

Pantheon Report

Generated at 2018-02-17 20:32:06 (UTC).

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

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.

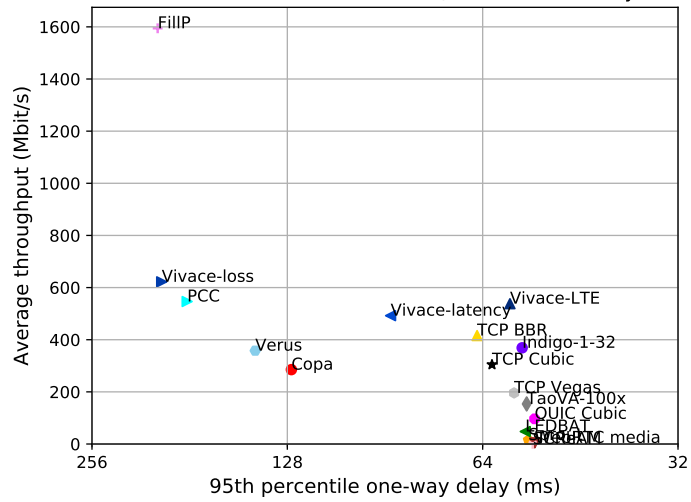
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

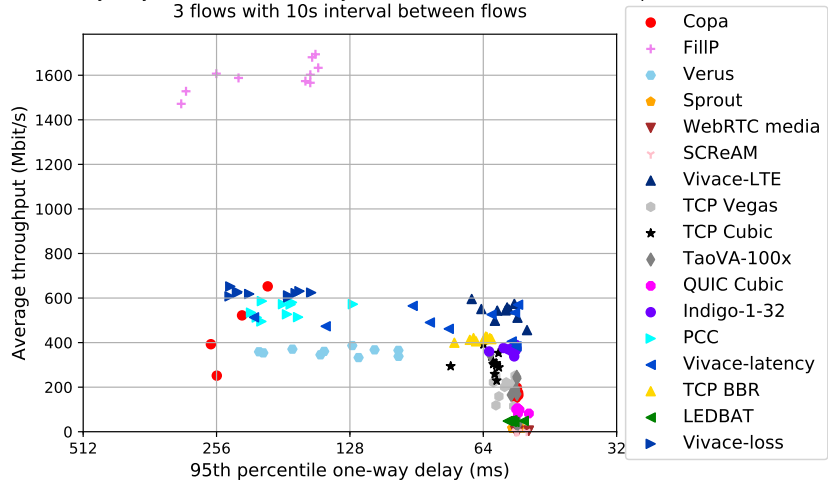
Git summary:

```
branch: master @ cccb2d77344969a7bac1df6edf6c0cfb6c77a6f8
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5cec90f281d1c69ae1a5c6
third_party/genericCC @ 8400b8926887fc4cf8c795a1d7ce2c8ac041ec72
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

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



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



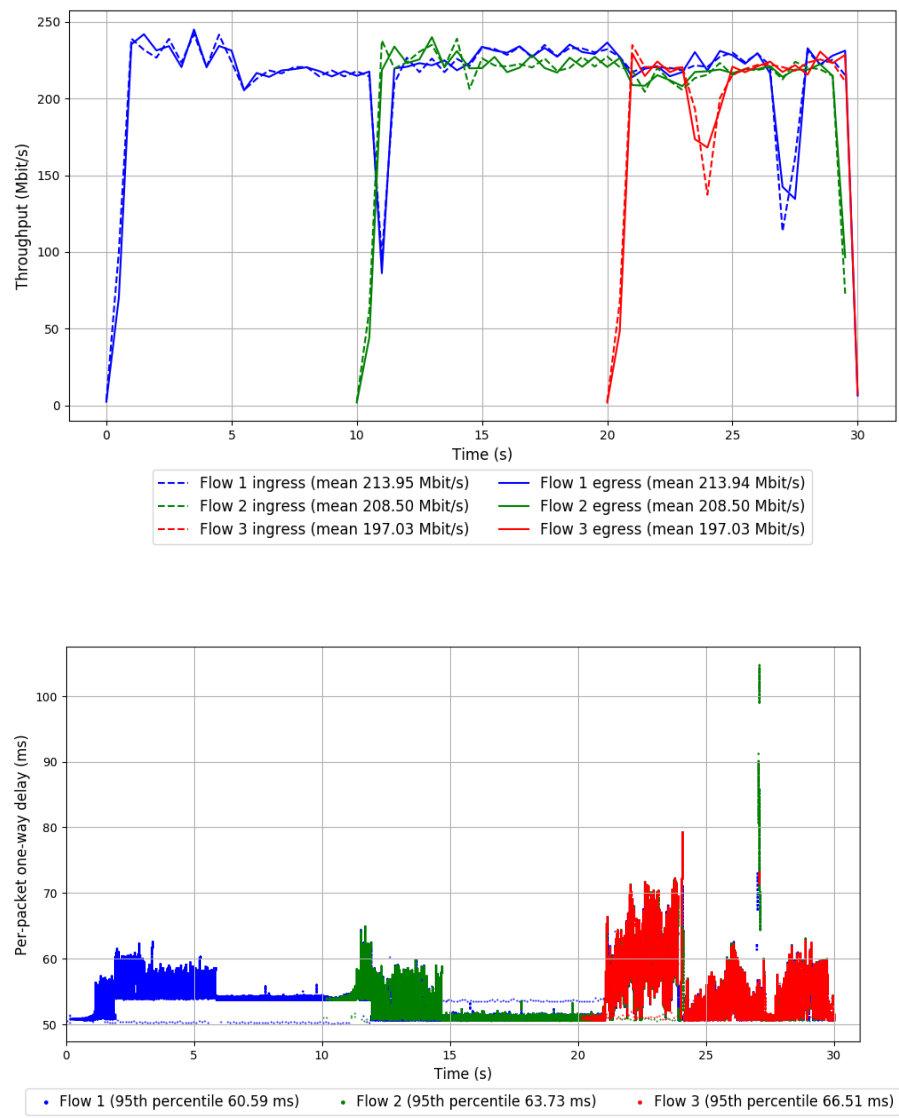
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	211.52	208.51	198.31	63.95	65.54	66.91	0.00	0.00	0.00
TCP Cubic	10	175.89	128.59	129.69	62.00	60.92	60.08	0.00	0.00	0.05
LEDBAT	10	30.88	20.55	10.19	55.04	55.08	54.49	0.00	0.00	0.00
PCC	10	495.60	64.67	25.09	183.76	179.78	156.75	2.47	2.56	2.87
QUIC Cubic	10	56.20	47.19	27.57	52.64	52.78	51.70	0.00	0.00	0.01
SCReAM	10	0.21	0.21	0.22	52.59	52.79	52.37	0.01	0.00	0.00
WebRTC media	10	2.29	1.47	0.64	53.12	52.40	52.07	0.00	0.00	0.01
Sprout	10	7.82	7.67	7.45	54.52	54.00	53.40	0.00	0.00	0.02
TaoVA-100x	10	130.62	69.02	69.52	54.15	54.85	54.95	0.00	0.00	0.00
TCP Vegas	10	94.53	111.41	82.45	56.70	55.78	55.95	0.00	0.01	0.01
Verus	10	214.51	162.74	110.19	135.68	141.83	148.89	0.34	0.15	0.32
Copa	10	163.68	168.24	56.71	119.27	120.91	98.13	9.38	11.60	7.38
FillP	10	848.79	779.19	685.44	188.98	188.62	207.45	6.62	9.31	12.92
Indigo-1-32	10	197.10	184.48	153.18	54.99	56.19	55.83	0.00	0.01	0.00
Vivace-latency	10	283.46	253.12	123.25	93.75	82.65	53.05	0.45	0.01	0.01
Vivace-loss	10	349.28	298.13	227.23	194.47	108.93	111.56	1.88	0.13	0.85
Vivace-LTE	10	316.27	242.44	185.40	56.19	59.09	67.06	0.01	0.04	0.01

```
Run 1: Statistics of TCP BBR

Start at: 2018-02-17 12:32:17
End at: 2018-02-17 12:32:47

# Below is generated by plot.py at 2018-02-17 18:14:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 417.80 Mbit/s
95th percentile per-packet one-way delay: 63.033 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 213.94 Mbit/s
95th percentile per-packet one-way delay: 60.590 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 208.50 Mbit/s
95th percentile per-packet one-way delay: 63.729 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 197.03 Mbit/s
95th percentile per-packet one-way delay: 66.508 ms
Loss rate: 0.00%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-02-17 12:49:43

End at: 2018-02-17 12:50:13

Below is generated by plot.py at 2018-02-17 18:14:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 399.60 Mbit/s

95th percentile per-packet one-way delay: 74.375 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 206.61 Mbit/s

95th percentile per-packet one-way delay: 71.722 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 202.39 Mbit/s

95th percentile per-packet one-way delay: 75.139 ms

Loss rate: 0.00%

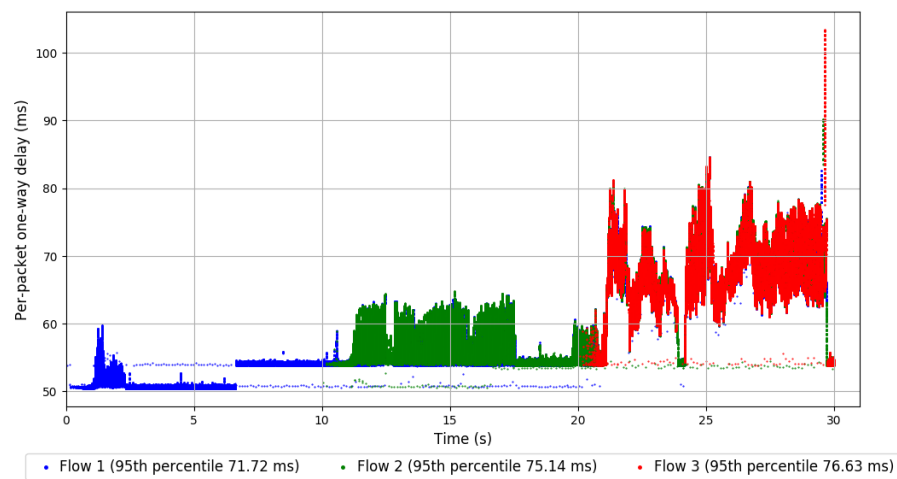
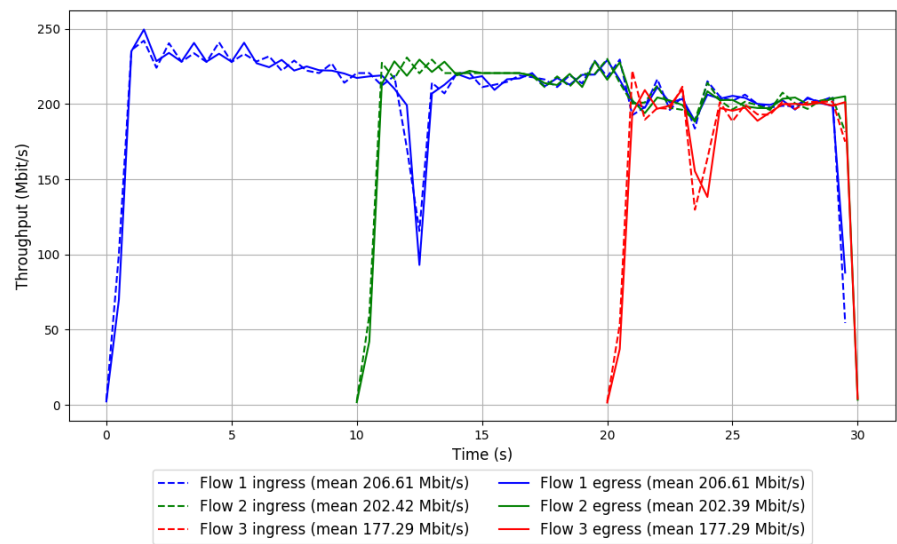
-- Flow 3:

Average throughput: 177.29 Mbit/s

95th percentile per-packet one-way delay: 76.627 ms

Loss rate: 0.01%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-02-17 13:07:30

End at: 2018-02-17 13:08:00

Below is generated by plot.py at 2018-02-17 18:14:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 420.20 Mbit/s

95th percentile per-packet one-way delay: 61.840 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 209.61 Mbit/s

95th percentile per-packet one-way delay: 61.316 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 213.15 Mbit/s

95th percentile per-packet one-way delay: 62.379 ms

Loss rate: 0.00%

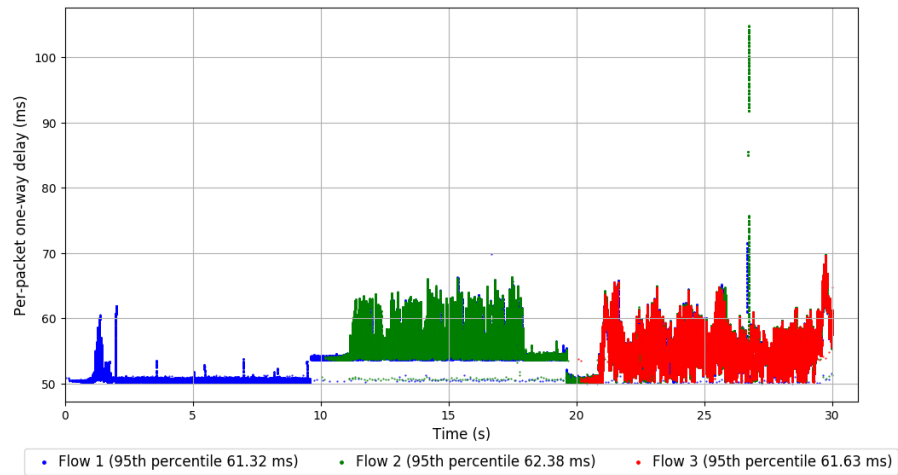
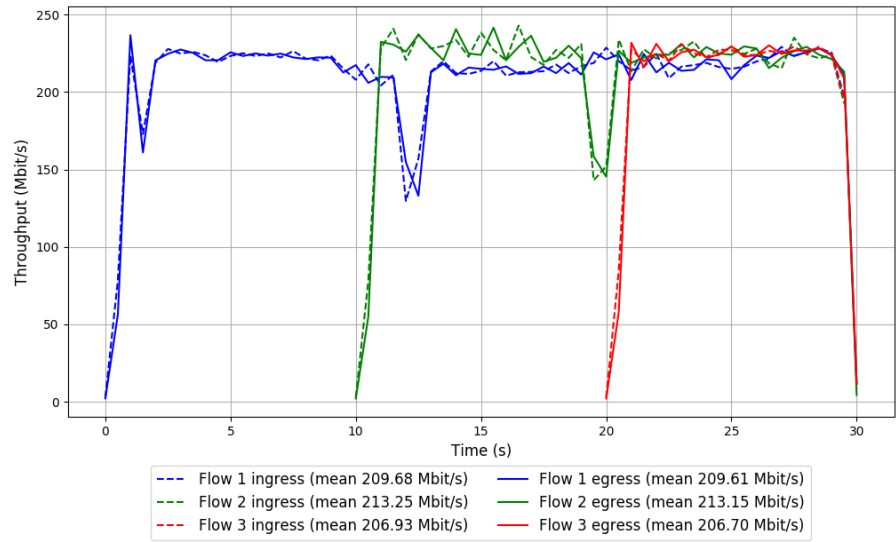
-- Flow 3:

Average throughput: 206.70 Mbit/s

95th percentile per-packet one-way delay: 61.631 ms

Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-02-17 13:26:23

End at: 2018-02-17 13:26:53

Below is generated by plot.py at 2018-02-17 18:14:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 412.57 Mbit/s

95th percentile per-packet one-way delay: 68.648 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 215.30 Mbit/s

95th percentile per-packet one-way delay: 66.994 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 201.61 Mbit/s

95th percentile per-packet one-way delay: 69.118 ms

Loss rate: 0.00%

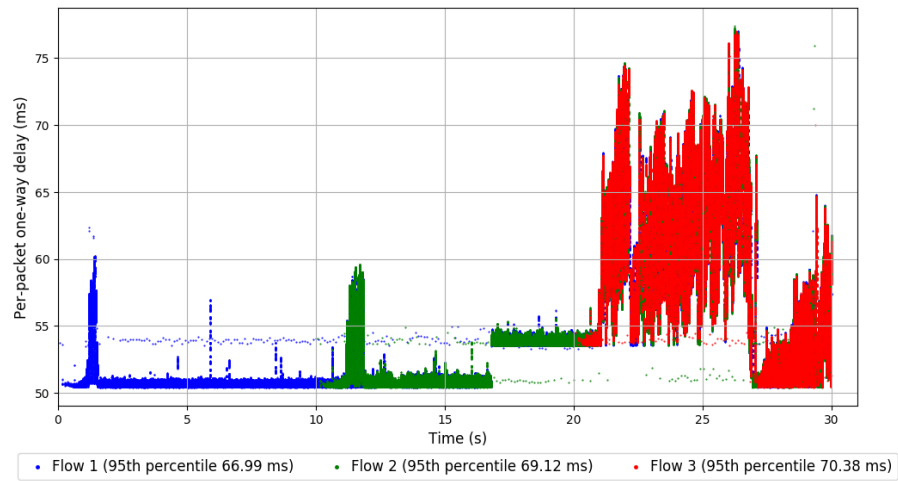
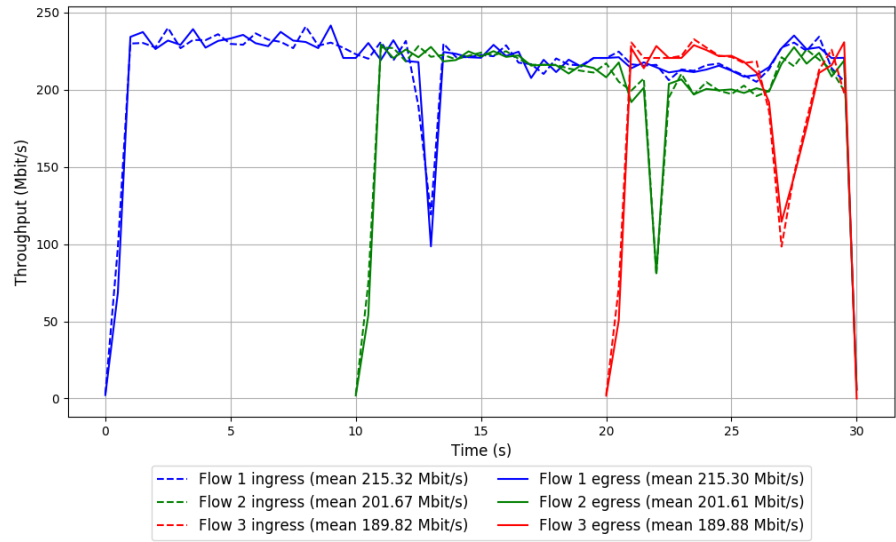
-- Flow 3:

Average throughput: 189.88 Mbit/s

95th percentile per-packet one-way delay: 70.378 ms

Loss rate: 0.00%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-02-17 13:44:20

End at: 2018-02-17 13:44:50

Below is generated by plot.py at 2018-02-17 18:14:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 415.69 Mbit/s

95th percentile per-packet one-way delay: 61.356 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 213.07 Mbit/s

95th percentile per-packet one-way delay: 60.207 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 205.66 Mbit/s

95th percentile per-packet one-way delay: 61.490 ms

Loss rate: 0.00%

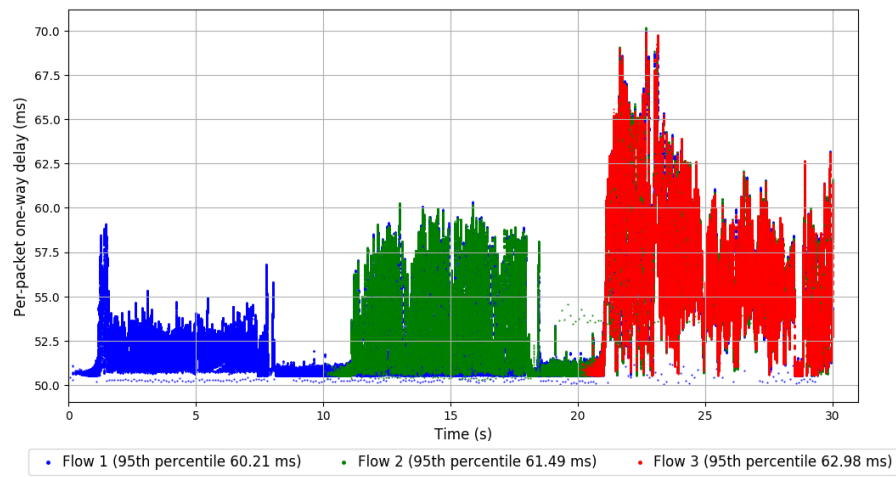
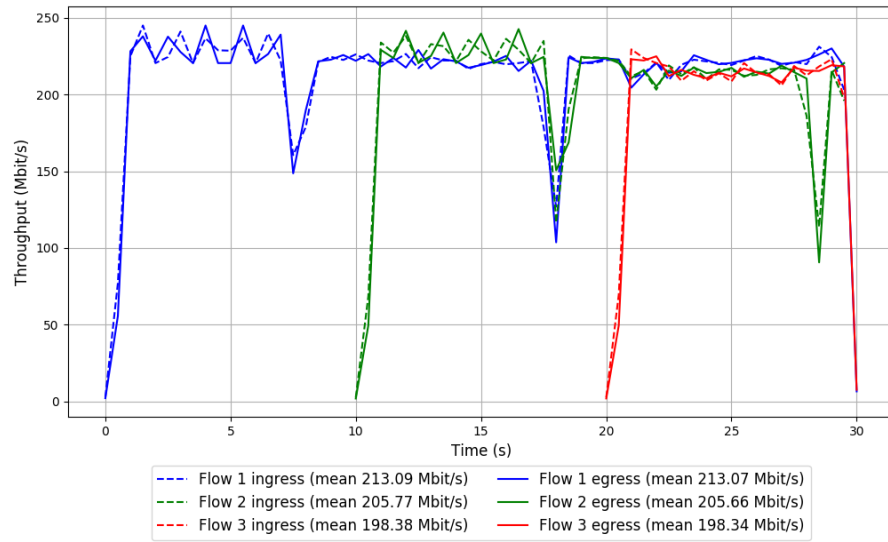
-- Flow 3:

Average throughput: 198.34 Mbit/s

95th percentile per-packet one-way delay: 62.980 ms

Loss rate: 0.00%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-02-17 14:02:00

End at: 2018-02-17 14:02:30

Below is generated by plot.py at 2018-02-17 18:14:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 415.76 Mbit/s

95th percentile per-packet one-way delay: 63.741 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 205.58 Mbit/s

95th percentile per-packet one-way delay: 62.850 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 214.53 Mbit/s

95th percentile per-packet one-way delay: 64.137 ms

Loss rate: 0.00%

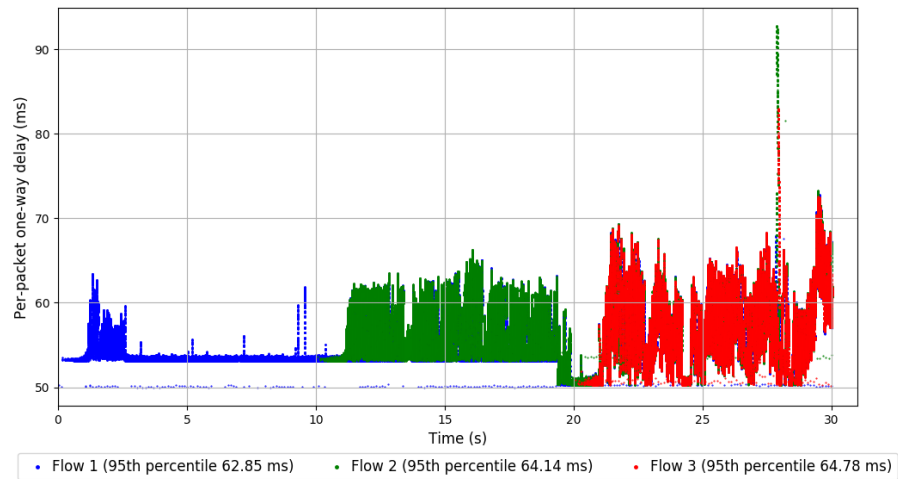
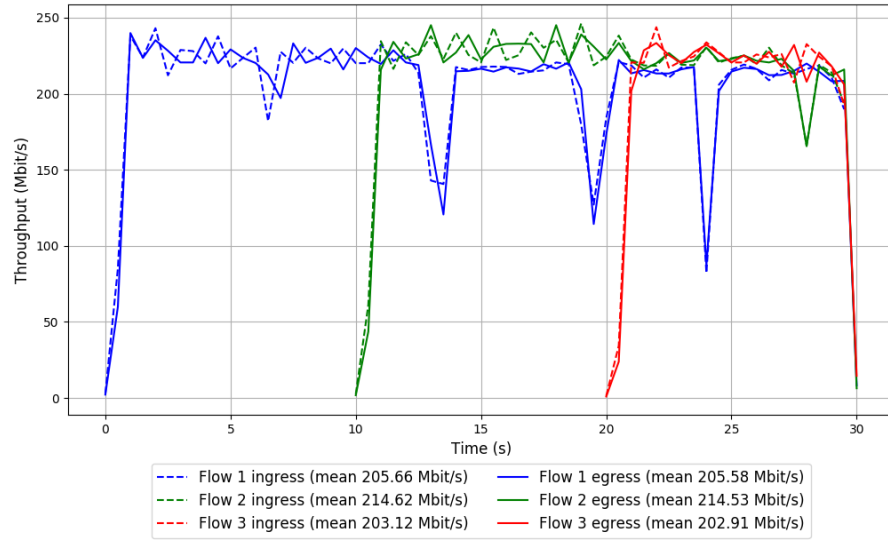
-- Flow 3:

Average throughput: 202.91 Mbit/s

95th percentile per-packet one-way delay: 64.785 ms

Loss rate: 0.00%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-02-17 14:19:47

End at: 2018-02-17 14:20:17

Below is generated by plot.py at 2018-02-17 18:14:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 405.86 Mbit/s

95th percentile per-packet one-way delay: 66.462 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 207.50 Mbit/s

95th percentile per-packet one-way delay: 65.480 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 204.95 Mbit/s

95th percentile per-packet one-way delay: 65.900 ms

Loss rate: 0.03%

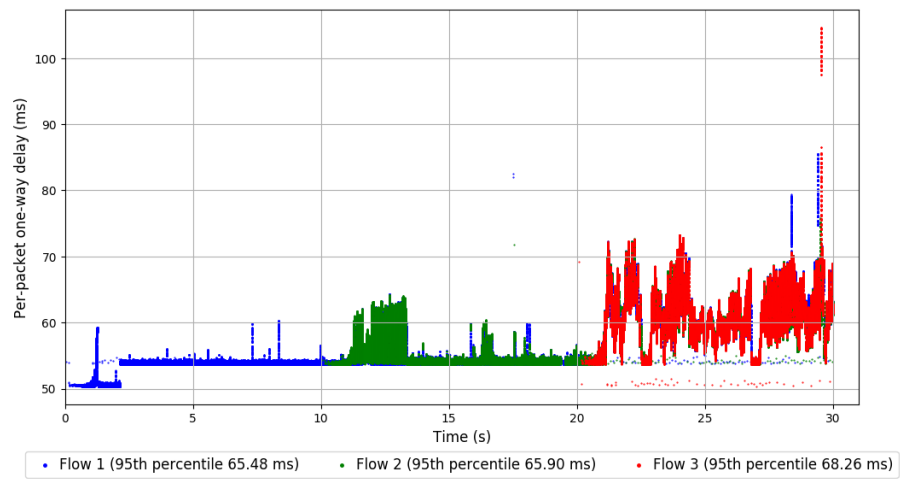
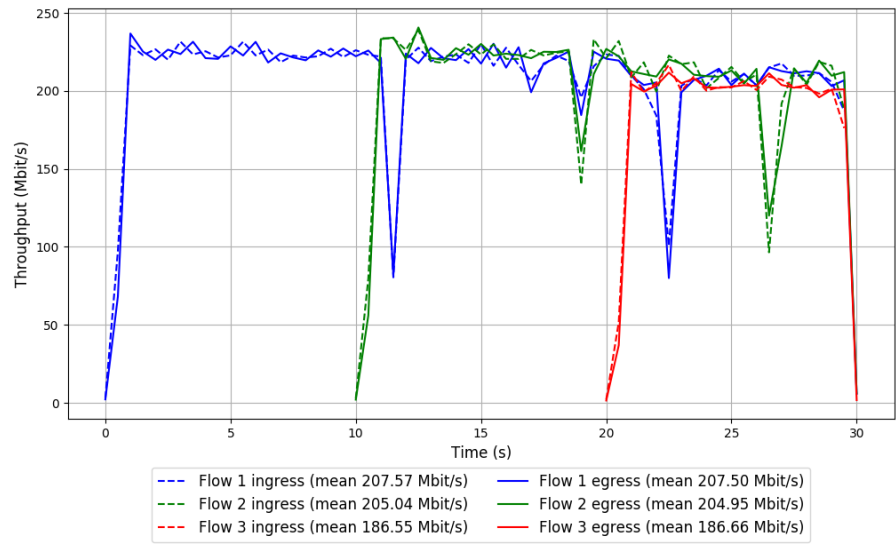
-- Flow 3:

Average throughput: 186.66 Mbit/s

95th percentile per-packet one-way delay: 68.257 ms

Loss rate: 0.00%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-02-17 14:38:12

End at: 2018-02-17 14:38:42

Below is generated by plot.py at 2018-02-17 18:14:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 425.29 Mbit/s

95th percentile per-packet one-way delay: 62.837 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 212.02 Mbit/s

95th percentile per-packet one-way delay: 61.922 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 215.28 Mbit/s

95th percentile per-packet one-way delay: 62.886 ms

Loss rate: 0.00%

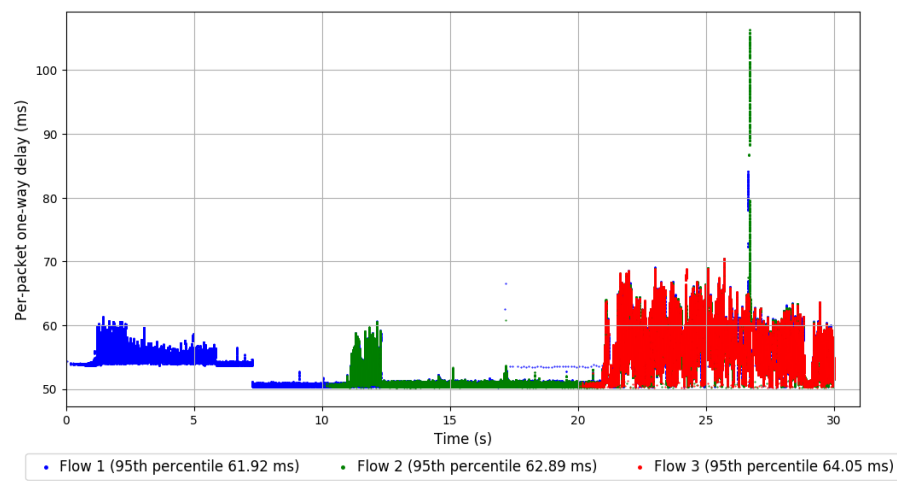
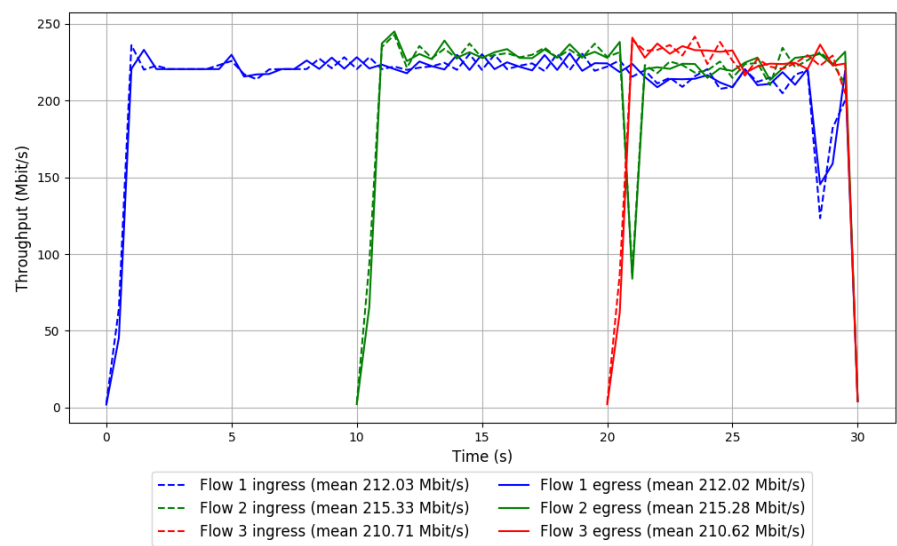
-- Flow 3:

Average throughput: 210.62 Mbit/s

95th percentile per-packet one-way delay: 64.051 ms

Loss rate: 0.00%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-02-17 14:55:49

End at: 2018-02-17 14:56:19

Below is generated by plot.py at 2018-02-17 18:20:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 420.37 Mbit/s

95th percentile per-packet one-way delay: 67.339 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 215.06 Mbit/s

95th percentile per-packet one-way delay: 66.101 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 204.88 Mbit/s

95th percentile per-packet one-way delay: 67.965 ms

Loss rate: 0.00%

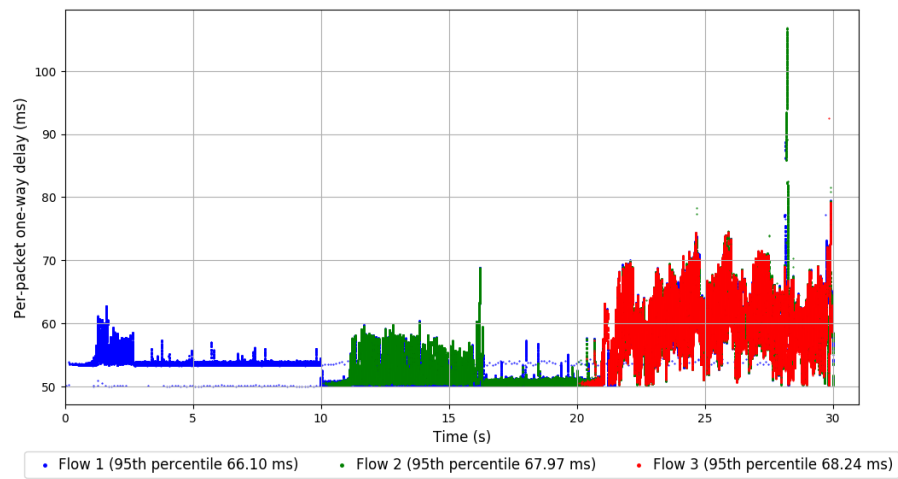
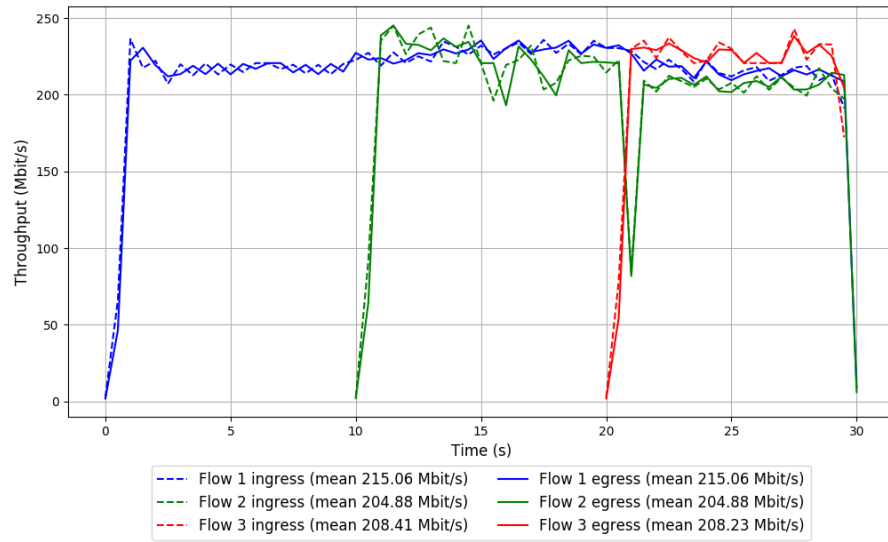
-- Flow 3:

Average throughput: 208.23 Mbit/s

95th percentile per-packet one-way delay: 68.242 ms

Loss rate: 0.00%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-02-17 15:13:46

End at: 2018-02-17 15:14:16

Below is generated by plot.py at 2018-02-17 18:21:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 427.15 Mbit/s

95th percentile per-packet one-way delay: 63.181 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 216.49 Mbit/s

95th percentile per-packet one-way delay: 62.291 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 214.17 Mbit/s

95th percentile per-packet one-way delay: 62.625 ms

Loss rate: 0.00%

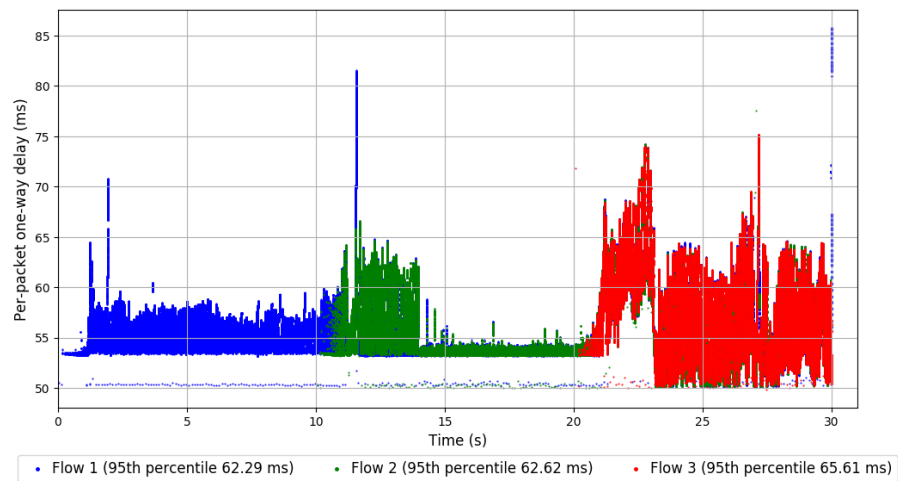
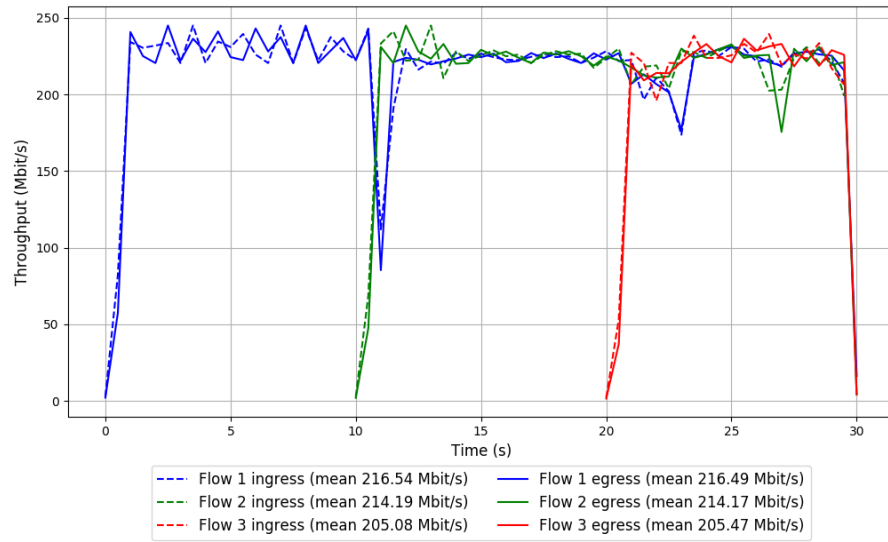
-- Flow 3:

Average throughput: 205.47 Mbit/s

95th percentile per-packet one-way delay: 65.612 ms

Loss rate: 0.00%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-02-17 12:38:42

End at: 2018-02-17 12:39:12

Below is generated by plot.py at 2018-02-17 18:21:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 298.34 Mbit/s

95th percentile per-packet one-way delay: 59.801 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 161.23 Mbit/s

95th percentile per-packet one-way delay: 59.885 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 154.07 Mbit/s

95th percentile per-packet one-way delay: 59.975 ms

Loss rate: 0.00%

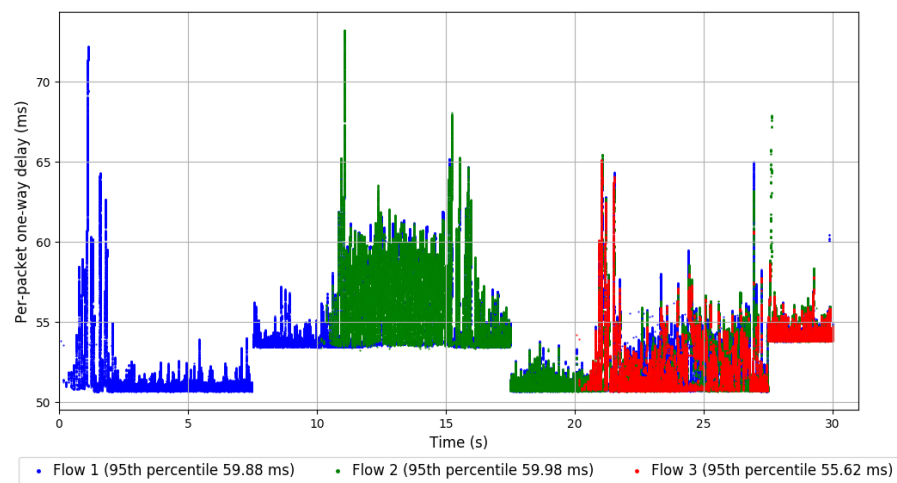
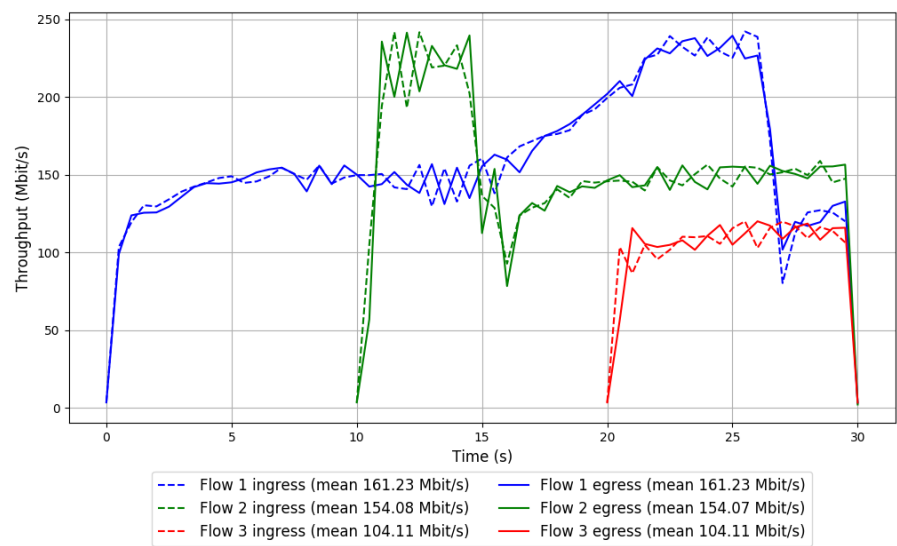
-- Flow 3:

Average throughput: 104.11 Mbit/s

95th percentile per-packet one-way delay: 55.622 ms

Loss rate: 0.00%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-02-17 12:56:19

End at: 2018-02-17 12:56:49

Below is generated by plot.py at 2018-02-17 18:21:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 353.49 Mbit/s

95th percentile per-packet one-way delay: 59.125 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 193.54 Mbit/s

95th percentile per-packet one-way delay: 59.665 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 158.35 Mbit/s

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

Loss rate: 0.00%

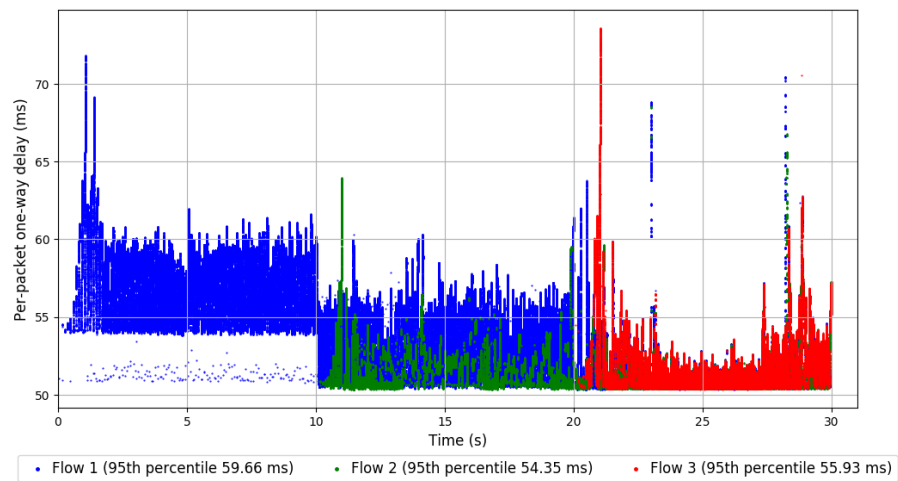
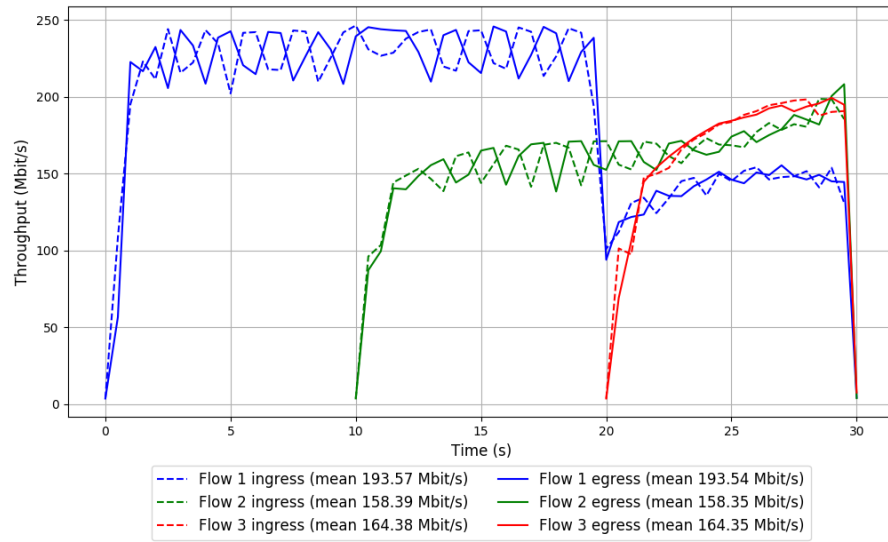
-- Flow 3:

Average throughput: 164.35 Mbit/s

95th percentile per-packet one-way delay: 55.928 ms

Loss rate: 0.00%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-02-17 13:14:29

End at: 2018-02-17 13:14:59

Below is generated by plot.py at 2018-02-17 18:21:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 304.03 Mbit/s

95th percentile per-packet one-way delay: 60.772 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 149.34 Mbit/s

95th percentile per-packet one-way delay: 59.939 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 166.88 Mbit/s

95th percentile per-packet one-way delay: 61.394 ms

Loss rate: 0.02%

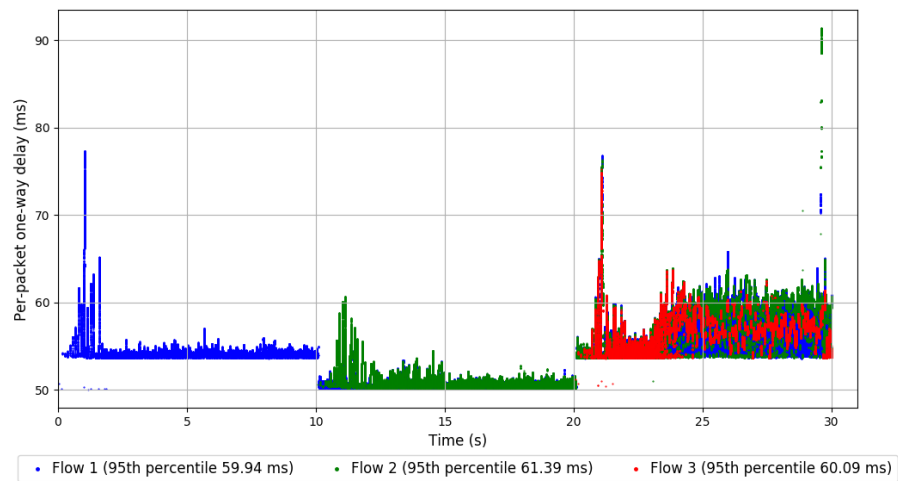
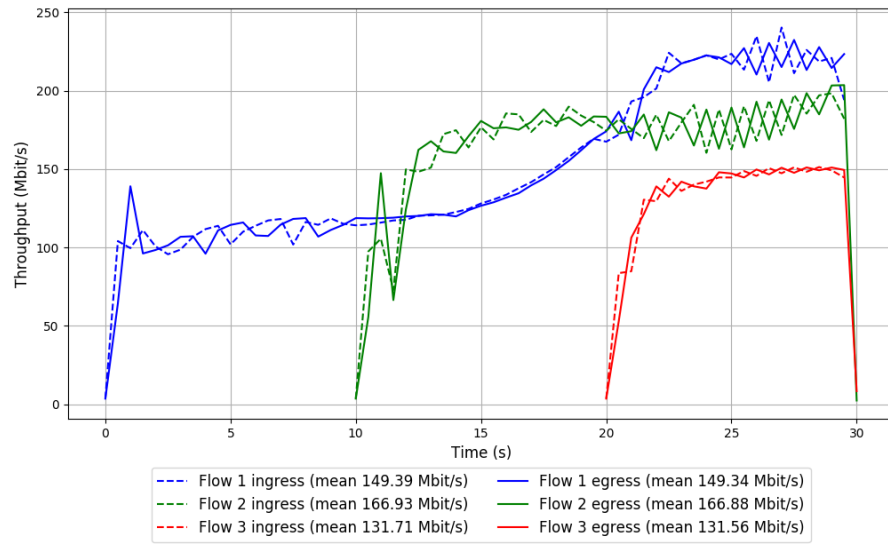
-- Flow 3:

Average throughput: 131.56 Mbit/s

95th percentile per-packet one-way delay: 60.095 ms

Loss rate: 0.11%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-02-17 13:32:49

End at: 2018-02-17 13:33:19

Below is generated by plot.py at 2018-02-17 18:21:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 392.07 Mbit/s

95th percentile per-packet one-way delay: 63.912 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 219.81 Mbit/s

95th percentile per-packet one-way delay: 64.351 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 157.34 Mbit/s

95th percentile per-packet one-way delay: 62.157 ms

Loss rate: 0.00%

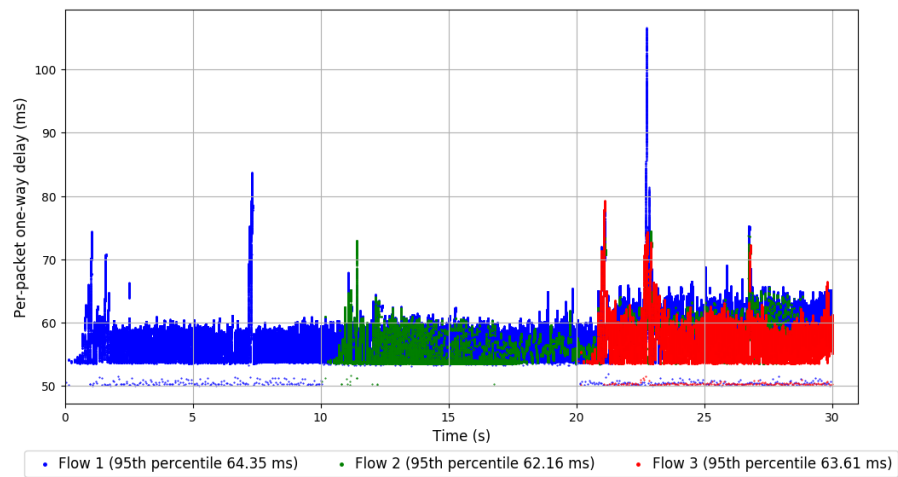
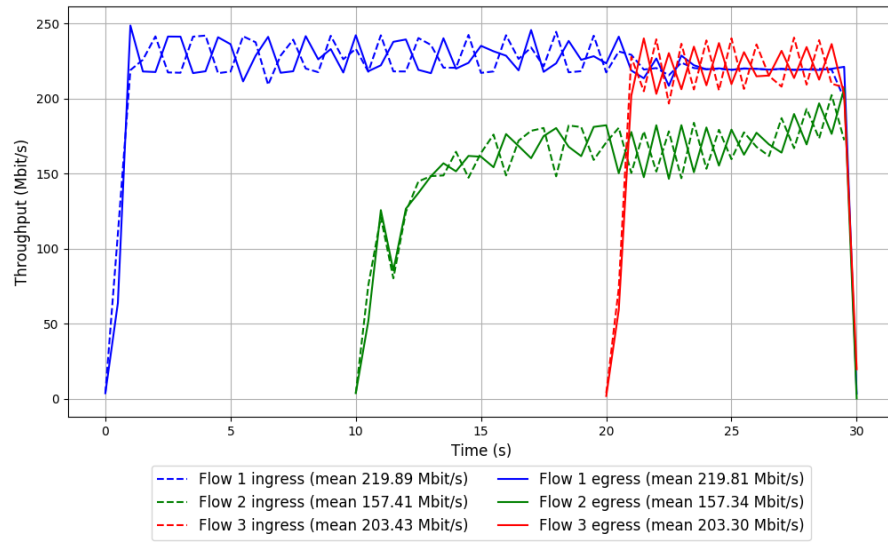
-- Flow 3:

Average throughput: 203.30 Mbit/s

95th percentile per-packet one-way delay: 63.611 ms

Loss rate: 0.00%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-02-17 13:50:44

End at: 2018-02-17 13:51:14

Below is generated by plot.py at 2018-02-17 18:21:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 229.58 Mbit/s

95th percentile per-packet one-way delay: 59.699 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 193.12 Mbit/s

95th percentile per-packet one-way delay: 59.750 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 52.41 Mbit/s

95th percentile per-packet one-way delay: 58.865 ms

Loss rate: 0.01%

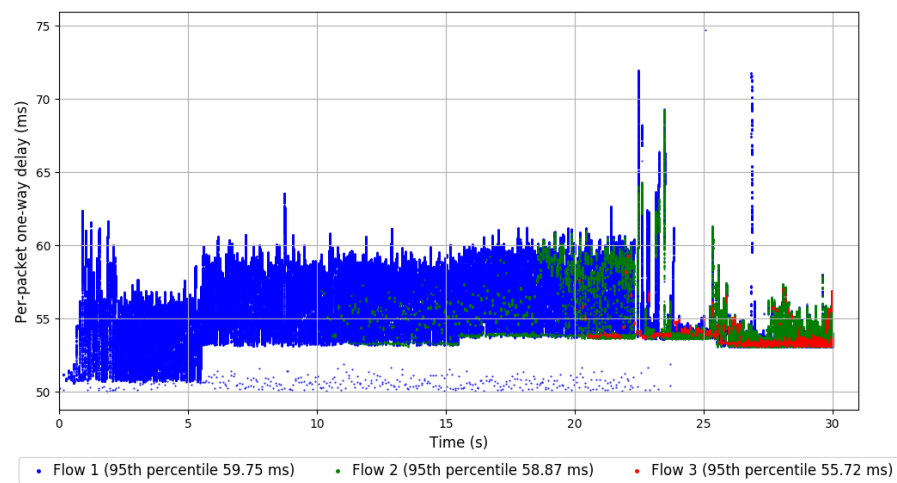
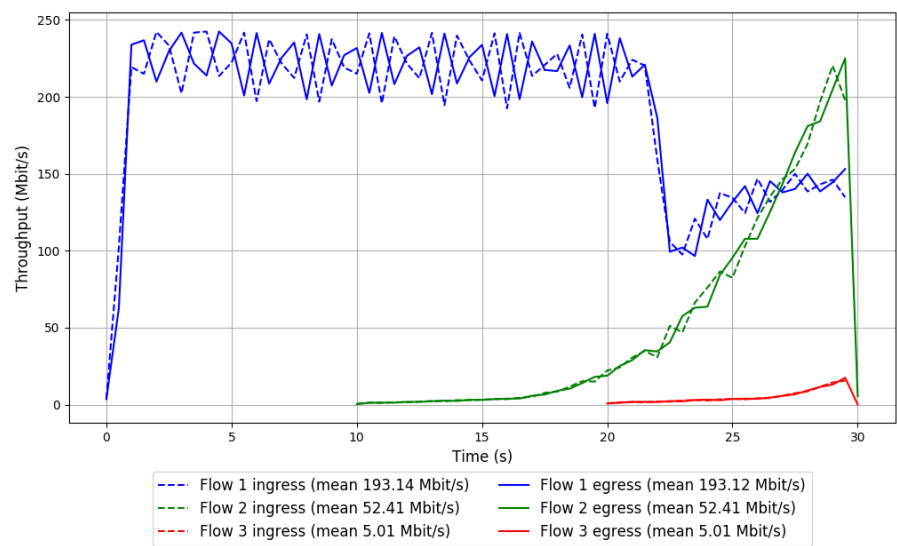
-- Flow 3:

Average throughput: 5.01 Mbit/s

95th percentile per-packet one-way delay: 55.722 ms

Loss rate: 0.14%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-02-17 14:08:32

End at: 2018-02-17 14:09:02

Below is generated by plot.py at 2018-02-17 18:21:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 294.17 Mbit/s

95th percentile per-packet one-way delay: 75.818 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 140.81 Mbit/s

95th percentile per-packet one-way delay: 75.941 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 137.02 Mbit/s

95th percentile per-packet one-way delay: 75.892 ms

Loss rate: 0.00%

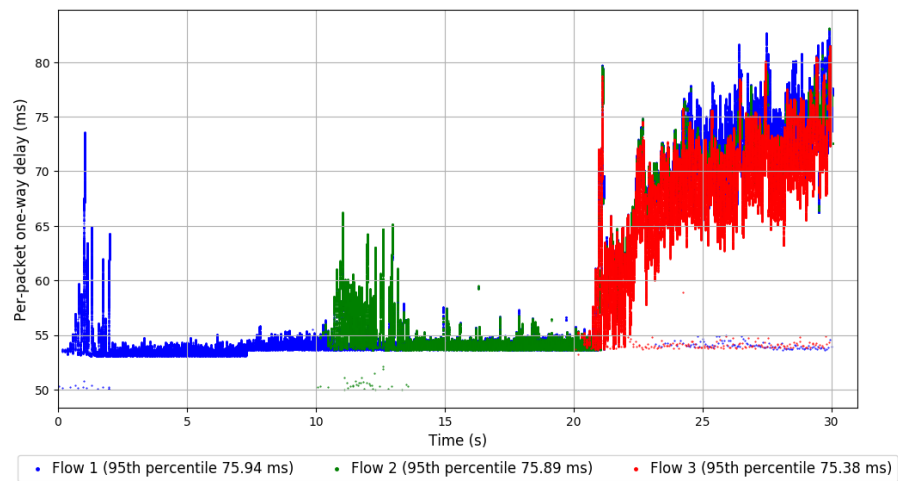
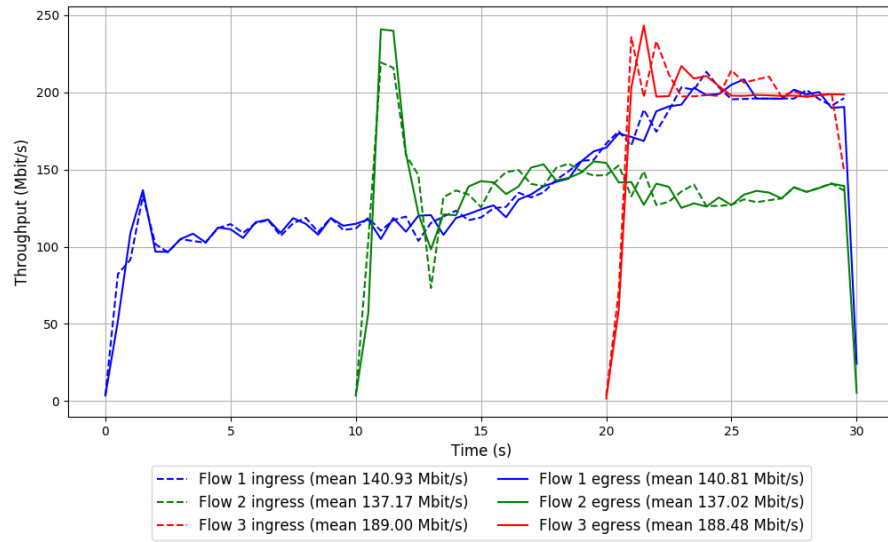
-- Flow 3:

Average throughput: 188.48 Mbit/s

95th percentile per-packet one-way delay: 75.383 ms

Loss rate: 0.00%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-02-17 14:26:42

End at: 2018-02-17 14:27:12

Below is generated by plot.py at 2018-02-17 18:23:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 288.79 Mbit/s

95th percentile per-packet one-way delay: 59.023 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 140.56 Mbit/s

95th percentile per-packet one-way delay: 58.998 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 146.88 Mbit/s

95th percentile per-packet one-way delay: 58.456 ms

Loss rate: 0.00%

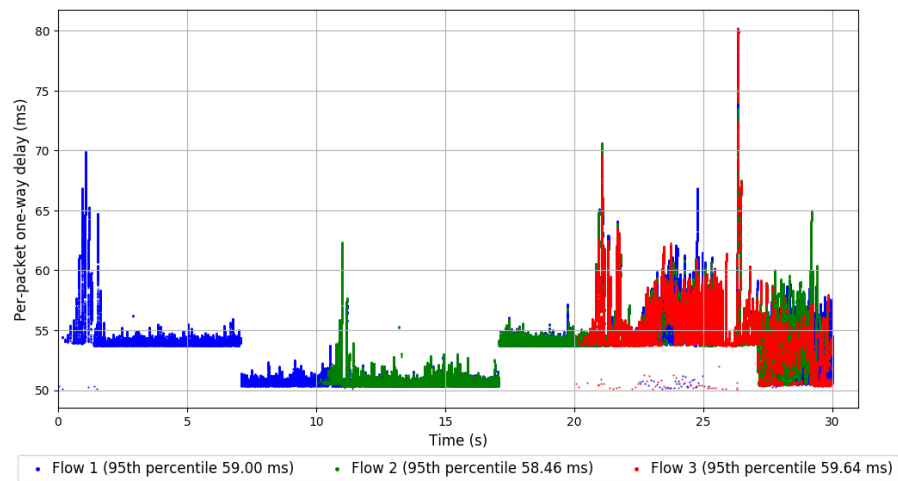
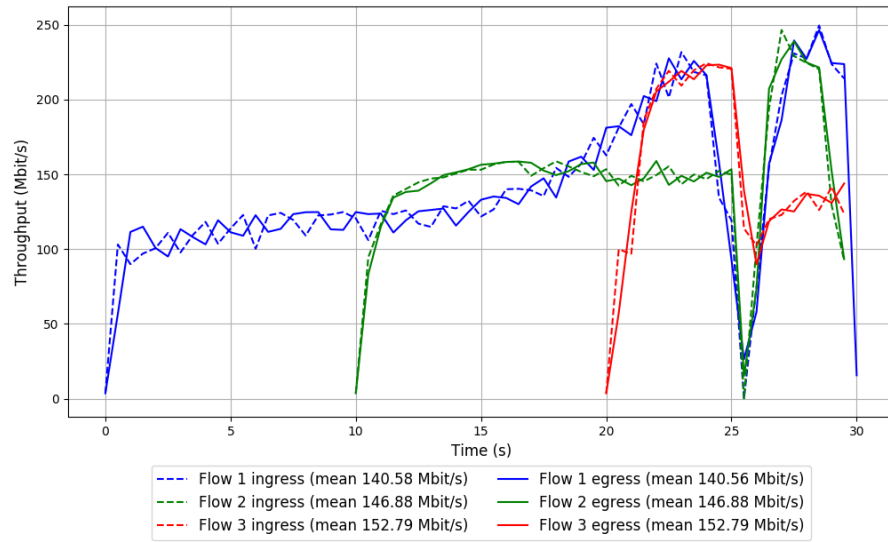
-- Flow 3:

Average throughput: 152.79 Mbit/s

95th percentile per-packet one-way delay: 59.644 ms

Loss rate: 0.00%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-02-17 14:44:41

End at: 2018-02-17 14:45:11

Below is generated by plot.py at 2018-02-17 18:23:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 259.17 Mbit/s

95th percentile per-packet one-way delay: 60.298 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 223.59 Mbit/s

95th percentile per-packet one-way delay: 60.399 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 51.21 Mbit/s

95th percentile per-packet one-way delay: 59.144 ms

Loss rate: 0.01%

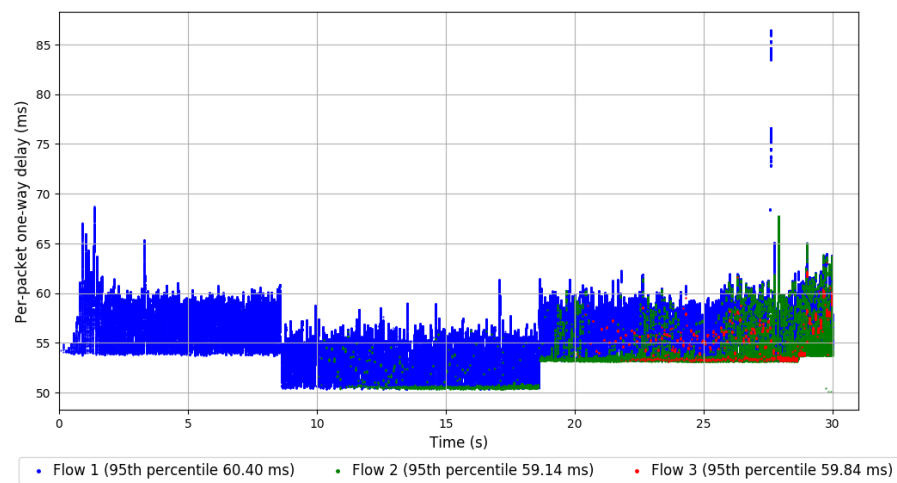
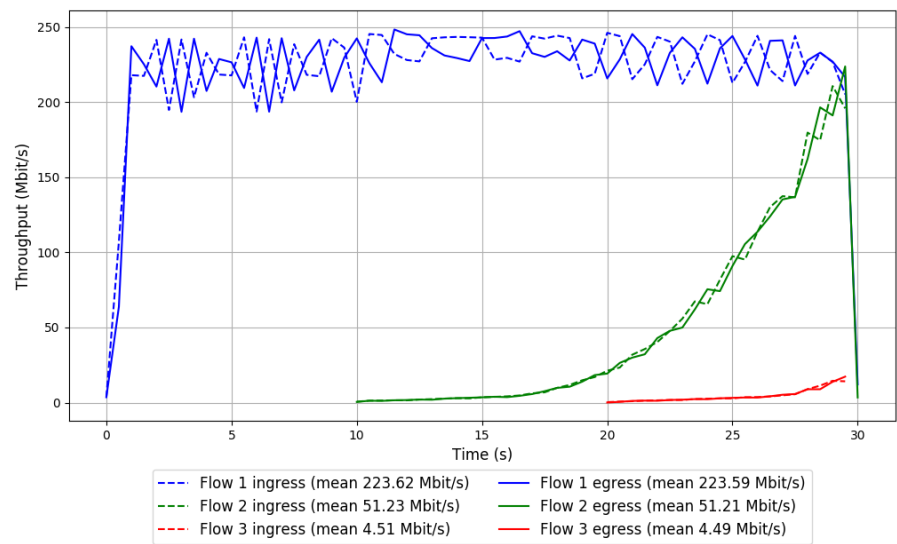
-- Flow 3:

Average throughput: 4.49 Mbit/s

95th percentile per-packet one-way delay: 59.839 ms

Loss rate: 0.27%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-02-17 15:02:30

End at: 2018-02-17 15:03:00

Below is generated by plot.py at 2018-02-17 18:24:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 317.30 Mbit/s

95th percentile per-packet one-way delay: 60.887 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 154.57 Mbit/s

95th percentile per-packet one-way delay: 60.702 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 142.41 Mbit/s

95th percentile per-packet one-way delay: 61.868 ms

Loss rate: 0.00%

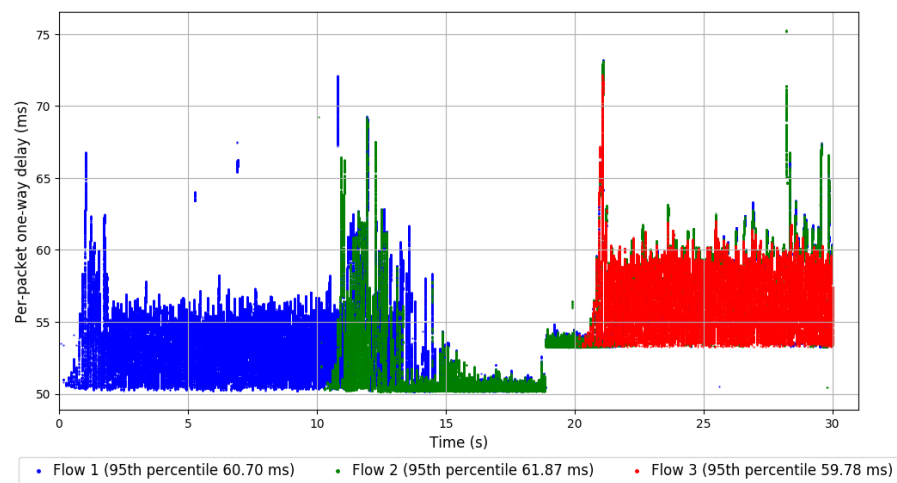
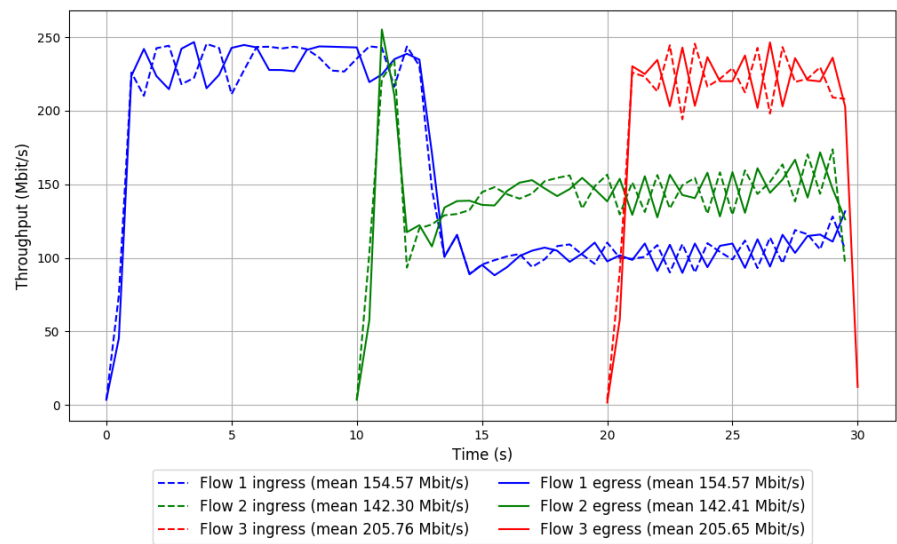
-- Flow 3:

Average throughput: 205.65 Mbit/s

95th percentile per-packet one-way delay: 59.785 ms

Loss rate: 0.02%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-02-17 15:20:15

End at: 2018-02-17 15:20:45

Below is generated by plot.py at 2018-02-17 18:24:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 307.29 Mbit/s

95th percentile per-packet one-way delay: 59.862 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 182.35 Mbit/s

95th percentile per-packet one-way delay: 60.381 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 119.33 Mbit/s

95th percentile per-packet one-way delay: 57.139 ms

Loss rate: 0.00%

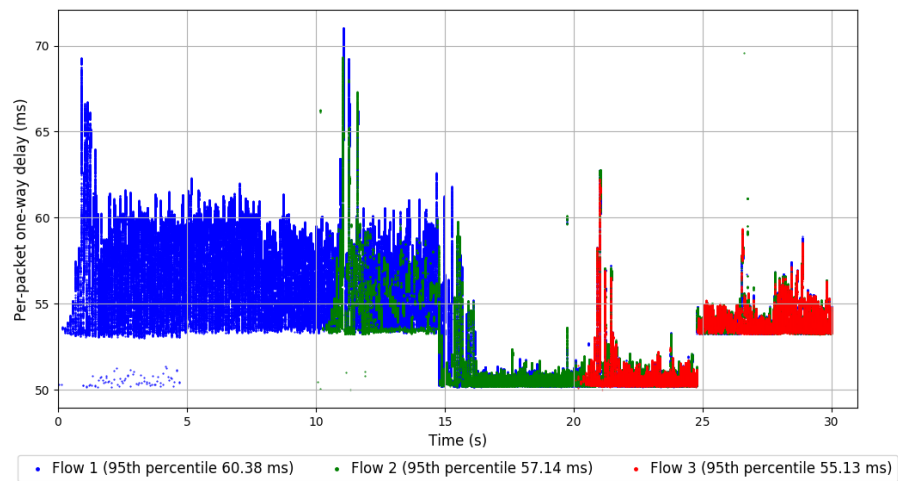
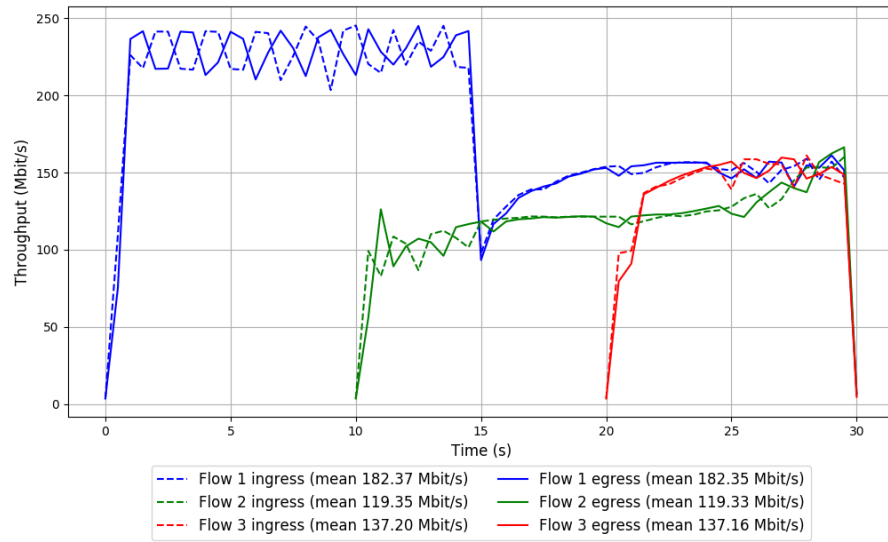
-- Flow 3:

Average throughput: 137.16 Mbit/s

95th percentile per-packet one-way delay: 55.127 ms

Loss rate: 0.00%

Run 10: Report of TCP Cubic — Data Link

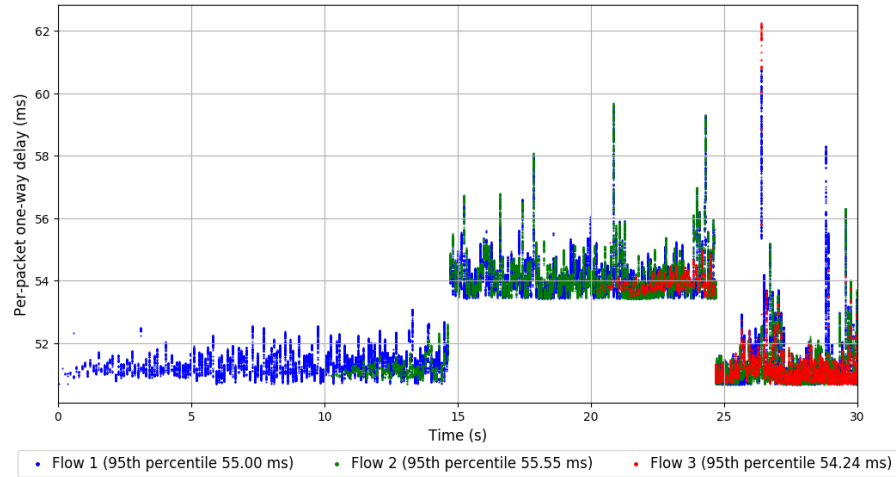
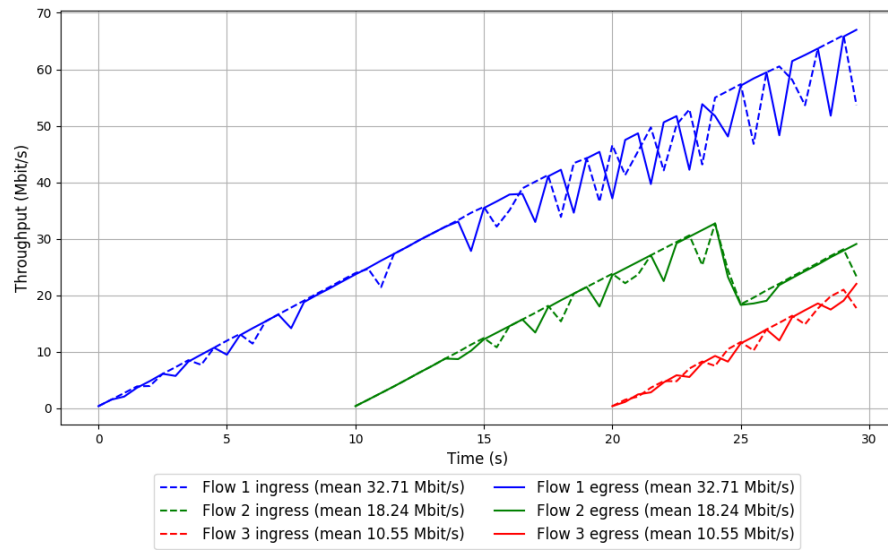


```
Run 1: Statistics of LEDBAT

Start at: 2018-02-17 12:31:35
End at: 2018-02-17 12:32:05

# Below is generated by plot.py at 2018-02-17 18:24:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.34 Mbit/s
95th percentile per-packet one-way delay: 55.089 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 32.71 Mbit/s
95th percentile per-packet one-way delay: 55.003 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 18.24 Mbit/s
95th percentile per-packet one-way delay: 55.546 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.55 Mbit/s
95th percentile per-packet one-way delay: 54.236 ms
Loss rate: 0.00%
```


Run 1: Report of LEDBAT — Data Link

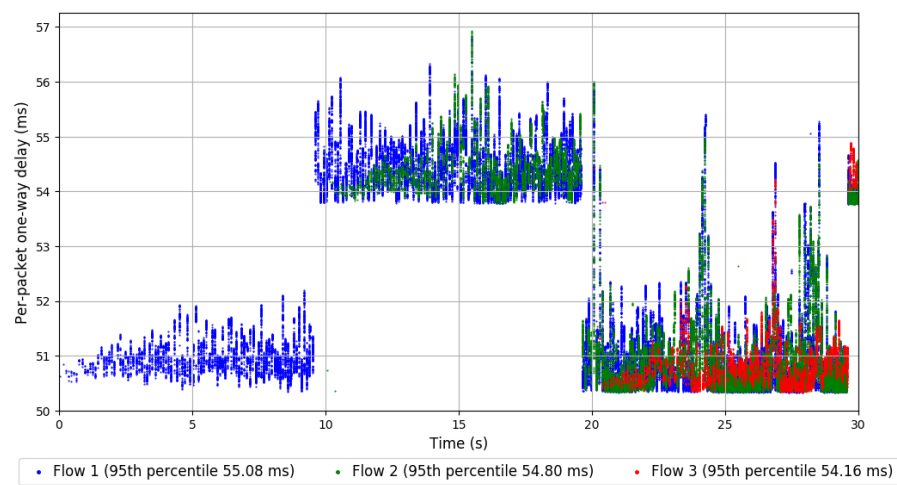
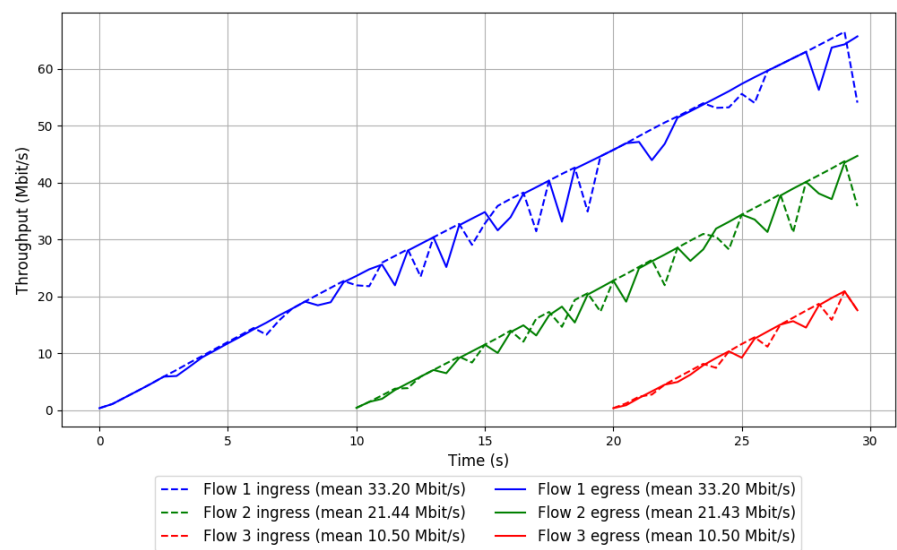


```
Run 2: Statistics of LEDBAT

Start at: 2018-02-17 12:49:00
End at: 2018-02-17 12:49:30

# Below is generated by plot.py at 2018-02-17 18:24:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.89 Mbit/s
95th percentile per-packet one-way delay: 55.004 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 33.20 Mbit/s
95th percentile per-packet one-way delay: 55.081 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.43 Mbit/s
95th percentile per-packet one-way delay: 54.799 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.50 Mbit/s
95th percentile per-packet one-way delay: 54.165 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-02-17 13:06:46

End at: 2018-02-17 13:07:17

Below is generated by plot.py at 2018-02-17 18:24:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 50.22 Mbit/s

95th percentile per-packet one-way delay: 55.325 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 32.11 Mbit/s

95th percentile per-packet one-way delay: 55.261 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 22.12 Mbit/s

95th percentile per-packet one-way delay: 55.542 ms

Loss rate: 0.00%

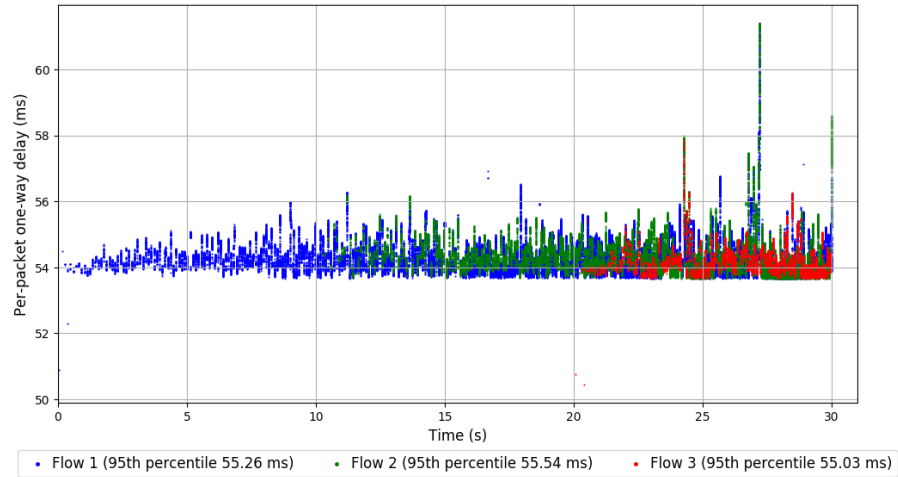
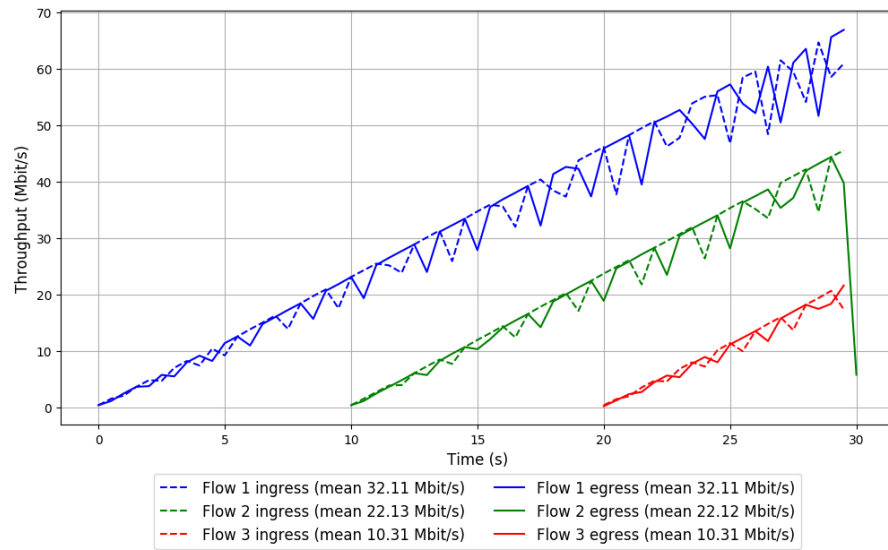
-- Flow 3:

Average throughput: 10.31 Mbit/s

95th percentile per-packet one-way delay: 55.028 ms

Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-02-17 13:25:39

End at: 2018-02-17 13:26:09

Below is generated by plot.py at 2018-02-17 18:24:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.04 Mbit/s

95th percentile per-packet one-way delay: 56.359 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 32.89 Mbit/s

95th percentile per-packet one-way delay: 56.483 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 18.75 Mbit/s

95th percentile per-packet one-way delay: 56.099 ms

Loss rate: 0.00%

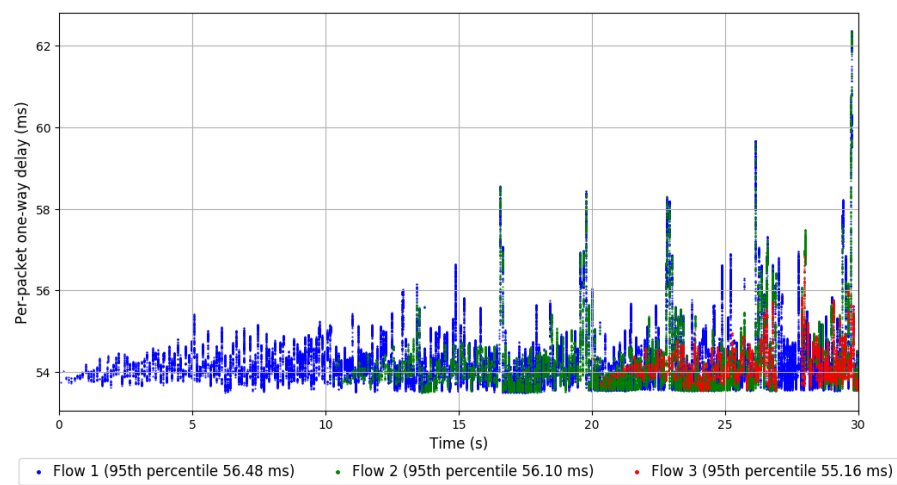
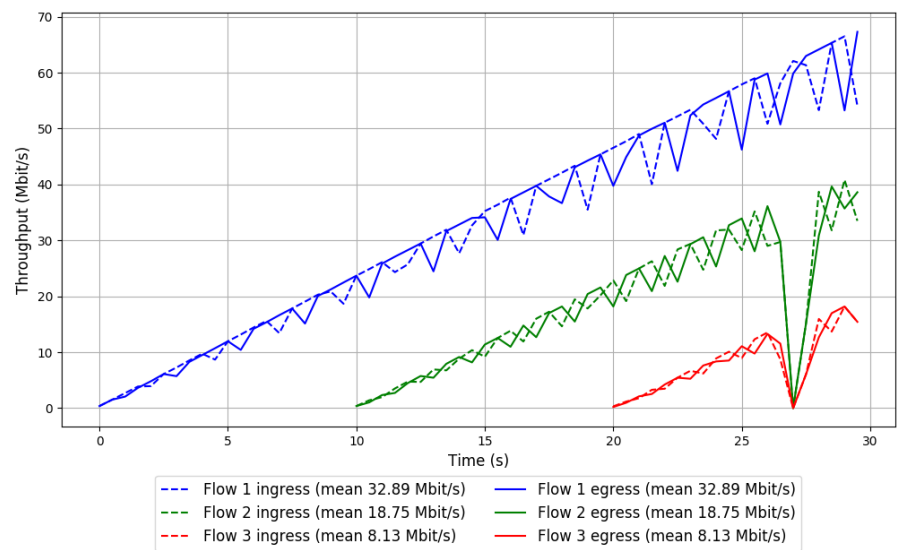
-- Flow 3:

Average throughput: 8.13 Mbit/s

95th percentile per-packet one-way delay: 55.159 ms

Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-02-17 13:43:37

End at: 2018-02-17 13:44:07

Below is generated by plot.py at 2018-02-17 18:24:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 47.84 Mbit/s

95th percentile per-packet one-way delay: 55.244 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 30.84 Mbit/s

95th percentile per-packet one-way delay: 55.125 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 20.41 Mbit/s

95th percentile per-packet one-way delay: 55.678 ms

Loss rate: 0.00%

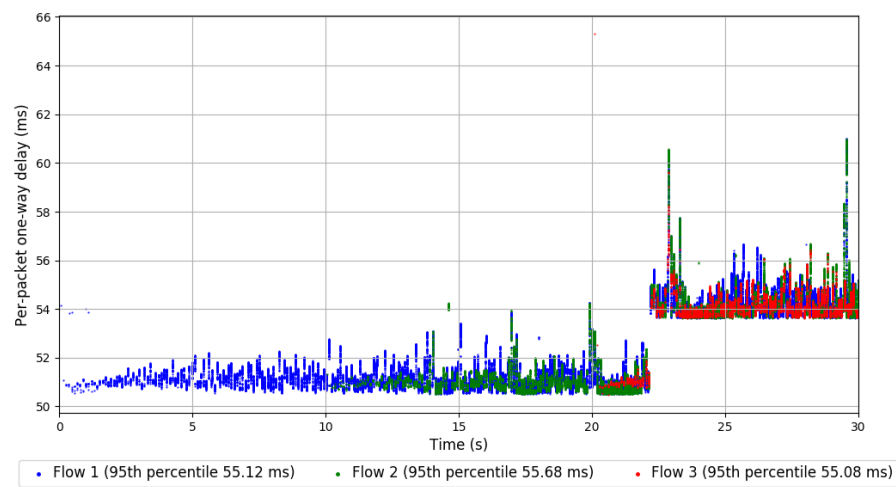
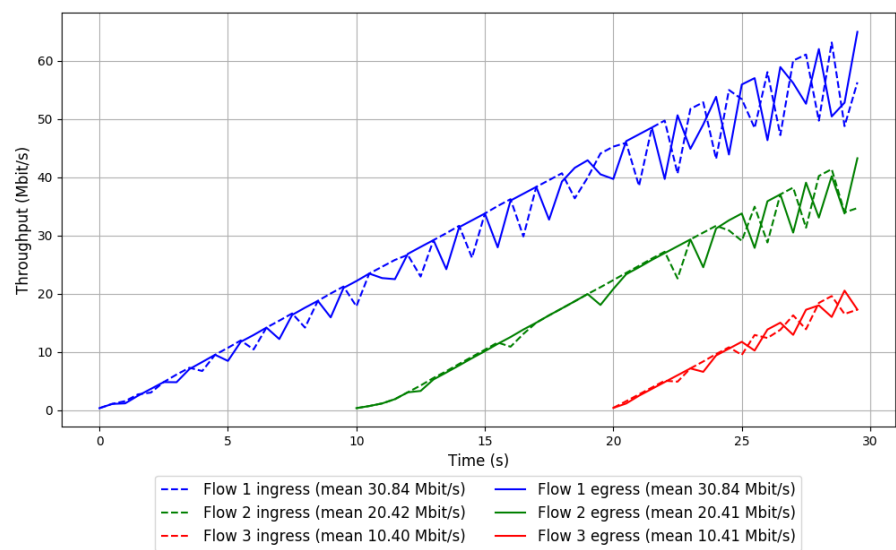
-- Flow 3:

Average throughput: 10.41 Mbit/s

95th percentile per-packet one-way delay: 55.084 ms

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-02-17 14:01:17

End at: 2018-02-17 14:01:47

Below is generated by plot.py at 2018-02-17 18:24:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.66 Mbit/s

95th percentile per-packet one-way delay: 55.916 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 32.66 Mbit/s

95th percentile per-packet one-way delay: 55.938 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 19.03 Mbit/s

95th percentile per-packet one-way delay: 55.833 ms

Loss rate: 0.00%

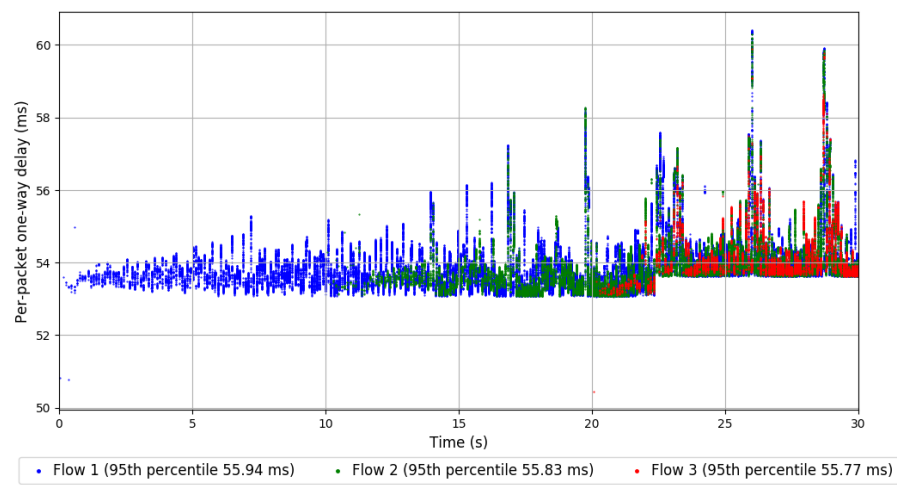
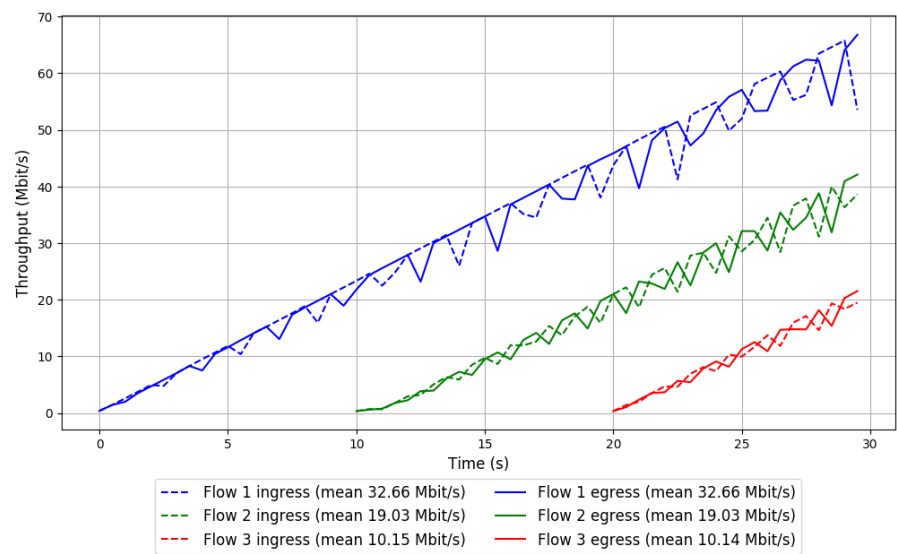
-- Flow 3:

Average throughput: 10.14 Mbit/s

95th percentile per-packet one-way delay: 55.772 ms

Loss rate: 0.00%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-02-17 14:19:05

End at: 2018-02-17 14:19:35

Below is generated by plot.py at 2018-02-17 18:24:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 44.27 Mbit/s

95th percentile per-packet one-way delay: 55.193 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 26.81 Mbit/s

95th percentile per-packet one-way delay: 55.308 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 21.06 Mbit/s

95th percentile per-packet one-way delay: 55.049 ms

Loss rate: 0.00%

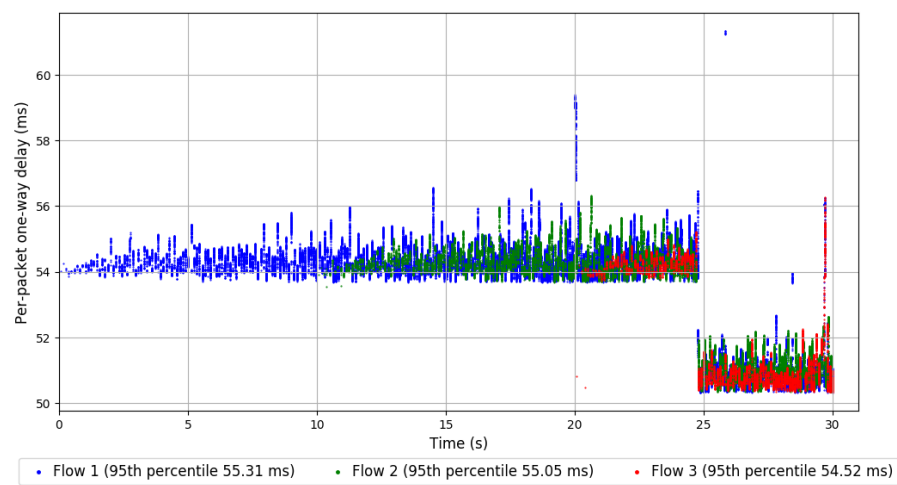
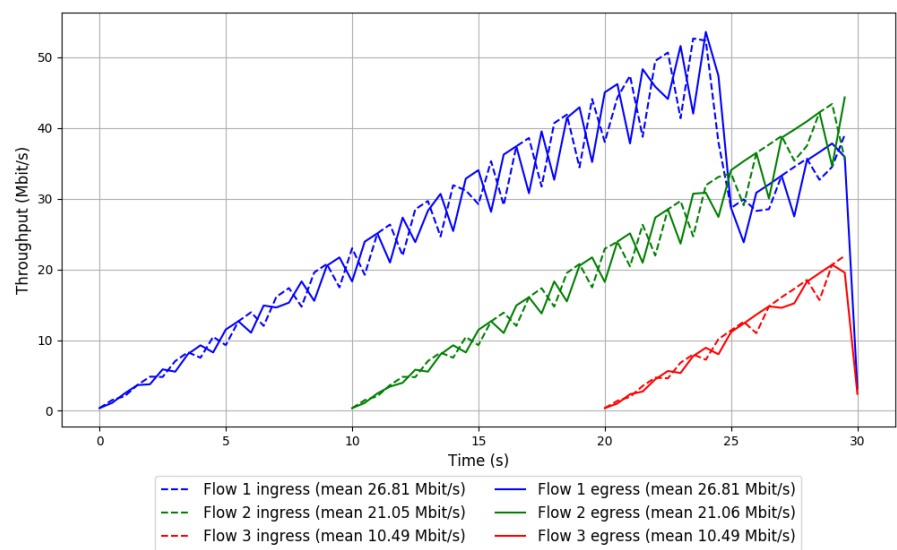
-- Flow 3:

Average throughput: 10.49 Mbit/s

95th percentile per-packet one-way delay: 54.517 ms

Loss rate: 0.00%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-02-17 14:37:28

End at: 2018-02-17 14:37:58

Below is generated by plot.py at 2018-02-17 18:24:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 47.94 Mbit/s

95th percentile per-packet one-way delay: 55.883 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 30.18 Mbit/s

95th percentile per-packet one-way delay: 55.724 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 21.21 Mbit/s

95th percentile per-packet one-way delay: 56.271 ms

Loss rate: 0.00%

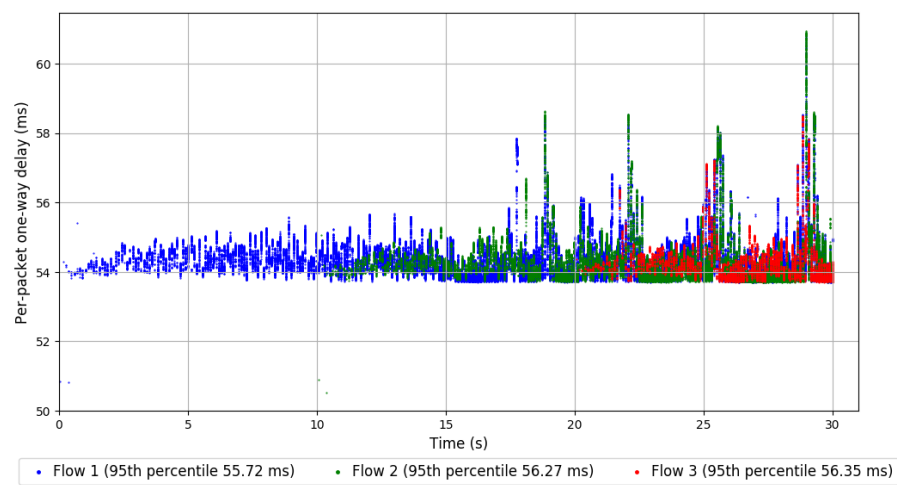
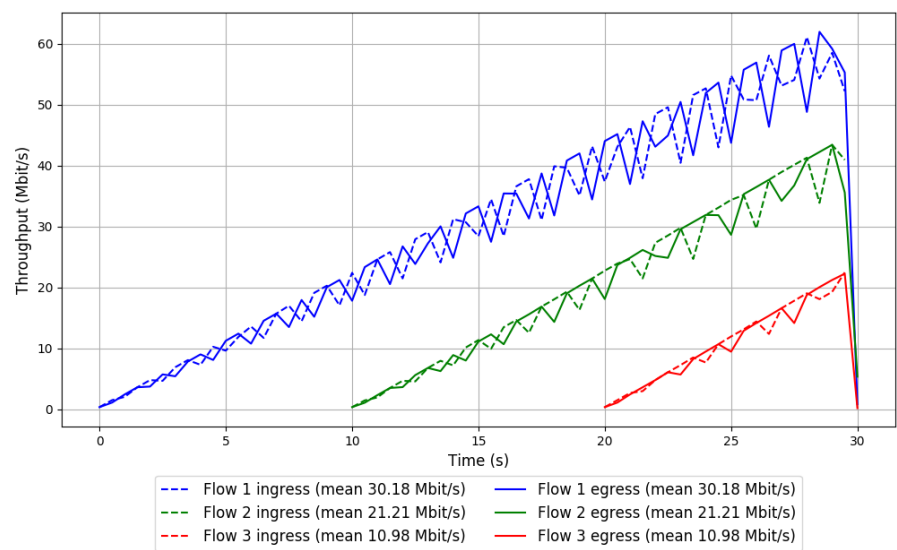
-- Flow 3:

Average throughput: 10.98 Mbit/s

95th percentile per-packet one-way delay: 56.350 ms

Loss rate: 0.00%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-02-17 14:55:07

End at: 2018-02-17 14:55:37

Below is generated by plot.py at 2018-02-17 18:24:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 44.08 Mbit/s

95th percentile per-packet one-way delay: 54.443 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 27.03 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 20.96 Mbit/s

95th percentile per-packet one-way delay: 54.172 ms

Loss rate: 0.00%

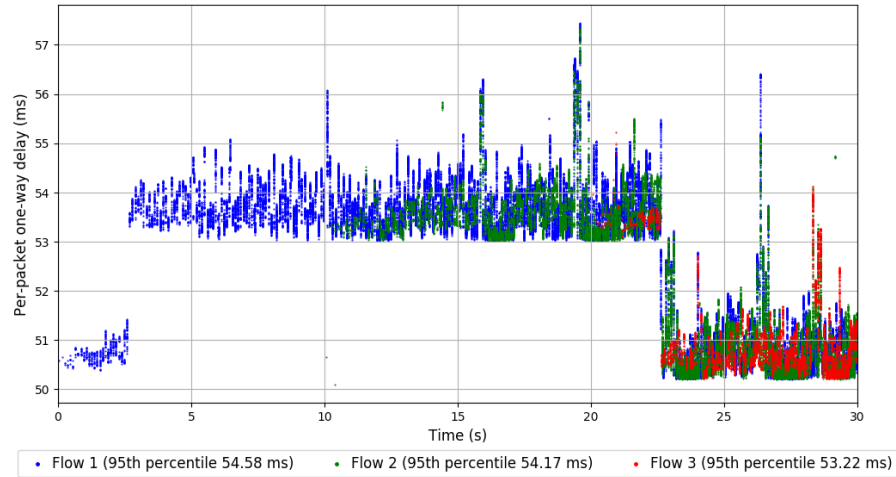
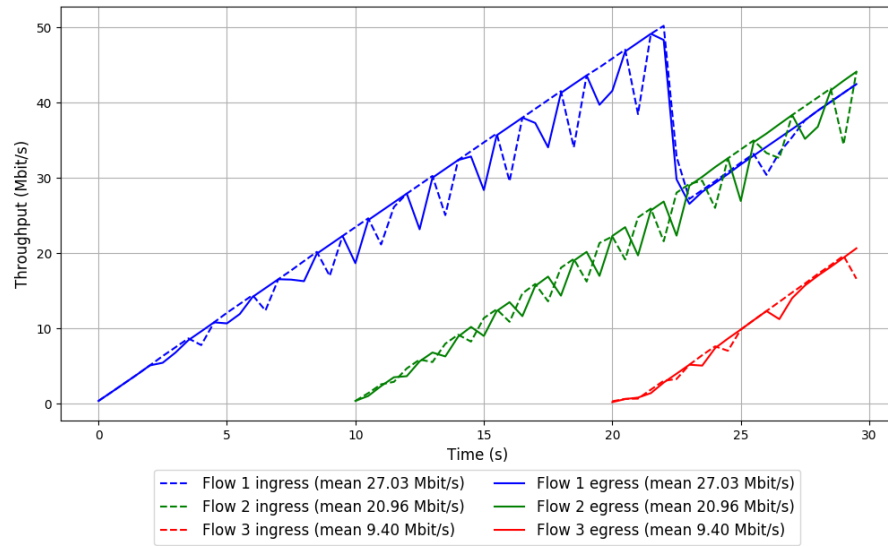
-- Flow 3:

Average throughput: 9.40 Mbit/s

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

Loss rate: 0.00%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2018-02-17 15:13:03

End at: 2018-02-17 15:13:33

Below is generated by plot.py at 2018-02-17 18:24:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.82 Mbit/s

95th percentile per-packet one-way delay: 51.855 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 30.37 Mbit/s

95th percentile per-packet one-way delay: 51.937 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 22.33 Mbit/s

95th percentile per-packet one-way delay: 51.775 ms

Loss rate: 0.00%

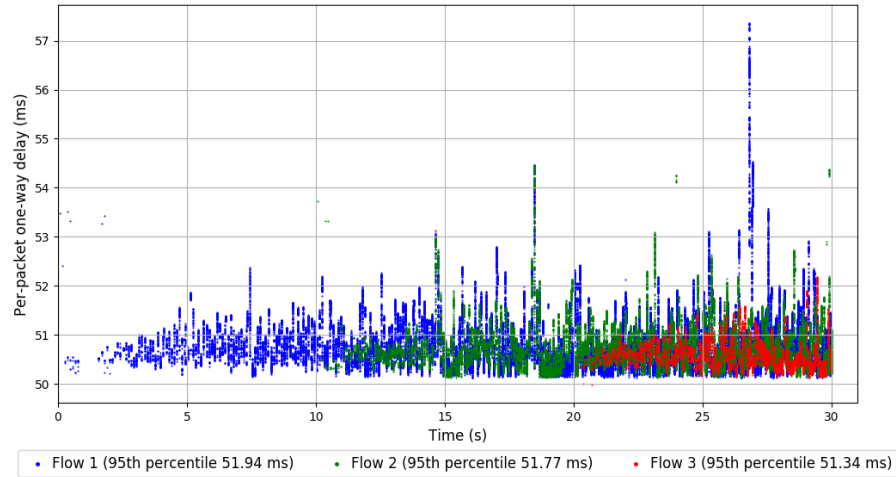
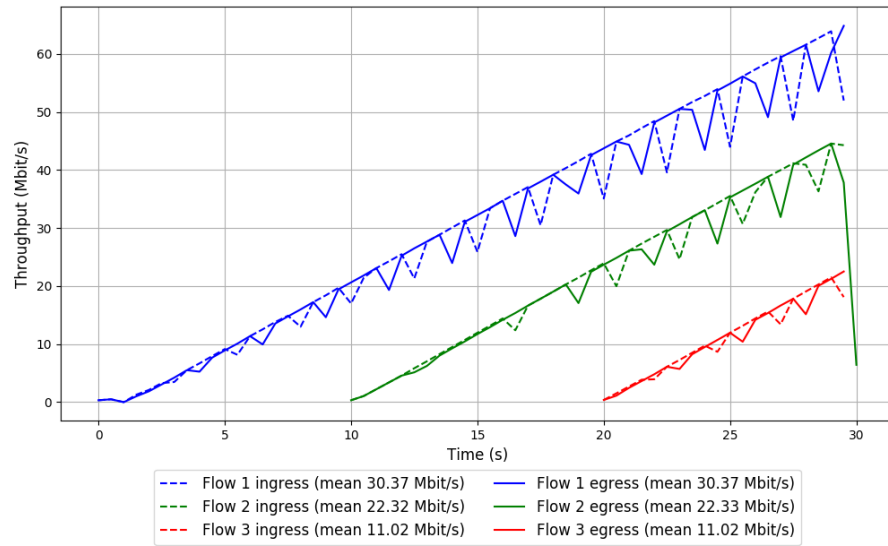
-- Flow 3:

Average throughput: 11.02 Mbit/s

95th percentile per-packet one-way delay: 51.340 ms

Loss rate: 0.00%

Run 10: Report of LEDBAT — Data Link

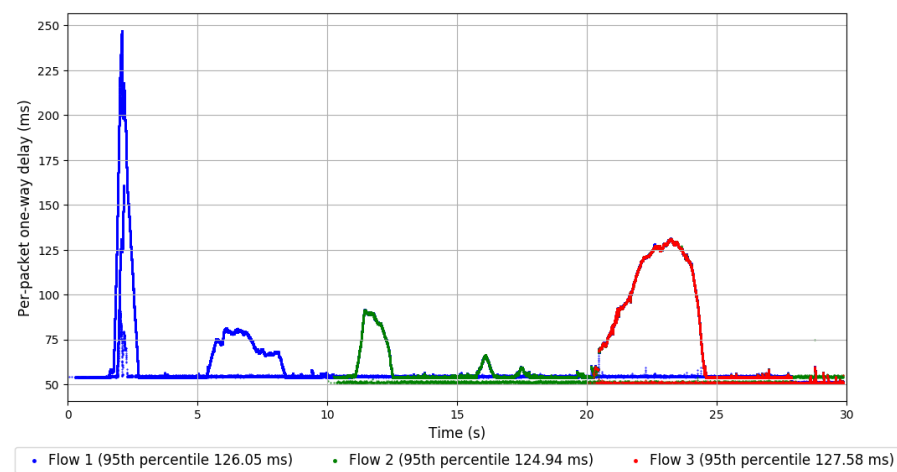
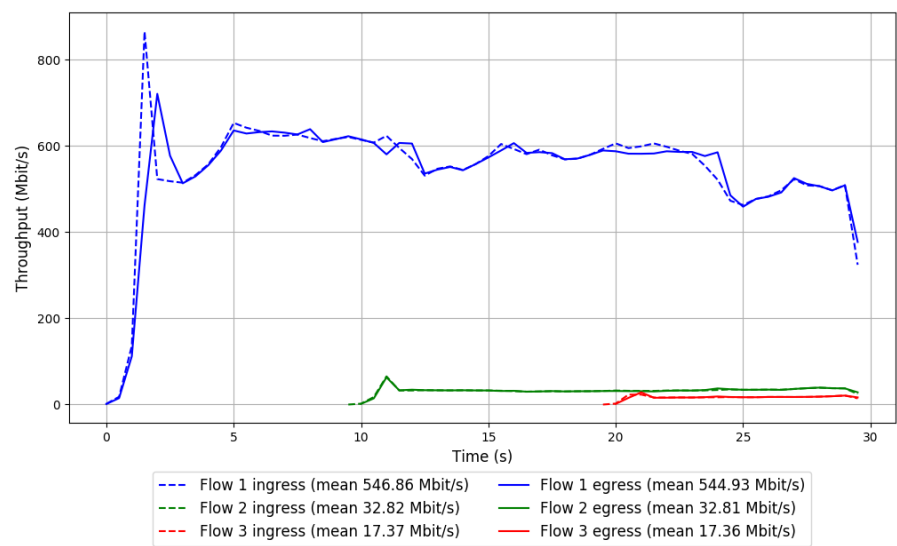


```
Run 1: Statistics of PCC

Start at: 2018-02-17 12:40:21
End at: 2018-02-17 12:40:51

# Below is generated by plot.py at 2018-02-17 18:32:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 572.44 Mbit/s
95th percentile per-packet one-way delay: 126.040 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 544.93 Mbit/s
95th percentile per-packet one-way delay: 126.048 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 32.81 Mbit/s
95th percentile per-packet one-way delay: 124.942 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.36 Mbit/s
95th percentile per-packet one-way delay: 127.579 ms
Loss rate: 0.00%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2018-02-17 12:57:59

End at: 2018-02-17 12:58:29

Below is generated by plot.py at 2018-02-17 18:32:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 586.25 Mbit/s

95th percentile per-packet one-way delay: 202.257 ms

Loss rate: 3.38%

-- Flow 1:

Average throughput: 466.26 Mbit/s

95th percentile per-packet one-way delay: 214.274 ms

Loss rate: 3.65%

-- Flow 2:

Average throughput: 120.49 Mbit/s

95th percentile per-packet one-way delay: 170.375 ms

Loss rate: 3.44%

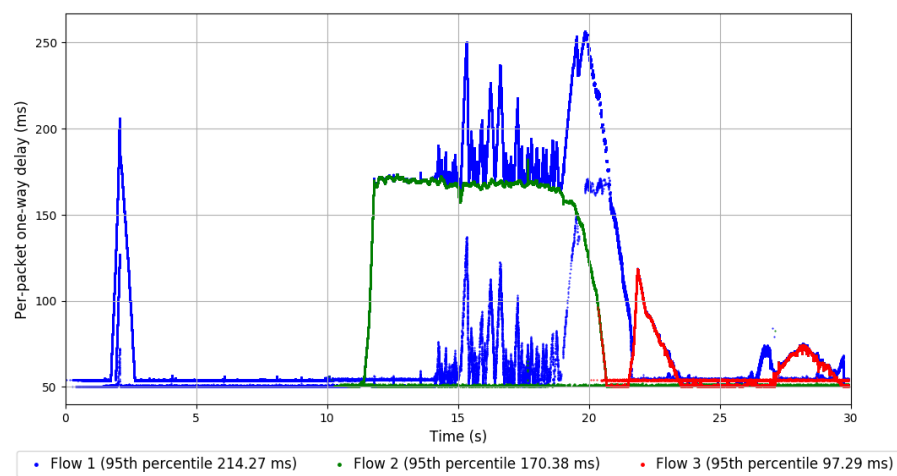
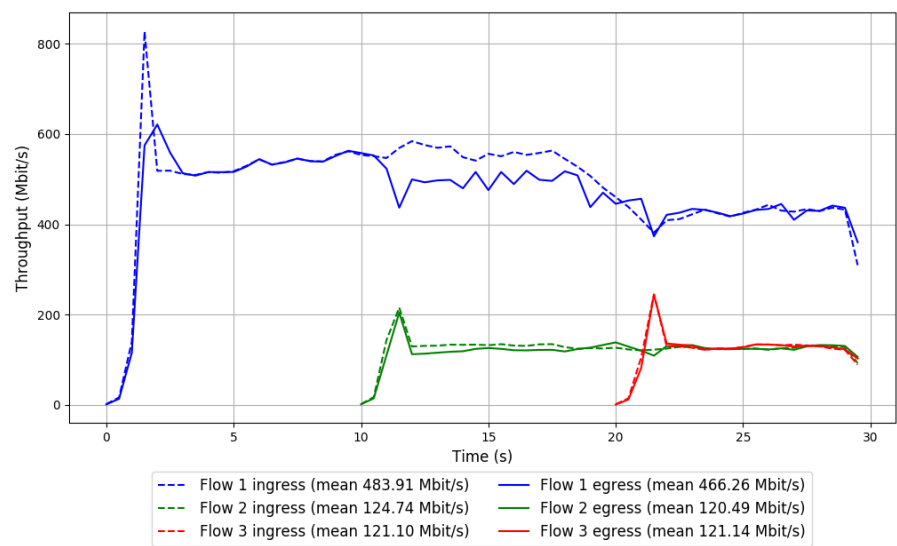
-- Flow 3:

Average throughput: 121.14 Mbit/s

95th percentile per-packet one-way delay: 97.286 ms

Loss rate: 0.00%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-02-17 13:16:25

End at: 2018-02-17 13:16:55

Below is generated by plot.py at 2018-02-17 18:32:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 512.58 Mbit/s

95th percentile per-packet one-way delay: 207.715 ms

Loss rate: 5.64%

-- Flow 1:

Average throughput: 474.56 Mbit/s

95th percentile per-packet one-way delay: 207.476 ms

Loss rate: 5.58%

-- Flow 2:

Average throughput: 56.23 Mbit/s

95th percentile per-packet one-way delay: 209.505 ms

Loss rate: 6.27%

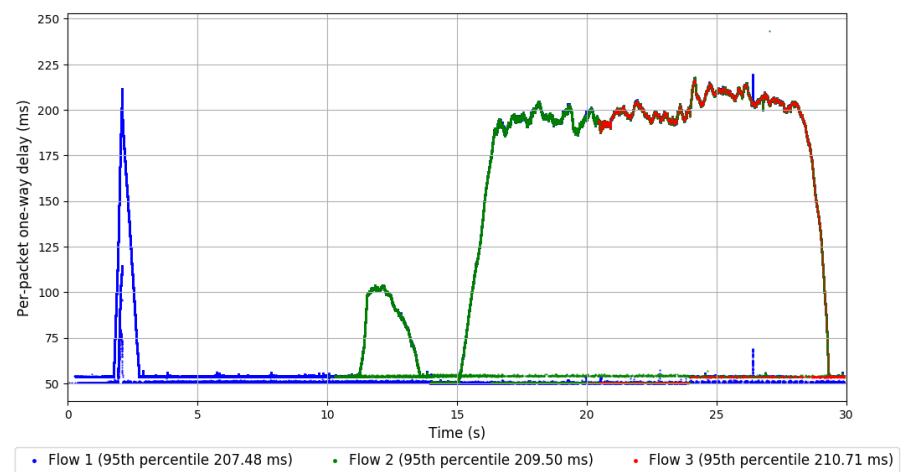
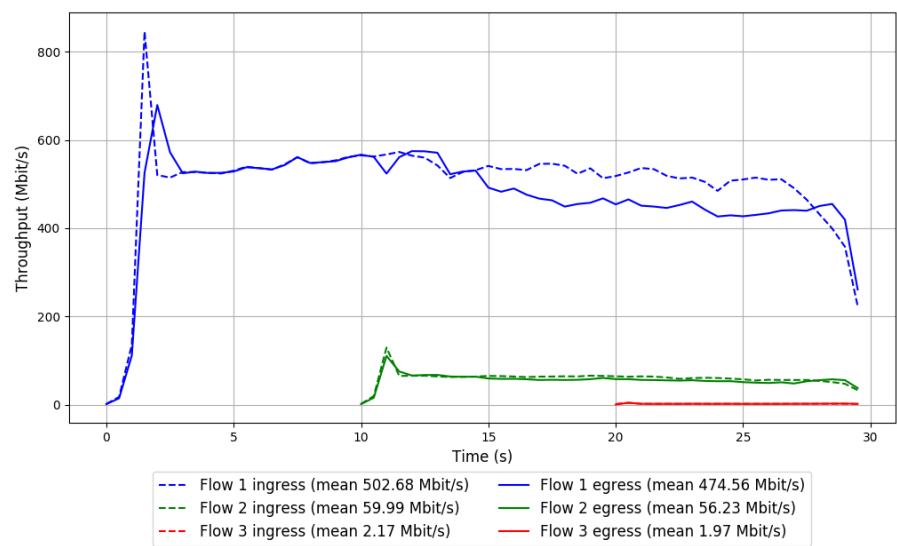
-- Flow 3:

Average throughput: 1.97 Mbit/s

95th percentile per-packet one-way delay: 210.710 ms

Loss rate: 9.02%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-02-17 13:34:50

End at: 2018-02-17 13:35:20

Below is generated by plot.py at 2018-02-17 18:32:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 494.93 Mbit/s

95th percentile per-packet one-way delay: 202.737 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 491.17 Mbit/s

95th percentile per-packet one-way delay: 202.699 ms

Loss rate: 1.30%

-- Flow 2:

Average throughput: 4.62 Mbit/s

95th percentile per-packet one-way delay: 203.032 ms

Loss rate: 1.52%

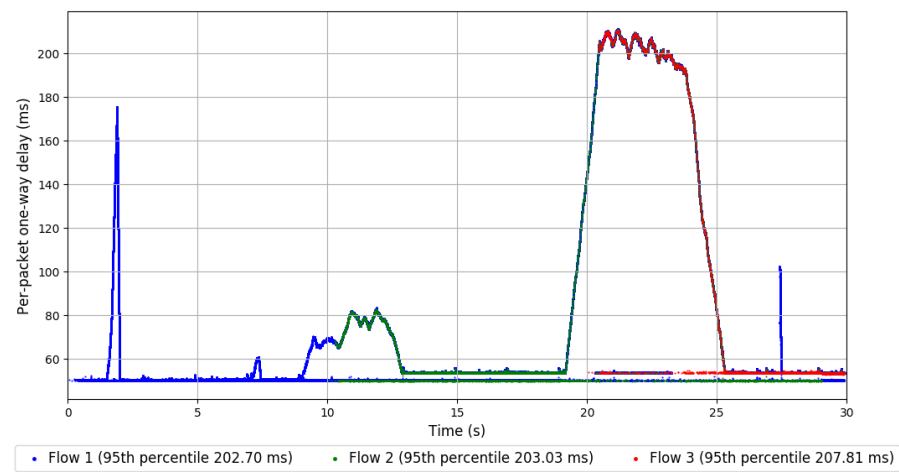
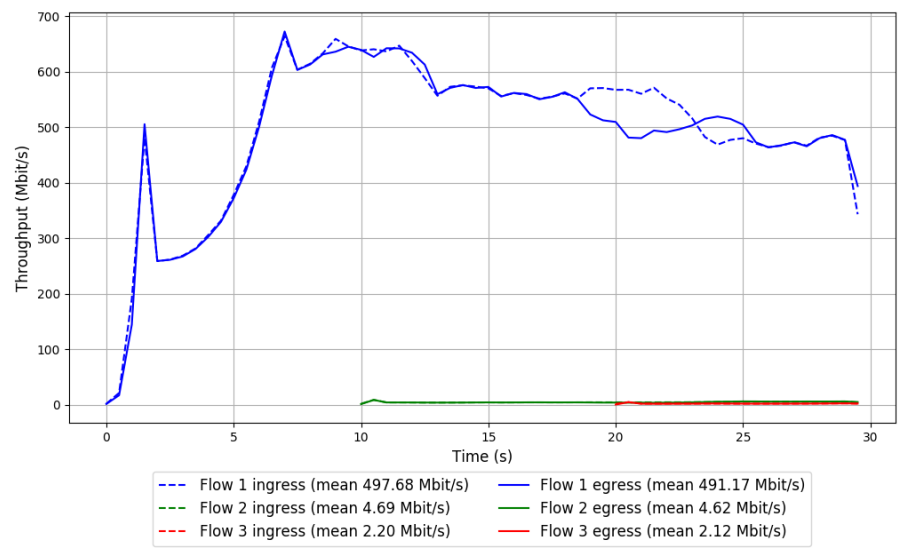
-- Flow 3:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 207.809 ms

Loss rate: 3.71%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-02-17 13:52:31

End at: 2018-02-17 13:53:01

Below is generated by plot.py at 2018-02-17 18:32:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 534.57 Mbit/s

95th percentile per-packet one-way delay: 213.984 ms

Loss rate: 6.58%

-- Flow 1:

Average throughput: 495.66 Mbit/s

95th percentile per-packet one-way delay: 213.839 ms

Loss rate: 6.51%

-- Flow 2:

Average throughput: 59.58 Mbit/s

95th percentile per-packet one-way delay: 214.895 ms

Loss rate: 7.42%

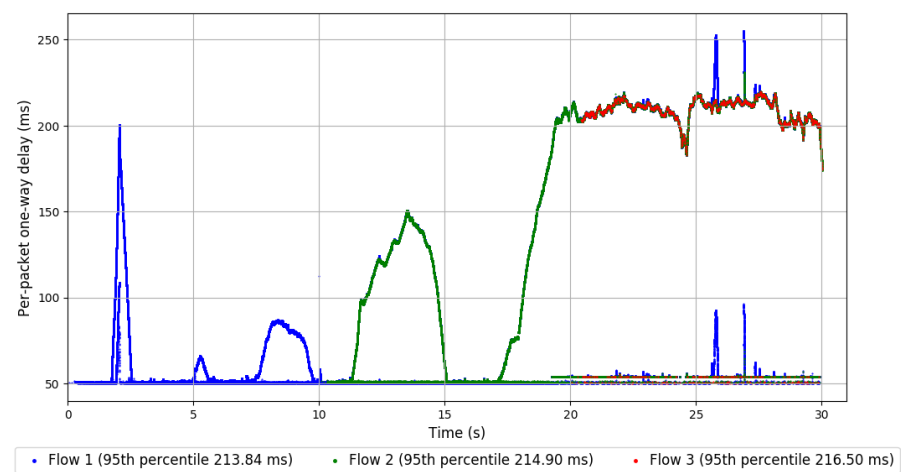
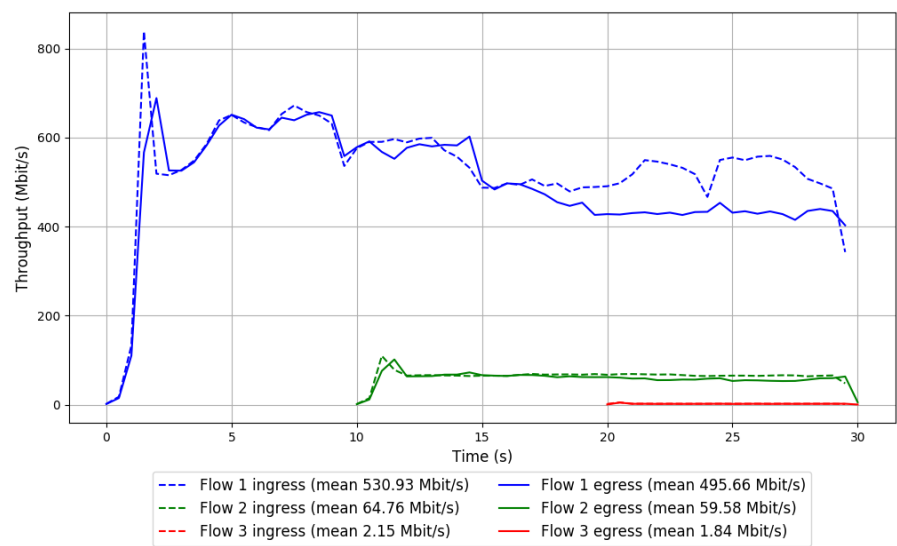
-- Flow 3:

Average throughput: 1.84 Mbit/s

95th percentile per-packet one-way delay: 216.504 ms

Loss rate: 13.23%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-02-17 14:10:21

End at: 2018-02-17 14:10:51

Below is generated by plot.py at 2018-02-17 18:32:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 514.38 Mbit/s

95th percentile per-packet one-way delay: 167.591 ms

Loss rate: 0.23%

-- Flow 1:

Average throughput: 419.07 Mbit/s

95th percentile per-packet one-way delay: 167.609 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 126.62 Mbit/s

95th percentile per-packet one-way delay: 167.713 ms

Loss rate: 0.21%

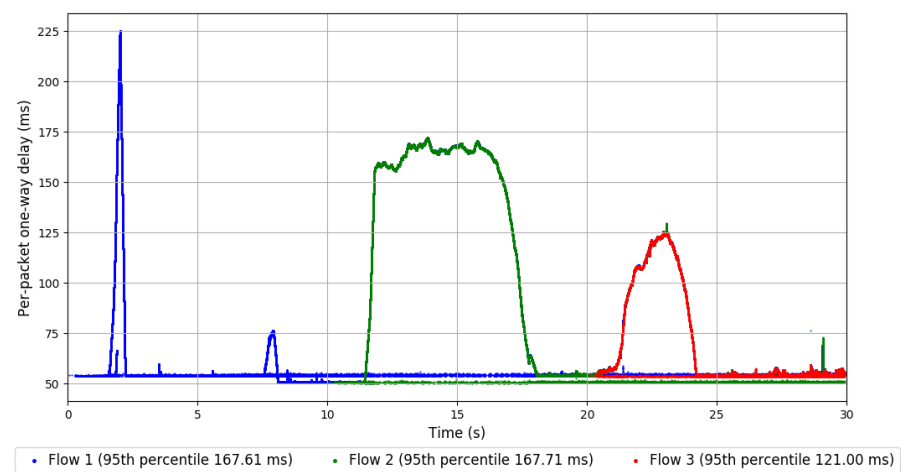
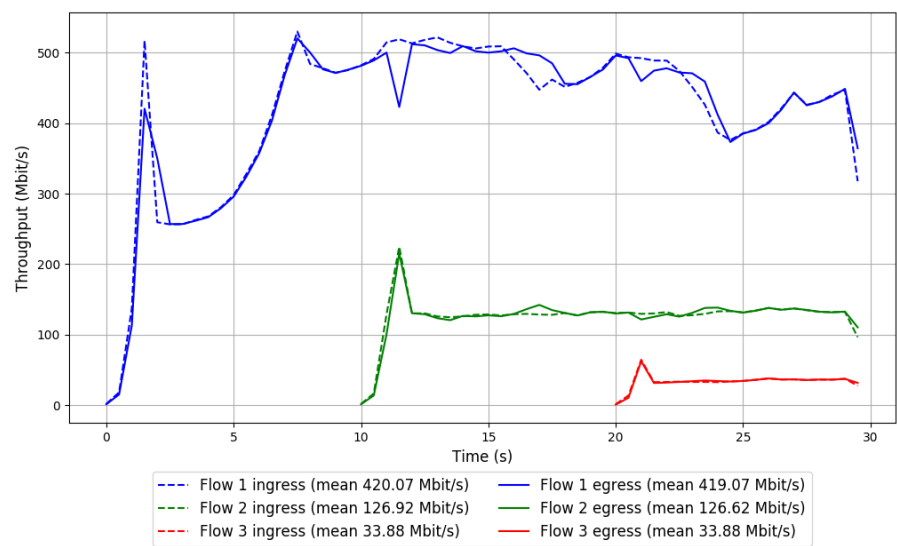
-- Flow 3:

Average throughput: 33.88 Mbit/s

95th percentile per-packet one-way delay: 121.002 ms

Loss rate: 0.00%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-02-17 14:28:47

End at: 2018-02-17 14:29:17

Below is generated by plot.py at 2018-02-17 18:33:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 526.97 Mbit/s

95th percentile per-packet one-way delay: 177.510 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 484.67 Mbit/s

95th percentile per-packet one-way delay: 177.475 ms

Loss rate: 1.40%

-- Flow 2:

Average throughput: 61.41 Mbit/s

95th percentile per-packet one-way delay: 178.059 ms

Loss rate: 1.34%

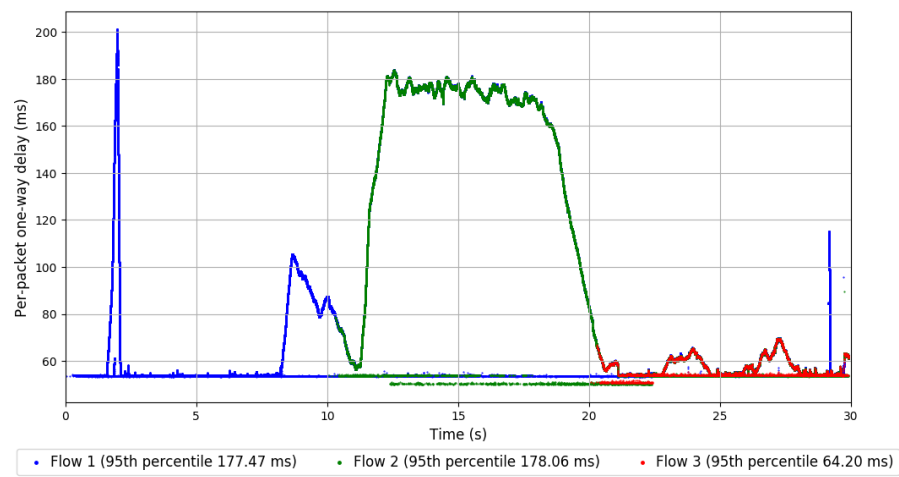
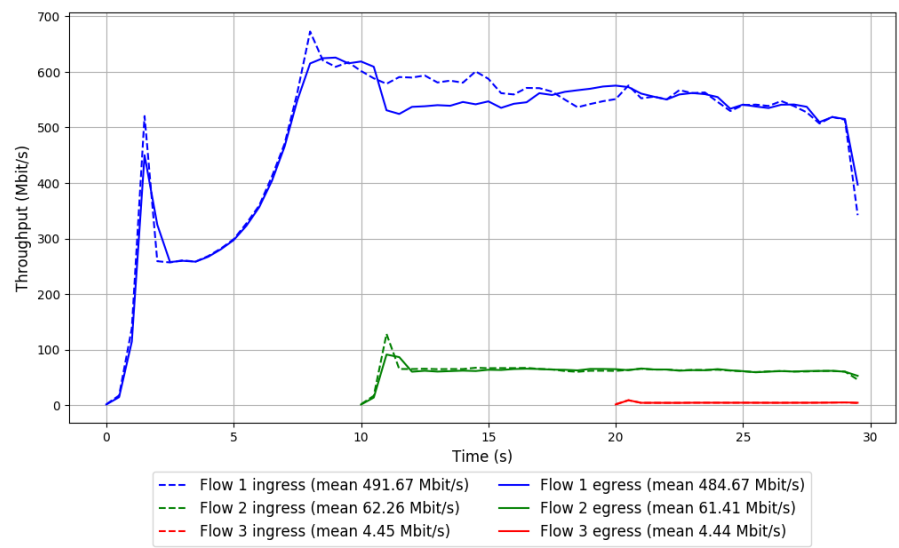
-- Flow 3:

Average throughput: 4.44 Mbit/s

95th percentile per-packet one-way delay: 64.204 ms

Loss rate: 0.00%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-02-17 14:46:16

End at: 2018-02-17 14:46:46

Below is generated by plot.py at 2018-02-17 18:34:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 572.35 Mbit/s

95th percentile per-packet one-way delay: 181.237 ms

Loss rate: 3.14%

-- Flow 1:

Average throughput: 550.94 Mbit/s

95th percentile per-packet one-way delay: 181.224 ms

Loss rate: 3.15%

-- Flow 2:

Average throughput: 29.59 Mbit/s

95th percentile per-packet one-way delay: 181.754 ms

Loss rate: 3.10%

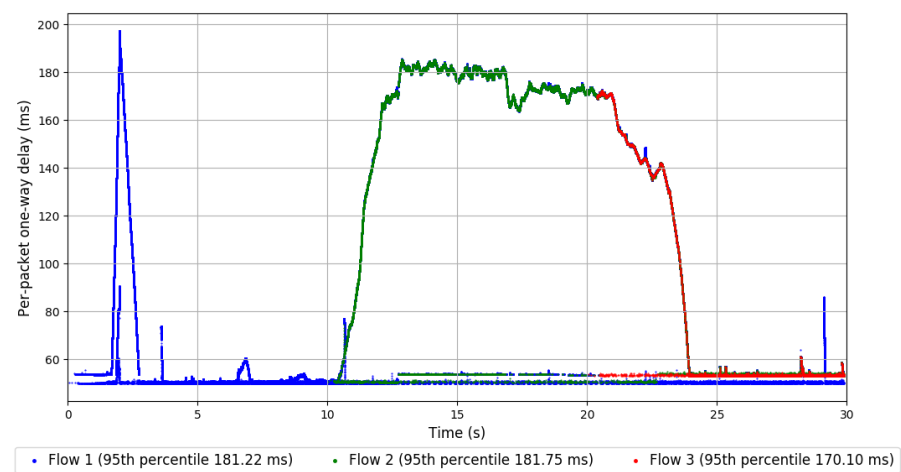
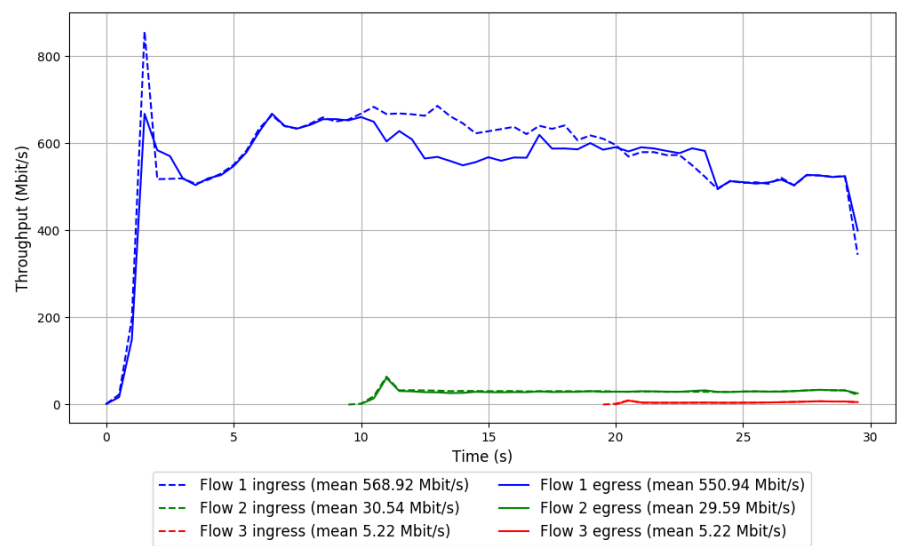
-- Flow 3:

Average throughput: 5.22 Mbit/s

95th percentile per-packet one-way delay: 170.096 ms

Loss rate: 0.00%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-02-17 15:04:21

End at: 2018-02-17 15:04:51

Below is generated by plot.py at 2018-02-17 18:41:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 571.04 Mbit/s

95th percentile per-packet one-way delay: 174.164 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 482.31 Mbit/s

95th percentile per-packet one-way delay: 174.076 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 117.68 Mbit/s

95th percentile per-packet one-way delay: 174.217 ms

Loss rate: 1.40%

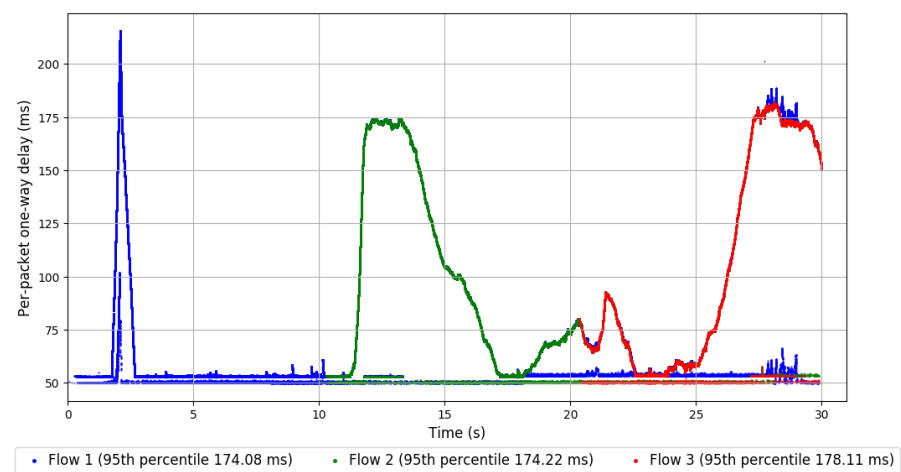
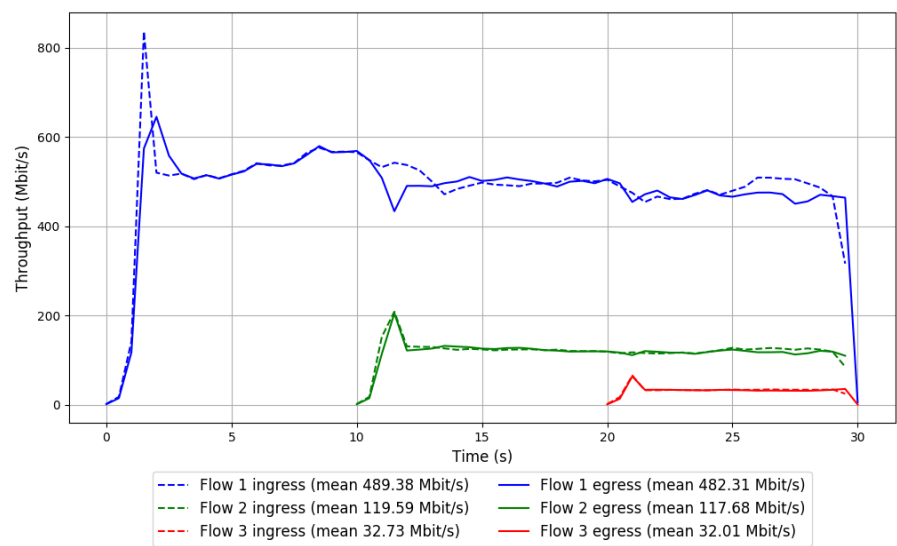
-- Flow 3:

Average throughput: 32.01 Mbit/s

95th percentile per-packet one-way delay: 178.106 ms

Loss rate: 1.23%

Run 9: Report of PCC — Data Link



Run 10: Statistics of PCC

Start at: 2018-02-17 15:21:52

End at: 2018-02-17 15:22:22

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 580.34 Mbit/s

95th percentile per-packet one-way delay: 172.943 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 546.38 Mbit/s

95th percentile per-packet one-way delay: 172.877 ms

Loss rate: 1.35%

-- Flow 2:

Average throughput: 37.63 Mbit/s

95th percentile per-packet one-way delay: 173.328 ms

Loss rate: 0.95%

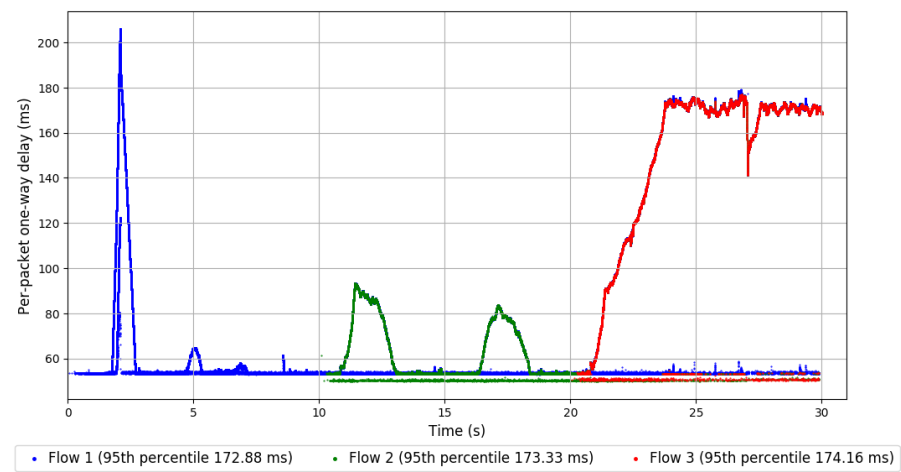
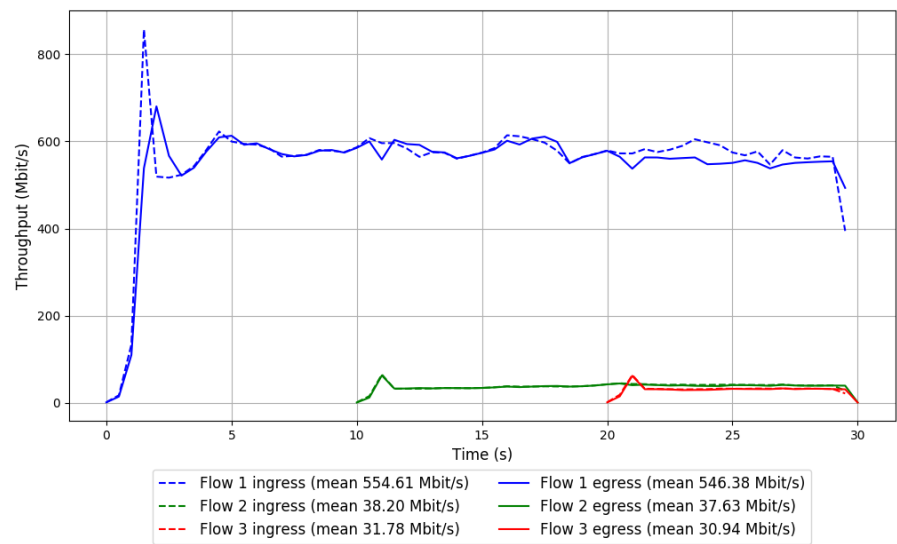
-- Flow 3:

Average throughput: 30.94 Mbit/s

95th percentile per-packet one-way delay: 174.161 ms

Loss rate: 1.48%

Run 10: Report of PCC — Data Link

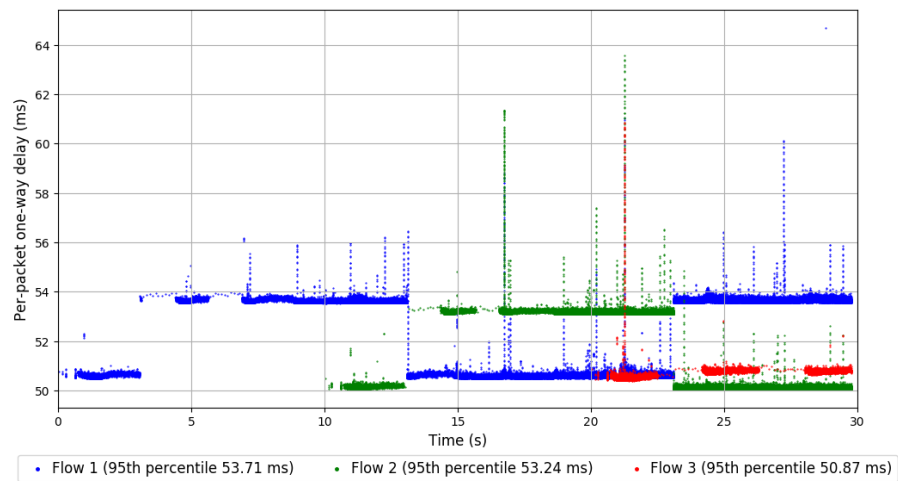
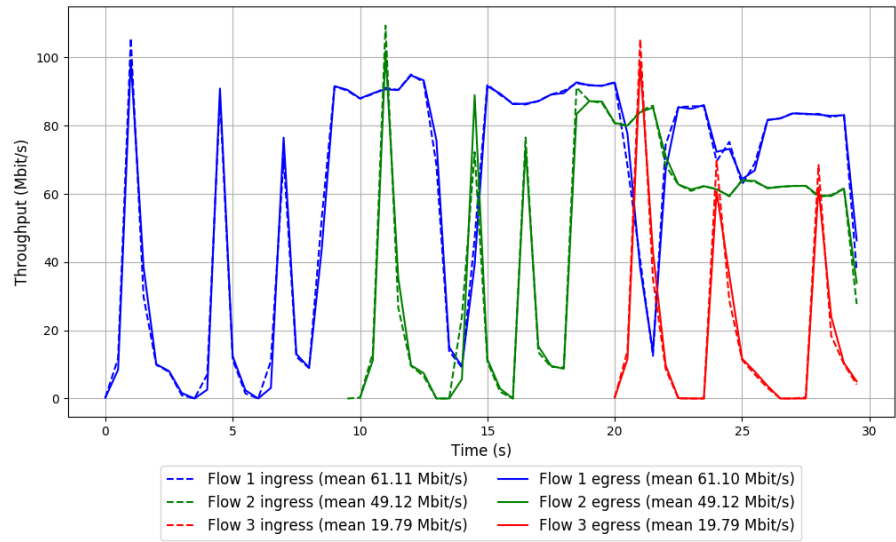


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-02-17 12:44:26
End at: 2018-02-17 12:44:56

# Below is generated by plot.py at 2018-02-17 18:42:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.18 Mbit/s
95th percentile per-packet one-way delay: 53.689 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.10 Mbit/s
95th percentile per-packet one-way delay: 53.714 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.12 Mbit/s
95th percentile per-packet one-way delay: 53.239 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.79 Mbit/s
95th percentile per-packet one-way delay: 50.870 ms
Loss rate: 0.00%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-02-17 13:02:05

End at: 2018-02-17 13:02:35

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.02 Mbit/s

95th percentile per-packet one-way delay: 50.491 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 39.58 Mbit/s

95th percentile per-packet one-way delay: 50.511 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 51.39 Mbit/s

95th percentile per-packet one-way delay: 50.180 ms

Loss rate: 0.00%

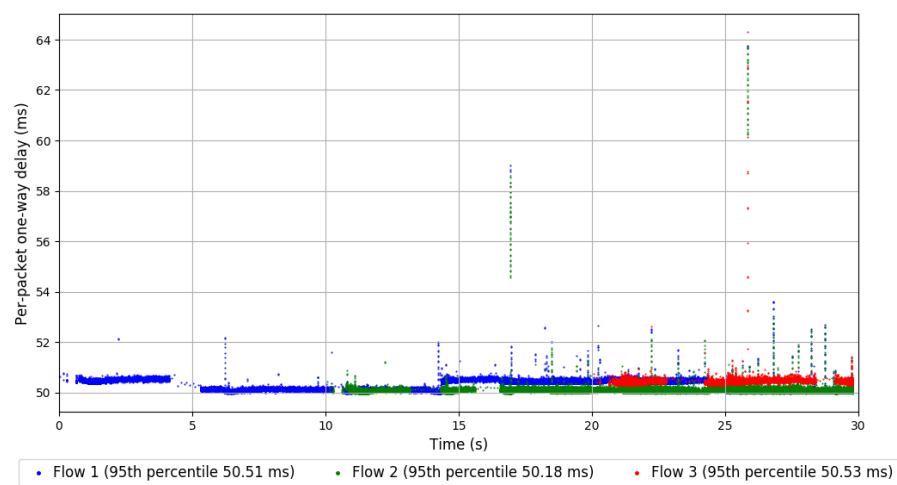
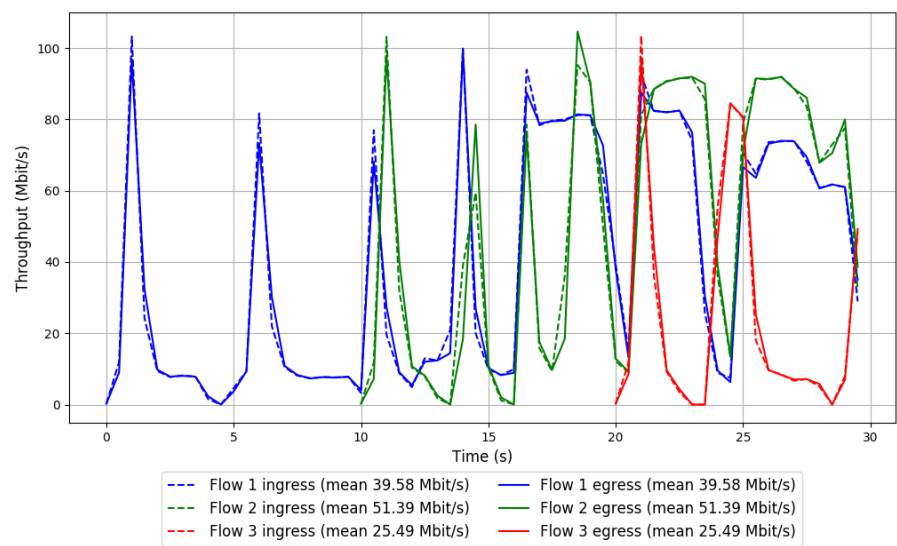
-- Flow 3:

Average throughput: 25.49 Mbit/s

95th percentile per-packet one-way delay: 50.535 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-02-17 13:20:43

End at: 2018-02-17 13:21:13

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.06 Mbit/s

95th percentile per-packet one-way delay: 53.494 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 64.69 Mbit/s

95th percentile per-packet one-way delay: 50.342 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 41.43 Mbit/s

95th percentile per-packet one-way delay: 53.513 ms

Loss rate: 0.00%

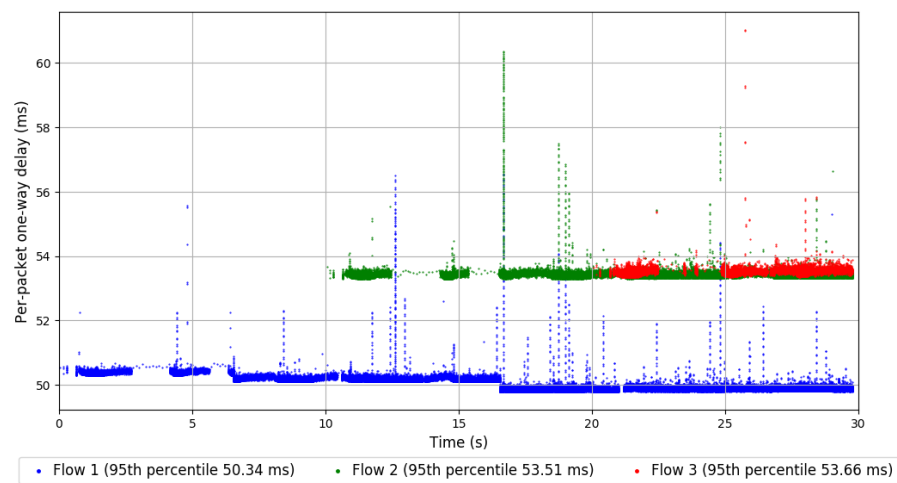
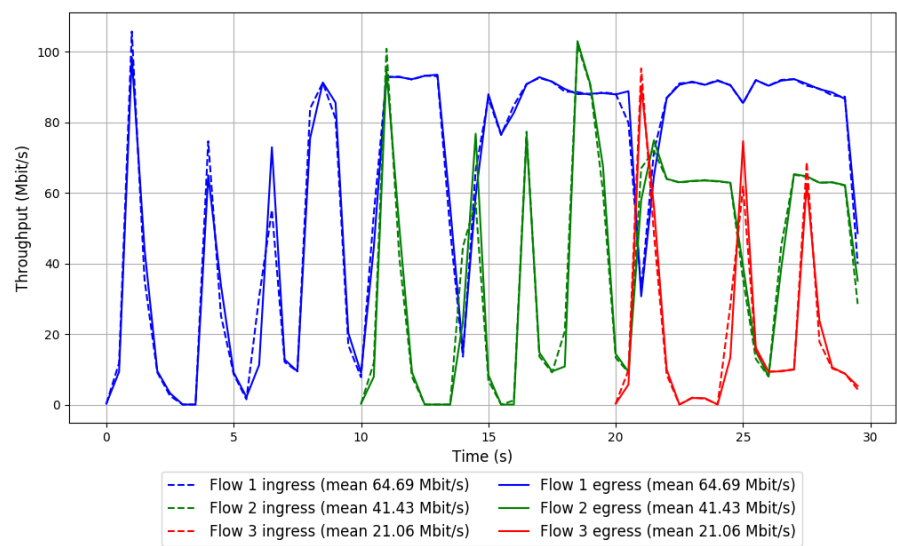
-- Flow 3:

Average throughput: 21.06 Mbit/s

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

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-02-17 13:38:51

End at: 2018-02-17 13:39:21

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.83 Mbit/s

95th percentile per-packet one-way delay: 53.015 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 54.67 Mbit/s

95th percentile per-packet one-way delay: 50.745 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 51.03 Mbit/s

95th percentile per-packet one-way delay: 53.101 ms

Loss rate: 0.00%

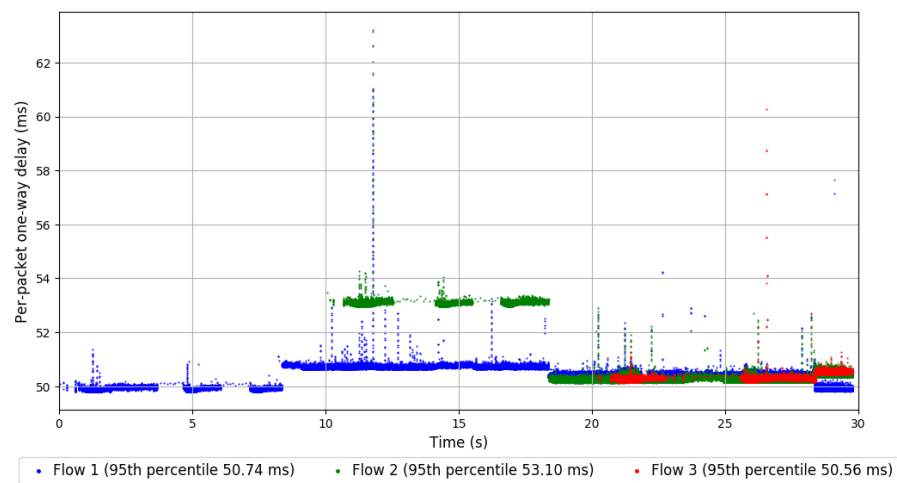
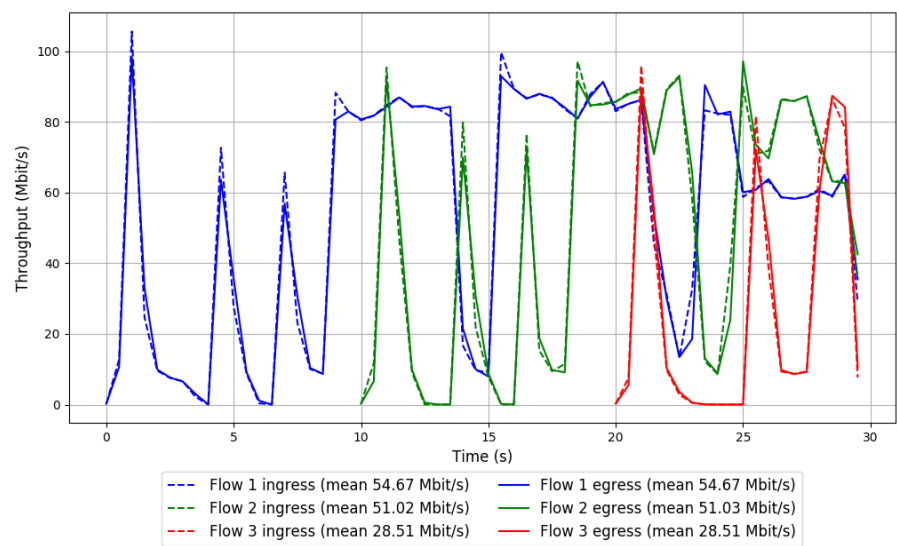
-- Flow 3:

Average throughput: 28.51 Mbit/s

95th percentile per-packet one-way delay: 50.560 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-02-17 13:56:37

End at: 2018-02-17 13:57:07

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.20 Mbit/s

95th percentile per-packet one-way delay: 53.350 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 51.41 Mbit/s

95th percentile per-packet one-way delay: 53.128 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 47.90 Mbit/s

95th percentile per-packet one-way delay: 53.181 ms

Loss rate: 0.00%

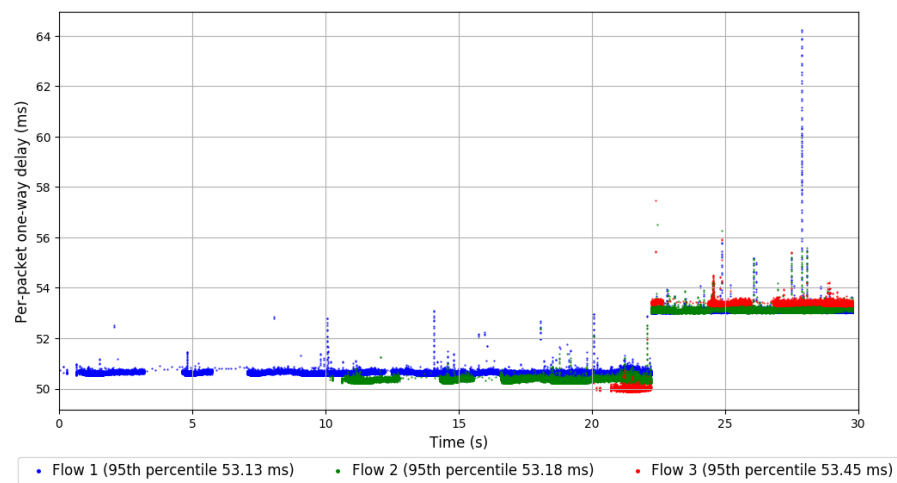
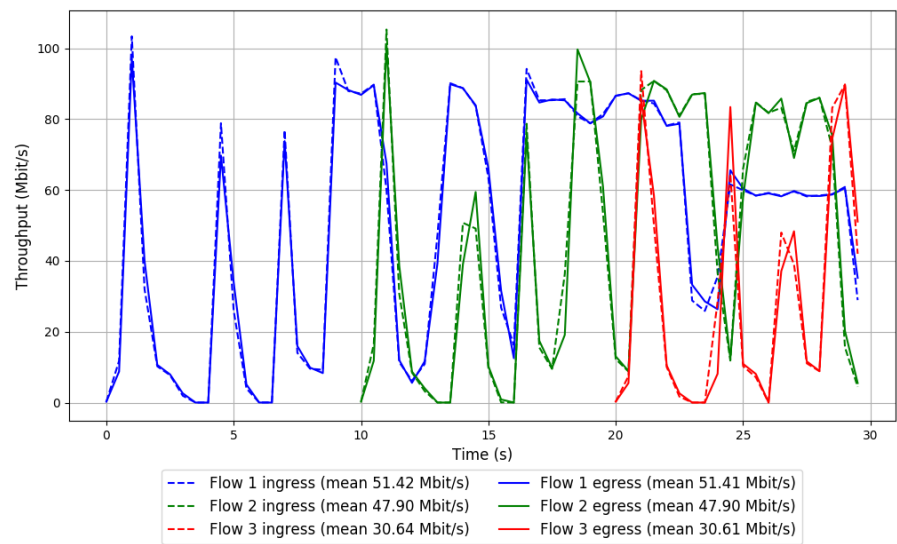
-- Flow 3:

Average throughput: 30.61 Mbit/s

95th percentile per-packet one-way delay: 53.454 ms

Loss rate: 0.09%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-02-17 14:14:25

End at: 2018-02-17 14:14:55

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.05 Mbit/s

95th percentile per-packet one-way delay: 53.847 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 61.31 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 47.96 Mbit/s

95th percentile per-packet one-way delay: 53.777 ms

Loss rate: 0.00%

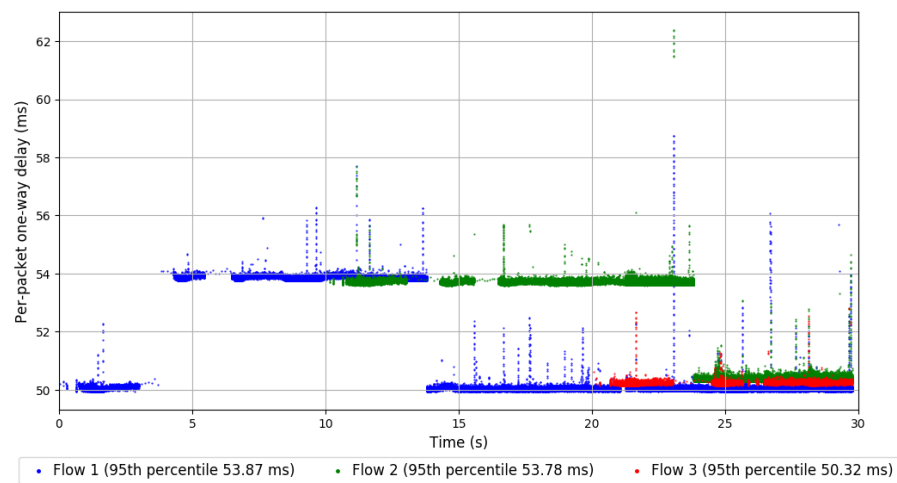
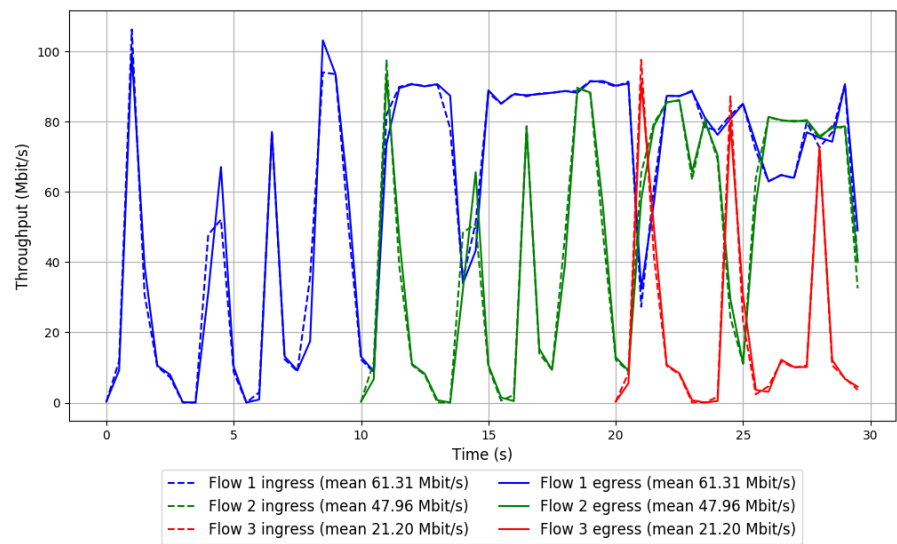
-- Flow 3:

Average throughput: 21.20 Mbit/s

95th percentile per-packet one-way delay: 50.318 ms

Loss rate: 0.00%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-02-17 14:32:49

End at: 2018-02-17 14:33:19

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.32 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 56.36 Mbit/s

95th percentile per-packet one-way delay: 53.929 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 53.23 Mbit/s

95th percentile per-packet one-way delay: 50.347 ms

Loss rate: 0.00%

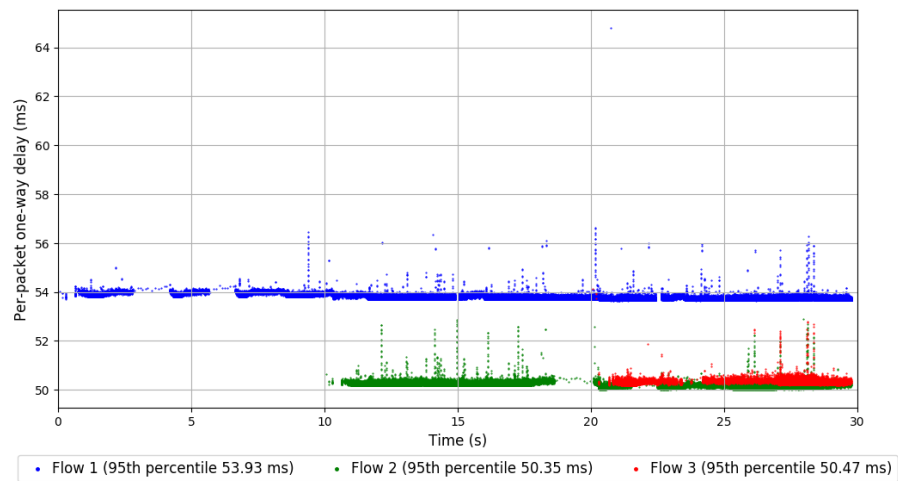
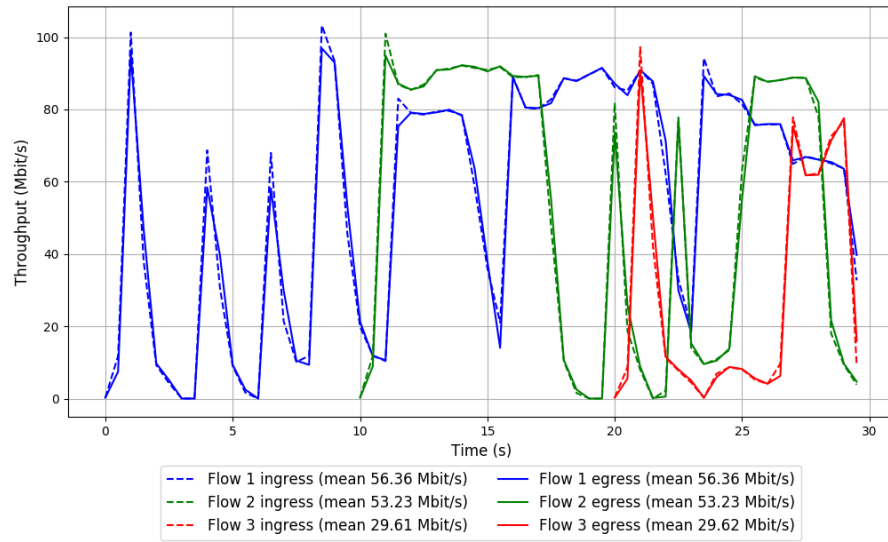
-- Flow 3:

Average throughput: 29.62 Mbit/s

95th percentile per-packet one-way delay: 50.469 ms

Loss rate: 0.00%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-02-17 14:50:22

End at: 2018-02-17 14:50:52

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.52 Mbit/s

95th percentile per-packet one-way delay: 53.602 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 60.27 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.42 Mbit/s

95th percentile per-packet one-way delay: 53.490 ms

Loss rate: 0.03%

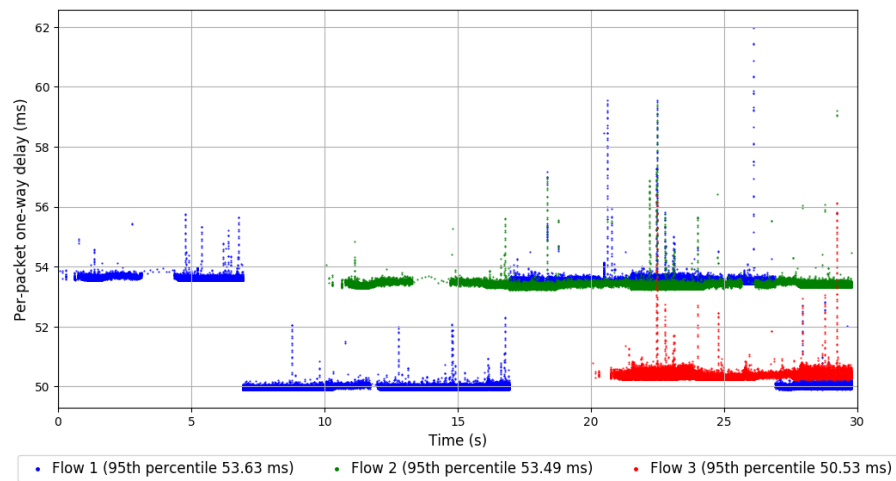
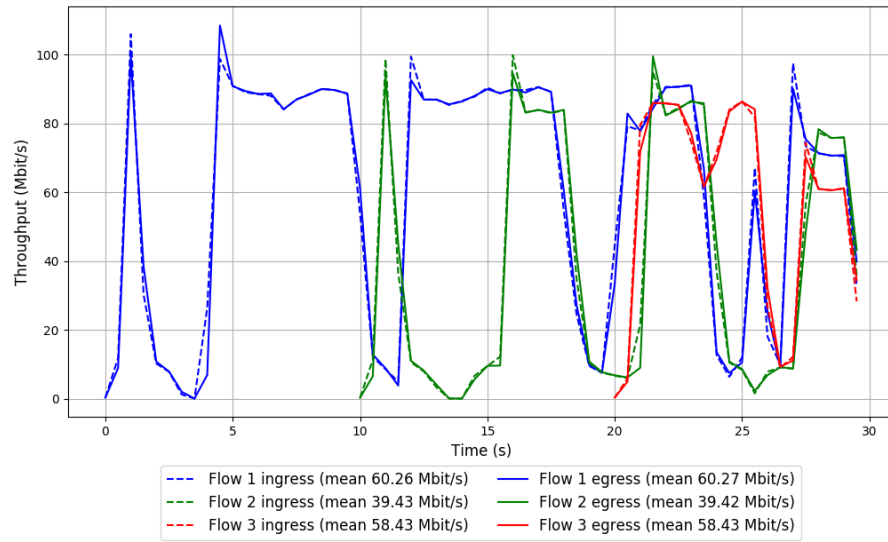
-- Flow 3:

Average throughput: 58.43 Mbit/s

95th percentile per-packet one-way delay: 50.534 ms

Loss rate: 0.00%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-02-17 15:08:27

End at: 2018-02-17 15:08:57

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.97 Mbit/s

95th percentile per-packet one-way delay: 53.445 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 51.87 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 35.06 Mbit/s

95th percentile per-packet one-way delay: 53.503 ms

Loss rate: 0.00%

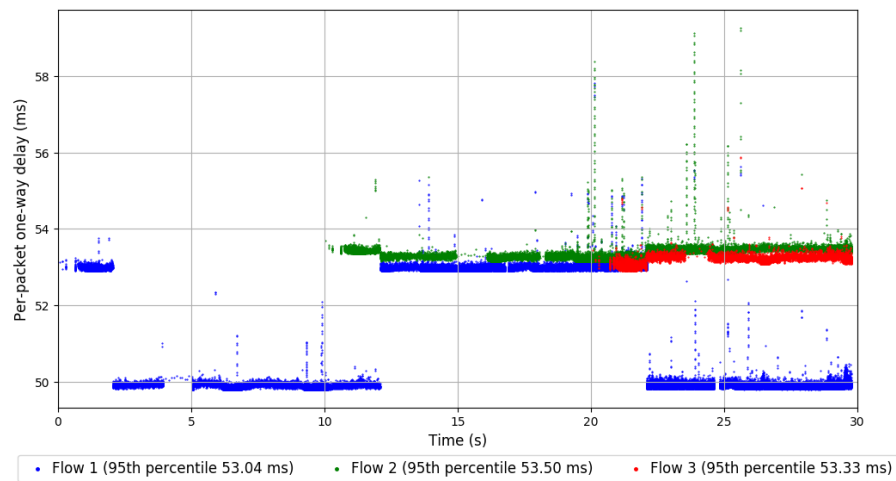
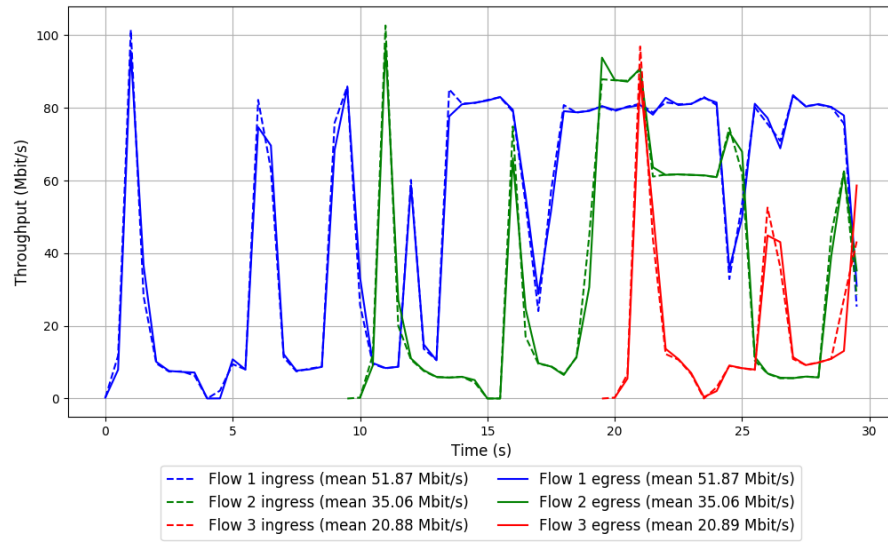
-- Flow 3:

Average throughput: 20.89 Mbit/s

95th percentile per-packet one-way delay: 53.333 ms

Loss rate: 0.00%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-02-17 15:25:57

End at: 2018-02-17 15:26:27

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.07 Mbit/s

95th percentile per-packet one-way delay: 53.497 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 60.78 Mbit/s

95th percentile per-packet one-way delay: 53.517 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 55.32 Mbit/s

95th percentile per-packet one-way delay: 53.426 ms

Loss rate: 0.00%

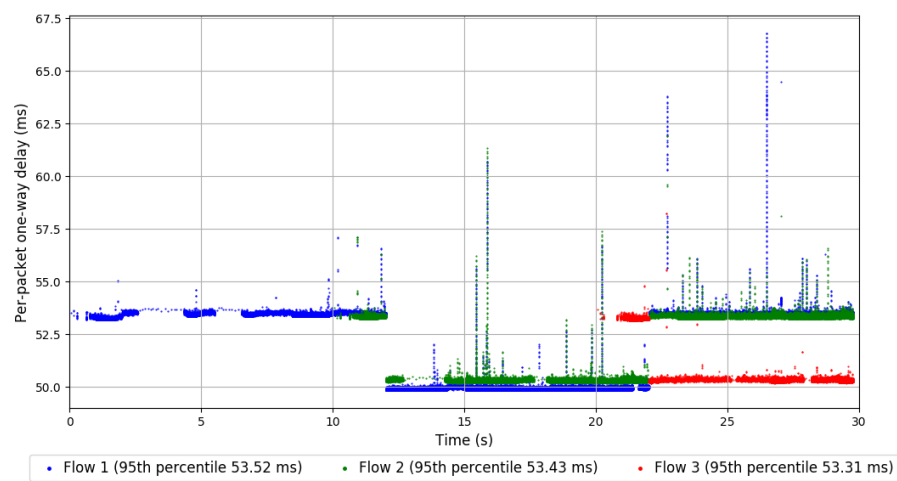
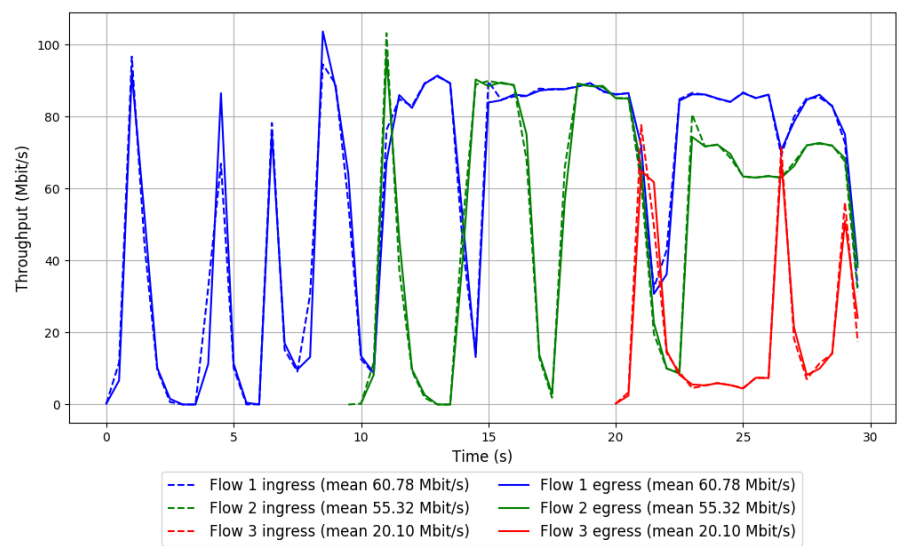
-- Flow 3:

Average throughput: 20.10 Mbit/s

95th percentile per-packet one-way delay: 53.308 ms

Loss rate: 0.00%

Run 10: Report of QUIC Cubic — Data Link

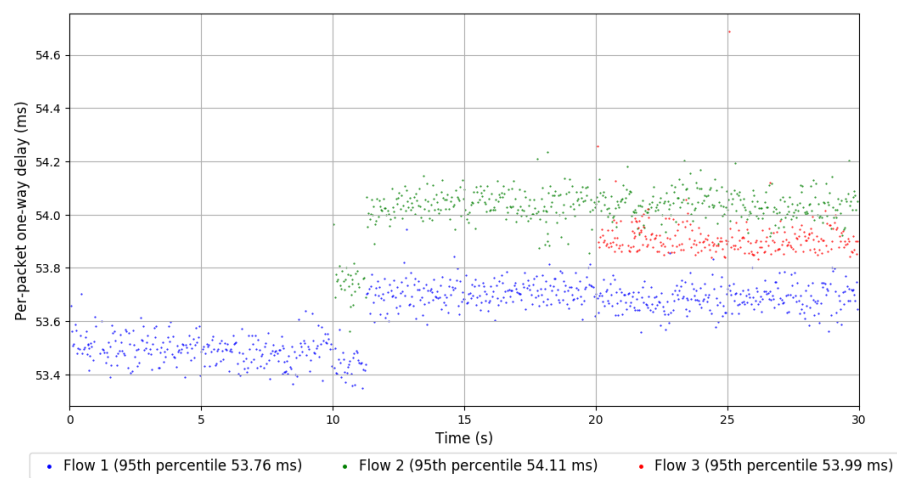
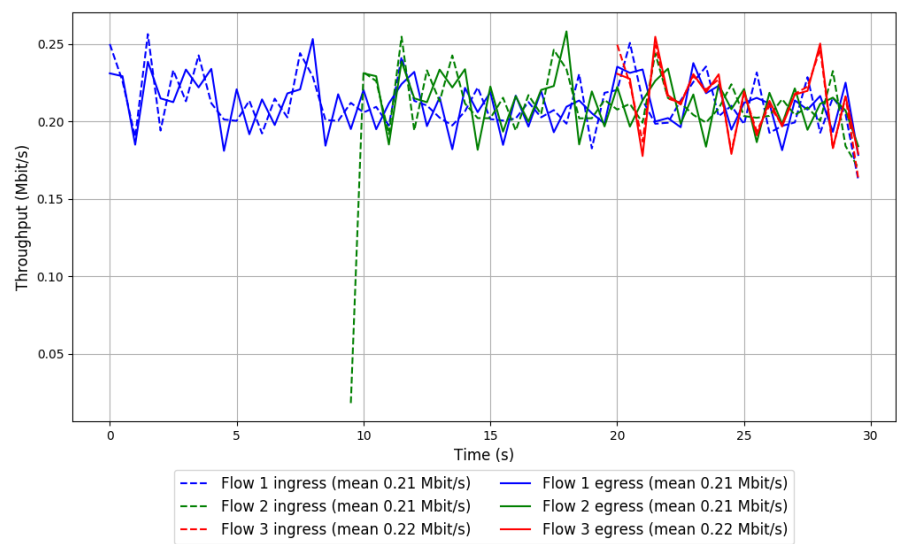


```
Run 1: Statistics of SCReAM

Start at: 2018-02-17 12:33:18
End at: 2018-02-17 12:33:48

# Below is generated by plot.py at 2018-02-17 18:42:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 54.087 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.760 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 54.113 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.987 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

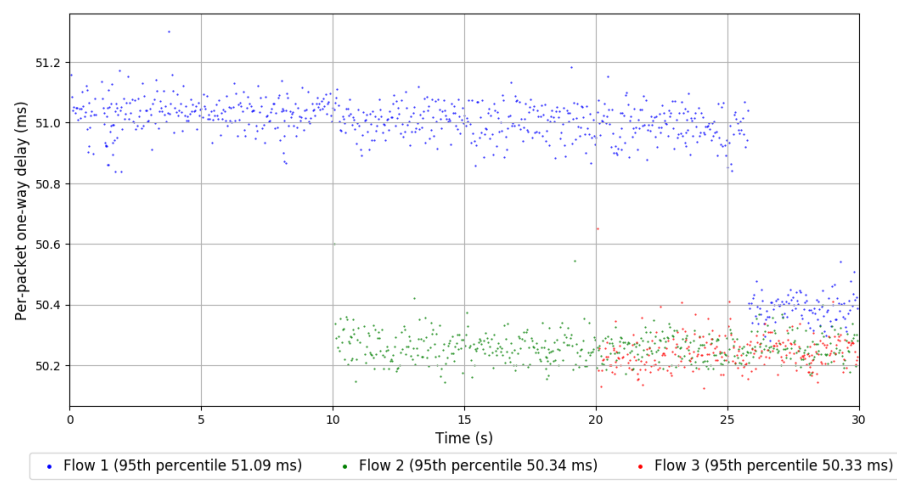
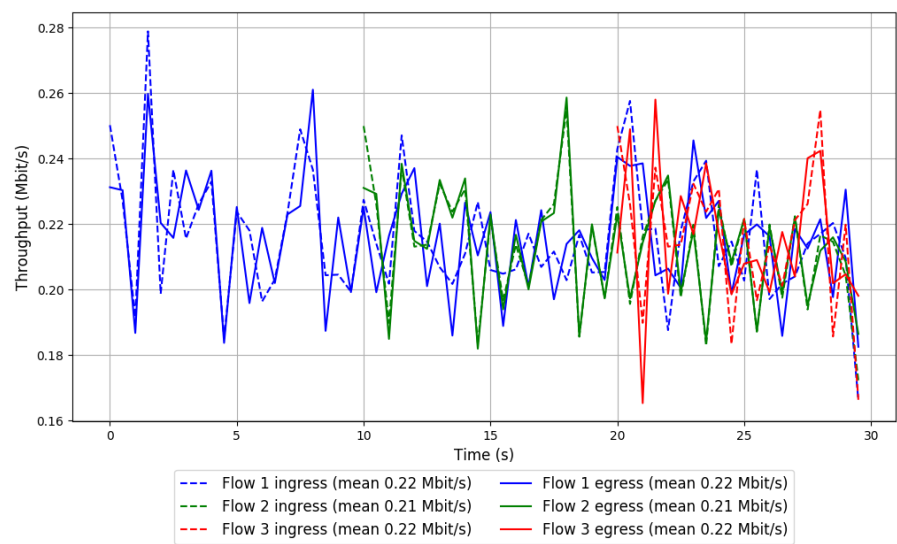


```
Run 2: Statistics of SReAM

Start at: 2018-02-17 12:50:43
End at: 2018-02-17 12:51:13

# Below is generated by plot.py at 2018-02-17 18:42:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.073 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.091 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.336 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.330 ms
Loss rate: 0.00%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SReAM

Start at: 2018-02-17 13:08:31

End at: 2018-02-17 13:09:01

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.945 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.977 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.752 ms

Loss rate: 0.00%

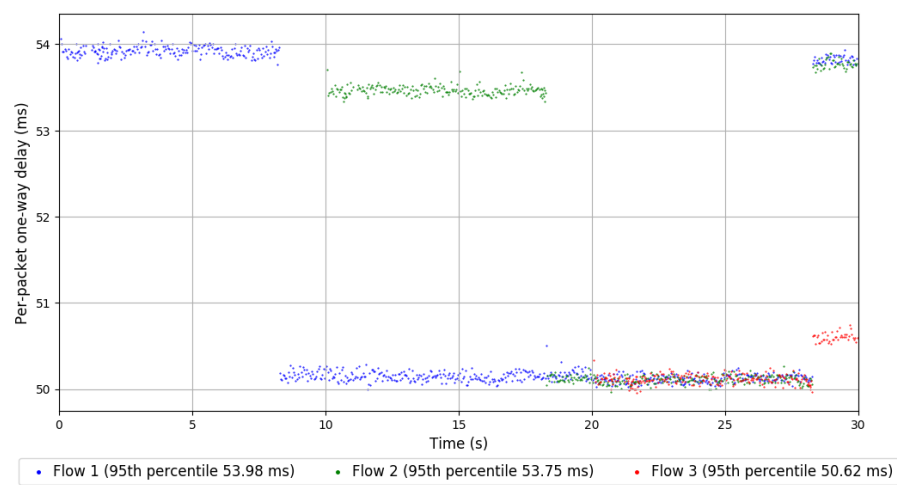
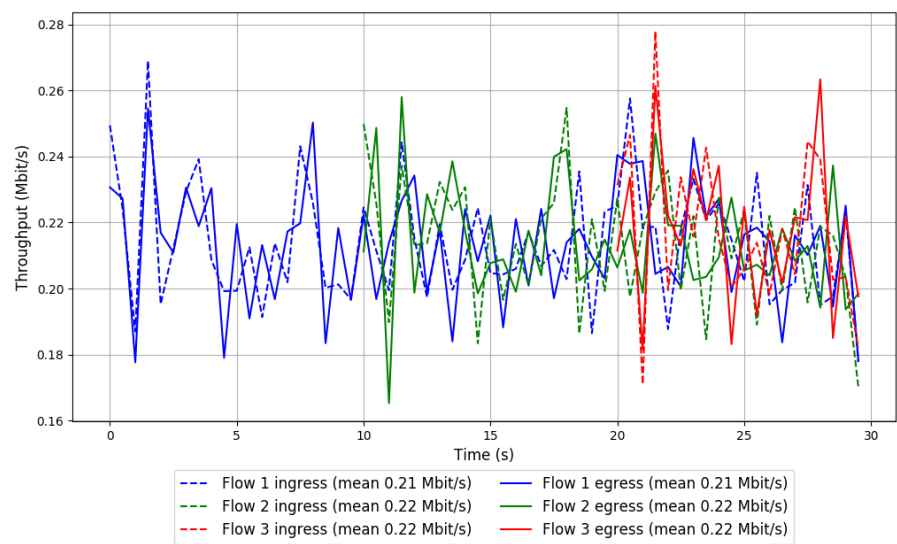
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.623 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-02-17 13:27:23

End at: 2018-02-17 13:27:53

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.884 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.399 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.917 ms

Loss rate: 0.00%

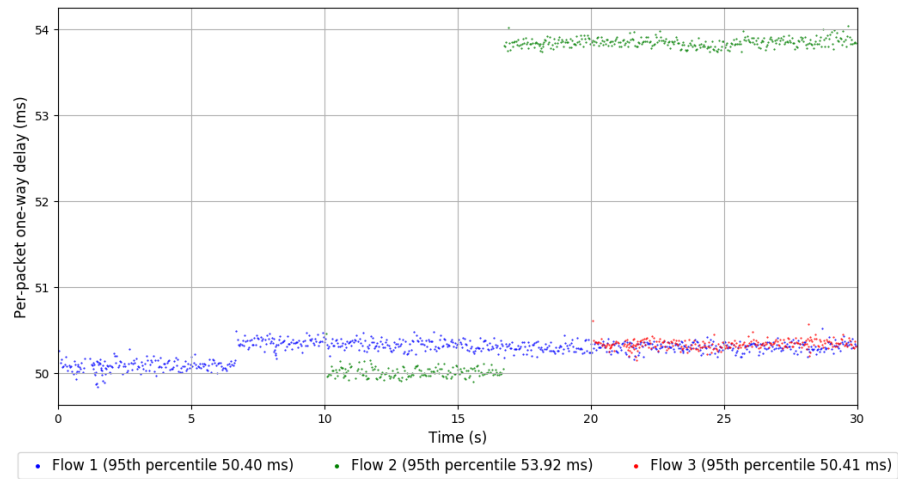
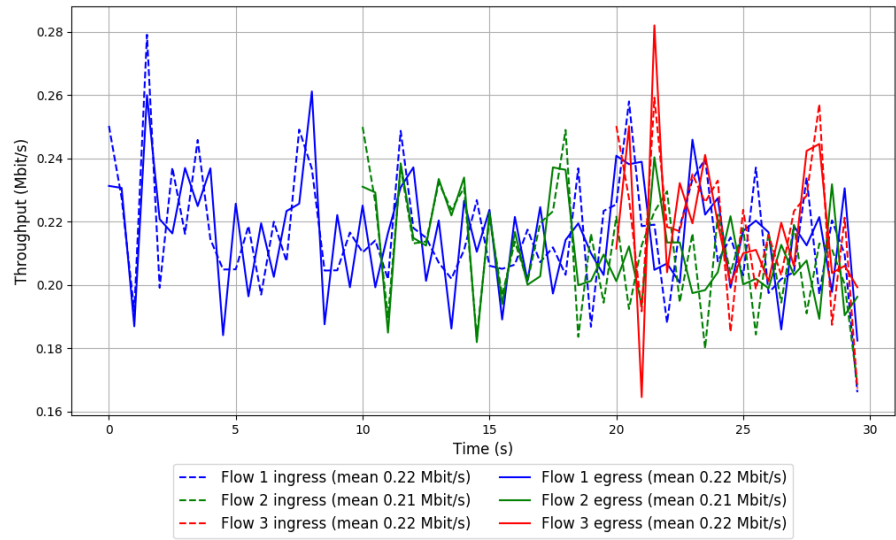
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.410 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-02-17 13:45:20

End at: 2018-02-17 13:45:50

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.911 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.932 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.674 ms

Loss rate: 0.00%

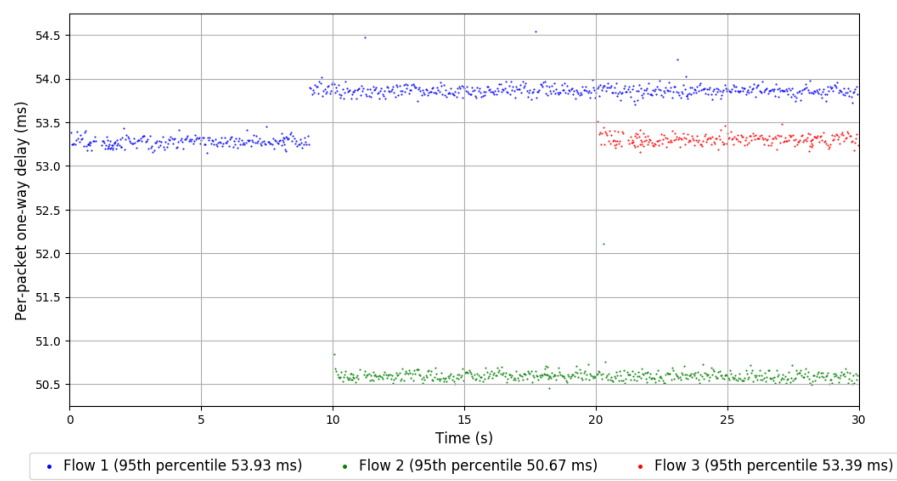
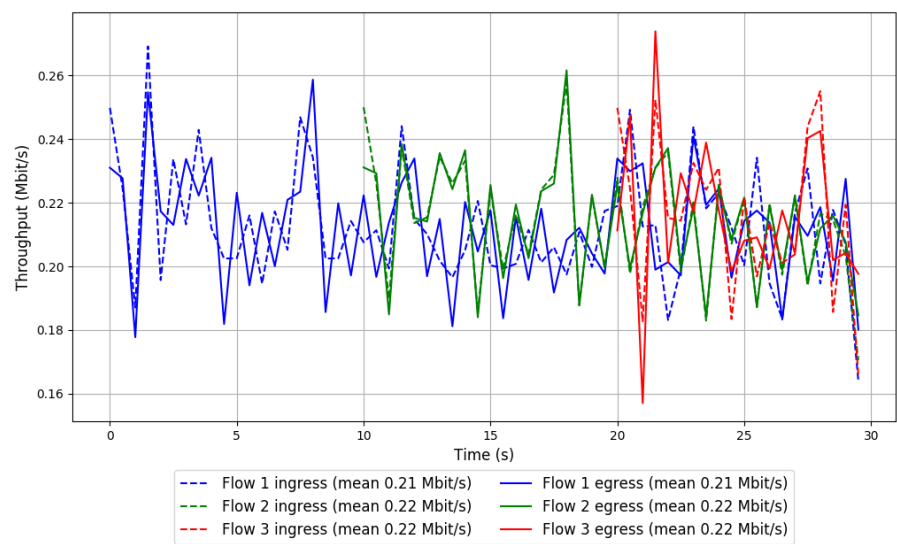
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.388 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-02-17 14:03:02

End at: 2018-02-17 14:03:32

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 54.048 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.460 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 54.091 ms

Loss rate: 0.00%

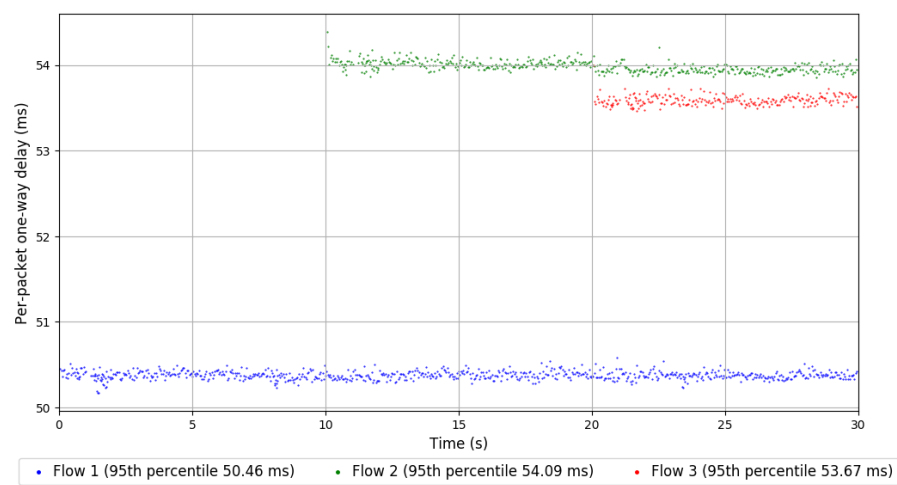
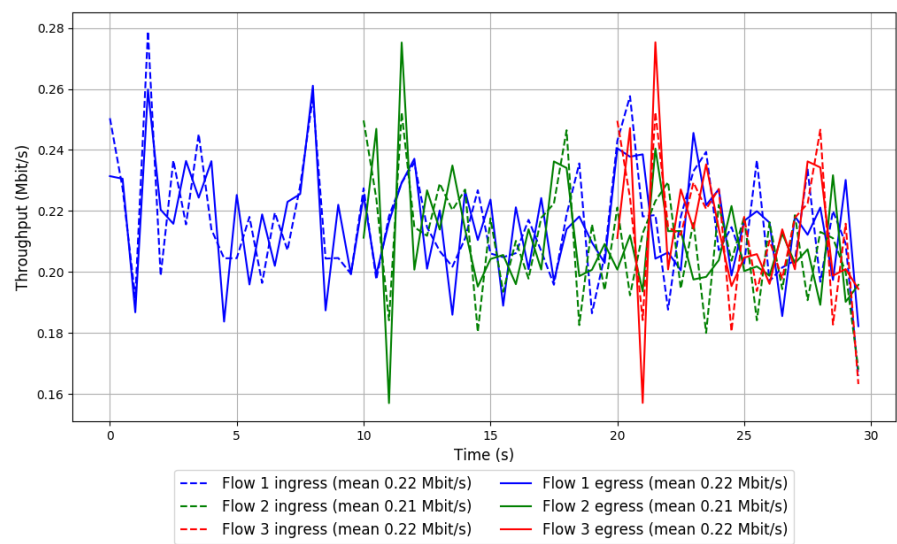
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.675 ms

Loss rate: 0.00%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2018-02-17 14:20:47

End at: 2018-02-17 14:21:17

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.931 ms

Loss rate: 0.00%

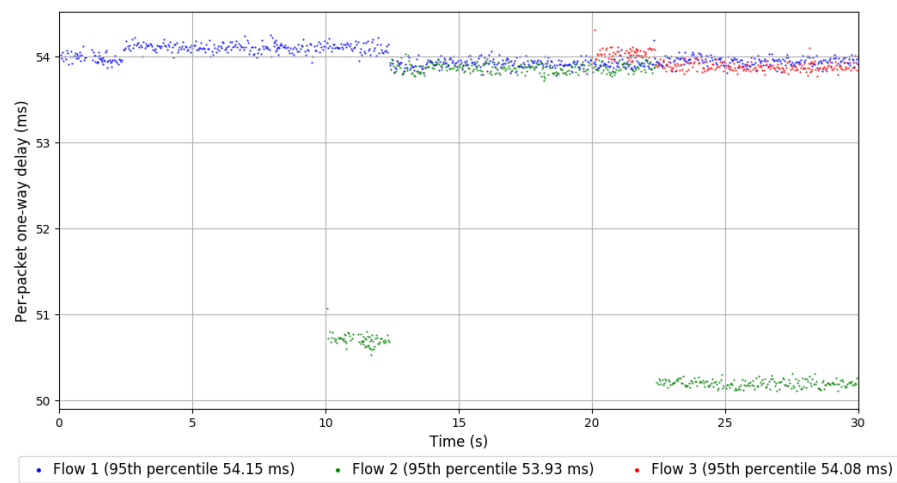
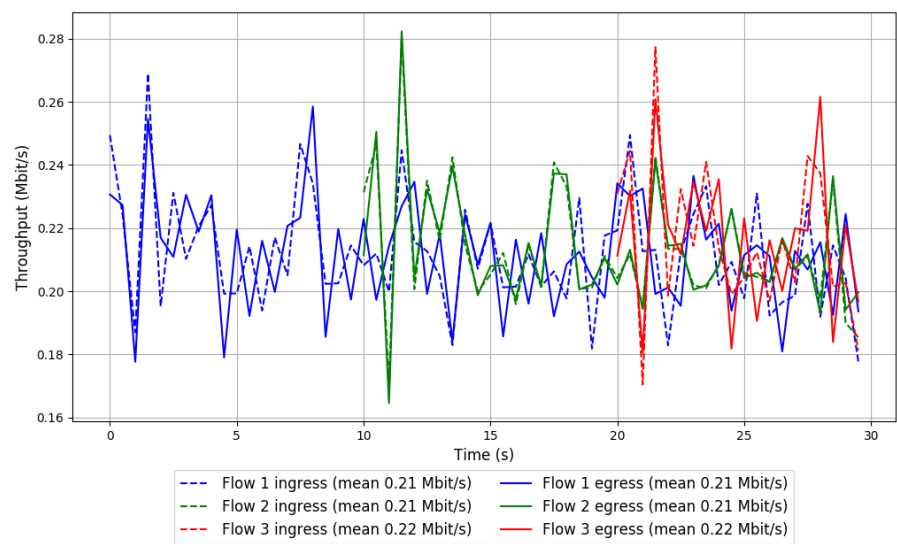
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 54.084 ms

Loss rate: 0.00%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2018-02-17 14:39:15

End at: 2018-02-17 14:39:45

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.448 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 50.832 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.465 ms

Loss rate: 0.00%

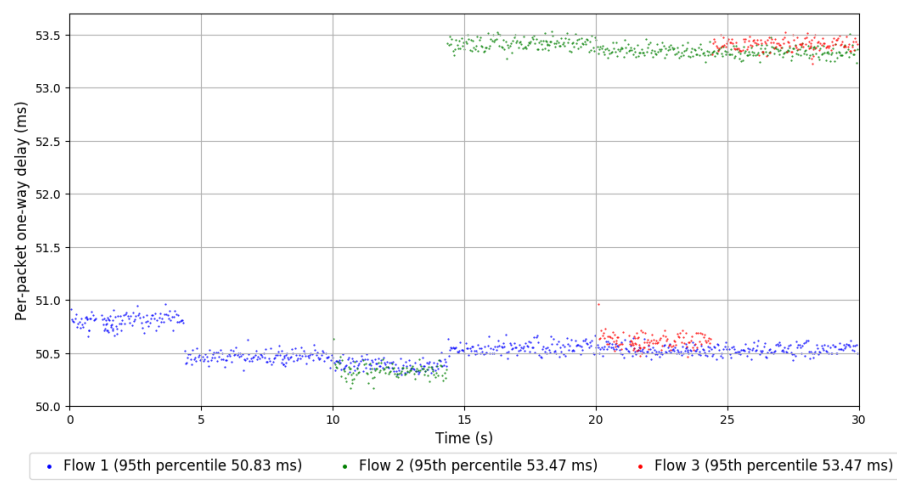
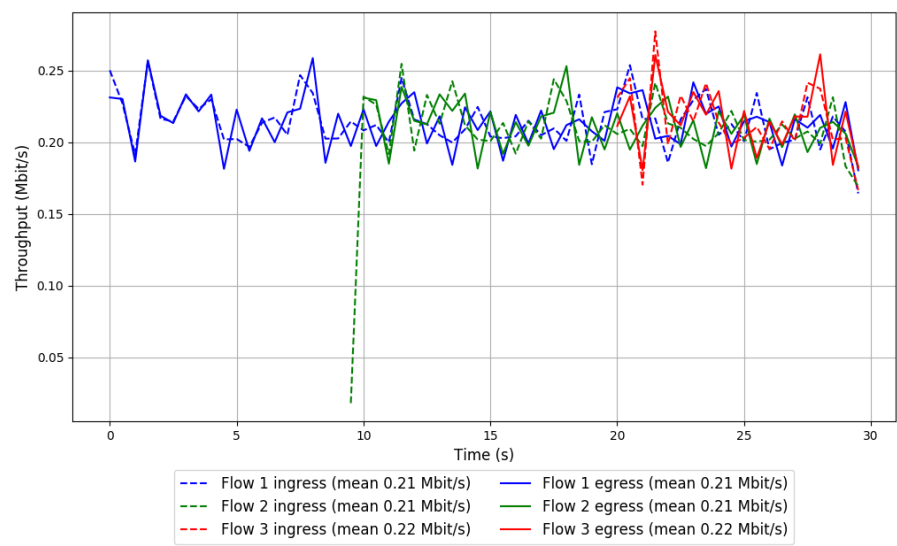
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.471 ms

Loss rate: 0.00%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2018-02-17 14:56:50

End at: 2018-02-17 14:57:20

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.884 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.906 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.381 ms

Loss rate: 0.00%

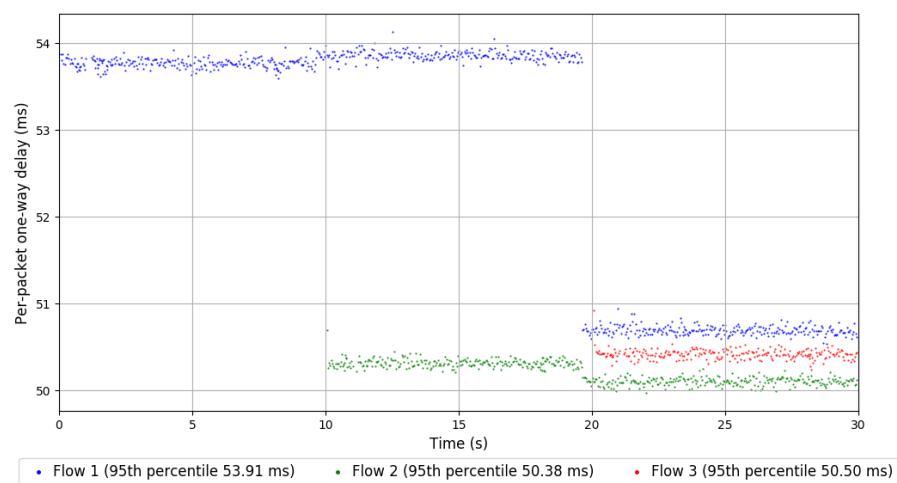
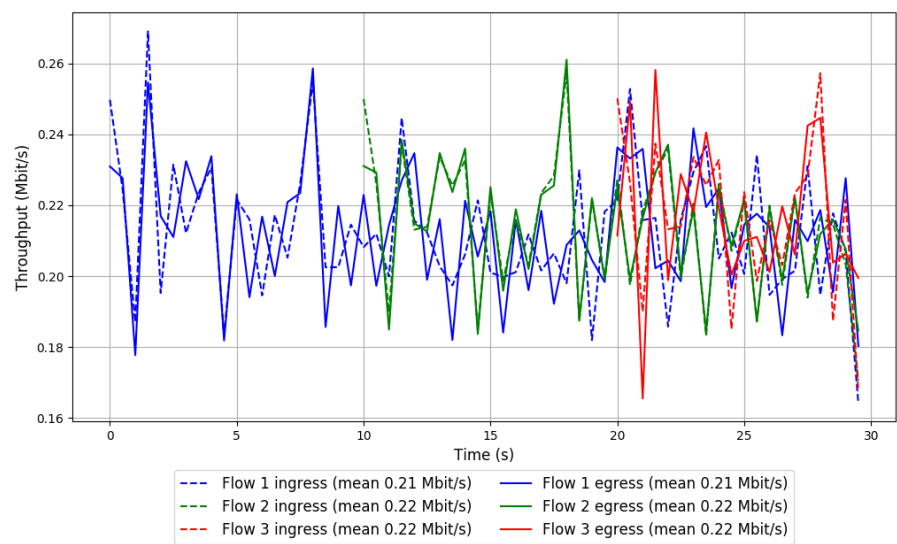
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.496 ms

Loss rate: 0.00%

Run 9: Report of SReAM — Data Link



Run 10: Statistics of SReAM

Start at: 2018-02-17 15:14:50

End at: 2018-02-17 15:15:20

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.410 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.432 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.208 ms

Loss rate: 0.00%

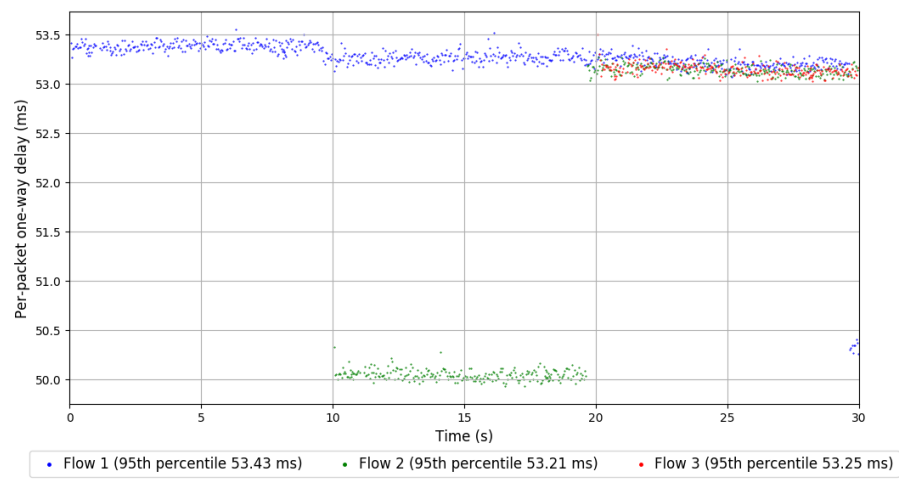
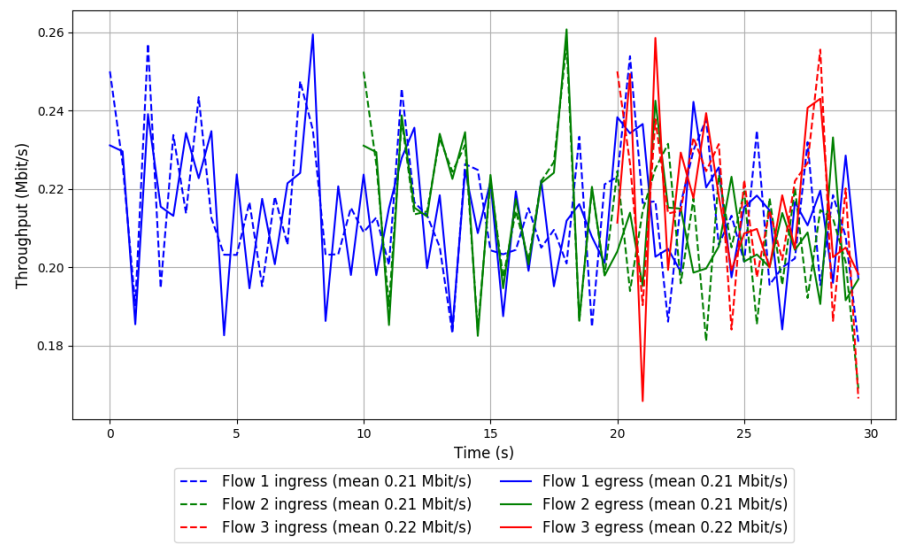
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.247 ms

Loss rate: 0.00%

Run 10: Report of SReAM — Data Link

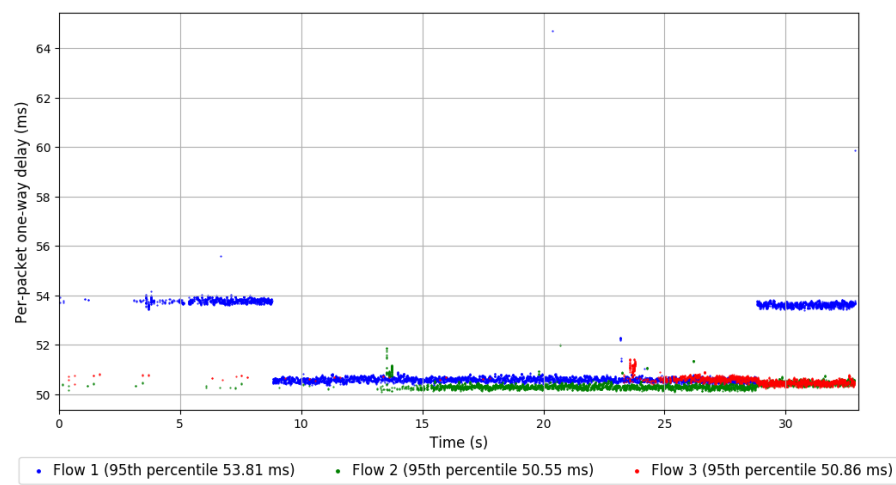
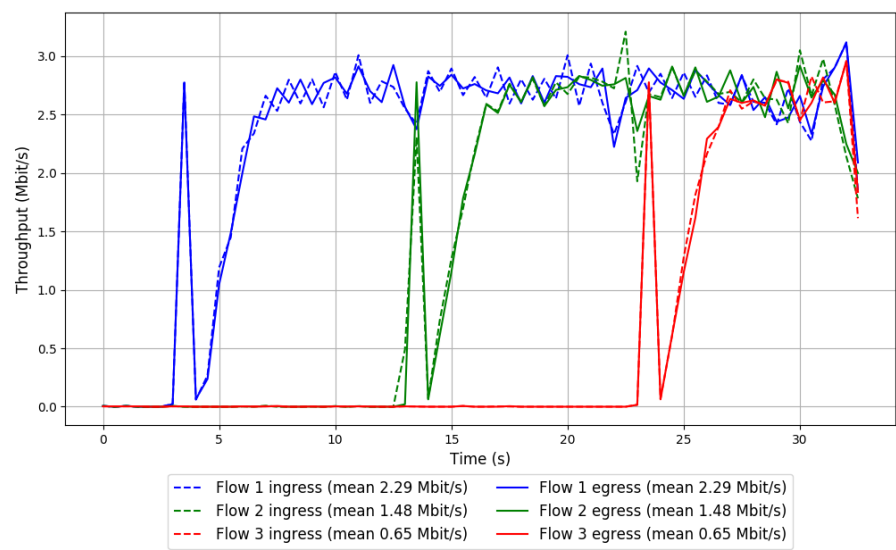


```
Run 1: Statistics of WebRTC media

Start at: 2018-02-17 12:42:43
End at: 2018-02-17 12:43:13

# Below is generated by plot.py at 2018-02-17 18:42:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 53.742 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 53.809 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 50.547 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 50.858 ms
Loss rate: 0.01%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-02-17 13:00:22

End at: 2018-02-17 13:00:52

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.40 Mbit/s

95th percentile per-packet one-way delay: 53.993 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 2.31 Mbit/s

95th percentile per-packet one-way delay: 54.006 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 53.996 ms

Loss rate: 0.00%

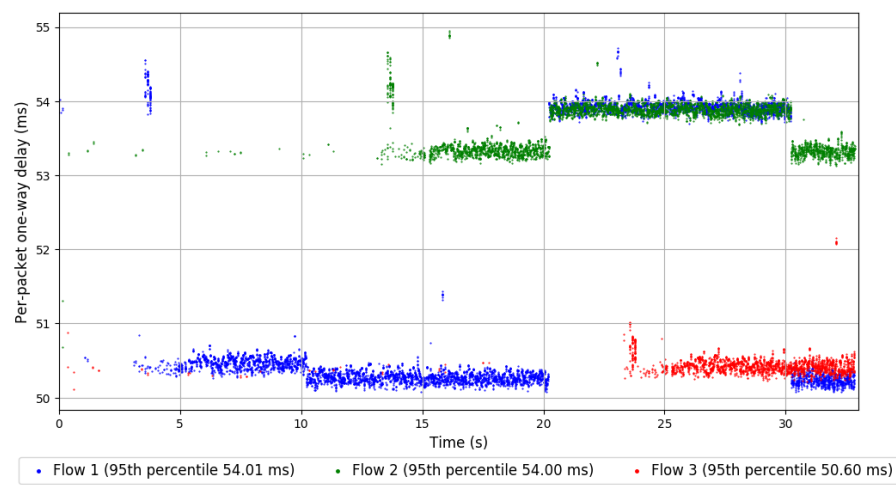
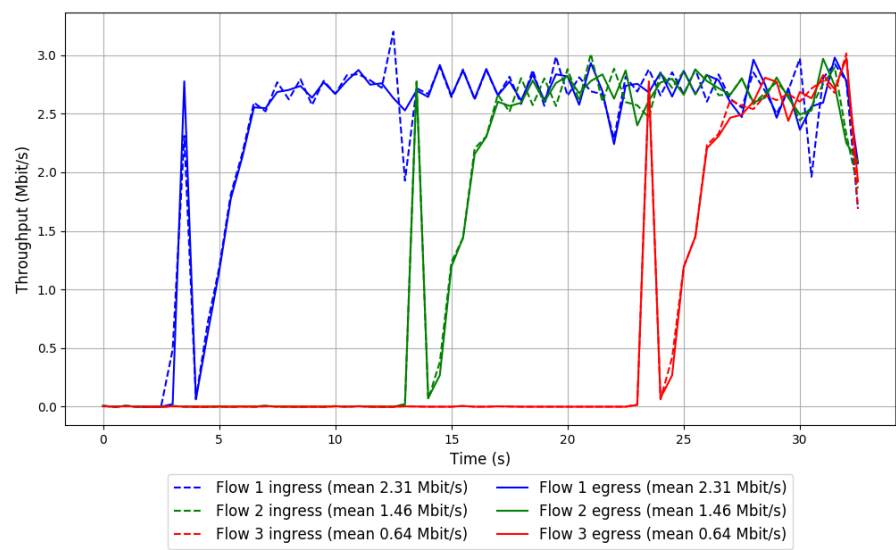
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 50.596 ms

Loss rate: 0.04%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-02-17 13:18:58

End at: 2018-02-17 13:19:28

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.39 Mbit/s

95th percentile per-packet one-way delay: 53.913 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 53.945 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 50.586 ms

Loss rate: 0.00%

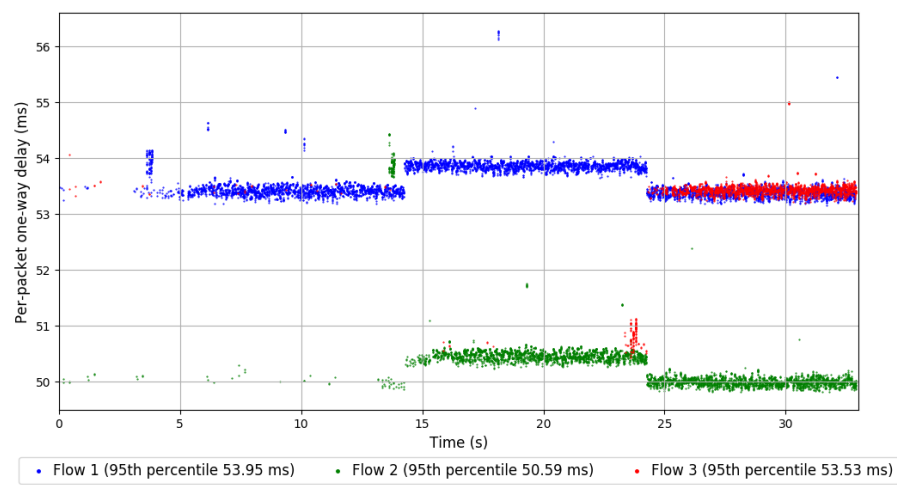
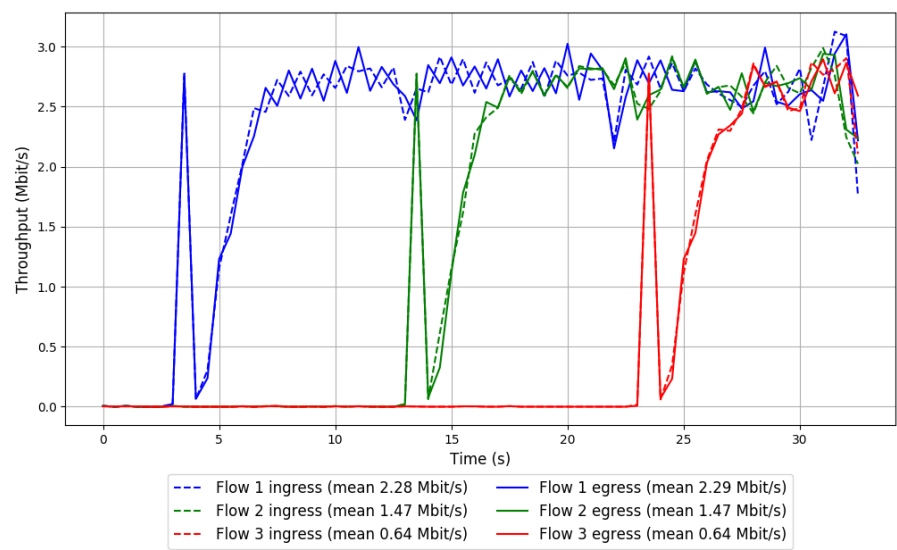
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 53.532 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-02-17 13:37:08

End at: 2018-02-17 13:37:38

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.38 Mbit/s

95th percentile per-packet one-way delay: 50.522 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 50.214 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 50.574 ms

Loss rate: 0.00%

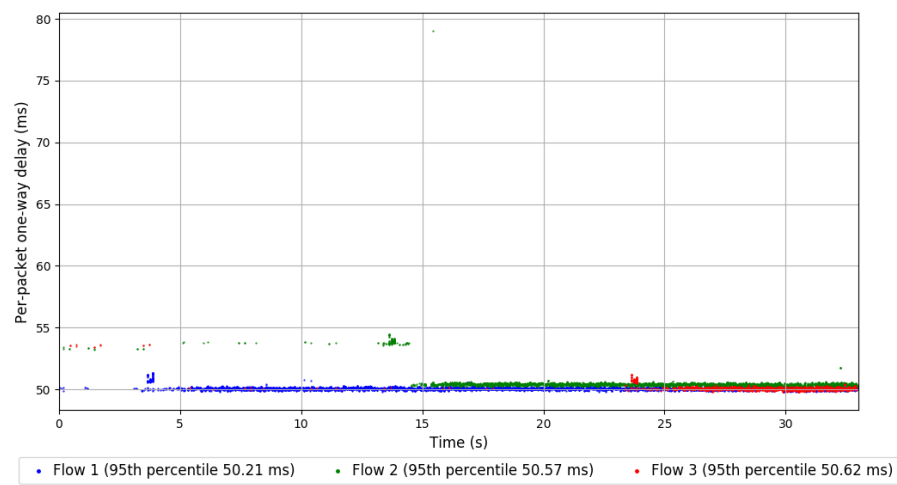
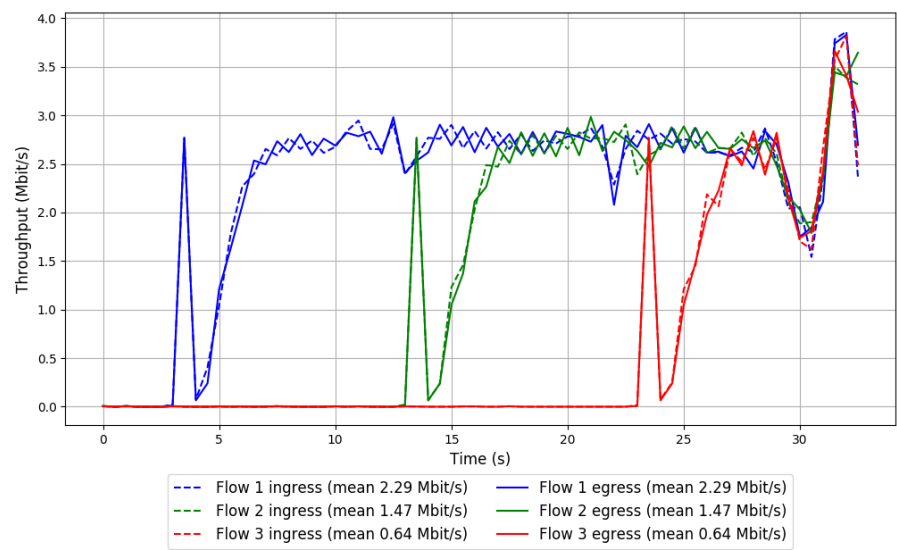
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 50.625 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-02-17 13:54:54

End at: 2018-02-17 13:55:24

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 53.393 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 53.400 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.49 Mbit/s

95th percentile per-packet one-way delay: 53.396 ms

Loss rate: 0.00%

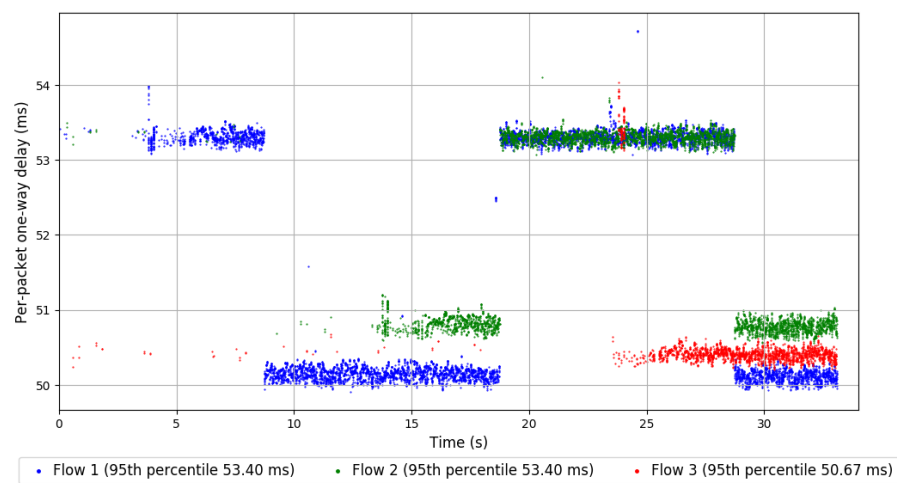
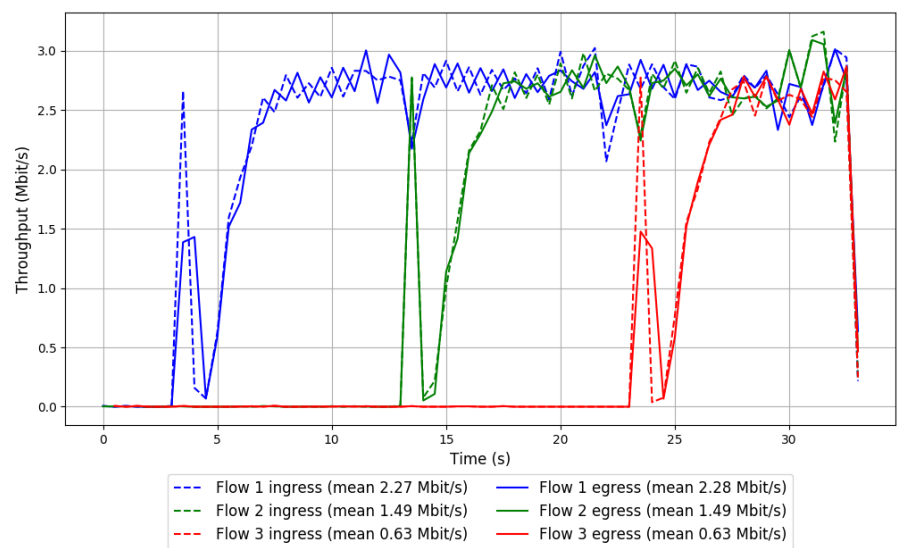
-- Flow 3:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 50.672 ms

Loss rate: 0.04%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-02-17 14:12:42

End at: 2018-02-17 14:13:12

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.35 Mbit/s

95th percentile per-packet one-way delay: 54.123 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 54.149 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.47 Mbit/s

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

Loss rate: 0.00%

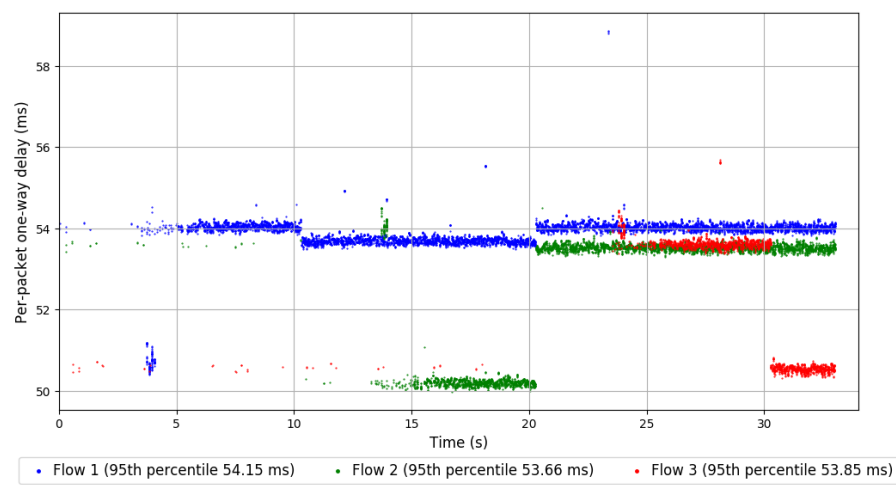
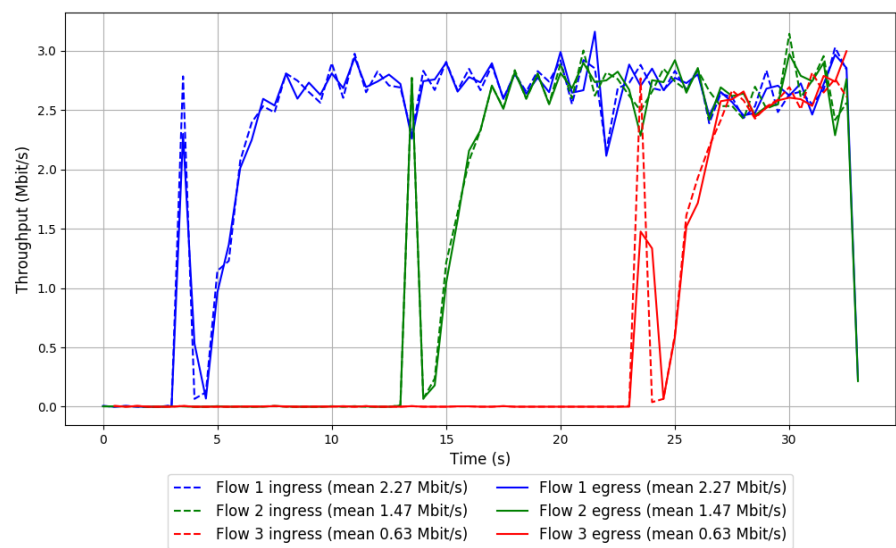
-- Flow 3:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 53.847 ms

Loss rate: 0.00%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-02-17 14:31:07

End at: 2018-02-17 14:31:37

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.41 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 54.123 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 54.024 ms

Loss rate: 0.00%

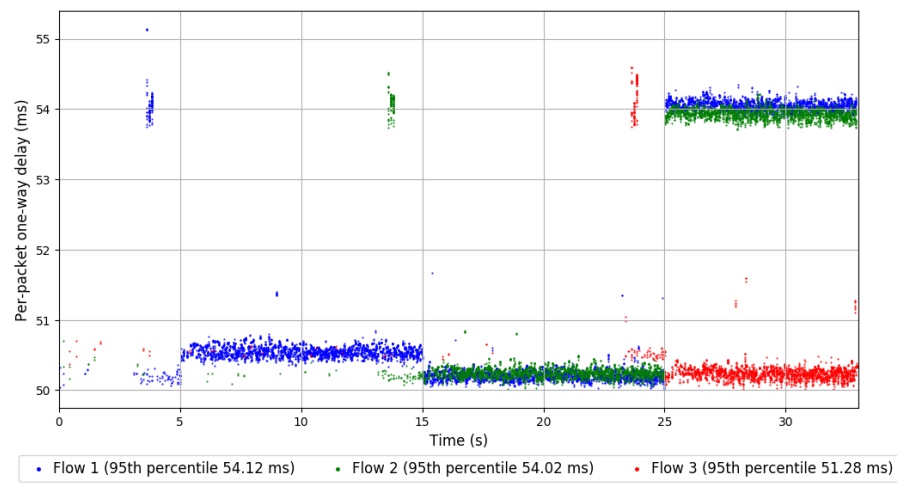
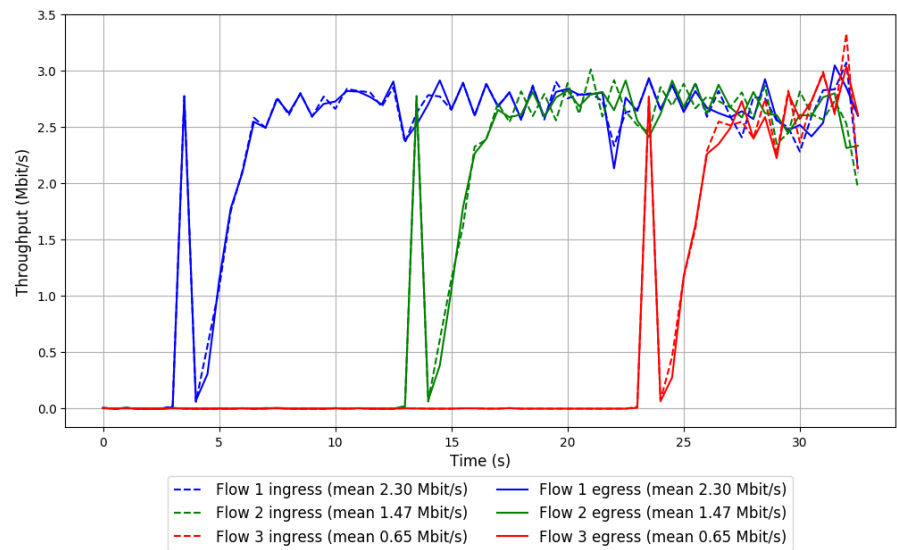
-- Flow 3:

Average throughput: 0.65 Mbit/s

95th percentile per-packet one-way delay: 51.279 ms

Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-02-17 14:48:38

End at: 2018-02-17 14:49:08

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.36 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.29 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.45 Mbit/s

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

Loss rate: 0.00%

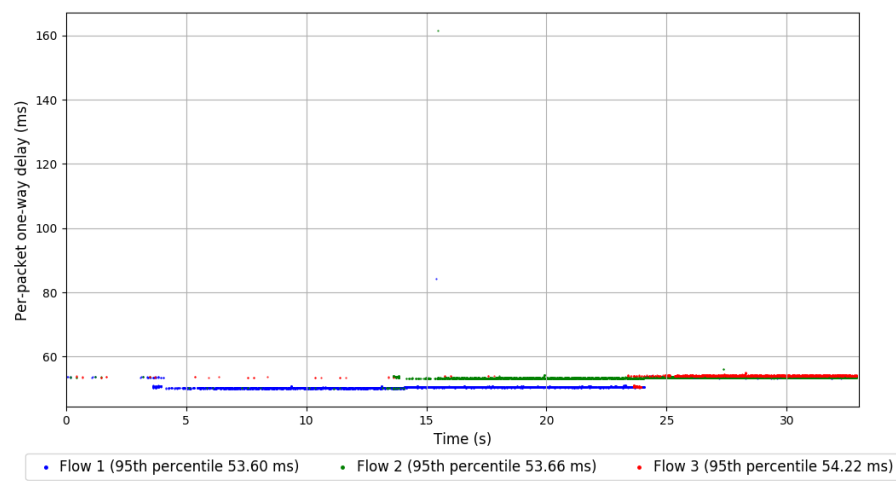
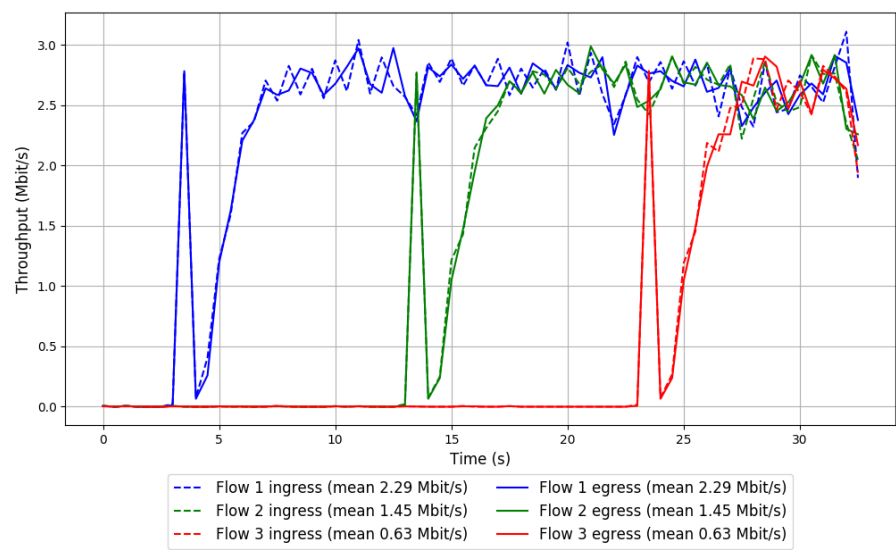
-- Flow 3:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 54.216 ms

Loss rate: 0.00%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-02-17 15:06:43

End at: 2018-02-17 15:07:13

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 50.559 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 50.429 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 50.172 ms

Loss rate: 0.00%

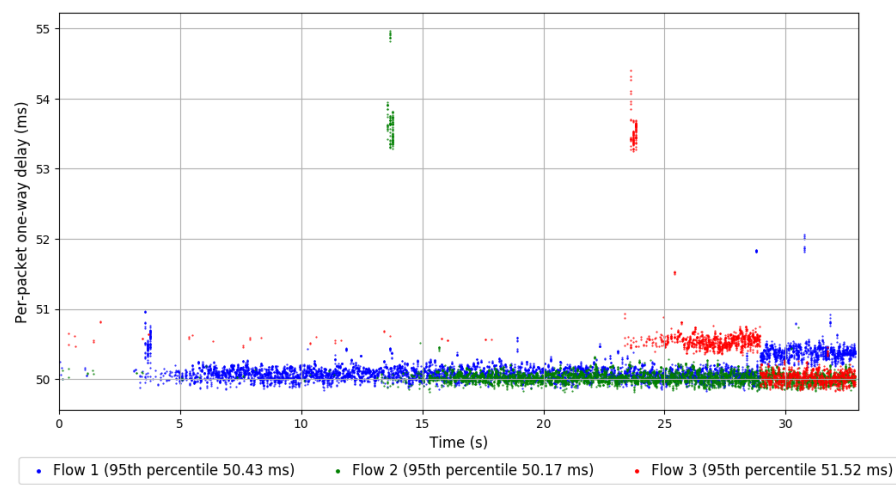
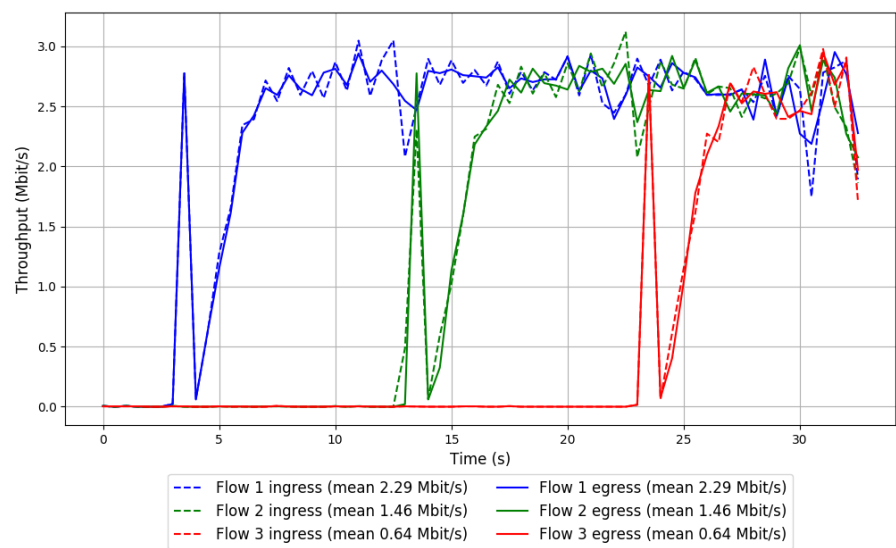
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 51.525 ms

Loss rate: 0.00%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-02-17 15:24:13

End at: 2018-02-17 15:24:43

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 53.514 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 53.521 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 53.400 ms

Loss rate: 0.00%

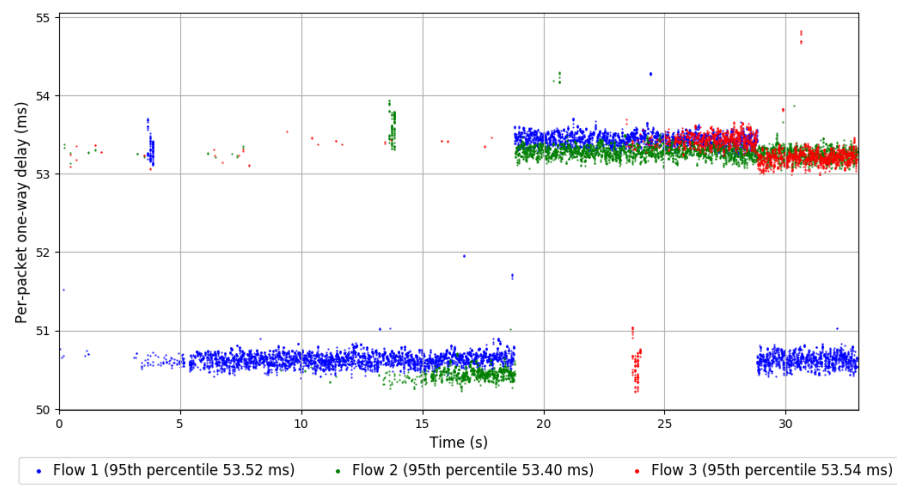
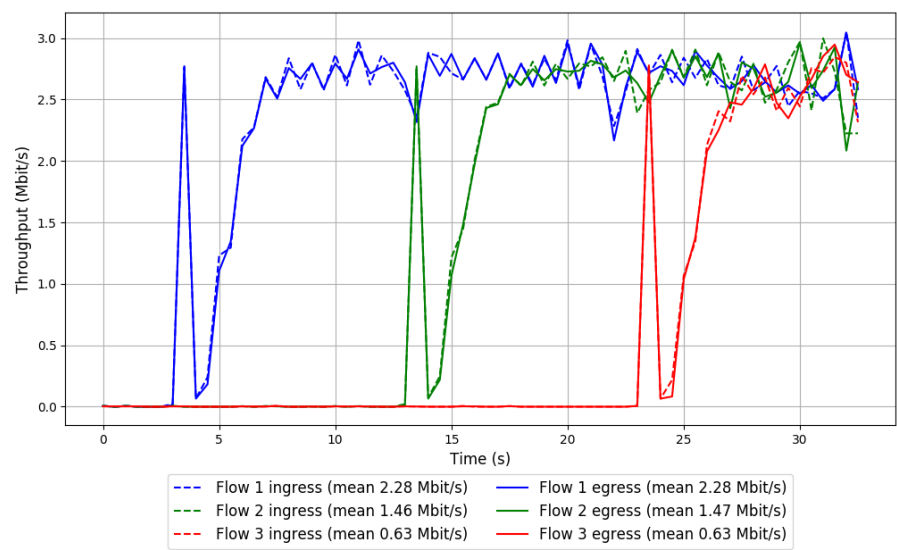
-- Flow 3:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 53.541 ms

Loss rate: 0.00%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-02-17 12:35:16

End at: 2018-02-17 12:35:46

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.32 Mbit/s

95th percentile per-packet one-way delay: 52.376 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.88 Mbit/s

95th percentile per-packet one-way delay: 52.439 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.79 Mbit/s

95th percentile per-packet one-way delay: 52.495 ms

Loss rate: 0.00%

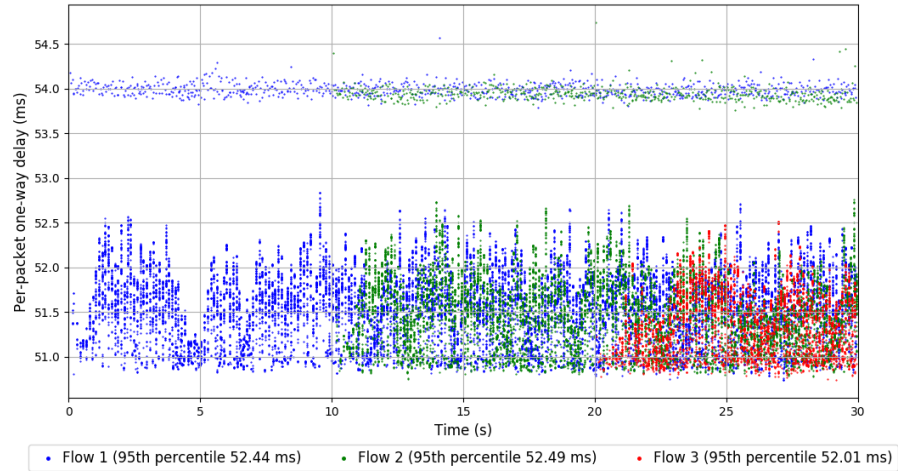
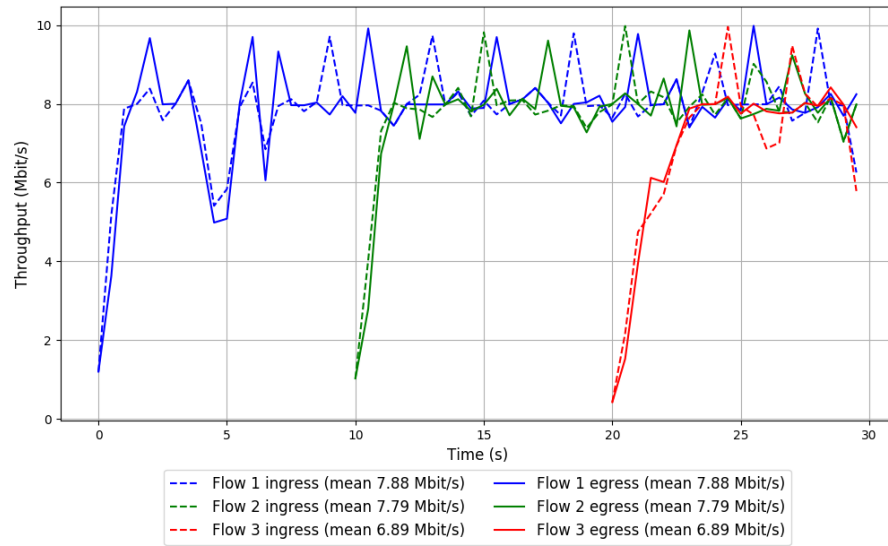
-- Flow 3:

Average throughput: 6.89 Mbit/s

95th percentile per-packet one-way delay: 52.008 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-02-17 12:52:45

End at: 2018-02-17 12:53:15

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.60 Mbit/s

95th percentile per-packet one-way delay: 55.055 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.96 Mbit/s

95th percentile per-packet one-way delay: 54.900 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.78 Mbit/s

95th percentile per-packet one-way delay: 55.224 ms

Loss rate: 0.00%

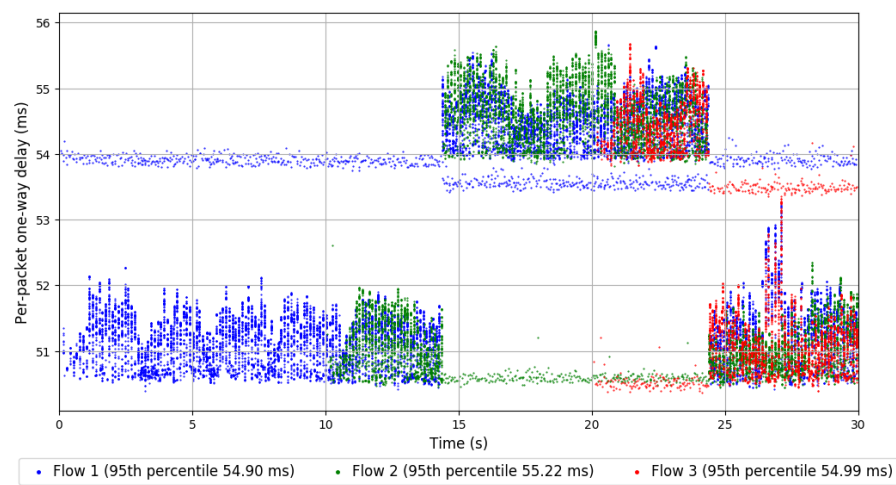
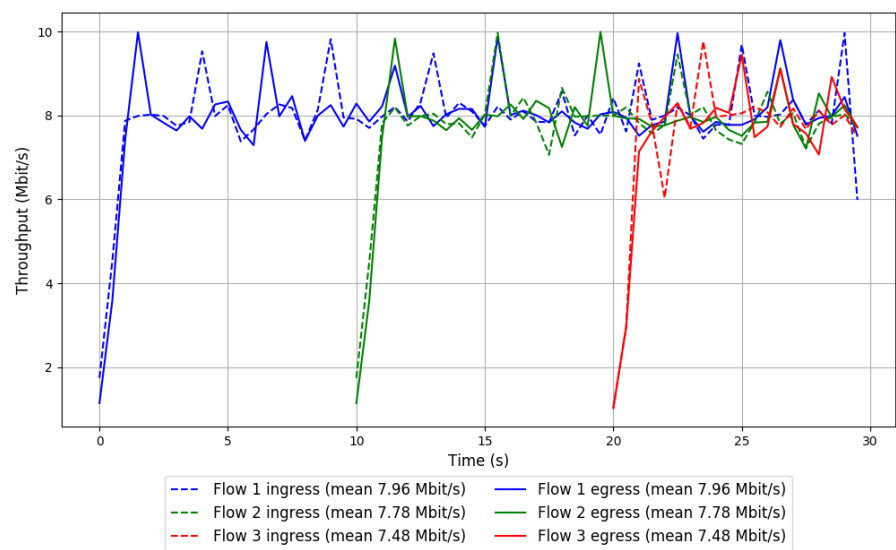
-- Flow 3:

Average throughput: 7.48 Mbit/s

95th percentile per-packet one-way delay: 54.986 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-02-17 13:10:34

End at: 2018-02-17 13:11:04

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.34 Mbit/s

95th percentile per-packet one-way delay: 54.641 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.72 Mbit/s

95th percentile per-packet one-way delay: 54.561 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.77 Mbit/s

95th percentile per-packet one-way delay: 54.667 ms

Loss rate: 0.00%

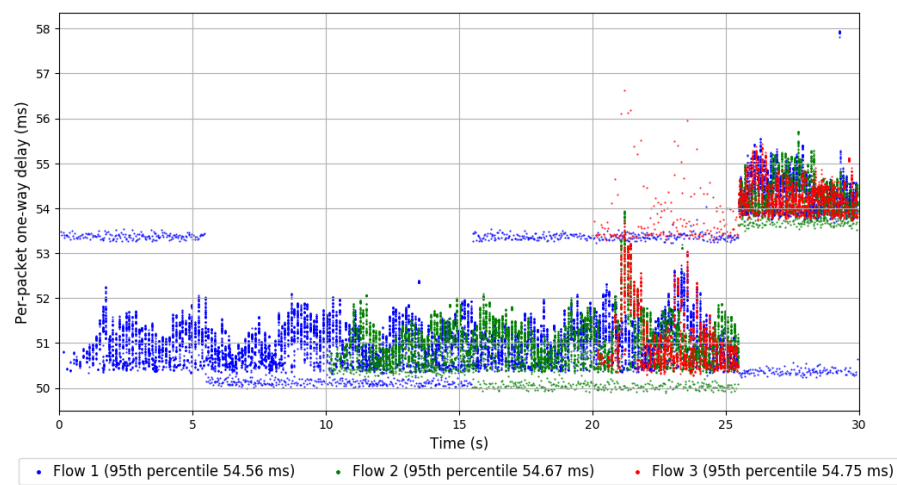
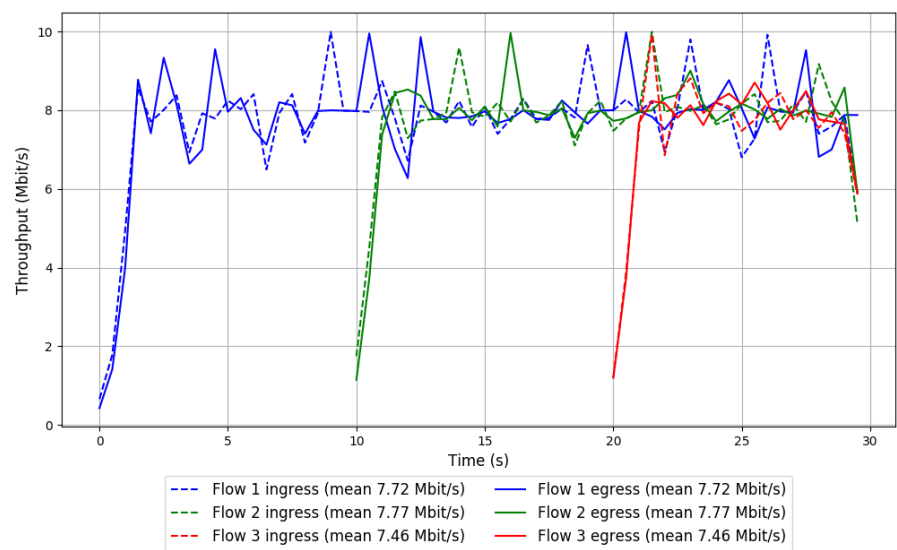
-- Flow 3:

Average throughput: 7.46 Mbit/s

95th percentile per-packet one-way delay: 54.746 ms

Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-02-17 13:29:19

End at: 2018-02-17 13:29:49

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.45 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.83 Mbit/s

95th percentile per-packet one-way delay: 54.697 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.66 Mbit/s

95th percentile per-packet one-way delay: 51.872 ms

Loss rate: 0.00%

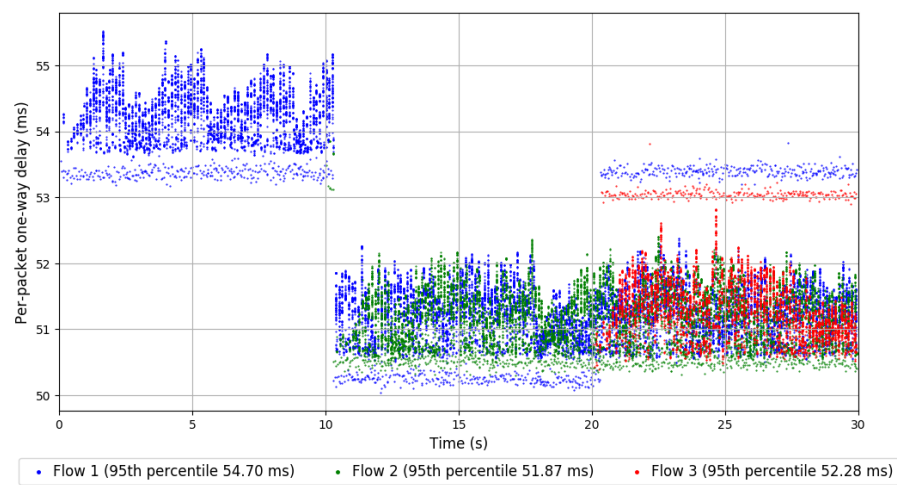
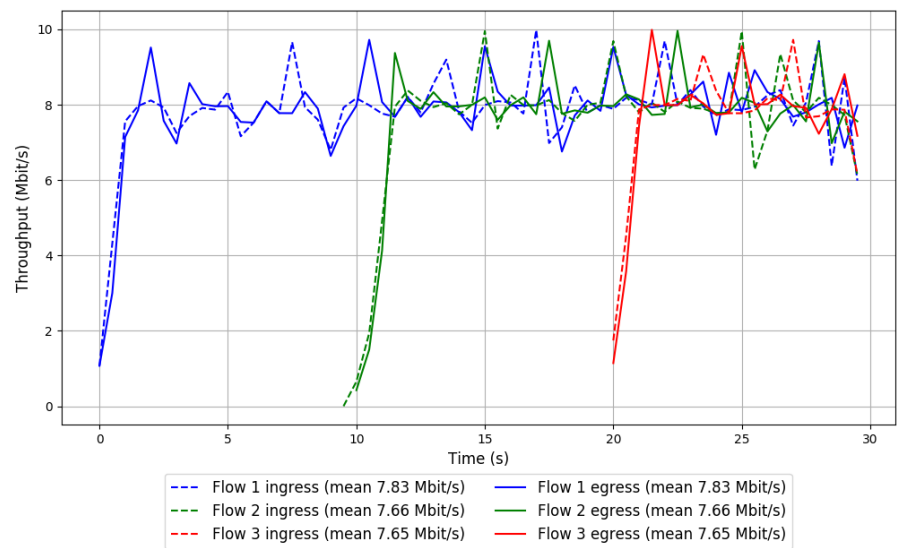
-- Flow 3:

Average throughput: 7.65 Mbit/s

95th percentile per-packet one-way delay: 52.284 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-02-17 13:47:18

End at: 2018-02-17 13:47:48

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.50 Mbit/s

95th percentile per-packet one-way delay: 55.032 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.88 Mbit/s

95th percentile per-packet one-way delay: 55.086 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.77 Mbit/s

95th percentile per-packet one-way delay: 54.891 ms

Loss rate: 0.00%

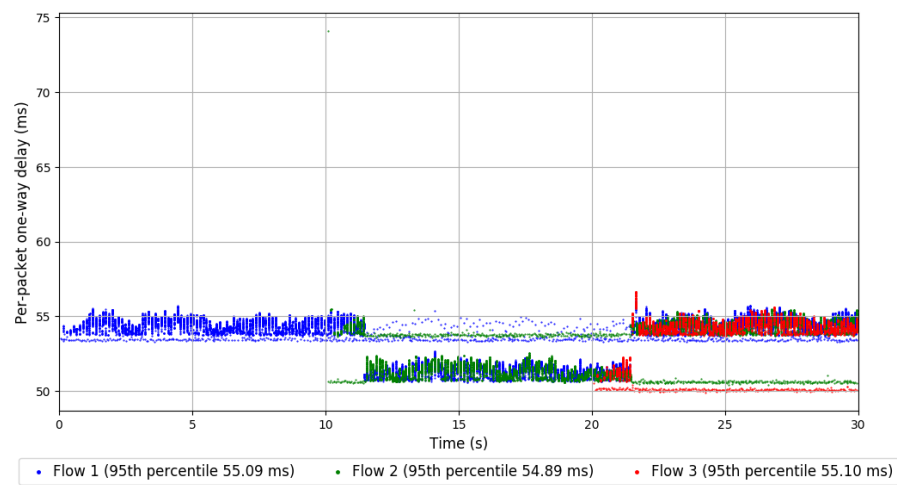
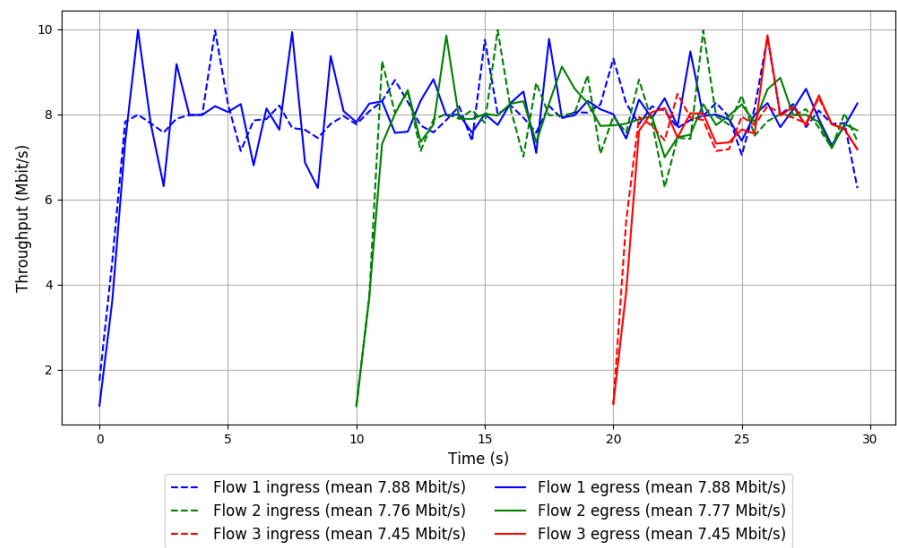
-- Flow 3:

Average throughput: 7.45 Mbit/s

95th percentile per-packet one-way delay: 55.097 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-02-17 14:05:02

End at: 2018-02-17 14:05:32

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.55 Mbit/s

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

Loss rate: 0.03%

-- Flow 1:

Average throughput: 7.97 Mbit/s

95th percentile per-packet one-way delay: 54.421 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.75 Mbit/s

95th percentile per-packet one-way delay: 54.274 ms

Loss rate: 0.00%

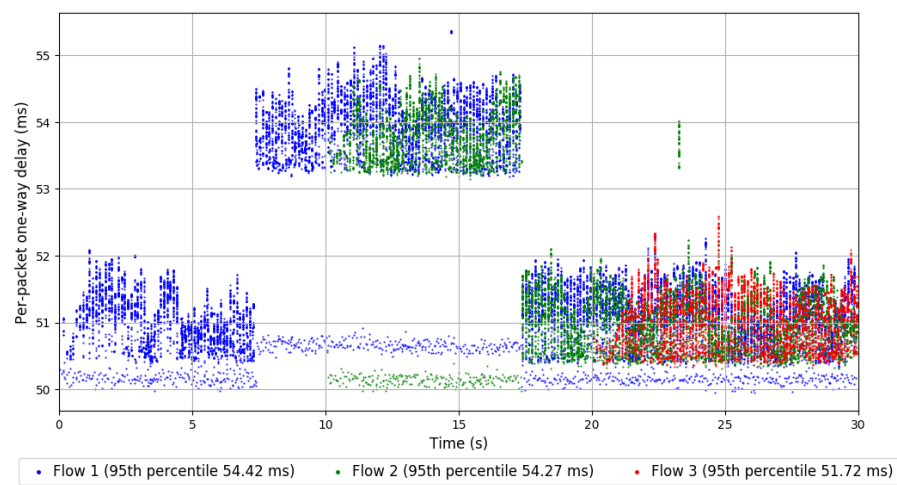
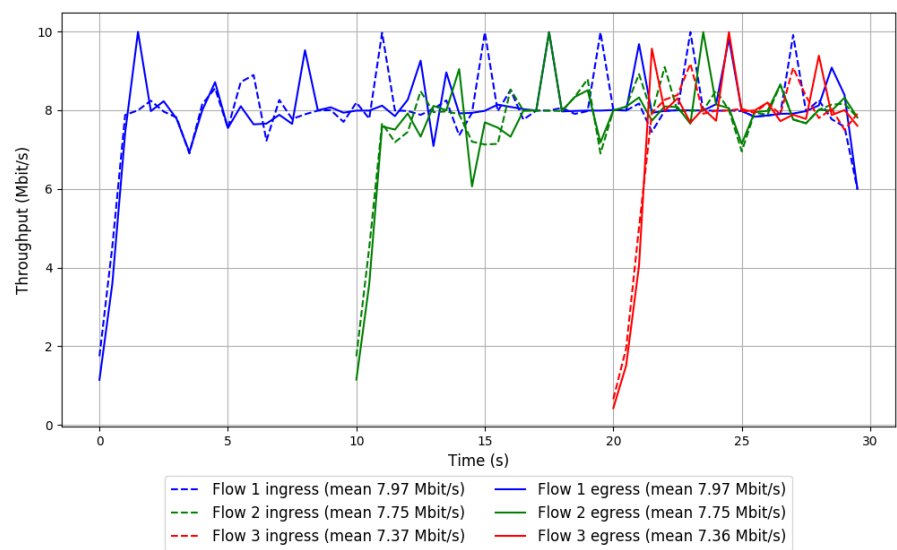
-- Flow 3:

Average throughput: 7.36 Mbit/s

95th percentile per-packet one-way delay: 51.721 ms

Loss rate: 0.21%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-02-17 14:22:45

End at: 2018-02-17 14:23:15

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.24 Mbit/s

95th percentile per-packet one-way delay: 54.177 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.73 Mbit/s

95th percentile per-packet one-way delay: 54.677 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.52 Mbit/s

95th percentile per-packet one-way delay: 52.434 ms

Loss rate: 0.00%

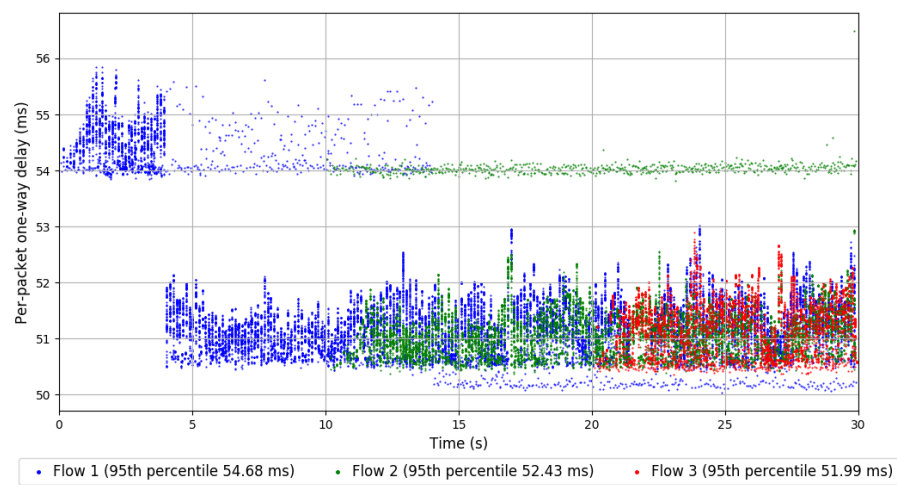
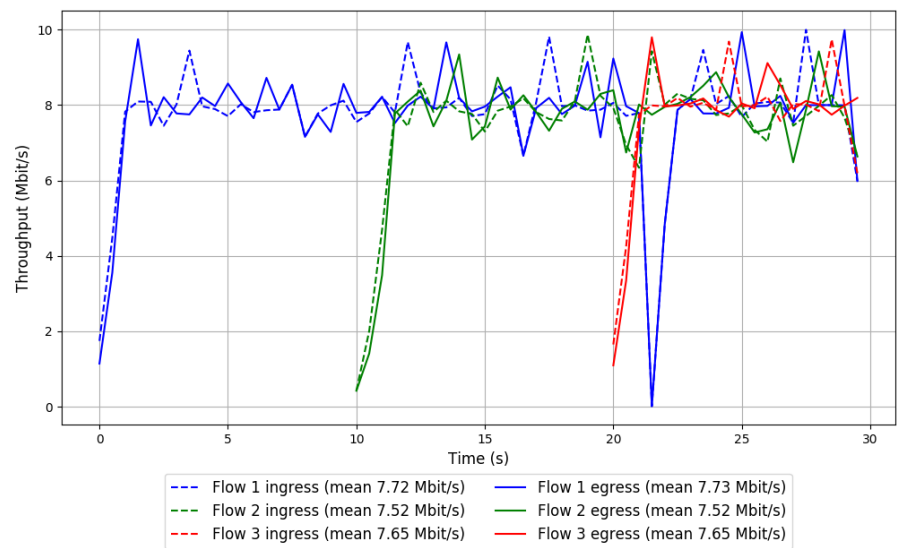
-- Flow 3:

Average throughput: 7.65 Mbit/s

95th percentile per-packet one-way delay: 51.994 ms

Loss rate: 0.00%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-02-17 14:41:14

End at: 2018-02-17 14:41:44

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.35 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.85 Mbit/s

95th percentile per-packet one-way delay: 55.145 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.57 Mbit/s

95th percentile per-packet one-way delay: 54.881 ms

Loss rate: 0.00%

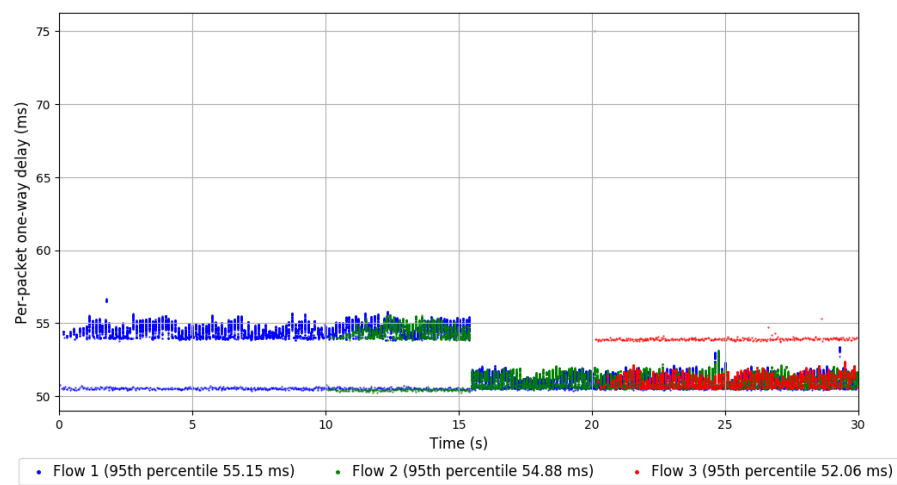
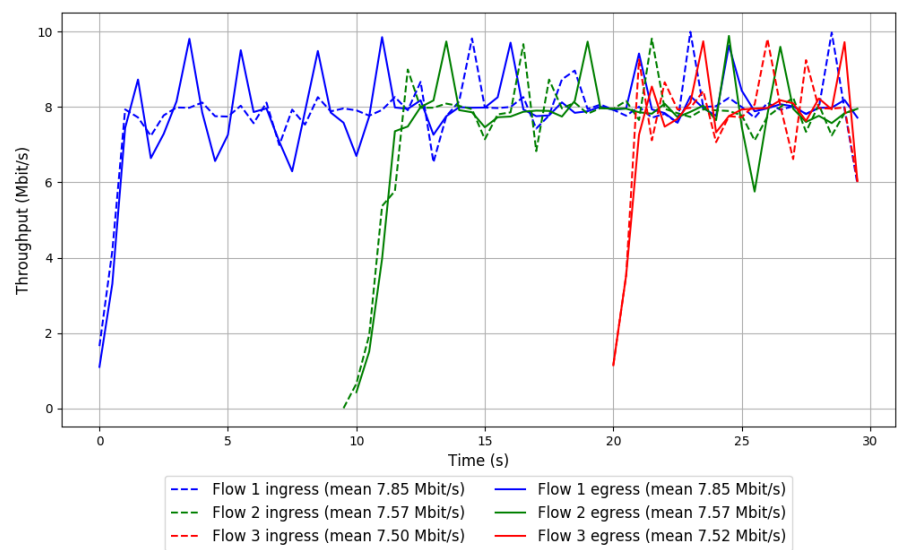
-- Flow 3:

Average throughput: 7.52 Mbit/s

95th percentile per-packet one-way delay: 52.058 ms

Loss rate: 0.00%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-02-17 14:58:46

End at: 2018-02-17 14:59:16

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.32 Mbit/s

95th percentile per-packet one-way delay: 54.696 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.90 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.45 Mbit/s

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

Loss rate: 0.00%

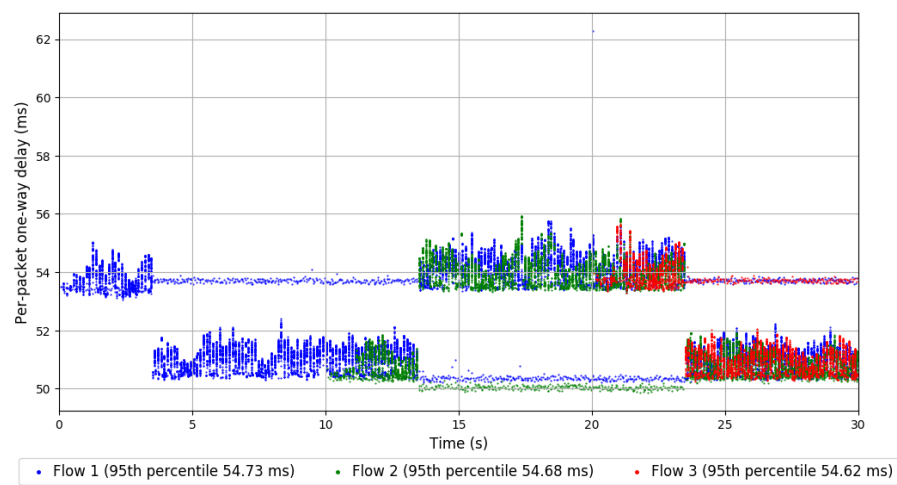
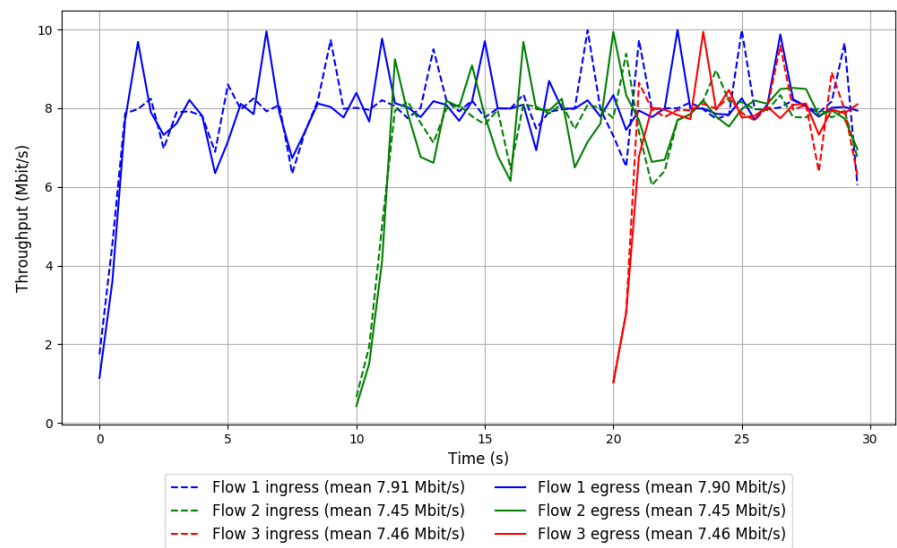
-- Flow 3:

Average throughput: 7.46 Mbit/s

95th percentile per-packet one-way delay: 54.620 ms

Loss rate: 0.00%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-02-17 15:16:41

End at: 2018-02-17 15:17:11

Below is generated by plot.py at 2018-02-17 18:42:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.09 Mbit/s

95th percentile per-packet one-way delay: 54.512 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 7.52 Mbit/s

95th percentile per-packet one-way delay: 54.516 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.65 Mbit/s

95th percentile per-packet one-way delay: 54.533 ms

Loss rate: 0.00%

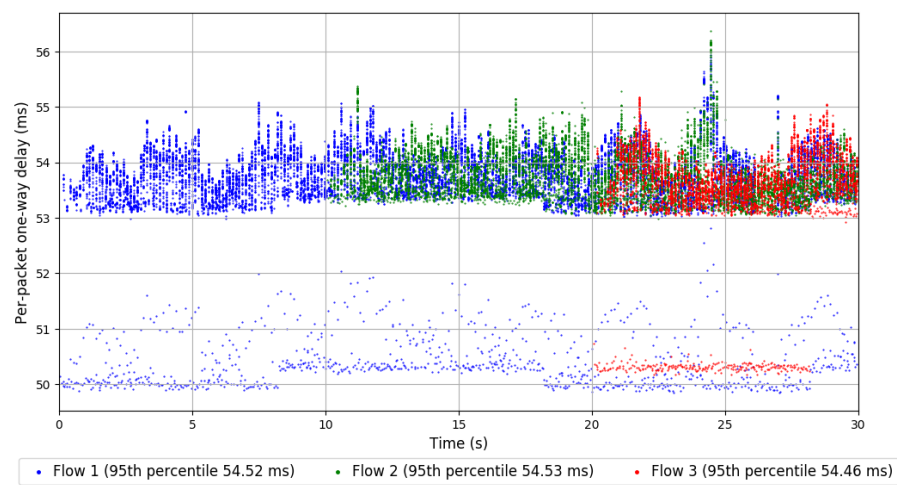
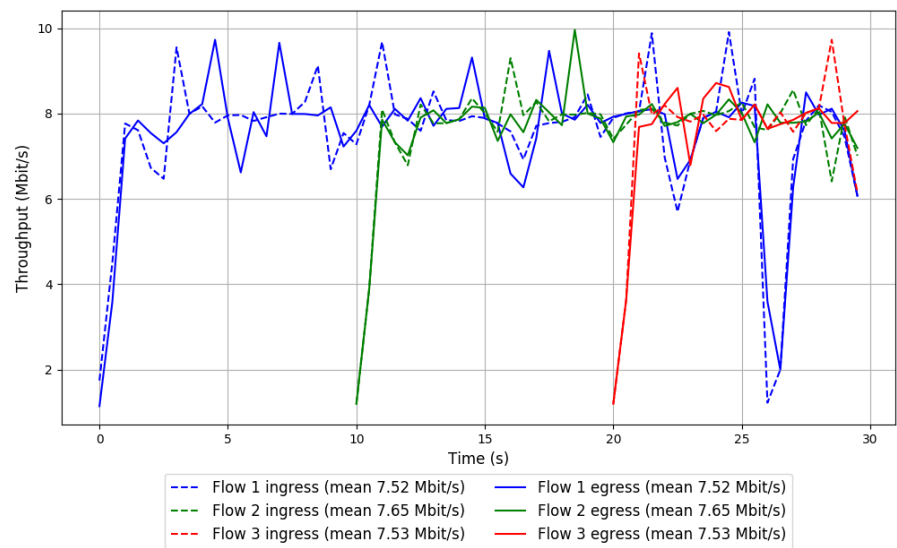
-- Flow 3:

Average throughput: 7.53 Mbit/s

95th percentile per-packet one-way delay: 54.463 ms

Loss rate: 0.00%

Run 10: Report of Sprout — Data Link

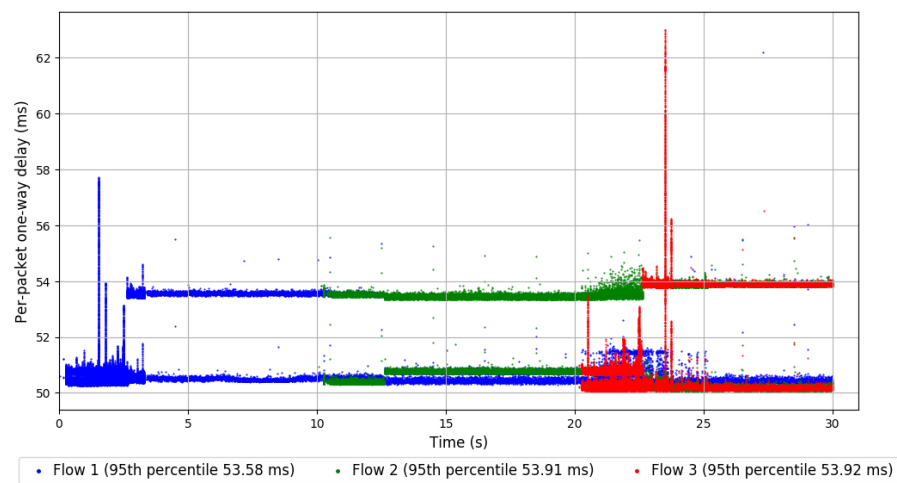
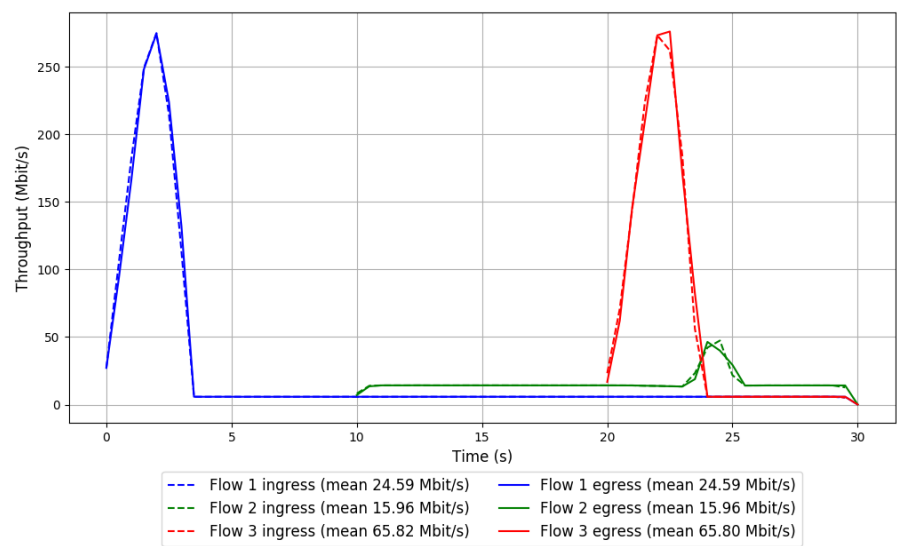


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-02-17 12:39:37
End at: 2018-02-17 12:40:07

# Below is generated by plot.py at 2018-02-17 18:42:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.03 Mbit/s
95th percentile per-packet one-way delay: 53.895 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.59 Mbit/s
95th percentile per-packet one-way delay: 53.581 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.96 Mbit/s
95th percentile per-packet one-way delay: 53.913 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 65.80 Mbit/s
95th percentile per-packet one-way delay: 53.918 ms
Loss rate: 0.00%
```


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

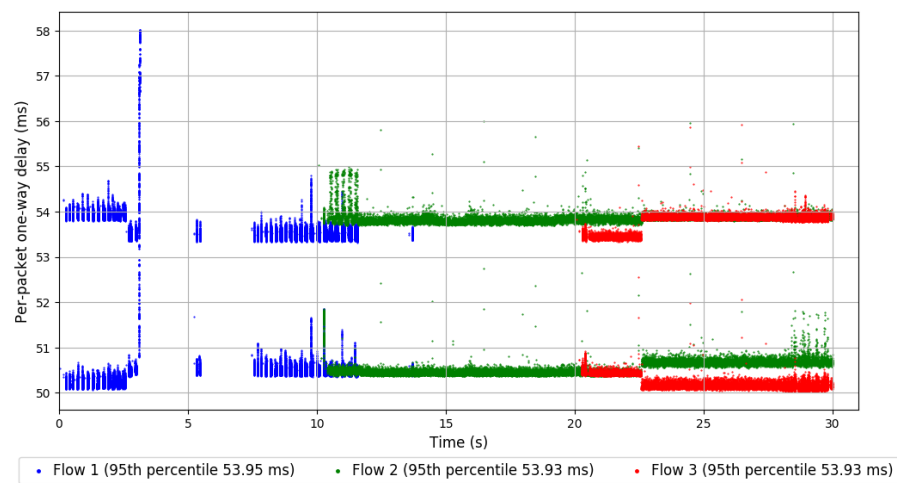
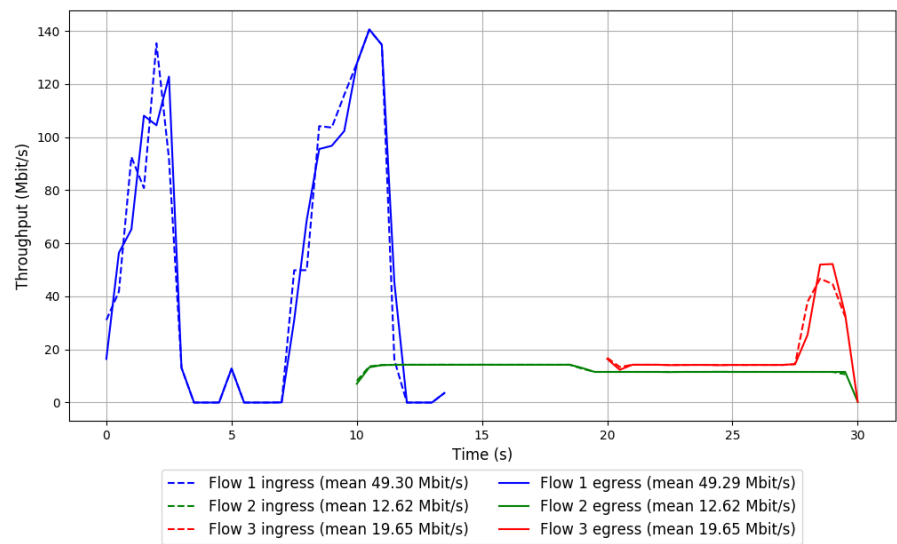


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-02-17 12:57:17
End at: 2018-02-17 12:57:47

# Below is generated by plot.py at 2018-02-17 18:42:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.37 Mbit/s
95th percentile per-packet one-way delay: 53.938 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.29 Mbit/s
95th percentile per-packet one-way delay: 53.946 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 12.62 Mbit/s
95th percentile per-packet one-way delay: 53.927 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.65 Mbit/s
95th percentile per-packet one-way delay: 53.928 ms
Loss rate: 0.00%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-02-17 13:15:24

End at: 2018-02-17 13:15:54

Below is generated by plot.py at 2018-02-17 18:44:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 246.69 Mbit/s

95th percentile per-packet one-way delay: 53.779 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 234.25 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 41.09 Mbit/s

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

Loss rate: 0.01%

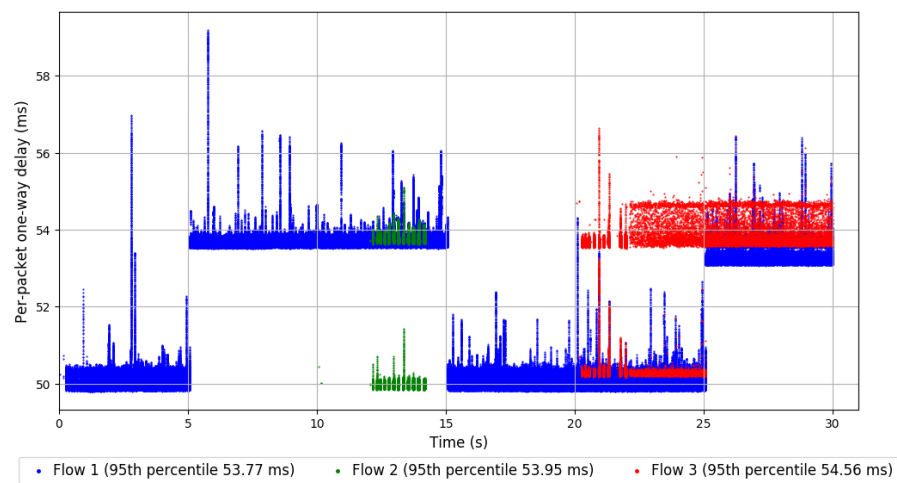
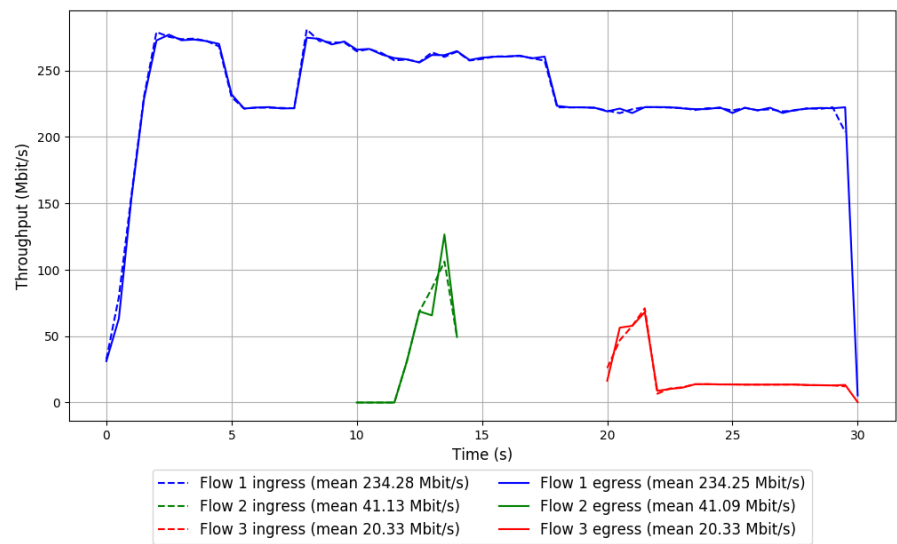
-- Flow 3:

Average throughput: 20.33 Mbit/s

95th percentile per-packet one-way delay: 54.561 ms

Loss rate: 0.00%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-02-17 13:33:49

End at: 2018-02-17 13:34:19

Below is generated by plot.py at 2018-02-17 18:44:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 239.55 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 217.78 Mbit/s

95th percentile per-packet one-way delay: 53.669 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 11.51 Mbit/s

95th percentile per-packet one-way delay: 53.710 ms

Loss rate: 0.00%

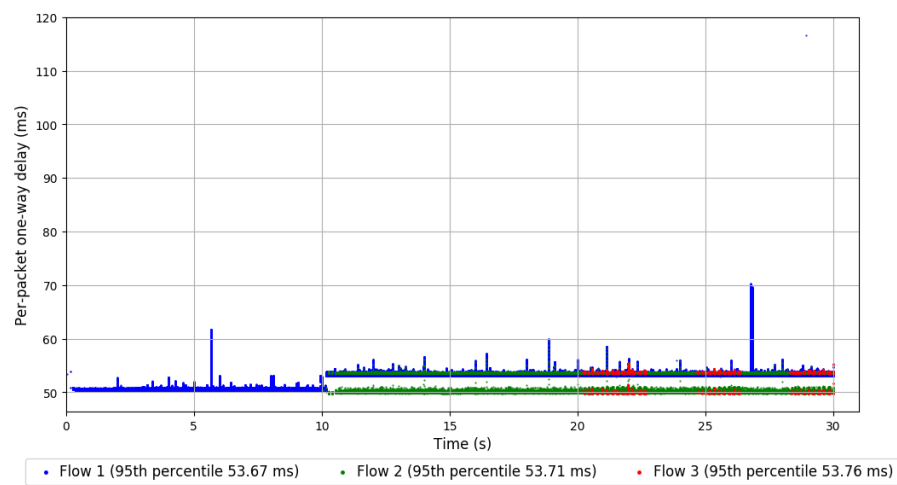
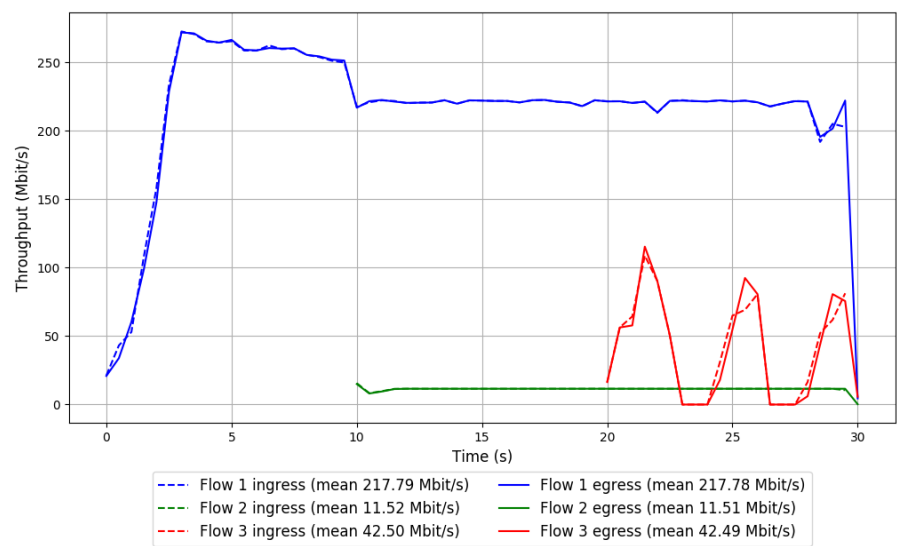
-- Flow 3:

Average throughput: 42.49 Mbit/s

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

Loss rate: 0.00%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-02-17 13:51:35

End at: 2018-02-17 13:52:05

Below is generated by plot.py at 2018-02-17 18:44:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 188.72 Mbit/s

95th percentile per-packet one-way delay: 54.017 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 189.08 Mbit/s

95th percentile per-packet one-way delay: 53.397 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 208.84 Mbit/s

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

Loss rate: 0.00%

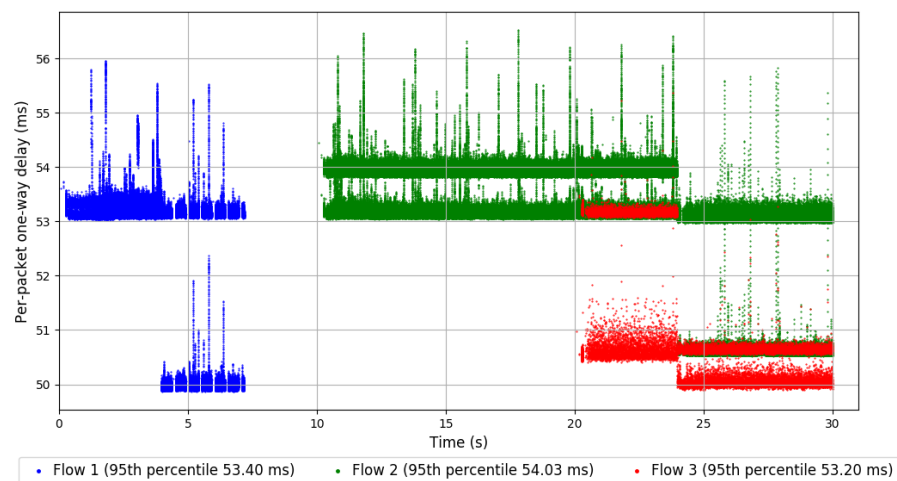
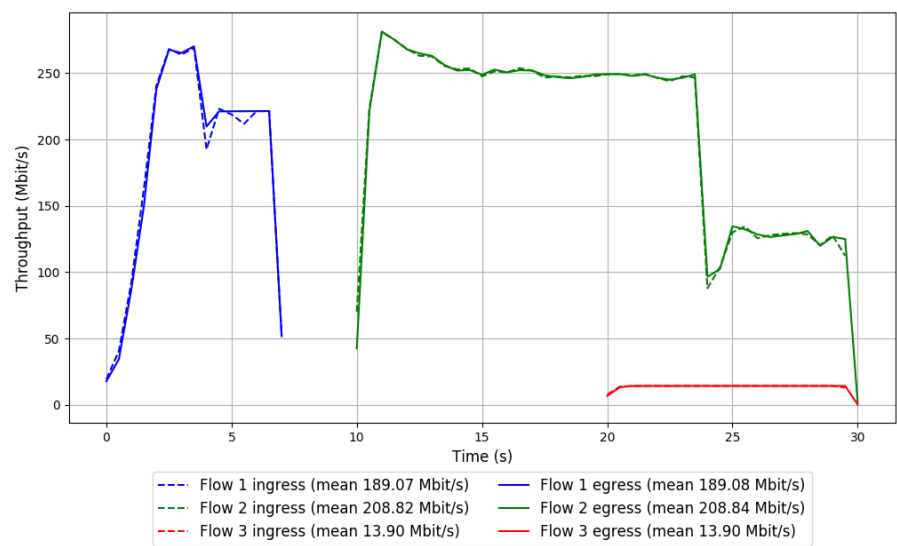
-- Flow 3:

Average throughput: 13.90 Mbit/s

95th percentile per-packet one-way delay: 53.202 ms

Loss rate: 0.00%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-02-17 14:09:27

End at: 2018-02-17 14:09:57

Below is generated by plot.py at 2018-02-17 18:44:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 168.97 Mbit/s

95th percentile per-packet one-way delay: 53.707 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 128.37 Mbit/s

95th percentile per-packet one-way delay: 50.836 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 19.70 Mbit/s

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

Loss rate: 0.00%

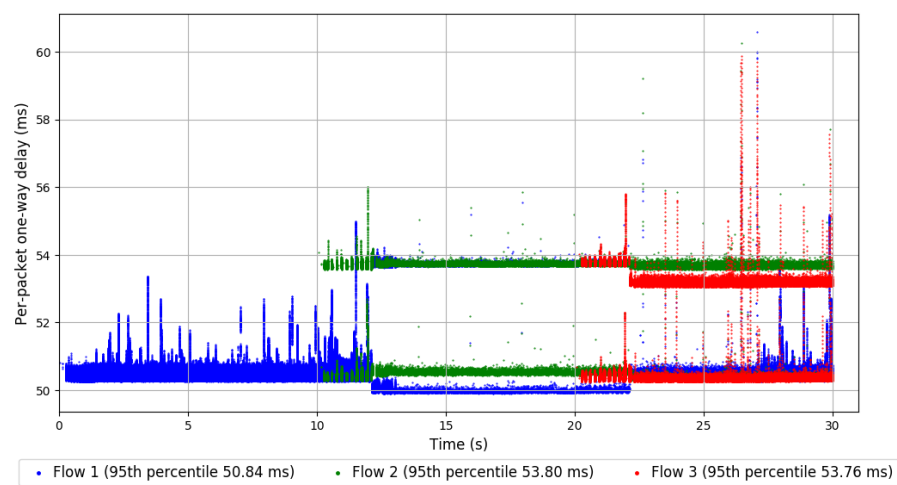
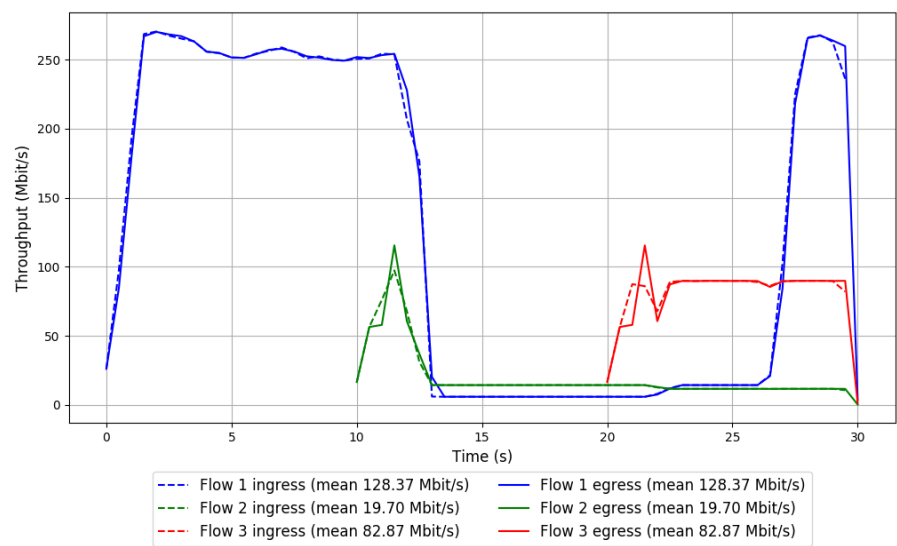
-- Flow 3:

Average throughput: 82.87 Mbit/s

95th percentile per-packet one-way delay: 53.762 ms

Loss rate: 0.00%

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

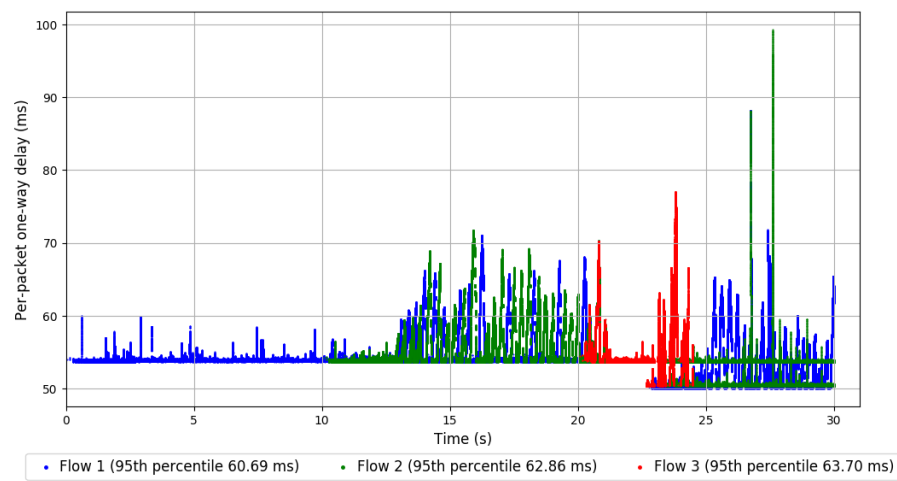
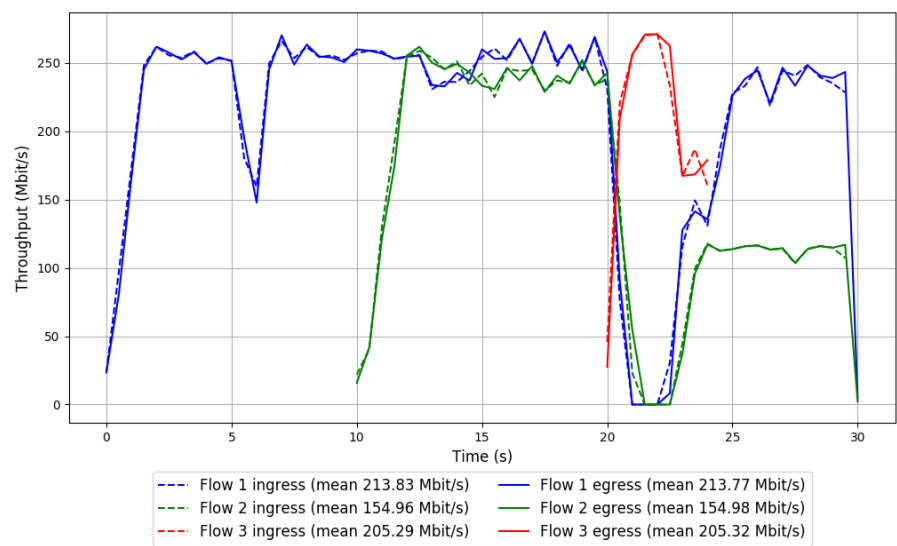


```
Run 7: Statistics of TaoVA-100x

Start at: 2018-02-17 14:27:37
End at: 2018-02-17 14:28:07

# Below is generated by plot.py at 2018-02-17 18:49:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 347.21 Mbit/s
95th percentile per-packet one-way delay: 61.782 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 213.77 Mbit/s
95th percentile per-packet one-way delay: 60.686 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 154.98 Mbit/s
95th percentile per-packet one-way delay: 62.857 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 205.32 Mbit/s
95th percentile per-packet one-way delay: 63.698 ms
Loss rate: 0.00%
```

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-02-17 14:45:34

End at: 2018-02-17 14:46:04

Below is generated by plot.py at 2018-02-17 18:49:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 51.03 Mbit/s

95th percentile per-packet one-way delay: 53.935 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 110.95 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 112.74 Mbit/s

95th percentile per-packet one-way delay: 53.959 ms

Loss rate: 0.00%

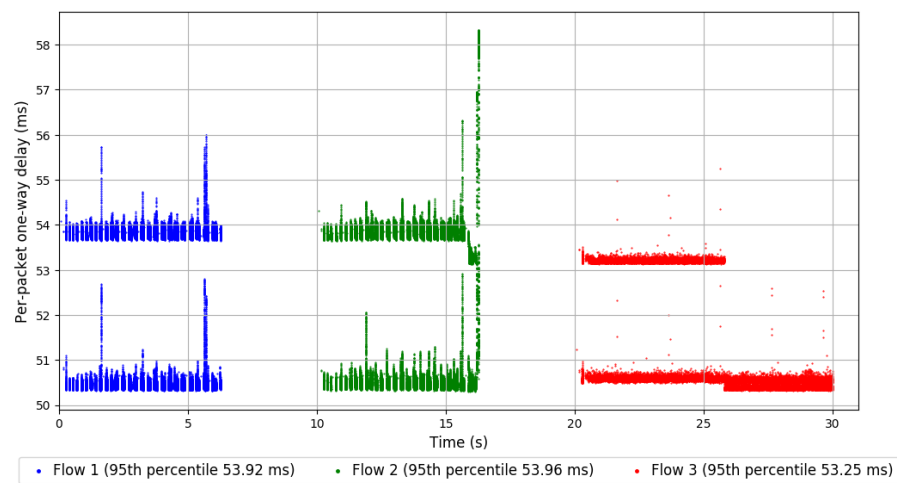
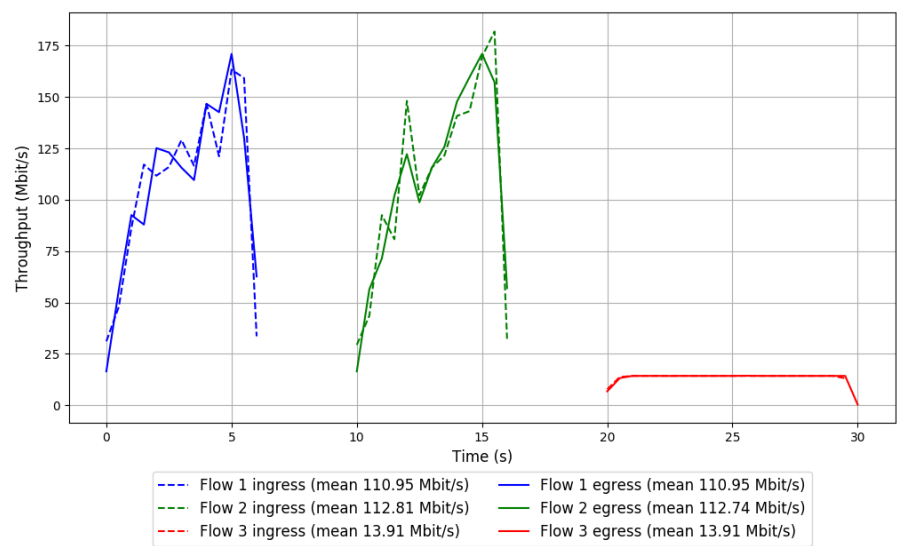
-- Flow 3:

Average throughput: 13.91 Mbit/s

95th percentile per-packet one-way delay: 53.251 ms

Loss rate: 0.00%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-02-17 15:03:27

End at: 2018-02-17 15:03:57

Below is generated by plot.py at 2018-02-17 18:49:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 165.21 Mbit/s

95th percentile per-packet one-way delay: 55.380 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 26.47 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 99.84 Mbit/s

95th percentile per-packet one-way delay: 54.930 ms

Loss rate: 0.00%

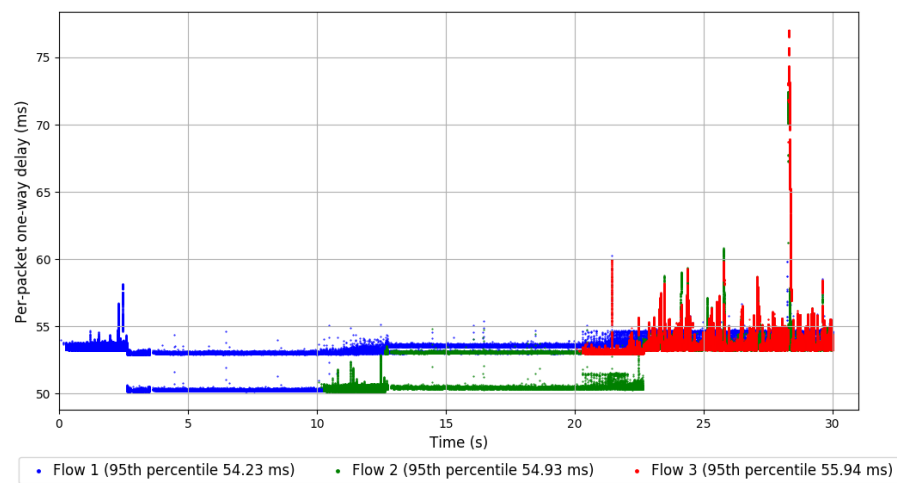
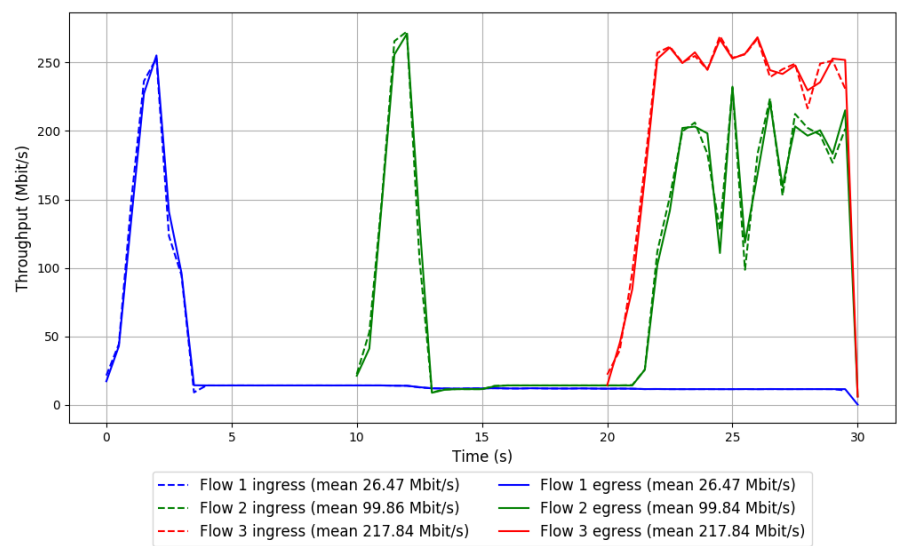
-- Flow 3:

Average throughput: 217.84 Mbit/s

95th percentile per-packet one-way delay: 55.939 ms

Loss rate: 0.00%

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

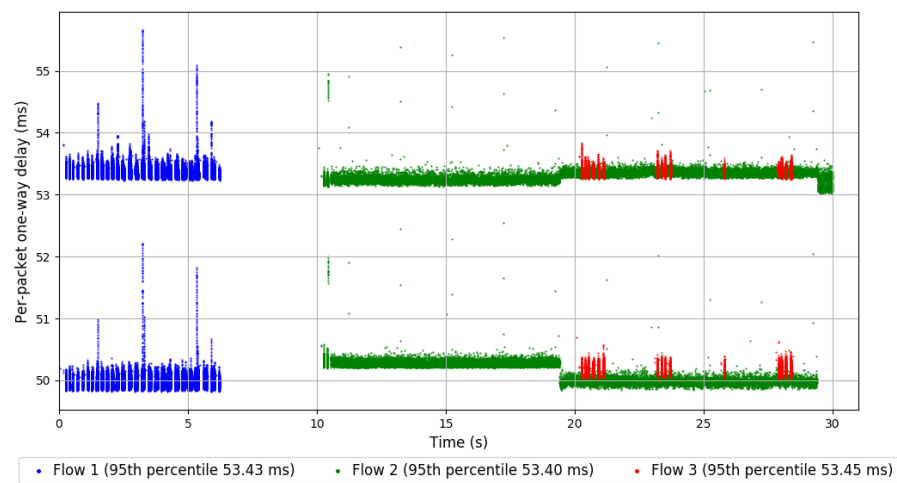
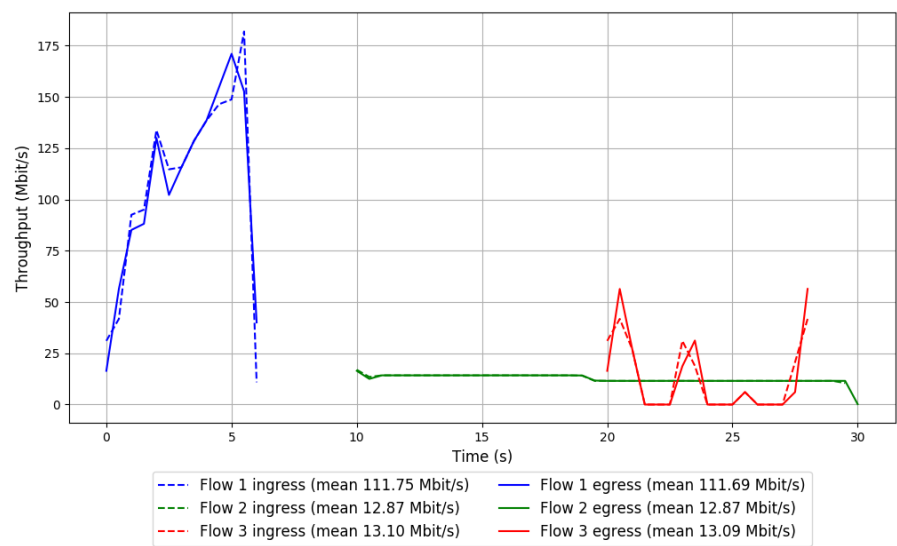


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-02-17 15:21:10
End at: 2018-02-17 15:21:40

# Below is generated by plot.py at 2018-02-17 18:49:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.24 Mbit/s
95th percentile per-packet one-way delay: 53.425 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 111.69 Mbit/s
95th percentile per-packet one-way delay: 53.429 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 12.87 Mbit/s
95th percentile per-packet one-way delay: 53.398 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.09 Mbit/s
95th percentile per-packet one-way delay: 53.453 ms
Loss rate: 0.00%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-02-17 12:36:58

End at: 2018-02-17 12:37:28

Below is generated by plot.py at 2018-02-17 18:49:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 221.59 Mbit/s

95th percentile per-packet one-way delay: 56.800 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 103.77 Mbit/s

95th percentile per-packet one-way delay: 57.814 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 148.24 Mbit/s

95th percentile per-packet one-way delay: 54.399 ms

Loss rate: 0.00%

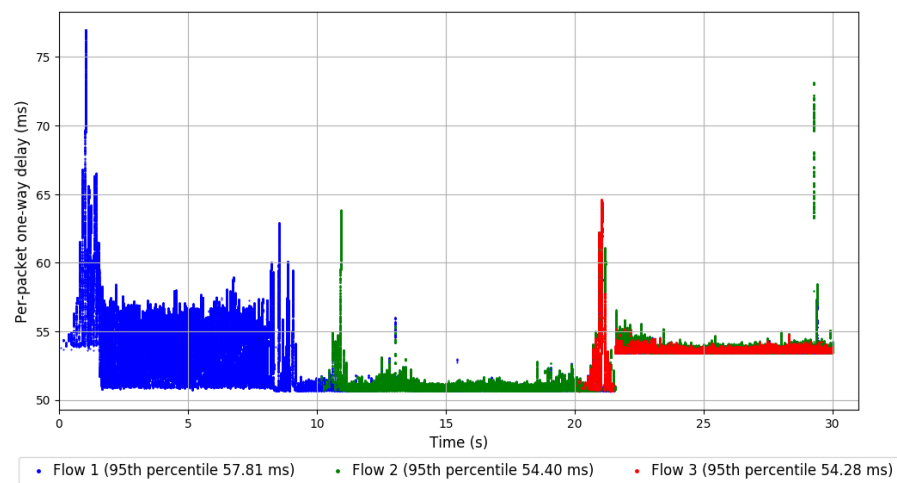
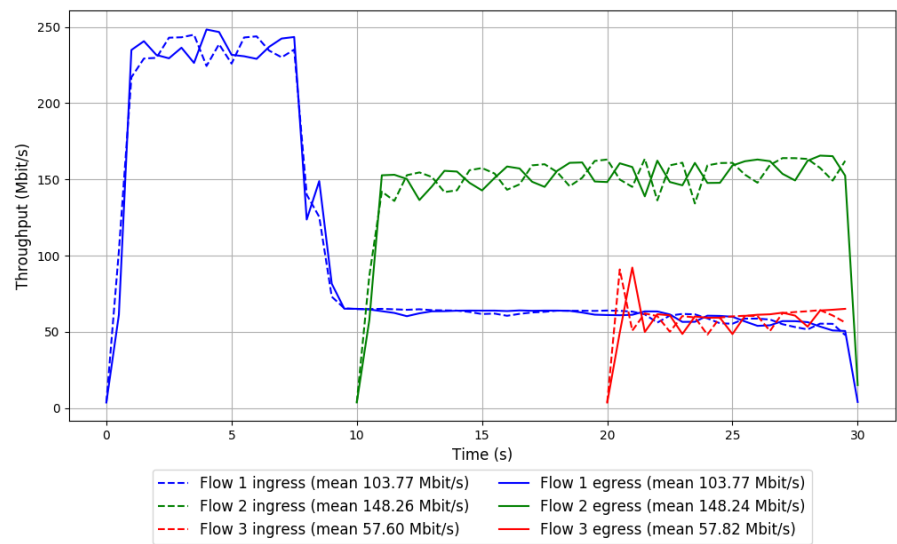
-- Flow 3:

Average throughput: 57.82 Mbit/s

95th percentile per-packet one-way delay: 54.276 ms

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-02-17 12:54:27

End at: 2018-02-17 12:54:57

Below is generated by plot.py at 2018-02-17 18:49:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 218.01 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 81.18 Mbit/s

95th percentile per-packet one-way delay: 54.797 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 135.47 Mbit/s

95th percentile per-packet one-way delay: 54.737 ms

Loss rate: 0.00%

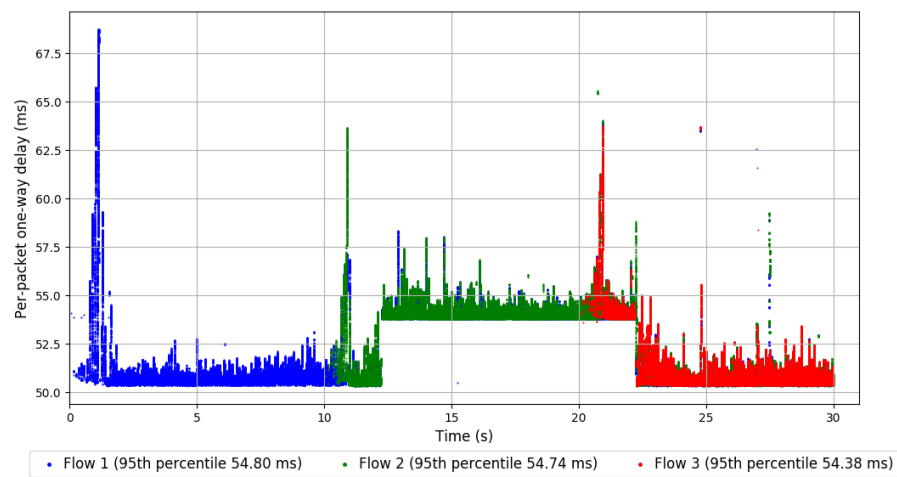
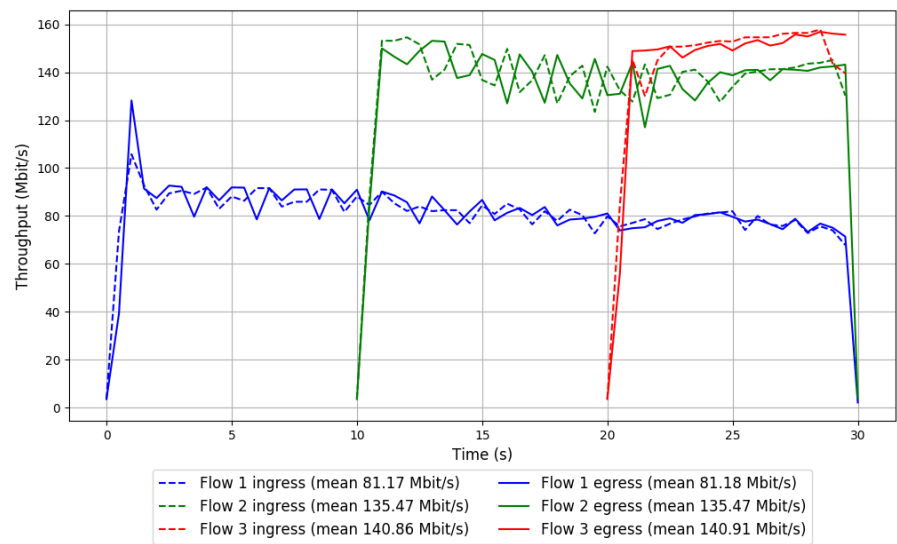
-- Flow 3:

Average throughput: 140.91 Mbit/s

95th percentile per-packet one-way delay: 54.384 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-02-17 13:12:19

End at: 2018-02-17 13:12:49

Below is generated by plot.py at 2018-02-17 18:49:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 202.98 Mbit/s

95th percentile per-packet one-way delay: 55.161 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 117.06 Mbit/s

95th percentile per-packet one-way delay: 53.933 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 93.89 Mbit/s

95th percentile per-packet one-way delay: 55.698 ms

Loss rate: 0.00%

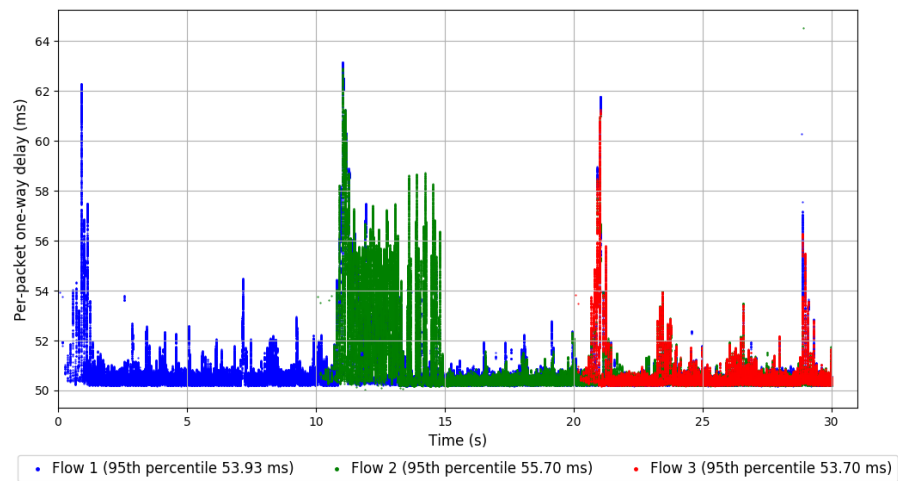
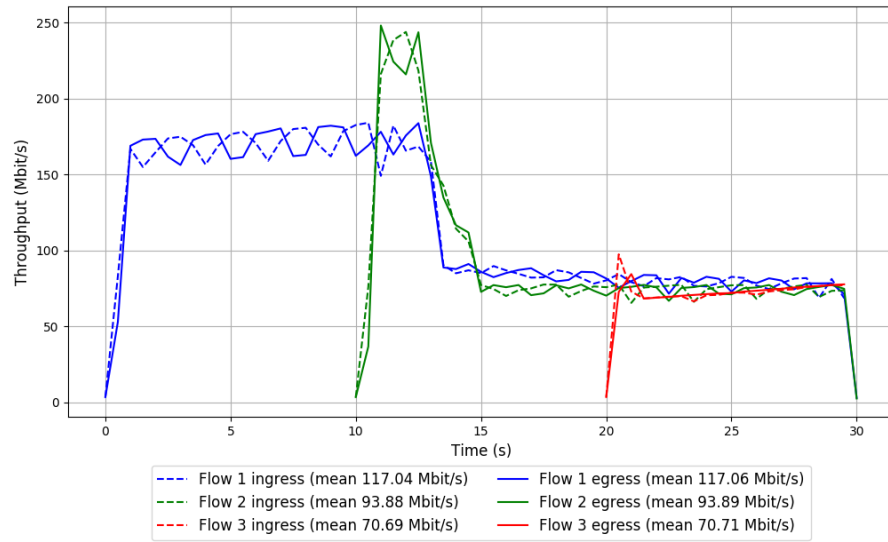
-- Flow 3:

Average throughput: 70.71 Mbit/s

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

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-02-17 13:31:03

End at: 2018-02-17 13:31:33

Below is generated by plot.py at 2018-02-17 18:49:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 221.85 Mbit/s

95th percentile per-packet one-way delay: 60.719 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 81.78 Mbit/s

95th percentile per-packet one-way delay: 61.335 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 208.30 Mbit/s

95th percentile per-packet one-way delay: 60.404 ms

Loss rate: 0.00%

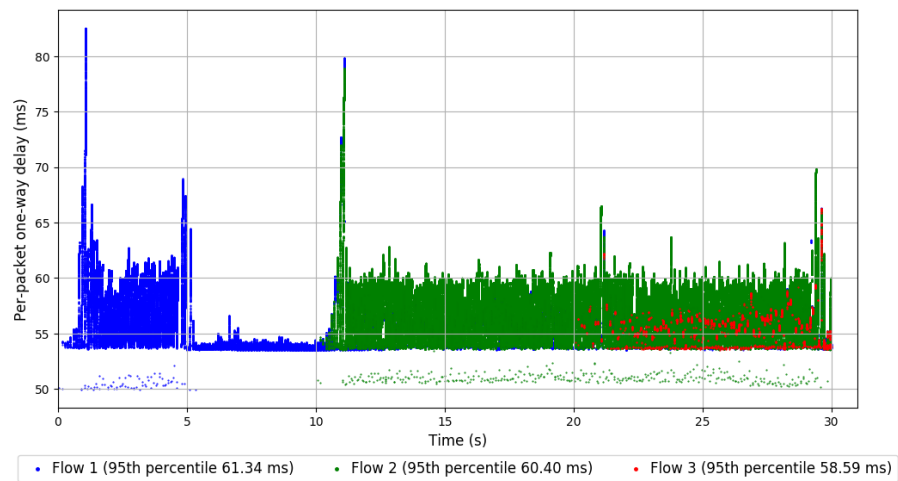
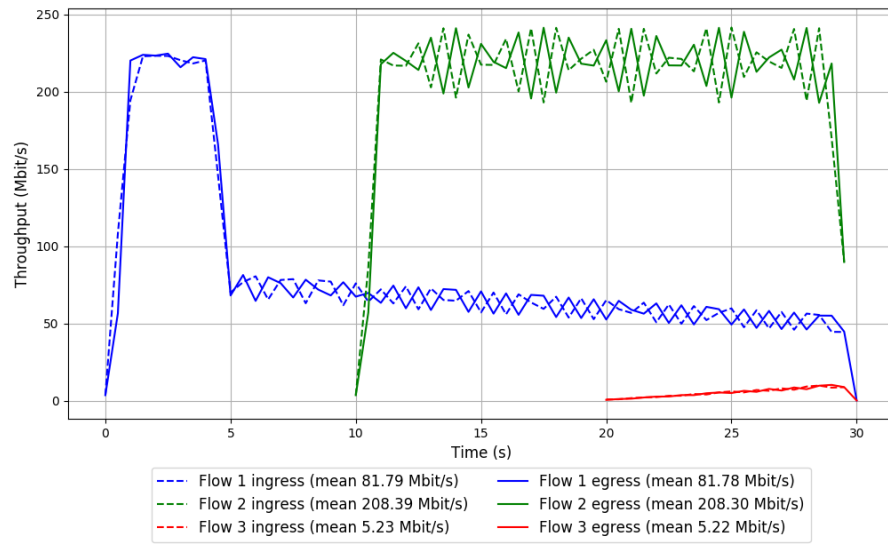
-- Flow 3:

Average throughput: 5.22 Mbit/s

95th percentile per-packet one-way delay: 58.590 ms

Loss rate: 0.12%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-02-17 13:49:02

End at: 2018-02-17 13:49:32

Below is generated by plot.py at 2018-02-17 18:49:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 118.30 Mbit/s

95th percentile per-packet one-way delay: 59.930 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 27.95 Mbit/s

95th percentile per-packet one-way delay: 56.018 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 34.14 Mbit/s

95th percentile per-packet one-way delay: 56.380 ms

Loss rate: 0.00%

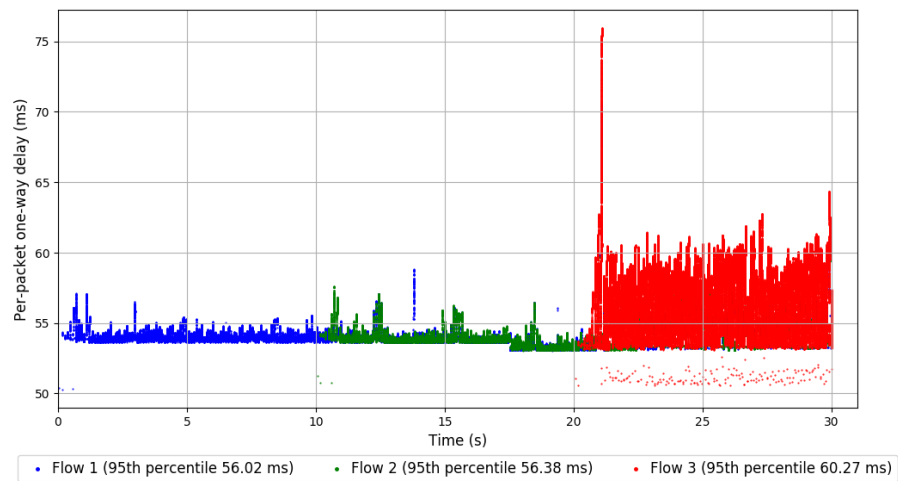
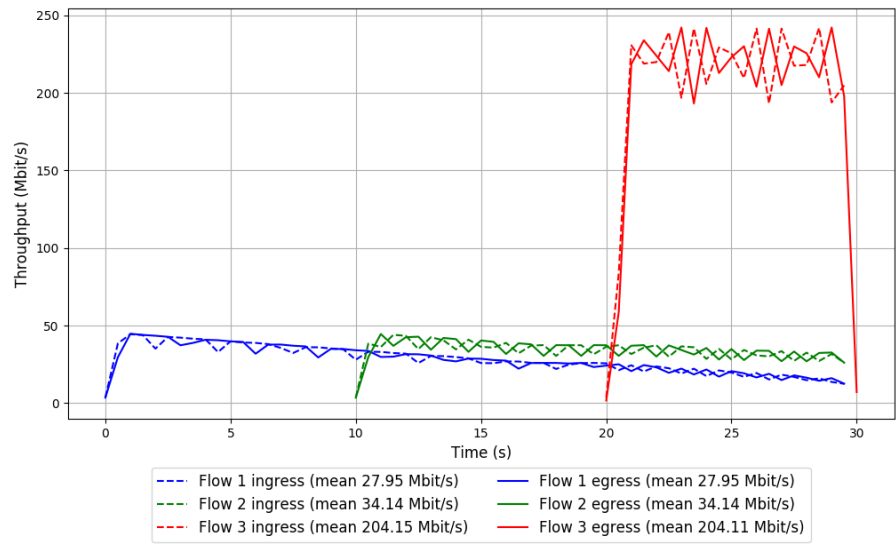
-- Flow 3:

Average throughput: 204.11 Mbit/s

95th percentile per-packet one-way delay: 60.268 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-02-17 14:06:45

End at: 2018-02-17 14:07:15

Below is generated by plot.py at 2018-02-17 18:49:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 250.71 Mbit/s

95th percentile per-packet one-way delay: 59.968 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 223.14 Mbit/s

95th percentile per-packet one-way delay: 59.864 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 4.98 Mbit/s

95th percentile per-packet one-way delay: 57.407 ms

Loss rate: 0.12%

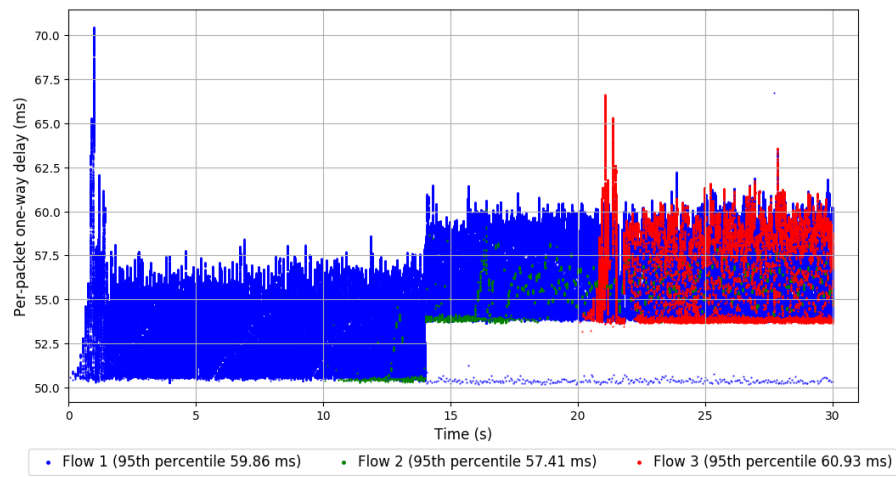
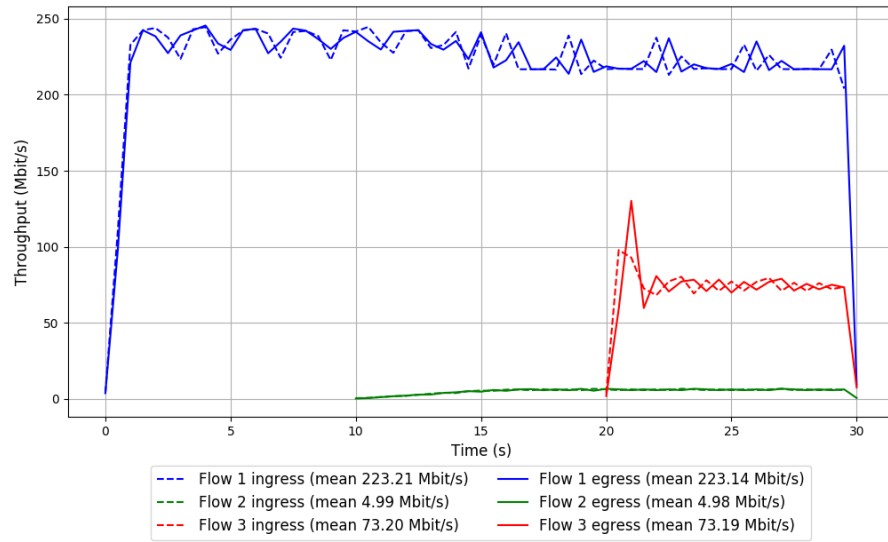
-- Flow 3:

Average throughput: 73.19 Mbit/s

95th percentile per-packet one-way delay: 60.929 ms

Loss rate: 0.00%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-02-17 14:24:28

End at: 2018-02-17 14:24:58

Below is generated by plot.py at 2018-02-17 18:49:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 114.85 Mbit/s

95th percentile per-packet one-way delay: 54.663 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 46.69 Mbit/s

95th percentile per-packet one-way delay: 54.570 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 68.83 Mbit/s

95th percentile per-packet one-way delay: 54.748 ms

Loss rate: 0.00%

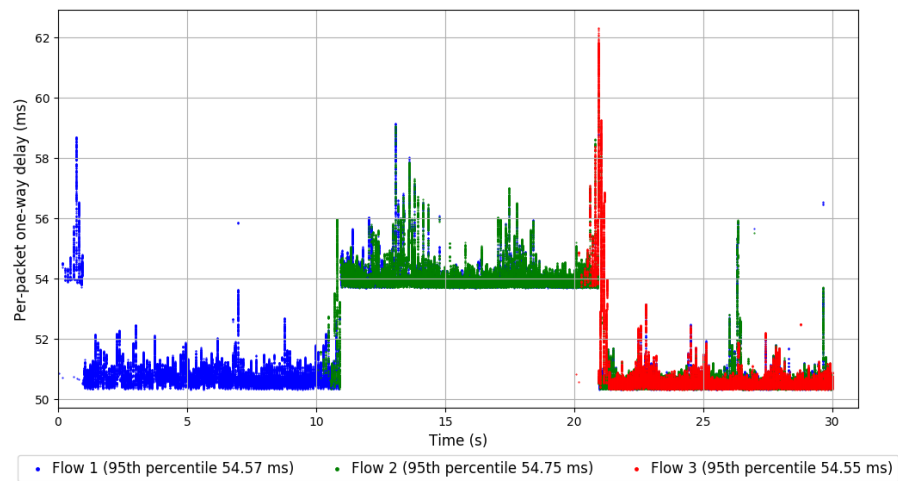
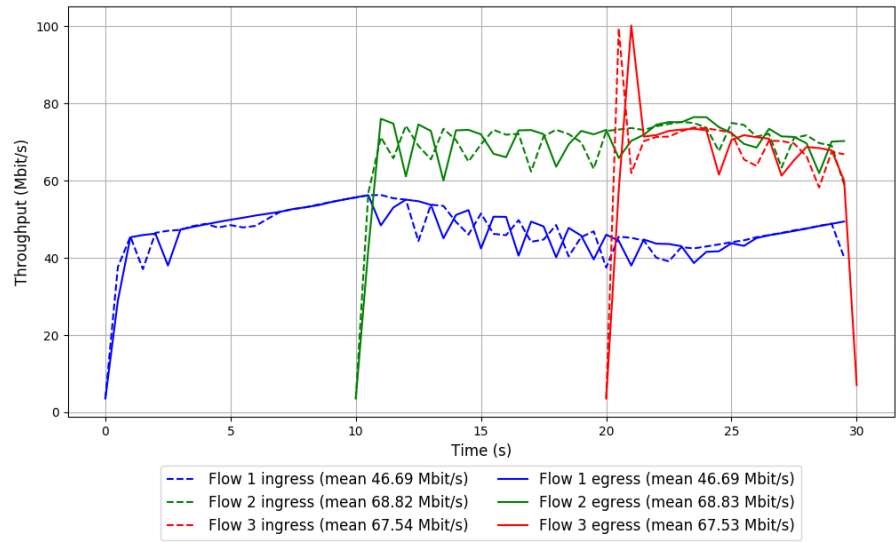
-- Flow 3:

Average throughput: 67.53 Mbit/s

95th percentile per-packet one-way delay: 54.554 ms

Loss rate: 0.01%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-02-17 14:42:56

End at: 2018-02-17 14:43:26

Below is generated by plot.py at 2018-02-17 18:49:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 201.00 Mbit/s

95th percentile per-packet one-way delay: 57.290 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 32.76 Mbit/s

95th percentile per-packet one-way delay: 54.744 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 219.41 Mbit/s

95th percentile per-packet one-way delay: 57.685 ms

Loss rate: 0.02%

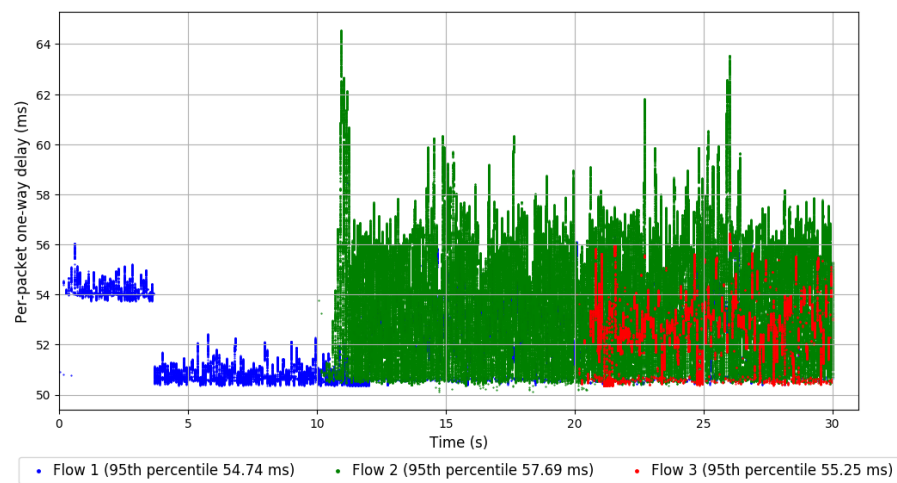
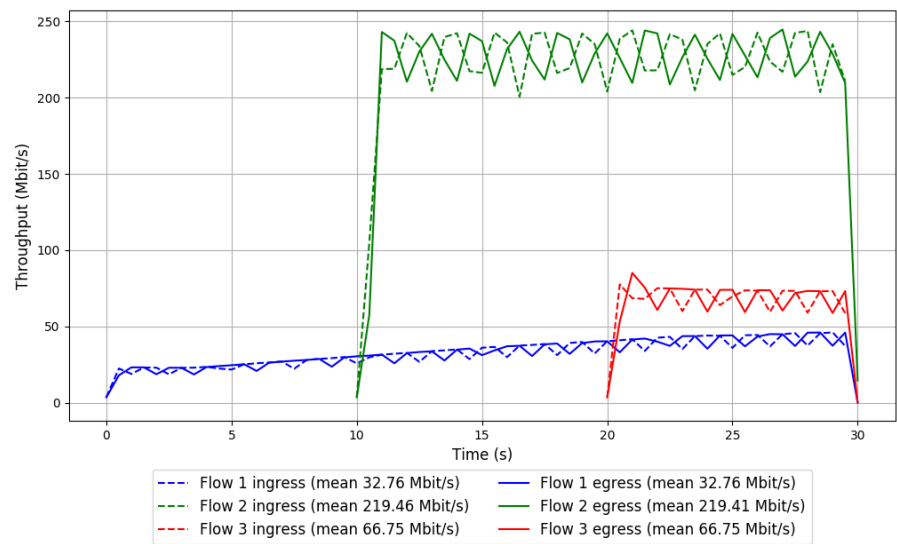
-- Flow 3:

Average throughput: 66.75 Mbit/s

95th percentile per-packet one-way delay: 55.252 ms

Loss rate: 0.00%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-02-17 15:00:29

End at: 2018-02-17 15:00:59

Below is generated by plot.py at 2018-02-17 18:49:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 158.77 Mbit/s

95th percentile per-packet one-way delay: 59.006 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 88.52 Mbit/s

95th percentile per-packet one-way delay: 59.902 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 70.34 Mbit/s

95th percentile per-packet one-way delay: 52.195 ms

Loss rate: 0.00%

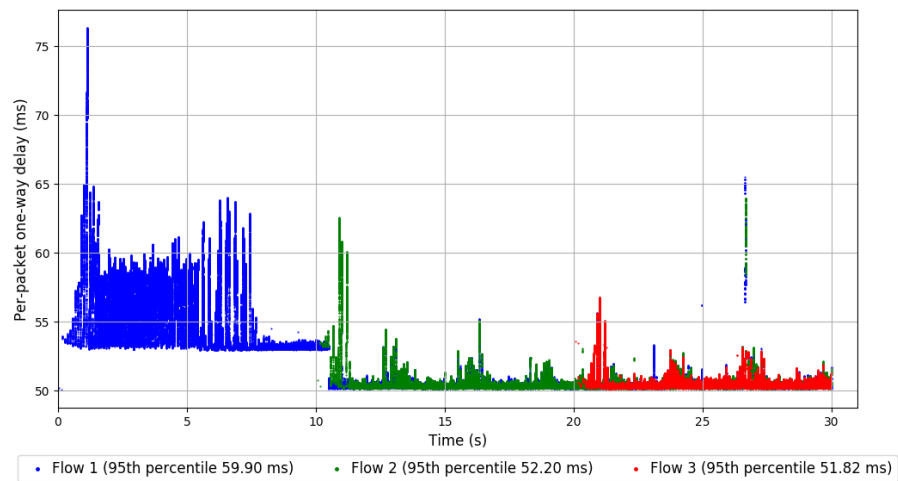
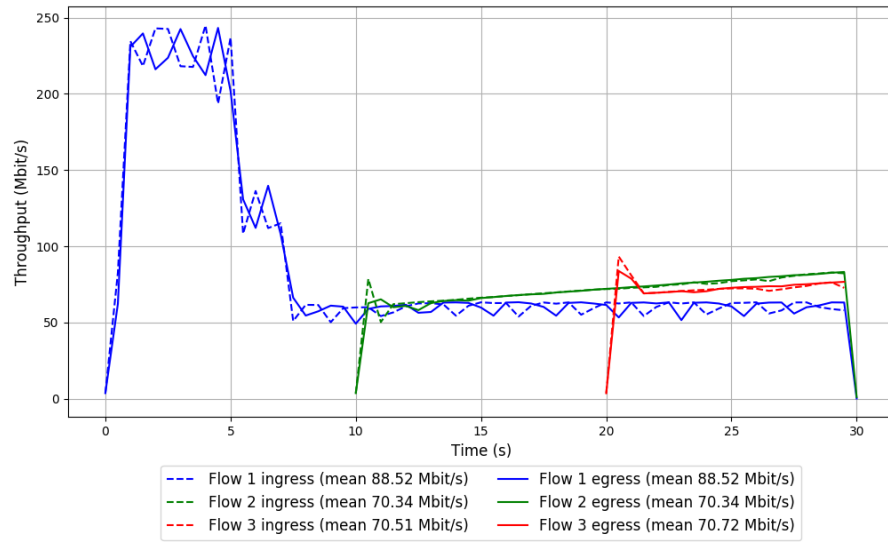
-- Flow 3:

Average throughput: 70.72 Mbit/s

95th percentile per-packet one-way delay: 51.820 ms

Loss rate: 0.00%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-02-17 15:18:26

End at: 2018-02-17 15:18:56

Below is generated by plot.py at 2018-02-17 18:50:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 251.73 Mbit/s

95th percentile per-packet one-way delay: 54.270 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 142.43 Mbit/s

95th percentile per-packet one-way delay: 54.053 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 130.52 Mbit/s

95th percentile per-packet one-way delay: 54.191 ms

Loss rate: 0.00%

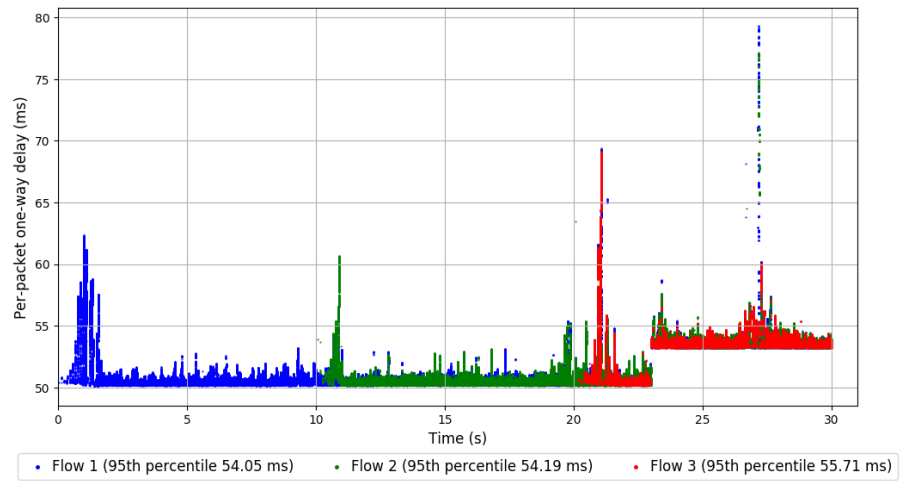
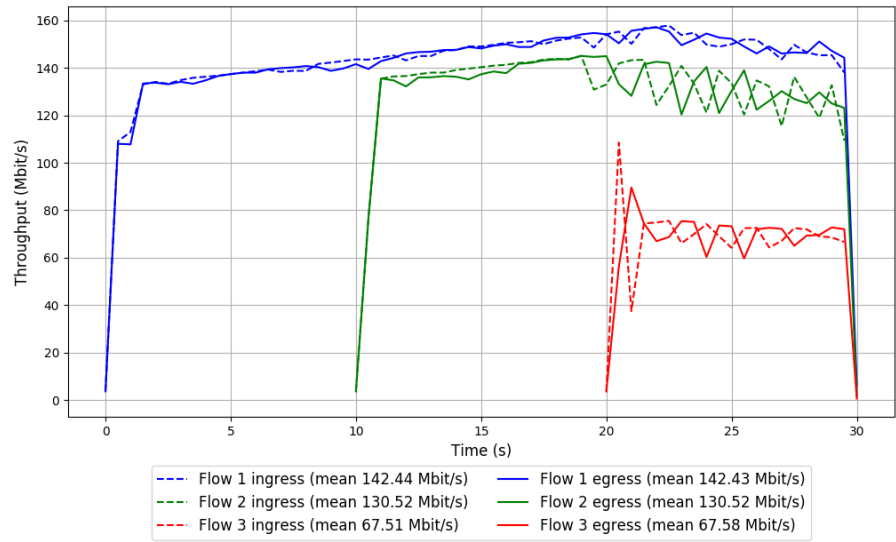
-- Flow 3:

Average throughput: 67.58 Mbit/s

95th percentile per-packet one-way delay: 55.711 ms

Loss rate: 0.00%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-02-17 12:35:56

End at: 2018-02-17 12:36:26

Below is generated by plot.py at 2018-02-17 18:52:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 338.42 Mbit/s

95th percentile per-packet one-way delay: 99.412 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 221.20 Mbit/s

95th percentile per-packet one-way delay: 98.606 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 134.95 Mbit/s

95th percentile per-packet one-way delay: 102.254 ms

Loss rate: 0.00%

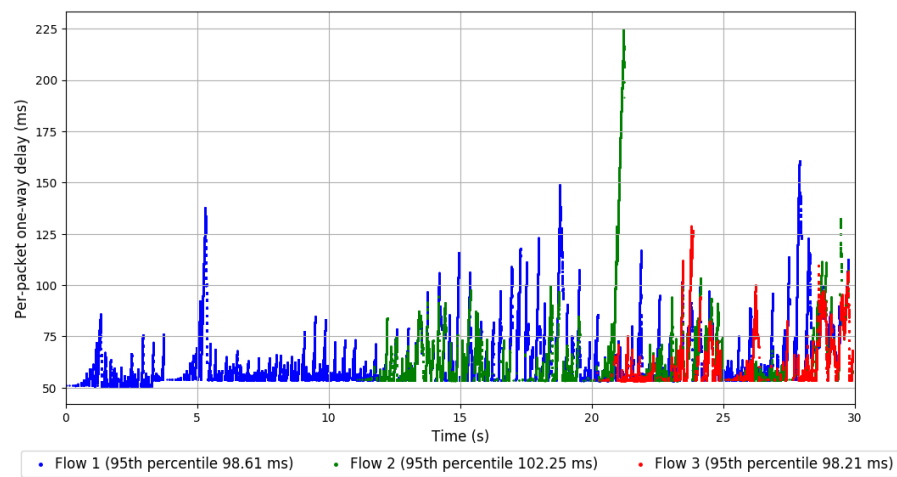
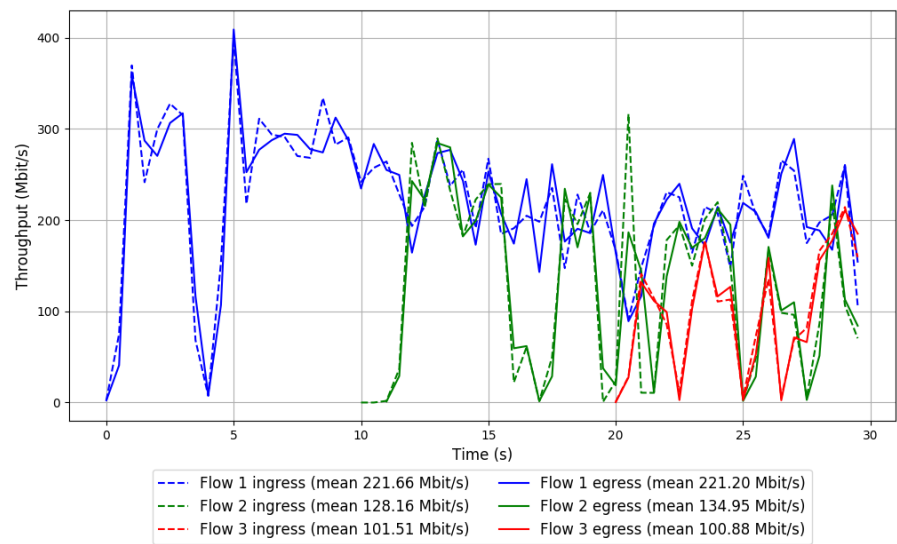
-- Flow 3:

Average throughput: 100.88 Mbit/s

95th percentile per-packet one-way delay: 98.212 ms

Loss rate: 0.57%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-02-17 12:53:25

End at: 2018-02-17 12:53:55

Below is generated by plot.py at 2018-02-17 18:52:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 345.20 Mbit/s

95th percentile per-packet one-way delay: 149.173 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 224.95 Mbit/s

95th percentile per-packet one-way delay: 146.163 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 124.17 Mbit/s

95th percentile per-packet one-way delay: 147.089 ms

Loss rate: 0.14%

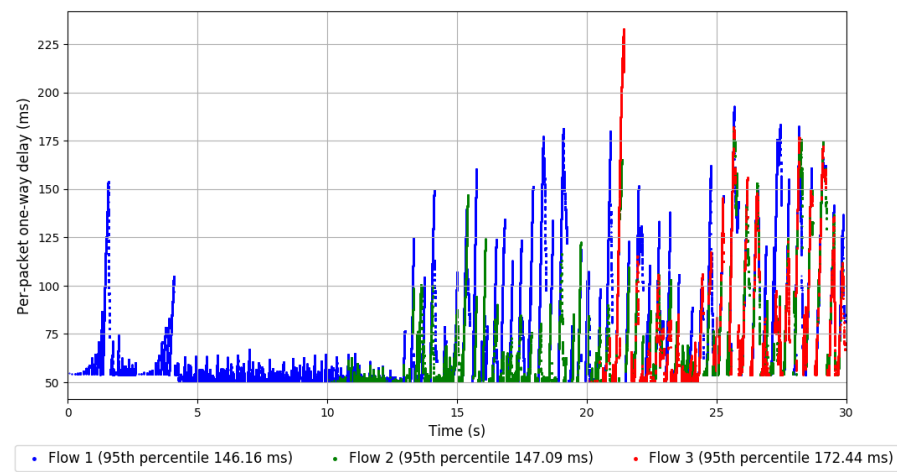
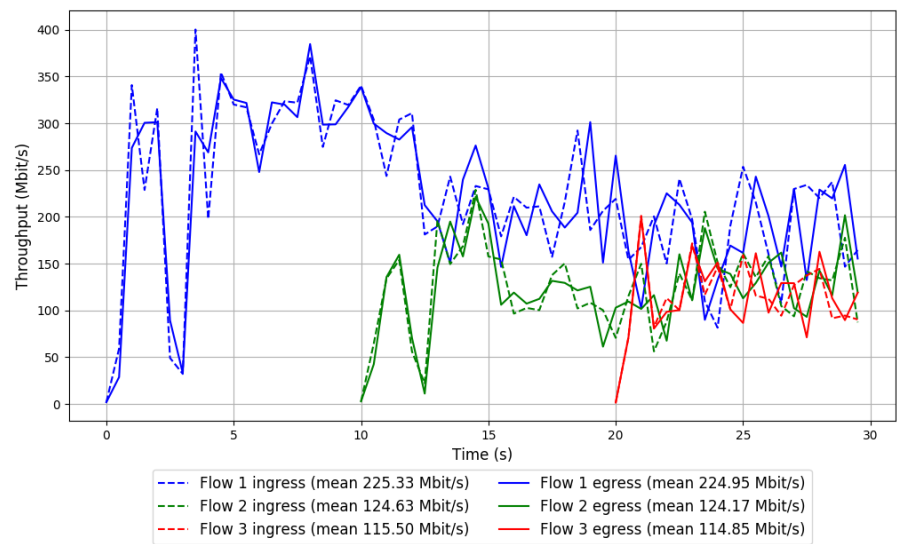
-- Flow 3:

Average throughput: 114.85 Mbit/s

95th percentile per-packet one-way delay: 172.438 ms

Loss rate: 0.41%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-02-17 13:11:15

End at: 2018-02-17 13:11:45

Below is generated by plot.py at 2018-02-17 18:54:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 370.59 Mbit/s

95th percentile per-packet one-way delay: 172.598 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 207.30 Mbit/s

95th percentile per-packet one-way delay: 149.185 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 185.60 Mbit/s

95th percentile per-packet one-way delay: 198.702 ms

Loss rate: 0.18%

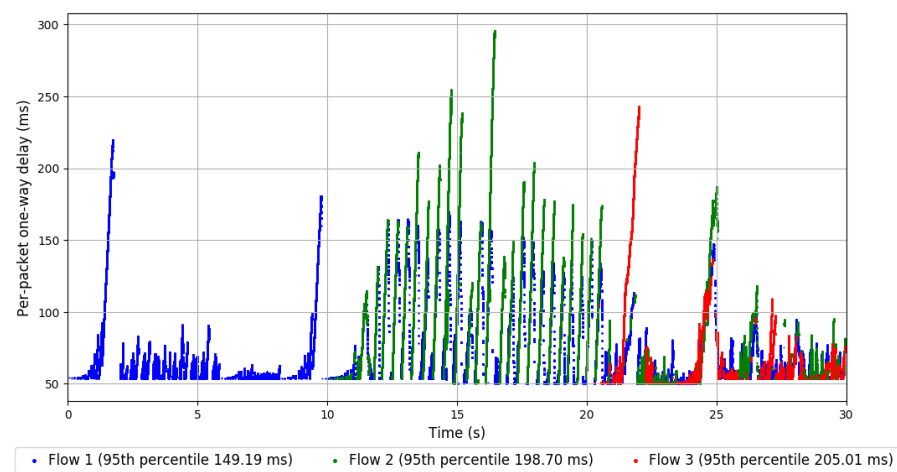
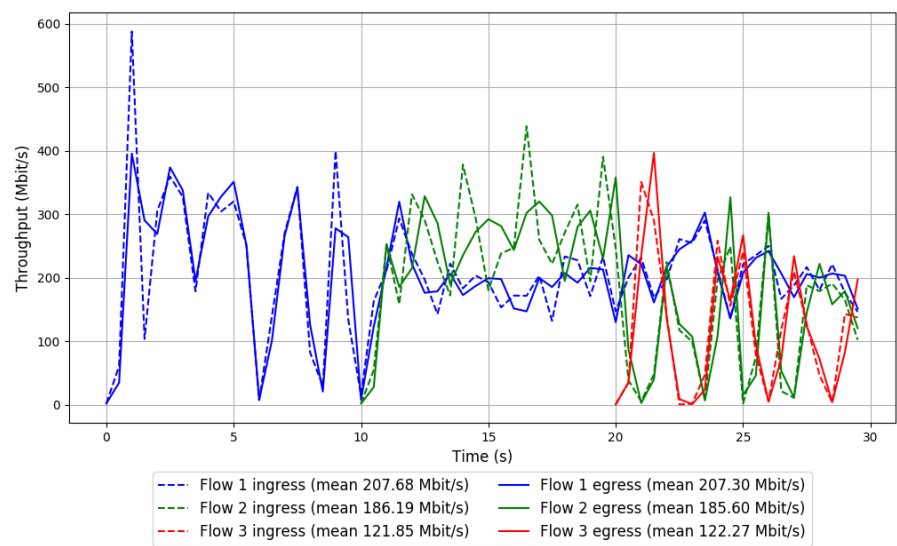
-- Flow 3:

Average throughput: 122.27 Mbit/s

95th percentile per-packet one-way delay: 205.013 ms

Loss rate: 0.27%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-02-17 13:29:59

End at: 2018-02-17 13:30:29

Below is generated by plot.py at 2018-02-17 18:54:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 365.20 Mbit/s

95th percentile per-packet one-way delay: 99.480 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 210.41 Mbit/s

95th percentile per-packet one-way delay: 102.469 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 180.68 Mbit/s

95th percentile per-packet one-way delay: 101.685 ms

Loss rate: 0.00%

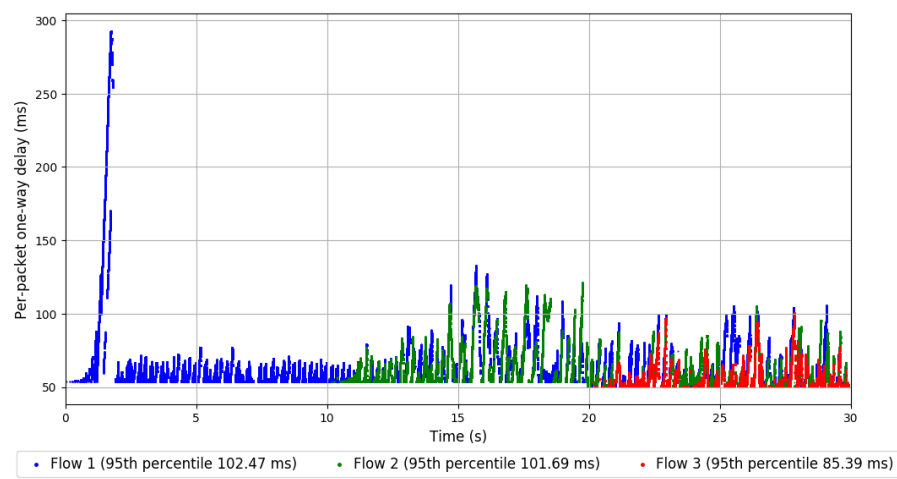
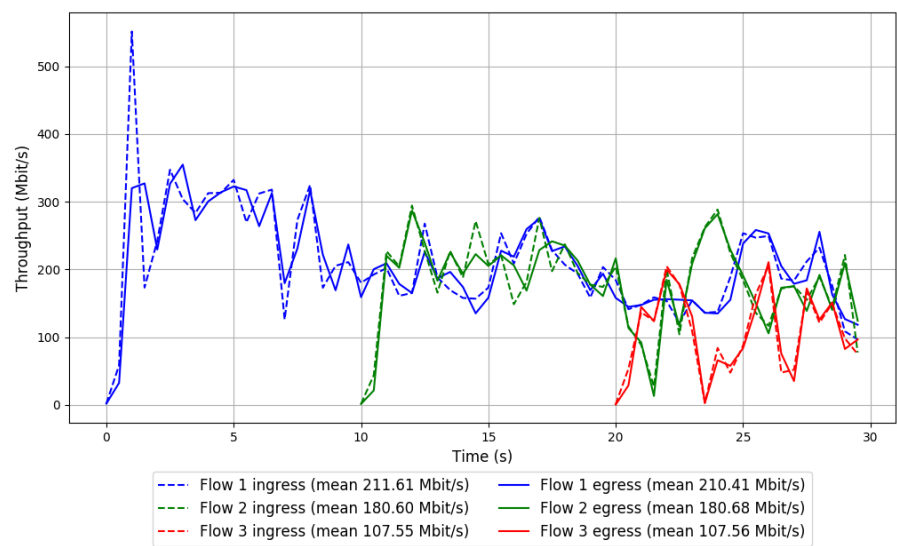
-- Flow 3:

Average throughput: 107.56 Mbit/s

95th percentile per-packet one-way delay: 85.386 ms

Loss rate: 0.01%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-02-17 13:47:58

End at: 2018-02-17 13:48:28

Below is generated by plot.py at 2018-02-17 18:55:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 367.55 Mbit/s

95th percentile per-packet one-way delay: 112.594 ms

Loss rate: 0.34%

-- Flow 1:

Average throughput: 187.47 Mbit/s

95th percentile per-packet one-way delay: 119.993 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 194.74 Mbit/s

95th percentile per-packet one-way delay: 110.936 ms

Loss rate: 0.03%

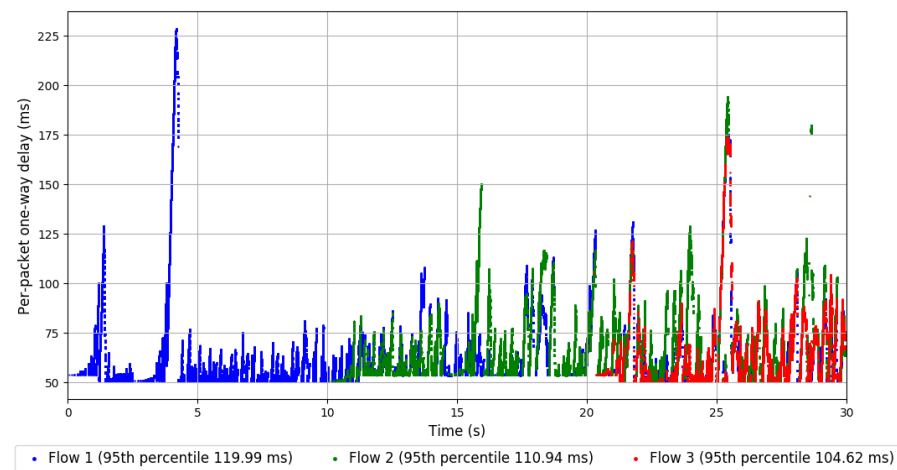
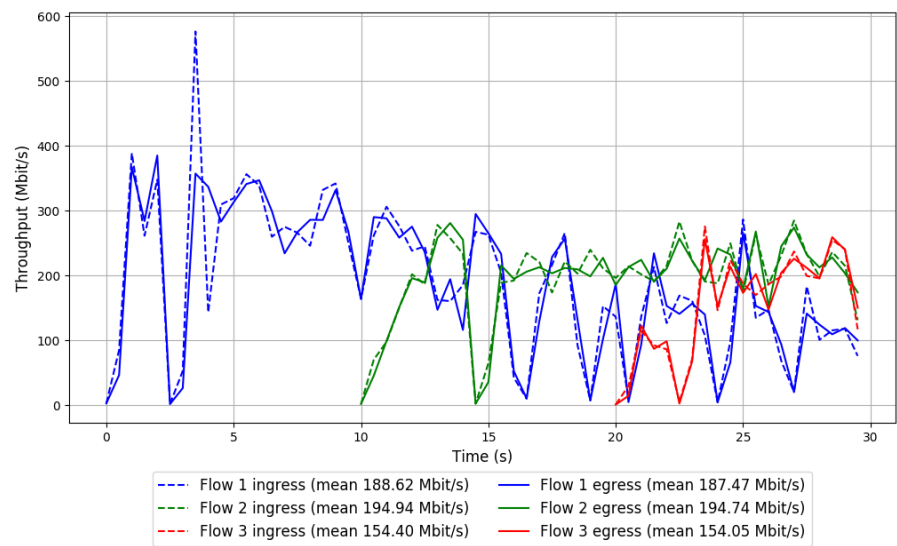
-- Flow 3:

Average throughput: 154.05 Mbit/s

95th percentile per-packet one-way delay: 104.620 ms

Loss rate: 0.23%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-02-17 14:05:42

End at: 2018-02-17 14:06:12

Below is generated by plot.py at 2018-02-17 18:55:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 360.65 Mbit/s

95th percentile per-packet one-way delay: 146.346 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 230.97 Mbit/s

95th percentile per-packet one-way delay: 126.327 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 145.55 Mbit/s

95th percentile per-packet one-way delay: 159.747 ms

Loss rate: 0.27%

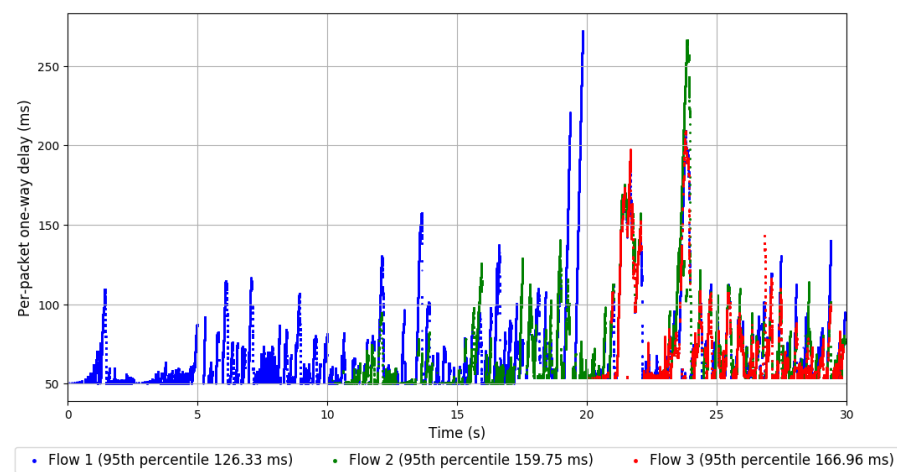
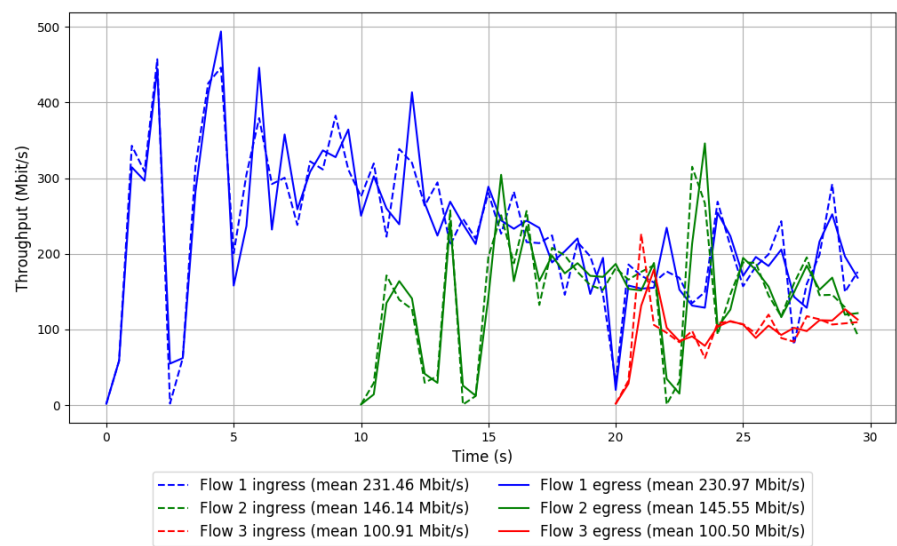
-- Flow 3:

Average throughput: 100.50 Mbit/s

95th percentile per-packet one-way delay: 166.958 ms

Loss rate: 0.22%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-02-17 14:23:25

End at: 2018-02-17 14:23:55

Below is generated by plot.py at 2018-02-17 18:55:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 353.98 Mbit/s

95th percentile per-packet one-way delay: 200.797 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 169.31 Mbit/s

95th percentile per-packet one-way delay: 162.628 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 254.18 Mbit/s

95th percentile per-packet one-way delay: 219.722 ms

Loss rate: 0.88%

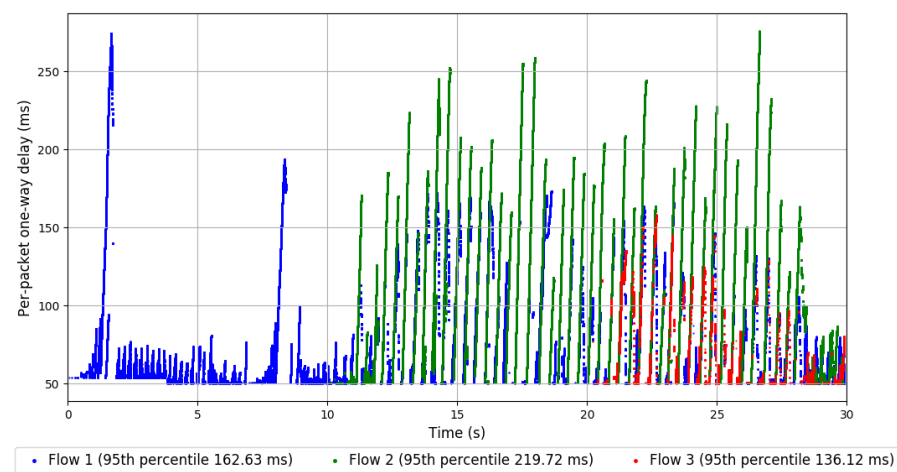
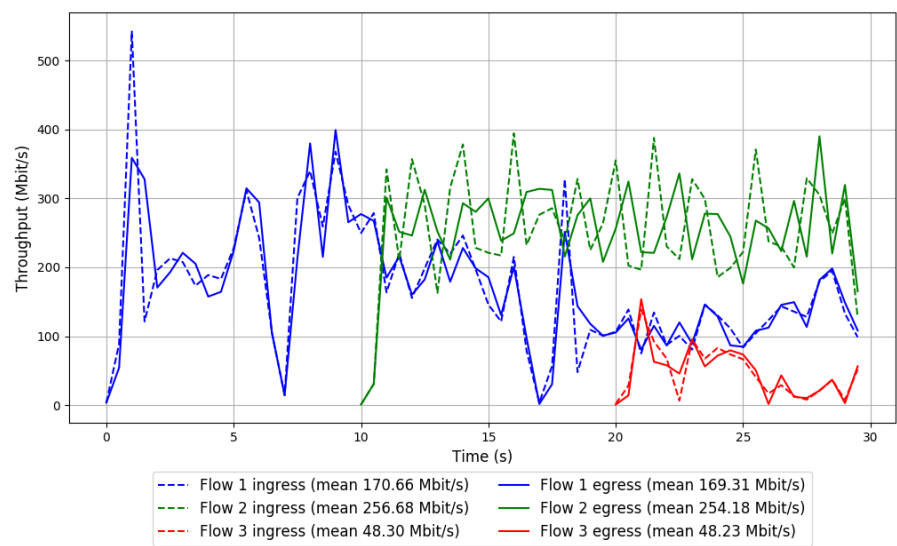
-- Flow 3:

Average throughput: 48.23 Mbit/s

95th percentile per-packet one-way delay: 136.122 ms

Loss rate: 0.00%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-02-17 14:41:54

End at: 2018-02-17 14:42:24

Below is generated by plot.py at 2018-02-17 18:56:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 332.81 Mbit/s

95th percentile per-packet one-way delay: 122.365 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 198.69 Mbit/s

95th percentile per-packet one-way delay: 110.383 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 153.29 Mbit/s

95th percentile per-packet one-way delay: 140.847 ms

Loss rate: 0.03%

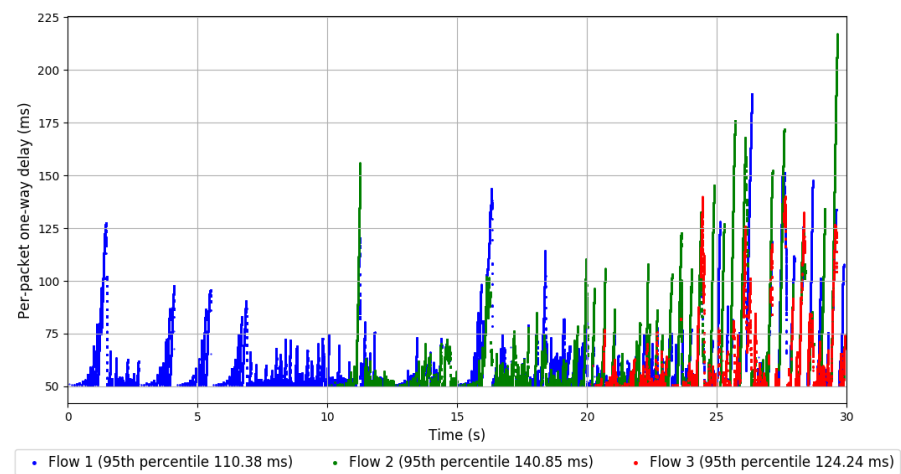
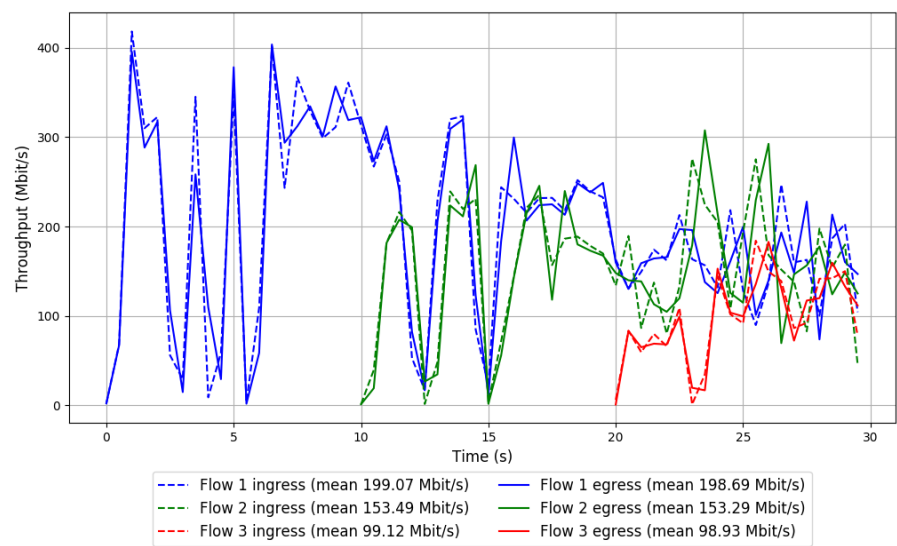
-- Flow 3:

Average throughput: 98.93 Mbit/s

95th percentile per-packet one-way delay: 124.240 ms

Loss rate: 0.00%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-02-17 14:59:26

End at: 2018-02-17 14:59:56

Below is generated by plot.py at 2018-02-17 18:58:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 358.83 Mbit/s

95th percentile per-packet one-way delay: 205.276 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 260.50 Mbit/s

95th percentile per-packet one-way delay: 210.120 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 96.49 Mbit/s

95th percentile per-packet one-way delay: 137.129 ms

Loss rate: 0.00%

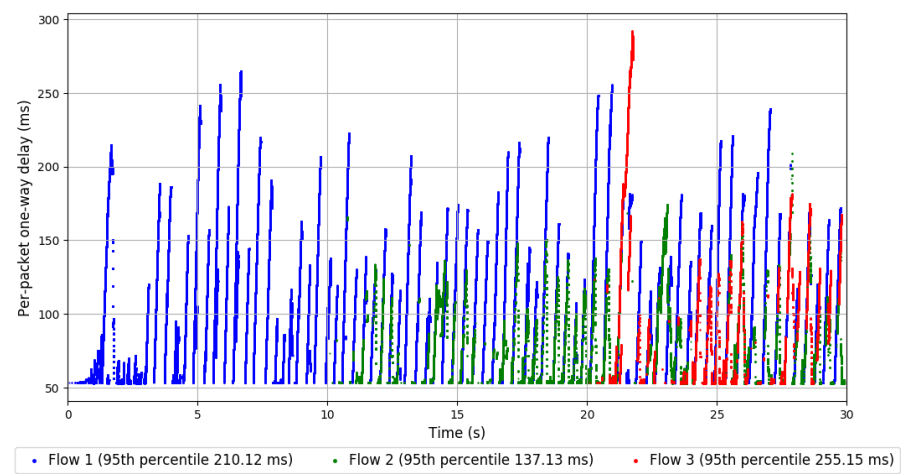
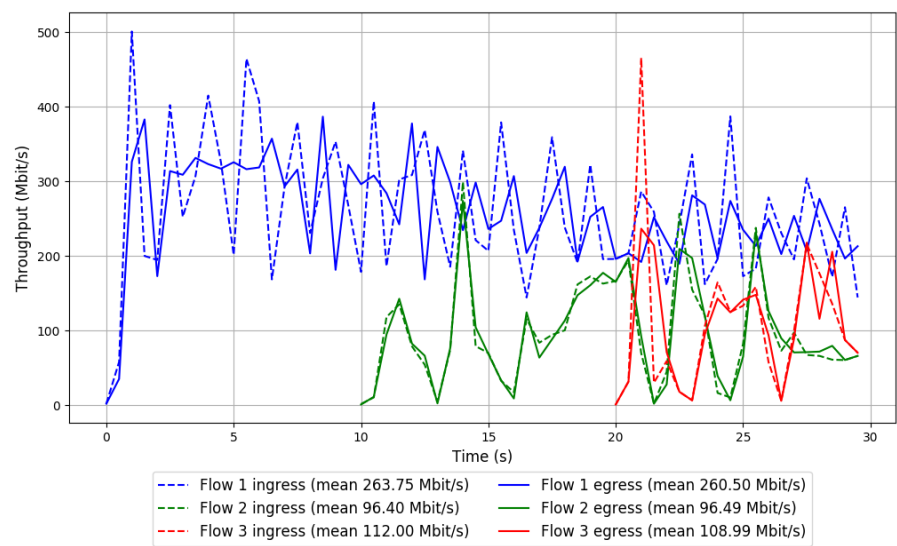
-- Flow 3:

Average throughput: 108.99 Mbit/s

95th percentile per-packet one-way delay: 255.154 ms

Loss rate: 1.53%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-02-17 15:17:21

End at: 2018-02-17 15:17:51

Below is generated by plot.py at 2018-02-17 18:59:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 386.78 Mbit/s

95th percentile per-packet one-way delay: 126.467 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 234.28 Mbit/s

95th percentile per-packet one-way delay: 130.906 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 157.79 Mbit/s

95th percentile per-packet one-way delay: 100.224 ms

Loss rate: 0.02%

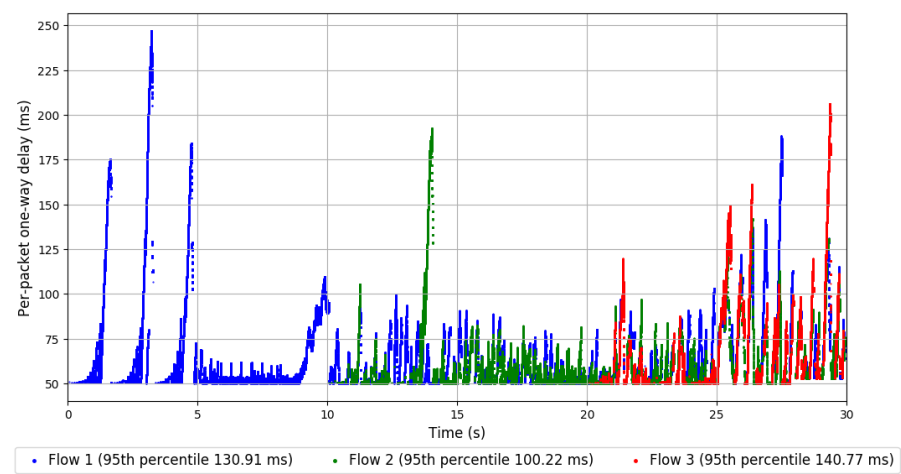
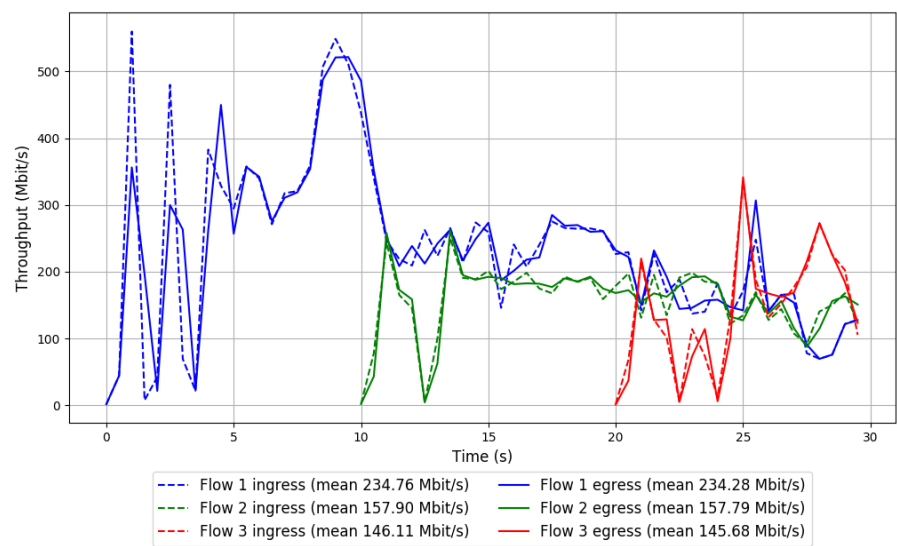
-- Flow 3:

Average throughput: 145.68 Mbit/s

95th percentile per-packet one-way delay: 140.773 ms

Loss rate: 0.00%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-02-17 12:37:49

End at: 2018-02-17 12:38:19

Below is generated by plot.py at 2018-02-17 18:59:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 151.89 Mbit/s

95th percentile per-packet one-way delay: 54.011 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 83.44 Mbit/s

95th percentile per-packet one-way delay: 53.893 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 50.00 Mbit/s

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

Loss rate: 0.00%

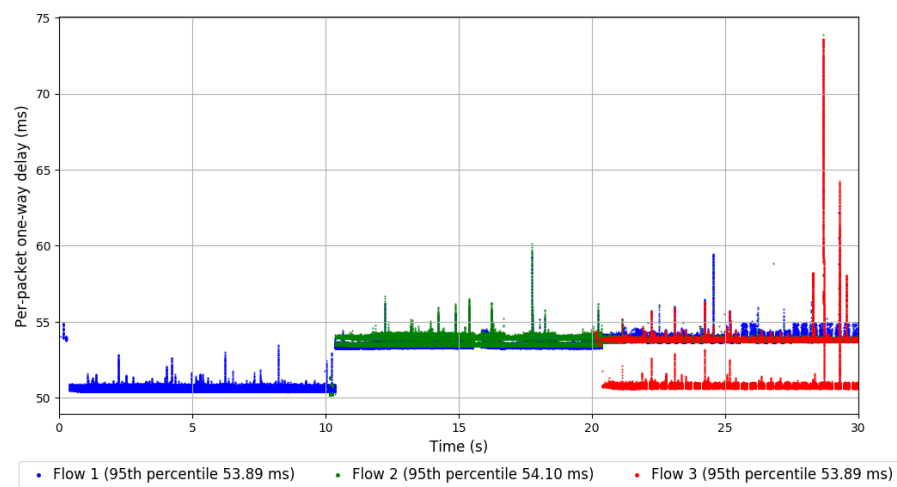
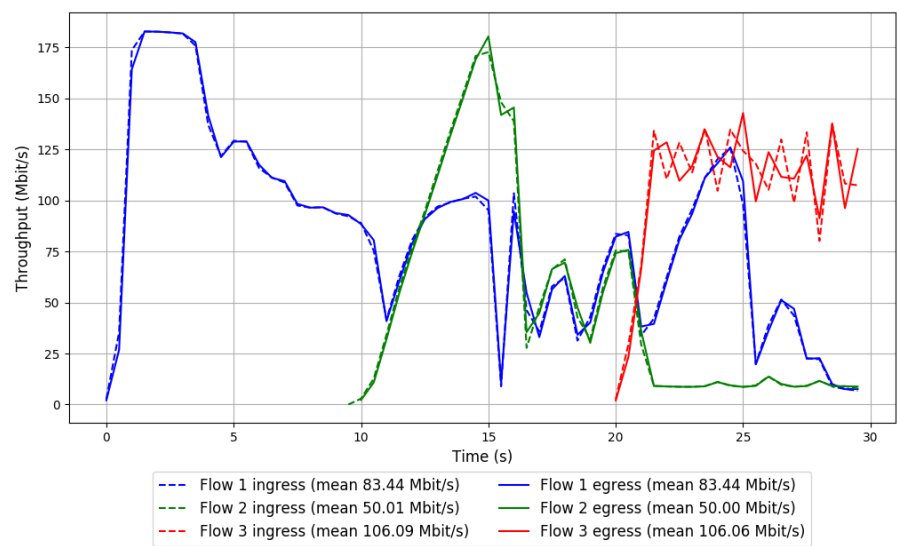
-- Flow 3:

Average throughput: 106.06 Mbit/s

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

Loss rate: 0.03%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-02-17 12:55:18

End at: 2018-02-17 12:55:48

Below is generated by plot.py at 2018-02-17 19:03:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 251.70 Mbit/s

95th percentile per-packet one-way delay: 255.677 ms

Loss rate: 31.61%

-- Flow 1:

Average throughput: 74.61 Mbit/s

95th percentile per-packet one-way delay: 188.189 ms

Loss rate: 2.66%

-- Flow 2:

Average throughput: 370.89 Mbit/s

95th percentile per-packet one-way delay: 257.839 ms

Loss rate: 42.55%

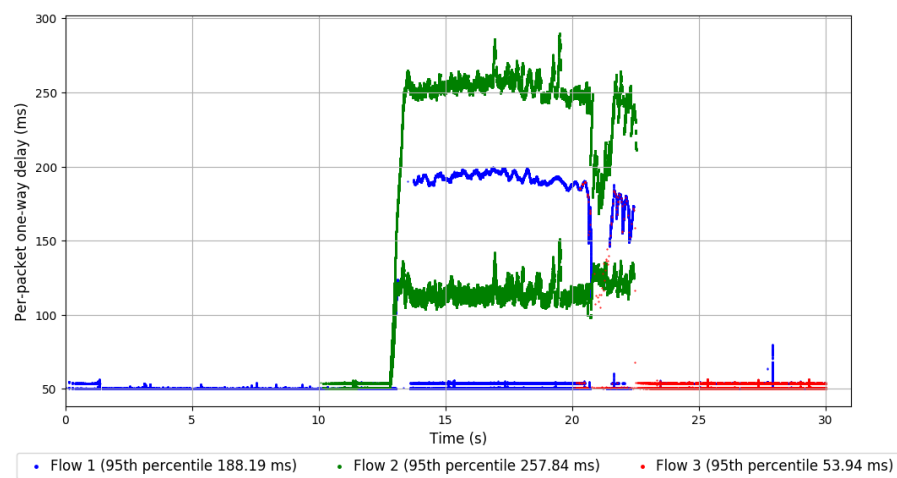
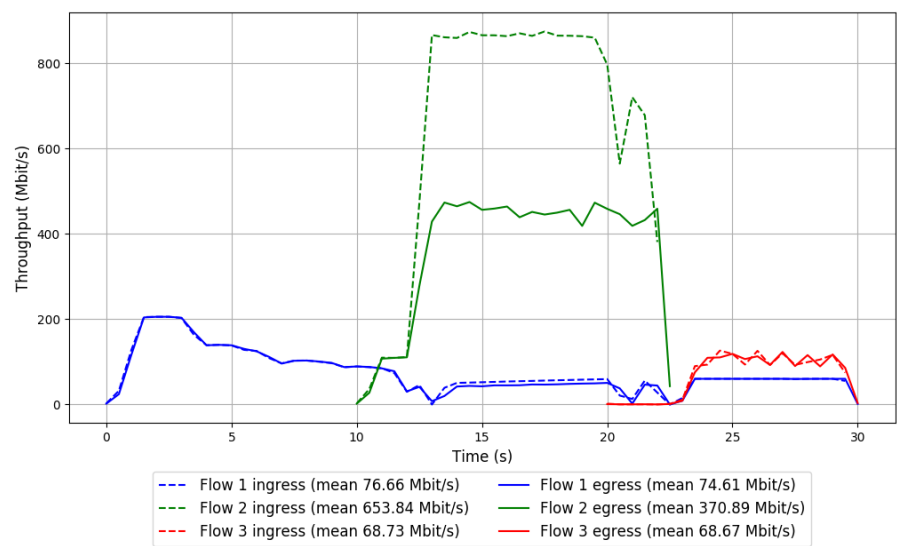
-- Flow 3:

Average throughput: 68.67 Mbit/s

95th percentile per-packet one-way delay: 53.944 ms

Loss rate: 0.06%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-02-17 13:13:09

End at: 2018-02-17 13:13:39

Below is generated by plot.py at 2018-02-17 19:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 522.16 Mbit/s

95th percentile per-packet one-way delay: 224.199 ms

Loss rate: 23.65%

-- Flow 1:

Average throughput: 282.75 Mbit/s

95th percentile per-packet one-way delay: 225.590 ms

Loss rate: 23.20%

-- Flow 2:

Average throughput: 358.64 Mbit/s

95th percentile per-packet one-way delay: 222.679 ms

Loss rate: 24.18%

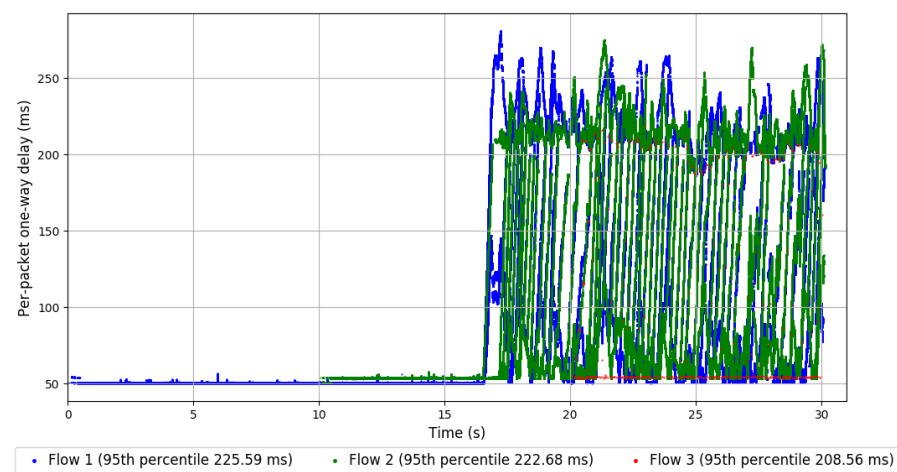
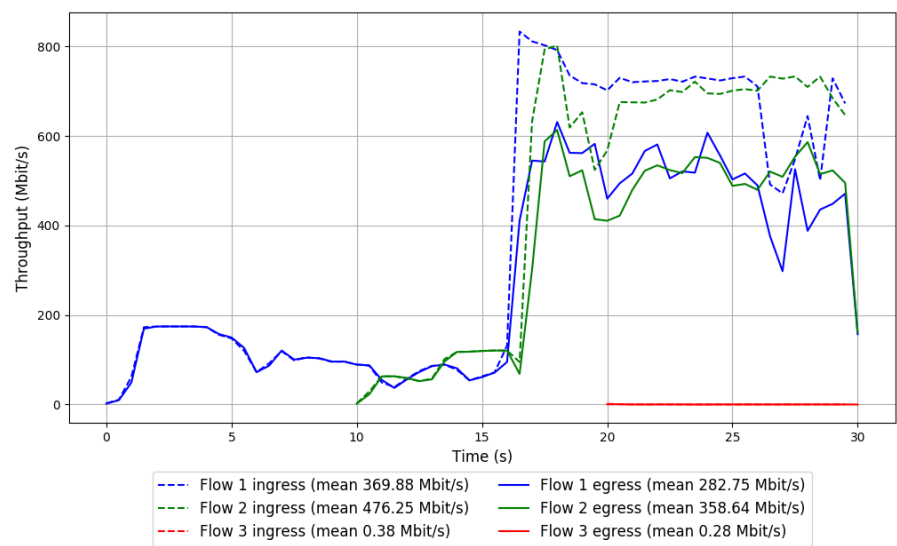
-- Flow 3:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 208.560 ms

Loss rate: 26.29%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-02-17 13:31:54

End at: 2018-02-17 13:32:24

Below is generated by plot.py at 2018-02-17 19:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 164.19 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 86.84 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 72.15 Mbit/s

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

Loss rate: 0.00%

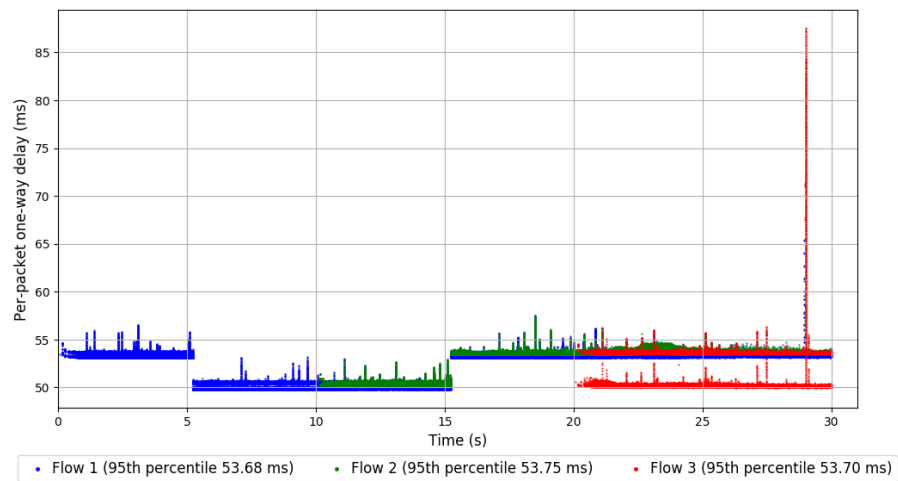
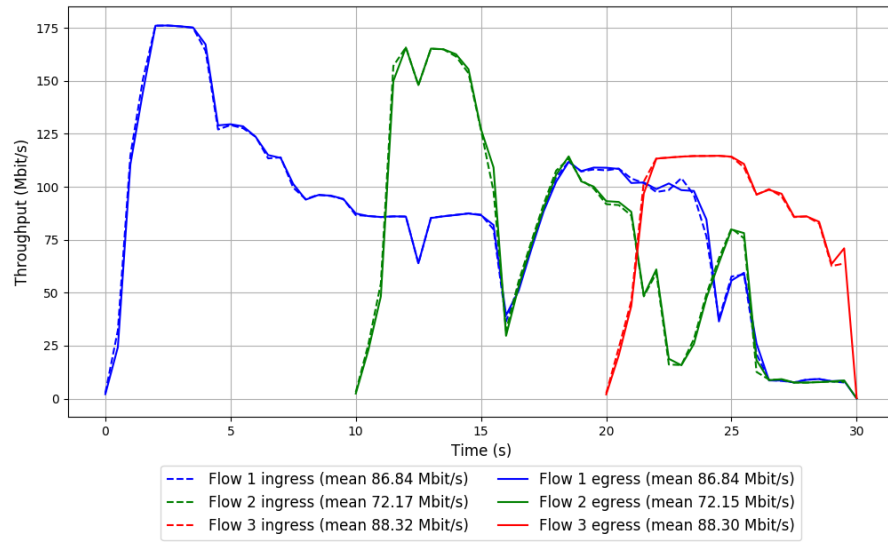
-- Flow 3:

Average throughput: 88.30 Mbit/s

95th percentile per-packet one-way delay: 53.695 ms

Loss rate: 0.00%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-02-17 13:49:47

End at: 2018-02-17 13:50:17

Below is generated by plot.py at 2018-02-17 19:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 180.89 Mbit/s

95th percentile per-packet one-way delay: 53.829 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 94.92 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 86.32 Mbit/s

95th percentile per-packet one-way delay: 53.725 ms

Loss rate: 0.00%

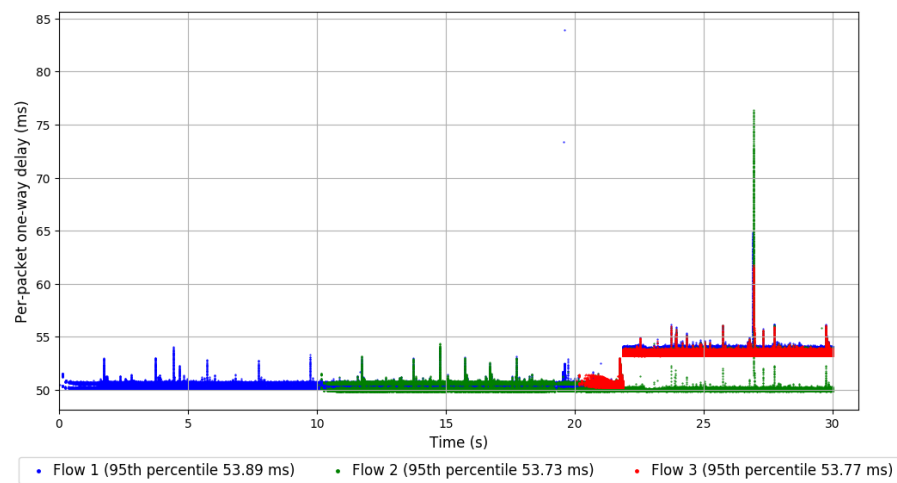
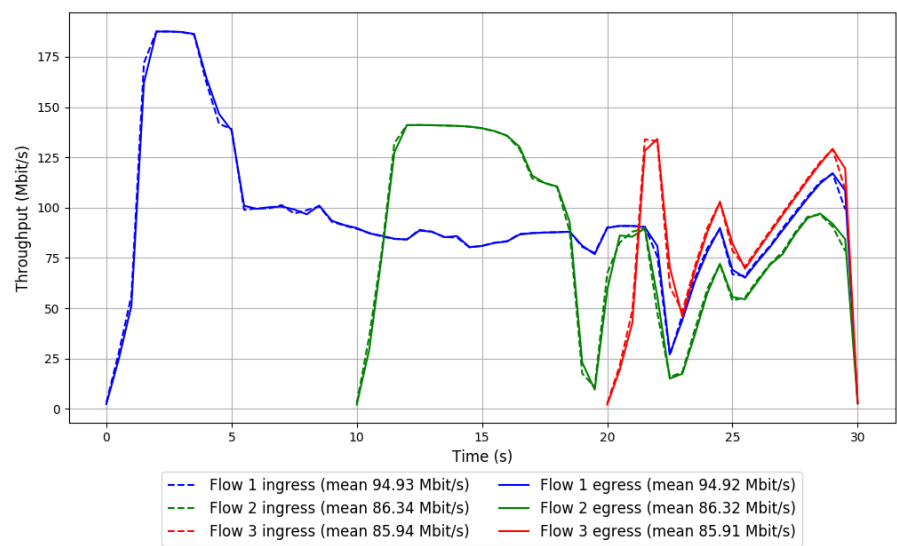
-- Flow 3:

Average throughput: 85.91 Mbit/s

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

Loss rate: 0.00%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-02-17 14:07:38

End at: 2018-02-17 14:08:08

Below is generated by plot.py at 2018-02-17 19:12:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 197.71 Mbit/s

95th percentile per-packet one-way delay: 53.731 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 106.46 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 108.66 Mbit/s

95th percentile per-packet one-way delay: 53.249 ms

Loss rate: 0.00%

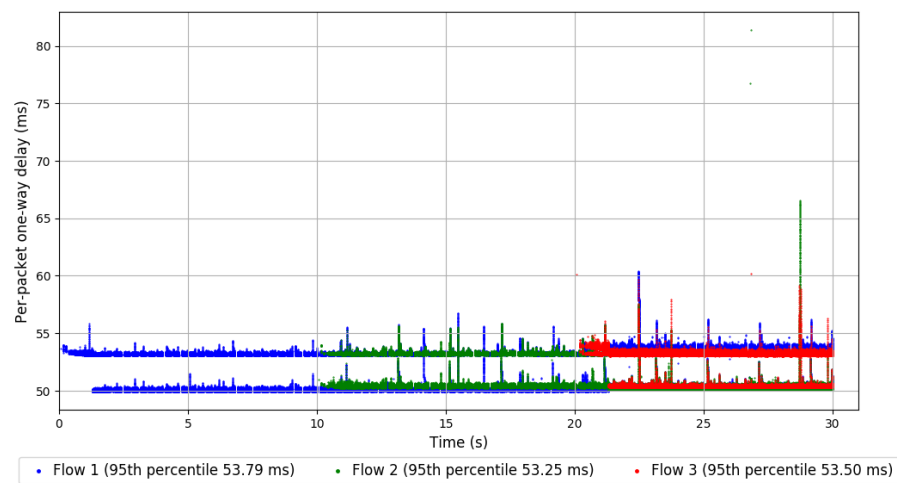
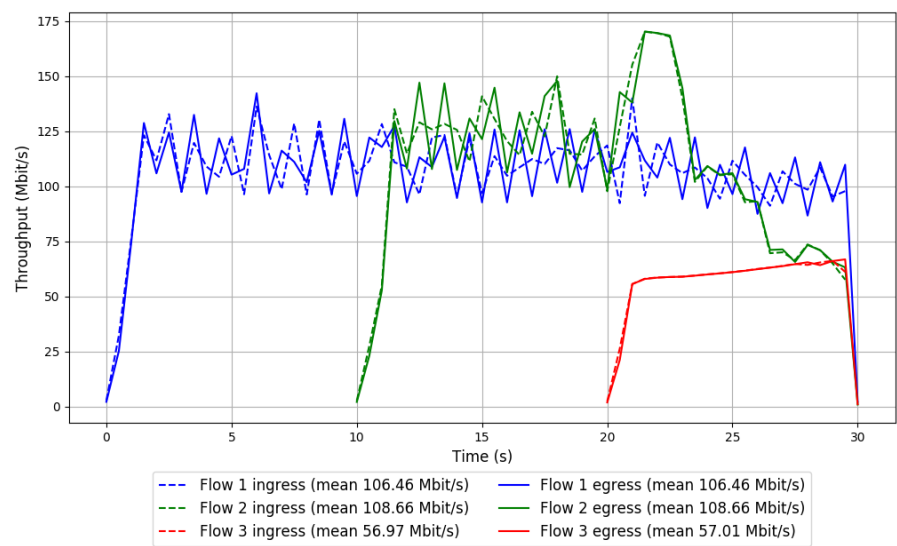
-- Flow 3:

Average throughput: 57.01 Mbit/s

95th percentile per-packet one-way delay: 53.499 ms

Loss rate: 0.00%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-02-17 14:25:14

End at: 2018-02-17 14:25:44

Below is generated by plot.py at 2018-02-17 19:21:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 652.43 Mbit/s

95th percentile per-packet one-way delay: 196.231 ms

Loss rate: 25.47%

-- Flow 1:

Average throughput: 335.97 Mbit/s

95th percentile per-packet one-way delay: 193.476 ms

Loss rate: 23.39%

-- Flow 2:

Average throughput: 475.10 Mbit/s

95th percentile per-packet one-way delay: 201.205 ms

Loss rate: 27.55%

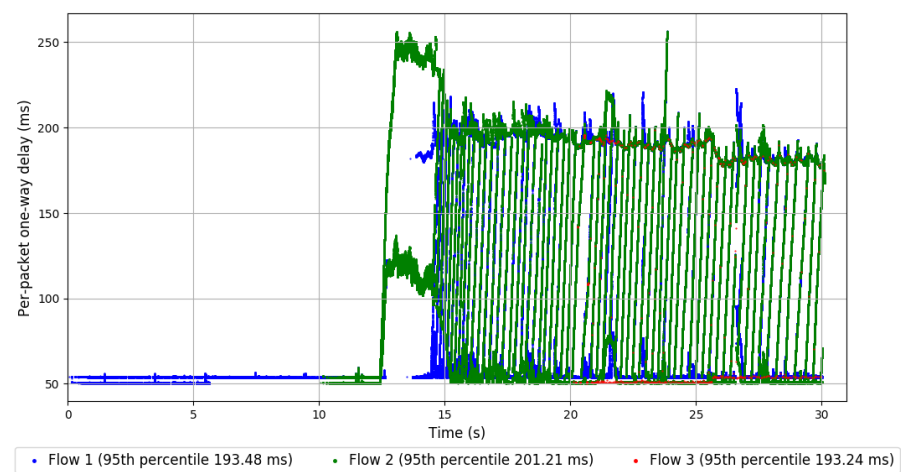
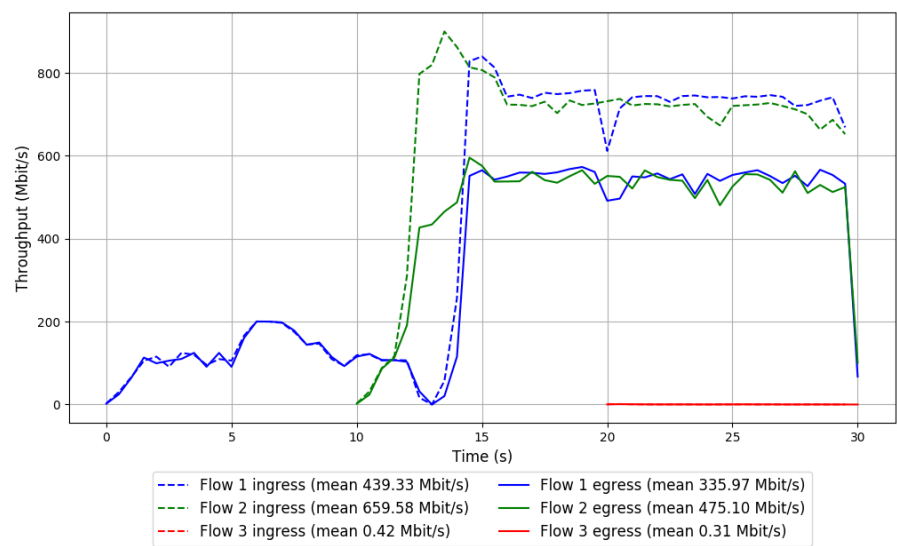
-- Flow 3:

Average throughput: 0.31 Mbit/s

95th percentile per-packet one-way delay: 193.236 ms

Loss rate: 23.59%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-02-17 14:43:45

End at: 2018-02-17 14:44:15

Below is generated by plot.py at 2018-02-17 19:21:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 164.12 Mbit/s

95th percentile per-packet one-way delay: 53.338 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 83.33 Mbit/s

95th percentile per-packet one-way delay: 53.229 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 78.49 Mbit/s

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

Loss rate: 0.00%

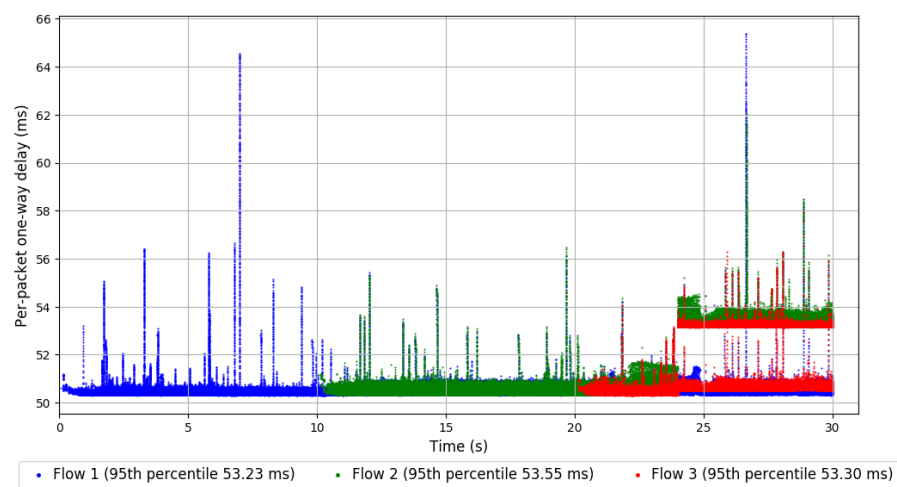
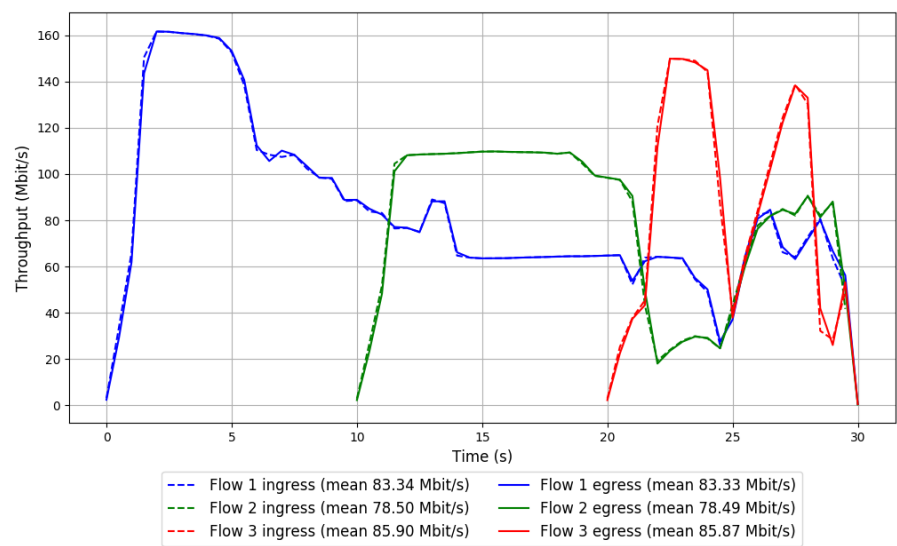
-- Flow 3:

Average throughput: 85.87 Mbit/s

95th percentile per-packet one-way delay: 53.297 ms

Loss rate: 0.00%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-02-17 15:01:17

End at: 2018-02-17 15:01:47

Below is generated by plot.py at 2018-02-17 19:21:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 392.82 Mbit/s

95th percentile per-packet one-way delay: 263.616 ms

Loss rate: 44.55%

-- Flow 1:

Average throughput: 392.27 Mbit/s

95th percentile per-packet one-way delay: 263.620 ms

Loss rate: 44.57%

-- Flow 2:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 205.594 ms

Loss rate: 21.68%

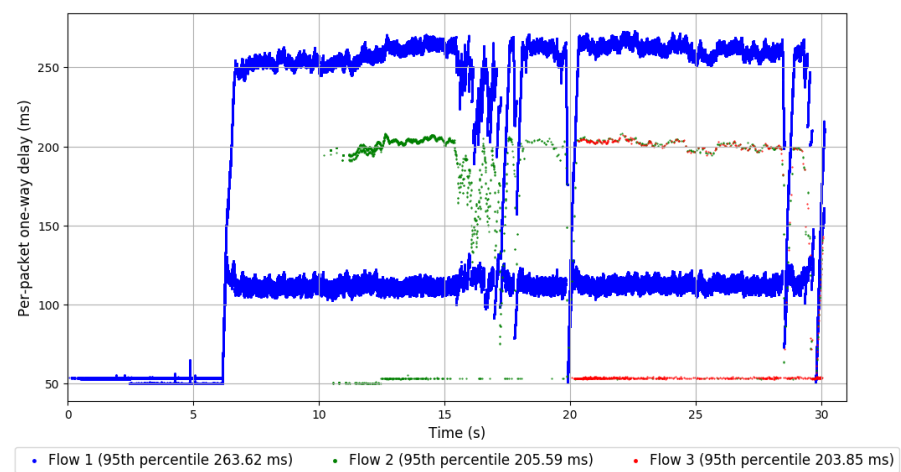
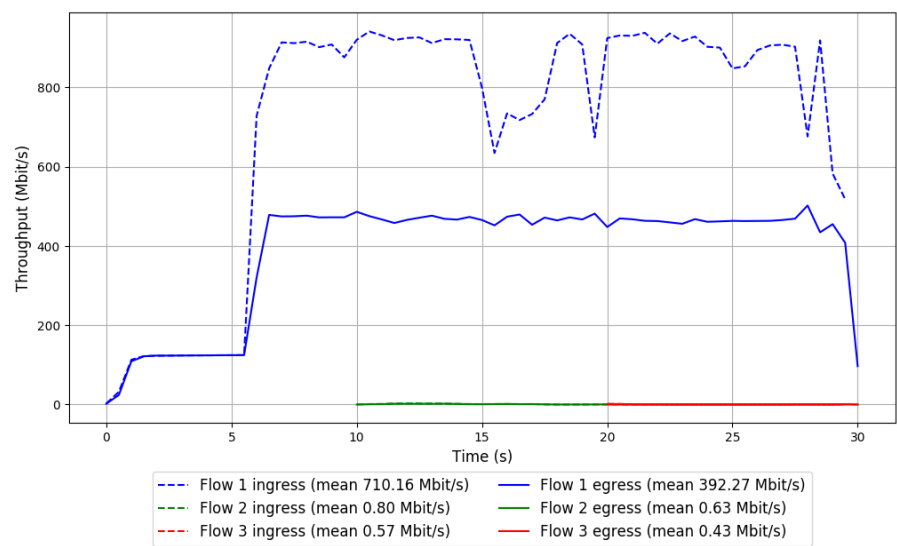
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 203.851 ms

Loss rate: 23.83%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-02-17 15:19:19

End at: 2018-02-17 15:19:49

Below is generated by plot.py at 2018-02-17 19:21:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 175.06 Mbit/s

95th percentile per-packet one-way delay: 53.399 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 96.16 Mbit/s

95th percentile per-packet one-way delay: 53.360 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 81.53 Mbit/s

95th percentile per-packet one-way delay: 53.384 ms

Loss rate: 0.03%

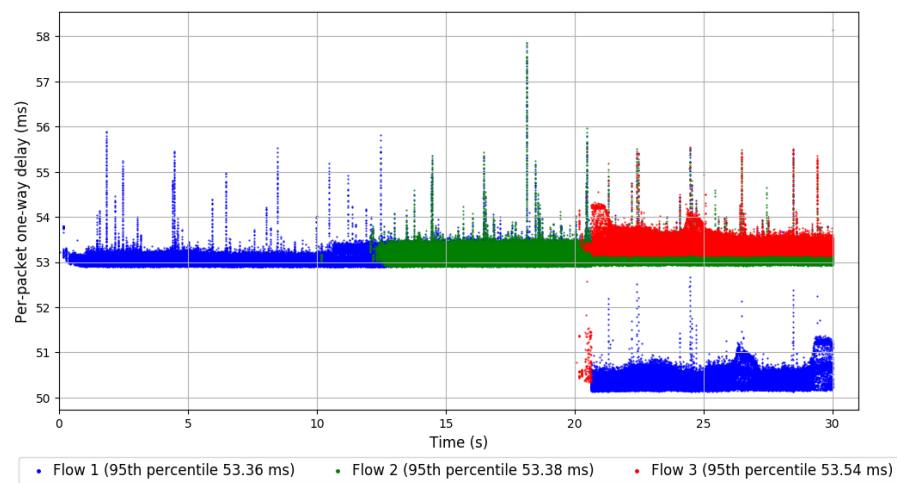
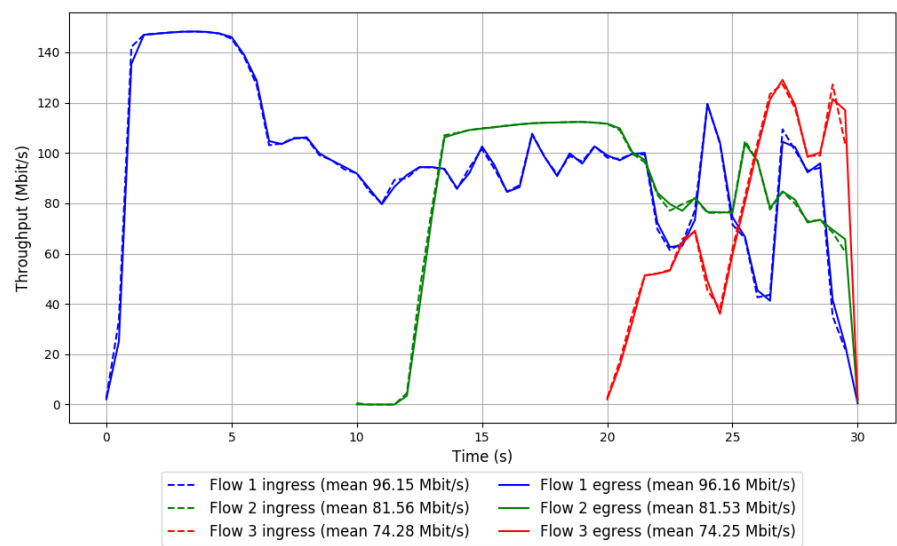
-- Flow 3:

Average throughput: 74.25 Mbit/s

95th percentile per-packet one-way delay: 53.544 ms

Loss rate: 0.04%

Run 10: Report of Copa — Data Link

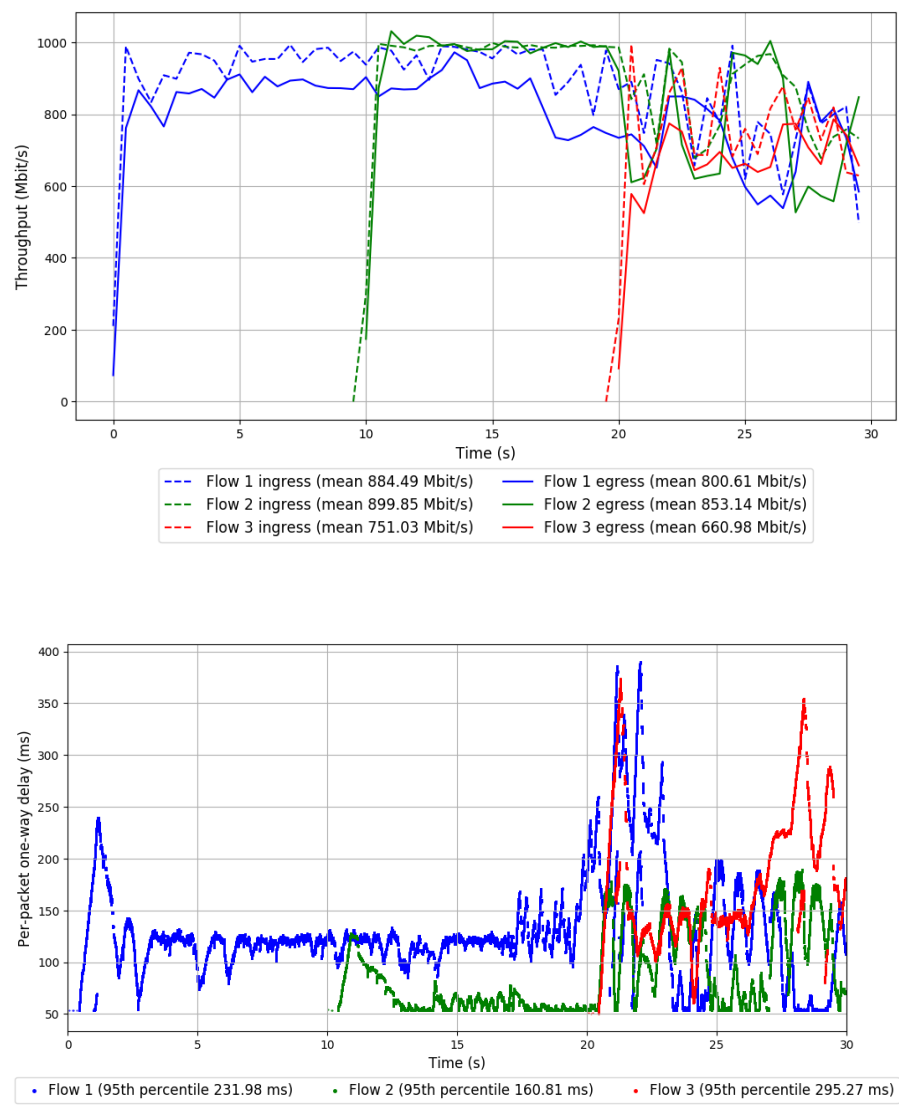


```
Run 1: Statistics of FillP

Start at: 2018-02-17 12:27:49
End at: 2018-02-17 12:28:19

# Below is generated by plot.py at 2018-02-17 19:29:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1587.83 Mbit/s
95th percentile per-packet one-way delay: 228.363 ms
Loss rate: 8.35%
-- Flow 1:
Average throughput: 800.61 Mbit/s
95th percentile per-packet one-way delay: 231.980 ms
Loss rate: 9.48%
-- Flow 2:
Average throughput: 853.14 Mbit/s
95th percentile per-packet one-way delay: 160.811 ms
Loss rate: 5.19%
-- Flow 3:
Average throughput: 660.98 Mbit/s
95th percentile per-packet one-way delay: 295.267 ms
Loss rate: 11.96%
```


Run 1: Report of FillP — Data Link

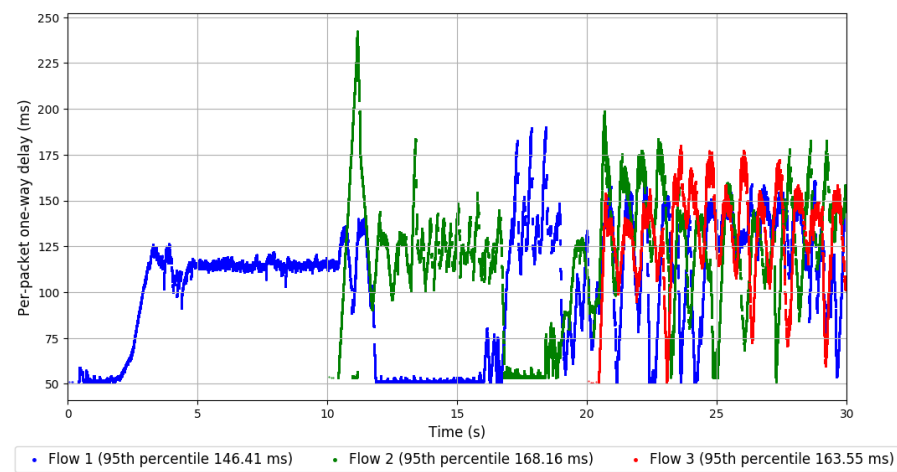
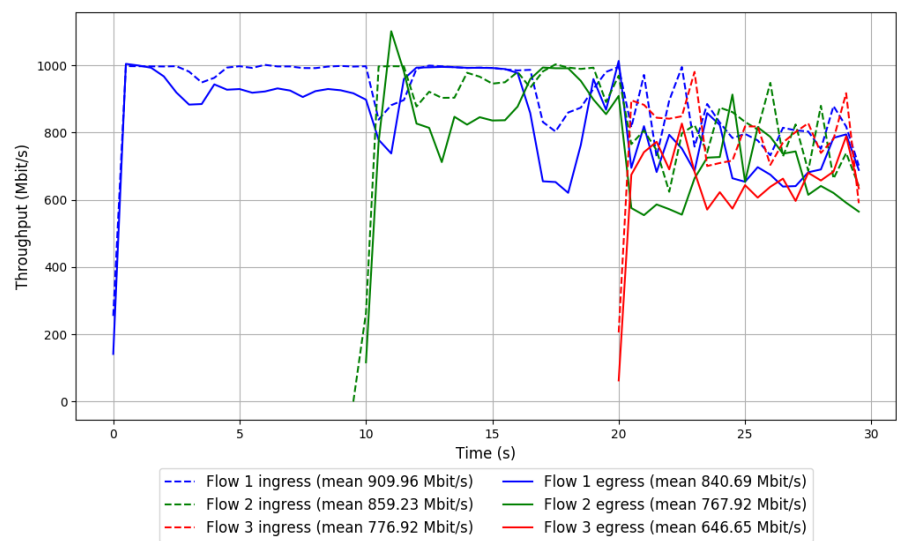


```
Run 2: Statistics of FillP

Start at: 2018-02-17 12:45:12
End at: 2018-02-17 12:45:42

# Below is generated by plot.py at 2018-02-17 19:30:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1566.19 Mbit/s
95th percentile per-packet one-way delay: 157.287 ms
Loss rate: 9.95%
-- Flow 1:
Average throughput: 840.69 Mbit/s
95th percentile per-packet one-way delay: 146.406 ms
Loss rate: 7.60%
-- Flow 2:
Average throughput: 767.92 Mbit/s
95th percentile per-packet one-way delay: 168.155 ms
Loss rate: 10.63%
-- Flow 3:
Average throughput: 646.65 Mbit/s
95th percentile per-packet one-way delay: 163.554 ms
Loss rate: 16.75%
```

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-02-17 13:02:49

End at: 2018-02-17 13:03:19

Below is generated by plot.py at 2018-02-17 19:32:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 1607.14 Mbit/s

95th percentile per-packet one-way delay: 256.284 ms

Loss rate: 8.48%

-- Flow 1:

Average throughput: 869.68 Mbit/s

95th percentile per-packet one-way delay: 262.318 ms

Loss rate: 4.98%

-- Flow 2:

Average throughput: 808.81 Mbit/s

95th percentile per-packet one-way delay: 157.006 ms

Loss rate: 10.24%

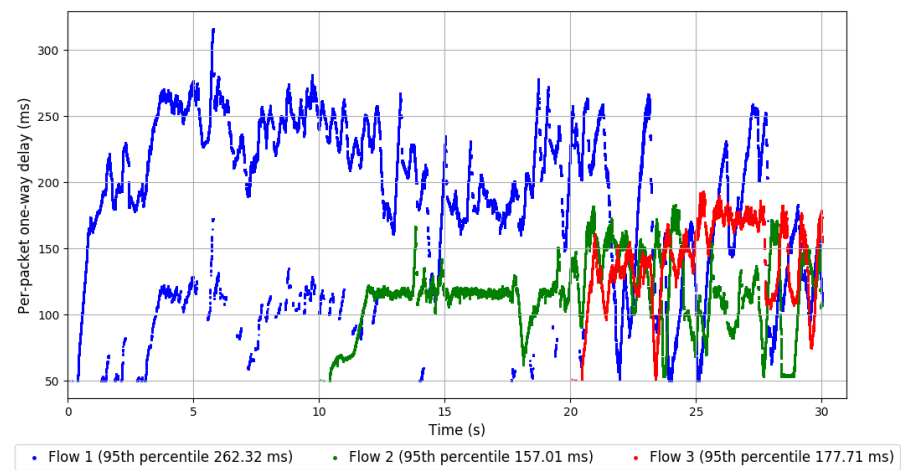
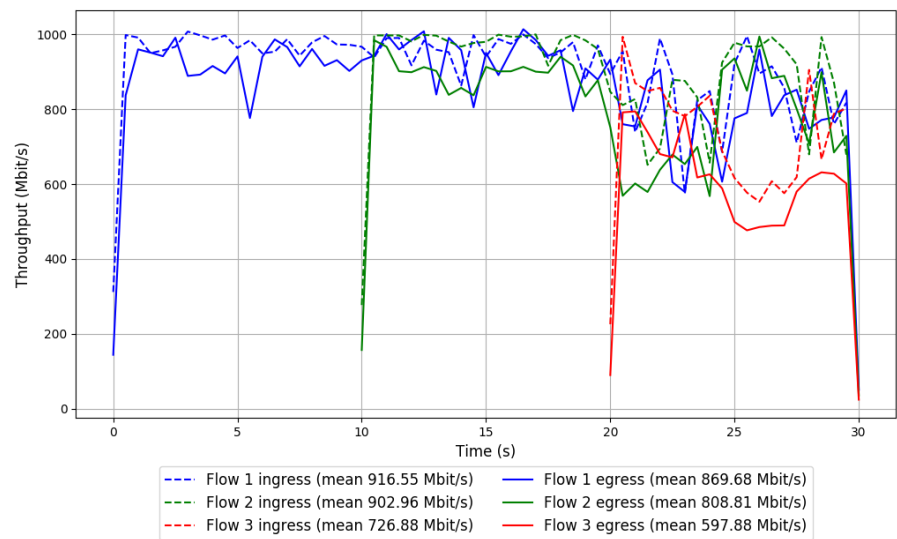
-- Flow 3:

Average throughput: 597.88 Mbit/s

95th percentile per-packet one-way delay: 177.709 ms

Loss rate: 17.40%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-02-17 13:21:28

End at: 2018-02-17 13:21:58

Below is generated by plot.py at 2018-02-17 19:33:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 1680.75 Mbit/s

95th percentile per-packet one-way delay: 155.759 ms

Loss rate: 6.71%

-- Flow 1:

Average throughput: 899.05 Mbit/s

95th percentile per-packet one-way delay: 142.341 ms

Loss rate: 4.60%

-- Flow 2:

Average throughput: 832.68 Mbit/s

95th percentile per-packet one-way delay: 156.504 ms

Loss rate: 7.38%

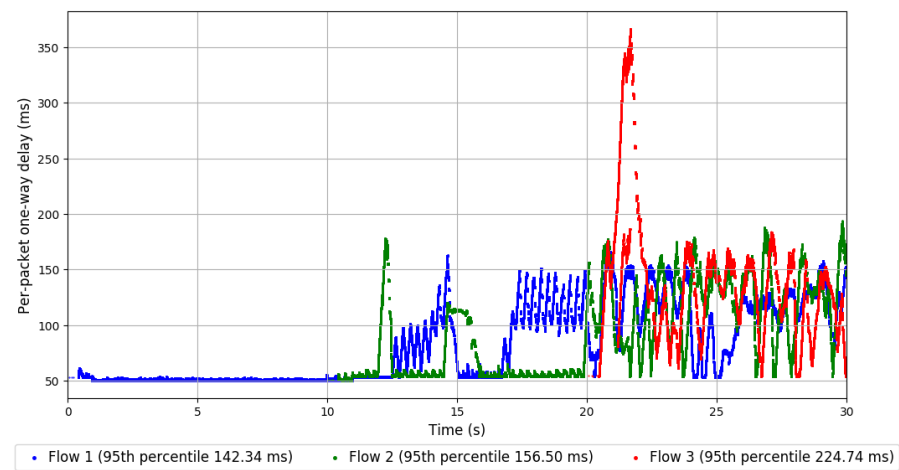
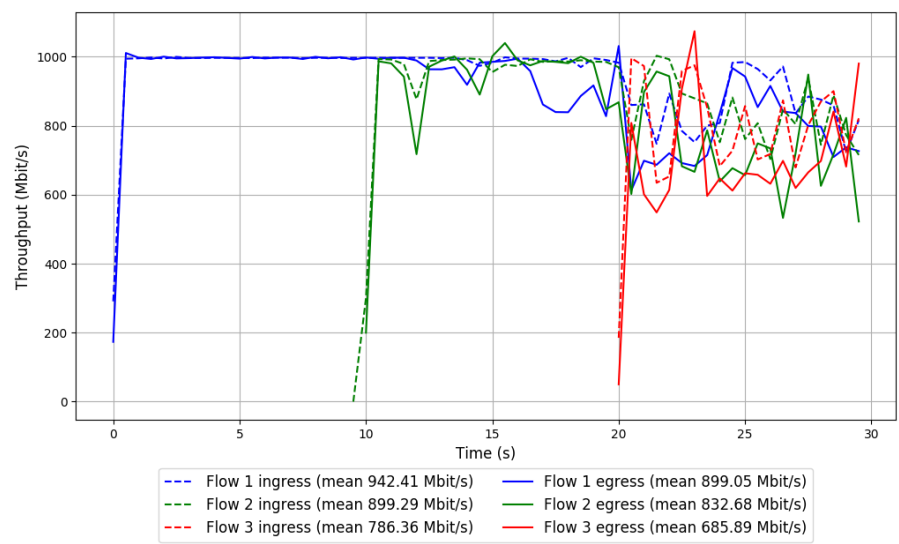
-- Flow 3:

Average throughput: 685.89 Mbit/s

95th percentile per-packet one-way delay: 224.744 ms

Loss rate: 12.78%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-02-17 13:39:36

End at: 2018-02-17 13:40:06

Below is generated by plot.py at 2018-02-17 19:33:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 1471.73 Mbit/s

95th percentile per-packet one-way delay: 307.579 ms

Loss rate: 9.76%

-- Flow 1:

Average throughput: 746.58 Mbit/s

95th percentile per-packet one-way delay: 309.369 ms

Loss rate: 9.93%

-- Flow 2:

Average throughput: 710.27 Mbit/s

95th percentile per-packet one-way delay: 313.018 ms

Loss rate: 10.45%

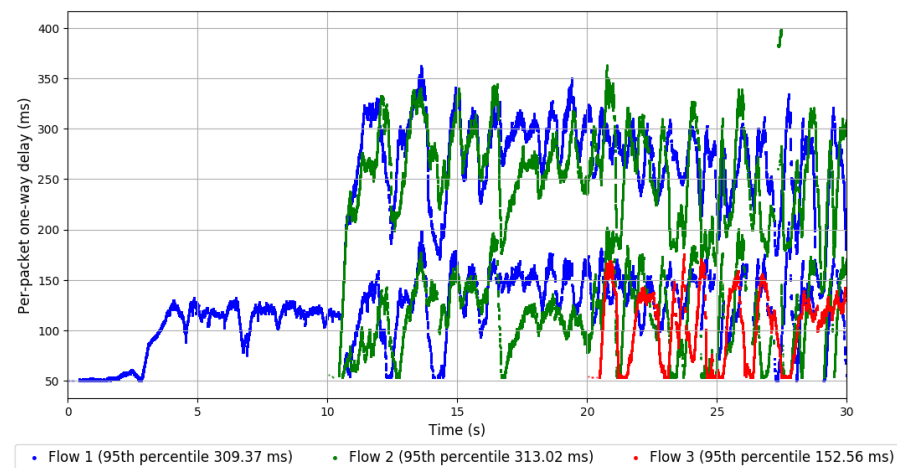
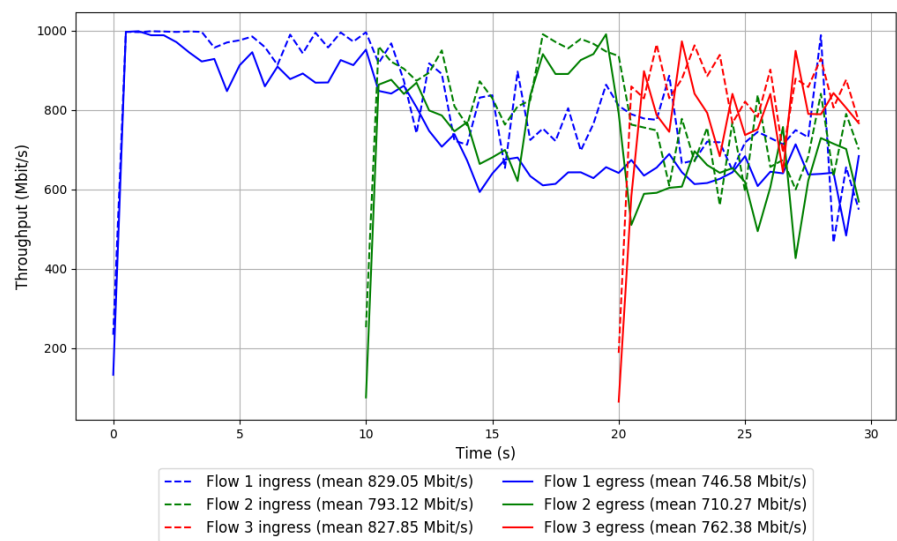
-- Flow 3:

Average throughput: 762.38 Mbit/s

95th percentile per-packet one-way delay: 152.560 ms

Loss rate: 7.90%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-02-17 13:57:22

End at: 2018-02-17 13:57:52

Below is generated by plot.py at 2018-02-17 19:43:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 1573.67 Mbit/s

95th percentile per-packet one-way delay: 161.295 ms

Loss rate: 8.54%

-- Flow 1:

Average throughput: 850.46 Mbit/s

95th percentile per-packet one-way delay: 164.656 ms

Loss rate: 5.86%

-- Flow 2:

Average throughput: 726.86 Mbit/s

95th percentile per-packet one-way delay: 159.581 ms

Loss rate: 11.08%

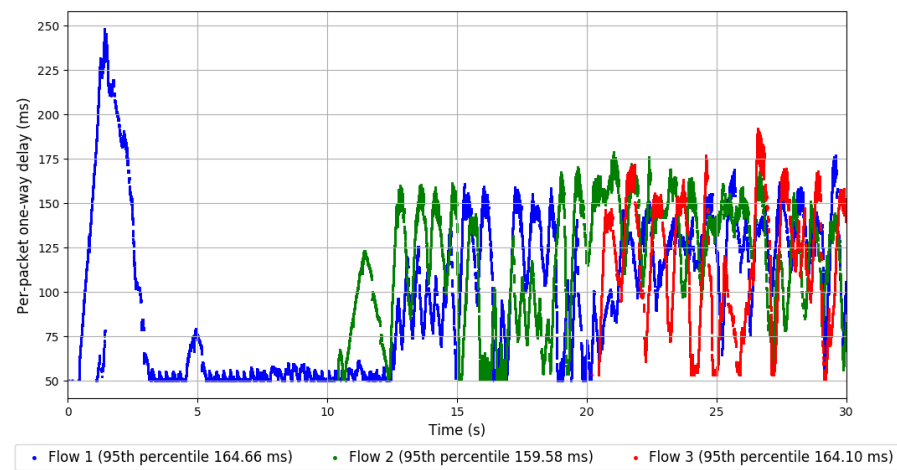
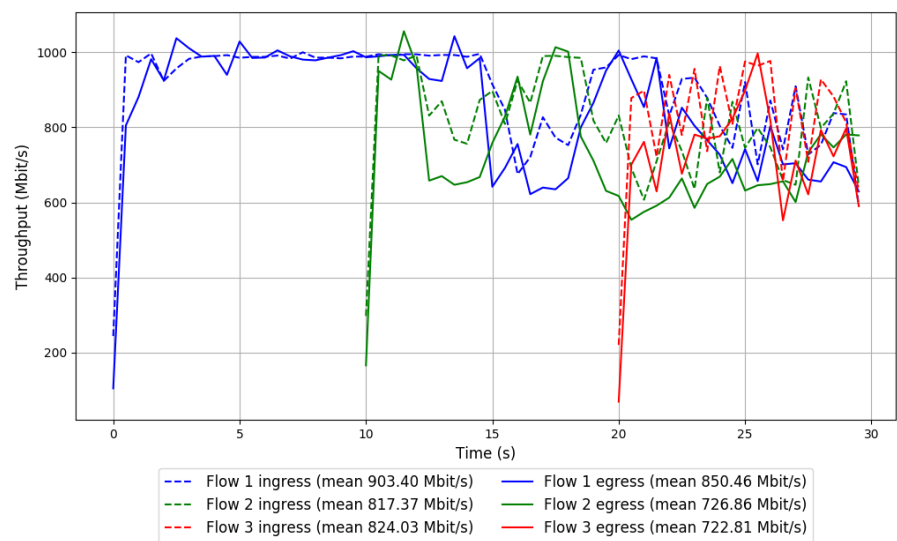
-- Flow 3:

Average throughput: 722.81 Mbit/s

95th percentile per-packet one-way delay: 164.097 ms

Loss rate: 12.33%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-02-17 14:15:11

End at: 2018-02-17 14:15:41

Below is generated by plot.py at 2018-02-17 19:46:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 1633.32 Mbit/s

95th percentile per-packet one-way delay: 150.922 ms

Loss rate: 8.59%

-- Flow 1:

Average throughput: 890.54 Mbit/s

95th percentile per-packet one-way delay: 129.194 ms

Loss rate: 5.91%

-- Flow 2:

Average throughput: 759.59 Mbit/s

95th percentile per-packet one-way delay: 148.931 ms

Loss rate: 10.79%

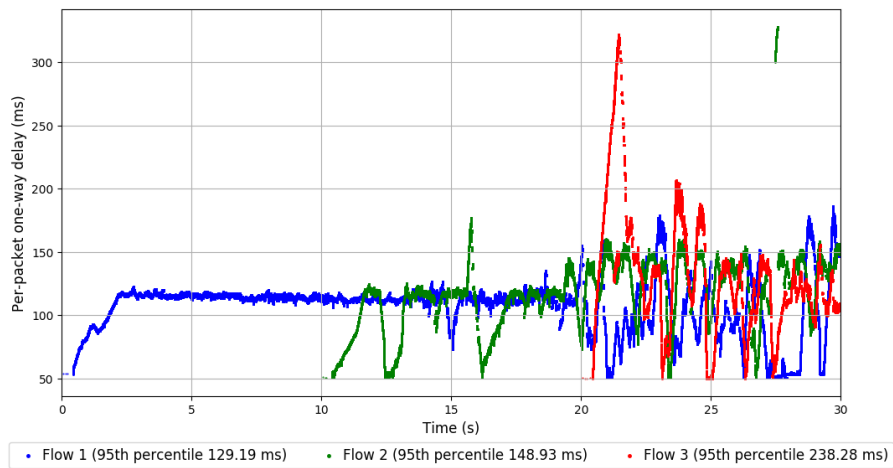
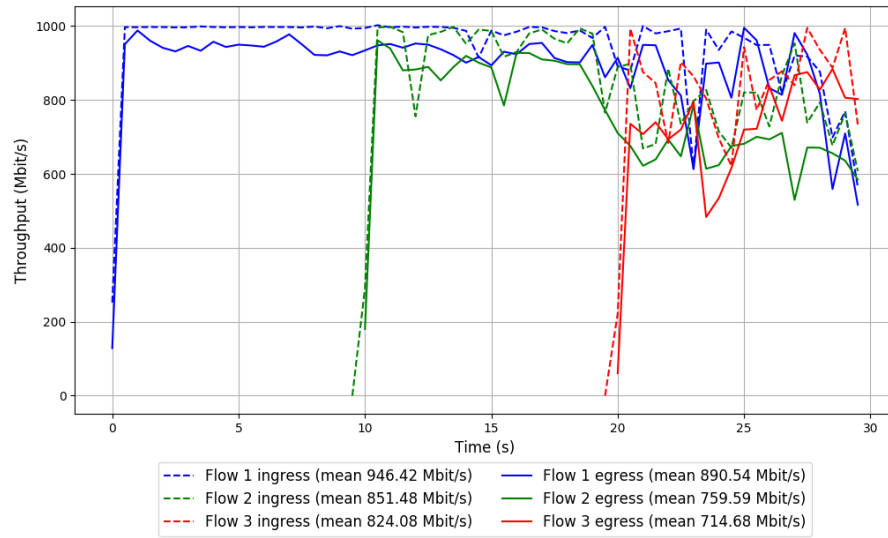
-- Flow 3:

Average throughput: 714.68 Mbit/s

95th percentile per-packet one-way delay: 238.280 ms

Loss rate: 13.28%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-02-17 14:33:35

End at: 2018-02-17 14:34:05

Below is generated by plot.py at 2018-02-17 19:56:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 1694.06 Mbit/s

95th percentile per-packet one-way delay: 153.099 ms

Loss rate: 6.73%

-- Flow 1:

Average throughput: 893.08 Mbit/s

95th percentile per-packet one-way delay: 143.660 ms

Loss rate: 4.25%

-- Flow 2:

Average throughput: 800.59 Mbit/s

95th percentile per-packet one-way delay: 162.069 ms

Loss rate: 9.52%

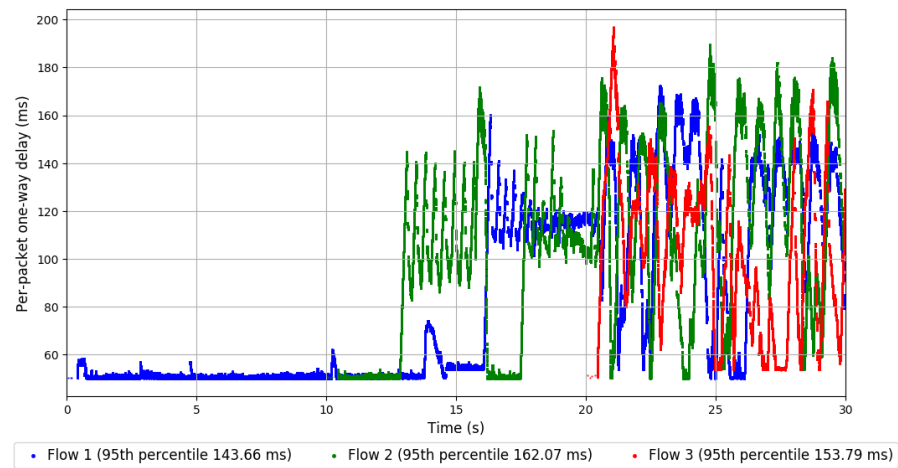
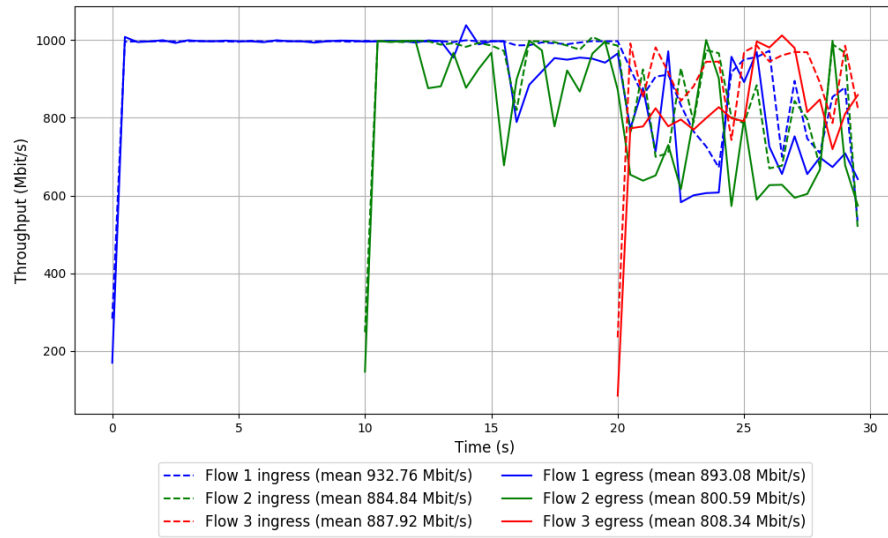
-- Flow 3:

Average throughput: 808.34 Mbit/s

95th percentile per-packet one-way delay: 153.790 ms

Loss rate: 8.97%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-02-17 14:51:09

End at: 2018-02-17 14:51:39

Below is generated by plot.py at 2018-02-17 19:59:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 1528.05 Mbit/s

95th percentile per-packet one-way delay: 300.006 ms

Loss rate: 7.69%

-- Flow 1:

Average throughput: 868.89 Mbit/s

95th percentile per-packet one-way delay: 197.617 ms

Loss rate: 4.89%

-- Flow 2:

Average throughput: 721.82 Mbit/s

95th percentile per-packet one-way delay: 307.692 ms

Loss rate: 8.51%

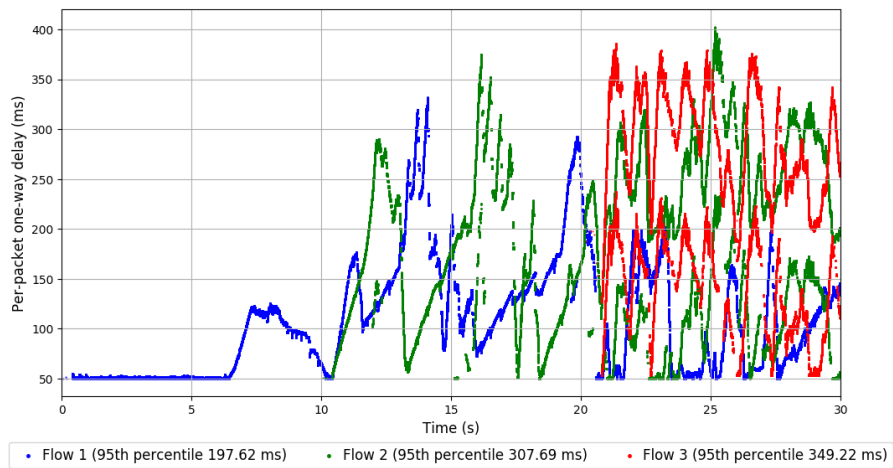
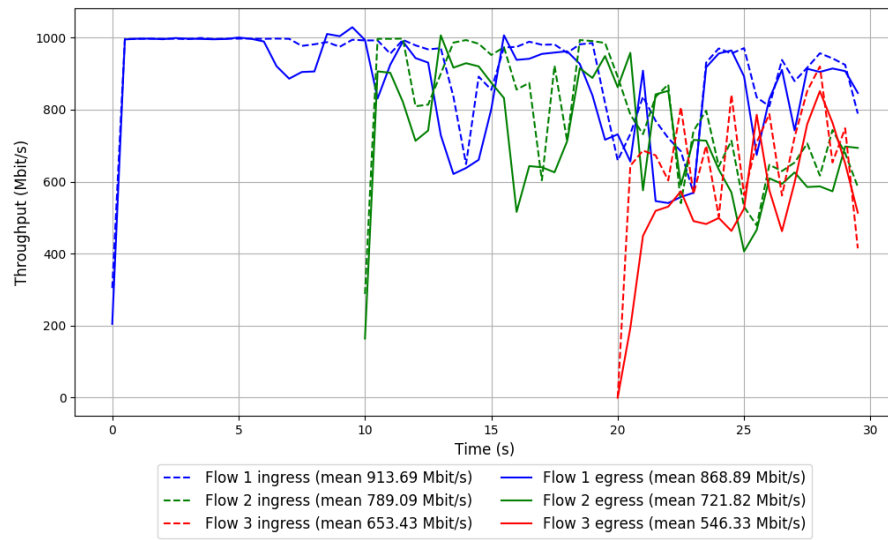
-- Flow 3:

Average throughput: 546.33 Mbit/s

95th percentile per-packet one-way delay: 349.217 ms

Loss rate: 17.51%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-02-17 15:09:12

End at: 2018-02-17 15:09:42

Below is generated by plot.py at 2018-02-17 20:03:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 1602.25 Mbit/s

95th percentile per-packet one-way delay: 157.224 ms

Loss rate: 9.16%

-- Flow 1:

Average throughput: 828.31 Mbit/s

95th percentile per-packet one-way delay: 162.289 ms

Loss rate: 8.71%

-- Flow 2:

Average throughput: 810.18 Mbit/s

95th percentile per-packet one-way delay: 152.443 ms

Loss rate: 9.35%

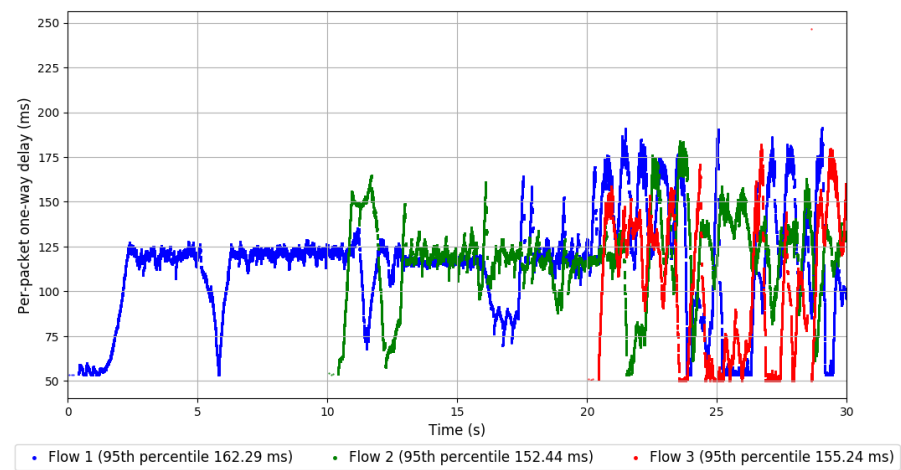
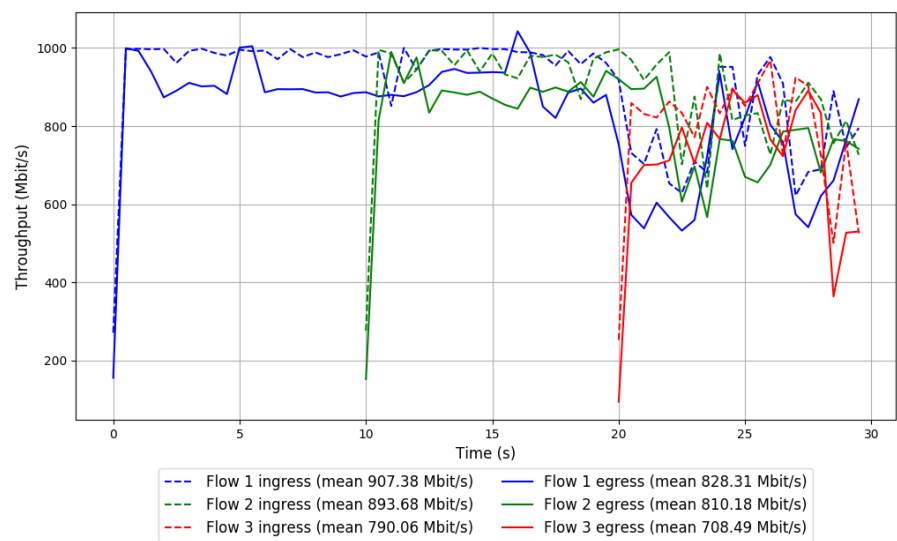
-- Flow 3:

Average throughput: 708.49 Mbit/s

95th percentile per-packet one-way delay: 155.237 ms

Loss rate: 10.28%

Run 10: Report of FillP — Data Link

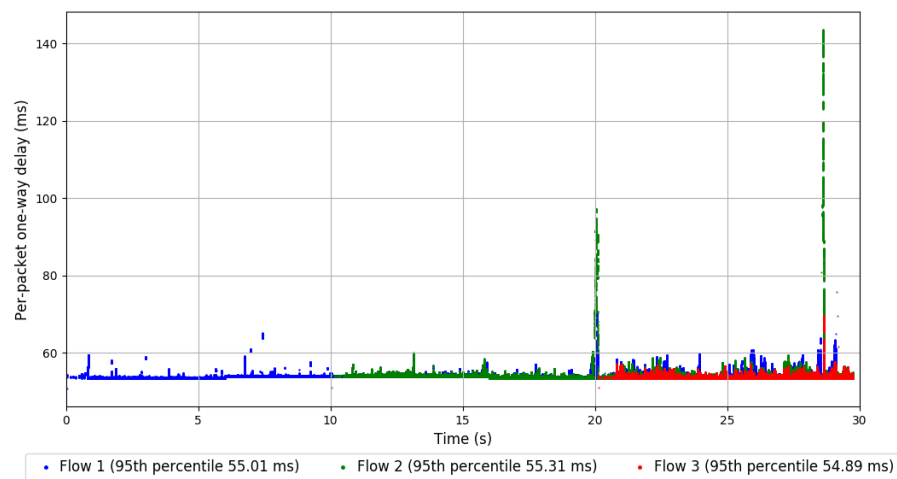
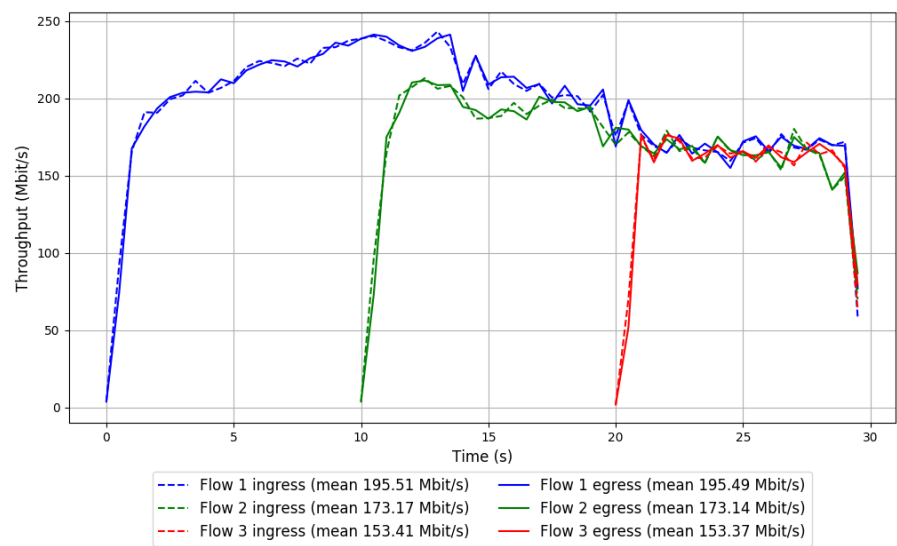


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-02-17 12:43:23
End at: 2018-02-17 12:43:53

# Below is generated by plot.py at 2018-02-17 20:03:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 359.97 Mbit/s
95th percentile per-packet one-way delay: 55.071 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 195.49 Mbit/s
95th percentile per-packet one-way delay: 55.006 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 173.14 Mbit/s
95th percentile per-packet one-way delay: 55.313 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 153.37 Mbit/s
95th percentile per-packet one-way delay: 54.886 ms
Loss rate: 0.00%
```

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

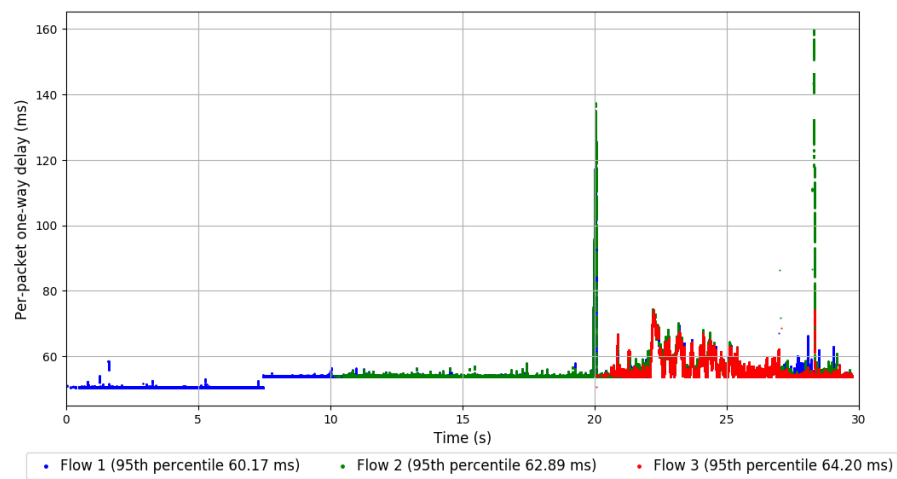
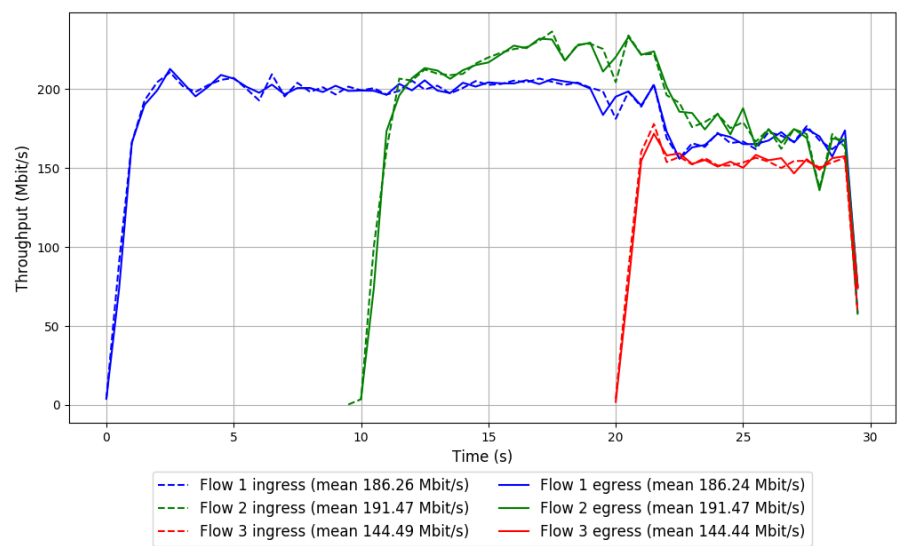


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-02-17 13:01:02
End at: 2018-02-17 13:01:32

# Below is generated by plot.py at 2018-02-17 20:03:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 360.27 Mbit/s
95th percentile per-packet one-way delay: 62.104 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 186.24 Mbit/s
95th percentile per-packet one-way delay: 60.168 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 191.47 Mbit/s
95th percentile per-packet one-way delay: 62.888 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 144.44 Mbit/s
95th percentile per-packet one-way delay: 64.196 ms
Loss rate: 0.00%
```

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



Run 3: Statistics of Indigo-1-32

Start at: 2018-02-17 13:19:38

End at: 2018-02-17 13:20:08

Below is generated by plot.py at 2018-02-17 20:03:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 390.62 Mbit/s

95th percentile per-packet one-way delay: 54.120 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 208.56 Mbit/s

95th percentile per-packet one-way delay: 53.006 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 196.42 Mbit/s

95th percentile per-packet one-way delay: 56.103 ms

Loss rate: 0.00%

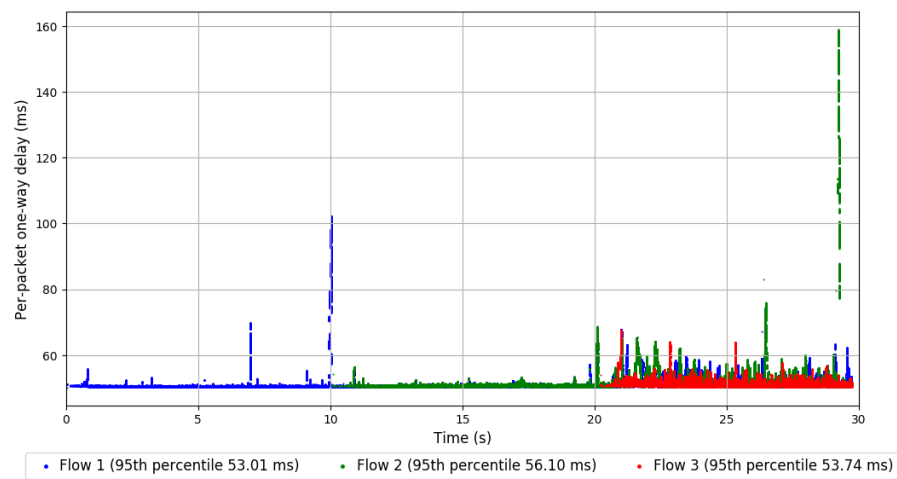
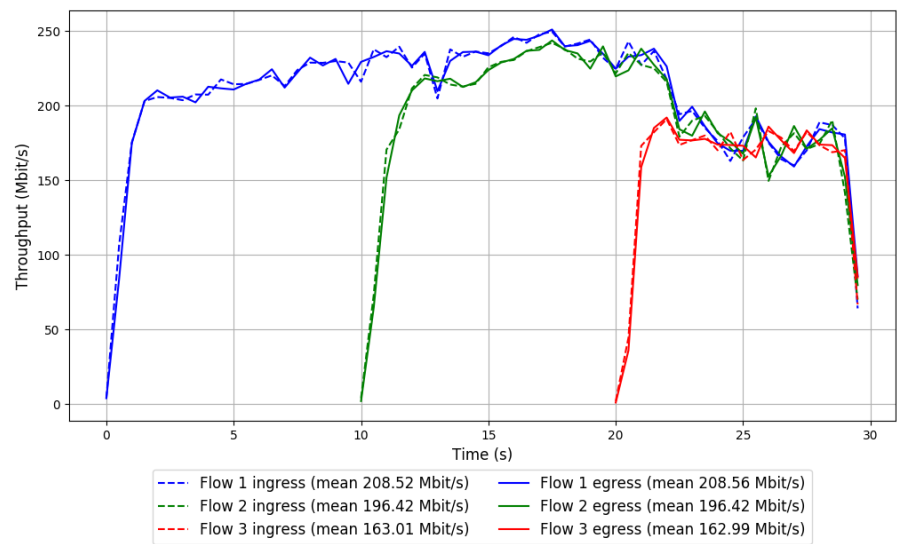
-- Flow 3:

Average throughput: 162.99 Mbit/s

95th percentile per-packet one-way delay: 53.744 ms

Loss rate: 0.02%

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



Run 4: Statistics of Indigo-1-32

Start at: 2018-02-17 13:37:48

End at: 2018-02-17 13:38:18

Below is generated by plot.py at 2018-02-17 20:03:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 364.18 Mbit/s

95th percentile per-packet one-way delay: 54.109 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 202.68 Mbit/s

95th percentile per-packet one-way delay: 54.045 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 165.75 Mbit/s

95th percentile per-packet one-way delay: 54.239 ms

Loss rate: 0.00%

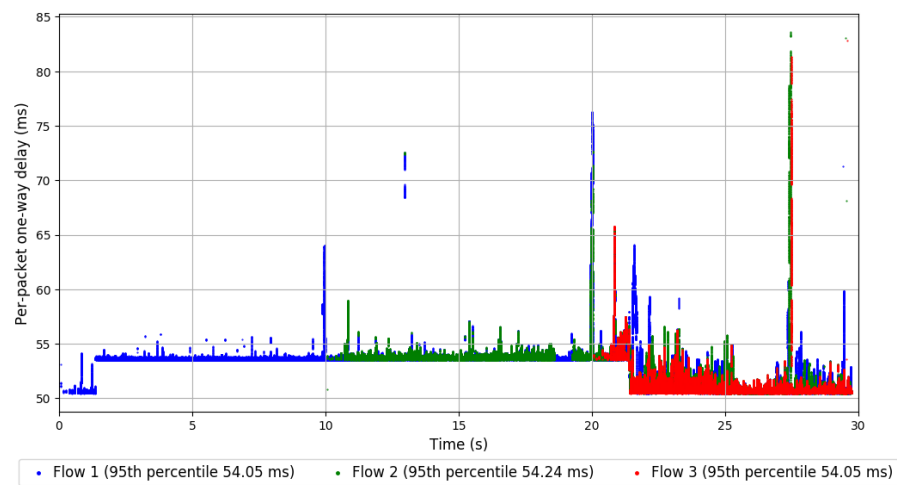
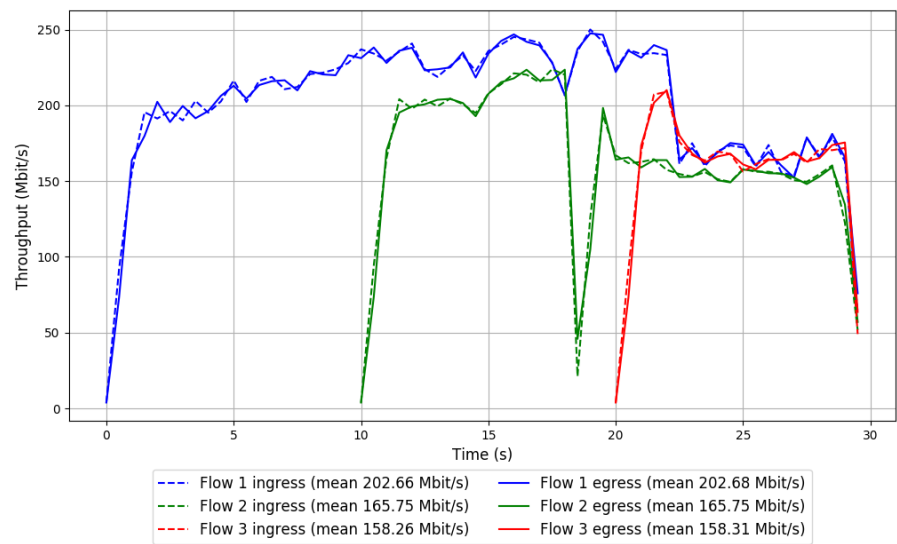
-- Flow 3:

Average throughput: 158.31 Mbit/s

95th percentile per-packet one-way delay: 54.051 ms

Loss rate: 0.00%

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



Run 5: Statistics of Indigo-1-32

Start at: 2018-02-17 13:55:33

End at: 2018-02-17 13:56:03

Below is generated by plot.py at 2018-02-17 20:03:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 373.63 Mbit/s

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

Loss rate: 0.04%

-- Flow 1:

Average throughput: 199.65 Mbit/s

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

Loss rate: 0.02%

-- Flow 2:

Average throughput: 187.76 Mbit/s

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

Loss rate: 0.09%

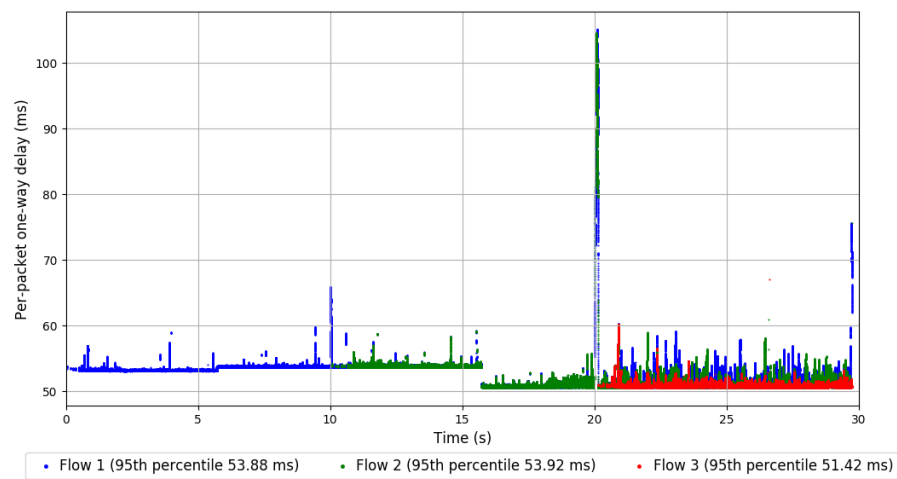
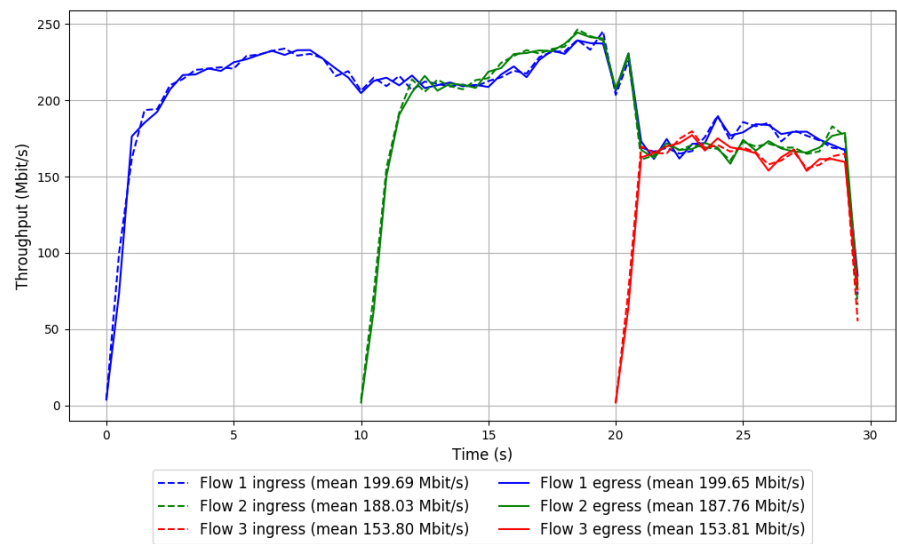
-- Flow 3:

Average throughput: 153.81 Mbit/s

95th percentile per-packet one-way delay: 51.424 ms

Loss rate: 0.00%

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



Run 6: Statistics of Indigo-1-32

Start at: 2018-02-17 14:13:22

End at: 2018-02-17 14:13:52

Below is generated by plot.py at 2018-02-17 20:03:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 369.83 Mbit/s

95th percentile per-packet one-way delay: 56.163 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 189.17 Mbit/s

95th percentile per-packet one-way delay: 55.362 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 194.46 Mbit/s

95th percentile per-packet one-way delay: 57.113 ms

Loss rate: 0.00%

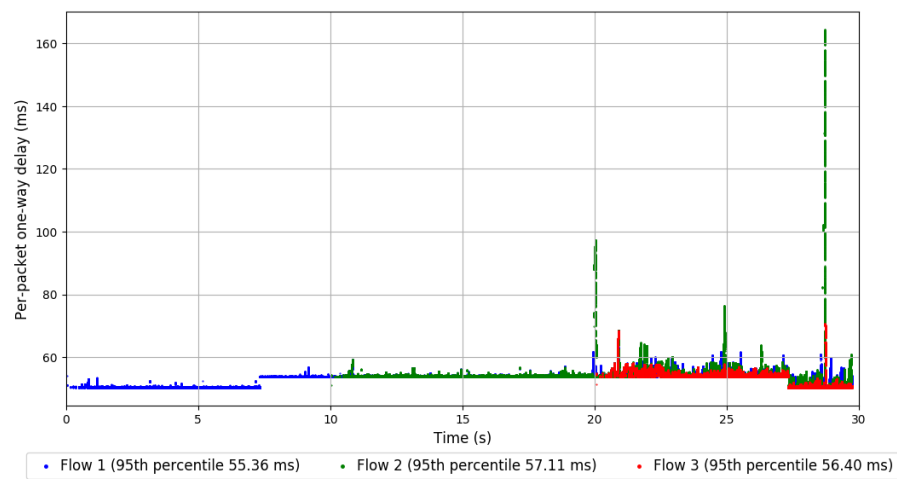
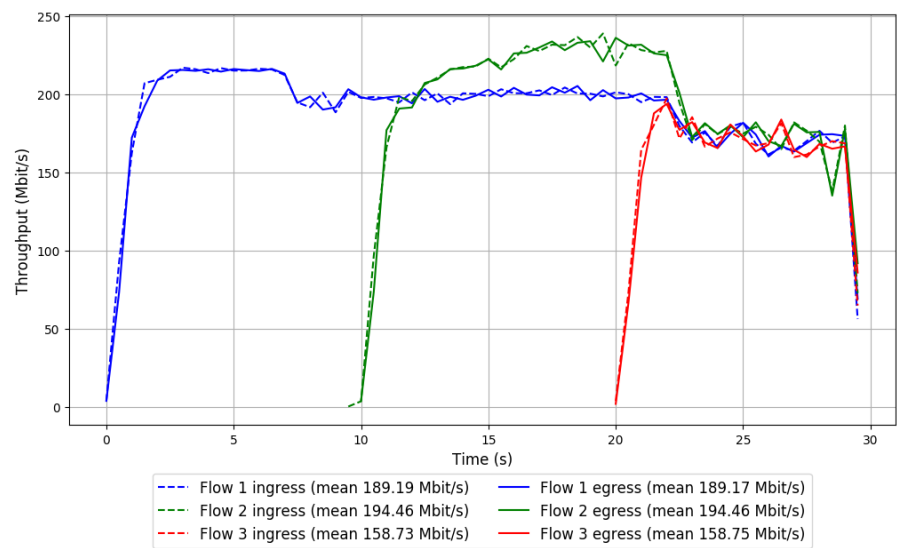
-- Flow 3:

Average throughput: 158.75 Mbit/s

95th percentile per-packet one-way delay: 56.401 ms

Loss rate: 0.00%

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



Run 7: Statistics of Indigo-1-32

Start at: 2018-02-17 14:31:47

End at: 2018-02-17 14:32:17

Below is generated by plot.py at 2018-02-17 20:03:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 338.19 Mbit/s

95th percentile per-packet one-way delay: 54.500 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 174.31 Mbit/s

95th percentile per-packet one-way delay: 54.274 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 175.59 Mbit/s

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

Loss rate: 0.00%

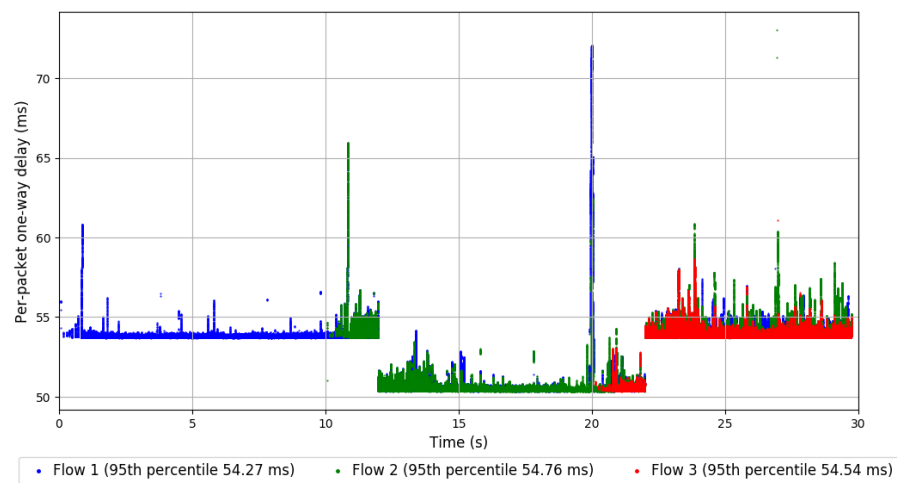
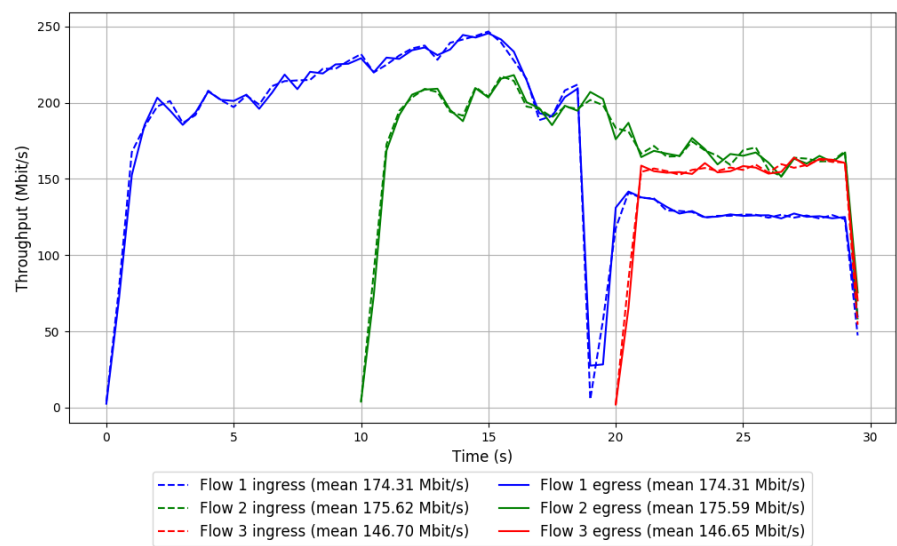
-- Flow 3:

Average throughput: 146.65 Mbit/s

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

Loss rate: 0.00%

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



Run 8: Statistics of Indigo-1-32

Start at: 2018-02-17 14:49:18

End at: 2018-02-17 14:49:48

Below is generated by plot.py at 2018-02-17 20:03:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 379.46 Mbit/s

95th percentile per-packet one-way delay: 54.010 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 206.22 Mbit/s

95th percentile per-packet one-way delay: 53.999 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 185.64 Mbit/s

95th percentile per-packet one-way delay: 54.170 ms

Loss rate: 0.00%

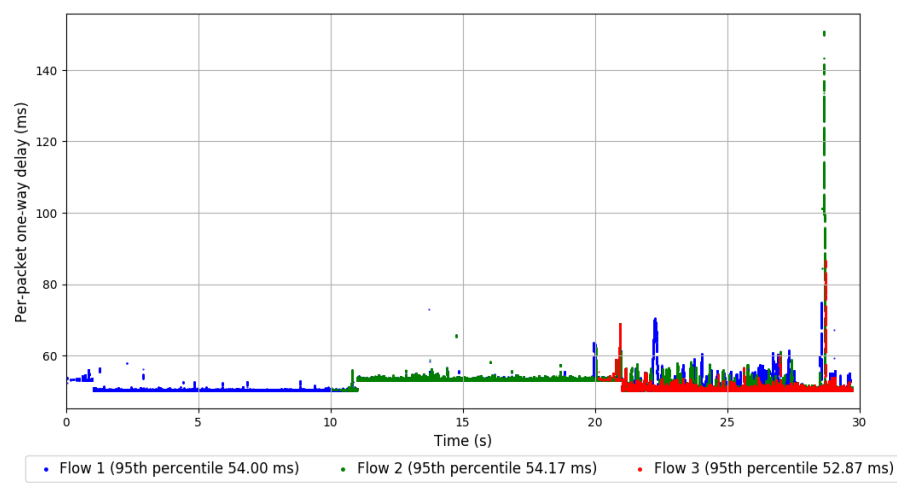
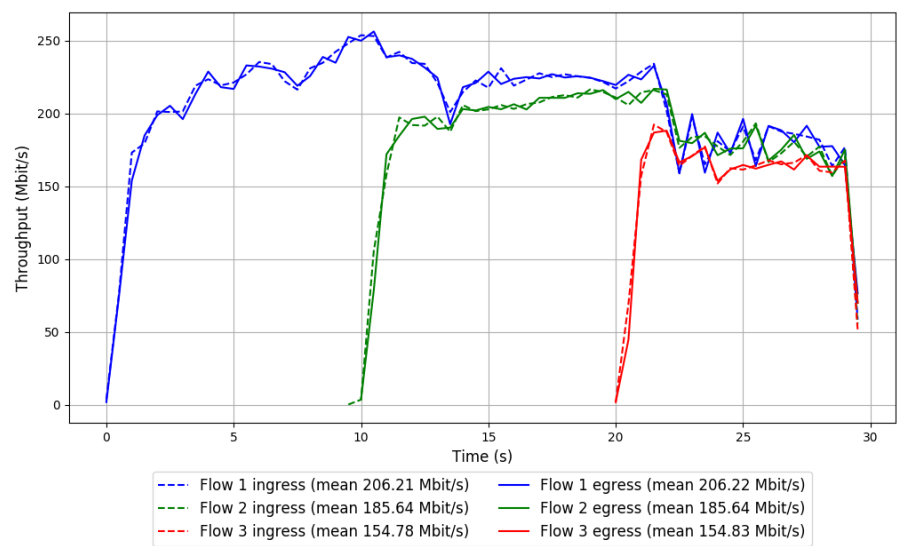
-- Flow 3:

Average throughput: 154.83 Mbit/s

95th percentile per-packet one-way delay: 52.866 ms

Loss rate: 0.00%

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



Run 9: Statistics of Indigo-1-32

Start at: 2018-02-17 15:07:23

End at: 2018-02-17 15:07:53

Below is generated by plot.py at 2018-02-17 20:03:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 377.77 Mbit/s

95th percentile per-packet one-way delay: 54.799 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 205.26 Mbit/s

95th percentile per-packet one-way delay: 53.643 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 187.78 Mbit/s

95th percentile per-packet one-way delay: 55.259 ms

Loss rate: 0.00%

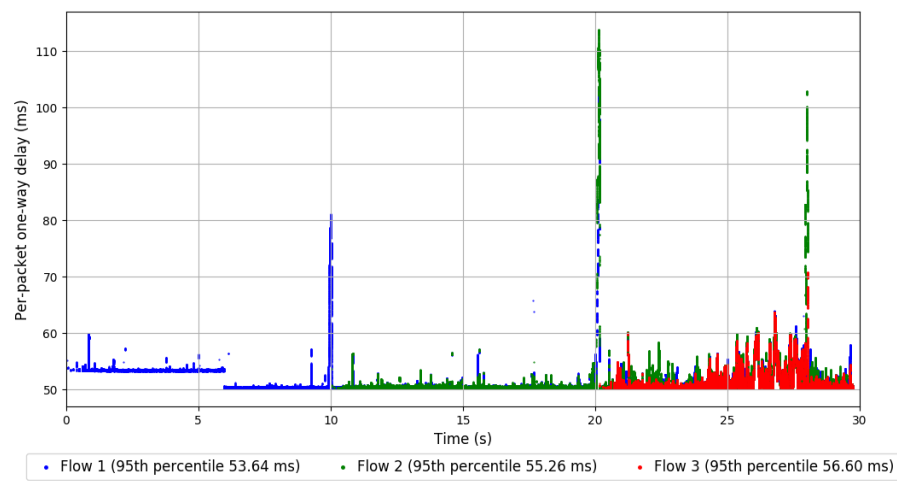
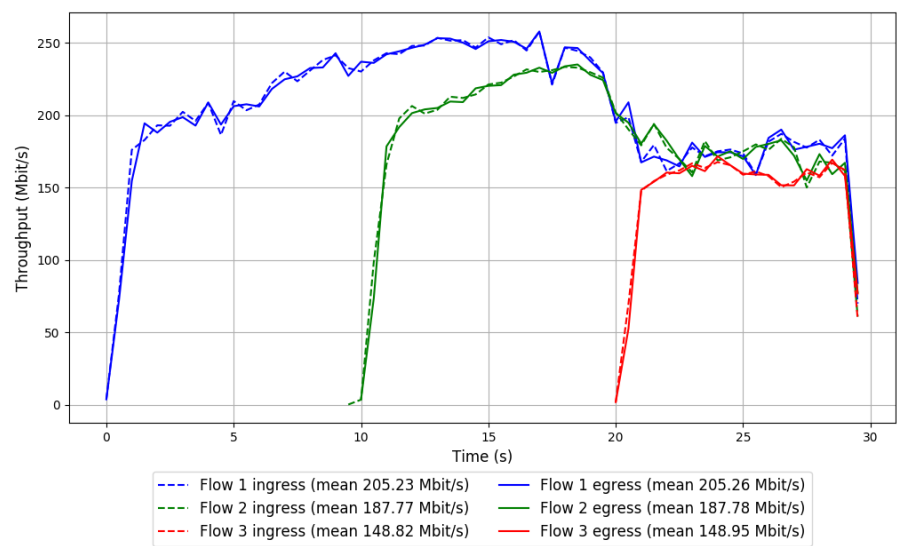
-- Flow 3:

Average throughput: 148.95 Mbit/s

95th percentile per-packet one-way delay: 56.597 ms

Loss rate: 0.00%

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



Run 10: Statistics of Indigo-1-32

Start at: 2018-02-17 15:24:53

End at: 2018-02-17 15:25:23

Below is generated by plot.py at 2018-02-17 20:03:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 375.81 Mbit/s

95th percentile per-packet one-way delay: 57.607 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 203.44 Mbit/s

95th percentile per-packet one-way delay: 56.558 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 186.81 Mbit/s

95th percentile per-packet one-way delay: 58.137 ms

Loss rate: 0.00%

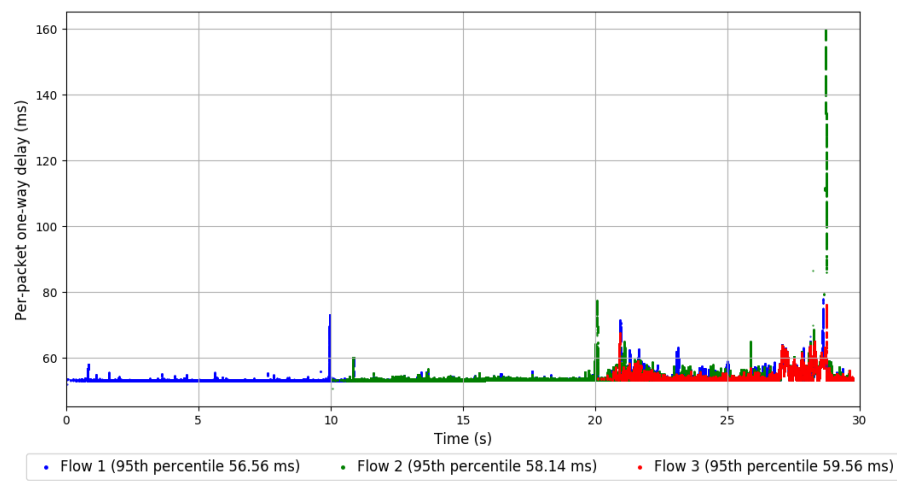
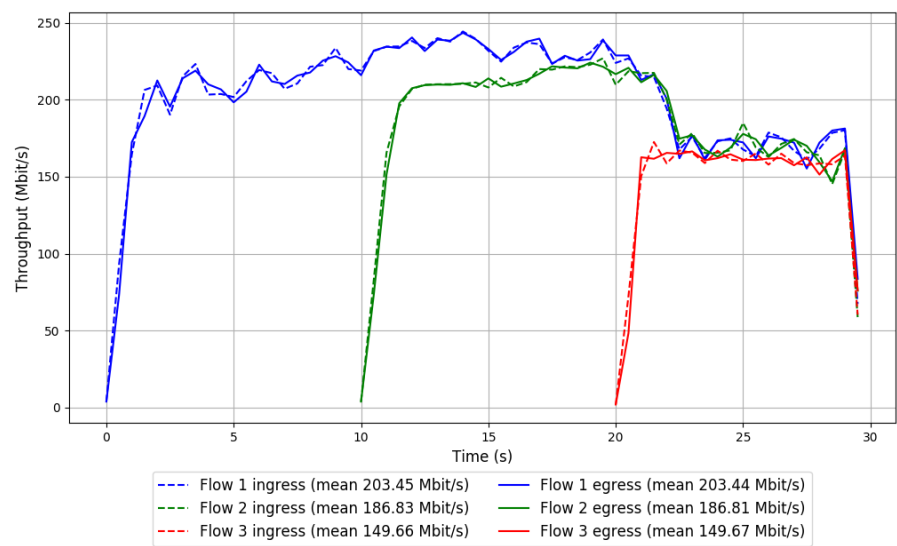
-- Flow 3:

Average throughput: 149.67 Mbit/s

95th percentile per-packet one-way delay: 59.559 ms

Loss rate: 0.00%

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



Run 1: Statistics of Vivace-latency

Start at: 2018-02-17 12:29:28

End at: 2018-02-17 12:29:58

Below is generated by plot.py at 2018-02-17 20:03:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 383.04 Mbit/s

95th percentile per-packet one-way delay: 53.856 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 234.07 Mbit/s

95th percentile per-packet one-way delay: 51.655 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 182.54 Mbit/s

95th percentile per-packet one-way delay: 52.112 ms

Loss rate: 0.00%

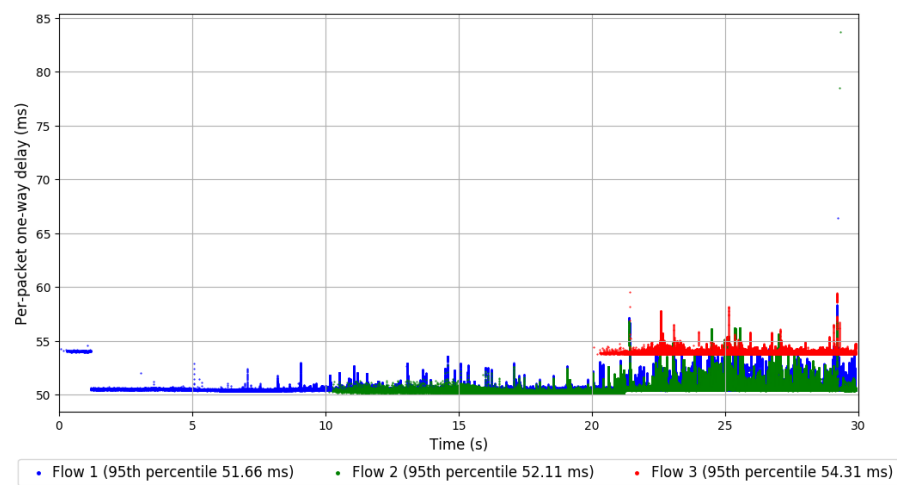
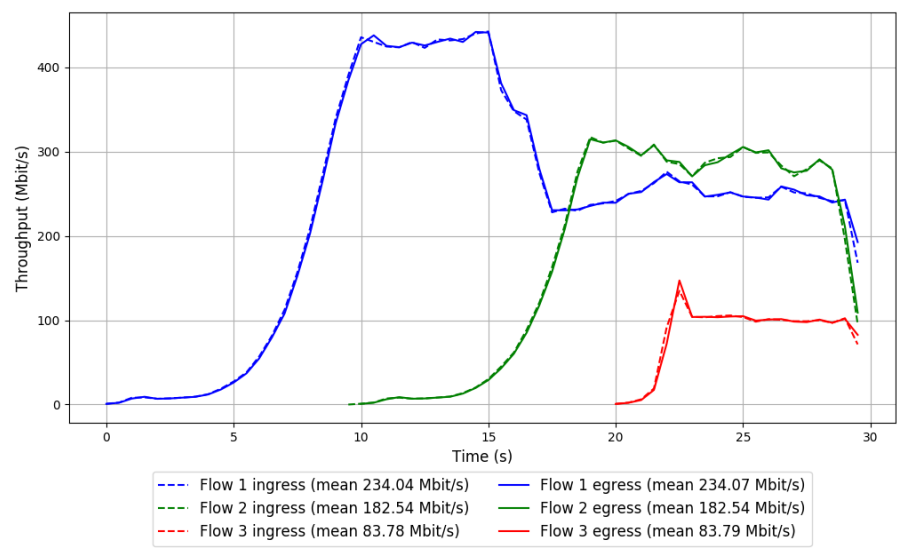
-- Flow 3:

Average throughput: 83.79 Mbit/s

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

Loss rate: 0.00%

Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-02-17 12:46:51

End at: 2018-02-17 12:47:21

Below is generated by plot.py at 2018-02-17 20:03:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 405.02 Mbit/s

95th percentile per-packet one-way delay: 55.219 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 233.49 Mbit/s

95th percentile per-packet one-way delay: 55.301 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 173.10 Mbit/s

95th percentile per-packet one-way delay: 55.328 ms

Loss rate: 0.03%

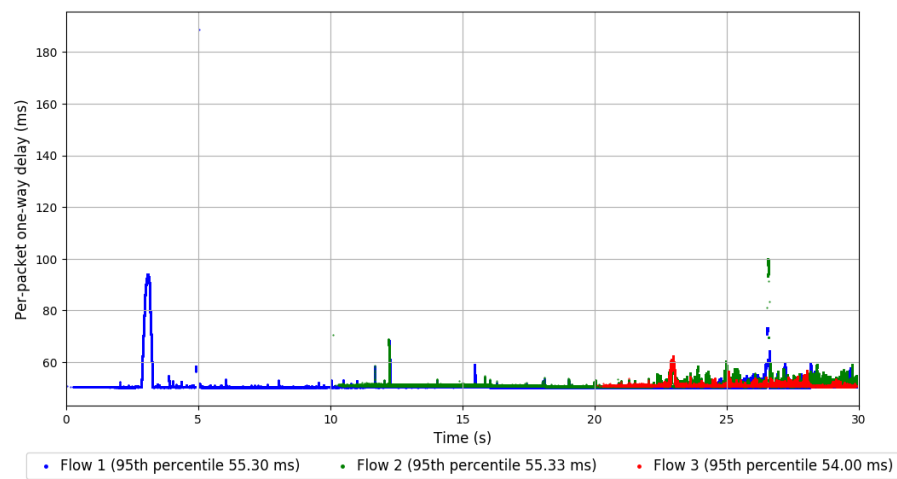
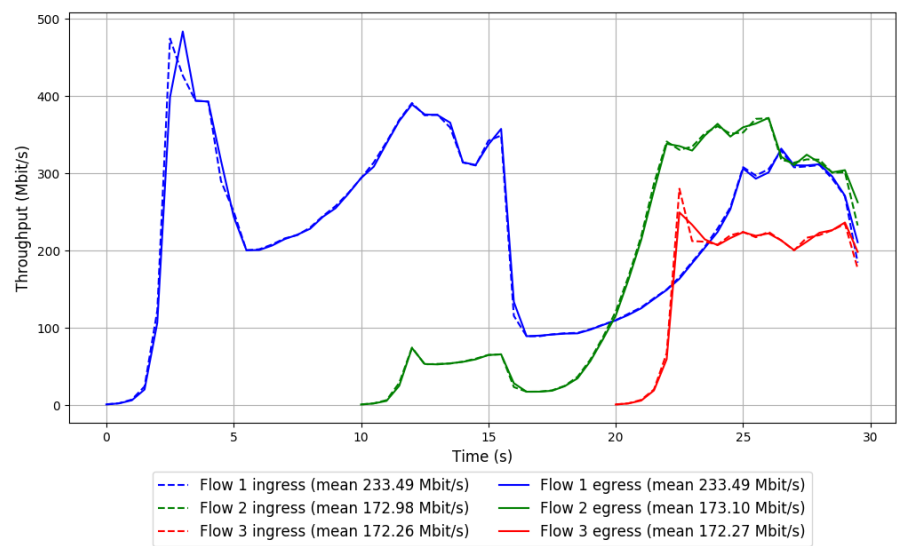
-- Flow 3:

Average throughput: 172.27 Mbit/s

95th percentile per-packet one-way delay: 54.002 ms

Loss rate: 0.00%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-02-17 13:04:30

End at: 2018-02-17 13:05:00

Below is generated by plot.py at 2018-02-17 20:03:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 525.99 Mbit/s

95th percentile per-packet one-way delay: 61.325 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 351.62 Mbit/s

95th percentile per-packet one-way delay: 56.803 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 219.94 Mbit/s

95th percentile per-packet one-way delay: 66.077 ms

Loss rate: 0.00%

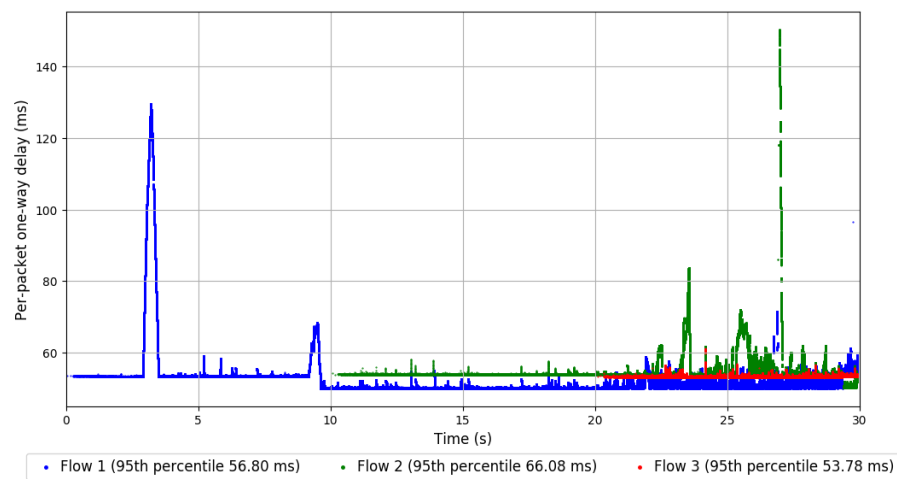
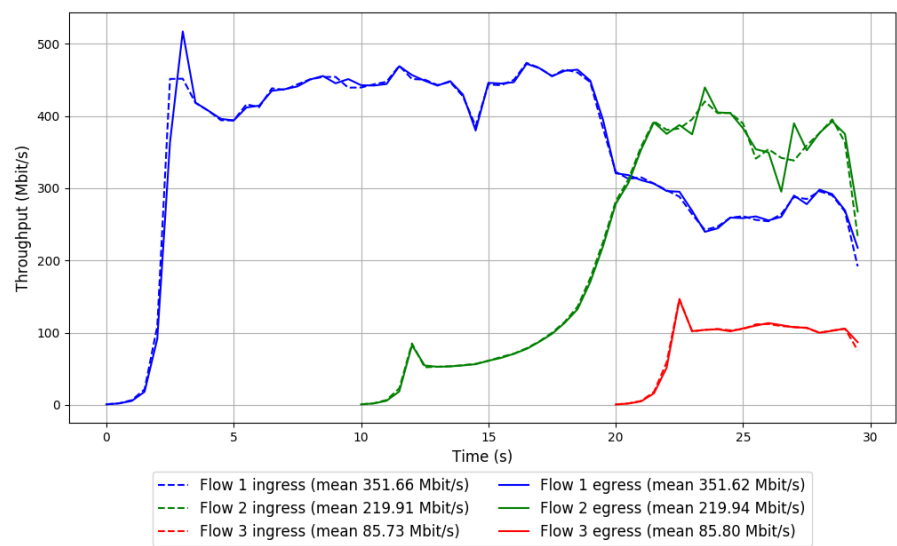
-- Flow 3:

Average throughput: 85.80 Mbit/s

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

Loss rate: 0.00%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-02-17 13:23:10

End at: 2018-02-17 13:23:40

Below is generated by plot.py at 2018-02-17 20:03:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 513.49 Mbit/s

95th percentile per-packet one-way delay: 210.702 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 308.93 Mbit/s

95th percentile per-packet one-way delay: 218.186 ms

Loss rate: 2.45%

-- Flow 2:

Average throughput: 289.82 Mbit/s

95th percentile per-packet one-way delay: 70.879 ms

Loss rate: 0.00%

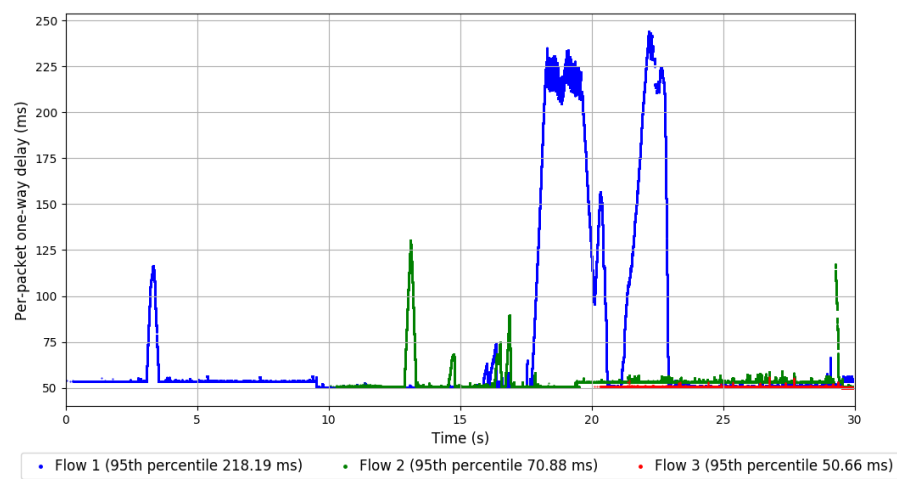
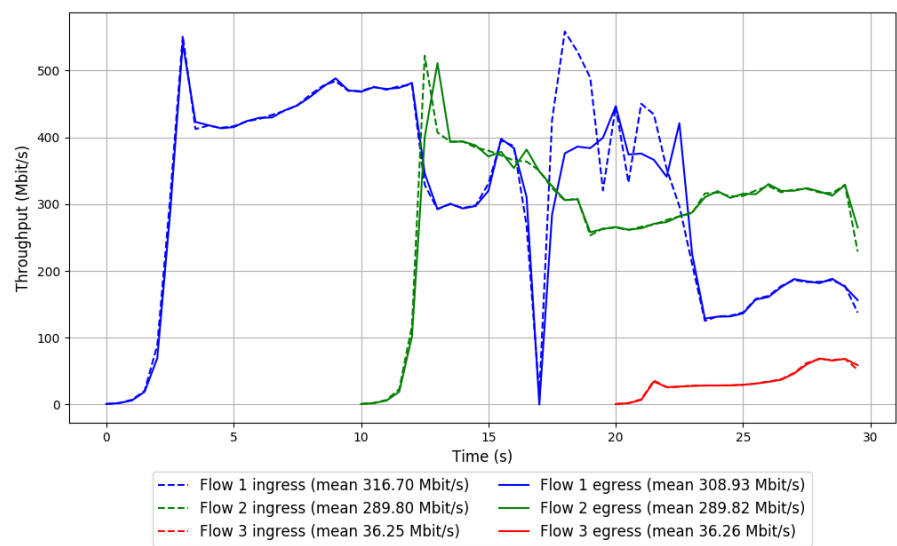
-- Flow 3:

Average throughput: 36.26 Mbit/s

95th percentile per-packet one-way delay: 50.655 ms

Loss rate: 0.00%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-02-17 13:41:18

End at: 2018-02-17 13:41:48

Below is generated by plot.py at 2018-02-17 20:04:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 570.01 Mbit/s

95th percentile per-packet one-way delay: 53.407 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 351.30 Mbit/s

95th percentile per-packet one-way delay: 51.807 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 281.72 Mbit/s

95th percentile per-packet one-way delay: 54.562 ms

Loss rate: 0.00%

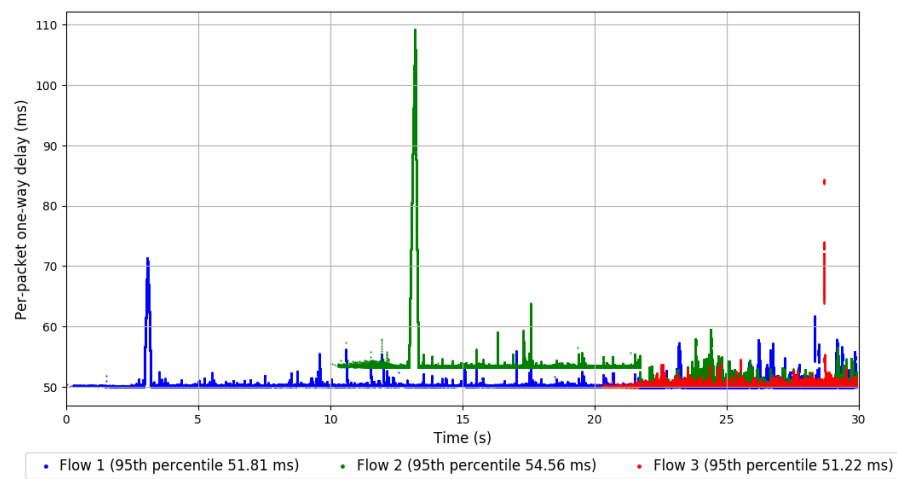
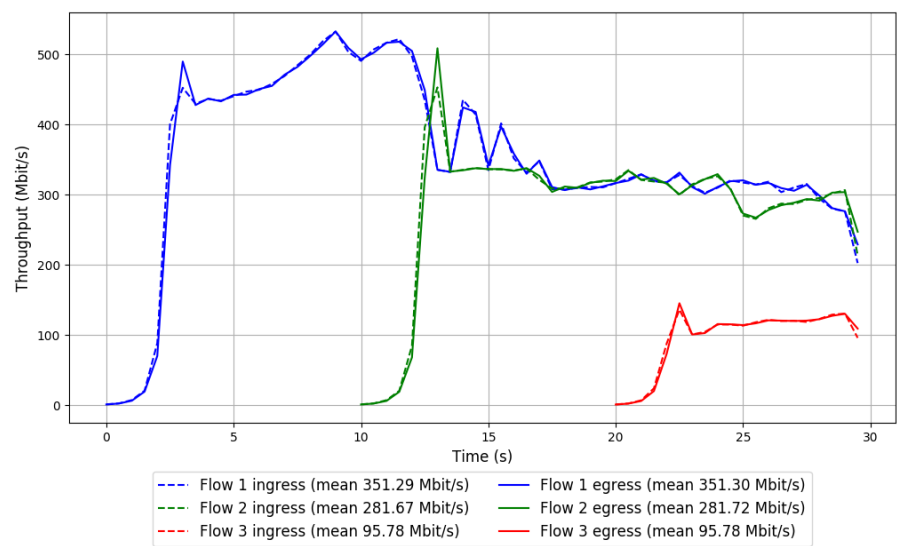
-- Flow 3:

Average throughput: 95.78 Mbit/s

95th percentile per-packet one-way delay: 51.222 ms

Loss rate: 0.00%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-02-17 13:59:00

End at: 2018-02-17 13:59:30

Below is generated by plot.py at 2018-02-17 20:04:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 534.66 Mbit/s

95th percentile per-packet one-way delay: 54.283 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 297.16 Mbit/s

95th percentile per-packet one-way delay: 54.184 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 247.53 Mbit/s

95th percentile per-packet one-way delay: 53.917 ms

Loss rate: 0.02%

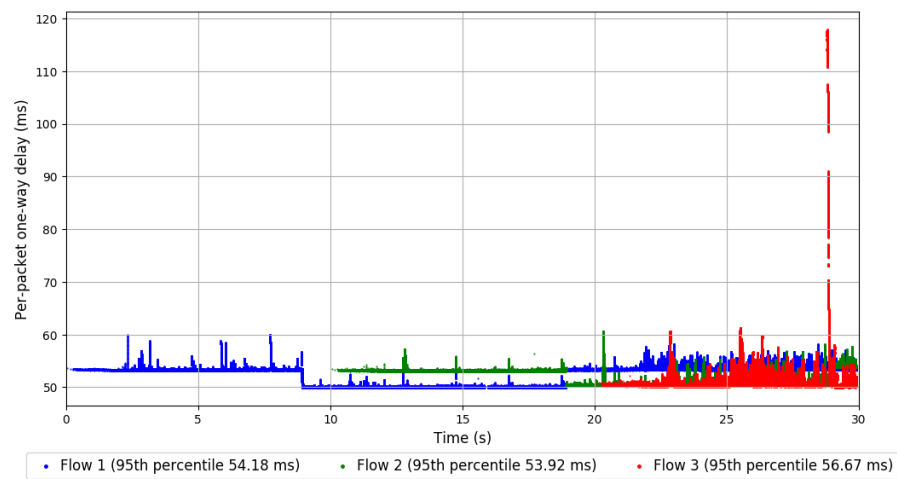
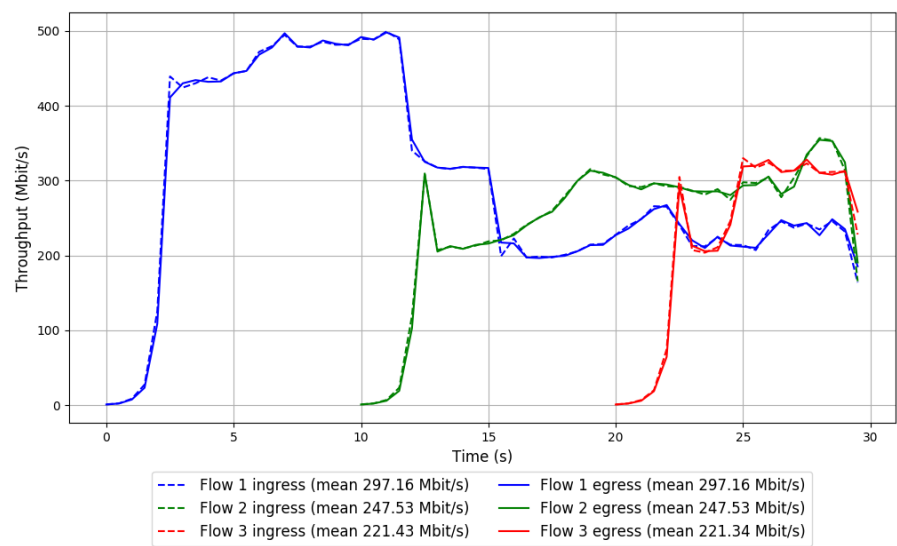
-- Flow 3:

Average throughput: 221.34 Mbit/s

95th percentile per-packet one-way delay: 56.671 ms

Loss rate: 0.05%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-02-17 14:16:51

End at: 2018-02-17 14:17:21

Below is generated by plot.py at 2018-02-17 20:05:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 490.35 Mbit/s

95th percentile per-packet one-way delay: 84.484 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 239.88 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 290.91 Mbit/s

95th percentile per-packet one-way delay: 189.406 ms

Loss rate: 0.00%

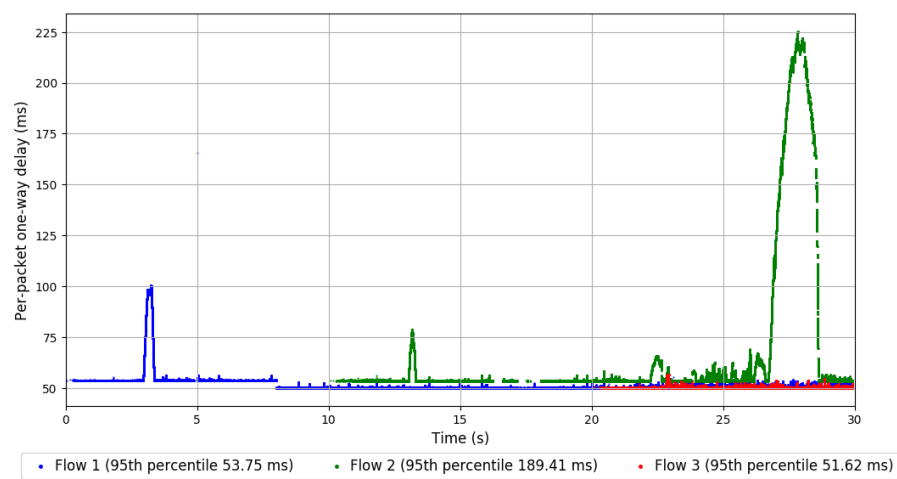
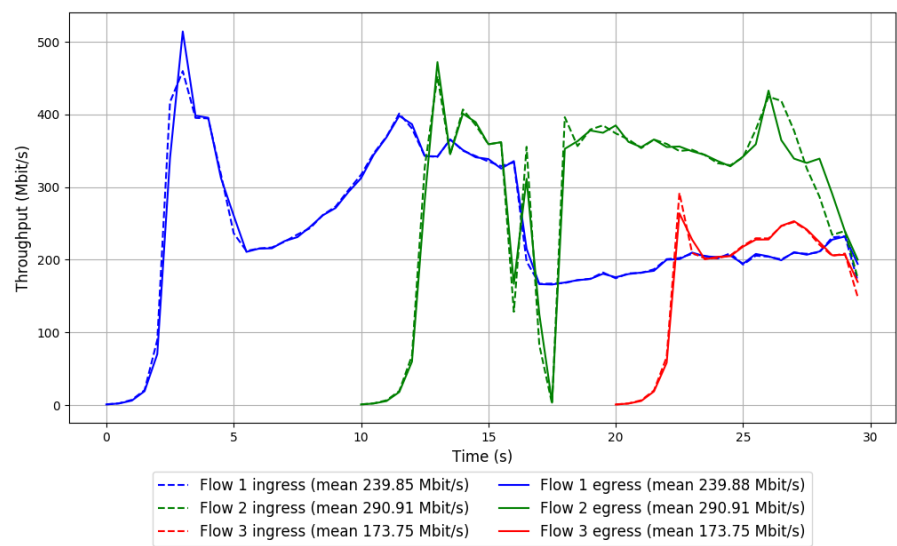
-- Flow 3:

Average throughput: 173.75 Mbit/s

95th percentile per-packet one-way delay: 51.625 ms

Loss rate: 0.00%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-02-17 14:35:16

End at: 2018-02-17 14:35:46

Below is generated by plot.py at 2018-02-17 20:06:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 473.28 Mbit/s

95th percentile per-packet one-way delay: 145.186 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 248.17 Mbit/s

95th percentile per-packet one-way delay: 188.259 ms

Loss rate: 1.93%

-- Flow 2:

Average throughput: 286.33 Mbit/s

95th percentile per-packet one-way delay: 138.853 ms

Loss rate: 0.00%

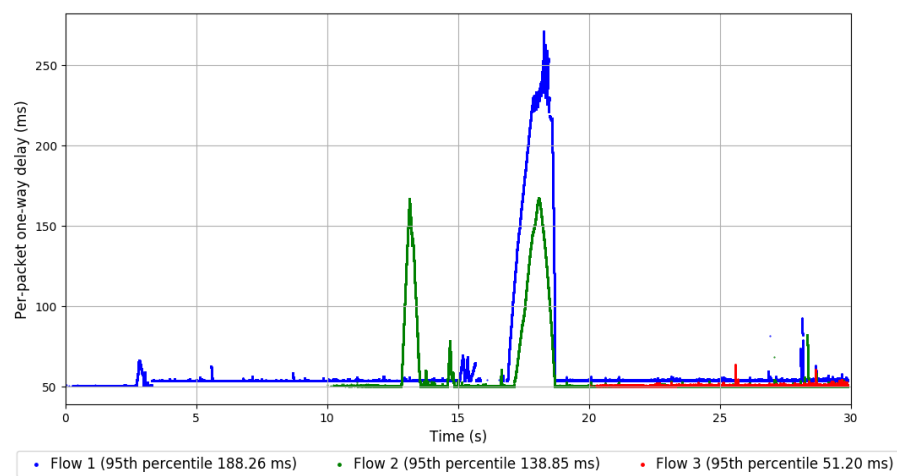
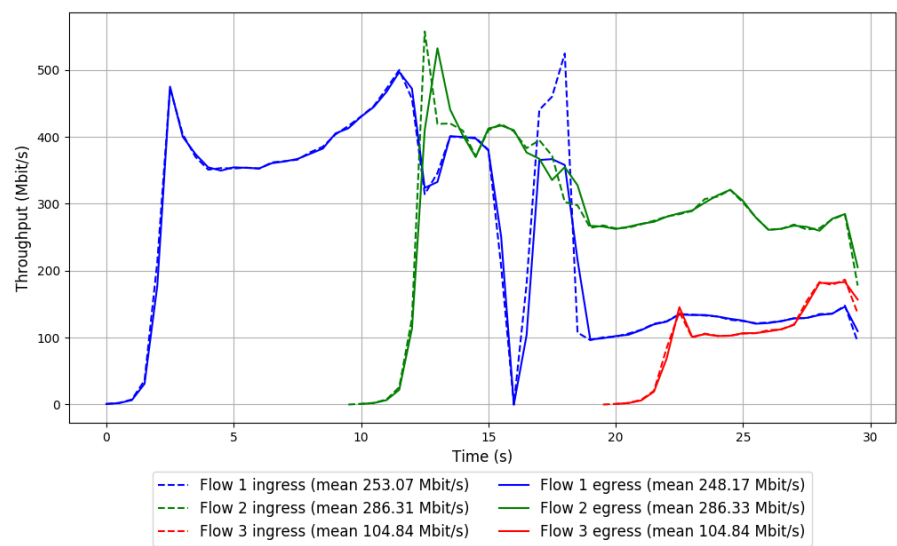
-- Flow 3:

Average throughput: 104.84 Mbit/s

95th percentile per-packet one-way delay: 51.197 ms

Loss rate: 0.00%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-02-17 14:52:48

End at: 2018-02-17 14:53:18

Below is generated by plot.py at 2018-02-17 20:09:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 564.85 Mbit/s

95th percentile per-packet one-way delay: 92.382 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 351.04 Mbit/s

95th percentile per-packet one-way delay: 144.680 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 275.94 Mbit/s

95th percentile per-packet one-way delay: 54.192 ms

Loss rate: 0.00%

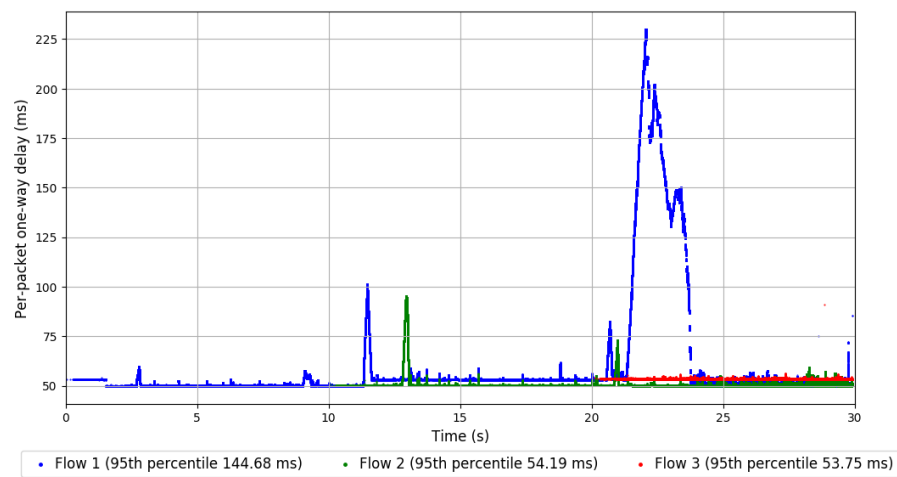
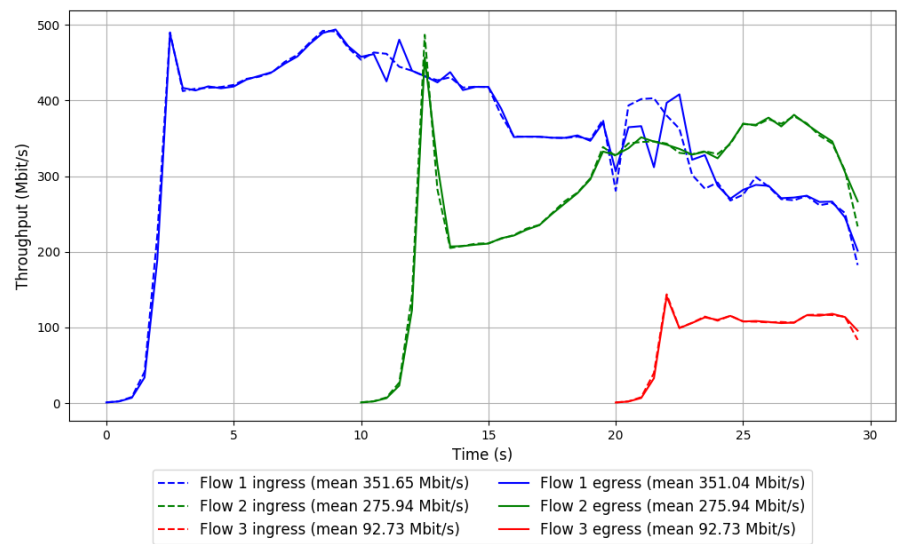
-- Flow 3:

Average throughput: 92.73 Mbit/s

95th percentile per-packet one-way delay: 53.747 ms

Loss rate: 0.01%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-02-17 15:10:51

End at: 2018-02-17 15:11:21

Below is generated by plot.py at 2018-02-17 20:09:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 461.85 Mbit/s

95th percentile per-packet one-way delay: 76.579 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 218.92 Mbit/s

95th percentile per-packet one-way delay: 62.877 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 283.40 Mbit/s

95th percentile per-packet one-way delay: 91.172 ms

Loss rate: 0.00%

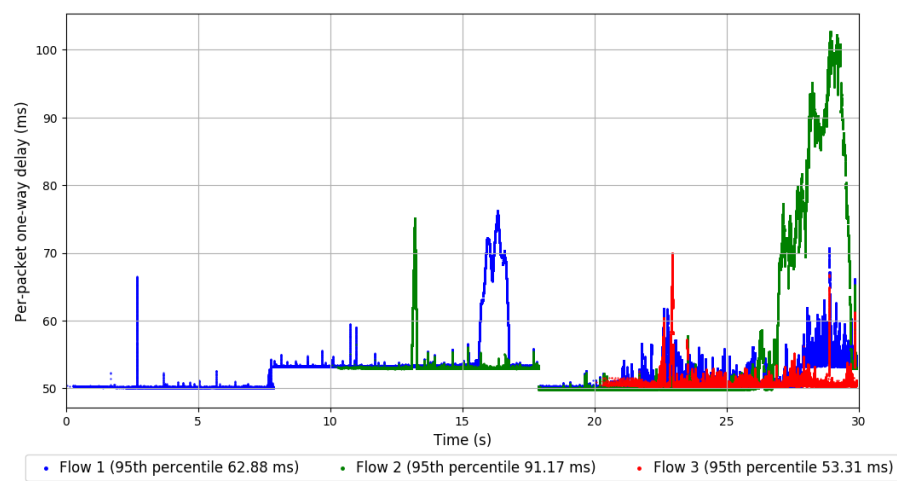
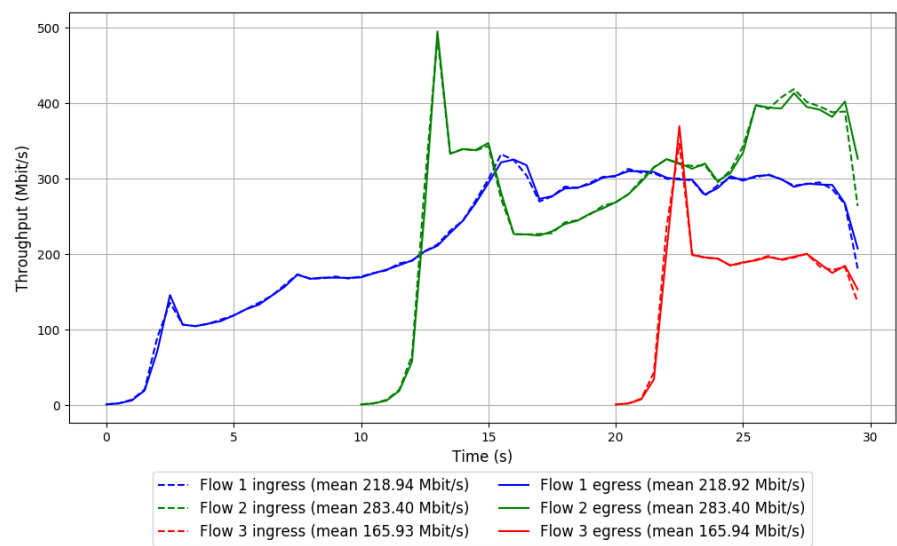
-- Flow 3:

Average throughput: 165.94 Mbit/s

95th percentile per-packet one-way delay: 53.315 ms

Loss rate: 0.00%

Run 10: Report of Vivace-latency — Data Link

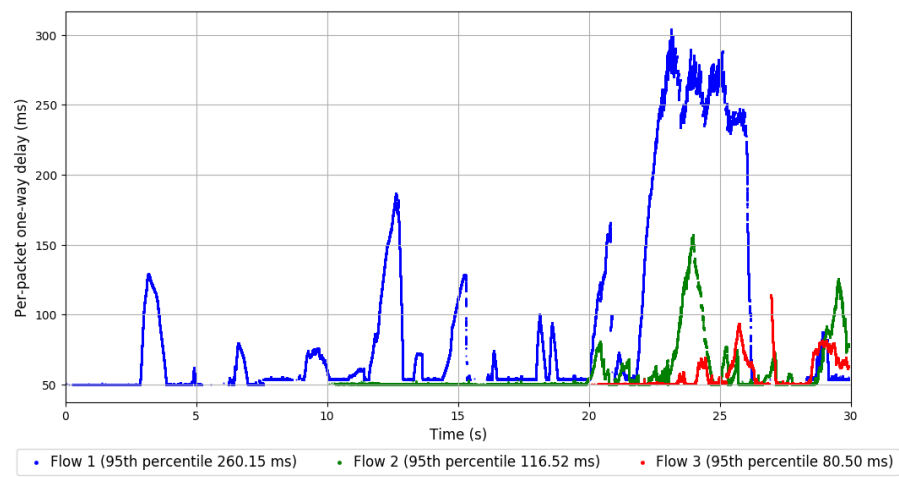
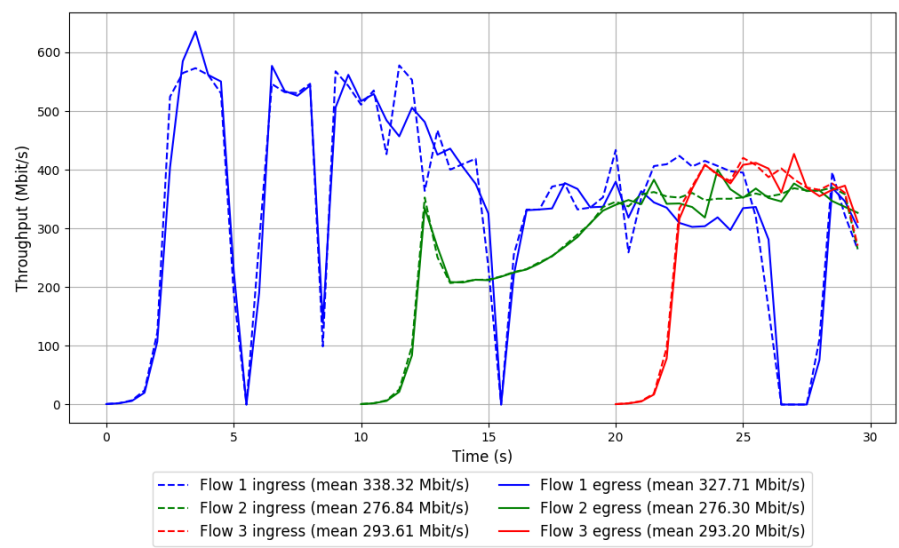


```
Run 1: Statistics of Vivace-loss

Start at: 2018-02-17 12:41:22
End at: 2018-02-17 12:41:52

# Below is generated by plot.py at 2018-02-17 20:12:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 607.61 Mbit/s
95th percentile per-packet one-way delay: 239.257 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 327.71 Mbit/s
95th percentile per-packet one-way delay: 260.151 ms
Loss rate: 3.12%
-- Flow 2:
Average throughput: 276.30 Mbit/s
95th percentile per-packet one-way delay: 116.519 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 293.20 Mbit/s
95th percentile per-packet one-way delay: 80.505 ms
Loss rate: 0.12%
```

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-02-17 12:59:00

End at: 2018-02-17 12:59:30

Below is generated by plot.py at 2018-02-17 20:14:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 630.76 Mbit/s

95th percentile per-packet one-way delay: 166.345 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 373.05 Mbit/s

95th percentile per-packet one-way delay: 195.083 ms

Loss rate: 1.65%

-- Flow 2:

Average throughput: 265.86 Mbit/s

95th percentile per-packet one-way delay: 104.875 ms

Loss rate: 0.00%

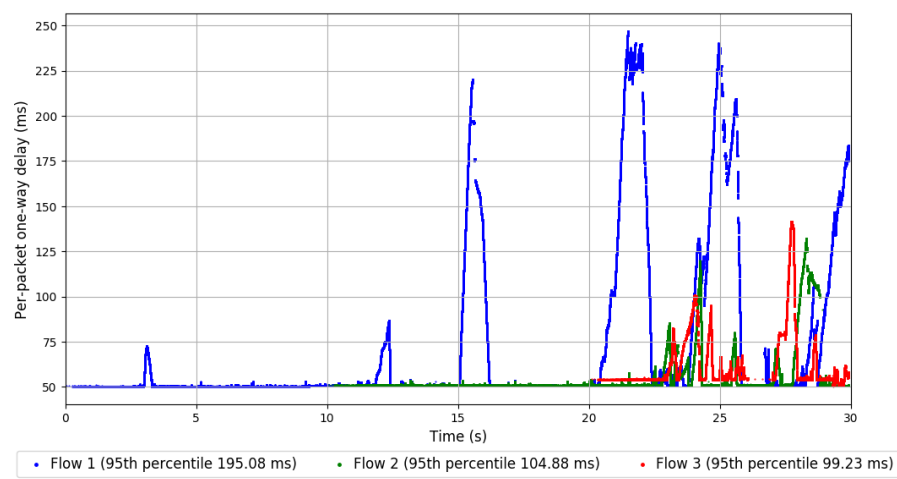
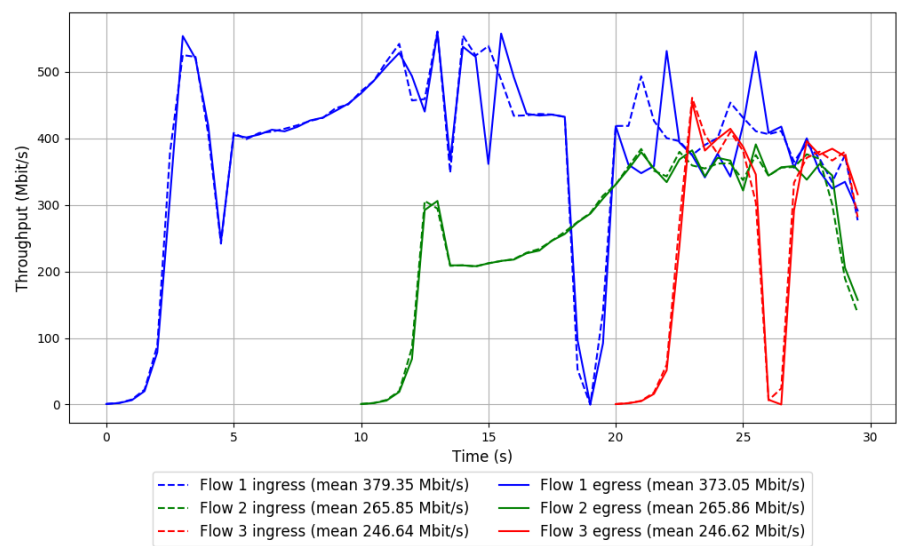
-- Flow 3:

Average throughput: 246.62 Mbit/s

95th percentile per-packet one-way delay: 99.233 ms

Loss rate: 0.00%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-02-17 13:17:31

End at: 2018-02-17 13:18:01

Below is generated by plot.py at 2018-02-17 20:14:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 611.86 Mbit/s

95th percentile per-packet one-way delay: 176.521 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 348.23 Mbit/s

95th percentile per-packet one-way delay: 216.520 ms

Loss rate: 2.30%

-- Flow 2:

Average throughput: 306.49 Mbit/s

95th percentile per-packet one-way delay: 81.728 ms

Loss rate: 0.00%

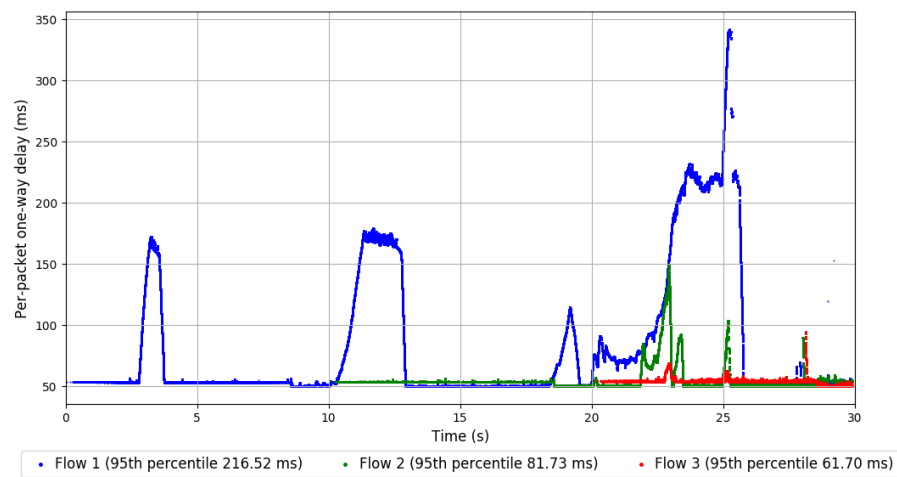
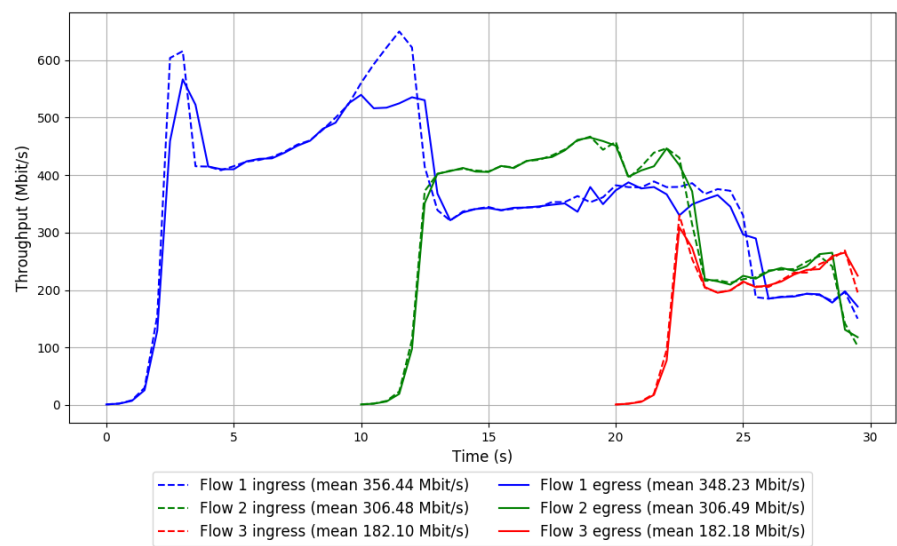
-- Flow 3:

Average throughput: 182.18 Mbit/s

95th percentile per-packet one-way delay: 61.702 ms

Loss rate: 0.00%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-02-17 13:35:47

End at: 2018-02-17 13:36:17

Below is generated by plot.py at 2018-02-17 20:14:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 603.21 Mbit/s

95th percentile per-packet one-way delay: 176.339 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 303.05 Mbit/s

95th percentile per-packet one-way delay: 191.797 ms

Loss rate: 1.45%

-- Flow 2:

Average throughput: 311.68 Mbit/s

95th percentile per-packet one-way delay: 108.148 ms

Loss rate: 0.26%

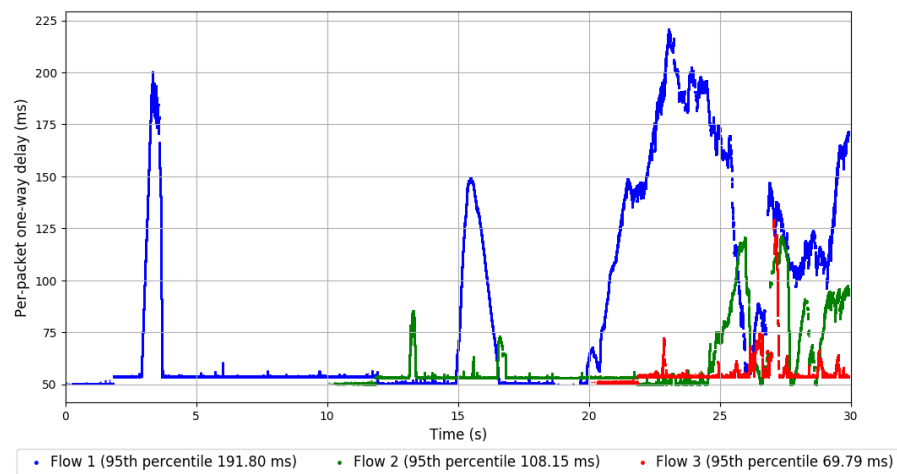
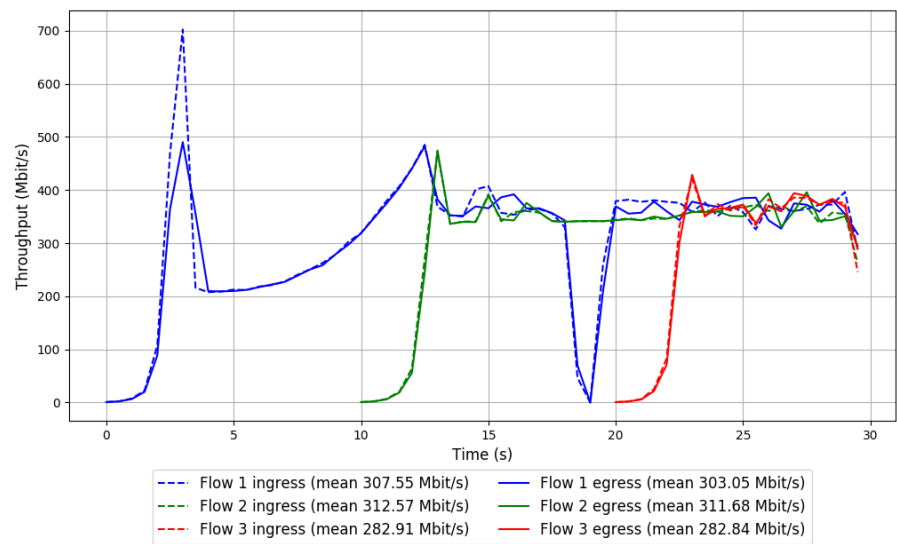
-- Flow 3:

Average throughput: 282.84 Mbit/s

95th percentile per-packet one-way delay: 69.789 ms

Loss rate: 0.00%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-02-17 13:53:30

End at: 2018-02-17 13:54:00

Below is generated by plot.py at 2018-02-17 20:17:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 652.11 Mbit/s

95th percentile per-packet one-way delay: 238.320 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 369.77 Mbit/s

95th percentile per-packet one-way delay: 69.912 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 300.58 Mbit/s

95th percentile per-packet one-way delay: 64.636 ms

Loss rate: 0.12%

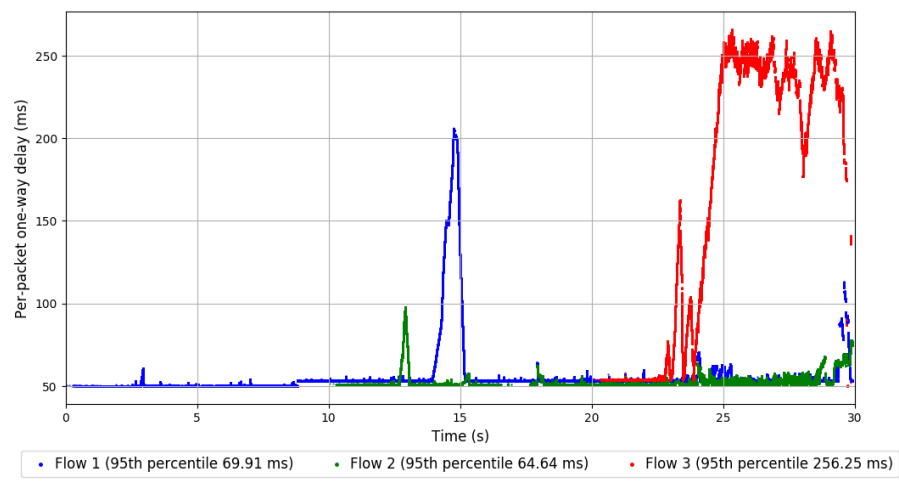
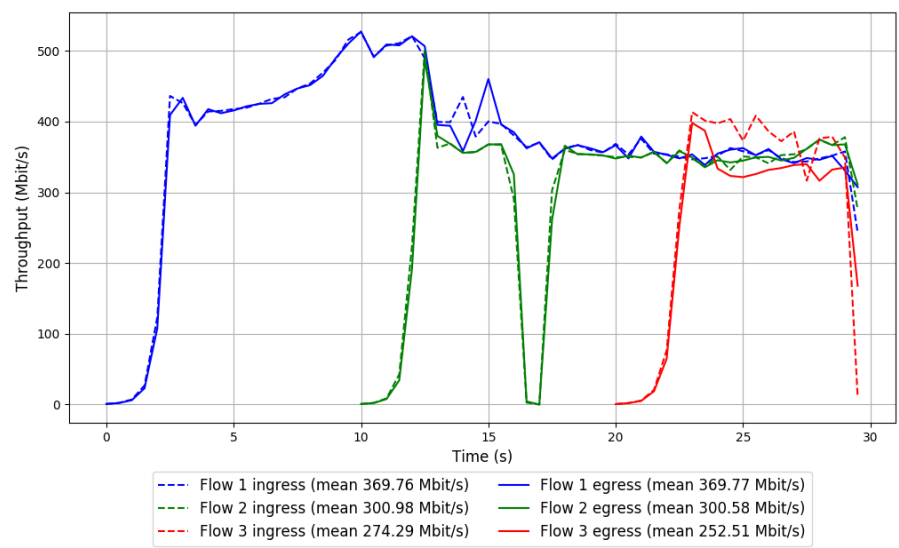
-- Flow 3:

Average throughput: 252.51 Mbit/s

95th percentile per-packet one-way delay: 256.254 ms

Loss rate: 7.96%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-02-17 14:11:20

End at: 2018-02-17 14:11:50

Below is generated by plot.py at 2018-02-17 20:18:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 627.72 Mbit/s

95th percentile per-packet one-way delay: 229.598 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 339.54 Mbit/s

95th percentile per-packet one-way delay: 238.011 ms

Loss rate: 2.45%

-- Flow 2:

Average throughput: 296.88 Mbit/s

95th percentile per-packet one-way delay: 60.276 ms

Loss rate: 0.02%

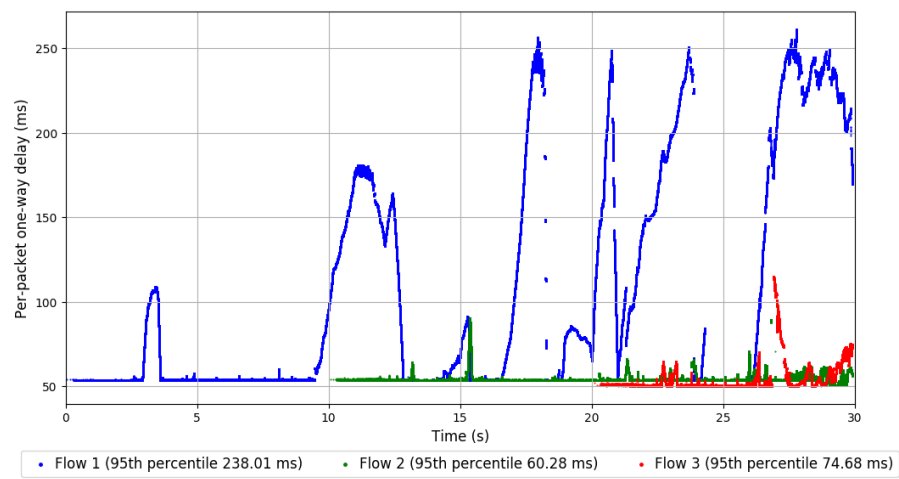
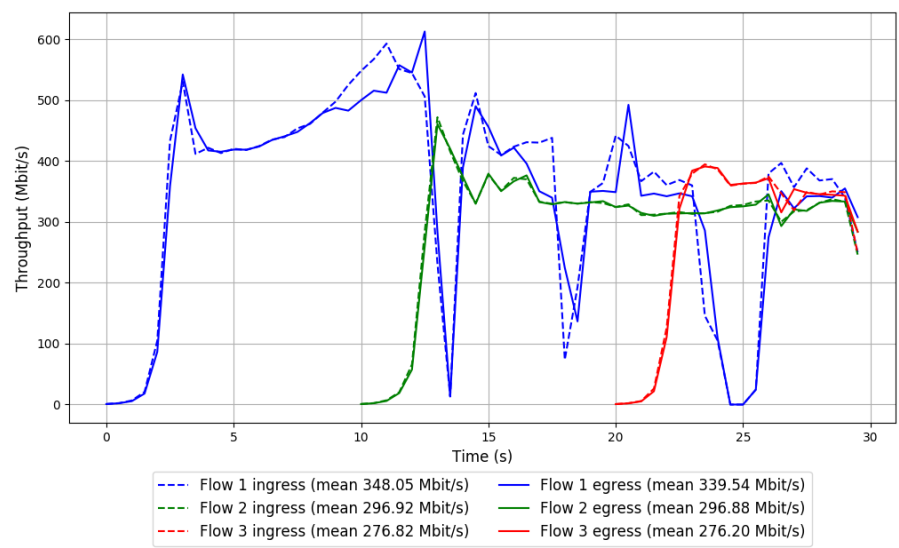
-- Flow 3:

Average throughput: 276.20 Mbit/s

95th percentile per-packet one-way delay: 74.678 ms

Loss rate: 0.22%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-02-17 14:29:45

End at: 2018-02-17 14:30:15

Below is generated by plot.py at 2018-02-17 20:20:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 621.97 Mbit/s

95th percentile per-packet one-way delay: 169.715 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 377.15 Mbit/s

95th percentile per-packet one-way delay: 162.214 ms

Loss rate: 1.22%

-- Flow 2:

Average throughput: 281.17 Mbit/s

95th percentile per-packet one-way delay: 225.453 ms

Loss rate: 0.62%

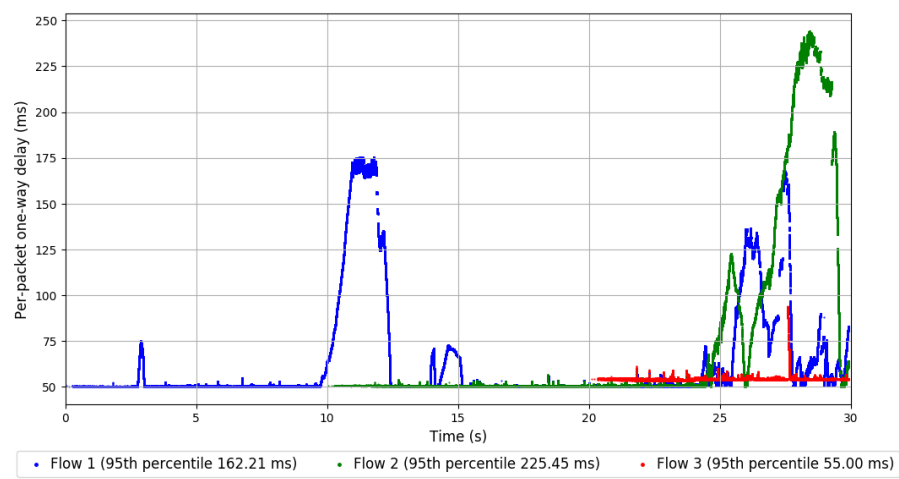
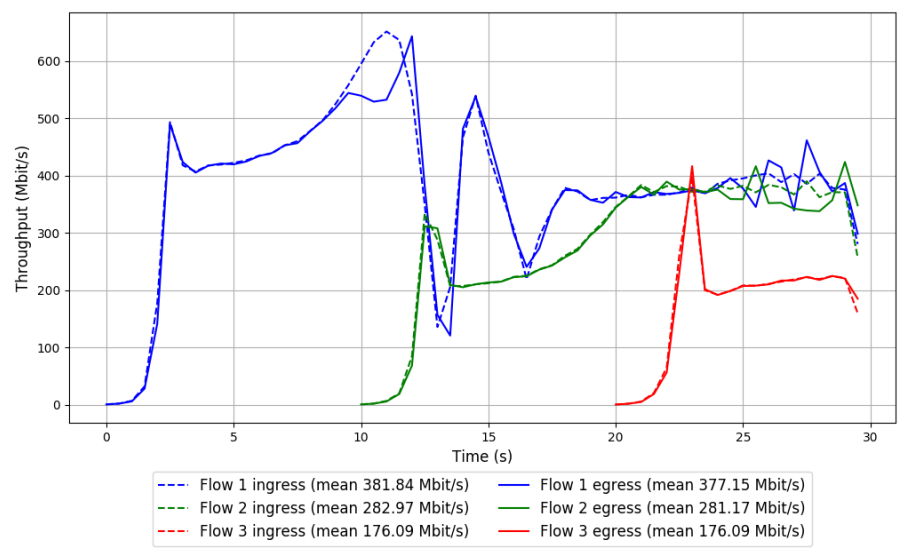
-- Flow 3:

Average throughput: 176.09 Mbit/s

95th percentile per-packet one-way delay: 55.001 ms

Loss rate: 0.00%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-02-17 14:47:17

End at: 2018-02-17 14:47:47

Below is generated by plot.py at 2018-02-17 20:21:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 624.31 Mbit/s

95th percentile per-packet one-way delay: 156.552 ms

Loss rate: 0.22%

-- Flow 1:

Average throughput: 312.21 Mbit/s

95th percentile per-packet one-way delay: 156.864 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 340.75 Mbit/s

95th percentile per-packet one-way delay: 115.946 ms

Loss rate: 0.00%

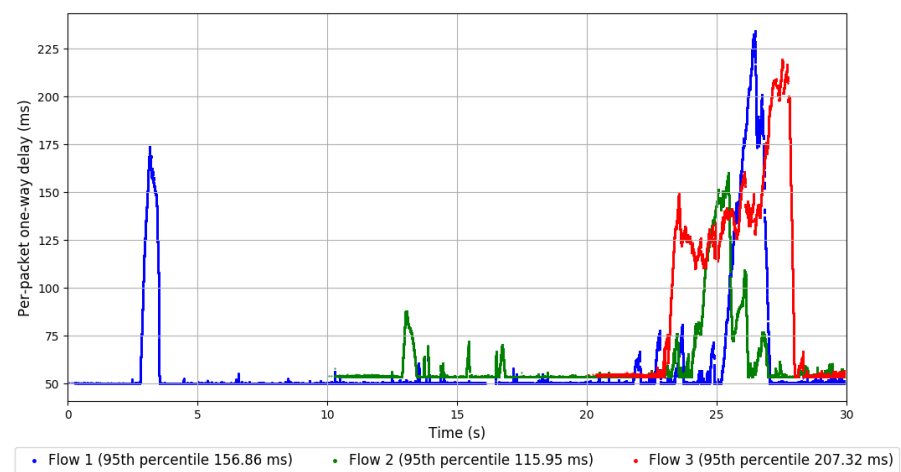
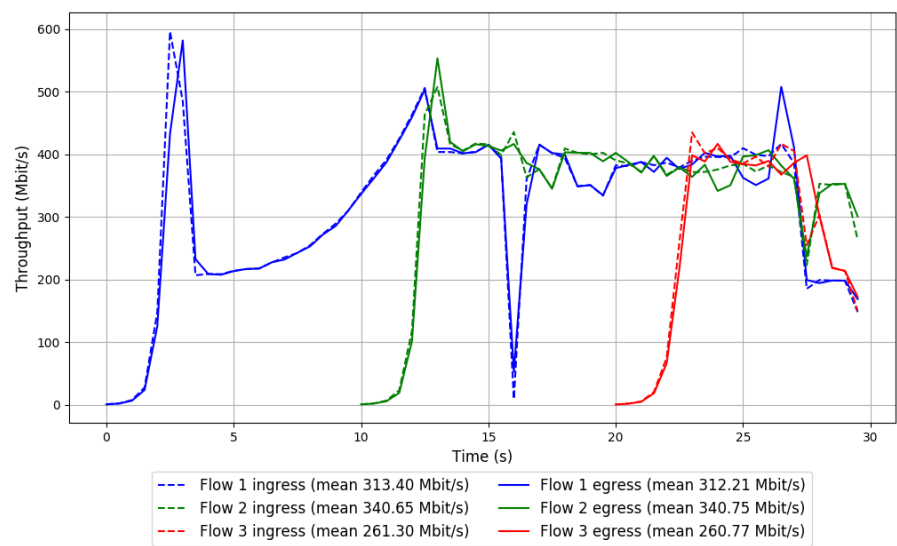
-- Flow 3:

Average throughput: 260.77 Mbit/s

95th percentile per-packet one-way delay: 207.325 ms

Loss rate: 0.24%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-02-17 15:05:21

End at: 2018-02-17 15:05:51

Below is generated by plot.py at 2018-02-17 20:24:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 622.84 Mbit/s

95th percentile per-packet one-way delay: 230.207 ms

Loss rate: 2.90%

-- Flow 1:

Average throughput: 362.19 Mbit/s

95th percentile per-packet one-way delay: 234.704 ms

Loss rate: 4.88%

-- Flow 2:

Average throughput: 332.20 Mbit/s

95th percentile per-packet one-way delay: 59.845 ms

Loss rate: 0.00%

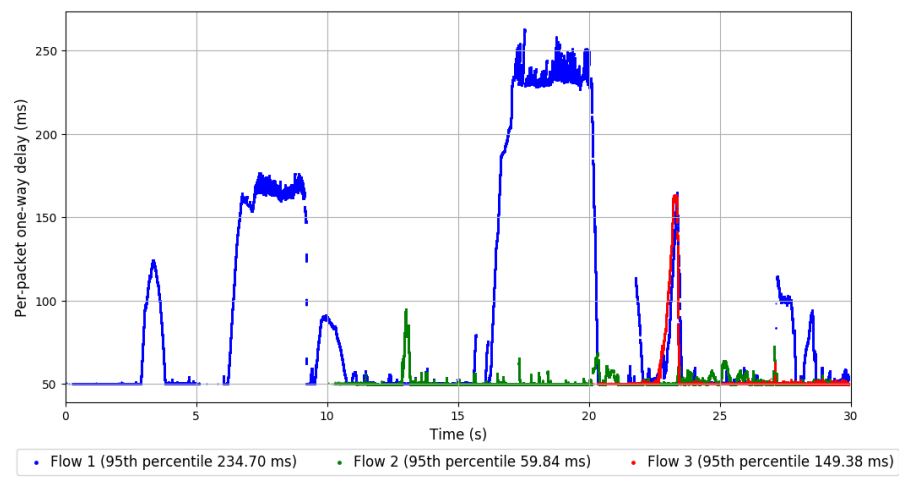
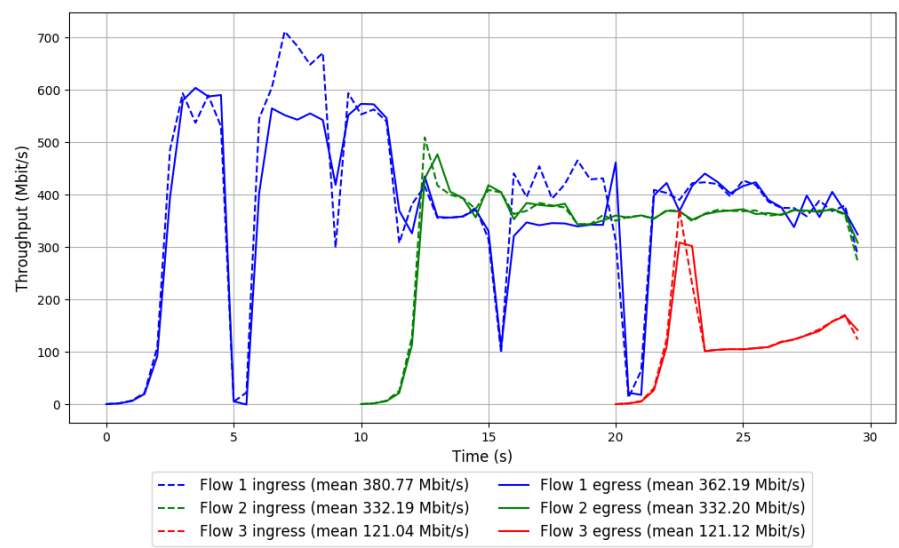
-- Flow 3:

Average throughput: 121.12 Mbit/s

95th percentile per-packet one-way delay: 149.376 ms

Loss rate: 0.00%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-02-17 15:22:52

End at: 2018-02-17 15:23:22

Below is generated by plot.py at 2018-02-17 20:25:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 618.23 Mbit/s

95th percentile per-packet one-way delay: 216.031 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 379.86 Mbit/s

95th percentile per-packet one-way delay: 219.472 ms

Loss rate: 1.35%

-- Flow 2:

Average throughput: 269.38 Mbit/s

95th percentile per-packet one-way delay: 151.893 ms

Loss rate: 0.11%

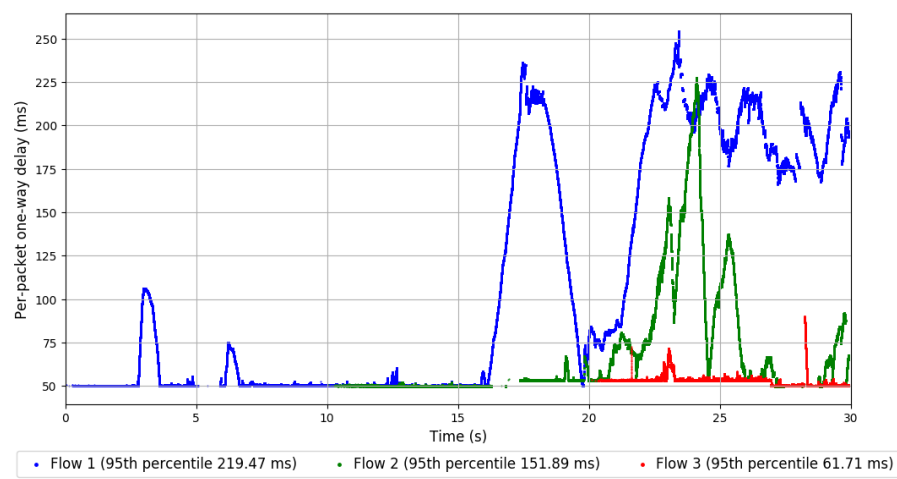
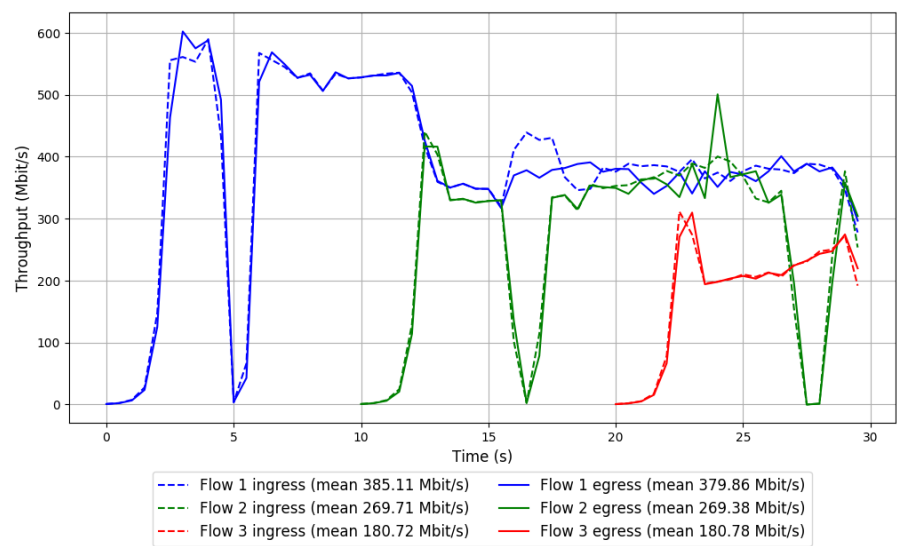
-- Flow 3:

Average throughput: 180.78 Mbit/s

95th percentile per-packet one-way delay: 61.708 ms

Loss rate: 0.00%

Run 10: Report of Vivace-loss — Data Link

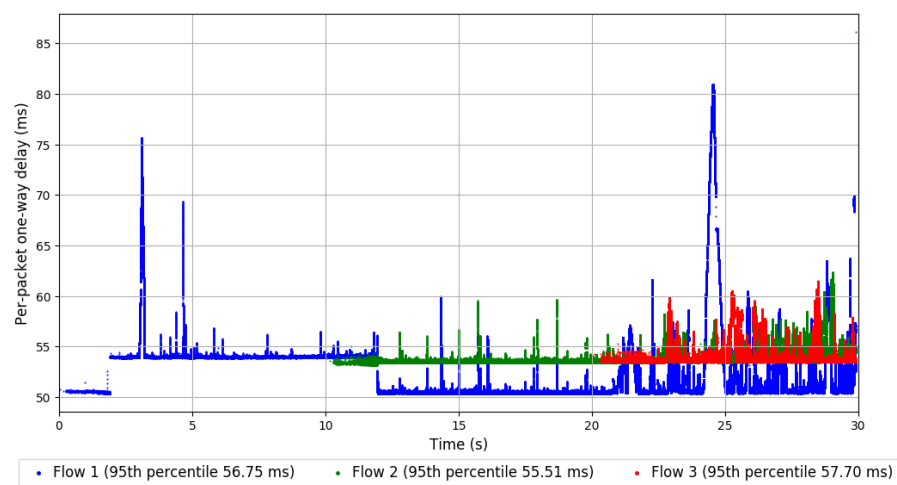
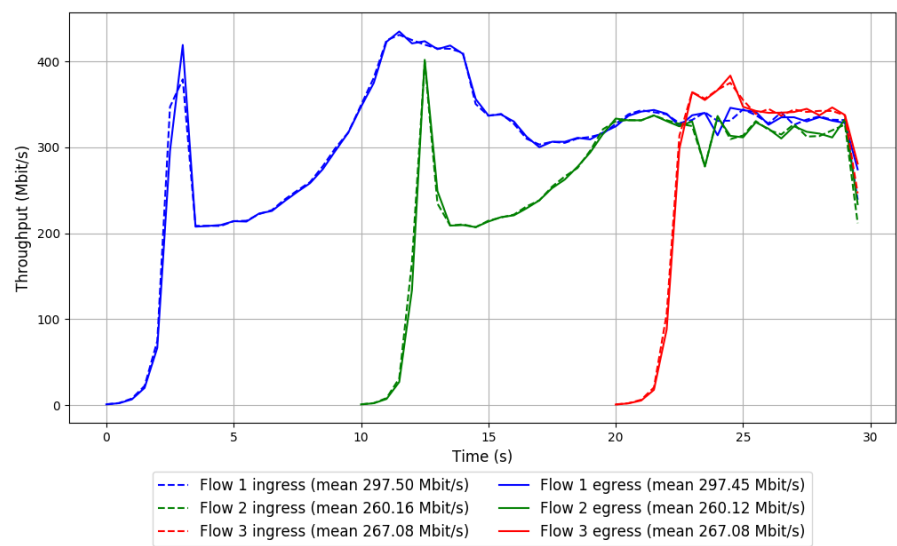


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-02-17 12:33:57
End at: 2018-02-17 12:34:27

# Below is generated by plot.py at 2018-02-17 20:25:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 558.05 Mbit/s
95th percentile per-packet one-way delay: 56.536 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 297.45 Mbit/s
95th percentile per-packet one-way delay: 56.751 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 260.12 Mbit/s
95th percentile per-packet one-way delay: 55.508 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 267.08 Mbit/s
95th percentile per-packet one-way delay: 57.699 ms
Loss rate: 0.04%
```


Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-02-17 12:51:23

End at: 2018-02-17 12:51:53

Below is generated by plot.py at 2018-02-17 20:25:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 544.66 Mbit/s

95th percentile per-packet one-way delay: 57.012 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 318.64 Mbit/s

95th percentile per-packet one-way delay: 57.101 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 255.51 Mbit/s

95th percentile per-packet one-way delay: 55.058 ms

Loss rate: 0.00%

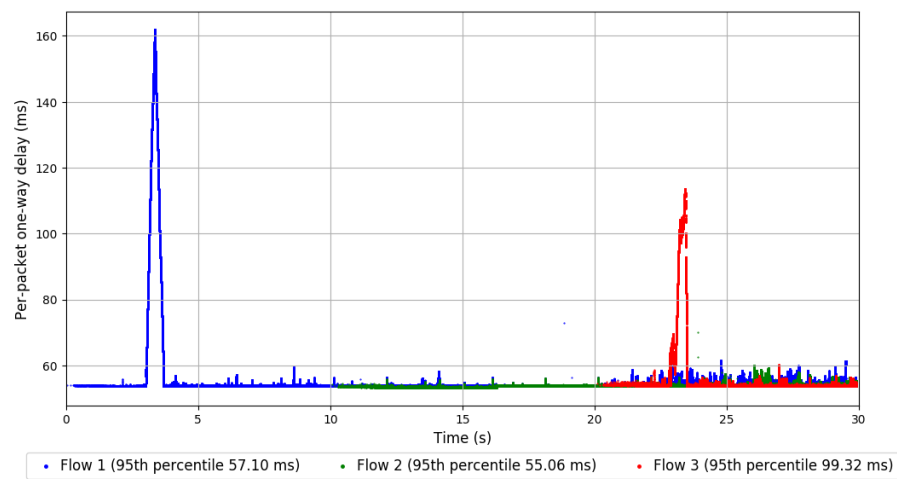
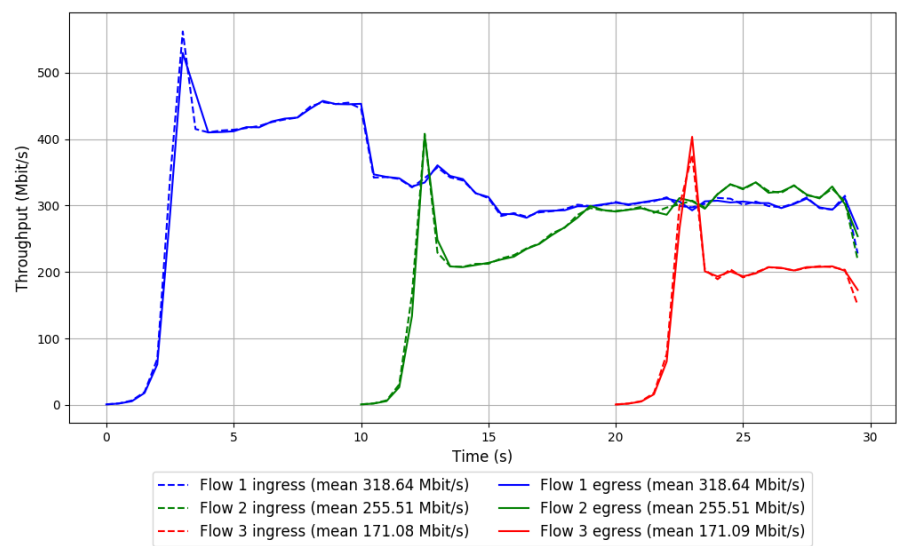
-- Flow 3:

Average throughput: 171.09 Mbit/s

95th percentile per-packet one-way delay: 99.319 ms

Loss rate: 0.00%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-02-17 13:09:10

End at: 2018-02-17 13:09:40

Below is generated by plot.py at 2018-02-17 20:28:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 595.85 Mbit/s

95th percentile per-packet one-way delay: 67.973 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 342.83 Mbit/s

95th percentile per-packet one-way delay: 55.173 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 299.02 Mbit/s

95th percentile per-packet one-way delay: 101.596 ms

Loss rate: 0.00%

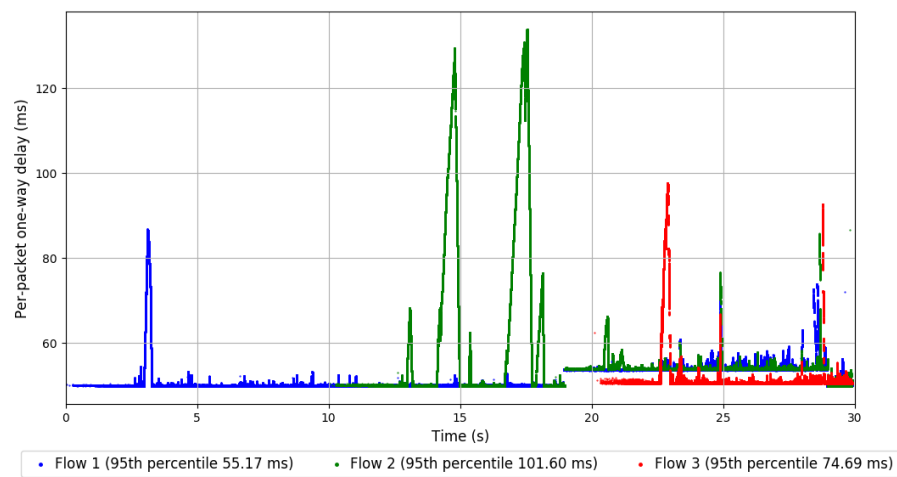
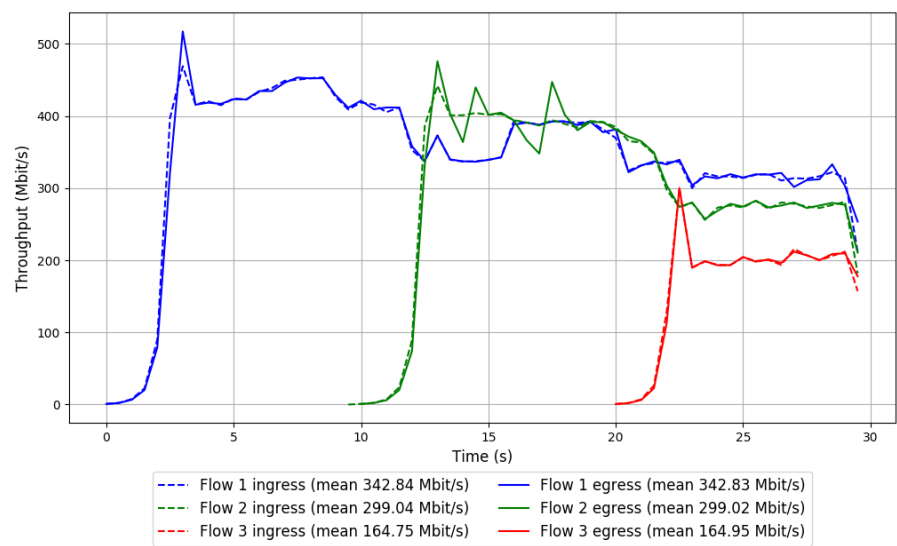
-- Flow 3:

Average throughput: 164.95 Mbit/s

95th percentile per-packet one-way delay: 74.694 ms

Loss rate: 0.00%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-02-17 13:28:02

End at: 2018-02-17 13:28:32

Below is generated by plot.py at 2018-02-17 20:28:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 550.81 Mbit/s

95th percentile per-packet one-way delay: 64.646 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 344.54 Mbit/s

95th percentile per-packet one-way delay: 51.072 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 188.31 Mbit/s

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

Loss rate: 0.05%

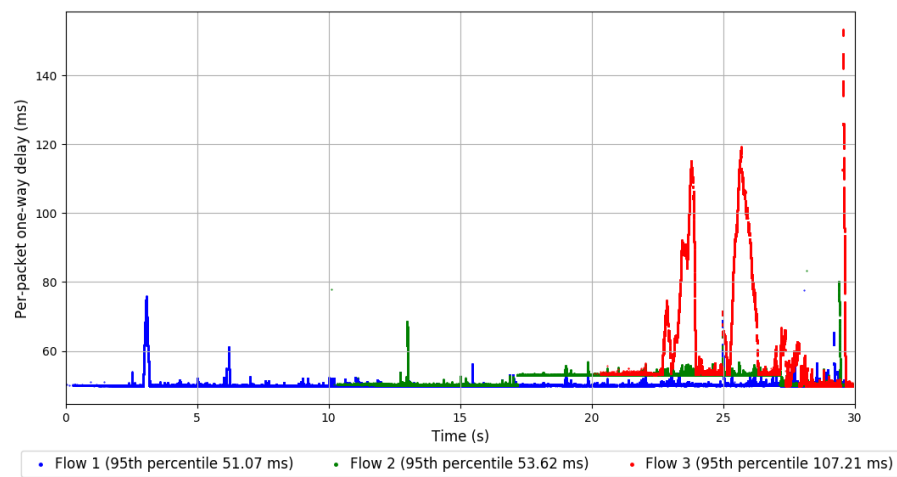
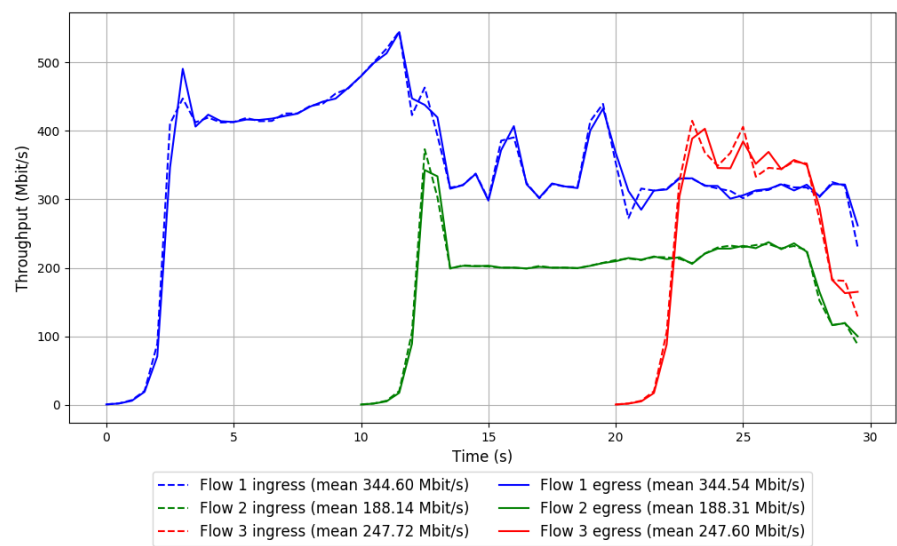
-- Flow 3:

Average throughput: 247.60 Mbit/s

95th percentile per-packet one-way delay: 107.213 ms

Loss rate: 0.08%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-02-17 13:46:00

End at: 2018-02-17 13:46:30

Below is generated by plot.py at 2018-02-17 20:30:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 574.28 Mbit/s

95th percentile per-packet one-way delay: 54.450 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 338.19 Mbit/s

95th percentile per-packet one-way delay: 53.912 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 271.24 Mbit/s

95th percentile per-packet one-way delay: 54.834 ms

Loss rate: 0.00%

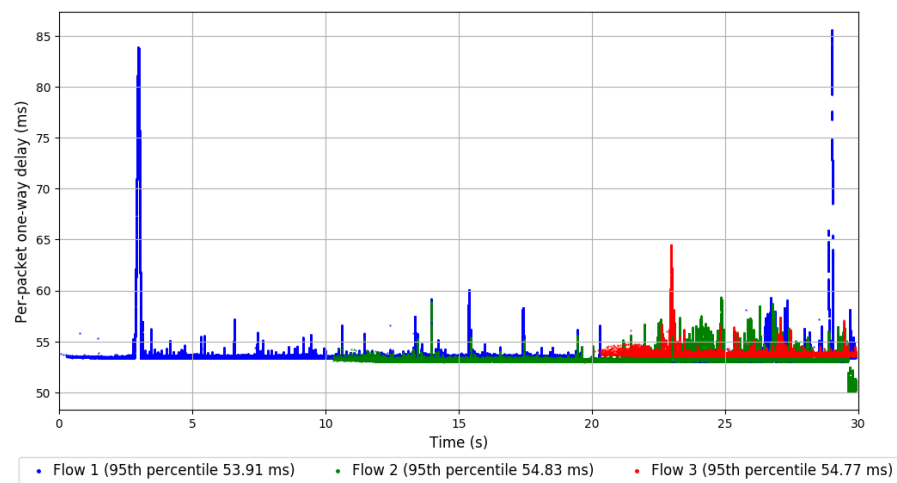
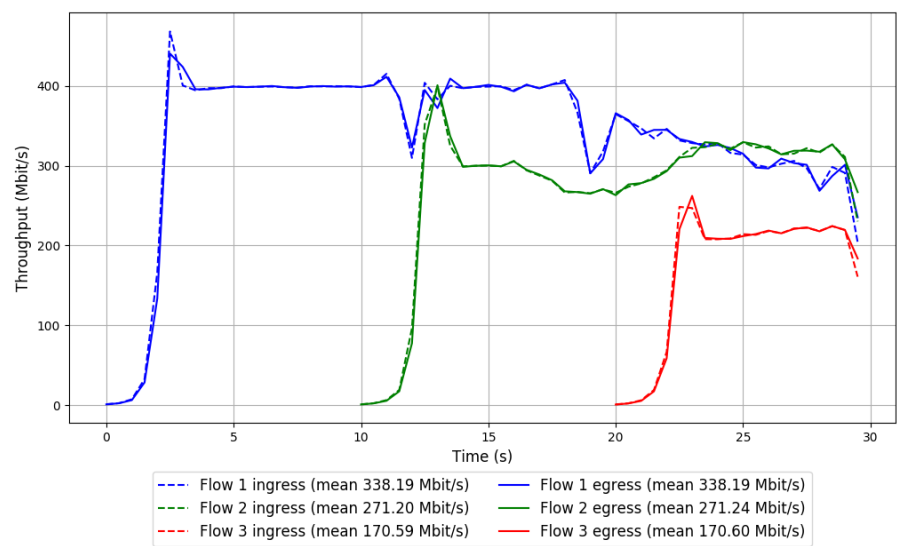
-- Flow 3:

Average throughput: 170.60 Mbit/s

95th percentile per-packet one-way delay: 54.775 ms

Loss rate: 0.00%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-02-17 14:03:41

End at: 2018-02-17 14:04:11

Below is generated by plot.py at 2018-02-17 20:30:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 511.87 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 295.29 Mbit/s

95th percentile per-packet one-way delay: 53.537 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 247.09 Mbit/s

95th percentile per-packet one-way delay: 50.529 ms

Loss rate: 0.00%

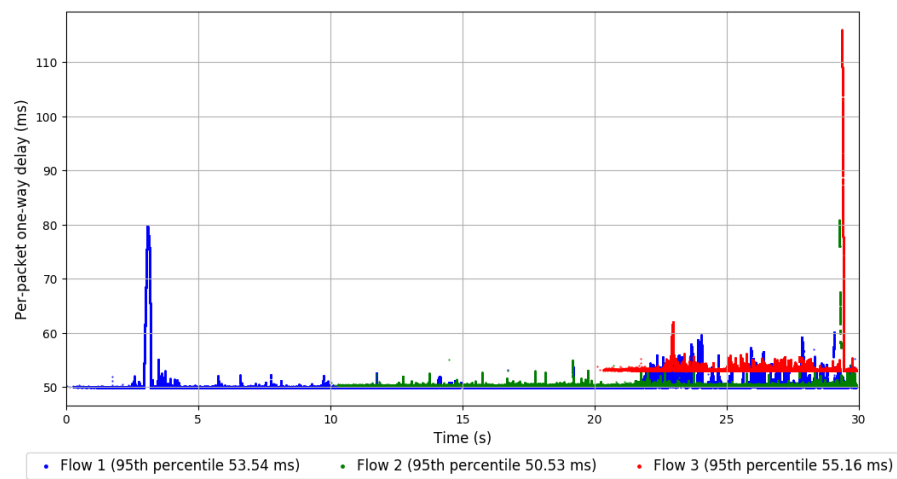
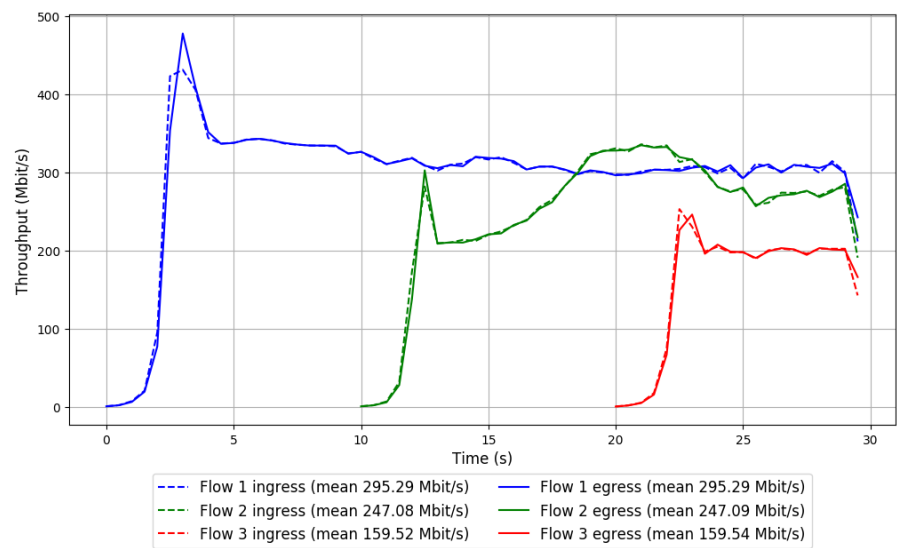
-- Flow 3:

Average throughput: 159.54 Mbit/s

95th percentile per-packet one-way delay: 55.155 ms

Loss rate: 0.00%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-02-17 14:21:26

End at: 2018-02-17 14:21:56

Below is generated by plot.py at 2018-02-17 20:31:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 543.63 Mbit/s

95th percentile per-packet one-way delay: 59.516 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 318.54 Mbit/s

95th percentile per-packet one-way delay: 66.139 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 261.06 Mbit/s

95th percentile per-packet one-way delay: 57.867 ms

Loss rate: 0.02%

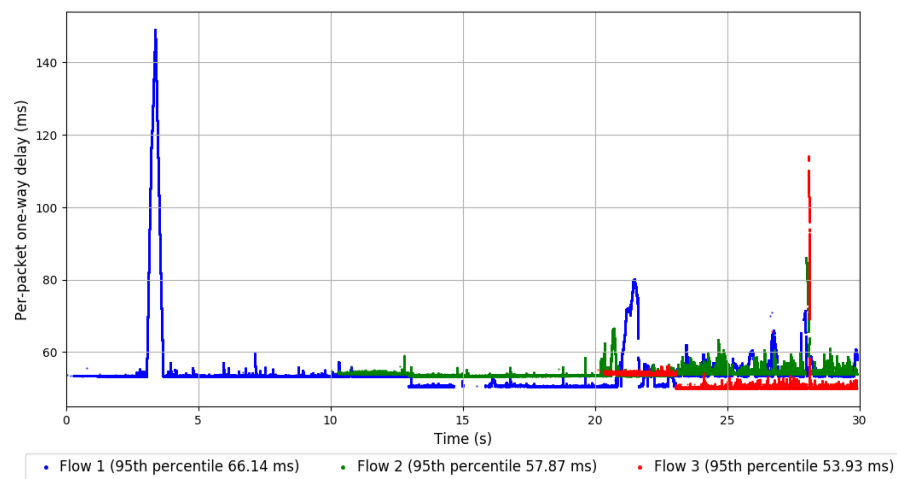
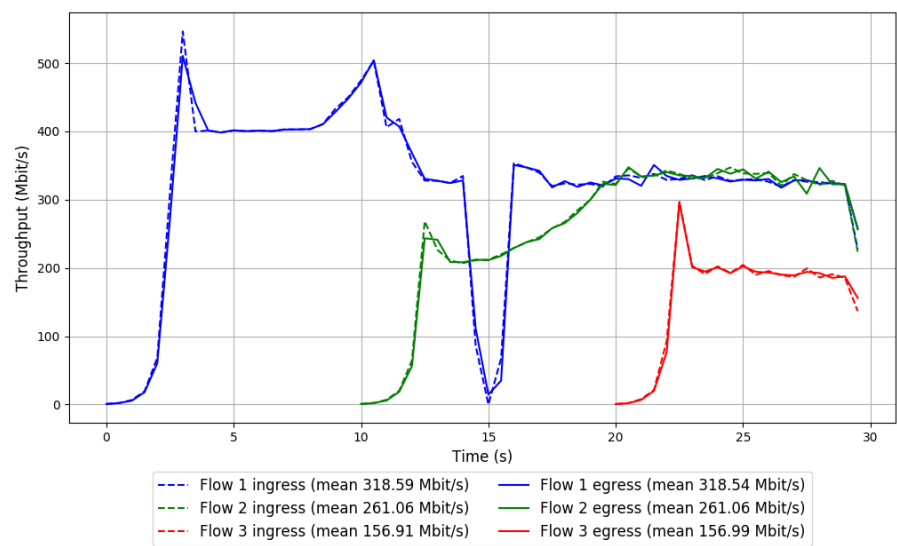
-- Flow 3:

Average throughput: 156.99 Mbit/s

95th percentile per-packet one-way delay: 53.930 ms

Loss rate: 0.00%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-02-17 14:39:54

End at: 2018-02-17 14:40:24

Below is generated by plot.py at 2018-02-17 20:31:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 498.16 Mbit/s

95th percentile per-packet one-way delay: 60.250 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 297.20 Mbit/s

95th percentile per-packet one-way delay: 60.625 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 217.75 Mbit/s

95th percentile per-packet one-way delay: 57.836 ms

Loss rate: 0.00%

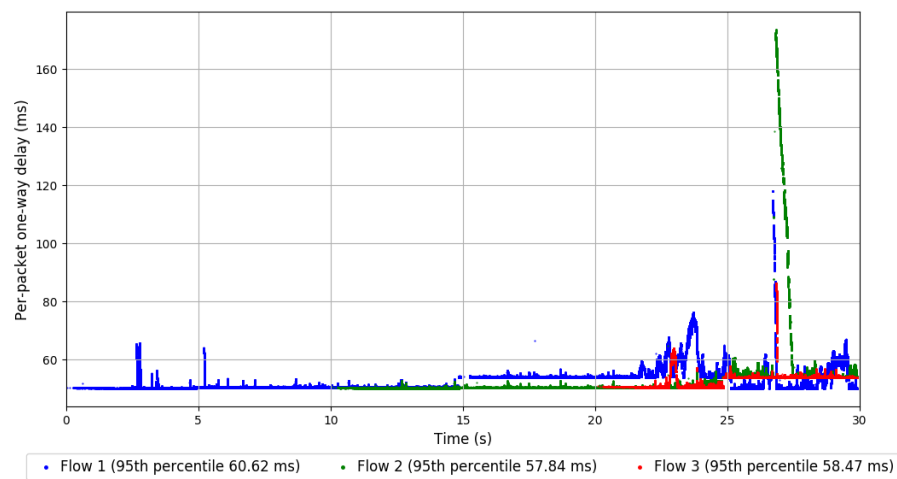
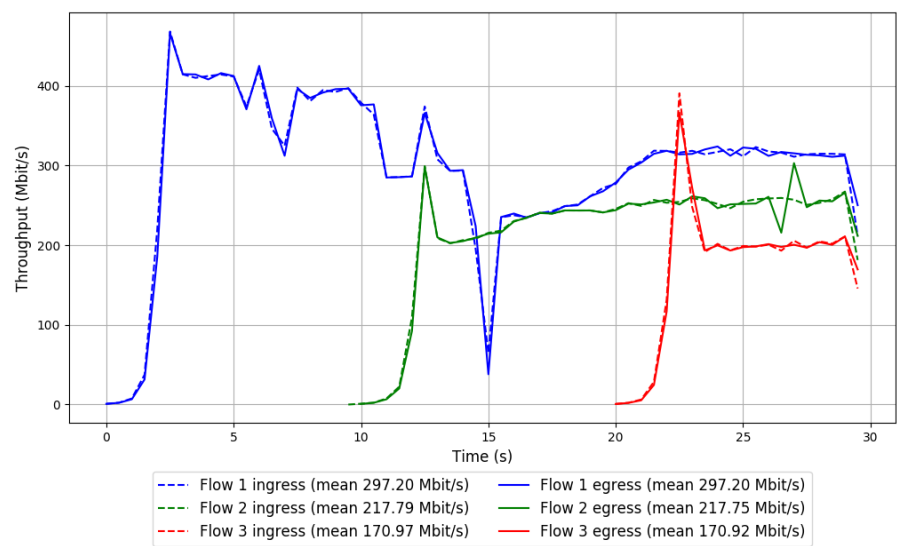
-- Flow 3:

Average throughput: 170.92 Mbit/s

95th percentile per-packet one-way delay: 58.466 ms

Loss rate: 0.00%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-02-17 14:57:29

End at: 2018-02-17 14:57:59

Below is generated by plot.py at 2018-02-17 20:32:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 548.93 Mbit/s

95th percentile per-packet one-way delay: 55.992 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 329.39 Mbit/s

95th percentile per-packet one-way delay: 57.247 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 239.16 Mbit/s

95th percentile per-packet one-way delay: 53.428 ms

Loss rate: 0.00%

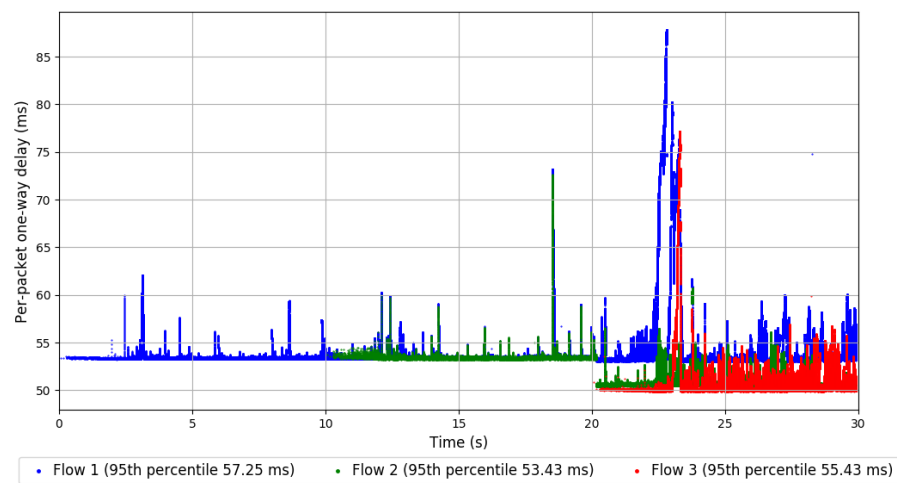
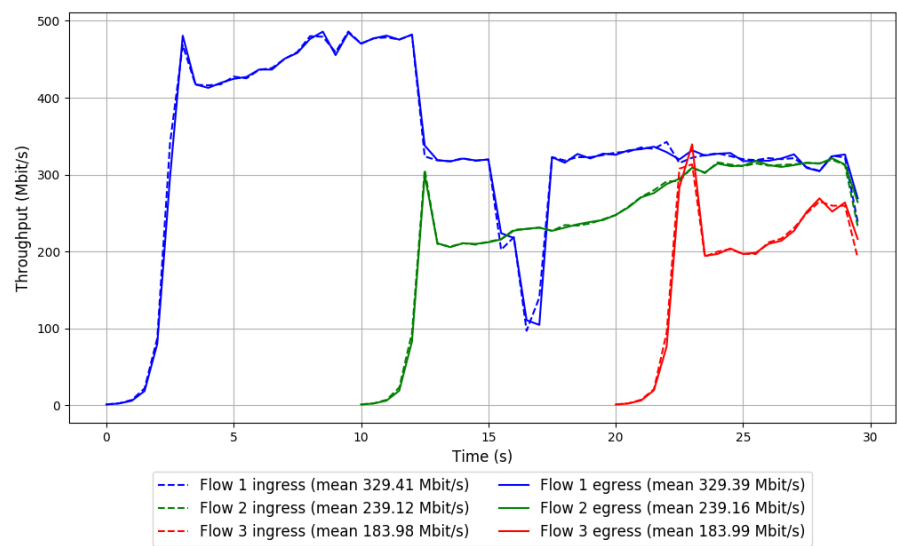
-- Flow 3:

Average throughput: 183.99 Mbit/s

95th percentile per-packet one-way delay: 55.427 ms

Loss rate: 0.00%

Run 9: Report of Vivace-LTE — Data Link



```
Run 10: Statistics of Vivace-LTE

Start at: 2018-02-17 15:15:29
End at: 2018-02-17 15:15:59

# Below is generated by plot.py at 2018-02-17 20:32:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 456.15 Mbit/s
95th percentile per-packet one-way delay: 50.986 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 280.64 Mbit/s
95th percentile per-packet one-way delay: 50.355 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 185.18 Mbit/s
95th percentile per-packet one-way delay: 50.660 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 161.20 Mbit/s
95th percentile per-packet one-way delay: 53.914 ms
Loss rate: 0.00%
```

Run 10: Report of Vivace-LTE — Data Link

