

Pantheon Report

Generated at 2017-12-20 19:39:24 (UTC).

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

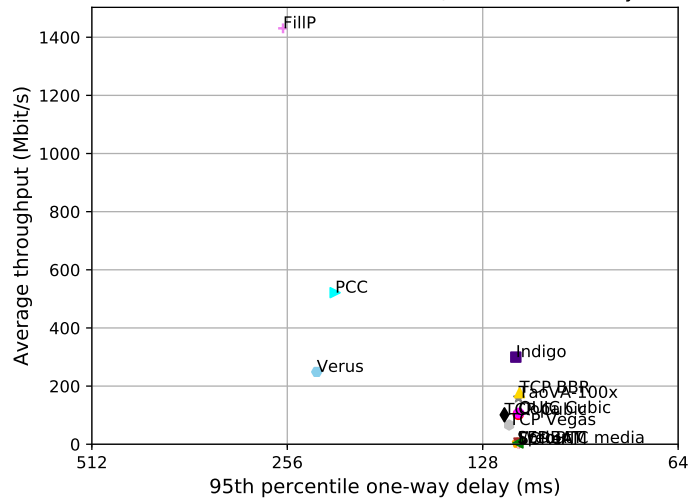
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

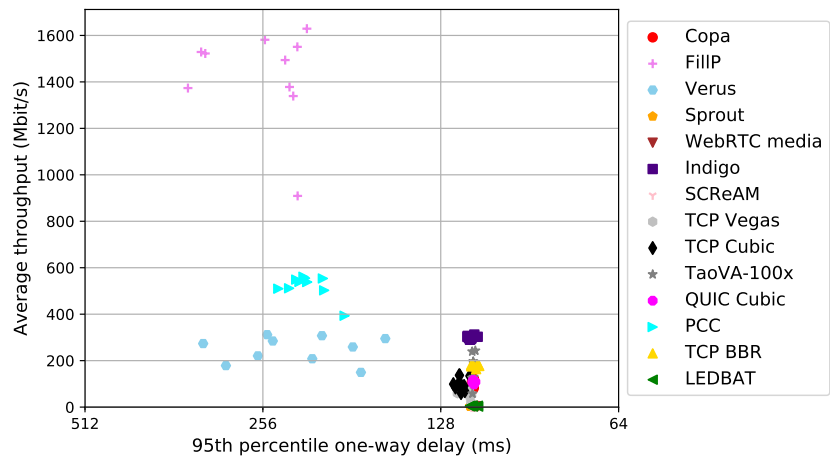
Git summary:

```
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 @ f1a14bffe749737437f61b1eaeab30b267cde681
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 Tokyo Ethernet to GCE London Ethernet, 10 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE Tokyo Ethernet to GCE London 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	92.35	88.09	81.17	112.29	112.29	112.90	0.97	1.31	3.04
TCP Cubic	10	48.42	51.89	52.85	117.68	118.18	118.36	1.40	1.84	3.22
LEDBAT	10	2.25	2.36	1.61	113.01	112.94	113.01	2.36	2.87	5.72
PCC	10	431.69	110.52	41.07	425.34	213.76	202.55	2.82	1.82	2.79
QUIC Cubic	10	60.19	51.58	39.95	112.12	111.92	111.72	0.87	1.15	3.38
SCReAM	10	0.20	0.21	0.22	112.39	112.14	120.22	0.61	1.07	2.13
WebRTC media	10	2.16	1.28	0.45	112.28	111.52	113.07	0.99	1.85	5.18
Sprout	10	2.50	1.78	1.55	113.22	113.23	113.22	1.02	1.90	3.64
TaoVA-100x	8	89.29	62.20	122.90	112.58	112.60	112.84	0.86	1.42	3.04
TCP Vegas	10	29.35	36.40	38.89	115.36	114.05	116.30	1.59	1.37	3.10
Verus	10	147.82	111.84	83.46	214.11	197.17	213.79	2.50	2.07	6.65
Copa	10	68.22	39.51	34.06	112.26	124.68	112.34	0.51	14.52	4.61
FillP	10	737.75	736.88	630.09	257.48	250.48	244.55	5.44	8.99	12.90
Indigo	10	161.42	150.86	119.35	113.02	114.22	117.32	0.87	1.16	2.82

Run 1: Statistics of TCP BBR

Start at: 2017-12-20 13:08:11

End at: 2017-12-20 13:08:41

Below is generated by plot.py at 2017-12-20 18:26:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 180.32 Mbit/s

95th percentile per-packet one-way delay: 111.165 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 93.70 Mbit/s

95th percentile per-packet one-way delay: 111.193 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 89.04 Mbit/s

95th percentile per-packet one-way delay: 110.998 ms

Loss rate: 1.23%

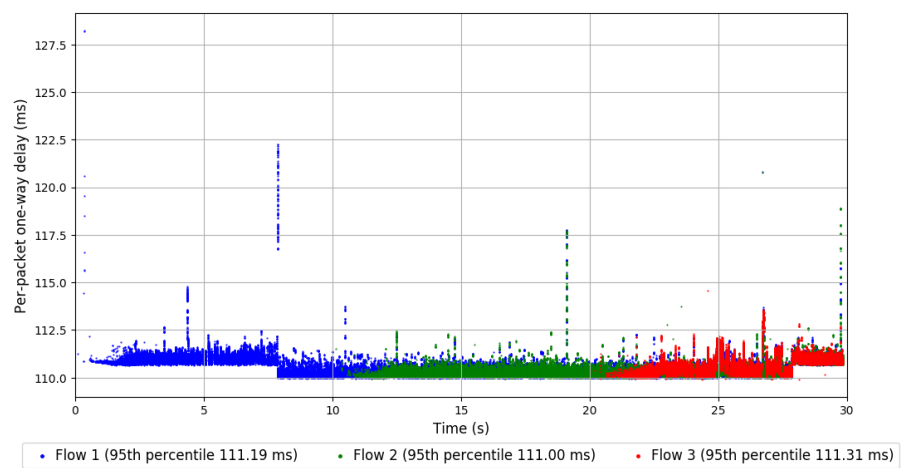
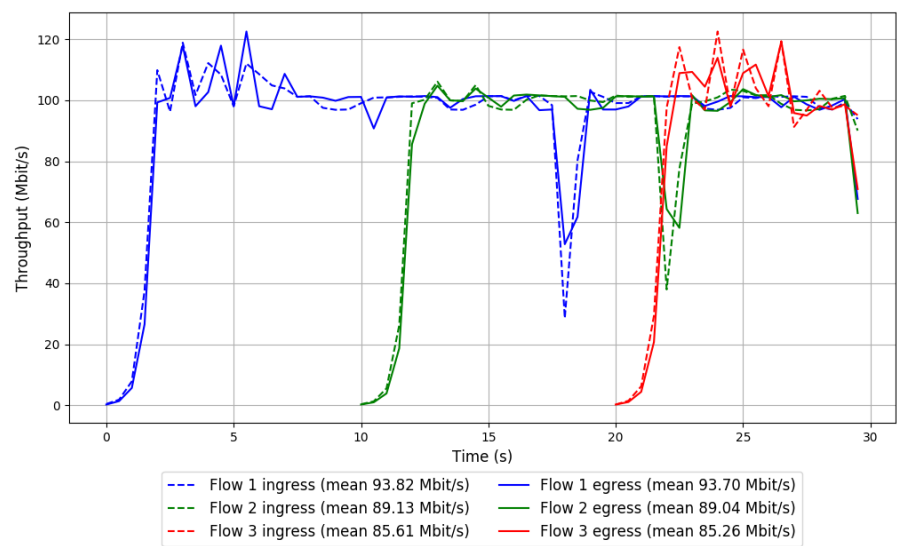
-- Flow 3:

Average throughput: 85.26 Mbit/s

95th percentile per-packet one-way delay: 111.308 ms

Loss rate: 2.84%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-12-20 13:23:41

End at: 2017-12-20 13:24:11

Below is generated by plot.py at 2017-12-20 18:26:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 163.50 Mbit/s

95th percentile per-packet one-way delay: 111.508 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 91.73 Mbit/s

95th percentile per-packet one-way delay: 111.520 ms

Loss rate: 1.31%

-- Flow 2:

Average throughput: 75.26 Mbit/s

95th percentile per-packet one-way delay: 111.538 ms

Loss rate: 1.18%

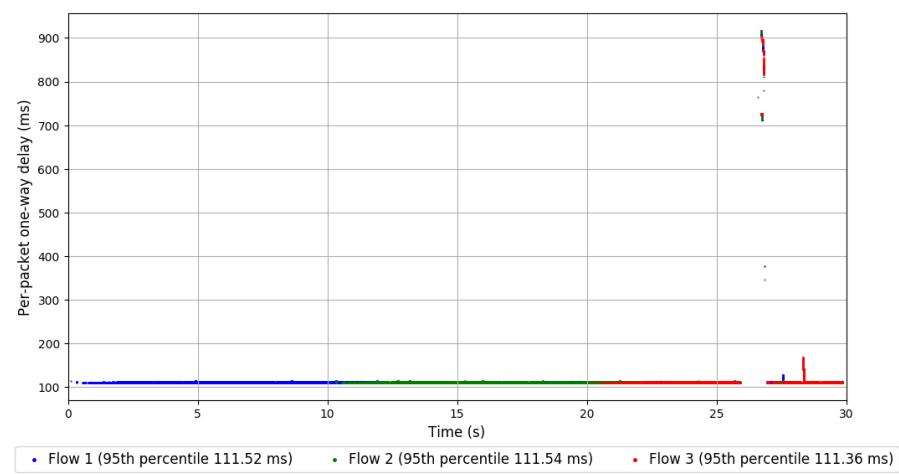
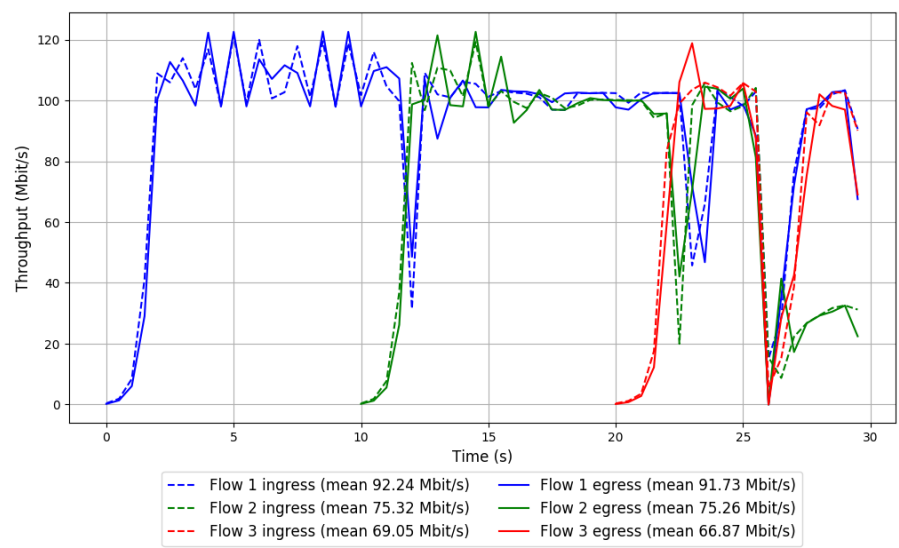
-- Flow 3:

Average throughput: 66.87 Mbit/s

95th percentile per-packet one-way delay: 111.360 ms

Loss rate: 5.33%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-12-20 13:38:42

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

Below is generated by plot.py at 2017-12-20 18:26:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.55 Mbit/s

95th percentile per-packet one-way delay: 113.686 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 92.53 Mbit/s

95th percentile per-packet one-way delay: 113.595 ms

Loss rate: 1.23%

-- Flow 2:

Average throughput: 93.04 Mbit/s

95th percentile per-packet one-way delay: 113.629 ms

Loss rate: 1.20%

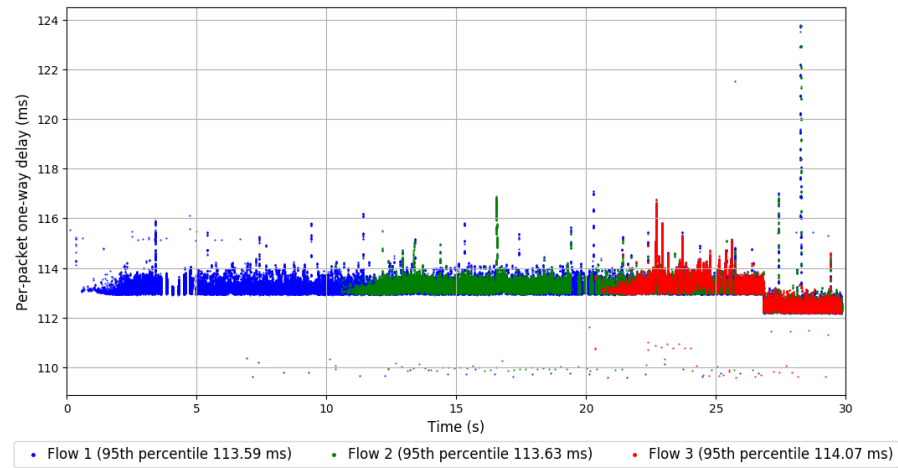
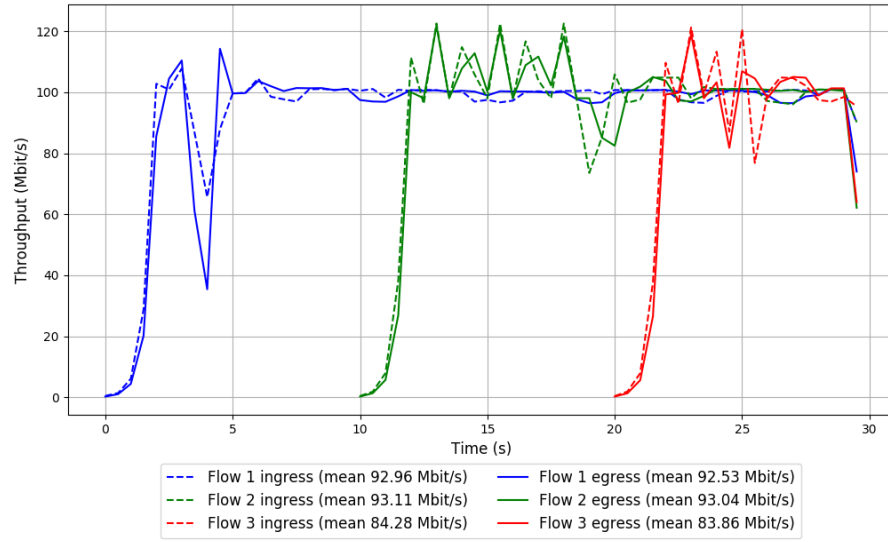
-- Flow 3:

Average throughput: 83.86 Mbit/s

95th percentile per-packet one-way delay: 114.074 ms

Loss rate: 2.91%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-12-20 13:54:02

End at: 2017-12-20 13:54:32

Below is generated by plot.py at 2017-12-20 18:26:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 176.24 Mbit/s

95th percentile per-packet one-way delay: 113.535 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 90.53 Mbit/s

95th percentile per-packet one-way delay: 113.523 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 88.18 Mbit/s

95th percentile per-packet one-way delay: 113.489 ms

Loss rate: 1.34%

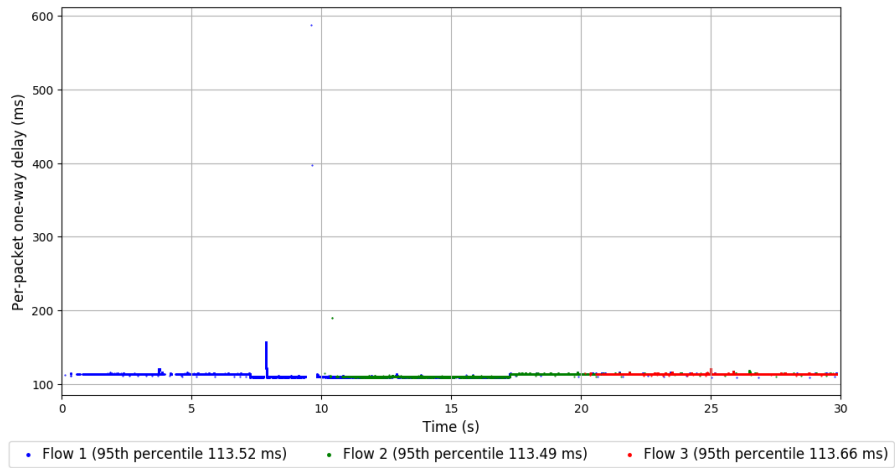
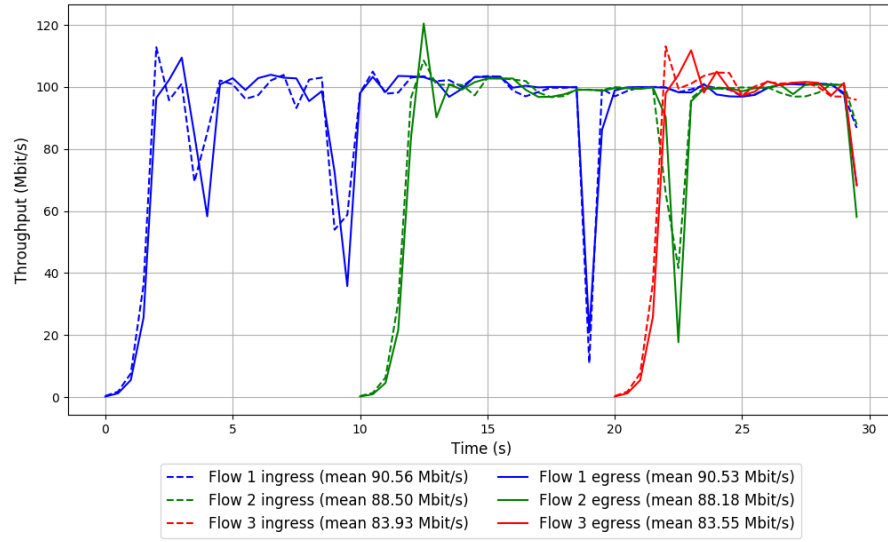
-- Flow 3:

Average throughput: 83.55 Mbit/s

95th percentile per-packet one-way delay: 113.663 ms

Loss rate: 2.84%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-12-20 14:09:23

End at: 2017-12-20 14:09:53

Below is generated by plot.py at 2017-12-20 18:26:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 180.22 Mbit/s

95th percentile per-packet one-way delay: 113.406 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 94.12 Mbit/s

95th percentile per-packet one-way delay: 113.408 ms

Loss rate: 1.21%

-- Flow 2:

Average throughput: 89.28 Mbit/s

95th percentile per-packet one-way delay: 113.365 ms

Loss rate: 1.30%

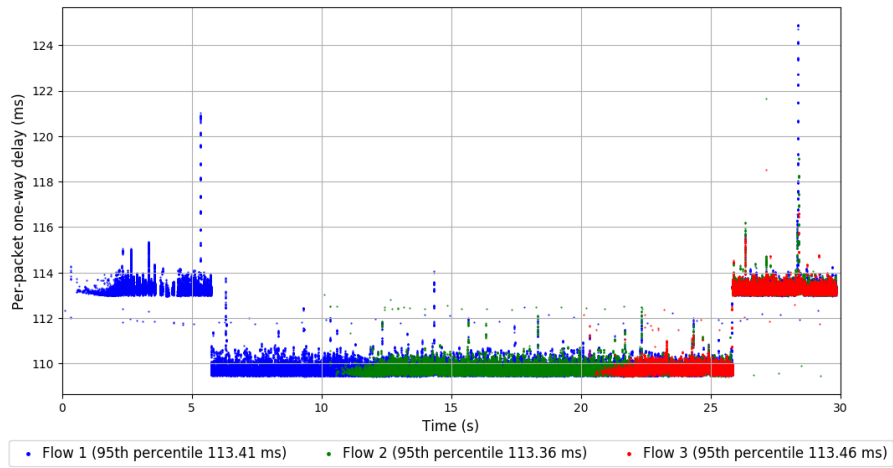
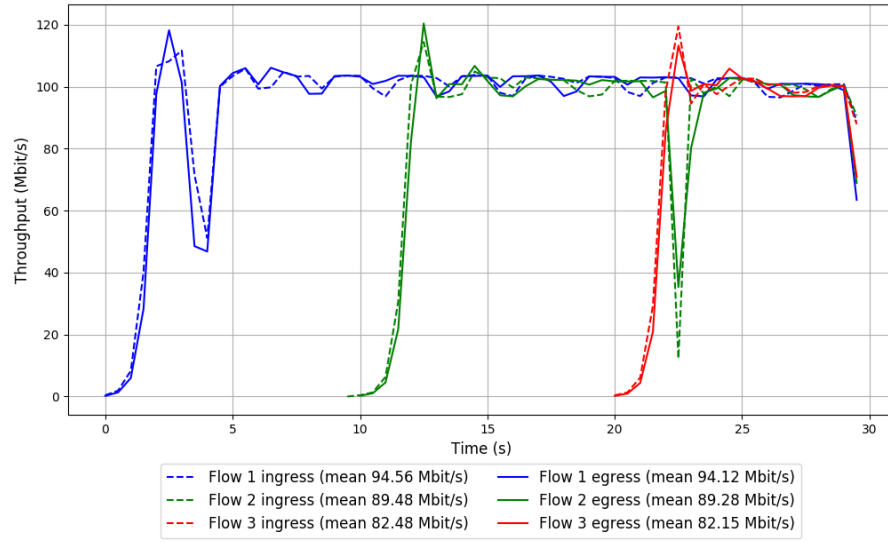
-- Flow 3:

Average throughput: 82.15 Mbit/s

95th percentile per-packet one-way delay: 113.456 ms

Loss rate: 2.64%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-12-20 14:24:43

End at: 2017-12-20 14:25:13

Below is generated by plot.py at 2017-12-20 18:26:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 176.04 Mbit/s

95th percentile per-packet one-way delay: 113.648 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 91.27 Mbit/s

95th percentile per-packet one-way delay: 113.565 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 87.95 Mbit/s

95th percentile per-packet one-way delay: 113.636 ms

Loss rate: 1.32%

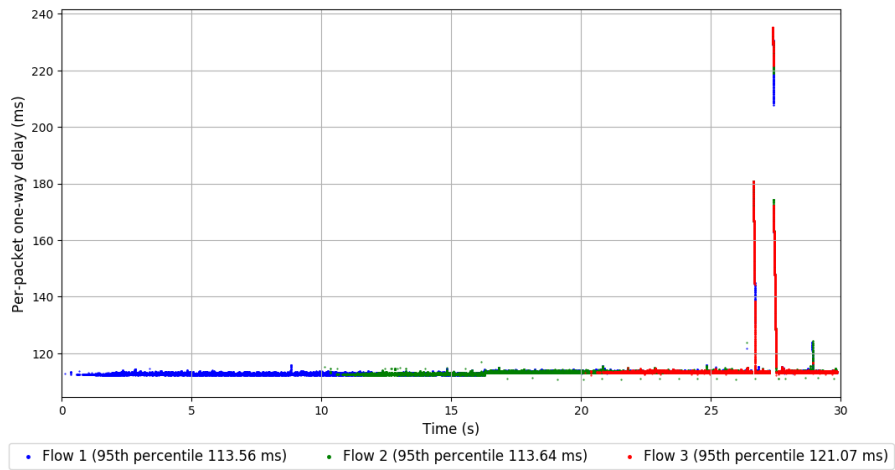
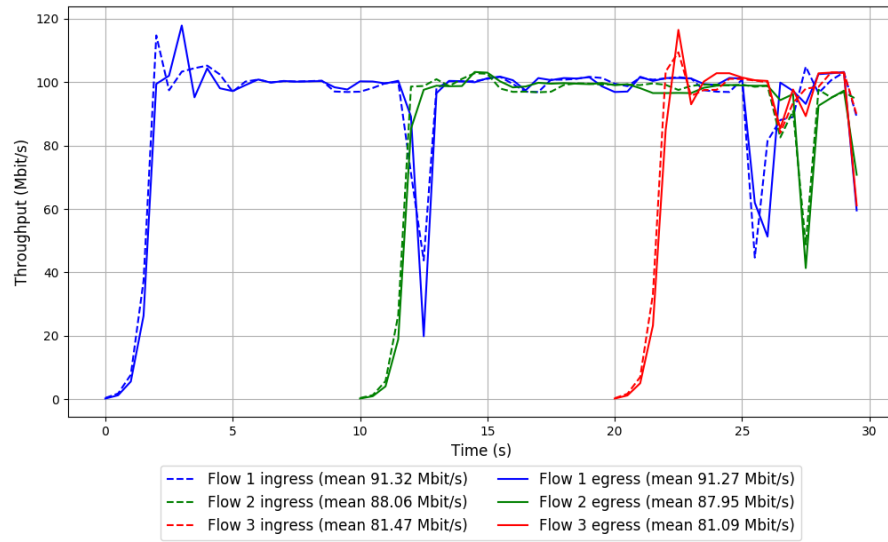
-- Flow 3:

Average throughput: 81.09 Mbit/s

95th percentile per-packet one-way delay: 121.071 ms

Loss rate: 2.69%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-12-20 14:39:54

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

Below is generated by plot.py at 2017-12-20 18:26:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 177.80 Mbit/s

95th percentile per-packet one-way delay: 112.980 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 91.44 Mbit/s

95th percentile per-packet one-way delay: 112.905 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 86.90 Mbit/s

95th percentile per-packet one-way delay: 112.985 ms

Loss rate: 1.34%

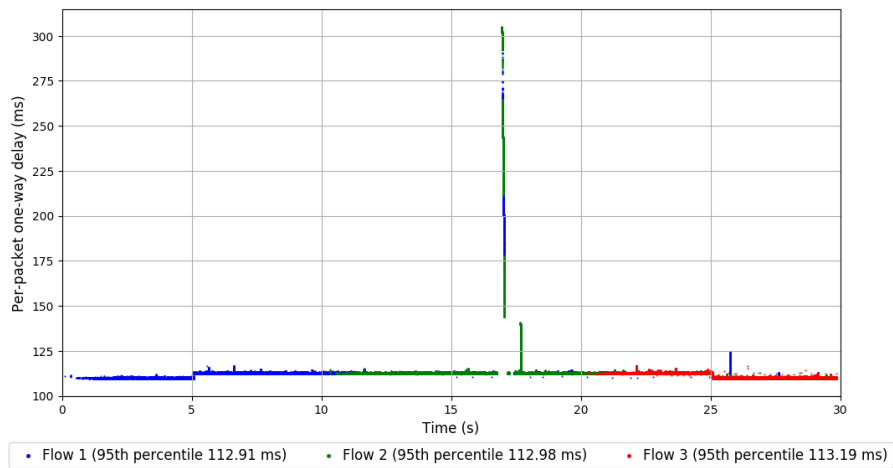
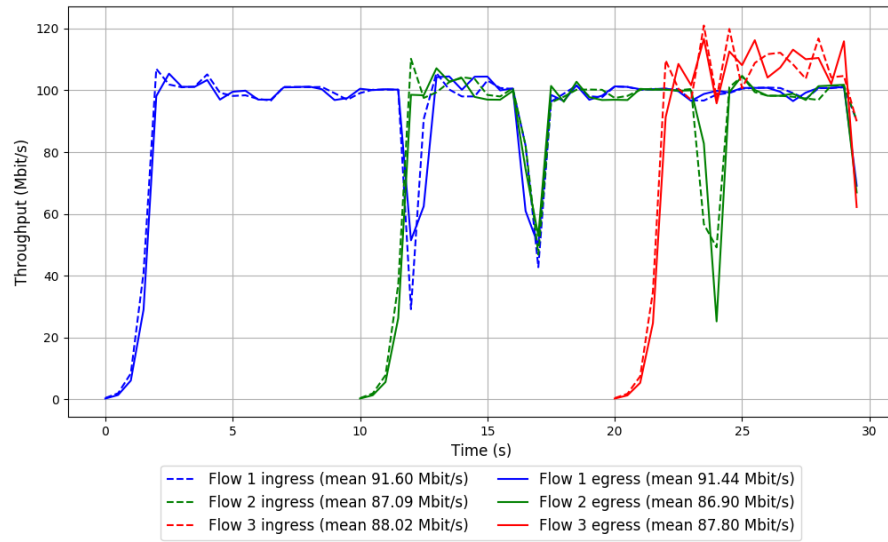
-- Flow 3:

Average throughput: 87.80 Mbit/s

95th percentile per-packet one-way delay: 113.186 ms

Loss rate: 2.47%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

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

End at: 2017-12-20 14:55:42

Below is generated by plot.py at 2017-12-20 18:26:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 177.12 Mbit/s

95th percentile per-packet one-way delay: 110.217 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 92.17 Mbit/s

95th percentile per-packet one-way delay: 110.231 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 87.71 Mbit/s

95th percentile per-packet one-way delay: 110.180 ms

Loss rate: 1.63%

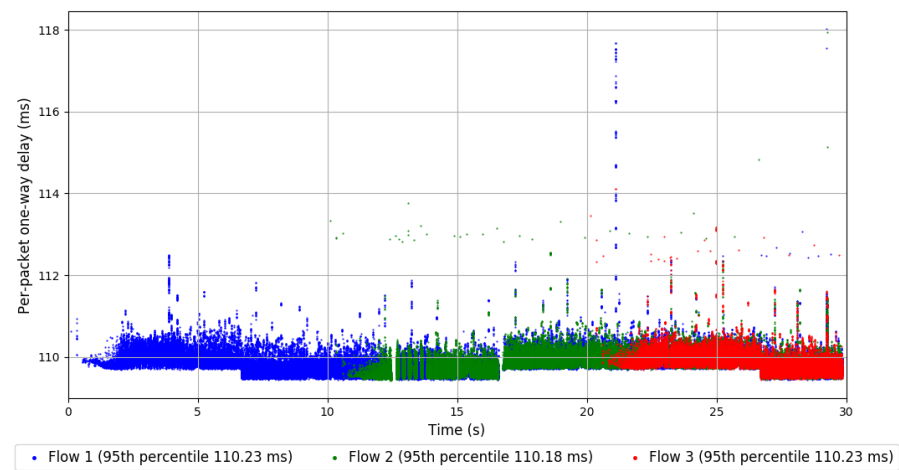
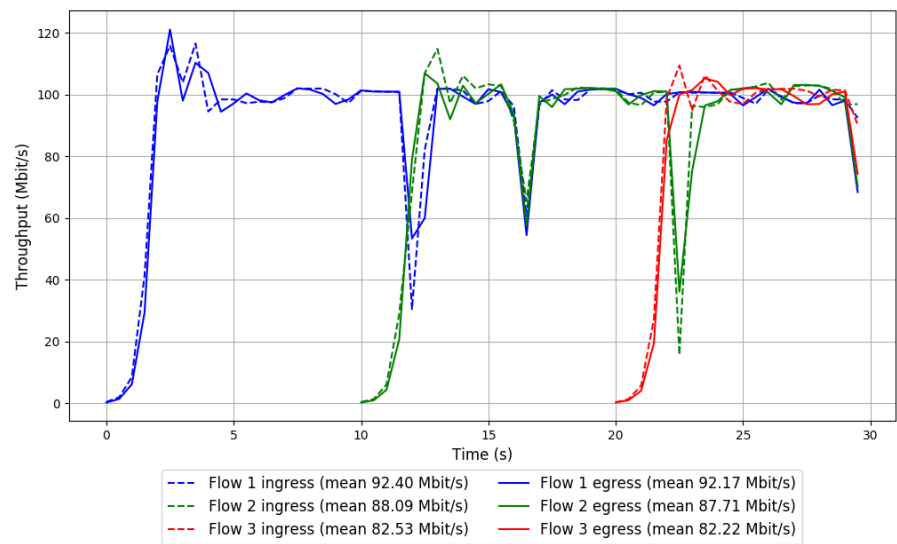
-- Flow 3:

Average throughput: 82.22 Mbit/s

95th percentile per-packet one-way delay: 110.235 ms

Loss rate: 2.62%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-12-20 15:10:33

End at: 2017-12-20 15:11:03

Below is generated by plot.py at 2017-12-20 18:29:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 177.84 Mbit/s

95th percentile per-packet one-way delay: 110.210 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 91.92 Mbit/s

95th percentile per-packet one-way delay: 110.208 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 90.03 Mbit/s

95th percentile per-packet one-way delay: 110.176 ms

Loss rate: 1.41%

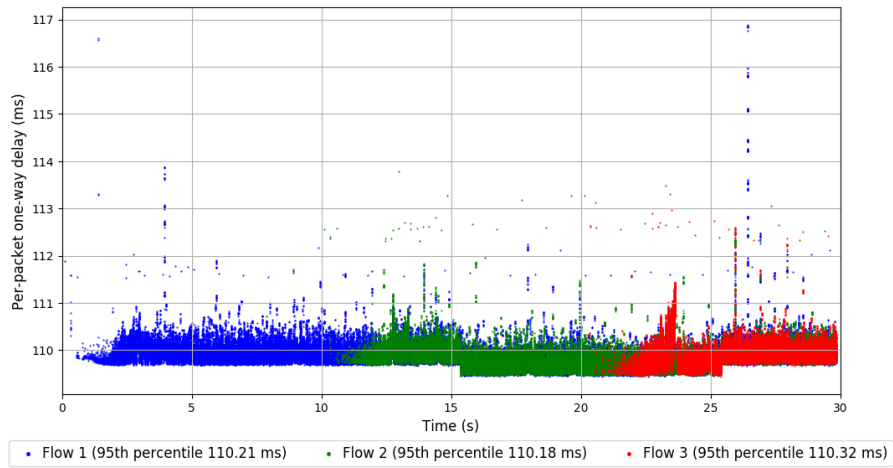
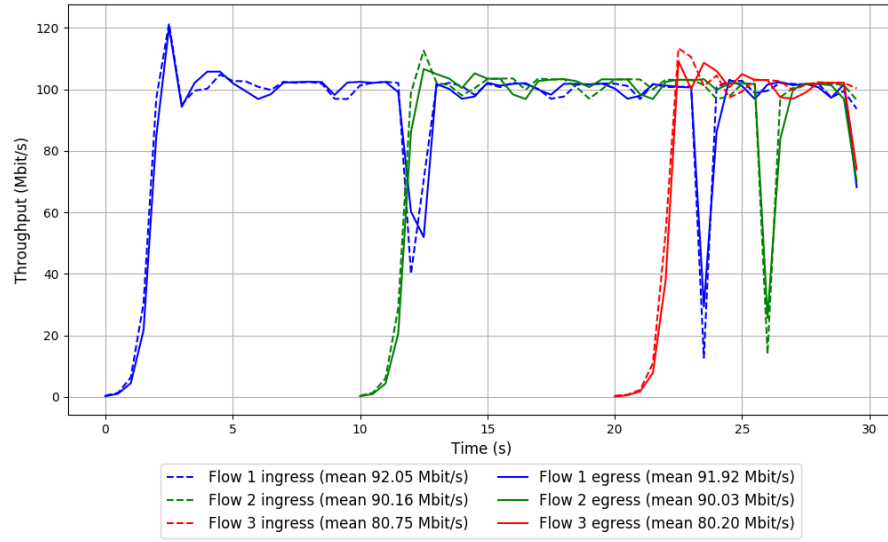
-- Flow 3:

Average throughput: 80.20 Mbit/s

95th percentile per-packet one-way delay: 110.321 ms

Loss rate: 3.31%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-12-20 15:26:17

End at: 2017-12-20 15:26:47

Below is generated by plot.py at 2017-12-20 18:29:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.75 Mbit/s

95th percentile per-packet one-way delay: 112.829 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 94.05 Mbit/s

95th percentile per-packet one-way delay: 112.761 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 93.52 Mbit/s

95th percentile per-packet one-way delay: 112.910 ms

Loss rate: 1.17%

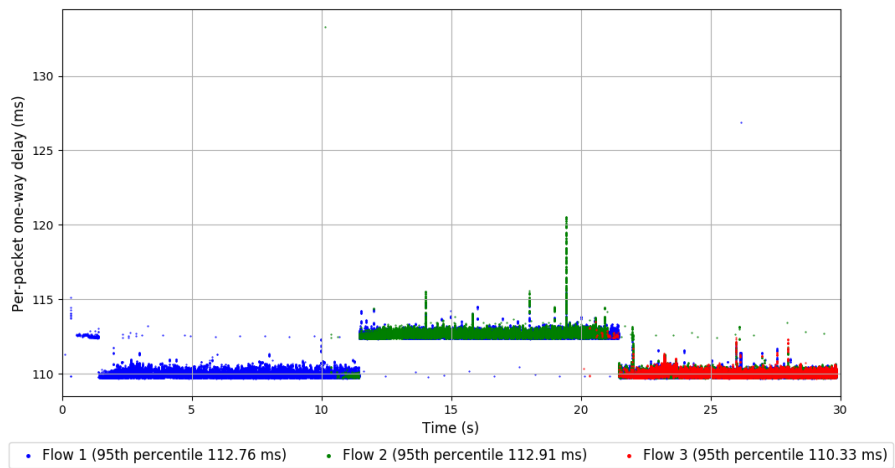
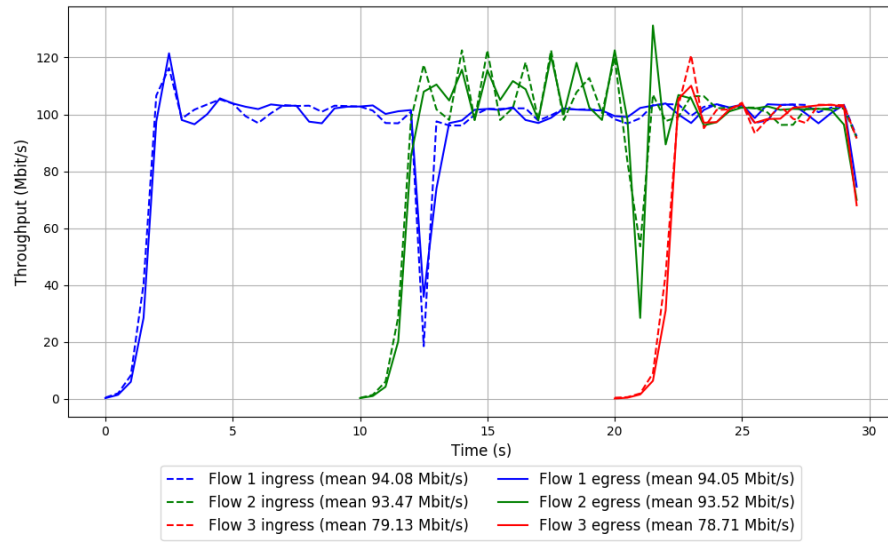
-- Flow 3:

Average throughput: 78.71 Mbit/s

95th percentile per-packet one-way delay: 110.331 ms

Loss rate: 2.73%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2017-12-20 13:11:06

End at: 2017-12-20 13:11:36

Below is generated by plot.py at 2017-12-20 18:29:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.98 Mbit/s

95th percentile per-packet one-way delay: 121.859 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 25.56 Mbit/s

95th percentile per-packet one-way delay: 121.971 ms

Loss rate: 1.27%

-- Flow 2:

Average throughput: 81.53 Mbit/s

95th percentile per-packet one-way delay: 121.967 ms

Loss rate: 0.60%

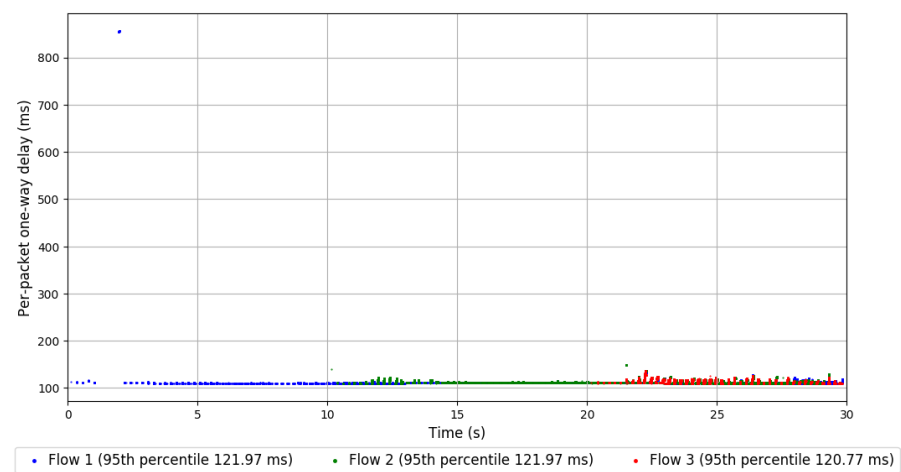
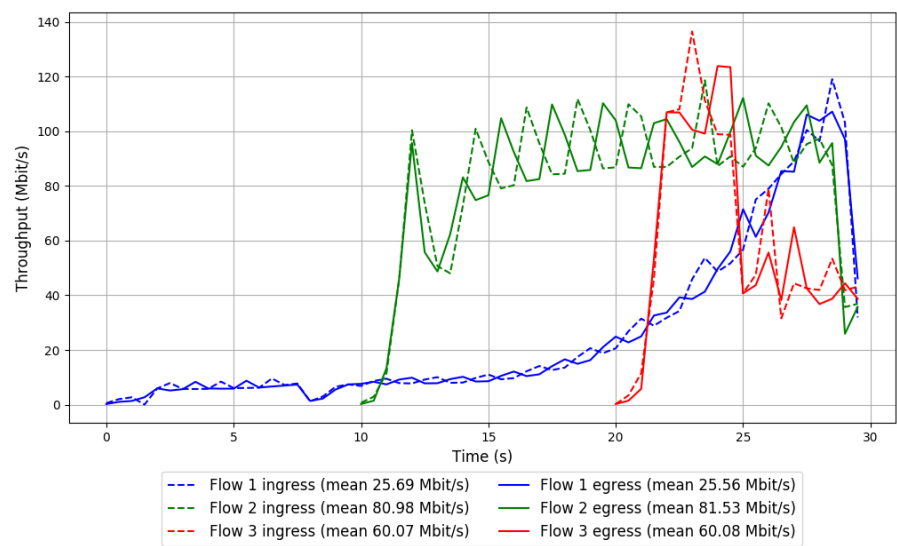
-- Flow 3:

Average throughput: 60.08 Mbit/s

95th percentile per-packet one-way delay: 120.771 ms

Loss rate: 1.83%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-12-20 13:26:35

End at: 2017-12-20 13:27:05

Below is generated by plot.py at 2017-12-20 18:29:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.06 Mbit/s

95th percentile per-packet one-way delay: 114.355 ms

Loss rate: 1.72%

-- Flow 1:

Average throughput: 60.98 Mbit/s

95th percentile per-packet one-way delay: 114.366 ms

Loss rate: 1.52%

-- Flow 2:

Average throughput: 62.11 Mbit/s

95th percentile per-packet one-way delay: 114.629 ms

Loss rate: 1.29%

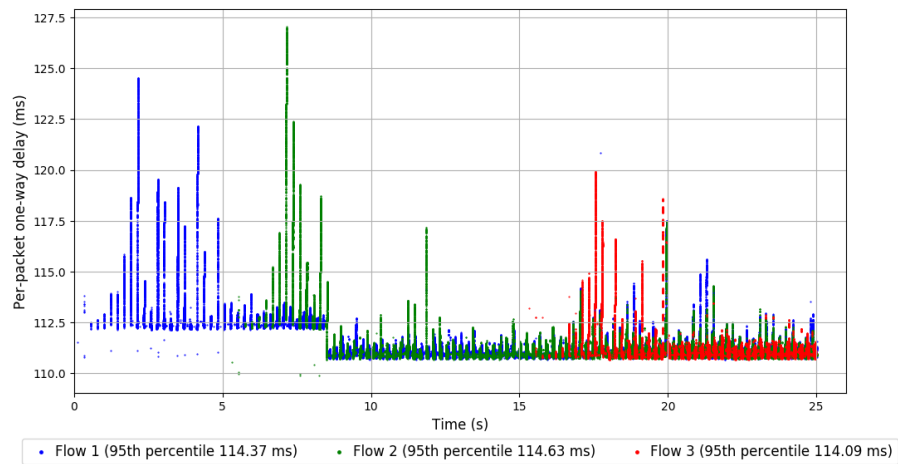
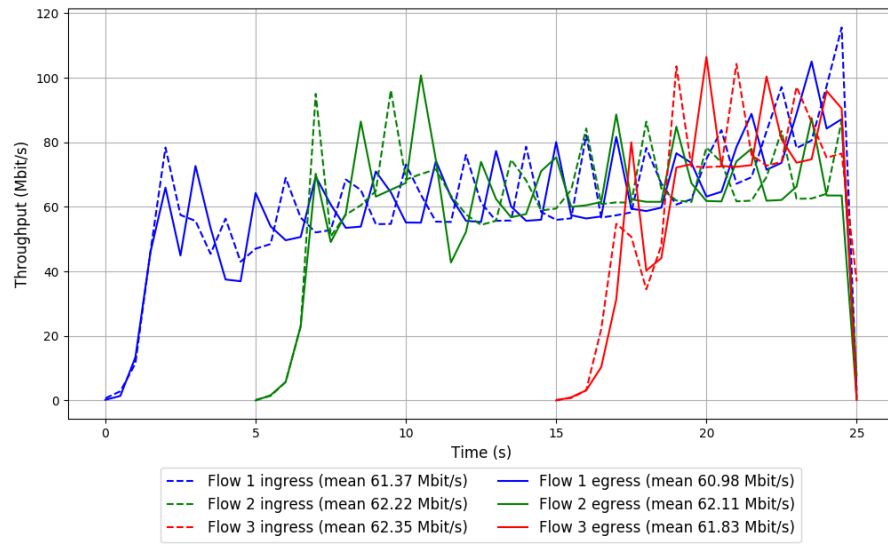
-- Flow 3:

Average throughput: 61.83 Mbit/s

95th percentile per-packet one-way delay: 114.093 ms

Loss rate: 3.09%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-12-20 13:41:37

End at: 2017-12-20 13:42:07

Below is generated by plot.py at 2017-12-20 18:29:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.83 Mbit/s

95th percentile per-packet one-way delay: 116.512 ms

Loss rate: 1.97%

-- Flow 1:

Average throughput: 50.28 Mbit/s

95th percentile per-packet one-way delay: 115.308 ms

Loss rate: 1.60%

-- Flow 2:

Average throughput: 5.32 Mbit/s

95th percentile per-packet one-way delay: 113.416 ms

Loss rate: 4.16%

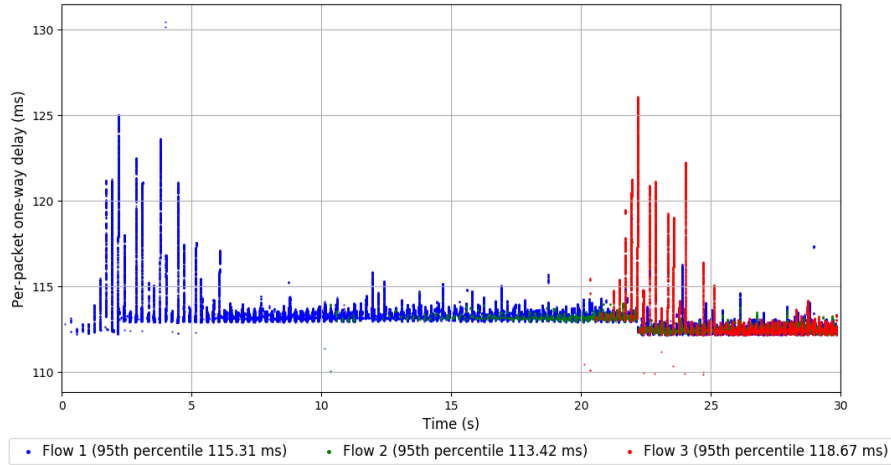
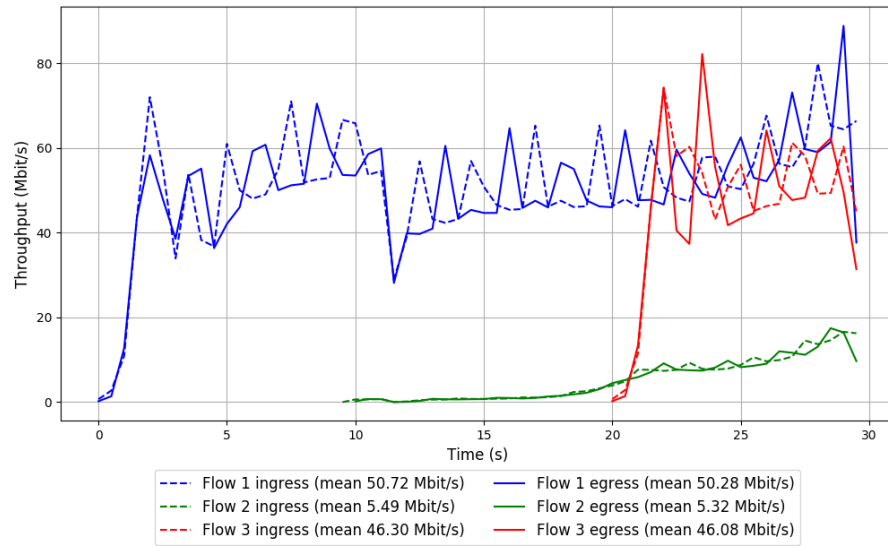
-- Flow 3:

Average throughput: 46.08 Mbit/s

95th percentile per-packet one-way delay: 118.673 ms

Loss rate: 2.70%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-12-20 13:56:57

End at: 2017-12-20 13:57:27

Below is generated by plot.py at 2017-12-20 18:29:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 60.40 Mbit/s

95th percentile per-packet one-way delay: 118.274 ms

Loss rate: 2.54%

-- Flow 1:

Average throughput: 44.74 Mbit/s

95th percentile per-packet one-way delay: 115.737 ms

Loss rate: 1.47%

-- Flow 2:

Average throughput: 2.79 Mbit/s

95th percentile per-packet one-way delay: 113.529 ms

Loss rate: 3.29%

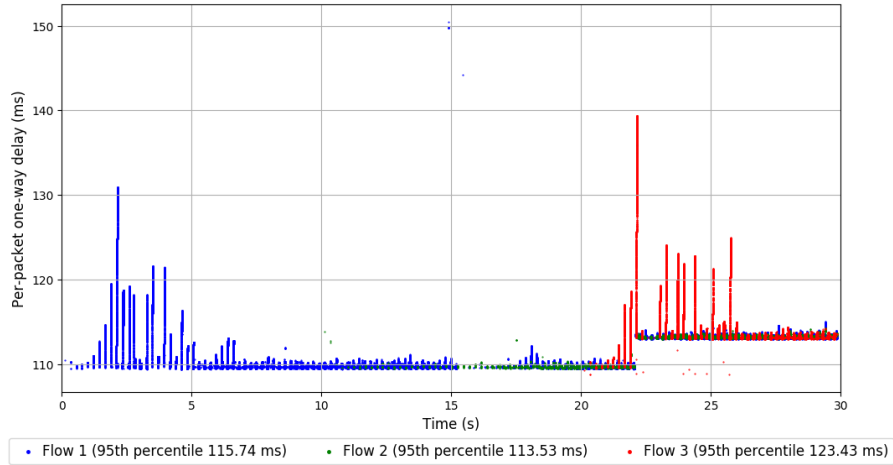
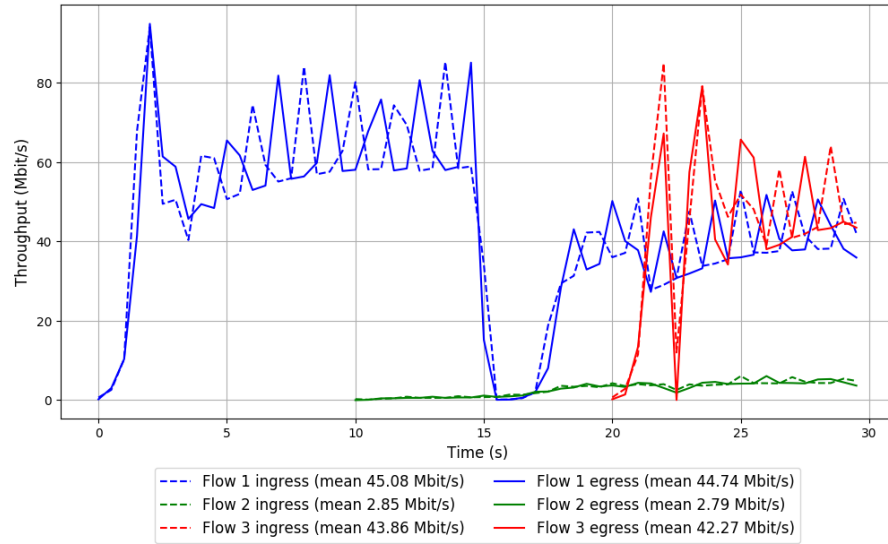
-- Flow 3:

Average throughput: 42.27 Mbit/s

95th percentile per-packet one-way delay: 123.430 ms

Loss rate: 5.75%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

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

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

Below is generated by plot.py at 2017-12-20 18:29:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.72 Mbit/s

95th percentile per-packet one-way delay: 118.624 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 45.92 Mbit/s

95th percentile per-packet one-way delay: 117.457 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 83.93 Mbit/s

95th percentile per-packet one-way delay: 119.104 ms

Loss rate: 1.68%

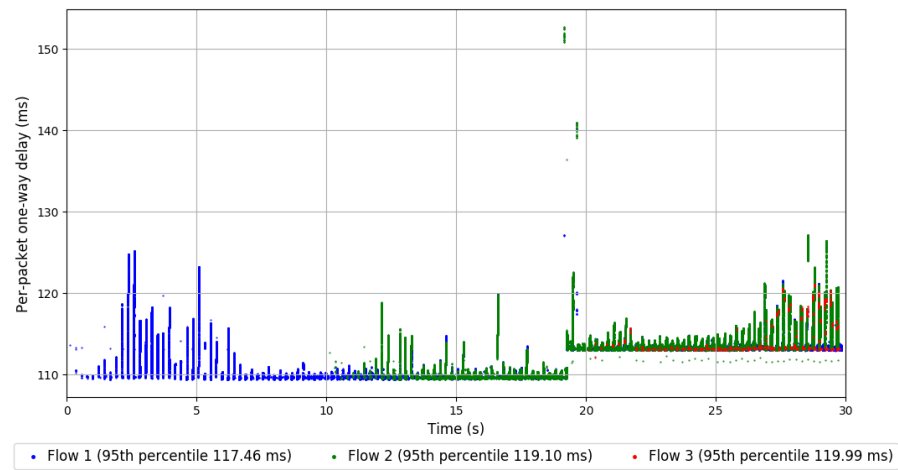
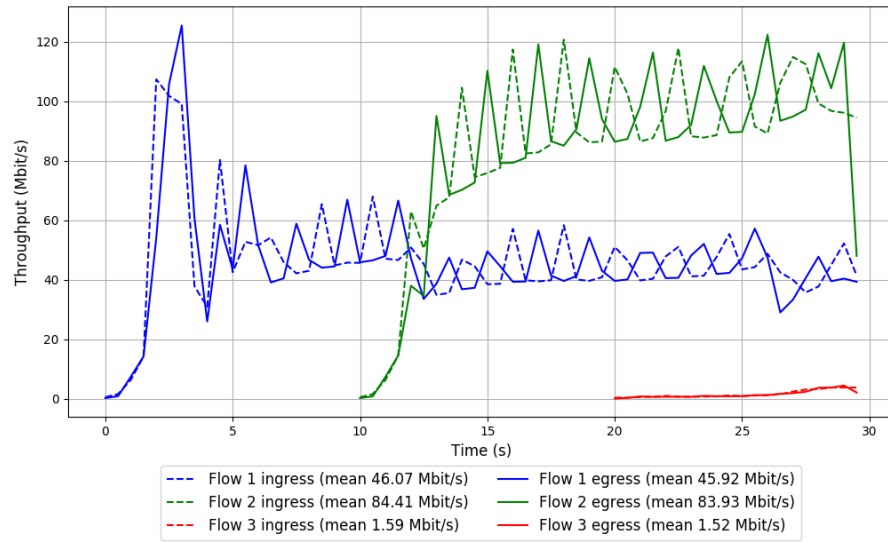
-- Flow 3:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 119.987 ms

Loss rate: 6.51%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-12-20 14:27:38

End at: 2017-12-20 14:28:08

Below is generated by plot.py at 2017-12-20 18:29:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.41 Mbit/s

95th percentile per-packet one-way delay: 120.859 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 27.85 Mbit/s

95th percentile per-packet one-way delay: 116.297 ms

Loss rate: 2.18%

-- Flow 2:

Average throughput: 47.76 Mbit/s

95th percentile per-packet one-way delay: 122.321 ms

Loss rate: 1.07%

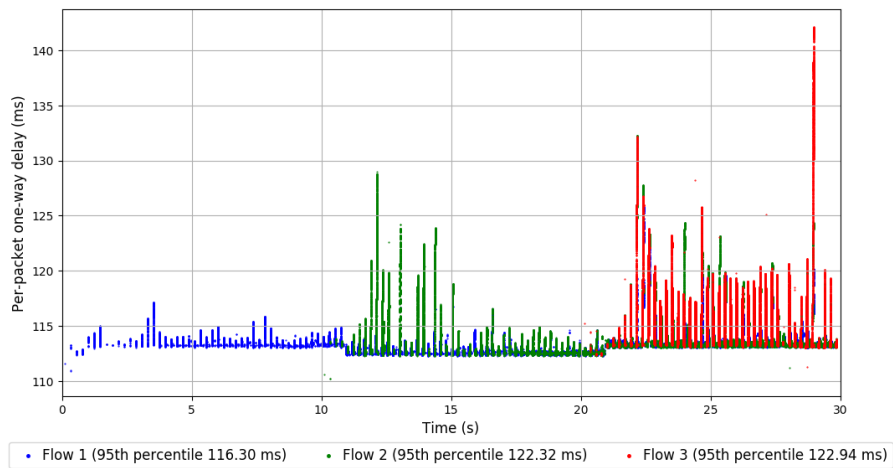
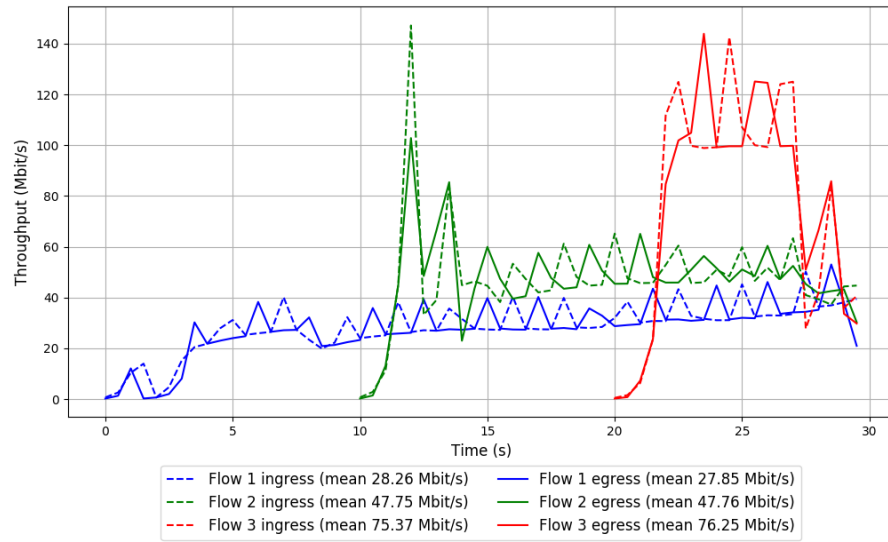
-- Flow 3:

Average throughput: 76.25 Mbit/s

95th percentile per-packet one-way delay: 122.935 ms

Loss rate: 0.88%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-12-20 14:42:48

End at: 2017-12-20 14:43:18

Below is generated by plot.py at 2017-12-20 18:29:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.16 Mbit/s

95th percentile per-packet one-way delay: 116.868 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 36.74 Mbit/s

95th percentile per-packet one-way delay: 116.254 ms

Loss rate: 1.29%

-- Flow 2:

Average throughput: 46.77 Mbit/s

95th percentile per-packet one-way delay: 118.585 ms

Loss rate: 1.35%

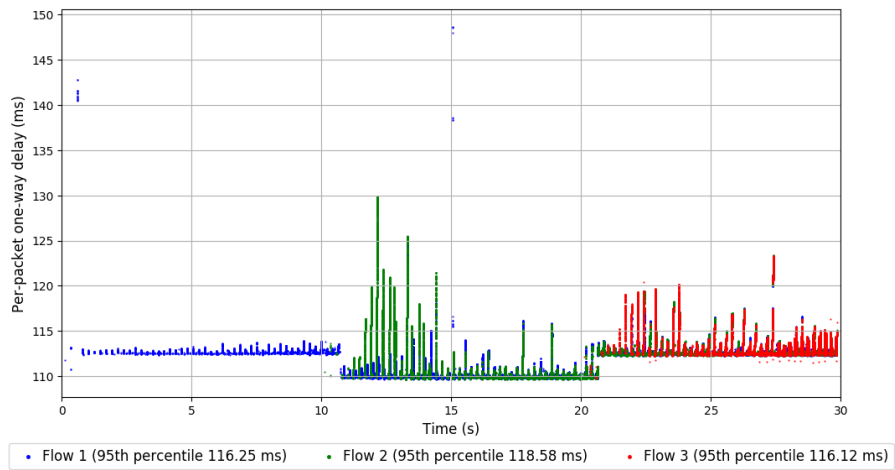
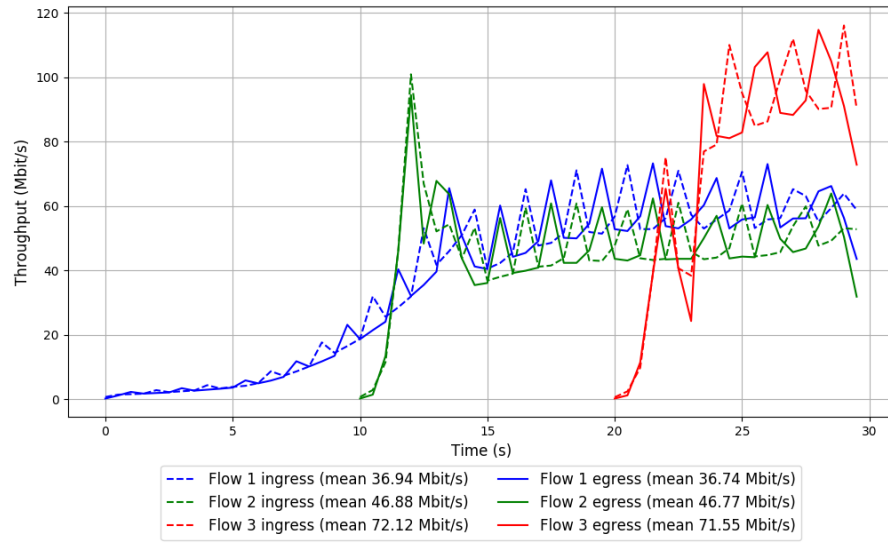
-- Flow 3:

Average throughput: 71.55 Mbit/s

95th percentile per-packet one-way delay: 116.122 ms

Loss rate: 2.97%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

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

End at: 2017-12-20 14:58:36

Below is generated by plot.py at 2017-12-20 18:30:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.07 Mbit/s

95th percentile per-packet one-way delay: 119.133 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 86.53 Mbit/s

95th percentile per-packet one-way delay: 119.435 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 53.31 Mbit/s

95th percentile per-packet one-way delay: 118.968 ms

Loss rate: 1.18%

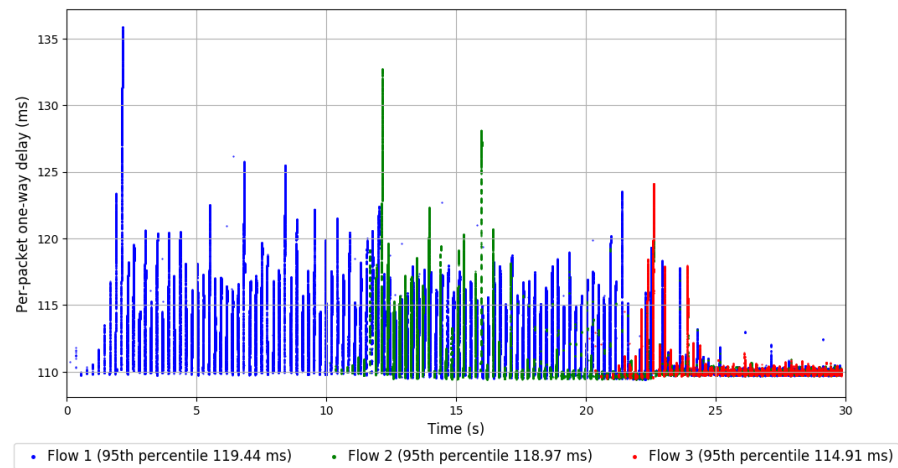
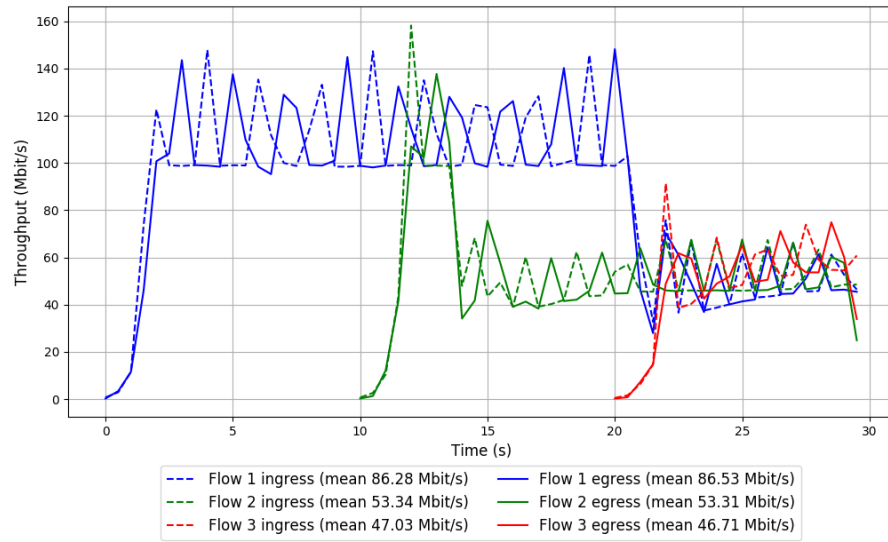
-- Flow 3:

Average throughput: 46.71 Mbit/s

95th percentile per-packet one-way delay: 114.910 ms

Loss rate: 2.92%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-12-20 15:13:31

End at: 2017-12-20 15:14:01

Below is generated by plot.py at 2017-12-20 18:30:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.30 Mbit/s

95th percentile per-packet one-way delay: 119.658 ms

Loss rate: 2.32%

-- Flow 1:

Average throughput: 50.10 Mbit/s

95th percentile per-packet one-way delay: 119.579 ms

Loss rate: 2.06%

-- Flow 2:

Average throughput: 49.18 Mbit/s

95th percentile per-packet one-way delay: 120.628 ms

Loss rate: 2.57%

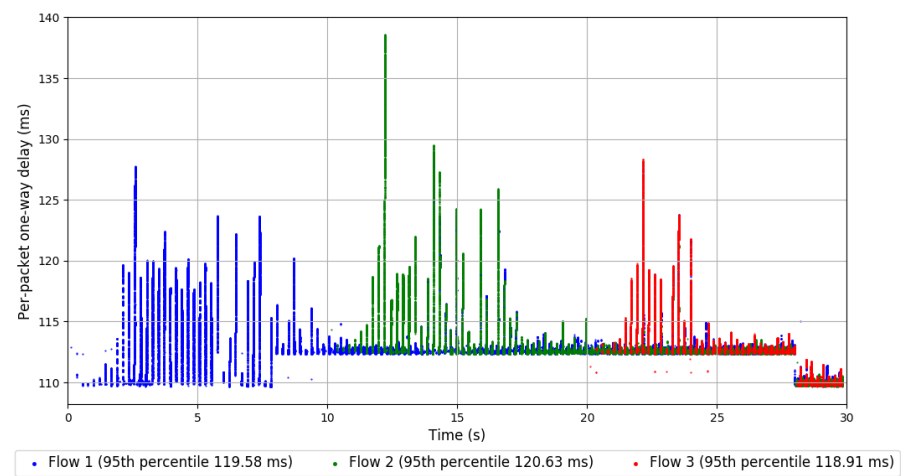
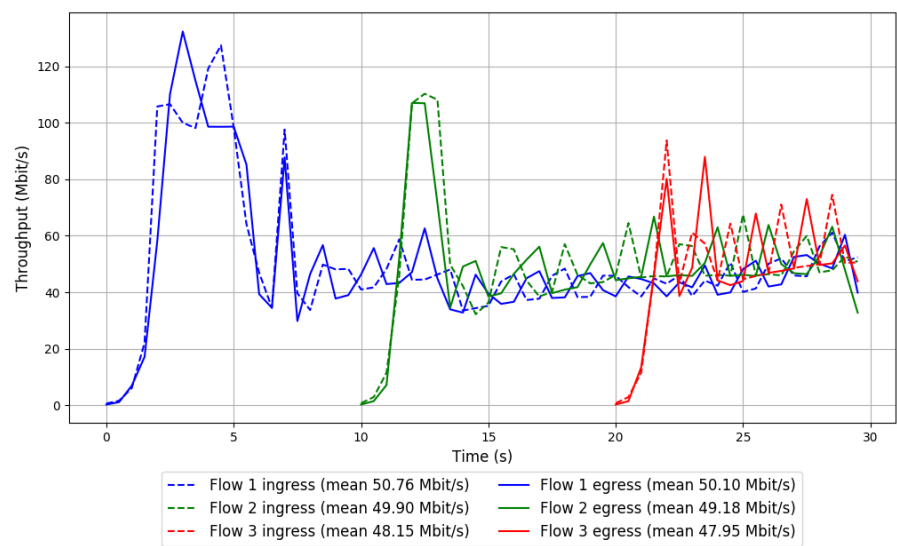
-- Flow 3:

Average throughput: 47.95 Mbit/s

95th percentile per-packet one-way delay: 118.905 ms

Loss rate: 2.64%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-12-20 15:29:13

End at: 2017-12-20 15:29:43

Below is generated by plot.py at 2017-12-20 18:30:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 136.58 Mbit/s

95th percentile per-packet one-way delay: 118.892 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 55.48 Mbit/s

95th percentile per-packet one-way delay: 120.436 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 86.23 Mbit/s

95th percentile per-packet one-way delay: 118.676 ms

Loss rate: 1.24%

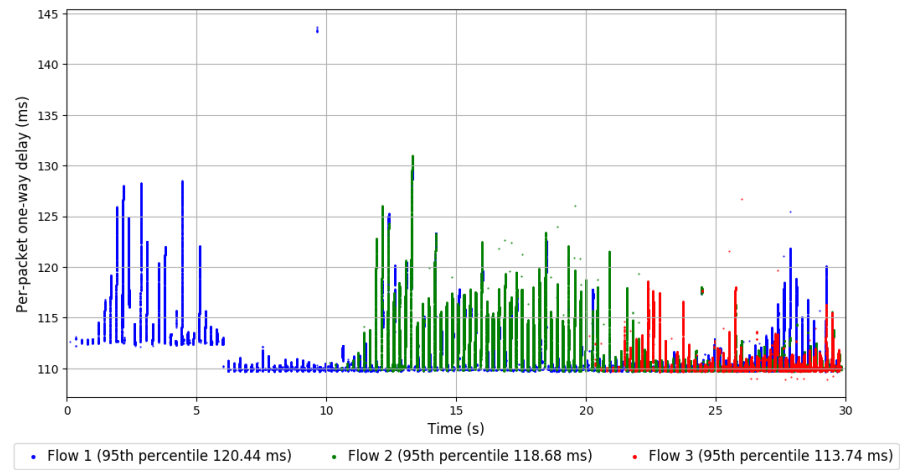
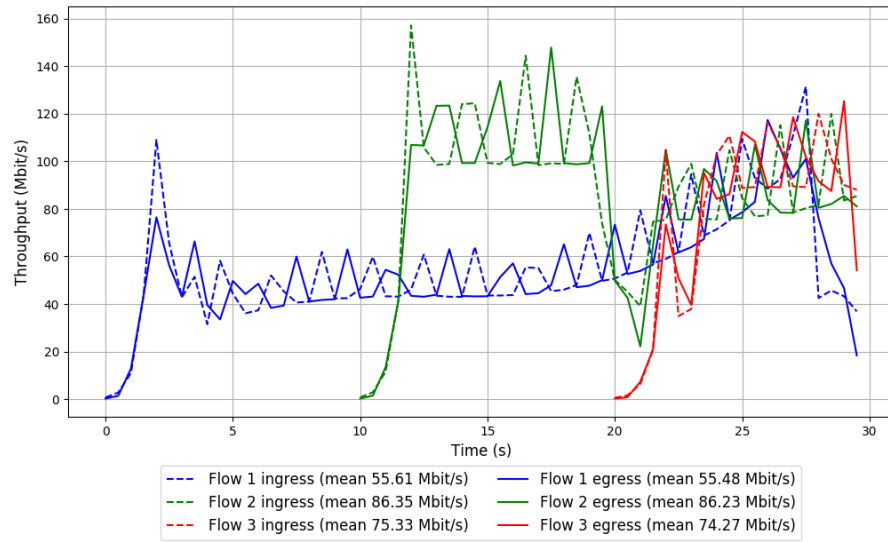
-- Flow 3:

Average throughput: 74.27 Mbit/s

95th percentile per-packet one-way delay: 113.743 ms

Loss rate: 2.90%

Run 10: Report of TCP Cubic — Data Link

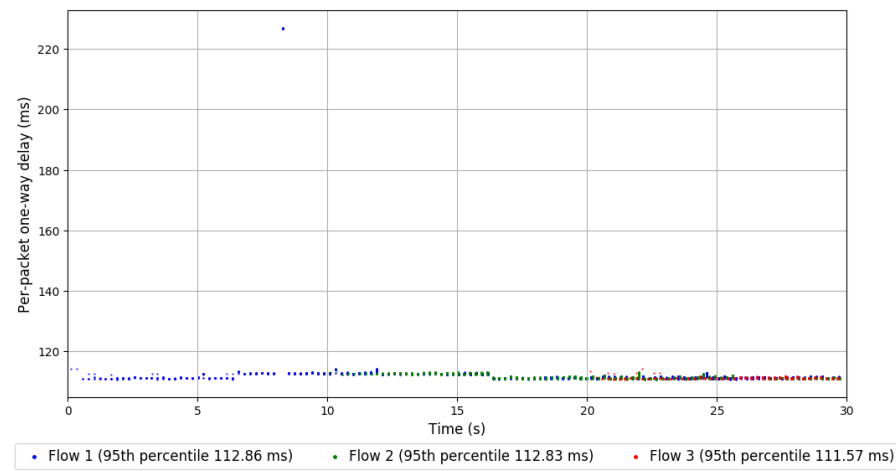
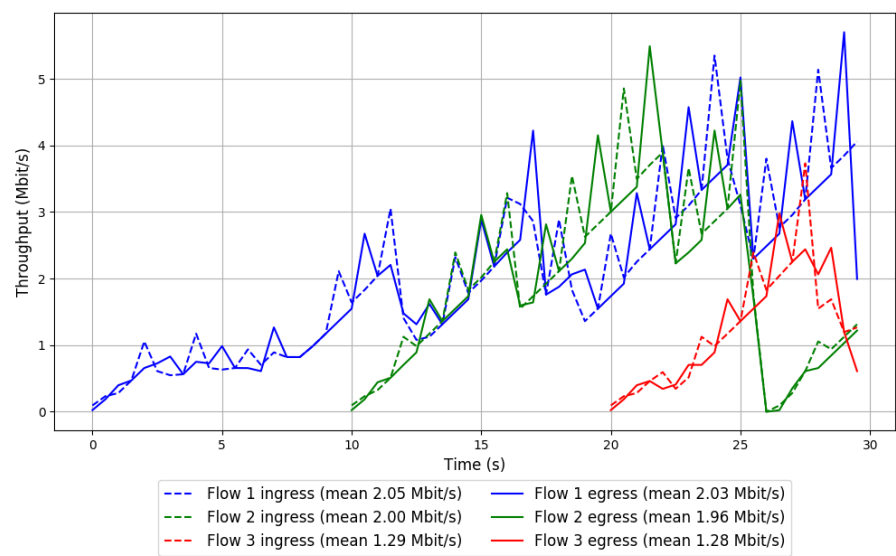


```
Run 1: Statistics of LEDBAT

Start at: 2017-12-20 13:18:02
End at: 2017-12-20 13:18:32

# Below is generated by plot.py at 2017-12-20 18:30:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 112.824 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 112.859 ms
Loss rate: 1.72%
-- Flow 2:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 112.827 ms
Loss rate: 3.07%
-- Flow 3:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 111.574 ms
Loss rate: 2.62%
```


Run 1: Report of LEDBAT — Data Link

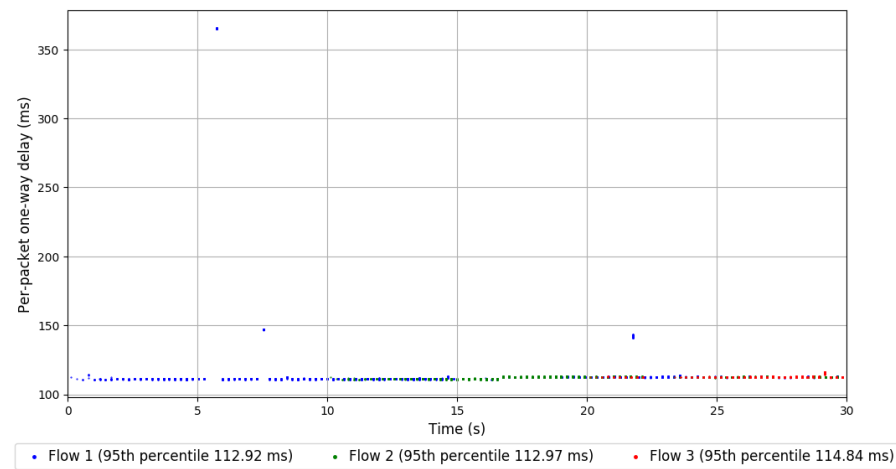
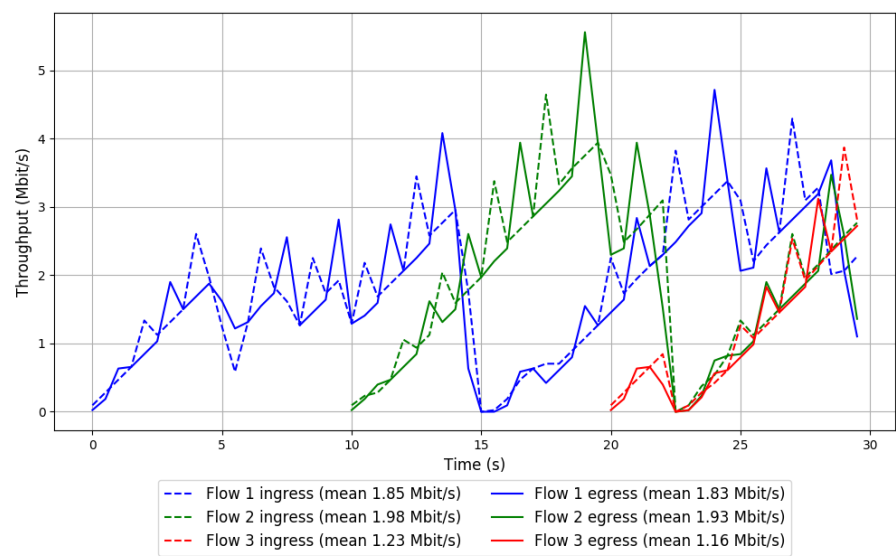


```
Run 2: Statistics of LEDBAT

Start at: 2017-12-20 13:33:02
End at: 2017-12-20 13:33:32

# Below is generated by plot.py at 2017-12-20 18:30:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.46 Mbit/s
95th percentile per-packet one-way delay: 112.974 ms
Loss rate: 3.36%
-- Flow 1:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 112.915 ms
Loss rate: 2.09%
-- Flow 2:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 112.967 ms
Loss rate: 3.80%
-- Flow 3:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 114.845 ms
Loss rate: 7.68%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-12-20 13:48:30

End at: 2017-12-20 13:49:01

Below is generated by plot.py at 2017-12-20 18:30:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.58 Mbit/s

95th percentile per-packet one-way delay: 114.265 ms

Loss rate: 3.52%

-- Flow 1:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 114.370 ms

Loss rate: 2.83%

-- Flow 2:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 114.092 ms

Loss rate: 4.58%

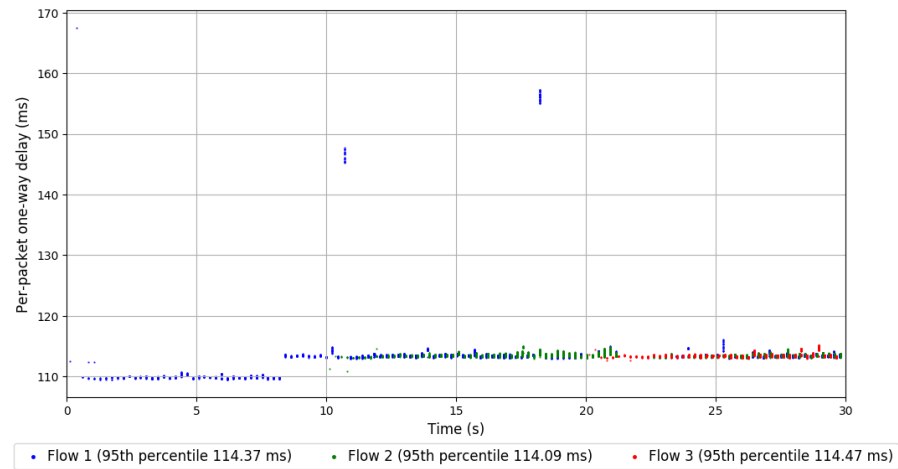
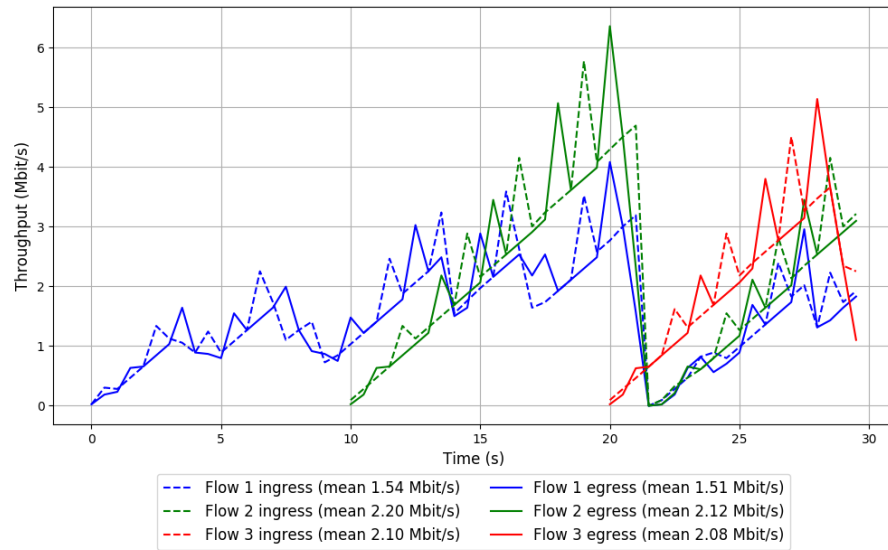
-- Flow 3:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 114.473 ms

Loss rate: 2.82%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-12-20 14:03:40

End at: 2017-12-20 14:04:11

Below is generated by plot.py at 2017-12-20 18:30:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.15 Mbit/s

95th percentile per-packet one-way delay: 114.282 ms

Loss rate: 2.44%

-- Flow 1:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 114.354 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 2.14 Mbit/s

95th percentile per-packet one-way delay: 114.218 ms

Loss rate: 3.02%

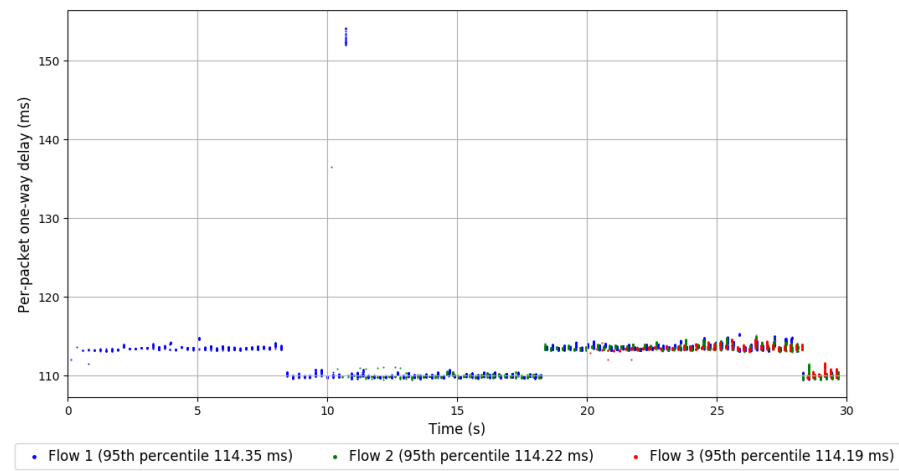
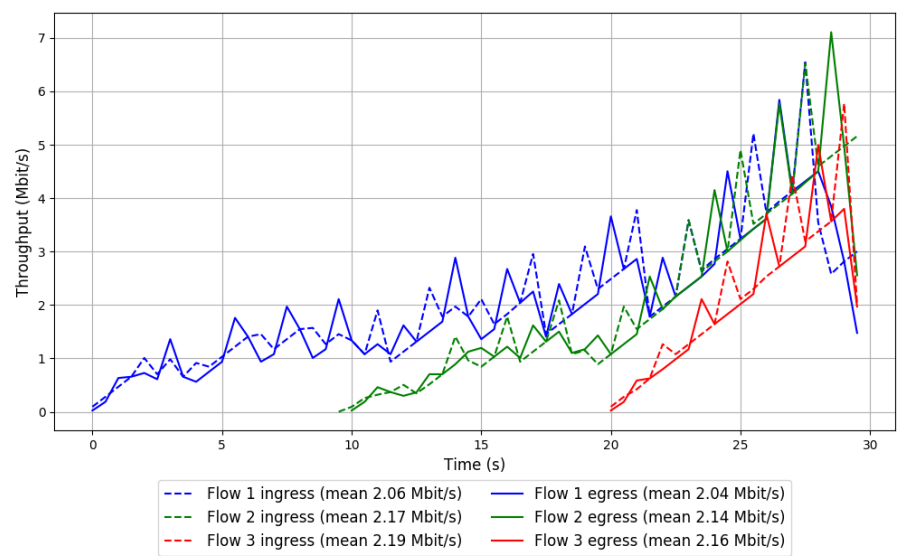
-- Flow 3:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 114.189 ms

Loss rate: 4.70%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-12-20 14:19:06

End at: 2017-12-20 14:19:36

Below is generated by plot.py at 2017-12-20 18:30:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.60 Mbit/s

95th percentile per-packet one-way delay: 114.035 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 2.91 Mbit/s

95th percentile per-packet one-way delay: 114.022 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 3.01 Mbit/s

95th percentile per-packet one-way delay: 114.135 ms

Loss rate: 1.98%

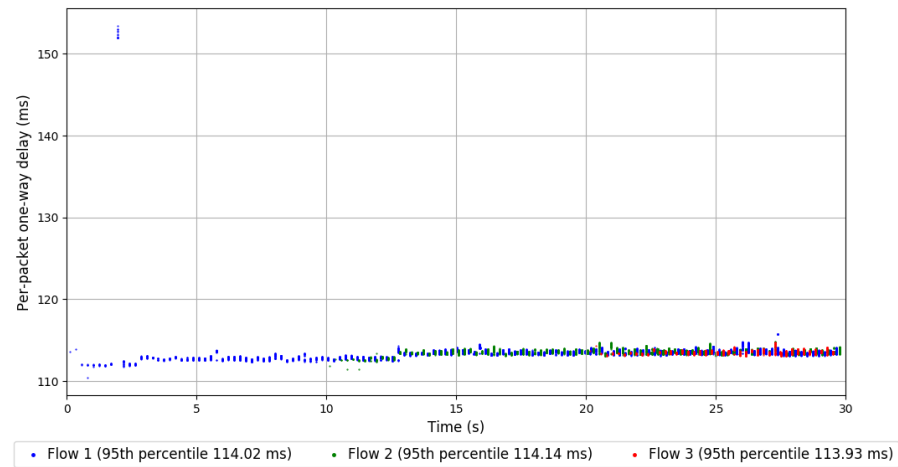
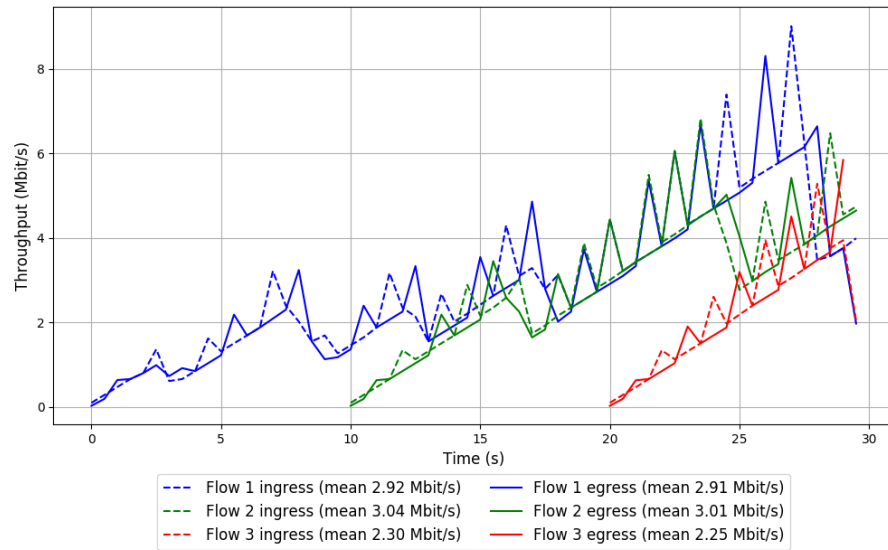
-- Flow 3:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 113.928 ms

Loss rate: 4.63%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-12-20 14:34:21

End at: 2017-12-20 14:34:51

Below is generated by plot.py at 2017-12-20 18:30:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.42 Mbit/s

95th percentile per-packet one-way delay: 113.790 ms

Loss rate: 2.70%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 113.707 ms

Loss rate: 2.64%

-- Flow 2:

Average throughput: 2.56 Mbit/s

95th percentile per-packet one-way delay: 113.788 ms

Loss rate: 1.95%

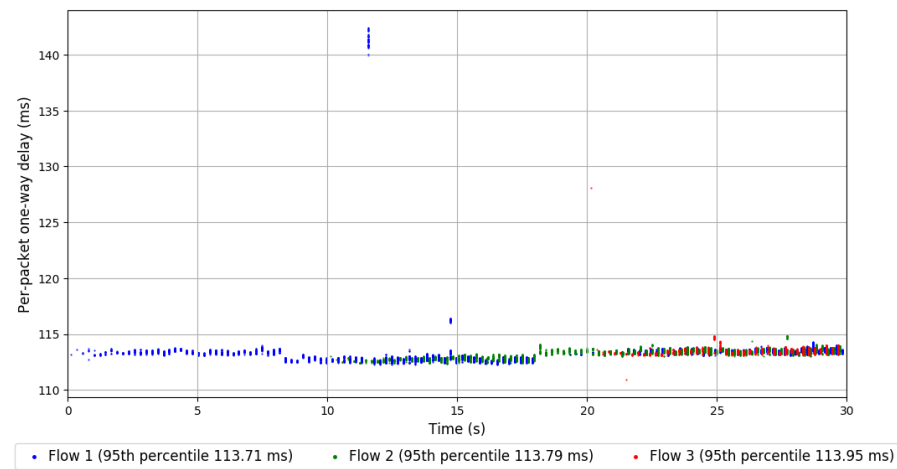
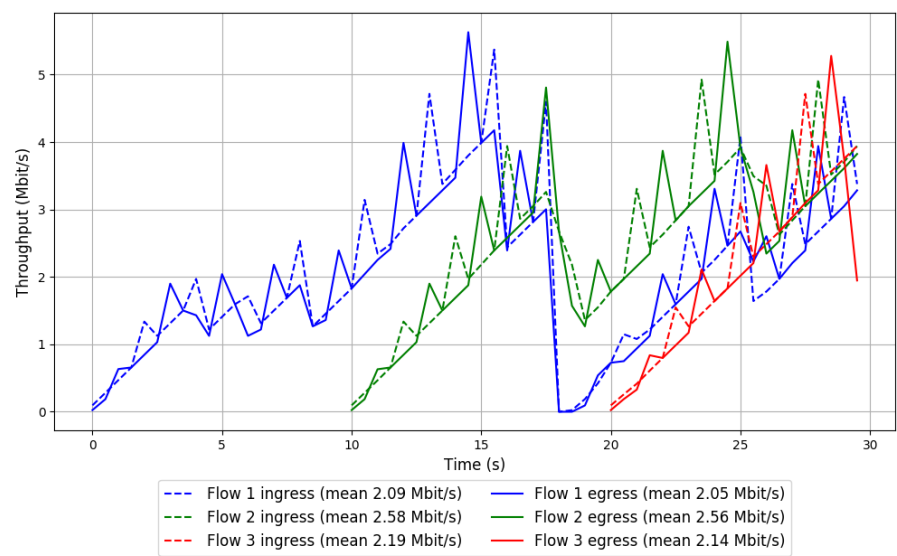
-- Flow 3:

Average throughput: 2.14 Mbit/s

95th percentile per-packet one-way delay: 113.951 ms

Loss rate: 4.67%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2017-12-20 14:49:37

End at: 2017-12-20 14:50:07

Below is generated by plot.py at 2017-12-20 18:30:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.03 Mbit/s

95th percentile per-packet one-way delay: 110.754 ms

Loss rate: 1.84%

-- Flow 1:

Average throughput: 3.07 Mbit/s

95th percentile per-packet one-way delay: 110.836 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 3.56 Mbit/s

95th percentile per-packet one-way delay: 110.681 ms

Loss rate: 2.19%

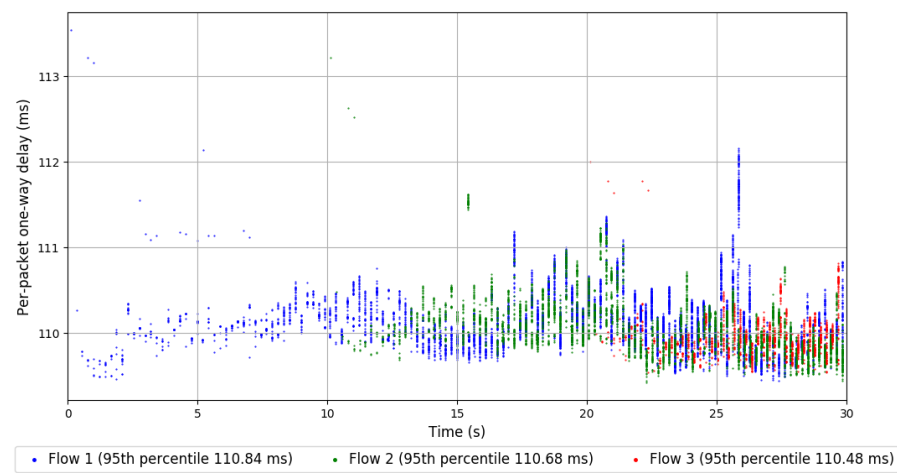
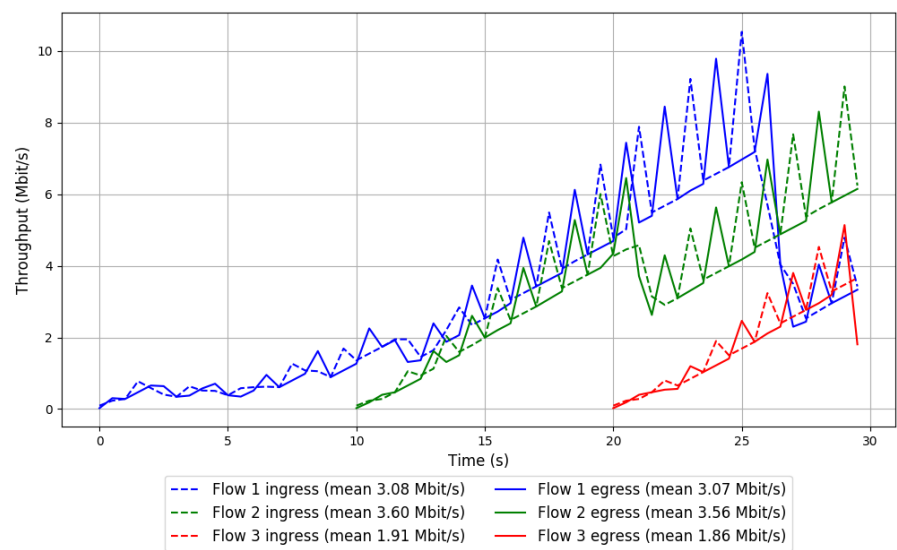
-- Flow 3:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 110.482 ms

Loss rate: 4.97%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-12-20 15:05:01

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

Below is generated by plot.py at 2017-12-20 18:30:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 110.635 ms

Loss rate: 5.42%

-- Flow 1:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 110.965 ms

Loss rate: 5.40%

-- Flow 2:

Average throughput: 1.06 Mbit/s

95th percentile per-packet one-way delay: 110.546 ms

Loss rate: 3.19%

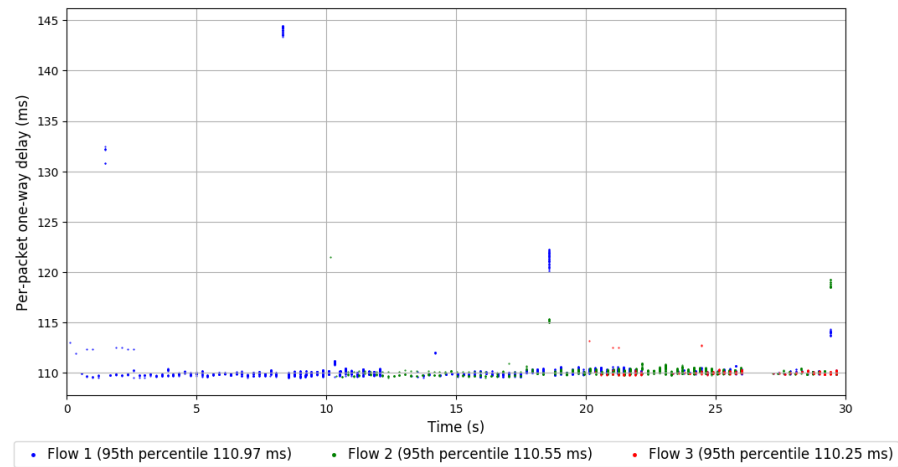
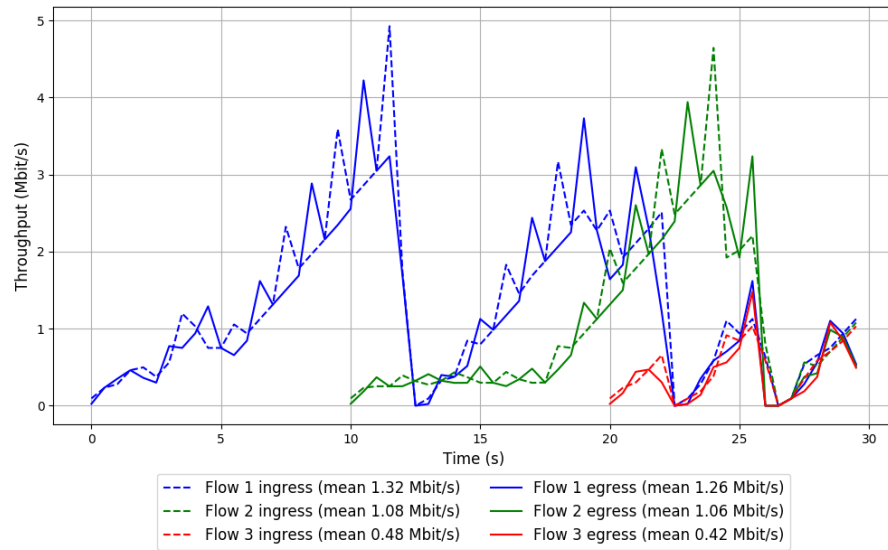
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 110.251 ms

Loss rate: 15.70%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-12-20 15:20:34

End at: 2017-12-20 15:21:04

Below is generated by plot.py at 2017-12-20 18:30:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.30 Mbit/s

95th percentile per-packet one-way delay: 113.121 ms

Loss rate: 3.65%

-- Flow 1:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 113.111 ms

Loss rate: 4.50%

-- Flow 2:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 113.168 ms

Loss rate: 2.42%

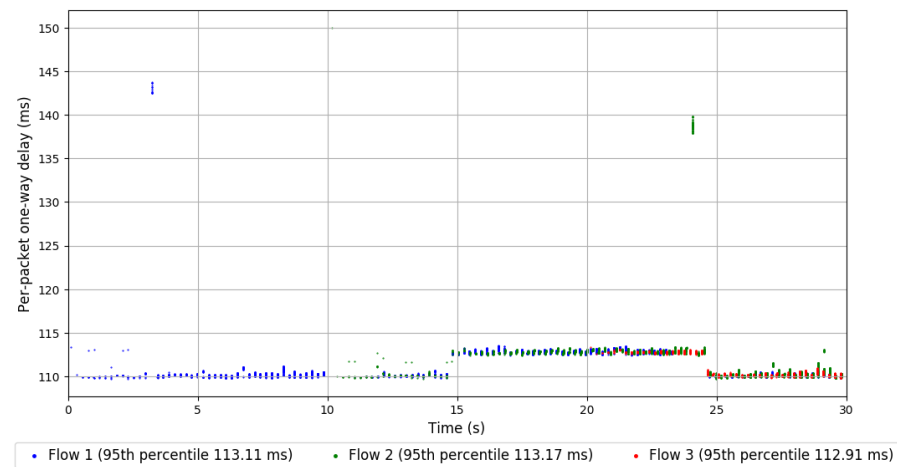
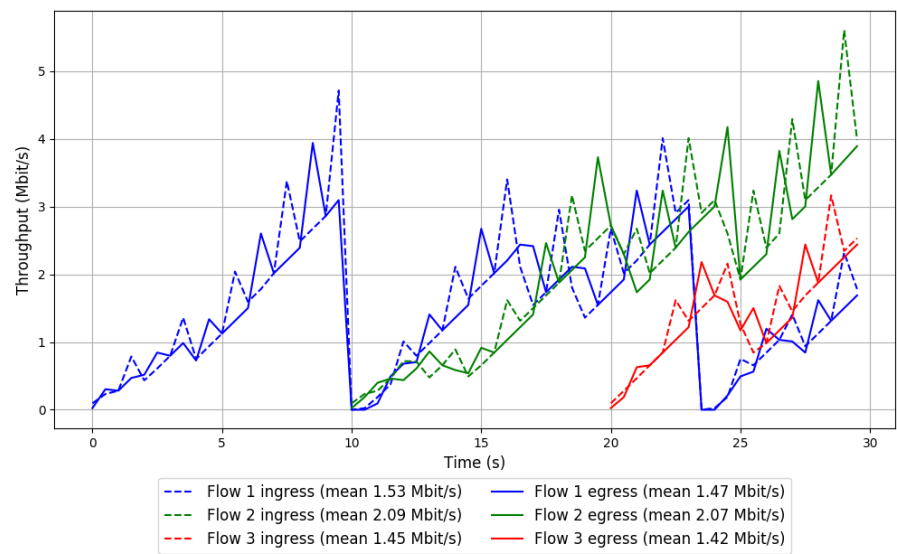
-- Flow 3:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 112.910 ms

Loss rate: 4.51%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2017-12-20 15:36:13

End at: 2017-12-20 15:36:43

Below is generated by plot.py at 2017-12-20 18:30:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.84 Mbit/s

95th percentile per-packet one-way delay: 112.985 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 4.38 Mbit/s

95th percentile per-packet one-way delay: 112.948 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 3.16 Mbit/s

95th percentile per-packet one-way delay: 112.982 ms

Loss rate: 2.54%

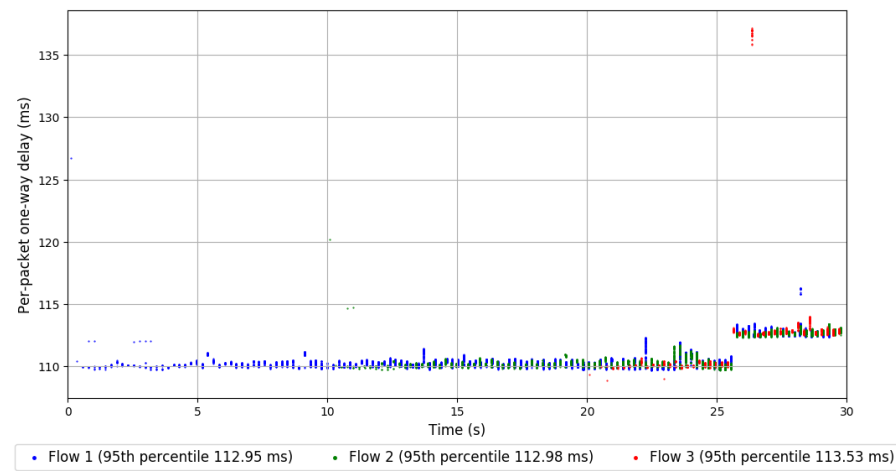
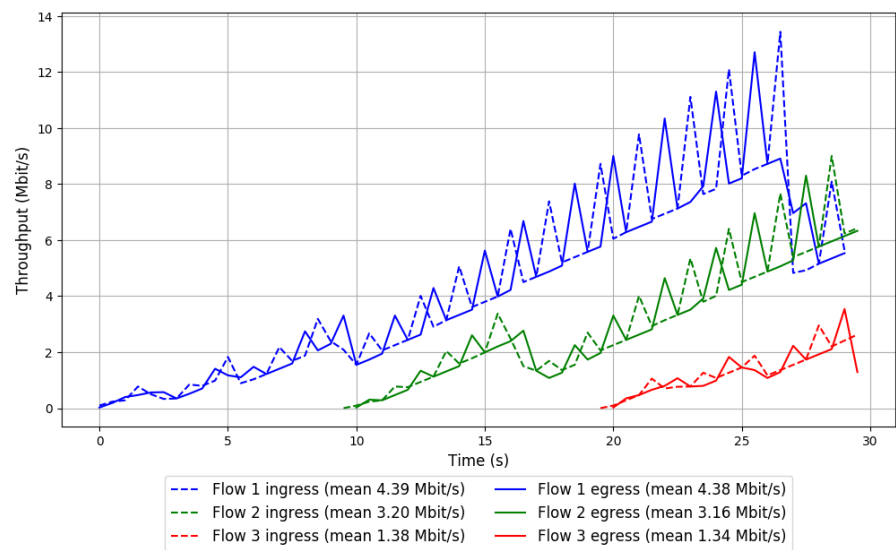
-- Flow 3:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 113.525 ms

Loss rate: 4.93%

Run 10: Report of LEDBAT — Data Link

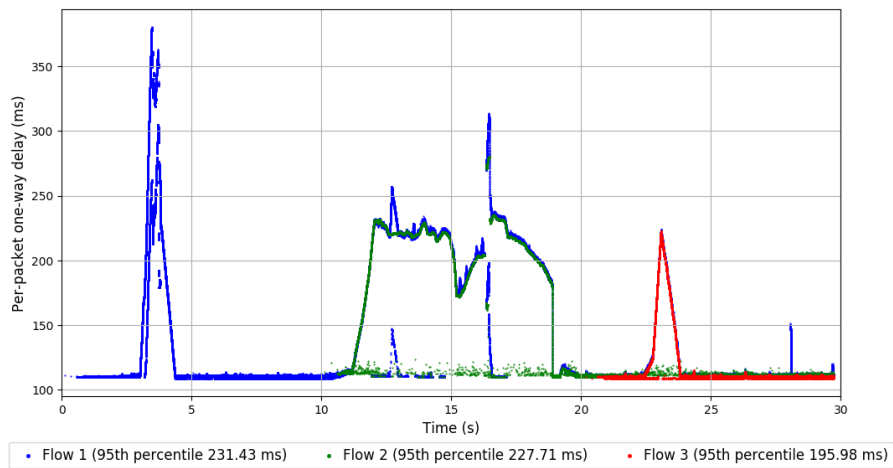
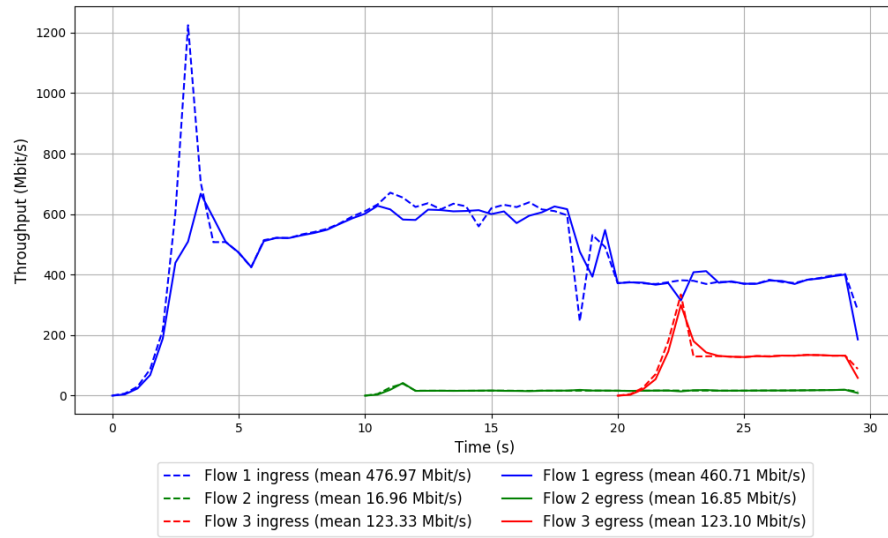


```
Run 1: Statistics of PCC

Start at: 2017-12-20 13:09:55
End at: 2017-12-20 13:10:25

# Below is generated by plot.py at 2017-12-20 18:38:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 511.53 Mbit/s
95th percentile per-packet one-way delay: 231.096 ms
Loss rate: 3.97%
-- Flow 1:
Average throughput: 460.71 Mbit/s
95th percentile per-packet one-way delay: 231.434 ms
Loss rate: 4.14%
-- Flow 2:
Average throughput: 16.85 Mbit/s
95th percentile per-packet one-way delay: 227.714 ms
Loss rate: 1.80%
-- Flow 3:
Average throughput: 123.10 Mbit/s
95th percentile per-packet one-way delay: 195.979 ms
Loss rate: 2.46%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2017-12-20 13:25:24

End at: 2017-12-20 13:25:54

Below is generated by plot.py at 2017-12-20 18:38:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 538.32 Mbit/s

95th percentile per-packet one-way delay: 215.390 ms

Loss rate: 2.28%

-- Flow 1:

Average throughput: 471.18 Mbit/s

95th percentile per-packet one-way delay: 215.405 ms

Loss rate: 2.37%

-- Flow 2:

Average throughput: 70.11 Mbit/s

95th percentile per-packet one-way delay: 214.573 ms

Loss rate: 1.22%

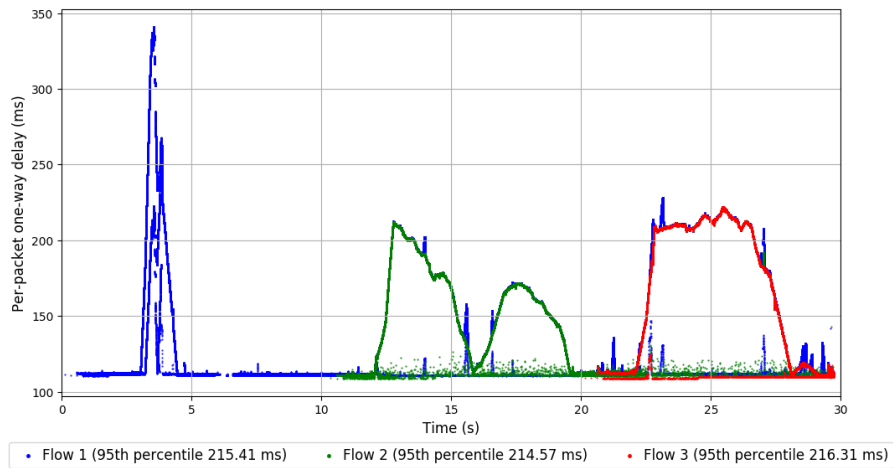
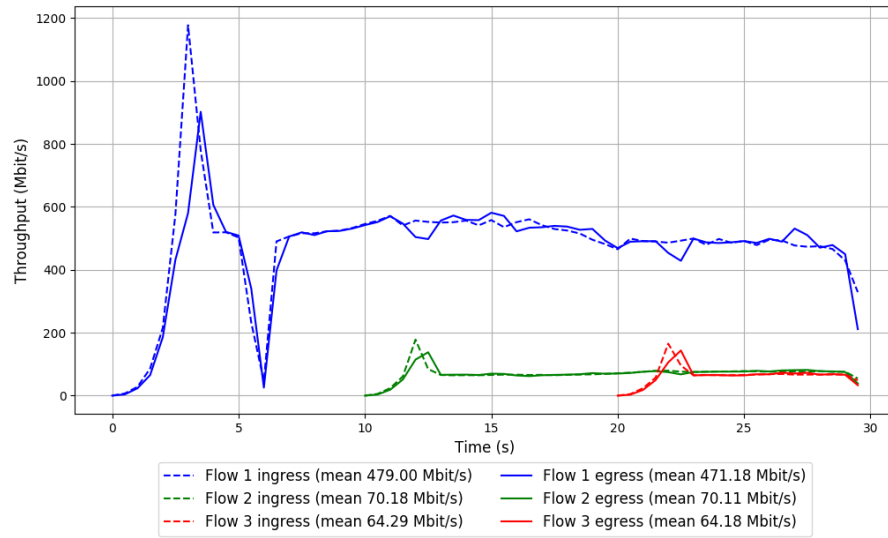
-- Flow 3:

Average throughput: 64.18 Mbit/s

95th percentile per-packet one-way delay: 216.311 ms

Loss rate: 2.44%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-12-20 13:40:27

End at: 2017-12-20 13:40:57

Below is generated by plot.py at 2017-12-20 18:38:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 509.75 Mbit/s

95th percentile per-packet one-way delay: 241.041 ms

Loss rate: 2.73%

-- Flow 1:

Average throughput: 478.69 Mbit/s

95th percentile per-packet one-way delay: 240.974 ms

Loss rate: 2.68%

-- Flow 2:

Average throughput: 16.49 Mbit/s

95th percentile per-packet one-way delay: 241.055 ms

Loss rate: 1.71%

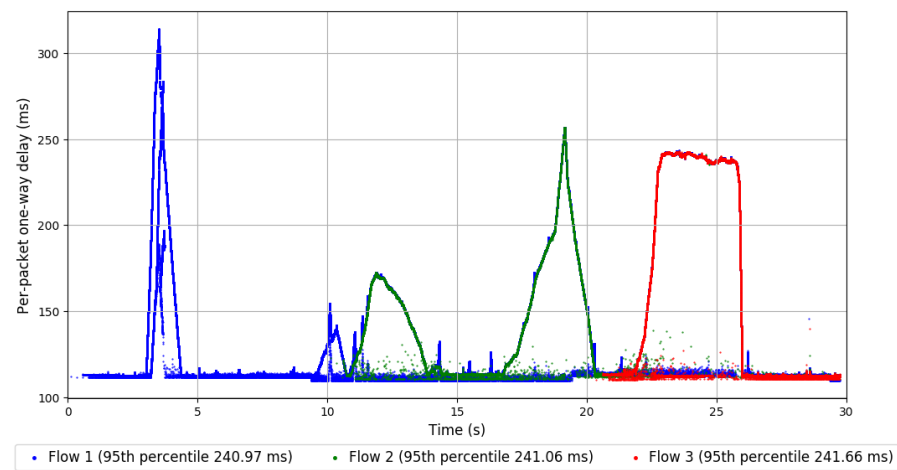
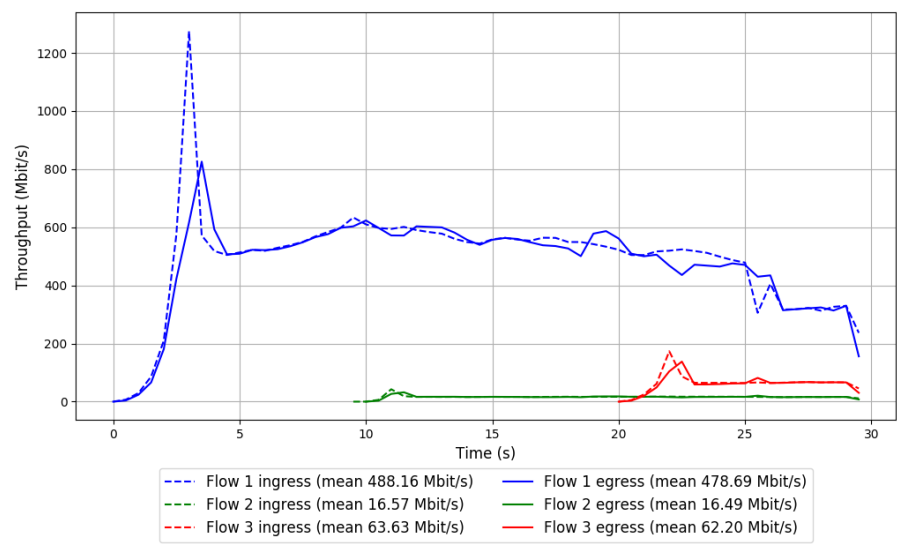
-- Flow 3:

Average throughput: 62.20 Mbit/s

95th percentile per-packet one-way delay: 241.664 ms

Loss rate: 4.49%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-12-20 13:55:45

End at: 2017-12-20 13:56:15

Below is generated by plot.py at 2017-12-20 18:39:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 554.84 Mbit/s

95th percentile per-packet one-way delay: 217.144 ms

Loss rate: 3.79%

-- Flow 1:

Average throughput: 473.50 Mbit/s

95th percentile per-packet one-way delay: 217.383 ms

Loss rate: 3.85%

-- Flow 2:

Average throughput: 120.80 Mbit/s

95th percentile per-packet one-way delay: 216.593 ms

Loss rate: 3.42%

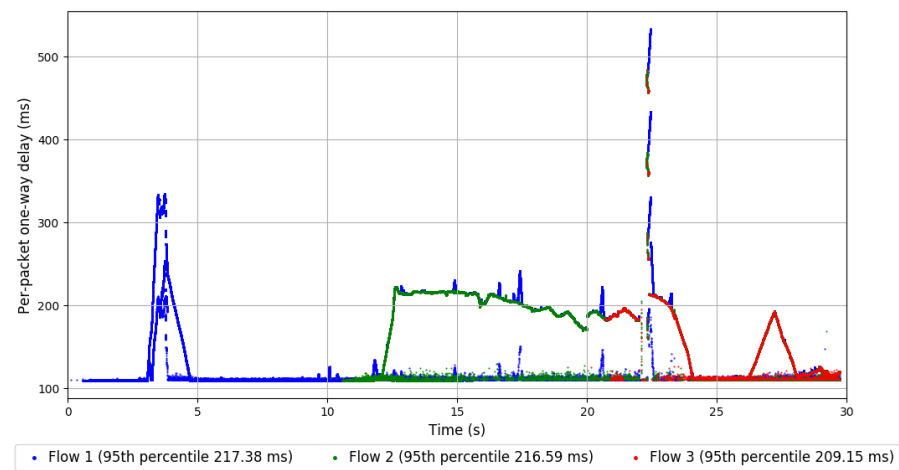
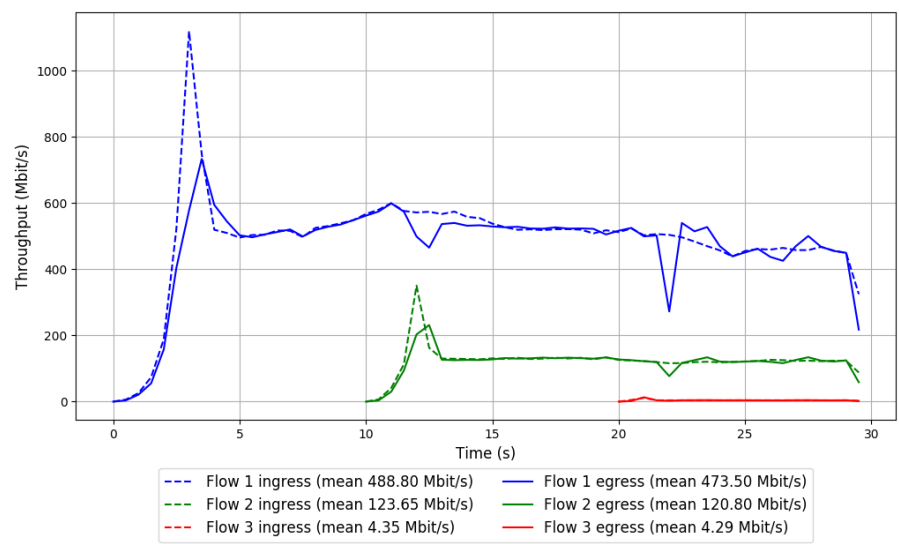
-- Flow 3:

Average throughput: 4.29 Mbit/s

95th percentile per-packet one-way delay: 209.145 ms

Loss rate: 3.64%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-12-20 14:11:07

End at: 2017-12-20 14:11:37

Below is generated by plot.py at 2017-12-20 18:39:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 393.36 Mbit/s

95th percentile per-packet one-way delay: 186.167 ms

Loss rate: 2.25%

-- Flow 1:

Average throughput: 0.02 Mbit/s

95th percentile per-packet one-way delay: 2272.385 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 541.22 Mbit/s

95th percentile per-packet one-way delay: 186.454 ms

Loss rate: 2.25%

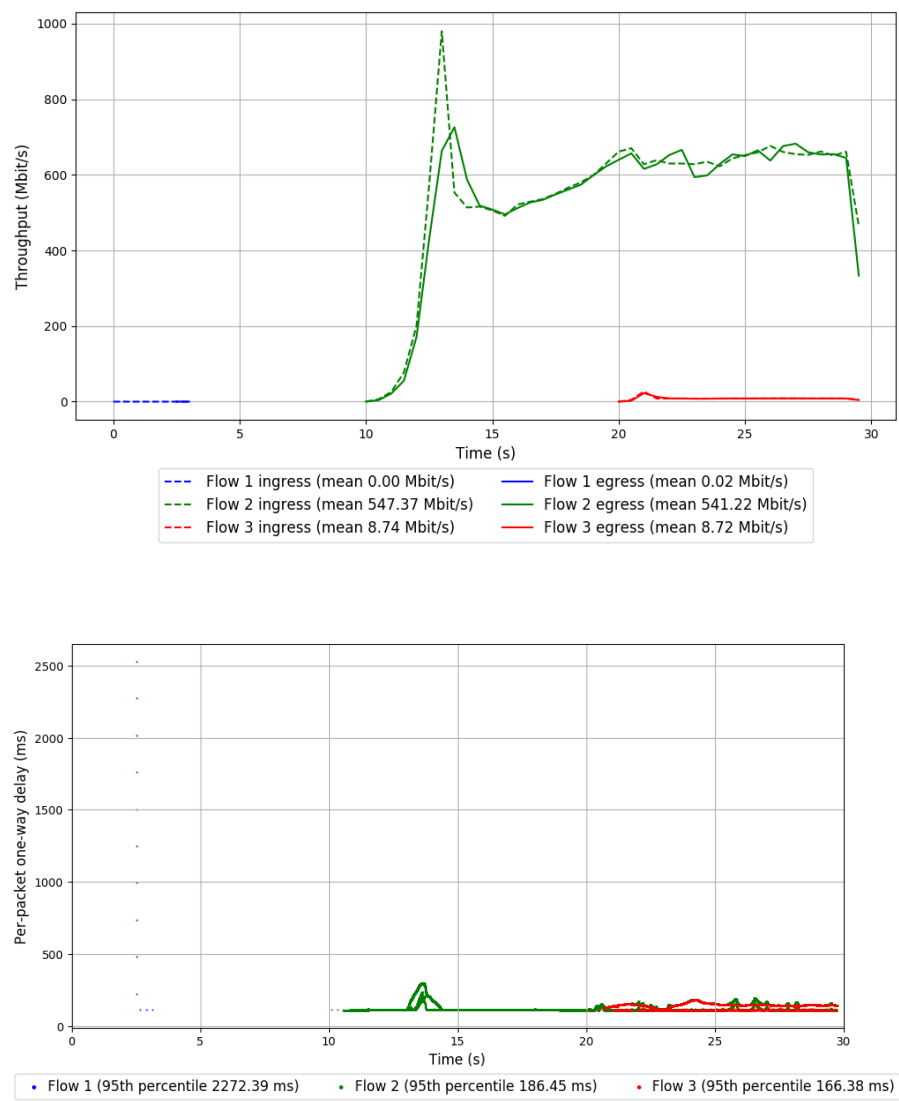
-- Flow 3:

Average throughput: 8.72 Mbit/s

95th percentile per-packet one-way delay: 166.378 ms

Loss rate: 2.45%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-12-20 14:26:27

End at: 2017-12-20 14:26:57

Below is generated by plot.py at 2017-12-20 18:39:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 548.92 Mbit/s

95th percentile per-packet one-way delay: 224.780 ms

Loss rate: 1.99%

-- Flow 1:

Average throughput: 500.28 Mbit/s

95th percentile per-packet one-way delay: 224.829 ms

Loss rate: 2.02%

-- Flow 2:

Average throughput: 65.50 Mbit/s

95th percentile per-packet one-way delay: 224.119 ms

Loss rate: 1.51%

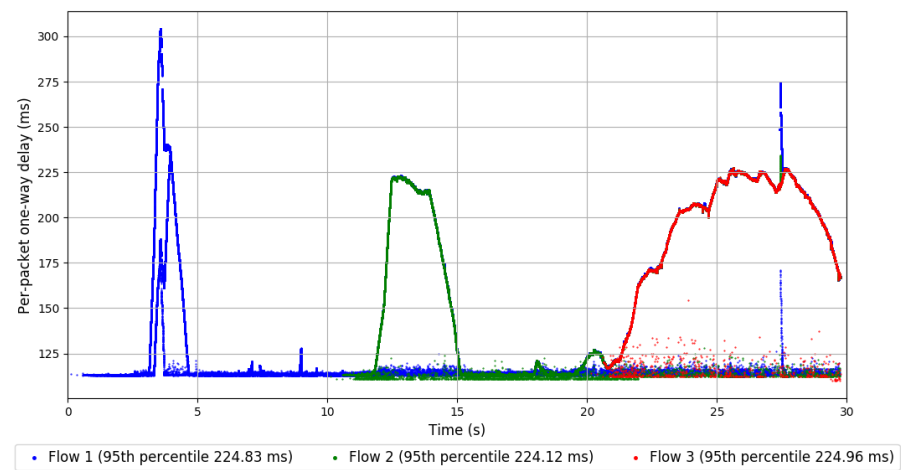
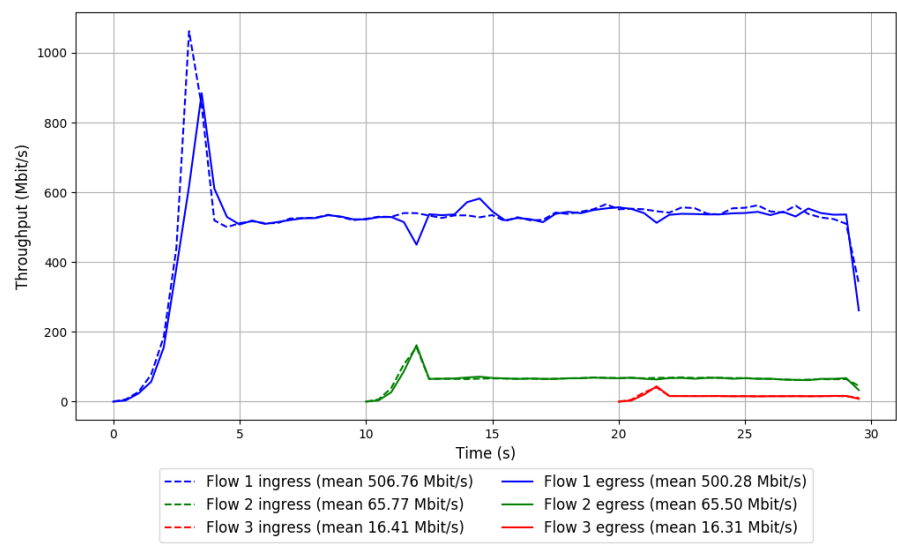
-- Flow 3:

Average throughput: 16.31 Mbit/s

95th percentile per-packet one-way delay: 224.963 ms

Loss rate: 2.90%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-12-20 14:41:38

End at: 2017-12-20 14:42:08

Below is generated by plot.py at 2017-12-20 18:39:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 539.19 Mbit/s

95th percentile per-packet one-way delay: 221.968 ms

Loss rate: 2.79%

-- Flow 1:

Average throughput: 452.54 Mbit/s

95th percentile per-packet one-way delay: 222.516 ms

Loss rate: 2.90%

-- Flow 2:

Average throughput: 128.55 Mbit/s

95th percentile per-packet one-way delay: 220.569 ms

Loss rate: 2.22%

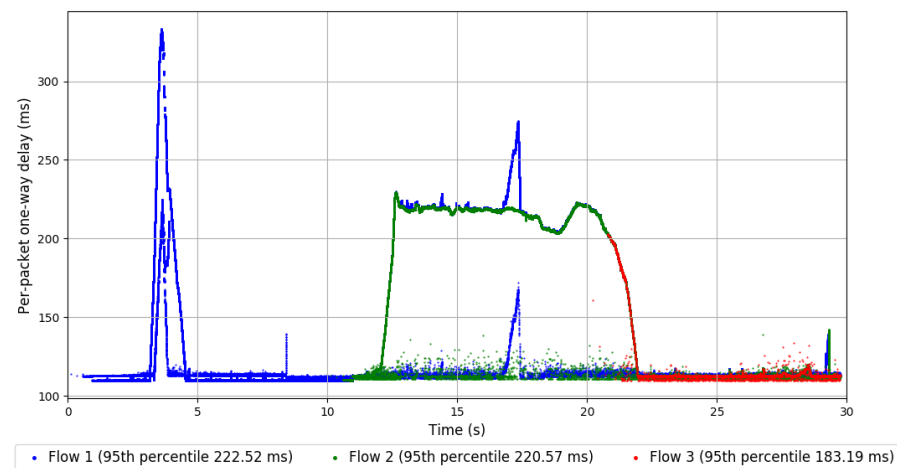
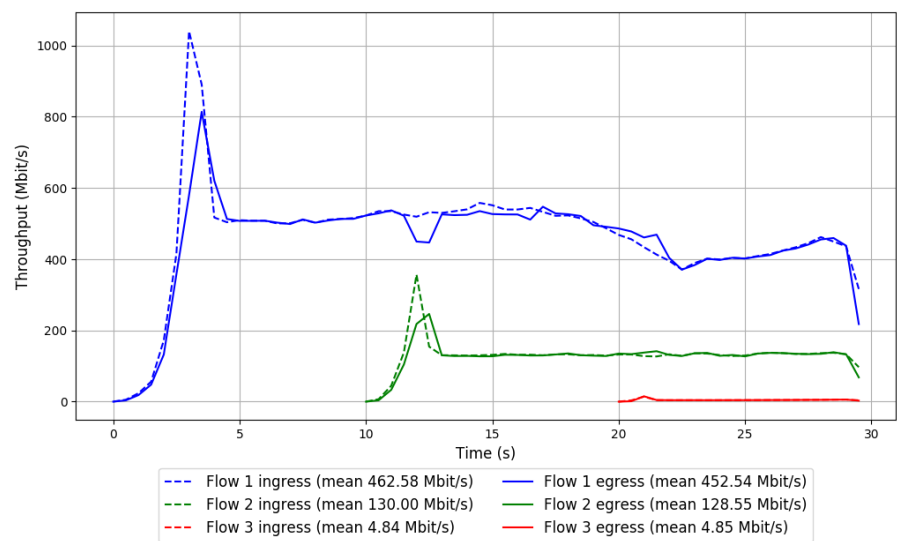
-- Flow 3:

Average throughput: 4.85 Mbit/s

95th percentile per-packet one-way delay: 183.191 ms

Loss rate: 2.53%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-12-20 14:56:57

End at: 2017-12-20 14:57:27

Below is generated by plot.py at 2017-12-20 18:39:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 502.61 Mbit/s

95th percentile per-packet one-way delay: 201.597 ms

Loss rate: 4.40%

-- Flow 1:

Average throughput: 489.00 Mbit/s

95th percentile per-packet one-way delay: 201.750 ms

Loss rate: 4.46%

-- Flow 2:

Average throughput: 4.74 Mbit/s

95th percentile per-packet one-way delay: 196.988 ms

Loss rate: 1.36%

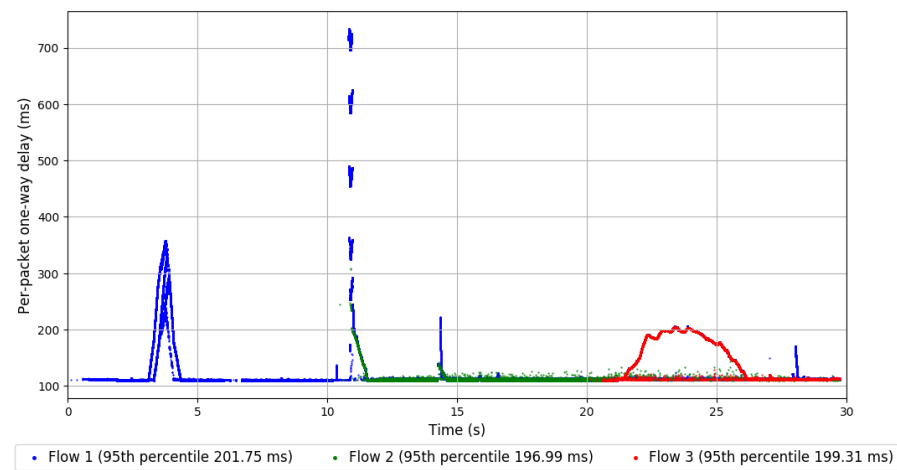
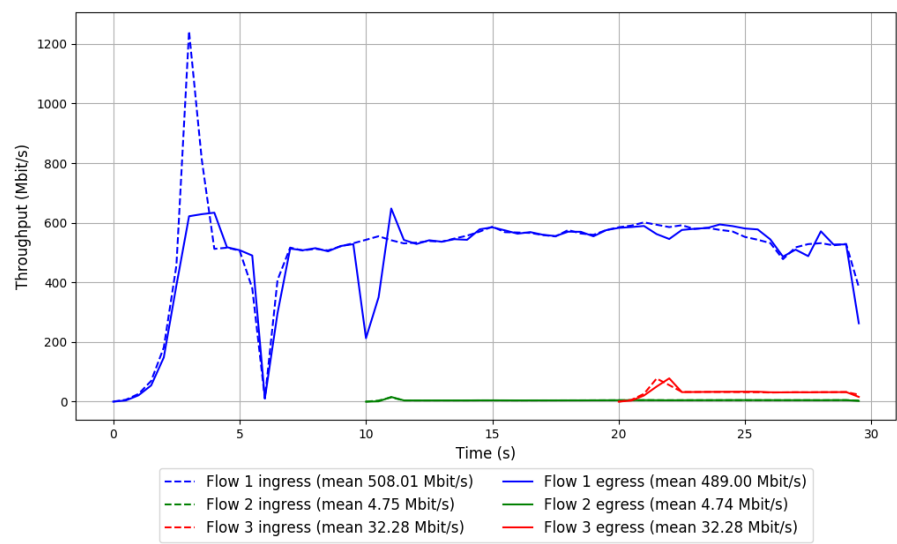
-- Flow 3:

Average throughput: 32.28 Mbit/s

95th percentile per-packet one-way delay: 199.307 ms

Loss rate: 2.30%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

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

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

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 561.25 Mbit/s

95th percentile per-packet one-way delay: 218.507 ms

Loss rate: 2.90%

-- Flow 1:

Average throughput: 494.47 Mbit/s

95th percentile per-packet one-way delay: 218.632 ms

Loss rate: 3.06%

-- Flow 2:

Average throughput: 70.35 Mbit/s

95th percentile per-packet one-way delay: 218.519 ms

Loss rate: 1.49%

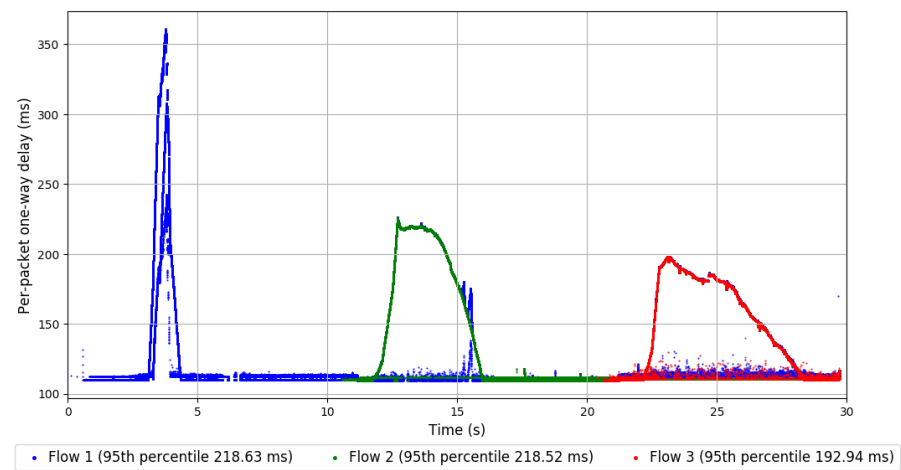
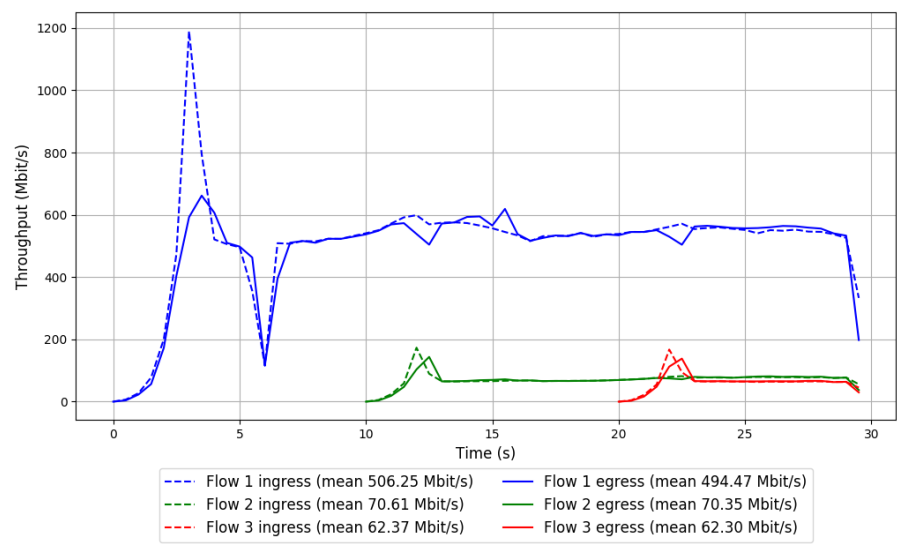
-- Flow 3:

Average throughput: 62.30 Mbit/s

95th percentile per-packet one-way delay: 192.941 ms

Loss rate: 2.38%

Run 9: Report of PCC — Data Link

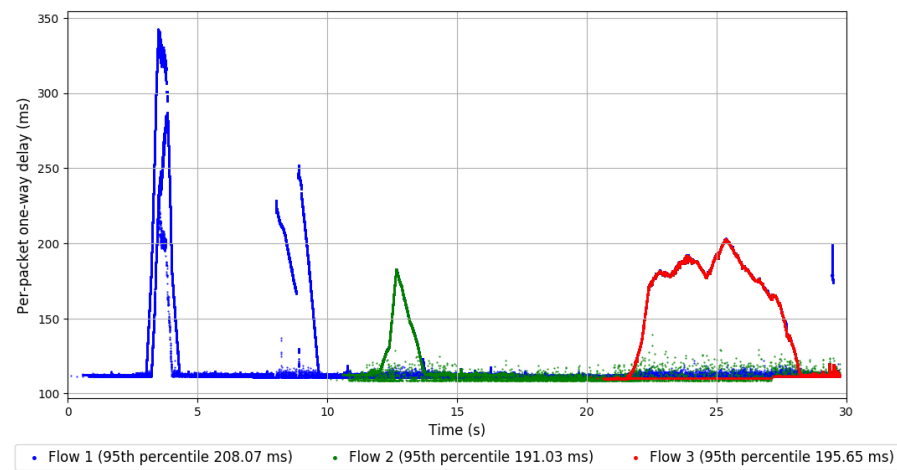
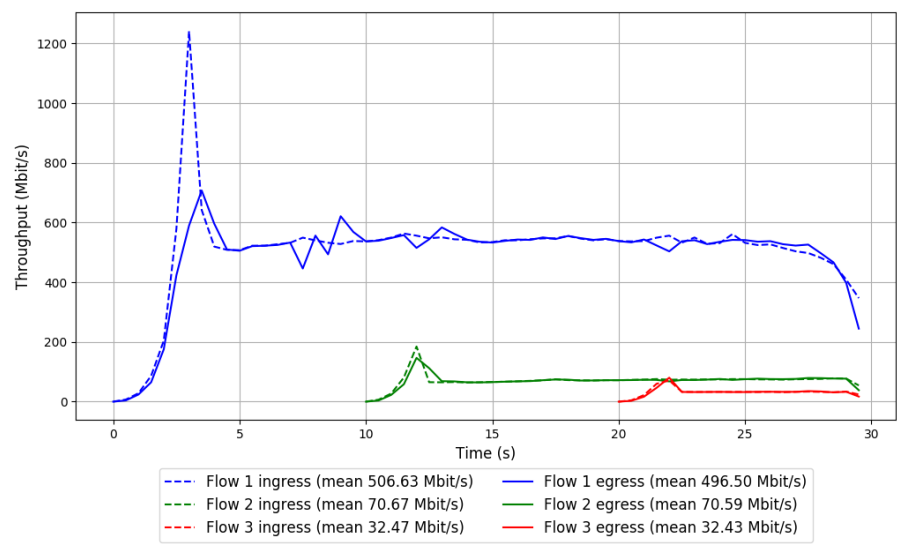


```
Run 10: Statistics of PCC

Start at: 2017-12-20 15:28:02
End at: 2017-12-20 15:28:32

# Below is generated by plot.py at 2017-12-20 18:48:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 553.74 Mbit/s
95th percentile per-packet one-way delay: 202.622 ms
Loss rate: 2.59%
-- Flow 1:
Average throughput: 496.50 Mbit/s
95th percentile per-packet one-way delay: 208.070 ms
Loss rate: 2.73%
-- Flow 2:
Average throughput: 70.59 Mbit/s
95th percentile per-packet one-way delay: 191.029 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 32.43 Mbit/s
95th percentile per-packet one-way delay: 195.647 ms
Loss rate: 2.34%
```

Run 10: Report of PCC — Data Link

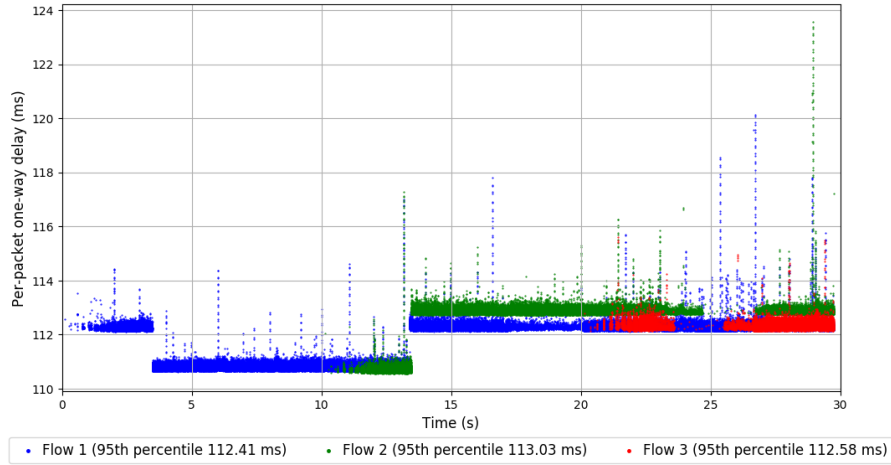
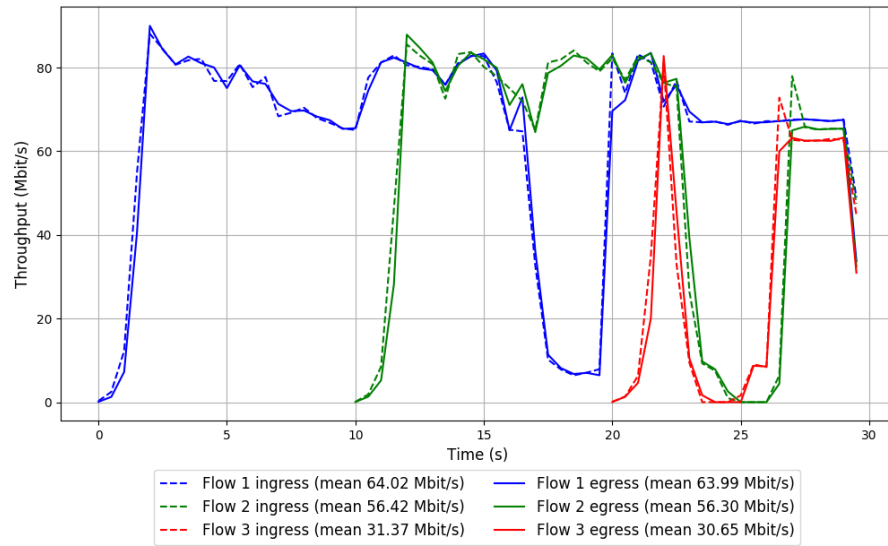


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-20 13:20:45
End at: 2017-12-20 13:21:15

# Below is generated by plot.py at 2017-12-20 18:48:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 111.13 Mbit/s
95th percentile per-packet one-way delay: 112.948 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 63.99 Mbit/s
95th percentile per-packet one-way delay: 112.409 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 56.30 Mbit/s
95th percentile per-packet one-way delay: 113.030 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 30.65 Mbit/s
95th percentile per-packet one-way delay: 112.579 ms
Loss rate: 4.52%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-12-20 13:35:48

End at: 2017-12-20 13:36:18

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.98 Mbit/s

95th percentile per-packet one-way delay: 112.639 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 63.56 Mbit/s

95th percentile per-packet one-way delay: 110.210 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 39.25 Mbit/s

95th percentile per-packet one-way delay: 111.450 ms

Loss rate: 1.85%

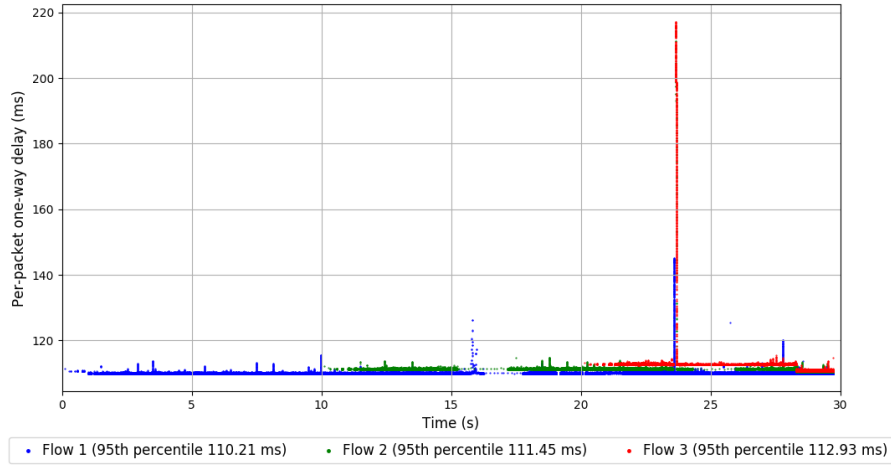
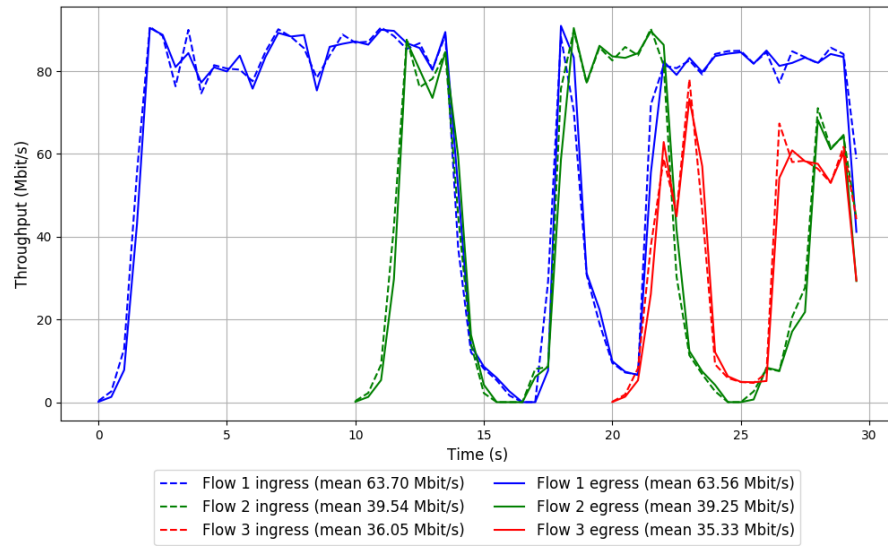
-- Flow 3:

Average throughput: 35.33 Mbit/s

95th percentile per-packet one-way delay: 112.928 ms

Loss rate: 4.21%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-12-20 13:51:06

End at: 2017-12-20 13:51:36

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.59 Mbit/s

95th percentile per-packet one-way delay: 111.818 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 55.69 Mbit/s

95th percentile per-packet one-way delay: 111.765 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 60.85 Mbit/s

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

Loss rate: 0.22%

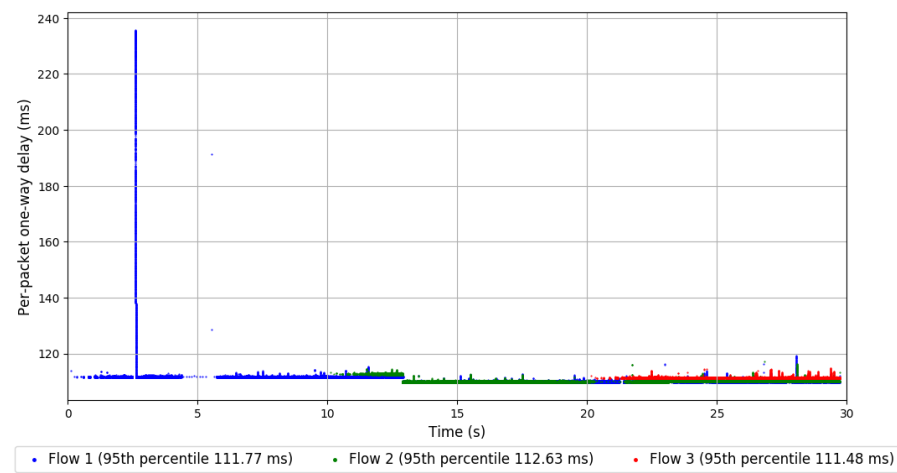
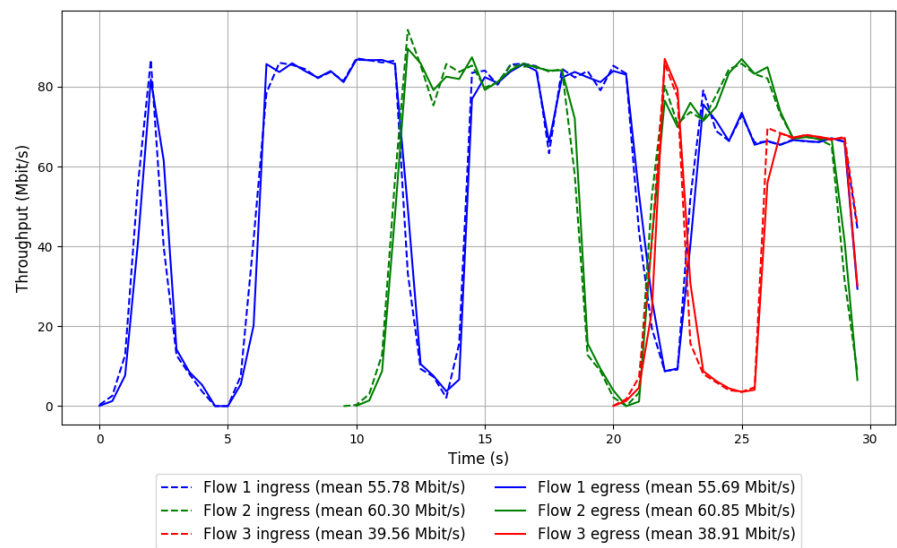
-- Flow 3:

Average throughput: 38.91 Mbit/s

95th percentile per-packet one-way delay: 111.484 ms

Loss rate: 3.89%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-12-20 14:06:26

End at: 2017-12-20 14:06:56

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 103.10 Mbit/s

95th percentile per-packet one-way delay: 112.666 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 60.36 Mbit/s

95th percentile per-packet one-way delay: 111.493 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 47.84 Mbit/s

95th percentile per-packet one-way delay: 112.780 ms

Loss rate: 1.82%

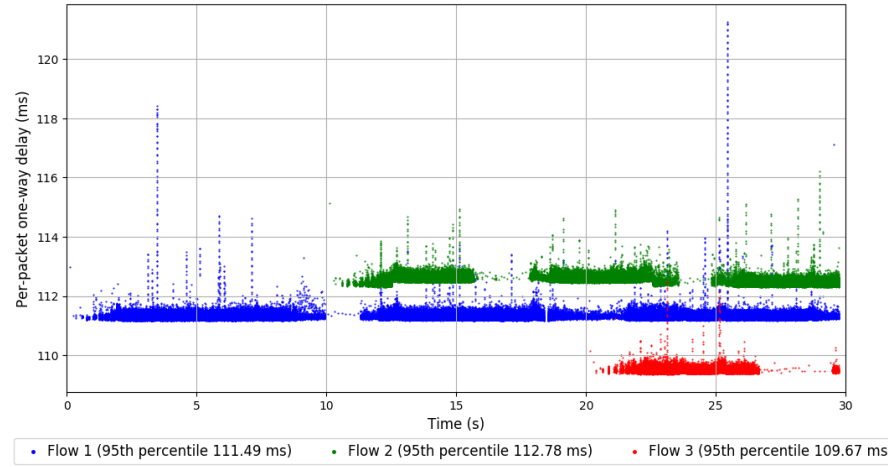
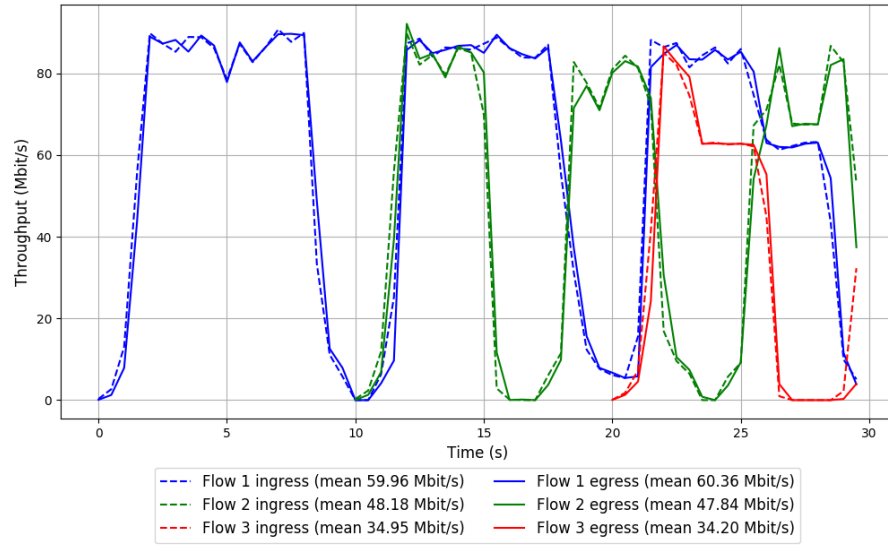
-- Flow 3:

Average throughput: 34.20 Mbit/s

95th percentile per-packet one-way delay: 109.667 ms

Loss rate: 4.40%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-12-20 14:21:49

End at: 2017-12-20 14:22:19

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.16 Mbit/s

95th percentile per-packet one-way delay: 113.024 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 57.33 Mbit/s

95th percentile per-packet one-way delay: 113.094 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 60.23 Mbit/s

95th percentile per-packet one-way delay: 112.503 ms

Loss rate: 0.55%

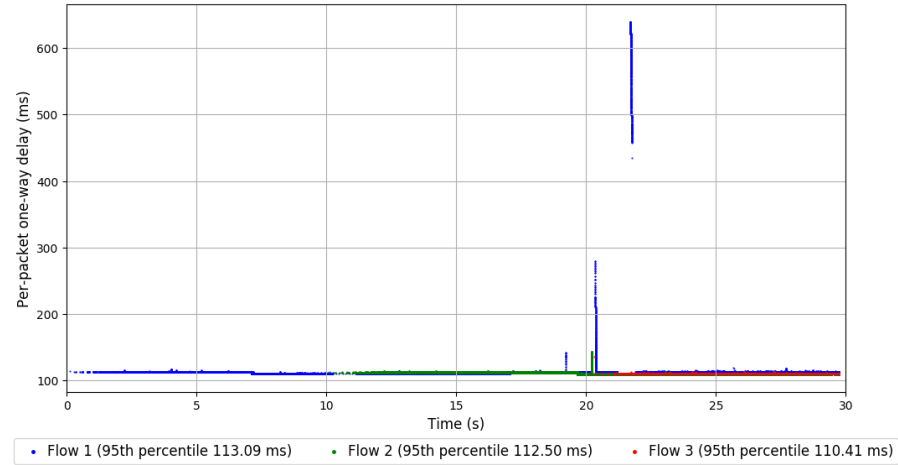
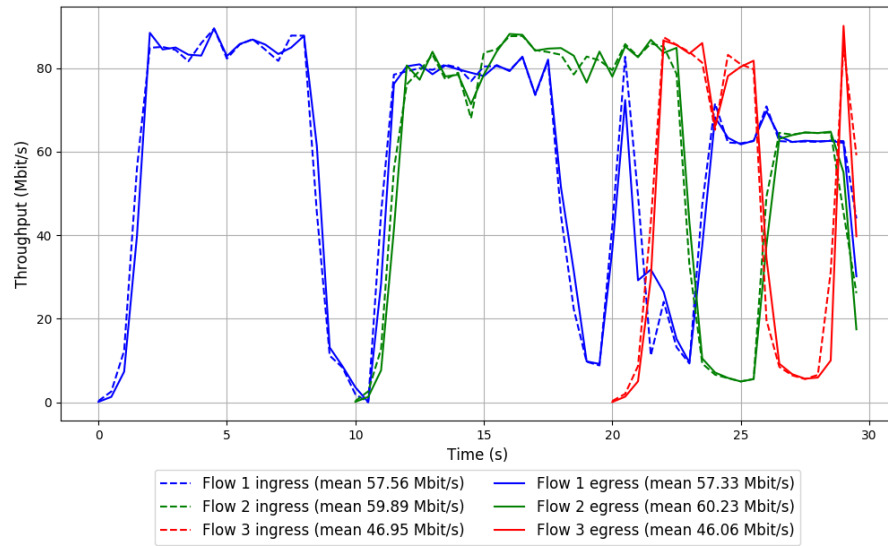
-- Flow 3:

Average throughput: 46.06 Mbit/s

95th percentile per-packet one-way delay: 110.410 ms

Loss rate: 4.09%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

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 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.67 Mbit/s

95th percentile per-packet one-way delay: 112.415 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 49.78 Mbit/s

95th percentile per-packet one-way delay: 112.477 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 51.28 Mbit/s

95th percentile per-packet one-way delay: 110.441 ms

Loss rate: 0.12%

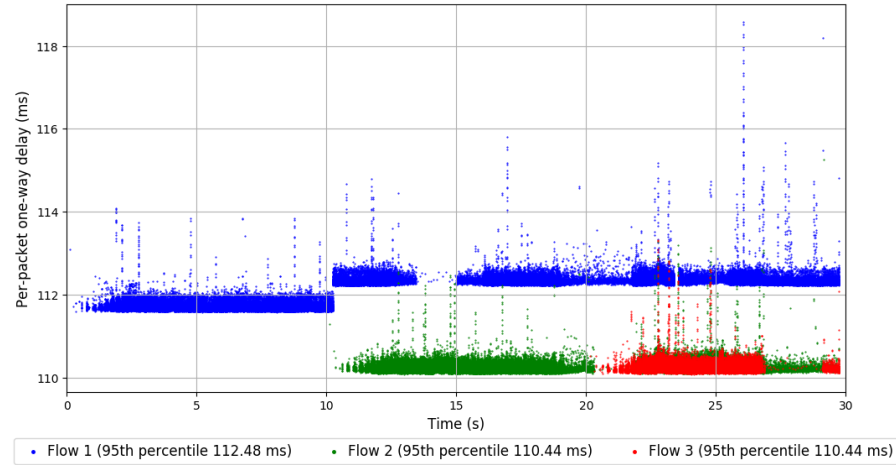
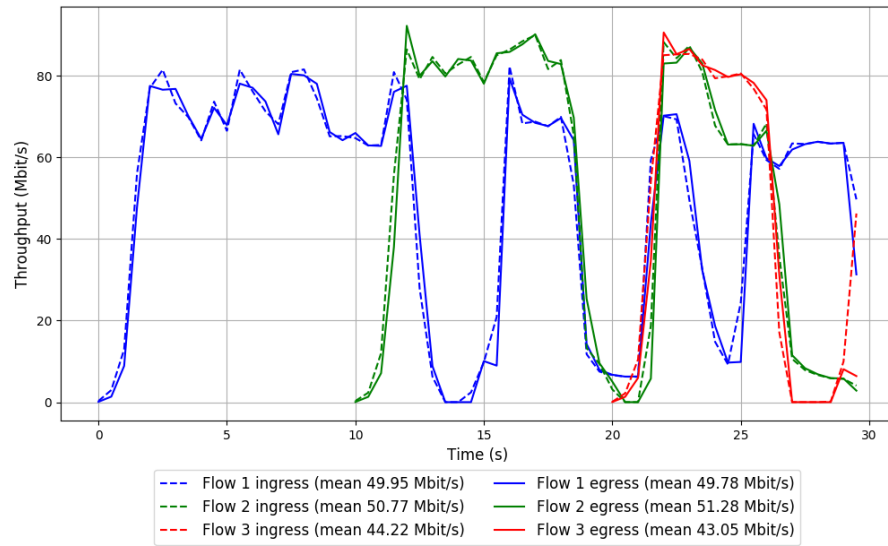
-- Flow 3:

Average throughput: 43.05 Mbit/s

95th percentile per-packet one-way delay: 110.440 ms

Loss rate: 4.82%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-12-20 14:52:16

End at: 2017-12-20 14:52:46

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.64 Mbit/s

95th percentile per-packet one-way delay: 112.514 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 72.96 Mbit/s

95th percentile per-packet one-way delay: 112.540 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 37.92 Mbit/s

95th percentile per-packet one-way delay: 112.393 ms

Loss rate: 1.68%

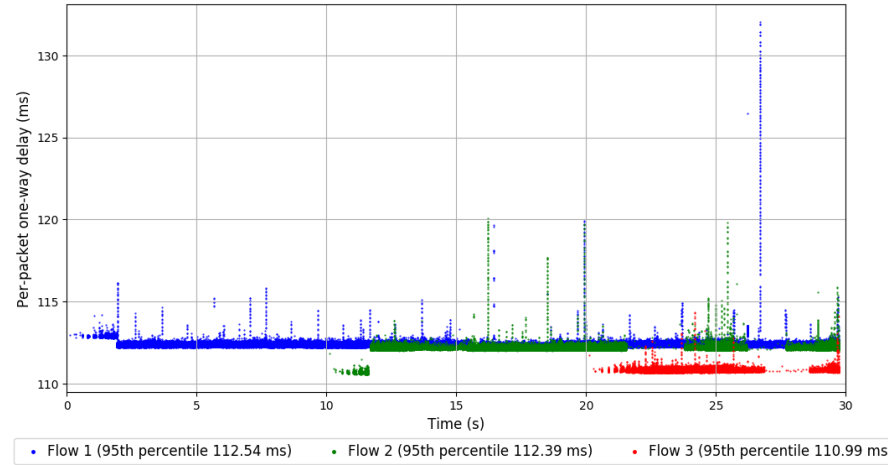
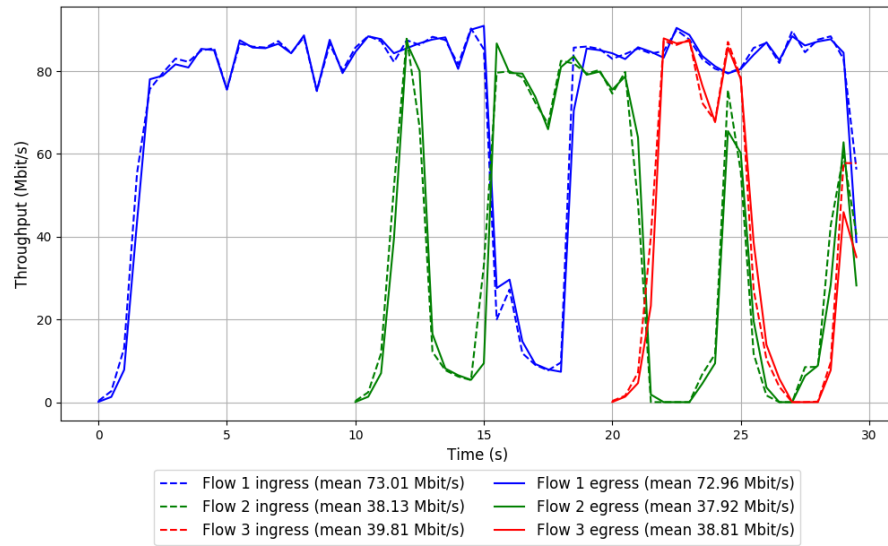
-- Flow 3:

Average throughput: 38.81 Mbit/s

95th percentile per-packet one-way delay: 110.990 ms

Loss rate: 4.67%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-12-20 15:07:34

End at: 2017-12-20 15:08:04

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.66 Mbit/s

95th percentile per-packet one-way delay: 113.135 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 57.77 Mbit/s

95th percentile per-packet one-way delay: 112.664 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 52.35 Mbit/s

95th percentile per-packet one-way delay: 113.222 ms

Loss rate: 1.42%

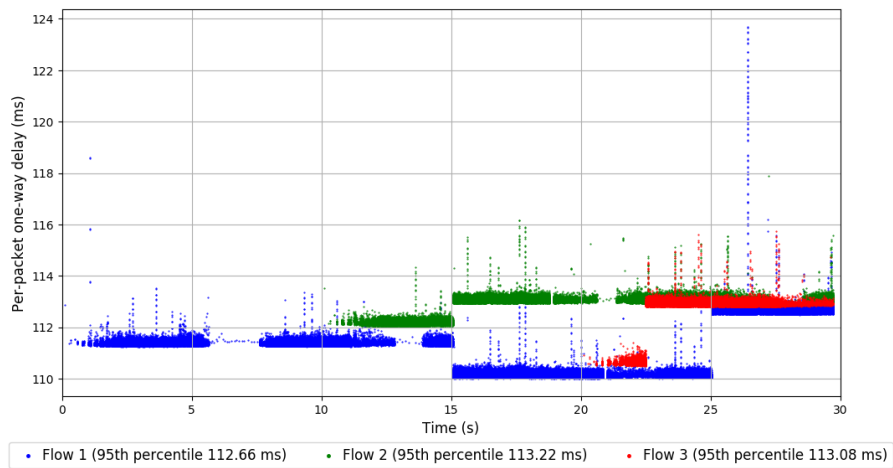
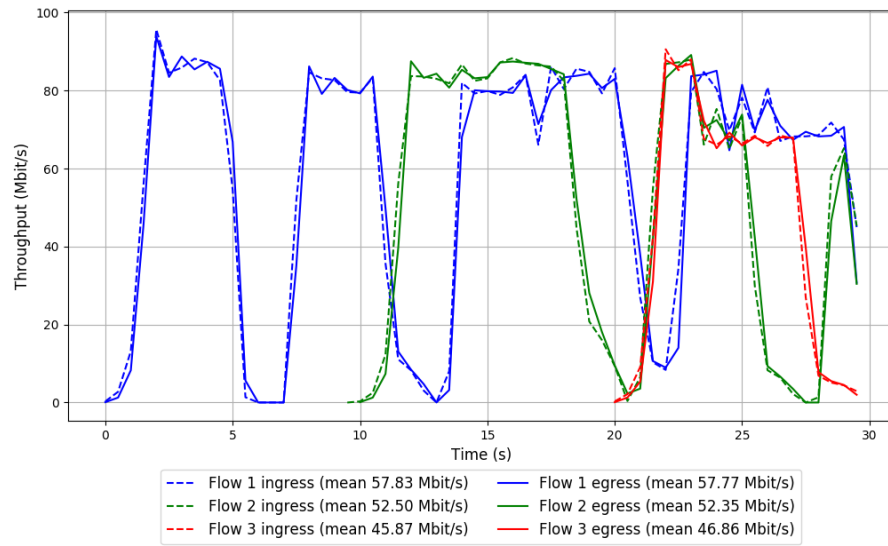
-- Flow 3:

Average throughput: 46.86 Mbit/s

95th percentile per-packet one-way delay: 113.080 ms

Loss rate: 0.20%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-12-20 15:23:18

End at: 2017-12-20 15:23:48

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.74 Mbit/s

95th percentile per-packet one-way delay: 112.797 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 60.92 Mbit/s

95th percentile per-packet one-way delay: 112.772 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 55.60 Mbit/s

95th percentile per-packet one-way delay: 111.532 ms

Loss rate: 1.17%

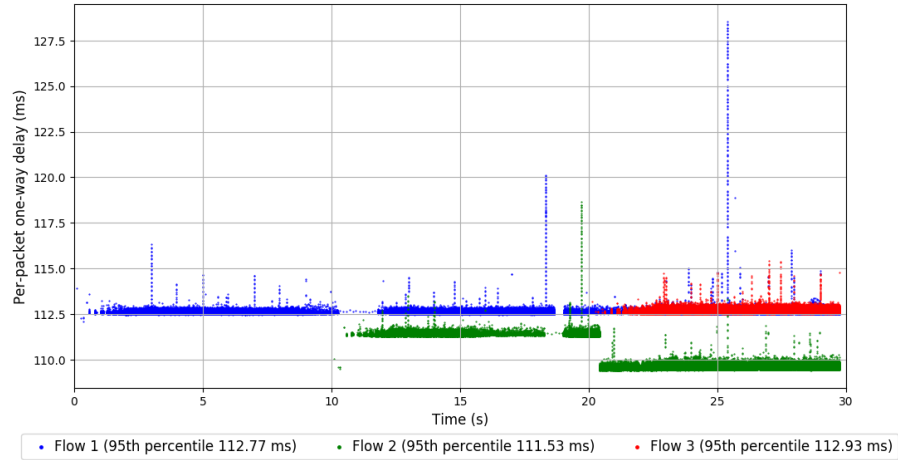
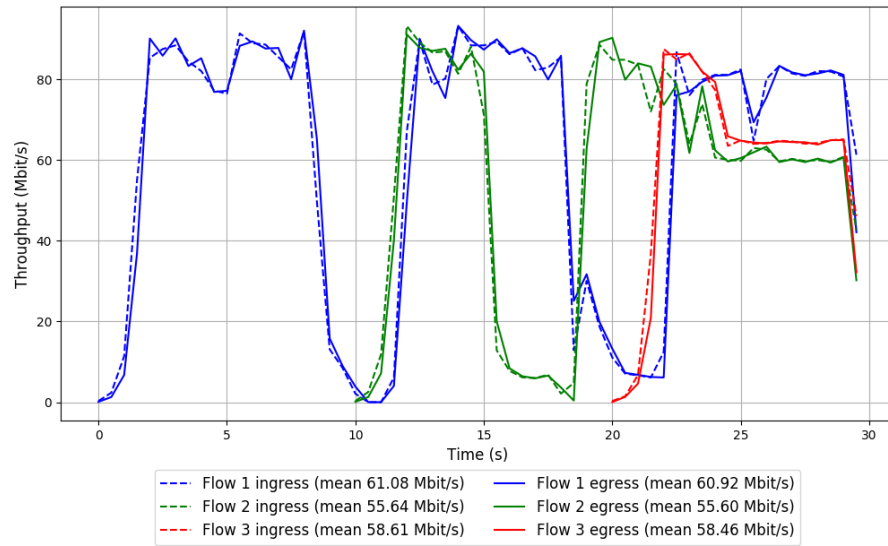
-- Flow 3:

Average throughput: 58.46 Mbit/s

95th percentile per-packet one-way delay: 112.928 ms

Loss rate: 2.49%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2017-12-20 15:38:58

End at: 2017-12-20 15:39:28

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.22 Mbit/s

95th percentile per-packet one-way delay: 112.350 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 59.51 Mbit/s

95th percentile per-packet one-way delay: 111.771 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 54.21 Mbit/s

95th percentile per-packet one-way delay: 109.224 ms

Loss rate: 1.38%

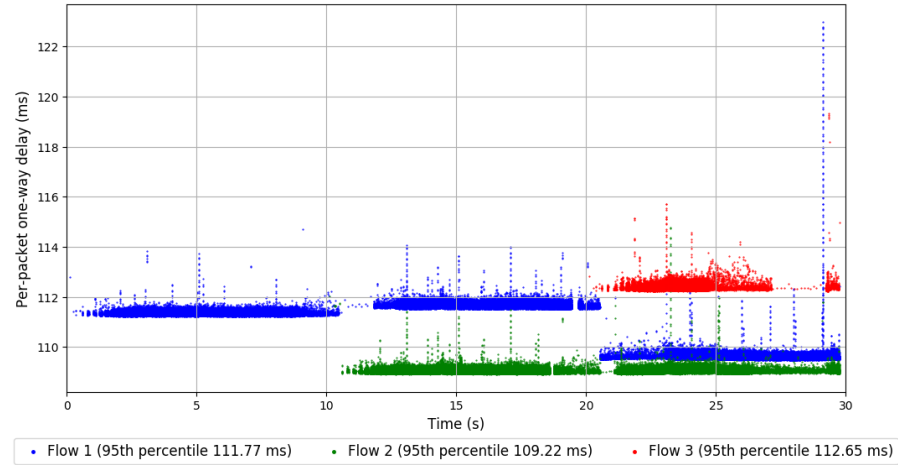
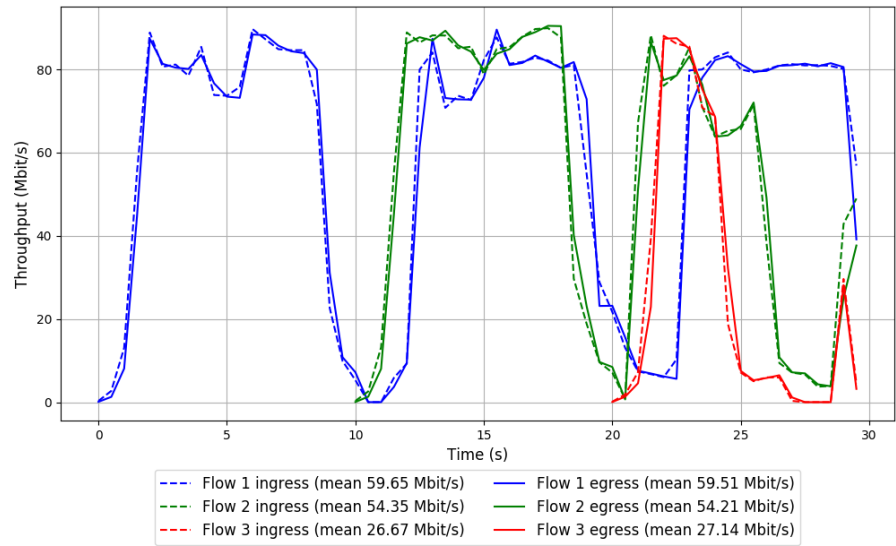
-- Flow 3:

Average throughput: 27.14 Mbit/s

95th percentile per-packet one-way delay: 112.649 ms

Loss rate: 0.53%

Run 10: Report of QUIC Cubic — Data Link

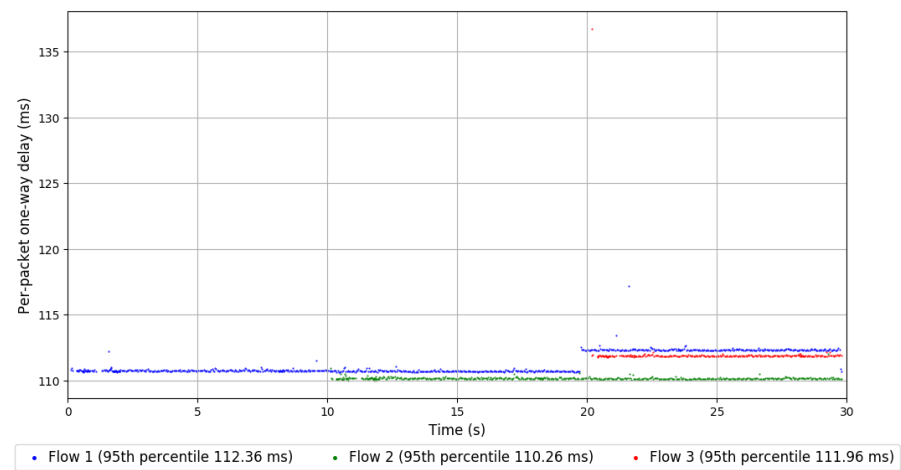
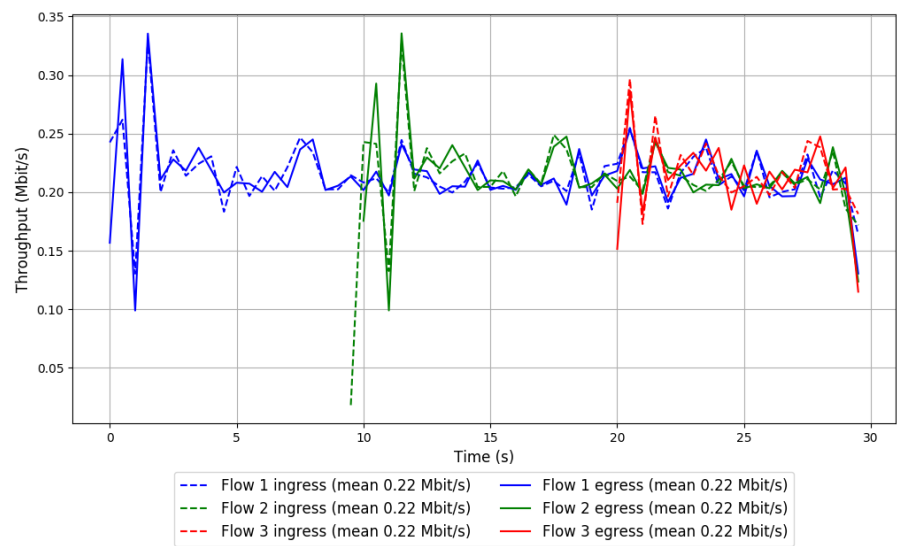


```
Run 1: Statistics of SCReAM

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

# Below is generated by plot.py at 2017-12-20 18:48:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.331 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.363 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.259 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.957 ms
Loss rate: 2.26%
```

Run 1: Report of SReAM — Data Link

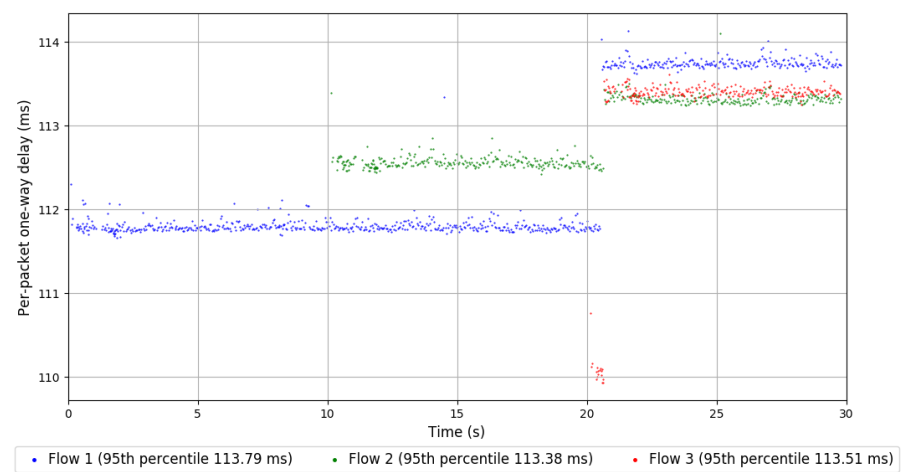
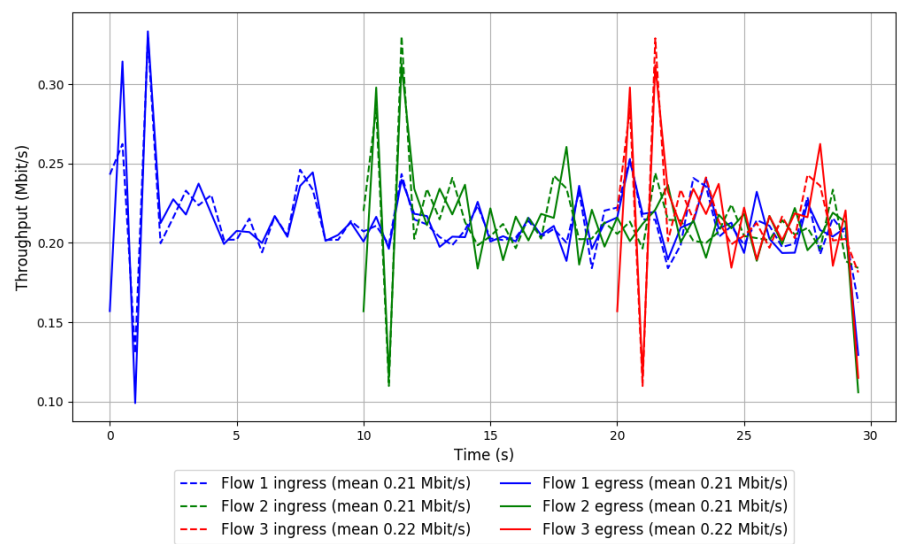


```
Run 2: Statistics of SCReAM

Start at: 2017-12-20 13:24:38
End at: 2017-12-20 13:25:08

# Below is generated by plot.py at 2017-12-20 18:48:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.757 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 113.786 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 113.383 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.514 ms
Loss rate: 2.25%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2017-12-20 13:39:41

End at: 2017-12-20 13:40:11

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.485 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 112.541 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.870 ms

Loss rate: 1.05%

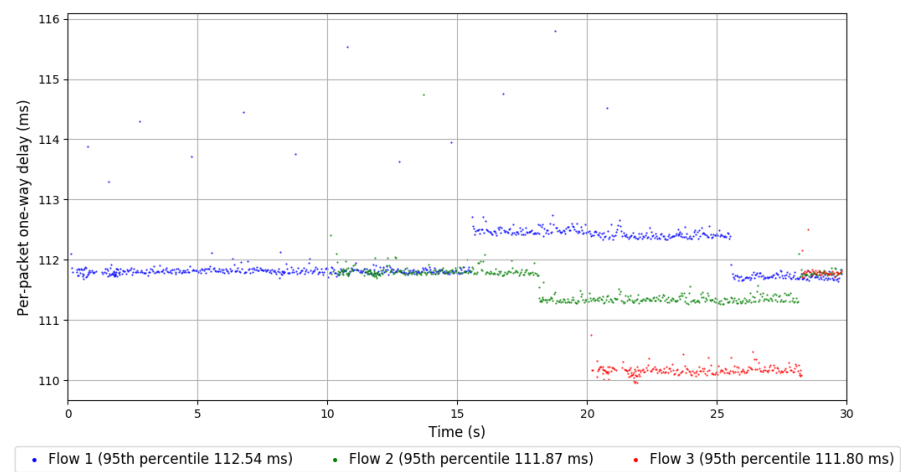
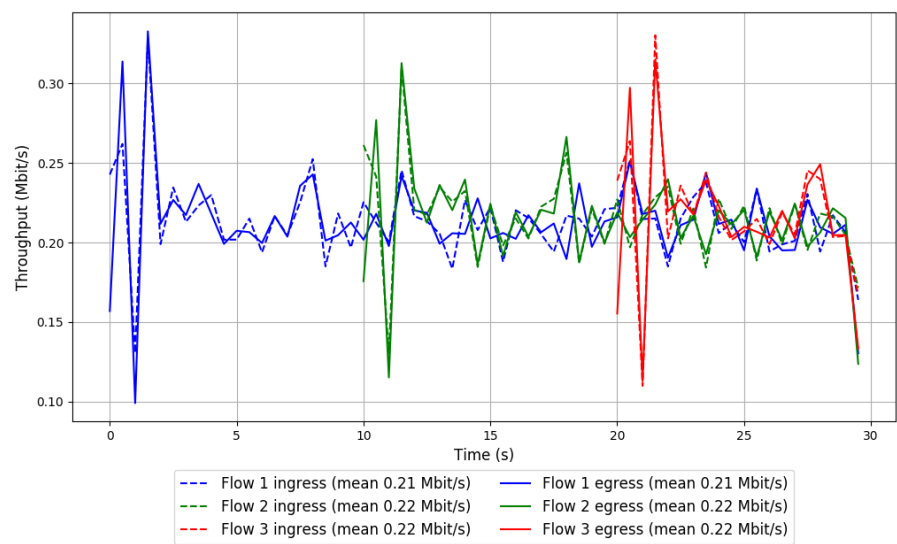
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.798 ms

Loss rate: 1.91%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SReAM

Start at: 2017-12-20 13:54:59

End at: 2017-12-20 13:55:29

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.631 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.490 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.666 ms

Loss rate: 1.05%

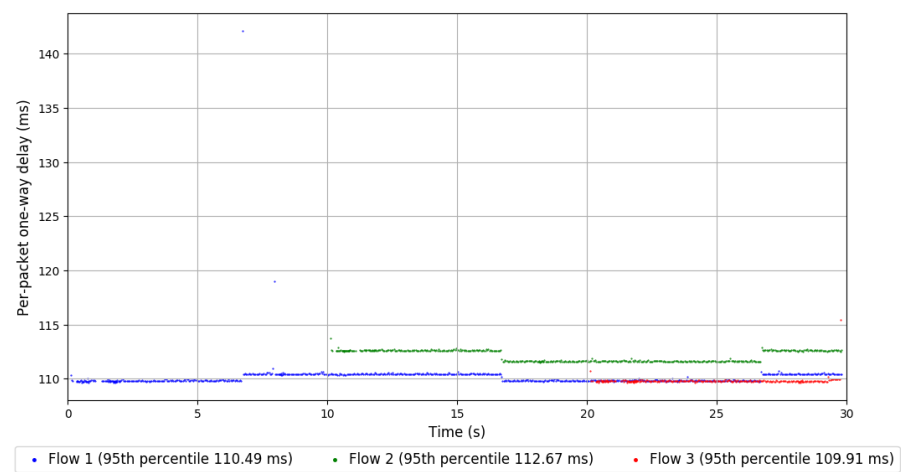
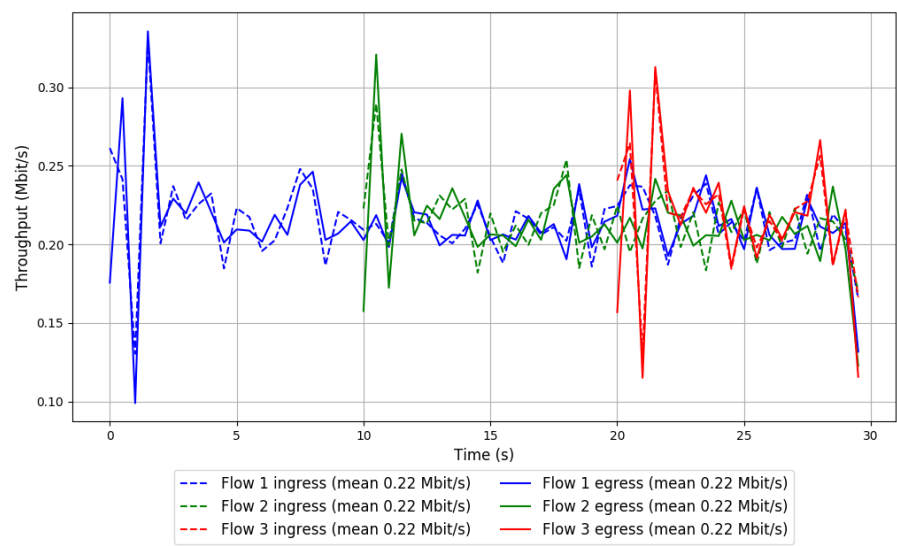
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 109.914 ms

Loss rate: 2.25%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2017-12-20 14:10:21

End at: 2017-12-20 14:10:51

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 113.475 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.468 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 113.218 ms

Loss rate: 1.05%

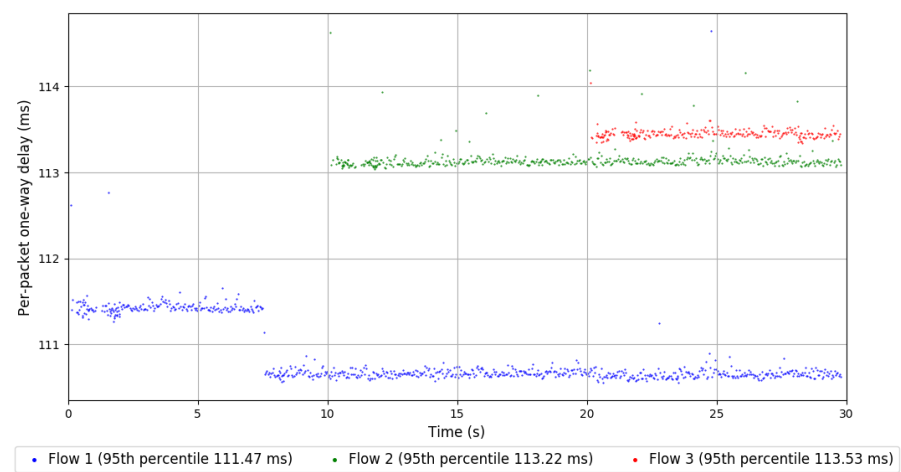
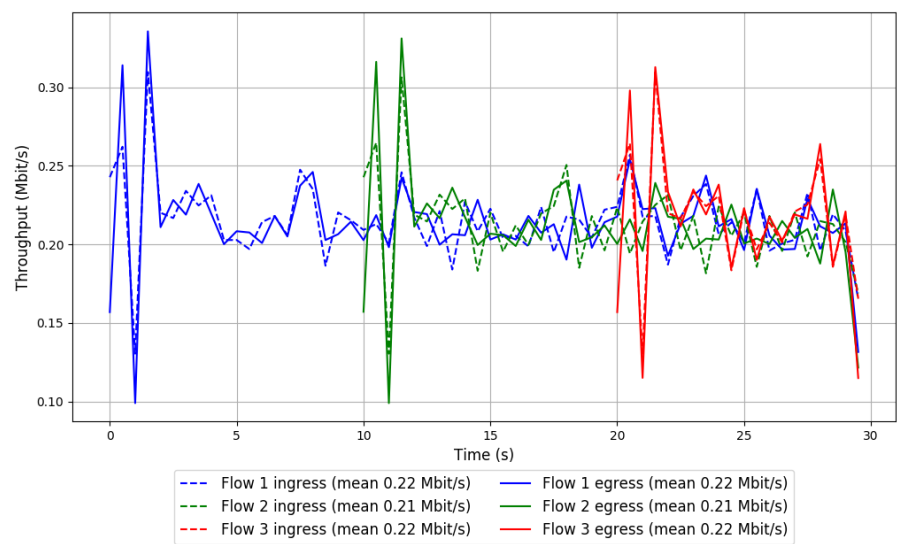
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.530 ms

Loss rate: 2.25%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2017-12-20 14:25:41

End at: 2017-12-20 14:26:11

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 113.074 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 112.686 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 112.562 ms

Loss rate: 0.65%

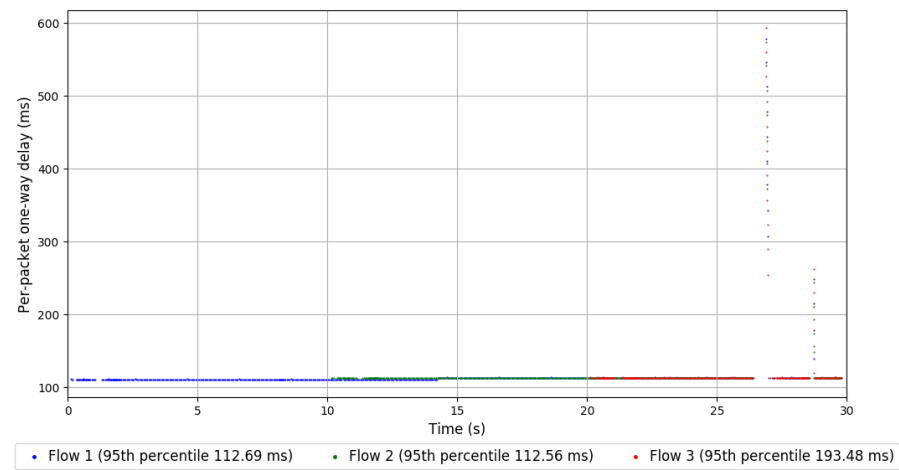
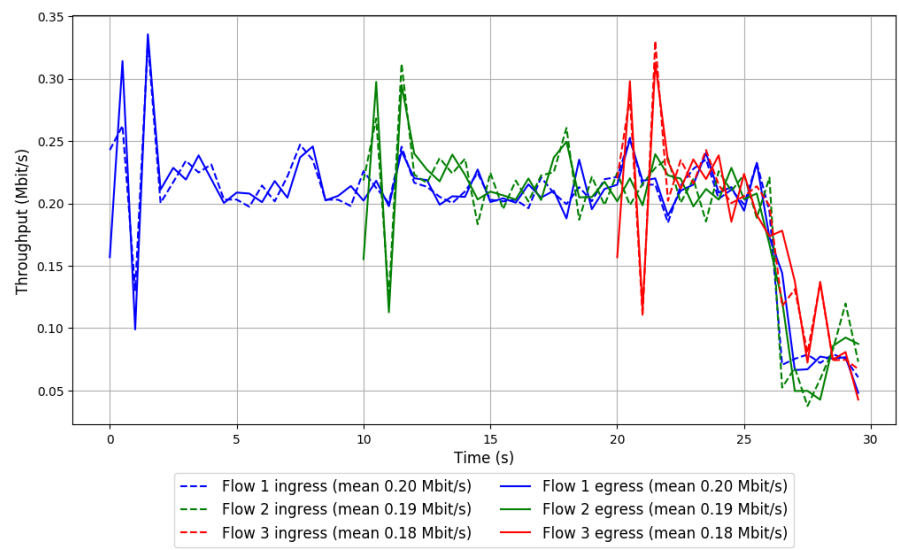
-- Flow 3:

Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 193.482 ms

Loss rate: 1.02%

Run 6: Report of SReAM — Data Link

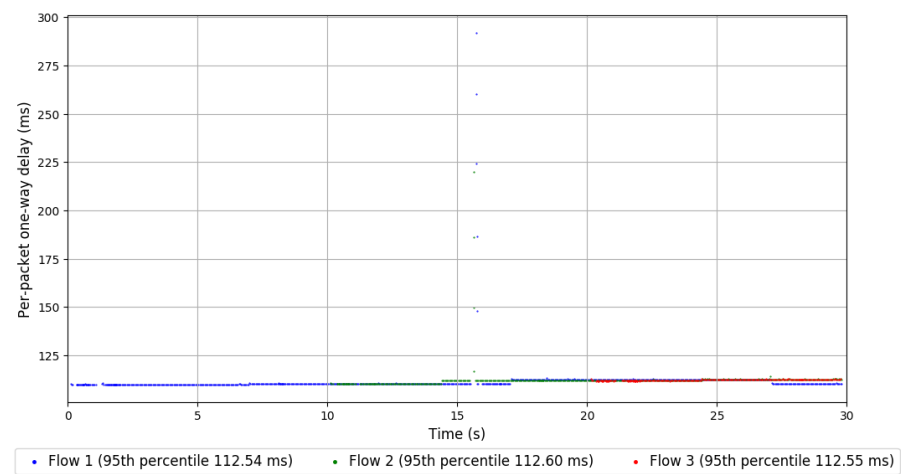
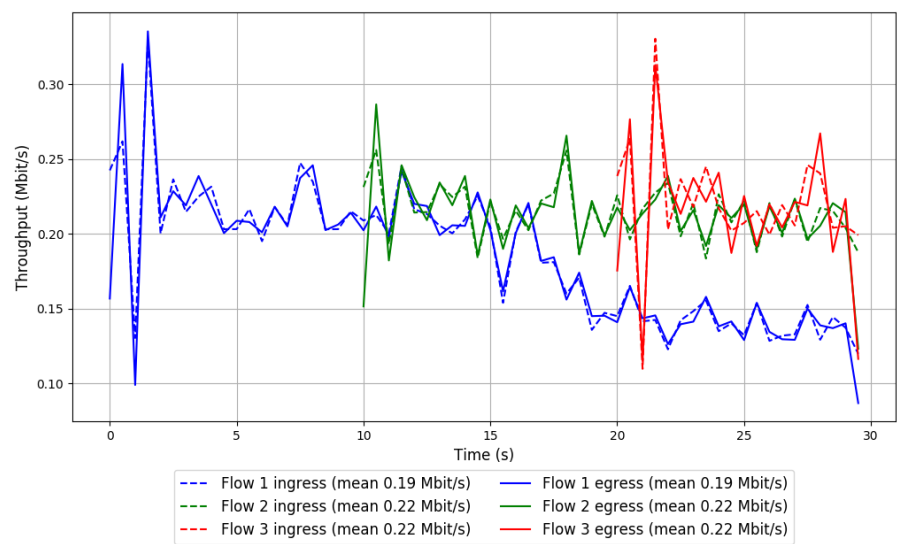


```
Run 7: Statistics of SReAM

Start at: 2017-12-20 14:40:52
End at: 2017-12-20 14:41:22

# Below is generated by plot.py at 2017-12-20 18:48:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 112.577 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 112.541 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.601 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.554 ms
Loss rate: 2.60%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

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

End at: 2017-12-20 14:56:41

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.774 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.801 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 112.621 ms

Loss rate: 1.06%

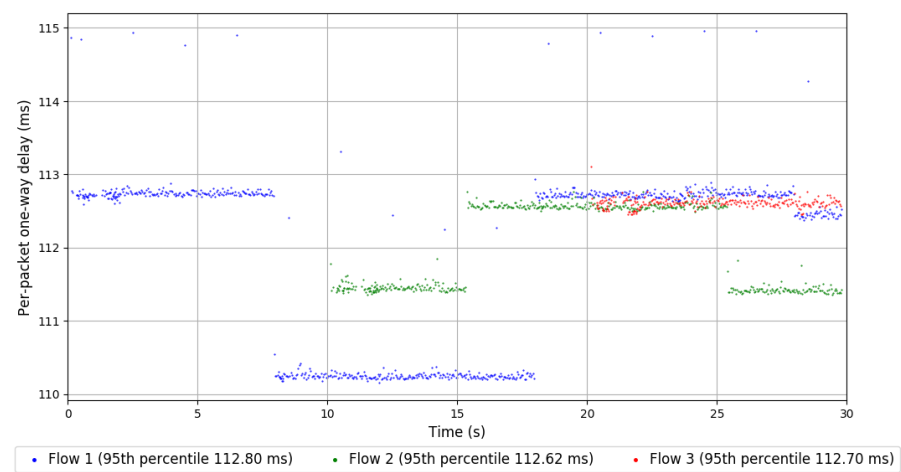
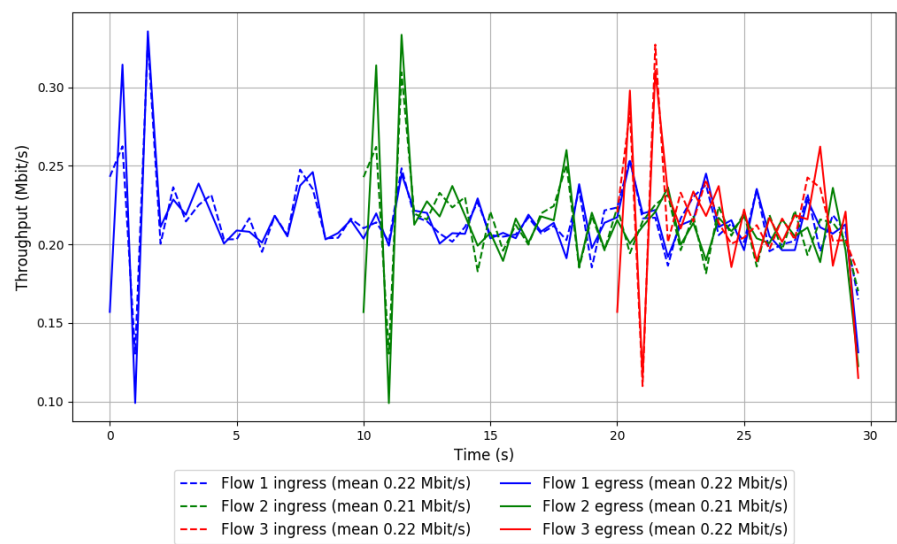
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.702 ms

Loss rate: 2.25%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2017-12-20 15:11:31

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

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.527 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.494 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.014 ms

Loss rate: 1.24%

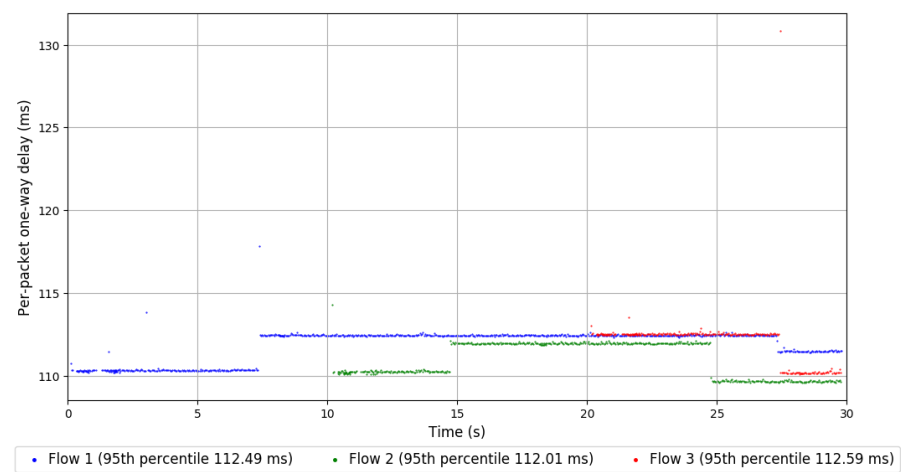
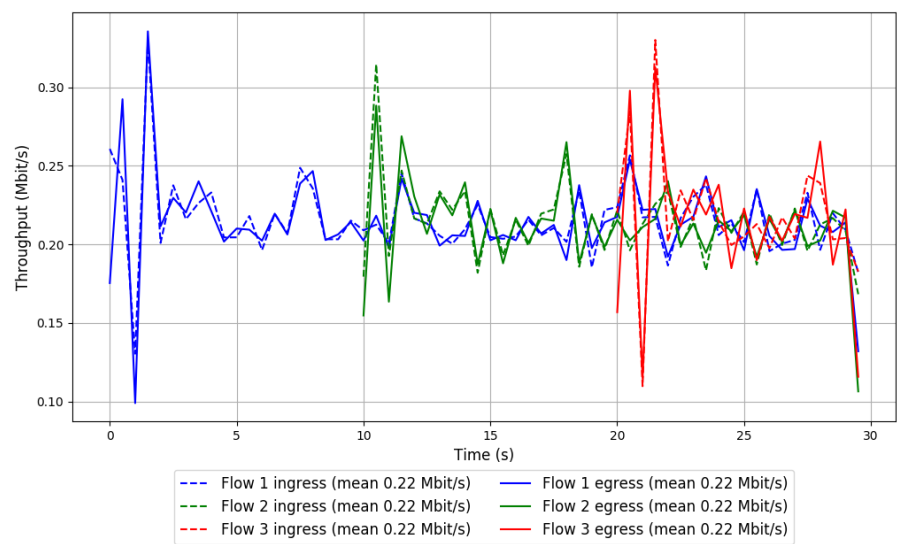
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 2.26%

Run 9: Report of SReAM — Data Link

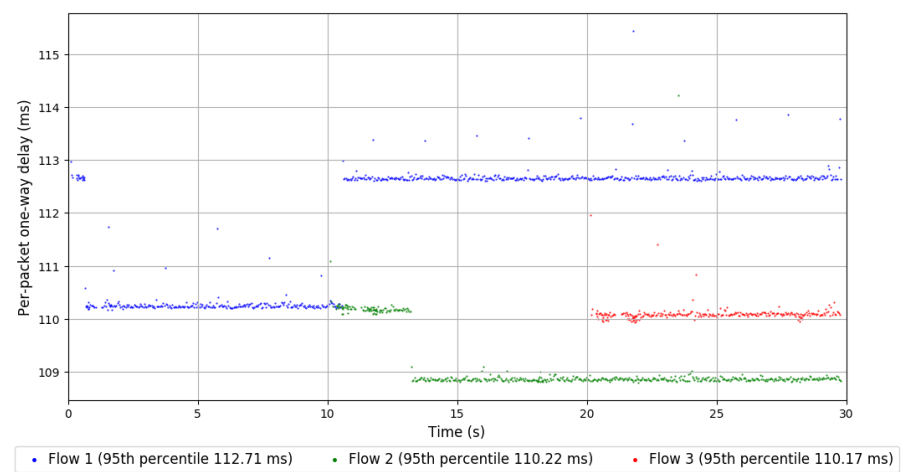
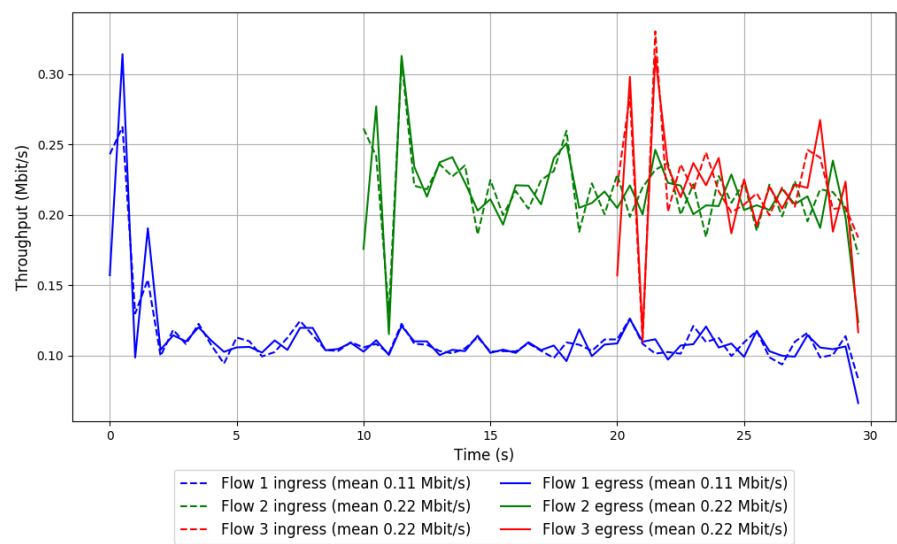


```
Run 10: Statistics of SReAM

Start at: 2017-12-20 15:27:16
End at: 2017-12-20 15:27:46

# Below is generated by plot.py at 2017-12-20 18:48:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 112.695 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 112.714 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.215 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.166 ms
Loss rate: 2.26%
```

Run 10: Report of SReAM — Data Link

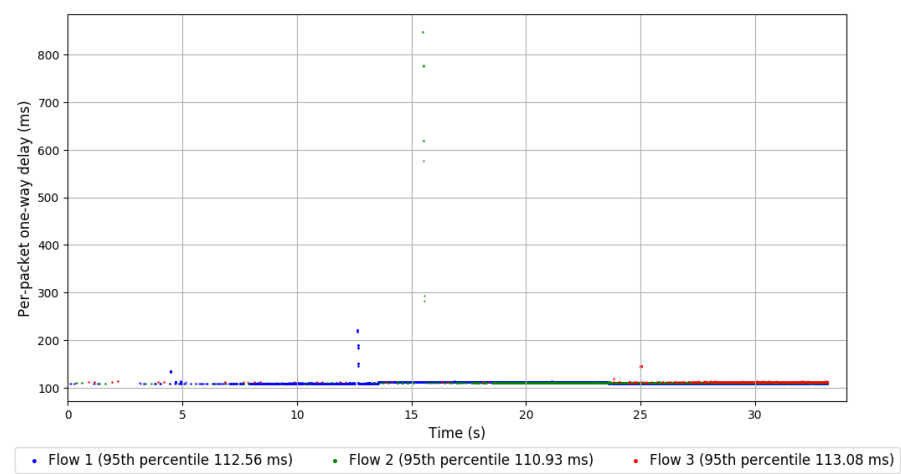
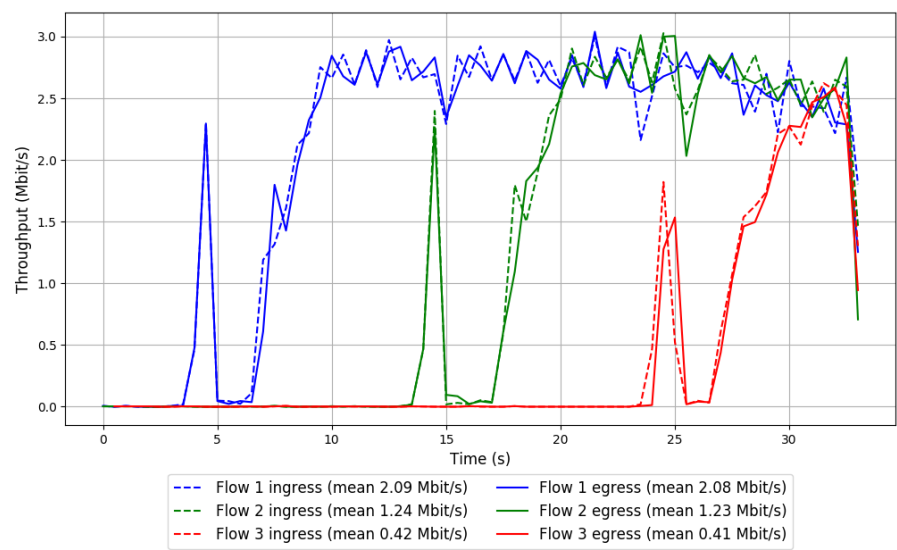


```
Run 1: Statistics of WebRTC media

Start at: 2017-12-20 13:19:59
End at: 2017-12-20 13:20:29

# Below is generated by plot.py at 2017-12-20 18:48:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.70 Mbit/s
95th percentile per-packet one-way delay: 112.631 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 112.556 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 110.930 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 113.080 ms
Loss rate: 3.73%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-12-20 13:35:01

End at: 2017-12-20 13:35:31

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.70 Mbit/s

95th percentile per-packet one-way delay: 112.636 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 112.318 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 112.249 ms

Loss rate: 1.42%

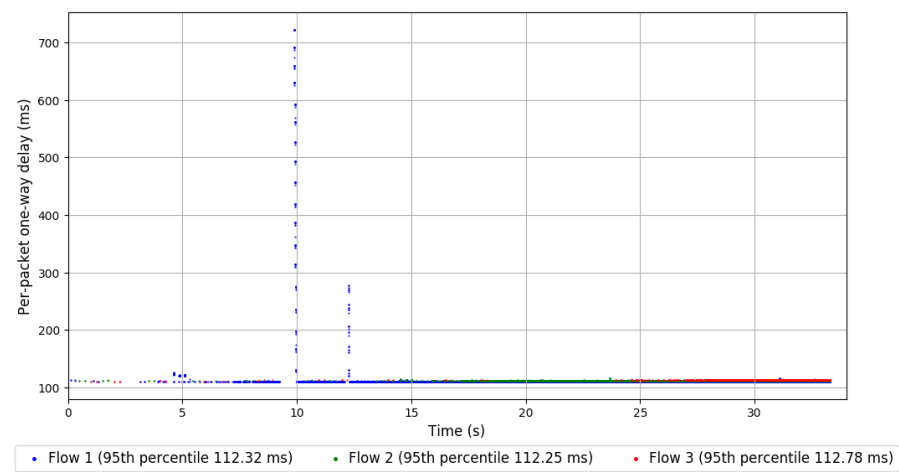
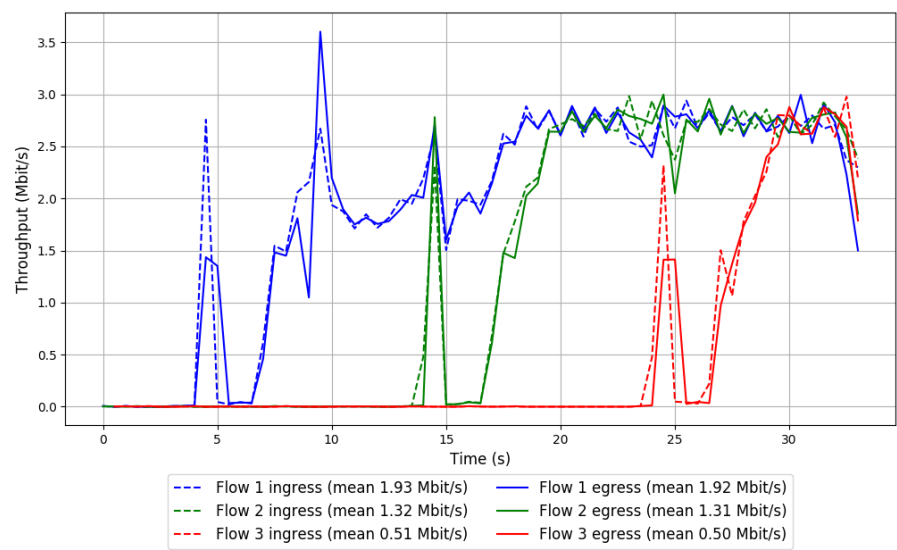
-- Flow 3:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 112.779 ms

Loss rate: 3.43%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-12-20 13:50:19

End at: 2017-12-20 13:50:49

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.77 Mbit/s

95th percentile per-packet one-way delay: 112.715 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 112.754 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 112.011 ms

Loss rate: 1.37%

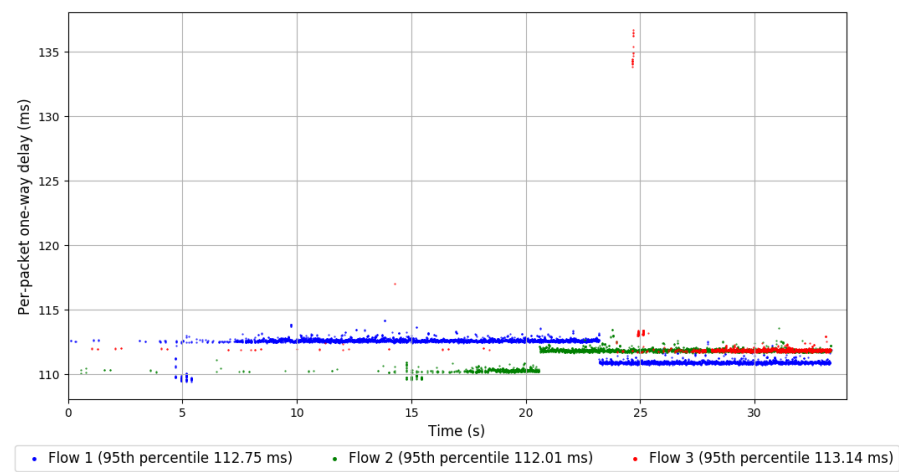
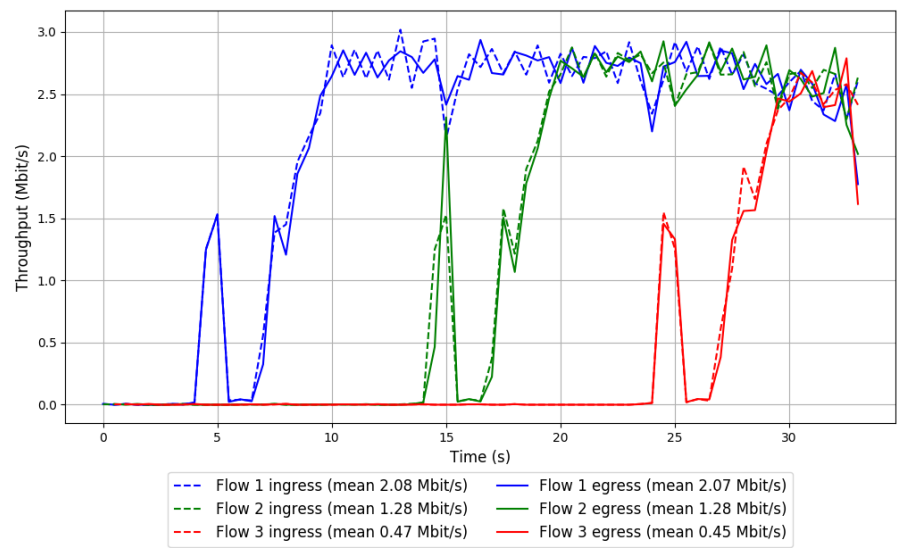
-- Flow 3:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 113.138 ms

Loss rate: 4.13%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-12-20 14:05:40

End at: 2017-12-20 14:06:10

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.67 Mbit/s

95th percentile per-packet one-way delay: 111.871 ms

Loss rate: 4.73%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 111.159 ms

Loss rate: 1.24%

-- Flow 2:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 111.924 ms

Loss rate: 5.82%

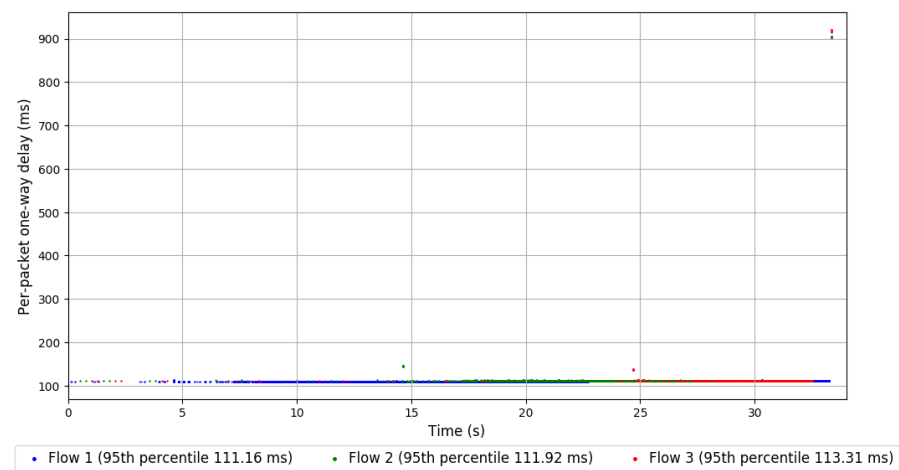
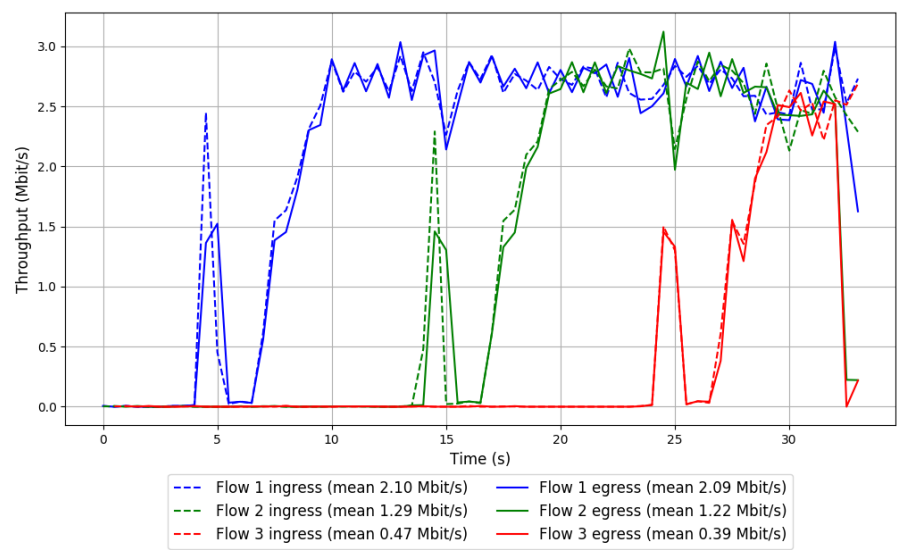
-- Flow 3:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 113.311 ms

Loss rate: 17.64%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-12-20 14:21:02

End at: 2017-12-20 14:21:32

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.74 Mbit/s

95th percentile per-packet one-way delay: 112.602 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 3.03 Mbit/s

95th percentile per-packet one-way delay: 112.628 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 109.525 ms

Loss rate: 1.44%

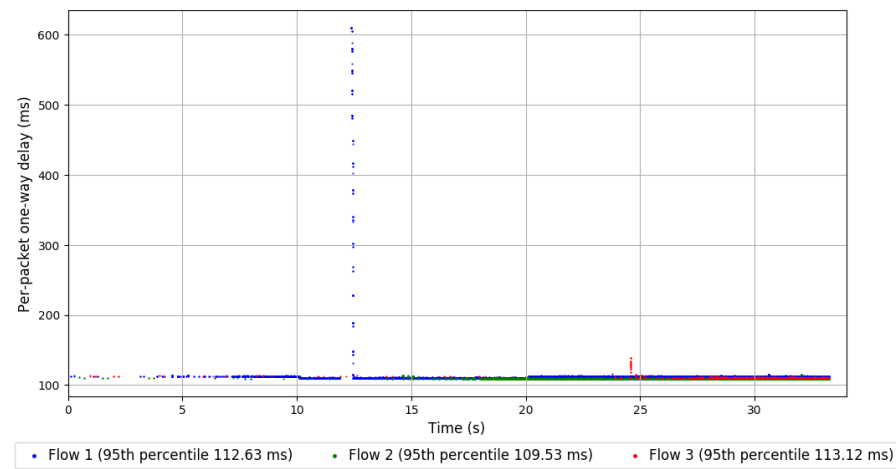
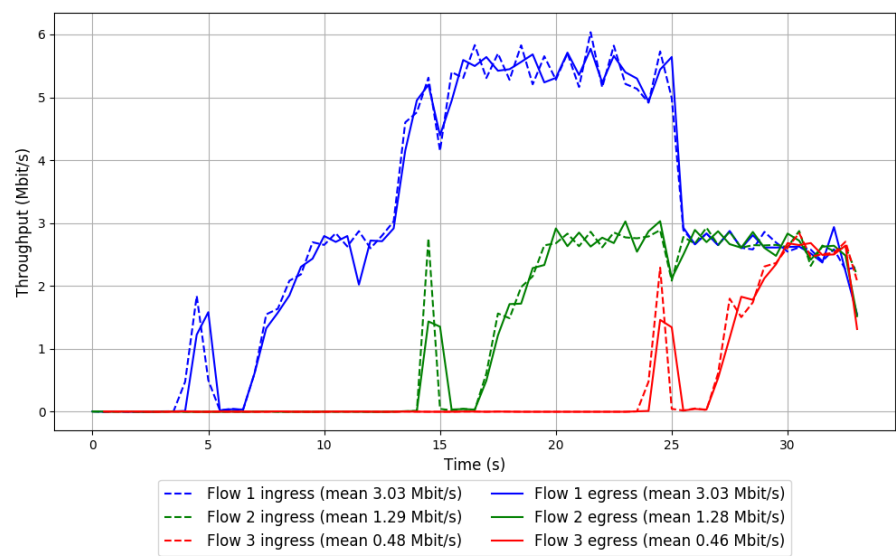
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 113.122 ms

Loss rate: 4.22%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

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

End at: 2017-12-20 14:36:42

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.81 Mbit/s

95th percentile per-packet one-way delay: 113.158 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 113.158 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 110.099 ms

Loss rate: 1.42%

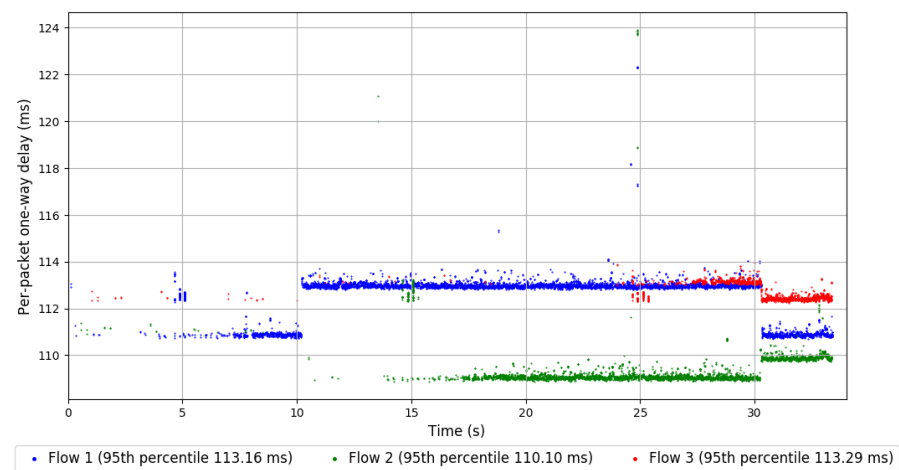
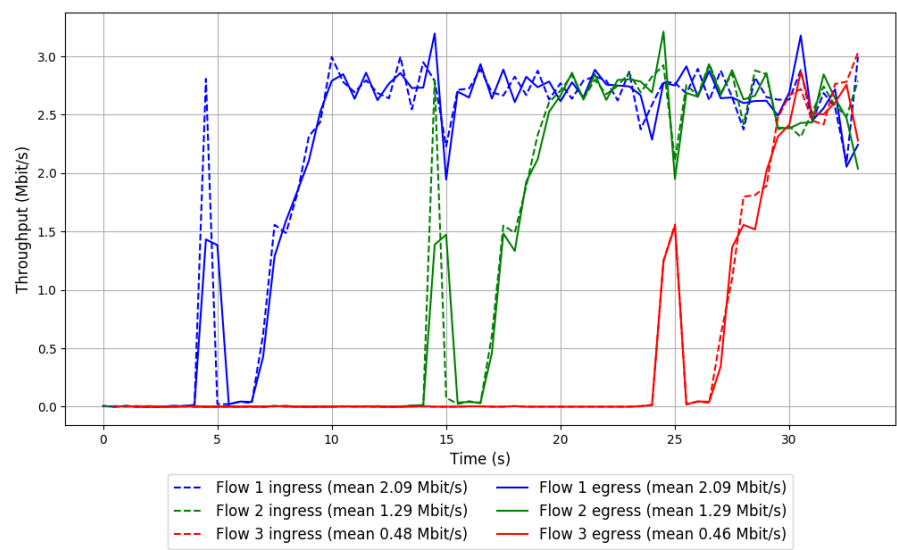
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 113.288 ms

Loss rate: 4.64%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-12-20 14:51:29

End at: 2017-12-20 14:51:59

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.81 Mbit/s

95th percentile per-packet one-way delay: 113.179 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 113.061 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 113.213 ms

Loss rate: 1.37%

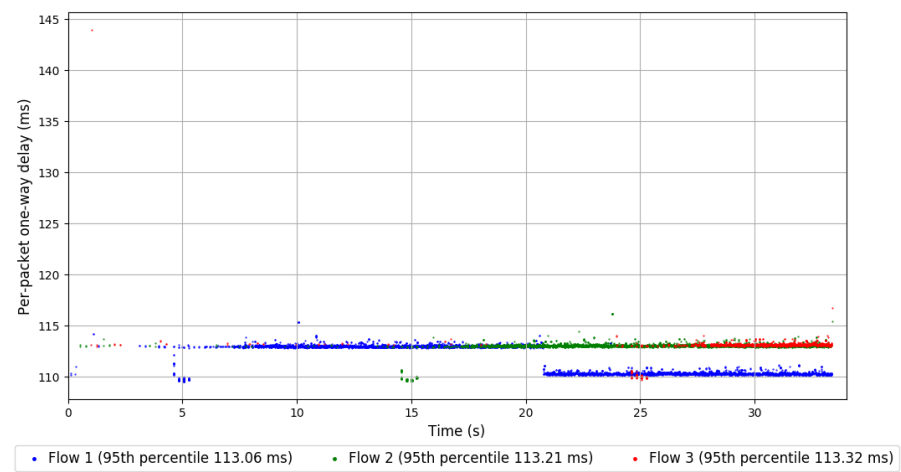
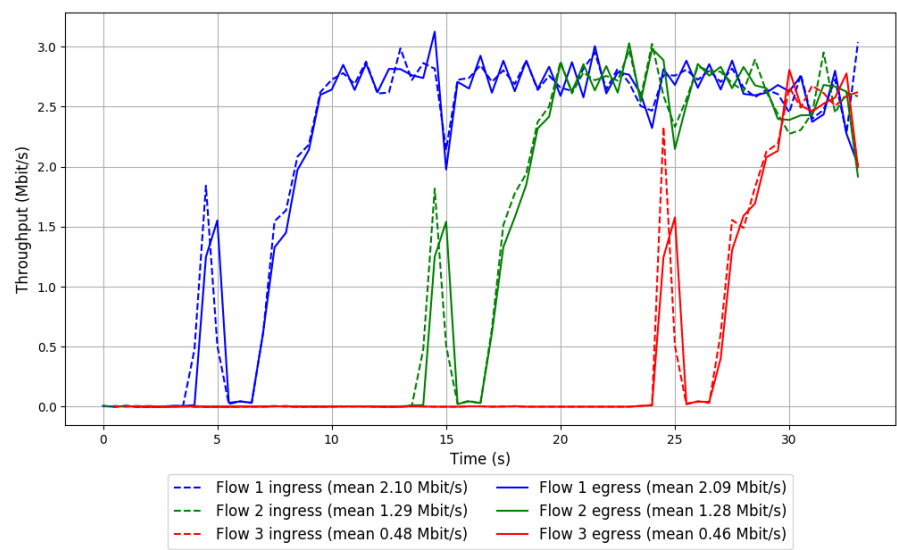
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 113.318 ms

Loss rate: 3.59%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2017-12-20 15:06:47

End at: 2017-12-20 15:07:17

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.80 Mbit/s

95th percentile per-packet one-way delay: 112.922 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 112.965 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 110.935 ms

Loss rate: 1.64%

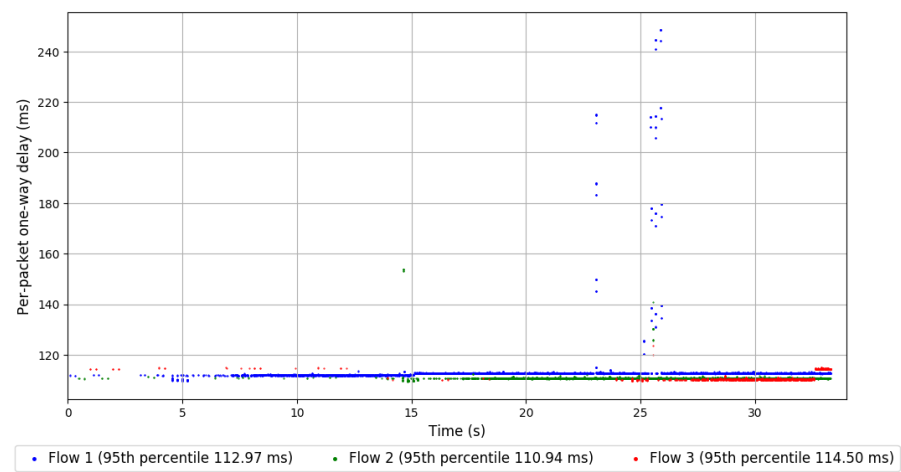
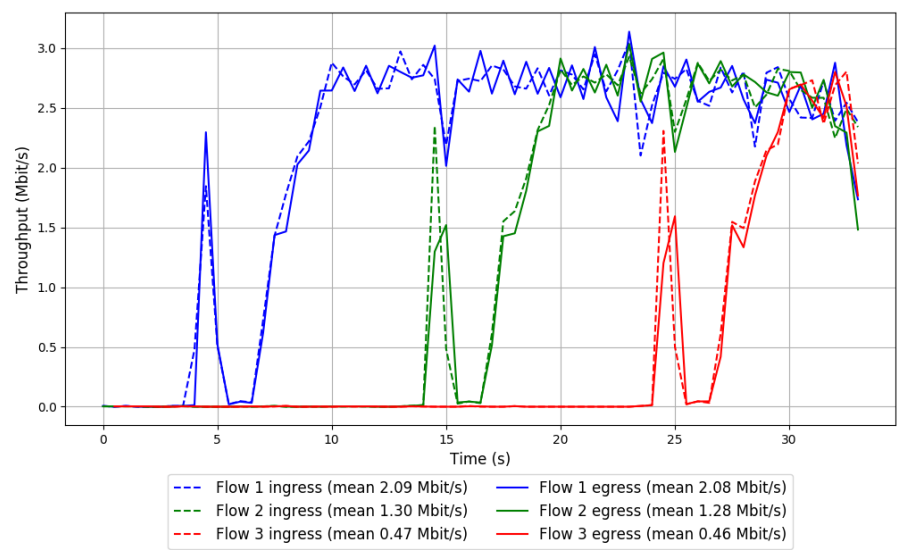
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 114.505 ms

Loss rate: 3.27%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-12-20 15:22:32

End at: 2017-12-20 15:23:02

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 113.192 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 112.835 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 113.305 ms

Loss rate: 1.08%

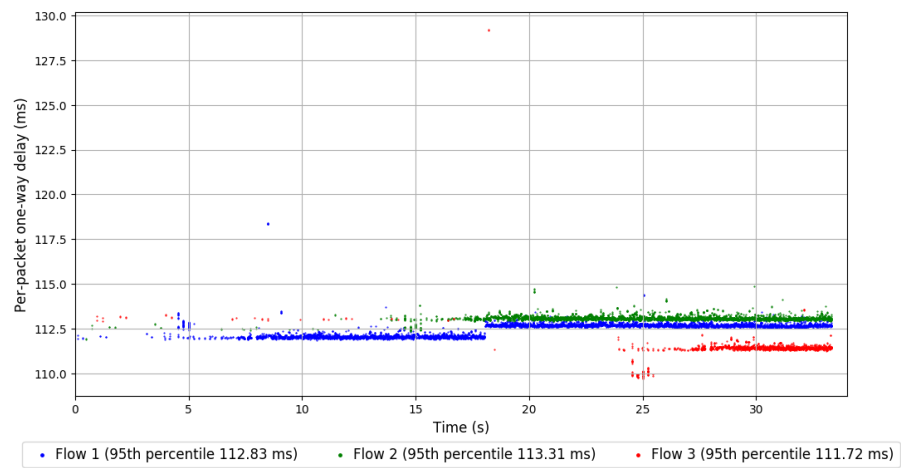
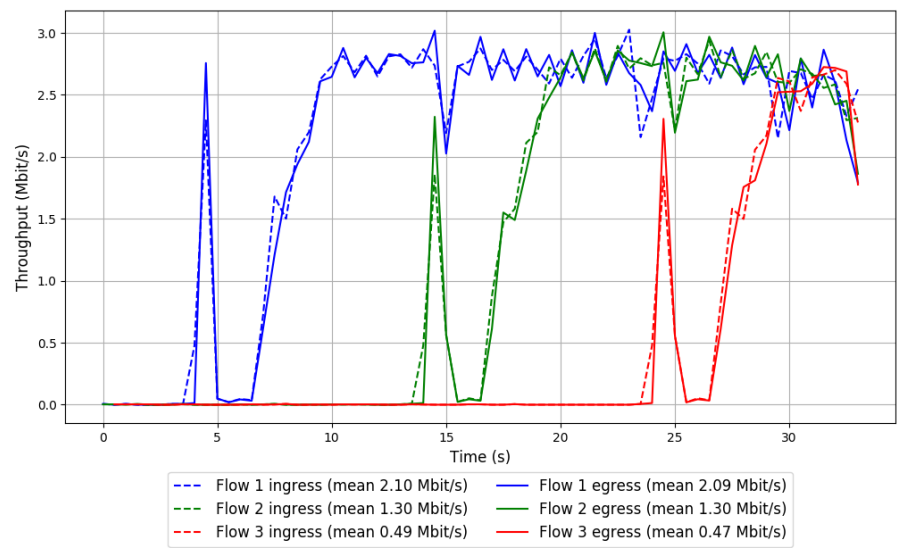
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 111.721 ms

Loss rate: 3.08%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

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

End at: 2017-12-20 15:38:42

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.80 Mbit/s

95th percentile per-packet one-way delay: 110.858 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 109.316 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 110.974 ms

Loss rate: 1.44%

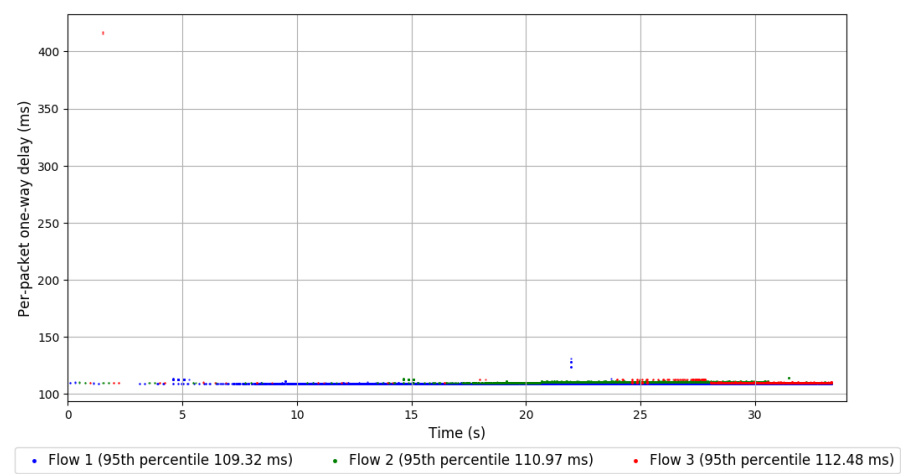
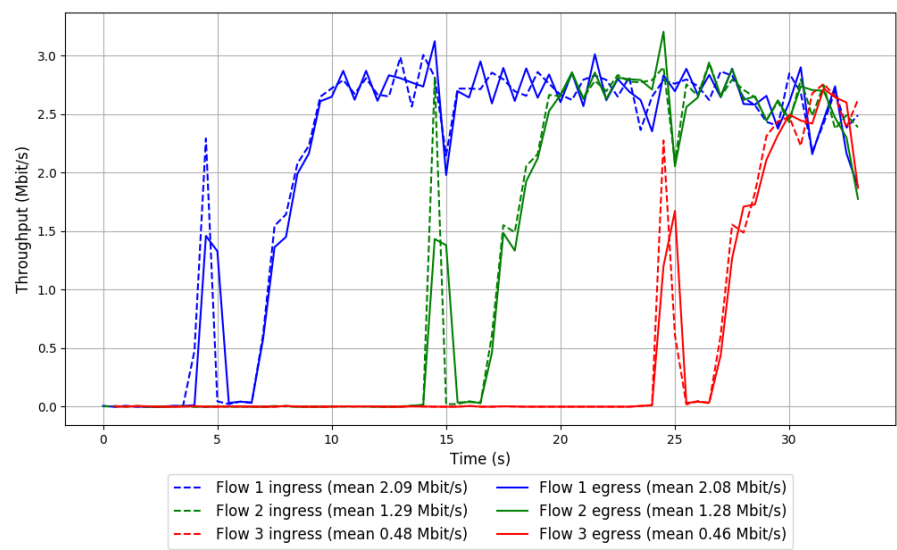
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 112.482 ms

Loss rate: 4.10%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

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 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.75 Mbit/s

95th percentile per-packet one-way delay: 112.319 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 3.02 Mbit/s

95th percentile per-packet one-way delay: 112.533 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.99 Mbit/s

95th percentile per-packet one-way delay: 112.078 ms

Loss rate: 1.24%

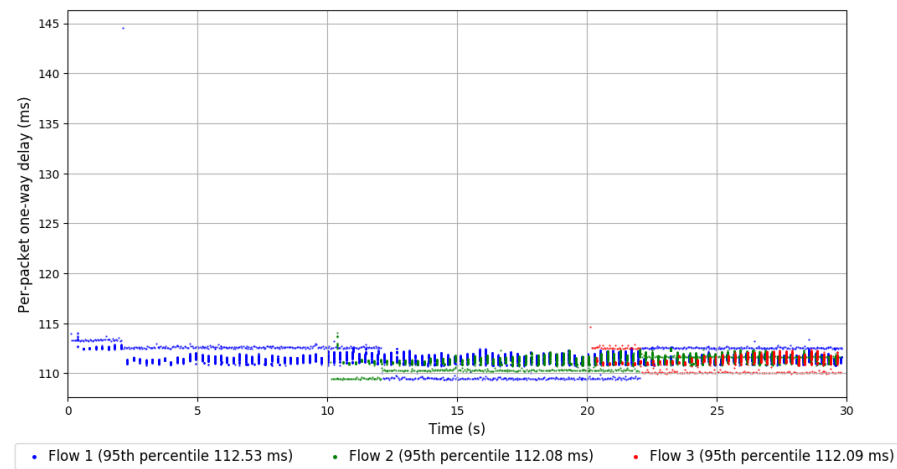
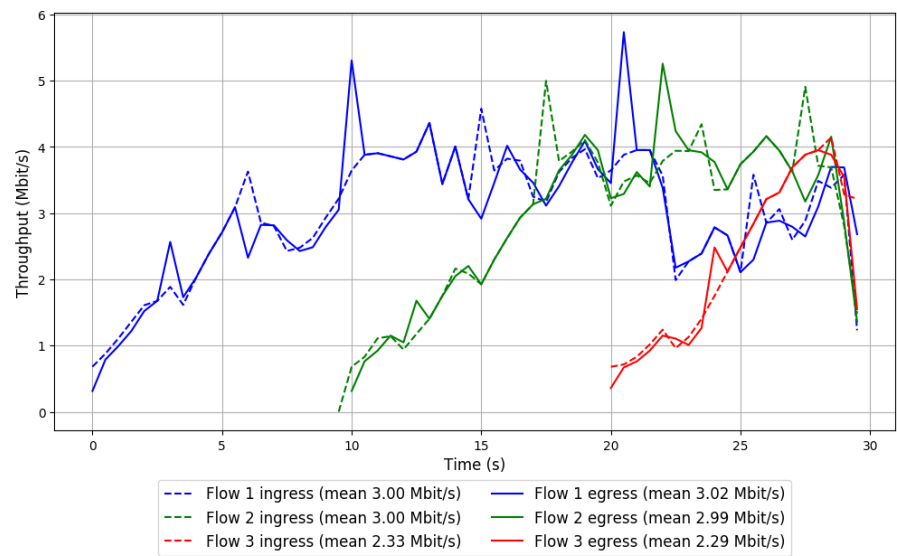
-- Flow 3:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 112.095 ms

Loss rate: 3.63%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-12-20 13:31:18

End at: 2017-12-20 13:31:48

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.46 Mbit/s

95th percentile per-packet one-way delay: 113.347 ms

Loss rate: 1.96%

-- Flow 1:

Average throughput: 2.32 Mbit/s

95th percentile per-packet one-way delay: 113.399 ms

Loss rate: 1.22%

-- Flow 2:

Average throughput: 1.06 Mbit/s

95th percentile per-packet one-way delay: 112.936 ms

Loss rate: 2.43%

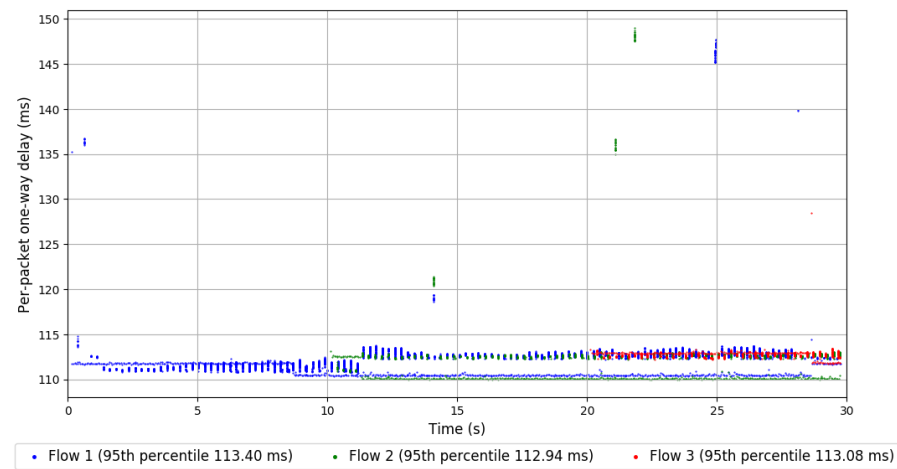
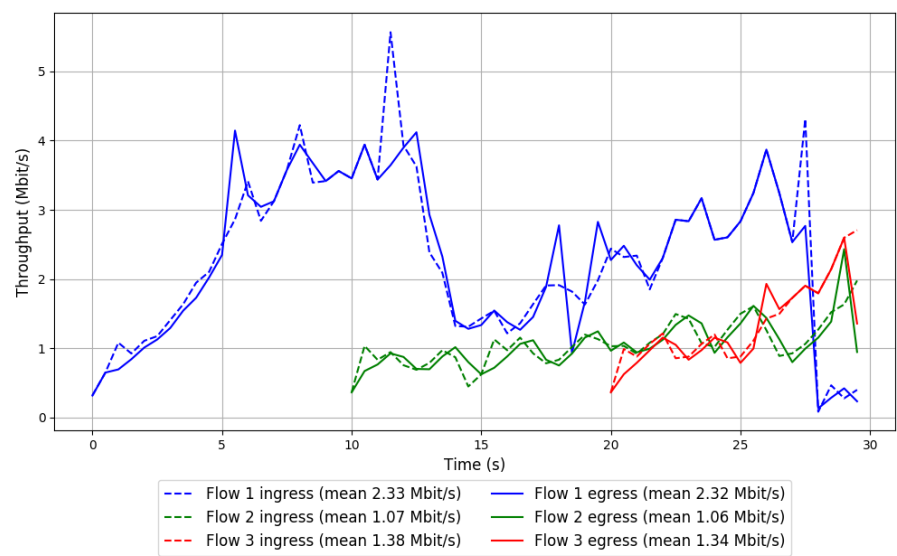
-- Flow 3:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 113.085 ms

Loss rate: 4.99%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-12-20 13:46:44

End at: 2017-12-20 13:47:14

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.67 Mbit/s

95th percentile per-packet one-way delay: 114.043 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 114.048 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 1.61 Mbit/s

95th percentile per-packet one-way delay: 113.949 ms

Loss rate: 0.24%

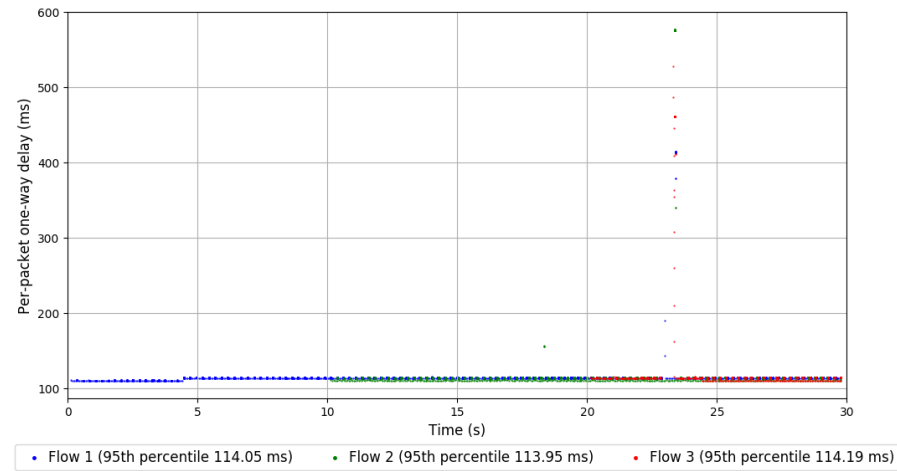
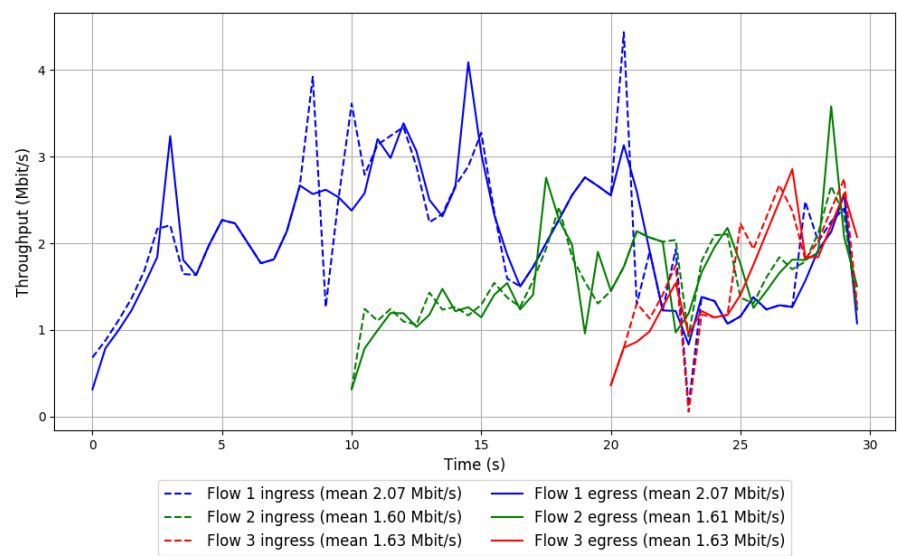
-- Flow 3:

Average throughput: 1.63 Mbit/s

95th percentile per-packet one-way delay: 114.185 ms

Loss rate: 1.94%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-12-20 14:01:55

End at: 2017-12-20 14:02:25

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 114.183 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 114.275 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 1.06 Mbit/s

95th percentile per-packet one-way delay: 114.055 ms

Loss rate: 1.42%

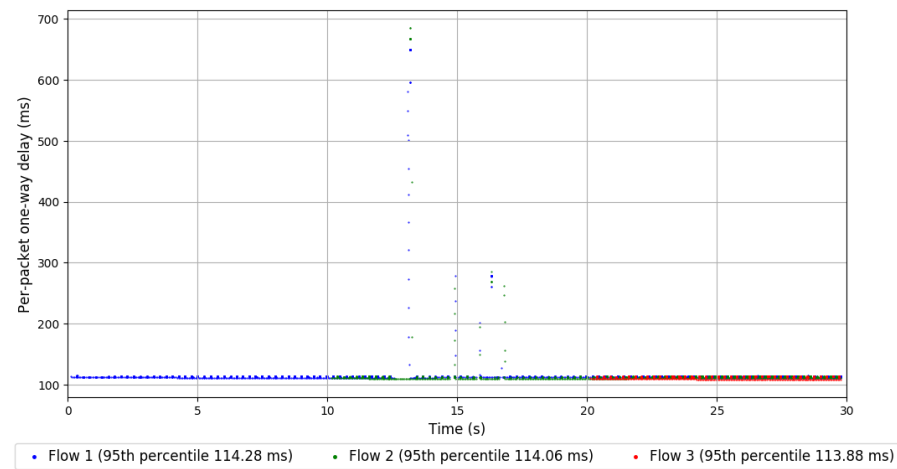
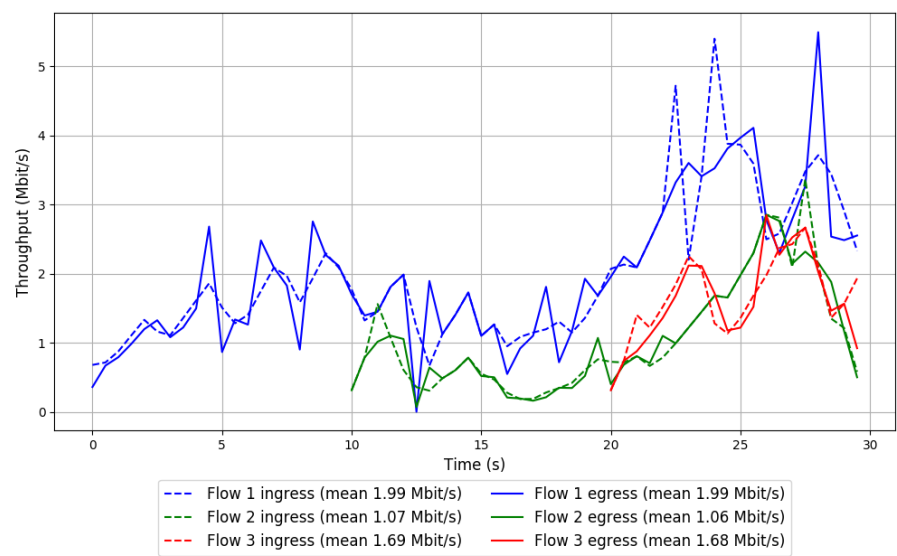
-- Flow 3:

Average throughput: 1.68 Mbit/s

95th percentile per-packet one-way delay: 113.878 ms

Loss rate: 3.05%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-12-20 14:17:24

End at: 2017-12-20 14:17:54

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.54 Mbit/s

95th percentile per-packet one-way delay: 114.055 ms

Loss rate: 2.66%

-- Flow 1:

Average throughput: 2.32 Mbit/s

95th percentile per-packet one-way delay: 114.131 ms

Loss rate: 1.79%

-- Flow 2:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 113.523 ms

Loss rate: 3.38%

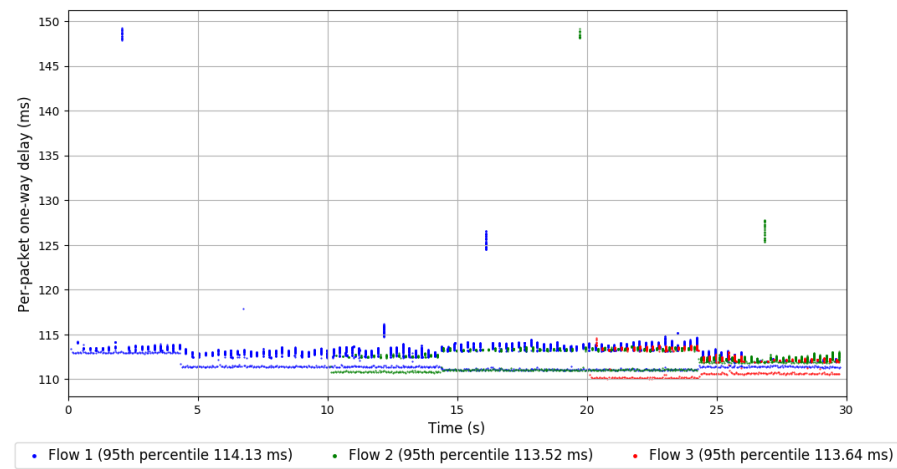
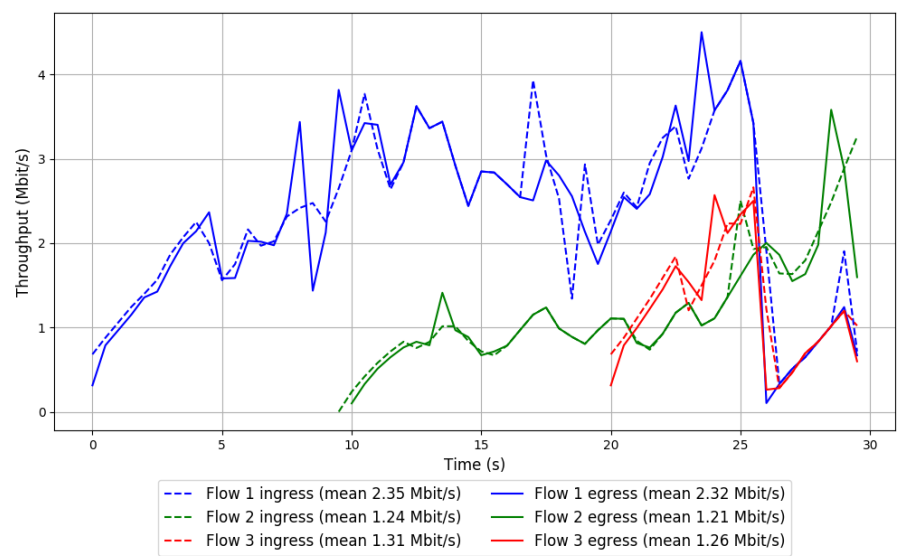
-- Flow 3:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 113.635 ms

Loss rate: 5.97%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-12-20 14:32:35

End at: 2017-12-20 14:33:05

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.49 Mbit/s

95th percentile per-packet one-way delay: 114.136 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 2.31 Mbit/s

95th percentile per-packet one-way delay: 114.211 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 1.24 Mbit/s

95th percentile per-packet one-way delay: 113.931 ms

Loss rate: 2.12%

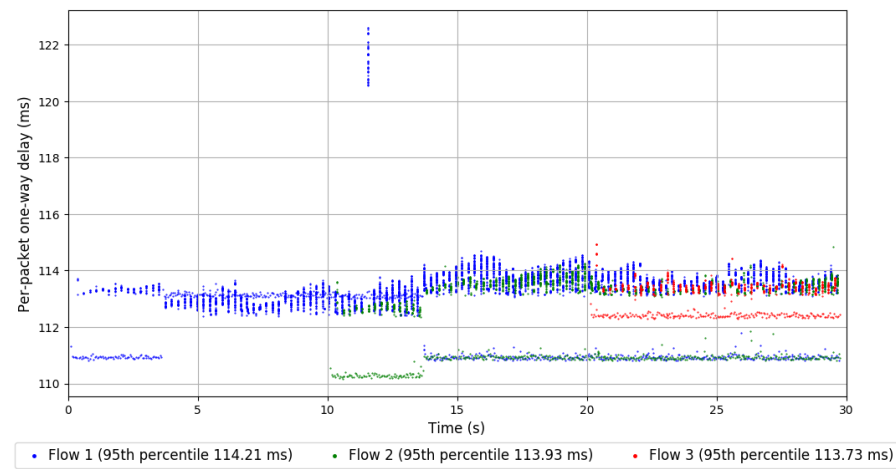
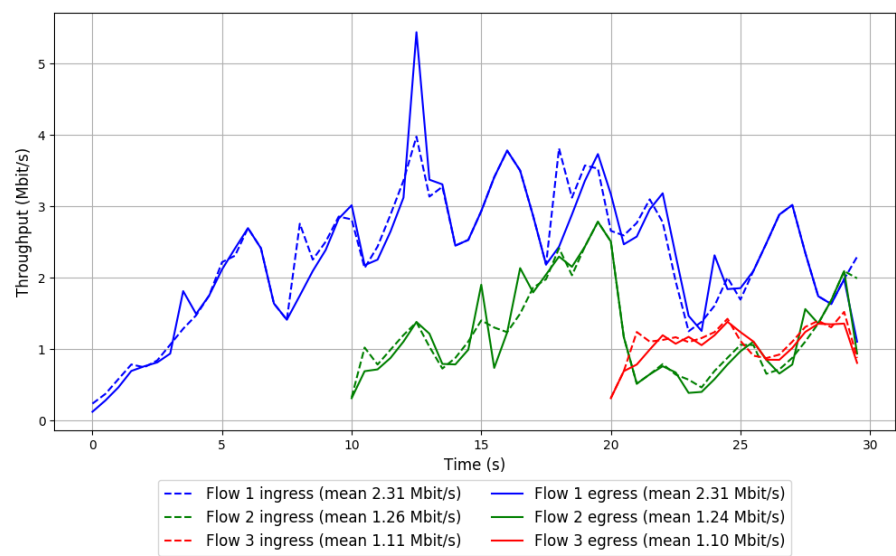
-- Flow 3:

Average throughput: 1.10 Mbit/s

95th percentile per-packet one-way delay: 113.726 ms

Loss rate: 3.99%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-12-20 14:47:50

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

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.63 Mbit/s

95th percentile per-packet one-way delay: 113.493 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 2.69 Mbit/s

95th percentile per-packet one-way delay: 113.535 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 113.450 ms

Loss rate: 1.45%

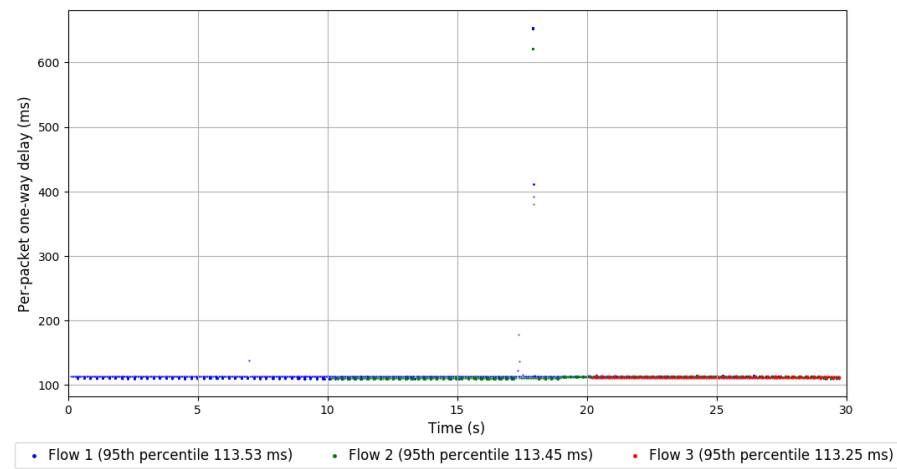
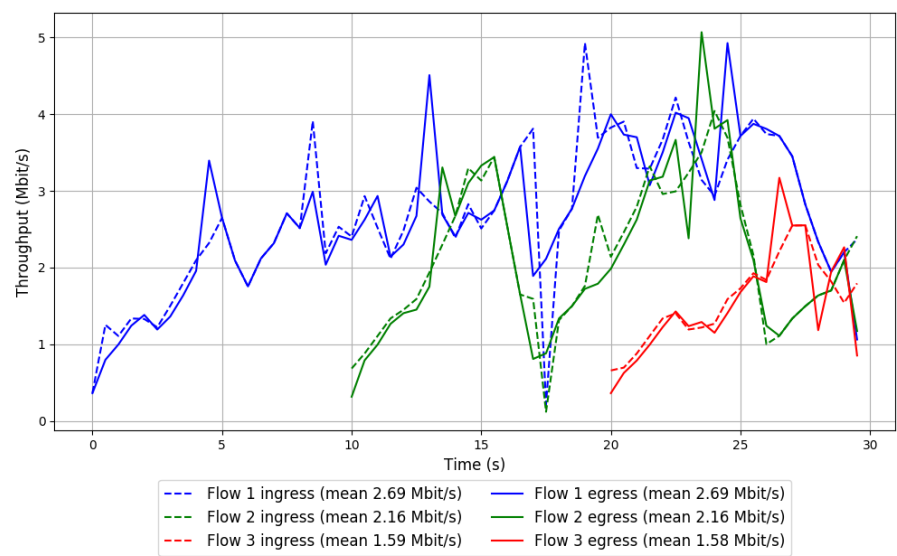
-- Flow 3:

Average throughput: 1.58 Mbit/s

95th percentile per-packet one-way delay: 113.253 ms

Loss rate: 3.01%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-12-20 15:03:19

End at: 2017-12-20 15:03:49

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.15 Mbit/s

95th percentile per-packet one-way delay: 112.030 ms

Loss rate: 2.05%

-- Flow 1:

Average throughput: 2.38 Mbit/s

95th percentile per-packet one-way delay: 111.043 ms

Loss rate: 1.41%

-- Flow 2:

Average throughput: 1.97 Mbit/s

95th percentile per-packet one-way delay: 112.371 ms

Loss rate: 3.16%

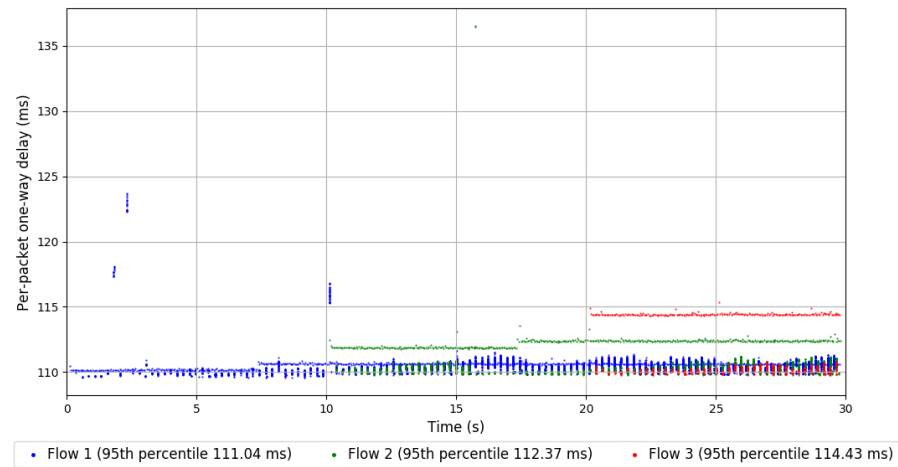
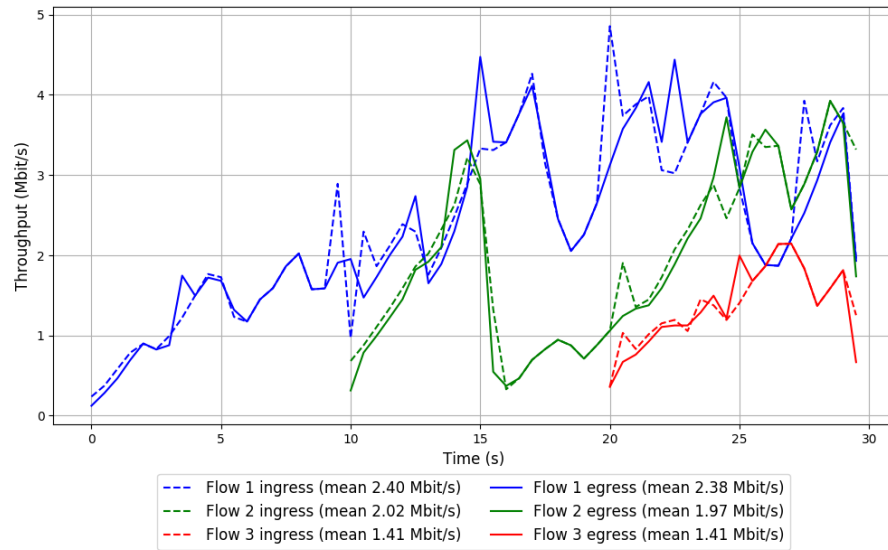
-- Flow 3:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 114.434 ms

Loss rate: 2.13%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-12-20 15:18:52

End at: 2017-12-20 15:19:22

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.00 Mbit/s

95th percentile per-packet one-way delay: 113.746 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 3.02 Mbit/s

95th percentile per-packet one-way delay: 113.951 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 113.530 ms

Loss rate: 2.00%

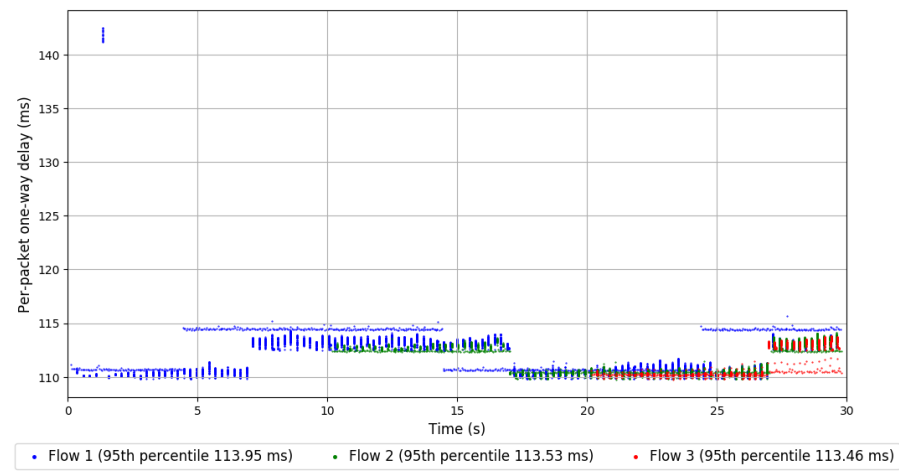
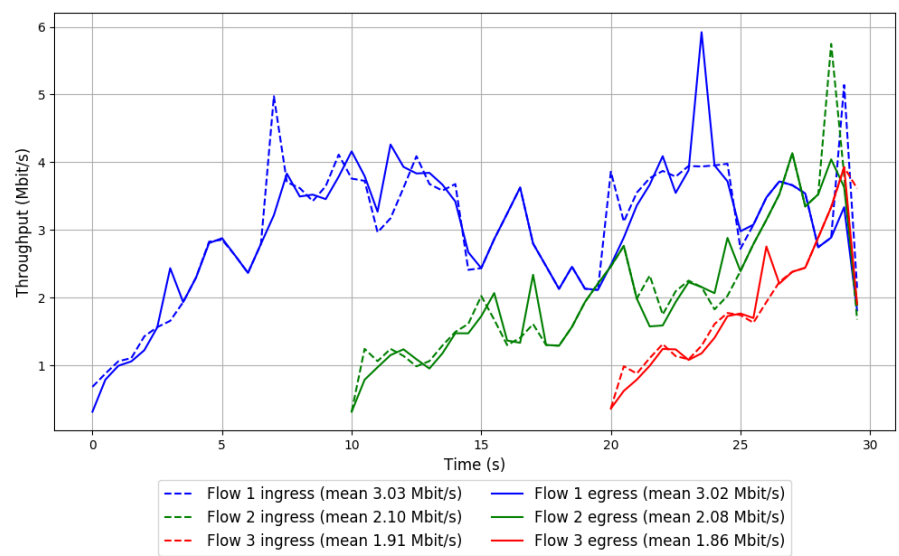
-- Flow 3:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 113.460 ms

Loss rate: 4.60%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-12-20 15:34:27

End at: 2017-12-20 15:34:57

Below is generated by plot.py at 2017-12-20 18:48:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.94 Mbit/s

95th percentile per-packet one-way delay: 111.210 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 2.91 Mbit/s

95th percentile per-packet one-way delay: 111.053 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 2.42 Mbit/s

95th percentile per-packet one-way delay: 112.433 ms

Loss rate: 1.51%

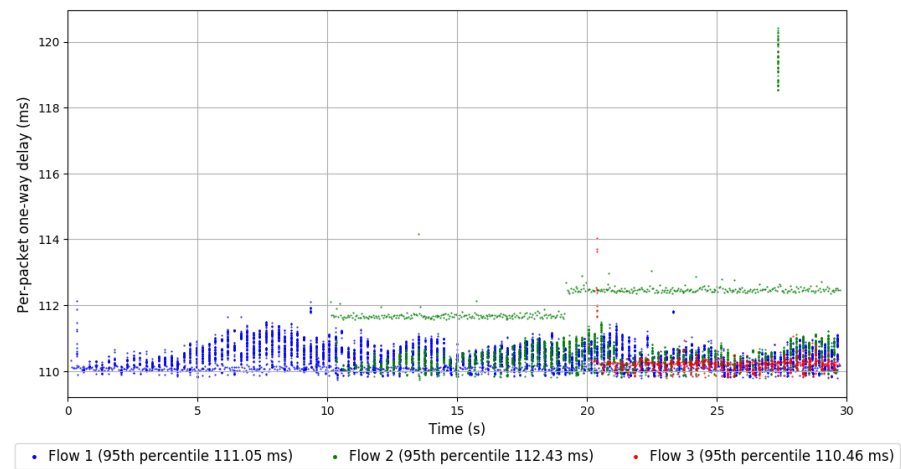
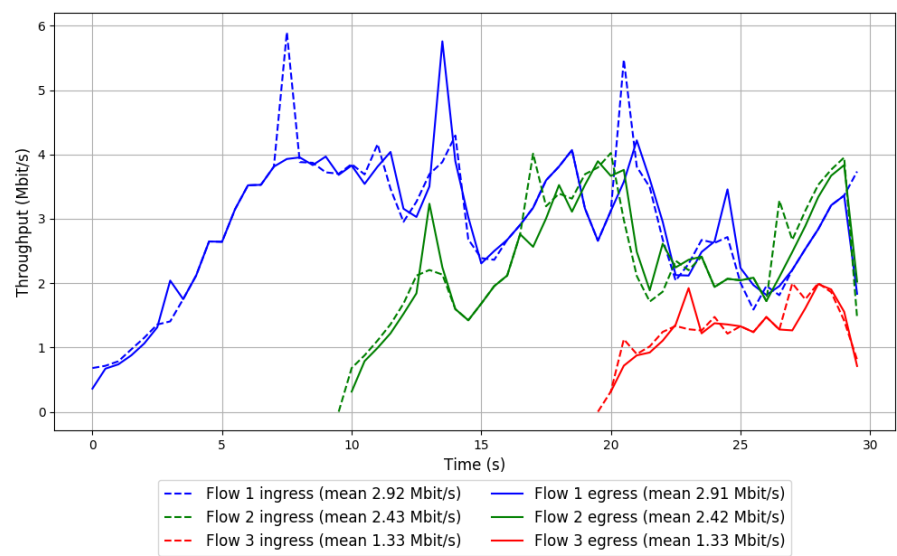
-- Flow 3:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 110.460 ms

Loss rate: 3.06%

Run 10: Report of Sprout — Data Link

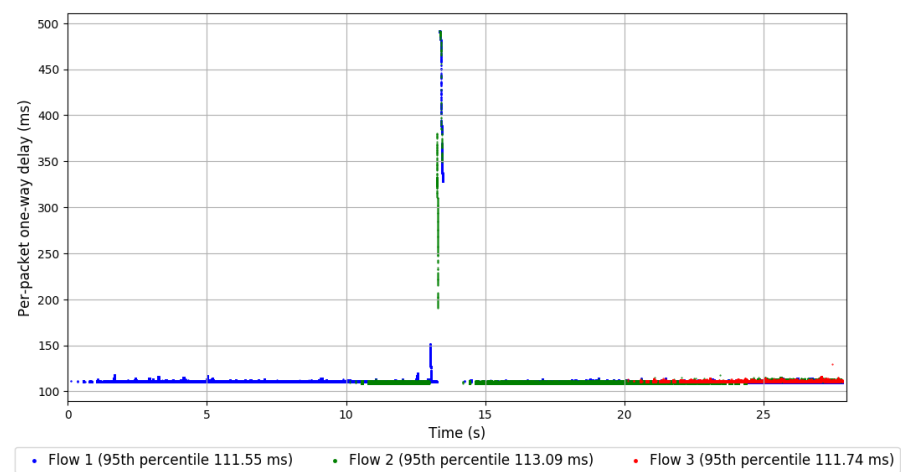
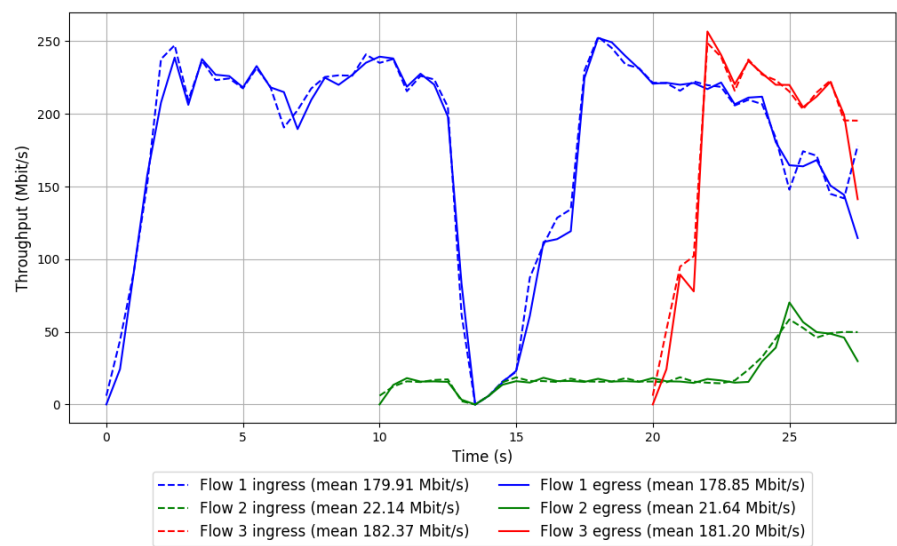


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-12-20 13:13:52
End at: 2017-12-20 13:14:22

# Below is generated by plot.py at 2017-12-20 18:50:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 243.00 Mbit/s
95th percentile per-packet one-way delay: 111.852 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 178.85 Mbit/s
95th percentile per-packet one-way delay: 111.550 ms
Loss rate: 1.37%
-- Flow 2:
Average throughput: 21.64 Mbit/s
95th percentile per-packet one-way delay: 113.092 ms
Loss rate: 3.66%
-- Flow 3:
Average throughput: 181.20 Mbit/s
95th percentile per-packet one-way delay: 111.737 ms
Loss rate: 3.46%
```


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

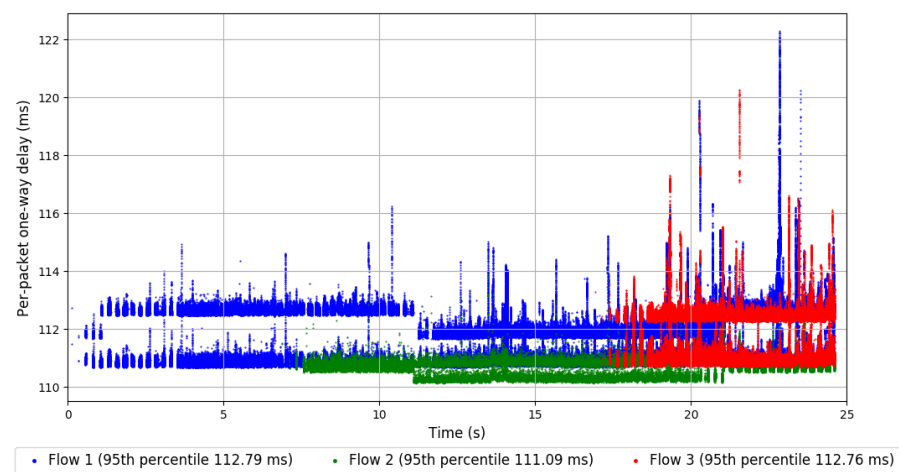
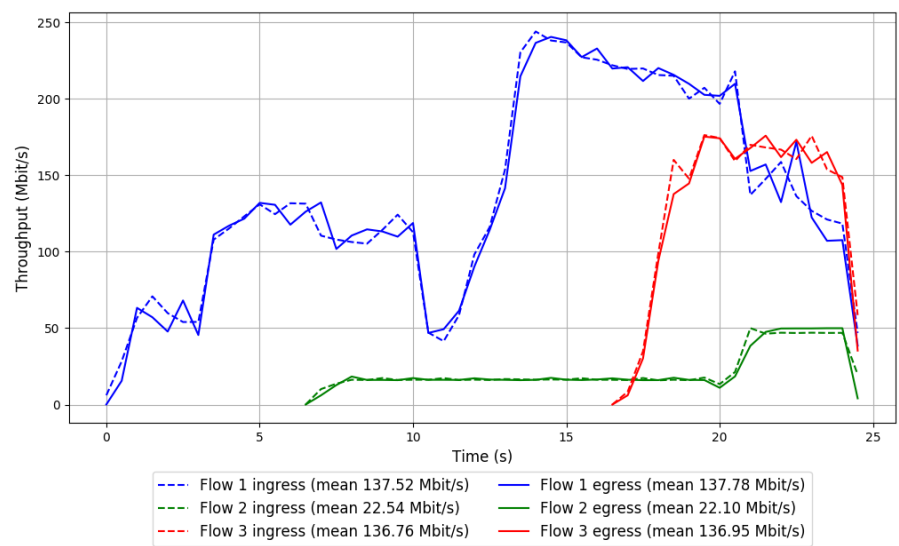


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-12-20 13:29:02
End at: 2017-12-20 13:29:33

# Below is generated by plot.py at 2017-12-20 18:50:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 196.70 Mbit/s
95th percentile per-packet one-way delay: 112.771 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 137.78 Mbit/s
95th percentile per-packet one-way delay: 112.789 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 22.10 Mbit/s
95th percentile per-packet one-way delay: 111.092 ms
Loss rate: 2.59%
-- Flow 3:
Average throughput: 136.95 Mbit/s
95th percentile per-packet one-way delay: 112.757 ms
Loss rate: 2.71%
```

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

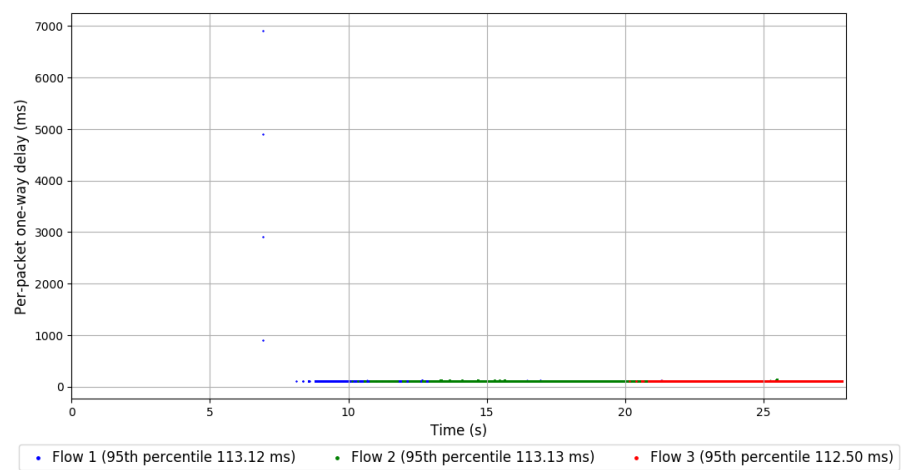
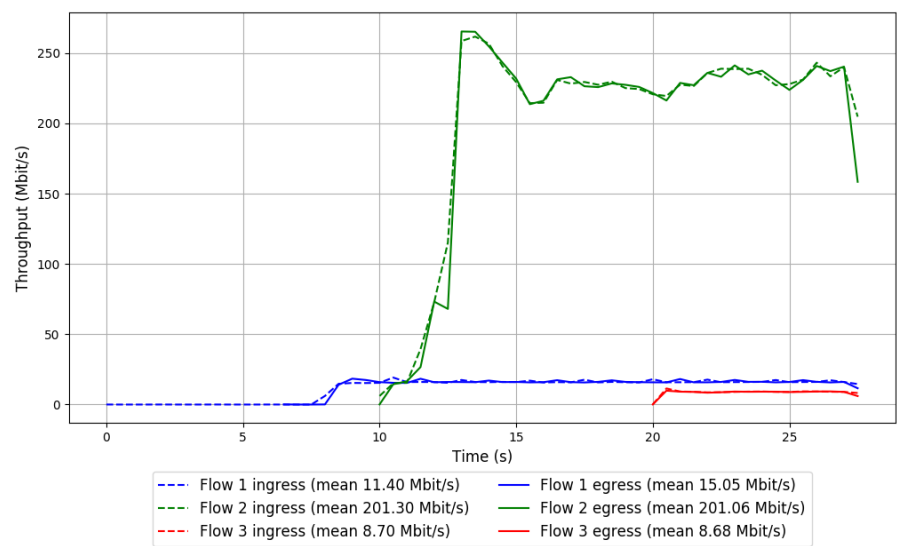


Run 3: Statistics of TaoVA-100x

Start at: 2017-12-20 13:44:31

End at: 2017-12-20 13:45:01

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

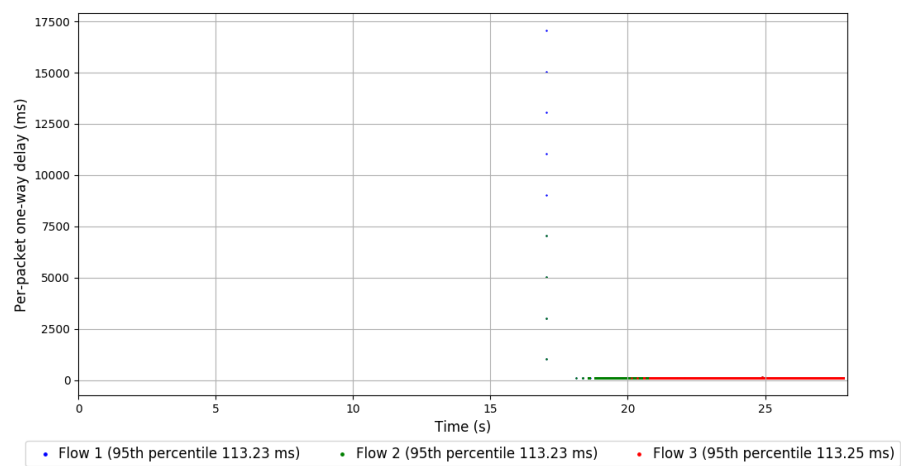
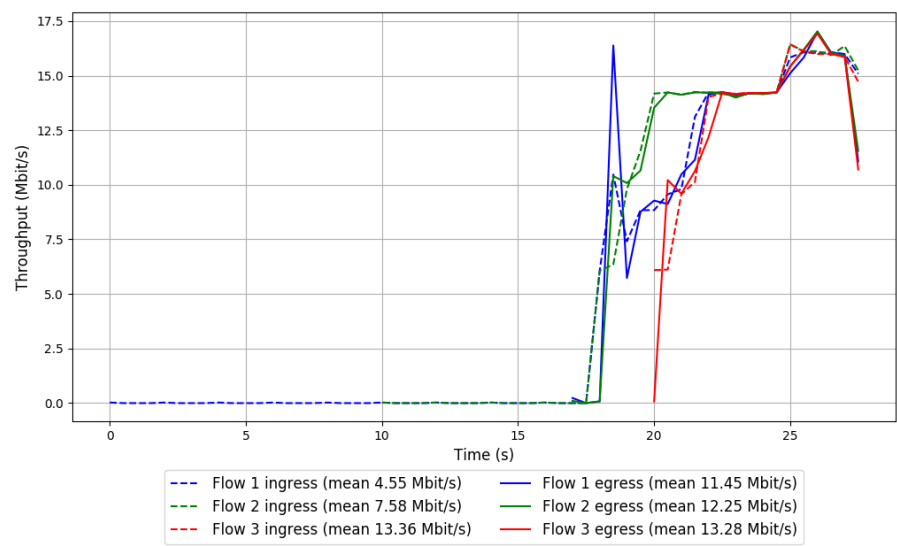


Run 4: Statistics of TaoVA-100x

Start at: 2017-12-20 13:59:40

End at: 2017-12-20 14:00:10

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



Run 5: Statistics of TaoVA-100x

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

End at: 2017-12-20 14:15:42

Below is generated by plot.py at 2017-12-20 18:50:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.67 Mbit/s

95th percentile per-packet one-way delay: 113.270 ms

Loss rate: 2.04%

-- Flow 1:

Average throughput: 15.91 Mbit/s

95th percentile per-packet one-way delay: 112.467 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 90.92 Mbit/s

95th percentile per-packet one-way delay: 113.326 ms

Loss rate: 0.77%

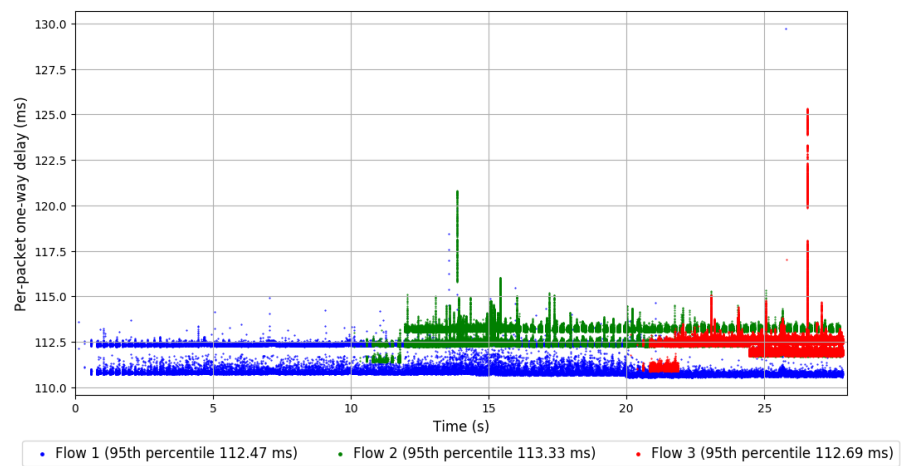
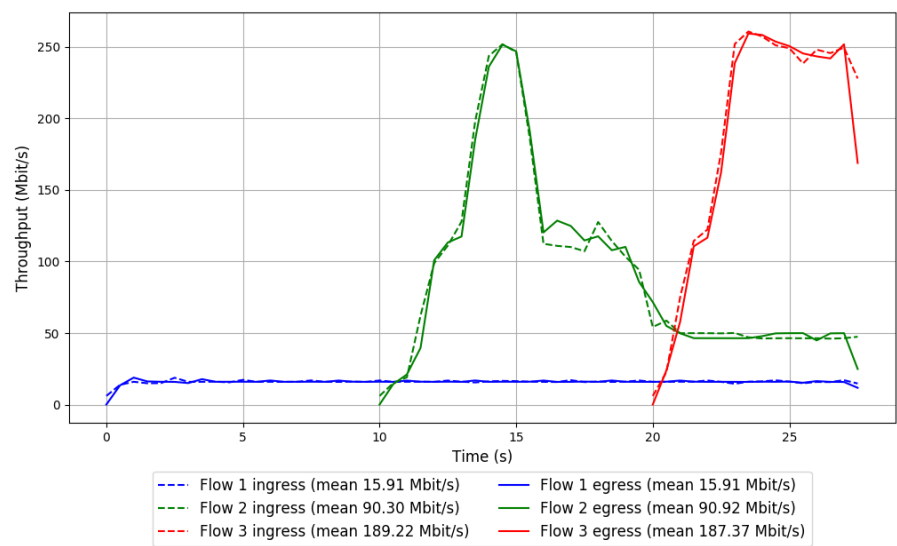
-- Flow 3:

Average throughput: 187.37 Mbit/s

95th percentile per-packet one-way delay: 112.694 ms

Loss rate: 3.78%

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



Run 6: Statistics of TaoVA-100x

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

End at: 2017-12-20 14:31:00

Below is generated by plot.py at 2017-12-20 18:50:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 58.13 Mbit/s

95th percentile per-packet one-way delay: 113.130 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 45.20 Mbit/s

95th percentile per-packet one-way delay: 113.124 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 13.55 Mbit/s

95th percentile per-packet one-way delay: 113.151 ms

Loss rate: 1.24%

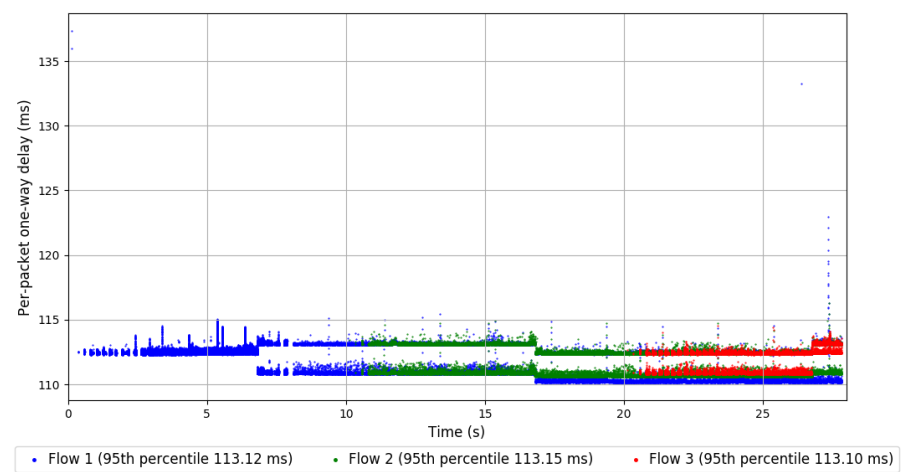
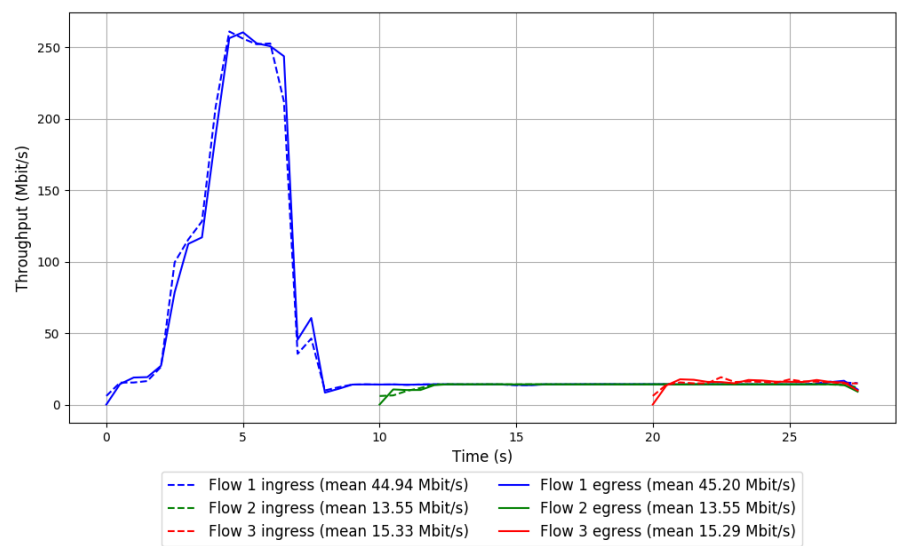
-- Flow 3:

Average throughput: 15.29 Mbit/s

95th percentile per-packet one-way delay: 113.102 ms

Loss rate: 3.03%

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



Run 7: Statistics of TaoVA-100x

Start at: 2017-12-20 14:45:42

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

Below is generated by plot.py at 2017-12-20 18:50:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.56 Mbit/s

95th percentile per-packet one-way delay: 112.505 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 83.76 Mbit/s

95th percentile per-packet one-way delay: 112.493 ms

Loss rate: 1.83%

-- Flow 2:

Average throughput: 13.18 Mbit/s

95th percentile per-packet one-way delay: 112.900 ms

Loss rate: 1.25%

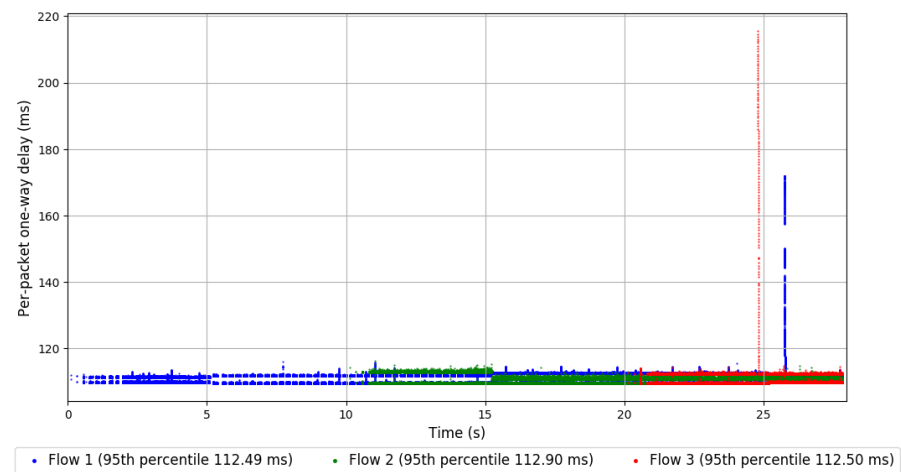
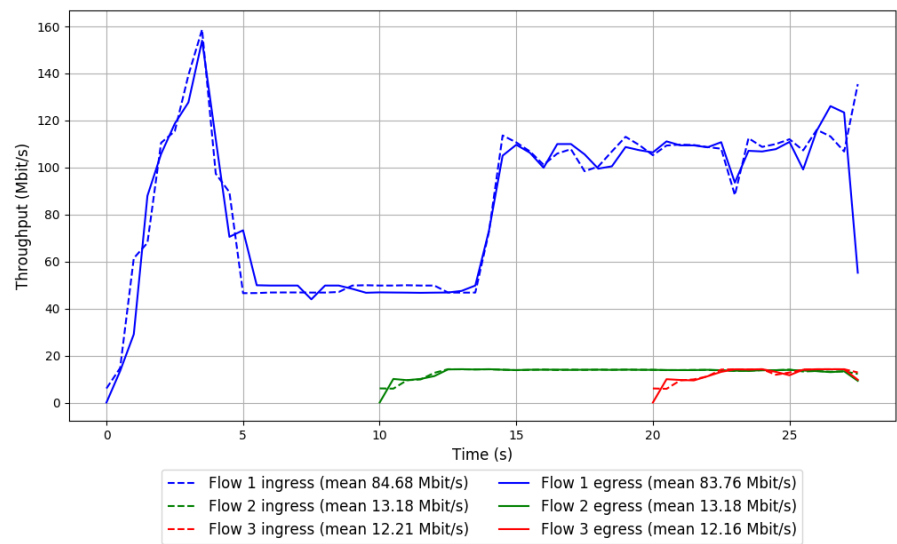
-- Flow 3:

Average throughput: 12.16 Mbit/s

95th percentile per-packet one-way delay: 112.499 ms

Loss rate: 3.23%

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



Run 8: Statistics of TaoVA-100x

Start at: 2017-12-20 15:01:06

End at: 2017-12-20 15:01:36

Below is generated by plot.py at 2017-12-20 18:50:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.73 Mbit/s

95th percentile per-packet one-way delay: 112.665 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 100.96 Mbit/s

95th percentile per-packet one-way delay: 112.590 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 12.95 Mbit/s

95th percentile per-packet one-way delay: 112.040 ms

Loss rate: 1.36%

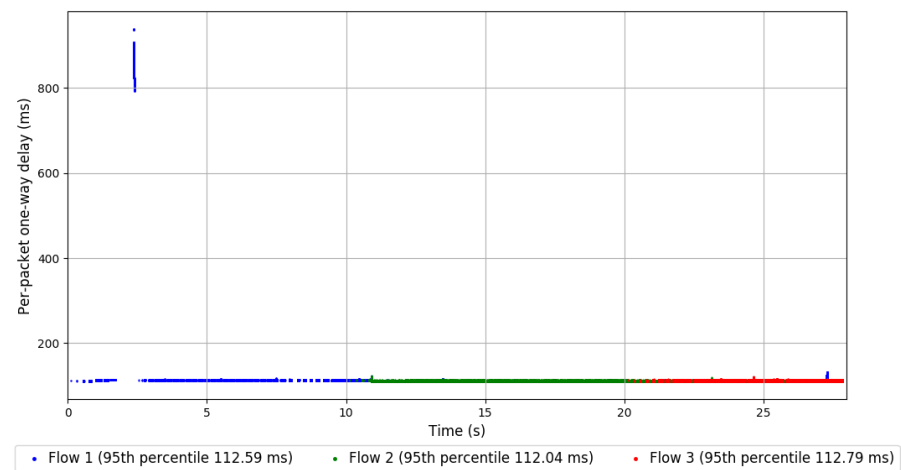
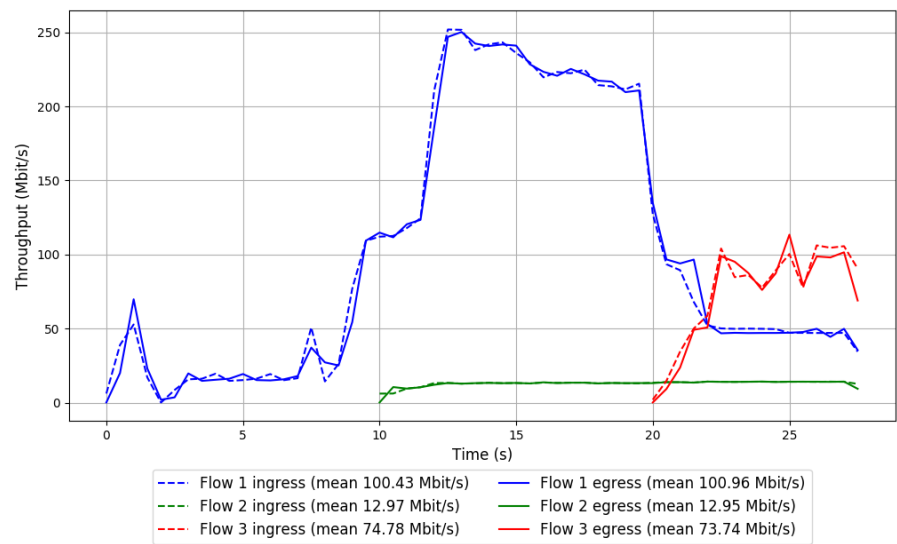
-- Flow 3:

Average throughput: 73.74 Mbit/s

95th percentile per-packet one-way delay: 112.787 ms

Loss rate: 4.13%

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



Run 9: Statistics of TaoVA-100x

Start at: 2017-12-20 15:16:27

End at: 2017-12-20 15:16:57

Below is generated by plot.py at 2017-12-20 18:54:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 239.08 Mbit/s

95th percentile per-packet one-way delay: 113.237 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 92.54 Mbit/s

95th percentile per-packet one-way delay: 113.276 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 149.84 Mbit/s

95th percentile per-packet one-way delay: 112.574 ms

Loss rate: 0.46%

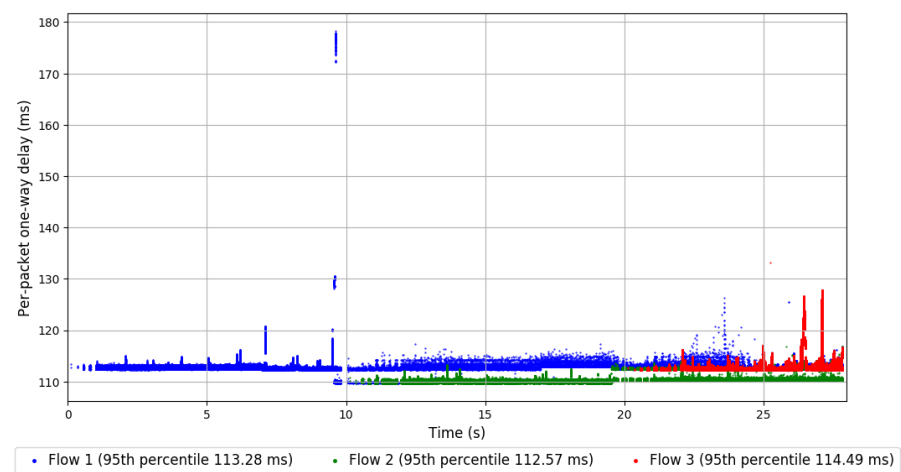
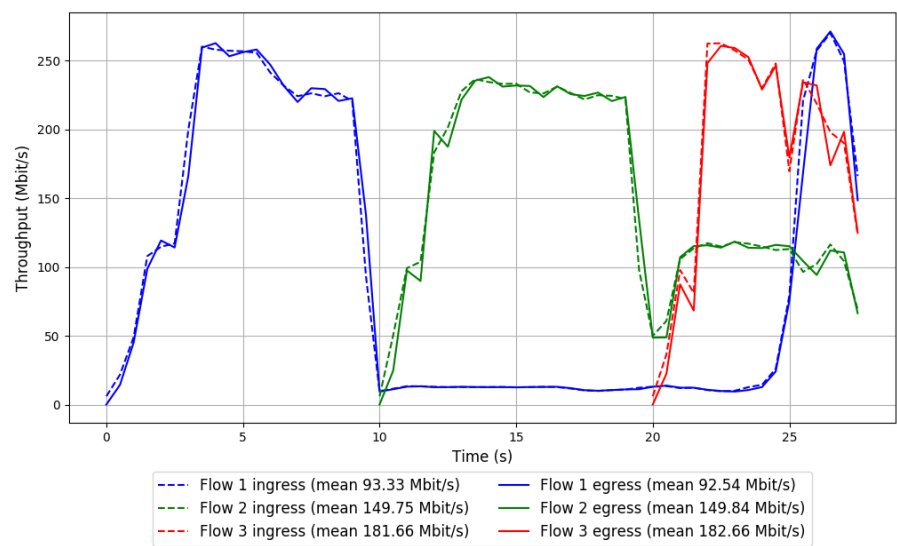
-- Flow 3:

Average throughput: 182.66 Mbit/s

95th percentile per-packet one-way delay: 114.490 ms

Loss rate: 1.82%

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

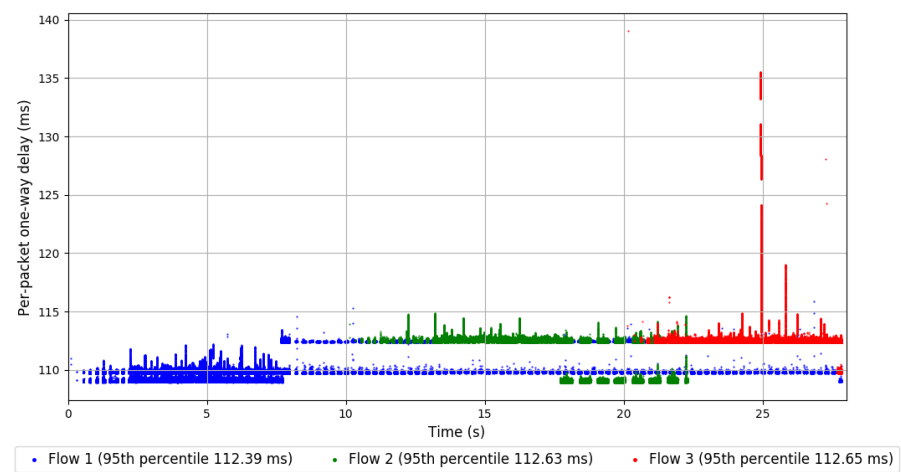
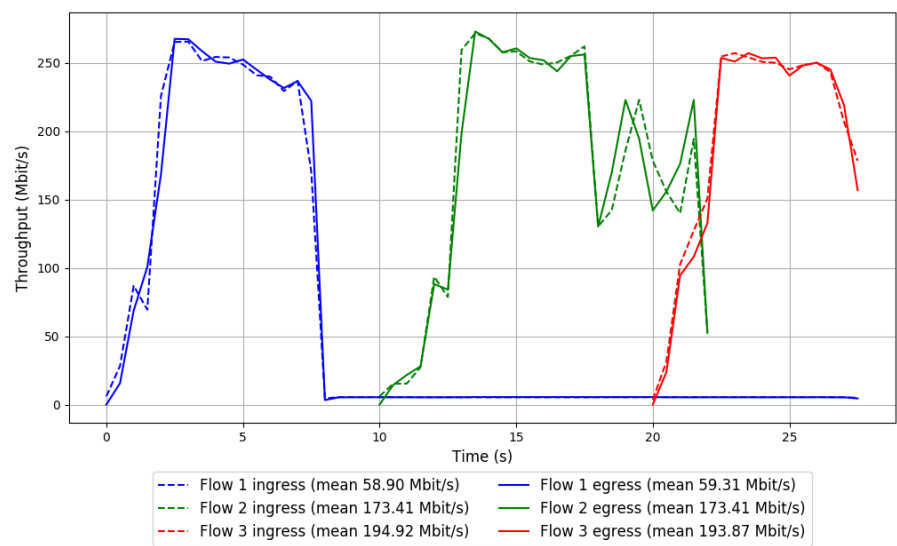


```
Run 10: Statistics of TaoVA-100x

Start at: 2017-12-20 15:32:09
End at: 2017-12-20 15:32:39

# Below is generated by plot.py at 2017-12-20 18:54:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 189.37 Mbit/s
95th percentile per-packet one-way delay: 112.610 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 59.31 Mbit/s
95th percentile per-packet one-way delay: 112.390 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 173.41 Mbit/s
95th percentile per-packet one-way delay: 112.630 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 193.87 Mbit/s
95th percentile per-packet one-way delay: 112.651 ms
Loss rate: 2.17%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2017-12-20 13:21:39

End at: 2017-12-20 13:22:09

Below is generated by plot.py at 2017-12-20 18:54:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 62.68 Mbit/s

95th percentile per-packet one-way delay: 117.260 ms

Loss rate: 1.94%

-- Flow 1:

Average throughput: 37.26 Mbit/s

95th percentile per-packet one-way delay: 117.967 ms

Loss rate: 2.24%

-- Flow 2:

Average throughput: 30.87 Mbit/s

95th percentile per-packet one-way delay: 111.569 ms

Loss rate: 1.24%

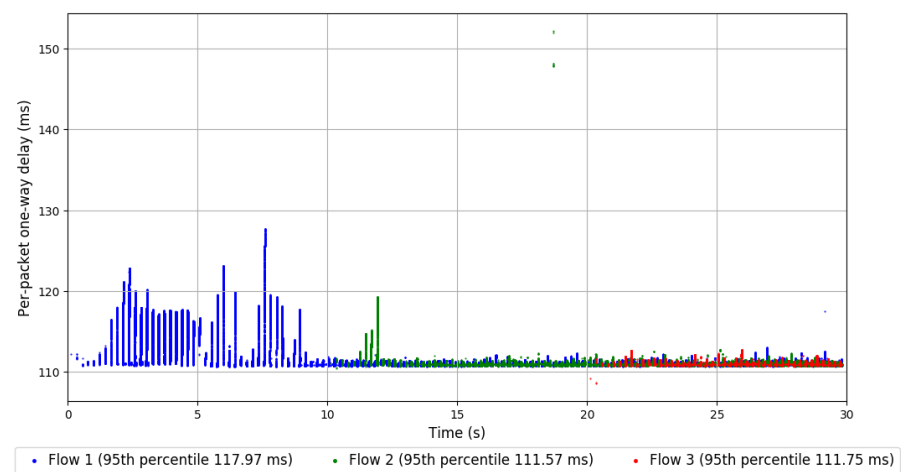
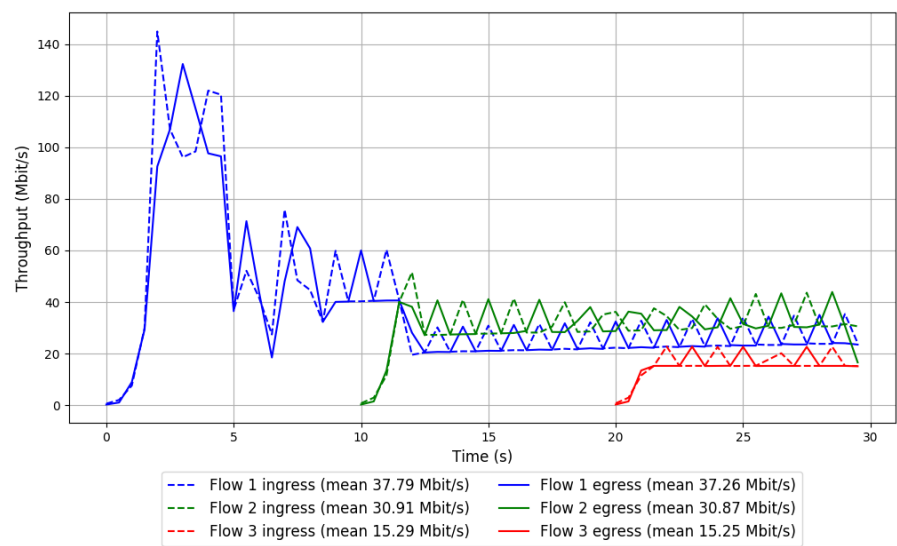
-- Flow 3:

Average throughput: 15.25 Mbit/s

95th percentile per-packet one-way delay: 111.753 ms

Loss rate: 2.50%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-12-20 13:36:41

End at: 2017-12-20 13:37:11

Below is generated by plot.py at 2017-12-20 18:54:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 45.25 Mbit/s

95th percentile per-packet one-way delay: 114.220 ms

Loss rate: 1.98%

-- Flow 1:

Average throughput: 19.67 Mbit/s

95th percentile per-packet one-way delay: 114.254 ms

Loss rate: 2.59%

-- Flow 2:

Average throughput: 24.29 Mbit/s

95th percentile per-packet one-way delay: 113.640 ms

Loss rate: 0.82%

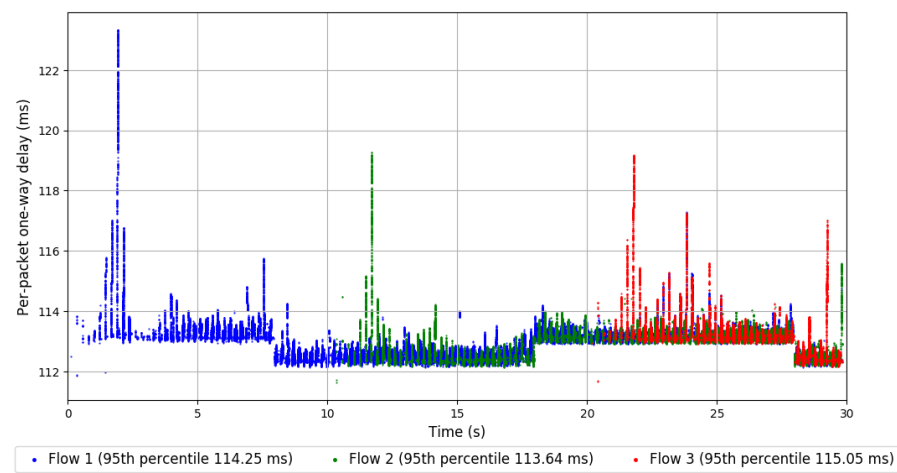
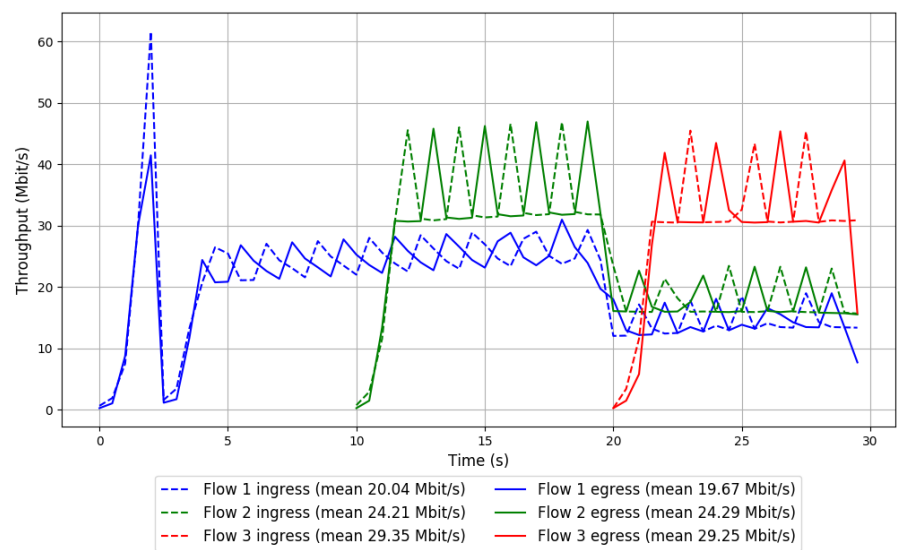
-- Flow 3:

Average throughput: 29.25 Mbit/s

95th percentile per-packet one-way delay: 115.046 ms

Loss rate: 2.66%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

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

End at: 2017-12-20 13:52:30

Below is generated by plot.py at 2017-12-20 18:54:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.34 Mbit/s

95th percentile per-packet one-way delay: 114.456 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 36.35 Mbit/s

95th percentile per-packet one-way delay: 114.446 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 50.47 Mbit/s

95th percentile per-packet one-way delay: 114.508 ms

Loss rate: 1.60%

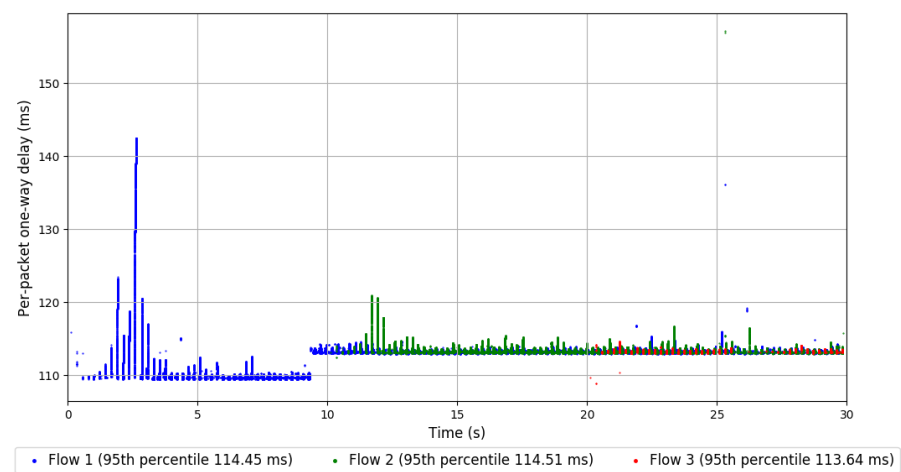
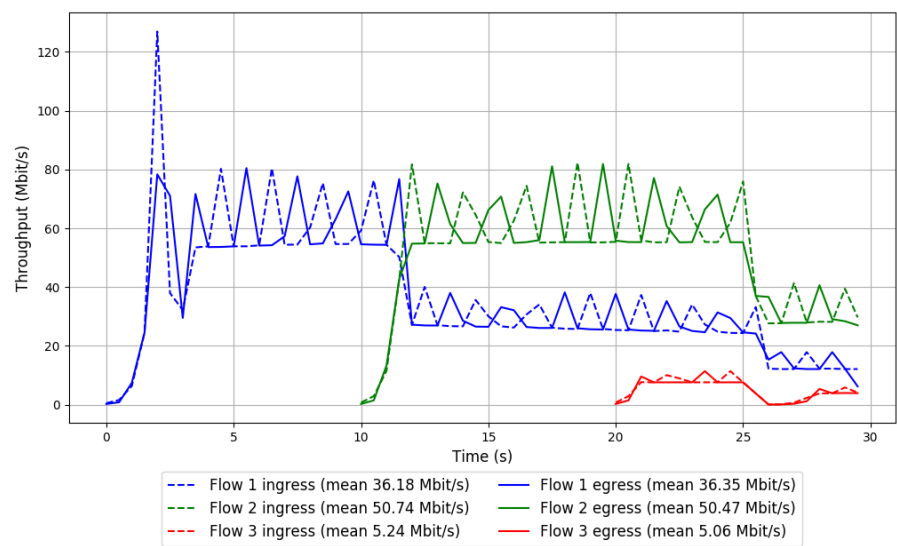
-- Flow 3:

Average throughput: 5.06 Mbit/s

95th percentile per-packet one-way delay: 113.639 ms

Loss rate: 5.64%

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 18:54:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.95 Mbit/s

95th percentile per-packet one-way delay: 119.237 ms

Loss rate: 1.71%

-- Flow 1:

Average throughput: 30.53 Mbit/s

95th percentile per-packet one-way delay: 114.001 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 30.65 Mbit/s

95th percentile per-packet one-way delay: 114.257 ms

Loss rate: 0.66%

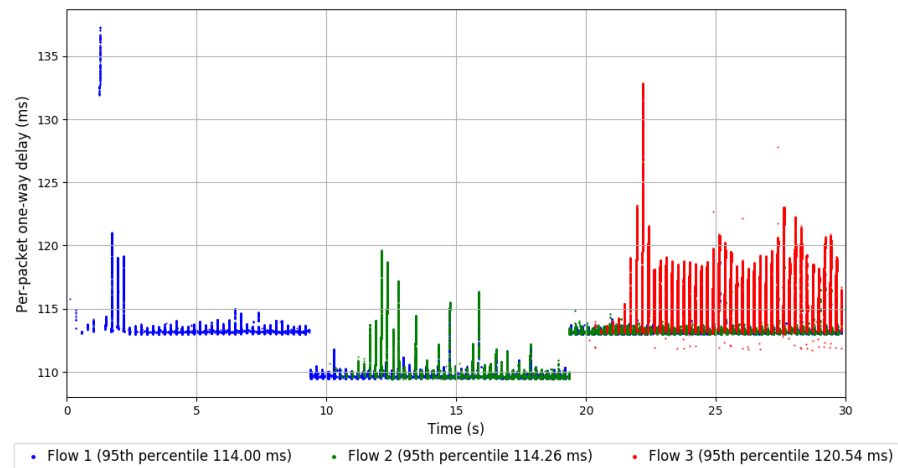
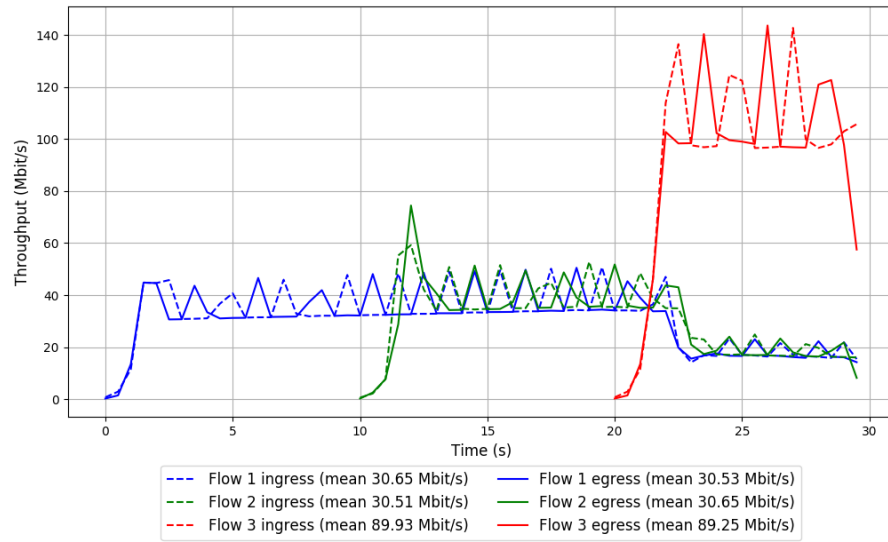
-- Flow 3:

Average throughput: 89.25 Mbit/s

95th percentile per-packet one-way delay: 120.536 ms

Loss rate: 2.99%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-12-20 14:22:43

End at: 2017-12-20 14:23:13

Below is generated by plot.py at 2017-12-20 18:54:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 20.12 Mbit/s

95th percentile per-packet one-way delay: 113.828 ms

Loss rate: 1.99%

-- Flow 1:

Average throughput: 9.62 Mbit/s

95th percentile per-packet one-way delay: 113.780 ms

Loss rate: 2.15%

-- Flow 2:

Average throughput: 8.12 Mbit/s

95th percentile per-packet one-way delay: 113.730 ms

Loss rate: 1.18%

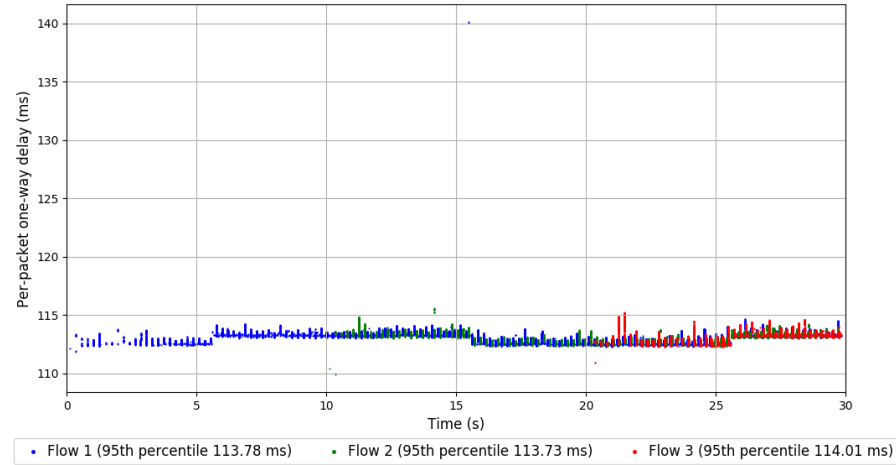
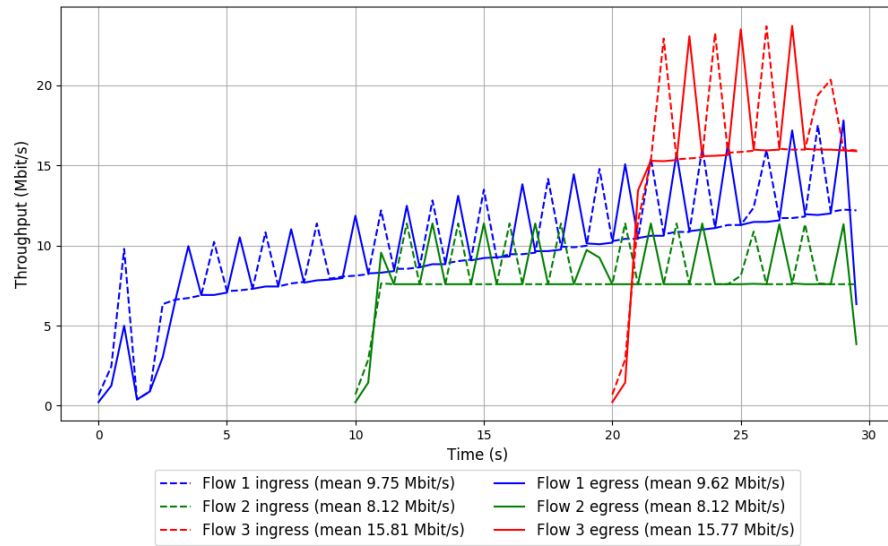
-- Flow 3:

Average throughput: 15.77 Mbit/s

95th percentile per-packet one-way delay: 114.006 ms

Loss rate: 2.54%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-12-20 14:37:51

End at: 2017-12-20 14:38:21

Below is generated by plot.py at 2017-12-20 18:54:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 60.42 Mbit/s

95th percentile per-packet one-way delay: 119.943 ms

Loss rate: 1.79%

-- Flow 1:

Average throughput: 31.00 Mbit/s

95th percentile per-packet one-way delay: 120.889 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 8.09 Mbit/s

95th percentile per-packet one-way delay: 114.084 ms

Loss rate: 2.36%

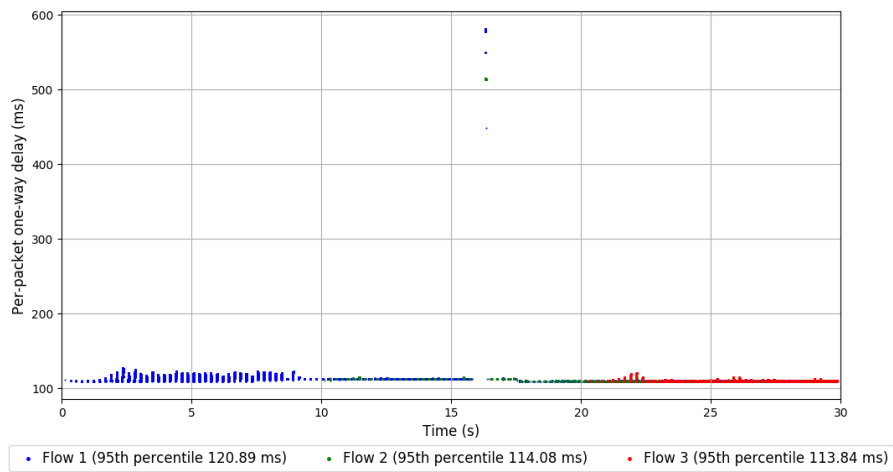
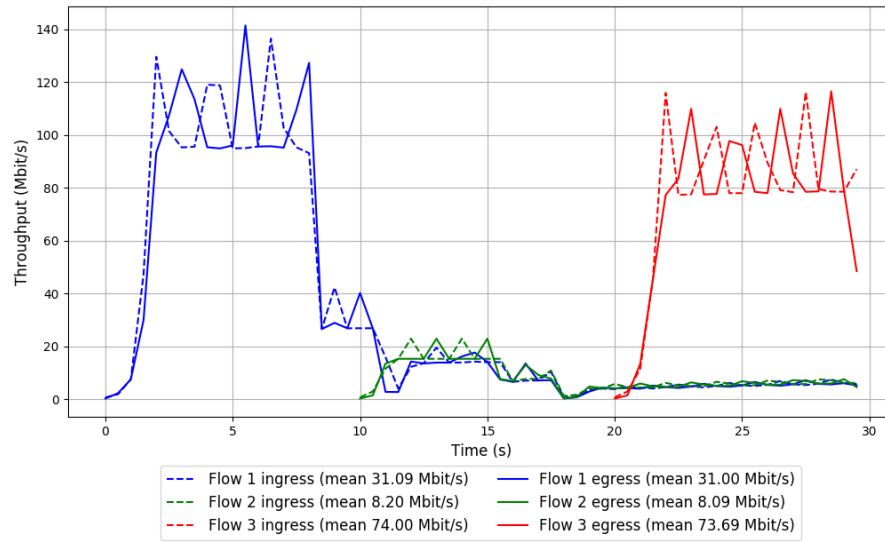
-- Flow 3:

Average throughput: 73.69 Mbit/s

95th percentile per-packet one-way delay: 113.839 ms

Loss rate: 2.65%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-12-20 14:53:10

End at: 2017-12-20 14:53:40

Below is generated by plot.py at 2017-12-20 18:54:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 59.95 Mbit/s

95th percentile per-packet one-way delay: 119.923 ms

Loss rate: 1.69%

-- Flow 1:

Average throughput: 25.45 Mbit/s

95th percentile per-packet one-way delay: 113.369 ms

Loss rate: 2.28%

-- Flow 2:

Average throughput: 34.22 Mbit/s

95th percentile per-packet one-way delay: 116.080 ms

Loss rate: 0.95%

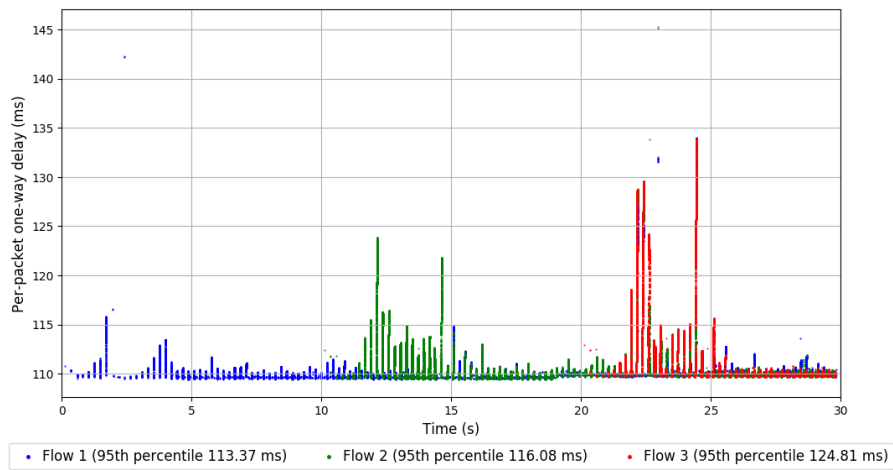
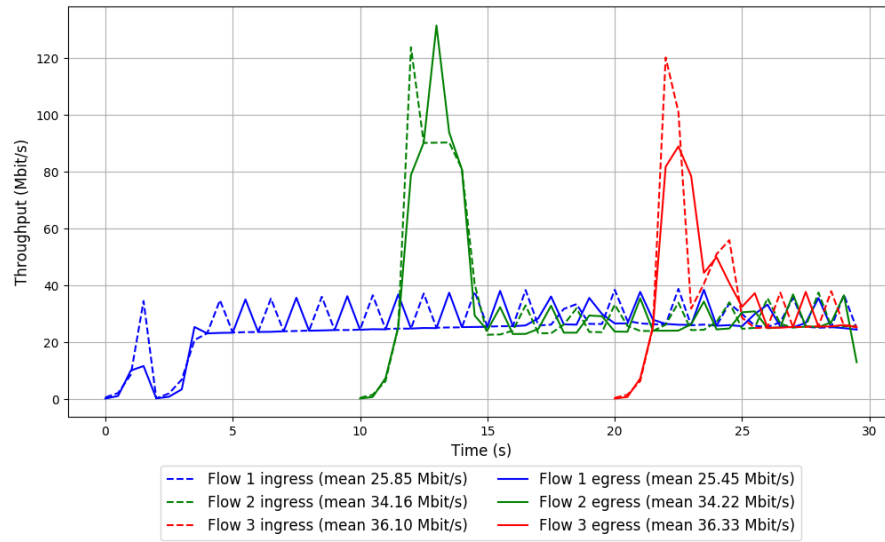
-- Flow 3:

Average throughput: 36.33 Mbit/s

95th percentile per-packet one-way delay: 124.810 ms

Loss rate: 1.80%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-12-20 15:08:28

End at: 2017-12-20 15:08:58

Below is generated by plot.py at 2017-12-20 18:54:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.11 Mbit/s

95th percentile per-packet one-way delay: 113.100 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 39.81 Mbit/s

95th percentile per-packet one-way delay: 111.949 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 93.15 Mbit/s

95th percentile per-packet one-way delay: 113.096 ms

Loss rate: 1.23%

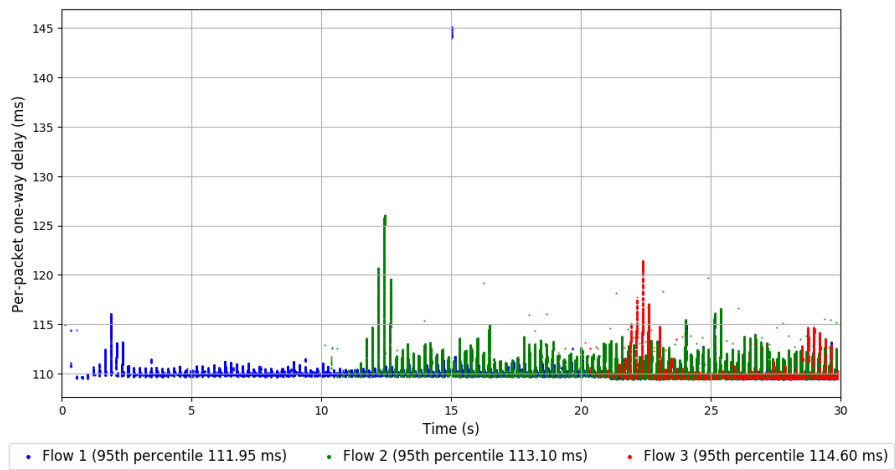
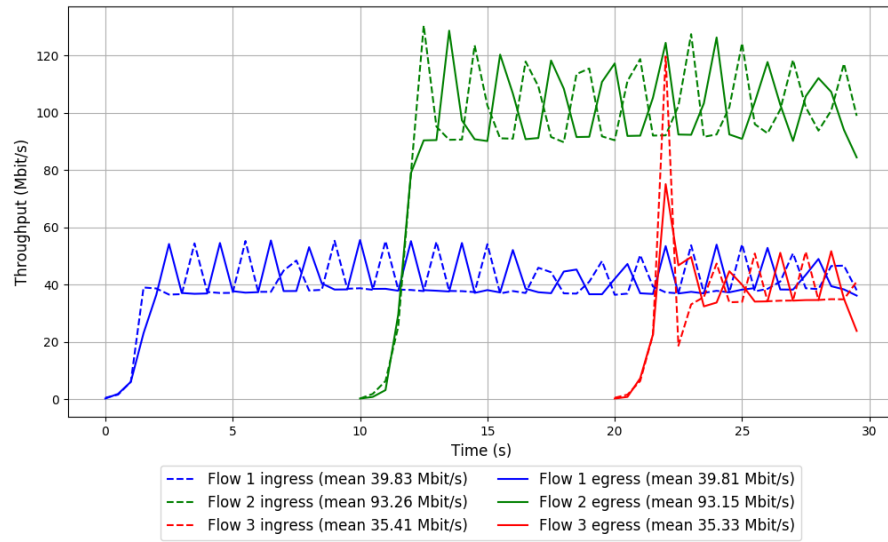
-- Flow 3:

Average throughput: 35.33 Mbit/s

95th percentile per-packet one-way delay: 114.598 ms

Loss rate: 2.47%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-12-20 15:24:13

End at: 2017-12-20 15:24:43

Below is generated by plot.py at 2017-12-20 18:54:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.41 Mbit/s

95th percentile per-packet one-way delay: 120.214 ms

Loss rate: 1.96%

-- Flow 1:

Average throughput: 58.20 Mbit/s

95th percentile per-packet one-way delay: 119.927 ms

Loss rate: 1.48%

-- Flow 2:

Average throughput: 12.88 Mbit/s

95th percentile per-packet one-way delay: 115.956 ms

Loss rate: 2.48%

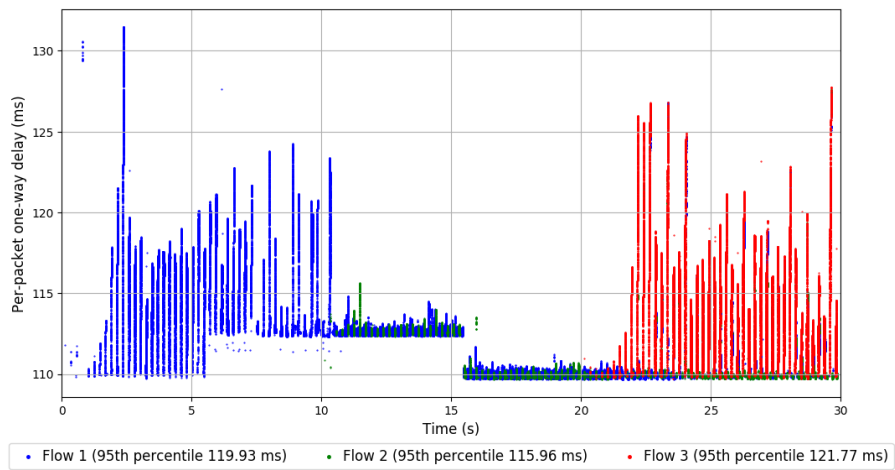
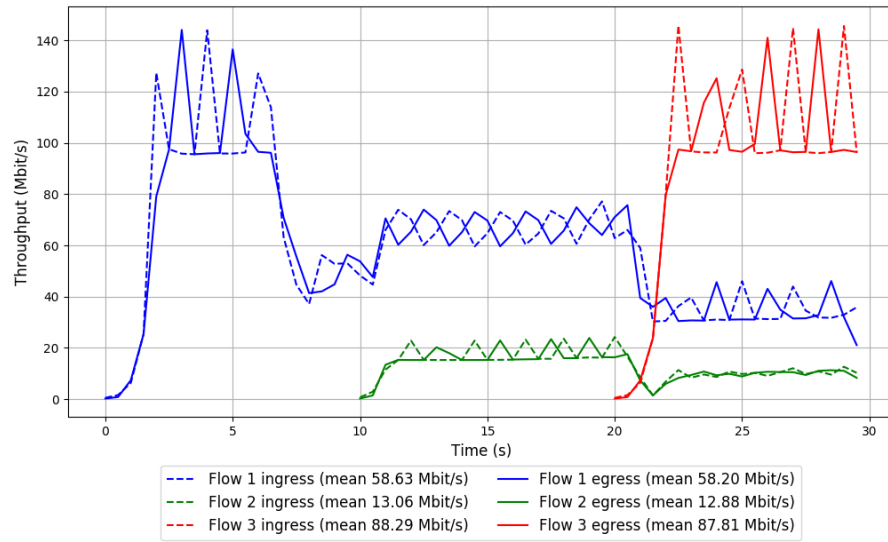
-- Flow 3:

Average throughput: 87.81 Mbit/s

95th percentile per-packet one-way delay: 121.773 ms

Loss rate: 2.76%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-12-20 15:39:51

End at: 2017-12-20 15:40:21

Below is generated by plot.py at 2017-12-20 18:54:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 53.19 Mbit/s

95th percentile per-packet one-way delay: 113.485 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 5.60 Mbit/s

95th percentile per-packet one-way delay: 113.025 ms

Loss rate: 1.93%

-- Flow 2:

Average throughput: 71.22 Mbit/s

95th percentile per-packet one-way delay: 113.544 ms

Loss rate: 1.20%

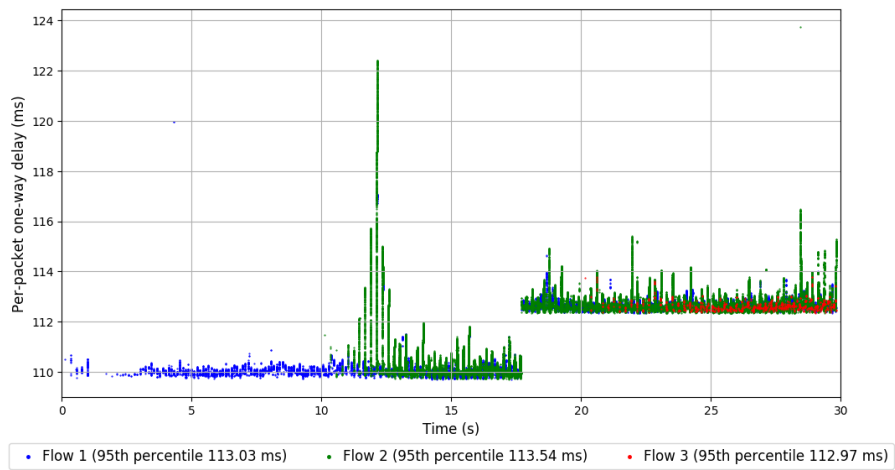
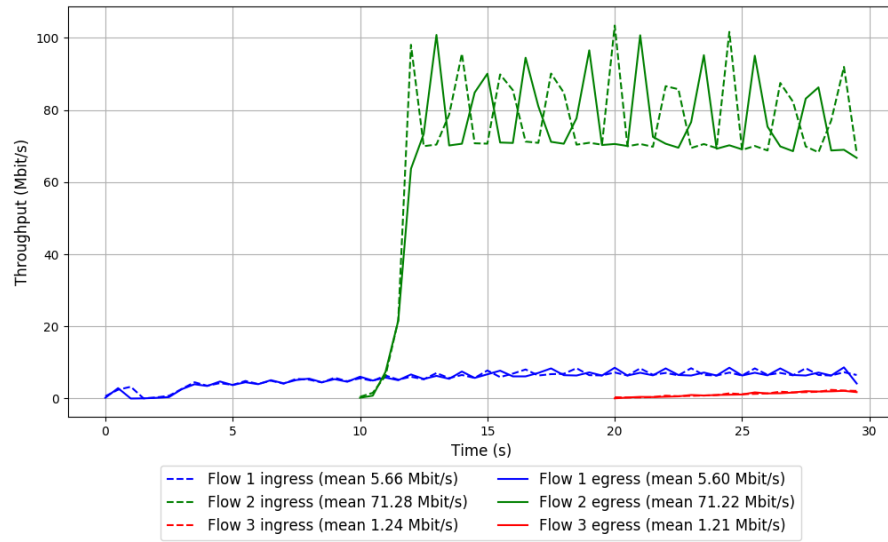
-- Flow 3:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 112.968 ms

Loss rate: 4.96%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2017-12-20 13:18:49

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

Below is generated by plot.py at 2017-12-20 18:54:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 258.89 Mbit/s

95th percentile per-packet one-way delay: 180.313 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 122.58 Mbit/s

95th percentile per-packet one-way delay: 171.025 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 184.29 Mbit/s

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

Loss rate: 1.01%

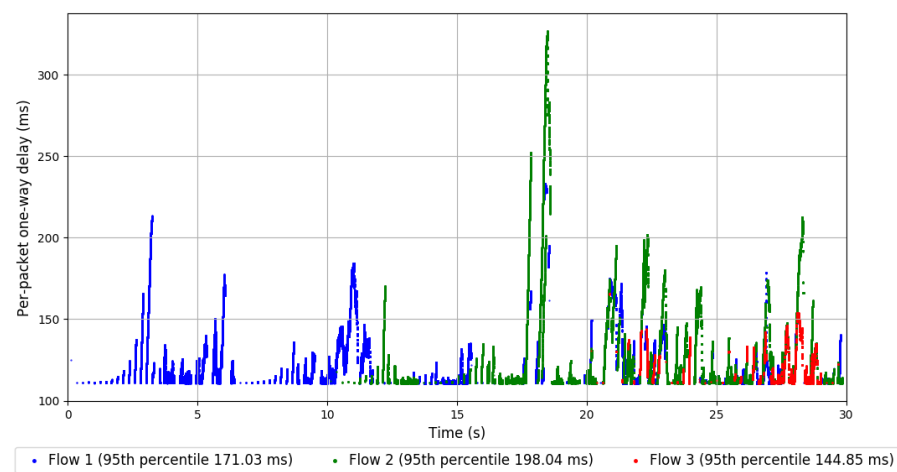
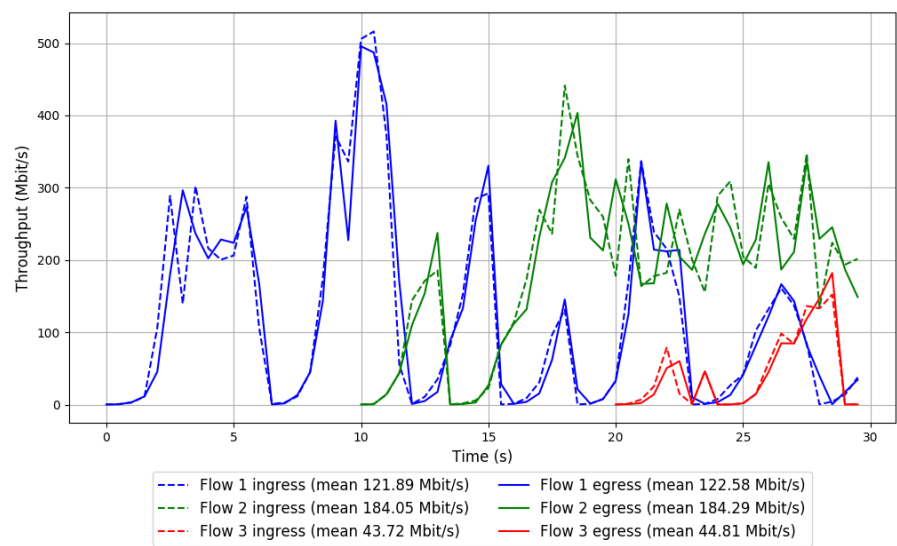
-- Flow 3:

Average throughput: 44.81 Mbit/s

95th percentile per-packet one-way delay: 144.848 ms

Loss rate: 0.06%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-12-20 13:33:48

End at: 2017-12-20 13:34:18

Below is generated by plot.py at 2017-12-20 18:55:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 311.80 Mbit/s

95th percentile per-packet one-way delay: 251.755 ms

Loss rate: 3.64%

-- Flow 1:

Average throughput: 204.81 Mbit/s

95th percentile per-packet one-way delay: 183.585 ms

Loss rate: 1.47%

-- Flow 2:

Average throughput: 150.04 Mbit/s

95th percentile per-packet one-way delay: 353.312 ms

Loss rate: 7.31%

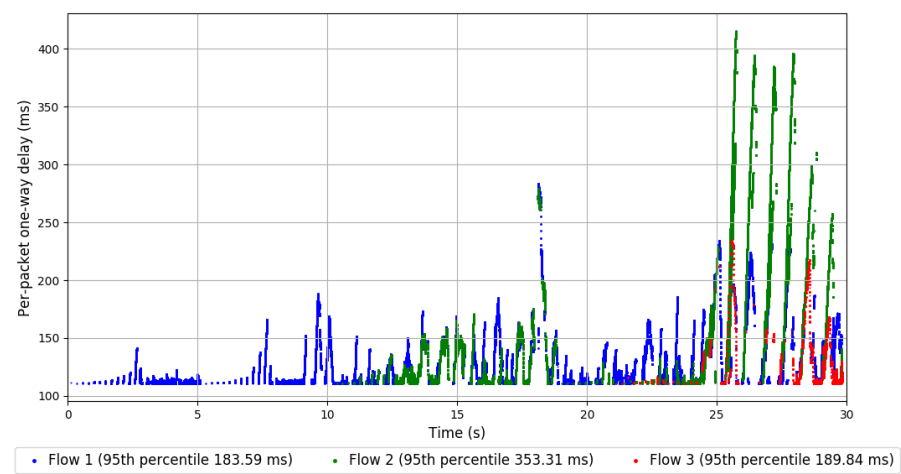
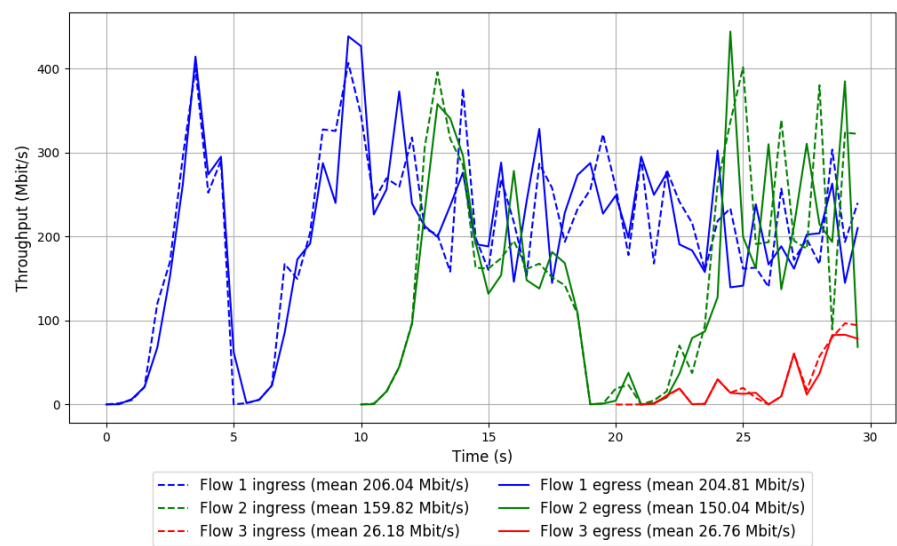
-- Flow 3:

Average throughput: 26.76 Mbit/s

95th percentile per-packet one-way delay: 189.838 ms

Loss rate: 10.39%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-12-20 13:49:17

End at: 2017-12-20 13:49:47

Below is generated by plot.py at 2017-12-20 18:55:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.64 Mbit/s

95th percentile per-packet one-way delay: 295.653 ms

Loss rate: 5.18%

-- Flow 1:

Average throughput: 142.70 Mbit/s

95th percentile per-packet one-way delay: 310.986 ms

Loss rate: 5.76%

-- Flow 2:

Average throughput: 44.75 Mbit/s

95th percentile per-packet one-way delay: 191.699 ms

Loss rate: 3.27%

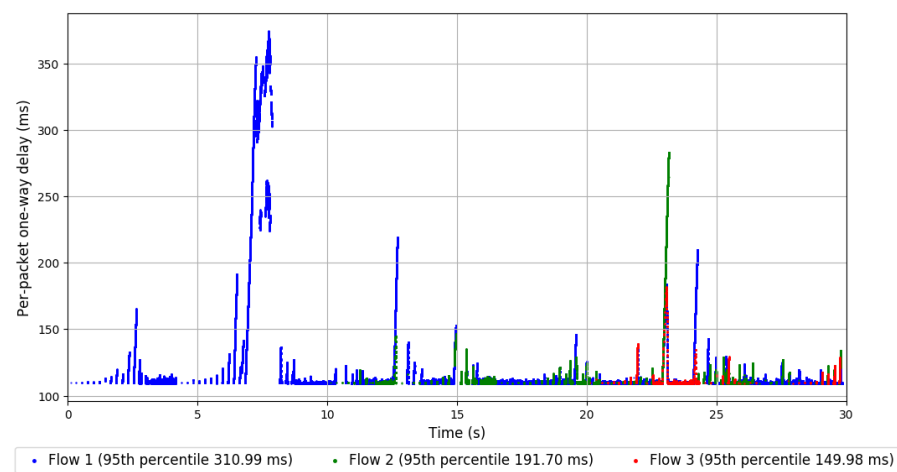
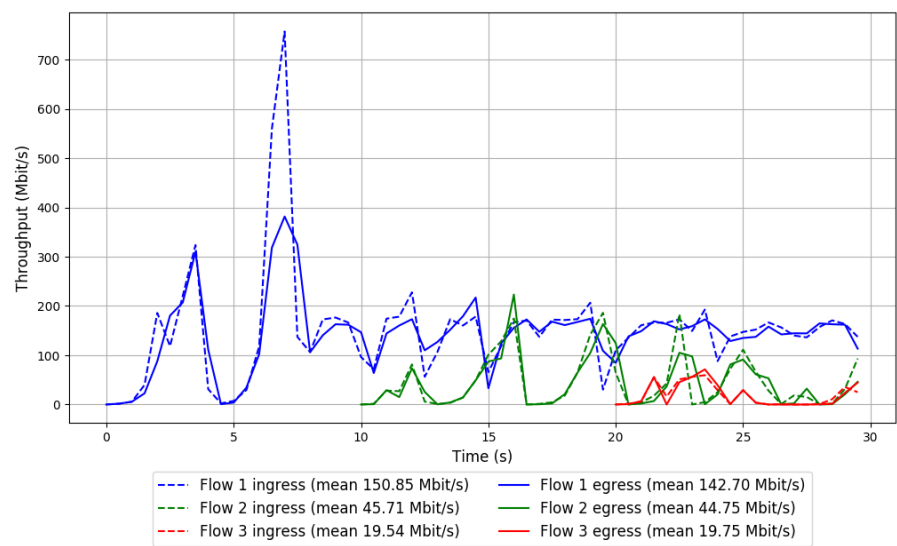
-- Flow 3:

Average throughput: 19.75 Mbit/s

95th percentile per-packet one-way delay: 149.983 ms

Loss rate: 0.75%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-12-20 14:04:27

End at: 2017-12-20 14:04:57

Below is generated by plot.py at 2017-12-20 18:56:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 307.39 Mbit/s

95th percentile per-packet one-way delay: 203.342 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 225.24 Mbit/s

95th percentile per-packet one-way delay: 217.400 ms

Loss rate: 1.37%

-- Flow 2:

Average throughput: 98.91 Mbit/s

95th percentile per-packet one-way delay: 167.022 ms

Loss rate: 2.05%

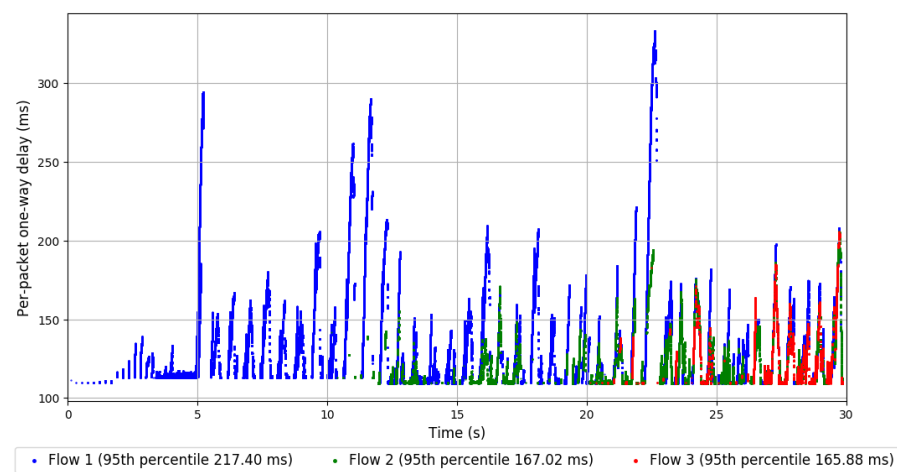
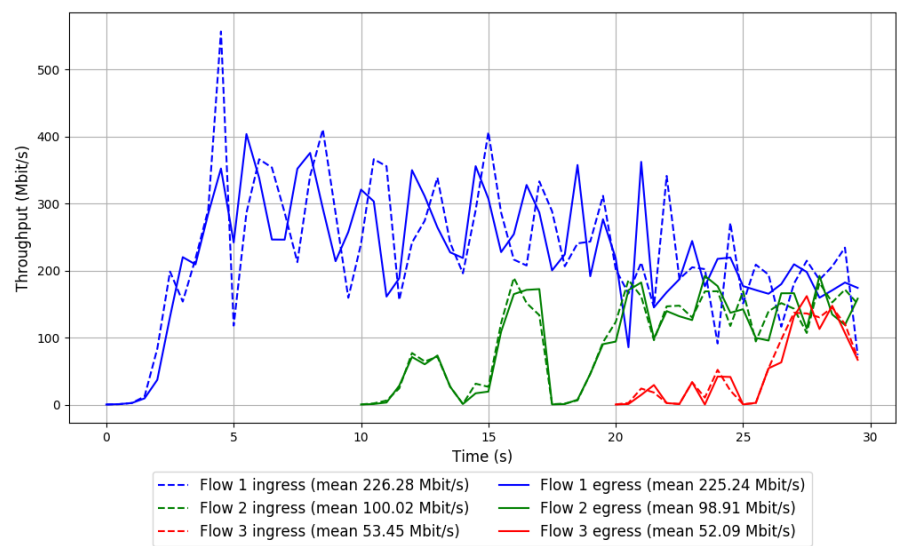
-- Flow 3:

Average throughput: 52.09 Mbit/s

95th percentile per-packet one-way delay: 165.883 ms

Loss rate: 4.23%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-12-20 14:19:53

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

Below is generated by plot.py at 2017-12-20 18:56:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 273.54 Mbit/s

95th percentile per-packet one-way delay: 323.067 ms

Loss rate: 9.71%

-- Flow 1:

Average throughput: 203.10 Mbit/s

95th percentile per-packet one-way delay: 231.930 ms

Loss rate: 3.37%

-- Flow 2:

Average throughput: 20.09 Mbit/s

95th percentile per-packet one-way delay: 163.302 ms

Loss rate: 0.66%

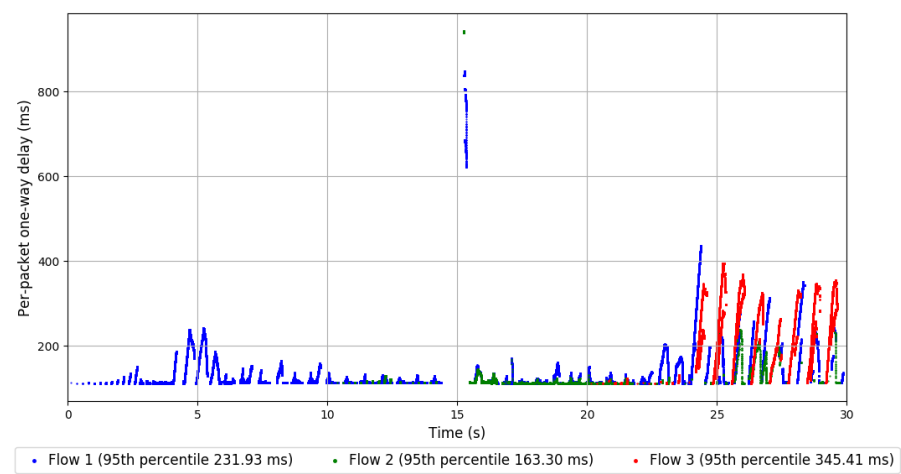
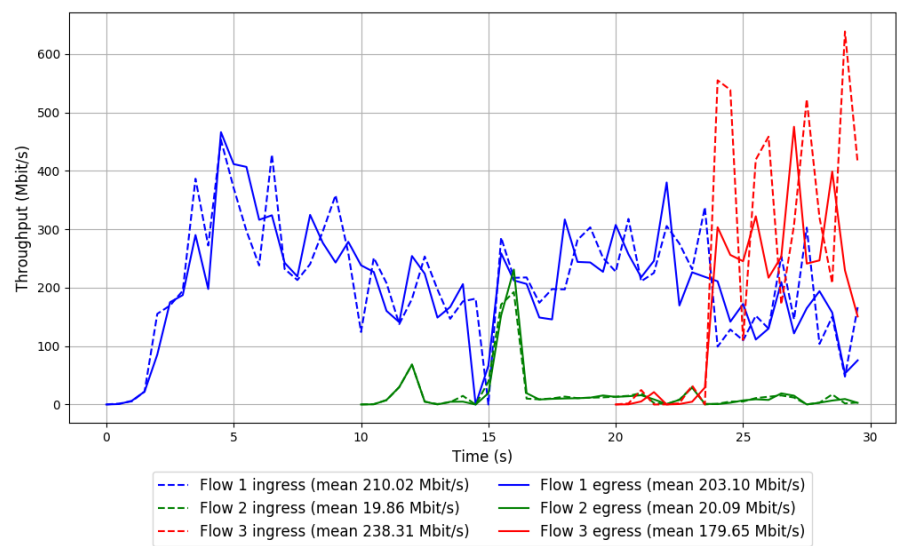
-- Flow 3:

Average throughput: 179.65 Mbit/s

95th percentile per-packet one-way delay: 345.409 ms

Loss rate: 28.01%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-12-20 14:35:07

End at: 2017-12-20 14:35:37

Below is generated by plot.py at 2017-12-20 18:56:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 208.20 Mbit/s

95th percentile per-packet one-way delay: 211.181 ms

Loss rate: 2.04%

-- Flow 1:

Average throughput: 65.93 Mbit/s

95th percentile per-packet one-way delay: 227.941 ms

Loss rate: 3.49%

-- Flow 2:

Average throughput: 158.60 Mbit/s

95th percentile per-packet one-way delay: 178.890 ms

Loss rate: 1.27%

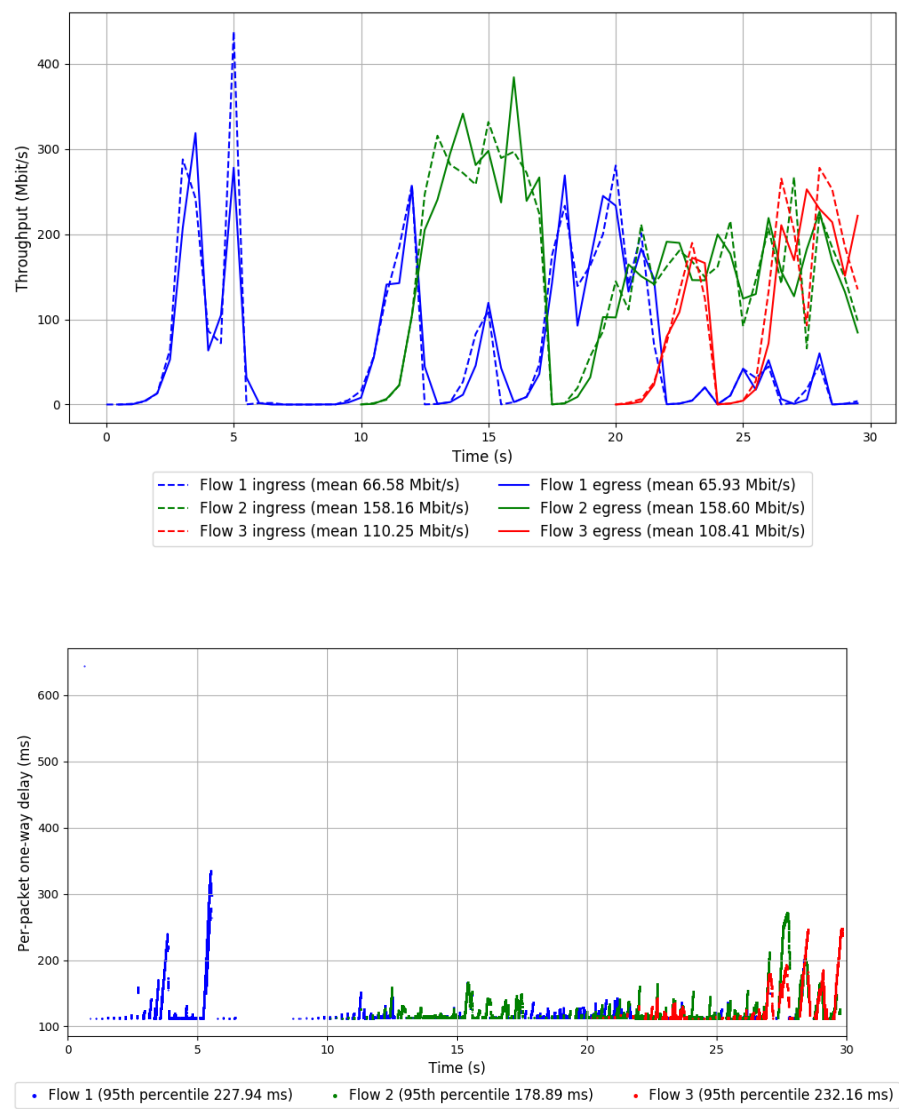
-- Flow 3:

Average throughput: 108.41 Mbit/s

95th percentile per-packet one-way delay: 232.156 ms

Loss rate: 1.62%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-12-20 14:50:24

End at: 2017-12-20 14:50:54

Below is generated by plot.py at 2017-12-20 18:57:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 220.58 Mbit/s

95th percentile per-packet one-way delay: 261.019 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 157.71 Mbit/s

95th percentile per-packet one-way delay: 263.656 ms

Loss rate: 2.18%

-- Flow 2:

Average throughput: 67.40 Mbit/s

95th percentile per-packet one-way delay: 213.460 ms

Loss rate: 0.55%

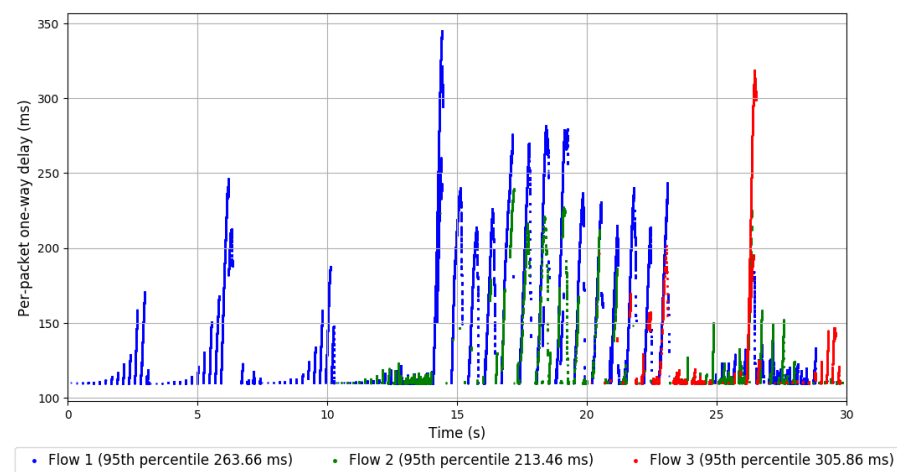
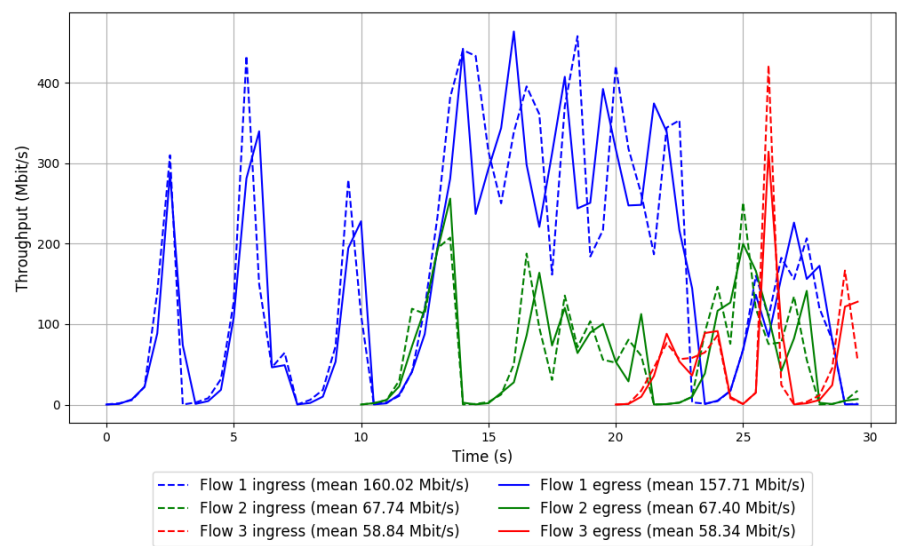
-- Flow 3:

Average throughput: 58.34 Mbit/s

95th percentile per-packet one-way delay: 305.855 ms

Loss rate: 3.08%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-12-20 15:05:47

End at: 2017-12-20 15:06:17

Below is generated by plot.py at 2017-12-20 18:57:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 149.49 Mbit/s

95th percentile per-packet one-way delay: 174.695 ms

Loss rate: 4.58%

-- Flow 1:

Average throughput: 85.68 Mbit/s

95th percentile per-packet one-way delay: 213.163 ms

Loss rate: 5.18%

-- Flow 2:

Average throughput: 72.38 Mbit/s

95th percentile per-packet one-way delay: 144.891 ms

Loss rate: 2.44%

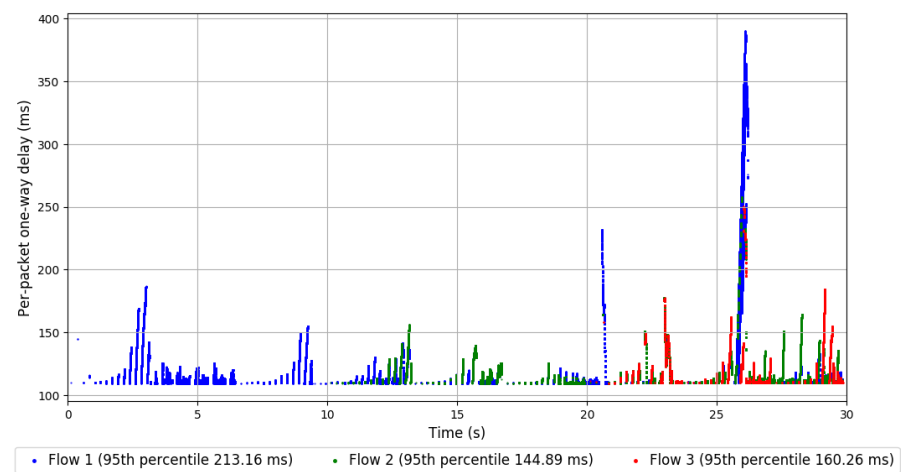
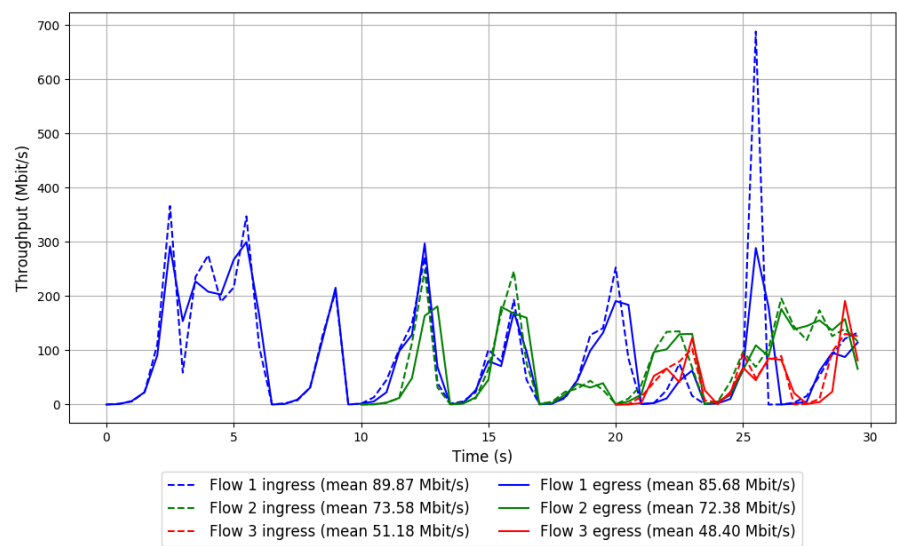
-- Flow 3:

Average throughput: 48.40 Mbit/s

95th percentile per-packet one-way delay: 160.264 ms

Loss rate: 7.57%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

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

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

Below is generated by plot.py at 2017-12-20 18:59:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 284.62 Mbit/s

95th percentile per-packet one-way delay: 246.295 ms

Loss rate: 3.01%

-- Flow 1:

Average throughput: 96.31 Mbit/s

95th percentile per-packet one-way delay: 157.417 ms

Loss rate: 1.13%

-- Flow 2:

Average throughput: 161.45 Mbit/s

95th percentile per-packet one-way delay: 209.664 ms

Loss rate: 0.88%

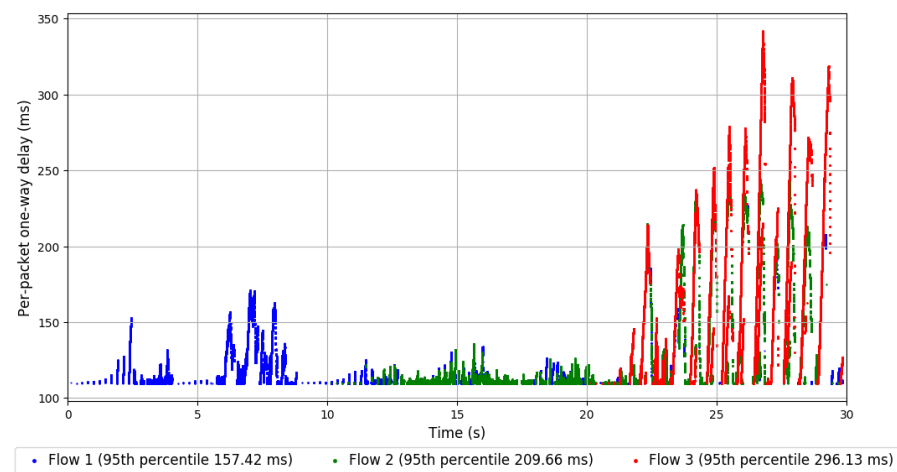
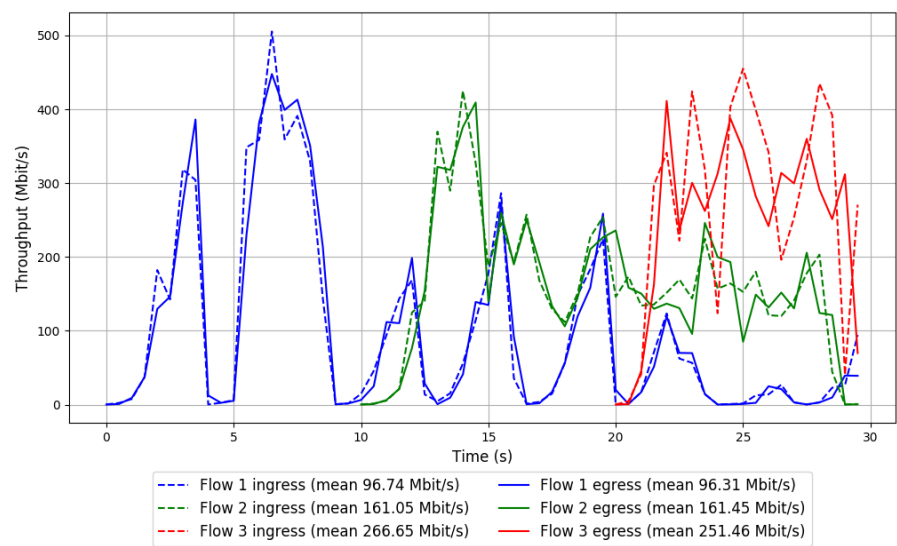
-- Flow 3:

Average throughput: 251.46 Mbit/s

95th percentile per-packet one-way delay: 296.128 ms

Loss rate: 7.62%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-12-20 15:37:00

End at: 2017-12-20 15:37:30

Below is generated by plot.py at 2017-12-20 18:59:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 294.94 Mbit/s

95th percentile per-packet one-way delay: 158.878 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 174.14 Mbit/s

95th percentile per-packet one-way delay: 164.002 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 160.46 Mbit/s

95th percentile per-packet one-way delay: 151.451 ms

Loss rate: 1.23%

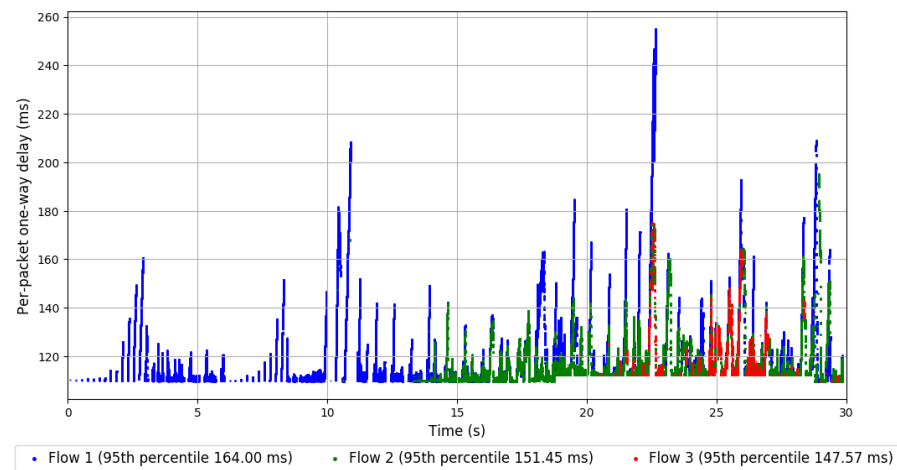
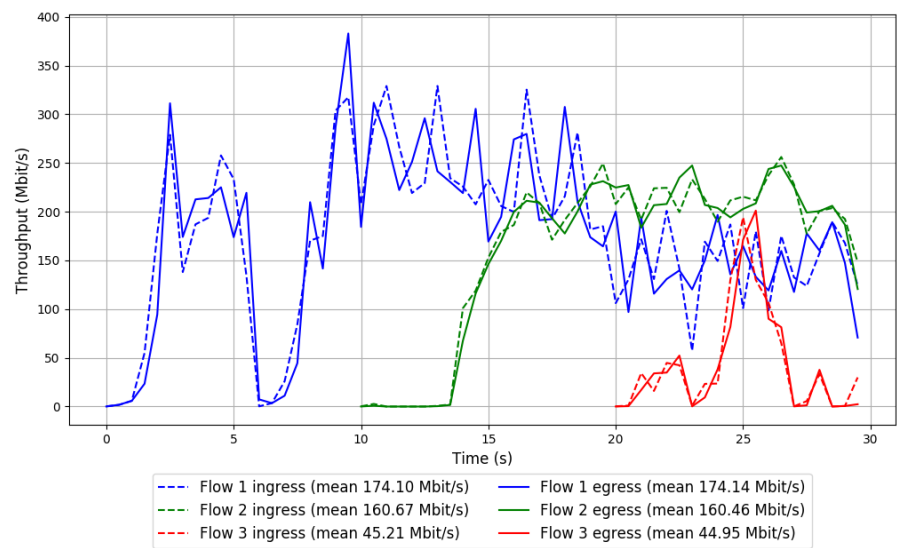
-- Flow 3:

Average throughput: 44.95 Mbit/s

95th percentile per-packet one-way delay: 147.575 ms

Loss rate: 3.12%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2017-12-20 13:17:03

End at: 2017-12-20 13:17:33

Below is generated by plot.py at 2017-12-20 18:59:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.70 Mbit/s

95th percentile per-packet one-way delay: 112.451 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 65.35 Mbit/s

95th percentile per-packet one-way delay: 110.971 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 59.46 Mbit/s

95th percentile per-packet one-way delay: 112.545 ms

Loss rate: 1.48%

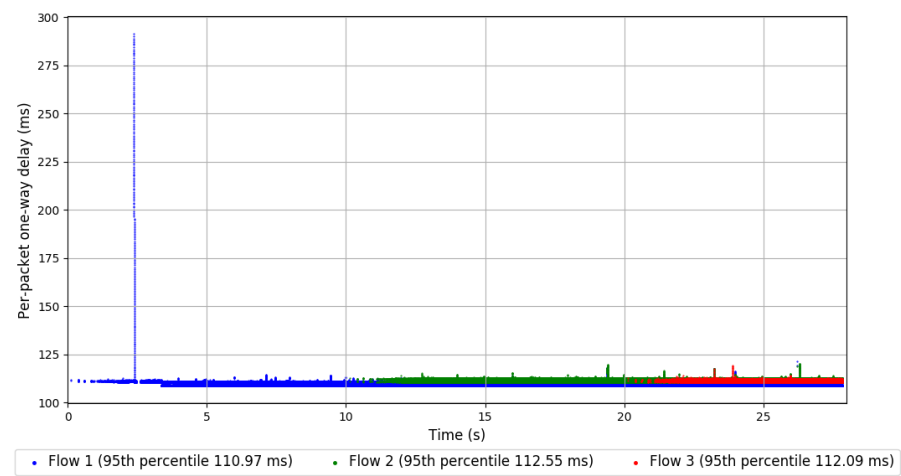
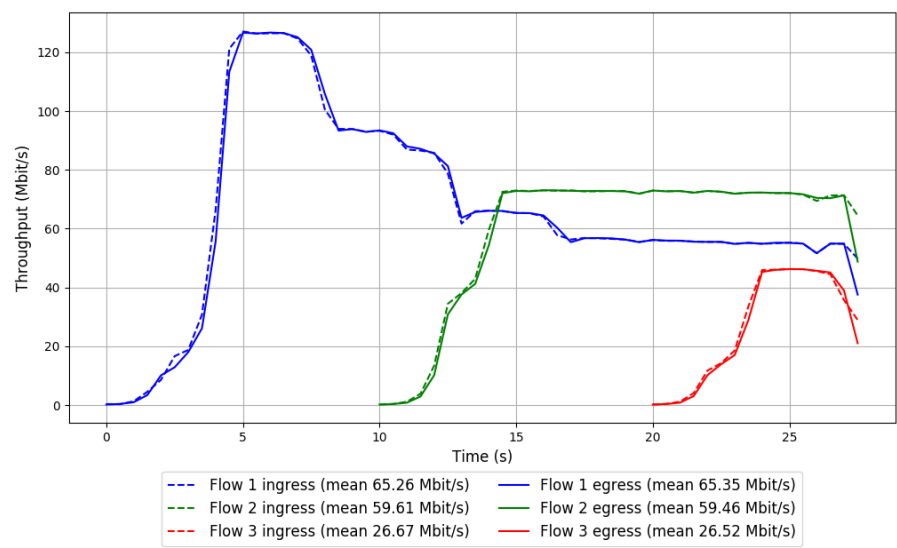
-- Flow 3:

Average throughput: 26.52 Mbit/s

95th percentile per-packet one-way delay: 112.093 ms

Loss rate: 3.36%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-12-20 13:32:04

End at: 2017-12-20 13:32:34

Below is generated by plot.py at 2017-12-20 18:59:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.81 Mbit/s

95th percentile per-packet one-way delay: 112.914 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 67.43 Mbit/s

95th percentile per-packet one-way delay: 112.391 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 43.24 Mbit/s

95th percentile per-packet one-way delay: 113.052 ms

Loss rate: 0.22%

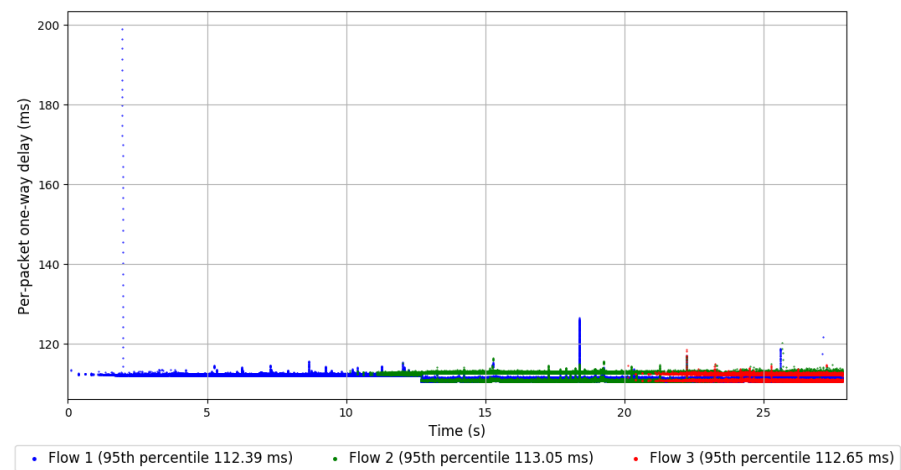
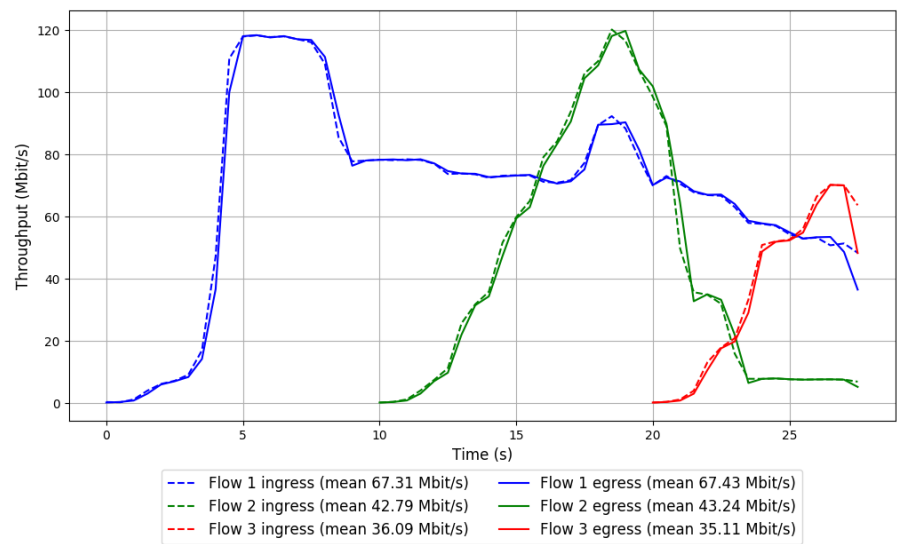
-- Flow 3:

Average throughput: 35.11 Mbit/s

95th percentile per-packet one-way delay: 112.653 ms

Loss rate: 5.41%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-12-20 13:47:31

End at: 2017-12-20 13:48:01

Below is generated by plot.py at 2017-12-20 18:59:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.89 Mbit/s

95th percentile per-packet one-way delay: 113.196 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 68.74 Mbit/s

95th percentile per-packet one-way delay: 113.178 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 52.39 Mbit/s

95th percentile per-packet one-way delay: 113.219 ms

Loss rate: 0.37%

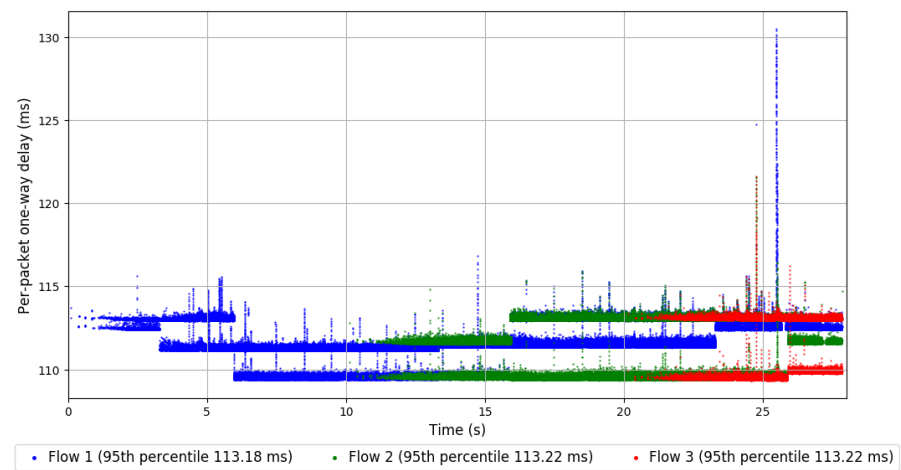
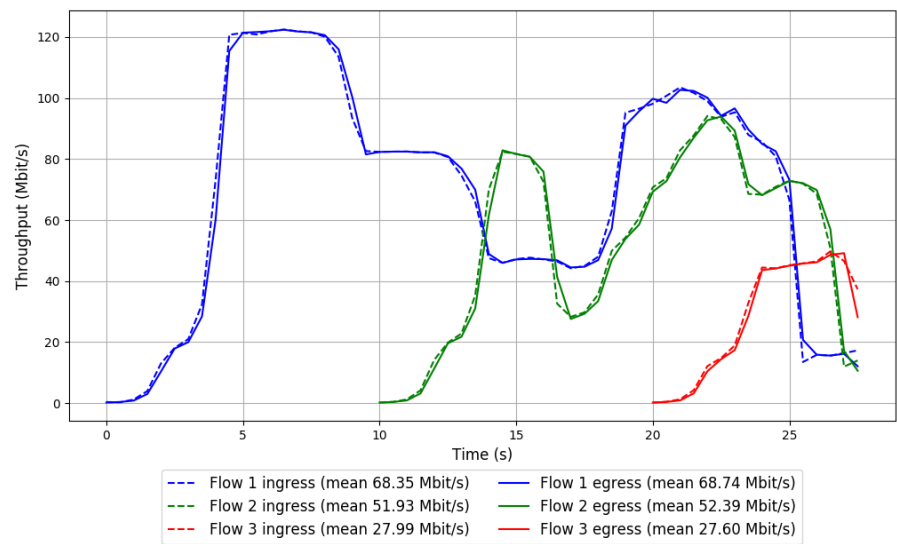
-- Flow 3:

Average throughput: 27.60 Mbit/s

95th percentile per-packet one-way delay: 113.224 ms

Loss rate: 4.14%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-12-20 14:02:41

End at: 2017-12-20 14:03:11

Below is generated by plot.py at 2017-12-20 18:59:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.59 Mbit/s

95th percentile per-packet one-way delay: 113.049 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 67.87 Mbit/s

95th percentile per-packet one-way delay: 111.013 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 57.80 Mbit/s

95th percentile per-packet one-way delay: 113.062 ms

Loss rate: 0.44%

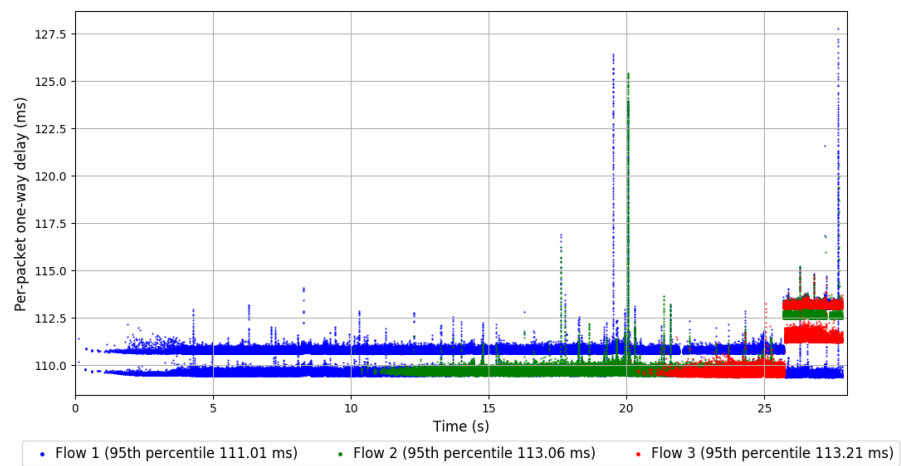
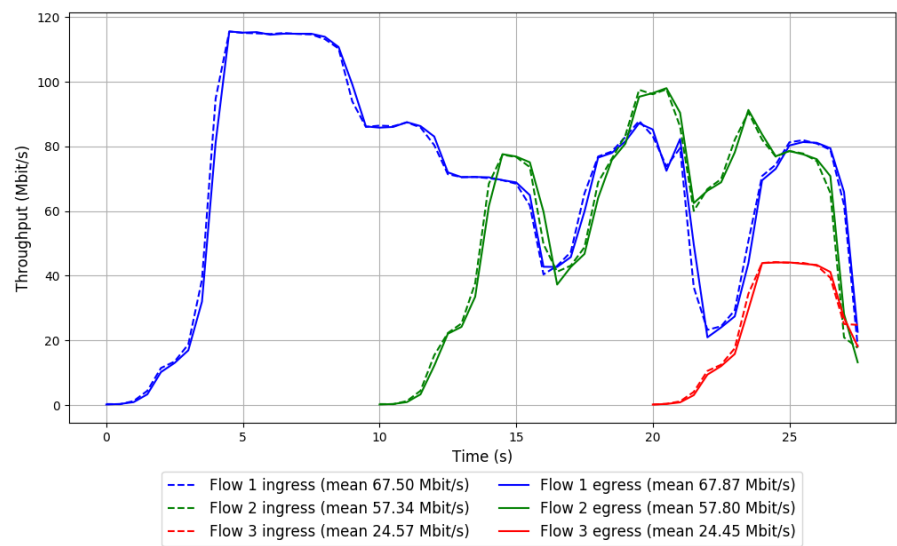
-- Flow 3:

Average throughput: 24.45 Mbit/s

95th percentile per-packet one-way delay: 113.206 ms

Loss rate: 3.27%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-12-20 14:18:11

End at: 2017-12-20 14:18:41

Below is generated by plot.py at 2017-12-20 18:59:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.87 Mbit/s

95th percentile per-packet one-way delay: 113.060 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 61.83 Mbit/s

95th percentile per-packet one-way delay: 113.082 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 123.051 ms

Loss rate: 46.17%

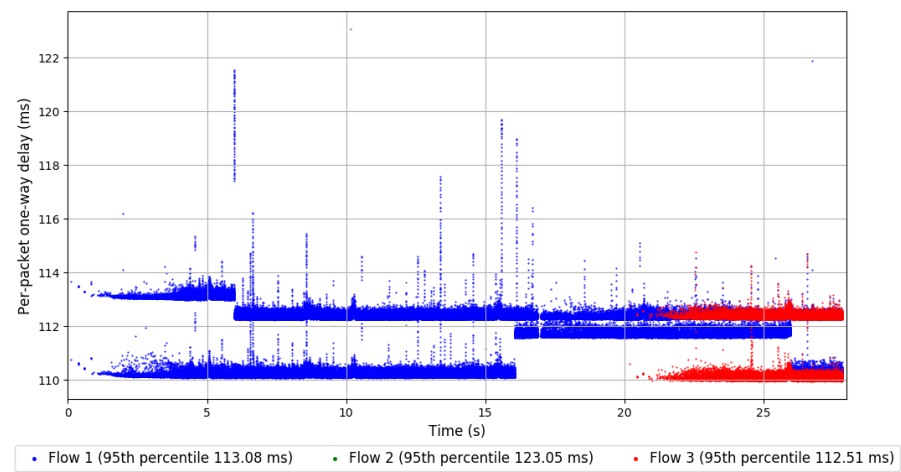
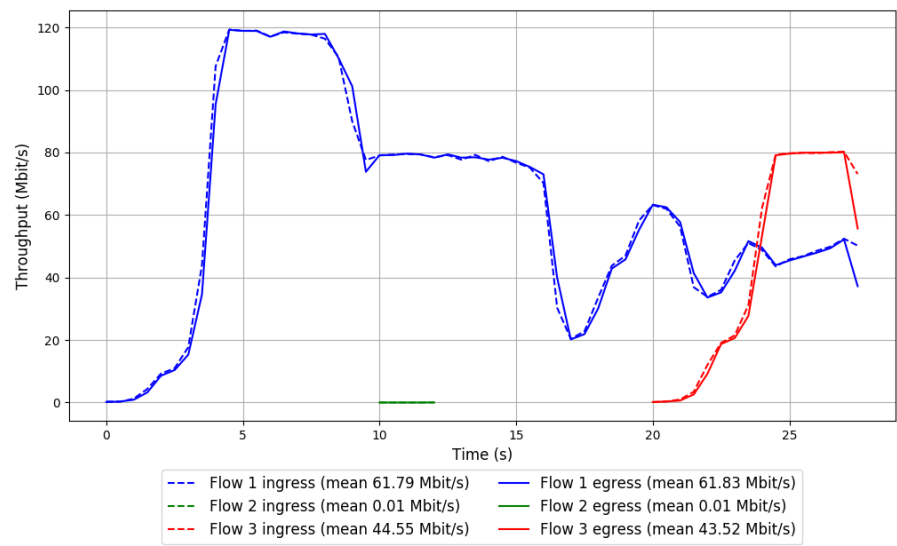
-- Flow 3:

Average throughput: 43.52 Mbit/s

95th percentile per-packet one-way delay: 112.509 ms

Loss rate: 5.04%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-12-20 14:33:22

End at: 2017-12-20 14:33:52

Below is generated by plot.py at 2017-12-20 19:00:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.39 Mbit/s

95th percentile per-packet one-way delay: 113.365 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 65.25 Mbit/s

95th percentile per-packet one-way delay: 113.394 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 50.86 Mbit/s

95th percentile per-packet one-way delay: 113.311 ms

Loss rate: 1.53%

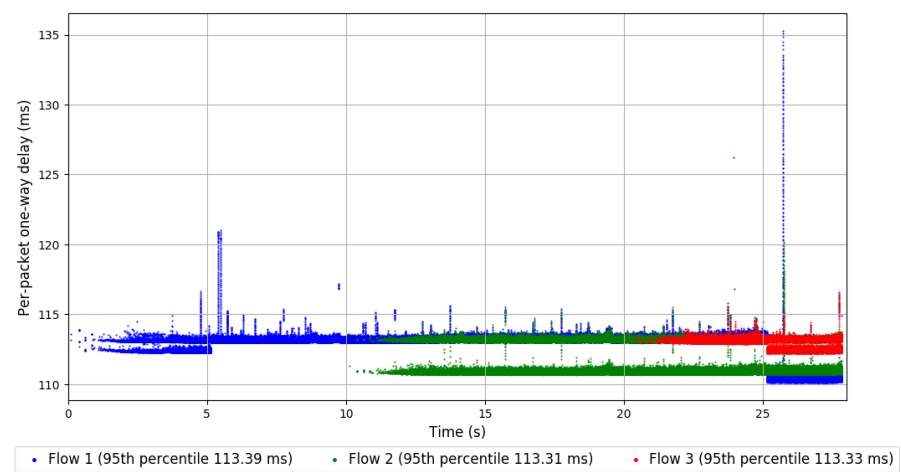
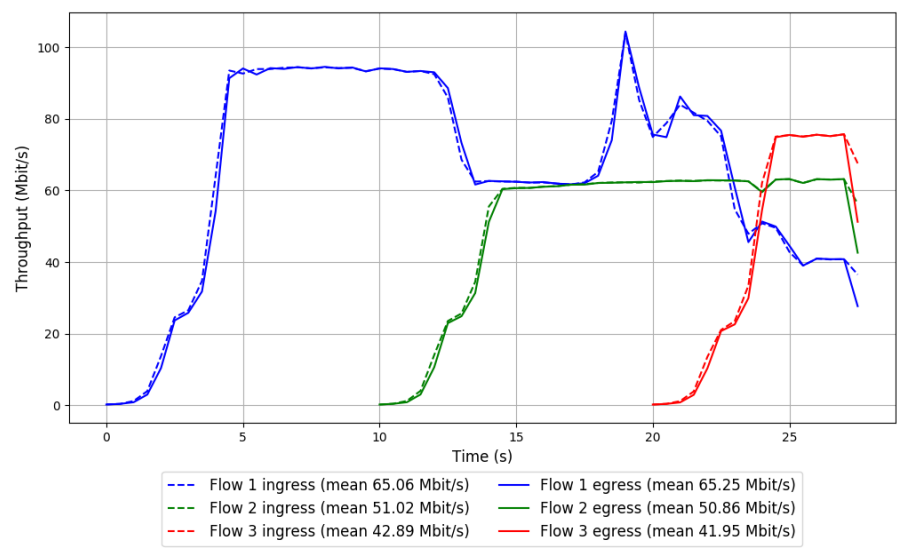
-- Flow 3:

Average throughput: 41.95 Mbit/s

95th percentile per-packet one-way delay: 113.331 ms

Loss rate: 4.94%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-12-20 14:48:36

End at: 2017-12-20 14:49:06

Below is generated by plot.py at 2017-12-20 19:01:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 122.51 Mbit/s

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

Loss rate: 1.15%

-- Flow 1:

Average throughput: 70.70 Mbit/s

95th percentile per-packet one-way delay: 112.514 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 67.42 Mbit/s

95th percentile per-packet one-way delay: 112.588 ms

Loss rate: 0.99%

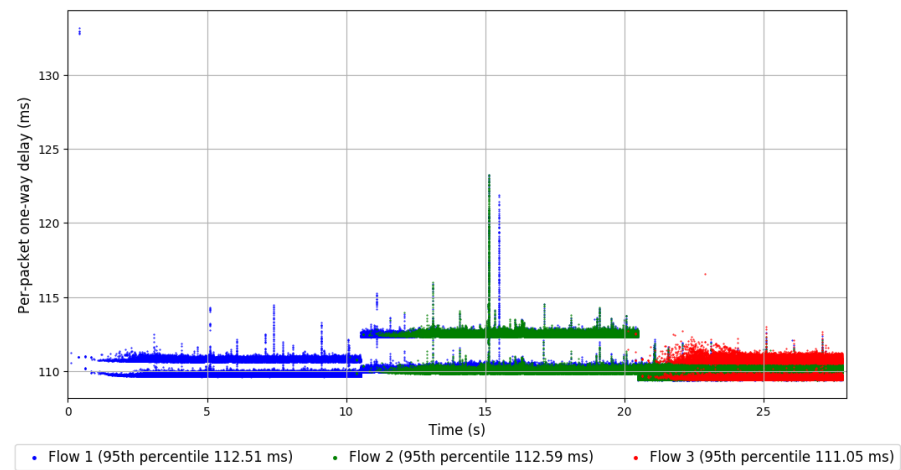
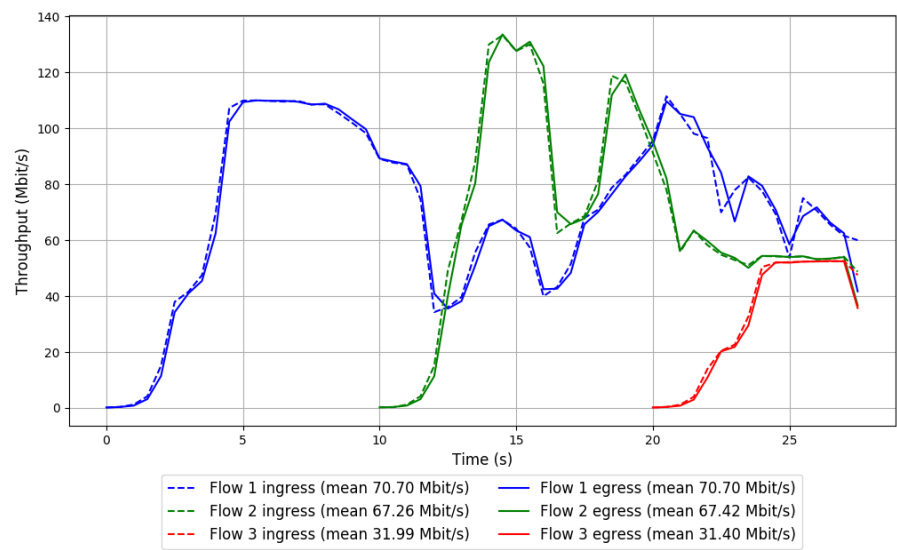
-- Flow 3:

Average throughput: 31.40 Mbit/s

95th percentile per-packet one-way delay: 111.046 ms

Loss rate: 4.60%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-12-20 15:04:05

End at: 2017-12-20 15:04:35

Below is generated by plot.py at 2017-12-20 19:01:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.07 Mbit/s

95th percentile per-packet one-way delay: 112.529 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 69.36 Mbit/s

95th percentile per-packet one-way delay: 112.555 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 157.091 ms

Loss rate: 46.17%

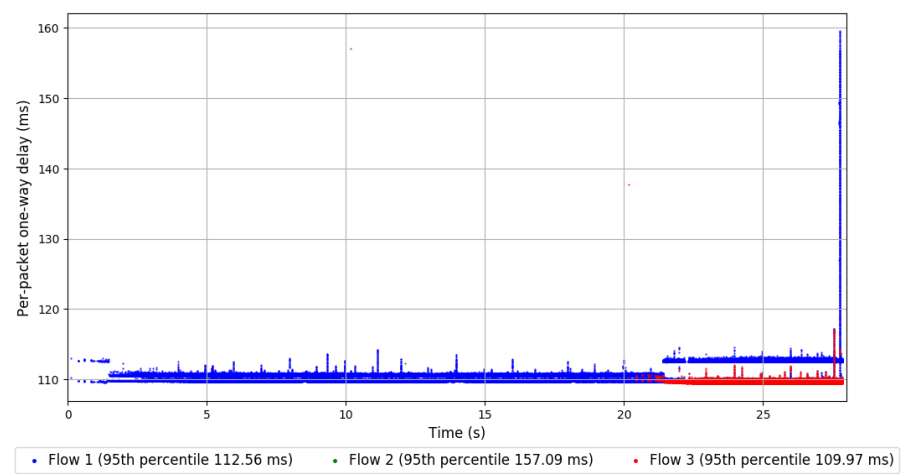
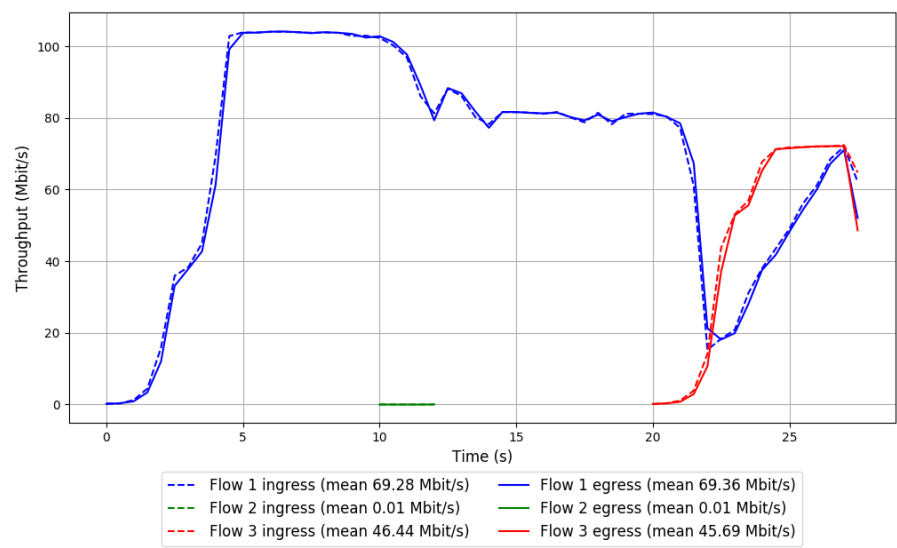
-- Flow 3:

Average throughput: 45.69 Mbit/s

95th percentile per-packet one-way delay: 109.970 ms

Loss rate: 4.35%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-12-20 15:19:38

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

Below is generated by plot.py at 2017-12-20 19:01:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.35 Mbit/s

95th percentile per-packet one-way delay: 112.744 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 75.17 Mbit/s

95th percentile per-packet one-way delay: 112.745 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 176.397 ms

Loss rate: 46.17%

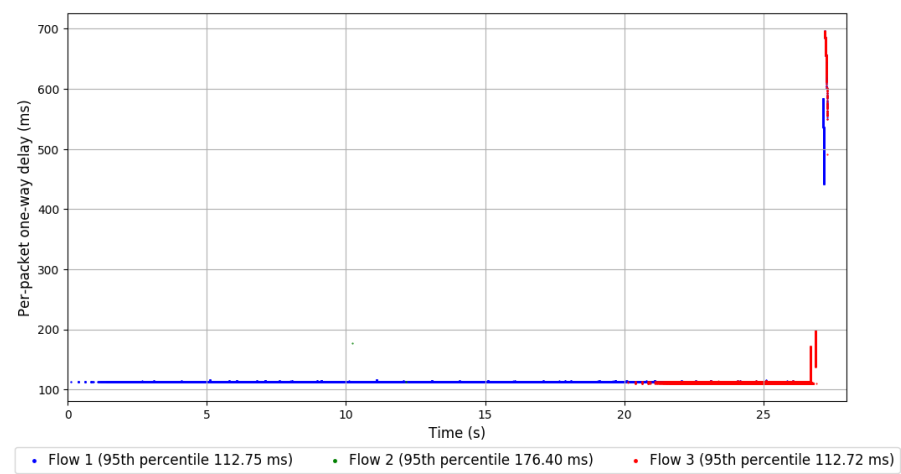
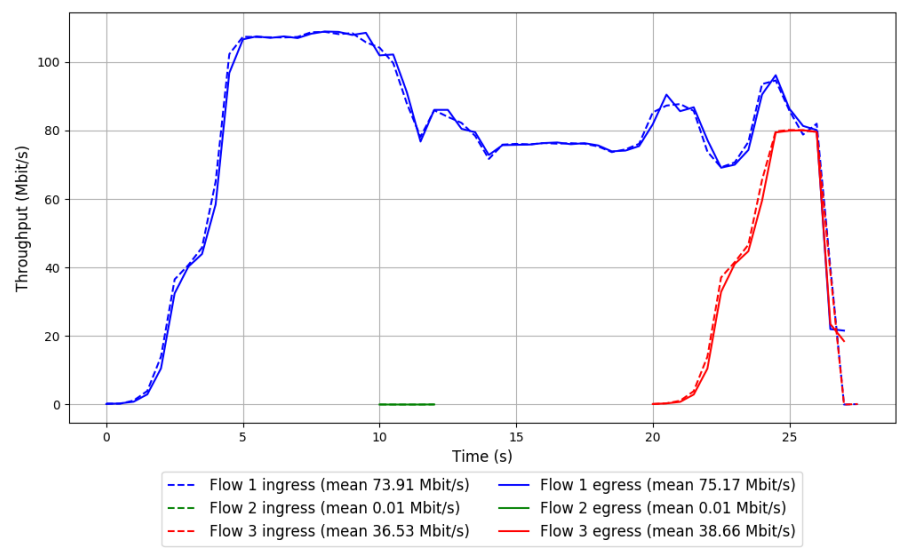
-- Flow 3:

Average throughput: 38.66 Mbit/s

95th percentile per-packet one-way delay: 112.716 ms

Loss rate: 2.59%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-12-20 15:35:13

End at: 2017-12-20 15:35:43

Below is generated by plot.py at 2017-12-20 19:02:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 118.49 Mbit/s

95th percentile per-packet one-way delay: 112.457 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 70.51 Mbit/s

95th percentile per-packet one-way delay: 110.804 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 63.89 Mbit/s

95th percentile per-packet one-way delay: 112.455 ms

Loss rate: 1.61%

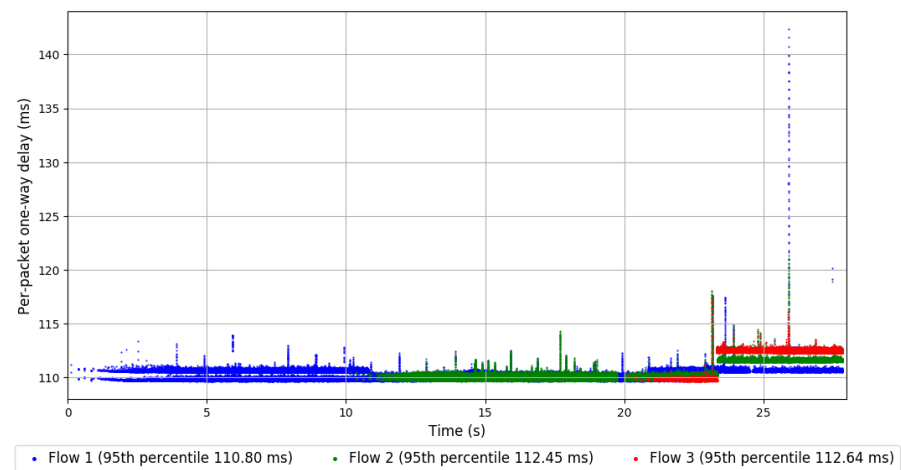
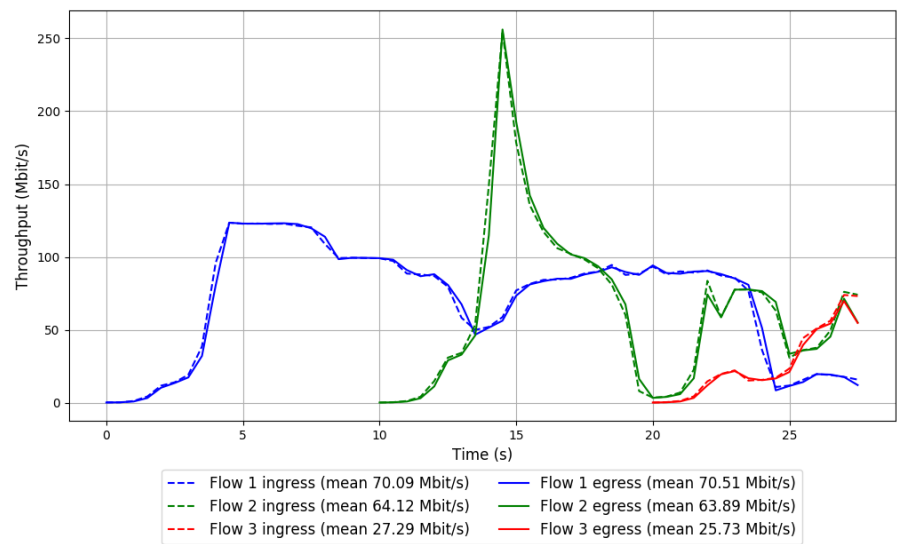
-- Flow 3:

Average throughput: 25.73 Mbit/s

95th percentile per-packet one-way delay: 112.642 ms

Loss rate: 8.37%

Run 10: Report of Copa — Data Link

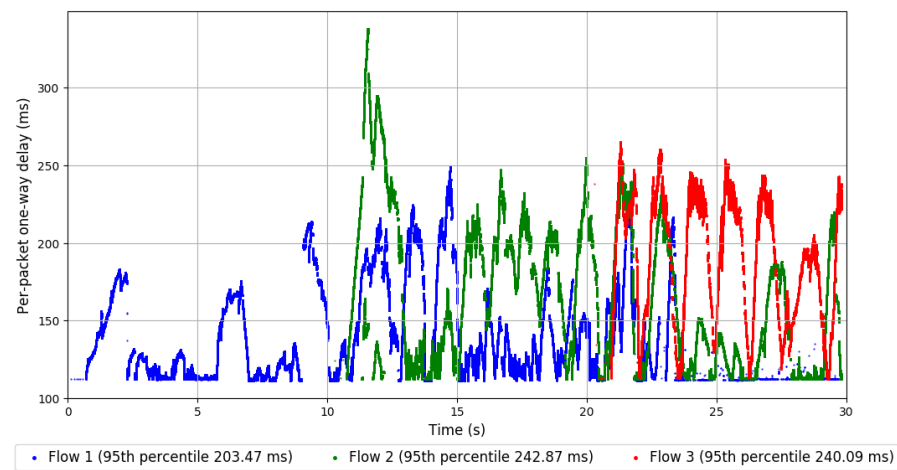
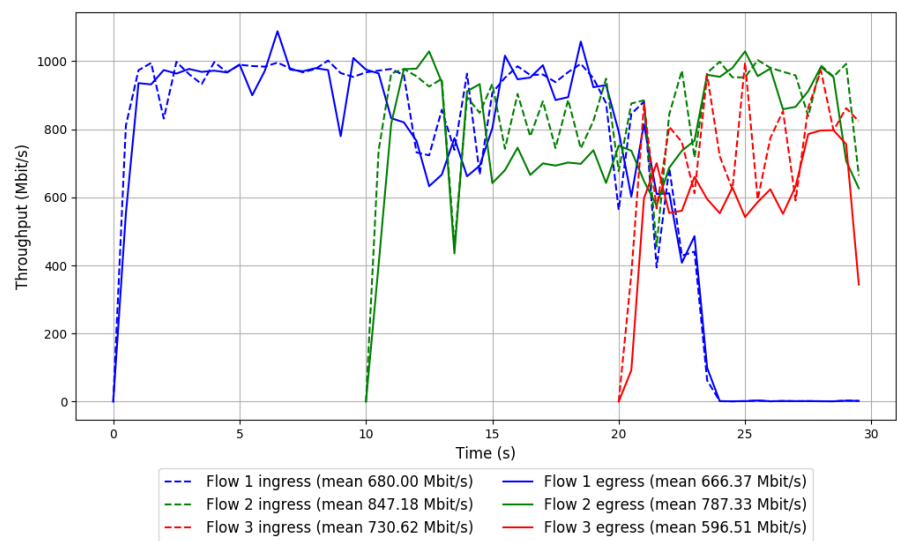


```
Run 1: Statistics of FillP

Start at: 2017-12-20 13:12:00
End at: 2017-12-20 13:12:30

# Below is generated by plot.py at 2017-12-20 19:25:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1378.12 Mbit/s
95th percentile per-packet one-way delay: 230.777 ms
Loss rate: 7.82%
-- Flow 1:
Average throughput: 666.37 Mbit/s
95th percentile per-packet one-way delay: 203.475 ms
Loss rate: 2.77%
-- Flow 2:
Average throughput: 787.33 Mbit/s
95th percentile per-packet one-way delay: 242.865 ms
Loss rate: 8.14%
-- Flow 3:
Average throughput: 596.51 Mbit/s
95th percentile per-packet one-way delay: 240.090 ms
Loss rate: 21.27%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2017-12-20 13:27:30

End at: 2017-12-20 13:28:00

Below is generated by plot.py at 2017-12-20 19:25:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 909.17 Mbit/s

95th percentile per-packet one-way delay: 223.594 ms

Loss rate: 5.68%

-- Flow 1:

Average throughput: 343.23 Mbit/s

95th percentile per-packet one-way delay: 222.870 ms

Loss rate: 7.44%

-- Flow 2:

Average throughput: 705.96 Mbit/s

95th percentile per-packet one-way delay: 236.673 ms

Loss rate: 5.48%

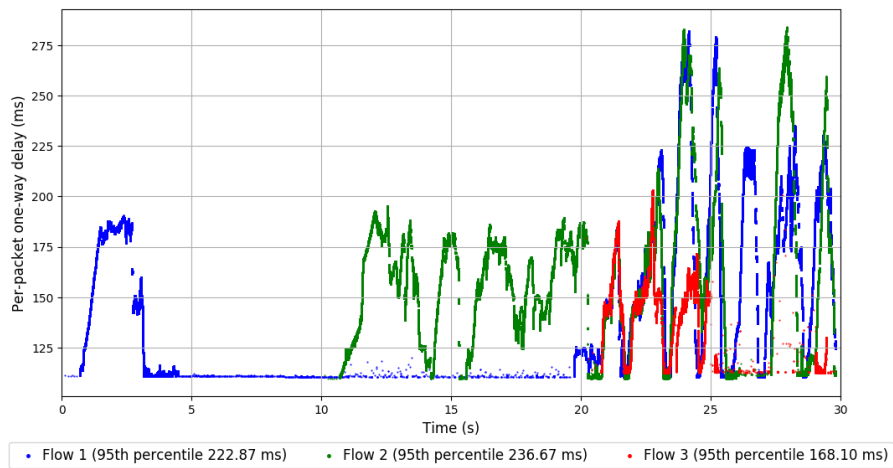
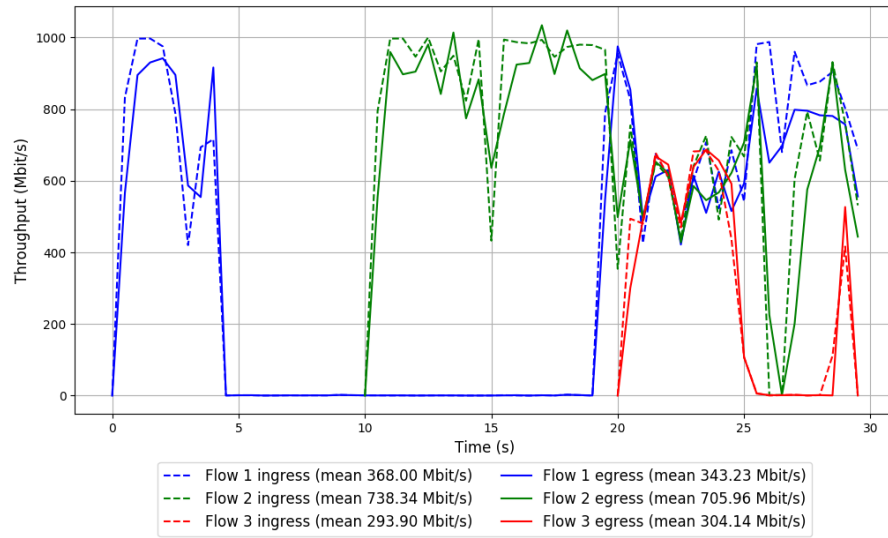
-- Flow 3:

Average throughput: 304.14 Mbit/s

95th percentile per-packet one-way delay: 168.096 ms

Loss rate: 0.00%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2017-12-20 13:42:28

End at: 2017-12-20 13:42:58

Below is generated by plot.py at 2017-12-20 19:27:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 1522.36 Mbit/s

95th percentile per-packet one-way delay: 320.439 ms

Loss rate: 4.92%

-- Flow 1:

Average throughput: 832.00 Mbit/s

95th percentile per-packet one-way delay: 327.351 ms

Loss rate: 2.42%

-- Flow 2:

Average throughput: 768.84 Mbit/s

95th percentile per-packet one-way delay: 228.211 ms

Loss rate: 7.70%

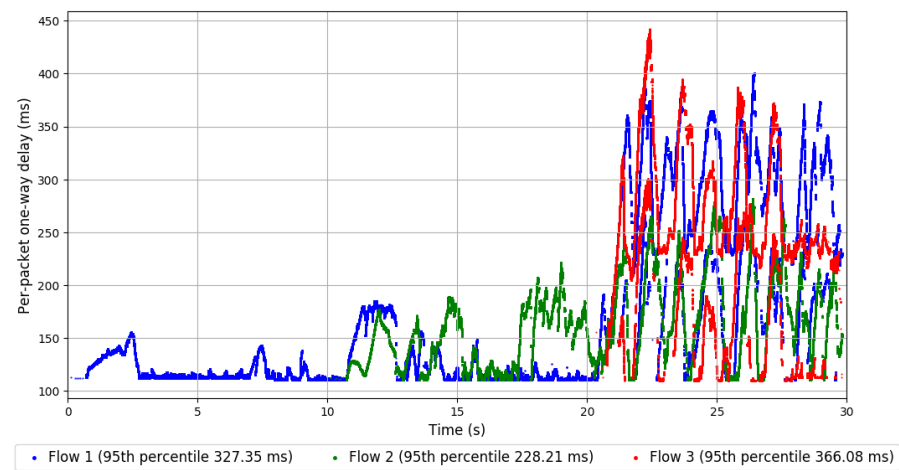
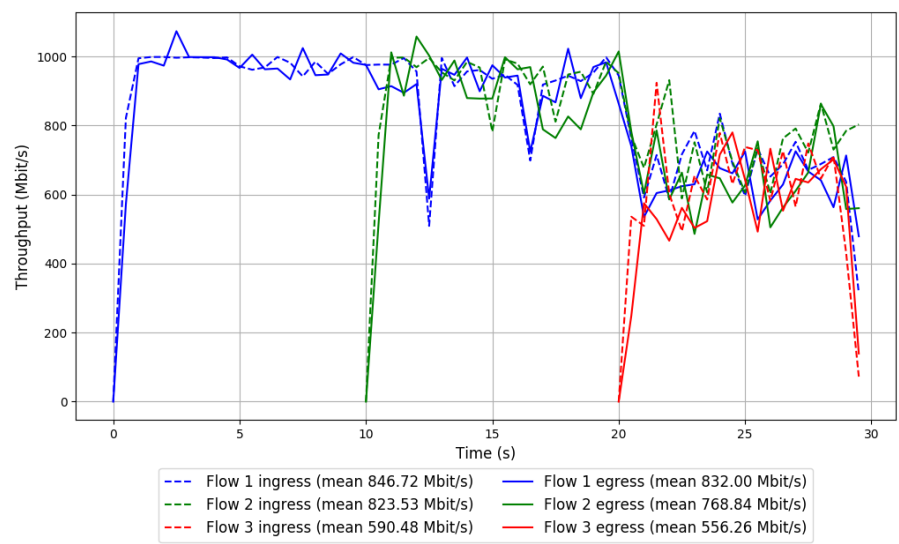
-- Flow 3:

Average throughput: 556.26 Mbit/s

95th percentile per-packet one-way delay: 366.083 ms

Loss rate: 7.91%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2017-12-20 13:57:48

End at: 2017-12-20 13:58:18

Below is generated by plot.py at 2017-12-20 19:27:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 1339.04 Mbit/s

95th percentile per-packet one-way delay: 227.434 ms

Loss rate: 6.85%

-- Flow 1:

Average throughput: 578.61 Mbit/s

95th percentile per-packet one-way delay: 214.462 ms

Loss rate: 2.04%

-- Flow 2:

Average throughput: 745.12 Mbit/s

95th percentile per-packet one-way delay: 224.485 ms

Loss rate: 11.40%

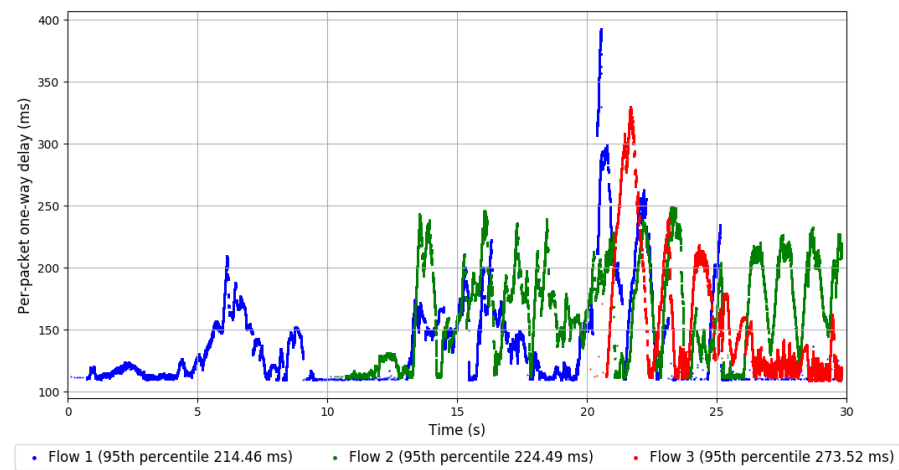
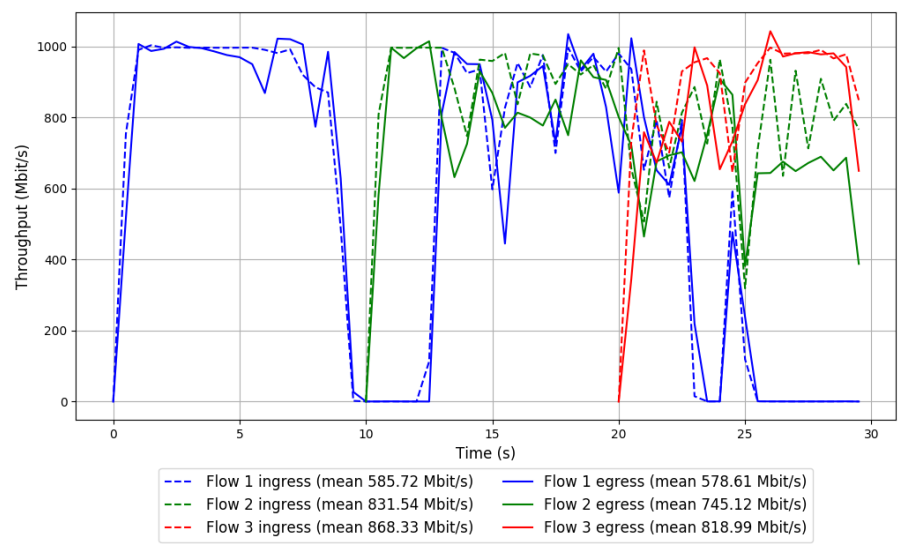
-- Flow 3:

Average throughput: 818.99 Mbit/s

95th percentile per-packet one-way delay: 273.521 ms

Loss rate: 7.89%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2017-12-20 14:13:03

End at: 2017-12-20 14:13:33

Below is generated by plot.py at 2017-12-20 19:28:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1528.74 Mbit/s

95th percentile per-packet one-way delay: 325.627 ms

Loss rate: 6.22%

-- Flow 1:

Average throughput: 835.53 Mbit/s

95th percentile per-packet one-way delay: 322.460 ms

Loss rate: 5.06%

-- Flow 2:

Average throughput: 669.51 Mbit/s

95th percentile per-packet one-way delay: 333.884 ms

Loss rate: 5.68%

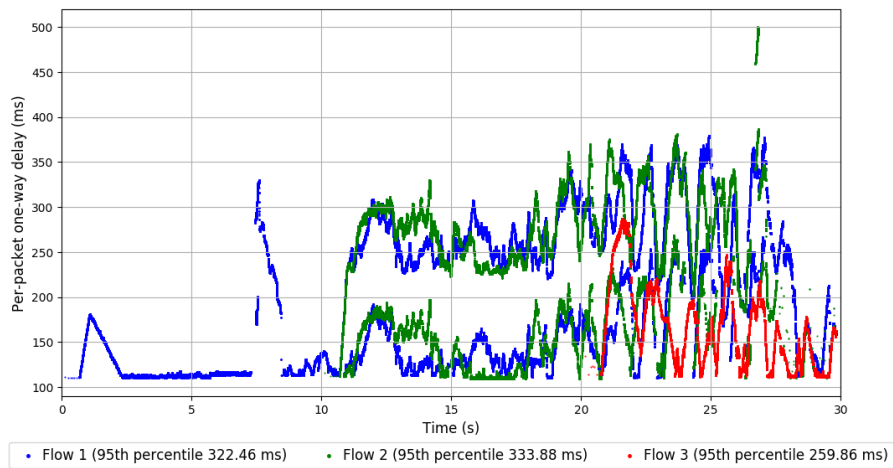
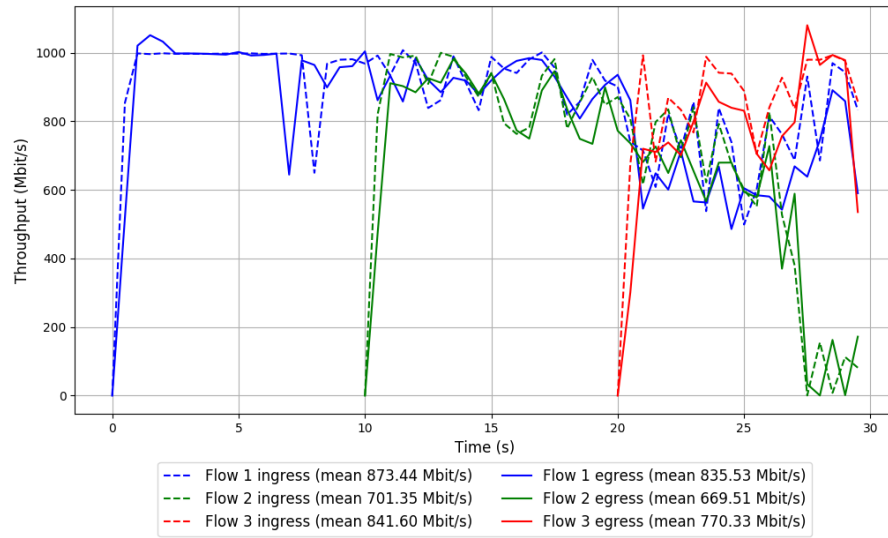
-- Flow 3:

Average throughput: 770.33 Mbit/s

95th percentile per-packet one-way delay: 259.855 ms

Loss rate: 10.76%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2017-12-20 14:28:31

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

Below is generated by plot.py at 2017-12-20 19:28:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1493.99 Mbit/s

95th percentile per-packet one-way delay: 234.704 ms

Loss rate: 7.59%

-- Flow 1:

Average throughput: 786.41 Mbit/s

95th percentile per-packet one-way delay: 237.191 ms

Loss rate: 7.29%

-- Flow 2:

Average throughput: 715.27 Mbit/s

95th percentile per-packet one-way delay: 223.585 ms

Loss rate: 5.60%

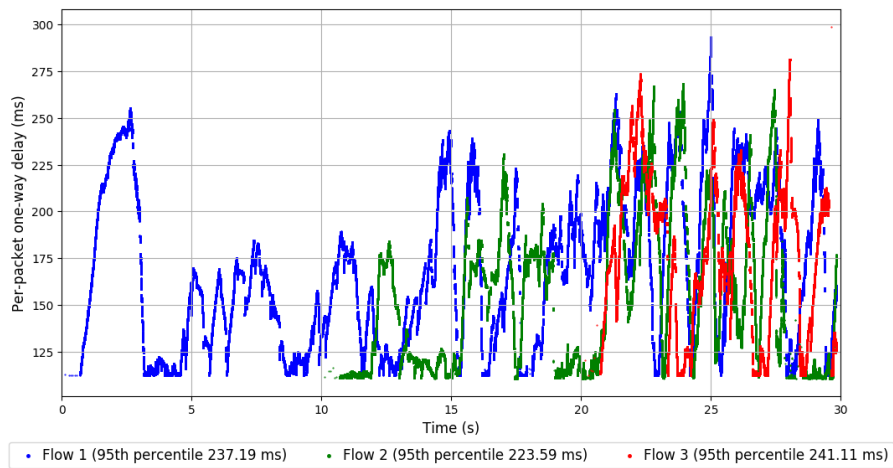
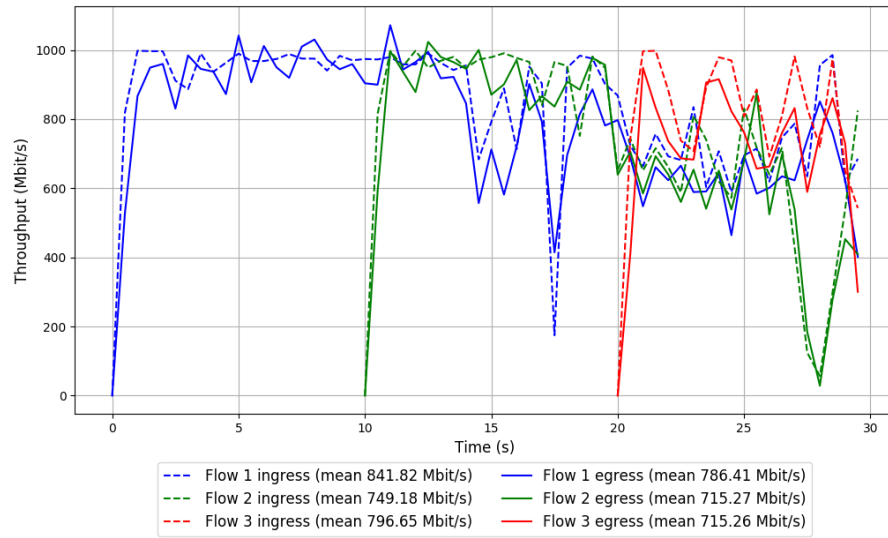
-- Flow 3:

Average throughput: 715.26 Mbit/s

95th percentile per-packet one-way delay: 241.113 ms

Loss rate: 12.33%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2017-12-20 14:43:41

End at: 2017-12-20 14:44:11

Below is generated by plot.py at 2017-12-20 19:28:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1373.45 Mbit/s

95th percentile per-packet one-way delay: 342.819 ms

Loss rate: 13.54%

-- Flow 1:

Average throughput: 765.89 Mbit/s

95th percentile per-packet one-way delay: 334.974 ms

Loss rate: 9.47%

-- Flow 2:

Average throughput: 634.48 Mbit/s

95th percentile per-packet one-way delay: 363.058 ms

Loss rate: 16.10%

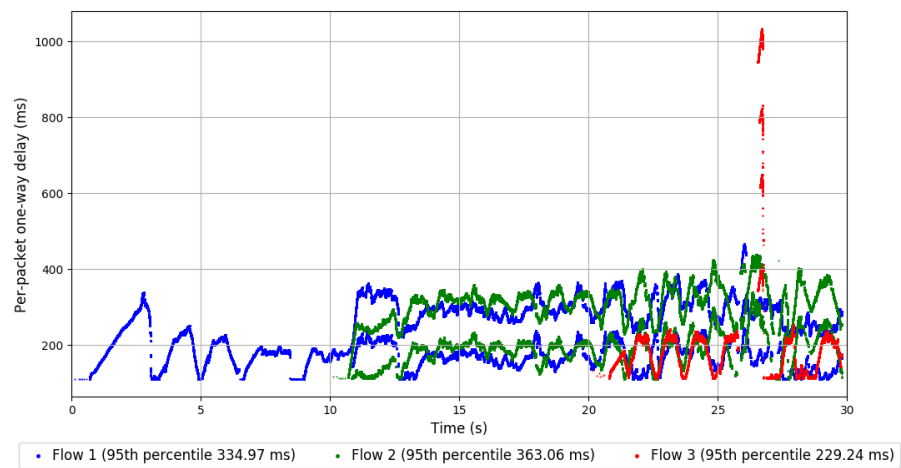
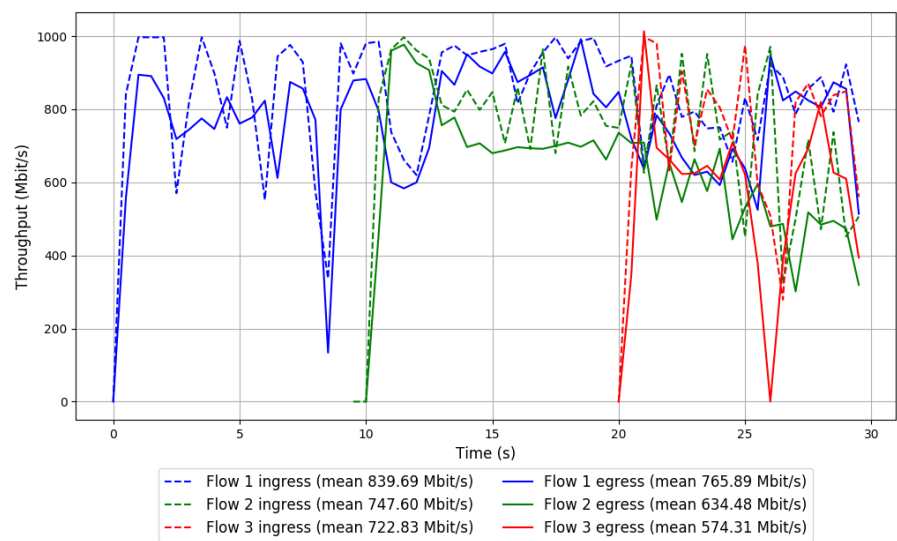
-- Flow 3:

Average throughput: 574.31 Mbit/s

95th percentile per-packet one-way delay: 229.236 ms

Loss rate: 22.51%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2017-12-20 14:59:03

End at: 2017-12-20 14:59:33

Below is generated by plot.py at 2017-12-20 19:34:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 1629.14 Mbit/s

95th percentile per-packet one-way delay: 215.659 ms

Loss rate: 7.64%

-- Flow 1:

Average throughput: 889.91 Mbit/s

95th percentile per-packet one-way delay: 211.600 ms

Loss rate: 4.43%

-- Flow 2:

Average throughput: 788.30 Mbit/s

95th percentile per-packet one-way delay: 218.089 ms

Loss rate: 9.92%

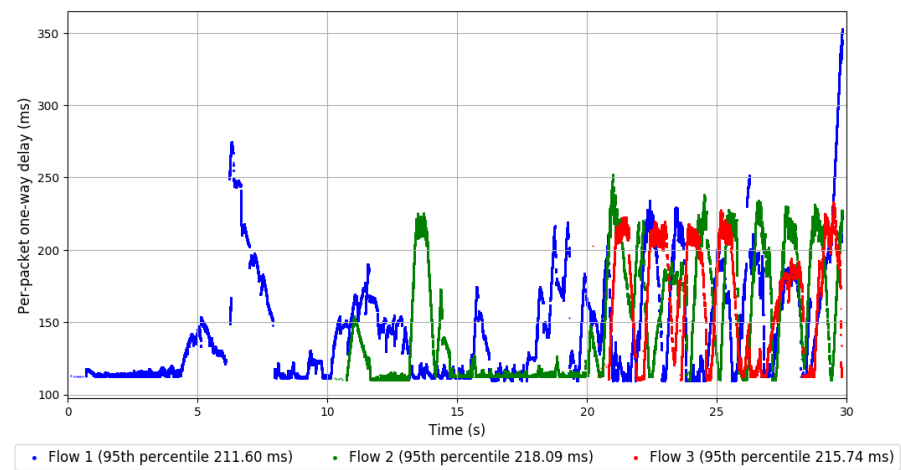
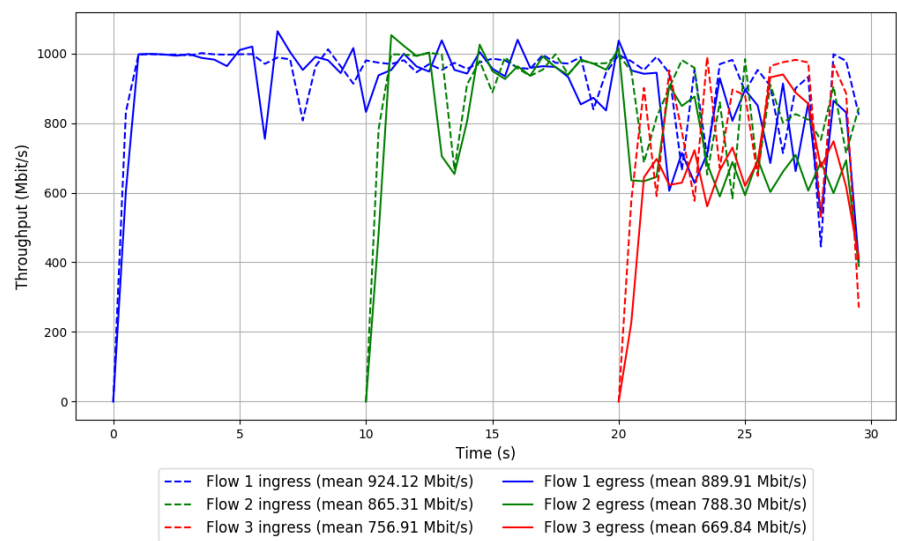
-- Flow 3:

Average throughput: 669.84 Mbit/s

95th percentile per-packet one-way delay: 215.738 ms

Loss rate: 14.23%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2017-12-20 15:14:25

End at: 2017-12-20 15:14:55

Below is generated by plot.py at 2017-12-20 19:38:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 1581.37 Mbit/s

95th percentile per-packet one-way delay: 253.969 ms

Loss rate: 8.55%

-- Flow 1:

Average throughput: 832.71 Mbit/s

95th percentile per-packet one-way delay: 277.426 ms

Loss rate: 7.11%

-- Flow 2:

Average throughput: 796.80 Mbit/s

95th percentile per-packet one-way delay: 220.972 ms

Loss rate: 9.04%

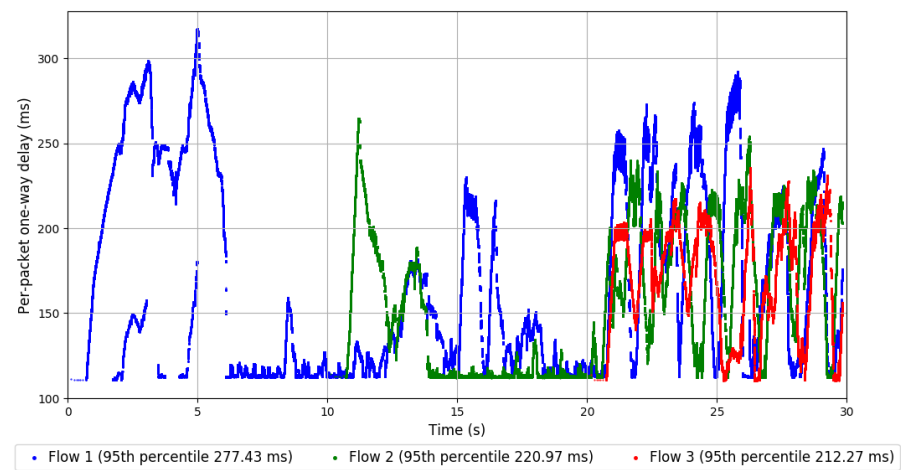
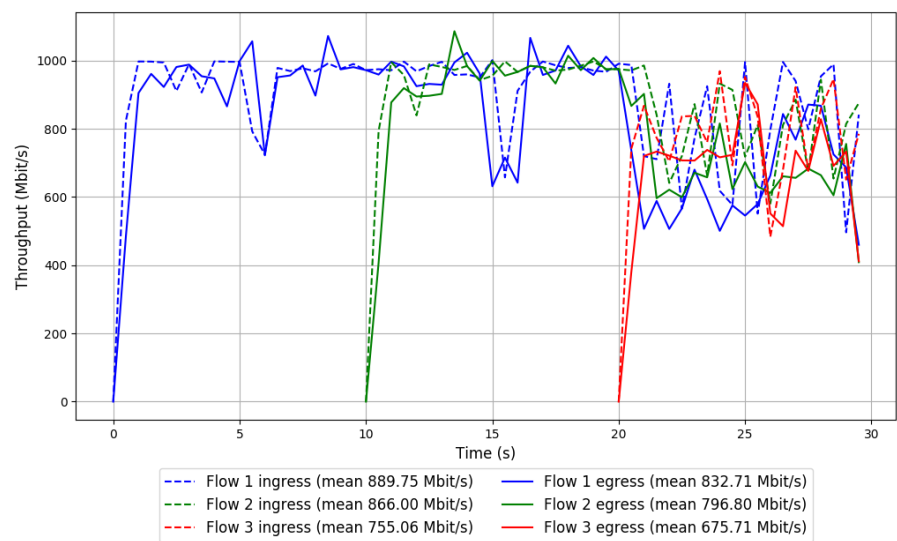
-- Flow 3:

Average throughput: 675.71 Mbit/s

95th percentile per-packet one-way delay: 212.266 ms

Loss rate: 12.56%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2017-12-20 15:30:09

End at: 2017-12-20 15:30:39

Below is generated by plot.py at 2017-12-20 19:39:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 1550.89 Mbit/s

95th percentile per-packet one-way delay: 223.823 ms

Loss rate: 9.74%

-- Flow 1:

Average throughput: 846.79 Mbit/s

95th percentile per-packet one-way delay: 222.973 ms

Loss rate: 6.32%

-- Flow 2:

Average throughput: 757.21 Mbit/s

95th percentile per-packet one-way delay: 212.998 ms

Loss rate: 10.83%

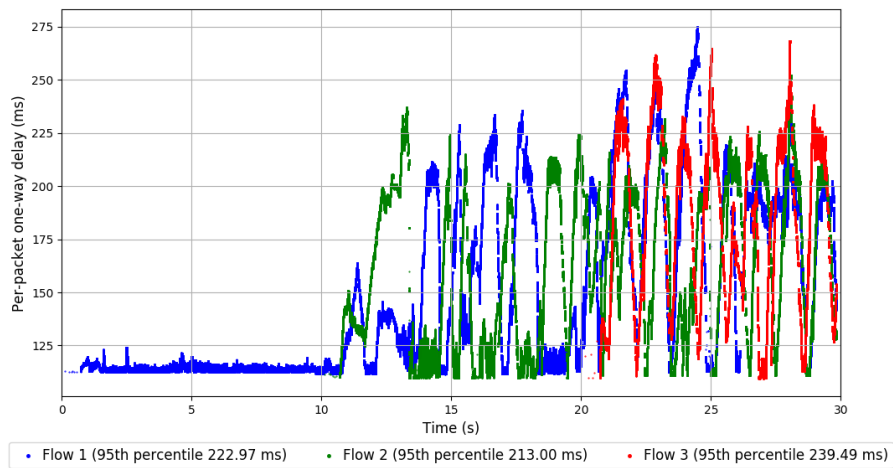
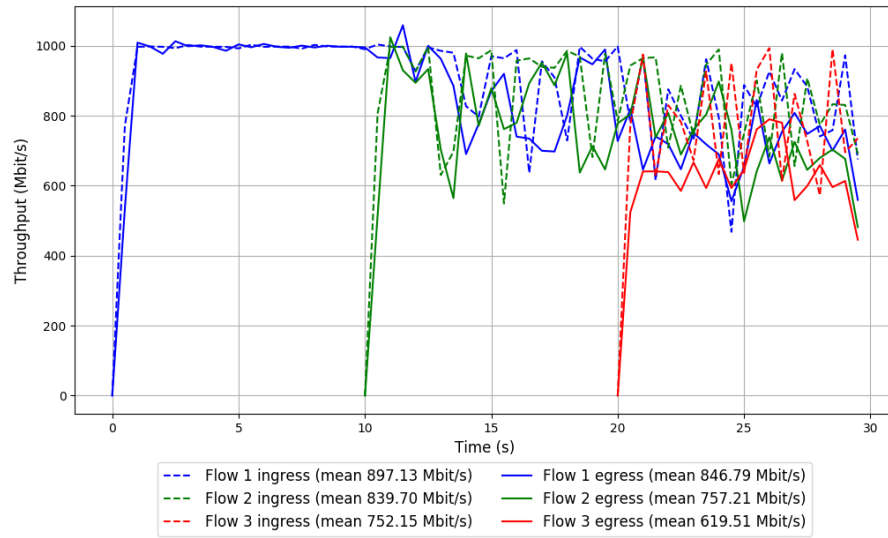
-- Flow 3:

Average throughput: 619.51 Mbit/s

95th percentile per-packet one-way delay: 239.489 ms

Loss rate: 19.56%

Run 10: Report of FillP — Data Link

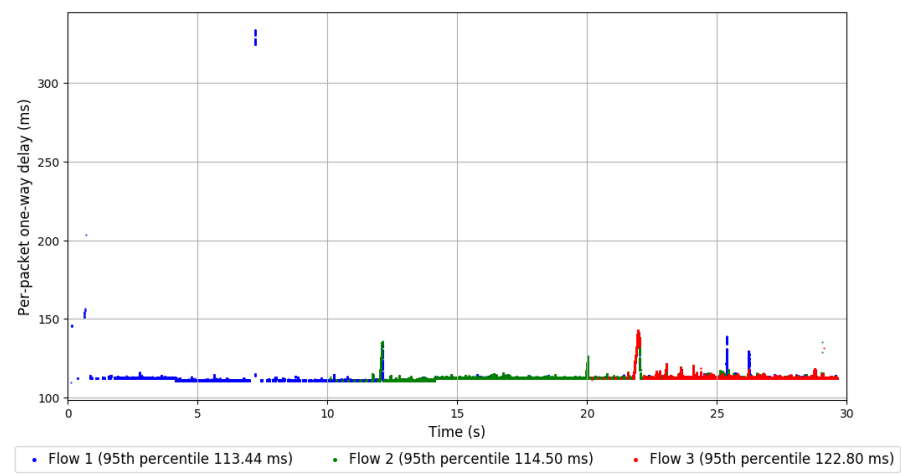
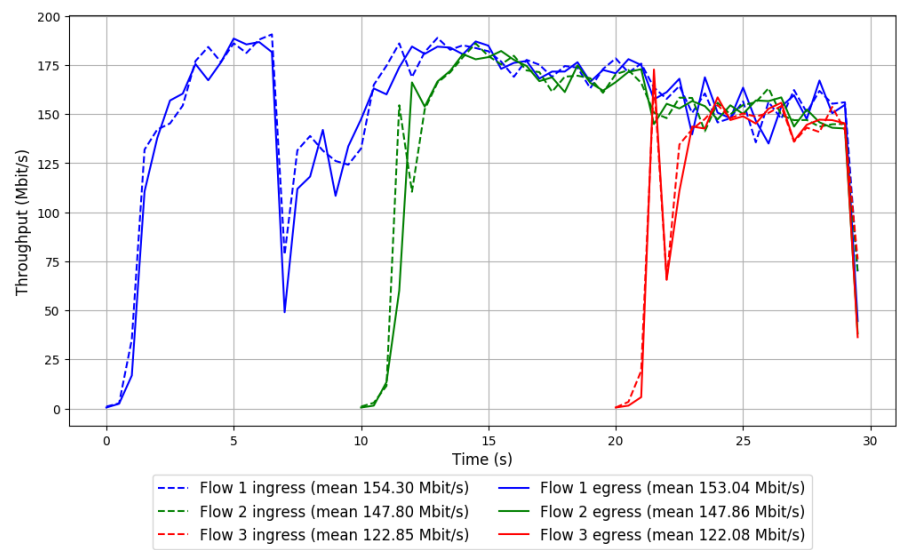


```
Run 1: Statistics of Indigo

Start at: 2017-12-20 13:15:04
End at: 2017-12-20 13:15:34

# Below is generated by plot.py at 2017-12-20 19:39:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 289.87 Mbit/s
95th percentile per-packet one-way delay: 114.213 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 153.04 Mbit/s
95th percentile per-packet one-way delay: 113.442 ms
Loss rate: 1.56%
-- Flow 2:
Average throughput: 147.86 Mbit/s
95th percentile per-packet one-way delay: 114.500 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 122.08 Mbit/s
95th percentile per-packet one-way delay: 122.802 ms
Loss rate: 2.92%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2017-12-20 13:30:07

End at: 2017-12-20 13:30:37

Below is generated by plot.py at 2017-12-20 19:39:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 295.63 Mbit/s

95th percentile per-packet one-way delay: 113.575 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 161.19 Mbit/s

95th percentile per-packet one-way delay: 113.035 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 147.19 Mbit/s

95th percentile per-packet one-way delay: 114.353 ms

Loss rate: 1.16%

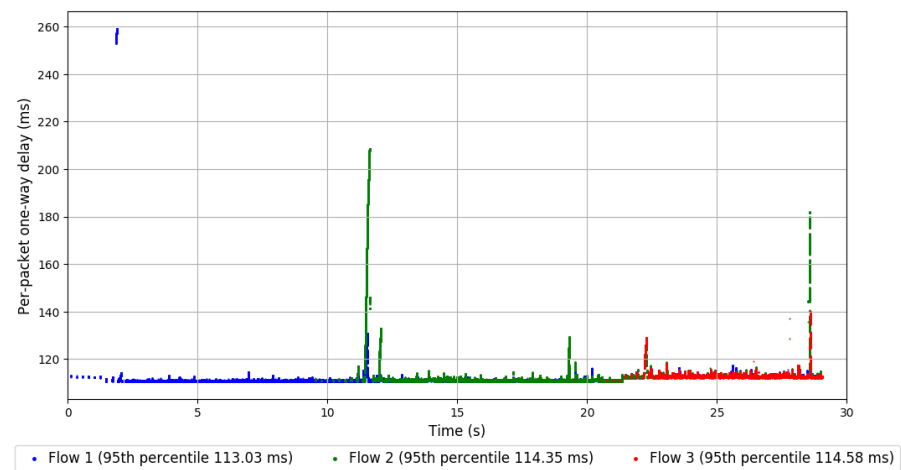
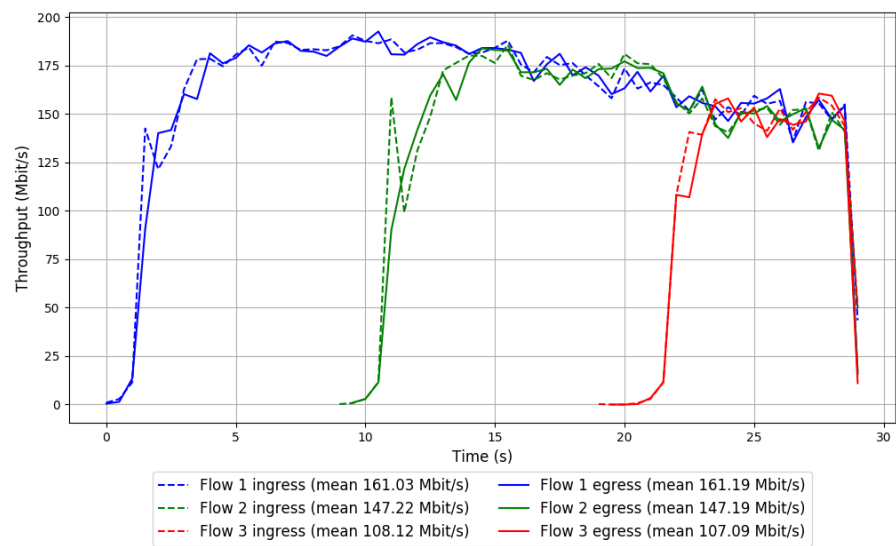
-- Flow 3:

Average throughput: 107.09 Mbit/s

95th percentile per-packet one-way delay: 114.577 ms

Loss rate: 3.22%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2017-12-20 13:45:33

End at: 2017-12-20 13:46:03

Below is generated by plot.py at 2017-12-20 19:39:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 298.90 Mbit/s

95th percentile per-packet one-way delay: 114.420 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 159.99 Mbit/s

95th percentile per-packet one-way delay: 114.012 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 146.89 Mbit/s

95th percentile per-packet one-way delay: 114.736 ms

Loss rate: 1.12%

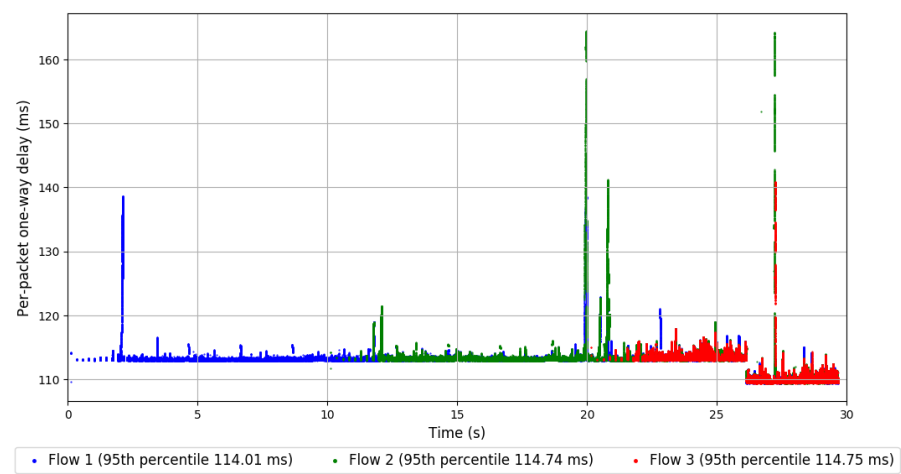
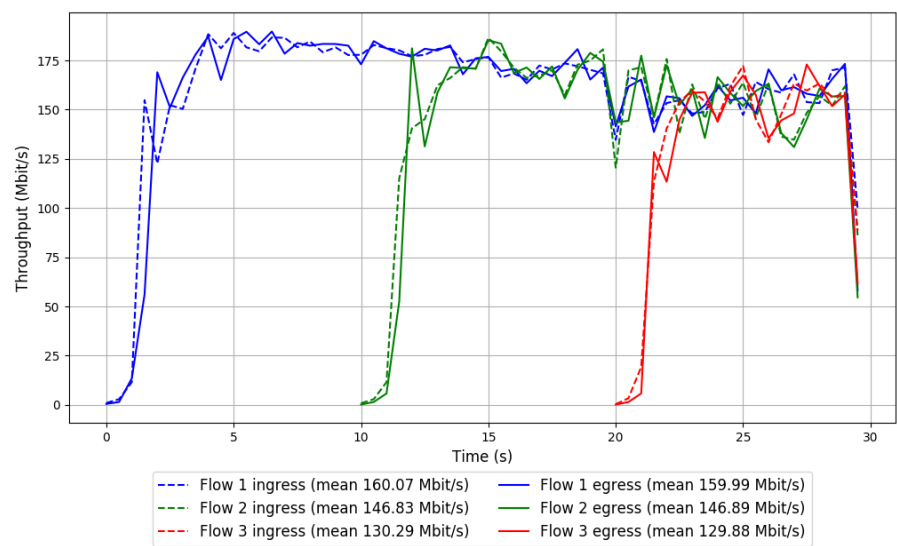
-- Flow 3:

Average throughput: 129.88 Mbit/s

95th percentile per-packet one-way delay: 114.753 ms

Loss rate: 2.62%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2017-12-20 14:00:28

End at: 2017-12-20 14:00:59

Below is generated by plot.py at 2017-12-20 19:39:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 292.97 Mbit/s

95th percentile per-packet one-way delay: 113.898 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 157.73 Mbit/s

95th percentile per-packet one-way delay: 113.617 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 146.78 Mbit/s

95th percentile per-packet one-way delay: 113.982 ms

Loss rate: 1.25%

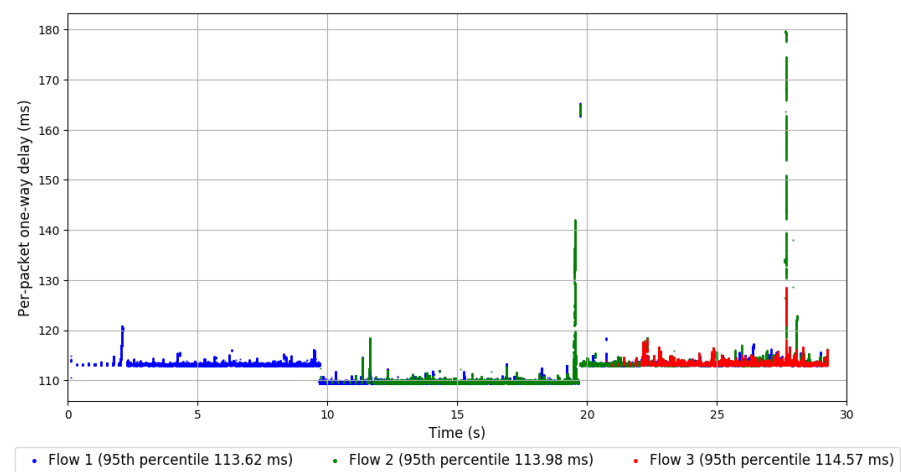
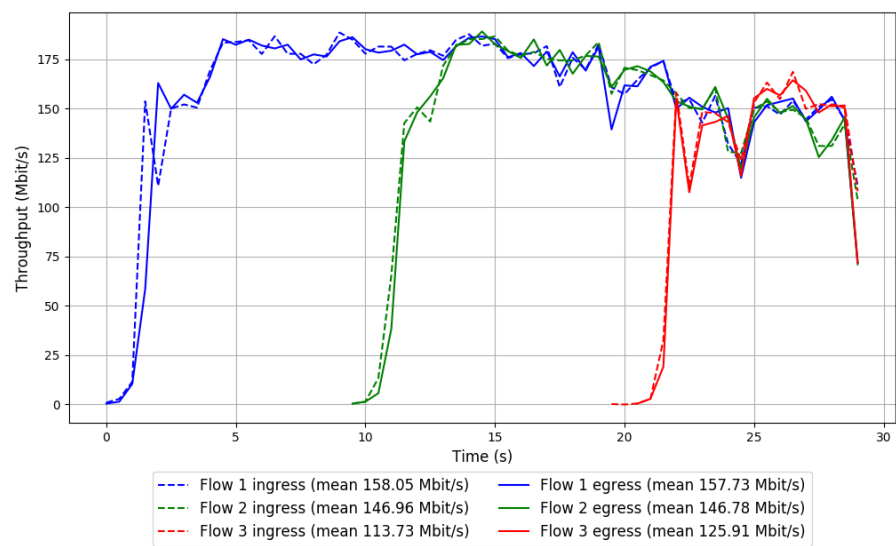
-- Flow 3:

Average throughput: 125.91 Mbit/s

95th percentile per-packet one-way delay: 114.573 ms

Loss rate: 3.20%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2017-12-20 14:16:13

End at: 2017-12-20 14:16:43

Below is generated by plot.py at 2017-12-20 19:39:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 298.78 Mbit/s

95th percentile per-packet one-way delay: 113.644 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 159.51 Mbit/s

95th percentile per-packet one-way delay: 113.479 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 148.58 Mbit/s

95th percentile per-packet one-way delay: 113.808 ms

Loss rate: 1.16%

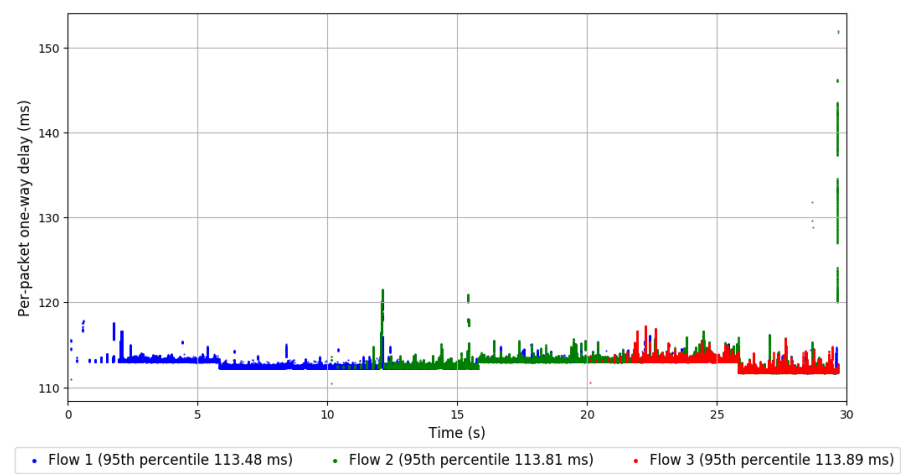
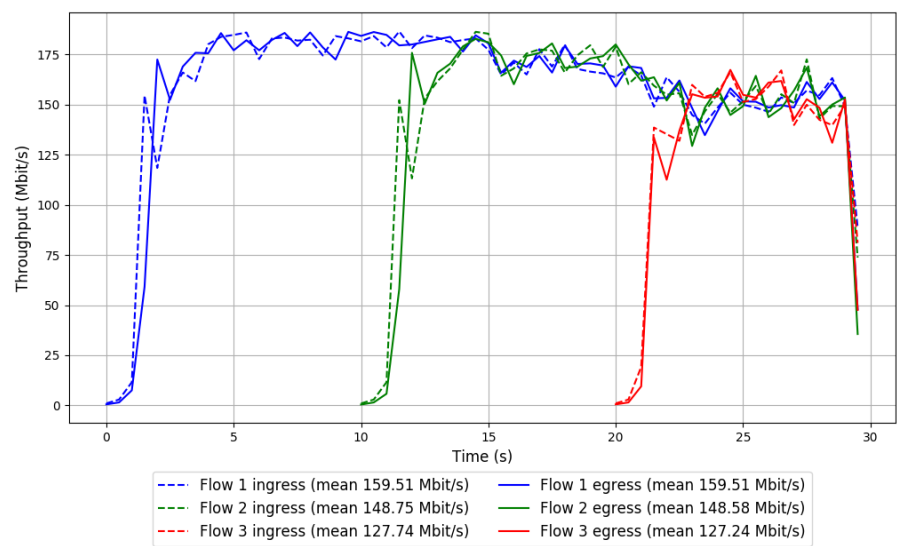
-- Flow 3:

Average throughput: 127.24 Mbit/s

95th percentile per-packet one-way delay: 113.892 ms

Loss rate: 2.67%

Run 5: Report of Indigo — Data Link



Run 6: Statistics of Indigo

Start at: 2017-12-20 14:31:23

End at: 2017-12-20 14:31:53

Below is generated by plot.py at 2017-12-20 19:39:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 296.84 Mbit/s

95th percentile per-packet one-way delay: 114.634 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 158.59 Mbit/s

95th percentile per-packet one-way delay: 114.115 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 146.79 Mbit/s

95th percentile per-packet one-way delay: 114.813 ms

Loss rate: 1.53%

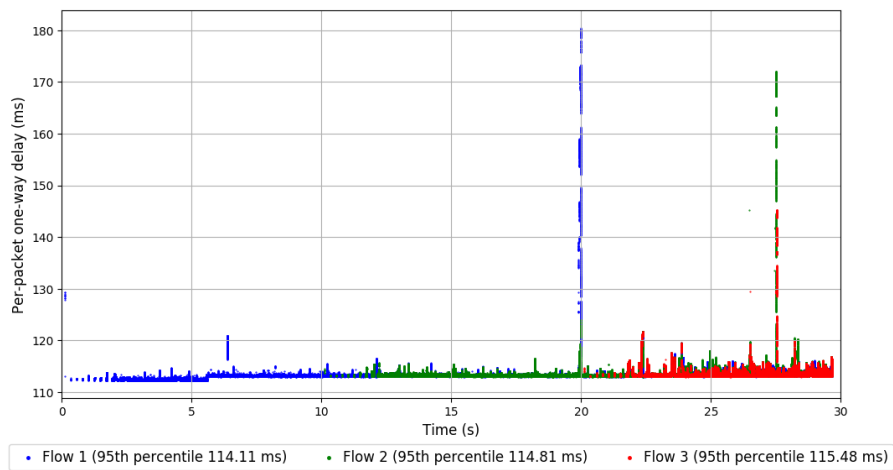
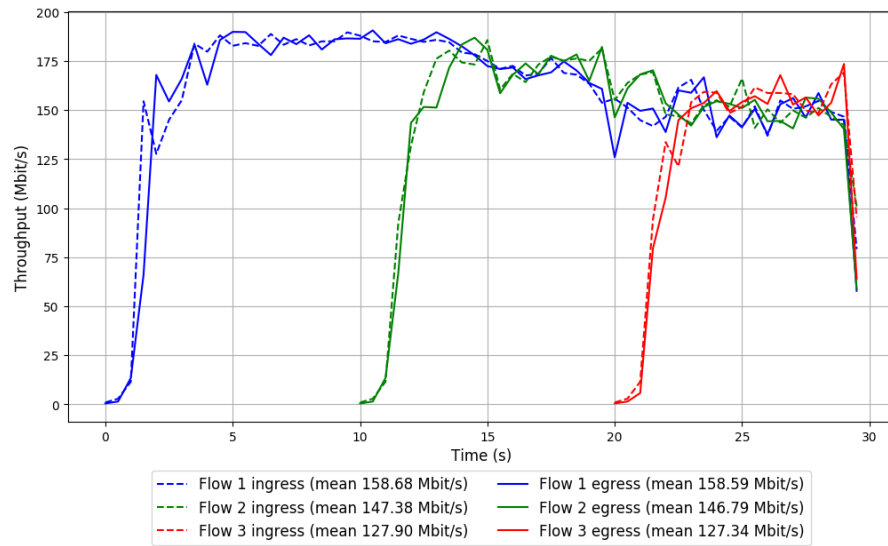
-- Flow 3:

Average throughput: 127.34 Mbit/s

95th percentile per-packet one-way delay: 115.477 ms

Loss rate: 2.73%

Run 6: Report of Indigo — Data Link



Run 7: Statistics of Indigo

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 19:39:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 302.68 Mbit/s

95th percentile per-packet one-way delay: 110.839 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 163.68 Mbit/s

95th percentile per-packet one-way delay: 110.593 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 150.01 Mbit/s

95th percentile per-packet one-way delay: 111.075 ms

Loss rate: 1.24%

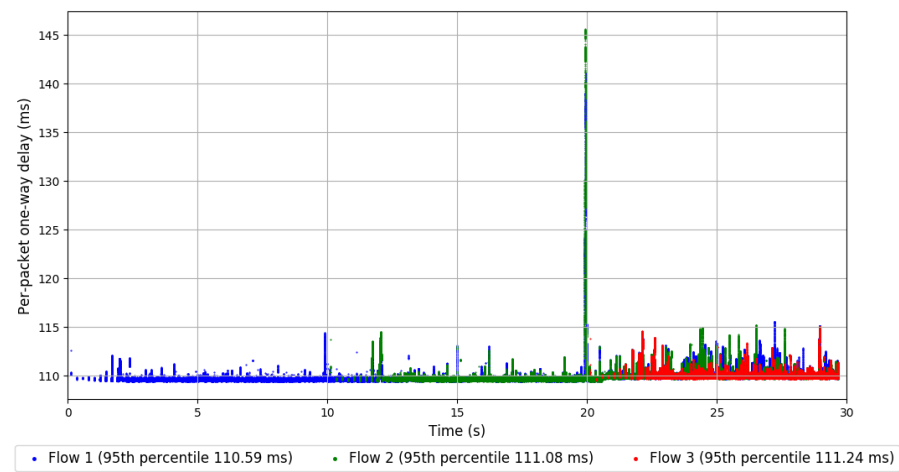
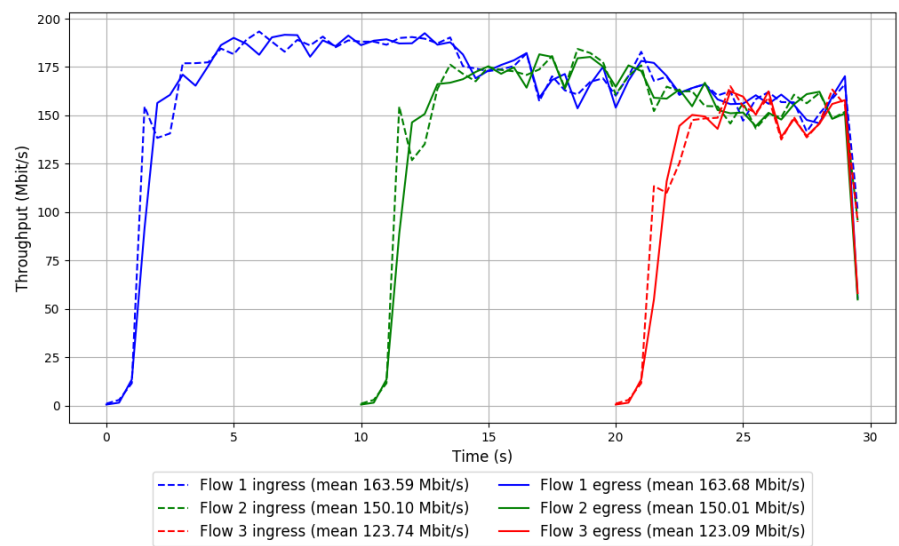
-- Flow 3:

Average throughput: 123.09 Mbit/s

95th percentile per-packet one-way delay: 111.241 ms

Loss rate: 2.96%

Run 7: Report of Indigo — Data Link



Run 8: Statistics of Indigo

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

End at: 2017-12-20 15:02:36

Below is generated by plot.py at 2017-12-20 19:39:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 312.36 Mbit/s

95th percentile per-packet one-way delay: 112.305 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 166.77 Mbit/s

95th percentile per-packet one-way delay: 111.720 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 158.08 Mbit/s

95th percentile per-packet one-way delay: 112.317 ms

Loss rate: 1.00%

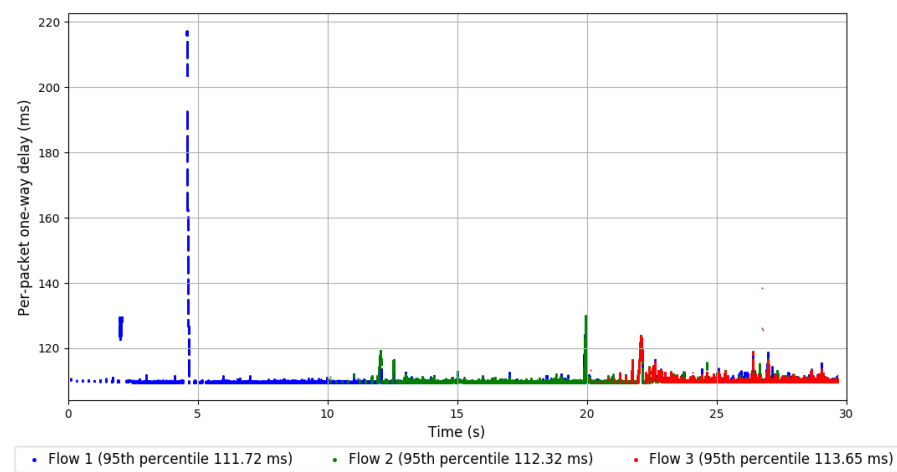
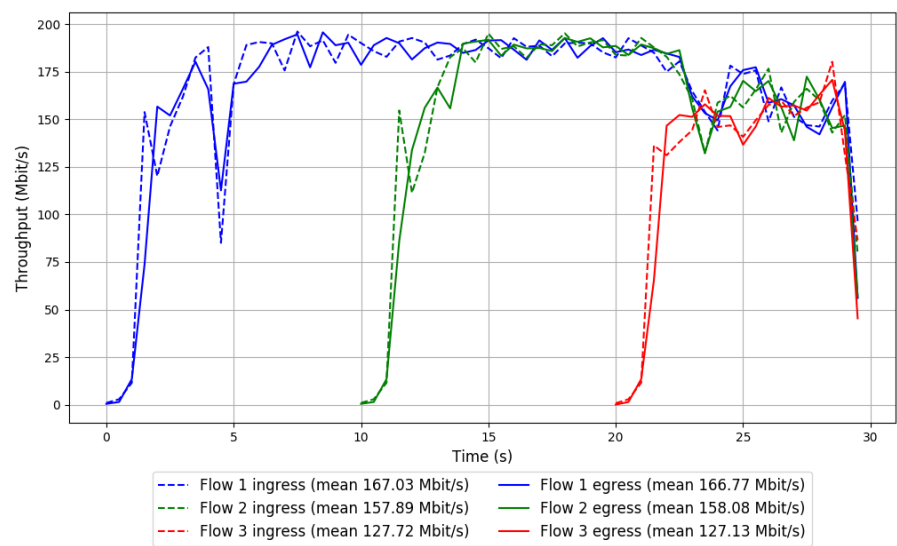
-- Flow 3:

Average throughput: 127.13 Mbit/s

95th percentile per-packet one-way delay: 113.653 ms

Loss rate: 2.70%

Run 8: Report of Indigo — Data Link



Run 9: Statistics of Indigo

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

End at: 2017-12-20 15:18:10

Below is generated by plot.py at 2017-12-20 19:39:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 306.55 Mbit/s

95th percentile per-packet one-way delay: 115.282 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 166.34 Mbit/s

95th percentile per-packet one-way delay: 112.990 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 156.39 Mbit/s

95th percentile per-packet one-way delay: 116.580 ms

Loss rate: 1.13%

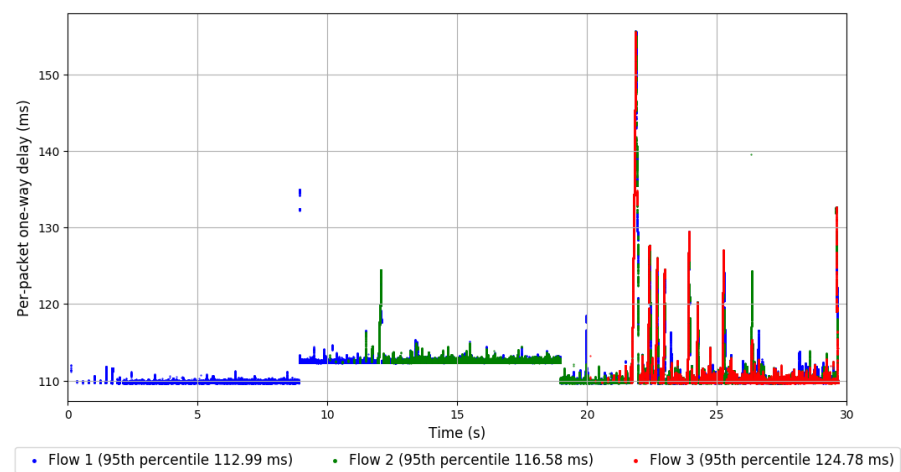
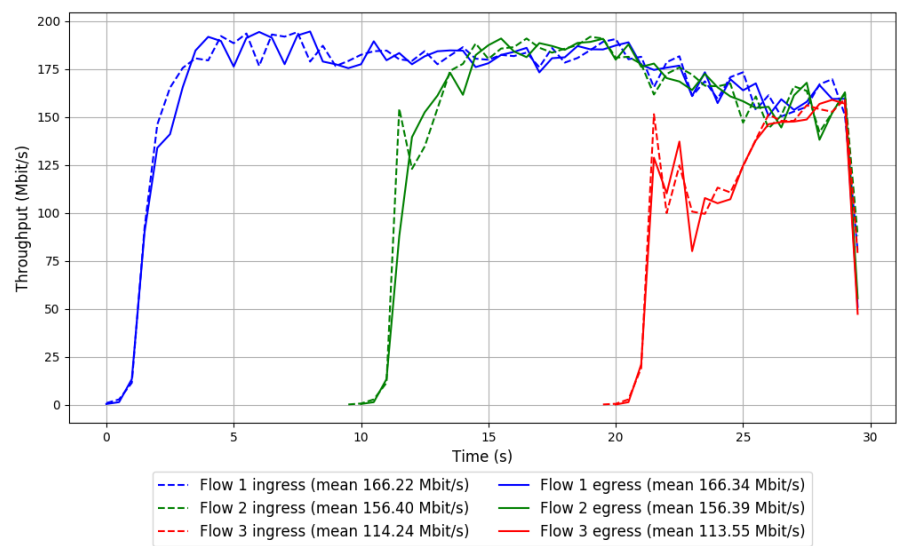
-- Flow 3:

Average throughput: 113.55 Mbit/s

95th percentile per-packet one-way delay: 124.782 ms

Loss rate: 2.79%

Run 9: Report of Indigo — Data Link



Run 10: Statistics of Indigo

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

End at: 2017-12-20 15:33:45

Below is generated by plot.py at 2017-12-20 19:39:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 302.25 Mbit/s

95th percentile per-packet one-way delay: 115.365 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 167.34 Mbit/s

95th percentile per-packet one-way delay: 113.161 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 160.06 Mbit/s

95th percentile per-packet one-way delay: 116.067 ms

Loss rate: 0.92%

-- Flow 3:

Average throughput: 90.24 Mbit/s

95th percentile per-packet one-way delay: 127.461 ms

Loss rate: 2.37%

Run 10: Report of Indigo — Data Link

