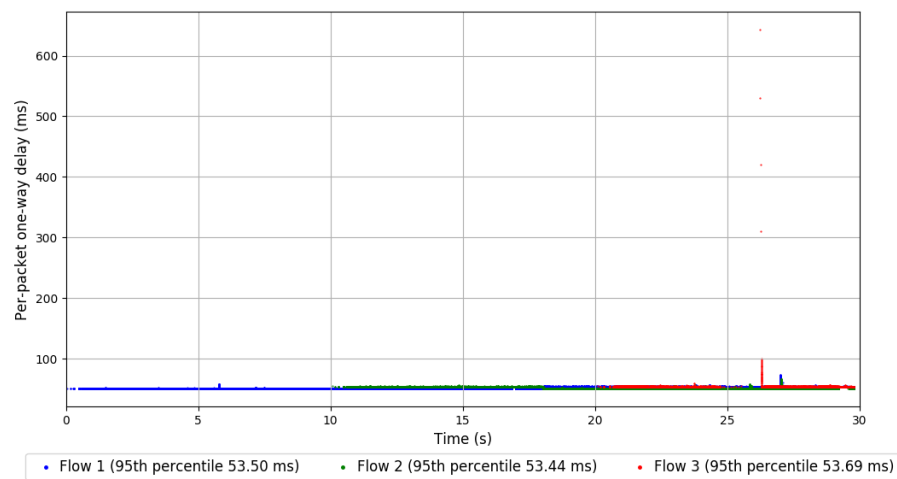
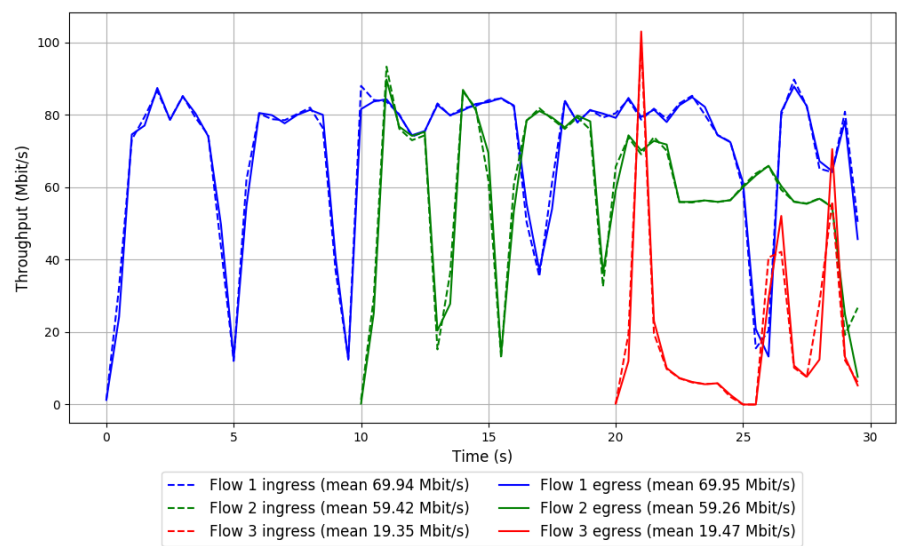


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-01-17 15:37:37
End at: 2018-01-17 15:38:07

# Below is generated by plot.py at 2018-01-17 21:51:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 115.60 Mbit/s
95th percentile per-packet one-way delay: 53.518 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 69.95 Mbit/s
95th percentile per-packet one-way delay: 53.503 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 59.26 Mbit/s
95th percentile per-packet one-way delay: 53.435 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 19.47 Mbit/s
95th percentile per-packet one-way delay: 53.685 ms
Loss rate: 0.51%
```

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-01-17 15:54:50

End at: 2018-01-17 15:55:20

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.34 Mbit/s

95th percentile per-packet one-way delay: 49.870 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 53.17 Mbit/s

95th percentile per-packet one-way delay: 49.859 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 27.76 Mbit/s

95th percentile per-packet one-way delay: 49.864 ms

Loss rate: 1.14%

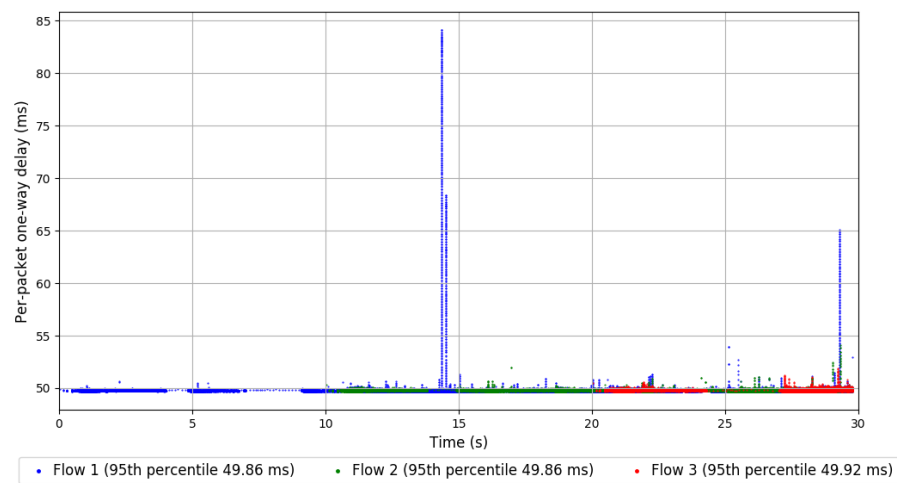
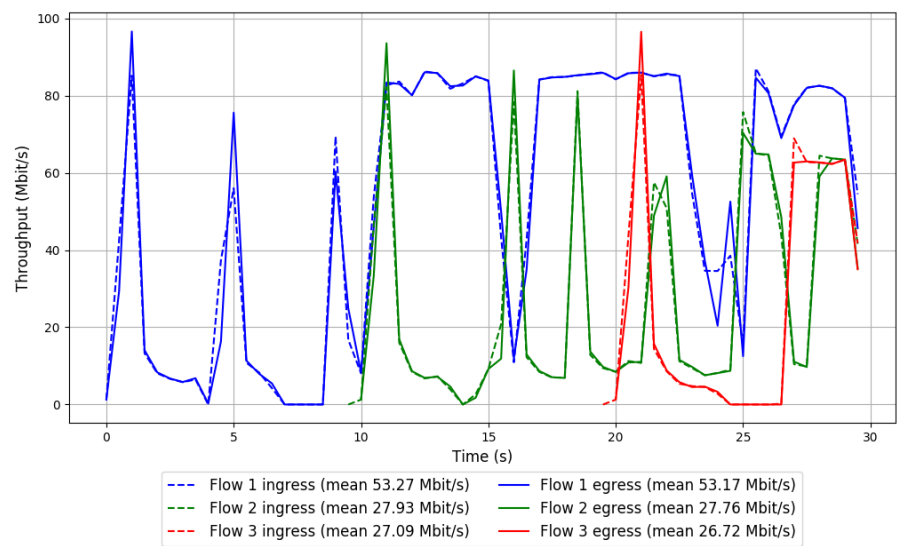
-- Flow 3:

Average throughput: 26.72 Mbit/s

95th percentile per-packet one-way delay: 49.918 ms

Loss rate: 2.43%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-01-17 16:11:29

End at: 2018-01-17 16:11:59

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.00 Mbit/s

95th percentile per-packet one-way delay: 50.136 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 52.62 Mbit/s

95th percentile per-packet one-way delay: 49.993 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 41.24 Mbit/s

95th percentile per-packet one-way delay: 50.196 ms

Loss rate: 0.90%

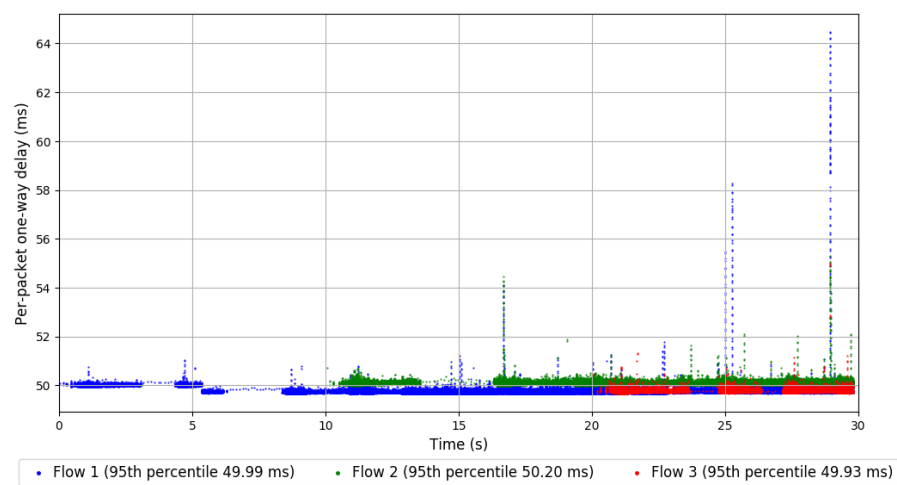
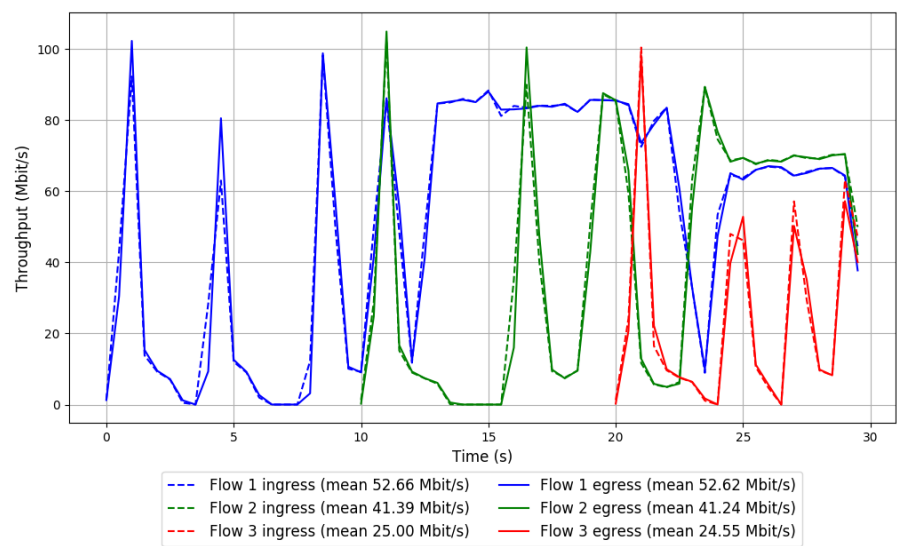
-- Flow 3:

Average throughput: 24.55 Mbit/s

95th percentile per-packet one-way delay: 49.933 ms

Loss rate: 2.84%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-01-17 16:28:46

End at: 2018-01-17 16:29:16

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.86 Mbit/s

95th percentile per-packet one-way delay: 50.151 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 45.20 Mbit/s

95th percentile per-packet one-way delay: 50.124 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 65.17 Mbit/s

95th percentile per-packet one-way delay: 49.905 ms

Loss rate: 0.55%

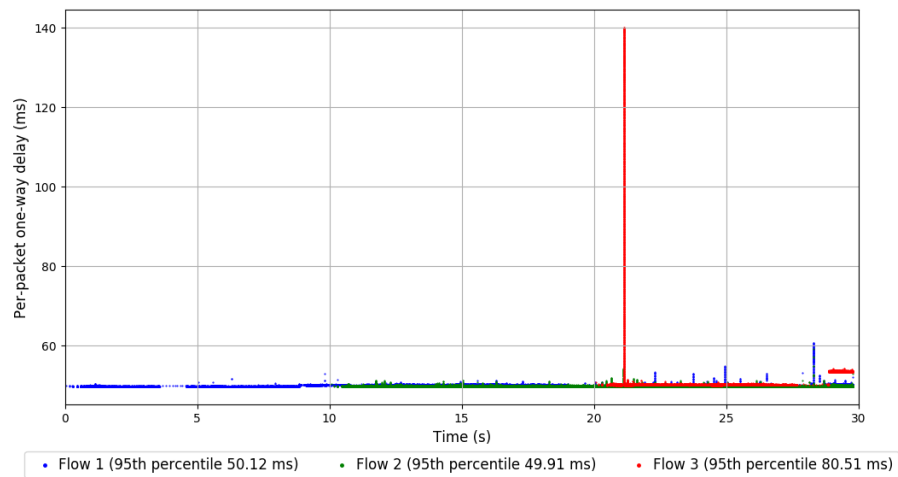
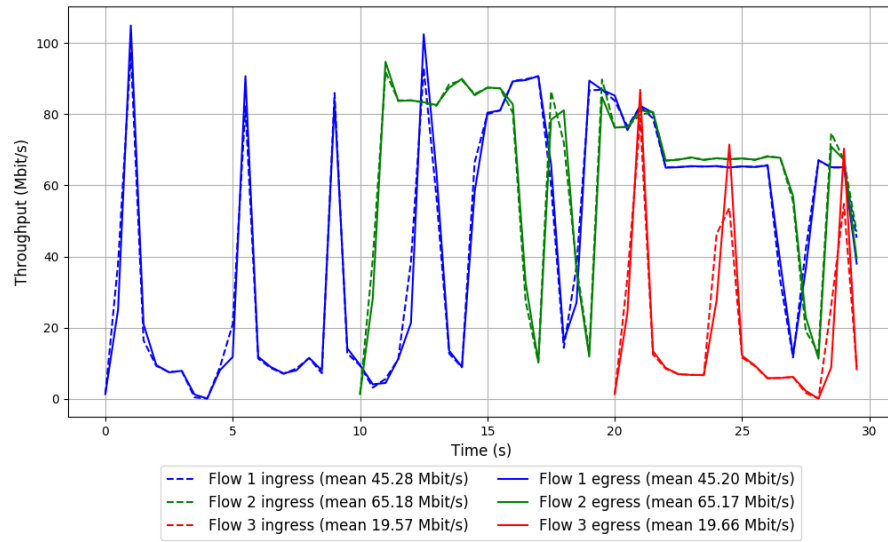
-- Flow 3:

Average throughput: 19.66 Mbit/s

95th percentile per-packet one-way delay: 80.508 ms

Loss rate: 0.62%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-01-17 16:45:52

End at: 2018-01-17 16:46:22

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.66 Mbit/s

95th percentile per-packet one-way delay: 53.561 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 48.78 Mbit/s

95th percentile per-packet one-way delay: 53.611 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 40.99 Mbit/s

95th percentile per-packet one-way delay: 49.977 ms

Loss rate: 0.77%

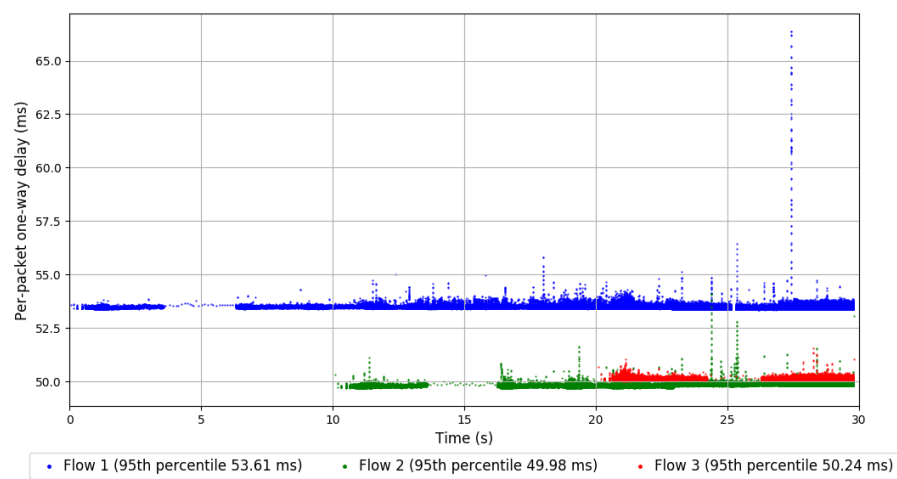
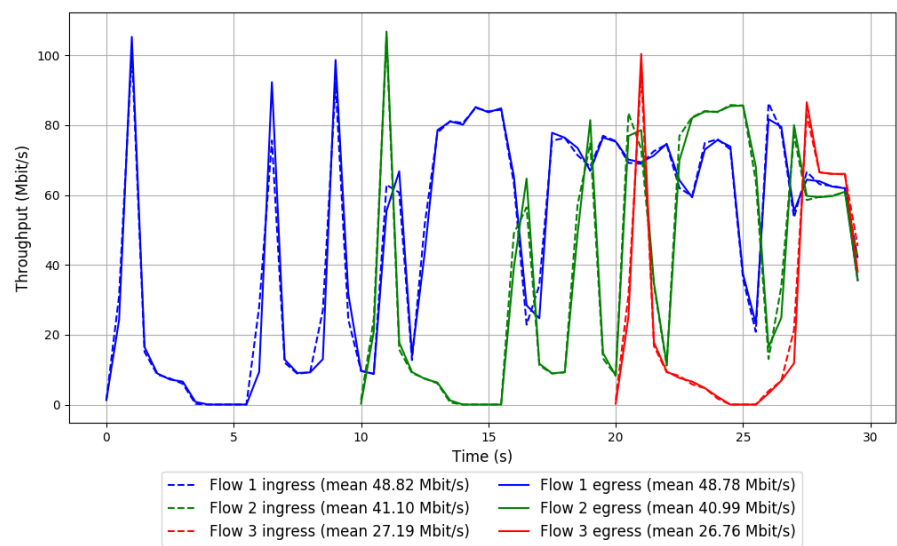
-- Flow 3:

Average throughput: 26.76 Mbit/s

95th percentile per-packet one-way delay: 50.242 ms

Loss rate: 2.60%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-01-17 17:02:36

End at: 2018-01-17 17:03:06

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.23 Mbit/s

95th percentile per-packet one-way delay: 53.648 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 48.01 Mbit/s

95th percentile per-packet one-way delay: 53.489 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 32.30 Mbit/s

95th percentile per-packet one-way delay: 53.516 ms

Loss rate: 0.98%

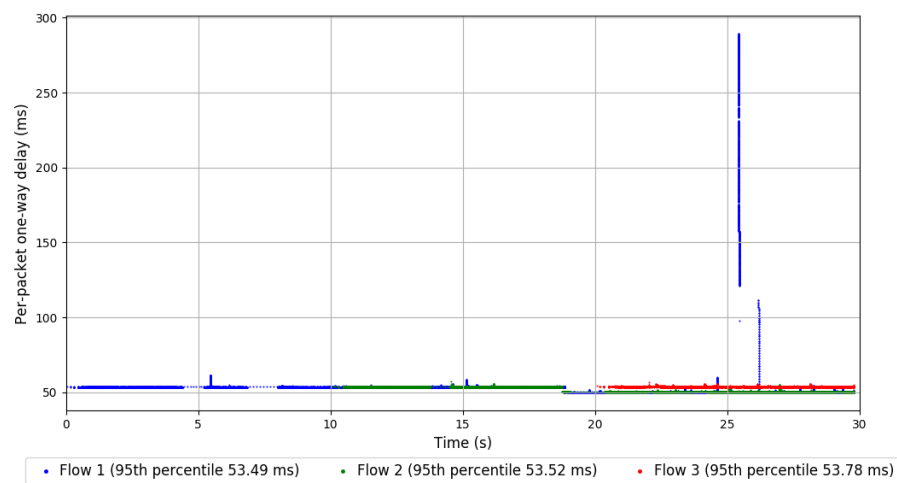
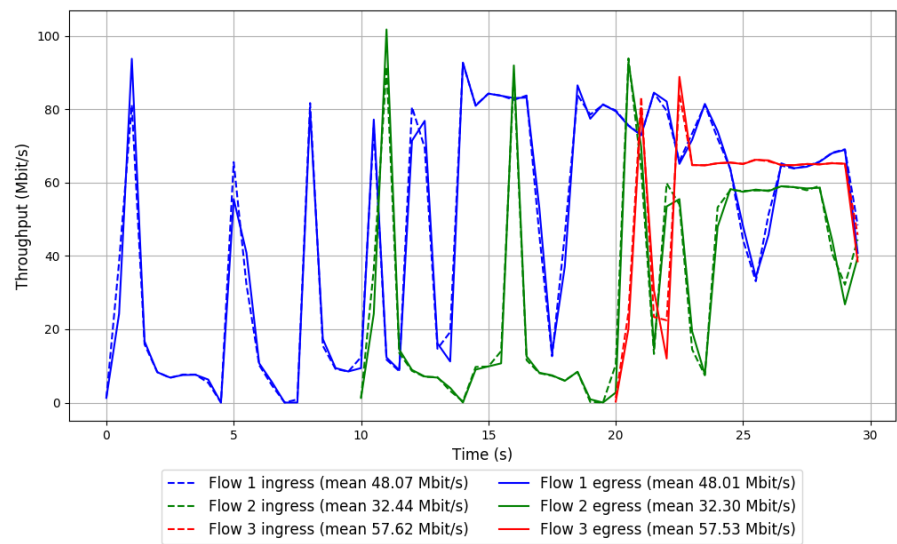
-- Flow 3:

Average throughput: 57.53 Mbit/s

95th percentile per-packet one-way delay: 53.778 ms

Loss rate: 1.25%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-01-17 17:19:49

End at: 2018-01-17 17:20:19

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.32 Mbit/s

95th percentile per-packet one-way delay: 53.530 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 47.27 Mbit/s

95th percentile per-packet one-way delay: 50.202 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 36.06 Mbit/s

95th percentile per-packet one-way delay: 53.603 ms

Loss rate: 0.81%

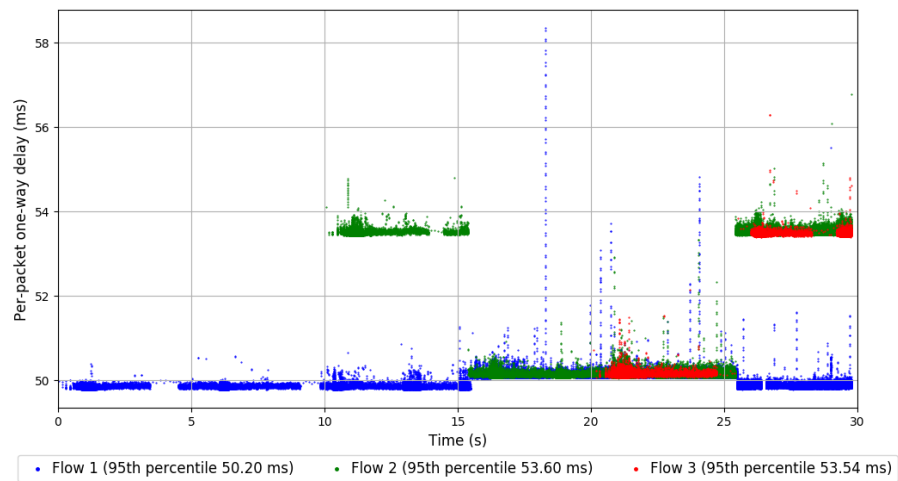
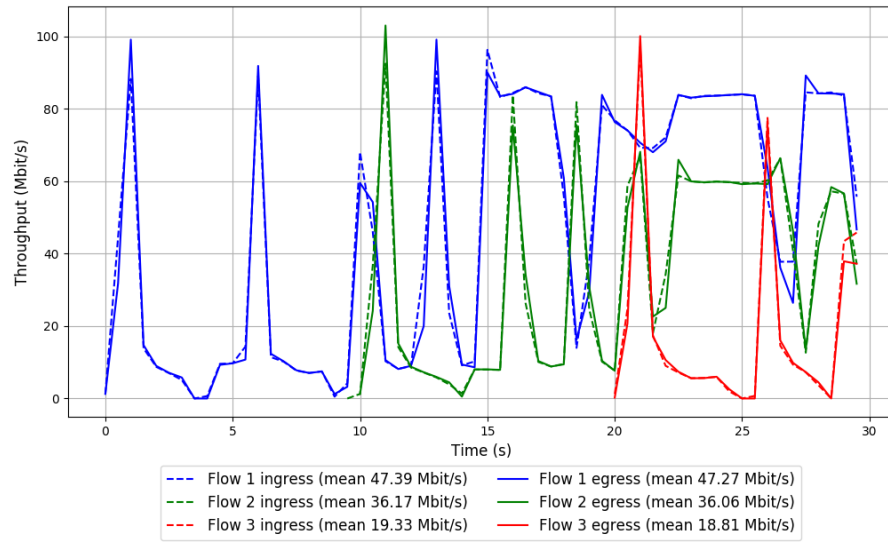
-- Flow 3:

Average throughput: 18.81 Mbit/s

95th percentile per-packet one-way delay: 53.542 ms

Loss rate: 3.74%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-01-17 17:36:37

End at: 2018-01-17 17:37:07

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.12 Mbit/s

95th percentile per-packet one-way delay: 53.552 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 45.97 Mbit/s

95th percentile per-packet one-way delay: 49.974 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 38.86 Mbit/s

95th percentile per-packet one-way delay: 53.571 ms

Loss rate: 0.81%

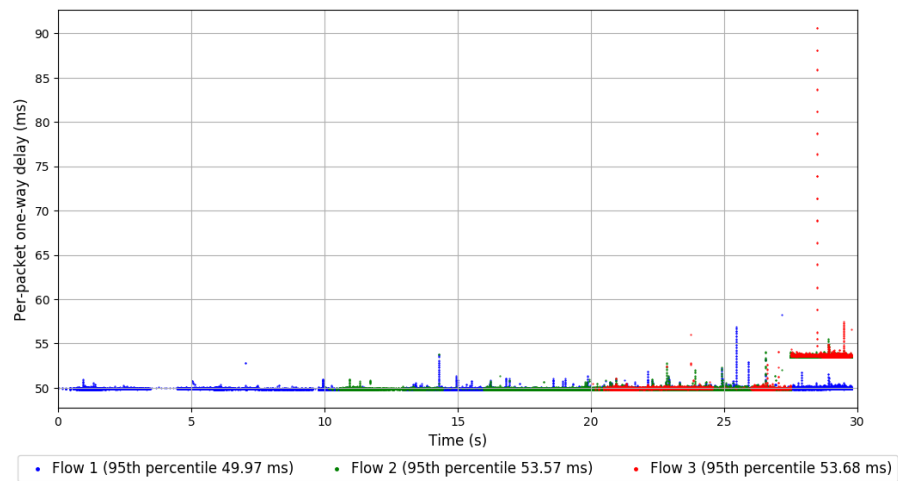
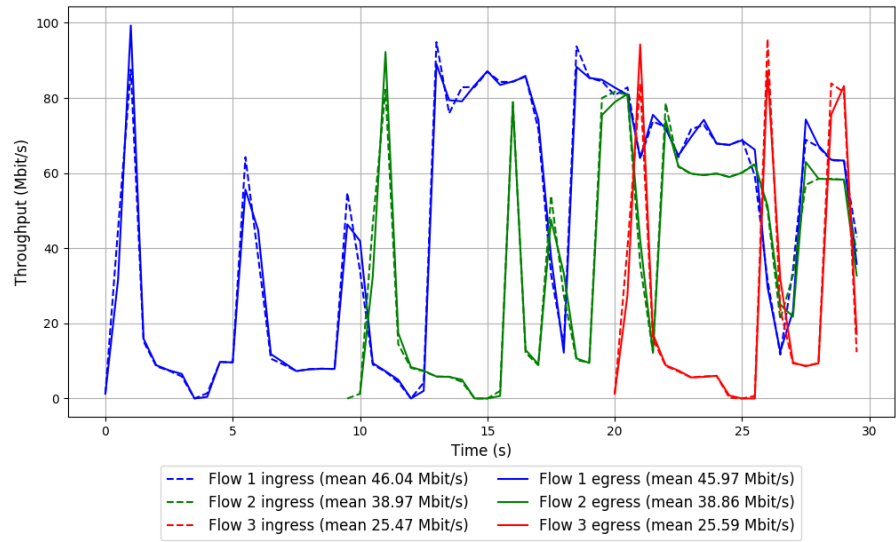
-- Flow 3:

Average throughput: 25.59 Mbit/s

95th percentile per-packet one-way delay: 53.676 ms

Loss rate: 0.56%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-01-17 17:53:35

End at: 2018-01-17 17:54:05

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.68 Mbit/s

95th percentile per-packet one-way delay: 53.657 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 73.22 Mbit/s

95th percentile per-packet one-way delay: 53.621 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 41.42 Mbit/s

95th percentile per-packet one-way delay: 53.682 ms

Loss rate: 0.86%

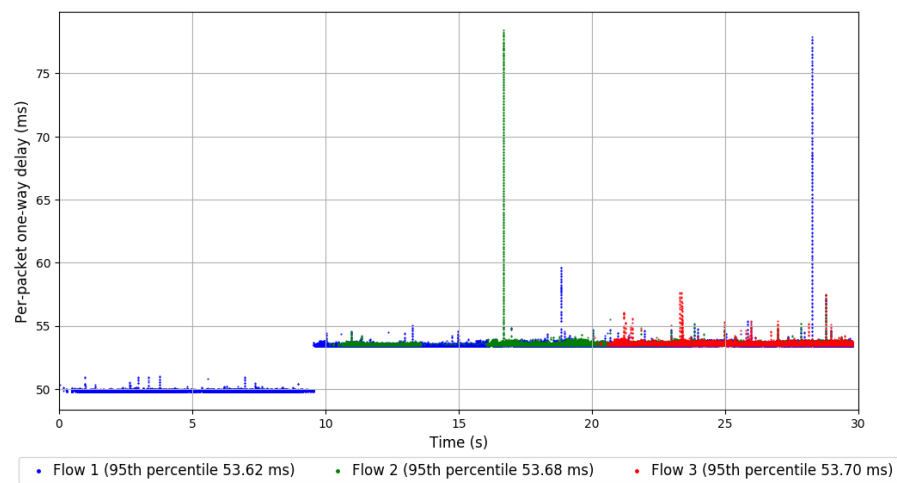
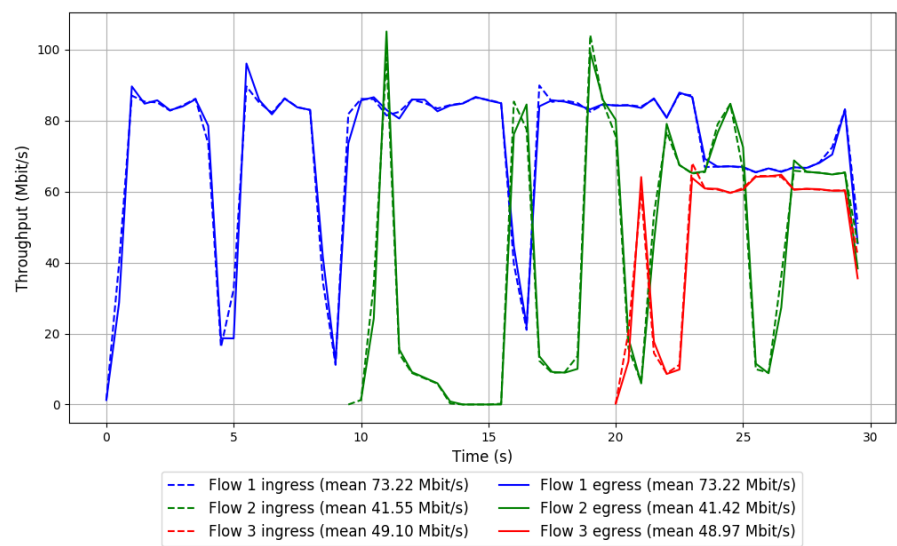
-- Flow 3:

Average throughput: 48.97 Mbit/s

95th percentile per-packet one-way delay: 53.698 ms

Loss rate: 1.36%

Run 9: Report of QUIC Cubic — Data Link

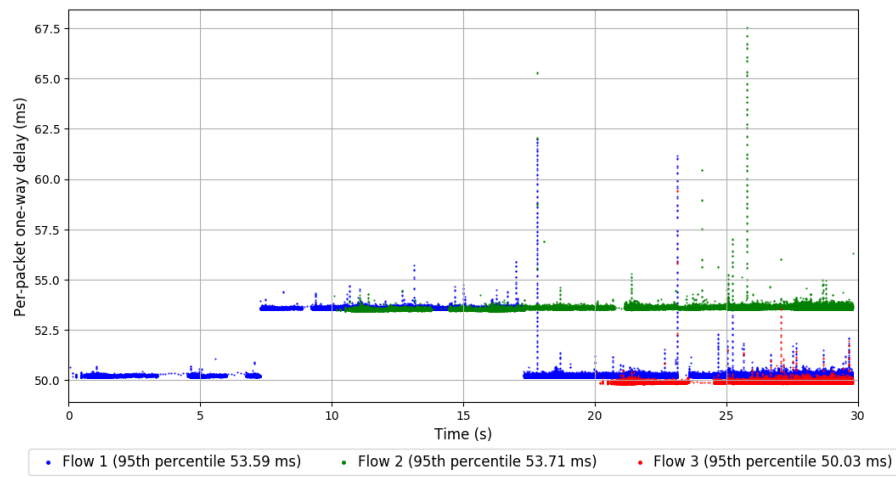
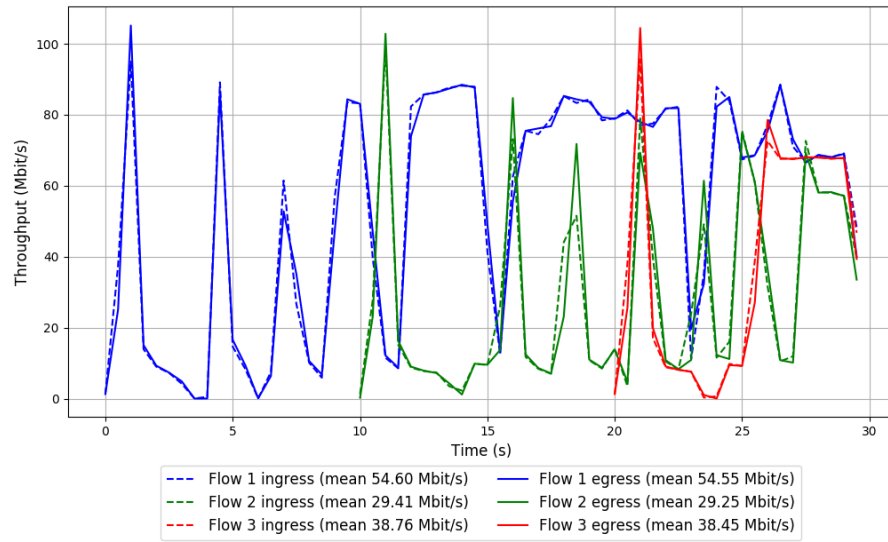


```
Run 10: Statistics of QUIC Cubic

Start at: 2018-01-17 18:10:27
End at: 2018-01-17 18:10:57

# Below is generated by plot.py at 2018-01-17 21:51:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.47 Mbit/s
95th percentile per-packet one-way delay: 53.640 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 54.55 Mbit/s
95th percentile per-packet one-way delay: 53.592 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 29.25 Mbit/s
95th percentile per-packet one-way delay: 53.712 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 38.45 Mbit/s
95th percentile per-packet one-way delay: 50.026 ms
Loss rate: 1.86%
```

Run 10: Report of QUIC Cubic — Data Link

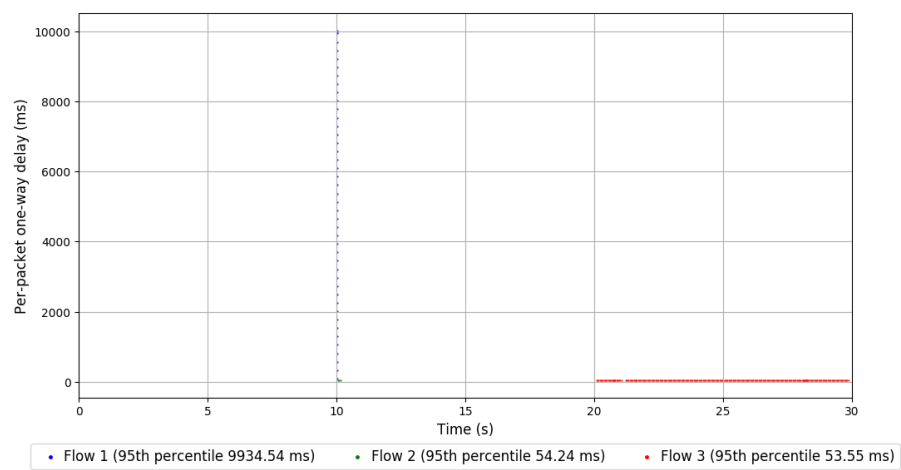
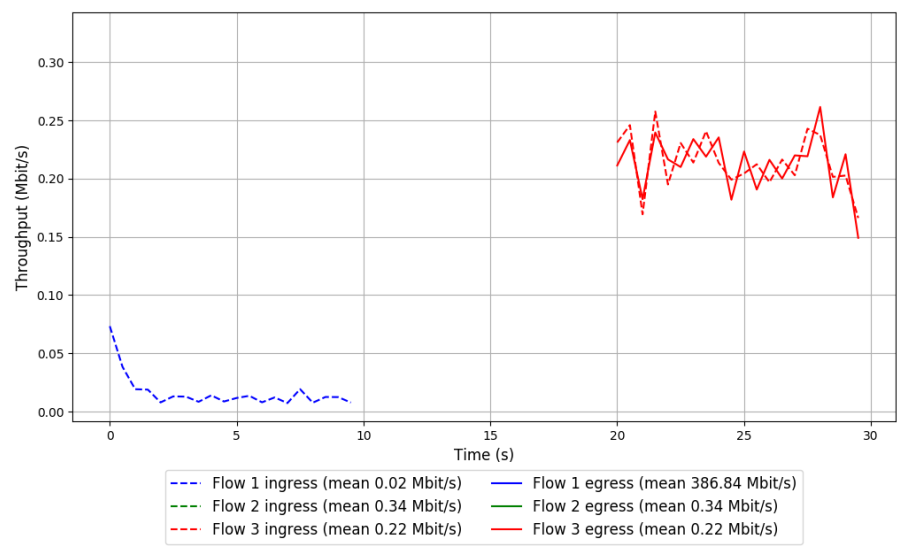


Run 1: Statistics of SReAM

Start at: 2018-01-17 15:33:24

End at: 2018-01-17 15:33:54

Run 1: Report of SReAM — Data Link

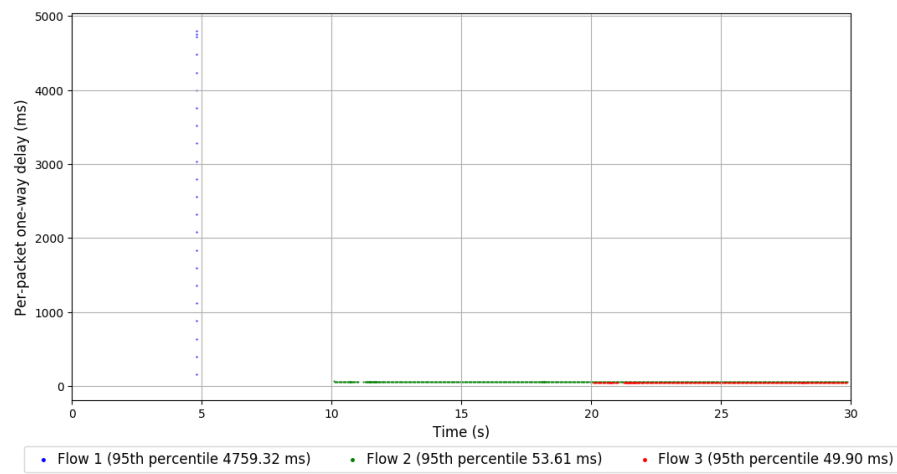
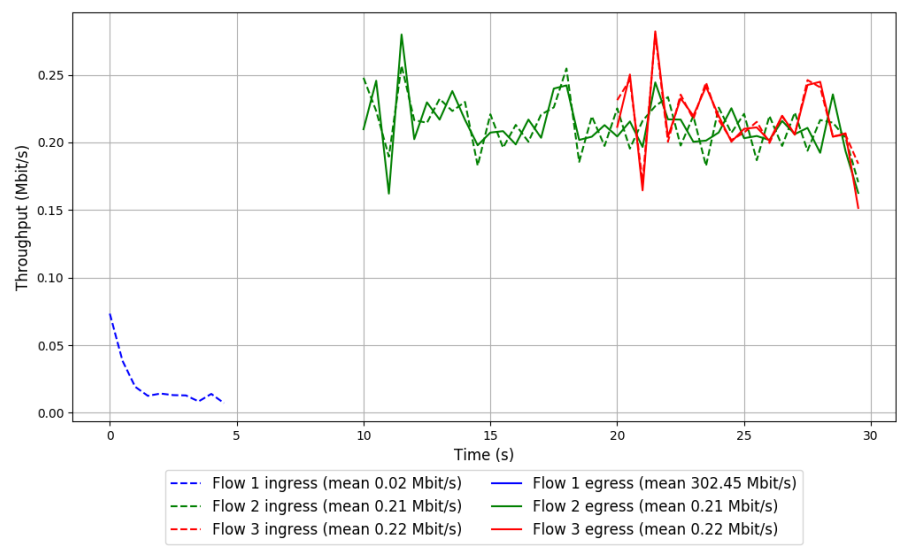


```
Run 2: Statistics of SCReAM

Start at: 2018-01-17 15:50:25
End at: 2018-01-17 15:50:55

# Below is generated by plot.py at 2018-01-17 21:51:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 53.614 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 302.45 Mbit/s
95th percentile per-packet one-way delay: 4759.317 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.607 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.904 ms
Loss rate: 1.11%
```


Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-01-17 16:07:15

End at: 2018-01-17 16:07:45

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.543 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.877 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.566 ms

Loss rate: 0.43%

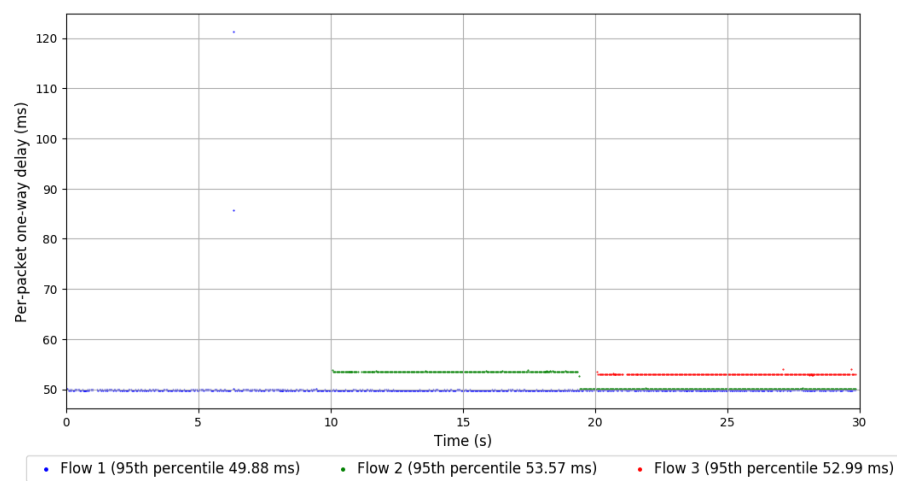
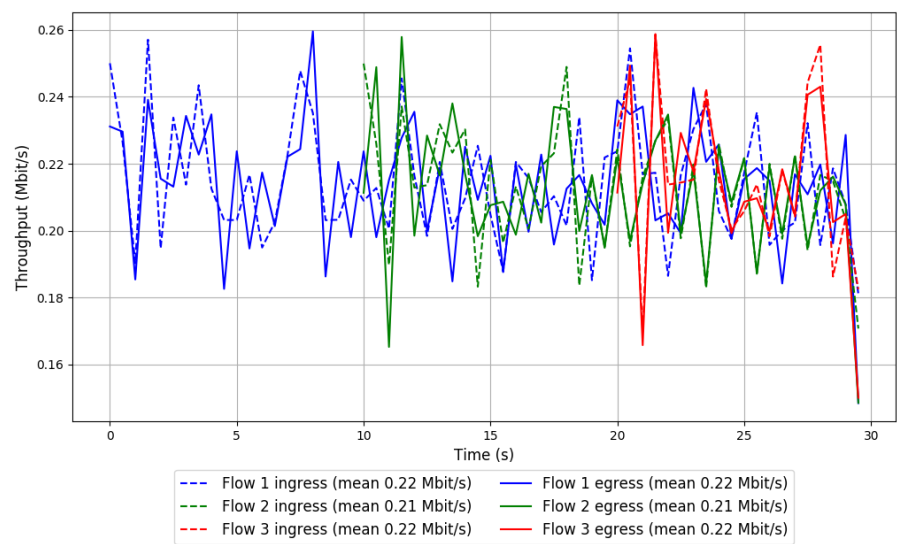
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 52.993 ms

Loss rate: 1.11%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-01-17 16:24:12

End at: 2018-01-17 16:24:42

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.518 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.504 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.167 ms

Loss rate: 0.42%

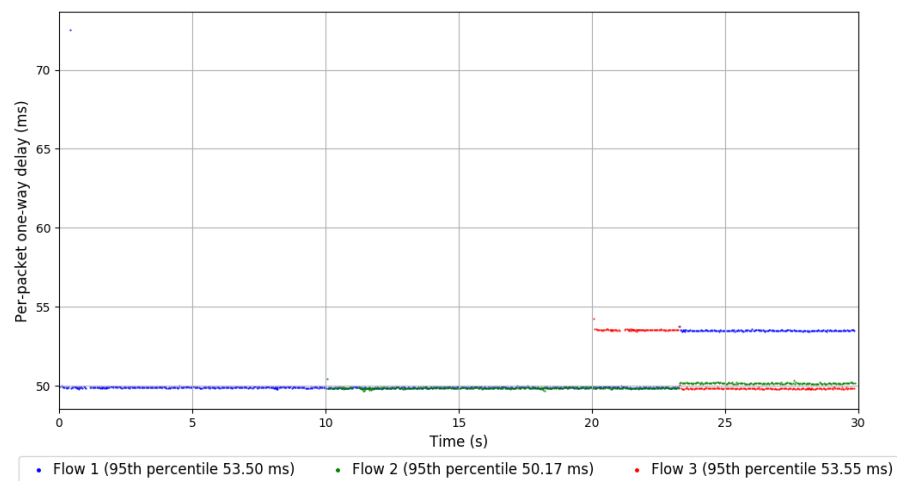
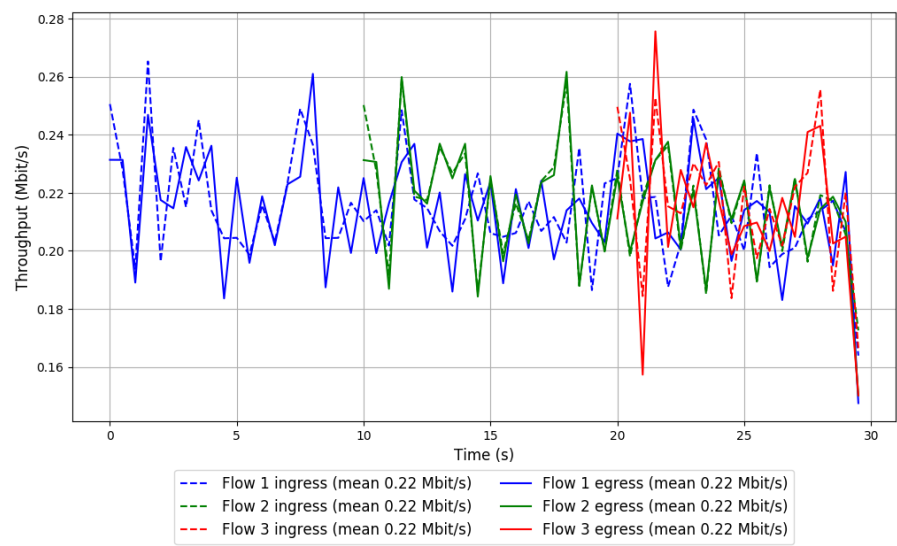
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.546 ms

Loss rate: 1.11%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-01-17 16:41:35

End at: 2018-01-17 16:42:05

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.550 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.528 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.572 ms

Loss rate: 0.42%

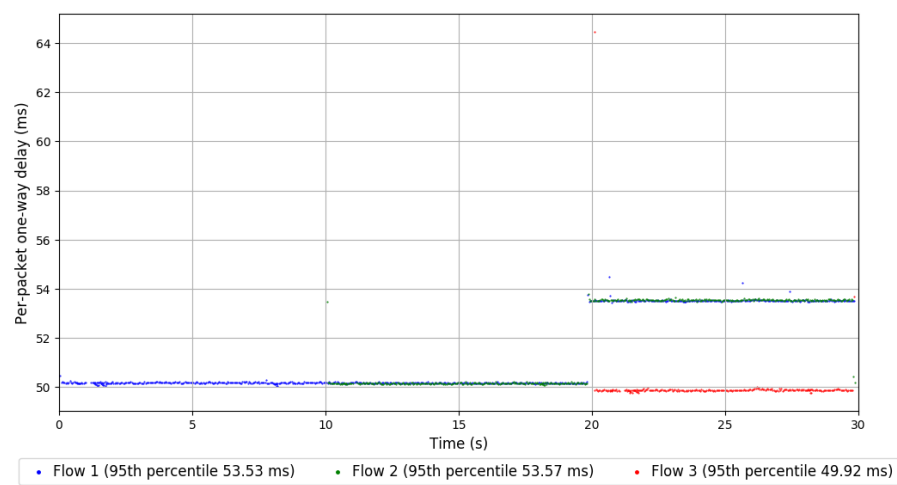
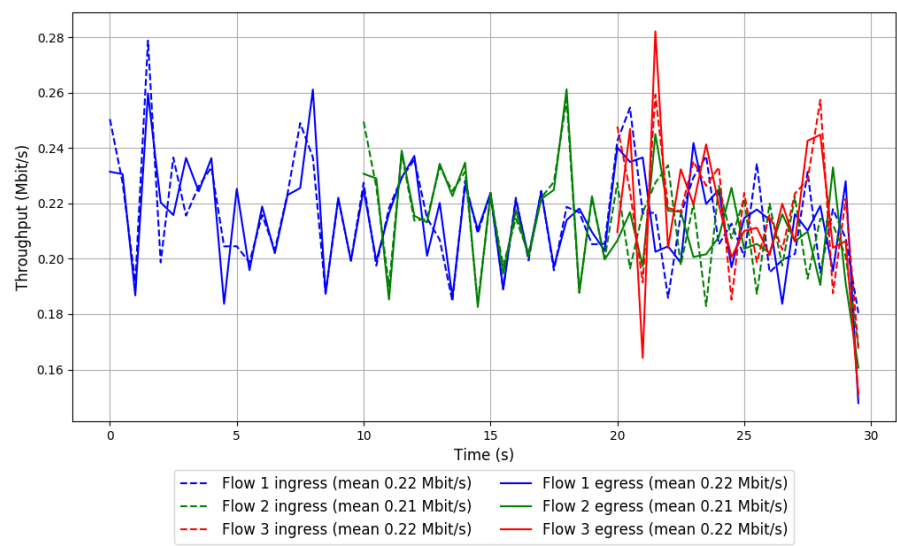
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.917 ms

Loss rate: 1.11%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-01-17 16:58:34

End at: 2018-01-17 16:59:04

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.599 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.590 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.566 ms

Loss rate: 0.43%

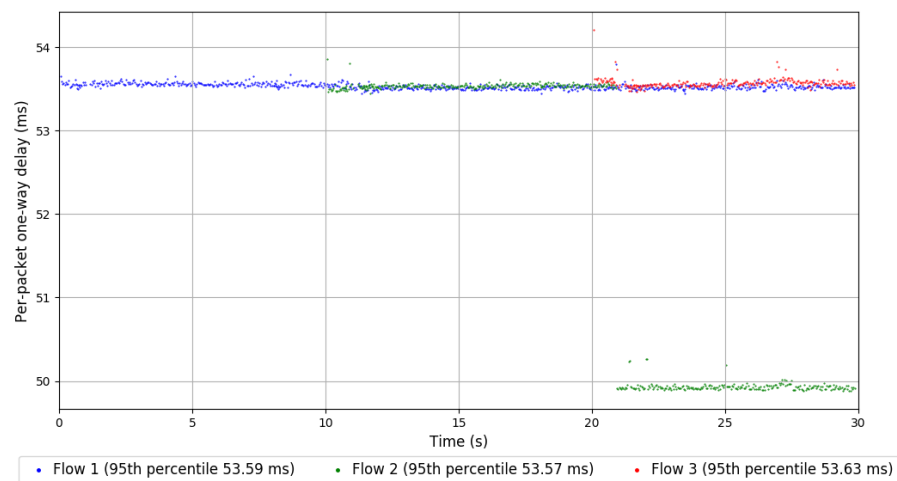
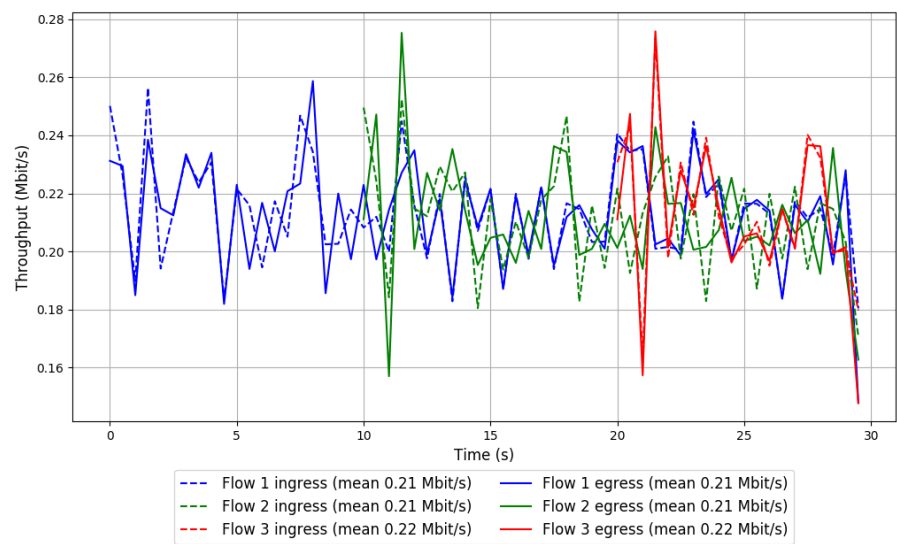
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.629 ms

Loss rate: 1.11%

Run 6: Report of SReAM — Data Link

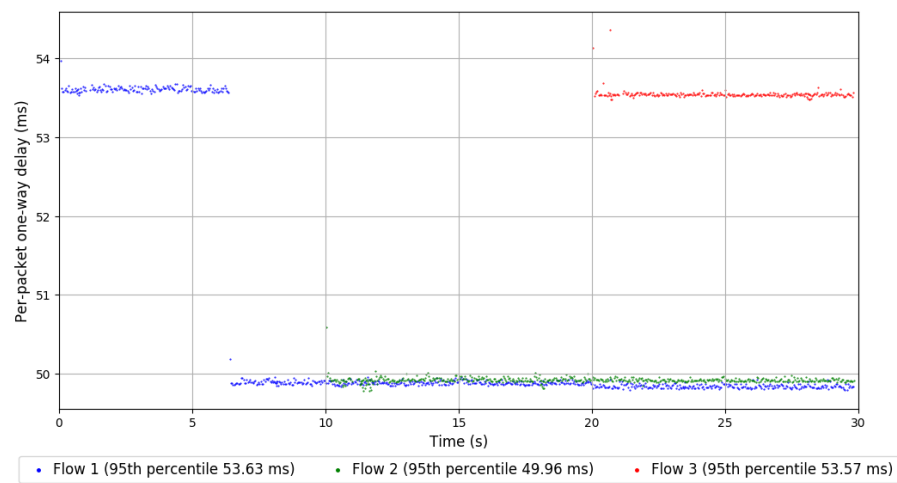
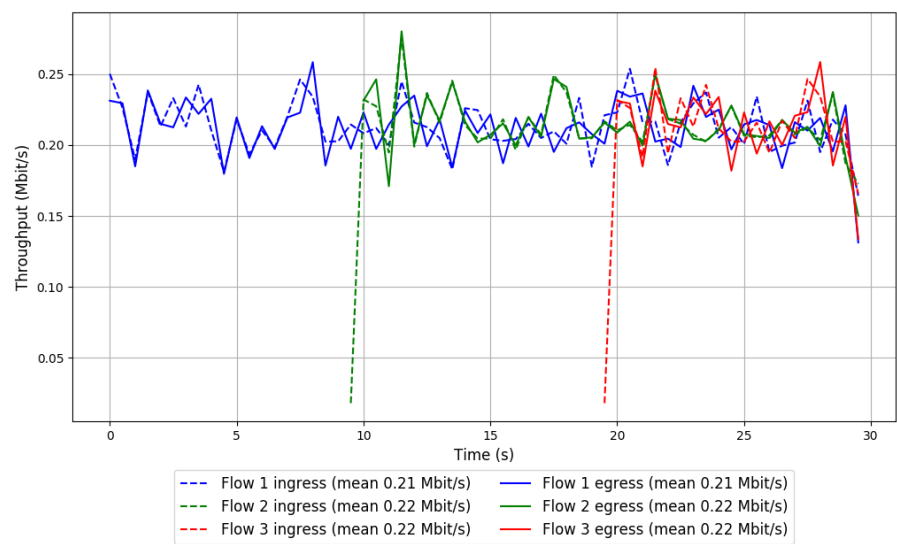


```
Run 7: Statistics of SReAM

Start at: 2018-01-17 17:15:28
End at: 2018-01-17 17:15:58

# Below is generated by plot.py at 2018-01-17 21:51:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.612 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.632 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.964 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.572 ms
Loss rate: 1.11%
```

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2018-01-17 17:32:23

End at: 2018-01-17 17:32:53

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.667 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.626 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.563 ms

Loss rate: 0.43%

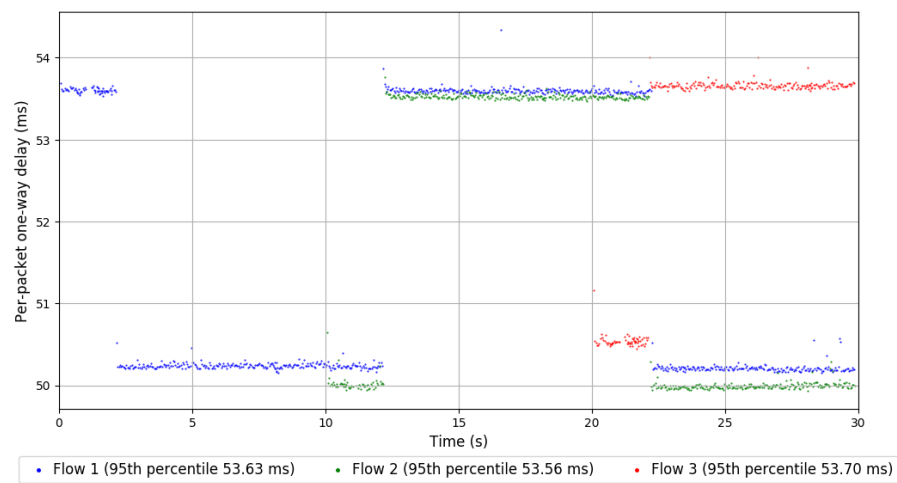
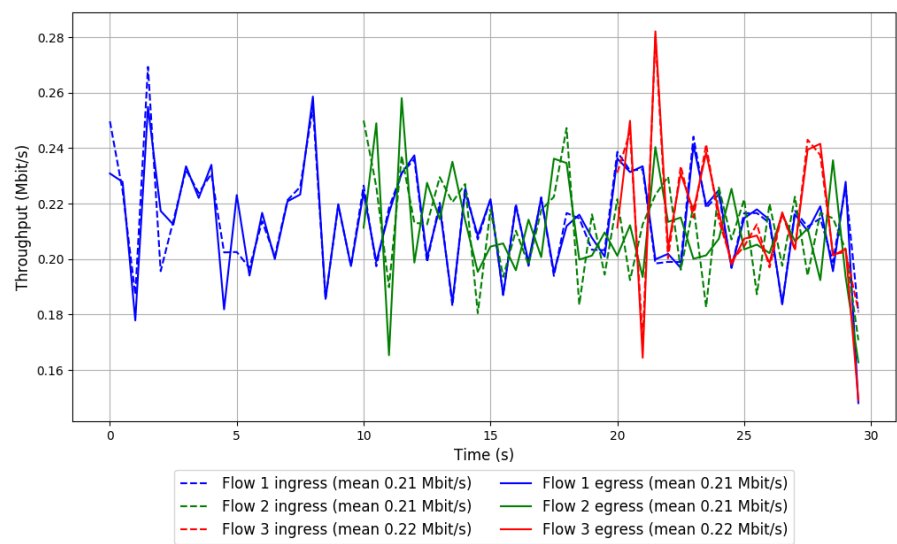
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 1.10%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-01-17 17:49:23

End at: 2018-01-17 17:49:53

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.657 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.655 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.663 ms

Loss rate: 0.42%

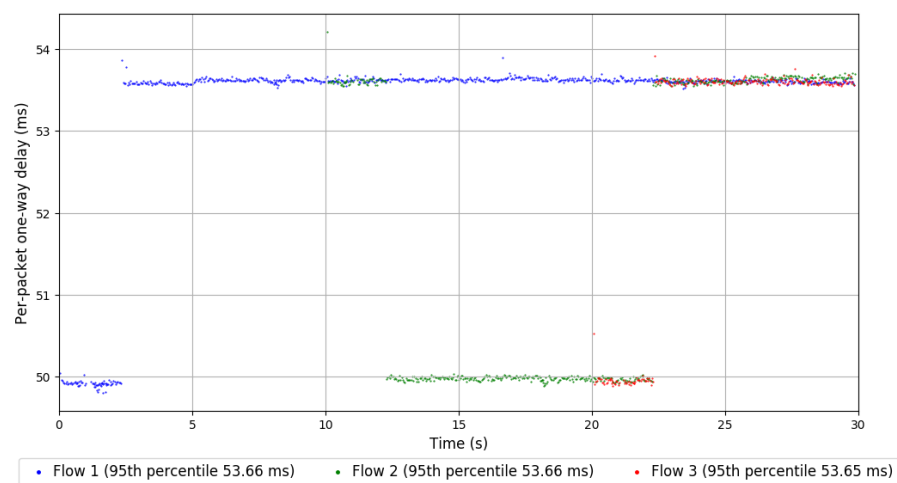
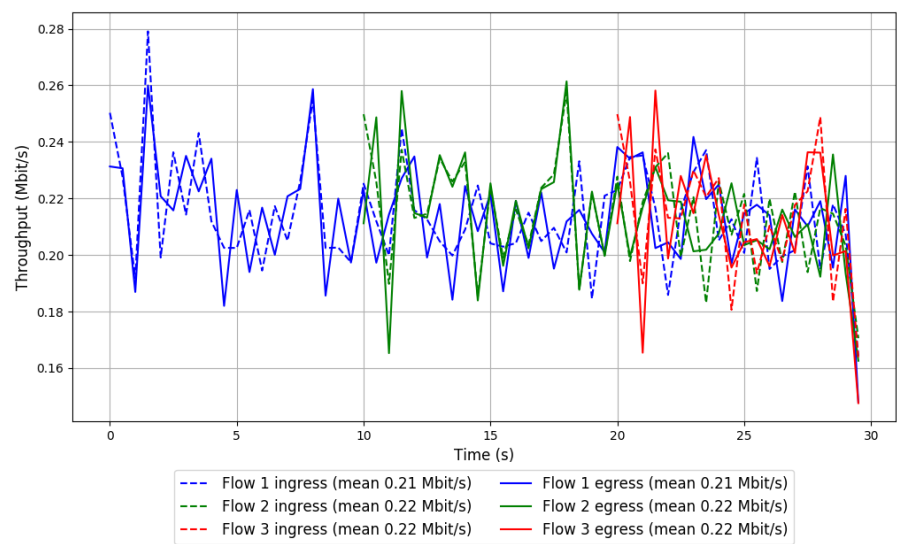
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.649 ms

Loss rate: 1.11%

Run 9: Report of SReAM — Data Link

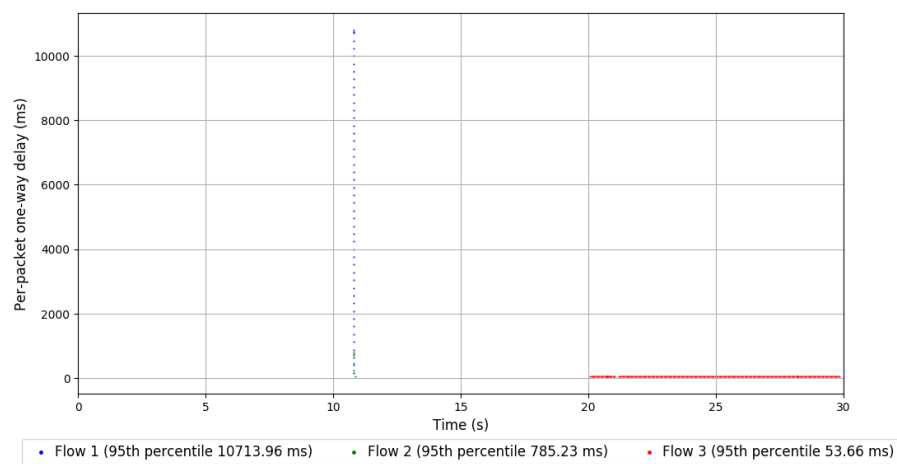
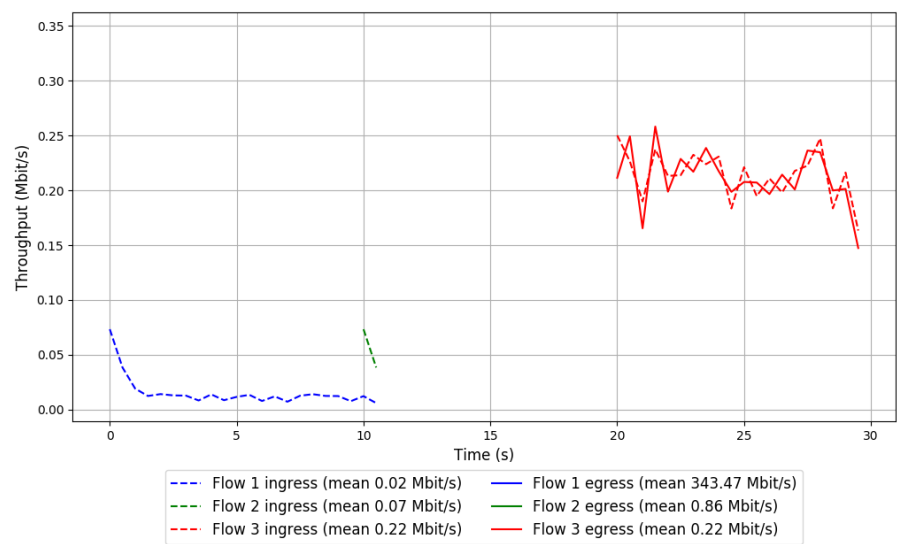


Run 10: Statistics of SCReAM

Start at: 2018-01-17 18:06:00

End at: 2018-01-17 18:06:30

Run 10: Report of SReAM — Data Link

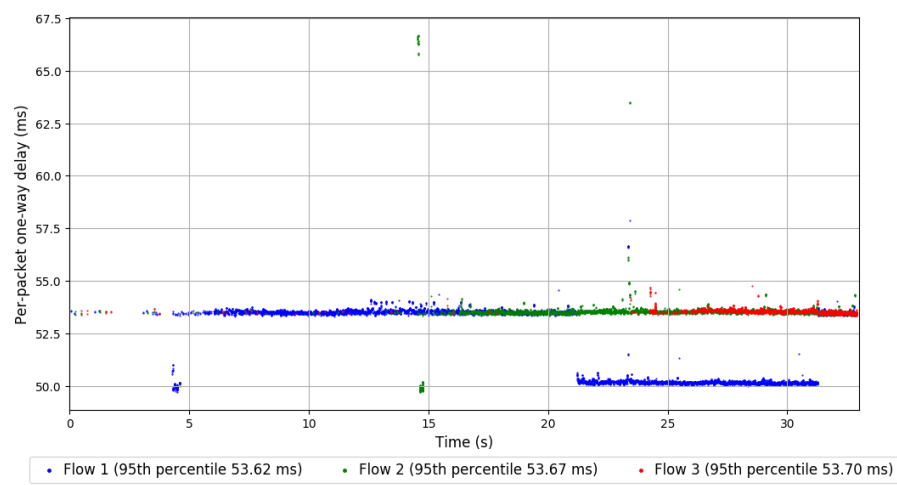
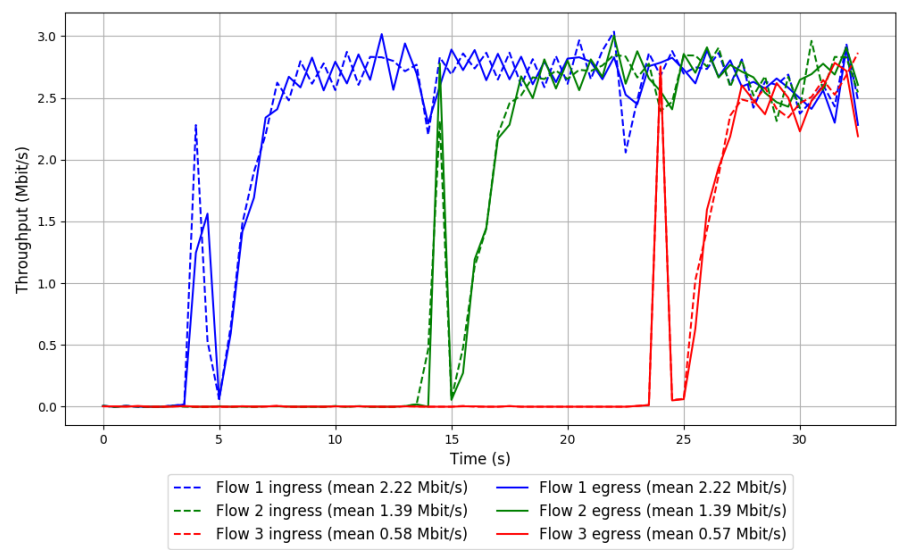


```
Run 1: Statistics of WebRTC media

Start at: 2018-01-17 15:36:57
End at: 2018-01-17 15:37:27

# Below is generated by plot.py at 2018-01-17 21:51:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 53.653 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 53.624 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 53.667 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 53.702 ms
Loss rate: 2.00%
```

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-01-17 15:54:10

End at: 2018-01-17 15:54:40

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 53.622 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 49.947 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 53.661 ms

Loss rate: 0.71%

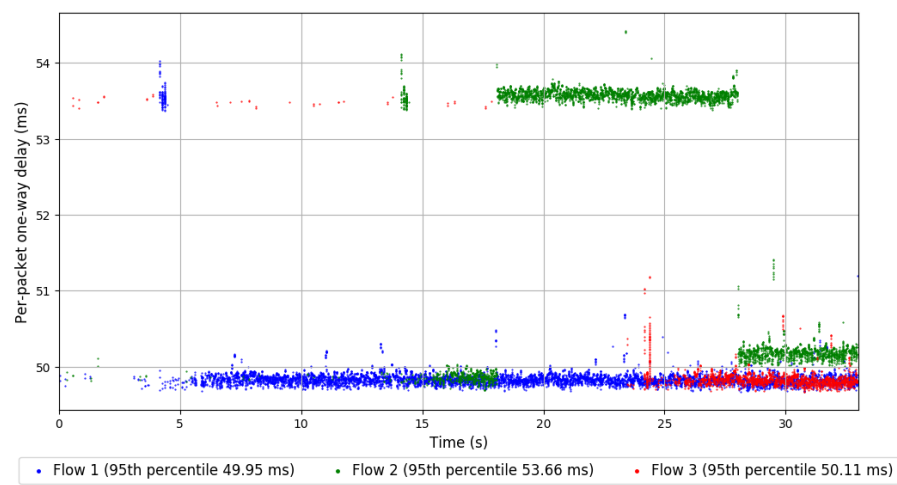
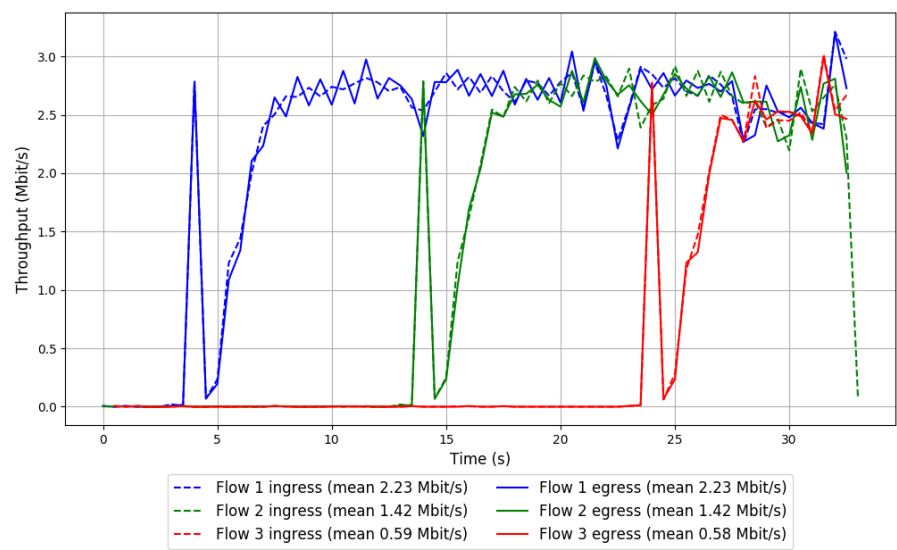
-- Flow 3:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 50.111 ms

Loss rate: 1.28%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-01-17 16:10:49

End at: 2018-01-17 16:11:19

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.23 Mbit/s

95th percentile per-packet one-way delay: 53.604 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 2.24 Mbit/s

95th percentile per-packet one-way delay: 53.629 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 53.591 ms

Loss rate: 0.61%

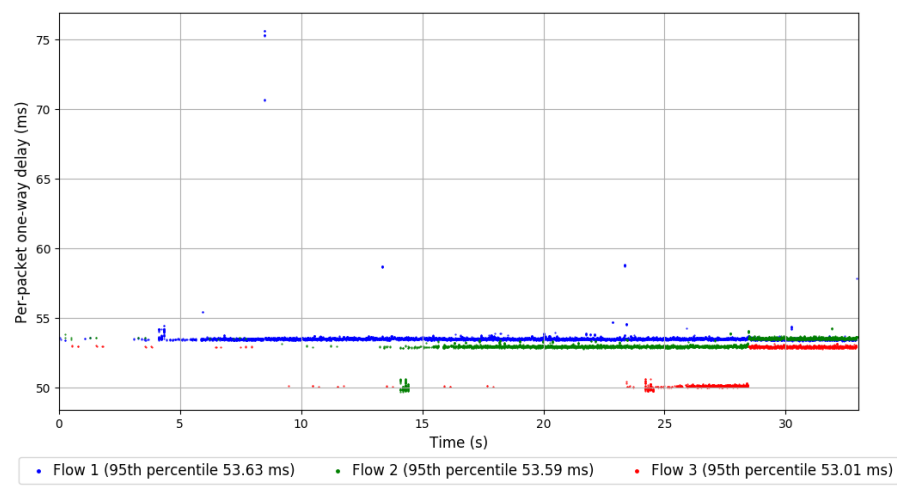
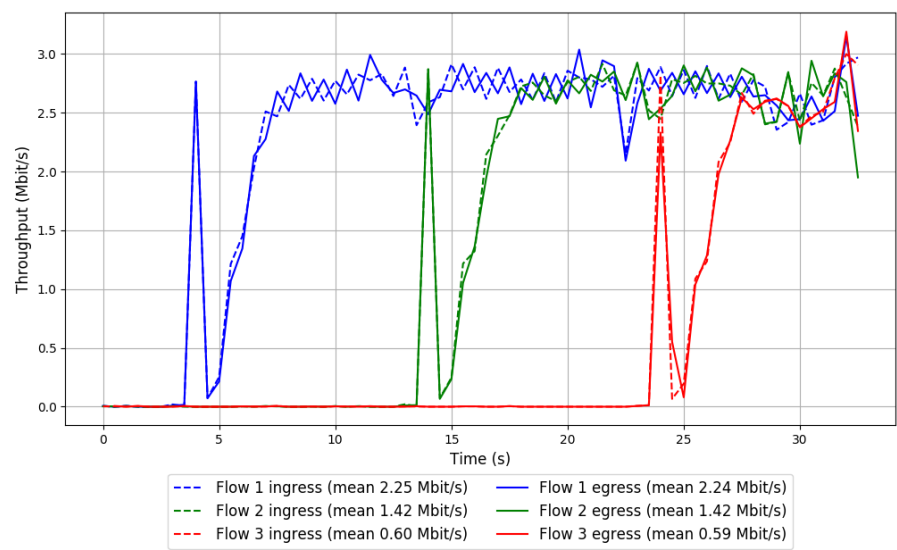
-- Flow 3:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 53.010 ms

Loss rate: 2.02%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-01-17 16:28:06

End at: 2018-01-17 16:28:36

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.24 Mbit/s

95th percentile per-packet one-way delay: 53.556 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 50.213 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 53.591 ms

Loss rate: 0.69%

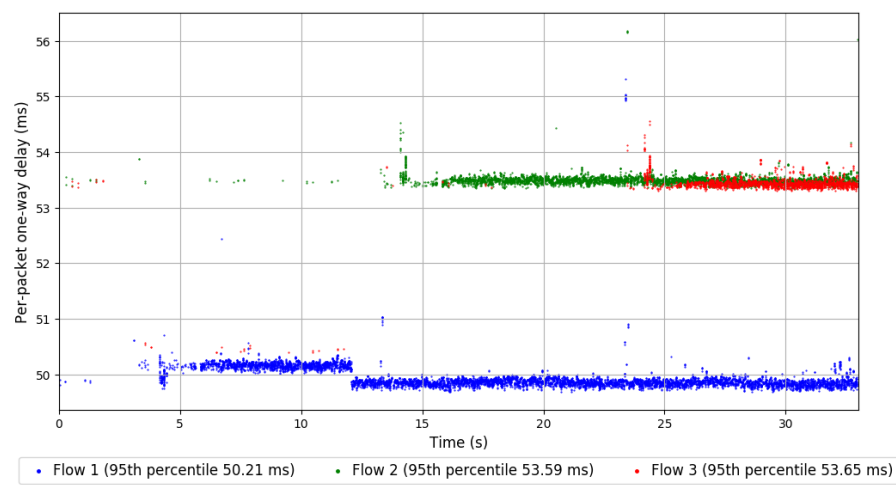
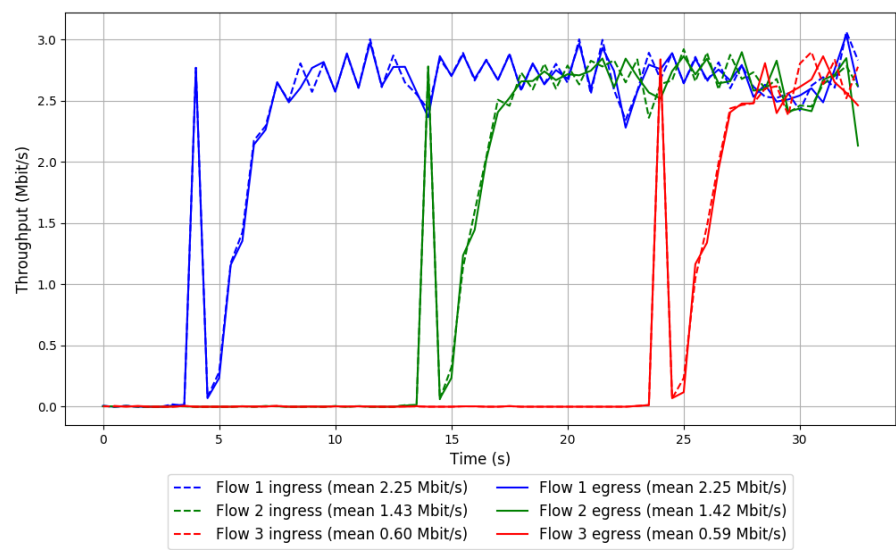
-- Flow 3:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 53.647 ms

Loss rate: 1.73%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-01-17 16:45:12

End at: 2018-01-17 16:45:42

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.22 Mbit/s

95th percentile per-packet one-way delay: 53.652 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 2.24 Mbit/s

95th percentile per-packet one-way delay: 53.613 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 53.668 ms

Loss rate: 0.64%

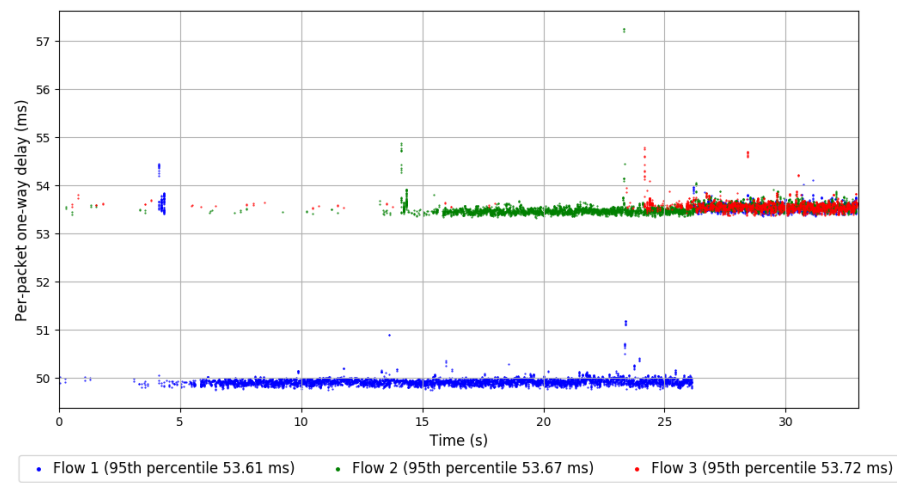
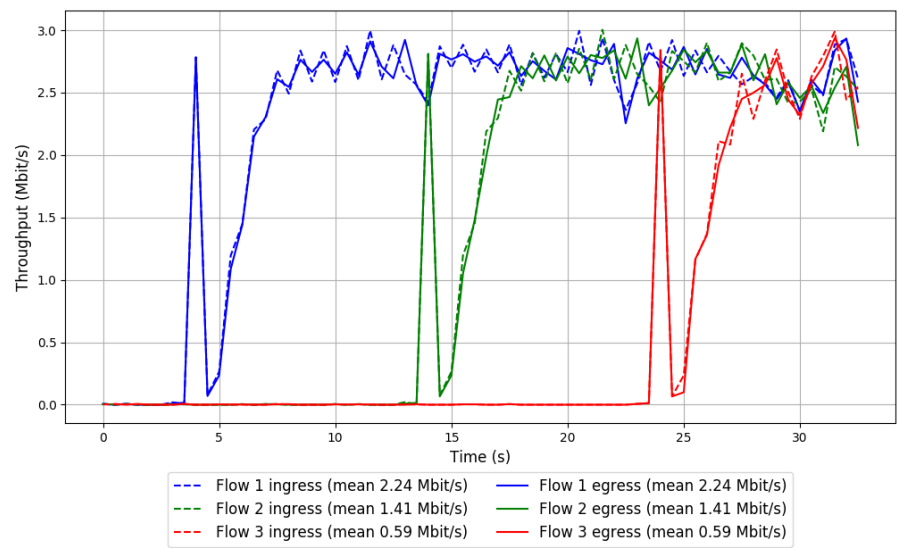
-- Flow 3:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 53.715 ms

Loss rate: 1.36%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-01-17 17:01:56

End at: 2018-01-17 17:02:26

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.43 Mbit/s

95th percentile per-packet one-way delay: 53.633 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 2.36 Mbit/s

95th percentile per-packet one-way delay: 53.614 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 53.646 ms

Loss rate: 0.48%

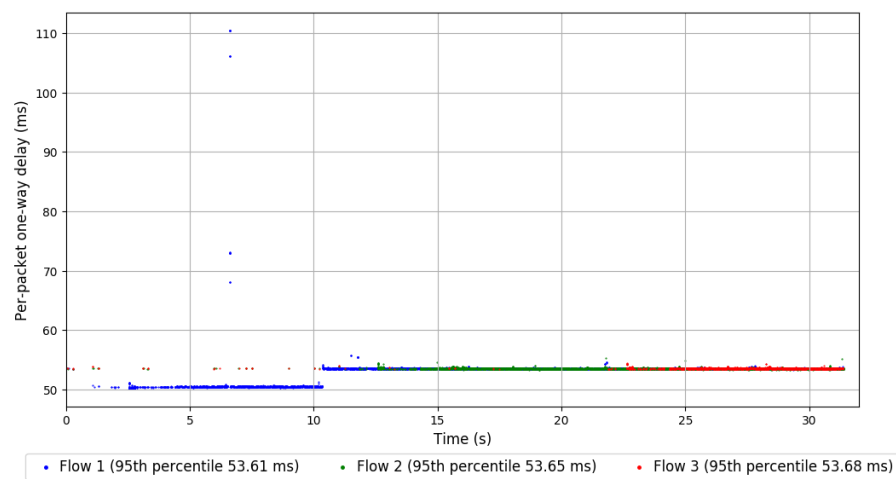
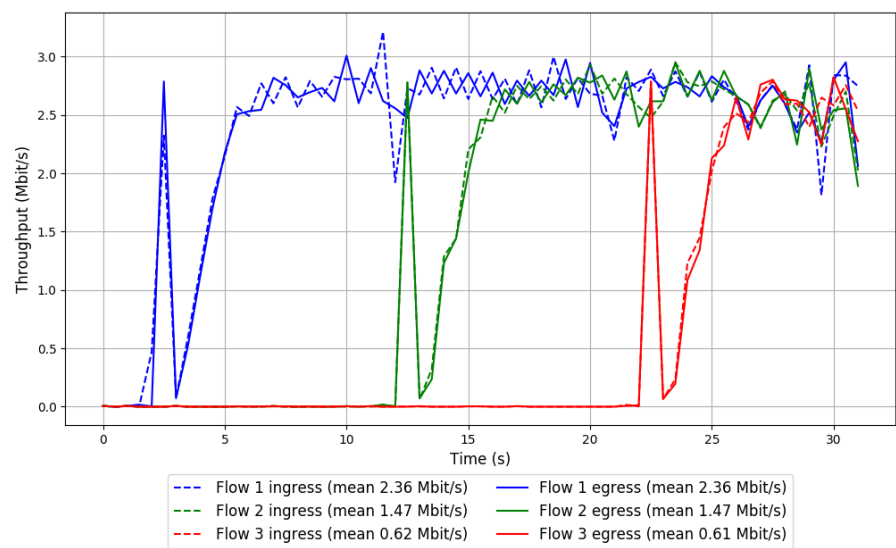
-- Flow 3:

Average throughput: 0.61 Mbit/s

95th percentile per-packet one-way delay: 53.679 ms

Loss rate: 1.82%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-01-17 17:19:09

End at: 2018-01-17 17:19:39

Below is generated by plot.py at 2018-01-17 21:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.22 Mbit/s

95th percentile per-packet one-way delay: 53.640 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 2.24 Mbit/s

95th percentile per-packet one-way delay: 50.331 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 53.692 ms

Loss rate: 0.66%

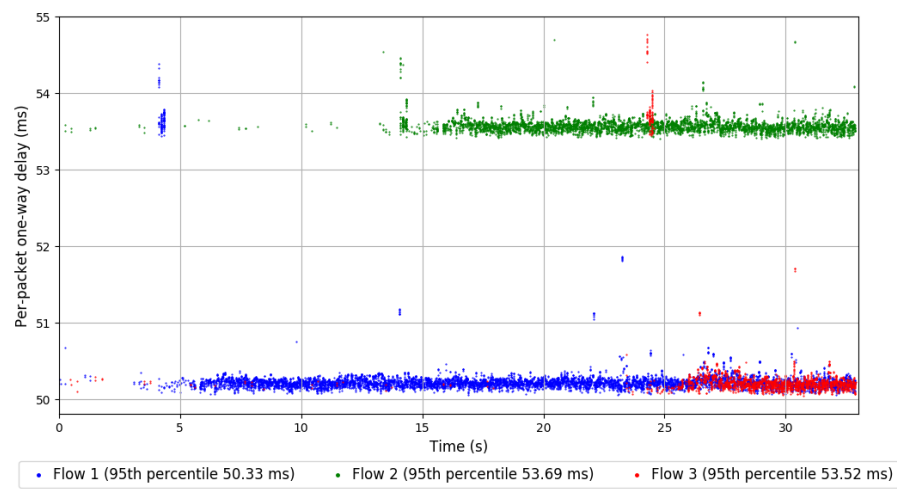
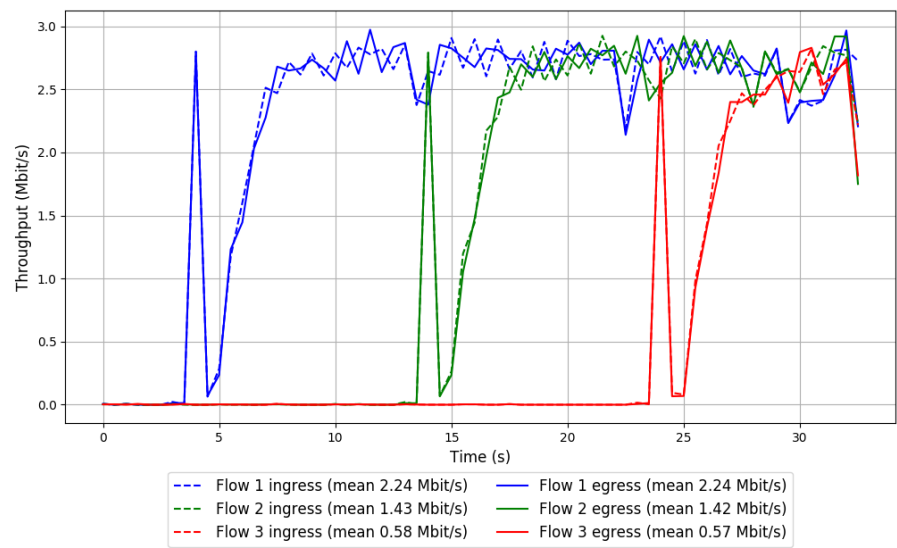
-- Flow 3:

Average throughput: 0.57 Mbit/s

95th percentile per-packet one-way delay: 53.516 ms

Loss rate: 1.63%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-01-17 17:35:57

End at: 2018-01-17 17:36:27

Below is generated by plot.py at 2018-01-17 21:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 53.661 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 50.359 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 53.681 ms

Loss rate: 0.63%

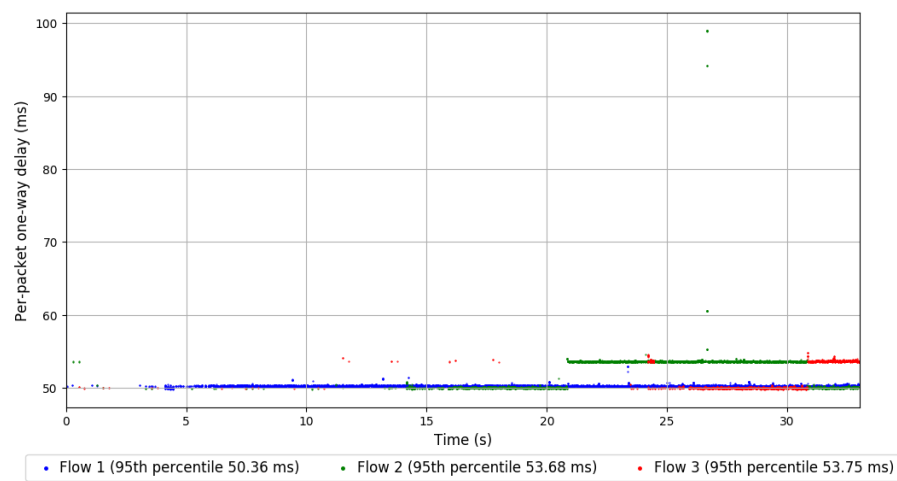
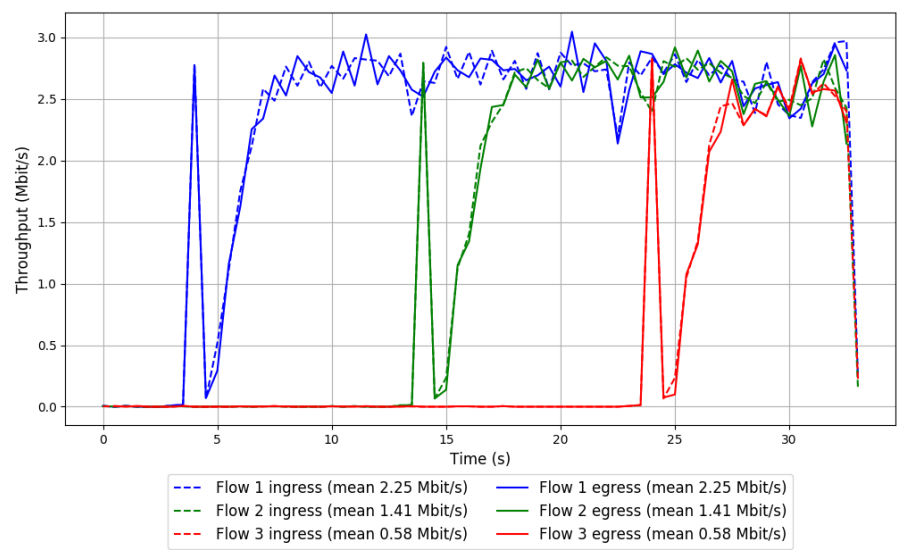
-- Flow 3:

Average throughput: 0.58 Mbit/s

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

Loss rate: 1.44%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-01-17 17:52:55

End at: 2018-01-17 17:53:25

Below is generated by plot.py at 2018-01-17 21:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.24 Mbit/s

95th percentile per-packet one-way delay: 53.753 ms

Loss rate: 0.73%

-- Flow 1:

Average throughput: 2.24 Mbit/s

95th percentile per-packet one-way delay: 53.774 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 53.660 ms

Loss rate: 0.74%

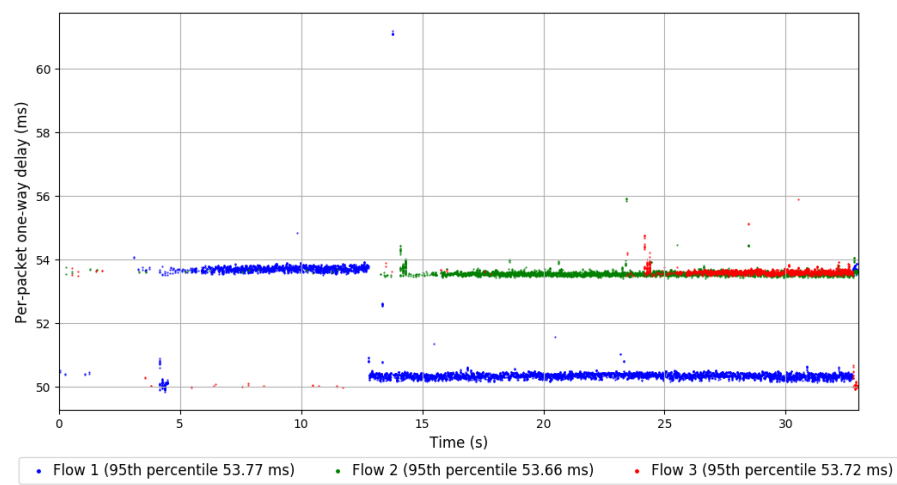
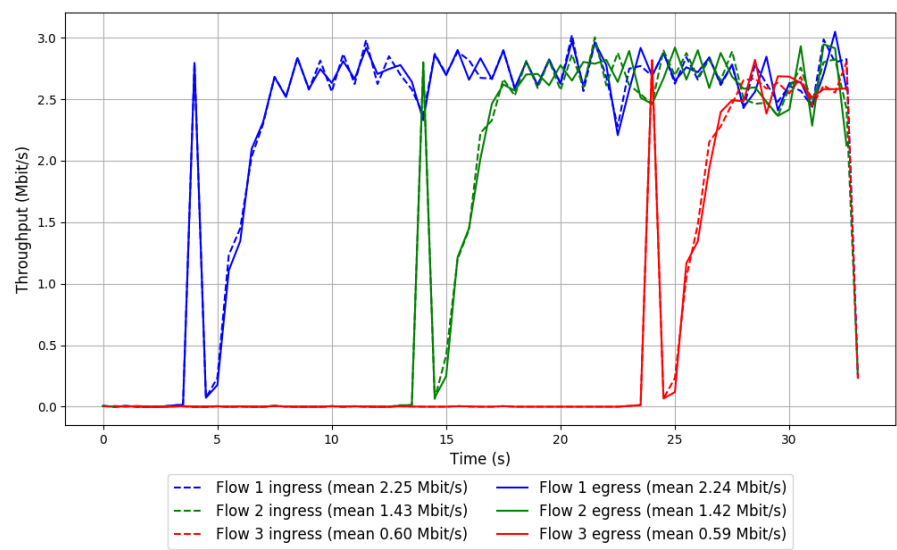
-- Flow 3:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 53.724 ms

Loss rate: 1.67%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-01-17 18:09:47

End at: 2018-01-17 18:10:17

Below is generated by plot.py at 2018-01-17 21:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.23 Mbit/s

95th percentile per-packet one-way delay: 53.776 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 2.23 Mbit/s

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

Loss rate: 0.54%

-- Flow 2:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 53.750 ms

Loss rate: 0.69%

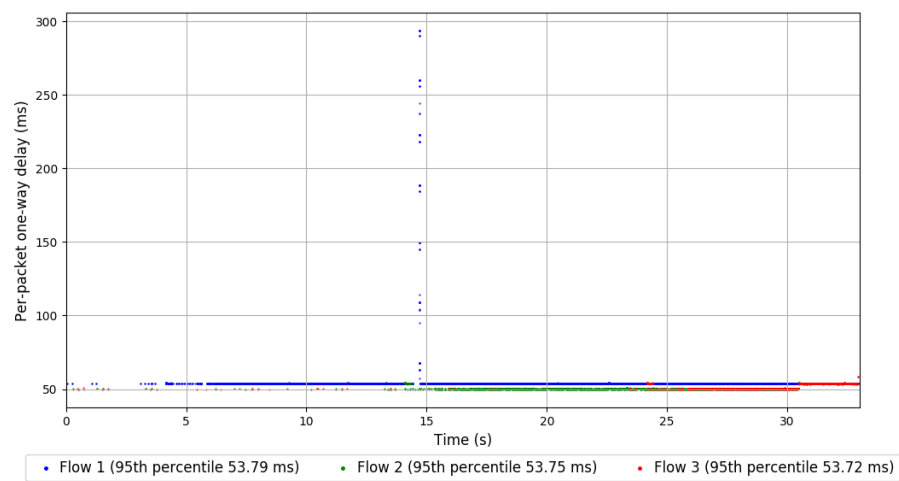
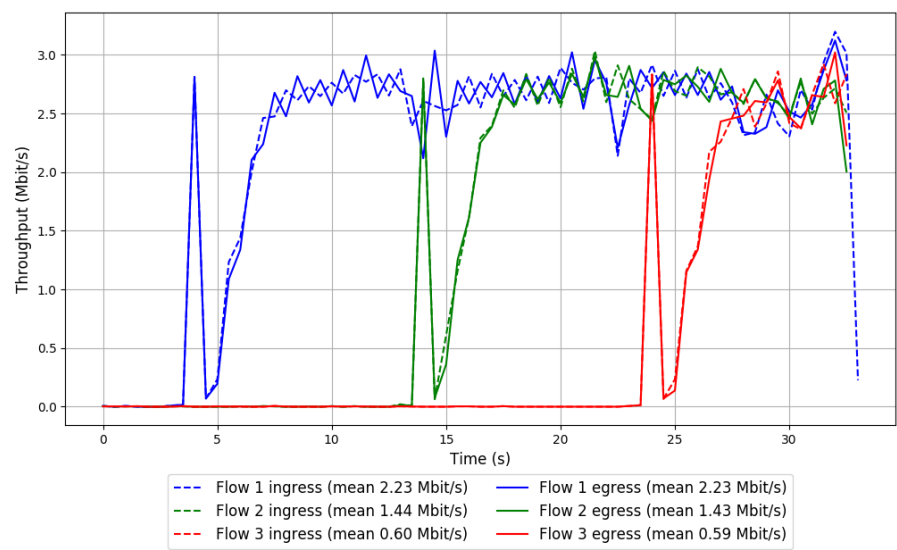
-- Flow 3:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 53.716 ms

Loss rate: 1.75%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-01-17 15:44:03

End at: 2018-01-17 15:44:33

Below is generated by plot.py at 2018-01-17 21:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.54 Mbit/s

95th percentile per-packet one-way delay: 54.041 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 7.89 Mbit/s

95th percentile per-packet one-way delay: 54.180 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 7.83 Mbit/s

95th percentile per-packet one-way delay: 53.547 ms

Loss rate: 0.62%

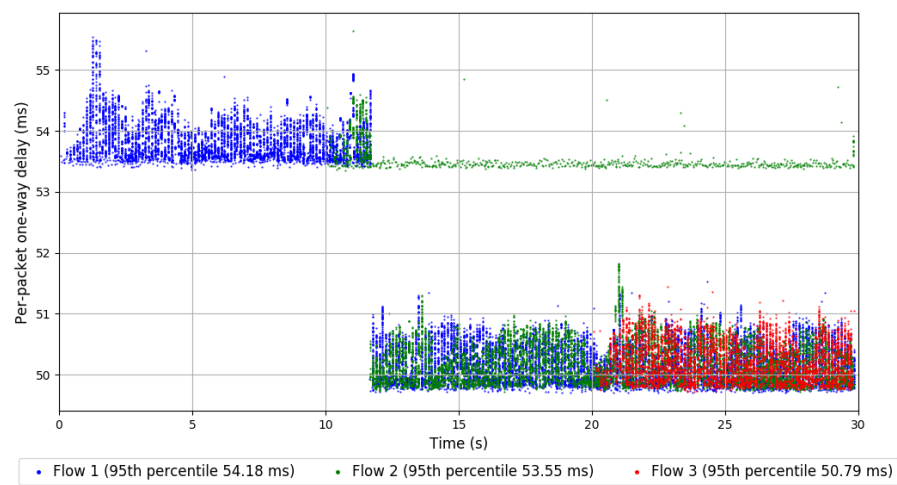
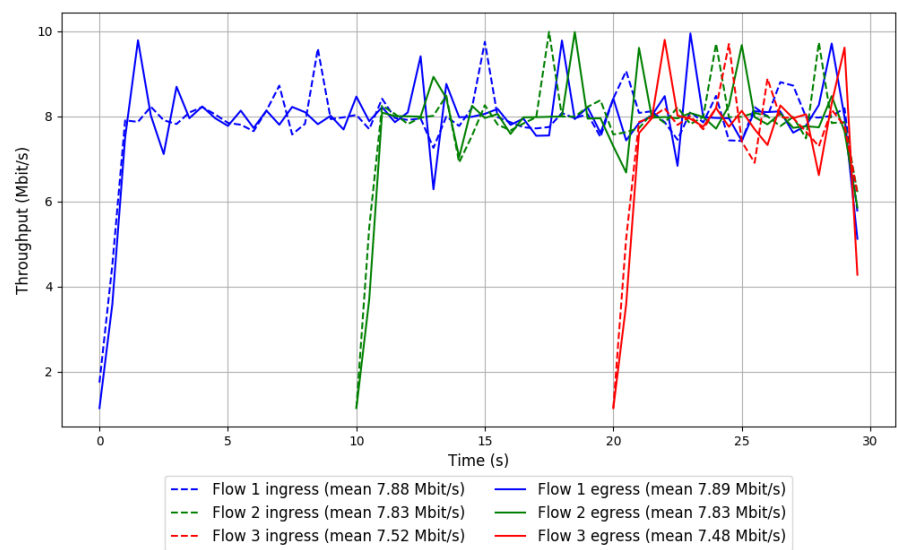
-- Flow 3:

Average throughput: 7.48 Mbit/s

95th percentile per-packet one-way delay: 50.786 ms

Loss rate: 1.30%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-01-17 16:01:06

End at: 2018-01-17 16:01:36

Below is generated by plot.py at 2018-01-17 21:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.49 Mbit/s

95th percentile per-packet one-way delay: 50.801 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 7.86 Mbit/s

95th percentile per-packet one-way delay: 50.791 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 7.80 Mbit/s

95th percentile per-packet one-way delay: 50.765 ms

Loss rate: 0.63%

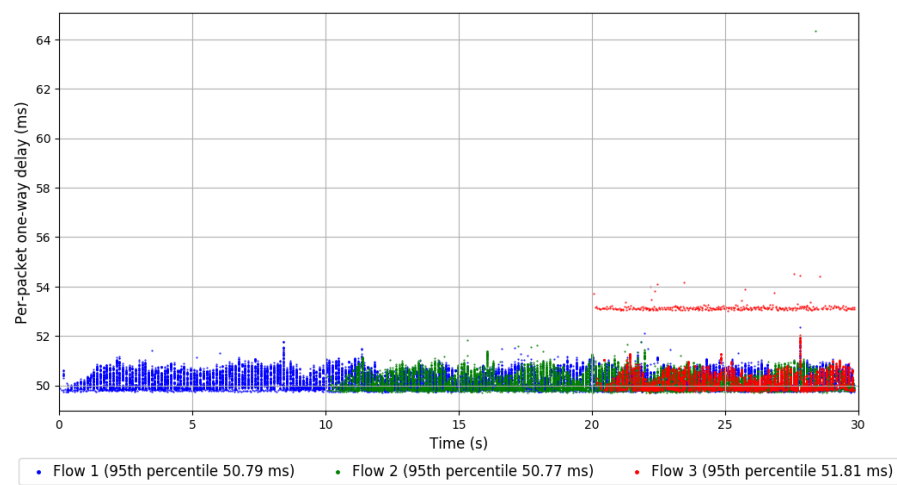
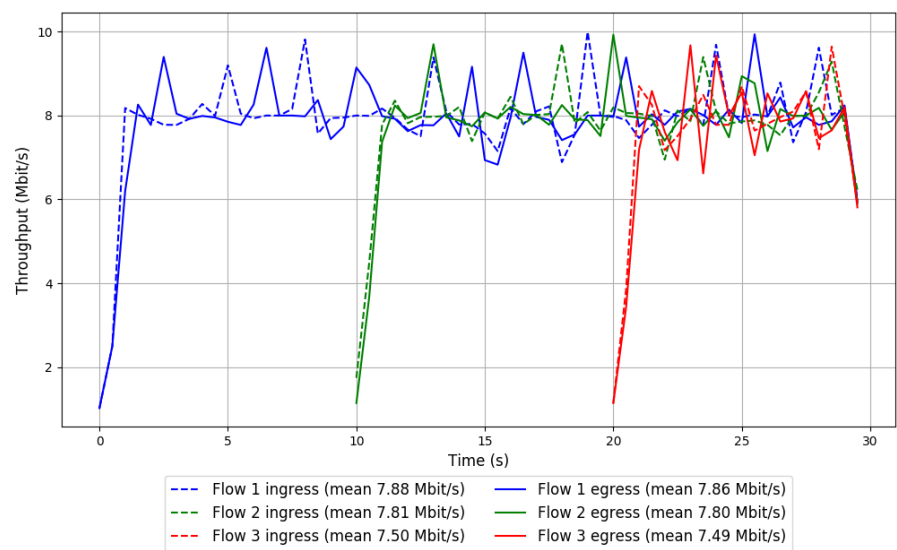
-- Flow 3:

Average throughput: 7.49 Mbit/s

95th percentile per-packet one-way delay: 51.812 ms

Loss rate: 1.28%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-01-17 16:17:54

End at: 2018-01-17 16:18:24

Below is generated by plot.py at 2018-01-17 21:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.11 Mbit/s

95th percentile per-packet one-way delay: 54.602 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 7.69 Mbit/s

95th percentile per-packet one-way delay: 54.474 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 7.59 Mbit/s

95th percentile per-packet one-way delay: 54.758 ms

Loss rate: 1.11%

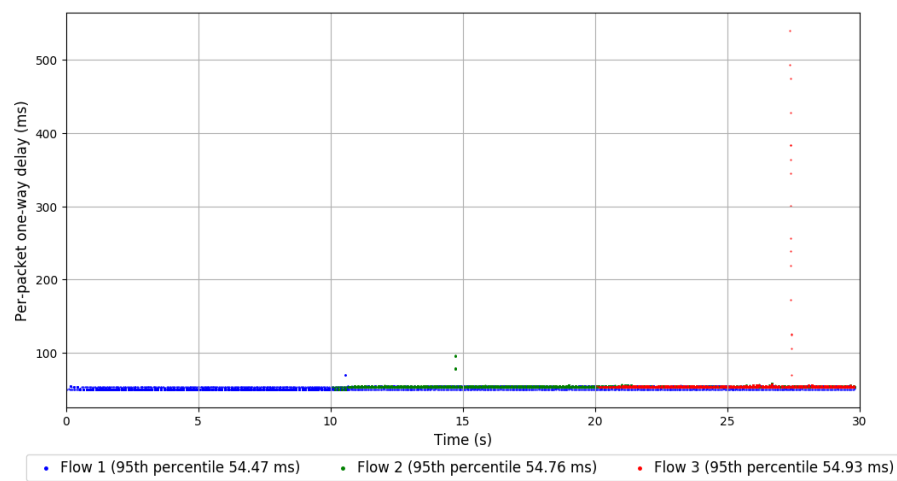
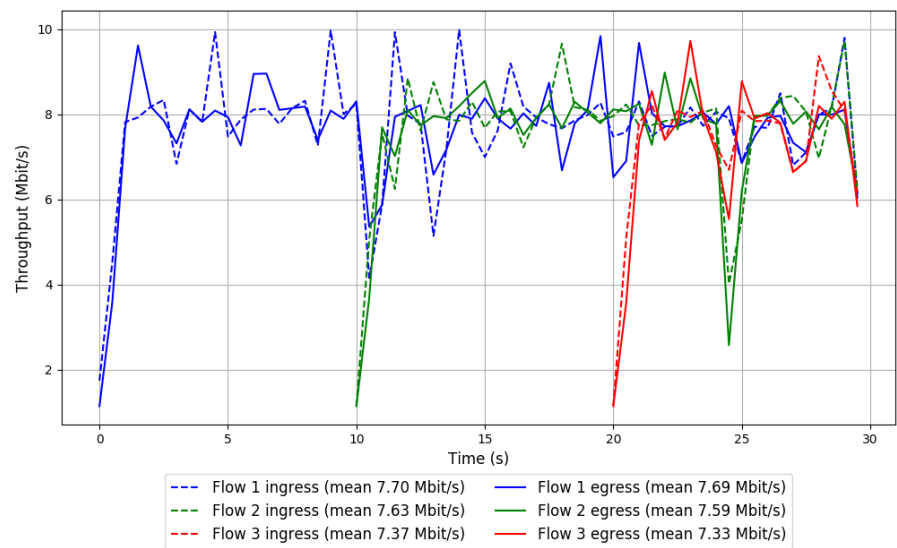
-- Flow 3:

Average throughput: 7.33 Mbit/s

95th percentile per-packet one-way delay: 54.934 ms

Loss rate: 1.76%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-01-17 16:35:05

End at: 2018-01-17 16:35:35

Below is generated by plot.py at 2018-01-17 21:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.62 Mbit/s

95th percentile per-packet one-way delay: 53.938 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 7.92 Mbit/s

95th percentile per-packet one-way delay: 54.138 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 7.92 Mbit/s

95th percentile per-packet one-way delay: 51.123 ms

Loss rate: 0.57%

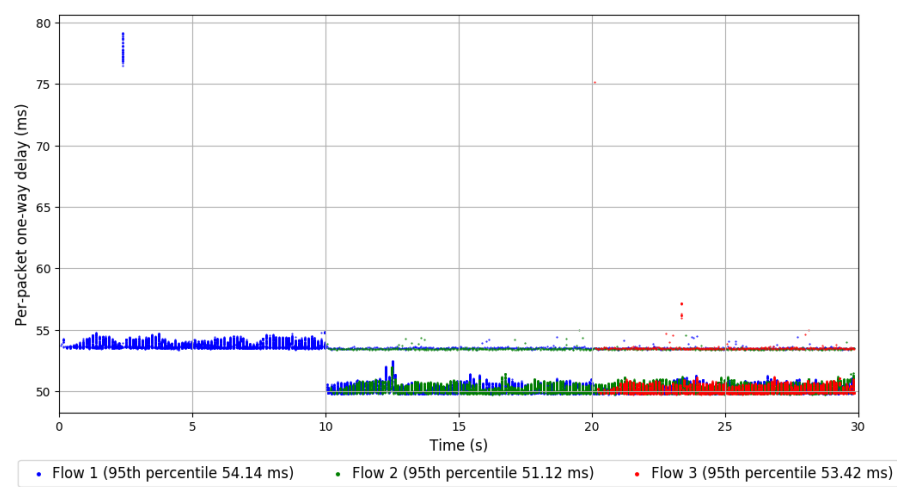
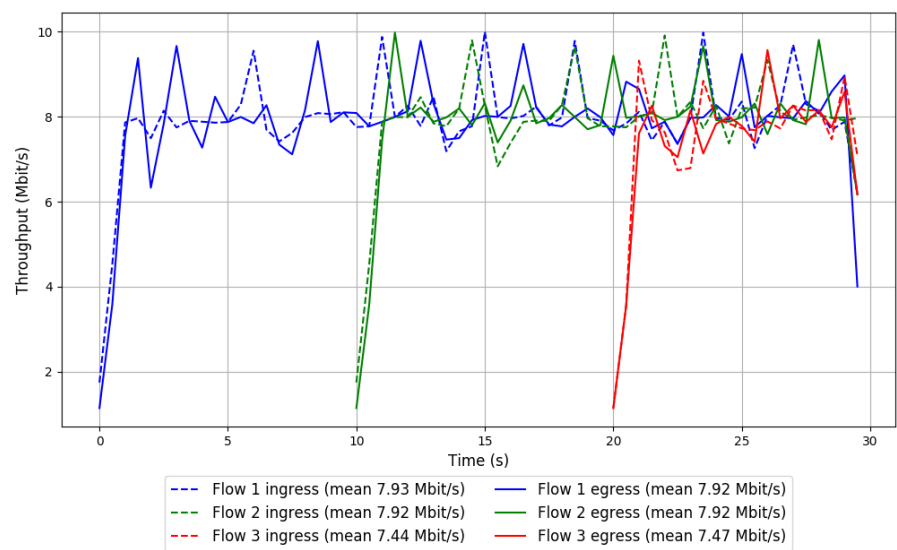
-- Flow 3:

Average throughput: 7.47 Mbit/s

95th percentile per-packet one-way delay: 53.423 ms

Loss rate: 0.87%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-01-17 16:52:13

End at: 2018-01-17 16:52:43

Below is generated by plot.py at 2018-01-17 21:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.43 Mbit/s

95th percentile per-packet one-way delay: 54.220 ms

Loss rate: 0.73%

-- Flow 1:

Average throughput: 7.82 Mbit/s

95th percentile per-packet one-way delay: 54.245 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 7.72 Mbit/s

95th percentile per-packet one-way delay: 54.243 ms

Loss rate: 0.72%

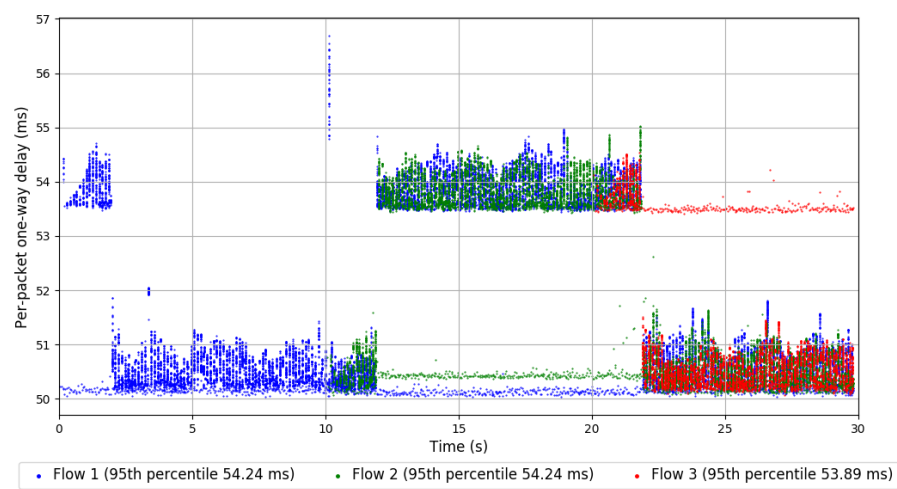
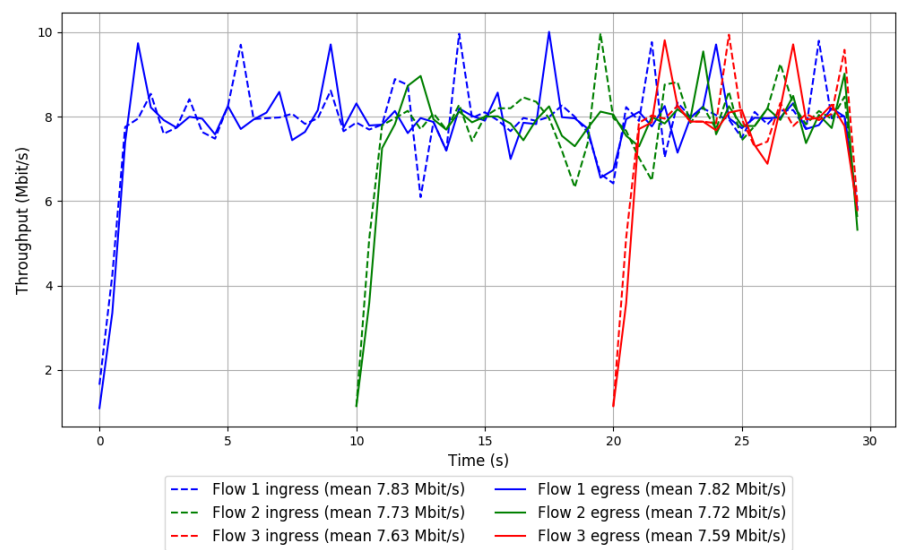
-- Flow 3:

Average throughput: 7.59 Mbit/s

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

Loss rate: 1.54%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-01-17 17:09:03

End at: 2018-01-17 17:09:33

Below is generated by plot.py at 2018-01-17 21:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.50 Mbit/s

95th percentile per-packet one-way delay: 54.218 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 7.87 Mbit/s

95th percentile per-packet one-way delay: 54.146 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 7.75 Mbit/s

95th percentile per-packet one-way delay: 54.353 ms

Loss rate: 0.65%

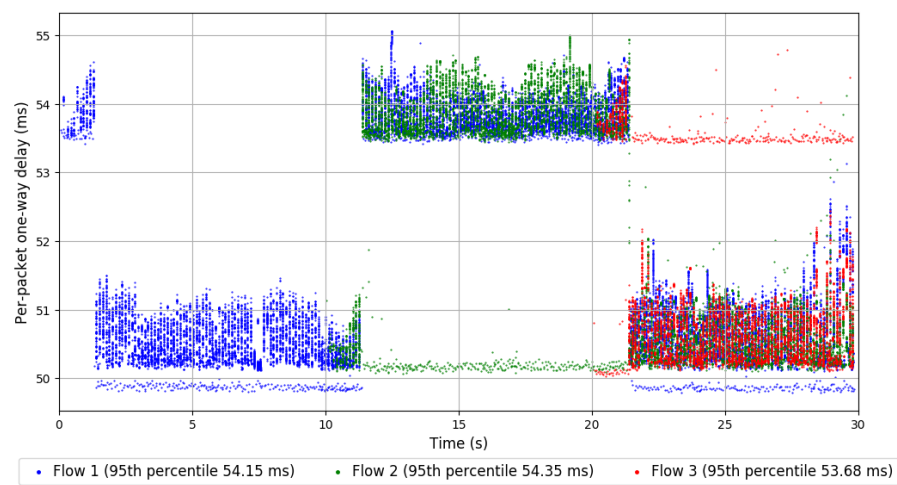
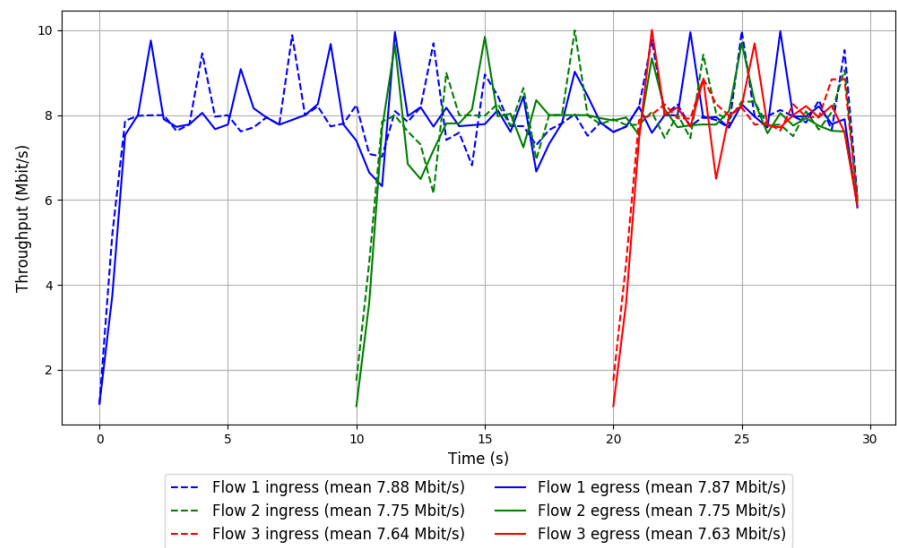
-- Flow 3:

Average throughput: 7.63 Mbit/s

95th percentile per-packet one-way delay: 53.677 ms

Loss rate: 1.33%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-01-17 17:26:13

End at: 2018-01-17 17:26:43

Below is generated by plot.py at 2018-01-17 21:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.41 Mbit/s

95th percentile per-packet one-way delay: 54.322 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 7.86 Mbit/s

95th percentile per-packet one-way delay: 54.349 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 7.80 Mbit/s

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

Loss rate: 1.02%

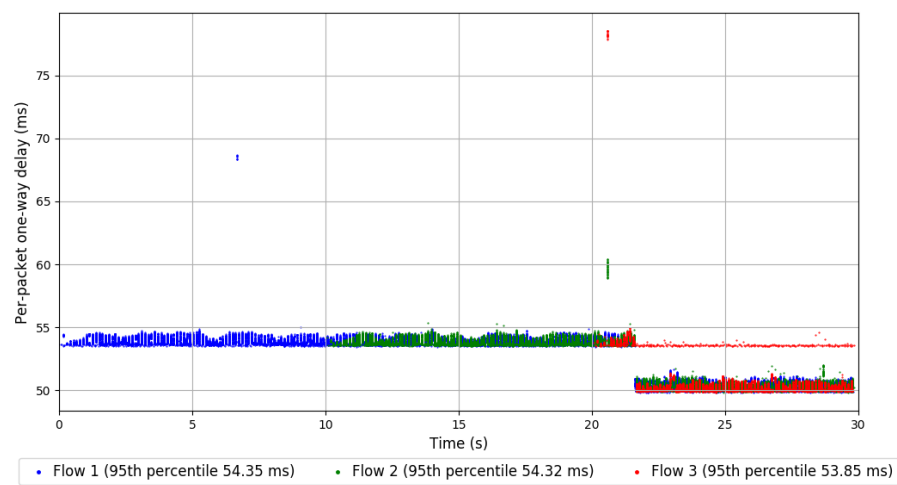
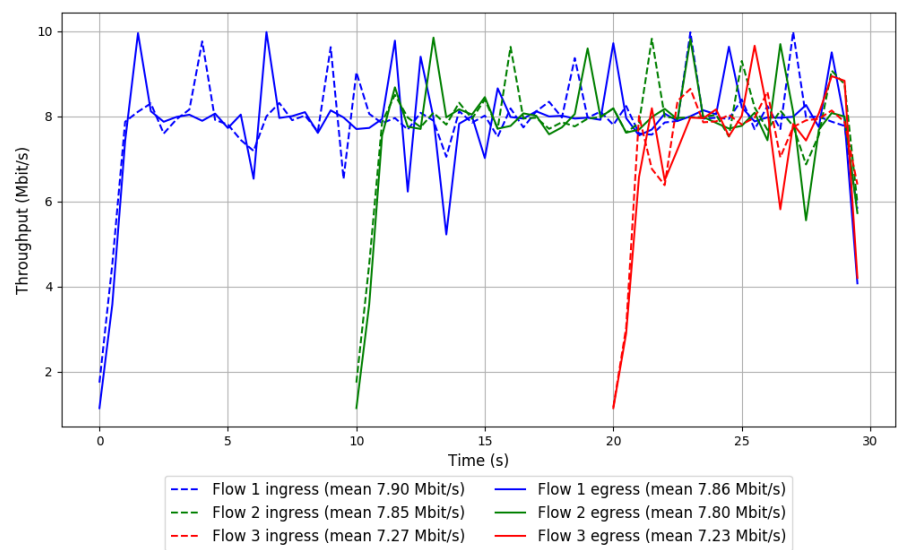
-- Flow 3:

Average throughput: 7.23 Mbit/s

95th percentile per-packet one-way delay: 53.852 ms

Loss rate: 1.71%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-01-17 17:42:50

End at: 2018-01-17 17:43:20

Below is generated by plot.py at 2018-01-17 21:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.39 Mbit/s

95th percentile per-packet one-way delay: 54.391 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 7.79 Mbit/s

95th percentile per-packet one-way delay: 54.345 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 7.77 Mbit/s

95th percentile per-packet one-way delay: 54.406 ms

Loss rate: 0.64%

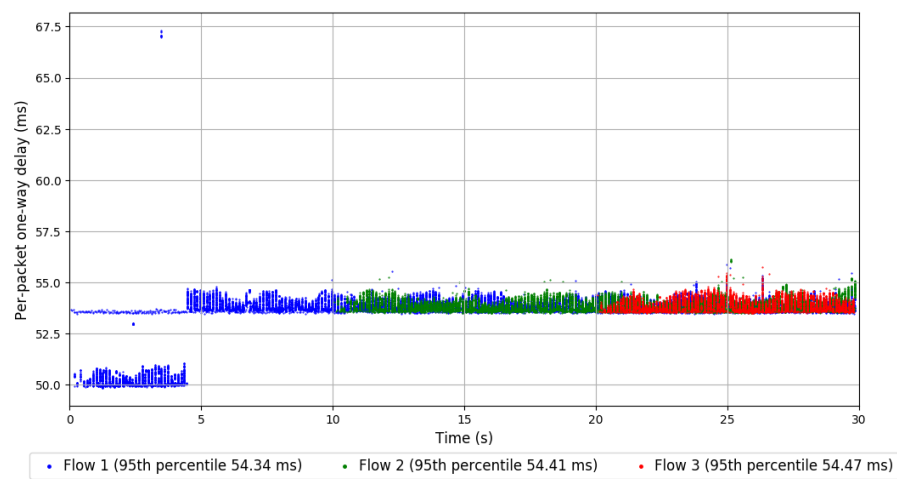
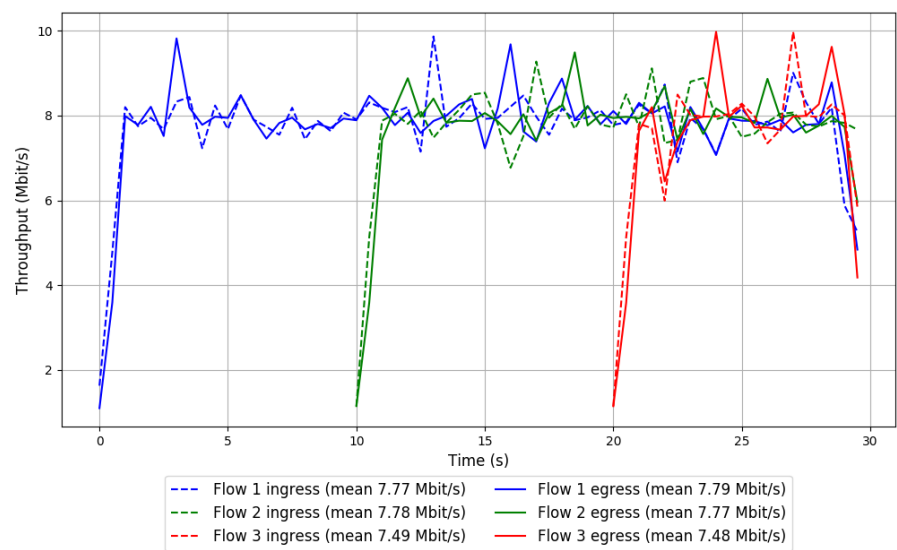
-- Flow 3:

Average throughput: 7.48 Mbit/s

95th percentile per-packet one-way delay: 54.468 ms

Loss rate: 1.34%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-01-17 18:00:01

End at: 2018-01-17 18:00:31

Below is generated by plot.py at 2018-01-17 21:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.45 Mbit/s

95th percentile per-packet one-way delay: 54.480 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 7.86 Mbit/s

95th percentile per-packet one-way delay: 54.469 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 7.84 Mbit/s

95th percentile per-packet one-way delay: 54.479 ms

Loss rate: 0.72%

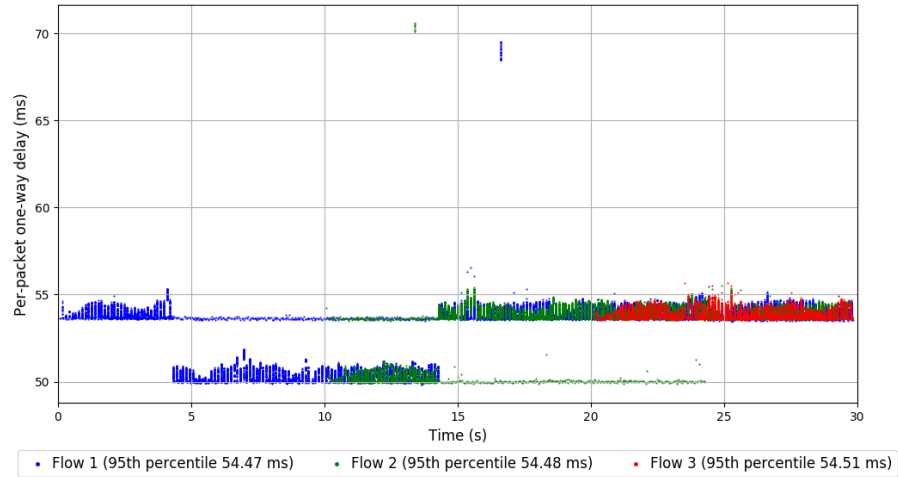
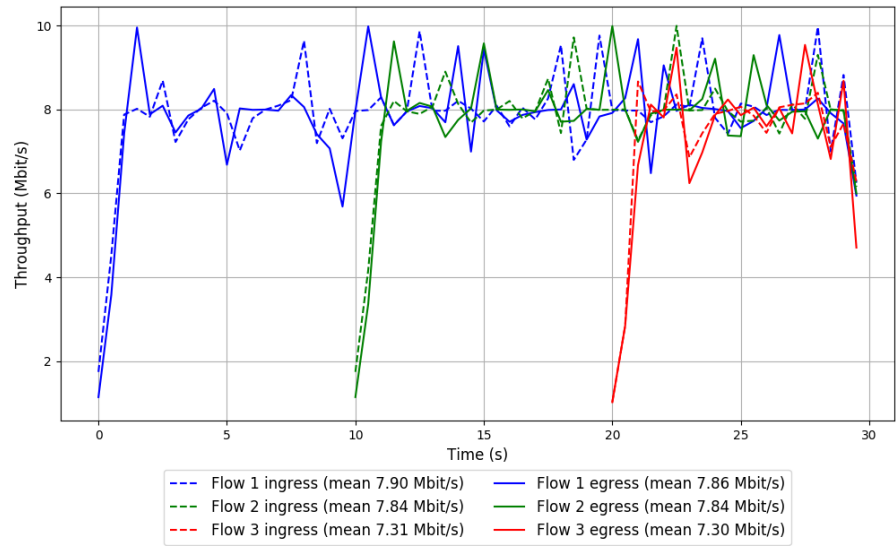
-- Flow 3:

Average throughput: 7.30 Mbit/s

95th percentile per-packet one-way delay: 54.514 ms

Loss rate: 1.39%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-01-17 18:16:49

End at: 2018-01-17 18:17:19

Below is generated by plot.py at 2018-01-17 21:51:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.55 Mbit/s

95th percentile per-packet one-way delay: 54.321 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 7.94 Mbit/s

95th percentile per-packet one-way delay: 54.307 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 7.73 Mbit/s

95th percentile per-packet one-way delay: 54.334 ms

Loss rate: 0.58%

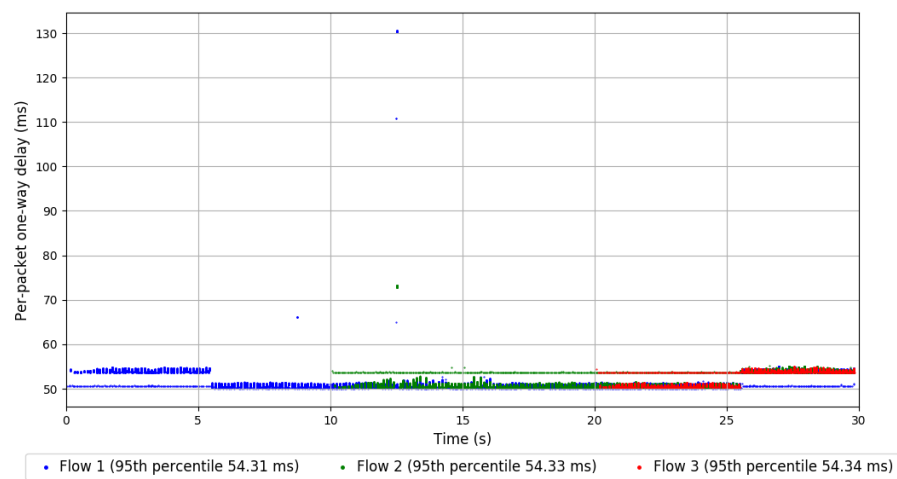
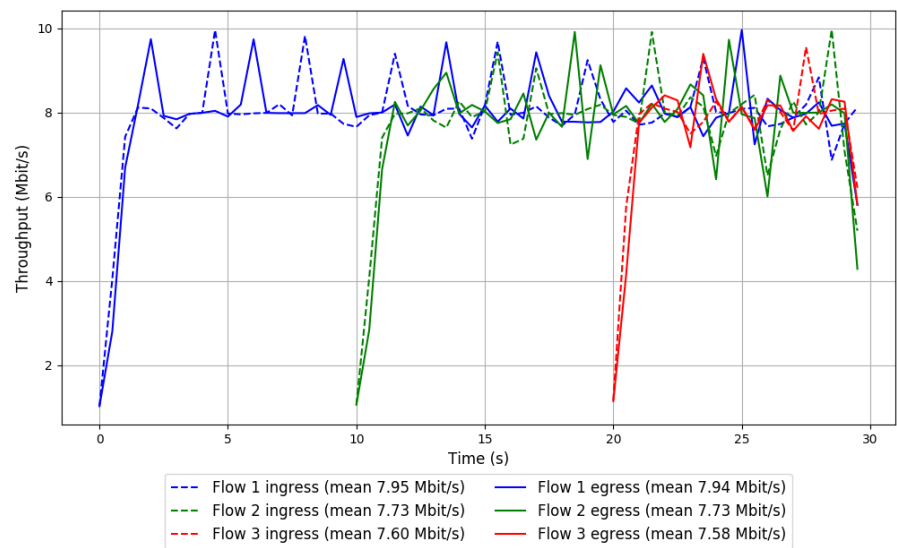
-- Flow 3:

Average throughput: 7.58 Mbit/s

95th percentile per-packet one-way delay: 54.336 ms

Loss rate: 1.31%

Run 10: Report of Sprout — Data Link

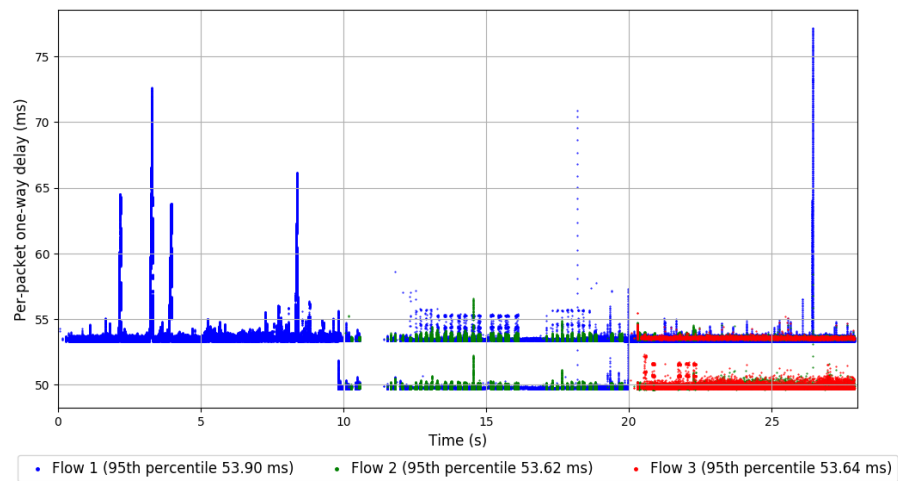
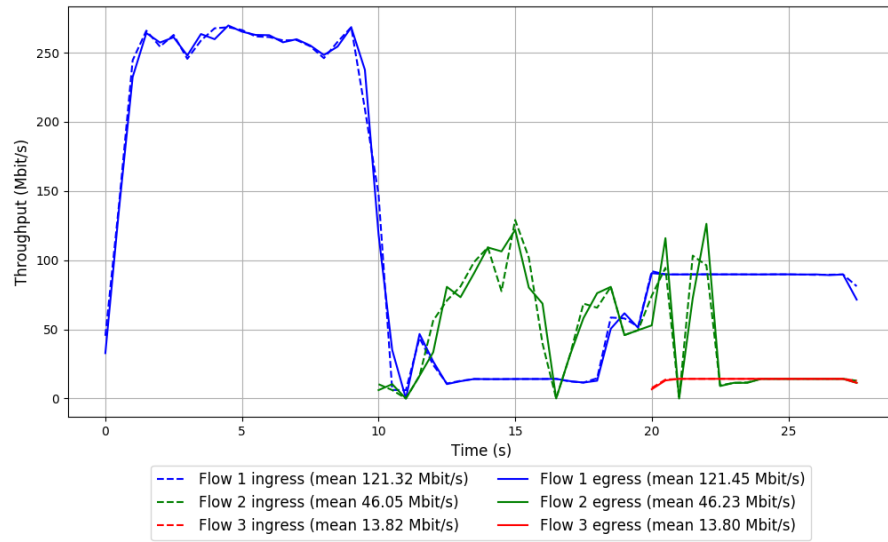


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-01-17 15:30:43
End at: 2018-01-17 15:31:13

# Below is generated by plot.py at 2018-01-17 21:51:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 154.94 Mbit/s
95th percentile per-packet one-way delay: 53.792 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 121.45 Mbit/s
95th percentile per-packet one-way delay: 53.900 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 46.23 Mbit/s
95th percentile per-packet one-way delay: 53.623 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 13.80 Mbit/s
95th percentile per-packet one-way delay: 53.639 ms
Loss rate: 1.39%
```

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

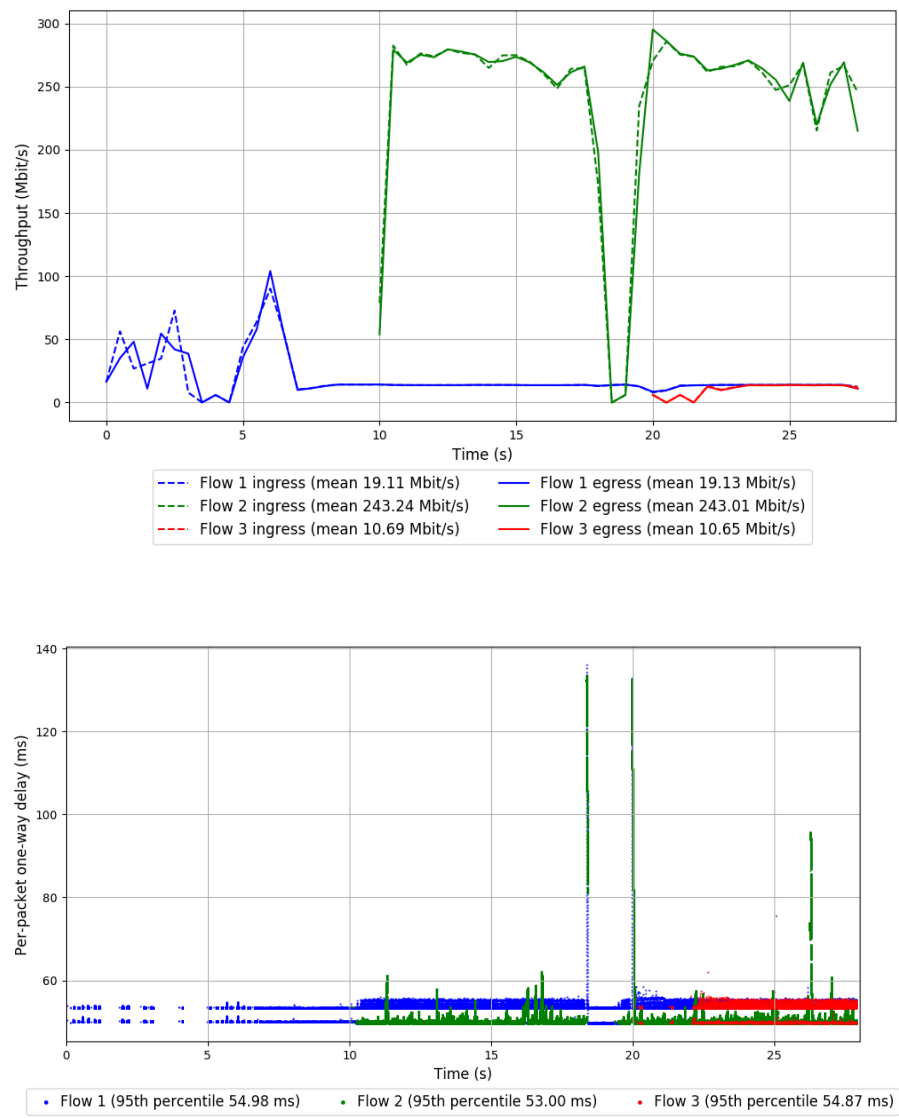


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-01-17 15:47:43
End at: 2018-01-17 15:48:13

# Below is generated by plot.py at 2018-01-17 21:51:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 177.79 Mbit/s
95th percentile per-packet one-way delay: 53.937 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 19.13 Mbit/s
95th percentile per-packet one-way delay: 54.983 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 243.01 Mbit/s
95th percentile per-packet one-way delay: 53.003 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 10.65 Mbit/s
95th percentile per-packet one-way delay: 54.866 ms
Loss rate: 1.67%
```

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

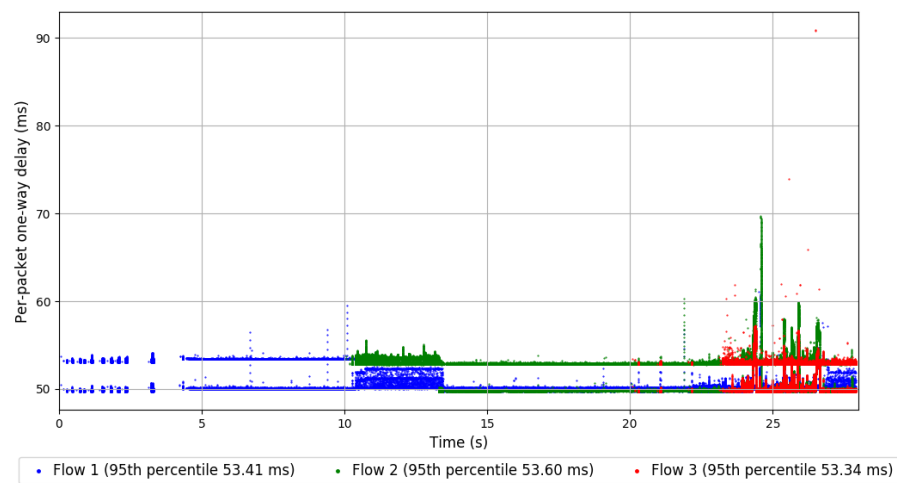
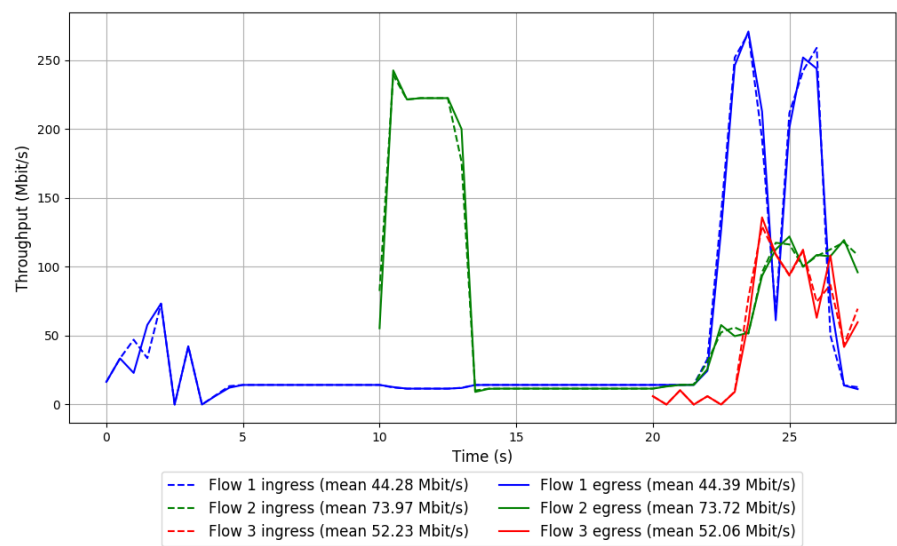


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-01-17 16:04:39
End at: 2018-01-17 16:05:10

# Below is generated by plot.py at 2018-01-17 21:51:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 106.24 Mbit/s
95th percentile per-packet one-way delay: 53.529 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 44.39 Mbit/s
95th percentile per-packet one-way delay: 53.406 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 73.72 Mbit/s
95th percentile per-packet one-way delay: 53.602 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 52.06 Mbit/s
95th percentile per-packet one-way delay: 53.335 ms
Loss rate: 1.37%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-01-17 16:21:26

End at: 2018-01-17 16:21:56

Below is generated by plot.py at 2018-01-17 21:51:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 212.39 Mbit/s

95th percentile per-packet one-way delay: 54.284 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 195.95 Mbit/s

95th percentile per-packet one-way delay: 54.301 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 20.58 Mbit/s

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

Loss rate: 0.41%

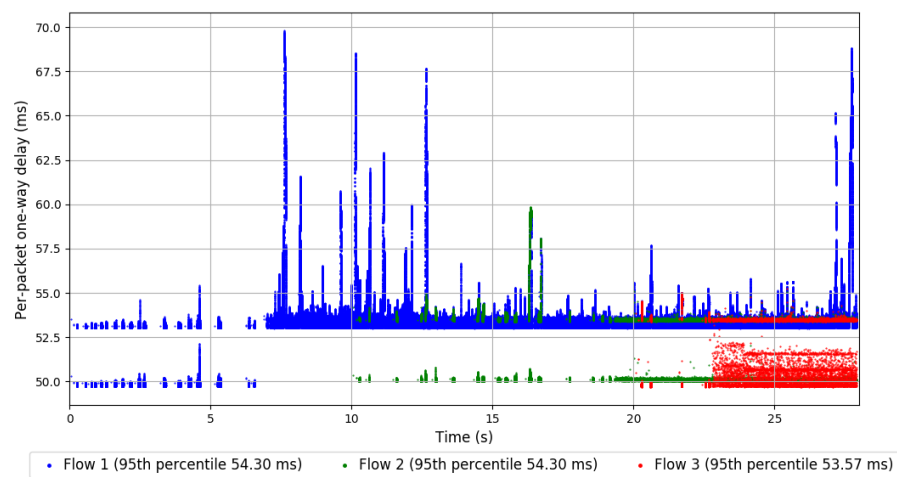
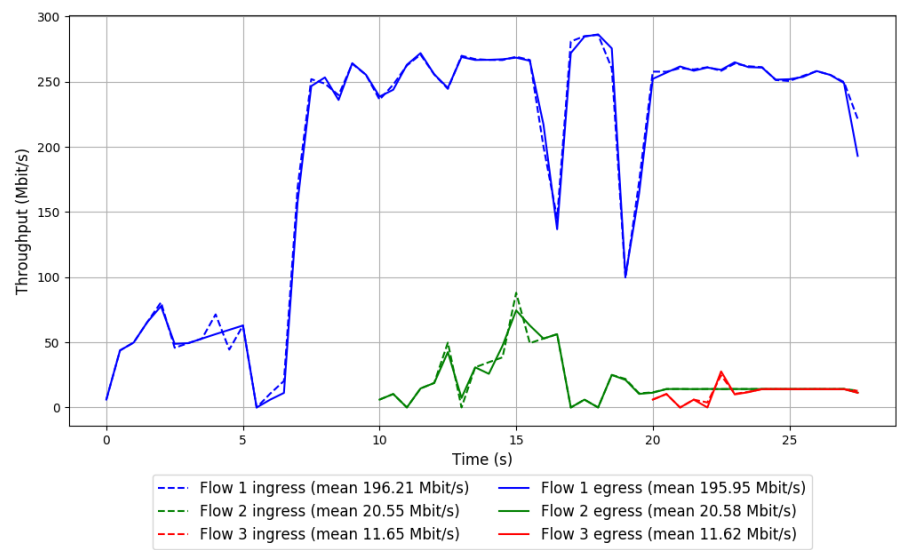
-- Flow 3:

Average throughput: 11.62 Mbit/s

95th percentile per-packet one-way delay: 53.573 ms

Loss rate: 1.63%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-01-17 16:38:44

End at: 2018-01-17 16:39:14

Below is generated by plot.py at 2018-01-17 21:53:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 266.86 Mbit/s

95th percentile per-packet one-way delay: 55.402 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 111.03 Mbit/s

95th percentile per-packet one-way delay: 53.593 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 239.52 Mbit/s

95th percentile per-packet one-way delay: 57.606 ms

Loss rate: 0.70%

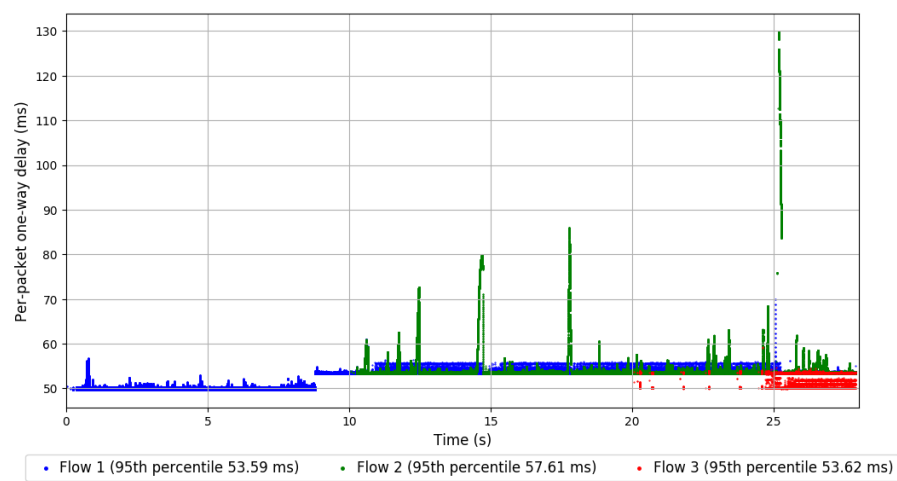
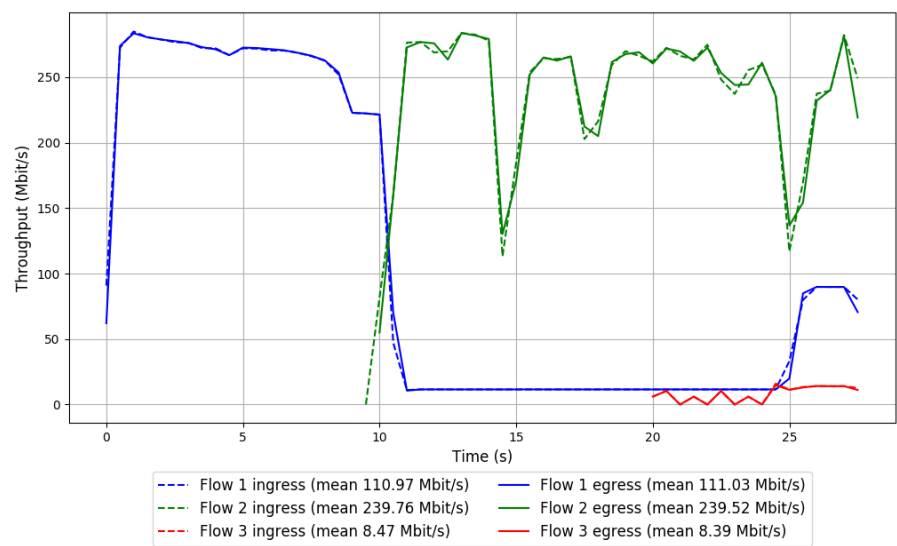
-- Flow 3:

Average throughput: 8.39 Mbit/s

95th percentile per-packet one-way delay: 53.625 ms

Loss rate: 2.23%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-01-17 16:55:48

End at: 2018-01-17 16:56:18

Below is generated by plot.py at 2018-01-17 21:53:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 199.60 Mbit/s

95th percentile per-packet one-way delay: 59.106 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 51.52 Mbit/s

95th percentile per-packet one-way delay: 53.560 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 202.07 Mbit/s

95th percentile per-packet one-way delay: 65.251 ms

Loss rate: 1.38%

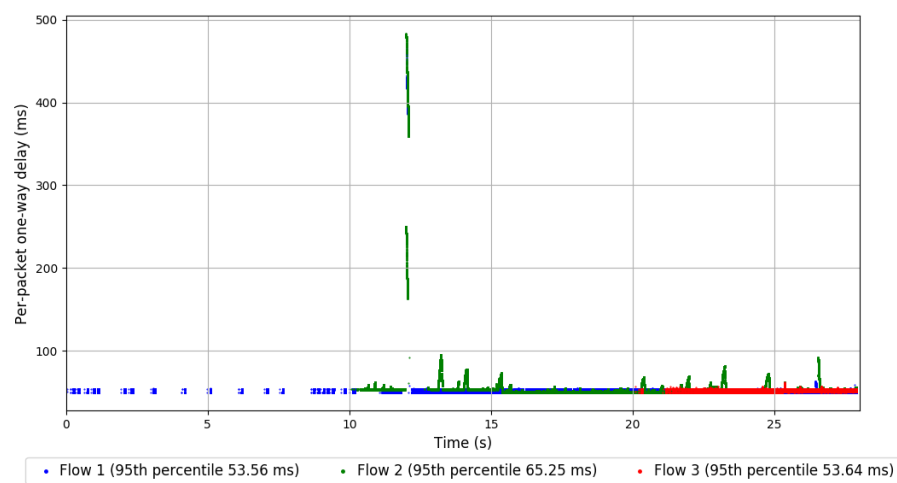
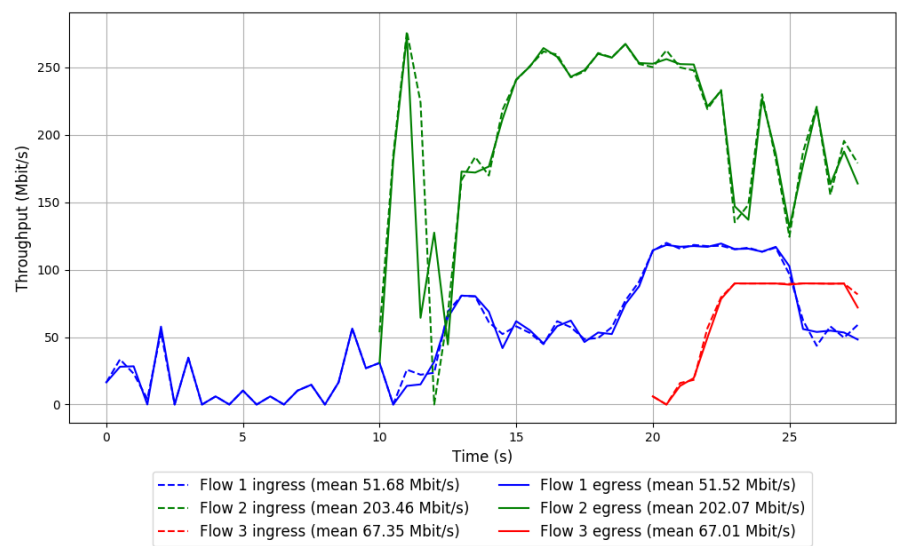
-- Flow 3:

Average throughput: 67.01 Mbit/s

95th percentile per-packet one-way delay: 53.641 ms

Loss rate: 1.81%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-01-17 17:12:38

End at: 2018-01-17 17:13:08

Below is generated by plot.py at 2018-01-17 21:56:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 253.83 Mbit/s

95th percentile per-packet one-way delay: 58.902 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 182.13 Mbit/s

95th percentile per-packet one-way delay: 58.344 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 16.61 Mbit/s

95th percentile per-packet one-way delay: 56.116 ms

Loss rate: 0.53%

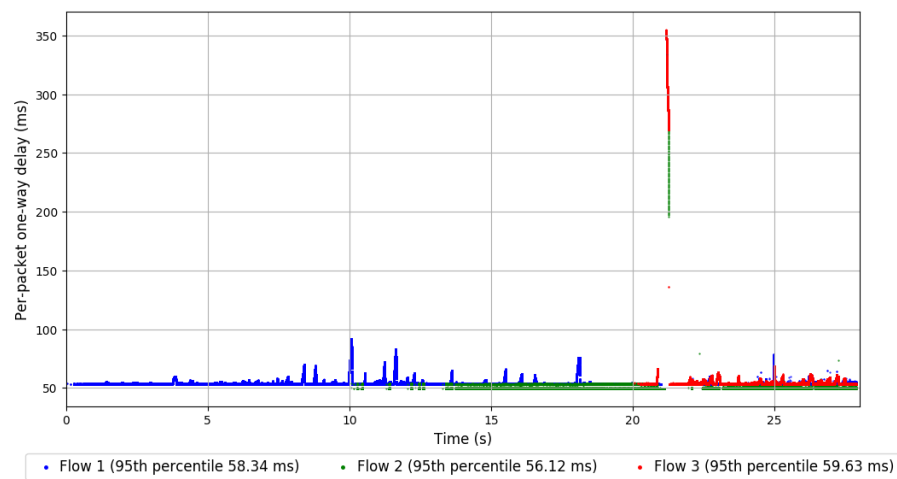
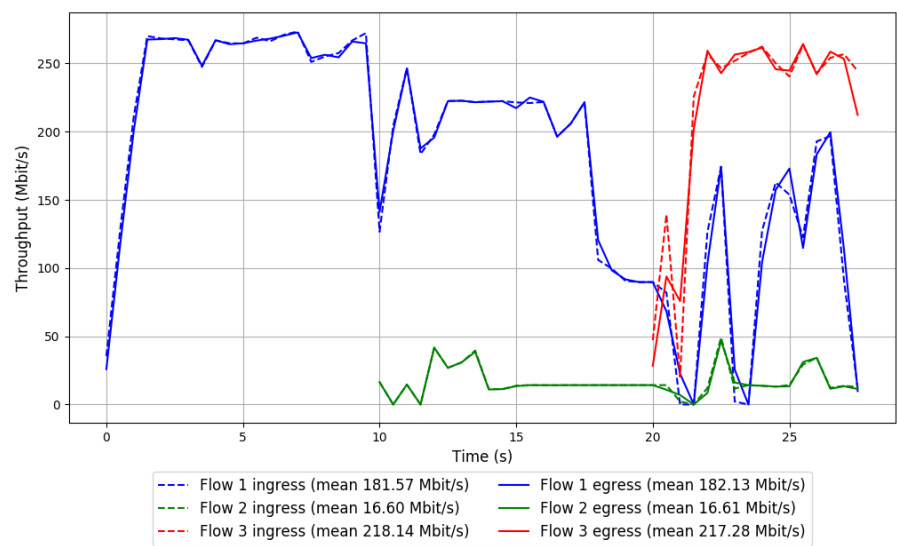
-- Flow 3:

Average throughput: 217.28 Mbit/s

95th percentile per-packet one-way delay: 59.630 ms

Loss rate: 1.75%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-01-17 17:29:48

End at: 2018-01-17 17:30:18

Below is generated by plot.py at 2018-01-17 21:56:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.93 Mbit/s

95th percentile per-packet one-way delay: 53.645 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 36.21 Mbit/s

95th percentile per-packet one-way delay: 53.569 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 79.39 Mbit/s

95th percentile per-packet one-way delay: 53.700 ms

Loss rate: 2.05%

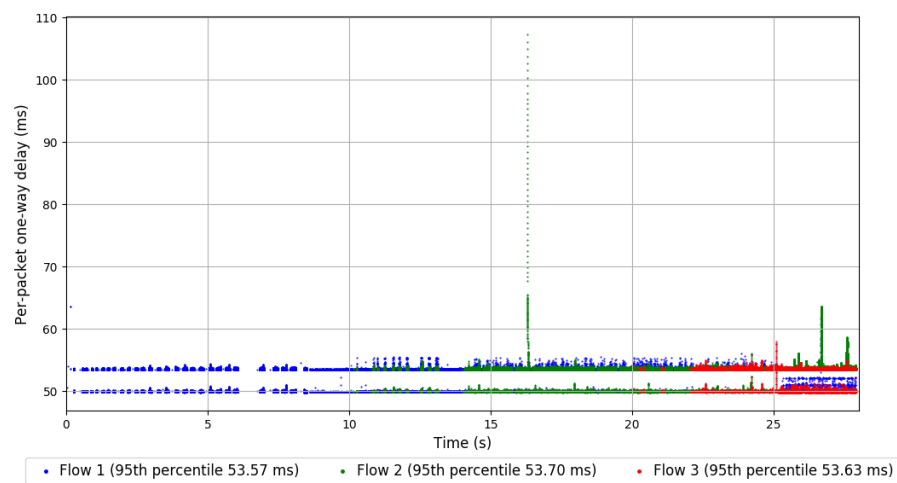
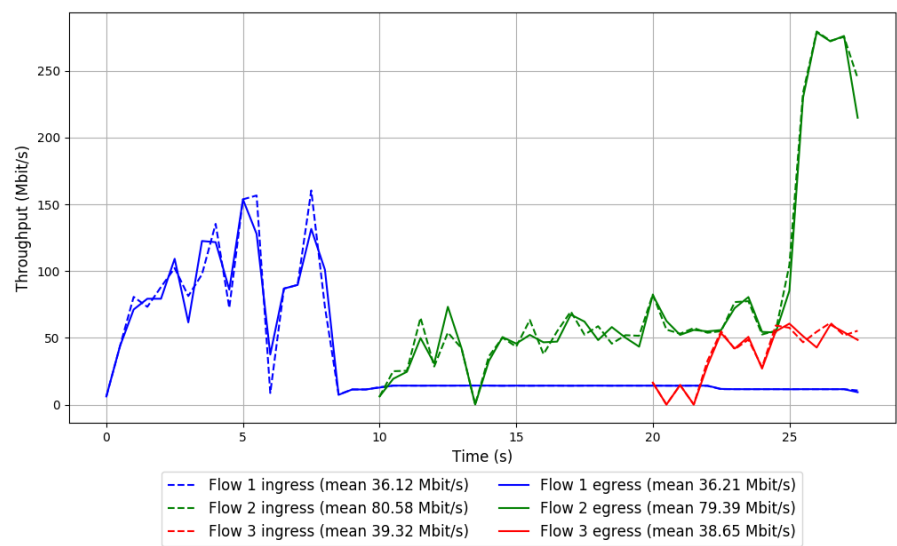
-- Flow 3:

Average throughput: 38.65 Mbit/s

95th percentile per-packet one-way delay: 53.632 ms

Loss rate: 2.84%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-01-17 17:46:23

End at: 2018-01-17 17:46:53

Below is generated by plot.py at 2018-01-17 22:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 324.66 Mbit/s

95th percentile per-packet one-way delay: 53.988 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 110.23 Mbit/s

95th percentile per-packet one-way delay: 53.683 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 233.80 Mbit/s

95th percentile per-packet one-way delay: 53.718 ms

Loss rate: 0.56%

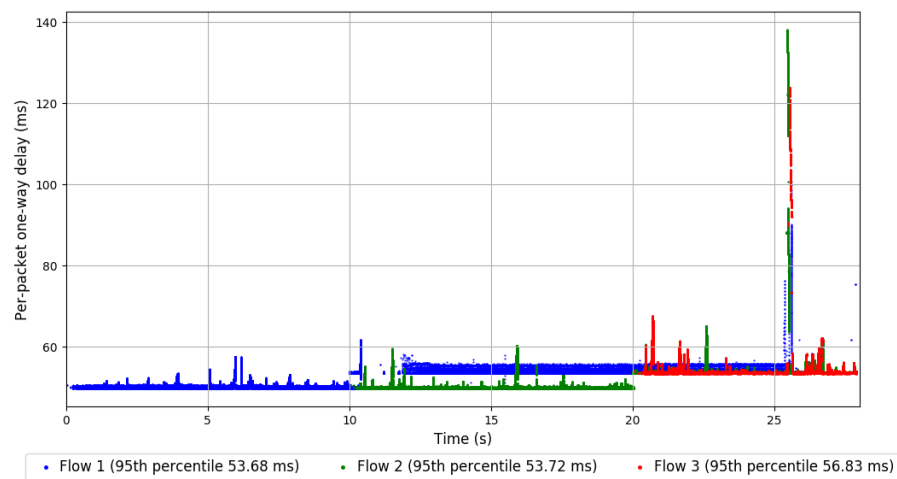
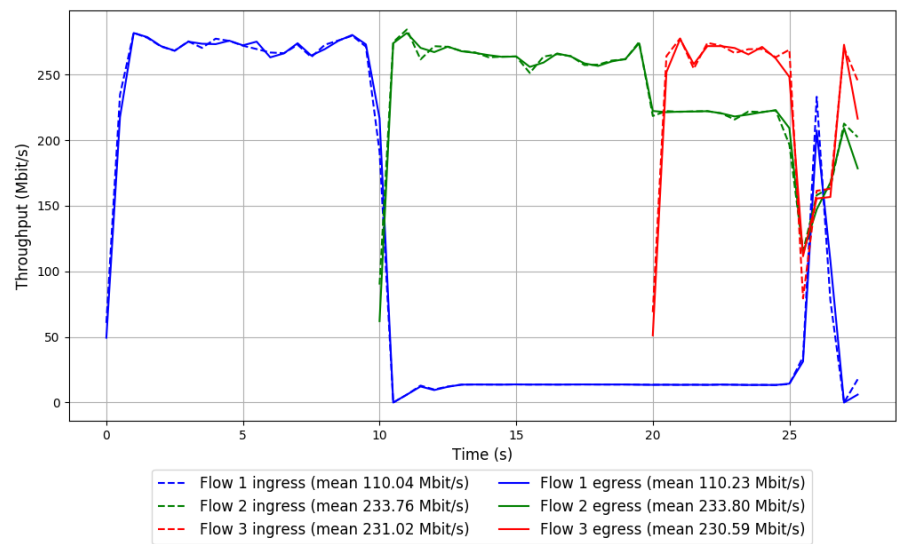
-- Flow 3:

Average throughput: 230.59 Mbit/s

95th percentile per-packet one-way delay: 56.831 ms

Loss rate: 1.54%

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

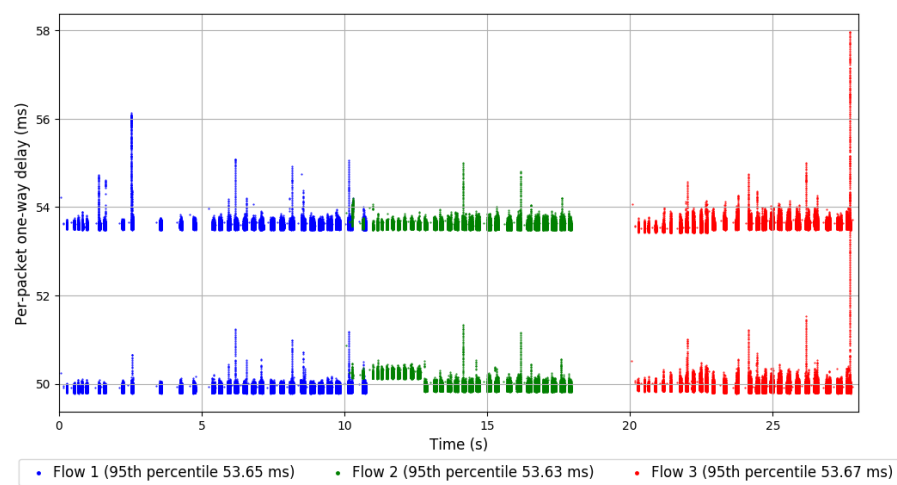
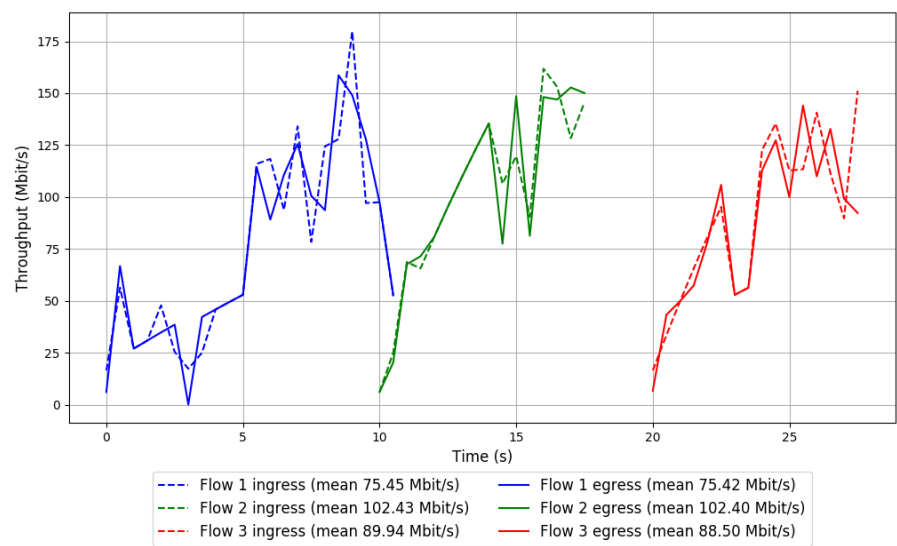


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-01-17 18:03:30
End at: 2018-01-17 18:04:00

# Below is generated by plot.py at 2018-01-17 22:00:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.82 Mbit/s
95th percentile per-packet one-way delay: 53.651 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 75.42 Mbit/s
95th percentile per-packet one-way delay: 53.650 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 102.40 Mbit/s
95th percentile per-packet one-way delay: 53.630 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 88.50 Mbit/s
95th percentile per-packet one-way delay: 53.674 ms
Loss rate: 4.13%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-01-17 15:27:55

End at: 2018-01-17 15:28:25

Below is generated by plot.py at 2018-01-17 22:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.67 Mbit/s

95th percentile per-packet one-way delay: 57.491 ms

Loss rate: 0.31%

-- Flow 1:

Average throughput: 8.46 Mbit/s

95th percentile per-packet one-way delay: 54.031 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 98.70 Mbit/s

95th percentile per-packet one-way delay: 58.332 ms

Loss rate: 0.20%

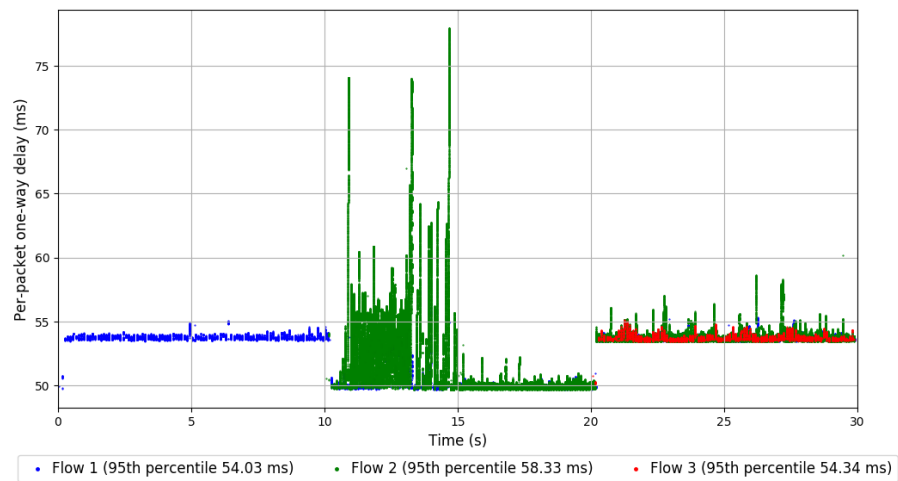
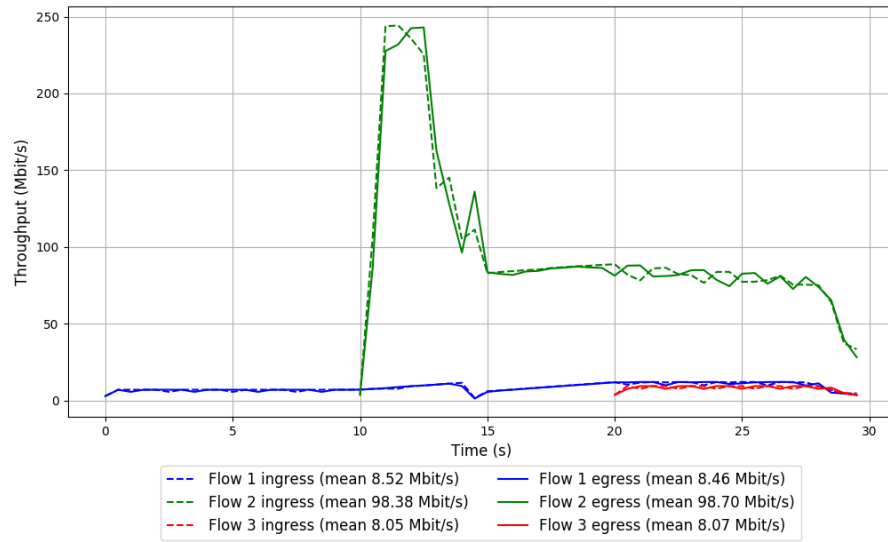
-- Flow 3:

Average throughput: 8.07 Mbit/s

95th percentile per-packet one-way delay: 54.337 ms

Loss rate: 0.72%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-01-17 15:44:45

End at: 2018-01-17 15:45:15

Below is generated by plot.py at 2018-01-17 22:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 199.44 Mbit/s

95th percentile per-packet one-way delay: 51.799 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 75.16 Mbit/s

95th percentile per-packet one-way delay: 51.557 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 115.20 Mbit/s

95th percentile per-packet one-way delay: 52.297 ms

Loss rate: 0.34%

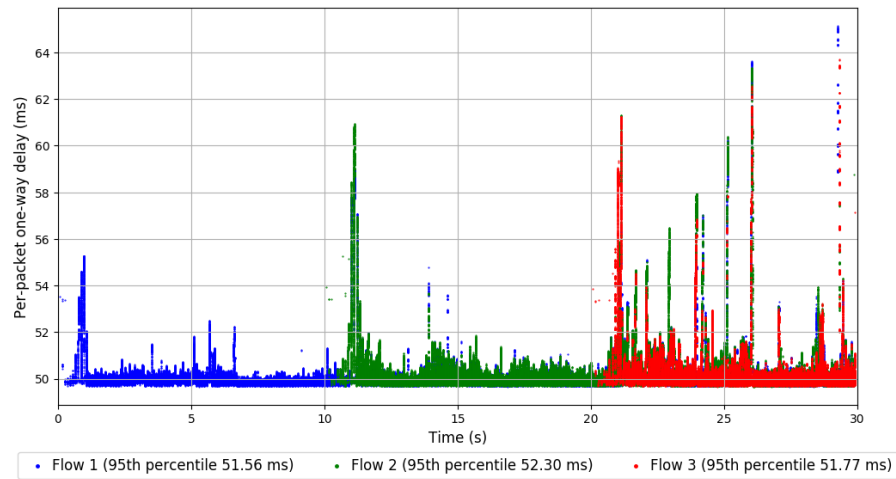
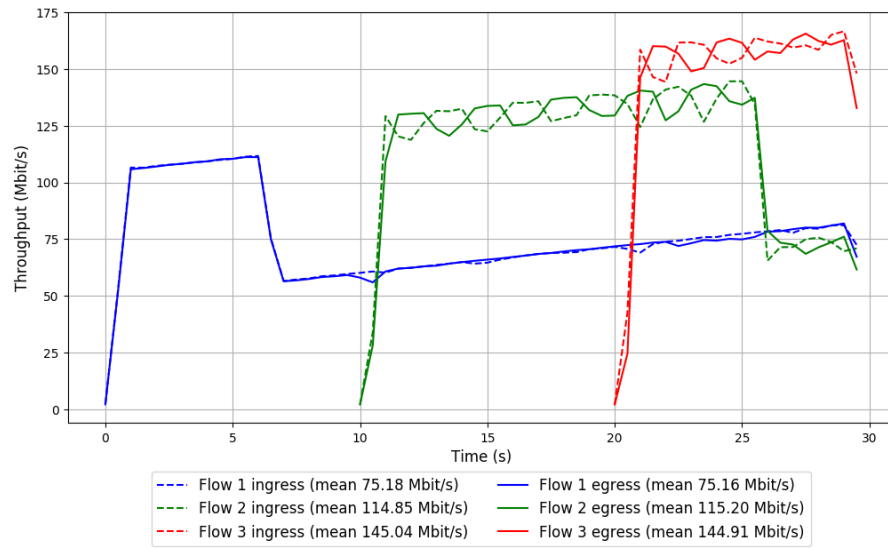
-- Flow 3:

Average throughput: 144.91 Mbit/s

95th percentile per-packet one-way delay: 51.769 ms

Loss rate: 1.16%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-01-17 16:01:47

End at: 2018-01-17 16:02:17

Below is generated by plot.py at 2018-01-17 22:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 127.35 Mbit/s

95th percentile per-packet one-way delay: 53.790 ms

Loss rate: 0.38%

-- Flow 1:

Average throughput: 53.36 Mbit/s

95th percentile per-packet one-way delay: 53.717 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 107.43 Mbit/s

95th percentile per-packet one-way delay: 53.837 ms

Loss rate: 0.51%

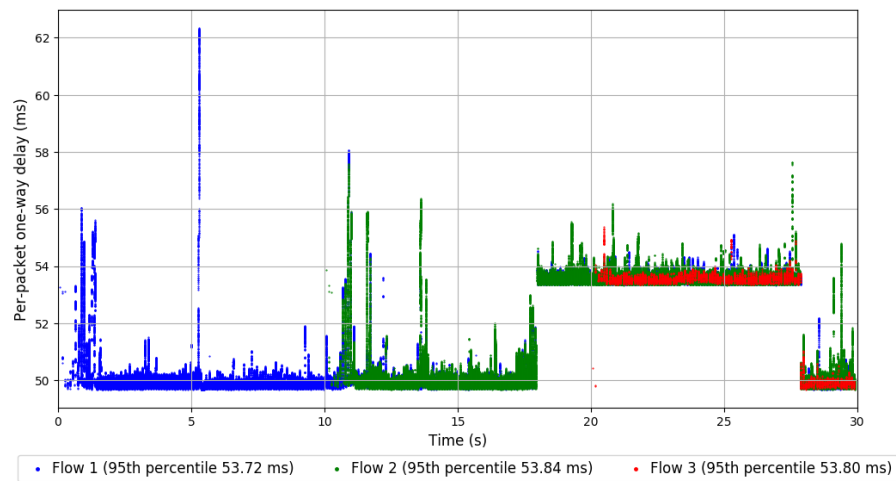
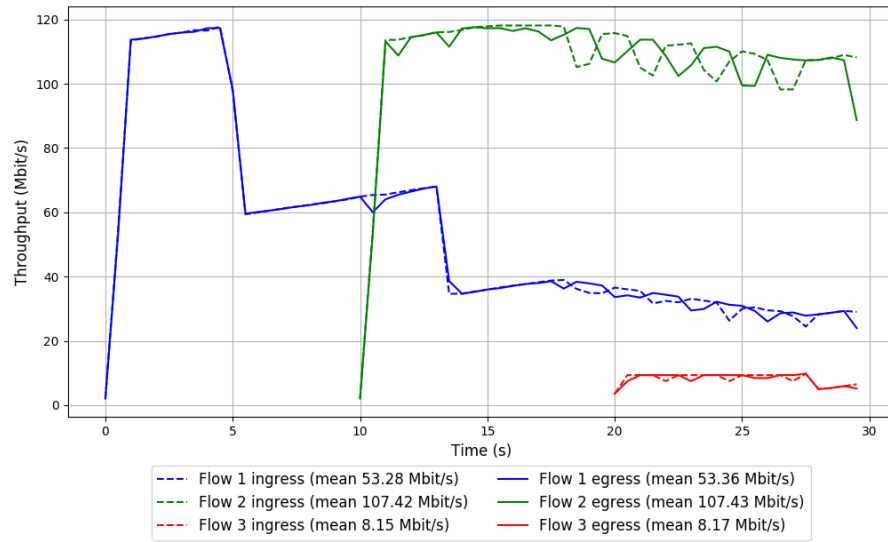
-- Flow 3:

Average throughput: 8.17 Mbit/s

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

Loss rate: 0.85%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-01-17 16:18:35

End at: 2018-01-17 16:19:05

Below is generated by plot.py at 2018-01-17 22:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.89 Mbit/s

95th percentile per-packet one-way delay: 54.083 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 73.82 Mbit/s

95th percentile per-packet one-way delay: 54.087 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 72.49 Mbit/s

95th percentile per-packet one-way delay: 54.021 ms

Loss rate: 0.47%

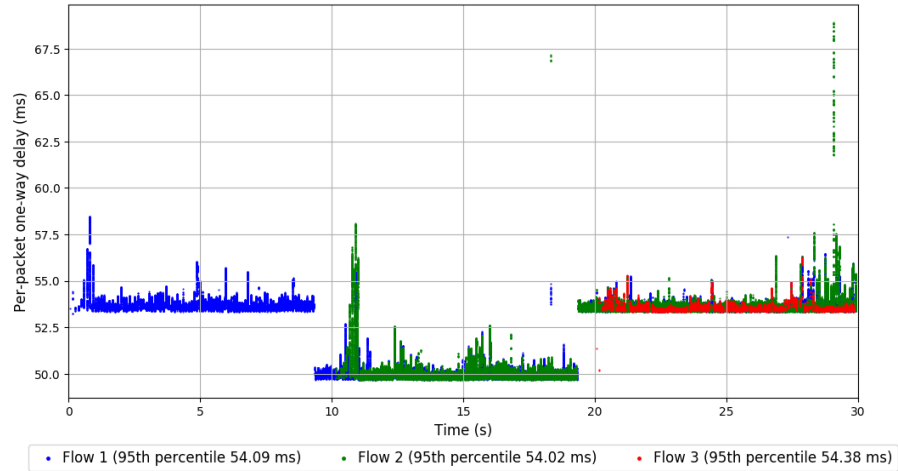
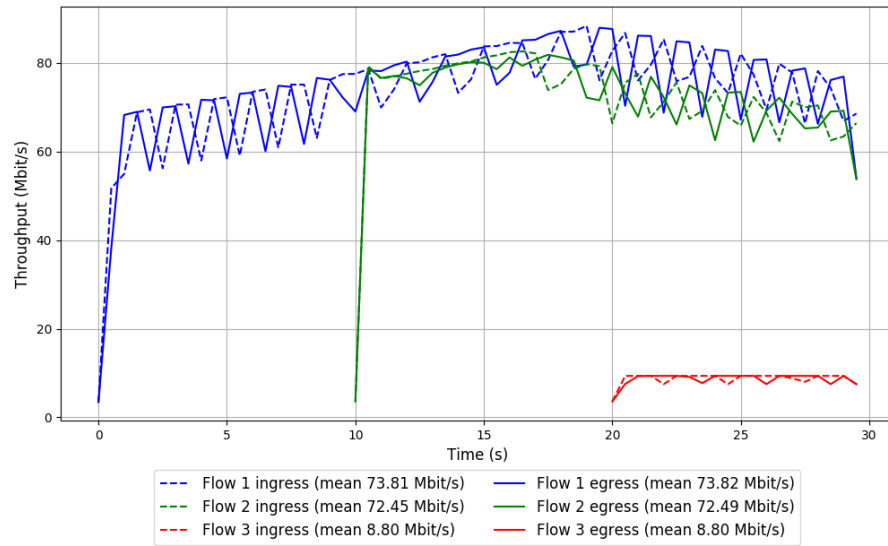
-- Flow 3:

Average throughput: 8.80 Mbit/s

95th percentile per-packet one-way delay: 54.377 ms

Loss rate: 1.08%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-01-17 16:35:46

End at: 2018-01-17 16:36:16

Below is generated by plot.py at 2018-01-17 22:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 232.30 Mbit/s

95th percentile per-packet one-way delay: 51.124 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 106.25 Mbit/s

95th percentile per-packet one-way delay: 51.037 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 186.95 Mbit/s

95th percentile per-packet one-way delay: 51.245 ms

Loss rate: 0.55%

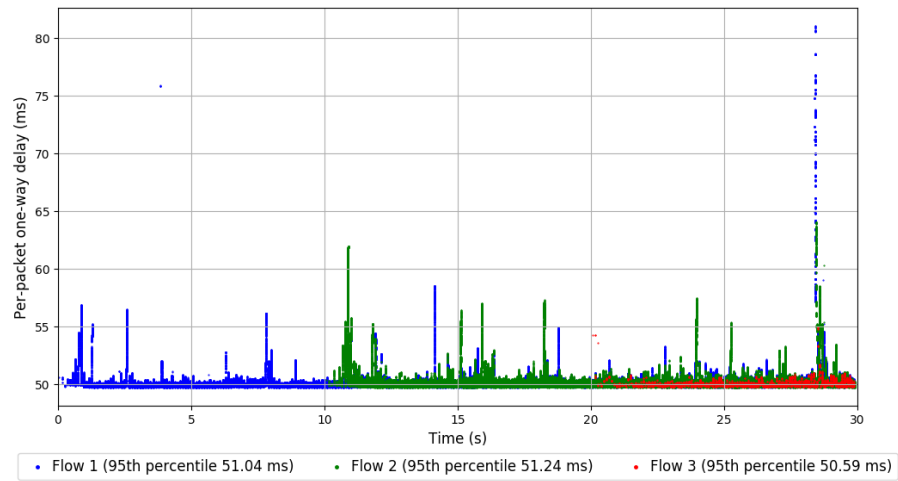
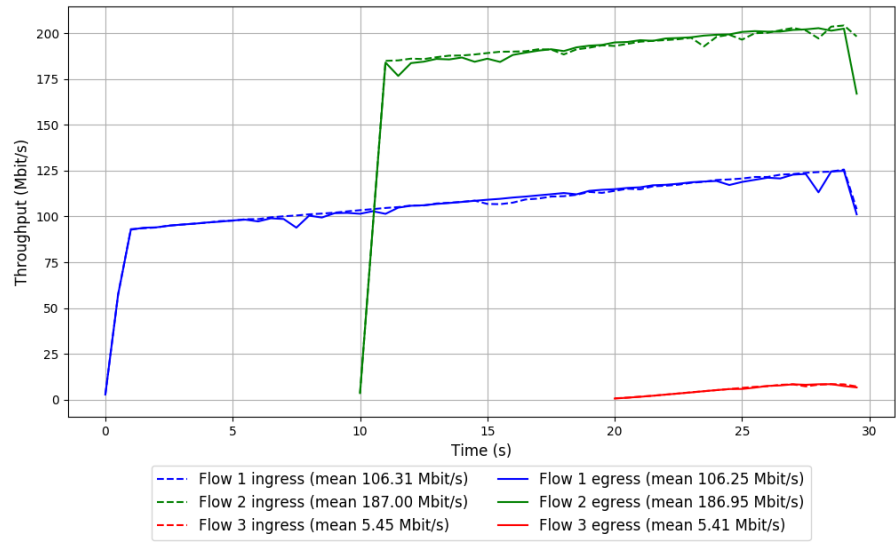
-- Flow 3:

Average throughput: 5.41 Mbit/s

95th percentile per-packet one-way delay: 50.588 ms

Loss rate: 1.71%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-01-17 16:52:54

End at: 2018-01-17 16:53:24

Below is generated by plot.py at 2018-01-17 22:00:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.78 Mbit/s

95th percentile per-packet one-way delay: 60.890 ms

Loss rate: 0.36%

-- Flow 1:

Average throughput: 58.41 Mbit/s

95th percentile per-packet one-way delay: 60.172 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 93.26 Mbit/s

95th percentile per-packet one-way delay: 61.564 ms

Loss rate: 0.46%

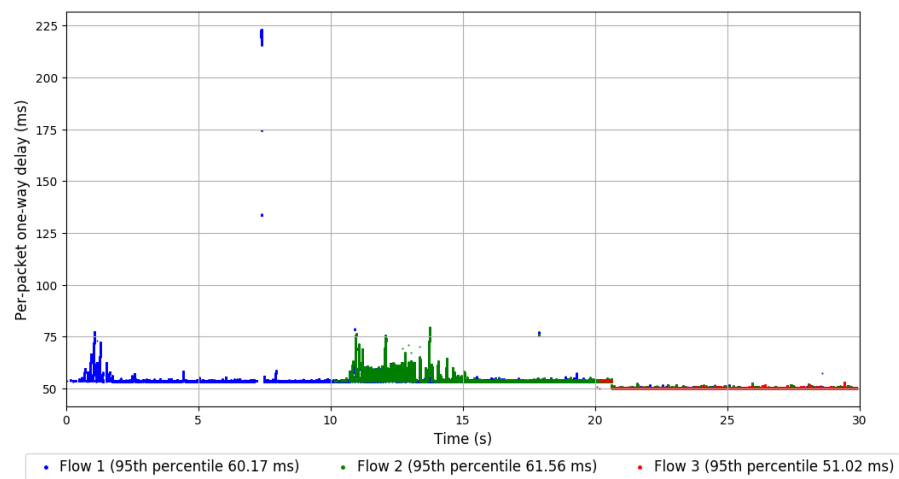
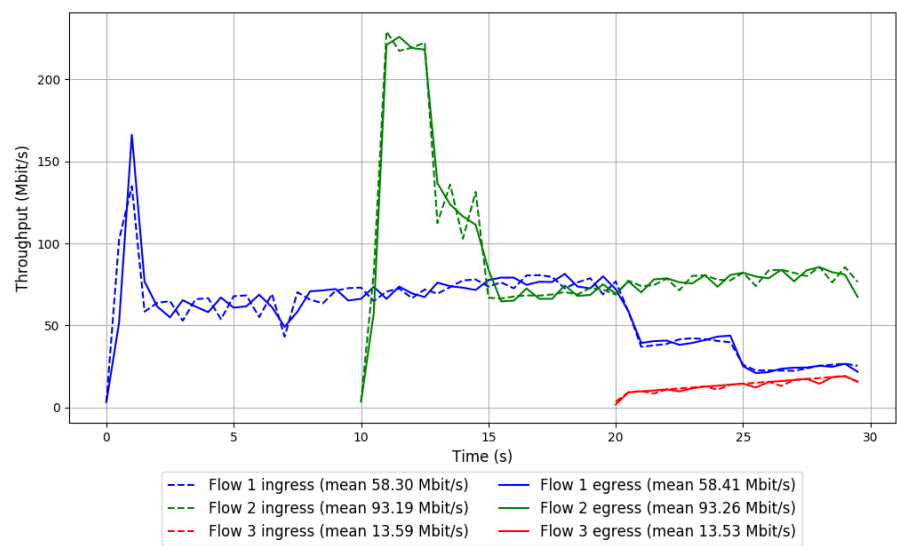
-- Flow 3:

Average throughput: 13.53 Mbit/s

95th percentile per-packet one-way delay: 51.018 ms

Loss rate: 1.48%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-01-17 17:09:45

End at: 2018-01-17 17:10:15

Below is generated by plot.py at 2018-01-17 22:00:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 149.44 Mbit/s

95th percentile per-packet one-way delay: 53.781 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 51.15 Mbit/s

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

Loss rate: 0.22%

-- Flow 2:

Average throughput: 45.51 Mbit/s

95th percentile per-packet one-way delay: 51.727 ms

Loss rate: 0.65%

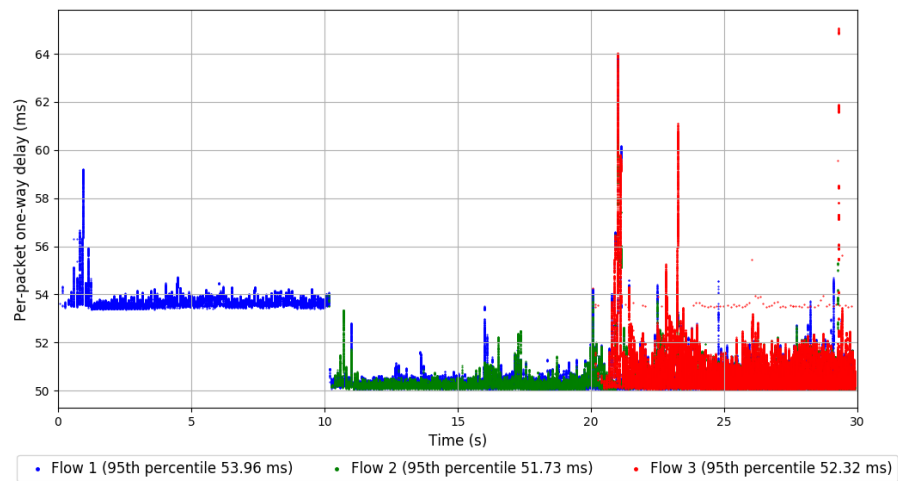
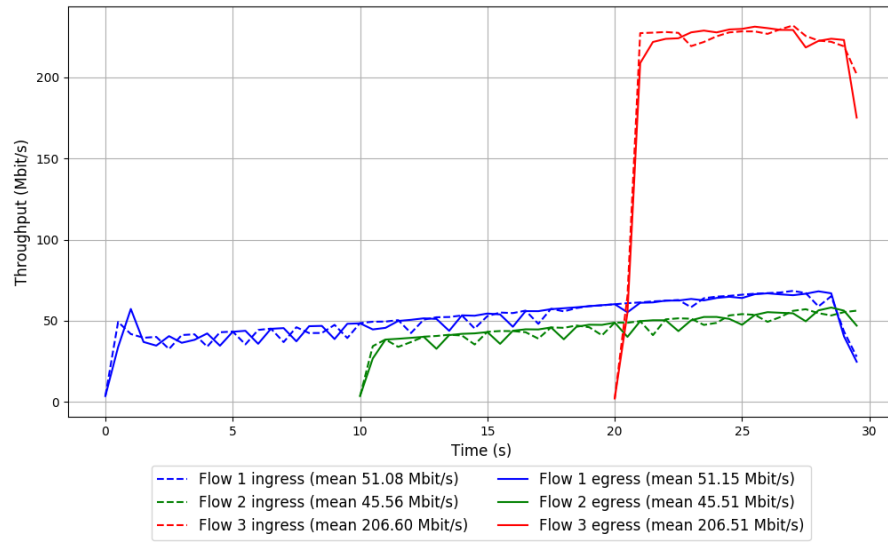
-- Flow 3:

Average throughput: 206.51 Mbit/s

95th percentile per-packet one-way delay: 52.323 ms

Loss rate: 1.12%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-01-17 17:26:54

End at: 2018-01-17 17:27:24

Below is generated by plot.py at 2018-01-17 22:00:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.45 Mbit/s

95th percentile per-packet one-way delay: 54.034 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 32.81 Mbit/s

95th percentile per-packet one-way delay: 53.936 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 56.21 Mbit/s

95th percentile per-packet one-way delay: 54.531 ms

Loss rate: 0.31%

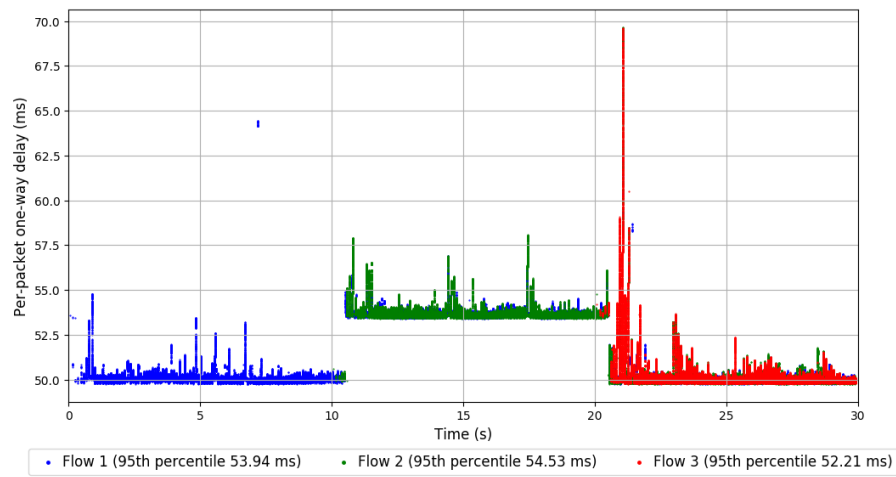
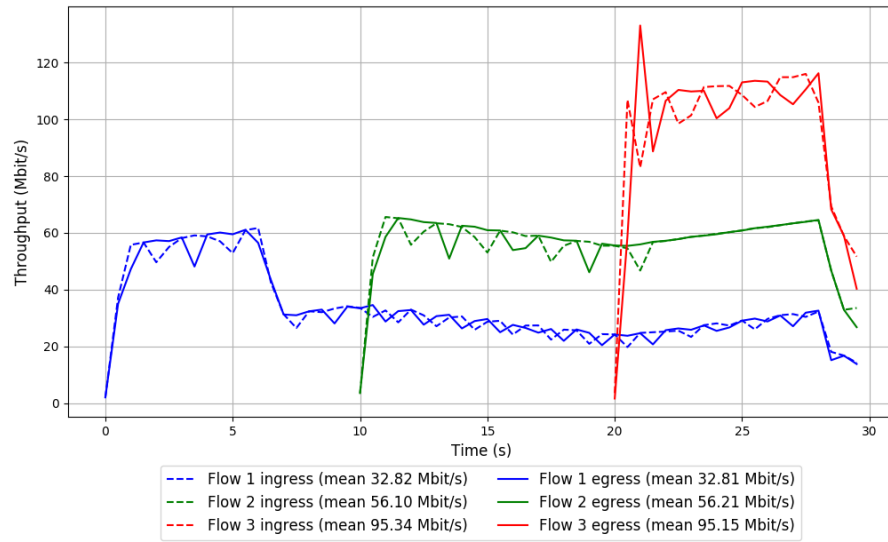
-- Flow 3:

Average throughput: 95.15 Mbit/s

95th percentile per-packet one-way delay: 52.211 ms

Loss rate: 1.28%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-01-17 17:43:32

End at: 2018-01-17 17:44:02

Below is generated by plot.py at 2018-01-17 22:00:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 149.73 Mbit/s

95th percentile per-packet one-way delay: 56.838 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 84.40 Mbit/s

95th percentile per-packet one-way delay: 54.326 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 72.74 Mbit/s

95th percentile per-packet one-way delay: 61.134 ms

Loss rate: 0.21%

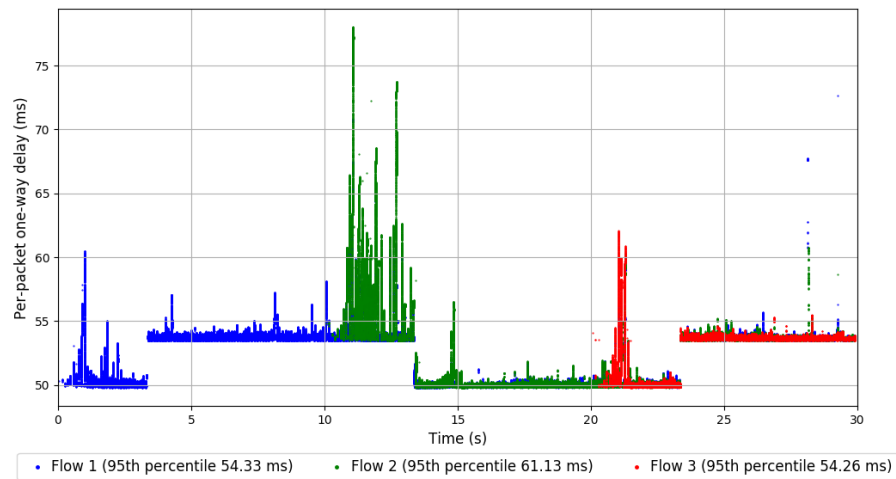
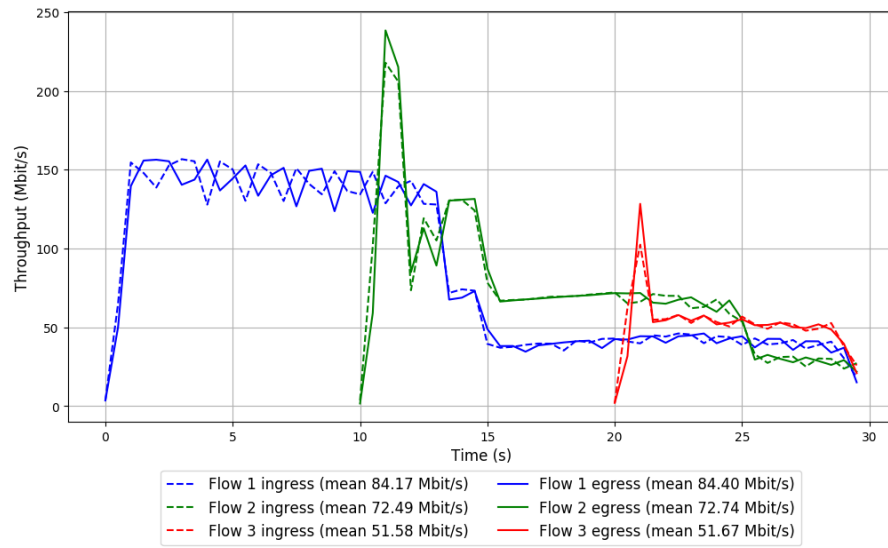
-- Flow 3:

Average throughput: 51.67 Mbit/s

95th percentile per-packet one-way delay: 54.263 ms

Loss rate: 0.90%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-01-17 18:00:42

End at: 2018-01-17 18:01:12

Below is generated by plot.py at 2018-01-17 22:00:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 35.09 Mbit/s

95th percentile per-packet one-way delay: 54.206 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 7.87 Mbit/s

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

Loss rate: 0.33%

-- Flow 2:

Average throughput: 35.39 Mbit/s

95th percentile per-packet one-way delay: 54.375 ms

Loss rate: 0.56%

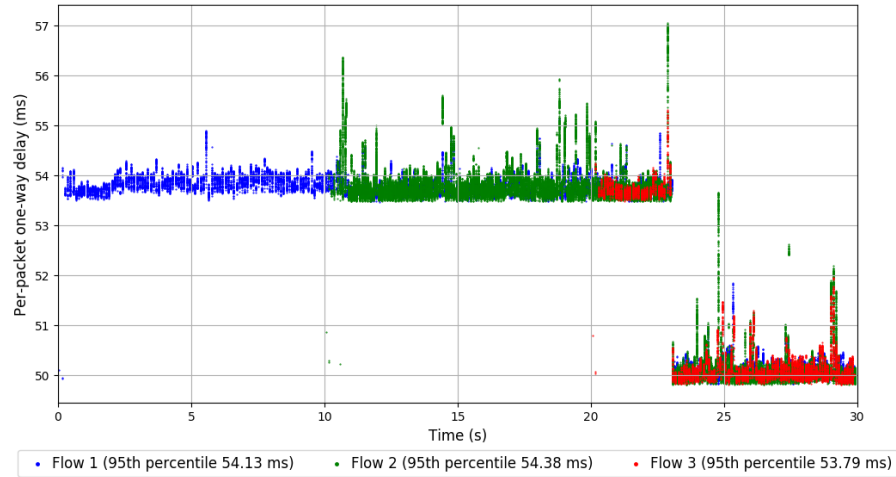
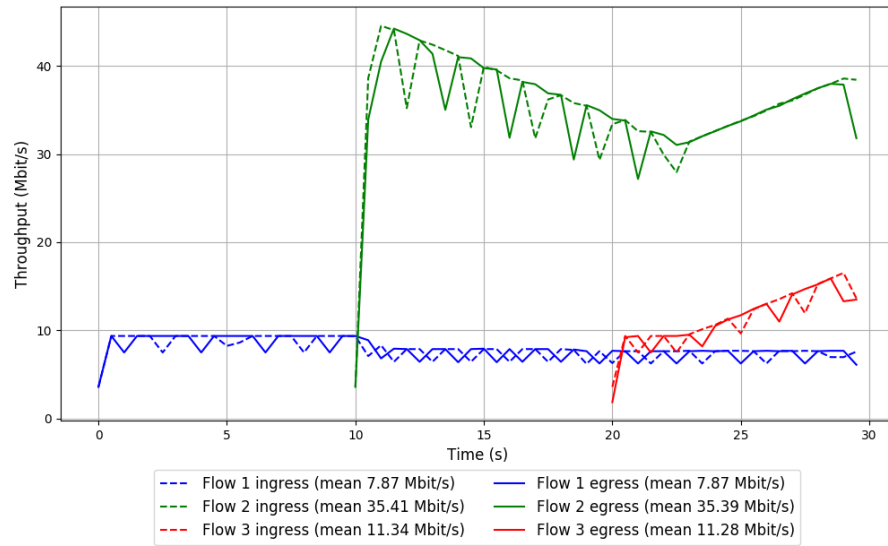
-- Flow 3:

Average throughput: 11.28 Mbit/s

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

Loss rate: 1.54%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-01-17 15:31:37

End at: 2018-01-17 15:32:07

Below is generated by plot.py at 2018-01-17 22:01:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 372.68 Mbit/s

95th percentile per-packet one-way delay: 178.138 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 176.95 Mbit/s

95th percentile per-packet one-way delay: 158.286 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 208.42 Mbit/s

95th percentile per-packet one-way delay: 201.209 ms

Loss rate: 1.01%

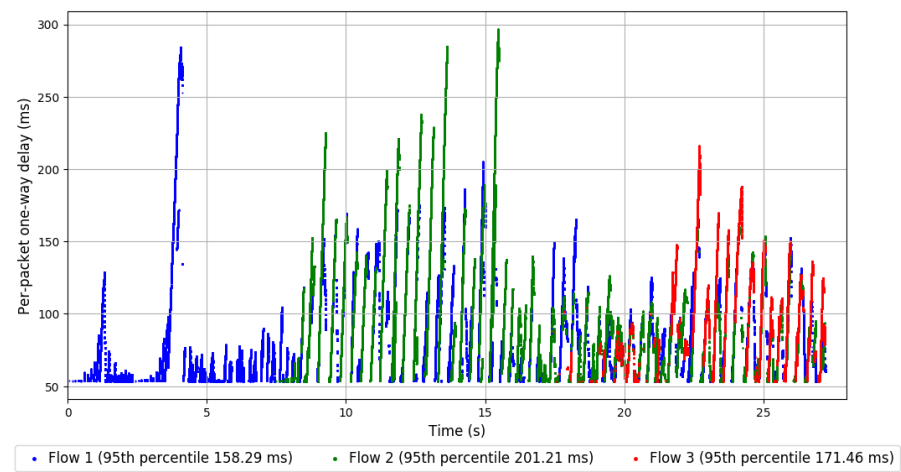
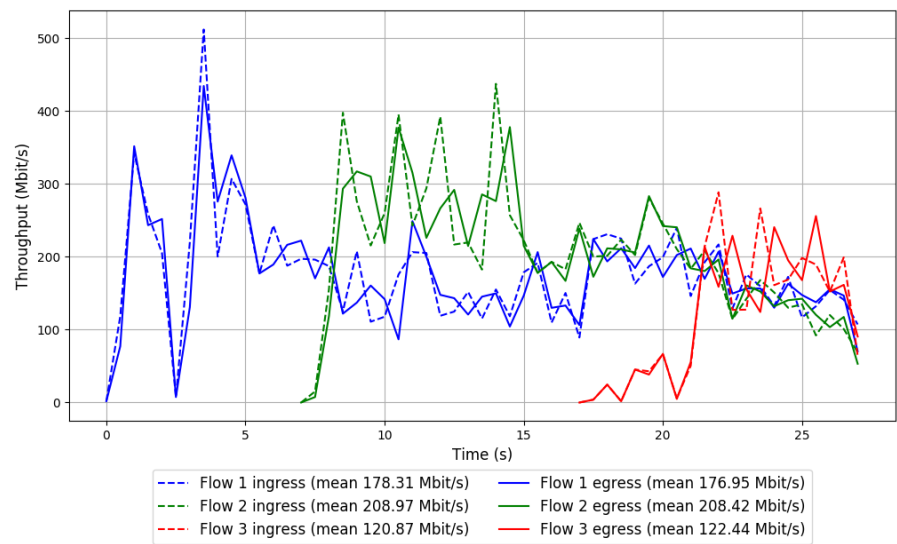
-- Flow 3:

Average throughput: 122.44 Mbit/s

95th percentile per-packet one-way delay: 171.457 ms

Loss rate: 0.47%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-01-17 15:48:39

End at: 2018-01-17 15:49:09

Below is generated by plot.py at 2018-01-17 22:02:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 342.20 Mbit/s

95th percentile per-packet one-way delay: 128.595 ms

Loss rate: 2.49%

-- Flow 1:

Average throughput: 196.58 Mbit/s

95th percentile per-packet one-way delay: 95.608 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 172.31 Mbit/s

95th percentile per-packet one-way delay: 118.050 ms

Loss rate: 1.62%

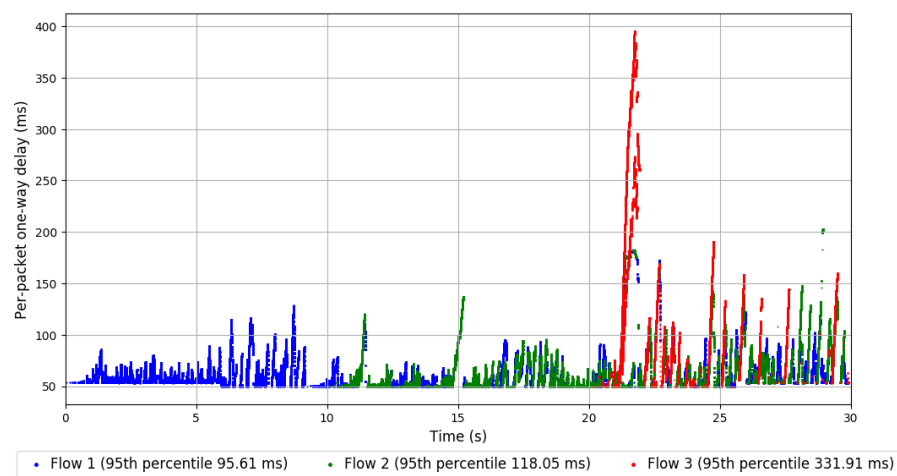
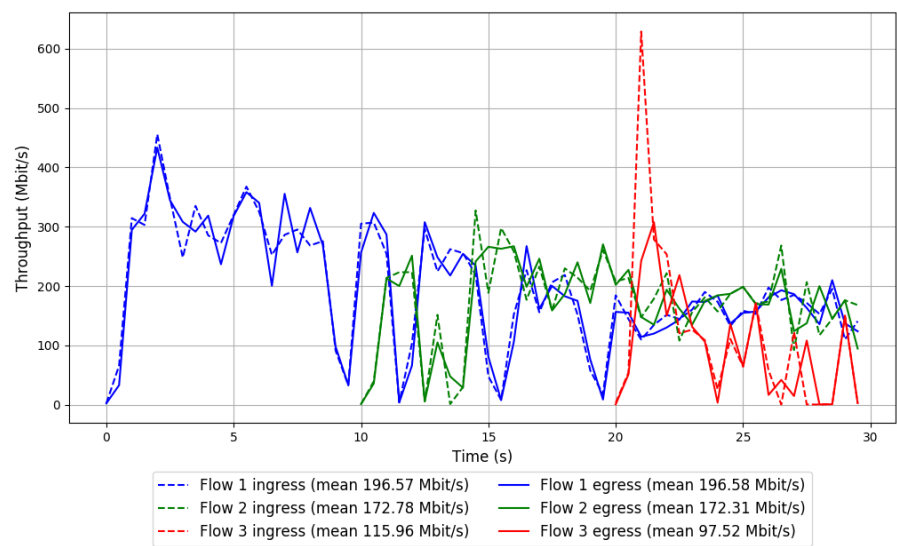
-- Flow 3:

Average throughput: 97.52 Mbit/s

95th percentile per-packet one-way delay: 331.912 ms

Loss rate: 15.97%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-01-17 16:05:29

End at: 2018-01-17 16:05:59

Below is generated by plot.py at 2018-01-17 22:02:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 326.14 Mbit/s

95th percentile per-packet one-way delay: 242.651 ms

Loss rate: 6.14%

-- Flow 1:

Average throughput: 235.33 Mbit/s

95th percentile per-packet one-way delay: 218.508 ms

Loss rate: 2.72%

-- Flow 2:

Average throughput: 53.87 Mbit/s

95th percentile per-packet one-way delay: 162.351 ms

Loss rate: 1.89%

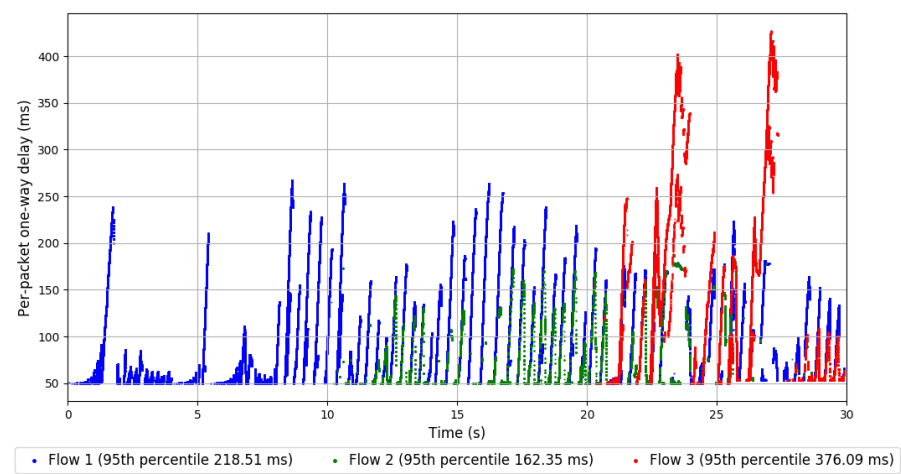
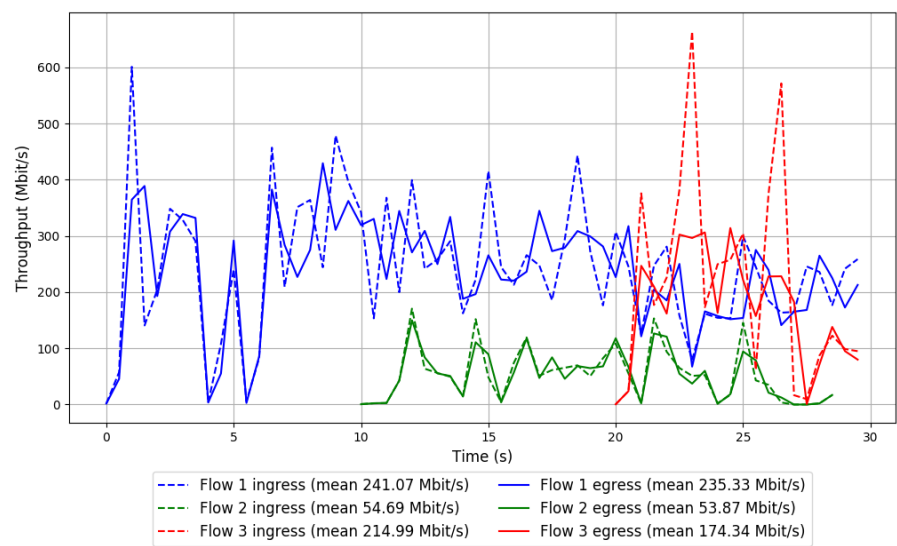
-- Flow 3:

Average throughput: 174.34 Mbit/s

95th percentile per-packet one-way delay: 376.089 ms

Loss rate: 19.73%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-01-17 16:22:26

End at: 2018-01-17 16:22:56

Below is generated by plot.py at 2018-01-17 22:02:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 327.84 Mbit/s

95th percentile per-packet one-way delay: 147.031 ms

Loss rate: 1.74%

-- Flow 1:

Average throughput: 157.58 Mbit/s

95th percentile per-packet one-way delay: 167.935 ms

Loss rate: 2.11%

-- Flow 2:

Average throughput: 180.52 Mbit/s

95th percentile per-packet one-way delay: 134.238 ms

Loss rate: 0.60%

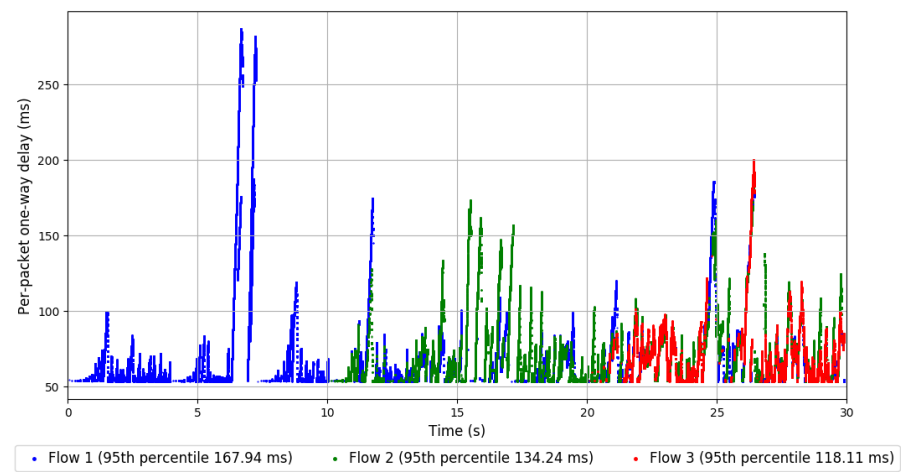
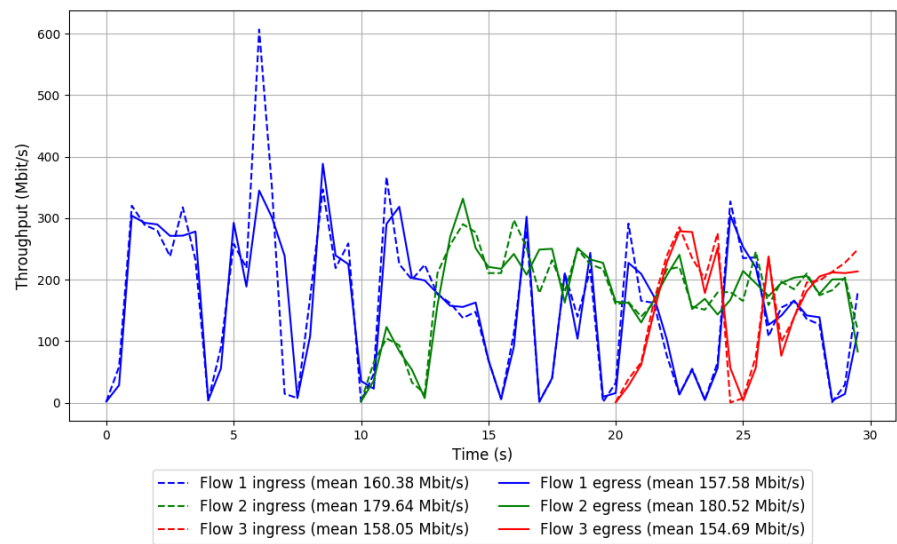
-- Flow 3:

Average throughput: 154.69 Mbit/s

95th percentile per-packet one-way delay: 118.111 ms

Loss rate: 3.22%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-01-17 16:39:49

End at: 2018-01-17 16:40:19

Below is generated by plot.py at 2018-01-17 22:02:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 328.34 Mbit/s

95th percentile per-packet one-way delay: 164.382 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 193.32 Mbit/s

95th percentile per-packet one-way delay: 138.371 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 150.56 Mbit/s

95th percentile per-packet one-way delay: 198.884 ms

Loss rate: 2.16%

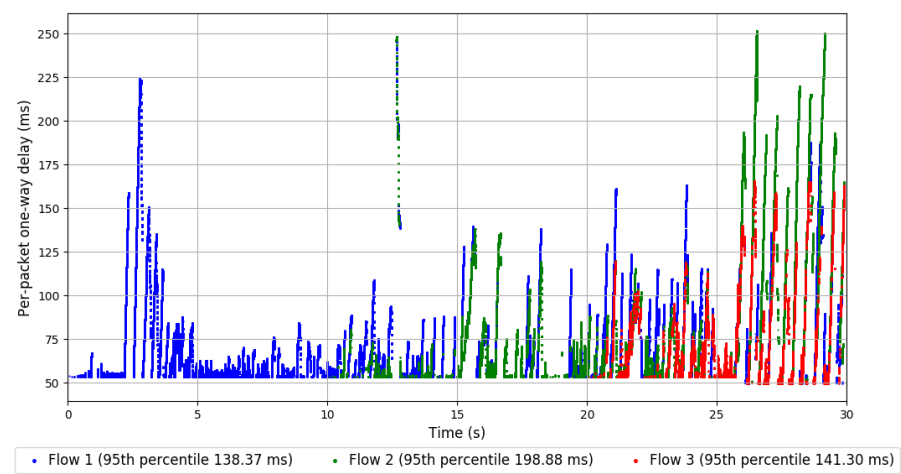
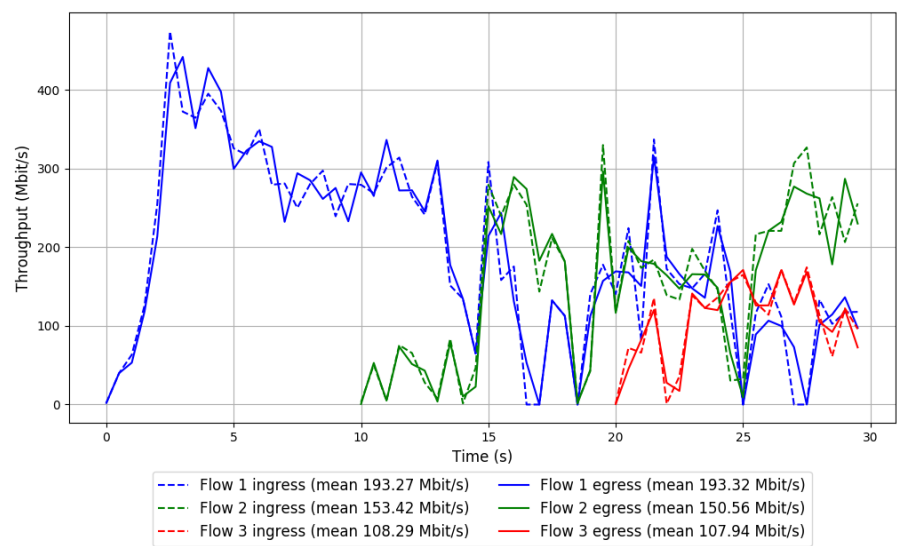
-- Flow 3:

Average throughput: 107.94 Mbit/s

95th percentile per-packet one-way delay: 141.299 ms

Loss rate: 1.38%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-01-17 16:56:46

End at: 2018-01-17 16:57:16

Below is generated by plot.py at 2018-01-17 22:03:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 364.74 Mbit/s

95th percentile per-packet one-way delay: 137.132 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 217.16 Mbit/s

95th percentile per-packet one-way delay: 137.654 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 150.07 Mbit/s

95th percentile per-packet one-way delay: 142.091 ms

Loss rate: 1.66%

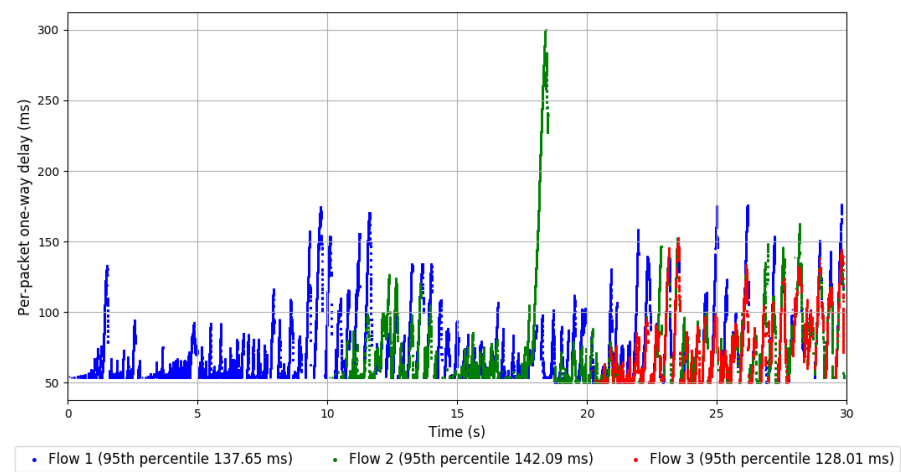
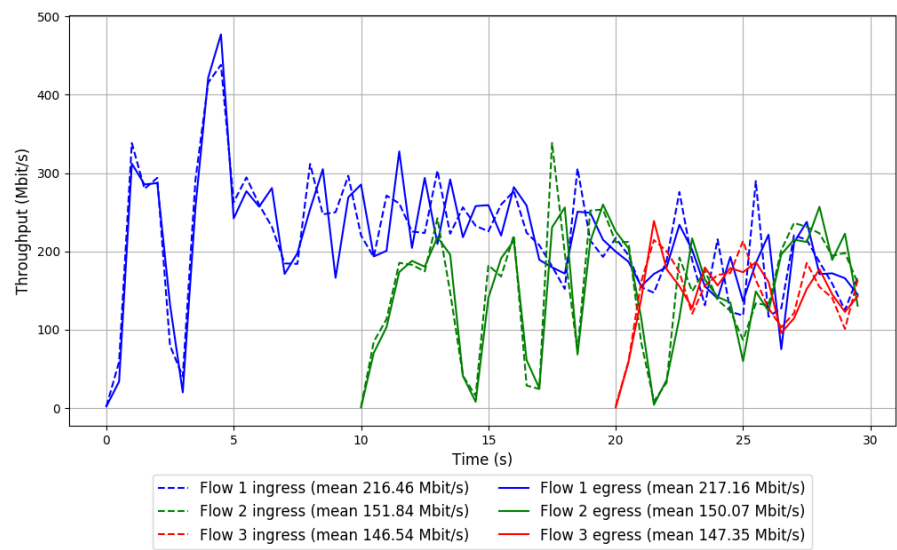
-- Flow 3:

Average throughput: 147.35 Mbit/s

95th percentile per-packet one-way delay: 128.014 ms

Loss rate: 0.72%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-01-17 17:13:42

End at: 2018-01-17 17:14:12

Below is generated by plot.py at 2018-01-17 22:03:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 343.32 Mbit/s

95th percentile per-packet one-way delay: 110.637 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 210.05 Mbit/s

95th percentile per-packet one-way delay: 112.002 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 137.21 Mbit/s

95th percentile per-packet one-way delay: 107.079 ms

Loss rate: 1.05%

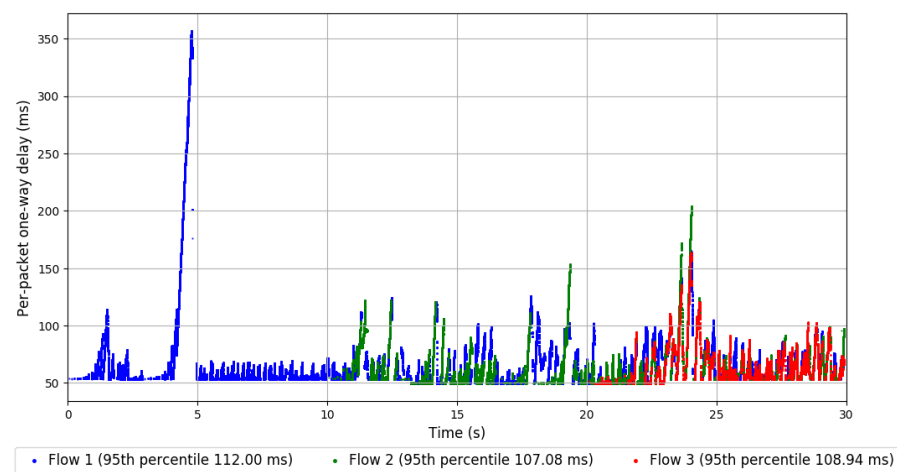
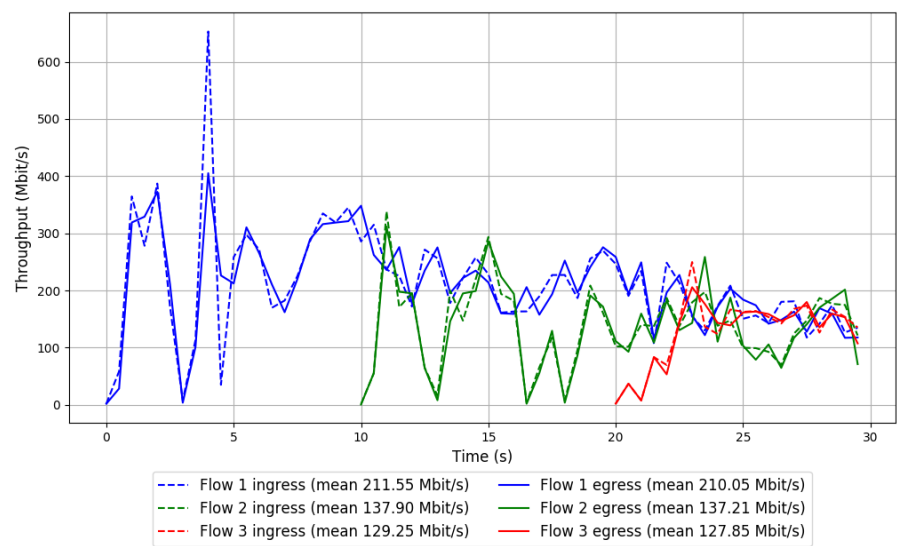
-- Flow 3:

Average throughput: 127.85 Mbit/s

95th percentile per-packet one-way delay: 108.941 ms

Loss rate: 2.14%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-01-17 17:30:36

End at: 2018-01-17 17:31:06

Below is generated by plot.py at 2018-01-17 22:07:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 341.37 Mbit/s

95th percentile per-packet one-way delay: 151.876 ms

Loss rate: 2.24%

-- Flow 1:

Average throughput: 192.19 Mbit/s

95th percentile per-packet one-way delay: 156.615 ms

Loss rate: 3.19%

-- Flow 2:

Average throughput: 175.14 Mbit/s

95th percentile per-packet one-way delay: 125.035 ms

Loss rate: 0.21%

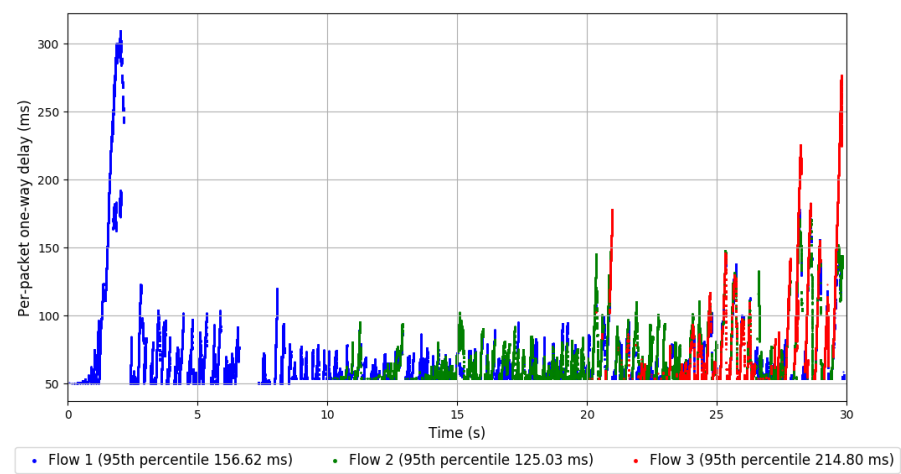
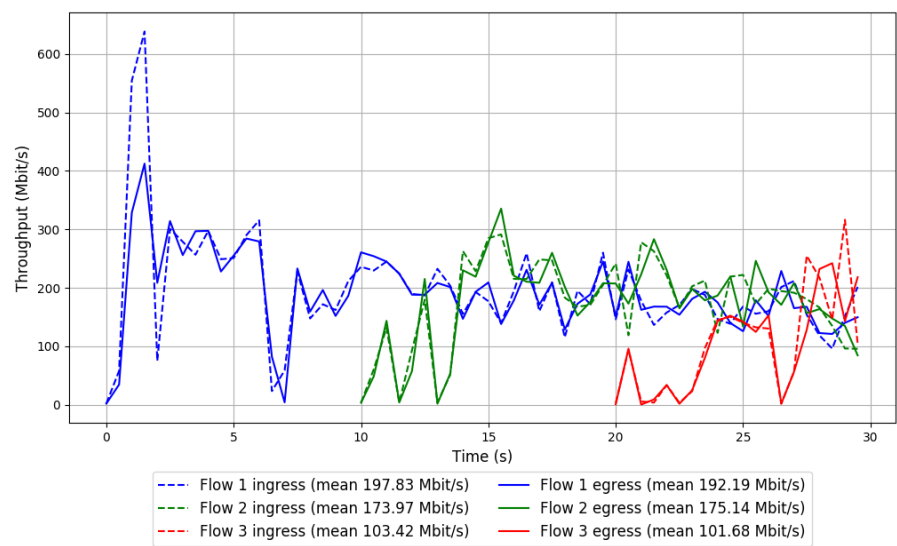
-- Flow 3:

Average throughput: 101.68 Mbit/s

95th percentile per-packet one-way delay: 214.797 ms

Loss rate: 3.63%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-01-17 17:47:33

End at: 2018-01-17 17:48:03

Below is generated by plot.py at 2018-01-17 22:08:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 364.66 Mbit/s

95th percentile per-packet one-way delay: 114.718 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 202.95 Mbit/s

95th percentile per-packet one-way delay: 108.801 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 187.17 Mbit/s

95th percentile per-packet one-way delay: 111.045 ms

Loss rate: 0.57%

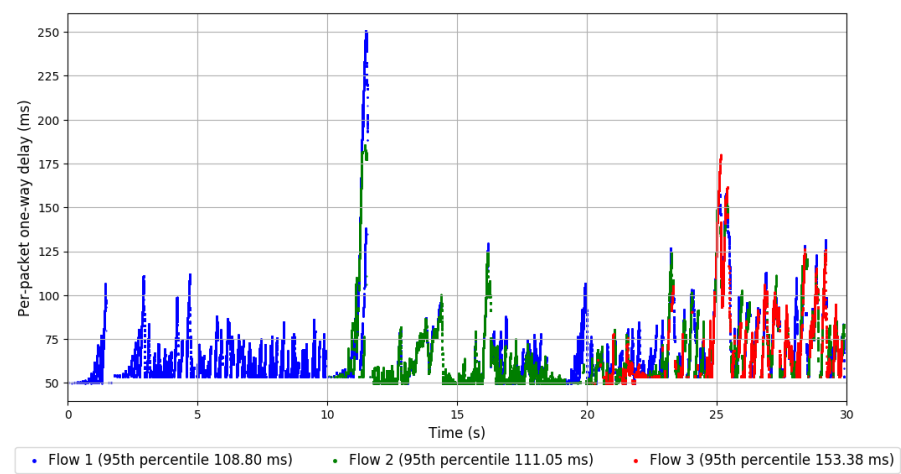
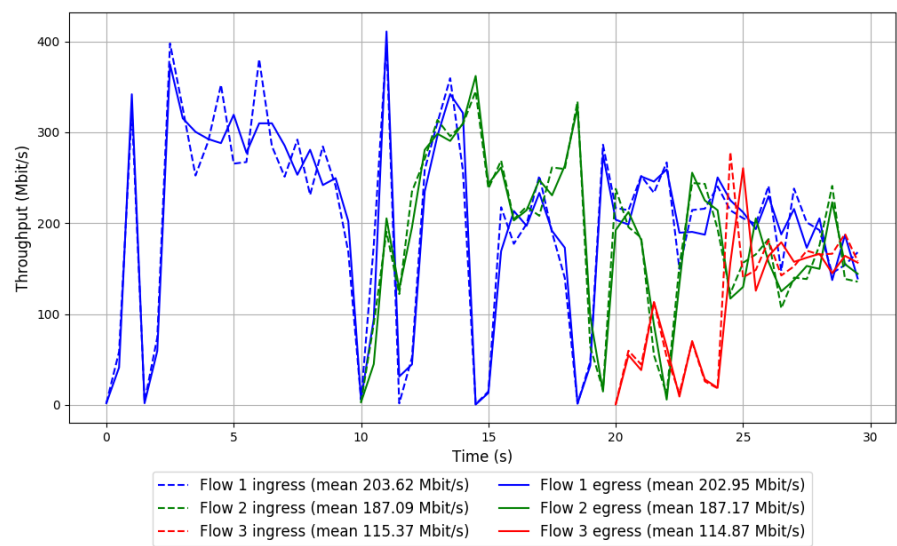
-- Flow 3:

Average throughput: 114.87 Mbit/s

95th percentile per-packet one-way delay: 153.384 ms

Loss rate: 2.37%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-01-17 18:04:16

End at: 2018-01-17 18:04:46

Below is generated by plot.py at 2018-01-17 22:08:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 311.14 Mbit/s

95th percentile per-packet one-way delay: 100.158 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 183.44 Mbit/s

95th percentile per-packet one-way delay: 99.682 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 149.79 Mbit/s

95th percentile per-packet one-way delay: 107.030 ms

Loss rate: 0.96%

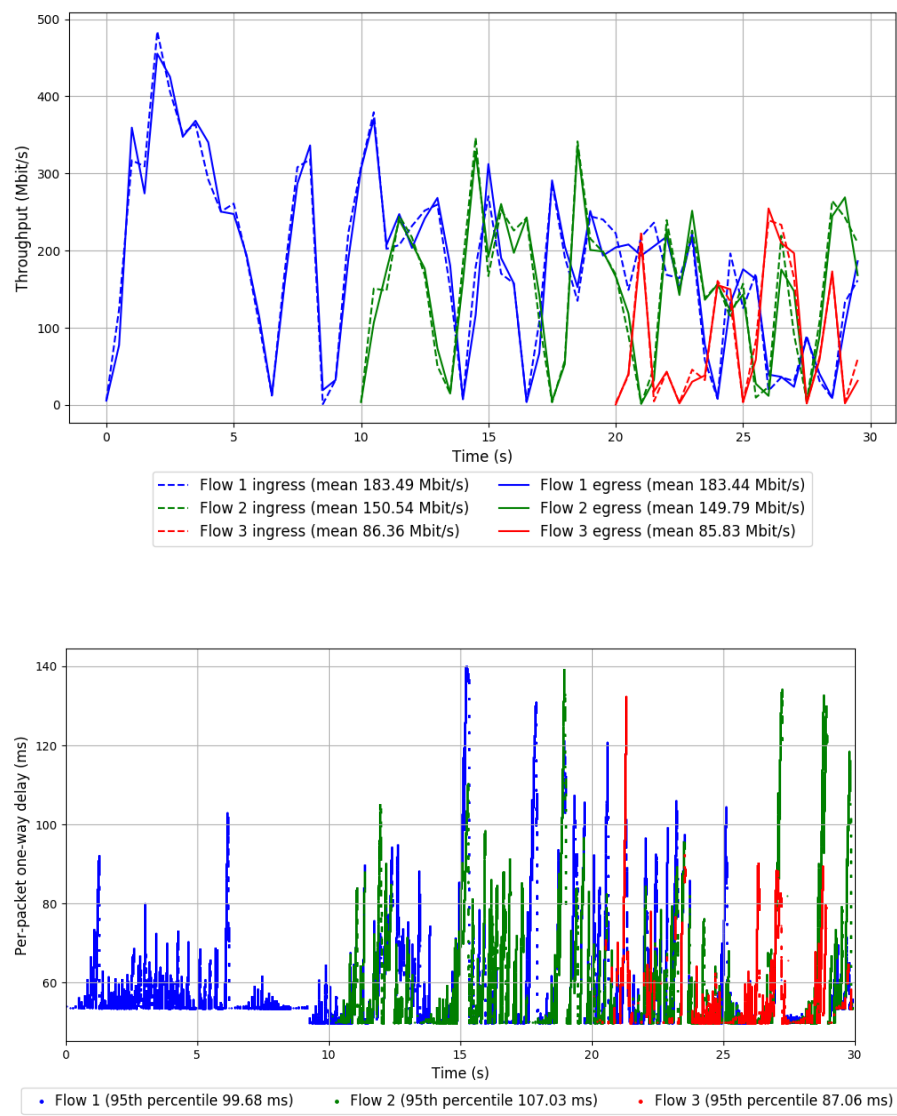
-- Flow 3:

Average throughput: 85.83 Mbit/s

95th percentile per-packet one-way delay: 87.059 ms

Loss rate: 1.80%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-01-17 15:41:05

End at: 2018-01-17 15:41:35

Below is generated by plot.py at 2018-01-17 22:08:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.34 Mbit/s

95th percentile per-packet one-way delay: 53.553 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 93.55 Mbit/s

95th percentile per-packet one-way delay: 53.441 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 57.26 Mbit/s

95th percentile per-packet one-way delay: 53.739 ms

Loss rate: 0.81%

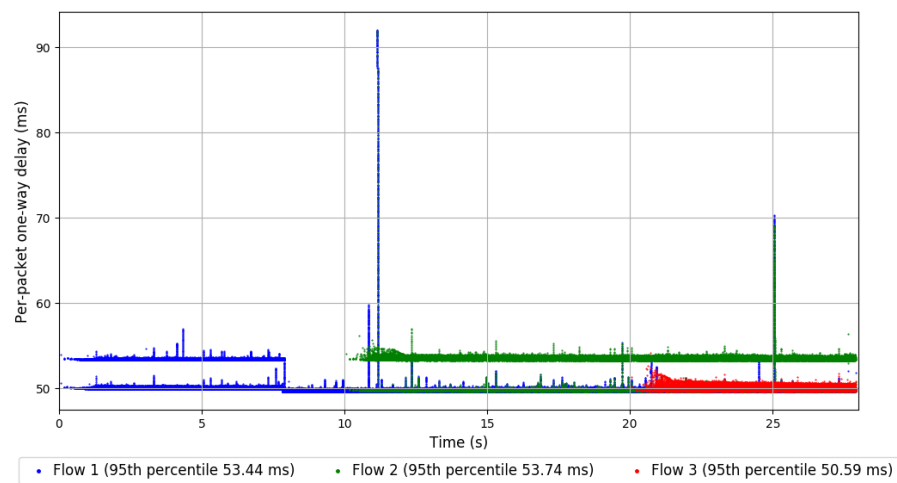
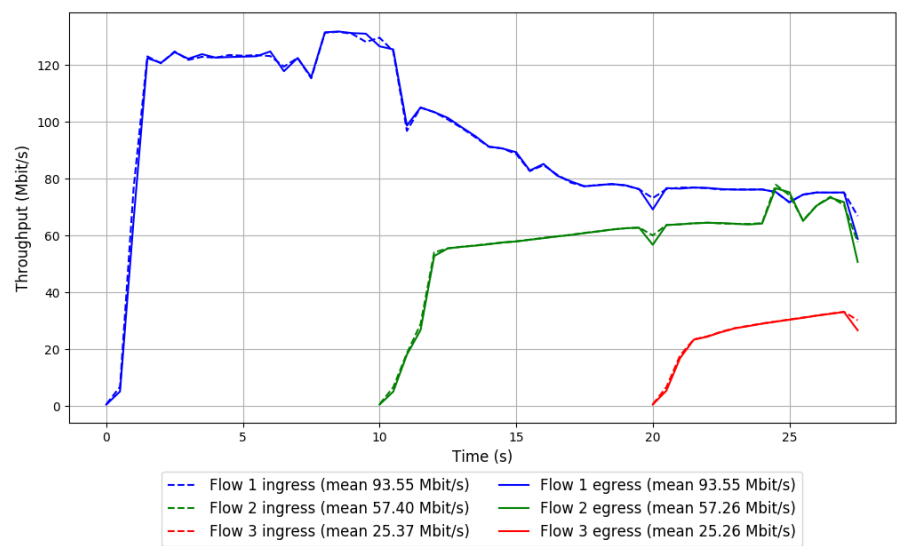
-- Flow 3:

Average throughput: 25.26 Mbit/s

95th percentile per-packet one-way delay: 50.589 ms

Loss rate: 1.71%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-01-17 15:58:12

End at: 2018-01-17 15:58:42

Below is generated by plot.py at 2018-01-17 22:08:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.75 Mbit/s

95th percentile per-packet one-way delay: 53.538 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 73.95 Mbit/s

95th percentile per-packet one-way delay: 53.562 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 70.75 Mbit/s

95th percentile per-packet one-way delay: 53.487 ms

Loss rate: 0.53%

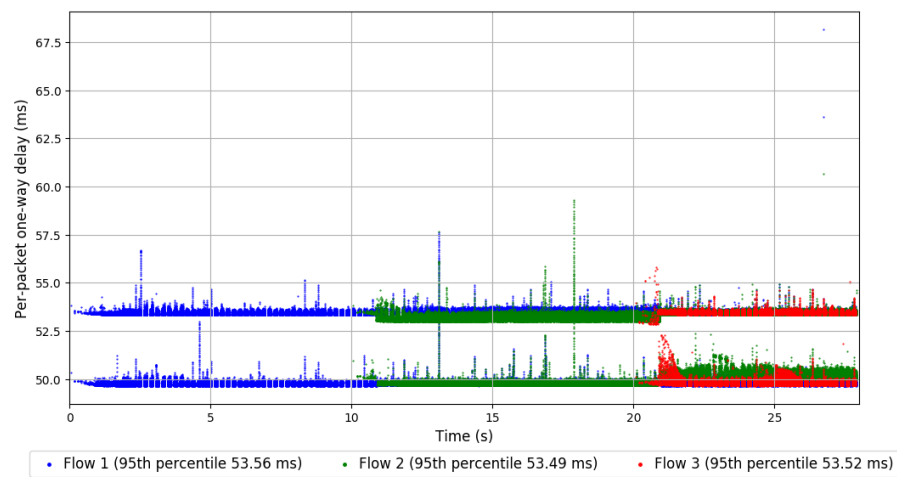
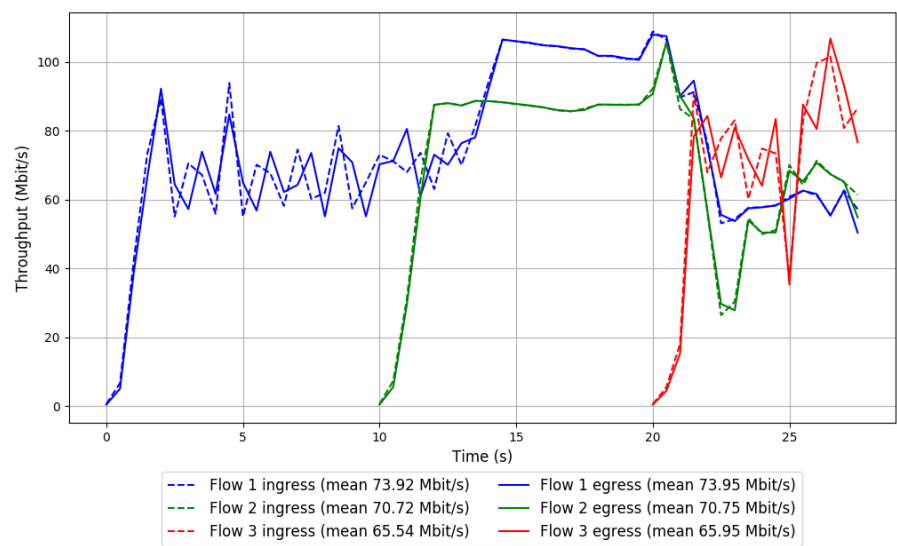
-- Flow 3:

Average throughput: 65.95 Mbit/s

95th percentile per-packet one-way delay: 53.525 ms

Loss rate: 1.10%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-01-17 16:14:55

End at: 2018-01-17 16:15:25

Below is generated by plot.py at 2018-01-17 22:08:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.44 Mbit/s

95th percentile per-packet one-way delay: 53.536 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 82.06 Mbit/s

95th percentile per-packet one-way delay: 53.473 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 75.33 Mbit/s

95th percentile per-packet one-way delay: 53.588 ms

Loss rate: 0.58%

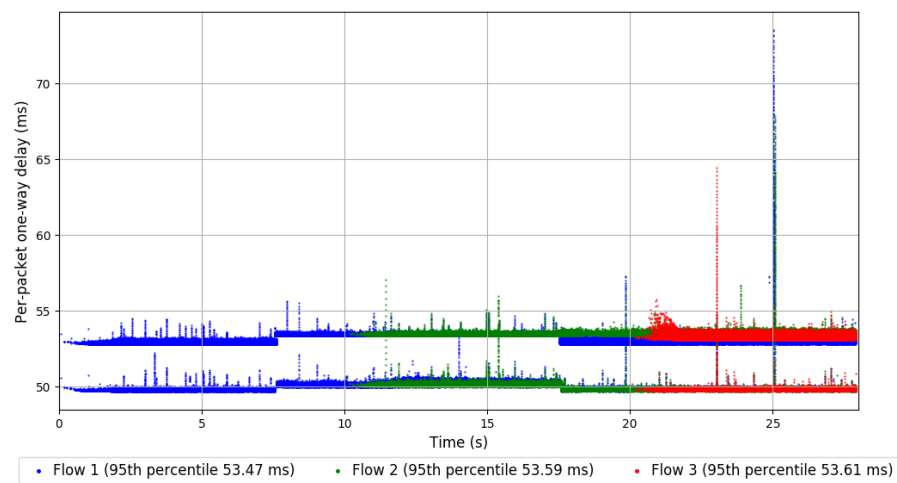
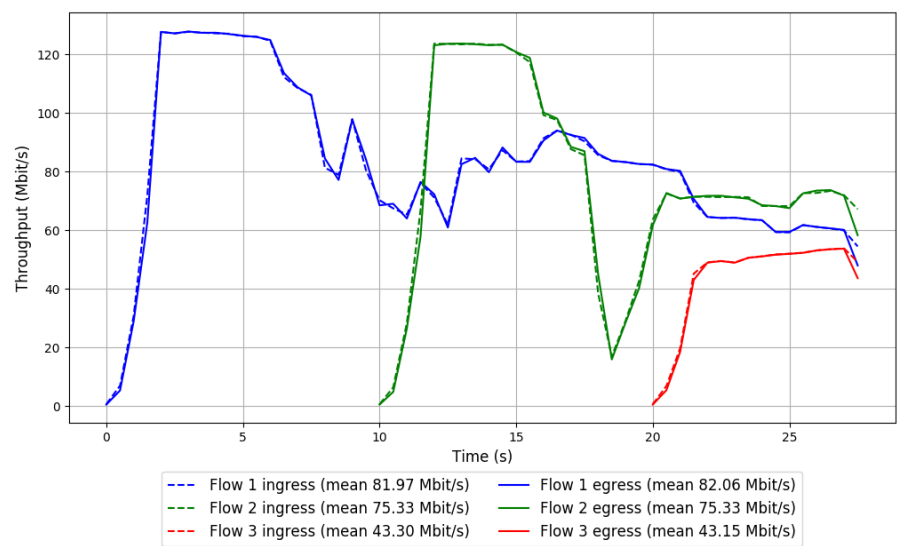
-- Flow 3:

Average throughput: 43.15 Mbit/s

95th percentile per-packet one-way delay: 53.612 ms

Loss rate: 1.60%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-01-17 16:32:07

End at: 2018-01-17 16:32:37

Below is generated by plot.py at 2018-01-17 22:08:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.86 Mbit/s

95th percentile per-packet one-way delay: 53.615 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 80.96 Mbit/s

95th percentile per-packet one-way delay: 49.998 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 75.97 Mbit/s

95th percentile per-packet one-way delay: 53.660 ms

Loss rate: 0.48%

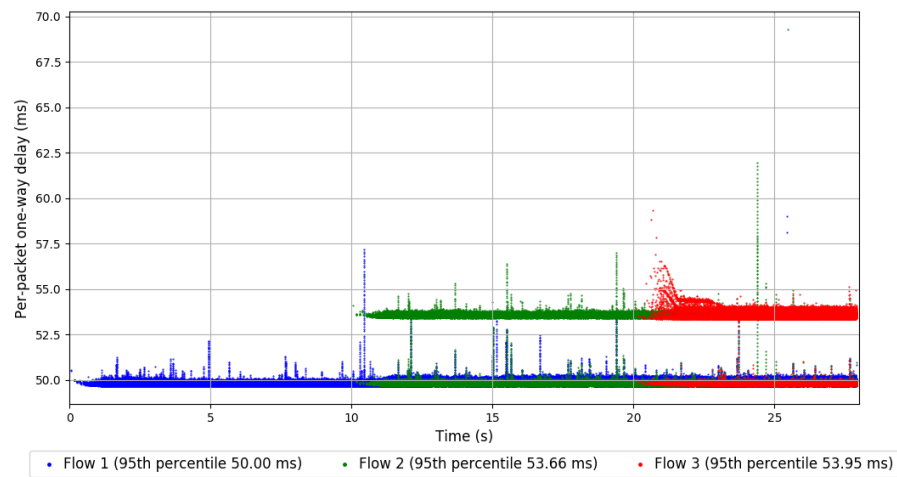
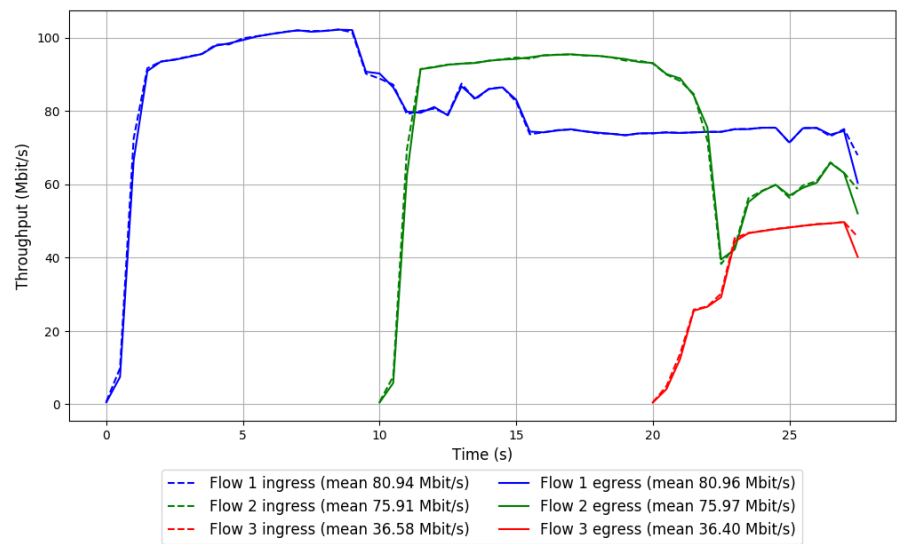
-- Flow 3:

Average throughput: 36.40 Mbit/s

95th percentile per-packet one-way delay: 53.948 ms

Loss rate: 1.80%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-01-17 16:49:15

End at: 2018-01-17 16:49:45

Below is generated by plot.py at 2018-01-17 22:08:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 130.04 Mbit/s

95th percentile per-packet one-way delay: 53.628 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 67.10 Mbit/s

95th percentile per-packet one-way delay: 53.552 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 76.15 Mbit/s

95th percentile per-packet one-way delay: 53.619 ms

Loss rate: 0.67%

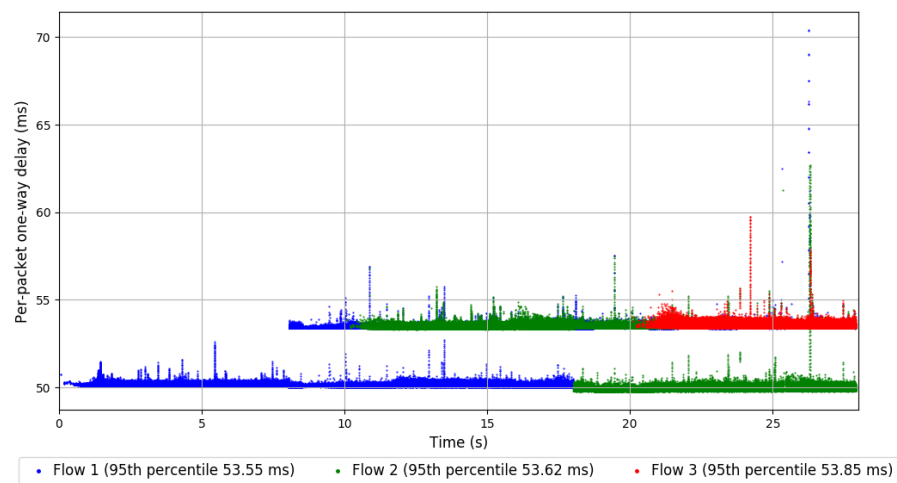
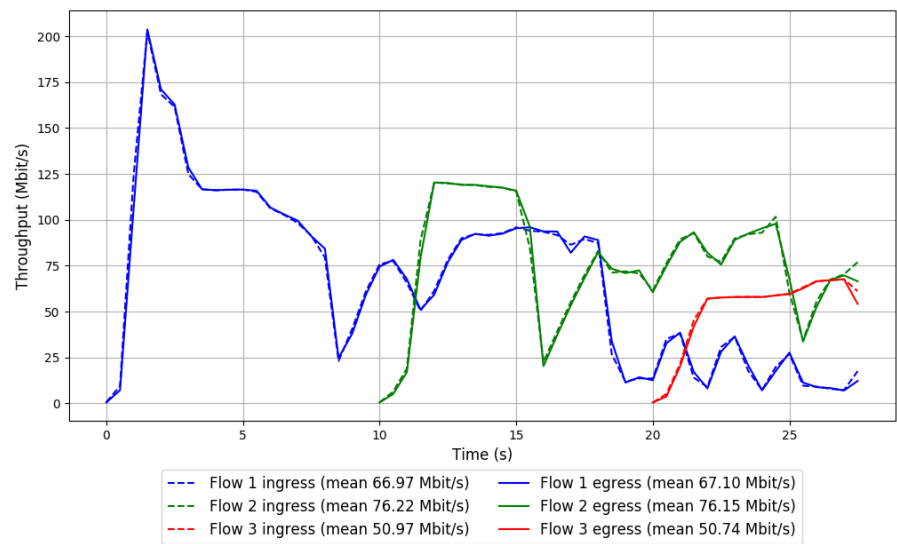
-- Flow 3:

Average throughput: 50.74 Mbit/s

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

Loss rate: 1.75%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-01-17 17:06:05

End at: 2018-01-17 17:06:35

Below is generated by plot.py at 2018-01-17 22:10:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 144.96 Mbit/s

95th percentile per-packet one-way delay: 53.580 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 82.96 Mbit/s

95th percentile per-packet one-way delay: 53.586 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 82.65 Mbit/s

95th percentile per-packet one-way delay: 50.268 ms

Loss rate: 0.63%

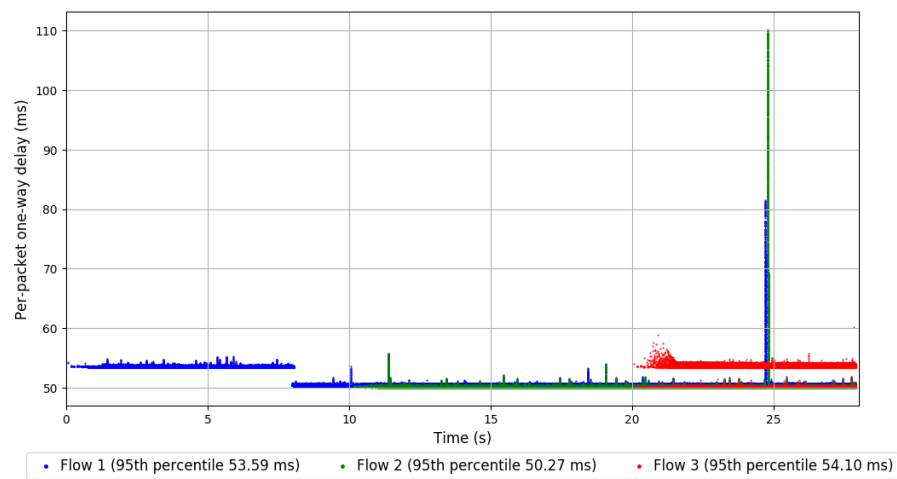
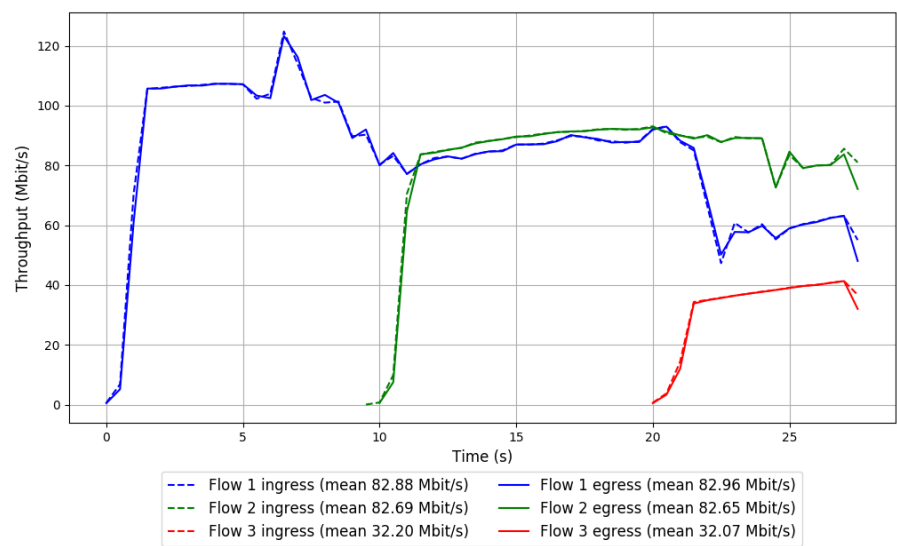
-- Flow 3:

Average throughput: 32.07 Mbit/s

95th percentile per-packet one-way delay: 54.096 ms

Loss rate: 1.73%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-01-17 17:23:14

End at: 2018-01-17 17:23:44

Below is generated by plot.py at 2018-01-17 22:10:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 126.87 Mbit/s

95th percentile per-packet one-way delay: 53.627 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 64.88 Mbit/s

95th percentile per-packet one-way delay: 53.559 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 72.05 Mbit/s

95th percentile per-packet one-way delay: 53.596 ms

Loss rate: 0.57%

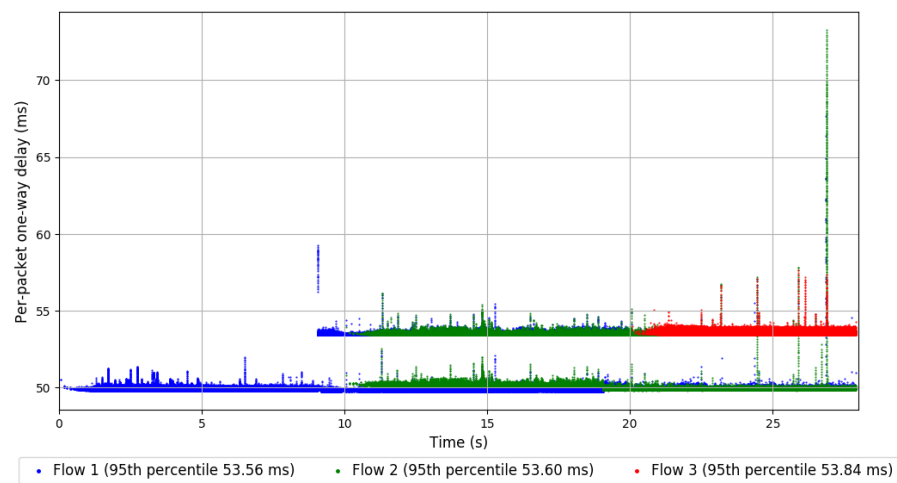
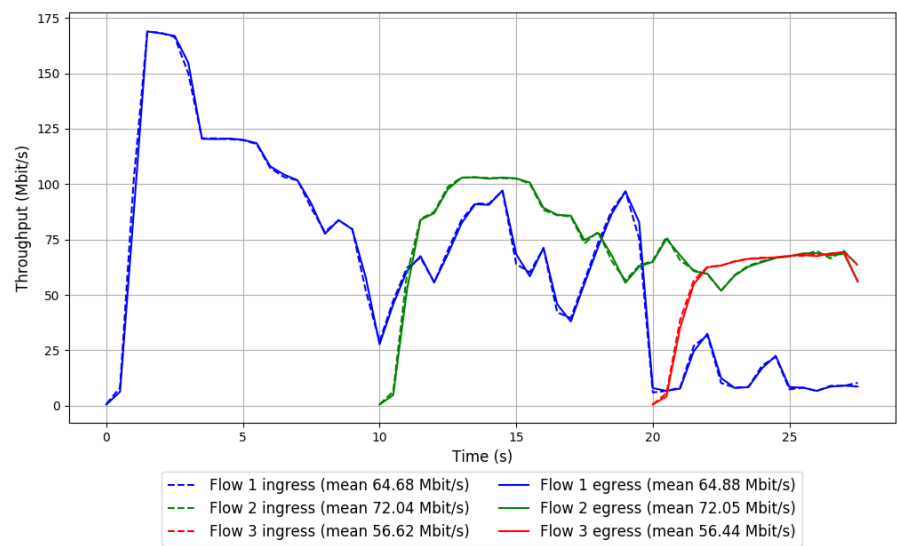
-- Flow 3:

Average throughput: 56.44 Mbit/s

95th percentile per-packet one-way delay: 53.839 ms

Loss rate: 1.67%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-01-17 17:39:54

End at: 2018-01-17 17:40:25

Below is generated by plot.py at 2018-01-17 22:10:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.86 Mbit/s

95th percentile per-packet one-way delay: 53.665 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 70.66 Mbit/s

95th percentile per-packet one-way delay: 53.594 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 69.12 Mbit/s

95th percentile per-packet one-way delay: 53.806 ms

Loss rate: 0.55%

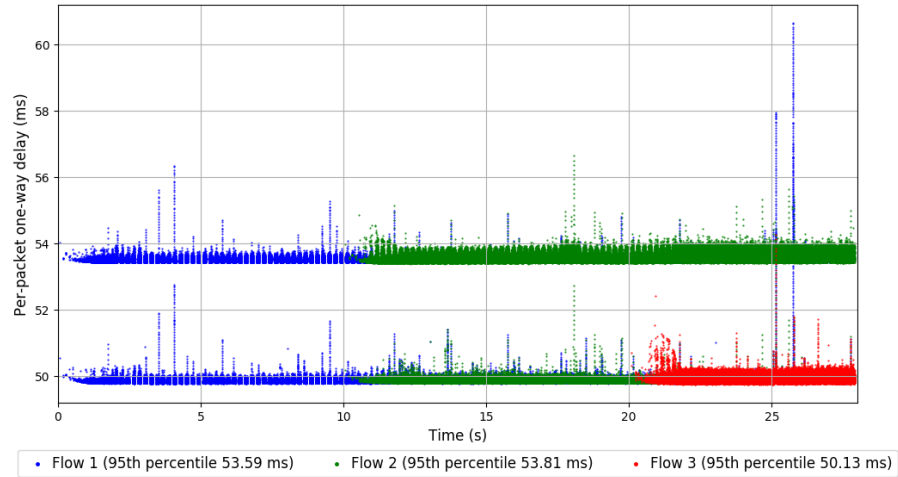
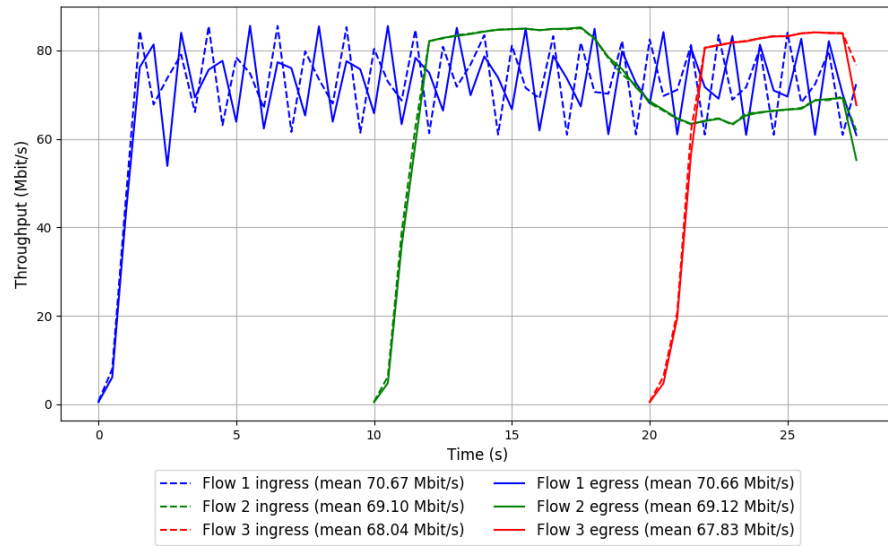
-- Flow 3:

Average throughput: 67.83 Mbit/s

95th percentile per-packet one-way delay: 50.126 ms

Loss rate: 1.62%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-01-17 17:57:01

End at: 2018-01-17 17:57:31

Below is generated by plot.py at 2018-01-17 22:11:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.81 Mbit/s

95th percentile per-packet one-way delay: 53.612 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 82.41 Mbit/s

95th percentile per-packet one-way delay: 50.047 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 85.61 Mbit/s

95th percentile per-packet one-way delay: 53.676 ms

Loss rate: 0.61%

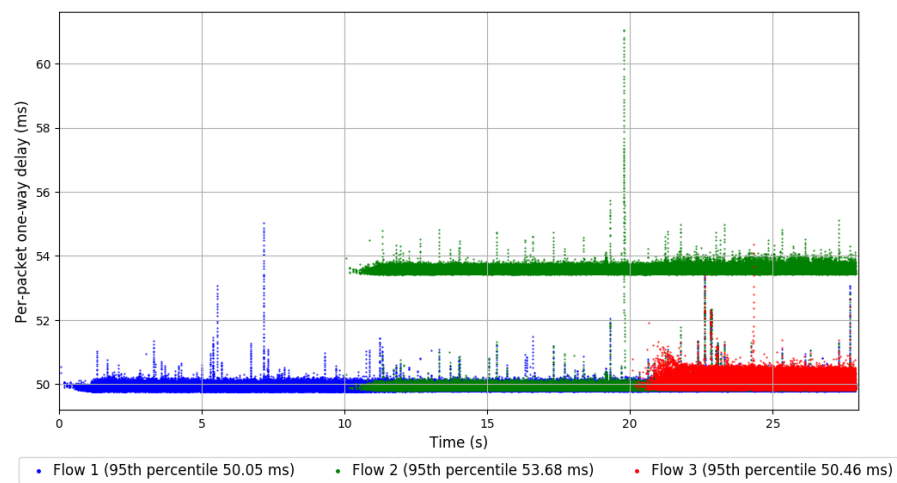
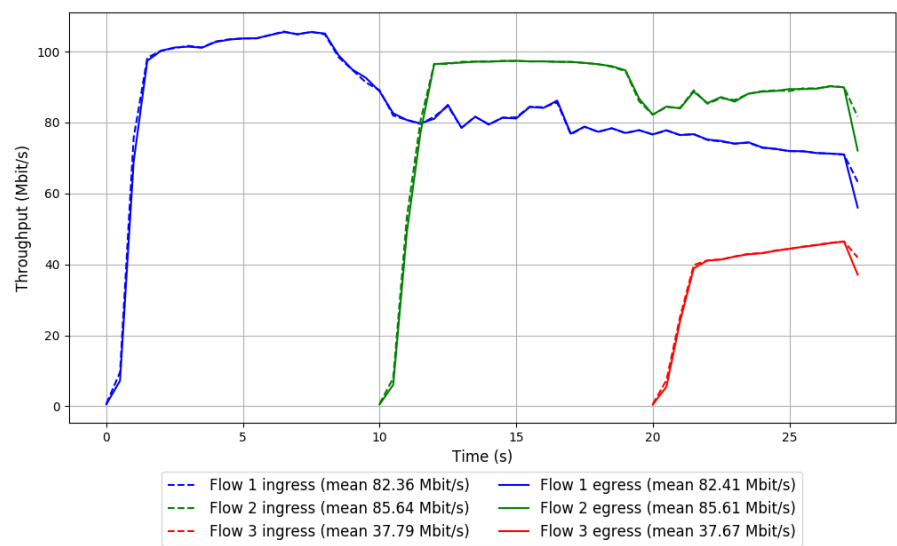
-- Flow 3:

Average throughput: 37.67 Mbit/s

95th percentile per-packet one-way delay: 50.457 ms

Loss rate: 1.59%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-01-17 18:13:51

End at: 2018-01-17 18:14:21

Below is generated by plot.py at 2018-01-17 22:12:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 168.08 Mbit/s

95th percentile per-packet one-way delay: 53.663 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 89.89 Mbit/s

95th percentile per-packet one-way delay: 53.647 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 99.32 Mbit/s

95th percentile per-packet one-way delay: 53.647 ms

Loss rate: 0.45%

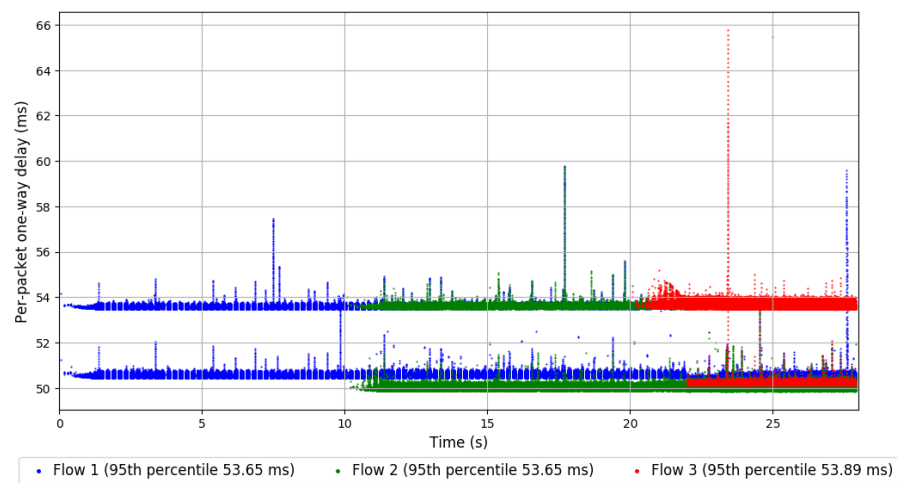
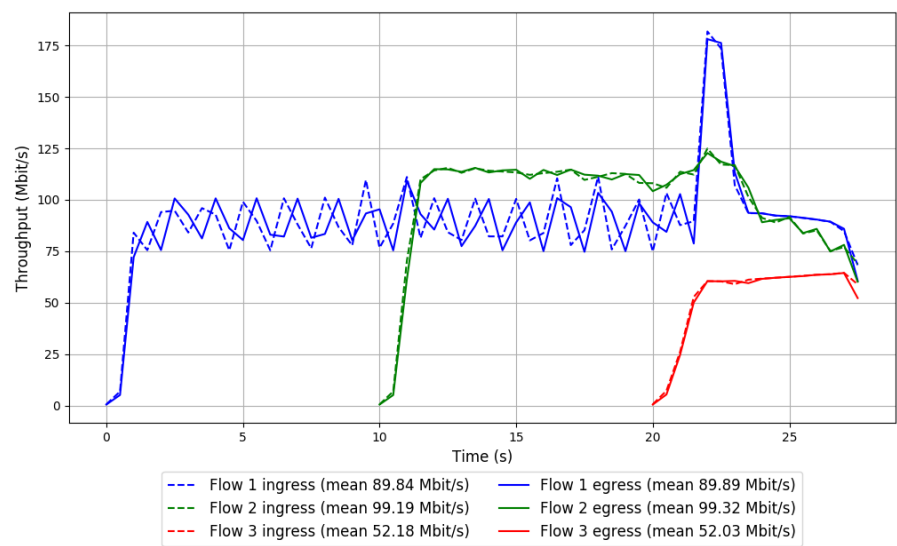
-- Flow 3:

Average throughput: 52.03 Mbit/s

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

Loss rate: 1.60%

Run 10: Report of Copa — Data Link

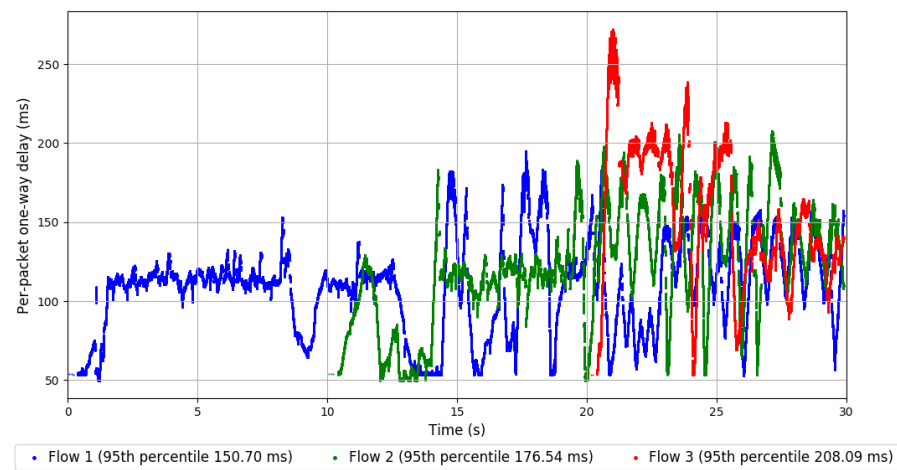
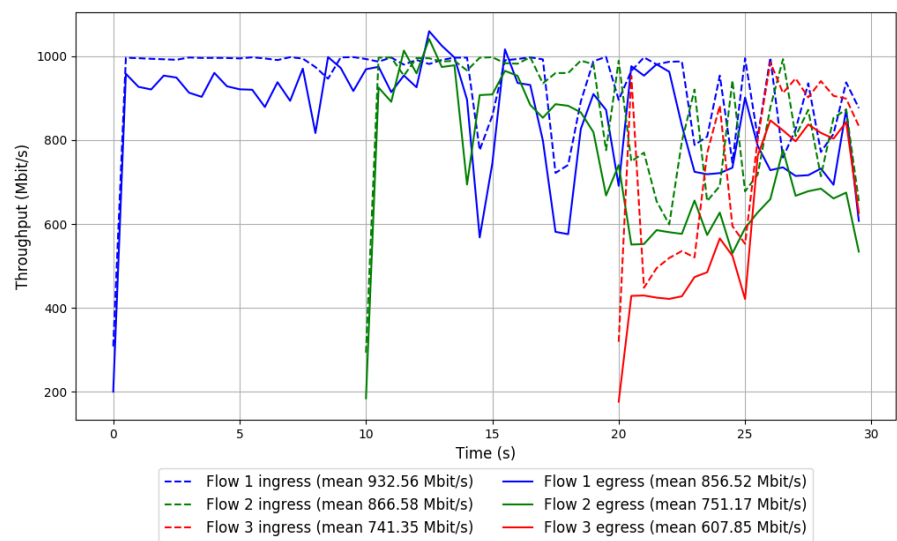


```
Run 1: Statistics of FillP

Start at: 2018-01-17 15:38:24
End at: 2018-01-17 15:38:54

# Below is generated by plot.py at 2018-01-17 22:37:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1555.64 Mbit/s
95th percentile per-packet one-way delay: 177.201 ms
Loss rate: 11.69%
-- Flow 1:
Average throughput: 856.52 Mbit/s
95th percentile per-packet one-way delay: 150.701 ms
Loss rate: 8.48%
-- Flow 2:
Average throughput: 751.17 Mbit/s
95th percentile per-packet one-way delay: 176.540 ms
Loss rate: 13.79%
-- Flow 3:
Average throughput: 607.85 Mbit/s
95th percentile per-packet one-way delay: 208.090 ms
Loss rate: 18.90%
```

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-01-17 15:55:35

End at: 2018-01-17 15:56:05

Below is generated by plot.py at 2018-01-17 22:37:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 1468.80 Mbit/s

95th percentile per-packet one-way delay: 175.079 ms

Loss rate: 13.49%

-- Flow 1:

Average throughput: 757.26 Mbit/s

95th percentile per-packet one-way delay: 176.901 ms

Loss rate: 13.21%

-- Flow 2:

Average throughput: 762.47 Mbit/s

95th percentile per-packet one-way delay: 171.326 ms

Loss rate: 10.60%

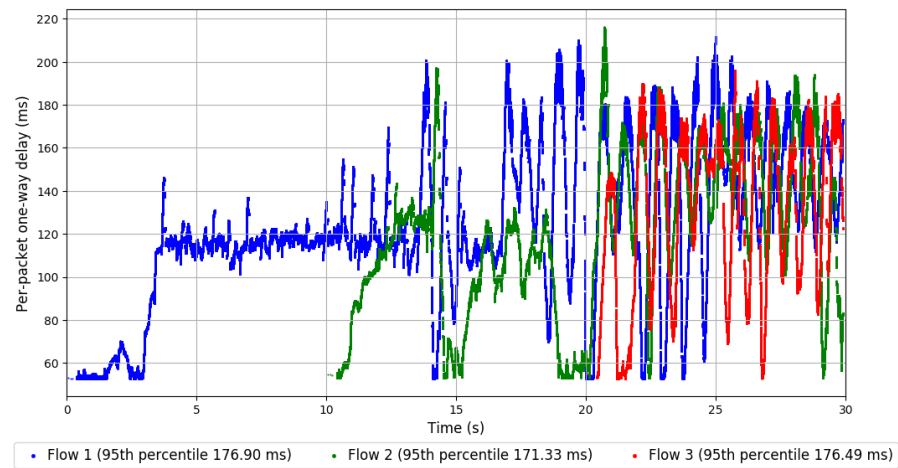
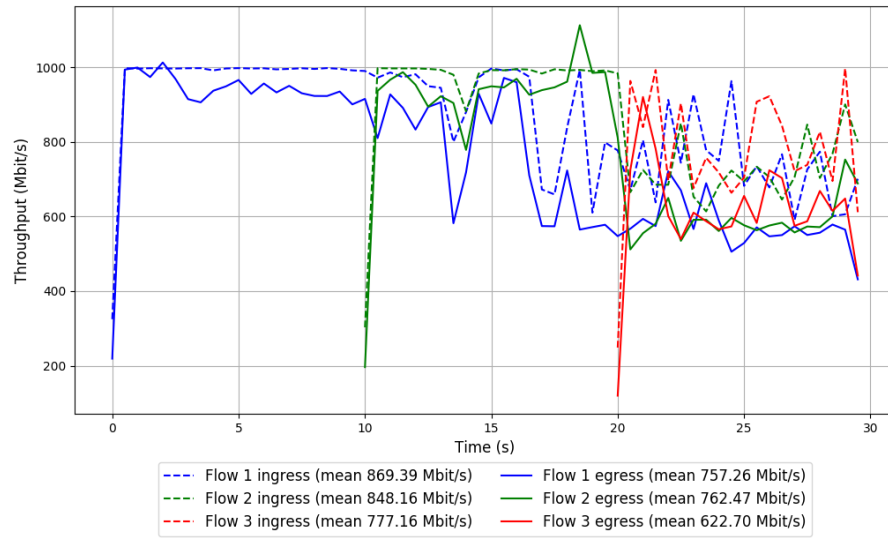
-- Flow 3:

Average throughput: 622.70 Mbit/s

95th percentile per-packet one-way delay: 176.491 ms

Loss rate: 20.76%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-01-17 16:12:15

End at: 2018-01-17 16:12:45

Below is generated by plot.py at 2018-01-17 22:37:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 1523.76 Mbit/s

95th percentile per-packet one-way delay: 169.300 ms

Loss rate: 13.17%

-- Flow 1:

Average throughput: 803.36 Mbit/s

95th percentile per-packet one-way delay: 168.210 ms

Loss rate: 11.92%

-- Flow 2:

Average throughput: 767.90 Mbit/s

95th percentile per-packet one-way delay: 168.599 ms

Loss rate: 12.81%

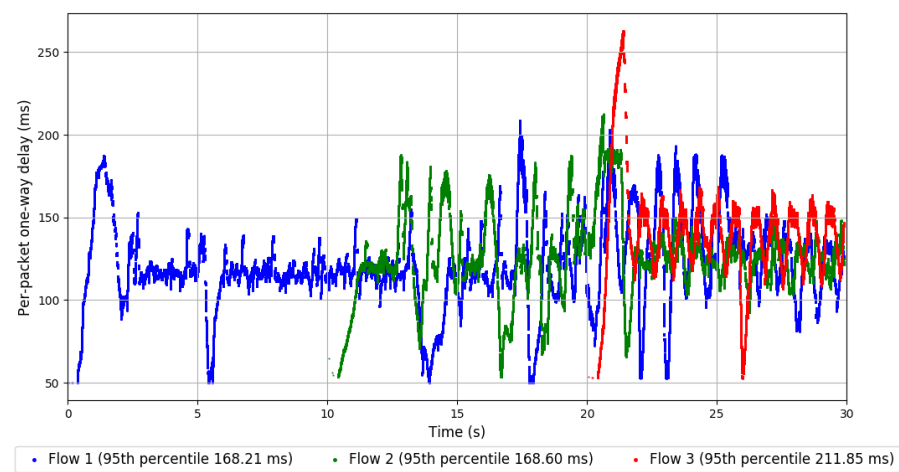
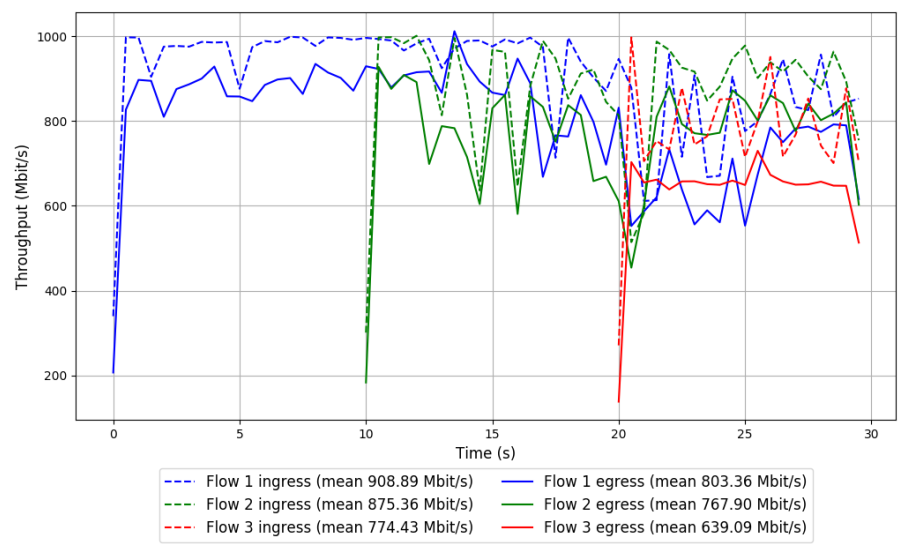
-- Flow 3:

Average throughput: 639.09 Mbit/s

95th percentile per-packet one-way delay: 211.846 ms

Loss rate: 18.38%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-01-17 16:29:31

End at: 2018-01-17 16:30:01

Below is generated by plot.py at 2018-01-17 22:37:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 1401.20 Mbit/s

95th percentile per-packet one-way delay: 177.888 ms

Loss rate: 15.23%

-- Flow 1:

Average throughput: 780.86 Mbit/s

95th percentile per-packet one-way delay: 153.041 ms

Loss rate: 12.19%

-- Flow 2:

Average throughput: 651.28 Mbit/s

95th percentile per-packet one-way delay: 194.664 ms

Loss rate: 17.25%

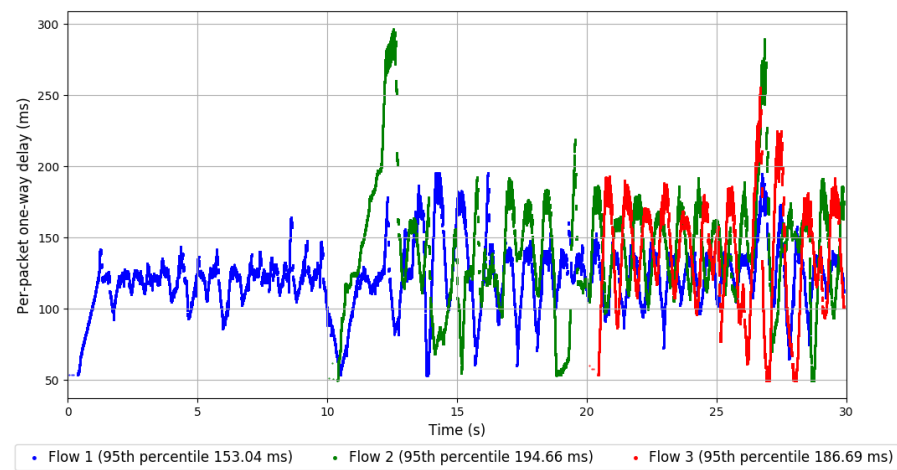
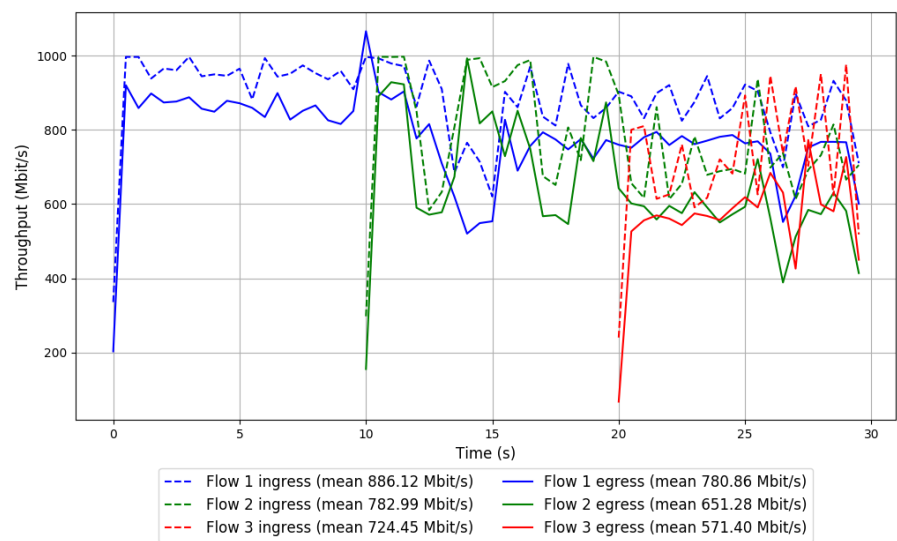
-- Flow 3:

Average throughput: 571.40 Mbit/s

95th percentile per-packet one-way delay: 186.691 ms

Loss rate: 22.03%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-01-17 16:46:37

End at: 2018-01-17 16:47:07

Below is generated by plot.py at 2018-01-17 22:40:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 1537.01 Mbit/s

95th percentile per-packet one-way delay: 179.325 ms

Loss rate: 12.06%

-- Flow 1:

Average throughput: 759.34 Mbit/s

95th percentile per-packet one-way delay: 183.228 ms

Loss rate: 12.68%

-- Flow 2:

Average throughput: 802.91 Mbit/s

95th percentile per-packet one-way delay: 160.349 ms

Loss rate: 10.71%

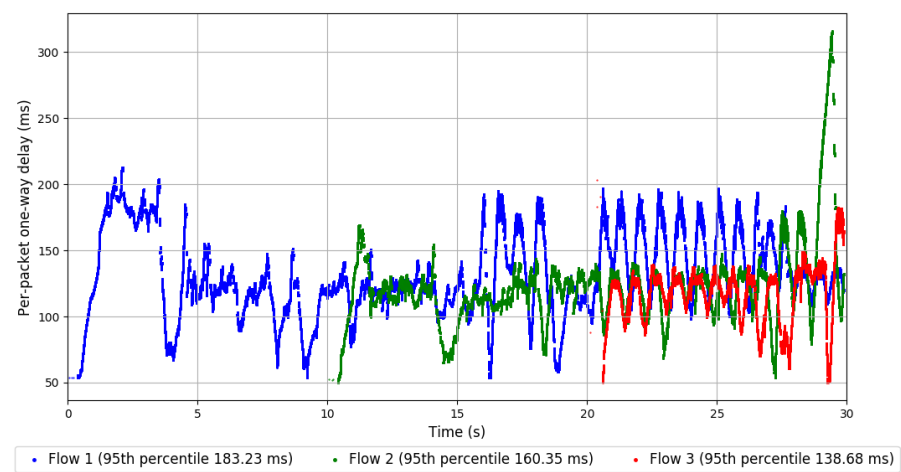
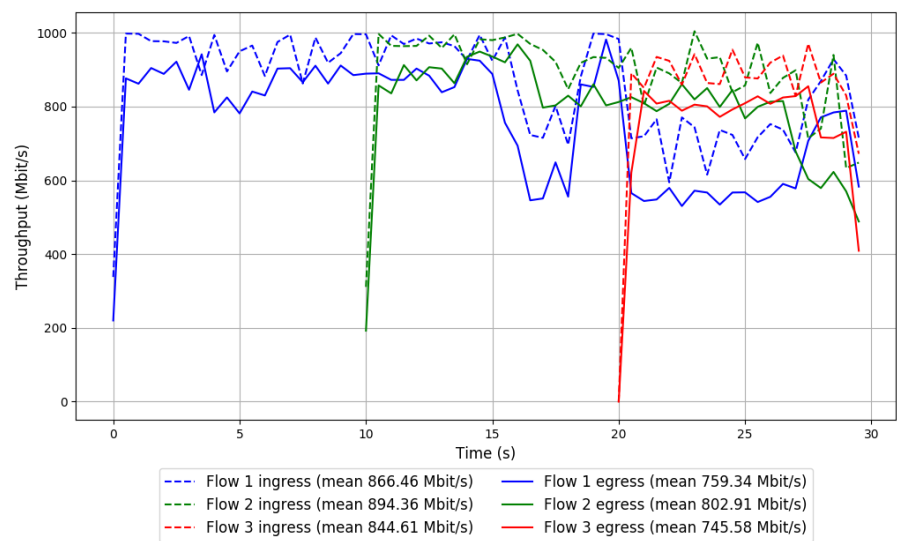
-- Flow 3:

Average throughput: 745.58 Mbit/s

95th percentile per-packet one-way delay: 138.682 ms

Loss rate: 13.00%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-01-17 17:03:21

End at: 2018-01-17 17:03:51

Below is generated by plot.py at 2018-01-17 22:40:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 1417.29 Mbit/s

95th percentile per-packet one-way delay: 276.132 ms

Loss rate: 15.48%

-- Flow 1:

Average throughput: 750.05 Mbit/s

95th percentile per-packet one-way delay: 183.506 ms

Loss rate: 13.82%

-- Flow 2:

Average throughput: 692.18 Mbit/s

95th percentile per-packet one-way delay: 298.963 ms

Loss rate: 15.43%

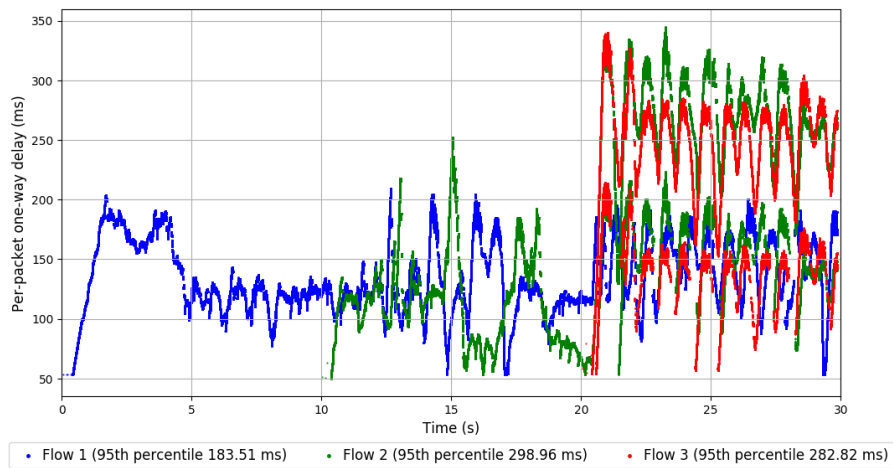
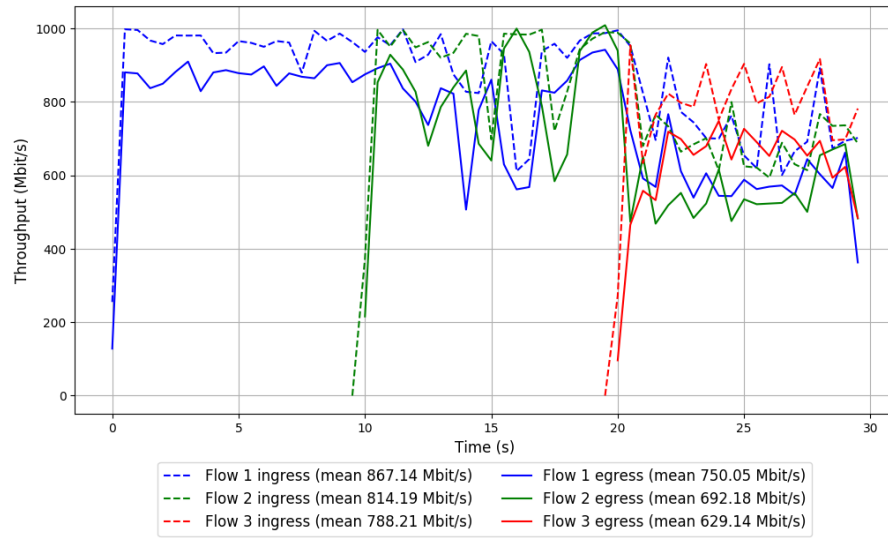
-- Flow 3:

Average throughput: 629.14 Mbit/s

95th percentile per-packet one-way delay: 282.822 ms

Loss rate: 21.09%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-01-17 17:20:34

End at: 2018-01-17 17:21:04

Below is generated by plot.py at 2018-01-17 22:41:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 1542.61 Mbit/s

95th percentile per-packet one-way delay: 256.494 ms

Loss rate: 12.30%

-- Flow 1:

Average throughput: 808.44 Mbit/s

95th percentile per-packet one-way delay: 261.560 ms

Loss rate: 11.95%

-- Flow 2:

Average throughput: 800.36 Mbit/s

95th percentile per-packet one-way delay: 149.902 ms

Loss rate: 10.69%

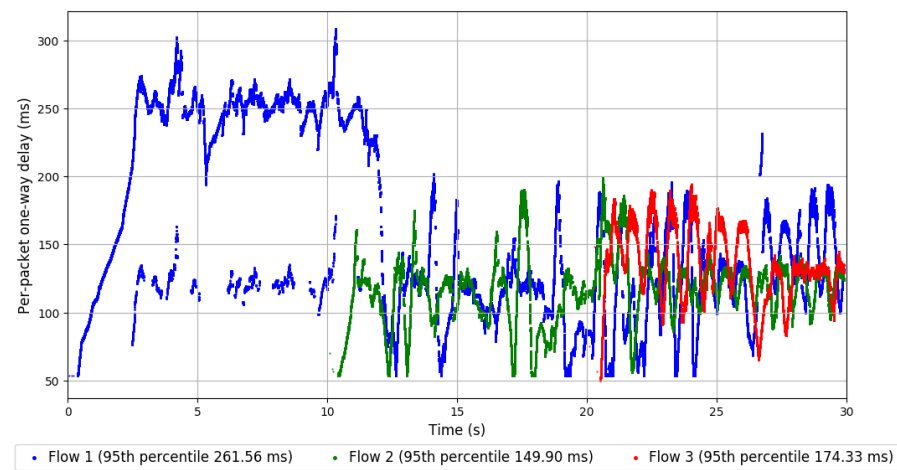
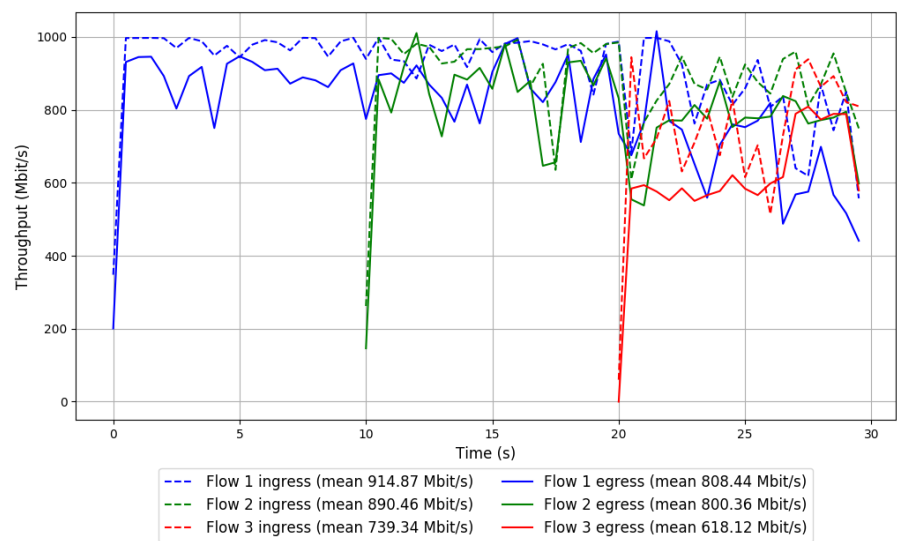
-- Flow 3:

Average throughput: 618.12 Mbit/s

95th percentile per-packet one-way delay: 174.327 ms

Loss rate: 17.49%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-01-17 17:37:22

End at: 2018-01-17 17:37:52

Below is generated by plot.py at 2018-01-17 22:44:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 1544.22 Mbit/s

95th percentile per-packet one-way delay: 162.771 ms

Loss rate: 12.67%

-- Flow 1:

Average throughput: 794.36 Mbit/s

95th percentile per-packet one-way delay: 167.579 ms

Loss rate: 12.51%

-- Flow 2:

Average throughput: 805.39 Mbit/s

95th percentile per-packet one-way delay: 140.773 ms

Loss rate: 10.40%

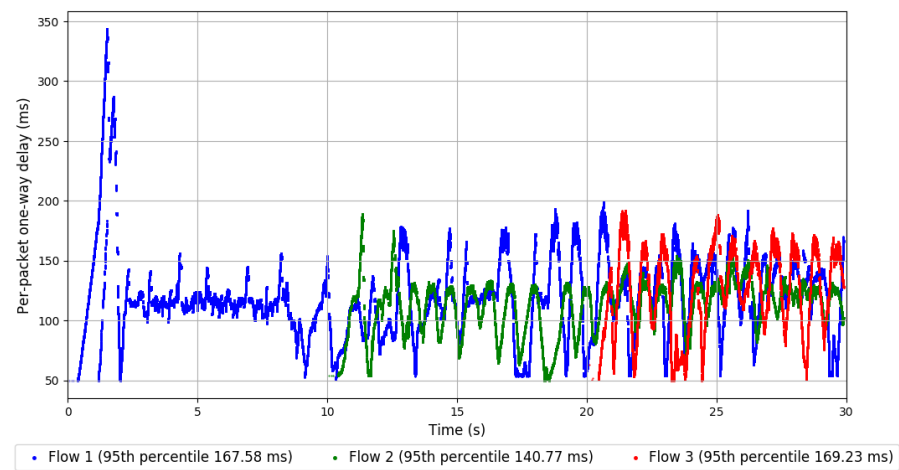
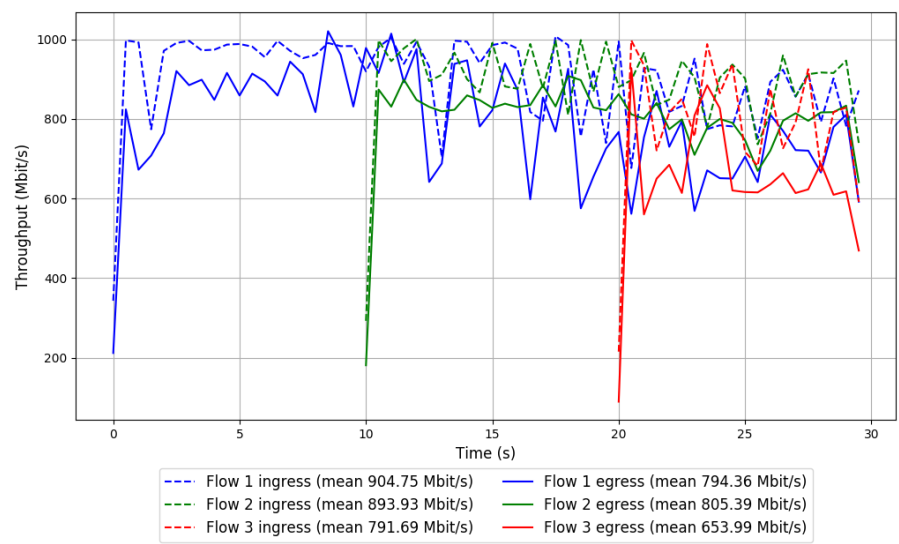
-- Flow 3:

Average throughput: 653.99 Mbit/s

95th percentile per-packet one-way delay: 169.228 ms

Loss rate: 18.38%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-01-17 17:54:22

End at: 2018-01-17 17:54:52

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 1511.57 Mbit/s

95th percentile per-packet one-way delay: 164.436 ms

Loss rate: 12.90%

-- Flow 1:

Average throughput: 753.80 Mbit/s

95th percentile per-packet one-way delay: 159.837 ms

Loss rate: 12.58%

-- Flow 2:

Average throughput: 829.05 Mbit/s

95th percentile per-packet one-way delay: 154.134 ms

Loss rate: 10.62%

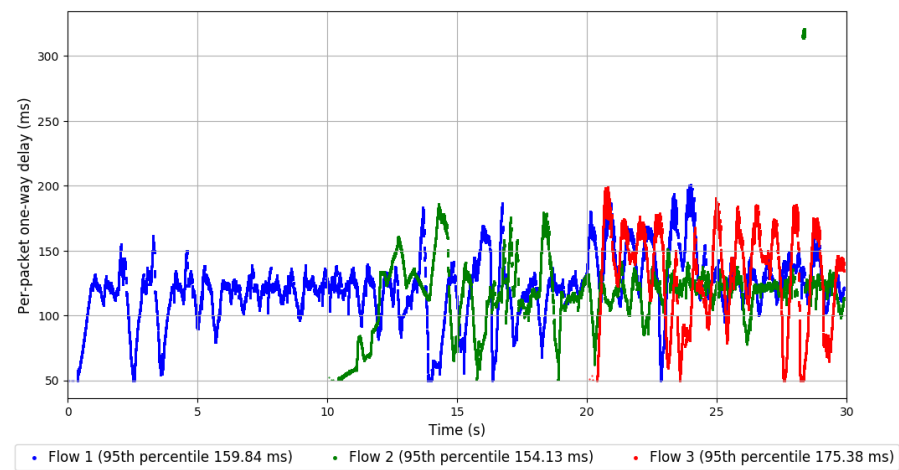
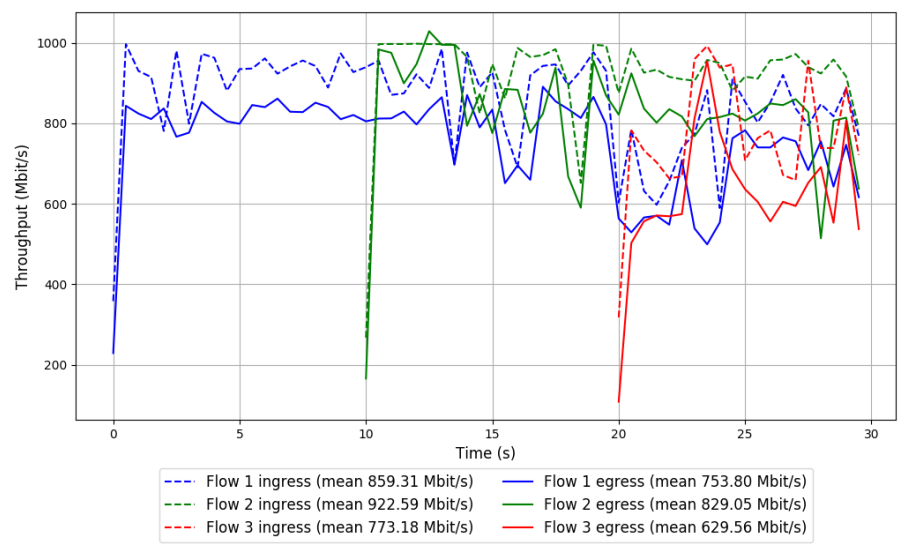
-- Flow 3:

Average throughput: 629.56 Mbit/s

95th percentile per-packet one-way delay: 175.380 ms

Loss rate: 19.44%

Run 9: Report of FillP — Data Link

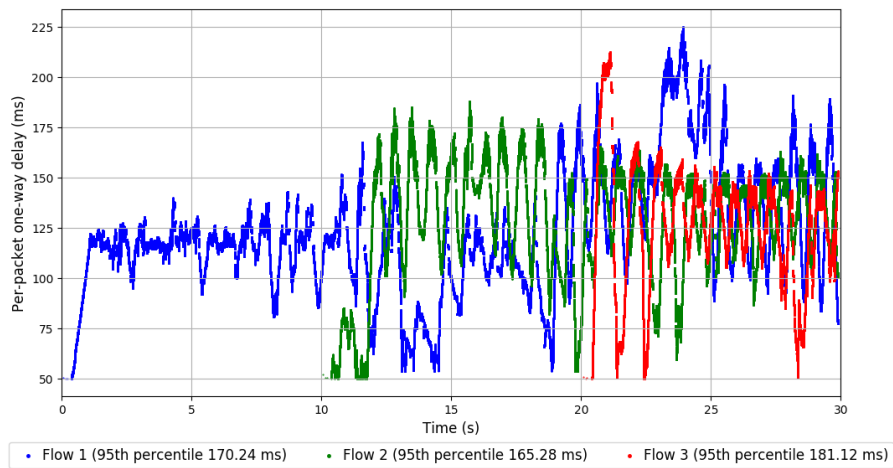
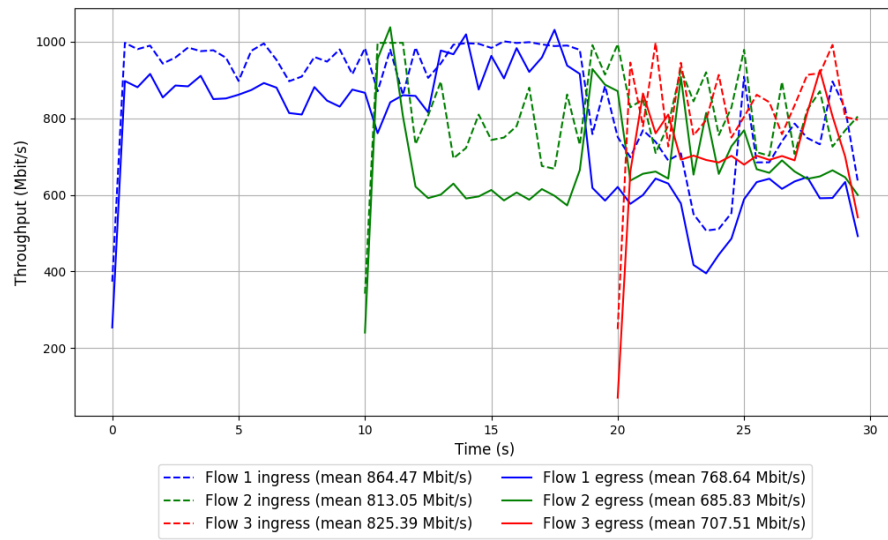


```
Run 10: Statistics of FillP

Start at: 2018-01-17 18:11:13
End at: 2018-01-17 18:11:43

# Below is generated by plot.py at 2018-01-17 23:07:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1457.18 Mbit/s
95th percentile per-packet one-way delay: 167.685 ms
Loss rate: 13.53%
-- Flow 1:
Average throughput: 768.64 Mbit/s
95th percentile per-packet one-way delay: 170.239 ms
Loss rate: 11.40%
-- Flow 2:
Average throughput: 685.83 Mbit/s
95th percentile per-packet one-way delay: 165.284 ms
Loss rate: 16.10%
-- Flow 3:
Average throughput: 707.51 Mbit/s
95th percentile per-packet one-way delay: 181.117 ms
Loss rate: 15.19%
```

Run 10: Report of FillP — Data Link

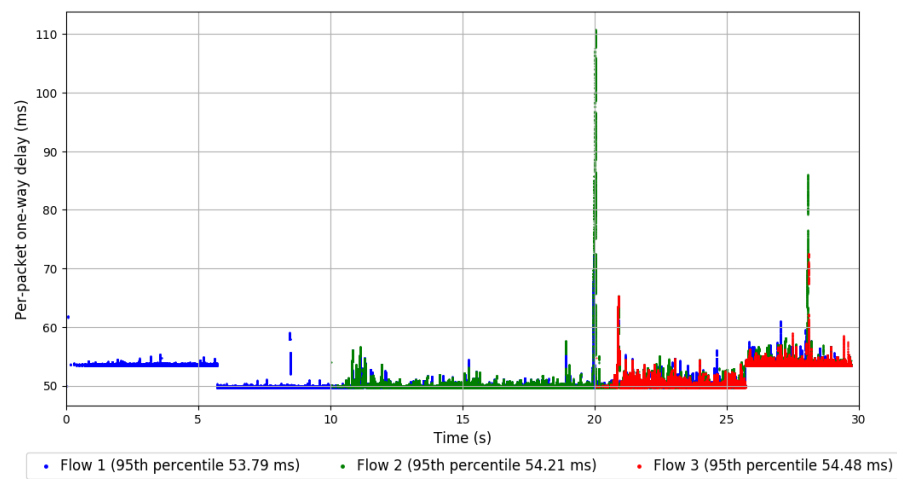
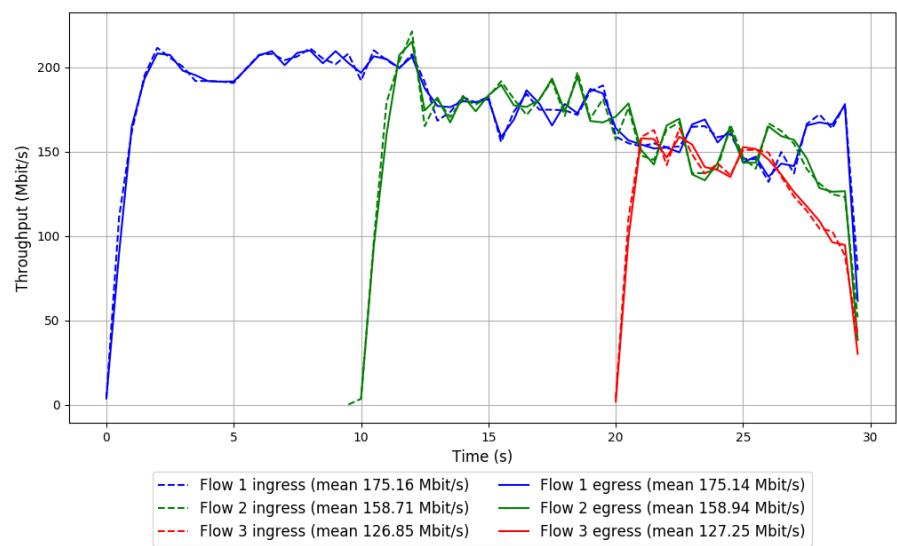


```
Run 1: Statistics of Indigo

Start at: 2018-01-17 15:28:39
End at: 2018-01-17 15:29:09

# Below is generated by plot.py at 2018-01-17 23:07:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 321.82 Mbit/s
95th percentile per-packet one-way delay: 54.022 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 175.14 Mbit/s
95th percentile per-packet one-way delay: 53.794 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 158.94 Mbit/s
95th percentile per-packet one-way delay: 54.211 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 127.25 Mbit/s
95th percentile per-packet one-way delay: 54.477 ms
Loss rate: 0.75%
```

Run 1: Report of Indigo — Data Link

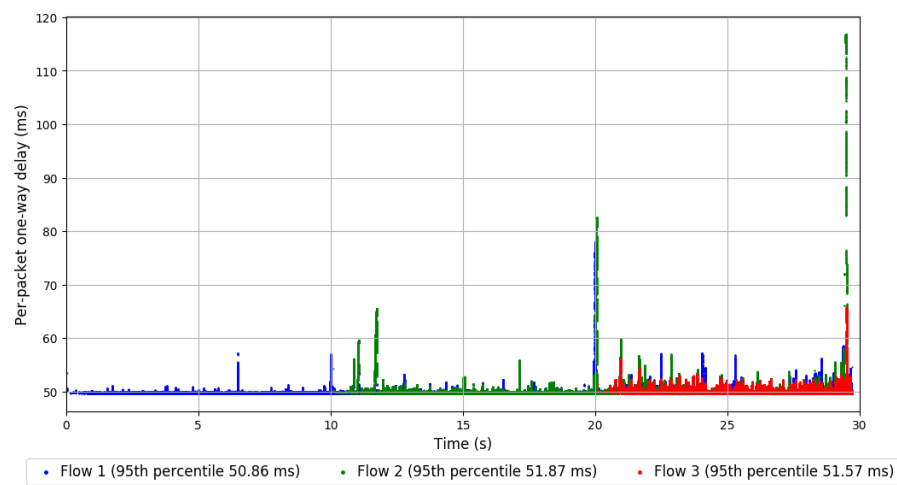
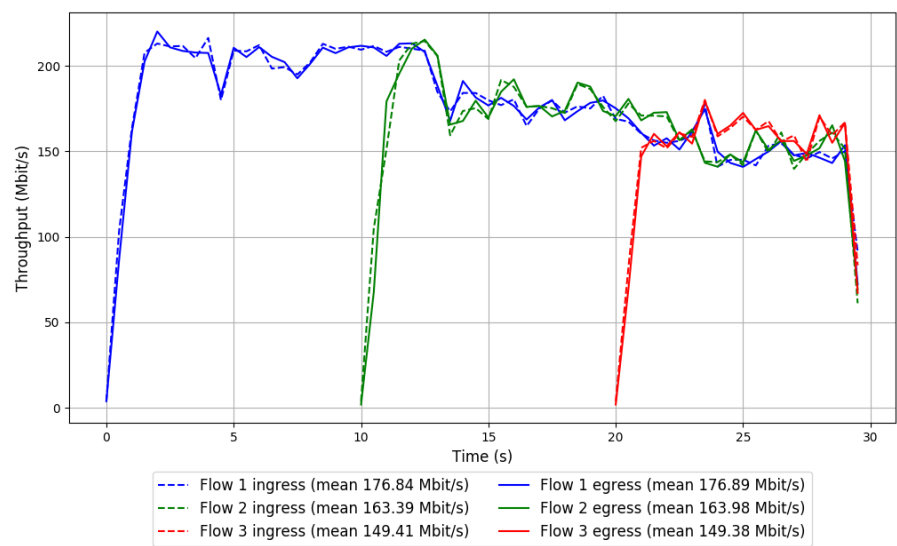


```
Run 2: Statistics of Indigo

Start at: 2018-01-17 15:45:36
End at: 2018-01-17 15:46:06

# Below is generated by plot.py at 2018-01-17 23:07:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 333.72 Mbit/s
95th percentile per-packet one-way delay: 51.327 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 176.89 Mbit/s
95th percentile per-packet one-way delay: 50.862 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 163.98 Mbit/s
95th percentile per-packet one-way delay: 51.870 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 149.38 Mbit/s
95th percentile per-packet one-way delay: 51.568 ms
Loss rate: 1.19%
```


Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-01-17 16:02:35

End at: 2018-01-17 16:03:05

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 358.19 Mbit/s

95th percentile per-packet one-way delay: 57.578 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 180.45 Mbit/s

95th percentile per-packet one-way delay: 56.613 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 175.31 Mbit/s

95th percentile per-packet one-way delay: 57.881 ms

Loss rate: 0.44%

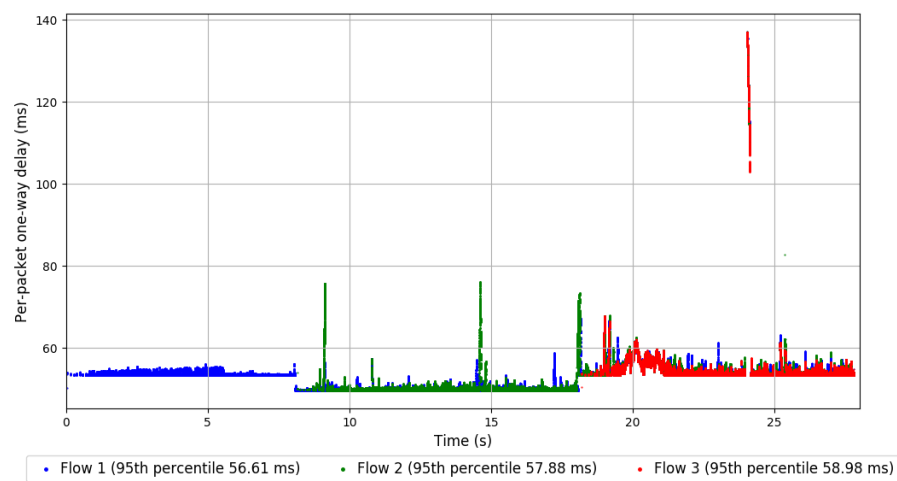
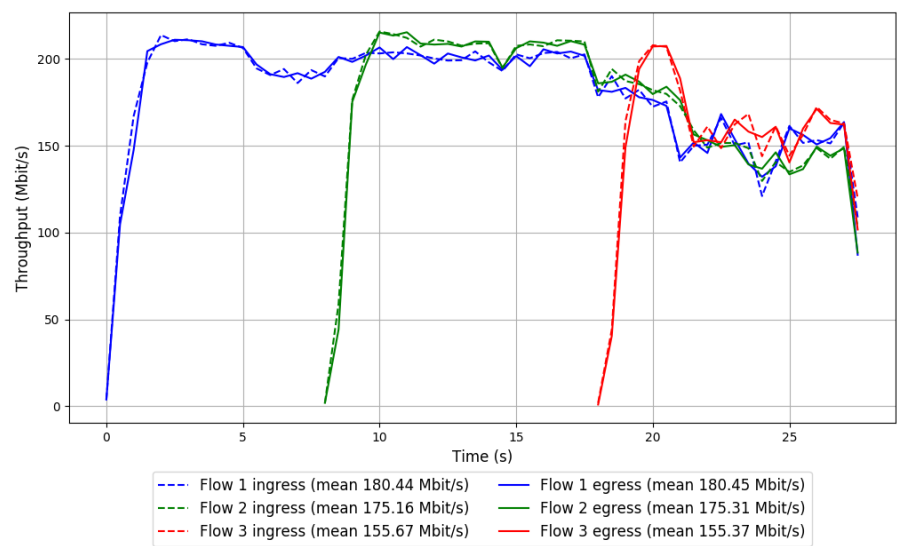
-- Flow 3:

Average throughput: 155.37 Mbit/s

95th percentile per-packet one-way delay: 58.983 ms

Loss rate: 1.25%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-01-17 16:19:23

End at: 2018-01-17 16:19:53

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 334.76 Mbit/s

95th percentile per-packet one-way delay: 52.374 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 180.12 Mbit/s

95th percentile per-packet one-way delay: 53.362 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 162.88 Mbit/s

95th percentile per-packet one-way delay: 51.828 ms

Loss rate: 0.43%

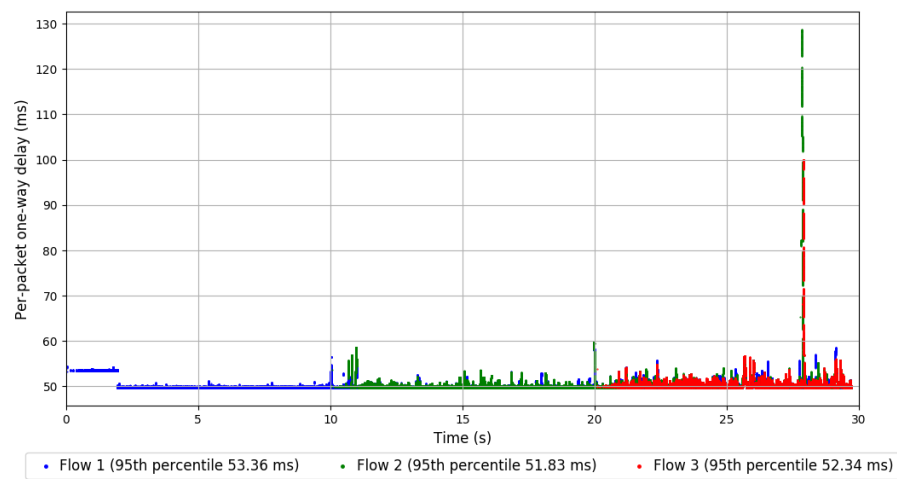
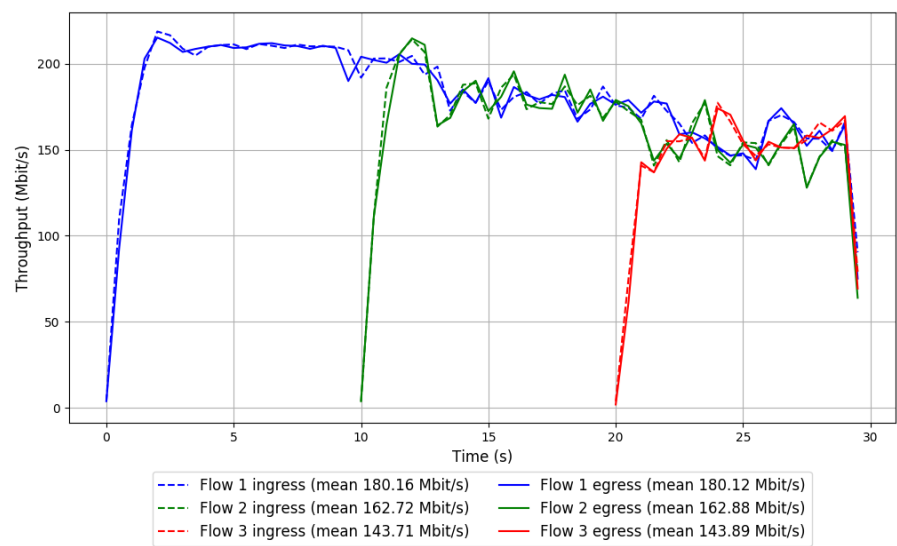
-- Flow 3:

Average throughput: 143.89 Mbit/s

95th percentile per-packet one-way delay: 52.335 ms

Loss rate: 0.94%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-01-17 16:36:39

End at: 2018-01-17 16:37:09

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 323.21 Mbit/s

95th percentile per-packet one-way delay: 55.074 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 167.95 Mbit/s

95th percentile per-packet one-way delay: 54.417 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 159.46 Mbit/s

95th percentile per-packet one-way delay: 55.829 ms

Loss rate: 0.64%

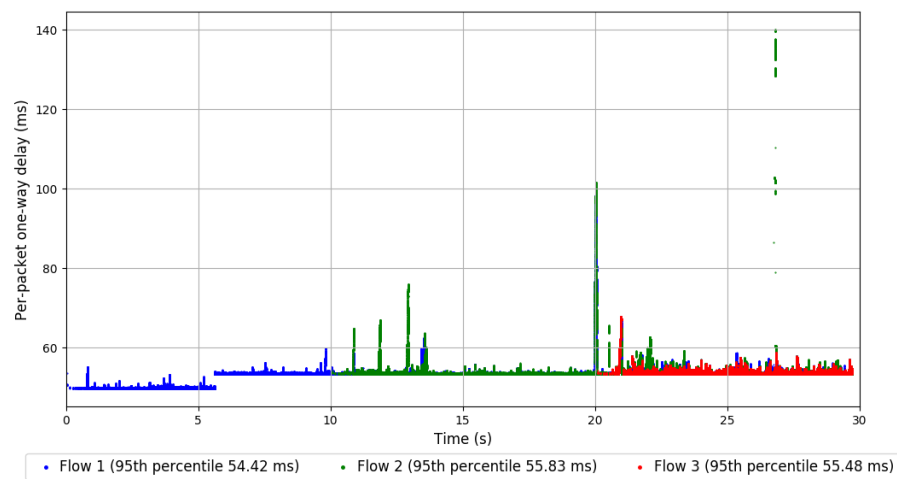
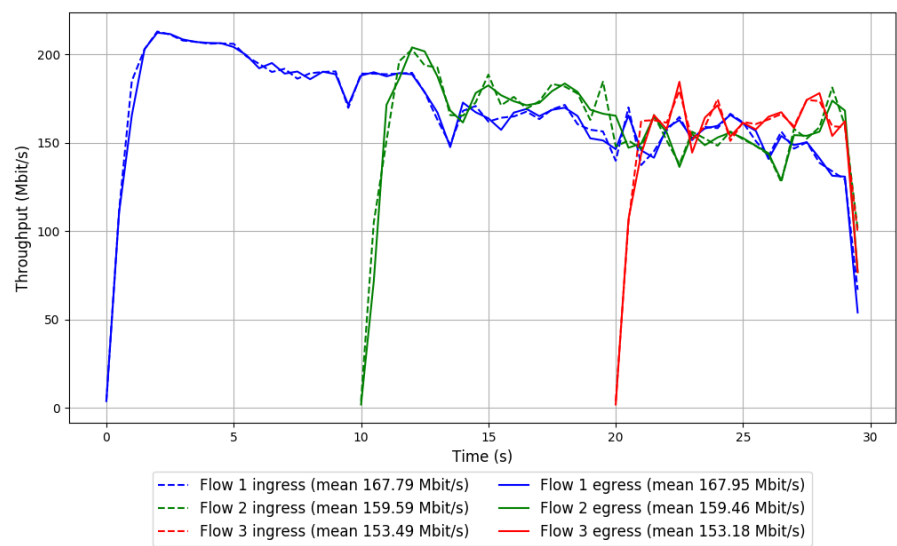
-- Flow 3:

Average throughput: 153.18 Mbit/s

95th percentile per-packet one-way delay: 55.481 ms

Loss rate: 1.32%

Run 5: Report of Indigo — Data Link



Run 6: Statistics of Indigo

Start at: 2018-01-17 16:53:42

End at: 2018-01-17 16:54:12

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 315.43 Mbit/s

95th percentile per-packet one-way delay: 59.205 ms

Loss rate: 0.36%

-- Flow 1:

Average throughput: 176.61 Mbit/s

95th percentile per-packet one-way delay: 57.124 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 162.12 Mbit/s

95th percentile per-packet one-way delay: 59.404 ms

Loss rate: 0.39%

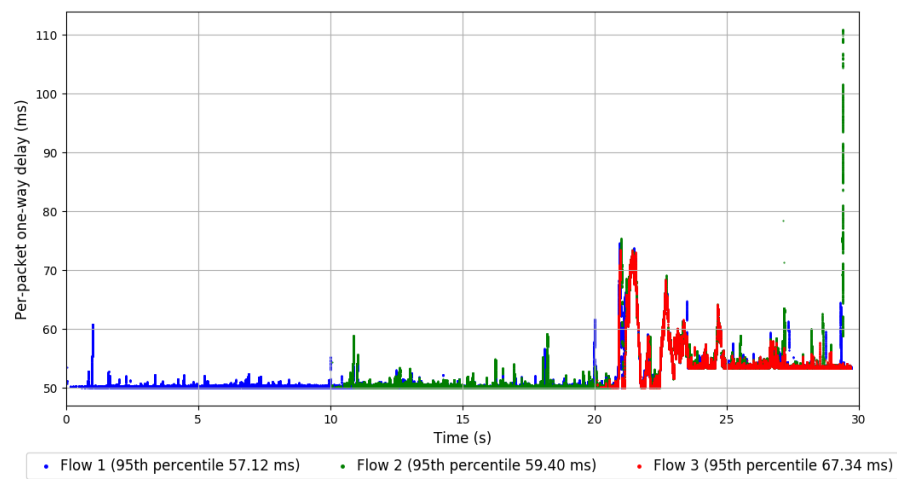
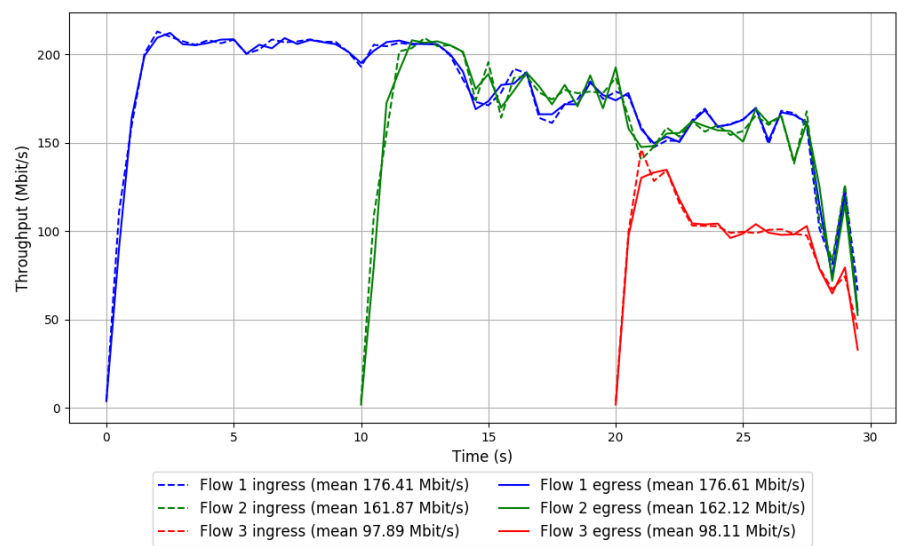
-- Flow 3:

Average throughput: 98.11 Mbit/s

95th percentile per-packet one-way delay: 67.337 ms

Loss rate: 0.91%

Run 6: Report of Indigo — Data Link



Run 7: Statistics of Indigo

Start at: 2018-01-17 17:10:33

End at: 2018-01-17 17:11:03

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 338.82 Mbit/s

95th percentile per-packet one-way delay: 54.211 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 181.00 Mbit/s

95th percentile per-packet one-way delay: 54.001 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 168.05 Mbit/s

95th percentile per-packet one-way delay: 54.455 ms

Loss rate: 0.51%

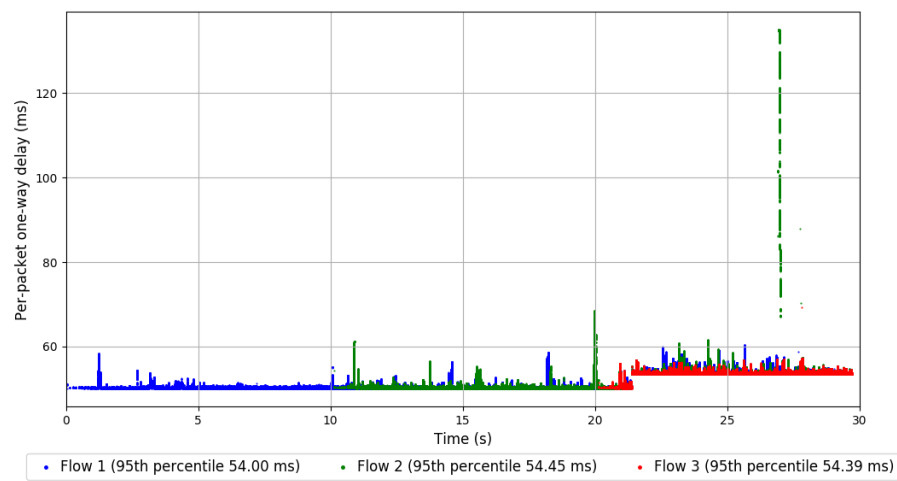
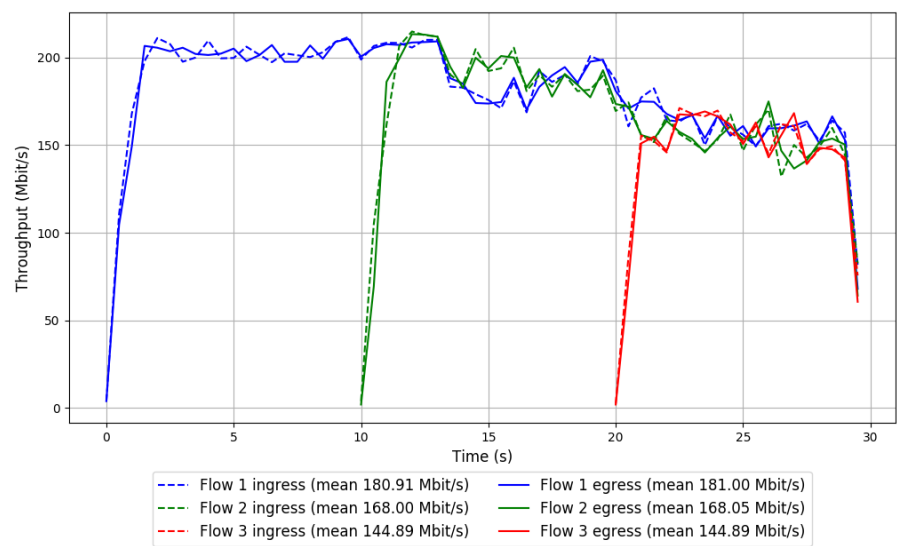
-- Flow 3:

Average throughput: 144.89 Mbit/s

95th percentile per-packet one-way delay: 54.386 ms

Loss rate: 1.07%

Run 7: Report of Indigo — Data Link



Run 8: Statistics of Indigo

Start at: 2018-01-17 17:27:40

End at: 2018-01-17 17:28:10

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 343.48 Mbit/s

95th percentile per-packet one-way delay: 54.329 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 187.04 Mbit/s

95th percentile per-packet one-way delay: 53.908 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 166.65 Mbit/s

95th percentile per-packet one-way delay: 54.472 ms

Loss rate: 0.45%

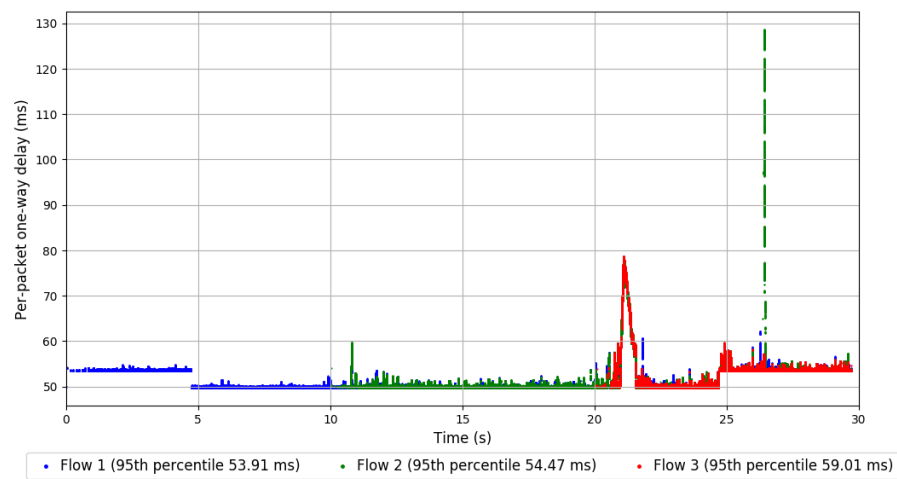
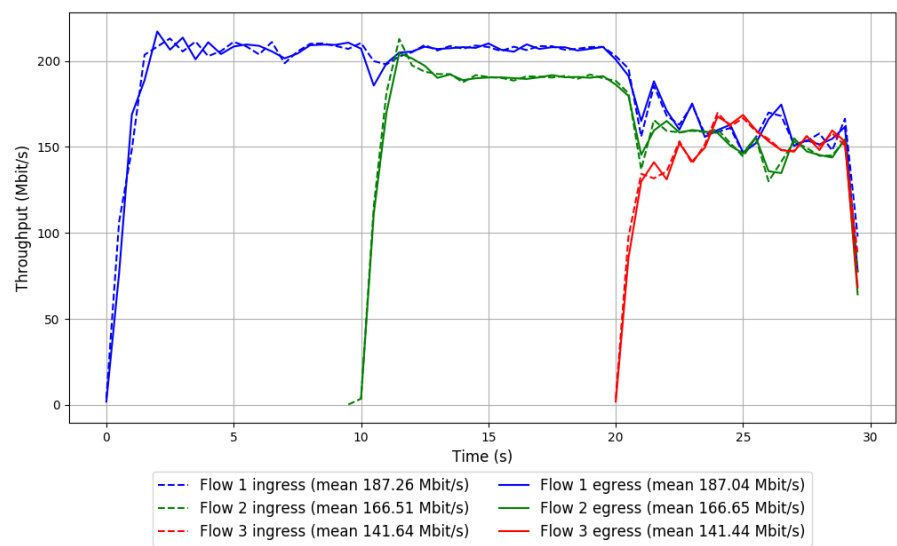
-- Flow 3:

Average throughput: 141.44 Mbit/s

95th percentile per-packet one-way delay: 59.011 ms

Loss rate: 1.21%

Run 8: Report of Indigo — Data Link



Run 9: Statistics of Indigo

Start at: 2018-01-17 17:44:20

End at: 2018-01-17 17:44:50

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 328.75 Mbit/s

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

Loss rate: 0.57%

-- Flow 1:

Average throughput: 175.61 Mbit/s

95th percentile per-packet one-way delay: 53.728 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 164.57 Mbit/s

95th percentile per-packet one-way delay: 54.005 ms

Loss rate: 0.63%

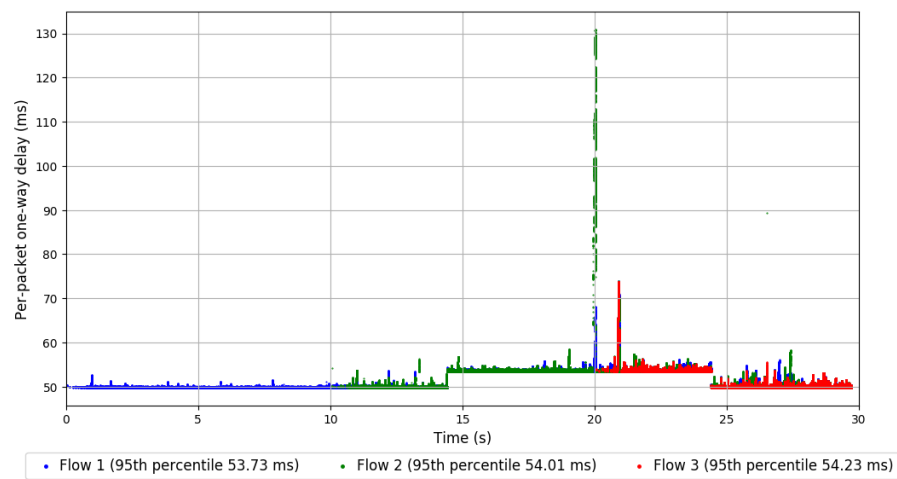
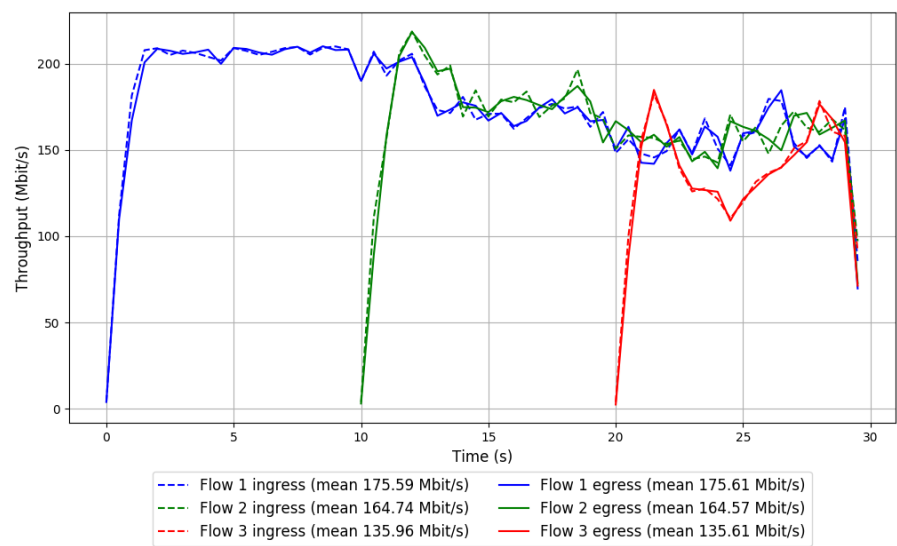
-- Flow 3:

Average throughput: 135.61 Mbit/s

95th percentile per-packet one-way delay: 54.230 ms

Loss rate: 1.36%

Run 9: Report of Indigo — Data Link



Run 10: Statistics of Indigo

Start at: 2018-01-17 18:01:24

End at: 2018-01-17 18:01:54

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 329.77 Mbit/s

95th percentile per-packet one-way delay: 60.690 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 184.44 Mbit/s

95th percentile per-packet one-way delay: 58.738 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 164.54 Mbit/s

95th percentile per-packet one-way delay: 61.650 ms

Loss rate: 0.53%

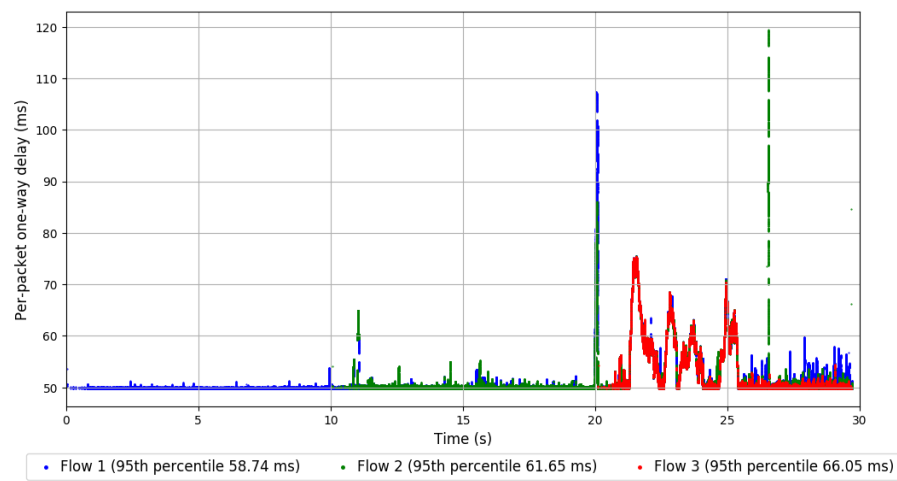
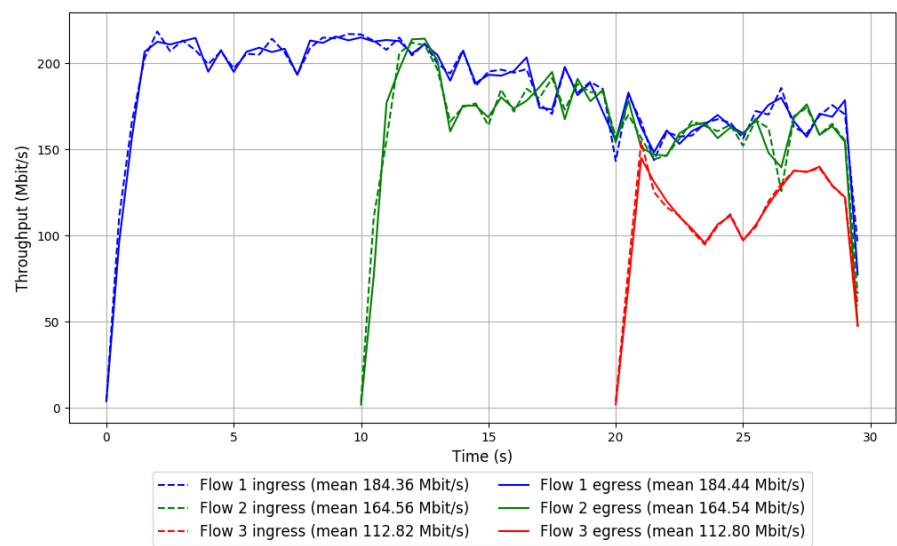
-- Flow 3:

Average throughput: 112.80 Mbit/s

95th percentile per-packet one-way delay: 66.046 ms

Loss rate: 1.10%

Run 10: Report of Indigo — Data Link



Run 1: Statistics of Vivace-latency

Start at: 2018-01-17 15:35:05

End at: 2018-01-17 15:35:35

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 191.27 Mbit/s

95th percentile per-packet one-way delay: 53.682 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 115.06 Mbit/s

95th percentile per-packet one-way delay: 63.796 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 83.04 Mbit/s

95th percentile per-packet one-way delay: 53.505 ms

Loss rate: 0.67%

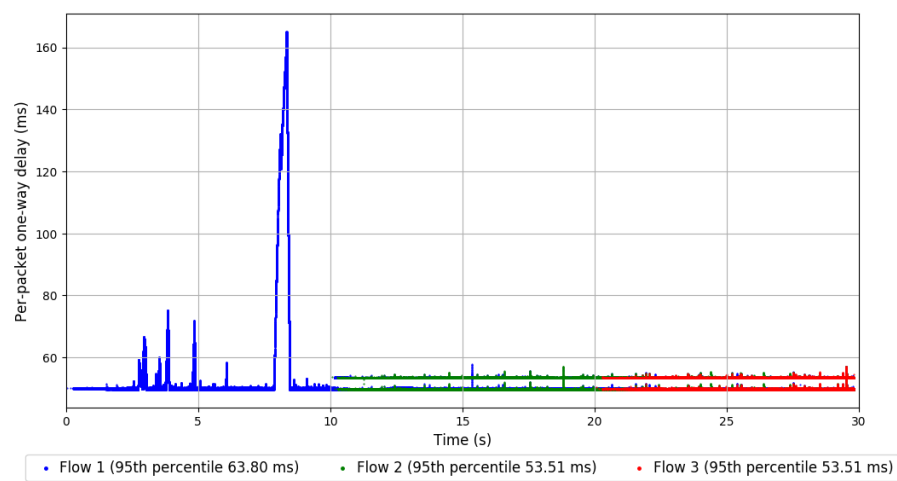
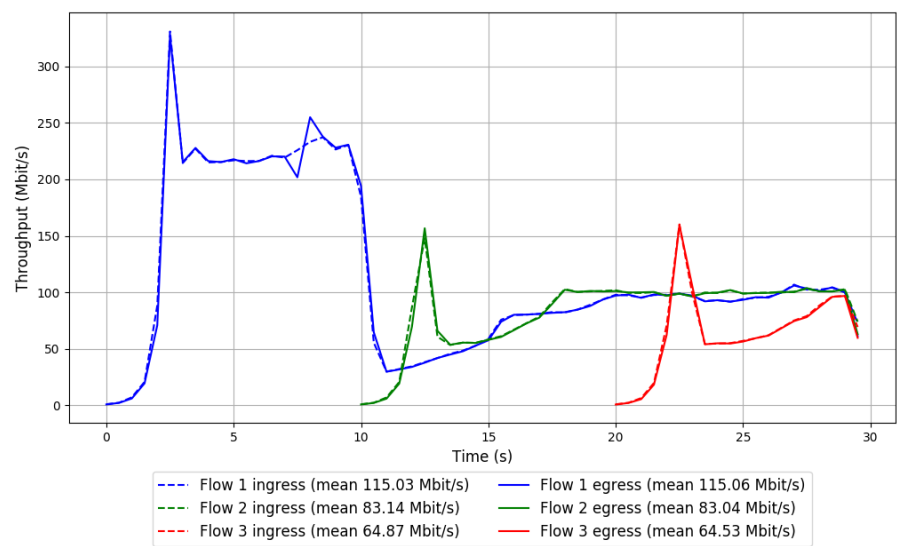
-- Flow 3:

Average throughput: 64.53 Mbit/s

95th percentile per-packet one-way delay: 53.505 ms

Loss rate: 1.56%

Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-01-17 15:52:11

End at: 2018-01-17 15:52:41

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 224.85 Mbit/s

95th percentile per-packet one-way delay: 69.642 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 159.35 Mbit/s

95th percentile per-packet one-way delay: 75.194 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 72.63 Mbit/s

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

Loss rate: 0.77%

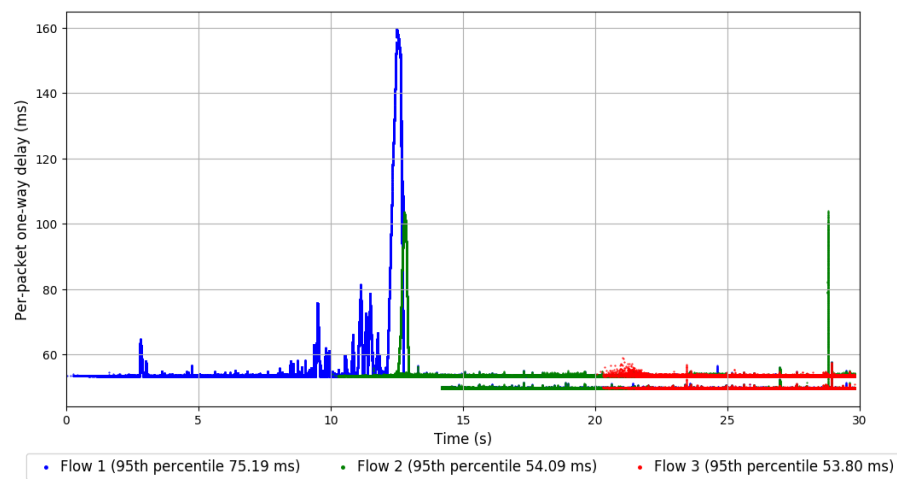
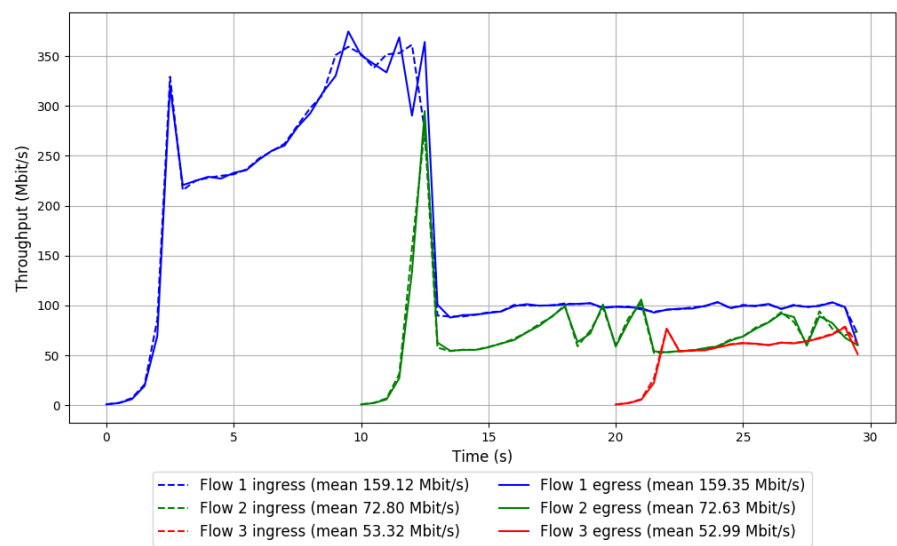
-- Flow 3:

Average throughput: 52.99 Mbit/s

95th percentile per-packet one-way delay: 53.796 ms

Loss rate: 1.72%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-01-17 16:08:52

End at: 2018-01-17 16:09:22

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 275.76 Mbit/s

95th percentile per-packet one-way delay: 56.533 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 141.65 Mbit/s

95th percentile per-packet one-way delay: 56.947 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 184.17 Mbit/s

95th percentile per-packet one-way delay: 56.504 ms

Loss rate: 0.78%

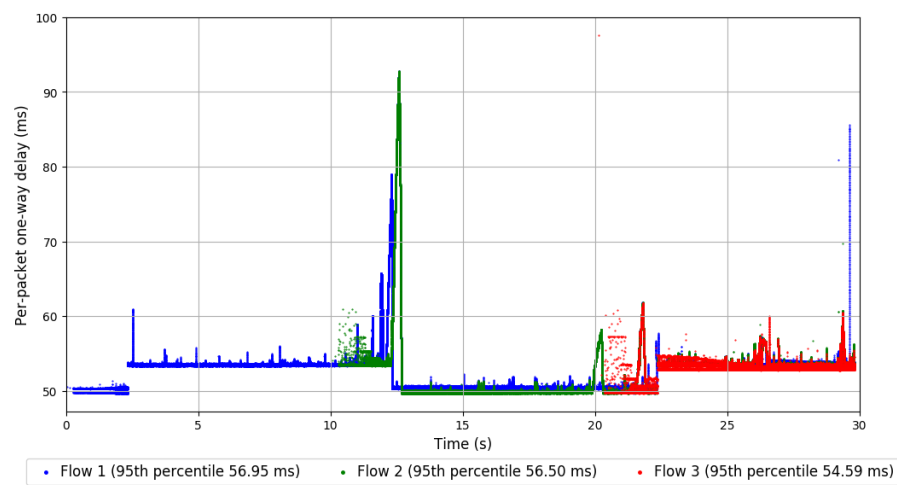
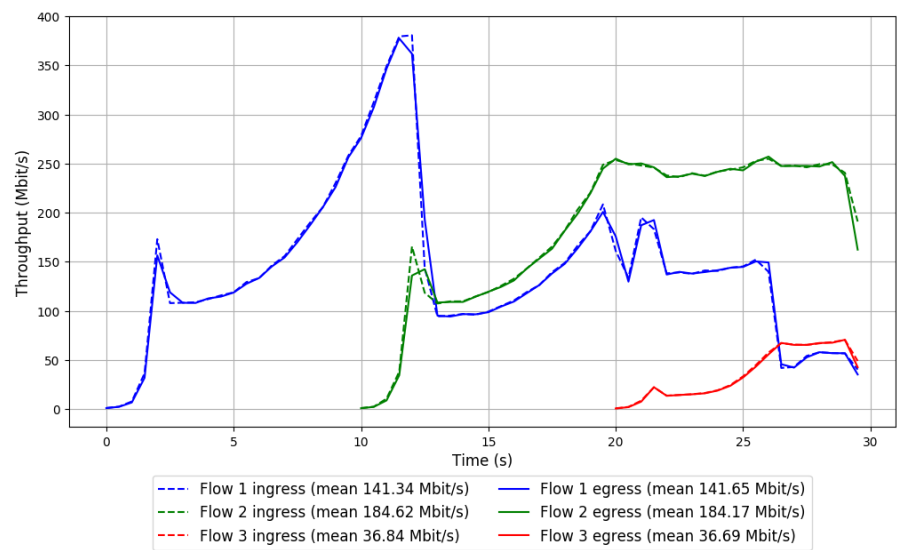
-- Flow 3:

Average throughput: 36.69 Mbit/s

95th percentile per-packet one-way delay: 54.587 ms

Loss rate: 1.93%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-01-17 16:26:01

End at: 2018-01-17 16:26:31

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 209.59 Mbit/s

95th percentile per-packet one-way delay: 53.802 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 87.42 Mbit/s

95th percentile per-packet one-way delay: 53.567 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 150.89 Mbit/s

95th percentile per-packet one-way delay: 60.437 ms

Loss rate: 0.17%

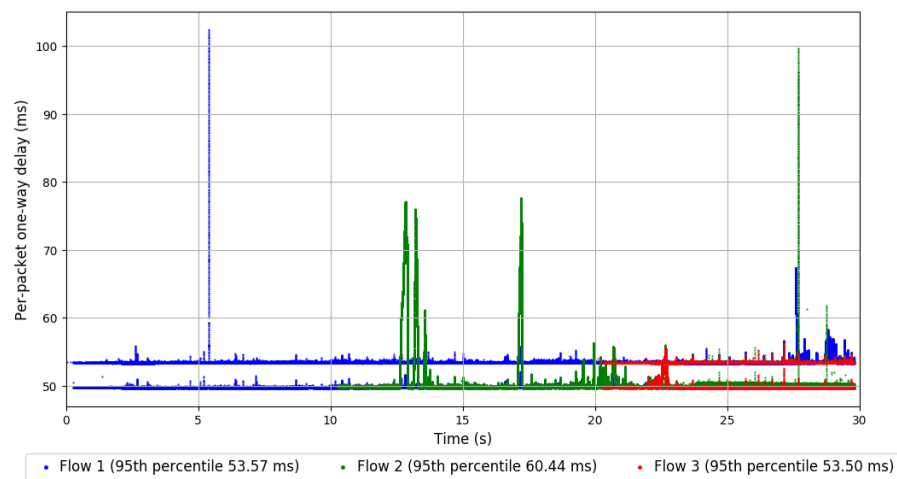
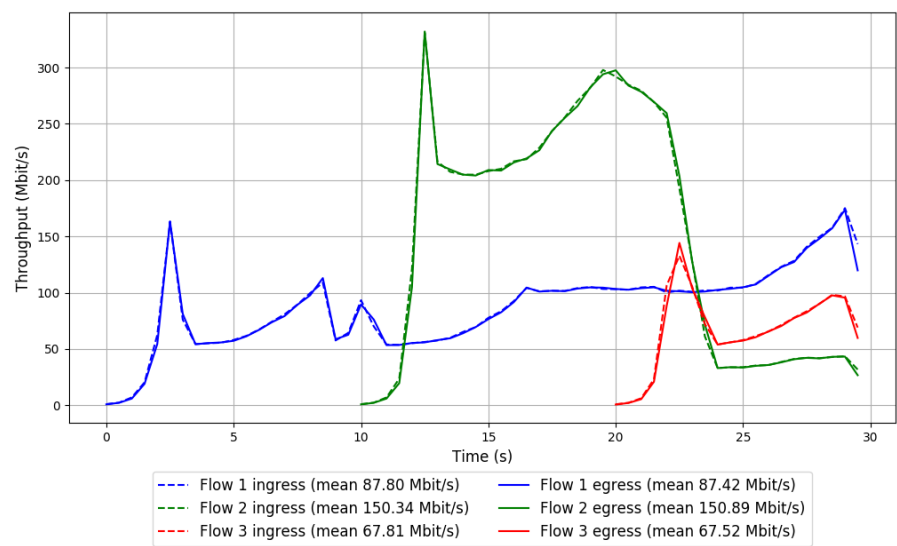
-- Flow 3:

Average throughput: 67.52 Mbit/s

95th percentile per-packet one-way delay: 53.503 ms

Loss rate: 1.51%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-01-17 16:43:19

End at: 2018-01-17 16:43:49

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 226.38 Mbit/s

95th percentile per-packet one-way delay: 54.997 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 150.17 Mbit/s

95th percentile per-packet one-way delay: 55.214 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 81.39 Mbit/s

95th percentile per-packet one-way delay: 53.911 ms

Loss rate: 0.42%

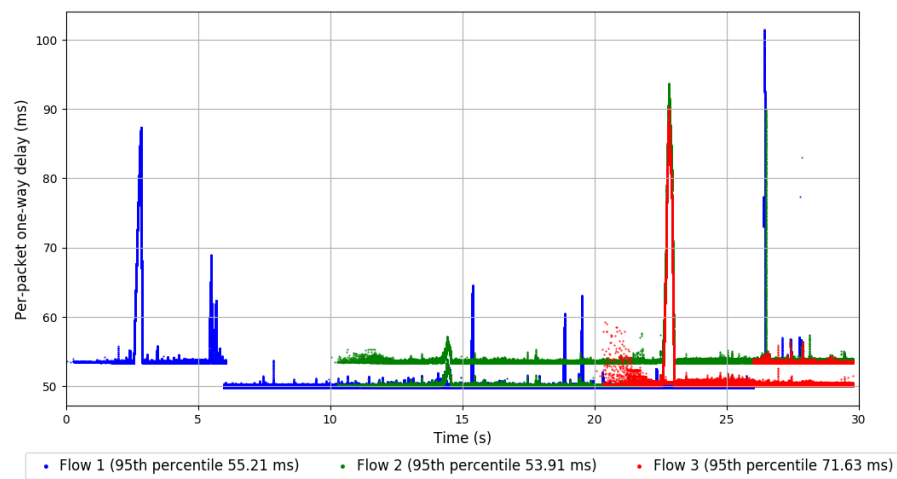
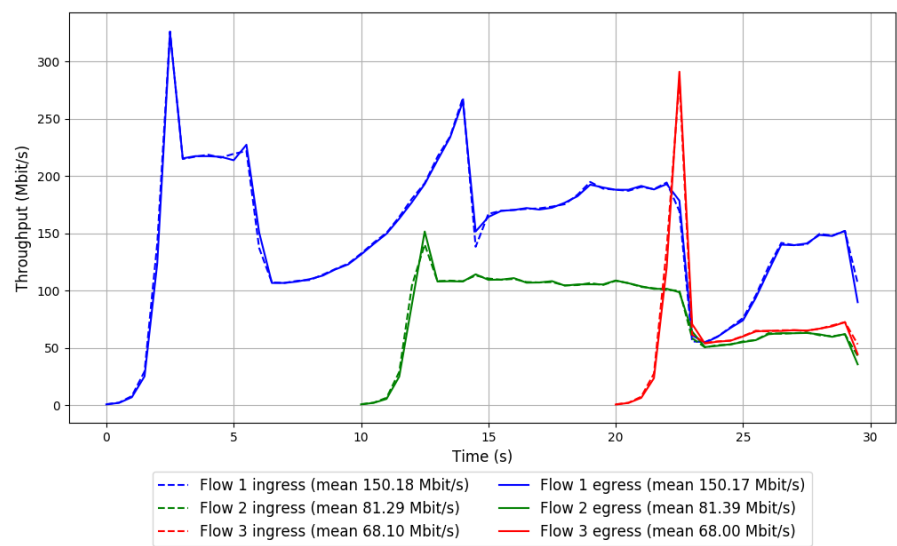
-- Flow 3:

Average throughput: 68.00 Mbit/s

95th percentile per-packet one-way delay: 71.630 ms

Loss rate: 1.22%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-01-17 17:00:16

End at: 2018-01-17 17:00:46

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 160.34 Mbit/s

95th percentile per-packet one-way delay: 53.592 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 83.30 Mbit/s

95th percentile per-packet one-way delay: 53.577 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 73.79 Mbit/s

95th percentile per-packet one-way delay: 53.604 ms

Loss rate: 0.69%

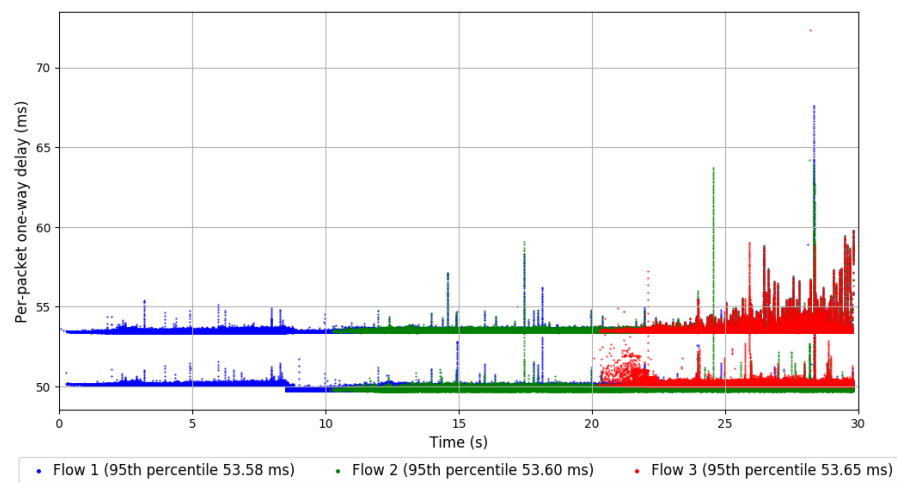
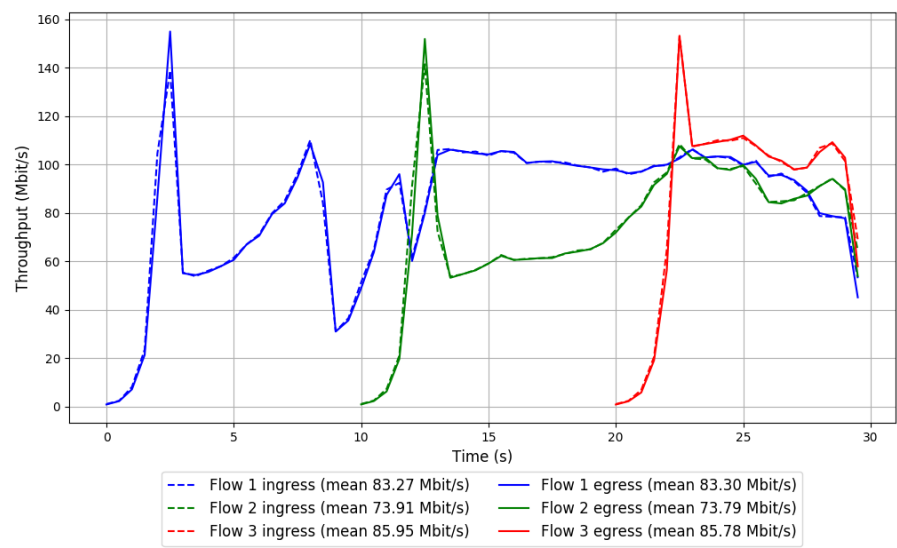
-- Flow 3:

Average throughput: 85.78 Mbit/s

95th percentile per-packet one-way delay: 53.650 ms

Loss rate: 1.27%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-01-17 17:17:07

End at: 2018-01-17 17:17:37

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 273.65 Mbit/s

95th percentile per-packet one-way delay: 55.490 ms

Loss rate: 0.37%

-- Flow 1:

Average throughput: 175.62 Mbit/s

95th percentile per-packet one-way delay: 55.716 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 123.14 Mbit/s

95th percentile per-packet one-way delay: 55.906 ms

Loss rate: 0.28%

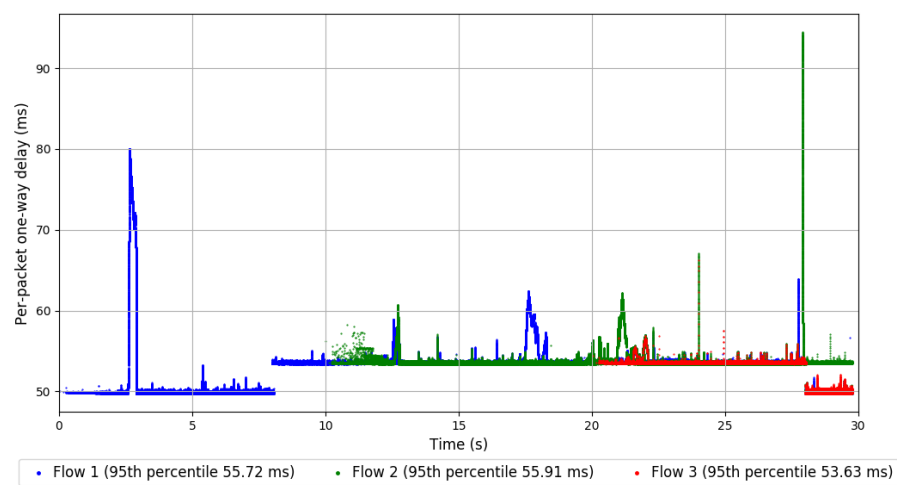
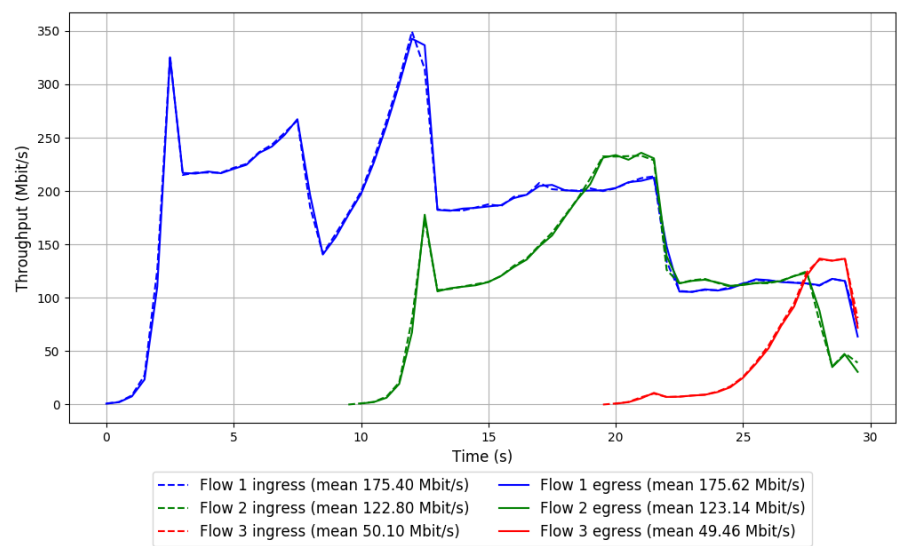
-- Flow 3:

Average throughput: 49.46 Mbit/s

95th percentile per-packet one-way delay: 53.634 ms

Loss rate: 2.37%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-01-17 17:34:05

End at: 2018-01-17 17:34:35

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 266.58 Mbit/s

95th percentile per-packet one-way delay: 67.257 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 103.12 Mbit/s

95th percentile per-packet one-way delay: 54.445 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 205.98 Mbit/s

95th percentile per-packet one-way delay: 78.260 ms

Loss rate: 0.84%

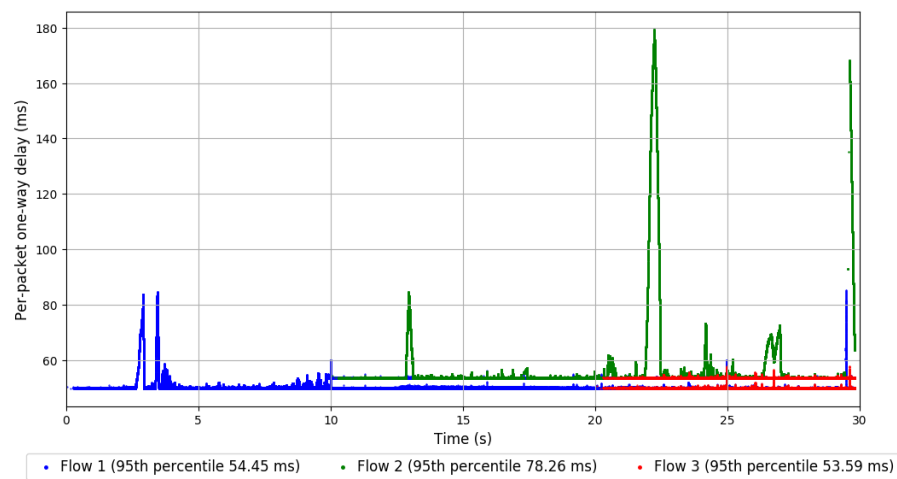
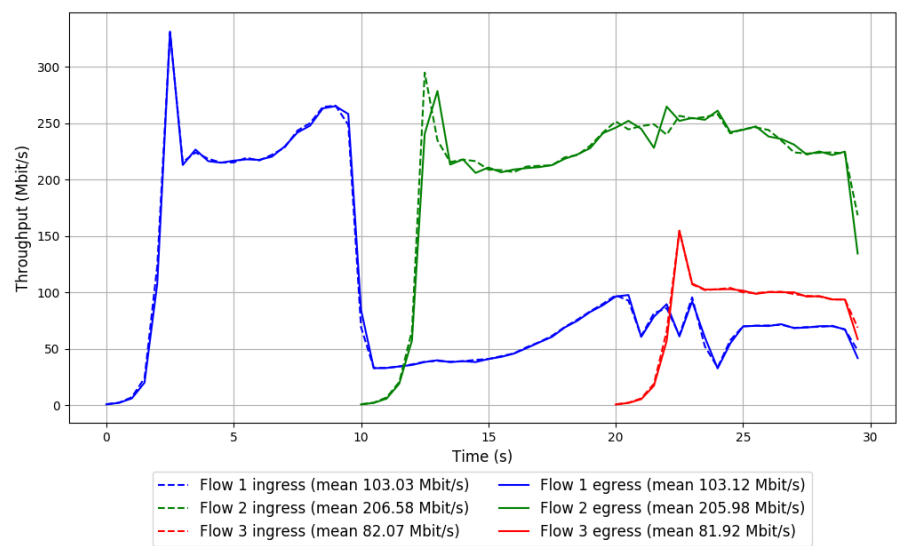
-- Flow 3:

Average throughput: 81.92 Mbit/s

95th percentile per-packet one-way delay: 53.595 ms

Loss rate: 1.25%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-01-17 17:51:07

End at: 2018-01-17 17:51:37

Below is generated by plot.py at 2018-01-17 23:07:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 182.71 Mbit/s

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

Loss rate: 0.61%

-- Flow 1:

Average throughput: 88.05 Mbit/s

95th percentile per-packet one-way delay: 53.772 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 88.65 Mbit/s

95th percentile per-packet one-way delay: 53.686 ms

Loss rate: 0.56%

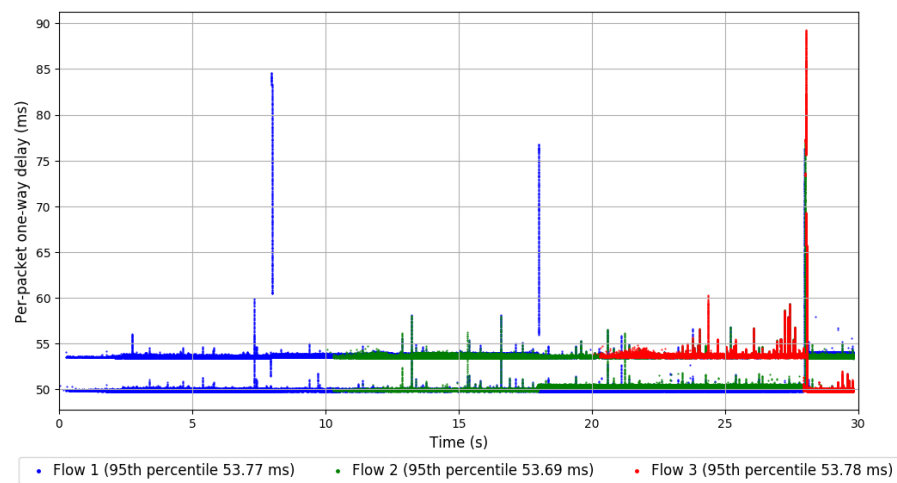
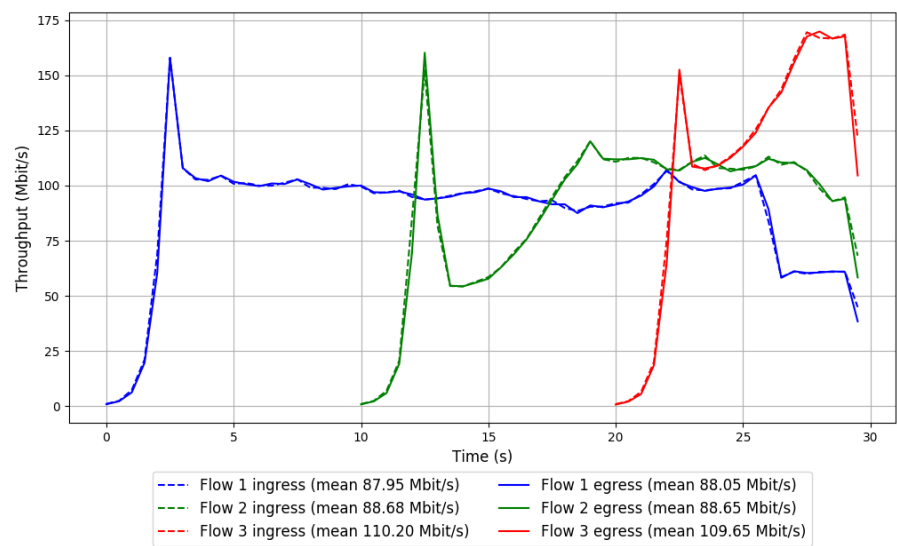
-- Flow 3:

Average throughput: 109.65 Mbit/s

95th percentile per-packet one-way delay: 53.776 ms

Loss rate: 1.58%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-01-17 18:07:42

End at: 2018-01-17 18:08:12

Below is generated by plot.py at 2018-01-17 23:08:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 345.35 Mbit/s

95th percentile per-packet one-way delay: 59.418 ms

Loss rate: 0.40%

-- Flow 1:

Average throughput: 209.32 Mbit/s

95th percentile per-packet one-way delay: 59.296 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 159.58 Mbit/s

95th percentile per-packet one-way delay: 74.299 ms

Loss rate: 0.26%

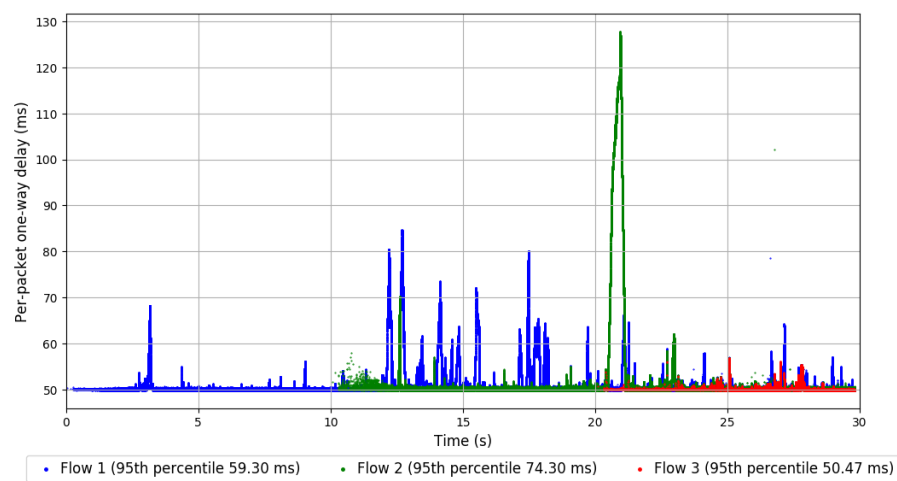
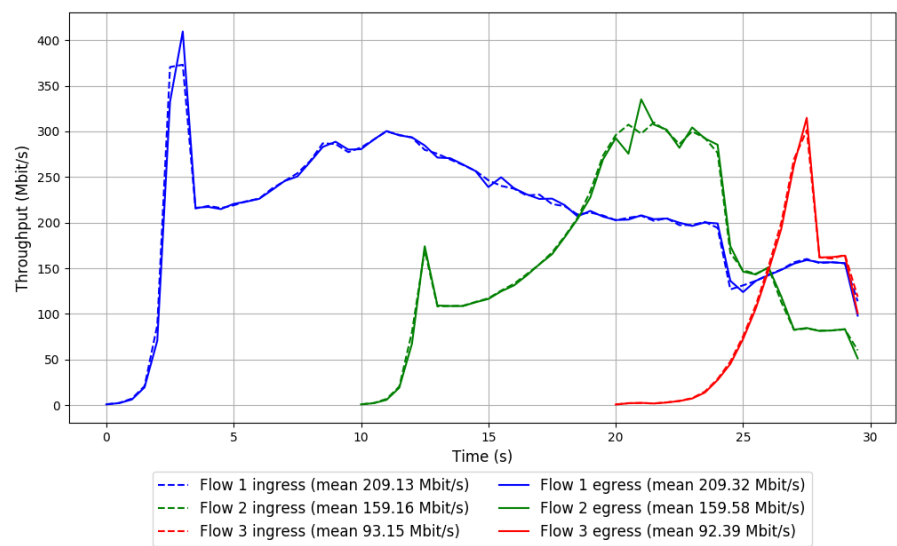
-- Flow 3:

Average throughput: 92.39 Mbit/s

95th percentile per-packet one-way delay: 50.472 ms

Loss rate: 1.88%

Run 10: Report of Vivace-latency — Data Link

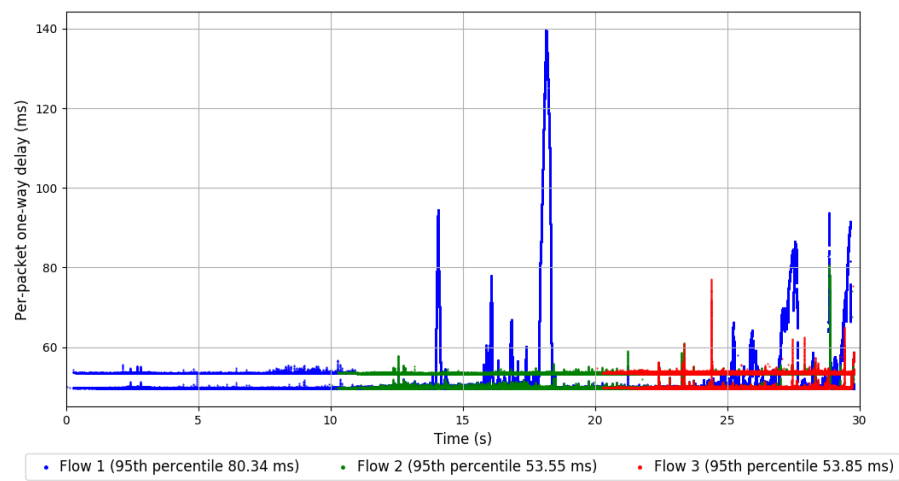
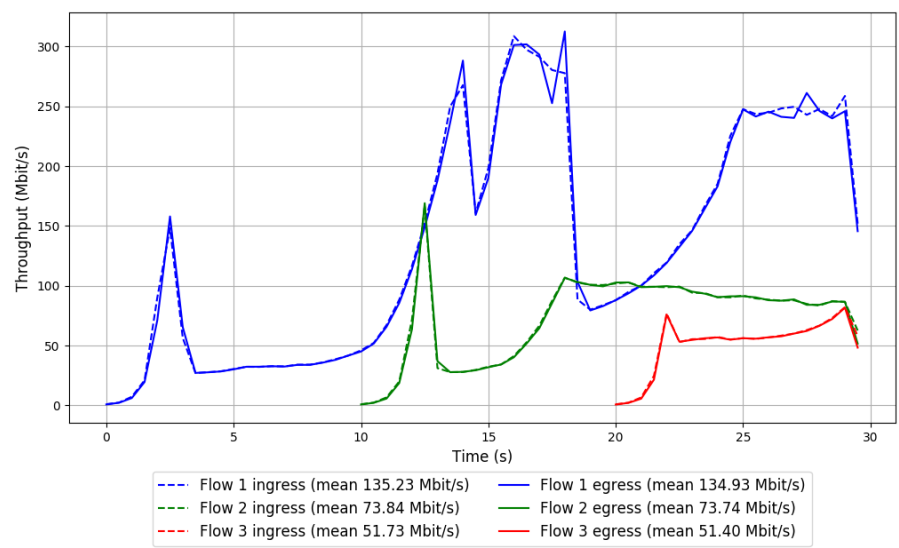


```
Run 1: Statistics of Vivace-loss

Start at: 2018-01-17 15:34:04
End at: 2018-01-17 15:34:34

# Below is generated by plot.py at 2018-01-17 23:08:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 200.66 Mbit/s
95th percentile per-packet one-way delay: 71.588 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 134.93 Mbit/s
95th percentile per-packet one-way delay: 80.344 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 73.74 Mbit/s
95th percentile per-packet one-way delay: 53.547 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 51.40 Mbit/s
95th percentile per-packet one-way delay: 53.846 ms
Loss rate: 1.76%
```

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-01-17 15:51:05

End at: 2018-01-17 15:51:35

Below is generated by plot.py at 2018-01-17 23:08:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 256.69 Mbit/s

95th percentile per-packet one-way delay: 53.618 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 174.82 Mbit/s

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

Loss rate: 0.47%

-- Flow 2:

Average throughput: 79.11 Mbit/s

95th percentile per-packet one-way delay: 53.654 ms

Loss rate: 0.37%

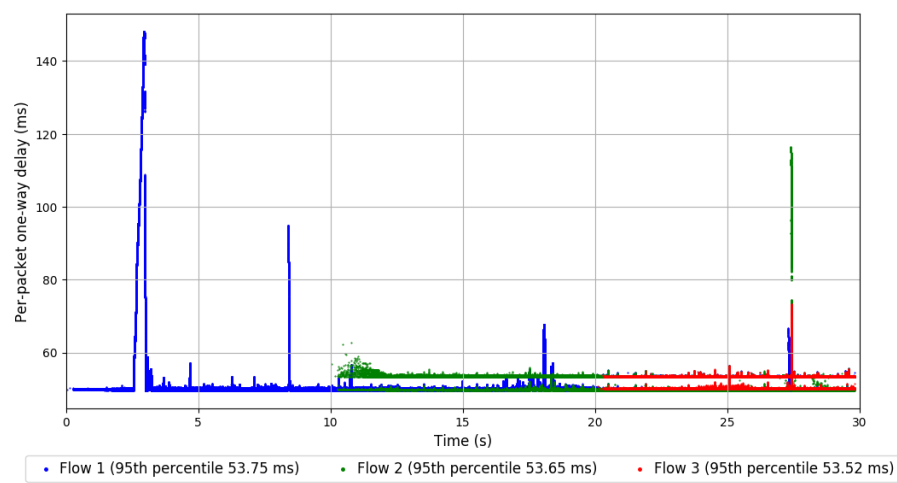
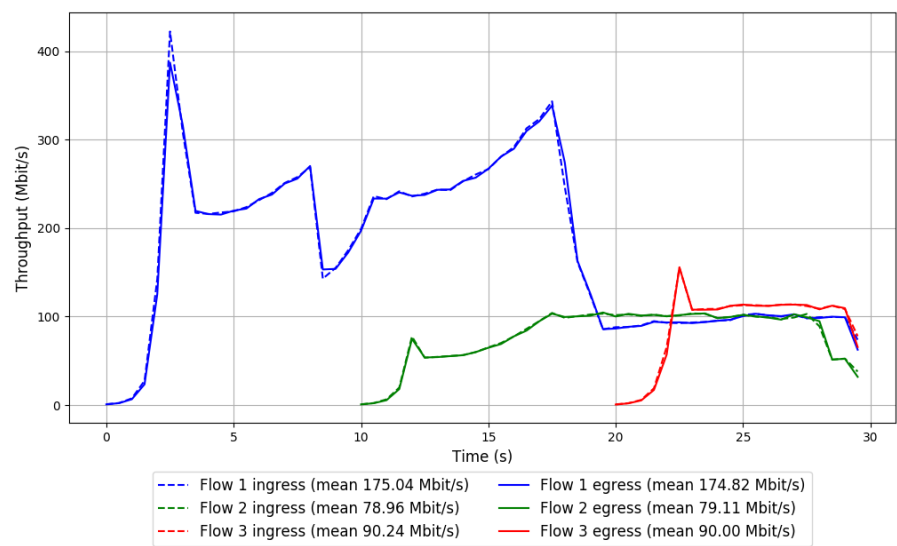
-- Flow 3:

Average throughput: 90.00 Mbit/s

95th percentile per-packet one-way delay: 53.519 ms

Loss rate: 1.31%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-01-17 16:07:55

End at: 2018-01-17 16:08:25

Below is generated by plot.py at 2018-01-17 23:08:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 168.64 Mbit/s

95th percentile per-packet one-way delay: 129.668 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 80.04 Mbit/s

95th percentile per-packet one-way delay: 53.496 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 105.32 Mbit/s

95th percentile per-packet one-way delay: 165.494 ms

Loss rate: 1.64%

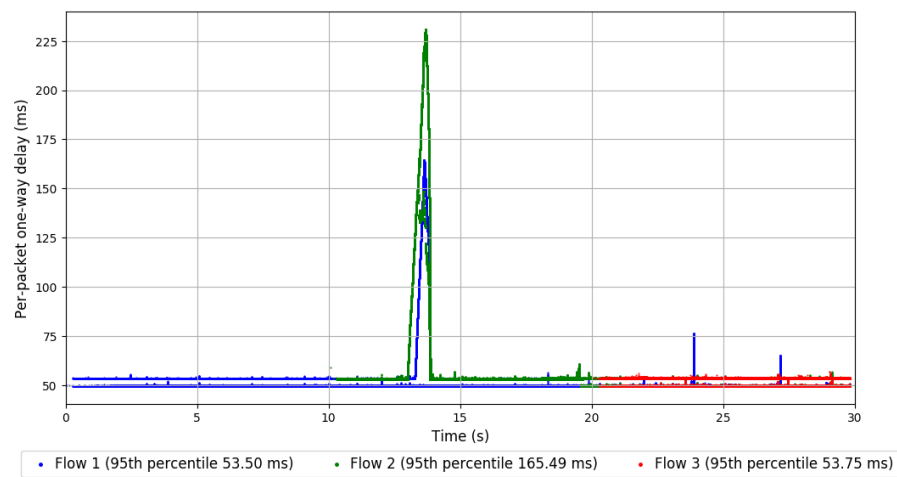
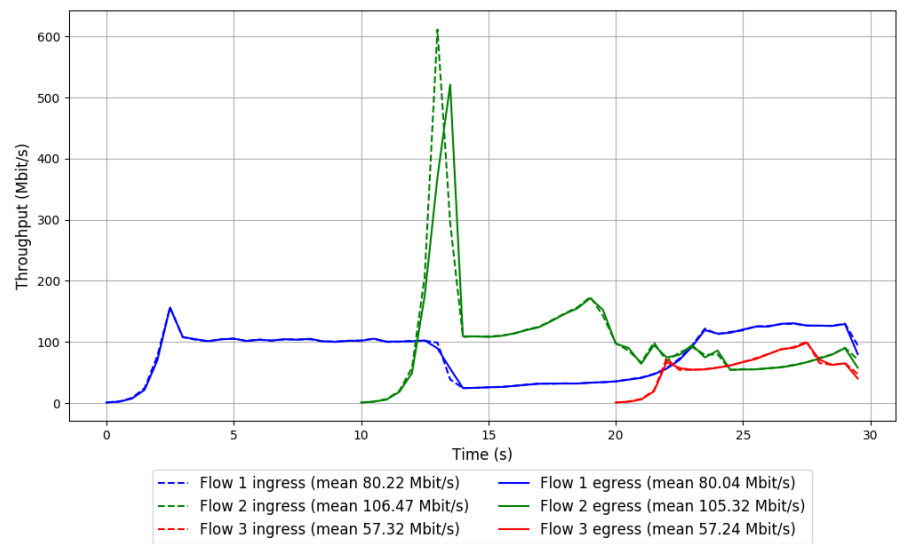
-- Flow 3:

Average throughput: 57.24 Mbit/s

95th percentile per-packet one-way delay: 53.747 ms

Loss rate: 1.23%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-01-17 16:24:51

End at: 2018-01-17 16:25:21

Below is generated by plot.py at 2018-01-17 23:12:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 294.48 Mbit/s

95th percentile per-packet one-way delay: 71.310 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 193.73 Mbit/s

95th percentile per-packet one-way delay: 72.277 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 115.27 Mbit/s

95th percentile per-packet one-way delay: 74.914 ms

Loss rate: 2.66%

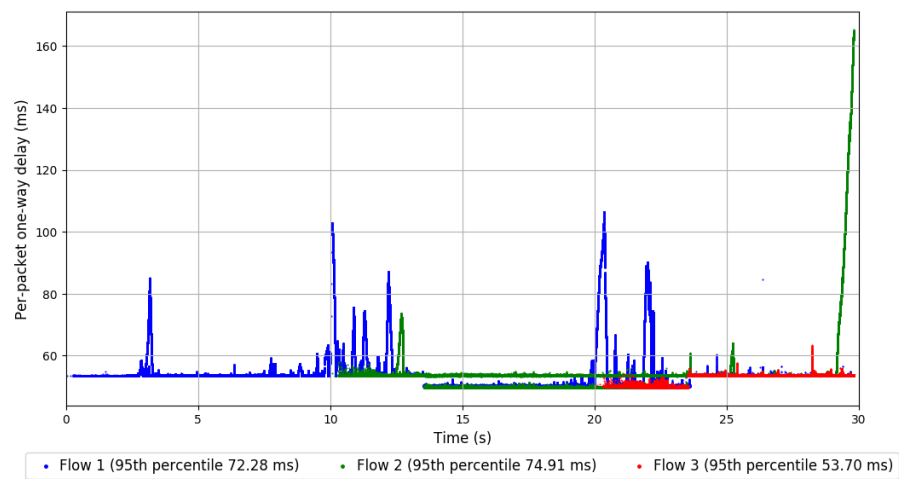
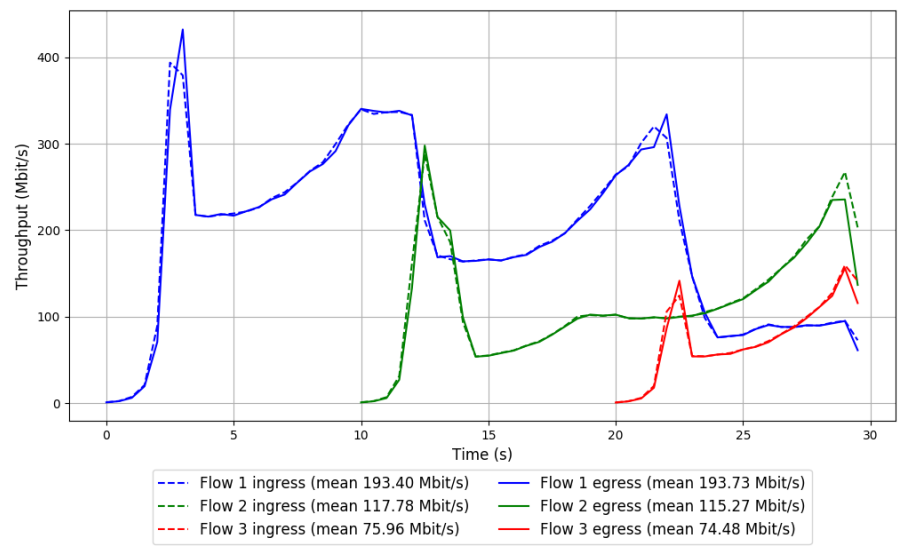
-- Flow 3:

Average throughput: 74.48 Mbit/s

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

Loss rate: 2.99%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-01-17 16:42:15

End at: 2018-01-17 16:42:45

Below is generated by plot.py at 2018-01-17 23:12:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 226.76 Mbit/s

95th percentile per-packet one-way delay: 97.089 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 75.80 Mbit/s

95th percentile per-packet one-way delay: 53.856 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 200.35 Mbit/s

95th percentile per-packet one-way delay: 110.100 ms

Loss rate: 2.30%

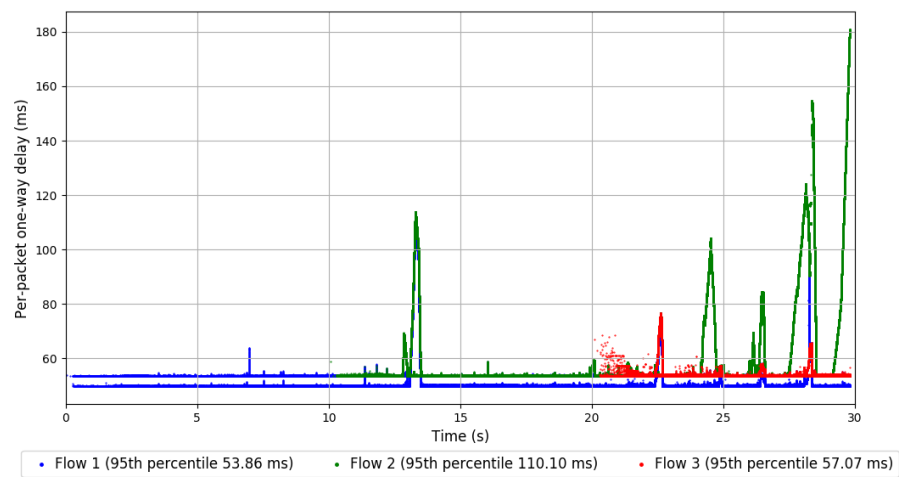
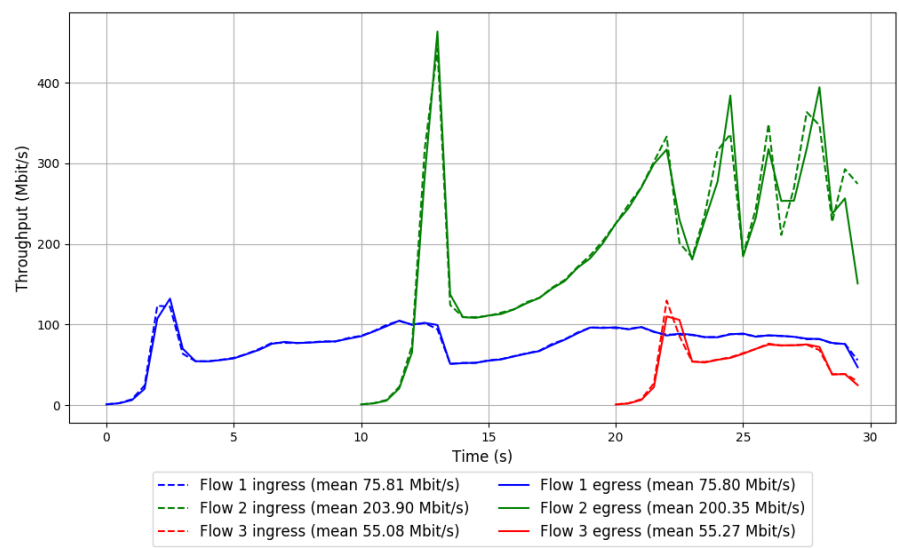
-- Flow 3:

Average throughput: 55.27 Mbit/s

95th percentile per-packet one-way delay: 57.072 ms

Loss rate: 0.85%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-01-17 16:59:14

End at: 2018-01-17 16:59:44

Below is generated by plot.py at 2018-01-17 23:12:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 220.64 Mbit/s

95th percentile per-packet one-way delay: 206.499 ms

Loss rate: 2.53%

-- Flow 1:

Average throughput: 86.24 Mbit/s

95th percentile per-packet one-way delay: 133.167 ms

Loss rate: 3.17%

-- Flow 2:

Average throughput: 158.98 Mbit/s

95th percentile per-packet one-way delay: 212.679 ms

Loss rate: 2.30%

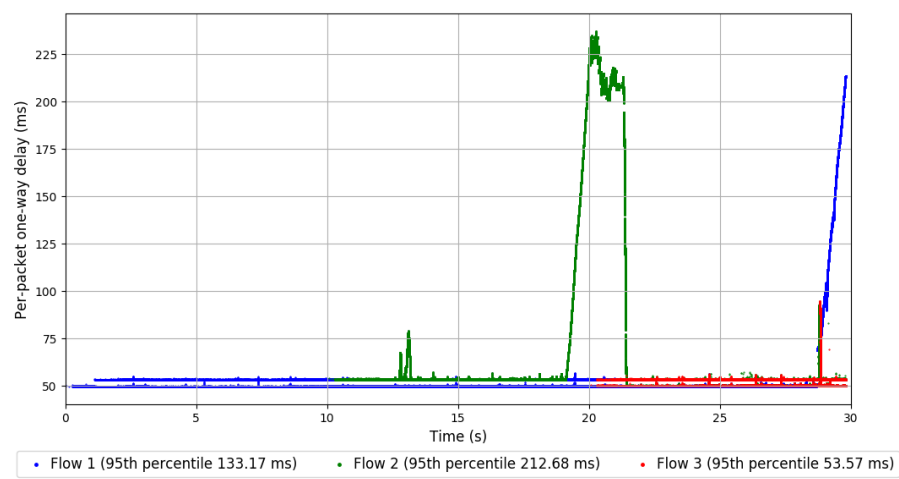
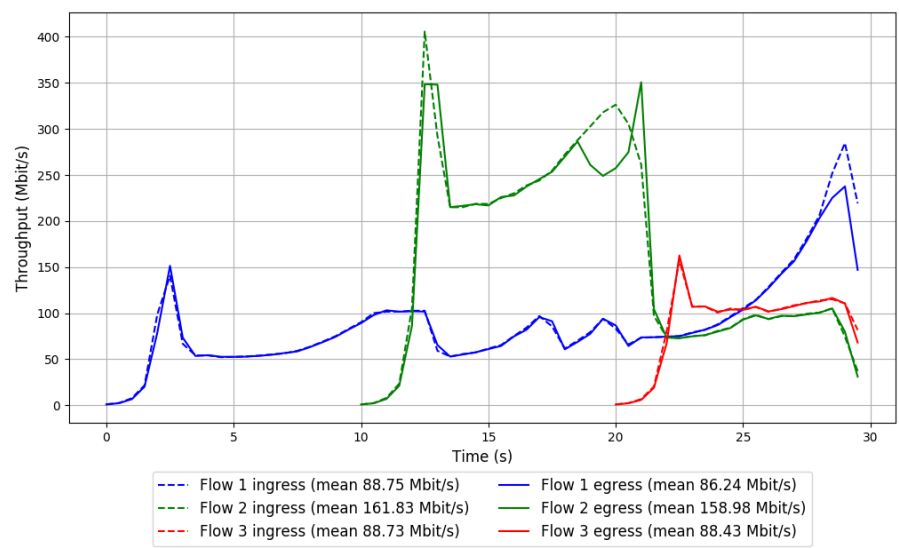
-- Flow 3:

Average throughput: 88.43 Mbit/s

95th percentile per-packet one-way delay: 53.572 ms

Loss rate: 1.40%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-01-17 17:16:08

End at: 2018-01-17 17:16:38

Below is generated by plot.py at 2018-01-17 23:12:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.18 Mbit/s

95th percentile per-packet one-way delay: 53.559 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 88.38 Mbit/s

95th percentile per-packet one-way delay: 53.558 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 99.44 Mbit/s

95th percentile per-packet one-way delay: 53.562 ms

Loss rate: 0.65%

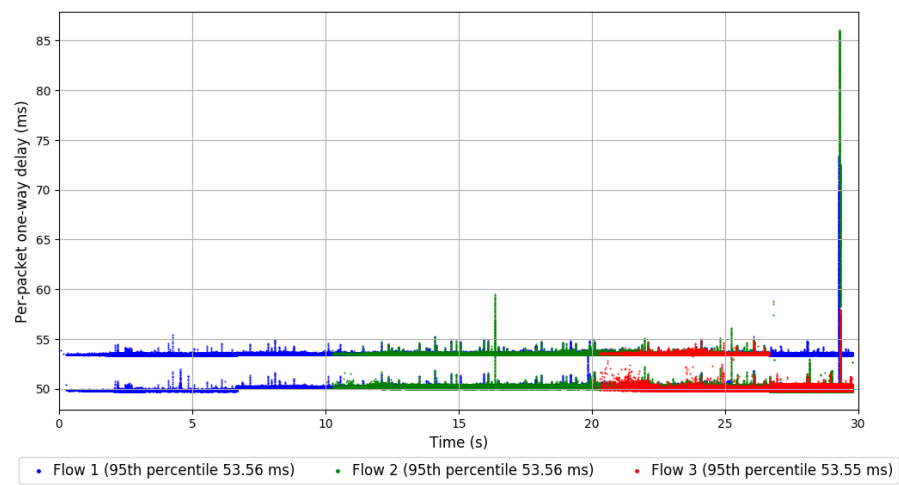
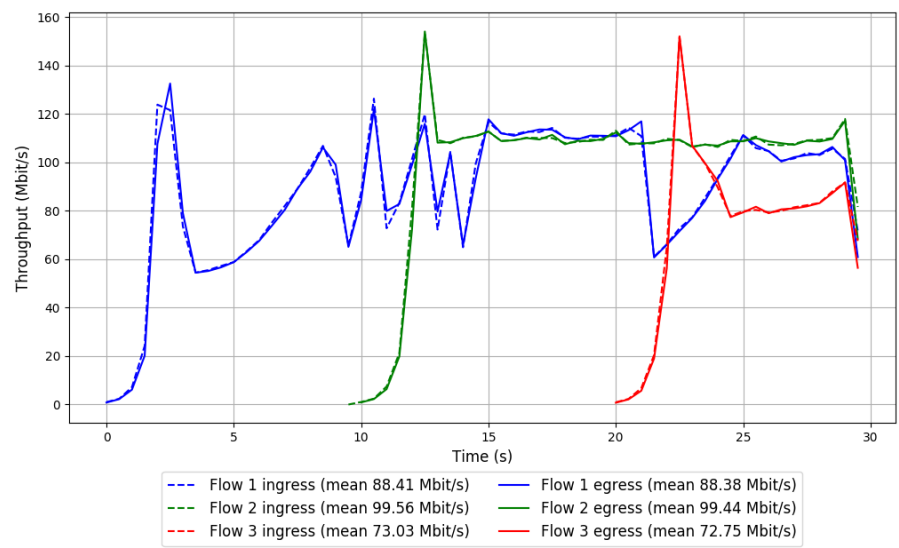
-- Flow 3:

Average throughput: 72.75 Mbit/s

95th percentile per-packet one-way delay: 53.551 ms

Loss rate: 1.43%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-01-17 17:33:02

End at: 2018-01-17 17:33:32

Below is generated by plot.py at 2018-01-17 23:14:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 227.50 Mbit/s

95th percentile per-packet one-way delay: 104.189 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 152.33 Mbit/s

95th percentile per-packet one-way delay: 121.991 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 73.43 Mbit/s

95th percentile per-packet one-way delay: 53.611 ms

Loss rate: 0.72%

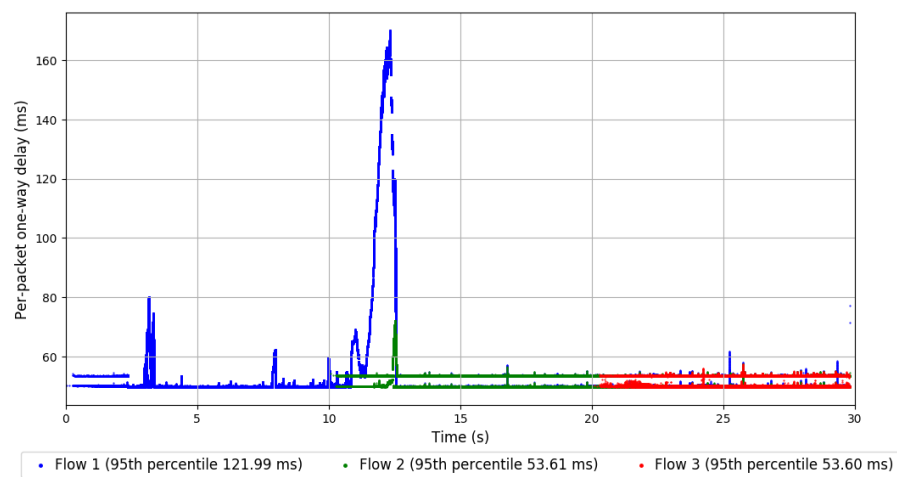
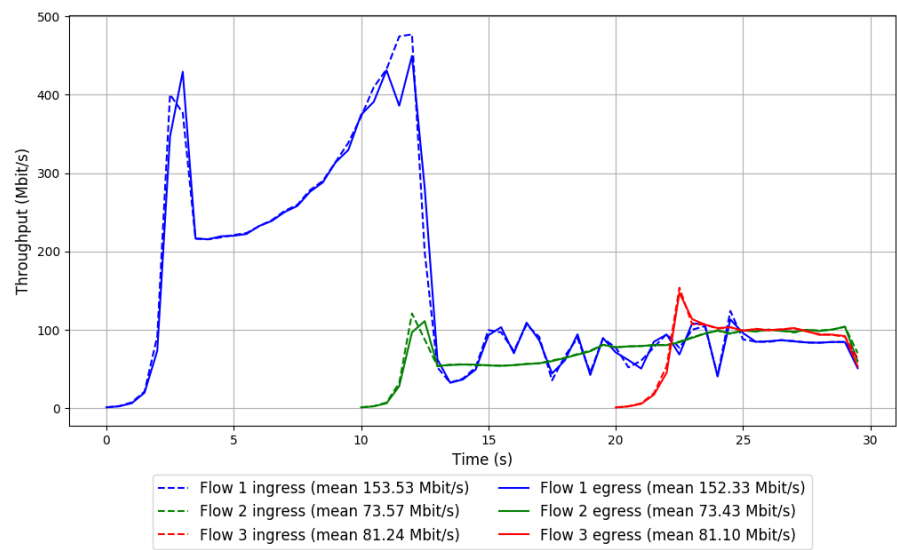
-- Flow 3:

Average throughput: 81.10 Mbit/s

95th percentile per-packet one-way delay: 53.605 ms

Loss rate: 1.23%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-01-17 17:50:02

End at: 2018-01-17 17:50:32

Below is generated by plot.py at 2018-01-17 23:16:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 245.05 Mbit/s

95th percentile per-packet one-way delay: 96.263 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 116.20 Mbit/s

95th percentile per-packet one-way delay: 151.757 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 155.83 Mbit/s

95th percentile per-packet one-way delay: 59.532 ms

Loss rate: 0.55%

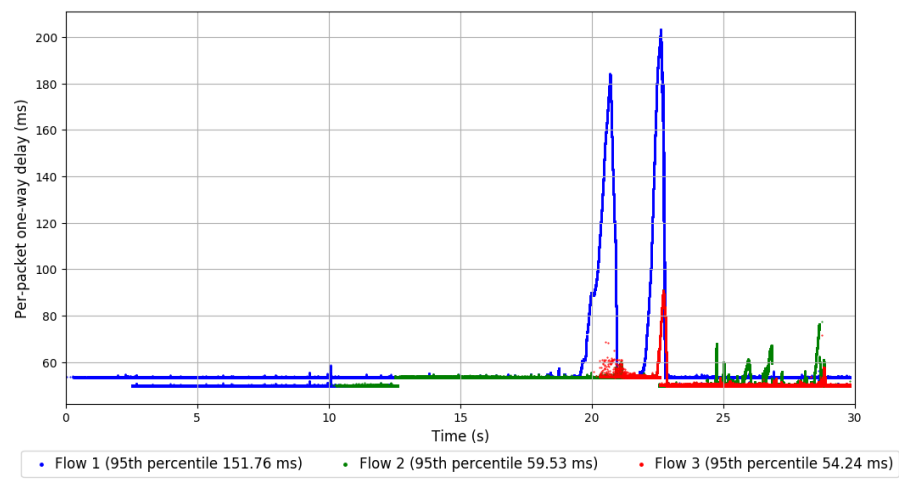
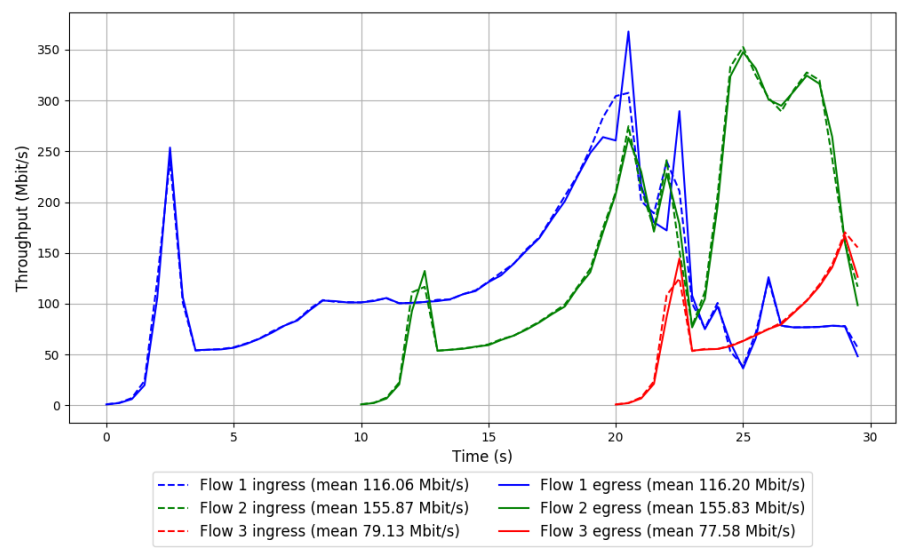
-- Flow 3:

Average throughput: 77.58 Mbit/s

95th percentile per-packet one-way delay: 54.245 ms

Loss rate: 3.06%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-01-17 18:06:39

End at: 2018-01-17 18:07:09

Below is generated by plot.py at 2018-01-17 23:16:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 219.38 Mbit/s

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

Loss rate: 0.75%

-- Flow 1:

Average throughput: 81.48 Mbit/s

95th percentile per-packet one-way delay: 53.835 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 179.63 Mbit/s

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

Loss rate: 0.88%

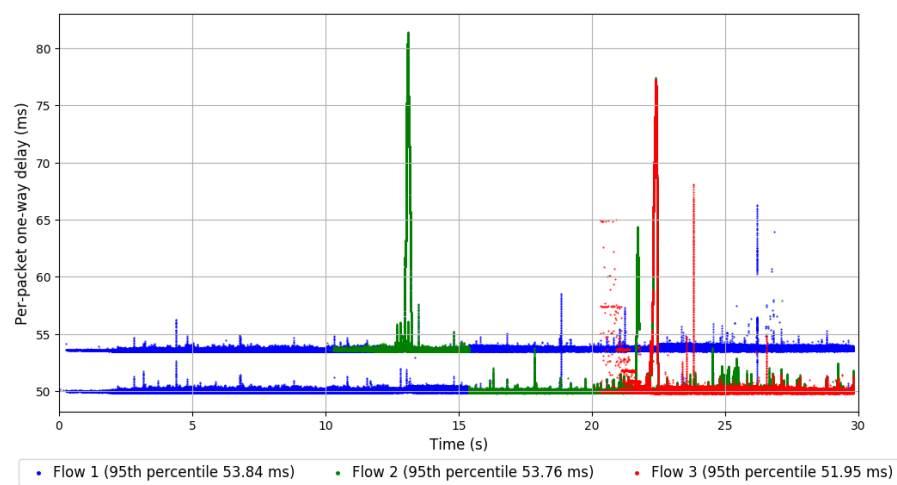
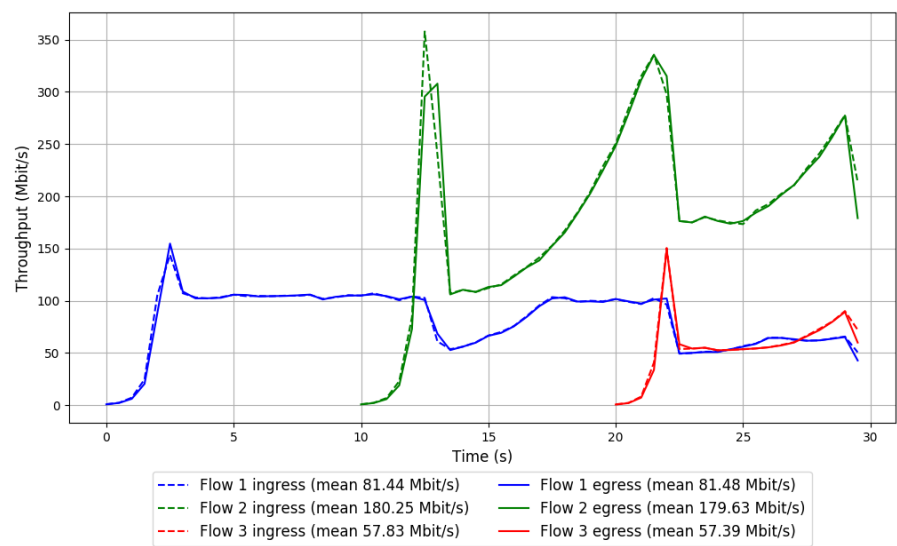
-- Flow 3:

Average throughput: 57.39 Mbit/s

95th percentile per-packet one-way delay: 51.947 ms

Loss rate: 1.88%

Run 10: Report of Vivace-loss — Data Link

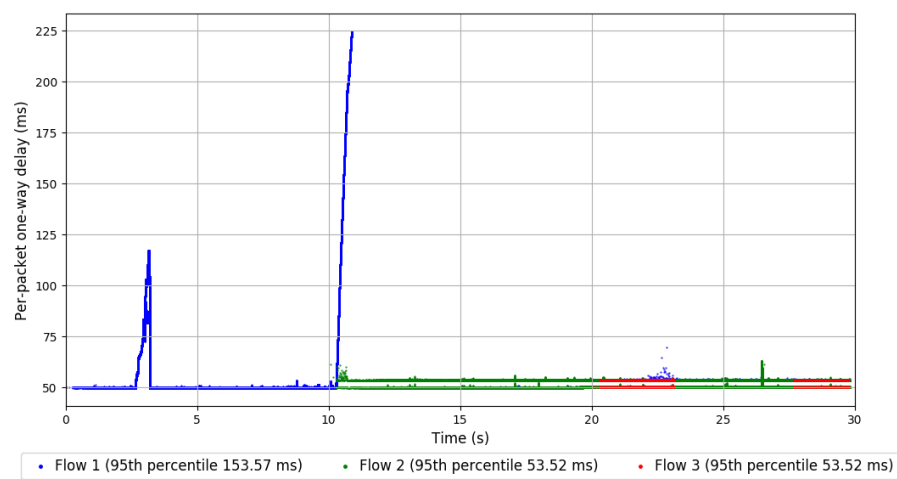
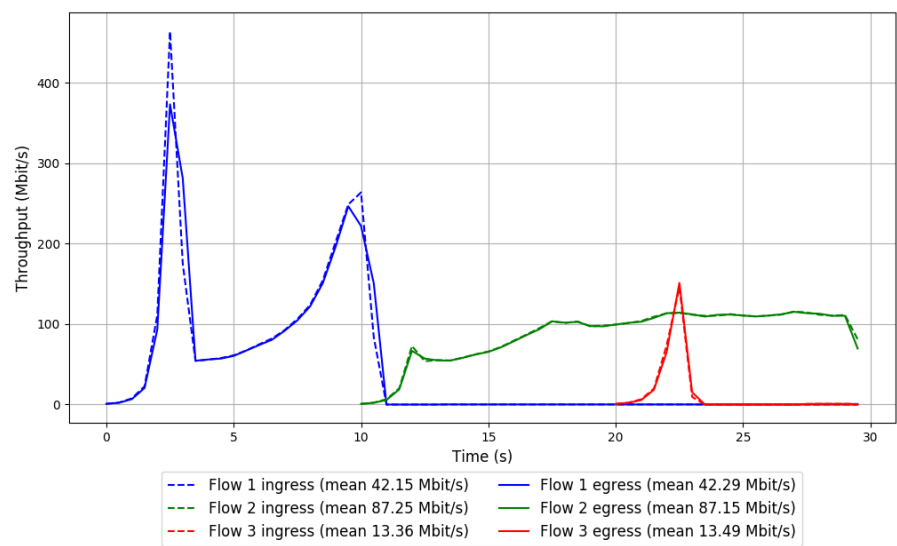


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-01-17 15:36:05
End at: 2018-01-17 15:36:35

# Below is generated by plot.py at 2018-01-17 23:16:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 104.50 Mbit/s
95th percentile per-packet one-way delay: 87.372 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 42.29 Mbit/s
95th percentile per-packet one-way delay: 153.573 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 87.15 Mbit/s
95th percentile per-packet one-way delay: 53.524 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 13.49 Mbit/s
95th percentile per-packet one-way delay: 53.516 ms
Loss rate: 0.07%
```

Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-01-17 15:53:14

End at: 2018-01-17 15:53:44

Below is generated by plot.py at 2018-01-17 23:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 153.52 Mbit/s

95th percentile per-packet one-way delay: 131.255 ms

Loss rate: 0.23%

-- Flow 1:

Average throughput: 83.36 Mbit/s

95th percentile per-packet one-way delay: 53.519 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 87.31 Mbit/s

95th percentile per-packet one-way delay: 151.858 ms

Loss rate: 0.00%

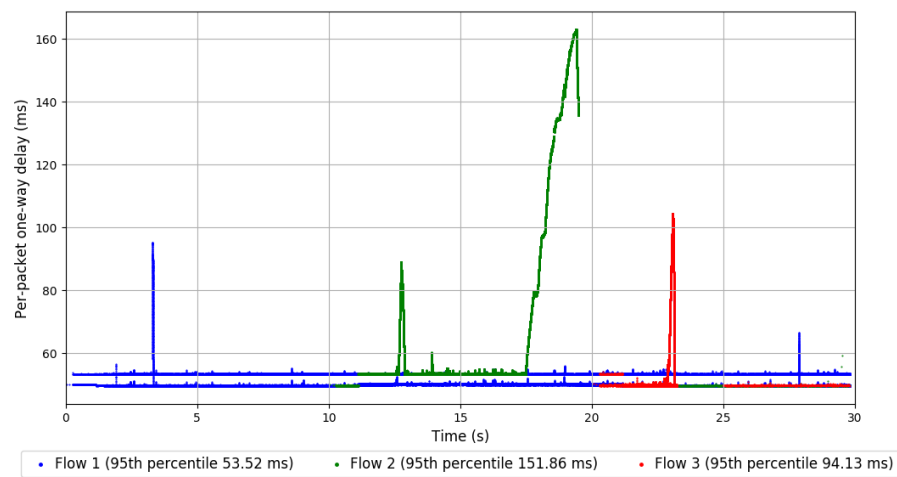
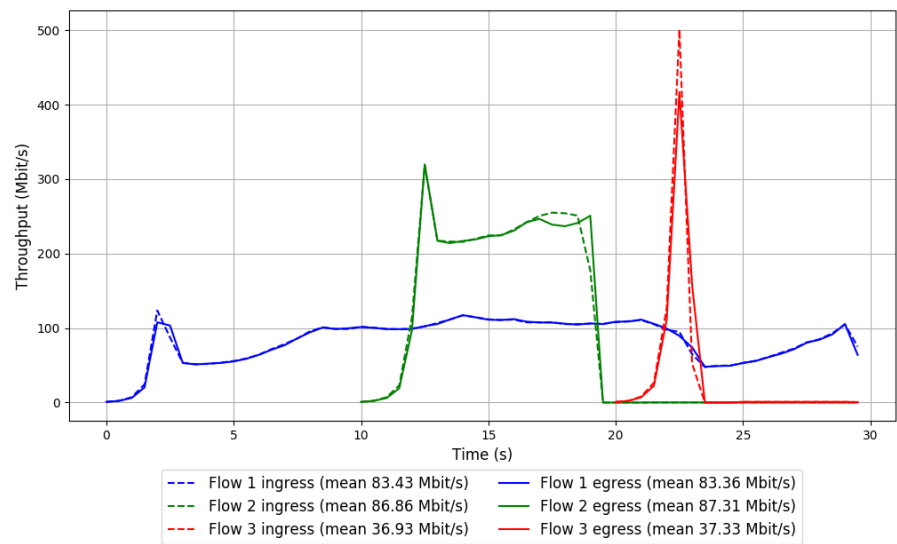
-- Flow 3:

Average throughput: 37.33 Mbit/s

95th percentile per-packet one-way delay: 94.133 ms

Loss rate: 0.03%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-01-17 16:10:00

End at: 2018-01-17 16:10:30

Below is generated by plot.py at 2018-01-17 23:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.02 Mbit/s

95th percentile per-packet one-way delay: 119.672 ms

Loss rate: 0.33%

-- Flow 1:

Average throughput: 23.90 Mbit/s

95th percentile per-packet one-way delay: 53.217 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 67.61 Mbit/s

95th percentile per-packet one-way delay: 143.812 ms

Loss rate: 0.00%

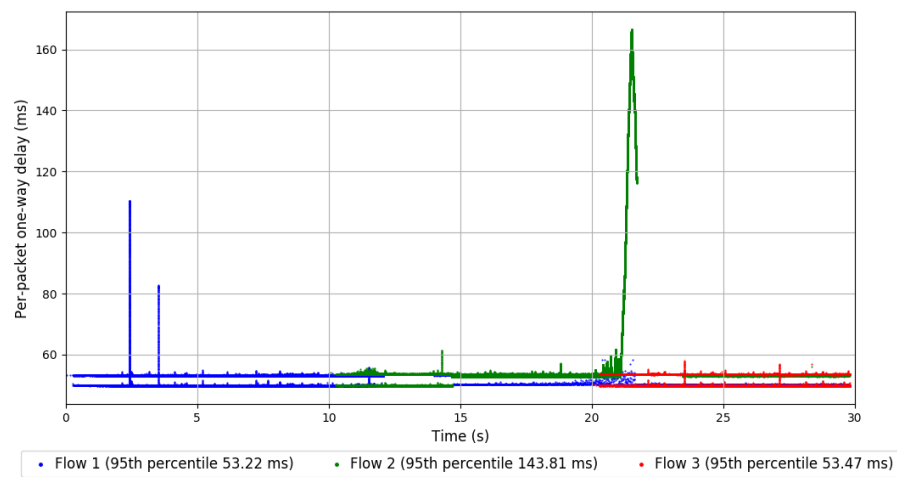
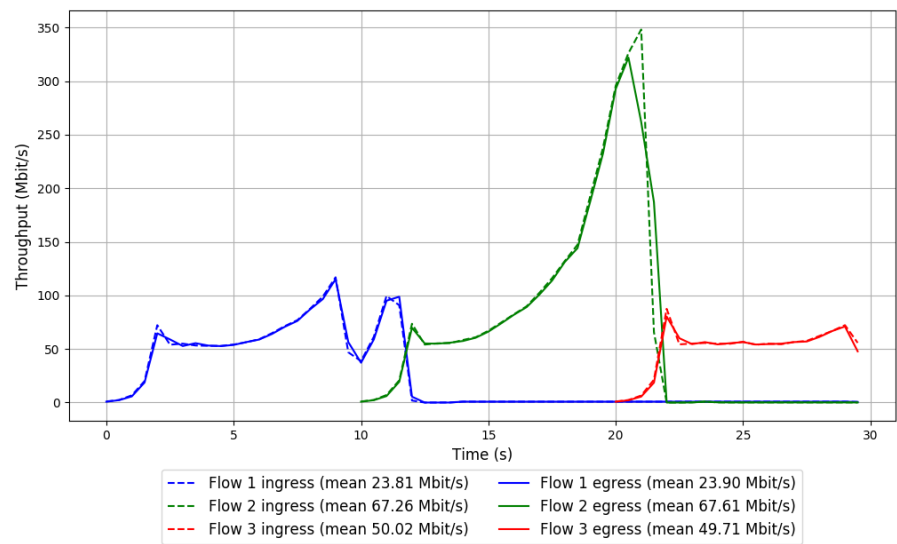
-- Flow 3:

Average throughput: 49.71 Mbit/s

95th percentile per-packet one-way delay: 53.466 ms

Loss rate: 1.67%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-01-17 16:27:03

End at: 2018-01-17 16:27:33

Below is generated by plot.py at 2018-01-17 23:17:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 223.73 Mbit/s

95th percentile per-packet one-way delay: 119.005 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 200.43 Mbit/s

95th percentile per-packet one-way delay: 122.281 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 12.63 Mbit/s

95th percentile per-packet one-way delay: 66.164 ms

Loss rate: 0.04%

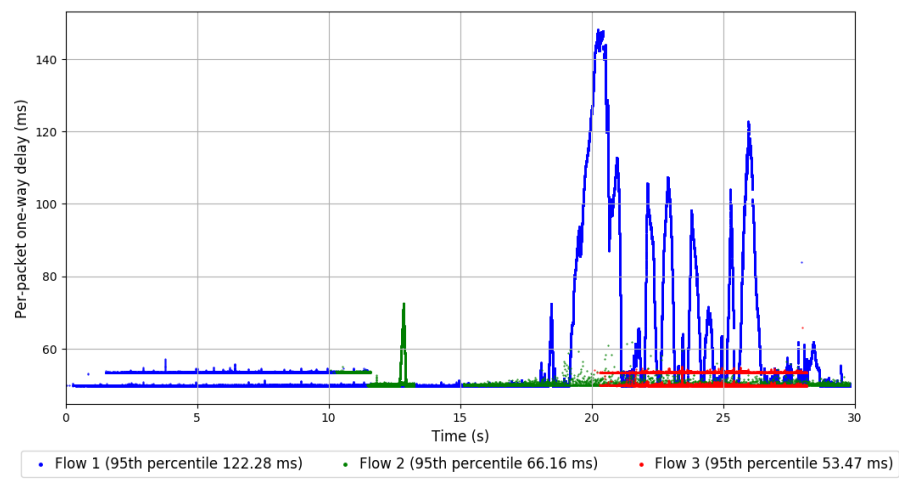
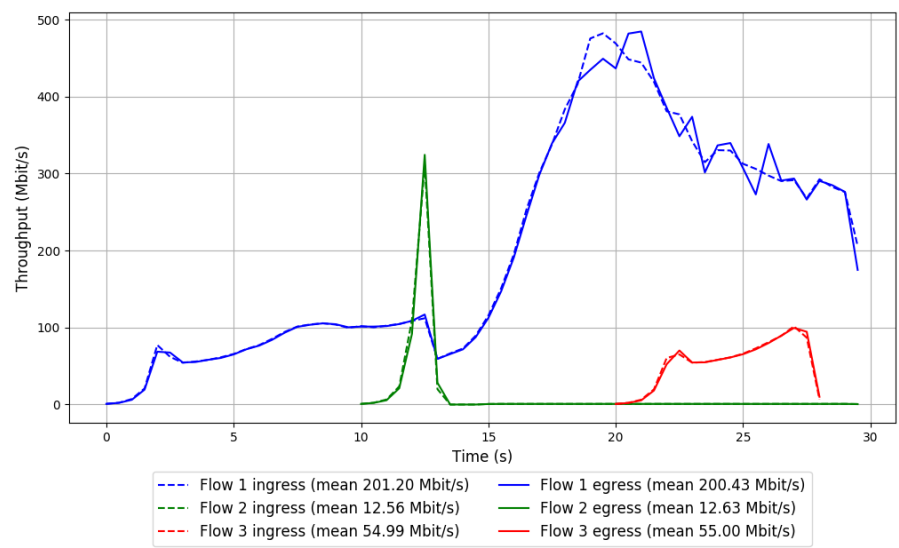
-- Flow 3:

Average throughput: 55.00 Mbit/s

95th percentile per-packet one-way delay: 53.474 ms

Loss rate: 0.00%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-01-17 16:44:23

End at: 2018-01-17 16:44:53

Below is generated by plot.py at 2018-01-17 23:17:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.44 Mbit/s

95th percentile per-packet one-way delay: 128.298 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 4.74 Mbit/s

95th percentile per-packet one-way delay: 53.525 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 23.38 Mbit/s

95th percentile per-packet one-way delay: 189.086 ms

Loss rate: 0.02%

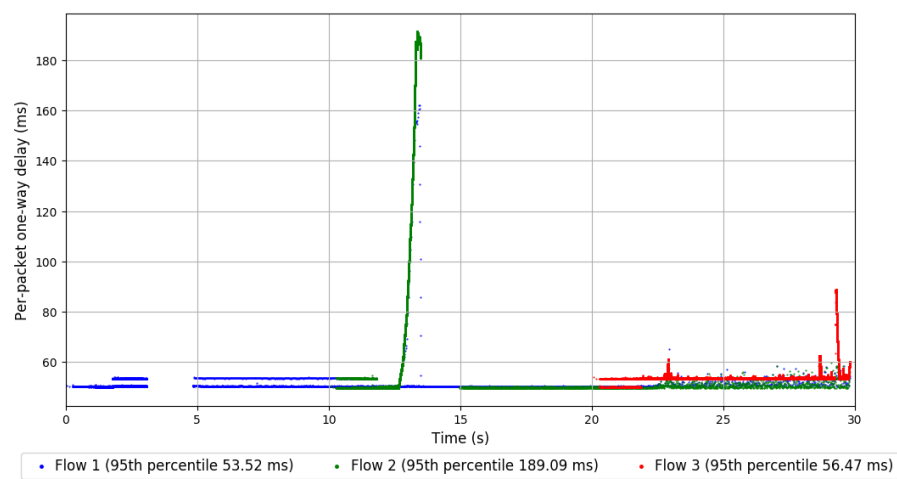
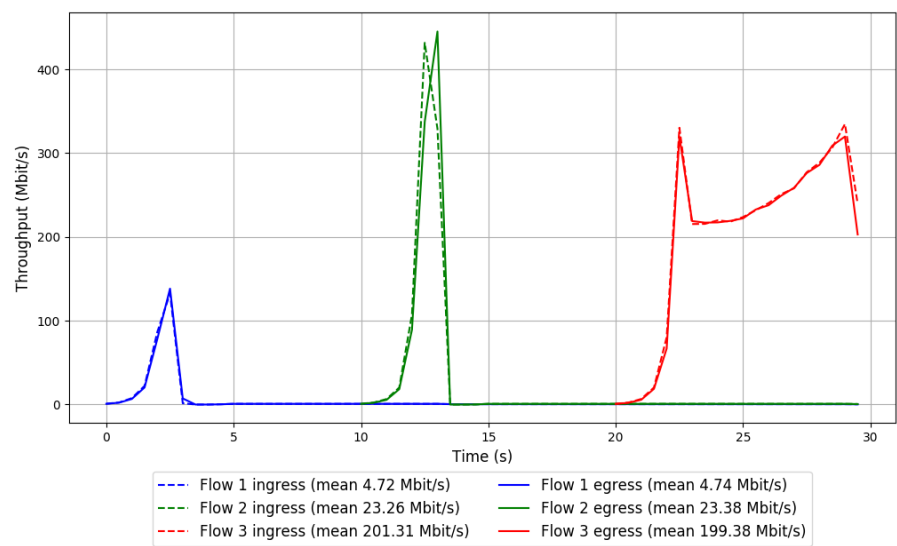
-- Flow 3:

Average throughput: 199.38 Mbit/s

95th percentile per-packet one-way delay: 56.469 ms

Loss rate: 2.05%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-01-17 17:01:13

End at: 2018-01-17 17:01:43

Below is generated by plot.py at 2018-01-17 23:17:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 22.64 Mbit/s

95th percentile per-packet one-way delay: 70.399 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 4.88 Mbit/s

95th percentile per-packet one-way delay: 53.598 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 20.29 Mbit/s

95th percentile per-packet one-way delay: 82.691 ms

Loss rate: 0.02%

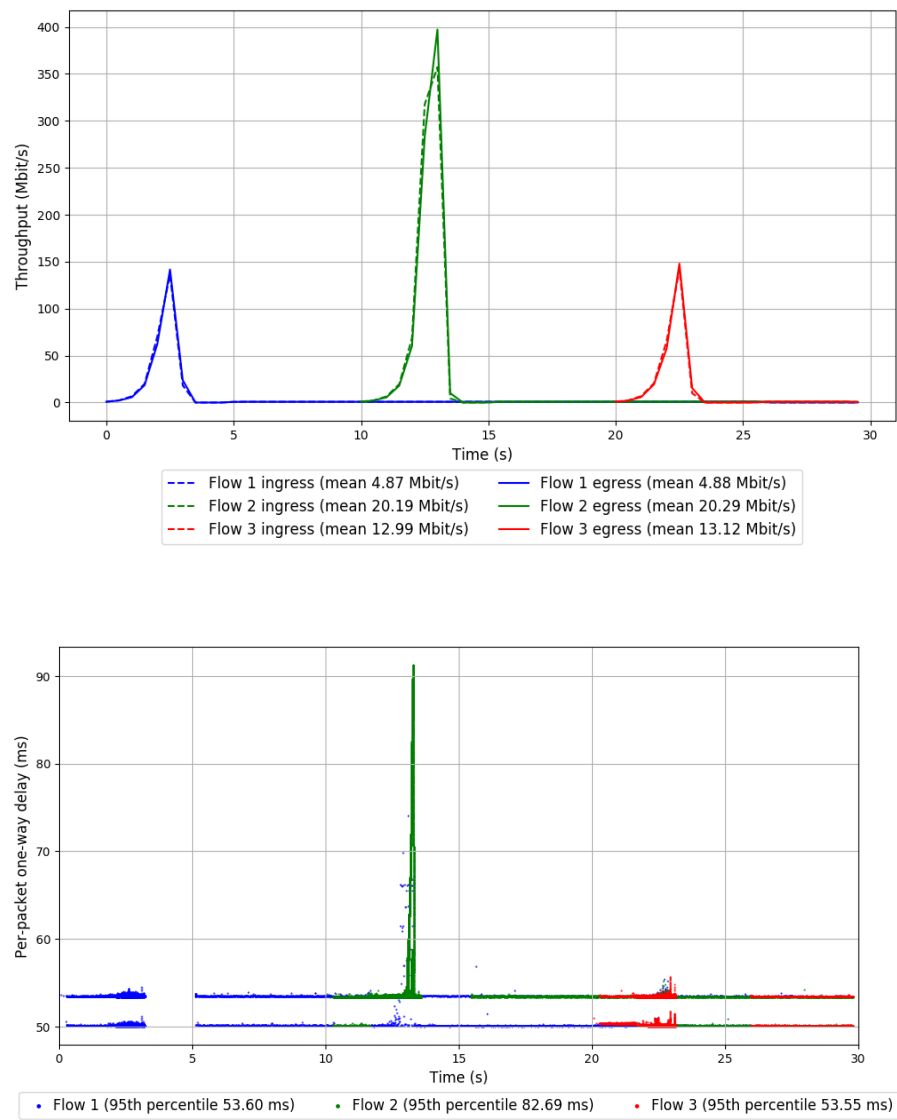
-- Flow 3:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 53.547 ms

Loss rate: 0.06%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-01-17 17:18:16

End at: 2018-01-17 17:18:46

Below is generated by plot.py at 2018-01-17 23:17:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 123.24 Mbit/s

95th percentile per-packet one-way delay: 144.329 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 106.42 Mbit/s

95th percentile per-packet one-way delay: 144.602 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 7.08 Mbit/s

95th percentile per-packet one-way delay: 53.592 ms

Loss rate: 0.07%

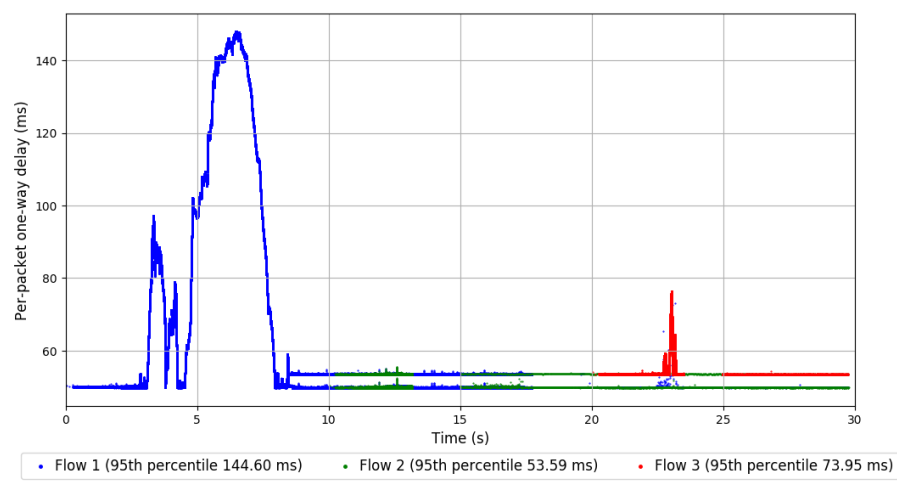
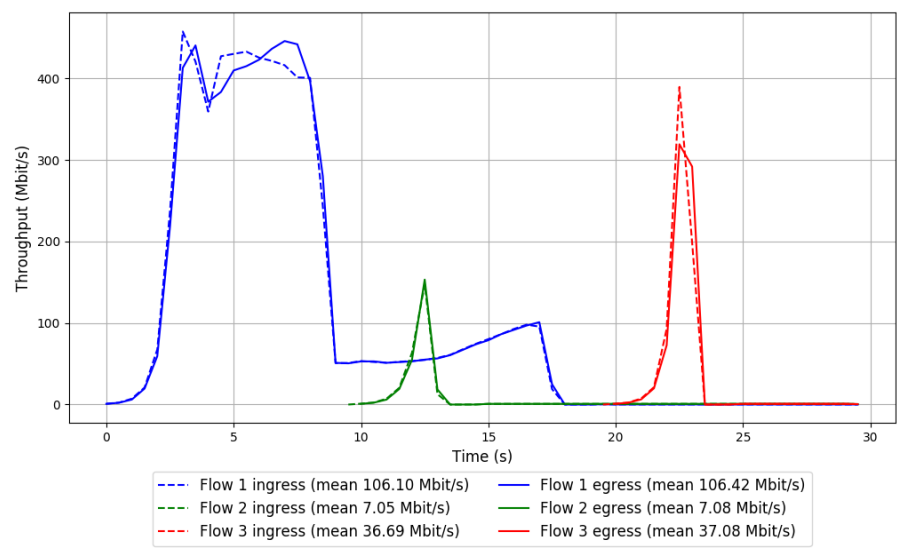
-- Flow 3:

Average throughput: 37.08 Mbit/s

95th percentile per-packet one-way delay: 73.948 ms

Loss rate: 0.03%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-01-17 17:35:12

End at: 2018-01-17 17:35:42

Below is generated by plot.py at 2018-01-17 23:17:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 49.86 Mbit/s

95th percentile per-packet one-way delay: 92.377 ms

Loss rate: 0.73%

-- Flow 1:

Average throughput: 15.53 Mbit/s

95th percentile per-packet one-way delay: 108.877 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 20.36 Mbit/s

95th percentile per-packet one-way delay: 78.379 ms

Loss rate: 0.02%

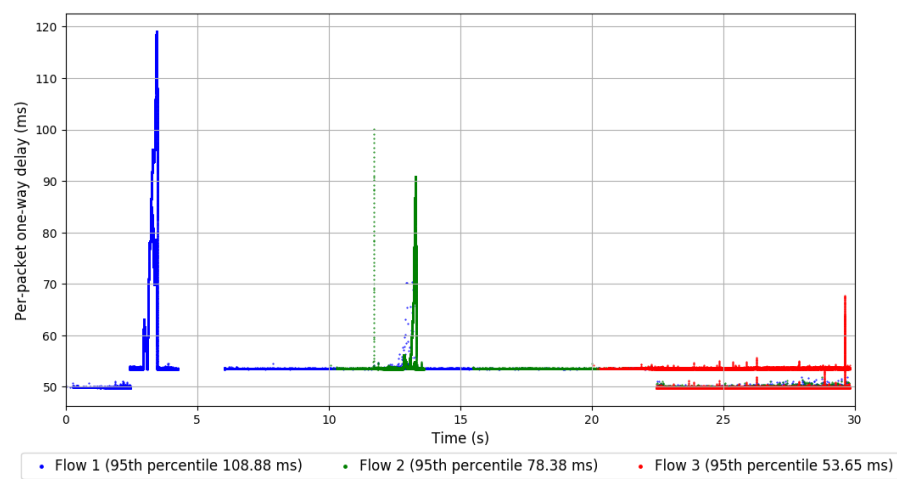
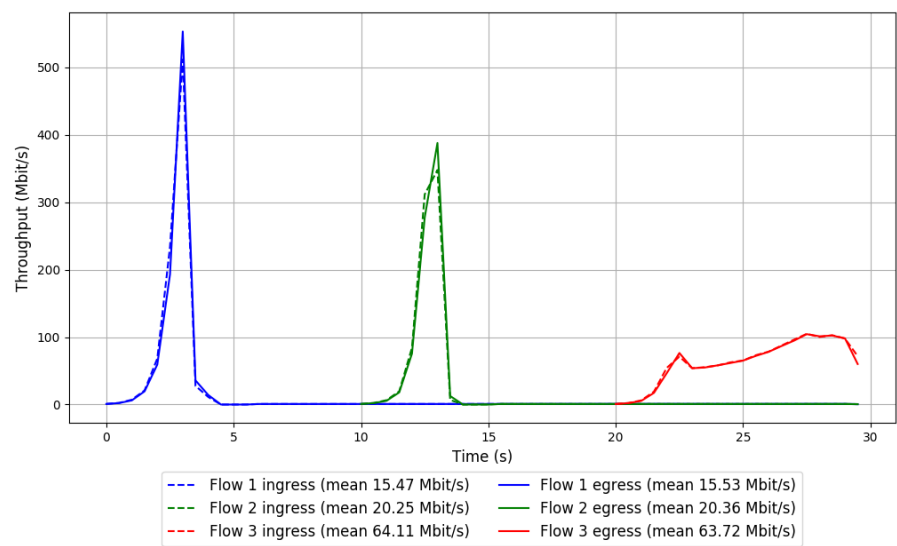
-- Flow 3:

Average throughput: 63.72 Mbit/s

95th percentile per-packet one-way delay: 53.649 ms

Loss rate: 1.70%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-01-17 17:52:06

End at: 2018-01-17 17:52:36

Below is generated by plot.py at 2018-01-17 23:17:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.05 Mbit/s

95th percentile per-packet one-way delay: 53.743 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 11.11 Mbit/s

95th percentile per-packet one-way delay: 53.590 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 82.29 Mbit/s

95th percentile per-packet one-way delay: 53.706 ms

Loss rate: 0.62%

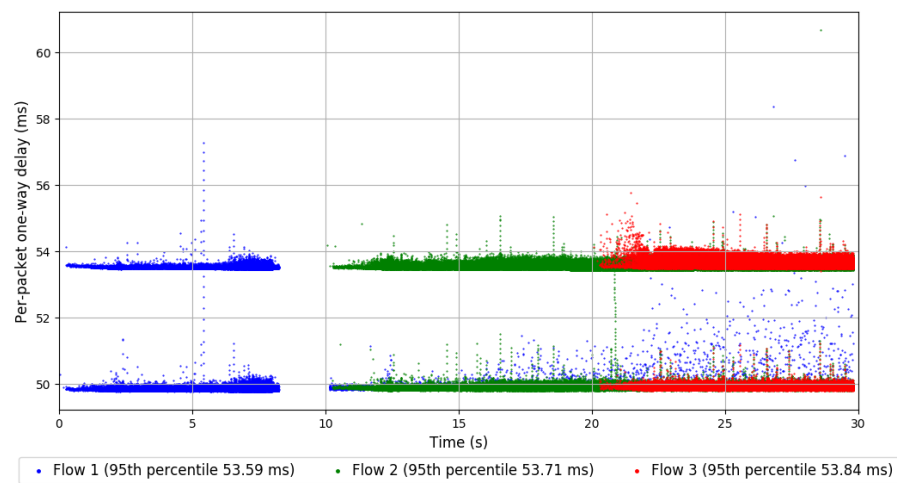
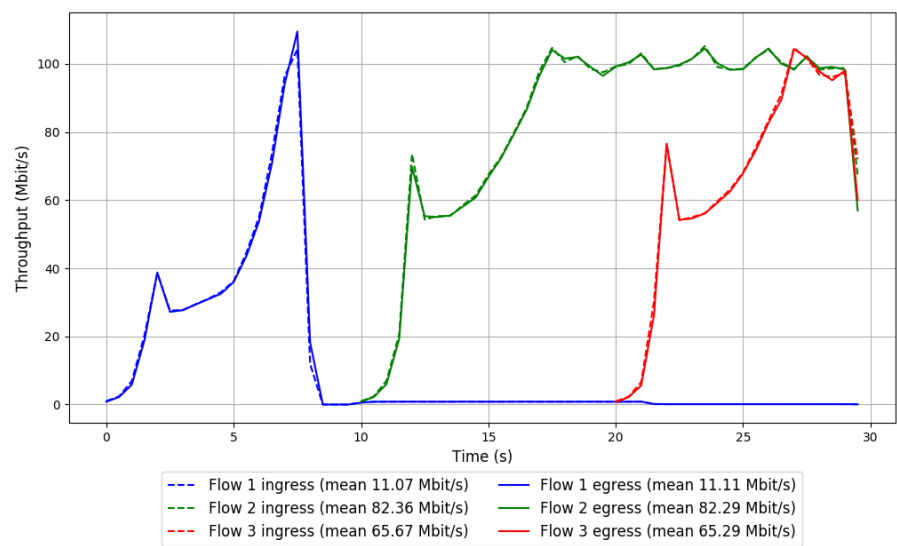
-- Flow 3:

Average throughput: 65.29 Mbit/s

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

Loss rate: 1.66%

Run 9: Report of Vivace-LTE — Data Link



Run 10: Statistics of Vivace-LTE

Start at: 2018-01-17 18:08:57

End at: 2018-01-17 18:09:27

Below is generated by plot.py at 2018-01-17 23:17:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.69 Mbit/s

95th percentile per-packet one-way delay: 53.679 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 92.52 Mbit/s

95th percentile per-packet one-way delay: 53.679 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 7.34 Mbit/s

95th percentile per-packet one-way delay: 53.691 ms

Loss rate: 0.06%

-- Flow 3:

Average throughput: 13.15 Mbit/s

95th percentile per-packet one-way delay: 53.669 ms

Loss rate: 0.06%

Run 10: Report of Vivace-LTE — Data Link

