

Pantheon Report

Generated at 2018-02-17 18:06:41 (UTC).

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

Repeated the test of 17 congestion control schemes 10 times.

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

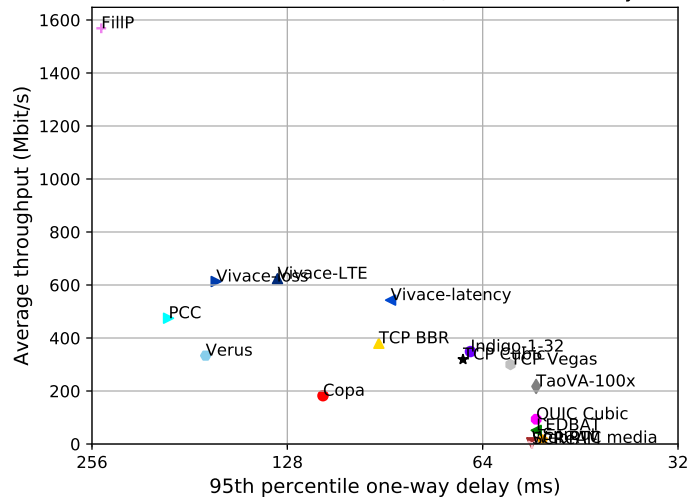
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

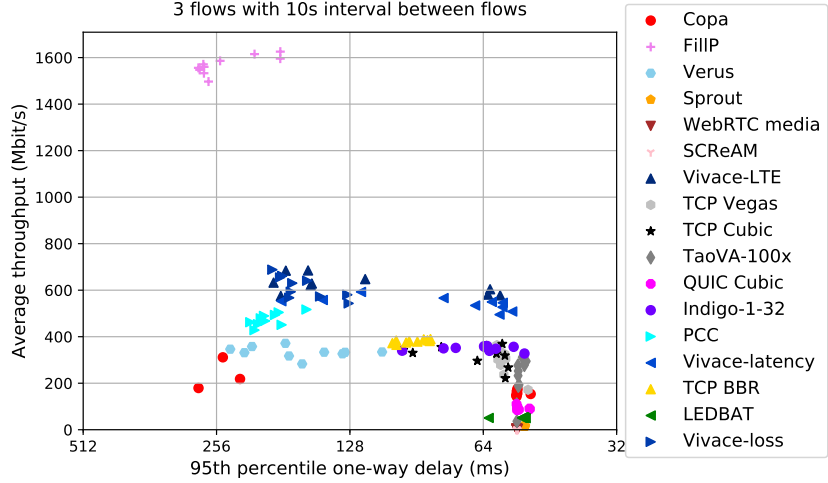
Git summary:

```
branch: master @ 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 Tokyo Ethernet to GCE Sydney Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



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



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	202.36	188.07	160.16	89.51	92.55	98.45	0.36	0.59	1.36
TCP Cubic	10	203.74	126.50	95.14	67.96	68.07	68.31	0.39	1.02	2.06
LEDBAT	10	33.57	21.84	10.49	53.02	52.95	52.44	0.68	1.04	2.17
PCC	10	440.56	24.85	53.88	195.23	192.35	180.30	2.89	3.62	3.79
QUIC Cubic	10	55.62	39.01	36.60	52.54	52.60	51.27	0.43	0.93	1.07
SCReAM	10	0.21	0.20	0.22	53.59	52.57	53.34	0.34	0.50	1.11
WebRTC media	10	2.28	1.47	0.66	53.00	52.71	88.44	0.40	0.60	1.43
Sprout	10	7.89	7.82	7.55	51.92	51.76	51.63	0.34	0.55	1.23
TaoVA-100x	10	122.22	81.29	126.94	52.21	53.44	52.99	0.52	0.22	1.40
TCP Vegas	10	185.51	118.88	107.46	57.20	56.89	57.08	0.36	0.55	1.16
Verus	10	204.44	139.19	111.65	153.73	157.09	179.74	1.38	2.01	3.83
Copa	10	88.41	105.34	73.75	69.63	91.67	104.93	2.90	4.79	7.68
FillP	10	830.07	767.46	695.47	218.51	240.42	211.07	8.12	9.87	12.15
Indigo-1-32	10	190.22	169.05	144.61	63.26	66.64	72.37	0.30	0.49	1.08
Vivace-latency	10	333.84	254.23	123.88	90.68	62.45	71.67	0.81	0.56	1.78
Vivace-loss	10	347.73	299.31	205.07	158.64	169.76	86.97	1.26	1.79	1.52
Vivace-LTE	10	361.15	281.10	232.57	115.45	91.00	155.87	0.59	0.82	2.48

Run 1: Statistics of TCP BBR

Start at: 2018-02-17 09:37:40

End at: 2018-02-17 09:38:10

Below is generated by plot.py at 2018-02-17 15:50:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 381.15 Mbit/s

95th percentile per-packet one-way delay: 94.063 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 203.30 Mbit/s

95th percentile per-packet one-way delay: 90.783 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 185.07 Mbit/s

95th percentile per-packet one-way delay: 94.372 ms

Loss rate: 0.60%

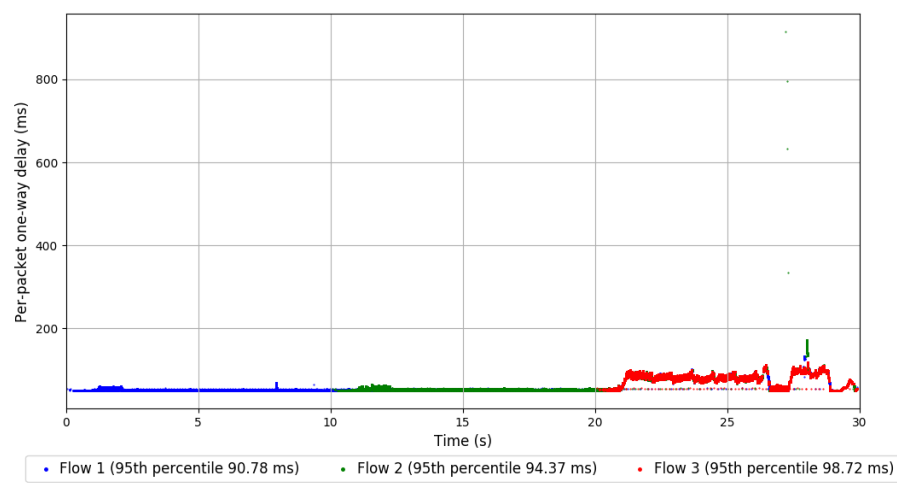
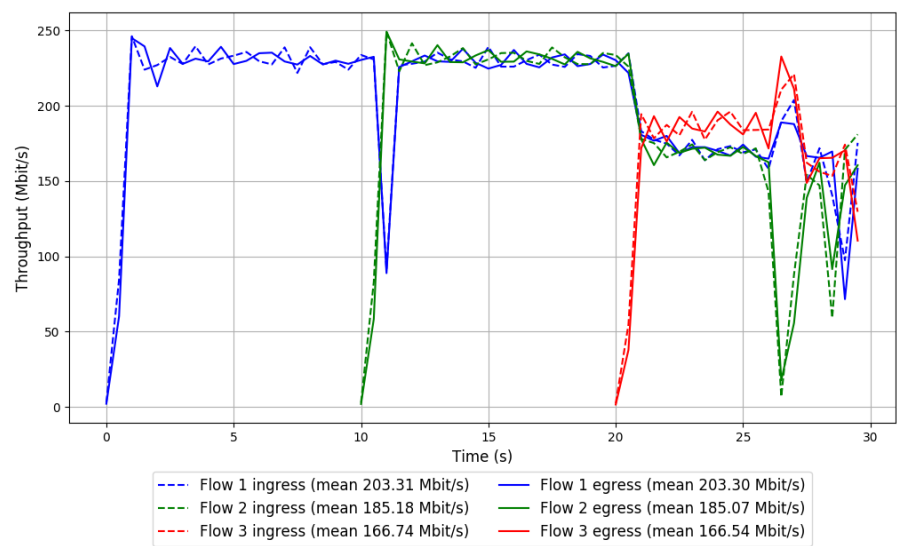
-- Flow 3:

Average throughput: 166.54 Mbit/s

95th percentile per-packet one-way delay: 98.718 ms

Loss rate: 1.21%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-02-17 09:55:33

End at: 2018-02-17 09:56:03

Below is generated by plot.py at 2018-02-17 15:50:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 372.31 Mbit/s

95th percentile per-packet one-way delay: 102.626 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 198.20 Mbit/s

95th percentile per-packet one-way delay: 98.708 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 188.71 Mbit/s

95th percentile per-packet one-way delay: 102.697 ms

Loss rate: 0.58%

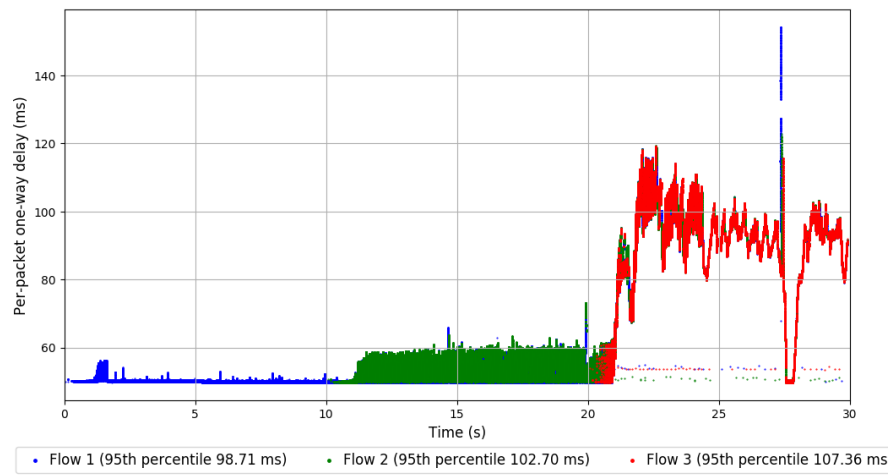
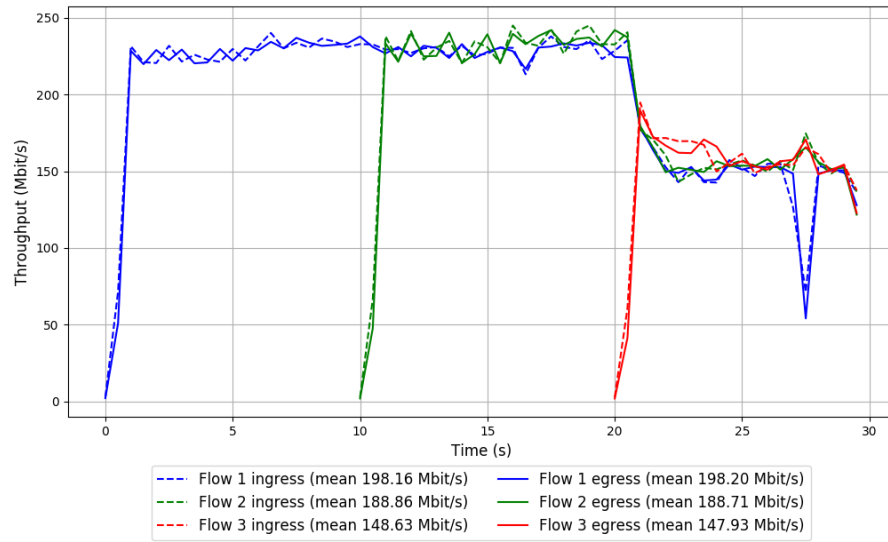
-- Flow 3:

Average throughput: 147.93 Mbit/s

95th percentile per-packet one-way delay: 107.358 ms

Loss rate: 1.51%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-02-17 10:13:04

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

Below is generated by plot.py at 2018-02-17 15:50:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 381.57 Mbit/s

95th percentile per-packet one-way delay: 84.570 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 202.57 Mbit/s

95th percentile per-packet one-way delay: 82.766 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 192.05 Mbit/s

95th percentile per-packet one-way delay: 84.401 ms

Loss rate: 0.60%

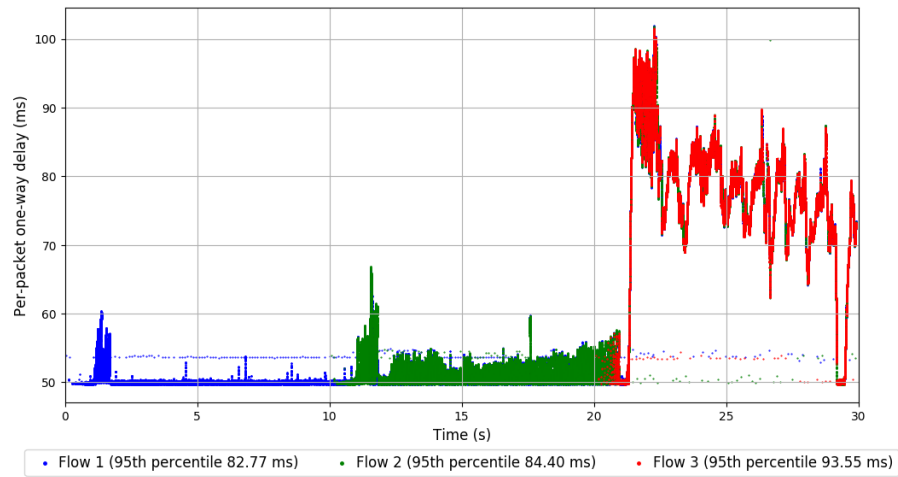
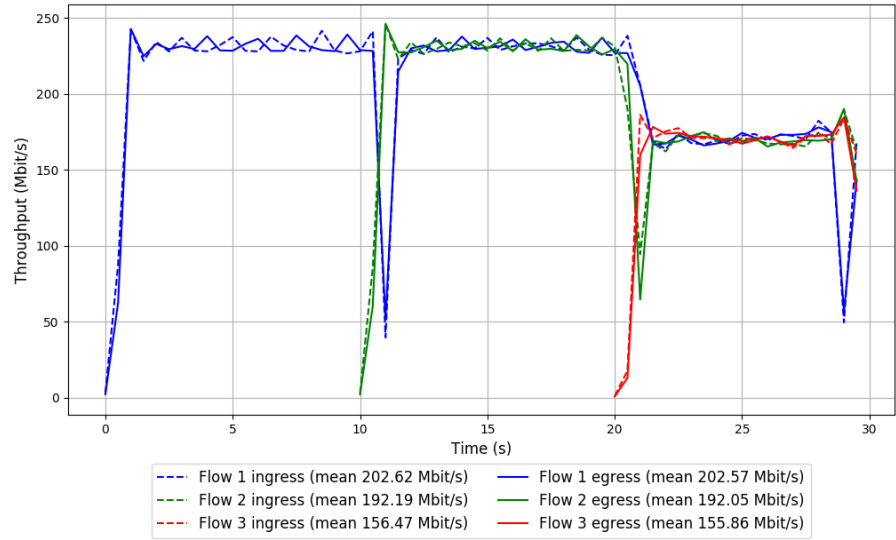
-- Flow 3:

Average throughput: 155.86 Mbit/s

95th percentile per-packet one-way delay: 93.548 ms

Loss rate: 1.43%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-02-17 10:31:00

End at: 2018-02-17 10:31:30

Below is generated by plot.py at 2018-02-17 15:50:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 388.74 Mbit/s

95th percentile per-packet one-way delay: 87.215 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 208.00 Mbit/s

95th percentile per-packet one-way delay: 85.436 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 185.96 Mbit/s

95th percentile per-packet one-way delay: 87.195 ms

Loss rate: 0.60%

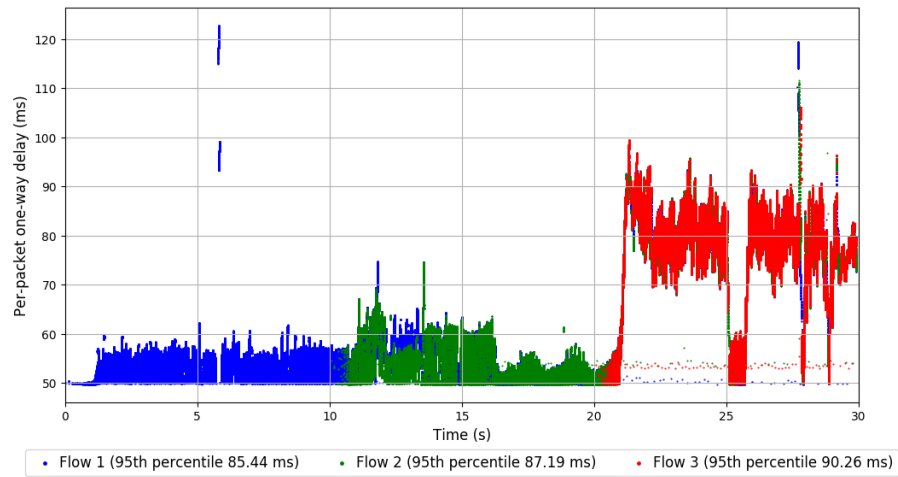
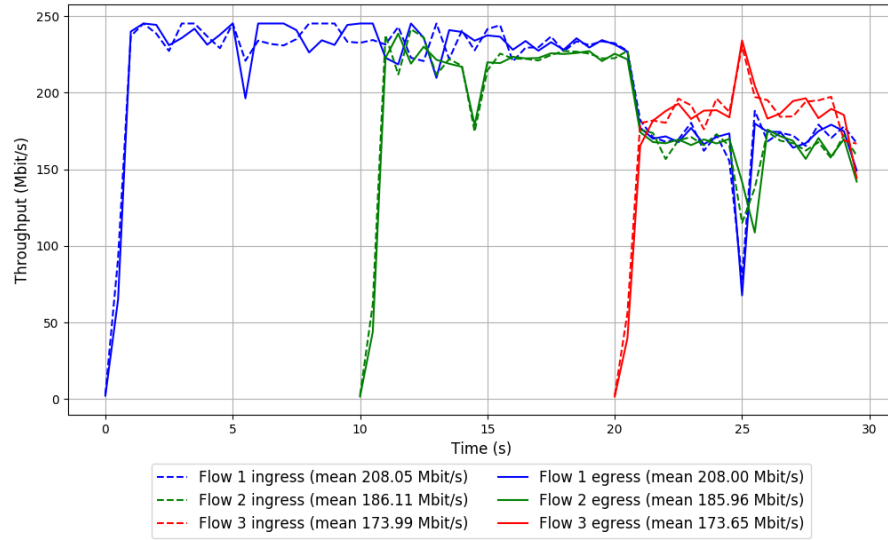
-- Flow 3:

Average throughput: 173.65 Mbit/s

95th percentile per-packet one-way delay: 90.257 ms

Loss rate: 1.38%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-02-17 10:48:47

End at: 2018-02-17 10:49:17

Below is generated by plot.py at 2018-02-17 15:50:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 389.67 Mbit/s

95th percentile per-packet one-way delay: 84.211 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 205.24 Mbit/s

95th percentile per-packet one-way delay: 81.950 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 196.24 Mbit/s

95th percentile per-packet one-way delay: 84.210 ms

Loss rate: 0.60%

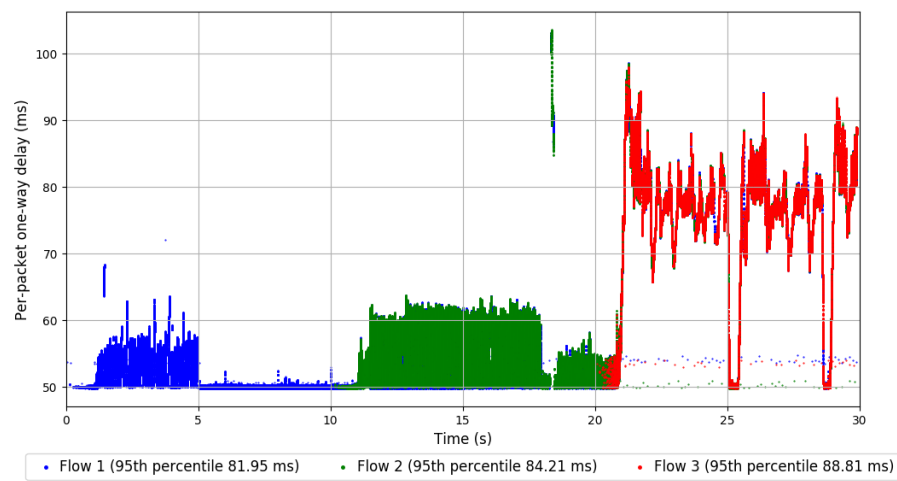
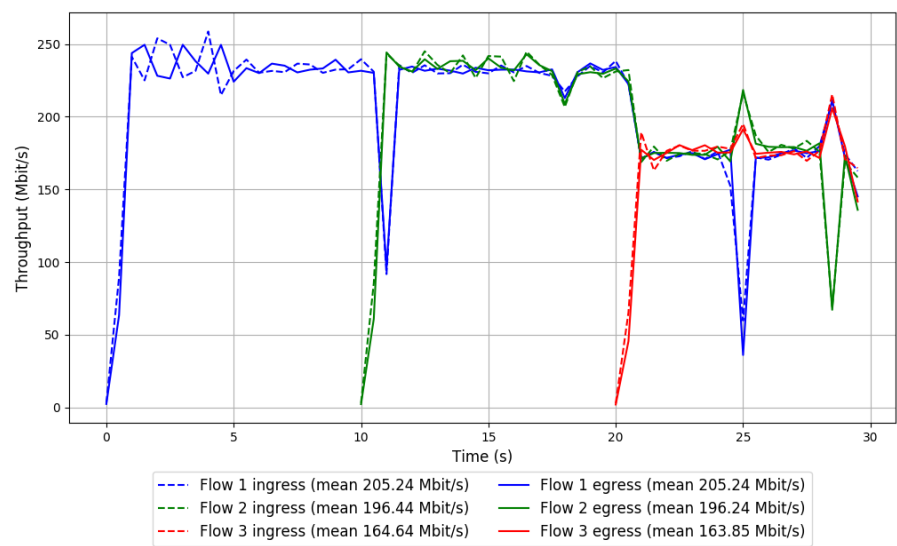
-- Flow 3:

Average throughput: 163.85 Mbit/s

95th percentile per-packet one-way delay: 88.810 ms

Loss rate: 1.52%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-02-17 11:06:41

End at: 2018-02-17 11:07:11

Below is generated by plot.py at 2018-02-17 15:50:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 384.77 Mbit/s

95th percentile per-packet one-way delay: 85.552 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 203.23 Mbit/s

95th percentile per-packet one-way delay: 82.946 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 192.84 Mbit/s

95th percentile per-packet one-way delay: 85.297 ms

Loss rate: 0.58%

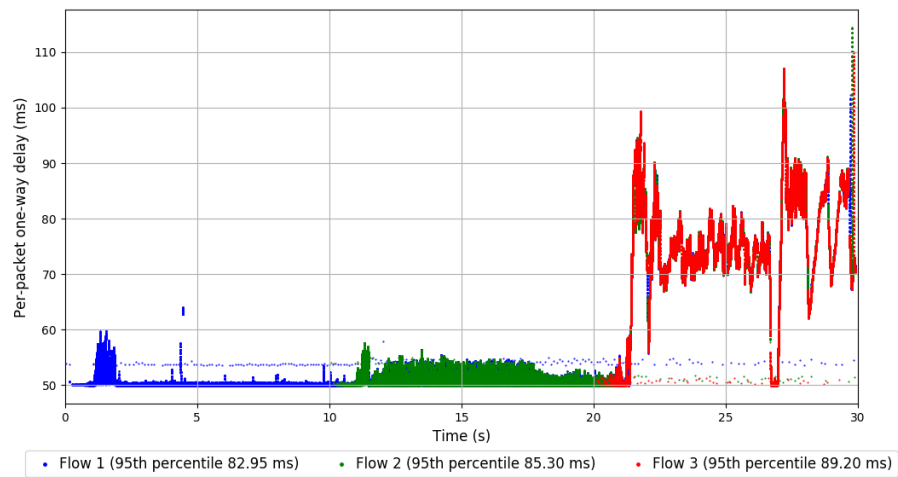
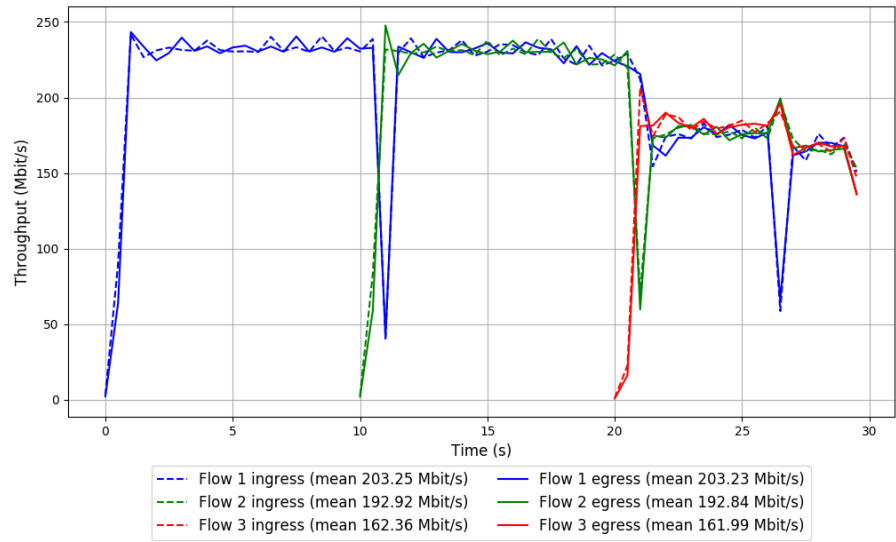
-- Flow 3:

Average throughput: 161.99 Mbit/s

95th percentile per-packet one-way delay: 89.204 ms

Loss rate: 1.27%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-02-17 11:24:38

End at: 2018-02-17 11:25:08

Below is generated by plot.py at 2018-02-17 15:50:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 365.11 Mbit/s

95th percentile per-packet one-way delay: 100.499 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 197.79 Mbit/s

95th percentile per-packet one-way delay: 98.726 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 180.10 Mbit/s

95th percentile per-packet one-way delay: 100.159 ms

Loss rate: 0.61%

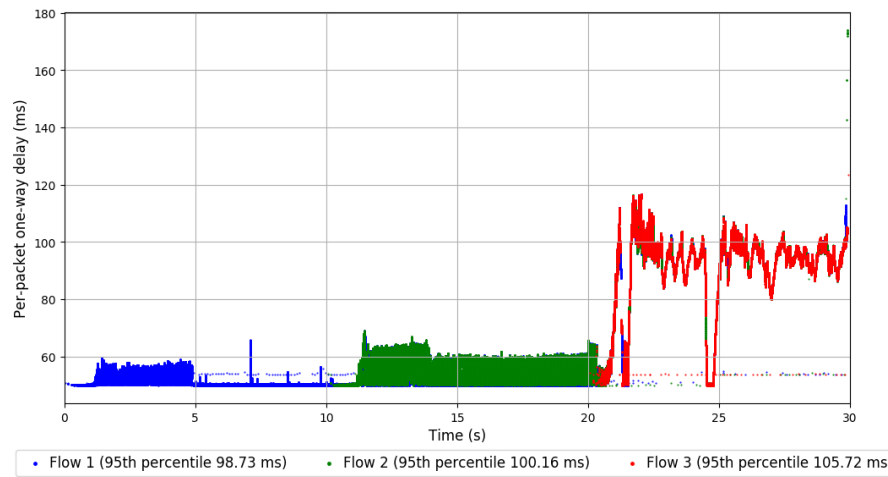
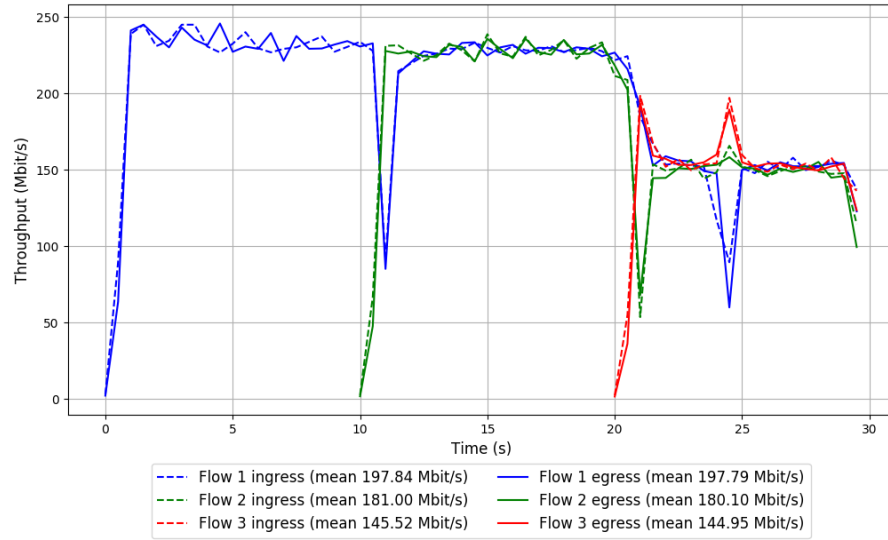
-- Flow 3:

Average throughput: 144.95 Mbit/s

95th percentile per-packet one-way delay: 105.721 ms

Loss rate: 1.28%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-02-17 11:42:42

End at: 2018-02-17 11:43:12

Below is generated by plot.py at 2018-02-17 15:50:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 383.52 Mbit/s

95th percentile per-packet one-way delay: 100.637 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 204.50 Mbit/s

95th percentile per-packet one-way delay: 95.029 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 188.27 Mbit/s

95th percentile per-packet one-way delay: 101.701 ms

Loss rate: 0.53%

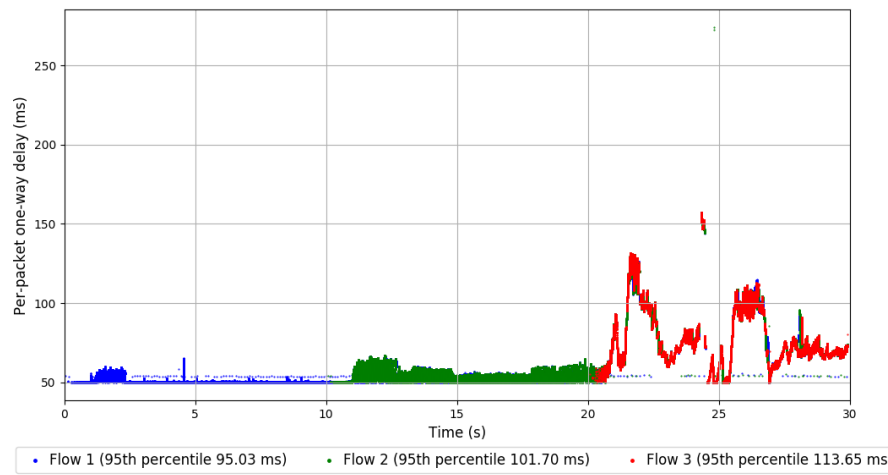
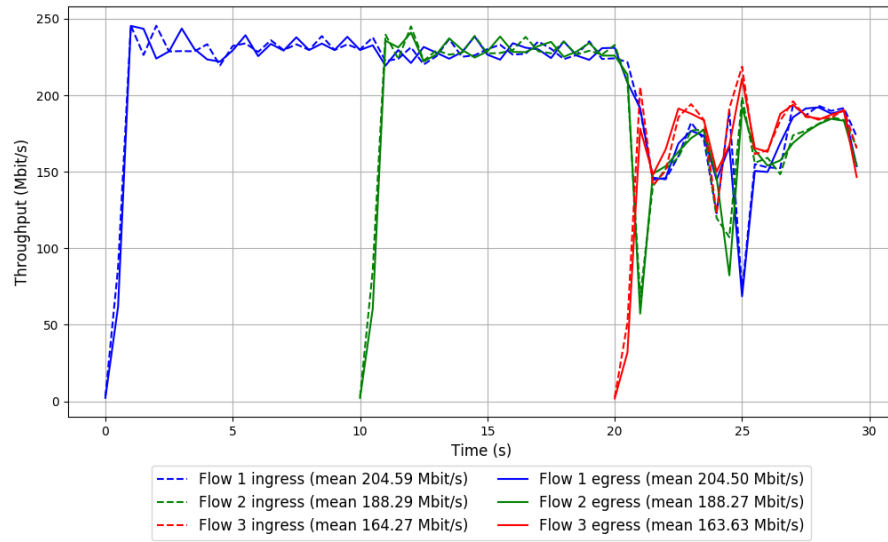
-- Flow 3:

Average throughput: 163.63 Mbit/s

95th percentile per-packet one-way delay: 113.649 ms

Loss rate: 1.37%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-02-17 12:00:29

End at: 2018-02-17 12:00:59

Below is generated by plot.py at 2018-02-17 15:56:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 379.06 Mbit/s

95th percentile per-packet one-way delay: 90.128 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 199.40 Mbit/s

95th percentile per-packet one-way delay: 88.334 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 184.07 Mbit/s

95th percentile per-packet one-way delay: 89.868 ms

Loss rate: 0.59%

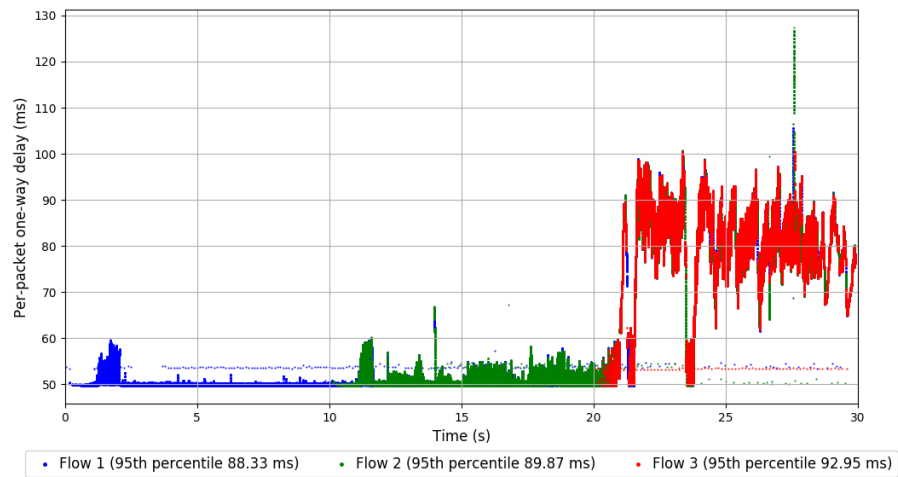
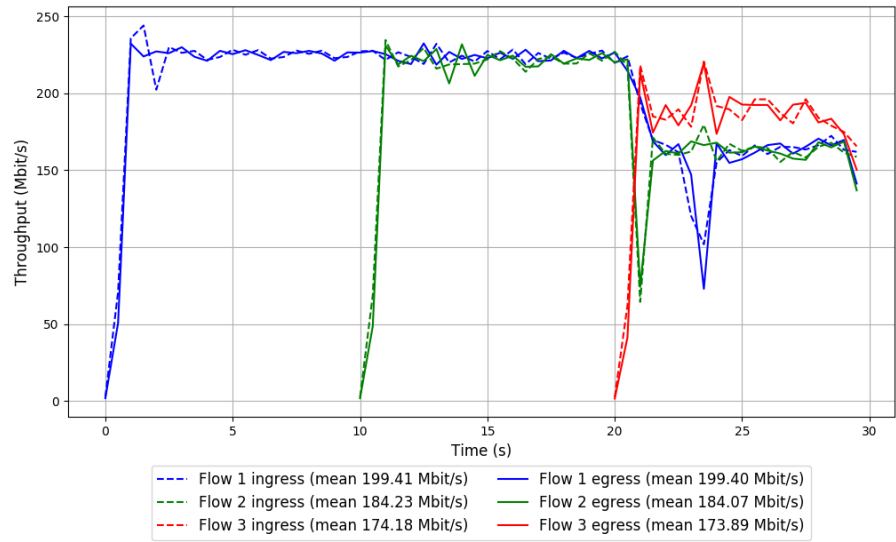
-- Flow 3:

Average throughput: 173.89 Mbit/s

95th percentile per-packet one-way delay: 92.949 ms

Loss rate: 1.21%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

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

End at: 2018-02-17 12:19:18

Below is generated by plot.py at 2018-02-17 15:56:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 375.20 Mbit/s

95th percentile per-packet one-way delay: 95.554 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 201.38 Mbit/s

95th percentile per-packet one-way delay: 90.453 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 187.44 Mbit/s

95th percentile per-packet one-way delay: 95.617 ms

Loss rate: 0.59%

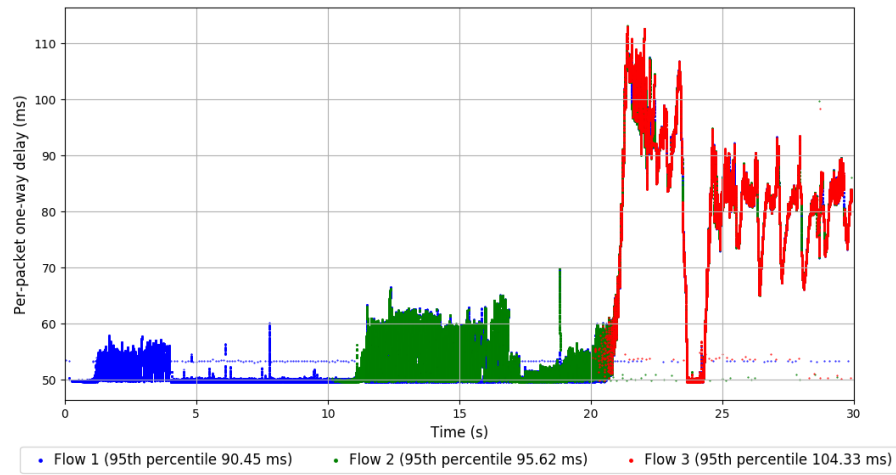
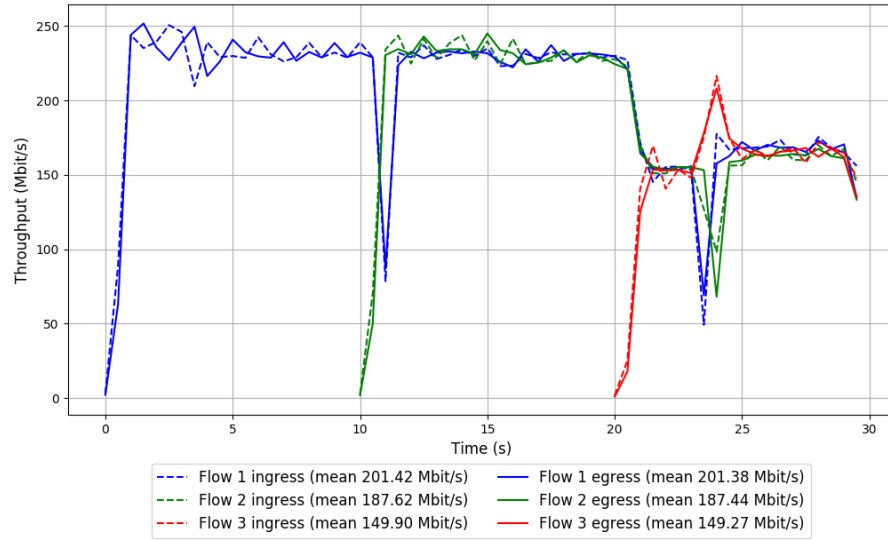
-- Flow 3:

Average throughput: 149.27 Mbit/s

95th percentile per-packet one-way delay: 104.330 ms

Loss rate: 1.47%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-02-17 09:35:55

End at: 2018-02-17 09:36:25

Below is generated by plot.py at 2018-02-17 15:56:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 296.43 Mbit/s

95th percentile per-packet one-way delay: 66.002 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 196.94 Mbit/s

95th percentile per-packet one-way delay: 63.559 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 47.30 Mbit/s

95th percentile per-packet one-way delay: 71.511 ms

Loss rate: 2.50%

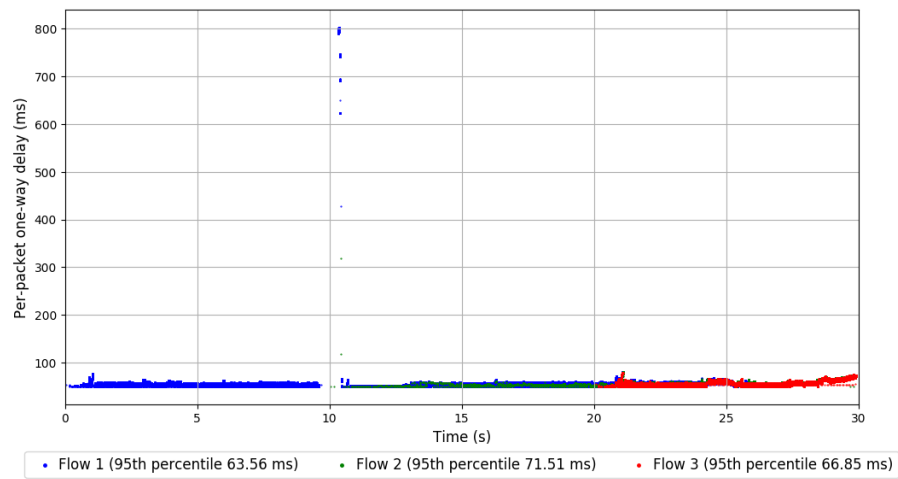
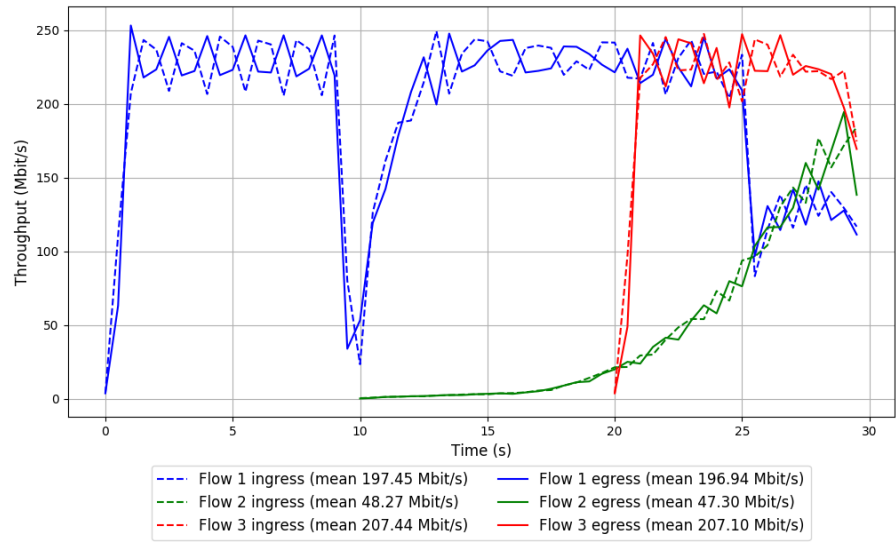
-- Flow 3:

Average throughput: 207.10 Mbit/s

95th percentile per-packet one-way delay: 66.854 ms

Loss rate: 1.21%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-02-17 09:53:41

End at: 2018-02-17 09:54:11

Below is generated by plot.py at 2018-02-17 15:56:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 368.93 Mbit/s

95th percentile per-packet one-way delay: 57.982 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 231.49 Mbit/s

95th percentile per-packet one-way delay: 58.565 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 204.51 Mbit/s

95th percentile per-packet one-way delay: 55.453 ms

Loss rate: 0.59%

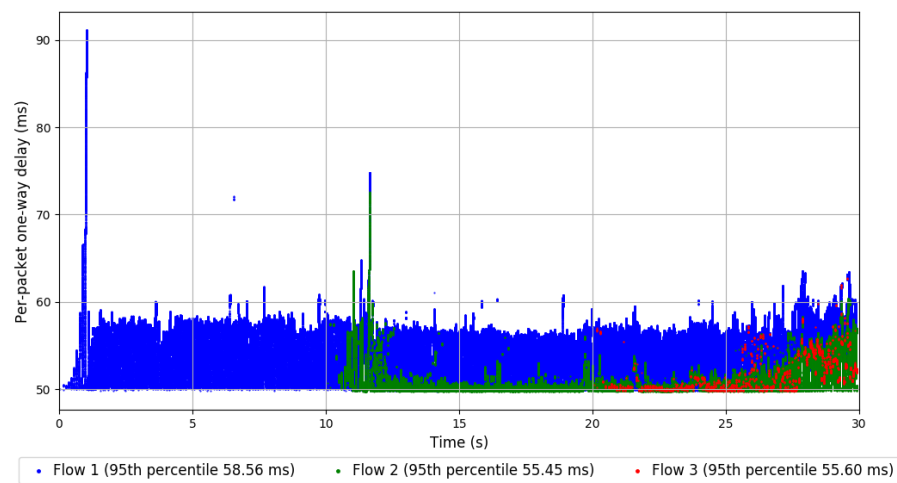
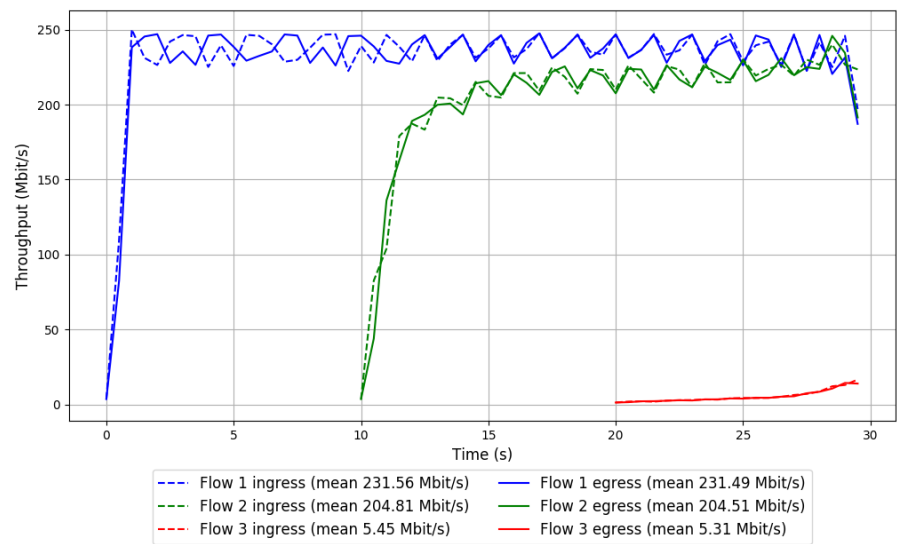
-- Flow 3:

Average throughput: 5.31 Mbit/s

95th percentile per-packet one-way delay: 55.601 ms

Loss rate: 3.59%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-02-17 10:11:13

End at: 2018-02-17 10:11:43

Below is generated by plot.py at 2018-02-17 15:56:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 267.52 Mbit/s

95th percentile per-packet one-way delay: 56.218 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 169.89 Mbit/s

95th percentile per-packet one-way delay: 56.513 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 144.57 Mbit/s

95th percentile per-packet one-way delay: 52.973 ms

Loss rate: 0.68%

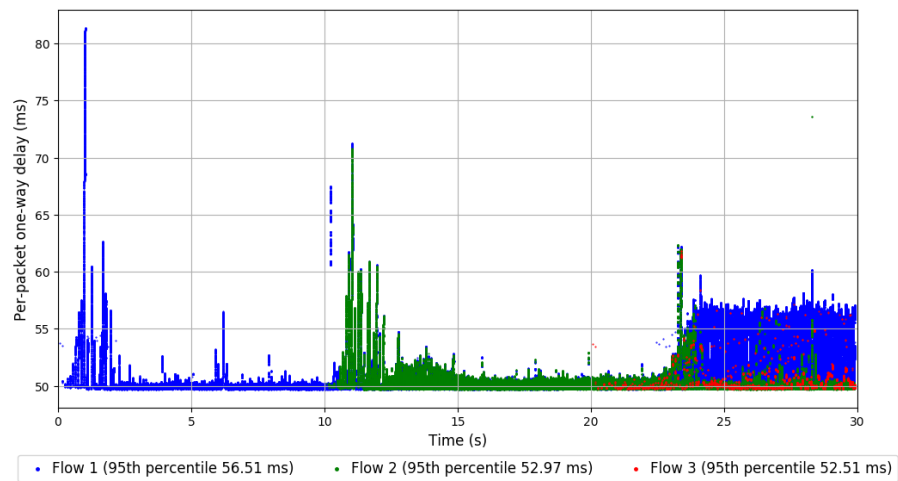
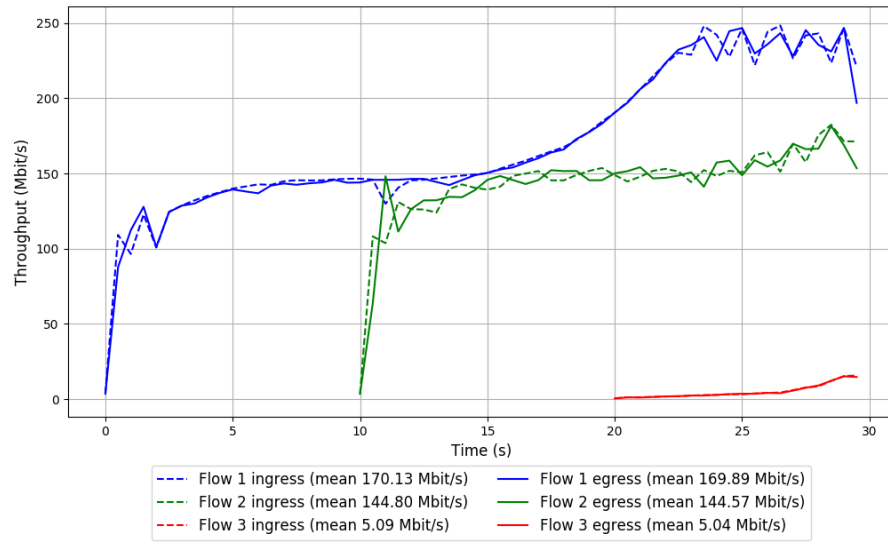
-- Flow 3:

Average throughput: 5.04 Mbit/s

95th percentile per-packet one-way delay: 52.505 ms

Loss rate: 1.99%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-02-17 10:29:11

End at: 2018-02-17 10:29:41

Below is generated by plot.py at 2018-02-17 15:56:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 318.89 Mbit/s

95th percentile per-packet one-way delay: 57.194 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 223.47 Mbit/s

95th percentile per-packet one-way delay: 57.279 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 141.37 Mbit/s

95th percentile per-packet one-way delay: 55.819 ms

Loss rate: 0.69%

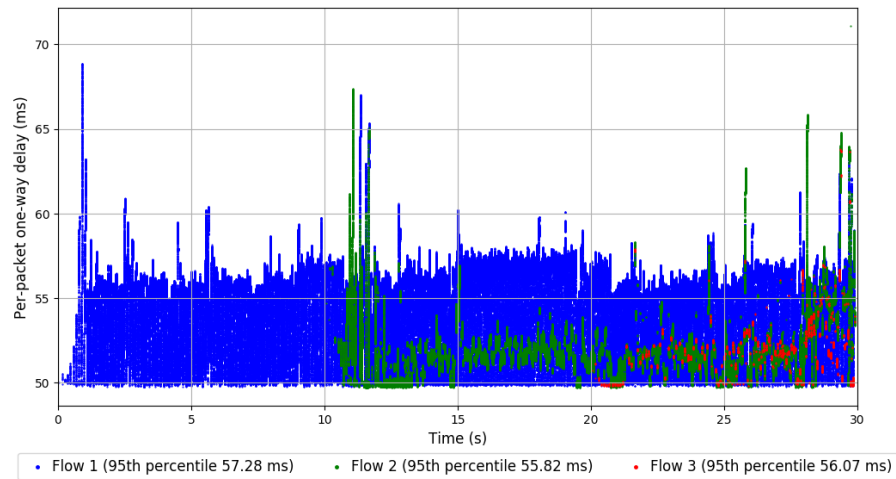
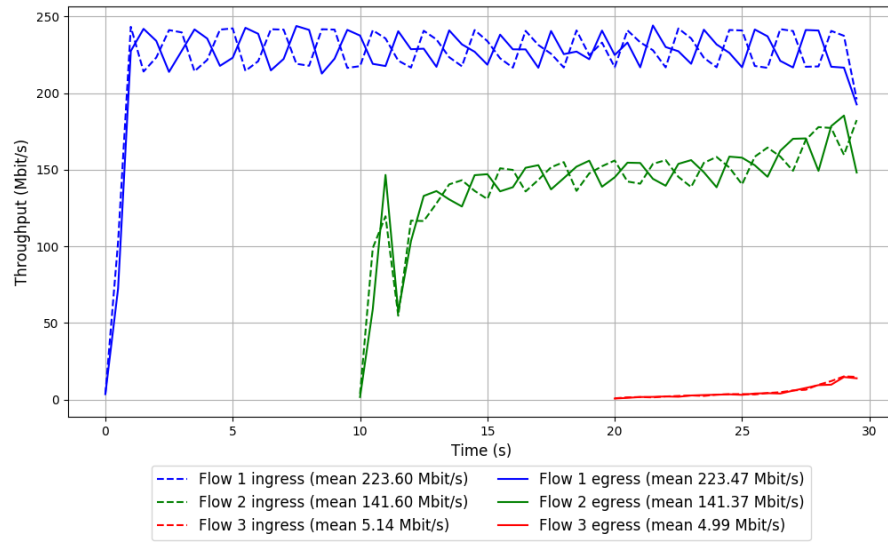
-- Flow 3:

Average throughput: 4.99 Mbit/s

95th percentile per-packet one-way delay: 56.069 ms

Loss rate: 3.99%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-02-17 10:46:55

End at: 2018-02-17 10:47:25

Below is generated by plot.py at 2018-02-17 15:56:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 355.42 Mbit/s

95th percentile per-packet one-way delay: 79.602 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 214.33 Mbit/s

95th percentile per-packet one-way delay: 80.293 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 124.53 Mbit/s

95th percentile per-packet one-way delay: 77.877 ms

Loss rate: 0.69%

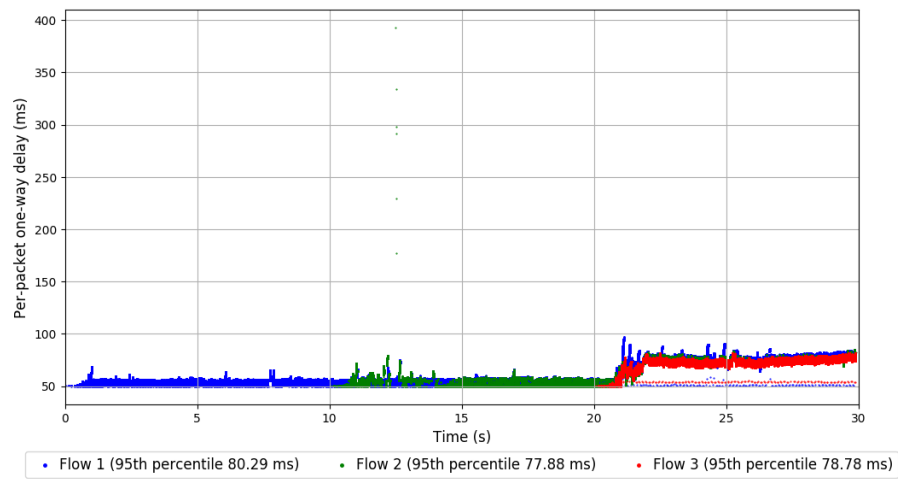
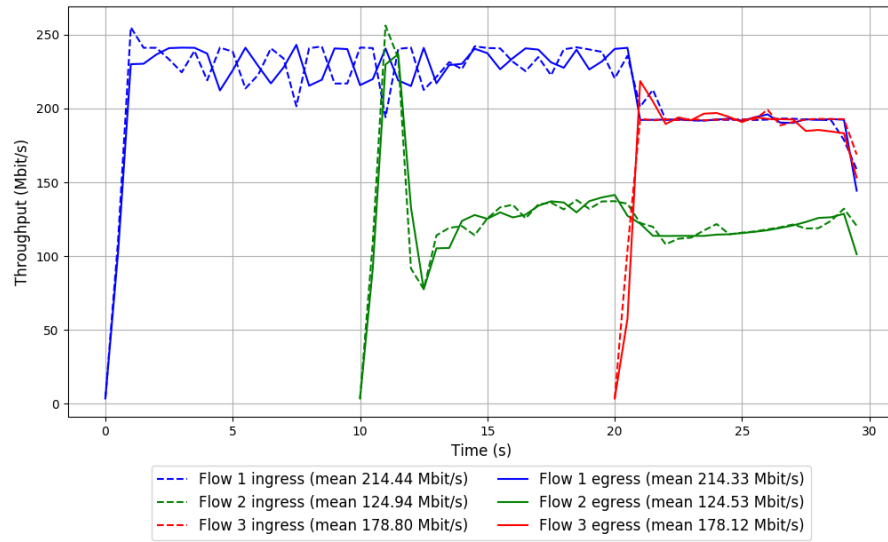
-- Flow 3:

Average throughput: 178.12 Mbit/s

95th percentile per-packet one-way delay: 78.779 ms

Loss rate: 1.39%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-02-17 11:04:51

End at: 2018-02-17 11:05:21

Below is generated by plot.py at 2018-02-17 15:56:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 330.45 Mbit/s

95th percentile per-packet one-way delay: 92.350 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 204.25 Mbit/s

95th percentile per-packet one-way delay: 90.658 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 117.39 Mbit/s

95th percentile per-packet one-way delay: 94.117 ms

Loss rate: 0.60%

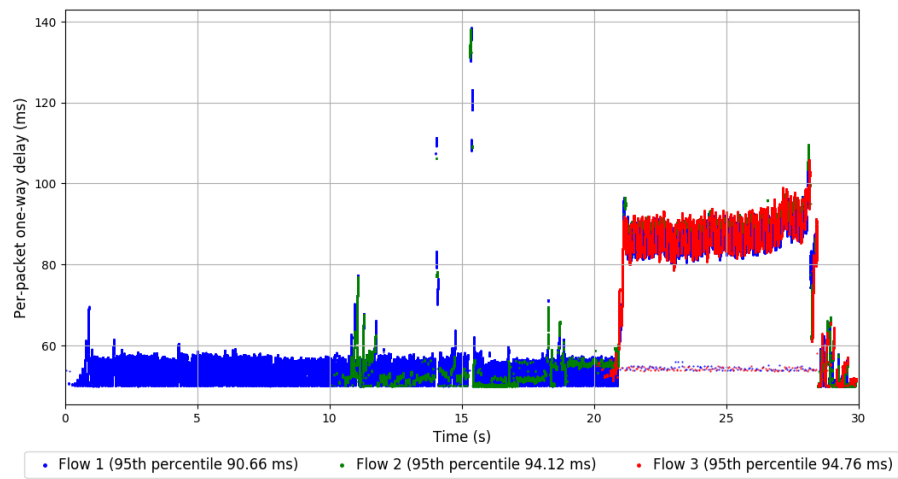
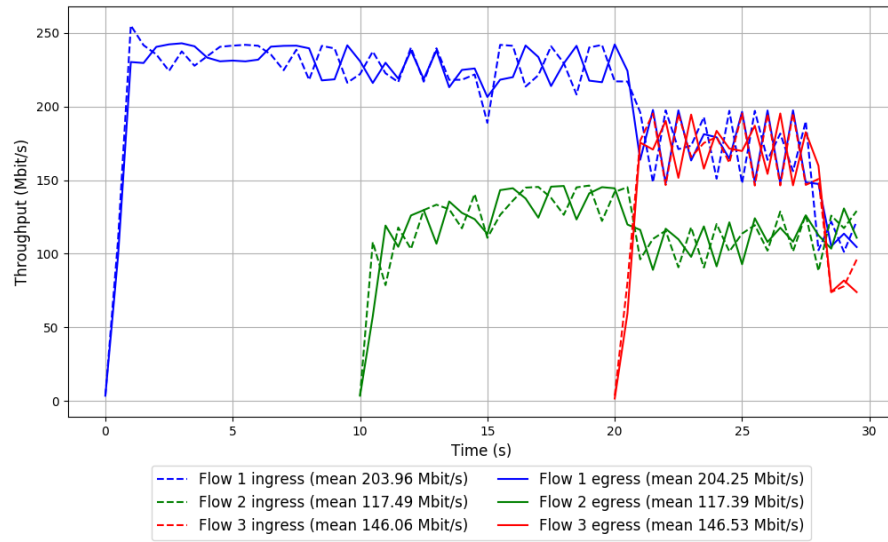
-- Flow 3:

Average throughput: 146.53 Mbit/s

95th percentile per-packet one-way delay: 94.762 ms

Loss rate: 0.76%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-02-17 11:22:50

End at: 2018-02-17 11:23:20

Below is generated by plot.py at 2018-02-17 16:00:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 327.21 Mbit/s

95th percentile per-packet one-way delay: 59.758 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 222.13 Mbit/s

95th percentile per-packet one-way delay: 59.879 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 155.86 Mbit/s

95th percentile per-packet one-way delay: 59.346 ms

Loss rate: 0.86%

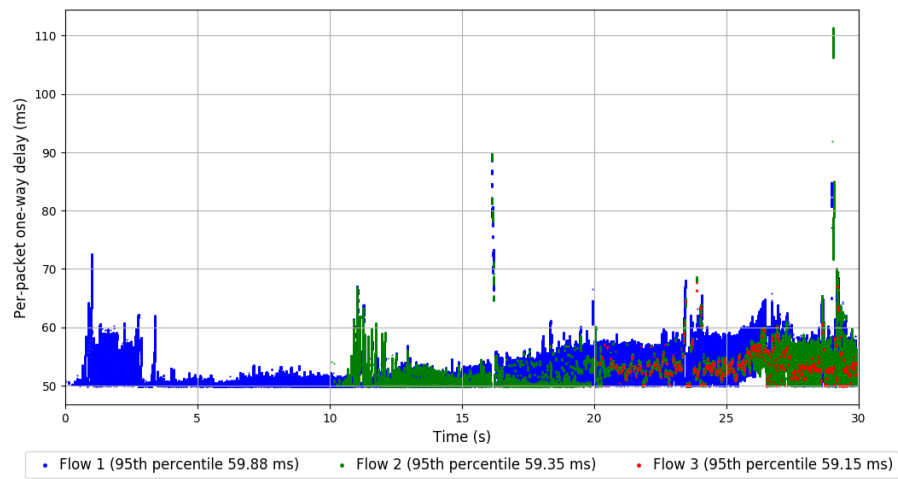
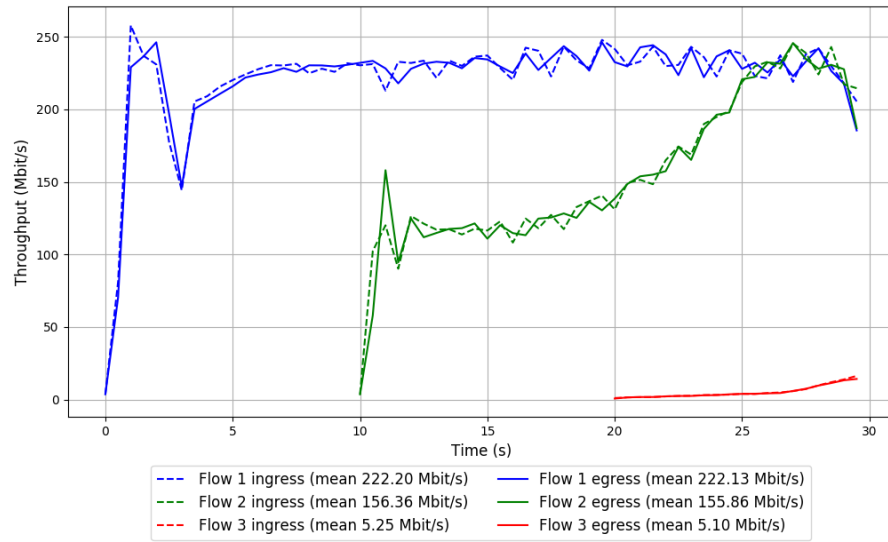
-- Flow 3:

Average throughput: 5.10 Mbit/s

95th percentile per-packet one-way delay: 59.152 ms

Loss rate: 3.87%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-02-17 11:40:55

End at: 2018-02-17 11:41:25

Below is generated by plot.py at 2018-02-17 16:00:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 221.54 Mbit/s

95th percentile per-packet one-way delay: 57.069 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 147.83 Mbit/s

95th percentile per-packet one-way delay: 57.412 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 52.15 Mbit/s

95th percentile per-packet one-way delay: 52.778 ms

Loss rate: 2.23%

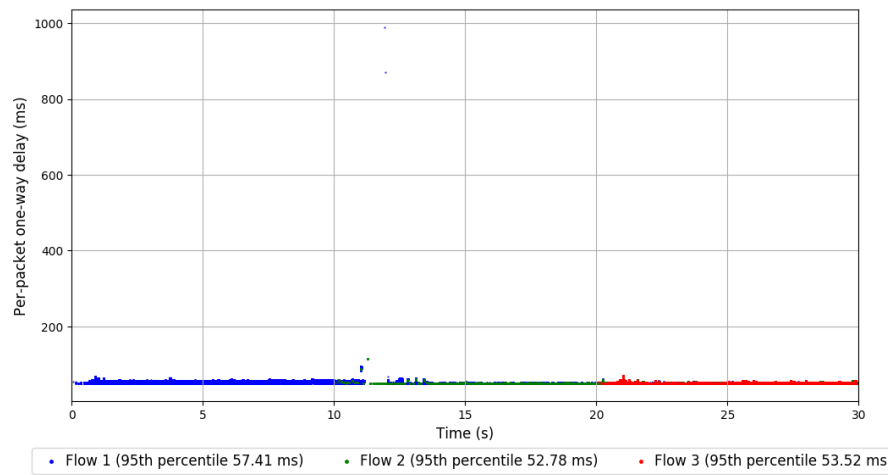
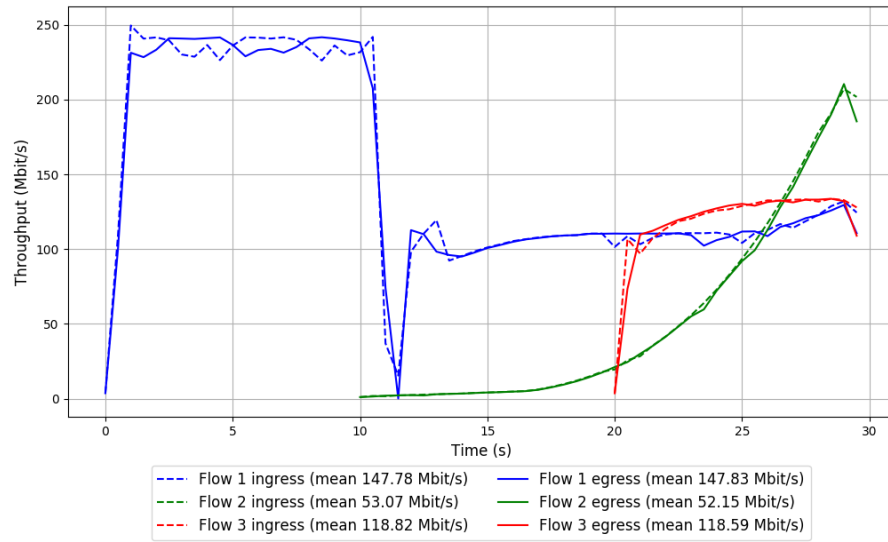
-- Flow 3:

Average throughput: 118.59 Mbit/s

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

Loss rate: 1.14%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-02-17 11:58:36

End at: 2018-02-17 11:59:06

Below is generated by plot.py at 2018-02-17 16:01:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 342.74 Mbit/s

95th percentile per-packet one-way delay: 97.069 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 201.40 Mbit/s

95th percentile per-packet one-way delay: 93.352 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 127.94 Mbit/s

95th percentile per-packet one-way delay: 96.761 ms

Loss rate: 0.70%

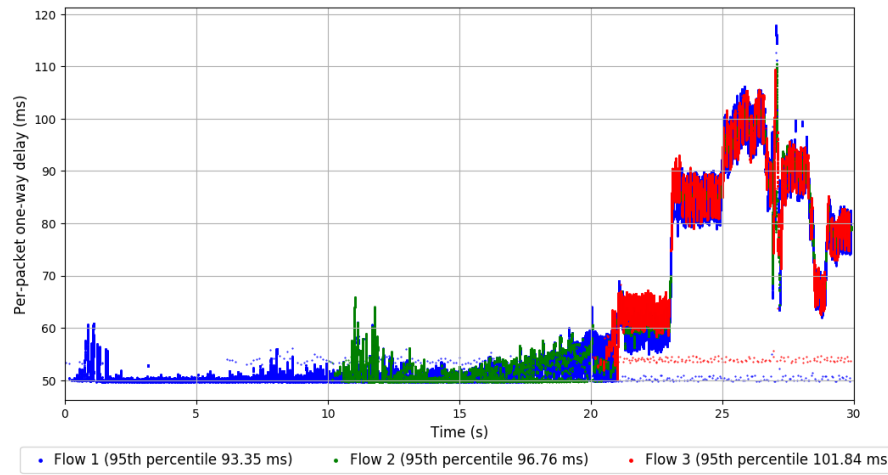
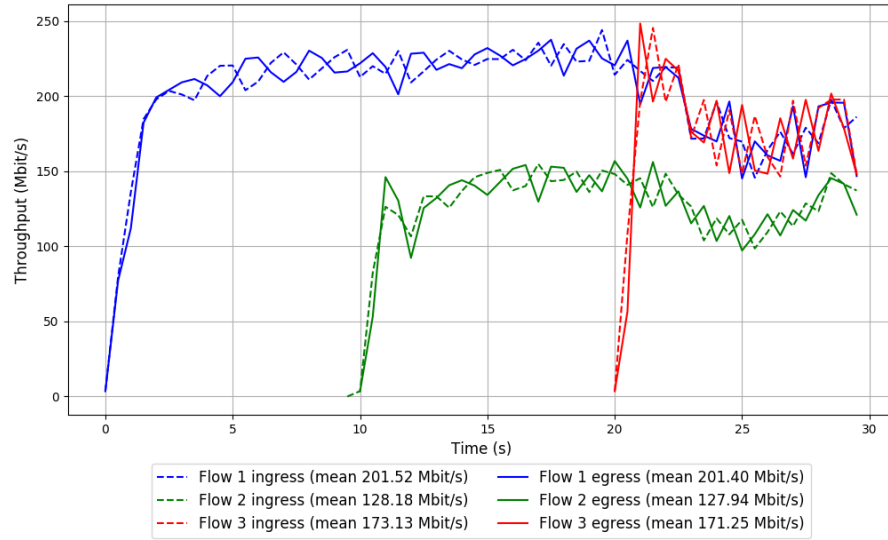
-- Flow 3:

Average throughput: 171.25 Mbit/s

95th percentile per-packet one-way delay: 101.836 ms

Loss rate: 1.45%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-02-17 12:16:44

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

Below is generated by plot.py at 2018-02-17 16:01:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 360.64 Mbit/s

95th percentile per-packet one-way delay: 63.025 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 225.65 Mbit/s

95th percentile per-packet one-way delay: 62.119 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 149.38 Mbit/s

95th percentile per-packet one-way delay: 64.093 ms

Loss rate: 0.71%

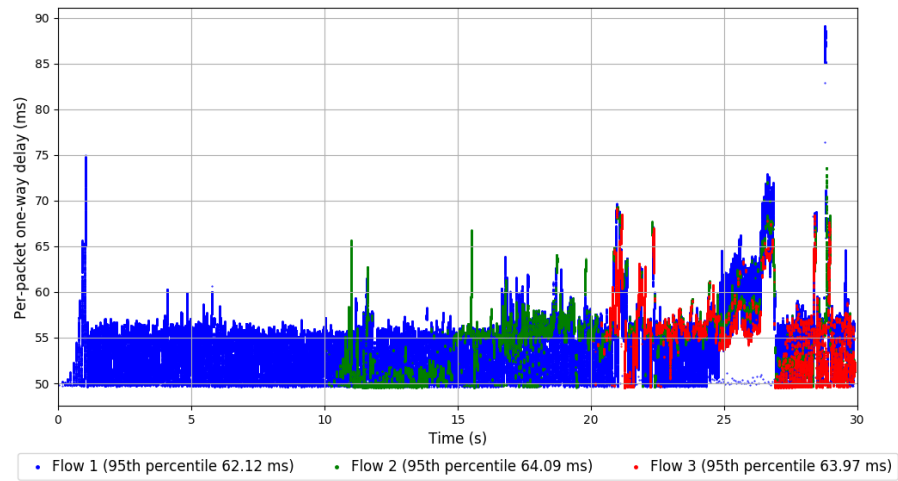
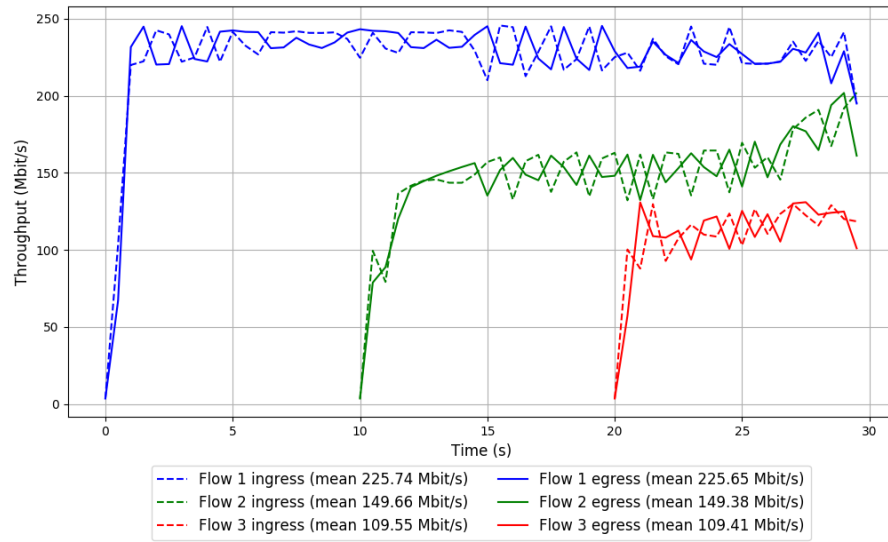
-- Flow 3:

Average throughput: 109.41 Mbit/s

95th percentile per-packet one-way delay: 63.973 ms

Loss rate: 1.22%

Run 10: Report of TCP Cubic — Data Link

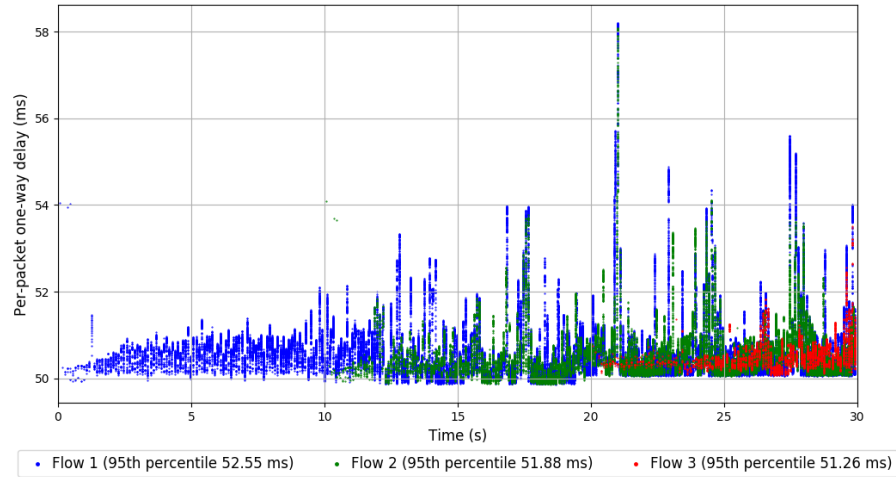
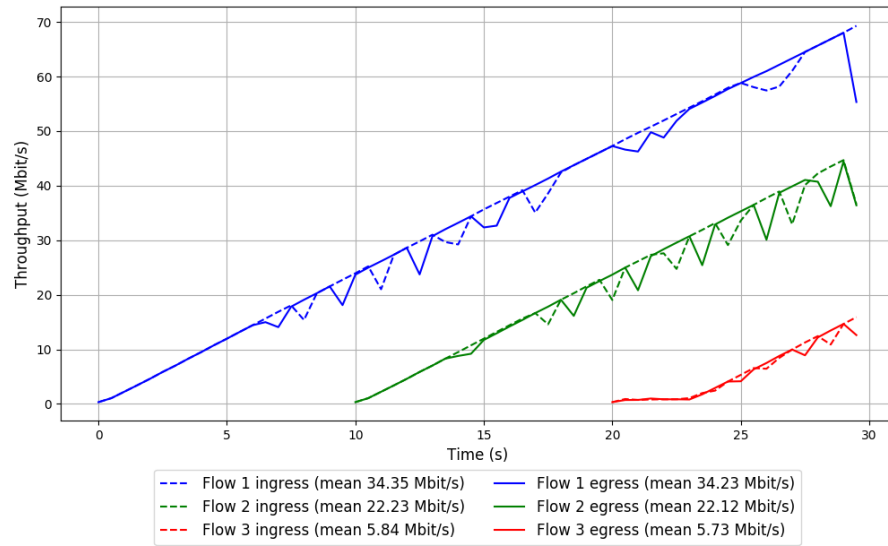


```
Run 1: Statistics of LEDBAT

Start at: 2018-02-17 09:32:52
End at: 2018-02-17 09:33:22

# Below is generated by plot.py at 2018-02-17 16:01:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.79 Mbit/s
95th percentile per-packet one-way delay: 52.317 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 34.23 Mbit/s
95th percentile per-packet one-way delay: 52.550 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 22.12 Mbit/s
95th percentile per-packet one-way delay: 51.877 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 5.73 Mbit/s
95th percentile per-packet one-way delay: 51.255 ms
Loss rate: 2.83%
```


Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-02-17 09:50:40

End at: 2018-02-17 09:51:10

Below is generated by plot.py at 2018-02-17 16:01:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 50.72 Mbit/s

95th percentile per-packet one-way delay: 62.233 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 33.04 Mbit/s

95th percentile per-packet one-way delay: 62.920 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 21.53 Mbit/s

95th percentile per-packet one-way delay: 61.724 ms

Loss rate: 1.05%

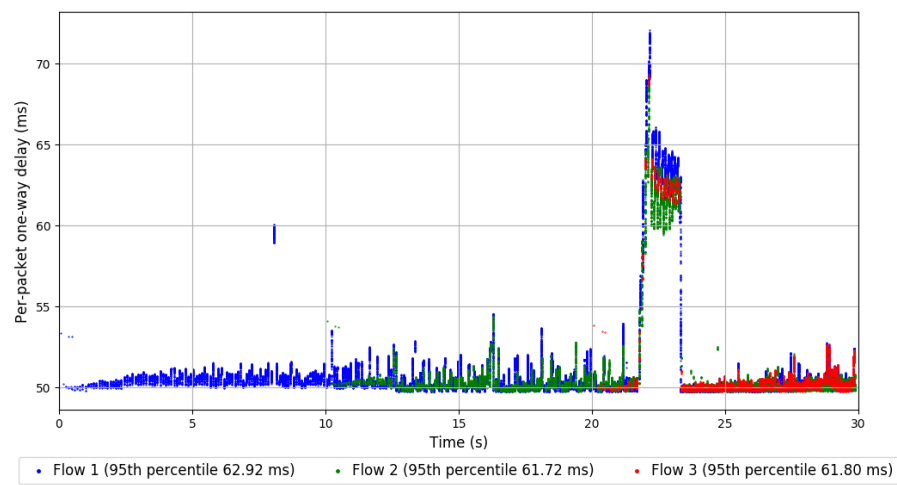
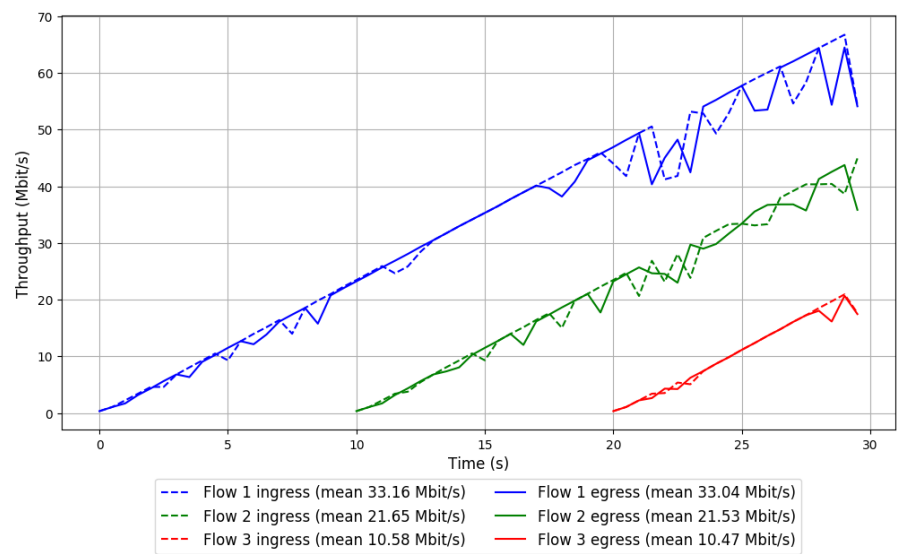
-- Flow 3:

Average throughput: 10.47 Mbit/s

95th percentile per-packet one-way delay: 61.796 ms

Loss rate: 2.15%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-02-17 10:08:15

End at: 2018-02-17 10:08:45

Below is generated by plot.py at 2018-02-17 16:01:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 49.73 Mbit/s

95th percentile per-packet one-way delay: 51.352 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 34.91 Mbit/s

95th percentile per-packet one-way delay: 51.476 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 16.82 Mbit/s

95th percentile per-packet one-way delay: 51.146 ms

Loss rate: 1.19%

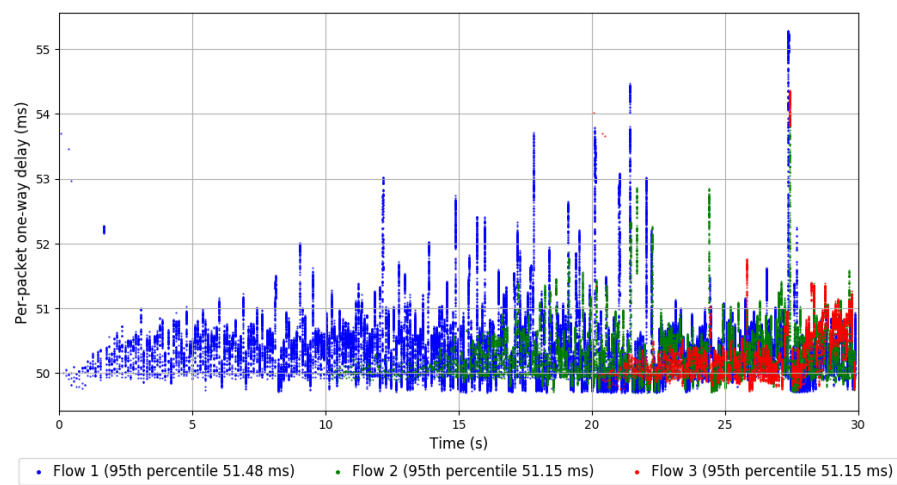
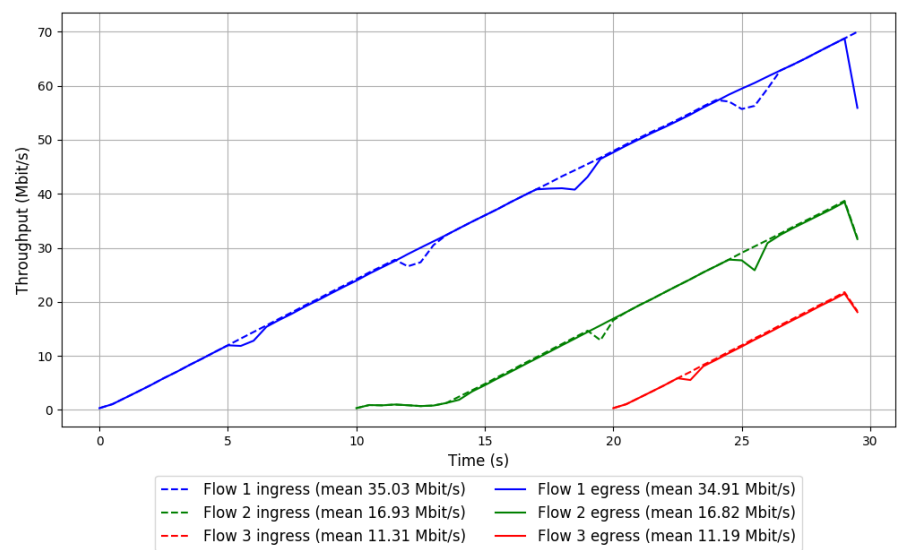
-- Flow 3:

Average throughput: 11.19 Mbit/s

95th percentile per-packet one-way delay: 51.145 ms

Loss rate: 2.08%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-02-17 10:26:12

End at: 2018-02-17 10:26:42

Below is generated by plot.py at 2018-02-17 16:01:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 52.86 Mbit/s

95th percentile per-packet one-way delay: 52.086 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 33.98 Mbit/s

95th percentile per-packet one-way delay: 51.945 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 22.88 Mbit/s

95th percentile per-packet one-way delay: 52.655 ms

Loss rate: 1.01%

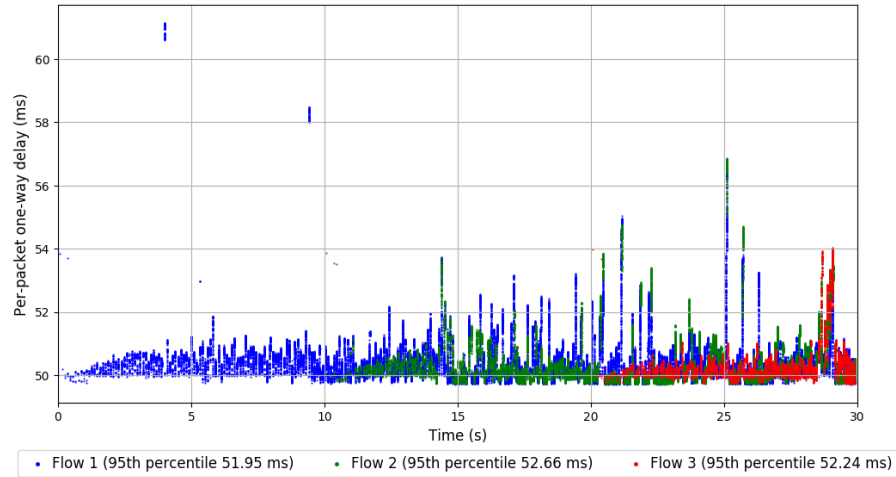
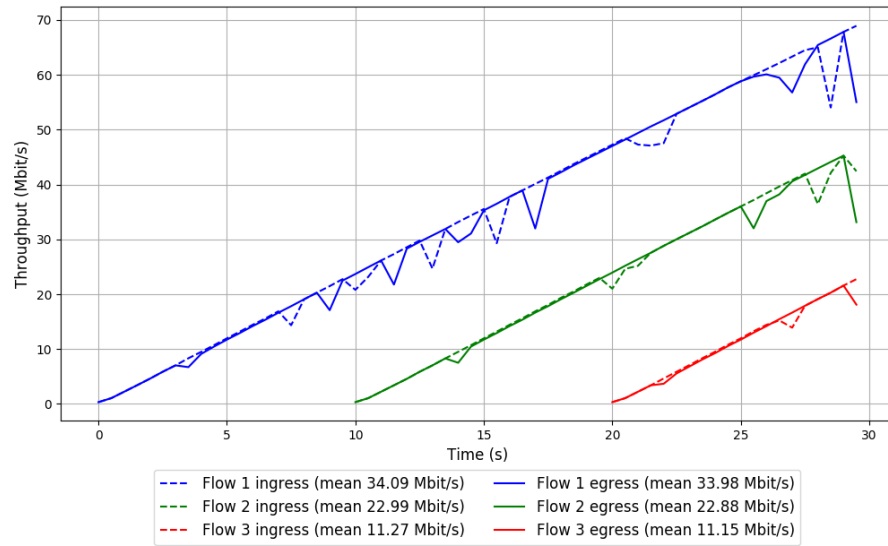
-- Flow 3:

Average throughput: 11.15 Mbit/s

95th percentile per-packet one-way delay: 52.245 ms

Loss rate: 2.08%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-02-17 10:43:53

End at: 2018-02-17 10:44:23

Below is generated by plot.py at 2018-02-17 16:01:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 51.26 Mbit/s

95th percentile per-packet one-way delay: 52.114 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 32.30 Mbit/s

95th percentile per-packet one-way delay: 52.112 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 23.04 Mbit/s

95th percentile per-packet one-way delay: 52.135 ms

Loss rate: 1.02%

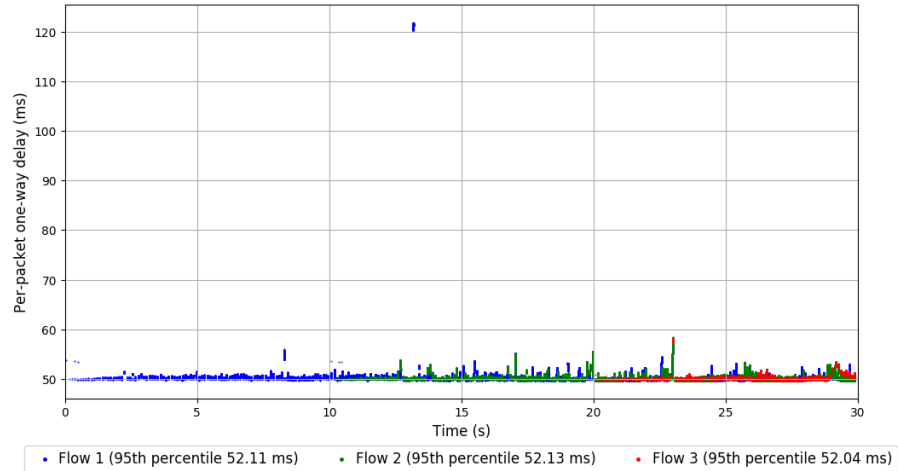
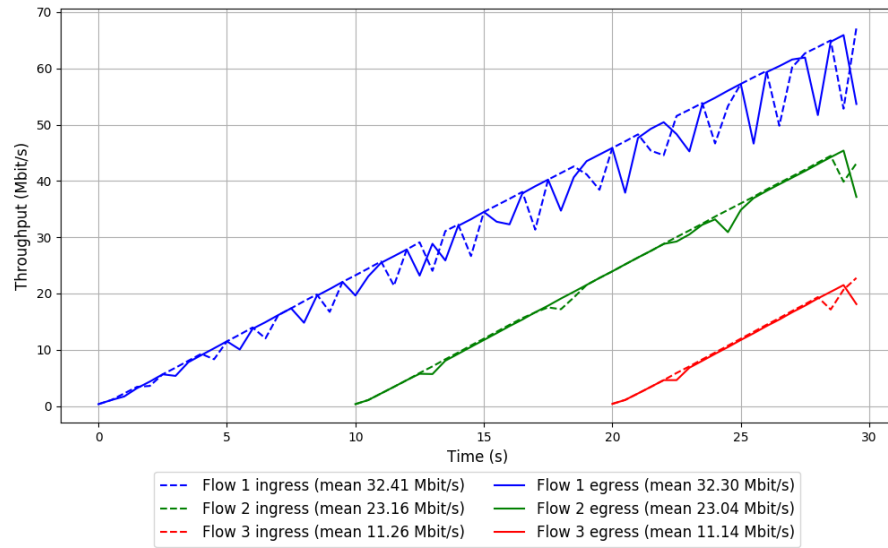
-- Flow 3:

Average throughput: 11.14 Mbit/s

95th percentile per-packet one-way delay: 52.036 ms

Loss rate: 2.08%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-02-17 11:01:52

End at: 2018-02-17 11:02:22

Below is generated by plot.py at 2018-02-17 16:01:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 51.68 Mbit/s

95th percentile per-packet one-way delay: 51.948 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 32.52 Mbit/s

95th percentile per-packet one-way delay: 51.823 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 23.14 Mbit/s

95th percentile per-packet one-way delay: 52.257 ms

Loss rate: 1.02%

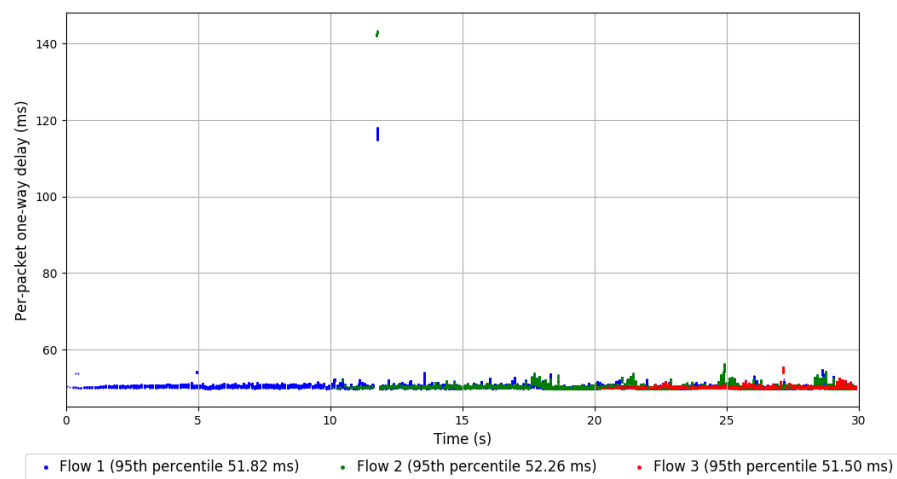
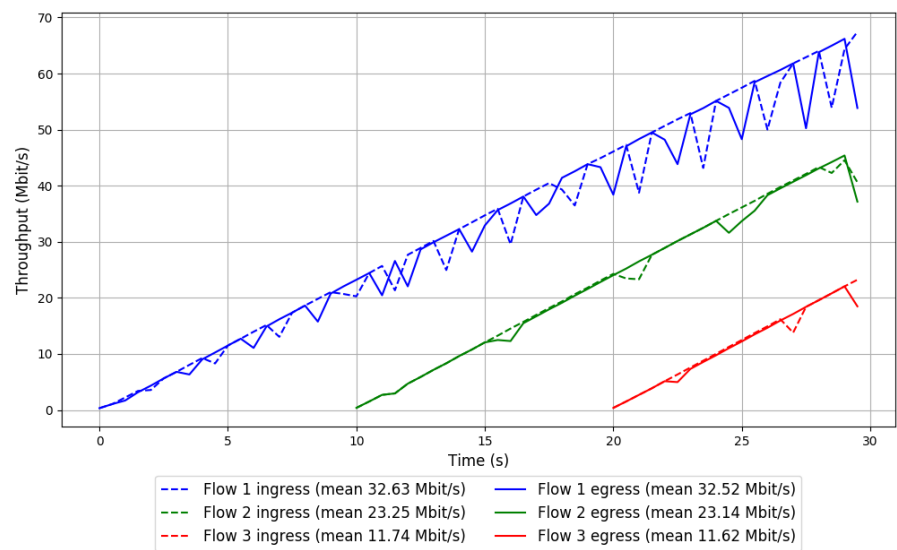
-- Flow 3:

Average throughput: 11.62 Mbit/s

95th percentile per-packet one-way delay: 51.504 ms

Loss rate: 2.04%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-02-17 11:19:45

End at: 2018-02-17 11:20:15

Below is generated by plot.py at 2018-02-17 16:01:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 52.56 Mbit/s

95th percentile per-packet one-way delay: 51.862 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 35.24 Mbit/s

95th percentile per-packet one-way delay: 51.878 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 20.70 Mbit/s

95th percentile per-packet one-way delay: 51.914 ms

Loss rate: 1.07%

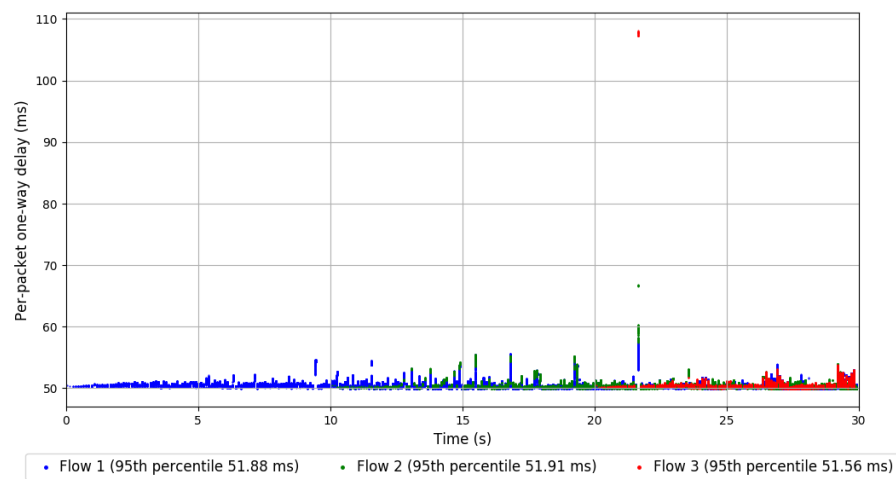
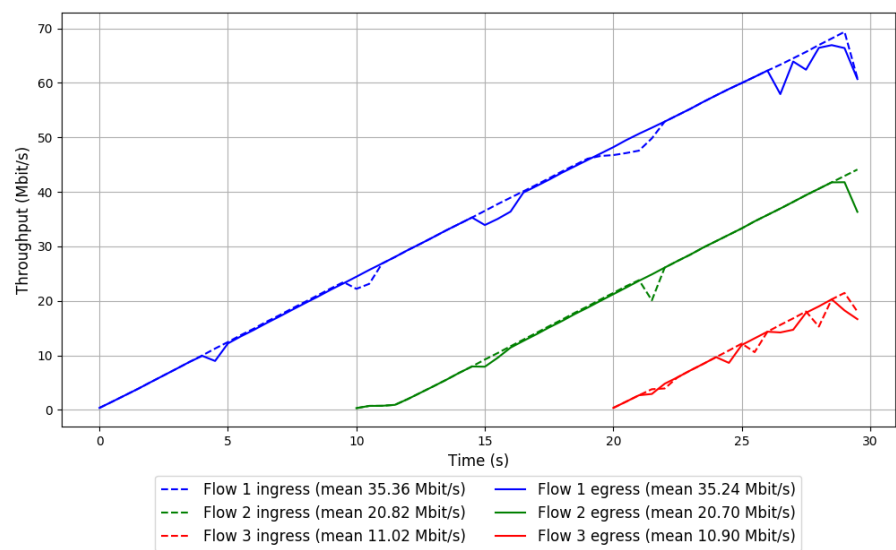
-- Flow 3:

Average throughput: 10.90 Mbit/s

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

Loss rate: 2.12%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-02-17 11:37:54

End at: 2018-02-17 11:38:24

Below is generated by plot.py at 2018-02-17 16:01:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 51.46 Mbit/s

95th percentile per-packet one-way delay: 51.892 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 32.84 Mbit/s

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

Loss rate: 0.69%

-- Flow 2:

Average throughput: 22.46 Mbit/s

95th percentile per-packet one-way delay: 52.440 ms

Loss rate: 1.03%

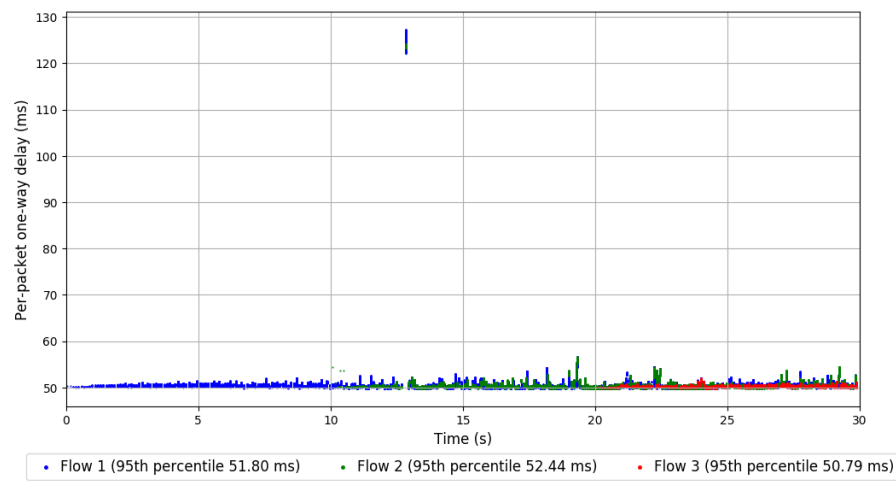
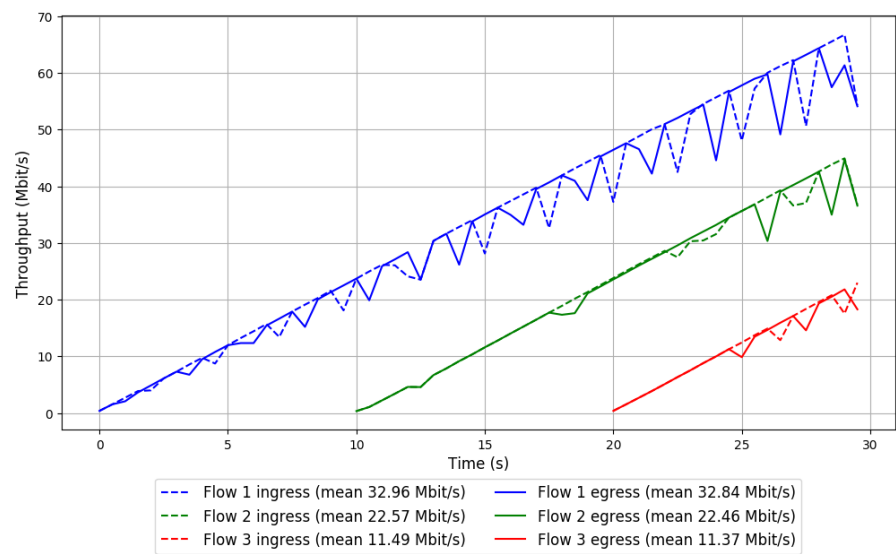
-- Flow 3:

Average throughput: 11.37 Mbit/s

95th percentile per-packet one-way delay: 50.787 ms

Loss rate: 2.06%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-02-17 11:55:36

End at: 2018-02-17 11:56:06

Below is generated by plot.py at 2018-02-17 16:01:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 51.38 Mbit/s

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

Loss rate: 0.89%

-- Flow 1:

Average throughput: 32.66 Mbit/s

95th percentile per-packet one-way delay: 51.763 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 23.10 Mbit/s

95th percentile per-packet one-way delay: 52.120 ms

Loss rate: 1.02%

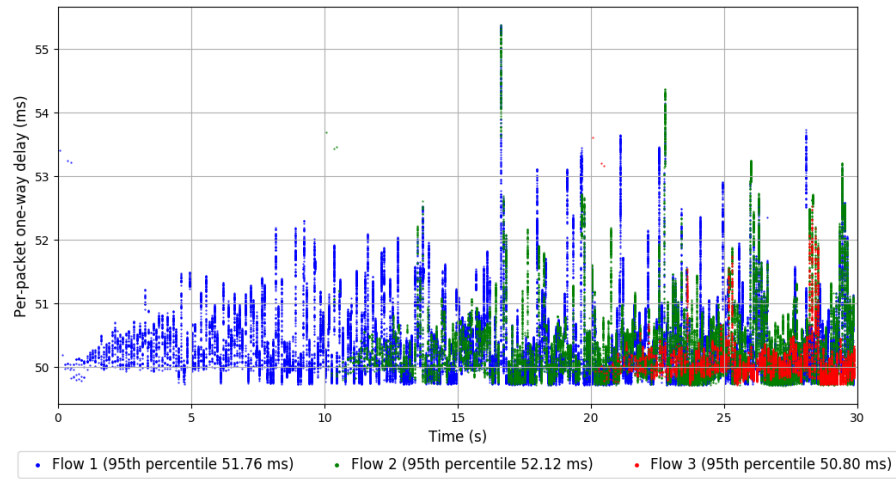
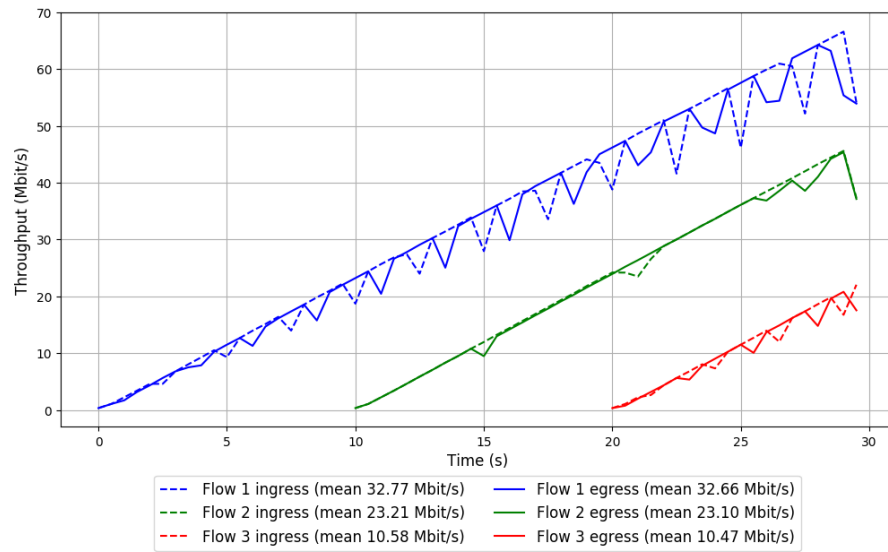
-- Flow 3:

Average throughput: 10.47 Mbit/s

95th percentile per-packet one-way delay: 50.805 ms

Loss rate: 2.15%

Run 9: Report of LEDBAT — Data Link

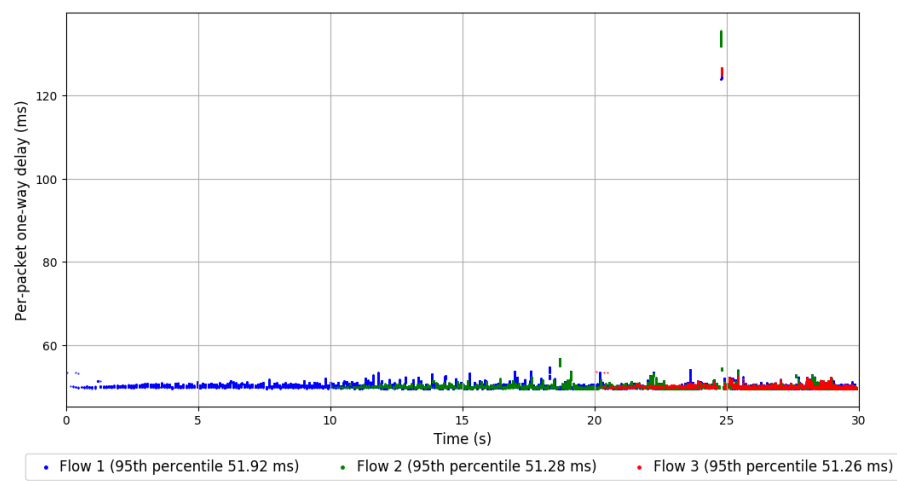
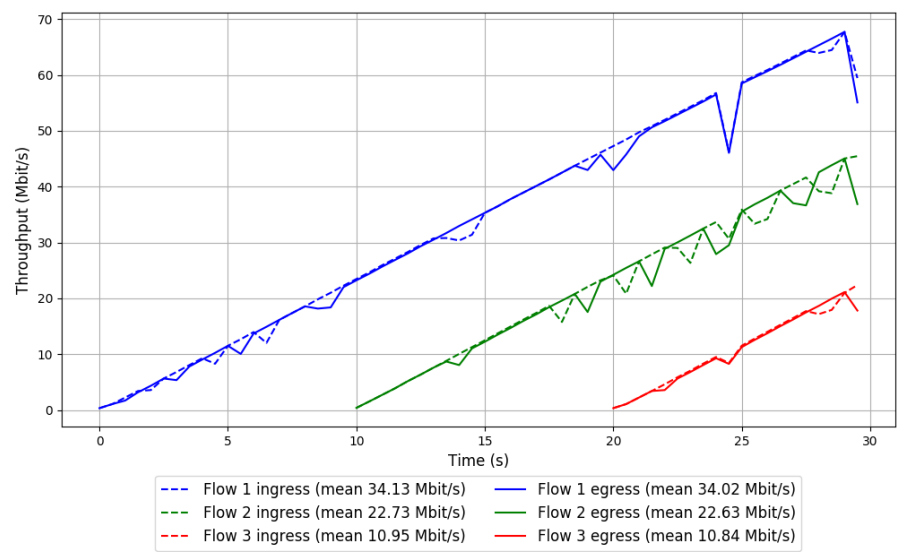


```
Run 10: Statistics of LEDBAT

Start at: 2018-02-17 12:13:41
End at: 2018-02-17 12:14:11

# Below is generated by plot.py at 2018-02-17 16:01:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.56 Mbit/s
95th percentile per-packet one-way delay: 51.703 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 34.02 Mbit/s
95th percentile per-packet one-way delay: 51.919 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 22.63 Mbit/s
95th percentile per-packet one-way delay: 51.278 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 10.84 Mbit/s
95th percentile per-packet one-way delay: 51.264 ms
Loss rate: 2.11%
```

Run 10: Report of LEDBAT — Data Link

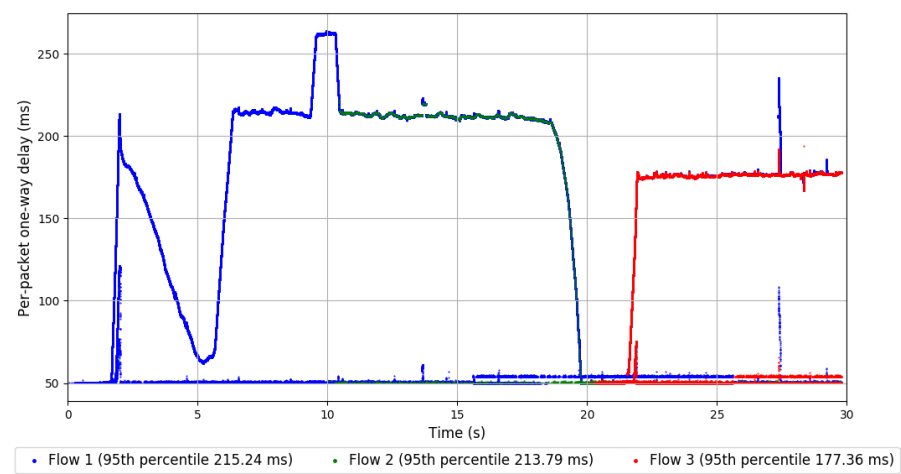
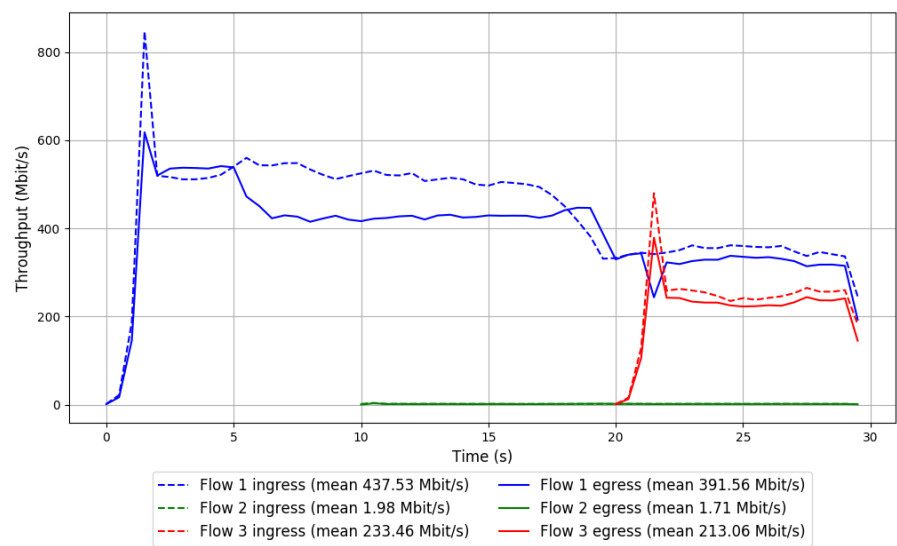


```
Run 1: Statistics of PCC

Start at: 2018-02-17 09:31:06
End at: 2018-02-17 09:31:36

# Below is generated by plot.py at 2018-02-17 16:05:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 462.27 Mbit/s
95th percentile per-packet one-way delay: 214.794 ms
Loss rate: 10.67%
-- Flow 1:
Average throughput: 391.56 Mbit/s
95th percentile per-packet one-way delay: 215.239 ms
Loss rate: 10.82%
-- Flow 2:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 213.793 ms
Loss rate: 13.99%
-- Flow 3:
Average throughput: 213.06 Mbit/s
95th percentile per-packet one-way delay: 177.358 ms
Loss rate: 9.73%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2018-02-17 09:48:40

End at: 2018-02-17 09:49:10

Below is generated by plot.py at 2018-02-17 16:05:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 453.82 Mbit/s

95th percentile per-packet one-way delay: 206.380 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 421.29 Mbit/s

95th percentile per-packet one-way delay: 206.425 ms

Loss rate: 1.86%

-- Flow 2:

Average throughput: 17.48 Mbit/s

95th percentile per-packet one-way delay: 206.626 ms

Loss rate: 1.93%

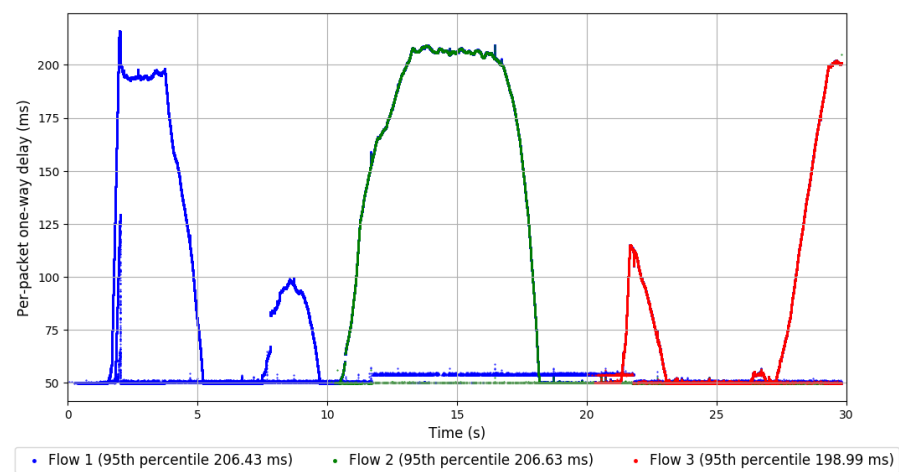
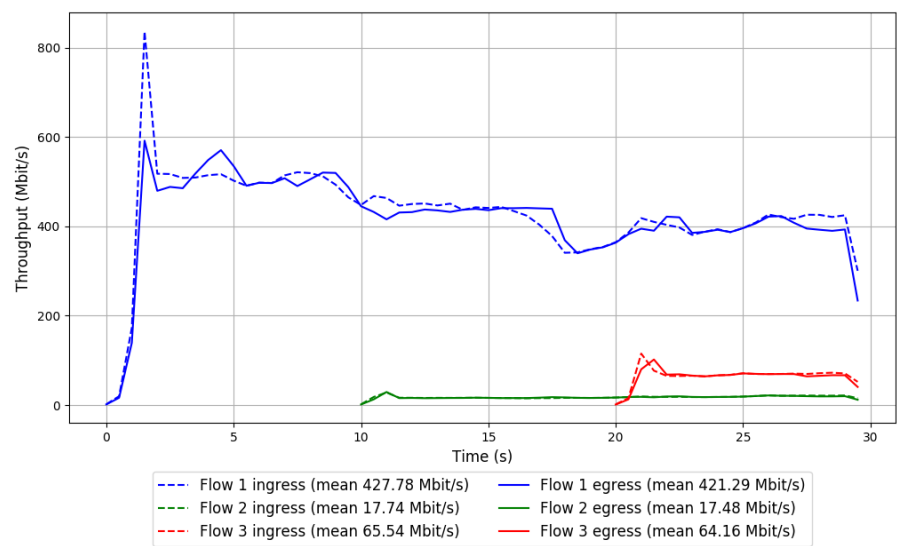
-- Flow 3:

Average throughput: 64.16 Mbit/s

95th percentile per-packet one-way delay: 198.989 ms

Loss rate: 3.18%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-02-17 10:06:35

End at: 2018-02-17 10:07:05

Below is generated by plot.py at 2018-02-17 16:07:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 504.47 Mbit/s

95th percentile per-packet one-way delay: 185.318 ms

Loss rate: 2.48%

-- Flow 1:

Average throughput: 463.44 Mbit/s

95th percentile per-packet one-way delay: 185.293 ms

Loss rate: 2.45%

-- Flow 2:

Average throughput: 60.86 Mbit/s

95th percentile per-packet one-way delay: 185.591 ms

Loss rate: 2.72%

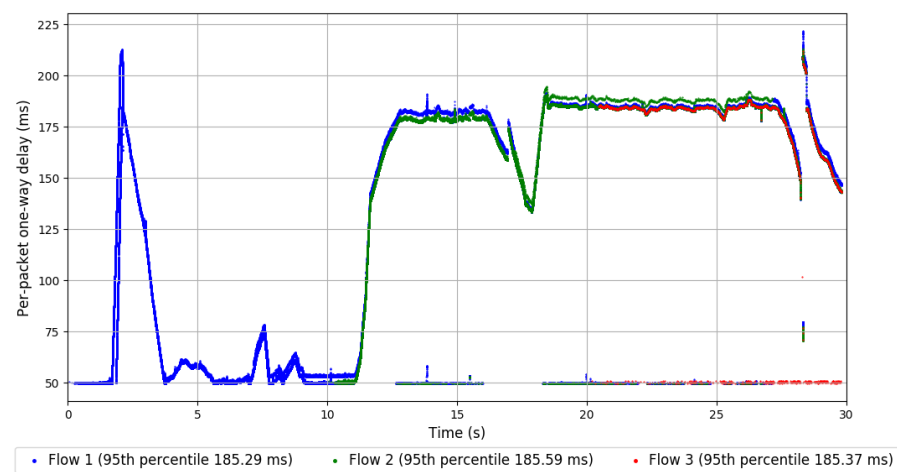
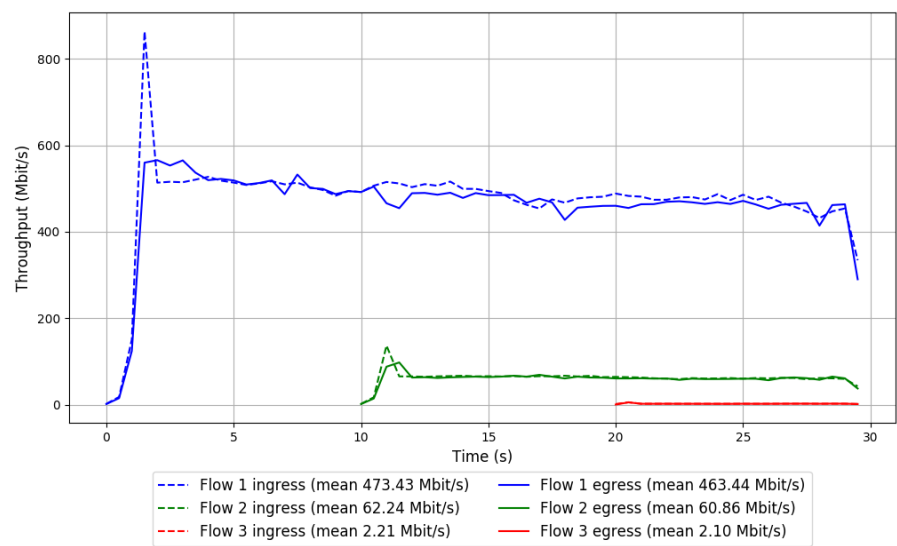
-- Flow 3:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 185.367 ms

Loss rate: 5.87%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-02-17 10:24:09

End at: 2018-02-17 10:24:39

Below is generated by plot.py at 2018-02-17 16:07:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 516.93 Mbit/s

95th percentile per-packet one-way delay: 160.398 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 454.49 Mbit/s

95th percentile per-packet one-way delay: 161.340 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 61.93 Mbit/s

95th percentile per-packet one-way delay: 125.948 ms

Loss rate: 0.57%

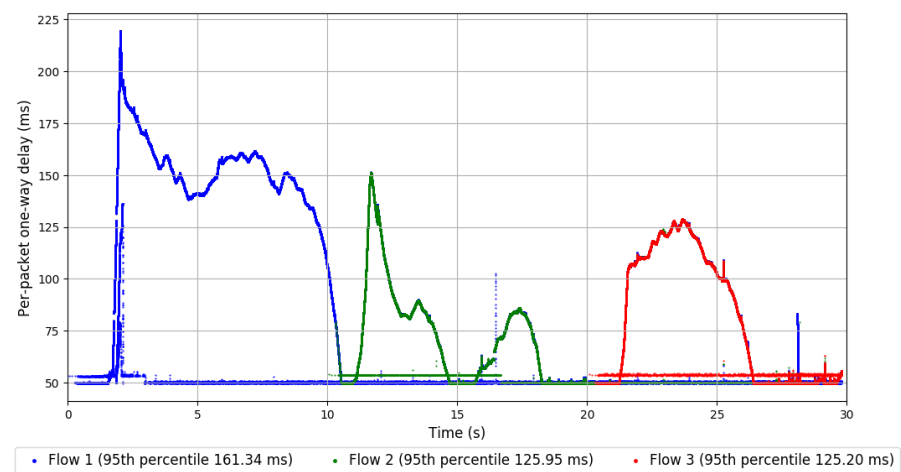
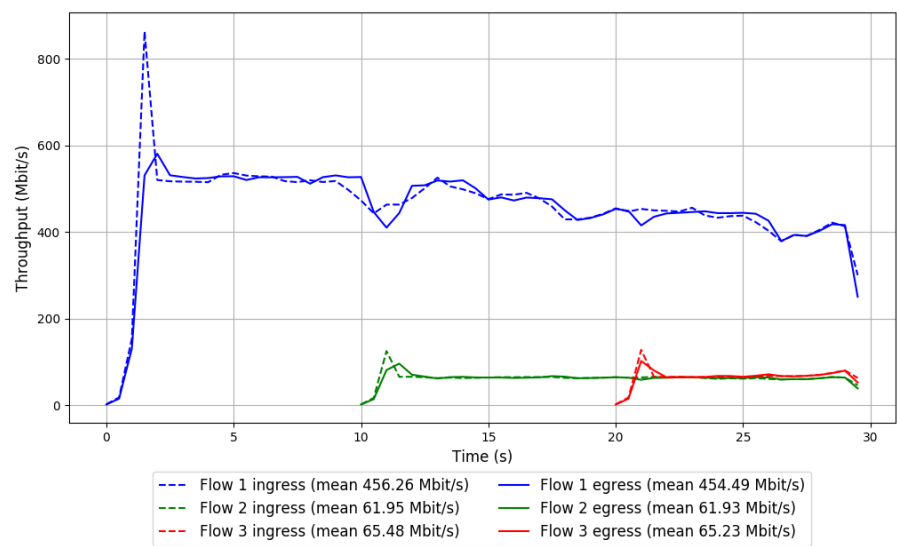
-- Flow 3:

Average throughput: 65.23 Mbit/s

95th percentile per-packet one-way delay: 125.200 ms

Loss rate: 1.46%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-02-17 10:42:00

End at: 2018-02-17 10:42:30

Below is generated by plot.py at 2018-02-17 16:07:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 467.71 Mbit/s

95th percentile per-packet one-way delay: 198.980 ms

Loss rate: 2.12%

-- Flow 1:

Average throughput: 454.06 Mbit/s

95th percentile per-packet one-way delay: 198.935 ms

Loss rate: 2.06%

-- Flow 2:

Average throughput: 4.51 Mbit/s

95th percentile per-packet one-way delay: 199.138 ms

Loss rate: 2.95%

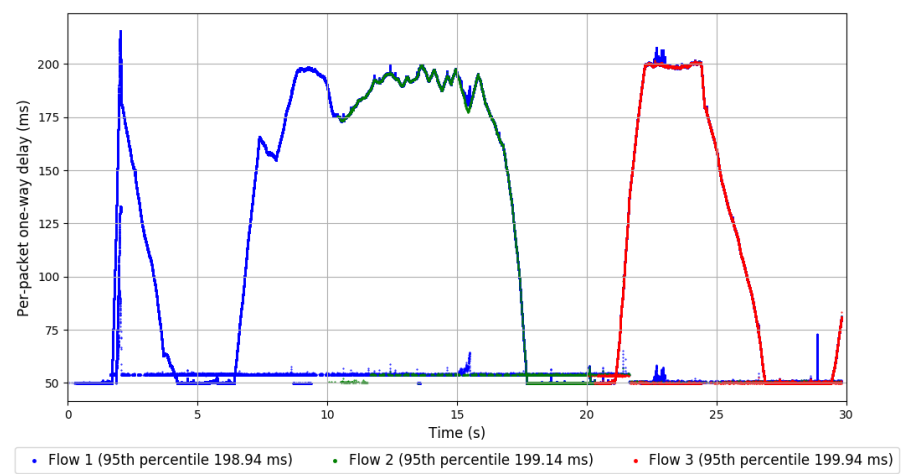
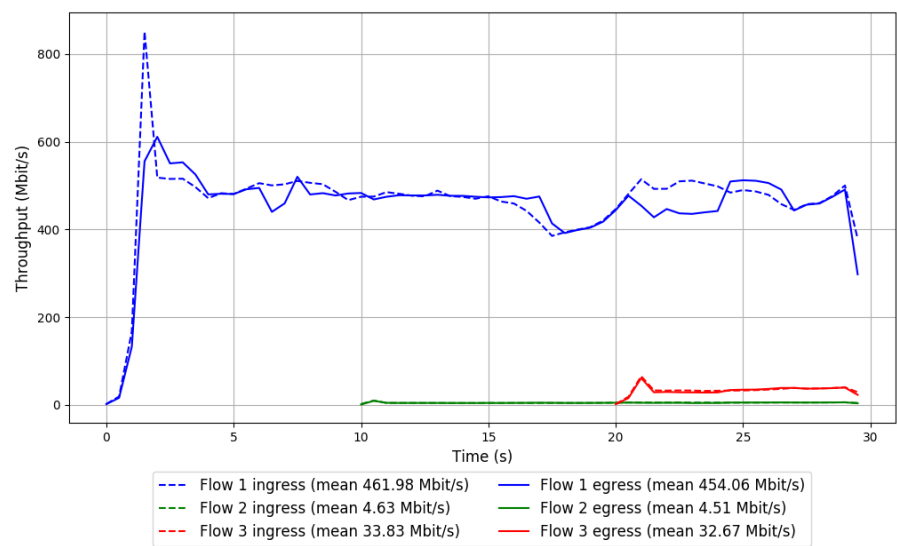
-- Flow 3:

Average throughput: 32.67 Mbit/s

95th percentile per-packet one-way delay: 199.945 ms

Loss rate: 4.46%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-02-17 10:59:59

End at: 2018-02-17 11:00:29

Below is generated by plot.py at 2018-02-17 16:09:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 489.35 Mbit/s

95th percentile per-packet one-way delay: 200.064 ms

Loss rate: 1.73%

-- Flow 1:

Average throughput: 467.09 Mbit/s

95th percentile per-packet one-way delay: 200.140 ms

Loss rate: 1.71%

-- Flow 2:

Average throughput: 4.27 Mbit/s

95th percentile per-packet one-way delay: 200.203 ms

Loss rate: 2.29%

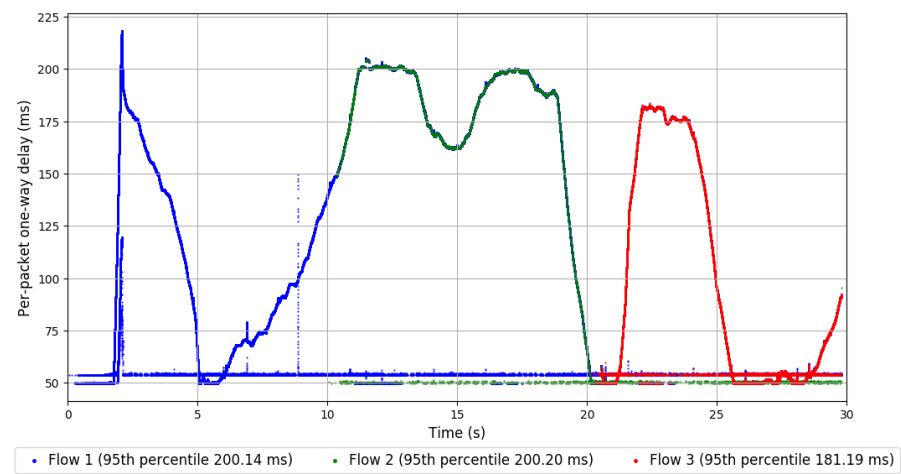
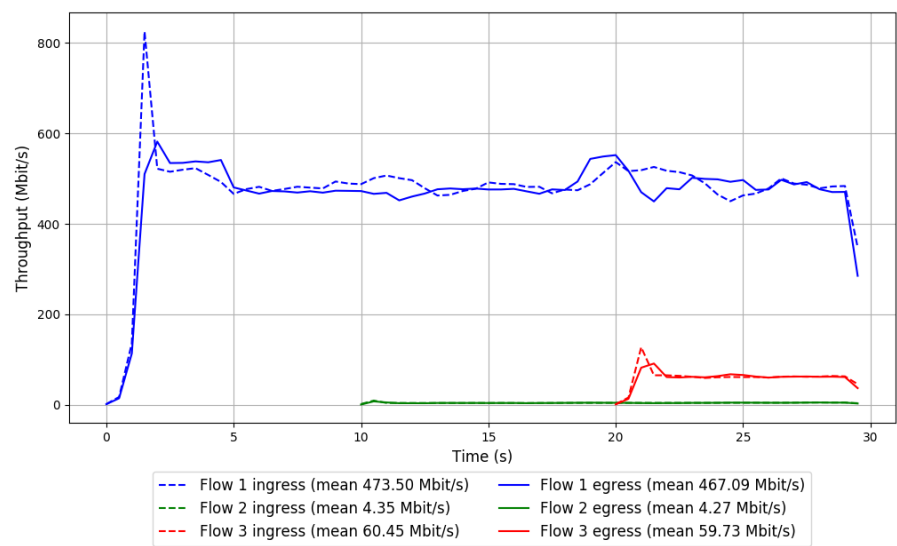
-- Flow 3:

Average throughput: 59.73 Mbit/s

95th percentile per-packet one-way delay: 181.185 ms

Loss rate: 2.27%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-02-17 11:17:45

End at: 2018-02-17 11:18:15

Below is generated by plot.py at 2018-02-17 16:09:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 428.23 Mbit/s

95th percentile per-packet one-way delay: 210.144 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 414.76 Mbit/s

95th percentile per-packet one-way delay: 210.080 ms

Loss rate: 1.71%

-- Flow 2:

Average throughput: 4.06 Mbit/s

95th percentile per-packet one-way delay: 210.234 ms

Loss rate: 2.84%

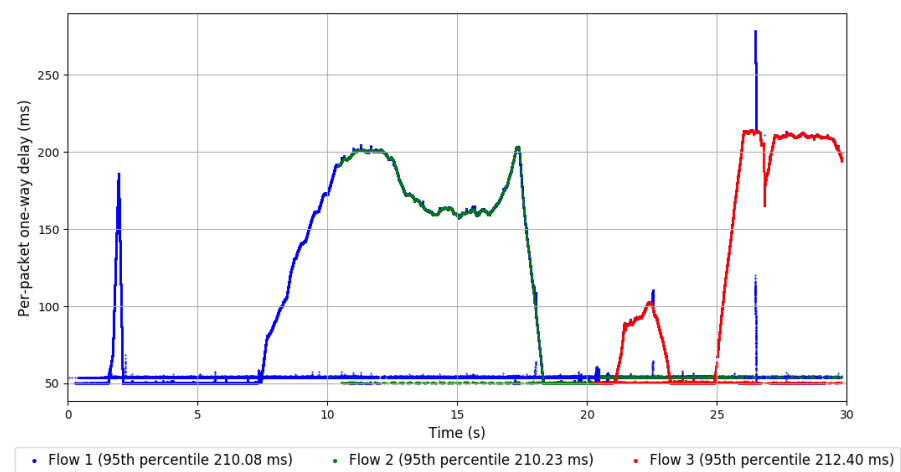
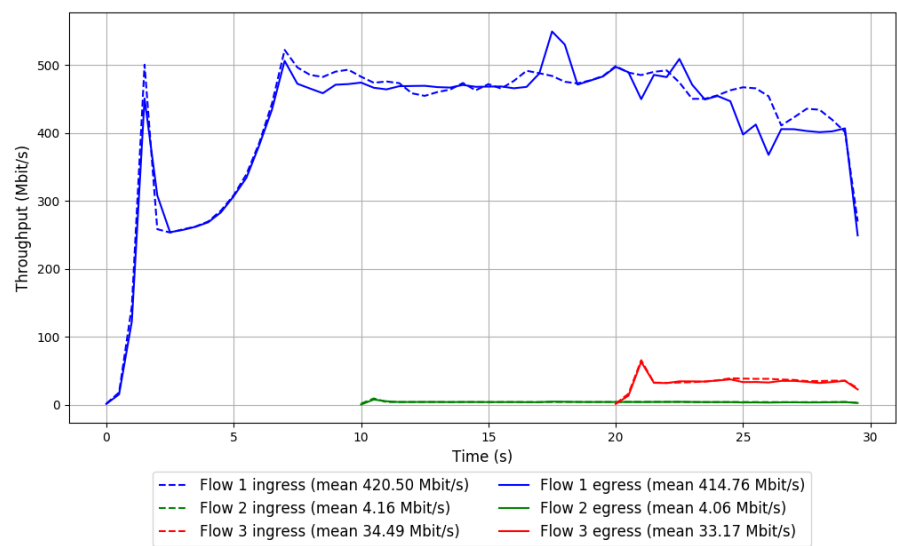
-- Flow 3:

Average throughput: 33.17 Mbit/s

95th percentile per-packet one-way delay: 212.399 ms

Loss rate: 4.76%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-02-17 11:35:50

End at: 2018-02-17 11:36:20

Below is generated by plot.py at 2018-02-17 16:10:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 478.97 Mbit/s

95th percentile per-packet one-way delay: 203.372 ms

Loss rate: 5.07%

-- Flow 1:

Average throughput: 457.33 Mbit/s

95th percentile per-packet one-way delay: 203.408 ms

Loss rate: 5.12%

-- Flow 2:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 203.424 ms

Loss rate: 6.72%

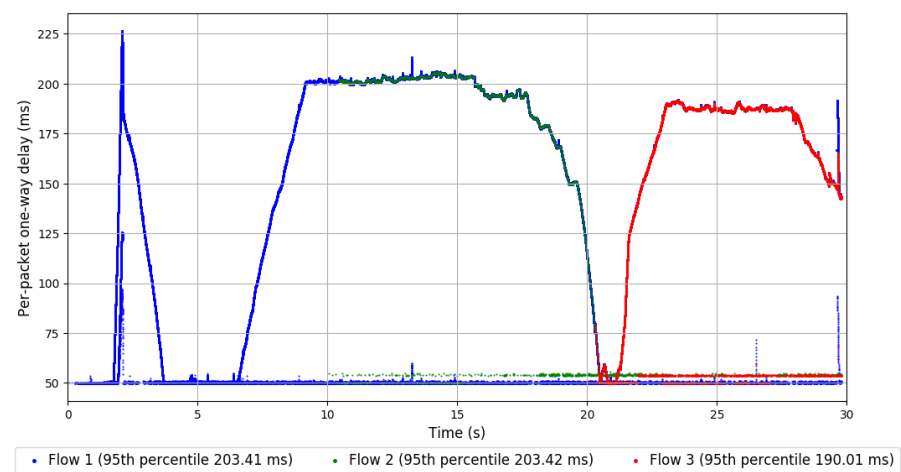
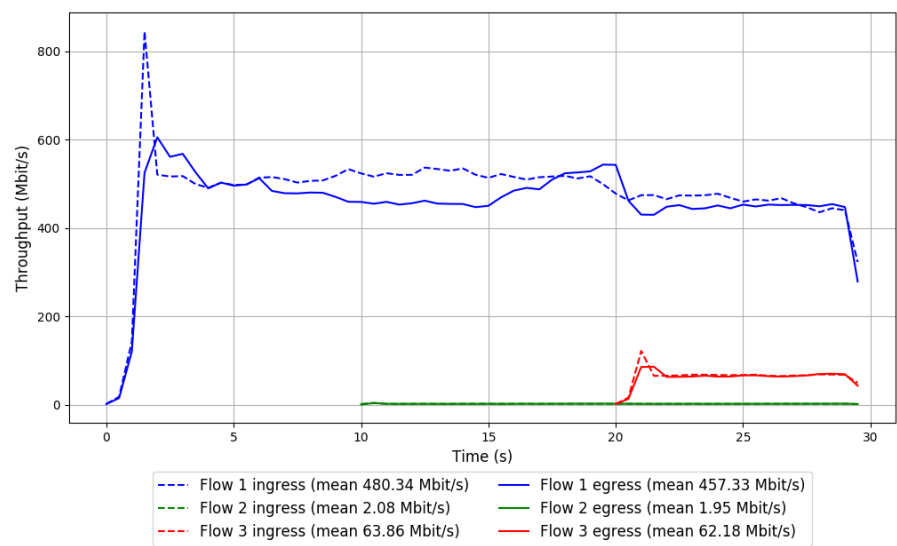
-- Flow 3:

Average throughput: 62.18 Mbit/s

95th percentile per-packet one-way delay: 190.010 ms

Loss rate: 3.67%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-02-17 11:53:41

End at: 2018-02-17 11:54:11

Below is generated by plot.py at 2018-02-17 16:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 451.04 Mbit/s

95th percentile per-packet one-way delay: 182.507 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 431.18 Mbit/s

95th percentile per-packet one-way delay: 182.436 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 27.80 Mbit/s

95th percentile per-packet one-way delay: 190.449 ms

Loss rate: 0.91%

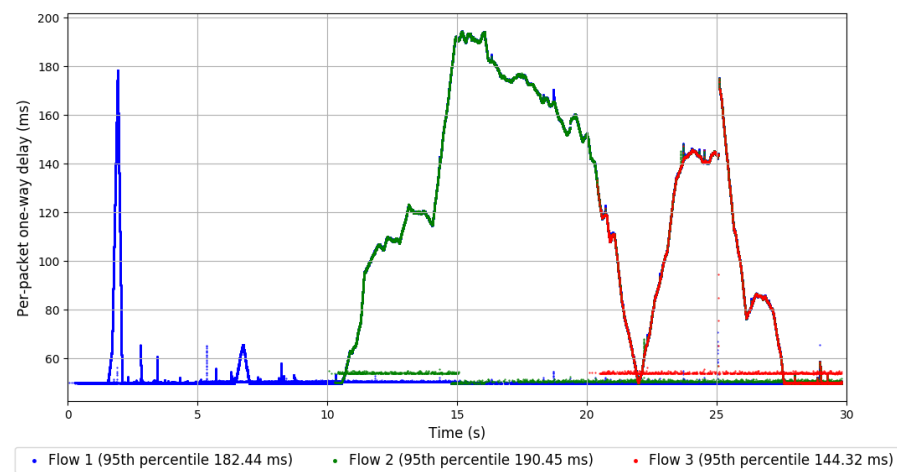
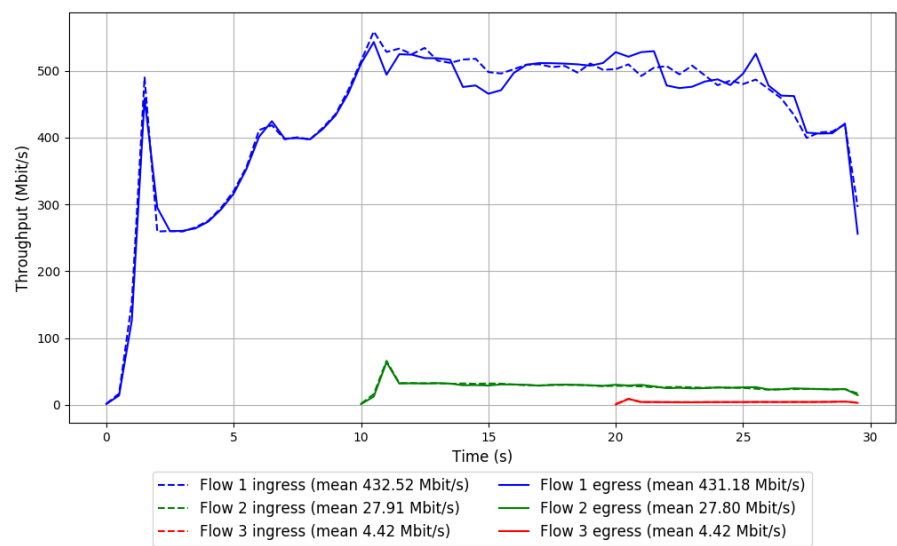
-- Flow 3:

Average throughput: 4.42 Mbit/s

95th percentile per-packet one-way delay: 144.321 ms

Loss rate: 1.10%

Run 9: Report of PCC — Data Link



Run 10: Statistics of PCC

Start at: 2018-02-17 12:11:42

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

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 493.56 Mbit/s

95th percentile per-packet one-way delay: 188.956 ms

Loss rate: 1.77%

-- Flow 1:

Average throughput: 450.45 Mbit/s

95th percentile per-packet one-way delay: 189.025 ms

Loss rate: 1.82%

-- Flow 2:

Average throughput: 63.96 Mbit/s

95th percentile per-packet one-way delay: 188.143 ms

Loss rate: 1.31%

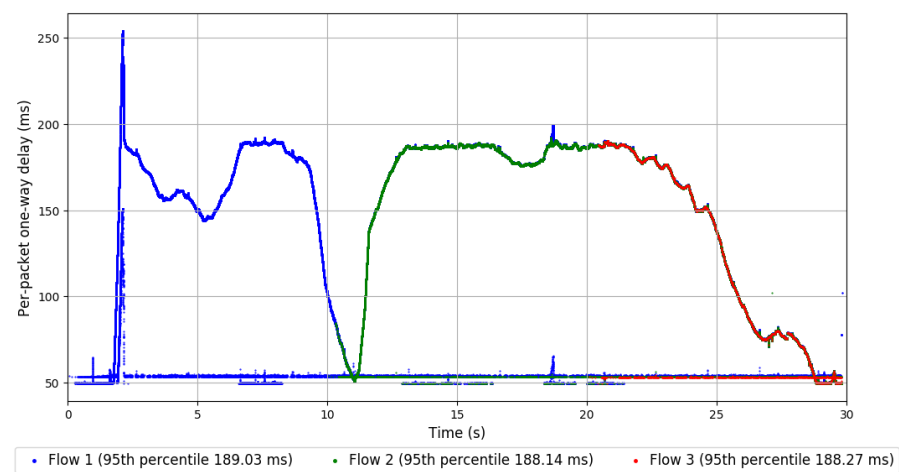
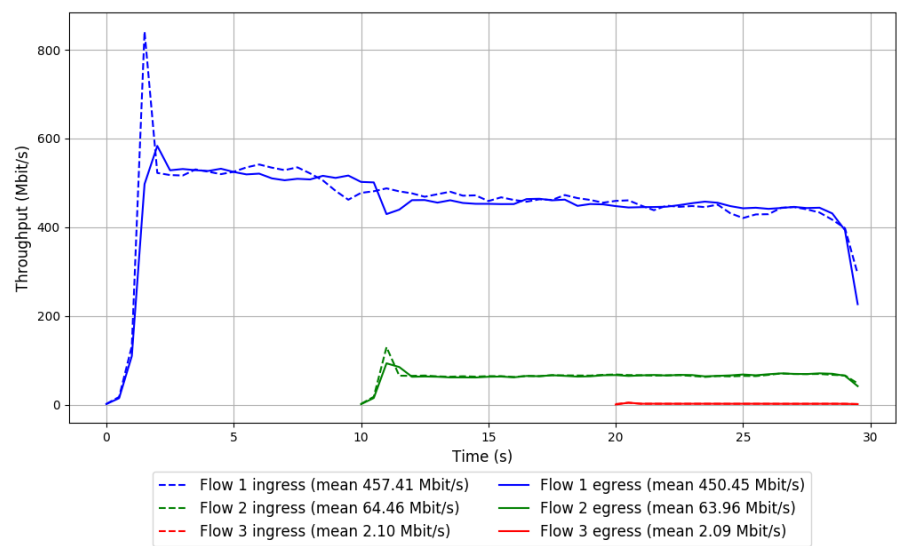
-- Flow 3:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 188.267 ms

Loss rate: 1.37%

Run 10: Report of PCC — Data Link

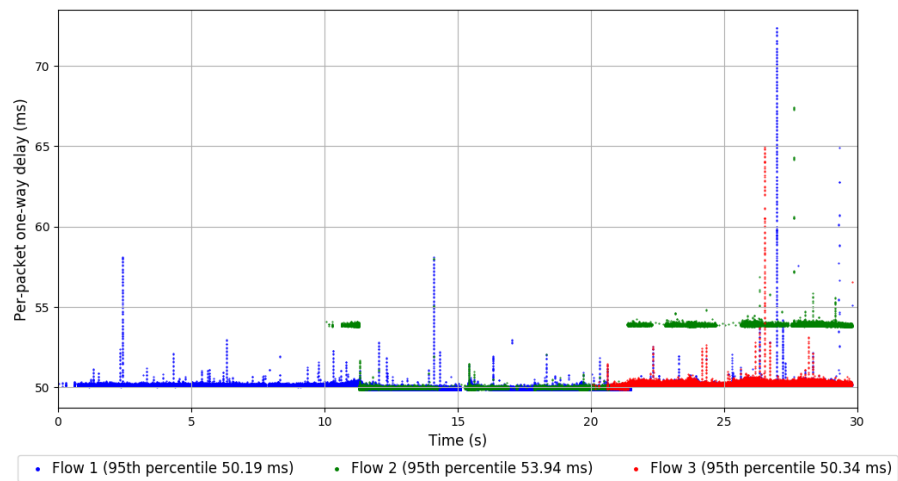
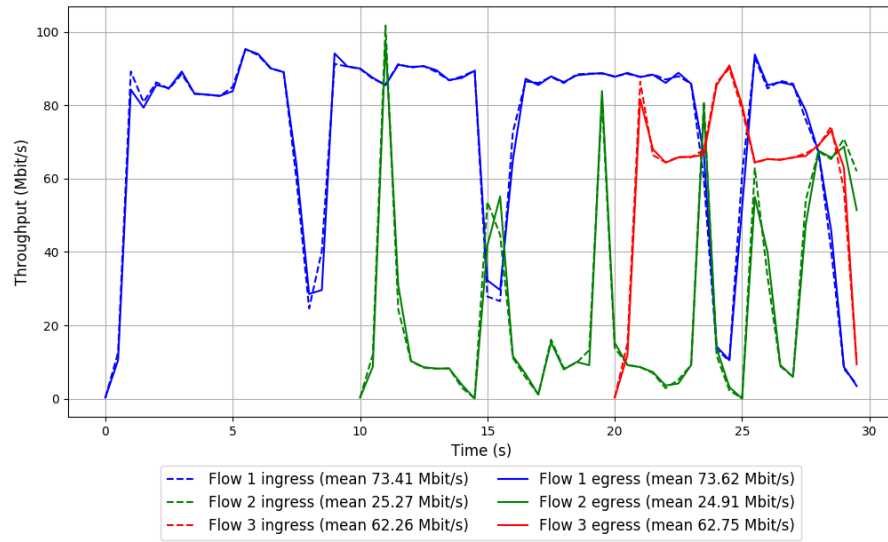


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-02-17 09:30:21
End at: 2018-02-17 09:30:51

# Below is generated by plot.py at 2018-02-17 16:15:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 110.68 Mbit/s
95th percentile per-packet one-way delay: 53.846 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 73.62 Mbit/s
95th percentile per-packet one-way delay: 50.188 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 24.91 Mbit/s
95th percentile per-packet one-way delay: 53.940 ms
Loss rate: 1.94%
-- Flow 3:
Average throughput: 62.75 Mbit/s
95th percentile per-packet one-way delay: 50.341 ms
Loss rate: 0.20%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-02-17 09:47:56

End at: 2018-02-17 09:48:26

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.78 Mbit/s

95th percentile per-packet one-way delay: 50.231 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 57.37 Mbit/s

95th percentile per-packet one-way delay: 50.050 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 38.71 Mbit/s

95th percentile per-packet one-way delay: 50.302 ms

Loss rate: 1.06%

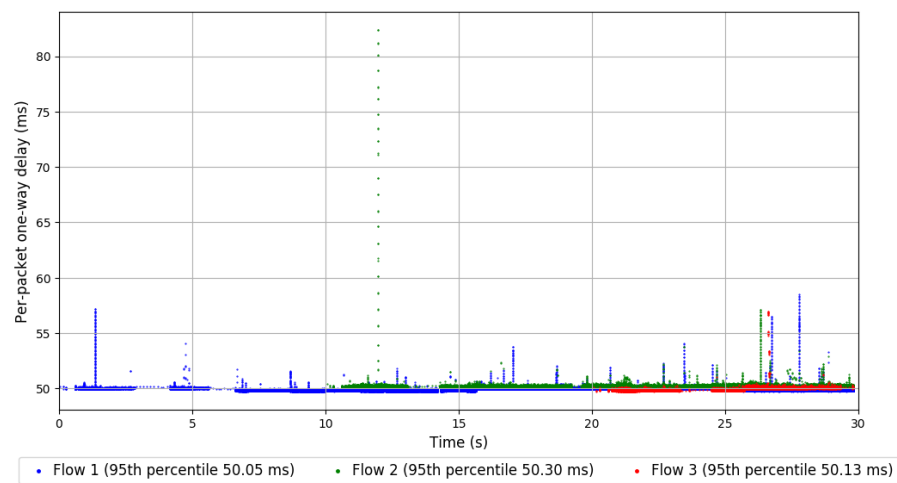
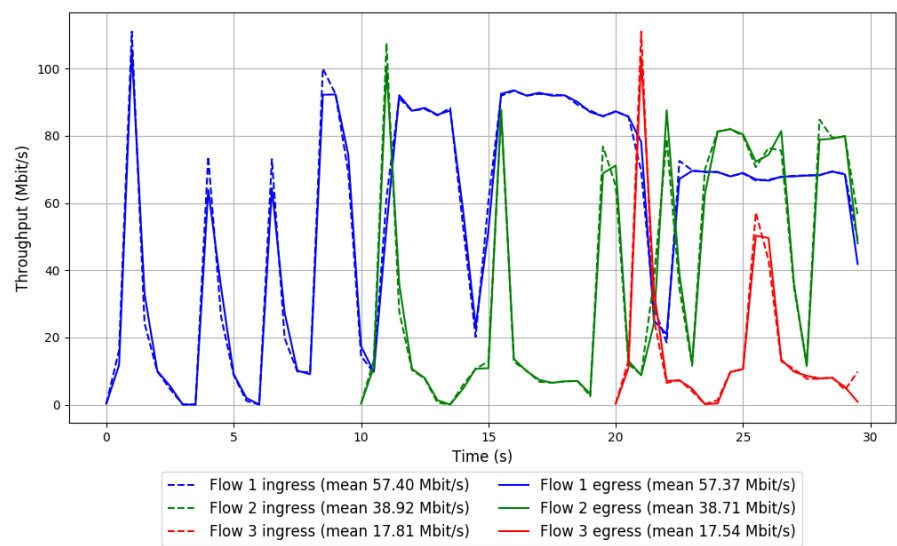
-- Flow 3:

Average throughput: 17.54 Mbit/s

95th percentile per-packet one-way delay: 50.131 ms

Loss rate: 2.56%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-02-17 10:05:50

End at: 2018-02-17 10:06:20

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.43 Mbit/s

95th percentile per-packet one-way delay: 53.638 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 48.20 Mbit/s

95th percentile per-packet one-way delay: 53.584 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 60.41 Mbit/s

95th percentile per-packet one-way delay: 53.658 ms

Loss rate: 0.19%

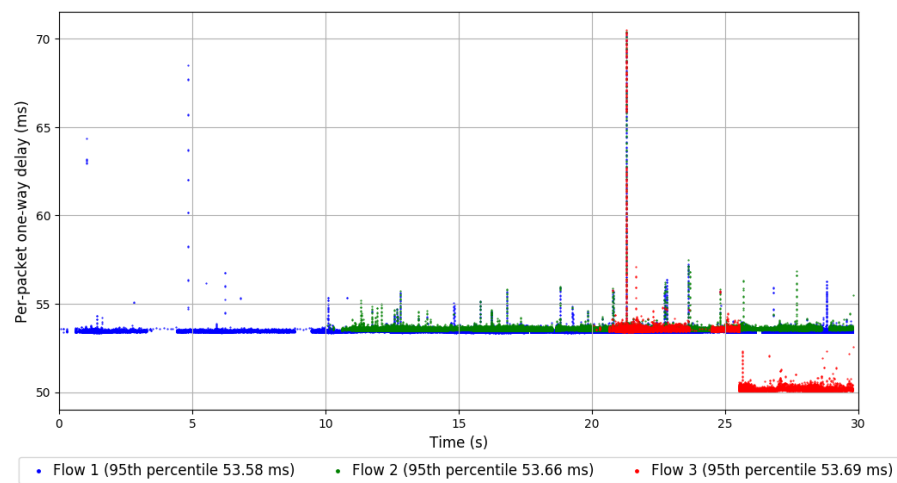
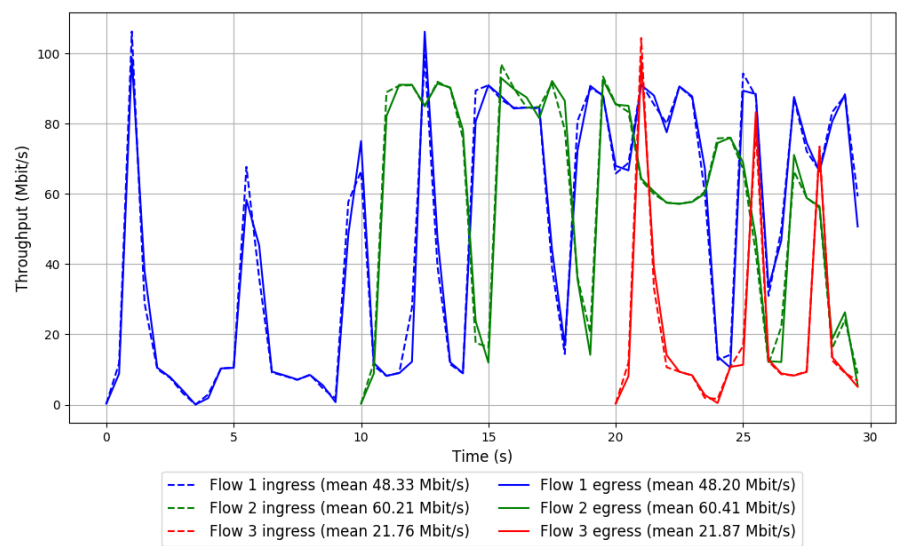
-- Flow 3:

Average throughput: 21.87 Mbit/s

95th percentile per-packet one-way delay: 53.691 ms

Loss rate: 0.58%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-02-17 10:23:25

End at: 2018-02-17 10:23:55

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.45 Mbit/s

95th percentile per-packet one-way delay: 53.545 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 60.38 Mbit/s

95th percentile per-packet one-way delay: 53.460 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 36.50 Mbit/s

95th percentile per-packet one-way delay: 53.617 ms

Loss rate: 0.84%

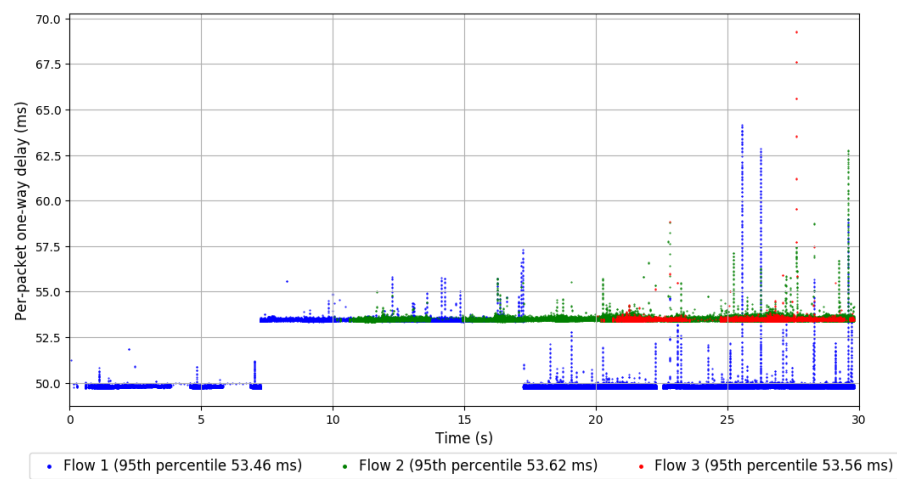
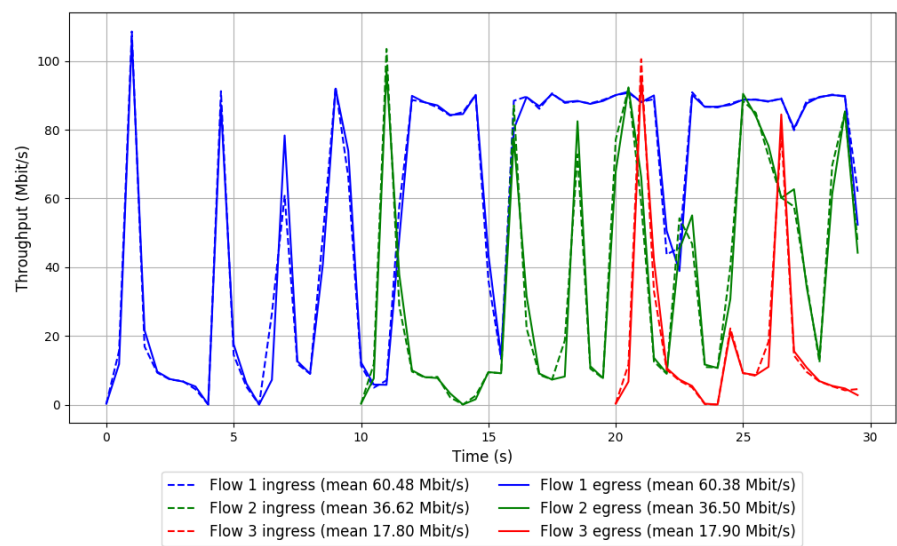
-- Flow 3:

Average throughput: 17.90 Mbit/s

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

Loss rate: 0.50%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-02-17 10:41:16

End at: 2018-02-17 10:41:46

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.59 Mbit/s

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

Loss rate: 0.74%

-- Flow 1:

Average throughput: 42.28 Mbit/s

95th percentile per-packet one-way delay: 53.617 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 51.38 Mbit/s

95th percentile per-packet one-way delay: 53.605 ms

Loss rate: 0.87%

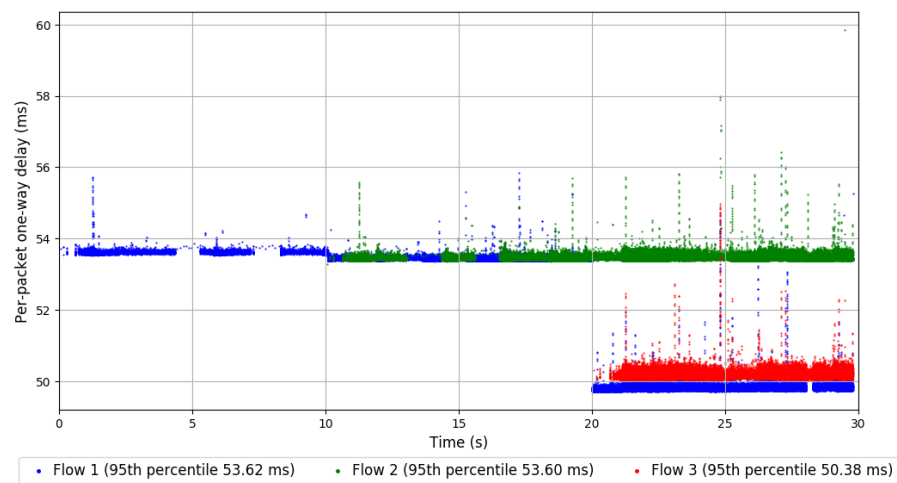
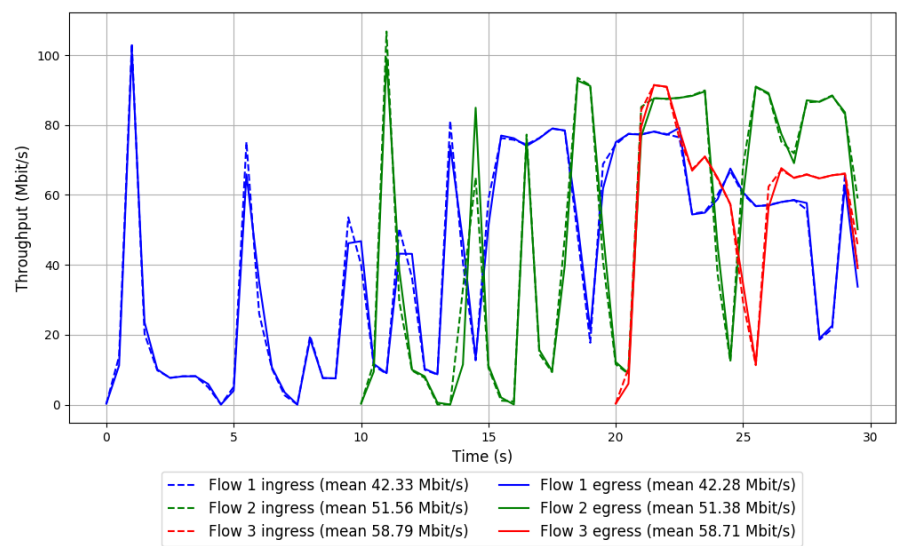
-- Flow 3:

Average throughput: 58.71 Mbit/s

95th percentile per-packet one-way delay: 50.379 ms

Loss rate: 1.16%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-02-17 10:59:14

End at: 2018-02-17 10:59:44

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.31 Mbit/s

95th percentile per-packet one-way delay: 50.360 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 43.72 Mbit/s

95th percentile per-packet one-way delay: 50.428 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 41.00 Mbit/s

95th percentile per-packet one-way delay: 50.056 ms

Loss rate: 1.23%

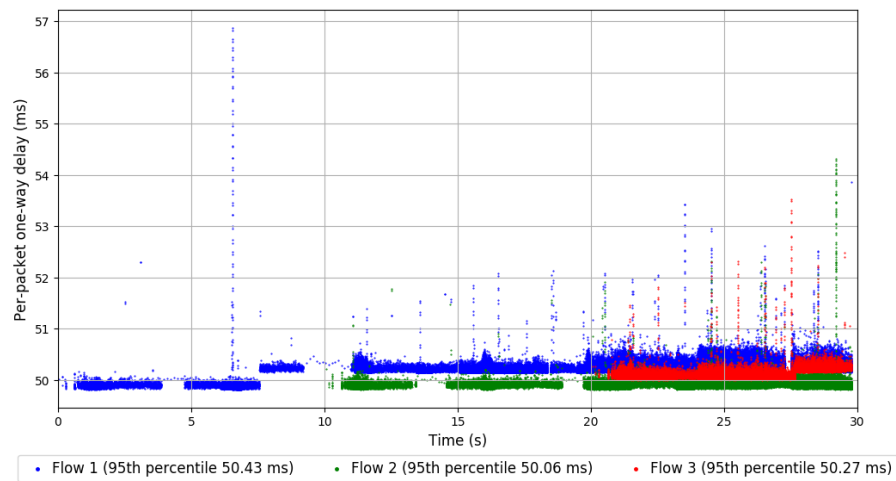
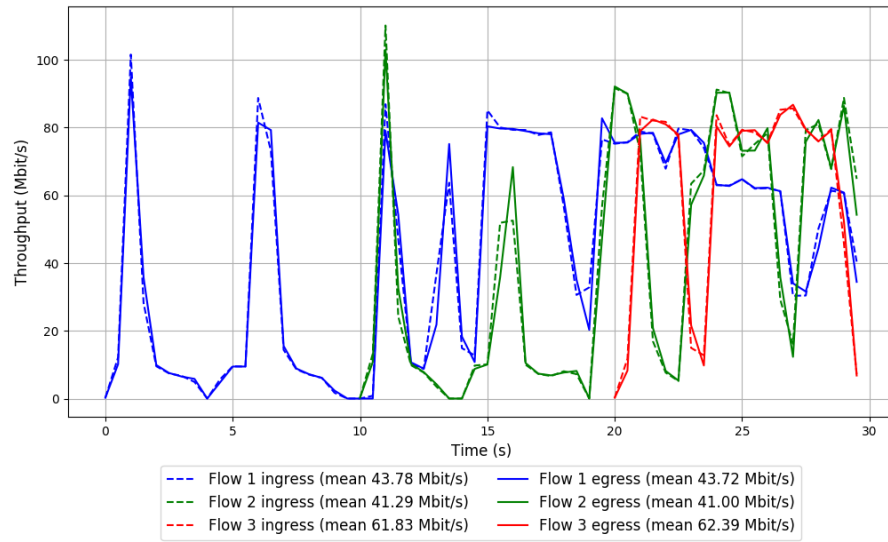
-- Flow 3:

Average throughput: 62.39 Mbit/s

95th percentile per-packet one-way delay: 50.275 ms

Loss rate: 0.15%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-02-17 11:17:01

End at: 2018-02-17 11:17:31

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.36 Mbit/s

95th percentile per-packet one-way delay: 53.690 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 55.30 Mbit/s

95th percentile per-packet one-way delay: 53.664 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 30.39 Mbit/s

95th percentile per-packet one-way delay: 53.747 ms

Loss rate: 0.90%

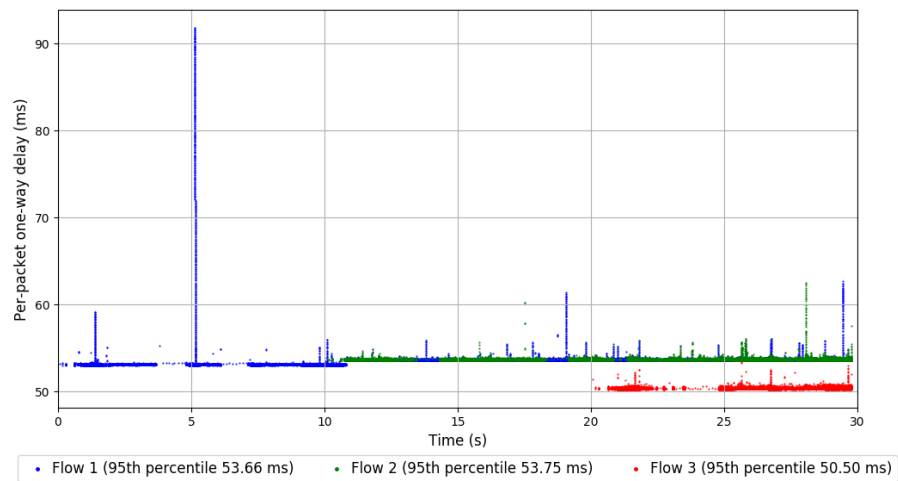
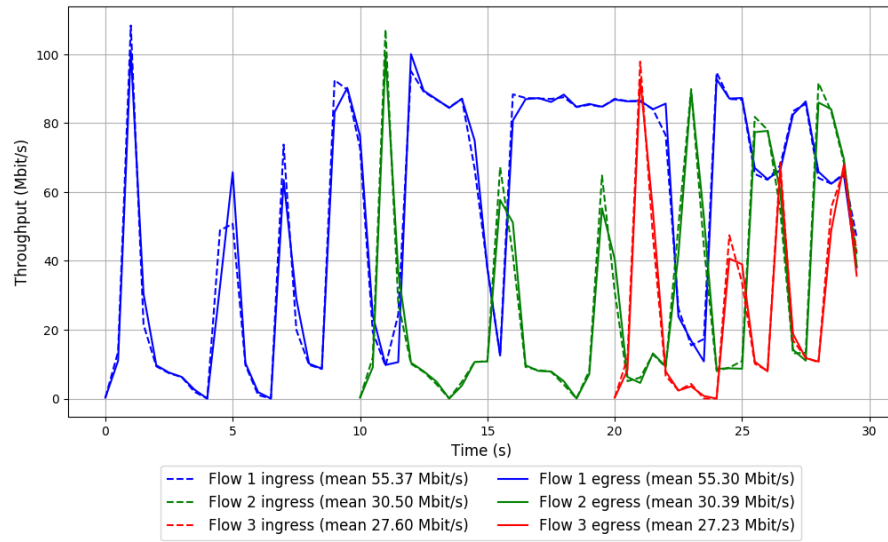
-- Flow 3:

Average throughput: 27.23 Mbit/s

95th percentile per-packet one-way delay: 50.502 ms

Loss rate: 2.39%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-02-17 11:35:06

End at: 2018-02-17 11:35:36

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.72 Mbit/s

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

Loss rate: 0.82%

-- Flow 1:

Average throughput: 48.67 Mbit/s

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

Loss rate: 0.52%

-- Flow 2:

Average throughput: 39.16 Mbit/s

95th percentile per-packet one-way delay: 53.643 ms

Loss rate: 1.09%

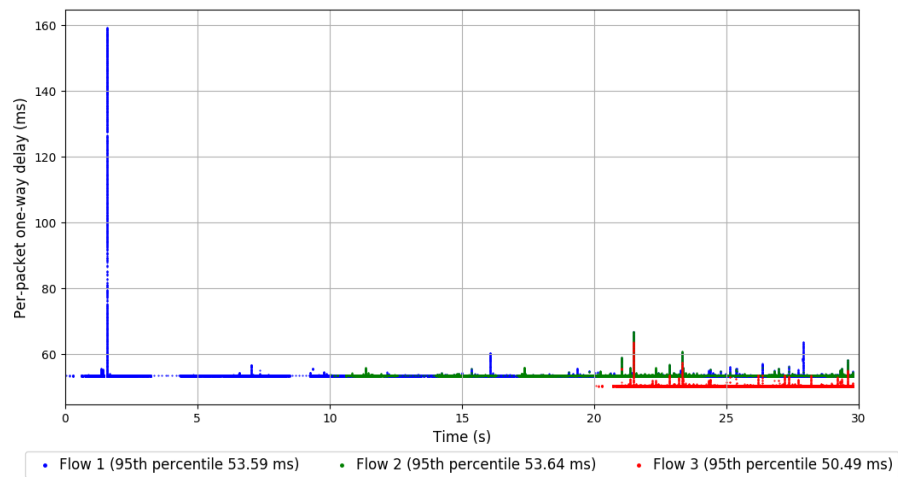
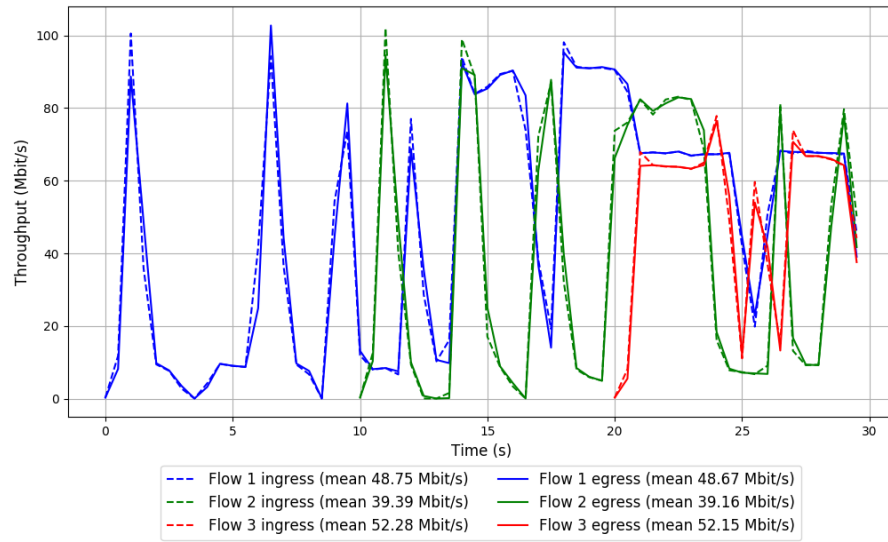
-- Flow 3:

Average throughput: 52.15 Mbit/s

95th percentile per-packet one-way delay: 50.488 ms

Loss rate: 1.27%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-02-17 11:52:55

End at: 2018-02-17 11:53:25

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.19 Mbit/s

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

Loss rate: 0.35%

-- Flow 1:

Average throughput: 71.01 Mbit/s

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

Loss rate: 0.34%

-- Flow 2:

Average throughput: 31.68 Mbit/s

95th percentile per-packet one-way delay: 53.435 ms

Loss rate: 0.18%

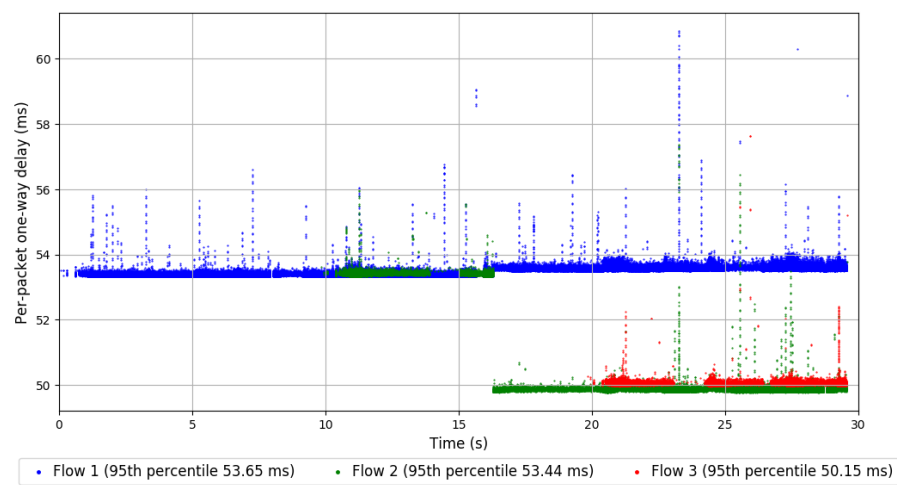
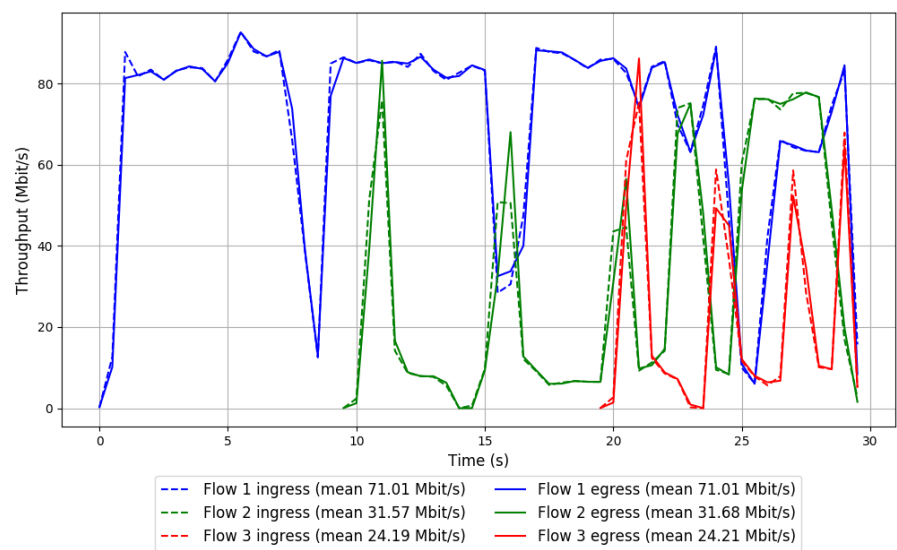
-- Flow 3:

Average throughput: 24.21 Mbit/s

95th percentile per-packet one-way delay: 50.152 ms

Loss rate: 0.90%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-02-17 12:10:58

End at: 2018-02-17 12:11:28

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.44 Mbit/s

95th percentile per-packet one-way delay: 53.172 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 55.61 Mbit/s

95th percentile per-packet one-way delay: 53.192 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 35.96 Mbit/s

95th percentile per-packet one-way delay: 50.016 ms

Loss rate: 0.99%

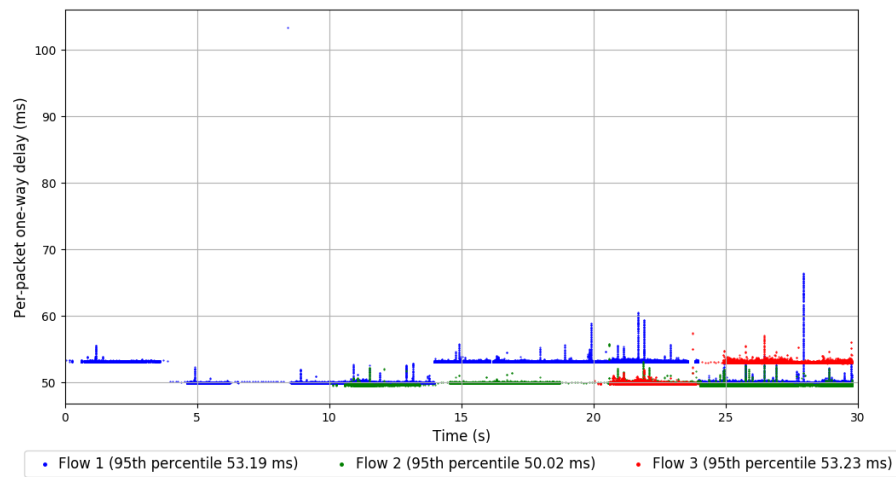
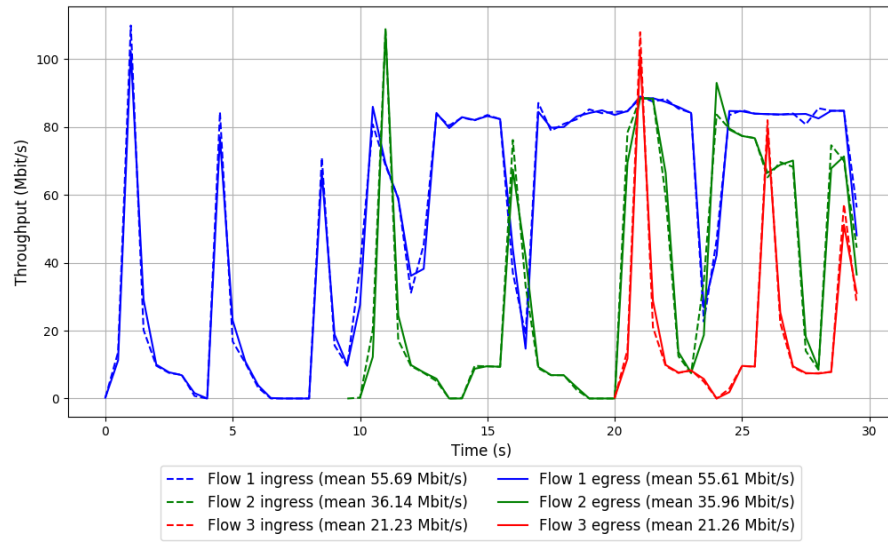
-- Flow 3:

Average throughput: 21.26 Mbit/s

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

Loss rate: 0.95%

Run 10: Report of QUIC Cubic — Data Link

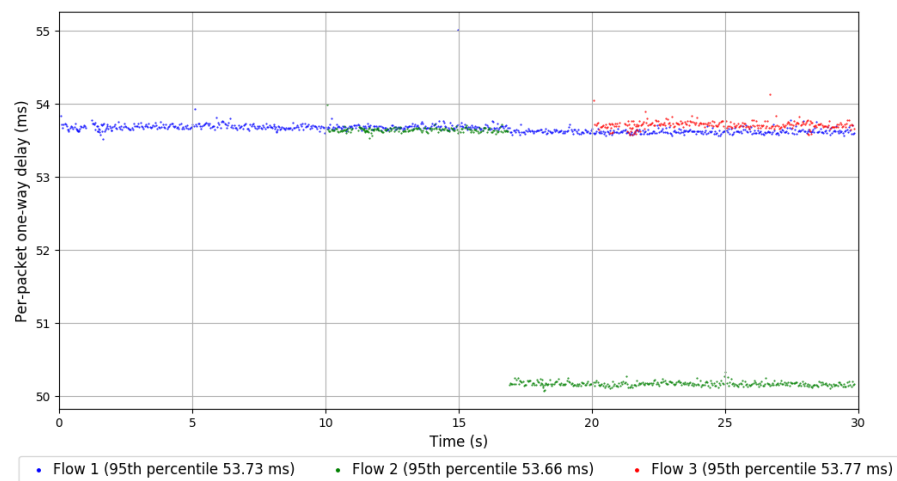
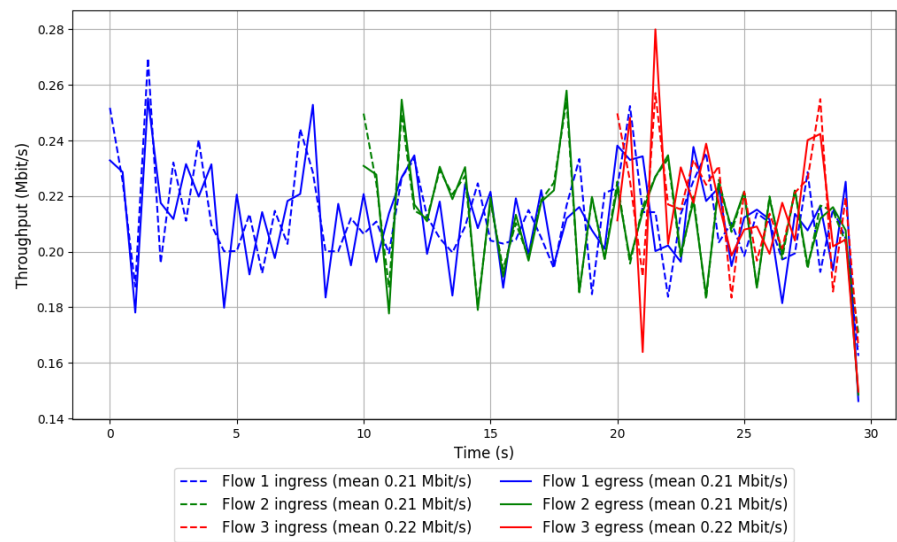


```
Run 1: Statistics of SCReAM

Start at: 2018-02-17 09:41:39
End at: 2018-02-17 09:42:09

# Below is generated by plot.py at 2018-02-17 16:15:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.743 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.732 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.665 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.773 ms
Loss rate: 1.11%
```

Run 1: Report of SReAM — Data Link

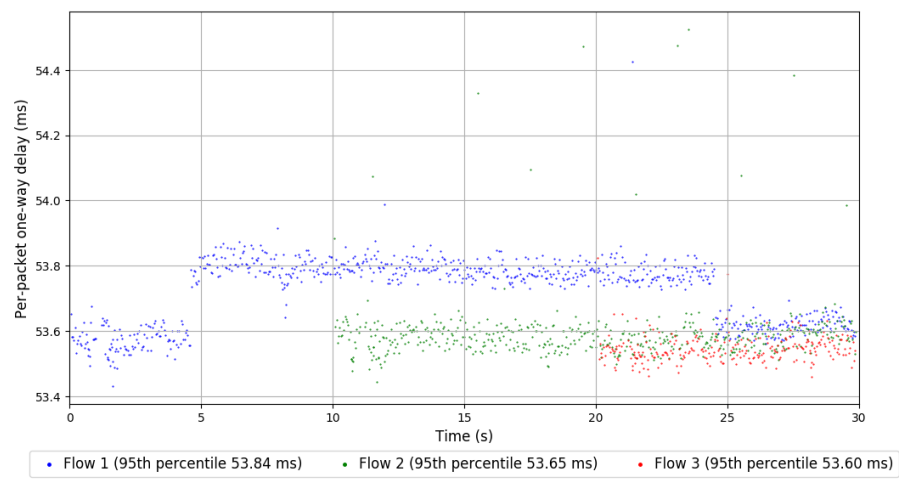
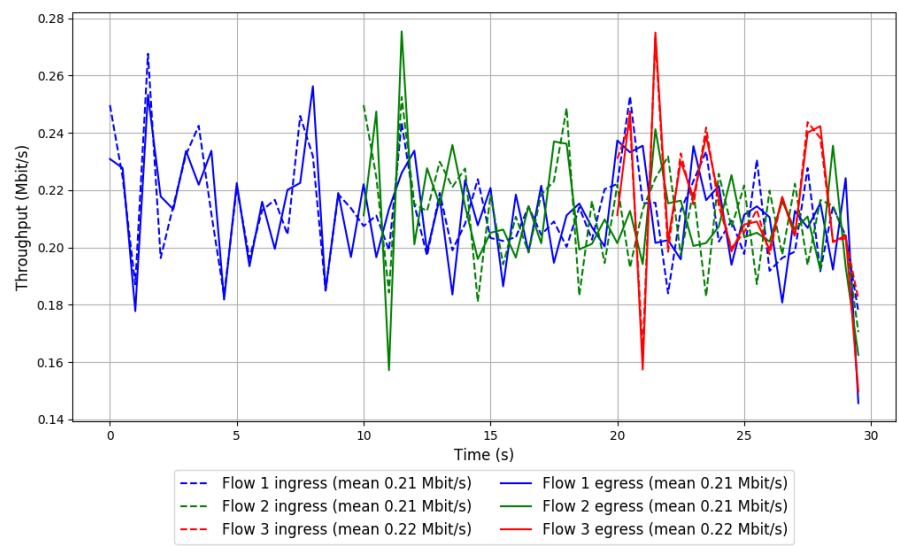


```
Run 2: Statistics of SReAM

Start at: 2018-02-17 09:59:38
End at: 2018-02-17 10:00:08

# Below is generated by plot.py at 2018-02-17 16:15:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.827 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.836 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.648 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.605 ms
Loss rate: 1.11%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

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

End at: 2018-02-17 10:17:32

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.735 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.637 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.259 ms

Loss rate: 0.42%

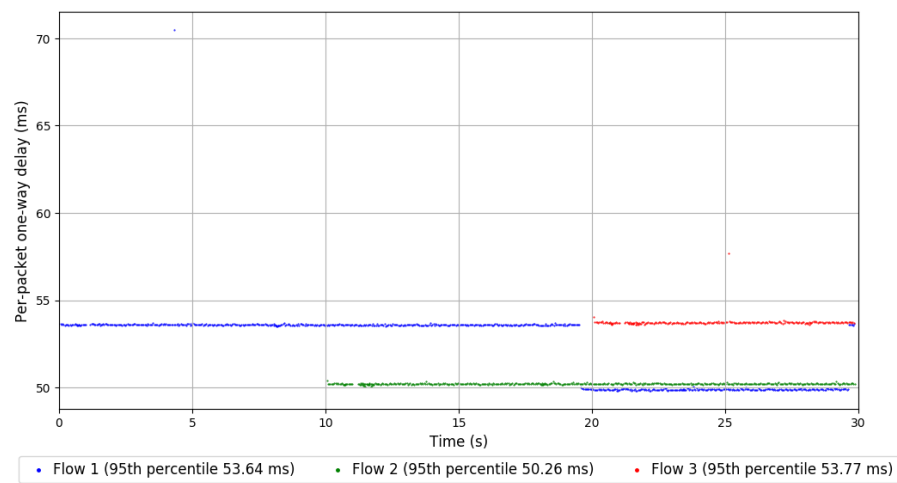
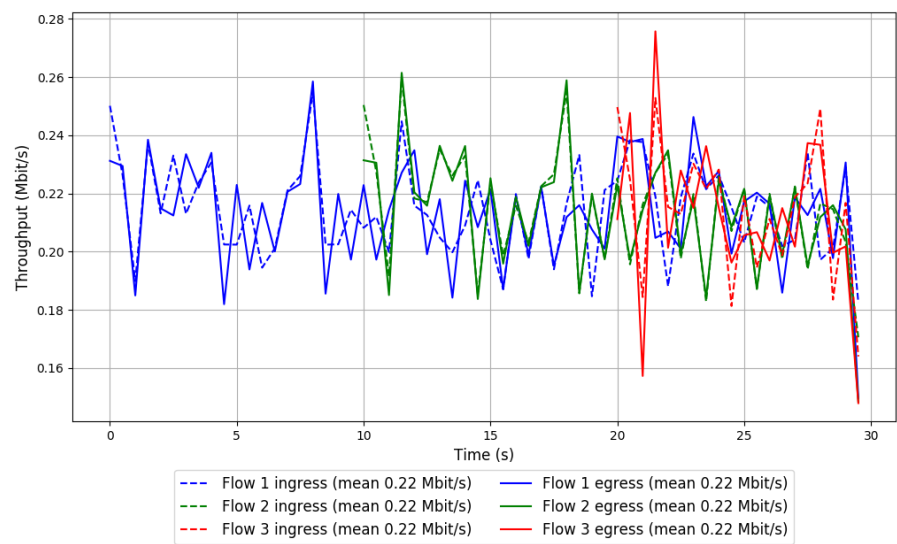
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.768 ms

Loss rate: 1.11%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-02-17 10:34:59

End at: 2018-02-17 10:35:29

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.788 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.653 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.656 ms

Loss rate: 0.43%

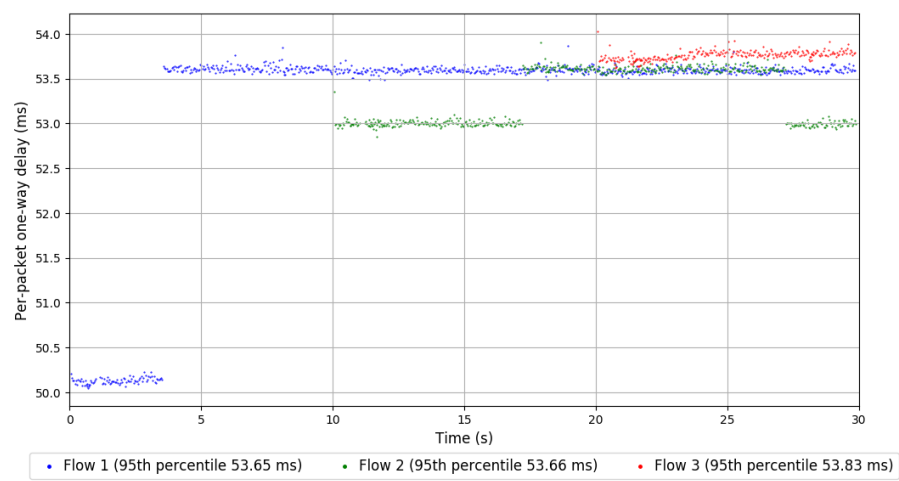
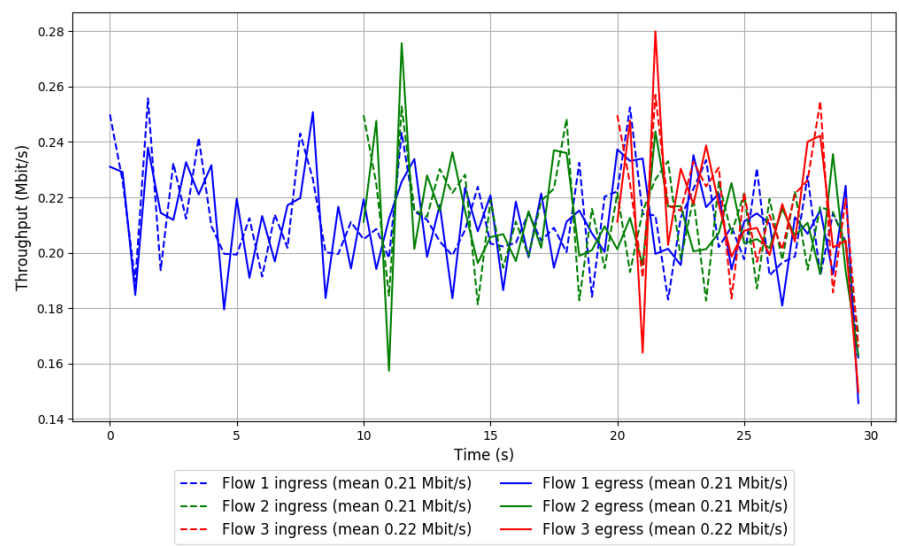
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.834 ms

Loss rate: 1.11%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-02-17 10:52:49

End at: 2018-02-17 10:53:19

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 53.637 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 53.162 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 50.045 ms

Loss rate: 1.01%

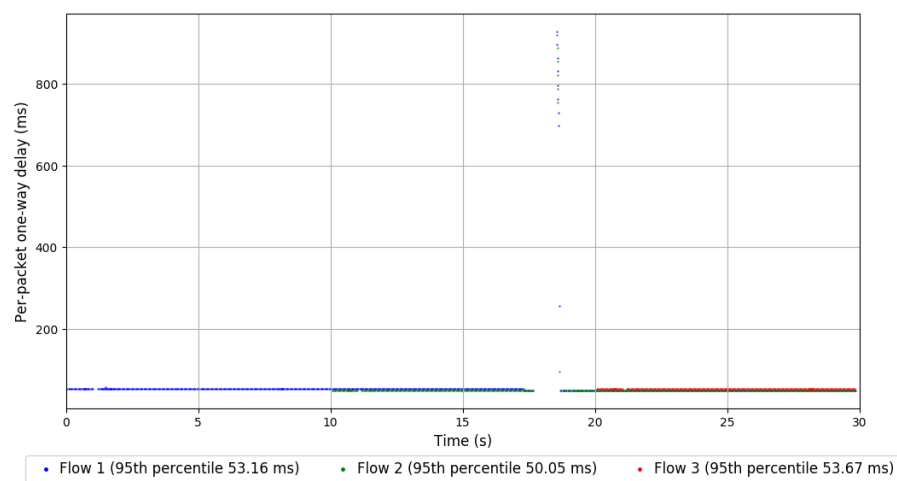
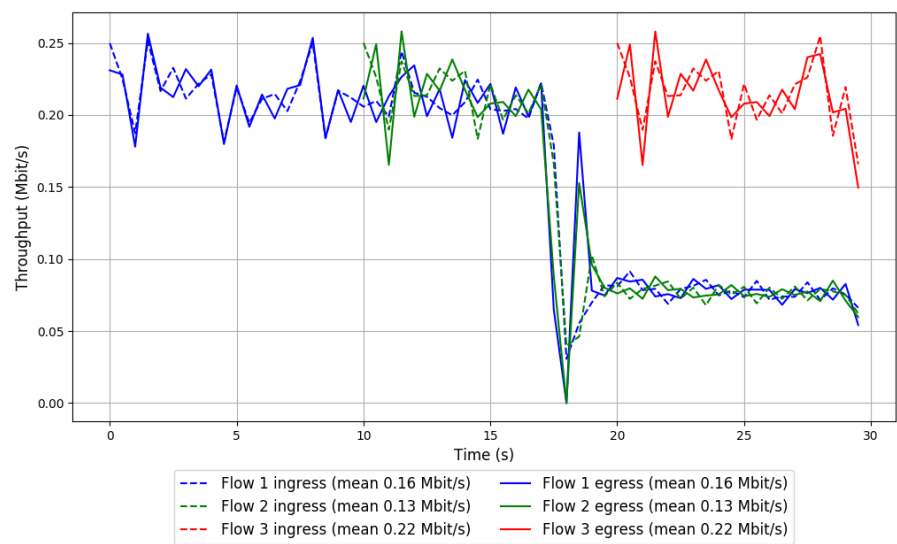
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.673 ms

Loss rate: 1.11%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-02-17 11:10:45

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

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.21 Mbit/s

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

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.738 ms

Loss rate: 0.43%

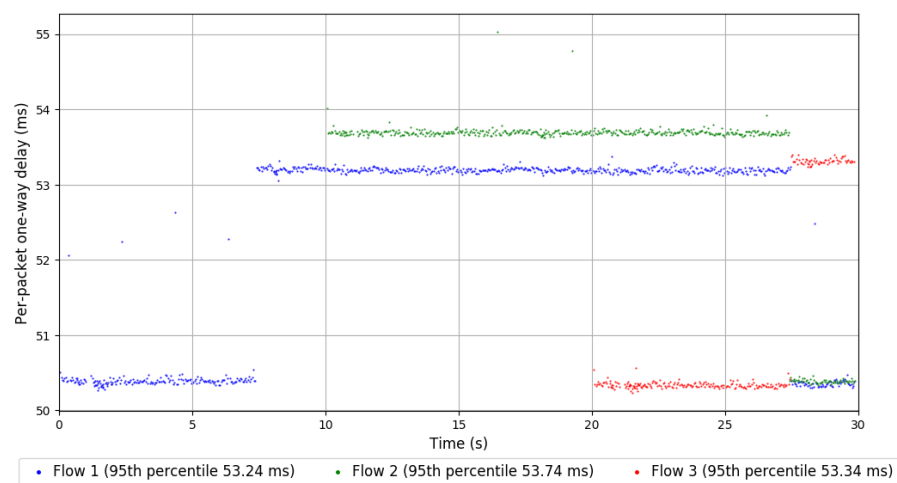
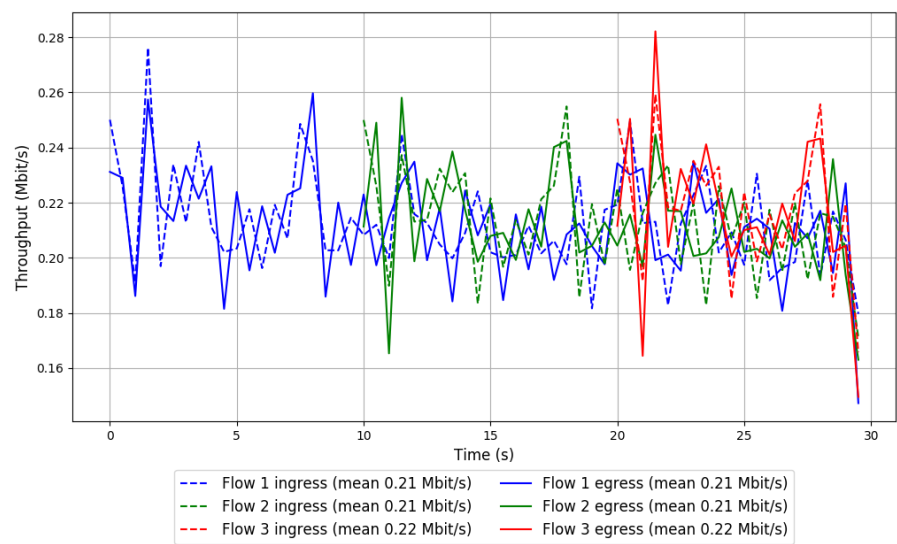
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 1.10%

Run 6: Report of SReAM — Data Link

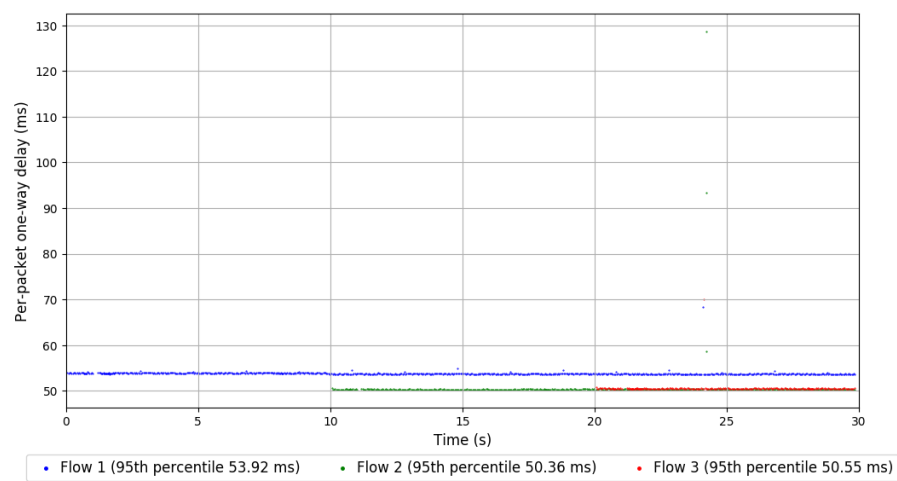
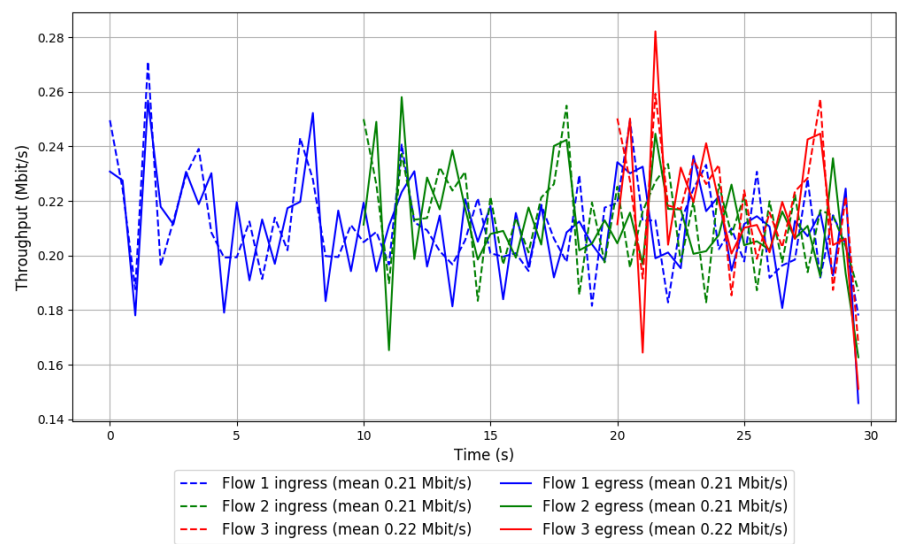


```
Run 7: Statistics of SCReAM

Start at: 2018-02-17 11:28:42
End at: 2018-02-17 11:29:12

# Below is generated by plot.py at 2018-02-17 16:15:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.892 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.921 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.358 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.554 ms
Loss rate: 1.11%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2018-02-17 11:46:42

End at: 2018-02-17 11:47:12

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.720 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.720 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.723 ms

Loss rate: 0.43%

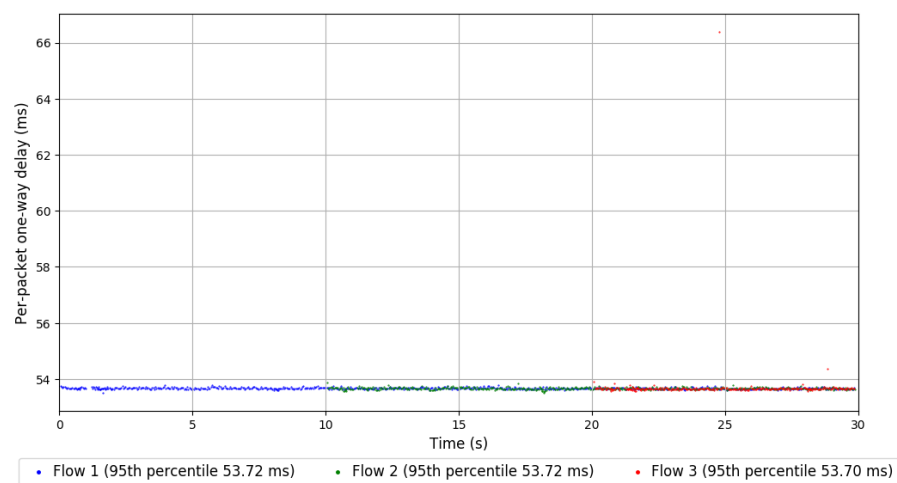
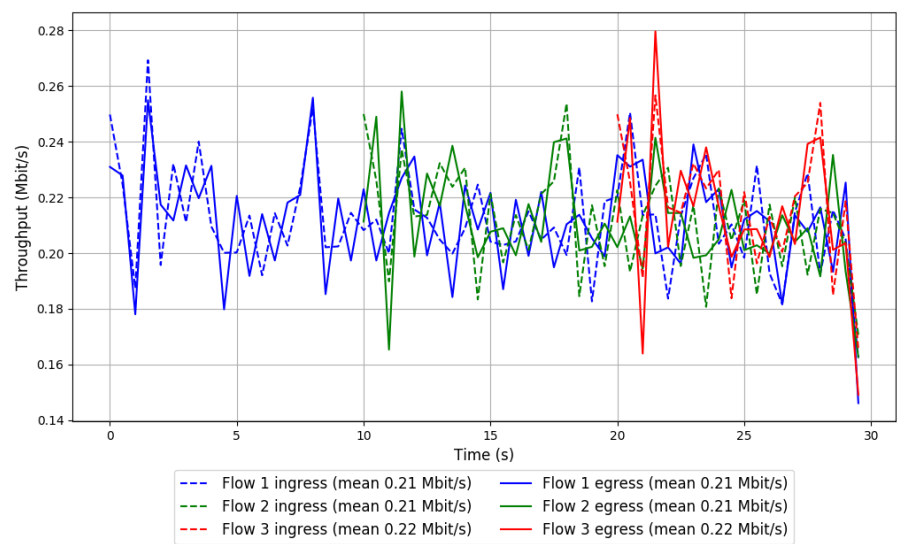
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.702 ms

Loss rate: 1.10%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-02-17 12:04:33

End at: 2018-02-17 12:05:03

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 0.51%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.505 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.158 ms

Loss rate: 0.42%

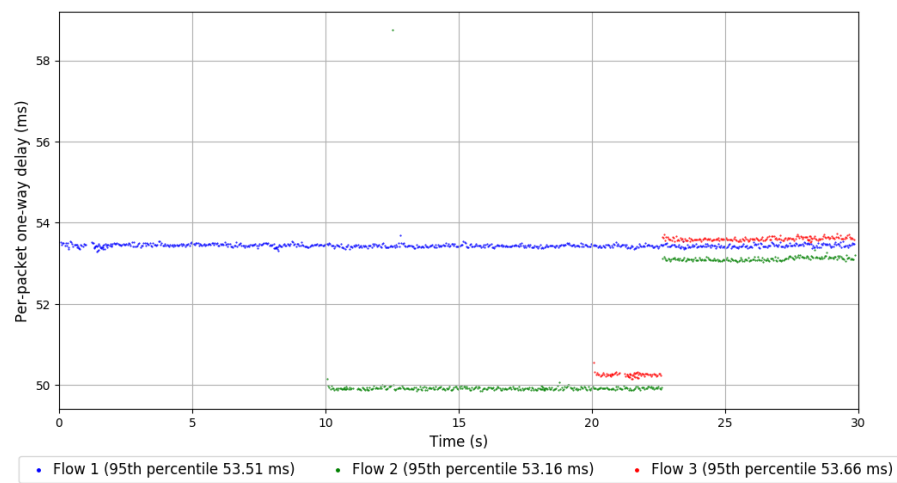
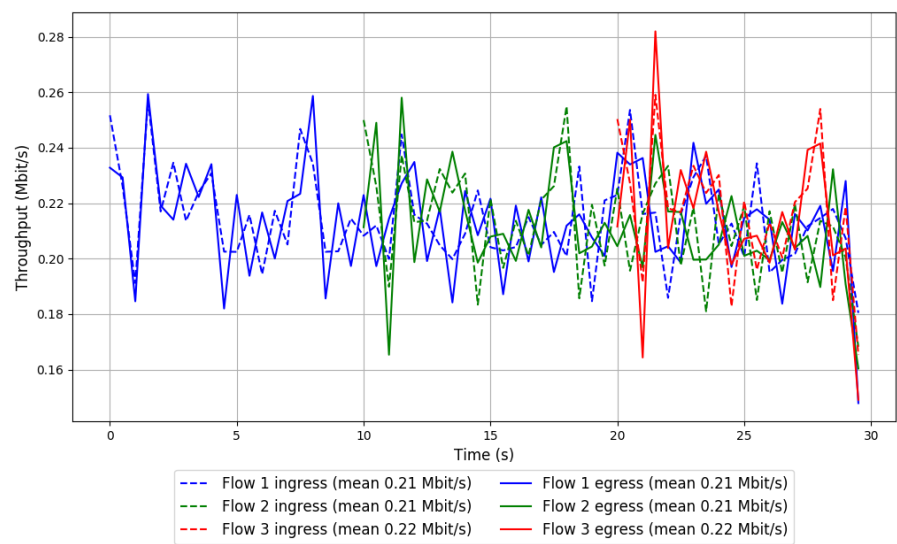
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 1.10%

Run 9: Report of SReAM — Data Link

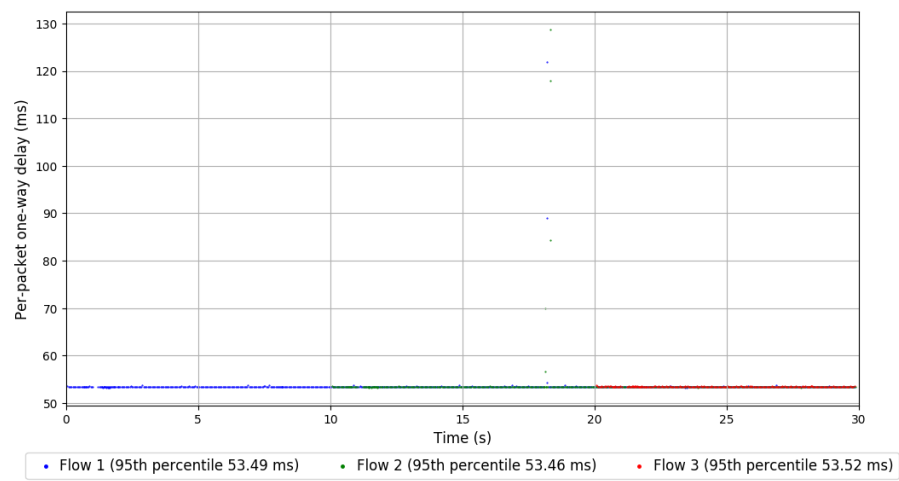
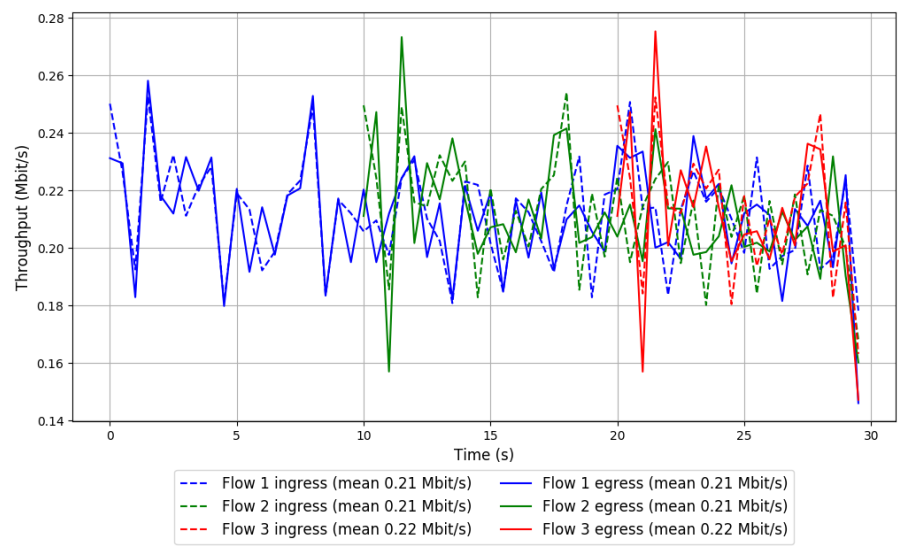


```
Run 10: Statistics of SReAM

Start at: 2018-02-17 12:22:48
End at: 2018-02-17 12:23:18

# Below is generated by plot.py at 2018-02-17 16:15:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 53.507 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.492 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.461 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.523 ms
Loss rate: 1.11%
```

Run 10: Report of SReAM — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-02-17 09:28:46

End at: 2018-02-17 09:29:16

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.41 Mbit/s

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

Loss rate: 0.66%

-- Flow 1:

Average throughput: 2.30 Mbit/s

95th percentile per-packet one-way delay: 53.881 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 53.950 ms

Loss rate: 0.66%

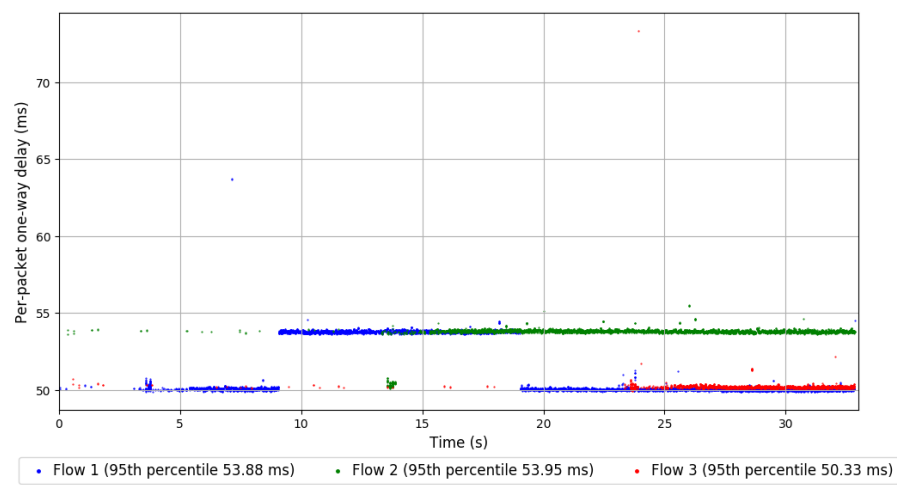
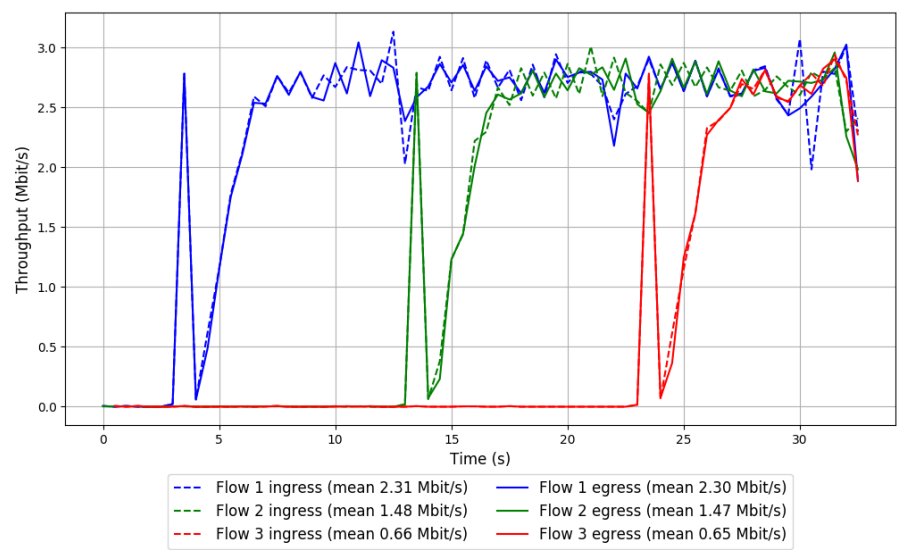
-- Flow 3:

Average throughput: 0.65 Mbit/s

95th percentile per-packet one-way delay: 50.332 ms

Loss rate: 1.47%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-02-17 09:46:18

End at: 2018-02-17 09:46:48

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 53.853 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 53.870 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 53.824 ms

Loss rate: 0.48%

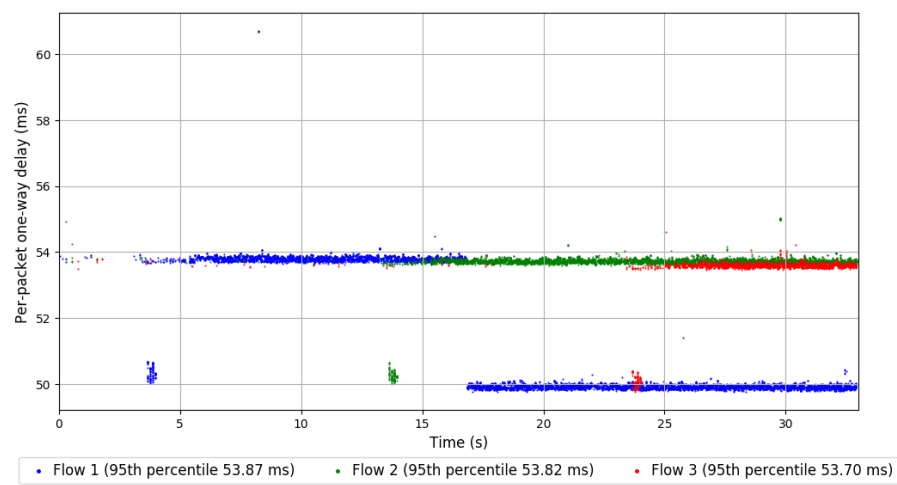
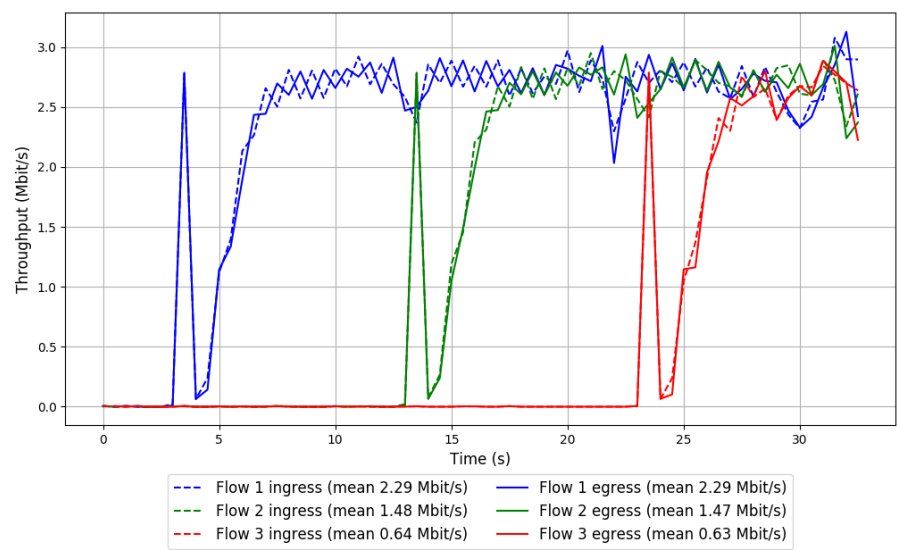
-- Flow 3:

Average throughput: 0.63 Mbit/s

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

Loss rate: 1.53%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-02-17 10:04:19

End at: 2018-02-17 10:04:49

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.38 Mbit/s

95th percentile per-packet one-way delay: 53.770 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 53.664 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 1.47 Mbit/s

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

Loss rate: 0.71%

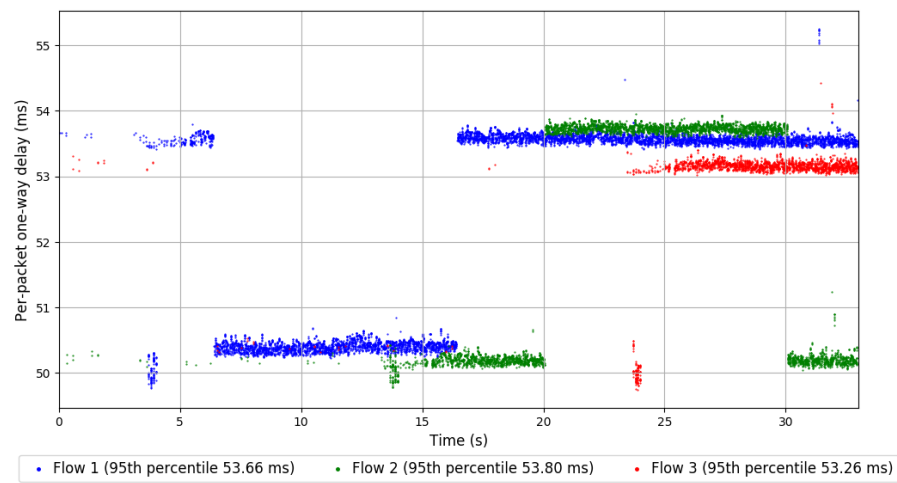
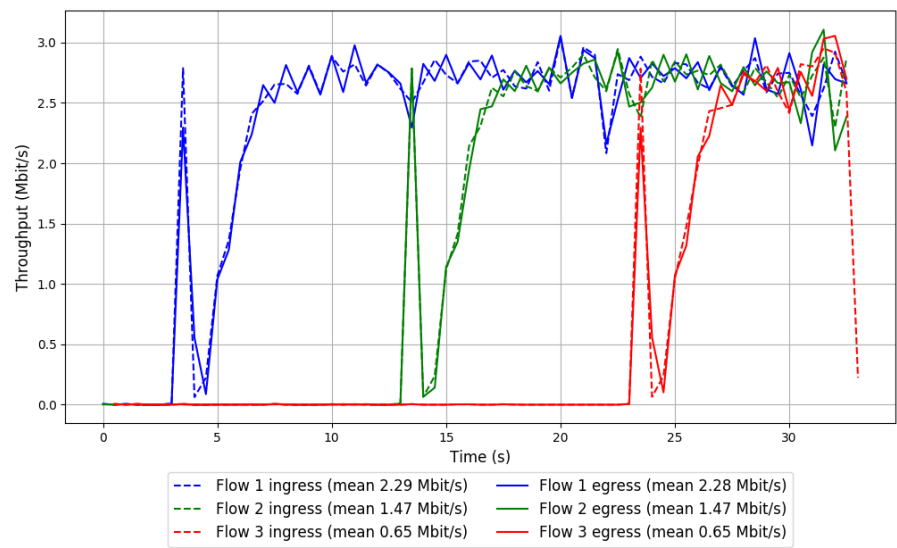
-- Flow 3:

Average throughput: 0.65 Mbit/s

95th percentile per-packet one-way delay: 53.262 ms

Loss rate: 0.97%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-02-17 10:21:49

End at: 2018-02-17 10:22:19

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.40 Mbit/s

95th percentile per-packet one-way delay: 53.656 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 2.29 Mbit/s

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

Loss rate: 0.32%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 50.119 ms

Loss rate: 0.47%

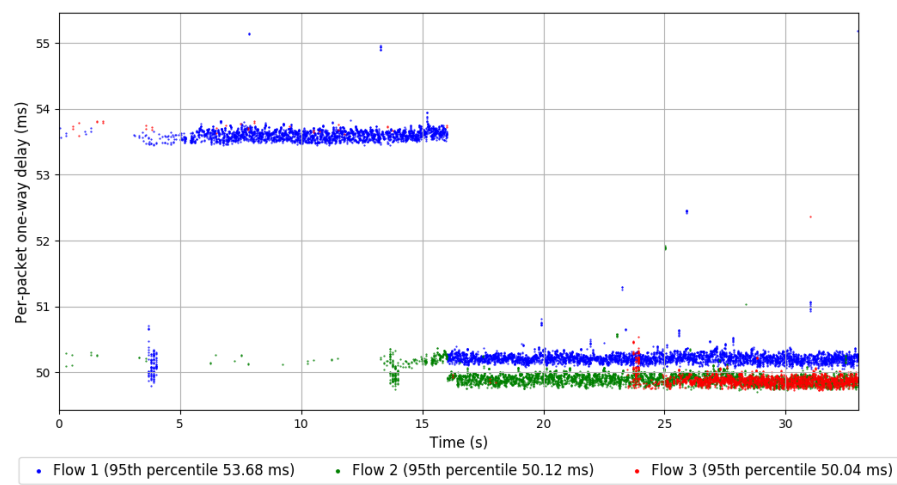
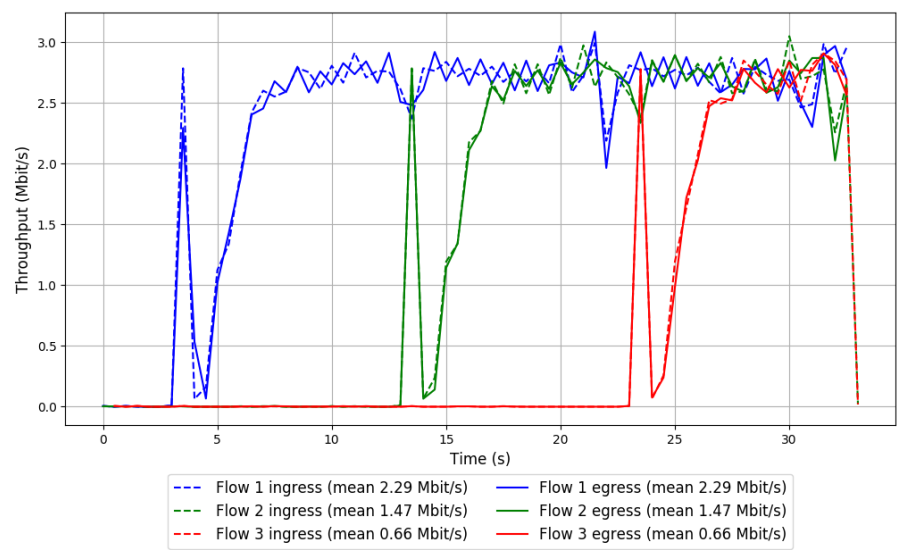
-- Flow 3:

Average throughput: 0.66 Mbit/s

95th percentile per-packet one-way delay: 50.044 ms

Loss rate: 0.99%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-02-17 10:39:40

End at: 2018-02-17 10:40:10

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.51 Mbit/s

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

Loss rate: 0.84%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 53.140 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 53.749 ms

Loss rate: 0.45%

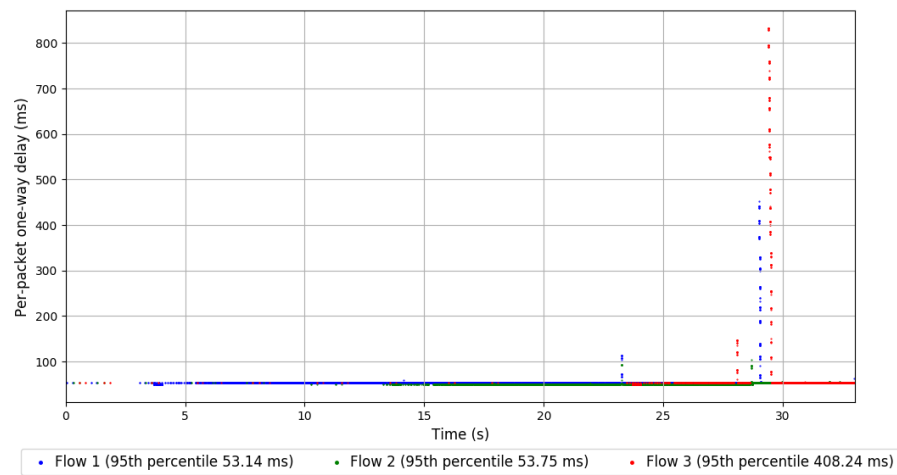
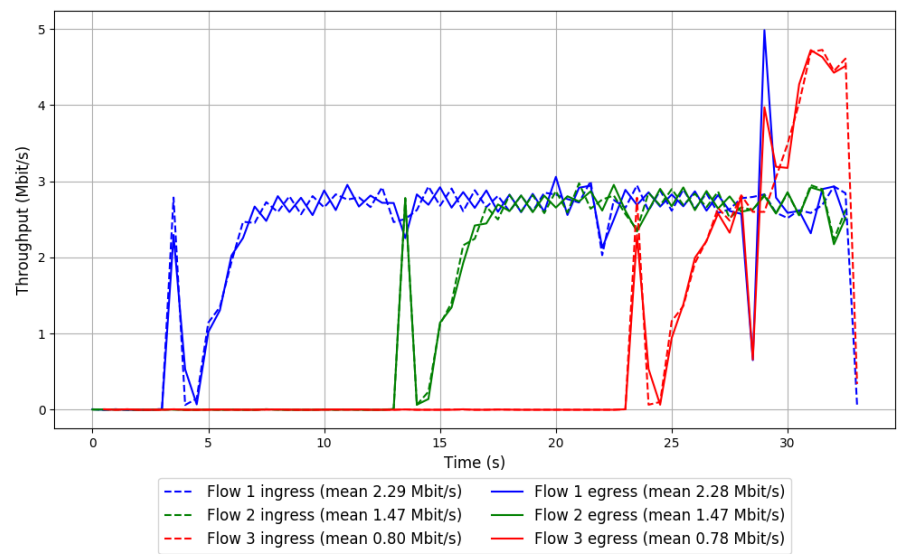
-- Flow 3:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 408.243 ms

Loss rate: 2.80%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-02-17 10:57:37

End at: 2018-02-17 10:58:07

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.38 Mbit/s

95th percentile per-packet one-way delay: 53.856 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 53.719 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 1.47 Mbit/s

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

Loss rate: 0.66%

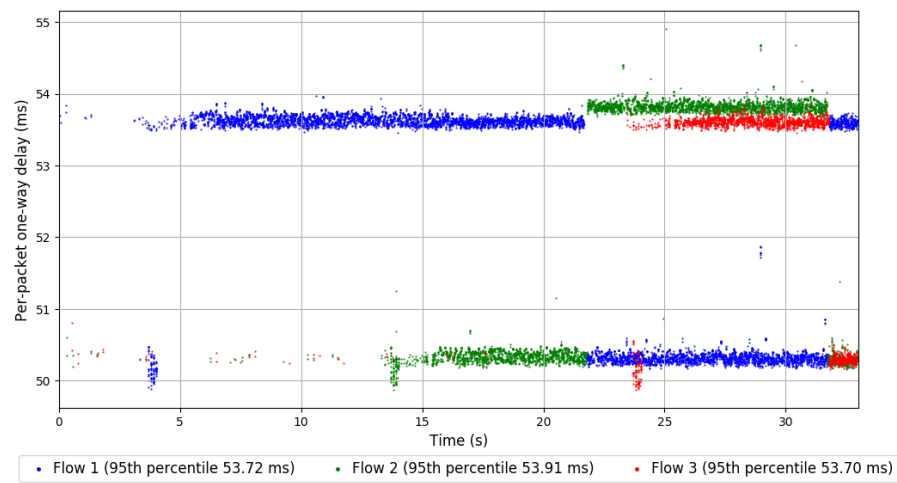
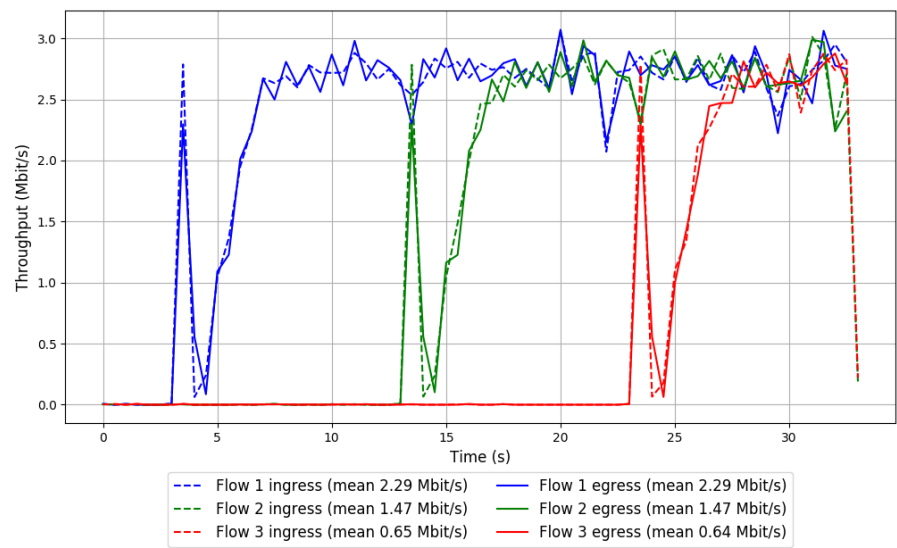
-- Flow 3:

Average throughput: 0.64 Mbit/s

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

Loss rate: 1.50%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-02-17 11:15:26

End at: 2018-02-17 11:15:56

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.37 Mbit/s

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

Loss rate: 0.54%

-- Flow 1:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 53.719 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 50.398 ms

Loss rate: 0.51%

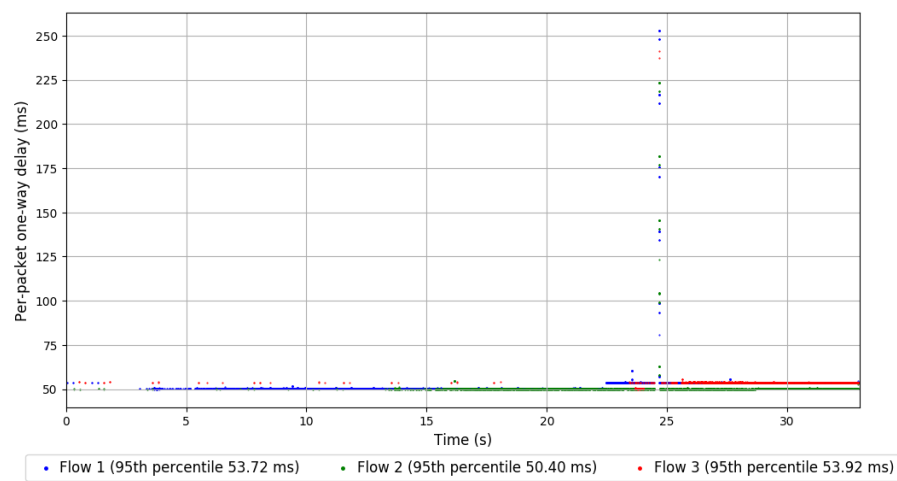
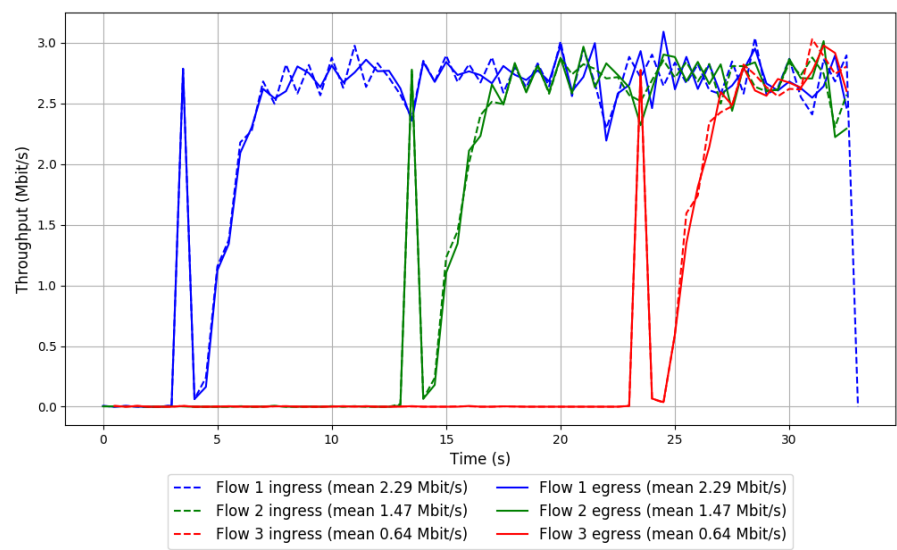
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 53.924 ms

Loss rate: 1.03%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-02-17 11:33:29

End at: 2018-02-17 11:33:59

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.38 Mbit/s

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

Loss rate: 0.61%

-- Flow 1:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 50.265 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 1.47 Mbit/s

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

Loss rate: 0.70%

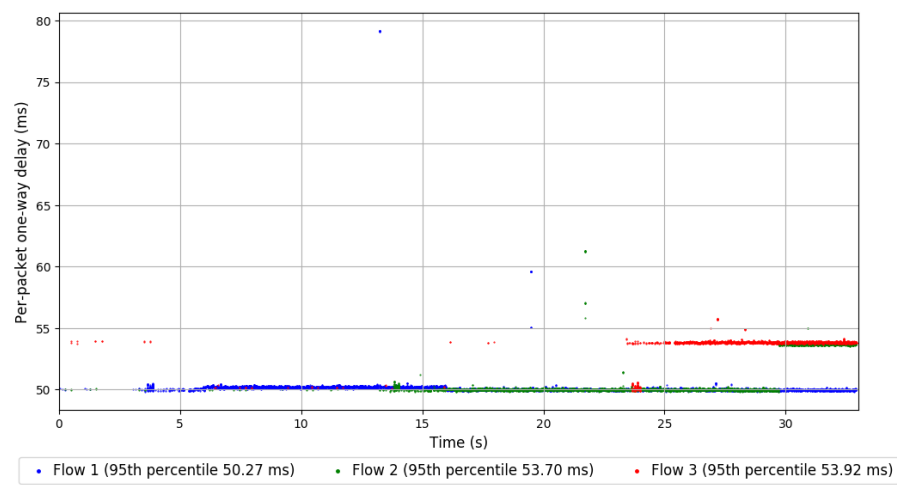
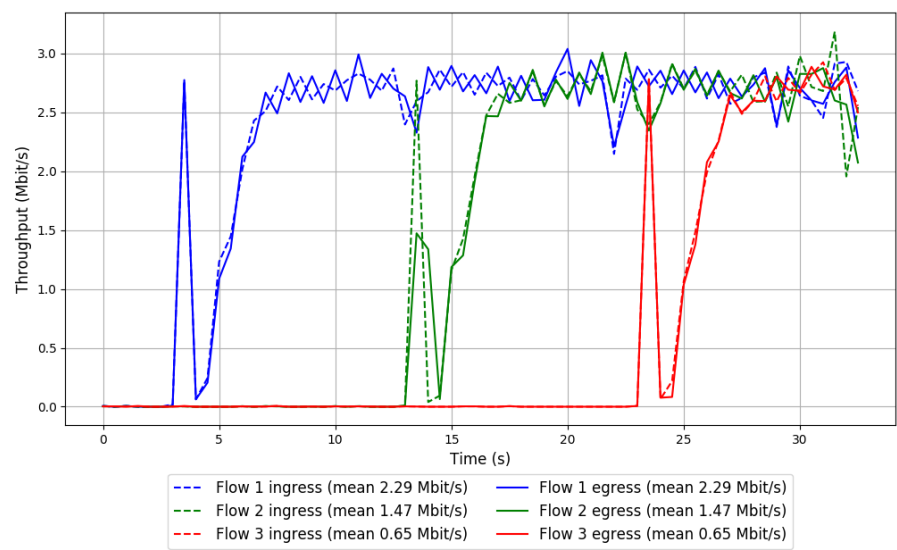
-- Flow 3:

Average throughput: 0.65 Mbit/s

95th percentile per-packet one-way delay: 53.921 ms

Loss rate: 1.06%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-02-17 11:51:22

End at: 2018-02-17 11:51:52

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.28 Mbit/s

95th percentile per-packet one-way delay: 53.883 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 2.19 Mbit/s

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

Loss rate: 0.44%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 50.416 ms

Loss rate: 0.71%

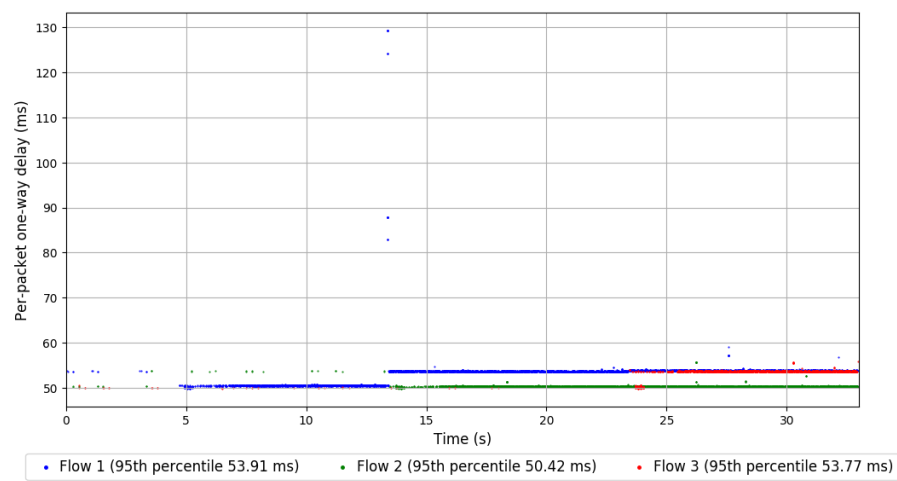
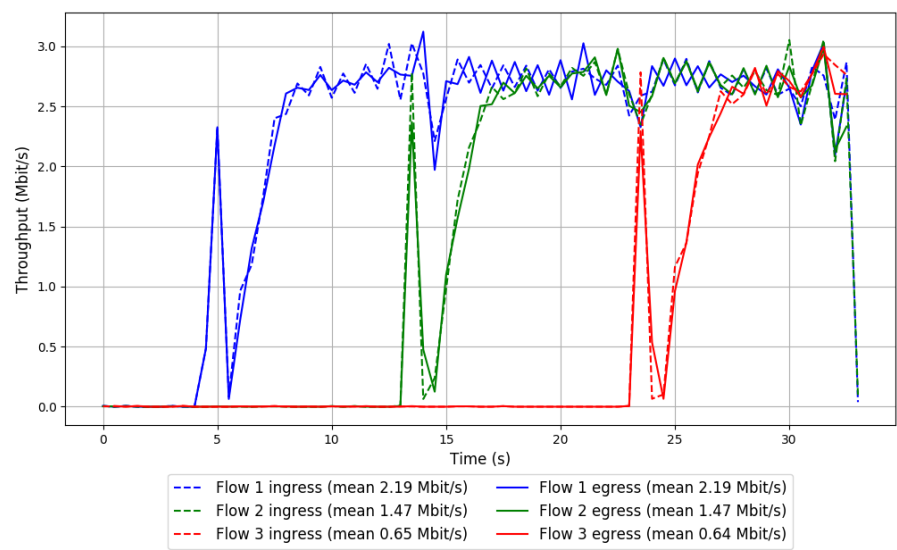
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 53.772 ms

Loss rate: 1.44%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-02-17 12:09:30

End at: 2018-02-17 12:10:00

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 53.440 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 50.166 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 53.187 ms

Loss rate: 0.69%

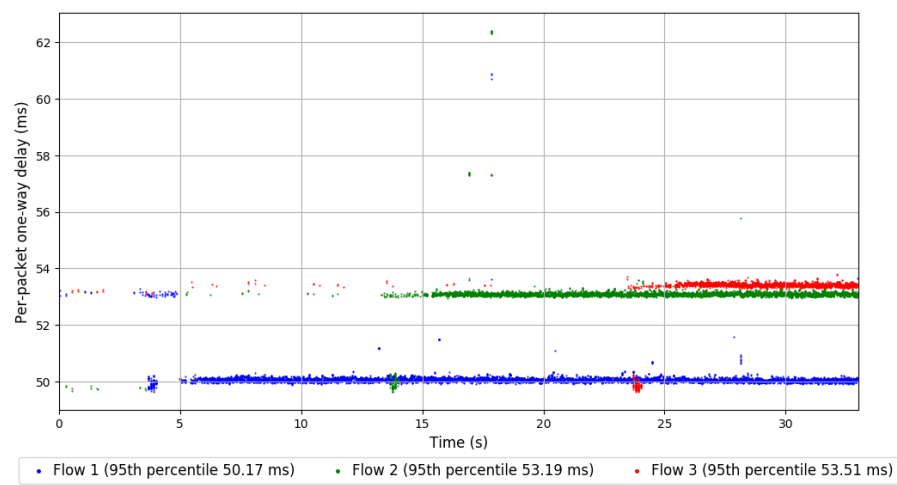
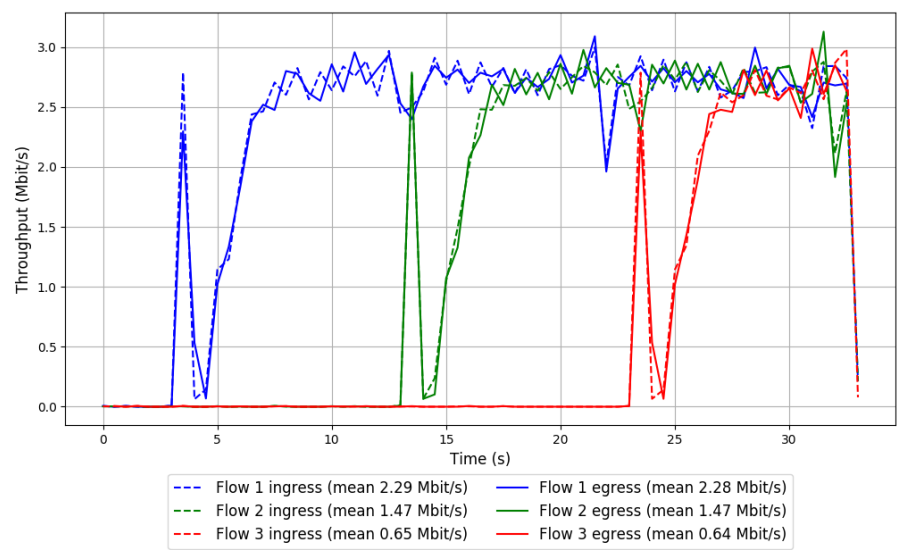
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 53.510 ms

Loss rate: 1.54%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-02-17 09:40:59

End at: 2018-02-17 09:41:29

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.43 Mbit/s

95th percentile per-packet one-way delay: 51.767 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 7.81 Mbit/s

95th percentile per-packet one-way delay: 51.649 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 7.74 Mbit/s

95th percentile per-packet one-way delay: 52.599 ms

Loss rate: 0.63%

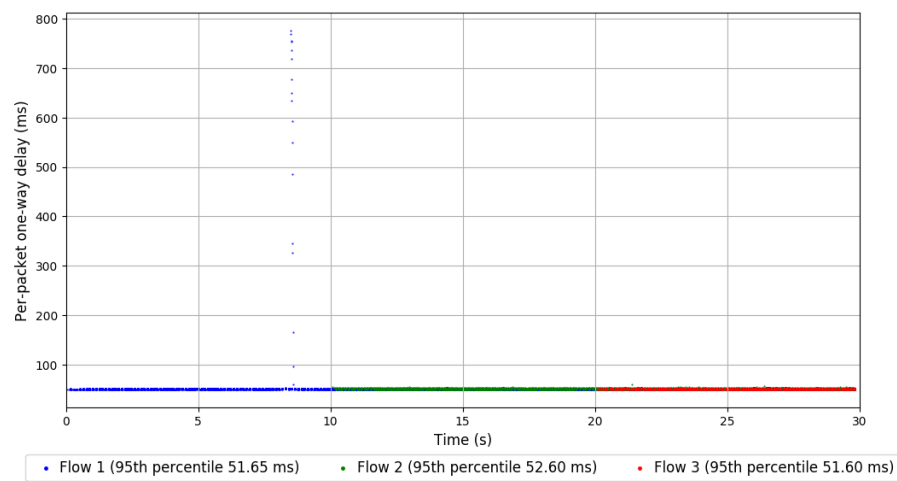
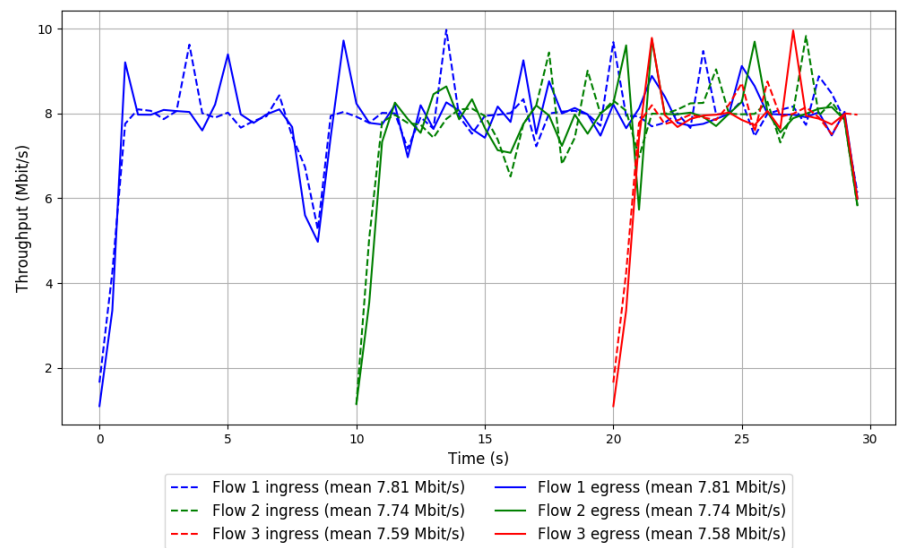
-- Flow 3:

Average throughput: 7.58 Mbit/s

95th percentile per-packet one-way delay: 51.602 ms

Loss rate: 1.33%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-02-17 09:58:57

End at: 2018-02-17 09:59:28

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.59 Mbit/s

95th percentile per-packet one-way delay: 51.600 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 7.94 Mbit/s

95th percentile per-packet one-way delay: 51.891 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 7.82 Mbit/s

95th percentile per-packet one-way delay: 51.629 ms

Loss rate: 0.62%

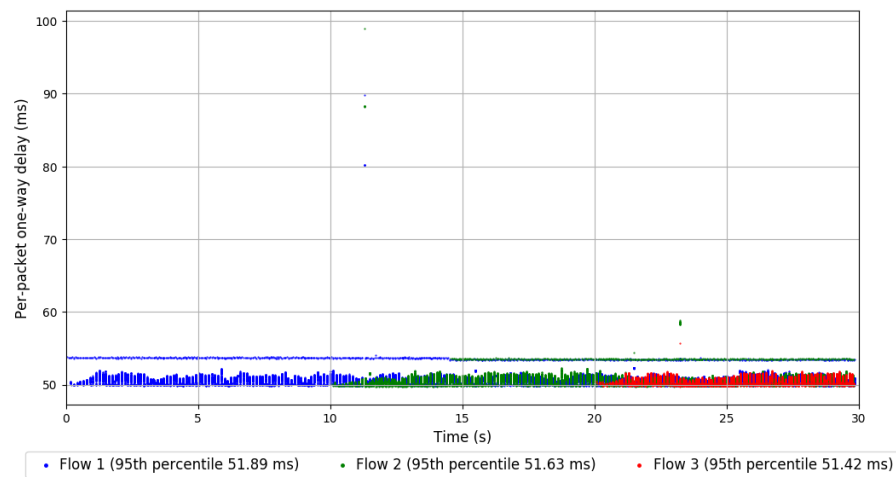
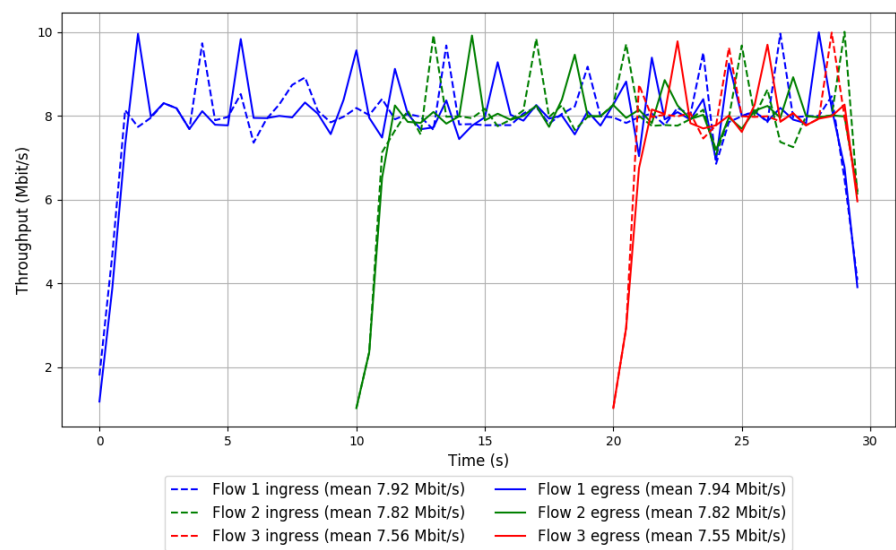
-- Flow 3:

Average throughput: 7.55 Mbit/s

95th percentile per-packet one-way delay: 51.420 ms

Loss rate: 1.29%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-02-17 10:16:23

End at: 2018-02-17 10:16:53

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.60 Mbit/s

95th percentile per-packet one-way delay: 51.522 ms

Loss rate: 0.27%

-- Flow 1:

Average throughput: 7.89 Mbit/s

95th percentile per-packet one-way delay: 51.491 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 7.85 Mbit/s

95th percentile per-packet one-way delay: 51.660 ms

Loss rate: 0.16%

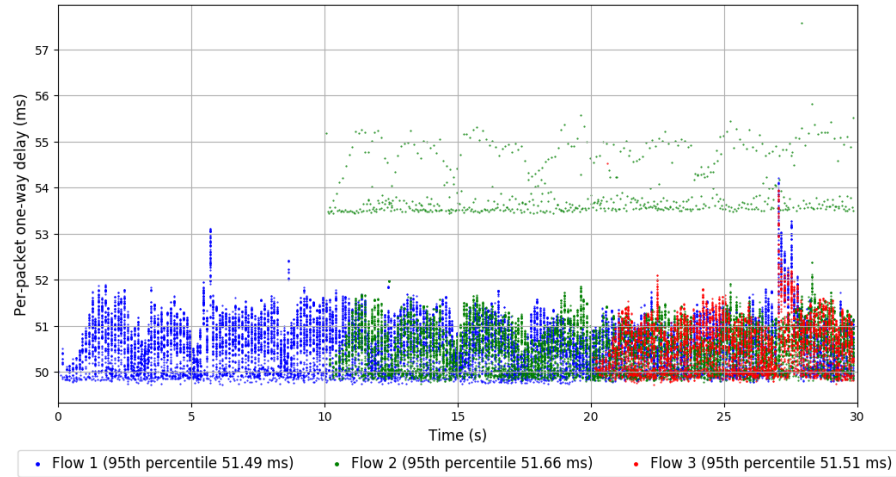
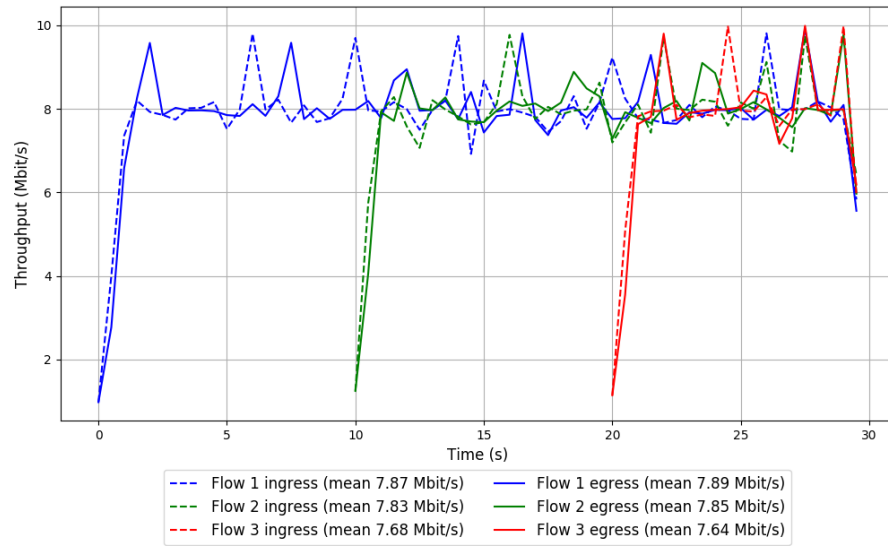
-- Flow 3:

Average throughput: 7.64 Mbit/s

95th percentile per-packet one-way delay: 51.507 ms

Loss rate: 1.17%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-02-17 10:34:18

End at: 2018-02-17 10:34:48

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.65 Mbit/s

95th percentile per-packet one-way delay: 51.816 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 7.89 Mbit/s

95th percentile per-packet one-way delay: 51.710 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 7.91 Mbit/s

95th percentile per-packet one-way delay: 51.624 ms

Loss rate: 0.63%

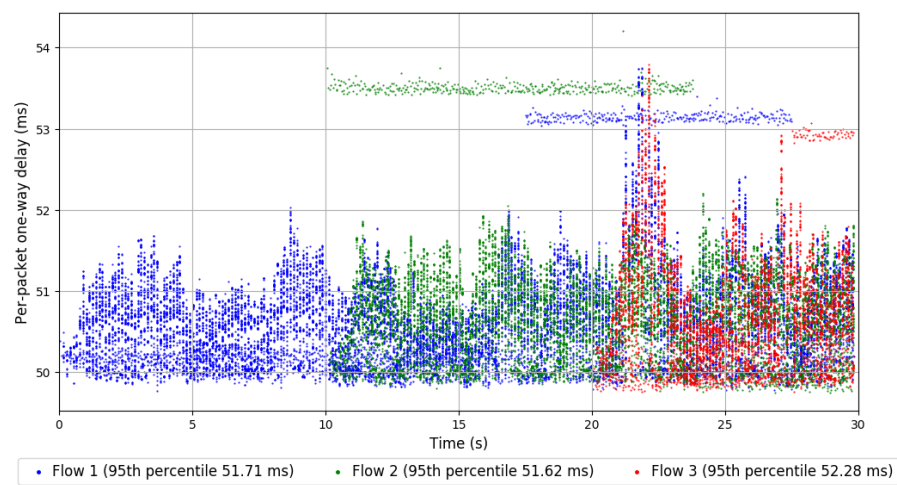
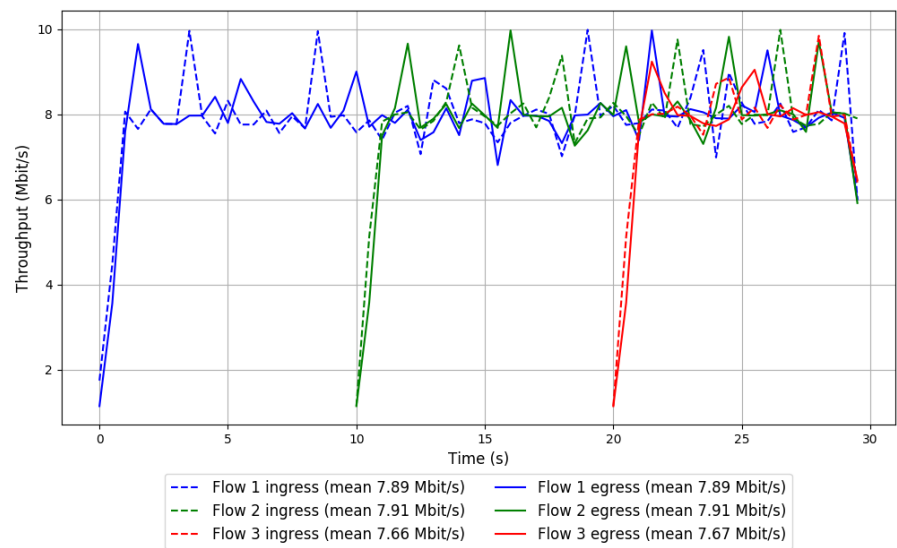
-- Flow 3:

Average throughput: 7.67 Mbit/s

95th percentile per-packet one-way delay: 52.282 ms

Loss rate: 1.28%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-02-17 10:52:08

End at: 2018-02-17 10:52:38

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.57 Mbit/s

95th percentile per-packet one-way delay: 51.873 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 7.98 Mbit/s

95th percentile per-packet one-way delay: 51.934 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 7.75 Mbit/s

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

Loss rate: 0.72%

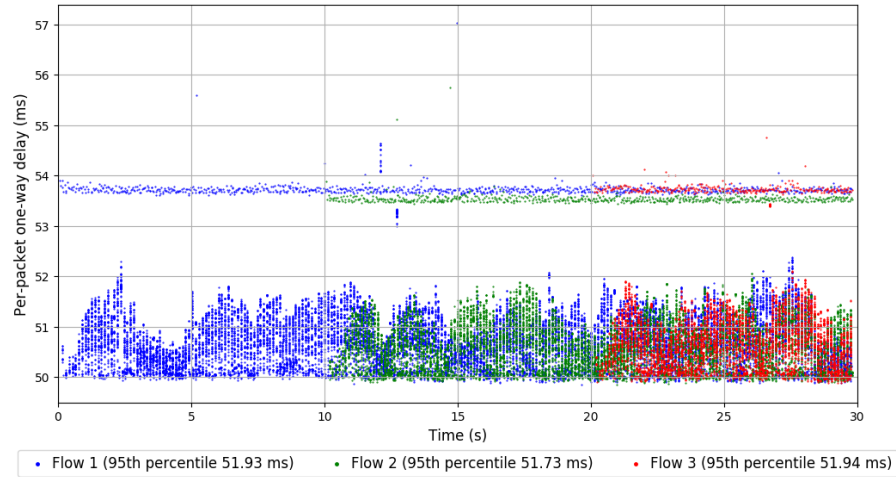
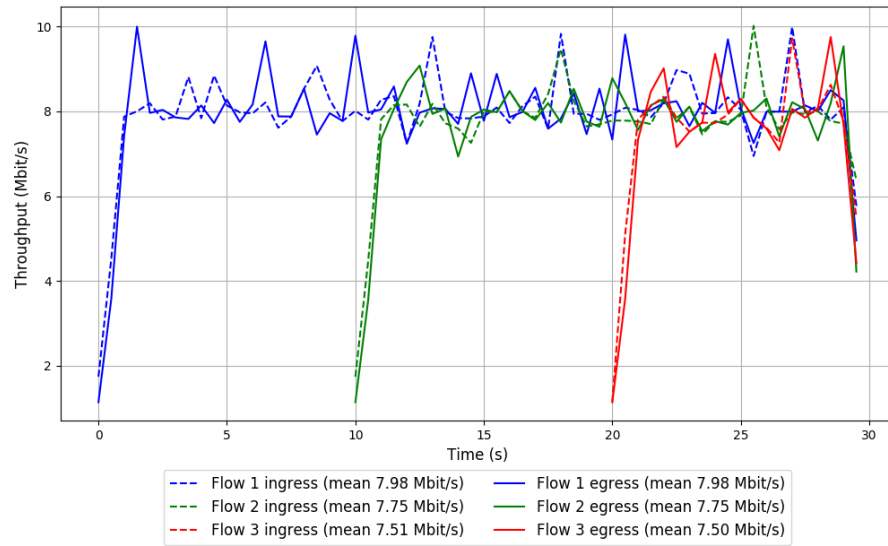
-- Flow 3:

Average throughput: 7.50 Mbit/s

95th percentile per-packet one-way delay: 51.938 ms

Loss rate: 1.35%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-02-17 11:10:04

End at: 2018-02-17 11:10:34

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.54 Mbit/s

95th percentile per-packet one-way delay: 51.926 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 7.95 Mbit/s

95th percentile per-packet one-way delay: 52.513 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 7.68 Mbit/s

95th percentile per-packet one-way delay: 51.944 ms

Loss rate: 0.65%

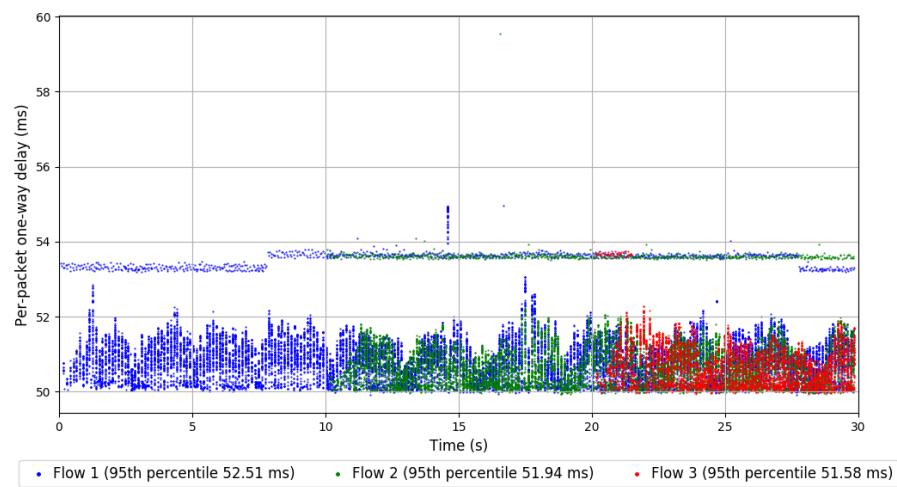
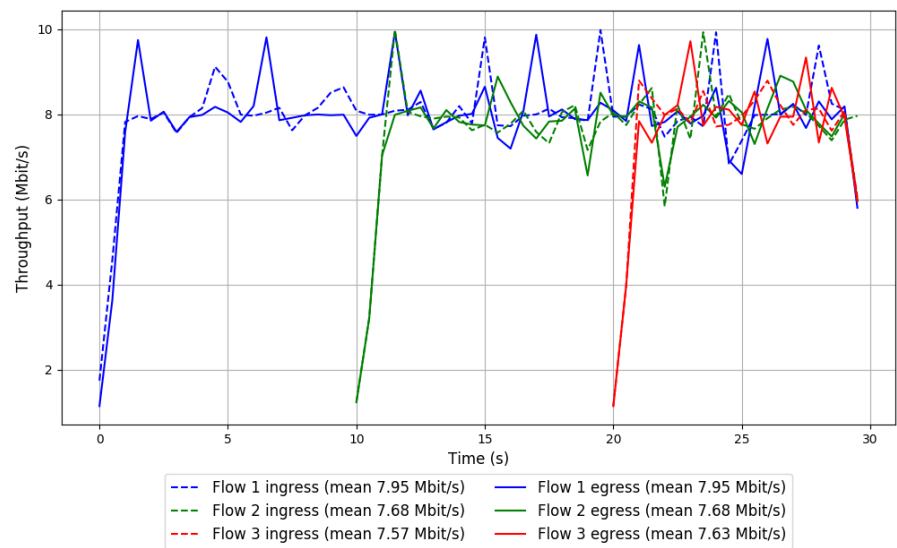
-- Flow 3:

Average throughput: 7.63 Mbit/s

95th percentile per-packet one-way delay: 51.578 ms

Loss rate: 0.24%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-02-17 11:28:02

End at: 2018-02-17 11:28:32

Below is generated by plot.py at 2018-02-17 16:15:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.48 Mbit/s

95th percentile per-packet one-way delay: 51.624 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 7.81 Mbit/s

95th percentile per-packet one-way delay: 51.720 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 7.90 Mbit/s

95th percentile per-packet one-way delay: 51.585 ms

Loss rate: 0.30%

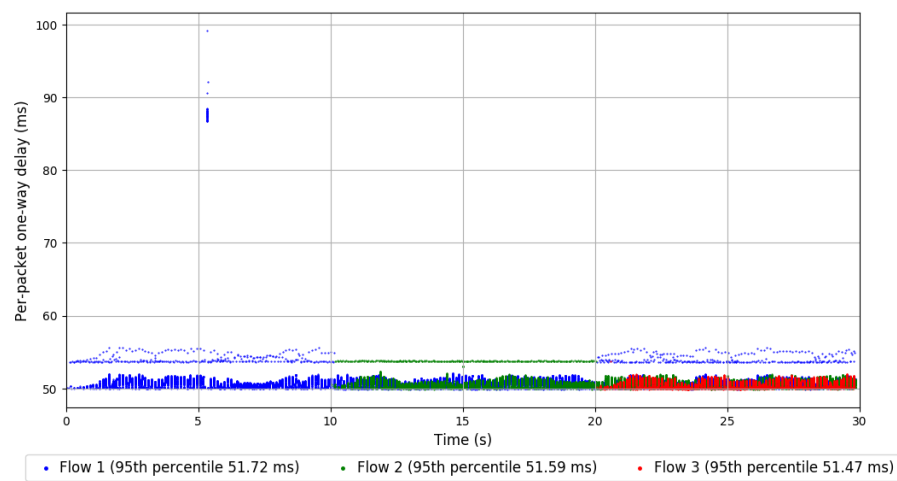
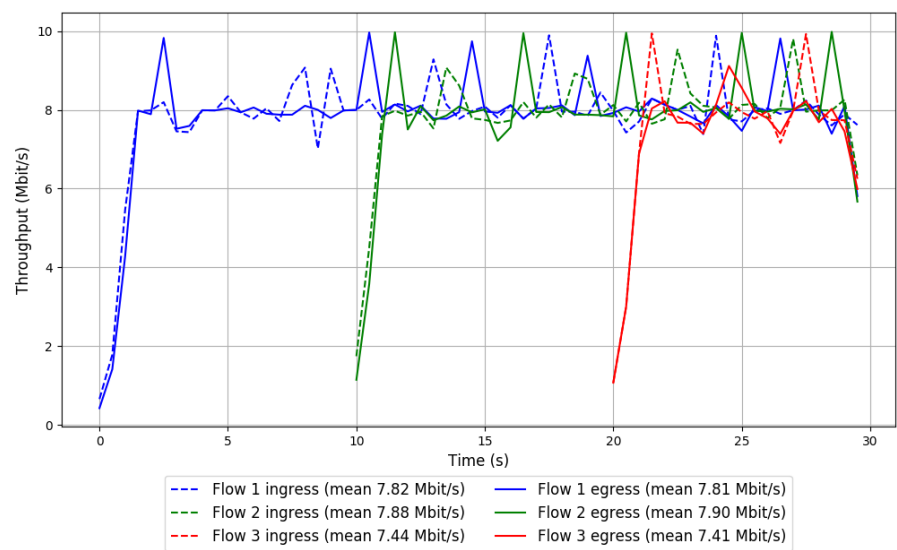
-- Flow 3:

Average throughput: 7.41 Mbit/s

95th percentile per-packet one-way delay: 51.471 ms

Loss rate: 1.54%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-02-17 11:46:01

End at: 2018-02-17 11:46:31

Below is generated by plot.py at 2018-02-17 16:15:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.60 Mbit/s

95th percentile per-packet one-way delay: 51.657 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 7.87 Mbit/s

95th percentile per-packet one-way delay: 51.640 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 7.91 Mbit/s

95th percentile per-packet one-way delay: 51.651 ms

Loss rate: 0.62%

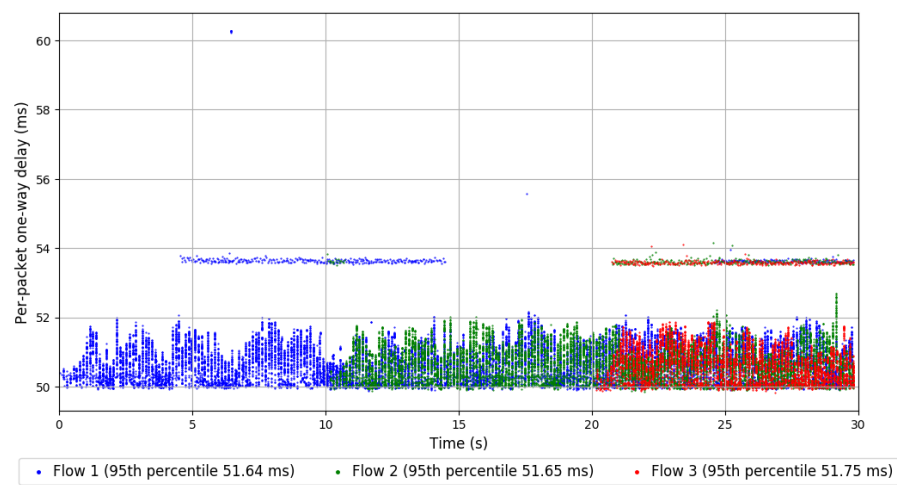
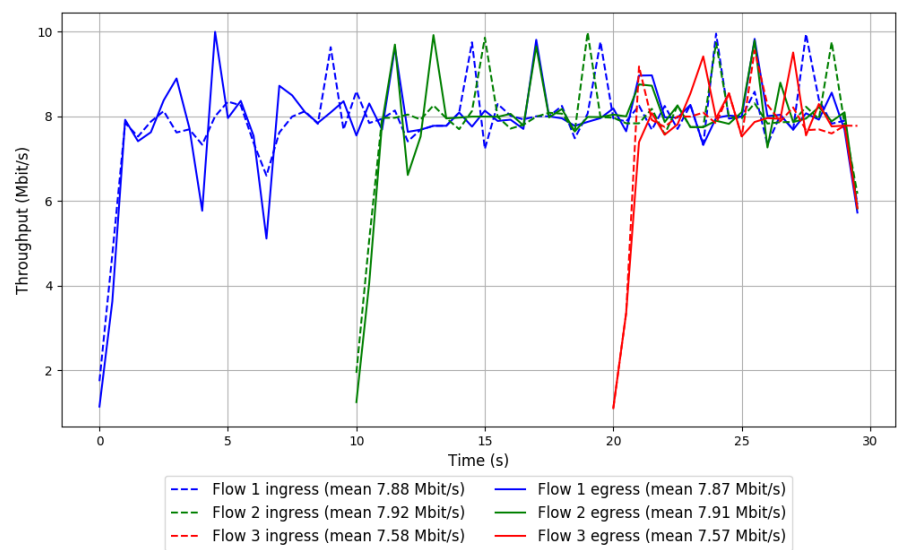
-- Flow 3:

Average throughput: 7.57 Mbit/s

95th percentile per-packet one-way delay: 51.749 ms

Loss rate: 1.30%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-02-17 12:03:53

End at: 2018-02-17 12:04:23

Below is generated by plot.py at 2018-02-17 16:15:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.55 Mbit/s

95th percentile per-packet one-way delay: 52.136 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 7.92 Mbit/s

95th percentile per-packet one-way delay: 52.814 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 7.81 Mbit/s

95th percentile per-packet one-way delay: 51.976 ms

Loss rate: 0.64%

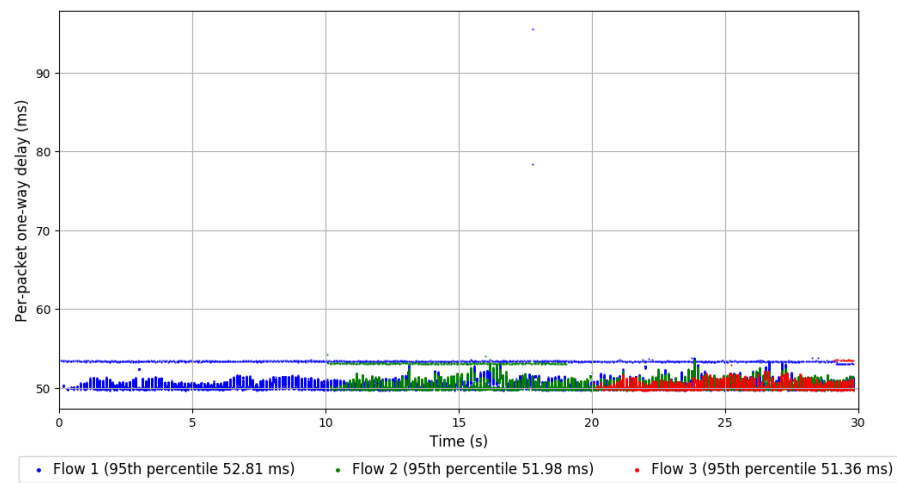
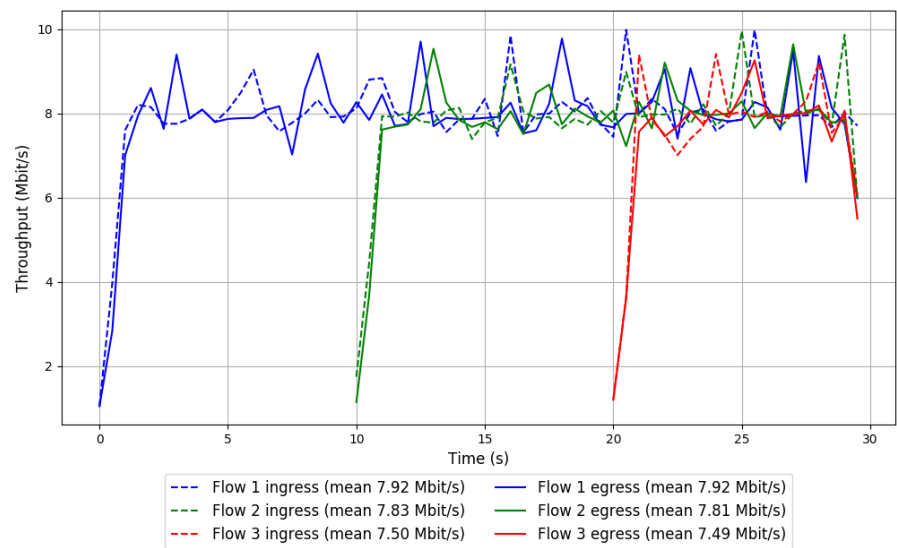
-- Flow 3:

Average throughput: 7.49 Mbit/s

95th percentile per-packet one-way delay: 51.361 ms

Loss rate: 1.31%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-02-17 12:22:08

End at: 2018-02-17 12:22:38

Below is generated by plot.py at 2018-02-17 16:15:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.45 Mbit/s

95th percentile per-packet one-way delay: 51.448 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 7.84 Mbit/s

95th percentile per-packet one-way delay: 51.865 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 7.78 Mbit/s

95th percentile per-packet one-way delay: 51.197 ms

Loss rate: 0.57%

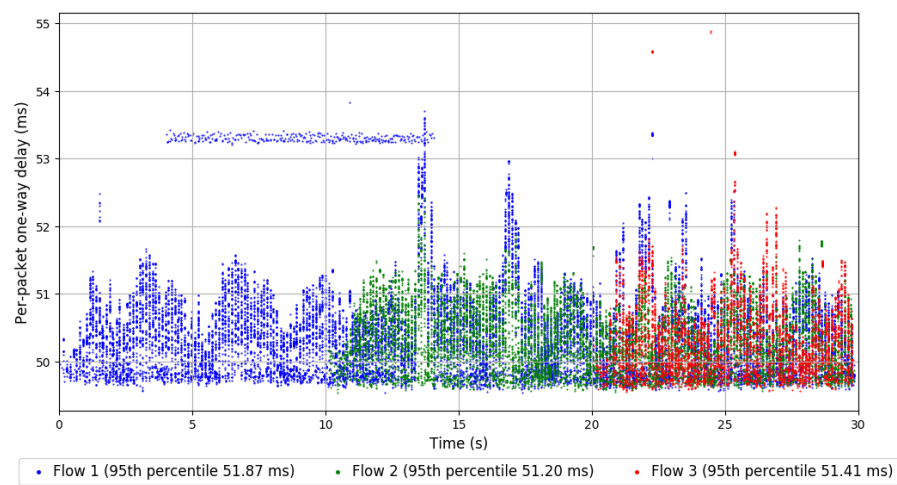
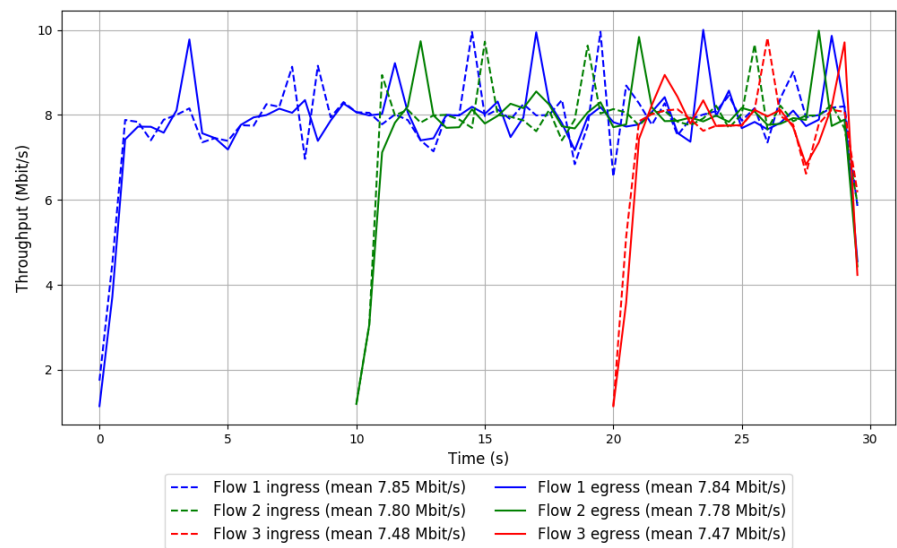
-- Flow 3:

Average throughput: 7.47 Mbit/s

95th percentile per-packet one-way delay: 51.415 ms

Loss rate: 1.51%

Run 10: Report of Sprout — Data Link

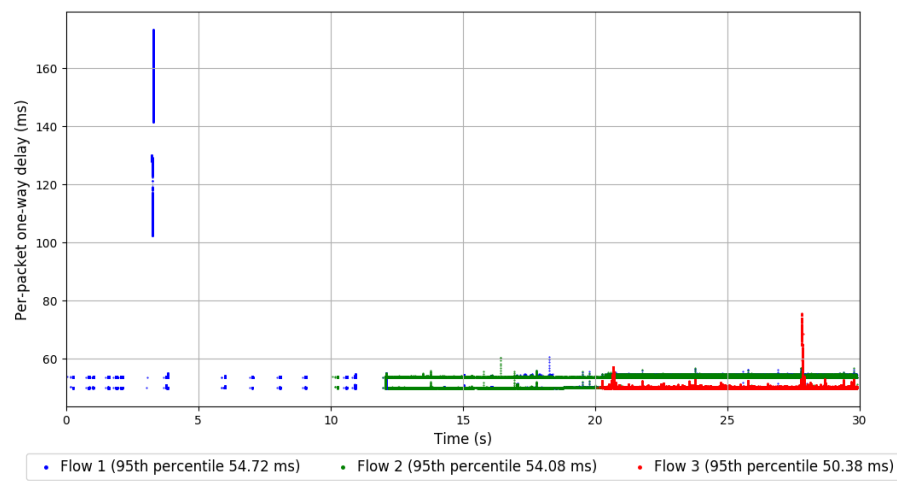
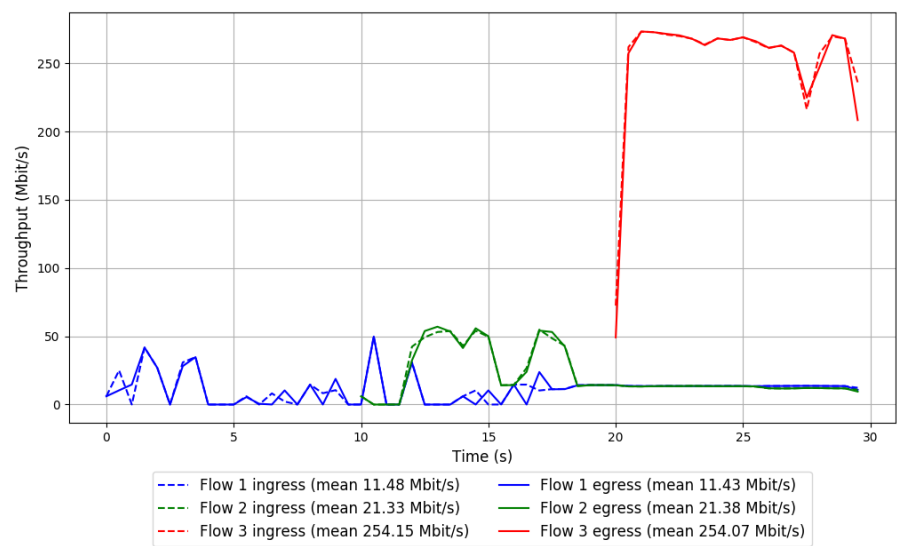


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-02-17 09:32:03
End at: 2018-02-17 09:32:33

# Below is generated by plot.py at 2018-02-17 16:15:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 109.34 Mbit/s
95th percentile per-packet one-way delay: 53.796 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 11.43 Mbit/s
95th percentile per-packet one-way delay: 54.717 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 21.38 Mbit/s
95th percentile per-packet one-way delay: 54.084 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 254.07 Mbit/s
95th percentile per-packet one-way delay: 50.383 ms
Loss rate: 1.08%
```


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

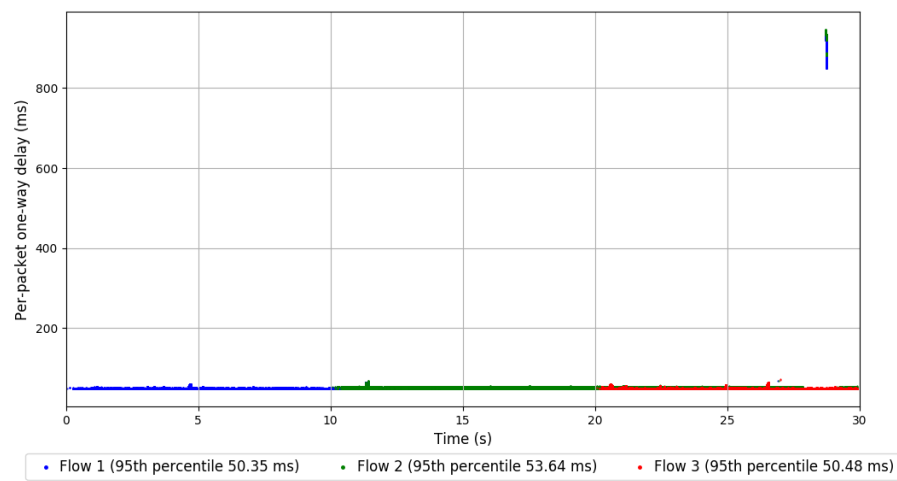
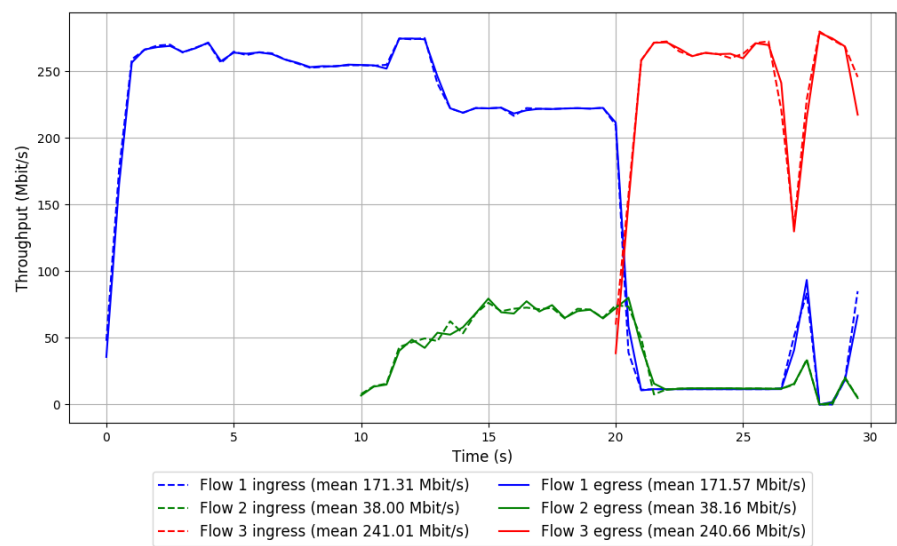


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-02-17 09:49:36
End at: 2018-02-17 09:50:06

# Below is generated by plot.py at 2018-02-17 16:20:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 276.19 Mbit/s
95th percentile per-packet one-way delay: 53.464 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 171.57 Mbit/s
95th percentile per-packet one-way delay: 50.352 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 38.16 Mbit/s
95th percentile per-packet one-way delay: 53.644 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 240.66 Mbit/s
95th percentile per-packet one-way delay: 50.477 ms
Loss rate: 1.15%
```

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

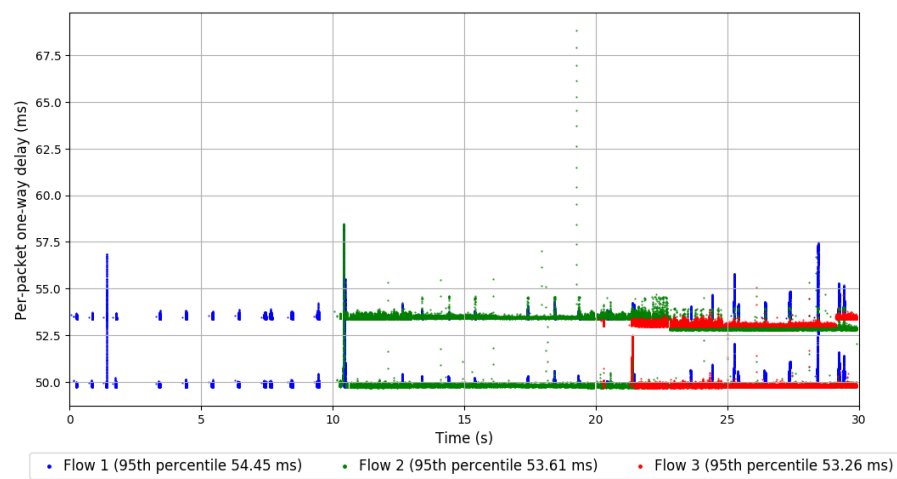
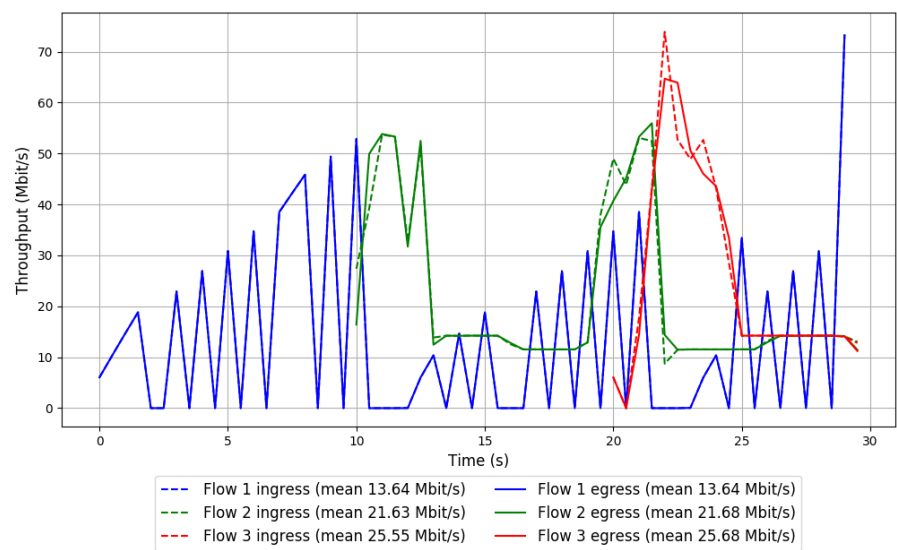


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-02-17 10:07:33
End at: 2018-02-17 10:08:03

# Below is generated by plot.py at 2018-02-17 16:20:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.29 Mbit/s
95th percentile per-packet one-way delay: 53.740 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 13.64 Mbit/s
95th percentile per-packet one-way delay: 54.448 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.68 Mbit/s
95th percentile per-packet one-way delay: 53.606 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 25.68 Mbit/s
95th percentile per-packet one-way delay: 53.258 ms
Loss rate: 0.58%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-02-17 10:25:07

End at: 2018-02-17 10:25:37

Below is generated by plot.py at 2018-02-17 16:20:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 277.89 Mbit/s

95th percentile per-packet one-way delay: 51.688 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 183.98 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 68.51 Mbit/s

95th percentile per-packet one-way delay: 57.356 ms

Loss rate: 0.00%

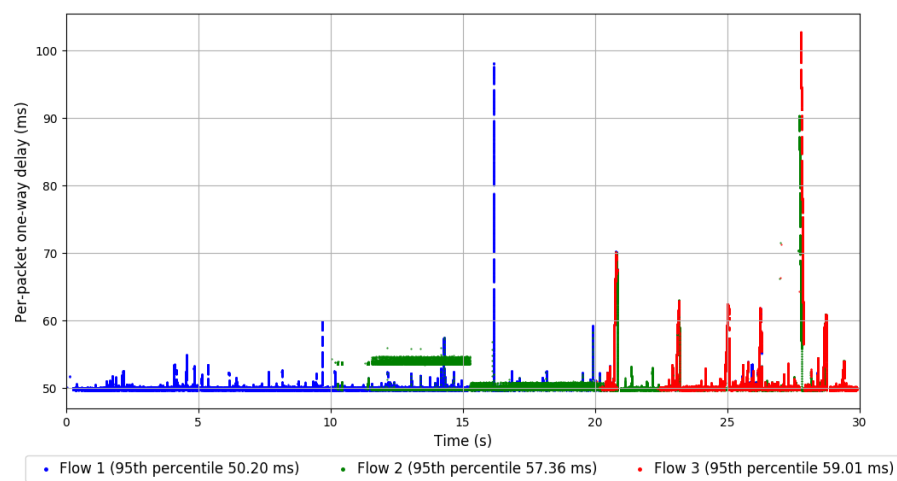
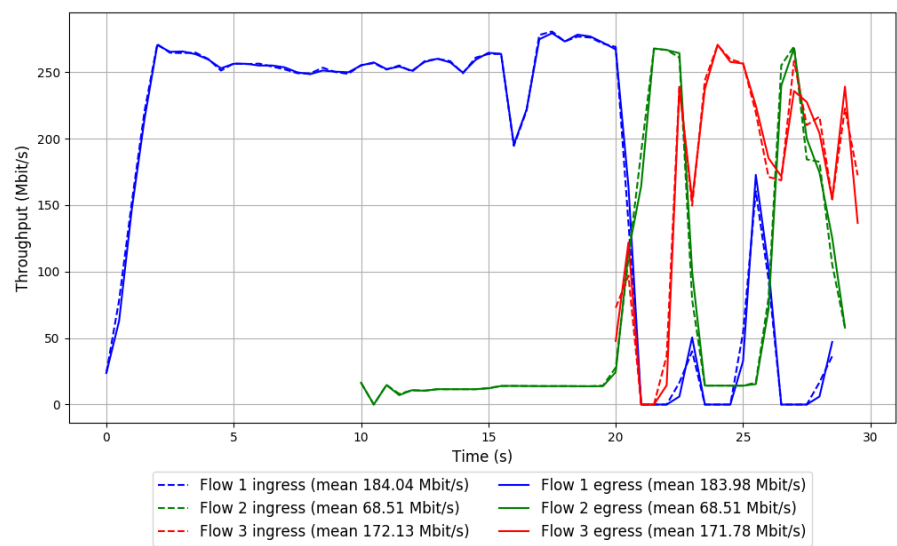
-- Flow 3:

Average throughput: 171.78 Mbit/s

95th percentile per-packet one-way delay: 59.013 ms

Loss rate: 1.26%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-02-17 10:42:57

End at: 2018-02-17 10:43:27

Below is generated by plot.py at 2018-02-17 16:20:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 193.38 Mbit/s

95th percentile per-packet one-way delay: 53.139 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 100.99 Mbit/s

95th percentile per-packet one-way delay: 53.654 ms

Loss rate: 1.89%

-- Flow 2:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 53.637 ms

Loss rate: 0.48%

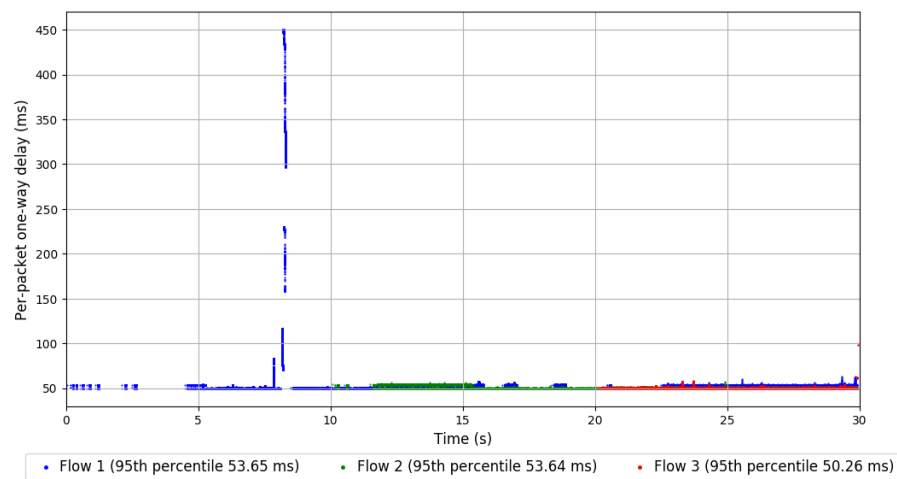
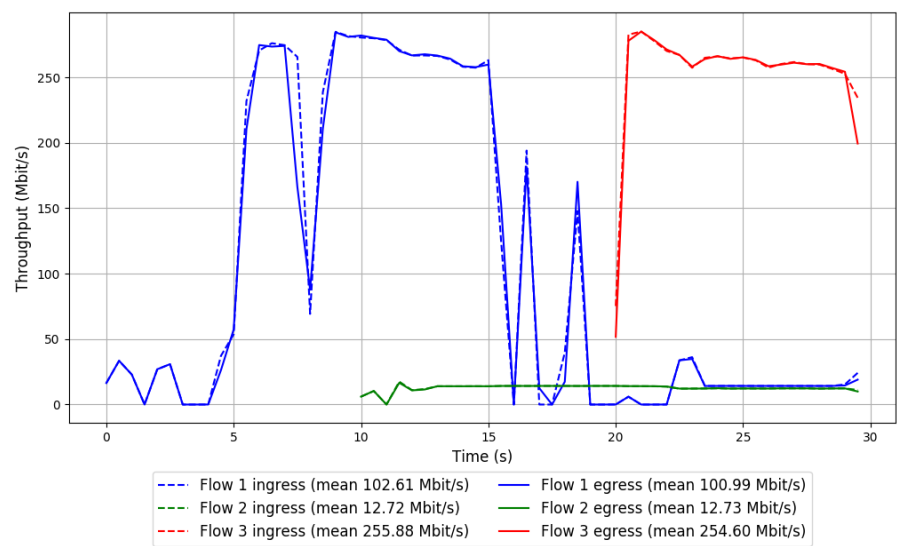
-- Flow 3:

Average throughput: 254.60 Mbit/s

95th percentile per-packet one-way delay: 50.260 ms

Loss rate: 1.15%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-02-17 11:00:55

End at: 2018-02-17 11:01:26

Below is generated by plot.py at 2018-02-17 16:20:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 188.07 Mbit/s

95th percentile per-packet one-way delay: 53.353 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 12.59 Mbit/s

95th percentile per-packet one-way delay: 54.211 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 251.03 Mbit/s

95th percentile per-packet one-way delay: 50.352 ms

Loss rate: 0.57%

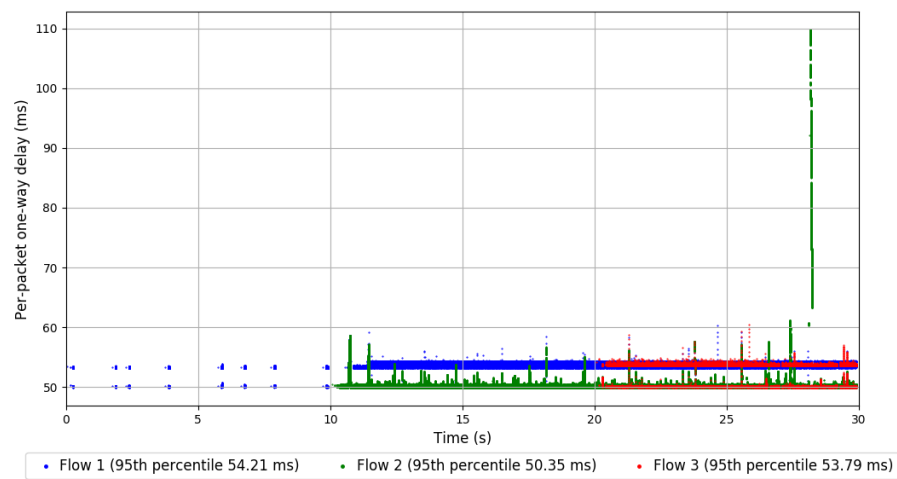
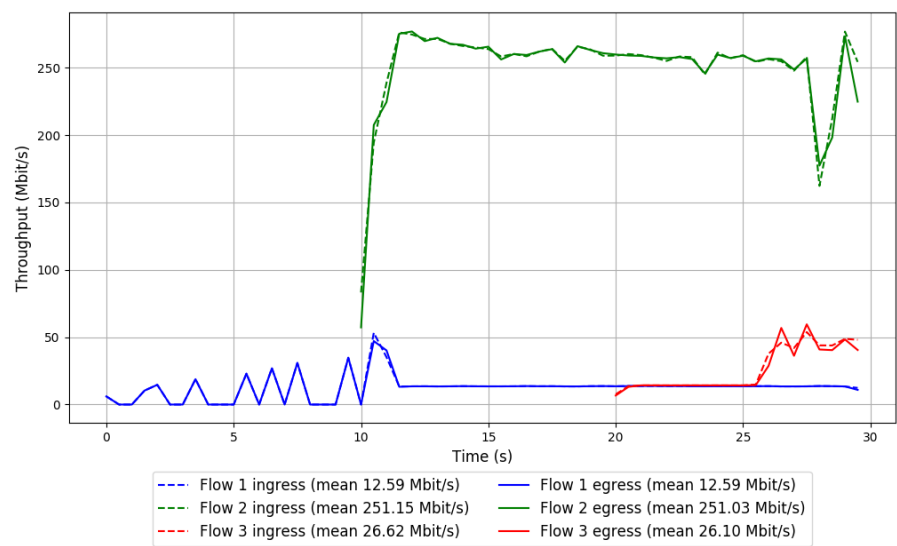
-- Flow 3:

Average throughput: 26.10 Mbit/s

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

Loss rate: 2.75%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-02-17 11:18:40

End at: 2018-02-17 11:19:10

Below is generated by plot.py at 2018-02-17 16:22:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 294.53 Mbit/s

95th percentile per-packet one-way delay: 51.195 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 144.87 Mbit/s

95th percentile per-packet one-way delay: 51.821 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 111.95 Mbit/s

95th percentile per-packet one-way delay: 53.210 ms

Loss rate: 0.03%

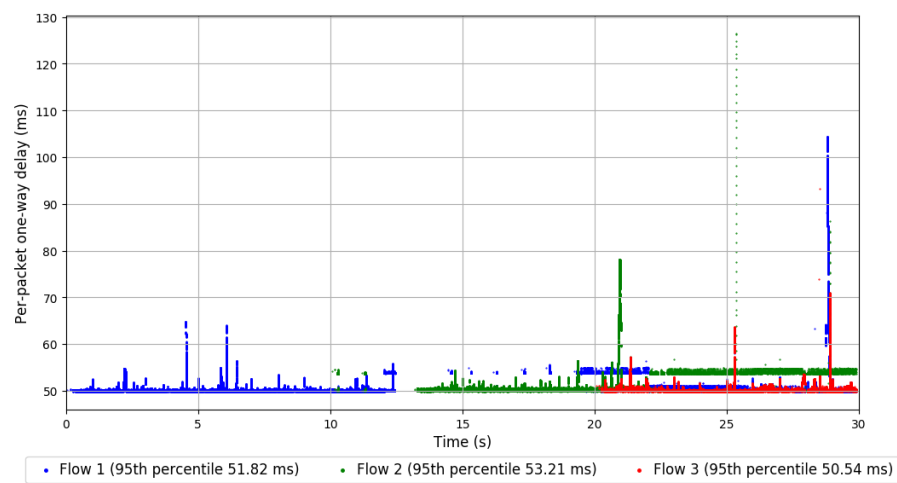
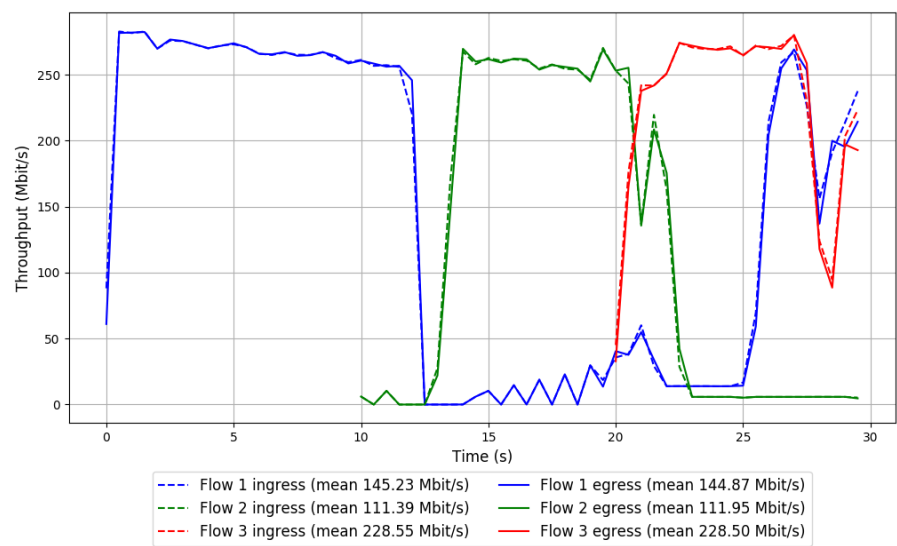
-- Flow 3:

Average throughput: 228.50 Mbit/s

95th percentile per-packet one-way delay: 50.541 ms

Loss rate: 1.08%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-02-17 11:36:47

End at: 2018-02-17 11:37:17

Below is generated by plot.py at 2018-02-17 16:23:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 311.52 Mbit/s

95th percentile per-packet one-way delay: 52.264 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 171.19 Mbit/s

95th percentile per-packet one-way delay: 51.384 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 197.80 Mbit/s

95th percentile per-packet one-way delay: 51.229 ms

Loss rate: 0.03%

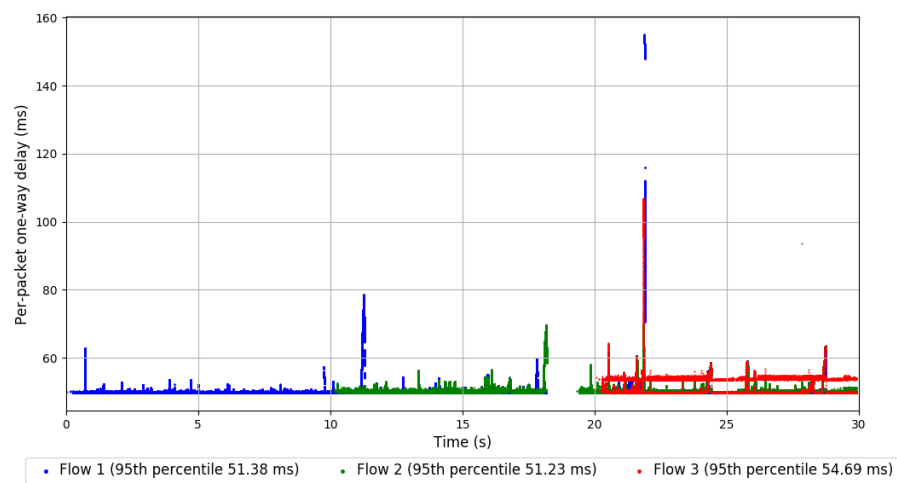
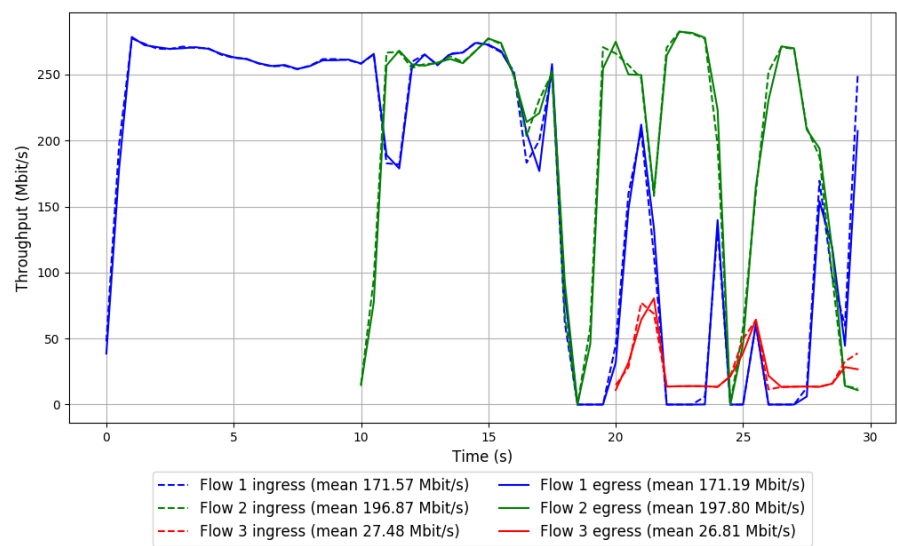
-- Flow 3:

Average throughput: 26.81 Mbit/s

95th percentile per-packet one-way delay: 54.686 ms

Loss rate: 3.27%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-02-17 11:54:36

End at: 2018-02-17 11:55:06

Below is generated by plot.py at 2018-02-17 16:23:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 232.55 Mbit/s

95th percentile per-packet one-way delay: 53.409 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 207.72 Mbit/s

95th percentile per-packet one-way delay: 51.265 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 23.41 Mbit/s

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

Loss rate: 0.31%

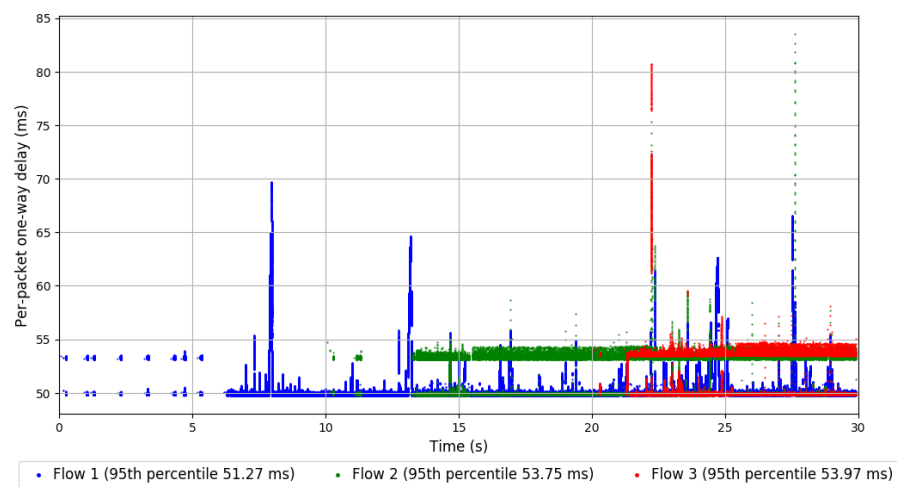
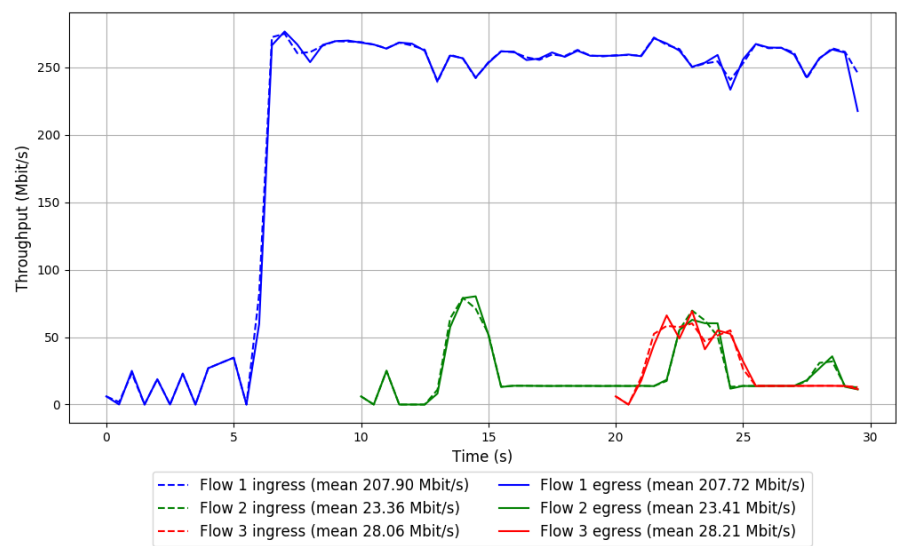
-- Flow 3:

Average throughput: 28.21 Mbit/s

95th percentile per-packet one-way delay: 53.969 ms

Loss rate: 0.52%

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

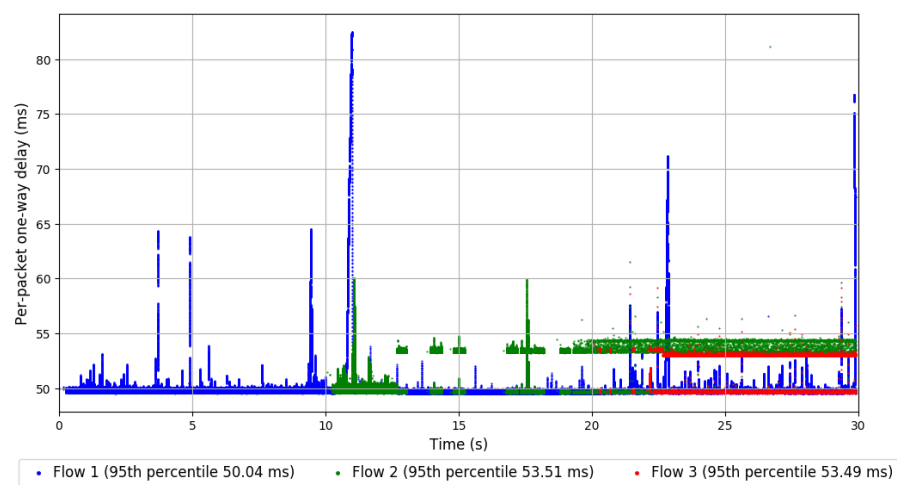
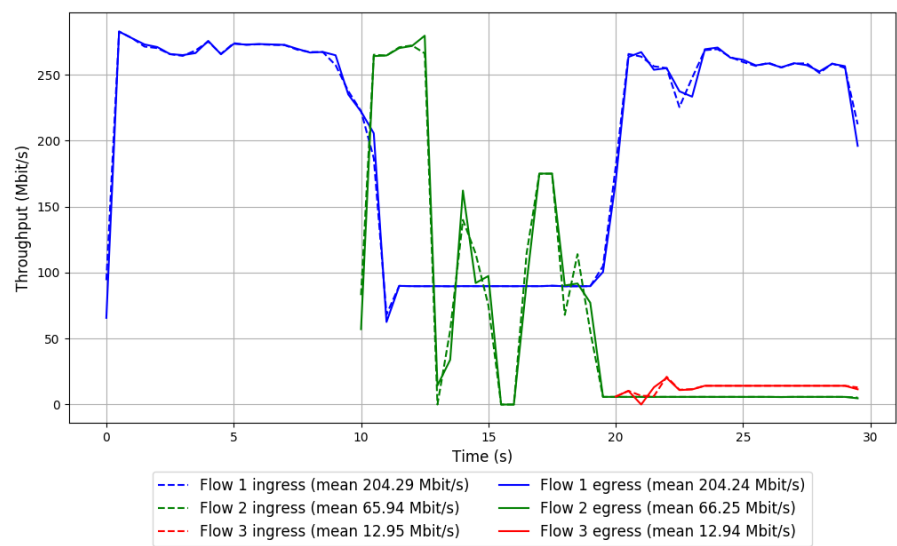


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-02-17 12:12:39
End at: 2018-02-17 12:13:09

# Below is generated by plot.py at 2018-02-17 16:23:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 252.53 Mbit/s
95th percentile per-packet one-way delay: 53.368 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 204.24 Mbit/s
95th percentile per-packet one-way delay: 50.044 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 66.25 Mbit/s
95th percentile per-packet one-way delay: 53.512 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 12.94 Mbit/s
95th percentile per-packet one-way delay: 53.488 ms
Loss rate: 1.11%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-02-17 09:29:26

End at: 2018-02-17 09:29:56

Below is generated by plot.py at 2018-02-17 16:23:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 305.95 Mbit/s

95th percentile per-packet one-way delay: 56.951 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 227.67 Mbit/s

95th percentile per-packet one-way delay: 57.098 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 96.77 Mbit/s

95th percentile per-packet one-way delay: 54.545 ms

Loss rate: 0.49%

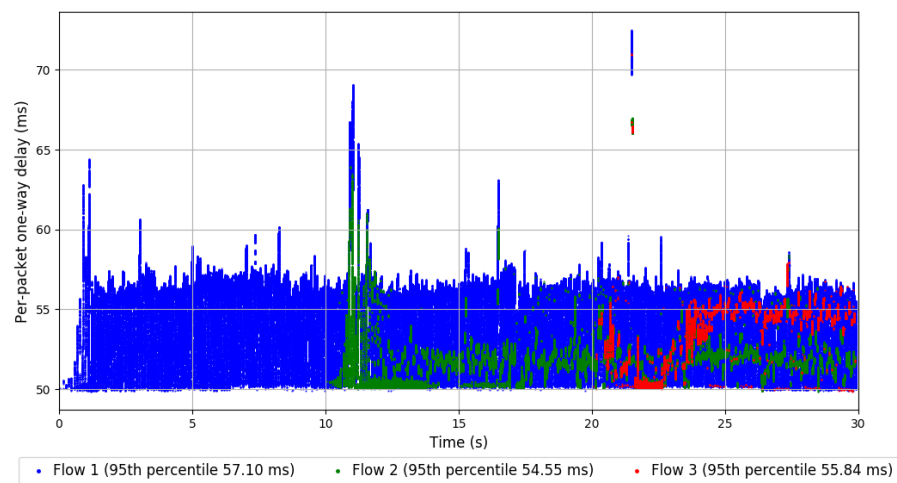
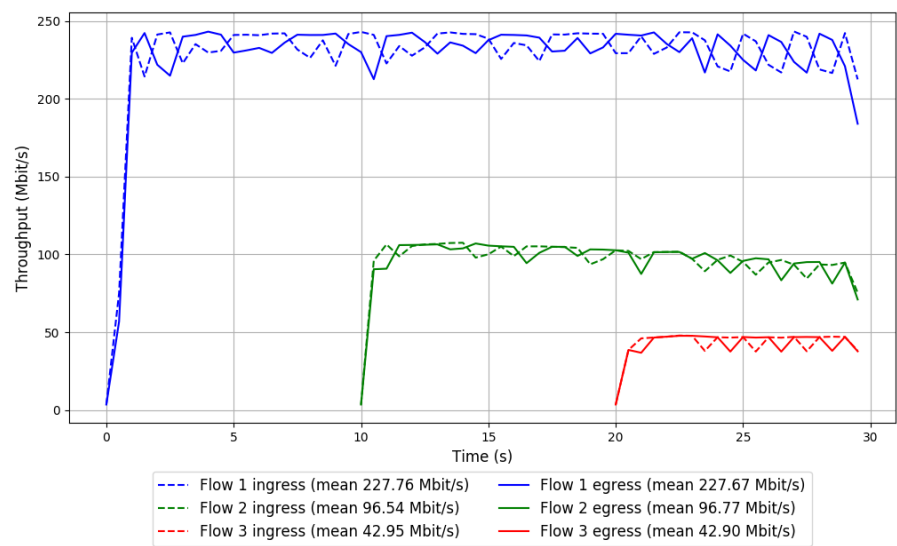
-- Flow 3:

Average throughput: 42.90 Mbit/s

95th percentile per-packet one-way delay: 55.843 ms

Loss rate: 1.12%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-02-17 09:46:58

End at: 2018-02-17 09:47:28

Below is generated by plot.py at 2018-02-17 16:25:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 363.79 Mbit/s

95th percentile per-packet one-way delay: 59.631 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 191.03 Mbit/s

95th percentile per-packet one-way delay: 57.519 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 155.77 Mbit/s

95th percentile per-packet one-way delay: 58.347 ms

Loss rate: 0.54%

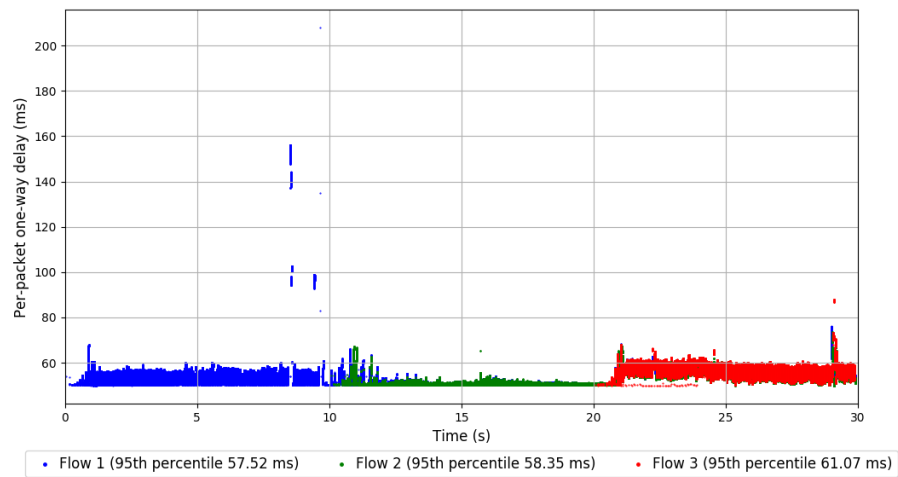
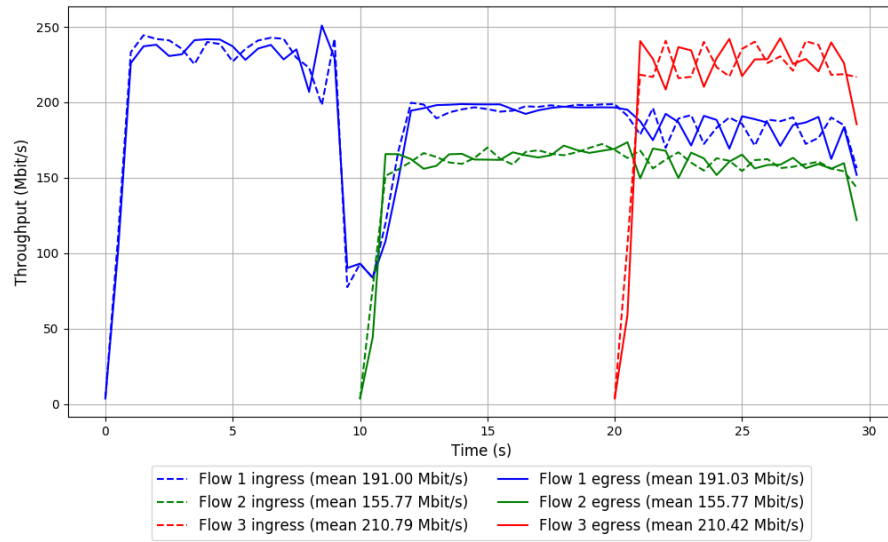
-- Flow 3:

Average throughput: 210.42 Mbit/s

95th percentile per-packet one-way delay: 61.074 ms

Loss rate: 1.15%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-02-17 10:04:58

End at: 2018-02-17 10:05:28

Below is generated by plot.py at 2018-02-17 16:25:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 236.67 Mbit/s

95th percentile per-packet one-way delay: 57.514 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 80.05 Mbit/s

95th percentile per-packet one-way delay: 57.474 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 219.56 Mbit/s

95th percentile per-packet one-way delay: 57.523 ms

Loss rate: 0.60%

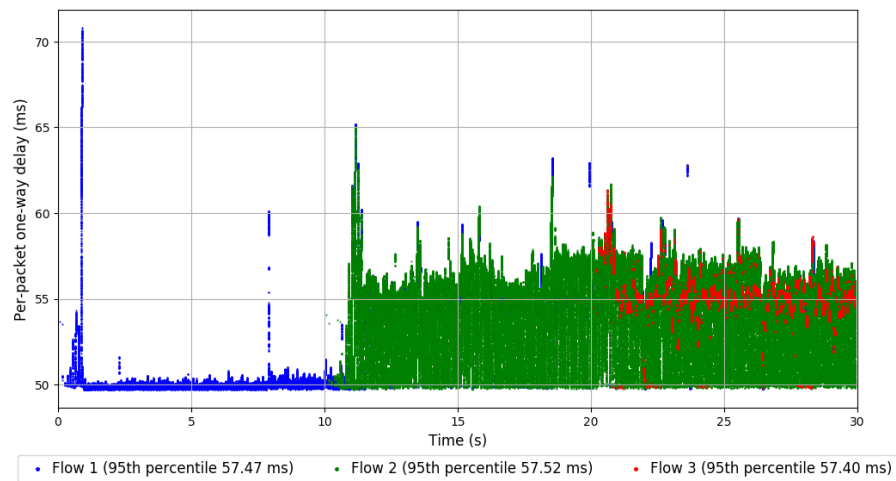
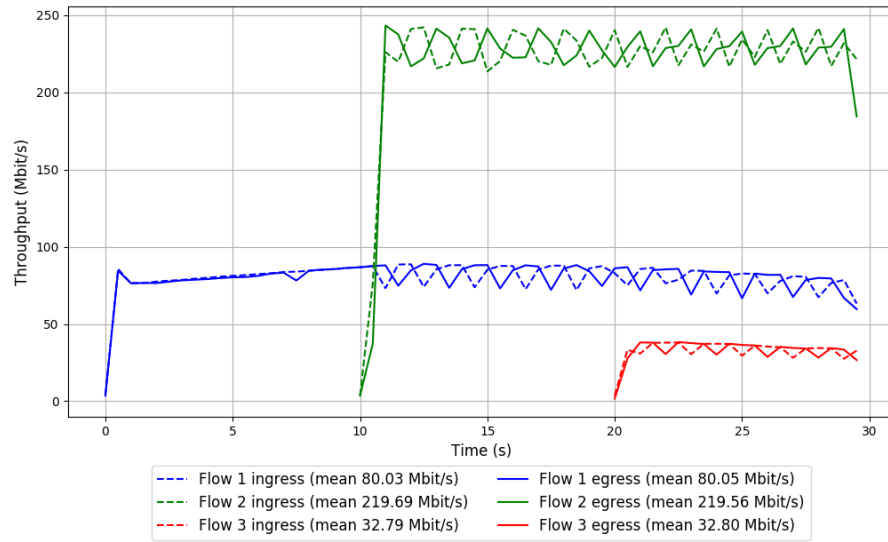
-- Flow 3:

Average throughput: 32.80 Mbit/s

95th percentile per-packet one-way delay: 57.395 ms

Loss rate: 1.02%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-02-17 10:22:29

End at: 2018-02-17 10:22:59

Below is generated by plot.py at 2018-02-17 16:26:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 324.60 Mbit/s

95th percentile per-packet one-way delay: 57.270 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 148.74 Mbit/s

95th percentile per-packet one-way delay: 52.576 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 228.48 Mbit/s

95th percentile per-packet one-way delay: 57.652 ms

Loss rate: 0.53%

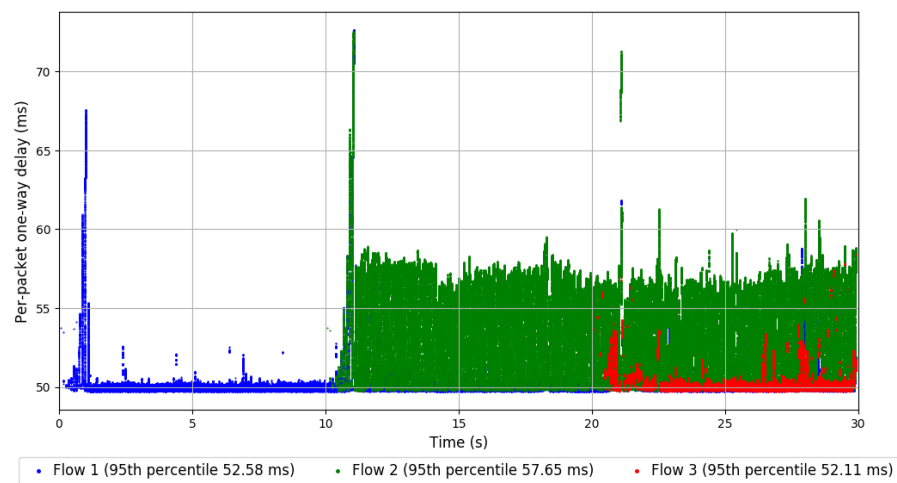
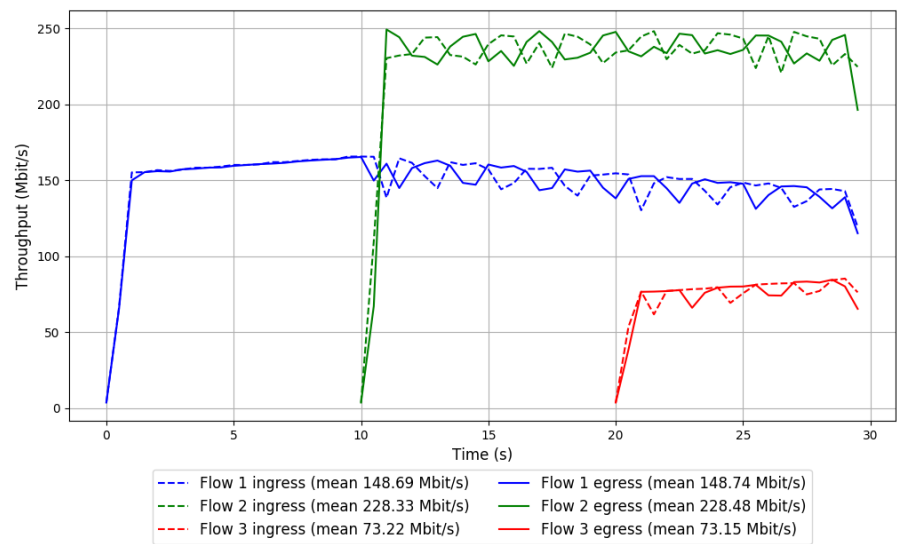
-- Flow 3:

Average throughput: 73.15 Mbit/s

95th percentile per-packet one-way delay: 52.110 ms

Loss rate: 1.18%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-02-17 10:40:20

End at: 2018-02-17 10:40:50

Below is generated by plot.py at 2018-02-17 16:28:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 320.38 Mbit/s

95th percentile per-packet one-way delay: 57.351 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 226.65 Mbit/s

95th percentile per-packet one-way delay: 57.488 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 114.74 Mbit/s

95th percentile per-packet one-way delay: 55.615 ms

Loss rate: 0.53%

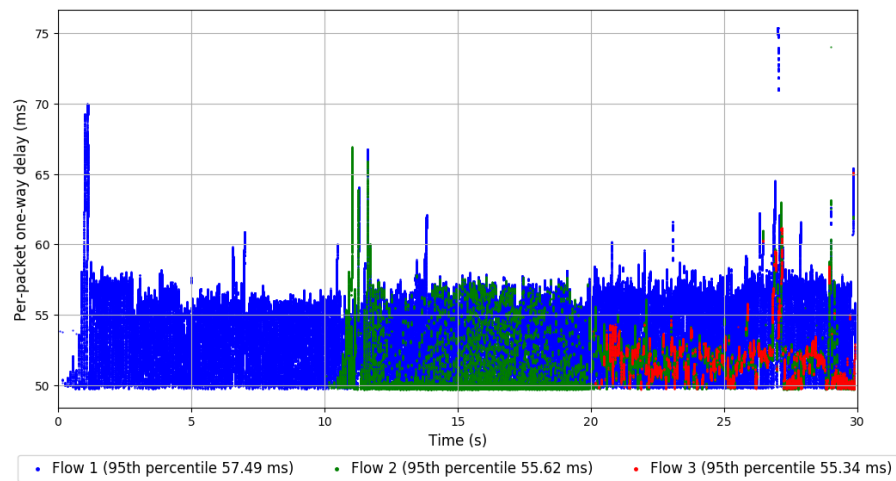
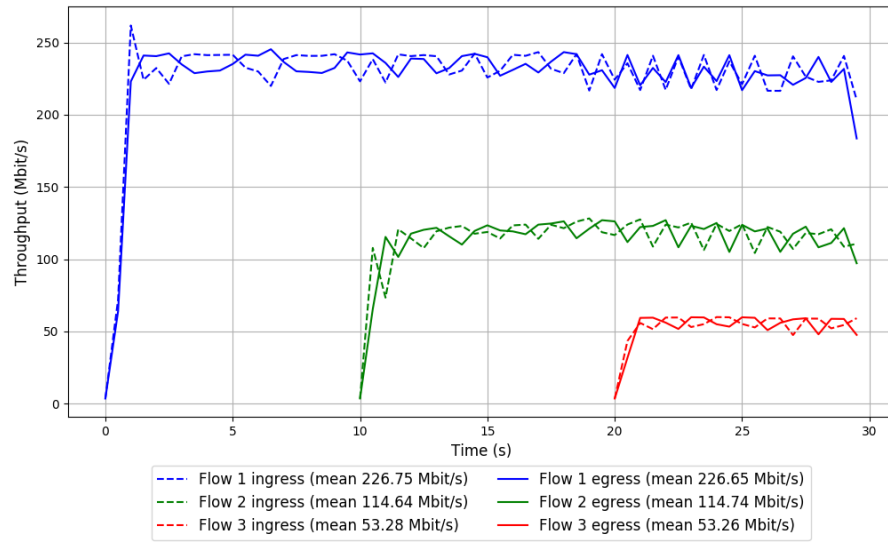
-- Flow 3:

Average throughput: 53.26 Mbit/s

95th percentile per-packet one-way delay: 55.345 ms

Loss rate: 1.14%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-02-17 10:58:17

End at: 2018-02-17 10:58:47

Below is generated by plot.py at 2018-02-17 16:28:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 354.97 Mbit/s

95th percentile per-packet one-way delay: 63.759 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 225.59 Mbit/s

95th percentile per-packet one-way delay: 63.681 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 91.06 Mbit/s

95th percentile per-packet one-way delay: 60.449 ms

Loss rate: 0.48%

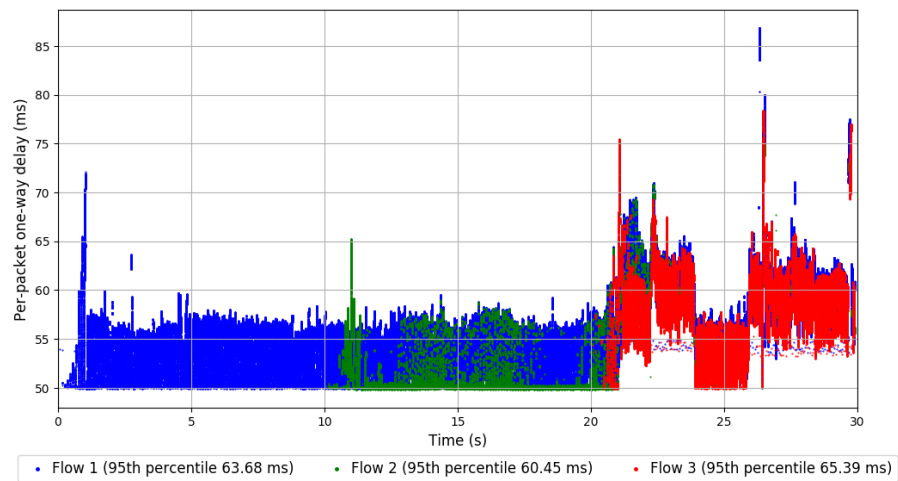
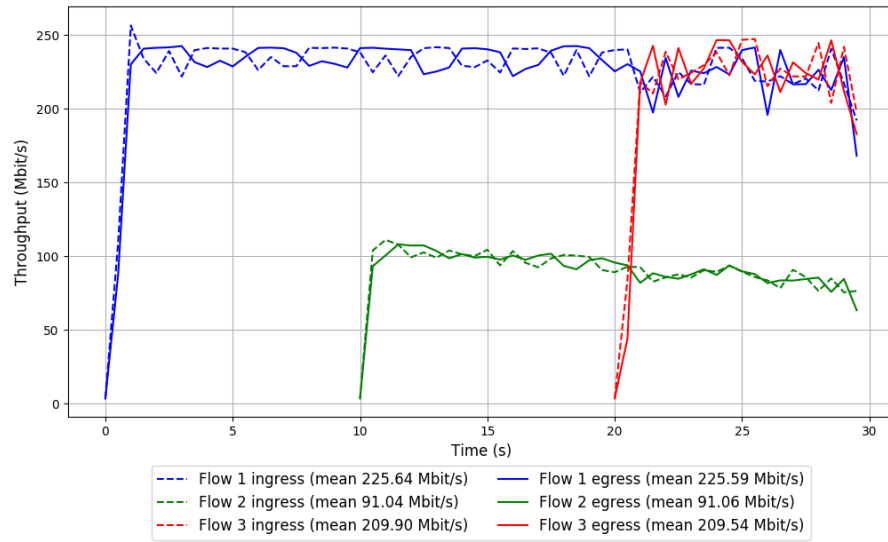
-- Flow 3:

Average throughput: 209.54 Mbit/s

95th percentile per-packet one-way delay: 65.389 ms

Loss rate: 1.19%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-02-17 11:16:06

End at: 2018-02-17 11:16:36

Below is generated by plot.py at 2018-02-17 16:28:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 301.90 Mbit/s

95th percentile per-packet one-way delay: 59.314 ms

Loss rate: 0.38%

-- Flow 1:

Average throughput: 133.50 Mbit/s

95th percentile per-packet one-way delay: 57.772 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 158.05 Mbit/s

95th percentile per-packet one-way delay: 59.460 ms

Loss rate: 0.39%

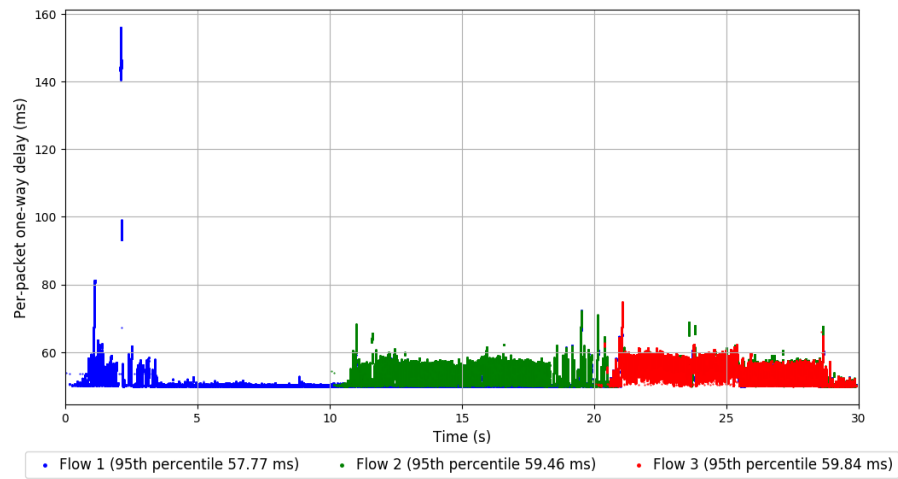
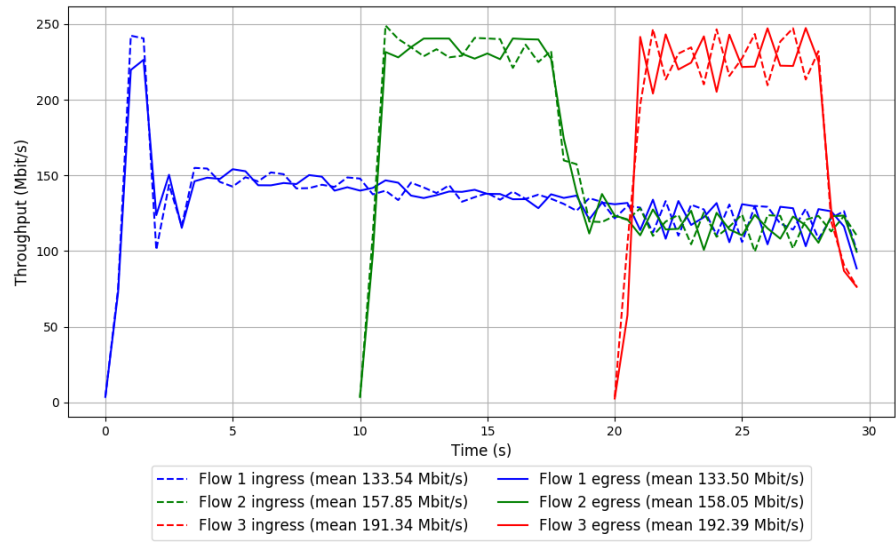
-- Flow 3:

Average throughput: 192.39 Mbit/s

95th percentile per-packet one-way delay: 59.835 ms

Loss rate: 0.50%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-02-17 11:34:09

End at: 2018-02-17 11:34:39

Below is generated by plot.py at 2018-02-17 16:29:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 339.49 Mbit/s

95th percentile per-packet one-way delay: 58.856 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 231.12 Mbit/s

95th percentile per-packet one-way delay: 59.078 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 59.07 Mbit/s

95th percentile per-packet one-way delay: 56.909 ms

Loss rate: 0.47%

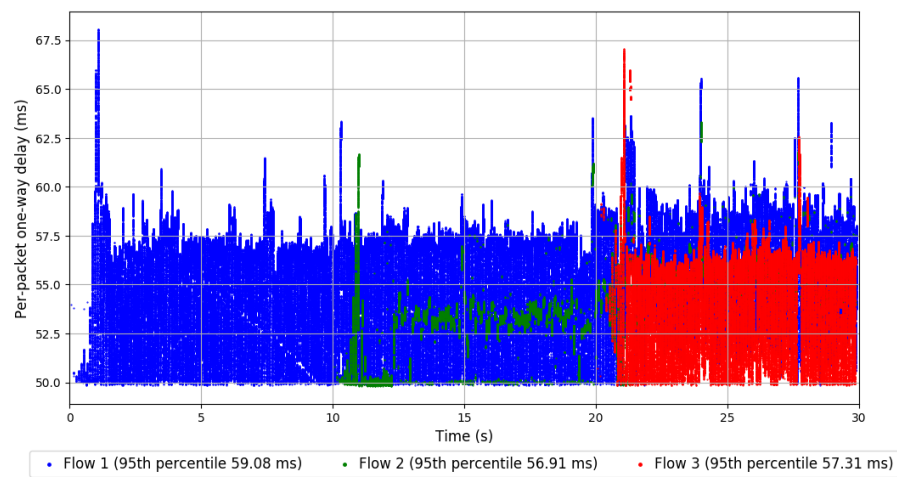
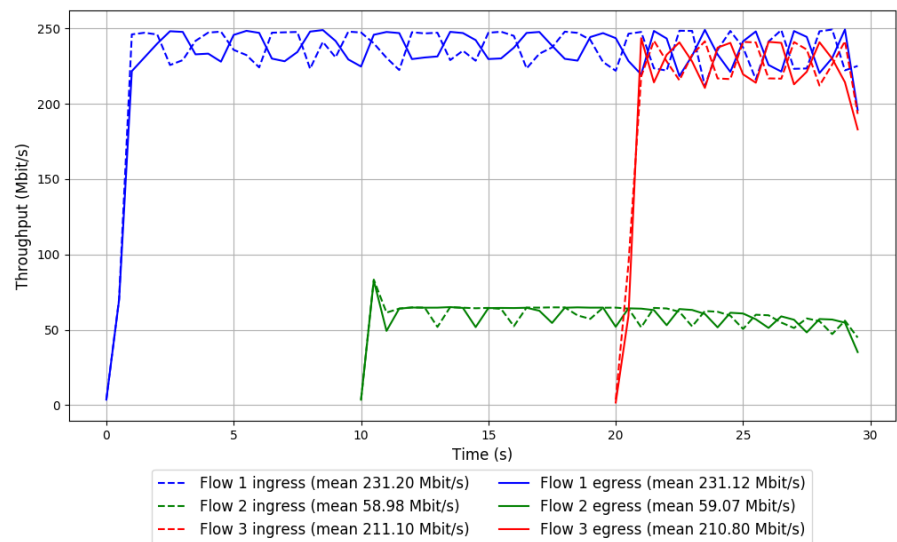
-- Flow 3:

Average throughput: 210.80 Mbit/s

95th percentile per-packet one-way delay: 57.314 ms

Loss rate: 1.15%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-02-17 11:52:02

End at: 2018-02-17 11:52:32

Below is generated by plot.py at 2018-02-17 16:29:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 278.54 Mbit/s

95th percentile per-packet one-way delay: 58.470 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 228.99 Mbit/s

95th percentile per-packet one-way delay: 58.576 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 53.18 Mbit/s

95th percentile per-packet one-way delay: 57.900 ms

Loss rate: 0.42%

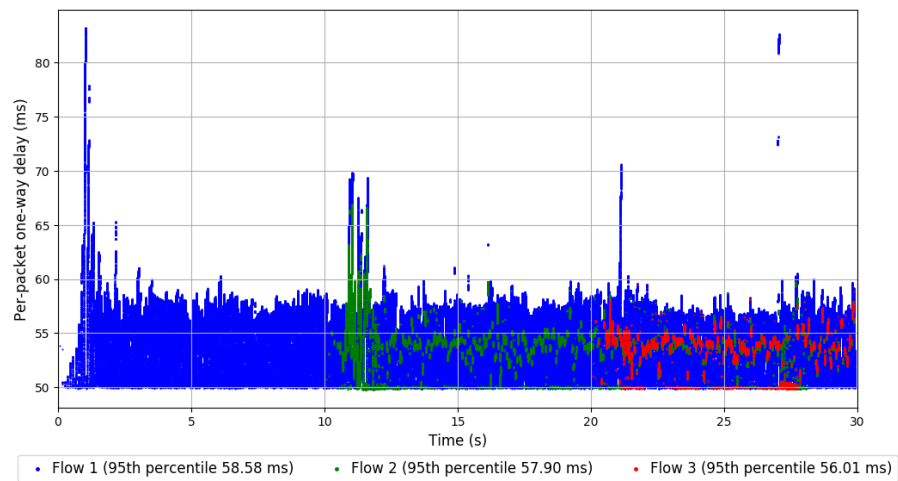
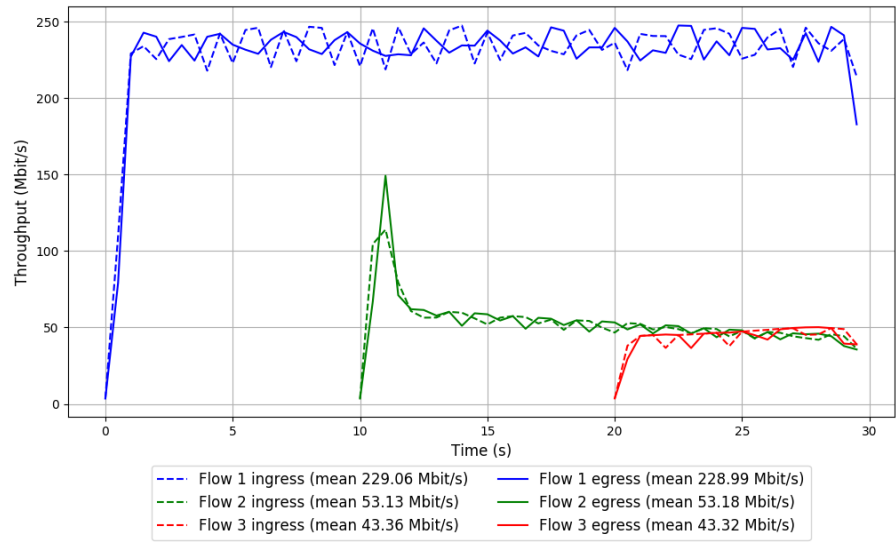
-- Flow 3:

Average throughput: 43.32 Mbit/s

95th percentile per-packet one-way delay: 56.008 ms

Loss rate: 1.13%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-02-17 12:10:10

End at: 2018-02-17 12:10:40

Below is generated by plot.py at 2018-02-17 16:29:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 171.79 Mbit/s

95th percentile per-packet one-way delay: 50.719 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 161.76 Mbit/s

95th percentile per-packet one-way delay: 50.744 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 12.10 Mbit/s

95th percentile per-packet one-way delay: 50.484 ms

Loss rate: 1.01%

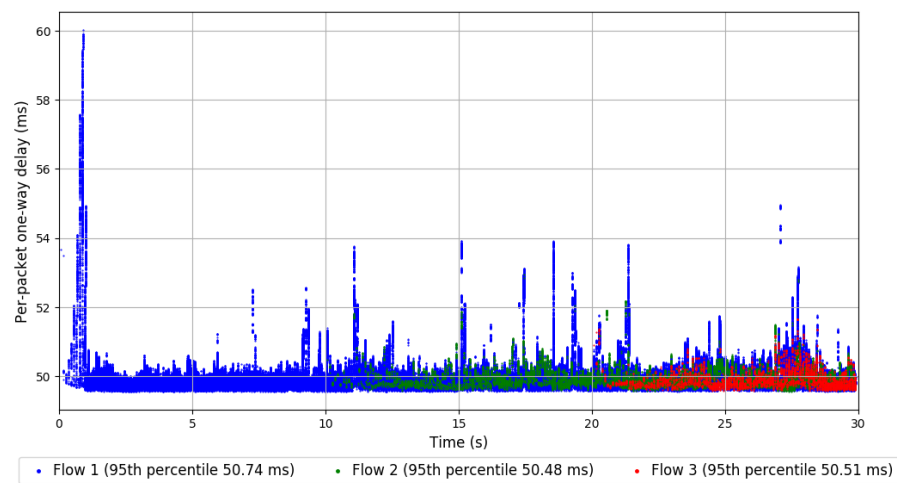
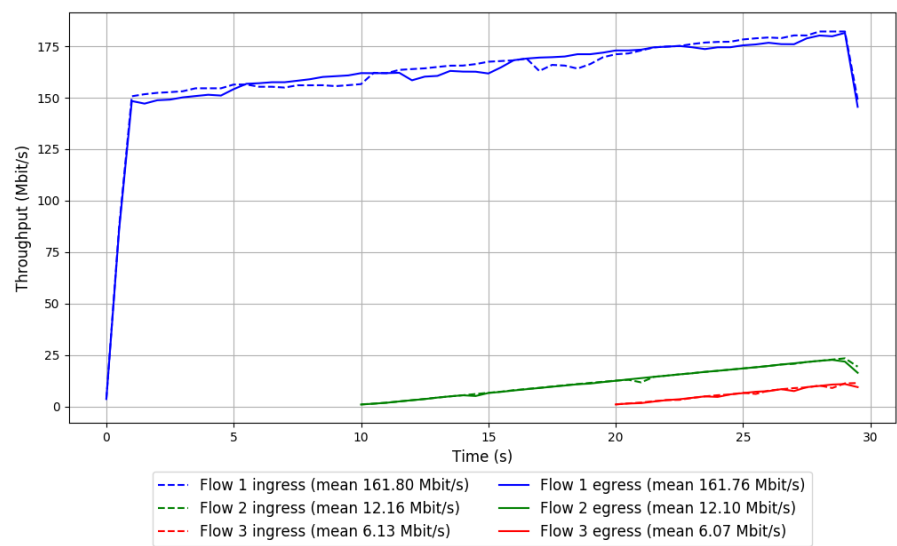
-- Flow 3:

Average throughput: 6.07 Mbit/s

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

Loss rate: 2.01%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-02-17 09:33:35

End at: 2018-02-17 09:34:05

Below is generated by plot.py at 2018-02-17 16:31:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 332.97 Mbit/s

95th percentile per-packet one-way delay: 131.262 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 187.67 Mbit/s

95th percentile per-packet one-way delay: 128.213 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 151.17 Mbit/s

95th percentile per-packet one-way delay: 138.384 ms

Loss rate: 0.70%

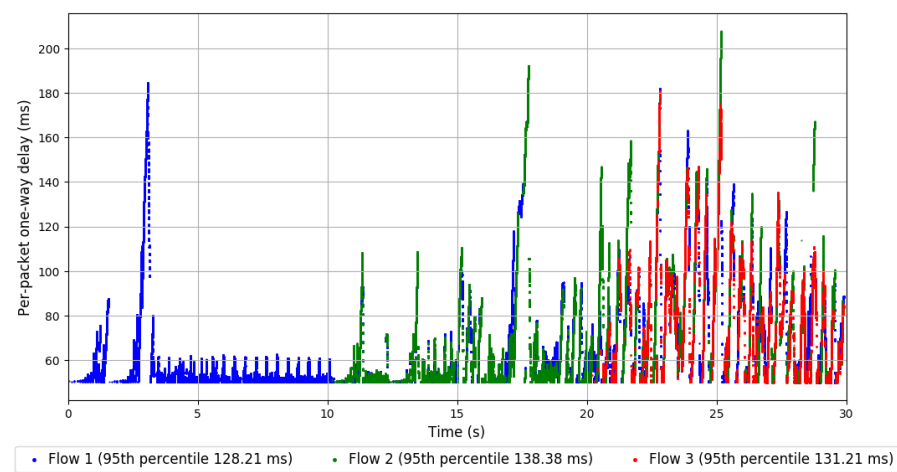
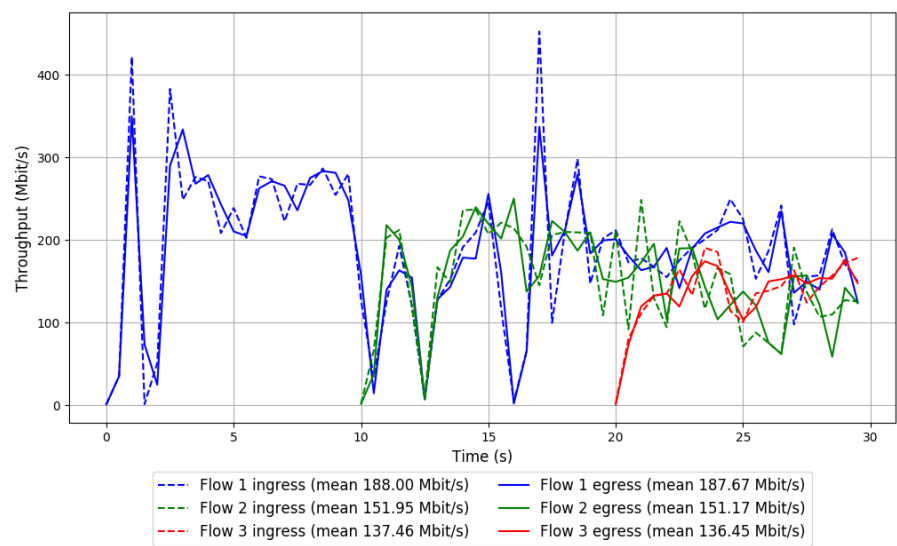
-- Flow 3:

Average throughput: 136.45 Mbit/s

95th percentile per-packet one-way delay: 131.214 ms

Loss rate: 1.22%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-02-17 09:51:22

End at: 2018-02-17 09:51:52

Below is generated by plot.py at 2018-02-17 16:33:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 346.31 Mbit/s

95th percentile per-packet one-way delay: 238.395 ms

Loss rate: 4.57%

-- Flow 1:

Average throughput: 267.61 Mbit/s

95th percentile per-packet one-way delay: 253.874 ms

Loss rate: 4.48%

-- Flow 2:

Average throughput: 84.98 Mbit/s

95th percentile per-packet one-way delay: 187.773 ms

Loss rate: 5.34%

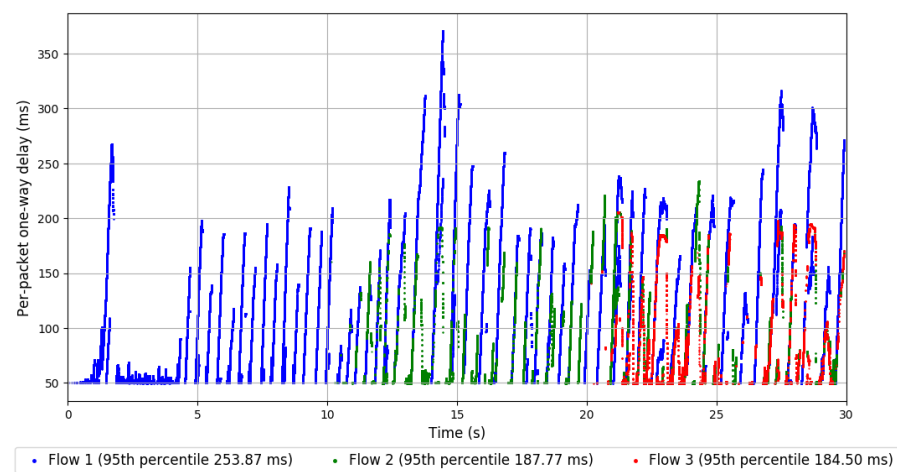
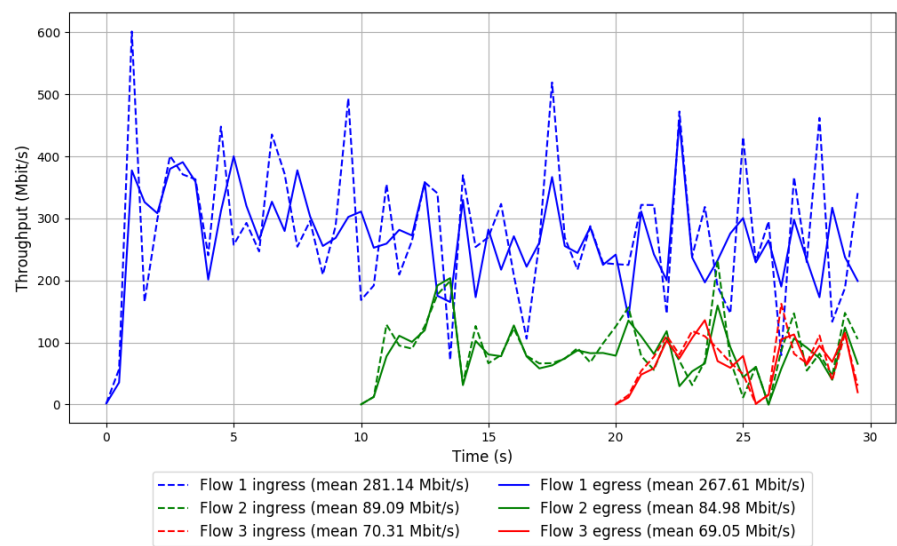
-- Flow 3:

Average throughput: 69.05 Mbit/s

95th percentile per-packet one-way delay: 184.499 ms

Loss rate: 3.72%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-02-17 10:08:58

End at: 2018-02-17 10:09:28

Below is generated by plot.py at 2018-02-17 16:33:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 283.01 Mbit/s

95th percentile per-packet one-way delay: 164.048 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 186.42 Mbit/s

95th percentile per-packet one-way delay: 166.841 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 83.07 Mbit/s

95th percentile per-packet one-way delay: 144.690 ms

Loss rate: 0.77%

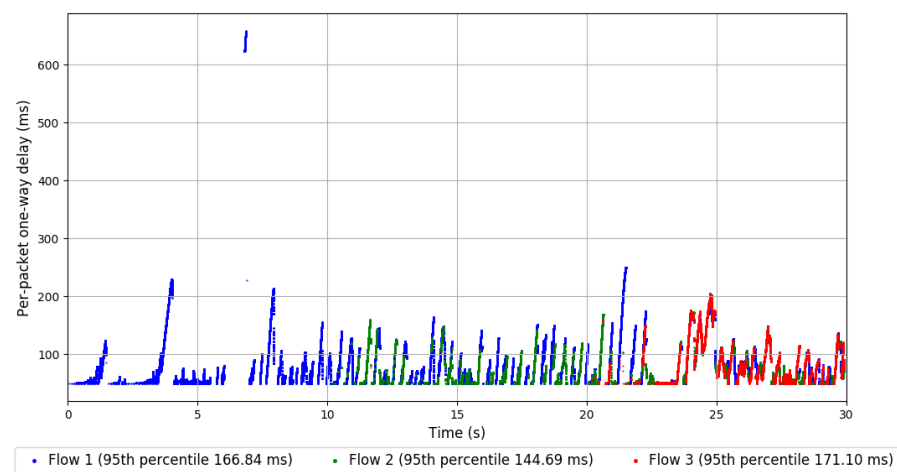
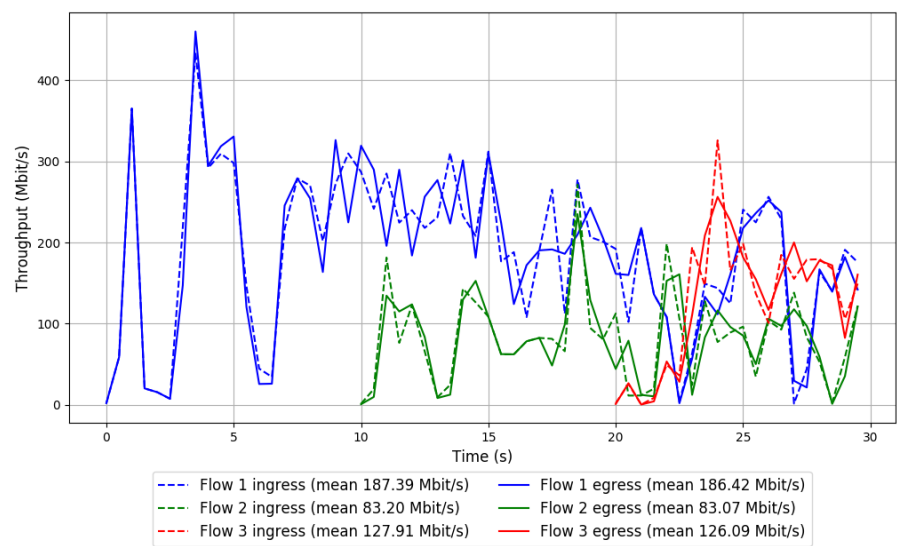
-- Flow 3:

Average throughput: 126.09 Mbit/s

95th percentile per-packet one-way delay: 171.099 ms

Loss rate: 1.45%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-02-17 10:26:55

End at: 2018-02-17 10:27:25

Below is generated by plot.py at 2018-02-17 16:33:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 331.28 Mbit/s

95th percentile per-packet one-way delay: 221.507 ms

Loss rate: 3.70%

-- Flow 1:

Average throughput: 191.92 Mbit/s

95th percentile per-packet one-way delay: 185.783 ms

Loss rate: 3.30%

-- Flow 2:

Average throughput: 201.29 Mbit/s

95th percentile per-packet one-way delay: 244.451 ms

Loss rate: 4.30%

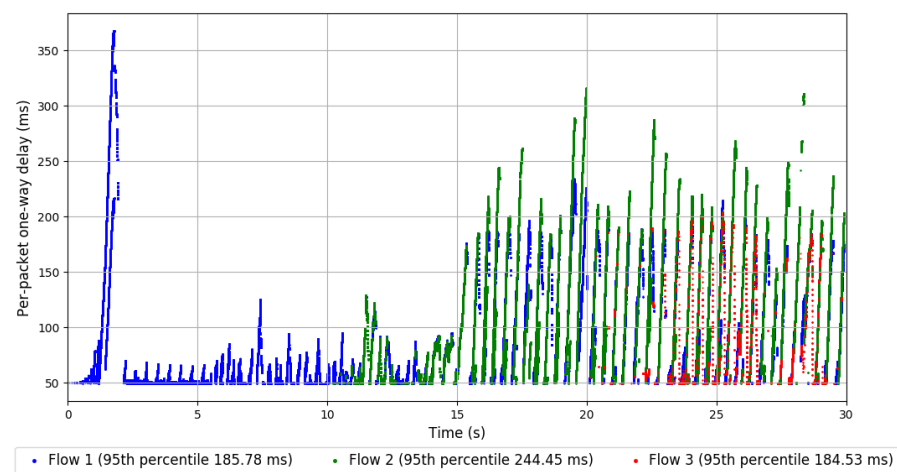
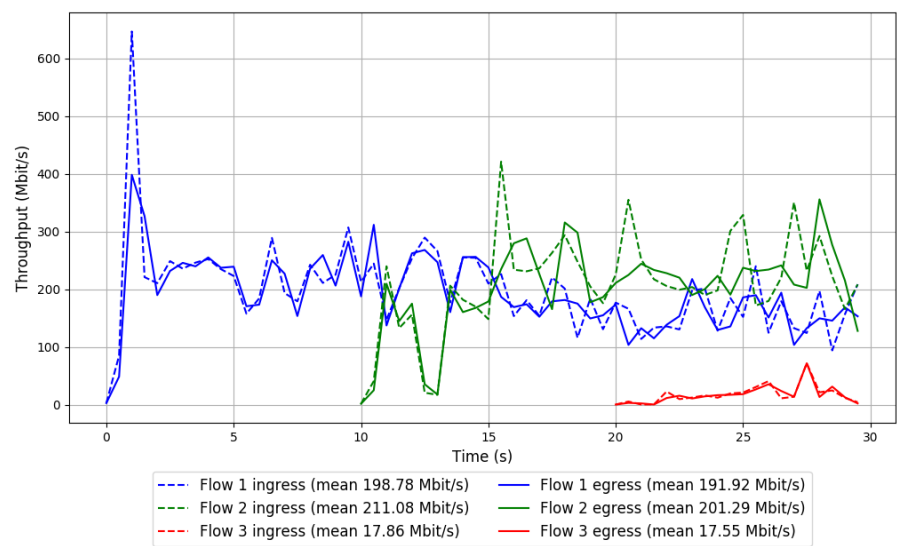
-- Flow 3:

Average throughput: 17.55 Mbit/s

95th percentile per-packet one-way delay: 184.535 ms

Loss rate: 2.75%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-02-17 10:44:36

End at: 2018-02-17 10:45:06

Below is generated by plot.py at 2018-02-17 16:34:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 326.50 Mbit/s

95th percentile per-packet one-way delay: 133.034 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 203.69 Mbit/s

95th percentile per-packet one-way delay: 129.743 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 139.40 Mbit/s

95th percentile per-packet one-way delay: 146.451 ms

Loss rate: 1.47%

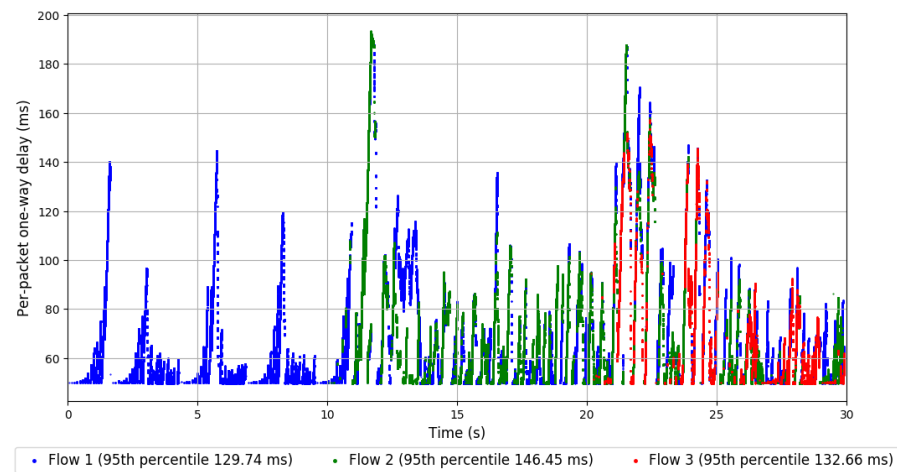
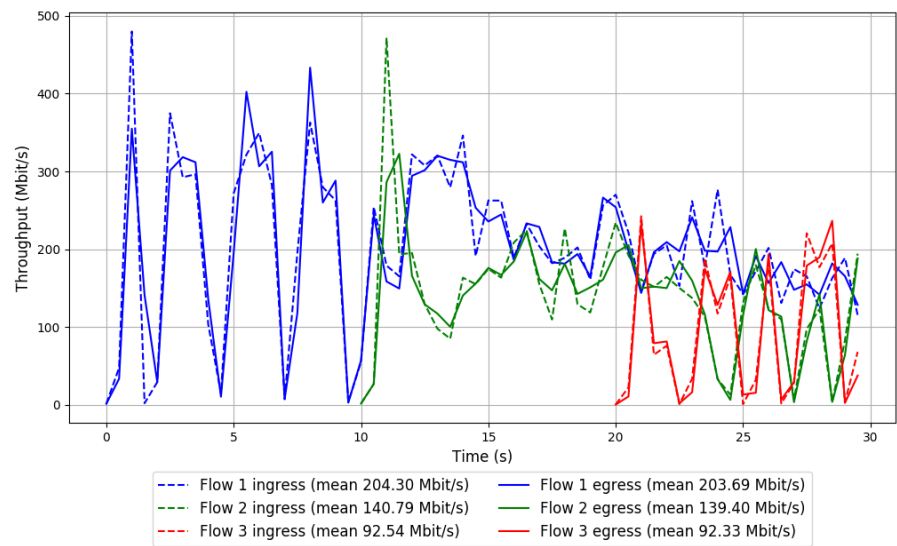
-- Flow 3:

Average throughput: 92.33 Mbit/s

95th percentile per-packet one-way delay: 132.658 ms

Loss rate: 1.70%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-02-17 11:02:35

End at: 2018-02-17 11:03:05

Below is generated by plot.py at 2018-02-17 16:34:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 357.77 Mbit/s

95th percentile per-packet one-way delay: 212.881 ms

Loss rate: 3.85%

-- Flow 1:

Average throughput: 206.20 Mbit/s

95th percentile per-packet one-way delay: 117.458 ms

Loss rate: 1.29%

-- Flow 2:

Average throughput: 158.08 Mbit/s

95th percentile per-packet one-way delay: 120.335 ms

Loss rate: 2.88%

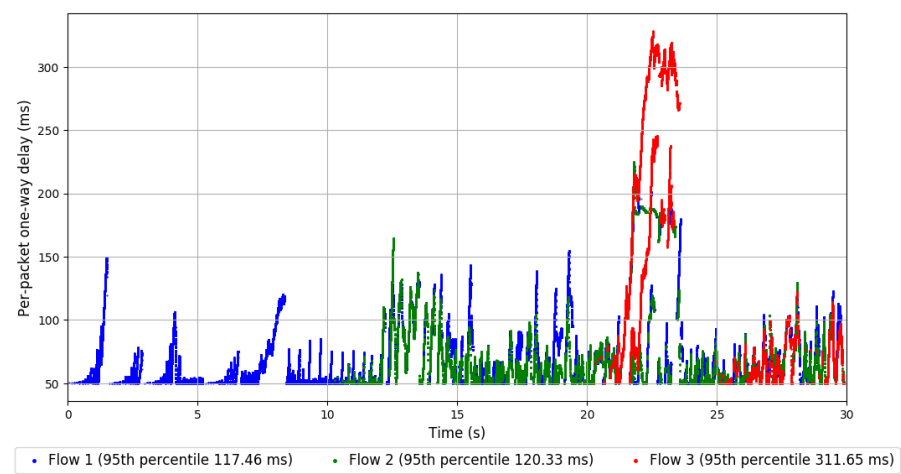
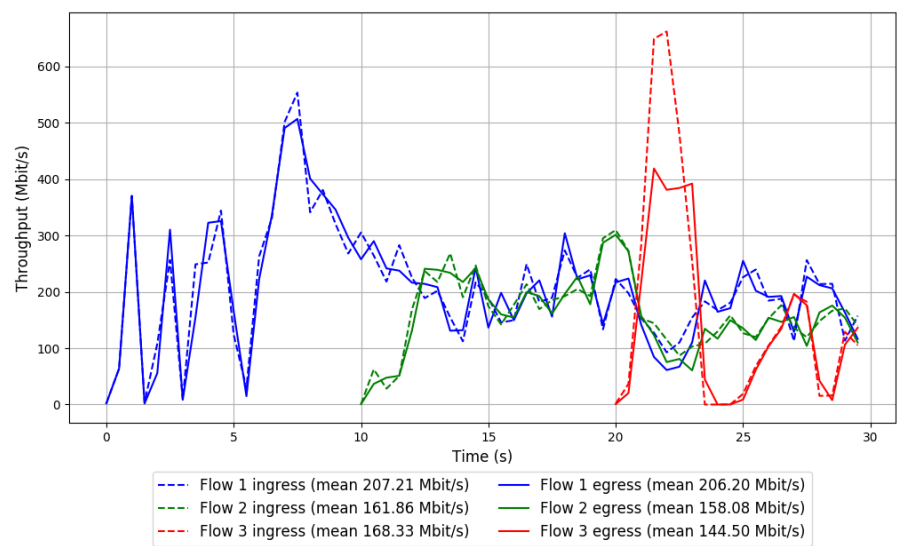
-- Flow 3:

Average throughput: 144.50 Mbit/s

95th percentile per-packet one-way delay: 311.650 ms

Loss rate: 15.23%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-02-17 11:20:28

End at: 2018-02-17 11:20:58

Below is generated by plot.py at 2018-02-17 16:34:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 333.33 Mbit/s

95th percentile per-packet one-way delay: 146.315 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 186.36 Mbit/s

95th percentile per-packet one-way delay: 133.277 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 152.38 Mbit/s

95th percentile per-packet one-way delay: 124.528 ms

Loss rate: 0.96%

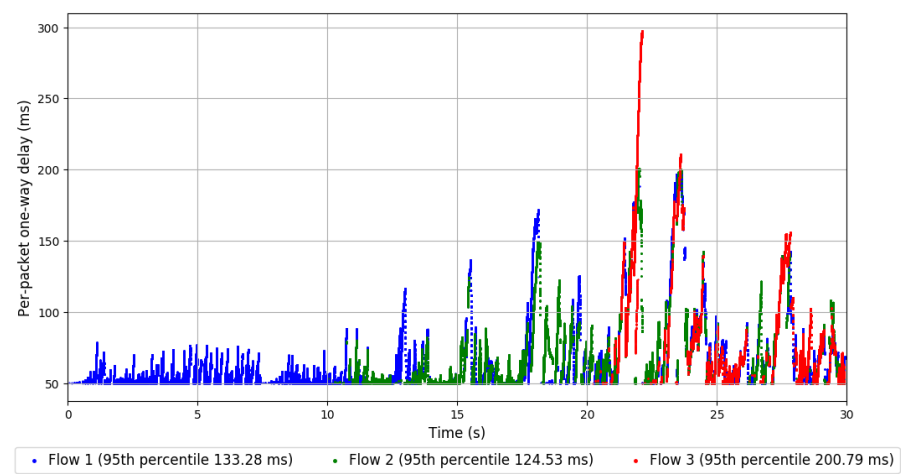
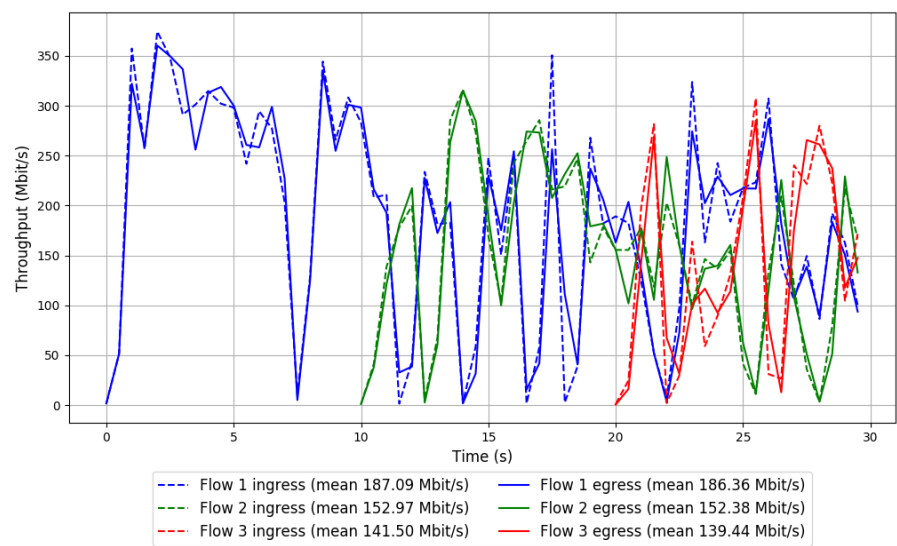
-- Flow 3:

Average throughput: 139.44 Mbit/s

95th percentile per-packet one-way delay: 200.790 ms

Loss rate: 2.17%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-02-17 11:38:37

End at: 2018-02-17 11:39:07

Below is generated by plot.py at 2018-02-17 16:35:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 334.37 Mbit/s

95th percentile per-packet one-way delay: 108.270 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 210.04 Mbit/s

95th percentile per-packet one-way delay: 104.070 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 146.10 Mbit/s

95th percentile per-packet one-way delay: 108.981 ms

Loss rate: 0.94%

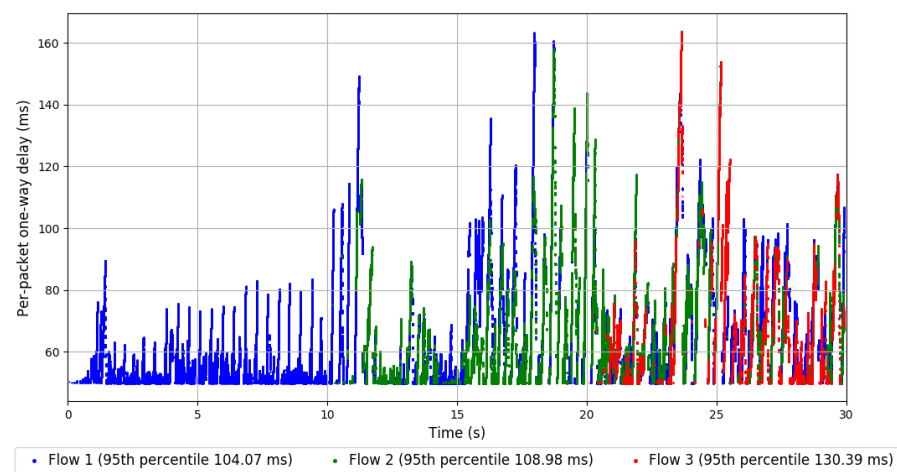
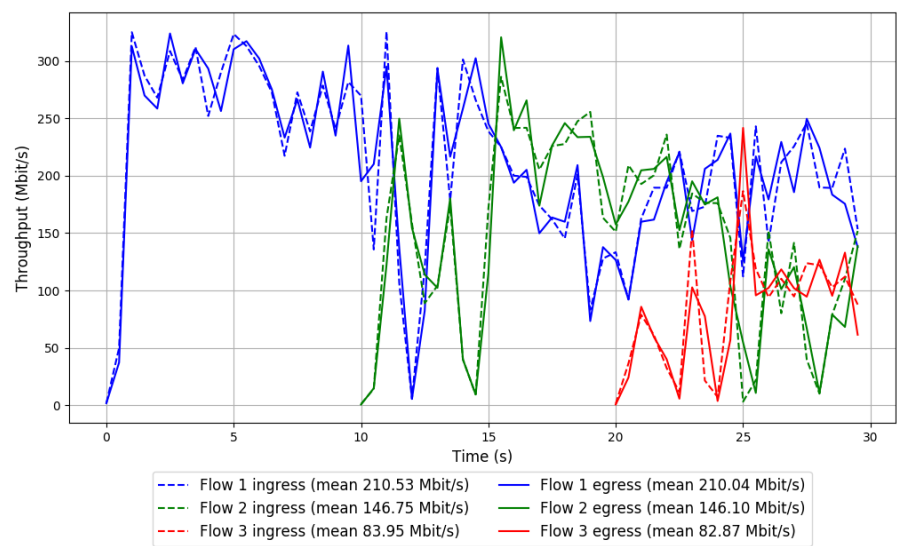
-- Flow 3:

Average throughput: 82.87 Mbit/s

95th percentile per-packet one-way delay: 130.391 ms

Loss rate: 2.24%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-02-17 11:56:19

End at: 2018-02-17 11:56:49

Below is generated by plot.py at 2018-02-17 16:36:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 317.19 Mbit/s

95th percentile per-packet one-way delay: 175.658 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 199.09 Mbit/s

95th percentile per-packet one-way delay: 155.546 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 122.76 Mbit/s

95th percentile per-packet one-way delay: 191.746 ms

Loss rate: 1.36%

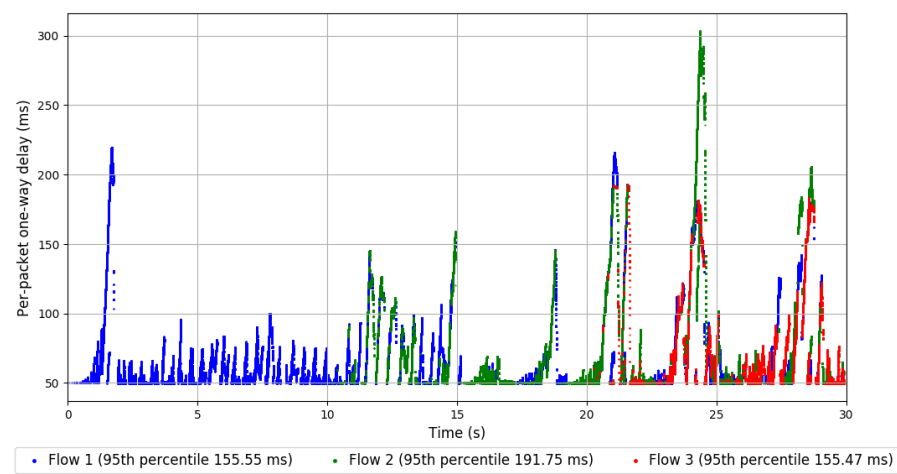
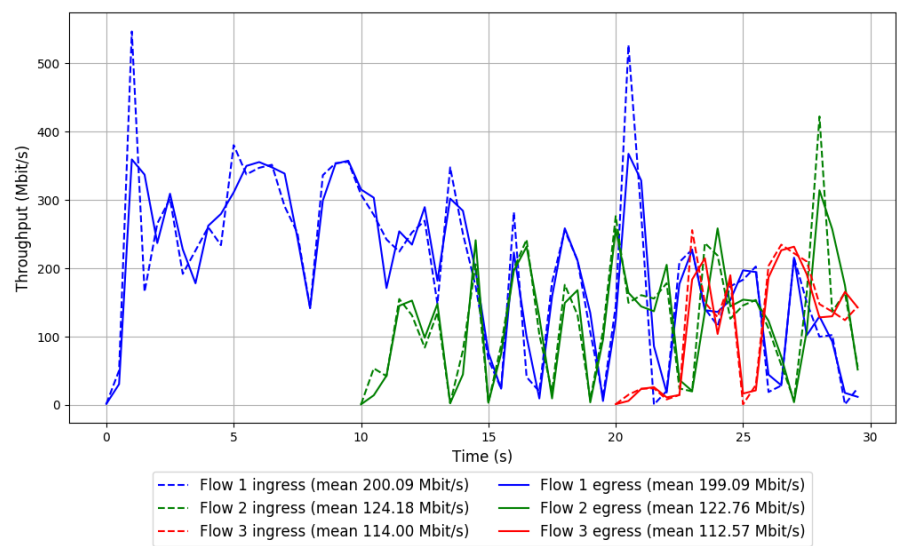
-- Flow 3:

Average throughput: 112.57 Mbit/s

95th percentile per-packet one-way delay: 155.467 ms

Loss rate: 1.87%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-02-17 12:14:24

End at: 2018-02-17 12:14:54

Below is generated by plot.py at 2018-02-17 16:39:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 371.53 Mbit/s

95th percentile per-packet one-way delay: 178.971 ms

Loss rate: 2.17%

-- Flow 1:

Average throughput: 205.45 Mbit/s

95th percentile per-packet one-way delay: 162.502 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 152.71 Mbit/s

95th percentile per-packet one-way delay: 163.547 ms

Loss rate: 1.37%

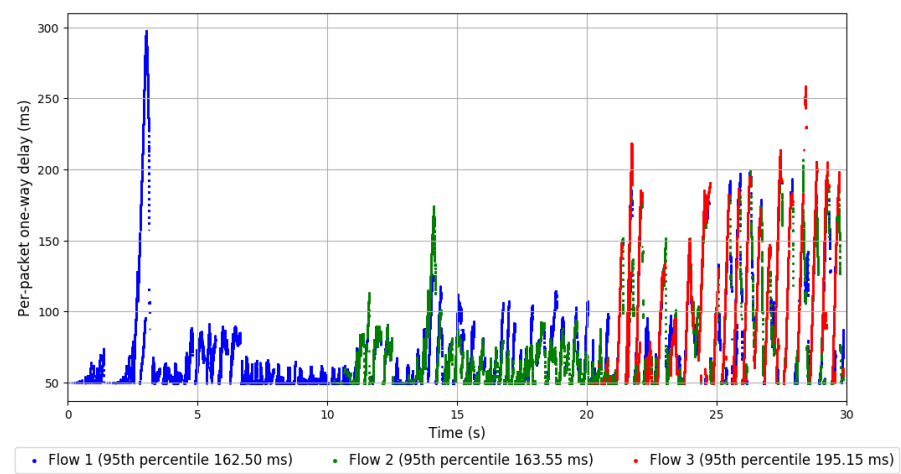
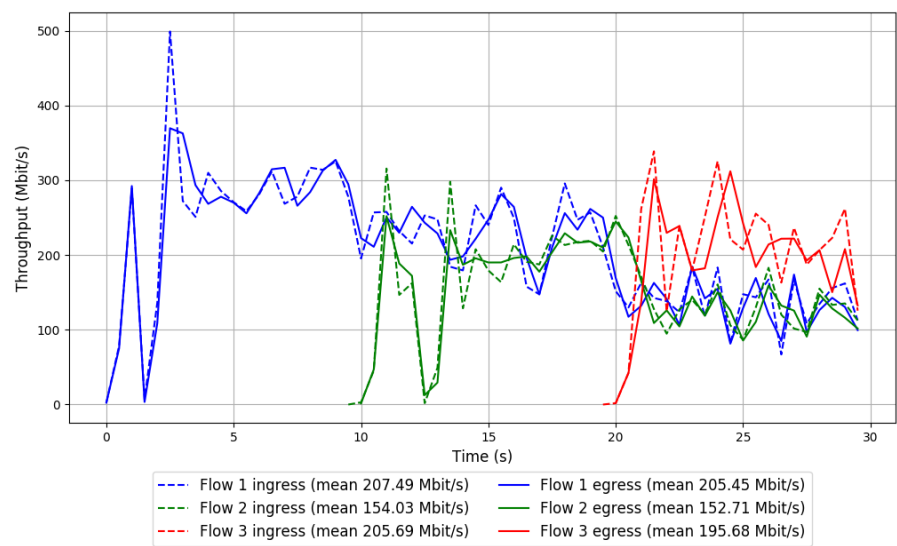
-- Flow 3:

Average throughput: 195.68 Mbit/s

95th percentile per-packet one-way delay: 195.145 ms

Loss rate: 5.91%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-02-17 09:36:49

End at: 2018-02-17 09:37:19

Below is generated by plot.py at 2018-02-17 16:39:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 149.09 Mbit/s

95th percentile per-packet one-way delay: 53.924 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 94.15 Mbit/s

95th percentile per-packet one-way delay: 53.950 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 66.95 Mbit/s

95th percentile per-packet one-way delay: 53.817 ms

Loss rate: 0.50%

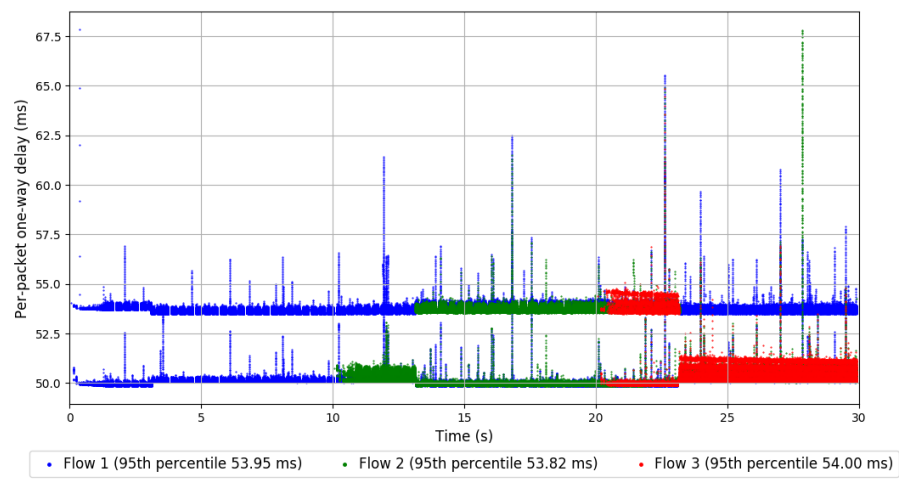
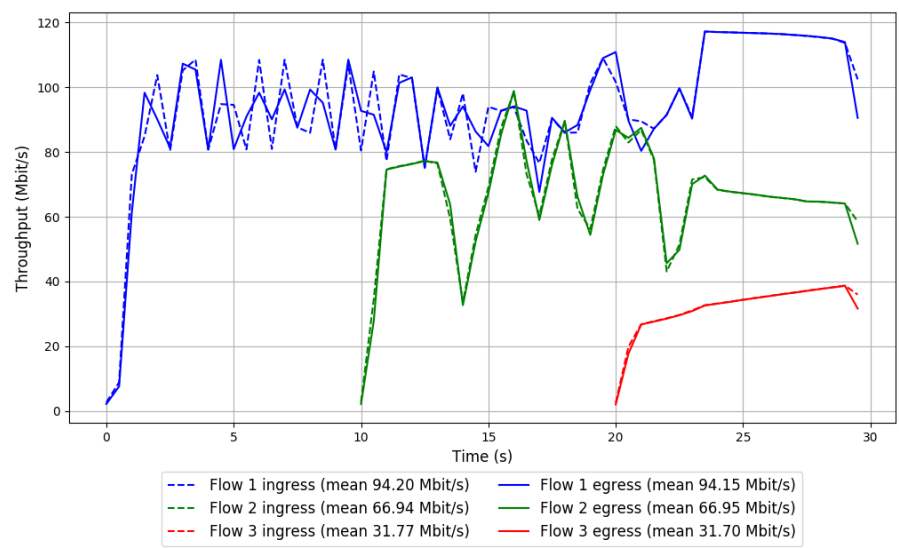
-- Flow 3:

Average throughput: 31.70 Mbit/s

95th percentile per-packet one-way delay: 54.000 ms

Loss rate: 1.30%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-02-17 09:54:39

End at: 2018-02-17 09:55:09

Below is generated by plot.py at 2018-02-17 16:39:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 156.06 Mbit/s

95th percentile per-packet one-way delay: 53.634 ms

Loss rate: 0.34%

-- Flow 1:

Average throughput: 64.50 Mbit/s

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

Loss rate: 0.20%

-- Flow 2:

Average throughput: 94.26 Mbit/s

95th percentile per-packet one-way delay: 50.148 ms

Loss rate: 0.31%

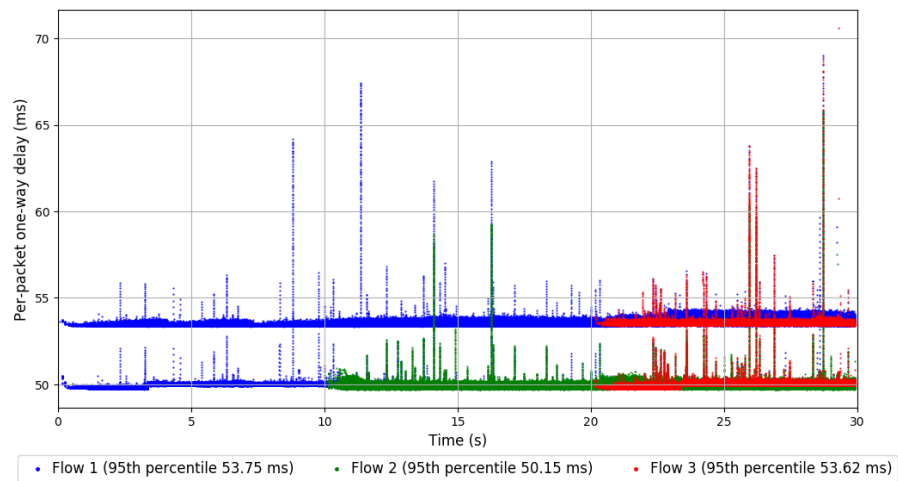
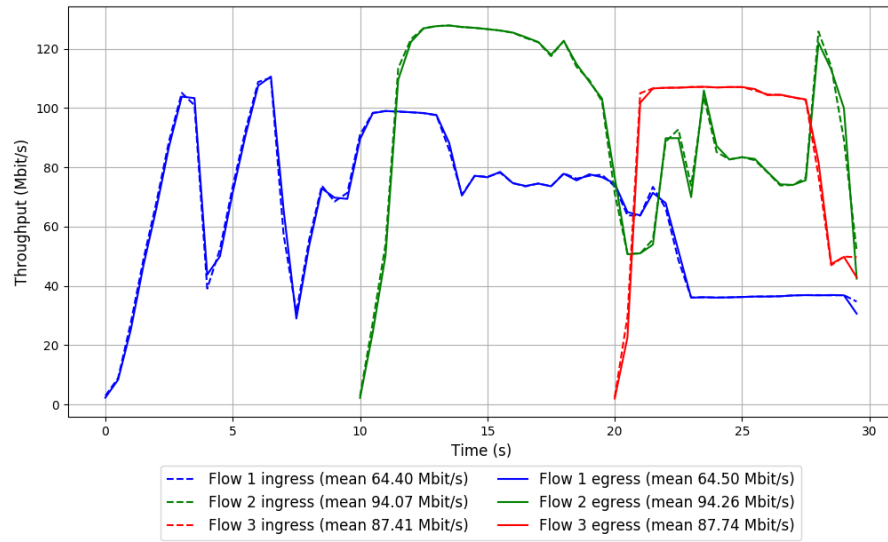
-- Flow 3:

Average throughput: 87.74 Mbit/s

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

Loss rate: 0.69%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-02-17 10:12:06

End at: 2018-02-17 10:12:36

Below is generated by plot.py at 2018-02-17 16:41:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 218.25 Mbit/s

95th percentile per-packet one-way delay: 226.579 ms

Loss rate: 13.29%

-- Flow 1:

Average throughput: 92.35 Mbit/s

95th percentile per-packet one-way delay: 57.801 ms

Loss rate: 6.49%

-- Flow 2:

Average throughput: 144.48 Mbit/s

95th percentile per-packet one-way delay: 248.249 ms

Loss rate: 21.16%

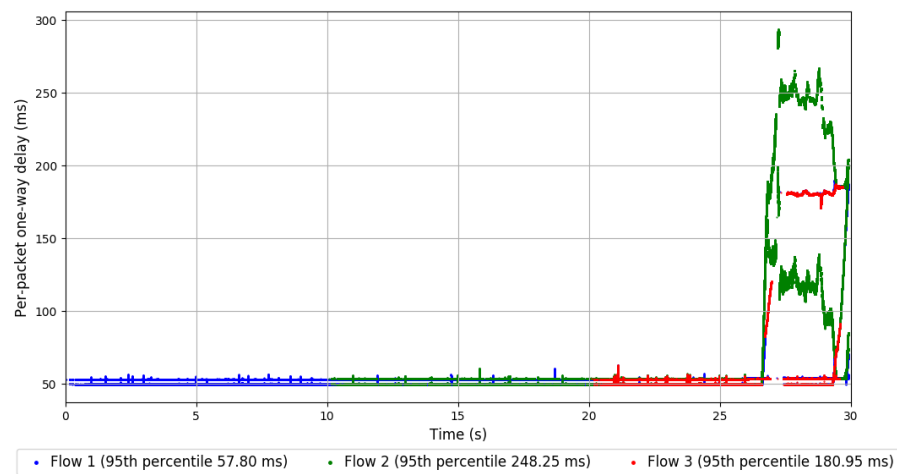
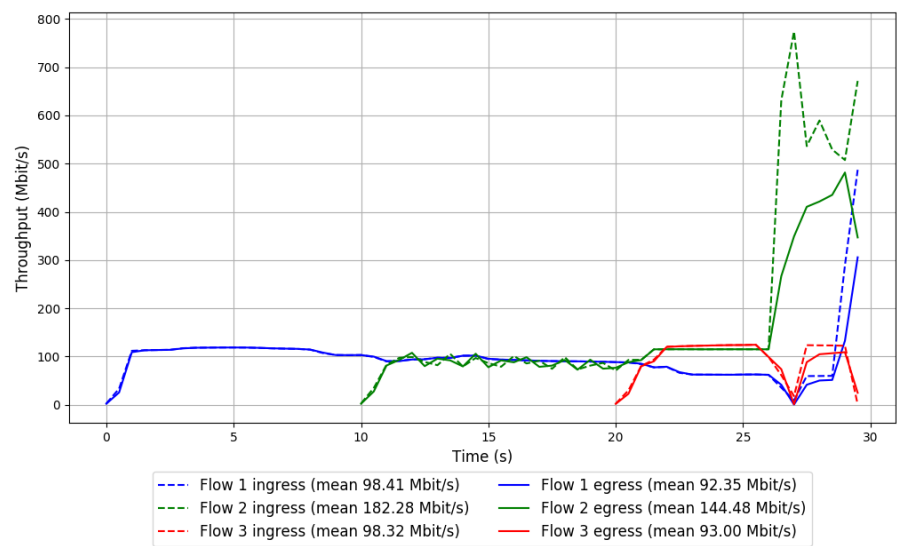
-- Flow 3:

Average throughput: 93.00 Mbit/s

95th percentile per-packet one-way delay: 180.947 ms

Loss rate: 4.09%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-02-17 10:30:06

End at: 2018-02-17 10:30:36

Below is generated by plot.py at 2018-02-17 16:41:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 176.32 Mbit/s

95th percentile per-packet one-way delay: 53.584 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 97.44 Mbit/s

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

Loss rate: 0.28%

-- Flow 2:

Average throughput: 96.55 Mbit/s

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

Loss rate: 0.65%

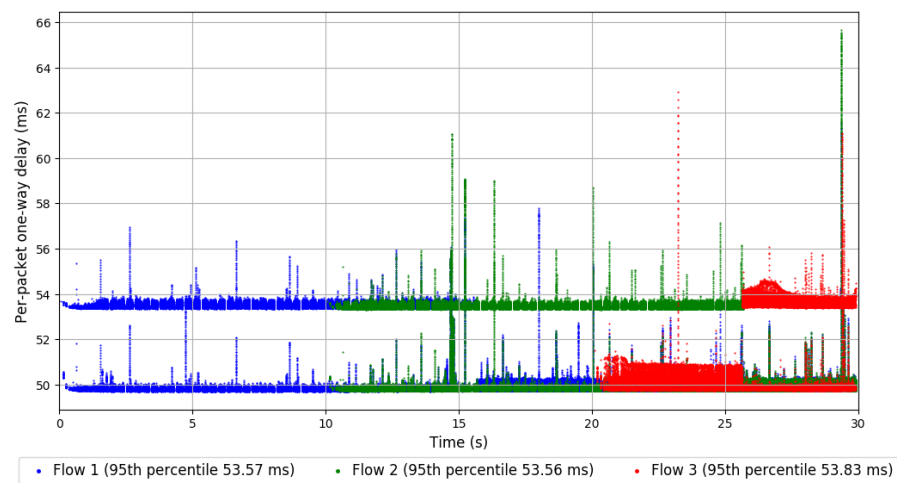
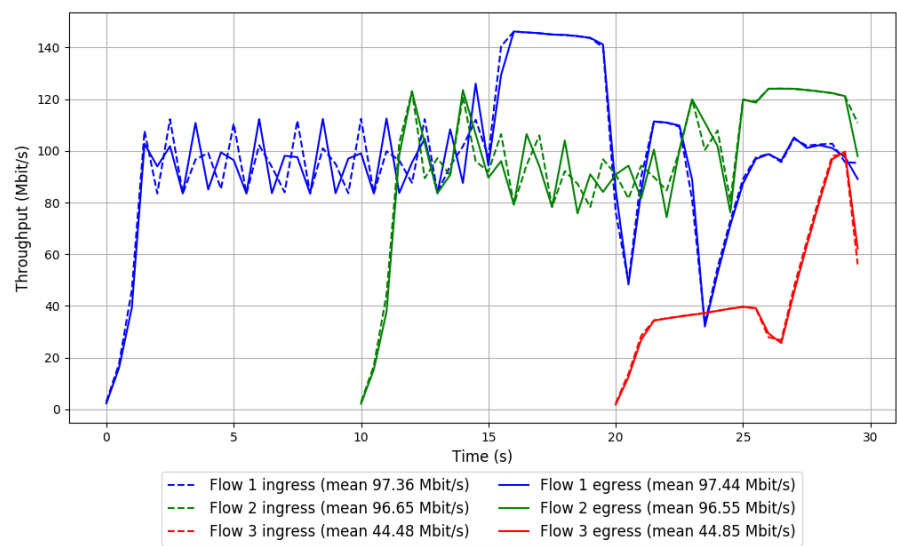
-- Flow 3:

Average throughput: 44.85 Mbit/s

95th percentile per-packet one-way delay: 53.833 ms

Loss rate: 0.38%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-02-17 10:47:53

End at: 2018-02-17 10:48:23

Below is generated by plot.py at 2018-02-17 16:41:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 169.30 Mbit/s

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

Loss rate: 0.23%

-- Flow 1:

Average throughput: 87.41 Mbit/s

95th percentile per-packet one-way delay: 50.007 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 90.05 Mbit/s

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

Loss rate: 0.06%

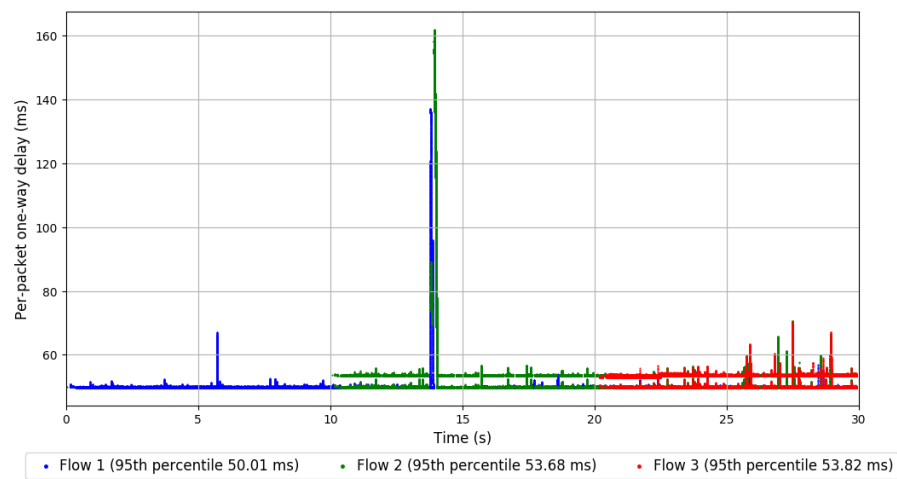
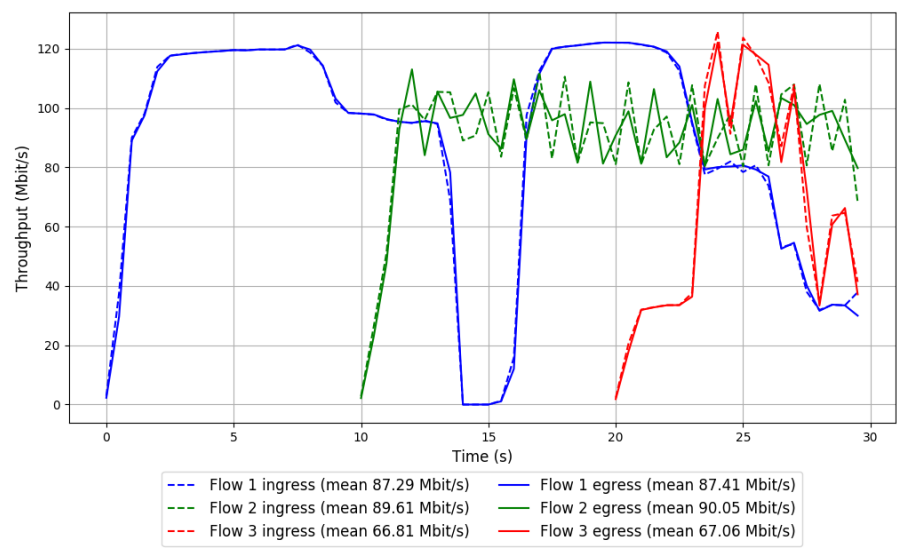
-- Flow 3:

Average throughput: 67.06 Mbit/s

95th percentile per-packet one-way delay: 53.822 ms

Loss rate: 0.72%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-02-17 11:05:48

End at: 2018-02-17 11:06:18

Below is generated by plot.py at 2018-02-17 16:41:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 165.47 Mbit/s

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

Loss rate: 0.55%

-- Flow 1:

Average throughput: 88.45 Mbit/s

95th percentile per-packet one-way delay: 53.688 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 85.86 Mbit/s

95th percentile per-packet one-way delay: 50.043 ms

Loss rate: 0.47%

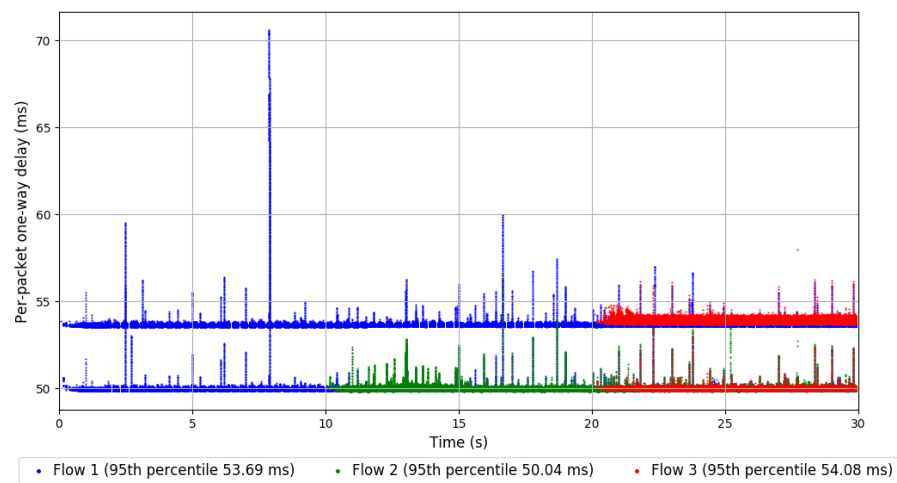
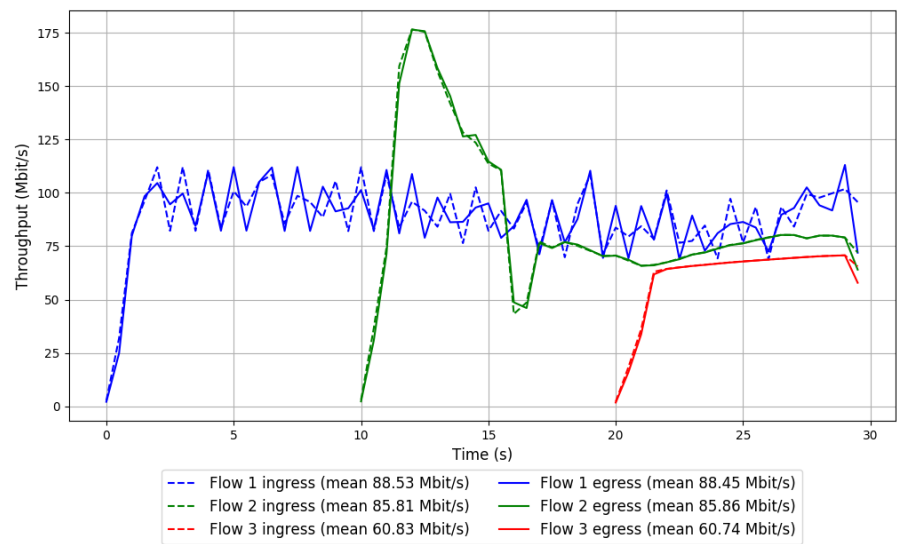
-- Flow 3:

Average throughput: 60.74 Mbit/s

95th percentile per-packet one-way delay: 54.082 ms

Loss rate: 1.23%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-02-17 11:23:46

End at: 2018-02-17 11:24:16

Below is generated by plot.py at 2018-02-17 16:41:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 143.45 Mbit/s

95th percentile per-packet one-way delay: 53.822 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 60.36 Mbit/s

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

Loss rate: 0.31%

-- Flow 2:

Average throughput: 83.86 Mbit/s

95th percentile per-packet one-way delay: 53.763 ms

Loss rate: 0.74%

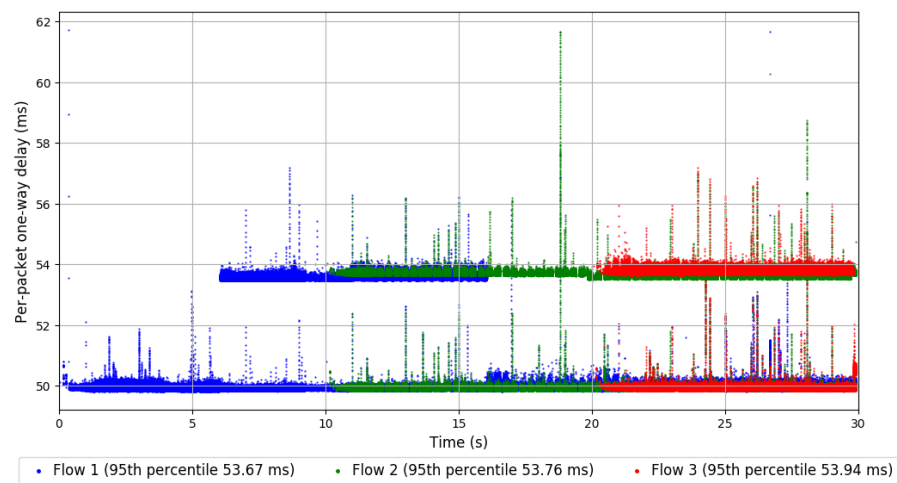
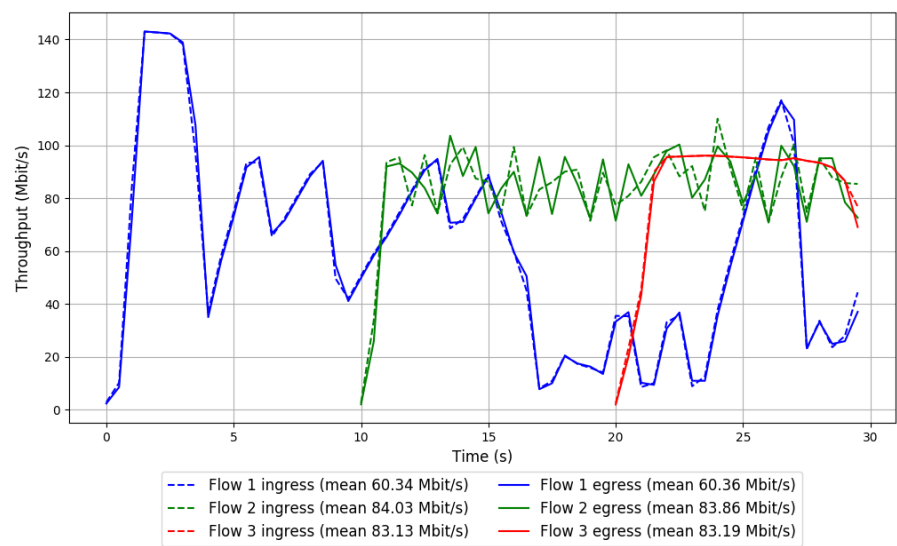
-- Flow 3:

Average throughput: 83.19 Mbit/s

95th percentile per-packet one-way delay: 53.943 ms

Loss rate: 1.02%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-02-17 11:41:46

End at: 2018-02-17 11:42:16

Below is generated by plot.py at 2018-02-17 16:43:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.35 Mbit/s

95th percentile per-packet one-way delay: 281.140 ms

Loss rate: 21.18%

-- Flow 1:

Average throughput: 87.43 Mbit/s

95th percentile per-packet one-way delay: 53.851 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 48.50 Mbit/s

95th percentile per-packet one-way delay: 53.979 ms

Loss rate: 0.07%

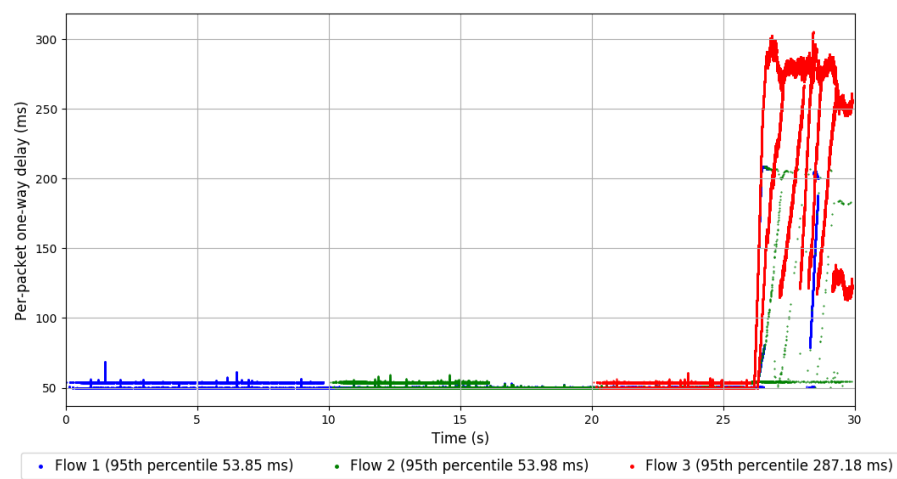
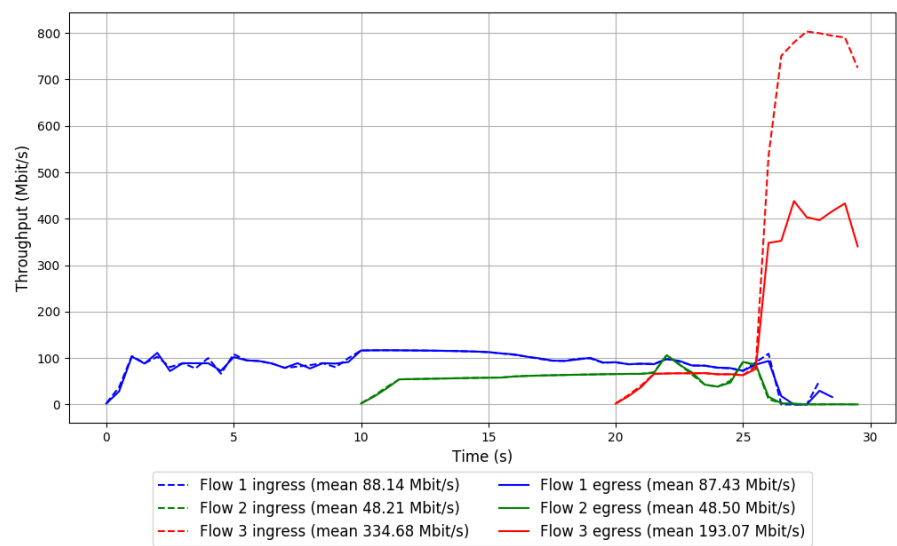
-- Flow 3:

Average throughput: 193.07 Mbit/s

95th percentile per-packet one-way delay: 287.177 ms

Loss rate: 43.01%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-02-17 11:59:34

End at: 2018-02-17 12:00:04

Below is generated by plot.py at 2018-02-17 16:43:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 153.70 Mbit/s

95th percentile per-packet one-way delay: 50.028 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 77.32 Mbit/s

95th percentile per-packet one-way delay: 50.097 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 77.34 Mbit/s

95th percentile per-packet one-way delay: 49.901 ms

Loss rate: 0.31%

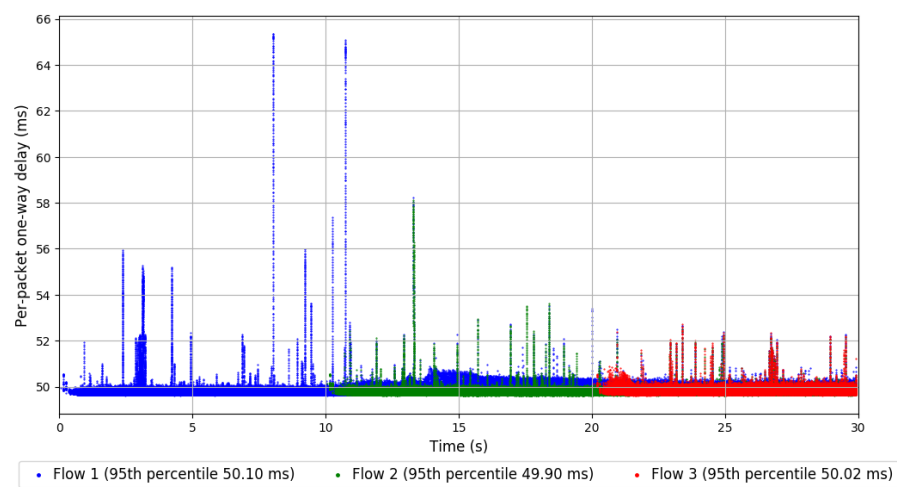
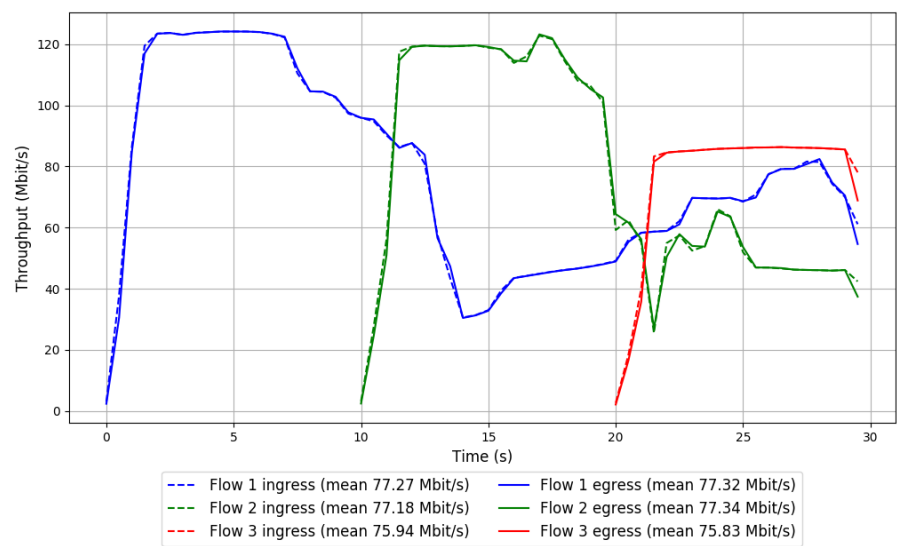
-- Flow 3:

Average throughput: 75.83 Mbit/s

95th percentile per-packet one-way delay: 50.025 ms

Loss rate: 1.17%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

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

End at: 2018-02-17 12:18:13

Below is generated by plot.py at 2018-02-17 16:48:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 311.35 Mbit/s

95th percentile per-packet one-way delay: 247.755 ms

Loss rate: 22.12%

-- Flow 1:

Average throughput: 134.71 Mbit/s

95th percentile per-packet one-way delay: 215.925 ms

Loss rate: 20.09%

-- Flow 2:

Average throughput: 265.54 Mbit/s

95th percentile per-packet one-way delay: 249.563 ms

Loss rate: 23.60%

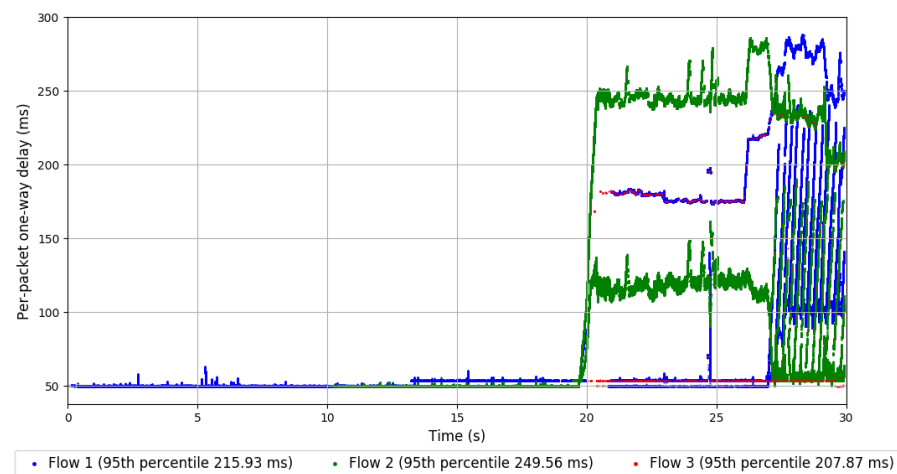
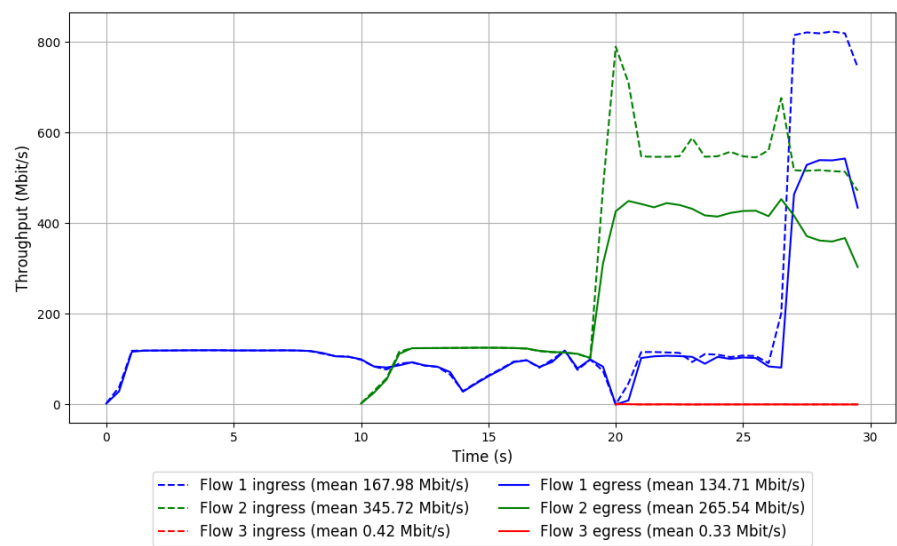
-- Flow 3:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 207.868 ms

Loss rate: 23.18%

Run 10: Report of Copa — Data Link

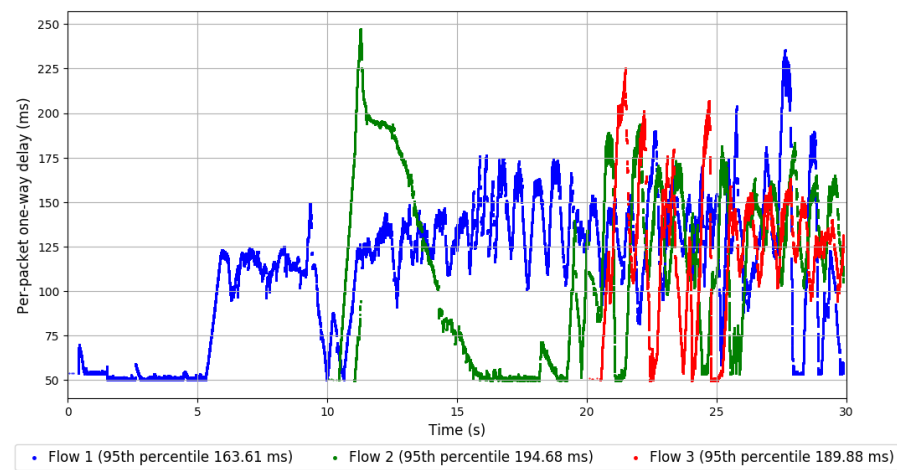
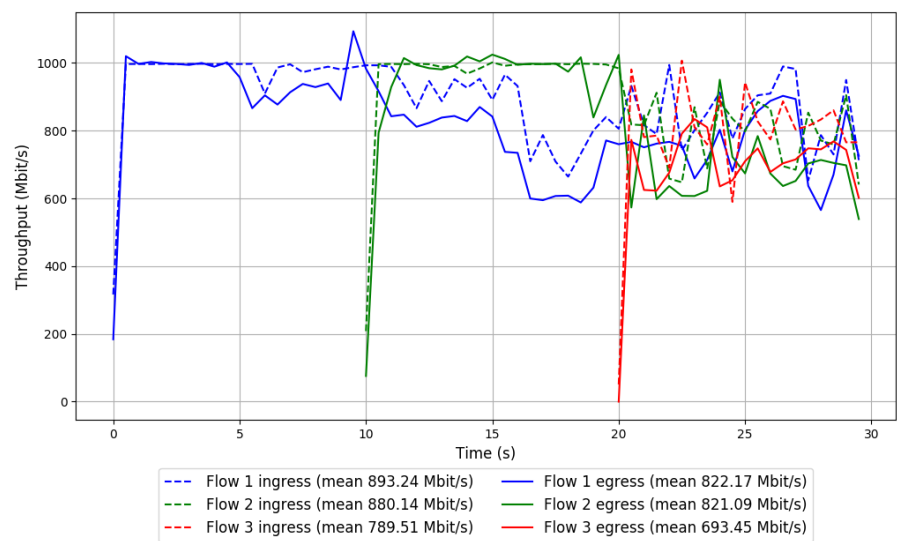


```
Run 1: Statistics of FillP

Start at: 2018-02-17 09:43:21
End at: 2018-02-17 09:43:51

# Below is generated by plot.py at 2018-02-17 17:08:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1595.51 Mbit/s
95th percentile per-packet one-way delay: 183.822 ms
Loss rate: 8.64%
-- Flow 1:
Average throughput: 822.17 Mbit/s
95th percentile per-packet one-way delay: 163.607 ms
Loss rate: 8.29%
-- Flow 2:
Average throughput: 821.09 Mbit/s
95th percentile per-packet one-way delay: 194.677 ms
Loss rate: 7.20%
-- Flow 3:
Average throughput: 693.45 Mbit/s
95th percentile per-packet one-way delay: 189.875 ms
Loss rate: 13.09%
```


Run 1: Report of FillP — Data Link

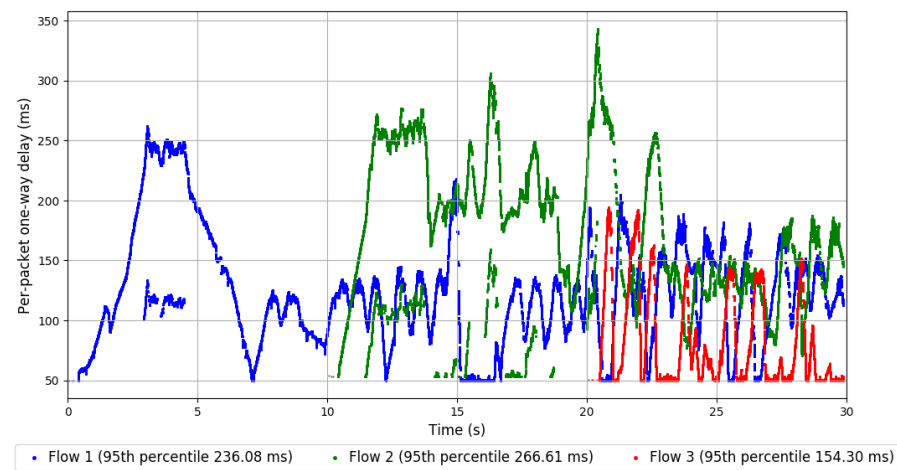
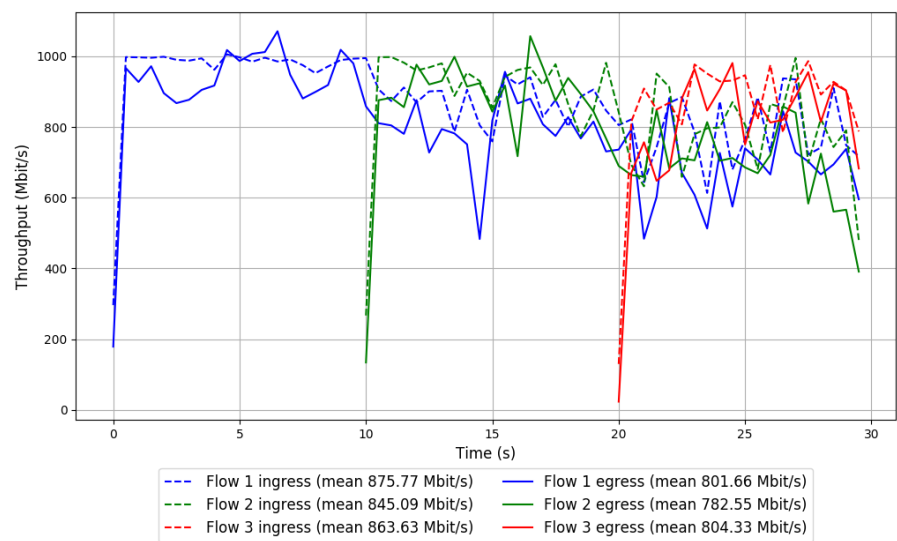


```
Run 2: Statistics of FillP

Start at: 2018-02-17 10:01:18
End at: 2018-02-17 10:01:48

# Below is generated by plot.py at 2018-02-17 17:08:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1586.08 Mbit/s
95th percentile per-packet one-way delay: 251.298 ms
Loss rate: 8.34%
-- Flow 1:
Average throughput: 801.66 Mbit/s
95th percentile per-packet one-way delay: 236.084 ms
Loss rate: 8.78%
-- Flow 2:
Average throughput: 782.55 Mbit/s
95th percentile per-packet one-way delay: 266.614 ms
Loss rate: 7.90%
-- Flow 3:
Average throughput: 804.33 Mbit/s
95th percentile per-packet one-way delay: 154.300 ms
Loss rate: 7.85%
```

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-02-17 10:18:45

End at: 2018-02-17 10:19:15

Below is generated by plot.py at 2018-02-17 17:09:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 1615.01 Mbit/s

95th percentile per-packet one-way delay: 210.119 ms

Loss rate: 8.53%

-- Flow 1:

Average throughput: 816.11 Mbit/s

95th percentile per-packet one-way delay: 180.567 ms

Loss rate: 9.37%

-- Flow 2:

Average throughput: 830.29 Mbit/s

95th percentile per-packet one-way delay: 225.301 ms

Loss rate: 6.27%

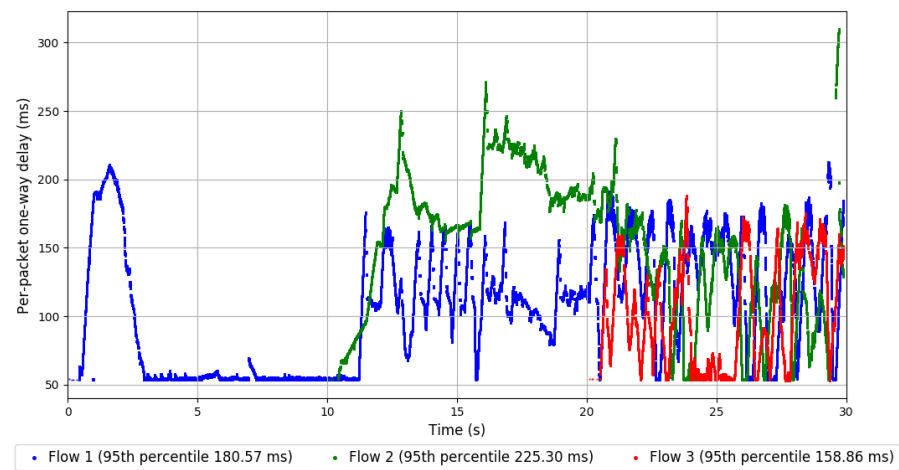
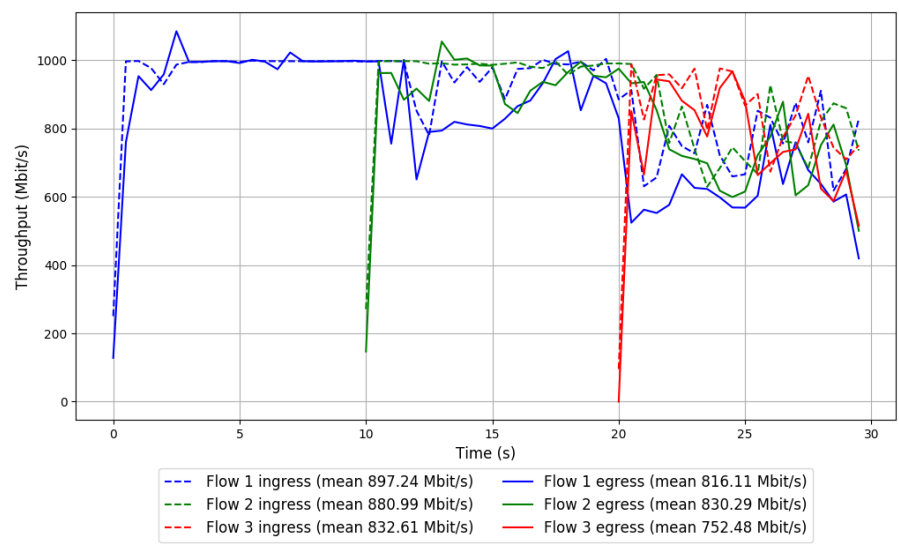
-- Flow 3:

Average throughput: 752.48 Mbit/s

95th percentile per-packet one-way delay: 158.857 ms

Loss rate: 10.61%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-02-17 10:36:40

End at: 2018-02-17 10:37:10

Below is generated by plot.py at 2018-02-17 17:09:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 1547.39 Mbit/s

95th percentile per-packet one-way delay: 279.421 ms

Loss rate: 7.85%

-- Flow 1:

Average throughput: 866.85 Mbit/s

95th percentile per-packet one-way delay: 177.577 ms

Loss rate: 5.54%

-- Flow 2:

Average throughput: 730.69 Mbit/s

95th percentile per-packet one-way delay: 290.959 ms

Loss rate: 9.76%

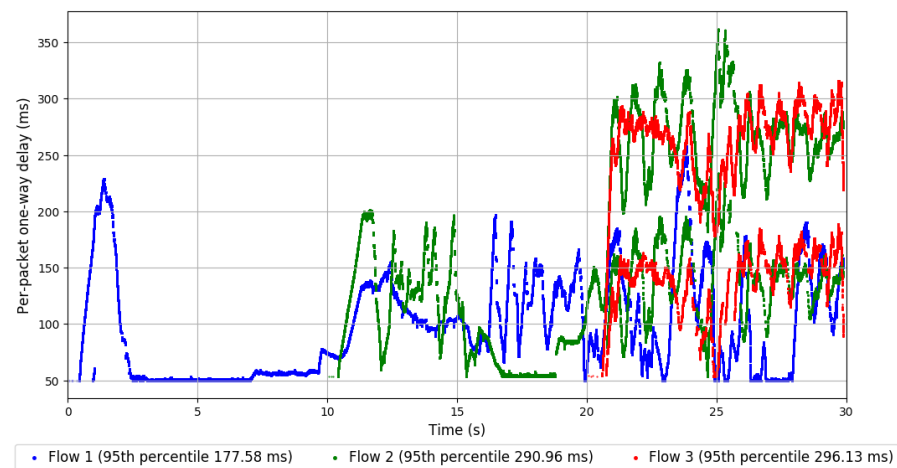
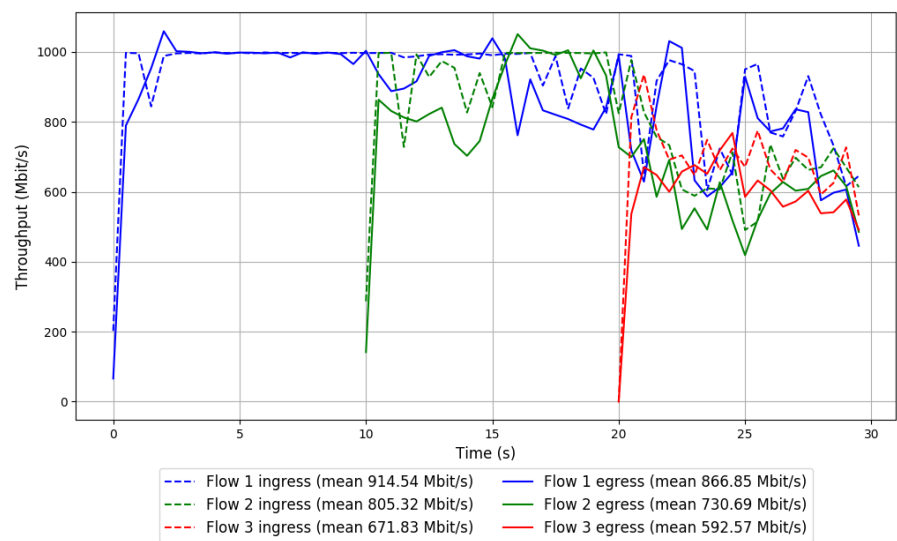
-- Flow 3:

Average throughput: 592.57 Mbit/s

95th percentile per-packet one-way delay: 296.129 ms

Loss rate: 12.76%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-02-17 10:54:31

End at: 2018-02-17 10:55:01

Below is generated by plot.py at 2018-02-17 17:09:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 1555.96 Mbit/s

95th percentile per-packet one-way delay: 281.298 ms

Loss rate: 9.94%

-- Flow 1:

Average throughput: 806.10 Mbit/s

95th percentile per-packet one-way delay: 296.394 ms

Loss rate: 9.61%

-- Flow 2:

Average throughput: 827.45 Mbit/s

95th percentile per-packet one-way delay: 279.191 ms

Loss rate: 7.57%

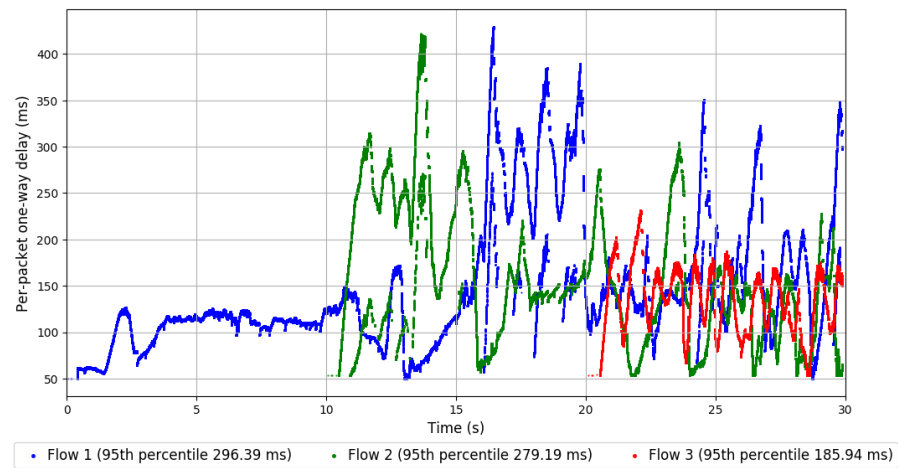
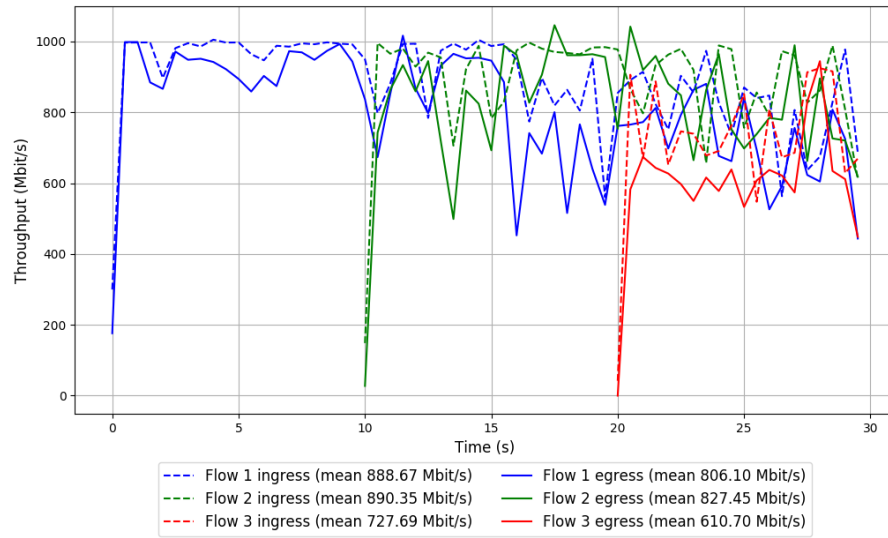
-- Flow 3:

Average throughput: 610.70 Mbit/s

95th percentile per-packet one-way delay: 185.940 ms

Loss rate: 16.99%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-02-17 11:12:27

End at: 2018-02-17 11:12:57

Below is generated by plot.py at 2018-02-17 17:12:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 1571.00 Mbit/s

95th percentile per-packet one-way delay: 274.179 ms

Loss rate: 9.49%

-- Flow 1:

Average throughput: 884.84 Mbit/s

95th percentile per-packet one-way delay: 152.696 ms

Loss rate: 5.32%

-- Flow 2:

Average throughput: 693.84 Mbit/s

95th percentile per-packet one-way delay: 302.859 ms

Loss rate: 15.11%

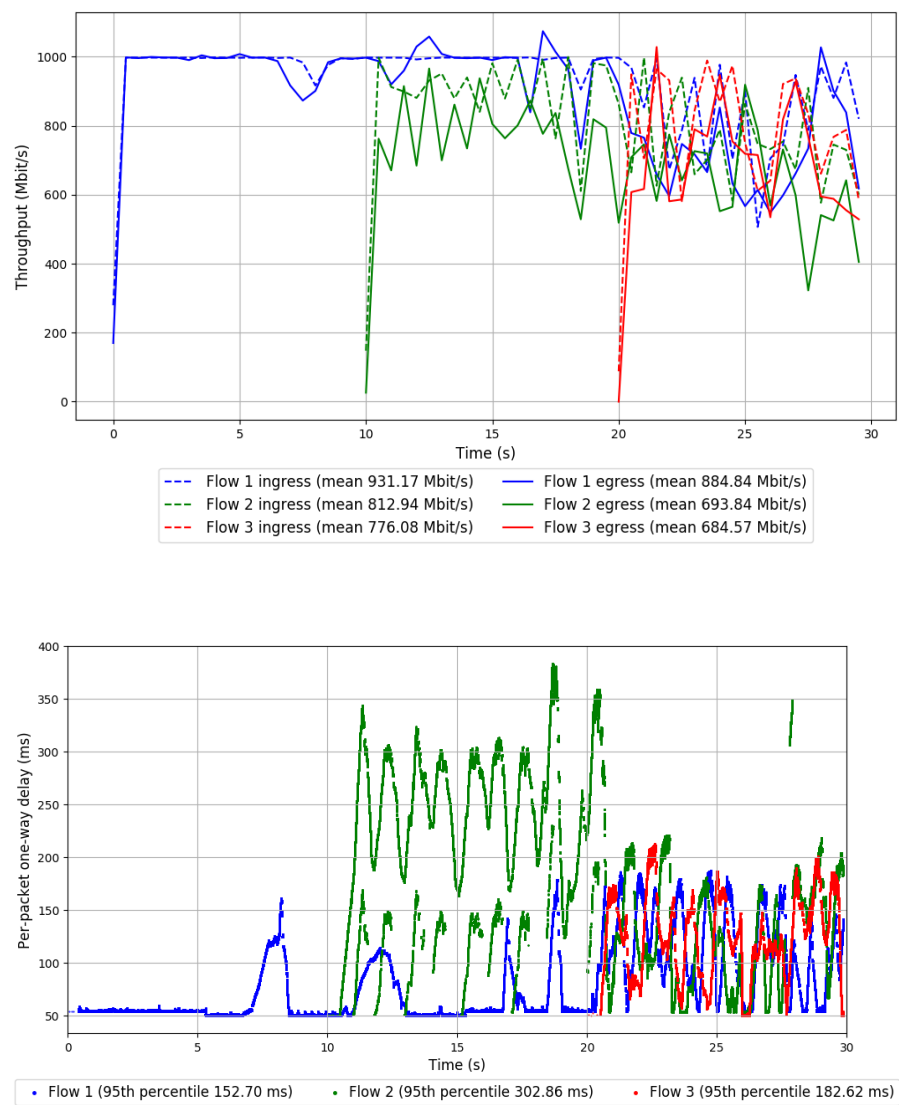
-- Flow 3:

Average throughput: 684.57 Mbit/s

95th percentile per-packet one-way delay: 182.618 ms

Loss rate: 12.73%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-02-17 11:30:24

End at: 2018-02-17 11:30:54

Below is generated by plot.py at 2018-02-17 17:13:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 1625.62 Mbit/s

95th percentile per-packet one-way delay: 183.785 ms

Loss rate: 8.08%

-- Flow 1:

Average throughput: 873.69 Mbit/s

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

Loss rate: 5.50%

-- Flow 2:

Average throughput: 736.59 Mbit/s

95th percentile per-packet one-way delay: 161.154 ms

Loss rate: 12.09%

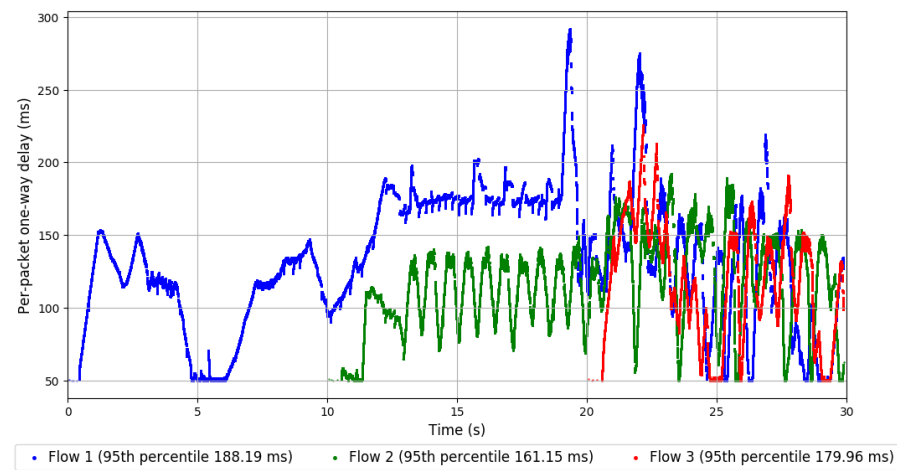
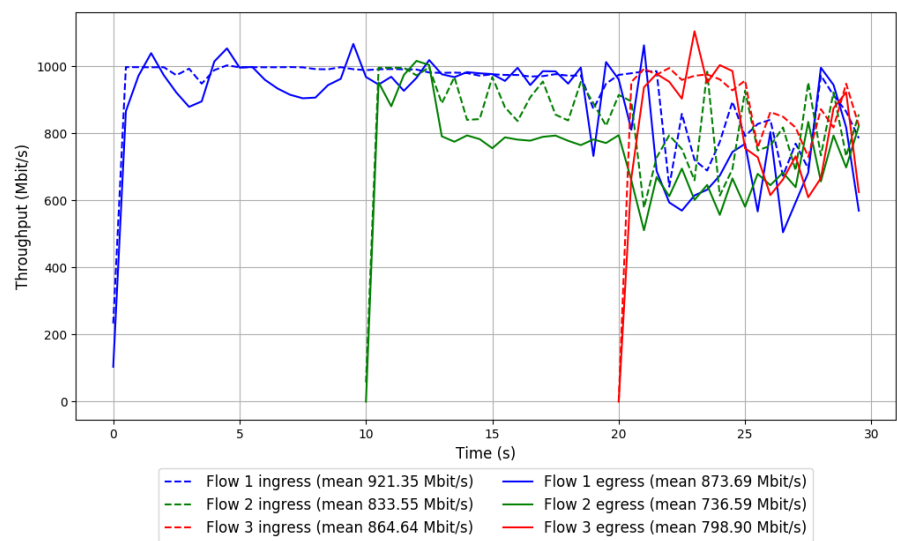
-- Flow 3:

Average throughput: 798.90 Mbit/s

95th percentile per-packet one-way delay: 179.960 ms

Loss rate: 8.59%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-02-17 11:48:24

End at: 2018-02-17 11:48:54

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 1532.84 Mbit/s

95th percentile per-packet one-way delay: 273.329 ms

Loss rate: 11.11%

-- Flow 1:

Average throughput: 814.12 Mbit/s

95th percentile per-packet one-way delay: 276.898 ms

Loss rate: 9.55%

-- Flow 2:

Average throughput: 741.61 Mbit/s

95th percentile per-packet one-way delay: 160.538 ms

Loss rate: 12.87%

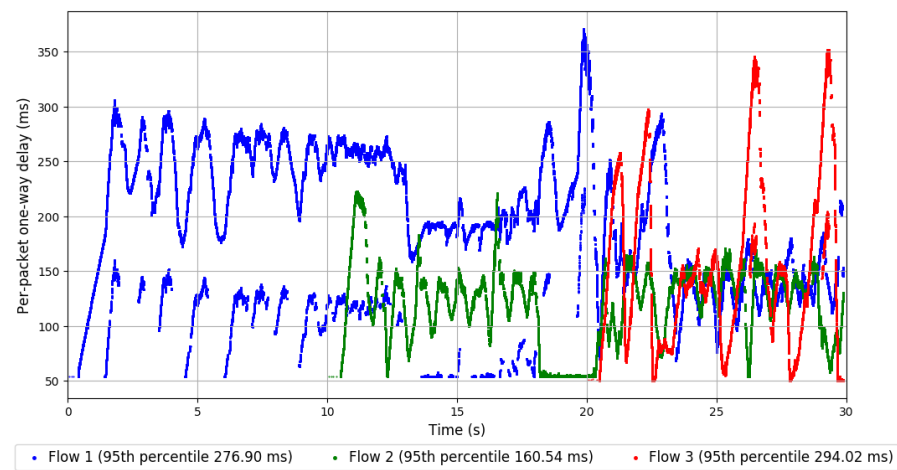
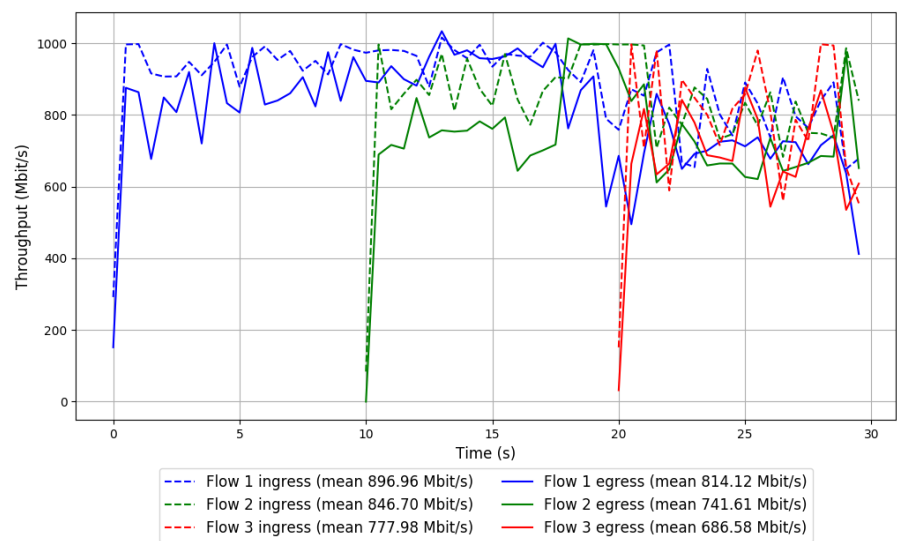
-- Flow 3:

Average throughput: 686.58 Mbit/s

95th percentile per-packet one-way delay: 294.023 ms

Loss rate: 12.65%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-02-17 12:06:15

End at: 2018-02-17 12:06:45

Below is generated by plot.py at 2018-02-17 17:37:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 1496.94 Mbit/s

95th percentile per-packet one-way delay: 266.904 ms

Loss rate: 10.52%

-- Flow 1:

Average throughput: 781.42 Mbit/s

95th percentile per-packet one-way delay: 237.259 ms

Loss rate: 10.82%

-- Flow 2:

Average throughput: 750.72 Mbit/s

95th percentile per-packet one-way delay: 271.092 ms

Loss rate: 9.22%

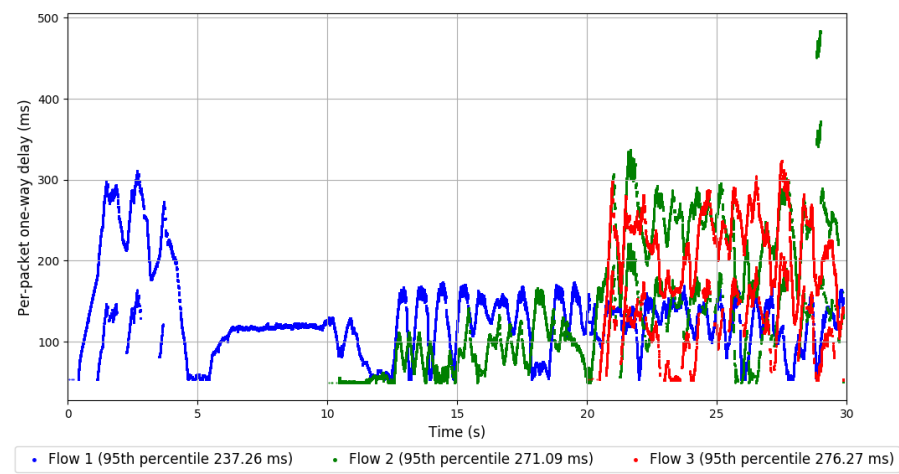
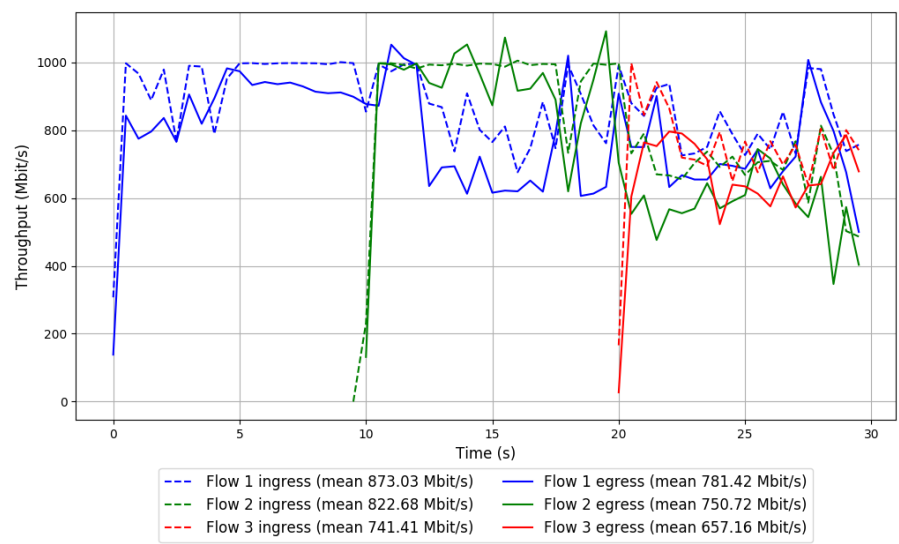
-- Flow 3:

Average throughput: 657.16 Mbit/s

95th percentile per-packet one-way delay: 276.274 ms

Loss rate: 12.33%

Run 9: Report of FillP — Data Link

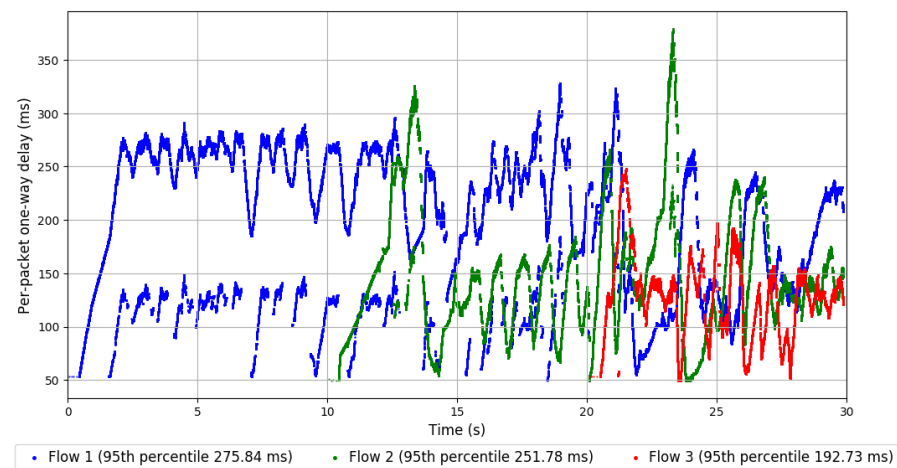
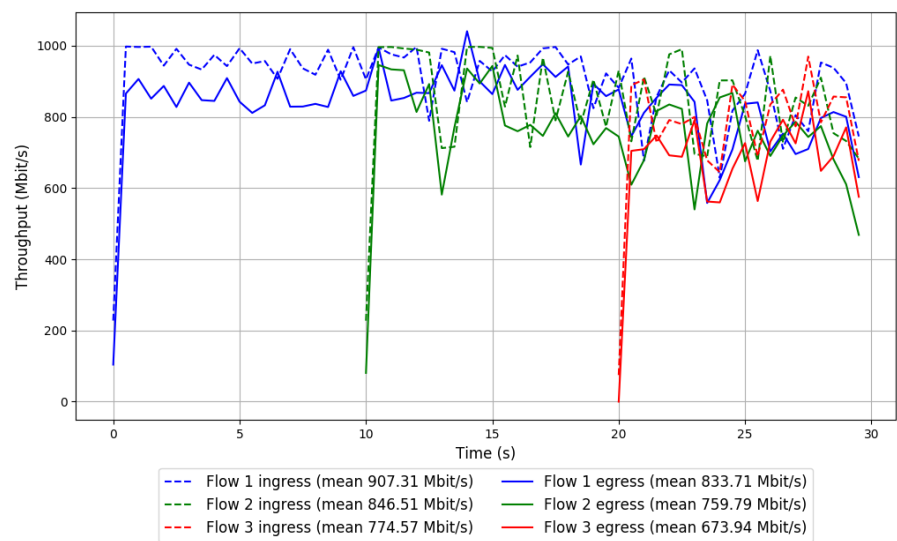


```
Run 10: Statistics of FillP

Start at: 2018-02-17 12:24:30
End at: 2018-02-17 12:25:00

# Below is generated by plot.py at 2018-02-17 17:39:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1560.13 Mbit/s
95th percentile per-packet one-way delay: 273.105 ms
Loss rate: 10.00%
-- Flow 1:
Average throughput: 833.71 Mbit/s
95th percentile per-packet one-way delay: 275.839 ms
Loss rate: 8.44%
-- Flow 2:
Average throughput: 759.79 Mbit/s
95th percentile per-packet one-way delay: 251.785 ms
Loss rate: 10.72%
-- Flow 3:
Average throughput: 673.94 Mbit/s
95th percentile per-packet one-way delay: 192.729 ms
Loss rate: 13.94%
```

Run 10: Report of FillP — Data Link

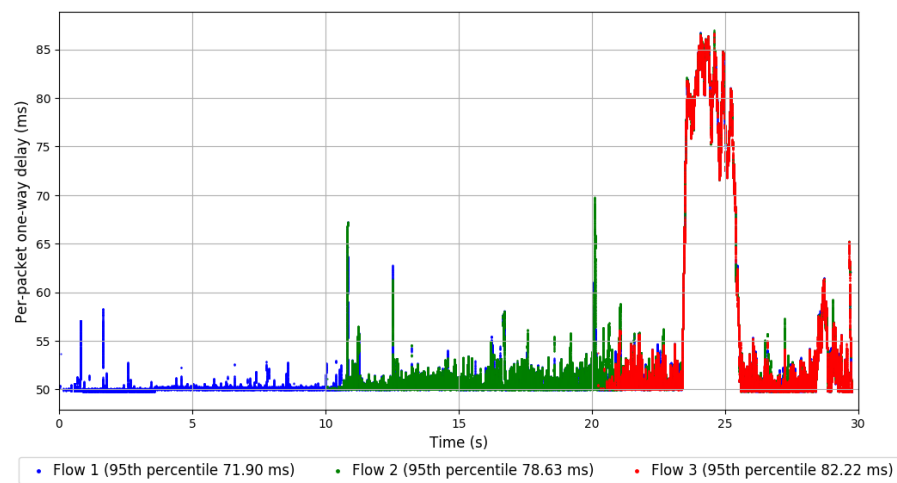
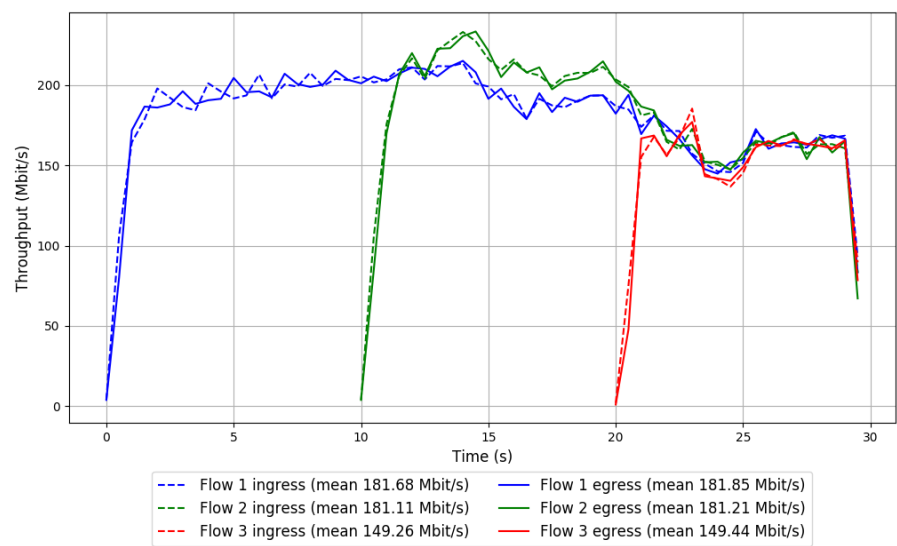


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-02-17 09:42:18
End at: 2018-02-17 09:42:48

# Below is generated by plot.py at 2018-02-17 17:39:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 349.91 Mbit/s
95th percentile per-packet one-way delay: 78.682 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 181.85 Mbit/s
95th percentile per-packet one-way delay: 71.899 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 181.21 Mbit/s
95th percentile per-packet one-way delay: 78.631 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 149.44 Mbit/s
95th percentile per-packet one-way delay: 82.219 ms
Loss rate: 0.96%
```

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

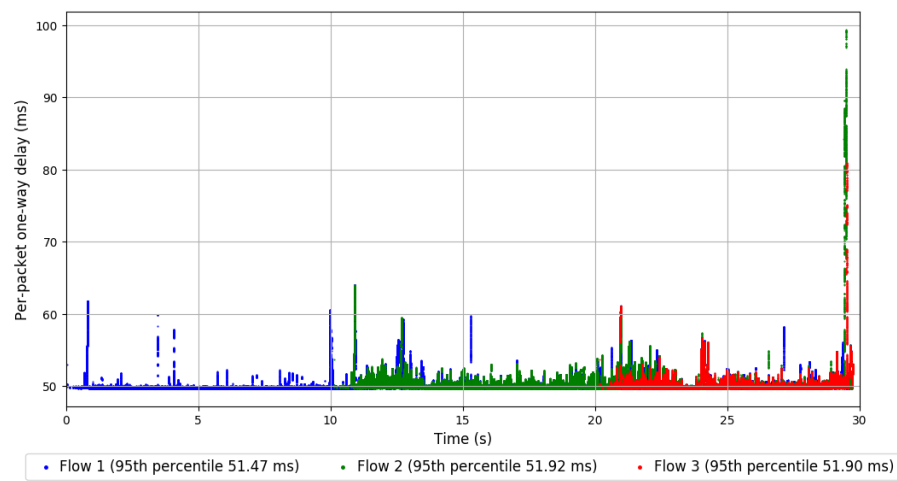
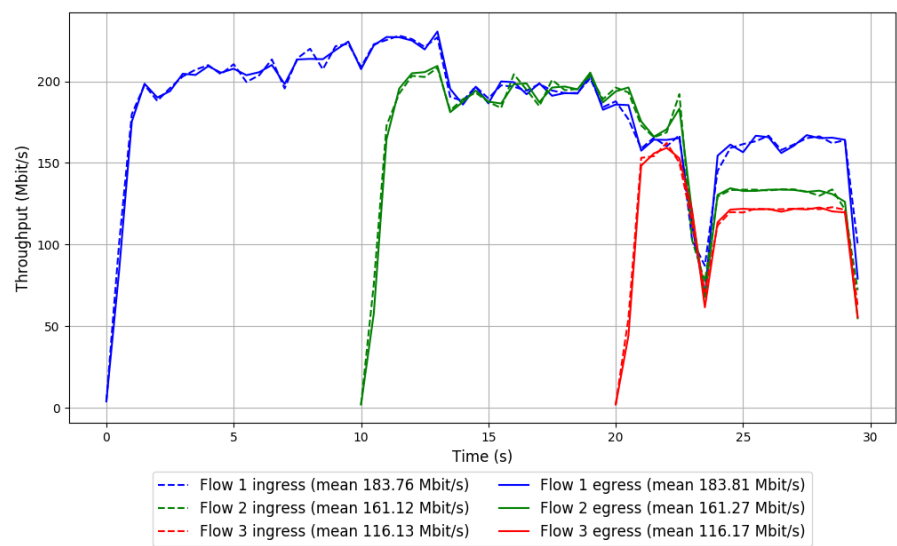


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-02-17 10:00:17
End at: 2018-02-17 10:00:47

# Below is generated by plot.py at 2018-02-17 17:39:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.70 Mbit/s
95th percentile per-packet one-way delay: 51.669 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 183.81 Mbit/s
95th percentile per-packet one-way delay: 51.465 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 161.27 Mbit/s
95th percentile per-packet one-way delay: 51.925 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 116.17 Mbit/s
95th percentile per-packet one-way delay: 51.902 ms
Loss rate: 1.01%
```

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



Run 3: Statistics of Indigo-1-32

Start at: 2018-02-17 10:17:42

End at: 2018-02-17 10:18:12

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 358.88 Mbit/s

95th percentile per-packet one-way delay: 63.743 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 199.39 Mbit/s

95th percentile per-packet one-way delay: 62.337 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 171.28 Mbit/s

95th percentile per-packet one-way delay: 63.813 ms

Loss rate: 0.56%

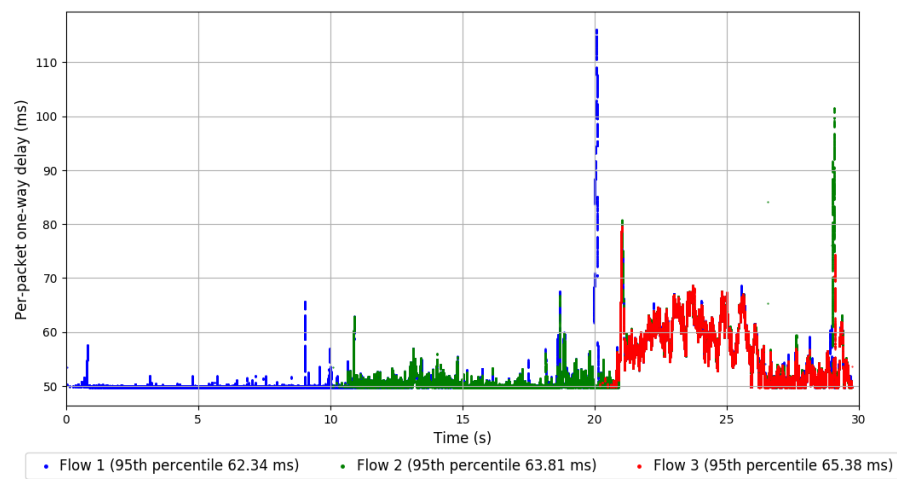
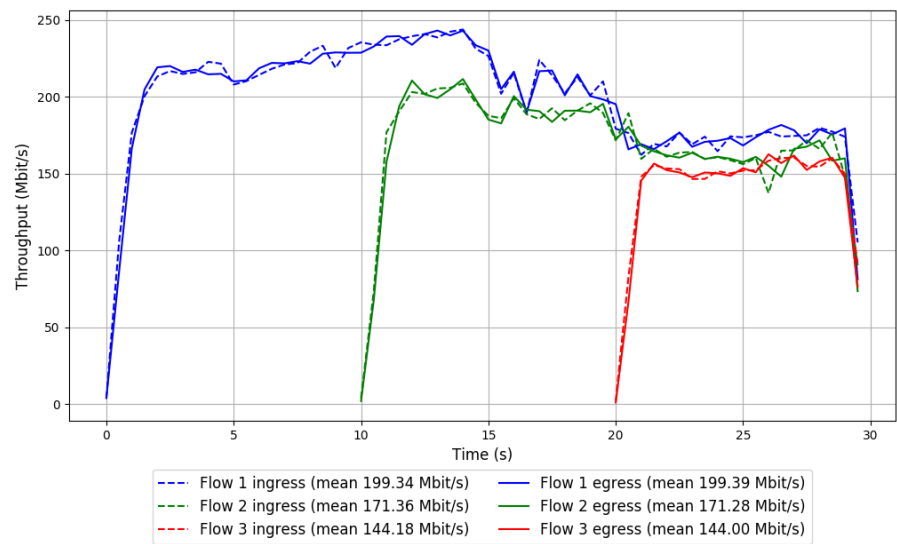
-- Flow 3:

Average throughput: 144.00 Mbit/s

95th percentile per-packet one-way delay: 65.376 ms

Loss rate: 1.18%

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



Run 4: Statistics of Indigo-1-32

Start at: 2018-02-17 10:35:38

End at: 2018-02-17 10:36:08

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 356.59 Mbit/s

95th percentile per-packet one-way delay: 63.558 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 200.20 Mbit/s

95th percentile per-packet one-way delay: 61.923 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 168.62 Mbit/s

95th percentile per-packet one-way delay: 63.775 ms

Loss rate: 0.49%

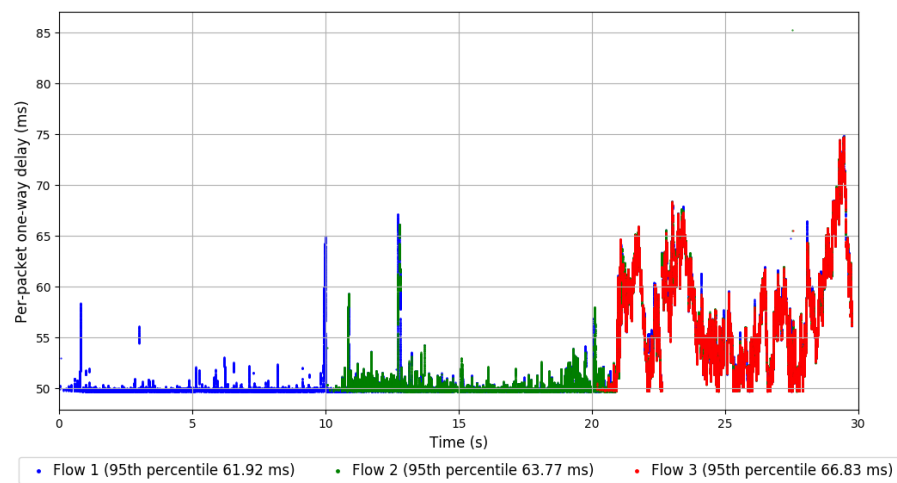
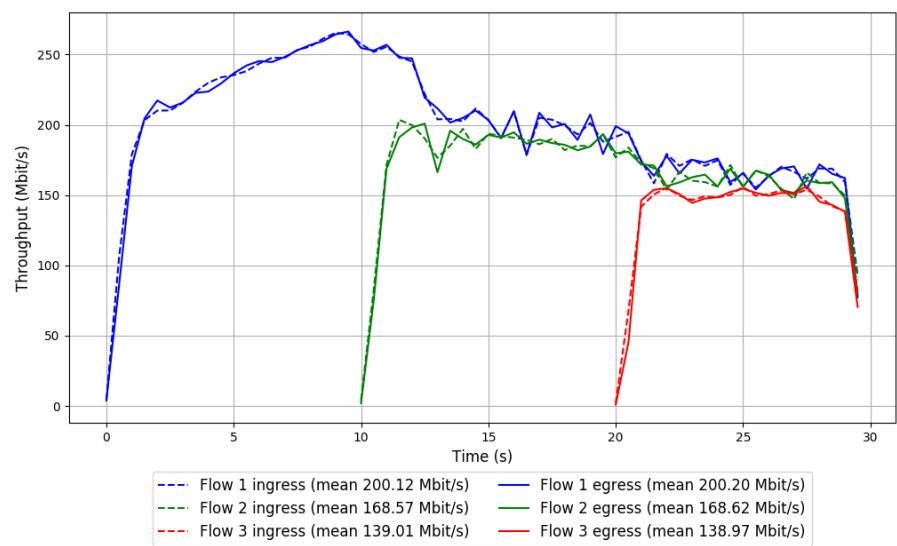
-- Flow 3:

Average throughput: 138.97 Mbit/s

95th percentile per-packet one-way delay: 66.827 ms

Loss rate: 1.07%

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



Run 5: Statistics of Indigo-1-32

Start at: 2018-02-17 10:53:28

End at: 2018-02-17 10:53:58

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 356.49 Mbit/s

95th percentile per-packet one-way delay: 54.655 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 194.84 Mbit/s

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

Loss rate: 0.28%

-- Flow 2:

Average throughput: 170.59 Mbit/s

95th percentile per-packet one-way delay: 55.337 ms

Loss rate: 0.42%

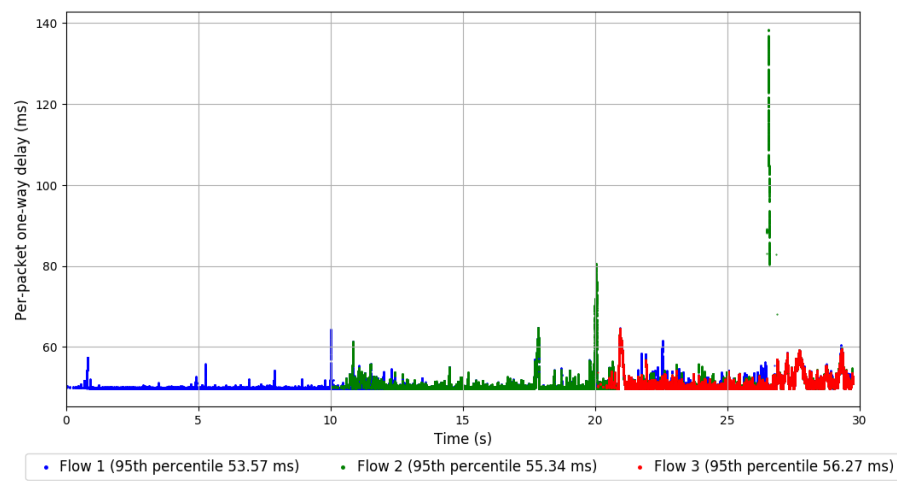
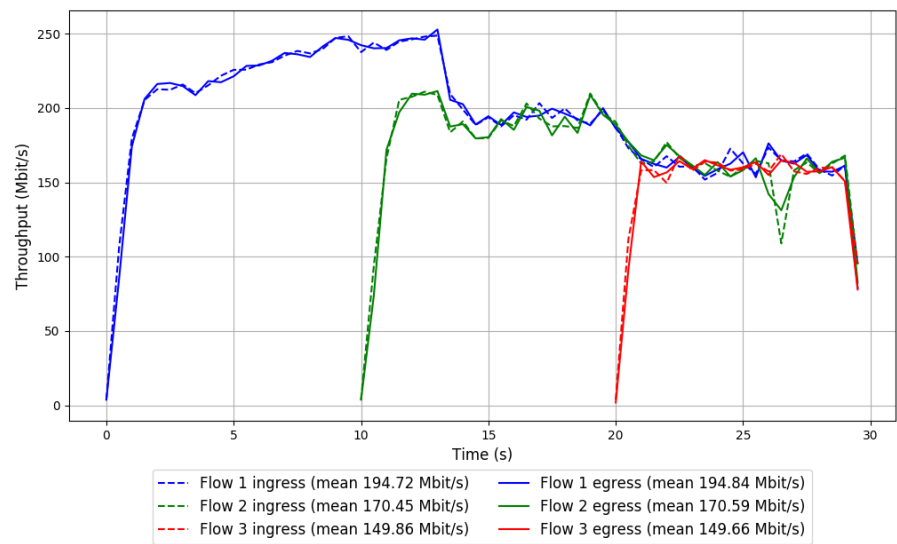
-- Flow 3:

Average throughput: 149.66 Mbit/s

95th percentile per-packet one-way delay: 56.273 ms

Loss rate: 1.16%

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



Run 6: Statistics of Indigo-1-32

Start at: 2018-02-17 11:11:24

End at: 2018-02-17 11:11:54

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 351.88 Mbit/s

95th percentile per-packet one-way delay: 73.847 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 192.85 Mbit/s

95th percentile per-packet one-way delay: 71.908 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 171.16 Mbit/s

95th percentile per-packet one-way delay: 74.589 ms

Loss rate: 0.48%

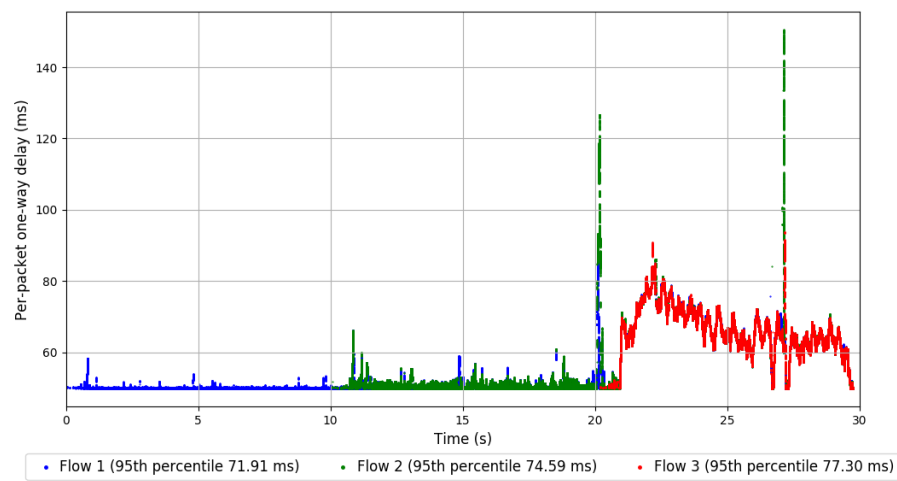
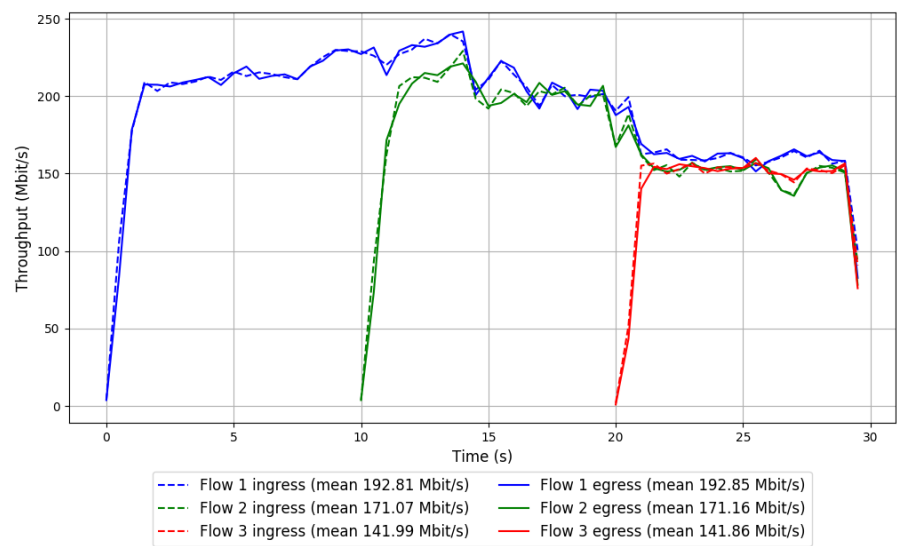
-- Flow 3:

Average throughput: 141.86 Mbit/s

95th percentile per-packet one-way delay: 77.300 ms

Loss rate: 1.18%

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



Run 7: Statistics of Indigo-1-32

Start at: 2018-02-17 11:29:21

End at: 2018-02-17 11:29:51

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 348.25 Mbit/s

95th percentile per-packet one-way delay: 59.943 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 188.94 Mbit/s

95th percentile per-packet one-way delay: 58.290 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 168.33 Mbit/s

95th percentile per-packet one-way delay: 60.254 ms

Loss rate: 0.54%

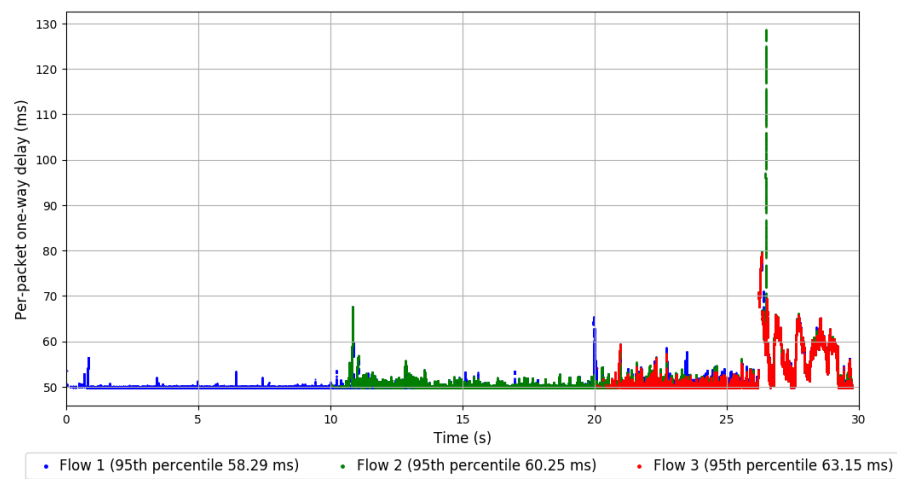
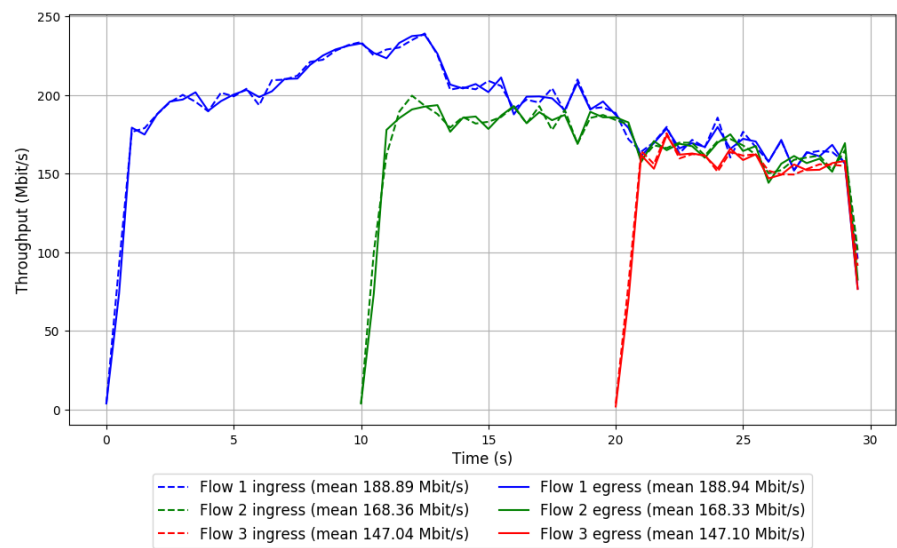
-- Flow 3:

Average throughput: 147.10 Mbit/s

95th percentile per-packet one-way delay: 63.148 ms

Loss rate: 1.00%

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



Run 8: Statistics of Indigo-1-32

Start at: 2018-02-17 11:47:21

End at: 2018-02-17 11:47:51

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 359.82 Mbit/s

95th percentile per-packet one-way delay: 62.700 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 197.68 Mbit/s

95th percentile per-packet one-way delay: 56.682 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 167.86 Mbit/s

95th percentile per-packet one-way delay: 61.904 ms

Loss rate: 0.48%

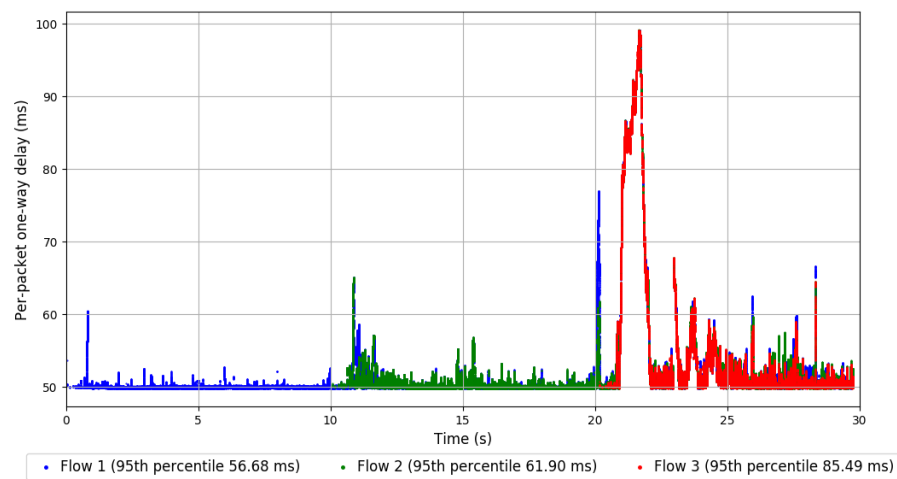
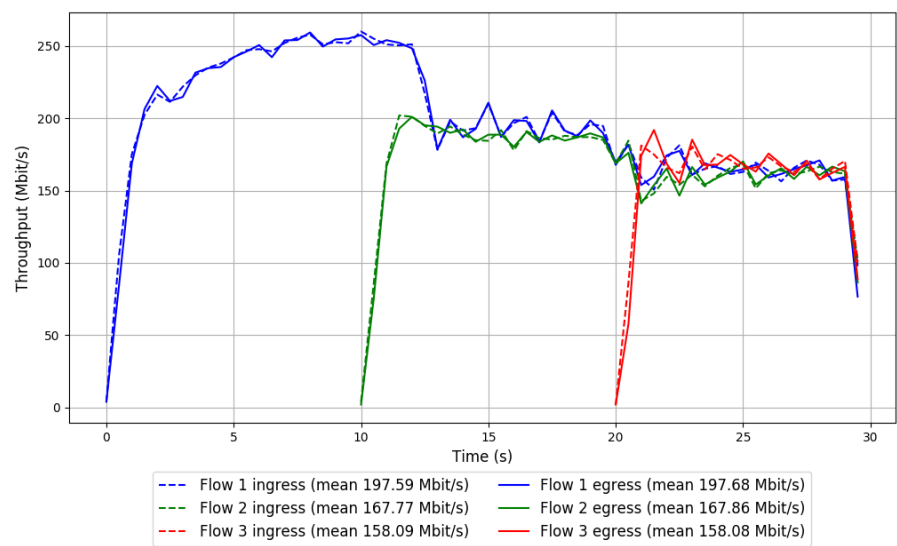
-- Flow 3:

Average throughput: 158.08 Mbit/s

95th percentile per-packet one-way delay: 85.492 ms

Loss rate: 1.09%

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



Run 9: Statistics of Indigo-1-32

Start at: 2018-02-17 12:05:13

End at: 2018-02-17 12:05:43

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 339.85 Mbit/s

95th percentile per-packet one-way delay: 97.572 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 182.39 Mbit/s

95th percentile per-packet one-way delay: 84.317 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 163.86 Mbit/s

95th percentile per-packet one-way delay: 93.878 ms

Loss rate: 0.51%

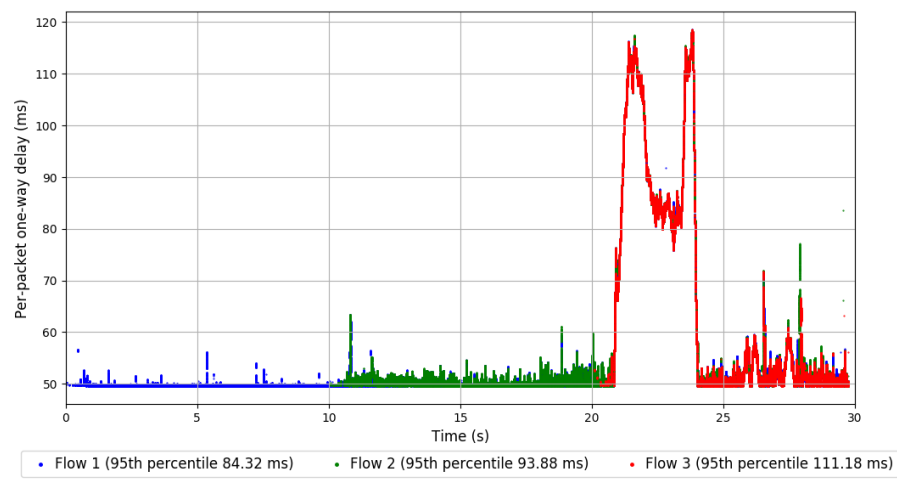
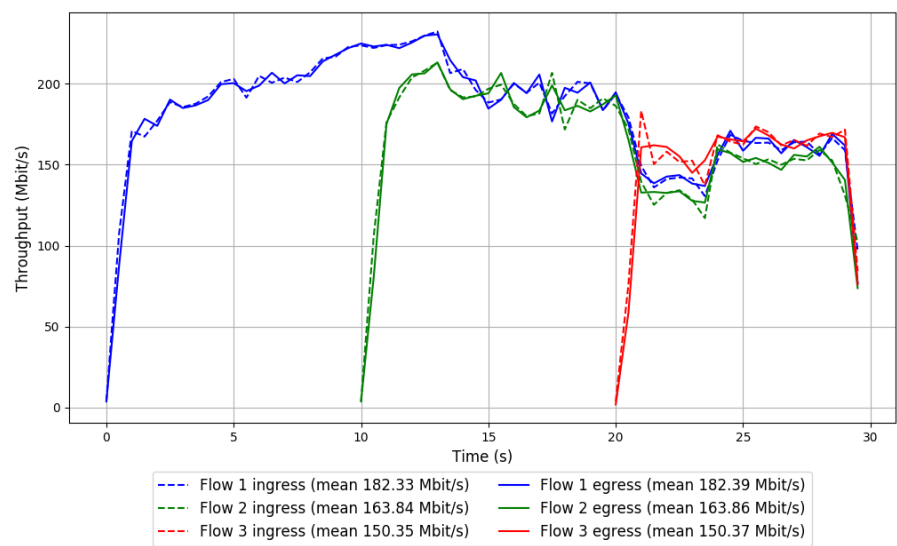
-- Flow 3:

Average throughput: 150.37 Mbit/s

95th percentile per-packet one-way delay: 111.183 ms

Loss rate: 1.02%

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



Run 10: Statistics of Indigo-1-32

Start at: 2018-02-17 12:23:28

End at: 2018-02-17 12:23:58

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 339.19 Mbit/s

95th percentile per-packet one-way delay: 61.994 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 180.25 Mbit/s

95th percentile per-packet one-way delay: 60.201 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 166.28 Mbit/s

95th percentile per-packet one-way delay: 62.265 ms

Loss rate: 0.55%

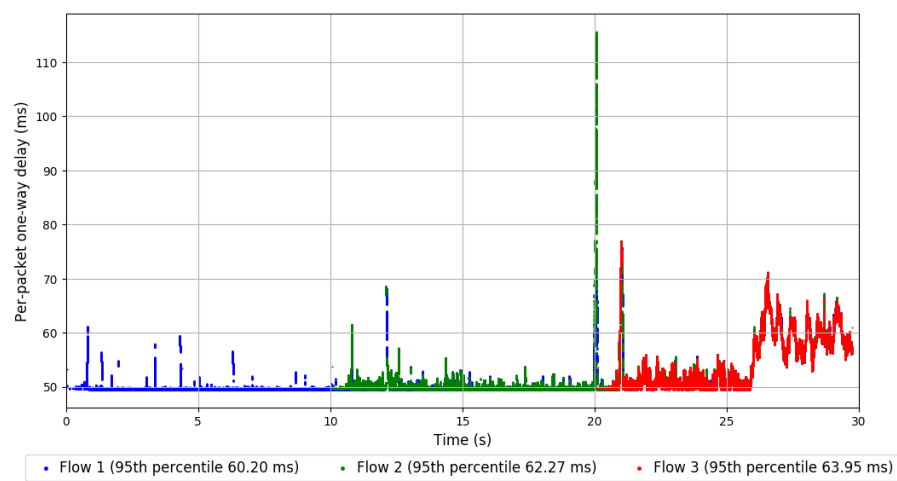
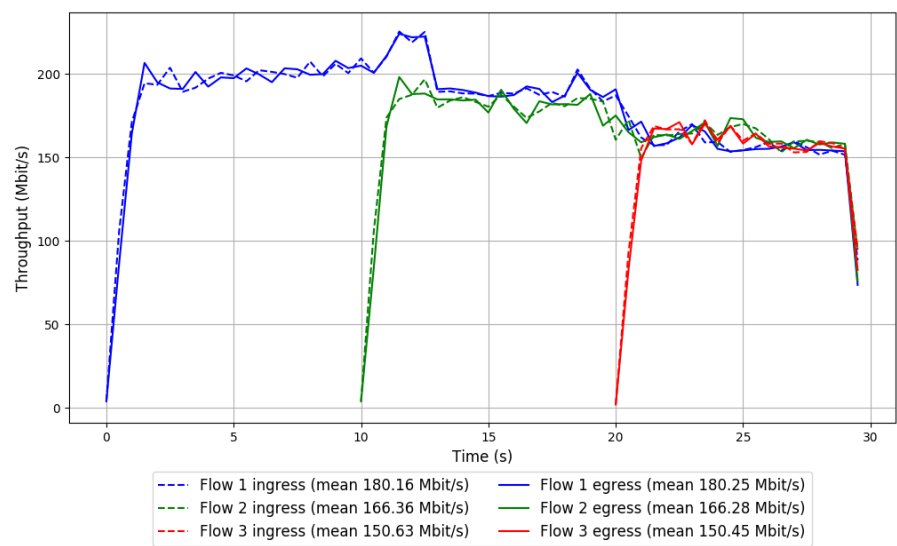
-- Flow 3:

Average throughput: 150.45 Mbit/s

95th percentile per-packet one-way delay: 63.947 ms

Loss rate: 1.11%

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



Run 1: Statistics of Vivace-latency

Start at: 2018-02-17 09:34:37

End at: 2018-02-17 09:35:07

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 566.11 Mbit/s

95th percentile per-packet one-way delay: 78.682 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 328.66 Mbit/s

95th percentile per-packet one-way delay: 66.166 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 259.59 Mbit/s

95th percentile per-packet one-way delay: 95.788 ms

Loss rate: 0.36%

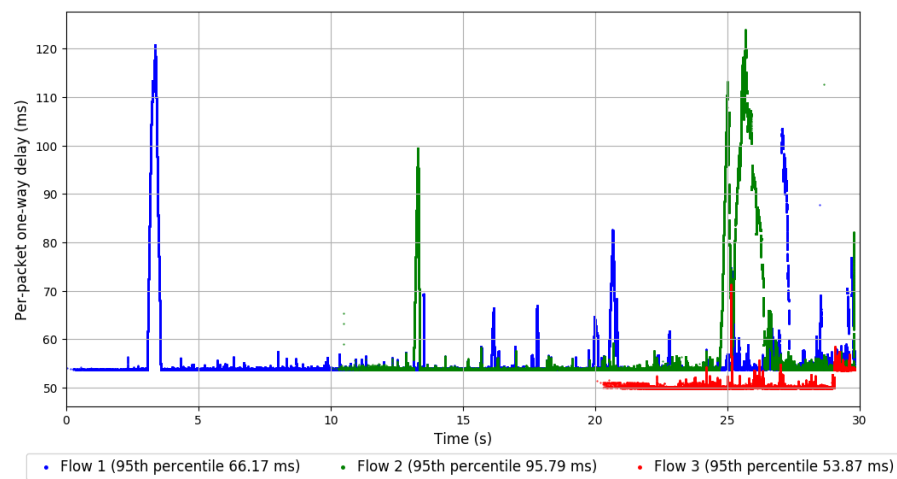
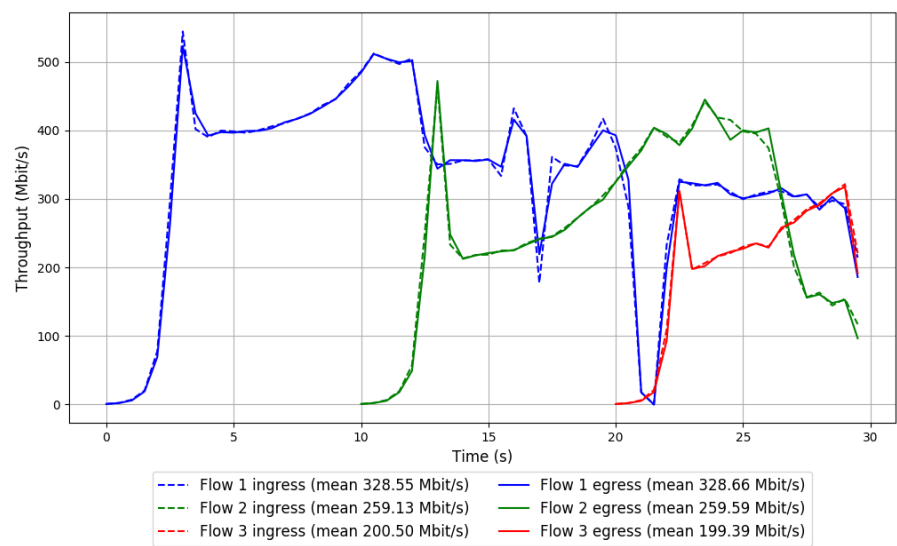
-- Flow 3:

Average throughput: 199.39 Mbit/s

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

Loss rate: 1.62%

Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-02-17 09:52:25

End at: 2018-02-17 09:52:55

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 545.98 Mbit/s

95th percentile per-packet one-way delay: 57.844 ms

Loss rate: 0.28%

-- Flow 1:

Average throughput: 380.13 Mbit/s

95th percentile per-packet one-way delay: 63.551 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 230.28 Mbit/s

95th percentile per-packet one-way delay: 53.558 ms

Loss rate: 0.41%

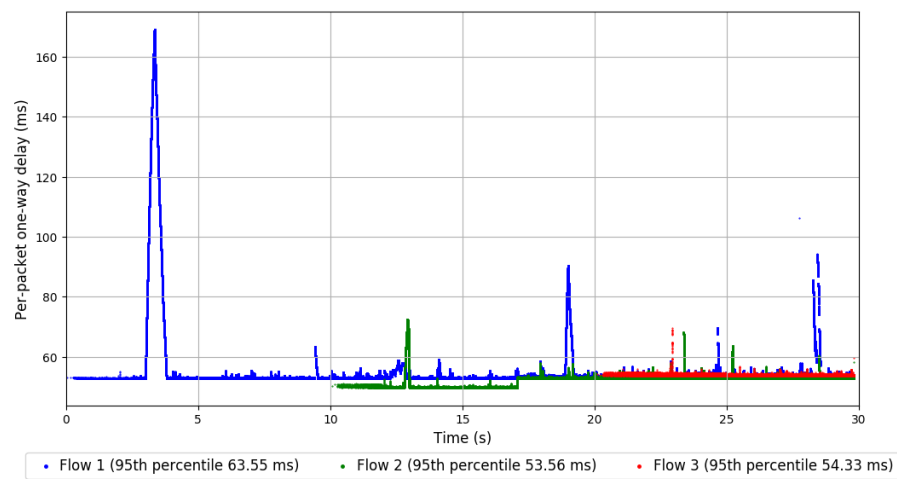
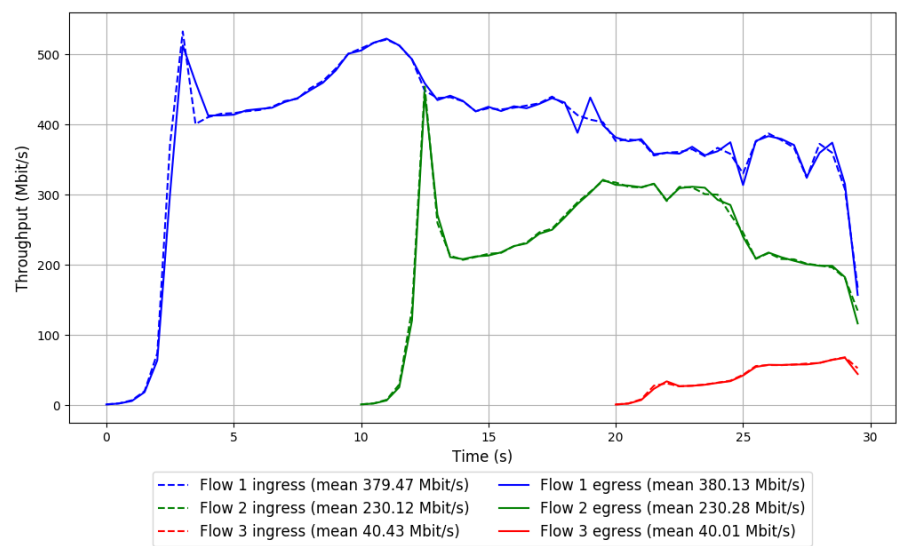
-- Flow 3:

Average throughput: 40.01 Mbit/s

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

Loss rate: 2.04%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-02-17 10:09:57

End at: 2018-02-17 10:10:27

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 549.54 Mbit/s

95th percentile per-packet one-way delay: 61.223 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 355.79 Mbit/s

95th percentile per-packet one-way delay: 70.799 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 245.94 Mbit/s

95th percentile per-packet one-way delay: 52.696 ms

Loss rate: 0.64%

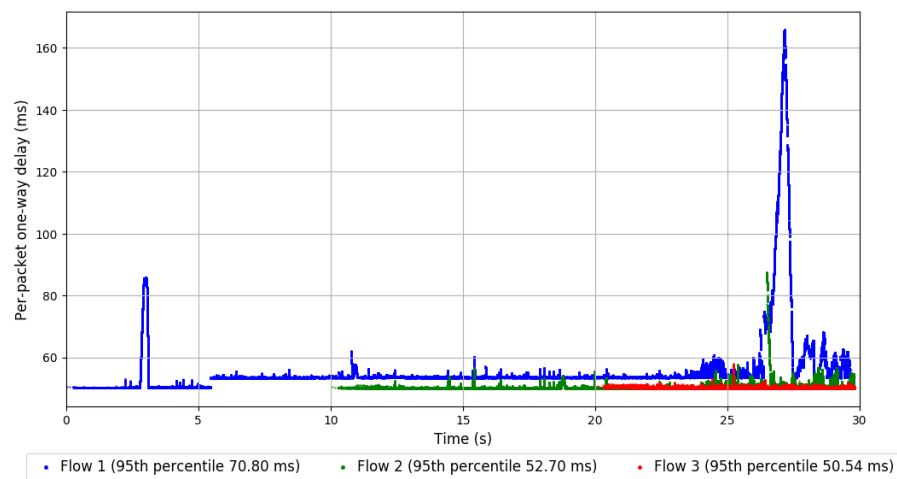
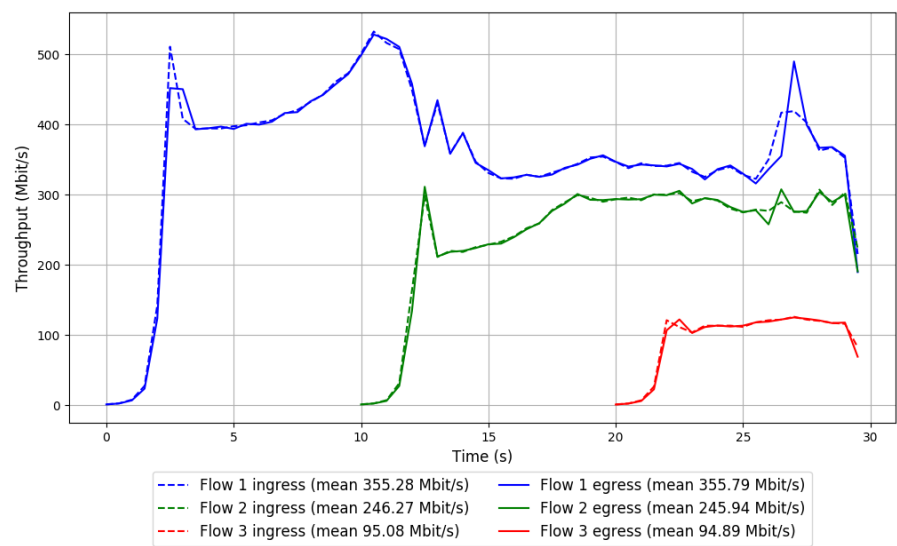
-- Flow 3:

Average throughput: 94.89 Mbit/s

95th percentile per-packet one-way delay: 50.541 ms

Loss rate: 1.26%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-02-17 10:27:56

End at: 2018-02-17 10:28:26

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 508.33 Mbit/s

95th percentile per-packet one-way delay: 55.068 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 284.80 Mbit/s

95th percentile per-packet one-way delay: 54.553 ms

Loss rate: 1.93%

-- Flow 2:

Average throughput: 248.32 Mbit/s

95th percentile per-packet one-way delay: 54.704 ms

Loss rate: 0.52%

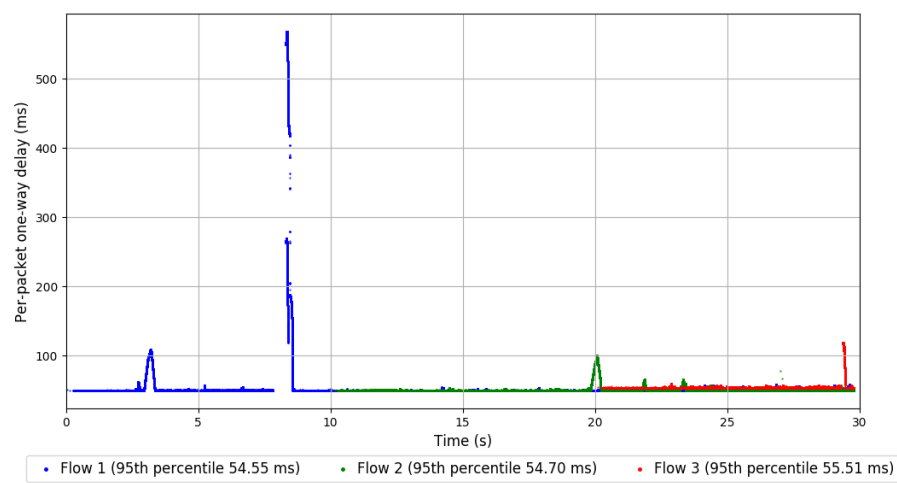
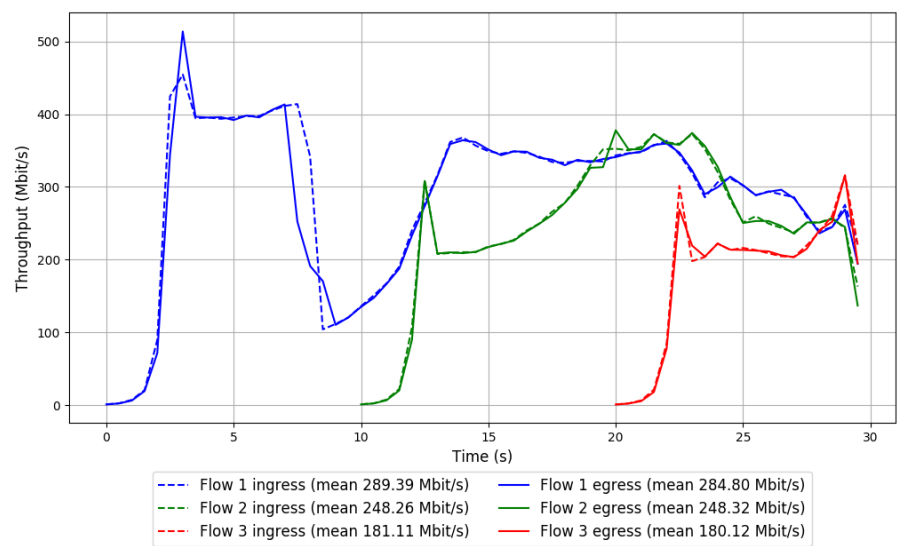
-- Flow 3:

Average throughput: 180.12 Mbit/s

95th percentile per-packet one-way delay: 55.510 ms

Loss rate: 1.64%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-02-17 10:45:37

End at: 2018-02-17 10:46:07

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 557.76 Mbit/s

95th percentile per-packet one-way delay: 147.382 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 323.46 Mbit/s

95th percentile per-packet one-way delay: 188.157 ms

Loss rate: 1.81%

-- Flow 2:

Average throughput: 263.87 Mbit/s

95th percentile per-packet one-way delay: 58.917 ms

Loss rate: 0.74%

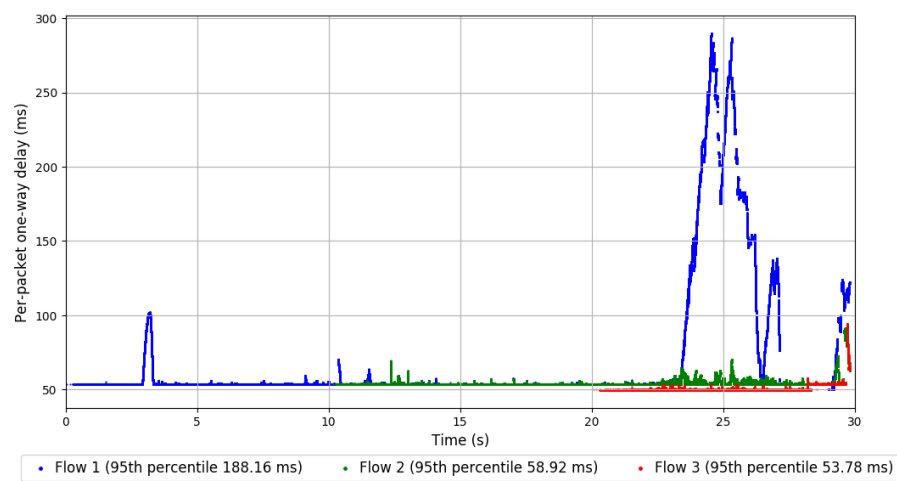
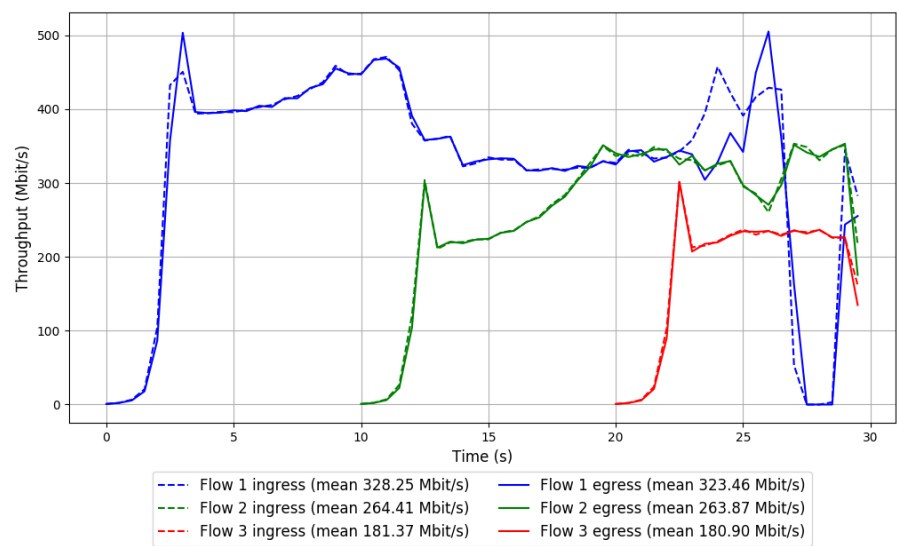
-- Flow 3:

Average throughput: 180.90 Mbit/s

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

Loss rate: 1.40%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-02-17 11:03:38

End at: 2018-02-17 11:04:08

Below is generated by plot.py at 2018-02-17 17:39:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 495.01 Mbit/s

95th percentile per-packet one-way delay: 58.830 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 316.66 Mbit/s

95th percentile per-packet one-way delay: 62.911 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 253.97 Mbit/s

95th percentile per-packet one-way delay: 56.325 ms

Loss rate: 0.37%

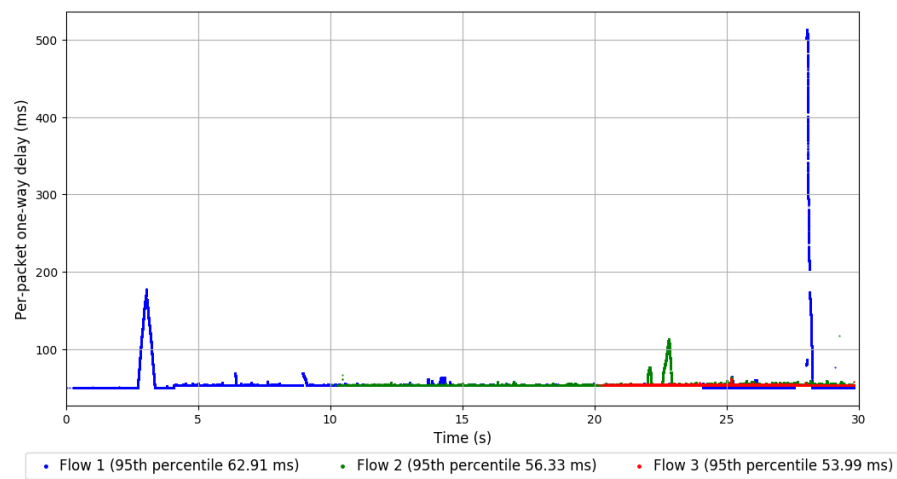
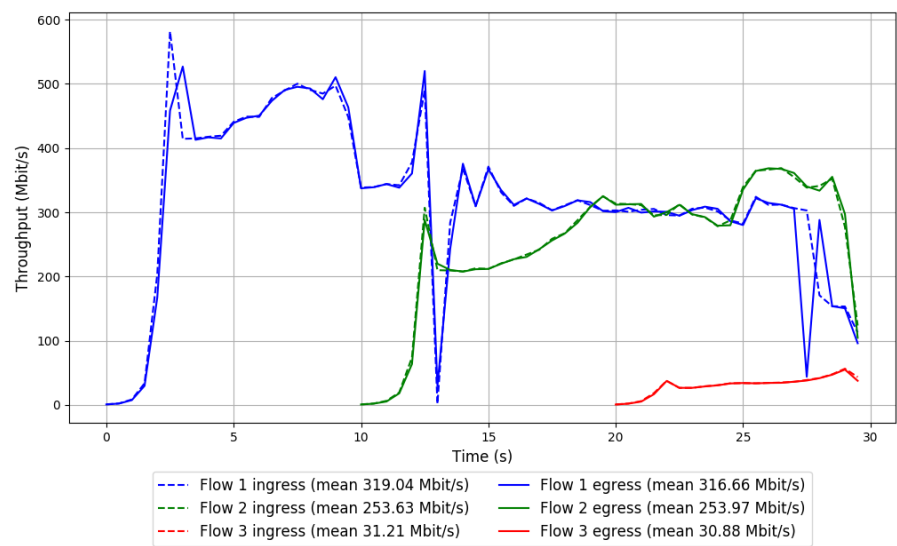
-- Flow 3:

Average throughput: 30.88 Mbit/s

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

Loss rate: 2.06%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-02-17 11:21:30

End at: 2018-02-17 11:22:00

Below is generated by plot.py at 2018-02-17 17:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 592.44 Mbit/s

95th percentile per-packet one-way delay: 120.837 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 347.21 Mbit/s

95th percentile per-packet one-way delay: 69.562 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 259.40 Mbit/s

95th percentile per-packet one-way delay: 68.543 ms

Loss rate: 0.46%

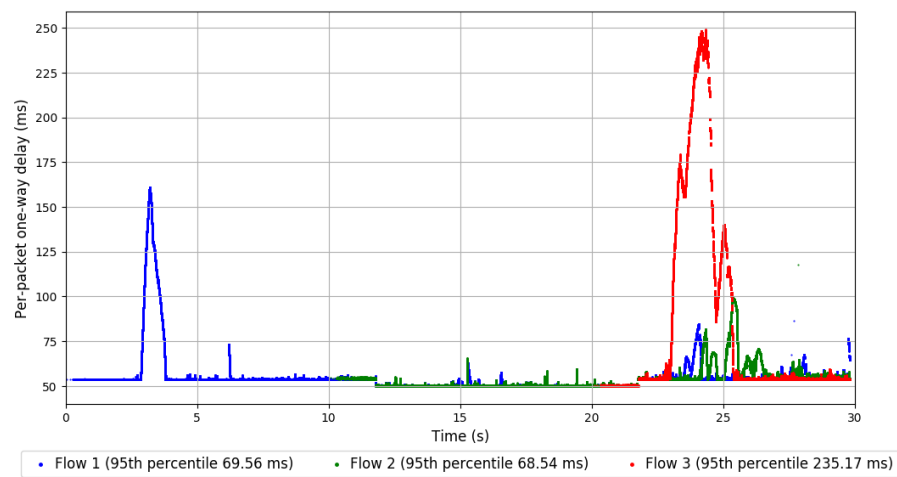
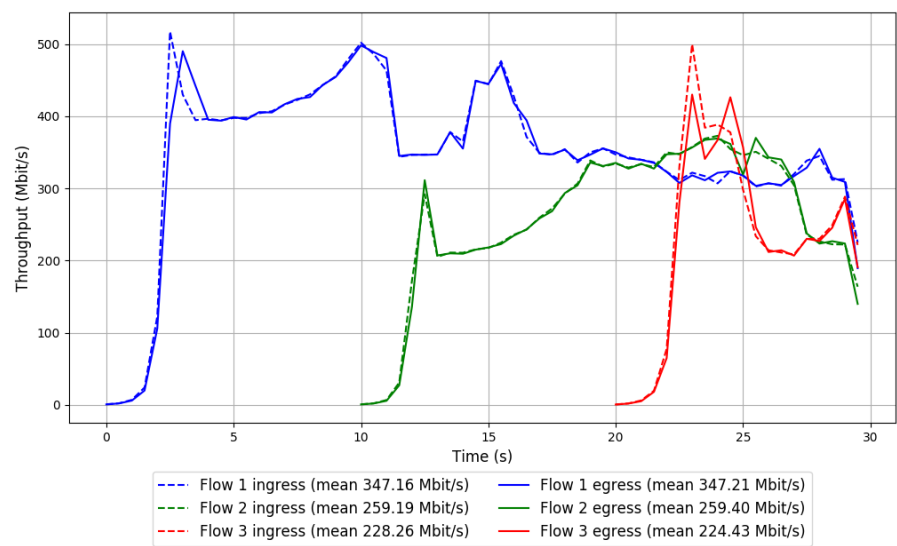
-- Flow 3:

Average throughput: 224.43 Mbit/s

95th percentile per-packet one-way delay: 235.171 ms

Loss rate: 2.72%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-02-17 11:39:38

End at: 2018-02-17 11:40:08

Below is generated by plot.py at 2018-02-17 17:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 552.62 Mbit/s

95th percentile per-packet one-way delay: 182.775 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 342.84 Mbit/s

95th percentile per-packet one-way delay: 192.982 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 269.32 Mbit/s

95th percentile per-packet one-way delay: 55.585 ms

Loss rate: 0.75%

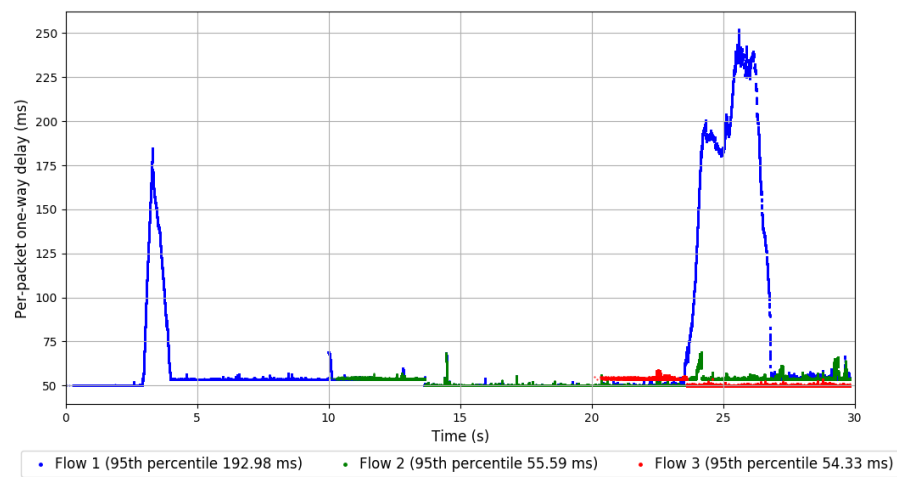
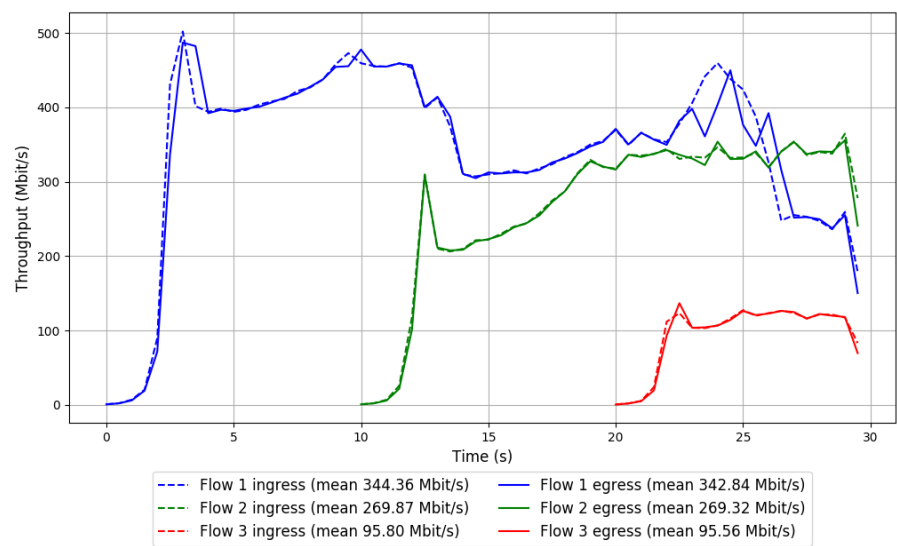
-- Flow 3:

Average throughput: 95.56 Mbit/s

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

Loss rate: 1.35%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-02-17 11:57:20

End at: 2018-02-17 11:57:50

Below is generated by plot.py at 2018-02-17 17:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 534.32 Mbit/s

95th percentile per-packet one-way delay: 66.773 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 312.02 Mbit/s

95th percentile per-packet one-way delay: 66.618 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 262.44 Mbit/s

95th percentile per-packet one-way delay: 72.518 ms

Loss rate: 0.81%

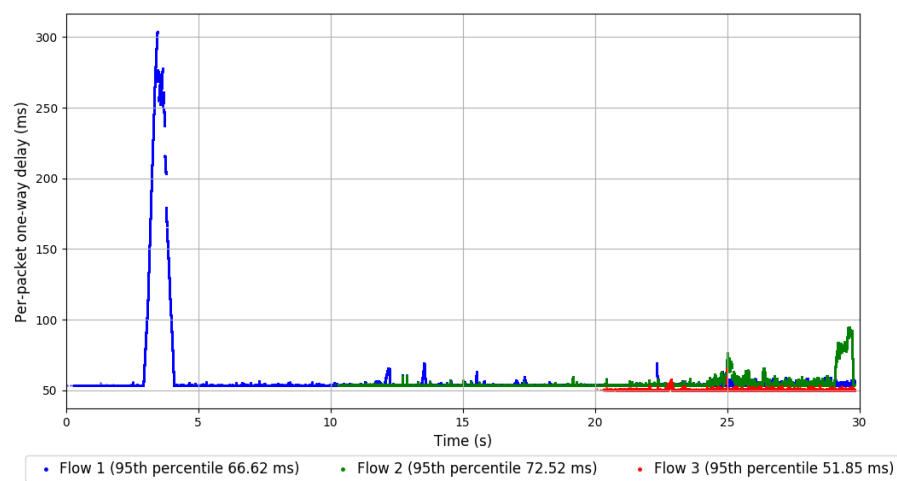
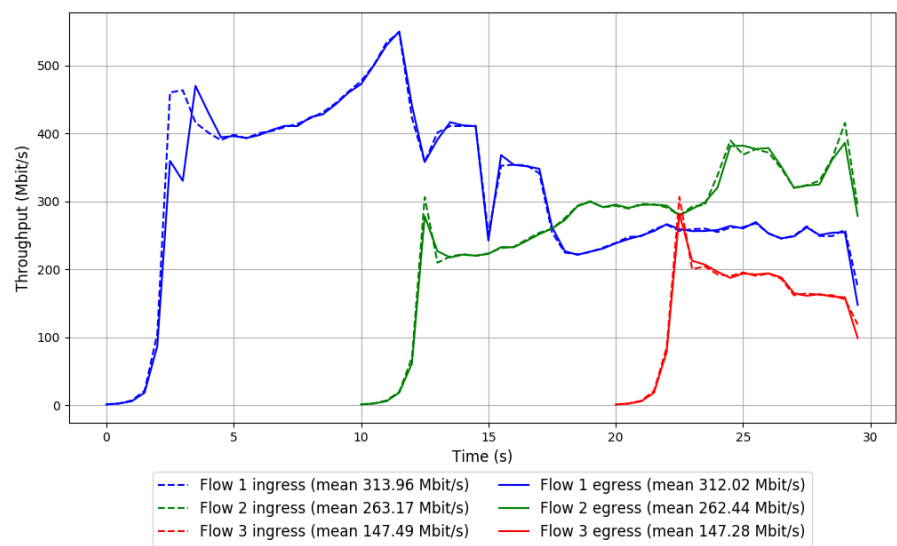
-- Flow 3:

Average throughput: 147.28 Mbit/s

95th percentile per-packet one-way delay: 51.846 ms

Loss rate: 1.19%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-02-17 12:15:28

End at: 2018-02-17 12:15:59

Below is generated by plot.py at 2018-02-17 17:41:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 526.99 Mbit/s

95th percentile per-packet one-way delay: 57.938 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 346.82 Mbit/s

95th percentile per-packet one-way delay: 71.546 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 249.15 Mbit/s

95th percentile per-packet one-way delay: 55.898 ms

Loss rate: 0.49%

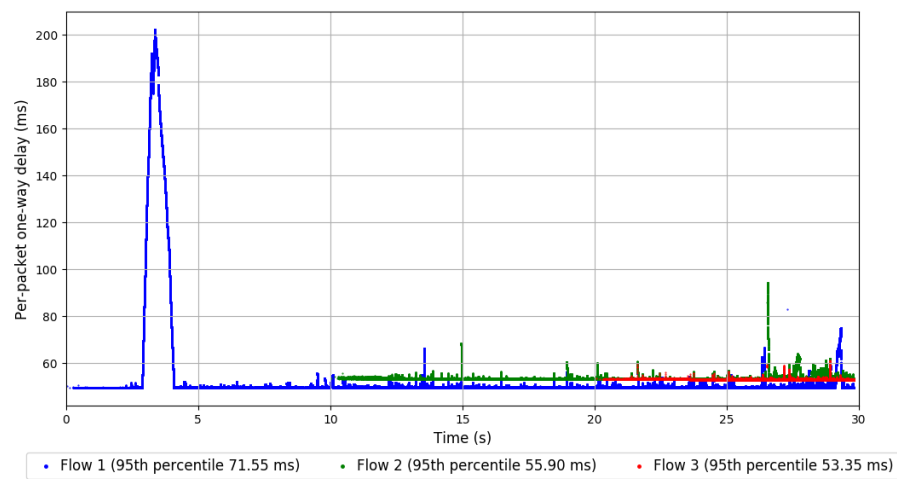
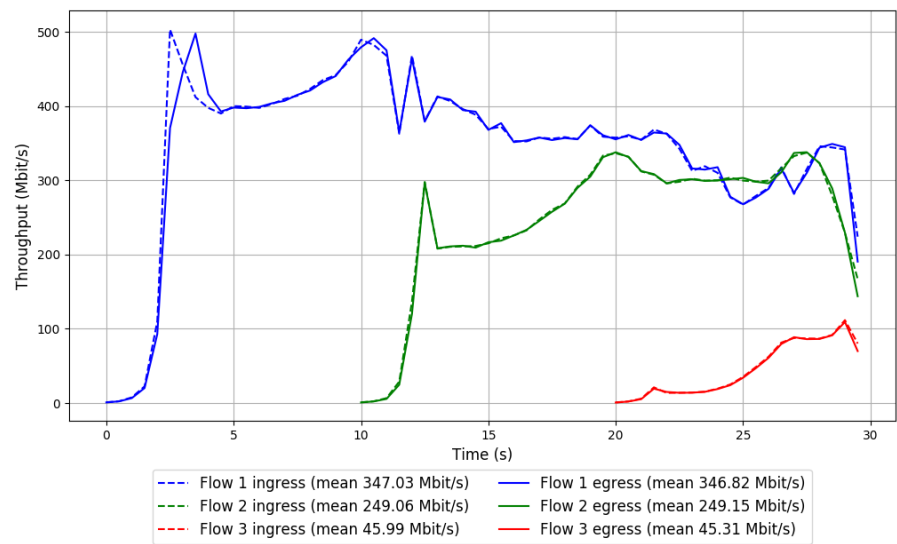
-- Flow 3:

Average throughput: 45.31 Mbit/s

95th percentile per-packet one-way delay: 53.349 ms

Loss rate: 2.53%

Run 10: Report of Vivace-latency — Data Link

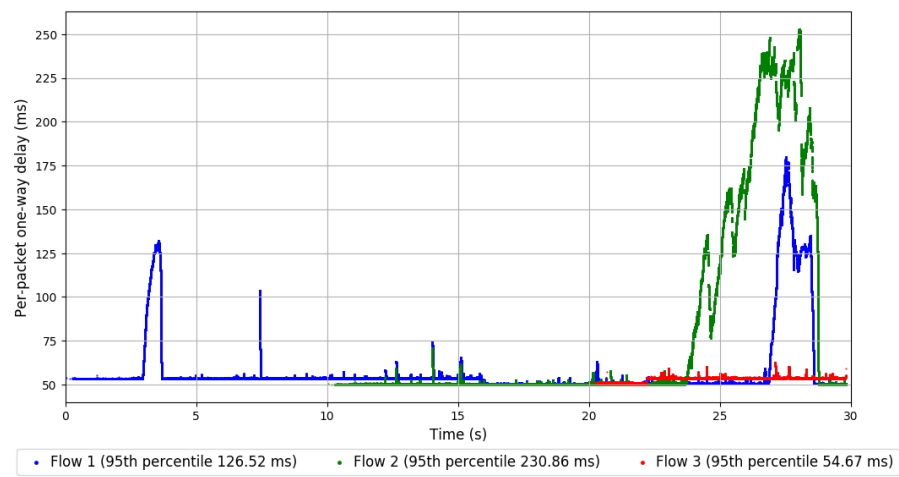
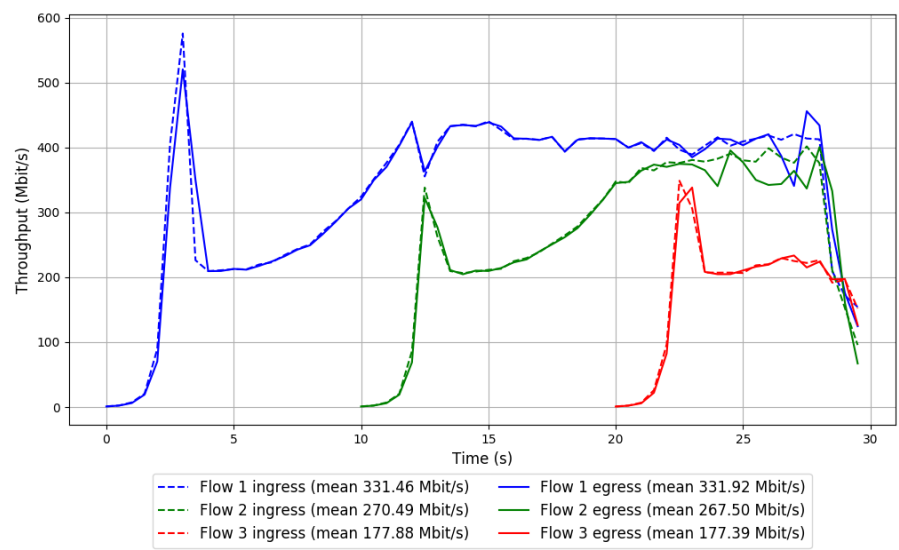


```
Run 1: Statistics of Vivace-loss

Start at: 2018-02-17 09:45:00
End at: 2018-02-17 09:45:30

# Below is generated by plot.py at 2018-02-17 17:44:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 567.37 Mbit/s
95th percentile per-packet one-way delay: 175.486 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 331.92 Mbit/s
95th percentile per-packet one-way delay: 126.519 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 267.50 Mbit/s
95th percentile per-packet one-way delay: 230.857 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 177.39 Mbit/s
95th percentile per-packet one-way delay: 54.670 ms
Loss rate: 1.28%
```

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-02-17 10:03:00

End at: 2018-02-17 10:03:30

Below is generated by plot.py at 2018-02-17 17:45:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 573.03 Mbit/s

95th percentile per-packet one-way delay: 149.443 ms

Loss rate: 1.92%

-- Flow 1:

Average throughput: 375.05 Mbit/s

95th percentile per-packet one-way delay: 151.660 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 211.06 Mbit/s

95th percentile per-packet one-way delay: 167.984 ms

Loss rate: 4.34%

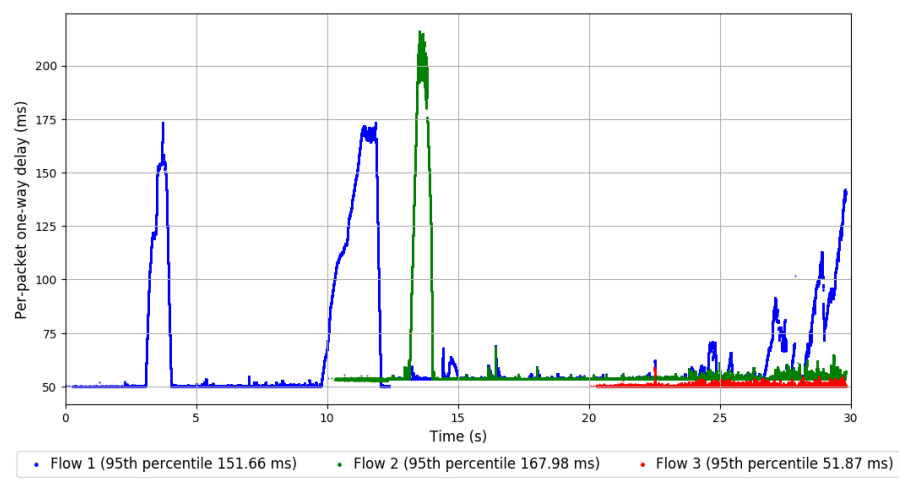
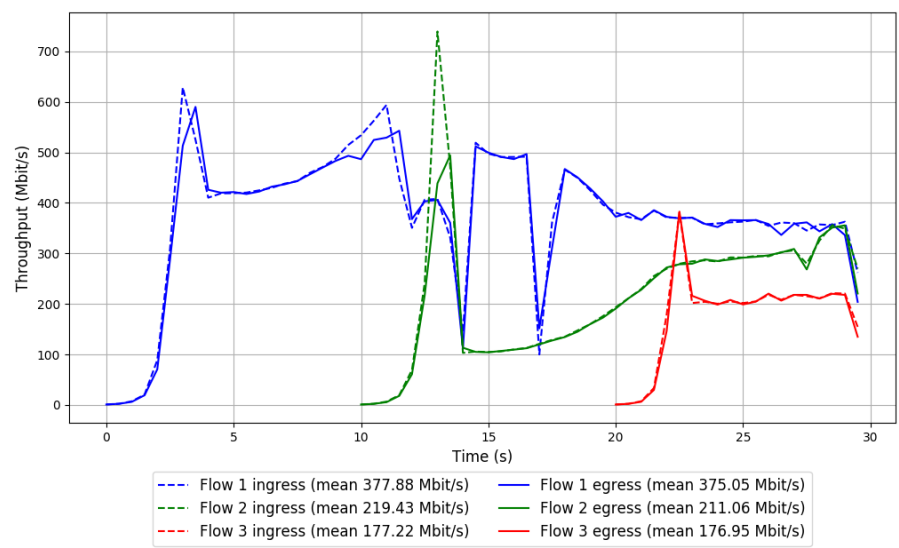
-- Flow 3:

Average throughput: 176.95 Mbit/s

95th percentile per-packet one-way delay: 51.871 ms

Loss rate: 1.23%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-02-17 10:20:25

End at: 2018-02-17 10:20:55

Below is generated by plot.py at 2018-02-17 17:50:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 654.71 Mbit/s

95th percentile per-packet one-way delay: 183.985 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 383.50 Mbit/s

95th percentile per-packet one-way delay: 151.362 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 321.33 Mbit/s

95th percentile per-packet one-way delay: 224.962 ms

Loss rate: 1.61%

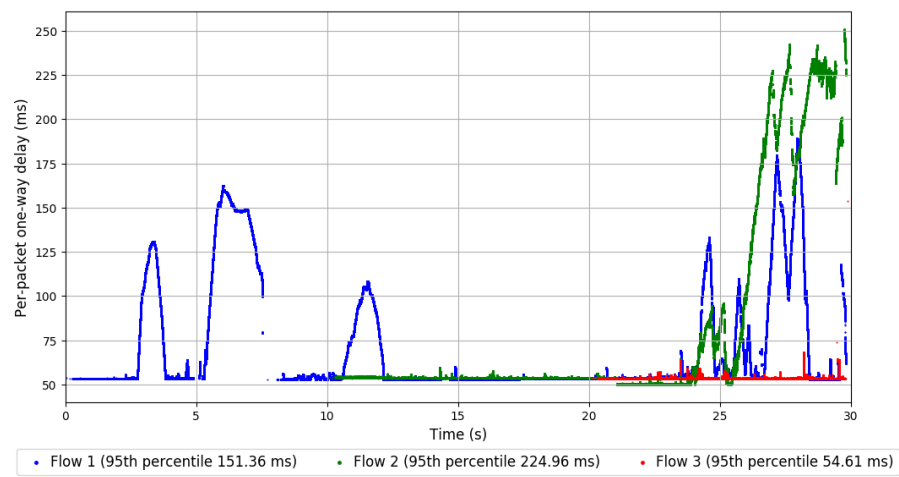
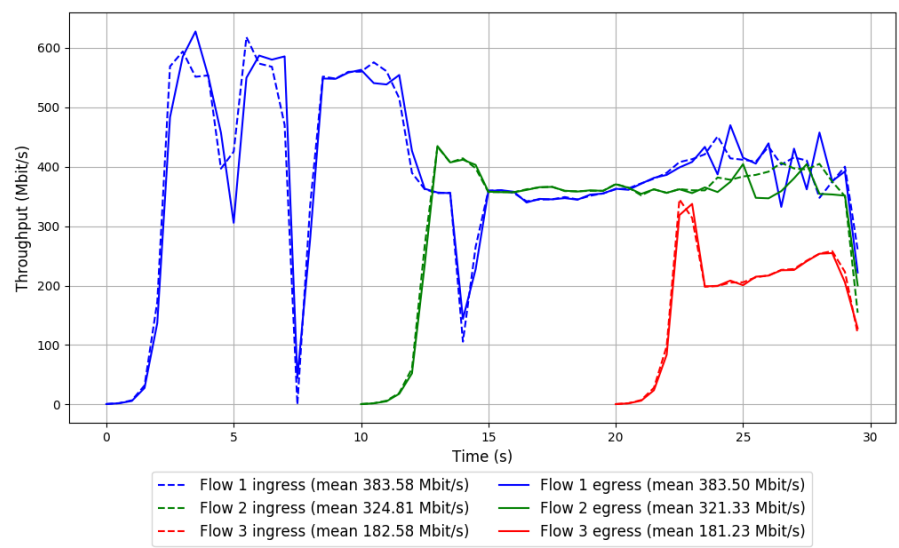
-- Flow 3:

Average throughput: 181.23 Mbit/s

95th percentile per-packet one-way delay: 54.608 ms

Loss rate: 1.07%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-02-17 10:38:20

End at: 2018-02-17 10:38:50

Below is generated by plot.py at 2018-02-17 17:50:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 593.28 Mbit/s

95th percentile per-packet one-way delay: 174.058 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 319.44 Mbit/s

95th percentile per-packet one-way delay: 204.151 ms

Loss rate: 1.81%

-- Flow 2:

Average throughput: 270.48 Mbit/s

95th percentile per-packet one-way delay: 72.389 ms

Loss rate: 0.67%

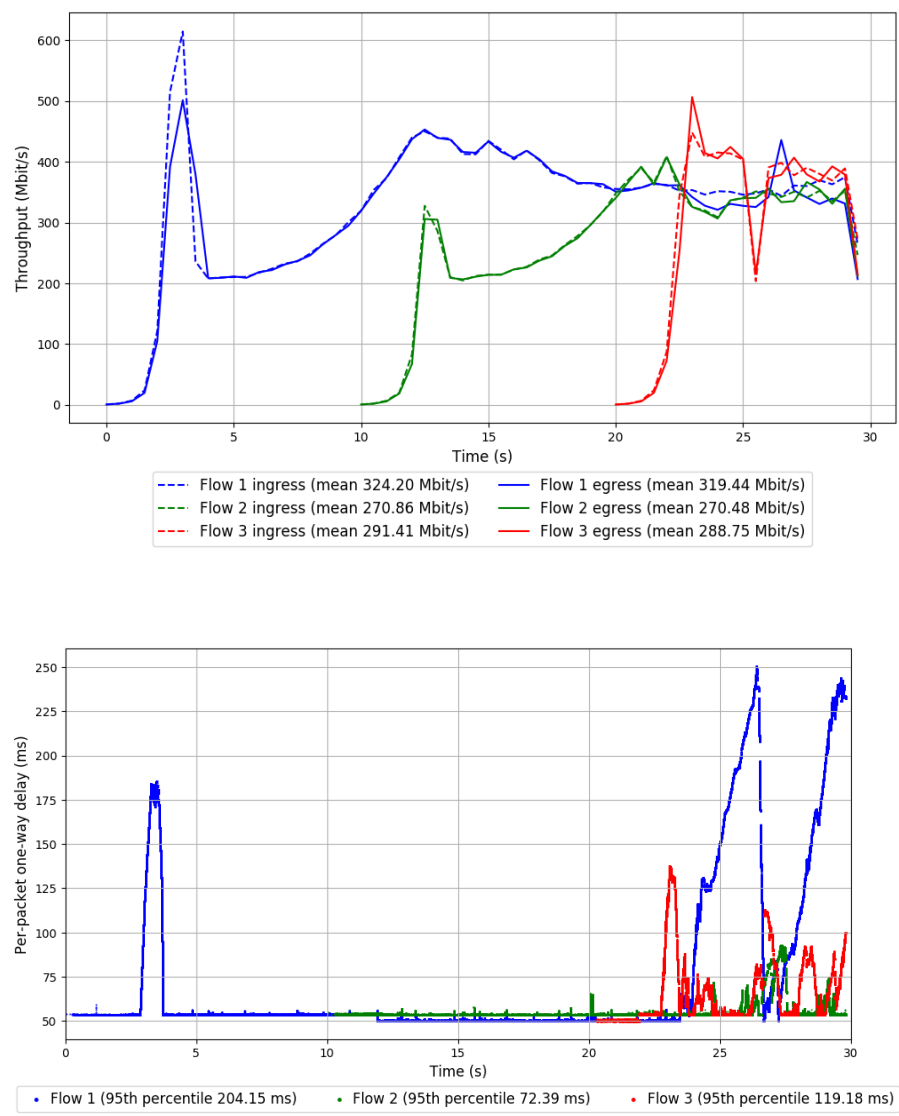
-- Flow 3:

Average throughput: 288.75 Mbit/s

95th percentile per-packet one-way delay: 119.179 ms

Loss rate: 1.93%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-02-17 10:56:10

End at: 2018-02-17 10:56:40

Below is generated by plot.py at 2018-02-17 17:53:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 688.13 Mbit/s

95th percentile per-packet one-way delay: 191.543 ms

Loss rate: 2.17%

-- Flow 1:

Average throughput: 380.52 Mbit/s

95th percentile per-packet one-way delay: 228.303 ms

Loss rate: 2.82%

-- Flow 2:

Average throughput: 321.63 Mbit/s

95th percentile per-packet one-way delay: 123.176 ms

Loss rate: 0.96%

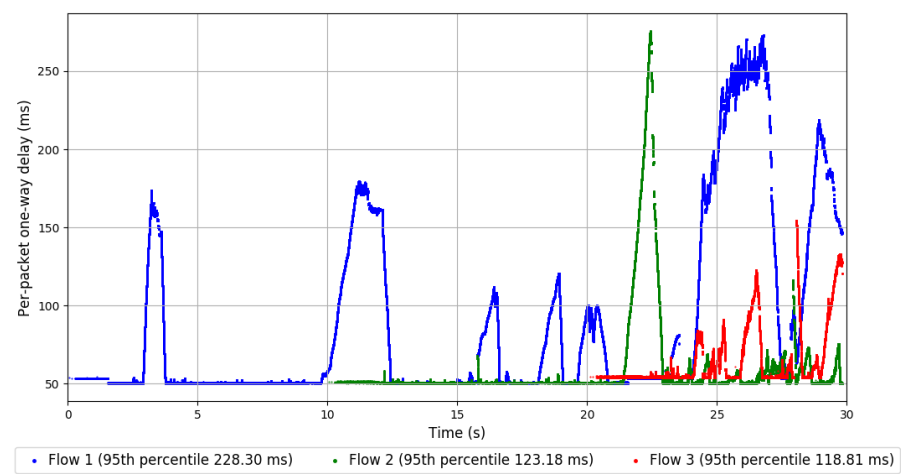
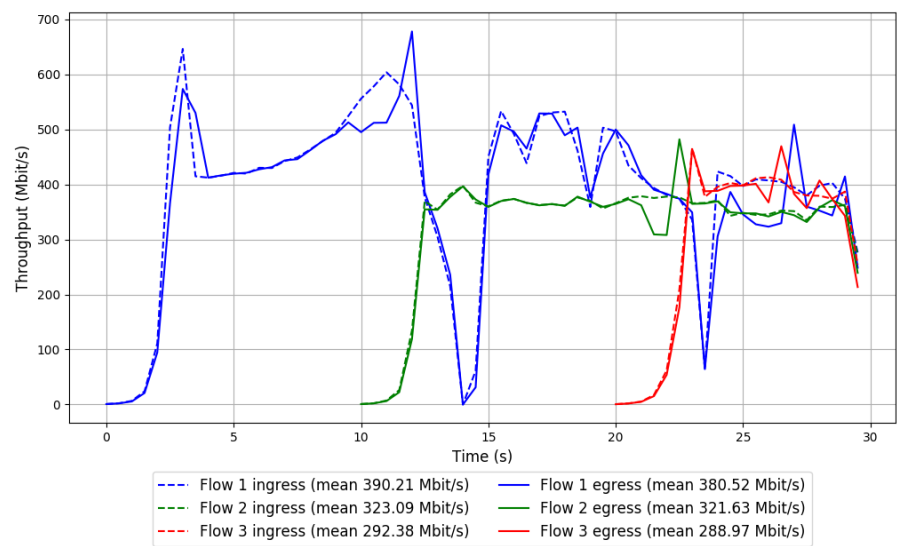
-- Flow 3:

Average throughput: 288.97 Mbit/s

95th percentile per-packet one-way delay: 118.815 ms

Loss rate: 2.22%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-02-17 11:14:07

End at: 2018-02-17 11:14:37

Below is generated by plot.py at 2018-02-17 17:53:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 580.41 Mbit/s

95th percentile per-packet one-way delay: 129.718 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 347.02 Mbit/s

95th percentile per-packet one-way delay: 203.650 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 295.40 Mbit/s

95th percentile per-packet one-way delay: 80.743 ms

Loss rate: 0.82%

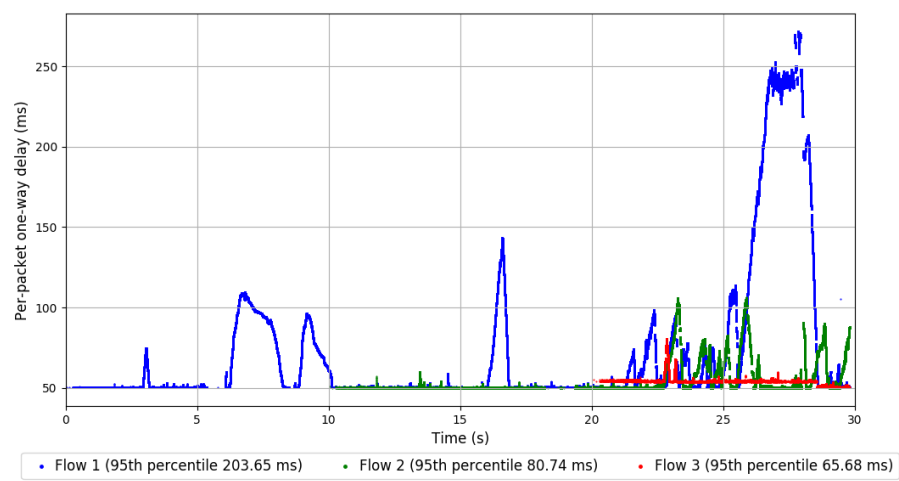
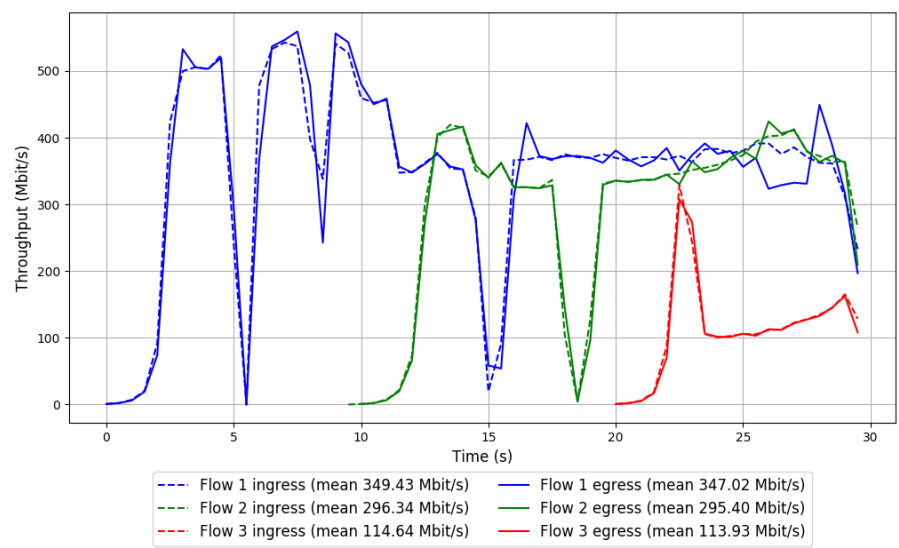
-- Flow 3:

Average throughput: 113.93 Mbit/s

95th percentile per-packet one-way delay: 65.680 ms

Loss rate: 1.69%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-02-17 11:32:04

End at: 2018-02-17 11:32:34

Below is generated by plot.py at 2018-02-17 17:53:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 661.31 Mbit/s

95th percentile per-packet one-way delay: 181.993 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 360.15 Mbit/s

95th percentile per-packet one-way delay: 169.089 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 325.69 Mbit/s

95th percentile per-packet one-way delay: 226.715 ms

Loss rate: 1.51%

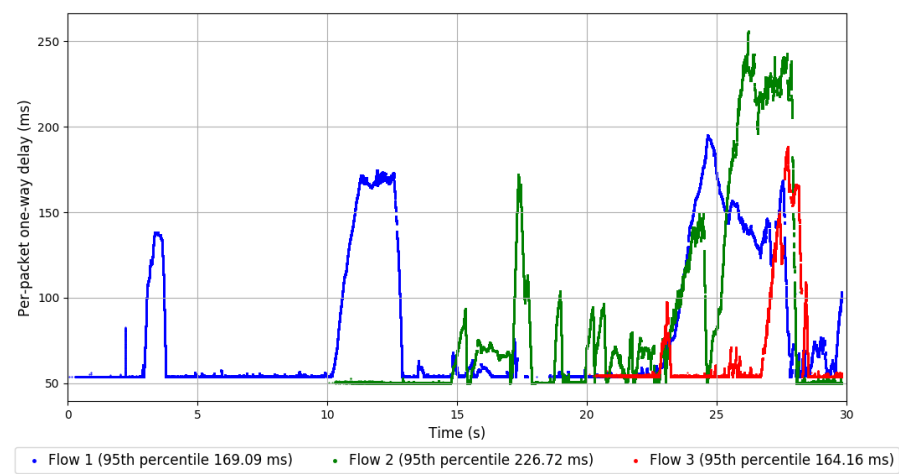
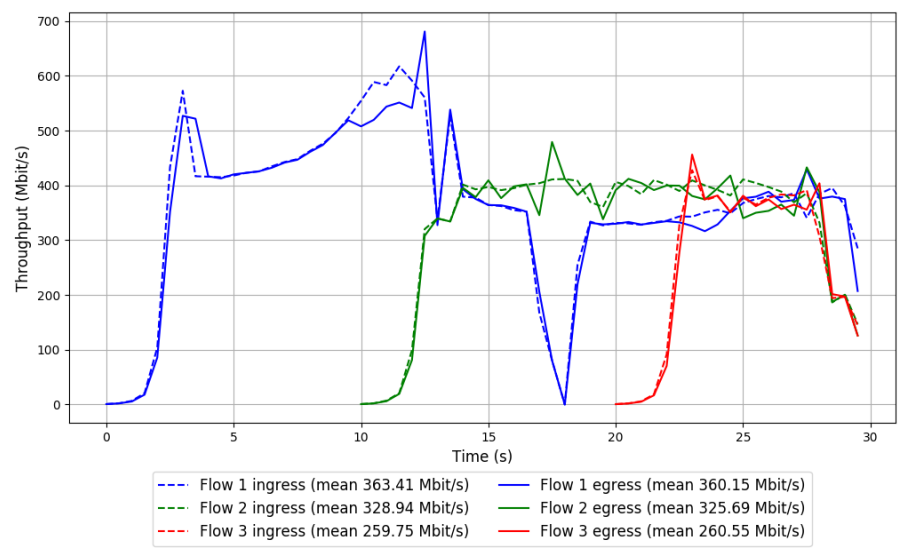
-- Flow 3:

Average throughput: 260.55 Mbit/s

95th percentile per-packet one-way delay: 164.164 ms

Loss rate: 0.79%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-02-17 11:50:05

End at: 2018-02-17 11:50:35

Below is generated by plot.py at 2018-02-17 17:53:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 543.26 Mbit/s

95th percentile per-packet one-way delay: 128.816 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 250.55 Mbit/s

95th percentile per-packet one-way delay: 75.516 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 346.17 Mbit/s

95th percentile per-packet one-way delay: 191.832 ms

Loss rate: 2.55%

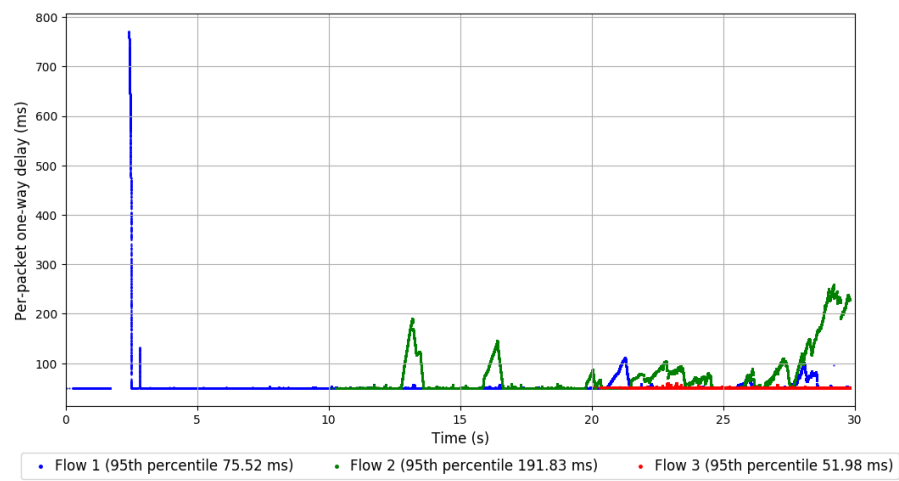
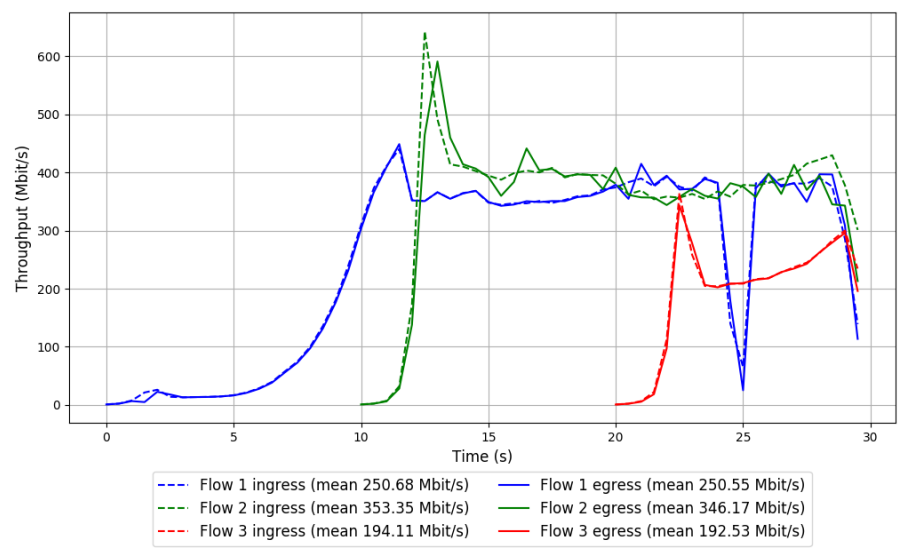
-- Flow 3:

Average throughput: 192.53 Mbit/s

95th percentile per-packet one-way delay: 51.985 ms

Loss rate: 1.87%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-02-17 12:08:06

End at: 2018-02-17 12:08:36

Below is generated by plot.py at 2018-02-17 17:57:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 640.69 Mbit/s

95th percentile per-packet one-way delay: 159.830 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 366.67 Mbit/s

95th percentile per-packet one-way delay: 99.835 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 316.76 Mbit/s

95th percentile per-packet one-way delay: 204.706 ms

Loss rate: 2.30%

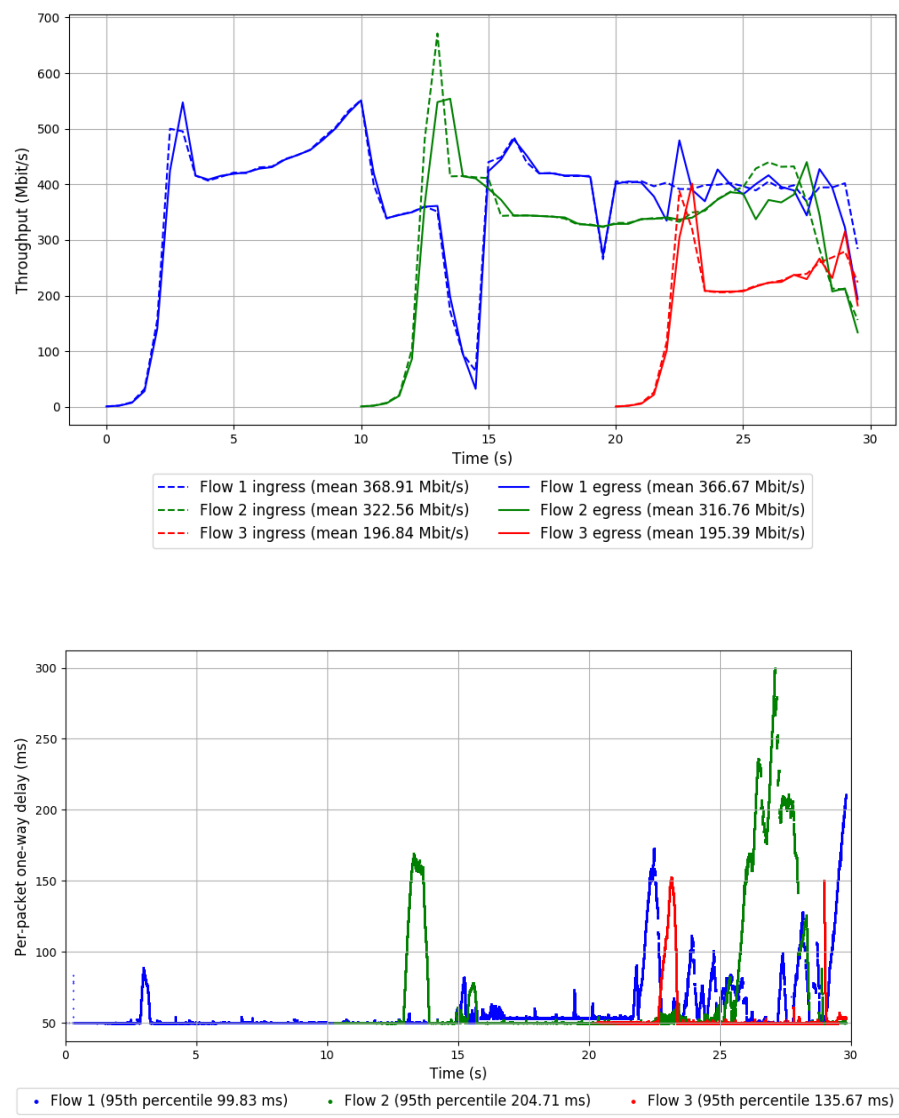
-- Flow 3:

Average throughput: 195.39 Mbit/s

95th percentile per-packet one-way delay: 135.666 ms

Loss rate: 1.75%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-02-17 12:26:11

End at: 2018-02-17 12:26:41

Below is generated by plot.py at 2018-02-17 17:57:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 630.08 Mbit/s

95th percentile per-packet one-way delay: 172.684 ms

Loss rate: 2.19%

-- Flow 1:

Average throughput: 362.49 Mbit/s

95th percentile per-packet one-way delay: 176.348 ms

Loss rate: 2.68%

-- Flow 2:

Average throughput: 317.11 Mbit/s

95th percentile per-packet one-way delay: 174.218 ms

Loss rate: 1.54%

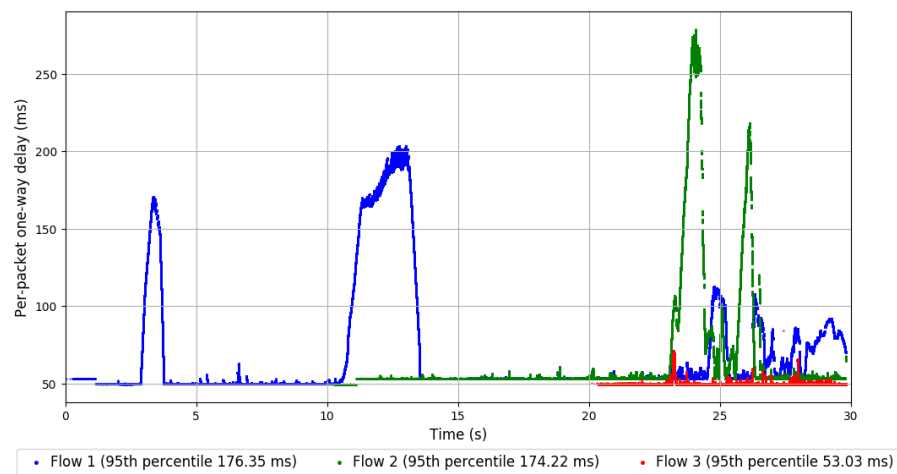
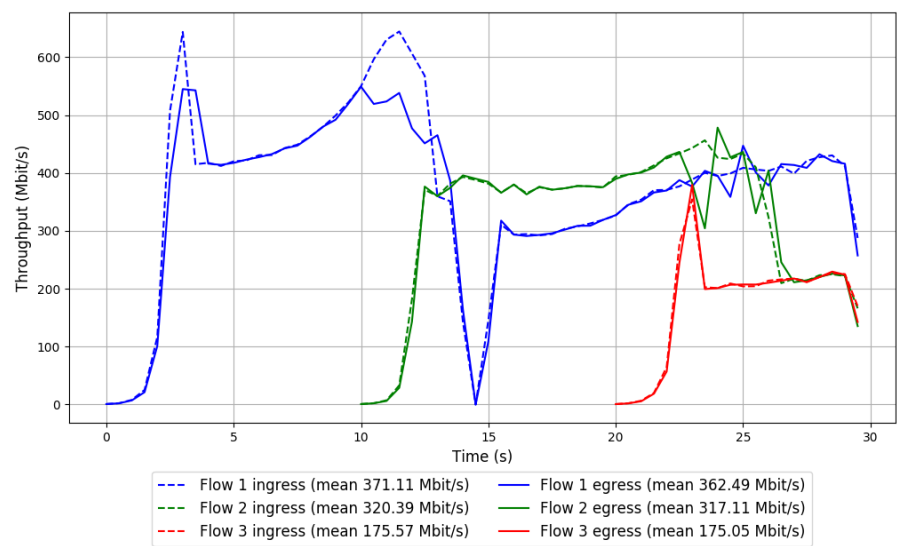
-- Flow 3:

Average throughput: 175.05 Mbit/s

95th percentile per-packet one-way delay: 53.031 ms

Loss rate: 1.42%

Run 10: Report of Vivace-loss — Data Link

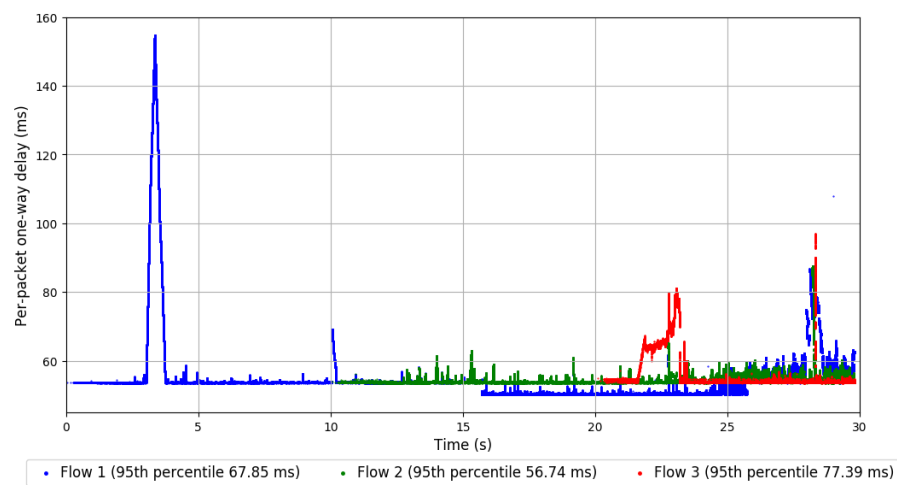
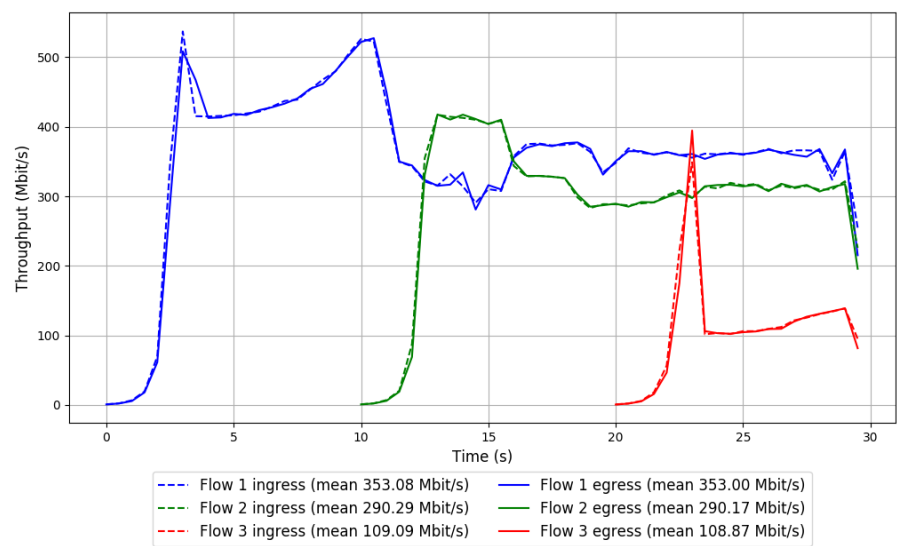


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-02-17 09:39:40
End at: 2018-02-17 09:40:10

# Below is generated by plot.py at 2018-02-17 18:00:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 581.11 Mbit/s
95th percentile per-packet one-way delay: 62.455 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 353.00 Mbit/s
95th percentile per-packet one-way delay: 67.852 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 290.17 Mbit/s
95th percentile per-packet one-way delay: 56.741 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 108.87 Mbit/s
95th percentile per-packet one-way delay: 77.391 ms
Loss rate: 1.29%
```


Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-02-17 09:57:32

End at: 2018-02-17 09:58:02

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 684.00 Mbit/s

95th percentile per-packet one-way delay: 178.632 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 408.69 Mbit/s

95th percentile per-packet one-way delay: 157.947 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 280.37 Mbit/s

95th percentile per-packet one-way delay: 137.719 ms

Loss rate: 0.86%

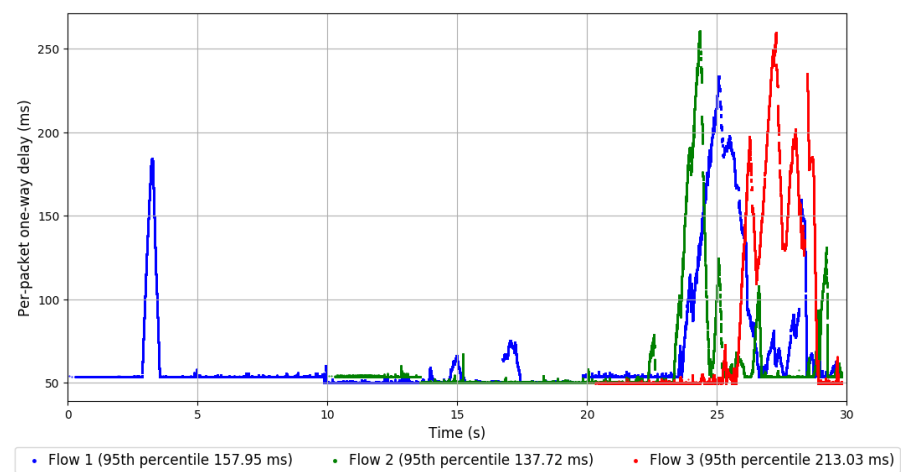
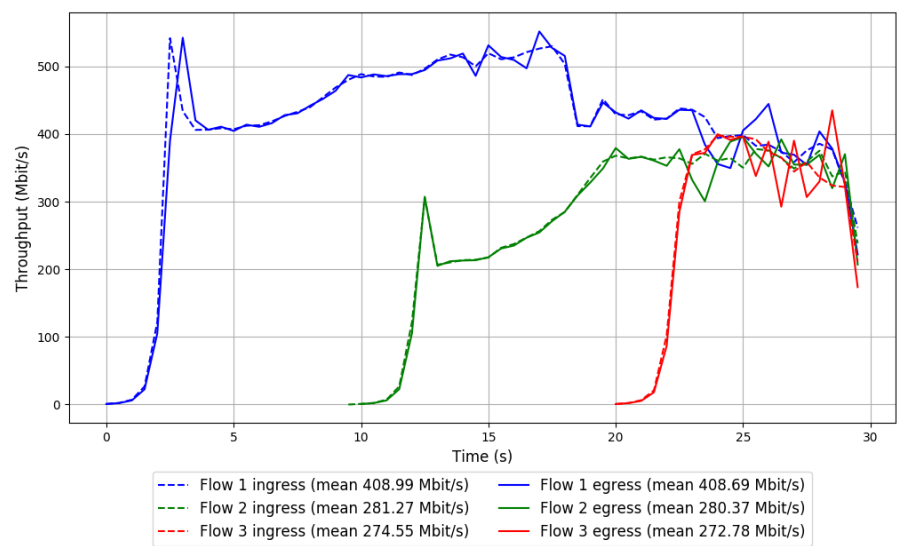
-- Flow 3:

Average throughput: 272.78 Mbit/s

95th percentile per-packet one-way delay: 213.035 ms

Loss rate: 1.70%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-02-17 10:15:04

End at: 2018-02-17 10:15:34

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 577.81 Mbit/s

95th percentile per-packet one-way delay: 58.621 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 358.46 Mbit/s

95th percentile per-packet one-way delay: 59.008 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 242.88 Mbit/s

95th percentile per-packet one-way delay: 58.502 ms

Loss rate: 0.78%

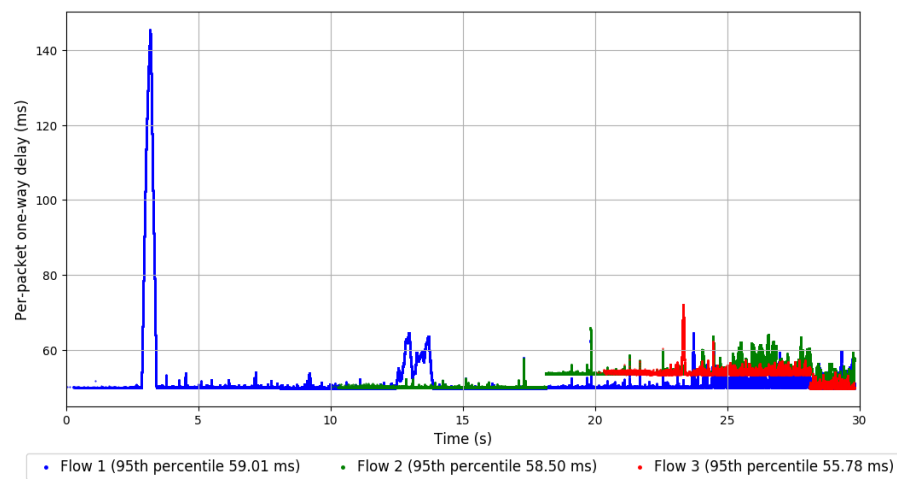
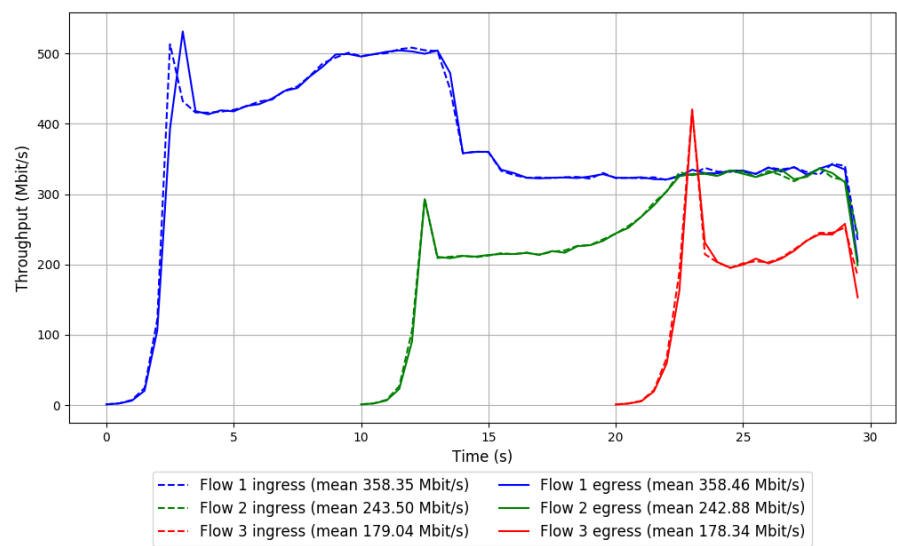
-- Flow 3:

Average throughput: 178.34 Mbit/s

95th percentile per-packet one-way delay: 55.784 ms

Loss rate: 1.54%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-02-17 10:32:59

End at: 2018-02-17 10:33:30

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 574.98 Mbit/s

95th percentile per-packet one-way delay: 183.313 ms

Loss rate: 1.74%

-- Flow 1:

Average throughput: 304.43 Mbit/s

95th percentile per-packet one-way delay: 178.286 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 275.07 Mbit/s

95th percentile per-packet one-way delay: 123.295 ms

Loss rate: 0.78%

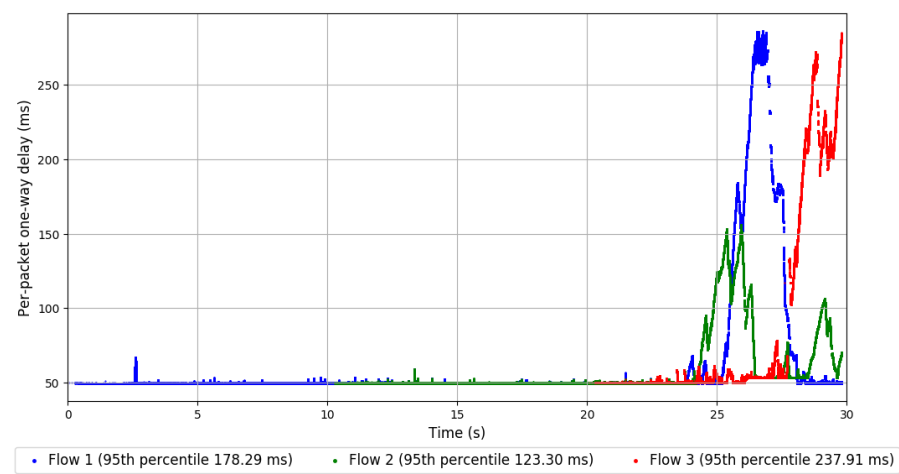
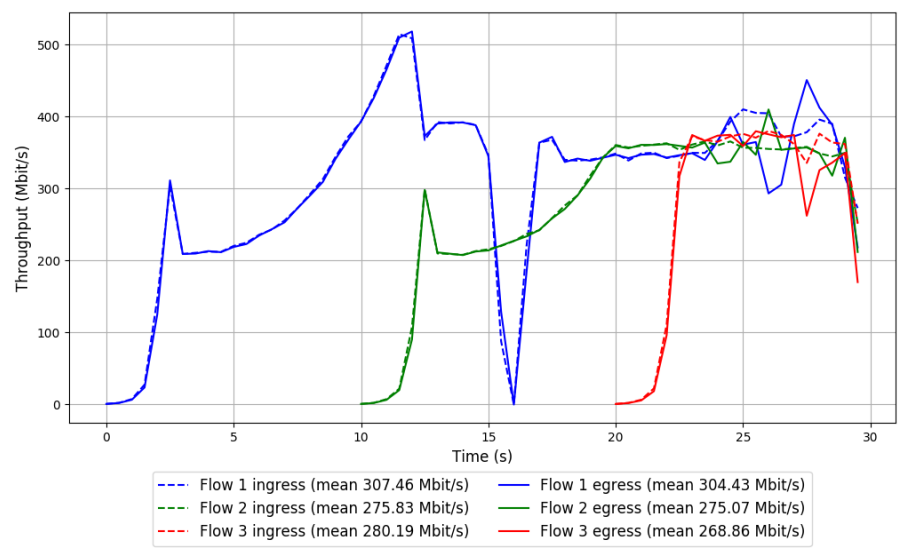
-- Flow 3:

Average throughput: 268.86 Mbit/s

95th percentile per-packet one-way delay: 237.912 ms

Loss rate: 5.03%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-02-17 10:50:47

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

Below is generated by plot.py at 2018-02-17 18:03:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 628.67 Mbit/s

95th percentile per-packet one-way delay: 156.030 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 379.30 Mbit/s

95th percentile per-packet one-way delay: 171.072 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 294.66 Mbit/s

95th percentile per-packet one-way delay: 102.747 ms

Loss rate: 0.64%

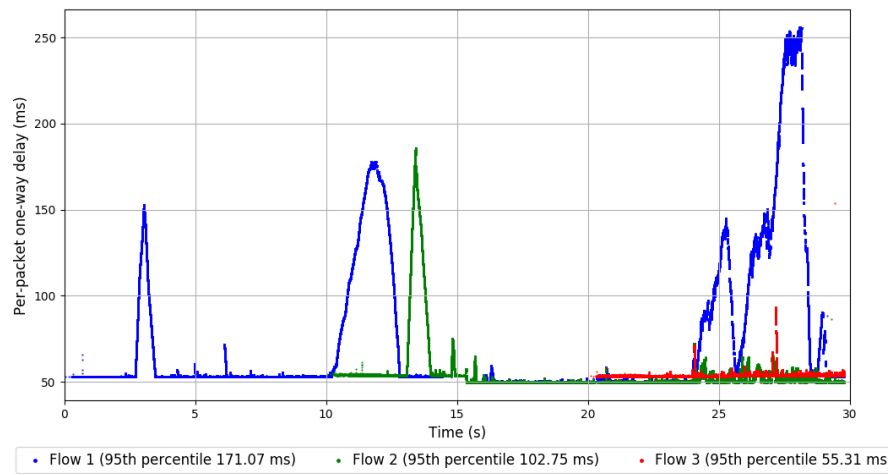
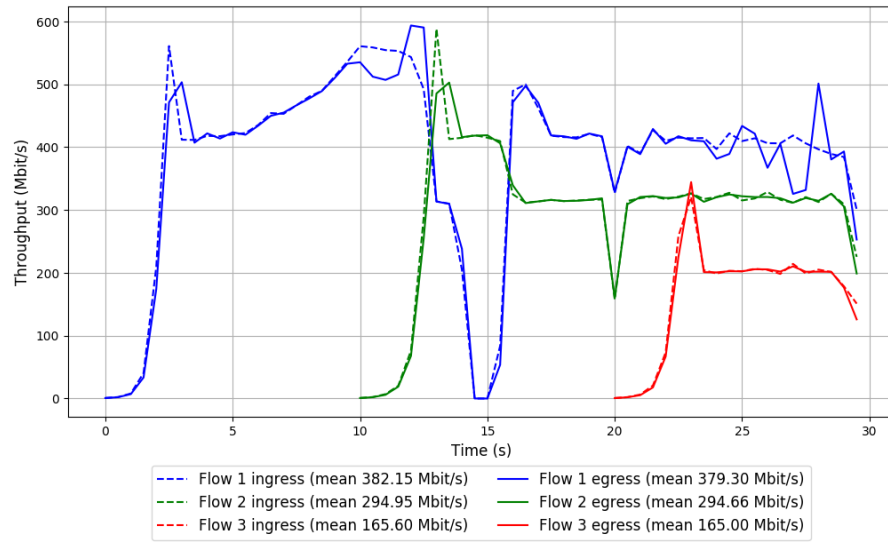
-- Flow 3:

Average throughput: 165.00 Mbit/s

95th percentile per-packet one-way delay: 55.311 ms

Loss rate: 1.54%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-02-17 11:08:41

End at: 2018-02-17 11:09:11

Below is generated by plot.py at 2018-02-17 18:03:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 647.60 Mbit/s

95th percentile per-packet one-way delay: 118.227 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 359.71 Mbit/s

95th percentile per-packet one-way delay: 81.548 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 293.77 Mbit/s

95th percentile per-packet one-way delay: 125.534 ms

Loss rate: 1.84%

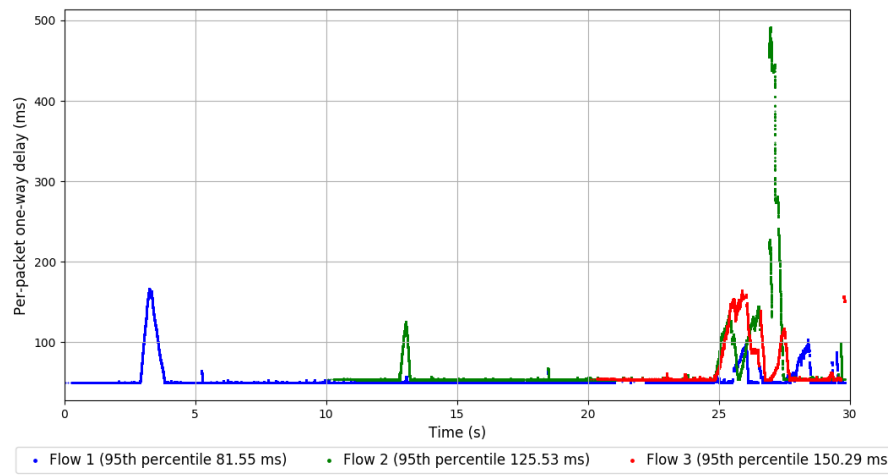
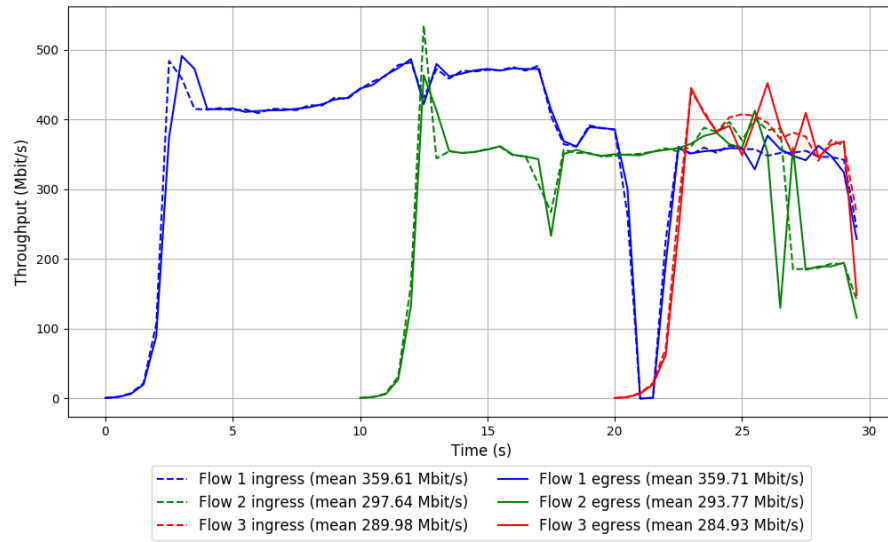
-- Flow 3:

Average throughput: 284.93 Mbit/s

95th percentile per-packet one-way delay: 150.294 ms

Loss rate: 2.83%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-02-17 11:26:36

End at: 2018-02-17 11:27:06

Below is generated by plot.py at 2018-02-17 18:06:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 684.94 Mbit/s

95th percentile per-packet one-way delay: 159.083 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 374.27 Mbit/s

95th percentile per-packet one-way delay: 138.424 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 323.03 Mbit/s

95th percentile per-packet one-way delay: 118.273 ms

Loss rate: 0.60%

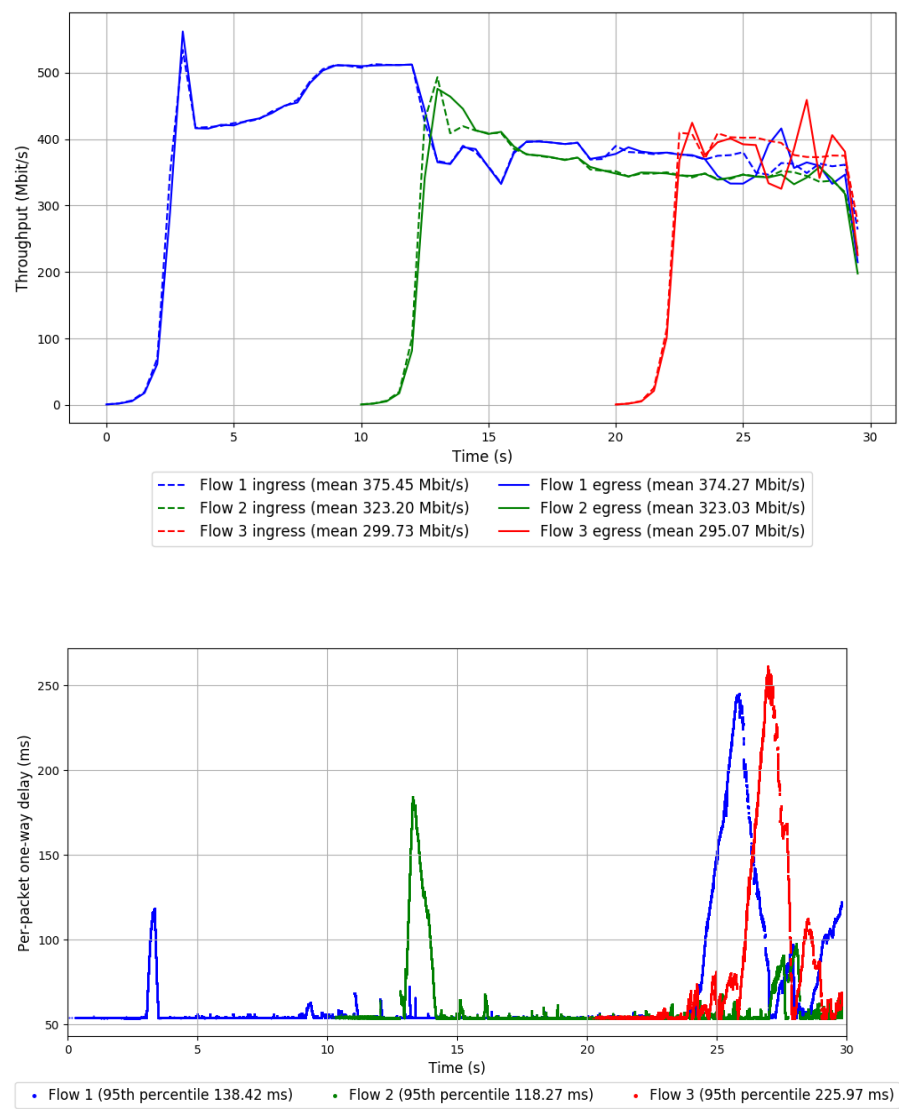
-- Flow 3:

Average throughput: 295.07 Mbit/s

95th percentile per-packet one-way delay: 225.968 ms

Loss rate: 2.63%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-02-17 11:44:41

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

Below is generated by plot.py at 2018-02-17 18:06:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 604.13 Mbit/s

95th percentile per-packet one-way delay: 61.783 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 333.93 Mbit/s

95th percentile per-packet one-way delay: 62.124 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 318.82 Mbit/s

95th percentile per-packet one-way delay: 62.315 ms

Loss rate: 0.75%

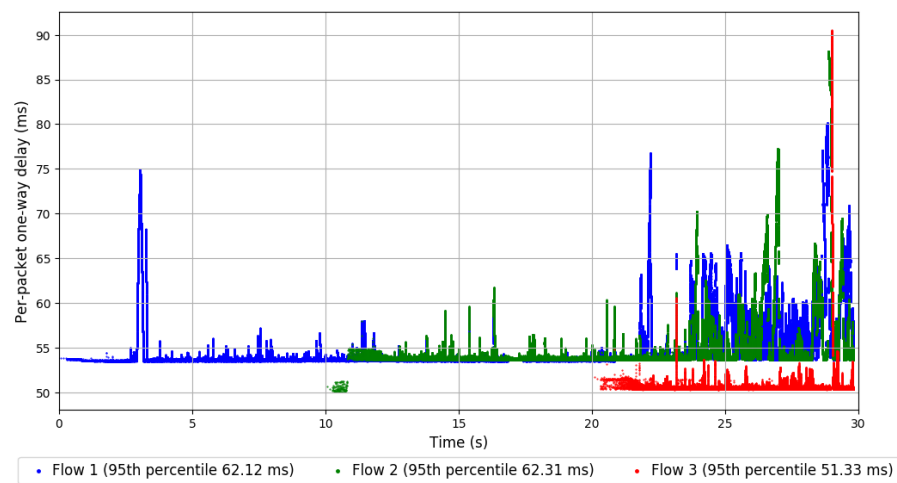
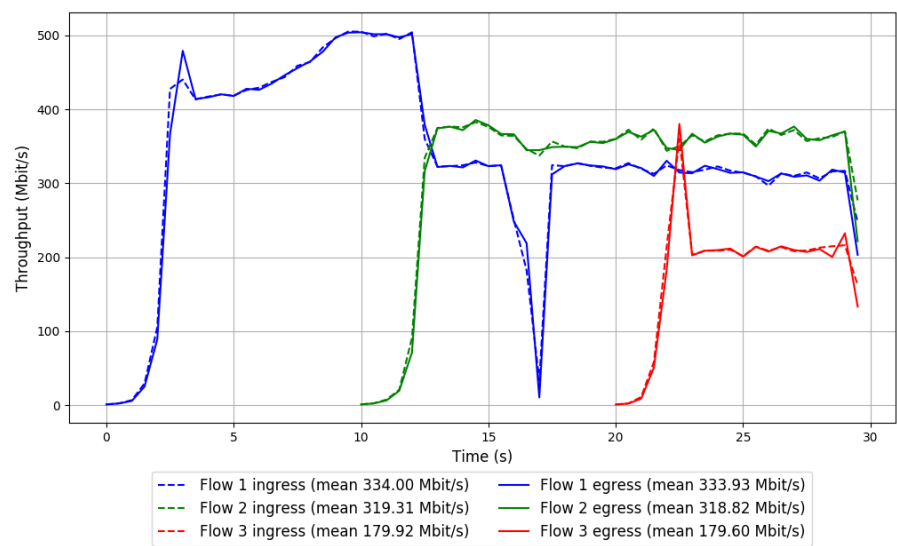
-- Flow 3:

Average throughput: 179.60 Mbit/s

95th percentile per-packet one-way delay: 51.331 ms

Loss rate: 1.41%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-02-17 12:02:29

End at: 2018-02-17 12:02:59

Below is generated by plot.py at 2018-02-17 18:06:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 632.58 Mbit/s

95th percentile per-packet one-way delay: 190.326 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 380.94 Mbit/s

95th percentile per-packet one-way delay: 175.855 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 235.06 Mbit/s

95th percentile per-packet one-way delay: 71.279 ms

Loss rate: 0.77%

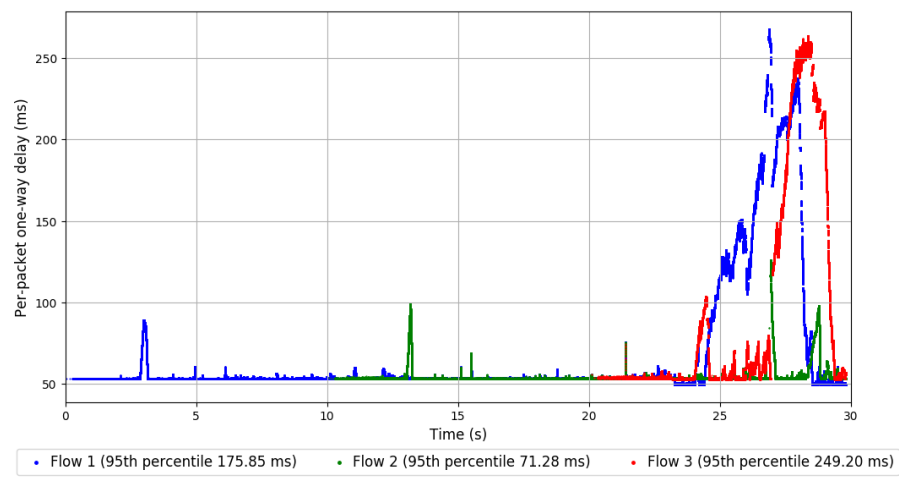
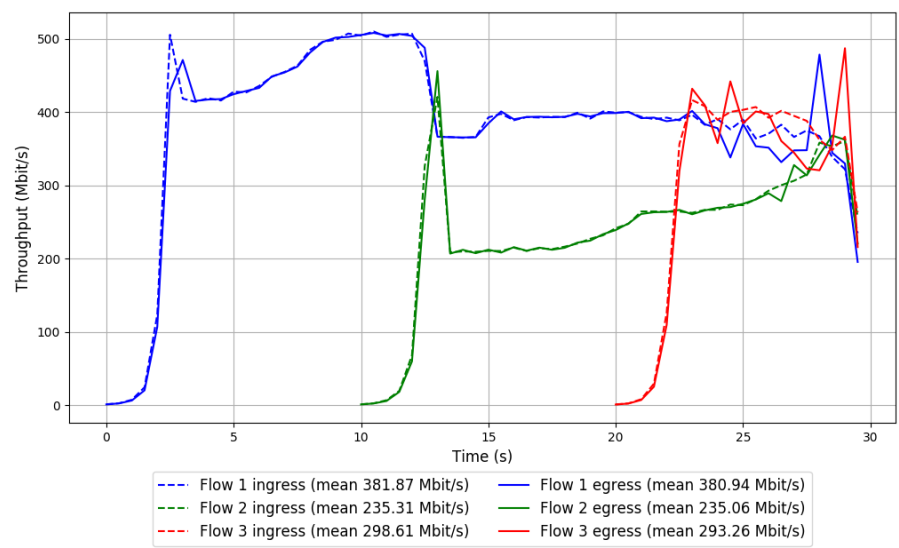
-- Flow 3:

Average throughput: 293.26 Mbit/s

95th percentile per-packet one-way delay: 249.199 ms

Loss rate: 2.91%

Run 9: Report of Vivace-LTE — Data Link



Run 10: Statistics of Vivace-LTE

Start at: 2018-02-17 12:20:46

End at: 2018-02-17 12:21:16

Below is generated by plot.py at 2018-02-17 18:06:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 620.73 Mbit/s

95th percentile per-packet one-way delay: 156.990 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 358.75 Mbit/s

95th percentile per-packet one-way delay: 62.345 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 257.21 Mbit/s

95th percentile per-packet one-way delay: 53.618 ms

Loss rate: 0.56%

-- Flow 3:

Average throughput: 279.03 Mbit/s

95th percentile per-packet one-way delay: 242.504 ms

Loss rate: 3.92%

Run 10: Report of Vivace-LTE — Data Link

