

Pantheon Report

Generated at 2017-12-20 19:42:29 (UTC).

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

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.

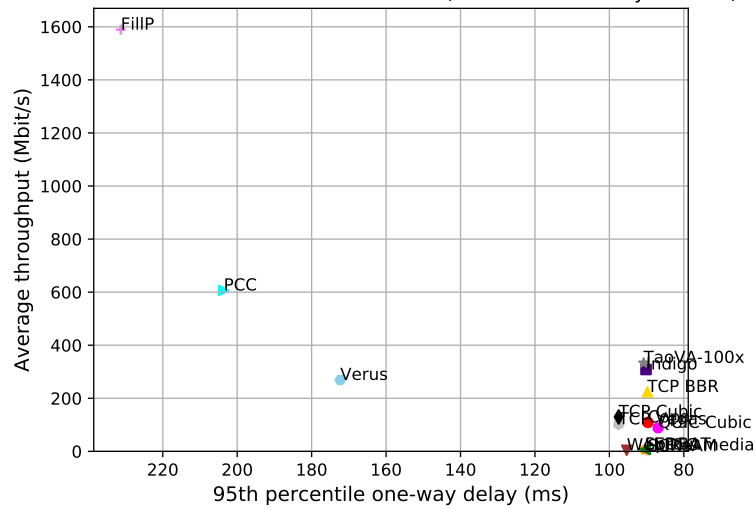
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

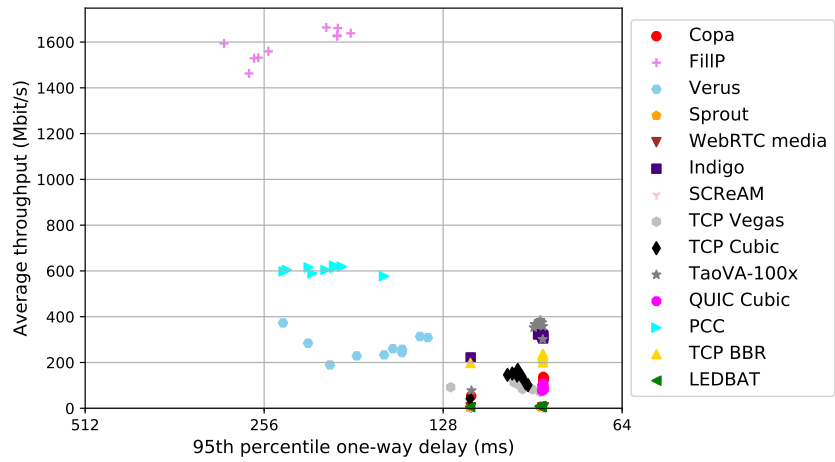
Git summary:

```
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-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaaeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/webRTC @ a488197ddd041ace68a42849b2540ad834825f42
```

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



test from GCE Sydney Ethernet to GCE Iowa 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	115.63	111.49	104.64	89.79	89.79	87.09	0.66	0.98	2.06
TCP Cubic	10	61.28	77.38	48.49	97.81	96.91	95.67	0.79	1.13	3.14
LEDBAT	10	3.84	3.67	1.76	90.43	90.40	87.41	1.01	1.81	3.62
PCC	10	548.36	63.84	48.21	205.78	193.96	197.32	2.83	2.47	3.78
QUIC Cubic	10	50.25	42.72	29.94	86.92	86.78	86.83	0.81	1.33	2.74
SCReAM	10	0.21	0.22	0.22	89.66	89.67	89.62	0.60	0.86	1.54
WebRTC media	10	2.12	1.32	0.48	89.43	92.22	92.61	0.75	1.01	2.77
Sprout	10	3.38	3.43	2.69	90.56	90.42	90.31	0.95	1.22	2.47
TaoVA-100x	10	176.40	174.52	162.83	90.48	88.29	92.96	0.61	1.00	2.52
TCP Vegas	9	39.93	63.68	59.74	94.69	97.59	96.61	1.09	0.72	1.41
Verus	10	172.60	101.71	90.21	164.52	170.64	160.43	1.27	1.97	3.26
Copa	10	65.98	48.43	43.66	89.59	90.71	89.85	0.43	5.93	3.11
FillP	10	861.43	789.83	623.28	193.53	236.94	255.70	5.60	8.43	12.97
Indigo	10	156.73	161.18	132.83	89.91	90.37	91.46	0.57	0.90	1.95

Run 1: Statistics of TCP BBR

Start at: 2017-12-20 13:14:24

End at: 2017-12-20 13:14:54

Below is generated by plot.py at 2017-12-20 18:16:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 232.88 Mbit/s

95th percentile per-packet one-way delay: 86.997 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 123.29 Mbit/s

95th percentile per-packet one-way delay: 87.052 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 119.31 Mbit/s

95th percentile per-packet one-way delay: 86.910 ms

Loss rate: 0.98%

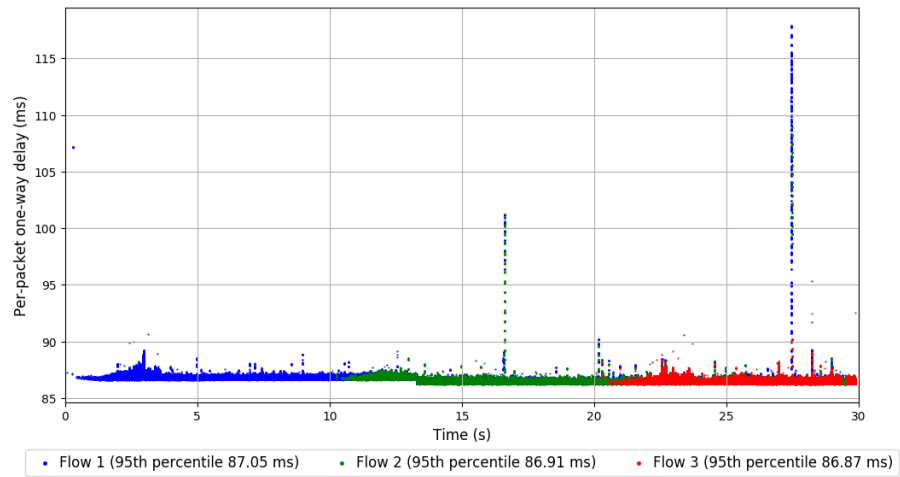
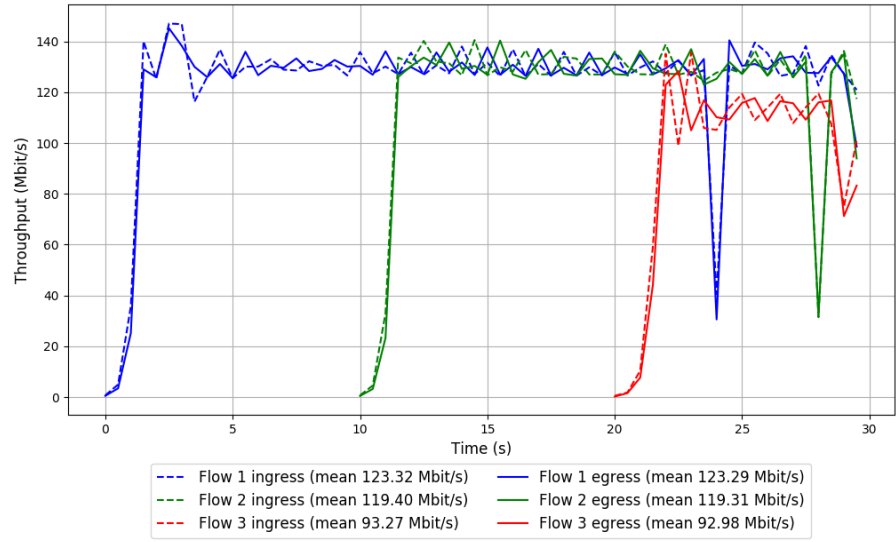
-- Flow 3:

Average throughput: 92.98 Mbit/s

95th percentile per-packet one-way delay: 86.868 ms

Loss rate: 1.99%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-12-20 13:29:41

End at: 2017-12-20 13:30:11

Below is generated by plot.py at 2017-12-20 18:16:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 200.90 Mbit/s

95th percentile per-packet one-way delay: 86.933 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 103.94 Mbit/s

95th percentile per-packet one-way delay: 86.949 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 99.78 Mbit/s

95th percentile per-packet one-way delay: 86.905 ms

Loss rate: 0.92%

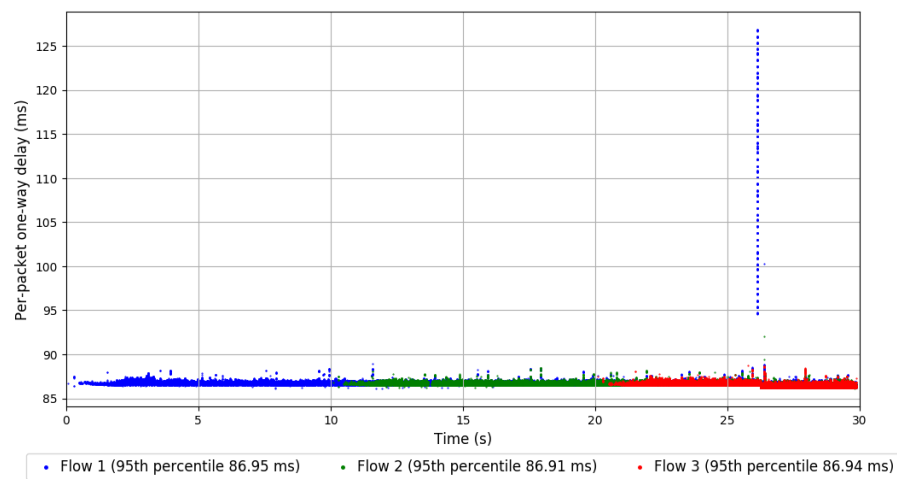
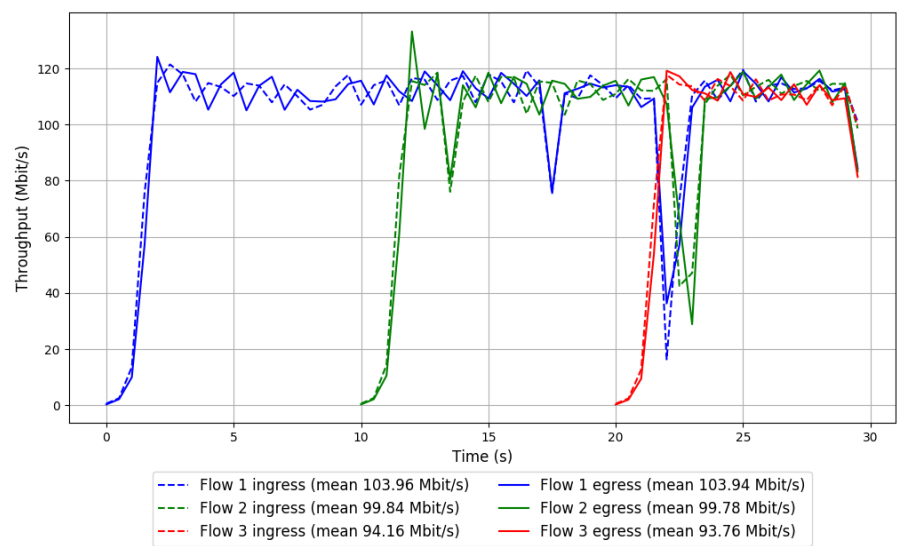
-- Flow 3:

Average throughput: 93.76 Mbit/s

95th percentile per-packet one-way delay: 86.937 ms

Loss rate: 2.13%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-12-20 13:44:49

End at: 2017-12-20 13:45:19

Below is generated by plot.py at 2017-12-20 18:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 233.33 Mbit/s

95th percentile per-packet one-way delay: 86.918 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 121.94 Mbit/s

95th percentile per-packet one-way delay: 86.872 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 121.27 Mbit/s

95th percentile per-packet one-way delay: 86.980 ms

Loss rate: 0.99%

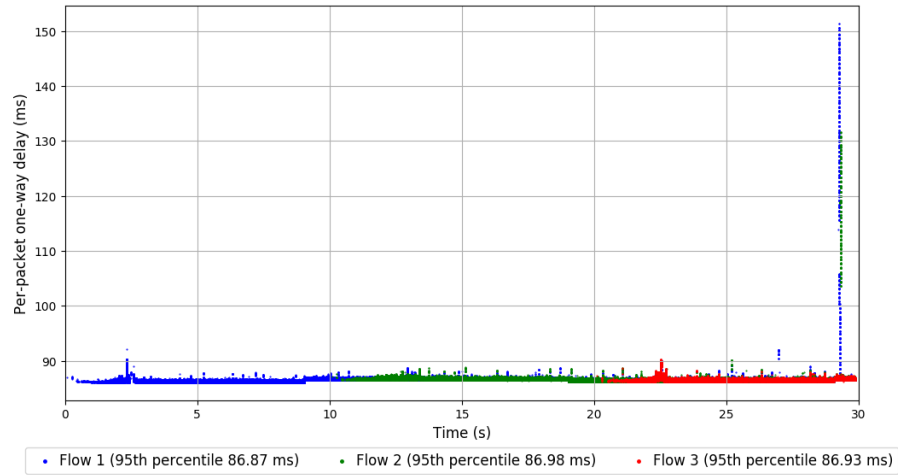
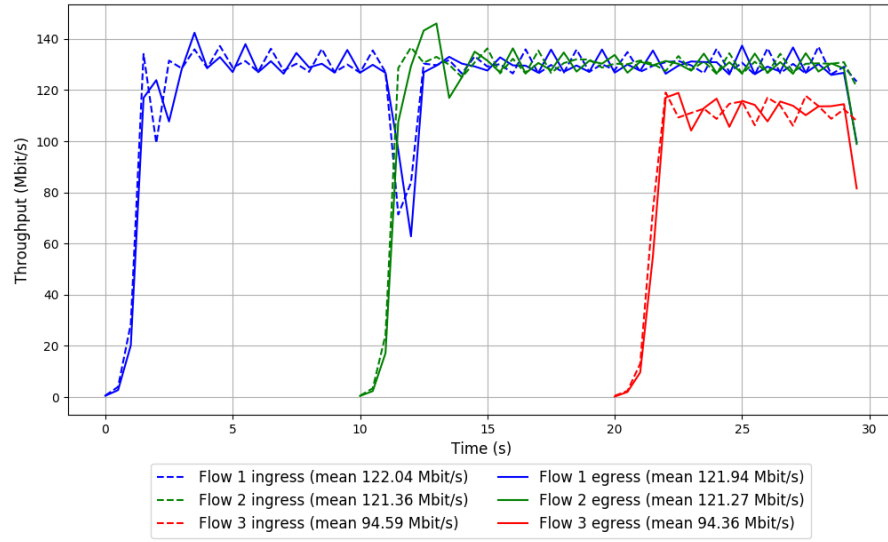
-- Flow 3:

Average throughput: 94.36 Mbit/s

95th percentile per-packet one-way delay: 86.927 ms

Loss rate: 2.19%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-12-20 13:59:51

End at: 2017-12-20 14:00:21

Below is generated by plot.py at 2017-12-20 18:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 220.84 Mbit/s

95th percentile per-packet one-way delay: 86.938 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 122.41 Mbit/s

95th percentile per-packet one-way delay: 86.981 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 102.32 Mbit/s

95th percentile per-packet one-way delay: 86.893 ms

Loss rate: 1.01%

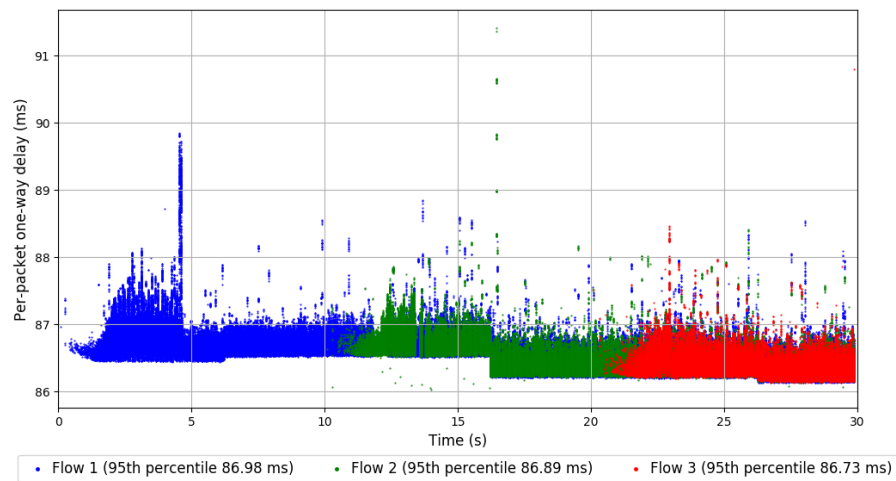
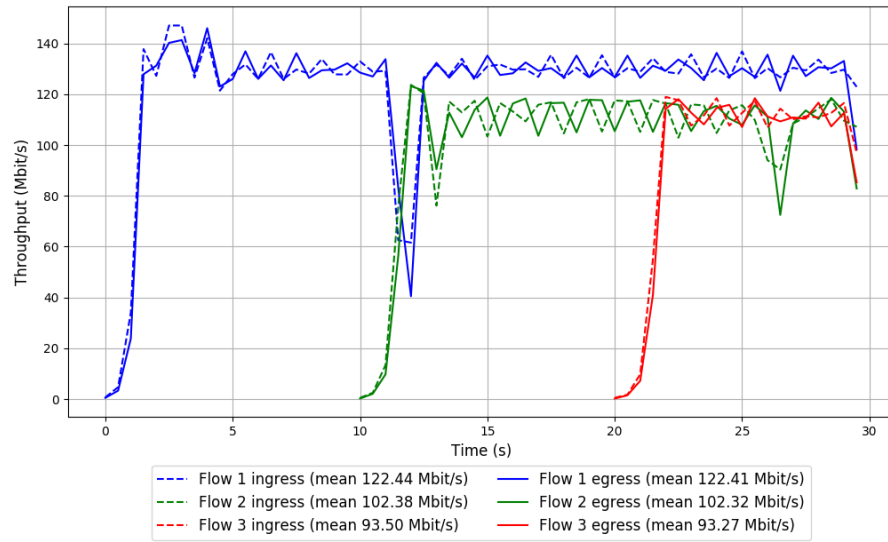
-- Flow 3:

Average throughput: 93.27 Mbit/s

95th percentile per-packet one-way delay: 86.730 ms

Loss rate: 1.95%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-12-20 14:15:06

End at: 2017-12-20 14:15:36

Below is generated by plot.py at 2017-12-20 18:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 227.57 Mbit/s

95th percentile per-packet one-way delay: 86.981 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 121.68 Mbit/s

95th percentile per-packet one-way delay: 86.986 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 103.57 Mbit/s

95th percentile per-packet one-way delay: 86.979 ms

Loss rate: 0.91%

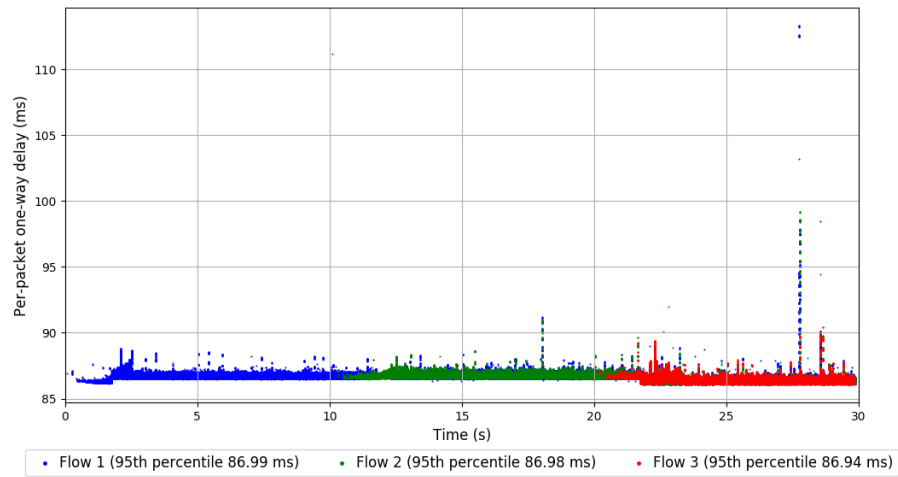
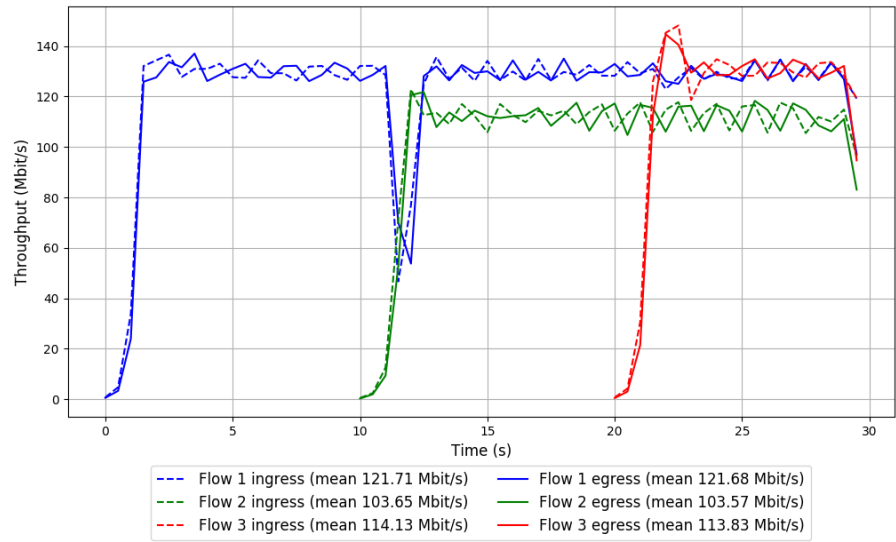
-- Flow 3:

Average throughput: 113.83 Mbit/s

95th percentile per-packet one-way delay: 86.939 ms

Loss rate: 2.12%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-12-20 14:30:22

End at: 2017-12-20 14:30:52

Below is generated by plot.py at 2017-12-20 18:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 235.50 Mbit/s

95th percentile per-packet one-way delay: 87.057 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 120.16 Mbit/s

95th percentile per-packet one-way delay: 87.051 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 117.80 Mbit/s

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

Loss rate: 0.95%

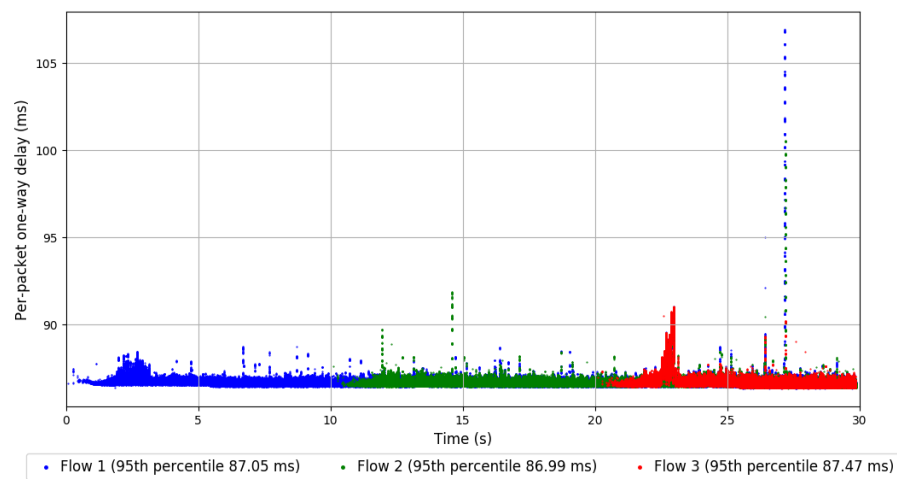
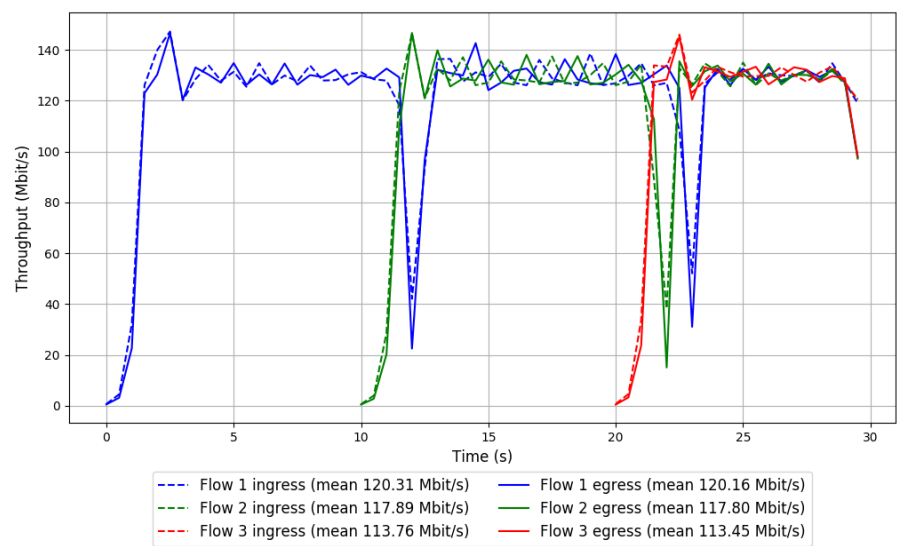
-- Flow 3:

Average throughput: 113.45 Mbit/s

95th percentile per-packet one-way delay: 87.469 ms

Loss rate: 2.07%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-12-20 14:45:40

End at: 2017-12-20 14:46:10

Below is generated by plot.py at 2017-12-20 18:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 216.30 Mbit/s

95th percentile per-packet one-way delay: 87.068 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 101.00 Mbit/s

95th percentile per-packet one-way delay: 86.981 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 118.23 Mbit/s

95th percentile per-packet one-way delay: 87.040 ms

Loss rate: 1.25%

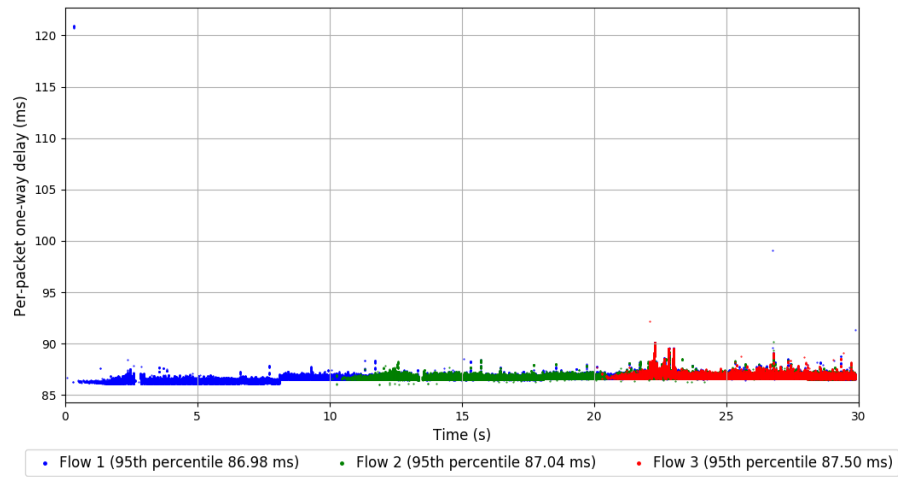
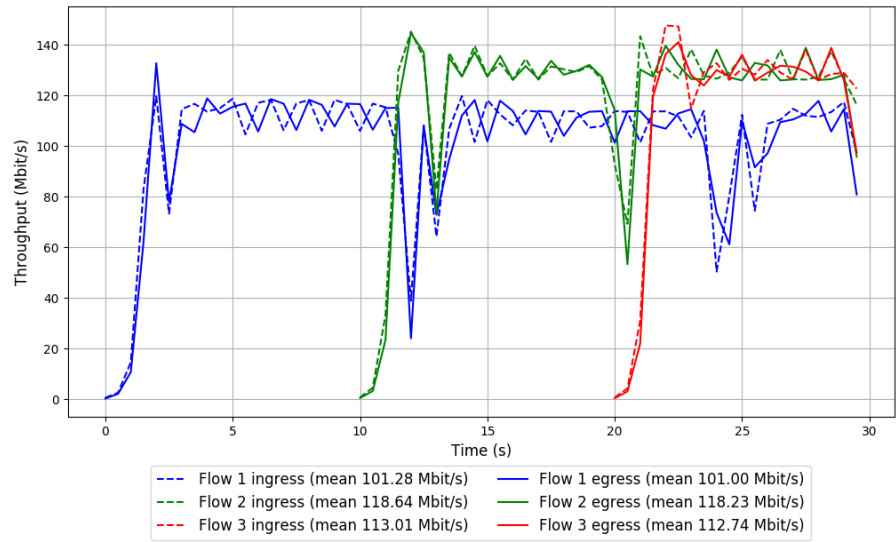
-- Flow 3:

Average throughput: 112.74 Mbit/s

95th percentile per-packet one-way delay: 87.496 ms

Loss rate: 1.99%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-12-20 15:00:51

End at: 2017-12-20 15:01:21

Below is generated by plot.py at 2017-12-20 18:16:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 236.19 Mbit/s

95th percentile per-packet one-way delay: 87.012 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 122.11 Mbit/s

95th percentile per-packet one-way delay: 86.991 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 119.60 Mbit/s

95th percentile per-packet one-way delay: 86.950 ms

Loss rate: 0.93%

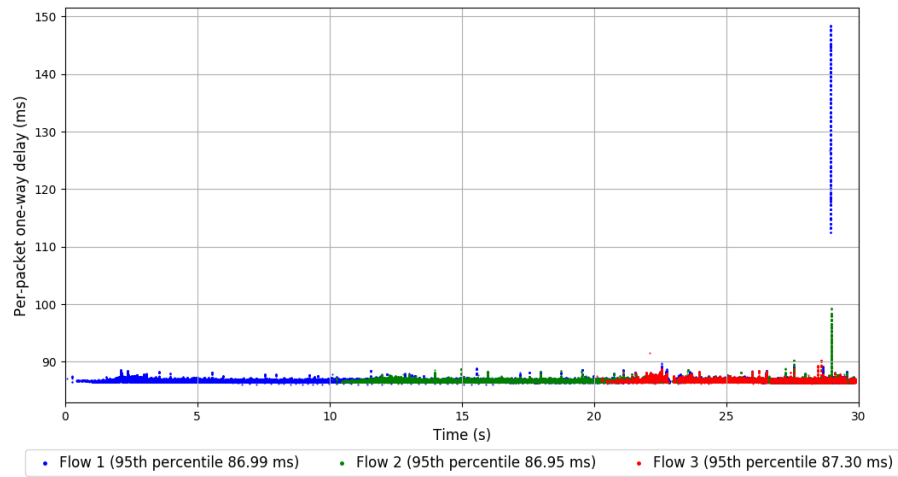
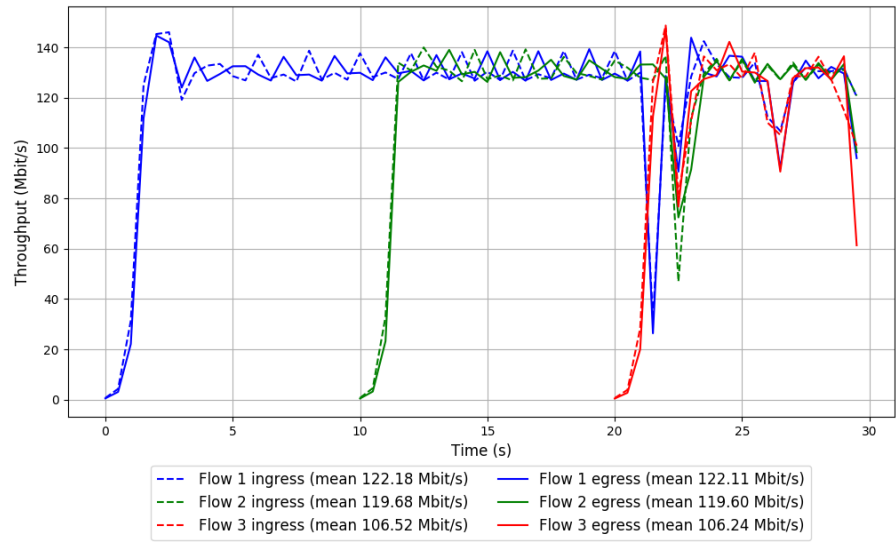
-- Flow 3:

Average throughput: 106.24 Mbit/s

95th percentile per-packet one-way delay: 87.296 ms

Loss rate: 2.02%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

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

End at: 2017-12-20 15:16:50

Below is generated by plot.py at 2017-12-20 18:20:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 237.13 Mbit/s

95th percentile per-packet one-way delay: 86.937 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 121.39 Mbit/s

95th percentile per-packet one-way delay: 86.931 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 118.88 Mbit/s

95th percentile per-packet one-way delay: 86.927 ms

Loss rate: 0.84%

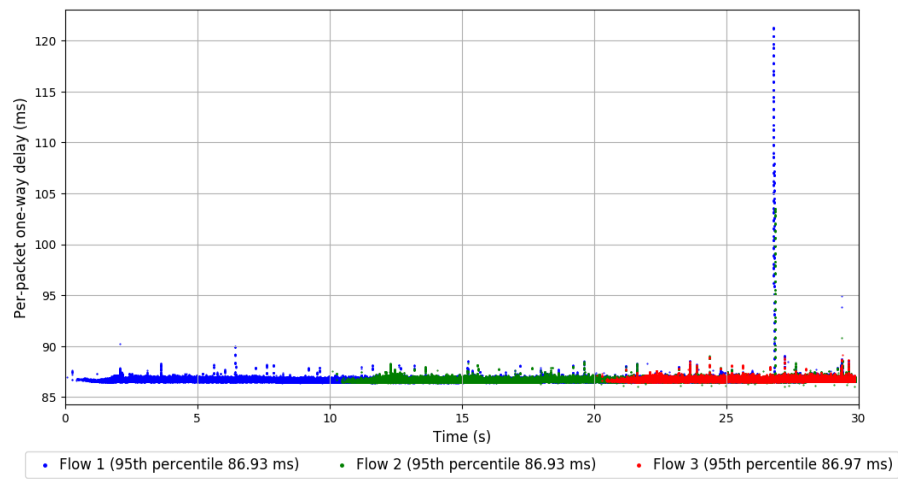
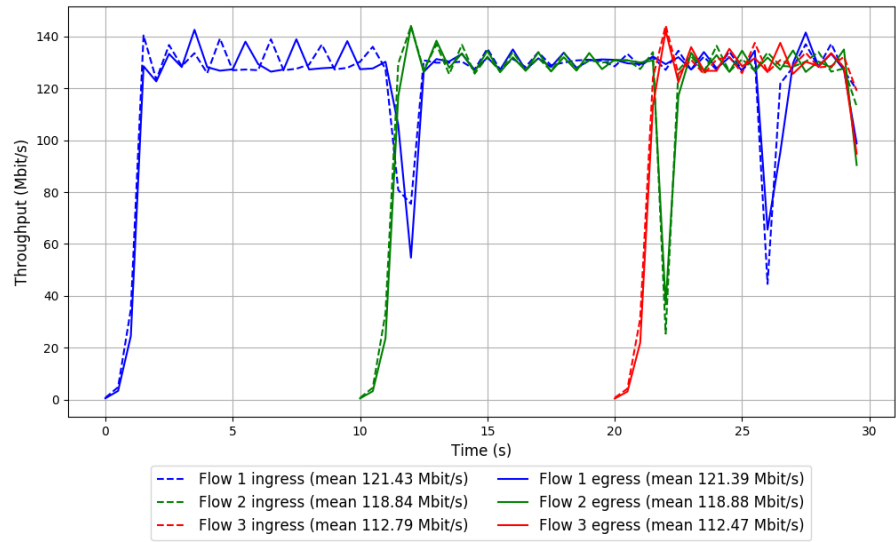
-- Flow 3:

Average throughput: 112.47 Mbit/s

95th percentile per-packet one-way delay: 86.968 ms

Loss rate: 2.13%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-12-20 15:31:08

End at: 2017-12-20 15:31:38

Below is generated by plot.py at 2017-12-20 18:20:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 198.01 Mbit/s

95th percentile per-packet one-way delay: 115.143 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 98.38 Mbit/s

95th percentile per-packet one-way delay: 115.084 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 94.13 Mbit/s

95th percentile per-packet one-way delay: 115.302 ms

Loss rate: 1.06%

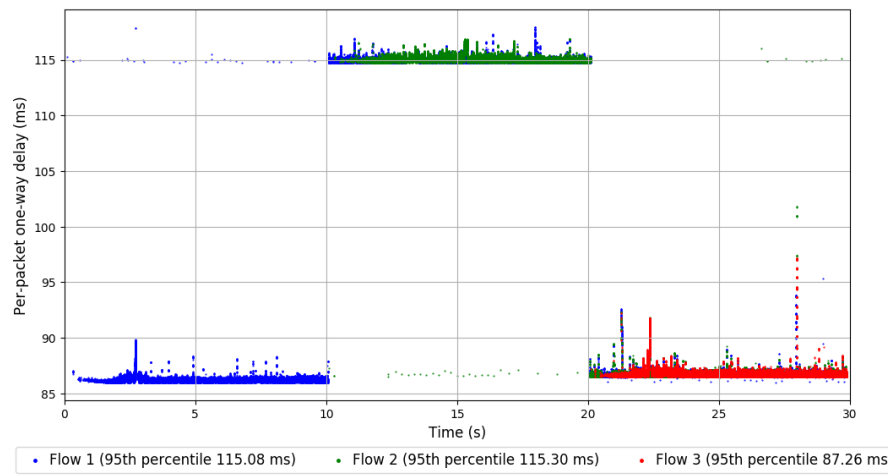
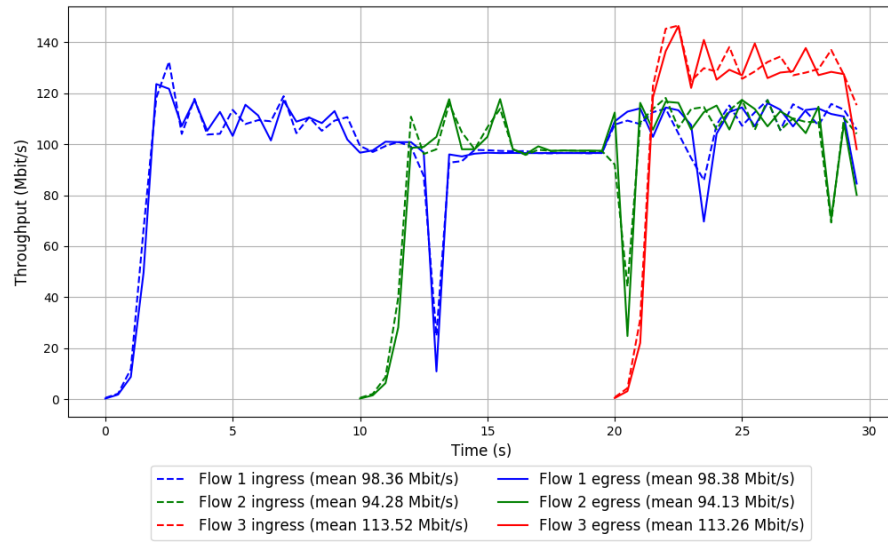
-- Flow 3:

Average throughput: 113.26 Mbit/s

95th percentile per-packet one-way delay: 87.259 ms

Loss rate: 1.98%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2017-12-20 13:18:59

End at: 2017-12-20 13:19:30

Below is generated by plot.py at 2017-12-20 18:20:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.35 Mbit/s

95th percentile per-packet one-way delay: 92.137 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 55.18 Mbit/s

95th percentile per-packet one-way delay: 92.841 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 68.80 Mbit/s

95th percentile per-packet one-way delay: 91.546 ms

Loss rate: 0.97%

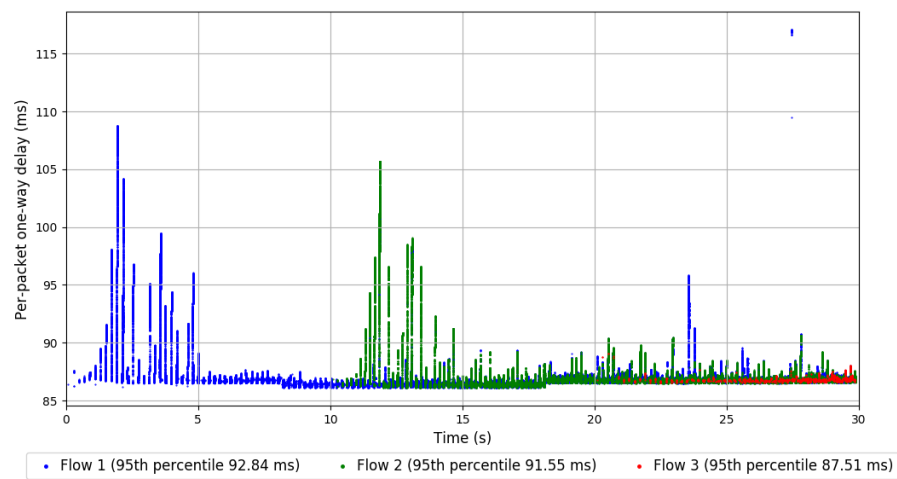
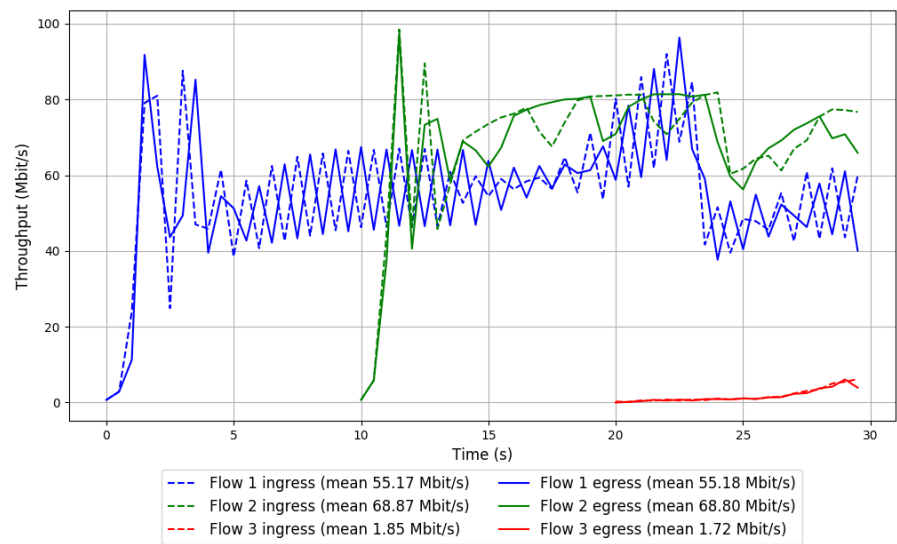
-- Flow 3:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 87.513 ms

Loss rate: 8.83%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-12-20 13:34:12

End at: 2017-12-20 13:34:42

Below is generated by plot.py at 2017-12-20 18:20:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.37 Mbit/s

95th percentile per-packet one-way delay: 92.997 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 73.67 Mbit/s

95th percentile per-packet one-way delay: 93.185 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 52.80 Mbit/s

95th percentile per-packet one-way delay: 92.601 ms

Loss rate: 1.18%

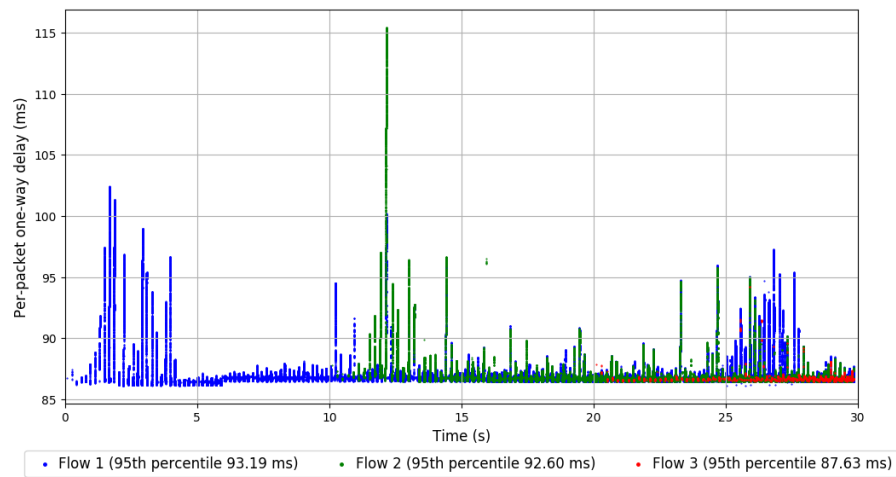
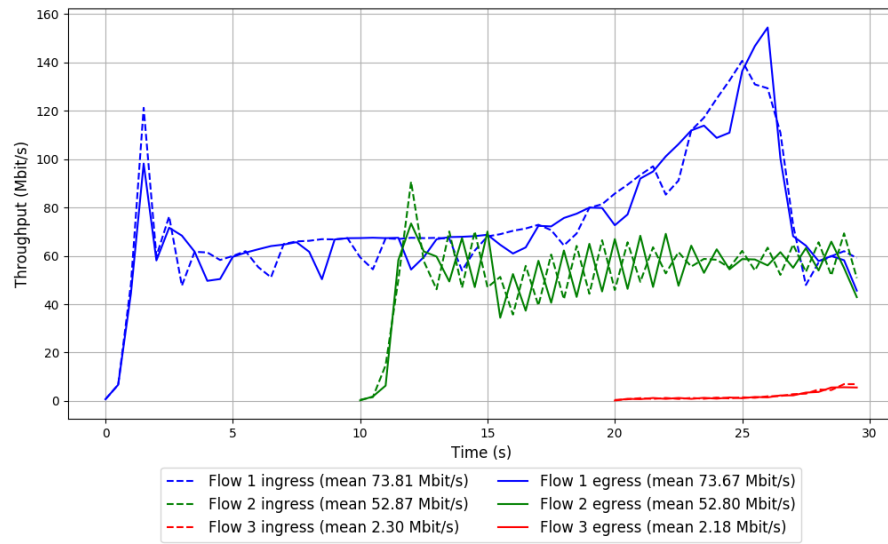
-- Flow 3:

Average throughput: 2.18 Mbit/s

95th percentile per-packet one-way delay: 87.634 ms

Loss rate: 6.74%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-12-20 13:49:15

End at: 2017-12-20 13:49:45

Below is generated by plot.py at 2017-12-20 18:20:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.83 Mbit/s

95th percentile per-packet one-way delay: 96.103 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 72.17 Mbit/s

95th percentile per-packet one-way delay: 94.985 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 76.44 Mbit/s

95th percentile per-packet one-way delay: 97.377 ms

Loss rate: 1.43%

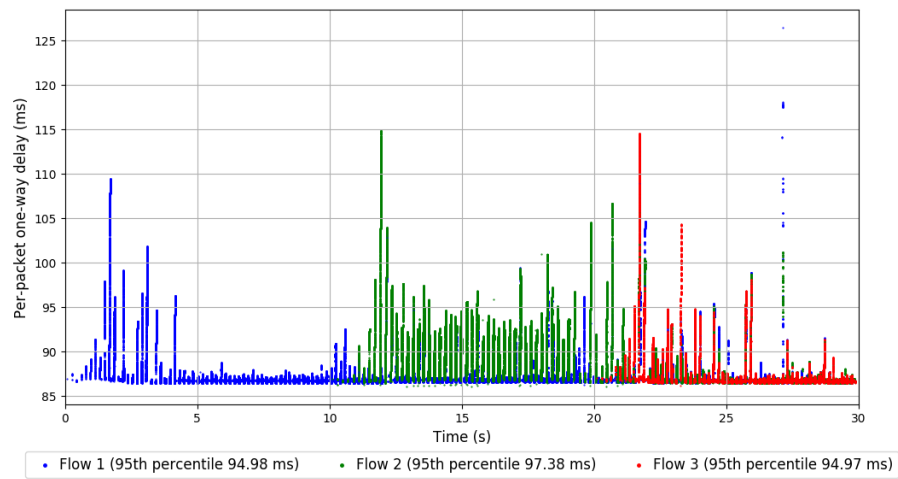
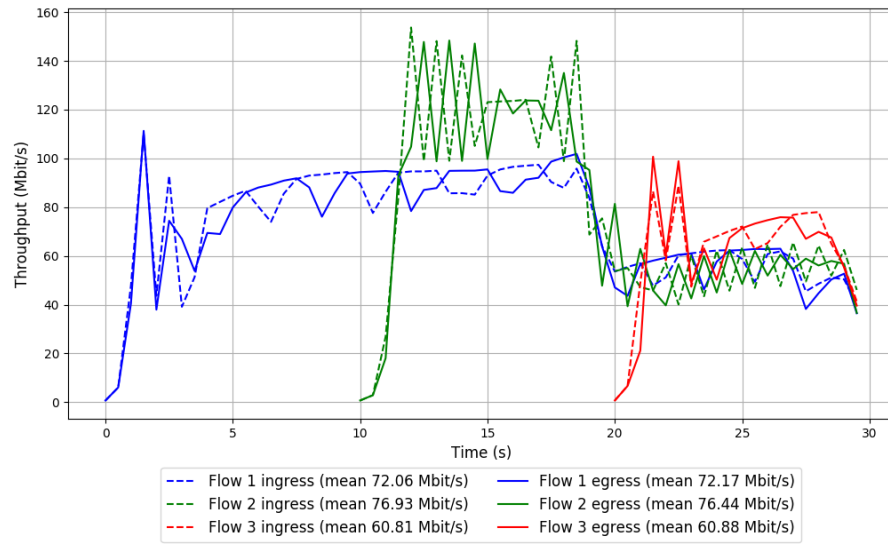
-- Flow 3:

Average throughput: 60.88 Mbit/s

95th percentile per-packet one-way delay: 94.975 ms

Loss rate: 1.64%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-12-20 14:04:32

End at: 2017-12-20 14:05:02

Below is generated by plot.py at 2017-12-20 18:20:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 150.12 Mbit/s

95th percentile per-packet one-way delay: 95.923 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 45.39 Mbit/s

95th percentile per-packet one-way delay: 95.145 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 129.66 Mbit/s

95th percentile per-packet one-way delay: 96.501 ms

Loss rate: 0.92%

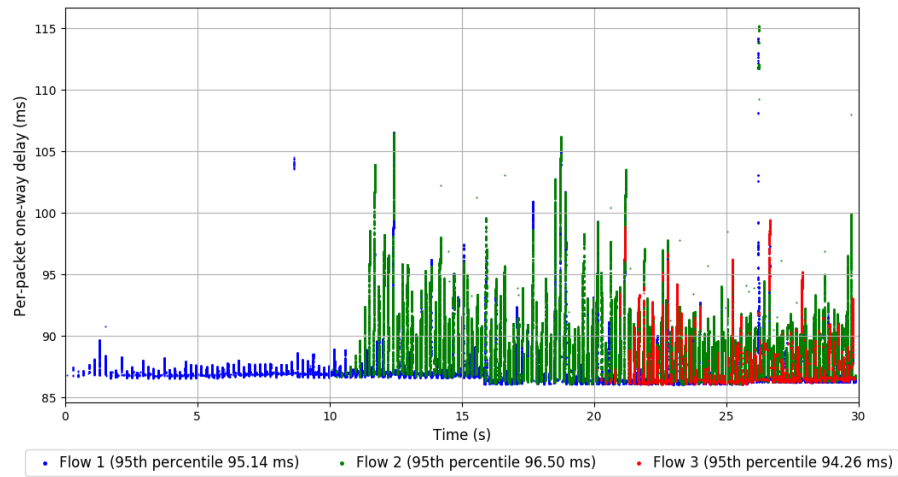
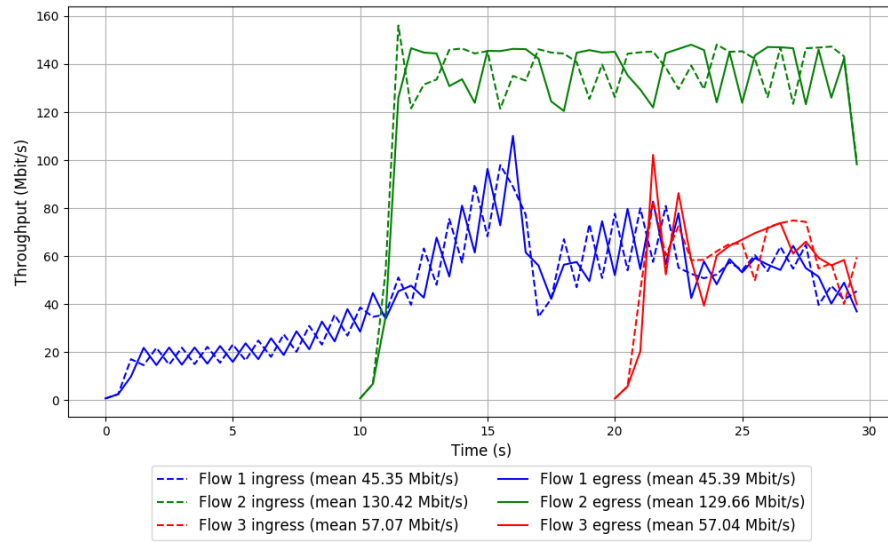
-- Flow 3:

Average throughput: 57.04 Mbit/s

95th percentile per-packet one-way delay: 94.258 ms

Loss rate: 1.80%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-12-20 14:19:38

End at: 2017-12-20 14:20:08

Below is generated by plot.py at 2017-12-20 18:20:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 143.04 Mbit/s

95th percentile per-packet one-way delay: 94.710 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 70.90 Mbit/s

95th percentile per-packet one-way delay: 94.890 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 81.96 Mbit/s

95th percentile per-packet one-way delay: 95.013 ms

Loss rate: 0.82%

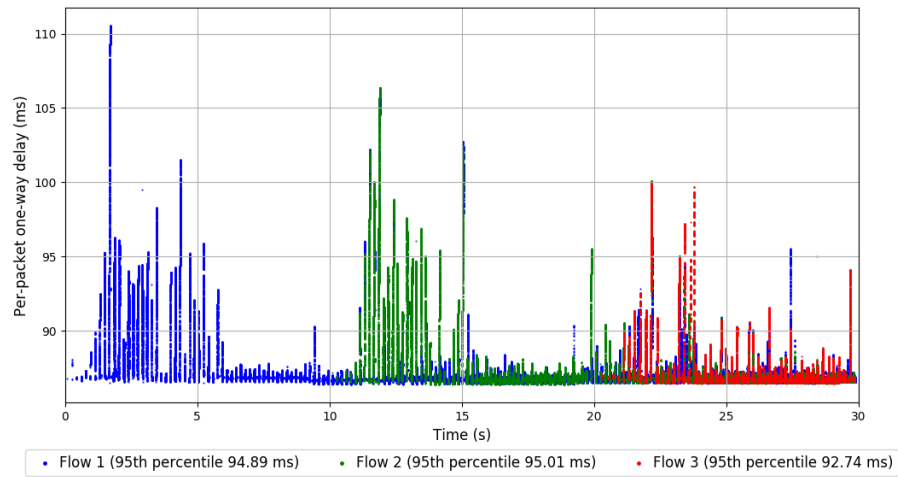
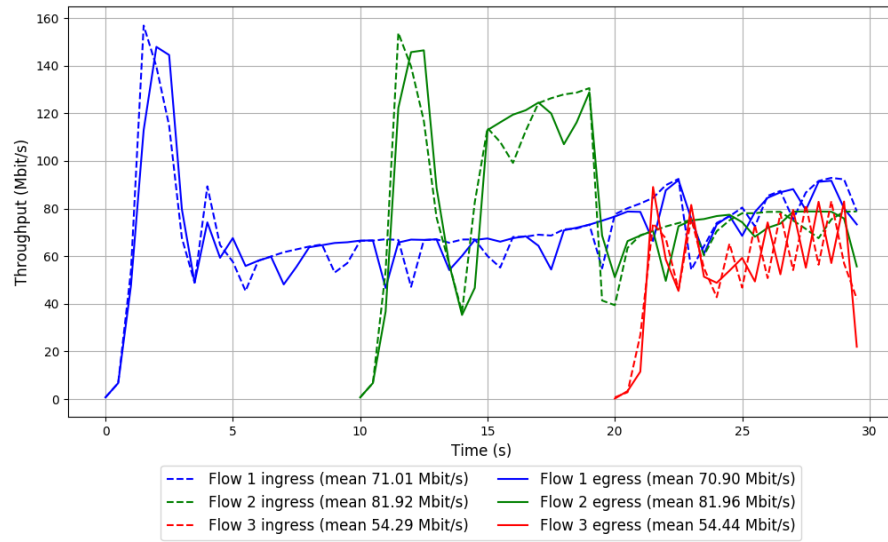
-- Flow 3:

Average throughput: 54.44 Mbit/s

95th percentile per-packet one-way delay: 92.742 ms

Loss rate: 1.91%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-12-20 14:34:57

End at: 2017-12-20 14:35:27

Below is generated by plot.py at 2017-12-20 18:20:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 151.78 Mbit/s

95th percentile per-packet one-way delay: 97.914 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 61.62 Mbit/s

95th percentile per-packet one-way delay: 98.620 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 93.64 Mbit/s

95th percentile per-packet one-way delay: 97.215 ms

Loss rate: 0.86%

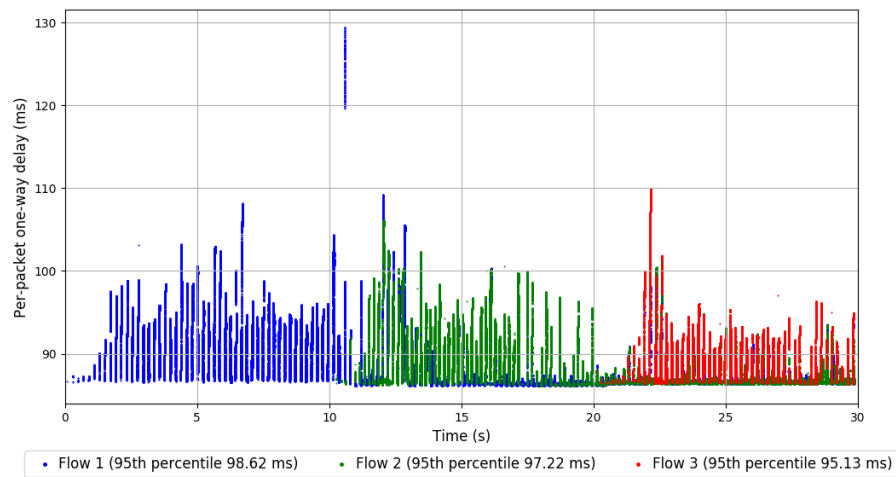
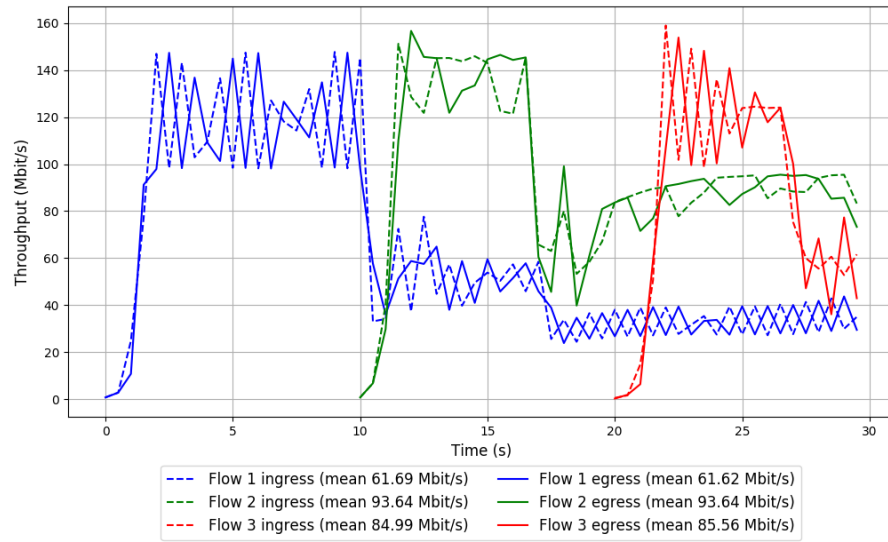
-- Flow 3:

Average throughput: 85.56 Mbit/s

95th percentile per-packet one-way delay: 95.126 ms

Loss rate: 1.11%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-12-20 14:50:15

End at: 2017-12-20 14:50:45

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.61 Mbit/s

95th percentile per-packet one-way delay: 94.356 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 65.36 Mbit/s

95th percentile per-packet one-way delay: 95.610 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 58.97 Mbit/s

95th percentile per-packet one-way delay: 90.891 ms

Loss rate: 1.44%

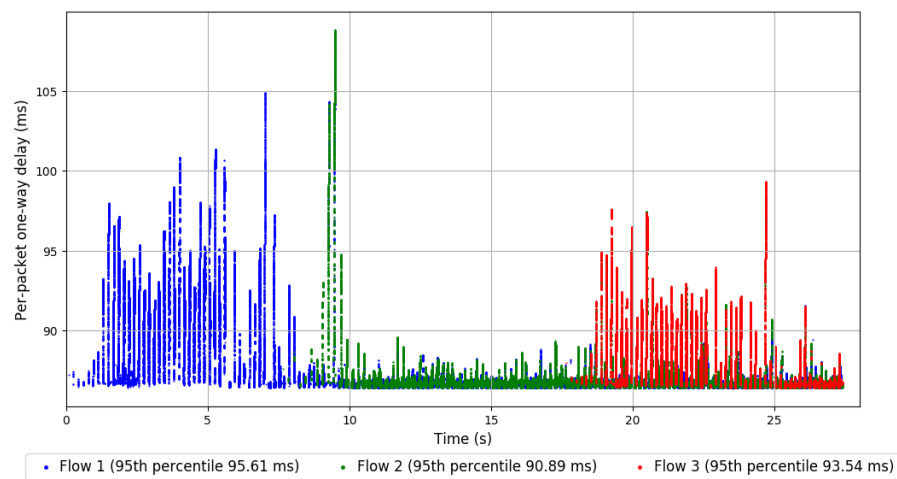
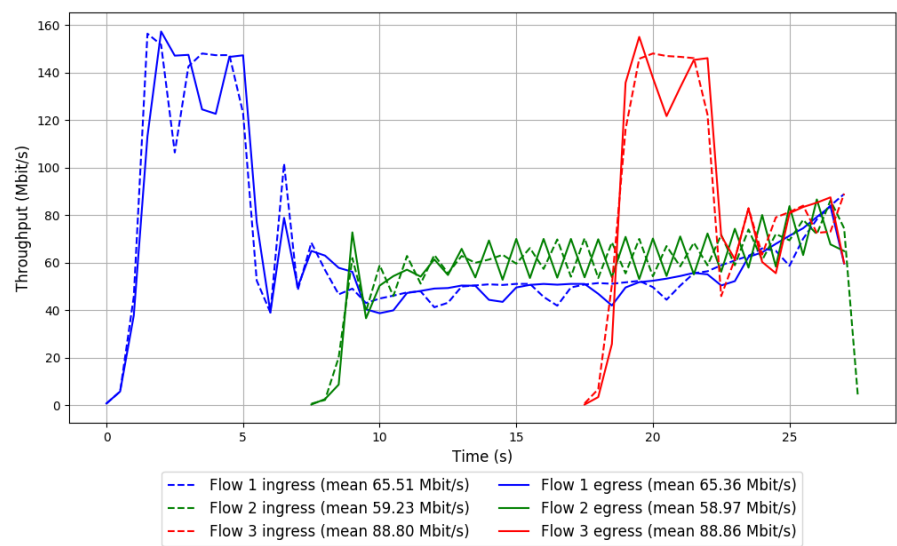
-- Flow 3:

Average throughput: 88.86 Mbit/s

95th percentile per-packet one-way delay: 93.540 ms

Loss rate: 1.69%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-12-20 15:05:31

End at: 2017-12-20 15:06:02

Below is generated by plot.py at 2017-12-20 18:21:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 168.04 Mbit/s

95th percentile per-packet one-way delay: 95.868 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 74.32 Mbit/s

95th percentile per-packet one-way delay: 96.828 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 106.19 Mbit/s

95th percentile per-packet one-way delay: 95.232 ms

Loss rate: 0.79%

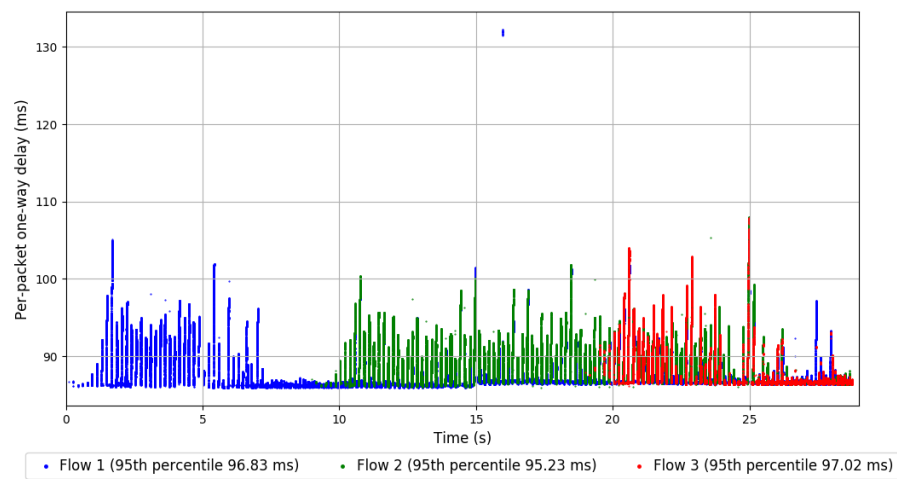
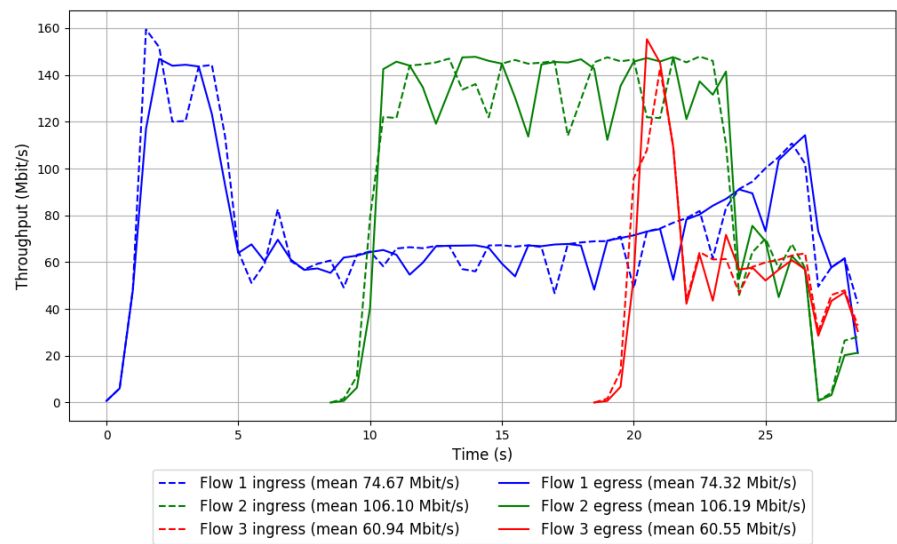
-- Flow 3:

Average throughput: 60.55 Mbit/s

95th percentile per-packet one-way delay: 97.015 ms

Loss rate: 2.37%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

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

End at: 2017-12-20 15:21:29

Below is generated by plot.py at 2017-12-20 18:21:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 145.91 Mbit/s

95th percentile per-packet one-way delay: 99.778 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 69.94 Mbit/s

95th percentile per-packet one-way delay: 100.417 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 83.28 Mbit/s

95th percentile per-packet one-way delay: 98.829 ms

Loss rate: 0.77%

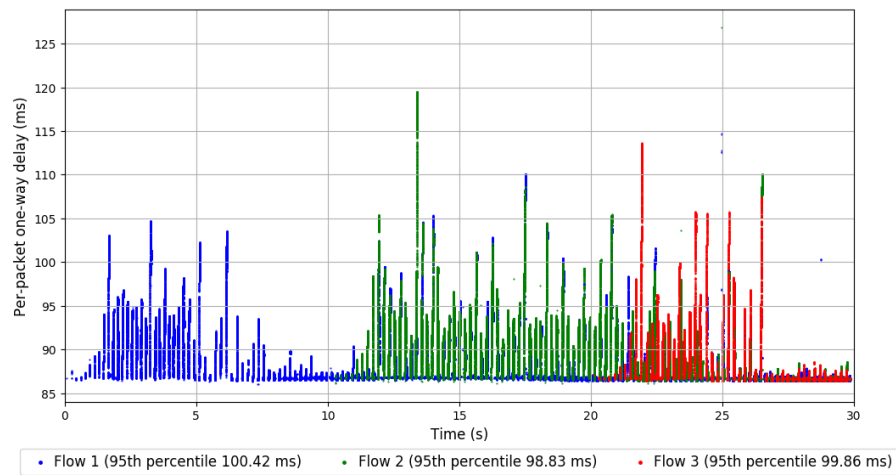
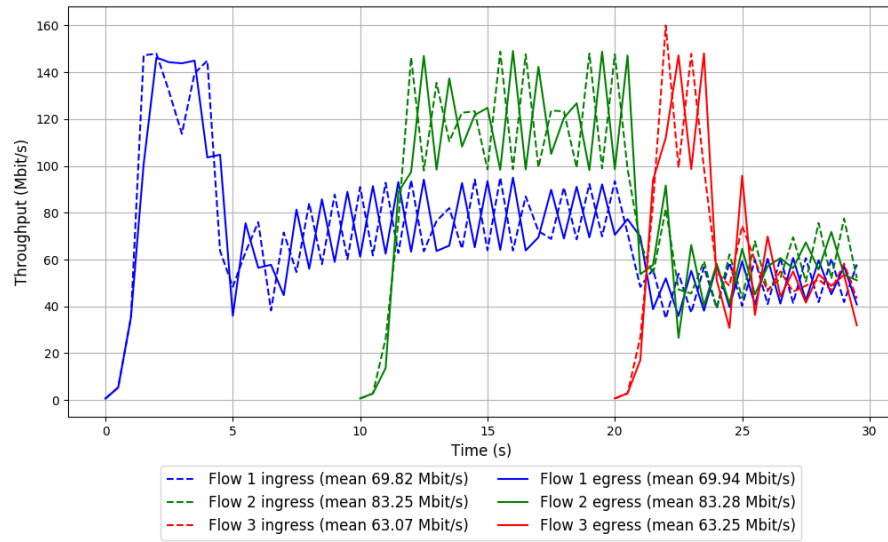
-- Flow 3:

Average throughput: 63.25 Mbit/s

95th percentile per-packet one-way delay: 99.856 ms

Loss rate: 1.72%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-12-20 15:35:37

End at: 2017-12-20 15:36:07

Below is generated by plot.py at 2017-12-20 18:21:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 42.33 Mbit/s

95th percentile per-packet one-way delay: 115.355 ms

Loss rate: 2.02%

-- Flow 1:

Average throughput: 24.27 Mbit/s

95th percentile per-packet one-way delay: 115.584 ms

Loss rate: 1.71%

-- Flow 2:

Average throughput: 22.10 Mbit/s

95th percentile per-packet one-way delay: 113.849 ms

Loss rate: 2.15%

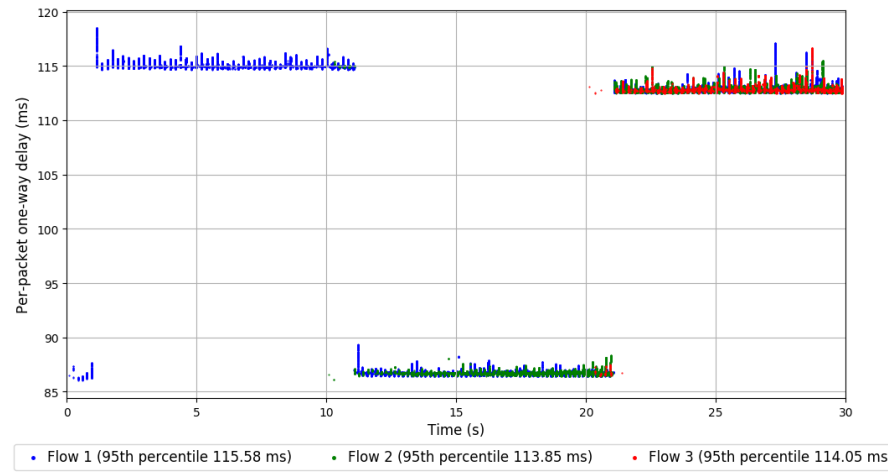
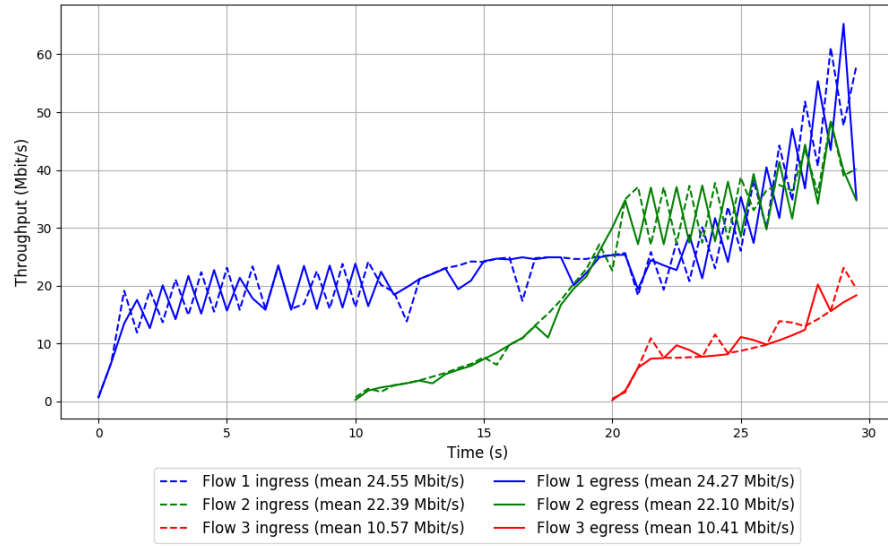
-- Flow 3:

Average throughput: 10.41 Mbit/s

95th percentile per-packet one-way delay: 114.054 ms

Loss rate: 3.59%

Run 10: Report of TCP Cubic — Data Link

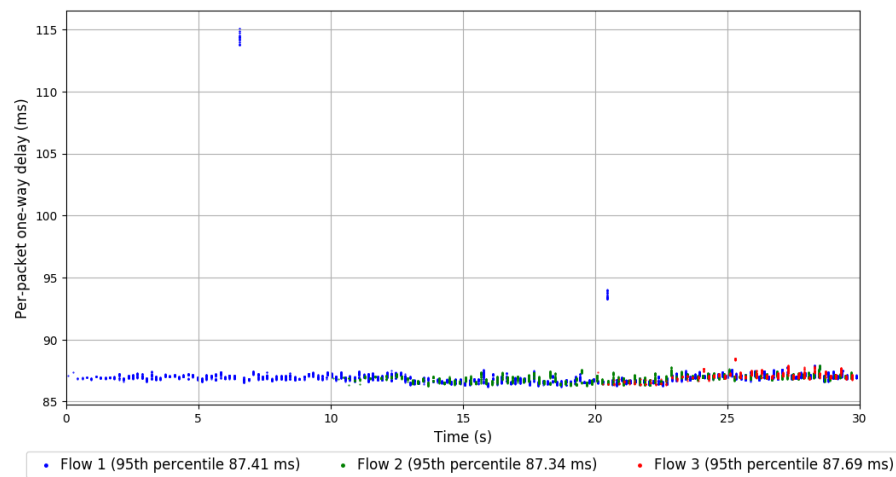
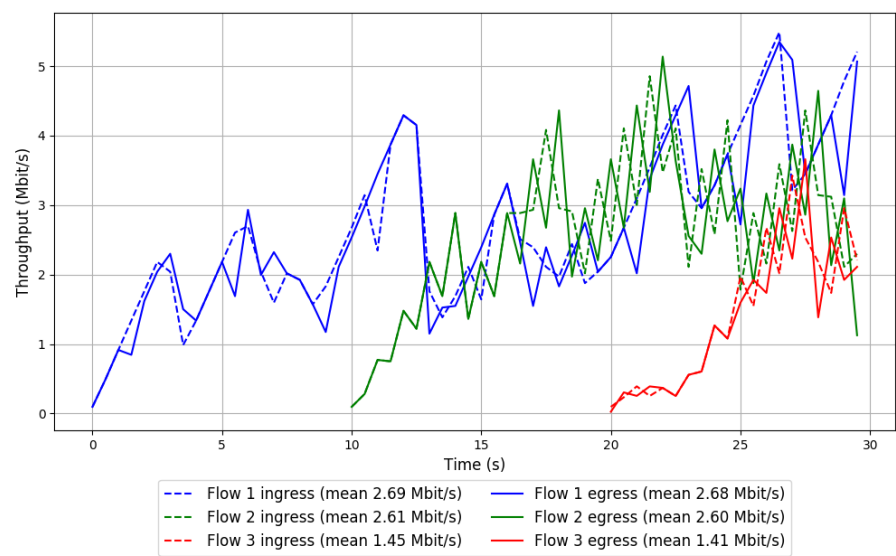


```
Run 1: Statistics of LEDBAT

Start at: 2017-12-20 13:12:25
End at: 2017-12-20 13:12:55

# Below is generated by plot.py at 2017-12-20 18:21:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 87.419 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 2.68 Mbit/s
95th percentile per-packet one-way delay: 87.406 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 2.60 Mbit/s
95th percentile per-packet one-way delay: 87.338 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 87.693 ms
Loss rate: 4.22%
```


Run 1: Report of LEDBAT — Data Link

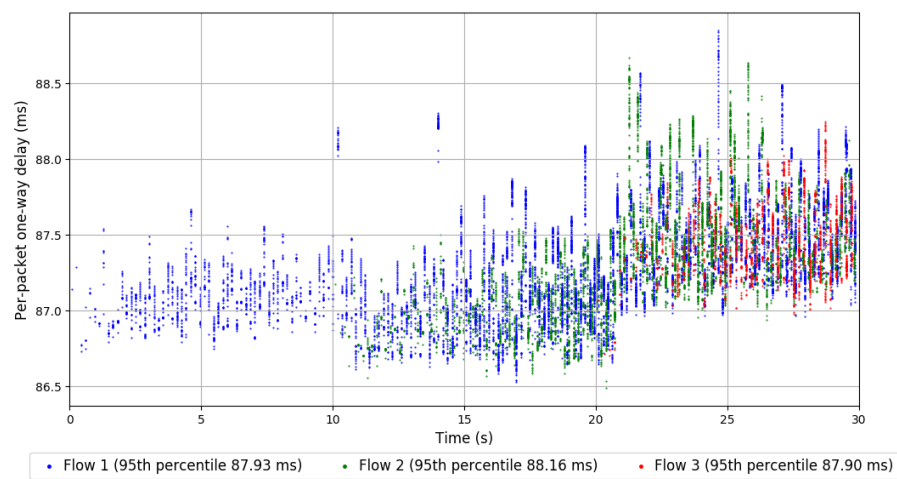
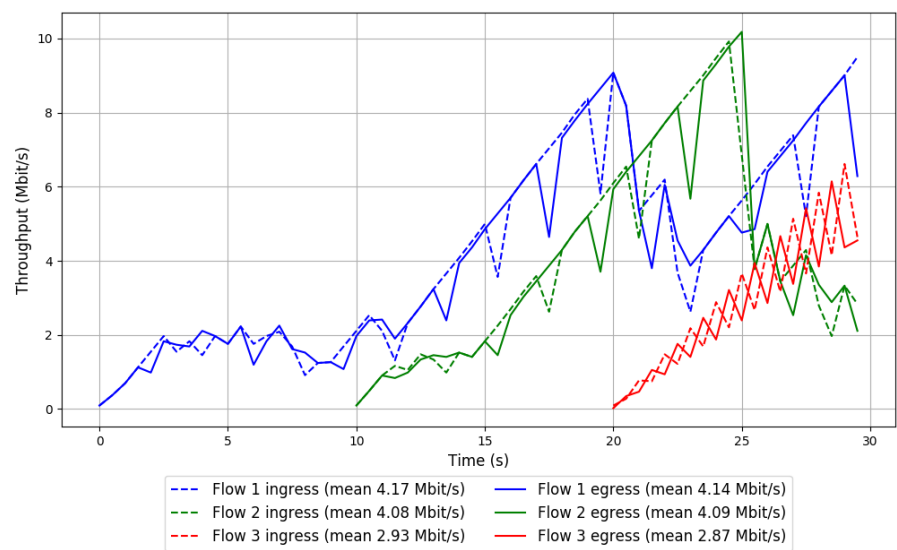


```
Run 2: Statistics of LEDBAT

Start at: 2017-12-20 13:27:37
End at: 2017-12-20 13:28:07

# Below is generated by plot.py at 2017-12-20 18:21:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.78 Mbit/s
95th percentile per-packet one-way delay: 88.032 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 87.933 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 88.158 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 2.87 Mbit/s
95th percentile per-packet one-way delay: 87.898 ms
Loss rate: 4.08%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-12-20 13:42:44

End at: 2017-12-20 13:43:14

Below is generated by plot.py at 2017-12-20 18:21:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.31 Mbit/s

95th percentile per-packet one-way delay: 87.553 ms

Loss rate: 1.41%

-- Flow 1:

Average throughput: 2.90 Mbit/s

95th percentile per-packet one-way delay: 87.726 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 2.79 Mbit/s

95th percentile per-packet one-way delay: 87.455 ms

Loss rate: 1.49%

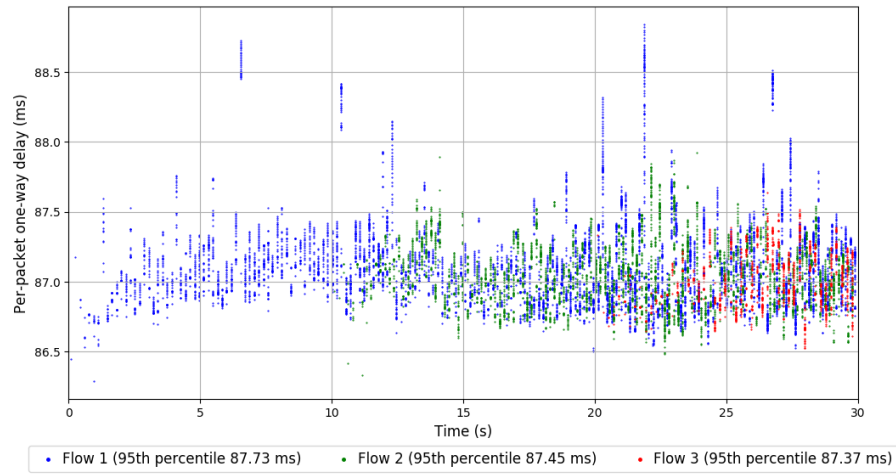
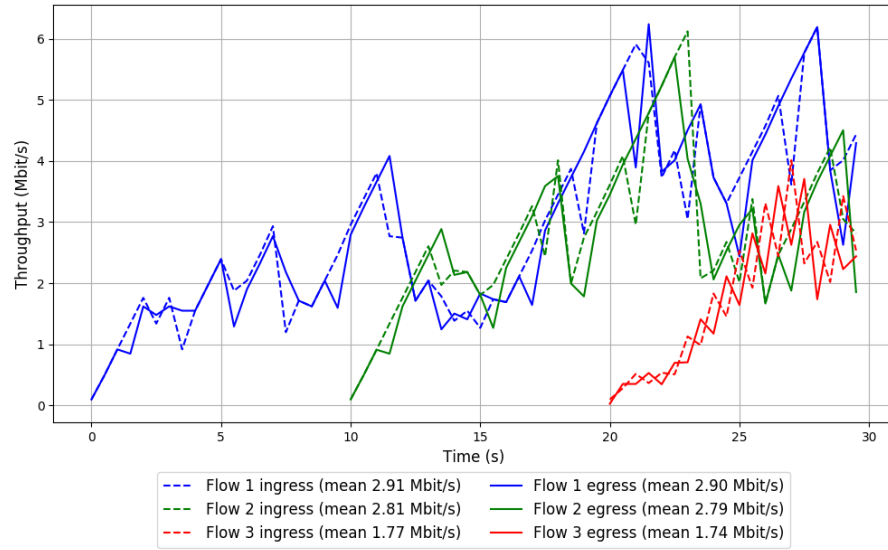
-- Flow 3:

Average throughput: 1.74 Mbit/s

95th percentile per-packet one-way delay: 87.366 ms

Loss rate: 3.70%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-12-20 13:57:47

End at: 2017-12-20 13:58:17

Below is generated by plot.py at 2017-12-20 18:21:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.52 Mbit/s

95th percentile per-packet one-way delay: 88.125 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 4.76 Mbit/s

95th percentile per-packet one-way delay: 88.061 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 4.75 Mbit/s

95th percentile per-packet one-way delay: 88.333 ms

Loss rate: 1.48%

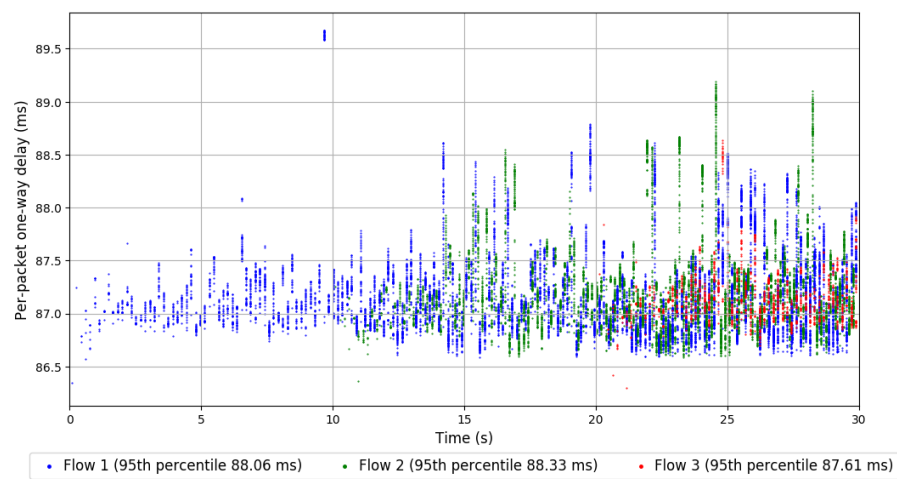
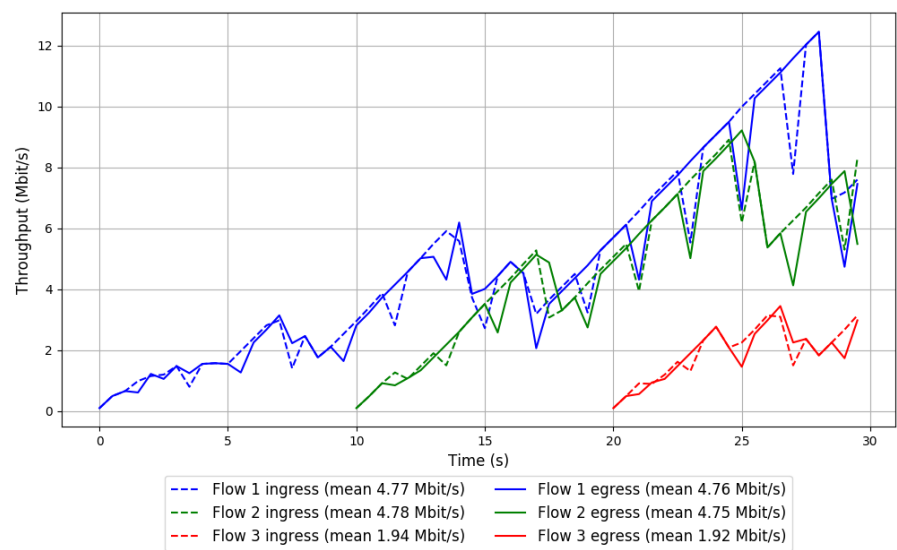
-- Flow 3:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 87.609 ms

Loss rate: 2.85%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-12-20 14:13:02

End at: 2017-12-20 14:13:32

Below is generated by plot.py at 2017-12-20 18:21:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.81 Mbit/s

95th percentile per-packet one-way delay: 87.575 ms

Loss rate: 2.16%

-- Flow 1:

Average throughput: 3.42 Mbit/s

95th percentile per-packet one-way delay: 87.617 ms

Loss rate: 1.35%

-- Flow 2:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 87.511 ms

Loss rate: 3.17%

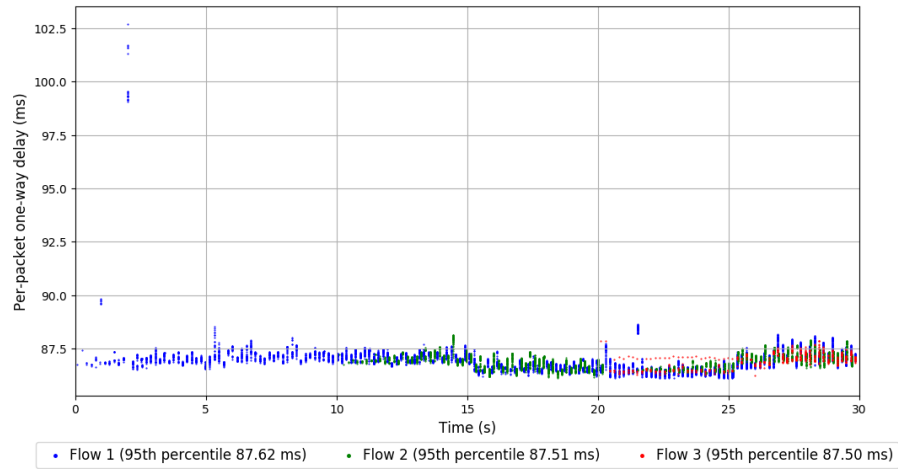
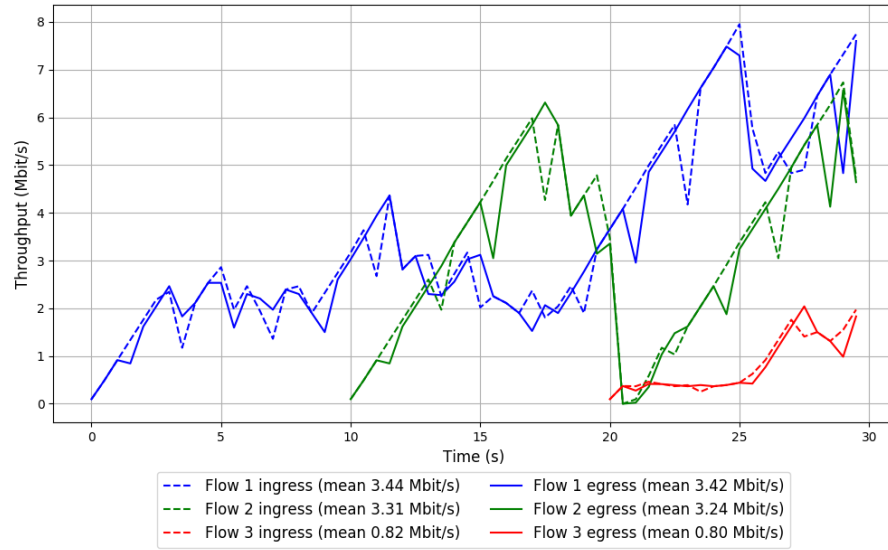
-- Flow 3:

Average throughput: 0.80 Mbit/s

95th percentile per-packet one-way delay: 87.497 ms

Loss rate: 4.32%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-12-20 14:28:17

End at: 2017-12-20 14:28:47

Below is generated by plot.py at 2017-12-20 18:21:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.08 Mbit/s

95th percentile per-packet one-way delay: 87.594 ms

Loss rate: 1.71%

-- Flow 1:

Average throughput: 5.40 Mbit/s

95th percentile per-packet one-way delay: 87.561 ms

Loss rate: 1.33%

-- Flow 2:

Average throughput: 4.97 Mbit/s

95th percentile per-packet one-way delay: 87.652 ms

Loss rate: 2.18%

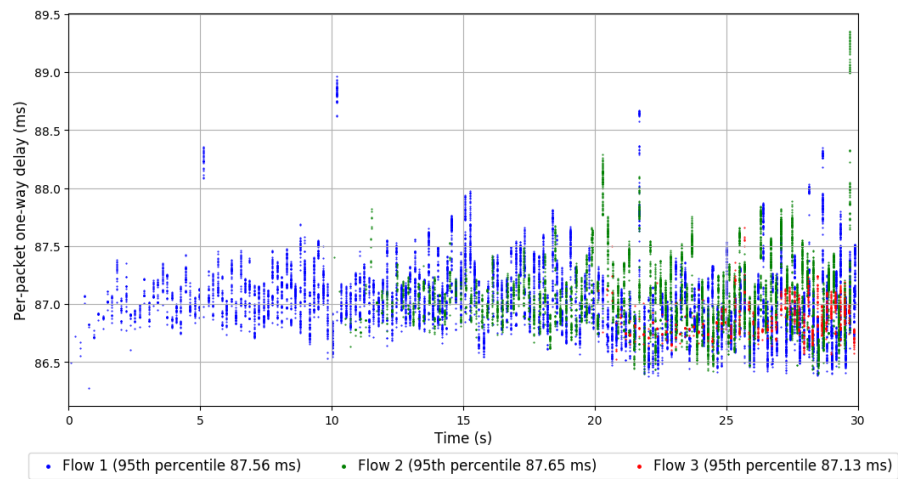
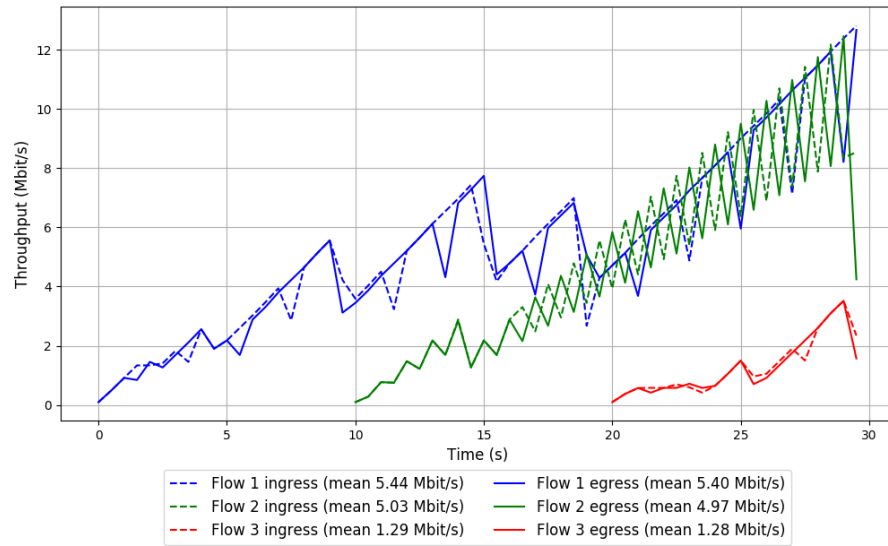
-- Flow 3:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 87.130 ms

Loss rate: 3.03%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2017-12-20 14:43:32

End at: 2017-12-20 14:44:02

Below is generated by plot.py at 2017-12-20 18:21:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.56 Mbit/s

95th percentile per-packet one-way delay: 87.506 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 4.32 Mbit/s

95th percentile per-packet one-way delay: 87.500 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 2.92 Mbit/s

95th percentile per-packet one-way delay: 87.573 ms

Loss rate: 1.82%

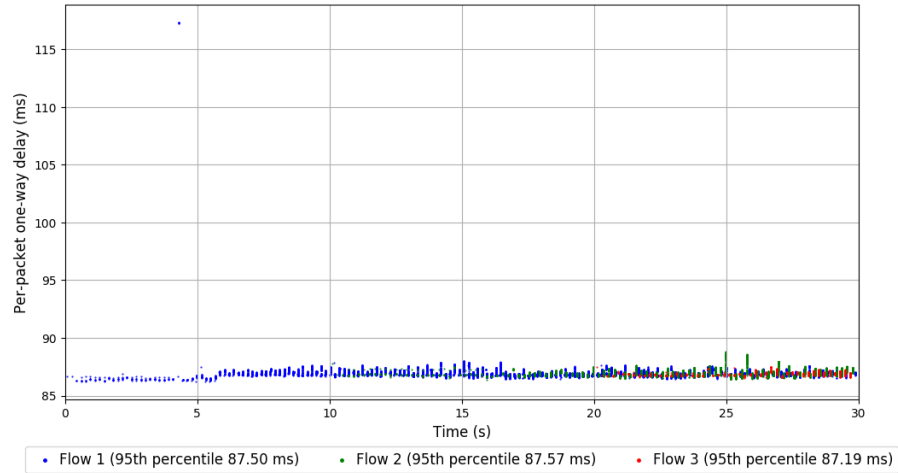
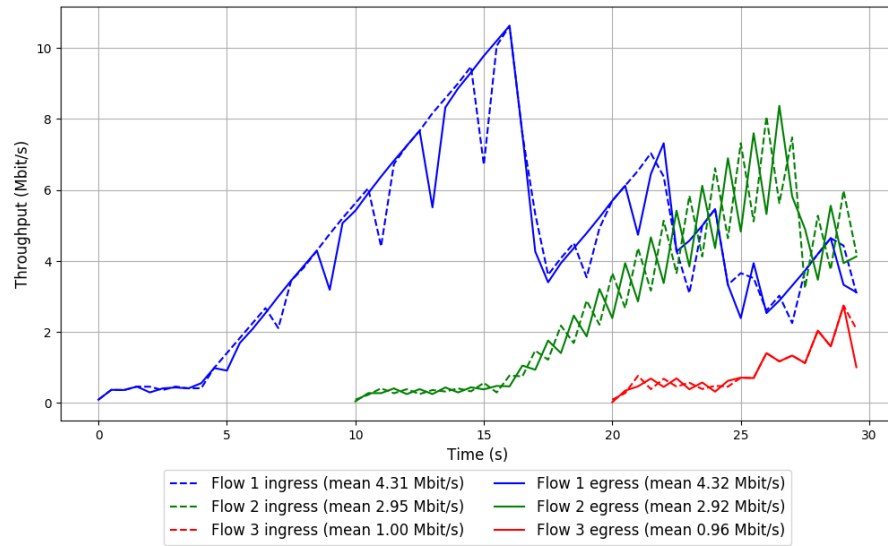
-- Flow 3:

Average throughput: 0.96 Mbit/s

95th percentile per-packet one-way delay: 87.192 ms

Loss rate: 5.53%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-12-20 14:58:46

End at: 2017-12-20 14:59:16

Below is generated by plot.py at 2017-12-20 18:21:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.48 Mbit/s

95th percentile per-packet one-way delay: 87.488 ms

Loss rate: 1.78%

-- Flow 1:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 87.533 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 4.41 Mbit/s

95th percentile per-packet one-way delay: 87.464 ms

Loss rate: 2.30%

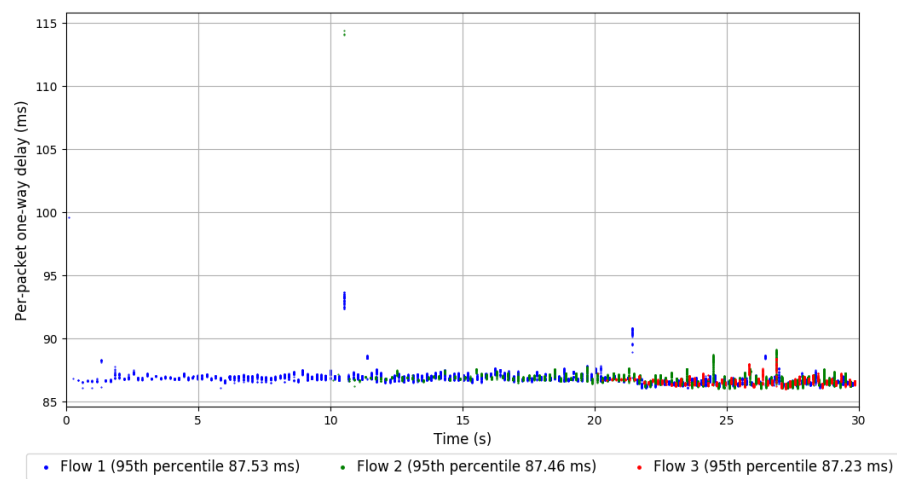
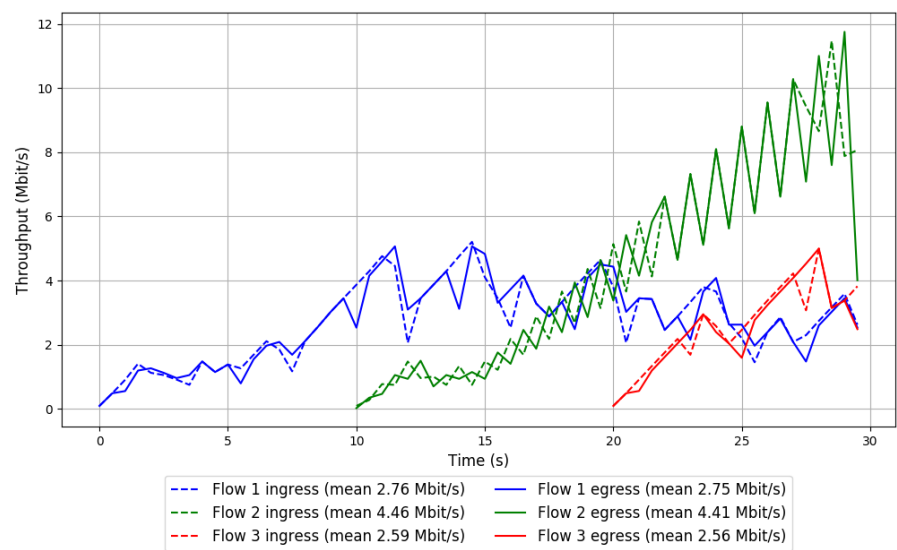
-- Flow 3:

Average throughput: 2.56 Mbit/s

95th percentile per-packet one-way delay: 87.233 ms

Loss rate: 2.98%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-12-20 15:14:14

End at: 2017-12-20 15:14:44

Below is generated by plot.py at 2017-12-20 18:21:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.40 Mbit/s

95th percentile per-packet one-way delay: 87.532 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 5.71 Mbit/s

95th percentile per-packet one-way delay: 87.594 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 3.13 Mbit/s

95th percentile per-packet one-way delay: 87.328 ms

Loss rate: 2.16%

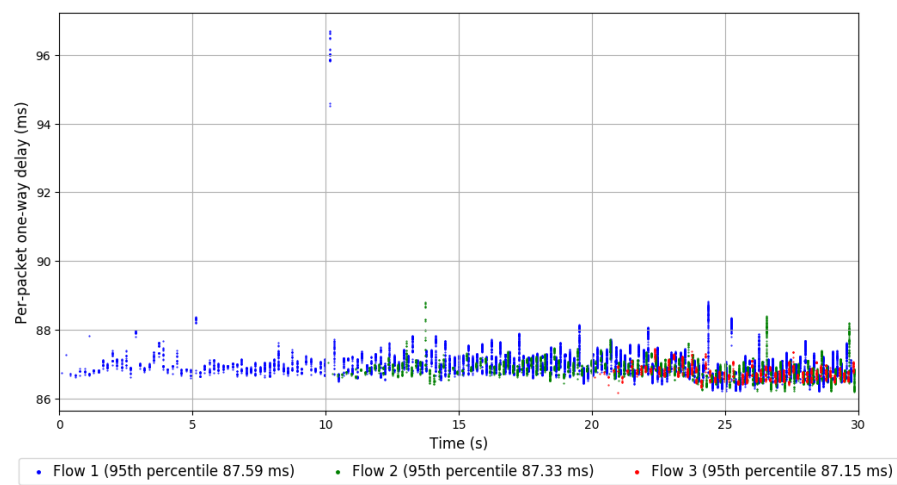
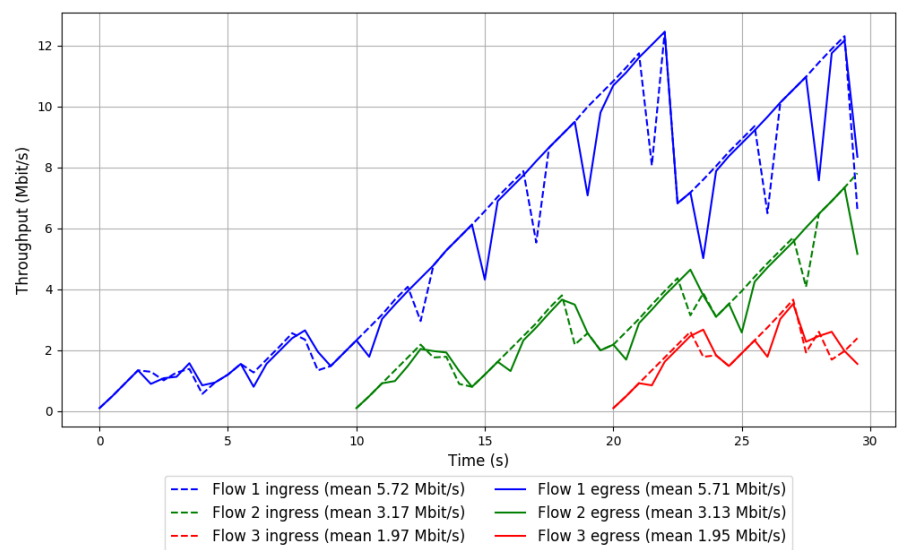
-- Flow 3:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 87.152 ms

Loss rate: 2.60%

Run 9: Report of LEDBAT — Data Link

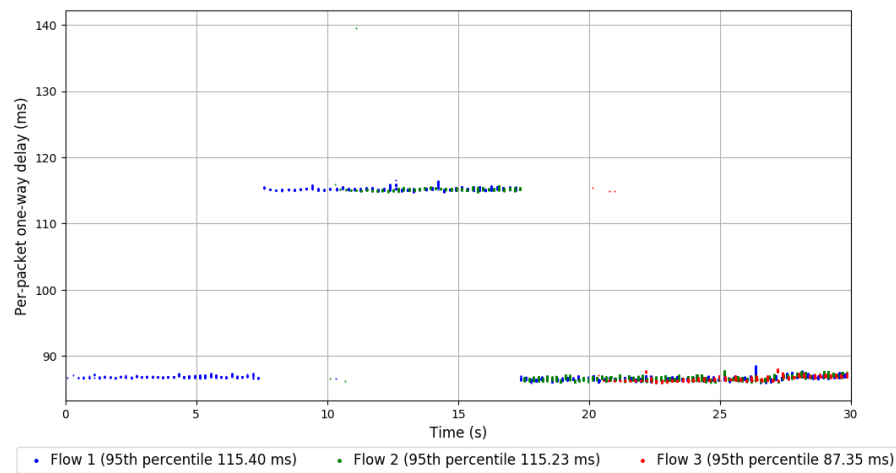
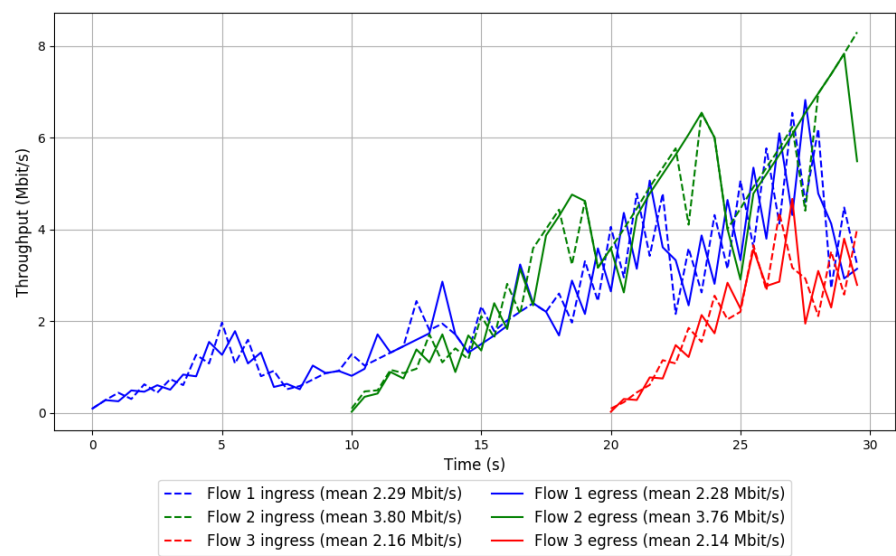


```
Run 10: Statistics of LEDBAT

Start at: 2017-12-20 15:29:30
End at: 2017-12-20 15:30:00

# Below is generated by plot.py at 2017-12-20 18:21:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.46 Mbit/s
95th percentile per-packet one-way delay: 115.271 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 115.399 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 3.76 Mbit/s
95th percentile per-packet one-way delay: 115.232 ms
Loss rate: 1.86%
-- Flow 3:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 87.347 ms
Loss rate: 2.85%
```

Run 10: Report of LEDBAT — Data Link

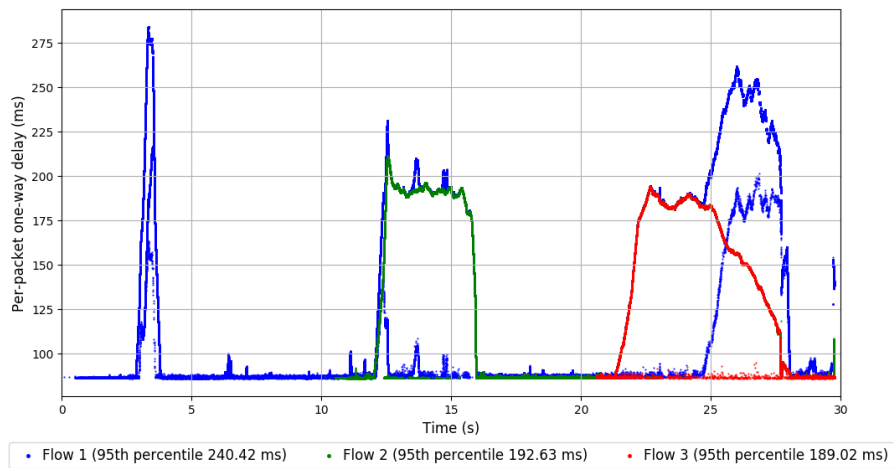
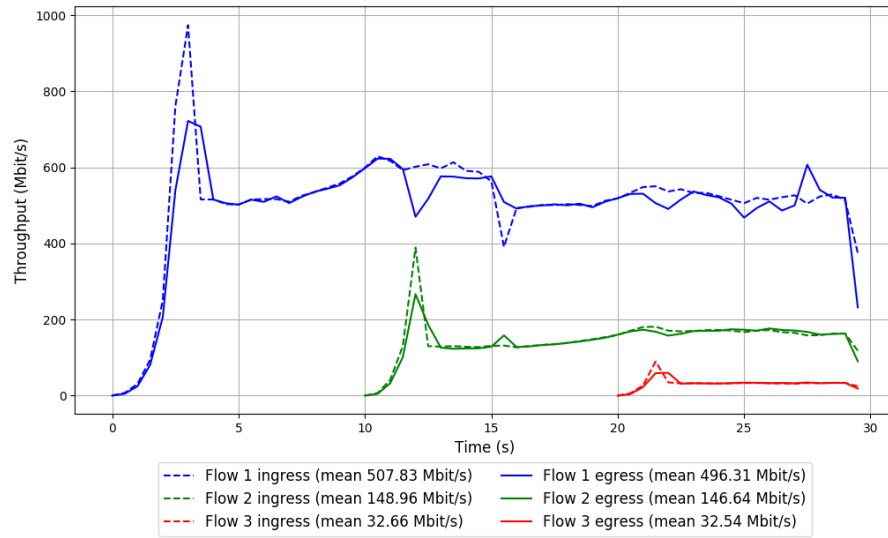


```
Run 1: Statistics of PCC

Start at: 2017-12-20 13:11:15
End at: 2017-12-20 13:11:45

# Below is generated by plot.py at 2017-12-20 18:30:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 603.99 Mbit/s
95th percentile per-packet one-way delay: 234.367 ms
Loss rate: 2.76%
-- Flow 1:
Average throughput: 496.31 Mbit/s
95th percentile per-packet one-way delay: 240.422 ms
Loss rate: 2.84%
-- Flow 2:
Average throughput: 146.64 Mbit/s
95th percentile per-packet one-way delay: 192.629 ms
Loss rate: 2.42%
-- Flow 3:
Average throughput: 32.54 Mbit/s
95th percentile per-packet one-way delay: 189.016 ms
Loss rate: 2.16%
```

Run 1: Report of PCC — Data Link

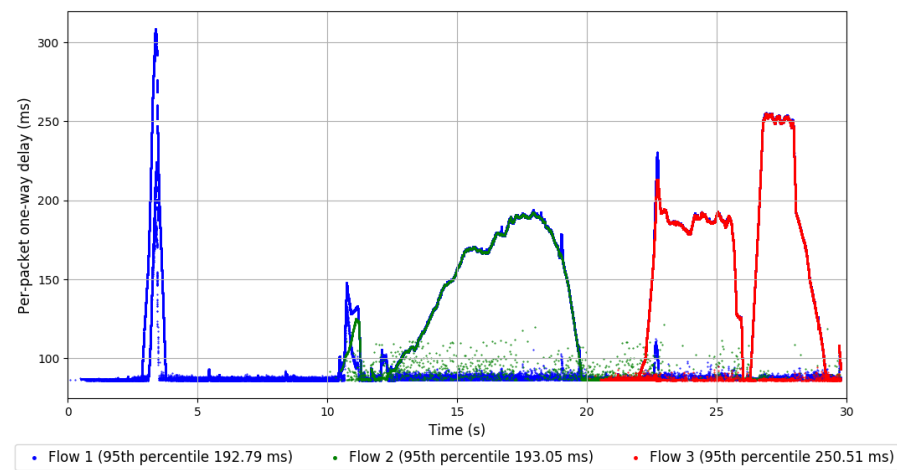
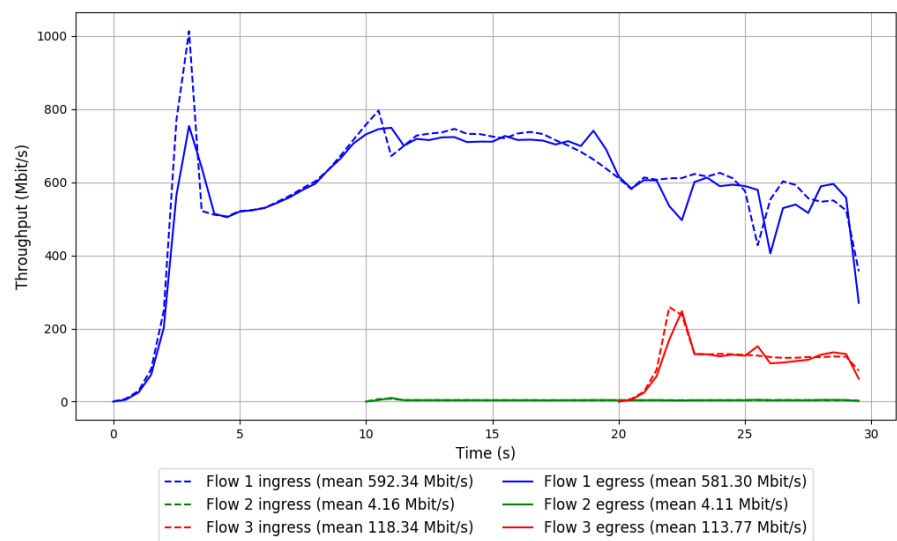


```
Run 2: Statistics of PCC

Start at: 2017-12-20 13:26:25
End at: 2017-12-20 13:26:55

# Below is generated by plot.py at 2017-12-20 18:30:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 621.02 Mbit/s
95th percentile per-packet one-way delay: 194.429 ms
Loss rate: 2.62%
-- Flow 1:
Average throughput: 581.30 Mbit/s
95th percentile per-packet one-way delay: 192.786 ms
Loss rate: 2.43%
-- Flow 2:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 193.053 ms
Loss rate: 2.10%
-- Flow 3:
Average throughput: 113.77 Mbit/s
95th percentile per-packet one-way delay: 250.512 ms
Loss rate: 5.56%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-12-20 13:41:33

End at: 2017-12-20 13:42:03

Below is generated by plot.py at 2017-12-20 18:30:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 613.31 Mbit/s

95th percentile per-packet one-way delay: 195.007 ms

Loss rate: 2.50%

-- Flow 1:

Average throughput: 591.99 Mbit/s

95th percentile per-packet one-way delay: 194.986 ms

Loss rate: 2.48%

-- Flow 2:

Average throughput: 16.55 Mbit/s

95th percentile per-packet one-way delay: 194.928 ms

Loss rate: 2.22%

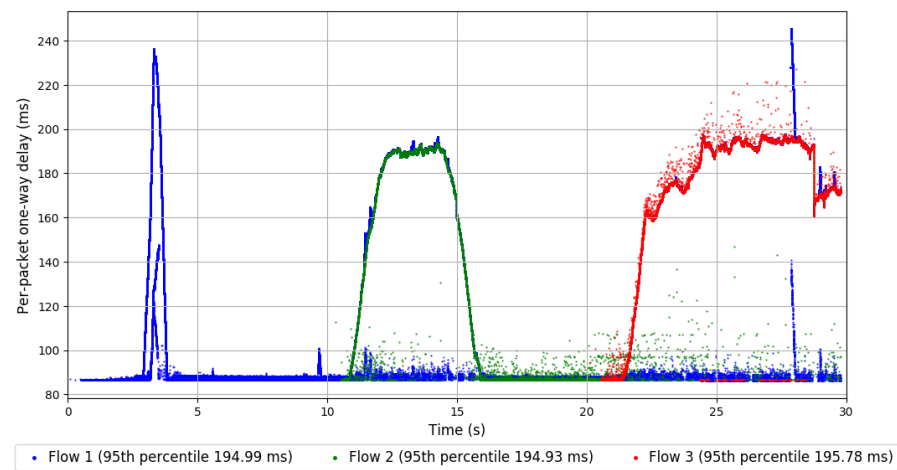
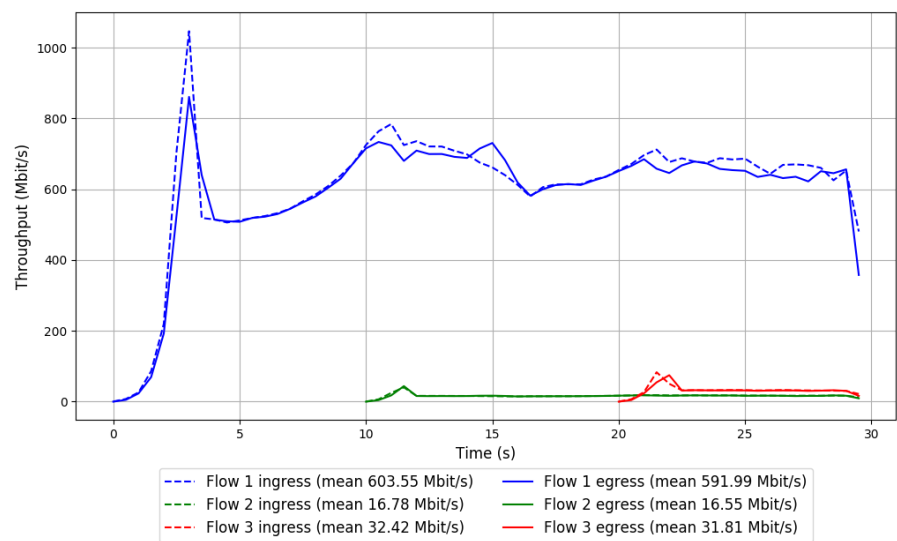
-- Flow 3:

Average throughput: 31.81 Mbit/s

95th percentile per-packet one-way delay: 195.775 ms

Loss rate: 3.70%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-12-20 13:56:36

End at: 2017-12-20 13:57:06

Below is generated by plot.py at 2017-12-20 18:30:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 618.73 Mbit/s

95th percentile per-packet one-way delay: 189.479 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 528.22 Mbit/s

95th percentile per-packet one-way delay: 189.391 ms

Loss rate: 1.48%

-- Flow 2:

Average throughput: 134.56 Mbit/s

95th percentile per-packet one-way delay: 189.860 ms

Loss rate: 1.51%

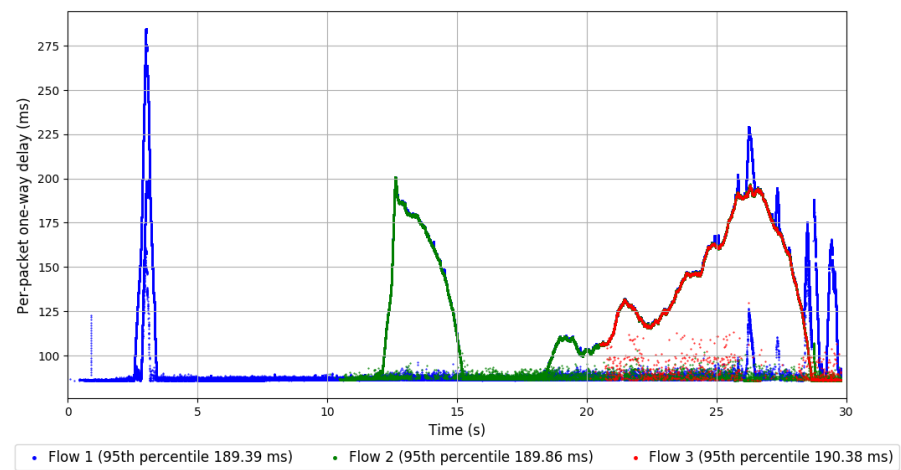
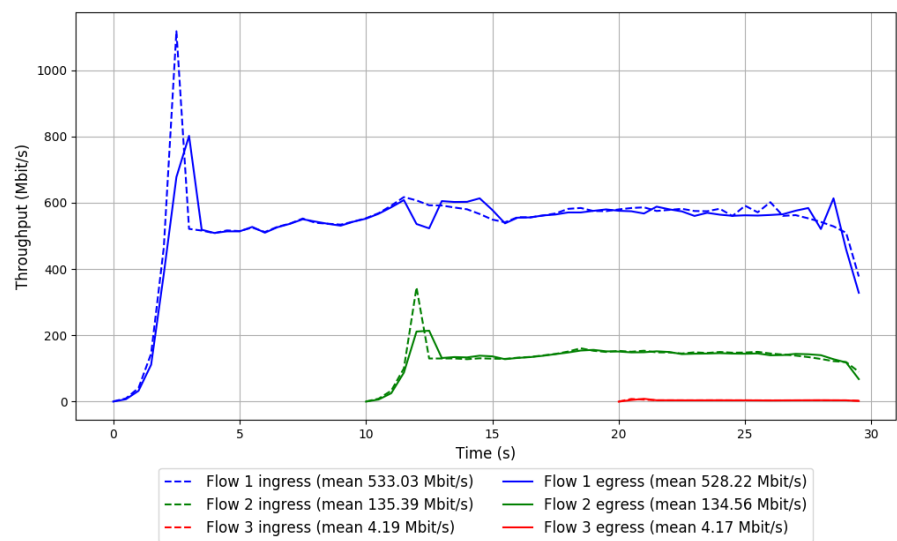
-- Flow 3:

Average throughput: 4.17 Mbit/s

95th percentile per-packet one-way delay: 190.385 ms

Loss rate: 2.27%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-12-20 14:11:52

End at: 2017-12-20 14:12:22

Below is generated by plot.py at 2017-12-20 18:31:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 622.34 Mbit/s

95th percentile per-packet one-way delay: 195.294 ms

Loss rate: 2.53%

-- Flow 1:

Average throughput: 595.67 Mbit/s

95th percentile per-packet one-way delay: 195.636 ms

Loss rate: 2.55%

-- Flow 2:

Average throughput: 32.42 Mbit/s

95th percentile per-packet one-way delay: 192.643 ms

Loss rate: 1.78%

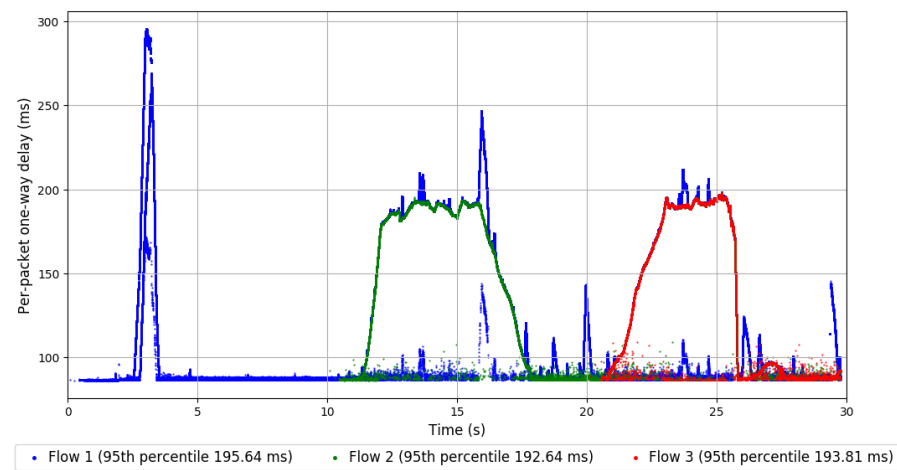
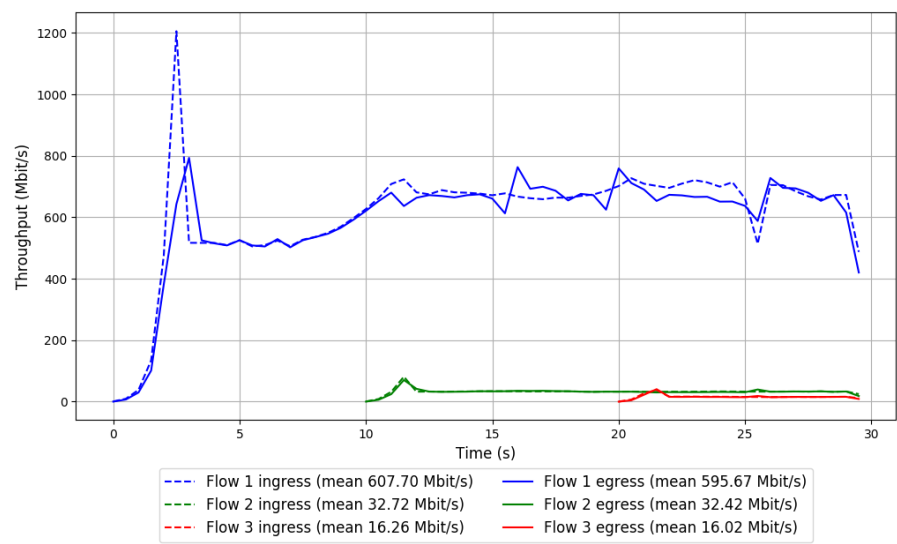
-- Flow 3:

Average throughput: 16.02 Mbit/s

95th percentile per-packet one-way delay: 193.808 ms

Loss rate: 3.23%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-12-20 14:27:07

End at: 2017-12-20 14:27:37

Below is generated by plot.py at 2017-12-20 18:31:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 604.42 Mbit/s

95th percentile per-packet one-way delay: 201.802 ms

Loss rate: 5.43%

-- Flow 1:

Average throughput: 488.08 Mbit/s

95th percentile per-packet one-way delay: 206.507 ms

Loss rate: 5.32%

-- Flow 2:

Average throughput: 118.40 Mbit/s

95th percentile per-packet one-way delay: 196.817 ms

Loss rate: 5.49%

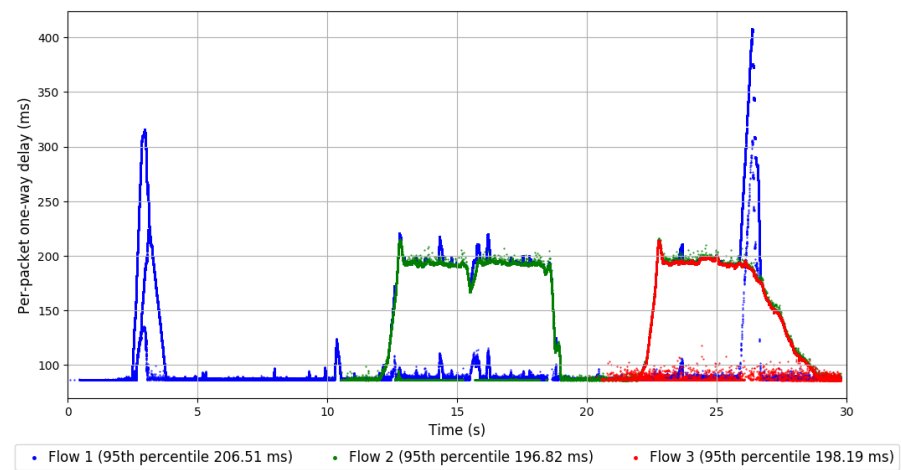
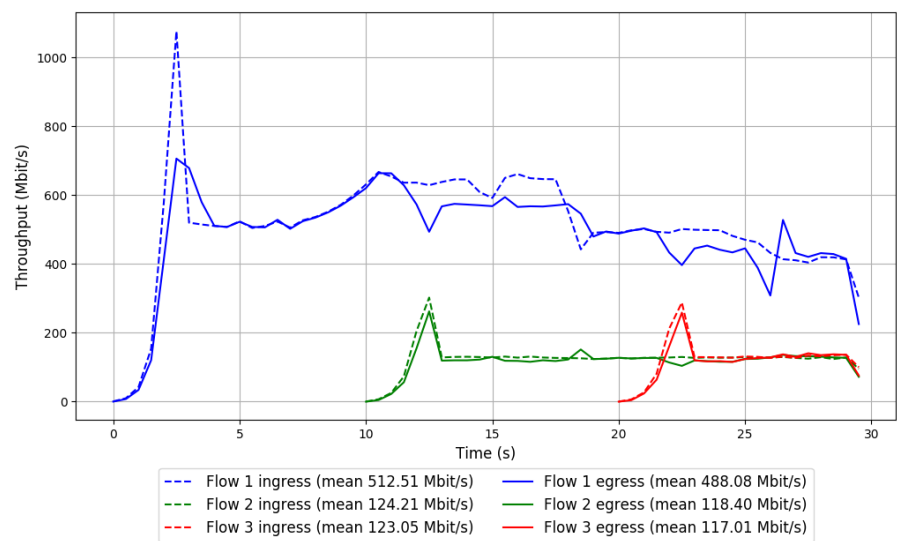
-- Flow 3:

Average throughput: 117.01 Mbit/s

95th percentile per-packet one-way delay: 198.195 ms

Loss rate: 6.63%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-12-20 14:42:22

End at: 2017-12-20 14:42:52

Below is generated by plot.py at 2017-12-20 18:31:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 589.23 Mbit/s

95th percentile per-packet one-way delay: 212.255 ms

Loss rate: 3.07%

-- Flow 1:

Average throughput: 545.41 Mbit/s

95th percentile per-packet one-way delay: 212.320 ms

Loss rate: 3.03%

-- Flow 2:

Average throughput: 35.15 Mbit/s

95th percentile per-packet one-way delay: 214.576 ms

Loss rate: 3.48%

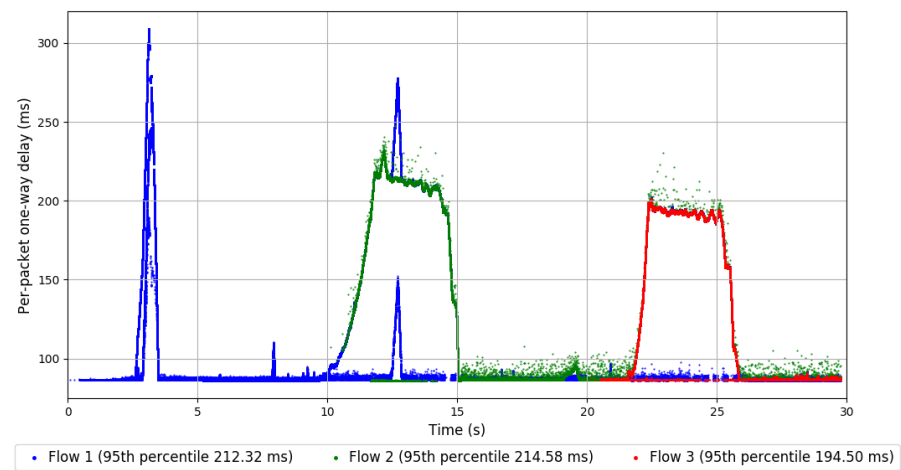
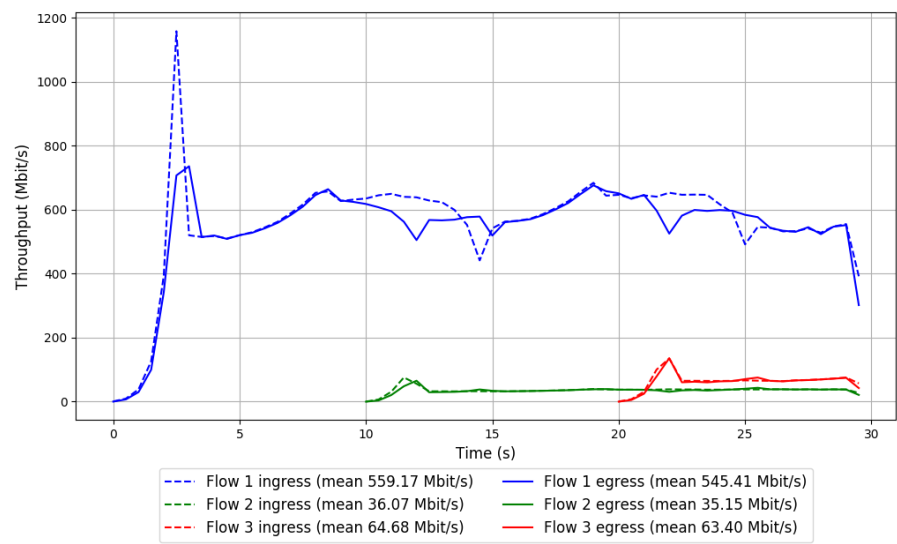
-- Flow 3:

Average throughput: 63.40 Mbit/s

95th percentile per-packet one-way delay: 194.501 ms

Loss rate: 3.72%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-12-20 14:57:36

End at: 2017-12-20 14:58:06

Below is generated by plot.py at 2017-12-20 18:32:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 615.25 Mbit/s

95th percentile per-packet one-way delay: 215.392 ms

Loss rate: 2.72%

-- Flow 1:

Average throughput: 607.18 Mbit/s

95th percentile per-packet one-way delay: 215.362 ms

Loss rate: 2.71%

-- Flow 2:

Average throughput: 8.15 Mbit/s

95th percentile per-packet one-way delay: 215.765 ms

Loss rate: 2.46%

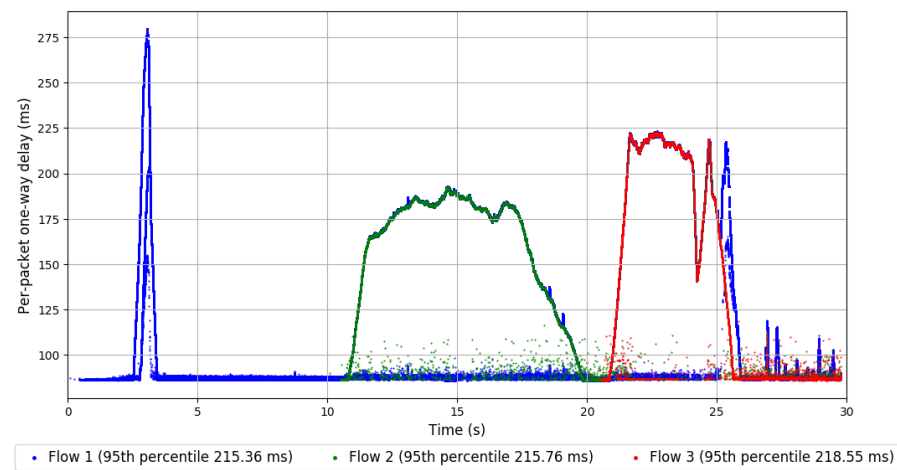
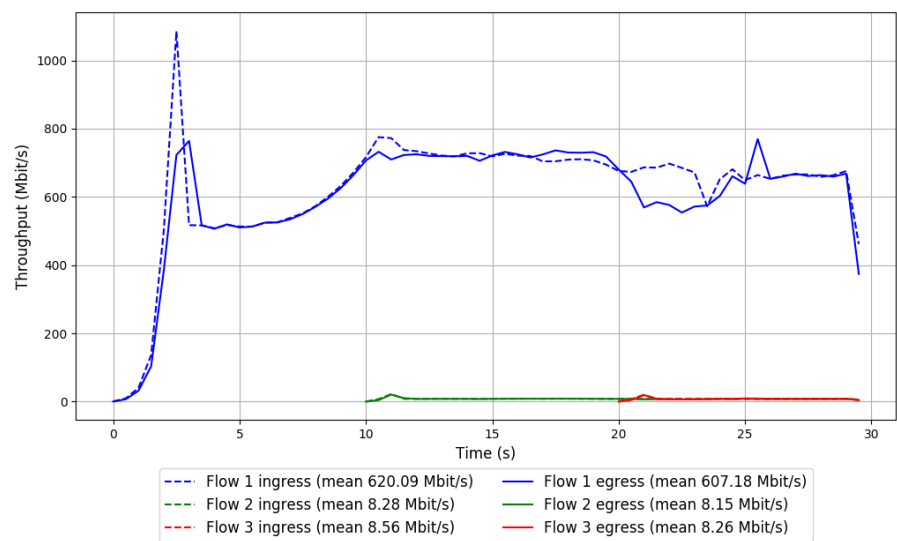
-- Flow 3:

Average throughput: 8.26 Mbit/s

95th percentile per-packet one-way delay: 218.554 ms

Loss rate: 5.20%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-12-20 15:13:04

End at: 2017-12-20 15:13:34

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 597.66 Mbit/s

95th percentile per-packet one-way delay: 237.348 ms

Loss rate: 3.73%

-- Flow 1:

Average throughput: 533.47 Mbit/s

95th percentile per-packet one-way delay: 249.538 ms

Loss rate: 3.88%

-- Flow 2:

Average throughput: 66.10 Mbit/s

95th percentile per-packet one-way delay: 187.881 ms

Loss rate: 1.95%

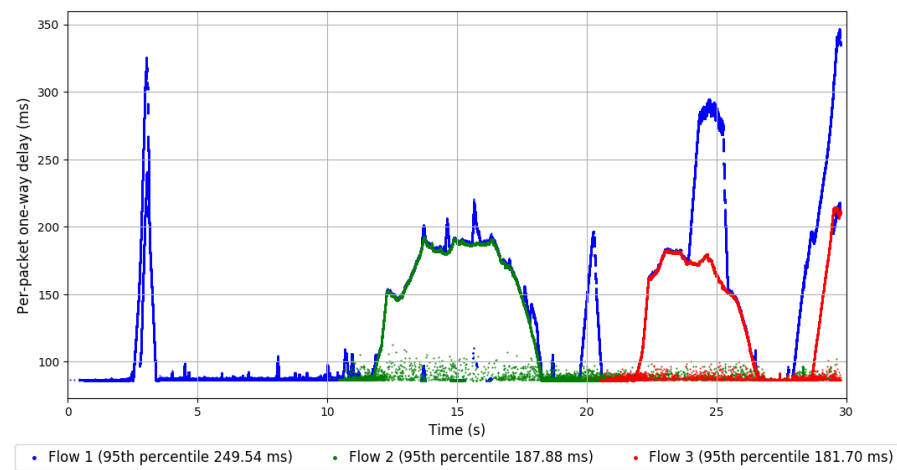
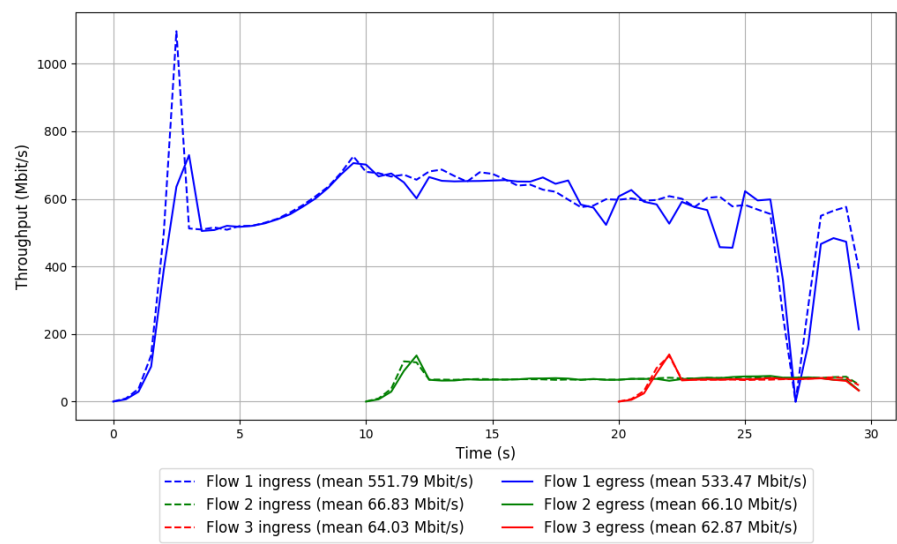
-- Flow 3:

Average throughput: 62.87 Mbit/s

95th percentile per-packet one-way delay: 181.700 ms

Loss rate: 3.53%

Run 9: Report of PCC — Data Link

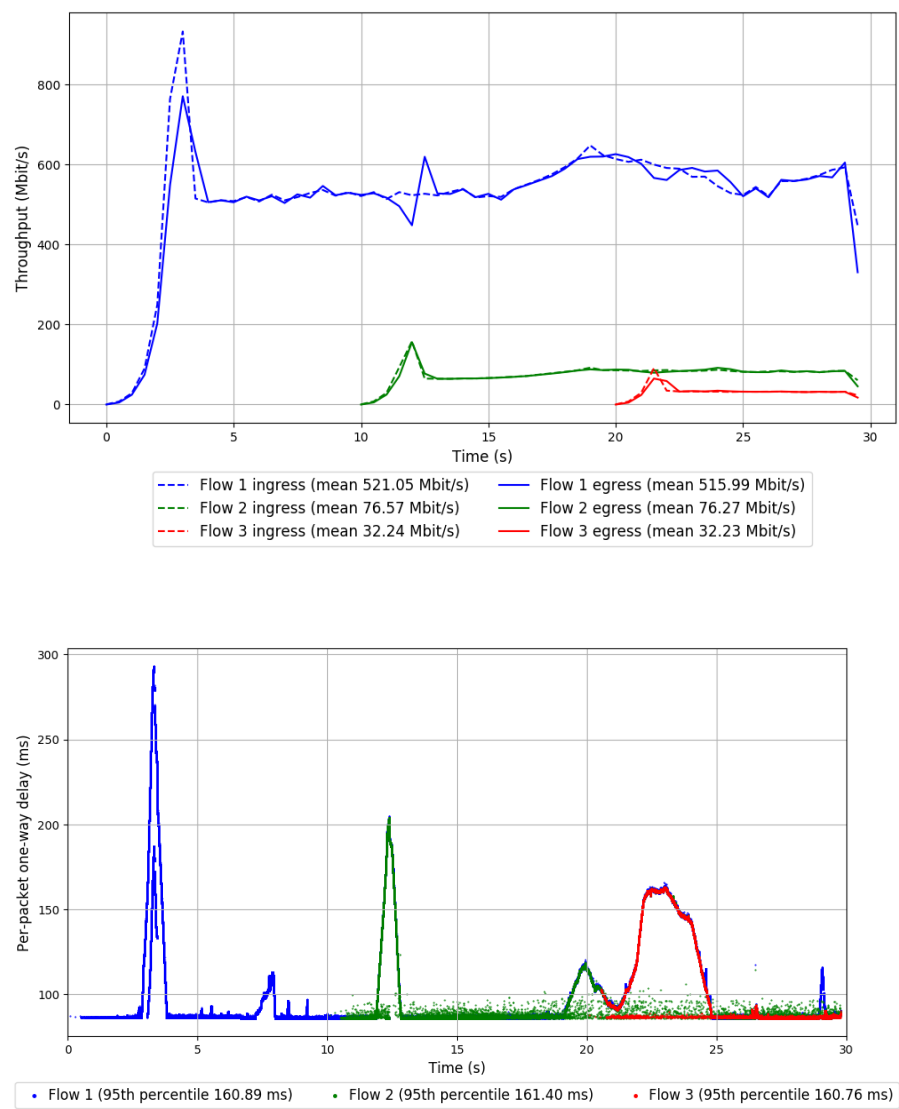


```
Run 10: Statistics of PCC

Start at: 2017-12-20 15:28:21
End at: 2017-12-20 15:28:51

# Below is generated by plot.py at 2017-12-20 18:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 577.00 Mbit/s
95th percentile per-packet one-way delay: 160.939 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 515.99 Mbit/s
95th percentile per-packet one-way delay: 160.894 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 76.27 Mbit/s
95th percentile per-packet one-way delay: 161.398 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 32.23 Mbit/s
95th percentile per-packet one-way delay: 160.762 ms
Loss rate: 1.77%
```

Run 10: Report of PCC — Data Link

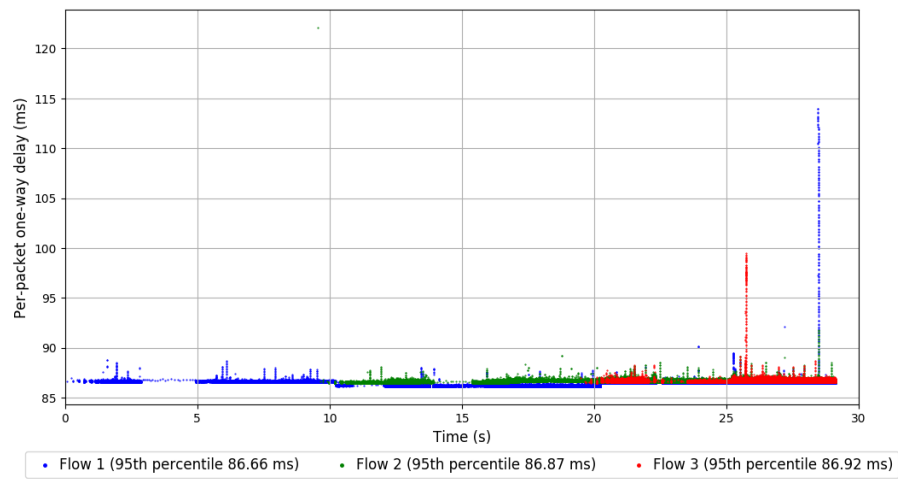
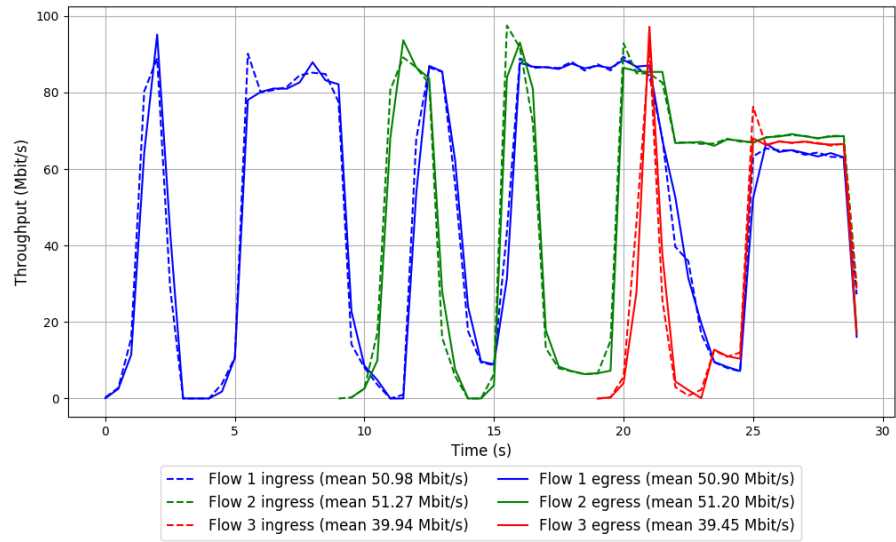


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-20 13:09:17
End at: 2017-12-20 13:09:47

# Below is generated by plot.py at 2017-12-20 18:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 98.50 Mbit/s
95th percentile per-packet one-way delay: 86.817 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 50.90 Mbit/s
95th percentile per-packet one-way delay: 86.662 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 51.20 Mbit/s
95th percentile per-packet one-way delay: 86.866 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 39.45 Mbit/s
95th percentile per-packet one-way delay: 86.923 ms
Loss rate: 2.98%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-12-20 13:24:32

End at: 2017-12-20 13:25:02

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.18 Mbit/s

95th percentile per-packet one-way delay: 87.297 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 47.42 Mbit/s

95th percentile per-packet one-way delay: 87.315 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 34.74 Mbit/s

95th percentile per-packet one-way delay: 86.826 ms

Loss rate: 1.93%

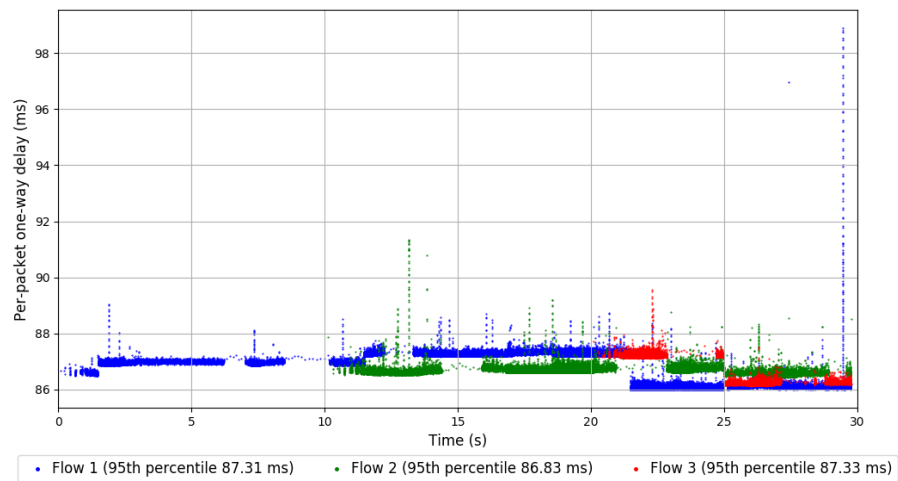
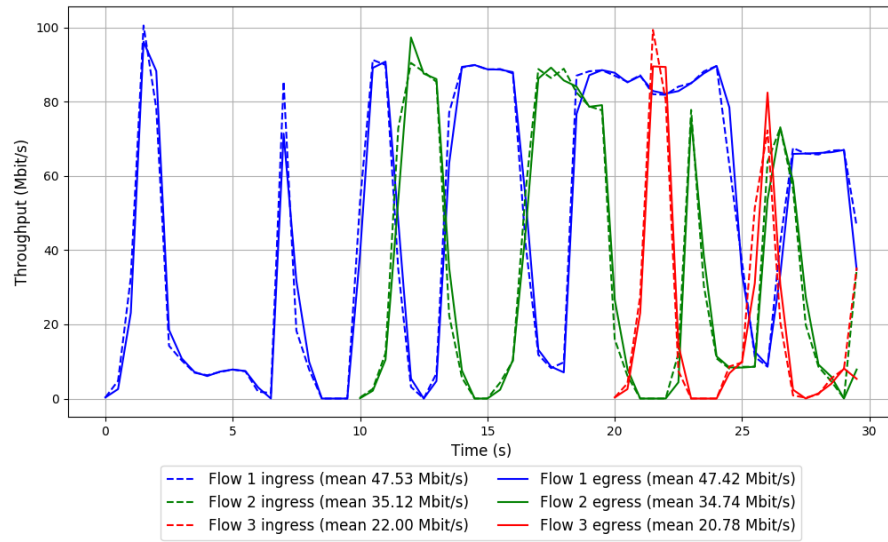
-- Flow 3:

Average throughput: 20.78 Mbit/s

95th percentile per-packet one-way delay: 87.334 ms

Loss rate: 7.24%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-12-20 13:39:37

End at: 2017-12-20 13:40:07

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.26 Mbit/s

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

Loss rate: 0.89%

-- Flow 1:

Average throughput: 61.75 Mbit/s

95th percentile per-packet one-way delay: 86.921 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 57.55 Mbit/s

95th percentile per-packet one-way delay: 86.758 ms

Loss rate: 1.28%

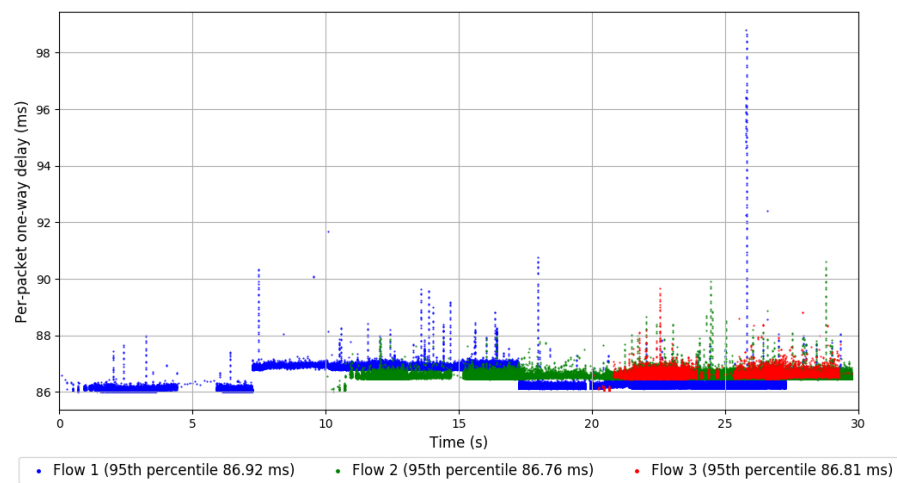
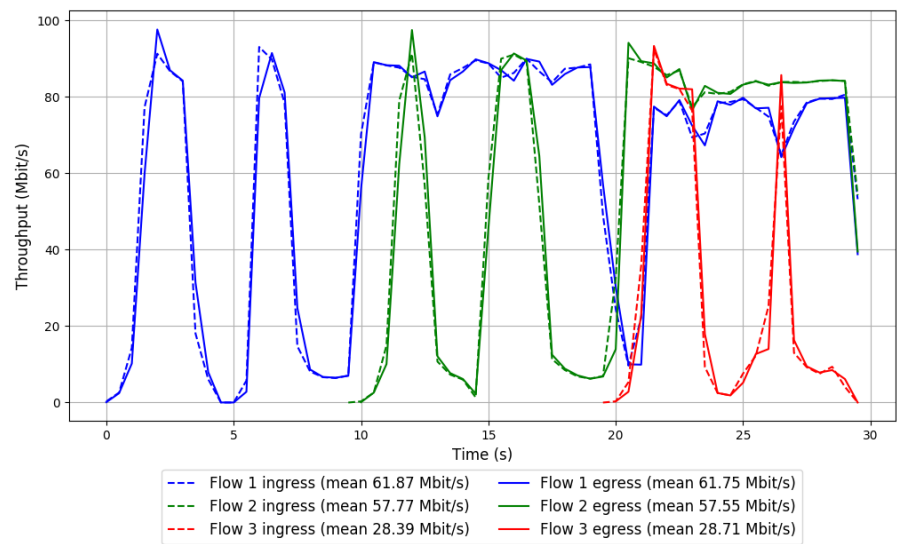
-- Flow 3:

Average throughput: 28.71 Mbit/s

95th percentile per-packet one-way delay: 86.808 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-12-20 13:54:47

End at: 2017-12-20 13:55:17

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.42 Mbit/s

95th percentile per-packet one-way delay: 86.829 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 50.96 Mbit/s

95th percentile per-packet one-way delay: 86.870 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 43.53 Mbit/s

95th percentile per-packet one-way delay: 86.723 ms

Loss rate: 0.19%

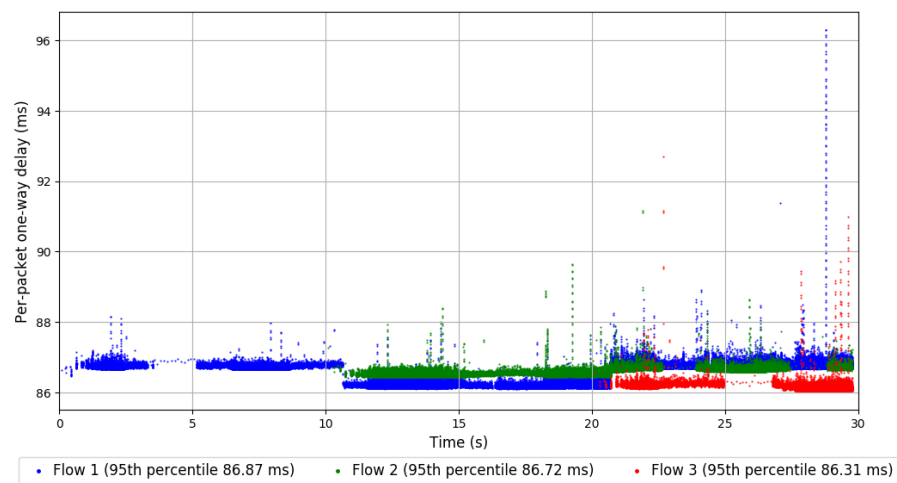
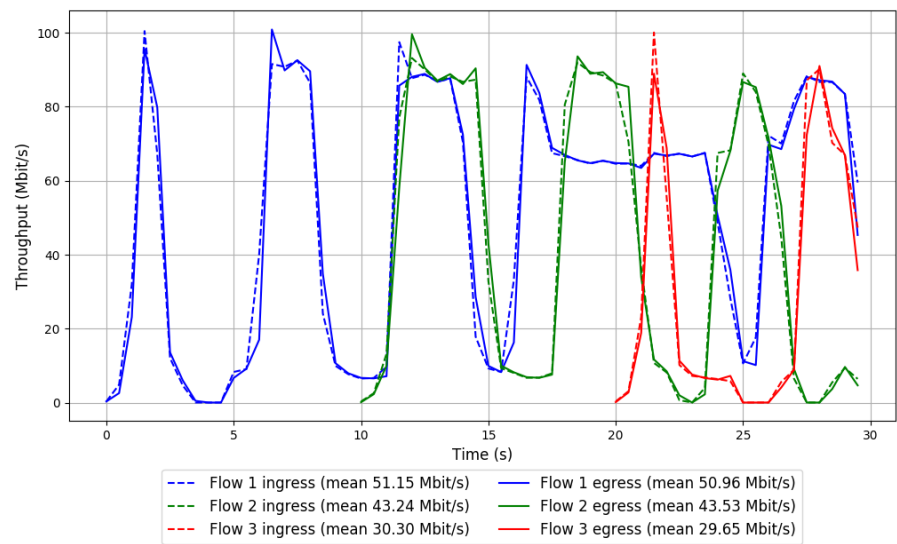
-- Flow 3:

Average throughput: 29.65 Mbit/s

95th percentile per-packet one-way delay: 86.307 ms

Loss rate: 3.88%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-12-20 14:10:01

End at: 2017-12-20 14:10:31

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.20 Mbit/s

95th percentile per-packet one-way delay: 87.265 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 47.31 Mbit/s

95th percentile per-packet one-way delay: 87.316 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 28.92 Mbit/s

95th percentile per-packet one-way delay: 87.077 ms

Loss rate: 1.86%

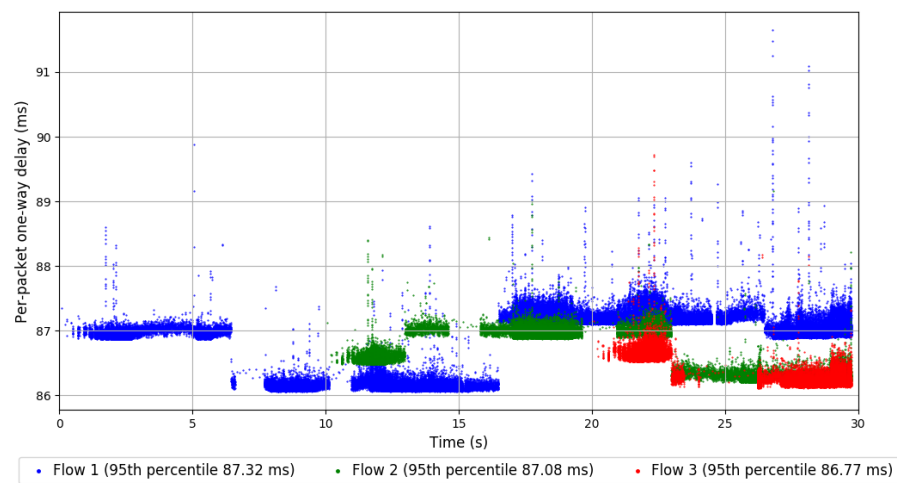
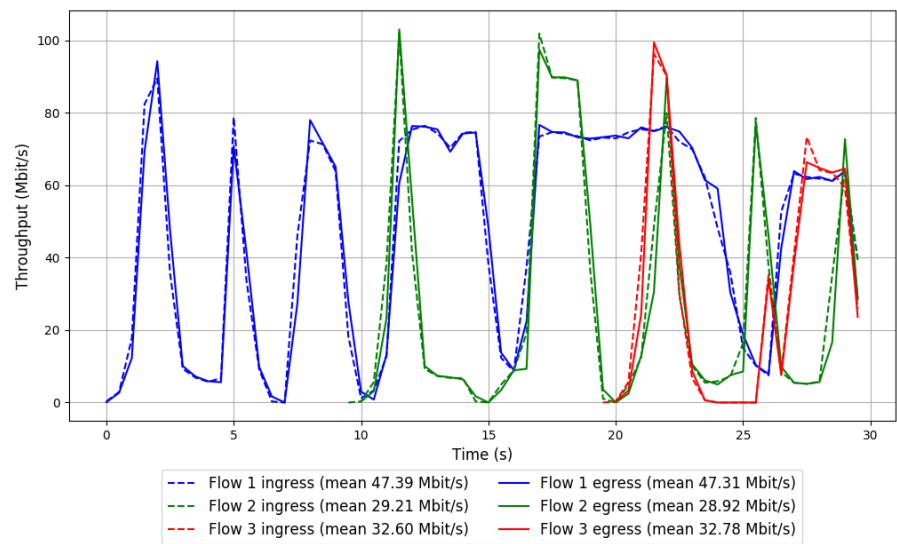
-- Flow 3:

Average throughput: 32.78 Mbit/s

95th percentile per-packet one-way delay: 86.774 ms

Loss rate: 1.23%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-12-20 14:25:10

End at: 2017-12-20 14:25:40

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.97 Mbit/s

95th percentile per-packet one-way delay: 87.241 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 46.69 Mbit/s

95th percentile per-packet one-way delay: 87.272 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 36.42 Mbit/s

95th percentile per-packet one-way delay: 86.651 ms

Loss rate: 1.49%

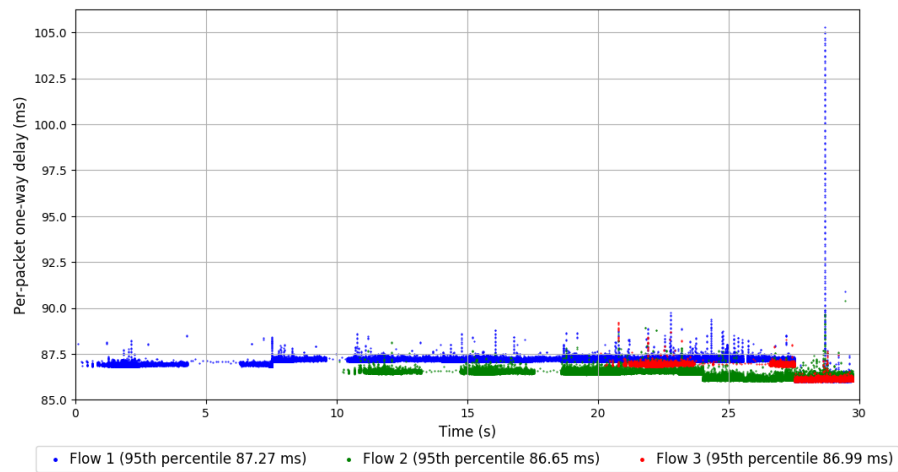
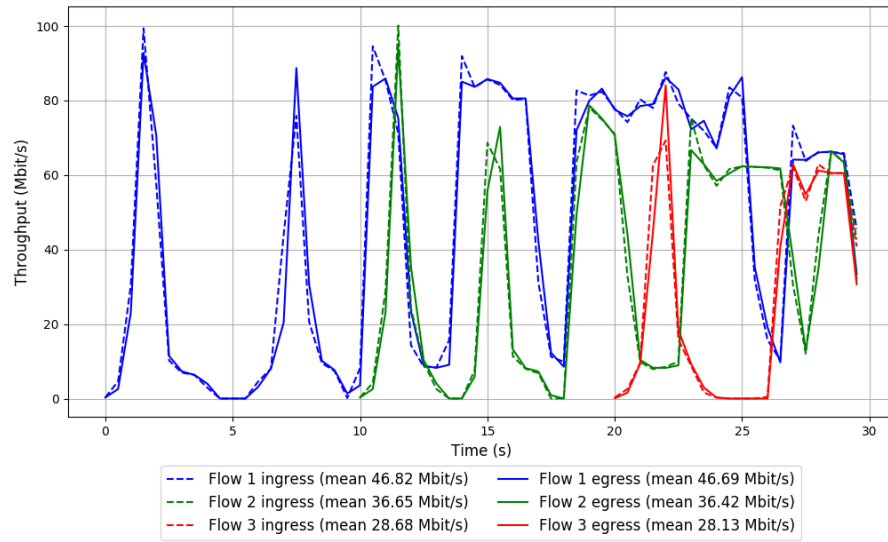
-- Flow 3:

Average throughput: 28.13 Mbit/s

95th percentile per-packet one-way delay: 86.991 ms

Loss rate: 3.66%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-12-20 14:40:24

End at: 2017-12-20 14:40:54

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.10 Mbit/s

95th percentile per-packet one-way delay: 87.017 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 49.55 Mbit/s

95th percentile per-packet one-way delay: 86.735 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 42.99 Mbit/s

95th percentile per-packet one-way delay: 87.080 ms

Loss rate: 1.50%

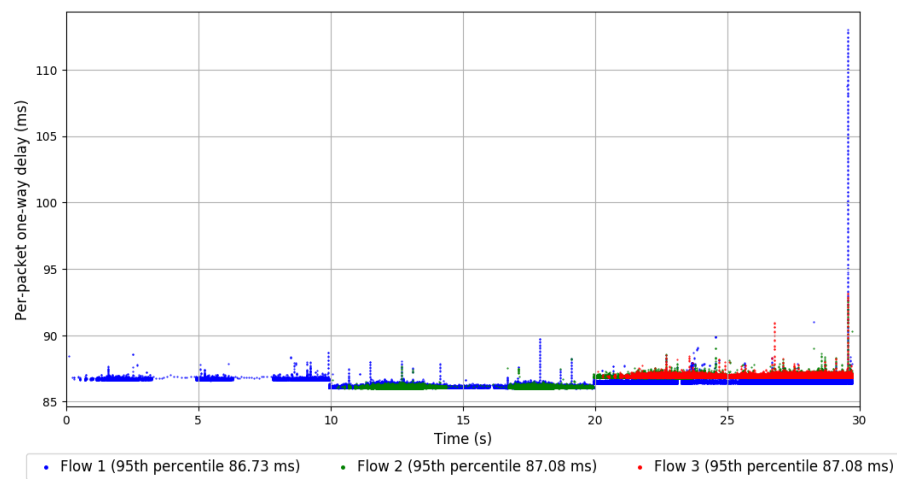
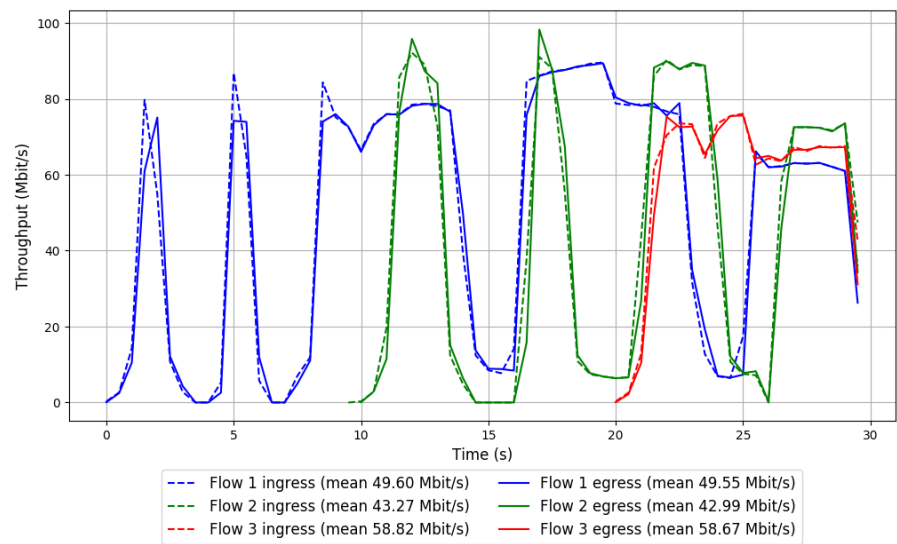
-- Flow 3:

Average throughput: 58.67 Mbit/s

95th percentile per-packet one-way delay: 87.075 ms

Loss rate: 2.02%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-12-20 14:55:41

End at: 2017-12-20 14:56:11

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.72 Mbit/s

95th percentile per-packet one-way delay: 86.685 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 45.46 Mbit/s

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

Loss rate: 0.98%

-- Flow 2:

Average throughput: 43.37 Mbit/s

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

Loss rate: 1.32%

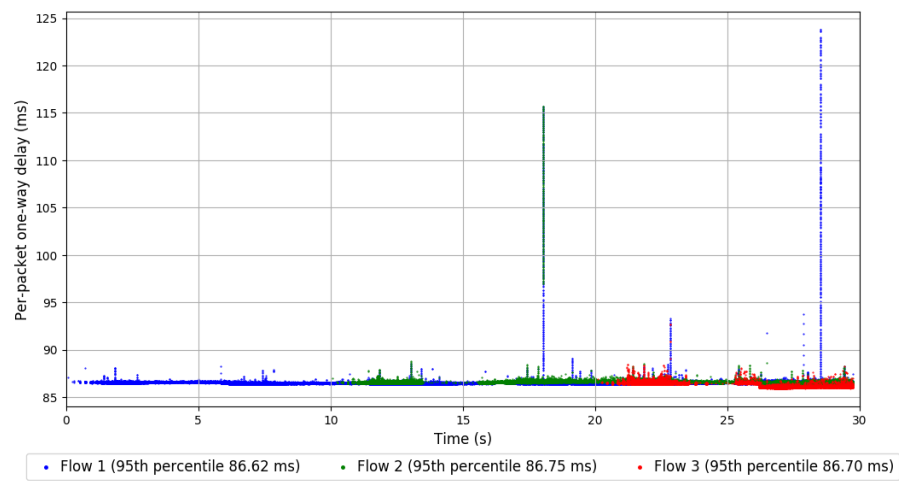
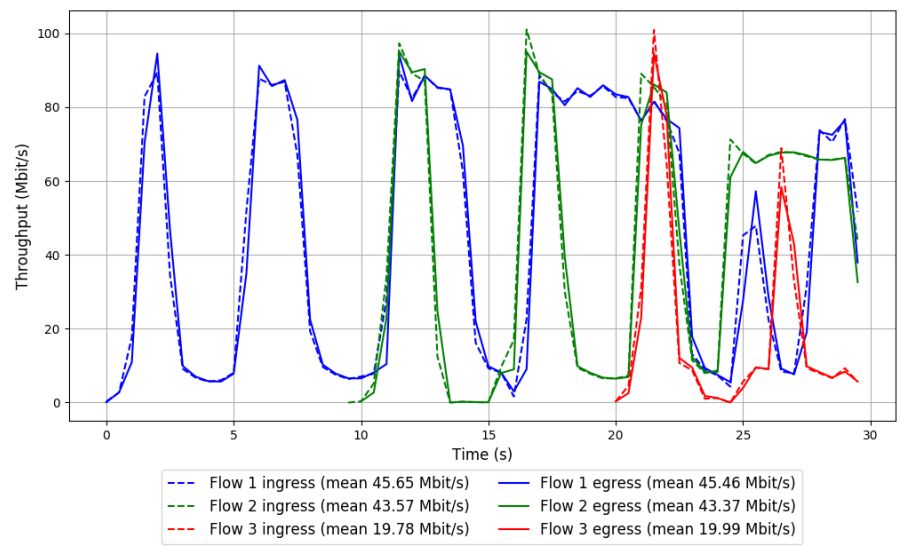
-- Flow 3:

Average throughput: 19.99 Mbit/s

95th percentile per-packet one-way delay: 86.698 ms

Loss rate: 0.47%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-12-20 15:11:02

End at: 2017-12-20 15:11:32

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.82 Mbit/s

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

Loss rate: 1.32%

-- Flow 1:

Average throughput: 45.11 Mbit/s

95th percentile per-packet one-way delay: 86.723 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 46.32 Mbit/s

95th percentile per-packet one-way delay: 86.510 ms

Loss rate: 1.19%

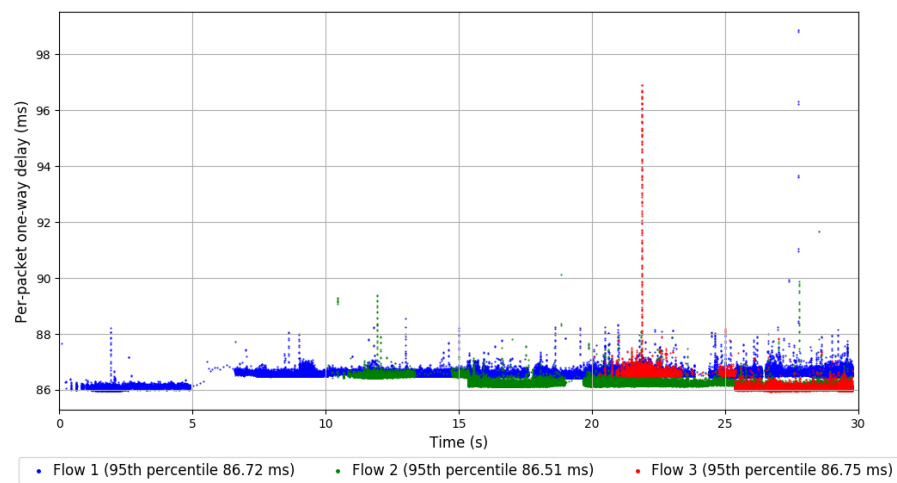
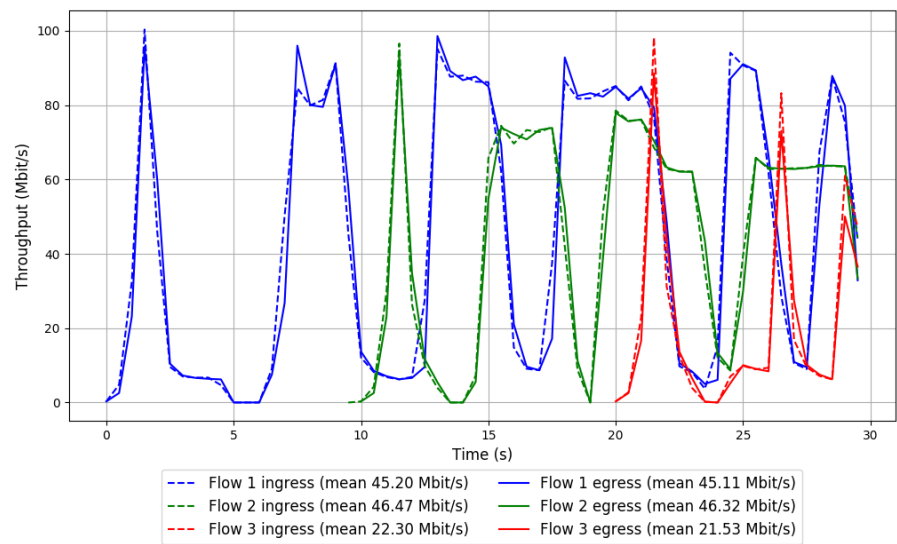
-- Flow 3:

Average throughput: 21.53 Mbit/s

95th percentile per-packet one-way delay: 86.753 ms

Loss rate: 5.13%

Run 9: Report of QUIC Cubic — Data Link

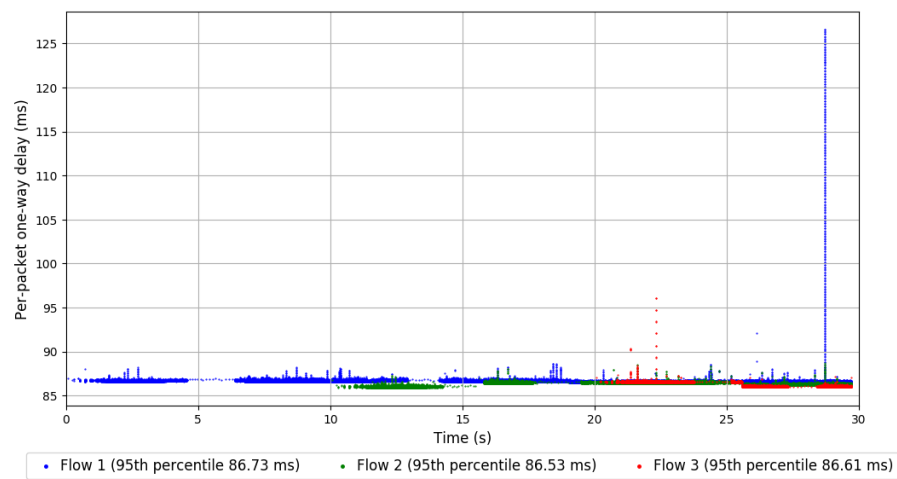
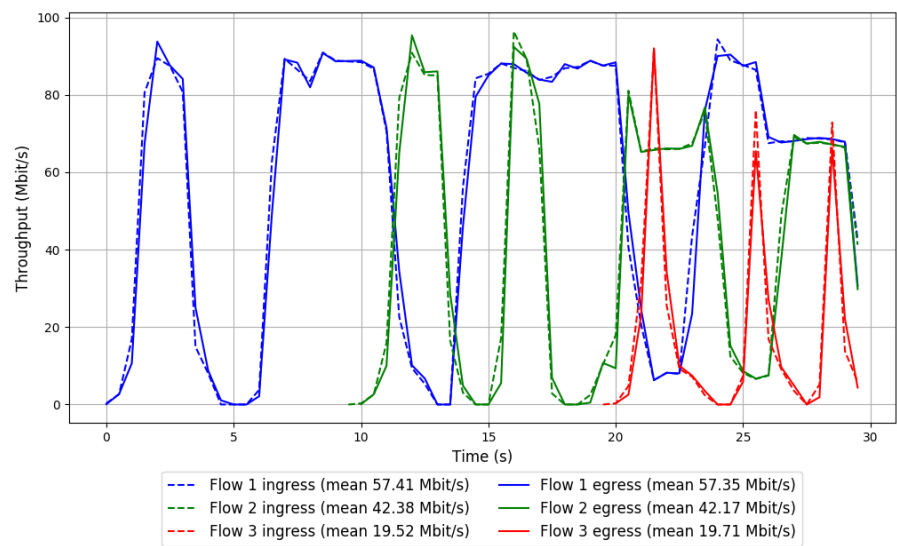


```
Run 10: Statistics of QUIC Cubic

Start at: 2017-12-20 15:26:28
End at: 2017-12-20 15:26:58

# Below is generated by plot.py at 2017-12-20 18:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.71 Mbit/s
95th percentile per-packet one-way delay: 86.709 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 57.35 Mbit/s
95th percentile per-packet one-way delay: 86.734 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 42.17 Mbit/s
95th percentile per-packet one-way delay: 86.530 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 19.71 Mbit/s
95th percentile per-packet one-way delay: 86.610 ms
Loss rate: 0.80%
```

Run 10: Report of QUIC Cubic — Data Link

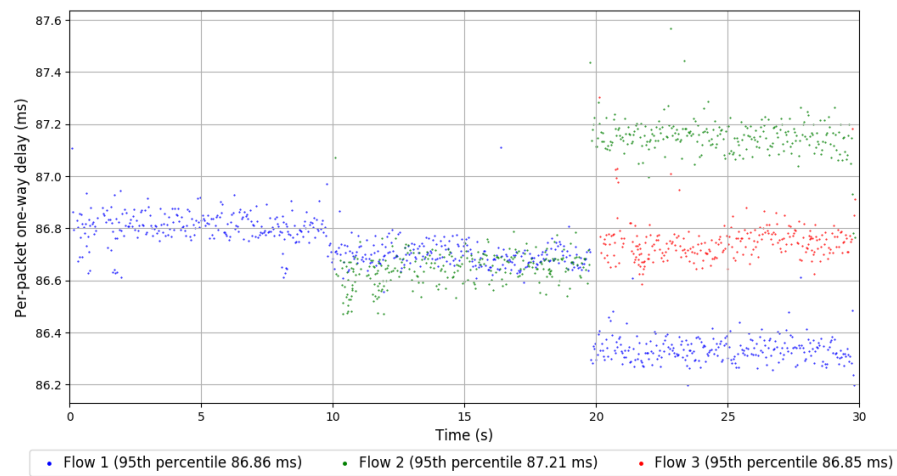
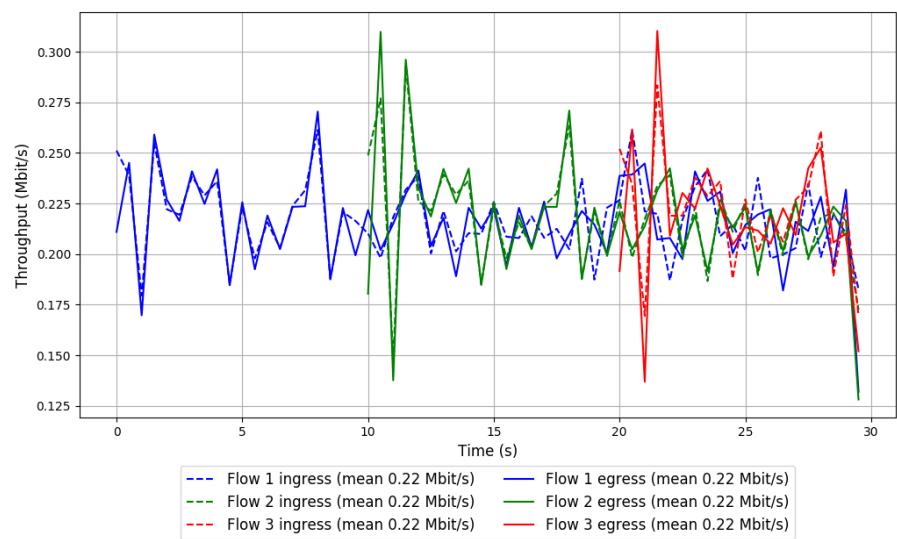


```
Run 1: Statistics of SCReAM

Start at: 2017-12-20 13:22:28
End at: 2017-12-20 13:22:58

# Below is generated by plot.py at 2017-12-20 18:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 87.178 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.863 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.214 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.851 ms
Loss rate: 1.50%
```

Run 1: Report of SReAM — Data Link

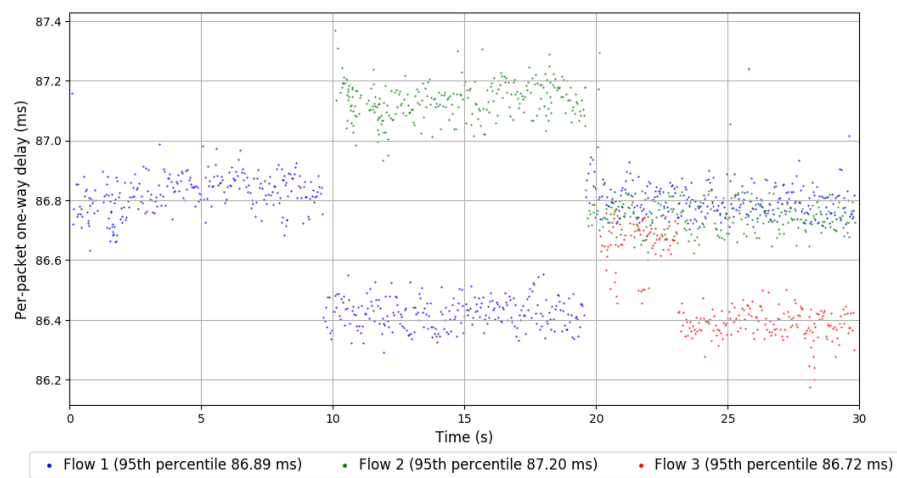
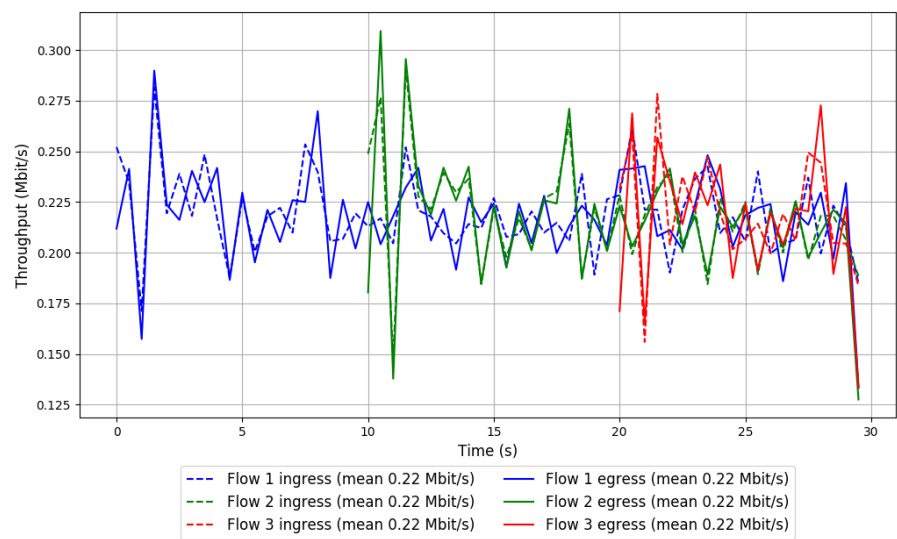


```
Run 2: Statistics of SReAM

Start at: 2017-12-20 13:37:44
End at: 2017-12-20 13:38:14

# Below is generated by plot.py at 2017-12-20 18:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 87.169 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.895 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.202 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.724 ms
Loss rate: 1.87%
```

Run 2: Report of SReAM — Data Link

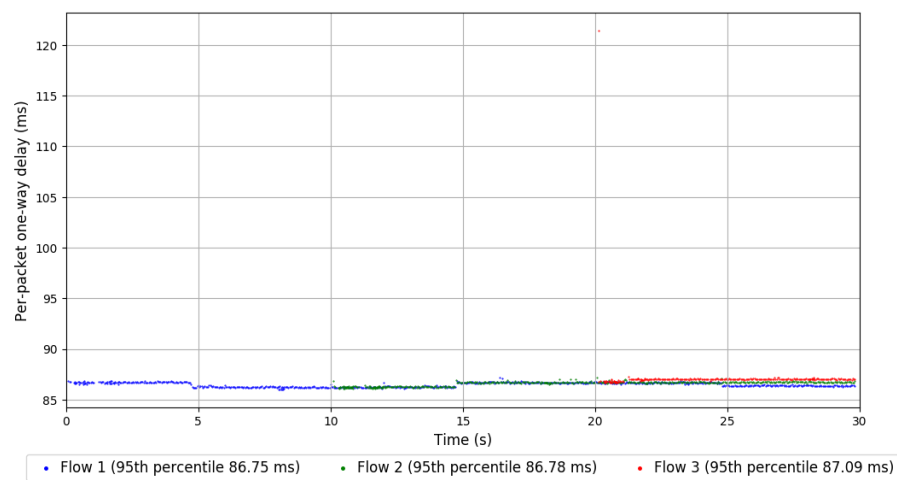
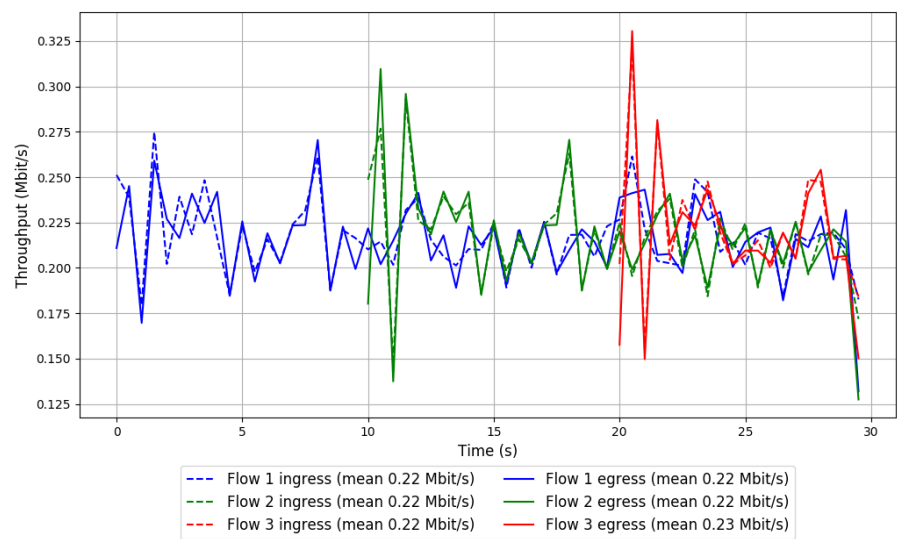


```
Run 3: Statistics of SCReAM

Start at: 2017-12-20 13:52:53
End at: 2017-12-20 13:53:23

# Below is generated by plot.py at 2017-12-20 18:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 87.035 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.746 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.780 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 87.088 ms
Loss rate: 1.48%
```


Run 3: Report of SReAM — Data Link

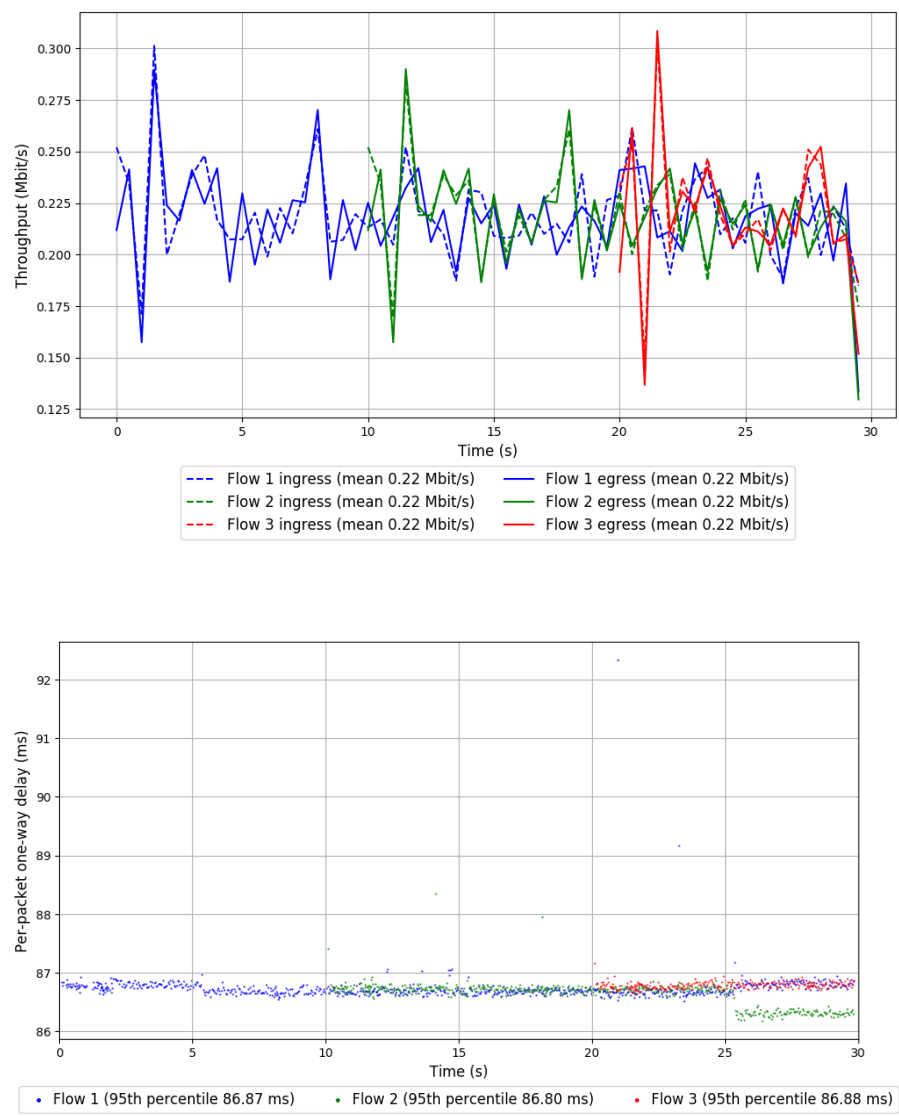


```
Run 4: Statistics of SReAM

Start at: 2017-12-20 14:08:09
End at: 2017-12-20 14:08:39

# Below is generated by plot.py at 2017-12-20 18:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.864 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.872 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.803 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.884 ms
Loss rate: 1.50%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2017-12-20 14:23:17

End at: 2017-12-20 14:23:48

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 87.165 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.192 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.758 ms

Loss rate: 0.85%

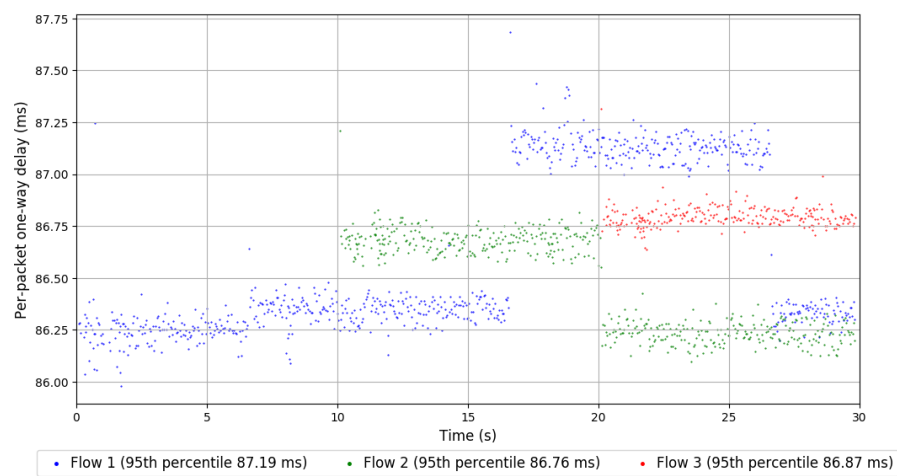
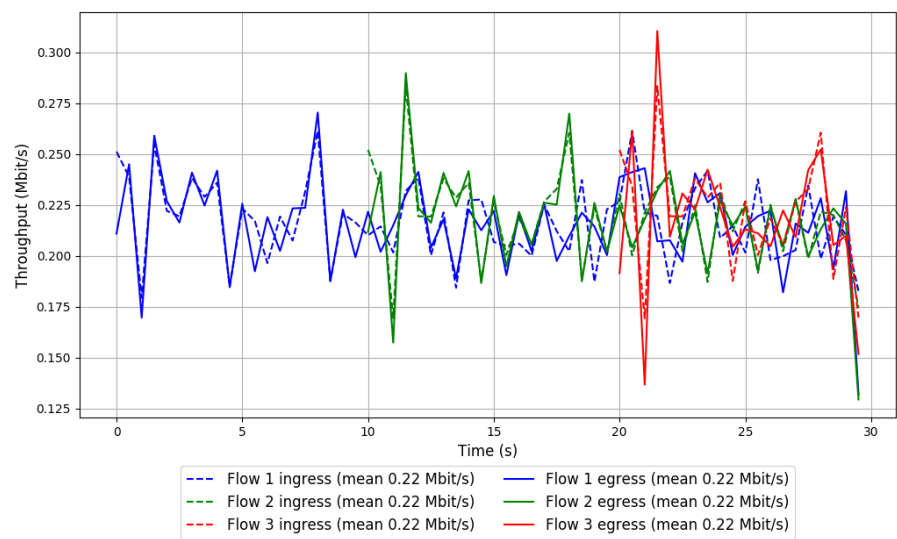
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.866 ms

Loss rate: 1.50%

Run 5: Report of SReAM — Data Link

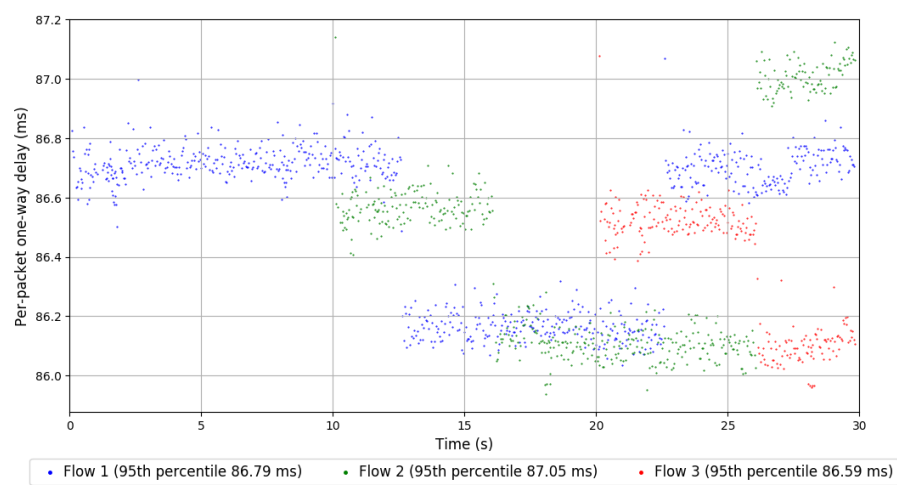
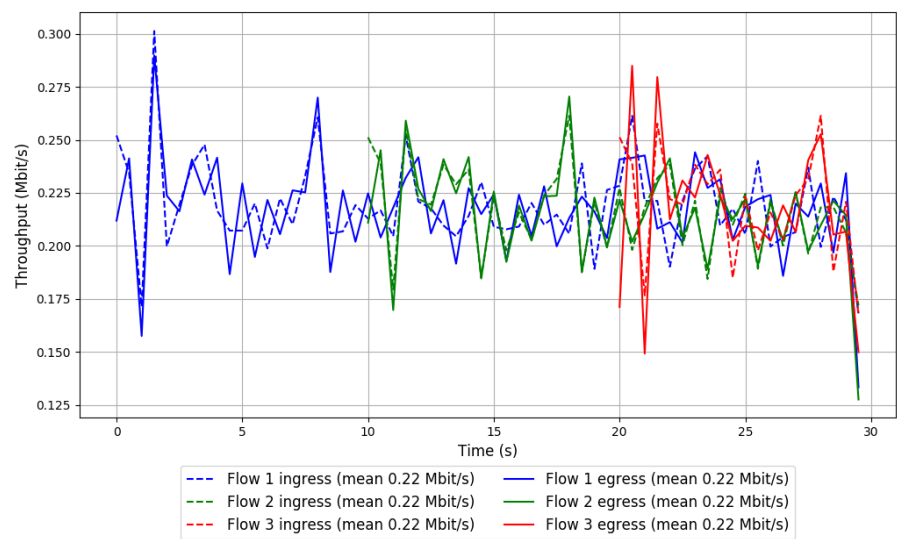


```
Run 6: Statistics of SReAM

Start at: 2017-12-20 14:38:31
End at: 2017-12-20 14:39:02

# Below is generated by plot.py at 2017-12-20 18:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.968 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.791 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.046 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.594 ms
Loss rate: 1.50%
```

Run 6: Report of SReAM — Data Link

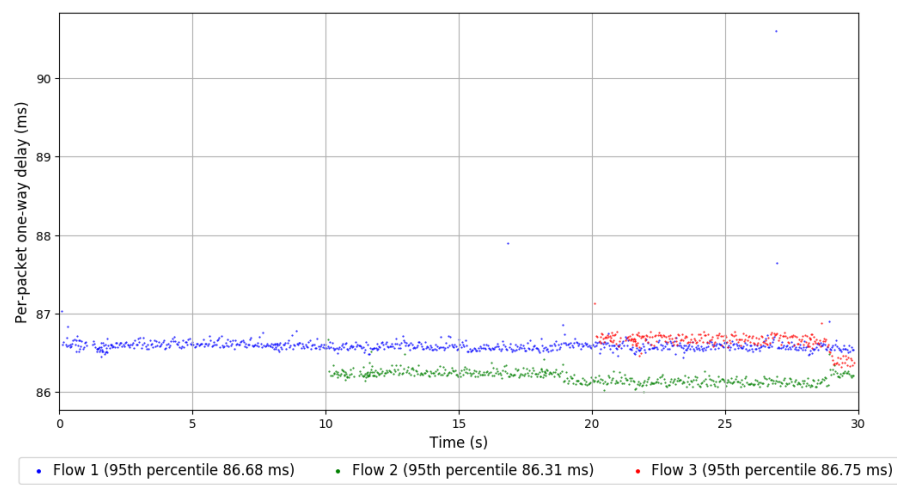
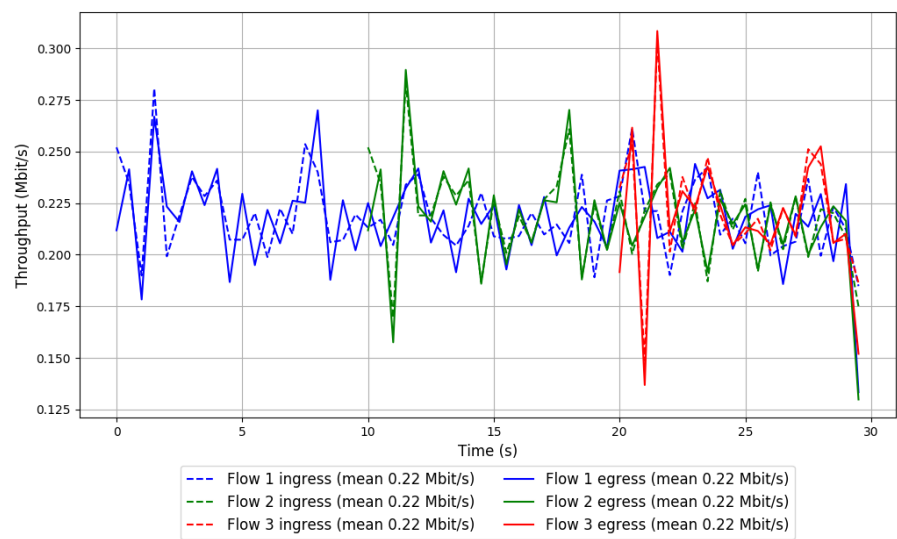


```
Run 7: Statistics of SReAM

Start at: 2017-12-20 14:53:49
End at: 2017-12-20 14:54:19

# Below is generated by plot.py at 2017-12-20 18:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.714 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.676 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.306 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.746 ms
Loss rate: 1.50%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2017-12-20 15:09:09

End at: 2017-12-20 15:09:39

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 86.773 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.753 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.773 ms

Loss rate: 0.85%

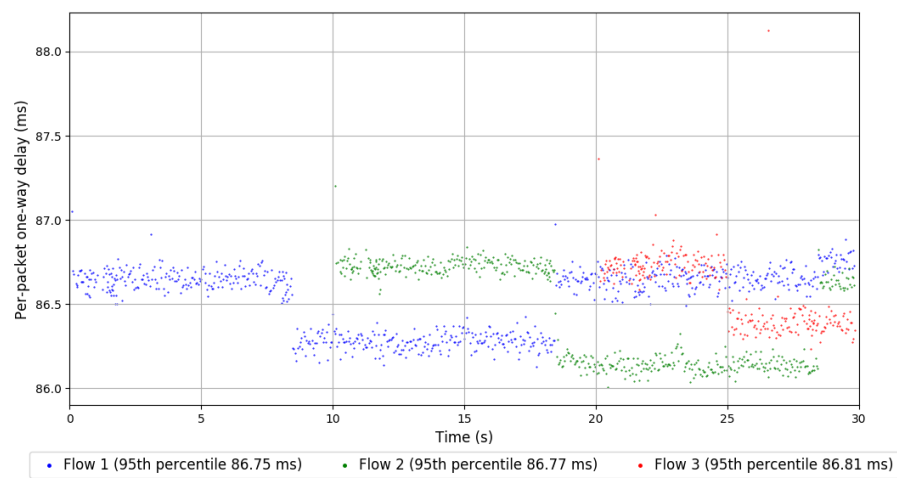
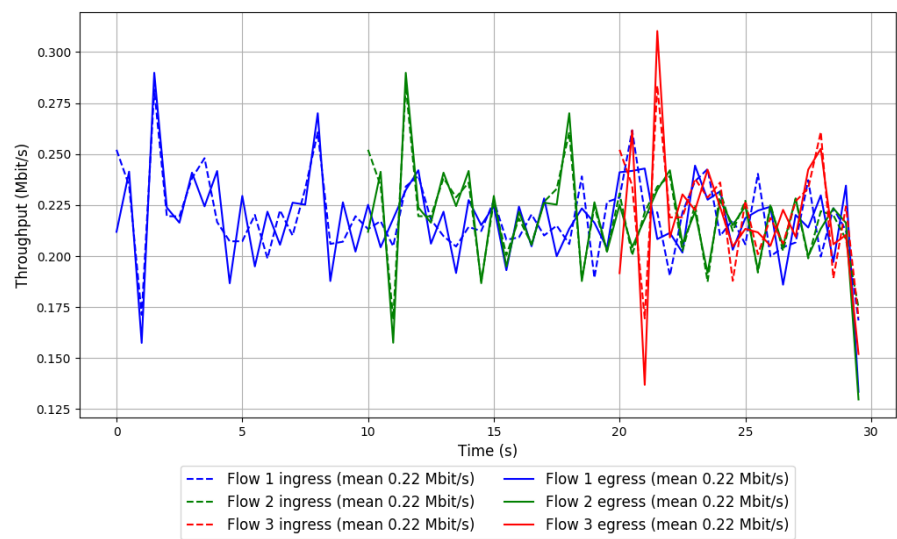
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.805 ms

Loss rate: 1.50%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2017-12-20 15:24:35

End at: 2017-12-20 15:25:05

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 86.722 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.711 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.734 ms

Loss rate: 0.85%

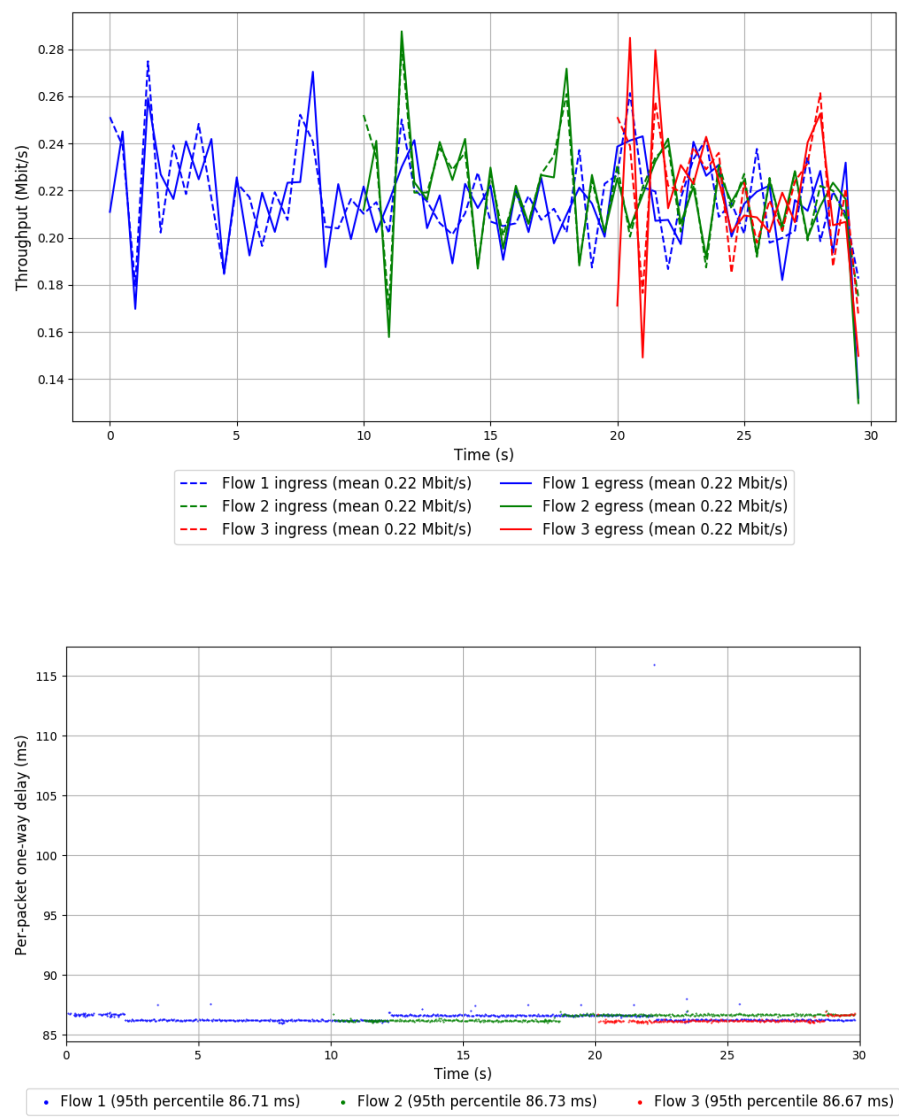
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.674 ms

Loss rate: 1.50%

Run 9: Report of SReAM — Data Link

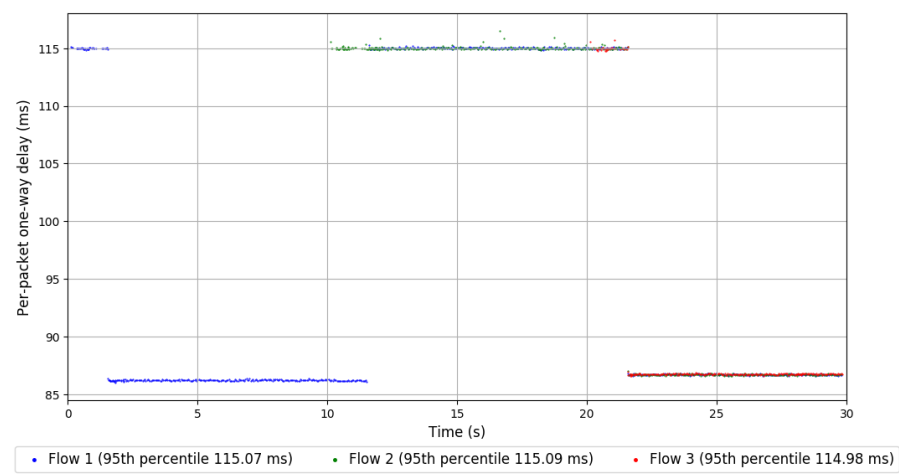
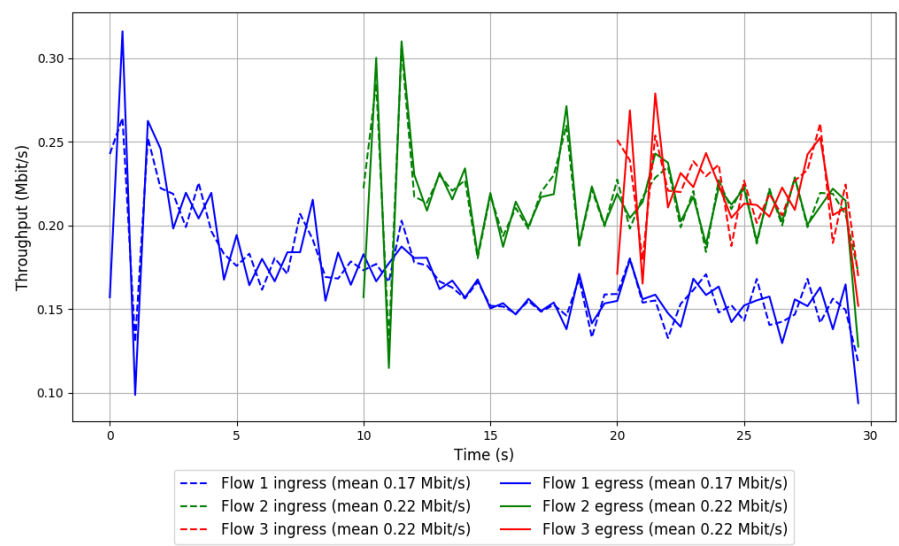


```
Run 10: Statistics of SReAM

Start at: 2017-12-20 15:38:56
End at: 2017-12-20 15:39:26

# Below is generated by plot.py at 2017-12-20 18:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 115.070 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 115.069 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 115.090 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.985 ms
Loss rate: 1.51%
```

Run 10: Report of SReAM — Data Link

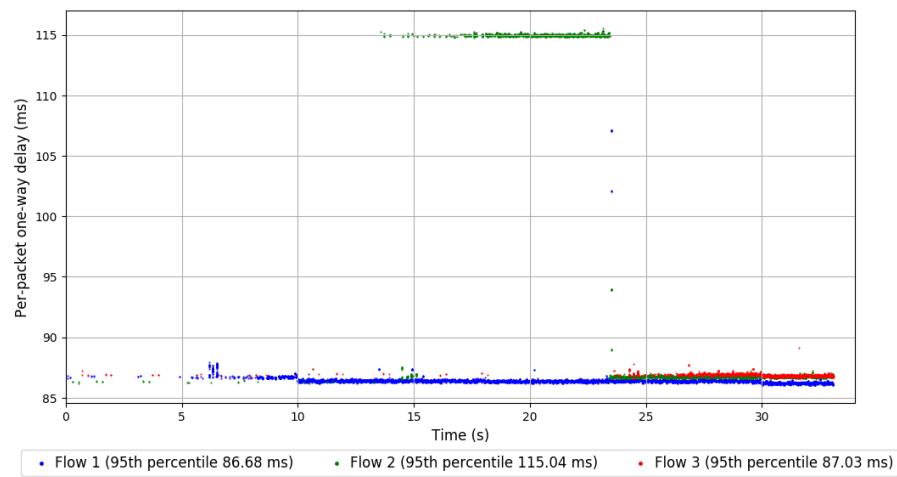
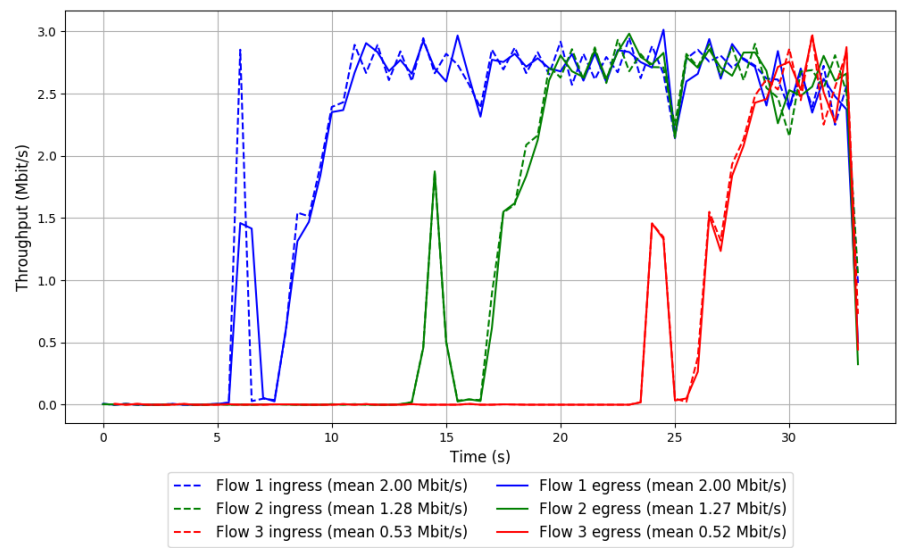


```
Run 1: Statistics of WebRTC media

Start at: 2017-12-20 13:16:17
End at: 2017-12-20 13:16:47

# Below is generated by plot.py at 2017-12-20 18:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 114.975 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 86.682 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 1.27 Mbit/s
95th percentile per-packet one-way delay: 115.042 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 87.034 ms
Loss rate: 2.11%
```


Run 1: Report of WebRTC media — Data Link

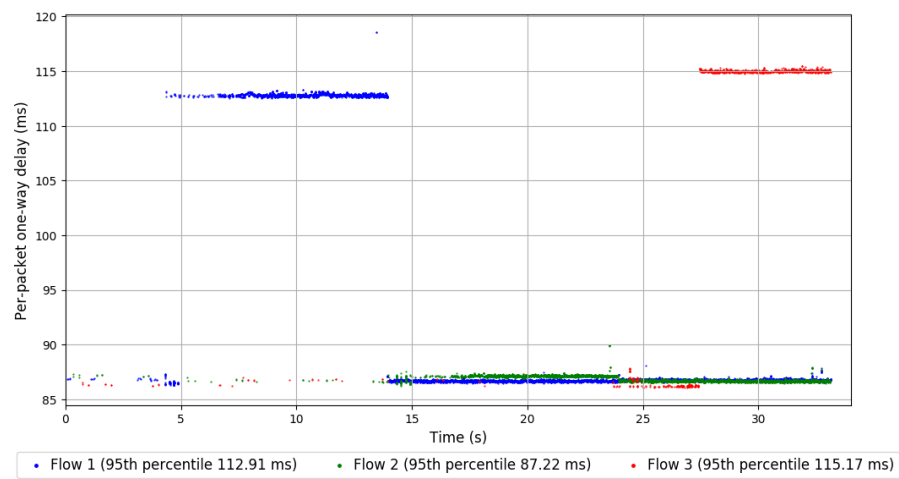
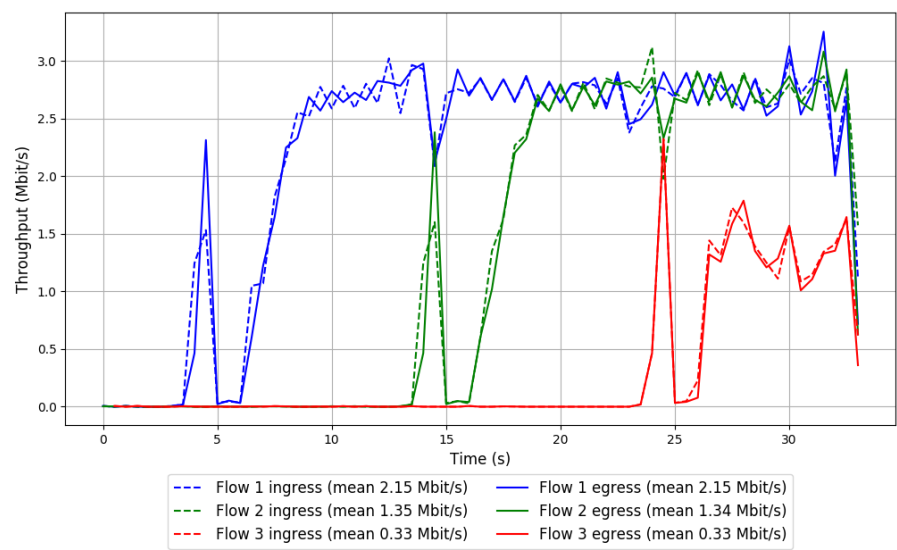


```
Run 2: Statistics of WebRTC media

Start at: 2017-12-20 13:31:33
End at: 2017-12-20 13:32:03

# Below is generated by plot.py at 2017-12-20 18:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.80 Mbit/s
95th percentile per-packet one-way delay: 114.933 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 112.908 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 87.217 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 115.175 ms
Loss rate: 2.82%
```

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-12-20 13:46:40

End at: 2017-12-20 13:47:10

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.95 Mbit/s

95th percentile per-packet one-way delay: 86.782 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 86.475 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 86.801 ms

Loss rate: 0.82%

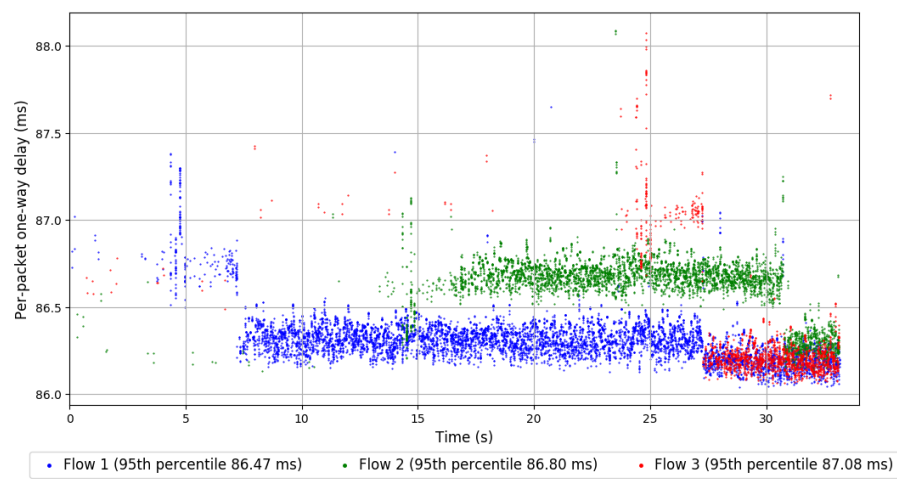
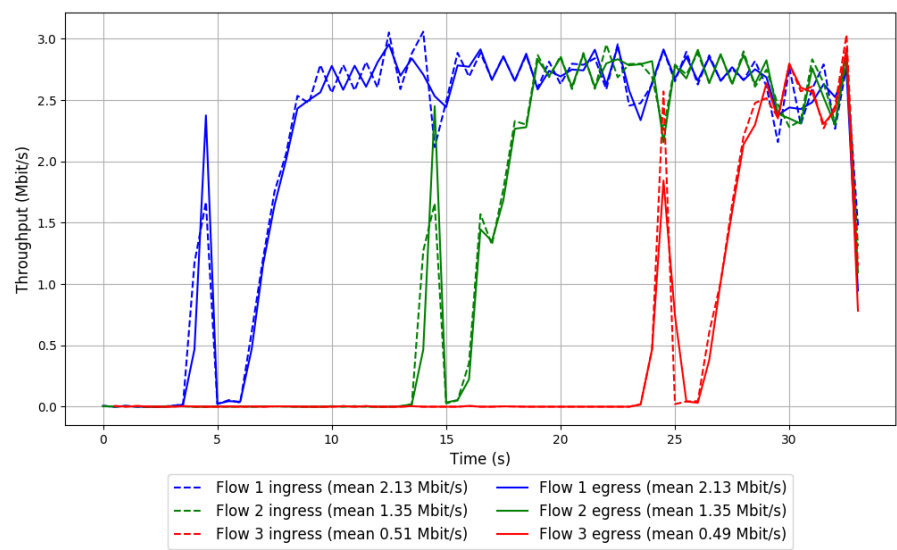
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 87.075 ms

Loss rate: 2.79%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-12-20 14:01:47

End at: 2017-12-20 14:02:17

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.91 Mbit/s

95th percentile per-packet one-way delay: 87.106 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 87.108 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 86.798 ms

Loss rate: 1.33%

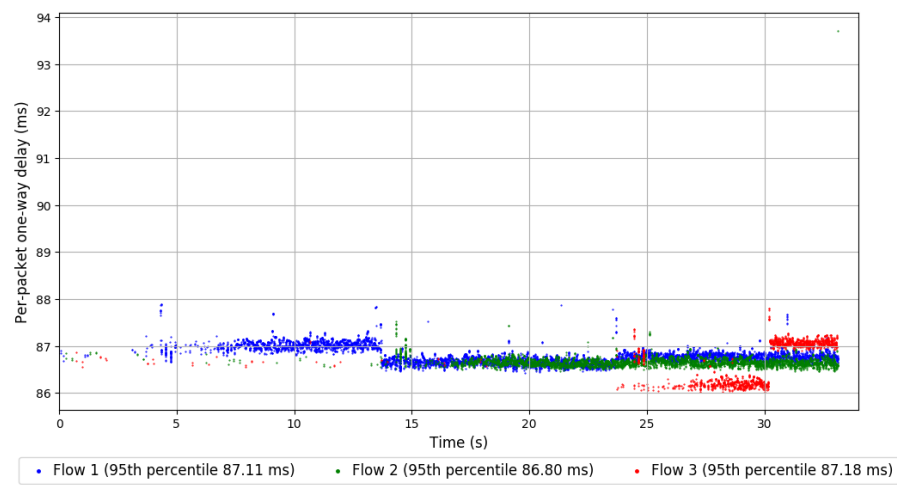
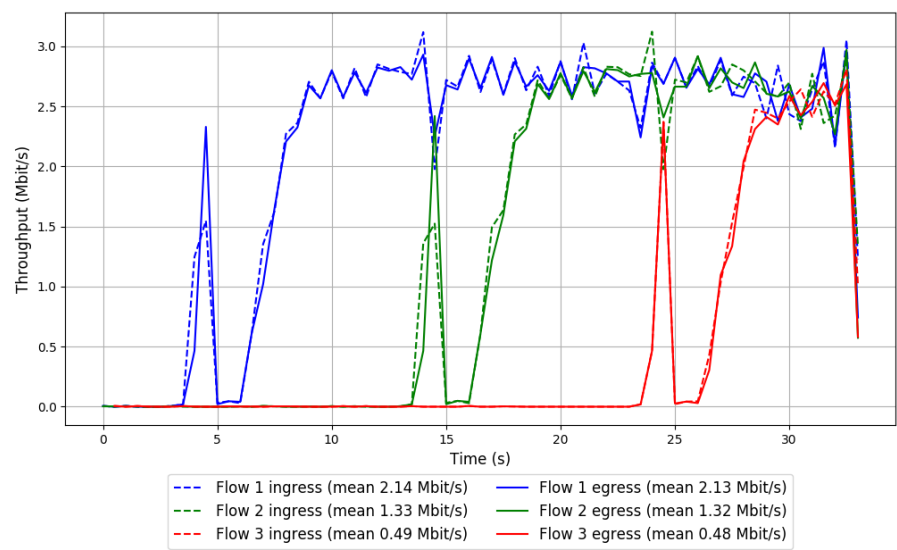
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 87.176 ms

Loss rate: 3.16%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-12-20 14:17:00

End at: 2017-12-20 14:17:30

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.91 Mbit/s

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

Loss rate: 0.96%

-- Flow 1:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 86.981 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 86.882 ms

Loss rate: 0.83%

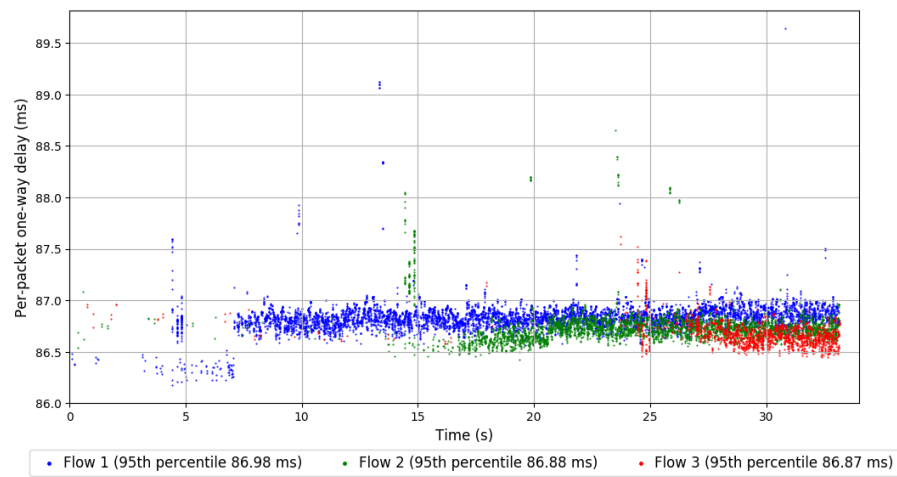
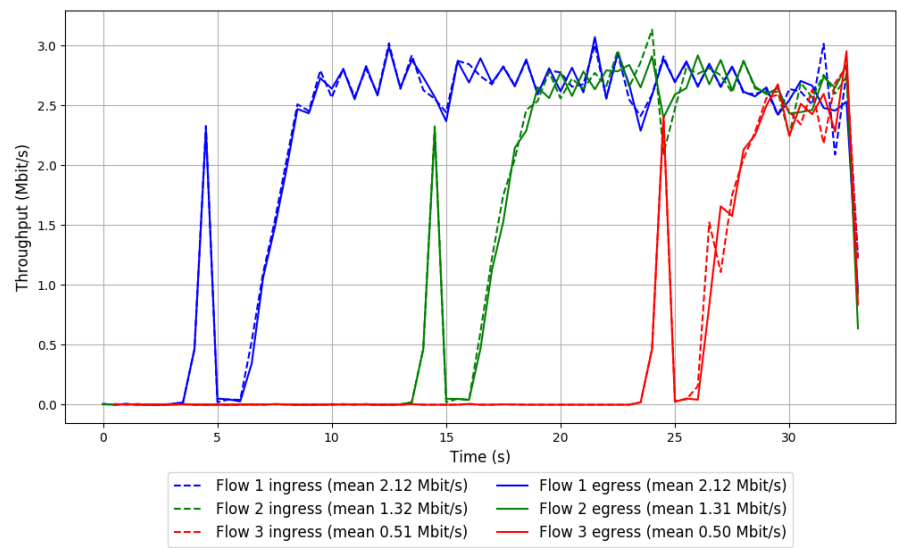
-- Flow 3:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 86.872 ms

Loss rate: 2.51%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-12-20 14:32:18

End at: 2017-12-20 14:32:48

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.92 Mbit/s

95th percentile per-packet one-way delay: 87.051 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 86.794 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 86.327 ms

Loss rate: 1.13%

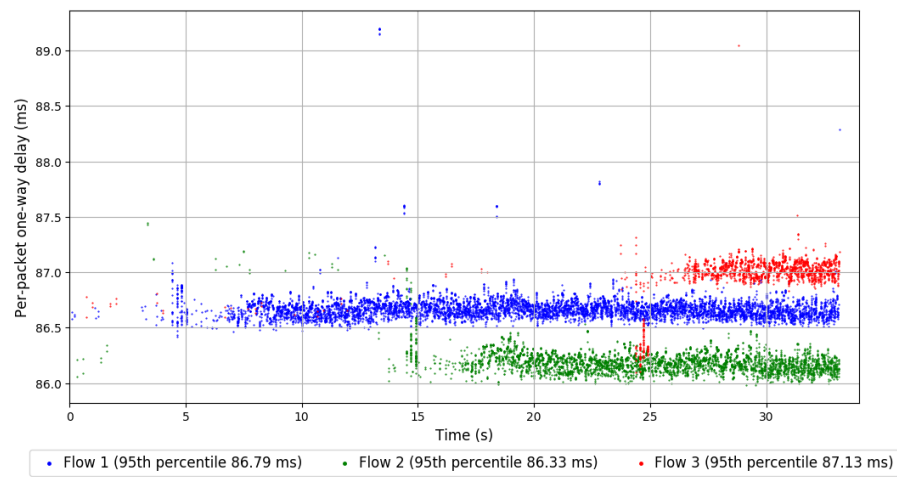
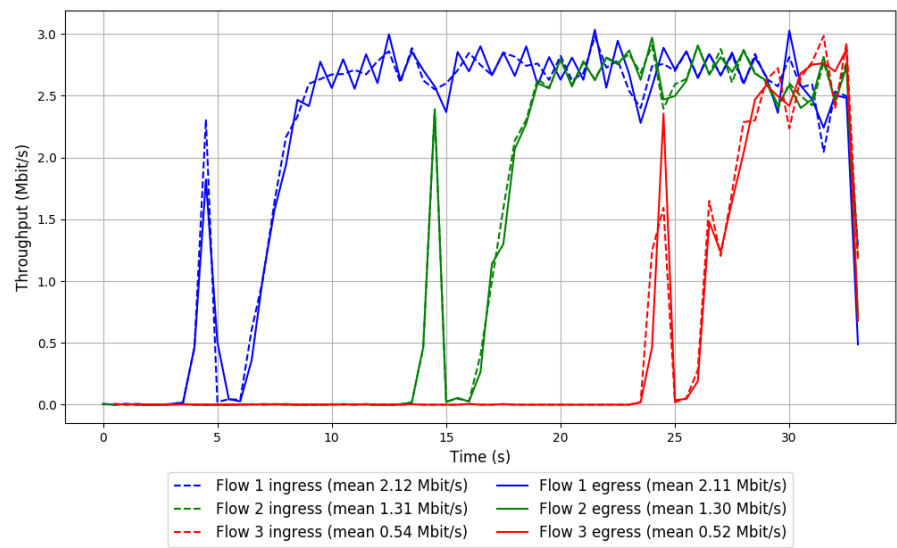
-- Flow 3:

Average throughput: 0.52 Mbit/s

95th percentile per-packet one-way delay: 87.130 ms

Loss rate: 2.64%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-12-20 14:47:33

End at: 2017-12-20 14:48:03

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.99 Mbit/s

95th percentile per-packet one-way delay: 87.076 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 87.081 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 86.822 ms

Loss rate: 0.75%

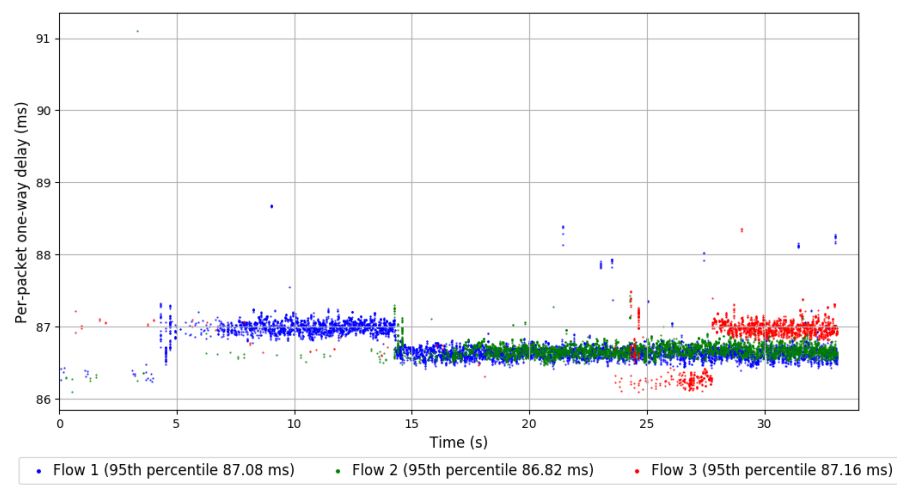
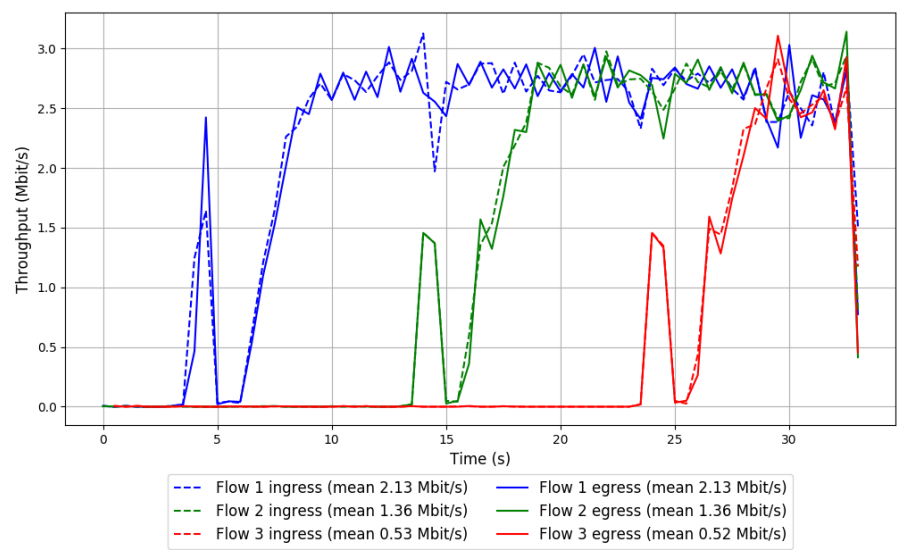
-- Flow 3:

Average throughput: 0.52 Mbit/s

95th percentile per-packet one-way delay: 87.158 ms

Loss rate: 2.72%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2017-12-20 15:02:48

End at: 2017-12-20 15:03:18

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.00 Mbit/s

95th percentile per-packet one-way delay: 86.760 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 86.718 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 86.809 ms

Loss rate: 0.76%

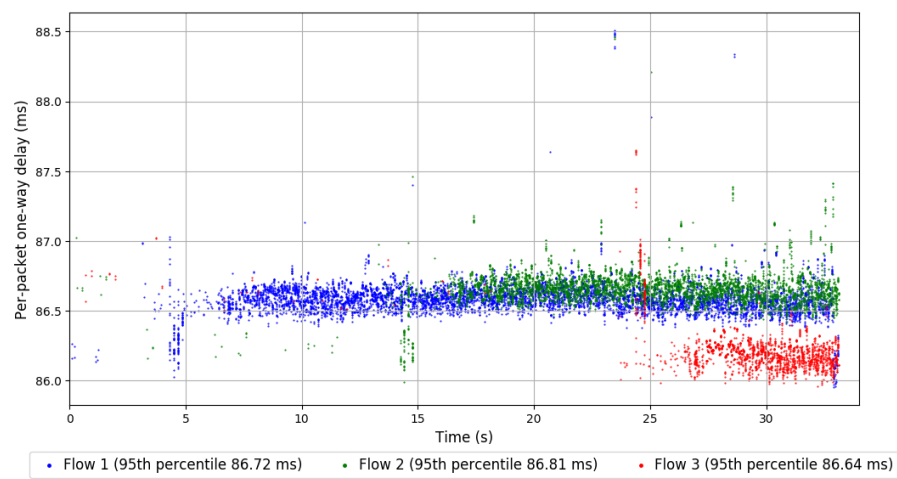
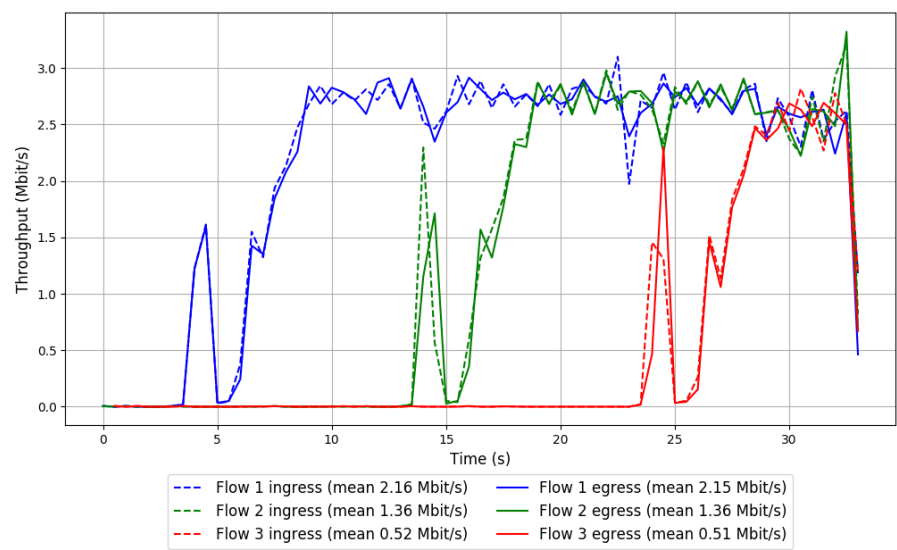
-- Flow 3:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 86.641 ms

Loss rate: 2.86%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

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

End at: 2017-12-20 15:18:45

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.99 Mbit/s

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

Loss rate: 1.00%

-- Flow 1:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 86.804 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 86.690 ms

Loss rate: 0.68%

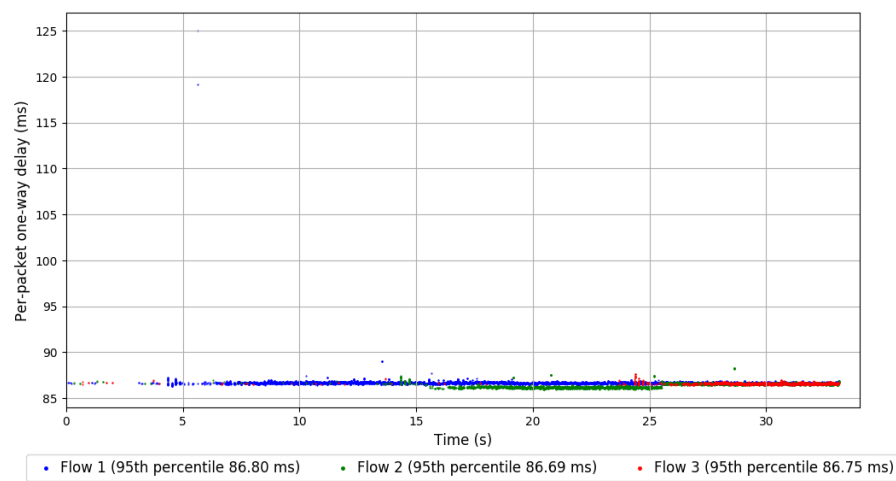
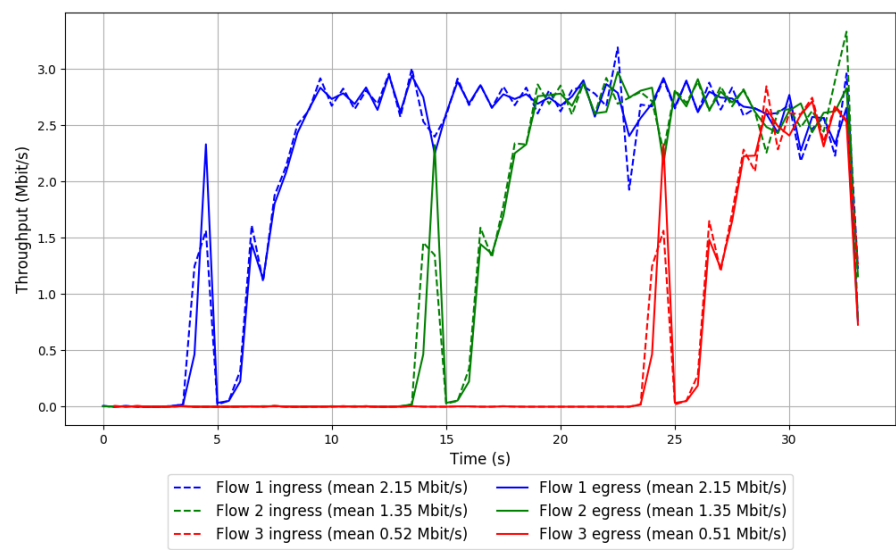
-- Flow 3:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 86.746 ms

Loss rate: 3.12%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-12-20 15:32:53

End at: 2017-12-20 15:33:23

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.76 Mbit/s

95th percentile per-packet one-way delay: 114.984 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 2.10 Mbit/s

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

Loss rate: 0.79%

-- Flow 2:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 112.859 ms

Loss rate: 1.09%

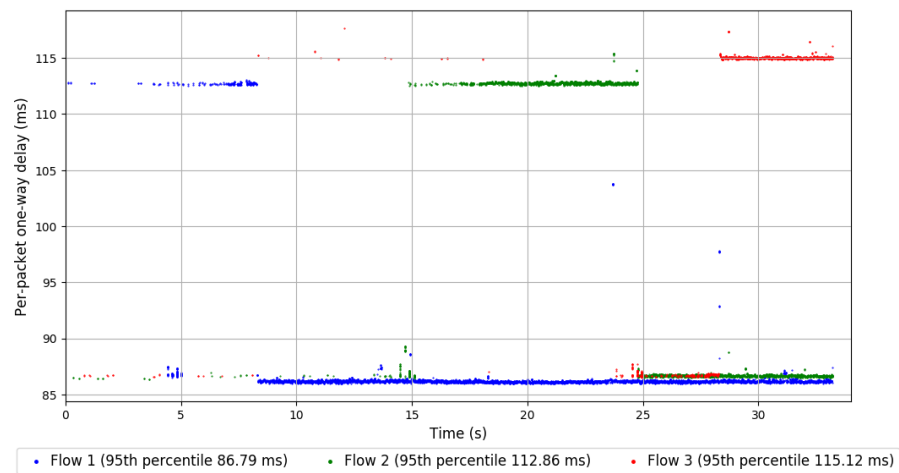
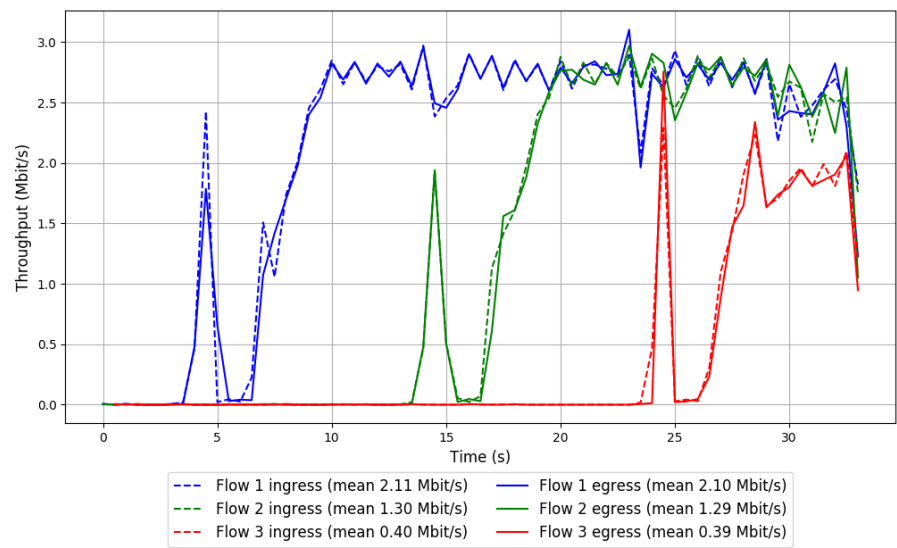
-- Flow 3:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 115.122 ms

Loss rate: 3.02%

Run 10: Report of WebRTC media — Data Link

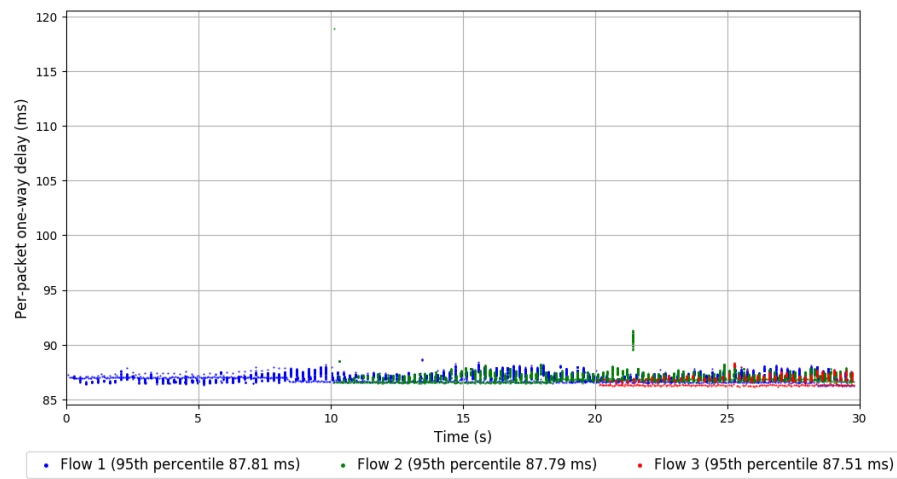
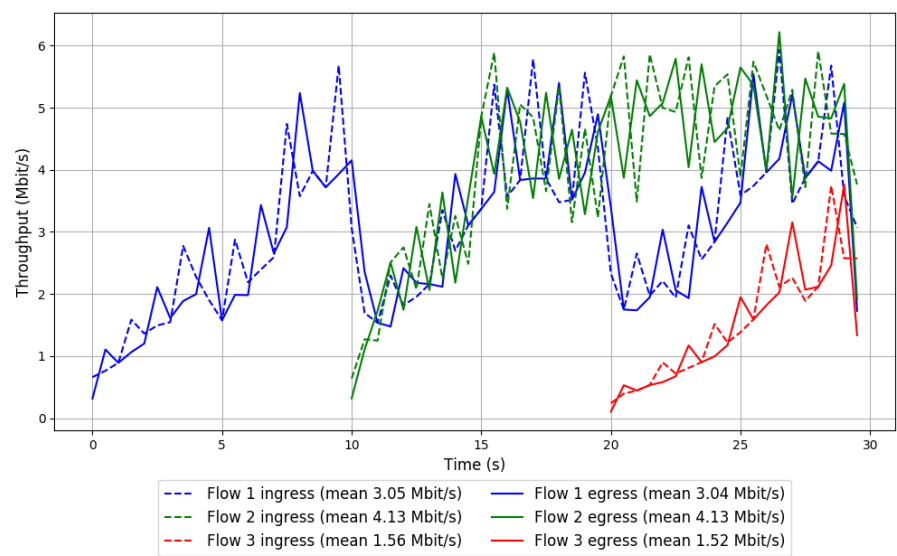


```
Run 1: Statistics of Sprout

Start at: 2017-12-20 13:20:59
End at: 2017-12-20 13:21:29

# Below is generated by plot.py at 2017-12-20 18:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.27 Mbit/s
95th percentile per-packet one-way delay: 87.787 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 3.04 Mbit/s
95th percentile per-packet one-way delay: 87.808 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 4.13 Mbit/s
95th percentile per-packet one-way delay: 87.787 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 87.506 ms
Loss rate: 4.34%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-12-20 13:36:12

End at: 2017-12-20 13:36:42

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.21 Mbit/s

95th percentile per-packet one-way delay: 87.836 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 4.09 Mbit/s

95th percentile per-packet one-way delay: 87.870 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 3.88 Mbit/s

95th percentile per-packet one-way delay: 87.811 ms

Loss rate: 0.18%

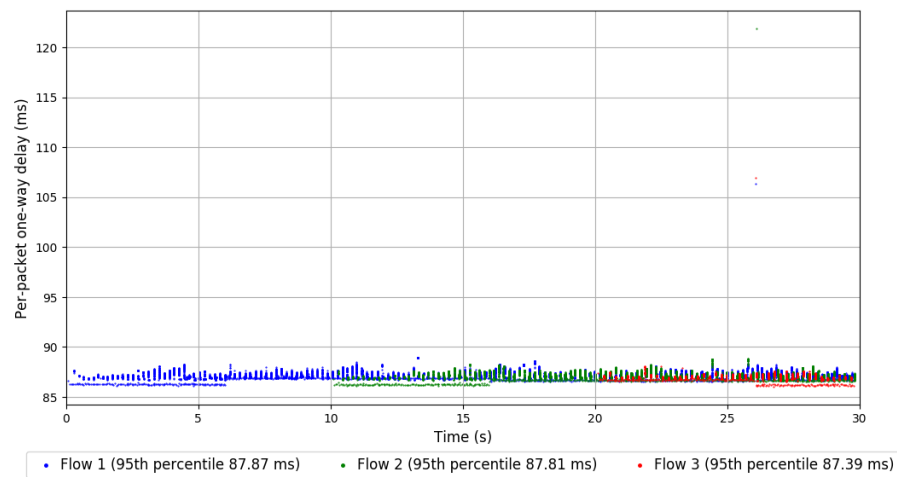
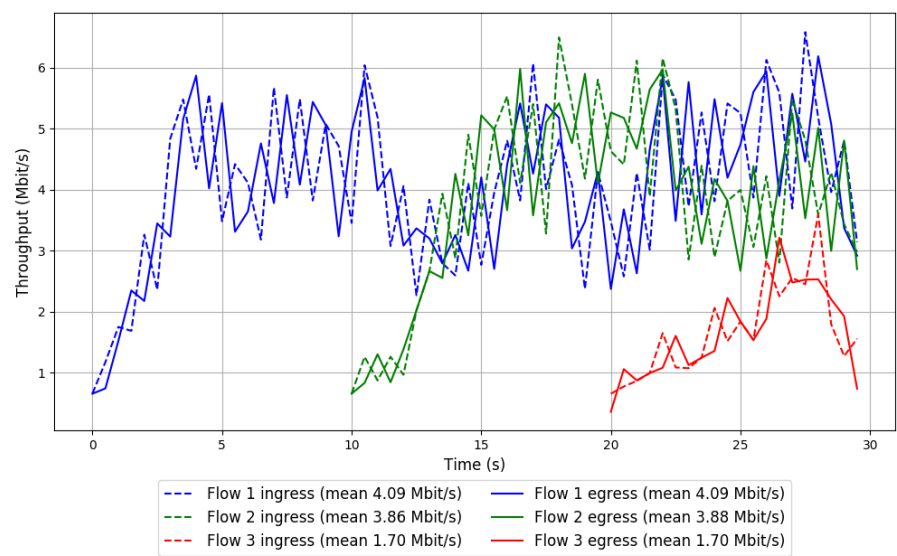
-- Flow 3:

Average throughput: 1.70 Mbit/s

95th percentile per-packet one-way delay: 87.390 ms

Loss rate: 2.45%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-12-20 13:51:17

End at: 2017-12-20 13:51:47

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.13 Mbit/s

95th percentile per-packet one-way delay: 87.841 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 2.18 Mbit/s

95th percentile per-packet one-way delay: 87.879 ms

Loss rate: 1.47%

-- Flow 2:

Average throughput: 4.11 Mbit/s

95th percentile per-packet one-way delay: 87.912 ms

Loss rate: 1.11%

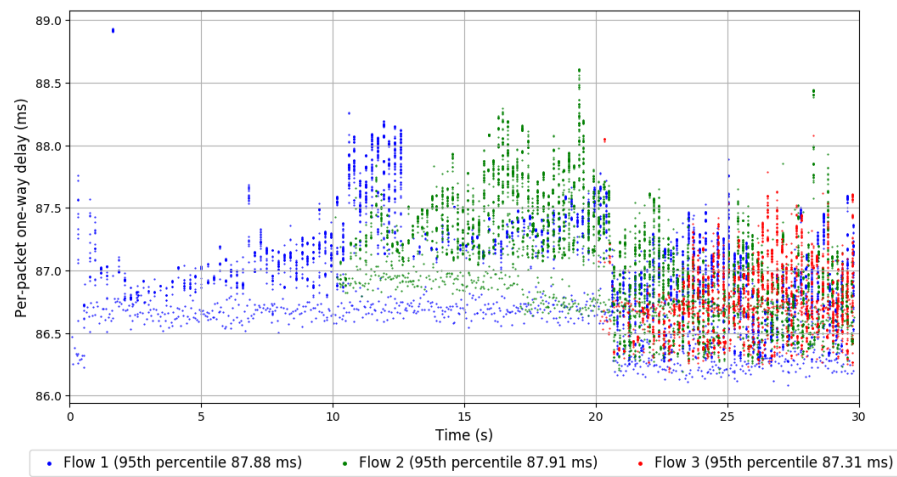
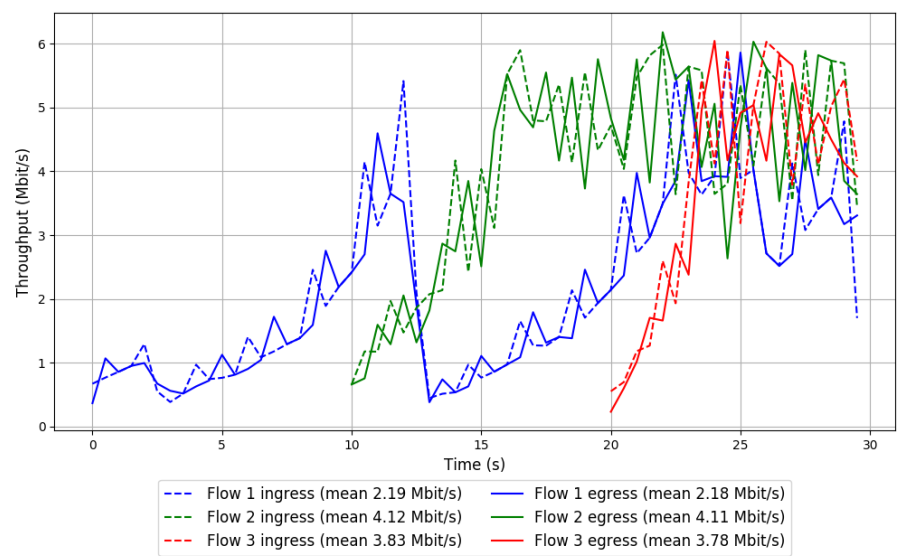
-- Flow 3:

Average throughput: 3.78 Mbit/s

95th percentile per-packet one-way delay: 87.314 ms

Loss rate: 3.08%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-12-20 14:06:35

End at: 2017-12-20 14:07:05

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.93 Mbit/s

95th percentile per-packet one-way delay: 87.766 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 3.59 Mbit/s

95th percentile per-packet one-way delay: 87.839 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 3.75 Mbit/s

95th percentile per-packet one-way delay: 87.605 ms

Loss rate: 1.15%

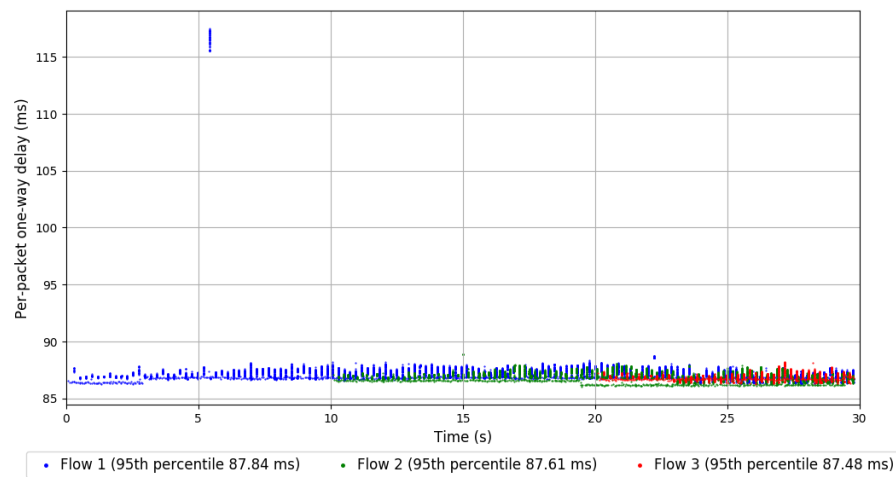
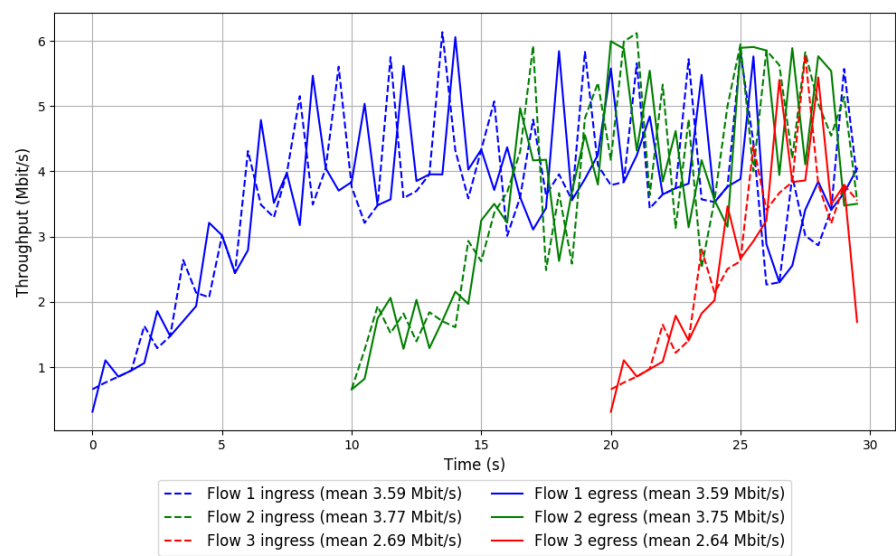
-- Flow 3:

Average throughput: 2.64 Mbit/s

95th percentile per-packet one-way delay: 87.482 ms

Loss rate: 3.52%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-12-20 14:21:41

End at: 2017-12-20 14:22:11

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.68 Mbit/s

95th percentile per-packet one-way delay: 87.779 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 3.38 Mbit/s

95th percentile per-packet one-way delay: 87.864 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 3.48 Mbit/s

95th percentile per-packet one-way delay: 87.721 ms

Loss rate: 2.66%

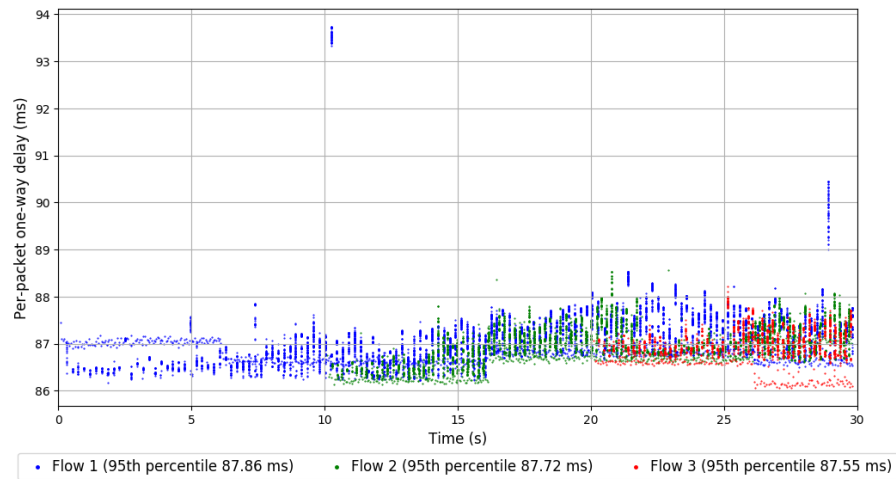
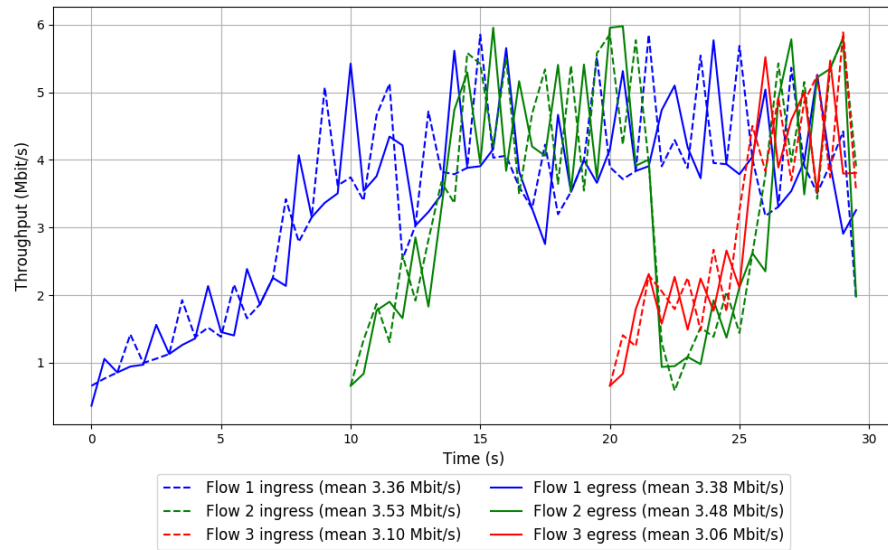
-- Flow 3:

Average throughput: 3.06 Mbit/s

95th percentile per-packet one-way delay: 87.552 ms

Loss rate: 2.99%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-12-20 14:36:59

End at: 2017-12-20 14:37:29

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.26 Mbit/s

95th percentile per-packet one-way delay: 87.754 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 2.58 Mbit/s

95th percentile per-packet one-way delay: 87.914 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 3.73 Mbit/s

95th percentile per-packet one-way delay: 87.668 ms

Loss rate: 1.28%

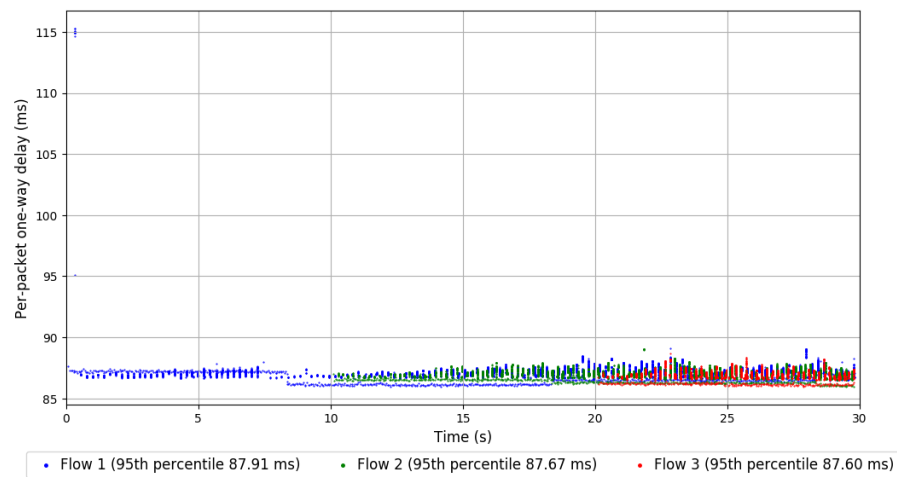
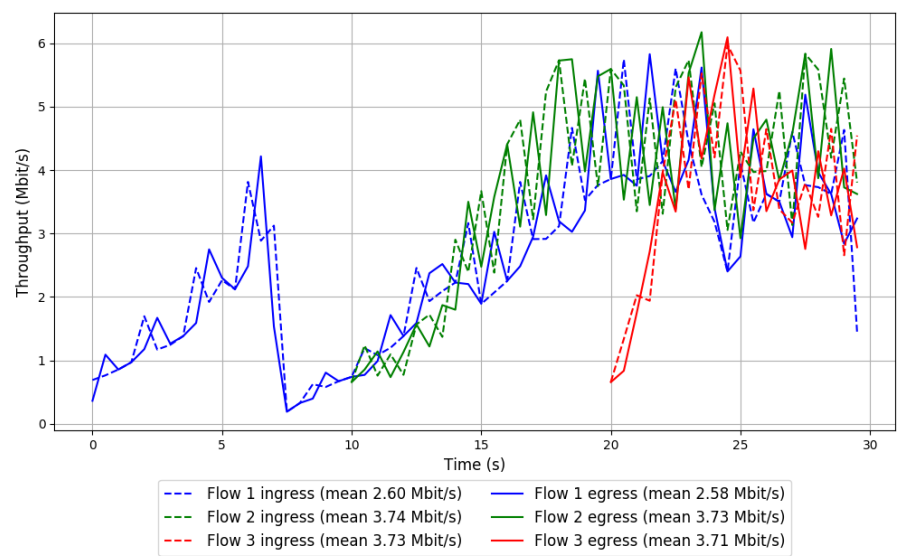
-- Flow 3:

Average throughput: 3.71 Mbit/s

95th percentile per-packet one-way delay: 87.598 ms

Loss rate: 2.40%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-12-20 14:52:14

End at: 2017-12-20 14:52:44

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.29 Mbit/s

95th percentile per-packet one-way delay: 87.292 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 4.34 Mbit/s

95th percentile per-packet one-way delay: 87.343 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 2.52 Mbit/s

95th percentile per-packet one-way delay: 87.140 ms

Loss rate: 1.60%

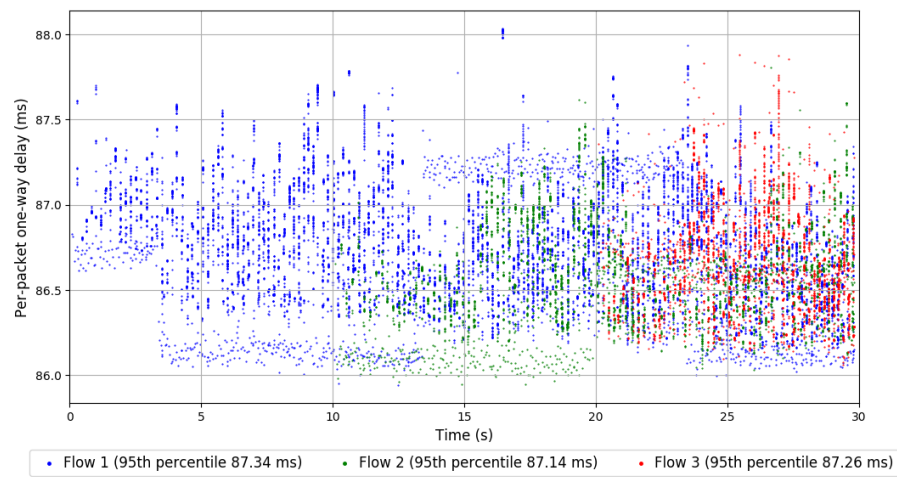
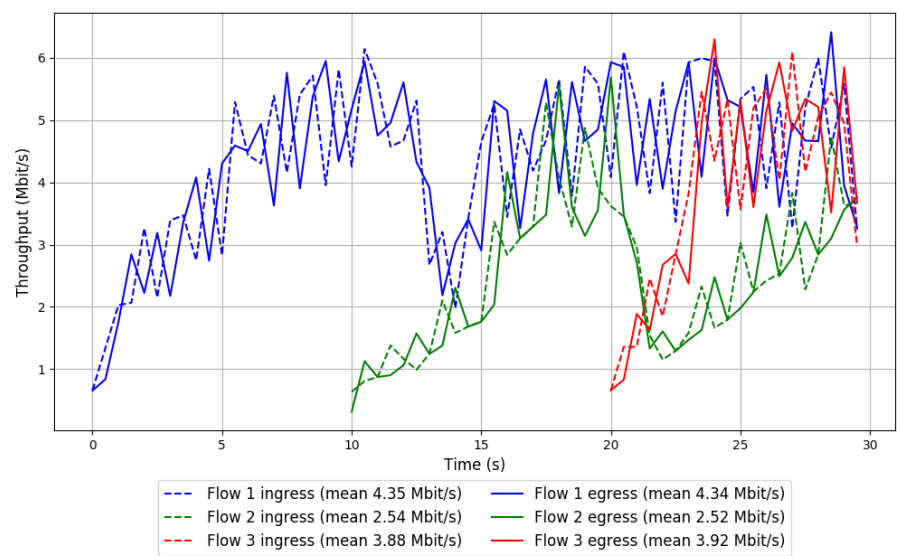
-- Flow 3:

Average throughput: 3.92 Mbit/s

95th percentile per-packet one-way delay: 87.261 ms

Loss rate: 0.43%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-12-20 15:07:37

End at: 2017-12-20 15:08:07

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.36 Mbit/s

95th percentile per-packet one-way delay: 87.725 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 3.72 Mbit/s

95th percentile per-packet one-way delay: 87.694 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 3.94 Mbit/s

95th percentile per-packet one-way delay: 87.664 ms

Loss rate: 1.10%

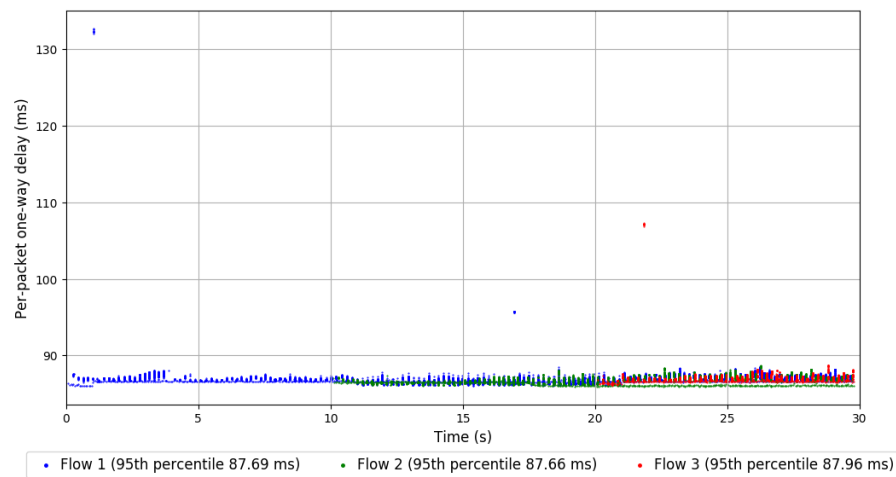
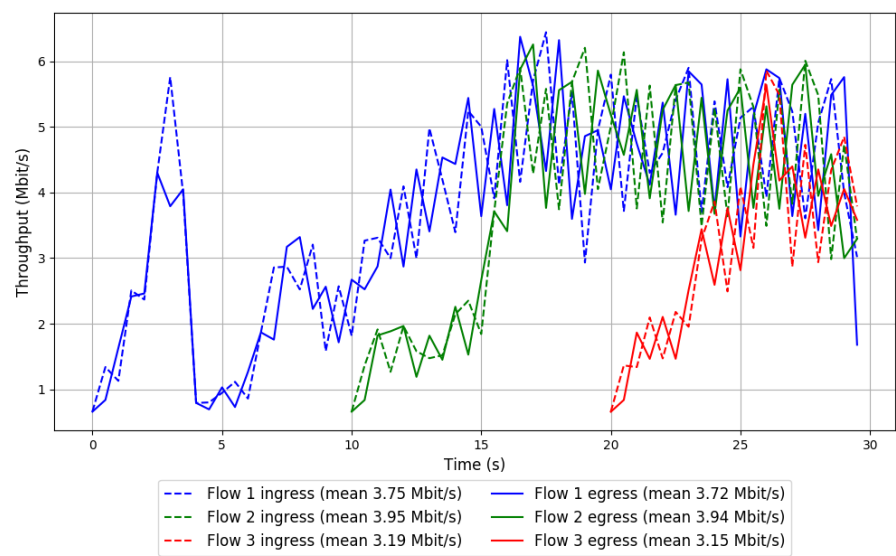
-- Flow 3:

Average throughput: 3.15 Mbit/s

95th percentile per-packet one-way delay: 87.962 ms

Loss rate: 2.96%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-12-20 15:23:01

End at: 2017-12-20 15:23:31

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.35 Mbit/s

95th percentile per-packet one-way delay: 87.772 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 4.22 Mbit/s

95th percentile per-packet one-way delay: 87.784 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 3.44 Mbit/s

95th percentile per-packet one-way delay: 87.761 ms

Loss rate: 1.62%

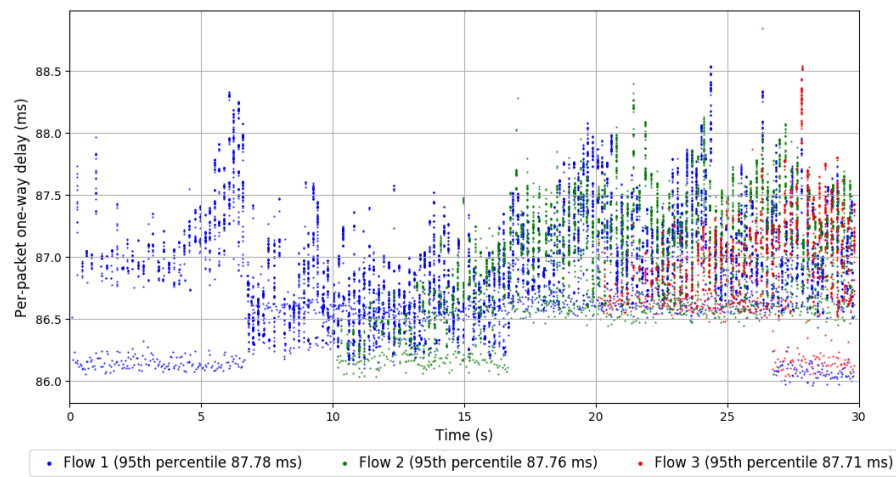
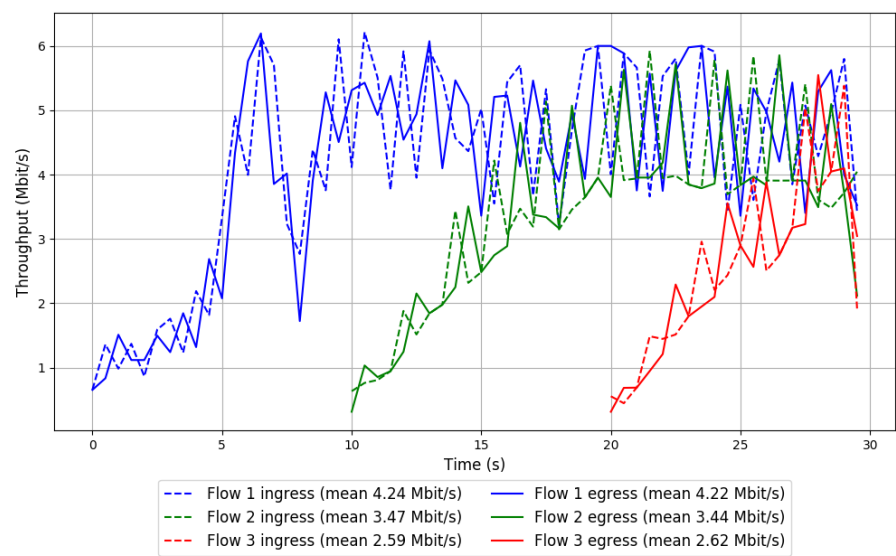
-- Flow 3:

Average throughput: 2.62 Mbit/s

95th percentile per-packet one-way delay: 87.713 ms

Loss rate: 0.30%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-12-20 15:37:22

End at: 2017-12-20 15:37:52

Below is generated by plot.py at 2017-12-20 18:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 115.571 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 2.69 Mbit/s

95th percentile per-packet one-way delay: 115.625 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 1.37 Mbit/s

95th percentile per-packet one-way delay: 115.108 ms

Loss rate: 0.34%

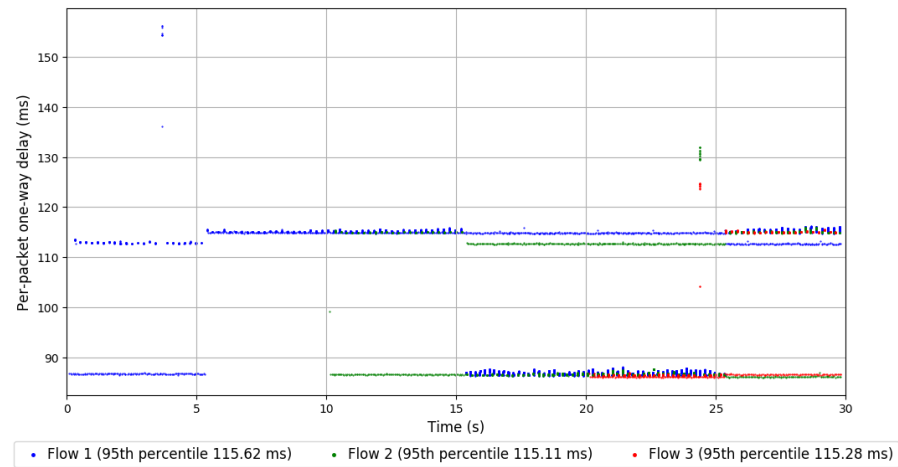
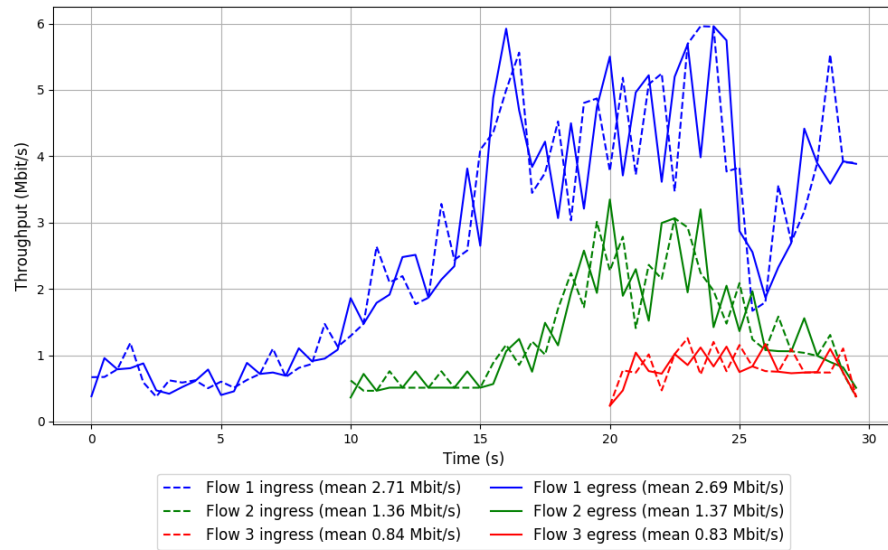
-- Flow 3:

Average throughput: 0.83 Mbit/s

95th percentile per-packet one-way delay: 115.278 ms

Loss rate: 2.19%

Run 10: Report of Sprout — Data Link

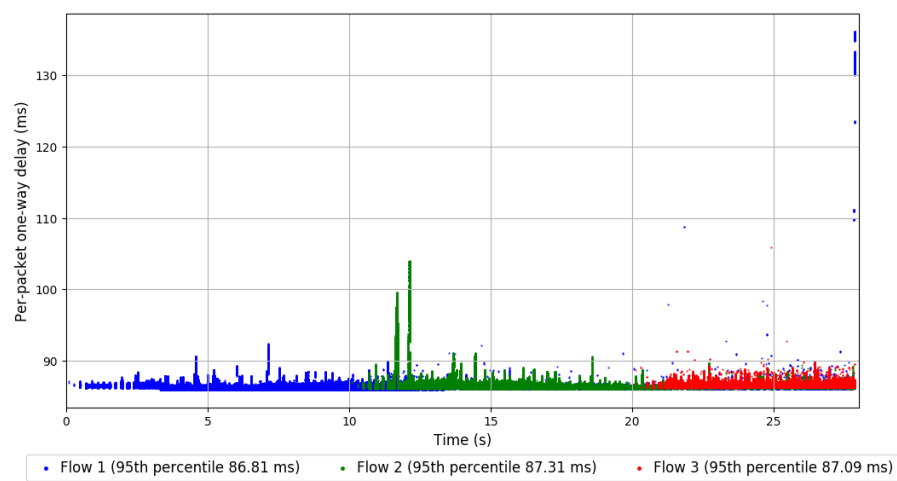
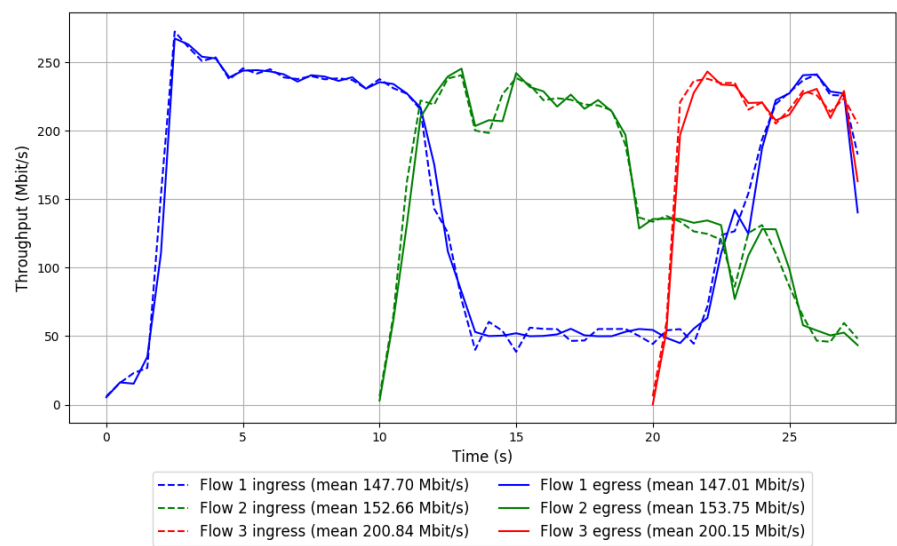


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-12-20 13:13:09
End at: 2017-12-20 13:13:39

# Below is generated by plot.py at 2017-12-20 18:43:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 301.30 Mbit/s
95th percentile per-packet one-way delay: 87.024 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 147.01 Mbit/s
95th percentile per-packet one-way delay: 86.810 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 153.75 Mbit/s
95th percentile per-packet one-way delay: 87.313 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 200.15 Mbit/s
95th percentile per-packet one-way delay: 87.089 ms
Loss rate: 2.46%
```


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

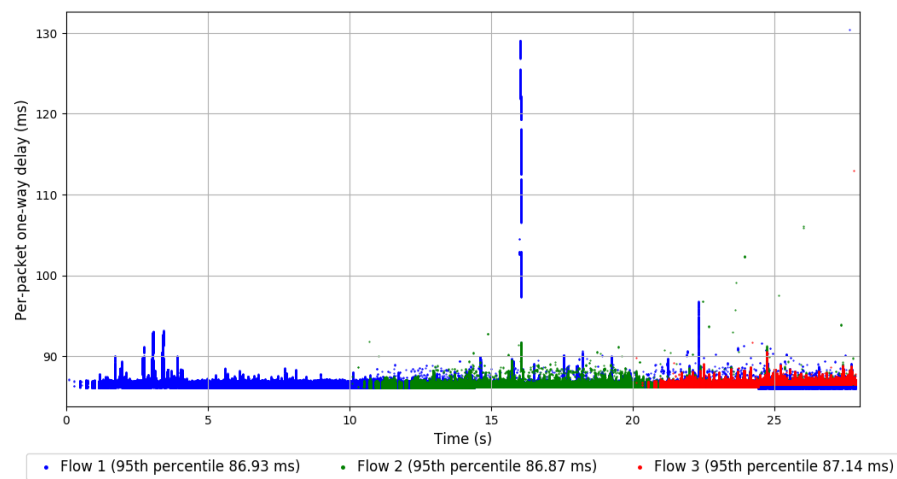
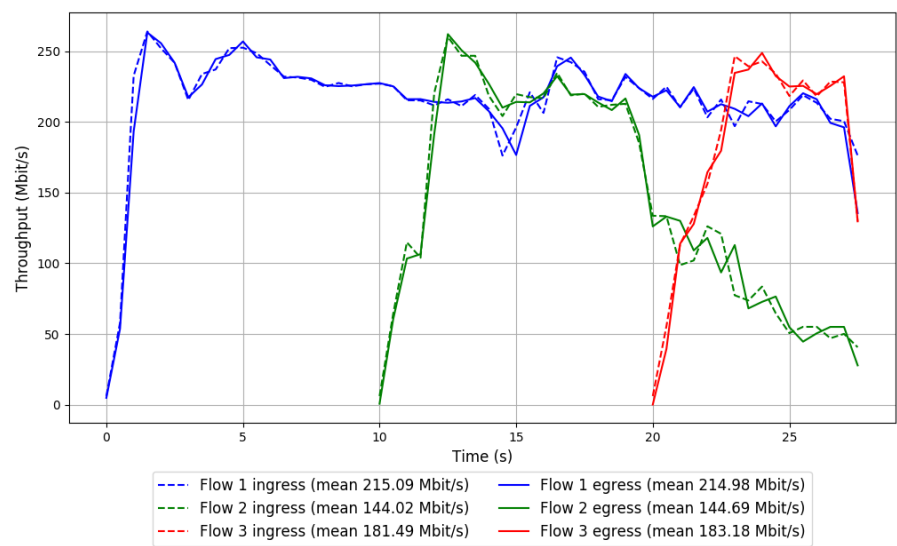


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-12-20 13:28:21
End at: 2017-12-20 13:28:51

# Below is generated by plot.py at 2017-12-20 18:44:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.30 Mbit/s
95th percentile per-packet one-way delay: 86.948 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 214.98 Mbit/s
95th percentile per-packet one-way delay: 86.934 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 144.69 Mbit/s
95th percentile per-packet one-way delay: 86.868 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 183.18 Mbit/s
95th percentile per-packet one-way delay: 87.142 ms
Loss rate: 1.30%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2017-12-20 13:43:27

End at: 2017-12-20 13:43:58

Below is generated by plot.py at 2017-12-20 18:45:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 375.30 Mbit/s

95th percentile per-packet one-way delay: 87.611 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 192.76 Mbit/s

95th percentile per-packet one-way delay: 87.703 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 193.59 Mbit/s

95th percentile per-packet one-way delay: 87.244 ms

Loss rate: 0.71%

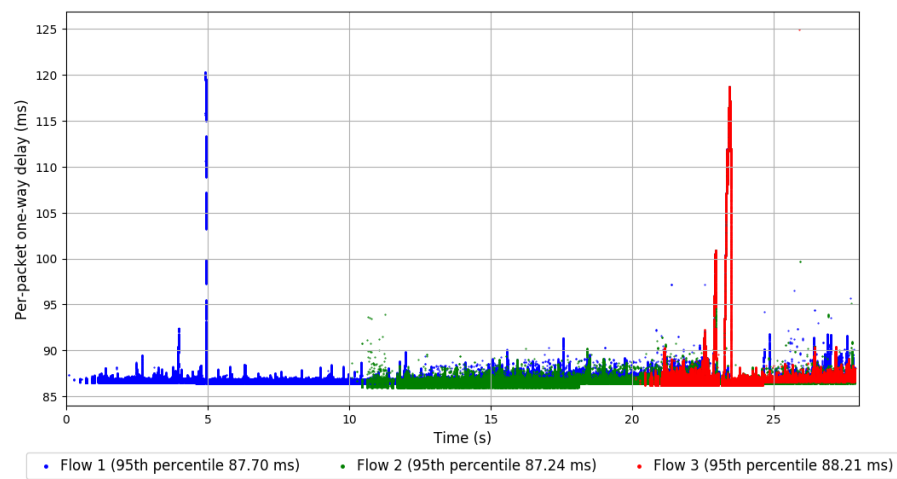
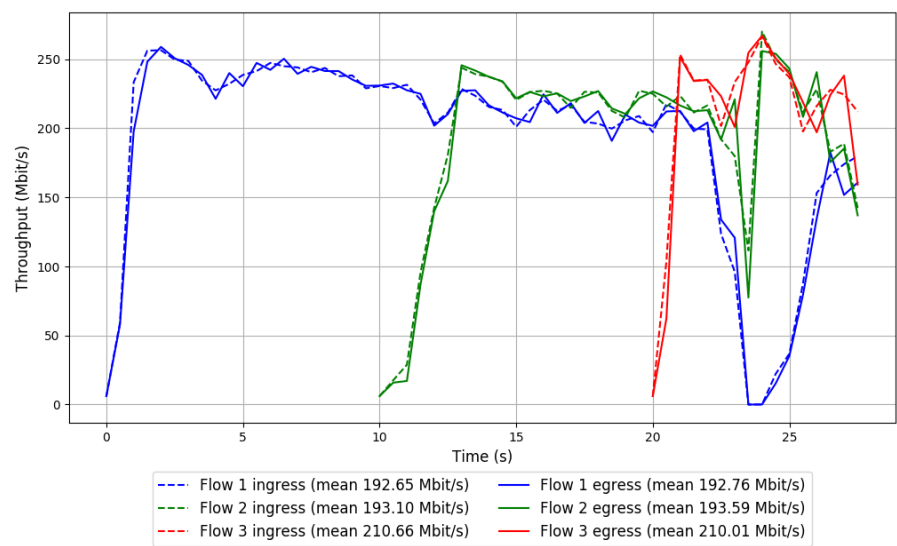
-- Flow 3:

Average throughput: 210.01 Mbit/s

95th percentile per-packet one-way delay: 88.209 ms

Loss rate: 2.45%

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



Run 4: Statistics of TaoVA-100x

Start at: 2017-12-20 13:58:31

End at: 2017-12-20 13:59:01

Below is generated by plot.py at 2017-12-20 18:45:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 361.56 Mbit/s

95th percentile per-packet one-way delay: 88.620 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 194.21 Mbit/s

95th percentile per-packet one-way delay: 86.960 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 186.47 Mbit/s

95th percentile per-packet one-way delay: 90.078 ms

Loss rate: 0.97%

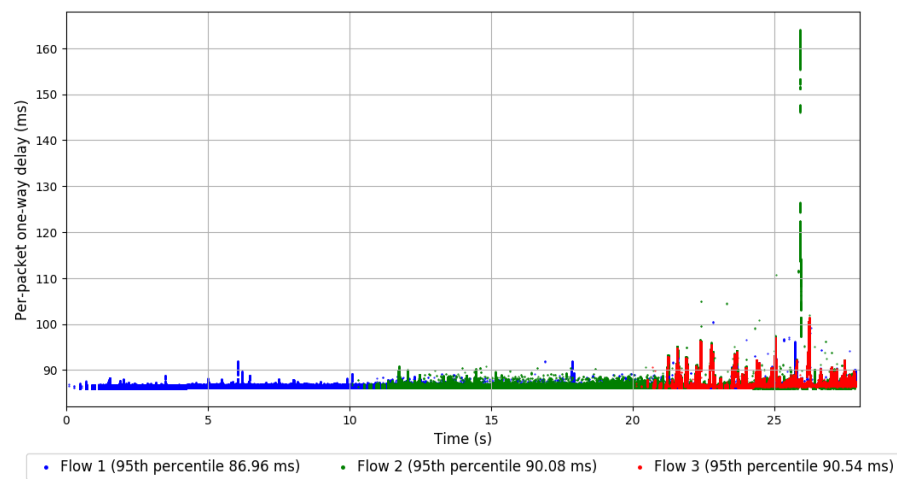
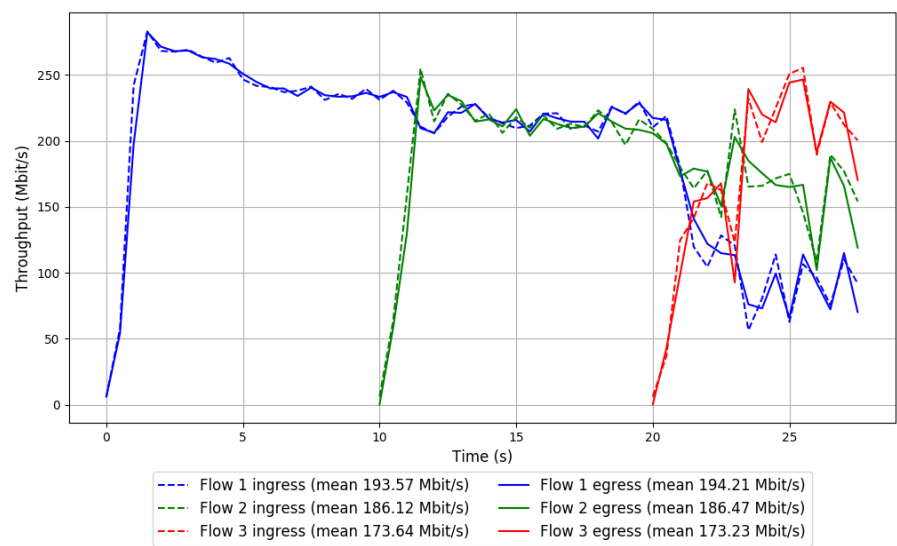
-- Flow 3:

Average throughput: 173.23 Mbit/s

95th percentile per-packet one-way delay: 90.536 ms

Loss rate: 2.44%

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



Run 5: Statistics of TaoVA-100x

Start at: 2017-12-20 14:13:46

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

Below is generated by plot.py at 2017-12-20 18:45:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 352.96 Mbit/s

95th percentile per-packet one-way delay: 90.141 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 196.78 Mbit/s

95th percentile per-packet one-way delay: 89.556 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 178.68 Mbit/s

95th percentile per-packet one-way delay: 87.757 ms

Loss rate: 1.20%

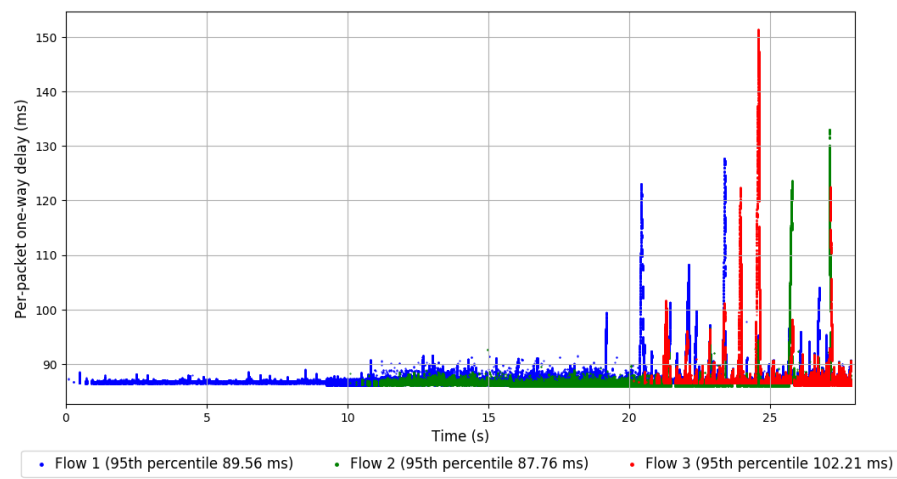
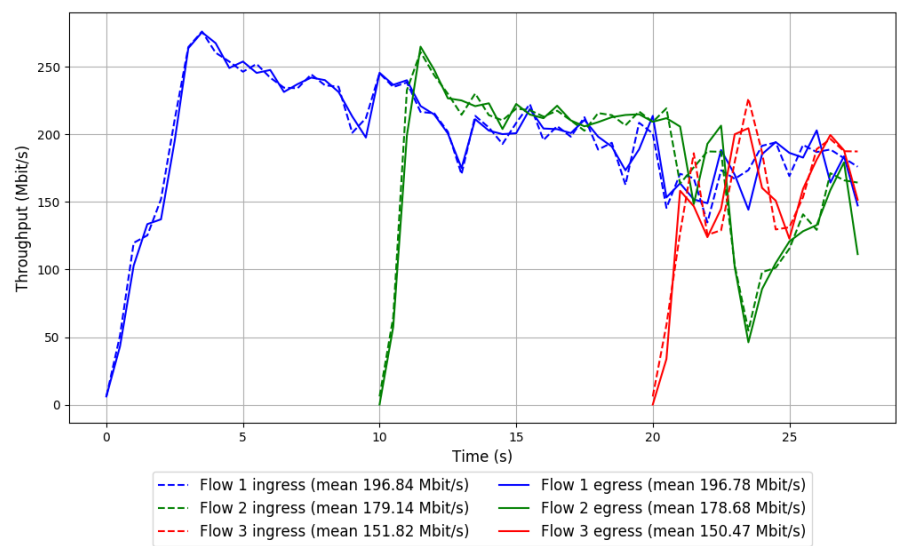
-- Flow 3:

Average throughput: 150.47 Mbit/s

95th percentile per-packet one-way delay: 102.207 ms

Loss rate: 3.08%

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



Run 6: Statistics of TaoVA-100x

Start at: 2017-12-20 14:29:01

End at: 2017-12-20 14:29:31

Below is generated by plot.py at 2017-12-20 18:45:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 367.24 Mbit/s

95th percentile per-packet one-way delay: 89.800 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 196.00 Mbit/s

95th percentile per-packet one-way delay: 89.367 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 179.92 Mbit/s

95th percentile per-packet one-way delay: 92.425 ms

Loss rate: 1.01%

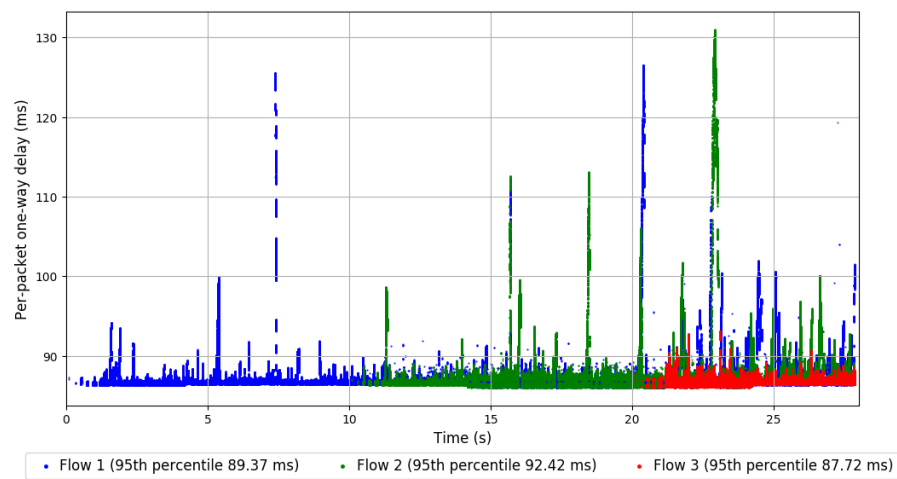
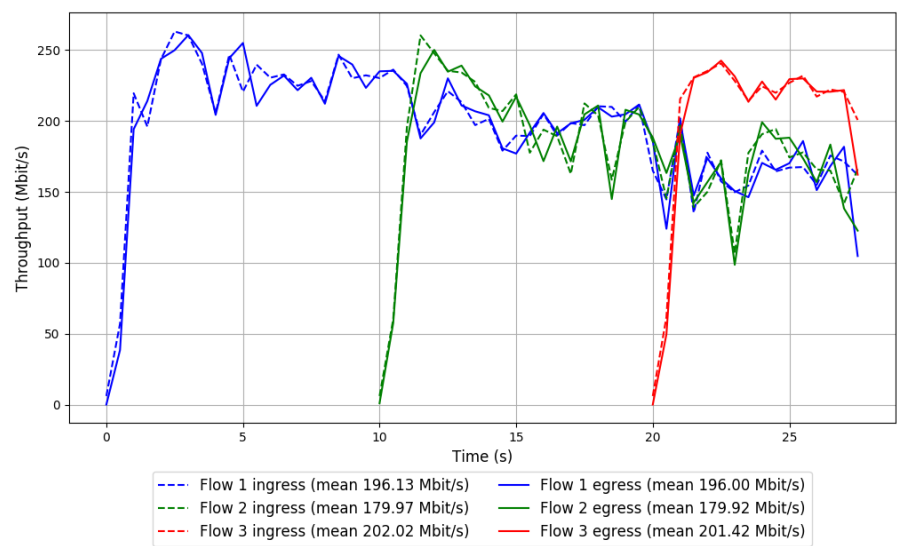
-- Flow 3:

Average throughput: 201.42 Mbit/s

95th percentile per-packet one-way delay: 87.724 ms

Loss rate: 2.37%

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



Run 7: Statistics of TaoVA-100x

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

End at: 2017-12-20 14:44:46

Below is generated by plot.py at 2017-12-20 18:52:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 385.07 Mbit/s

95th percentile per-packet one-way delay: 87.814 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 209.86 Mbit/s

95th percentile per-packet one-way delay: 87.754 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 204.31 Mbit/s

95th percentile per-packet one-way delay: 88.089 ms

Loss rate: 1.17%

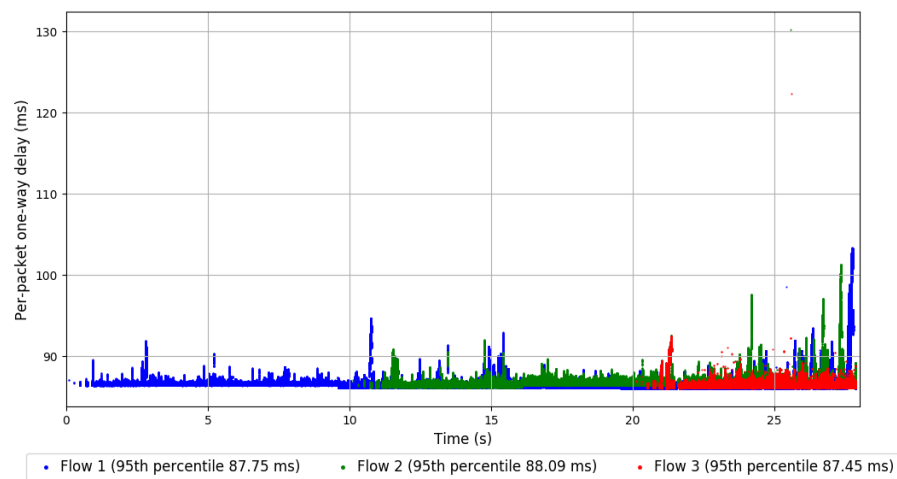
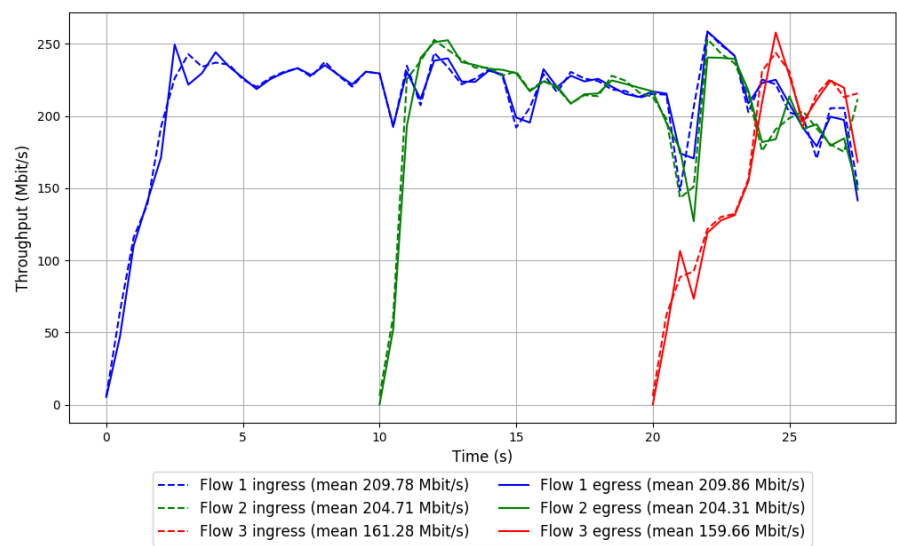
-- Flow 3:

Average throughput: 159.66 Mbit/s

95th percentile per-packet one-way delay: 87.454 ms

Loss rate: 3.14%

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



Run 8: Statistics of TaoVA-100x

Start at: 2017-12-20 14:59:30

End at: 2017-12-20 15:00:00

Below is generated by plot.py at 2017-12-20 18:52:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 374.41 Mbit/s

95th percentile per-packet one-way delay: 87.298 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 187.35 Mbit/s

95th percentile per-packet one-way delay: 87.429 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 210.71 Mbit/s

95th percentile per-packet one-way delay: 87.109 ms

Loss rate: 1.09%

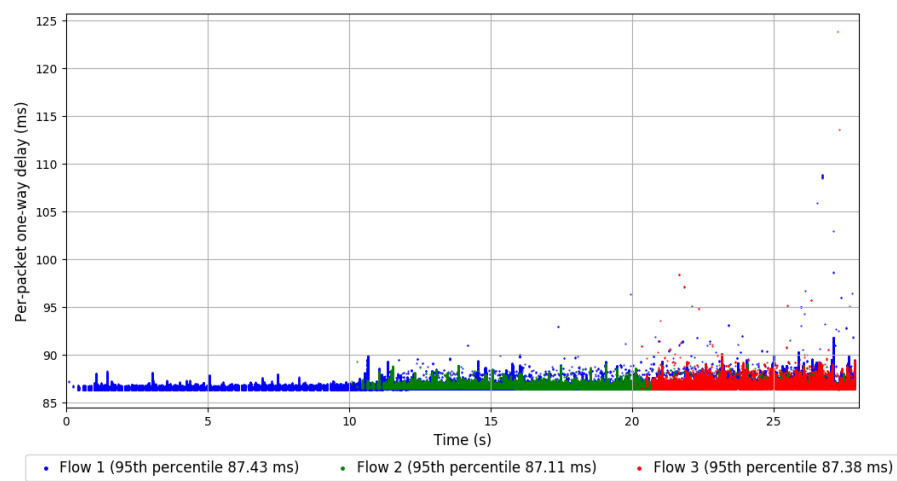
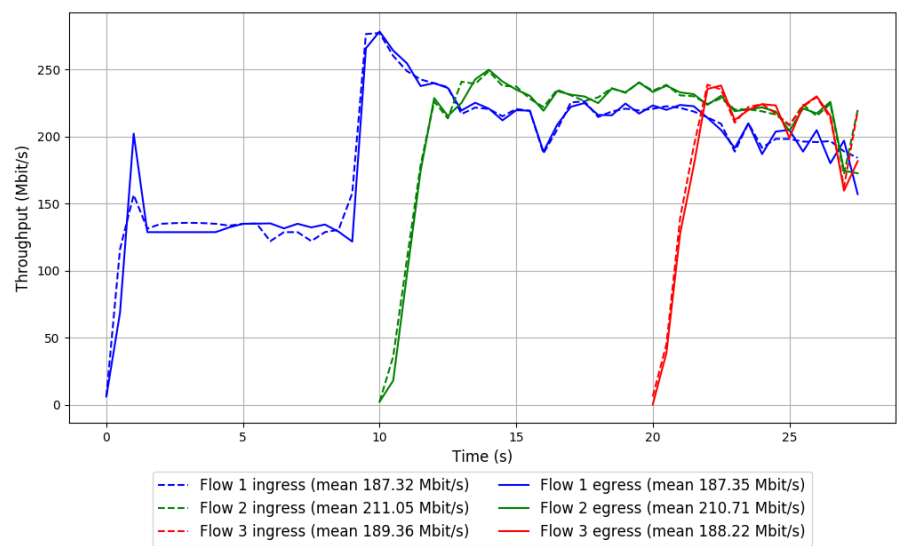
-- Flow 3:

Average throughput: 188.22 Mbit/s

95th percentile per-packet one-way delay: 87.377 ms

Loss rate: 2.68%

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



Run 9: Statistics of TaoVA-100x

Start at: 2017-12-20 15:14:58

End at: 2017-12-20 15:15:28

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 380.13 Mbit/s

95th percentile per-packet one-way delay: 88.179 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 212.15 Mbit/s

95th percentile per-packet one-way delay: 87.384 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 194.84 Mbit/s

95th percentile per-packet one-way delay: 87.325 ms

Loss rate: 1.05%

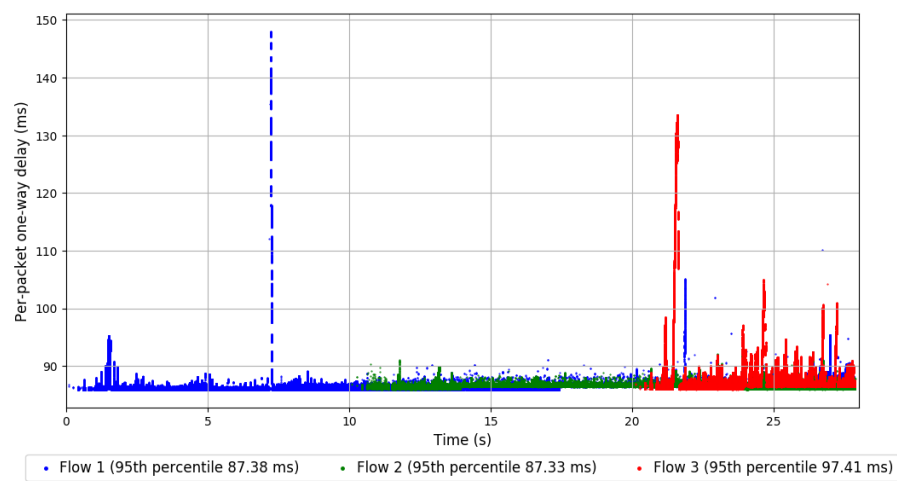
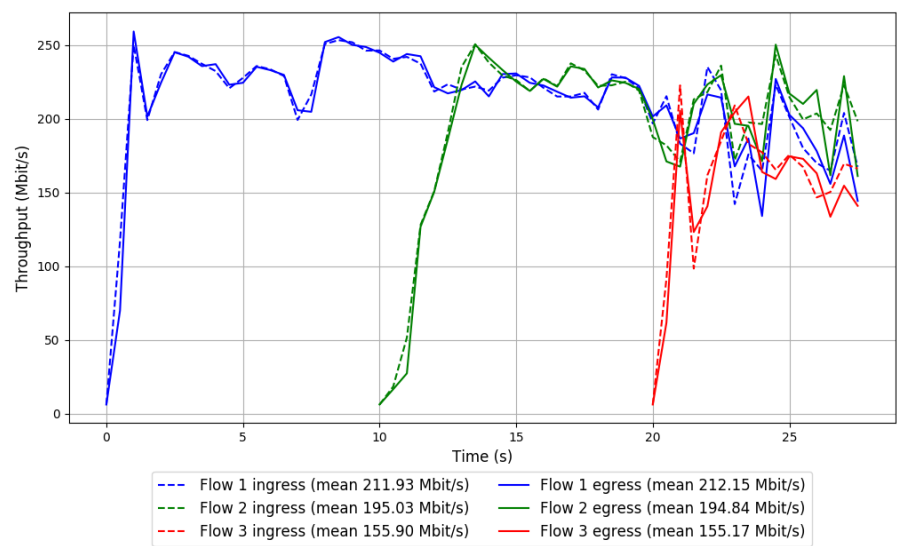
-- Flow 3:

Average throughput: 155.17 Mbit/s

95th percentile per-packet one-way delay: 97.408 ms

Loss rate: 2.65%

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

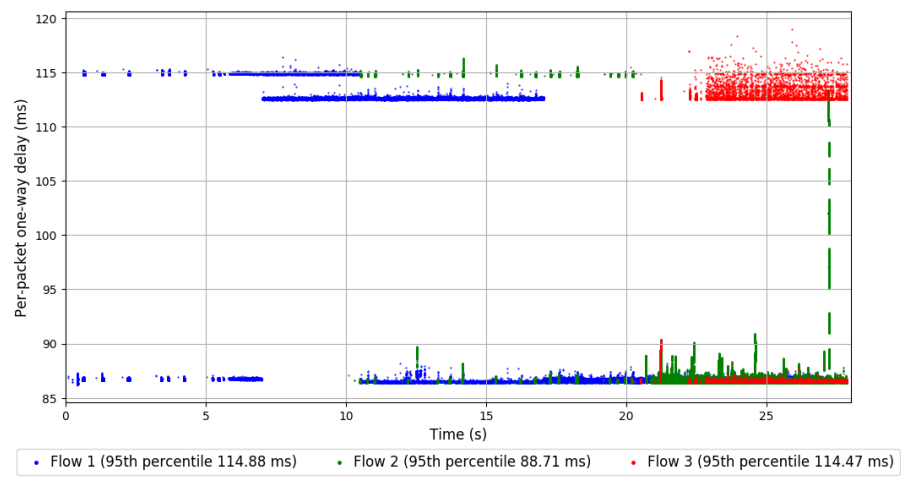
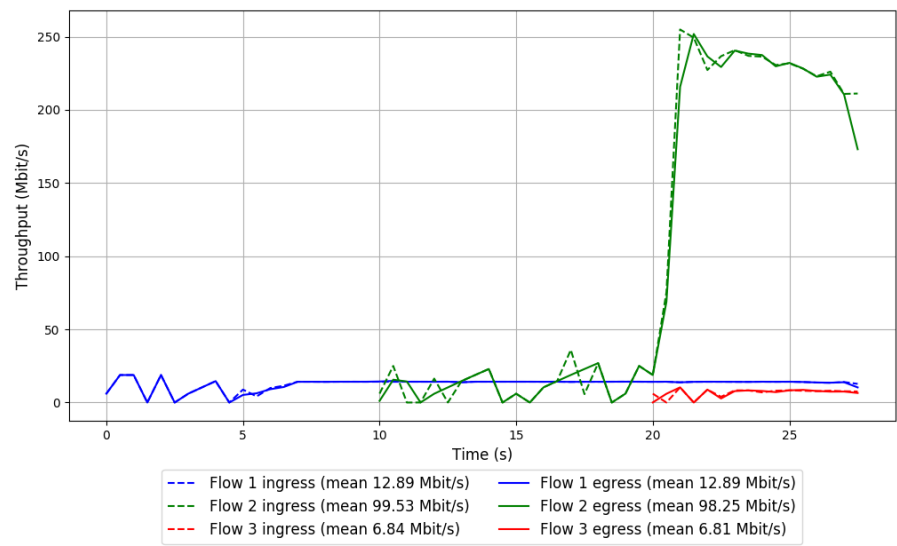


```
Run 10: Statistics of TaoVA-100x

Start at: 2017-12-20 15:30:15
End at: 2017-12-20 15:30:45

# Below is generated by plot.py at 2017-12-20 18:54:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.64 Mbit/s
95th percentile per-packet one-way delay: 114.690 ms
Loss rate: 2.00%
-- Flow 1:
Average throughput: 12.89 Mbit/s
95th percentile per-packet one-way delay: 114.879 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 98.25 Mbit/s
95th percentile per-packet one-way delay: 88.712 ms
Loss rate: 2.24%
-- Flow 3:
Average throughput: 6.81 Mbit/s
95th percentile per-packet one-way delay: 114.475 ms
Loss rate: 2.61%
```

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

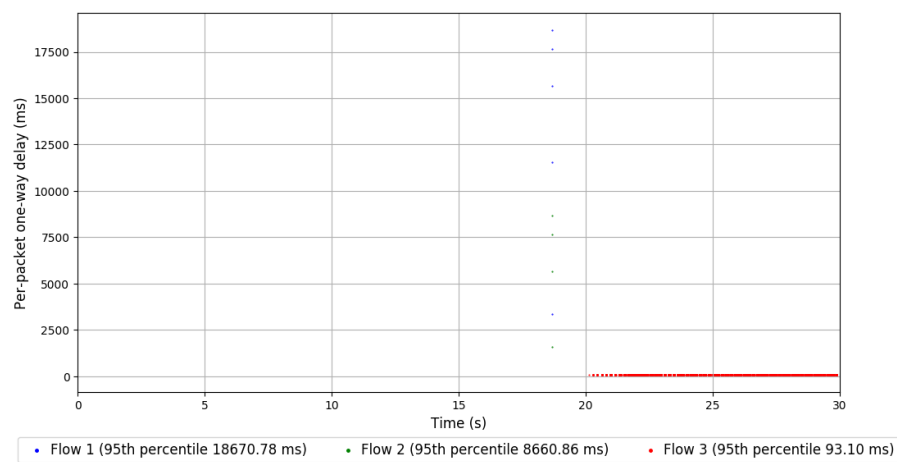
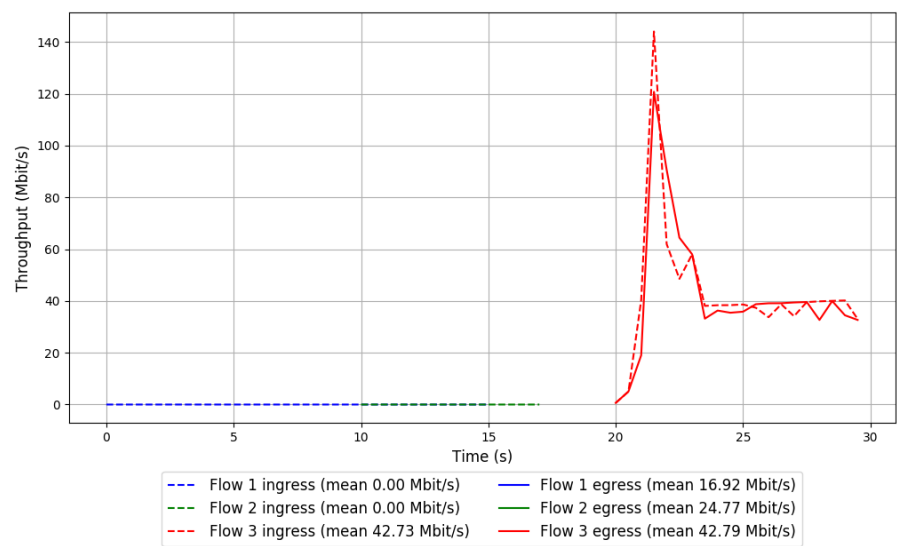


Run 1: Statistics of TCP Vegas

Start at: 2017-12-20 13:21:43

End at: 2017-12-20 13:22:13

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-12-20 13:36:56

End at: 2017-12-20 13:37:26

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.24 Mbit/s

95th percentile per-packet one-way delay: 90.568 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 23.74 Mbit/s

95th percentile per-packet one-way delay: 91.184 ms

Loss rate: 2.10%

-- Flow 2:

Average throughput: 43.47 Mbit/s

95th percentile per-packet one-way delay: 89.115 ms

Loss rate: 0.69%

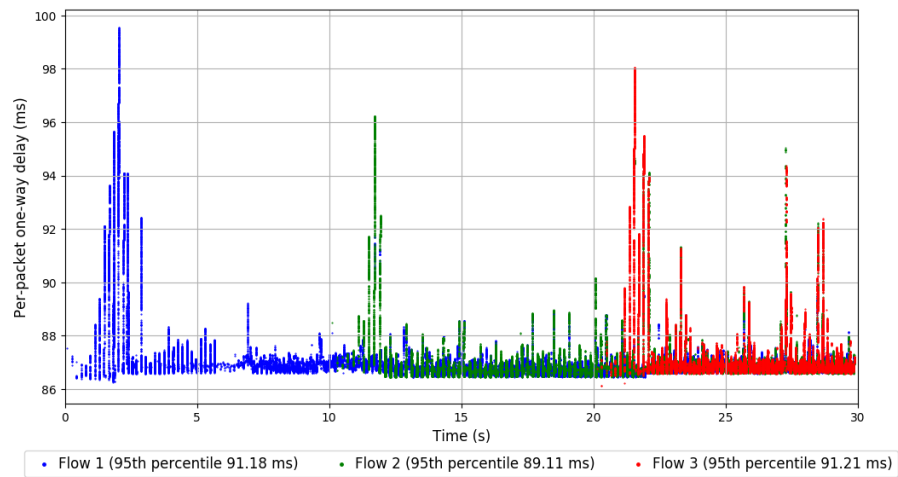
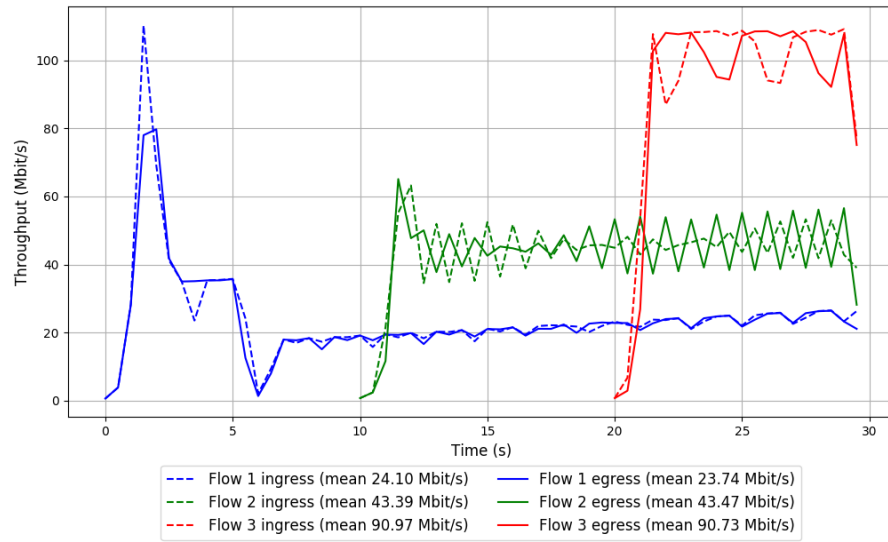
-- Flow 3:

Average throughput: 90.73 Mbit/s

95th percentile per-packet one-way delay: 91.211 ms

Loss rate: 2.02%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-12-20 13:52:01

End at: 2017-12-20 13:52:31

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 131.28 Mbit/s

95th percentile per-packet one-way delay: 96.041 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 66.06 Mbit/s

95th percentile per-packet one-way delay: 93.392 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 73.44 Mbit/s

95th percentile per-packet one-way delay: 98.104 ms

Loss rate: 0.46%

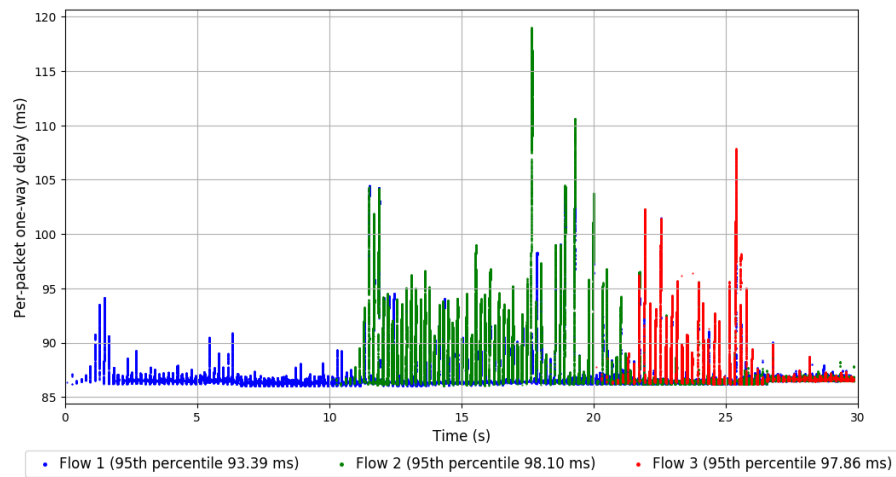
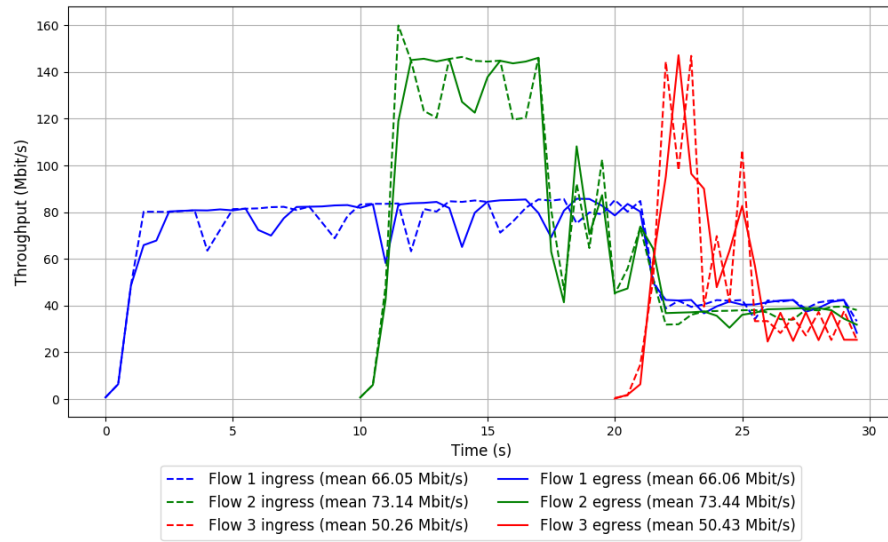
-- Flow 3:

Average throughput: 50.43 Mbit/s

95th percentile per-packet one-way delay: 97.862 ms

Loss rate: 1.25%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-12-20 14:07:19

End at: 2017-12-20 14:07:49

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.16 Mbit/s

95th percentile per-packet one-way delay: 94.621 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 35.97 Mbit/s

95th percentile per-packet one-way delay: 89.544 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 70.01 Mbit/s

95th percentile per-packet one-way delay: 96.702 ms

Loss rate: 0.31%

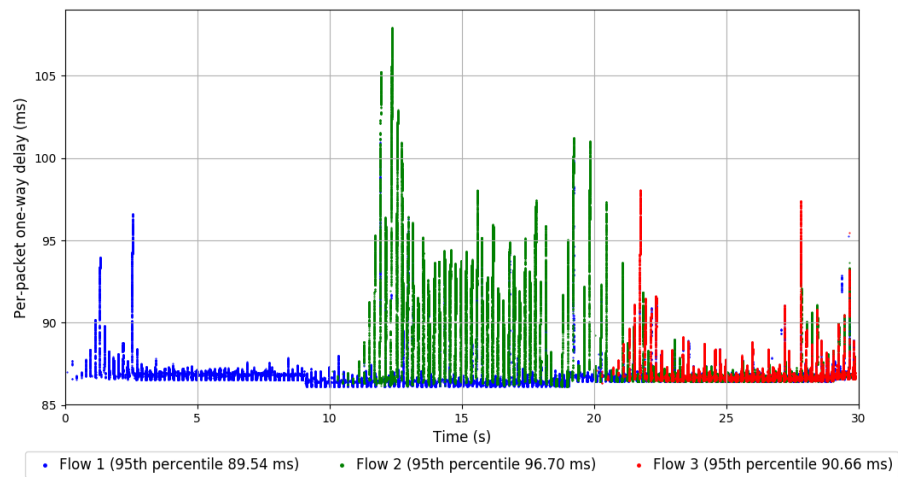
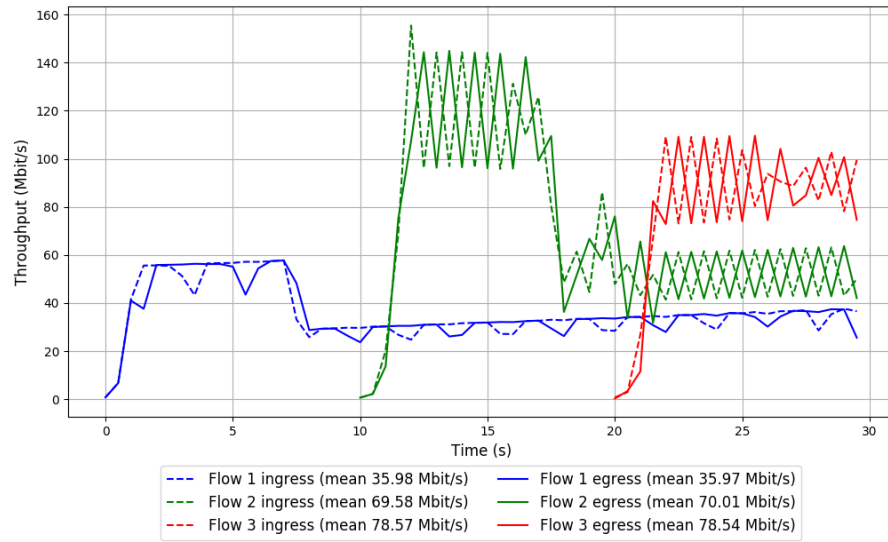
-- Flow 3:

Average throughput: 78.54 Mbit/s

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

Loss rate: 1.85%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-12-20 14:22:25

End at: 2017-12-20 14:22:55

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.30 Mbit/s

95th percentile per-packet one-way delay: 97.661 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 62.81 Mbit/s

95th percentile per-packet one-way delay: 98.713 ms

Loss rate: 1.76%

-- Flow 2:

Average throughput: 82.98 Mbit/s

95th percentile per-packet one-way delay: 96.490 ms

Loss rate: 0.84%

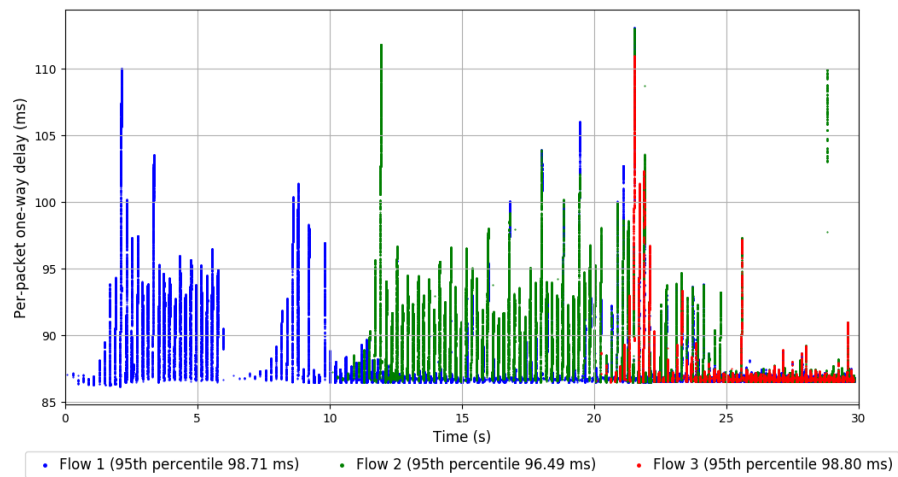
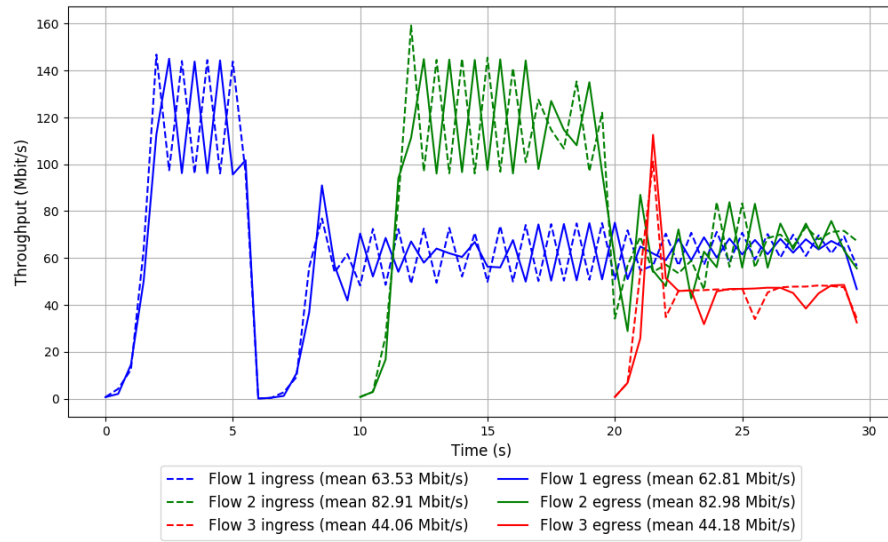
-- Flow 3:

Average throughput: 44.18 Mbit/s

95th percentile per-packet one-way delay: 98.798 ms

Loss rate: 1.86%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-12-20 14:37:43

End at: 2017-12-20 14:38:13

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.38 Mbit/s

95th percentile per-packet one-way delay: 87.966 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 36.41 Mbit/s

95th percentile per-packet one-way delay: 87.604 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 20.44 Mbit/s

95th percentile per-packet one-way delay: 87.620 ms

Loss rate: 1.43%

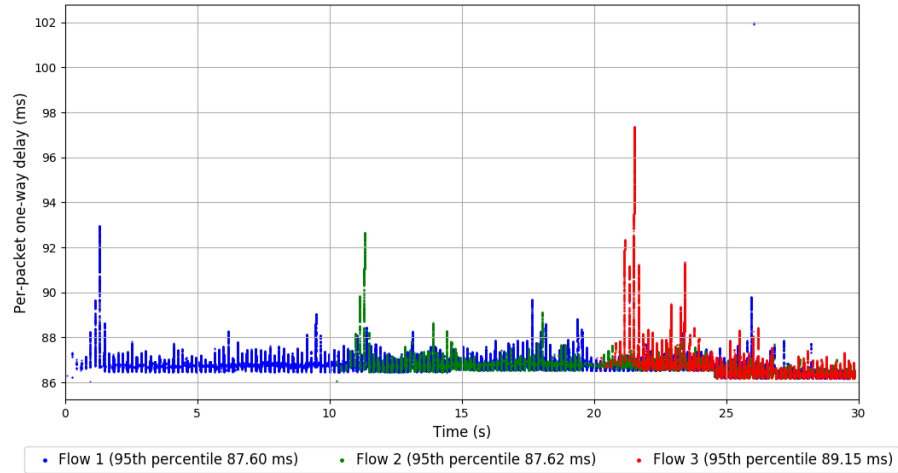
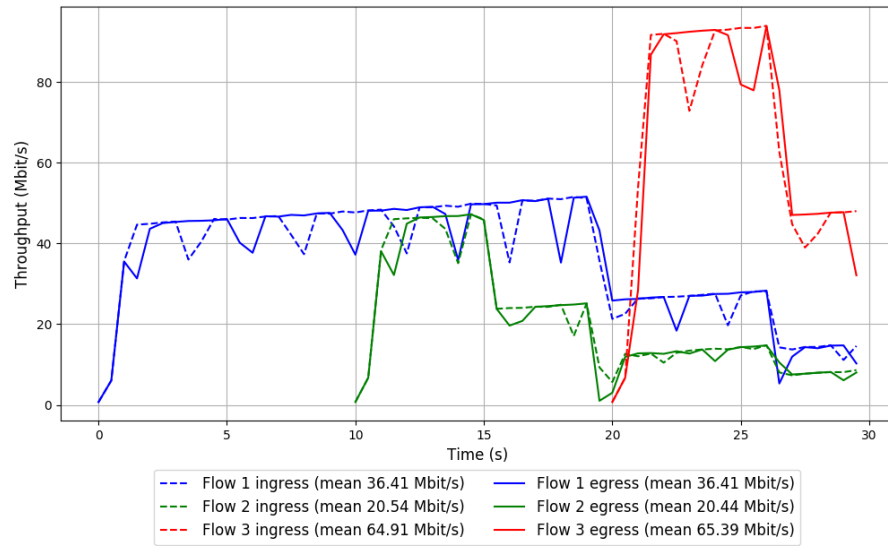
-- Flow 3:

Average throughput: 65.39 Mbit/s

95th percentile per-packet one-way delay: 89.153 ms

Loss rate: 1.26%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-12-20 14:52:58

End at: 2017-12-20 14:53:28

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.80 Mbit/s

95th percentile per-packet one-way delay: 97.268 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 44.83 Mbit/s

95th percentile per-packet one-way delay: 95.505 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 51.64 Mbit/s

95th percentile per-packet one-way delay: 93.976 ms

Loss rate: 0.94%

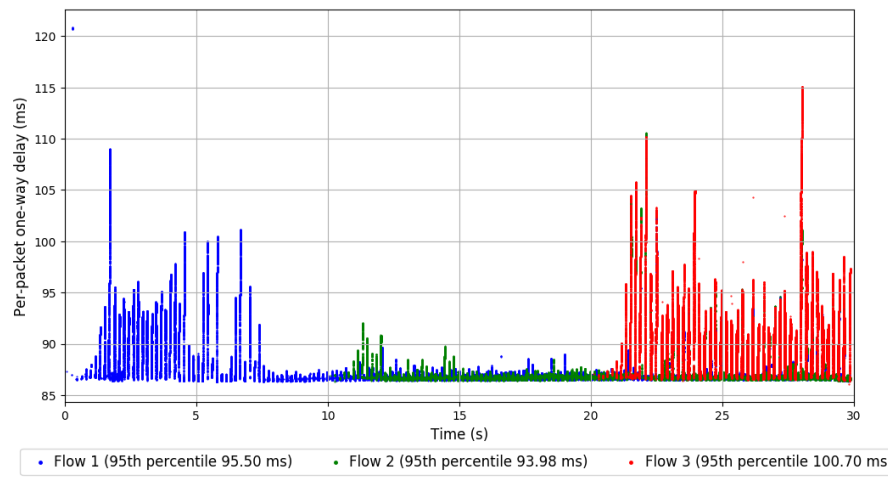
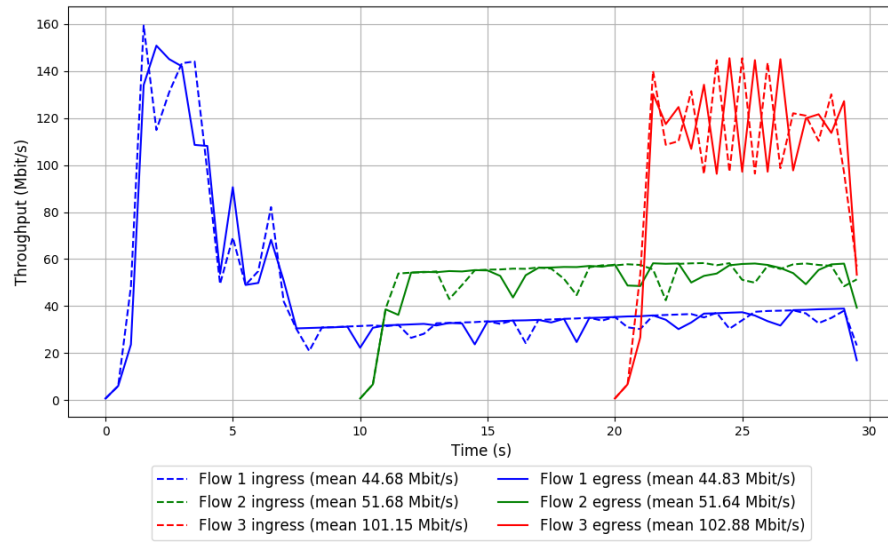
-- Flow 3:

Average throughput: 102.88 Mbit/s

95th percentile per-packet one-way delay: 100.697 ms

Loss rate: 0.19%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-12-20 15:08:21

End at: 2017-12-20 15:08:51

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.91 Mbit/s

95th percentile per-packet one-way delay: 94.133 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 33.13 Mbit/s

95th percentile per-packet one-way delay: 88.564 ms

Loss rate: 2.15%

-- Flow 2:

Average throughput: 49.36 Mbit/s

95th percentile per-packet one-way delay: 94.393 ms

Loss rate: 0.53%

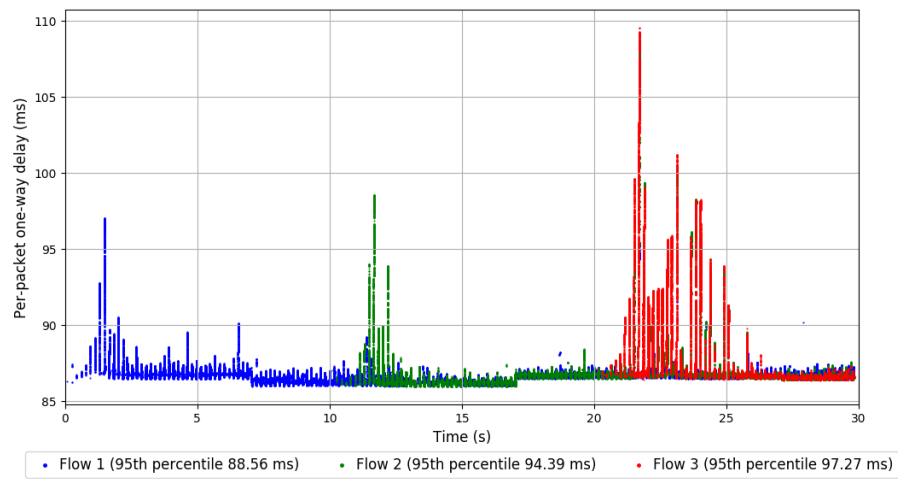
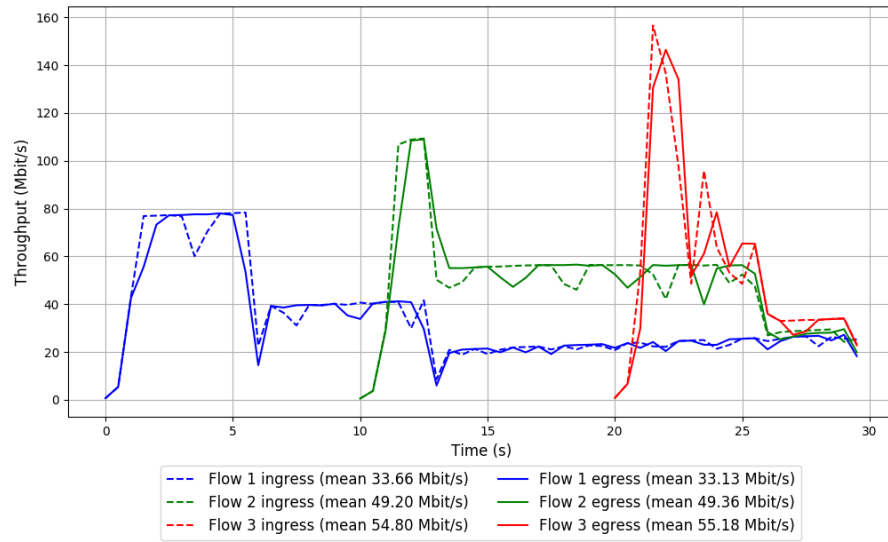
-- Flow 3:

Average throughput: 55.18 Mbit/s

95th percentile per-packet one-way delay: 97.272 ms

Loss rate: 1.06%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-12-20 15:23:45

End at: 2017-12-20 15:24:15

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.77 Mbit/s

95th percentile per-packet one-way delay: 95.322 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 17.75 Mbit/s

95th percentile per-packet one-way delay: 92.034 ms

Loss rate: 1.57%

-- Flow 2:

Average throughput: 102.79 Mbit/s

95th percentile per-packet one-way delay: 95.907 ms

Loss rate: 0.54%

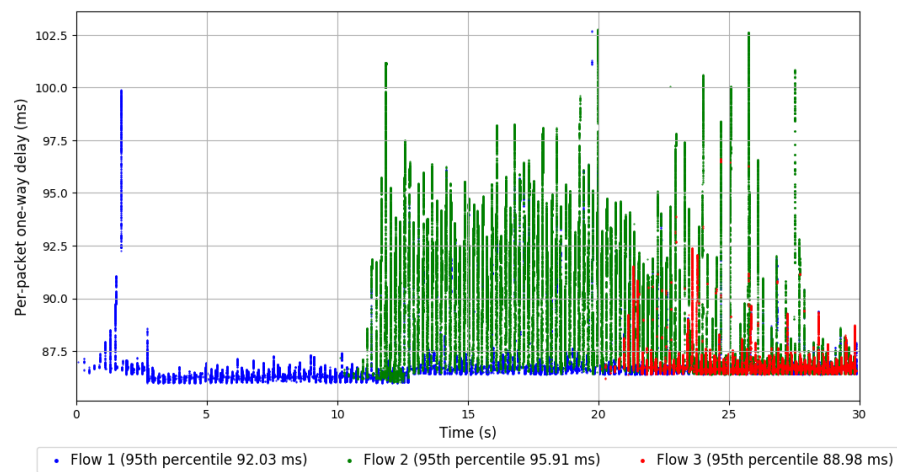
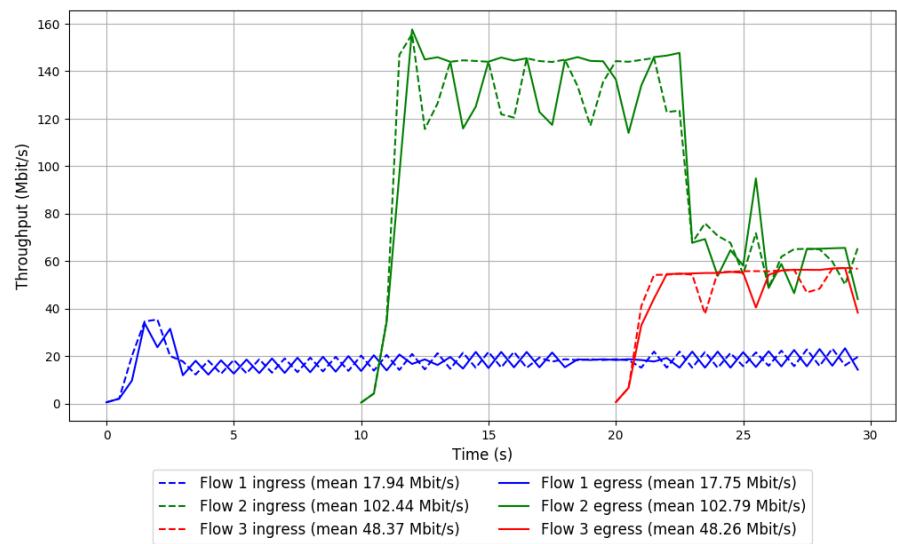
-- Flow 3:

Average throughput: 48.26 Mbit/s

95th percentile per-packet one-way delay: 88.977 ms

Loss rate: 1.99%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-12-20 15:38:06

End at: 2017-12-20 15:38:36

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.74 Mbit/s

95th percentile per-packet one-way delay: 124.296 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 38.65 Mbit/s

95th percentile per-packet one-way delay: 115.698 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 78.96 Mbit/s

95th percentile per-packet one-way delay: 126.008 ms

Loss rate: 0.70%

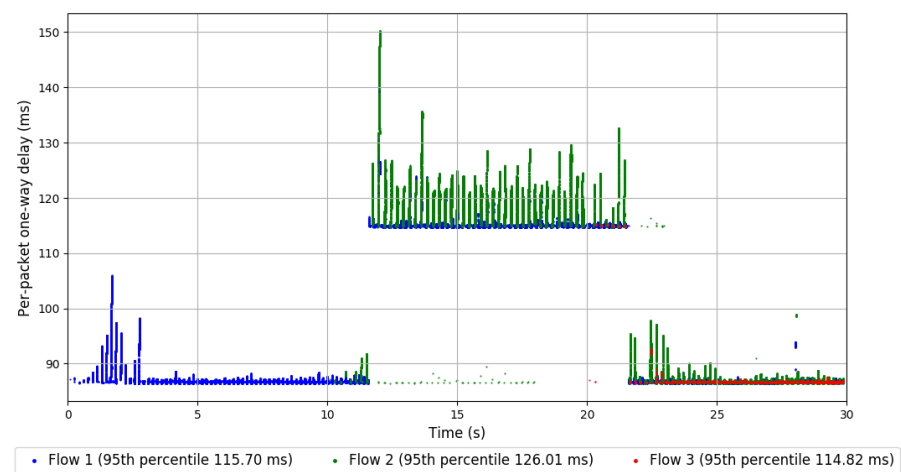
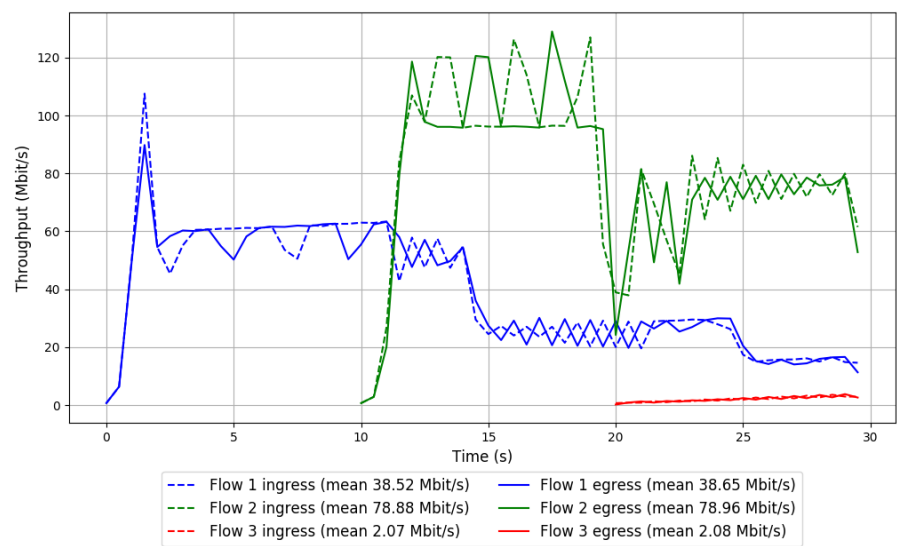
-- Flow 3:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 114.824 ms

Loss rate: 1.17%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2017-12-20 13:10:06

End at: 2017-12-20 13:10:36

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 313.54 Mbit/s

95th percentile per-packet one-way delay: 139.978 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 218.48 Mbit/s

95th percentile per-packet one-way delay: 134.016 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 82.82 Mbit/s

95th percentile per-packet one-way delay: 173.892 ms

Loss rate: 0.59%

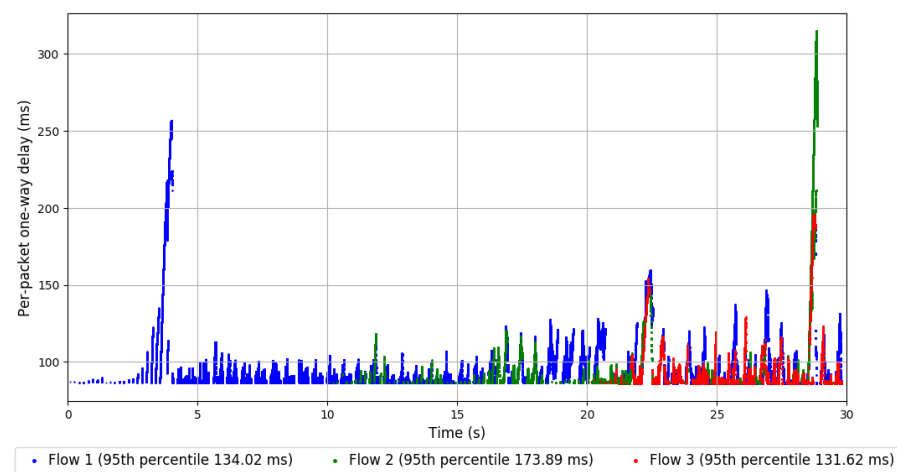
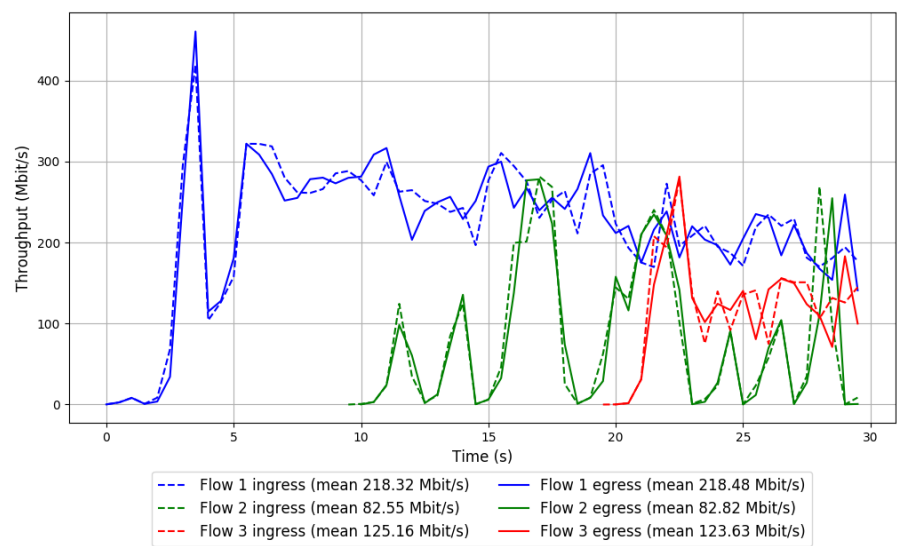
-- Flow 3:

Average throughput: 123.63 Mbit/s

95th percentile per-packet one-way delay: 131.616 ms

Loss rate: 2.97%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-12-20 13:25:22

End at: 2017-12-20 13:25:52

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 228.87 Mbit/s

95th percentile per-packet one-way delay: 178.859 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 85.19 Mbit/s

95th percentile per-packet one-way delay: 144.051 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 204.31 Mbit/s

95th percentile per-packet one-way delay: 191.649 ms

Loss rate: 2.19%

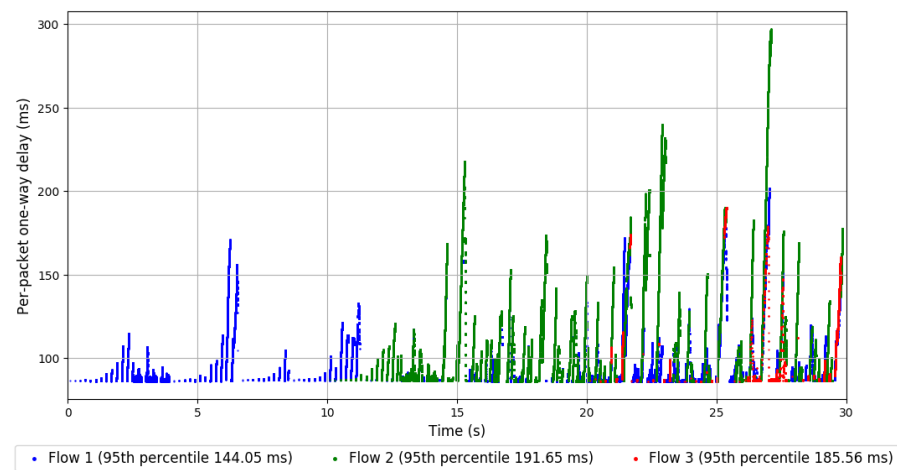
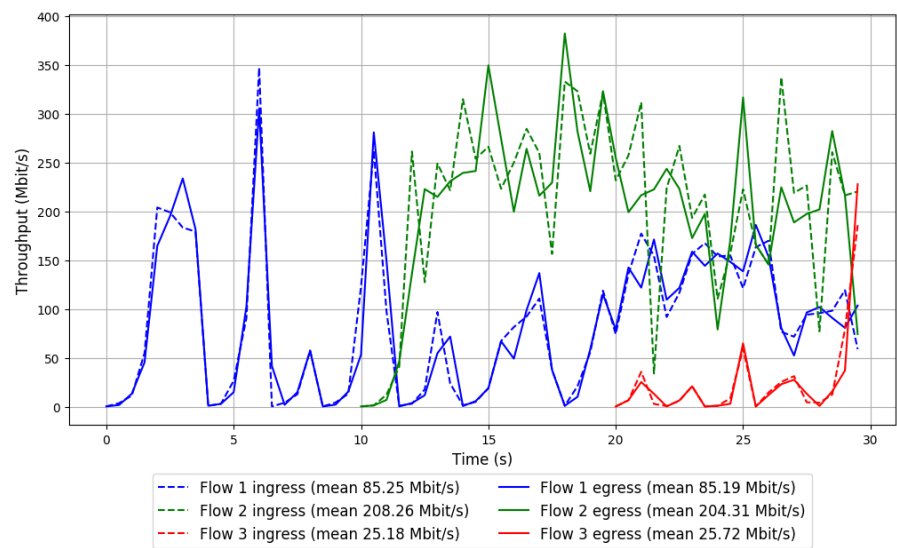
-- Flow 3:

Average throughput: 25.72 Mbit/s

95th percentile per-packet one-way delay: 185.557 ms

Loss rate: 0.03%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-12-20 13:40:28

End at: 2017-12-20 13:40:58

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 257.68 Mbit/s

95th percentile per-packet one-way delay: 149.984 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 138.14 Mbit/s

95th percentile per-packet one-way delay: 146.745 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 120.12 Mbit/s

95th percentile per-packet one-way delay: 148.085 ms

Loss rate: 1.92%

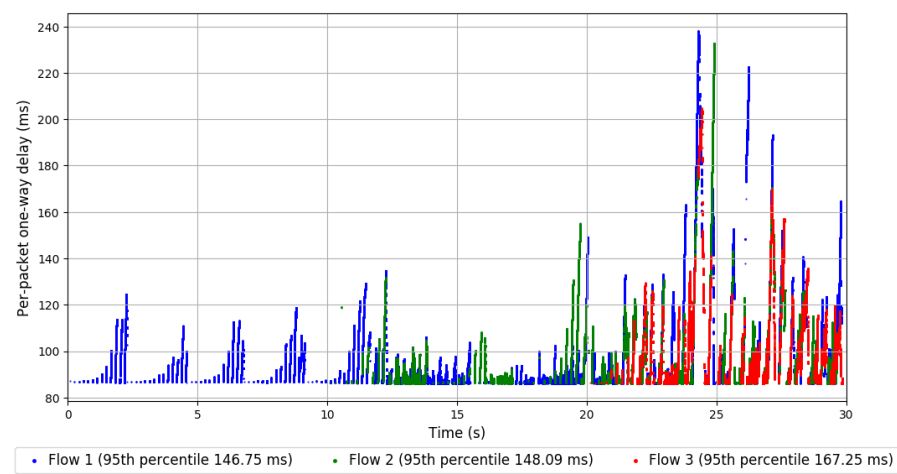
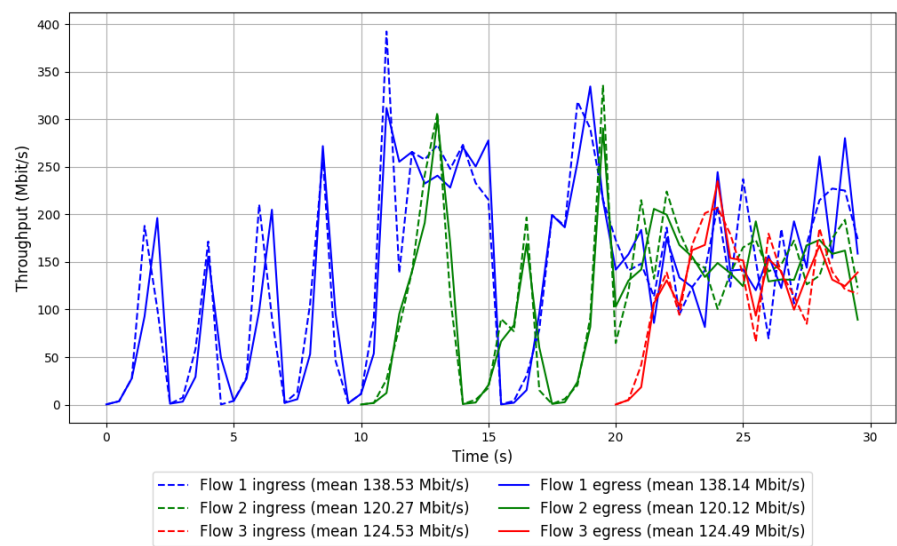
-- Flow 3:

Average throughput: 124.49 Mbit/s

95th percentile per-packet one-way delay: 167.252 ms

Loss rate: 0.35%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-12-20 13:55:36

End at: 2017-12-20 13:56:06

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 189.11 Mbit/s

95th percentile per-packet one-way delay: 198.410 ms

Loss rate: 2.37%

-- Flow 1:

Average throughput: 89.72 Mbit/s

95th percentile per-packet one-way delay: 217.944 ms

Loss rate: 2.22%

-- Flow 2:

Average throughput: 87.87 Mbit/s

95th percentile per-packet one-way delay: 200.136 ms

Loss rate: 4.19%

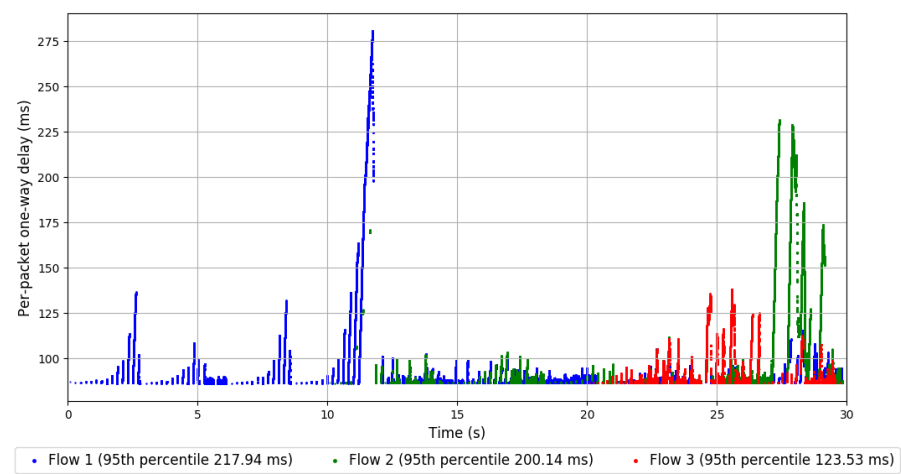
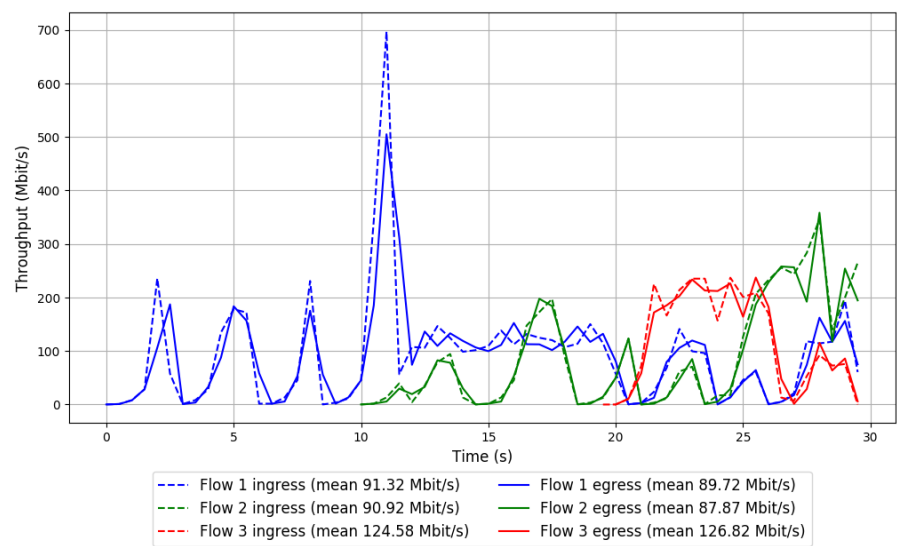
-- Flow 3:

Average throughput: 126.82 Mbit/s

95th percentile per-packet one-way delay: 123.527 ms

Loss rate: 0.01%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-12-20 14:10:50

End at: 2017-12-20 14:11:20

Below is generated by plot.py at 2017-12-20 18:54:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 233.37 Mbit/s

95th percentile per-packet one-way delay: 160.829 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 148.18 Mbit/s

95th percentile per-packet one-way delay: 108.359 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 51.62 Mbit/s

95th percentile per-packet one-way delay: 124.884 ms

Loss rate: 2.45%

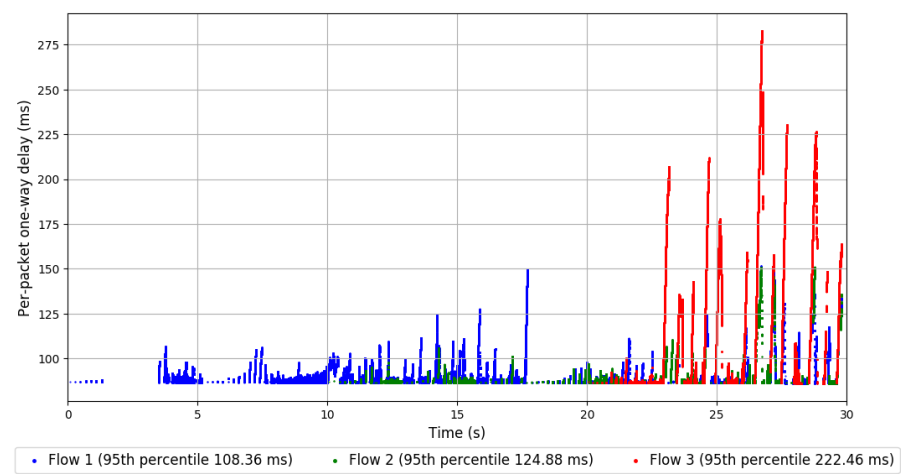
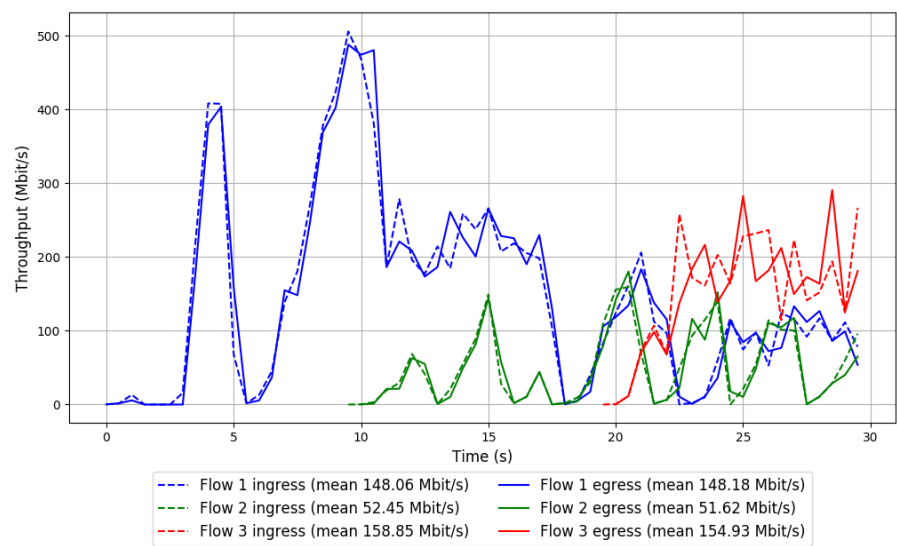
-- Flow 3:

Average throughput: 154.93 Mbit/s

95th percentile per-packet one-way delay: 222.464 ms

Loss rate: 3.52%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-12-20 14:25:59

End at: 2017-12-20 14:26:29

Below is generated by plot.py at 2017-12-20 18:57:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 308.59 Mbit/s

95th percentile per-packet one-way delay: 135.811 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 205.49 Mbit/s

95th percentile per-packet one-way delay: 130.683 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 102.35 Mbit/s

95th percentile per-packet one-way delay: 124.470 ms

Loss rate: 0.02%

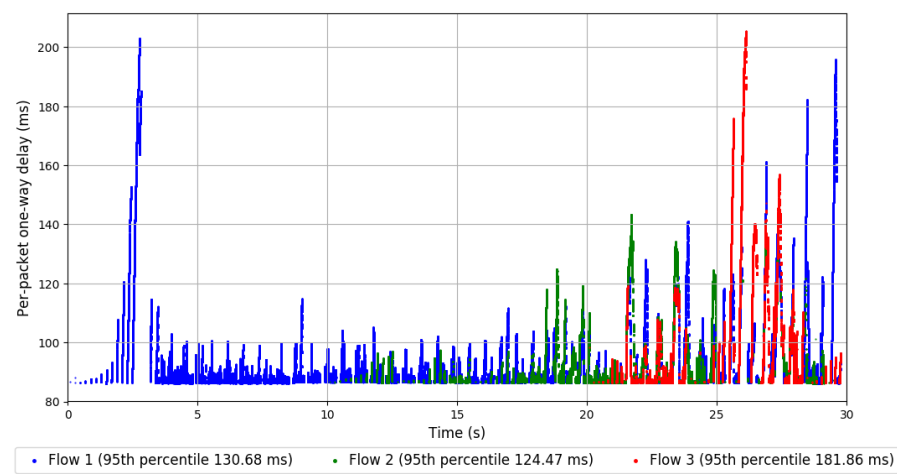
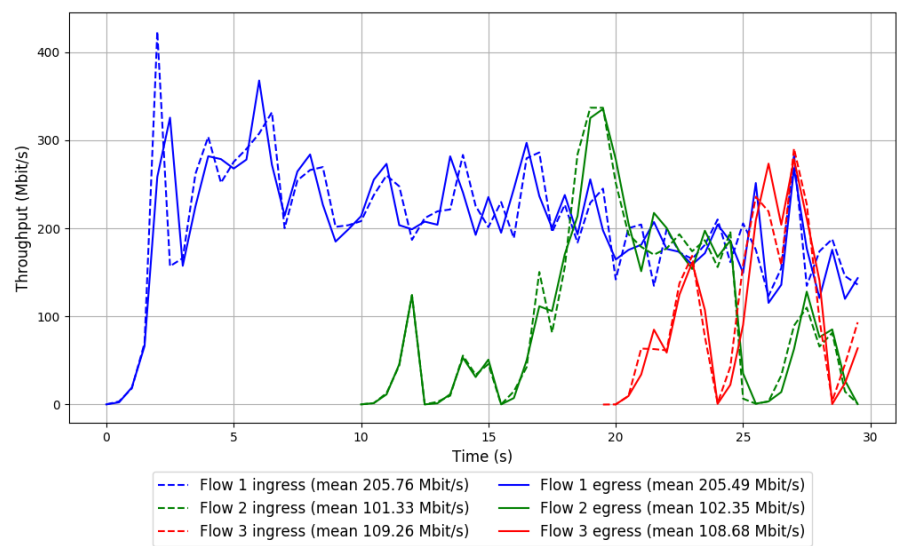
-- Flow 3:

Average throughput: 108.68 Mbit/s

95th percentile per-packet one-way delay: 181.864 ms

Loss rate: 2.53%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-12-20 14:41:14

End at: 2017-12-20 14:41:44

Below is generated by plot.py at 2017-12-20 18:57:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 284.11 Mbit/s

95th percentile per-packet one-way delay: 215.941 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 222.37 Mbit/s

95th percentile per-packet one-way delay: 230.169 ms

Loss rate: 1.55%

-- Flow 2:

Average throughput: 73.56 Mbit/s

95th percentile per-packet one-way delay: 139.372 ms

Loss rate: 1.09%

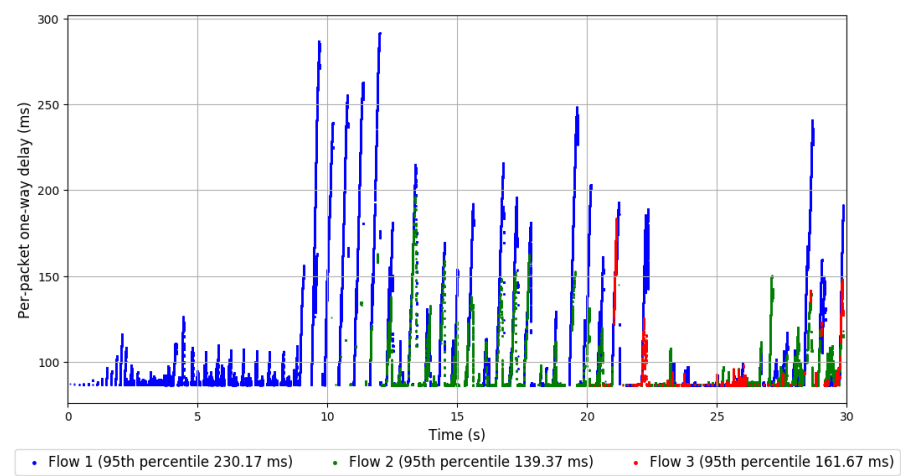
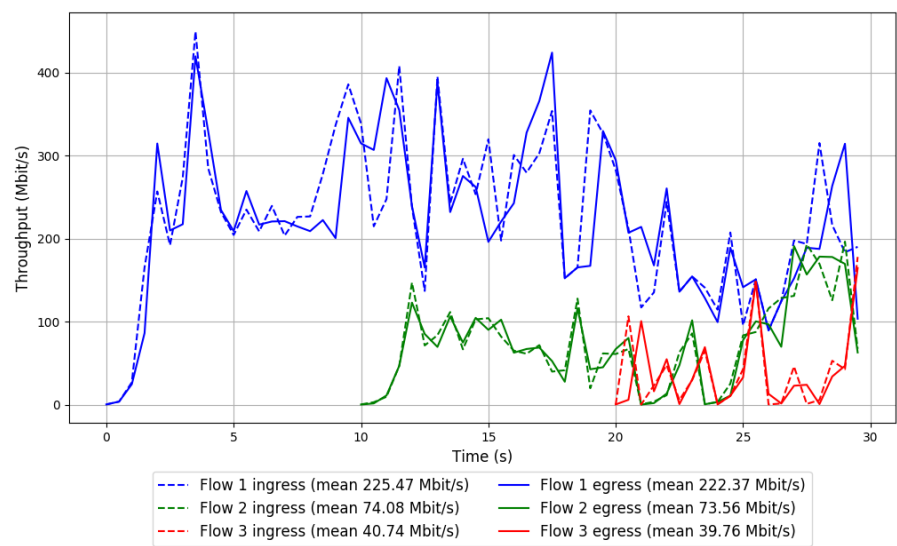
-- Flow 3:

Average throughput: 39.76 Mbit/s

95th percentile per-packet one-way delay: 161.667 ms

Loss rate: 4.11%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-12-20 14:56:30

End at: 2017-12-20 14:57:00

Below is generated by plot.py at 2017-12-20 18:57:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 260.28 Mbit/s

95th percentile per-packet one-way delay: 155.475 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 157.23 Mbit/s

95th percentile per-packet one-way delay: 169.608 ms

Loss rate: 1.52%

-- Flow 2:

Average throughput: 133.24 Mbit/s

95th percentile per-packet one-way delay: 118.920 ms

Loss rate: 1.05%

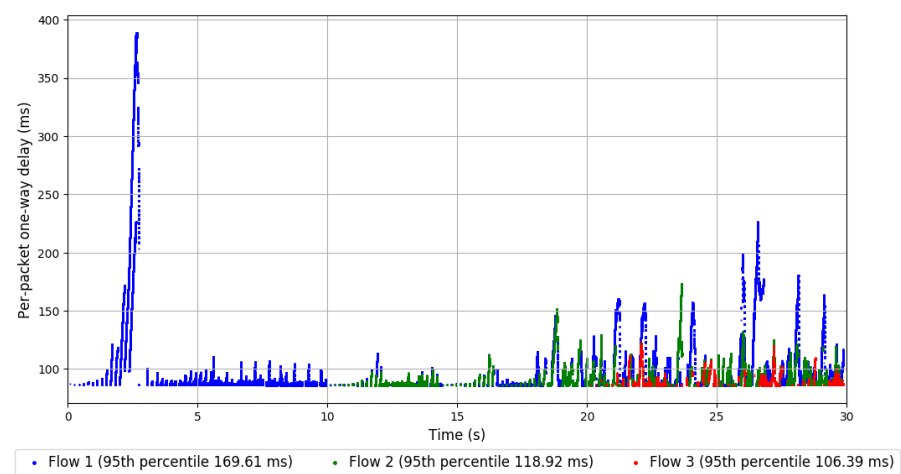
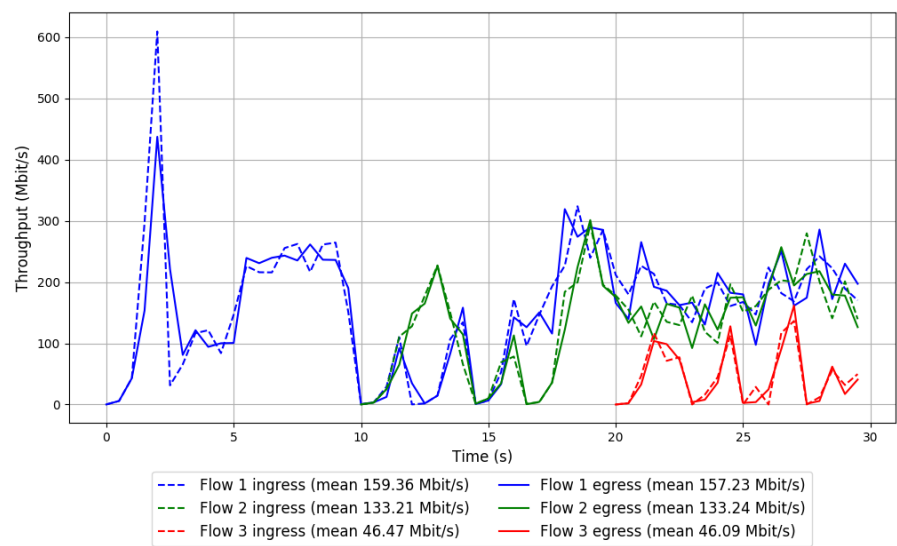
-- Flow 3:

Average throughput: 46.09 Mbit/s

95th percentile per-packet one-way delay: 106.385 ms

Loss rate: 2.58%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2017-12-20 15:11:51

End at: 2017-12-20 15:12:21

Below is generated by plot.py at 2017-12-20 18:59:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 373.00 Mbit/s

95th percentile per-packet one-way delay: 237.895 ms

Loss rate: 4.76%

-- Flow 1:

Average throughput: 264.95 Mbit/s

95th percentile per-packet one-way delay: 232.781 ms

Loss rate: 3.48%

-- Flow 2:

Average throughput: 109.24 Mbit/s

95th percentile per-packet one-way delay: 268.632 ms

Loss rate: 4.11%

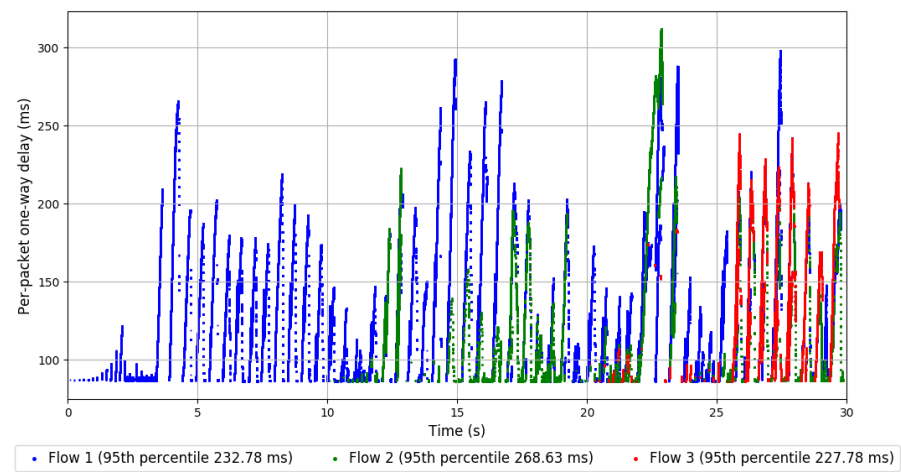
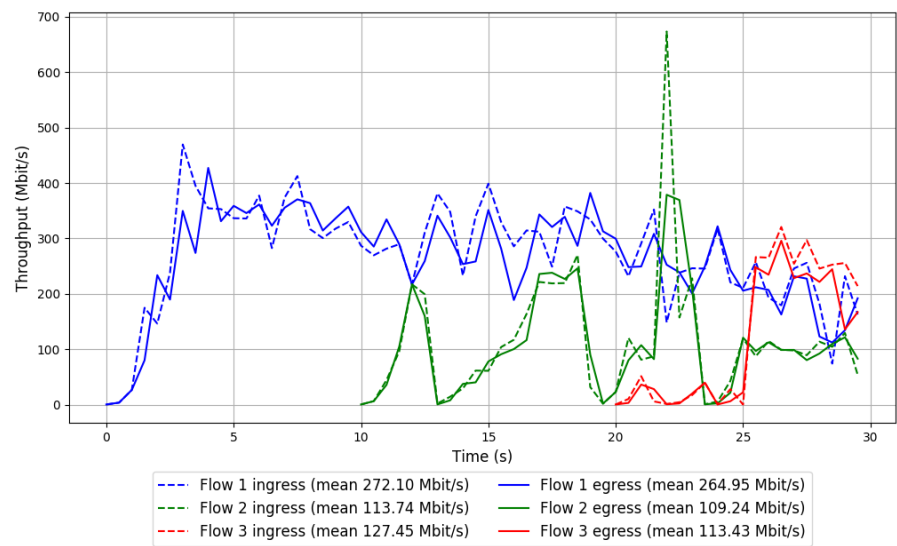
-- Flow 3:

Average throughput: 113.43 Mbit/s

95th percentile per-packet one-way delay: 227.781 ms

Loss rate: 14.21%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-12-20 15:27:18

End at: 2017-12-20 15:27:48

Below is generated by plot.py at 2017-12-20 18:59:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 243.22 Mbit/s

95th percentile per-packet one-way delay: 150.115 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 196.22 Mbit/s

95th percentile per-packet one-way delay: 130.856 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 51.97 Mbit/s

95th percentile per-packet one-way delay: 216.349 ms

Loss rate: 2.13%

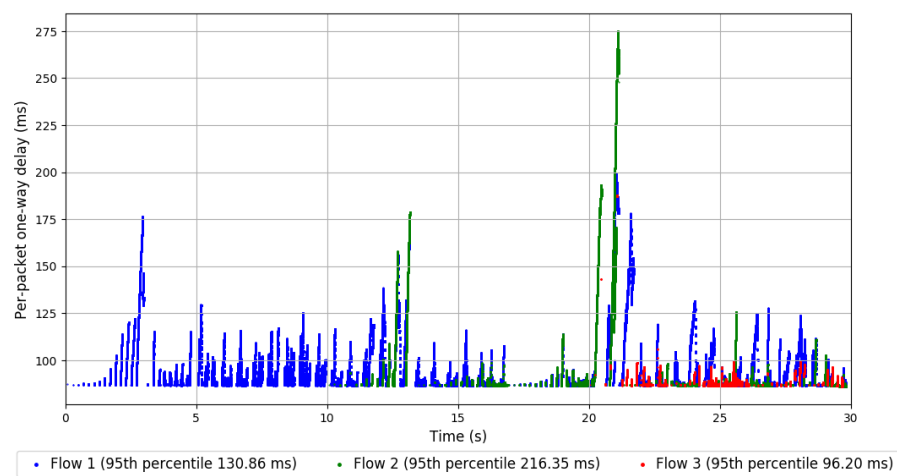
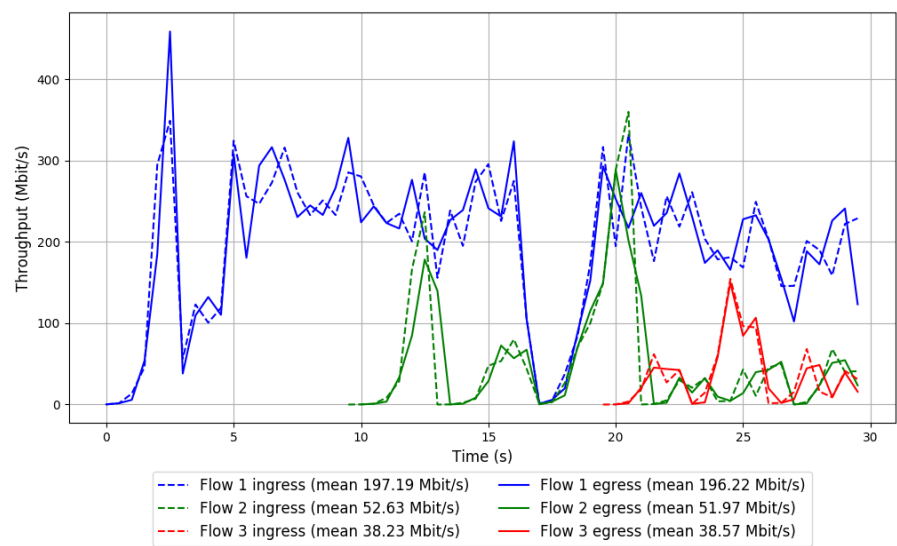
-- Flow 3:

Average throughput: 38.57 Mbit/s

95th percentile per-packet one-way delay: 96.197 ms

Loss rate: 2.28%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2017-12-20 13:15:23

End at: 2017-12-20 13:15:53

Below is generated by plot.py at 2017-12-20 18:59:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.25 Mbit/s

95th percentile per-packet one-way delay: 87.035 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 64.15 Mbit/s

95th percentile per-packet one-way delay: 87.037 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 50.54 Mbit/s

95th percentile per-packet one-way delay: 86.890 ms

Loss rate: 1.16%

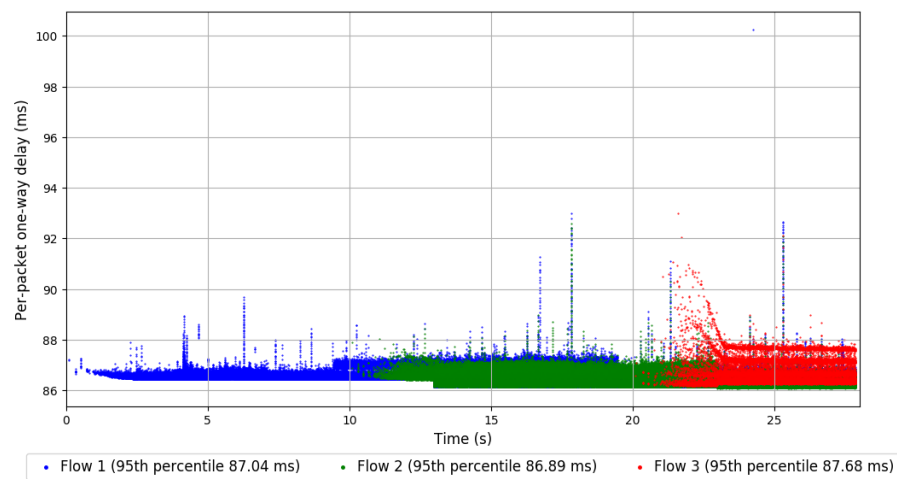
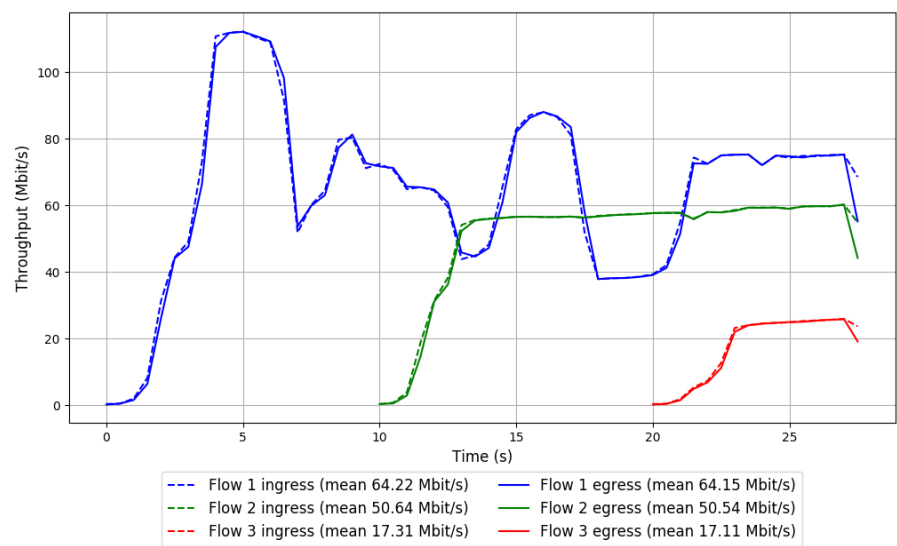
-- Flow 3:

Average throughput: 17.11 Mbit/s

95th percentile per-packet one-way delay: 87.680 ms

Loss rate: 3.29%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-12-20 13:30:38

End at: 2017-12-20 13:31:08

Below is generated by plot.py at 2017-12-20 18:59:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.37 Mbit/s

95th percentile per-packet one-way delay: 87.019 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 54.63 Mbit/s

95th percentile per-packet one-way delay: 86.878 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 53.50 Mbit/s

95th percentile per-packet one-way delay: 86.985 ms

Loss rate: 0.96%

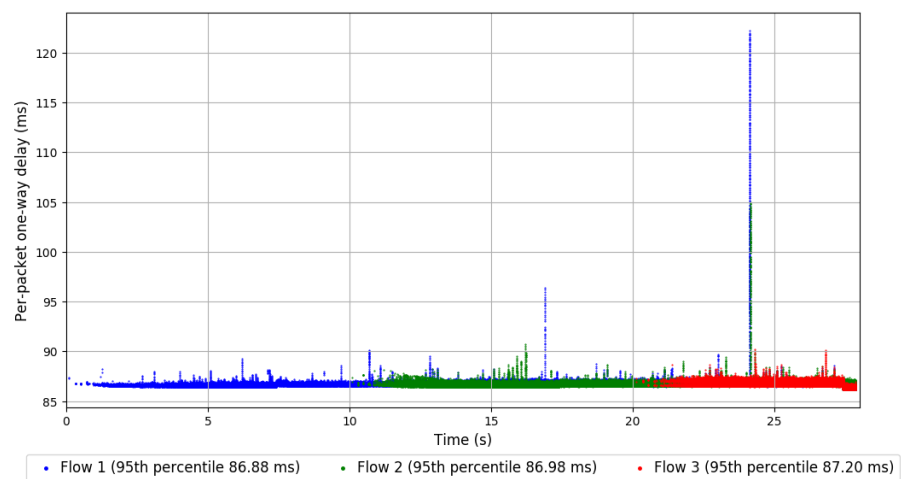
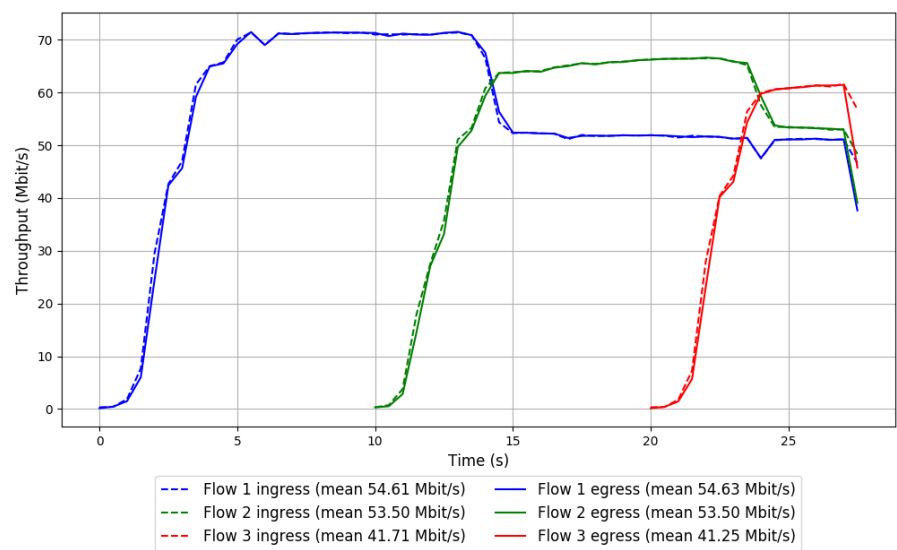
-- Flow 3:

Average throughput: 41.25 Mbit/s

95th percentile per-packet one-way delay: 87.201 ms

Loss rate: 3.27%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-12-20 13:45:47

End at: 2017-12-20 13:46:17

Below is generated by plot.py at 2017-12-20 18:59:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.41 Mbit/s

95th percentile per-packet one-way delay: 86.899 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 74.76 Mbit/s

95th percentile per-packet one-way delay: 86.733 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 97.708 ms

Loss rate: 46.17%

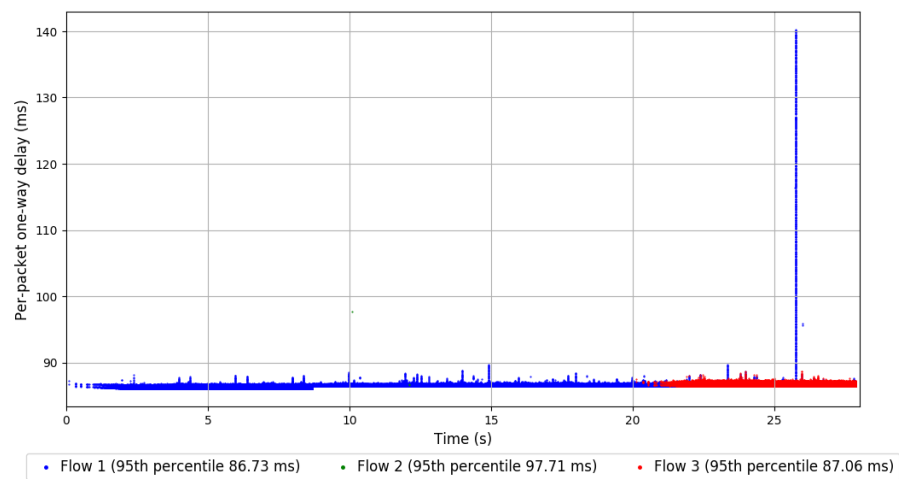
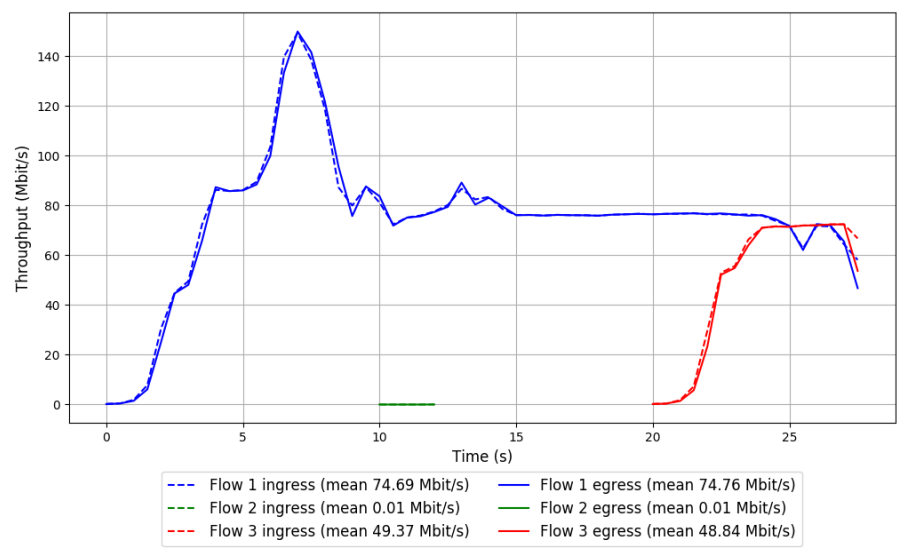
-- Flow 3:

Average throughput: 48.84 Mbit/s

95th percentile per-packet one-way delay: 87.064 ms

Loss rate: 3.27%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-12-20 14:00:49

End at: 2017-12-20 14:01:19

Below is generated by plot.py at 2017-12-20 19:00:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 136.77 Mbit/s

95th percentile per-packet one-way delay: 86.863 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 79.20 Mbit/s

95th percentile per-packet one-way delay: 86.879 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 67.79 Mbit/s

95th percentile per-packet one-way delay: 86.779 ms

Loss rate: 0.81%

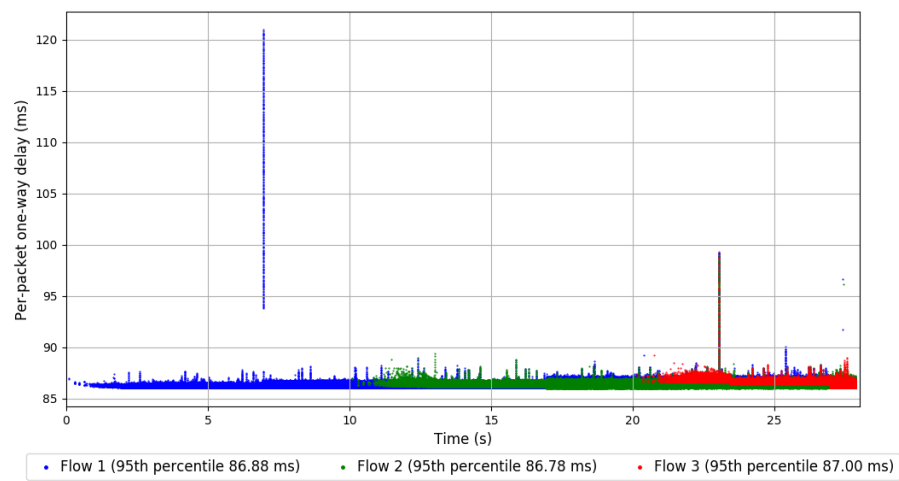
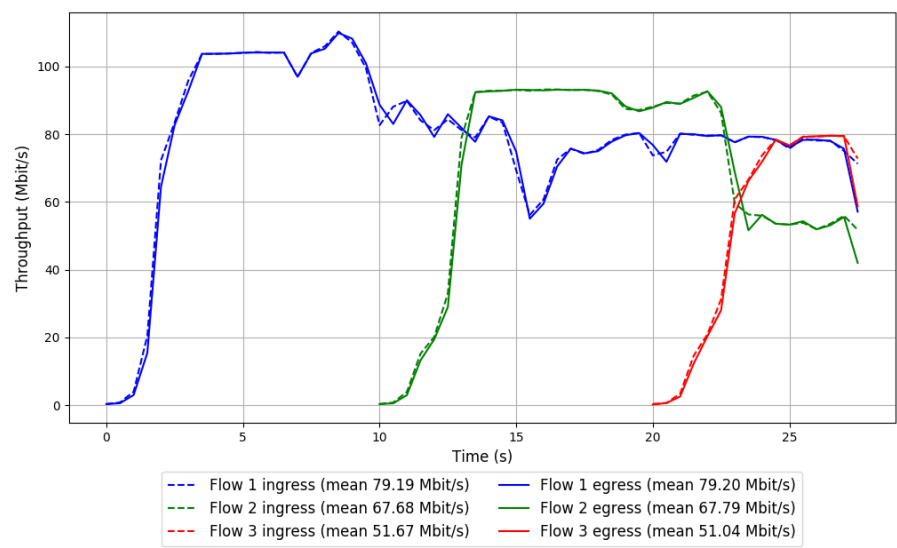
-- Flow 3:

Average throughput: 51.04 Mbit/s

95th percentile per-packet one-way delay: 87.002 ms

Loss rate: 3.39%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-12-20 14:16:04

End at: 2017-12-20 14:16:34

Below is generated by plot.py at 2017-12-20 19:00:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 126.37 Mbit/s

95th percentile per-packet one-way delay: 86.838 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 74.32 Mbit/s

95th percentile per-packet one-way delay: 86.866 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 50.10 Mbit/s

95th percentile per-packet one-way delay: 86.785 ms

Loss rate: 1.49%

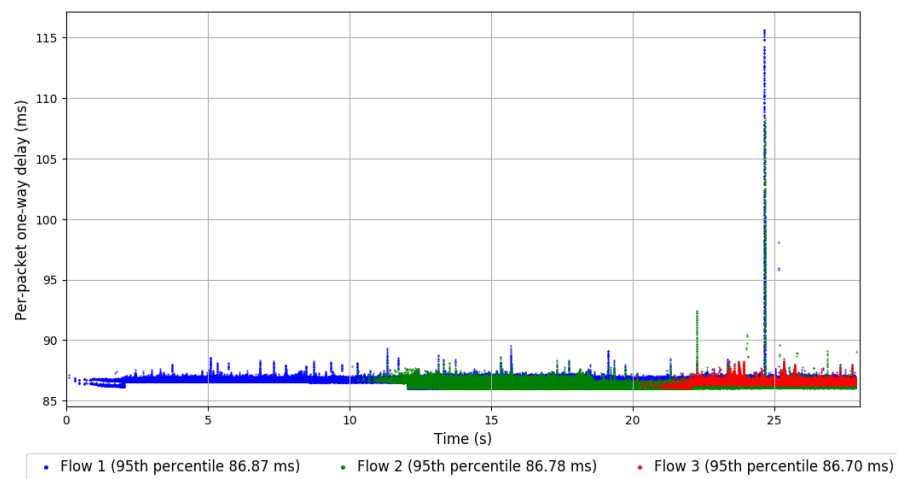
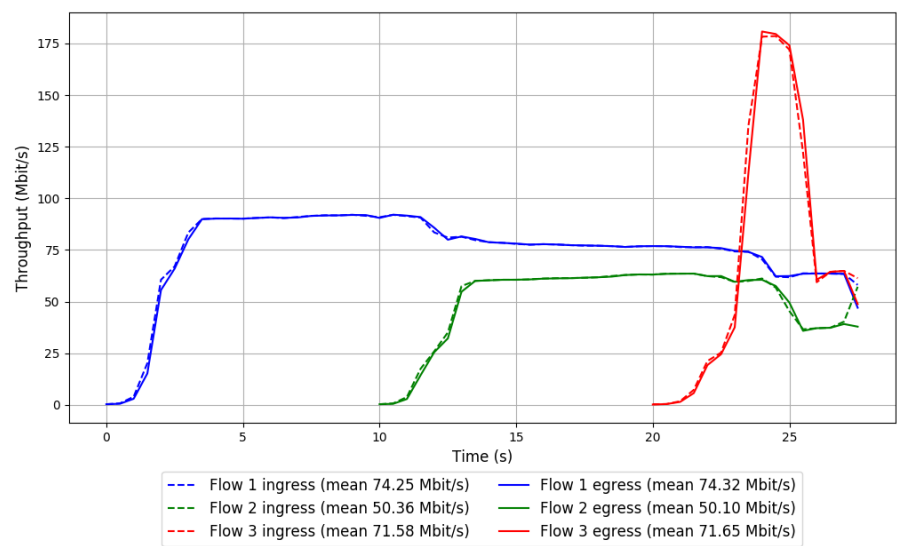
-- Flow 3:

Average throughput: 71.65 Mbit/s

95th percentile per-packet one-way delay: 86.696 ms

Loss rate: 2.09%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-12-20 14:31:21

End at: 2017-12-20 14:31:51

Below is generated by plot.py at 2017-12-20 19:00:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 122.51 Mbit/s

95th percentile per-packet one-way delay: 86.842 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 66.30 Mbit/s

95th percentile per-packet one-way delay: 86.708 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 62.92 Mbit/s

95th percentile per-packet one-way delay: 86.681 ms

Loss rate: 0.77%

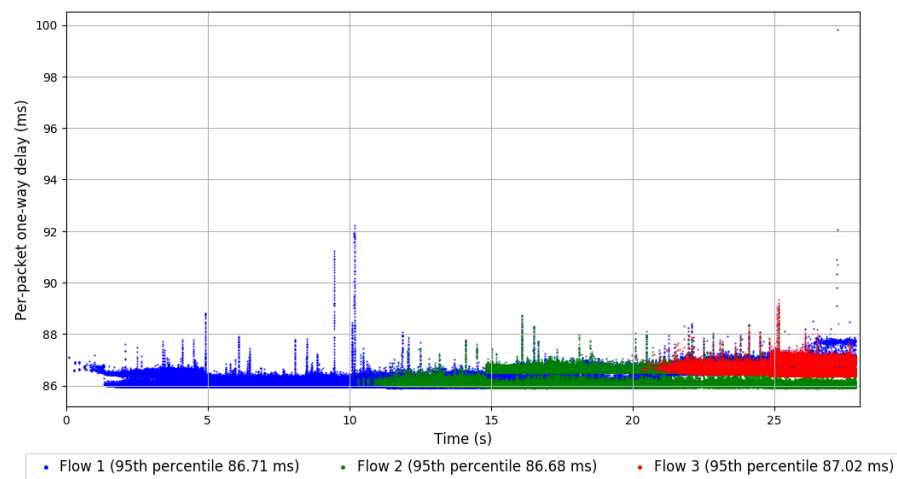
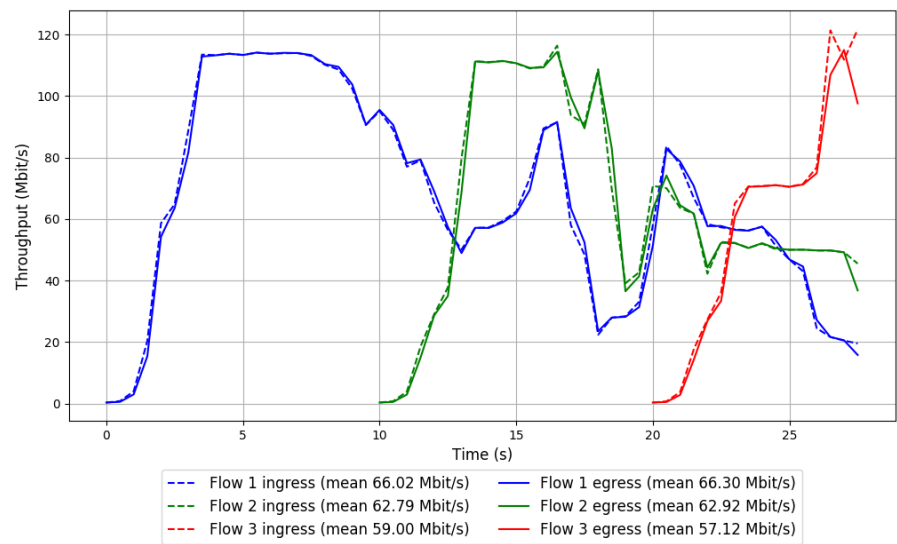
-- Flow 3:

Average throughput: 57.12 Mbit/s

95th percentile per-packet one-way delay: 87.017 ms

Loss rate: 5.32%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-12-20 14:46:38

End at: 2017-12-20 14:47:08

Below is generated by plot.py at 2017-12-20 19:00:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.72 Mbit/s

95th percentile per-packet one-way delay: 86.899 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 69.72 Mbit/s

95th percentile per-packet one-way delay: 86.626 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 40.18 Mbit/s

95th percentile per-packet one-way delay: 86.913 ms

Loss rate: 1.26%

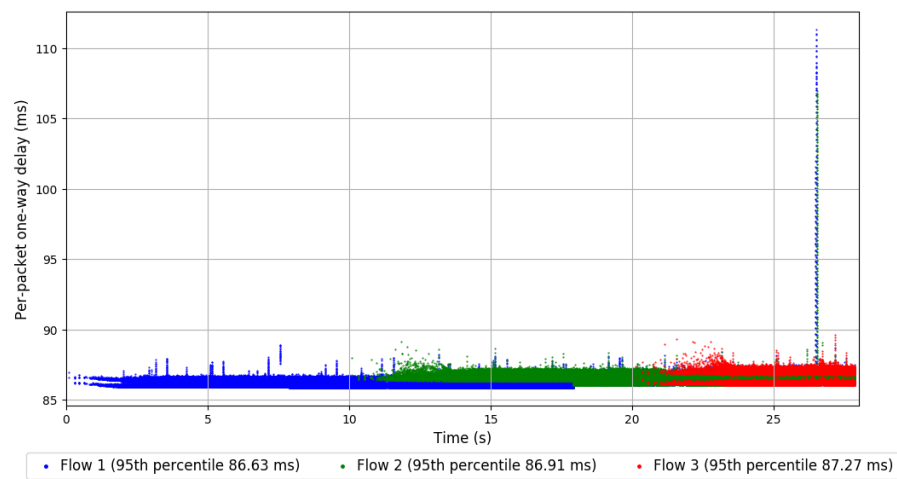
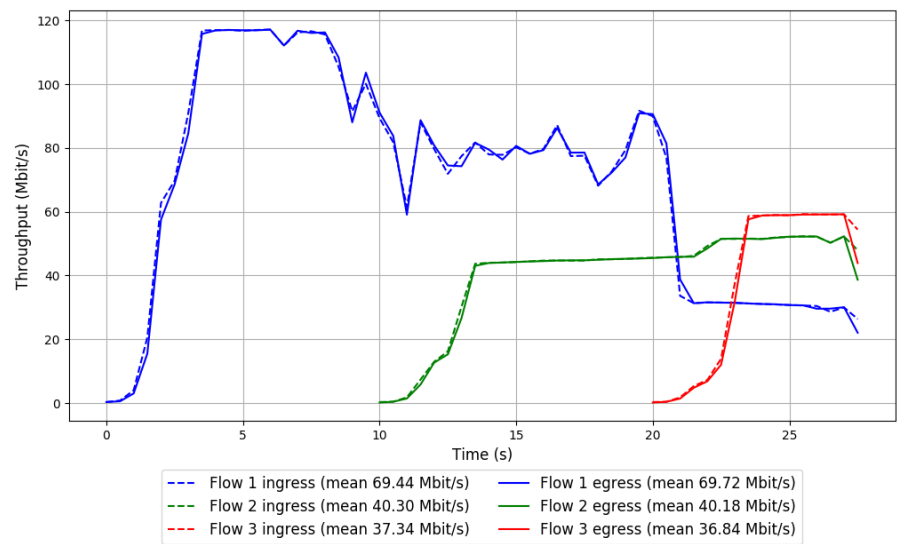
-- Flow 3:

Average throughput: 36.84 Mbit/s

95th percentile per-packet one-way delay: 87.265 ms

Loss rate: 3.49%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-12-20 15:01:50

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

Below is generated by plot.py at 2017-12-20 19:01:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.37 Mbit/s

95th percentile per-packet one-way delay: 86.641 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 76.51 Mbit/s

95th percentile per-packet one-way delay: 86.619 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 71.75 Mbit/s

95th percentile per-packet one-way delay: 86.634 ms

Loss rate: 0.84%

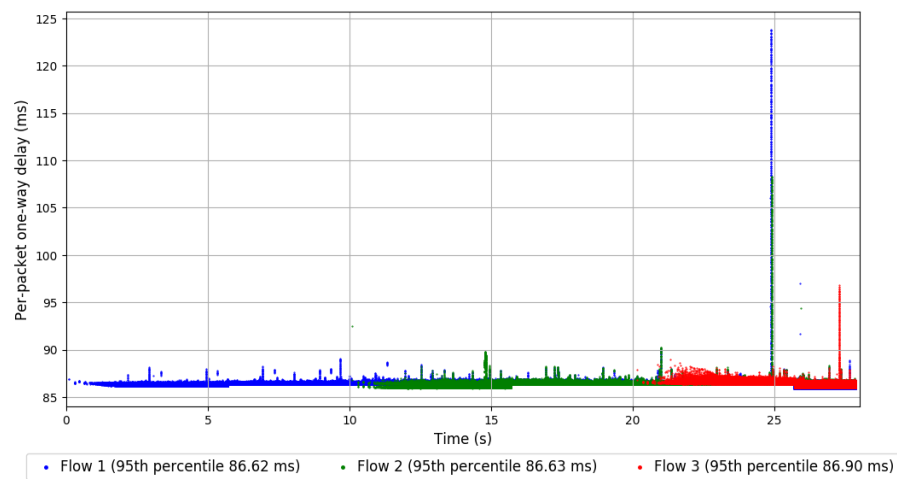
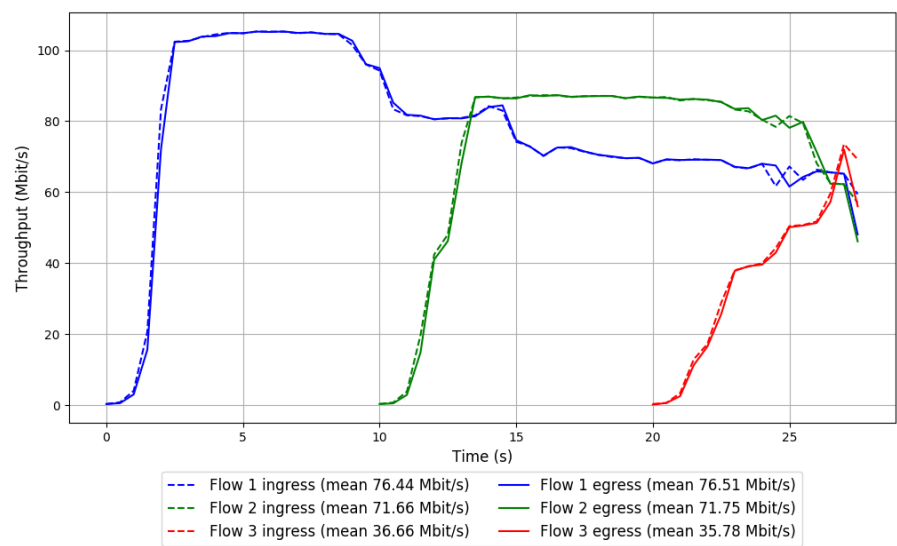
-- Flow 3:

Average throughput: 35.78 Mbit/s

95th percentile per-packet one-way delay: 86.898 ms

Loss rate: 4.54%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-12-20 15:17:18

End at: 2017-12-20 15:17:48

Below is generated by plot.py at 2017-12-20 19:01:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 123.70 Mbit/s

95th percentile per-packet one-way delay: 86.775 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 62.13 Mbit/s

95th percentile per-packet one-way delay: 86.746 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 66.21 Mbit/s

95th percentile per-packet one-way delay: 86.799 ms

Loss rate: 0.88%

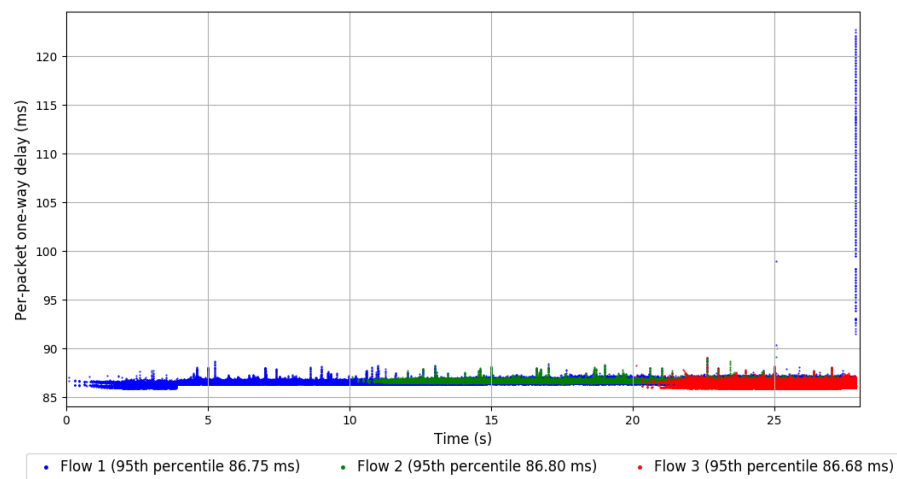
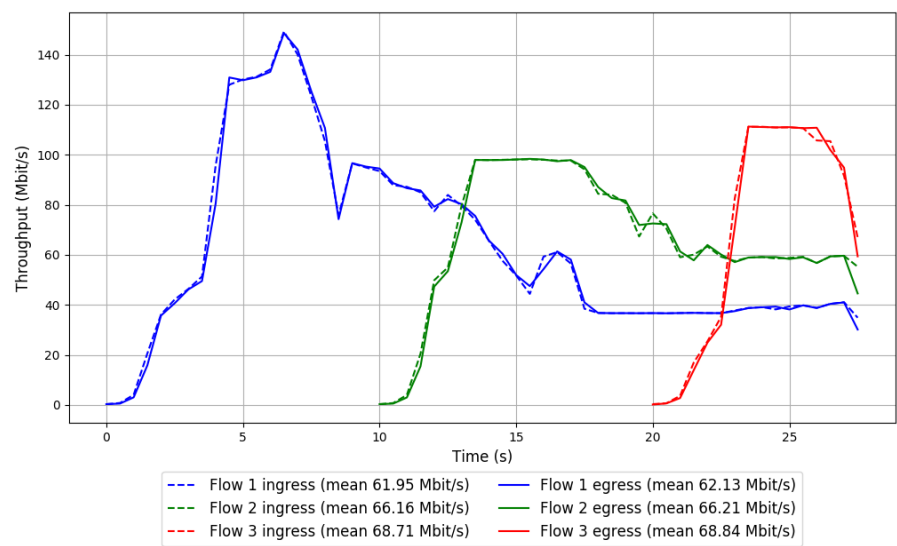
-- Flow 3:

Average throughput: 68.84 Mbit/s

95th percentile per-packet one-way delay: 86.682 ms

Loss rate: 2.02%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-12-20 15:32:03

End at: 2017-12-20 15:32:34

Below is generated by plot.py at 2017-12-20 19:01:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 53.75 Mbit/s

95th percentile per-packet one-way delay: 114.826 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 38.07 Mbit/s

95th percentile per-packet one-way delay: 114.758 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 21.28 Mbit/s

95th percentile per-packet one-way delay: 114.934 ms

Loss rate: 4.98%

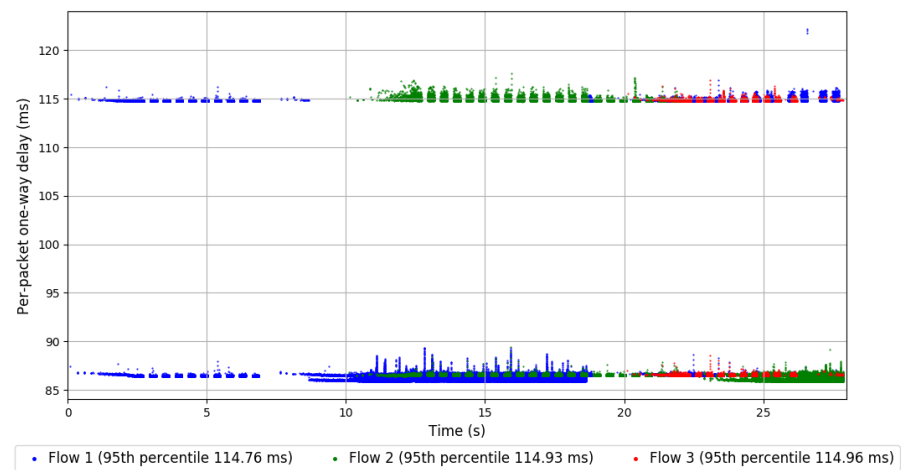
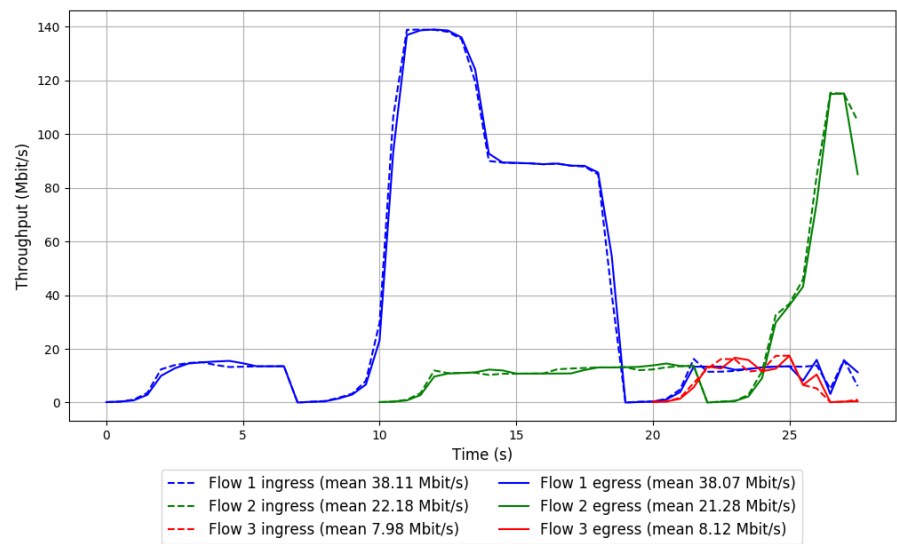
-- Flow 3:

Average throughput: 8.12 Mbit/s

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

Loss rate: 0.45%

Run 10: Report of Copa — Data Link

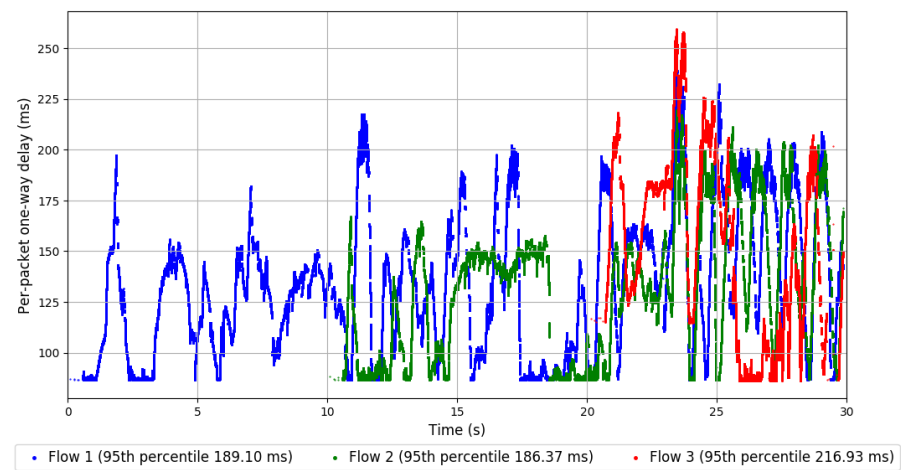
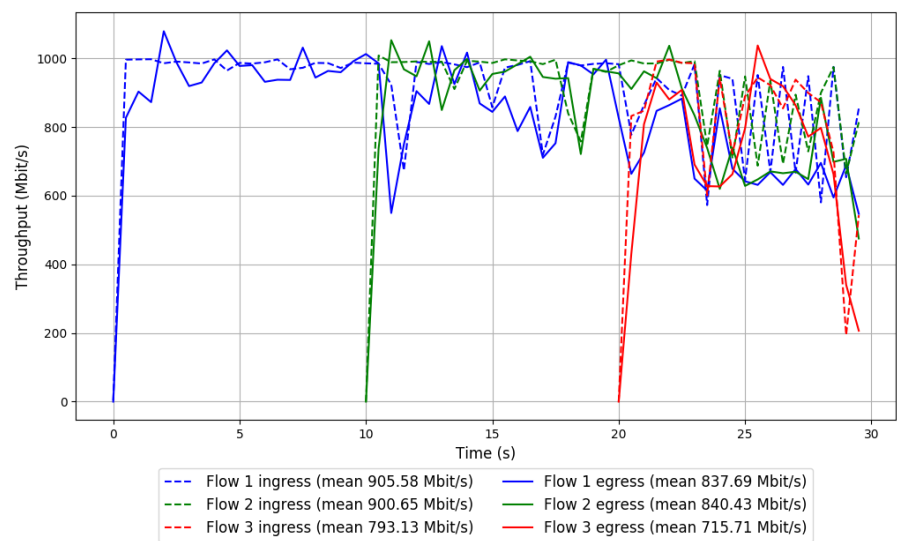


```
Run 1: Statistics of FillP

Start at: 2017-12-20 13:17:02
End at: 2017-12-20 13:17:32

# Below is generated by plot.py at 2017-12-20 19:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1628.84 Mbit/s
95th percentile per-packet one-way delay: 192.828 ms
Loss rate: 8.35%
-- Flow 1:
Average throughput: 837.69 Mbit/s
95th percentile per-packet one-way delay: 189.096 ms
Loss rate: 8.04%
-- Flow 2:
Average throughput: 840.43 Mbit/s
95th percentile per-packet one-way delay: 186.369 ms
Loss rate: 7.50%
-- Flow 3:
Average throughput: 715.71 Mbit/s
95th percentile per-packet one-way delay: 216.925 ms
Loss rate: 11.40%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2017-12-20 13:32:18

End at: 2017-12-20 13:32:48

Below is generated by plot.py at 2017-12-20 19:30:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 1529.18 Mbit/s

95th percentile per-packet one-way delay: 266.166 ms

Loss rate: 7.19%

-- Flow 1:

Average throughput: 849.19 Mbit/s

95th percentile per-packet one-way delay: 183.384 ms

Loss rate: 6.55%

-- Flow 2:

Average throughput: 812.05 Mbit/s

95th percentile per-packet one-way delay: 286.174 ms

Loss rate: 6.78%

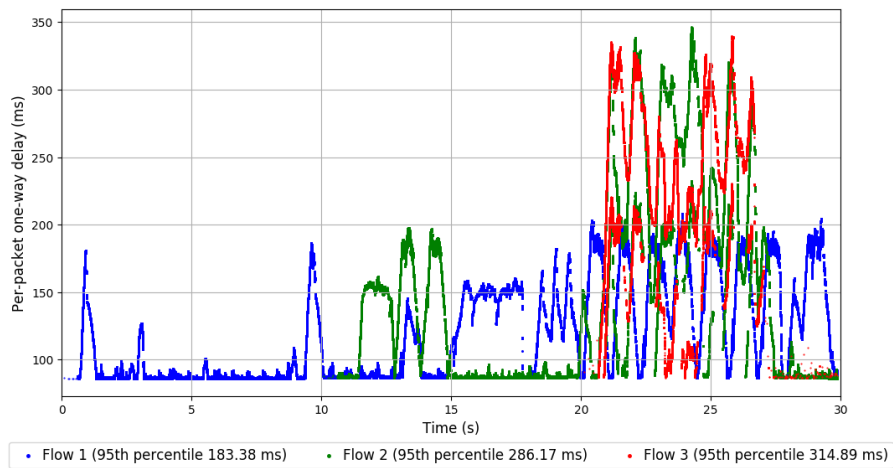
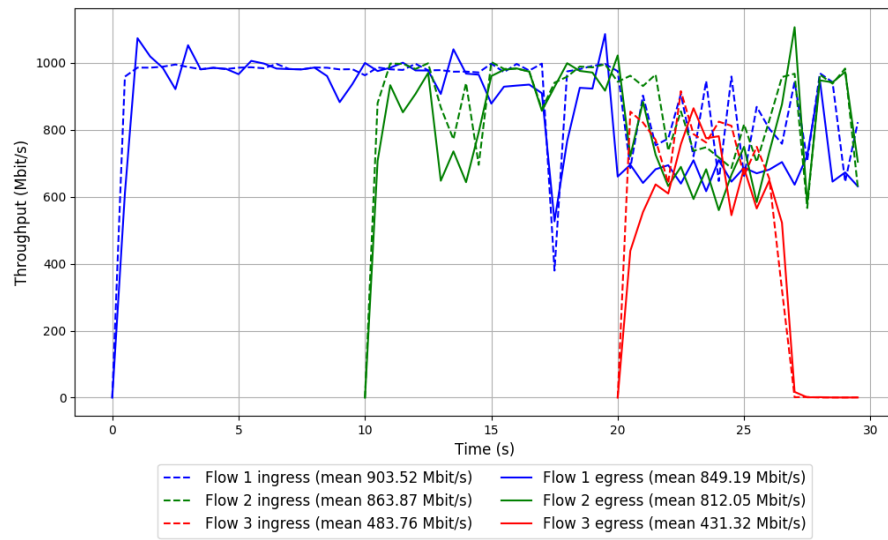
-- Flow 3:

Average throughput: 431.32 Mbit/s

95th percentile per-packet one-way delay: 314.893 ms

Loss rate: 12.29%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2017-12-20 13:47:25

End at: 2017-12-20 13:47:55

Below is generated by plot.py at 2017-12-20 19:30:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 1462.73 Mbit/s

95th percentile per-packet one-way delay: 271.464 ms

Loss rate: 5.93%

-- Flow 1:

Average throughput: 805.50 Mbit/s

95th percentile per-packet one-way delay: 166.536 ms

Loss rate: 2.94%

-- Flow 2:

Average throughput: 823.42 Mbit/s

95th percentile per-packet one-way delay: 290.526 ms

Loss rate: 8.32%

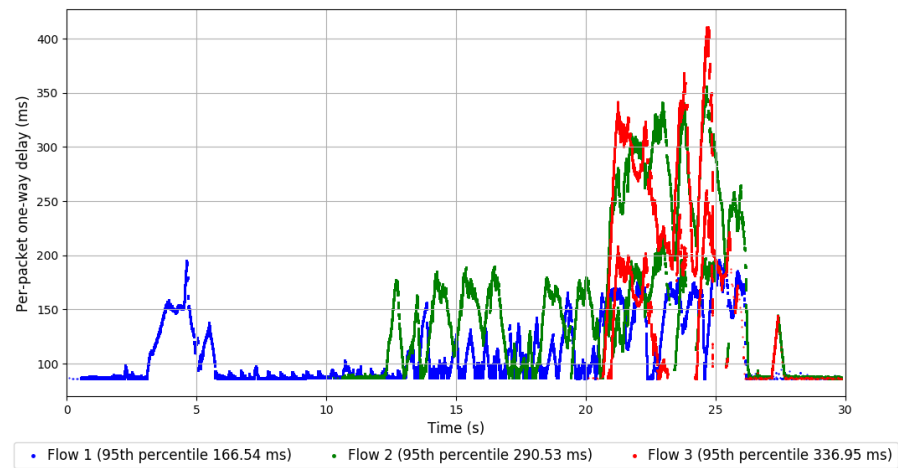
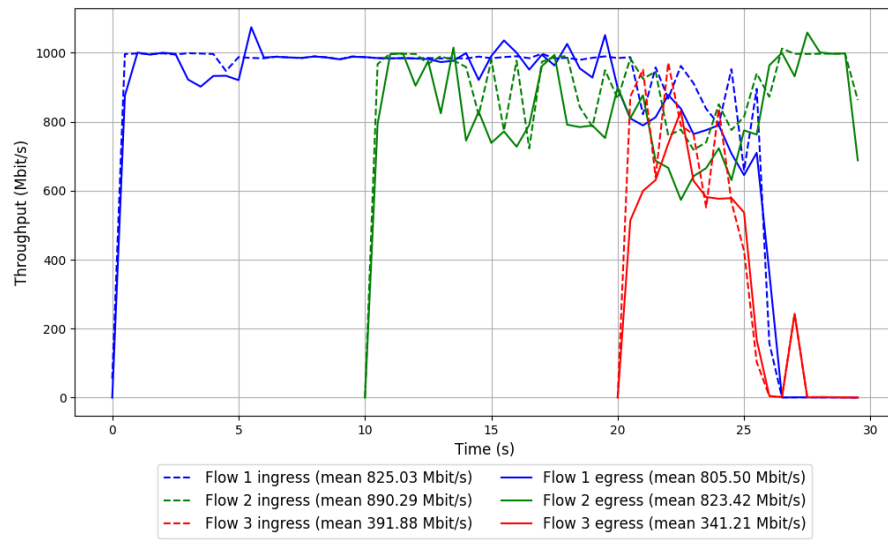
-- Flow 3:

Average throughput: 341.21 Mbit/s

95th percentile per-packet one-way delay: 336.952 ms

Loss rate: 14.11%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2017-12-20 14:02:32

End at: 2017-12-20 14:03:02

Below is generated by plot.py at 2017-12-20 19:31:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 1638.55 Mbit/s

95th percentile per-packet one-way delay: 183.059 ms

Loss rate: 9.15%

-- Flow 1:

Average throughput: 876.42 Mbit/s

95th percentile per-packet one-way delay: 180.926 ms

Loss rate: 6.32%

-- Flow 2:

Average throughput: 805.53 Mbit/s

95th percentile per-packet one-way delay: 182.453 ms

Loss rate: 10.62%

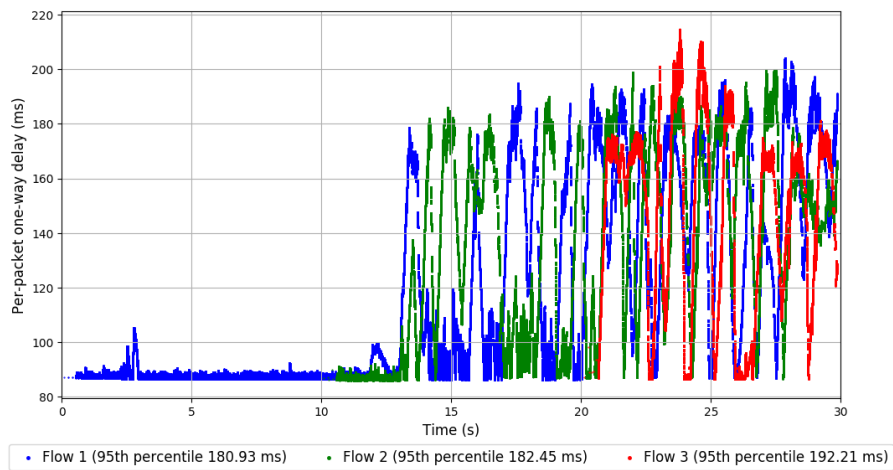
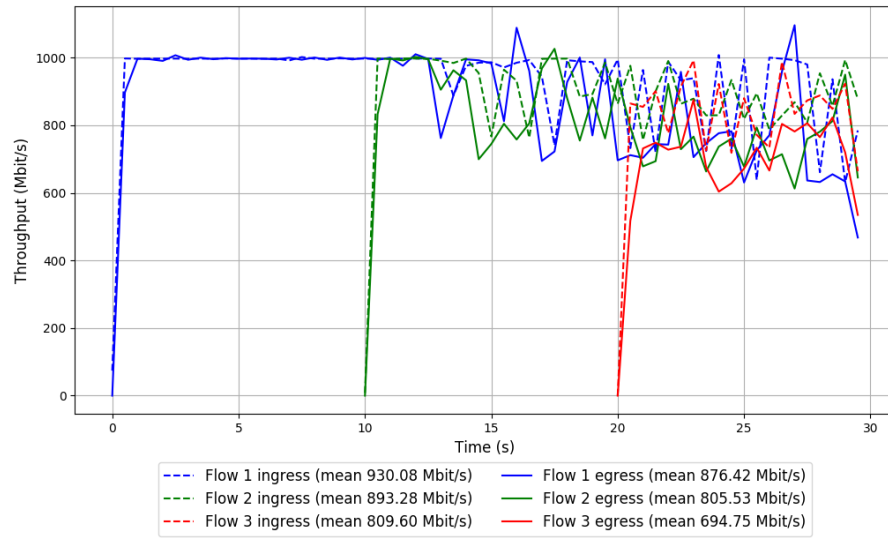
-- Flow 3:

Average throughput: 694.75 Mbit/s

95th percentile per-packet one-way delay: 192.208 ms

Loss rate: 15.70%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2017-12-20 14:17:45

End at: 2017-12-20 14:18:15

Below is generated by plot.py at 2017-12-20 19:31:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 1531.76 Mbit/s

95th percentile per-packet one-way delay: 261.844 ms

Loss rate: 5.60%

-- Flow 1:

Average throughput: 904.09 Mbit/s

95th percentile per-packet one-way delay: 172.210 ms

Loss rate: 4.01%

-- Flow 2:

Average throughput: 727.94 Mbit/s

95th percentile per-packet one-way delay: 291.069 ms

Loss rate: 7.32%

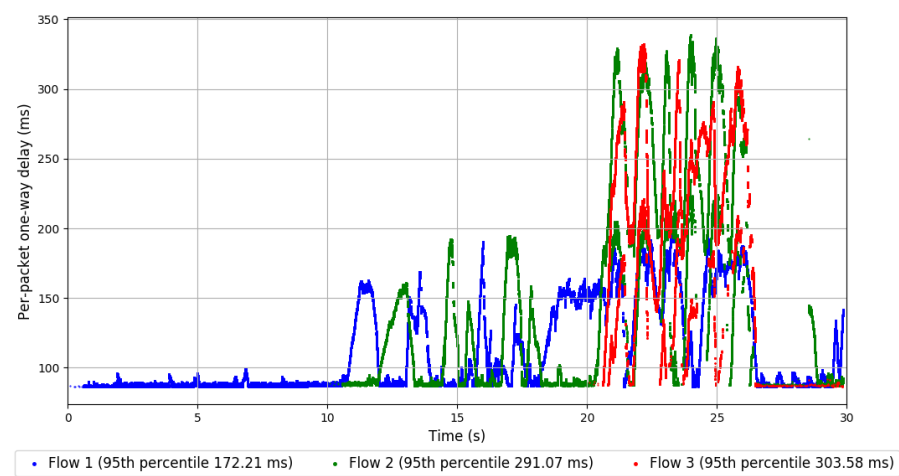
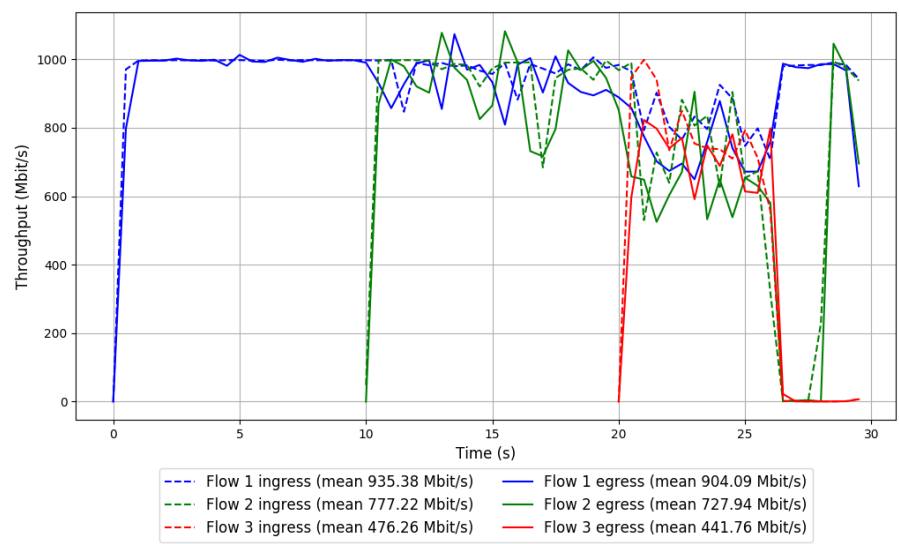
-- Flow 3:

Average throughput: 441.76 Mbit/s

95th percentile per-packet one-way delay: 303.576 ms

Loss rate: 9.44%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2017-12-20 14:33:02

End at: 2017-12-20 14:33:32

Below is generated by plot.py at 2017-12-20 19:31:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 1559.37 Mbit/s

95th percentile per-packet one-way delay: 251.842 ms

Loss rate: 6.29%

-- Flow 1:

Average throughput: 900.39 Mbit/s

95th percentile per-packet one-way delay: 175.217 ms

Loss rate: 4.08%

-- Flow 2:

Average throughput: 689.39 Mbit/s

95th percentile per-packet one-way delay: 266.745 ms

Loss rate: 3.28%

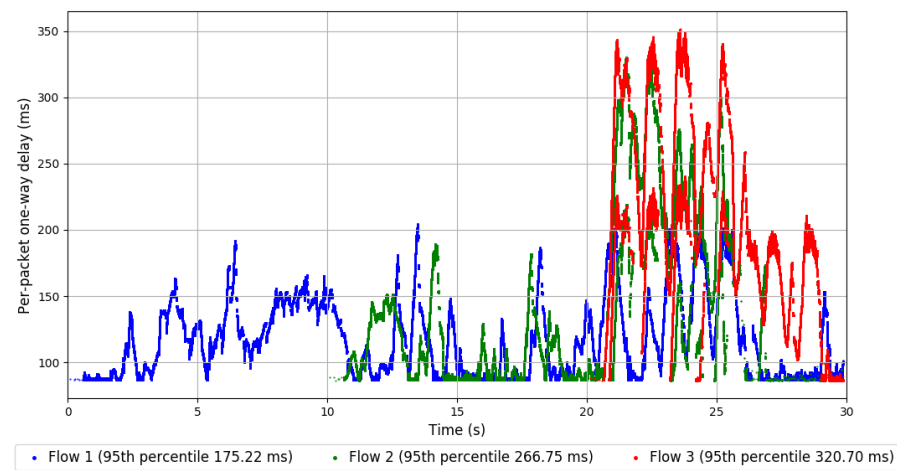
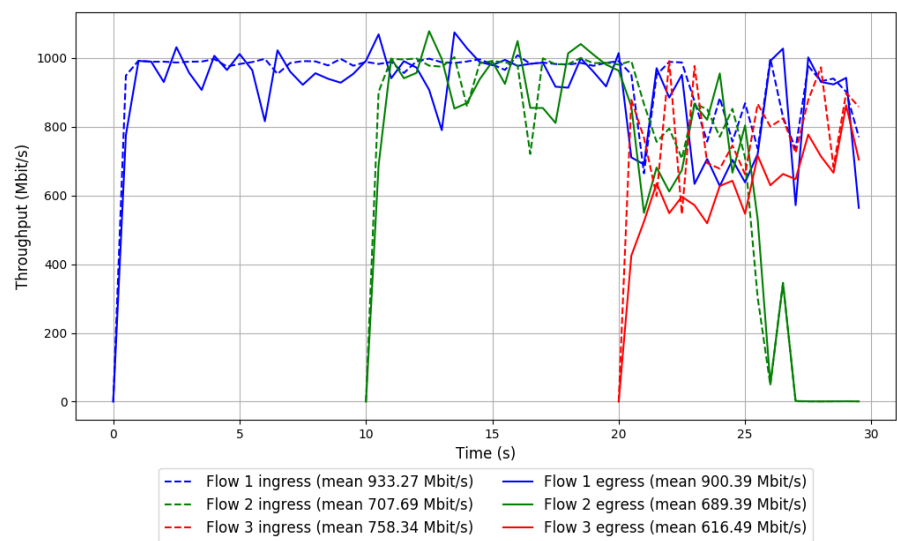
-- Flow 3:

Average throughput: 616.49 Mbit/s

95th percentile per-packet one-way delay: 320.704 ms

Loss rate: 20.12%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2017-12-20 14:48:18

End at: 2017-12-20 14:48:48

Below is generated by plot.py at 2017-12-20 19:31:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 1625.67 Mbit/s

95th percentile per-packet one-way delay: 193.055 ms

Loss rate: 8.56%

-- Flow 1:

Average throughput: 829.41 Mbit/s

95th percentile per-packet one-way delay: 194.806 ms

Loss rate: 7.87%

-- Flow 2:

Average throughput: 822.80 Mbit/s

95th percentile per-packet one-way delay: 190.103 ms

Loss rate: 9.60%

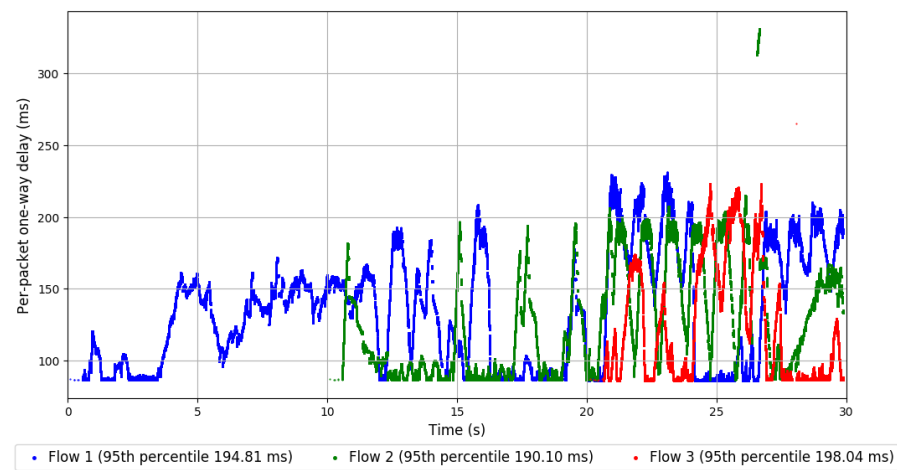
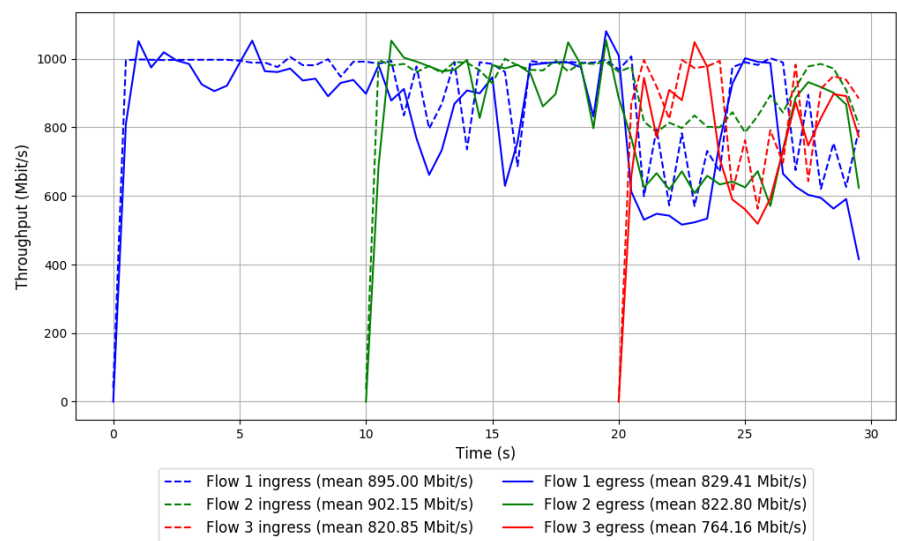
-- Flow 3:

Average throughput: 764.16 Mbit/s

95th percentile per-packet one-way delay: 198.039 ms

Loss rate: 8.54%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2017-12-20 15:03:33

End at: 2017-12-20 15:04:03

Below is generated by plot.py at 2017-12-20 19:33:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1660.93 Mbit/s

95th percentile per-packet one-way delay: 192.481 ms

Loss rate: 7.62%

-- Flow 1:

Average throughput: 871.47 Mbit/s

95th percentile per-packet one-way delay: 185.654 ms

Loss rate: 5.64%

-- Flow 2:

Average throughput: 771.83 Mbit/s

95th percentile per-packet one-way delay: 197.941 ms

Loss rate: 11.03%

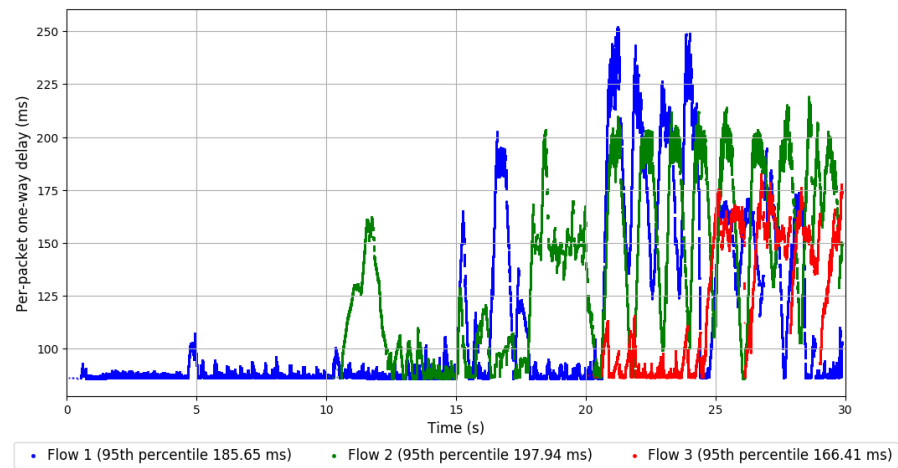
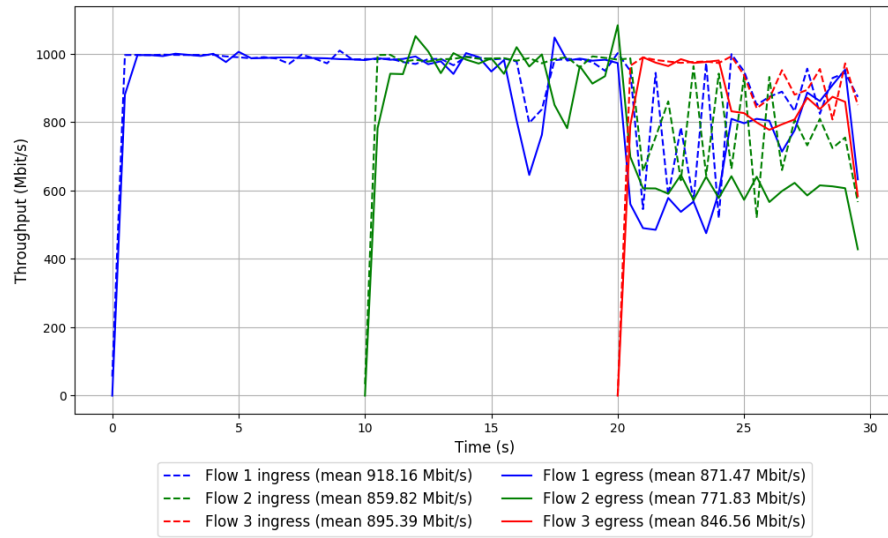
-- Flow 3:

Average throughput: 846.56 Mbit/s

95th percentile per-packet one-way delay: 166.408 ms

Loss rate: 7.15%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2017-12-20 15:19:00

End at: 2017-12-20 15:19:30

Below is generated by plot.py at 2017-12-20 19:42:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 1663.56 Mbit/s

95th percentile per-packet one-way delay: 201.212 ms

Loss rate: 7.82%

-- Flow 1:

Average throughput: 897.17 Mbit/s

95th percentile per-packet one-way delay: 179.343 ms

Loss rate: 4.52%

-- Flow 2:

Average throughput: 805.18 Mbit/s

95th percentile per-packet one-way delay: 259.322 ms

Loss rate: 9.91%

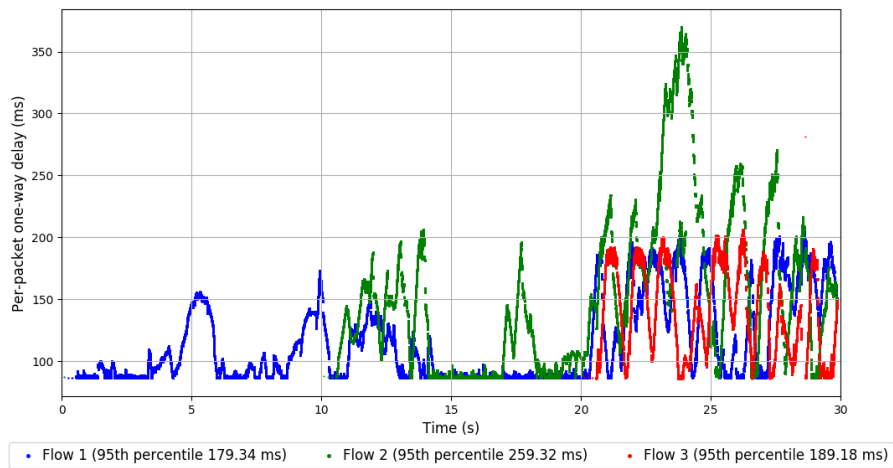
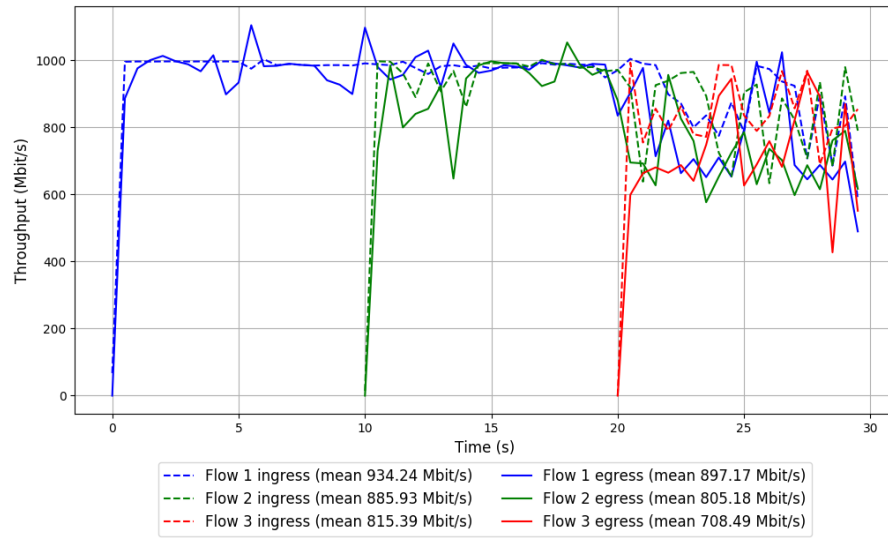
-- Flow 3:

Average throughput: 708.49 Mbit/s

95th percentile per-packet one-way delay: 189.181 ms

Loss rate: 14.65%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2017-12-20 15:33:37

End at: 2017-12-20 15:34:07

Below is generated by plot.py at 2017-12-20 19:42:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 1593.75 Mbit/s

95th percentile per-packet one-way delay: 298.930 ms

Loss rate: 8.87%

-- Flow 1:

Average throughput: 843.00 Mbit/s

95th percentile per-packet one-way delay: 308.125 ms

Loss rate: 5.99%

-- Flow 2:

Average throughput: 799.74 Mbit/s

95th percentile per-packet one-way delay: 218.726 ms

Loss rate: 9.93%

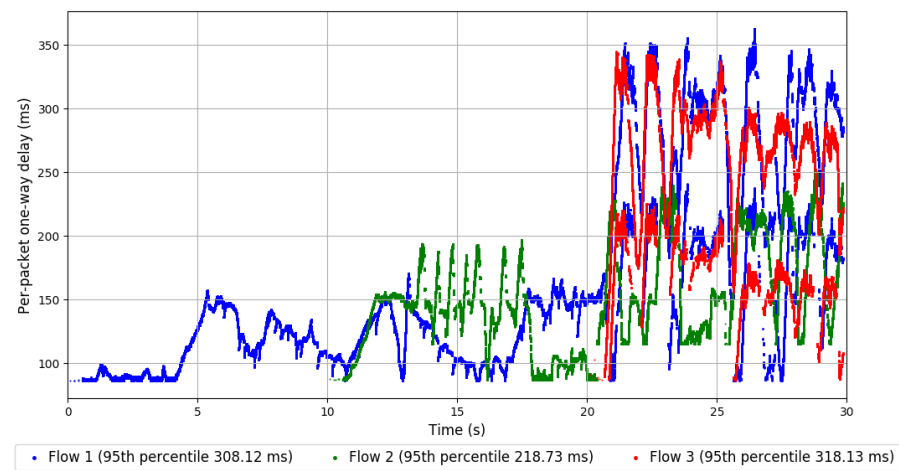
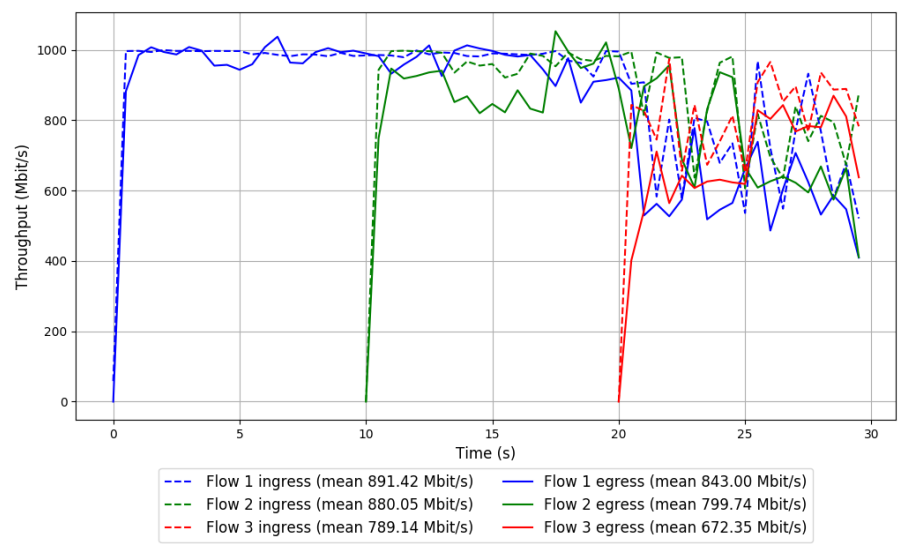
-- Flow 3:

Average throughput: 672.35 Mbit/s

95th percentile per-packet one-way delay: 318.130 ms

Loss rate: 16.35%

Run 10: Report of FillP — Data Link

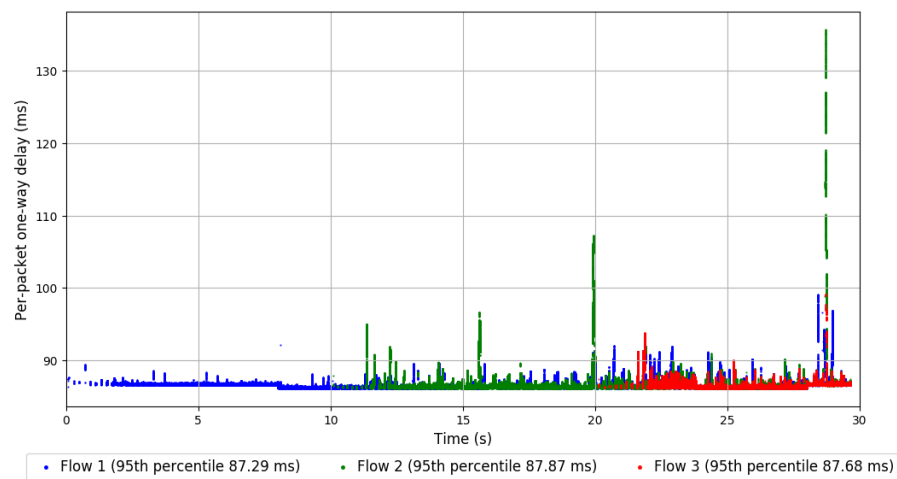
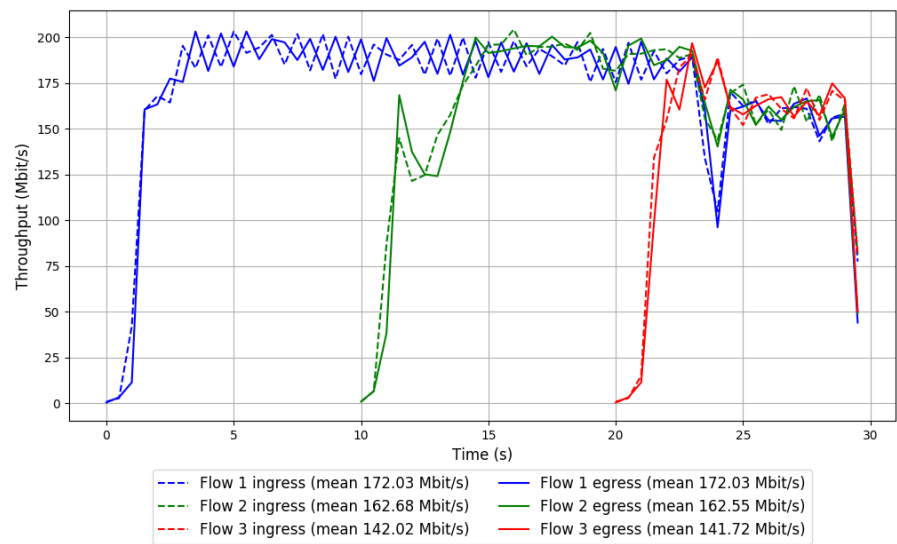


```
Run 1: Statistics of Indigo

Start at: 2017-12-20 13:19:49
End at: 2017-12-20 13:20:19

# Below is generated by plot.py at 2017-12-20 19:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.13 Mbit/s
95th percentile per-packet one-way delay: 87.537 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 172.03 Mbit/s
95th percentile per-packet one-way delay: 87.293 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 162.55 Mbit/s
95th percentile per-packet one-way delay: 87.871 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 141.72 Mbit/s
95th percentile per-packet one-way delay: 87.681 ms
Loss rate: 2.00%
```

Run 1: Report of Indigo — Data Link

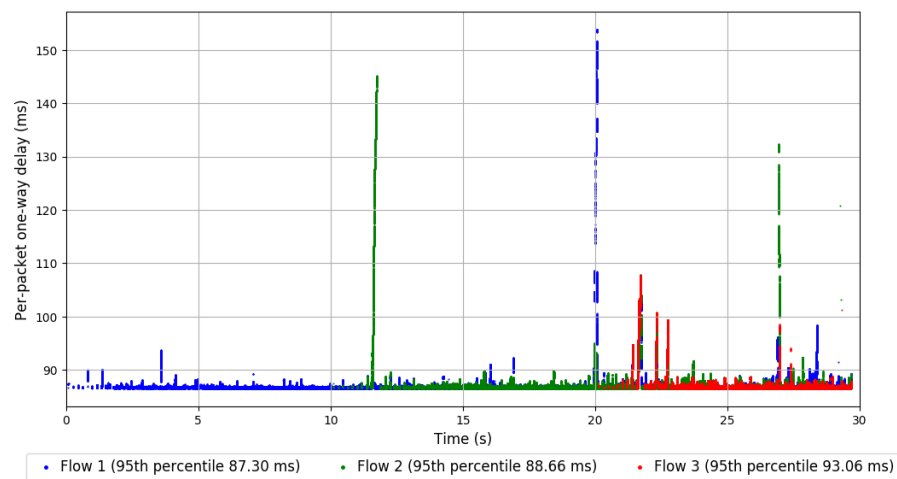
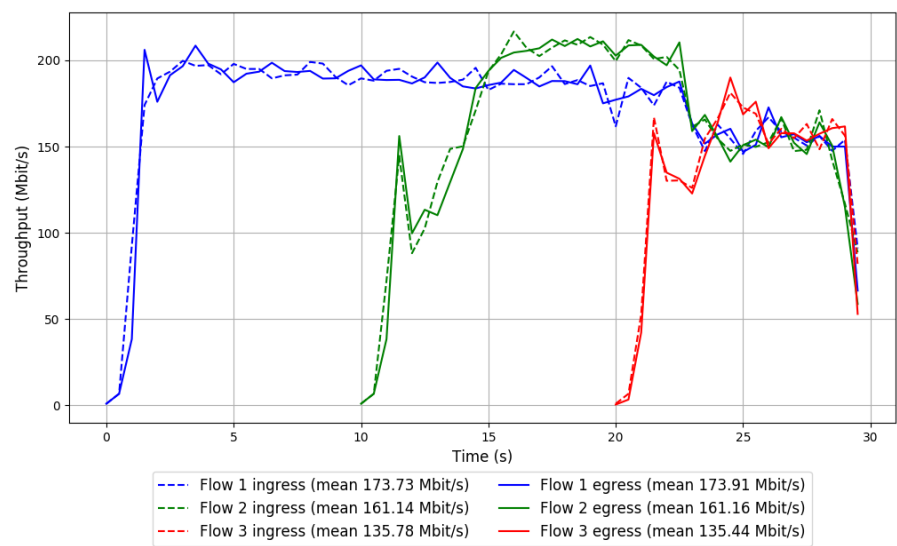


```
Run 2: Statistics of Indigo

Start at: 2017-12-20 13:35:02
End at: 2017-12-20 13:35:32

# Below is generated by plot.py at 2017-12-20 19:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 324.20 Mbit/s
95th percentile per-packet one-way delay: 87.947 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 173.91 Mbit/s
95th percentile per-packet one-way delay: 87.303 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 161.16 Mbit/s
95th percentile per-packet one-way delay: 88.660 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 135.44 Mbit/s
95th percentile per-packet one-way delay: 93.057 ms
Loss rate: 2.03%
```

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2017-12-20 13:50:08

End at: 2017-12-20 13:50:38

Below is generated by plot.py at 2017-12-20 19:42:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 315.05 Mbit/s

95th percentile per-packet one-way delay: 86.965 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 168.00 Mbit/s

95th percentile per-packet one-way delay: 87.008 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 159.21 Mbit/s

95th percentile per-packet one-way delay: 86.986 ms

Loss rate: 0.82%

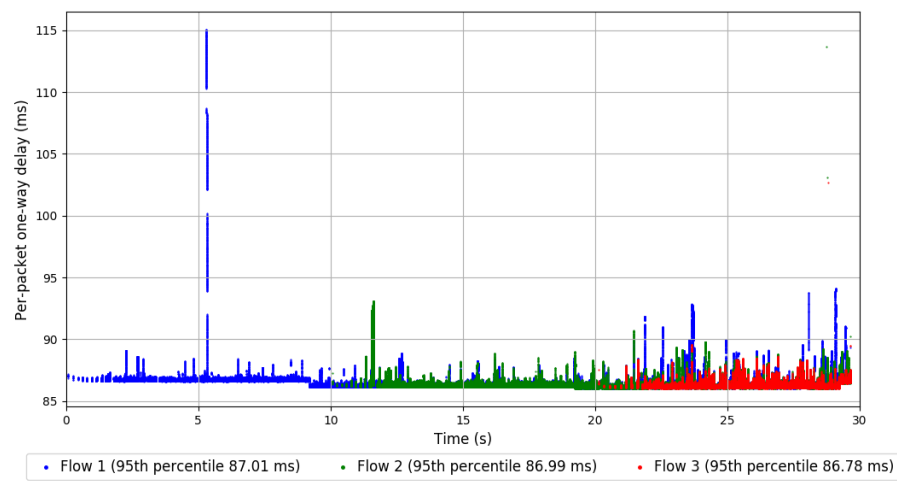
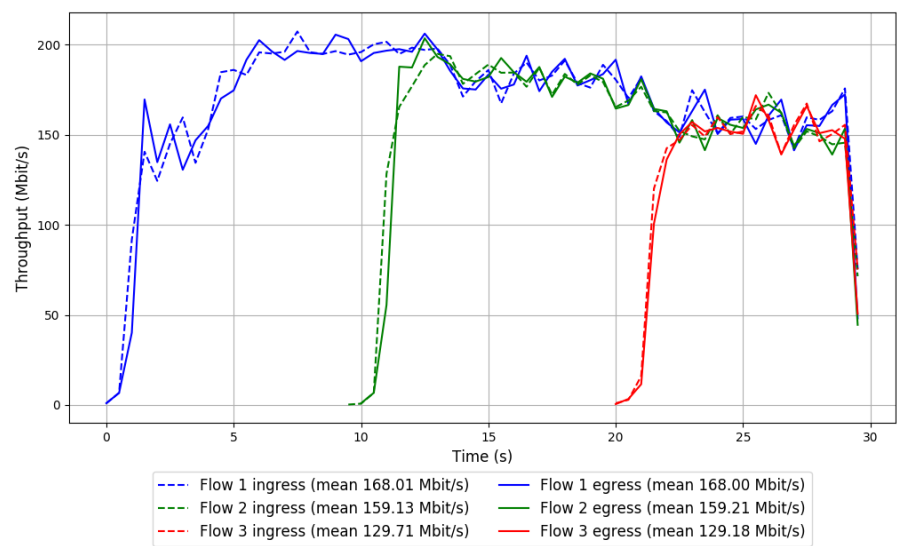
-- Flow 3:

Average throughput: 129.18 Mbit/s

95th percentile per-packet one-way delay: 86.785 ms

Loss rate: 2.18%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2017-12-20 14:05:25

End at: 2017-12-20 14:05:55

Below is generated by plot.py at 2017-12-20 19:42:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 316.71 Mbit/s

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

Loss rate: 0.83%

-- Flow 1:

Average throughput: 167.90 Mbit/s

95th percentile per-packet one-way delay: 86.803 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 156.88 Mbit/s

95th percentile per-packet one-way delay: 87.024 ms

Loss rate: 0.85%

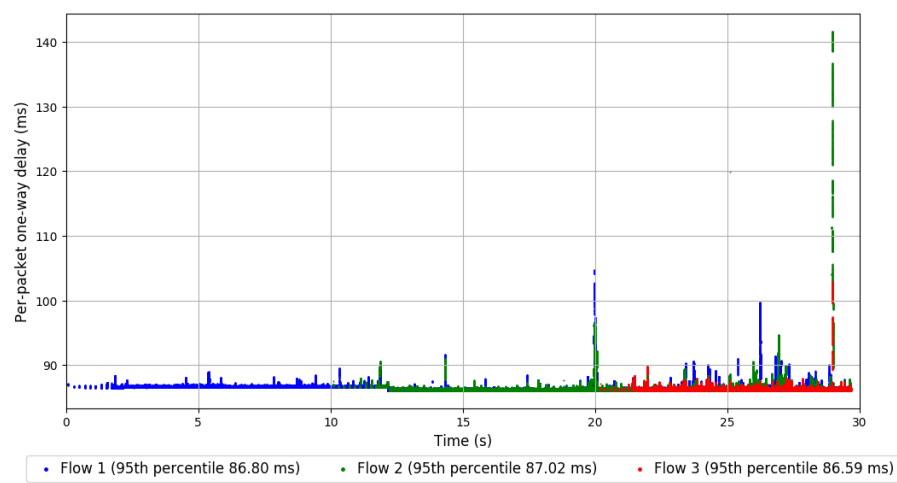
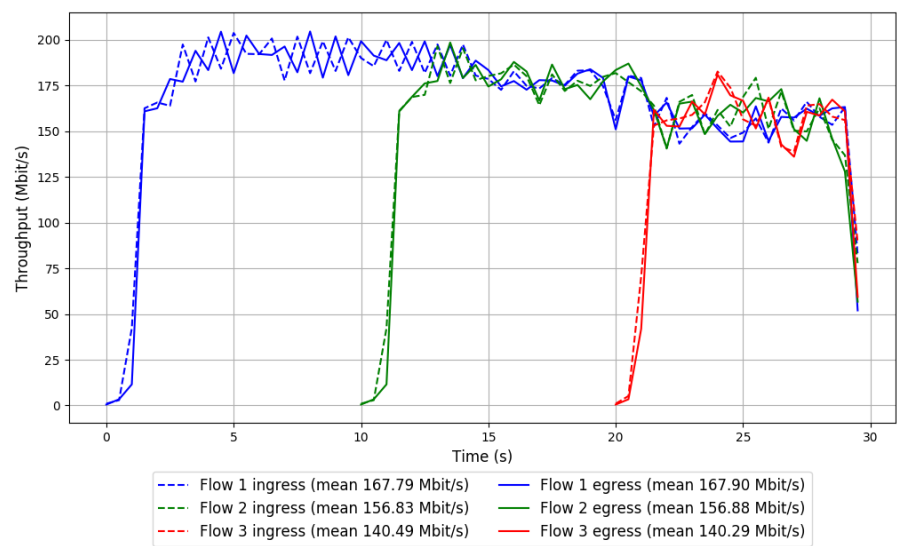
-- Flow 3:

Average throughput: 140.29 Mbit/s

95th percentile per-packet one-way delay: 86.586 ms

Loss rate: 1.94%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

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

End at: 2017-12-20 14:21:02

Below is generated by plot.py at 2017-12-20 19:42:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 322.46 Mbit/s

95th percentile per-packet one-way delay: 88.605 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 173.07 Mbit/s

95th percentile per-packet one-way delay: 87.756 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 164.29 Mbit/s

95th percentile per-packet one-way delay: 88.503 ms

Loss rate: 0.93%

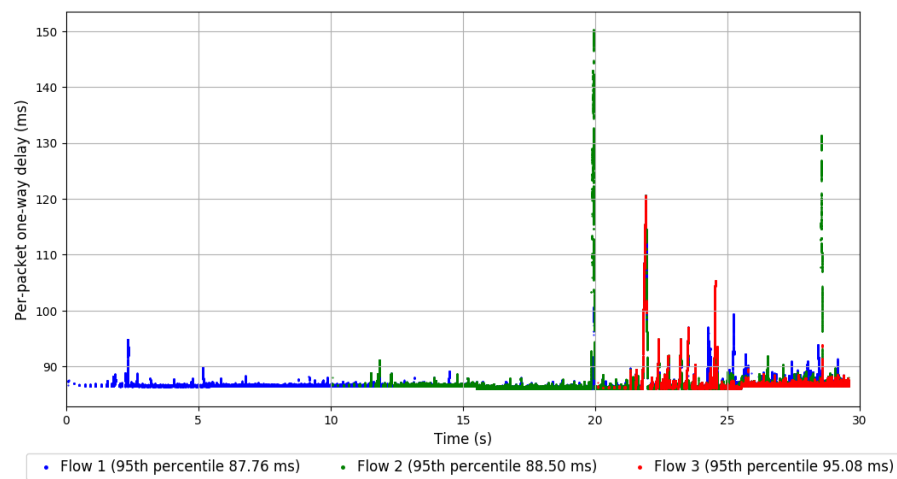
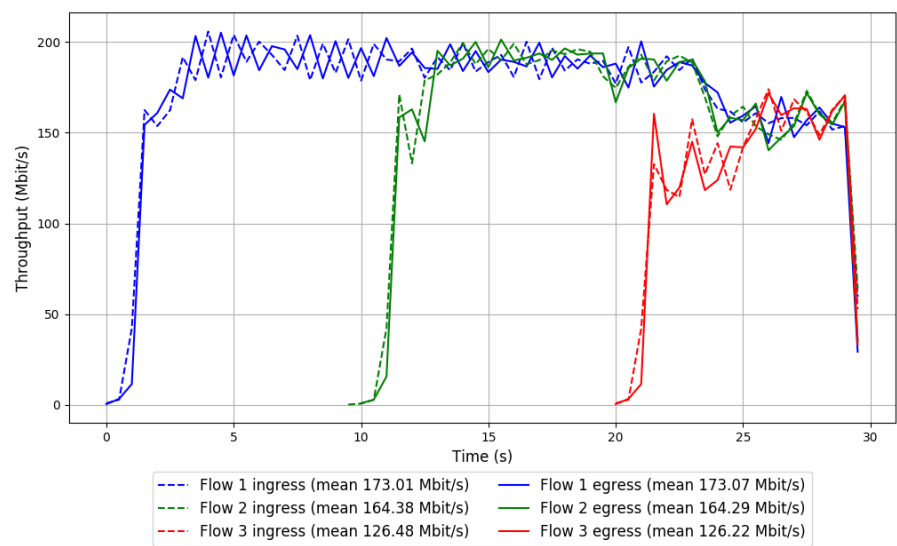
-- Flow 3:

Average throughput: 126.22 Mbit/s

95th percentile per-packet one-way delay: 95.085 ms

Loss rate: 1.99%

Run 5: Report of Indigo — Data Link



Run 6: Statistics of Indigo

Start at: 2017-12-20 14:35:50

End at: 2017-12-20 14:36:20

Below is generated by plot.py at 2017-12-20 19:42:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 312.43 Mbit/s

95th percentile per-packet one-way delay: 87.145 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 162.22 Mbit/s

95th percentile per-packet one-way delay: 86.913 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 158.35 Mbit/s

95th percentile per-packet one-way delay: 87.329 ms

Loss rate: 0.81%

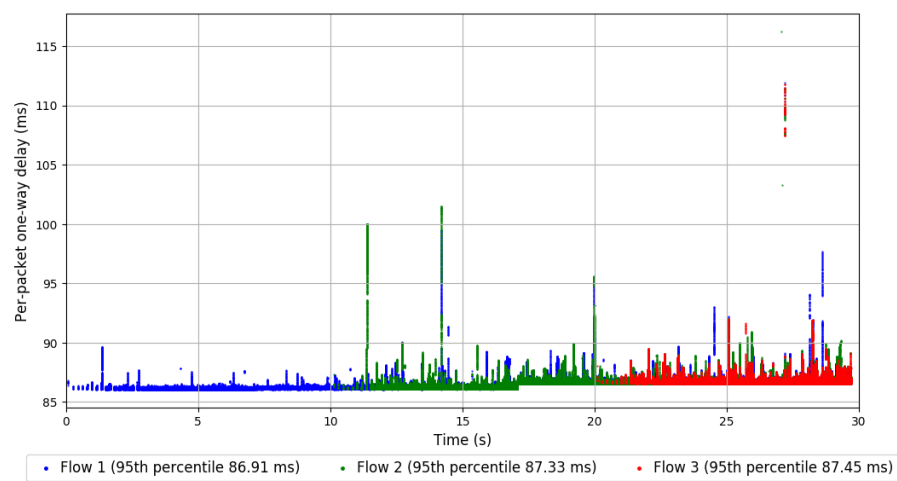
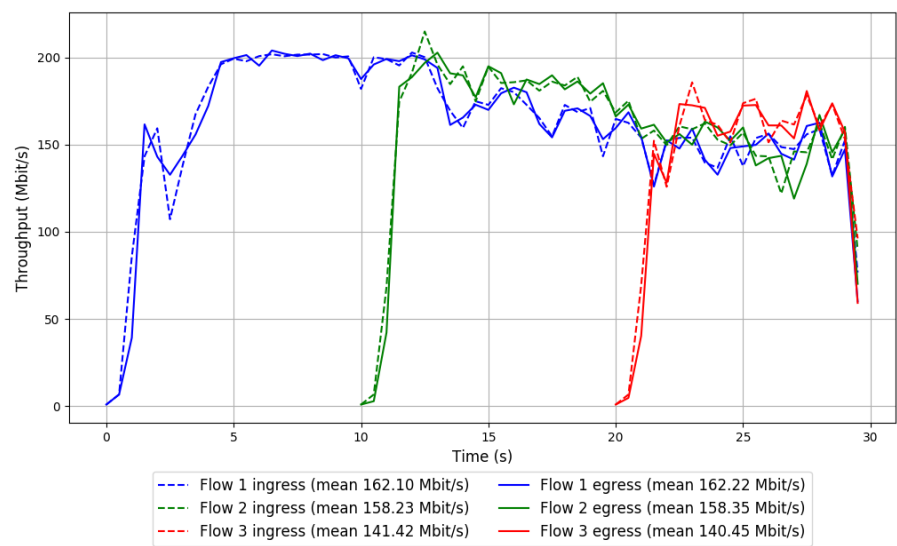
-- Flow 3:

Average throughput: 140.45 Mbit/s

95th percentile per-packet one-way delay: 87.446 ms

Loss rate: 2.46%

Run 6: Report of Indigo — Data Link



Run 7: Statistics of Indigo

Start at: 2017-12-20 14:51:07

End at: 2017-12-20 14:51:37

Below is generated by plot.py at 2017-12-20 19:42:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 305.18 Mbit/s

95th percentile per-packet one-way delay: 86.897 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 172.92 Mbit/s

95th percentile per-packet one-way delay: 86.781 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 158.21 Mbit/s

95th percentile per-packet one-way delay: 87.125 ms

Loss rate: 1.07%

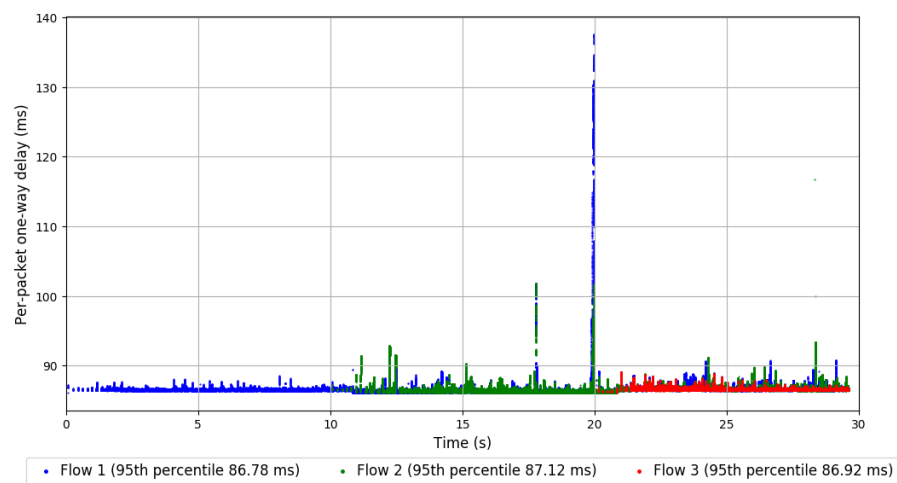
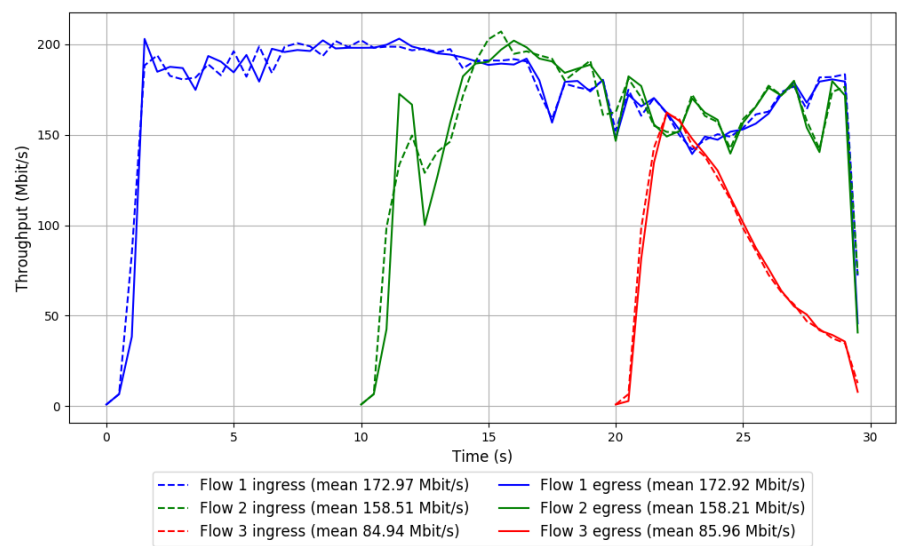
-- Flow 3:

Average throughput: 85.96 Mbit/s

95th percentile per-packet one-way delay: 86.920 ms

Loss rate: 0.62%

Run 7: Report of Indigo — Data Link



Run 8: Statistics of Indigo

Start at: 2017-12-20 15:06:27

End at: 2017-12-20 15:06:57

Below is generated by plot.py at 2017-12-20 19:42:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 320.89 Mbit/s

95th percentile per-packet one-way delay: 87.047 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 174.35 Mbit/s

95th percentile per-packet one-way delay: 86.944 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 153.63 Mbit/s

95th percentile per-packet one-way delay: 87.197 ms

Loss rate: 0.98%

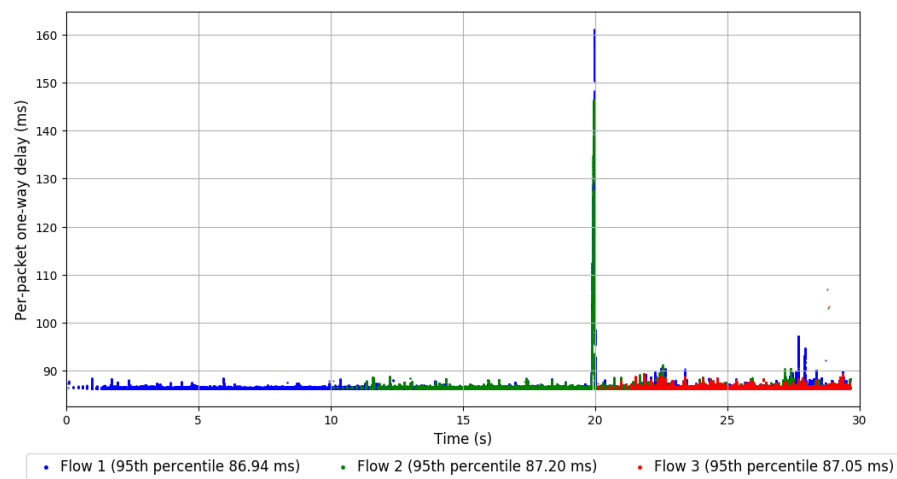
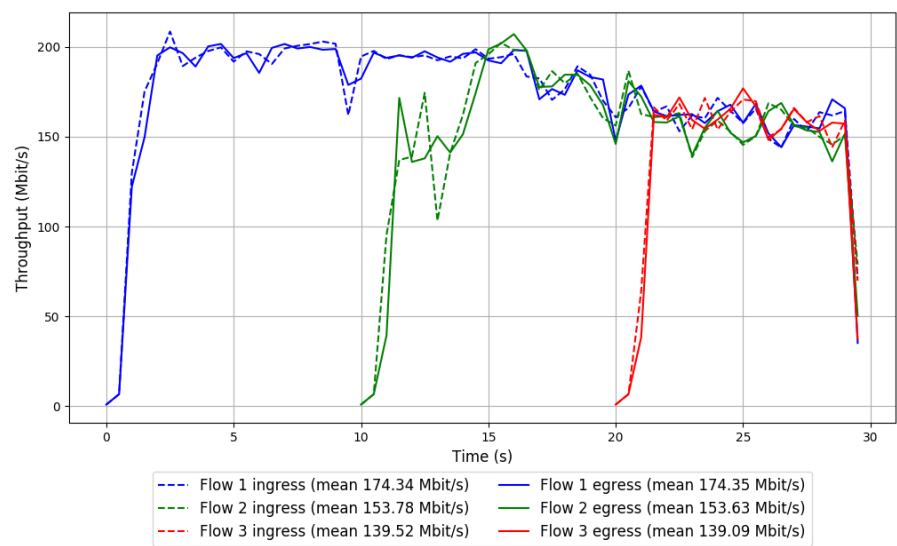
-- Flow 3:

Average throughput: 139.09 Mbit/s

95th percentile per-packet one-way delay: 87.053 ms

Loss rate: 2.08%

Run 8: Report of Indigo — Data Link



Run 9: Statistics of Indigo

Start at: 2017-12-20 15:21:52

End at: 2017-12-20 15:22:22

Below is generated by plot.py at 2017-12-20 19:42:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 321.55 Mbit/s

95th percentile per-packet one-way delay: 87.515 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 169.23 Mbit/s

95th percentile per-packet one-way delay: 86.987 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 164.89 Mbit/s

95th percentile per-packet one-way delay: 88.033 ms

Loss rate: 0.86%

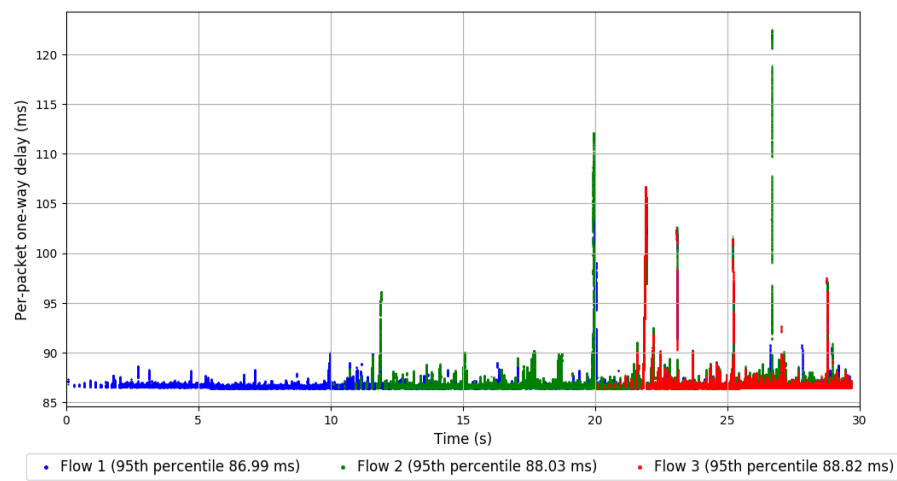
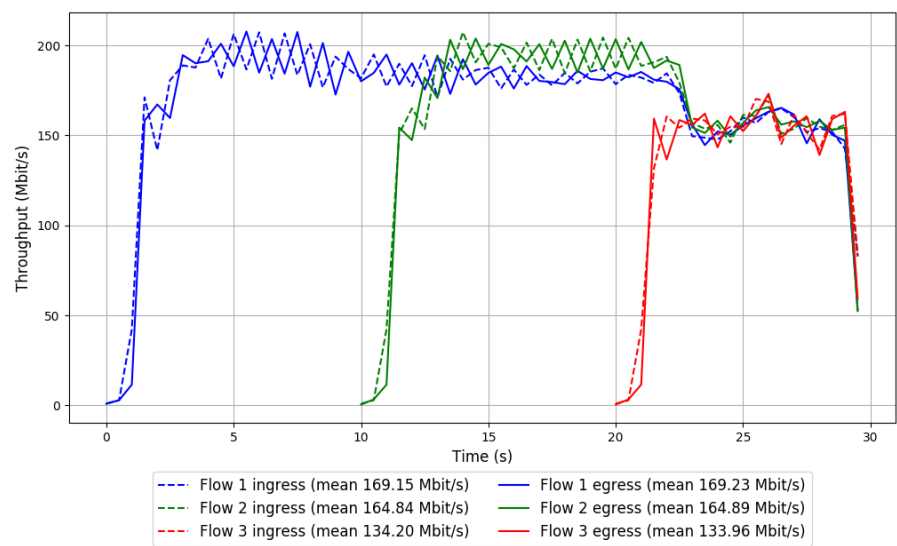
-- Flow 3:

Average throughput: 133.96 Mbit/s

95th percentile per-packet one-way delay: 88.820 ms

Loss rate: 1.96%

Run 9: Report of Indigo — Data Link



Run 10: Statistics of Indigo

Start at: 2017-12-20 15:36:23

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

Below is generated by plot.py at 2017-12-20 19:42:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 221.94 Mbit/s

95th percentile per-packet one-way delay: 115.064 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 33.63 Mbit/s

95th percentile per-packet one-way delay: 115.342 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 172.59 Mbit/s

95th percentile per-packet one-way delay: 114.977 ms

Loss rate: 0.85%

-- Flow 3:

Average throughput: 155.96 Mbit/s

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

Loss rate: 2.20%

Run 10: Report of Indigo — Data Link

