

Pantheon Report

Generated at 2017-12-21 04:49:22 (UTC).

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

Repeated the test of 14 congestion control schemes 10 times.

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

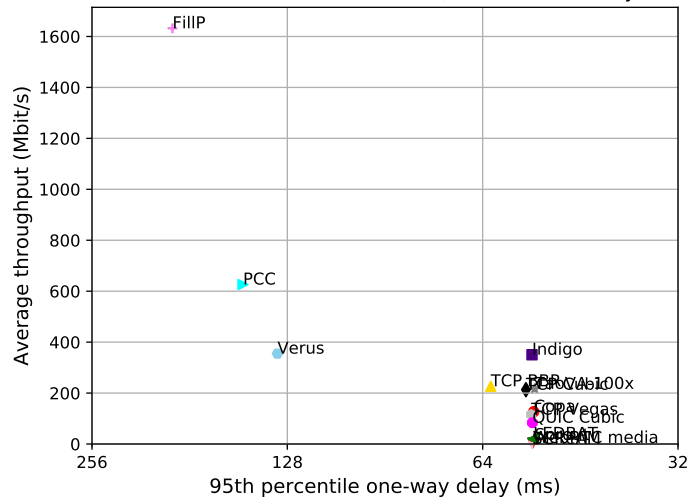
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

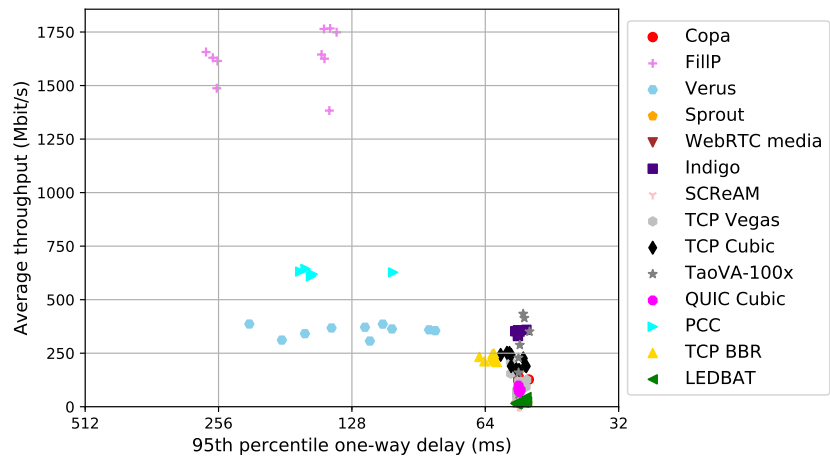
Git summary:

```
branch: master @ 904a5750834816b1e46a2c86405d707788d27c16
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ dcaef6b00654e660f73f7ed679d2eab61ce08639
third_party/genericCC @ 80b516c448f795fd6e9675f7177b69c622f07da8
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaaeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

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



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



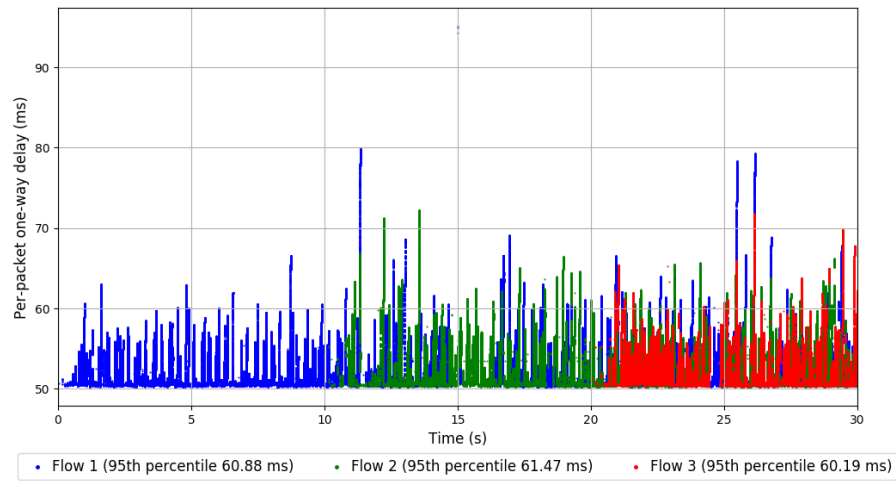
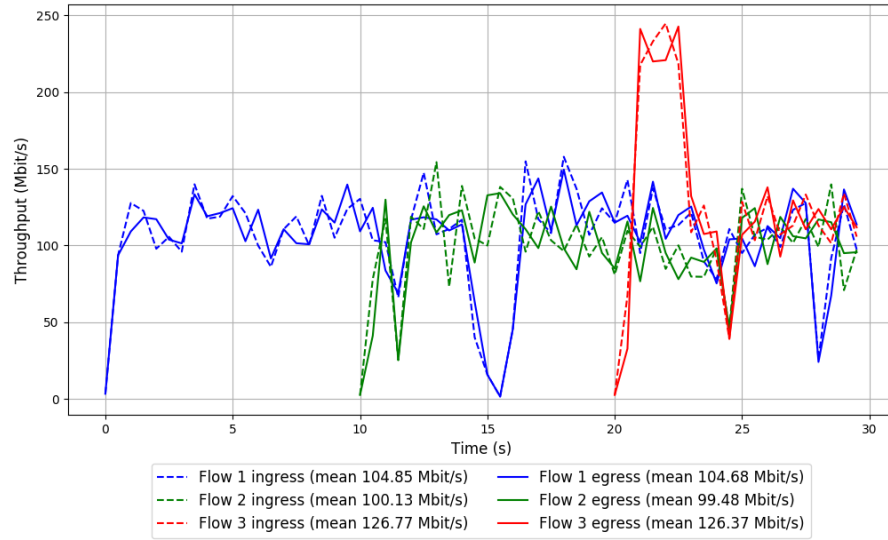
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	8	112.19	103.75	137.31	61.49	62.27	63.38	0.21	0.21	0.38
TCP Cubic	10	106.71	113.16	94.17	54.56	53.85	54.54	0.11	0.09	0.08
LEDBAT	10	11.52	9.66	7.74	53.63	53.24	52.67	0.47	0.52	0.37
PCC	5	582.17	48.71	33.62	149.80	149.71	144.45	1.43	1.25	1.25
QUIC Cubic	5	44.44	52.15	14.10	51.93	53.73	52.41	0.00	0.00	0.01
SCReAM	10	0.22	0.21	0.22	52.54	53.05	52.83	0.01	0.00	0.00
WebRTC media	4	2.15	1.56	0.65	51.48	52.92	53.59	0.01	0.00	0.00
Sprout	10	7.73	7.74	7.44	53.18	53.29	52.88	0.38	0.21	0.05
TaoVA-100x	10	100.17	147.12	77.65	53.18	52.48	54.83	0.00	0.00	0.01
TCP Vegas	10	49.37	67.53	63.13	53.66	53.52	53.26	0.37	0.36	0.22
Verus	10	222.60	143.02	115.58	135.65	127.23	112.47	0.55	0.42	0.36
Copa	8	64.03	72.16	56.05	229.38	53.35	52.87	0.03	0.06	0.07
FillP	10	843.20	829.00	716.33	171.68	161.68	214.33	5.87	5.79	11.92
Indigo	7	185.92	173.71	152.07	53.58	53.81	52.99	0.03	0.05	0.13

```
Run 1: Statistics of TCP BBR

Start at: 2017-12-20 23:29:44
End at: 2017-12-20 23:30:14

# Below is generated by plot.py at 2017-12-21 03:26:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 212.76 Mbit/s
95th percentile per-packet one-way delay: 61.013 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 104.68 Mbit/s
95th percentile per-packet one-way delay: 60.880 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 99.48 Mbit/s
95th percentile per-packet one-way delay: 61.470 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 126.37 Mbit/s
95th percentile per-packet one-way delay: 60.185 ms
Loss rate: 0.29%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-12-20 23:43:38

End at: 2017-12-20 23:44:08

Below is generated by plot.py at 2017-12-21 03:26:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 249.00 Mbit/s

95th percentile per-packet one-way delay: 61.210 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 144.39 Mbit/s

95th percentile per-packet one-way delay: 60.431 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 103.66 Mbit/s

95th percentile per-packet one-way delay: 60.860 ms

Loss rate: 0.08%

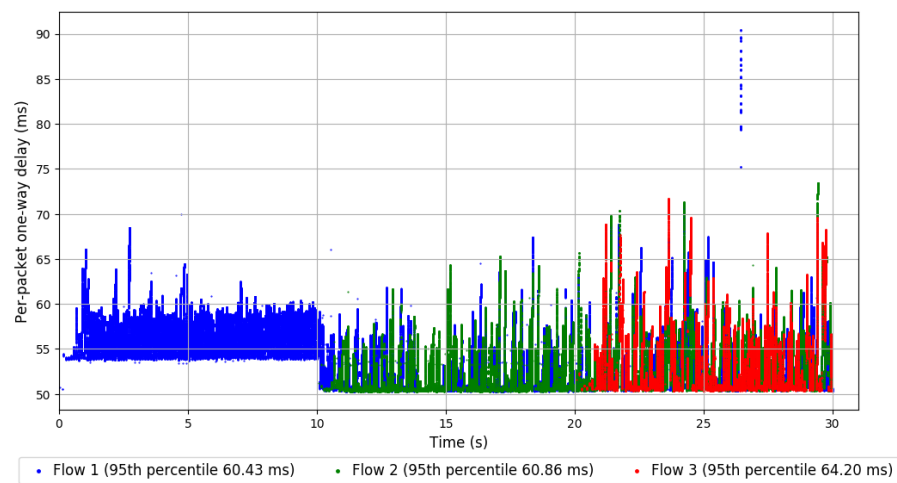
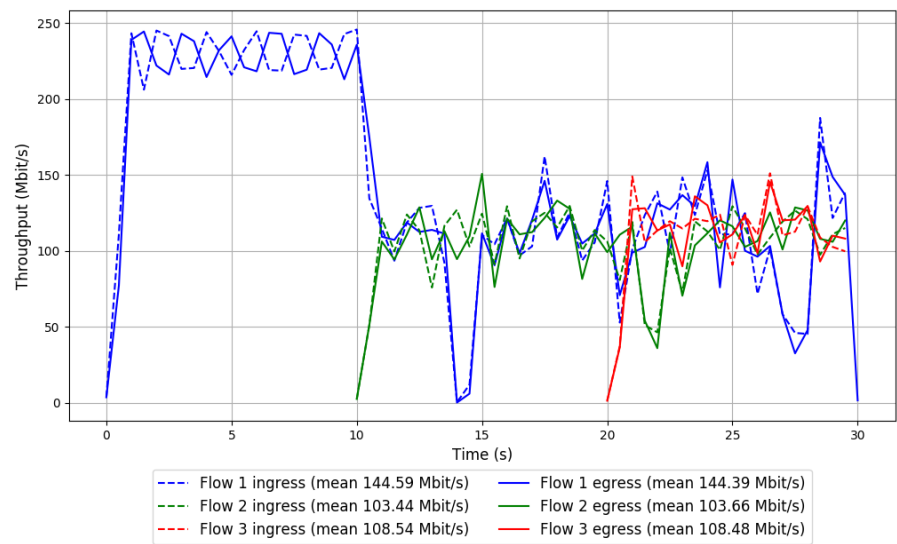
-- Flow 3:

Average throughput: 108.48 Mbit/s

95th percentile per-packet one-way delay: 64.196 ms

Loss rate: 0.00%

Run 2: Report of TCP BBR — Data Link

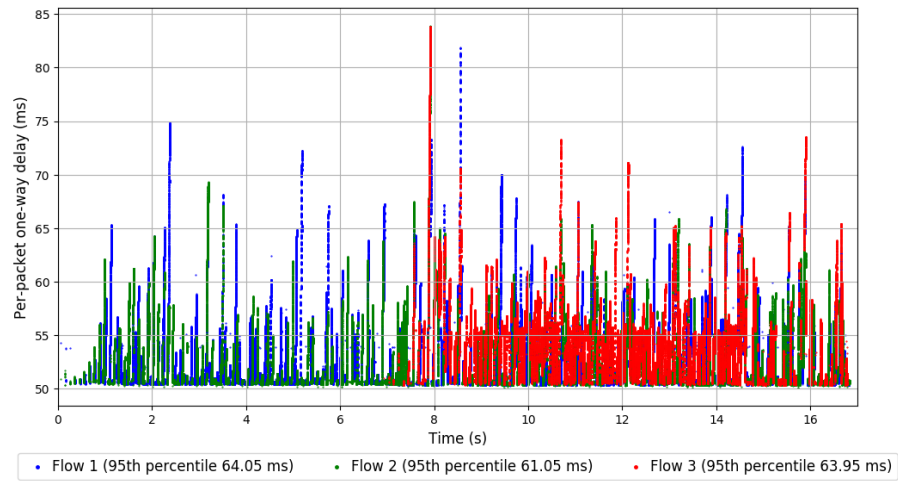
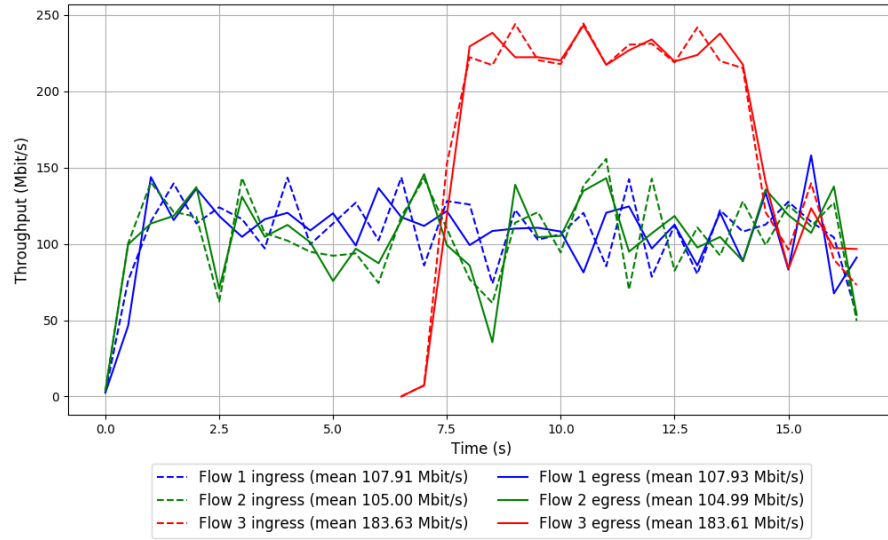


Run 3: Statistics of TCP BBR

Start at: 2017-12-20 23:57:38

End at: 2017-12-20 23:58:08

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-12-21 00:11:05

End at: 2017-12-21 00:11:35

Below is generated by plot.py at 2017-12-21 03:26:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 245.47 Mbit/s

95th percentile per-packet one-way delay: 61.685 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 104.88 Mbit/s

95th percentile per-packet one-way delay: 60.836 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 111.83 Mbit/s

95th percentile per-packet one-way delay: 61.026 ms

Loss rate: 0.03%

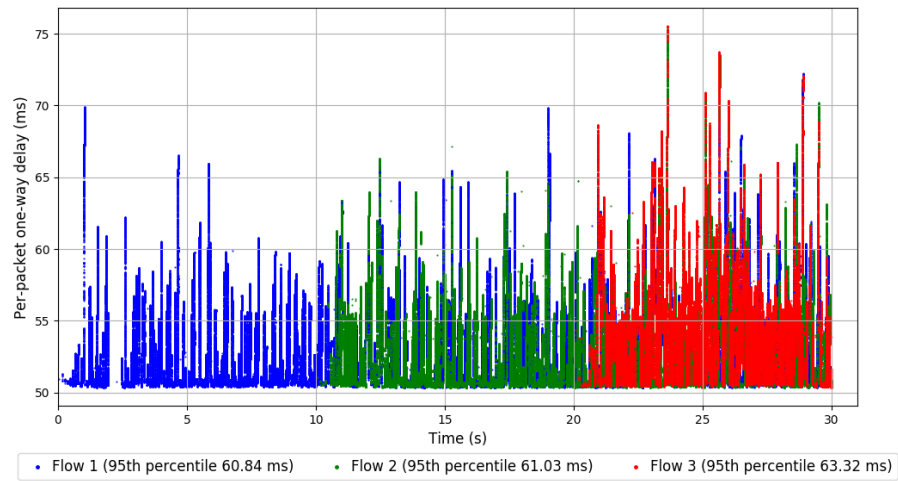
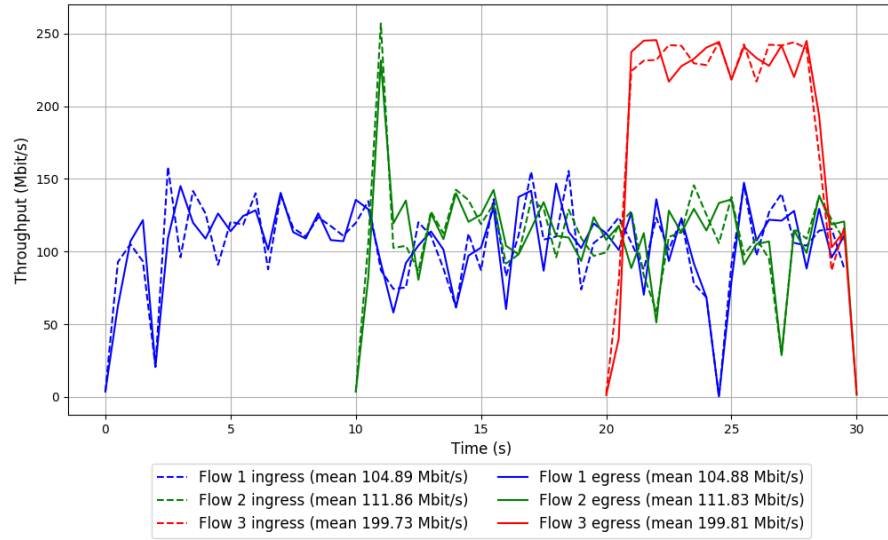
-- Flow 3:

Average throughput: 199.81 Mbit/s

95th percentile per-packet one-way delay: 63.323 ms

Loss rate: 0.00%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-12-21 00:25:00

End at: 2017-12-21 00:25:30

Below is generated by plot.py at 2017-12-21 03:26:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 212.00 Mbit/s

95th percentile per-packet one-way delay: 64.297 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 107.84 Mbit/s

95th percentile per-packet one-way delay: 62.917 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 104.01 Mbit/s

95th percentile per-packet one-way delay: 65.090 ms

Loss rate: 0.13%

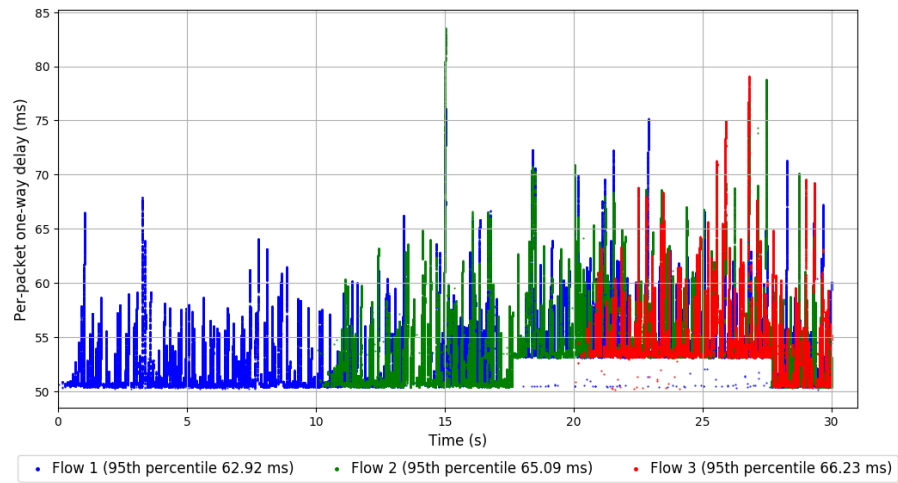
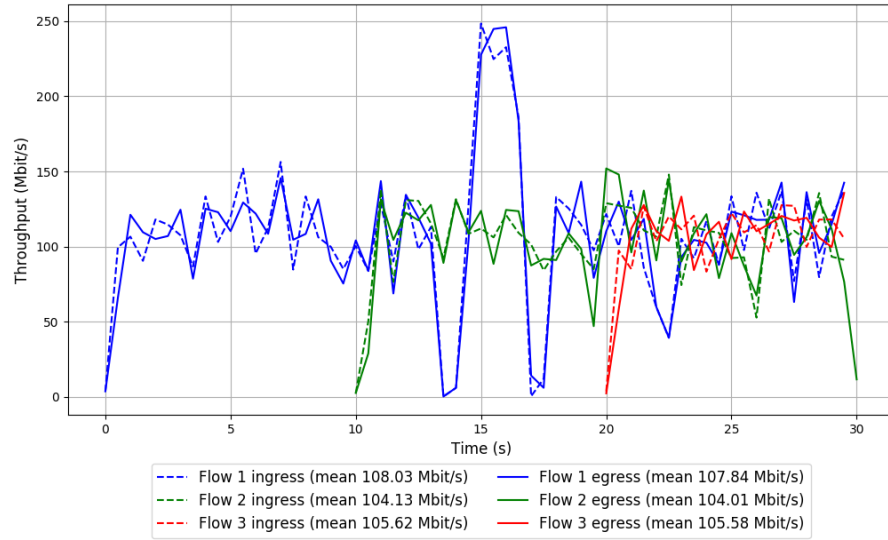
-- Flow 3:

Average throughput: 105.58 Mbit/s

95th percentile per-packet one-way delay: 66.232 ms

Loss rate: 0.00%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-12-21 00:38:31

End at: 2017-12-21 00:39:01

Below is generated by plot.py at 2017-12-21 03:26:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 221.02 Mbit/s

95th percentile per-packet one-way delay: 61.330 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 115.76 Mbit/s

95th percentile per-packet one-way delay: 60.754 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 108.26 Mbit/s

95th percentile per-packet one-way delay: 61.901 ms

Loss rate: 0.01%

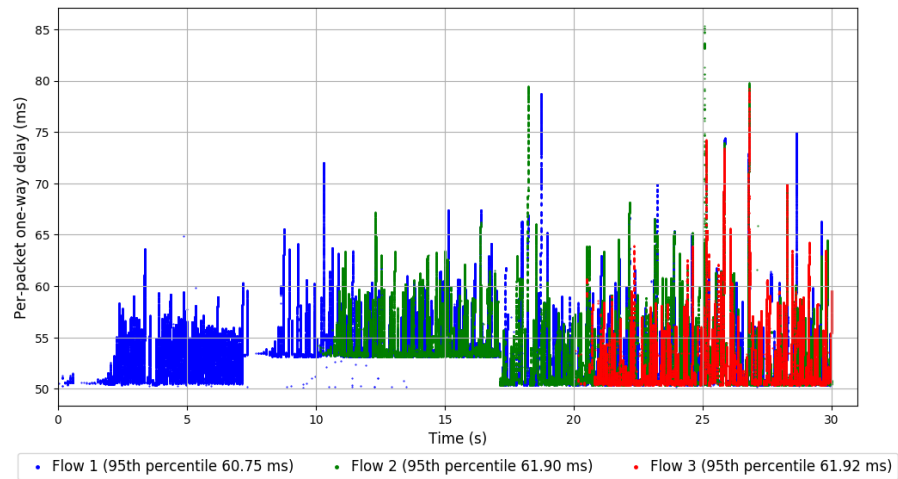
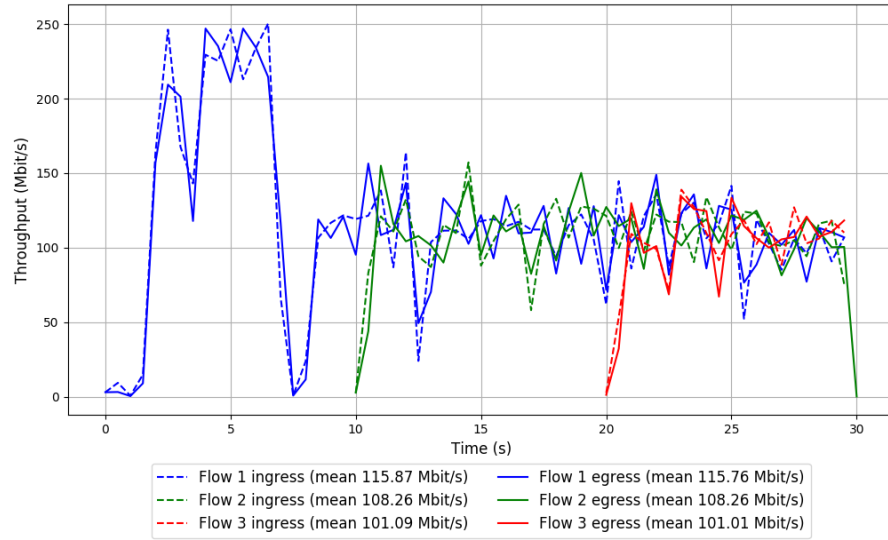
-- Flow 3:

Average throughput: 101.01 Mbit/s

95th percentile per-packet one-way delay: 61.917 ms

Loss rate: 0.01%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-12-21 00:52:04

End at: 2017-12-21 00:52:34

Below is generated by plot.py at 2017-12-21 03:26:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 231.35 Mbit/s

95th percentile per-packet one-way delay: 61.764 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 105.73 Mbit/s

95th percentile per-packet one-way delay: 61.712 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 103.09 Mbit/s

95th percentile per-packet one-way delay: 61.145 ms

Loss rate: 0.01%

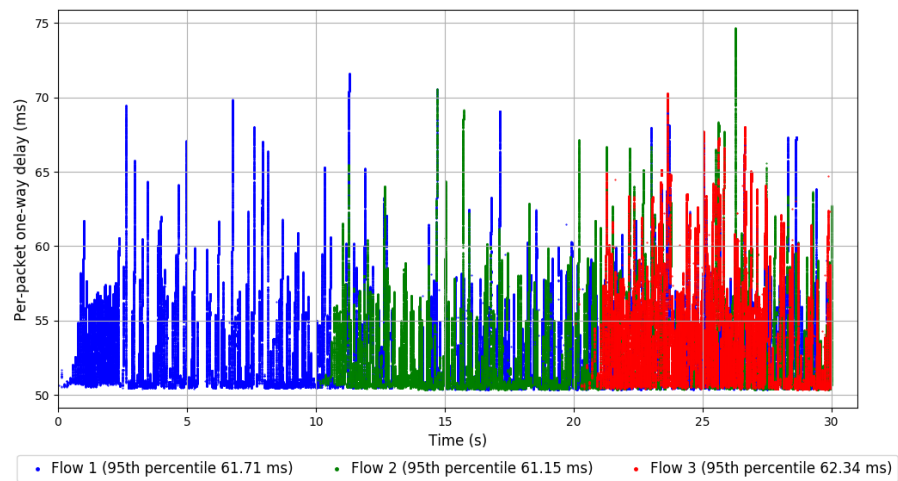
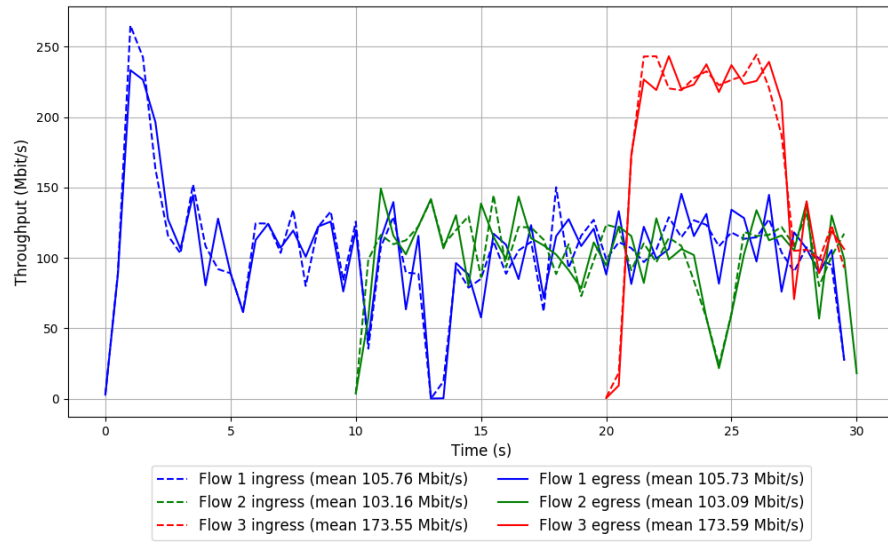
-- Flow 3:

Average throughput: 173.59 Mbit/s

95th percentile per-packet one-way delay: 62.343 ms

Loss rate: 0.02%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-12-21 01:05:43

End at: 2017-12-21 01:06:13

Below is generated by plot.py at 2017-12-21 03:26:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 232.72 Mbit/s

95th percentile per-packet one-way delay: 65.987 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 109.21 Mbit/s

95th percentile per-packet one-way delay: 64.834 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 95.64 Mbit/s

95th percentile per-packet one-way delay: 65.825 ms

Loss rate: 0.41%

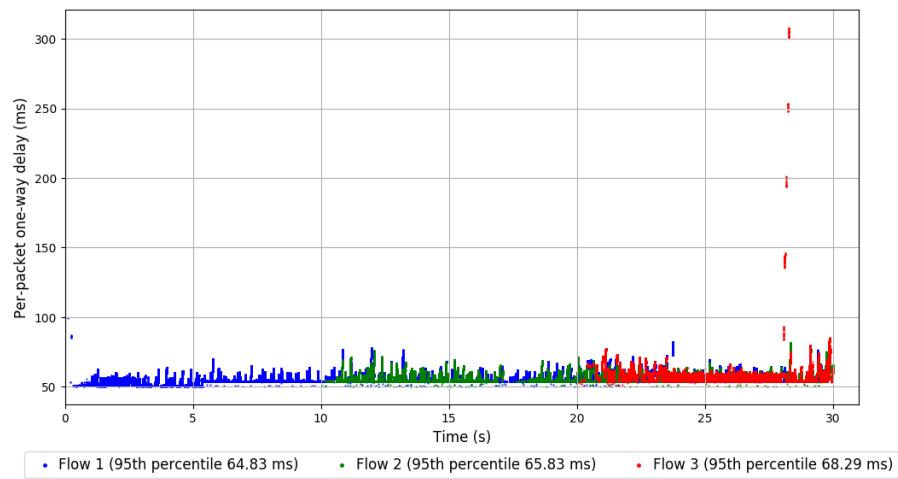
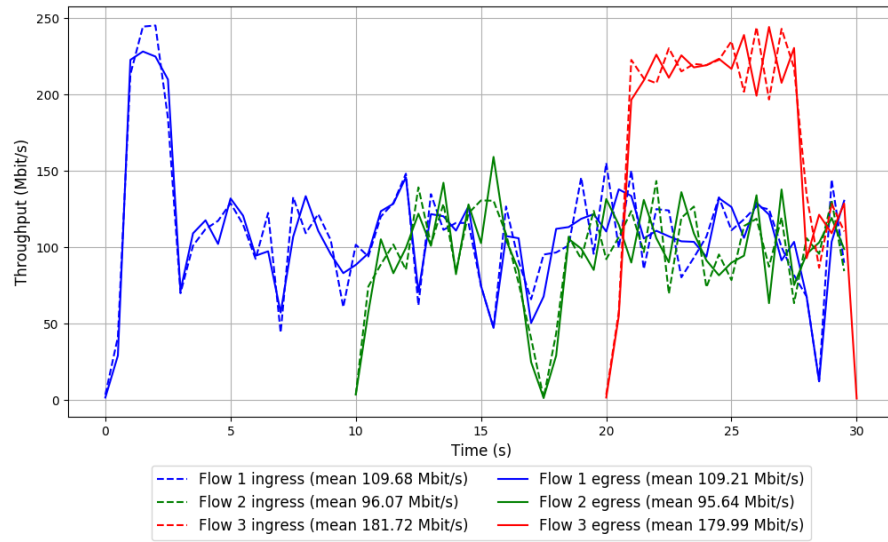
-- Flow 3:

Average throughput: 179.99 Mbit/s

95th percentile per-packet one-way delay: 68.287 ms

Loss rate: 0.86%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-12-21 01:19:02

End at: 2017-12-21 01:19:32

Below is generated by plot.py at 2017-12-21 03:29:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 208.52 Mbit/s

95th percentile per-packet one-way delay: 60.261 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 105.07 Mbit/s

95th percentile per-packet one-way delay: 59.546 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 104.04 Mbit/s

95th percentile per-packet one-way delay: 60.814 ms

Loss rate: 0.31%

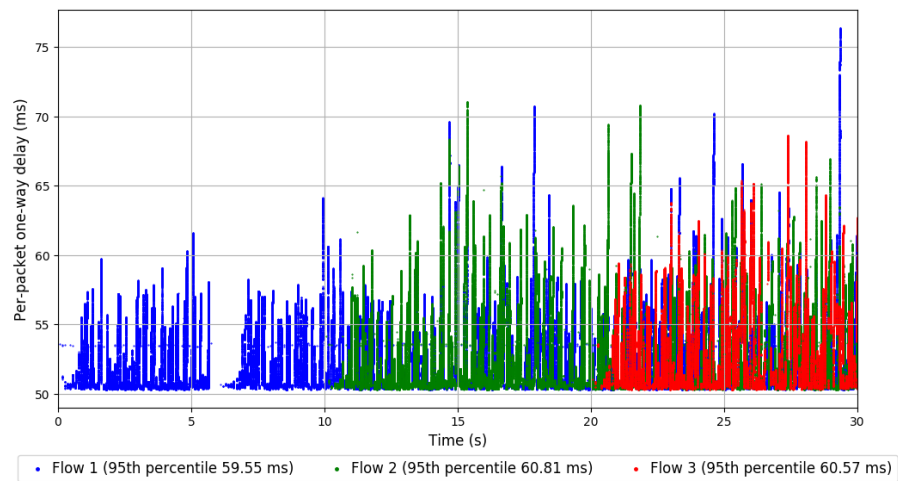
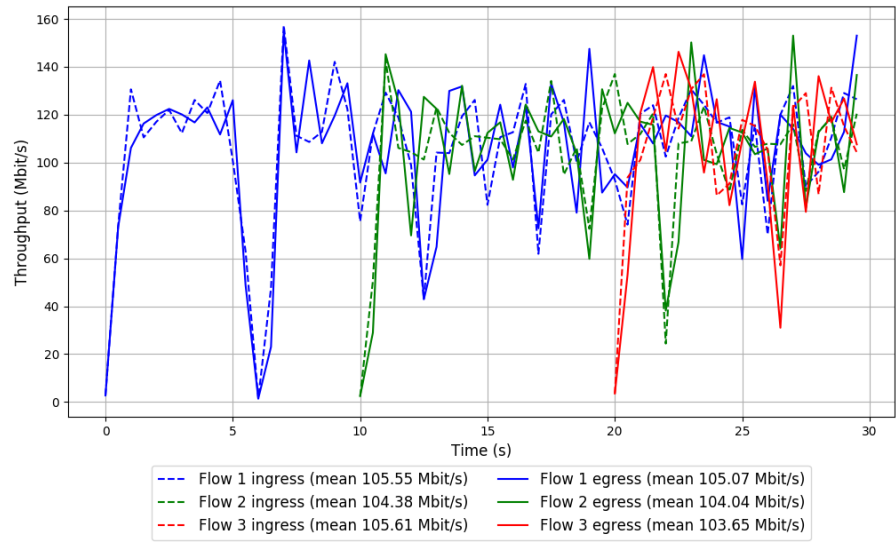
-- Flow 3:

Average throughput: 103.65 Mbit/s

95th percentile per-packet one-way delay: 60.566 ms

Loss rate: 1.86%

Run 9: Report of TCP BBR — Data Link

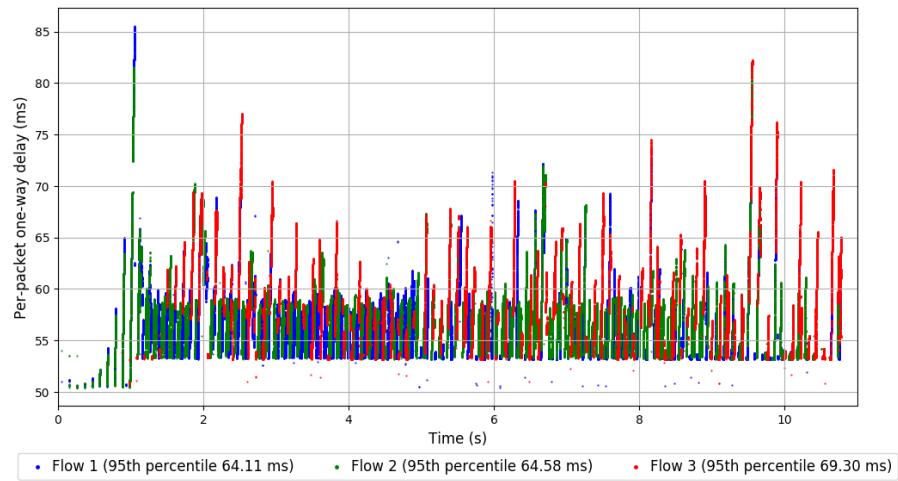
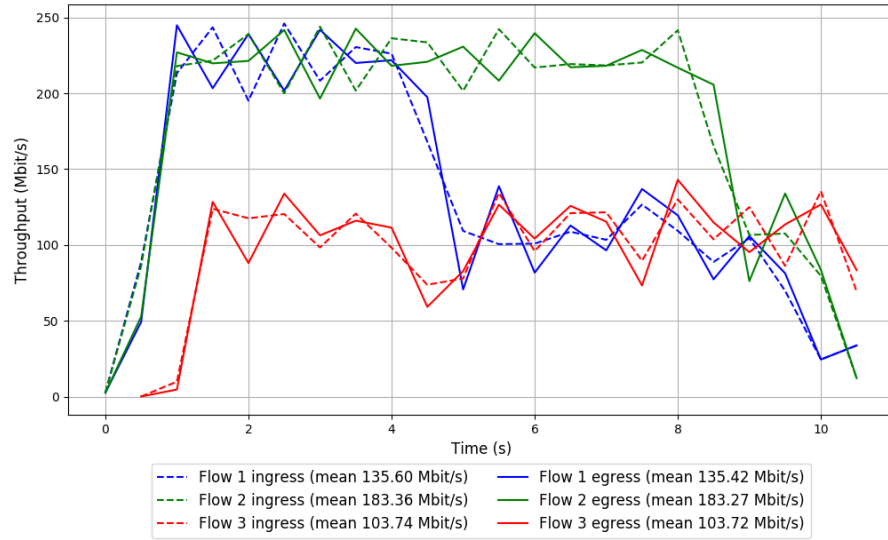


Run 10: Statistics of TCP BBR

Start at: 2017-12-21 01:32:58

End at: 2017-12-21 01:33:28

Run 10: Report of TCP BBR — Data Link

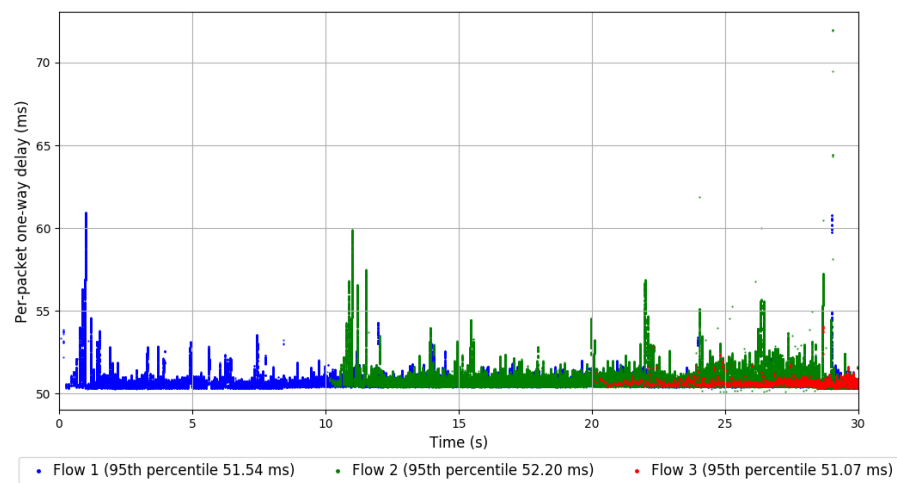
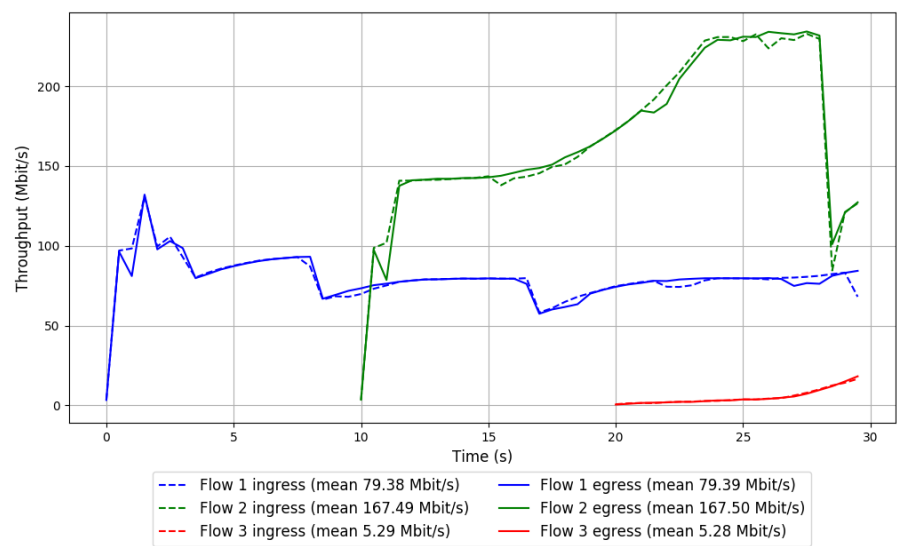


```
Run 1: Statistics of TCP Cubic

Start at: 2017-12-20 23:20:39
End at: 2017-12-20 23:21:09

# Below is generated by plot.py at 2017-12-21 03:29:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 192.60 Mbit/s
95th percentile per-packet one-way delay: 51.937 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 79.39 Mbit/s
95th percentile per-packet one-way delay: 51.538 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 167.50 Mbit/s
95th percentile per-packet one-way delay: 52.205 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 51.070 ms
Loss rate: 0.16%
```

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-12-20 23:33:57

End at: 2017-12-20 23:34:27

Below is generated by plot.py at 2017-12-21 03:30:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 251.31 Mbit/s

95th percentile per-packet one-way delay: 56.447 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 154.79 Mbit/s

95th percentile per-packet one-way delay: 54.857 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 142.26 Mbit/s

95th percentile per-packet one-way delay: 57.913 ms

Loss rate: 0.00%

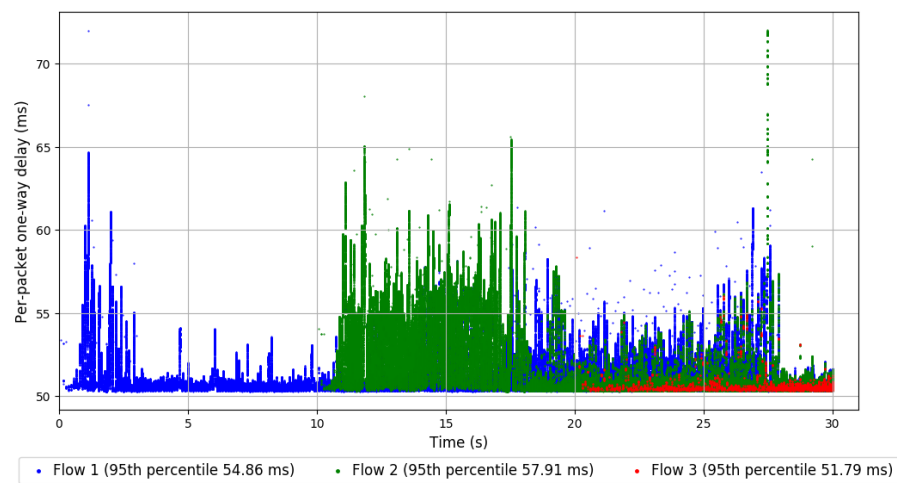
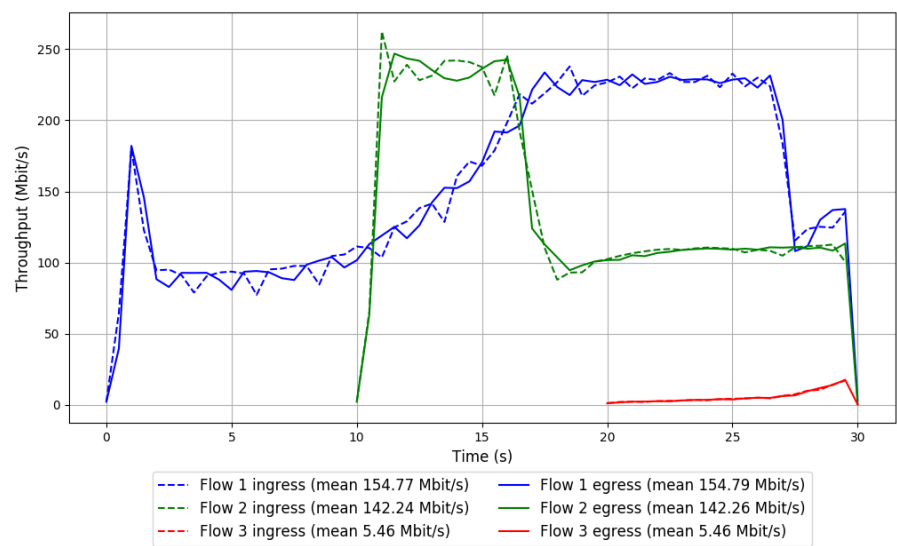
-- Flow 3:

Average throughput: 5.46 Mbit/s

95th percentile per-packet one-way delay: 51.794 ms

Loss rate: 0.02%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-12-20 23:47:50

End at: 2017-12-20 23:48:20

Below is generated by plot.py at 2017-12-21 03:30:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 242.48 Mbit/s

95th percentile per-packet one-way delay: 55.958 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 111.77 Mbit/s

95th percentile per-packet one-way delay: 55.374 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 116.42 Mbit/s

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

Loss rate: 0.00%

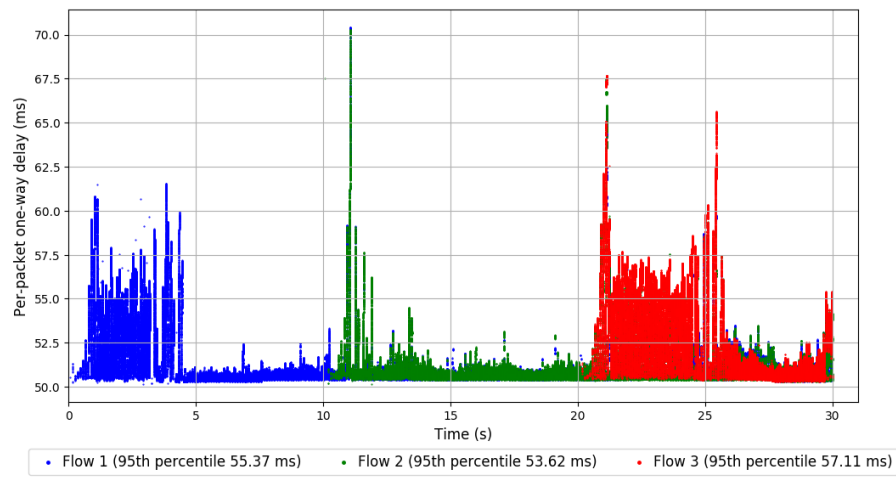
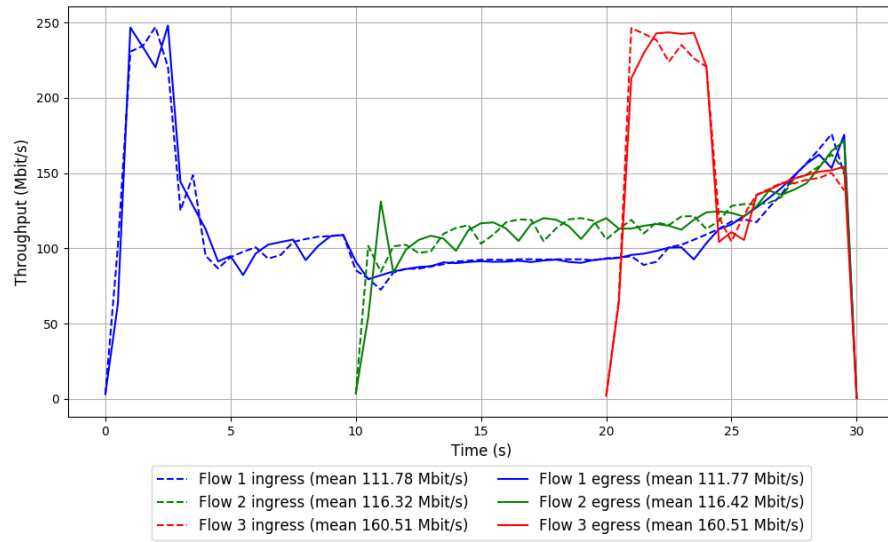
-- Flow 3:

Average throughput: 160.51 Mbit/s

95th percentile per-packet one-way delay: 57.112 ms

Loss rate: 0.00%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-12-21 00:01:48

End at: 2017-12-21 00:02:18

Below is generated by plot.py at 2017-12-21 03:30:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 225.70 Mbit/s

95th percentile per-packet one-way delay: 52.521 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 121.72 Mbit/s

95th percentile per-packet one-way delay: 51.735 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 100.90 Mbit/s

95th percentile per-packet one-way delay: 53.970 ms

Loss rate: 0.02%

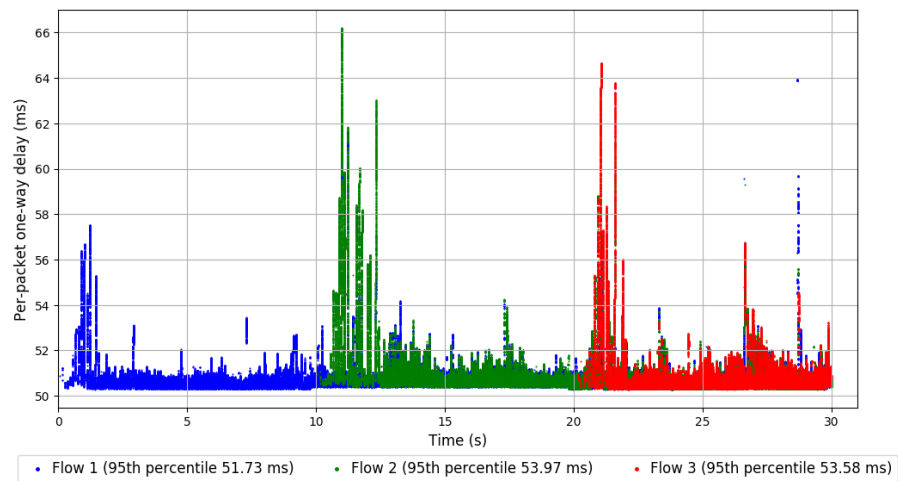
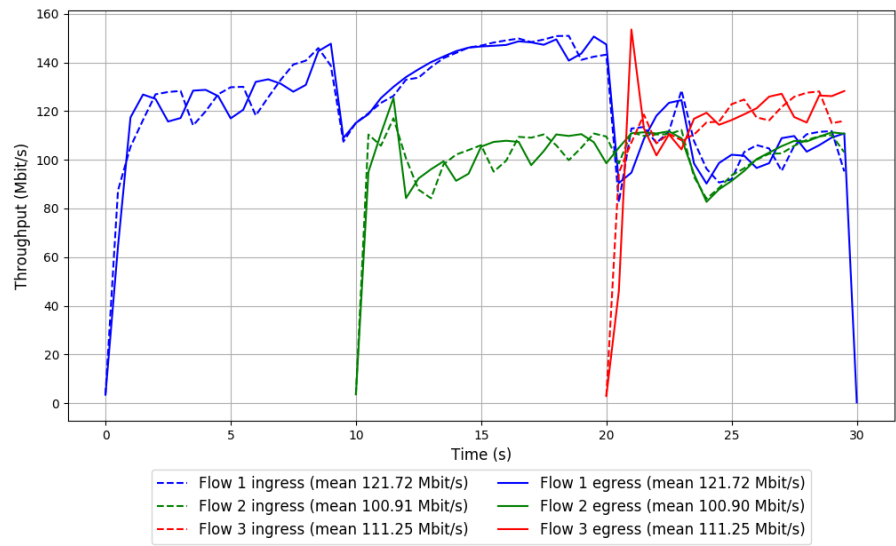
-- Flow 3:

Average throughput: 111.25 Mbit/s

95th percentile per-packet one-way delay: 53.582 ms

Loss rate: 0.00%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-12-21 00:15:27

End at: 2017-12-21 00:15:57

Below is generated by plot.py at 2017-12-21 03:30:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 188.93 Mbit/s

95th percentile per-packet one-way delay: 51.715 ms

Loss rate: 0.34%

-- Flow 1:

Average throughput: 111.37 Mbit/s

95th percentile per-packet one-way delay: 51.605 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 65.39 Mbit/s

95th percentile per-packet one-way delay: 52.122 ms

Loss rate: 0.74%

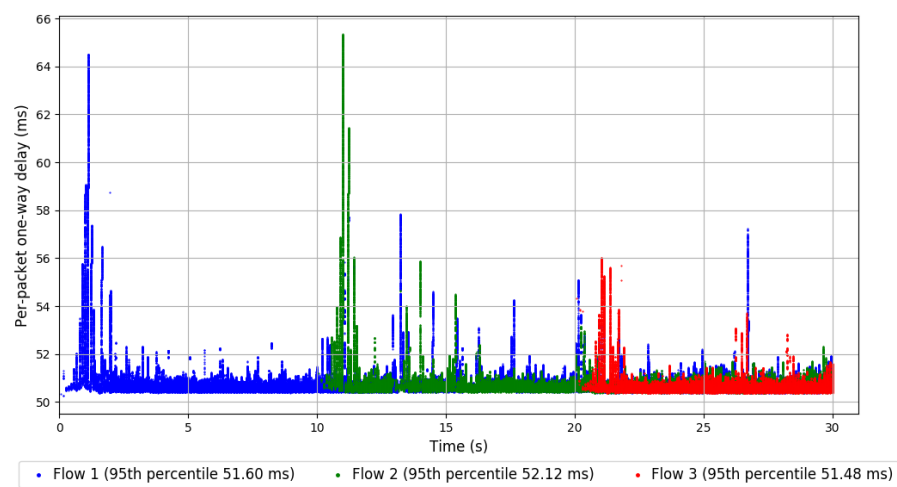
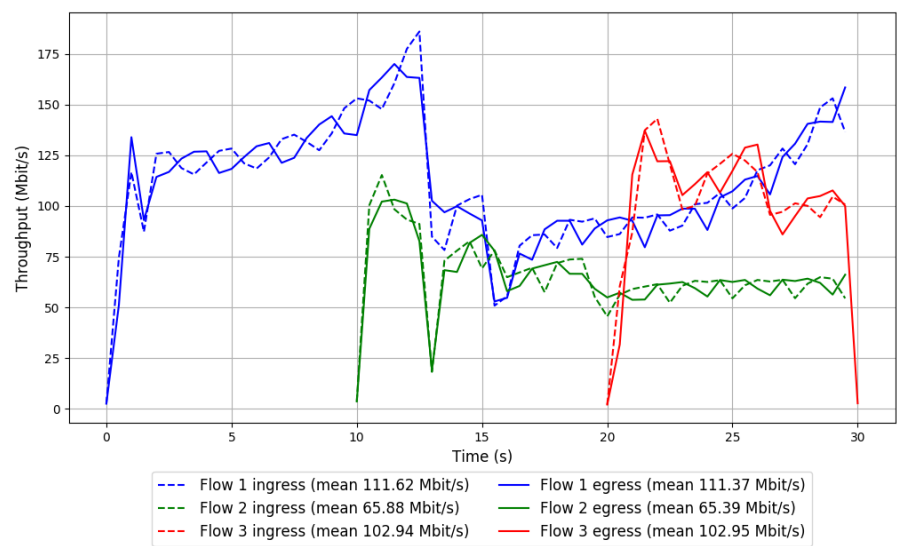
-- Flow 3:

Average throughput: 102.95 Mbit/s

95th percentile per-packet one-way delay: 51.481 ms

Loss rate: 0.03%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-12-21 00:29:09

End at: 2017-12-21 00:29:39

Below is generated by plot.py at 2017-12-21 03:30:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 172.01 Mbit/s

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

Loss rate: 0.05%

-- Flow 1:

Average throughput: 47.83 Mbit/s

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

Loss rate: 0.14%

-- Flow 2:

Average throughput: 136.93 Mbit/s

95th percentile per-packet one-way delay: 53.598 ms

Loss rate: 0.00%

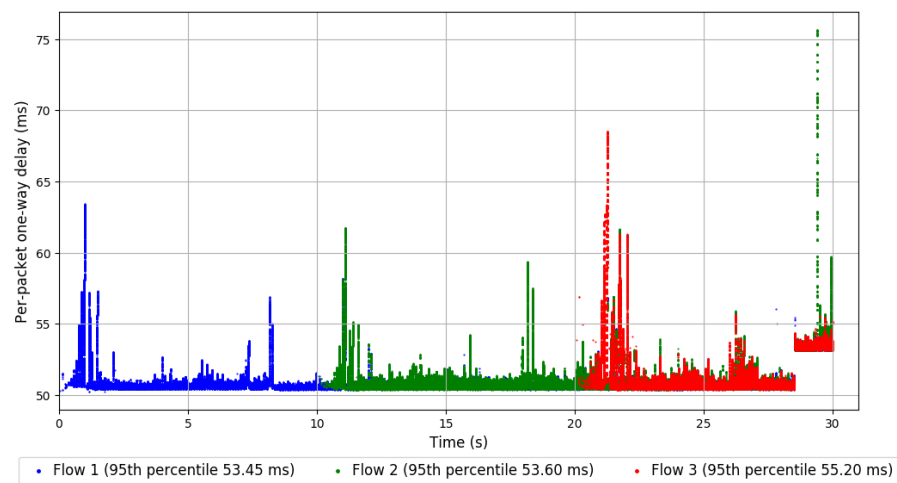
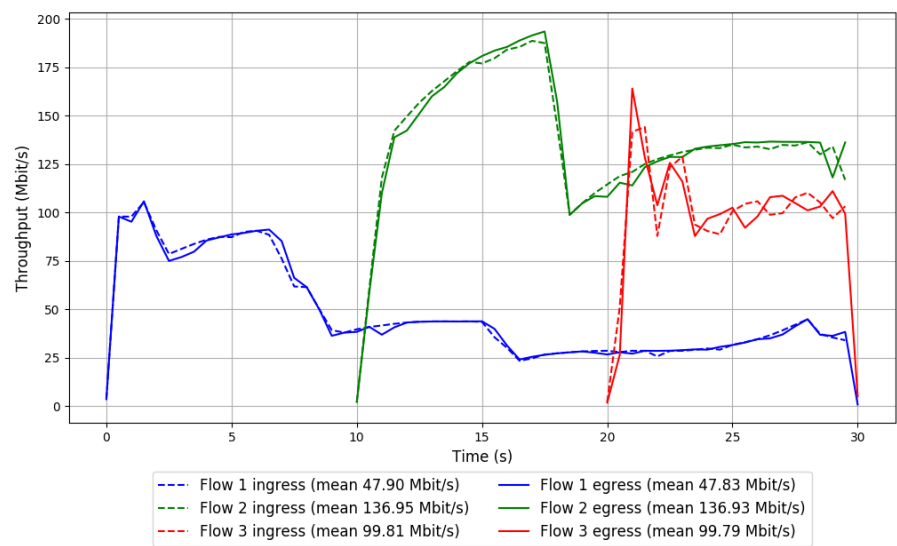
-- Flow 3:

Average throughput: 99.79 Mbit/s

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

Loss rate: 0.06%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-12-21 00:42:45

End at: 2017-12-21 00:43:15

Below is generated by plot.py at 2017-12-21 03:32:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 251.71 Mbit/s

95th percentile per-packet one-way delay: 57.181 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 136.13 Mbit/s

95th percentile per-packet one-way delay: 57.718 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 100.99 Mbit/s

95th percentile per-packet one-way delay: 54.567 ms

Loss rate: 0.00%

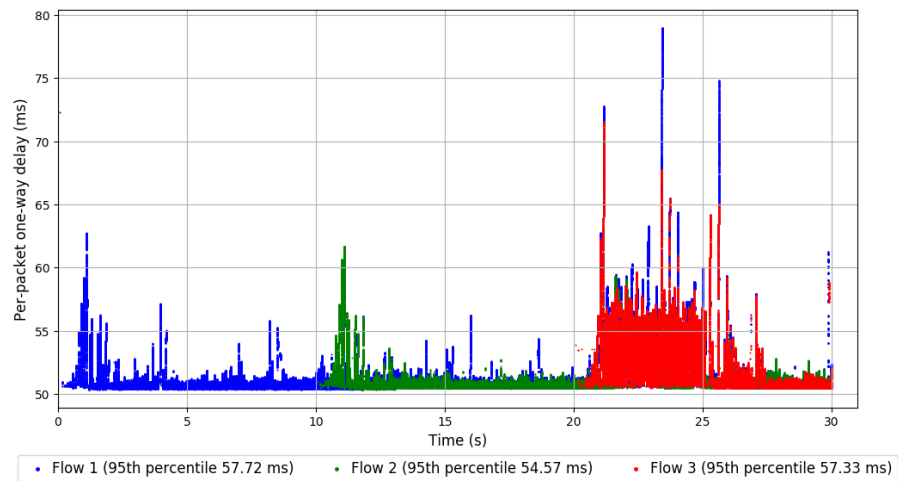
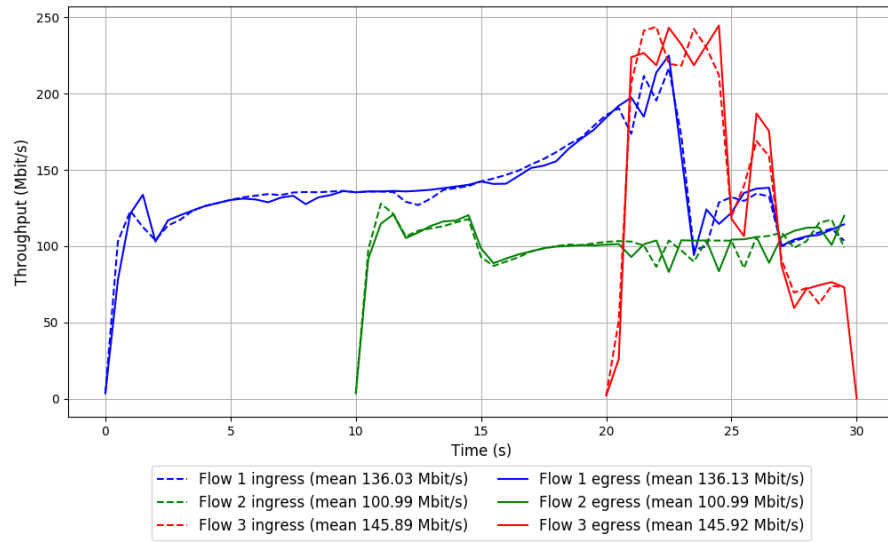
-- Flow 3:

Average throughput: 145.92 Mbit/s

95th percentile per-packet one-way delay: 57.329 ms

Loss rate: 0.01%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-12-21 00:56:21

End at: 2017-12-21 00:56:51

Below is generated by plot.py at 2017-12-21 03:32:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 189.59 Mbit/s

95th percentile per-packet one-way delay: 55.942 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 88.63 Mbit/s

95th percentile per-packet one-way delay: 56.660 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 101.23 Mbit/s

95th percentile per-packet one-way delay: 51.990 ms

Loss rate: 0.02%

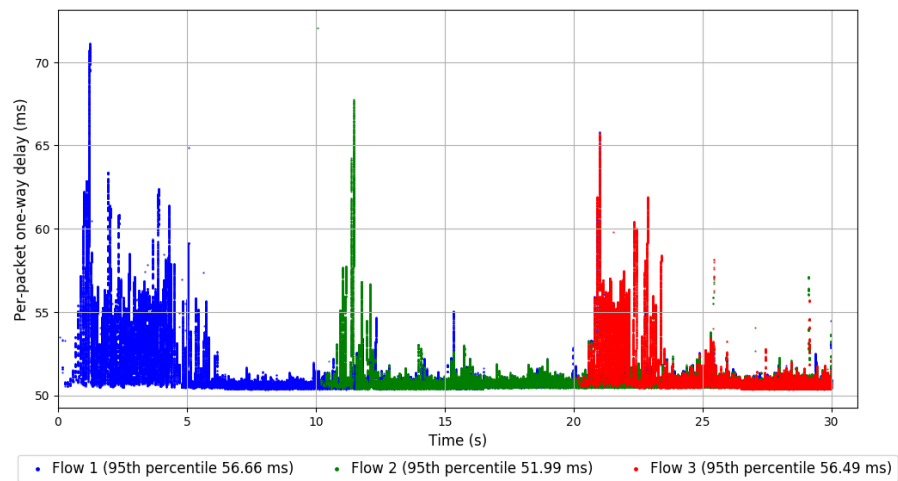
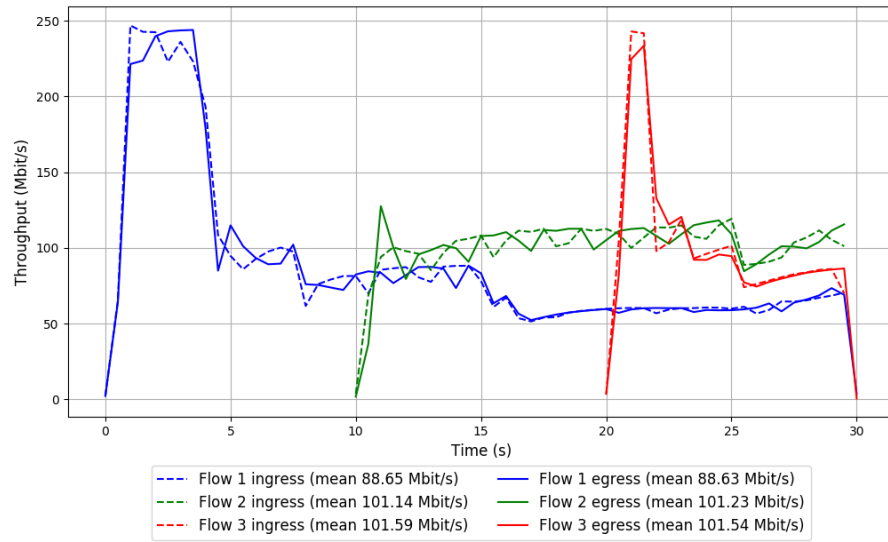
-- Flow 3:

Average throughput: 101.54 Mbit/s

95th percentile per-packet one-way delay: 56.486 ms

Loss rate: 0.05%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-12-21 01:09:56

End at: 2017-12-21 01:10:26

Below is generated by plot.py at 2017-12-21 03:32:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 175.65 Mbit/s

95th percentile per-packet one-way delay: 54.452 ms

Loss rate: 0.40%

-- Flow 1:

Average throughput: 78.40 Mbit/s

95th percentile per-packet one-way delay: 52.726 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 100.76 Mbit/s

95th percentile per-packet one-way delay: 53.214 ms

Loss rate: 0.16%

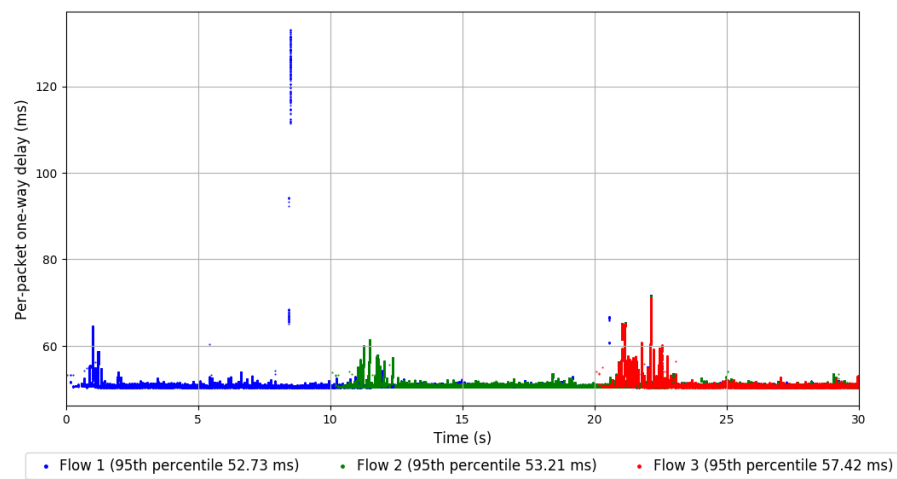
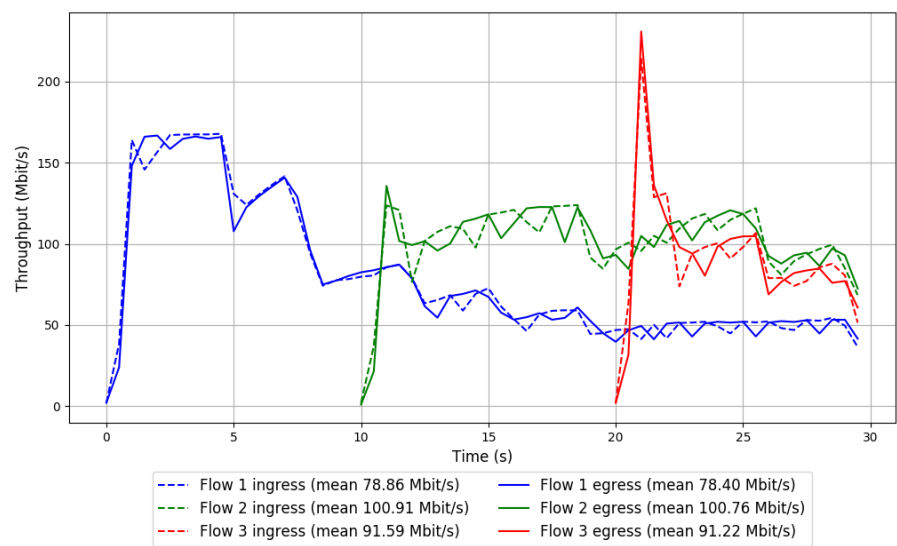
-- Flow 3:

Average throughput: 91.22 Mbit/s

95th percentile per-packet one-way delay: 57.417 ms

Loss rate: 0.44%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-12-21 01:23:17

End at: 2017-12-21 01:23:47

Below is generated by plot.py at 2017-12-21 03:33:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 242.22 Mbit/s

95th percentile per-packet one-way delay: 59.092 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 137.10 Mbit/s

95th percentile per-packet one-way delay: 59.904 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 99.26 Mbit/s

95th percentile per-packet one-way delay: 55.329 ms

Loss rate: 0.00%

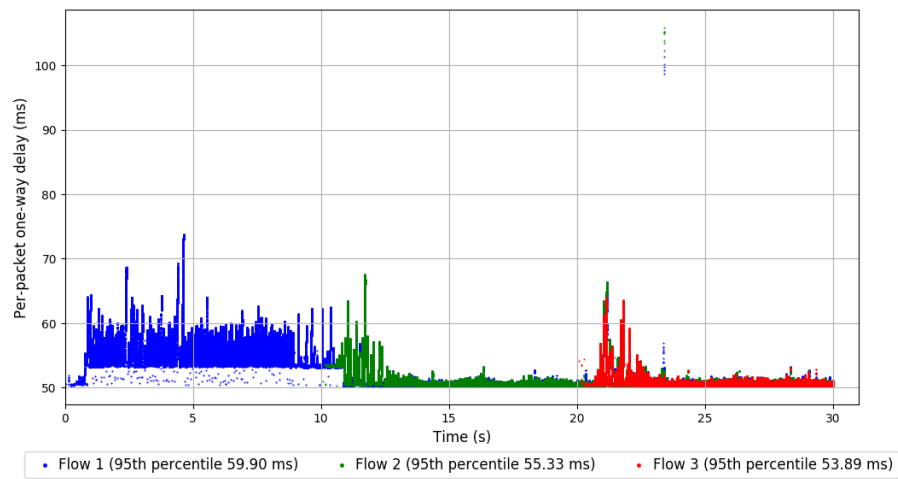
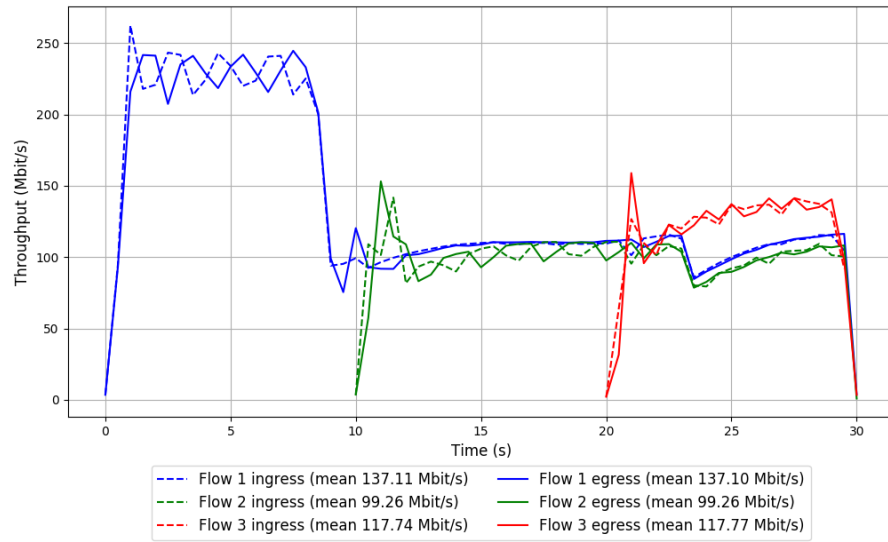
-- Flow 3:

Average throughput: 117.77 Mbit/s

95th percentile per-packet one-way delay: 53.891 ms

Loss rate: 0.00%

Run 10: Report of TCP Cubic — Data Link

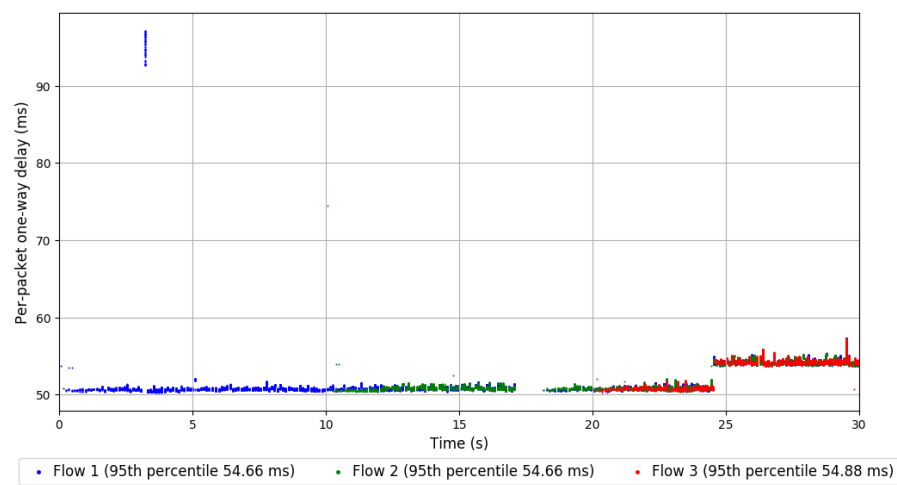
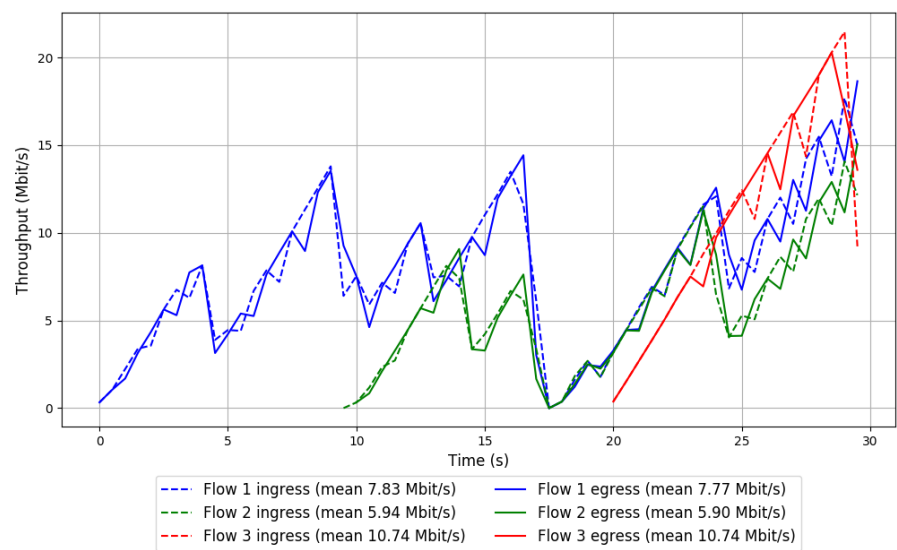


```
Run 1: Statistics of LEDBAT

Start at: 2017-12-20 23:29:03
End at: 2017-12-20 23:29:33

# Below is generated by plot.py at 2017-12-21 03:33:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.24 Mbit/s
95th percentile per-packet one-way delay: 54.756 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 7.77 Mbit/s
95th percentile per-packet one-way delay: 54.664 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 5.90 Mbit/s
95th percentile per-packet one-way delay: 54.656 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 10.74 Mbit/s
95th percentile per-packet one-way delay: 54.878 ms
Loss rate: 0.01%
```


Run 1: Report of LEDBAT — Data Link

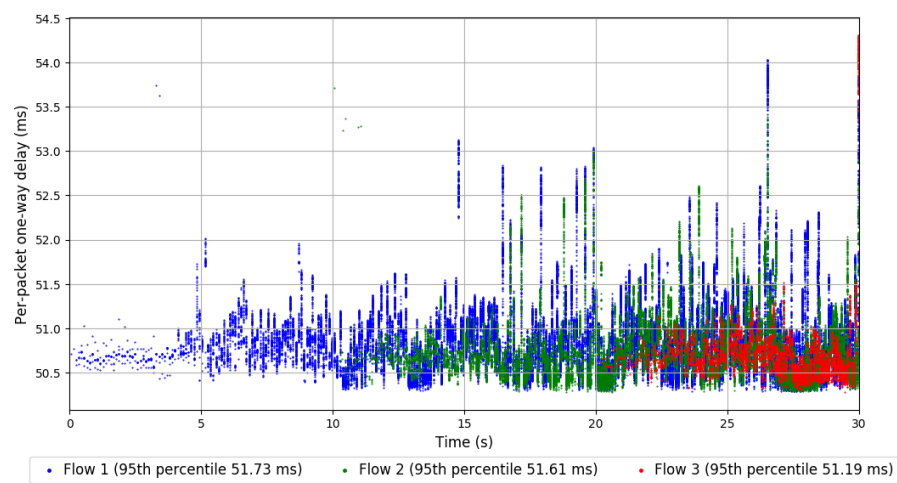
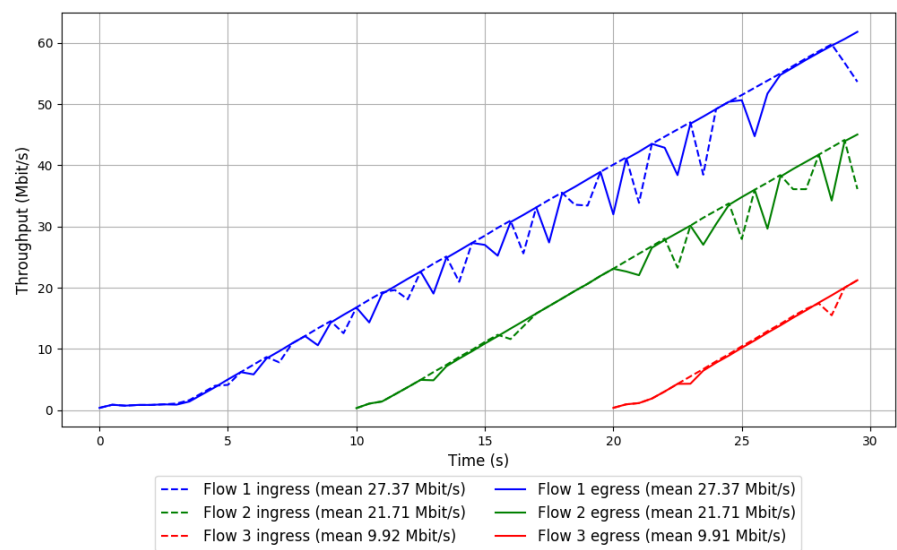


```
Run 2: Statistics of LEDBAT

Start at: 2017-12-20 23:42:55
End at: 2017-12-20 23:43:25

# Below is generated by plot.py at 2017-12-21 03:33:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.08 Mbit/s
95th percentile per-packet one-way delay: 51.666 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 27.37 Mbit/s
95th percentile per-packet one-way delay: 51.728 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.71 Mbit/s
95th percentile per-packet one-way delay: 51.610 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.91 Mbit/s
95th percentile per-packet one-way delay: 51.187 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link

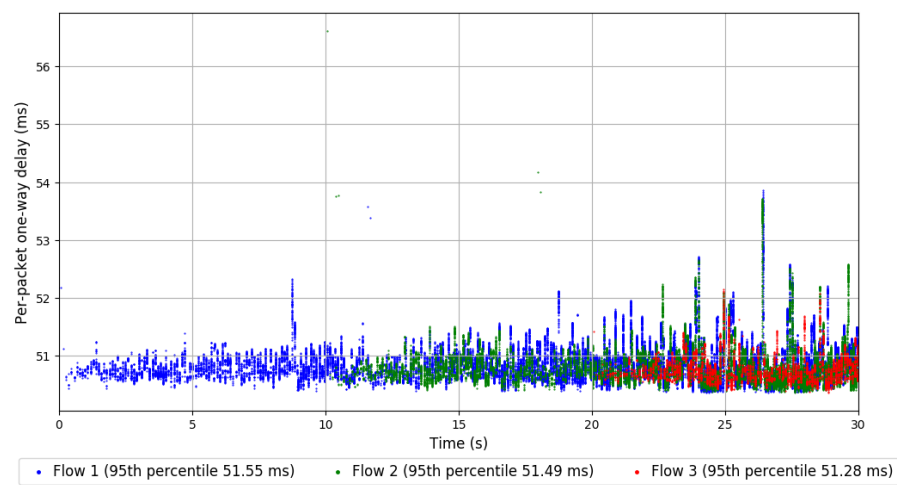
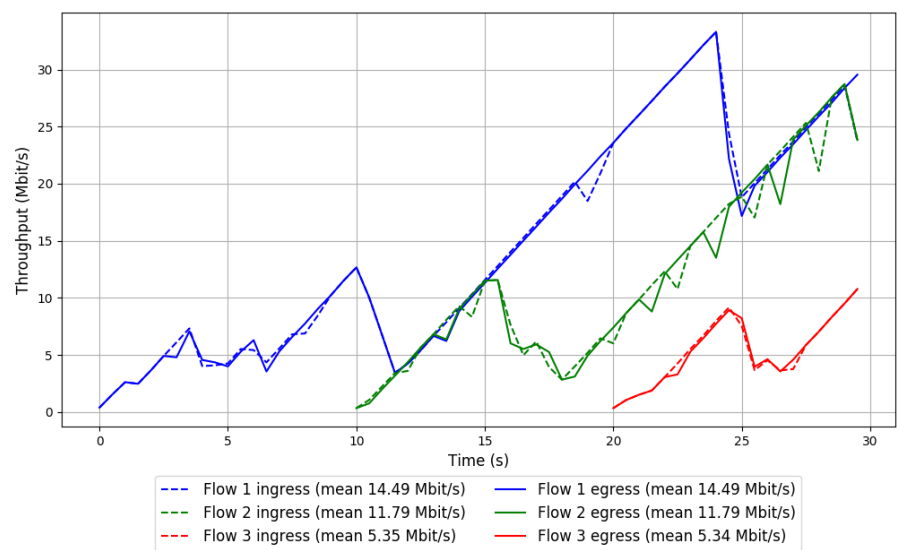


```
Run 3: Statistics of LEDBAT

Start at: 2017-12-20 23:56:56
End at: 2017-12-20 23:57:26

# Below is generated by plot.py at 2017-12-21 03:33:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.06 Mbit/s
95th percentile per-packet one-way delay: 51.515 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 14.49 Mbit/s
95th percentile per-packet one-way delay: 51.546 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 11.79 Mbit/s
95th percentile per-packet one-way delay: 51.494 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 5.34 Mbit/s
95th percentile per-packet one-way delay: 51.276 ms
Loss rate: 0.11%
```

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-12-21 00:10:24

End at: 2017-12-21 00:10:54

Below is generated by plot.py at 2017-12-21 03:33:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 19.49 Mbit/s

95th percentile per-packet one-way delay: 52.384 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 10.20 Mbit/s

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

Loss rate: 0.40%

-- Flow 2:

Average throughput: 10.84 Mbit/s

95th percentile per-packet one-way delay: 51.811 ms

Loss rate: 1.04%

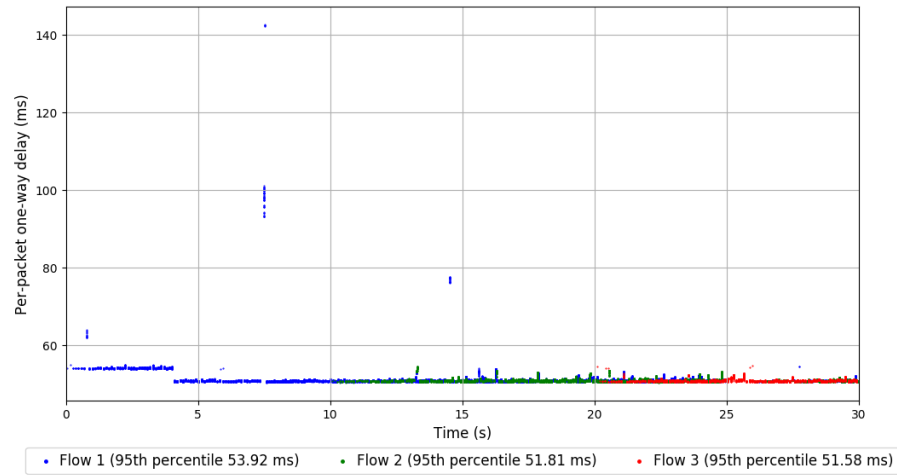
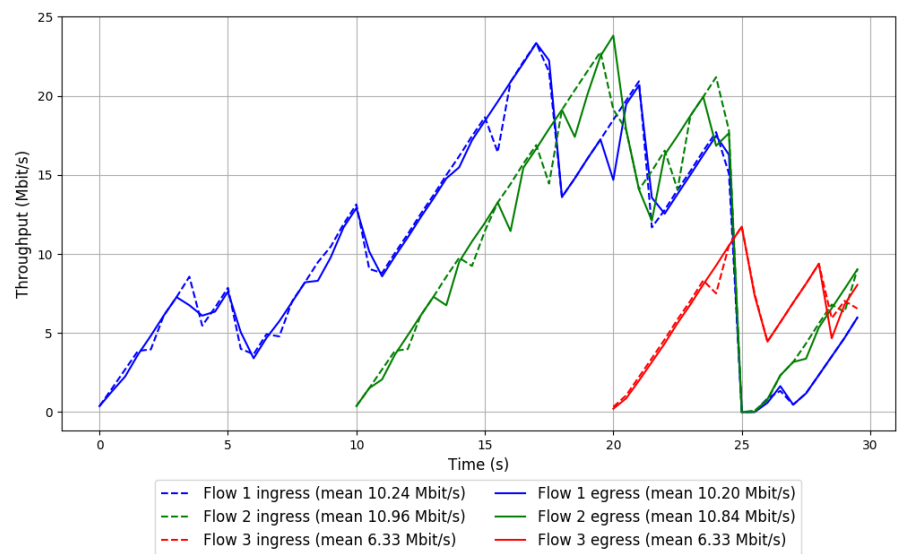
-- Flow 3:

Average throughput: 6.33 Mbit/s

95th percentile per-packet one-way delay: 51.577 ms

Loss rate: 0.09%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-12-21 00:24:19

End at: 2017-12-21 00:24:49

Below is generated by plot.py at 2017-12-21 03:33:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 23.27 Mbit/s

95th percentile per-packet one-way delay: 53.630 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 11.73 Mbit/s

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

Loss rate: 0.12%

-- Flow 2:

Average throughput: 12.58 Mbit/s

95th percentile per-packet one-way delay: 51.344 ms

Loss rate: 0.02%

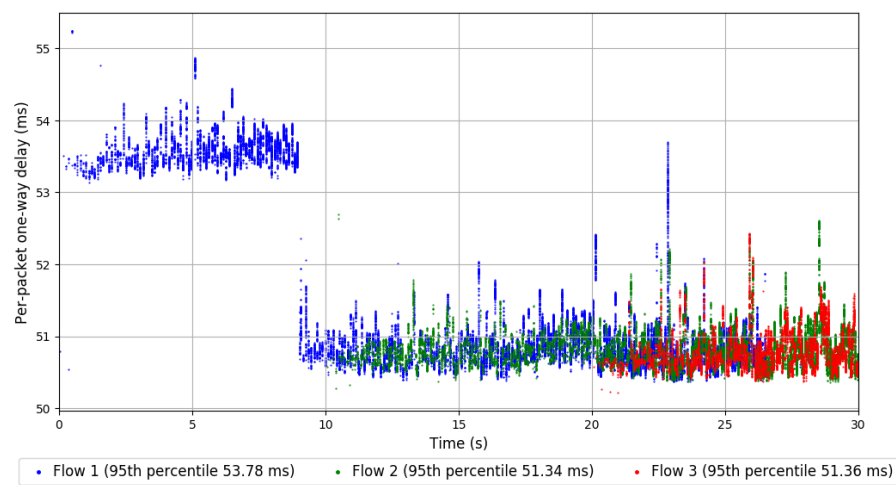
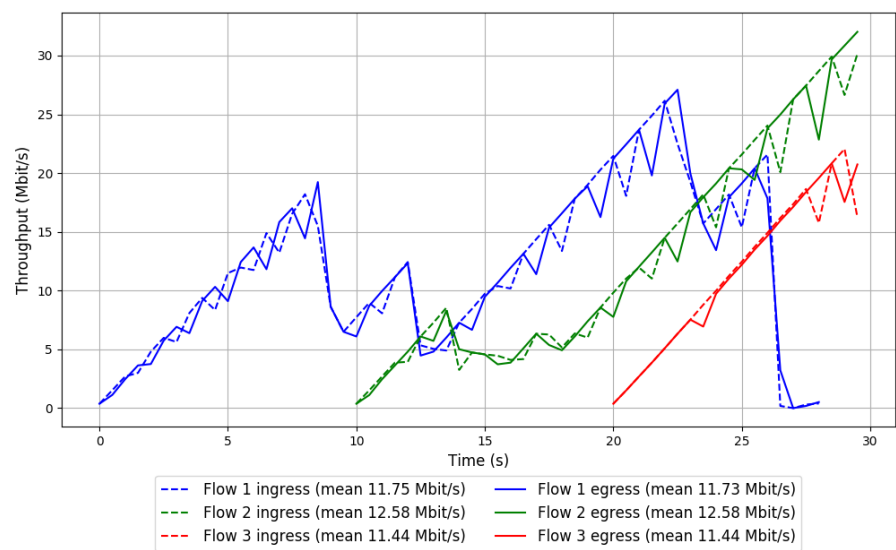
-- Flow 3:

Average throughput: 11.44 Mbit/s

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

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-12-21 00:37:50

End at: 2017-12-21 00:38:20

Below is generated by plot.py at 2017-12-21 03:33:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.65 Mbit/s

95th percentile per-packet one-way delay: 53.973 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 7.05 Mbit/s

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

Loss rate: 0.90%

-- Flow 2:

Average throughput: 8.91 Mbit/s

95th percentile per-packet one-way delay: 54.429 ms

Loss rate: 0.70%

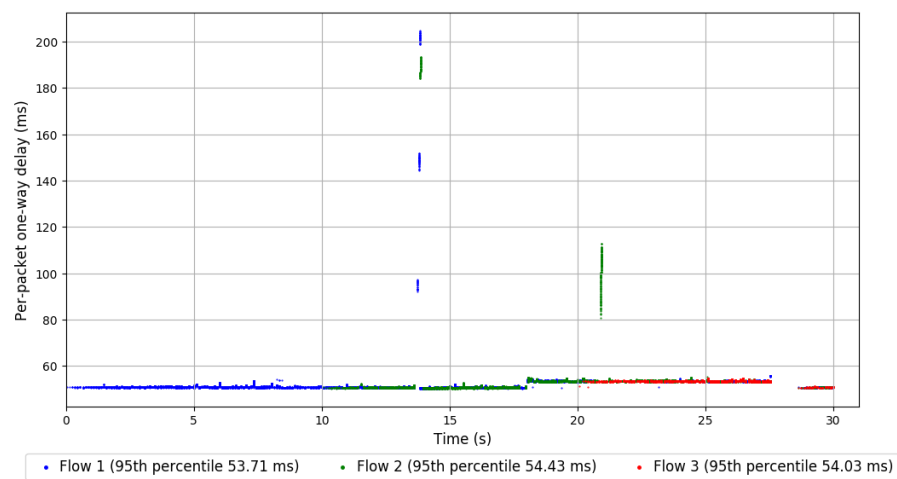
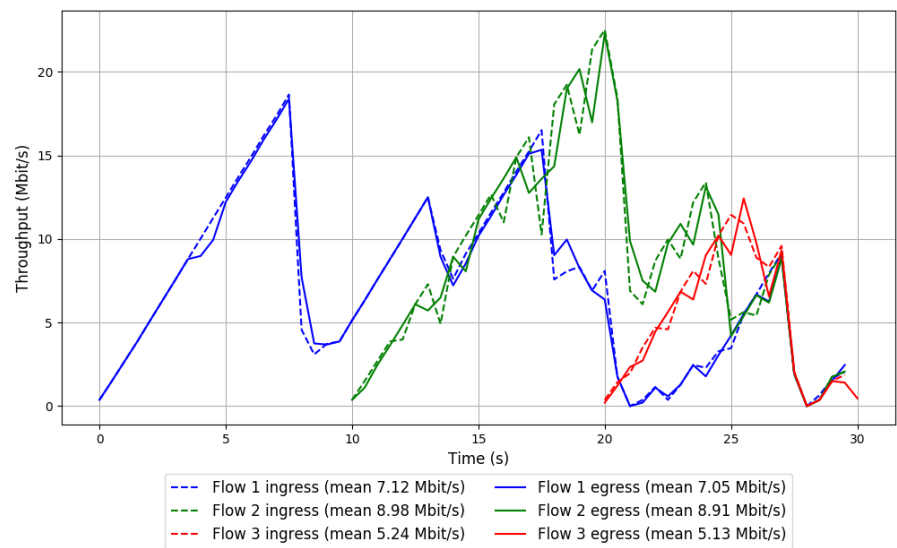
-- Flow 3:

Average throughput: 5.13 Mbit/s

95th percentile per-packet one-way delay: 54.030 ms

Loss rate: 1.98%

Run 6: Report of LEDBAT — Data Link

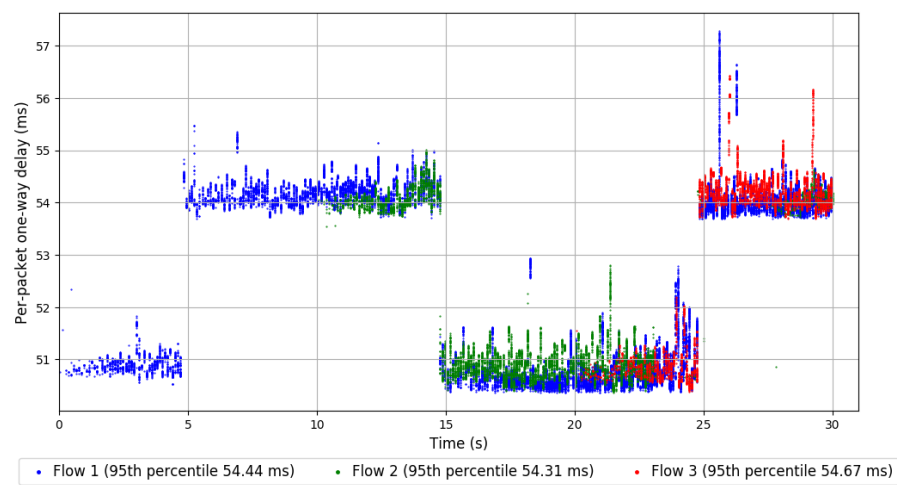
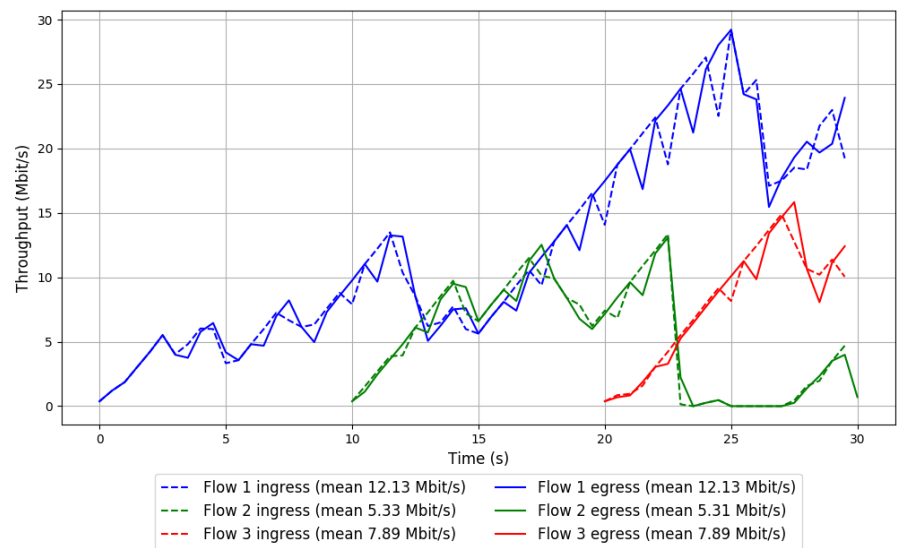


```
Run 7: Statistics of LEDBAT

Start at: 2017-12-21 00:51:23
End at: 2017-12-21 00:51:53

# Below is generated by plot.py at 2017-12-21 03:33:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.24 Mbit/s
95th percentile per-packet one-way delay: 54.480 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 12.13 Mbit/s
95th percentile per-packet one-way delay: 54.437 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 5.31 Mbit/s
95th percentile per-packet one-way delay: 54.313 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 54.669 ms
Loss rate: 0.00%
```

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-12-21 01:05:02

End at: 2017-12-21 01:05:32

Below is generated by plot.py at 2017-12-21 03:33:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.85 Mbit/s

95th percentile per-packet one-way delay: 54.148 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 8.44 Mbit/s

95th percentile per-packet one-way delay: 54.111 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 6.51 Mbit/s

95th percentile per-packet one-way delay: 54.290 ms

Loss rate: 0.43%

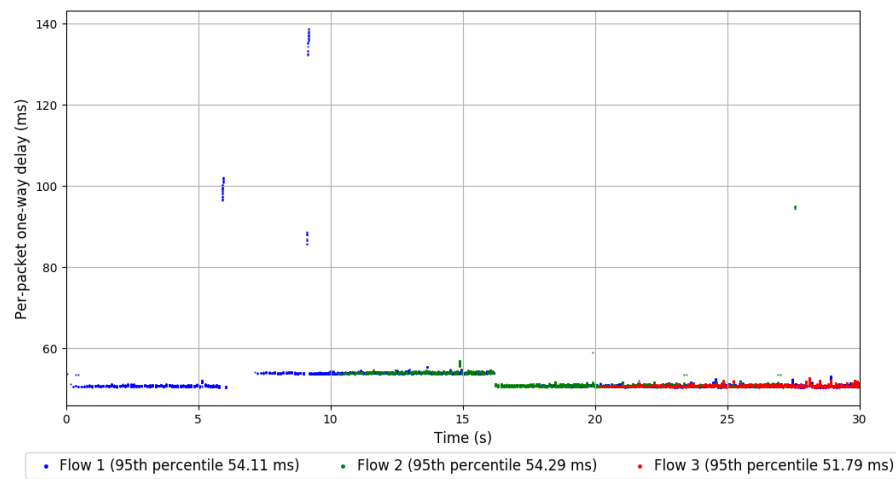
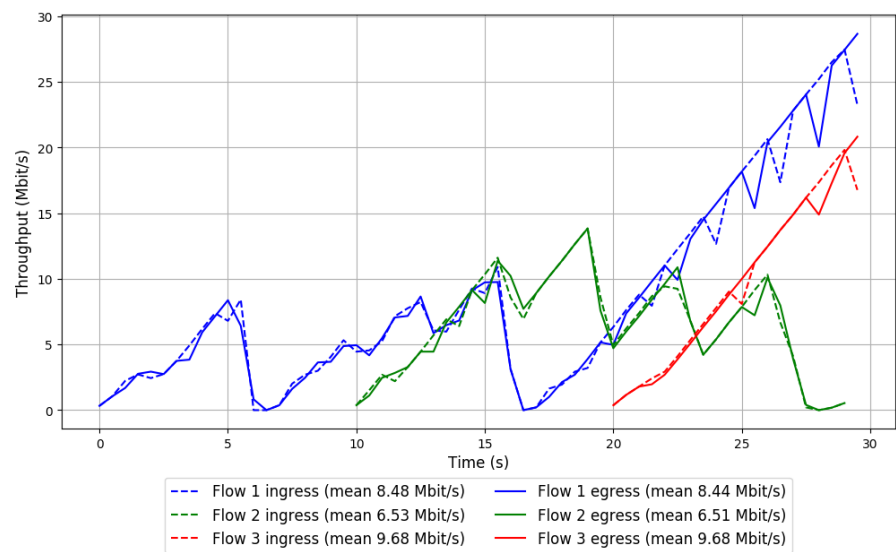
-- Flow 3:

Average throughput: 9.68 Mbit/s

95th percentile per-packet one-way delay: 51.788 ms

Loss rate: 0.00%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-12-21 01:18:21

End at: 2017-12-21 01:18:51

Below is generated by plot.py at 2017-12-21 03:33:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.93 Mbit/s

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

Loss rate: 0.74%

-- Flow 1:

Average throughput: 6.76 Mbit/s

95th percentile per-packet one-way delay: 54.287 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 6.09 Mbit/s

95th percentile per-packet one-way delay: 54.343 ms

Loss rate: 0.43%

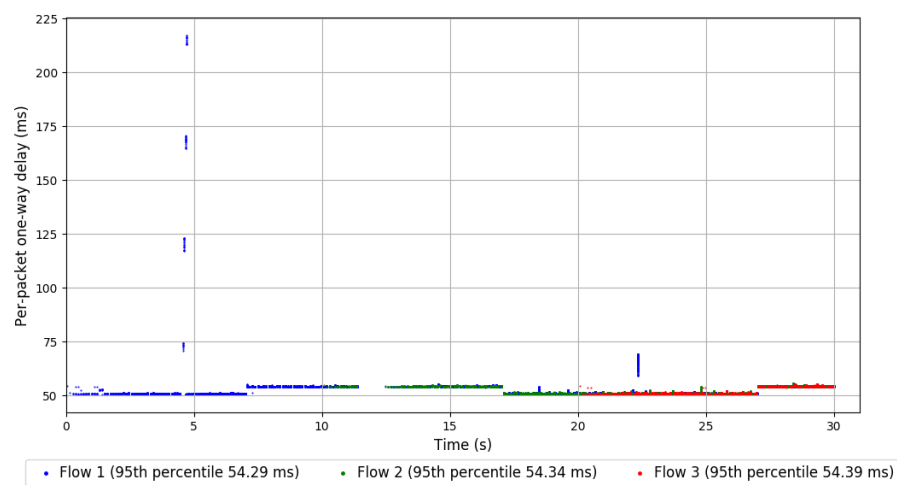
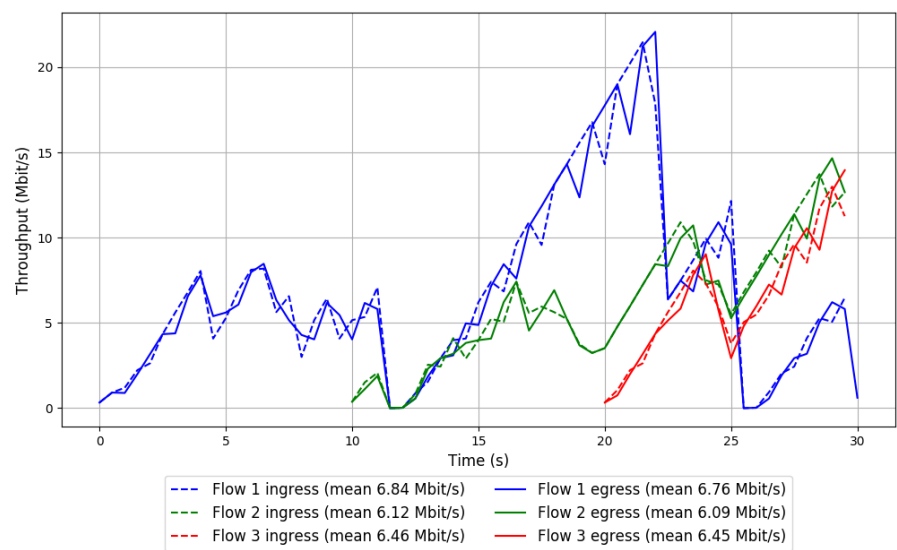
-- Flow 3:

Average throughput: 6.45 Mbit/s

95th percentile per-packet one-way delay: 54.392 ms

Loss rate: 0.15%

Run 9: Report of LEDBAT — Data Link

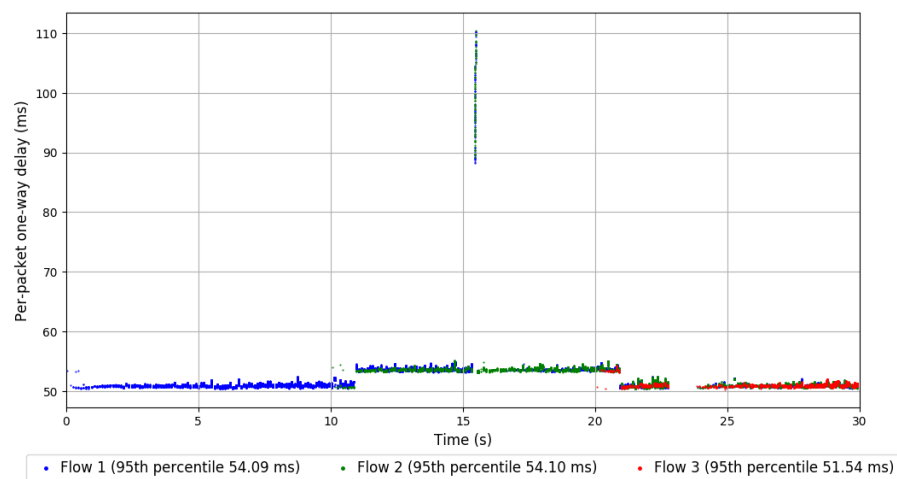
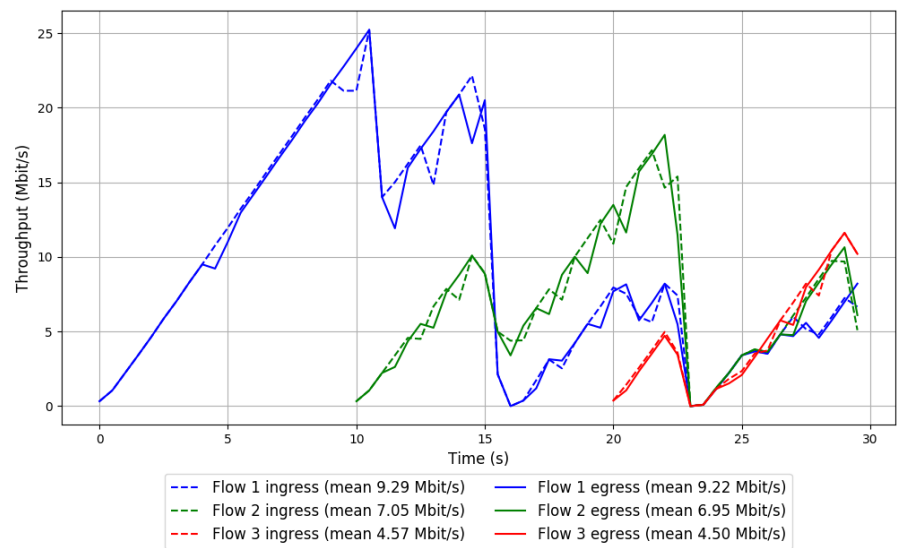


```
Run 10: Statistics of LEDBAT

Start at: 2017-12-21 01:32:17
End at: 2017-12-21 01:32:47

# Below is generated by plot.py at 2017-12-21 03:33:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.32 Mbit/s
95th percentile per-packet one-way delay: 54.059 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 9.22 Mbit/s
95th percentile per-packet one-way delay: 54.088 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 6.95 Mbit/s
95th percentile per-packet one-way delay: 54.099 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 4.50 Mbit/s
95th percentile per-packet one-way delay: 51.539 ms
Loss rate: 1.38%
```

Run 10: Report of LEDBAT — Data Link

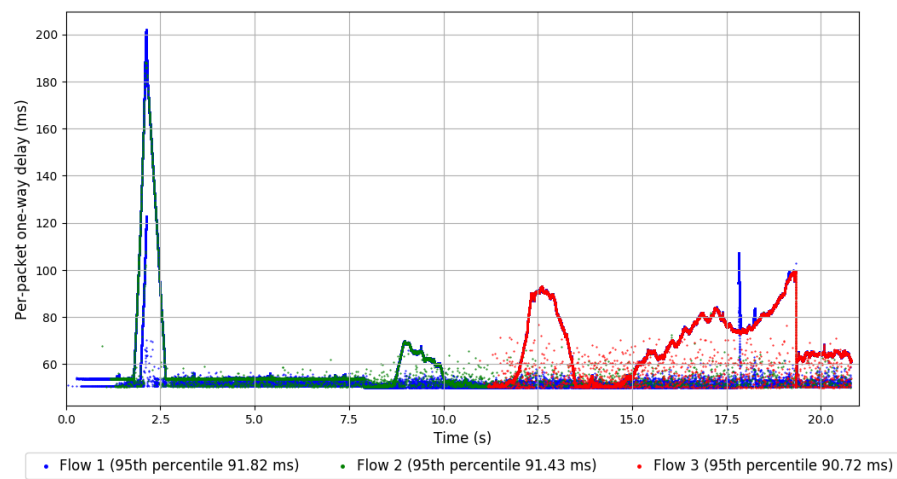
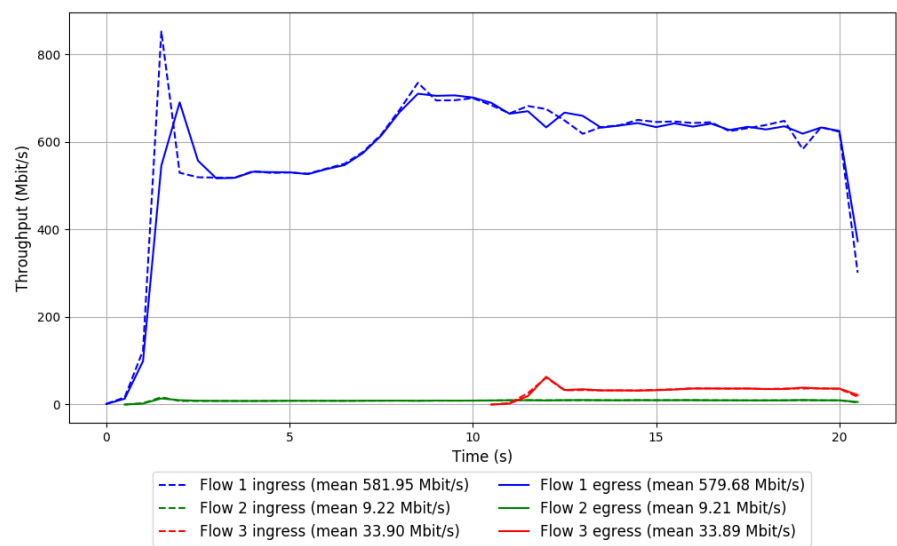


Run 1: Statistics of PCC

Start at: 2017-12-20 23:33:01

End at: 2017-12-20 23:33:31

Run 1: Report of PCC — Data Link

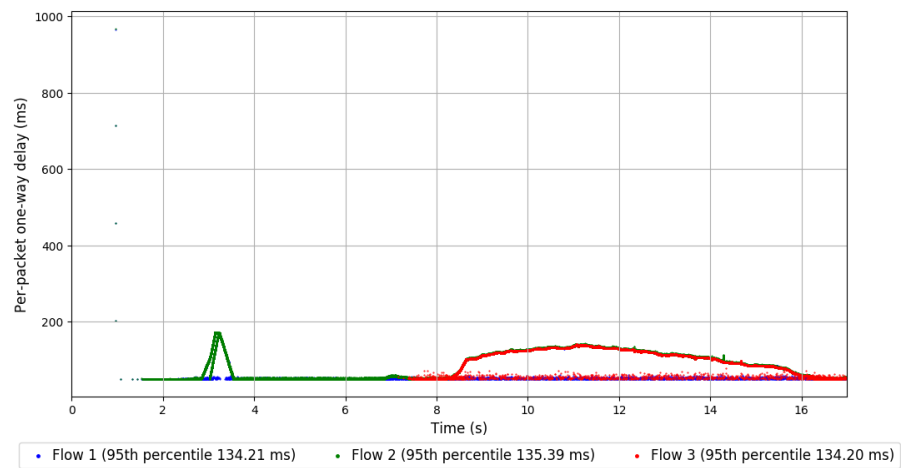
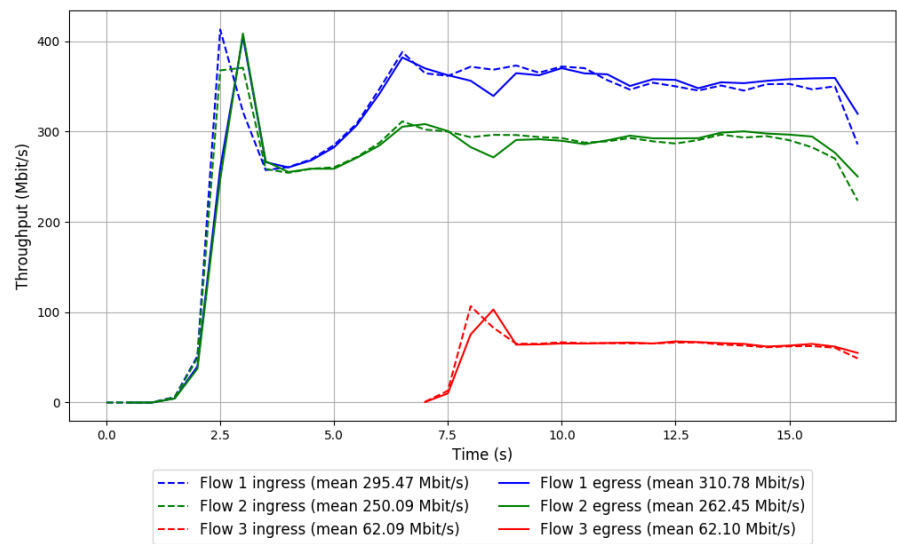


Run 2: Statistics of PCC

Start at: 2017-12-20 23:46:57

End at: 2017-12-20 23:47:27

Run 2: Report of PCC — Data Link

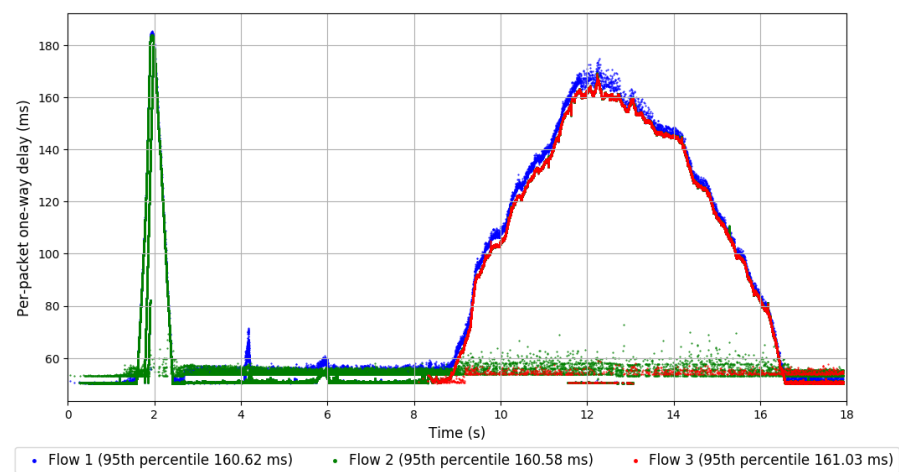
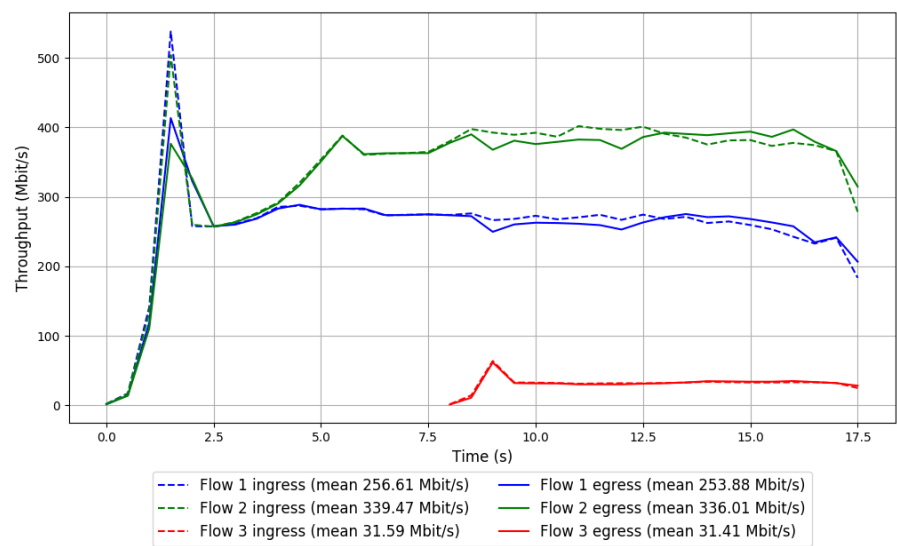


Run 3: Statistics of PCC

Start at: 2017-12-21 00:00:53

End at: 2017-12-21 00:01:23

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-12-21 00:14:25

End at: 2017-12-21 00:14:55

Below is generated by plot.py at 2017-12-21 03:41:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 608.81 Mbit/s

95th percentile per-packet one-way delay: 158.312 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 575.06 Mbit/s

95th percentile per-packet one-way delay: 158.241 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 15.39 Mbit/s

95th percentile per-packet one-way delay: 158.141 ms

Loss rate: 0.43%

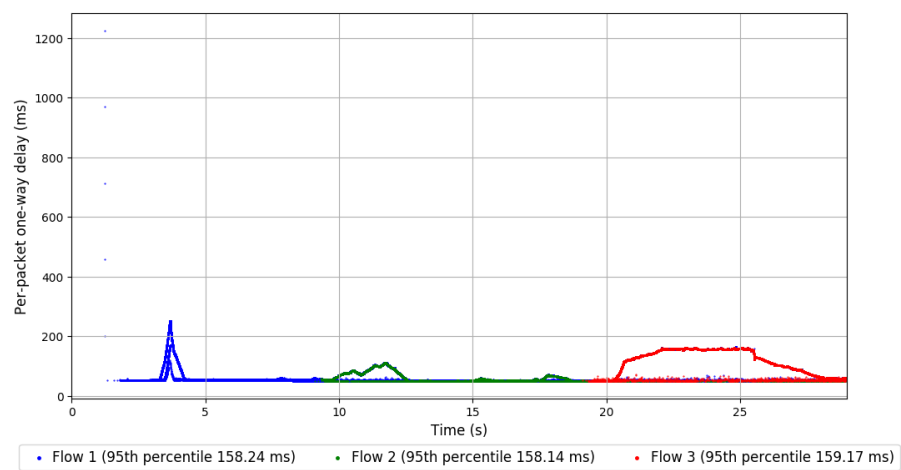
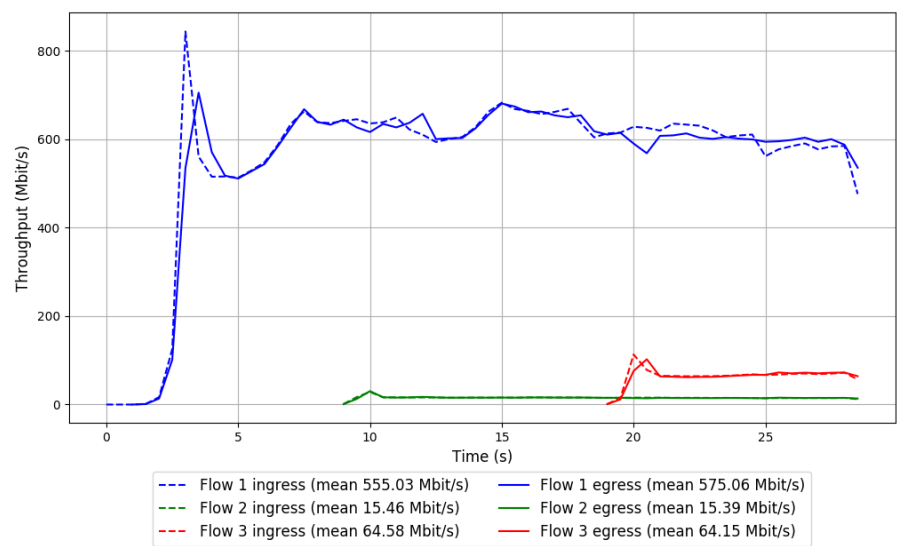
-- Flow 3:

Average throughput: 64.15 Mbit/s

95th percentile per-packet one-way delay: 159.173 ms

Loss rate: 0.68%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-12-21 00:28:05

End at: 2017-12-21 00:28:35

Below is generated by plot.py at 2017-12-21 03:43:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 631.37 Mbit/s

95th percentile per-packet one-way delay: 167.468 ms

Loss rate: 2.30%

-- Flow 1:

Average throughput: 576.84 Mbit/s

95th percentile per-packet one-way delay: 167.466 ms

Loss rate: 2.36%

-- Flow 2:

Average throughput: 64.19 Mbit/s

95th percentile per-packet one-way delay: 167.901 ms

Loss rate: 2.07%

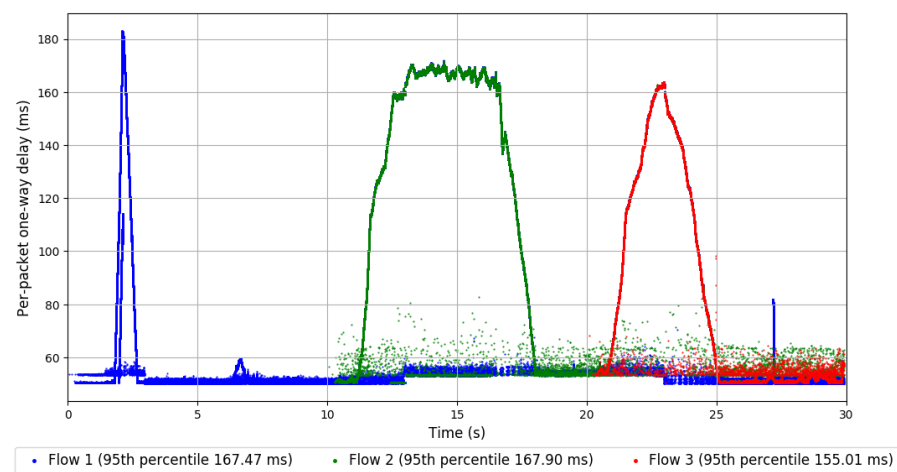
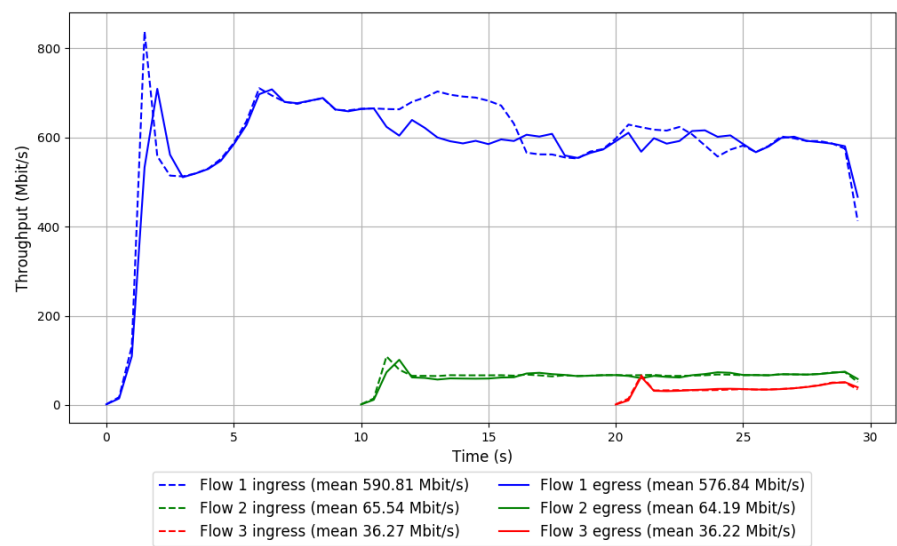
-- Flow 3:

Average throughput: 36.22 Mbit/s

95th percentile per-packet one-way delay: 155.014 ms

Loss rate: 0.28%

Run 5: Report of PCC — Data Link

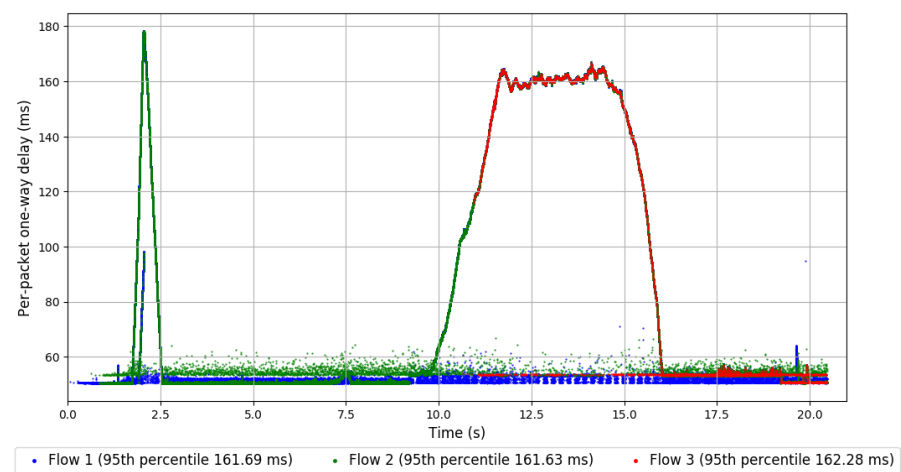
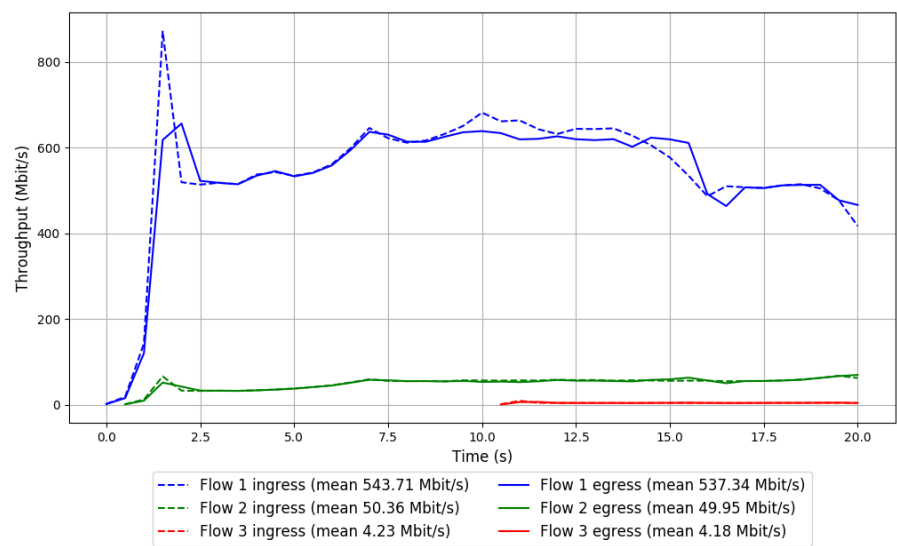


Run 6: Statistics of PCC

Start at: 2017-12-21 00:41:49

End at: 2017-12-21 00:42:19

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-12-21 00:55:16

End at: 2017-12-21 00:55:46

Below is generated by plot.py at 2017-12-21 03:44:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 643.94 Mbit/s

95th percentile per-packet one-way delay: 162.887 ms

Loss rate: 2.90%

-- Flow 1:

Average throughput: 602.87 Mbit/s

95th percentile per-packet one-way delay: 163.300 ms

Loss rate: 2.92%

-- Flow 2:

Average throughput: 59.90 Mbit/s

95th percentile per-packet one-way delay: 161.355 ms

Loss rate: 2.49%

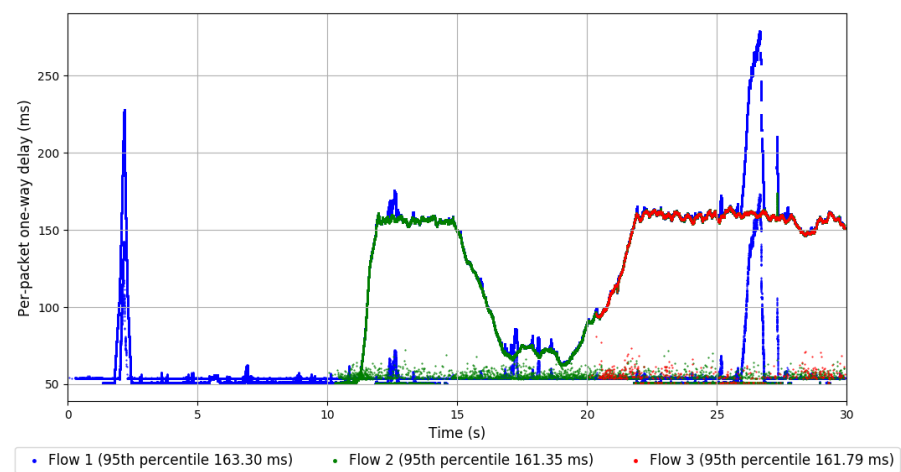
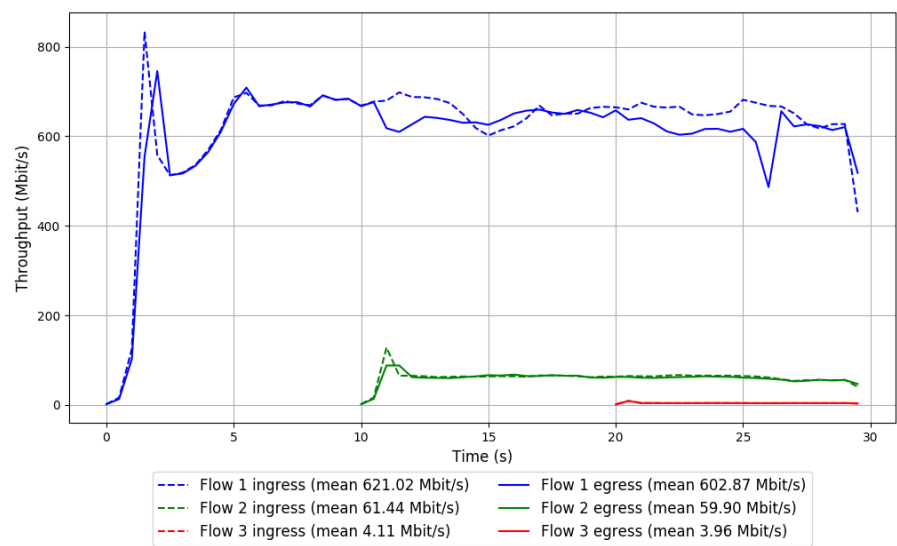
-- Flow 3:

Average throughput: 3.96 Mbit/s

95th percentile per-packet one-way delay: 161.790 ms

Loss rate: 3.62%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-12-21 01:08:52

End at: 2017-12-21 01:09:22

Below is generated by plot.py at 2017-12-21 03:44:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 618.85 Mbit/s

95th percentile per-packet one-way delay: 156.932 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 551.54 Mbit/s

95th percentile per-packet one-way delay: 156.617 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 86.32 Mbit/s

95th percentile per-packet one-way delay: 158.355 ms

Loss rate: 0.88%

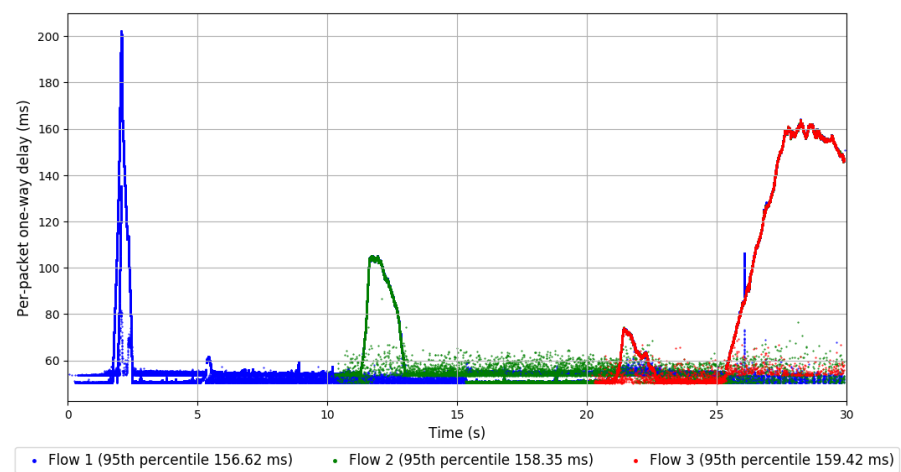
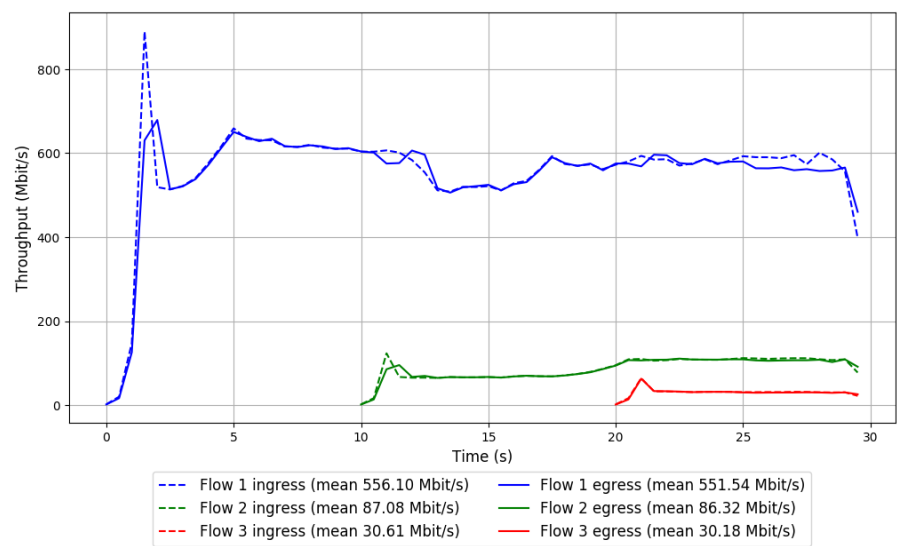
-- Flow 3:

Average throughput: 30.18 Mbit/s

95th percentile per-packet one-way delay: 159.416 ms

Loss rate: 1.40%

Run 8: Report of PCC — Data Link

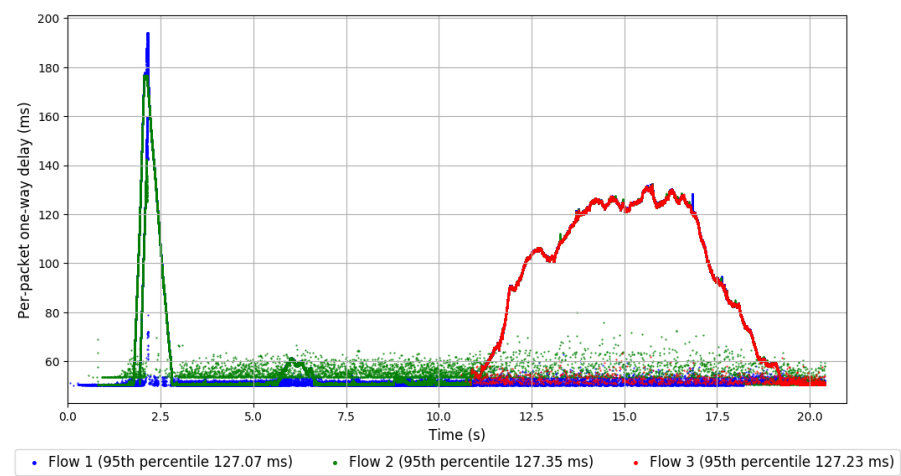
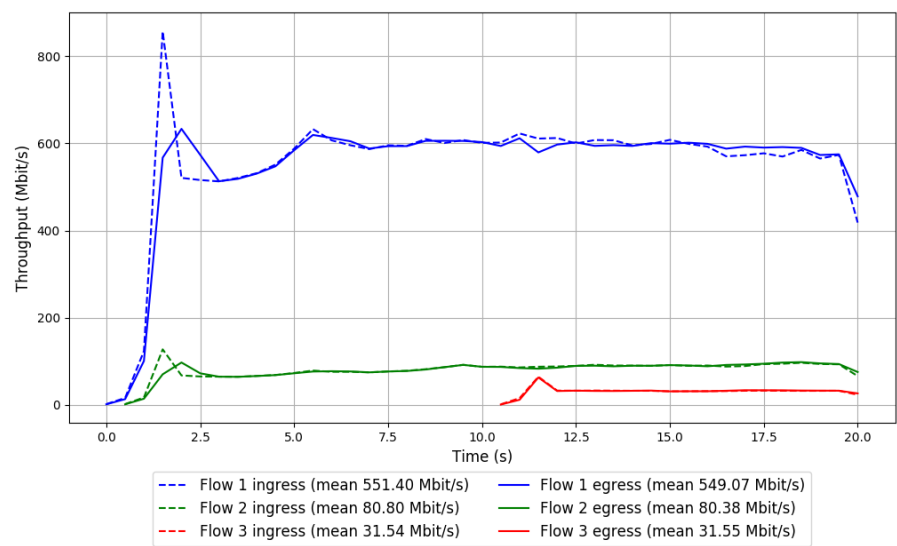


Run 9: Statistics of PCC

Start at: 2017-12-21 01:22:20

End at: 2017-12-21 01:22:50

Run 9: Report of PCC — Data Link

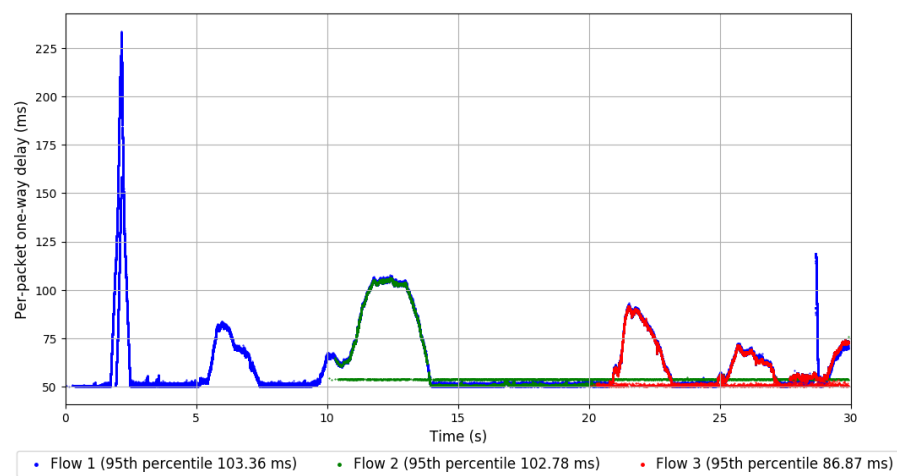
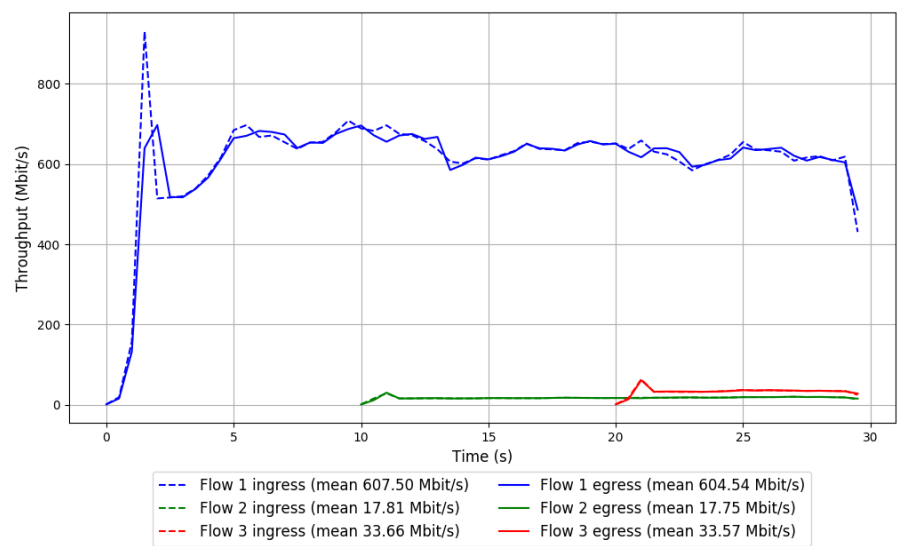


```
Run 10: Statistics of PCC

Start at: 2017-12-21 01:36:10
End at: 2017-12-21 01:36:40

# Below is generated by plot.py at 2017-12-21 03:48:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 627.34 Mbit/s
95th percentile per-packet one-way delay: 103.297 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 604.54 Mbit/s
95th percentile per-packet one-way delay: 103.361 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 17.75 Mbit/s
95th percentile per-packet one-way delay: 102.779 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 33.57 Mbit/s
95th percentile per-packet one-way delay: 86.874 ms
Loss rate: 0.25%
```

Run 10: Report of PCC — Data Link

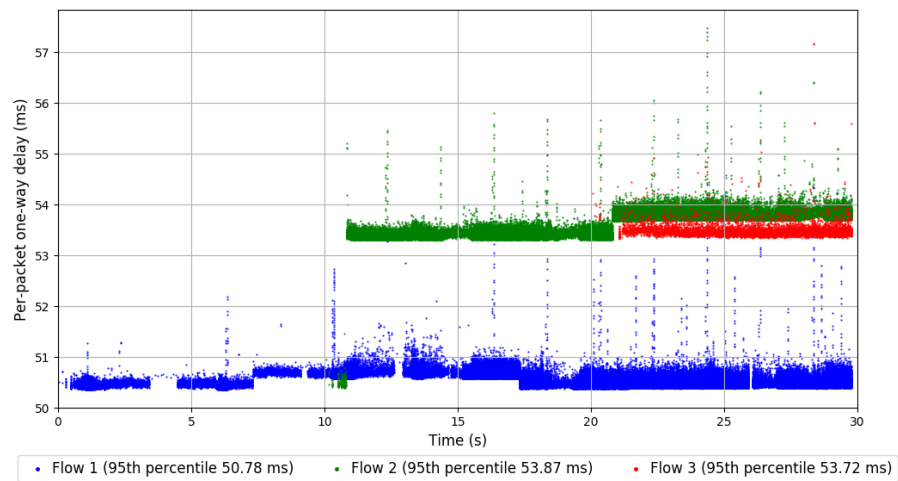
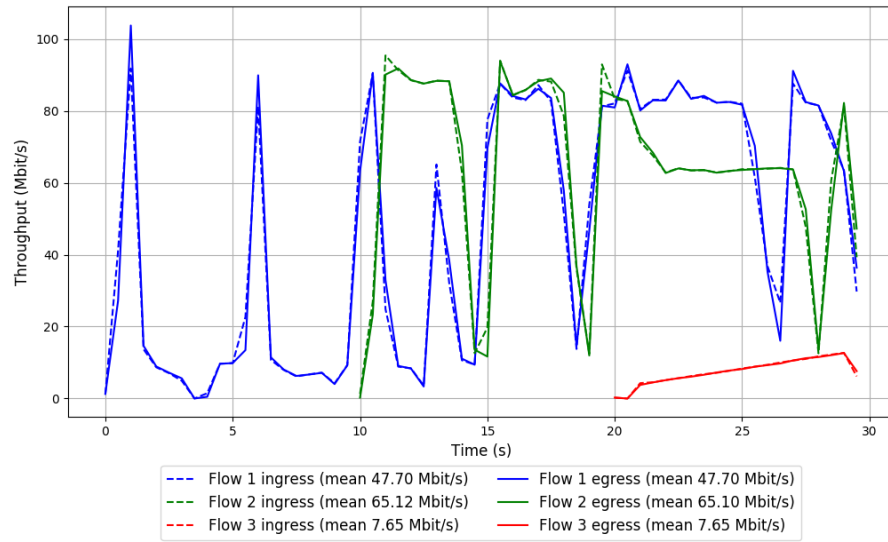


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-20 23:25:57
End at: 2017-12-20 23:26:27

# Below is generated by plot.py at 2017-12-21 03:48:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.40 Mbit/s
95th percentile per-packet one-way delay: 53.810 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 47.70 Mbit/s
95th percentile per-packet one-way delay: 50.777 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 65.10 Mbit/s
95th percentile per-packet one-way delay: 53.869 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 7.65 Mbit/s
95th percentile per-packet one-way delay: 53.718 ms
Loss rate: 0.02%
```


Run 1: Report of QUIC Cubic — Data Link

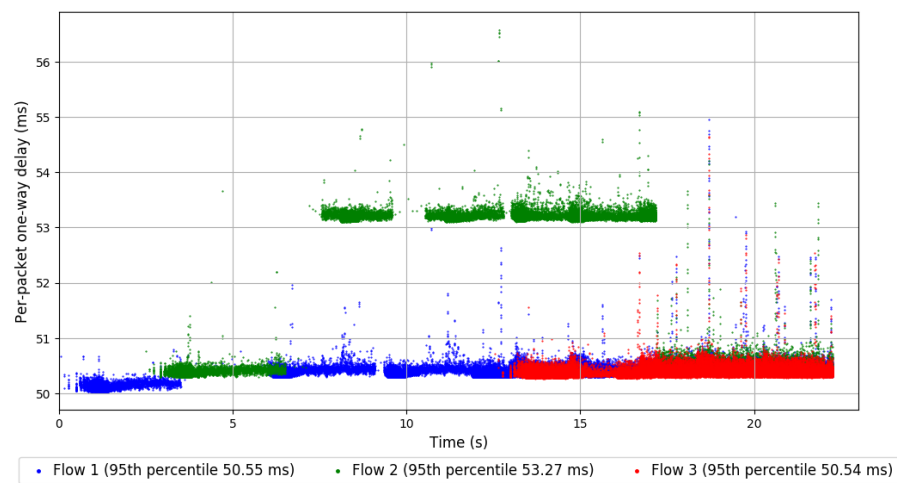
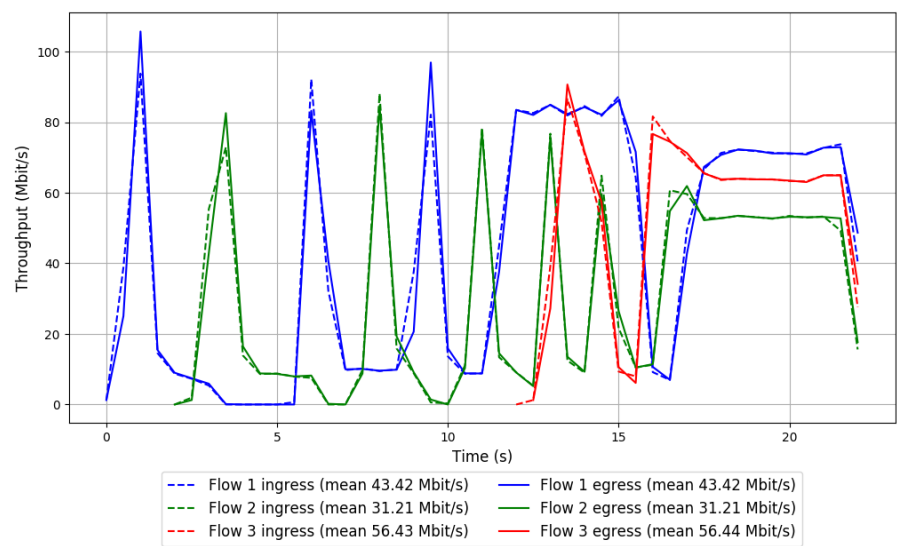


Run 2: Statistics of QUIC Cubic

Start at: 2017-12-20 23:39:33

End at: 2017-12-20 23:40:03

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-12-20 23:53:22

End at: 2017-12-20 23:53:52

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.84 Mbit/s

95th percentile per-packet one-way delay: 53.220 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 45.65 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.77 Mbit/s

95th percentile per-packet one-way delay: 53.419 ms

Loss rate: 0.00%

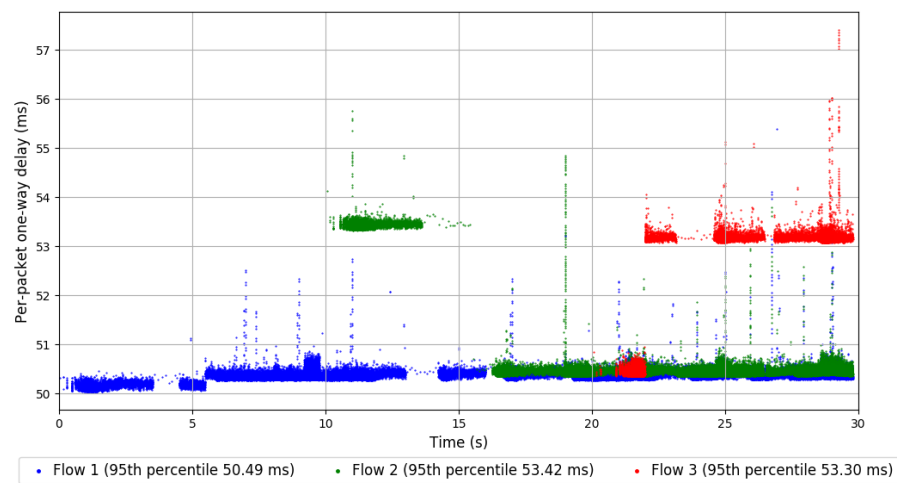
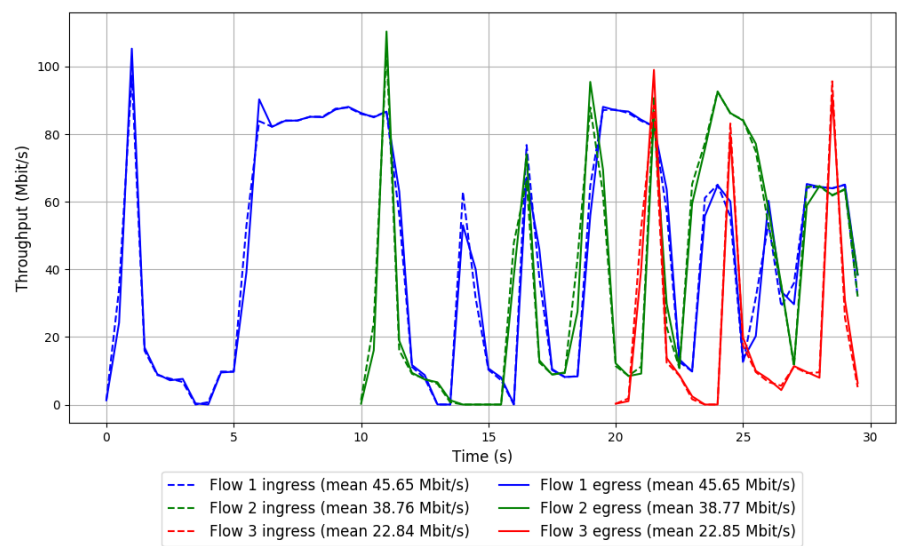
-- Flow 3:

Average throughput: 22.85 Mbit/s

95th percentile per-packet one-way delay: 53.298 ms

Loss rate: 0.01%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-12-21 00:07:21

End at: 2017-12-21 00:07:51

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.27 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 47.80 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.26 Mbit/s

95th percentile per-packet one-way delay: 53.900 ms

Loss rate: 0.00%

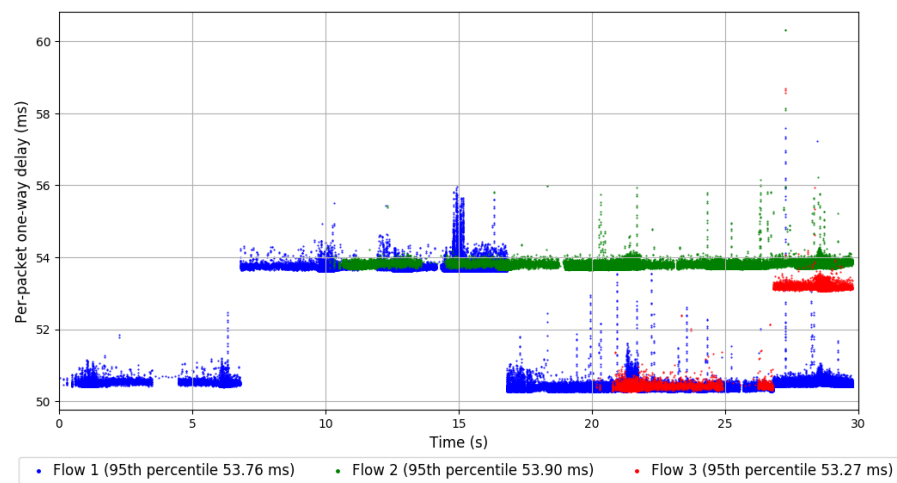
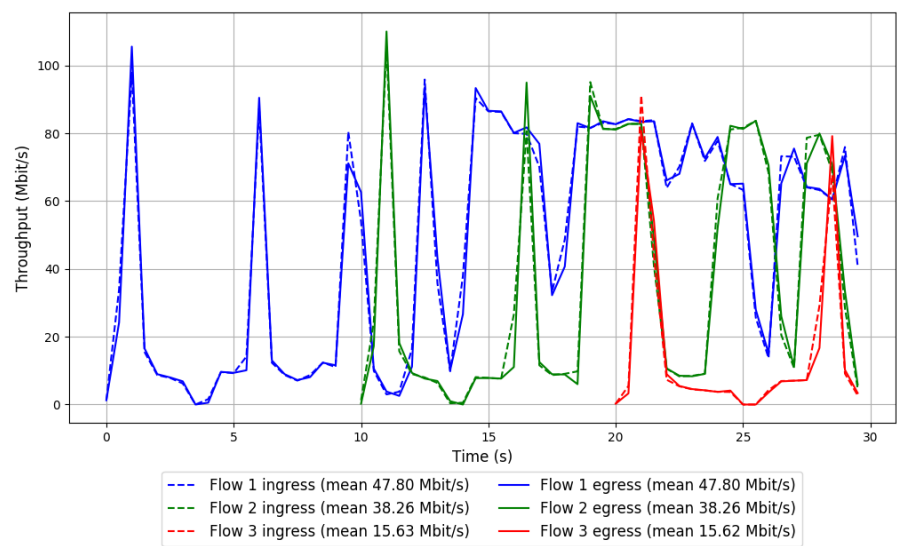
-- Flow 3:

Average throughput: 15.62 Mbit/s

95th percentile per-packet one-way delay: 53.266 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link

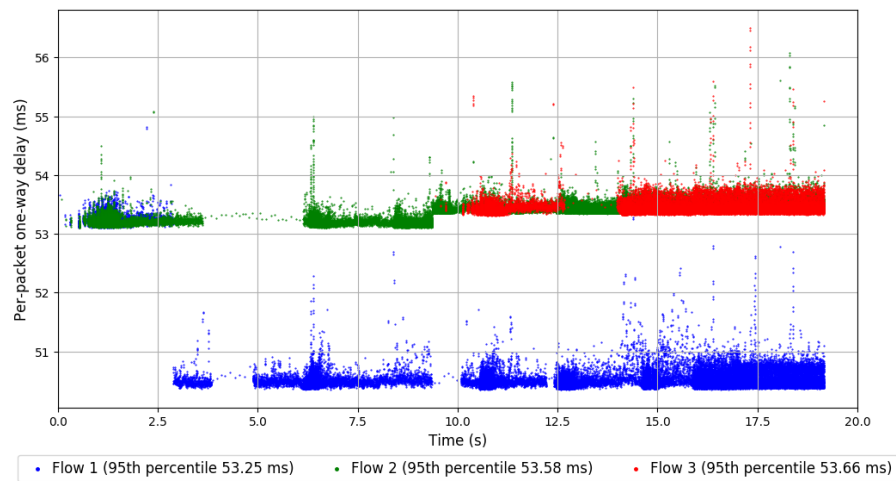
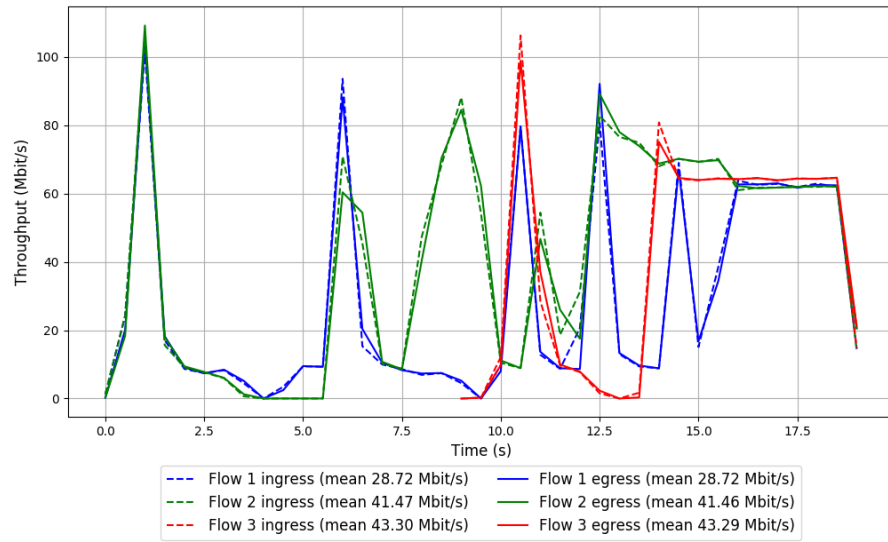


Run 5: Statistics of QUIC Cubic

Start at: 2017-12-21 00:21:04

End at: 2017-12-21 00:21:34

Run 5: Report of QUIC Cubic — Data Link

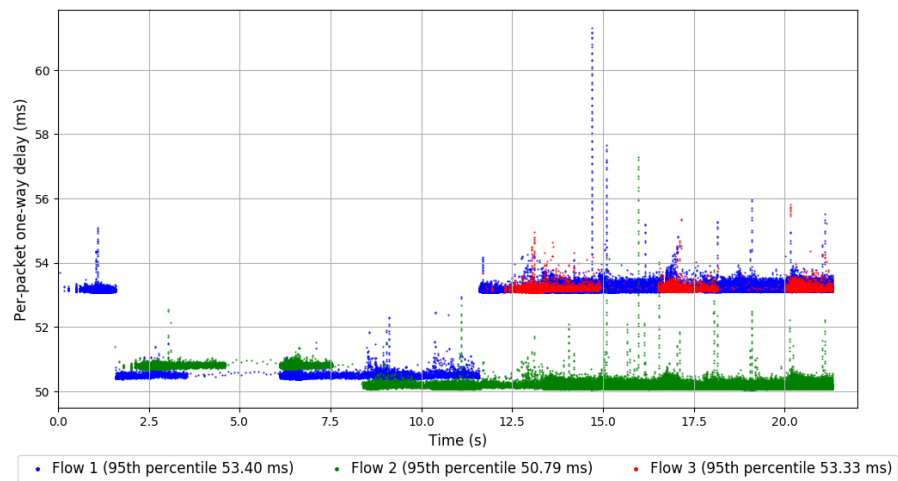
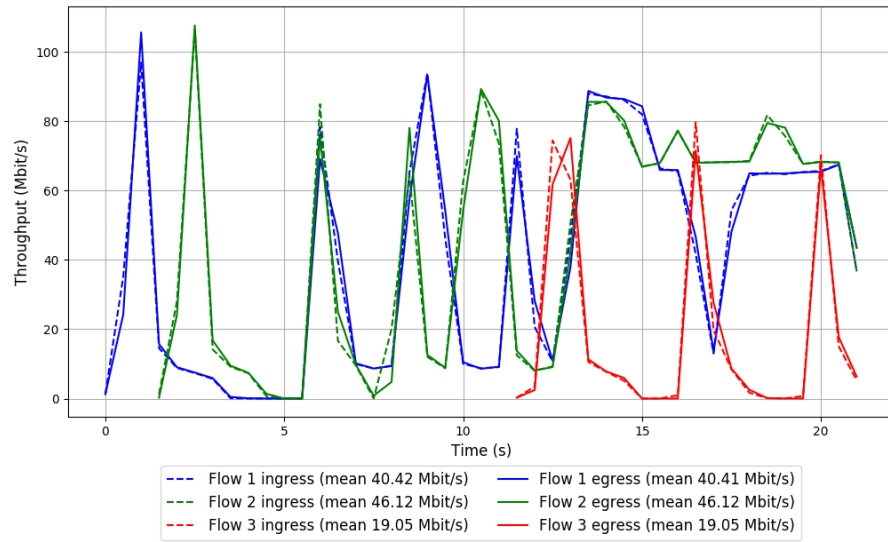


Run 6: Statistics of QUIC Cubic

Start at: 2017-12-21 00:34:48

End at: 2017-12-21 00:35:18

Run 6: Report of QUIC Cubic — Data Link

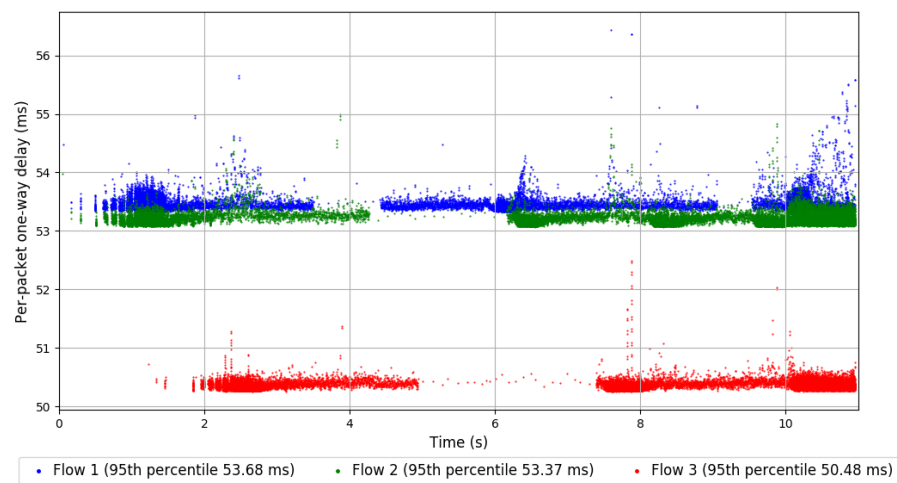
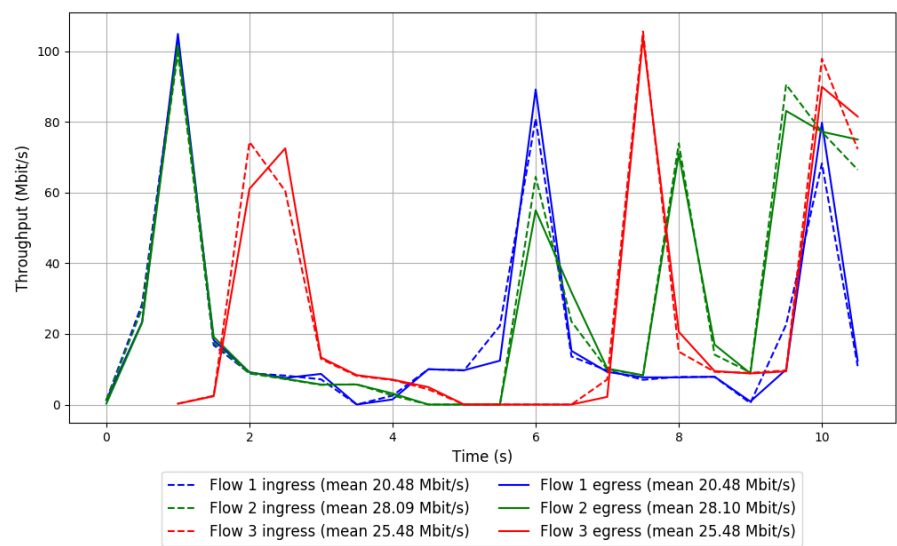


Run 7: Statistics of QUIC Cubic

Start at: 2017-12-21 00:48:14

End at: 2017-12-21 00:48:44

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-12-21 01:01:53

End at: 2017-12-21 01:02:23

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.16 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 33.09 Mbit/s

95th percentile per-packet one-way delay: 50.788 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 45.30 Mbit/s

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

Loss rate: 0.00%

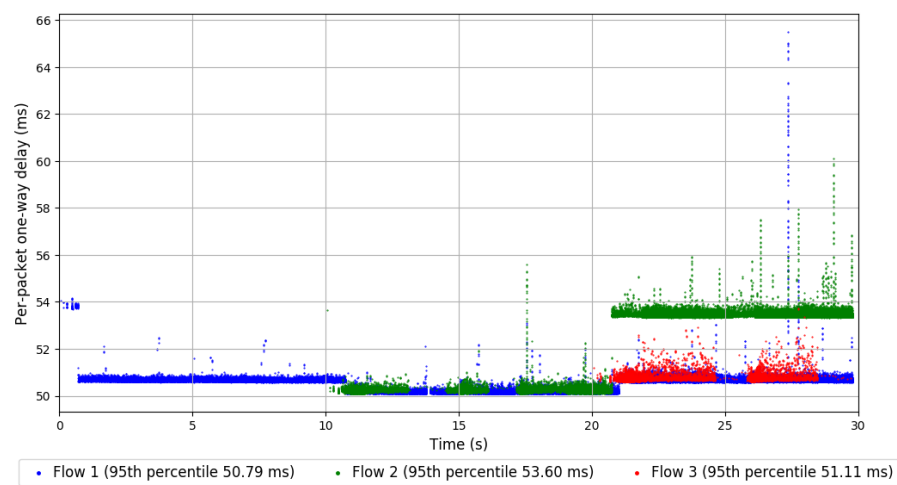
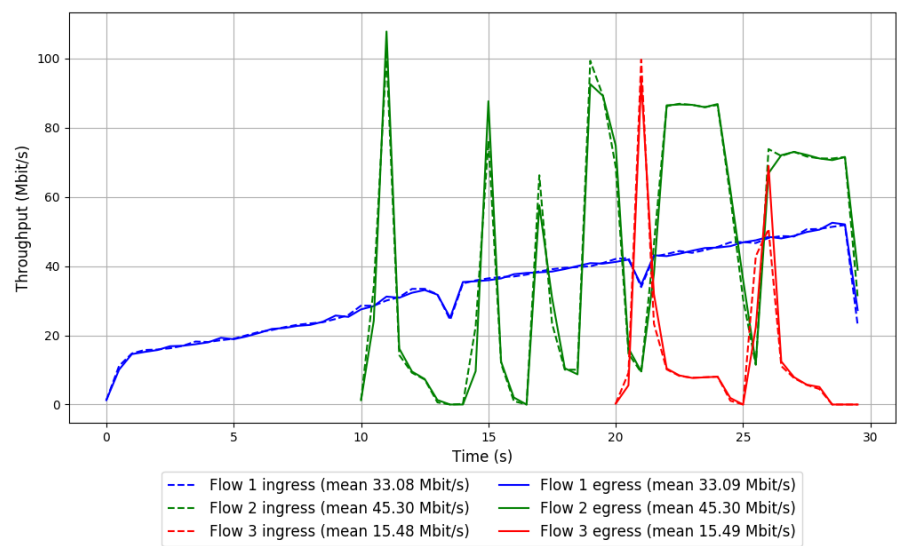
-- Flow 3:

Average throughput: 15.49 Mbit/s

95th percentile per-packet one-way delay: 51.106 ms

Loss rate: 0.00%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-12-21 01:15:18

End at: 2017-12-21 01:15:48

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.46 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 47.94 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 73.31 Mbit/s

95th percentile per-packet one-way delay: 53.845 ms

Loss rate: 0.00%

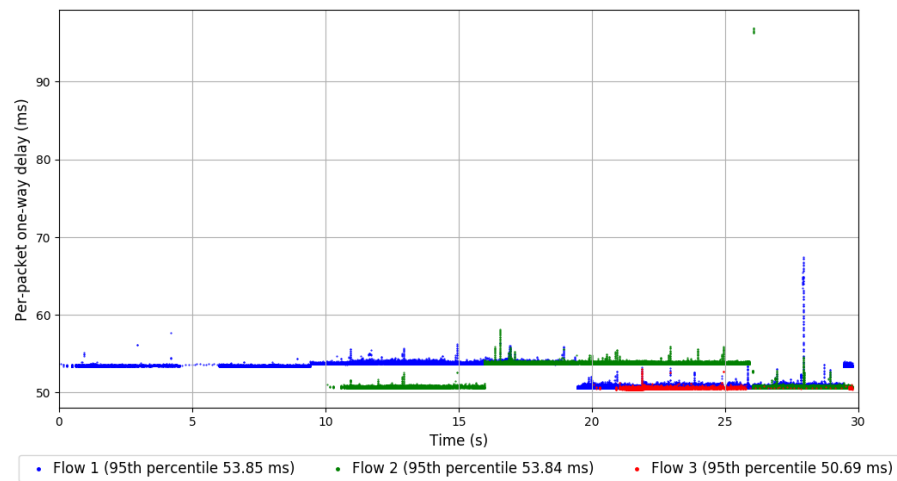
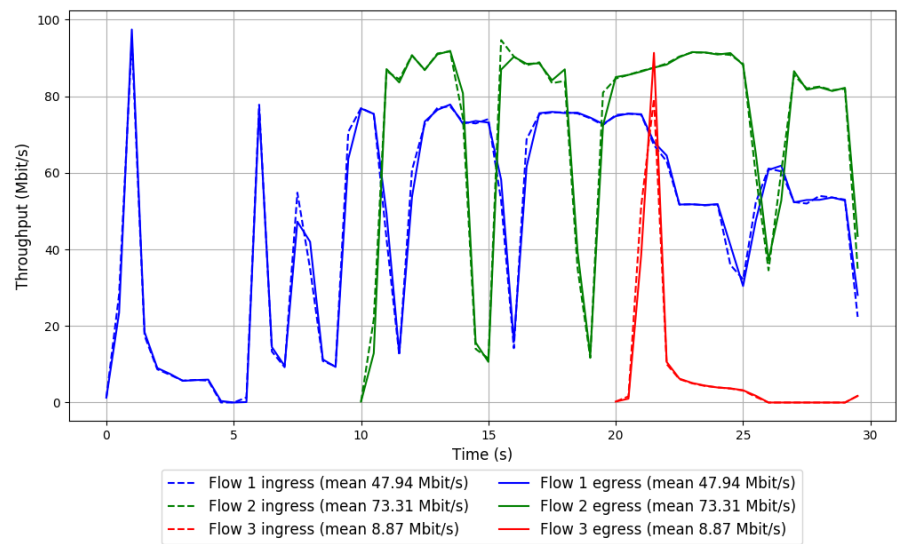
-- Flow 3:

Average throughput: 8.87 Mbit/s

95th percentile per-packet one-way delay: 50.687 ms

Loss rate: 0.00%

Run 9: Report of QUIC Cubic — Data Link

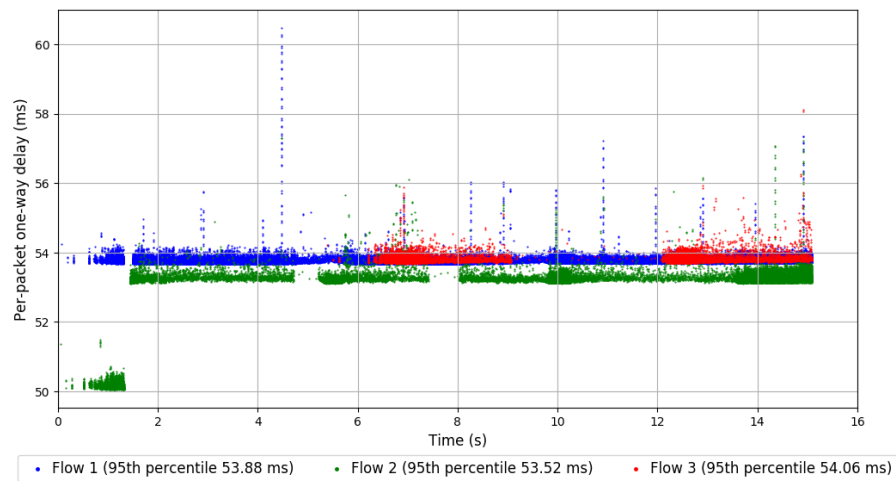
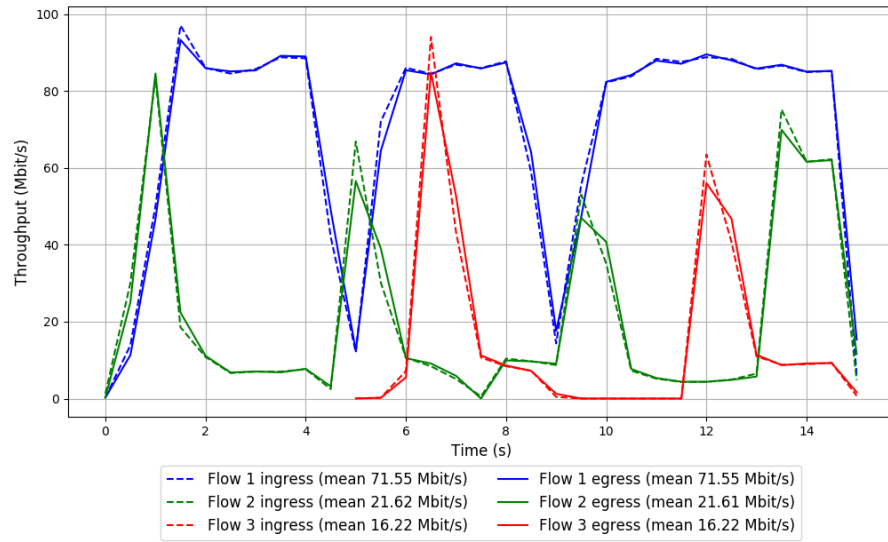


Run 10: Statistics of QUIC Cubic

Start at: 2017-12-21 01:28:52

End at: 2017-12-21 01:29:22

Run 10: Report of QUIC Cubic — Data Link

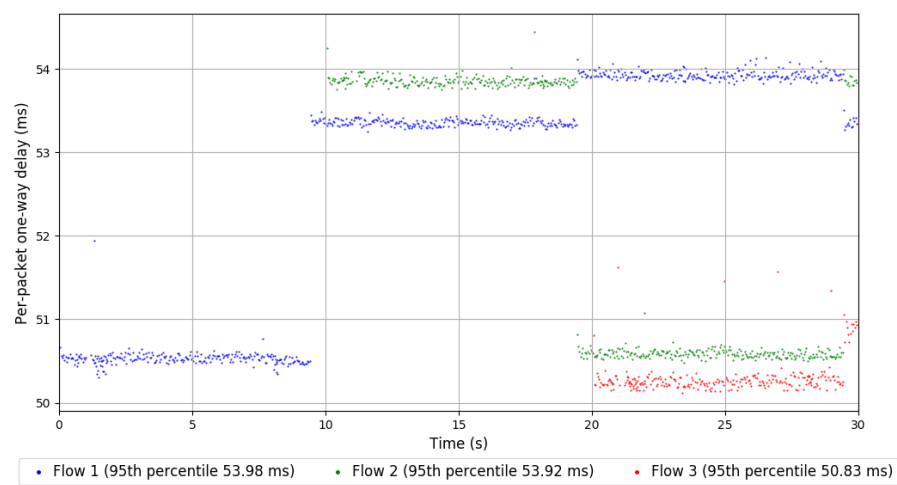
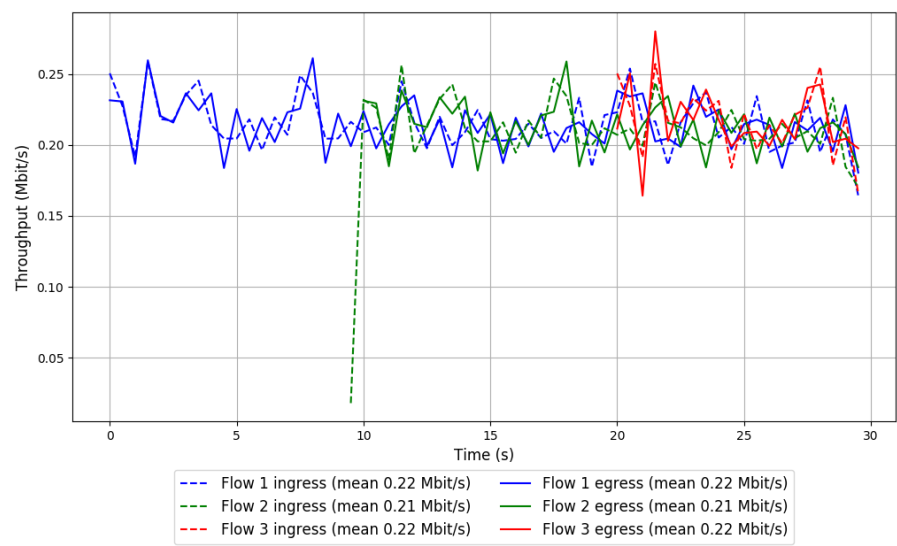


```
Run 1: Statistics of SCReAM

Start at: 2017-12-20 23:31:18
End at: 2017-12-20 23:31:48

# Below is generated by plot.py at 2017-12-21 03:48:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.956 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.979 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.916 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.828 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

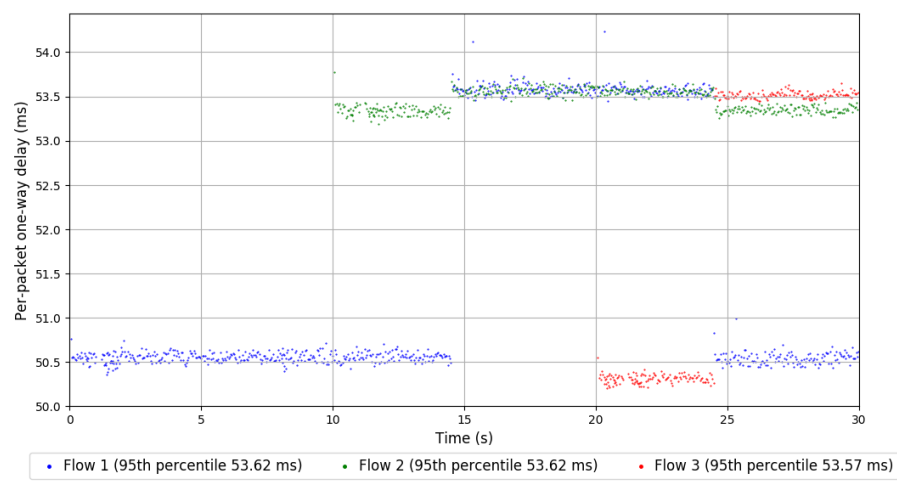
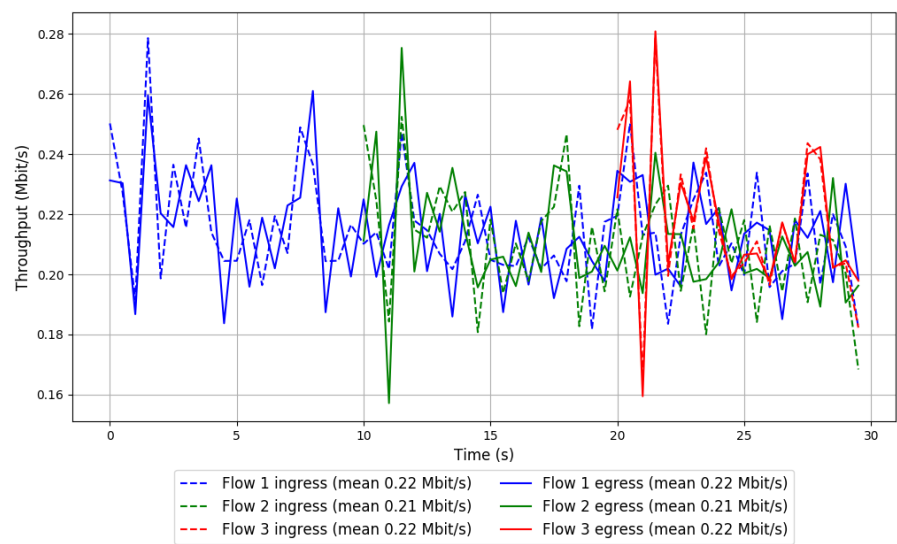


```
Run 2: Statistics of SCReAM

Start at: 2017-12-20 23:45:13
End at: 2017-12-20 23:45:43

# Below is generated by plot.py at 2017-12-21 03:48:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.618 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.625 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.621 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.566 ms
Loss rate: 0.00%
```

Run 2: Report of SReAM — Data Link

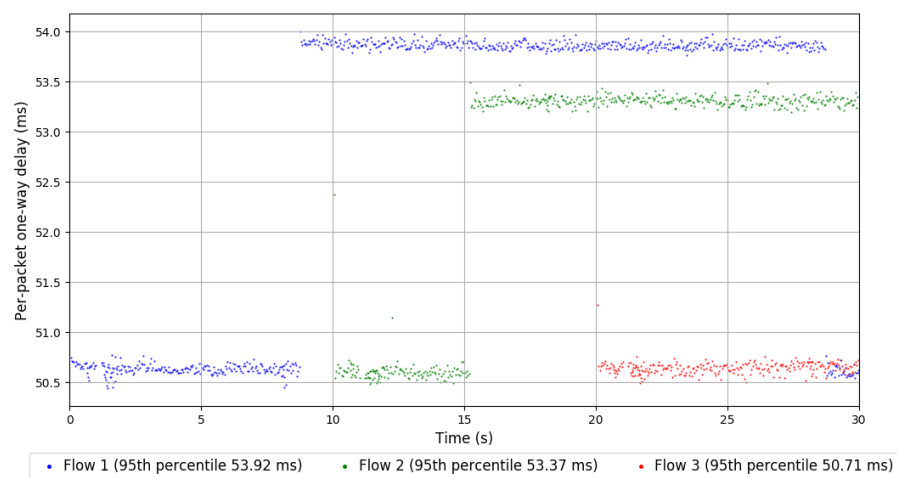
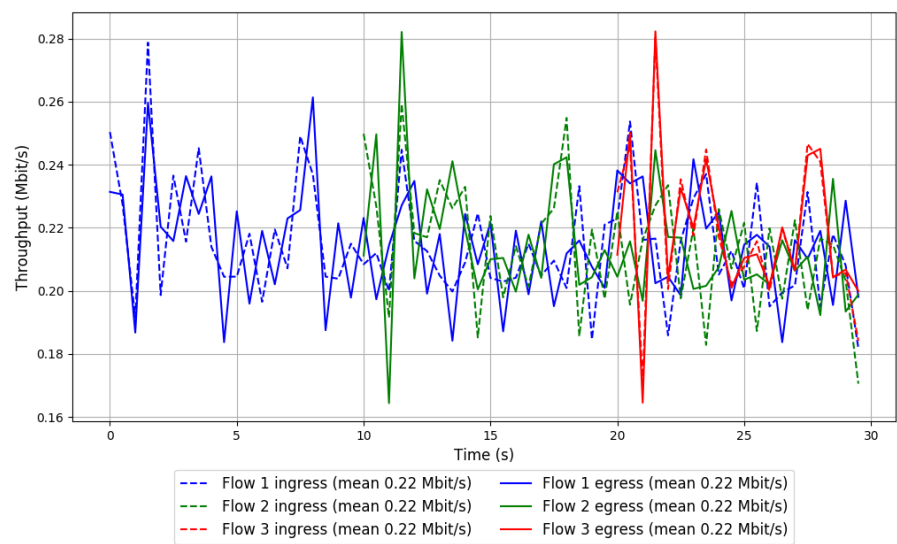


```
Run 3: Statistics of SCReAM

Start at: 2017-12-20 23:59:09
End at: 2017-12-20 23:59:39

# Below is generated by plot.py at 2017-12-21 03:48:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.901 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.919 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.373 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.713 ms
Loss rate: 0.00%
```


Run 3: Report of SReAM — Data Link

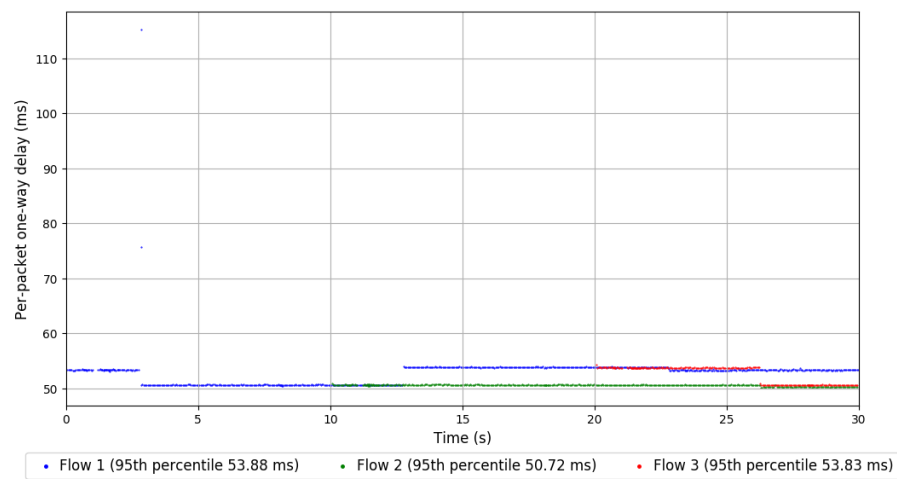
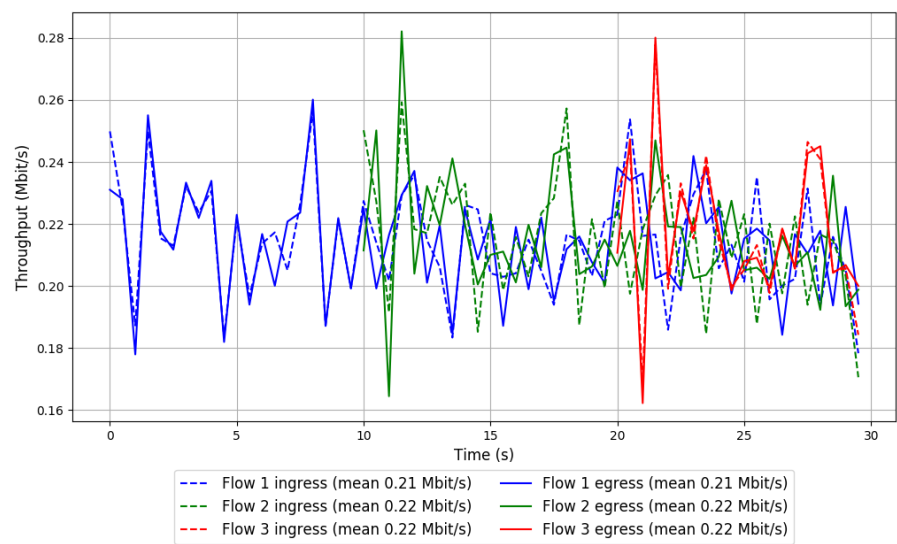


```
Run 4: Statistics of SCReAM

Start at: 2017-12-21 00:12:42
End at: 2017-12-21 00:13:12

# Below is generated by plot.py at 2017-12-21 03:48:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.856 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.885 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.719 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.831 ms
Loss rate: 0.00%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2017-12-21 00:26:34

End at: 2017-12-21 00:27:04

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 54.003 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.383 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 54.037 ms

Loss rate: 0.00%

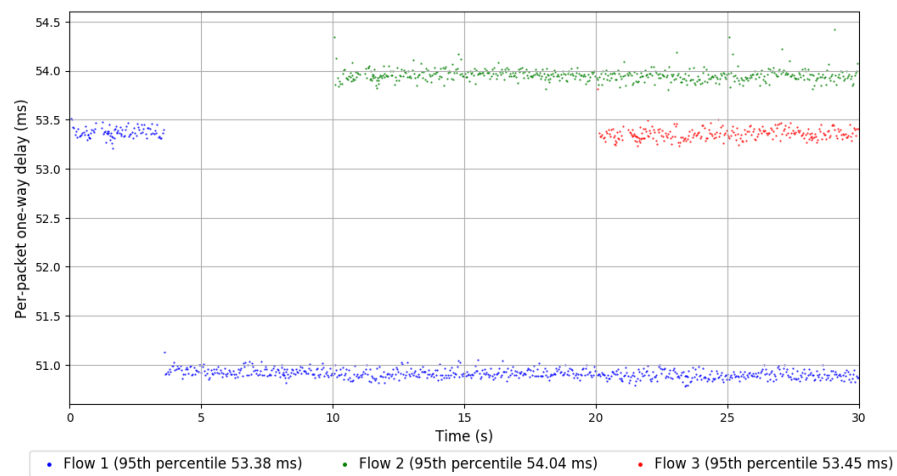
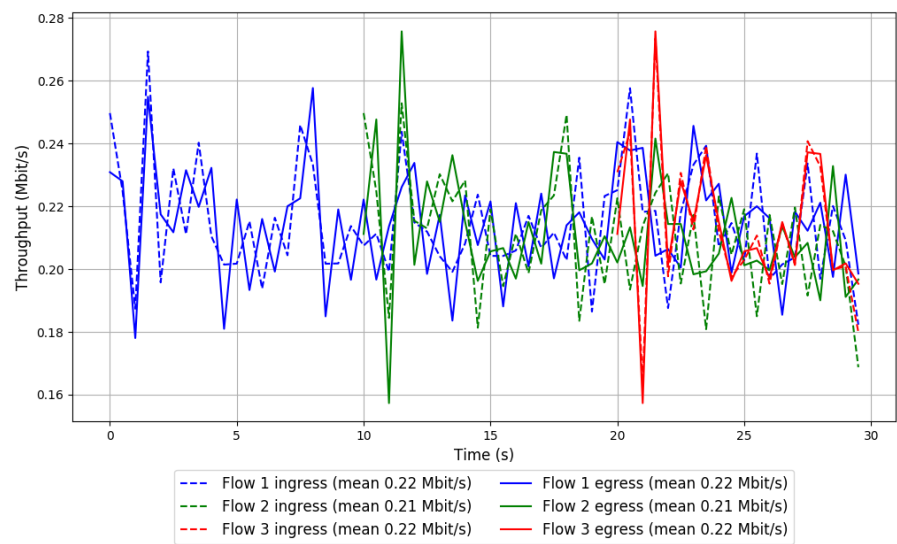
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2017-12-21 00:40:05

End at: 2017-12-21 00:40:35

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.413 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.657 ms

Loss rate: 0.00%

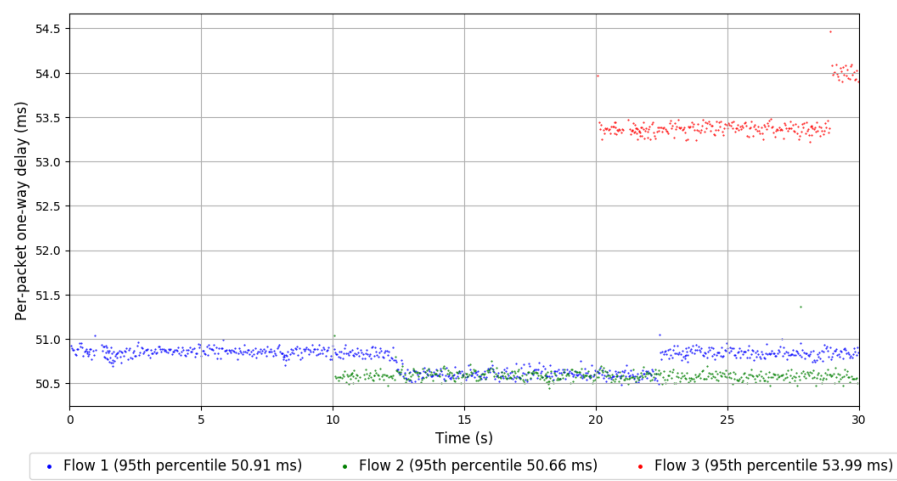
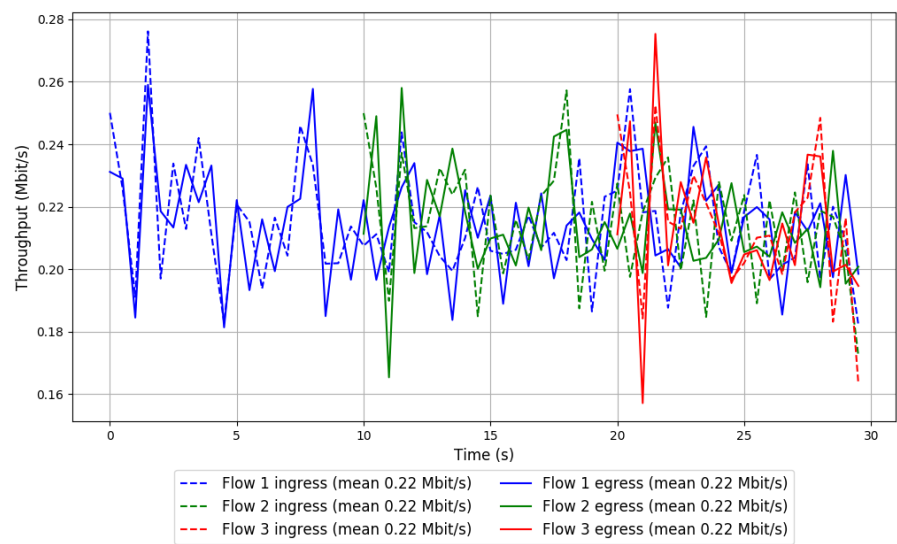
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

Run 6: Report of SReAM — Data Link

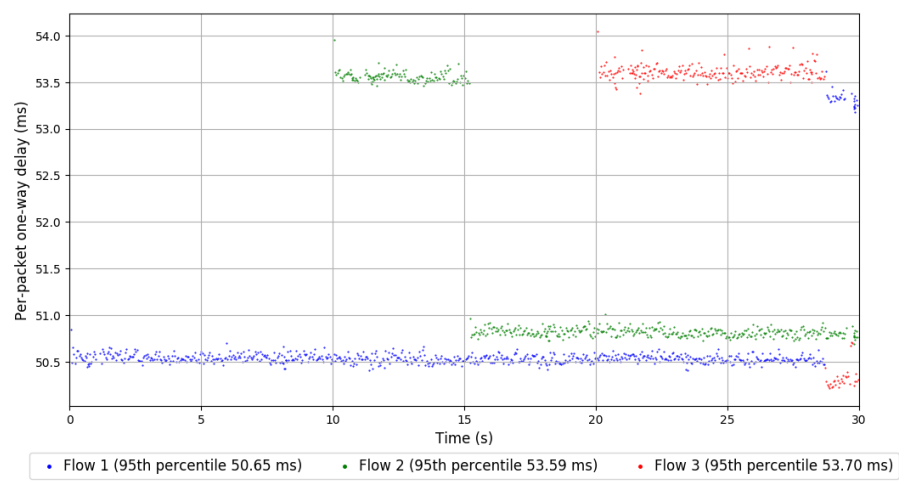
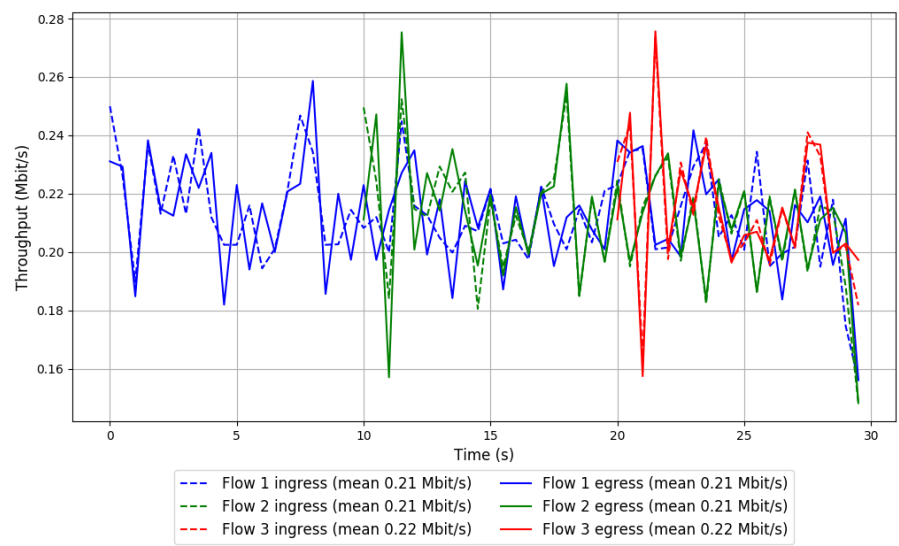


```
Run 7: Statistics of SReAM

Start at: 2017-12-21 00:53:39
End at: 2017-12-21 00:54:09

# Below is generated by plot.py at 2017-12-21 03:48:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.633 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.645 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.595 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.705 ms
Loss rate: 0.00%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2017-12-21 01:07:17

End at: 2017-12-21 01:07:47

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 53.623 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 53.456 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 53.589 ms

Loss rate: 0.00%

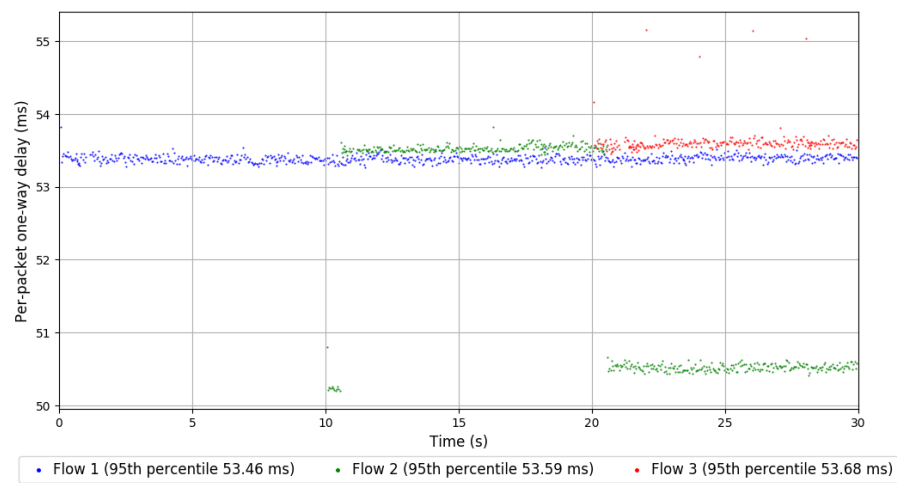
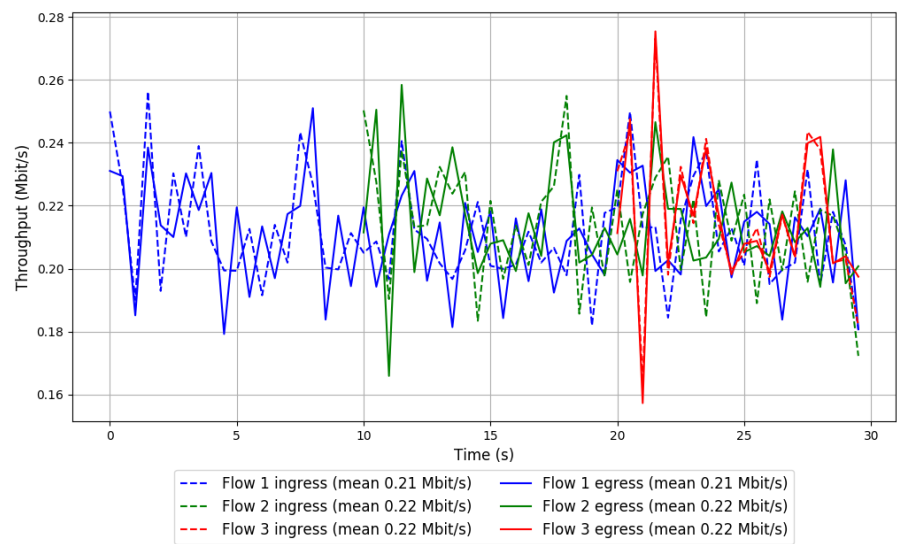
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

Run 8: Report of SReAM — Data Link

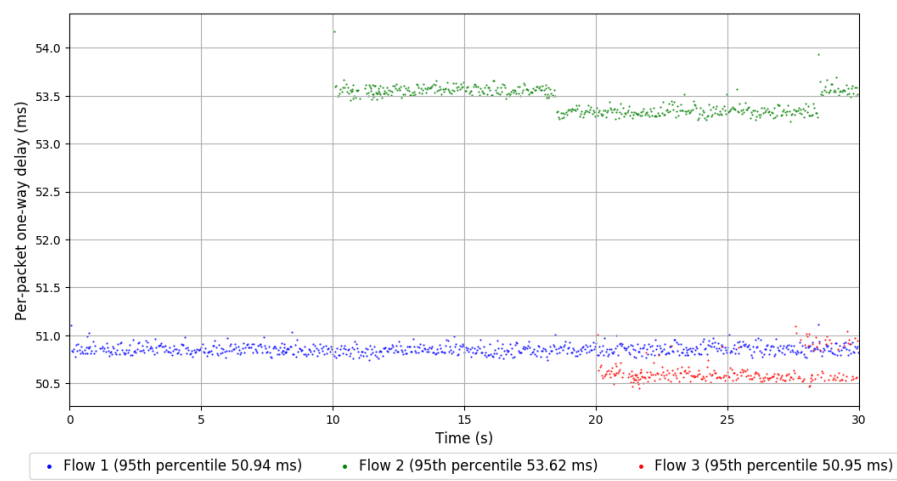
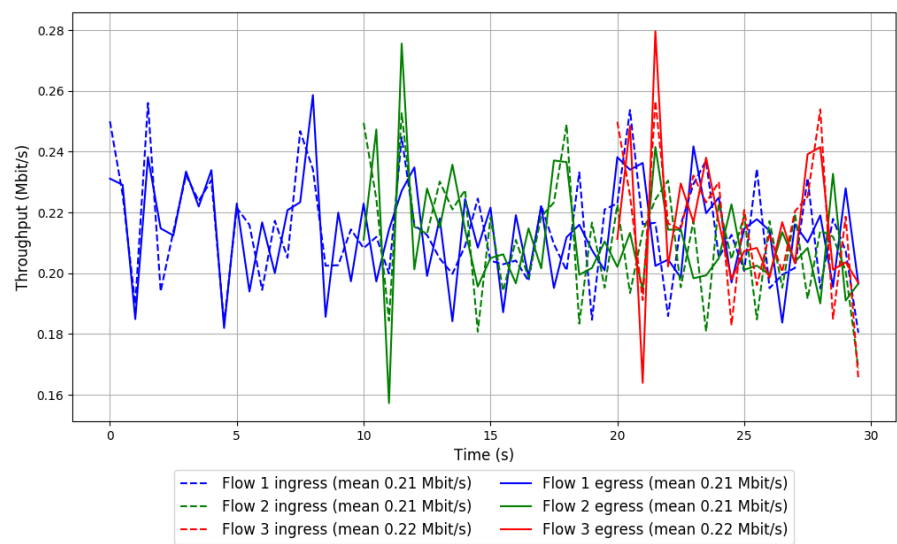


```
Run 9: Statistics of SReAM

Start at: 2017-12-21 01:20:36
End at: 2017-12-21 01:21:06

# Below is generated by plot.py at 2017-12-21 03:48:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.585 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.937 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.618 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.952 ms
Loss rate: 0.00%
```

Run 9: Report of SReAM — Data Link

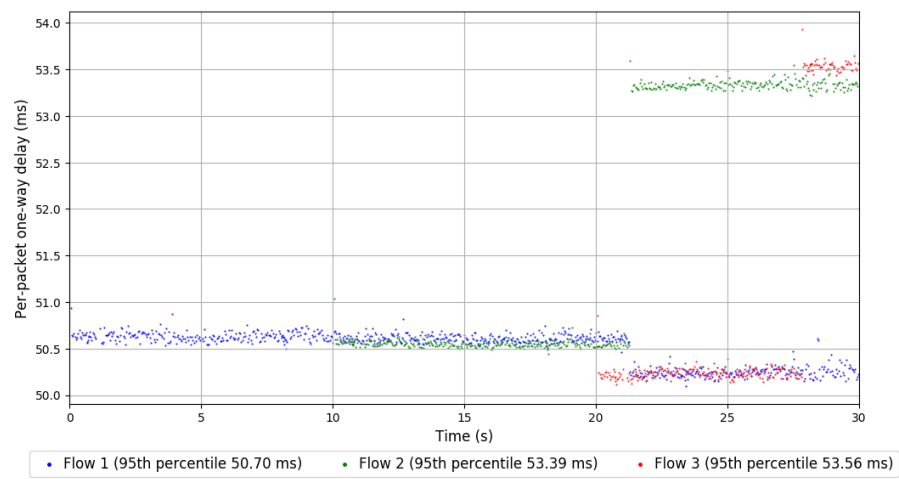
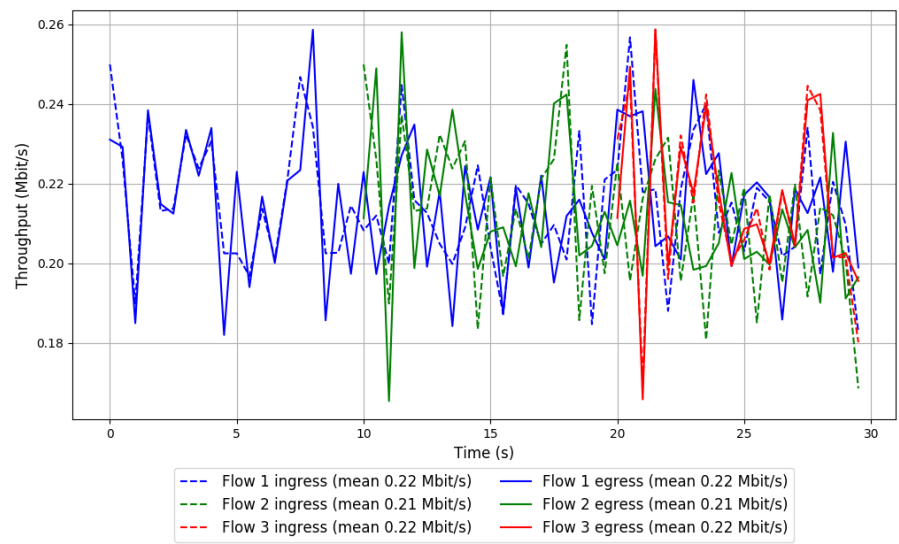


```
Run 10: Statistics of SReAM

Start at: 2017-12-21 01:34:27
End at: 2017-12-21 01:34:57

# Below is generated by plot.py at 2017-12-21 03:48:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.401 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.695 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.388 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.562 ms
Loss rate: 0.00%
```

Run 10: Report of SReAM — Data Link

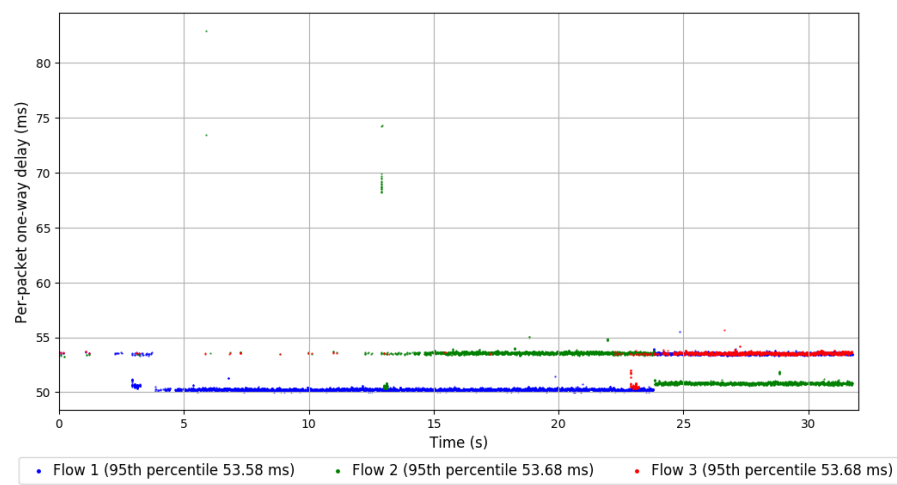
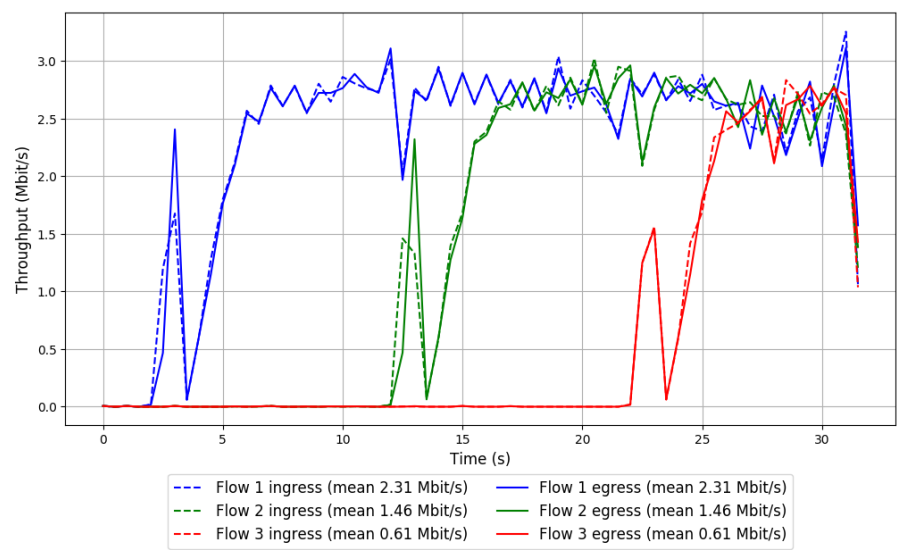


```
Run 1: Statistics of WebRTC media

Start at: 2017-12-20 23:26:42
End at: 2017-12-20 23:27:12

# Below is generated by plot.py at 2017-12-21 03:48:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 53.646 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 53.580 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 53.679 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 53.676 ms
Loss rate: 0.00%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-12-20 23:40:17

End at: 2017-12-20 23:40:47

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.29 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 50.978 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.64 Mbit/s

95th percentile per-packet one-way delay: 53.607 ms

Loss rate: 0.00%

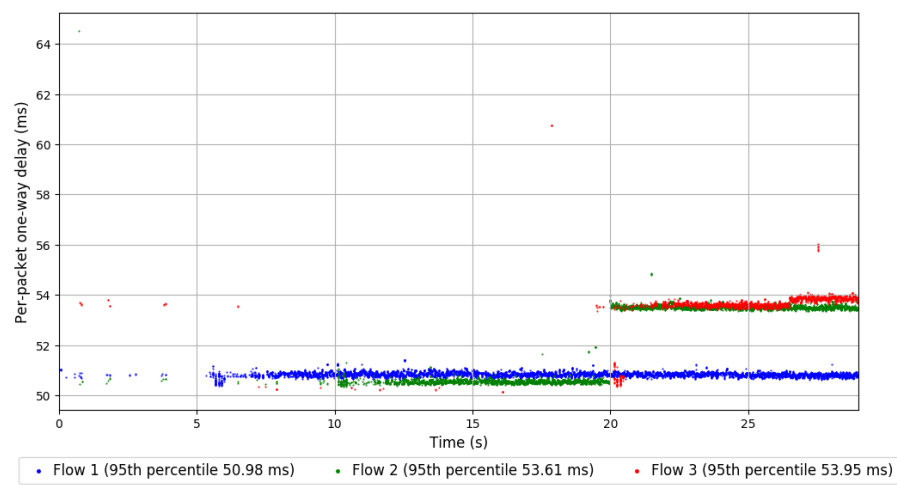
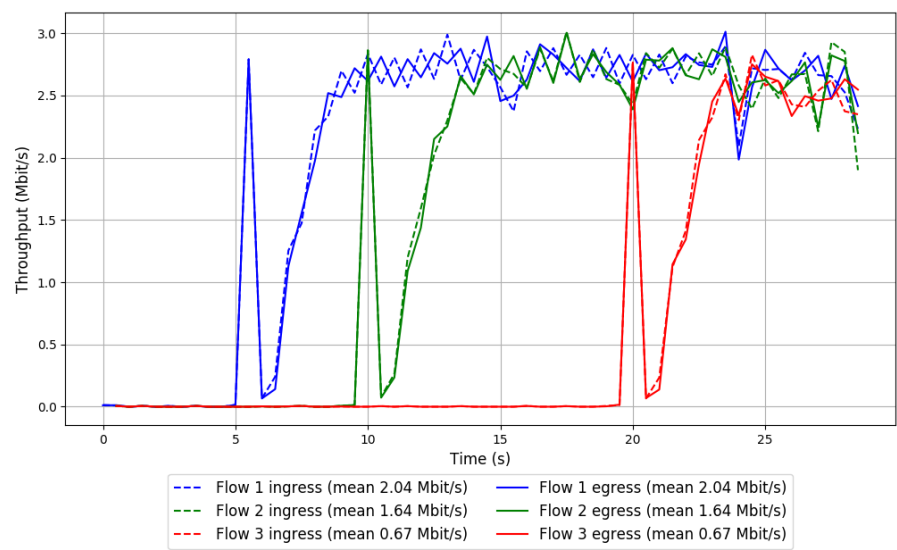
-- Flow 3:

Average throughput: 0.67 Mbit/s

95th percentile per-packet one-way delay: 53.947 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

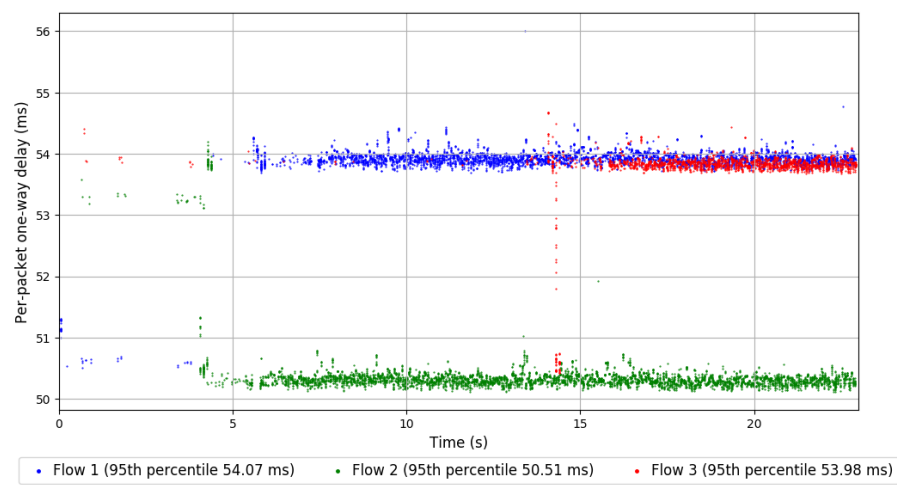
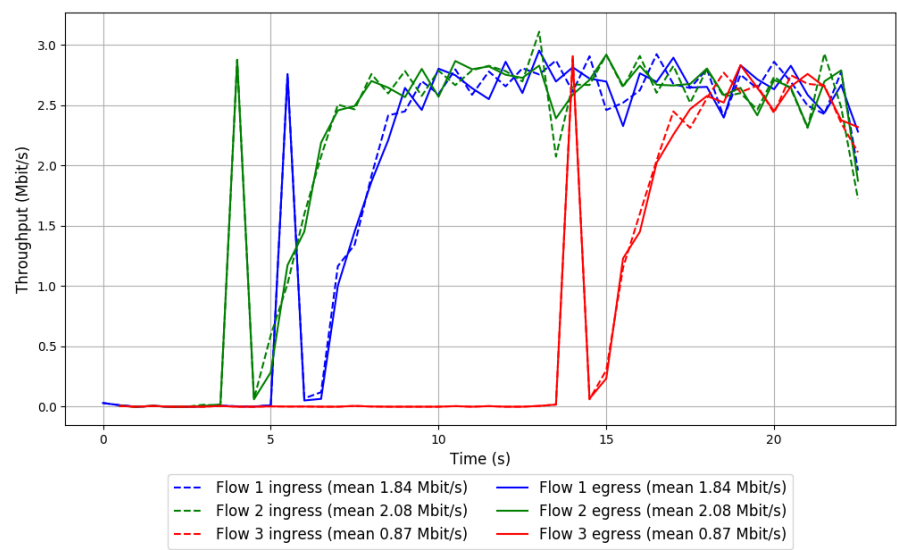


Run 3: Statistics of WebRTC media

Start at: 2017-12-20 23:54:07

End at: 2017-12-20 23:54:37

Run 3: Report of WebRTC media — Data Link

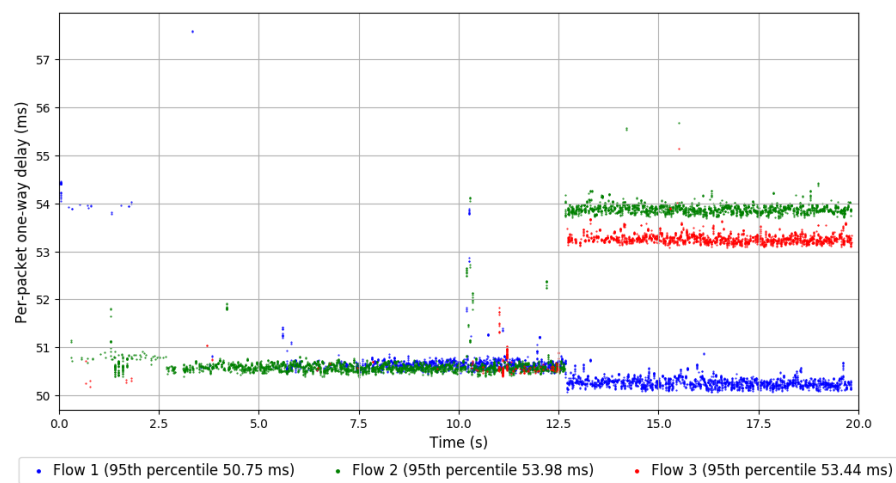
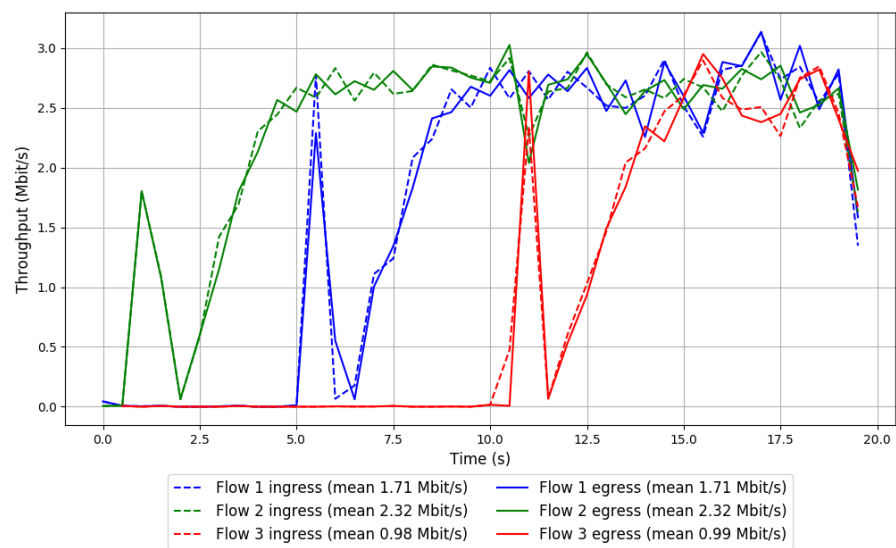


Run 4: Statistics of WebRTC media

Start at: 2017-12-21 00:08:05

End at: 2017-12-21 00:08:35

Run 4: Report of WebRTC media — Data Link

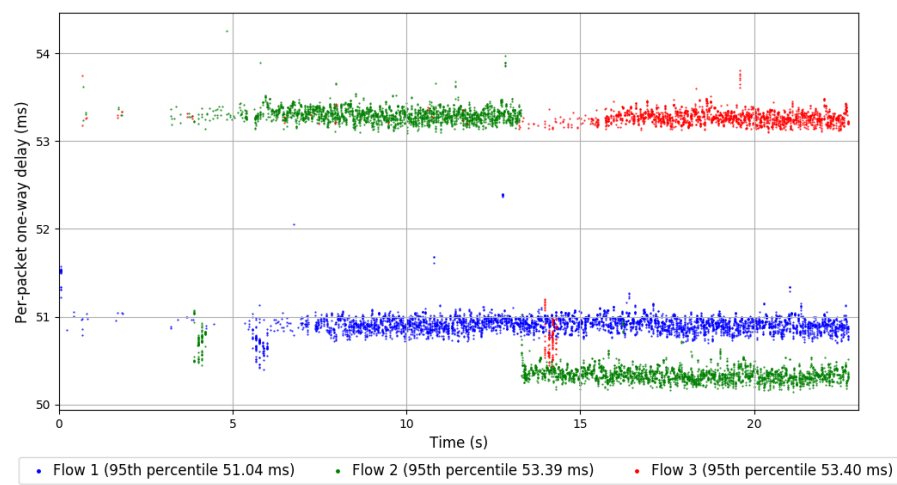
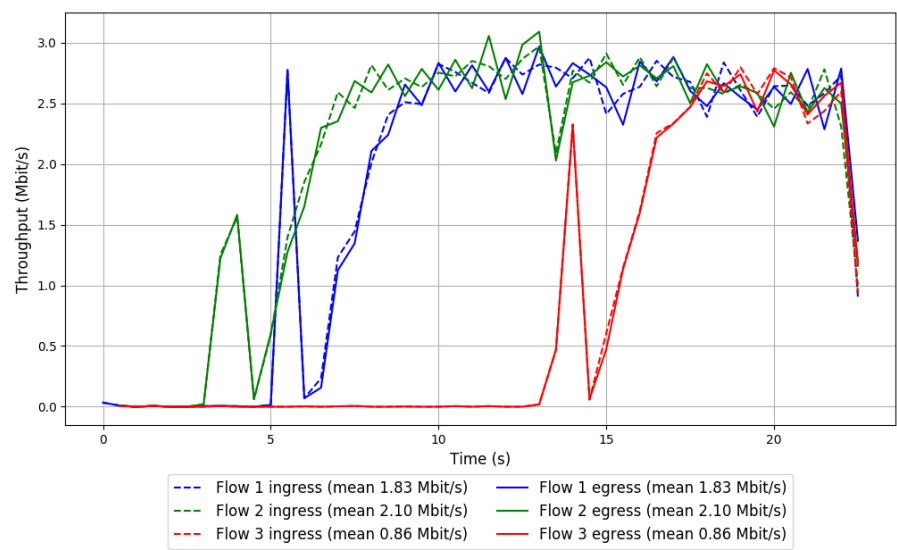


Run 5: Statistics of WebRTC media

Start at: 2017-12-21 00:21:47

End at: 2017-12-21 00:22:17

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-12-21 00:35:31

End at: 2017-12-21 00:36:01

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.39 Mbit/s

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

Loss rate: 0.01%

-- Flow 1:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 50.678 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 53.713 ms

Loss rate: 0.00%

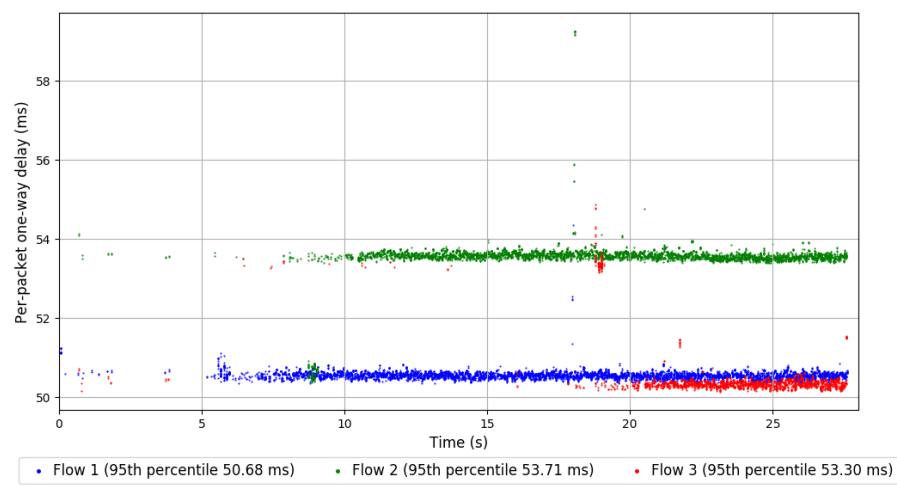
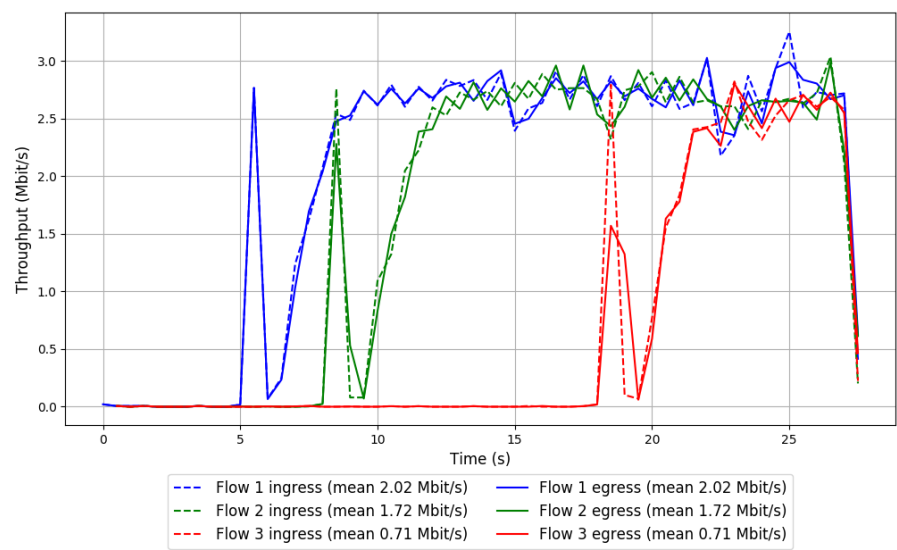
-- Flow 3:

Average throughput: 0.71 Mbit/s

95th percentile per-packet one-way delay: 53.298 ms

Loss rate: 0.00%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-12-21 00:48:56

End at: 2017-12-21 00:49:26

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.24 Mbit/s

95th percentile per-packet one-way delay: 53.307 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 50.683 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 50.676 ms

Loss rate: 0.00%

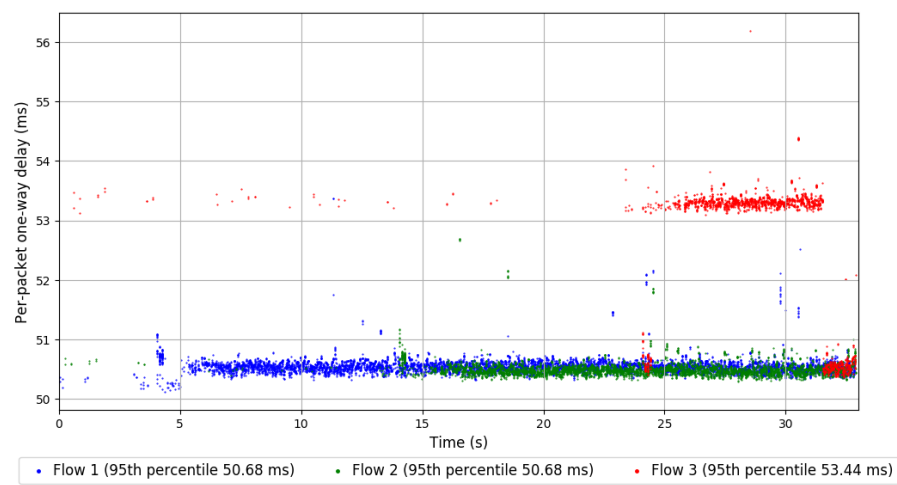
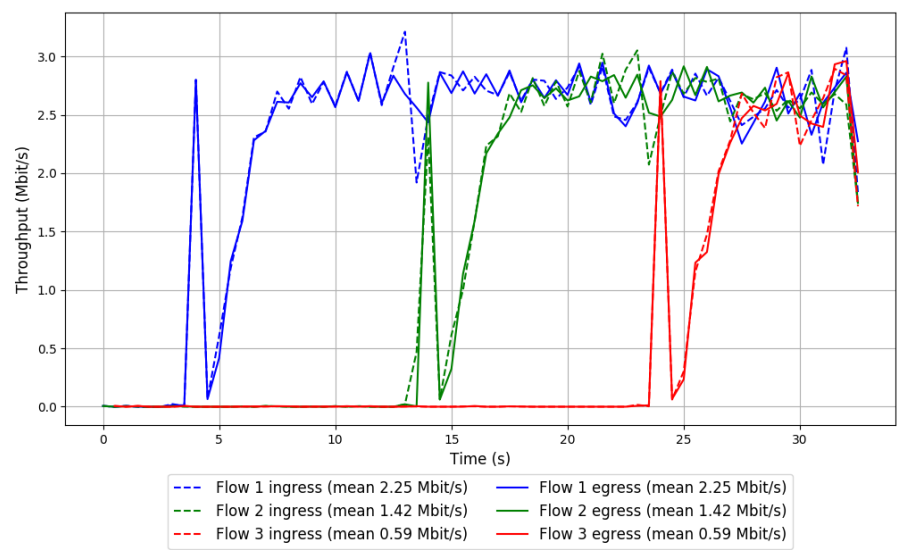
-- Flow 3:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 53.437 ms

Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link

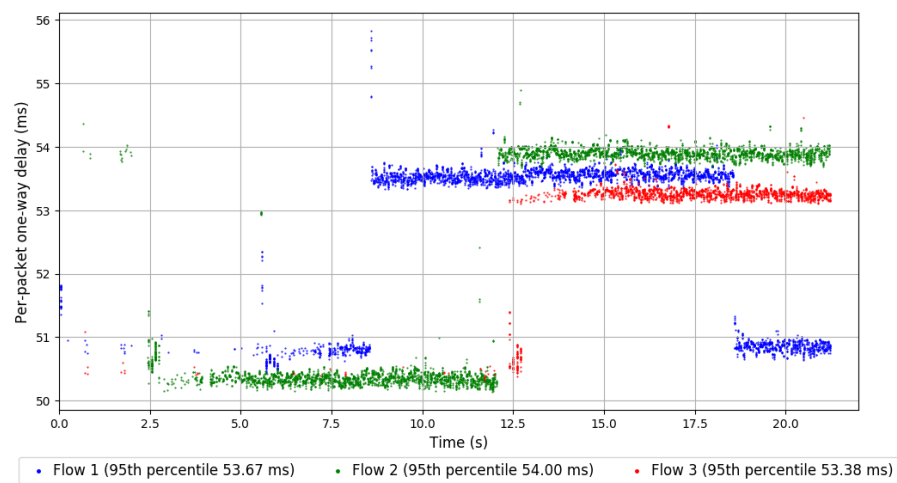
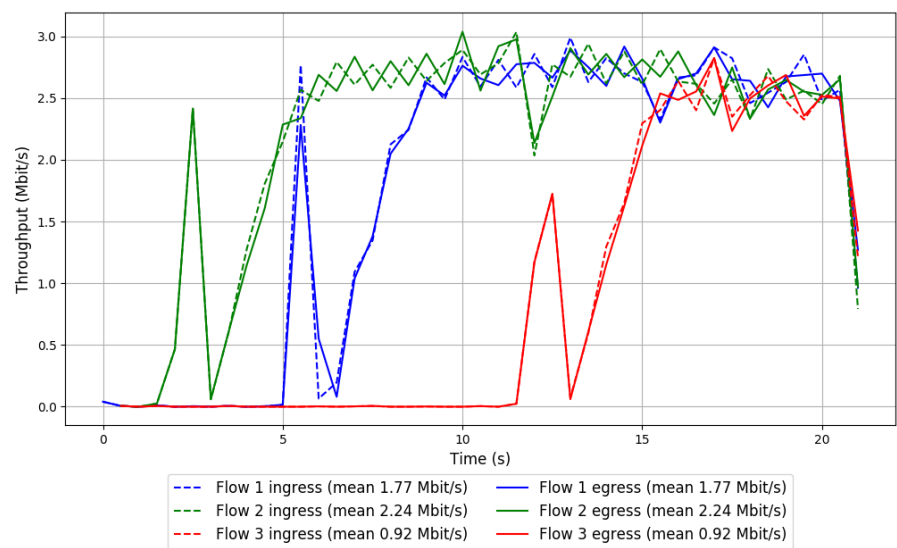


Run 8: Statistics of WebRTC media

Start at: 2017-12-21 01:02:37

End at: 2017-12-21 01:03:07

Run 8: Report of WebRTC media — Data Link

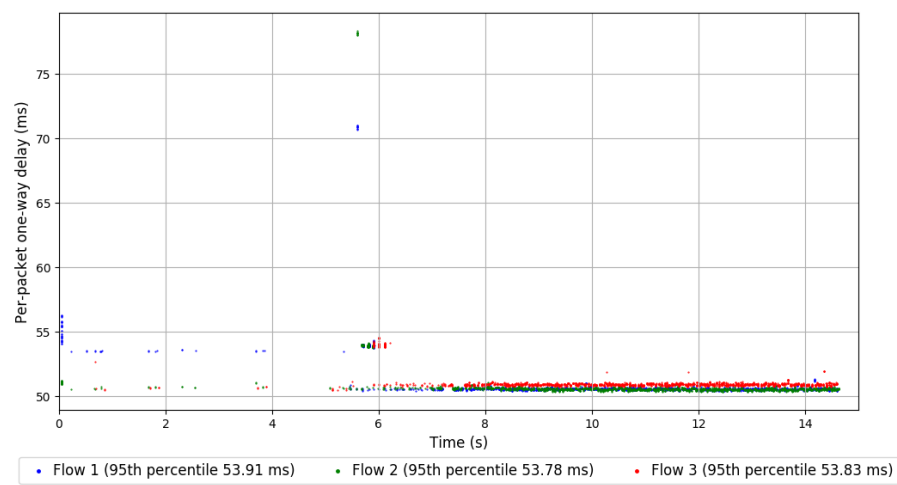
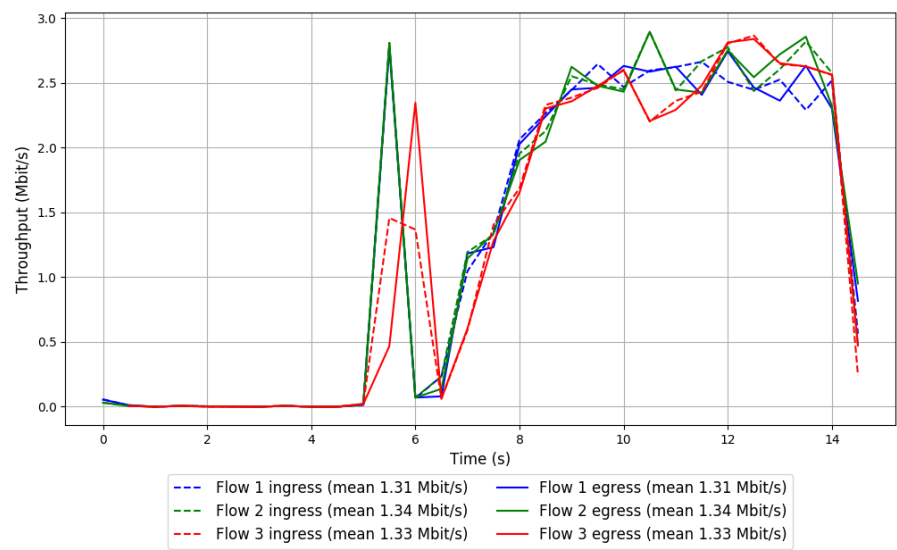


Run 9: Statistics of WebRTC media

Start at: 2017-12-21 01:16:04

End at: 2017-12-21 01:16:34

Run 9: Report of WebRTC media — Data Link

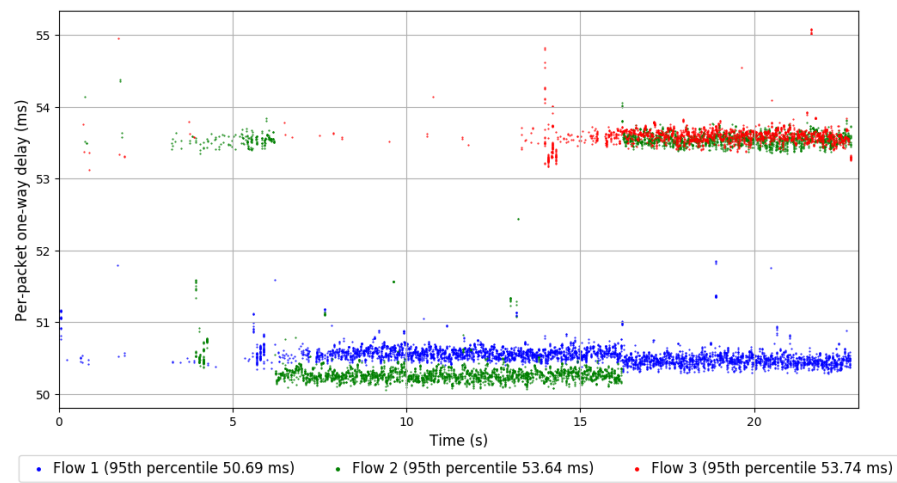
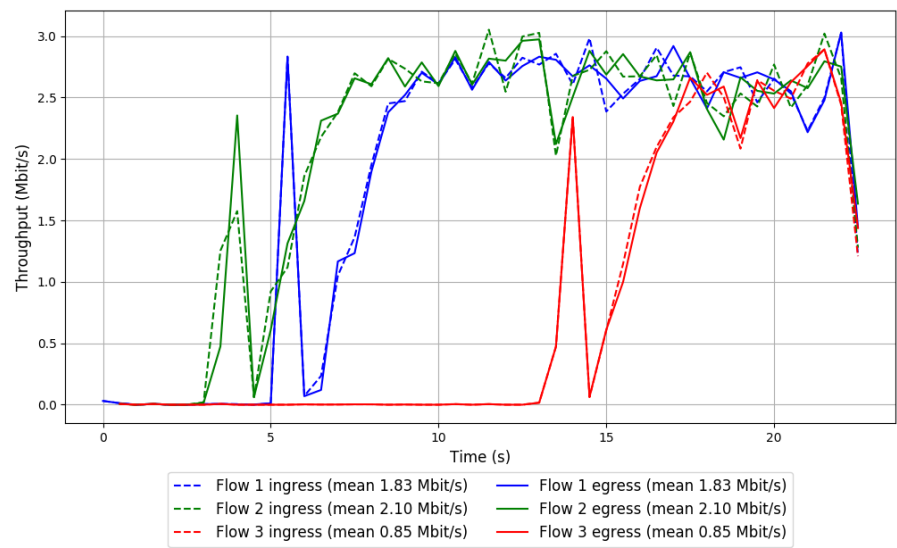


Run 10: Statistics of WebRTC media

Start at: 2017-12-21 01:29:34

End at: 2017-12-21 01:30:04

Run 10: Report of WebRTC media — Data Link

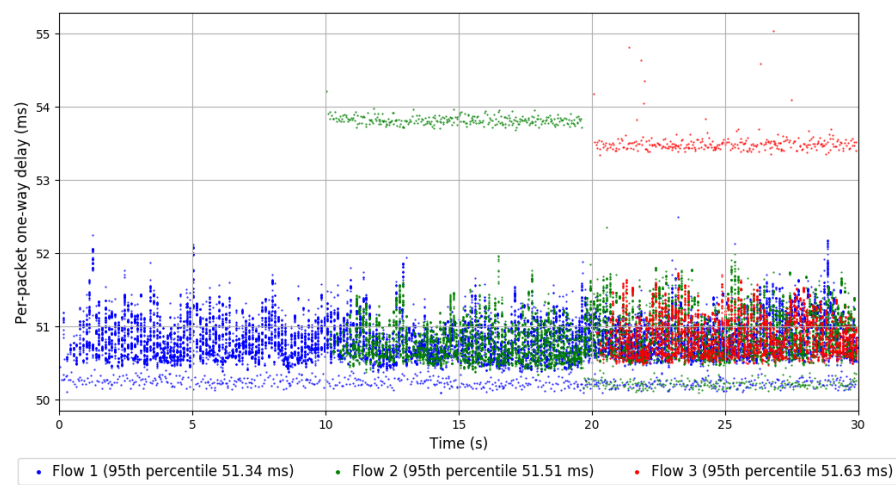
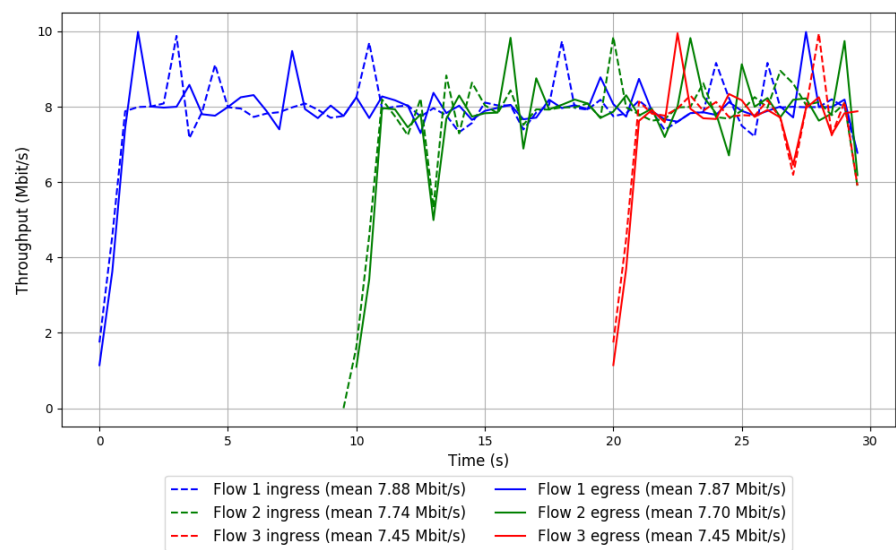


```
Run 1: Statistics of Sprout

Start at: 2017-12-20 23:30:38
End at: 2017-12-20 23:31:08

# Below is generated by plot.py at 2017-12-21 03:48:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.44 Mbit/s
95th percentile per-packet one-way delay: 51.433 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 51.339 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 51.511 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 7.45 Mbit/s
95th percentile per-packet one-way delay: 51.628 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-12-20 23:44:33

End at: 2017-12-20 23:45:03

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.51 Mbit/s

95th percentile per-packet one-way delay: 51.577 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 7.82 Mbit/s

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

Loss rate: 0.50%

-- Flow 2:

Average throughput: 7.79 Mbit/s

95th percentile per-packet one-way delay: 51.698 ms

Loss rate: 0.65%

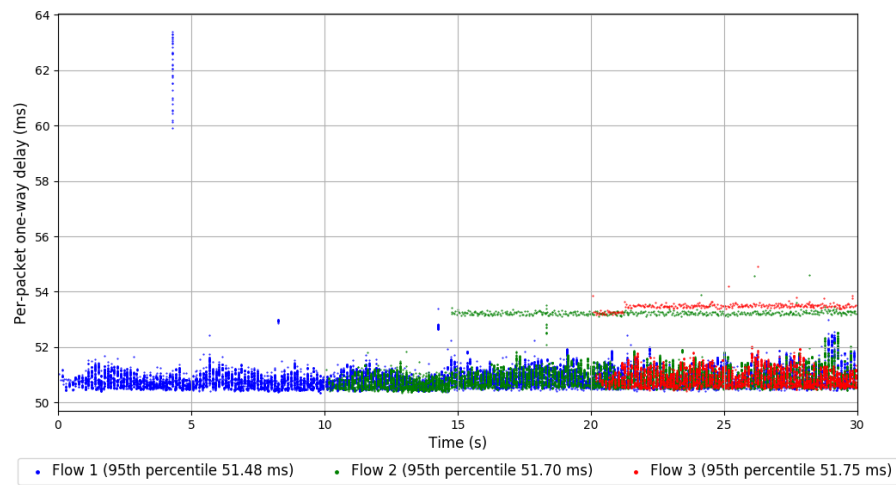
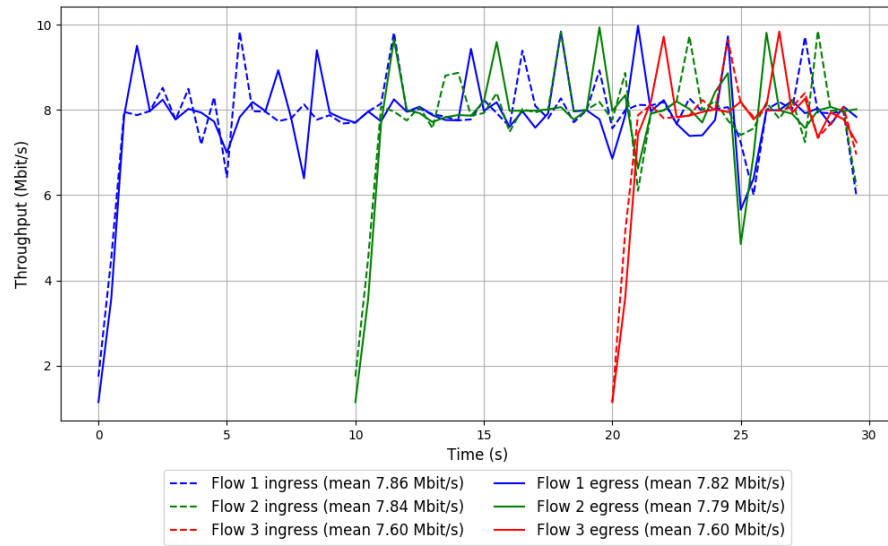
-- Flow 3:

Average throughput: 7.60 Mbit/s

95th percentile per-packet one-way delay: 51.753 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-12-20 23:58:29

End at: 2017-12-20 23:58:59

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.40 Mbit/s

95th percentile per-packet one-way delay: 54.600 ms

Loss rate: 0.33%

-- Flow 1:

Average throughput: 7.78 Mbit/s

95th percentile per-packet one-way delay: 54.524 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 7.72 Mbit/s

95th percentile per-packet one-way delay: 54.611 ms

Loss rate: 0.11%

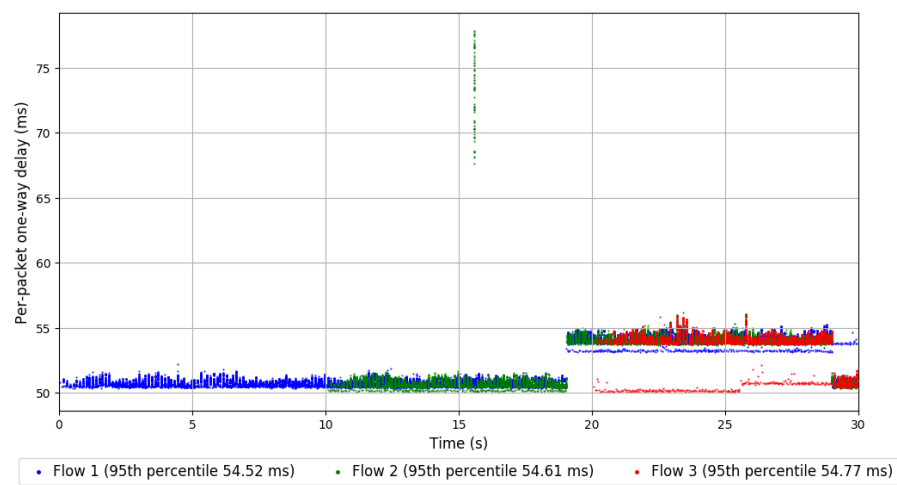
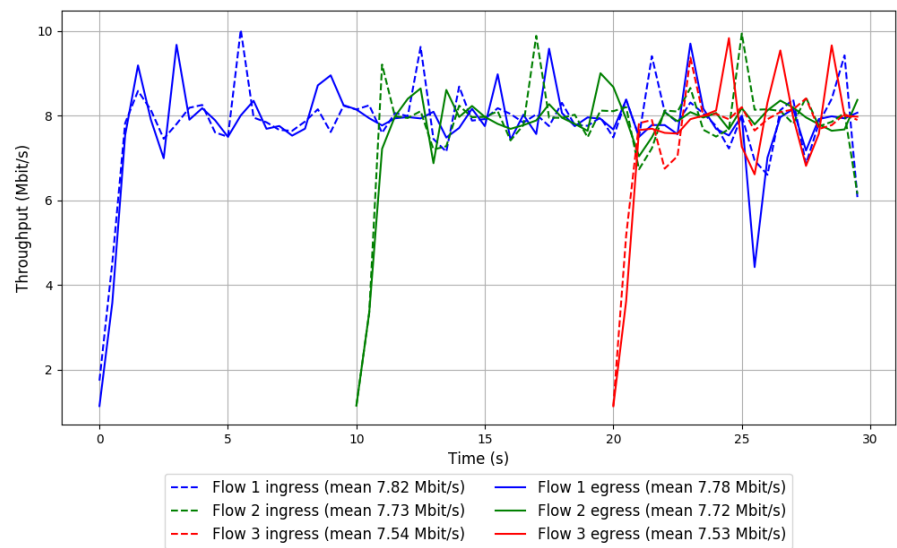
-- Flow 3:

Average throughput: 7.53 Mbit/s

95th percentile per-packet one-way delay: 54.771 ms

Loss rate: 0.06%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-12-21 00:12:01

End at: 2017-12-21 00:12:31

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.20 Mbit/s

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

Loss rate: 0.47%

-- Flow 1:

Average throughput: 7.66 Mbit/s

95th percentile per-packet one-way delay: 54.489 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 7.64 Mbit/s

95th percentile per-packet one-way delay: 54.417 ms

Loss rate: 0.07%

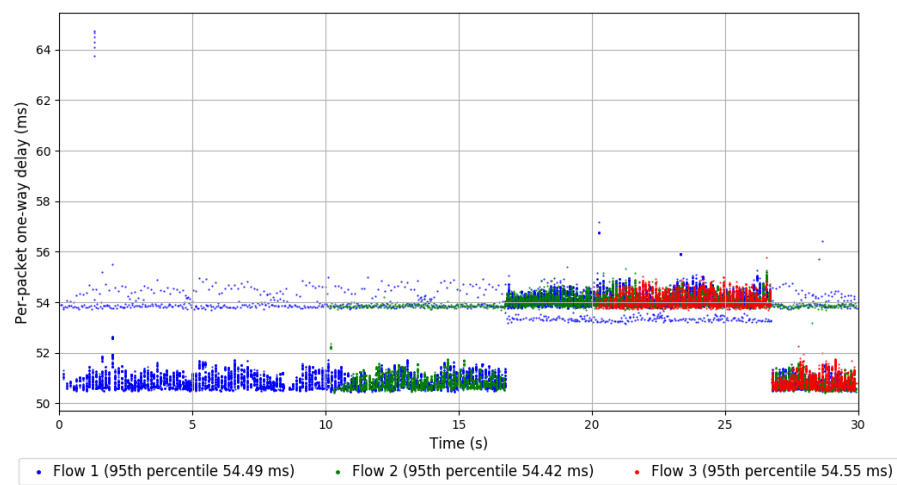
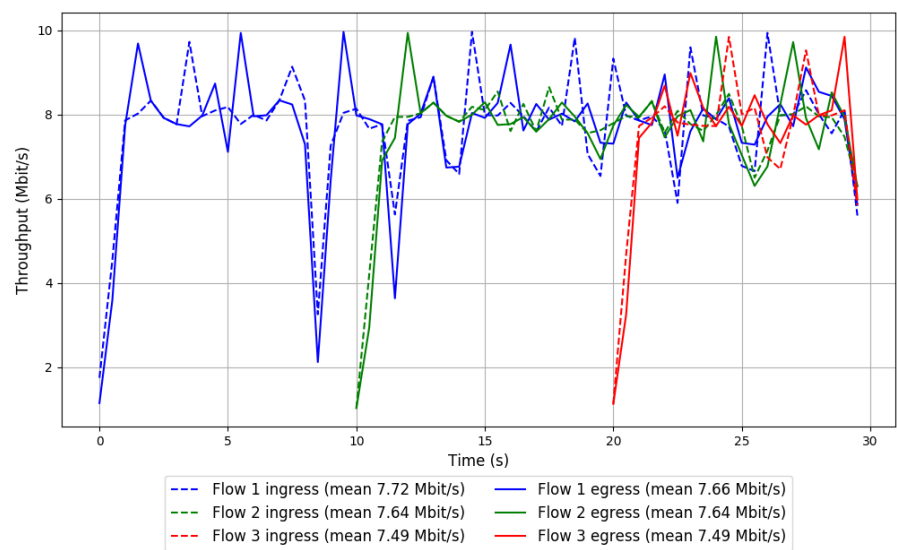
-- Flow 3:

Average throughput: 7.49 Mbit/s

95th percentile per-packet one-way delay: 54.551 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-12-21 00:25:54

End at: 2017-12-21 00:26:24

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.45 Mbit/s

95th percentile per-packet one-way delay: 53.940 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 7.70 Mbit/s

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

Loss rate: 0.19%

-- Flow 2:

Average throughput: 7.88 Mbit/s

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

Loss rate: 0.00%

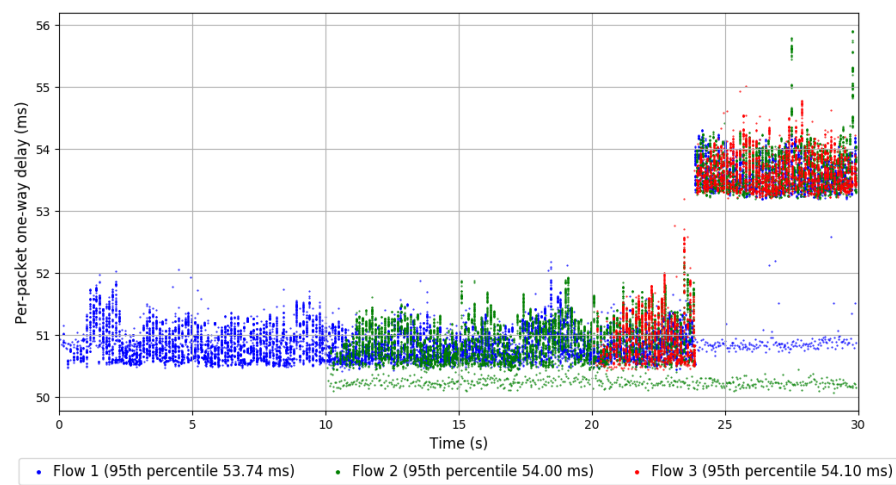
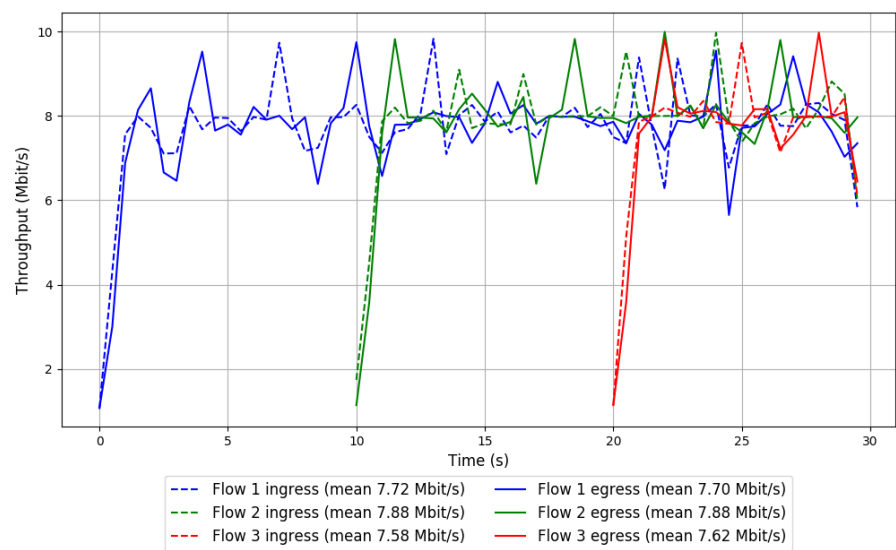
-- Flow 3:

Average throughput: 7.62 Mbit/s

95th percentile per-packet one-way delay: 54.098 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-12-21 00:39:25

End at: 2017-12-21 00:39:55

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.41 Mbit/s

95th percentile per-packet one-way delay: 51.713 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 7.82 Mbit/s

95th percentile per-packet one-way delay: 52.016 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 7.67 Mbit/s

95th percentile per-packet one-way delay: 51.940 ms

Loss rate: 0.63%

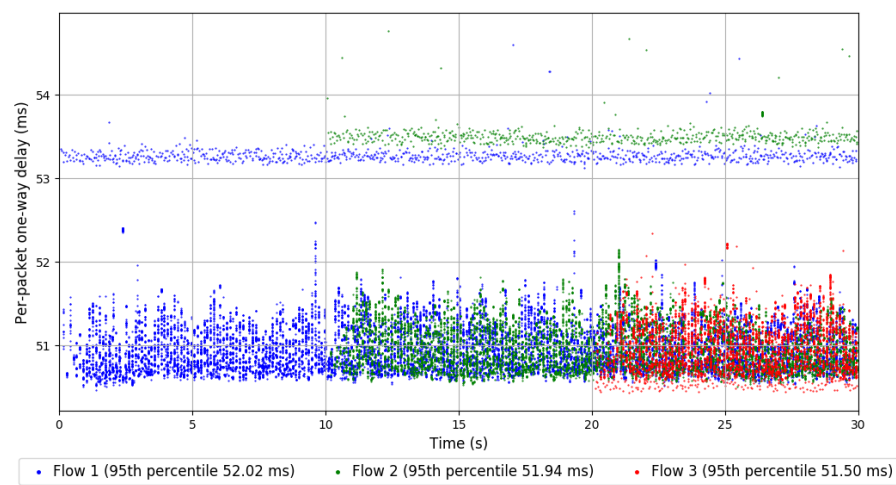
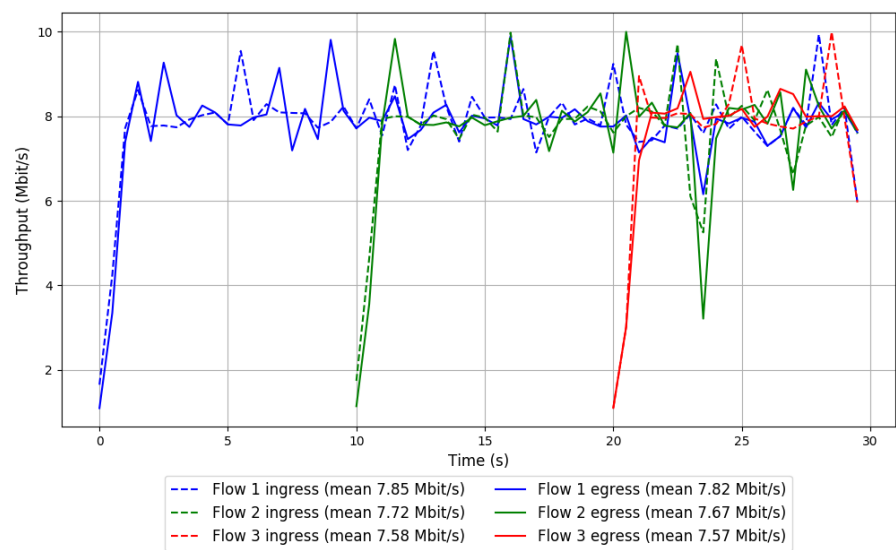
-- Flow 3:

Average throughput: 7.57 Mbit/s

95th percentile per-packet one-way delay: 51.496 ms

Loss rate: 0.19%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-12-21 00:52:59

End at: 2017-12-21 00:53:29

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.15 Mbit/s

95th percentile per-packet one-way delay: 54.414 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 7.69 Mbit/s

95th percentile per-packet one-way delay: 54.441 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 7.66 Mbit/s

95th percentile per-packet one-way delay: 54.473 ms

Loss rate: 0.02%

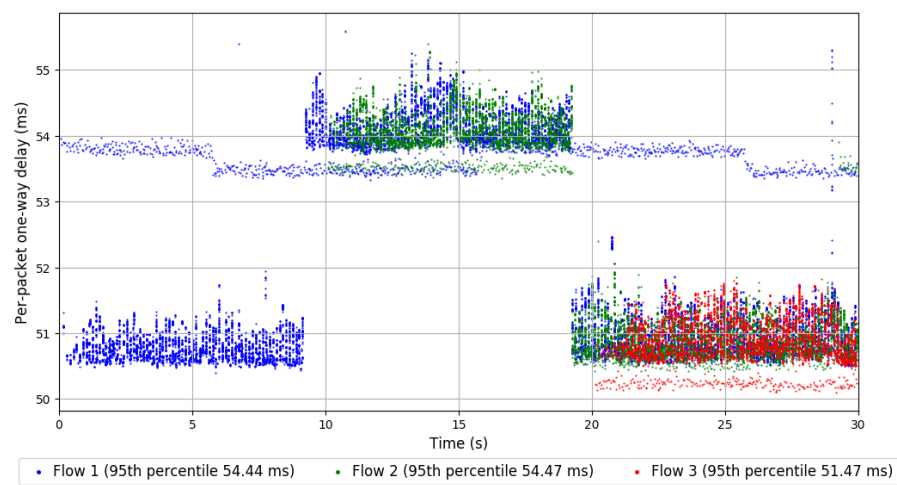
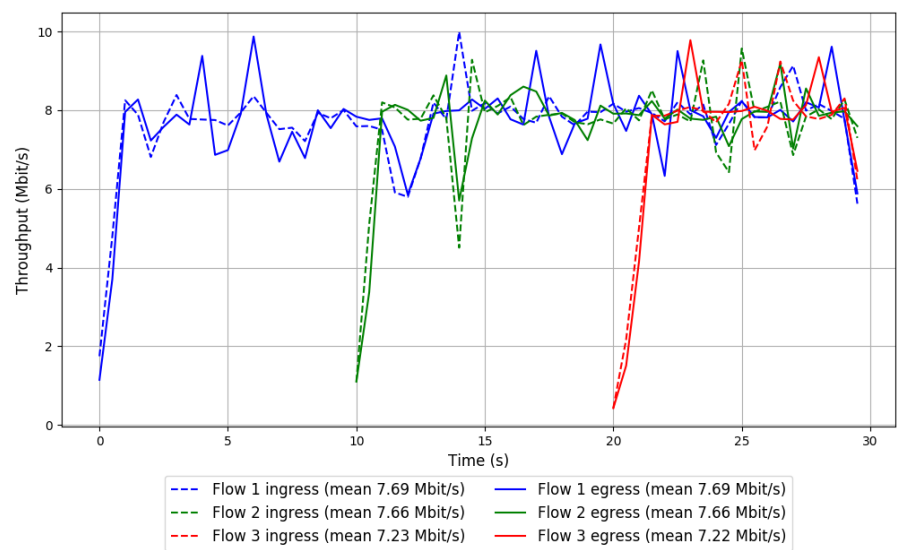
-- Flow 3:

Average throughput: 7.22 Mbit/s

95th percentile per-packet one-way delay: 51.469 ms

Loss rate: 0.05%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-12-21 01:06:37

End at: 2017-12-21 01:07:07

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.85 Mbit/s

95th percentile per-packet one-way delay: 54.454 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 7.42 Mbit/s

95th percentile per-packet one-way delay: 54.409 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 7.72 Mbit/s

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

Loss rate: 0.06%

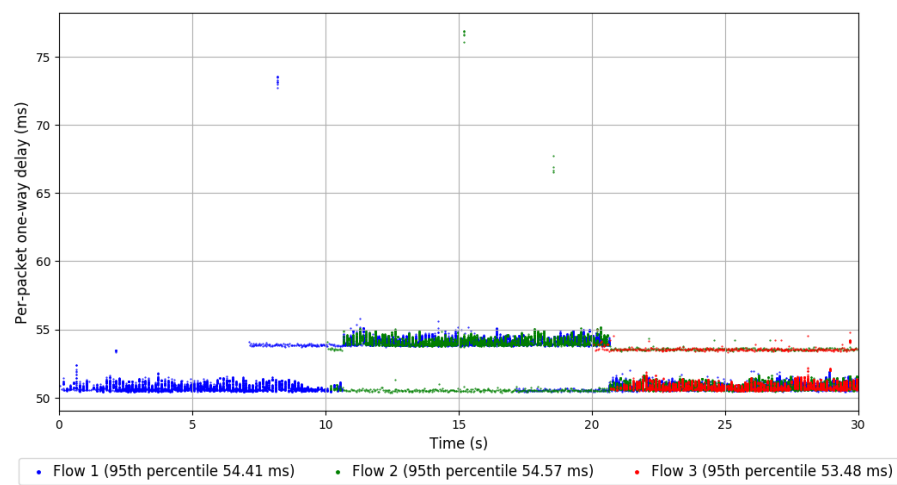
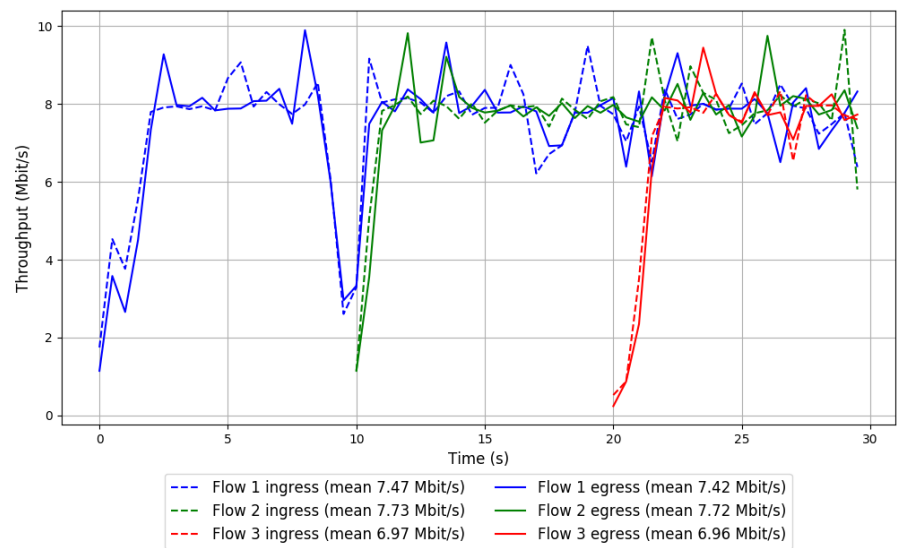
-- Flow 3:

Average throughput: 6.96 Mbit/s

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

Loss rate: 0.21%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-12-21 01:19:56

End at: 2017-12-21 01:20:26

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.50 Mbit/s

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

Loss rate: 0.03%

-- Flow 1:

Average throughput: 7.89 Mbit/s

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

Loss rate: 0.06%

-- Flow 2:

Average throughput: 7.76 Mbit/s

95th percentile per-packet one-way delay: 54.219 ms

Loss rate: 0.00%

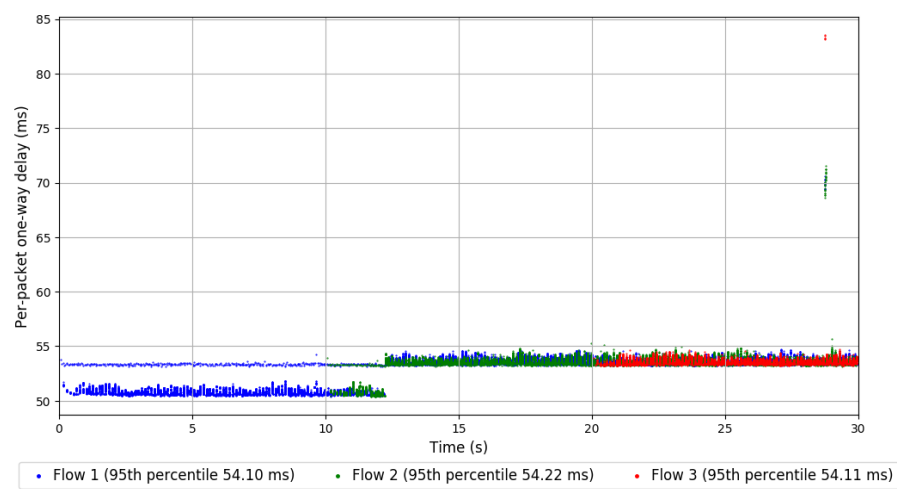
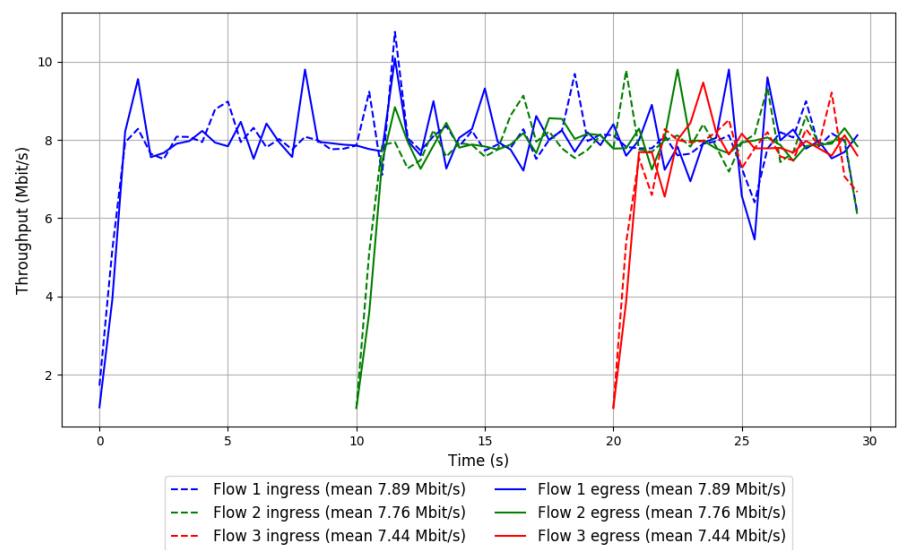
-- Flow 3:

Average throughput: 7.44 Mbit/s

95th percentile per-packet one-way delay: 54.112 ms

Loss rate: 0.00%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-12-21 01:33:46

End at: 2017-12-21 01:34:16

Below is generated by plot.py at 2017-12-21 03:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.32 Mbit/s

95th percentile per-packet one-way delay: 51.363 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 7.65 Mbit/s

95th percentile per-packet one-way delay: 51.281 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 7.81 Mbit/s

95th percentile per-packet one-way delay: 51.477 ms

Loss rate: 0.00%

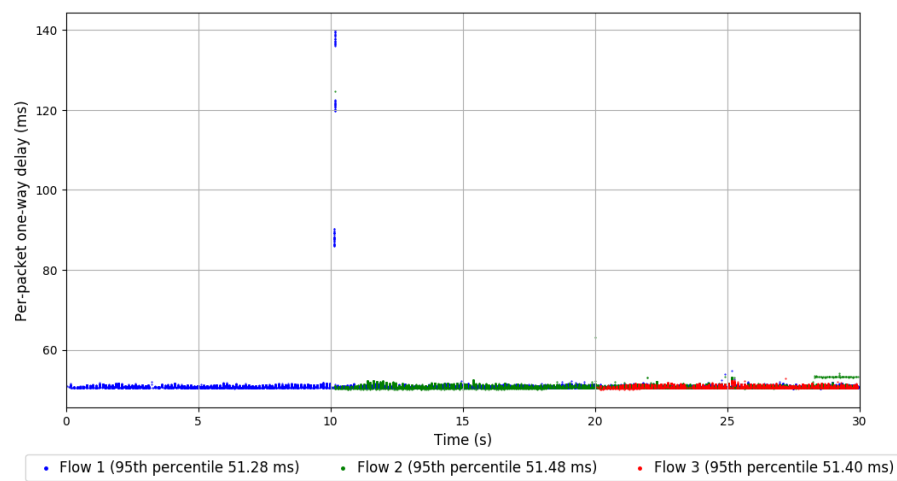
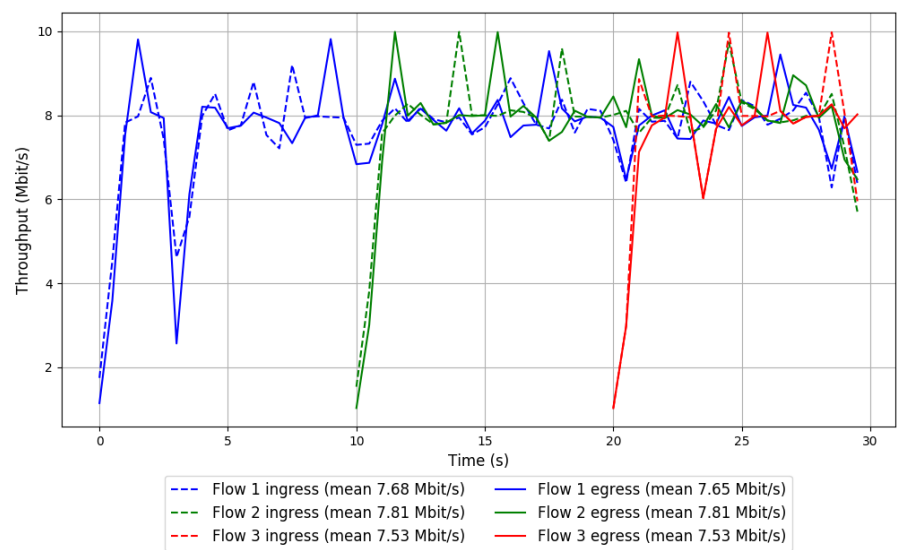
-- Flow 3:

Average throughput: 7.53 Mbit/s

95th percentile per-packet one-way delay: 51.400 ms

Loss rate: 0.00%

Run 10: Report of Sprout — Data Link

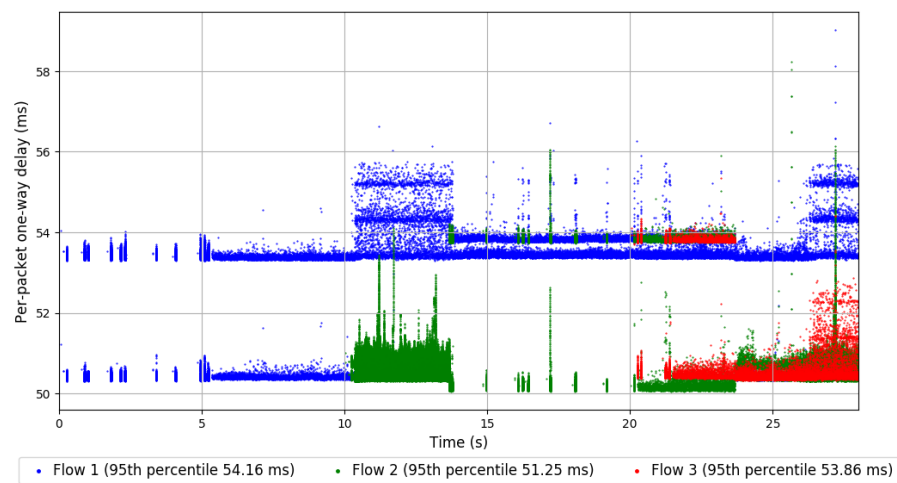
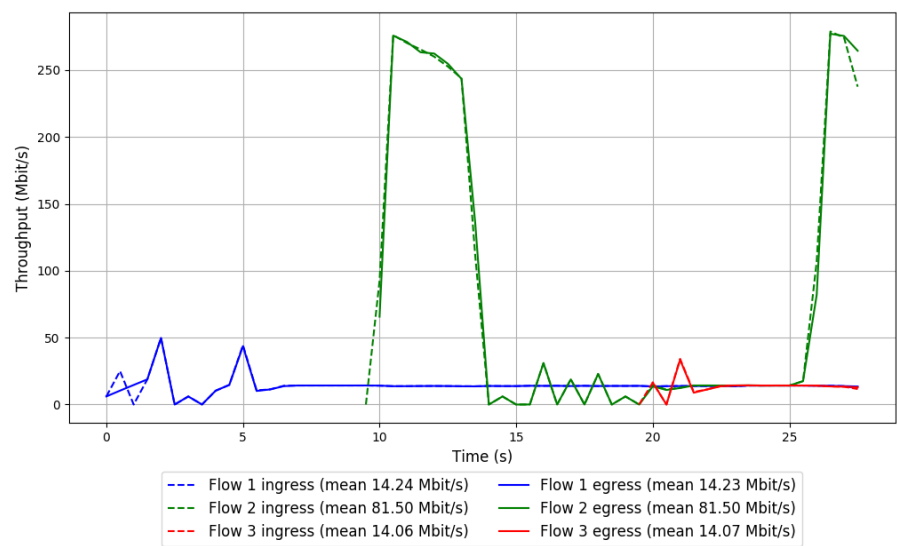


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-12-20 23:27:22
End at: 2017-12-20 23:27:52

# Below is generated by plot.py at 2017-12-21 03:48:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.59 Mbit/s
95th percentile per-packet one-way delay: 53.826 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 14.23 Mbit/s
95th percentile per-packet one-way delay: 54.161 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 81.50 Mbit/s
95th percentile per-packet one-way delay: 51.249 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 14.07 Mbit/s
95th percentile per-packet one-way delay: 53.862 ms
Loss rate: 0.00%
```


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

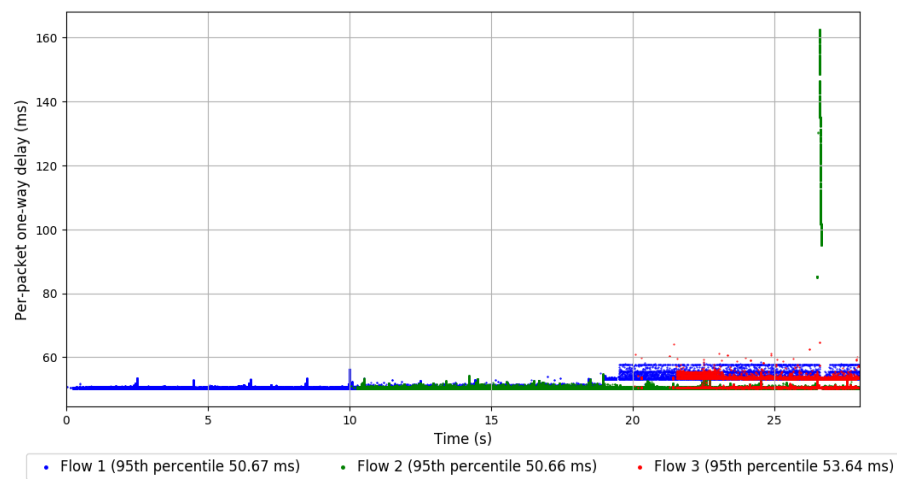
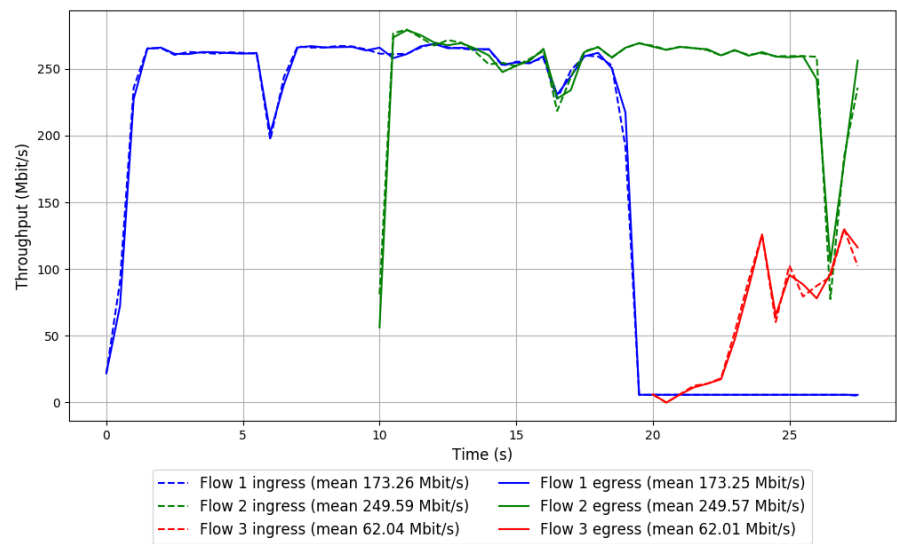


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-12-20 23:40:57
End at: 2017-12-20 23:41:27

# Below is generated by plot.py at 2017-12-21 03:54:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 351.03 Mbit/s
95th percentile per-packet one-way delay: 50.863 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 173.25 Mbit/s
95th percentile per-packet one-way delay: 50.670 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 249.57 Mbit/s
95th percentile per-packet one-way delay: 50.665 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 62.01 Mbit/s
95th percentile per-packet one-way delay: 53.640 ms
Loss rate: 0.00%
```

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

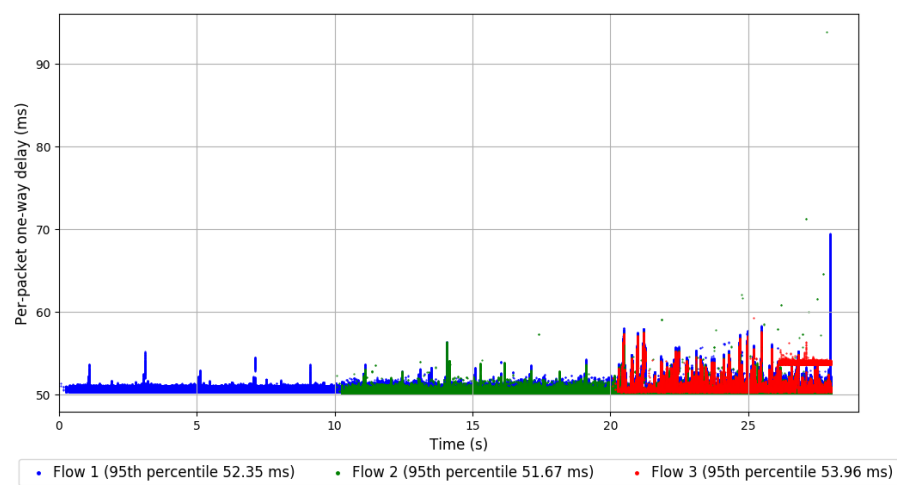
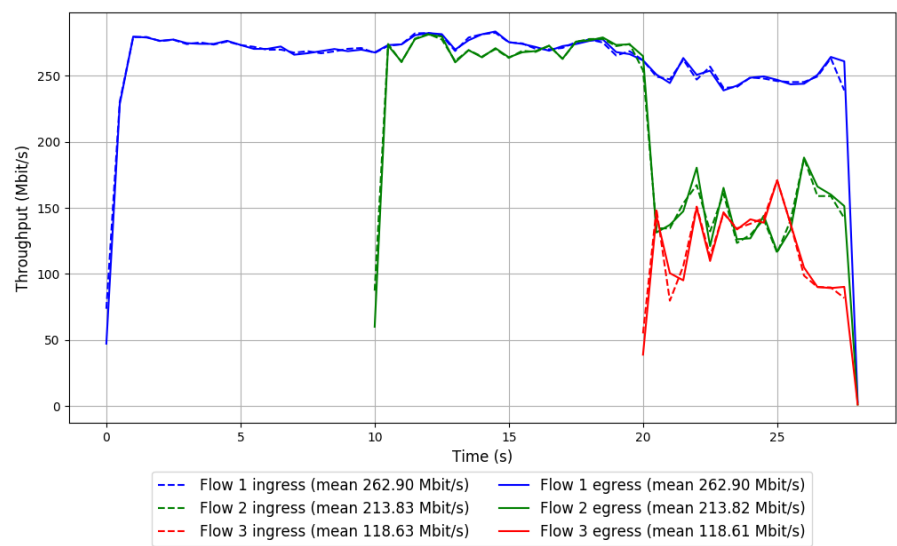


```
Run 3: Statistics of TaoVA-100x

Start at: 2017-12-20 23:54:46
End at: 2017-12-20 23:55:16

# Below is generated by plot.py at 2017-12-21 03:57:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 433.81 Mbit/s
95th percentile per-packet one-way delay: 52.555 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 262.90 Mbit/s
95th percentile per-packet one-way delay: 52.354 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 213.82 Mbit/s
95th percentile per-packet one-way delay: 51.671 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 118.61 Mbit/s
95th percentile per-packet one-way delay: 53.957 ms
Loss rate: 0.02%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2017-12-21 00:08:45

End at: 2017-12-21 00:09:15

Below is generated by plot.py at 2017-12-21 03:57:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.64 Mbit/s

95th percentile per-packet one-way delay: 53.937 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 21.70 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 85.08 Mbit/s

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

Loss rate: 0.00%

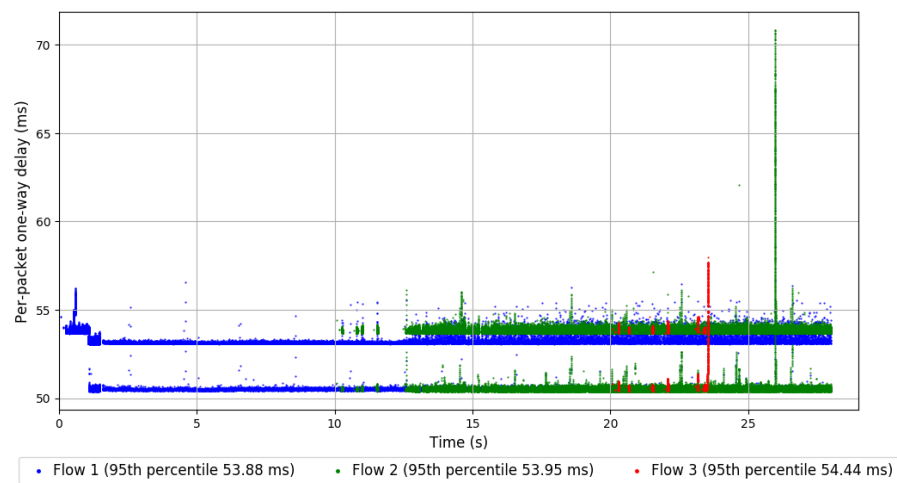
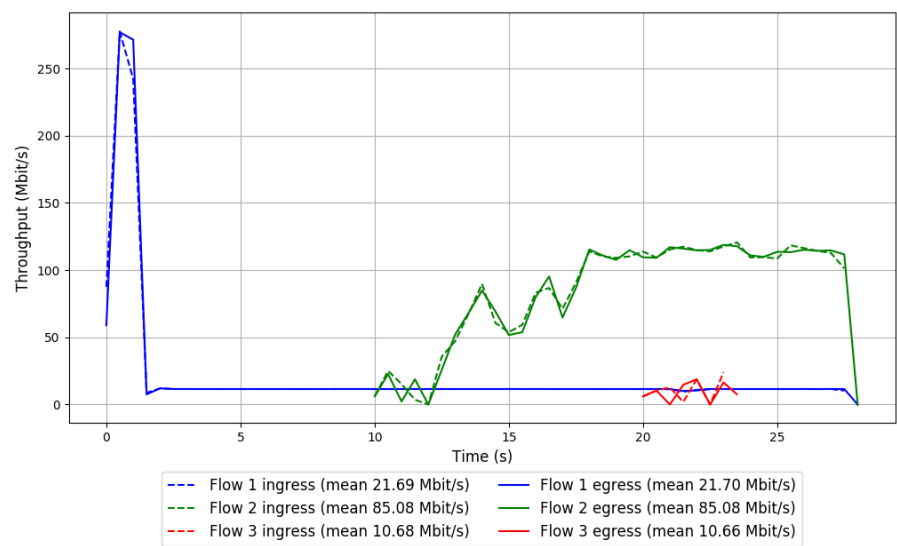
-- Flow 3:

Average throughput: 10.66 Mbit/s

95th percentile per-packet one-way delay: 54.444 ms

Loss rate: 0.00%

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



Run 5: Statistics of TaoVA-100x

Start at: 2017-12-21 00:22:27

End at: 2017-12-21 00:22:57

Below is generated by plot.py at 2017-12-21 03:57:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 228.74 Mbit/s

95th percentile per-packet one-way delay: 53.868 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 103.91 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 99.24 Mbit/s

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

Loss rate: 0.01%

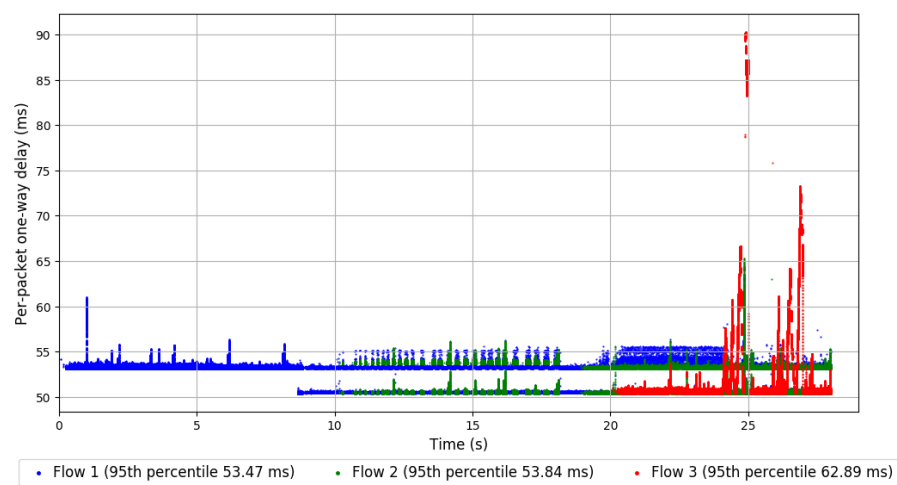
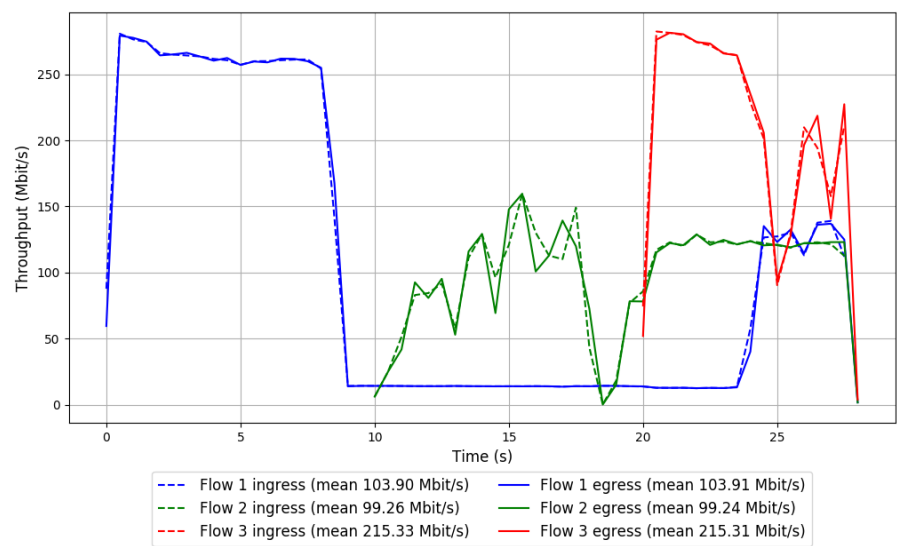
-- Flow 3:

Average throughput: 215.31 Mbit/s

95th percentile per-packet one-way delay: 62.890 ms

Loss rate: 0.01%

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



Run 6: Statistics of TaoVA-100x

Start at: 2017-12-21 00:36:11

End at: 2017-12-21 00:36:41

Below is generated by plot.py at 2017-12-21 03:57:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.71 Mbit/s

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

Loss rate: 0.01%

-- Flow 1:

Average throughput: 13.00 Mbit/s

95th percentile per-packet one-way delay: 53.295 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 77.12 Mbit/s

95th percentile per-packet one-way delay: 53.420 ms

Loss rate: 0.01%

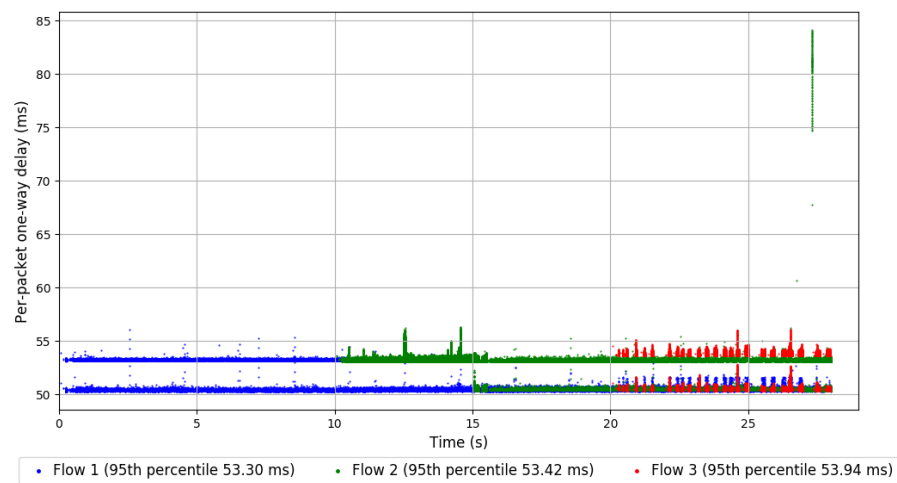
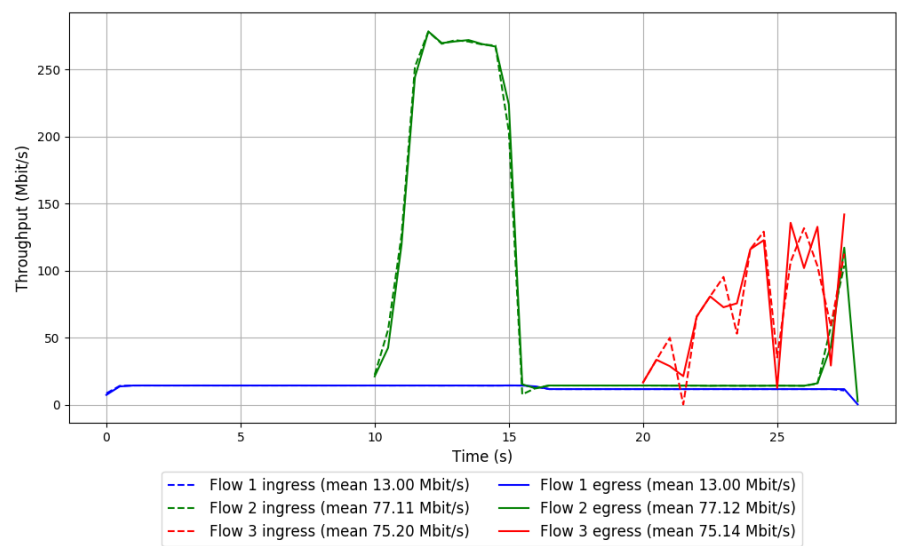
-- Flow 3:

Average throughput: 75.14 Mbit/s

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

Loss rate: 0.04%

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



Run 7: Statistics of TaoVA-100x

Start at: 2017-12-21 00:49:36

End at: 2017-12-21 00:50:06

Below is generated by plot.py at 2017-12-21 03:57:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 288.58 Mbit/s

95th percentile per-packet one-way delay: 53.483 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 103.71 Mbit/s

95th percentile per-packet one-way delay: 53.485 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 252.77 Mbit/s

95th percentile per-packet one-way delay: 50.812 ms

Loss rate: 0.00%

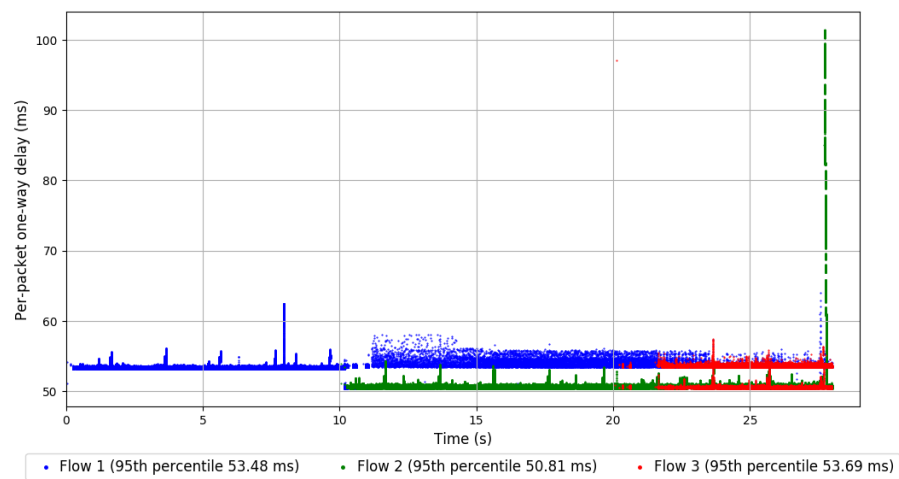
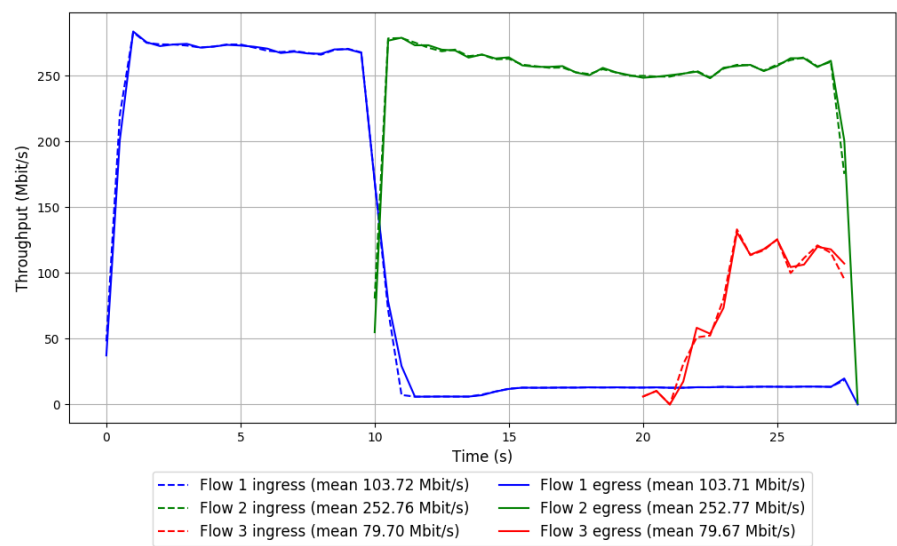
-- Flow 3:

Average throughput: 79.67 Mbit/s

95th percentile per-packet one-way delay: 53.694 ms

Loss rate: 0.00%

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



Run 8: Statistics of TaoVA-100x

Start at: 2017-12-21 01:03:17

End at: 2017-12-21 01:03:47

Below is generated by plot.py at 2017-12-21 03:57:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 159.25 Mbit/s

95th percentile per-packet one-way delay: 53.840 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 12.89 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 222.81 Mbit/s

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

Loss rate: 0.00%

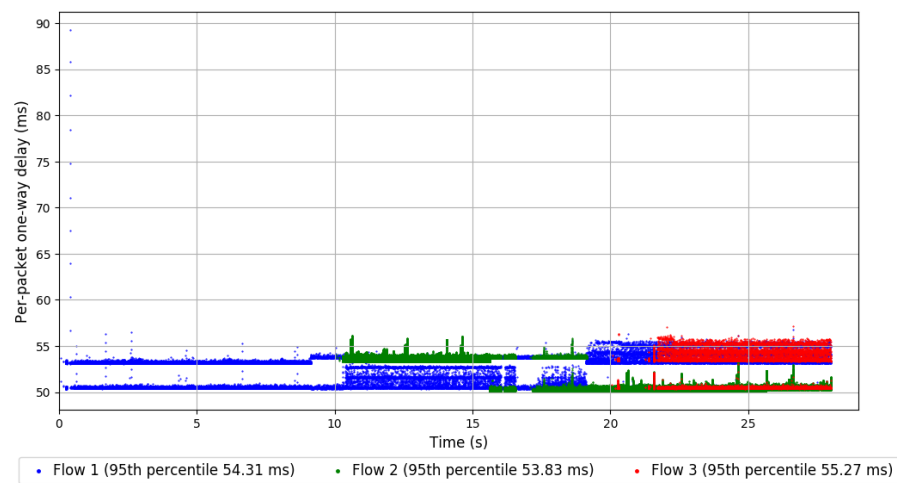
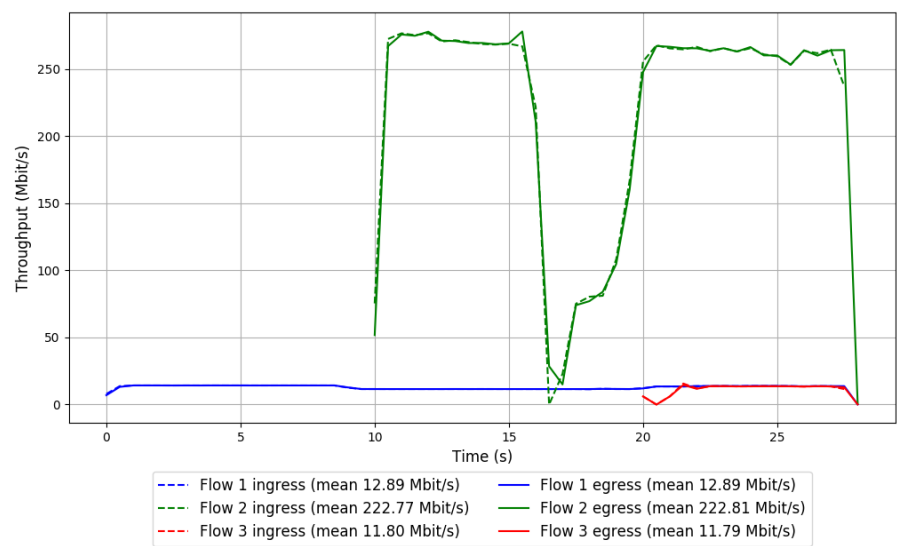
-- Flow 3:

Average throughput: 11.79 Mbit/s

95th percentile per-packet one-way delay: 55.271 ms

Loss rate: 0.00%

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

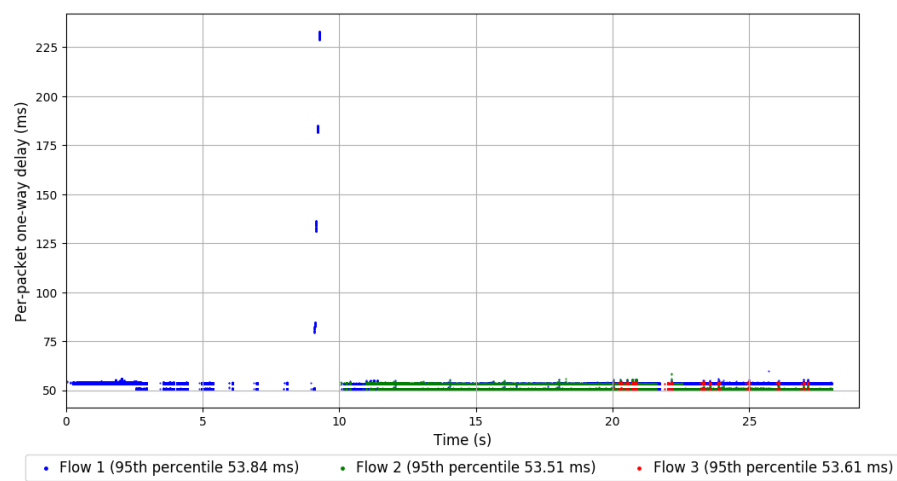
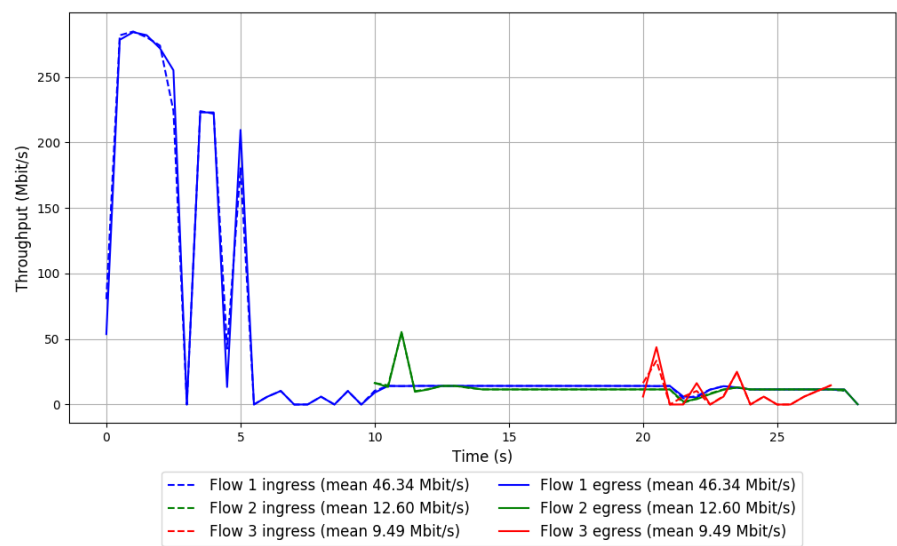


```
Run 9: Statistics of TaoVA-100x

Start at: 2017-12-21 01:16:43
End at: 2017-12-21 01:17:13

# Below is generated by plot.py at 2017-12-21 03:57:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.83 Mbit/s
95th percentile per-packet one-way delay: 53.832 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 46.34 Mbit/s
95th percentile per-packet one-way delay: 53.842 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 12.60 Mbit/s
95th percentile per-packet one-way delay: 53.507 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.49 Mbit/s
95th percentile per-packet one-way delay: 53.607 ms
Loss rate: 0.00%
```


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

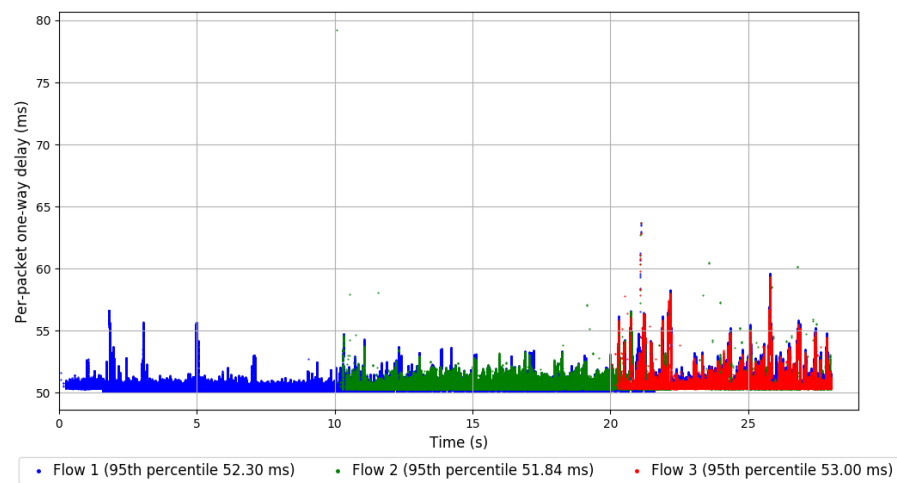
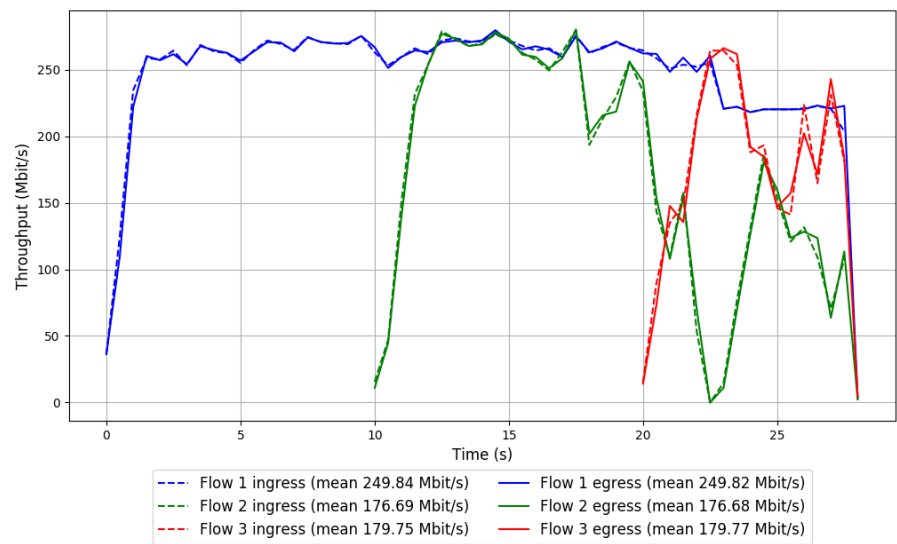


```
Run 10: Statistics of TaoVA-100x

Start at: 2017-12-21 01:30:14
End at: 2017-12-21 01:30:44

# Below is generated by plot.py at 2017-12-21 03:59:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 414.30 Mbit/s
95th percentile per-packet one-way delay: 52.244 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 249.82 Mbit/s
95th percentile per-packet one-way delay: 52.300 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 176.68 Mbit/s
95th percentile per-packet one-way delay: 51.840 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 179.77 Mbit/s
95th percentile per-packet one-way delay: 53.002 ms
Loss rate: 0.01%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2017-12-20 23:23:07

End at: 2017-12-20 23:23:37

Below is generated by plot.py at 2017-12-21 03:59:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.48 Mbit/s

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

Loss rate: 0.33%

-- Flow 1:

Average throughput: 20.24 Mbit/s

95th percentile per-packet one-way delay: 54.404 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 15.78 Mbit/s

95th percentile per-packet one-way delay: 54.074 ms

Loss rate: 0.07%

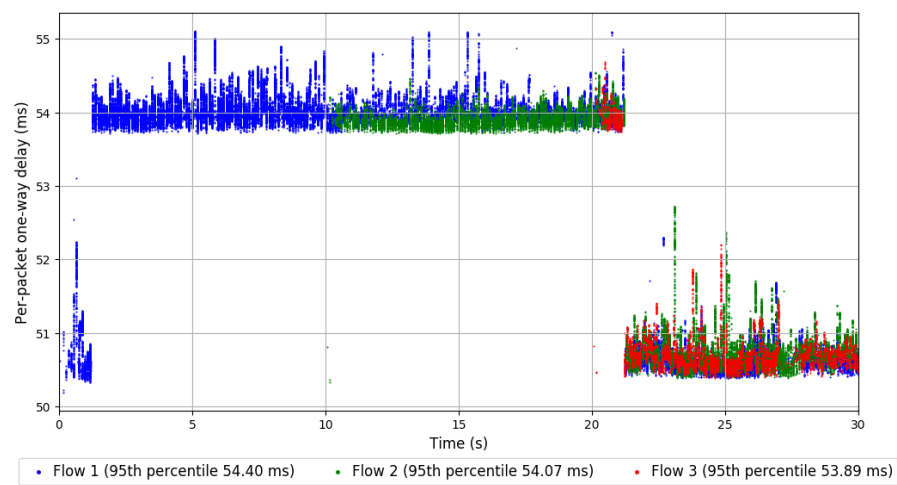
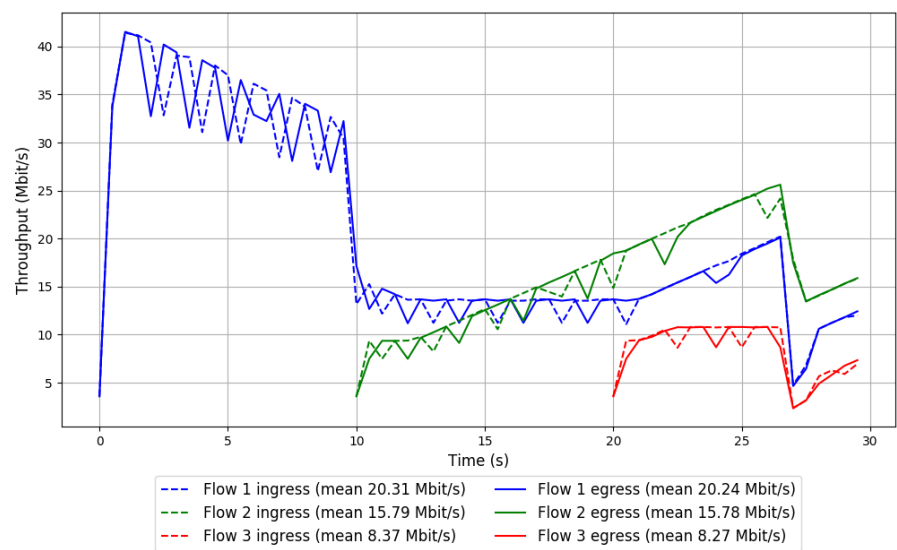
-- Flow 3:

Average throughput: 8.27 Mbit/s

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

Loss rate: 1.27%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-12-20 23:36:36

End at: 2017-12-20 23:37:06

Below is generated by plot.py at 2017-12-21 03:59:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 154.47 Mbit/s

95th percentile per-packet one-way delay: 56.074 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 40.91 Mbit/s

95th percentile per-packet one-way delay: 55.227 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 113.04 Mbit/s

95th percentile per-packet one-way delay: 56.955 ms

Loss rate: 0.00%

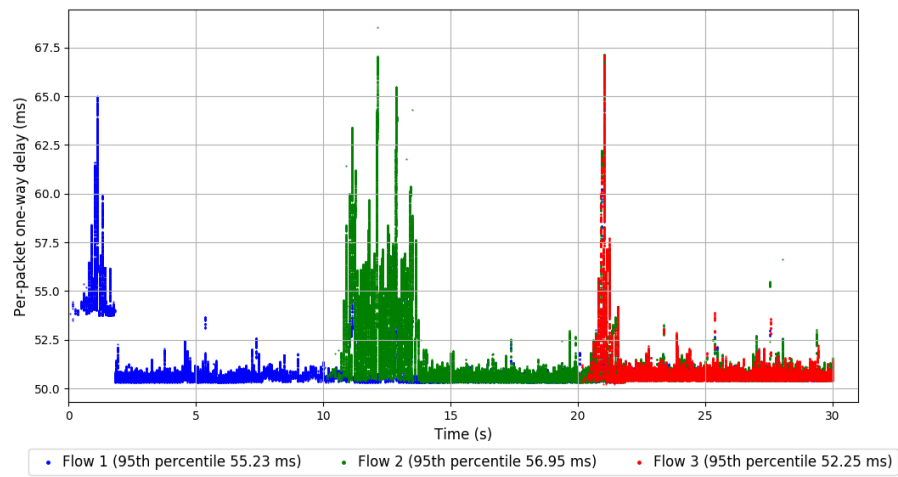
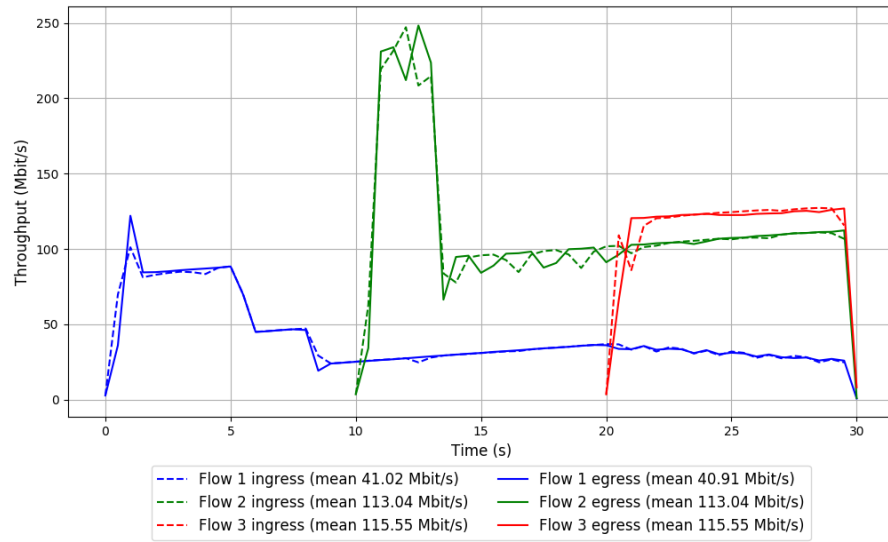
-- Flow 3:

Average throughput: 115.55 Mbit/s

95th percentile per-packet one-way delay: 52.253 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-12-20 23:50:33

End at: 2017-12-20 23:51:03

Below is generated by plot.py at 2017-12-21 03:59:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 122.13 Mbit/s

95th percentile per-packet one-way delay: 53.785 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 44.88 Mbit/s

95th percentile per-packet one-way delay: 54.047 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 79.14 Mbit/s

95th percentile per-packet one-way delay: 51.447 ms

Loss rate: 0.86%

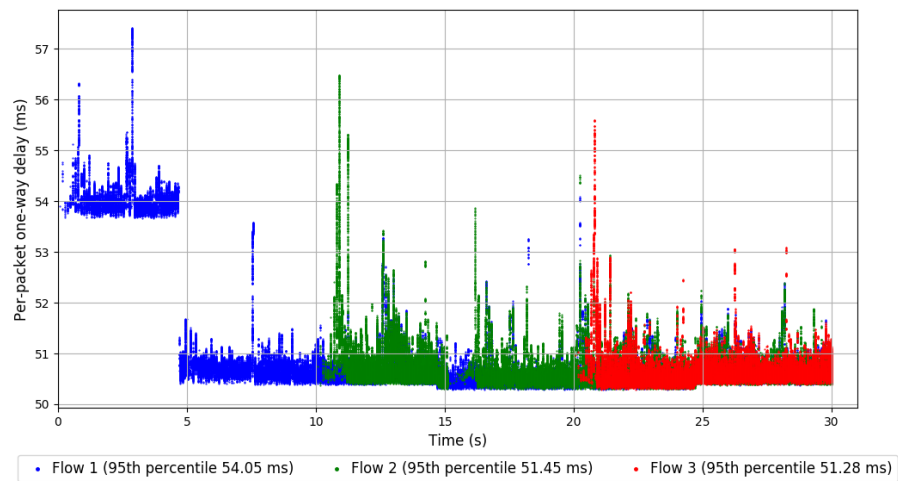
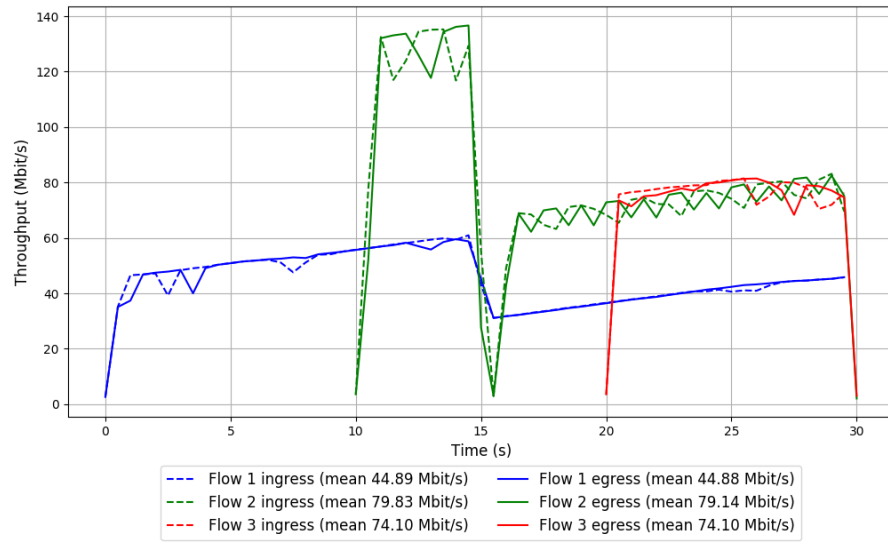
-- Flow 3:

Average throughput: 74.10 Mbit/s

95th percentile per-packet one-way delay: 51.285 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-12-21 00:04:28

End at: 2017-12-21 00:04:58

Below is generated by plot.py at 2017-12-21 03:59:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.33 Mbit/s

95th percentile per-packet one-way delay: 51.796 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 59.61 Mbit/s

95th percentile per-packet one-way delay: 51.956 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 47.60 Mbit/s

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

Loss rate: 1.75%

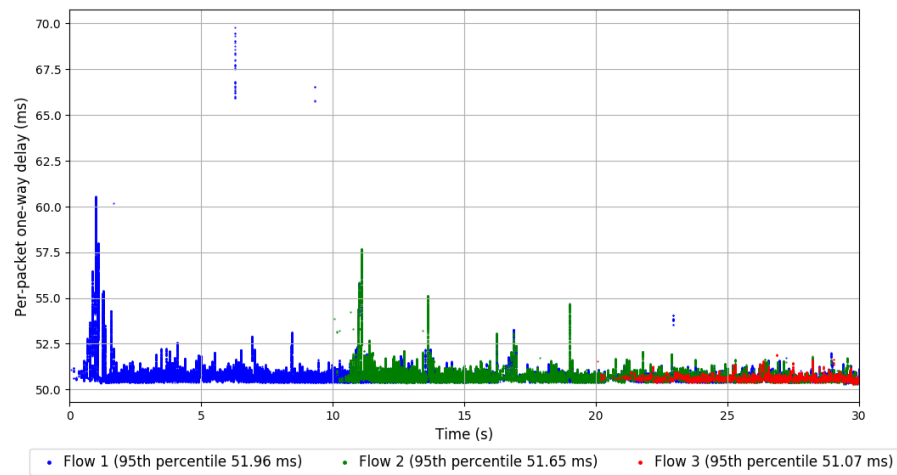
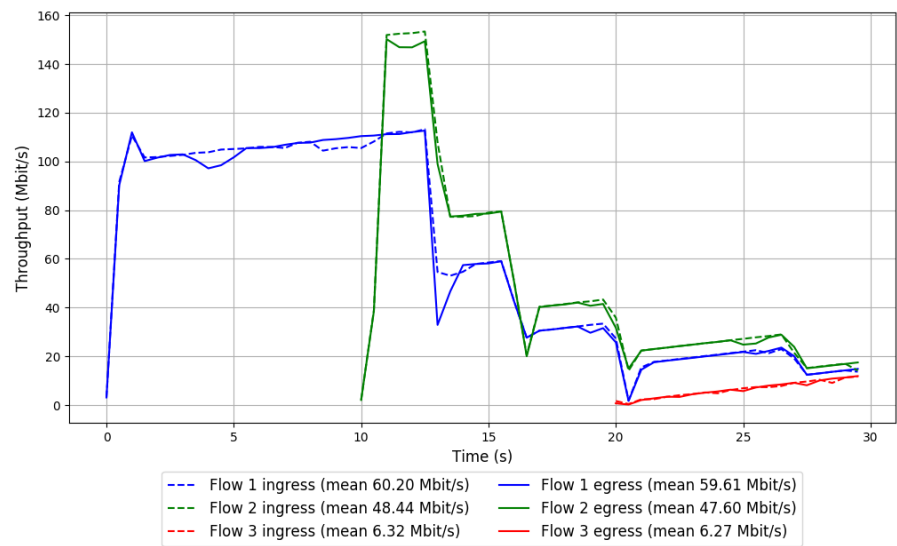
-- Flow 3:

Average throughput: 6.27 Mbit/s

95th percentile per-packet one-way delay: 51.068 ms

Loss rate: 0.77%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-12-21 00:18:08

End at: 2017-12-21 00:18:38

Below is generated by plot.py at 2017-12-21 03:59:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.48 Mbit/s

95th percentile per-packet one-way delay: 51.604 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 63.20 Mbit/s

95th percentile per-packet one-way delay: 51.508 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 38.46 Mbit/s

95th percentile per-packet one-way delay: 51.655 ms

Loss rate: 0.73%

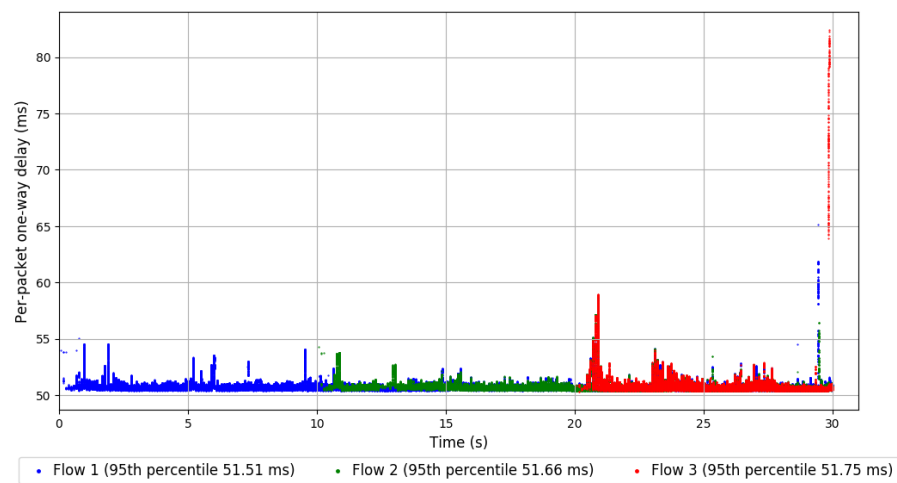
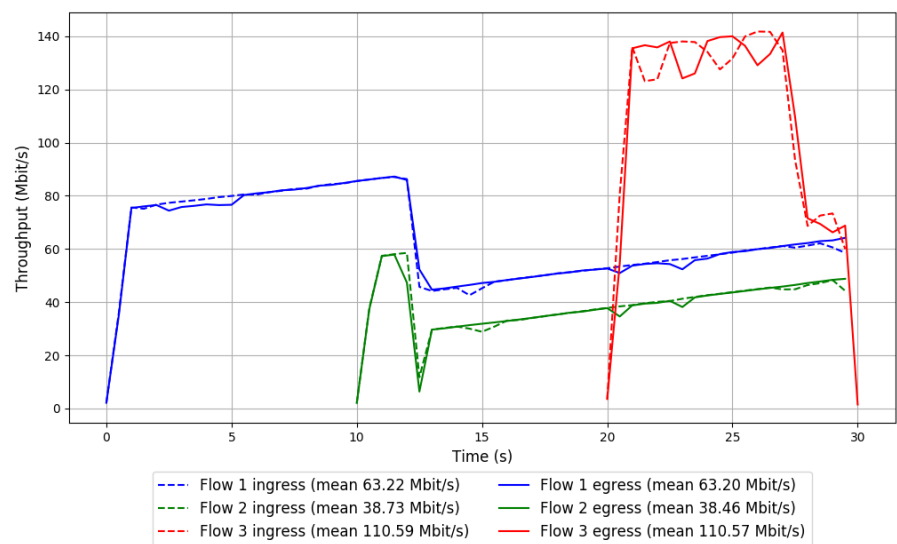
-- Flow 3:

Average throughput: 110.57 Mbit/s

95th percentile per-packet one-way delay: 51.746 ms

Loss rate: 0.02%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-12-21 00:31:48

End at: 2017-12-21 00:32:18

Below is generated by plot.py at 2017-12-21 03:59:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 210.05 Mbit/s

95th percentile per-packet one-way delay: 56.160 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 64.16 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 167.39 Mbit/s

95th percentile per-packet one-way delay: 55.847 ms

Loss rate: 0.00%

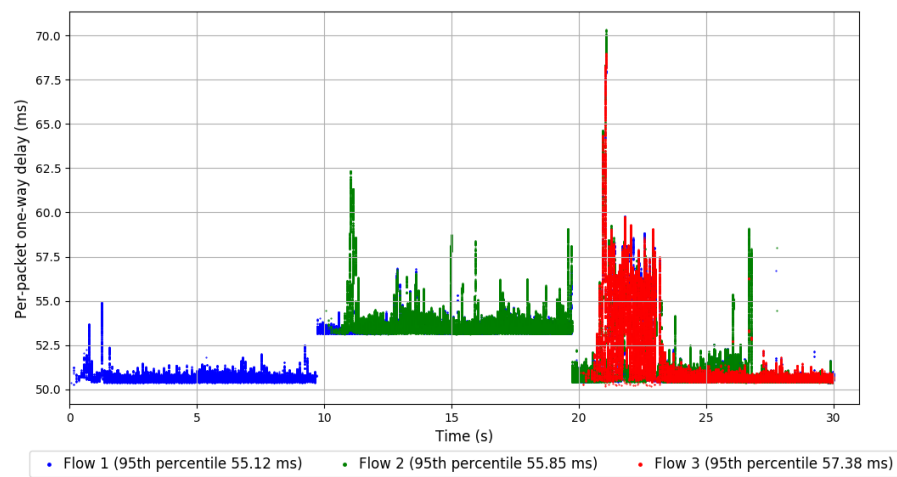
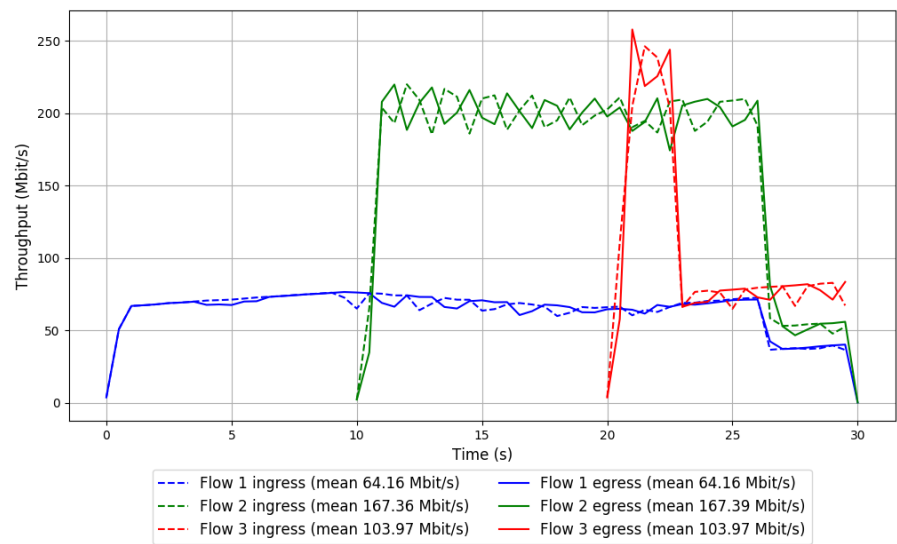
-- Flow 3:

Average throughput: 103.97 Mbit/s

95th percentile per-packet one-way delay: 57.384 ms

Loss rate: 0.00%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-12-21 00:45:20

End at: 2017-12-21 00:45:50

Below is generated by plot.py at 2017-12-21 03:59:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 176.64 Mbit/s

95th percentile per-packet one-way delay: 53.195 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 93.07 Mbit/s

95th percentile per-packet one-way delay: 52.694 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 98.18 Mbit/s

95th percentile per-packet one-way delay: 52.996 ms

Loss rate: 0.02%

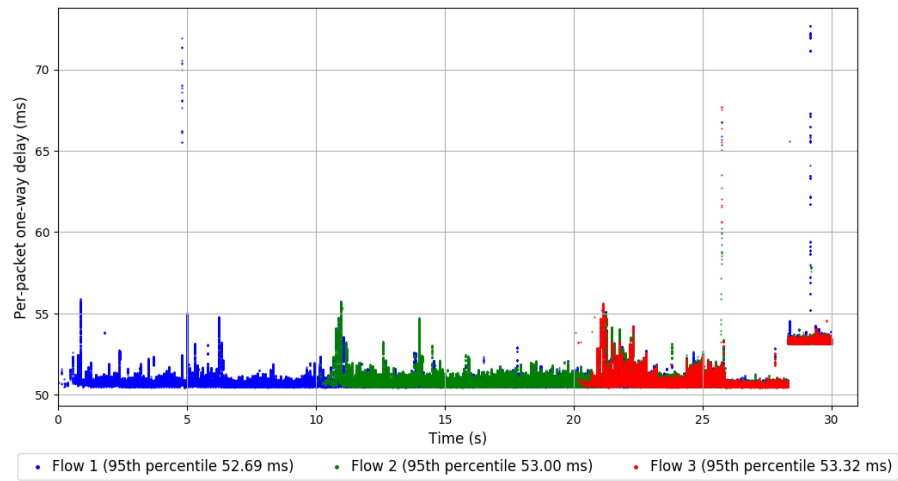
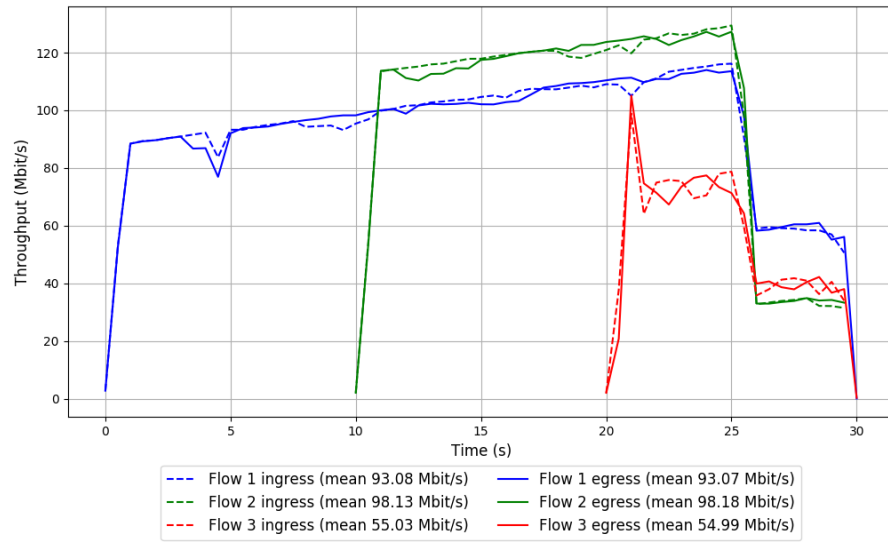
-- Flow 3:

Average throughput: 54.99 Mbit/s

95th percentile per-packet one-way delay: 53.320 ms

Loss rate: 0.09%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-12-21 00:59:02

End at: 2017-12-21 00:59:32

Below is generated by plot.py at 2017-12-21 03:59:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 54.66 Mbit/s

95th percentile per-packet one-way delay: 54.367 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 25.35 Mbit/s

95th percentile per-packet one-way delay: 54.541 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 22.05 Mbit/s

95th percentile per-packet one-way delay: 54.165 ms

Loss rate: 0.00%

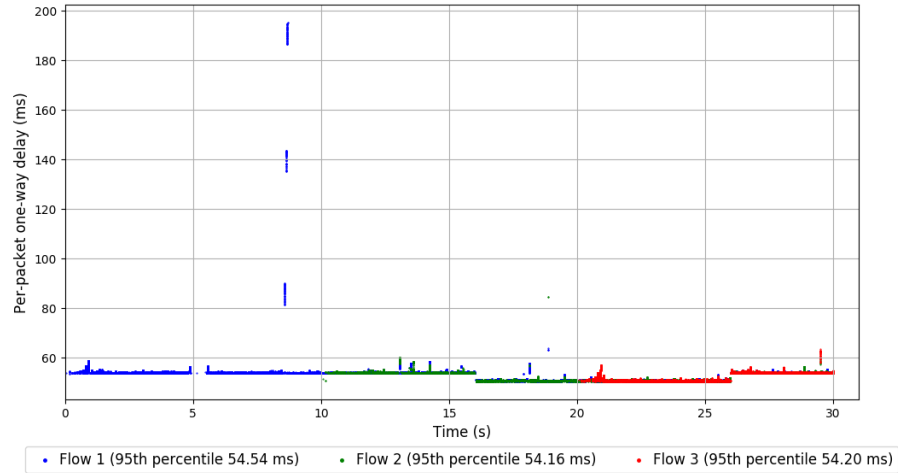
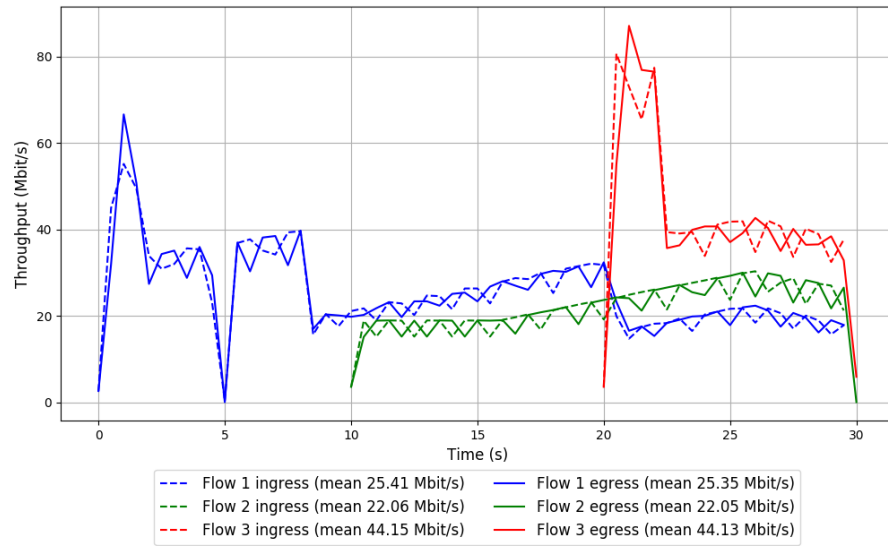
-- Flow 3:

Average throughput: 44.13 Mbit/s

95th percentile per-packet one-way delay: 54.198 ms

Loss rate: 0.00%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-12-21 01:12:33

End at: 2017-12-21 01:13:03

Below is generated by plot.py at 2017-12-21 03:59:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.14 Mbit/s

95th percentile per-packet one-way delay: 54.347 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 46.57 Mbit/s

95th percentile per-packet one-way delay: 54.428 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 12.62 Mbit/s

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

Loss rate: 0.14%

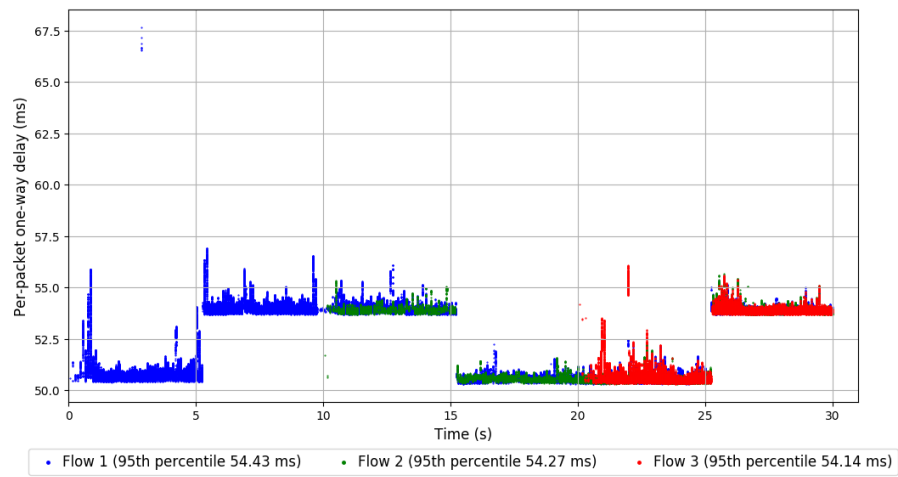
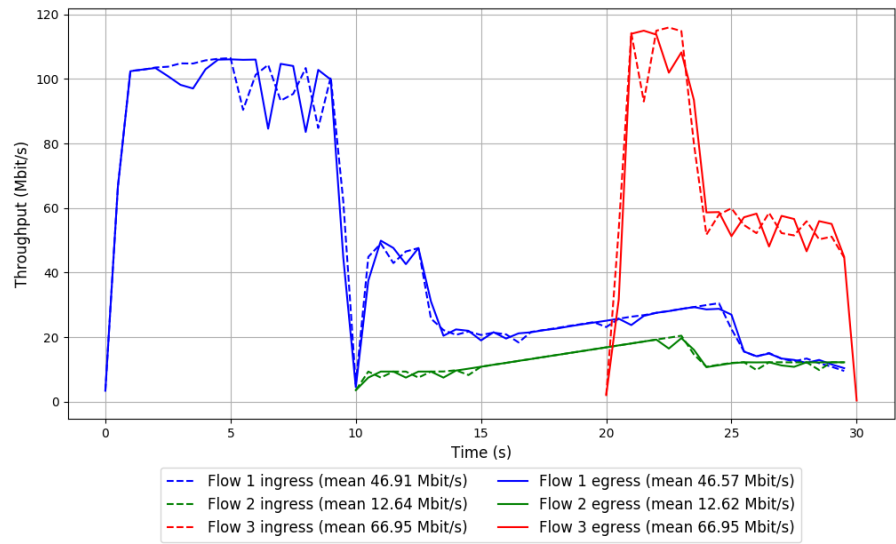
-- Flow 3:

Average throughput: 66.95 Mbit/s

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

Loss rate: 0.00%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-12-21 01:25:59

End at: 2017-12-21 01:26:29

Below is generated by plot.py at 2017-12-21 03:59:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.91 Mbit/s

95th percentile per-packet one-way delay: 53.200 ms

Loss rate: 0.36%

-- Flow 1:

Average throughput: 35.67 Mbit/s

95th percentile per-packet one-way delay: 52.676 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 80.99 Mbit/s

95th percentile per-packet one-way delay: 52.118 ms

Loss rate: 0.00%

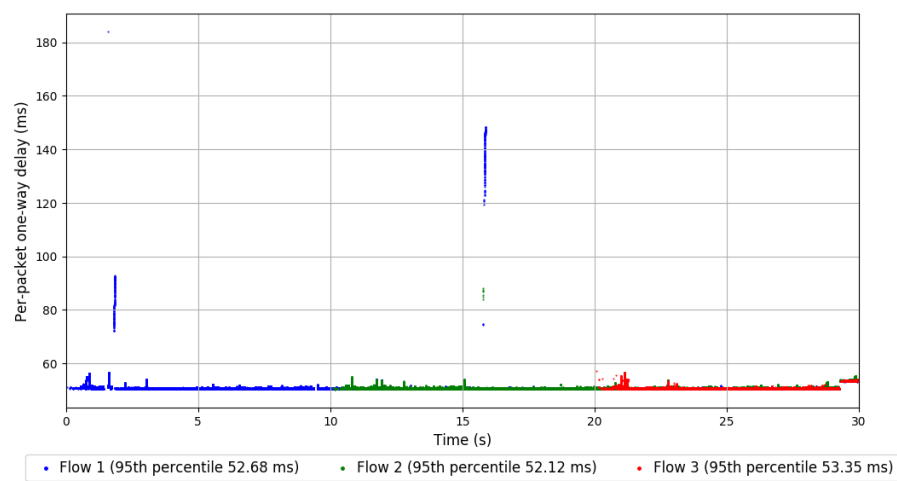
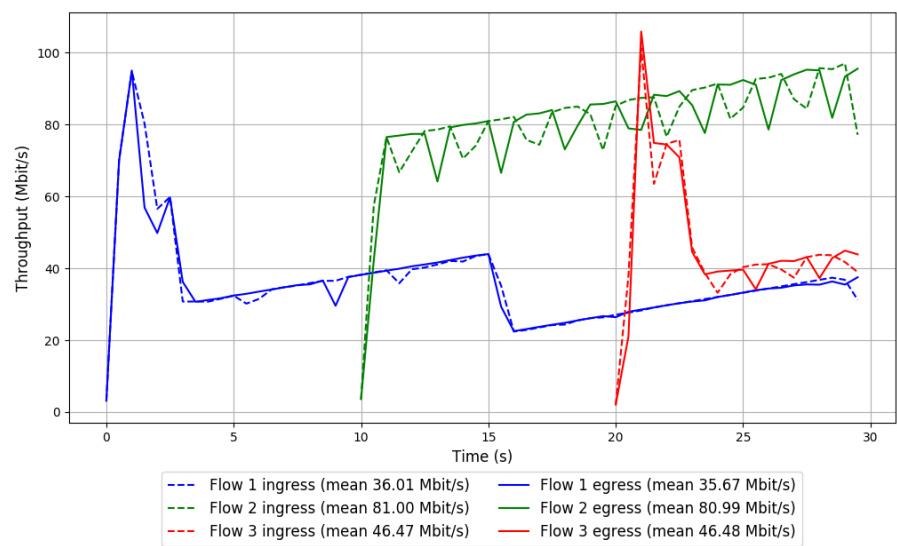
-- Flow 3:

Average throughput: 46.48 Mbit/s

95th percentile per-packet one-way delay: 53.354 ms

Loss rate: 0.01%

Run 10: Report of TCP Vegas — Data Link

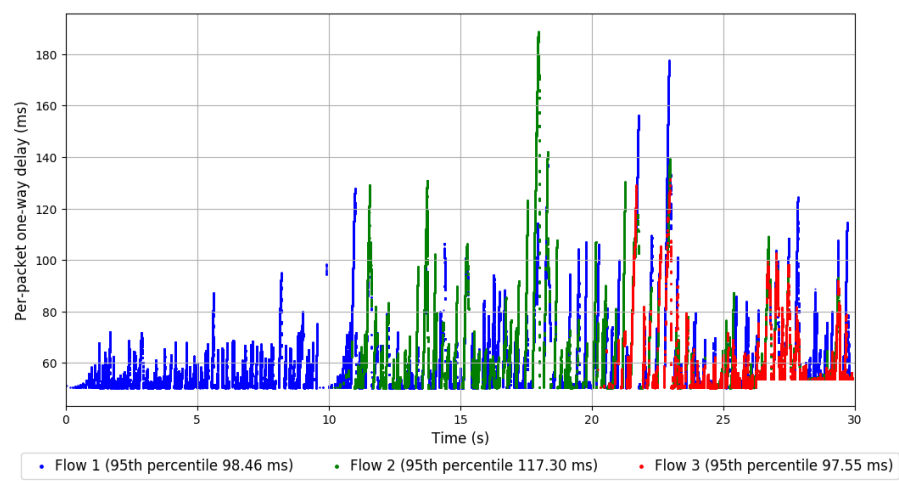
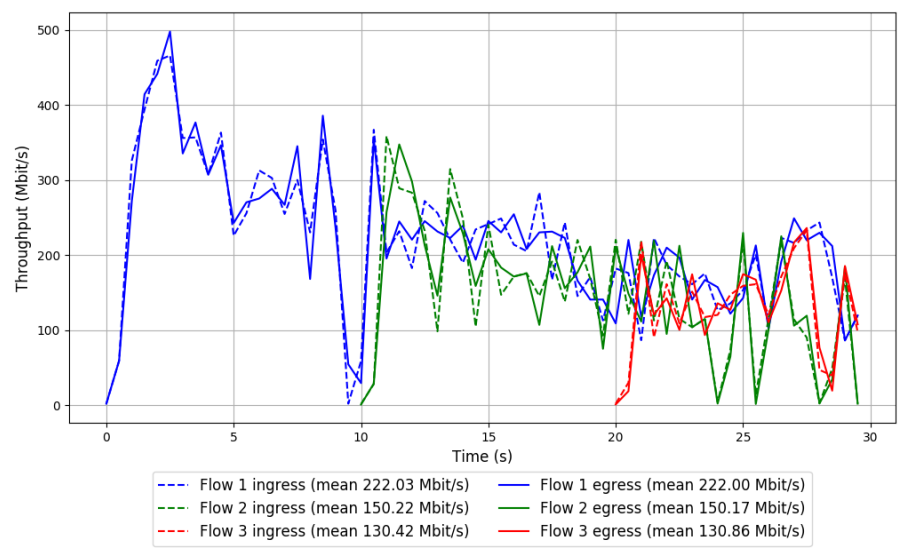


```
Run 1: Statistics of Verus

Start at: 2017-12-20 23:24:52
End at: 2017-12-20 23:25:22

# Below is generated by plot.py at 2017-12-21 04:00:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 363.35 Mbit/s
95th percentile per-packet one-way delay: 103.931 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 222.00 Mbit/s
95th percentile per-packet one-way delay: 98.457 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 150.17 Mbit/s
95th percentile per-packet one-way delay: 117.301 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 130.86 Mbit/s
95th percentile per-packet one-way delay: 97.546 ms
Loss rate: 0.00%
```


Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-12-20 23:38:27

End at: 2017-12-20 23:38:57

Below is generated by plot.py at 2017-12-21 04:00:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 371.35 Mbit/s

95th percentile per-packet one-way delay: 119.583 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 267.00 Mbit/s

95th percentile per-packet one-way delay: 121.900 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 115.31 Mbit/s

95th percentile per-packet one-way delay: 114.644 ms

Loss rate: 0.00%

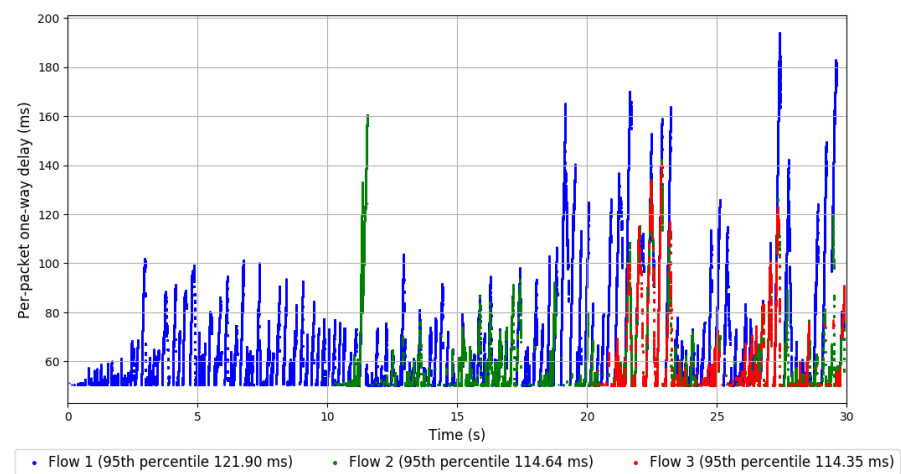
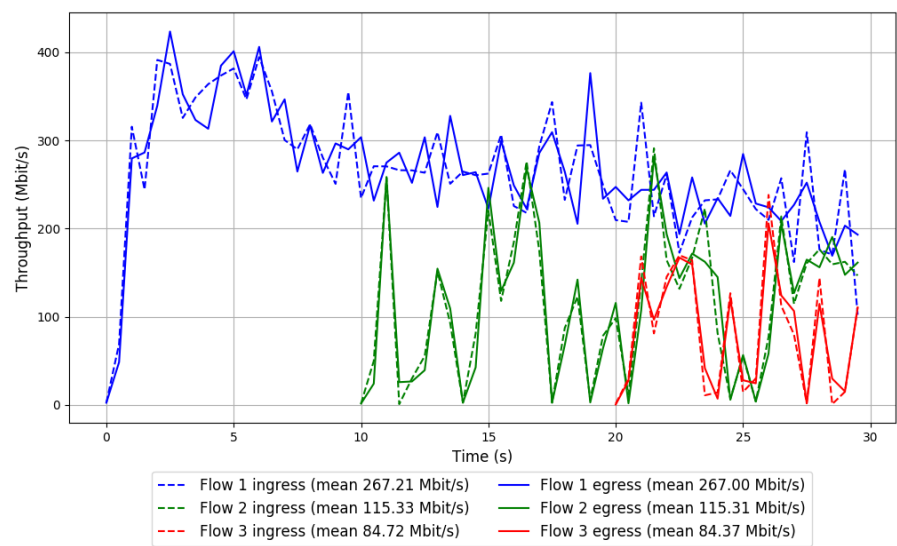
-- Flow 3:

Average throughput: 84.37 Mbit/s

95th percentile per-packet one-way delay: 114.351 ms

Loss rate: 0.00%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-12-20 23:52:21

End at: 2017-12-20 23:52:51

Below is generated by plot.py at 2017-12-21 04:00:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 306.82 Mbit/s

95th percentile per-packet one-way delay: 116.604 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 186.57 Mbit/s

95th percentile per-packet one-way delay: 116.446 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 110.92 Mbit/s

95th percentile per-packet one-way delay: 81.793 ms

Loss rate: 0.00%

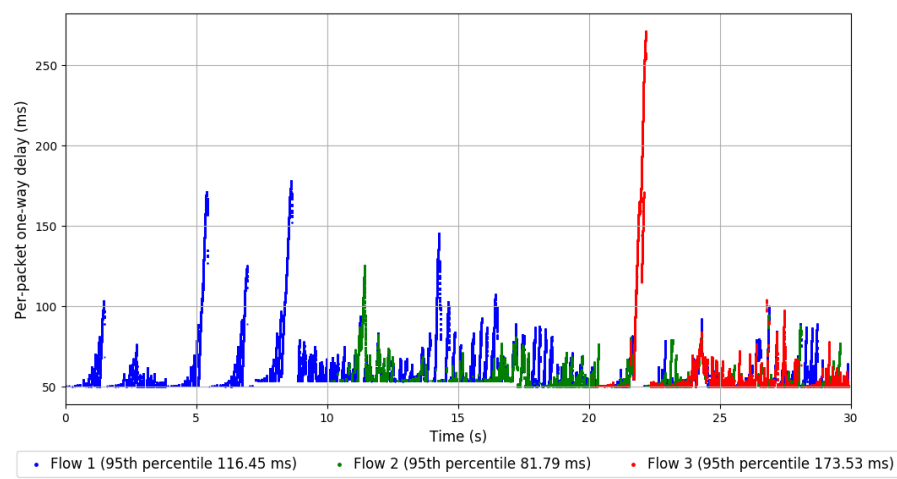
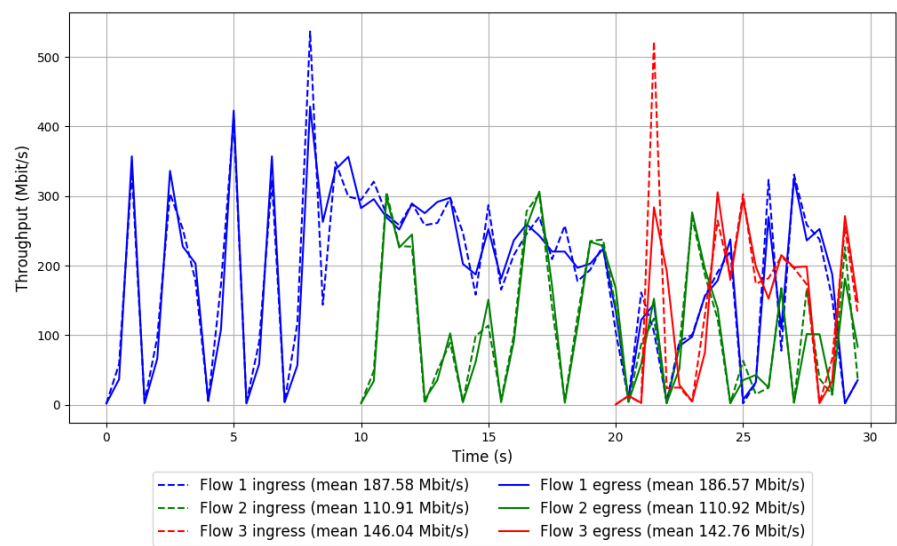
-- Flow 3:

Average throughput: 142.76 Mbit/s

95th percentile per-packet one-way delay: 173.528 ms

Loss rate: 2.32%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-12-21 00:06:14

End at: 2017-12-21 00:06:44

Below is generated by plot.py at 2017-12-21 04:01:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 385.74 Mbit/s

95th percentile per-packet one-way delay: 109.026 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 208.84 Mbit/s

95th percentile per-packet one-way delay: 111.589 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 209.93 Mbit/s

95th percentile per-packet one-way delay: 110.391 ms

Loss rate: 0.26%

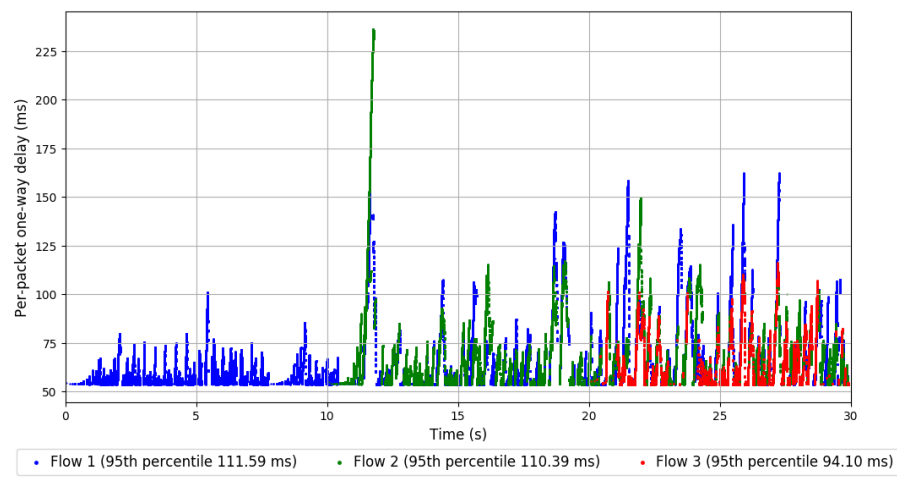
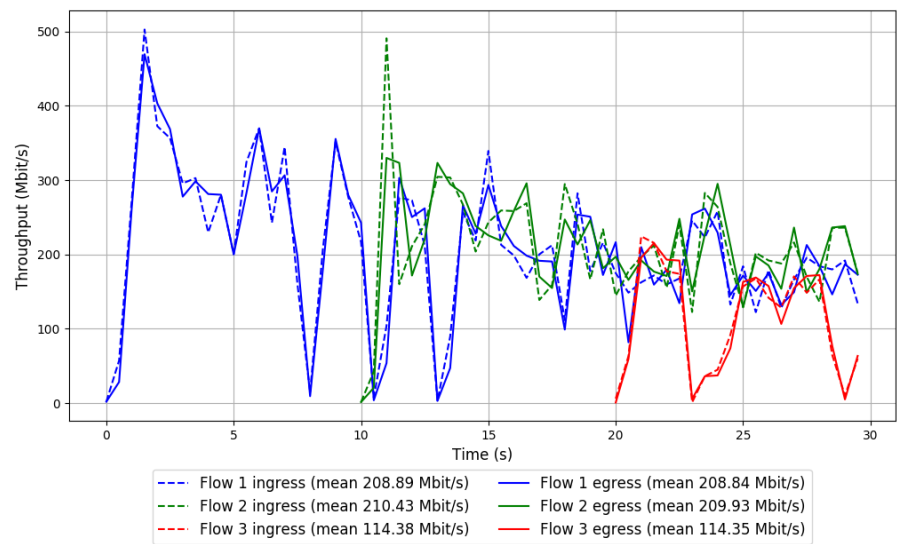
-- Flow 3:

Average throughput: 114.35 Mbit/s

95th percentile per-packet one-way delay: 94.098 ms

Loss rate: 0.07%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-12-21 00:19:57

End at: 2017-12-21 00:20:27

Below is generated by plot.py at 2017-12-21 04:01:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 386.28 Mbit/s

95th percentile per-packet one-way delay: 218.122 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 293.30 Mbit/s

95th percentile per-packet one-way delay: 219.941 ms

Loss rate: 1.95%

-- Flow 2:

Average throughput: 86.57 Mbit/s

95th percentile per-packet one-way delay: 244.354 ms

Loss rate: 2.82%

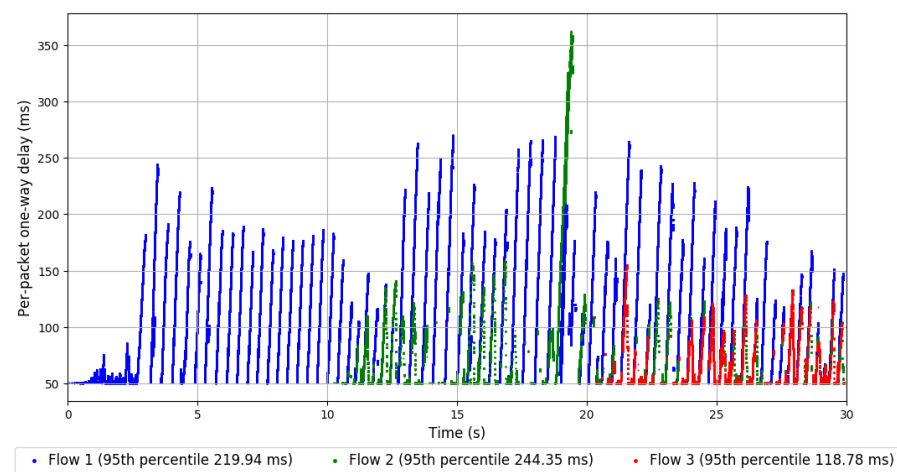
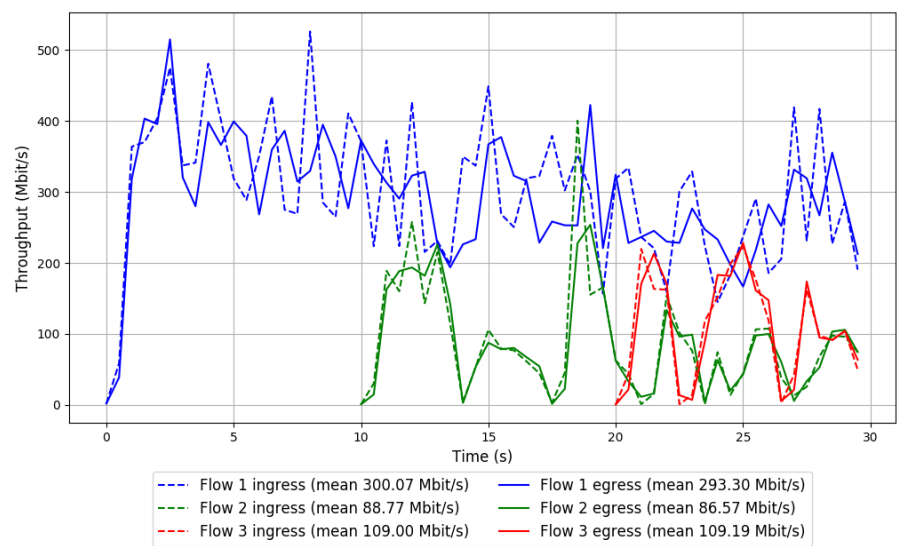
-- Flow 3:

Average throughput: 109.19 Mbit/s

95th percentile per-packet one-way delay: 118.778 ms

Loss rate: 0.00%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-12-21 00:33:42

End at: 2017-12-21 00:34:12

Below is generated by plot.py at 2017-12-21 04:01:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 341.14 Mbit/s

95th percentile per-packet one-way delay: 163.417 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 246.42 Mbit/s

95th percentile per-packet one-way delay: 178.441 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 95.73 Mbit/s

95th percentile per-packet one-way delay: 130.352 ms

Loss rate: 0.01%

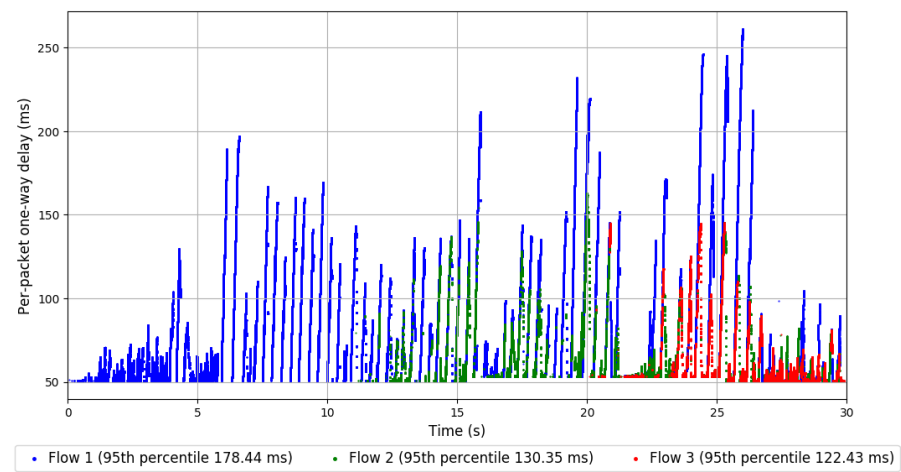
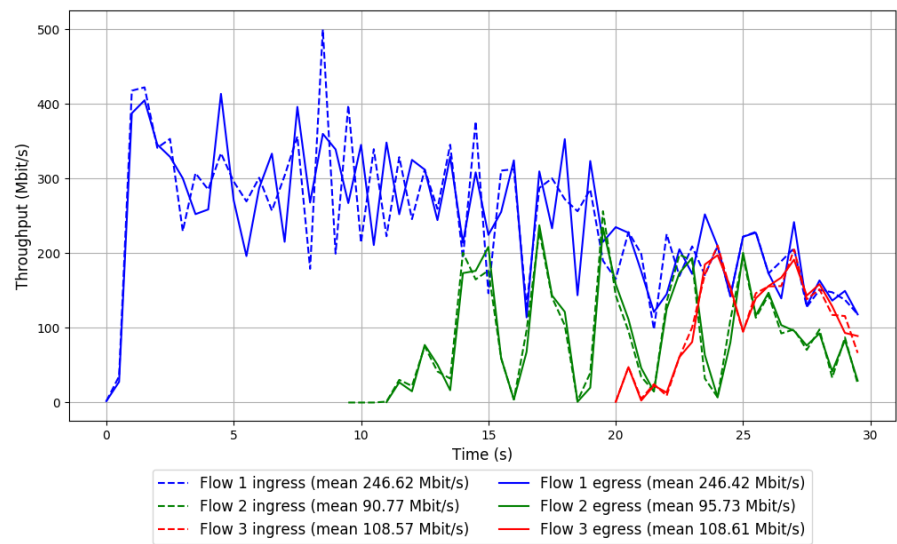
-- Flow 3:

Average throughput: 108.61 Mbit/s

95th percentile per-packet one-way delay: 122.430 ms

Loss rate: 0.00%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-12-21 00:47:12

End at: 2017-12-21 00:47:42

Below is generated by plot.py at 2017-12-21 04:02:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 311.30 Mbit/s

95th percentile per-packet one-way delay: 184.193 ms

Loss rate: 1.63%

-- Flow 1:

Average throughput: 149.01 Mbit/s

95th percentile per-packet one-way delay: 196.714 ms

Loss rate: 2.62%

-- Flow 2:

Average throughput: 205.35 Mbit/s

95th percentile per-packet one-way delay: 183.327 ms

Loss rate: 0.71%

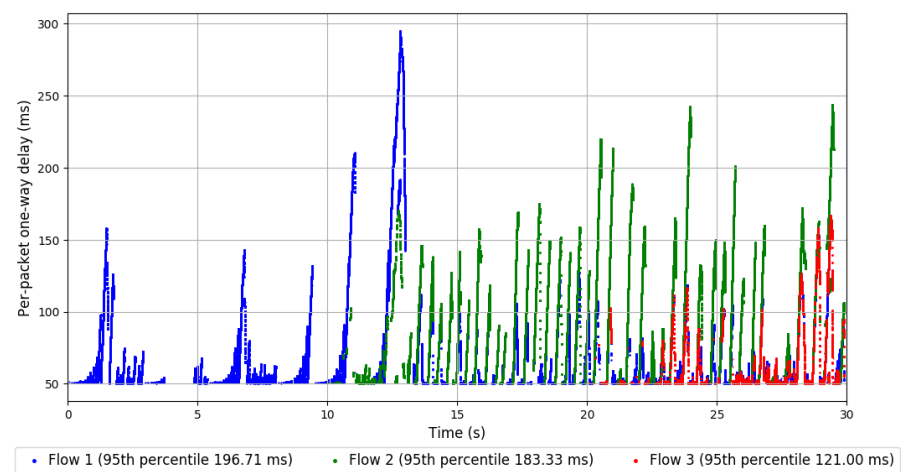
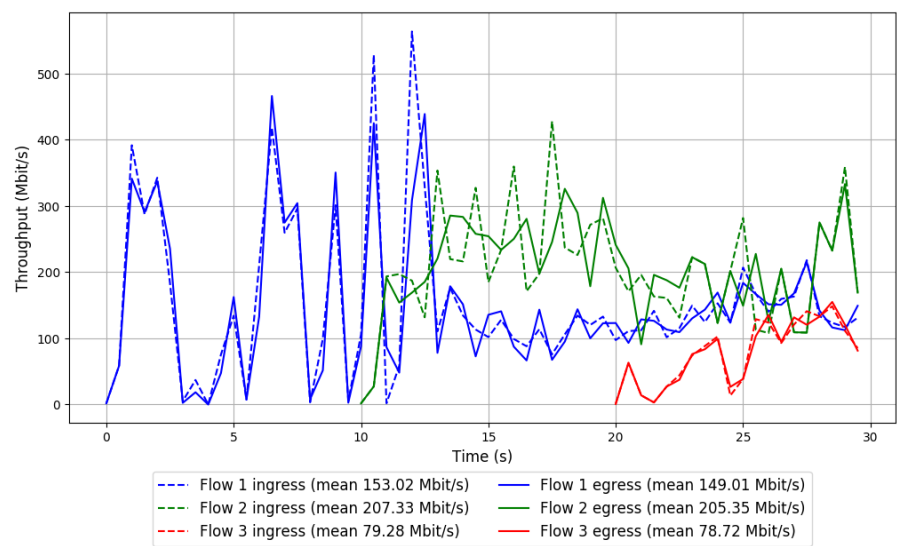
-- Flow 3:

Average throughput: 78.72 Mbit/s

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

Loss rate: 0.69%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-12-21 01:00:47

End at: 2017-12-21 01:01:18

Below is generated by plot.py at 2017-12-21 04:05:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 367.92 Mbit/s

95th percentile per-packet one-way delay: 142.281 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 263.91 Mbit/s

95th percentile per-packet one-way delay: 152.549 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 102.59 Mbit/s

95th percentile per-packet one-way delay: 115.644 ms

Loss rate: 0.31%

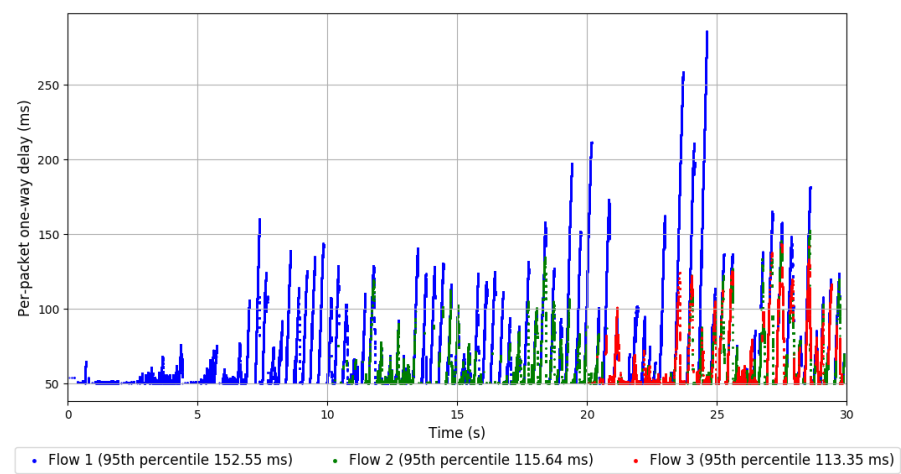
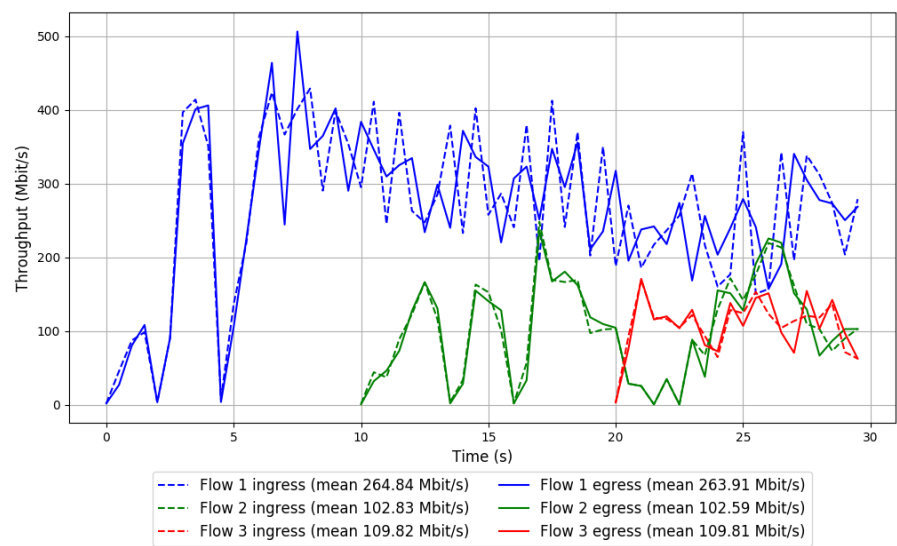
-- Flow 3:

Average throughput: 109.81 Mbit/s

95th percentile per-packet one-way delay: 113.354 ms

Loss rate: 0.01%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2017-12-21 01:14:13

End at: 2017-12-21 01:14:43

Below is generated by plot.py at 2017-12-21 04:06:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 355.12 Mbit/s

95th percentile per-packet one-way delay: 82.987 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 191.89 Mbit/s

95th percentile per-packet one-way delay: 80.274 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 172.91 Mbit/s

95th percentile per-packet one-way delay: 86.665 ms

Loss rate: 0.01%

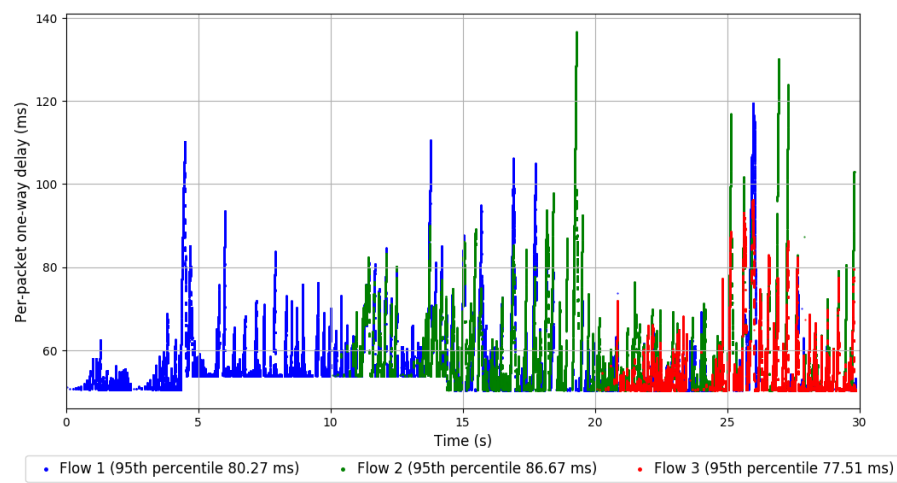
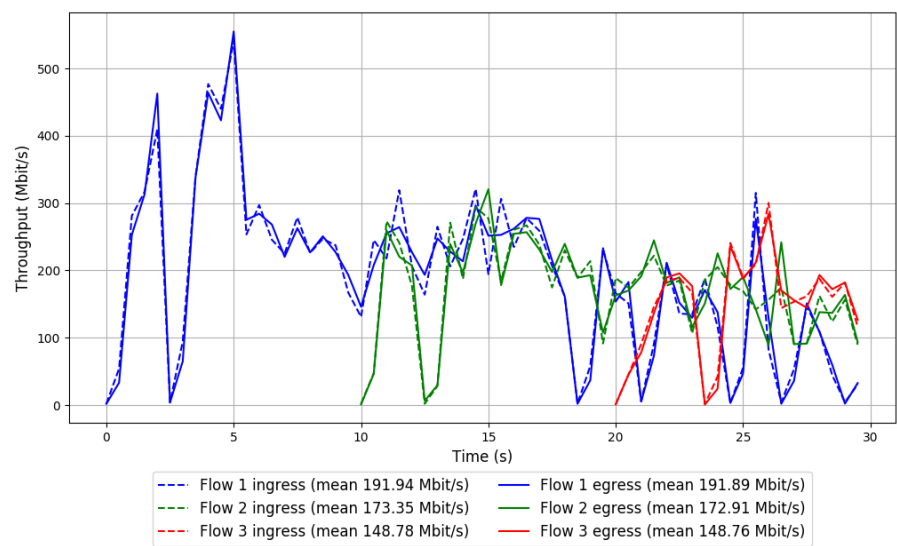
-- Flow 3:

Average throughput: 148.76 Mbit/s

95th percentile per-packet one-way delay: 77.506 ms

Loss rate: 0.02%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-12-21 01:27:46

End at: 2017-12-21 01:28:16

Below is generated by plot.py at 2017-12-21 04:06:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 359.21 Mbit/s

95th percentile per-packet one-way delay: 85.709 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 197.03 Mbit/s

95th percentile per-packet one-way delay: 80.185 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 180.73 Mbit/s

95th percentile per-packet one-way delay: 87.872 ms

Loss rate: 0.11%

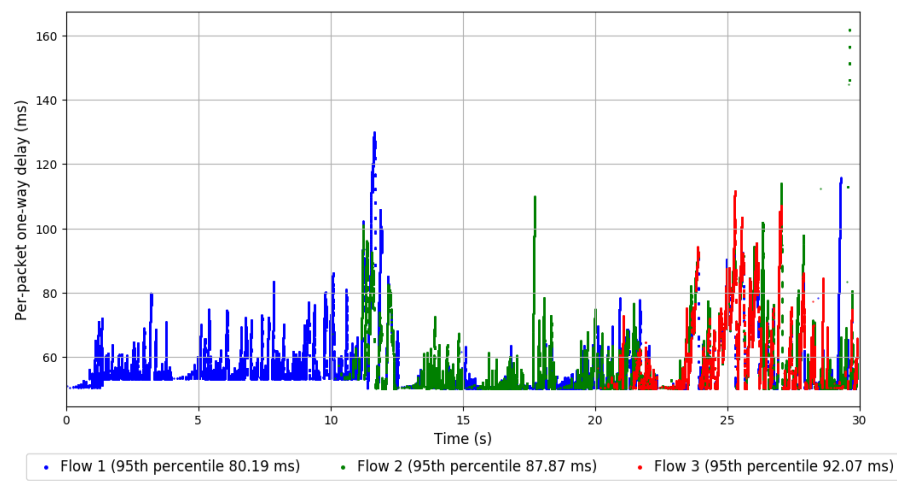
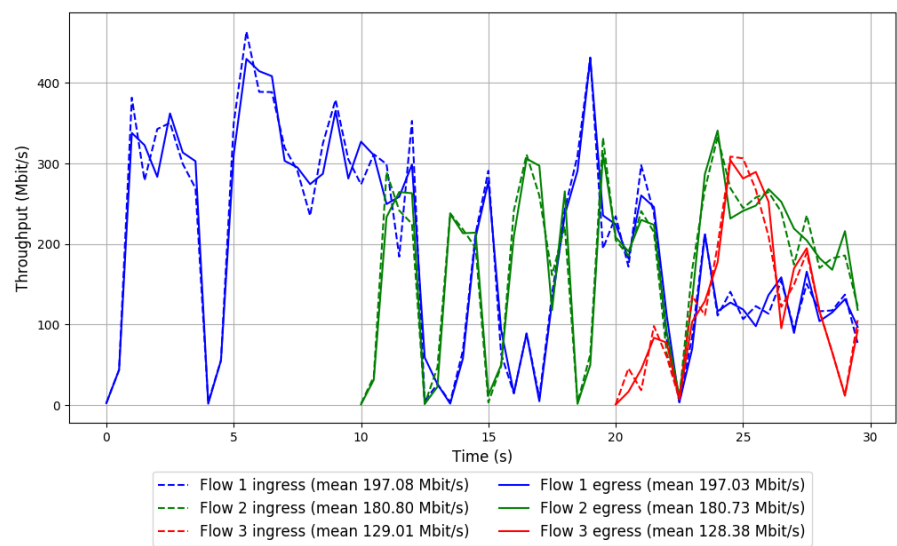
-- Flow 3:

Average throughput: 128.38 Mbit/s

95th percentile per-packet one-way delay: 92.069 ms

Loss rate: 0.52%

Run 10: Report of Verus — Data Link

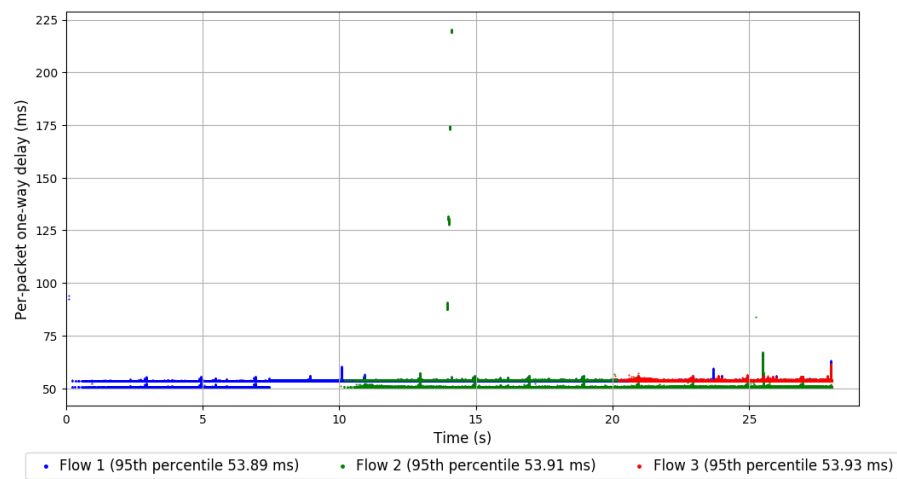
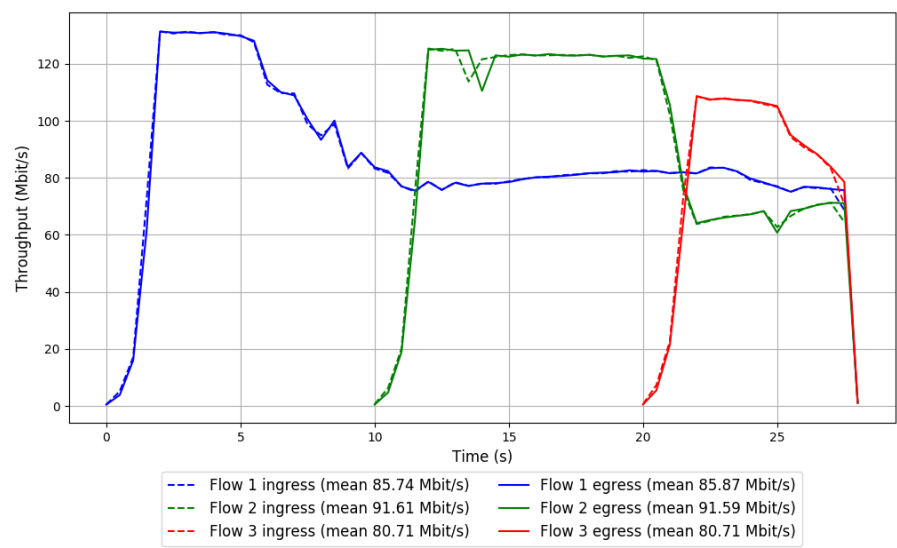


```
Run 1: Statistics of Copa

Start at: 2017-12-20 23:28:08
End at: 2017-12-20 23:28:38

# Below is generated by plot.py at 2017-12-21 04:06:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 167.68 Mbit/s
95th percentile per-packet one-way delay: 53.905 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 85.87 Mbit/s
95th percentile per-packet one-way delay: 53.891 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 91.59 Mbit/s
95th percentile per-packet one-way delay: 53.913 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 80.71 Mbit/s
95th percentile per-packet one-way delay: 53.927 ms
Loss rate: 0.00%
```

Run 1: Report of Copa — Data Link

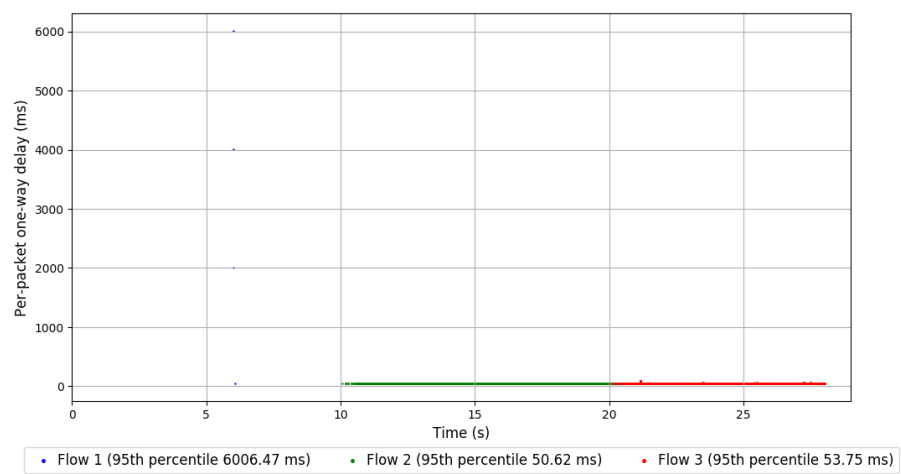
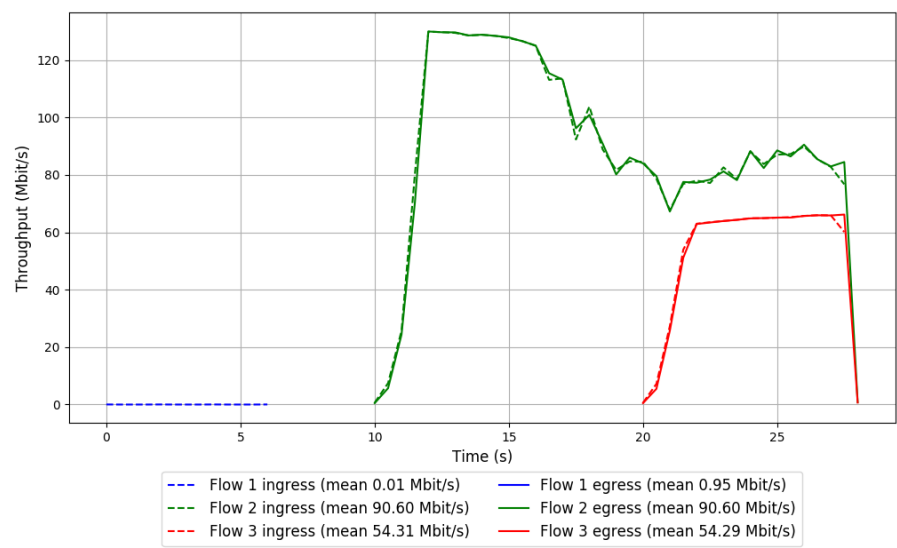


Run 2: Statistics of Copa

Start at: 2017-12-20 23:42:08

End at: 2017-12-20 23:42:38

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-12-20 23:56:05

End at: 2017-12-20 23:56:35

Below is generated by plot.py at 2017-12-21 04:06:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 119.49 Mbit/s

95th percentile per-packet one-way delay: 53.867 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 69.66 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 65.65 Mbit/s

95th percentile per-packet one-way delay: 53.937 ms

Loss rate: 0.00%

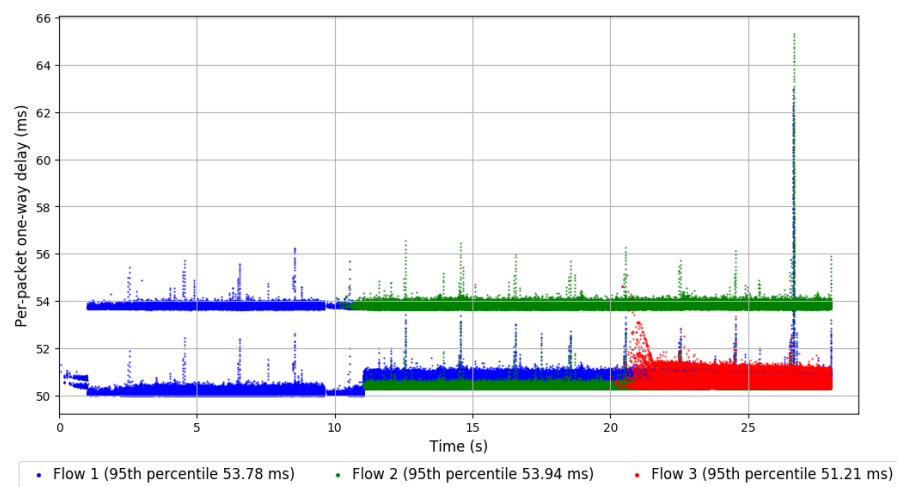
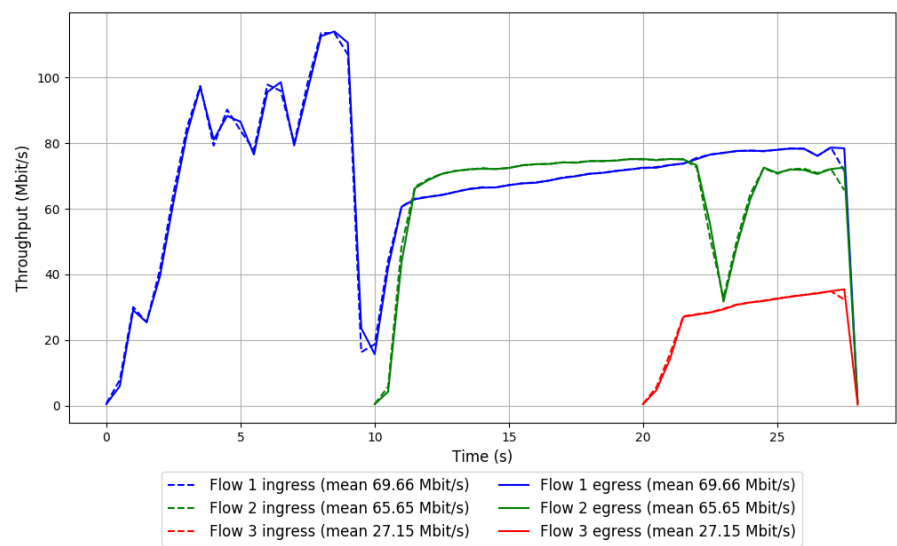
-- Flow 3:

Average throughput: 27.15 Mbit/s

95th percentile per-packet one-way delay: 51.212 ms

Loss rate: 0.00%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-12-21 00:09:31

End at: 2017-12-21 00:10:01

Below is generated by plot.py at 2017-12-21 04:06:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.66 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 72.49 Mbit/s

95th percentile per-packet one-way delay: 53.914 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 73.93 Mbit/s

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

Loss rate: 0.00%

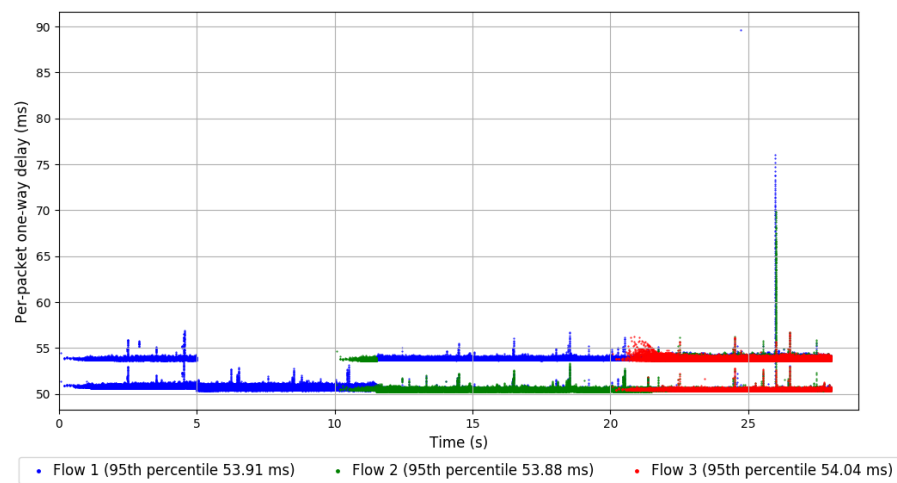
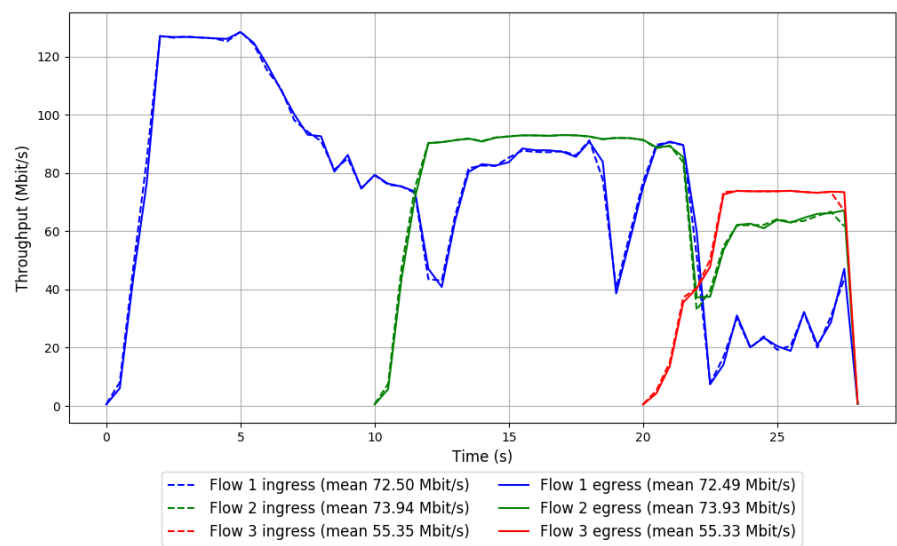
-- Flow 3:

Average throughput: 55.33 Mbit/s

95th percentile per-packet one-way delay: 54.040 ms

Loss rate: 0.00%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-12-21 00:23:27

End at: 2017-12-21 00:23:57

Below is generated by plot.py at 2017-12-21 04:07:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 127.05 Mbit/s

95th percentile per-packet one-way delay: 51.050 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 74.29 Mbit/s

95th percentile per-packet one-way delay: 51.103 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 61.39 Mbit/s

95th percentile per-packet one-way delay: 50.921 ms

Loss rate: 0.00%

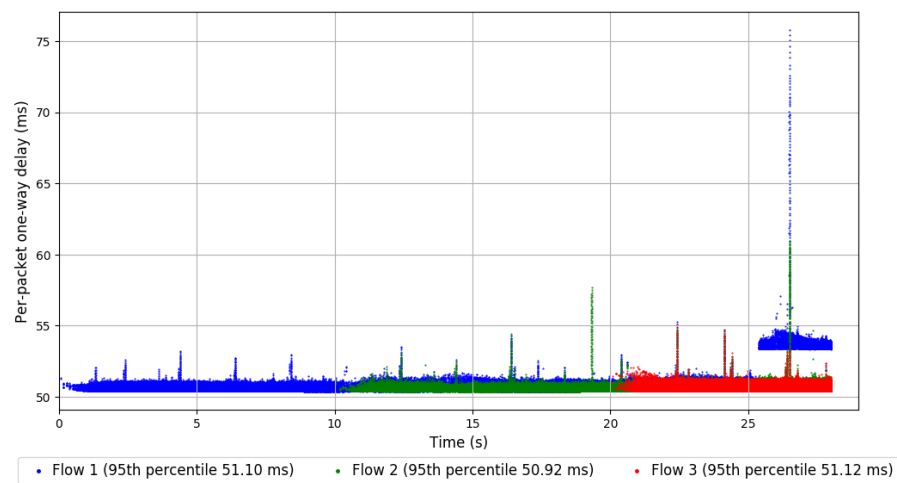
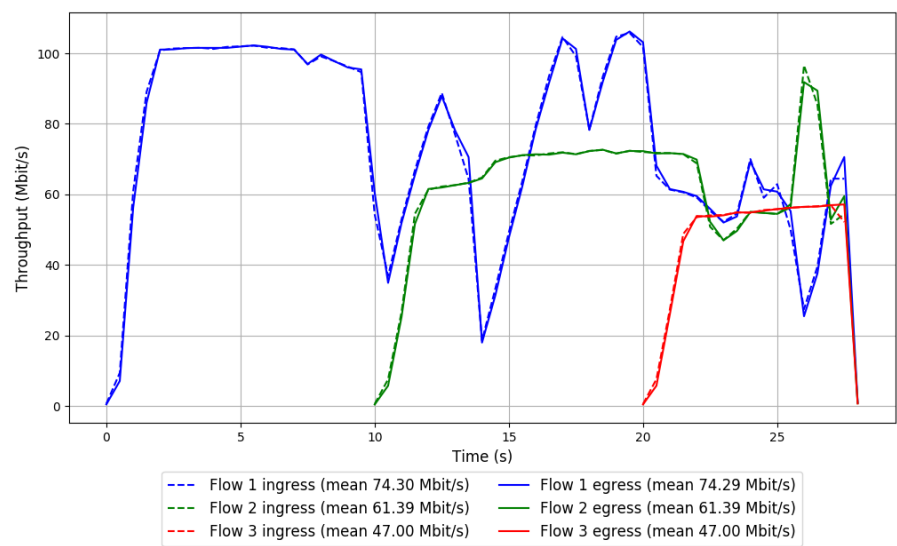
-- Flow 3:

Average throughput: 47.00 Mbit/s

95th percentile per-packet one-way delay: 51.120 ms

Loss rate: 0.00%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-12-21 00:36:58

End at: 2017-12-21 00:37:28

Below is generated by plot.py at 2017-12-21 04:07:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.20 Mbit/s

95th percentile per-packet one-way delay: 53.286 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 59.13 Mbit/s

95th percentile per-packet one-way delay: 53.310 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 77.42 Mbit/s

95th percentile per-packet one-way delay: 53.277 ms

Loss rate: 0.00%

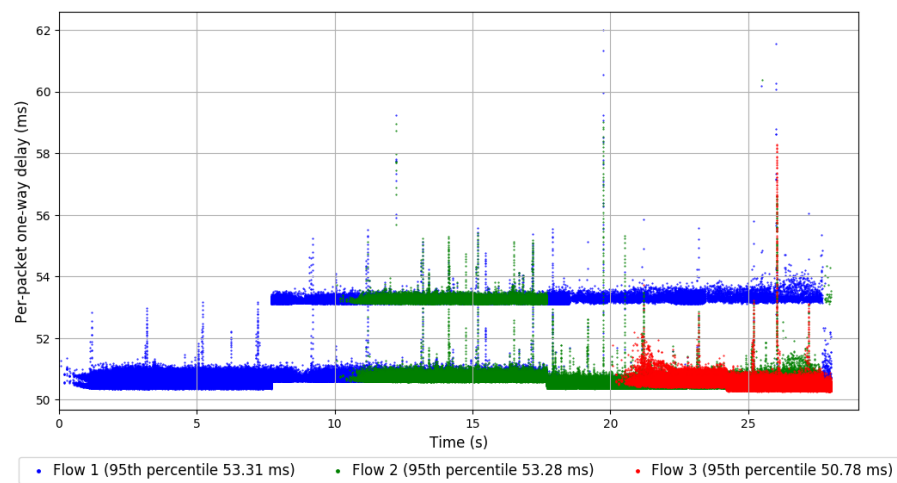
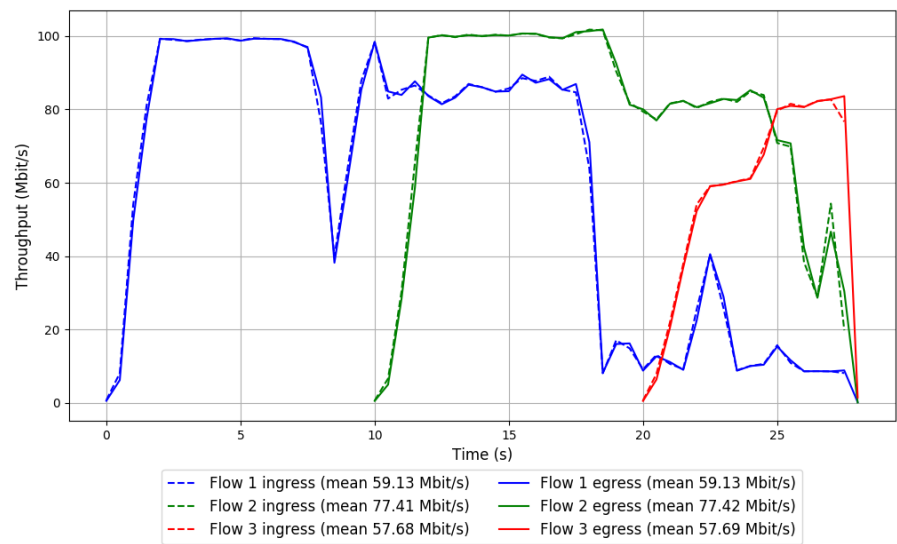
-- Flow 3:

Average throughput: 57.69 Mbit/s

95th percentile per-packet one-way delay: 50.779 ms

Loss rate: 0.00%

Run 6: Report of Copa — Data Link

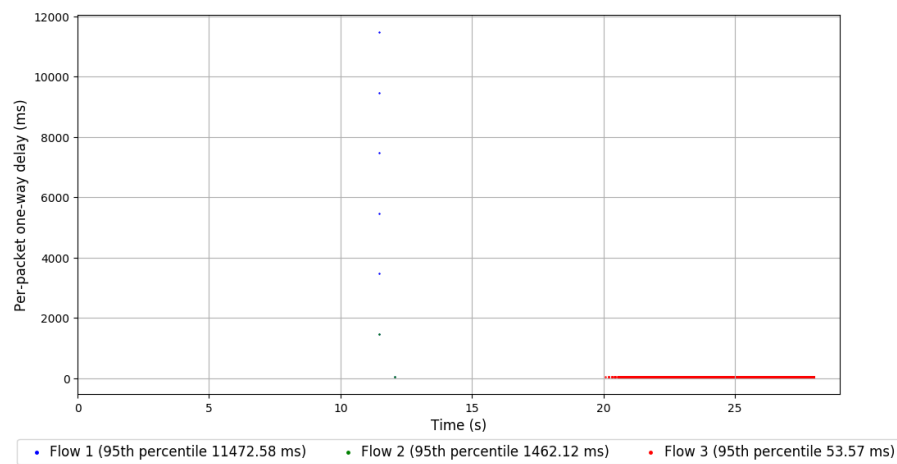
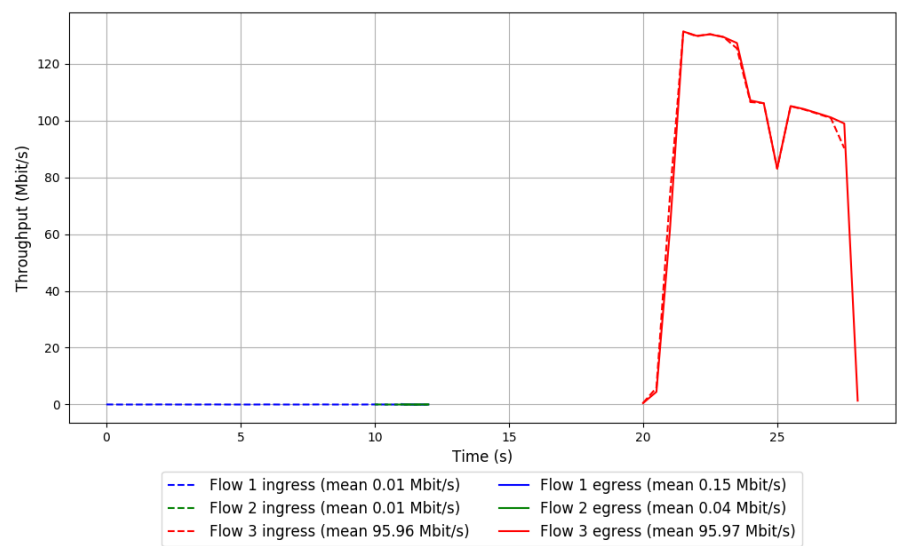


Run 7: Statistics of Copa

Start at: 2017-12-21 00:50:41

End at: 2017-12-21 00:51:11

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-12-21 01:04:10

End at: 2017-12-21 01:04:40

Below is generated by plot.py at 2017-12-21 04:09:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 122.13 Mbit/s

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

Loss rate: 0.22%

-- Flow 1:

Average throughput: 74.30 Mbit/s

95th percentile per-packet one-way delay: 50.902 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 54.21 Mbit/s

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

Loss rate: 0.26%

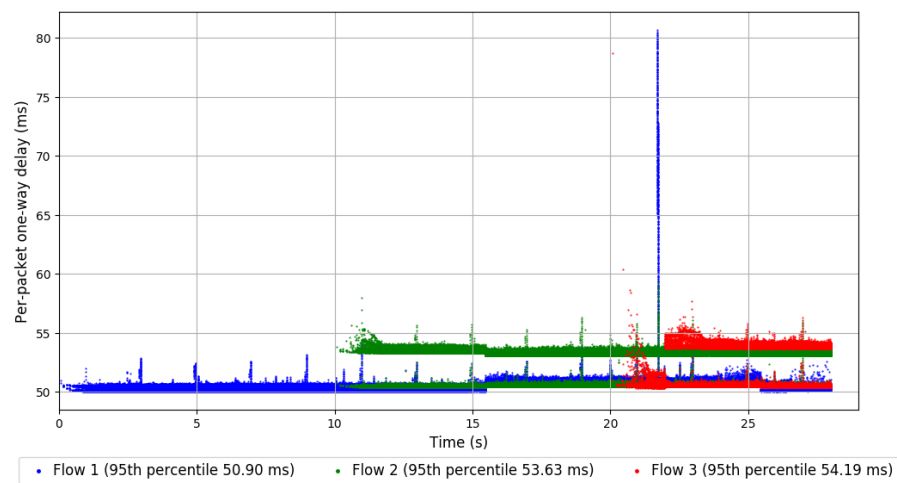
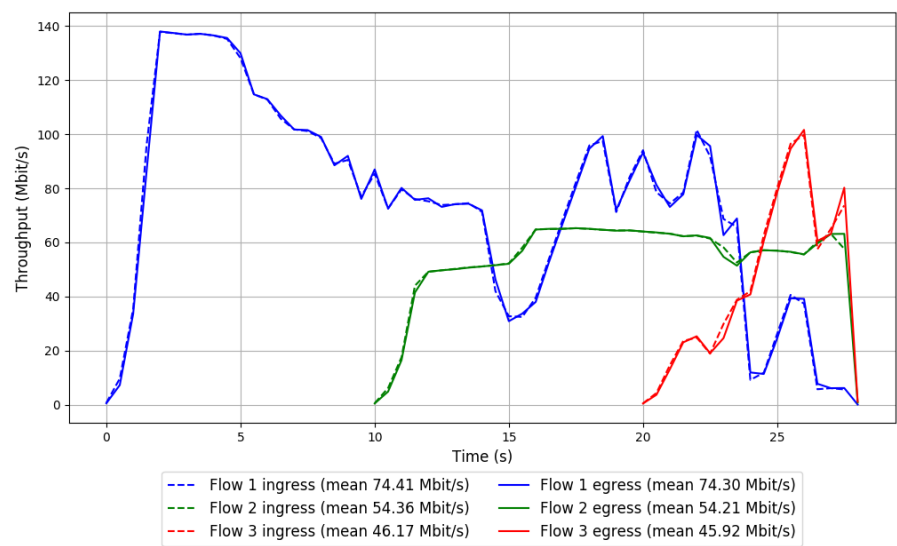
-- Flow 3:

Average throughput: 45.92 Mbit/s

95th percentile per-packet one-way delay: 54.190 ms

Loss rate: 0.51%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-12-21 01:17:28

End at: 2017-12-21 01:17:58

Below is generated by plot.py at 2017-12-21 04:09:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.87 Mbit/s

95th percentile per-packet one-way delay: 53.838 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 76.45 Mbit/s

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

Loss rate: 0.12%

-- Flow 2:

Average throughput: 64.47 Mbit/s

95th percentile per-packet one-way delay: 53.859 ms

Loss rate: 0.19%

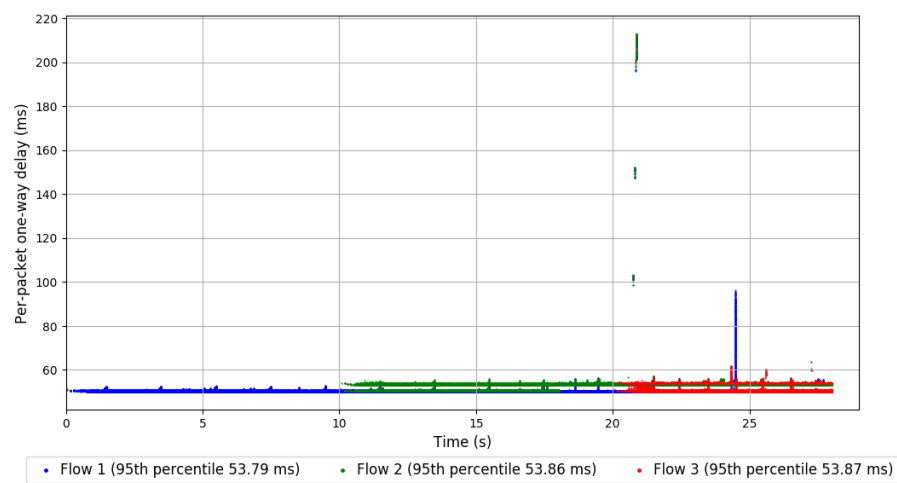
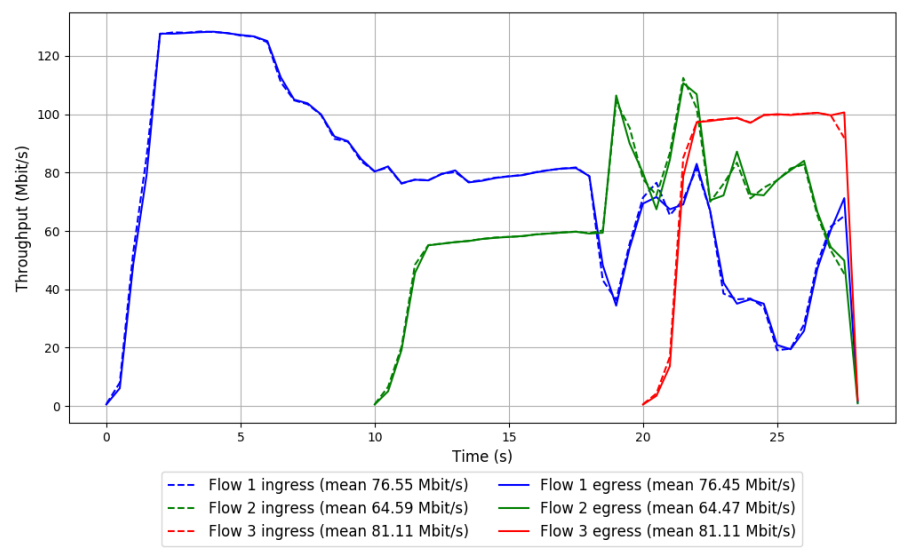
-- Flow 3:

Average throughput: 81.11 Mbit/s

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

Loss rate: 0.01%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-12-21 01:31:30

End at: 2017-12-21 01:32:00

Below is generated by plot.py at 2017-12-21 04:09:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.92 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 1464.312 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 88.64 Mbit/s

95th percentile per-packet one-way delay: 53.340 ms

Loss rate: 0.00%

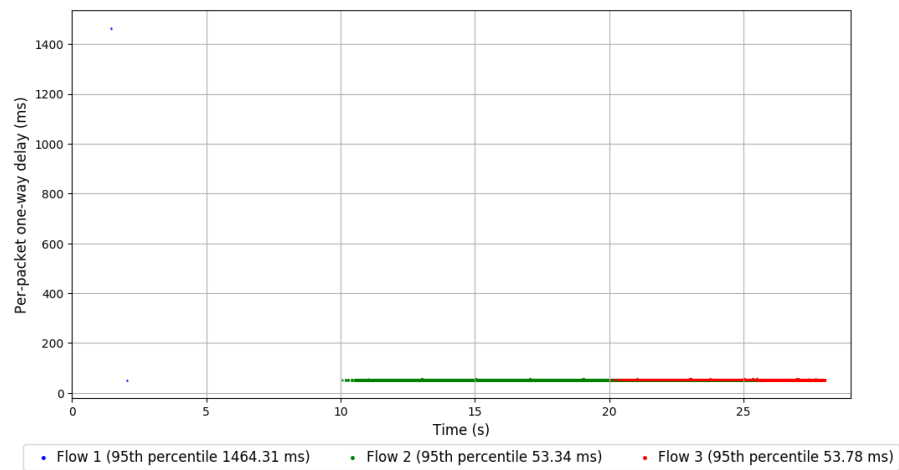
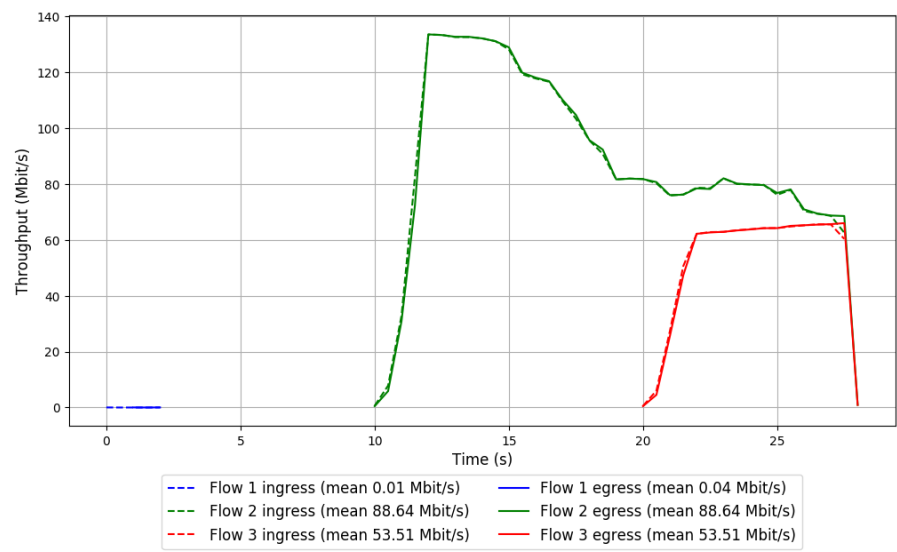
-- Flow 3:

Average throughput: 53.51 Mbit/s

95th percentile per-packet one-way delay: 53.780 ms

Loss rate: 0.01%

Run 10: Report of Copa — Data Link

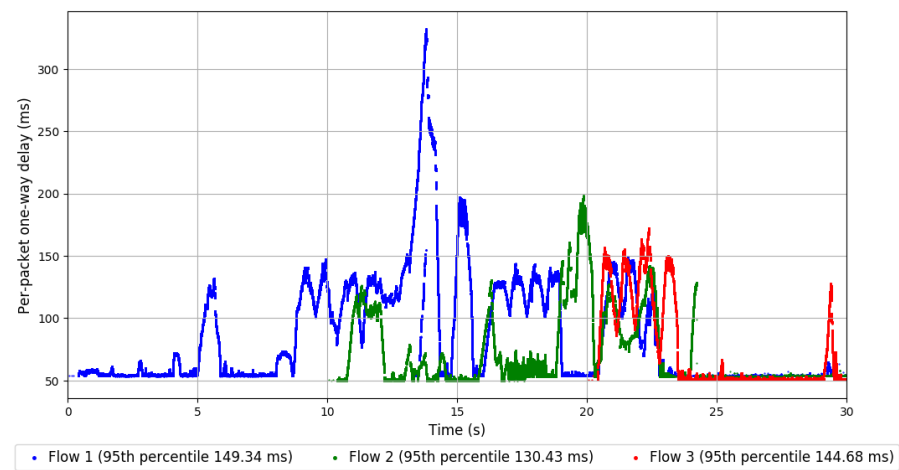
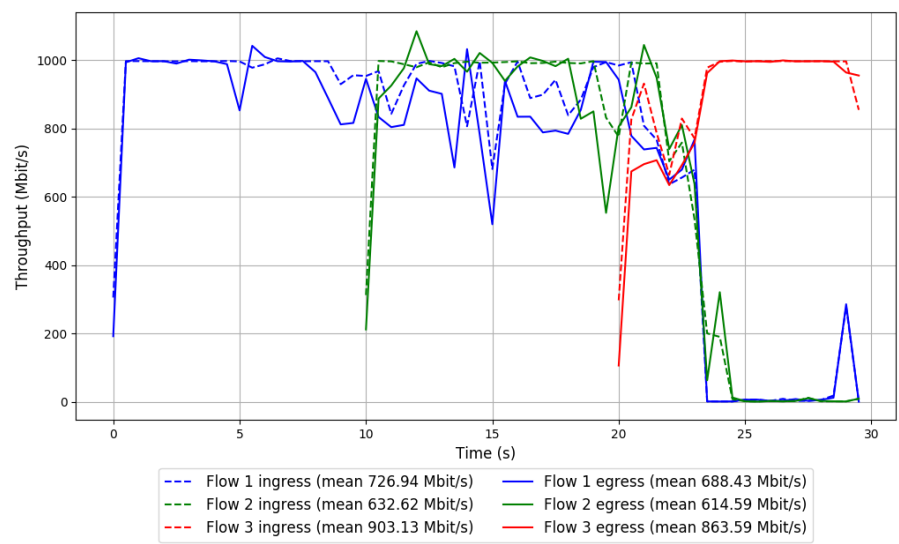


```
Run 1: Statistics of FillP

Start at: 2017-12-20 23:21:30
End at: 2017-12-20 23:22:00

# Below is generated by plot.py at 2017-12-21 04:30:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1383.10 Mbit/s
95th percentile per-packet one-way delay: 143.914 ms
Loss rate: 4.39%
-- Flow 1:
Average throughput: 688.43 Mbit/s
95th percentile per-packet one-way delay: 149.339 ms
Loss rate: 5.30%
-- Flow 2:
Average throughput: 614.59 Mbit/s
95th percentile per-packet one-way delay: 130.428 ms
Loss rate: 2.83%
-- Flow 3:
Average throughput: 863.59 Mbit/s
95th percentile per-packet one-way delay: 144.681 ms
Loss rate: 4.38%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2017-12-20 23:34:51

End at: 2017-12-20 23:35:21

Below is generated by plot.py at 2017-12-21 04:35:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 1625.26 Mbit/s

95th percentile per-packet one-way delay: 147.626 ms

Loss rate: 7.66%

-- Flow 1:

Average throughput: 806.57 Mbit/s

95th percentile per-packet one-way delay: 154.811 ms

Loss rate: 6.39%

-- Flow 2:

Average throughput: 854.61 Mbit/s

95th percentile per-packet one-way delay: 139.654 ms

Loss rate: 7.38%

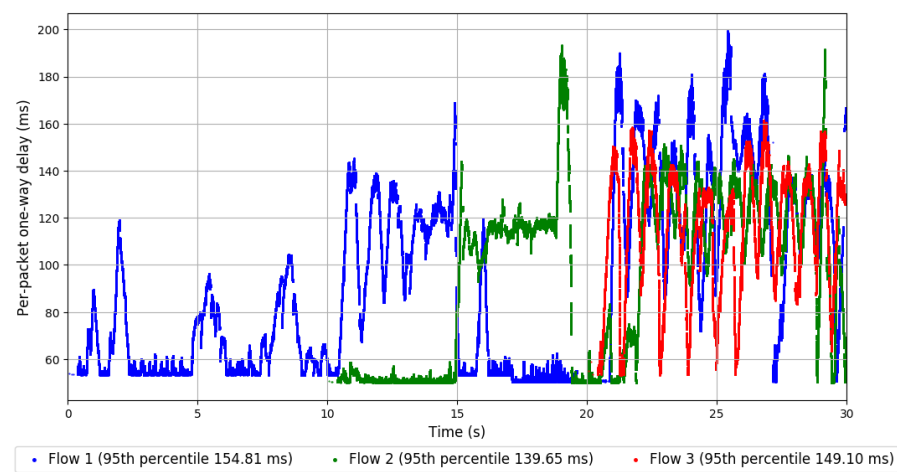
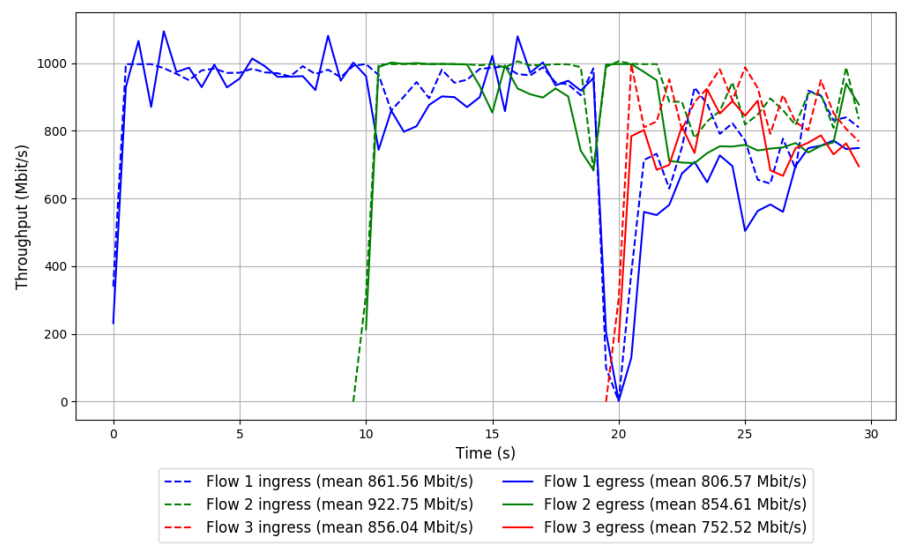
-- Flow 3:

Average throughput: 752.52 Mbit/s

95th percentile per-packet one-way delay: 149.099 ms

Loss rate: 12.13%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2017-12-20 23:48:44

End at: 2017-12-20 23:49:14

Below is generated by plot.py at 2017-12-21 04:37:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 1748.79 Mbit/s

95th percentile per-packet one-way delay: 138.594 ms

Loss rate: 5.89%

-- Flow 1:

Average throughput: 841.92 Mbit/s

95th percentile per-packet one-way delay: 161.245 ms

Loss rate: 7.40%

-- Flow 2:

Average throughput: 910.50 Mbit/s

95th percentile per-packet one-way delay: 133.958 ms

Loss rate: 3.94%

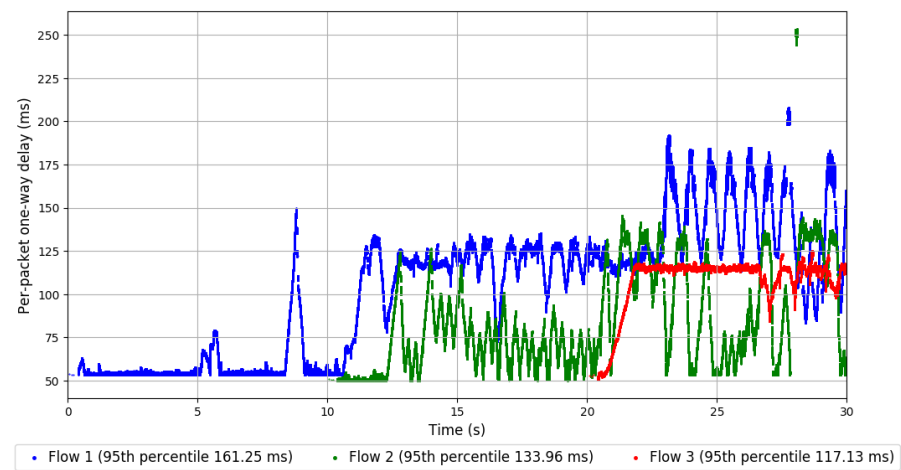
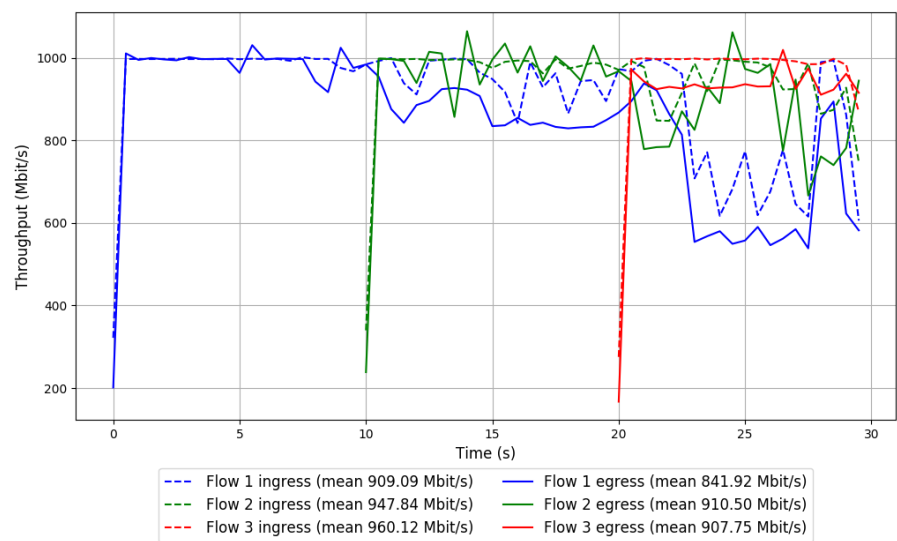
-- Flow 3:

Average throughput: 907.75 Mbit/s

95th percentile per-packet one-way delay: 117.126 ms

Loss rate: 5.47%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2017-12-21 00:02:41

End at: 2017-12-21 00:03:11

Below is generated by plot.py at 2017-12-21 04:37:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 1614.72 Mbit/s

95th percentile per-packet one-way delay: 257.371 ms

Loss rate: 7.65%

-- Flow 1:

Average throughput: 848.36 Mbit/s

95th percentile per-packet one-way delay: 137.632 ms

Loss rate: 5.34%

-- Flow 2:

Average throughput: 836.64 Mbit/s

95th percentile per-packet one-way delay: 256.813 ms

Loss rate: 6.71%

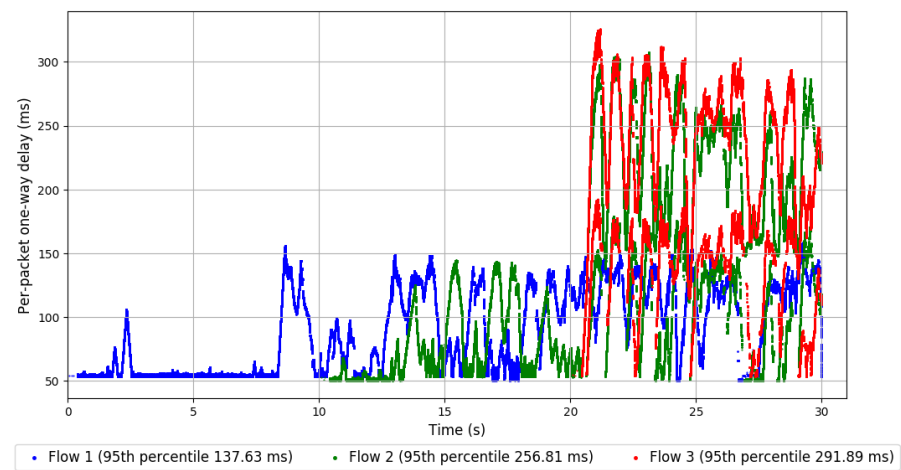
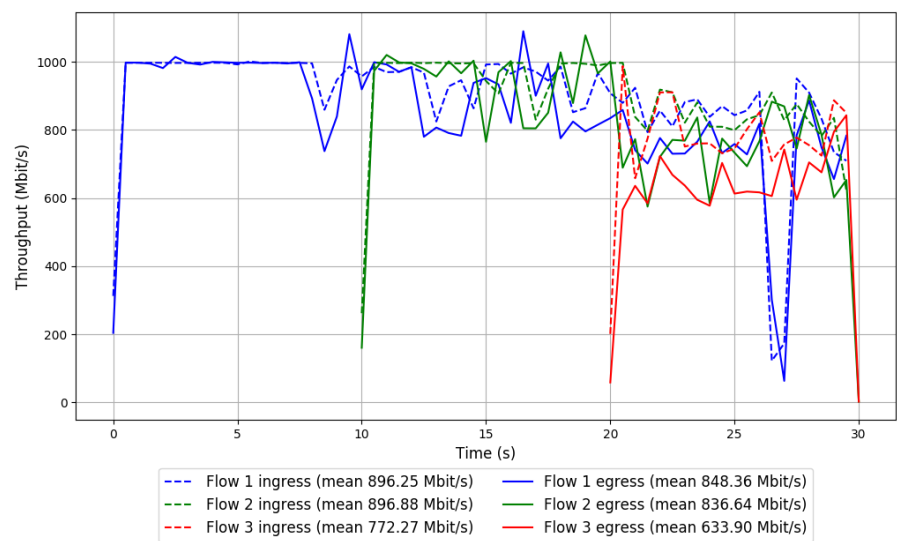
-- Flow 3:

Average throughput: 633.90 Mbit/s

95th percentile per-packet one-way delay: 291.888 ms

Loss rate: 17.92%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2017-12-21 00:16:18

End at: 2017-12-21 00:16:48

Below is generated by plot.py at 2017-12-21 04:39:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 1764.19 Mbit/s

95th percentile per-packet one-way delay: 148.004 ms

Loss rate: 5.11%

-- Flow 1:

Average throughput: 911.21 Mbit/s

95th percentile per-packet one-way delay: 128.767 ms

Loss rate: 3.77%

-- Flow 2:

Average throughput: 933.61 Mbit/s

95th percentile per-packet one-way delay: 121.920 ms

Loss rate: 3.29%

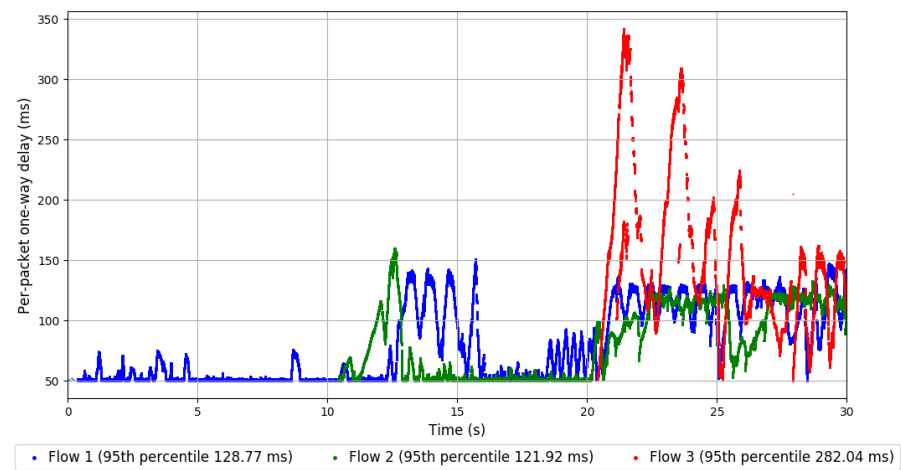
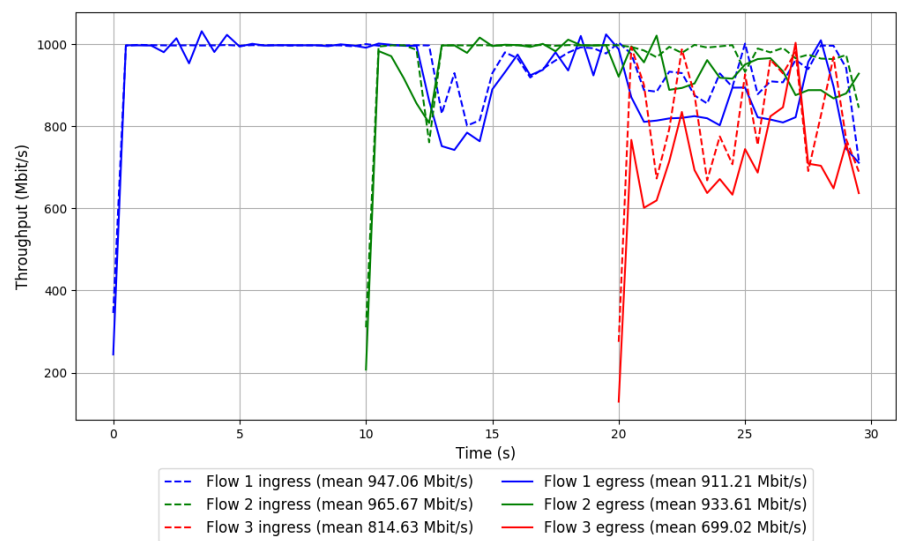
-- Flow 3:

Average throughput: 699.02 Mbit/s

95th percentile per-packet one-way delay: 282.037 ms

Loss rate: 14.14%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2017-12-21 00:29:59

End at: 2017-12-21 00:30:29

Below is generated by plot.py at 2017-12-21 04:39:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 1629.90 Mbit/s

95th percentile per-packet one-way delay: 263.716 ms

Loss rate: 8.10%

-- Flow 1:

Average throughput: 881.71 Mbit/s

95th percentile per-packet one-way delay: 138.870 ms

Loss rate: 5.67%

-- Flow 2:

Average throughput: 827.63 Mbit/s

95th percentile per-packet one-way delay: 262.344 ms

Loss rate: 7.46%

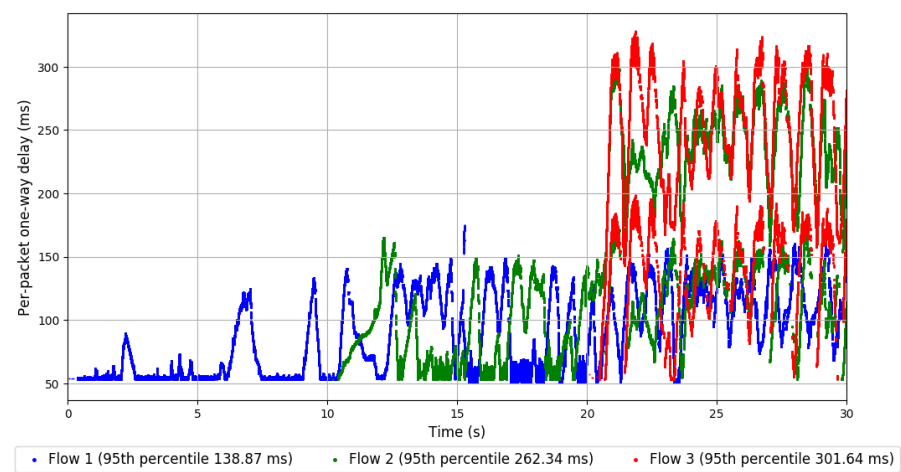
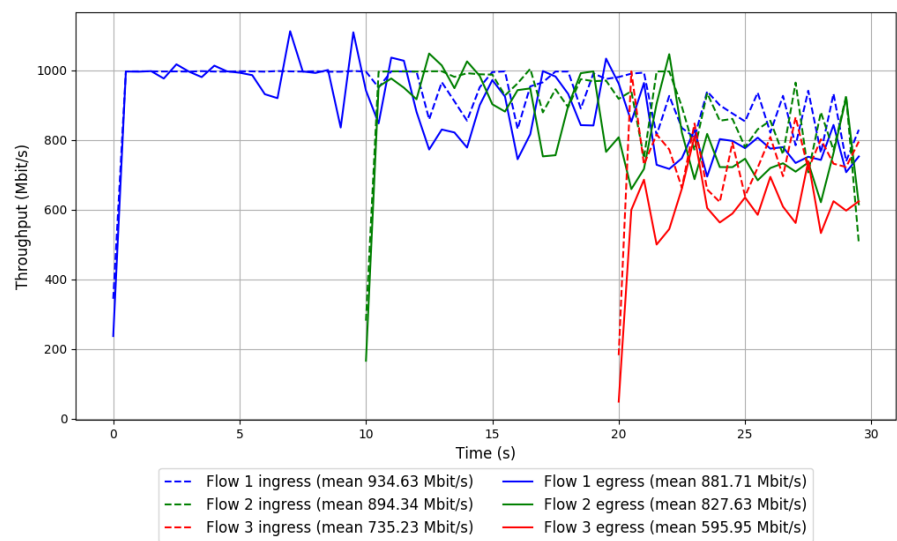
-- Flow 3:

Average throughput: 595.95 Mbit/s

95th percentile per-packet one-way delay: 301.644 ms

Loss rate: 18.98%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2017-12-21 00:43:39

End at: 2017-12-21 00:44:09

Below is generated by plot.py at 2017-12-21 04:39:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 1487.34 Mbit/s

95th percentile per-packet one-way delay: 258.420 ms

Loss rate: 7.07%

-- Flow 1:

Average throughput: 835.76 Mbit/s

95th percentile per-packet one-way delay: 270.396 ms

Loss rate: 6.89%

-- Flow 2:

Average throughput: 741.00 Mbit/s

95th percentile per-packet one-way delay: 139.647 ms

Loss rate: 6.59%

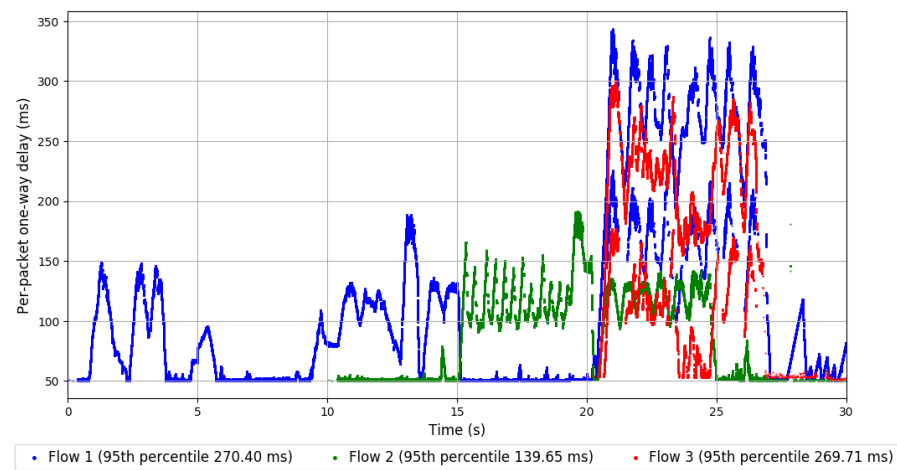
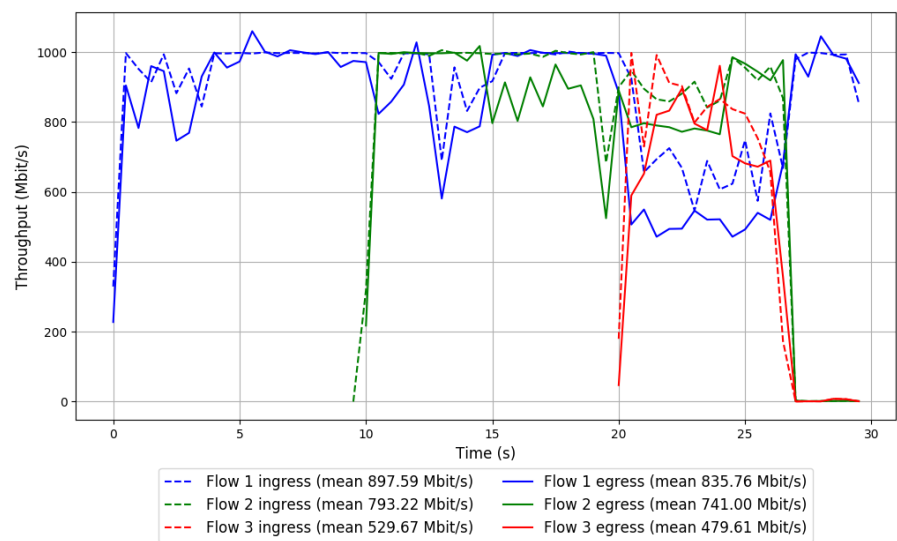
-- Flow 3:

Average throughput: 479.61 Mbit/s

95th percentile per-packet one-way delay: 269.708 ms

Loss rate: 9.46%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2017-12-21 00:57:13

End at: 2017-12-21 00:57:43

Below is generated by plot.py at 2017-12-21 04:43:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 1766.60 Mbit/s

95th percentile per-packet one-way delay: 143.367 ms

Loss rate: 5.31%

-- Flow 1:

Average throughput: 872.49 Mbit/s

95th percentile per-packet one-way delay: 156.855 ms

Loss rate: 5.99%

-- Flow 2:

Average throughput: 913.31 Mbit/s

95th percentile per-packet one-way delay: 130.691 ms

Loss rate: 3.54%

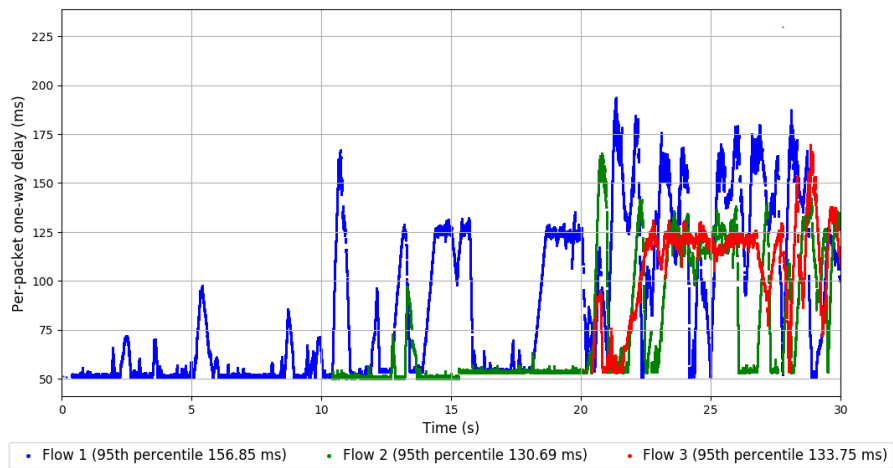
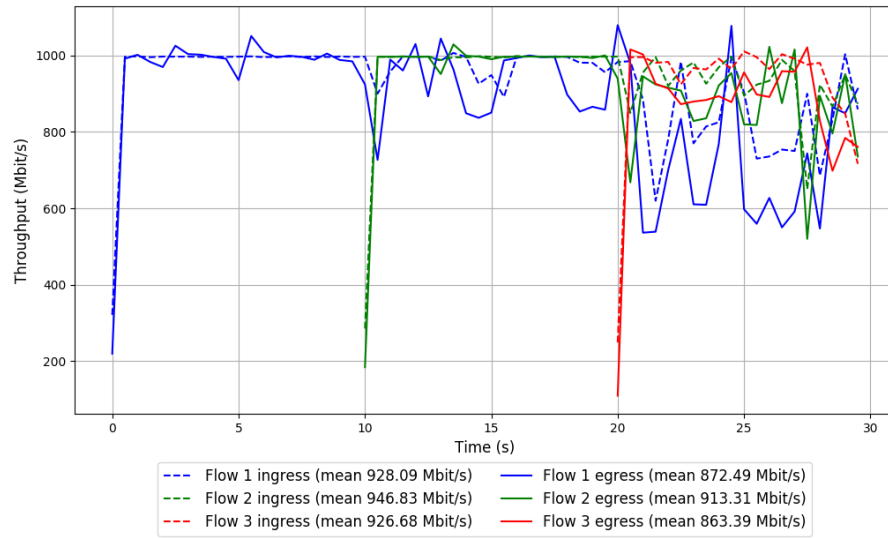
-- Flow 3:

Average throughput: 863.39 Mbit/s

95th percentile per-packet one-way delay: 133.751 ms

Loss rate: 6.87%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2017-12-21 01:10:47

End at: 2017-12-21 01:11:17

Below is generated by plot.py at 2017-12-21 04:48:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 1644.97 Mbit/s

95th percentile per-packet one-way delay: 149.875 ms

Loss rate: 8.02%

-- Flow 1:

Average throughput: 876.69 Mbit/s

95th percentile per-packet one-way delay: 143.153 ms

Loss rate: 5.63%

-- Flow 2:

Average throughput: 845.15 Mbit/s

95th percentile per-packet one-way delay: 150.177 ms

Loss rate: 7.62%

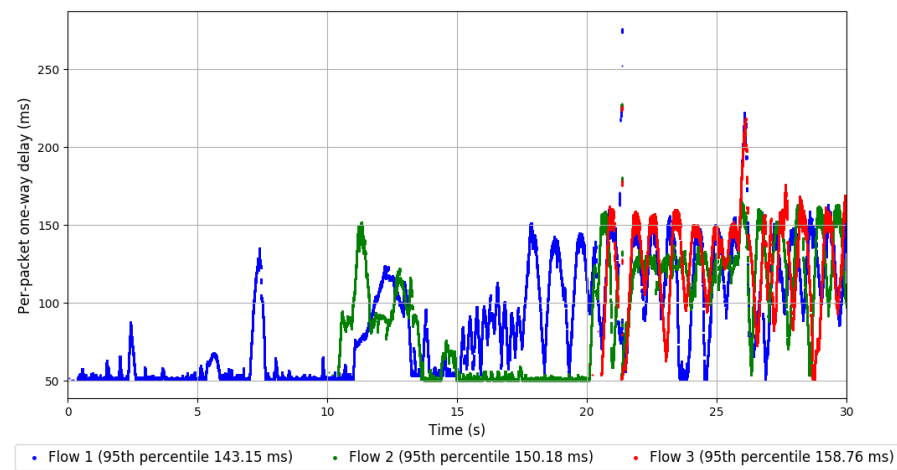
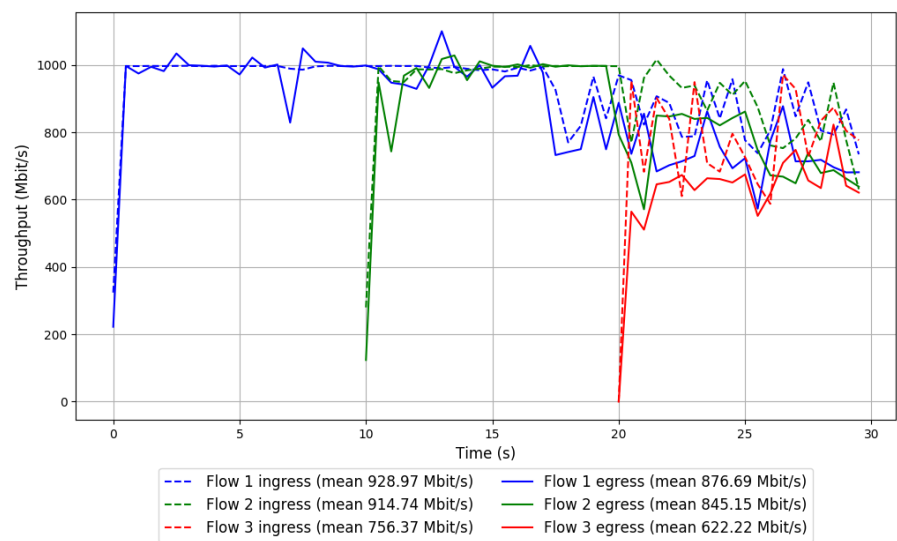
-- Flow 3:

Average throughput: 622.22 Mbit/s

95th percentile per-packet one-way delay: 158.760 ms

Loss rate: 17.81%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2017-12-21 01:24:11

End at: 2017-12-21 01:24:41

Below is generated by plot.py at 2017-12-21 04:49:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 1656.67 Mbit/s

95th percentile per-packet one-way delay: 273.184 ms

Loss rate: 7.92%

-- Flow 1:

Average throughput: 868.83 Mbit/s

95th percentile per-packet one-way delay: 275.691 ms

Loss rate: 6.29%

-- Flow 2:

Average throughput: 812.92 Mbit/s

95th percentile per-packet one-way delay: 151.194 ms

Loss rate: 8.55%

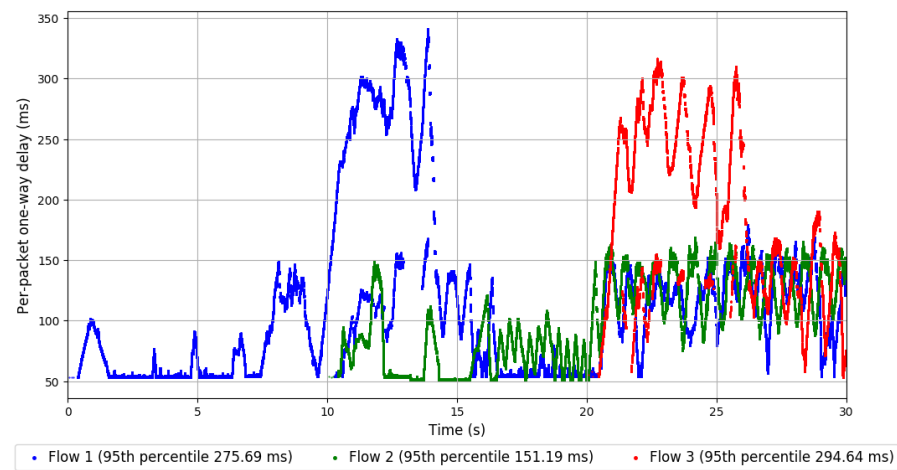
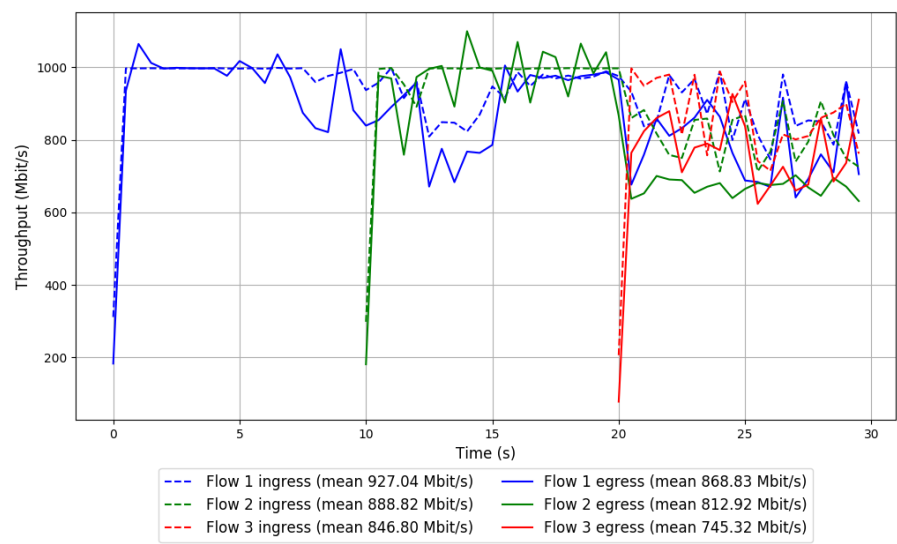
-- Flow 3:

Average throughput: 745.32 Mbit/s

95th percentile per-packet one-way delay: 294.643 ms

Loss rate: 12.02%

Run 10: Report of FillP — Data Link

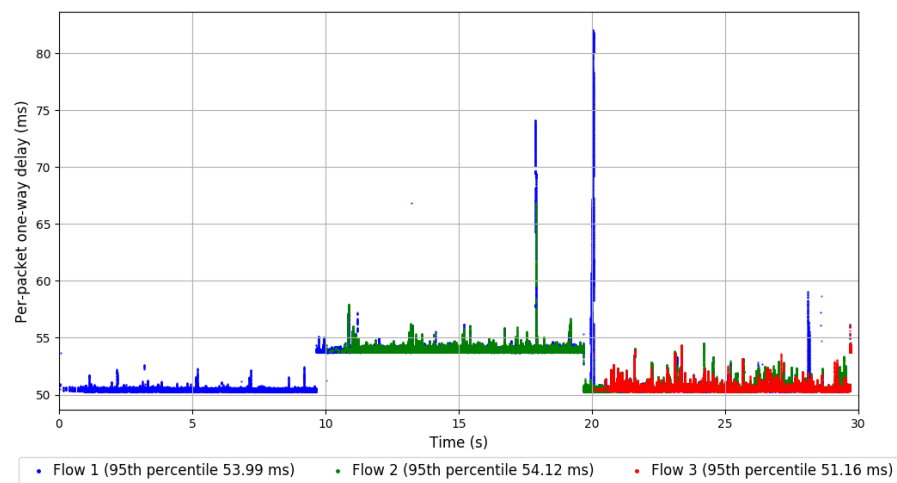
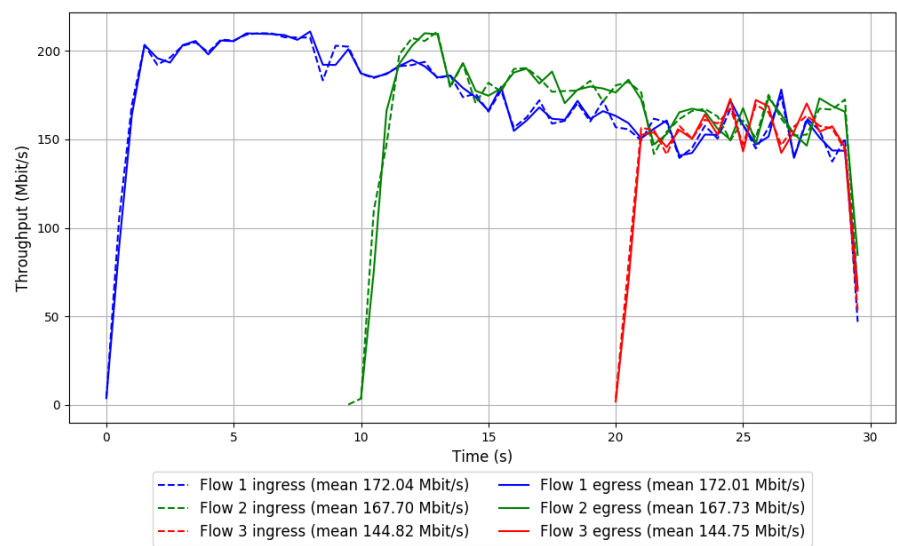


```
Run 1: Statistics of Indigo

Start at: 2017-12-20 23:31:58
End at: 2017-12-20 23:32:28

# Below is generated by plot.py at 2017-12-21 04:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.26 Mbit/s
95th percentile per-packet one-way delay: 54.015 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 172.01 Mbit/s
95th percentile per-packet one-way delay: 53.989 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 167.73 Mbit/s
95th percentile per-packet one-way delay: 54.121 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 144.75 Mbit/s
95th percentile per-packet one-way delay: 51.160 ms
Loss rate: 0.05%
```

Run 1: Report of Indigo — Data Link

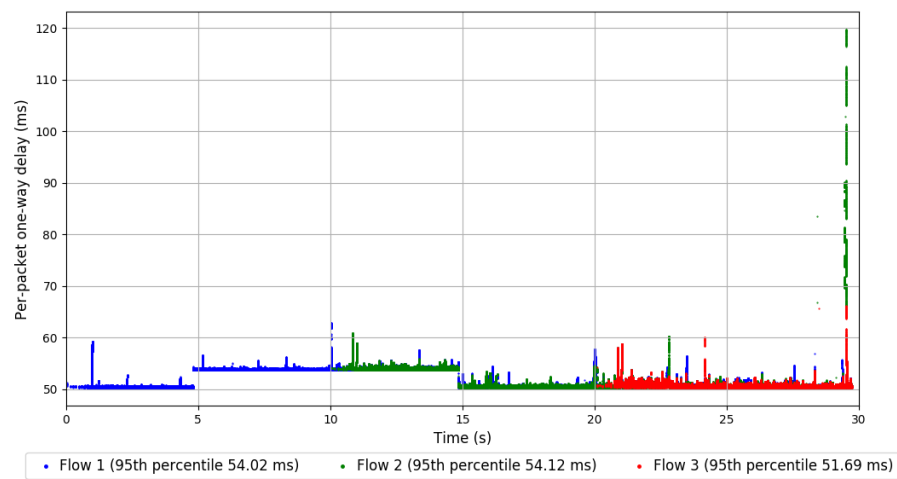
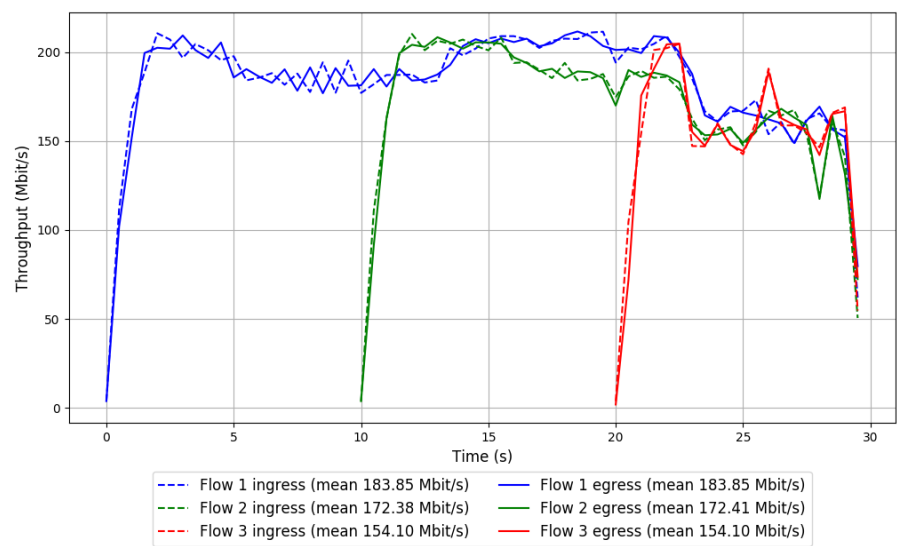


```
Run 2: Statistics of Indigo

Start at: 2017-12-20 23:45:53
End at: 2017-12-20 23:46:23

# Below is generated by plot.py at 2017-12-21 04:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 348.19 Mbit/s
95th percentile per-packet one-way delay: 54.025 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 183.85 Mbit/s
95th percentile per-packet one-way delay: 54.017 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 172.41 Mbit/s
95th percentile per-packet one-way delay: 54.116 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 154.10 Mbit/s
95th percentile per-packet one-way delay: 51.690 ms
Loss rate: 0.01%
```

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2017-12-20 23:59:49

End at: 2017-12-21 00:00:19

Below is generated by plot.py at 2017-12-21 04:49:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 356.96 Mbit/s

95th percentile per-packet one-way delay: 53.990 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 192.31 Mbit/s

95th percentile per-packet one-way delay: 54.020 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 174.41 Mbit/s

95th percentile per-packet one-way delay: 54.001 ms

Loss rate: 0.01%

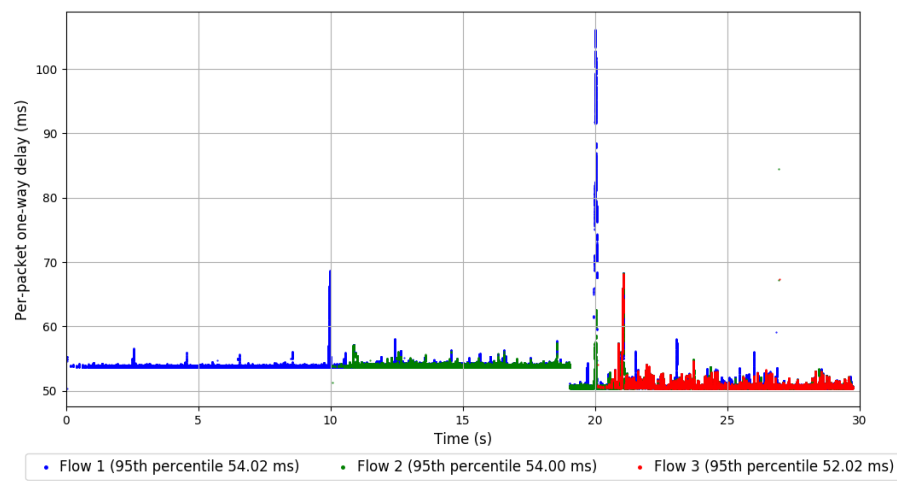
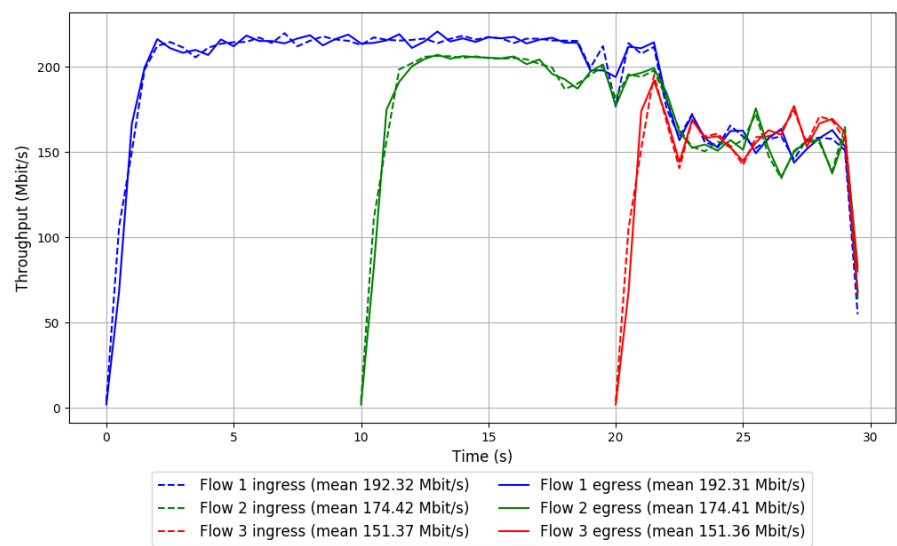
-- Flow 3:

Average throughput: 151.36 Mbit/s

95th percentile per-packet one-way delay: 52.021 ms

Loss rate: 0.01%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2017-12-21 00:13:21

End at: 2017-12-21 00:13:51

Below is generated by plot.py at 2017-12-21 04:49:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 352.84 Mbit/s

95th percentile per-packet one-way delay: 54.772 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 183.76 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 175.19 Mbit/s

95th percentile per-packet one-way delay: 54.855 ms

Loss rate: 0.01%

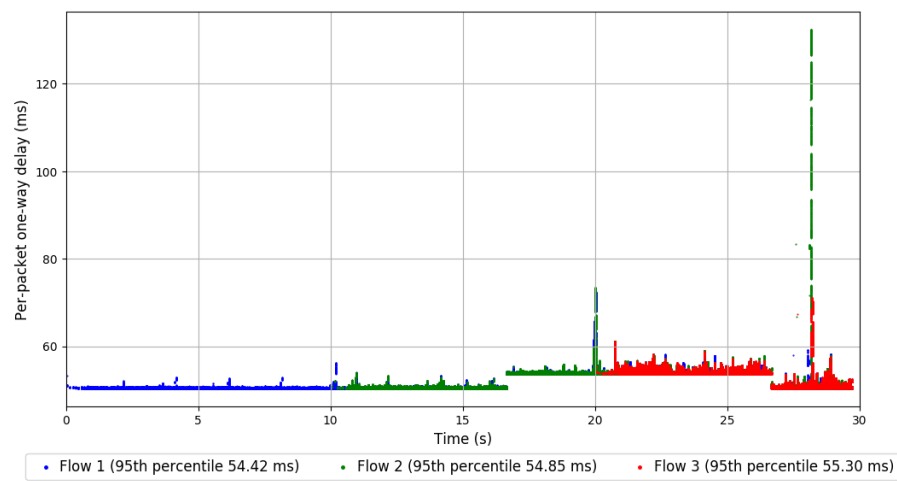
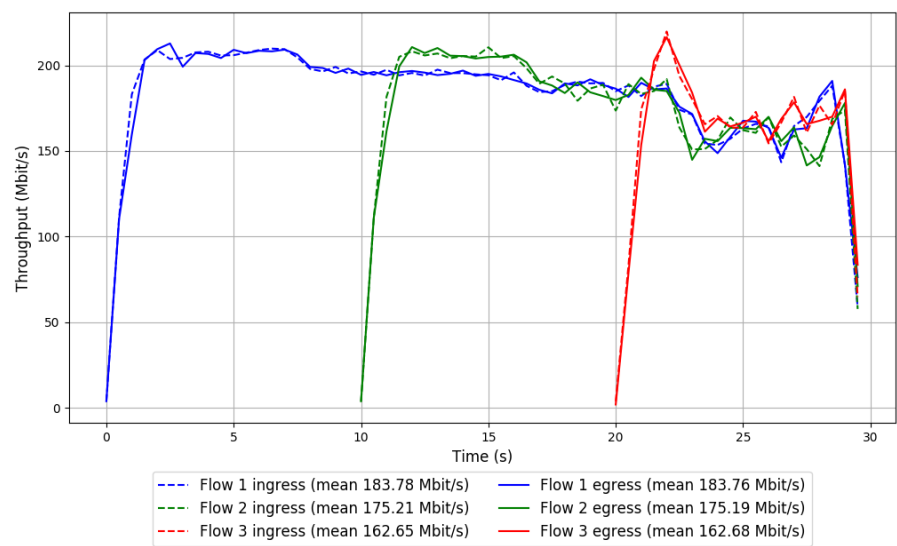
-- Flow 3:

Average throughput: 162.68 Mbit/s

95th percentile per-packet one-way delay: 55.301 ms

Loss rate: 0.01%

Run 4: Report of Indigo — Data Link

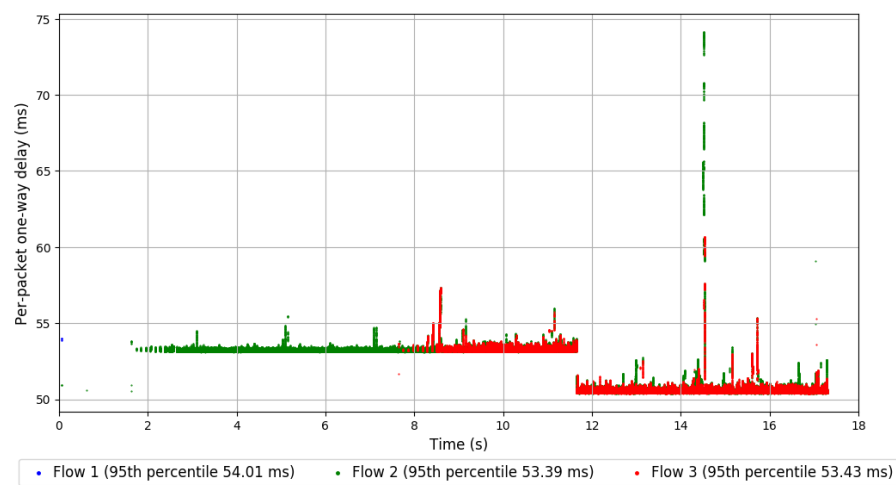
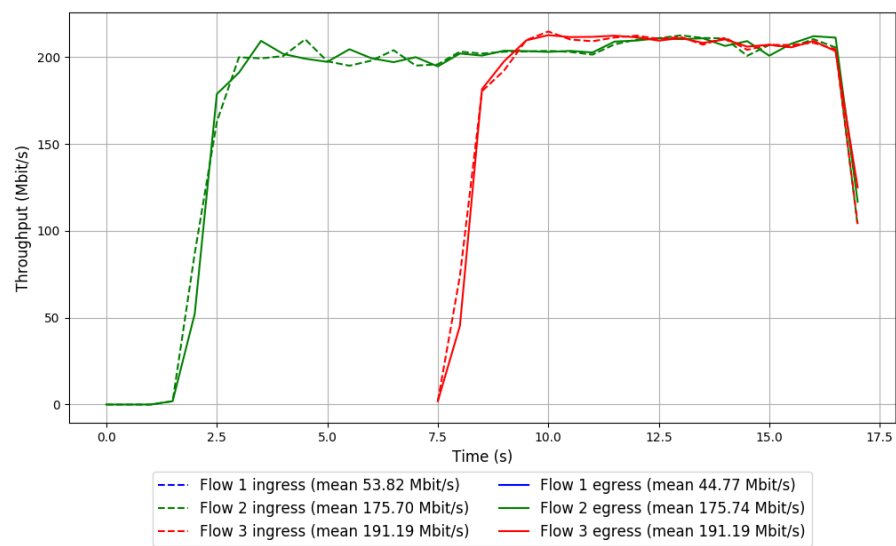


Run 5: Statistics of Indigo

Start at: 2017-12-21 00:27:14

End at: 2017-12-21 00:27:44

Run 5: Report of Indigo — Data Link



Run 6: Statistics of Indigo

Start at: 2017-12-21 00:40:45

End at: 2017-12-21 00:41:15

Below is generated by plot.py at 2017-12-21 04:49:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 359.10 Mbit/s

95th percentile per-packet one-way delay: 51.684 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 189.64 Mbit/s

95th percentile per-packet one-way delay: 51.433 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 179.90 Mbit/s

95th percentile per-packet one-way delay: 51.694 ms

Loss rate: 0.00%

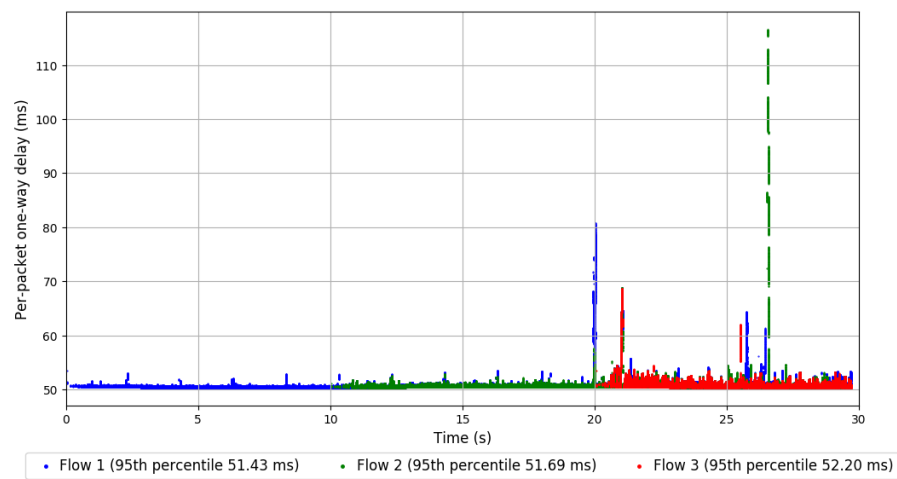
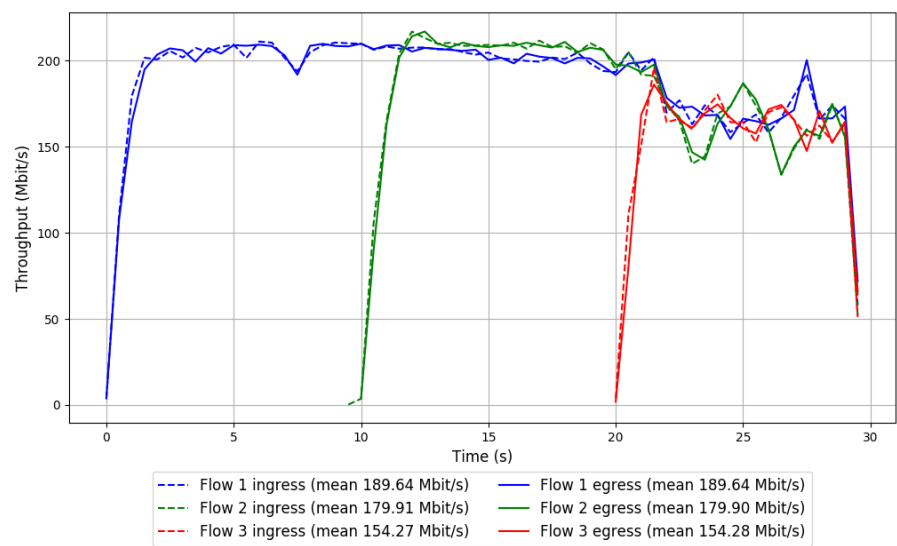
-- Flow 3:

Average throughput: 154.28 Mbit/s

95th percentile per-packet one-way delay: 52.197 ms

Loss rate: 0.00%

Run 6: Report of Indigo — Data Link

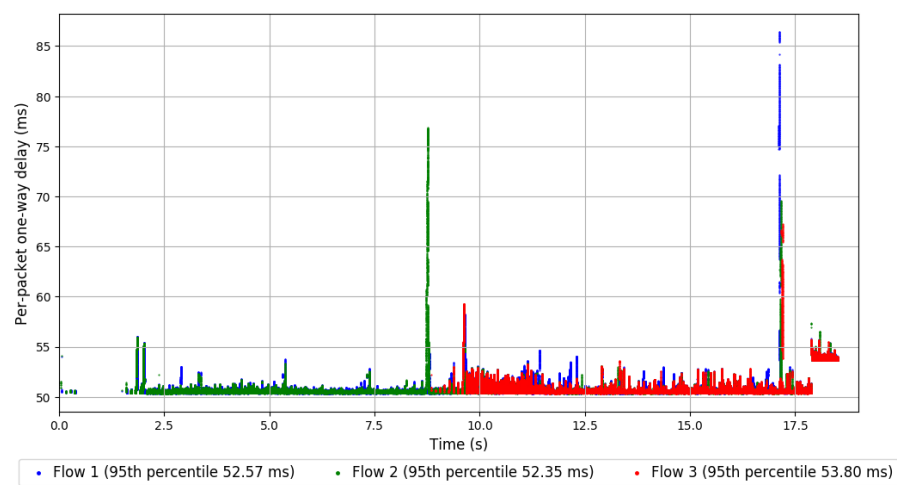
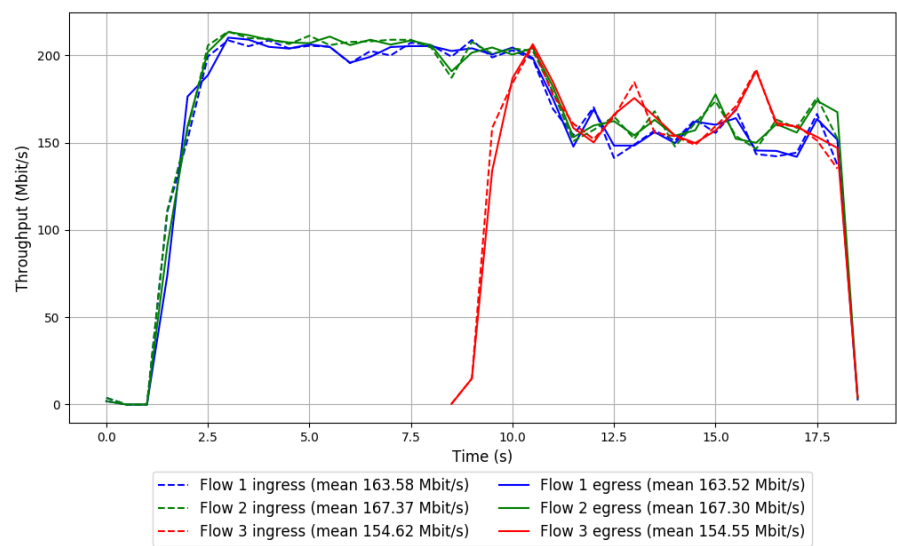


Run 7: Statistics of Indigo

Start at: 2017-12-21 00:54:19

End at: 2017-12-21 00:54:49

Run 7: Report of Indigo — Data Link

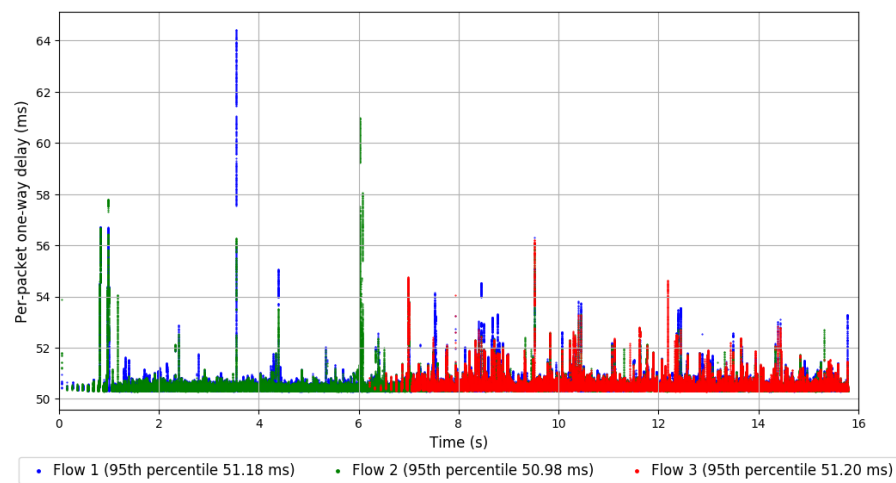
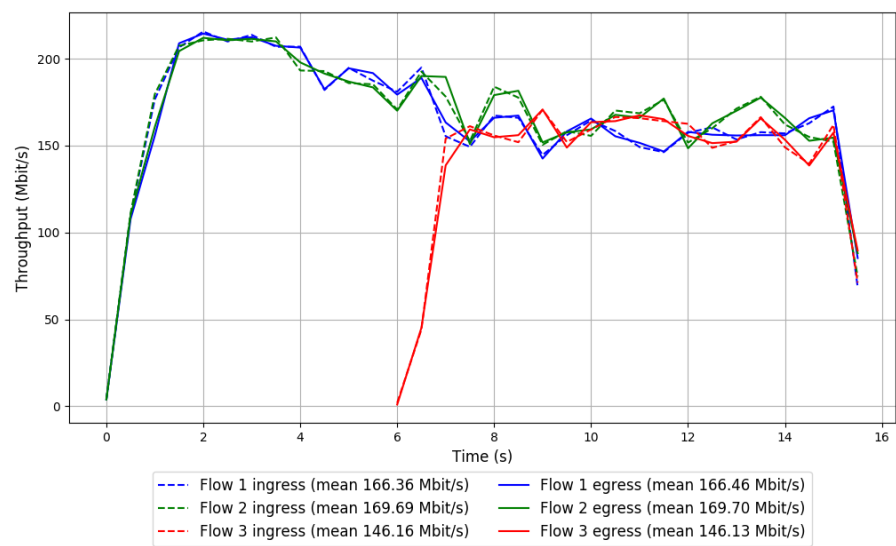


Run 8: Statistics of Indigo

Start at: 2017-12-21 01:07:57

End at: 2017-12-21 01:08:27

Run 8: Report of Indigo — Data Link



Run 9: Statistics of Indigo

Start at: 2017-12-21 01:21:15

End at: 2017-12-21 01:21:45

Below is generated by plot.py at 2017-12-21 04:49:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 354.74 Mbit/s

95th percentile per-packet one-way delay: 54.012 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 188.35 Mbit/s

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

Loss rate: 0.19%

-- Flow 2:

Average throughput: 177.92 Mbit/s

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

Loss rate: 0.31%

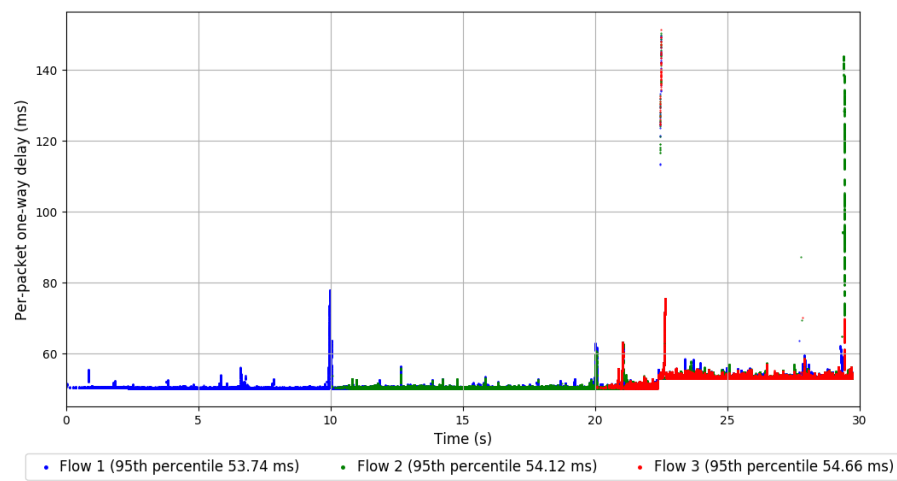
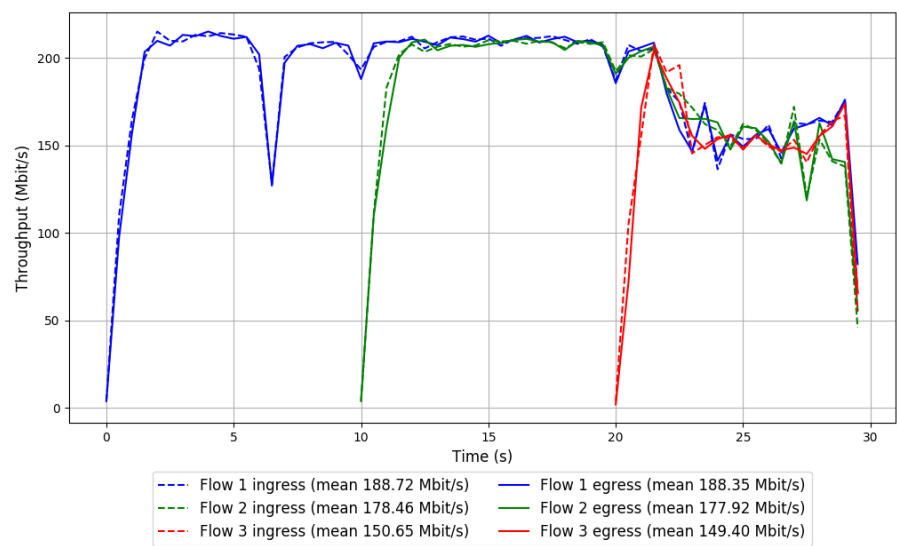
-- Flow 3:

Average throughput: 149.40 Mbit/s

95th percentile per-packet one-way delay: 54.661 ms

Loss rate: 0.84%

Run 9: Report of Indigo — Data Link



Run 10: Statistics of Indigo

Start at: 2017-12-21 01:35:06

End at: 2017-12-21 01:35:36

Below is generated by plot.py at 2017-12-21 04:49:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 351.22 Mbit/s

95th percentile per-packet one-way delay: 53.555 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 191.53 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 168.44 Mbit/s

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

Loss rate: 0.00%

-- Flow 3:

Average throughput: 147.93 Mbit/s

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

Loss rate: 0.01%

Run 10: Report of Indigo — Data Link

