

Pantheon Report

Generated at 2017-12-20 20:50:02 (UTC).

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

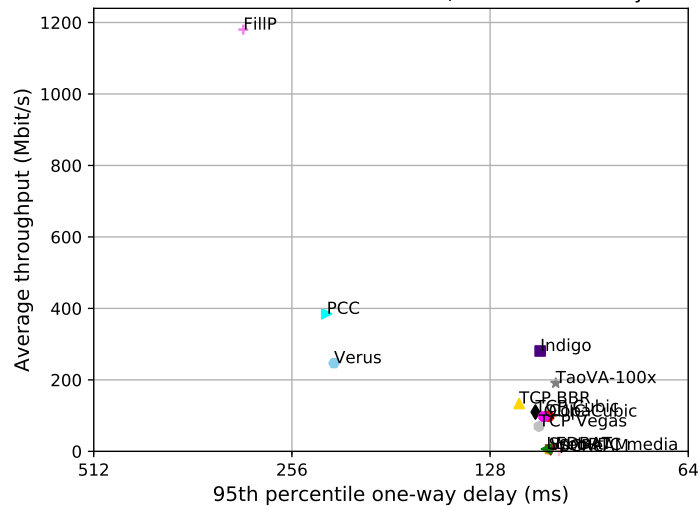
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

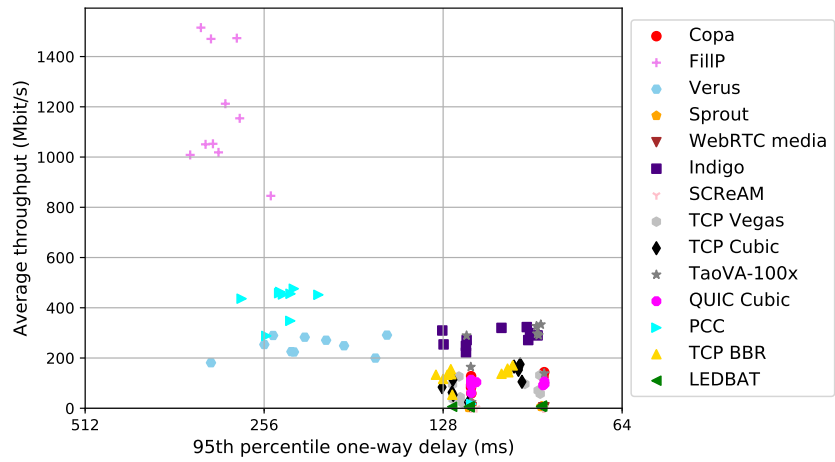
Git summary:

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



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



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	52.86	80.25	82.89	224.50	115.50	116.86	0.62	0.29	0.20
TCP Cubic	10	52.62	57.99	56.86	108.74	108.77	108.72	0.13	0.14	0.03
LEDBAT	10	3.94	2.80	2.42	104.93	105.43	104.72	0.51	1.57	0.70
PCC	10	334.20	62.32	27.76	225.59	210.83	197.14	1.47	0.96	0.83
QUIC Cubic	10	49.53	53.75	37.46	103.06	92.13	100.80	0.01	0.00	0.12
SCReAM	10	0.21	0.22	0.21	97.88	97.69	91.95	0.01	0.00	0.03
WebRTC media	10	2.12	1.32	0.50	100.76	95.05	103.50	0.02	0.00	0.09
Sprout	10	2.60	2.61	2.03	104.15	103.93	106.32	0.53	0.71	0.40
TaoVA-100x	10	105.95	106.05	64.19	101.29	104.96	104.06	0.12	0.61	0.03
TCP Vegas	10	33.52	42.65	23.64	106.65	107.37	106.91	0.21	0.22	0.13
Verus	10	156.11	96.10	80.29	213.29	225.88	210.92	1.09	1.85	1.40
Copa	8	61.07	44.64	29.79	104.29	104.25	107.16	0.02	0.01	5.79
FillP	10	459.35	731.27	708.44	288.84	302.59	293.02	2.63	6.35	6.69
Indigo	10	132.51	157.97	135.36	105.41	108.19	110.51	0.10	0.01	0.03

Run 1: Statistics of TCP BBR

Start at: 2017-12-20 15:44:16

End at: 2017-12-20 15:44:46

Below is generated by plot.py at 2017-12-20 19:45:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.33 Mbit/s

95th percentile per-packet one-way delay: 102.085 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 55.88 Mbit/s

95th percentile per-packet one-way delay: 99.514 ms

Loss rate: 1.64%

-- Flow 2:

Average throughput: 62.27 Mbit/s

95th percentile per-packet one-way delay: 104.134 ms

Loss rate: 0.10%

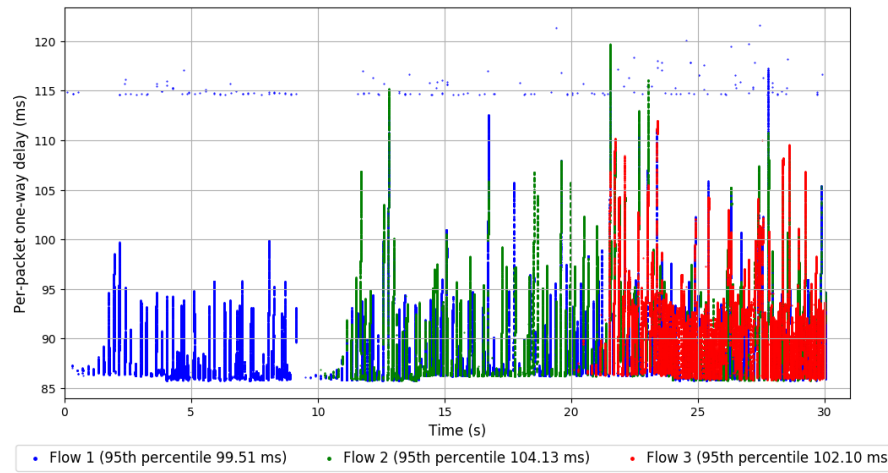
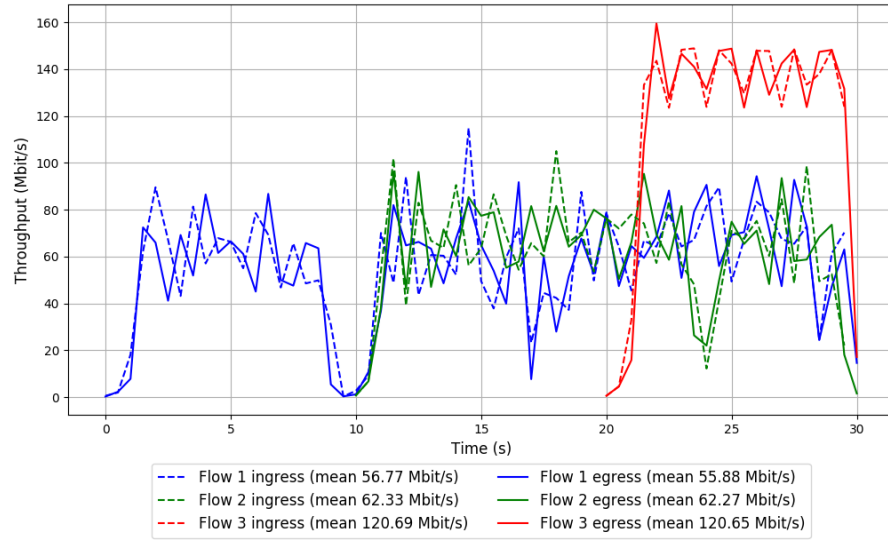
-- Flow 3:

Average throughput: 120.65 Mbit/s

95th percentile per-packet one-way delay: 102.097 ms

Loss rate: 0.00%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-12-20 15:58:45

End at: 2017-12-20 15:59:15

Below is generated by plot.py at 2017-12-20 19:45:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.51 Mbit/s

95th percentile per-packet one-way delay: 124.015 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 53.89 Mbit/s

95th percentile per-packet one-way delay: 124.632 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 101.43 Mbit/s

95th percentile per-packet one-way delay: 123.691 ms

Loss rate: 0.00%

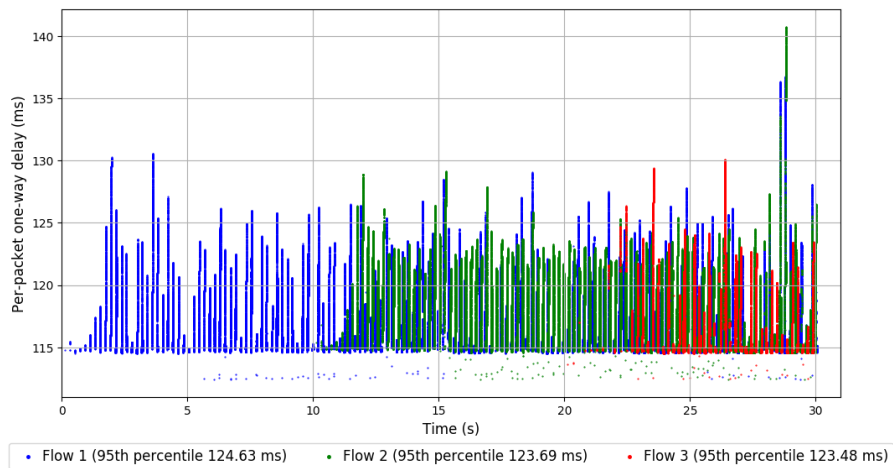
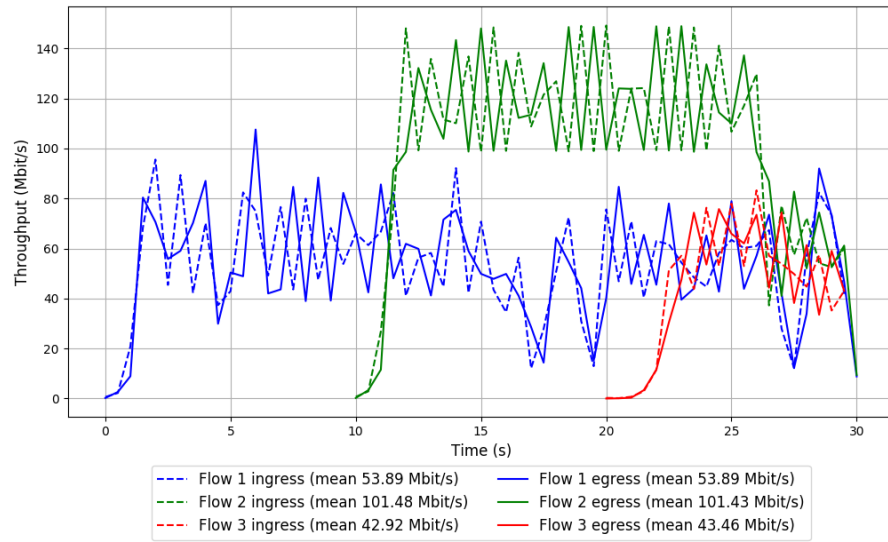
-- Flow 3:

Average throughput: 43.46 Mbit/s

95th percentile per-packet one-way delay: 123.481 ms

Loss rate: 0.03%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-12-20 16:13:03

End at: 2017-12-20 16:13:33

Below is generated by plot.py at 2017-12-20 19:45:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.48 Mbit/s

95th percentile per-packet one-way delay: 125.921 ms

Loss rate: 0.31%

-- Flow 1:

Average throughput: 47.57 Mbit/s

95th percentile per-packet one-way delay: 125.639 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 104.54 Mbit/s

95th percentile per-packet one-way delay: 125.402 ms

Loss rate: 0.00%

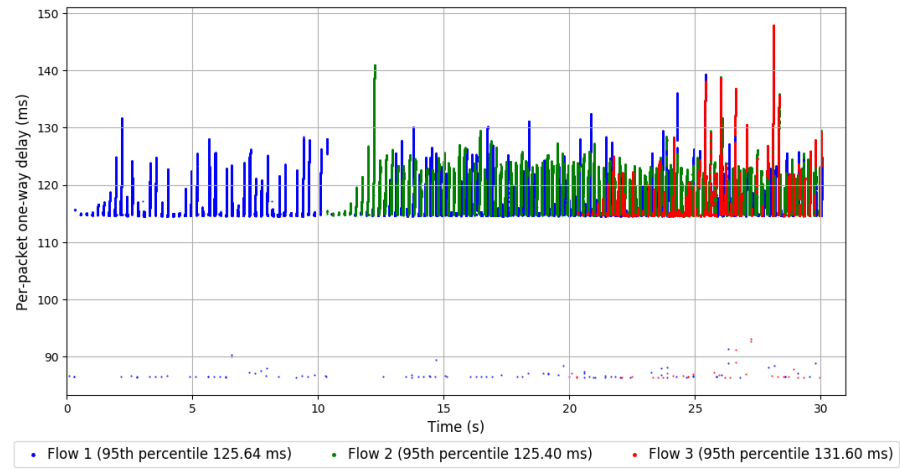
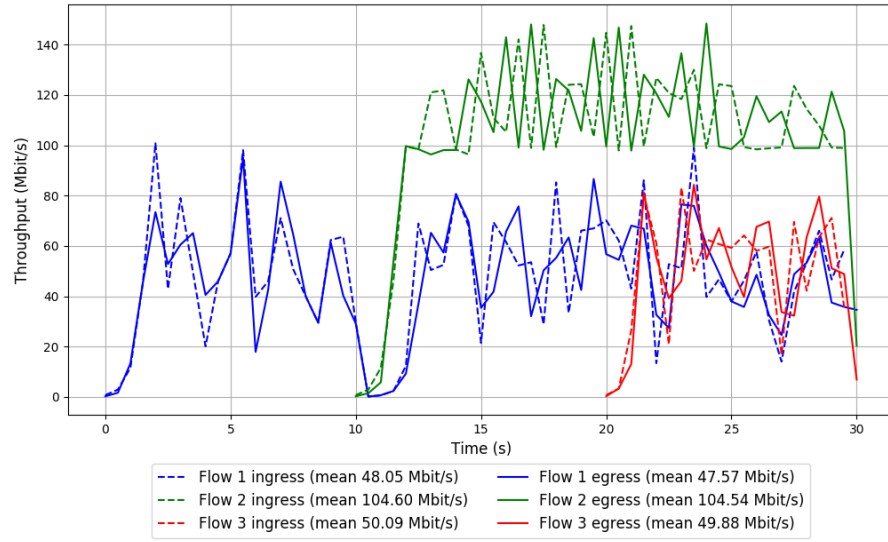
-- Flow 3:

Average throughput: 49.88 Mbit/s

95th percentile per-packet one-way delay: 131.605 ms

Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-12-20 16:27:12

End at: 2017-12-20 16:27:42

Below is generated by plot.py at 2017-12-20 19:45:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 53.98 Mbit/s

95th percentile per-packet one-way delay: 123.515 ms

Loss rate: 1.69%

-- Flow 1:

Average throughput: 10.04 Mbit/s

95th percentile per-packet one-way delay: 1221.815 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 56.44 Mbit/s

95th percentile per-packet one-way delay: 123.400 ms

Loss rate: 1.72%

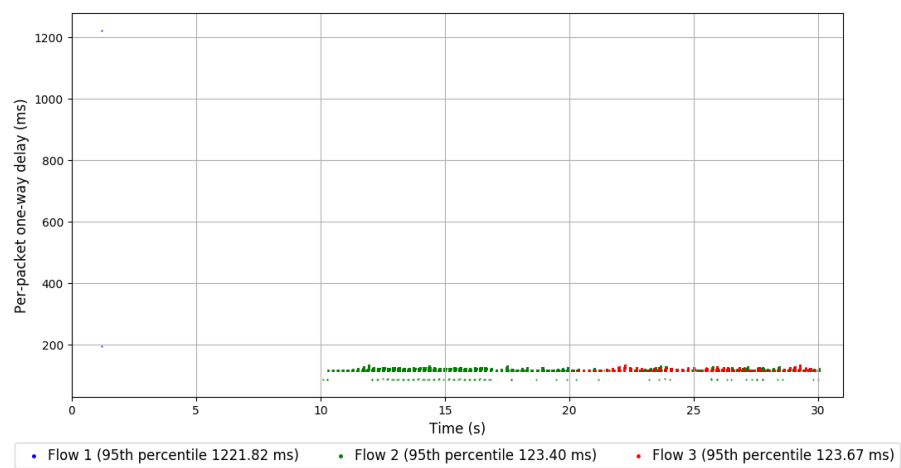
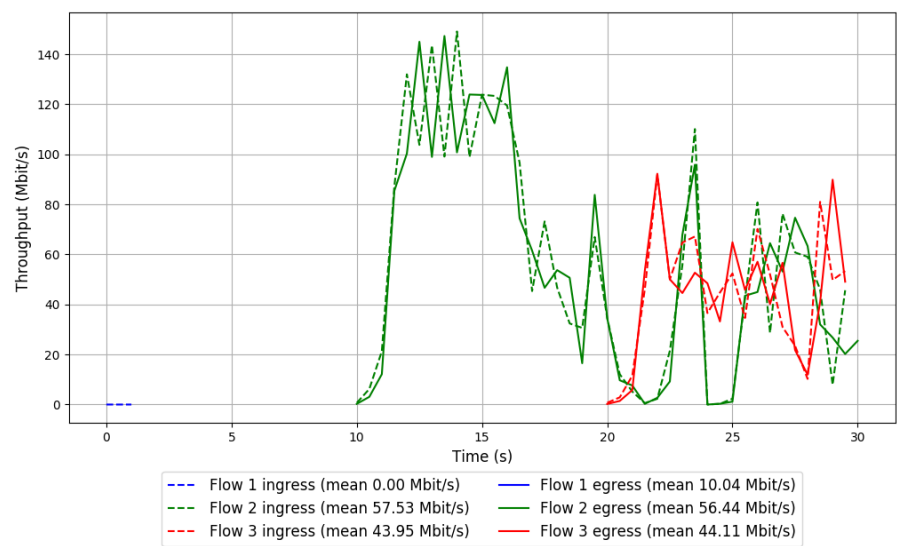
-- Flow 3:

Average throughput: 44.11 Mbit/s

95th percentile per-packet one-way delay: 123.667 ms

Loss rate: 1.62%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-12-20 16:41:52

End at: 2017-12-20 16:42:22

Below is generated by plot.py at 2017-12-20 19:45:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.60 Mbit/s

95th percentile per-packet one-way delay: 131.611 ms

Loss rate: 0.27%

-- Flow 1:

Average throughput: 52.70 Mbit/s

95th percentile per-packet one-way delay: 128.091 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 74.07 Mbit/s

95th percentile per-packet one-way delay: 130.655 ms

Loss rate: 0.00%

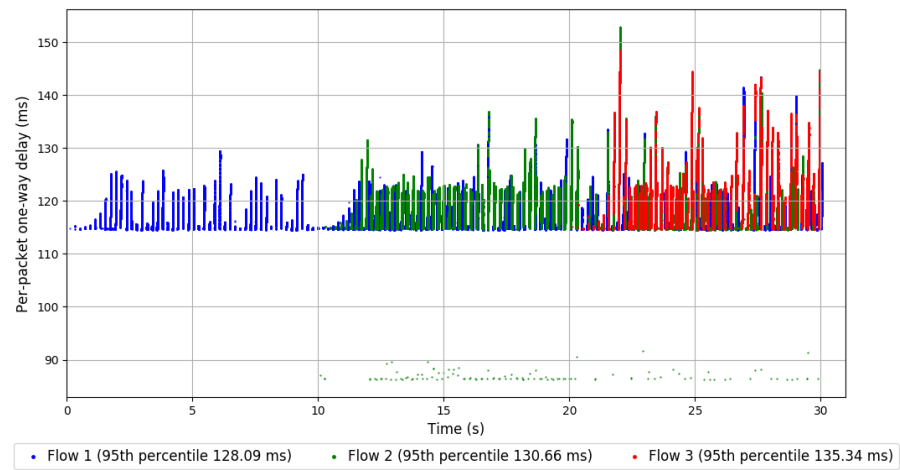
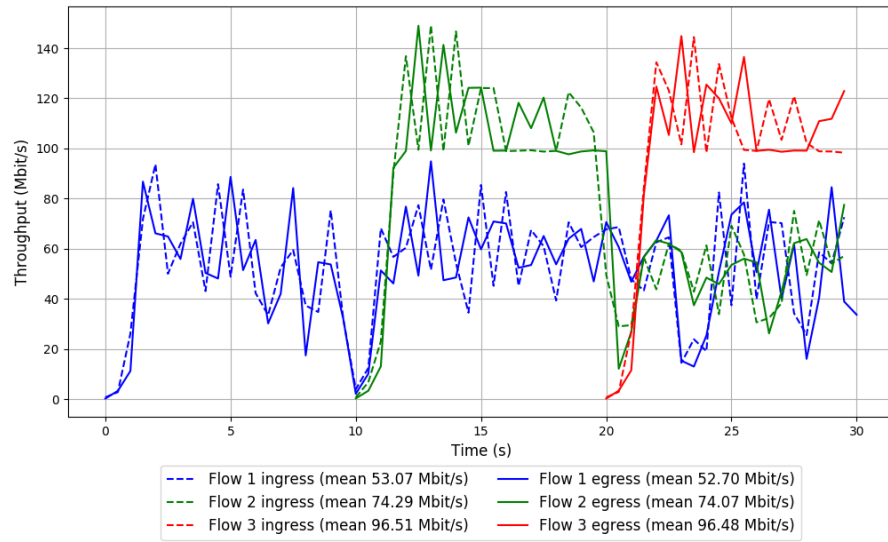
-- Flow 3:

Average throughput: 96.48 Mbit/s

95th percentile per-packet one-way delay: 135.337 ms

Loss rate: 0.00%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-12-20 16:56:07

End at: 2017-12-20 16:56:37

Below is generated by plot.py at 2017-12-20 19:45:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 155.71 Mbit/s

95th percentile per-packet one-way delay: 124.247 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 73.07 Mbit/s

95th percentile per-packet one-way delay: 123.715 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 76.94 Mbit/s

95th percentile per-packet one-way delay: 124.944 ms

Loss rate: 0.00%

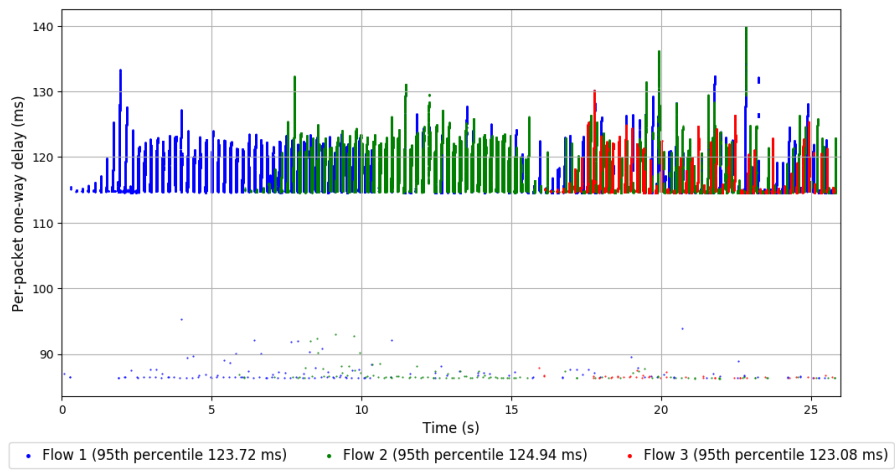
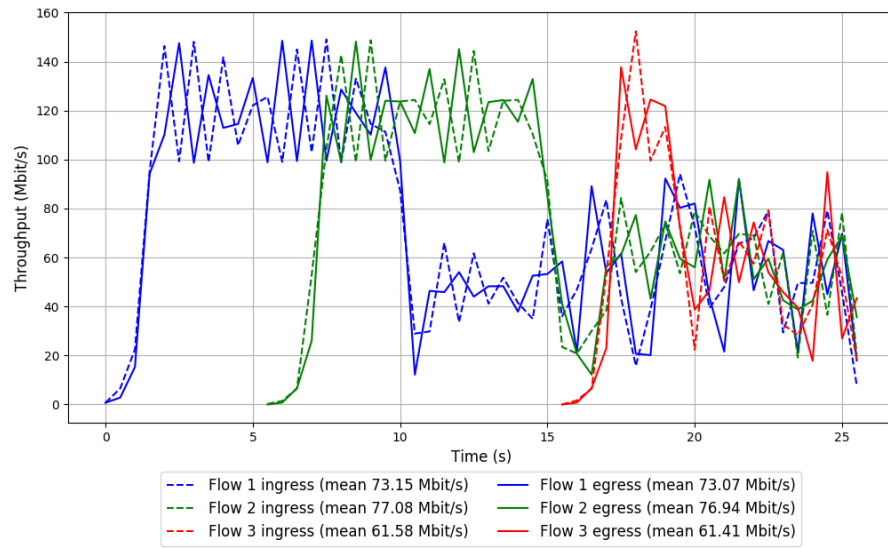
-- Flow 3:

Average throughput: 61.41 Mbit/s

95th percentile per-packet one-way delay: 123.075 ms

Loss rate: 0.00%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-12-20 17:10:14

End at: 2017-12-20 17:10:44

Below is generated by plot.py at 2017-12-20 19:45:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.89 Mbit/s

95th percentile per-packet one-way delay: 128.009 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 57.41 Mbit/s

95th percentile per-packet one-way delay: 127.022 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 65.19 Mbit/s

95th percentile per-packet one-way delay: 130.468 ms

Loss rate: 0.94%

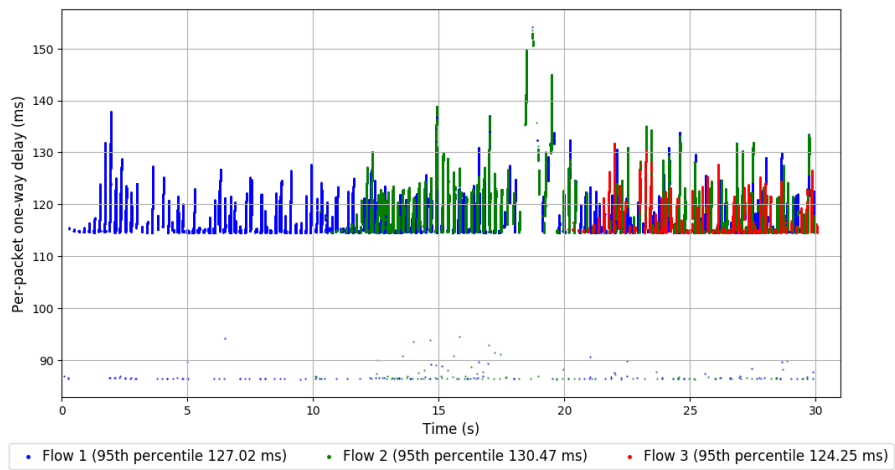
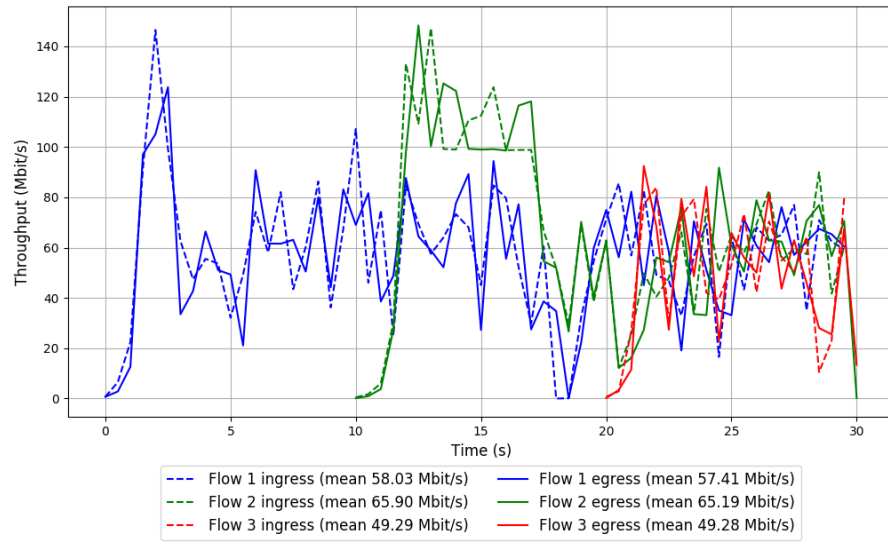
-- Flow 3:

Average throughput: 49.28 Mbit/s

95th percentile per-packet one-way delay: 124.251 ms

Loss rate: 0.00%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-12-20 17:25:05

End at: 2017-12-20 17:25:35

Below is generated by plot.py at 2017-12-20 19:45:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 157.78 Mbit/s

95th percentile per-packet one-way delay: 99.748 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 52.03 Mbit/s

95th percentile per-packet one-way delay: 100.021 ms

Loss rate: 1.49%

-- Flow 2:

Average throughput: 98.98 Mbit/s

95th percentile per-packet one-way delay: 96.606 ms

Loss rate: 0.14%

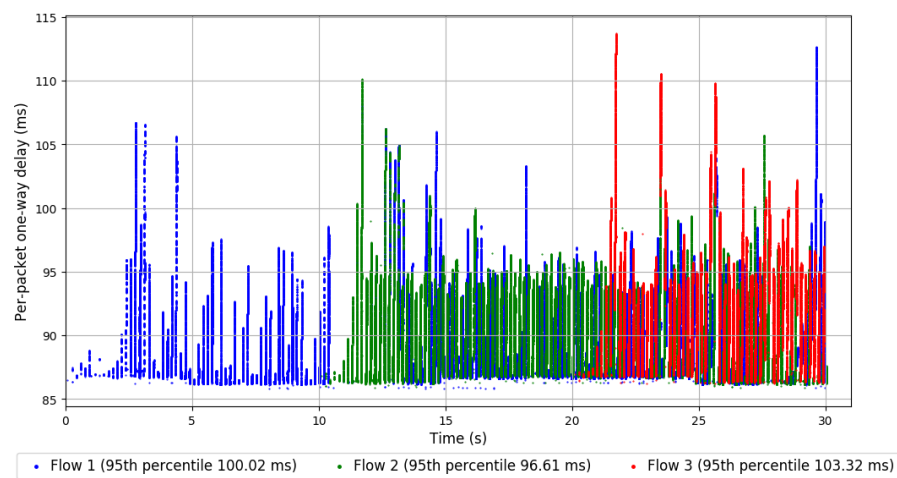
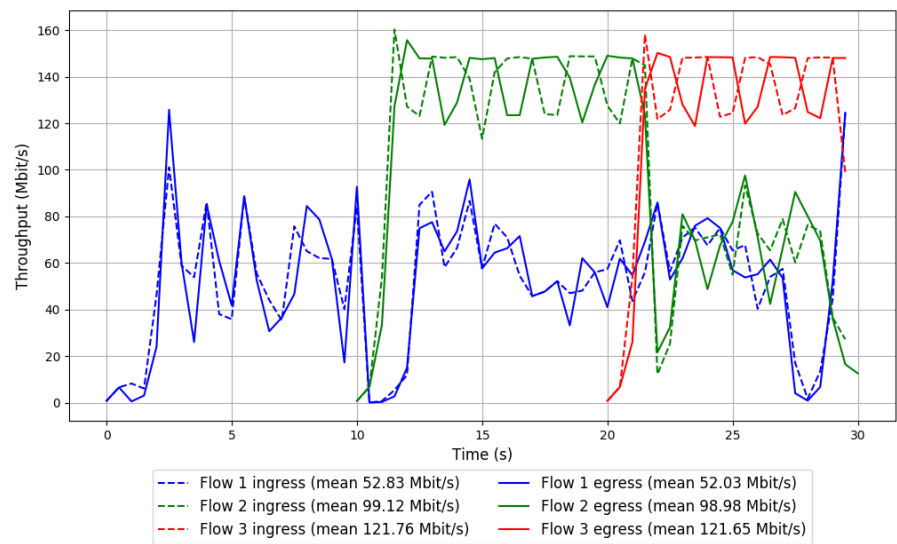
-- Flow 3:

Average throughput: 121.65 Mbit/s

95th percentile per-packet one-way delay: 103.318 ms

Loss rate: 0.00%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

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

End at: 2017-12-20 17:40:42

Below is generated by plot.py at 2017-12-20 19:46:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 143.28 Mbit/s

95th percentile per-packet one-way delay: 99.450 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 62.70 Mbit/s

95th percentile per-packet one-way delay: 97.709 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 61.43 Mbit/s

95th percentile per-packet one-way delay: 97.302 ms

Loss rate: 0.00%

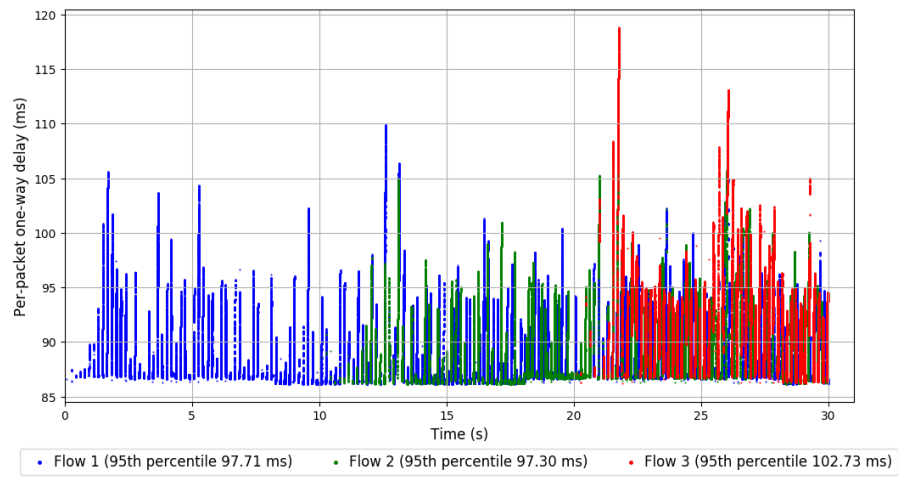
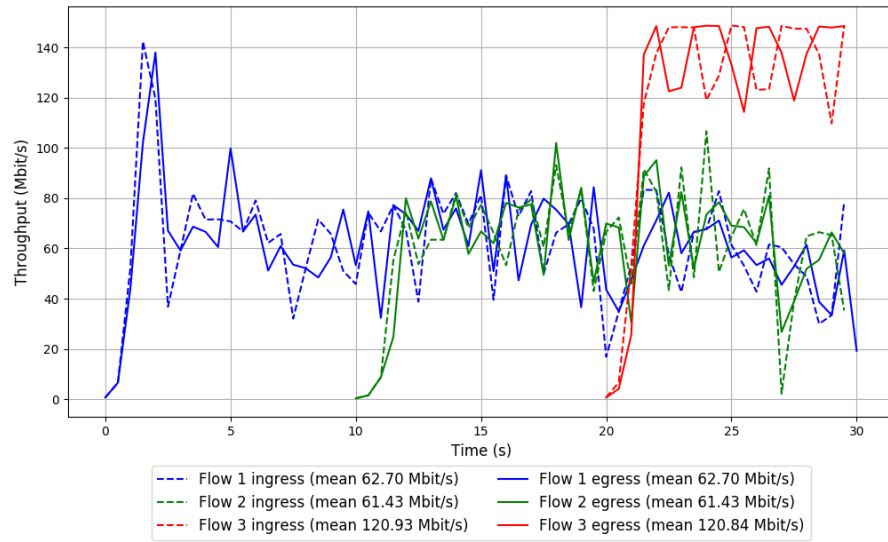
-- Flow 3:

Average throughput: 120.84 Mbit/s

95th percentile per-packet one-way delay: 102.726 ms

Loss rate: 0.00%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-12-20 17:54:32

End at: 2017-12-20 17:55:02

Below is generated by plot.py at 2017-12-20 19:48:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 170.68 Mbit/s

95th percentile per-packet one-way delay: 97.770 ms

Loss rate: 0.28%

-- Flow 1:

Average throughput: 63.32 Mbit/s

95th percentile per-packet one-way delay: 96.836 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 101.25 Mbit/s

95th percentile per-packet one-way delay: 98.407 ms

Loss rate: 0.00%

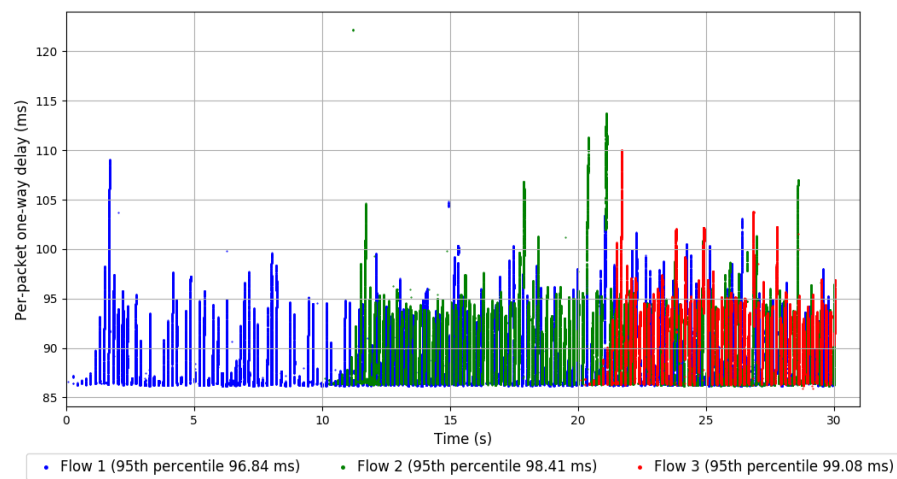
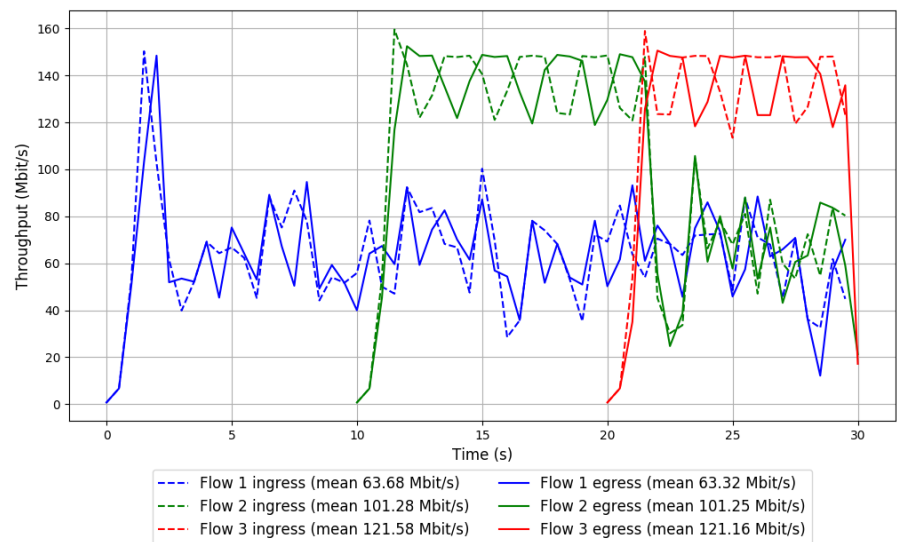
-- Flow 3:

Average throughput: 121.16 Mbit/s

95th percentile per-packet one-way delay: 99.080 ms

Loss rate: 0.31%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2017-12-20 15:39:41

End at: 2017-12-20 15:40:11

Below is generated by plot.py at 2017-12-20 19:48:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.30 Mbit/s

95th percentile per-packet one-way delay: 94.321 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 58.90 Mbit/s

95th percentile per-packet one-way delay: 95.136 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 39.27 Mbit/s

95th percentile per-packet one-way delay: 91.145 ms

Loss rate: 0.16%

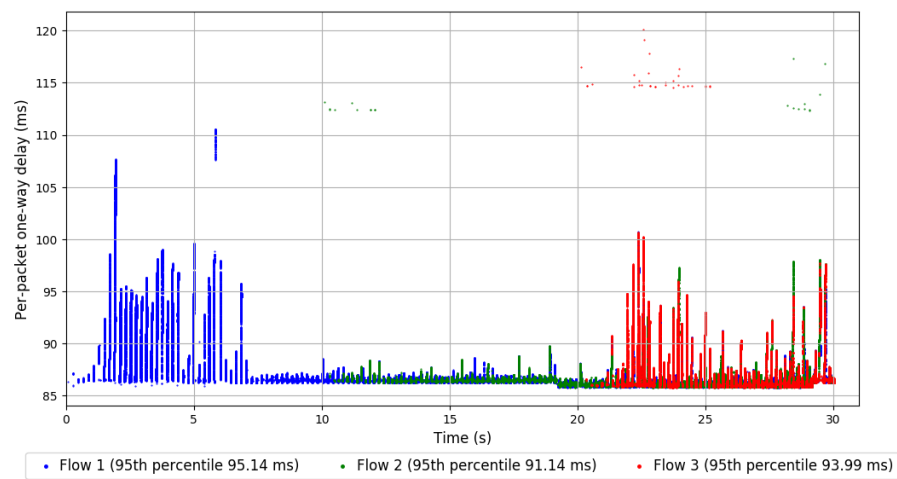
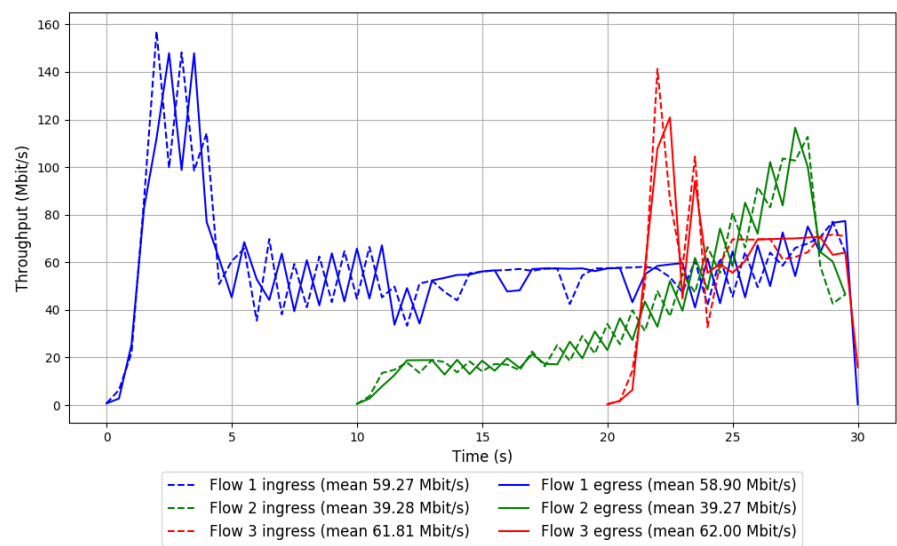
-- Flow 3:

Average throughput: 62.00 Mbit/s

95th percentile per-packet one-way delay: 93.993 ms

Loss rate: 0.00%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-12-20 15:53:36

End at: 2017-12-20 15:54:06

Below is generated by plot.py at 2017-12-20 19:48:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 174.97 Mbit/s

95th percentile per-packet one-way delay: 94.977 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 90.47 Mbit/s

95th percentile per-packet one-way delay: 94.836 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 69.85 Mbit/s

95th percentile per-packet one-way delay: 96.065 ms

Loss rate: 0.00%

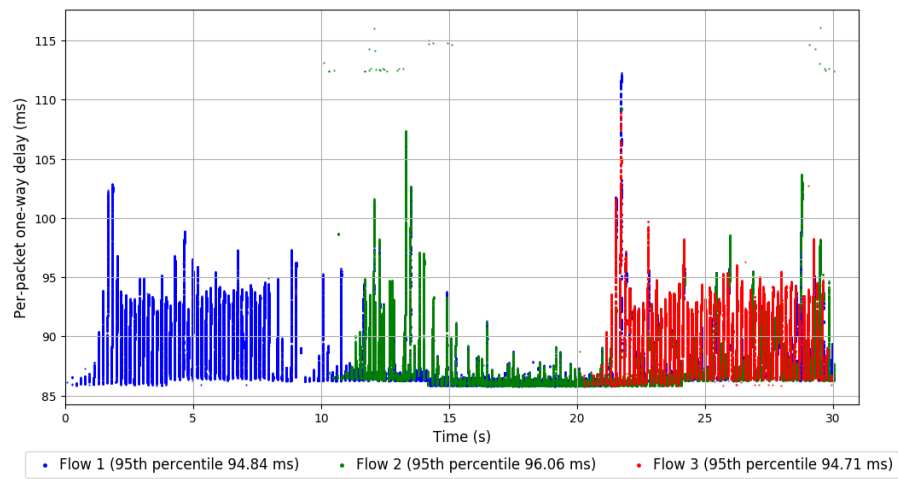
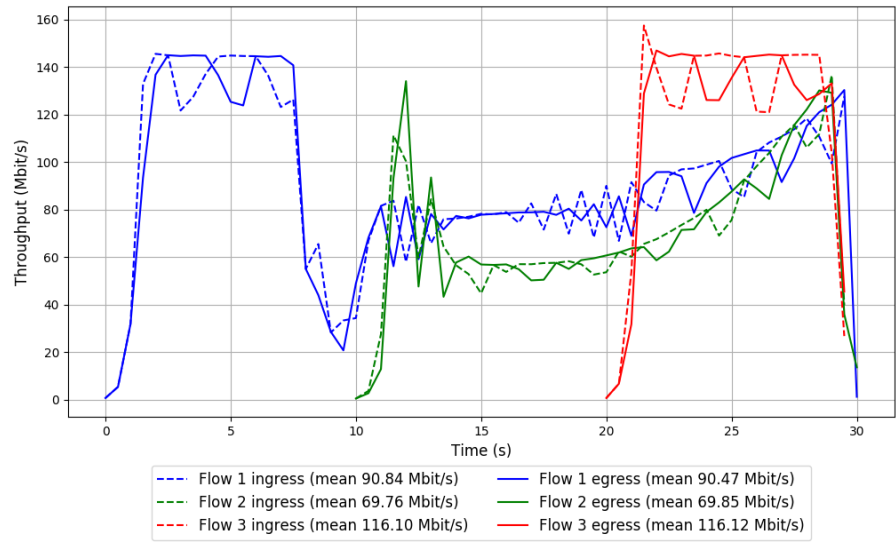
-- Flow 3:

Average throughput: 116.12 Mbit/s

95th percentile per-packet one-way delay: 94.712 ms

Loss rate: 0.00%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-12-20 16:08:41

End at: 2017-12-20 16:09:11

Below is generated by plot.py at 2017-12-20 19:48:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 53.03 Mbit/s

95th percentile per-packet one-way delay: 123.121 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 12.71 Mbit/s

95th percentile per-packet one-way delay: 119.182 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 57.66 Mbit/s

95th percentile per-packet one-way delay: 123.758 ms

Loss rate: 1.20%

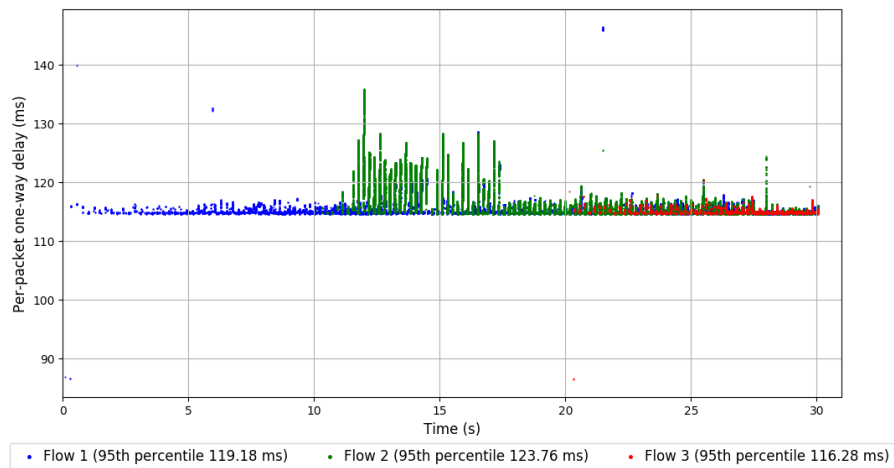
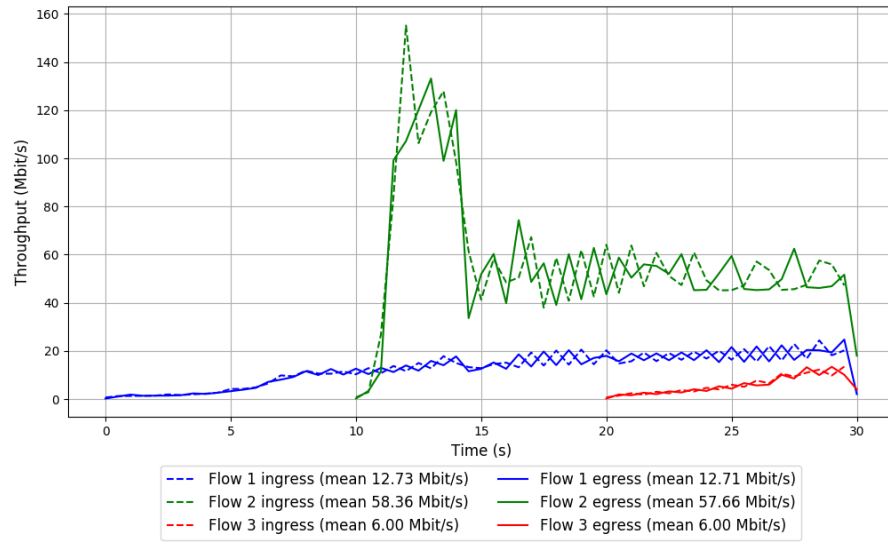
-- Flow 3:

Average throughput: 6.00 Mbit/s

95th percentile per-packet one-way delay: 116.283 ms

Loss rate: 0.00%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-12-20 16:22:40

End at: 2017-12-20 16:23:10

Below is generated by plot.py at 2017-12-20 19:48:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.68 Mbit/s

95th percentile per-packet one-way delay: 123.245 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 40.32 Mbit/s

95th percentile per-packet one-way delay: 124.619 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 107.76 Mbit/s

95th percentile per-packet one-way delay: 122.787 ms

Loss rate: 0.00%

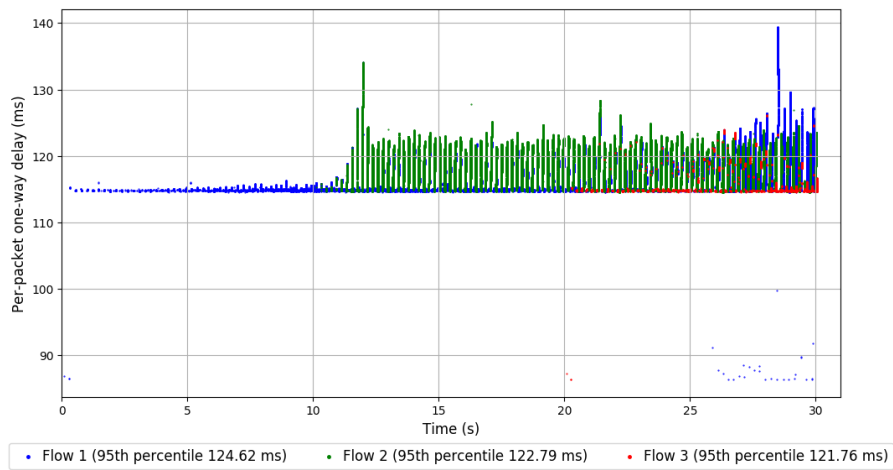
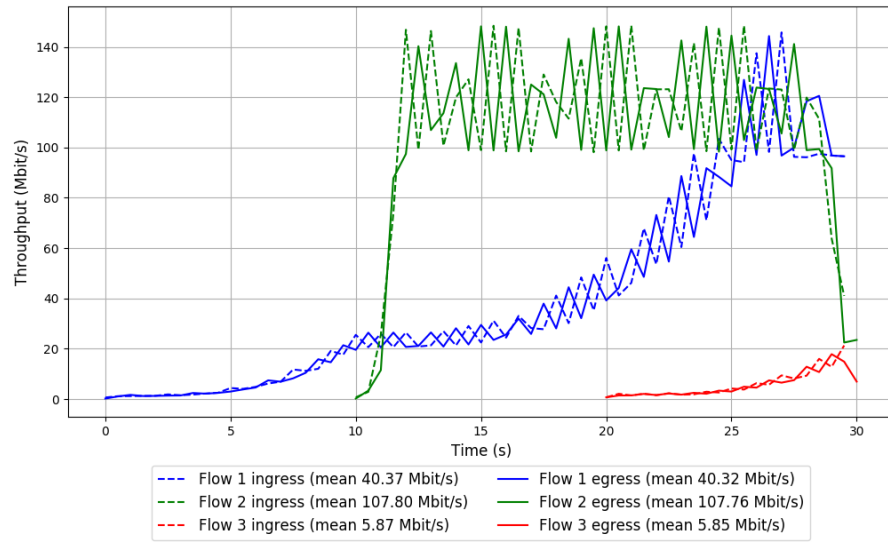
-- Flow 3:

Average throughput: 5.85 Mbit/s

95th percentile per-packet one-way delay: 121.764 ms

Loss rate: 0.00%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-12-20 16:36:54

End at: 2017-12-20 16:37:24

Below is generated by plot.py at 2017-12-20 19:48:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 63.09 Mbit/s

95th percentile per-packet one-way delay: 123.669 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 33.73 Mbit/s

95th percentile per-packet one-way delay: 123.381 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 14.87 Mbit/s

95th percentile per-packet one-way delay: 120.999 ms

Loss rate: 0.00%

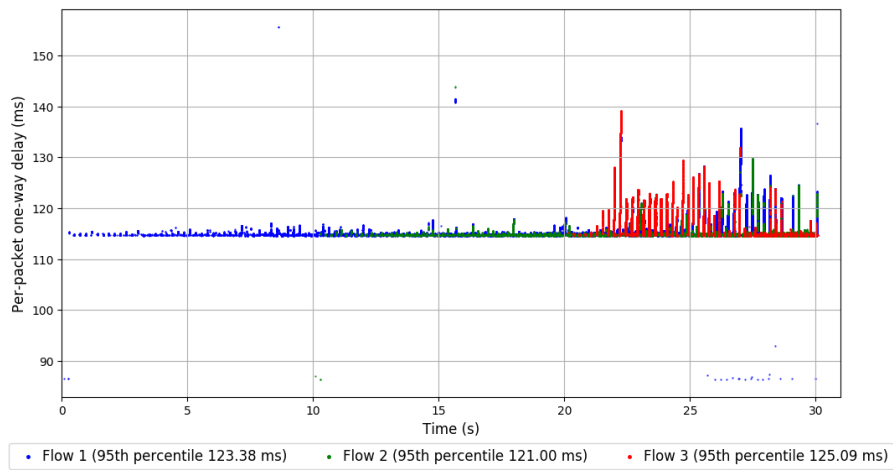
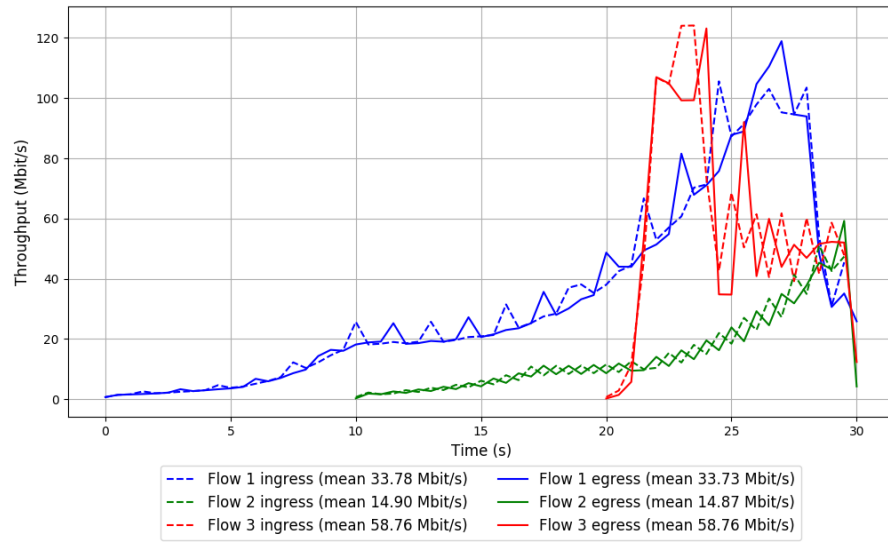
-- Flow 3:

Average throughput: 58.76 Mbit/s

95th percentile per-packet one-way delay: 125.092 ms

Loss rate: 0.00%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-12-20 16:51:28

End at: 2017-12-20 16:51:58

Below is generated by plot.py at 2017-12-20 19:48:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.97 Mbit/s

95th percentile per-packet one-way delay: 128.507 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 41.69 Mbit/s

95th percentile per-packet one-way delay: 126.962 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 20.03 Mbit/s

95th percentile per-packet one-way delay: 128.631 ms

Loss rate: 0.00%

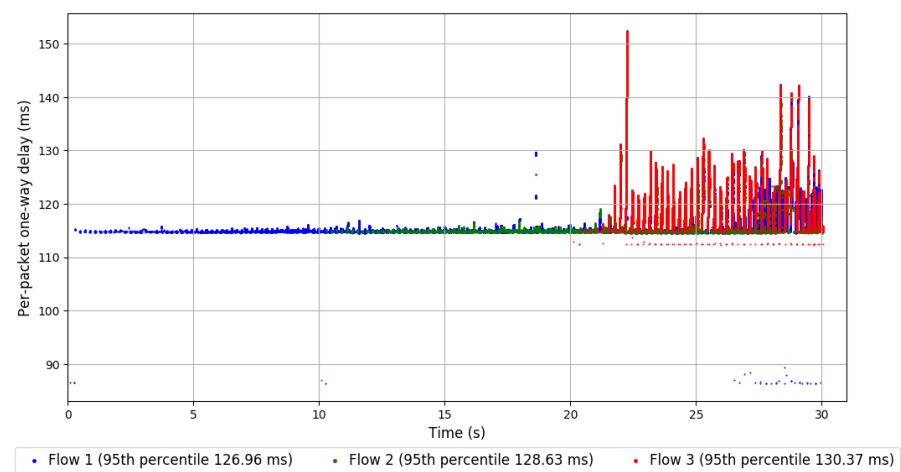
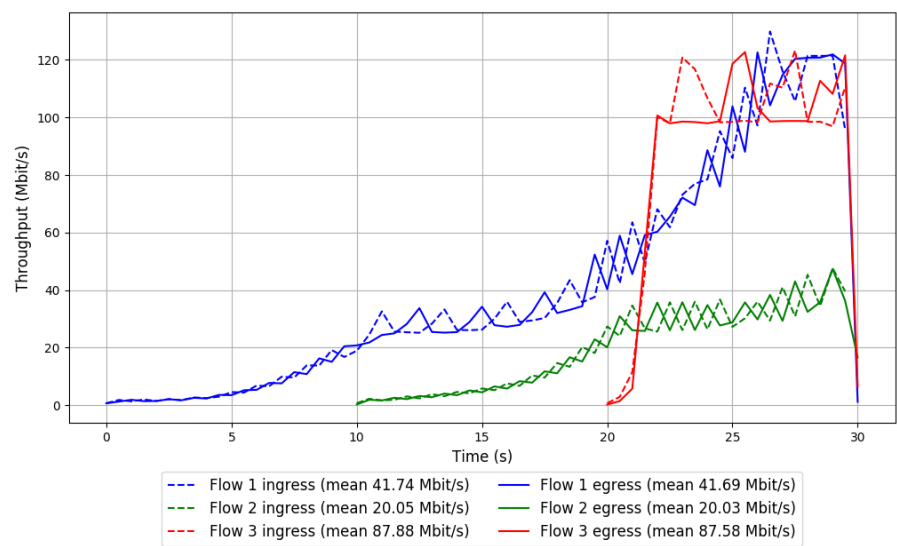
-- Flow 3:

Average throughput: 87.58 Mbit/s

95th percentile per-packet one-way delay: 130.367 ms

Loss rate: 0.34%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-12-20 17:06:02

End at: 2017-12-20 17:06:32

Below is generated by plot.py at 2017-12-20 19:48:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 23.87 Mbit/s

95th percentile per-packet one-way delay: 116.044 ms

Loss rate: 0.17%

-- Flow 1:

Average throughput: 18.39 Mbit/s

95th percentile per-packet one-way delay: 116.035 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 6.23 Mbit/s

95th percentile per-packet one-way delay: 116.101 ms

Loss rate: 0.08%

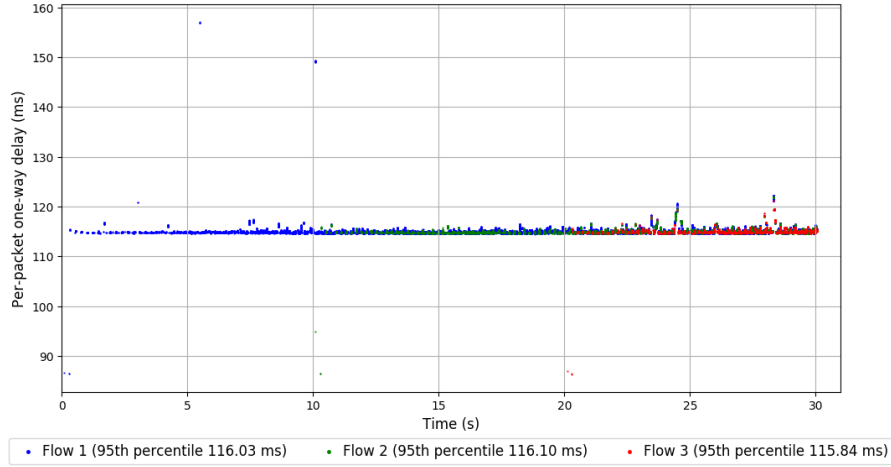
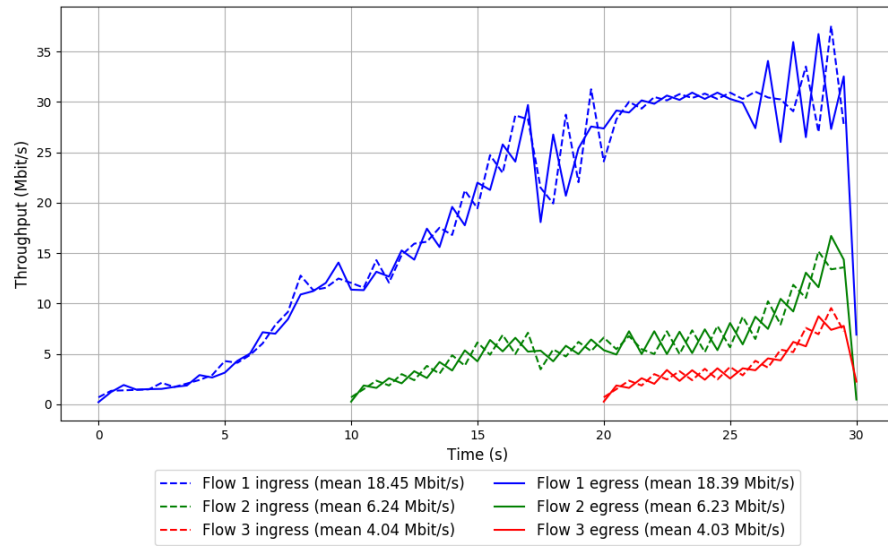
-- Flow 3:

Average throughput: 4.03 Mbit/s

95th percentile per-packet one-way delay: 115.839 ms

Loss rate: 0.00%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-12-20 17:20:14

End at: 2017-12-20 17:20:44

Below is generated by plot.py at 2017-12-20 19:49:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 165.92 Mbit/s

95th percentile per-packet one-way delay: 97.247 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 86.64 Mbit/s

95th percentile per-packet one-way delay: 96.457 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 59.48 Mbit/s

95th percentile per-packet one-way delay: 96.912 ms

Loss rate: 0.00%

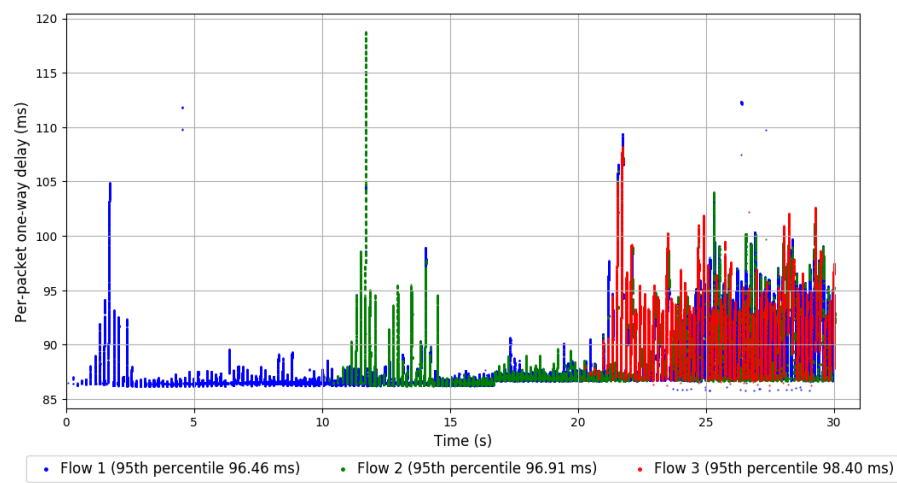
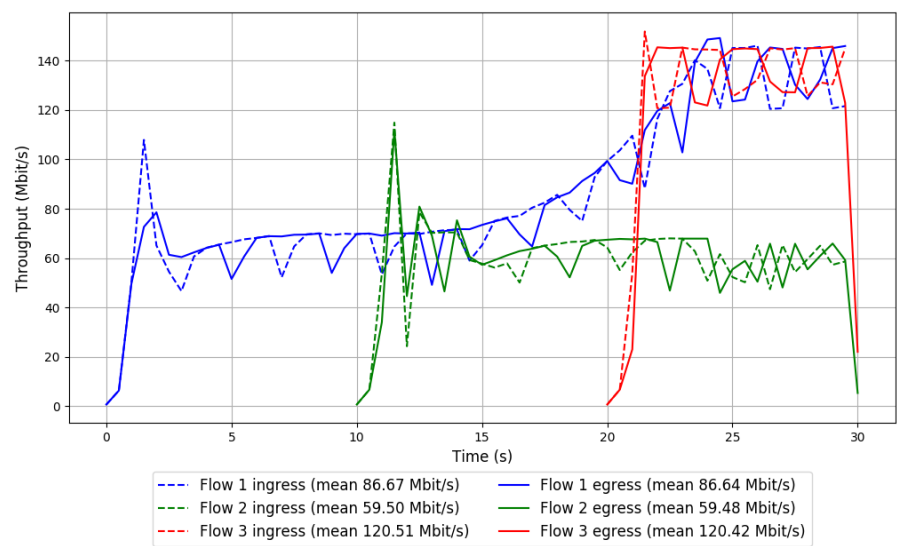
-- Flow 3:

Average throughput: 120.42 Mbit/s

95th percentile per-packet one-way delay: 98.403 ms

Loss rate: 0.00%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-12-20 17:35:11

End at: 2017-12-20 17:35:41

Below is generated by plot.py at 2017-12-20 19:49:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 162.21 Mbit/s

95th percentile per-packet one-way delay: 95.514 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 86.09 Mbit/s

95th percentile per-packet one-way delay: 95.491 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 75.02 Mbit/s

95th percentile per-packet one-way delay: 95.368 ms

Loss rate: 0.00%

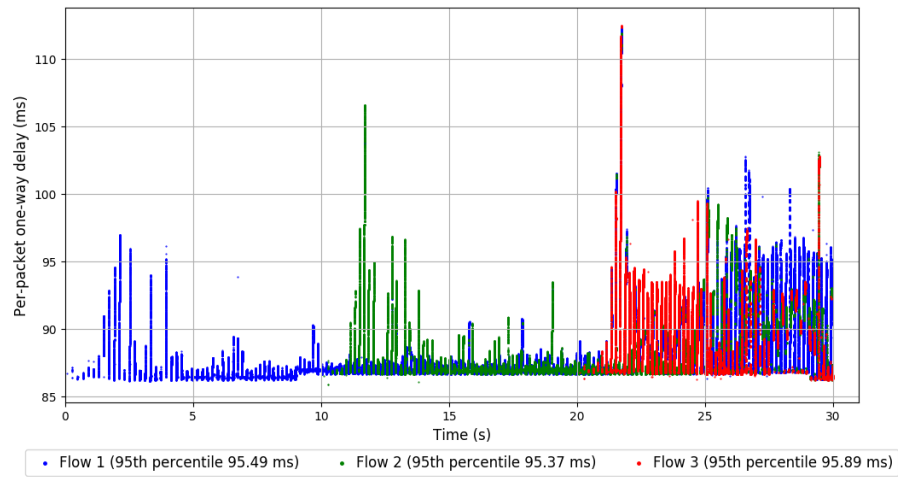
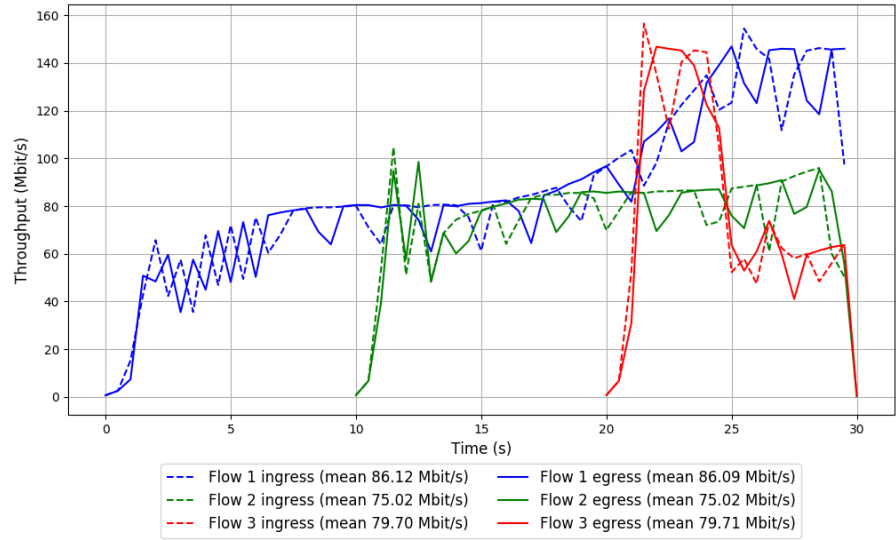
-- Flow 3:

Average throughput: 79.71 Mbit/s

95th percentile per-packet one-way delay: 95.895 ms

Loss rate: 0.00%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-12-20 17:49:37

End at: 2017-12-20 17:50:07

Below is generated by plot.py at 2017-12-20 19:49:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 152.64 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 57.26 Mbit/s

95th percentile per-packet one-way delay: 95.260 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 129.72 Mbit/s

95th percentile per-packet one-way delay: 95.888 ms

Loss rate: 0.00%

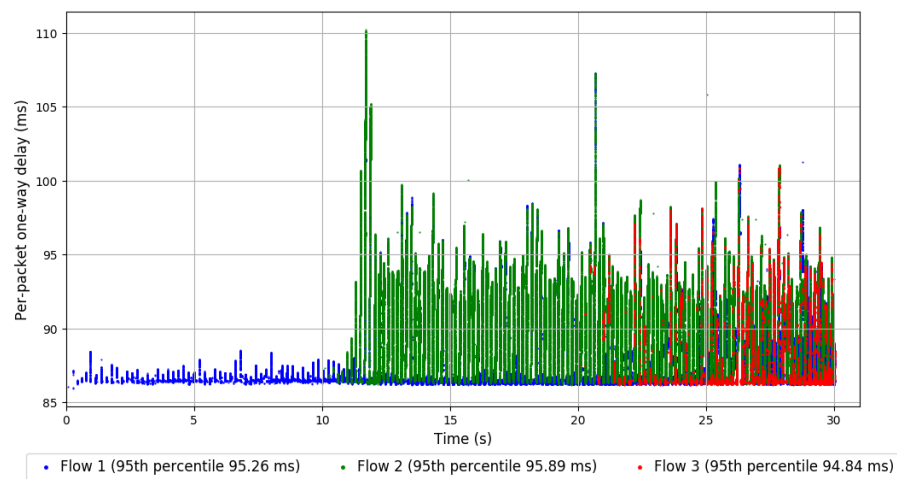
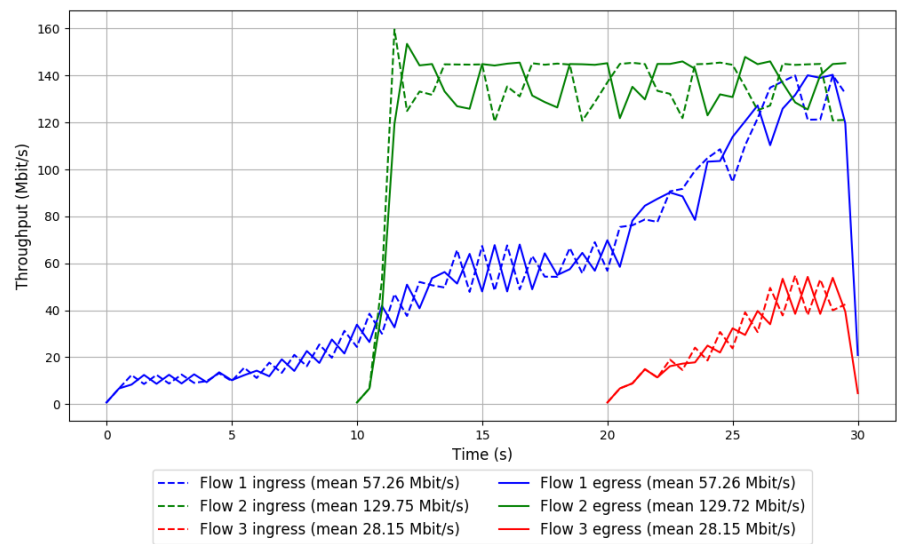
-- Flow 3:

Average throughput: 28.15 Mbit/s

95th percentile per-packet one-way delay: 94.838 ms

Loss rate: 0.00%

Run 10: Report of TCP Cubic — Data Link

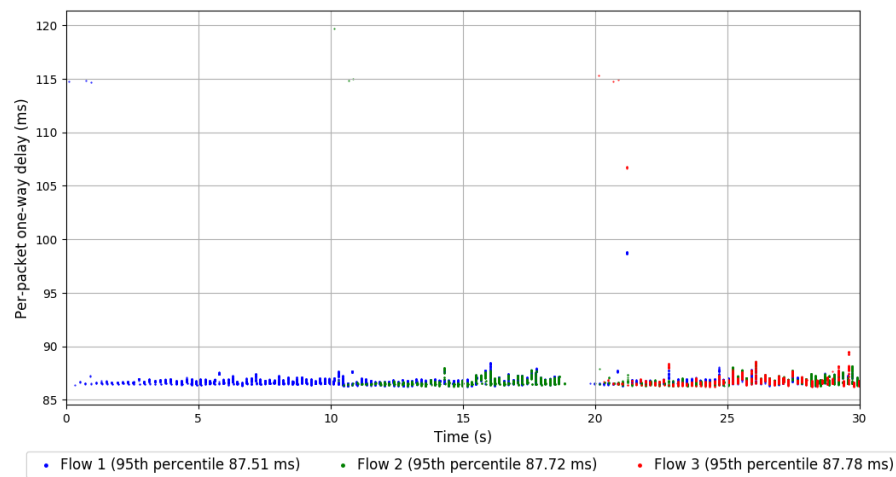
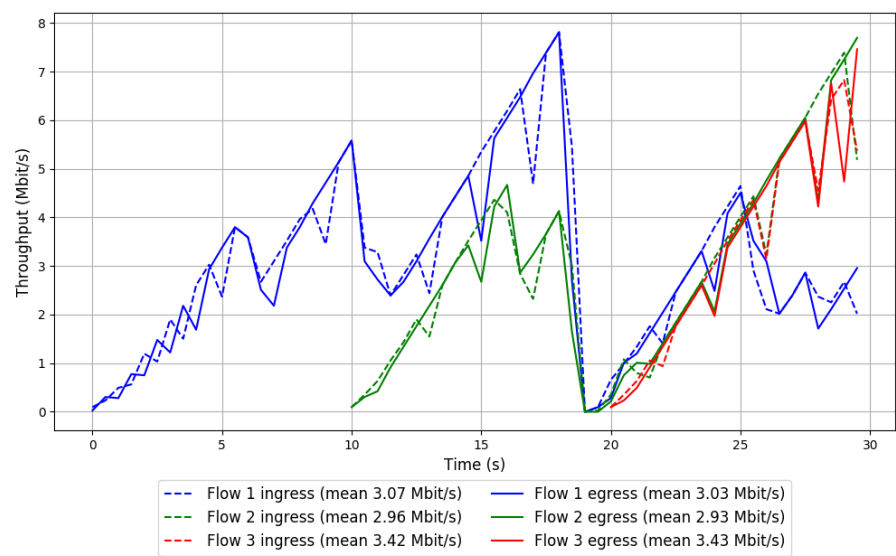


```
Run 1: Statistics of LEDBAT

Start at: 2017-12-20 15:45:10
End at: 2017-12-20 15:45:40

# Below is generated by plot.py at 2017-12-20 19:49:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.09 Mbit/s
95th percentile per-packet one-way delay: 87.634 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 3.03 Mbit/s
95th percentile per-packet one-way delay: 87.513 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 87.721 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 87.777 ms
Loss rate: 0.00%
```


Run 1: Report of LEDBAT — Data Link

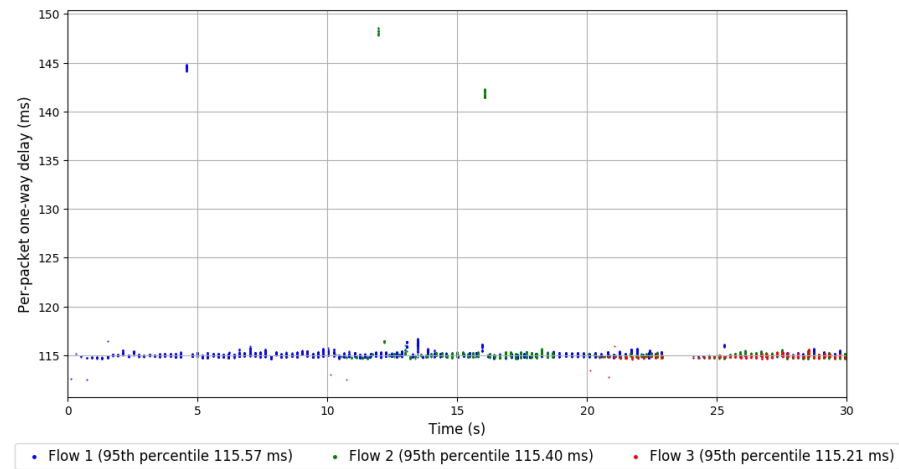
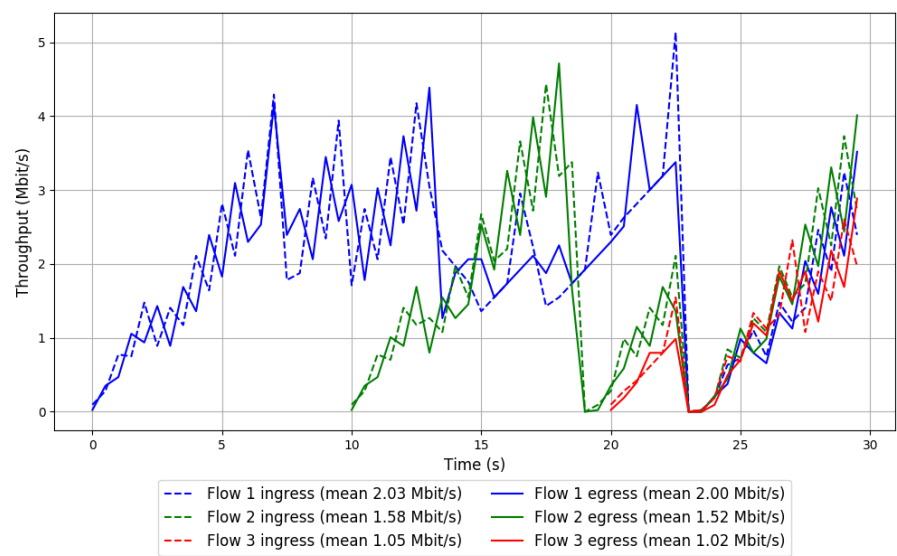


```
Run 2: Statistics of LEDBAT

Start at: 2017-12-20 15:59:40
End at: 2017-12-20 16:00:10

# Below is generated by plot.py at 2017-12-20 19:49:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.34 Mbit/s
95th percentile per-packet one-way delay: 115.515 ms
Loss rate: 2.40%
-- Flow 1:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 115.572 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 115.399 ms
Loss rate: 3.94%
-- Flow 3:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 115.208 ms
Loss rate: 2.74%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-12-20 16:13:58

End at: 2017-12-20 16:14:28

Below is generated by plot.py at 2017-12-20 19:49:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.82 Mbit/s

95th percentile per-packet one-way delay: 115.509 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 115.510 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 115.399 ms

Loss rate: 3.14%

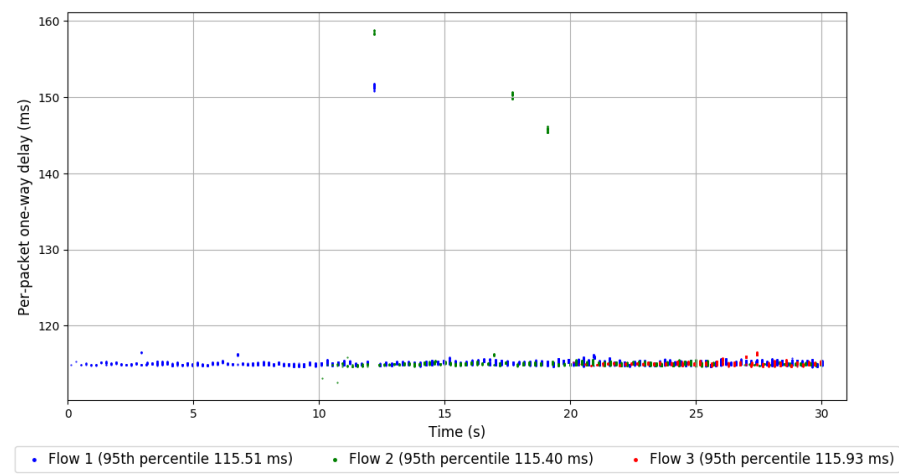
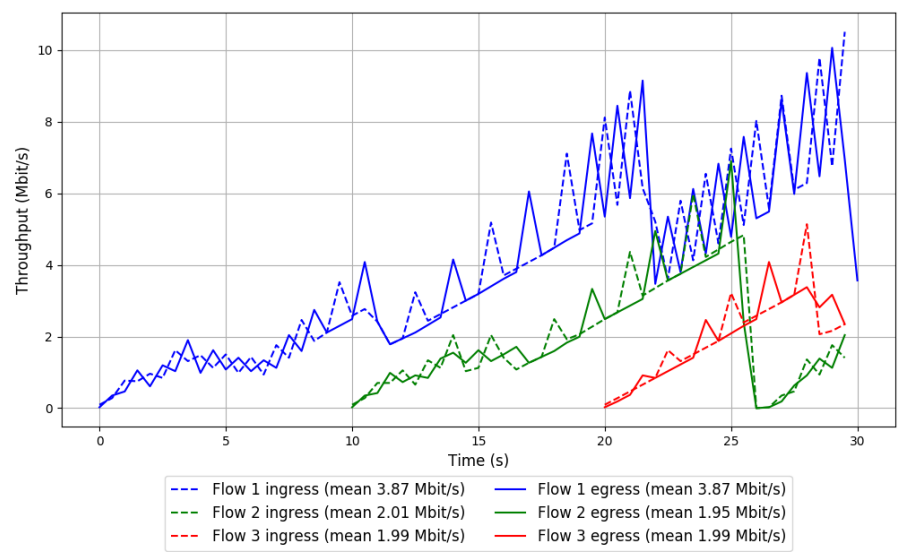
-- Flow 3:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 115.929 ms

Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-12-20 16:28:00

End at: 2017-12-20 16:28:30

Below is generated by plot.py at 2017-12-20 19:49:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.35 Mbit/s

95th percentile per-packet one-way delay: 115.495 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 3.31 Mbit/s

95th percentile per-packet one-way delay: 115.523 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.97 Mbit/s

95th percentile per-packet one-way delay: 115.415 ms

Loss rate: 2.09%

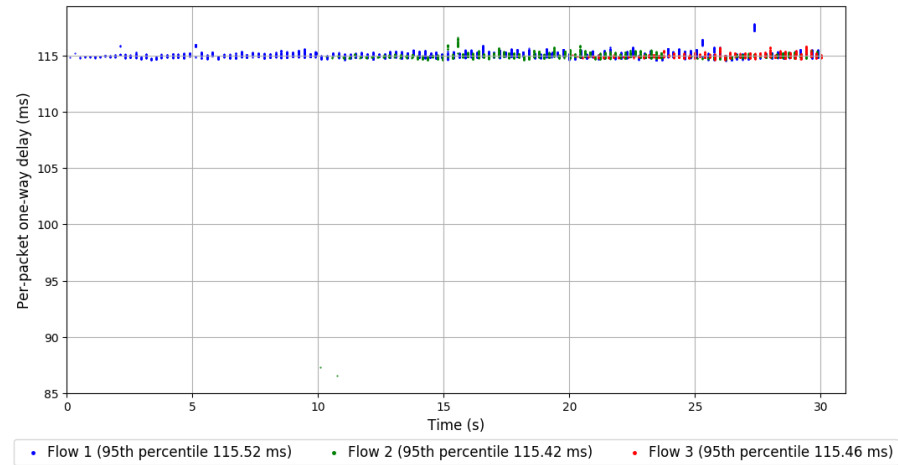
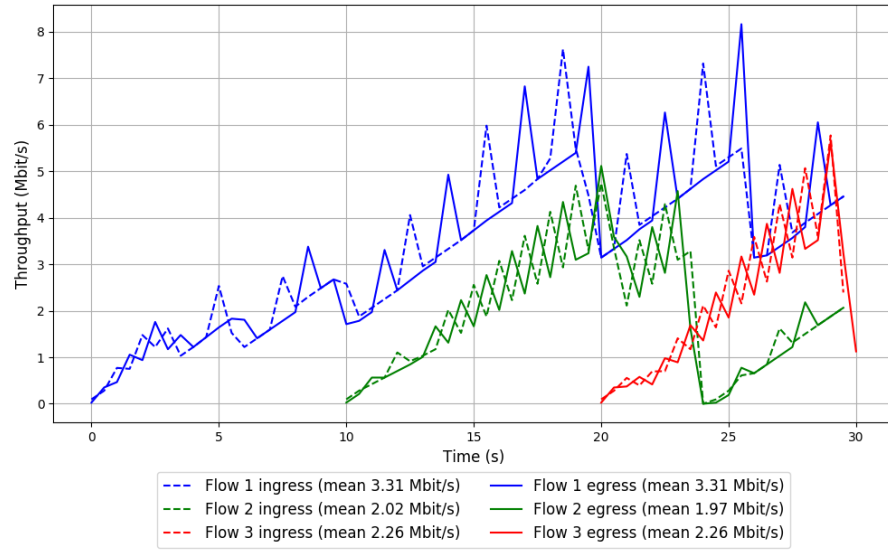
-- Flow 3:

Average throughput: 2.26 Mbit/s

95th percentile per-packet one-way delay: 115.460 ms

Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-12-20 16:42:47

End at: 2017-12-20 16:43:17

Below is generated by plot.py at 2017-12-20 19:49:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.03 Mbit/s

95th percentile per-packet one-way delay: 115.909 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 2.89 Mbit/s

95th percentile per-packet one-way delay: 115.762 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 3.76 Mbit/s

95th percentile per-packet one-way delay: 116.001 ms

Loss rate: 0.06%

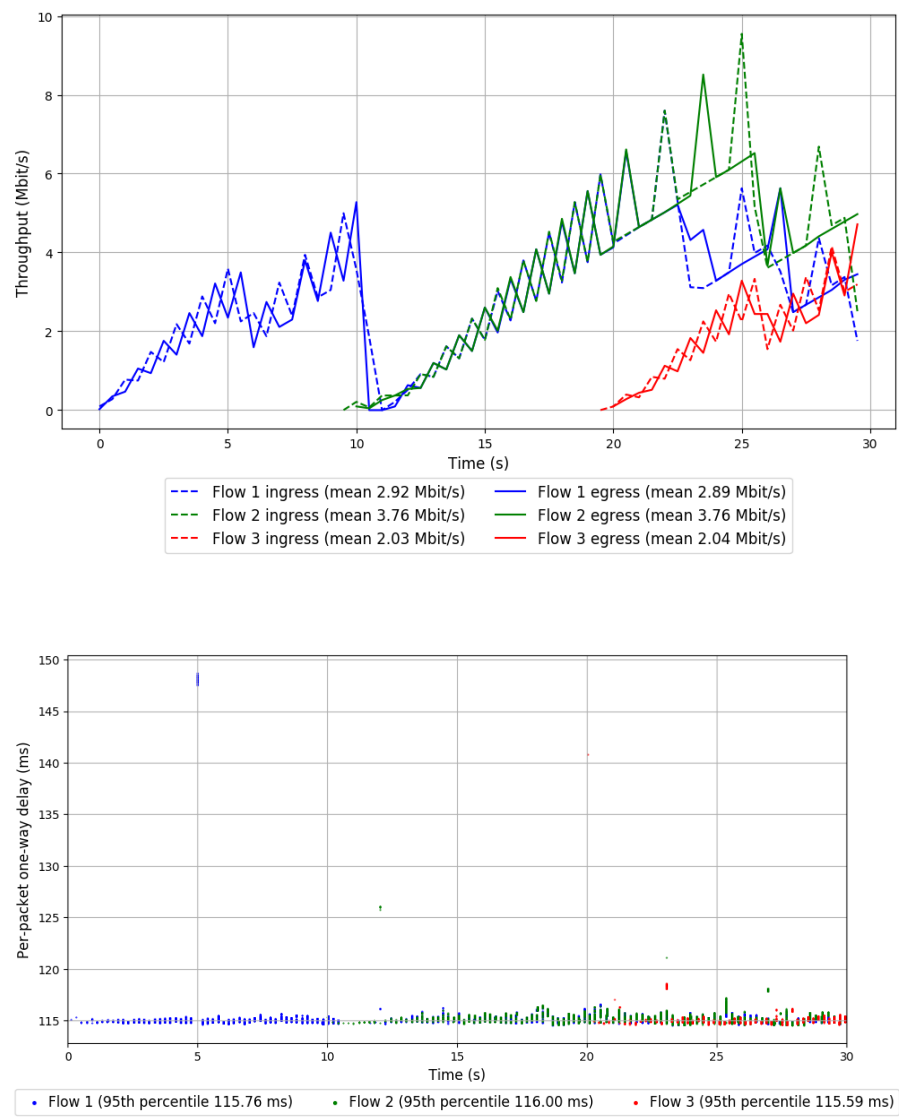
-- Flow 3:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 115.594 ms

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-12-20 16:57:02

End at: 2017-12-20 16:57:32

Below is generated by plot.py at 2017-12-20 19:49:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.19 Mbit/s

95th percentile per-packet one-way delay: 115.531 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 4.77 Mbit/s

95th percentile per-packet one-way delay: 115.565 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.51 Mbit/s

95th percentile per-packet one-way delay: 115.393 ms

Loss rate: 2.55%

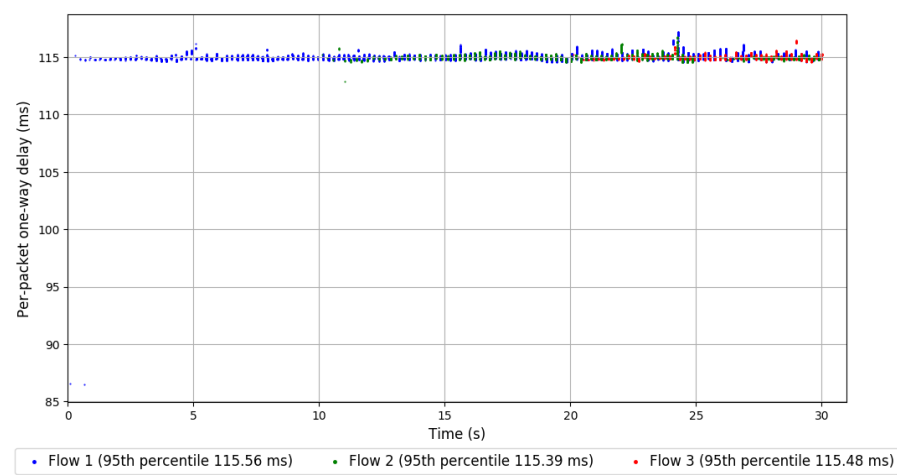
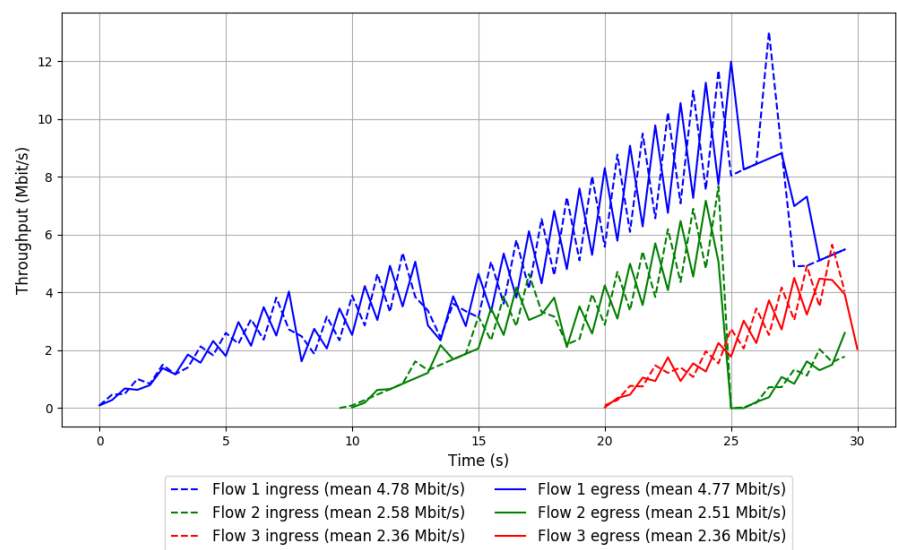
-- Flow 3:

Average throughput: 2.36 Mbit/s

95th percentile per-packet one-way delay: 115.480 ms

Loss rate: 0.00%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2017-12-20 17:11:08

End at: 2017-12-20 17:11:38

Below is generated by plot.py at 2017-12-20 19:49:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.94 Mbit/s

95th percentile per-packet one-way delay: 123.594 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 2.54 Mbit/s

95th percentile per-packet one-way delay: 121.885 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 3.94 Mbit/s

95th percentile per-packet one-way delay: 126.499 ms

Loss rate: 0.00%

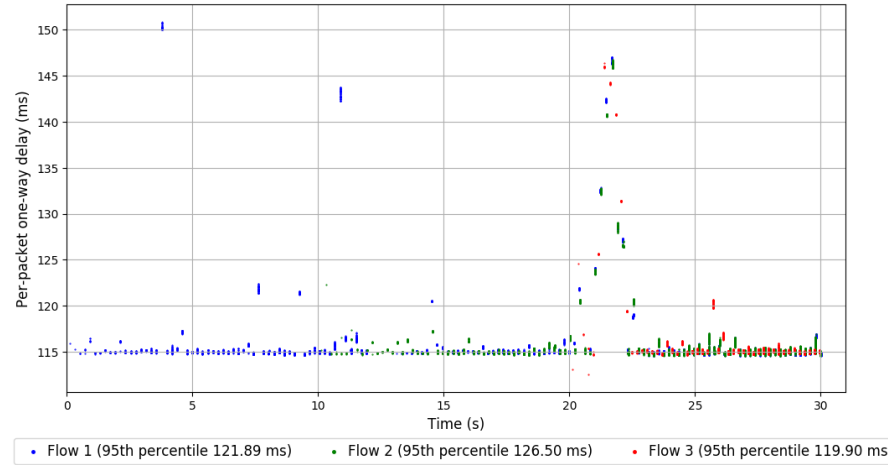
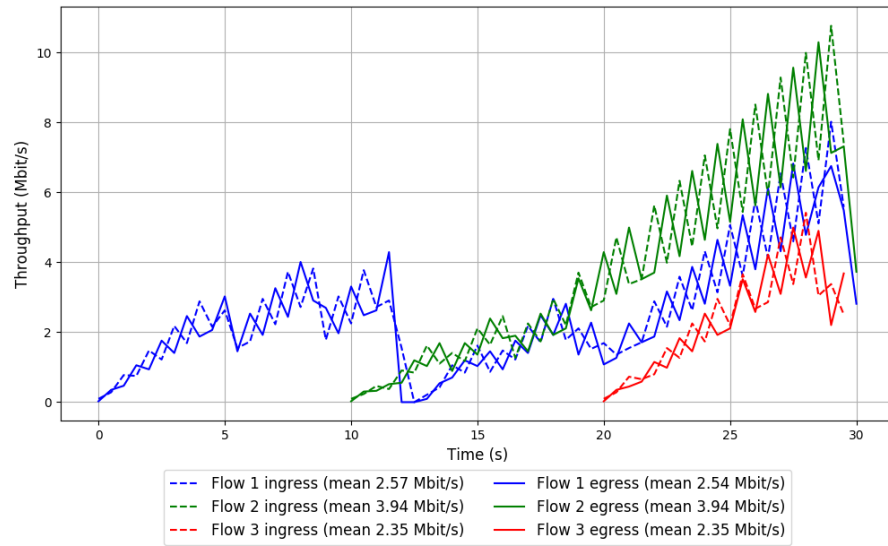
-- Flow 3:

Average throughput: 2.35 Mbit/s

95th percentile per-packet one-way delay: 119.897 ms

Loss rate: 0.00%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-12-20 17:26:02

End at: 2017-12-20 17:26:32

Below is generated by plot.py at 2017-12-20 19:49:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.00 Mbit/s

95th percentile per-packet one-way delay: 87.475 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 4.30 Mbit/s

95th percentile per-packet one-way delay: 87.251 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 4.31 Mbit/s

95th percentile per-packet one-way delay: 87.677 ms

Loss rate: 0.03%

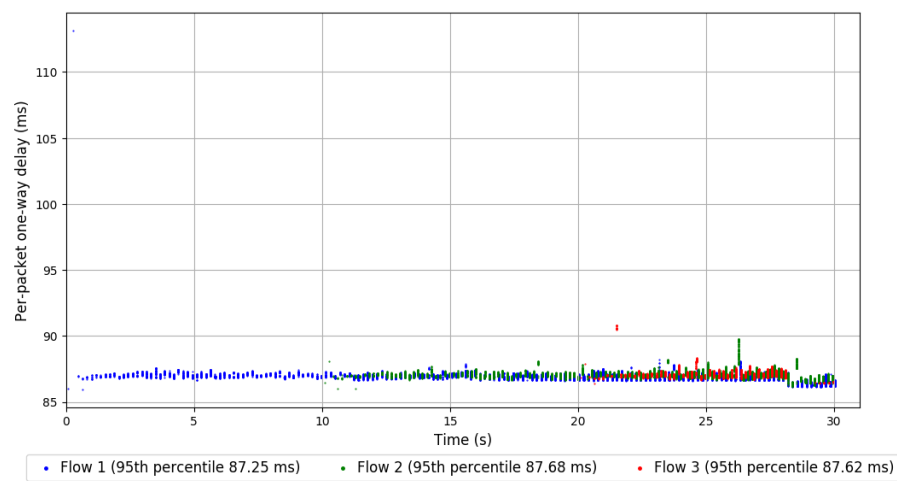
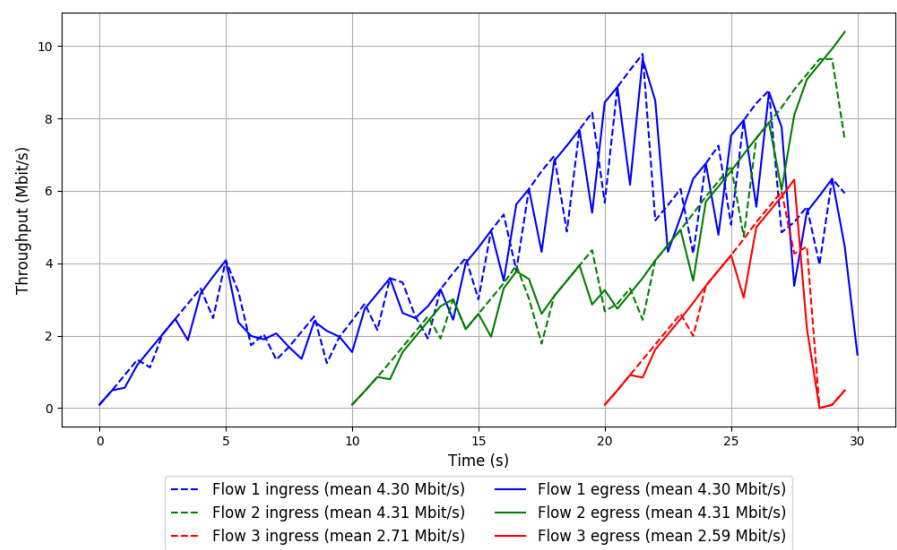
-- Flow 3:

Average throughput: 2.59 Mbit/s

95th percentile per-packet one-way delay: 87.621 ms

Loss rate: 4.21%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-12-20 17:41:06

End at: 2017-12-20 17:41:36

Below is generated by plot.py at 2017-12-20 19:49:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.89 Mbit/s

95th percentile per-packet one-way delay: 87.311 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 8.10 Mbit/s

95th percentile per-packet one-way delay: 87.304 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.71 Mbit/s

95th percentile per-packet one-way delay: 87.687 ms

Loss rate: 0.02%

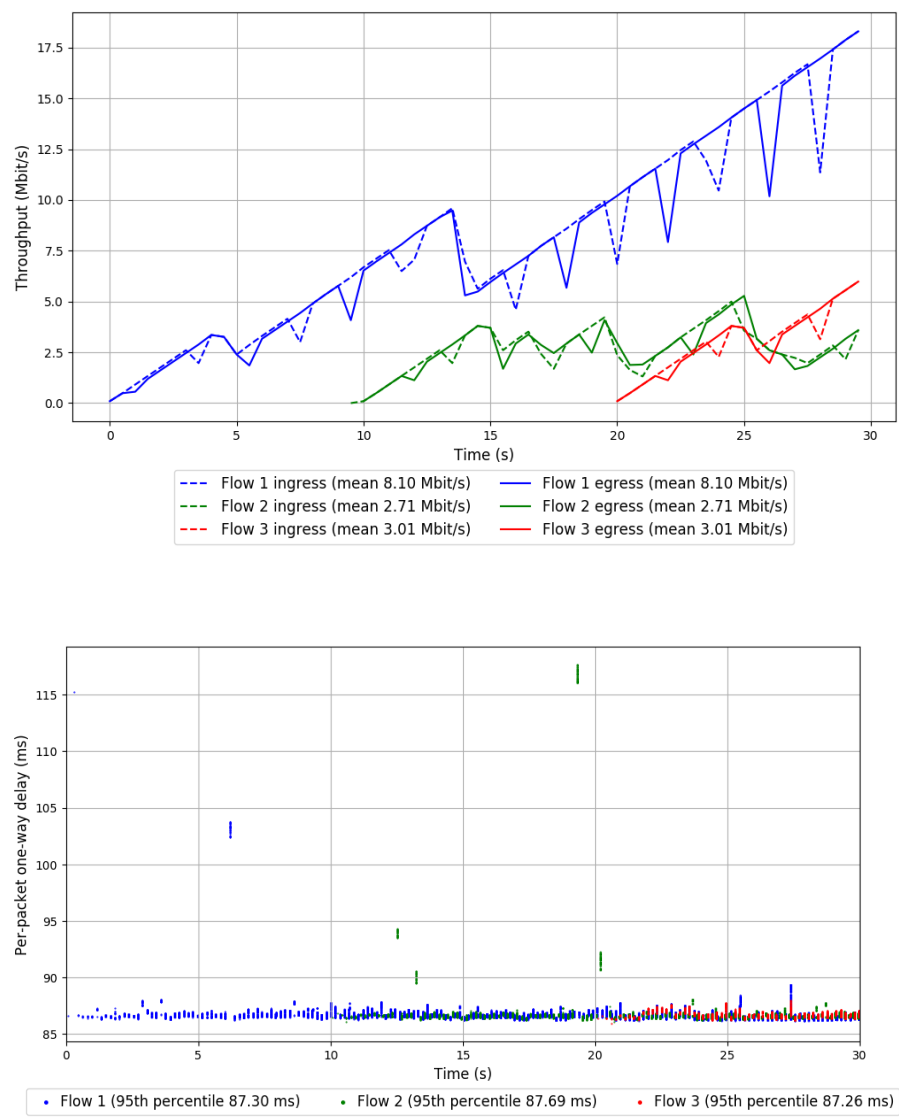
-- Flow 3:

Average throughput: 3.01 Mbit/s

95th percentile per-packet one-way delay: 87.262 ms

Loss rate: 0.00%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2017-12-20 17:55:28

End at: 2017-12-20 17:55:58

Below is generated by plot.py at 2017-12-20 19:49:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.08 Mbit/s

95th percentile per-packet one-way delay: 87.204 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 4.54 Mbit/s

95th percentile per-packet one-way delay: 87.395 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.40 Mbit/s

95th percentile per-packet one-way delay: 87.128 ms

Loss rate: 2.76%

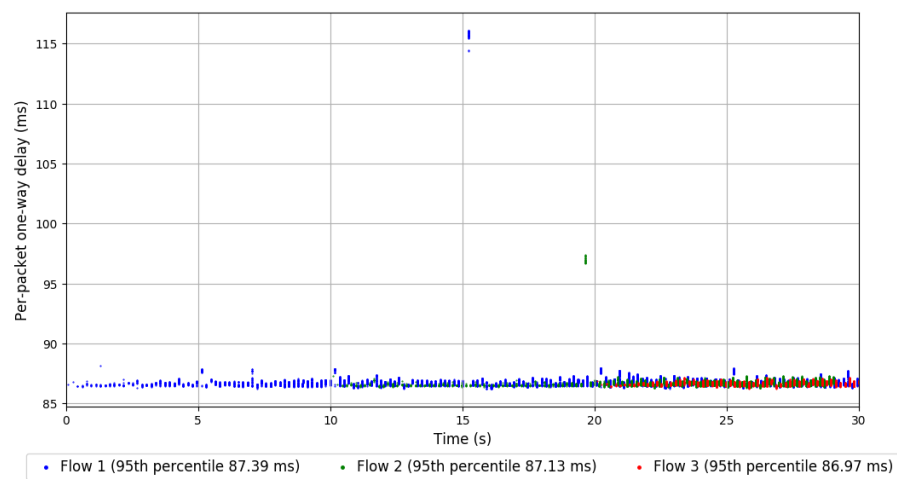
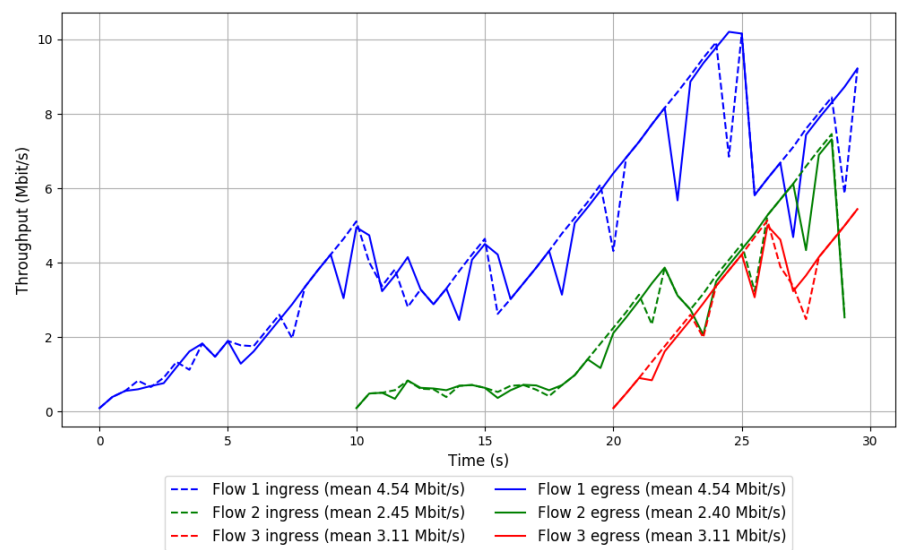
-- Flow 3:

Average throughput: 3.11 Mbit/s

95th percentile per-packet one-way delay: 86.966 ms

Loss rate: 0.00%

Run 10: Report of LEDBAT — Data Link

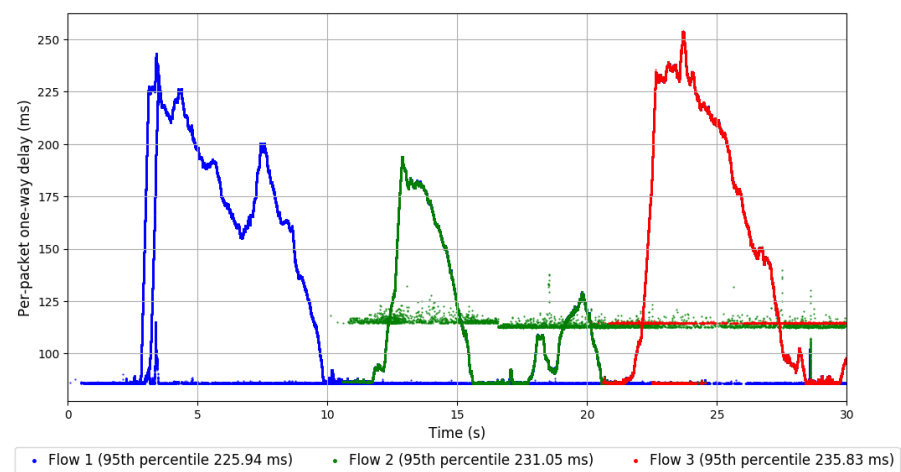
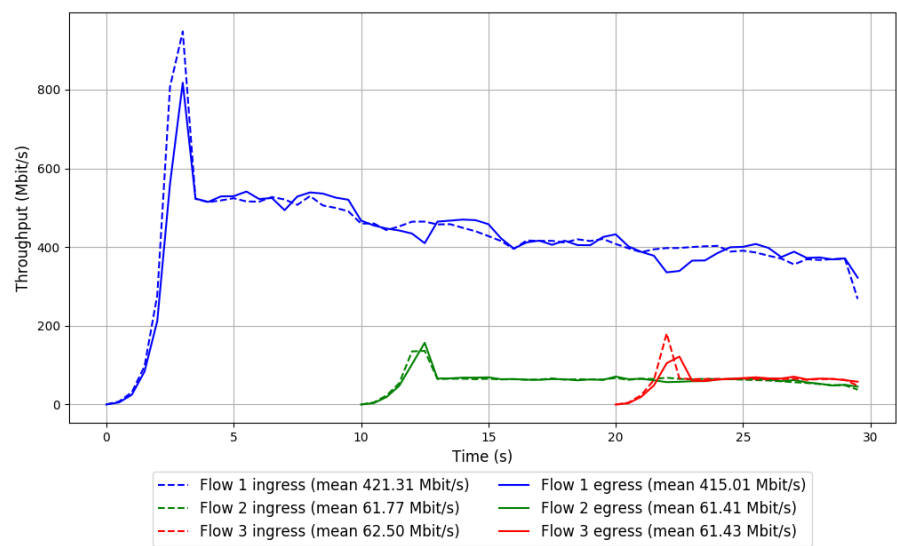


```
Run 1: Statistics of PCC

Start at: 2017-12-20 15:49:56
End at: 2017-12-20 15:50:26

# Below is generated by plot.py at 2017-12-20 19:55:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 475.87 Mbit/s
95th percentile per-packet one-way delay: 228.221 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 415.01 Mbit/s
95th percentile per-packet one-way delay: 225.942 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 61.41 Mbit/s
95th percentile per-packet one-way delay: 231.051 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 61.43 Mbit/s
95th percentile per-packet one-way delay: 235.829 ms
Loss rate: 2.00%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2017-12-20 16:04:58

End at: 2017-12-20 16:05:28

Below is generated by plot.py at 2017-12-20 19:55:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 463.19 Mbit/s

95th percentile per-packet one-way delay: 240.689 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 458.59 Mbit/s

95th percentile per-packet one-way delay: 240.951 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 4.76 Mbit/s

95th percentile per-packet one-way delay: 143.019 ms

Loss rate: 0.03%

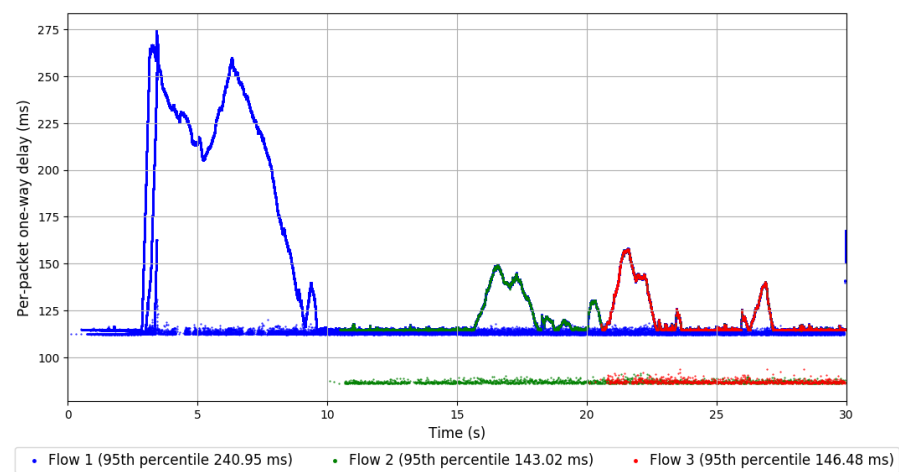
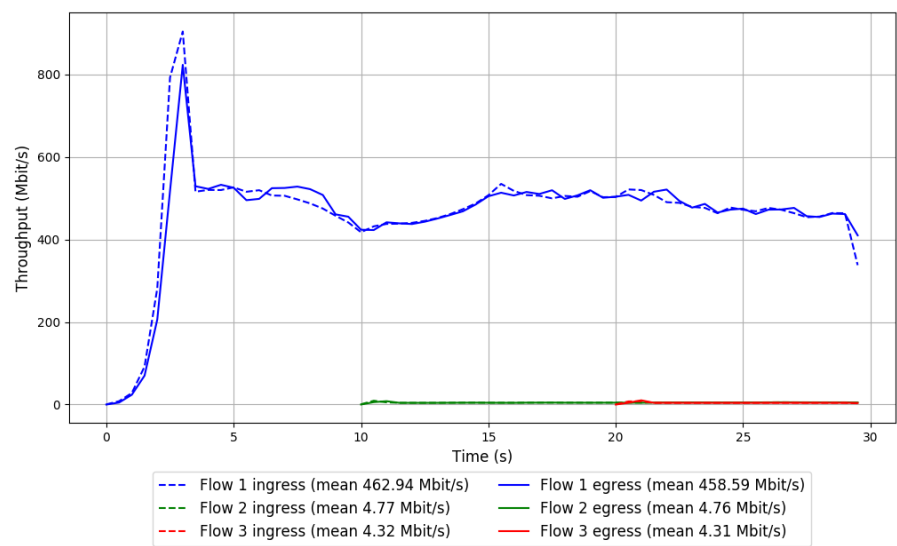
-- Flow 3:

Average throughput: 4.31 Mbit/s

95th percentile per-packet one-way delay: 146.484 ms

Loss rate: 0.03%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-12-20 16:19:03

End at: 2017-12-20 16:19:33

Below is generated by plot.py at 2017-12-20 19:55:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 288.17 Mbit/s

95th percentile per-packet one-way delay: 253.869 ms

Loss rate: 2.05%

-- Flow 1:

Average throughput: 5.10 Mbit/s

95th percentile per-packet one-way delay: 245.699 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 424.15 Mbit/s

95th percentile per-packet one-way delay: 253.964 ms

Loss rate: 2.09%

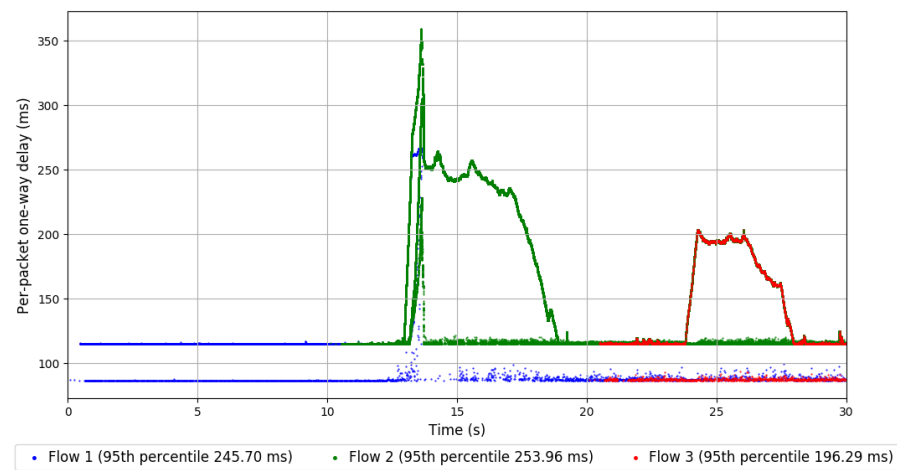
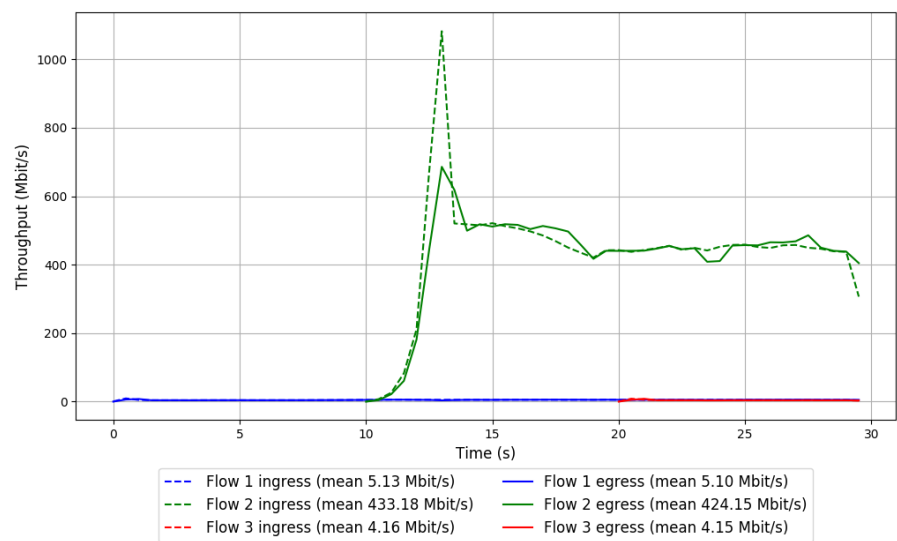
-- Flow 3:

Average throughput: 4.15 Mbit/s

95th percentile per-packet one-way delay: 196.286 ms

Loss rate: 0.03%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-12-20 16:33:09

End at: 2017-12-20 16:33:39

Below is generated by plot.py at 2017-12-20 19:55:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 455.81 Mbit/s

95th percentile per-packet one-way delay: 231.139 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 432.13 Mbit/s

95th percentile per-packet one-way delay: 231.817 ms

Loss rate: 1.65%

-- Flow 2:

Average throughput: 34.50 Mbit/s

95th percentile per-packet one-way delay: 220.078 ms

Loss rate: 0.01%

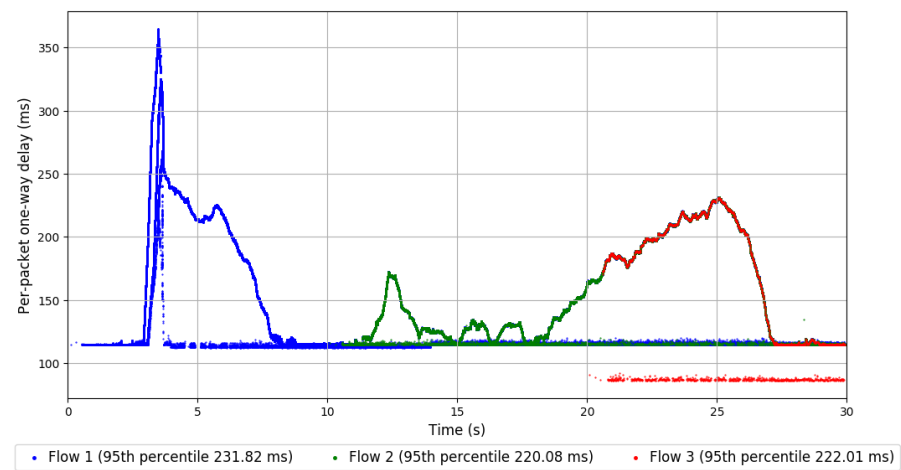
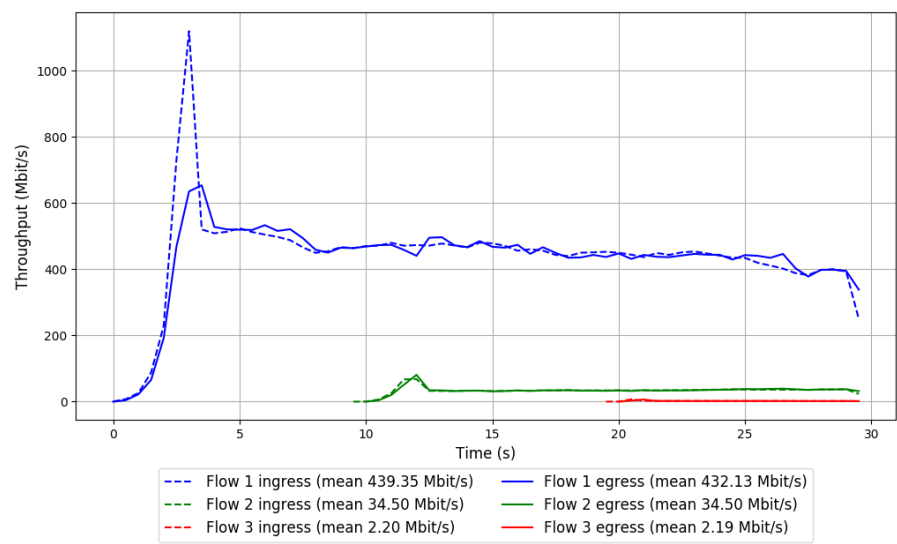
-- Flow 3:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 222.011 ms

Loss rate: 0.00%

Run 4: Report of PCC — Data Link

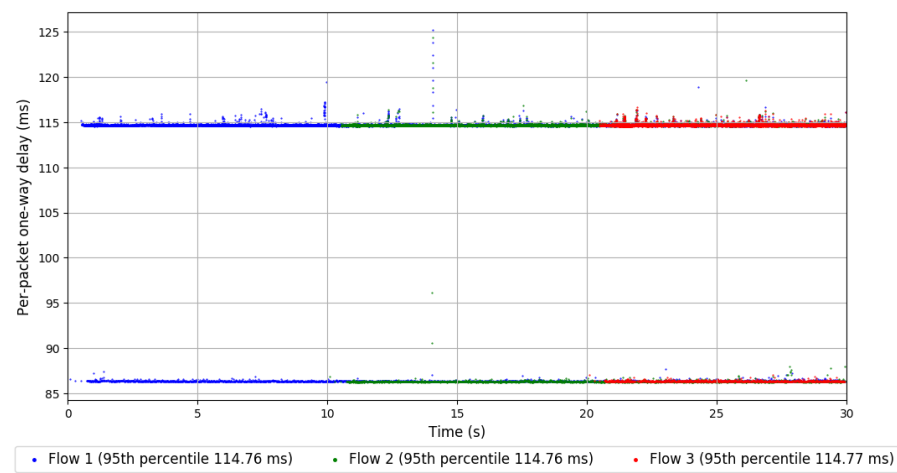
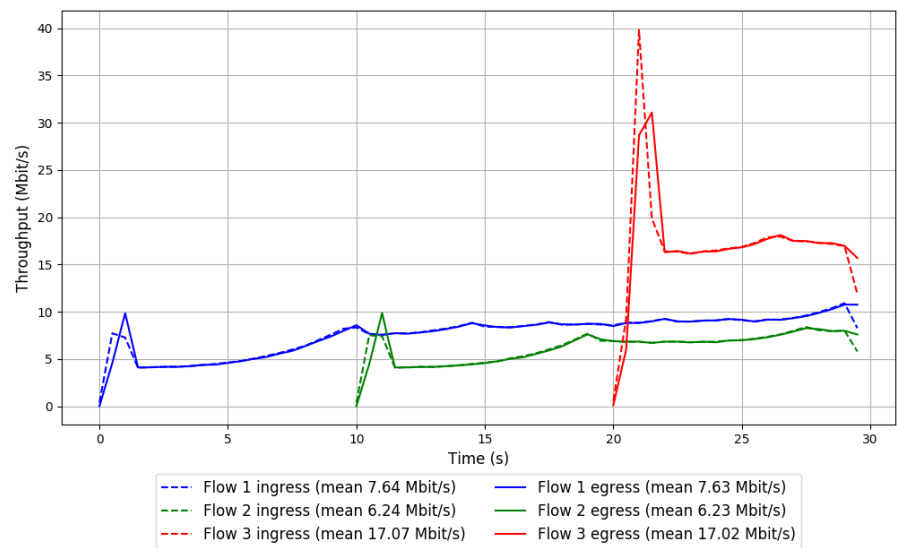


```
Run 5: Statistics of PCC

Start at: 2017-12-20 16:48:00
End at: 2017-12-20 16:48:30

# Below is generated by plot.py at 2017-12-20 19:55:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.40 Mbit/s
95th percentile per-packet one-way delay: 114.763 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 7.63 Mbit/s
95th percentile per-packet one-way delay: 114.762 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 6.23 Mbit/s
95th percentile per-packet one-way delay: 114.762 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 17.02 Mbit/s
95th percentile per-packet one-way delay: 114.766 ms
Loss rate: 0.01%
```

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-12-20 17:02:22

End at: 2017-12-20 17:02:52

Below is generated by plot.py at 2017-12-20 19:56:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 436.23 Mbit/s

95th percentile per-packet one-way delay: 279.341 ms

Loss rate: 3.55%

-- Flow 1:

Average throughput: 413.98 Mbit/s

95th percentile per-packet one-way delay: 278.845 ms

Loss rate: 3.46%

-- Flow 2:

Average throughput: 4.46 Mbit/s

95th percentile per-packet one-way delay: 278.452 ms

Loss rate: 3.72%

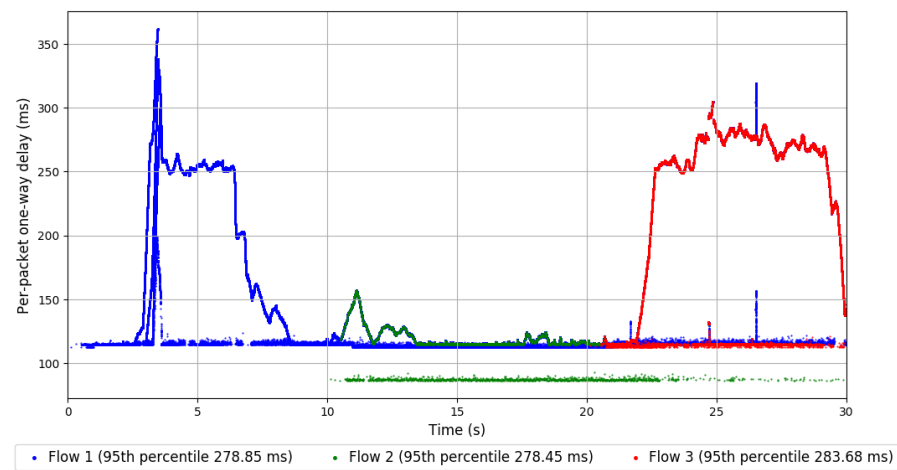
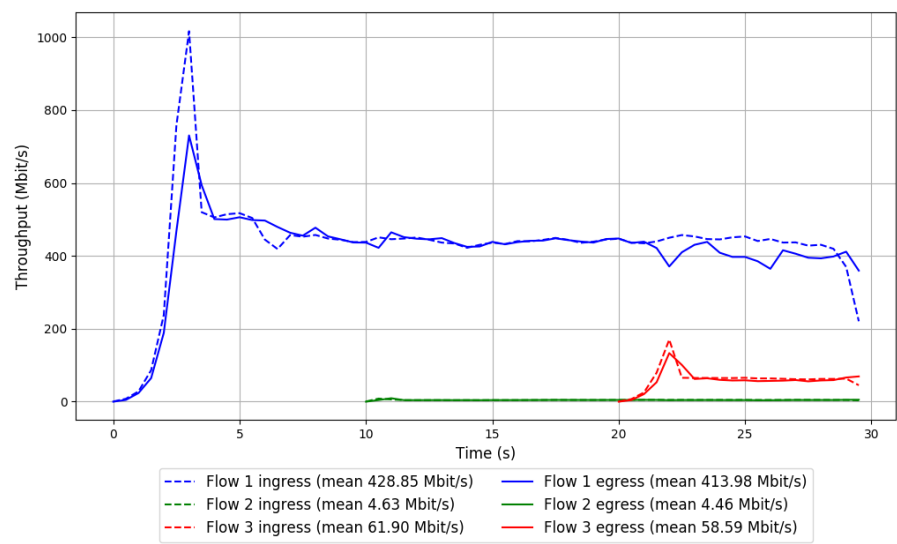
-- Flow 3:

Average throughput: 58.59 Mbit/s

95th percentile per-packet one-way delay: 283.681 ms

Loss rate: 5.32%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-12-20 17:16:37

End at: 2017-12-20 17:17:07

Below is generated by plot.py at 2017-12-20 19:57:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 458.06 Mbit/s

95th percentile per-packet one-way delay: 241.533 ms

Loss rate: 1.82%

-- Flow 1:

Average throughput: 444.51 Mbit/s

95th percentile per-packet one-way delay: 241.841 ms

Loss rate: 1.87%

-- Flow 2:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 241.641 ms

Loss rate: 0.95%

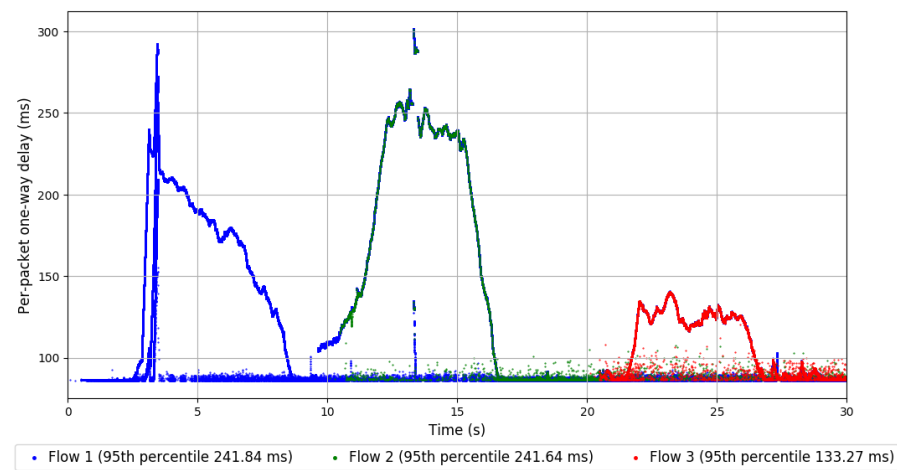
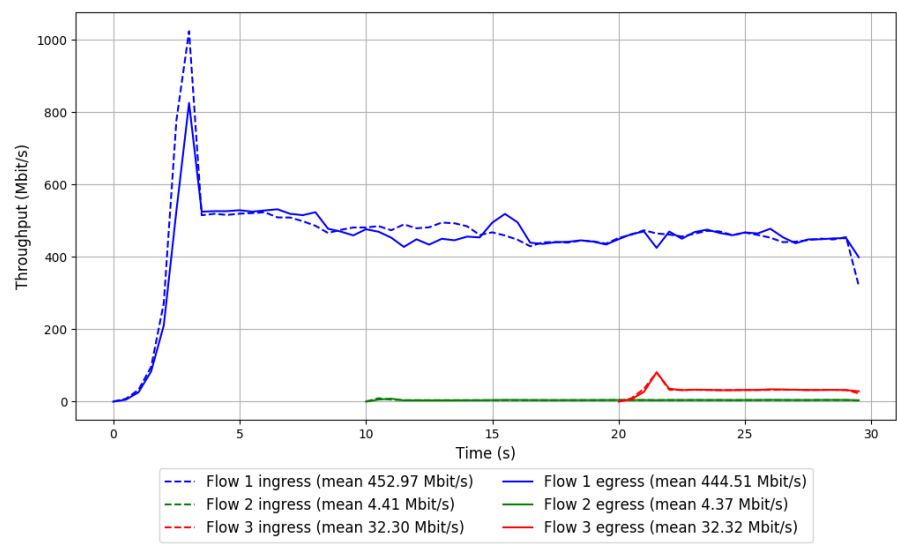
-- Flow 3:

Average throughput: 32.32 Mbit/s

95th percentile per-packet one-way delay: 133.271 ms

Loss rate: 0.00%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-12-20 17:31:34

End at: 2017-12-20 17:32:04

Below is generated by plot.py at 2017-12-20 19:57:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 452.89 Mbit/s

95th percentile per-packet one-way delay: 238.018 ms

Loss rate: 2.69%

-- Flow 1:

Average throughput: 450.73 Mbit/s

95th percentile per-packet one-way delay: 238.030 ms

Loss rate: 2.69%

-- Flow 2:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 236.975 ms

Loss rate: 1.58%

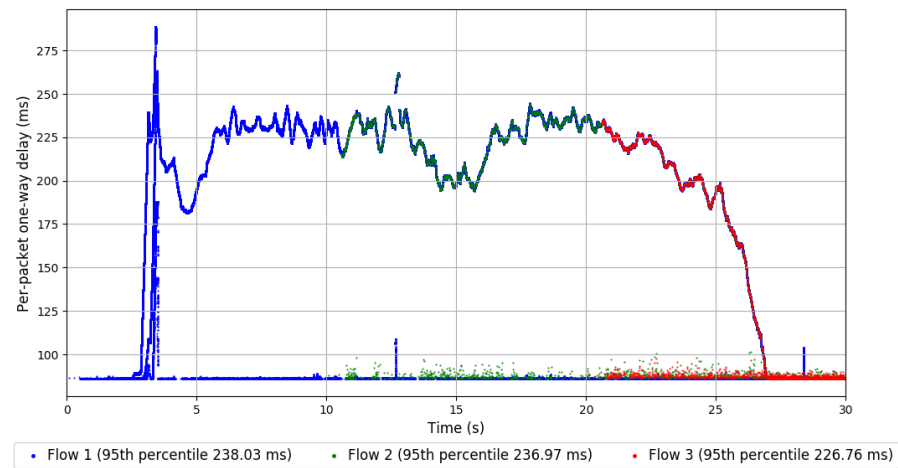
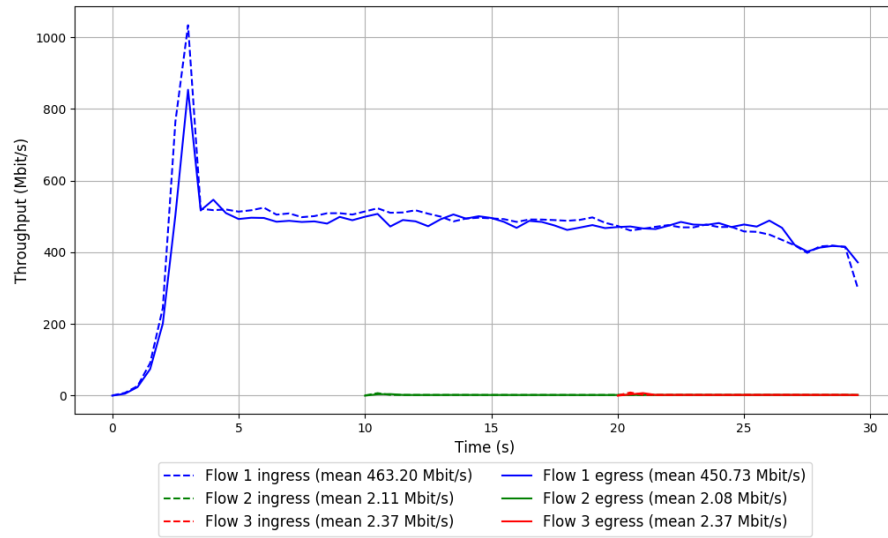
-- Flow 3:

Average throughput: 2.37 Mbit/s

95th percentile per-packet one-way delay: 226.762 ms

Loss rate: 0.00%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-12-20 17:46:01

End at: 2017-12-20 17:46:31

Below is generated by plot.py at 2017-12-20 19:57:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 347.94 Mbit/s

95th percentile per-packet one-way delay: 231.340 ms

Loss rate: 0.27%

-- Flow 1:

Average throughput: 276.31 Mbit/s

95th percentile per-packet one-way delay: 230.197 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 76.97 Mbit/s

95th percentile per-packet one-way delay: 233.338 ms

Loss rate: 0.12%

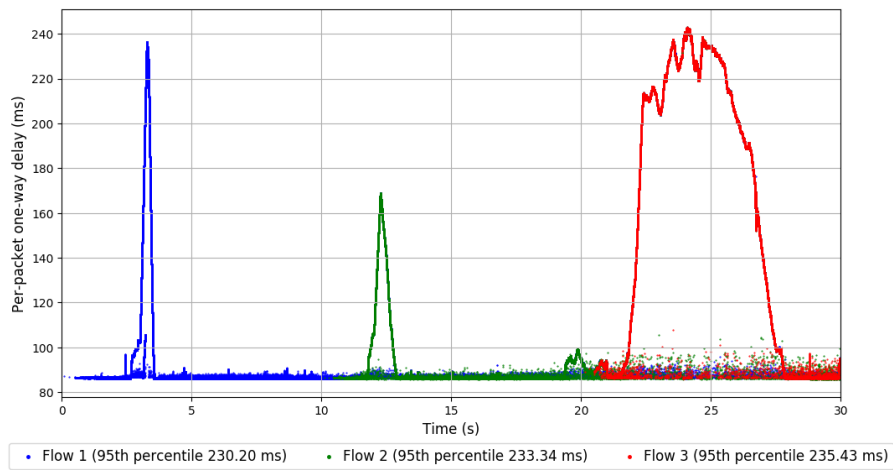
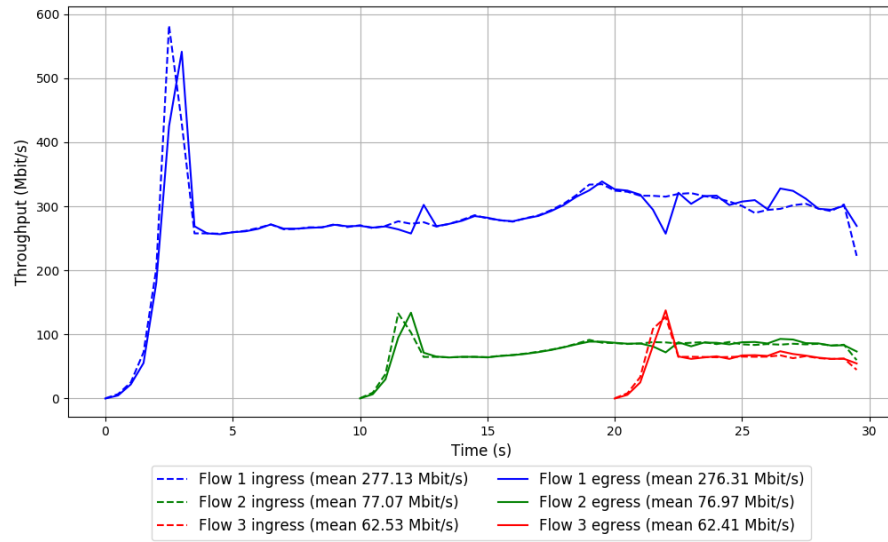
-- Flow 3:

Average throughput: 62.41 Mbit/s

95th percentile per-packet one-way delay: 235.428 ms

Loss rate: 0.22%

Run 9: Report of PCC — Data Link

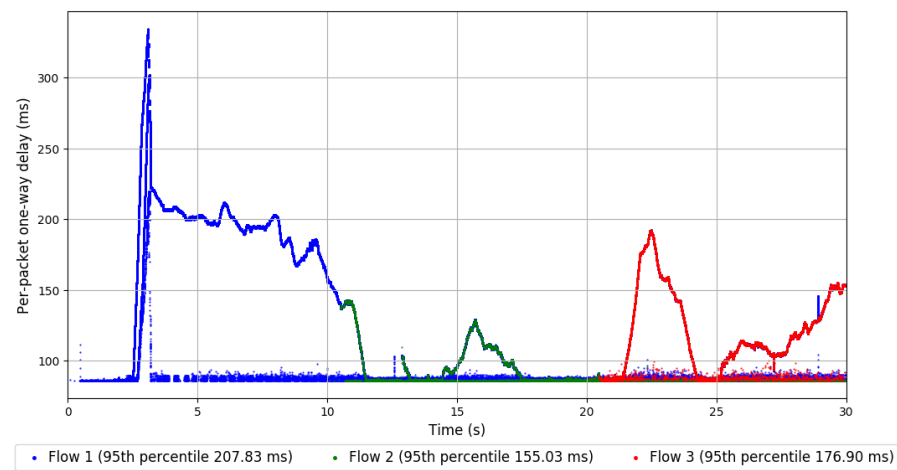
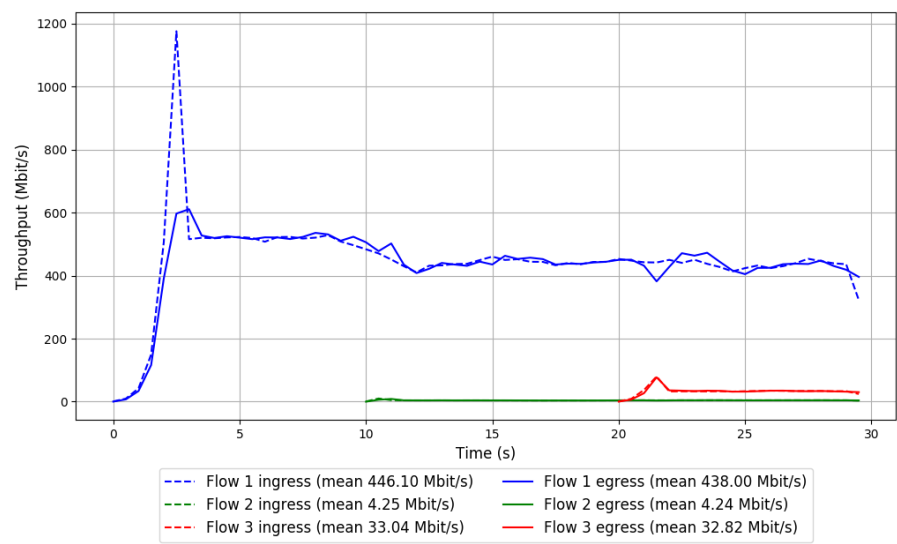


```
Run 10: Statistics of PCC

Start at: 2017-12-20 18:00:34
End at: 2017-12-20 18:01:04

# Below is generated by plot.py at 2017-12-20 20:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 451.63 Mbit/s
95th percentile per-packet one-way delay: 207.482 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 438.00 Mbit/s
95th percentile per-packet one-way delay: 207.827 ms
Loss rate: 1.81%
-- Flow 2:
Average throughput: 4.24 Mbit/s
95th percentile per-packet one-way delay: 155.028 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 32.82 Mbit/s
95th percentile per-packet one-way delay: 176.895 ms
Loss rate: 0.68%
```

Run 10: Report of PCC — Data Link

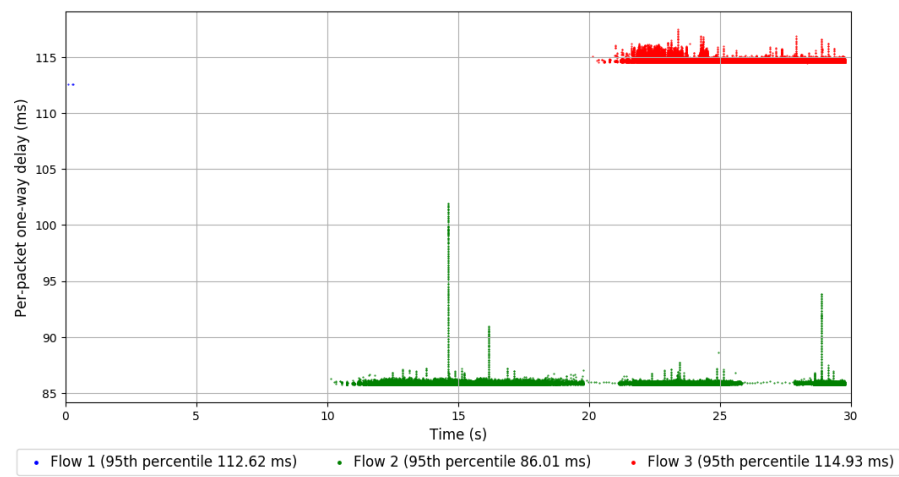
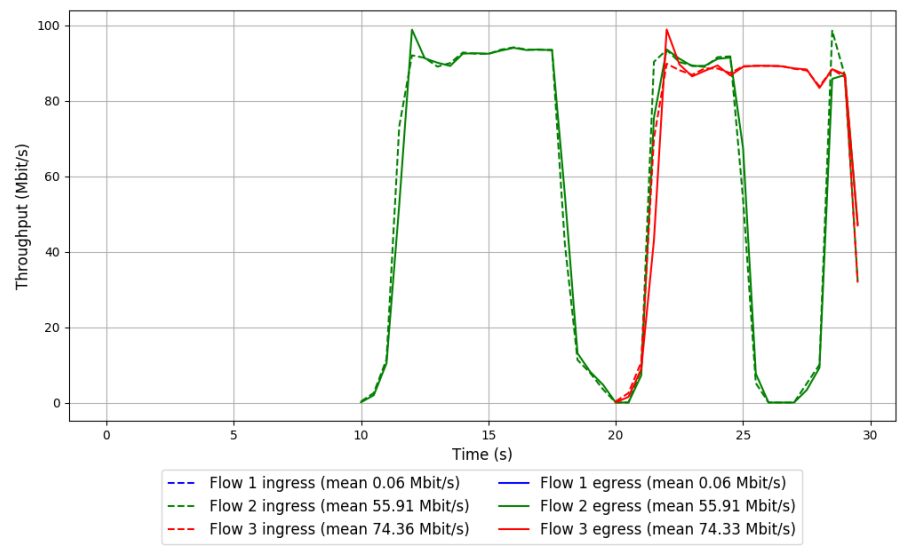


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-20 15:40:32
End at: 2017-12-20 15:41:02

# Below is generated by plot.py at 2017-12-20 20:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.17 Mbit/s
95th percentile per-packet one-way delay: 114.794 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 112.616 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 55.91 Mbit/s
95th percentile per-packet one-way delay: 86.008 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 74.33 Mbit/s
95th percentile per-packet one-way delay: 114.933 ms
Loss rate: 0.33%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-12-20 15:54:32

End at: 2017-12-20 15:55:02

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.72 Mbit/s

95th percentile per-packet one-way delay: 114.857 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 67.75 Mbit/s

95th percentile per-packet one-way delay: 114.837 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 53.35 Mbit/s

95th percentile per-packet one-way delay: 114.892 ms

Loss rate: 0.02%

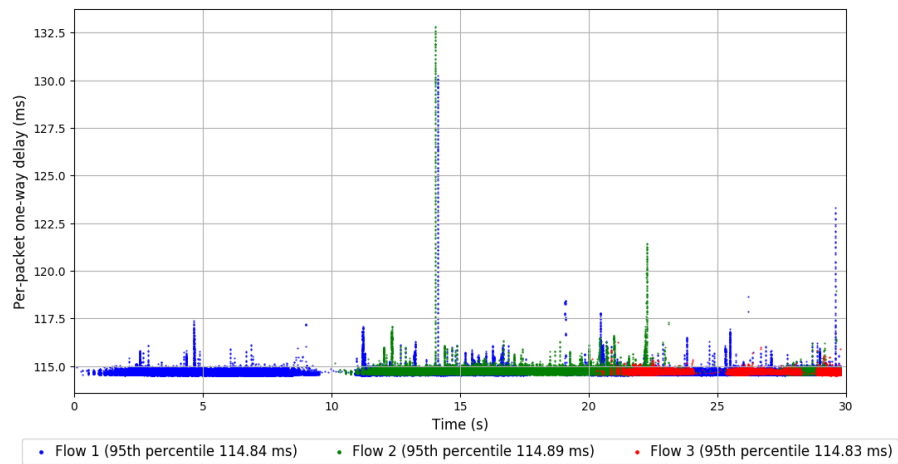
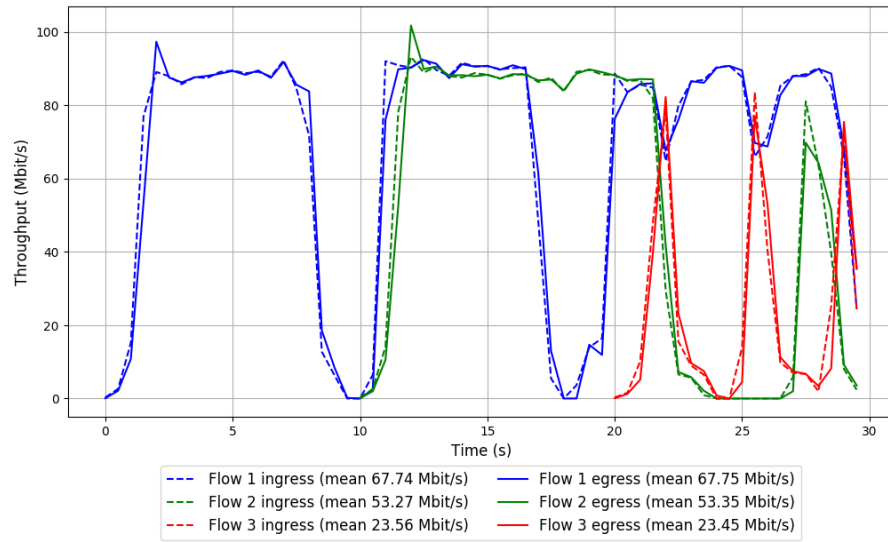
-- Flow 3:

Average throughput: 23.45 Mbit/s

95th percentile per-packet one-way delay: 114.829 ms

Loss rate: 0.75%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-12-20 16:09:29

End at: 2017-12-20 16:09:59

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.34 Mbit/s

95th percentile per-packet one-way delay: 114.754 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 48.40 Mbit/s

95th percentile per-packet one-way delay: 114.764 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 60.70 Mbit/s

95th percentile per-packet one-way delay: 86.604 ms

Loss rate: 0.00%

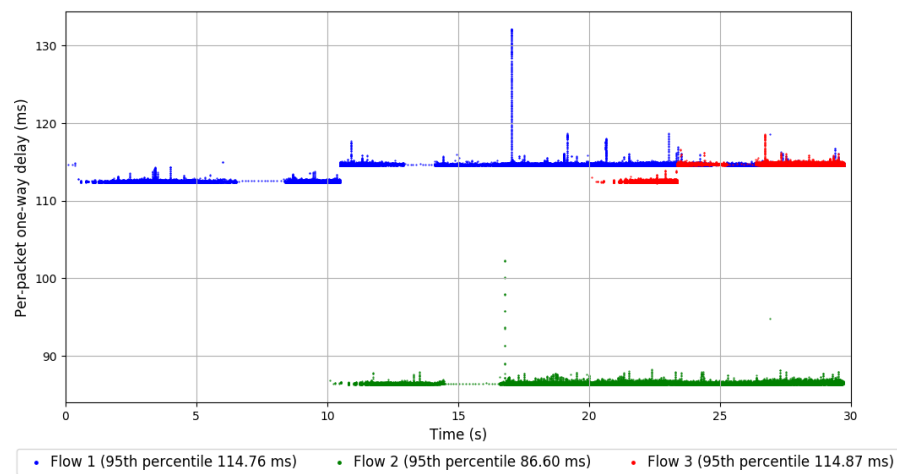
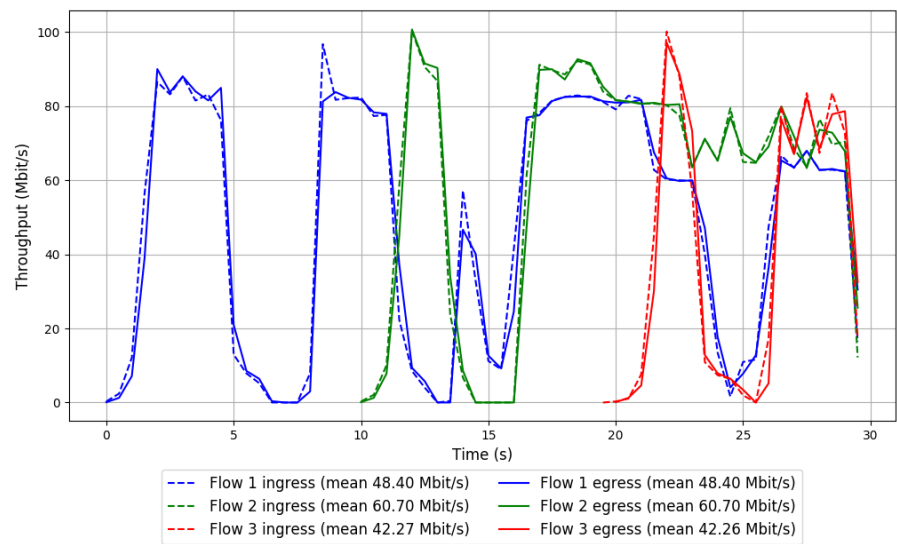
-- Flow 3:

Average throughput: 42.26 Mbit/s

95th percentile per-packet one-way delay: 114.867 ms

Loss rate: 0.03%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-12-20 16:23:33

End at: 2017-12-20 16:24:03

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.71 Mbit/s

95th percentile per-packet one-way delay: 114.863 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 62.21 Mbit/s

95th percentile per-packet one-way delay: 114.897 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 45.90 Mbit/s

95th percentile per-packet one-way delay: 114.857 ms

Loss rate: 0.01%

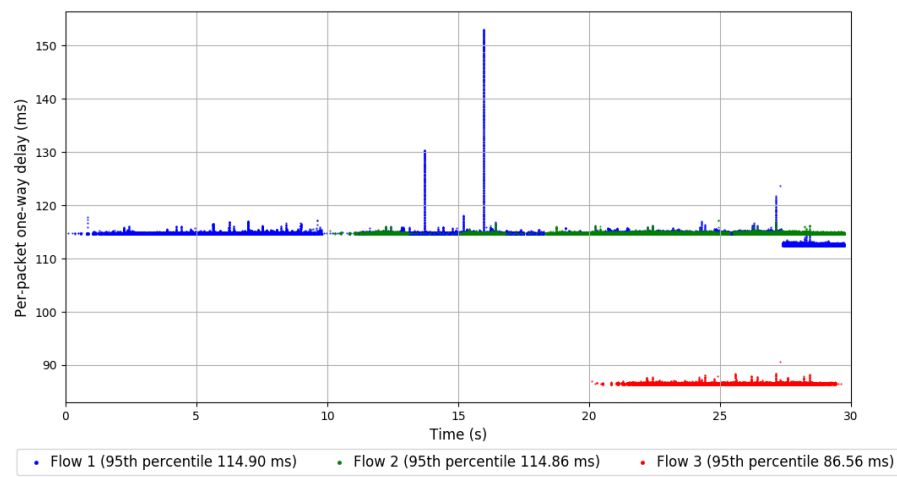
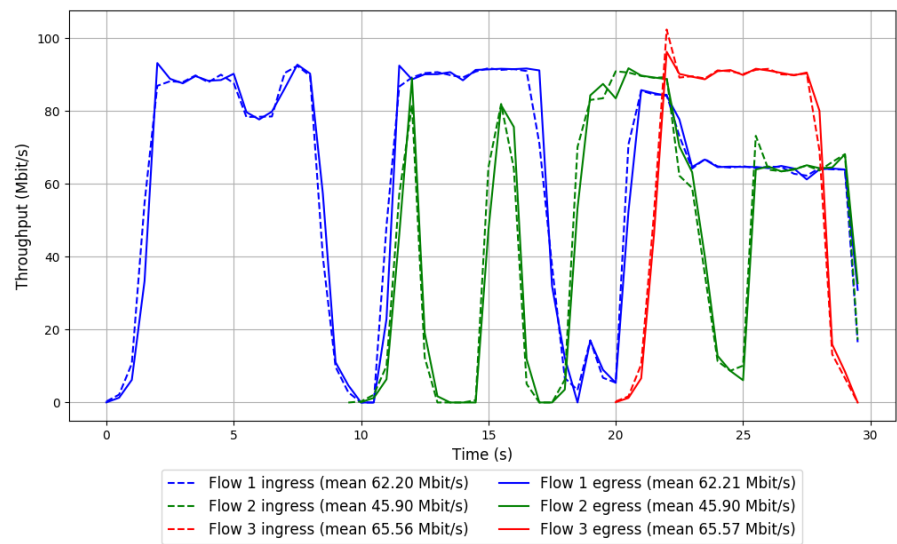
-- Flow 3:

Average throughput: 65.57 Mbit/s

95th percentile per-packet one-way delay: 86.564 ms

Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-12-20 16:37:43

End at: 2017-12-20 16:38:13

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.79 Mbit/s

95th percentile per-packet one-way delay: 114.776 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 52.50 Mbit/s

95th percentile per-packet one-way delay: 114.811 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 57.02 Mbit/s

95th percentile per-packet one-way delay: 86.561 ms

Loss rate: 0.00%

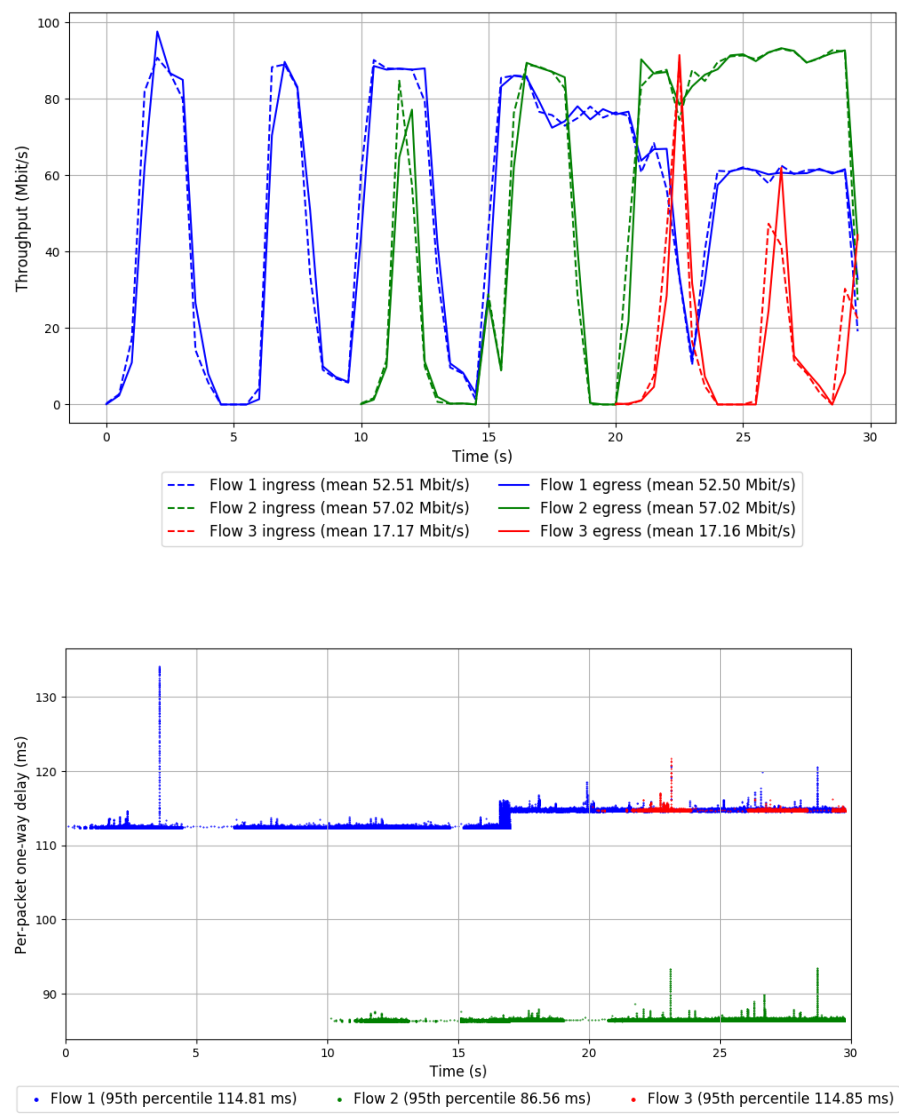
-- Flow 3:

Average throughput: 17.16 Mbit/s

95th percentile per-packet one-way delay: 114.850 ms

Loss rate: 0.05%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-12-20 16:52:19

End at: 2017-12-20 16:52:49

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 103.96 Mbit/s

95th percentile per-packet one-way delay: 112.543 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 47.31 Mbit/s

95th percentile per-packet one-way delay: 112.627 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 59.39 Mbit/s

95th percentile per-packet one-way delay: 86.552 ms

Loss rate: 0.00%

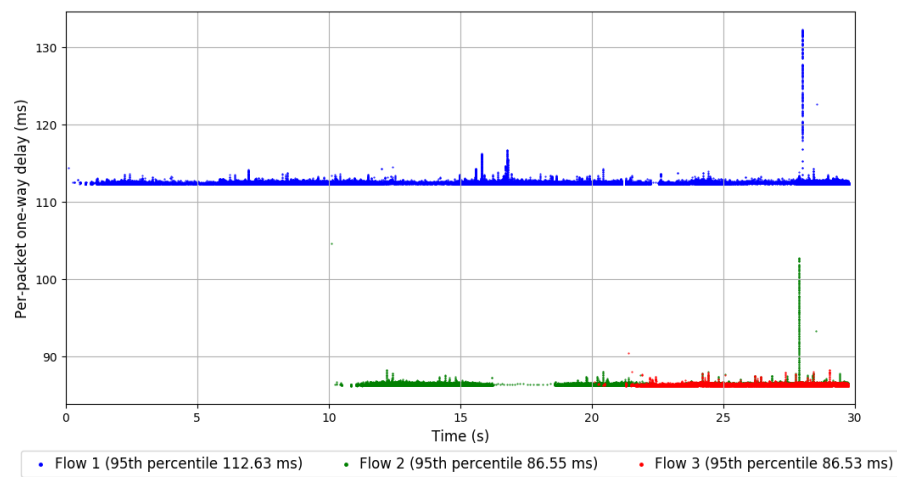
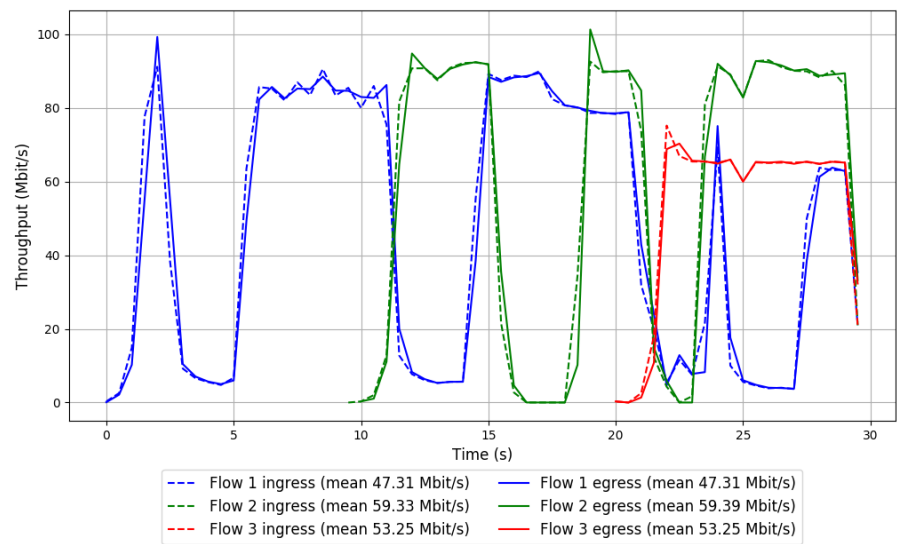
-- Flow 3:

Average throughput: 53.25 Mbit/s

95th percentile per-packet one-way delay: 86.527 ms

Loss rate: 0.00%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-12-20 17:06:50

End at: 2017-12-20 17:07:20

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.25 Mbit/s

95th percentile per-packet one-way delay: 114.707 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 41.99 Mbit/s

95th percentile per-packet one-way delay: 86.518 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 61.42 Mbit/s

95th percentile per-packet one-way delay: 86.502 ms

Loss rate: 0.00%

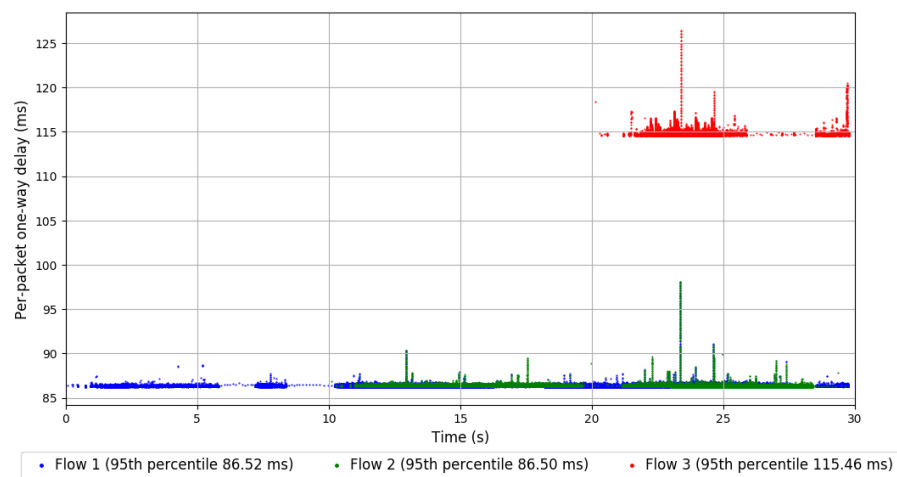
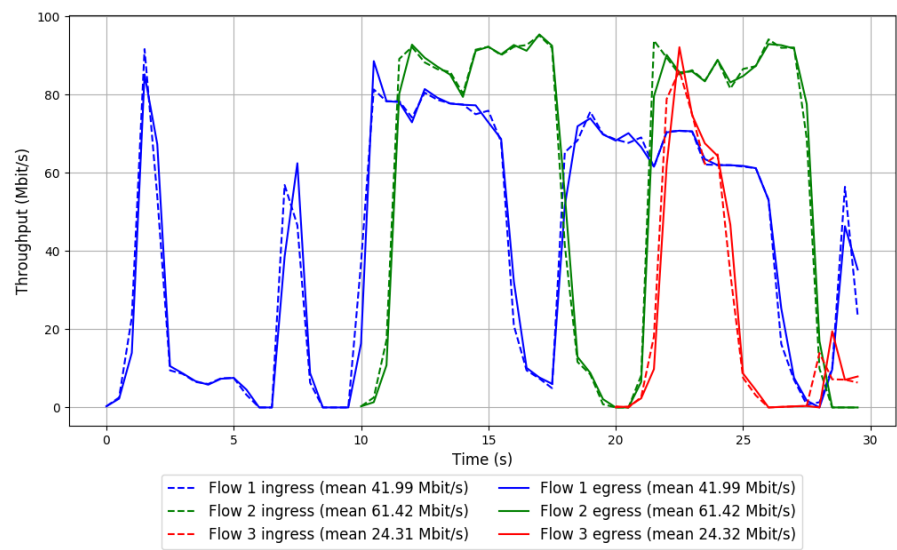
-- Flow 3:

Average throughput: 24.32 Mbit/s

95th percentile per-packet one-way delay: 115.461 ms

Loss rate: 0.02%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-12-20 17:21:08

End at: 2017-12-20 17:21:38

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.47 Mbit/s

95th percentile per-packet one-way delay: 86.915 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 54.09 Mbit/s

95th percentile per-packet one-way delay: 86.994 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 44.14 Mbit/s

95th percentile per-packet one-way delay: 86.461 ms

Loss rate: 0.00%

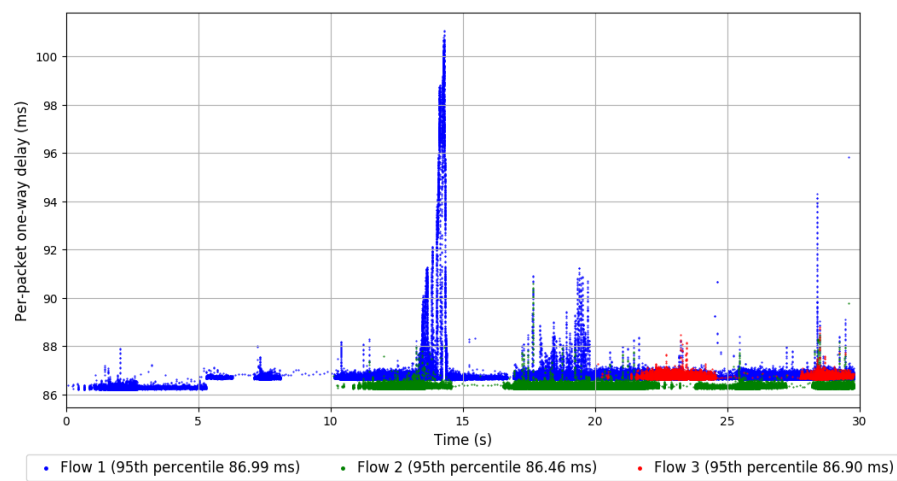
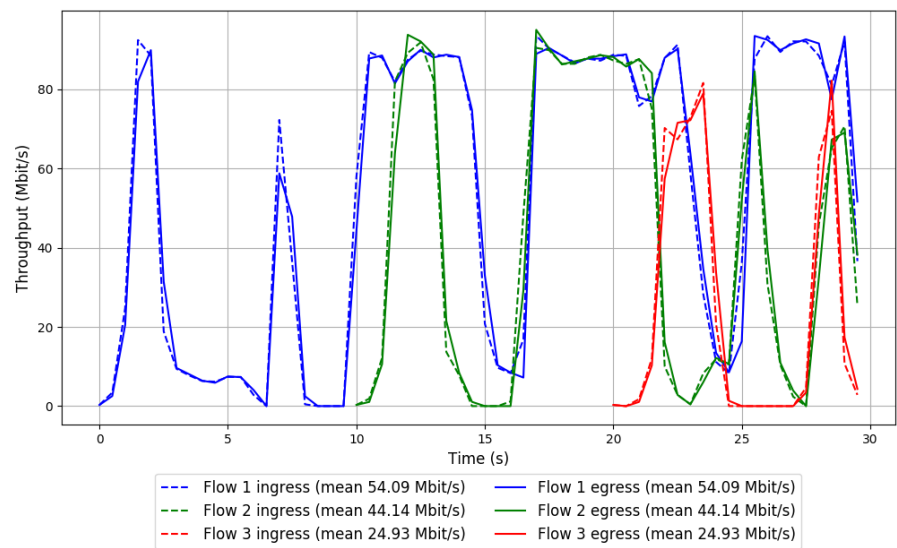
-- Flow 3:

Average throughput: 24.93 Mbit/s

95th percentile per-packet one-way delay: 86.903 ms

Loss rate: 0.00%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-12-20 17:36:05

End at: 2017-12-20 17:36:35

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.55 Mbit/s

95th percentile per-packet one-way delay: 86.465 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 68.19 Mbit/s

95th percentile per-packet one-way delay: 86.118 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 50.72 Mbit/s

95th percentile per-packet one-way delay: 86.530 ms

Loss rate: 0.00%

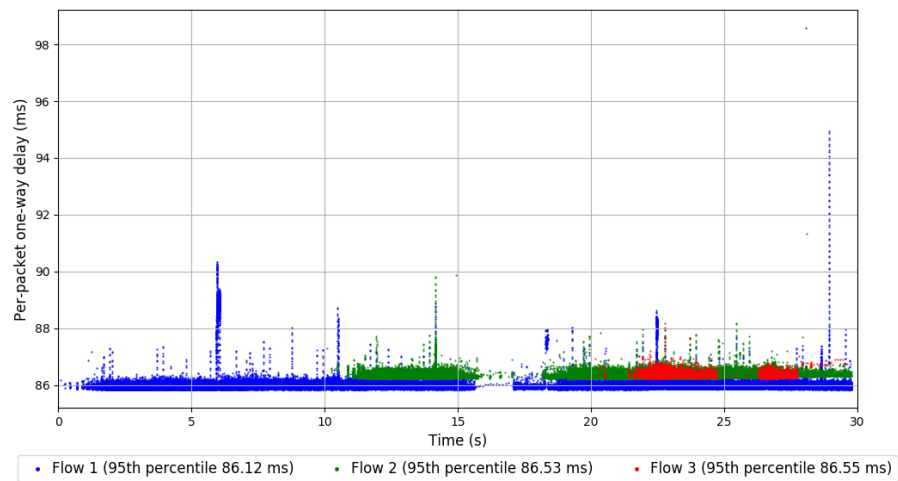
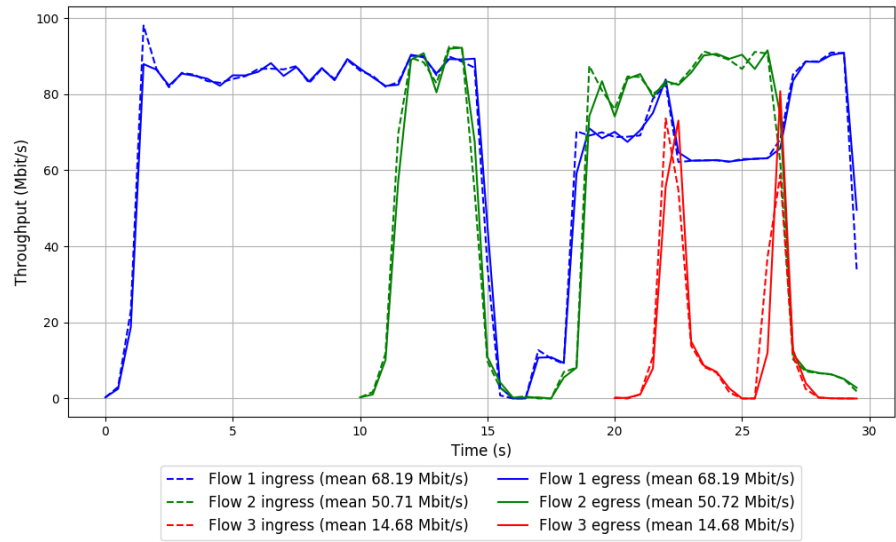
-- Flow 3:

Average throughput: 14.68 Mbit/s

95th percentile per-packet one-way delay: 86.552 ms

Loss rate: 0.00%

Run 9: Report of QUIC Cubic — Data Link

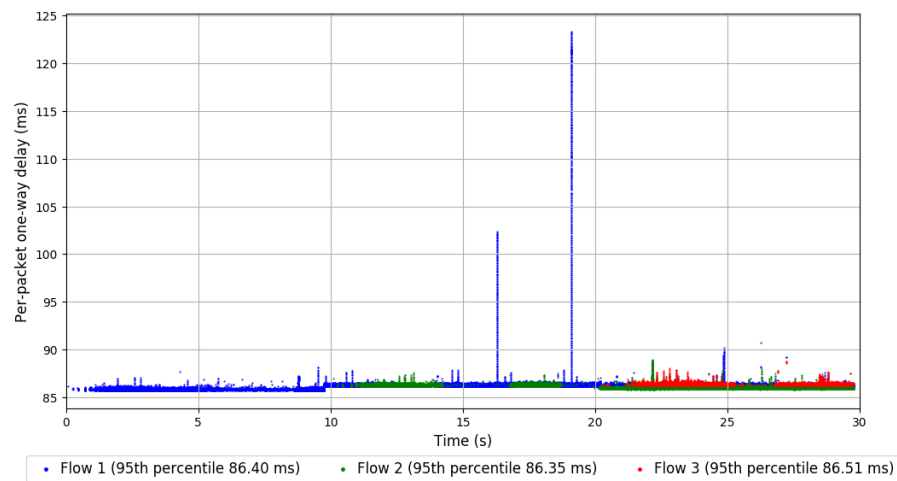
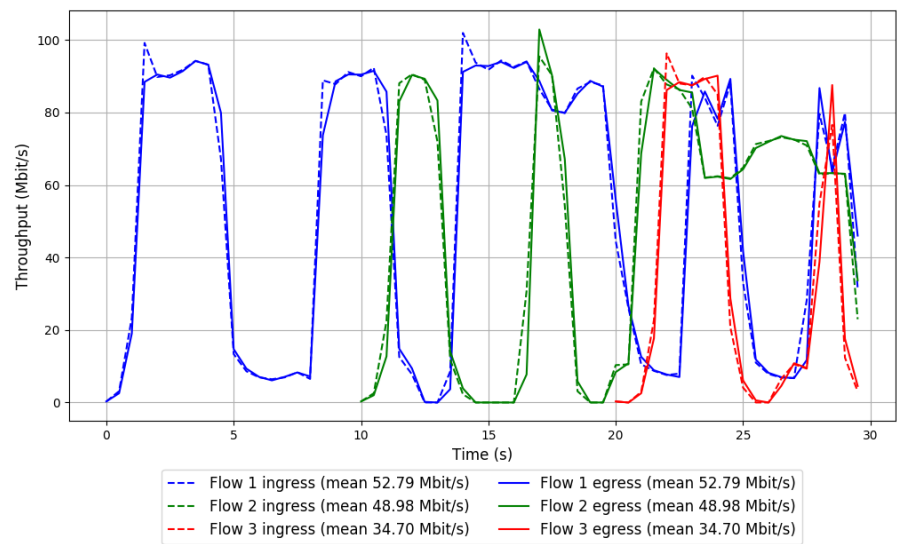


```
Run 10: Statistics of QUIC Cubic

Start at: 2017-12-20 17:50:30
End at: 2017-12-20 17:51:00

# Below is generated by plot.py at 2017-12-20 20:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.57 Mbit/s
95th percentile per-packet one-way delay: 86.416 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 52.79 Mbit/s
95th percentile per-packet one-way delay: 86.396 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 48.98 Mbit/s
95th percentile per-packet one-way delay: 86.349 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.70 Mbit/s
95th percentile per-packet one-way delay: 86.509 ms
Loss rate: 0.00%
```

Run 10: Report of QUIC Cubic — Data Link

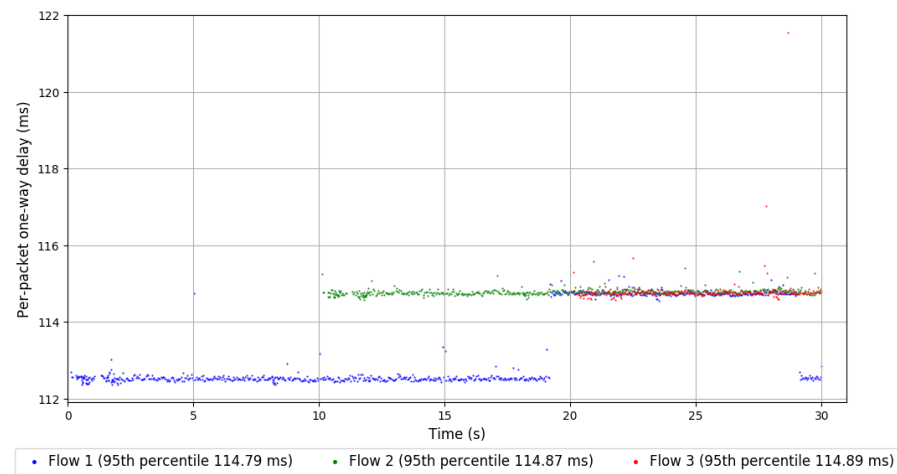
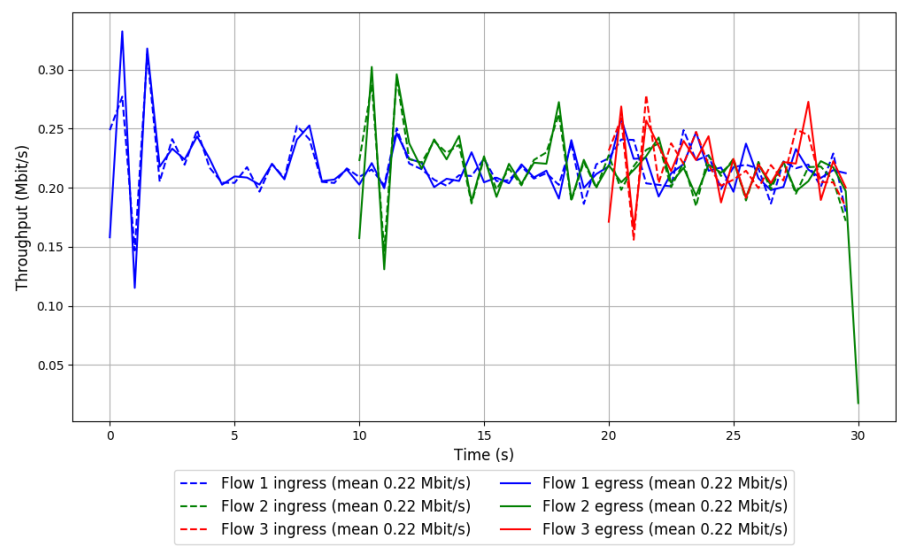


```
Run 1: Statistics of SCReAM

Start at: 2017-12-20 15:51:01
End at: 2017-12-20 15:51:31

# Below is generated by plot.py at 2017-12-20 20:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 114.849 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.786 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.868 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.893 ms
Loss rate: 0.35%
```

Run 1: Report of SCRaM — Data Link

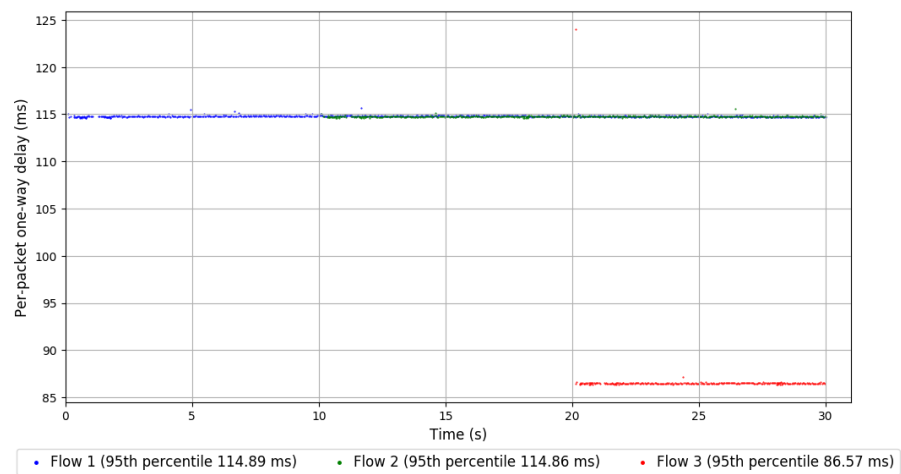
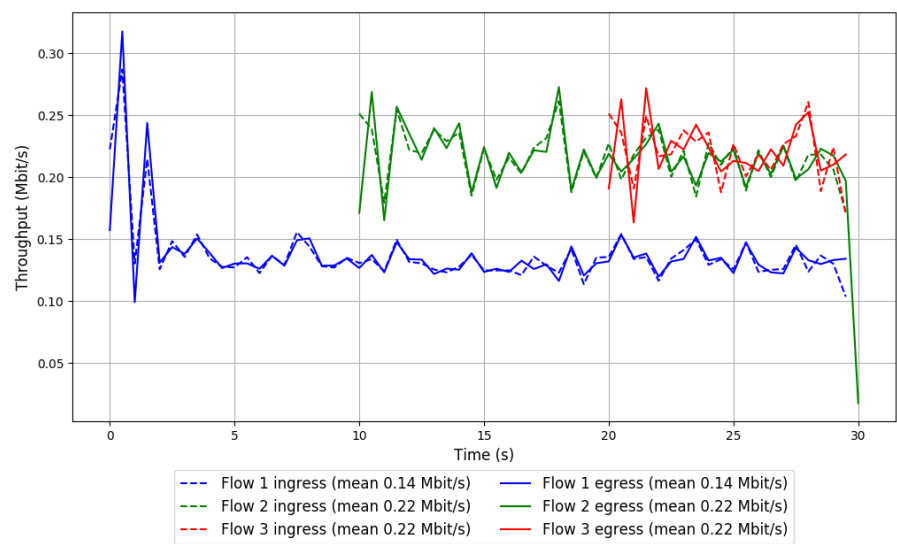


```
Run 2: Statistics of SCReAM

Start at: 2017-12-20 16:06:03
End at: 2017-12-20 16:06:33

# Below is generated by plot.py at 2017-12-20 20:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 114.873 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 114.894 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.856 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.570 ms
Loss rate: 0.00%
```

Run 2: Report of SReAM — Data Link

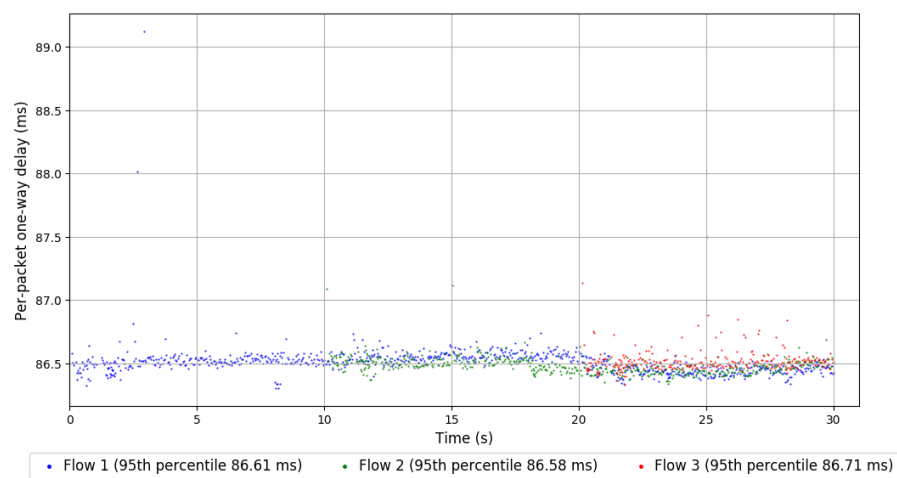
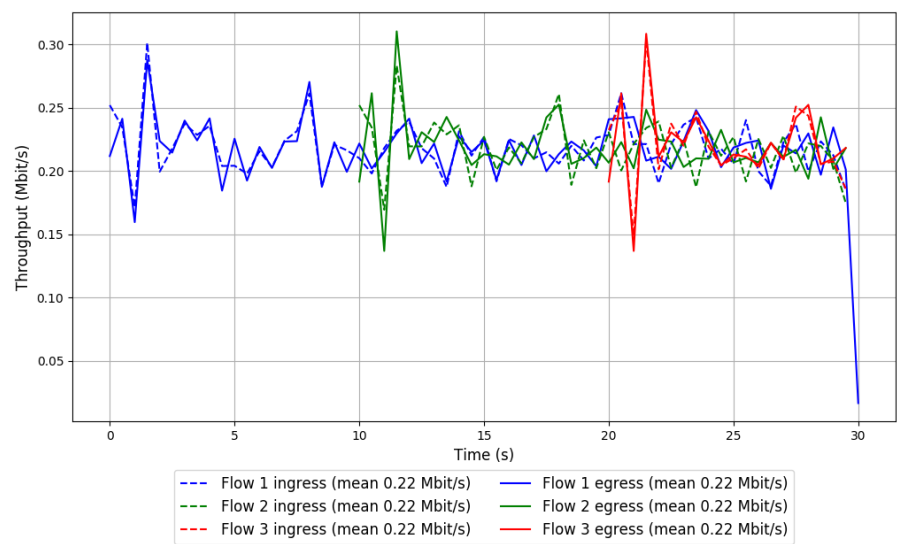


```
Run 3: Statistics of SCReAM

Start at: 2017-12-20 16:20:02
End at: 2017-12-20 16:20:32

# Below is generated by plot.py at 2017-12-20 20:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.606 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.609 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.578 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.710 ms
Loss rate: 0.00%
```


Run 3: Report of SReAM — Data Link

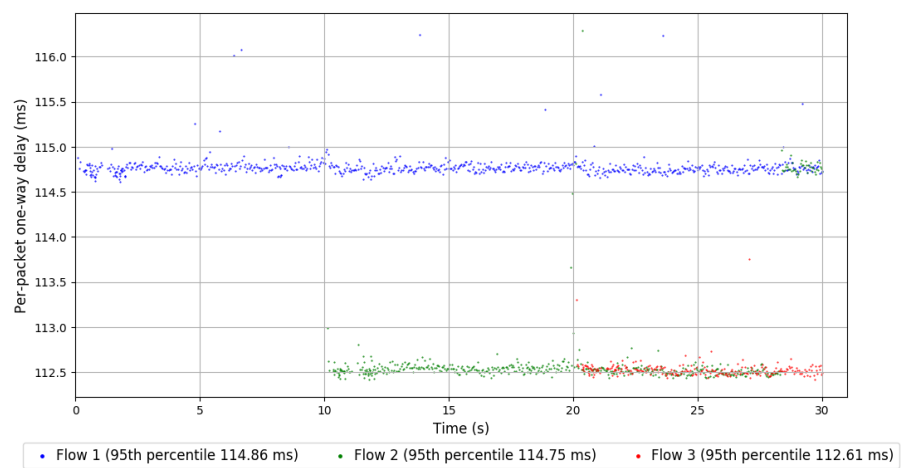
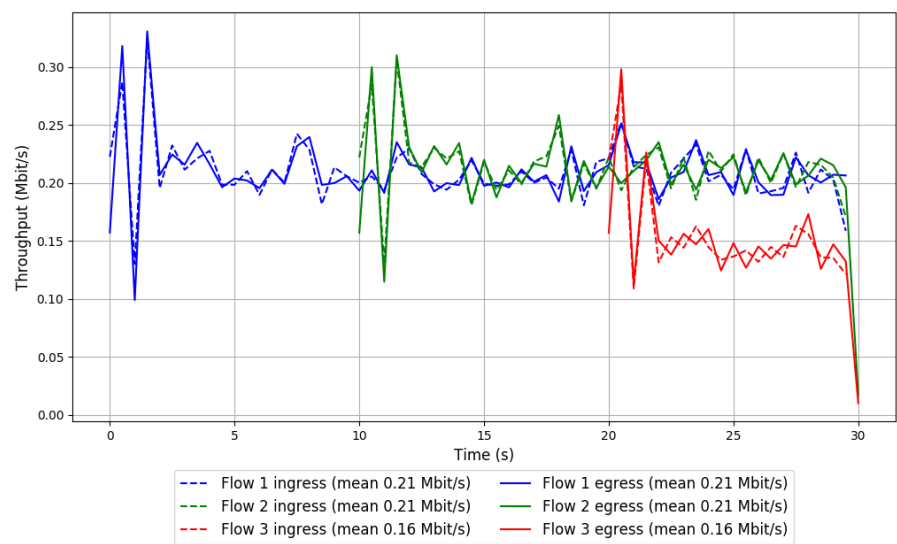


```
Run 4: Statistics of SCReAM

Start at: 2017-12-20 16:34:15
End at: 2017-12-20 16:34:45

# Below is generated by plot.py at 2017-12-20 20:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 114.827 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 114.857 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 114.751 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 112.609 ms
Loss rate: 0.00%
```

Run 4: Report of SCRaM — Data Link



Run 5: Statistics of SCReAM

Start at: 2017-12-20 16:48:46

End at: 2017-12-20 16:49:16

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 114.833 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 114.853 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.541 ms

Loss rate: 0.00%

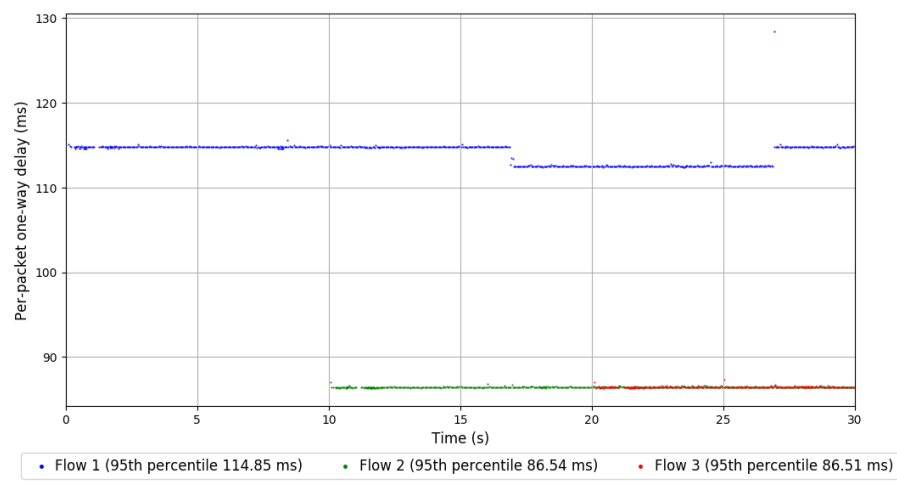
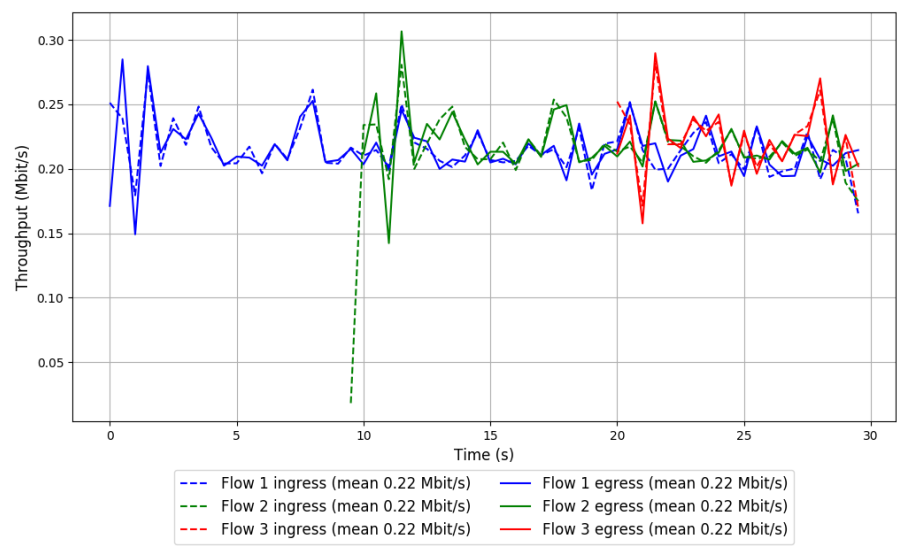
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.512 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2017-12-20 17:03:28

End at: 2017-12-20 17:03:58

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 112.512 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.562 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.644 ms

Loss rate: 0.00%

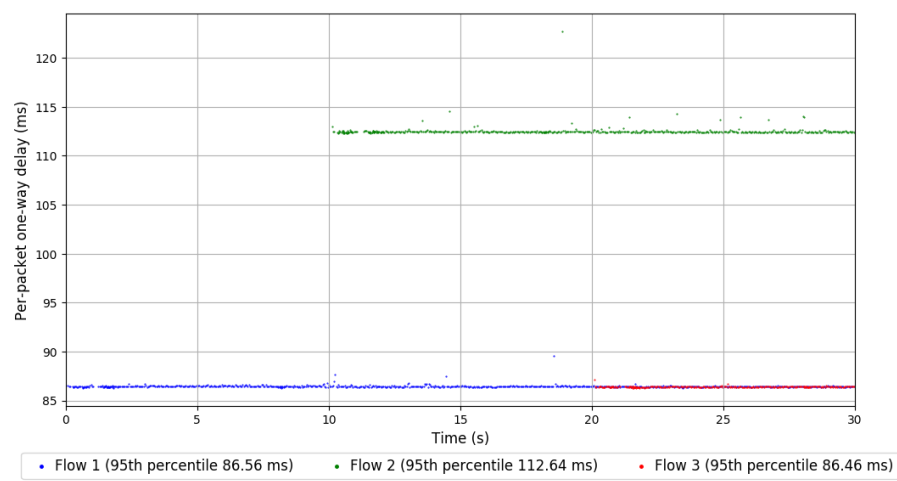
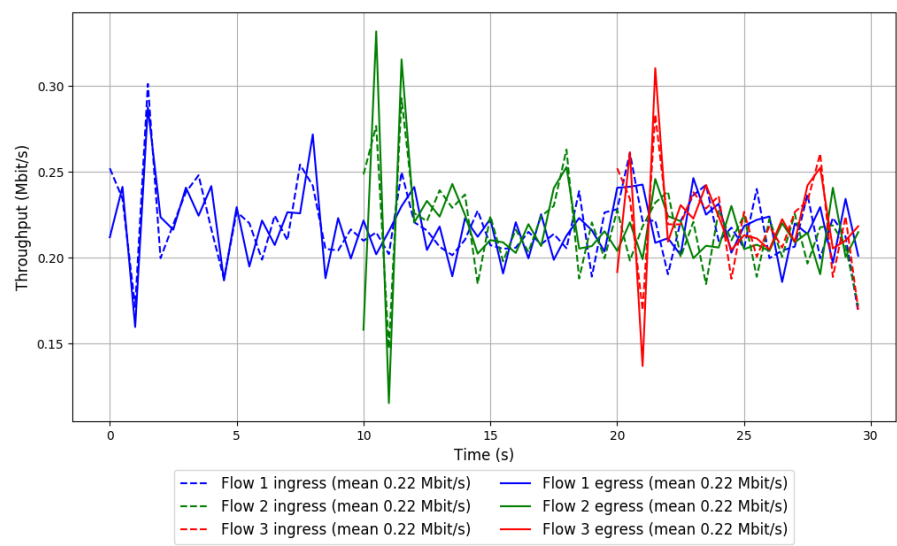
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.462 ms

Loss rate: 0.00%

Run 6: Report of SReAM — Data Link

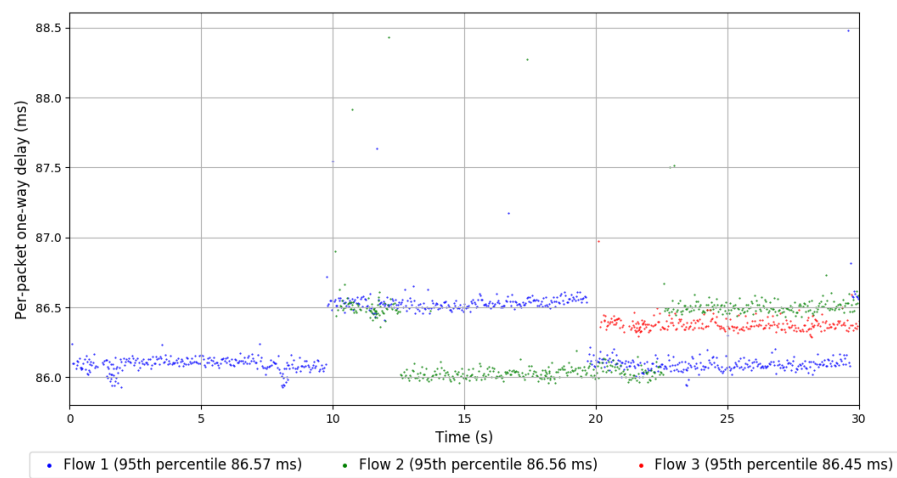
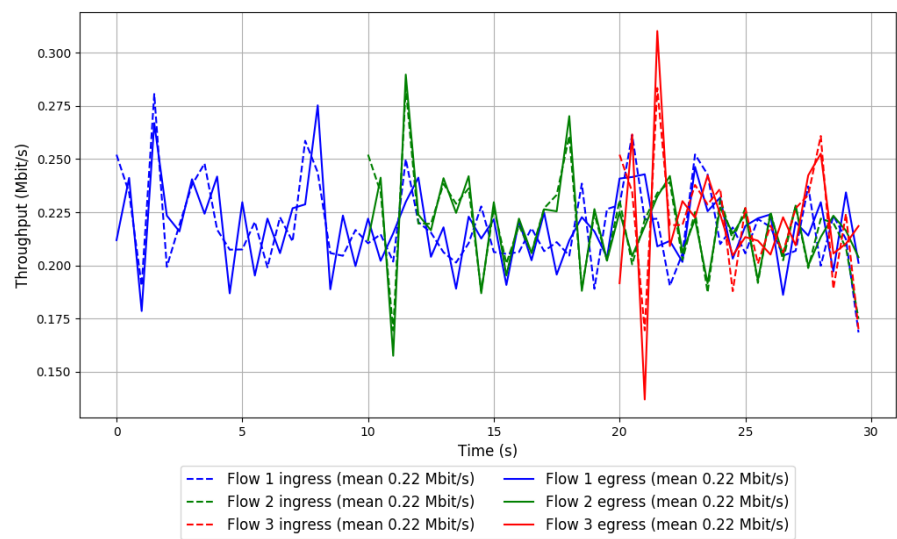


```
Run 7: Statistics of SReAM

Start at: 2017-12-20 17:17:40
End at: 2017-12-20 17:18:11

# Below is generated by plot.py at 2017-12-20 20:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.562 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.570 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.558 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.450 ms
Loss rate: 0.00%
```


Run 7: Report of SReAM — Data Link

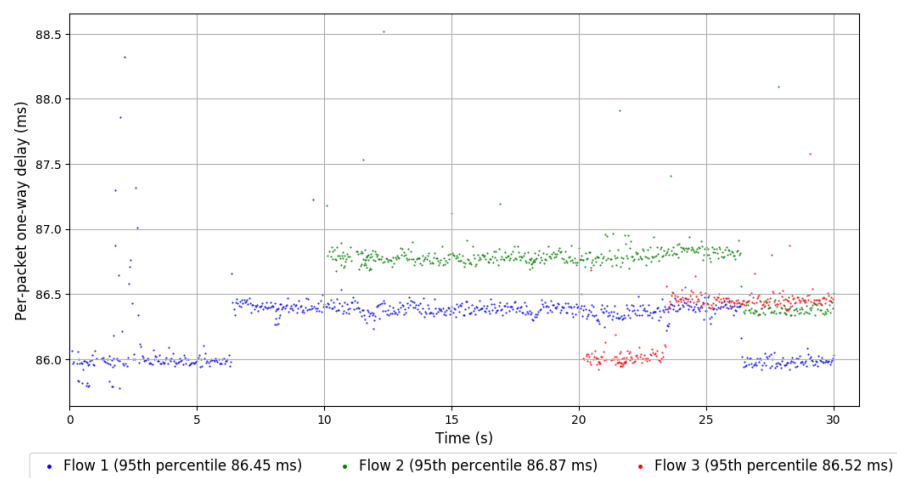
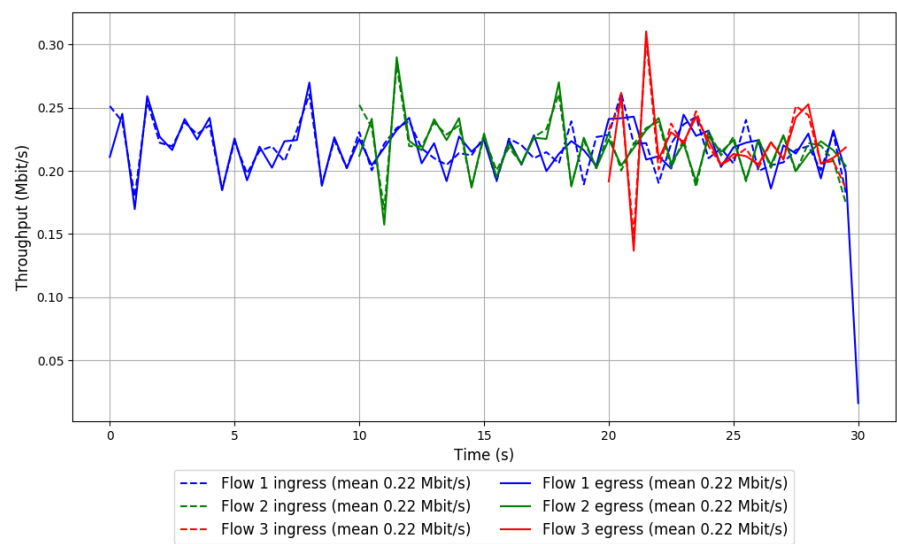


```
Run 8: Statistics of SReAM

Start at: 2017-12-20 17:32:37
End at: 2017-12-20 17:33:07

# Below is generated by plot.py at 2017-12-20 20:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.842 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.451 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.869 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.517 ms
Loss rate: 0.00%
```

Run 8: Report of SReAM — Data Link

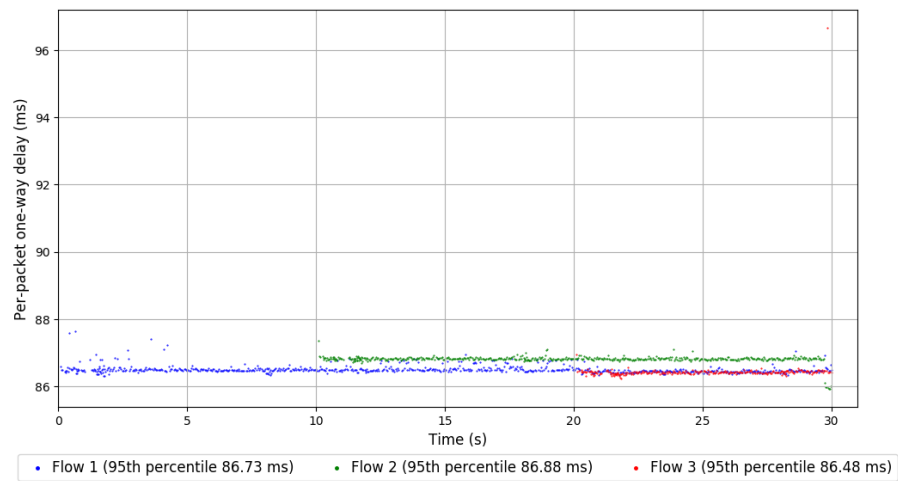
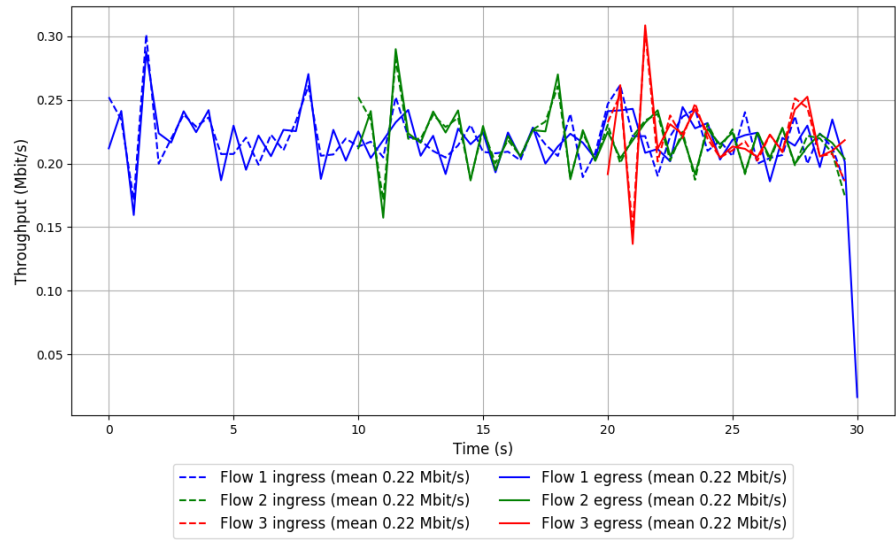


```
Run 9: Statistics of SReAM

Start at: 2017-12-20 17:47:00
End at: 2017-12-20 17:47:30

# Below is generated by plot.py at 2017-12-20 20:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.852 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.726 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.877 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.478 ms
Loss rate: 0.00%
```

Run 9: Report of SReAM — Data Link

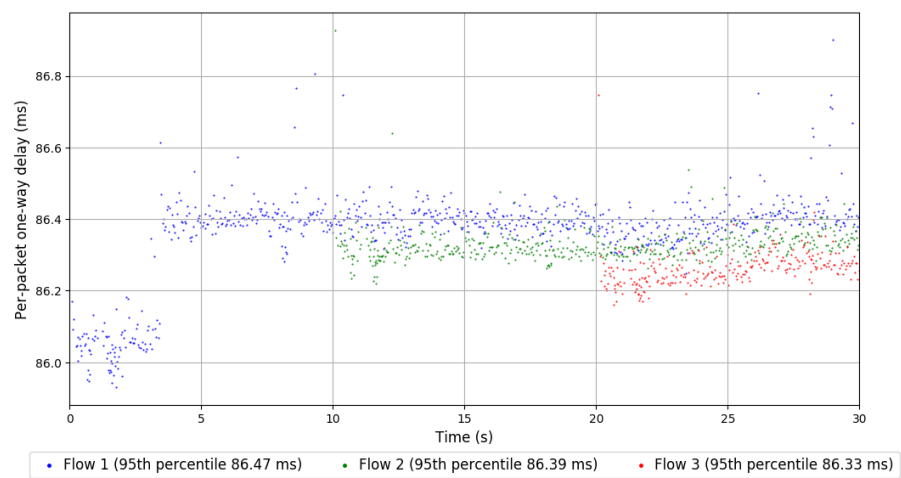
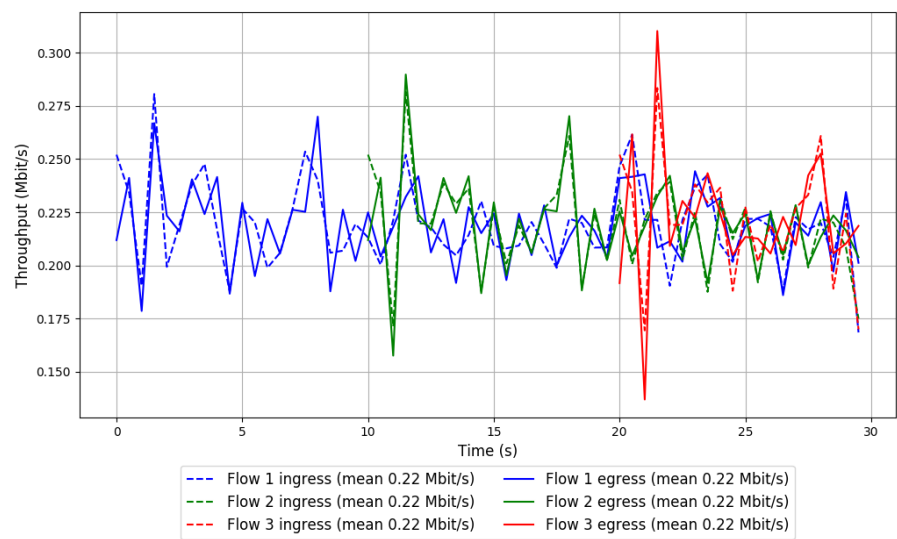


```
Run 10: Statistics of SCReAM

Start at: 2017-12-20 18:01:37
End at: 2017-12-20 18:02:07

# Below is generated by plot.py at 2017-12-20 20:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.447 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.466 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.388 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.327 ms
Loss rate: 0.00%
```

Run 10: Report of SReAM — Data Link

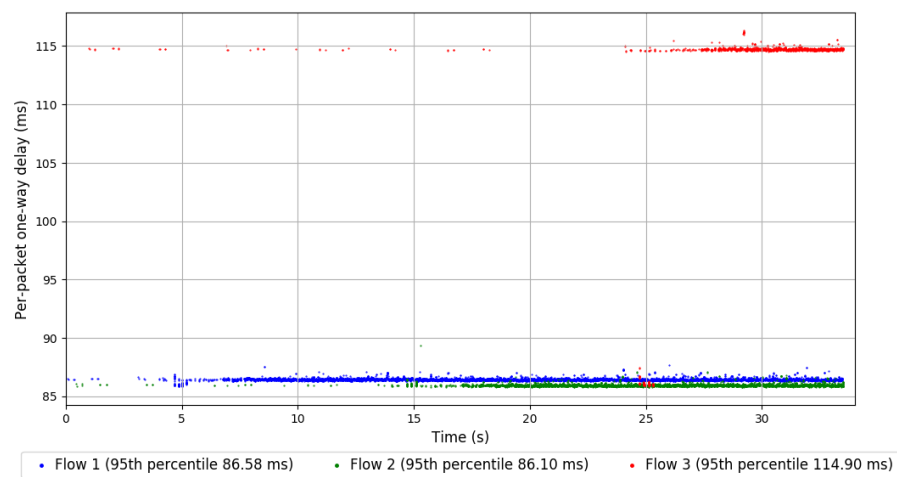
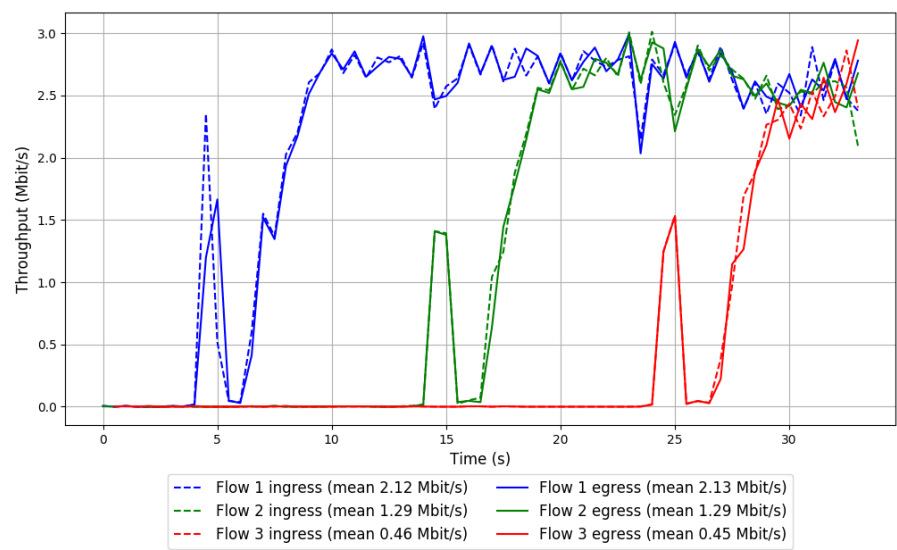


```
Run 1: Statistics of WebRTC media

Start at: 2017-12-20 15:52:52
End at: 2017-12-20 15:53:22

# Below is generated by plot.py at 2017-12-20 20:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 114.720 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 86.576 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 86.100 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 114.898 ms
Loss rate: 0.88%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-12-20 16:07:55

End at: 2017-12-20 16:08:25

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.81 Mbit/s

95th percentile per-packet one-way delay: 114.898 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 114.926 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 114.808 ms

Loss rate: 0.00%

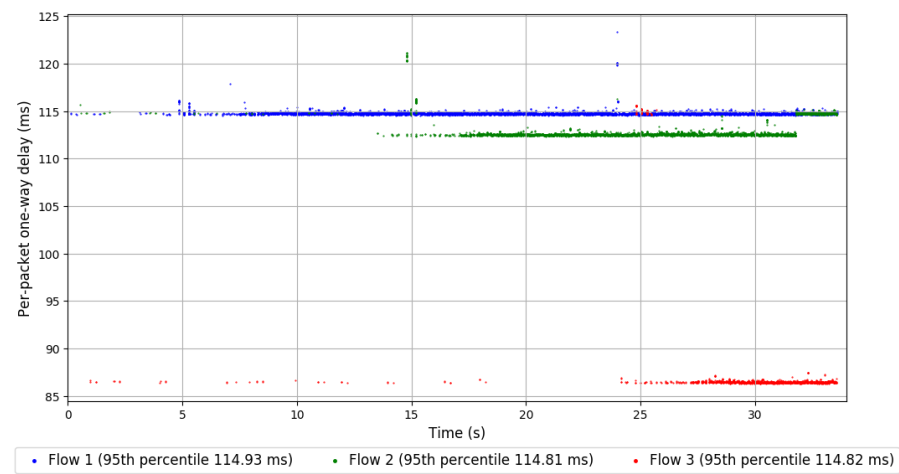
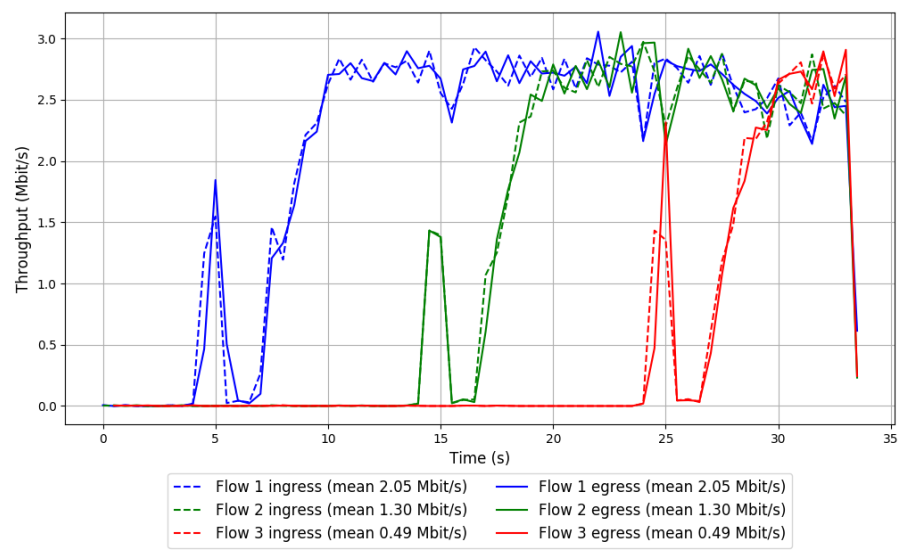
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 114.823 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-12-20 16:21:54

End at: 2017-12-20 16:22:24

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.80 Mbit/s

95th percentile per-packet one-way delay: 114.862 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.06 Mbit/s

95th percentile per-packet one-way delay: 114.901 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 86.660 ms

Loss rate: 0.00%

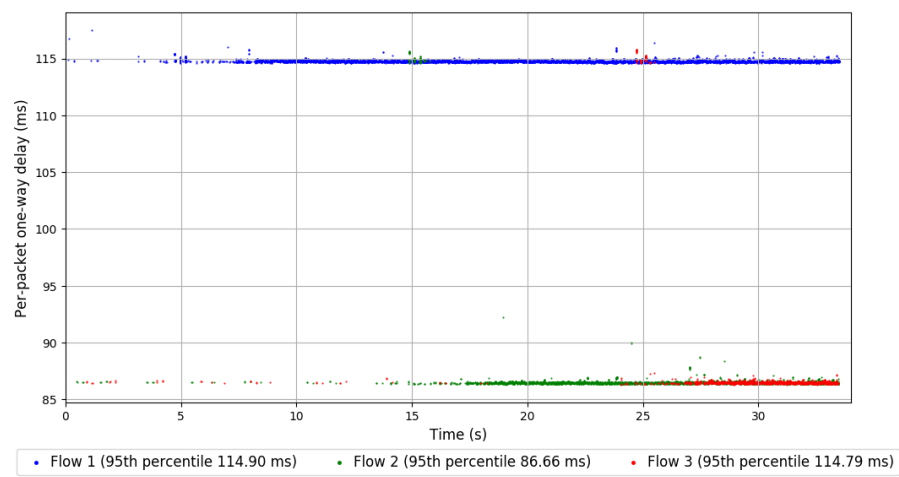
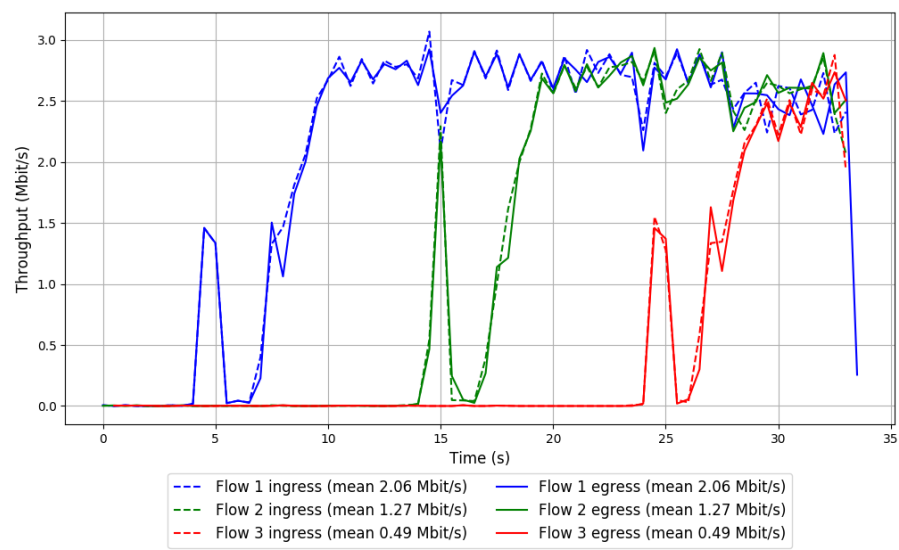
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 114.788 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-12-20 16:36:07

End at: 2017-12-20 16:36:37

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 114.846 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 114.884 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 86.712 ms

Loss rate: 0.00%

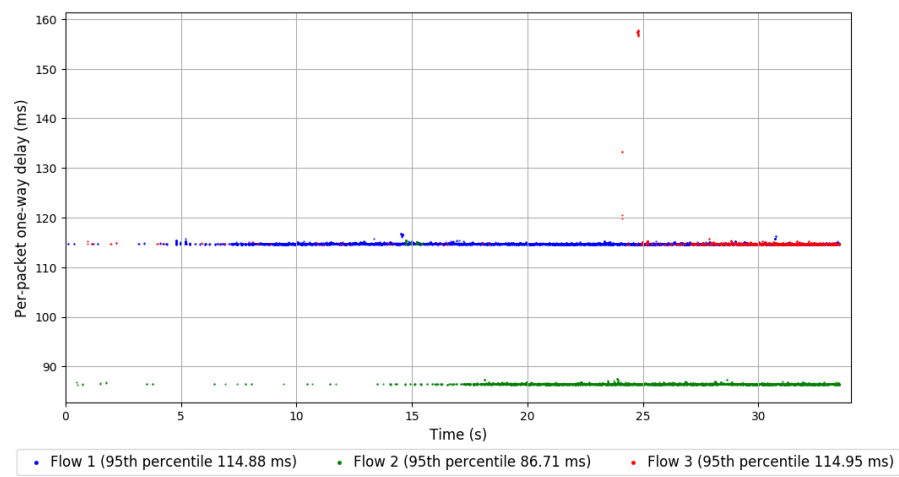
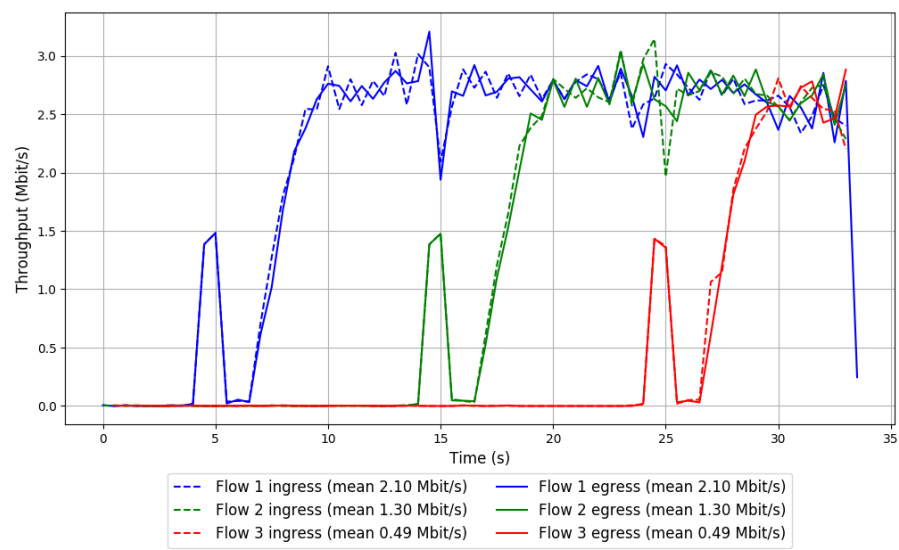
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 114.955 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-12-20 16:50:42

End at: 2017-12-20 16:51:12

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 114.963 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 115.028 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 114.915 ms

Loss rate: 0.00%

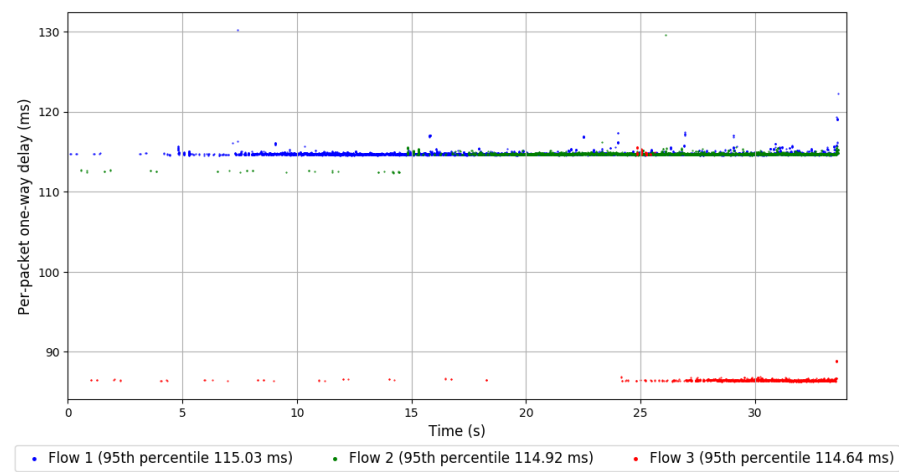
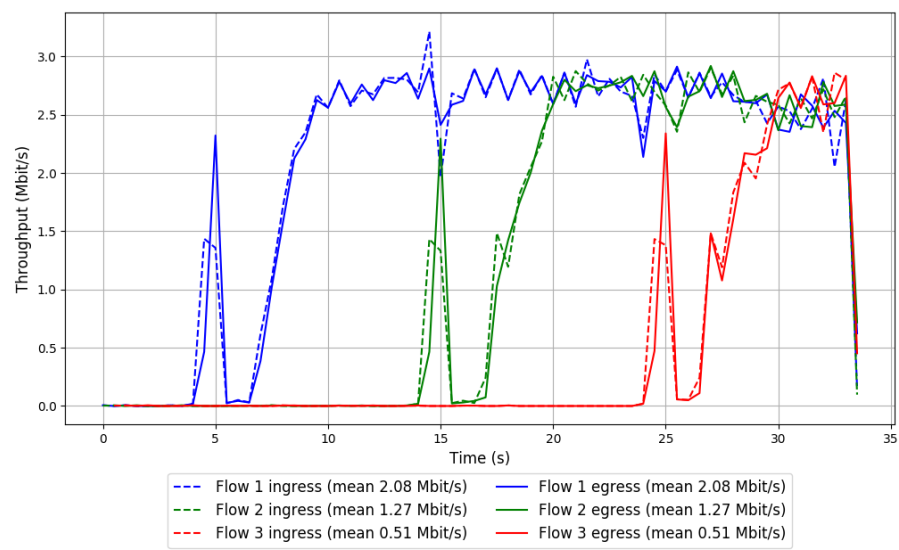
-- Flow 3:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 114.642 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-12-20 17:05:17

End at: 2017-12-20 17:05:47

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.14 Mbit/s

95th percentile per-packet one-way delay: 115.099 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 115.205 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 114.989 ms

Loss rate: 0.00%

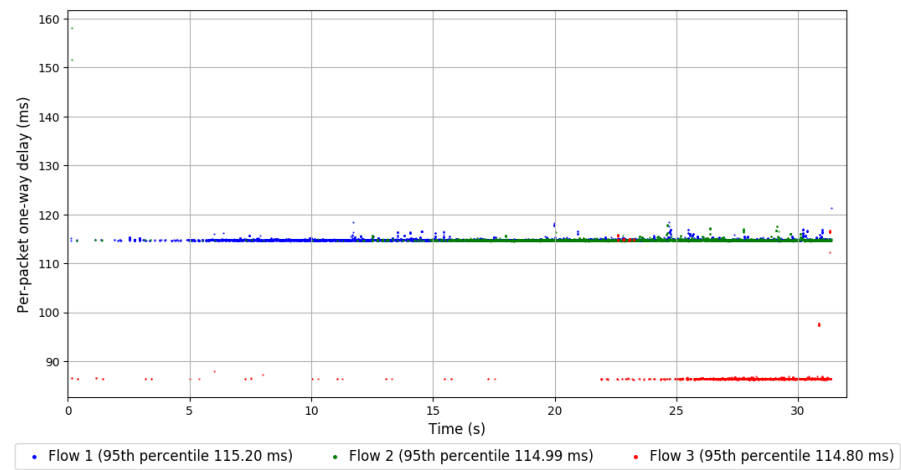
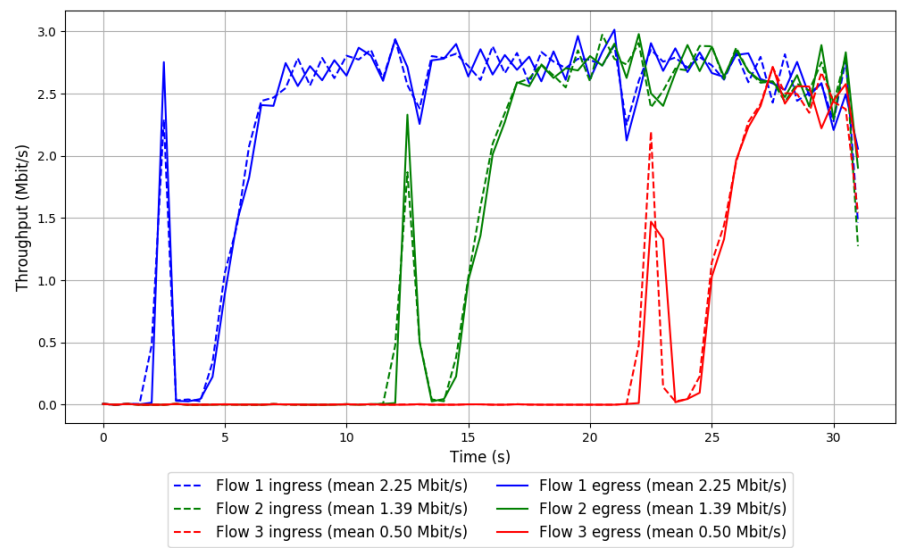
-- Flow 3:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 114.803 ms

Loss rate: 0.00%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-12-20 17:19:29

End at: 2017-12-20 17:19:59

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.97 Mbit/s

95th percentile per-packet one-way delay: 86.847 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.14 Mbit/s

95th percentile per-packet one-way delay: 86.515 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 86.892 ms

Loss rate: 0.00%

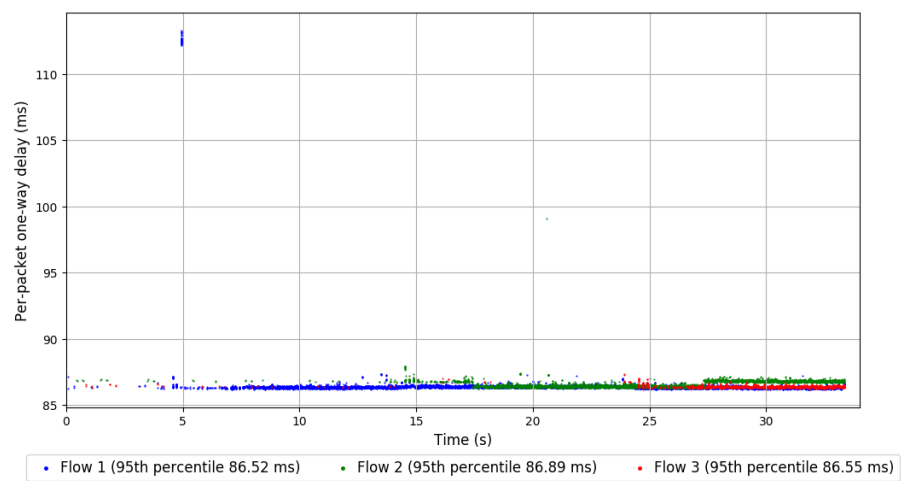
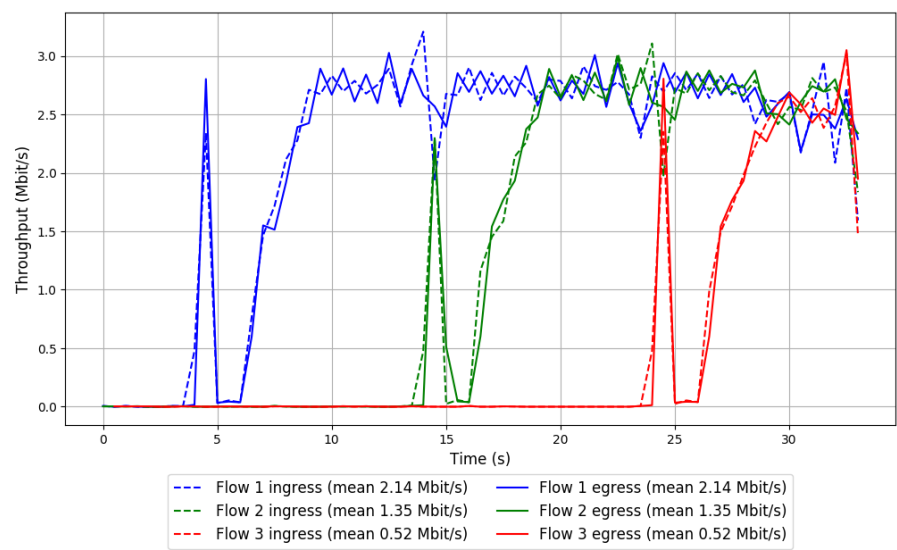
-- Flow 3:

Average throughput: 0.52 Mbit/s

95th percentile per-packet one-way delay: 86.553 ms

Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2017-12-20 17:34:27

End at: 2017-12-20 17:34:57

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.98 Mbit/s

95th percentile per-packet one-way delay: 86.588 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.14 Mbit/s

95th percentile per-packet one-way delay: 86.558 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 86.618 ms

Loss rate: 0.00%

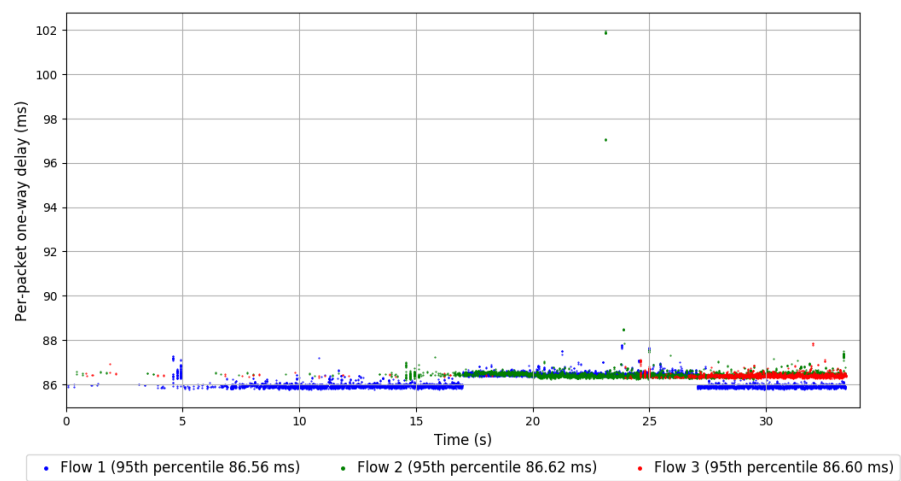
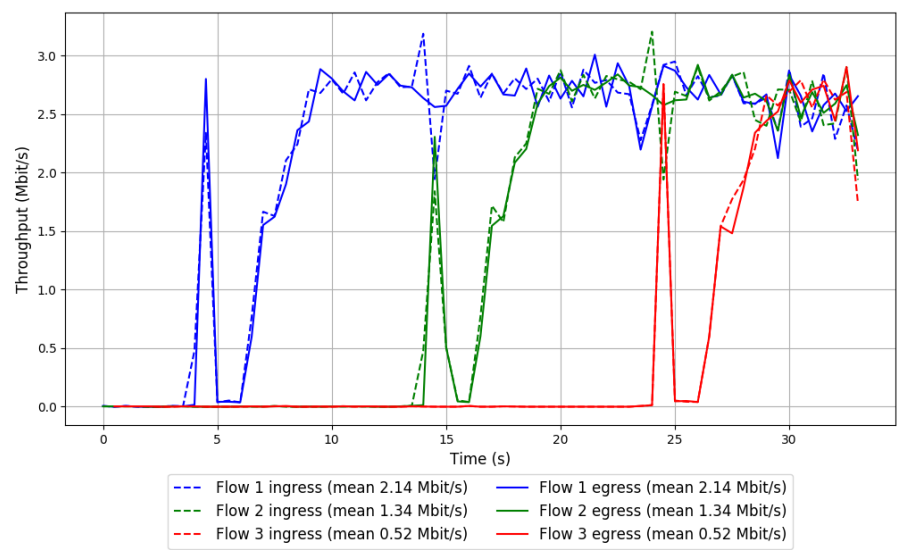
-- Flow 3:

Average throughput: 0.52 Mbit/s

95th percentile per-packet one-way delay: 86.599 ms

Loss rate: 0.00%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-12-20 17:48:52

End at: 2017-12-20 17:49:22

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.96 Mbit/s

95th percentile per-packet one-way delay: 86.501 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 86.366 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 86.564 ms

Loss rate: 0.00%

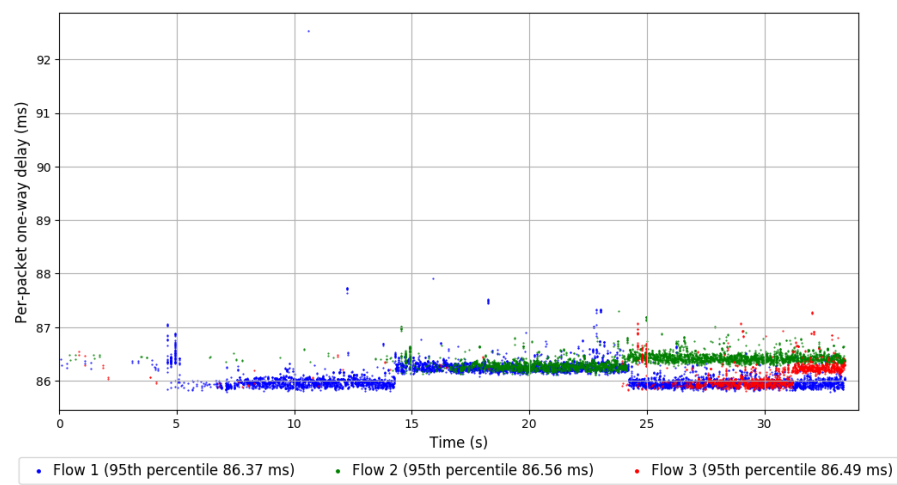
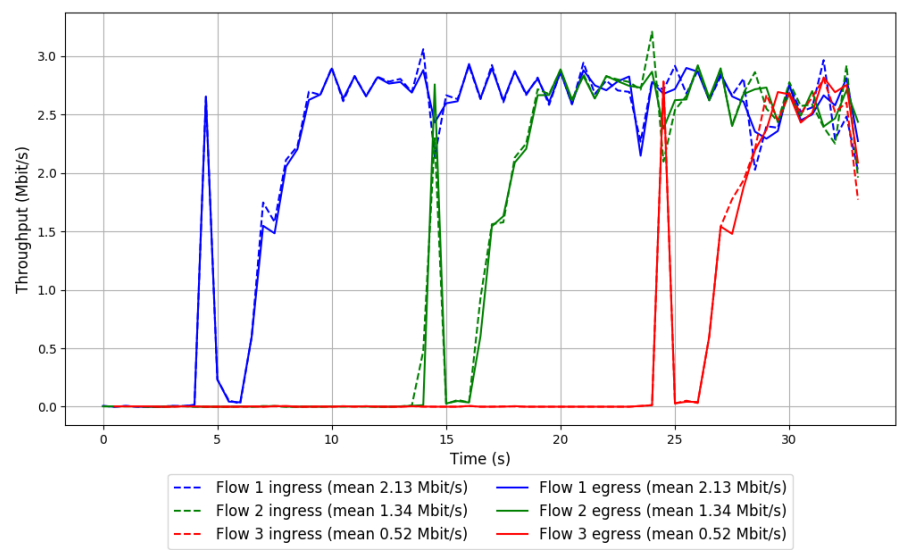
-- Flow 3:

Average throughput: 0.52 Mbit/s

95th percentile per-packet one-way delay: 86.490 ms

Loss rate: 0.00%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-12-20 18:03:29

End at: 2017-12-20 18:03:59

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.98 Mbit/s

95th percentile per-packet one-way delay: 86.622 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 86.663 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 86.212 ms

Loss rate: 0.00%

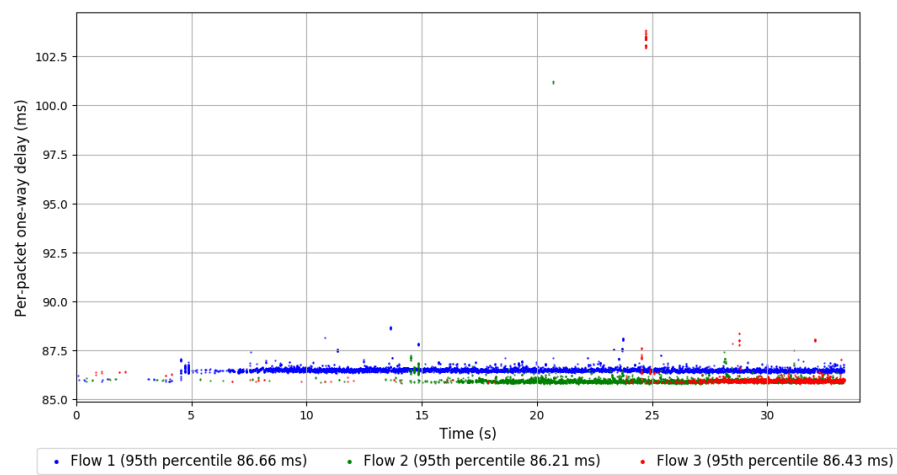
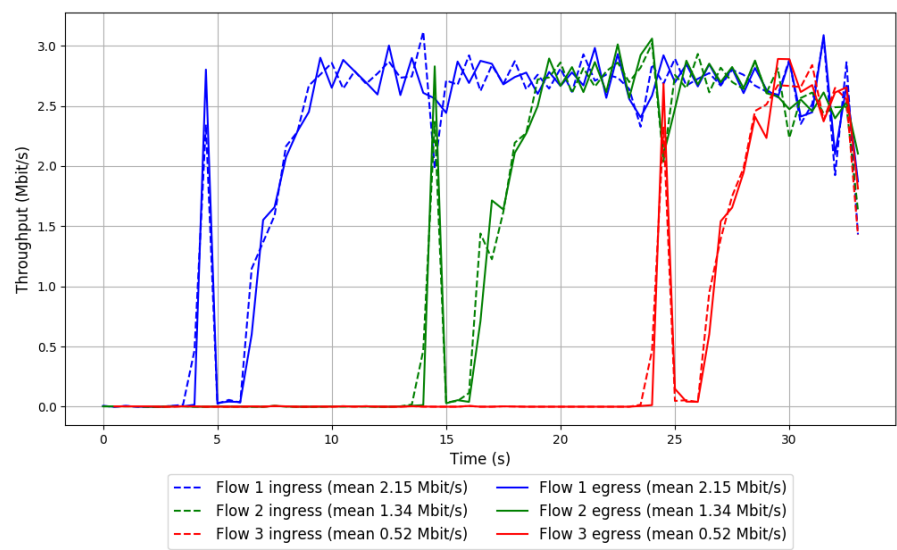
-- Flow 3:

Average throughput: 0.52 Mbit/s

95th percentile per-packet one-way delay: 86.430 ms

Loss rate: 0.00%

Run 10: Report of WebRTC media — Data Link

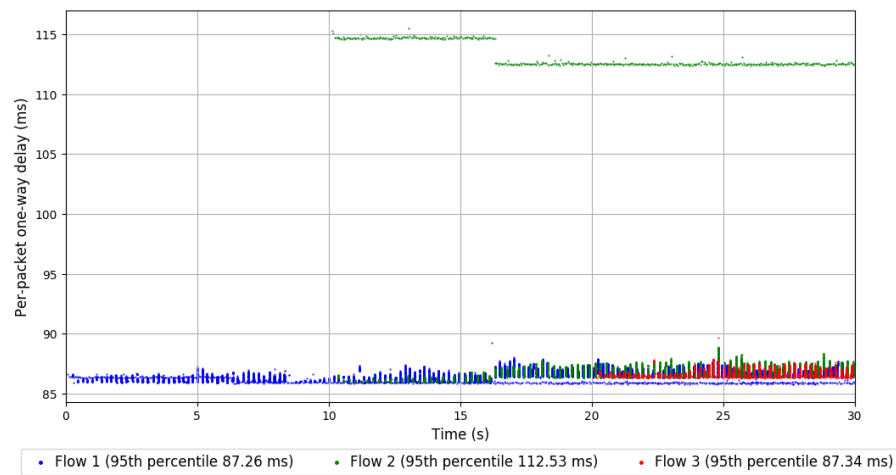
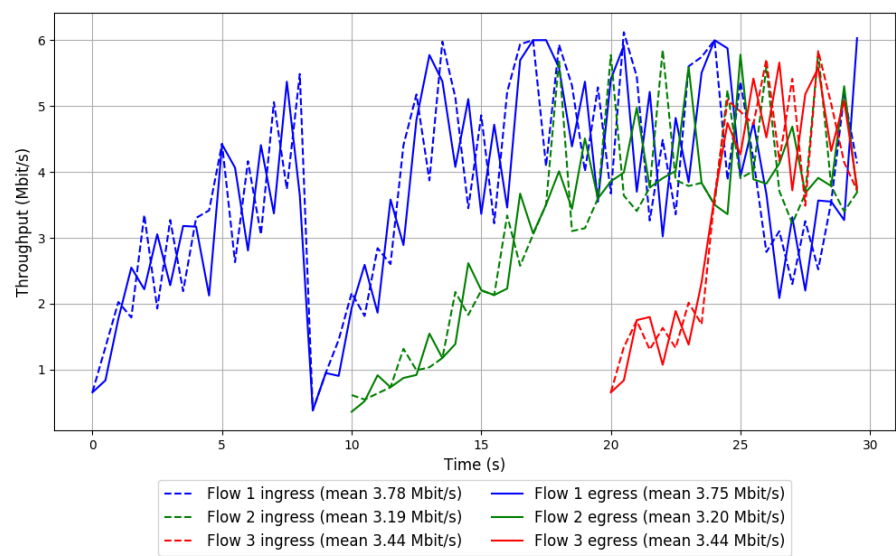


```
Run 1: Statistics of Sprout

Start at: 2017-12-20 15:46:54
End at: 2017-12-20 15:47:24

# Below is generated by plot.py at 2017-12-20 20:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.00 Mbit/s
95th percentile per-packet one-way delay: 87.580 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 3.75 Mbit/s
95th percentile per-packet one-way delay: 87.264 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 3.20 Mbit/s
95th percentile per-packet one-way delay: 112.532 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 87.338 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-12-20 16:01:33

End at: 2017-12-20 16:02:03

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.46 Mbit/s

95th percentile per-packet one-way delay: 115.746 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 1.98 Mbit/s

95th percentile per-packet one-way delay: 115.843 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.80 Mbit/s

95th percentile per-packet one-way delay: 115.415 ms

Loss rate: 1.21%

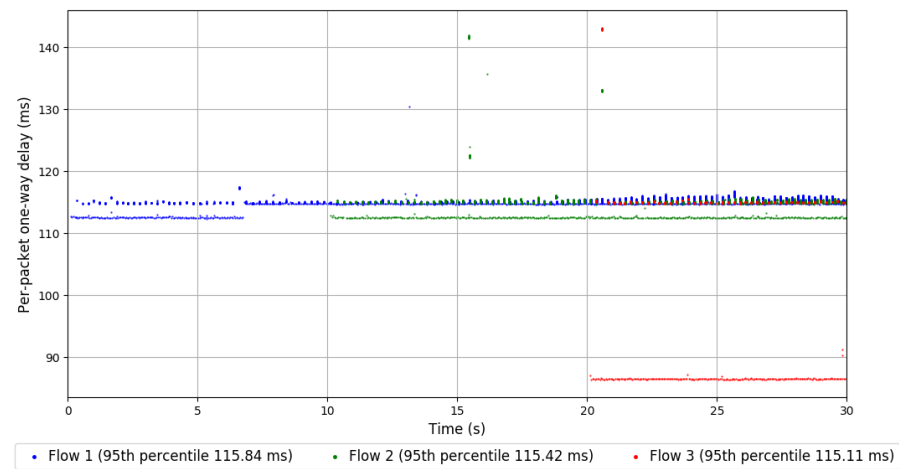
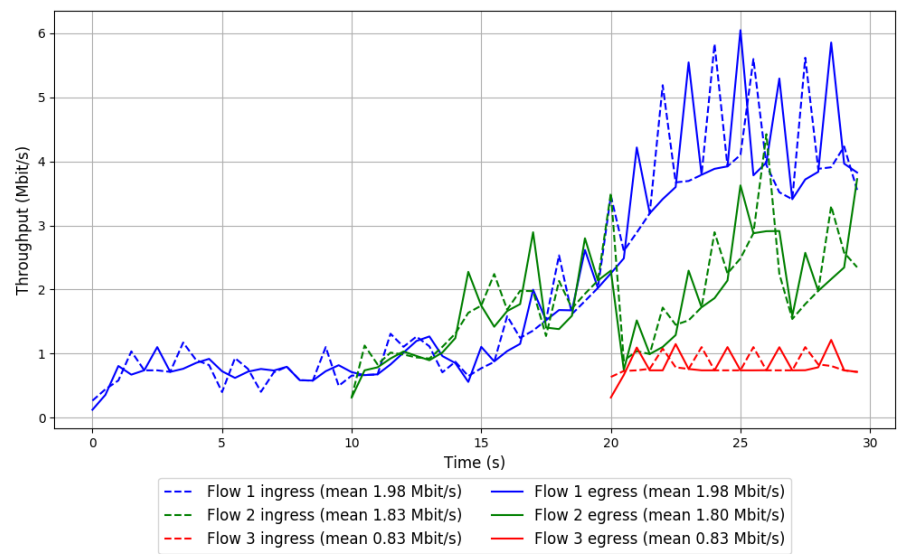
-- Flow 3:

Average throughput: 0.83 Mbit/s

95th percentile per-packet one-way delay: 115.114 ms

Loss rate: 0.15%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-12-20 16:15:52

End at: 2017-12-20 16:16:22

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 115.485 ms

Loss rate: 2.58%

-- Flow 1:

Average throughput: 1.57 Mbit/s

95th percentile per-packet one-way delay: 115.551 ms

Loss rate: 3.38%

-- Flow 2:

Average throughput: 0.27 Mbit/s

95th percentile per-packet one-way delay: 114.938 ms

Loss rate: 2.39%

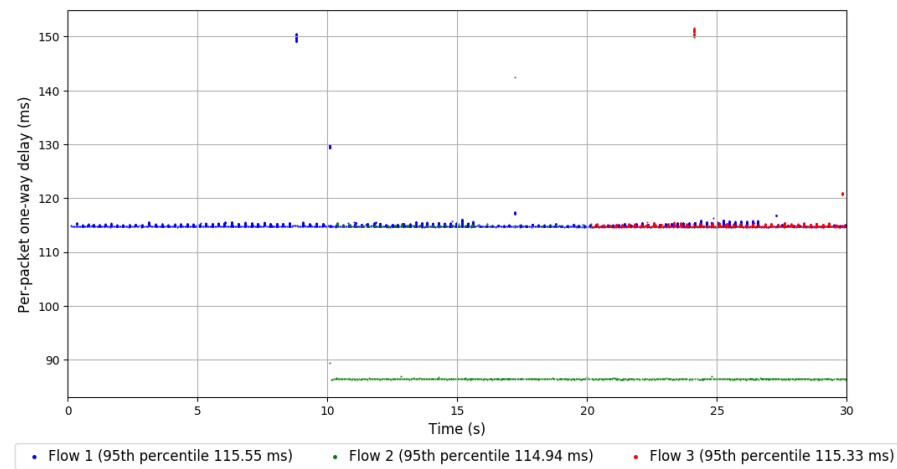
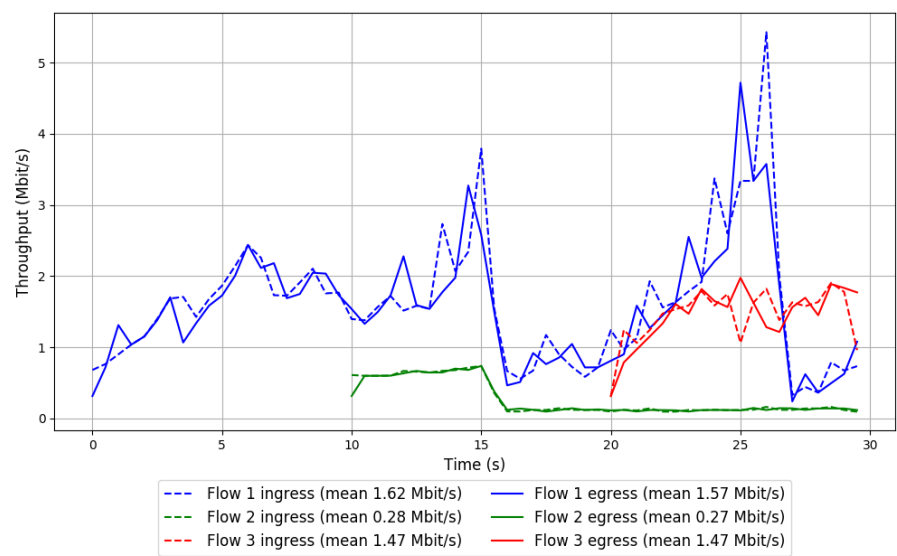
-- Flow 3:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 115.334 ms

Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-12-20 16:29:49

End at: 2017-12-20 16:30:19

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.73 Mbit/s

95th percentile per-packet one-way delay: 115.878 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 115.049 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 3.13 Mbit/s

95th percentile per-packet one-way delay: 115.945 ms

Loss rate: 0.59%

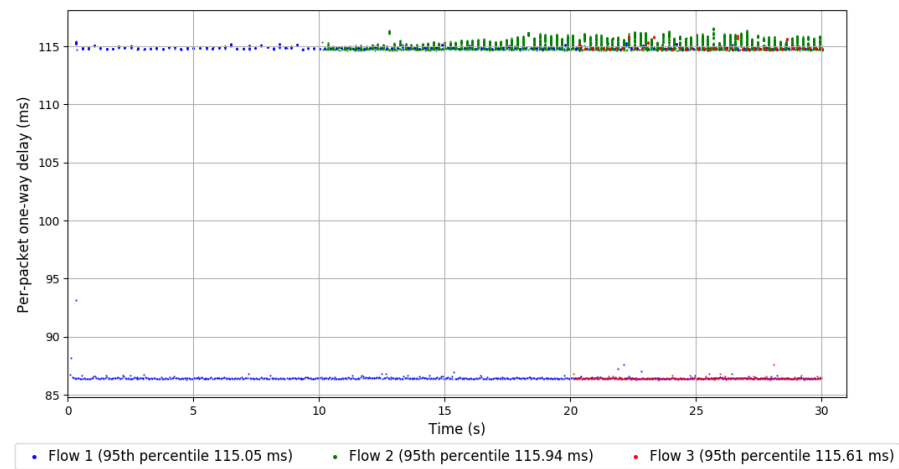
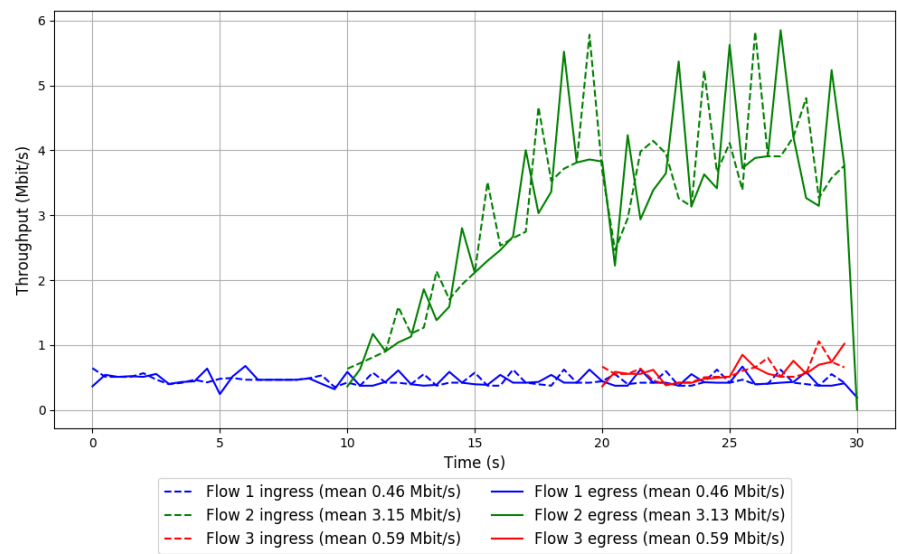
-- Flow 3:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 115.609 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-12-20 16:44:38

End at: 2017-12-20 16:45:08

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 115.748 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 115.156 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 115.303 ms

Loss rate: 0.00%

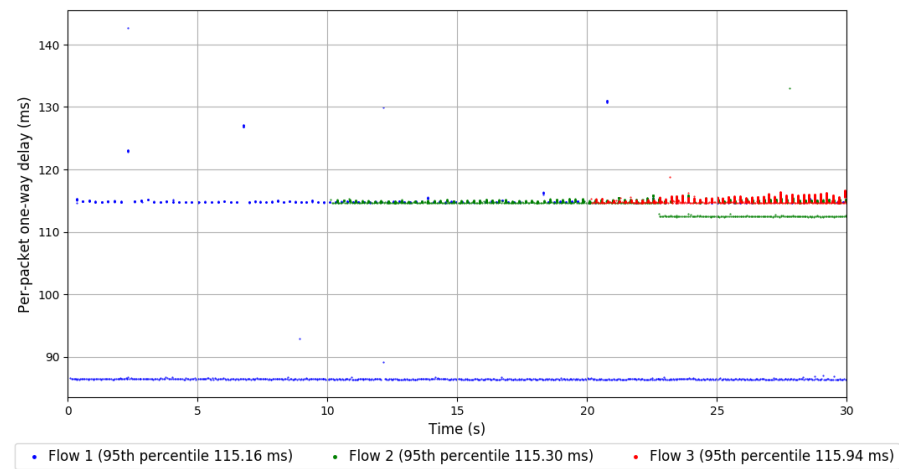
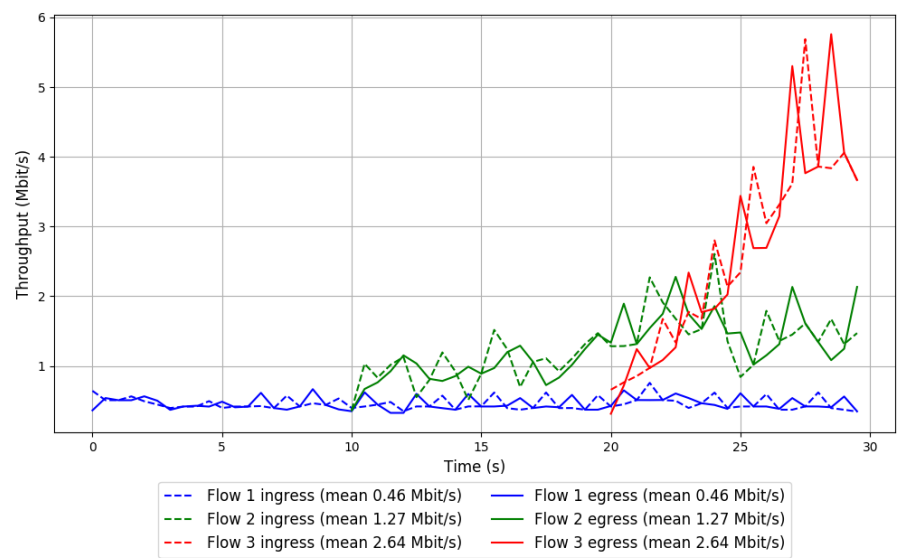
-- Flow 3:

Average throughput: 2.64 Mbit/s

95th percentile per-packet one-way delay: 115.936 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-12-20 16:58:51

End at: 2017-12-20 16:59:21

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.88 Mbit/s

95th percentile per-packet one-way delay: 115.834 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 3.49 Mbit/s

95th percentile per-packet one-way delay: 115.901 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.57 Mbit/s

95th percentile per-packet one-way delay: 115.731 ms

Loss rate: 0.00%

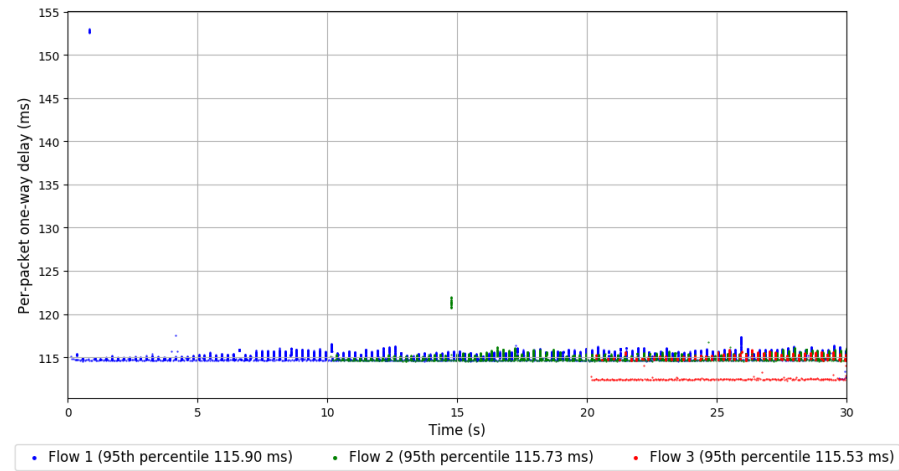
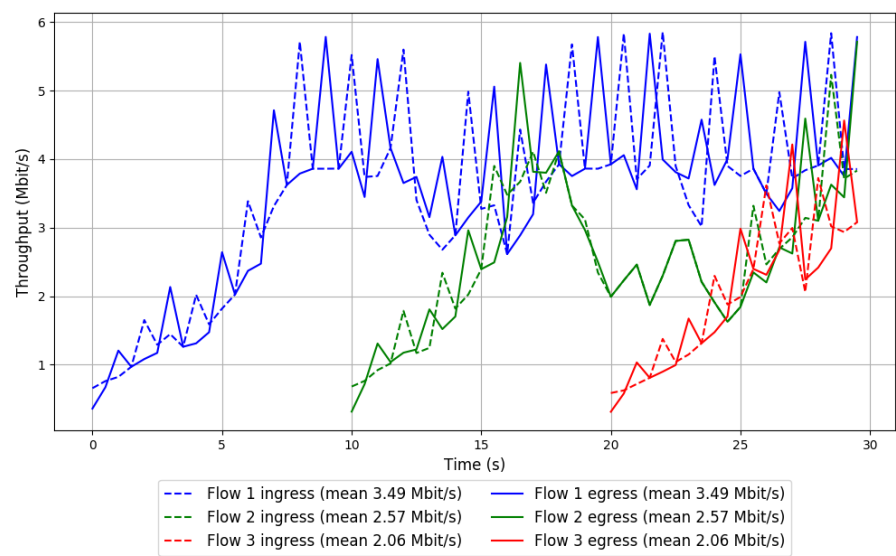
-- Flow 3:

Average throughput: 2.06 Mbit/s

95th percentile per-packet one-way delay: 115.532 ms

Loss rate: 0.00%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-12-20 17:13:02

End at: 2017-12-20 17:13:32

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.46 Mbit/s

95th percentile per-packet one-way delay: 114.719 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 3.16 Mbit/s

95th percentile per-packet one-way delay: 114.803 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.79 Mbit/s

95th percentile per-packet one-way delay: 87.510 ms

Loss rate: 1.41%

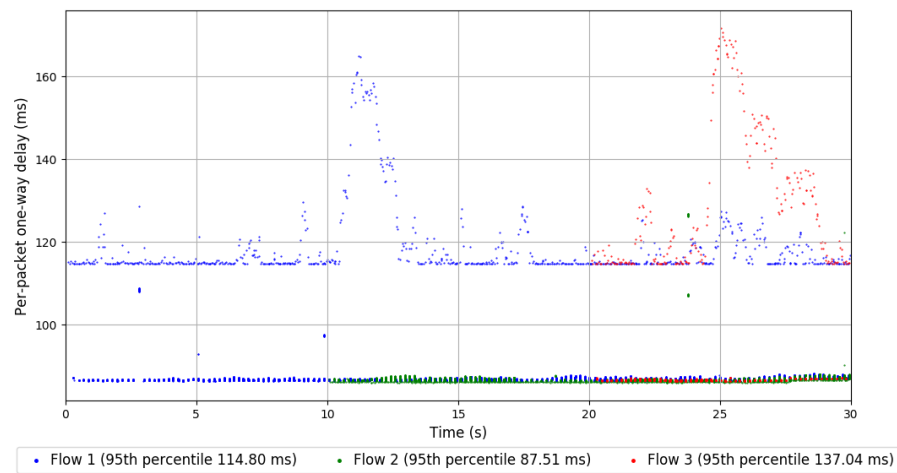
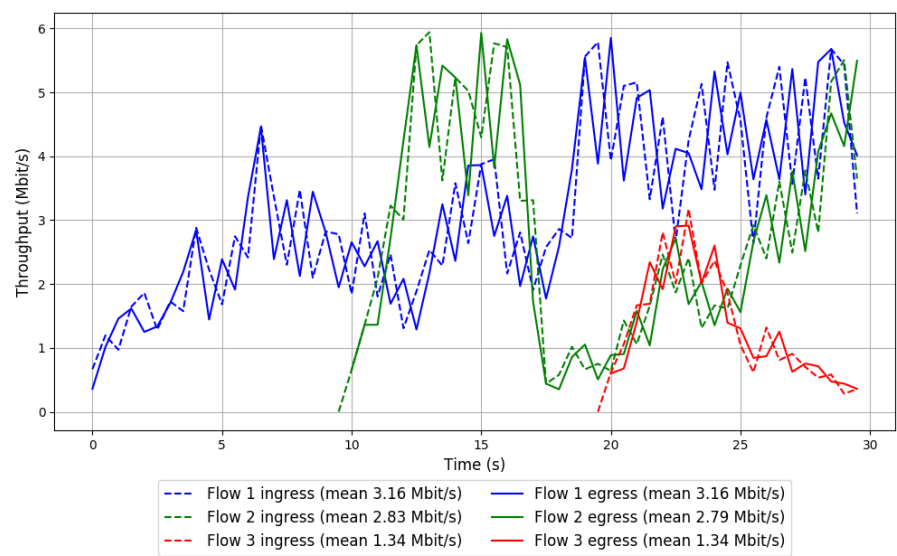
-- Flow 3:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 137.041 ms

Loss rate: 0.01%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-12-20 17:27:56

End at: 2017-12-20 17:28:26

Below is generated by plot.py at 2017-12-20 20:01:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.66 Mbit/s

95th percentile per-packet one-way delay: 87.253 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 3.09 Mbit/s

95th percentile per-packet one-way delay: 87.251 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 3.30 Mbit/s

95th percentile per-packet one-way delay: 87.287 ms

Loss rate: 1.46%

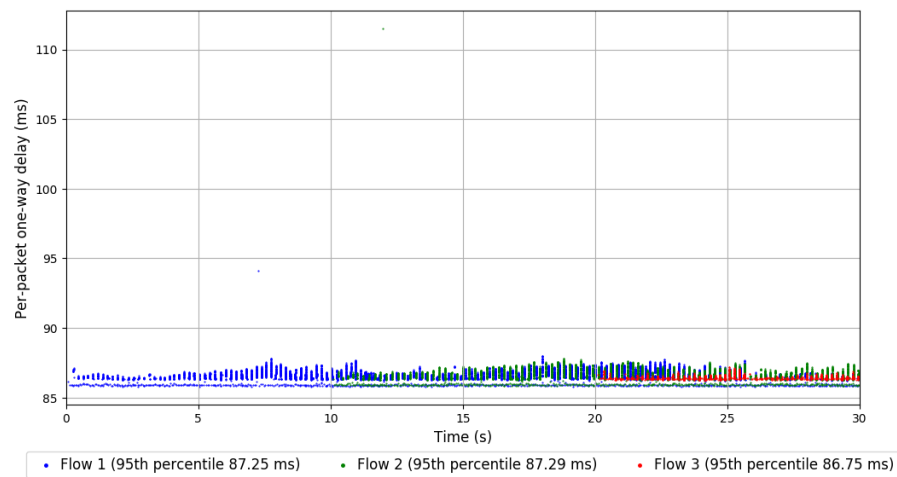
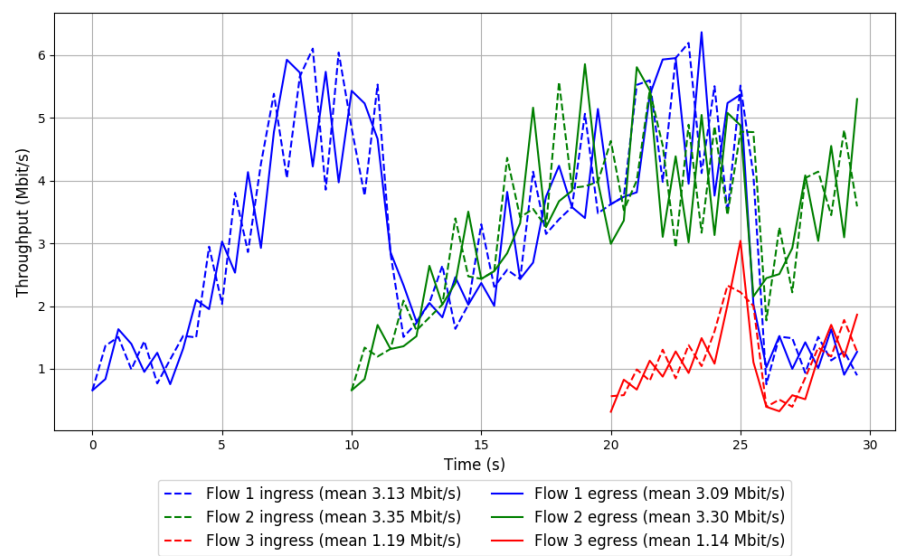
-- Flow 3:

Average throughput: 1.14 Mbit/s

95th percentile per-packet one-way delay: 86.749 ms

Loss rate: 3.85%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-12-20 17:42:57

End at: 2017-12-20 17:43:27

Below is generated by plot.py at 2017-12-20 20:01:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.28 Mbit/s

95th percentile per-packet one-way delay: 87.346 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 87.351 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 4.07 Mbit/s

95th percentile per-packet one-way delay: 87.330 ms

Loss rate: 0.00%

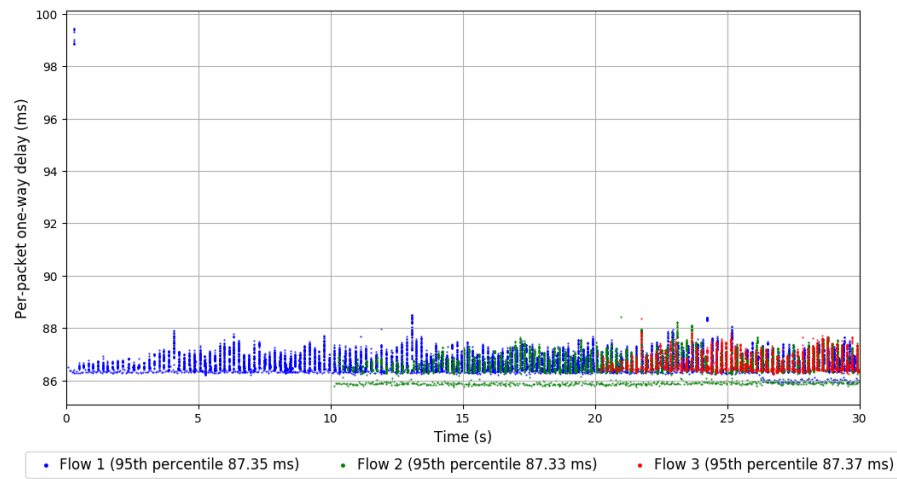
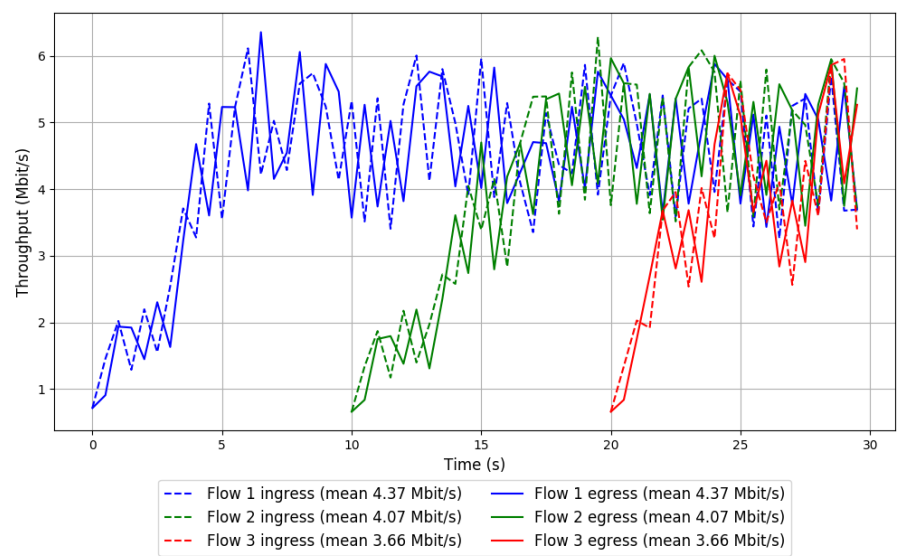
-- Flow 3:

Average throughput: 3.66 Mbit/s

95th percentile per-packet one-way delay: 87.369 ms

Loss rate: 0.00%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-12-20 17:57:17

End at: 2017-12-20 17:57:47

Below is generated by plot.py at 2017-12-20 20:01:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.19 Mbit/s

95th percentile per-packet one-way delay: 87.291 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 3.71 Mbit/s

95th percentile per-packet one-way delay: 87.304 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 3.66 Mbit/s

95th percentile per-packet one-way delay: 87.311 ms

Loss rate: 0.00%

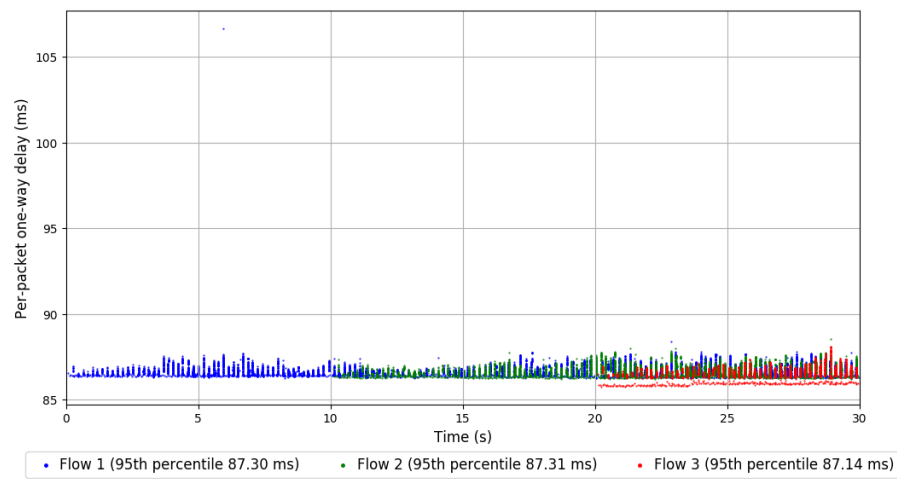
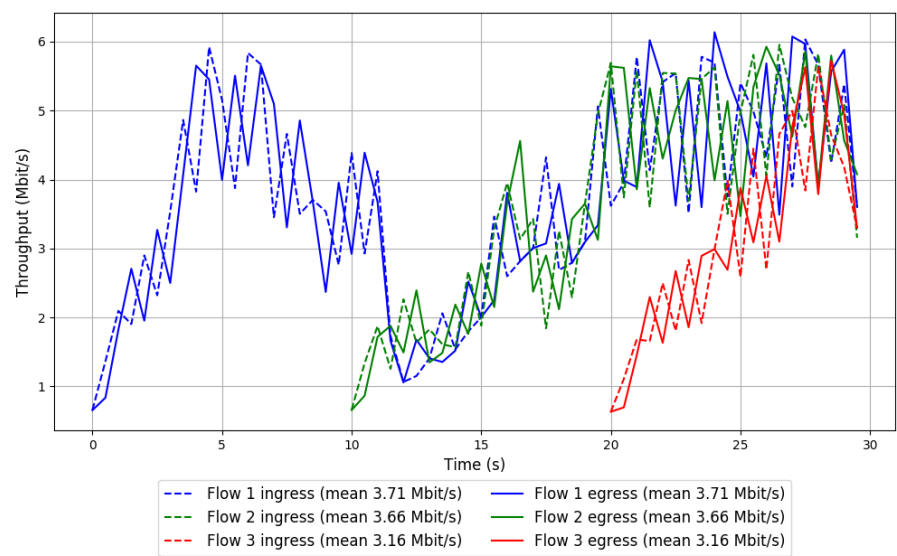
-- Flow 3:

Average throughput: 3.16 Mbit/s

95th percentile per-packet one-way delay: 87.144 ms

Loss rate: 0.00%

Run 10: Report of Sprout — Data Link

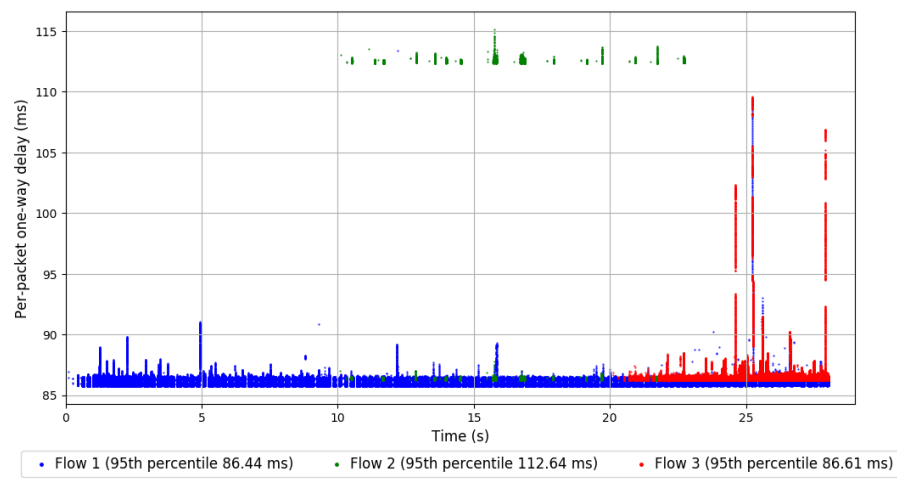
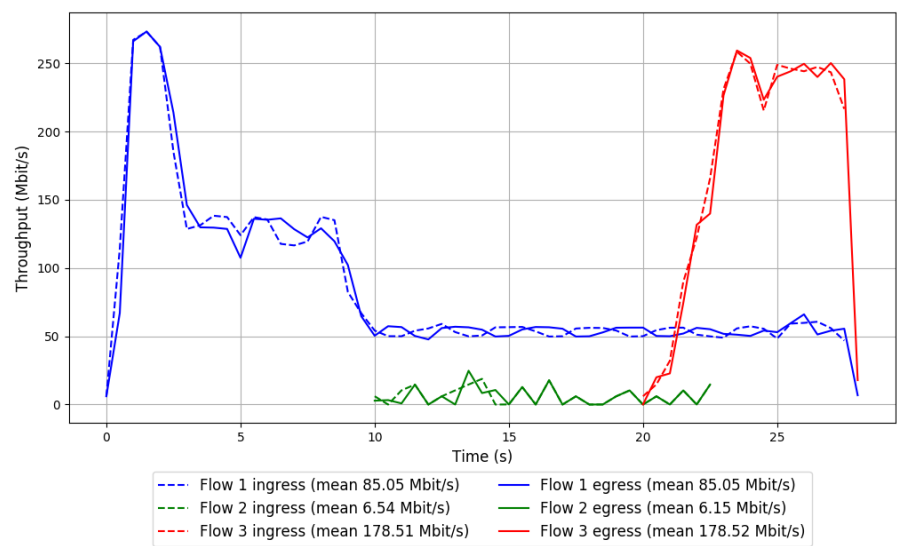


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-12-20 15:41:20
End at: 2017-12-20 15:41:50

# Below is generated by plot.py at 2017-12-20 20:02:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.48 Mbit/s
95th percentile per-packet one-way delay: 86.531 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 85.05 Mbit/s
95th percentile per-packet one-way delay: 86.437 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 6.15 Mbit/s
95th percentile per-packet one-way delay: 112.642 ms
Loss rate: 5.78%
-- Flow 3:
Average throughput: 178.52 Mbit/s
95th percentile per-packet one-way delay: 86.610 ms
Loss rate: 0.00%
```


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

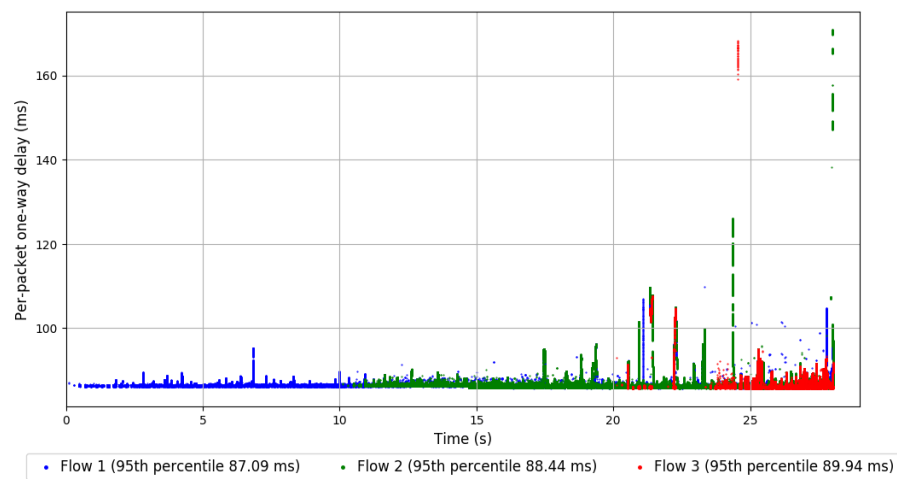
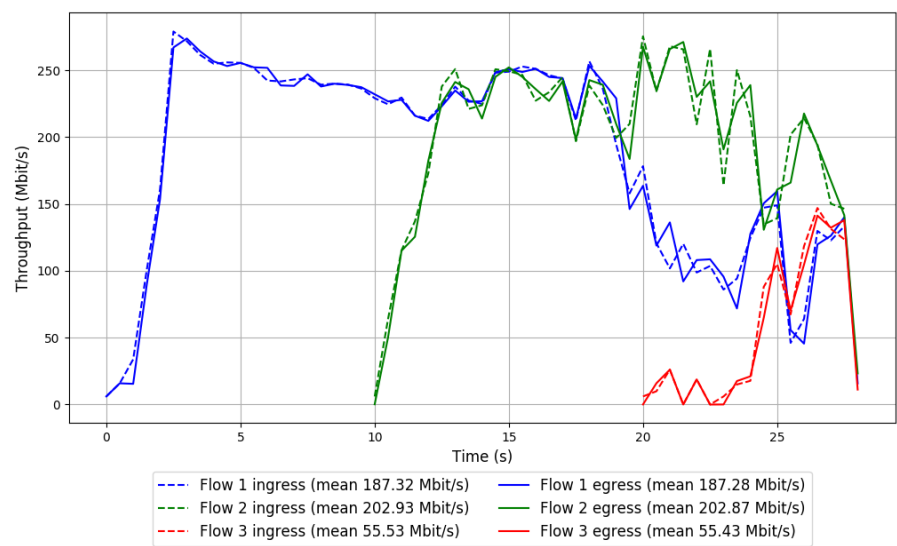


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-12-20 15:55:23
End at: 2017-12-20 15:55:53

# Below is generated by plot.py at 2017-12-20 20:09:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 333.22 Mbit/s
95th percentile per-packet one-way delay: 87.694 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 187.28 Mbit/s
95th percentile per-packet one-way delay: 87.089 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 202.87 Mbit/s
95th percentile per-packet one-way delay: 88.439 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 55.43 Mbit/s
95th percentile per-packet one-way delay: 89.935 ms
Loss rate: 0.17%
```

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

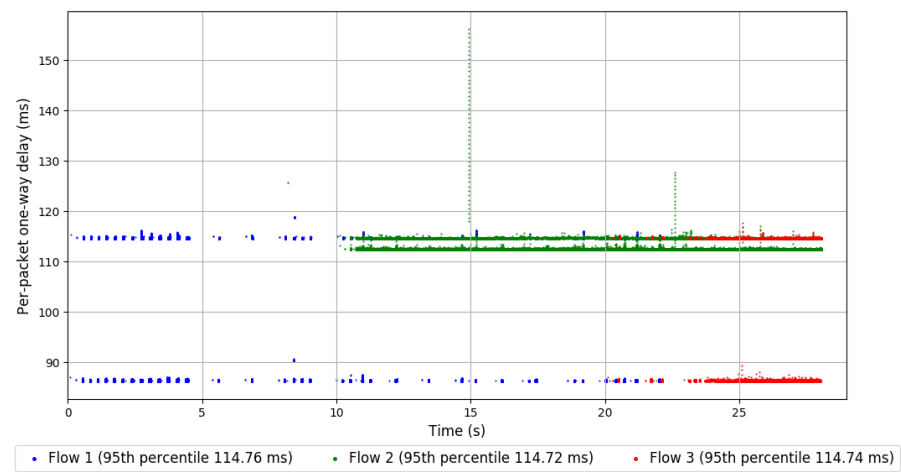
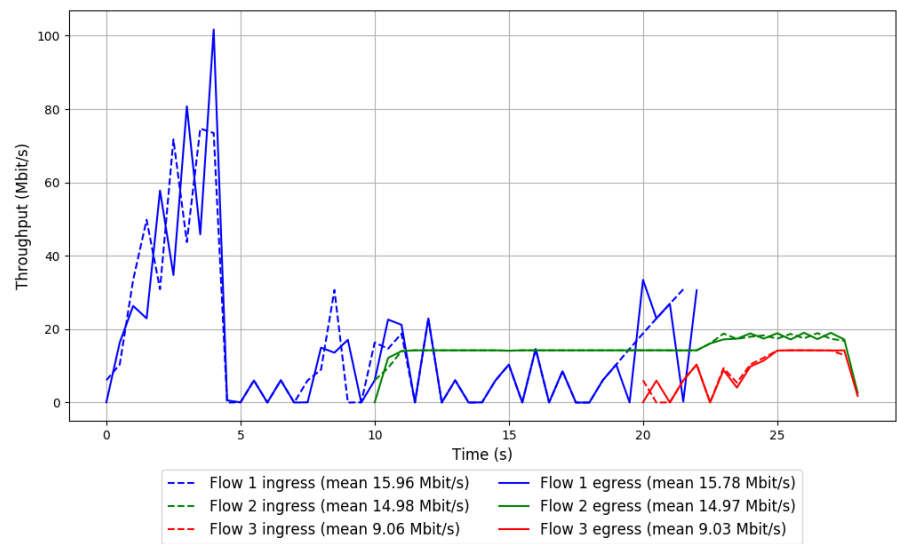


```
Run 3: Statistics of TaoVA-100x

Start at: 2017-12-20 16:10:22
End at: 2017-12-20 16:10:52

# Below is generated by plot.py at 2017-12-20 20:09:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.57 Mbit/s
95th percentile per-packet one-way delay: 114.743 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 15.78 Mbit/s
95th percentile per-packet one-way delay: 114.757 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 14.97 Mbit/s
95th percentile per-packet one-way delay: 114.720 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 9.03 Mbit/s
95th percentile per-packet one-way delay: 114.744 ms
Loss rate: 0.05%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2017-12-20 16:24:26

End at: 2017-12-20 16:24:56

Below is generated by plot.py at 2017-12-20 20:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 24.13 Mbit/s

95th percentile per-packet one-way delay: 114.751 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 12.25 Mbit/s

95th percentile per-packet one-way delay: 114.742 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 12.74 Mbit/s

95th percentile per-packet one-way delay: 114.765 ms

Loss rate: 0.01%

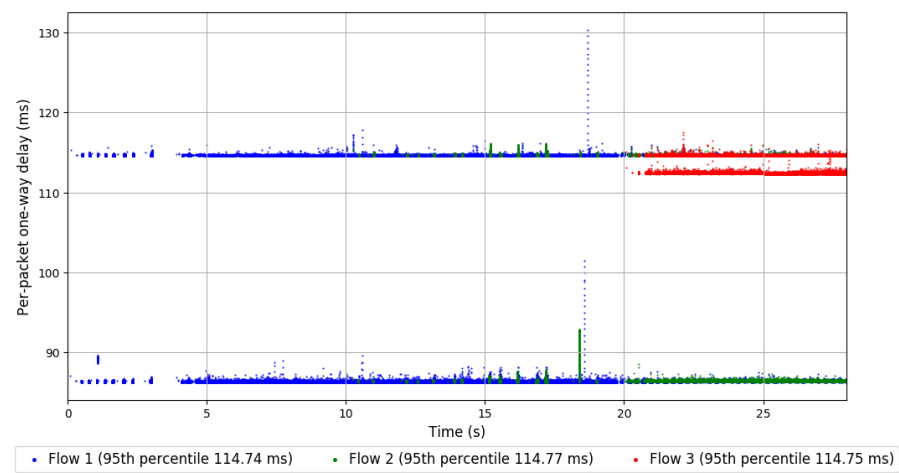
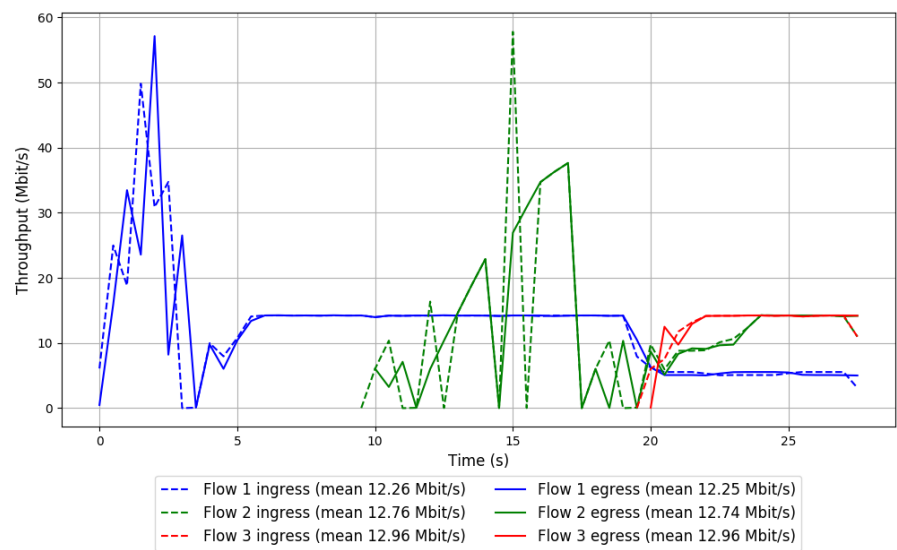
-- Flow 3:

Average throughput: 12.96 Mbit/s

95th percentile per-packet one-way delay: 114.748 ms

Loss rate: 0.01%

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



Run 5: Statistics of TaoVA-100x

Start at: 2017-12-20 16:38:35

End at: 2017-12-20 16:39:05

Below is generated by plot.py at 2017-12-20 20:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 289.42 Mbit/s

95th percentile per-packet one-way delay: 116.901 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 204.78 Mbit/s

95th percentile per-packet one-way delay: 116.003 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 130.25 Mbit/s

95th percentile per-packet one-way delay: 118.973 ms

Loss rate: 0.00%

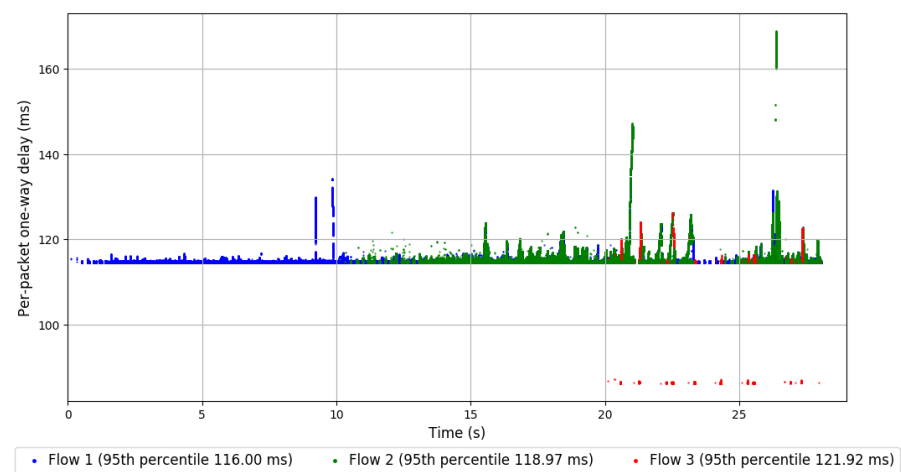
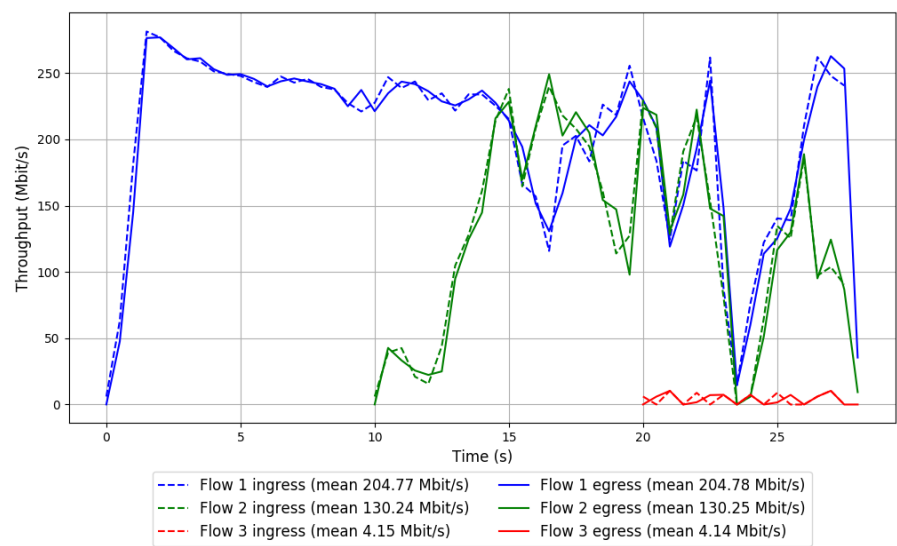
-- Flow 3:

Average throughput: 4.14 Mbit/s

95th percentile per-packet one-way delay: 121.917 ms

Loss rate: 0.00%

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



Run 6: Statistics of TaoVA-100x

Start at: 2017-12-20 16:53:11

End at: 2017-12-20 16:53:41

Below is generated by plot.py at 2017-12-20 20:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 164.57 Mbit/s

95th percentile per-packet one-way delay: 115.012 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 10.08 Mbit/s

95th percentile per-packet one-way delay: 115.421 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 219.25 Mbit/s

95th percentile per-packet one-way delay: 114.989 ms

Loss rate: 0.00%

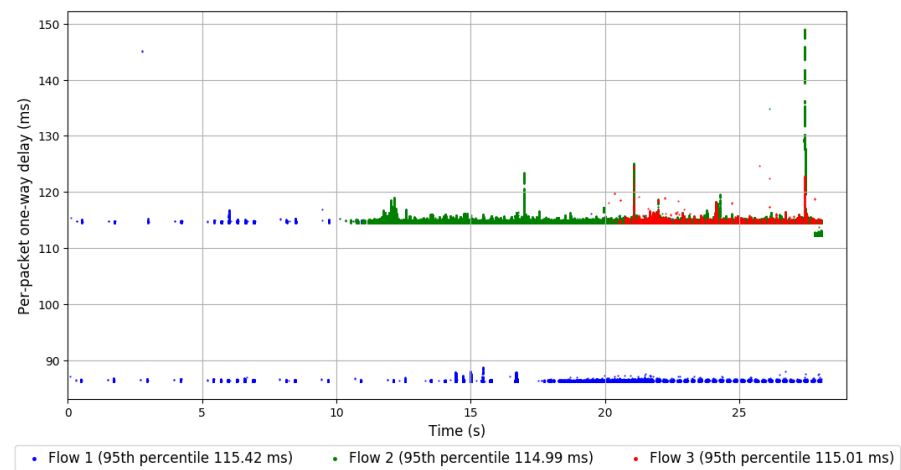
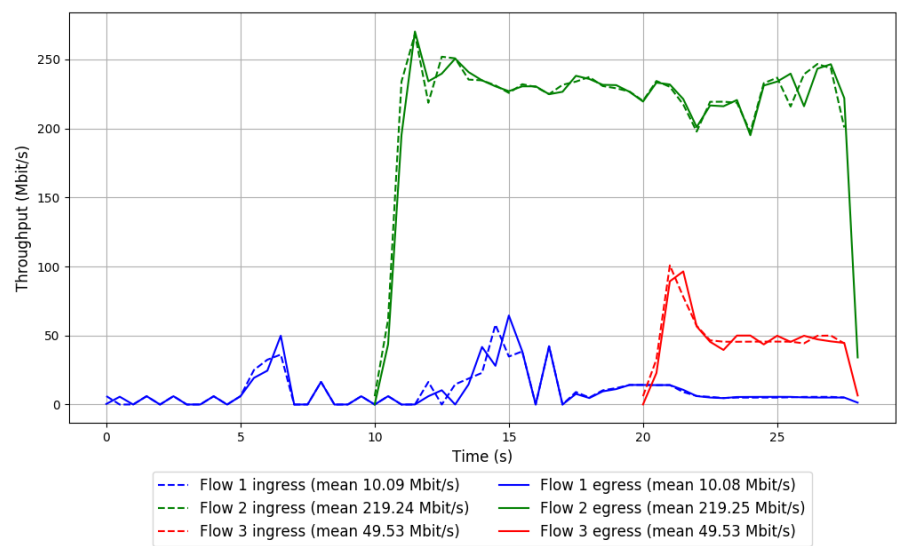
-- Flow 3:

Average throughput: 49.53 Mbit/s

95th percentile per-packet one-way delay: 115.013 ms

Loss rate: 0.00%

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



Run 7: Statistics of TaoVA-100x

Start at: 2017-12-20 17:07:42

End at: 2017-12-20 17:08:12

Below is generated by plot.py at 2017-12-20 20:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 20.92 Mbit/s

95th percentile per-packet one-way delay: 115.297 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 10.64 Mbit/s

95th percentile per-packet one-way delay: 114.964 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 11.45 Mbit/s

95th percentile per-packet one-way delay: 115.812 ms

Loss rate: 0.00%

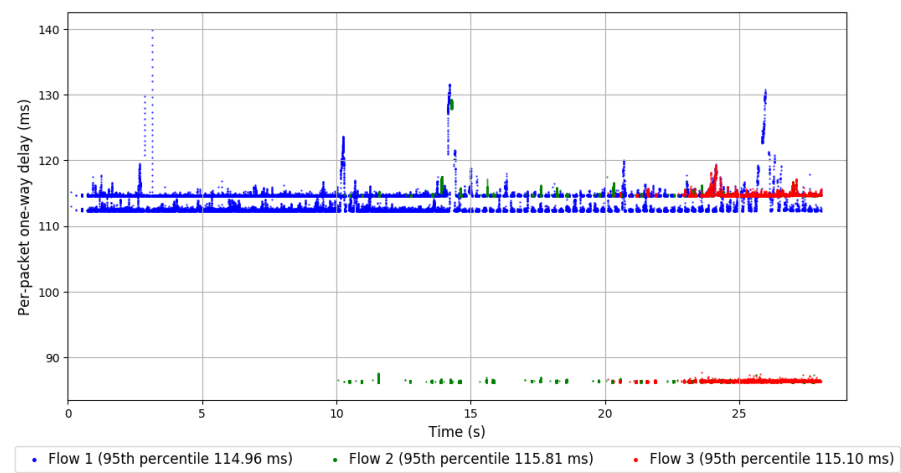
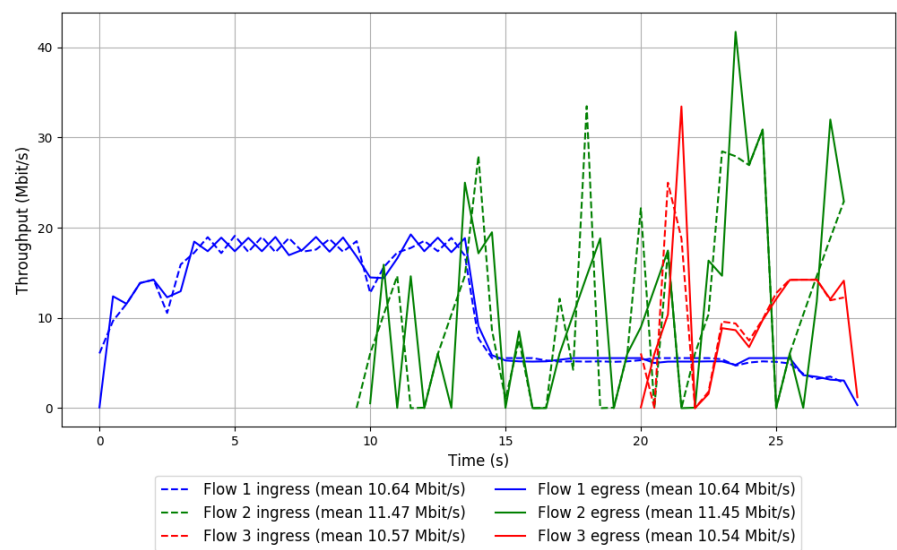
-- Flow 3:

Average throughput: 10.54 Mbit/s

95th percentile per-packet one-way delay: 115.101 ms

Loss rate: 0.03%

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



Run 8: Statistics of TaoVA-100x

Start at: 2017-12-20 17:21:57

End at: 2017-12-20 17:22:27

Below is generated by plot.py at 2017-12-20 20:09:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 297.15 Mbit/s

95th percentile per-packet one-way delay: 88.954 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 190.36 Mbit/s

95th percentile per-packet one-way delay: 87.830 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 118.52 Mbit/s

95th percentile per-packet one-way delay: 90.082 ms

Loss rate: 0.13%

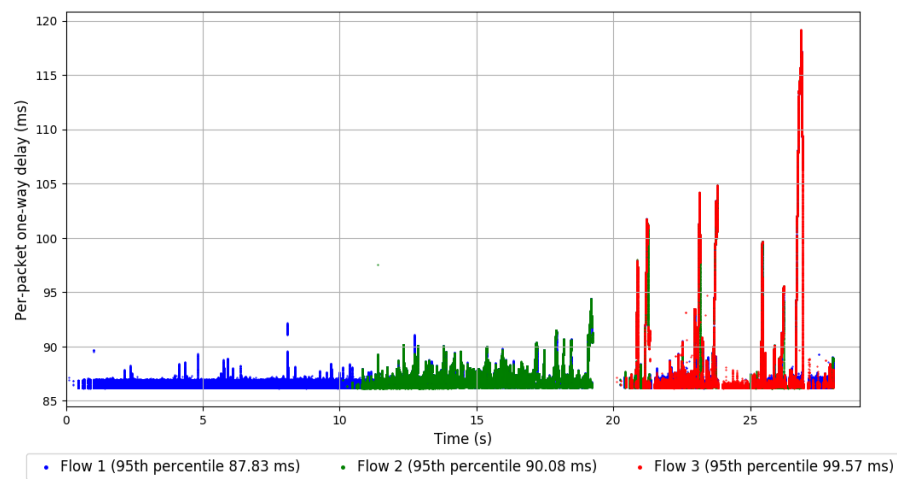
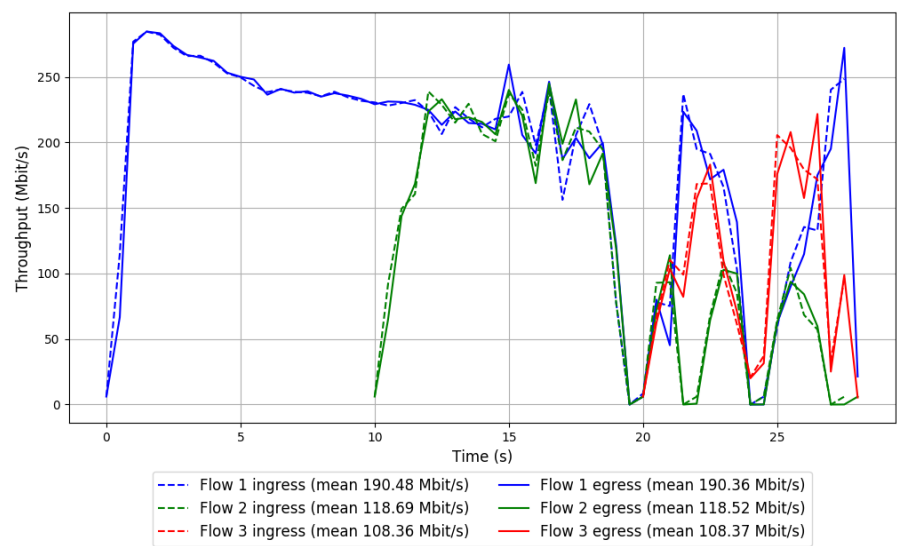
-- Flow 3:

Average throughput: 108.37 Mbit/s

95th percentile per-packet one-way delay: 99.567 ms

Loss rate: 0.00%

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



Run 9: Statistics of TaoVA-100x

Start at: 2017-12-20 17:36:56

End at: 2017-12-20 17:37:26

Below is generated by plot.py at 2017-12-20 20:09:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 326.97 Mbit/s

95th percentile per-packet one-way delay: 89.162 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 188.59 Mbit/s

95th percentile per-packet one-way delay: 88.049 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 160.27 Mbit/s

95th percentile per-packet one-way delay: 90.161 ms

Loss rate: 0.00%

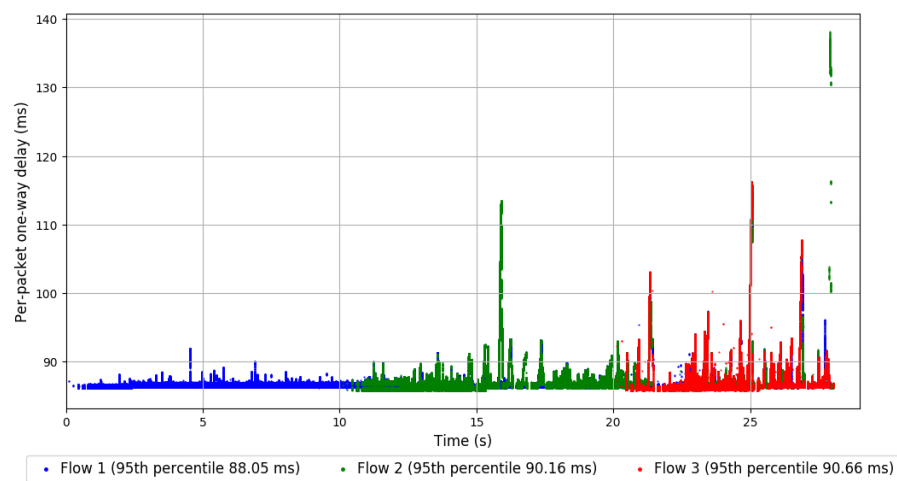
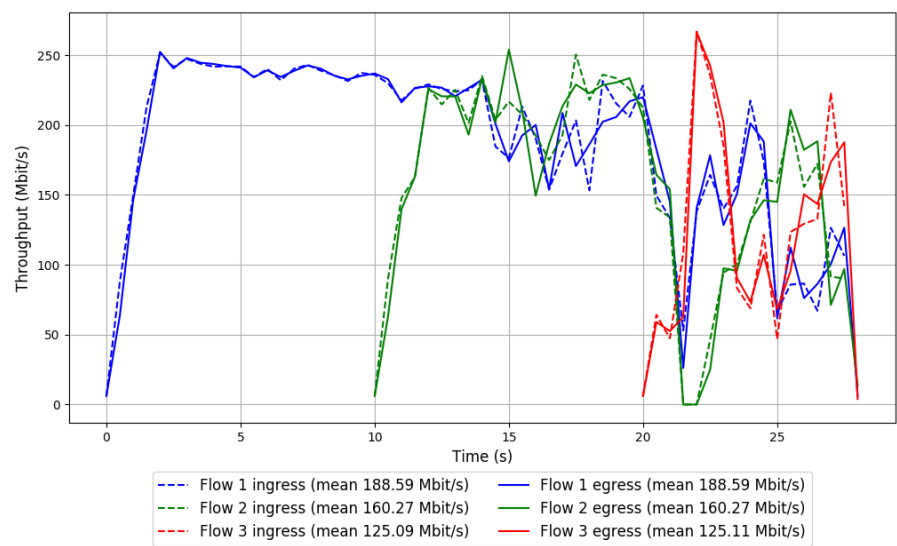
-- Flow 3:

Average throughput: 125.11 Mbit/s

95th percentile per-packet one-way delay: 90.657 ms

Loss rate: 0.00%

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

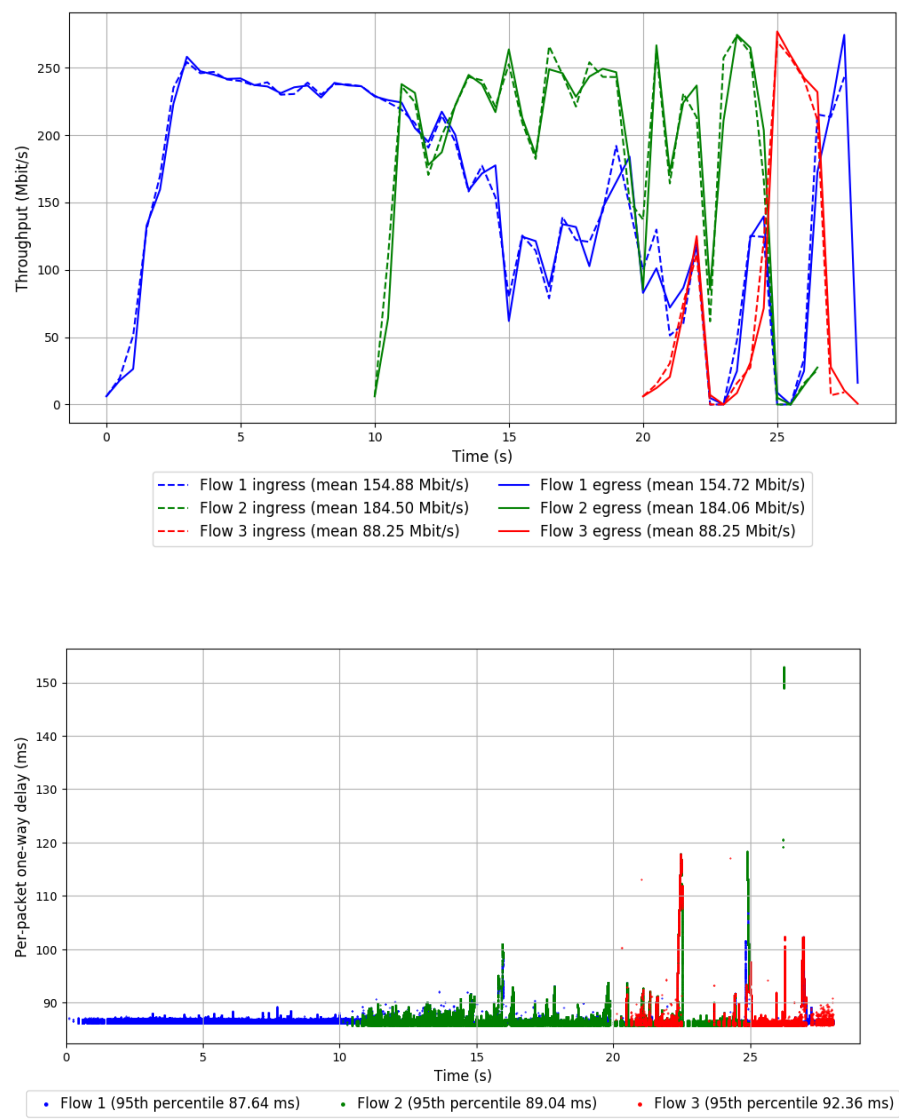


```
Run 10: Statistics of TaoVA-100x

Start at: 2017-12-20 17:51:20
End at: 2017-12-20 17:51:50

# Below is generated by plot.py at 2017-12-20 20:09:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.70 Mbit/s
95th percentile per-packet one-way delay: 88.408 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 154.72 Mbit/s
95th percentile per-packet one-way delay: 87.644 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 184.06 Mbit/s
95th percentile per-packet one-way delay: 89.036 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 88.25 Mbit/s
95th percentile per-packet one-way delay: 92.355 ms
Loss rate: 0.00%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2017-12-20 15:42:18

End at: 2017-12-20 15:42:48

Below is generated by plot.py at 2017-12-20 20:09:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.61 Mbit/s

95th percentile per-packet one-way delay: 88.598 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 39.66 Mbit/s

95th percentile per-packet one-way delay: 90.967 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 45.57 Mbit/s

95th percentile per-packet one-way delay: 87.528 ms

Loss rate: 0.00%

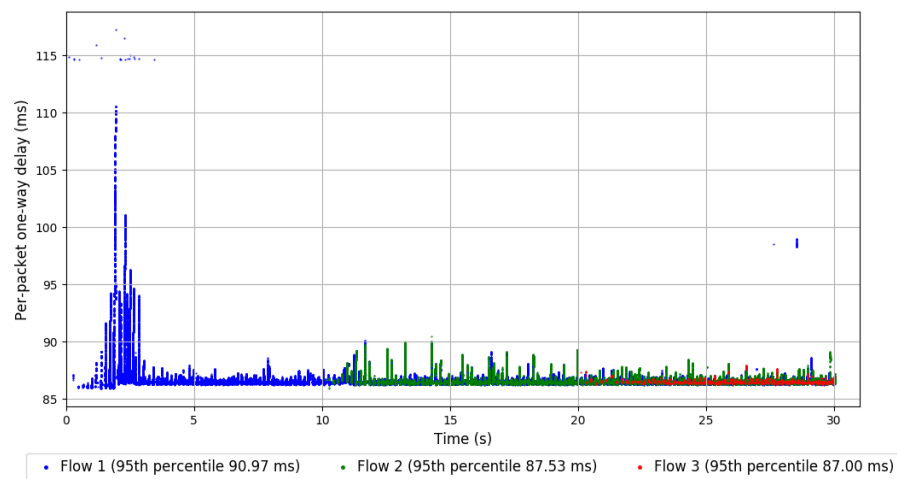
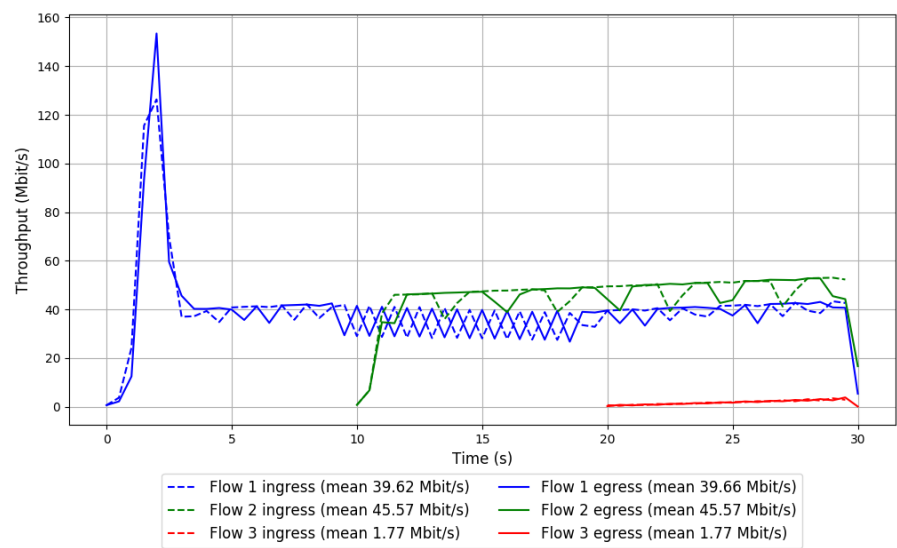
-- Flow 3:

Average throughput: 1.77 Mbit/s

95th percentile per-packet one-way delay: 86.998 ms

Loss rate: 0.14%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-12-20 15:56:41

End at: 2017-12-20 15:57:11

Below is generated by plot.py at 2017-12-20 20:09:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 126.45 Mbit/s

95th percentile per-packet one-way delay: 120.406 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 93.48 Mbit/s

95th percentile per-packet one-way delay: 118.597 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 30.77 Mbit/s

95th percentile per-packet one-way delay: 124.691 ms

Loss rate: 0.00%

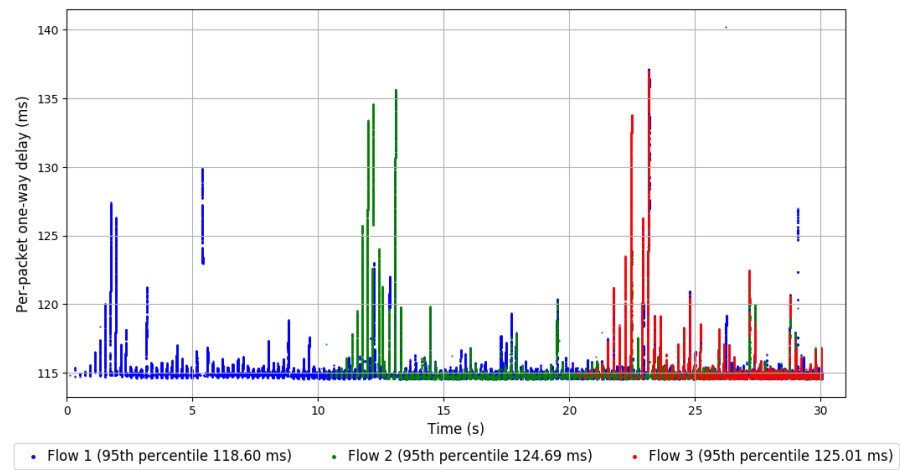
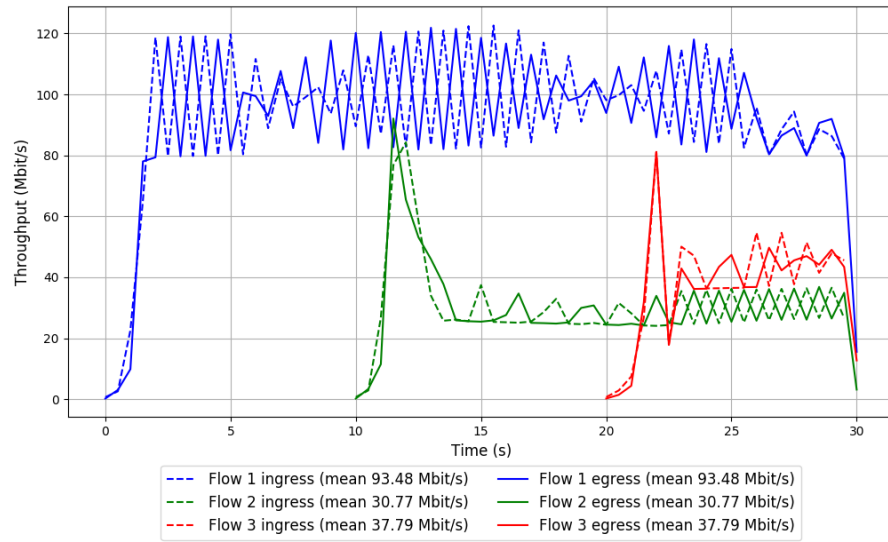
-- Flow 3:

Average throughput: 37.79 Mbit/s

95th percentile per-packet one-way delay: 125.009 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-12-20 16:11:10

End at: 2017-12-20 16:11:40

Below is generated by plot.py at 2017-12-20 20:09:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.30 Mbit/s

95th percentile per-packet one-way delay: 123.149 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.40 Mbit/s

95th percentile per-packet one-way delay: 118.692 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.06 Mbit/s

95th percentile per-packet one-way delay: 119.218 ms

Loss rate: 0.00%

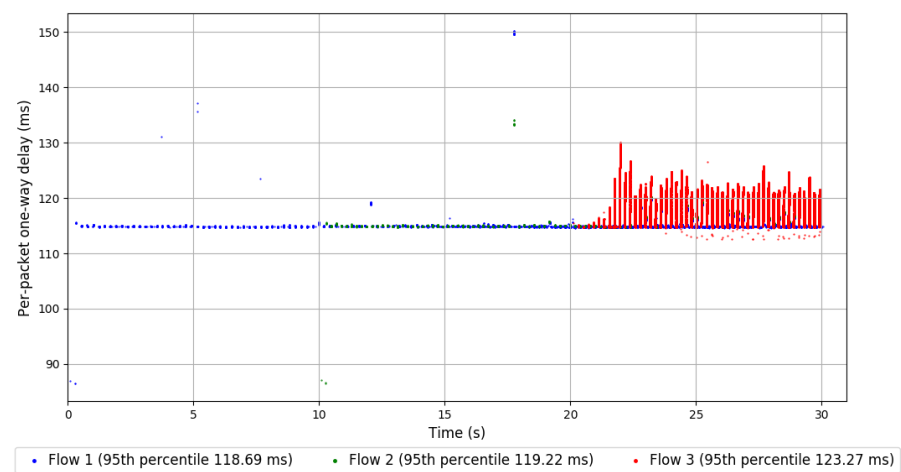
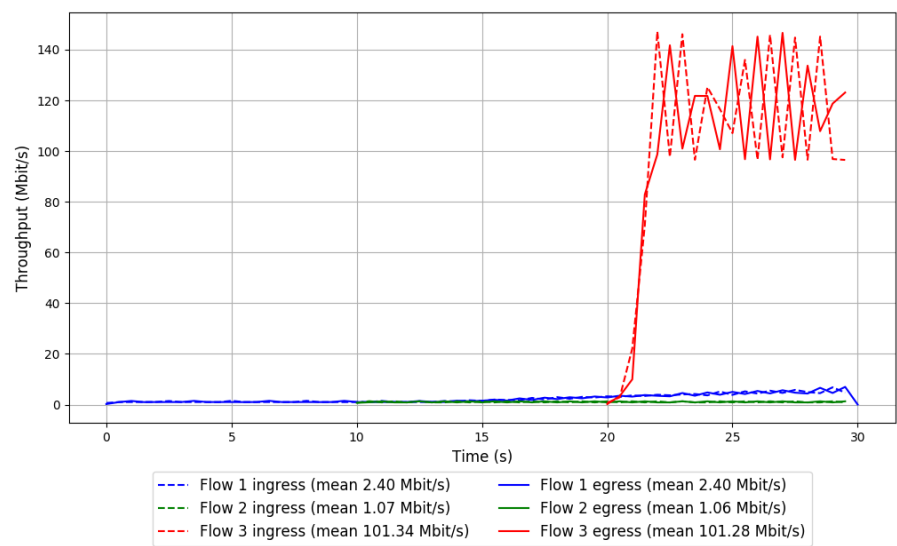
-- Flow 3:

Average throughput: 101.28 Mbit/s

95th percentile per-packet one-way delay: 123.268 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-12-20 16:25:14

End at: 2017-12-20 16:25:44

Below is generated by plot.py at 2017-12-20 20:09:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 21.70 Mbit/s

95th percentile per-packet one-way delay: 118.641 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 115.177 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 29.25 Mbit/s

95th percentile per-packet one-way delay: 119.289 ms

Loss rate: 0.02%

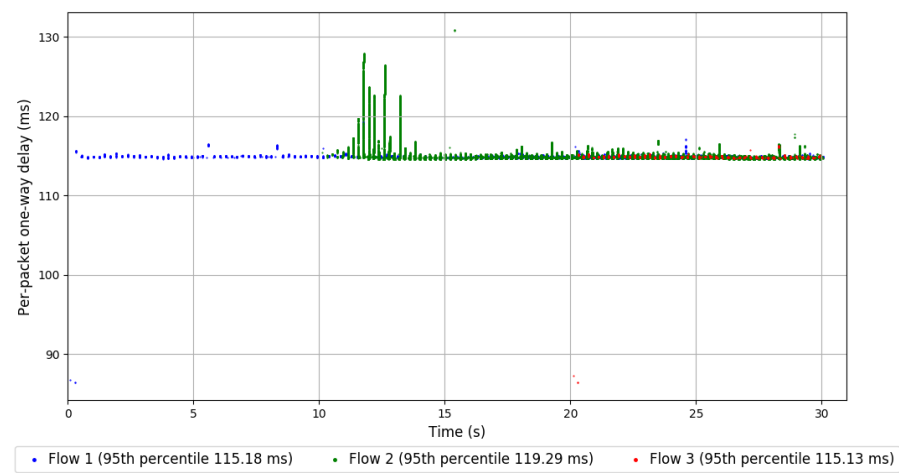
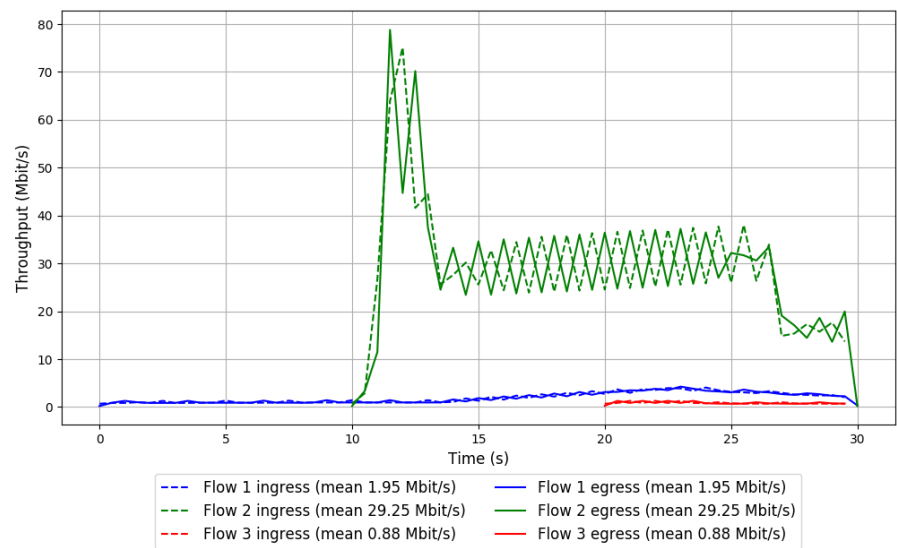
-- Flow 3:

Average throughput: 0.88 Mbit/s

95th percentile per-packet one-way delay: 115.131 ms

Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-12-20 16:39:50

End at: 2017-12-20 16:40:20

Below is generated by plot.py at 2017-12-20 20:09:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.48 Mbit/s

95th percentile per-packet one-way delay: 123.434 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 12.88 Mbit/s

95th percentile per-packet one-way delay: 120.348 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 107.38 Mbit/s

95th percentile per-packet one-way delay: 123.537 ms

Loss rate: 0.00%

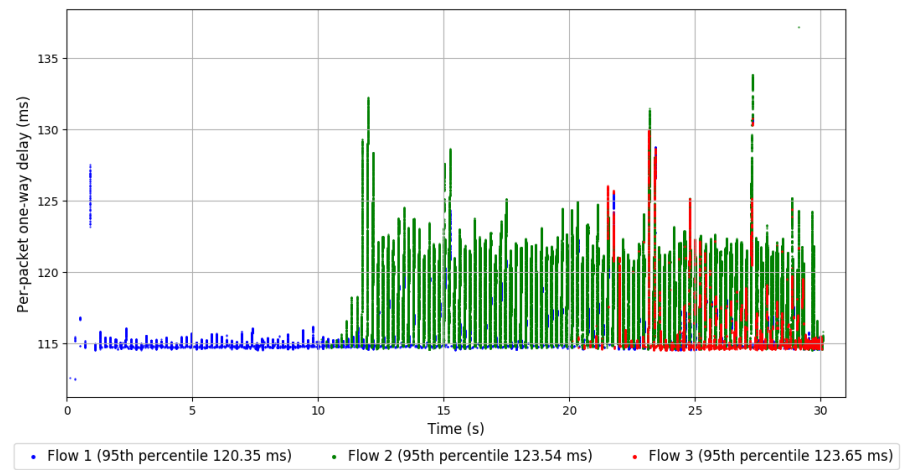
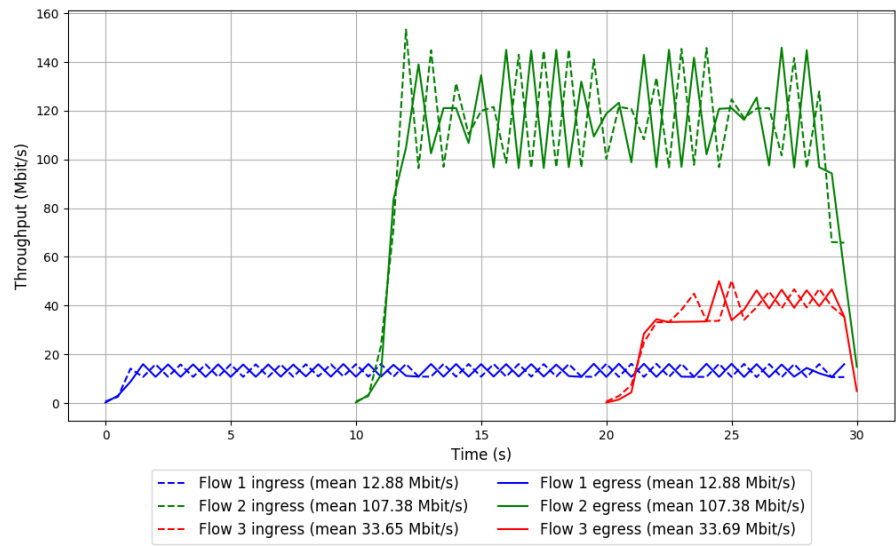
-- Flow 3:

Average throughput: 33.69 Mbit/s

95th percentile per-packet one-way delay: 123.648 ms

Loss rate: 0.08%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-12-20 16:54:12

End at: 2017-12-20 16:54:42

Below is generated by plot.py at 2017-12-20 20:09:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.47 Mbit/s

95th percentile per-packet one-way delay: 115.975 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 10.33 Mbit/s

95th percentile per-packet one-way delay: 115.935 ms

Loss rate: 2.00%

-- Flow 2:

Average throughput: 1.77 Mbit/s

95th percentile per-packet one-way delay: 115.372 ms

Loss rate: 0.61%

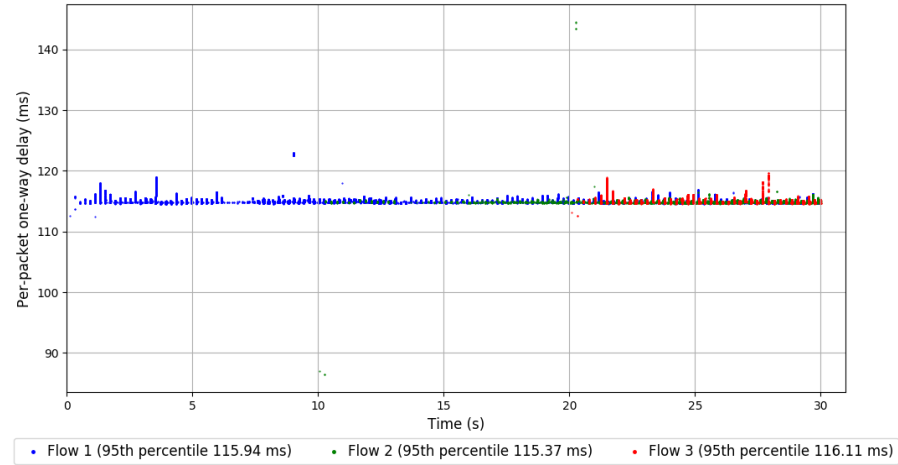
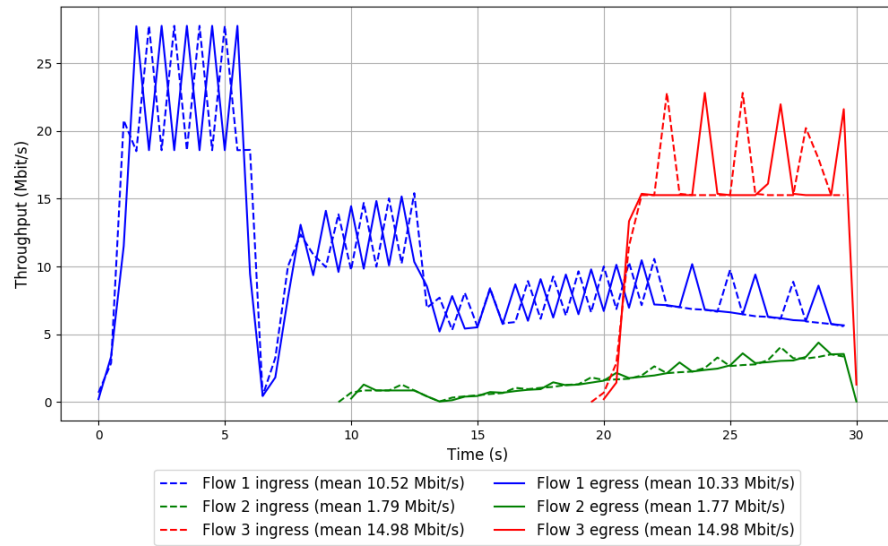
-- Flow 3:

Average throughput: 14.98 Mbit/s

95th percentile per-packet one-way delay: 116.109 ms

Loss rate: 0.00%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-12-20 17:08:29

End at: 2017-12-20 17:08:59

Below is generated by plot.py at 2017-12-20 20:09:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 44.01 Mbit/s

95th percentile per-packet one-way delay: 119.810 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 1.15 Mbit/s

95th percentile per-packet one-way delay: 116.774 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 63.97 Mbit/s

95th percentile per-packet one-way delay: 119.883 ms

Loss rate: 0.00%

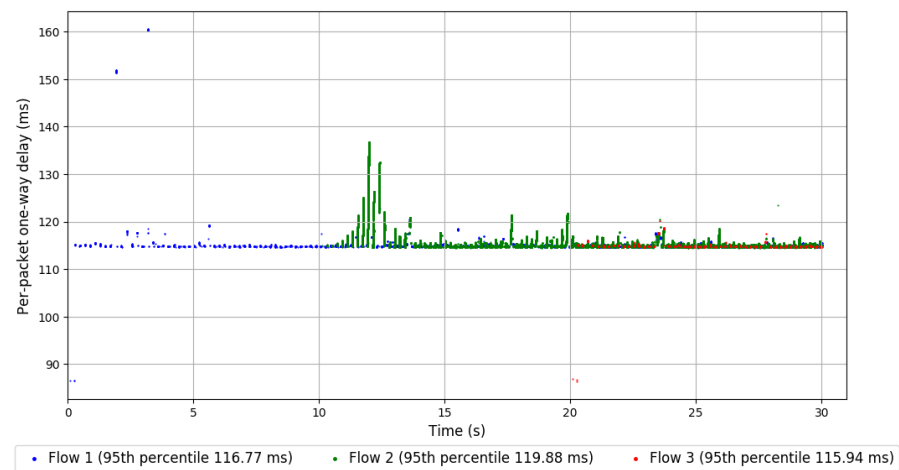
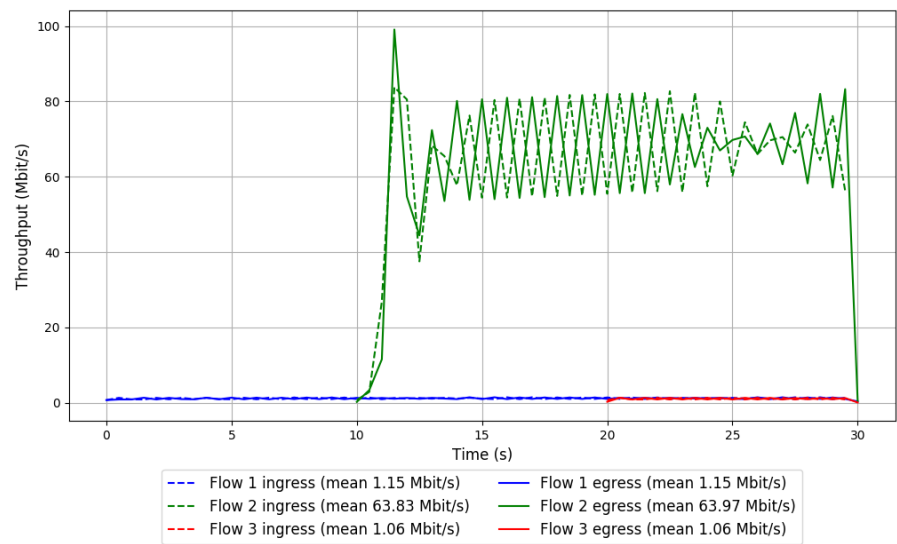
-- Flow 3:

Average throughput: 1.06 Mbit/s

95th percentile per-packet one-way delay: 115.944 ms

Loss rate: 0.00%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-12-20 17:23:09

End at: 2017-12-20 17:23:39

Below is generated by plot.py at 2017-12-20 20:09:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 57.78 Mbit/s

95th percentile per-packet one-way delay: 87.883 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 27.80 Mbit/s

95th percentile per-packet one-way delay: 87.831 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 24.16 Mbit/s

95th percentile per-packet one-way delay: 87.542 ms

Loss rate: 1.56%

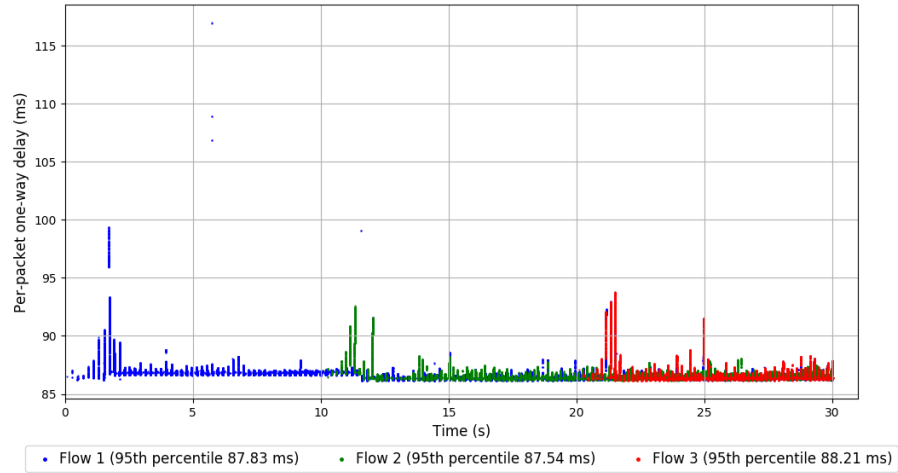
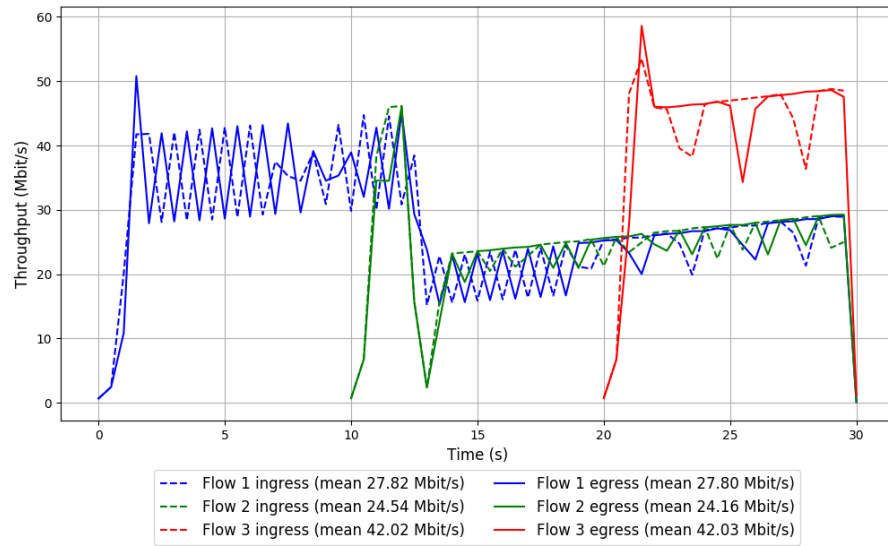
-- Flow 3:

Average throughput: 42.03 Mbit/s

95th percentile per-packet one-way delay: 88.208 ms

Loss rate: 0.00%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-12-20 17:38:11

End at: 2017-12-20 17:38:41

Below is generated by plot.py at 2017-12-20 20:09:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 131.51 Mbit/s

95th percentile per-packet one-way delay: 88.031 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 80.72 Mbit/s

95th percentile per-packet one-way delay: 88.178 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 75.26 Mbit/s

95th percentile per-packet one-way delay: 87.773 ms

Loss rate: 0.00%

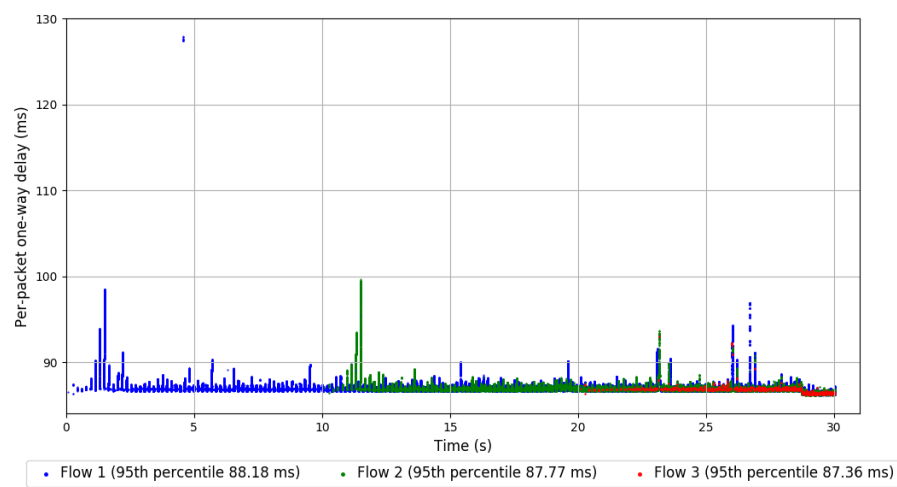
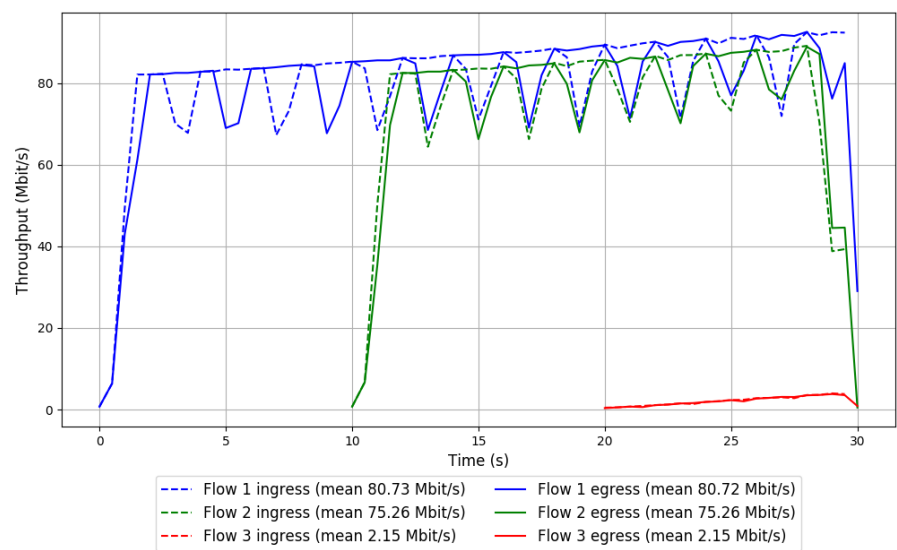
-- Flow 3:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 87.363 ms

Loss rate: 0.28%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-12-20 17:52:32

End at: 2017-12-20 17:53:02

Below is generated by plot.py at 2017-12-20 20:09:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.60 Mbit/s

95th percentile per-packet one-way delay: 93.275 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 64.83 Mbit/s

95th percentile per-packet one-way delay: 94.040 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 47.36 Mbit/s

95th percentile per-packet one-way delay: 88.915 ms

Loss rate: 0.00%

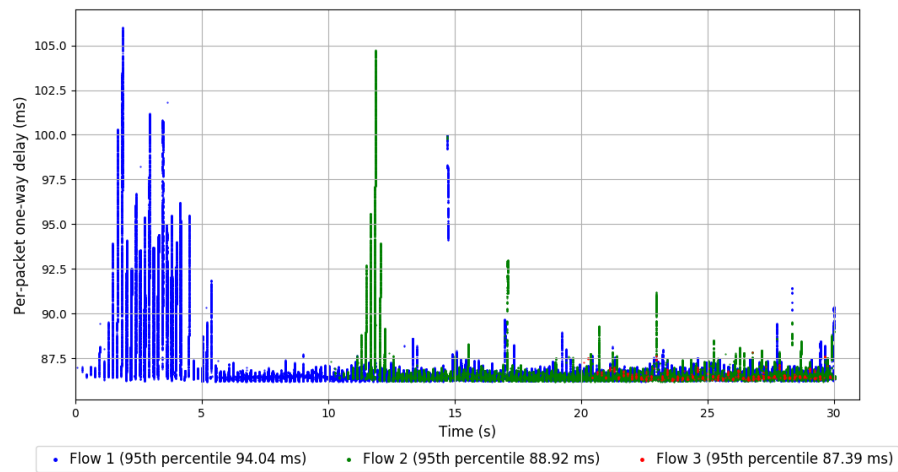
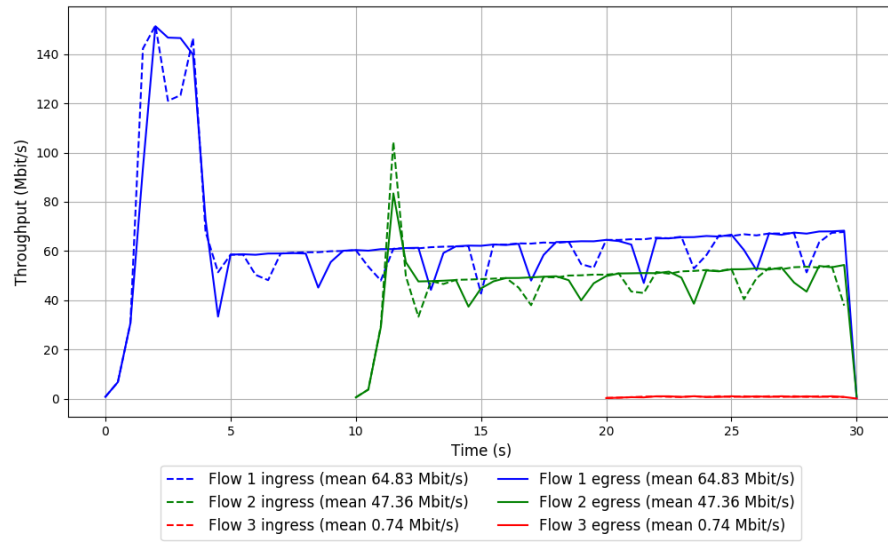
-- Flow 3:

Average throughput: 0.74 Mbit/s

95th percentile per-packet one-way delay: 87.388 ms

Loss rate: 0.82%

Run 10: Report of TCP Vegas — Data Link

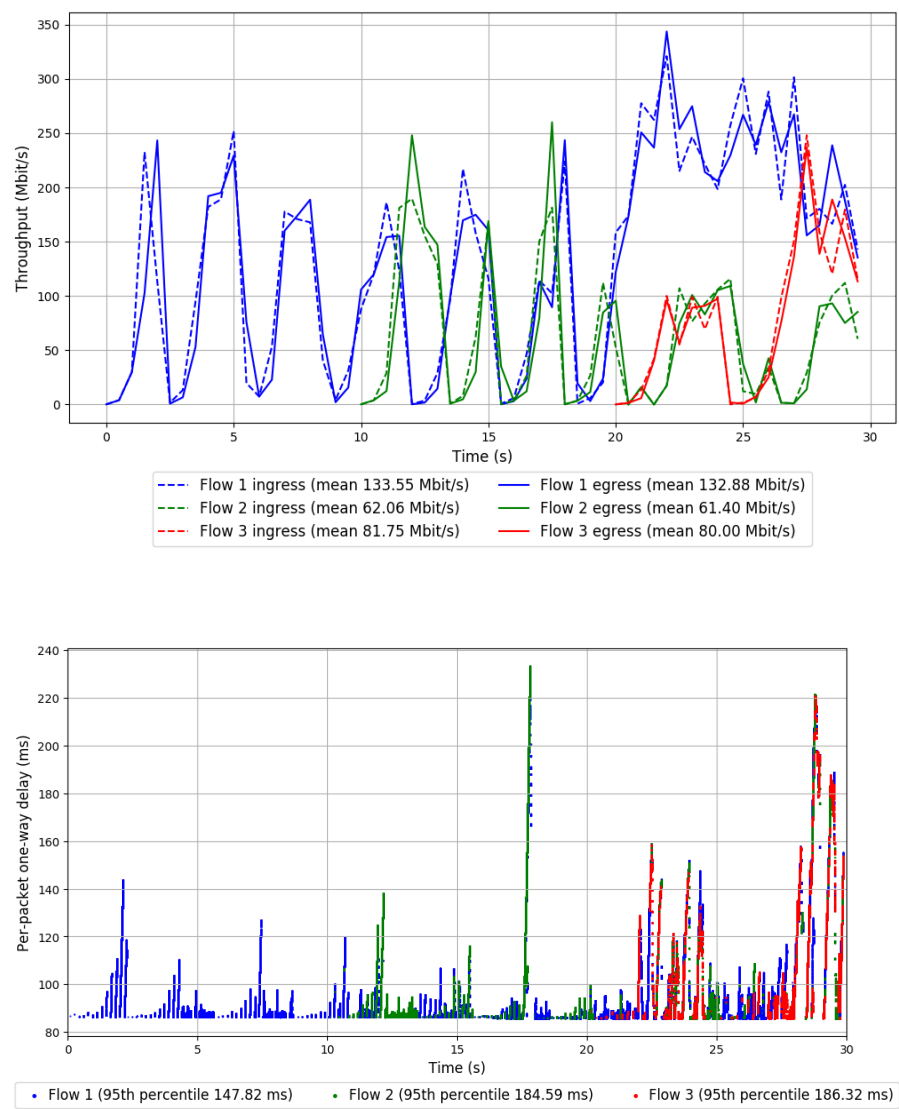


```
Run 1: Statistics of Verus

Start at: 2017-12-20 15:45:54
End at: 2017-12-20 15:46:24

# Below is generated by plot.py at 2017-12-20 20:09:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 199.78 Mbit/s
95th percentile per-packet one-way delay: 166.389 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 132.88 Mbit/s
95th percentile per-packet one-way delay: 147.823 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 61.40 Mbit/s
95th percentile per-packet one-way delay: 184.593 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 80.00 Mbit/s
95th percentile per-packet one-way delay: 186.324 ms
Loss rate: 2.15%
```


Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-12-20 16:00:26

End at: 2017-12-20 16:00:56

Below is generated by plot.py at 2017-12-20 20:11:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 248.87 Mbit/s

95th percentile per-packet one-way delay: 187.852 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 192.58 Mbit/s

95th percentile per-packet one-way delay: 194.059 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 62.92 Mbit/s

95th percentile per-packet one-way delay: 165.736 ms

Loss rate: 1.16%

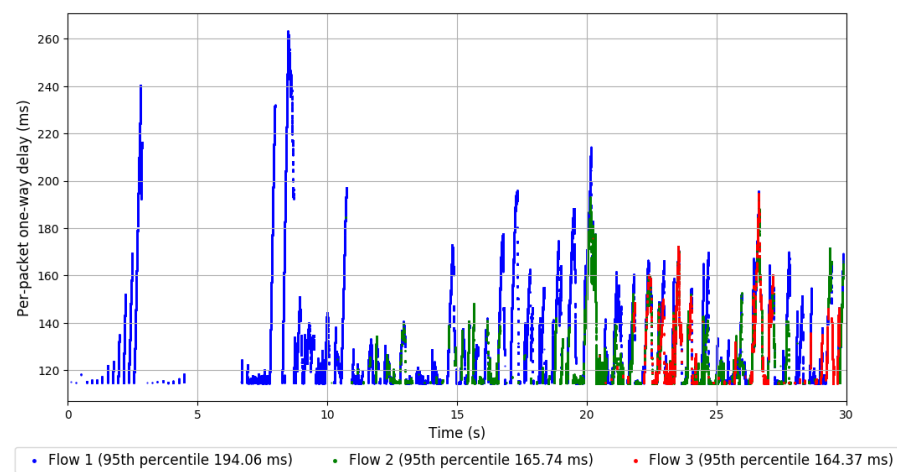
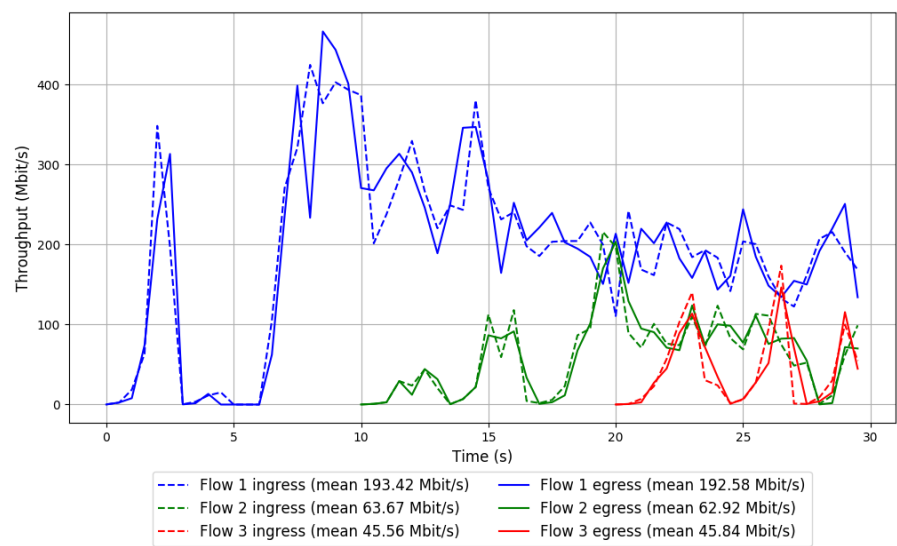
-- Flow 3:

Average throughput: 45.84 Mbit/s

95th percentile per-packet one-way delay: 164.371 ms

Loss rate: 1.61%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-12-20 16:14:44

End at: 2017-12-20 16:15:14

Below is generated by plot.py at 2017-12-20 20:12:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 253.69 Mbit/s

95th percentile per-packet one-way delay: 255.816 ms

Loss rate: 3.74%

-- Flow 1:

Average throughput: 147.31 Mbit/s

95th percentile per-packet one-way delay: 230.998 ms

Loss rate: 1.11%

-- Flow 2:

Average throughput: 116.24 Mbit/s

95th percentile per-packet one-way delay: 309.390 ms

Loss rate: 8.72%

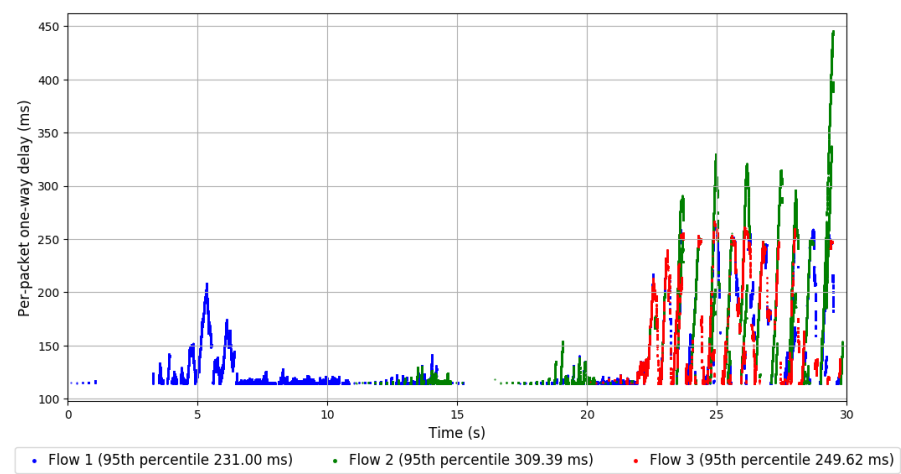
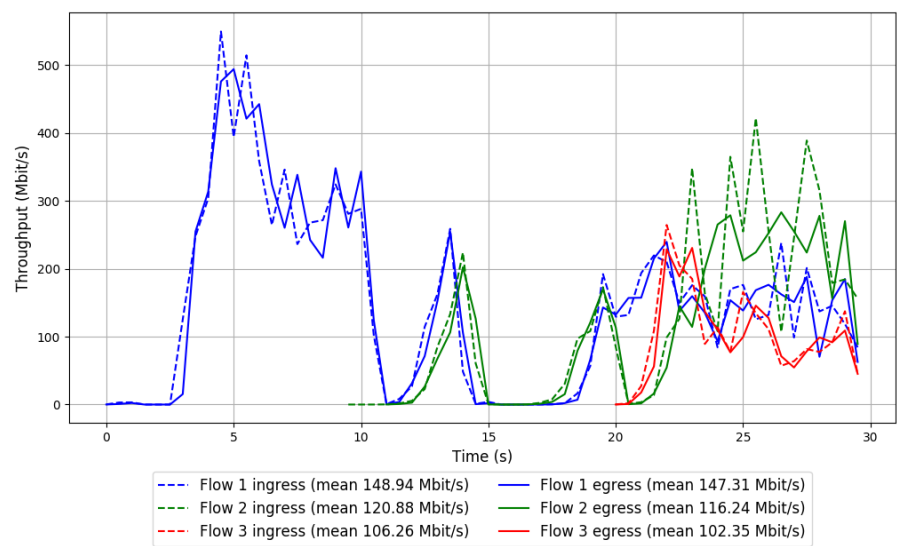
-- Flow 3:

Average throughput: 102.35 Mbit/s

95th percentile per-packet one-way delay: 249.625 ms

Loss rate: 3.46%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-12-20 16:28:46

End at: 2017-12-20 16:29:16

Below is generated by plot.py at 2017-12-20 20:12:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.27 Mbit/s

95th percentile per-packet one-way delay: 314.527 ms

Loss rate: 2.71%

-- Flow 1:

Average throughput: 76.57 Mbit/s

95th percentile per-packet one-way delay: 326.276 ms

Loss rate: 3.84%

-- Flow 2:

Average throughput: 123.60 Mbit/s

95th percentile per-packet one-way delay: 322.265 ms

Loss rate: 1.53%

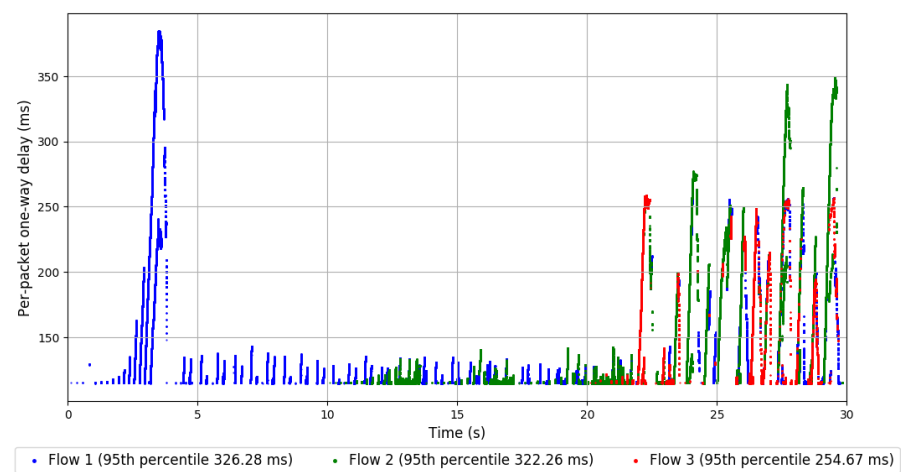
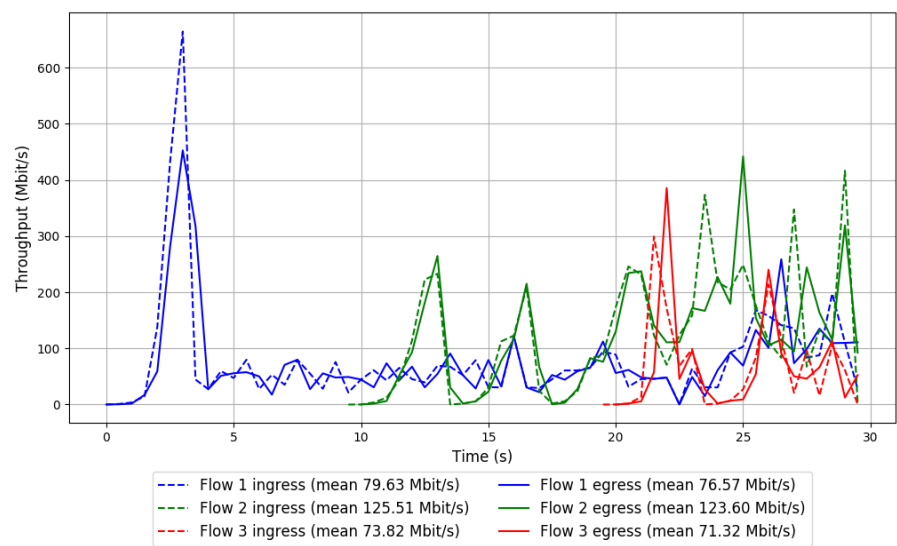
-- Flow 3:

Average throughput: 71.32 Mbit/s

95th percentile per-packet one-way delay: 254.672 ms

Loss rate: 3.06%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-12-20 16:43:33

End at: 2017-12-20 16:44:03

Below is generated by plot.py at 2017-12-20 20:12:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 223.96 Mbit/s

95th percentile per-packet one-way delay: 228.067 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 125.50 Mbit/s

95th percentile per-packet one-way delay: 203.939 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 101.33 Mbit/s

95th percentile per-packet one-way delay: 240.765 ms

Loss rate: 1.65%

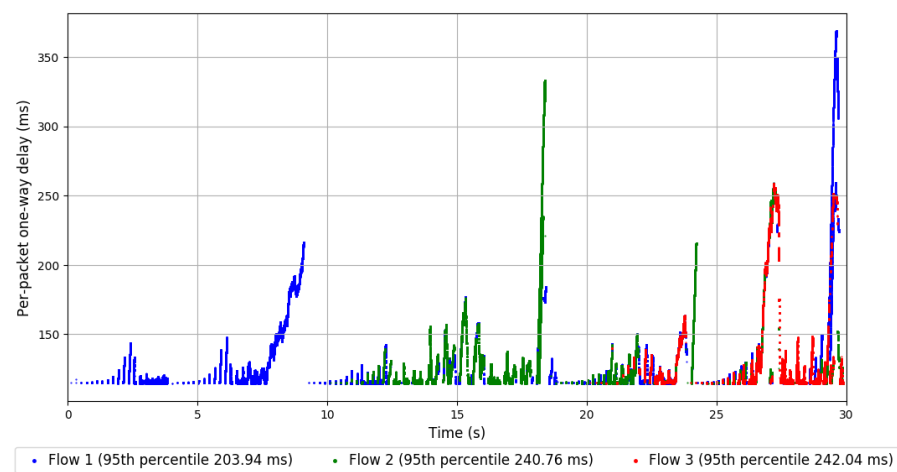
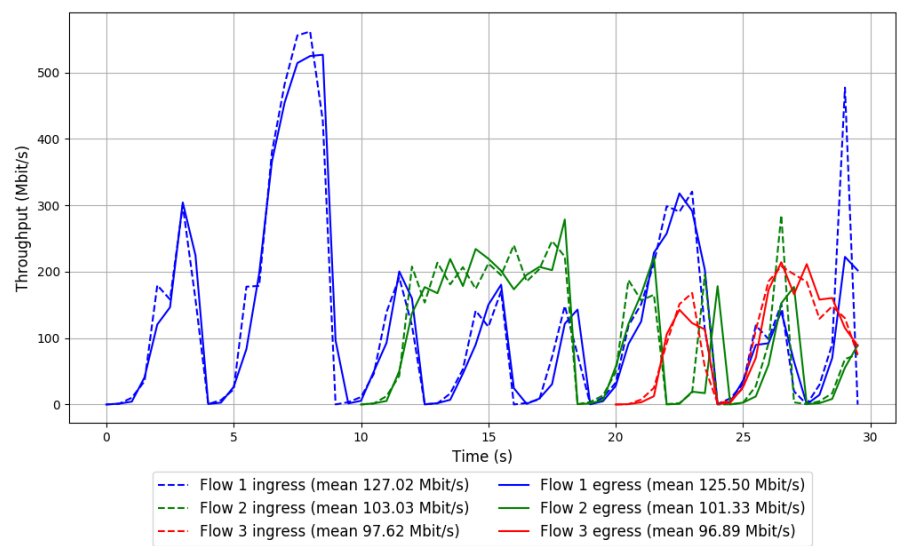
-- Flow 3:

Average throughput: 96.89 Mbit/s

95th percentile per-packet one-way delay: 242.044 ms

Loss rate: 0.74%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-12-20 16:57:48

End at: 2017-12-20 16:58:18

Below is generated by plot.py at 2017-12-20 20:12:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 225.33 Mbit/s

95th percentile per-packet one-way delay: 230.364 ms

Loss rate: 0.28%

-- Flow 1:

Average throughput: 74.39 Mbit/s

95th percentile per-packet one-way delay: 189.582 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 165.04 Mbit/s

95th percentile per-packet one-way delay: 252.669 ms

Loss rate: 0.29%

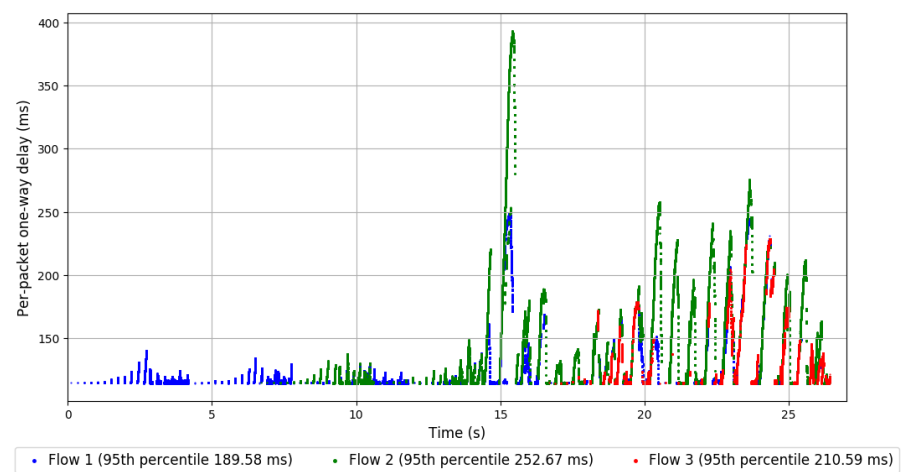
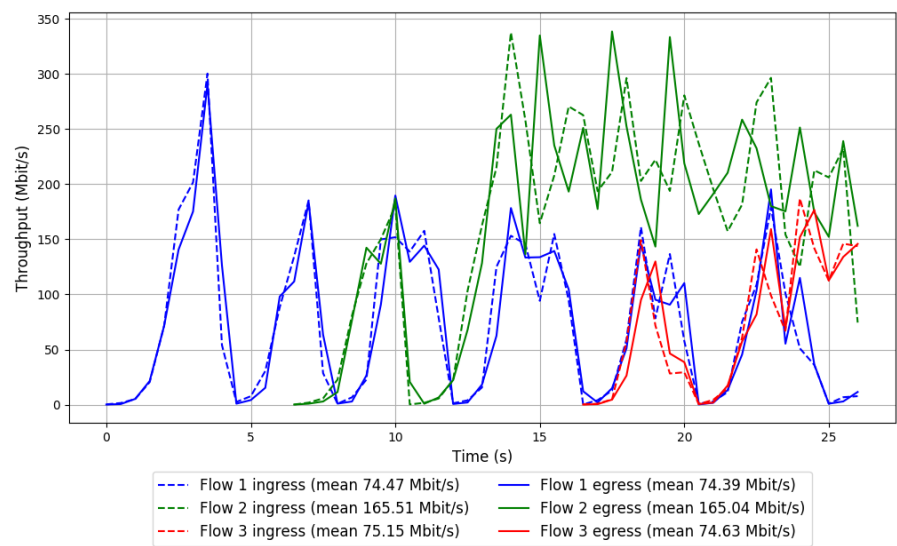
-- Flow 3:

Average throughput: 74.63 Mbit/s

95th percentile per-packet one-way delay: 210.587 ms

Loss rate: 0.69%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-12-20 17:11:54

End at: 2017-12-20 17:12:24

Below is generated by plot.py at 2017-12-20 20:14:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 289.74 Mbit/s

95th percentile per-packet one-way delay: 247.257 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 191.77 Mbit/s

95th percentile per-packet one-way delay: 266.653 ms

Loss rate: 1.27%

-- Flow 2:

Average throughput: 97.73 Mbit/s

95th percentile per-packet one-way delay: 172.590 ms

Loss rate: 0.10%

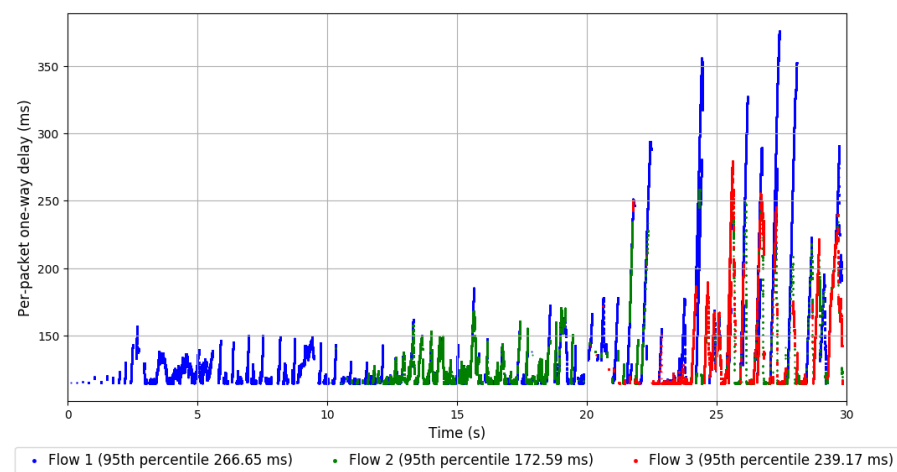
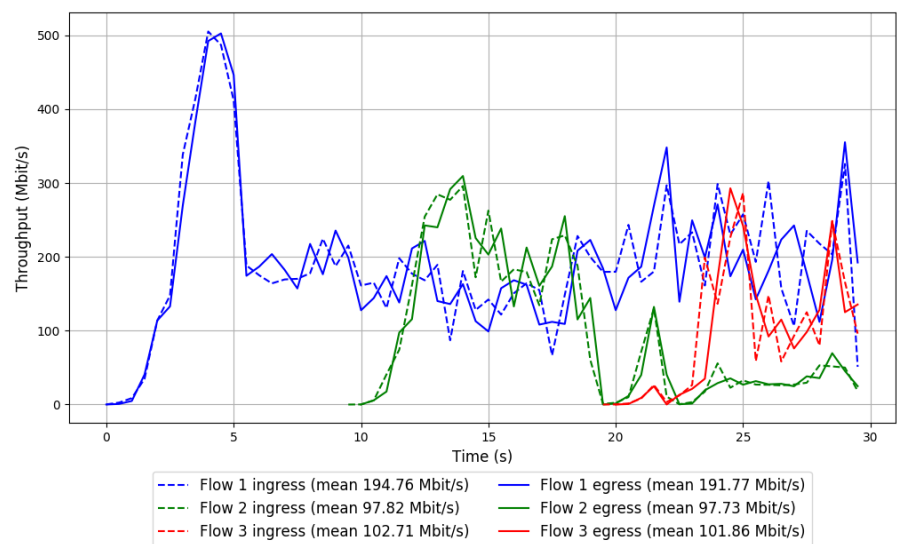
-- Flow 3:

Average throughput: 101.86 Mbit/s

95th percentile per-packet one-way delay: 239.174 ms

Loss rate: 1.12%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-12-20 17:26:46

End at: 2017-12-20 17:27:16

Below is generated by plot.py at 2017-12-20 20:14:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 282.89 Mbit/s

95th percentile per-packet one-way delay: 218.741 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 171.70 Mbit/s

95th percentile per-packet one-way delay: 221.305 ms

Loss rate: 2.19%

-- Flow 2:

Average throughput: 118.13 Mbit/s

95th percentile per-packet one-way delay: 218.662 ms

Loss rate: 1.21%

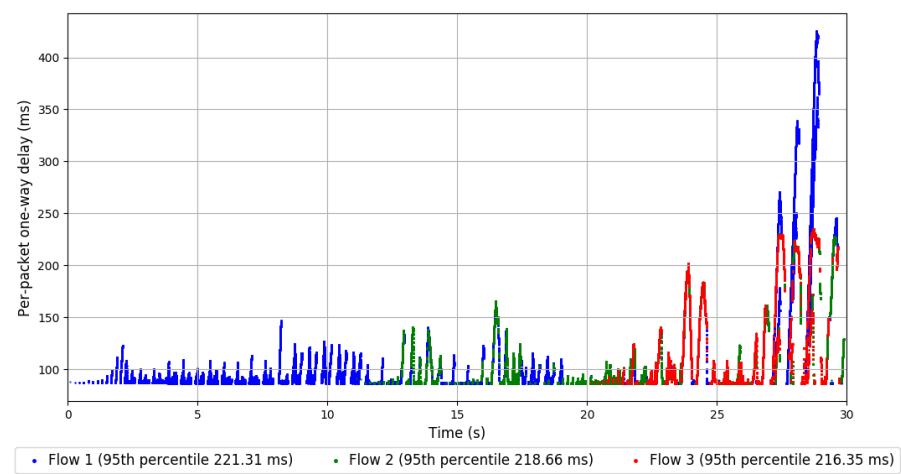
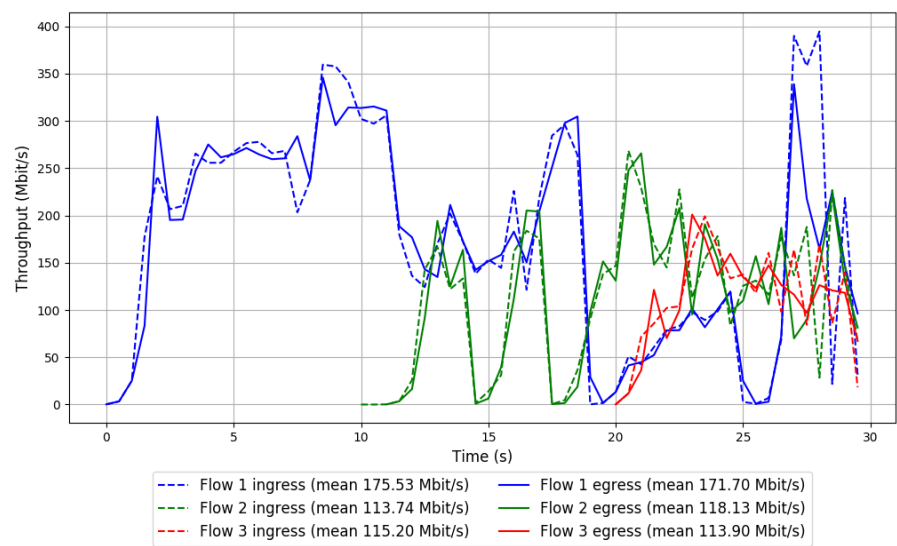
-- Flow 3:

Average throughput: 113.90 Mbit/s

95th percentile per-packet one-way delay: 216.351 ms

Loss rate: 1.13%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2017-12-20 17:41:51

End at: 2017-12-20 17:42:21

Below is generated by plot.py at 2017-12-20 20:15:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 291.17 Mbit/s

95th percentile per-packet one-way delay: 159.084 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 237.52 Mbit/s

95th percentile per-packet one-way delay: 161.371 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 54.23 Mbit/s

95th percentile per-packet one-way delay: 153.179 ms

Loss rate: 0.00%

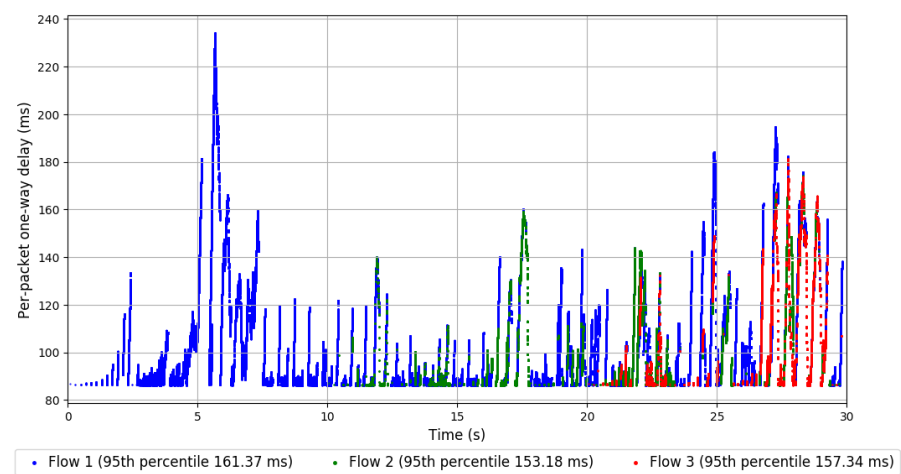
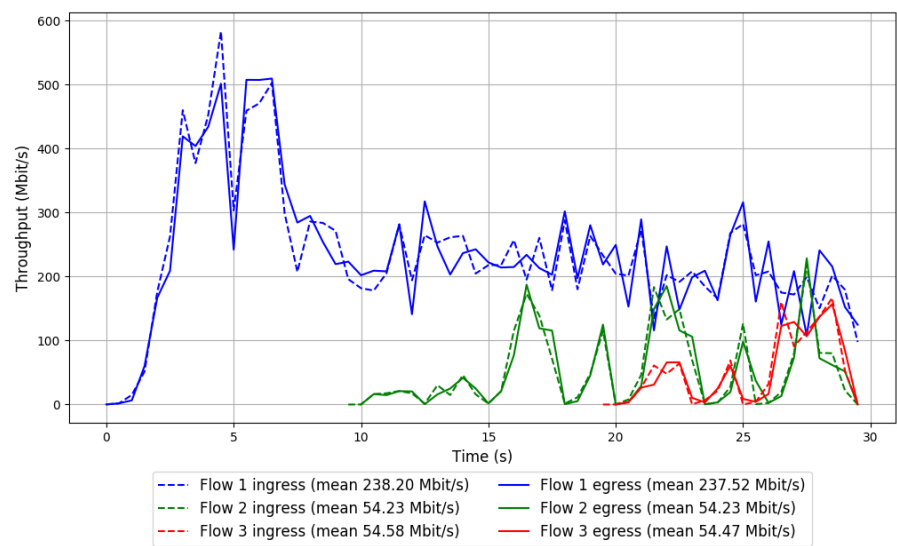
-- Flow 3:

Average throughput: 54.47 Mbit/s

95th percentile per-packet one-way delay: 157.342 ms

Loss rate: 0.00%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-12-20 17:56:12

End at: 2017-12-20 17:56:42

Below is generated by plot.py at 2017-12-20 20:15:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 270.84 Mbit/s

95th percentile per-packet one-way delay: 201.377 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 210.87 Mbit/s

95th percentile per-packet one-way delay: 190.890 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 60.43 Mbit/s

95th percentile per-packet one-way delay: 238.958 ms

Loss rate: 2.79%

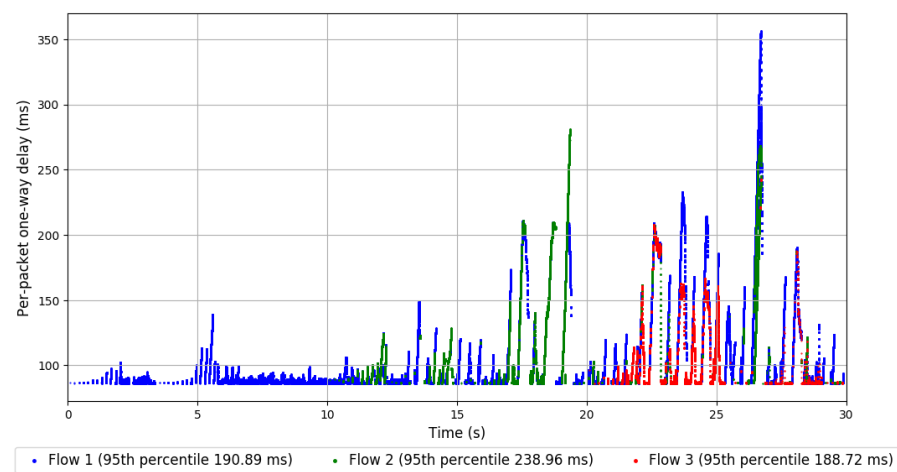
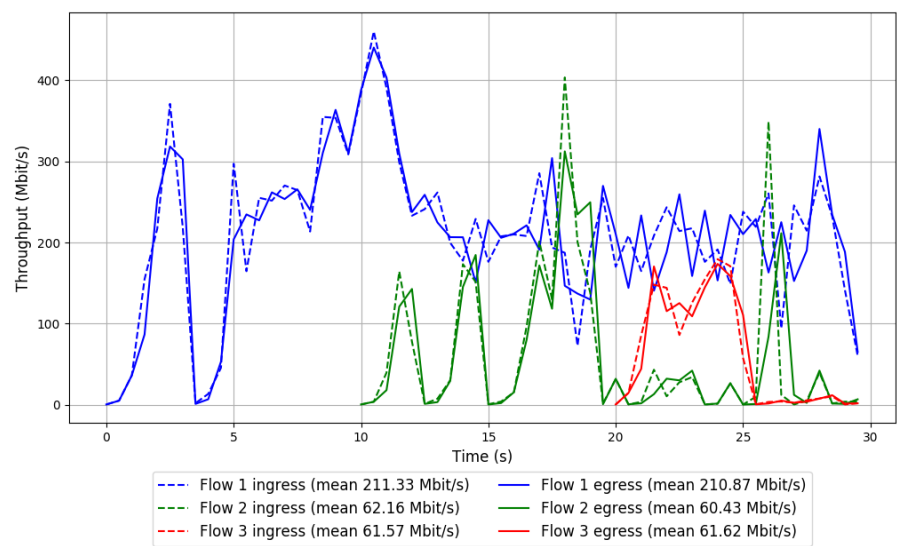
-- Flow 3:

Average throughput: 61.62 Mbit/s

95th percentile per-packet one-way delay: 188.717 ms

Loss rate: 0.02%

Run 10: Report of Verus — Data Link

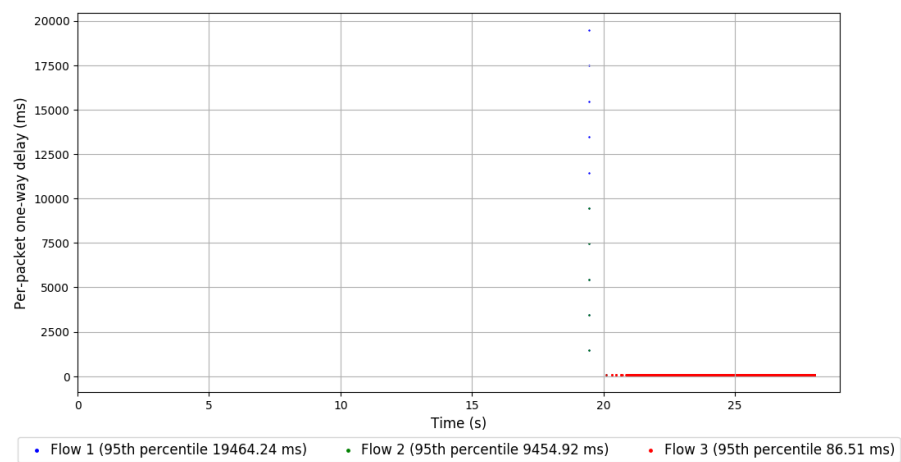
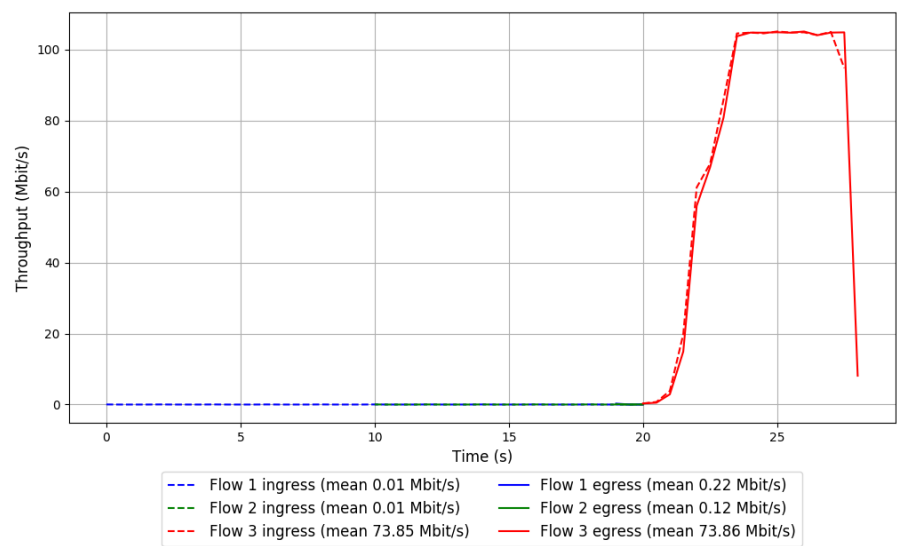


Run 1: Statistics of Copa

Start at: 2017-12-20 15:49:10

End at: 2017-12-20 15:49:40

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-12-20 16:03:58

End at: 2017-12-20 16:04:28

Below is generated by plot.py at 2017-12-20 20:16:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 127.76 Mbit/s

95th percentile per-packet one-way delay: 114.851 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 71.90 Mbit/s

95th percentile per-packet one-way delay: 114.850 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 58.50 Mbit/s

95th percentile per-packet one-way delay: 114.858 ms

Loss rate: 0.01%

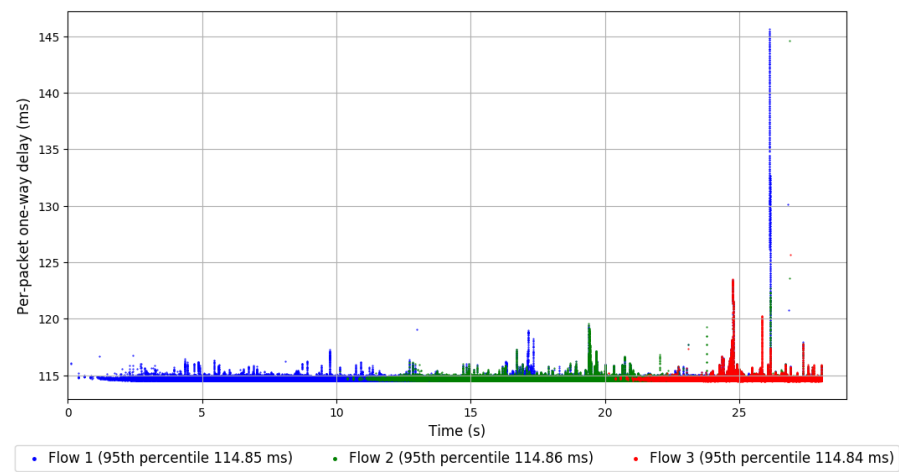
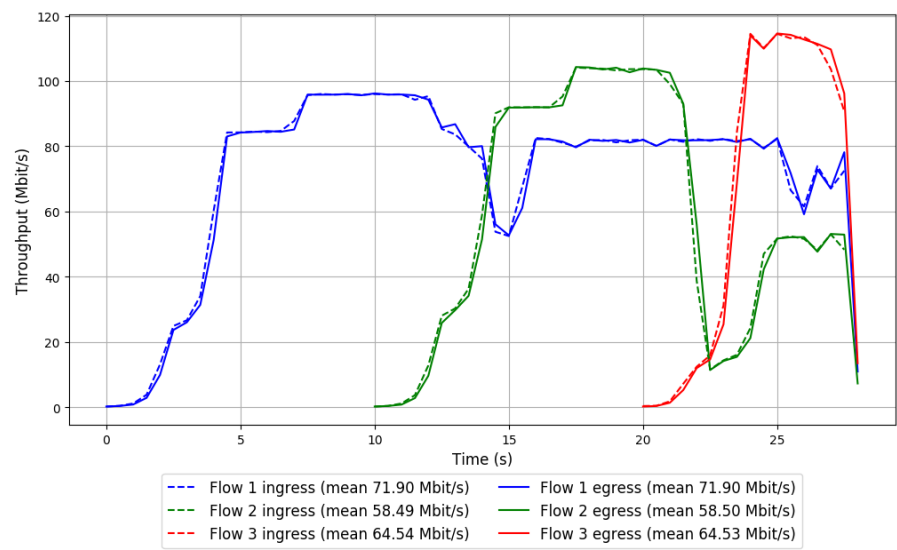
-- Flow 3:

Average throughput: 64.53 Mbit/s

95th percentile per-packet one-way delay: 114.836 ms

Loss rate: 0.06%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-12-20 16:18:08

End at: 2017-12-20 16:18:38

Below is generated by plot.py at 2017-12-20 20:16:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.95 Mbit/s

95th percentile per-packet one-way delay: 114.883 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 77.13 Mbit/s

95th percentile per-packet one-way delay: 114.886 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 9.36 Mbit/s

95th percentile per-packet one-way delay: 114.850 ms

Loss rate: 0.00%

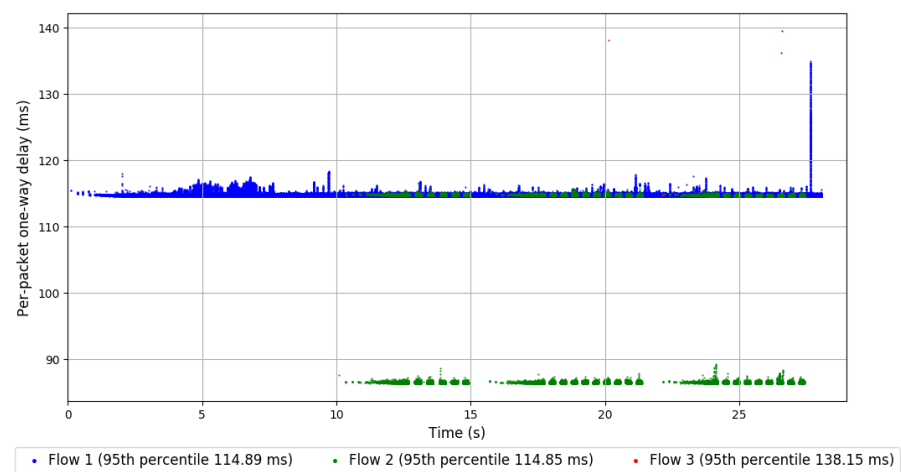
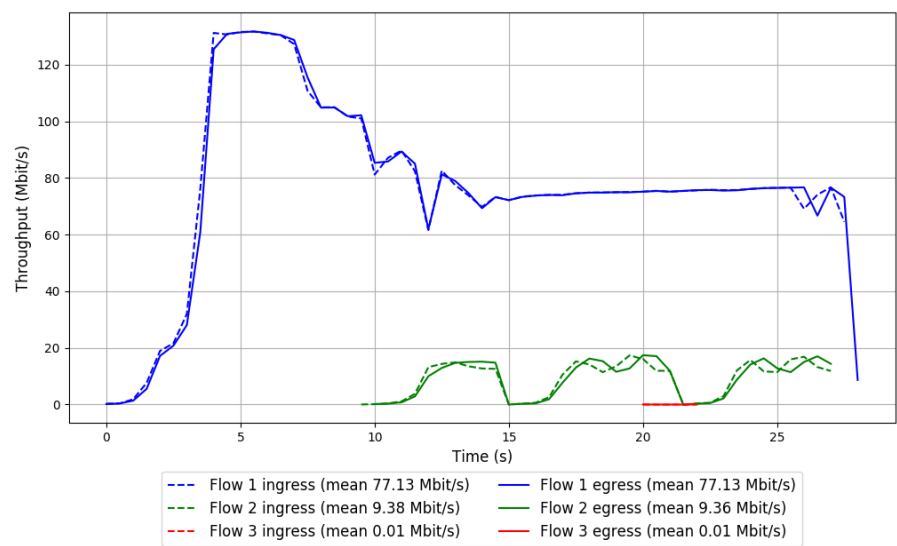
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 138.154 ms

Loss rate: 46.17%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-12-20 16:32:14

End at: 2017-12-20 16:32:44

Below is generated by plot.py at 2017-12-20 20:16:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.44 Mbit/s

95th percentile per-packet one-way delay: 114.870 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 42.94 Mbit/s

95th percentile per-packet one-way delay: 114.911 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 74.35 Mbit/s

95th percentile per-packet one-way delay: 114.819 ms

Loss rate: 0.01%

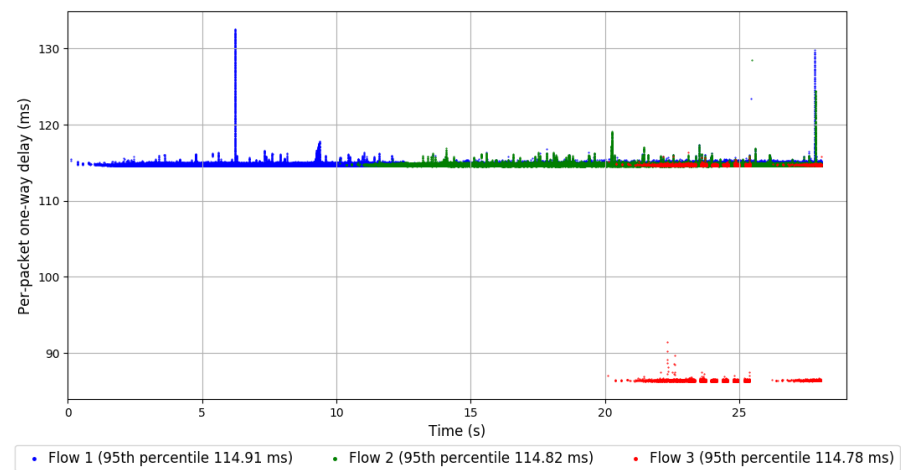
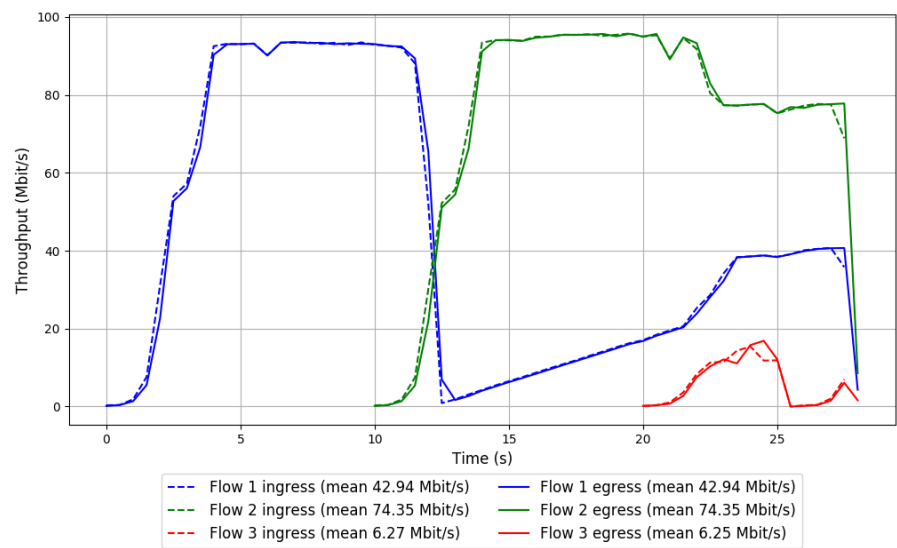
-- Flow 3:

Average throughput: 6.25 Mbit/s

95th percentile per-packet one-way delay: 114.785 ms

Loss rate: 0.02%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-12-20 16:47:07

End at: 2017-12-20 16:47:37

Below is generated by plot.py at 2017-12-20 20:16:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 59.00 Mbit/s

95th percentile per-packet one-way delay: 114.766 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 49.97 Mbit/s

95th percentile per-packet one-way delay: 114.766 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 9.33 Mbit/s

95th percentile per-packet one-way delay: 114.773 ms

Loss rate: 0.02%

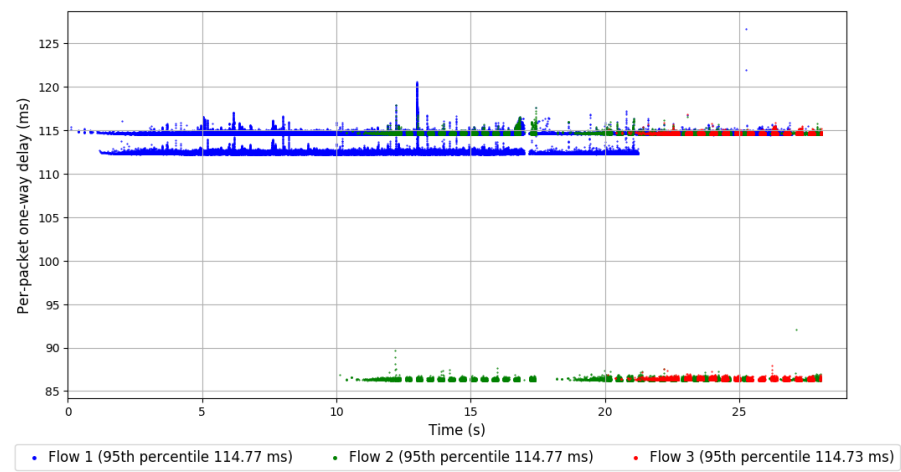
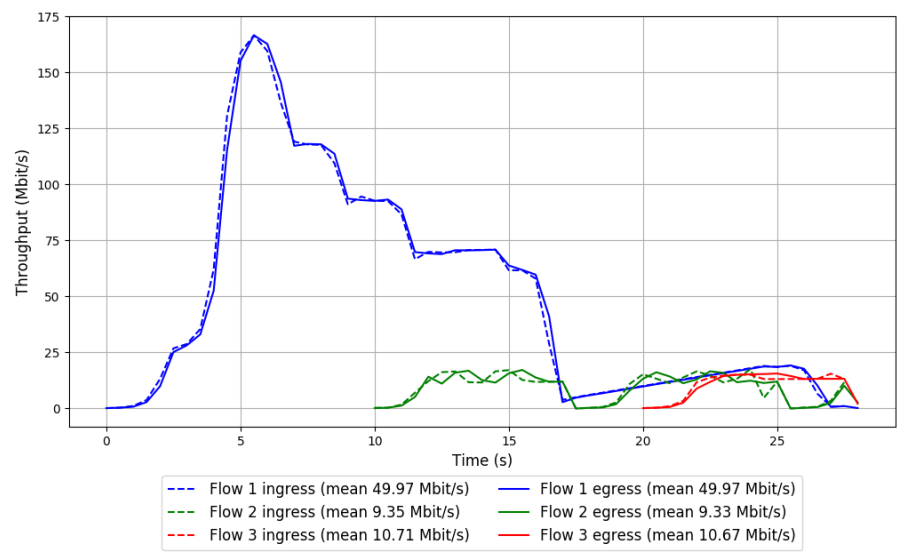
-- Flow 3:

Average throughput: 10.67 Mbit/s

95th percentile per-packet one-way delay: 114.734 ms

Loss rate: 0.03%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-12-20 17:01:35

End at: 2017-12-20 17:02:05

Below is generated by plot.py at 2017-12-20 20:16:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.79 Mbit/s

95th percentile per-packet one-way delay: 114.752 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 9.22 Mbit/s

95th percentile per-packet one-way delay: 114.742 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 8.30 Mbit/s

95th percentile per-packet one-way delay: 114.747 ms

Loss rate: 0.00%

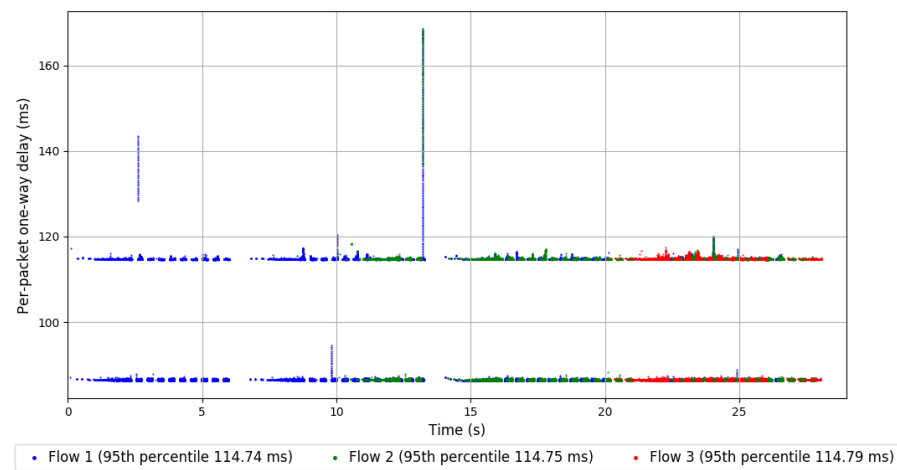
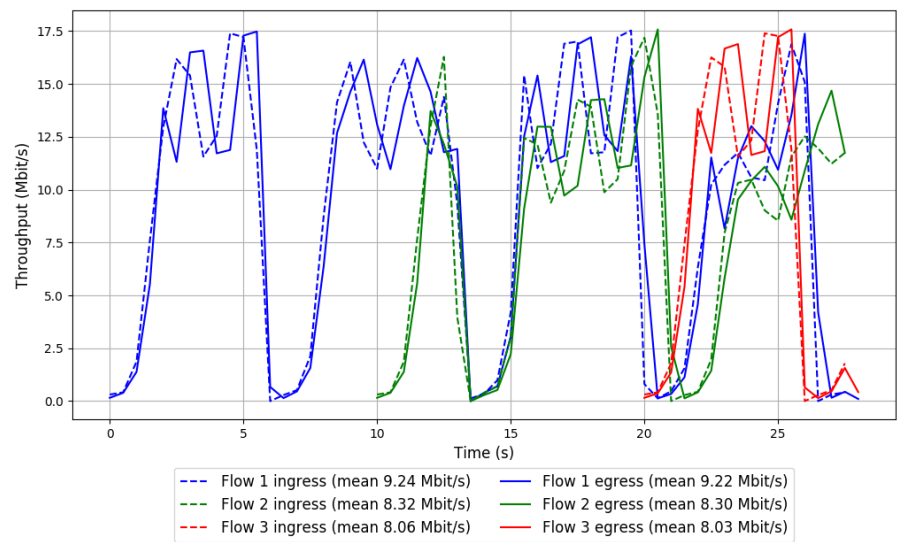
-- Flow 3:

Average throughput: 8.03 Mbit/s

95th percentile per-packet one-way delay: 114.789 ms

Loss rate: 0.00%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-12-20 17:15:40

End at: 2017-12-20 17:16:10

Below is generated by plot.py at 2017-12-20 20:17:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.07 Mbit/s

95th percentile per-packet one-way delay: 86.783 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 79.15 Mbit/s

95th percentile per-packet one-way delay: 86.792 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 57.06 Mbit/s

95th percentile per-packet one-way delay: 86.683 ms

Loss rate: 0.00%

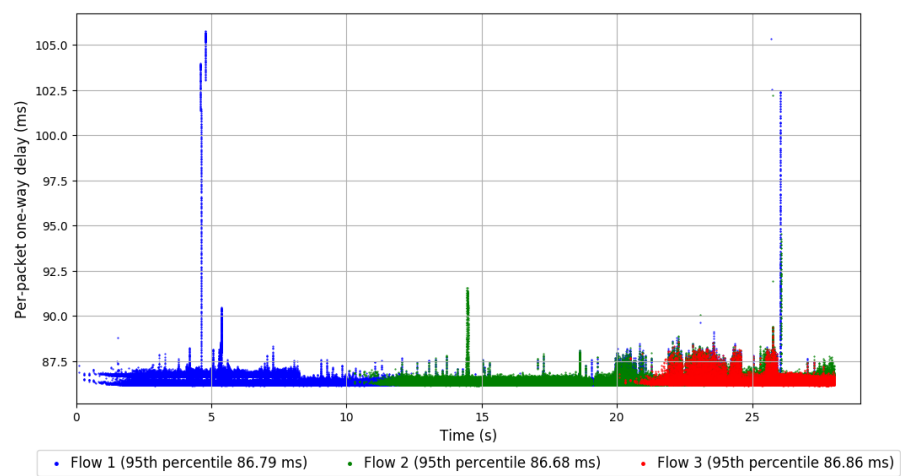
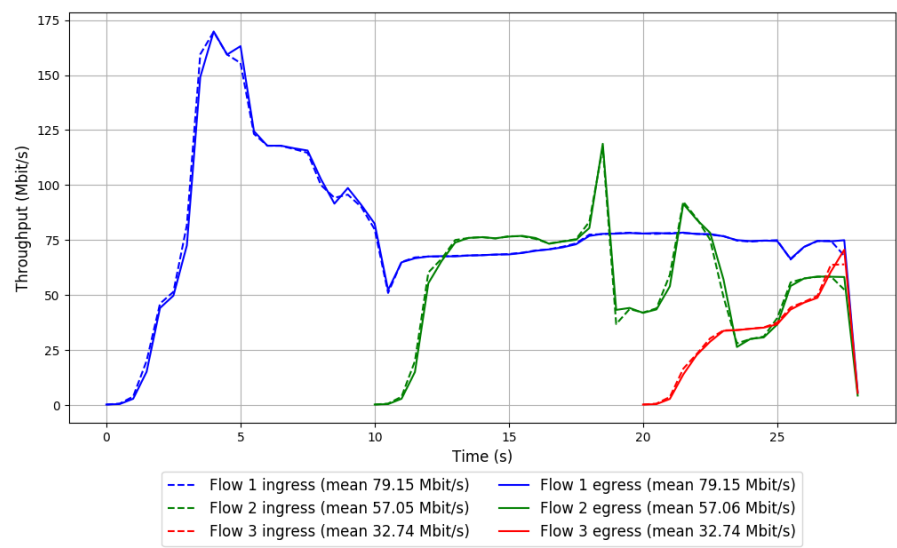
-- Flow 3:

Average throughput: 32.74 Mbit/s

95th percentile per-packet one-way delay: 86.856 ms

Loss rate: 0.00%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-12-20 17:30:35

End at: 2017-12-20 17:31:05

Below is generated by plot.py at 2017-12-20 20:18:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.52 Mbit/s

95th percentile per-packet one-way delay: 86.827 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 78.66 Mbit/s

95th percentile per-packet one-way delay: 86.812 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 66.26 Mbit/s

95th percentile per-packet one-way delay: 86.860 ms

Loss rate: 0.00%

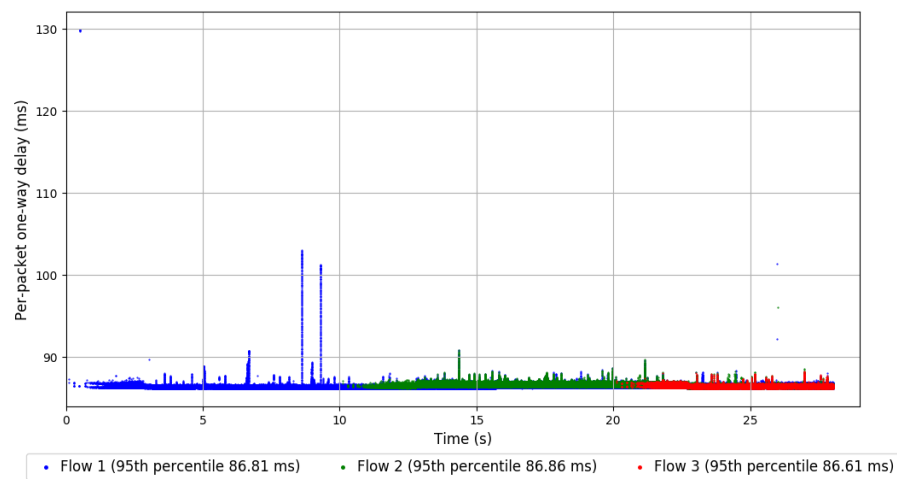
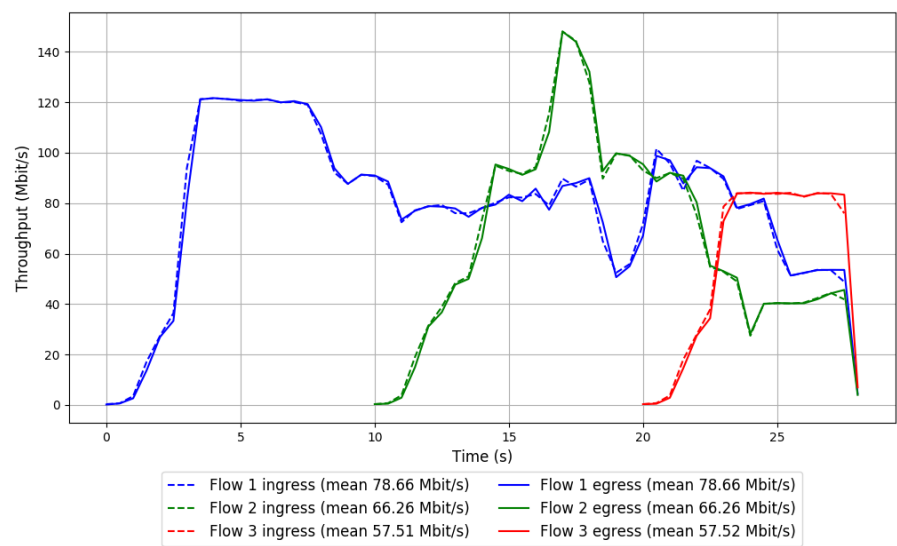
-- Flow 3:

Average throughput: 57.52 Mbit/s

95th percentile per-packet one-way delay: 86.607 ms

Loss rate: 0.00%

Run 8: Report of Copa — Data Link

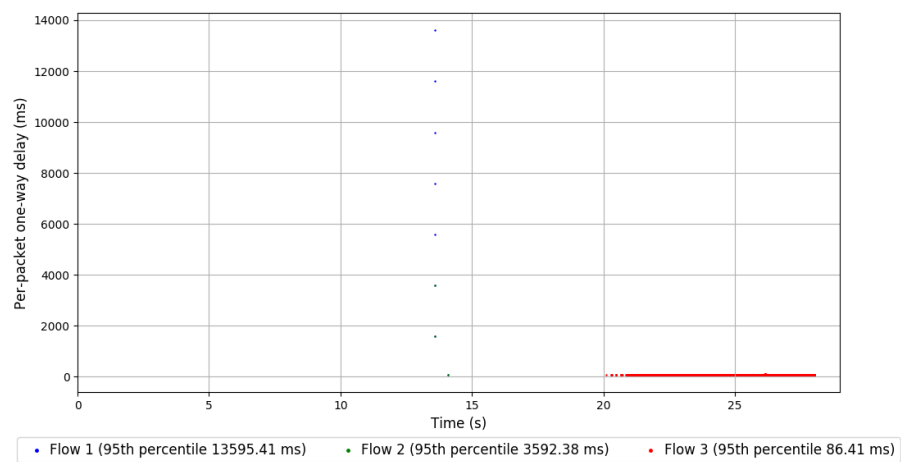
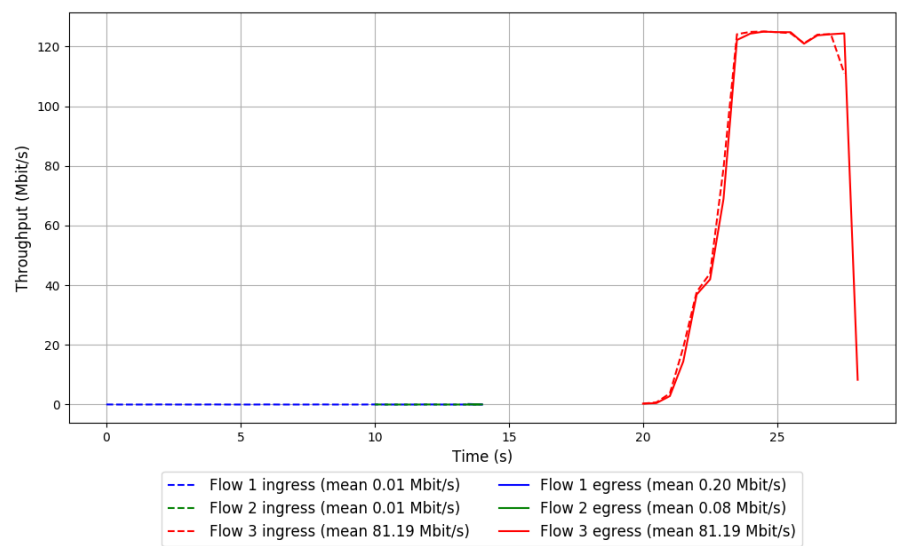


Run 9: Statistics of Copa

Start at: 2017-12-20 17:45:15

End at: 2017-12-20 17:45:45

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-12-20 17:59:35

End at: 2017-12-20 18:00:05

Below is generated by plot.py at 2017-12-20 20:18:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 143.65 Mbit/s

95th percentile per-packet one-way delay: 86.530 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 79.57 Mbit/s

95th percentile per-packet one-way delay: 86.575 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 73.94 Mbit/s

95th percentile per-packet one-way delay: 86.438 ms

Loss rate: 0.00%

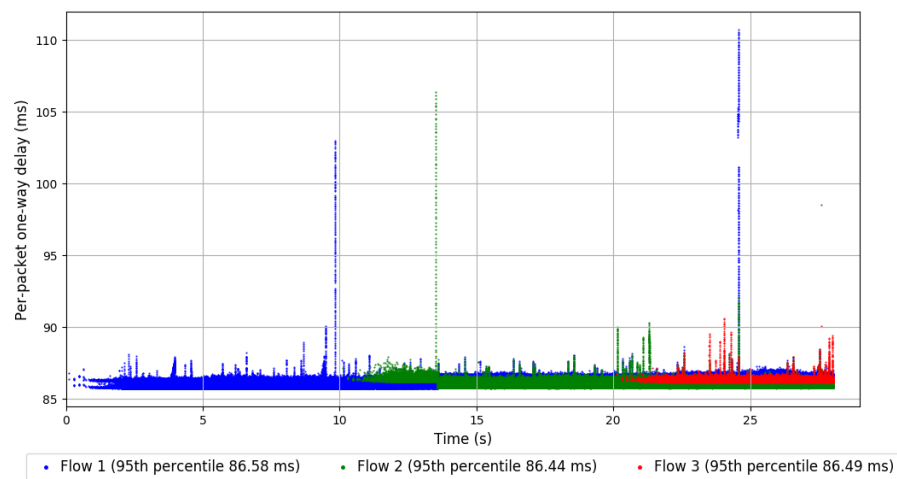
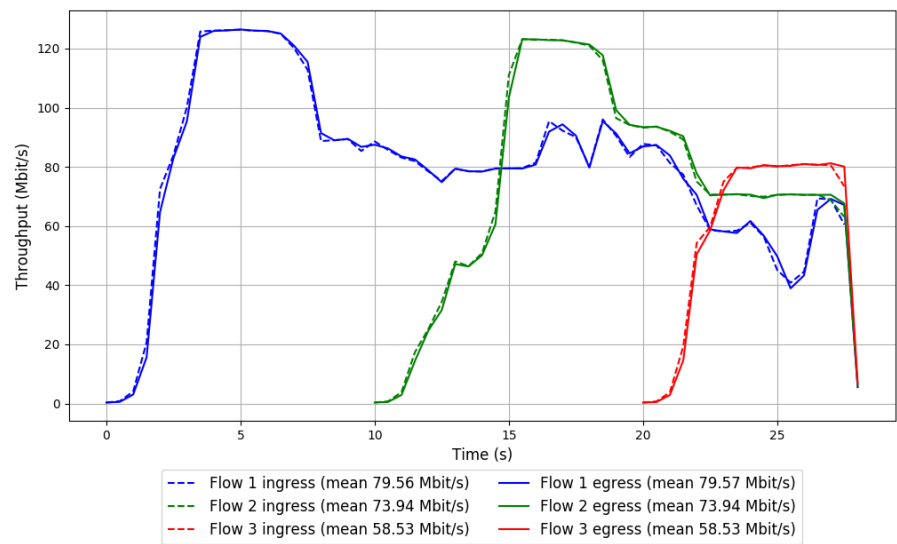
-- Flow 3:

Average throughput: 58.53 Mbit/s

95th percentile per-packet one-way delay: 86.487 ms

Loss rate: 0.00%

Run 10: Report of Copa — Data Link

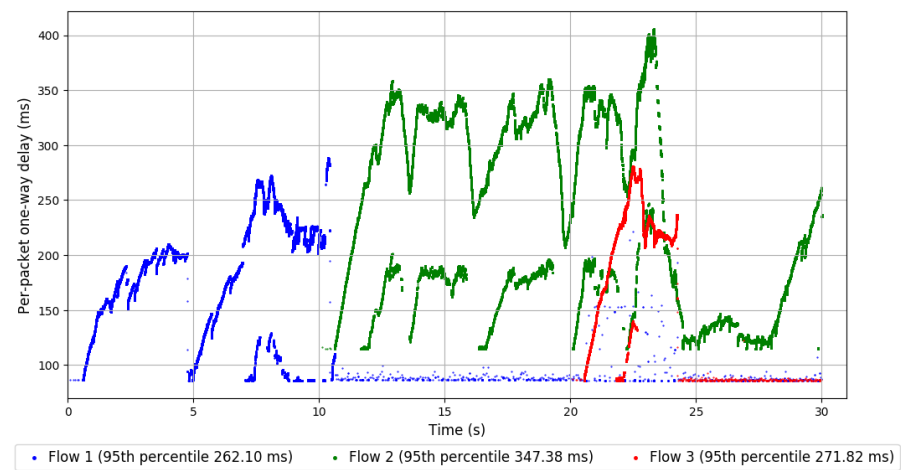
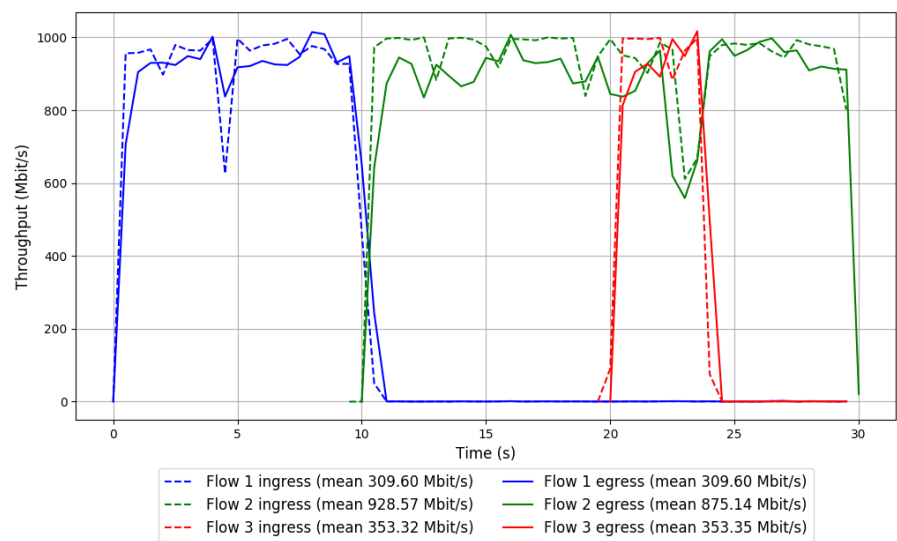


```
Run 1: Statistics of FillP

Start at: 2017-12-20 15:47:40
End at: 2017-12-20 15:48:10

# Below is generated by plot.py at 2017-12-20 20:32:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1008.48 Mbit/s
95th percentile per-packet one-way delay: 340.896 ms
Loss rate: 3.49%
-- Flow 1:
Average throughput: 309.60 Mbit/s
95th percentile per-packet one-way delay: 262.098 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 875.14 Mbit/s
95th percentile per-packet one-way delay: 347.381 ms
Loss rate: 5.89%
-- Flow 3:
Average throughput: 353.35 Mbit/s
95th percentile per-packet one-way delay: 271.822 ms
Loss rate: 0.00%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2017-12-20 16:02:21

End at: 2017-12-20 16:02:51

Below is generated by plot.py at 2017-12-20 20:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 1050.62 Mbit/s

95th percentile per-packet one-way delay: 321.191 ms

Loss rate: 2.89%

-- Flow 1:

Average throughput: 434.95 Mbit/s

95th percentile per-packet one-way delay: 282.887 ms

Loss rate: 1.71%

-- Flow 2:

Average throughput: 523.64 Mbit/s

95th percentile per-packet one-way delay: 326.458 ms

Loss rate: 3.99%

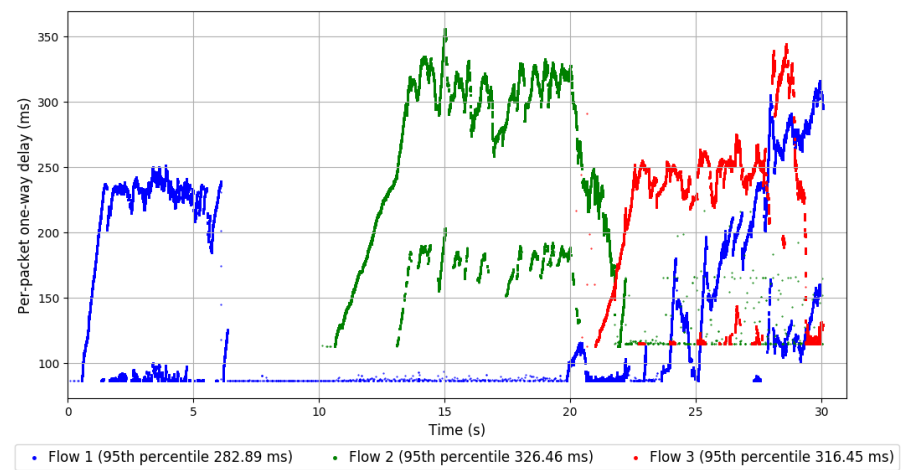
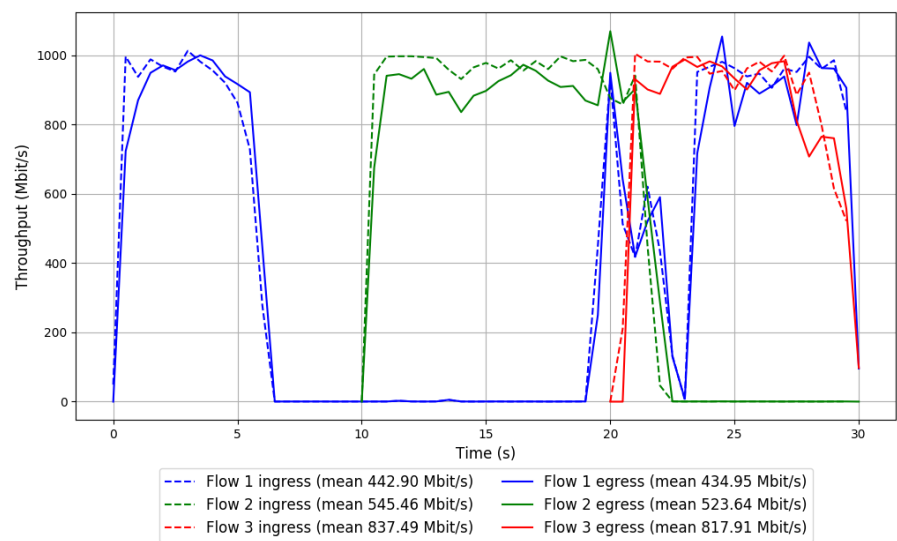
-- Flow 3:

Average throughput: 817.91 Mbit/s

95th percentile per-packet one-way delay: 316.453 ms

Loss rate: 3.35%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2017-12-20 16:16:40

End at: 2017-12-20 16:17:10

Below is generated by plot.py at 2017-12-20 20:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 845.57 Mbit/s

95th percentile per-packet one-way delay: 249.489 ms

Loss rate: 4.01%

-- Flow 1:

Average throughput: 125.67 Mbit/s

95th percentile per-packet one-way delay: 245.241 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 666.26 Mbit/s

95th percentile per-packet one-way delay: 245.131 ms

Loss rate: 5.01%

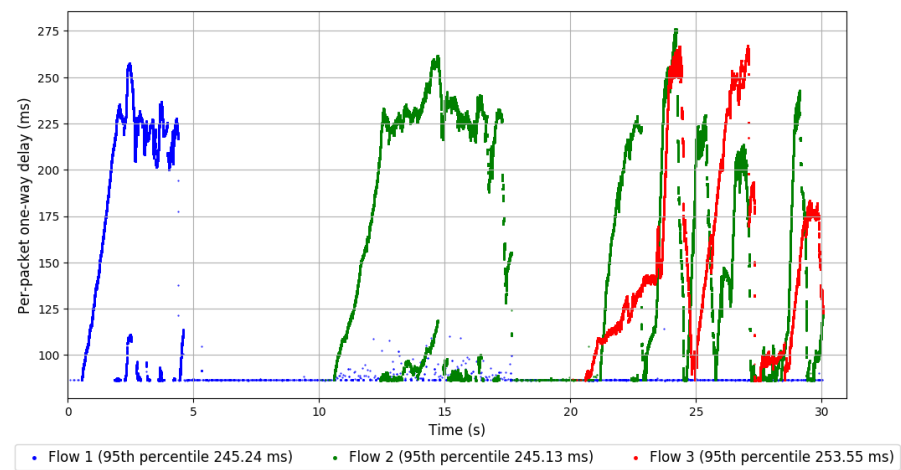
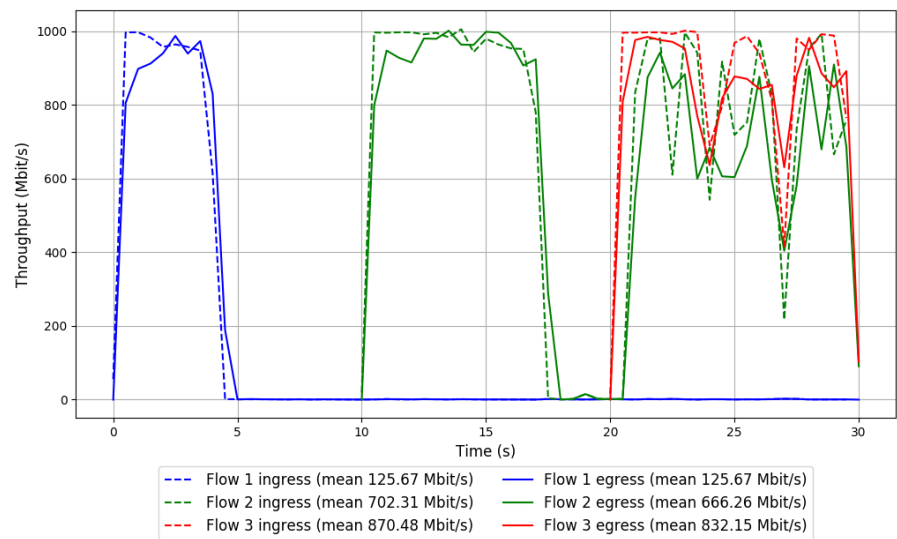
-- Flow 3:

Average throughput: 832.15 Mbit/s

95th percentile per-packet one-way delay: 253.551 ms

Loss rate: 4.15%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2017-12-20 16:30:35

End at: 2017-12-20 16:31:05

Below is generated by plot.py at 2017-12-20 20:37:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 1154.19 Mbit/s

95th percentile per-packet one-way delay: 281.398 ms

Loss rate: 1.76%

-- Flow 1:

Average throughput: 339.47 Mbit/s

95th percentile per-packet one-way delay: 283.750 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 921.00 Mbit/s

95th percentile per-packet one-way delay: 256.293 ms

Loss rate: 1.96%

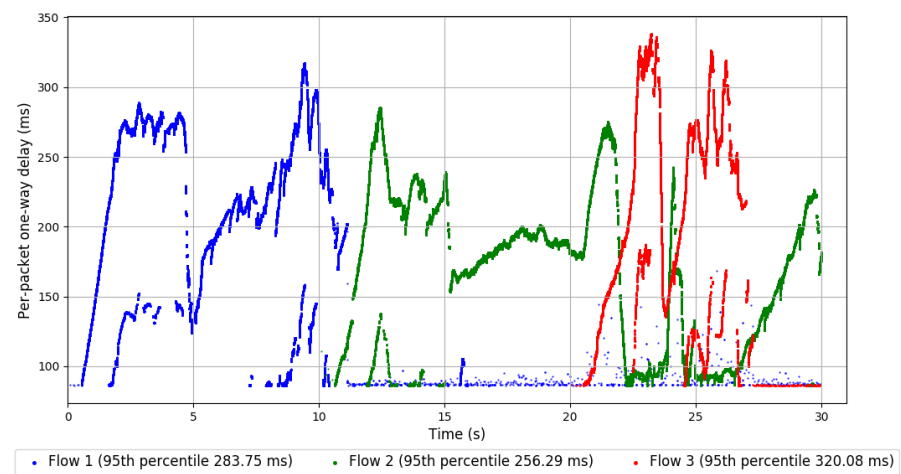
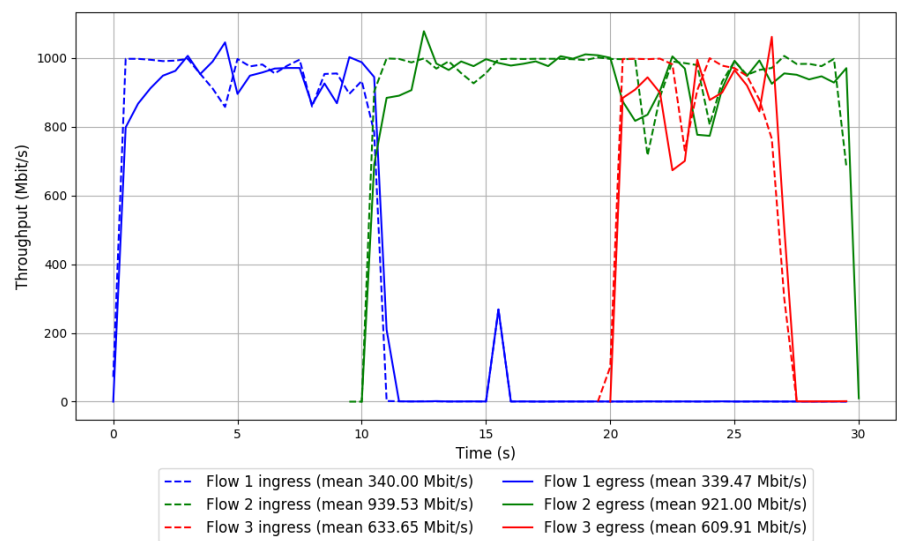
-- Flow 3:

Average throughput: 609.91 Mbit/s

95th percentile per-packet one-way delay: 320.083 ms

Loss rate: 3.75%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2017-12-20 16:45:23

End at: 2017-12-20 16:45:53

Below is generated by plot.py at 2017-12-20 20:38:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 1212.25 Mbit/s

95th percentile per-packet one-way delay: 297.462 ms

Loss rate: 2.73%

-- Flow 1:

Average throughput: 492.92 Mbit/s

95th percentile per-packet one-way delay: 295.682 ms

Loss rate: 1.46%

-- Flow 2:

Average throughput: 645.36 Mbit/s

95th percentile per-packet one-way delay: 303.063 ms

Loss rate: 3.33%

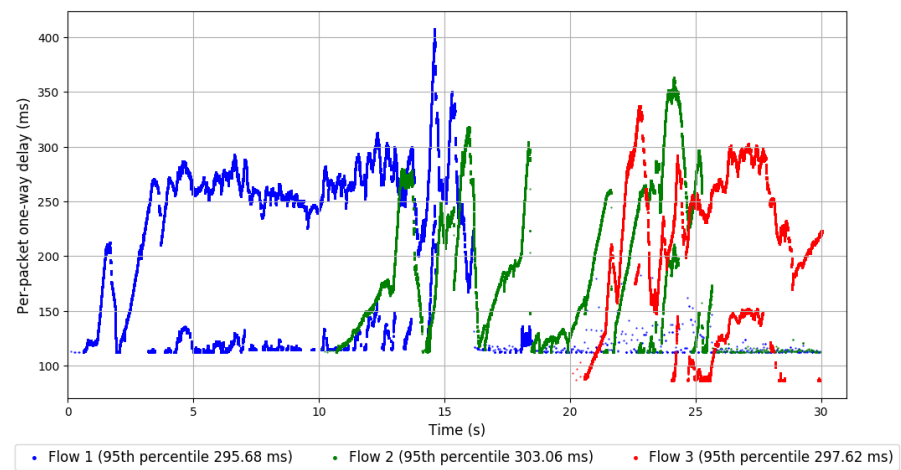
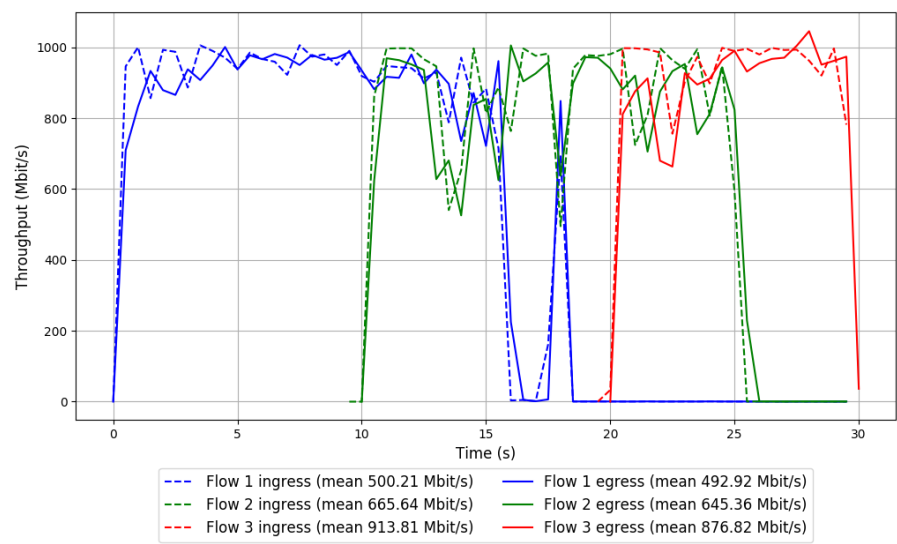
-- Flow 3:

Average throughput: 876.82 Mbit/s

95th percentile per-packet one-way delay: 297.623 ms

Loss rate: 3.96%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2017-12-20 16:59:38

End at: 2017-12-20 17:00:08

Below is generated by plot.py at 2017-12-20 20:46:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 1515.19 Mbit/s

95th percentile per-packet one-way delay: 327.036 ms

Loss rate: 10.76%

-- Flow 1:

Average throughput: 819.67 Mbit/s

95th percentile per-packet one-way delay: 321.778 ms

Loss rate: 7.78%

-- Flow 2:

Average throughput: 752.01 Mbit/s

95th percentile per-packet one-way delay: 336.294 ms

Loss rate: 11.24%

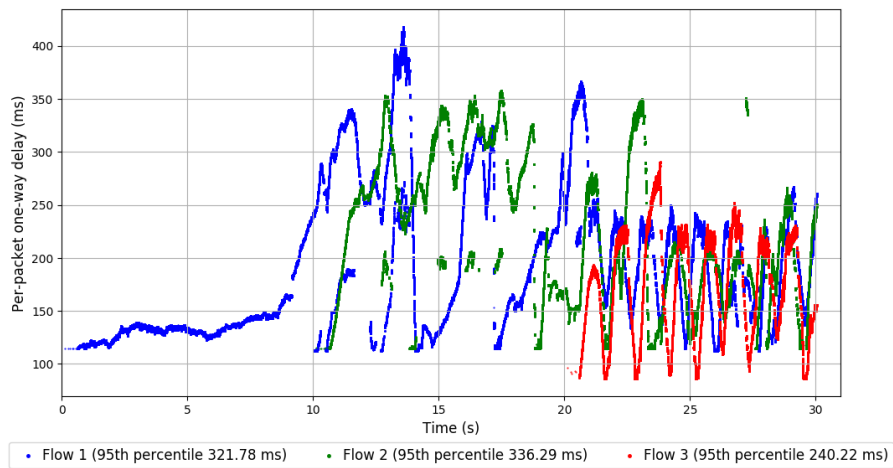
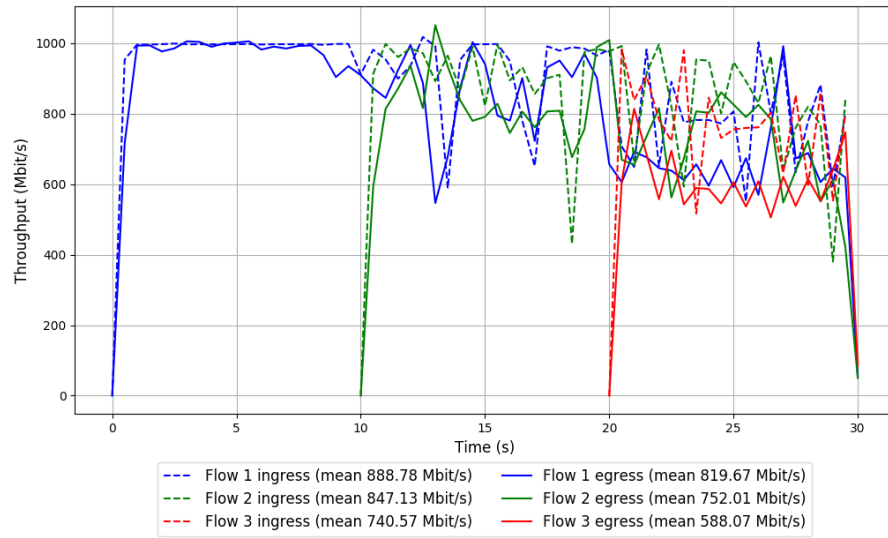
-- Flow 3:

Average throughput: 588.07 Mbit/s

95th percentile per-packet one-way delay: 240.215 ms

Loss rate: 20.46%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2017-12-20 17:13:47

End at: 2017-12-20 17:14:17

Below is generated by plot.py at 2017-12-20 20:46:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 1473.29 Mbit/s

95th percentile per-packet one-way delay: 284.575 ms

Loss rate: 7.60%

-- Flow 1:

Average throughput: 757.84 Mbit/s

95th percentile per-packet one-way delay: 278.629 ms

Loss rate: 5.08%

-- Flow 2:

Average throughput: 700.39 Mbit/s

95th percentile per-packet one-way delay: 277.930 ms

Loss rate: 11.86%

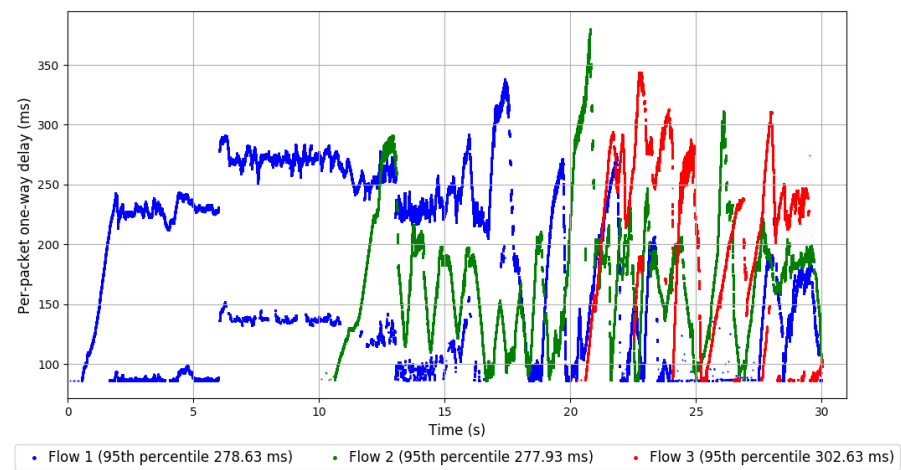
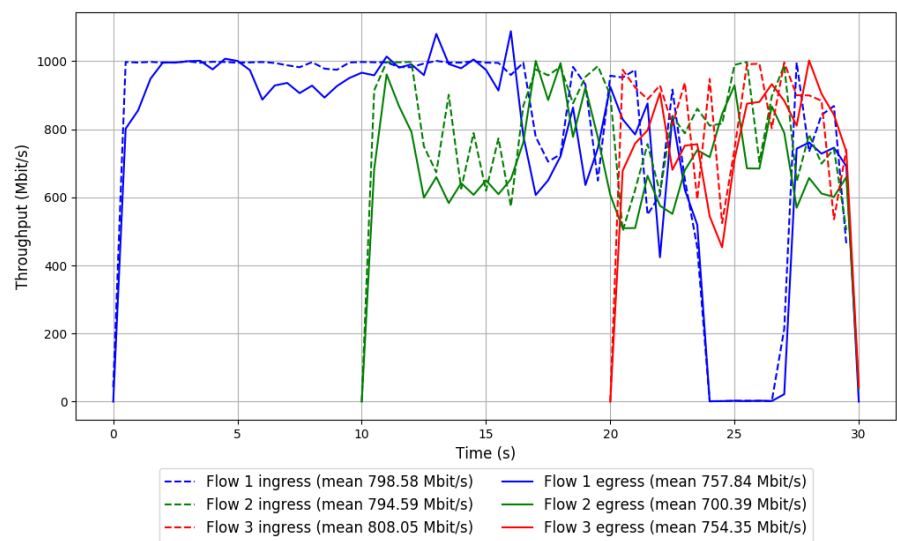
-- Flow 3:

Average throughput: 754.35 Mbit/s

95th percentile per-packet one-way delay: 302.632 ms

Loss rate: 6.67%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2017-12-20 17:28:41

End at: 2017-12-20 17:29:11

Below is generated by plot.py at 2017-12-20 20:46:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 1470.29 Mbit/s

95th percentile per-packet one-way delay: 314.517 ms

Loss rate: 9.32%

-- Flow 1:

Average throughput: 841.86 Mbit/s

95th percentile per-packet one-way delay: 313.606 ms

Loss rate: 6.96%

-- Flow 2:

Average throughput: 624.59 Mbit/s

95th percentile per-packet one-way delay: 312.230 ms

Loss rate: 13.72%

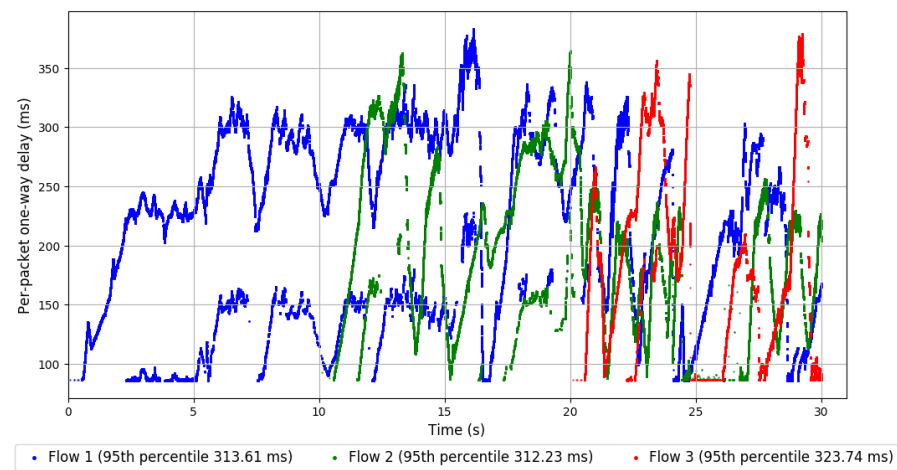
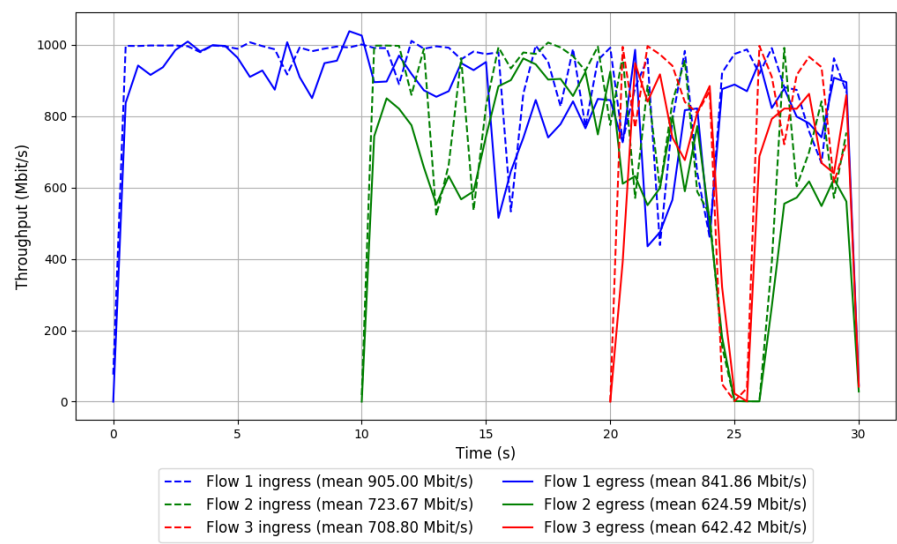
-- Flow 3:

Average throughput: 642.42 Mbit/s

95th percentile per-packet one-way delay: 323.742 ms

Loss rate: 9.38%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2017-12-20 17:43:42

End at: 2017-12-20 17:44:12

Below is generated by plot.py at 2017-12-20 20:49:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 1018.61 Mbit/s

95th percentile per-packet one-way delay: 305.479 ms

Loss rate: 2.53%

-- Flow 1:

Average throughput: 228.09 Mbit/s

95th percentile per-packet one-way delay: 289.391 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 758.01 Mbit/s

95th percentile per-packet one-way delay: 306.836 ms

Loss rate: 2.43%

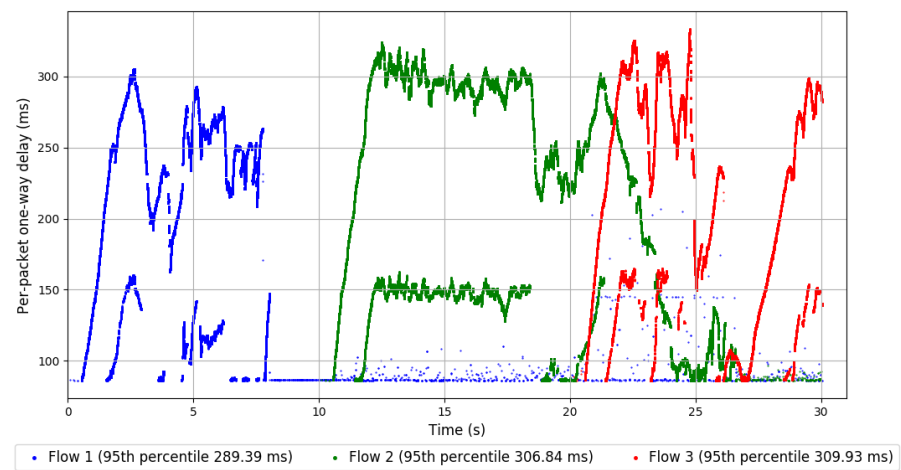
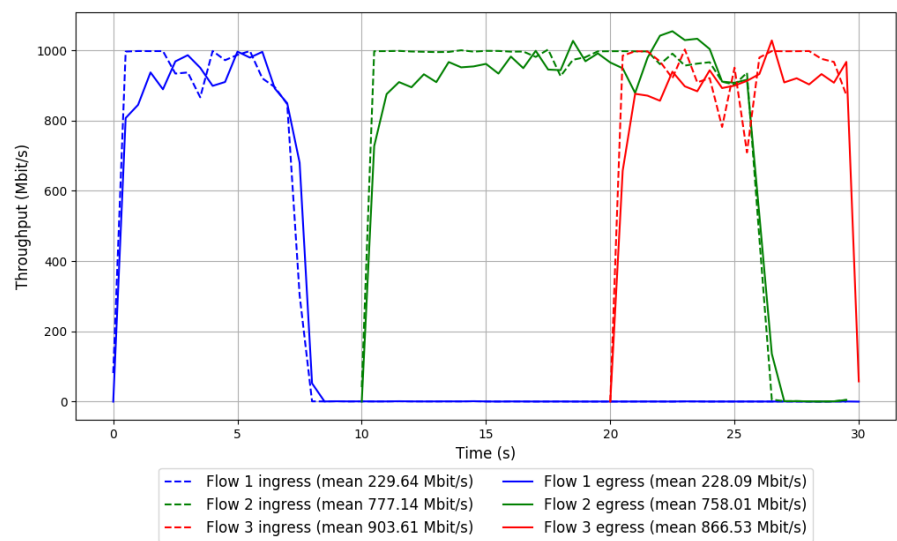
-- Flow 3:

Average throughput: 866.53 Mbit/s

95th percentile per-packet one-way delay: 309.925 ms

Loss rate: 4.12%

Run 9: Report of FillP — Data Link

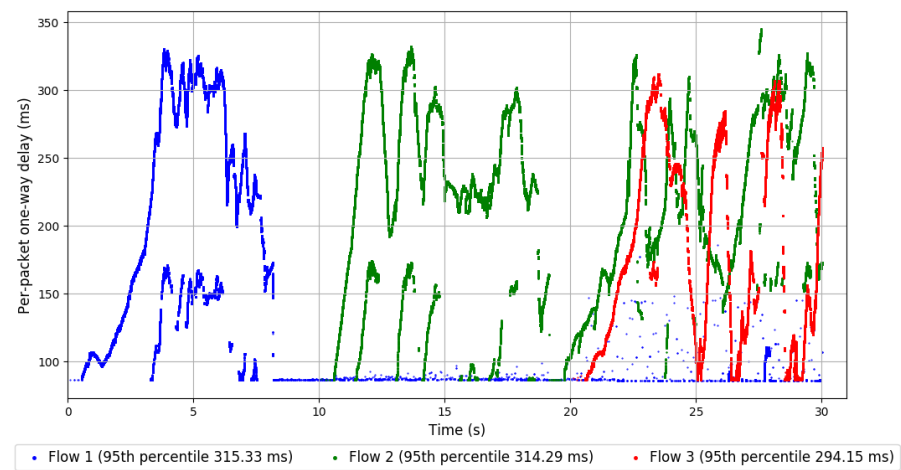
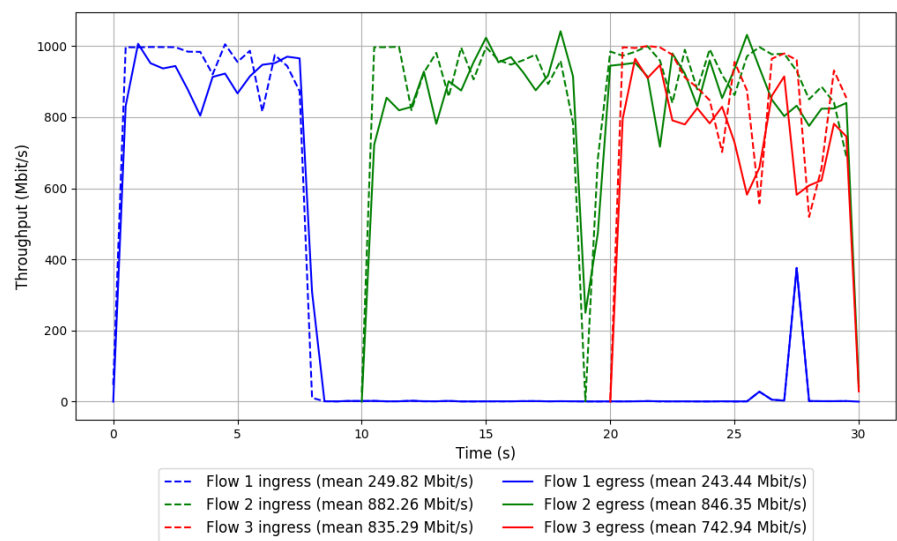


```
Run 10: Statistics of FillP

Start at: 2017-12-20 17:58:01
End at: 2017-12-20 17:58:31

# Below is generated by plot.py at 2017-12-20 20:49:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1052.74 Mbit/s
95th percentile per-packet one-way delay: 312.142 ms
Loss rate: 5.45%
-- Flow 1:
Average throughput: 243.44 Mbit/s
95th percentile per-packet one-way delay: 315.328 ms
Loss rate: 2.49%
-- Flow 2:
Average throughput: 846.35 Mbit/s
95th percentile per-packet one-way delay: 314.287 ms
Loss rate: 4.07%
-- Flow 3:
Average throughput: 742.94 Mbit/s
95th percentile per-packet one-way delay: 294.146 ms
Loss rate: 11.07%
```

Run 10: Report of FillP — Data Link

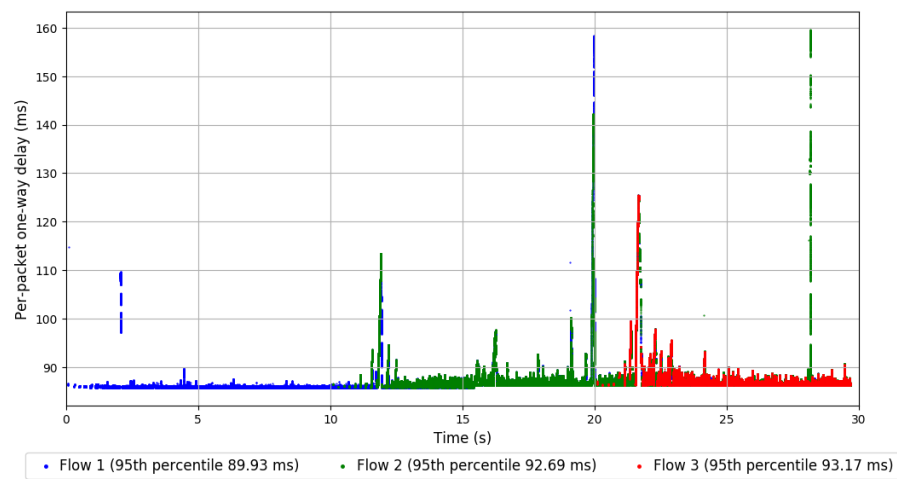
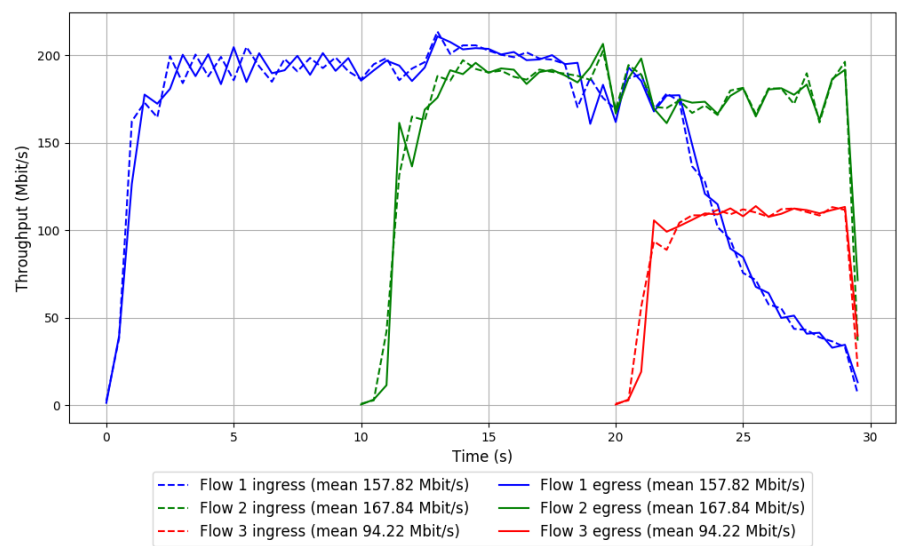


```
Run 1: Statistics of Indigo

Start at: 2017-12-20 15:51:44
End at: 2017-12-20 15:52:14

# Below is generated by plot.py at 2017-12-20 20:49:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 299.29 Mbit/s
95th percentile per-packet one-way delay: 91.419 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 157.82 Mbit/s
95th percentile per-packet one-way delay: 89.929 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 167.84 Mbit/s
95th percentile per-packet one-way delay: 92.695 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 94.22 Mbit/s
95th percentile per-packet one-way delay: 93.171 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2017-12-20 16:06:48

End at: 2017-12-20 16:07:18

Below is generated by plot.py at 2017-12-20 20:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 254.16 Mbit/s

95th percentile per-packet one-way delay: 127.781 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 114.34 Mbit/s

95th percentile per-packet one-way delay: 124.578 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 150.98 Mbit/s

95th percentile per-packet one-way delay: 128.834 ms

Loss rate: 0.01%

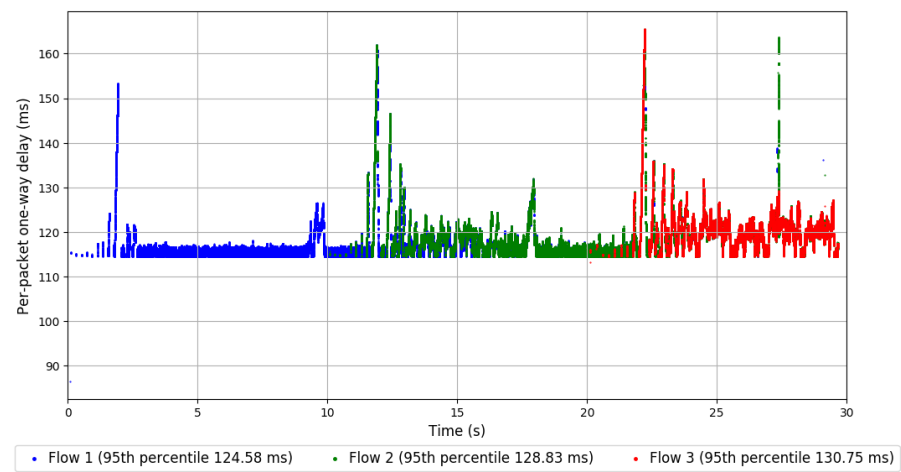
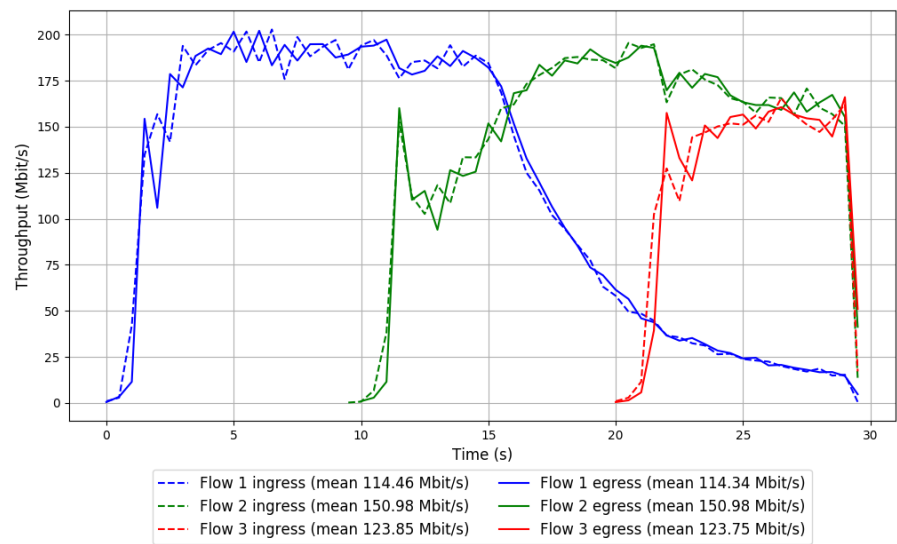
-- Flow 3:

Average throughput: 123.75 Mbit/s

95th percentile per-packet one-way delay: 130.747 ms

Loss rate: 0.09%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2017-12-20 16:20:47

End at: 2017-12-20 16:21:17

Below is generated by plot.py at 2017-12-20 20:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 247.92 Mbit/s

95th percentile per-packet one-way delay: 117.184 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 86.03 Mbit/s

95th percentile per-packet one-way delay: 116.186 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 170.10 Mbit/s

95th percentile per-packet one-way delay: 117.119 ms

Loss rate: 0.00%

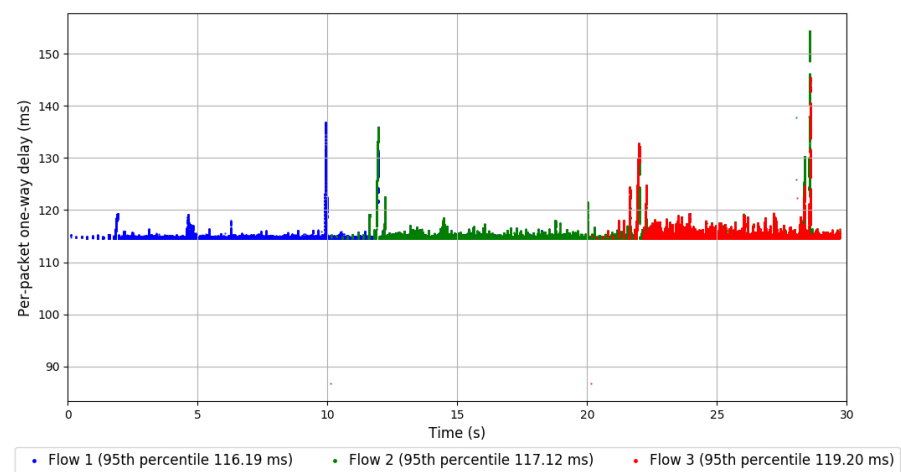
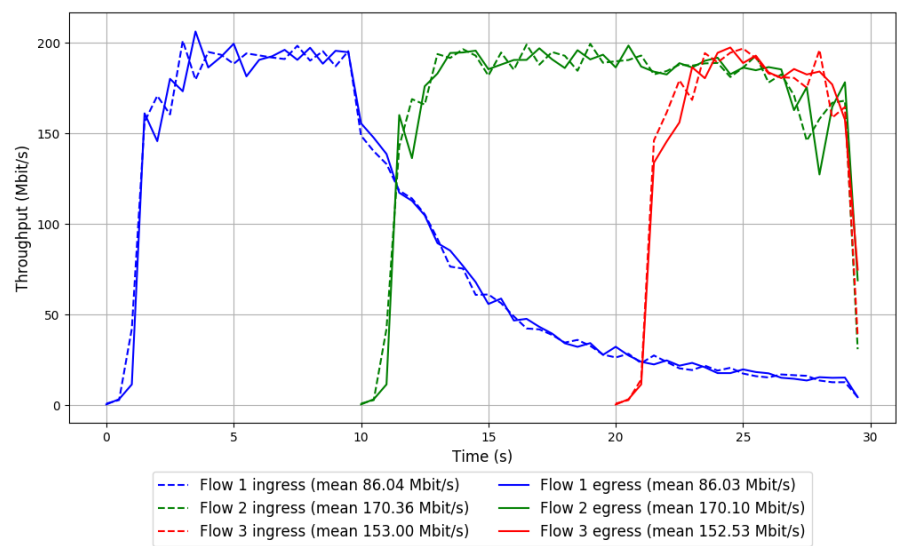
-- Flow 3:

Average throughput: 152.53 Mbit/s

95th percentile per-packet one-way delay: 119.205 ms

Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2017-12-20 16:34:59

End at: 2017-12-20 16:35:29

Below is generated by plot.py at 2017-12-20 20:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 271.21 Mbit/s

95th percentile per-packet one-way delay: 116.865 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 112.34 Mbit/s

95th percentile per-packet one-way delay: 116.174 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 168.15 Mbit/s

95th percentile per-packet one-way delay: 117.445 ms

Loss rate: 0.04%

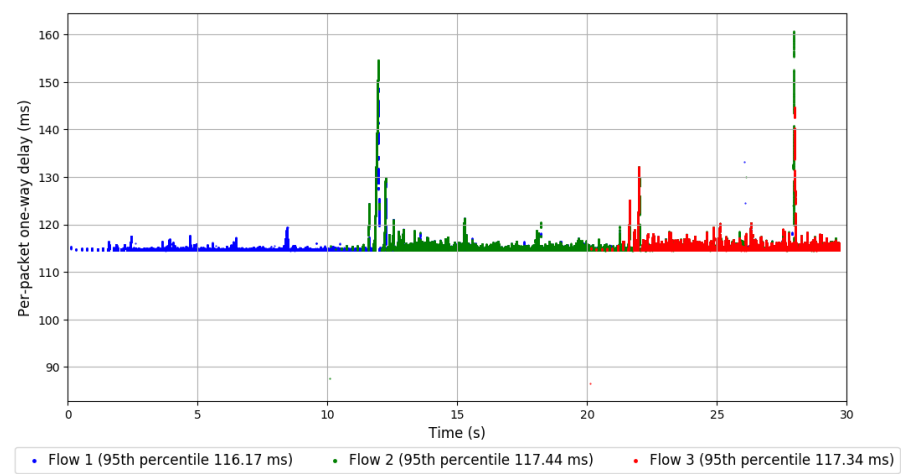
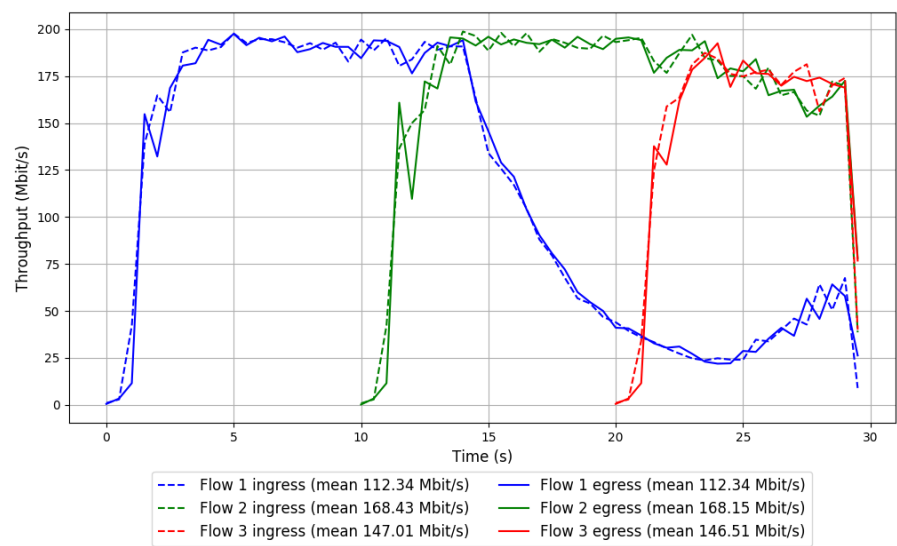
-- Flow 3:

Average throughput: 146.51 Mbit/s

95th percentile per-packet one-way delay: 117.341 ms

Loss rate: 0.08%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2017-12-20 16:49:31

End at: 2017-12-20 16:50:01

Below is generated by plot.py at 2017-12-20 20:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 309.57 Mbit/s

95th percentile per-packet one-way delay: 128.421 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 166.49 Mbit/s

95th percentile per-packet one-way delay: 125.886 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 152.60 Mbit/s

95th percentile per-packet one-way delay: 130.201 ms

Loss rate: 0.01%

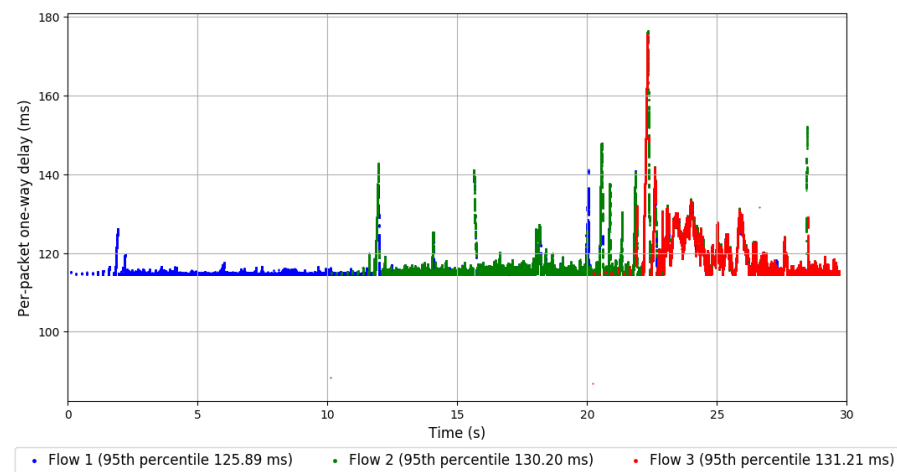
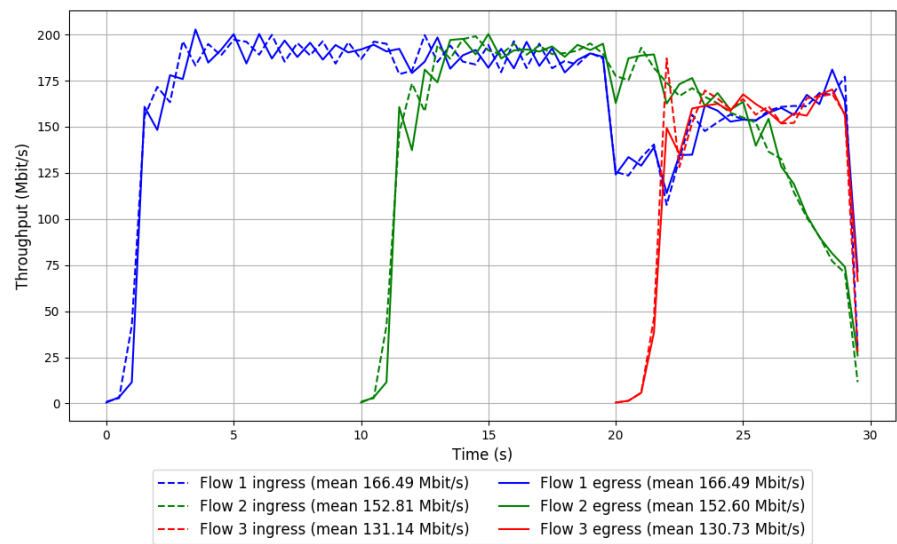
-- Flow 3:

Average throughput: 130.73 Mbit/s

95th percentile per-packet one-way delay: 131.212 ms

Loss rate: 0.03%

Run 5: Report of Indigo — Data Link



Run 6: Statistics of Indigo

Start at: 2017-12-20 17:04:13

End at: 2017-12-20 17:04:43

Below is generated by plot.py at 2017-12-20 20:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 221.54 Mbit/s

95th percentile per-packet one-way delay: 117.150 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 58.13 Mbit/s

95th percentile per-packet one-way delay: 115.816 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 172.03 Mbit/s

95th percentile per-packet one-way delay: 116.458 ms

Loss rate: 0.01%

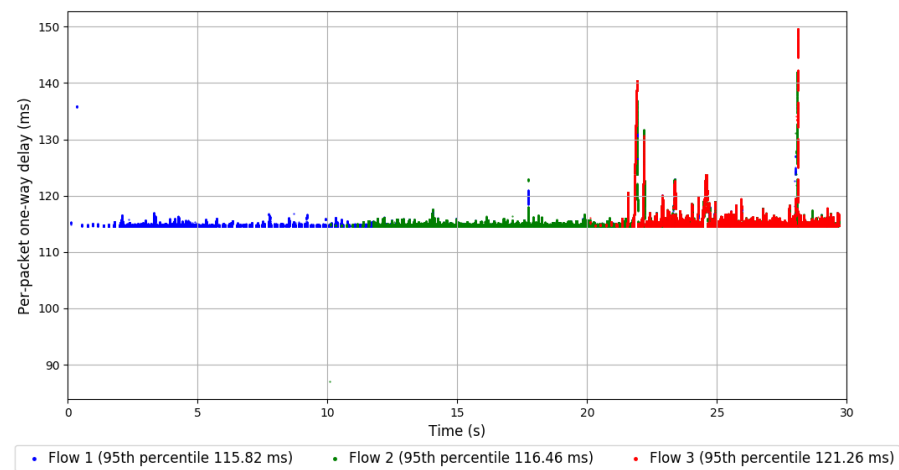
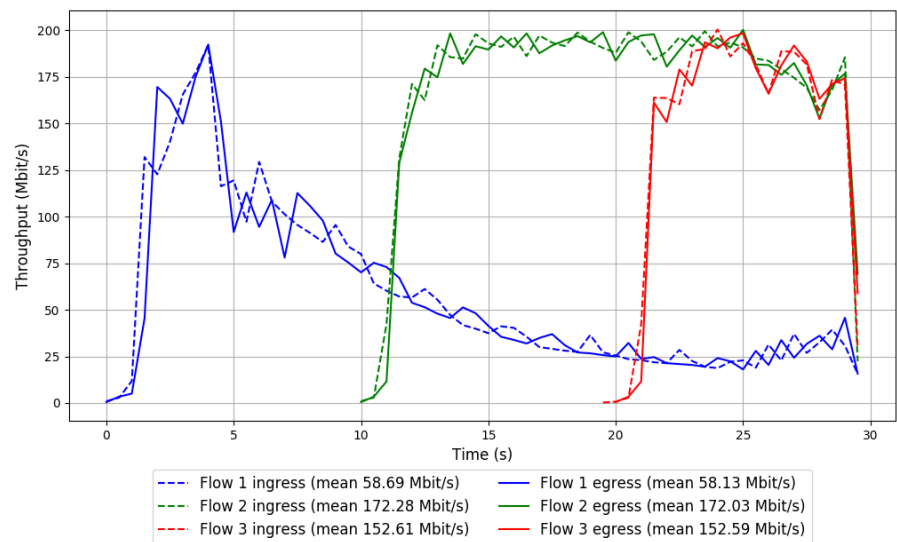
-- Flow 3:

Average throughput: 152.59 Mbit/s

95th percentile per-packet one-way delay: 121.258 ms

Loss rate: 0.02%

Run 6: Report of Indigo — Data Link



Run 7: Statistics of Indigo

Start at: 2017-12-20 17:18:24

End at: 2017-12-20 17:18:54

Below is generated by plot.py at 2017-12-20 20:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 271.48 Mbit/s

95th percentile per-packet one-way delay: 92.066 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 106.66 Mbit/s

95th percentile per-packet one-way delay: 88.050 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 174.95 Mbit/s

95th percentile per-packet one-way delay: 93.341 ms

Loss rate: 0.00%

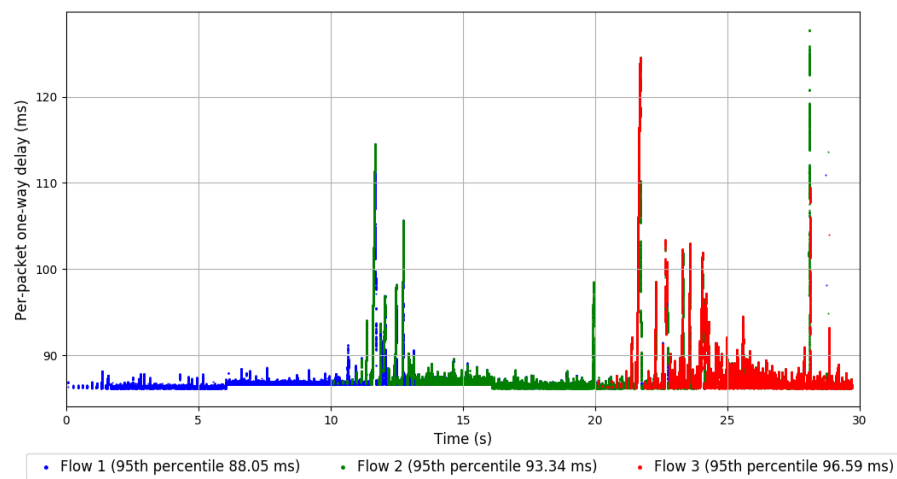
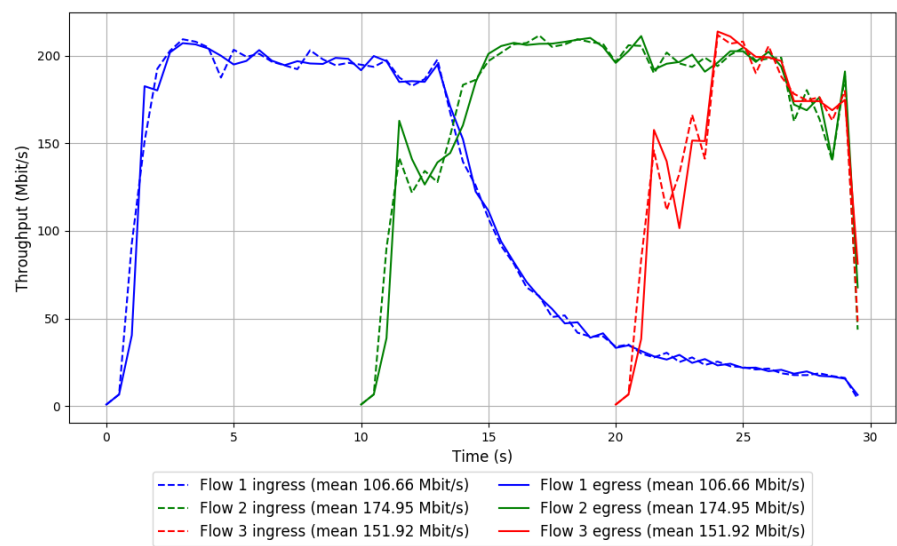
-- Flow 3:

Average throughput: 151.92 Mbit/s

95th percentile per-packet one-way delay: 96.591 ms

Loss rate: 0.00%

Run 7: Report of Indigo — Data Link



Run 8: Statistics of Indigo

Start at: 2017-12-20 17:33:20

End at: 2017-12-20 17:33:50

Below is generated by plot.py at 2017-12-20 20:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 290.03 Mbit/s

95th percentile per-packet one-way delay: 88.786 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 179.69 Mbit/s

95th percentile per-packet one-way delay: 88.095 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 90.31 Mbit/s

95th percentile per-packet one-way delay: 89.826 ms

Loss rate: 0.00%

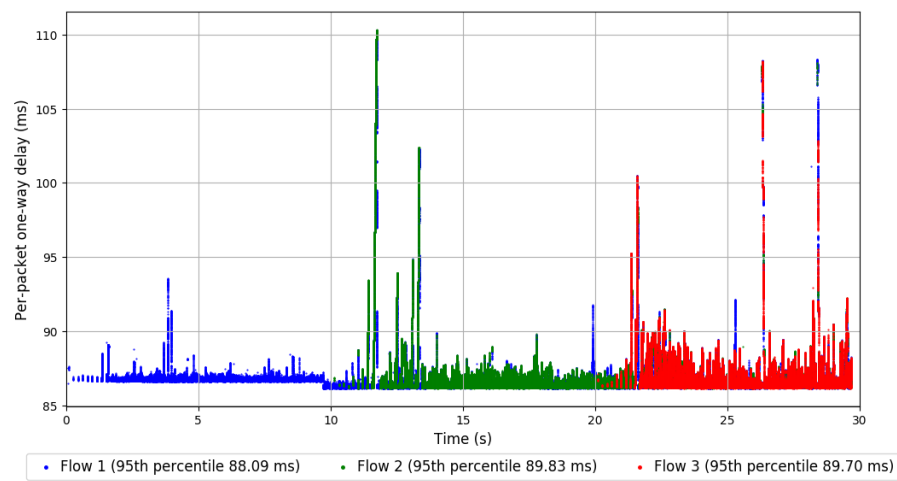
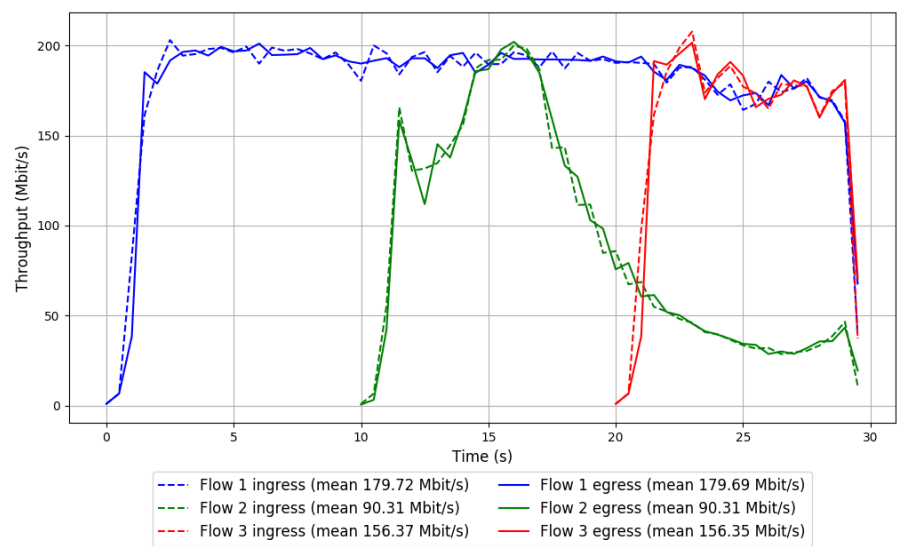
-- Flow 3:

Average throughput: 156.35 Mbit/s

95th percentile per-packet one-way delay: 89.705 ms

Loss rate: 0.03%

Run 8: Report of Indigo — Data Link



Run 9: Statistics of Indigo

Start at: 2017-12-20 17:47:44

End at: 2017-12-20 17:48:14

Below is generated by plot.py at 2017-12-20 20:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 323.13 Mbit/s

95th percentile per-packet one-way delay: 92.583 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 175.11 Mbit/s

95th percentile per-packet one-way delay: 91.019 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 170.10 Mbit/s

95th percentile per-packet one-way delay: 93.024 ms

Loss rate: 0.00%

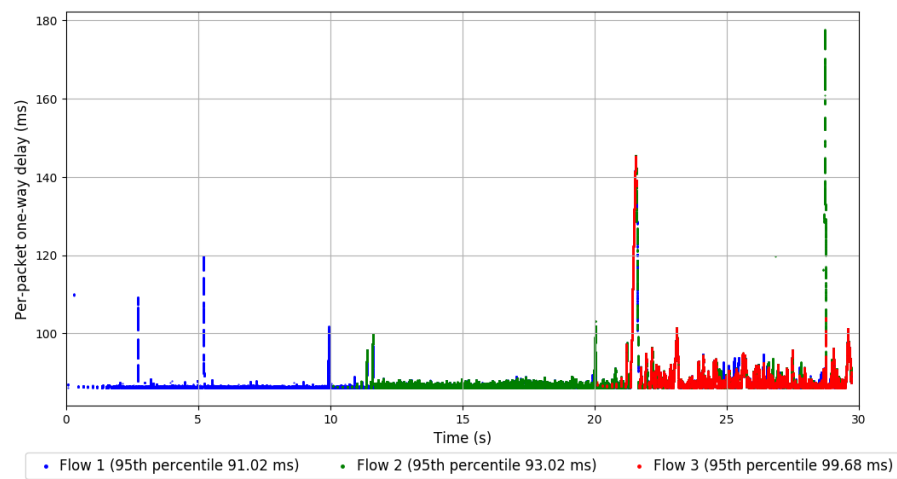
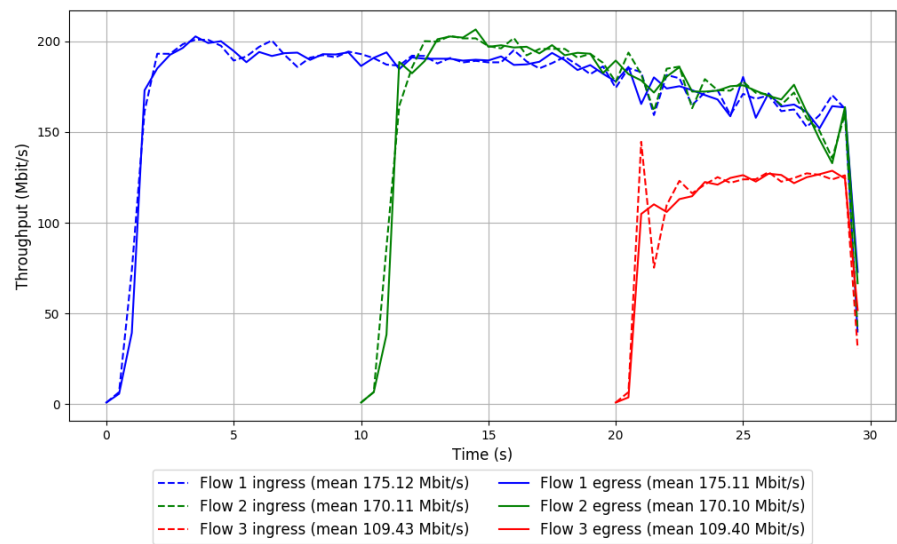
-- Flow 3:

Average throughput: 109.40 Mbit/s

95th percentile per-packet one-way delay: 99.684 ms

Loss rate: 0.00%

Run 9: Report of Indigo — Data Link



Run 10: Statistics of Indigo

Start at: 2017-12-20 18:02:20

End at: 2017-12-20 18:02:50

Below is generated by plot.py at 2017-12-20 20:49:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 320.00 Mbit/s

95th percentile per-packet one-way delay: 102.114 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 168.48 Mbit/s

95th percentile per-packet one-way delay: 98.340 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 162.67 Mbit/s

95th percentile per-packet one-way delay: 102.946 ms

Loss rate: 0.02%

-- Flow 3:

Average throughput: 135.61 Mbit/s

95th percentile per-packet one-way delay: 106.229 ms

Loss rate: 0.10%

Run 10: Report of Indigo — Data Link

