

Pantheon Report

Generated at 2017-11-21 18:09:51 (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.

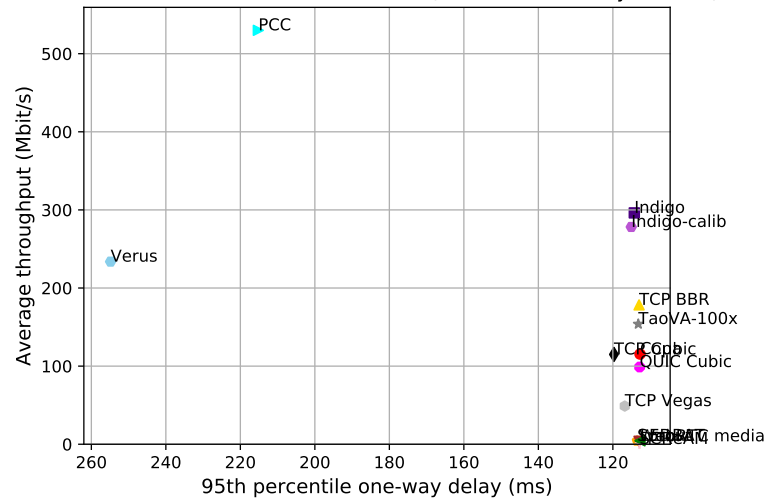
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

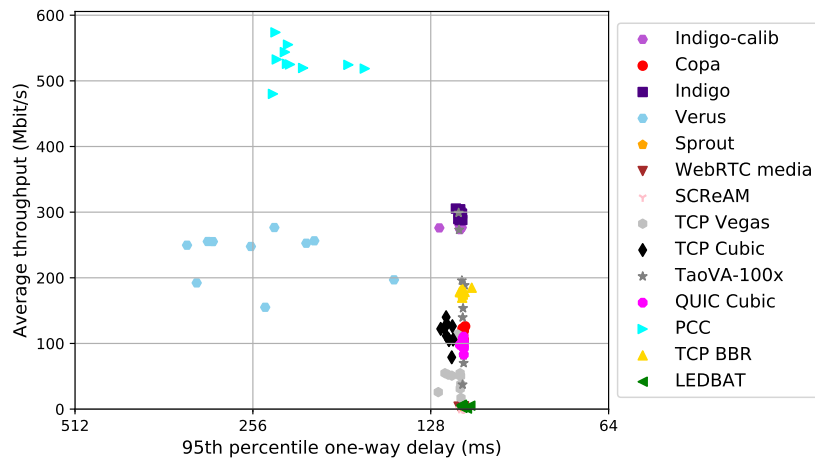
Git summary:

```
branch: indigos @ e3a57ad5ac5cfcaca0e3f983c8dd4cc3509e0262
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
M datagrump/sender.cc
third_party/genericCC @ b5b7c38e8391001927dc41c6cfa2627d03dde737
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-cellular @ aee99e8eb842cb053f8c9a80e28cd256a930bbc2
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/indigo-no-cwnd @ 3e58442c04028a11d7b02456e137604633ba2d6c
third_party/indigo-no-delivery-rate @ 57caa40858b964906edff4876d5a7e5bfff666c5
third_party/indigo-no-queuing-delay @ 03455460fd1a8ffbdad86fabb936fdca204b80db
third_party/indigo-no-send-rate @ b39dfa6b2c5f19cb7cd89626cb4f5bb81f9fecda
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaaeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

test from GCE 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



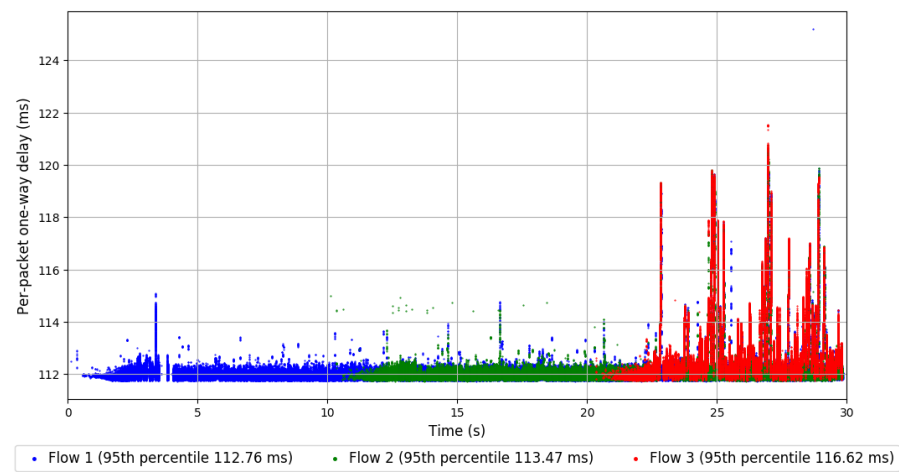
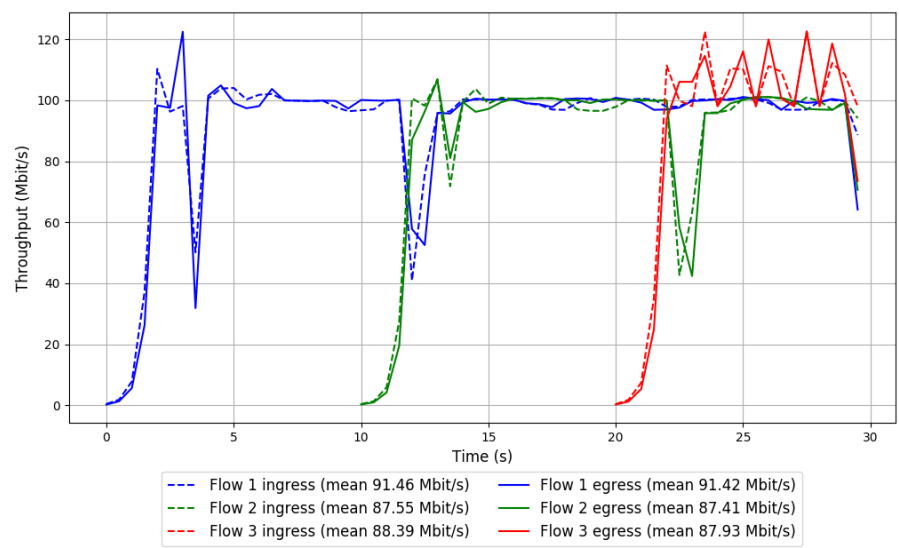
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	91.62	90.18	82.79	112.60	112.83	113.41	0.85	1.15	2.83
TCP Cubic	10	56.54	56.62	64.67	117.59	119.56	121.36	1.17	1.17	2.42
LEDBAT	10	2.18	2.47	1.69	157.52	112.70	112.57	1.17	1.91	4.08
PCC	10	466.06	83.23	27.07	216.05	212.02	193.97	2.61	2.02	2.69
QUIC Cubic	10	54.69	50.05	34.10	112.23	112.35	111.83	0.73	1.34	2.55
SCReAM	10	0.21	0.20	0.20	112.26	111.69	112.39	0.66	1.04	2.16
WebRTC media	10	2.08	1.27	0.45	112.33	112.23	112.26	1.01	1.43	4.33
Sprout	10	2.26	2.24	1.74	113.49	113.38	113.22	1.11	1.40	3.76
TaoVA-100x	10	89.98	69.21	72.37	113.25	112.98	113.32	0.69	1.17	2.75
TCP Vegas	10	25.02	20.76	30.93	114.72	114.42	117.92	0.79	1.16	2.36
Verus	10	160.07	89.51	47.20	240.53	216.78	210.48	3.57	5.08	5.73
Copa	10	65.24	58.38	46.53	112.68	112.74	112.27	0.63	1.34	4.72
Indigo	10	159.83	147.37	121.15	113.71	114.86	115.29	0.71	1.12	2.90
Indigo-calib	10	148.41	138.79	118.15	113.87	115.26	117.53	0.78	1.20	2.95

```
Run 1: Statistics of TCP BBR

Start at: 2017-11-21 12:54:10
End at: 2017-11-21 12:54:40

# Below is generated by plot.py at 2017-11-21 17:22:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 177.96 Mbit/s
95th percentile per-packet one-way delay: 114.102 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 91.42 Mbit/s
95th percentile per-packet one-way delay: 112.758 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 87.41 Mbit/s
95th percentile per-packet one-way delay: 113.471 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 87.93 Mbit/s
95th percentile per-packet one-way delay: 116.624 ms
Loss rate: 2.80%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-11-21 13:07:27

End at: 2017-11-21 13:07:57

Below is generated by plot.py at 2017-11-21 17:22:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.91 Mbit/s

95th percentile per-packet one-way delay: 114.305 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 90.31 Mbit/s

95th percentile per-packet one-way delay: 113.552 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 90.27 Mbit/s

95th percentile per-packet one-way delay: 113.978 ms

Loss rate: 0.18%

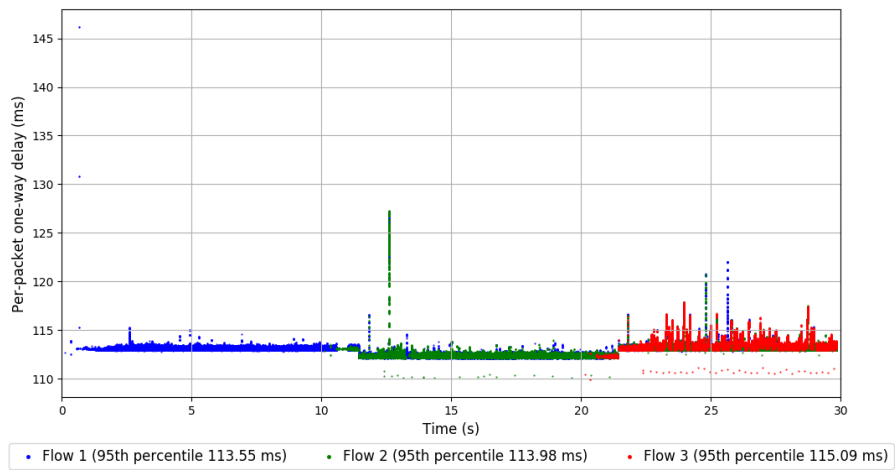
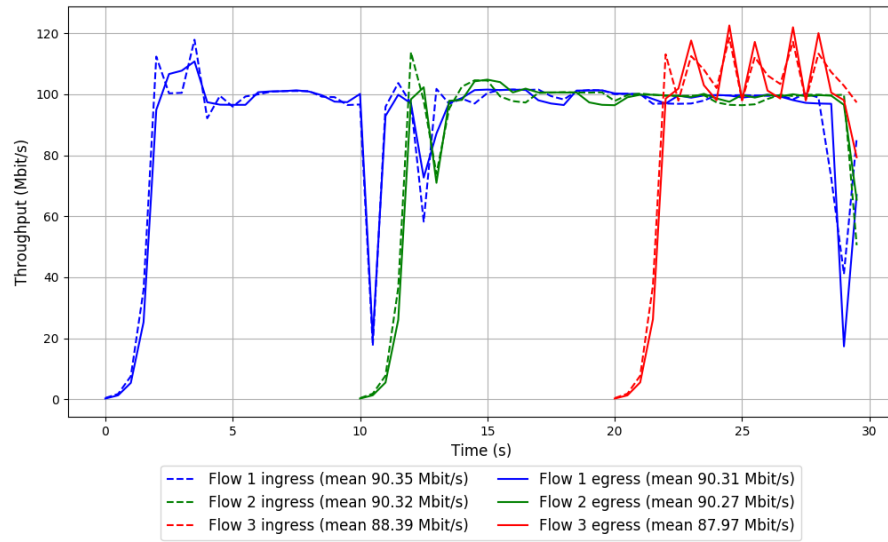
-- Flow 3:

Average throughput: 87.97 Mbit/s

95th percentile per-packet one-way delay: 115.091 ms

Loss rate: 2.69%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-11-21 13:21:10

End at: 2017-11-21 13:21:40

Below is generated by plot.py at 2017-11-21 17:22:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.93 Mbit/s

95th percentile per-packet one-way delay: 113.994 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 93.49 Mbit/s

95th percentile per-packet one-way delay: 113.482 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 88.09 Mbit/s

95th percentile per-packet one-way delay: 113.749 ms

Loss rate: 1.31%

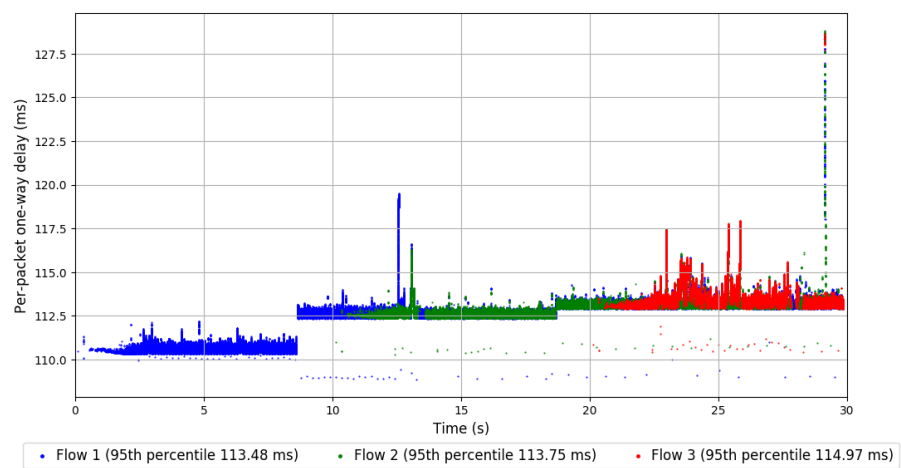
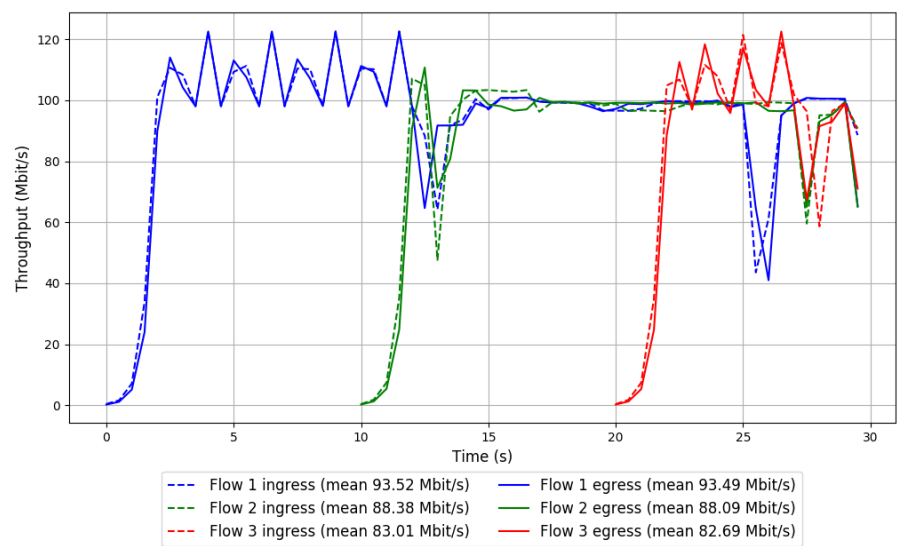
-- Flow 3:

Average throughput: 82.69 Mbit/s

95th percentile per-packet one-way delay: 114.968 ms

Loss rate: 2.61%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-11-21 13:34:39

End at: 2017-11-21 13:35:09

Below is generated by plot.py at 2017-11-21 17:22:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 176.96 Mbit/s

95th percentile per-packet one-way delay: 113.035 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 88.87 Mbit/s

95th percentile per-packet one-way delay: 112.921 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 91.82 Mbit/s

95th percentile per-packet one-way delay: 112.940 ms

Loss rate: 1.20%

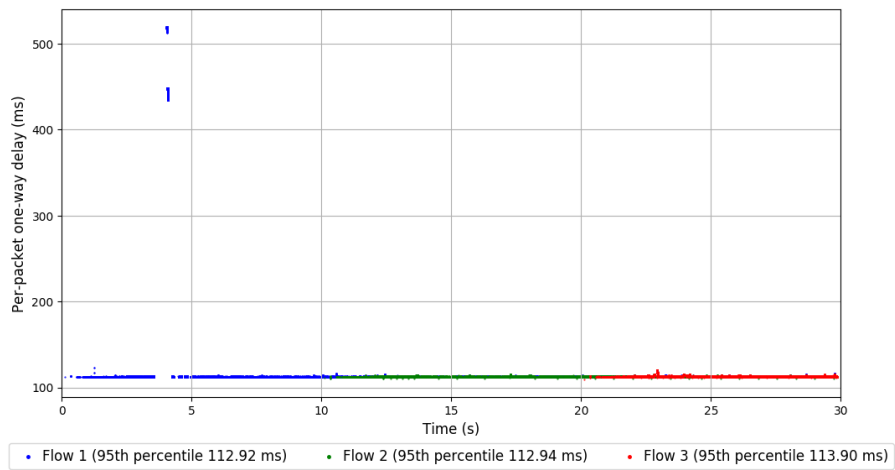
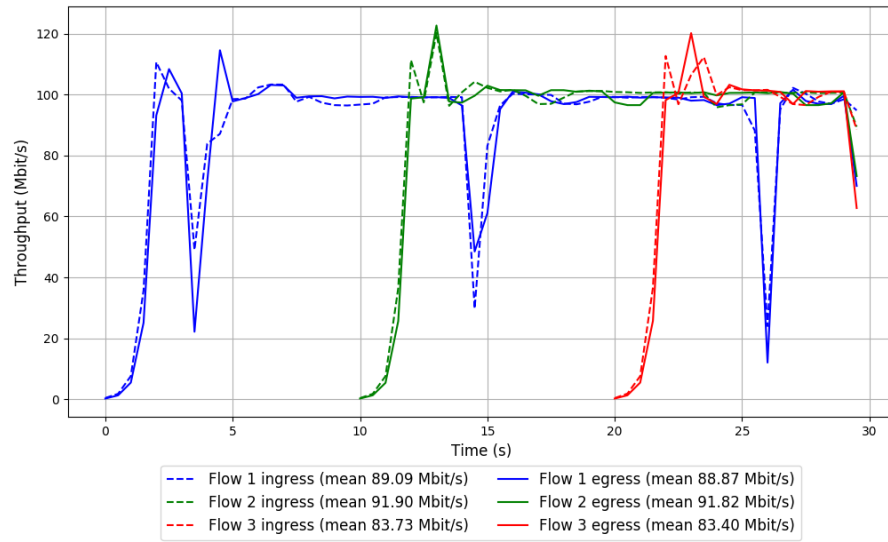
-- Flow 3:

Average throughput: 83.40 Mbit/s

95th percentile per-packet one-way delay: 113.903 ms

Loss rate: 2.61%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-11-21 13:48:16

End at: 2017-11-21 13:48:46

Below is generated by plot.py at 2017-11-21 17:22:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 174.48 Mbit/s

95th percentile per-packet one-way delay: 112.950 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 89.55 Mbit/s

95th percentile per-packet one-way delay: 112.857 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 88.83 Mbit/s

95th percentile per-packet one-way delay: 112.962 ms

Loss rate: 1.23%

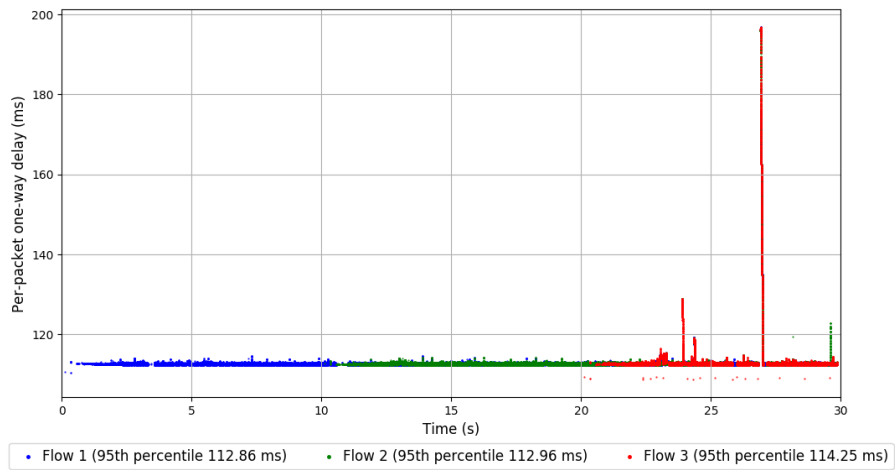
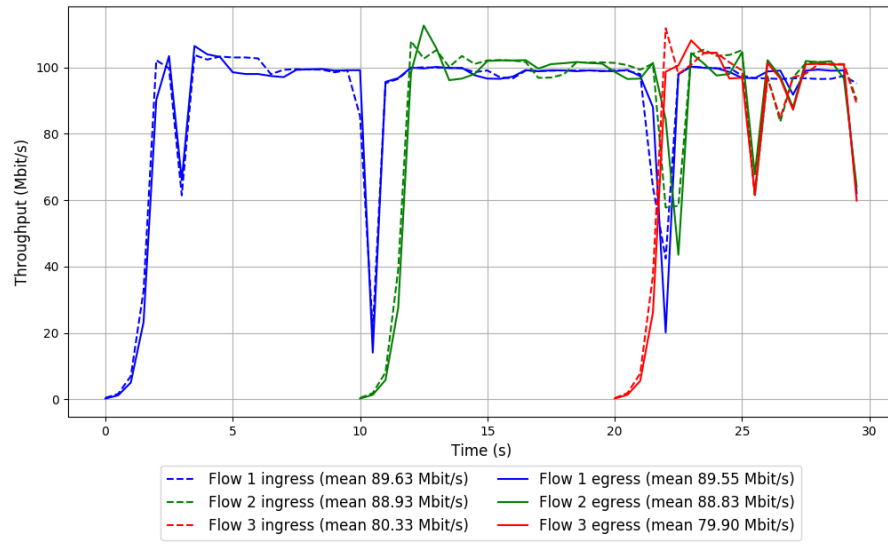
-- Flow 3:

Average throughput: 79.90 Mbit/s

95th percentile per-packet one-way delay: 114.250 ms

Loss rate: 2.73%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-11-21 14:01:40

End at: 2017-11-21 14:02:10

Below is generated by plot.py at 2017-11-21 17:22:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 182.39 Mbit/s

95th percentile per-packet one-way delay: 113.029 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 92.87 Mbit/s

95th percentile per-packet one-way delay: 112.951 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 94.18 Mbit/s

95th percentile per-packet one-way delay: 113.050 ms

Loss rate: 1.15%

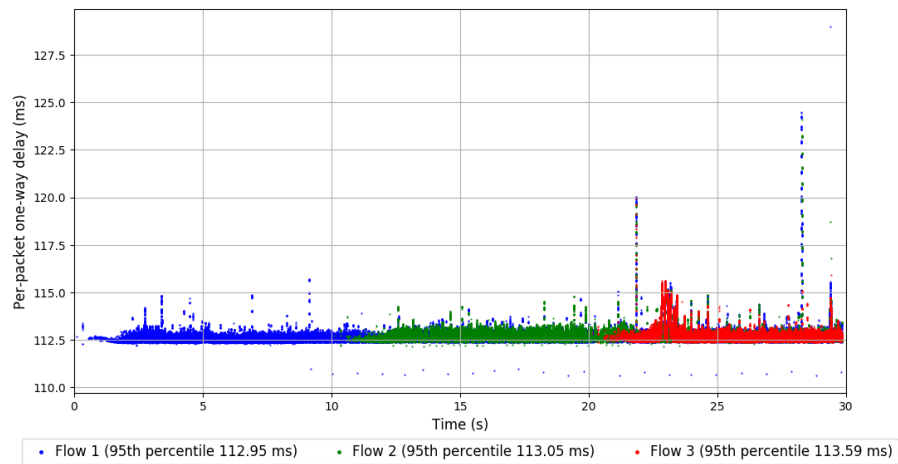
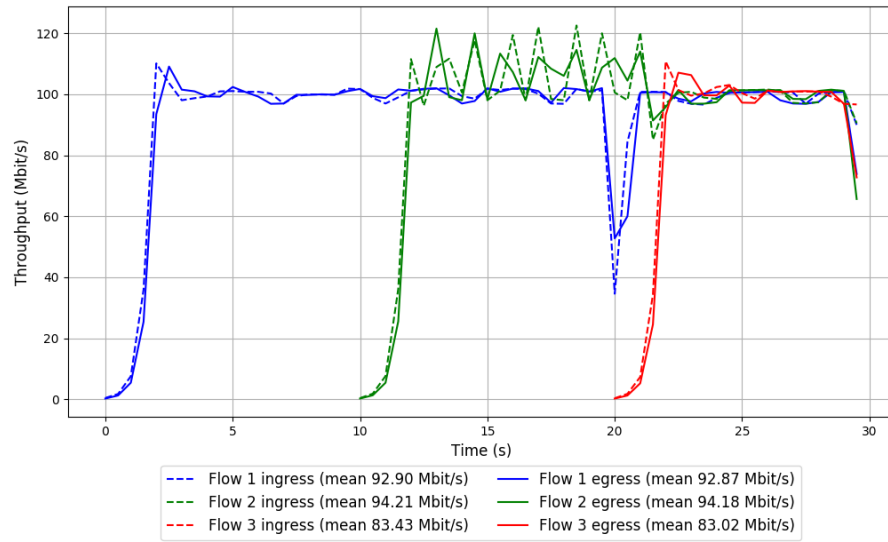
-- Flow 3:

Average throughput: 83.02 Mbit/s

95th percentile per-packet one-way delay: 113.592 ms

Loss rate: 2.91%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-11-21 14:14:57

End at: 2017-11-21 14:15:27

Below is generated by plot.py at 2017-11-21 17:22:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.37 Mbit/s

95th percentile per-packet one-way delay: 113.710 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 92.37 Mbit/s

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

Loss rate: 0.78%

-- Flow 2:

Average throughput: 91.07 Mbit/s

95th percentile per-packet one-way delay: 113.384 ms

Loss rate: 1.19%

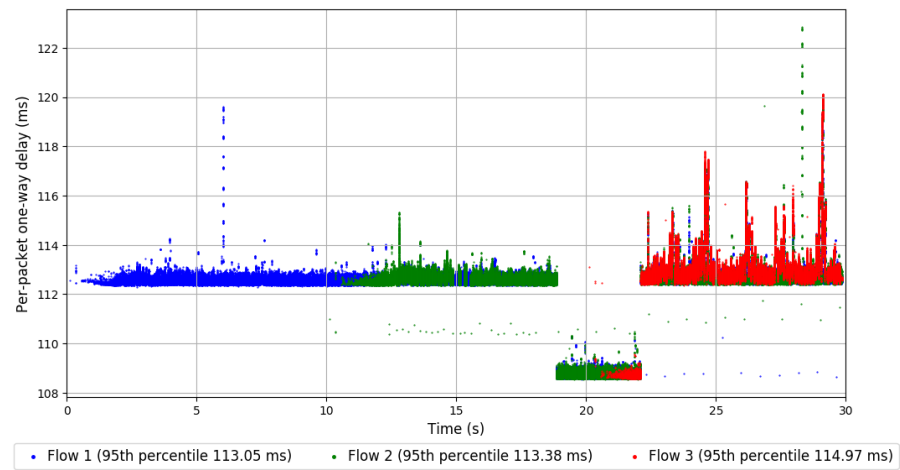
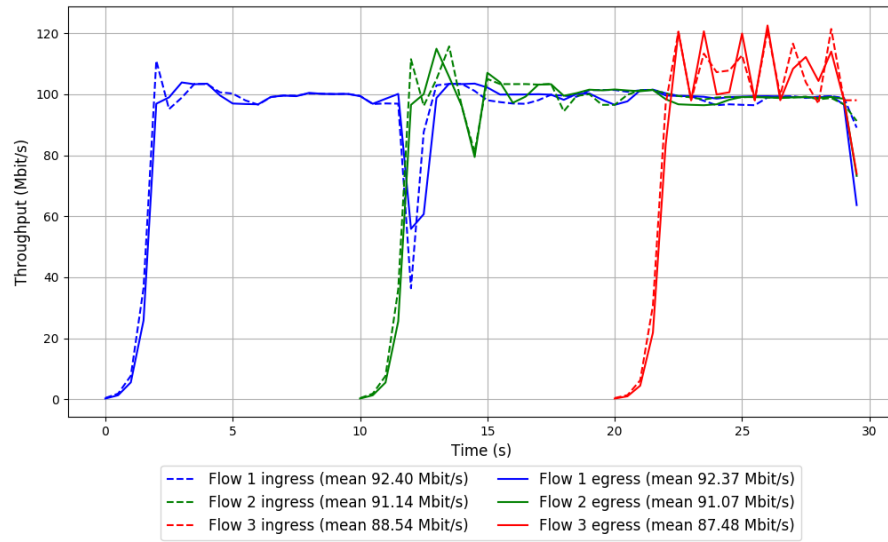
-- Flow 3:

Average throughput: 87.48 Mbit/s

95th percentile per-packet one-way delay: 114.969 ms

Loss rate: 2.78%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-11-21 14:28:19

End at: 2017-11-21 14:28:49

Below is generated by plot.py at 2017-11-21 17:22:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 169.72 Mbit/s

95th percentile per-packet one-way delay: 113.244 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 88.65 Mbit/s

95th percentile per-packet one-way delay: 113.140 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 86.92 Mbit/s

95th percentile per-packet one-way delay: 113.401 ms

Loss rate: 1.48%

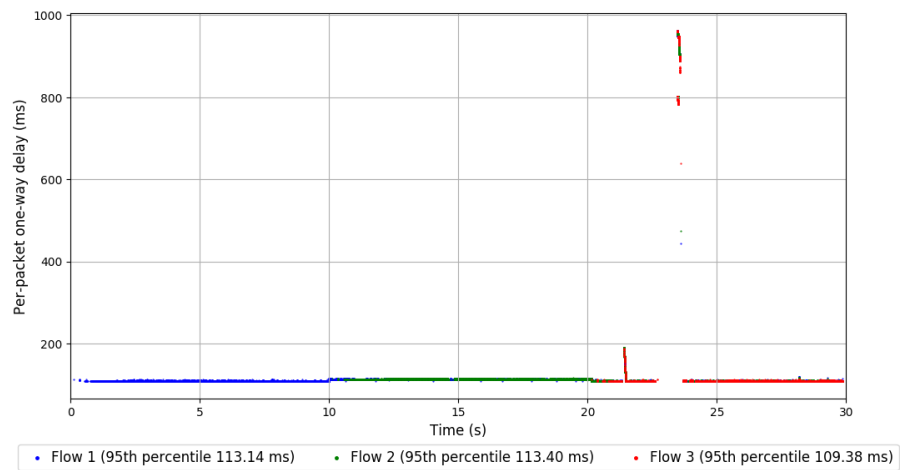
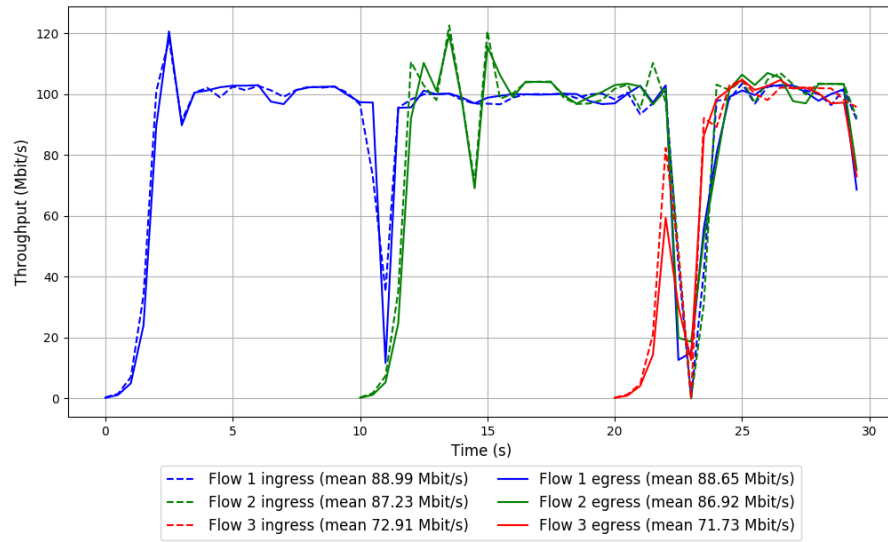
-- Flow 3:

Average throughput: 71.73 Mbit/s

95th percentile per-packet one-way delay: 109.377 ms

Loss rate: 3.84%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-11-21 14:41:48

End at: 2017-11-21 14:42:18

Below is generated by plot.py at 2017-11-21 17:25:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 184.93 Mbit/s

95th percentile per-packet one-way delay: 109.118 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 95.69 Mbit/s

95th percentile per-packet one-way delay: 109.057 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 94.56 Mbit/s

95th percentile per-packet one-way delay: 109.189 ms

Loss rate: 1.15%

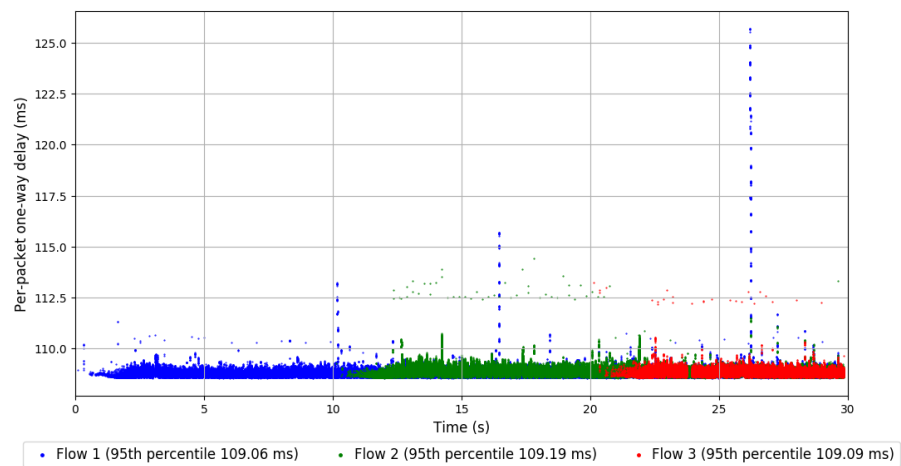
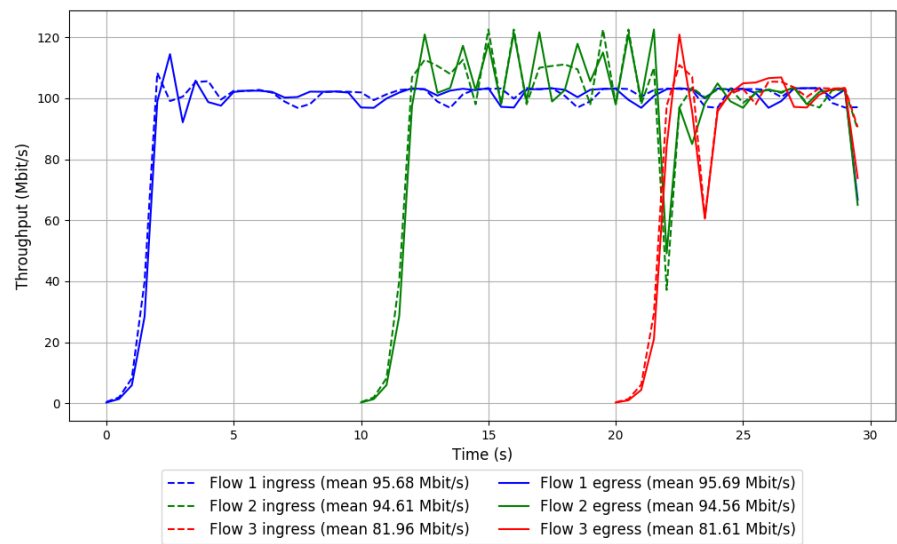
-- Flow 3:

Average throughput: 81.61 Mbit/s

95th percentile per-packet one-way delay: 109.095 ms

Loss rate: 2.68%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-11-21 14:55:26

End at: 2017-11-21 14:55:56

Below is generated by plot.py at 2017-11-21 17:25:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.56 Mbit/s

95th percentile per-packet one-way delay: 112.185 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 92.93 Mbit/s

95th percentile per-packet one-way delay: 112.228 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 88.61 Mbit/s

95th percentile per-packet one-way delay: 112.140 ms

Loss rate: 1.23%

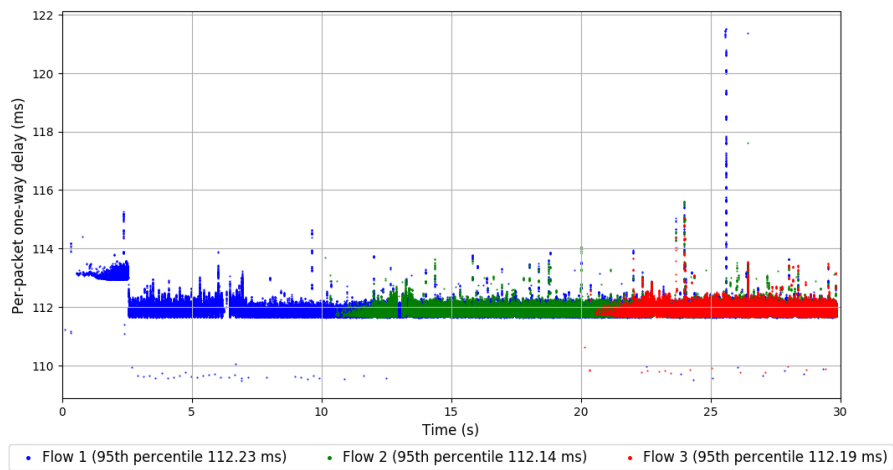
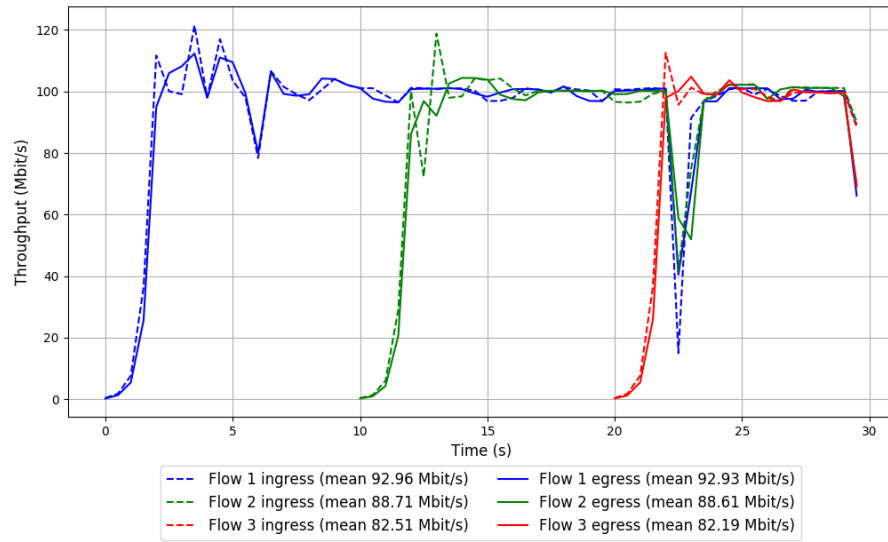
-- Flow 3:

Average throughput: 82.19 Mbit/s

95th percentile per-packet one-way delay: 112.187 ms

Loss rate: 2.60%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2017-11-21 12:56:19

End at: 2017-11-21 12:56:49

Below is generated by plot.py at 2017-11-21 17:25:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.63 Mbit/s

95th percentile per-packet one-way delay: 120.466 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 61.88 Mbit/s

95th percentile per-packet one-way delay: 120.109 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 47.09 Mbit/s

95th percentile per-packet one-way delay: 120.231 ms

Loss rate: 1.37%

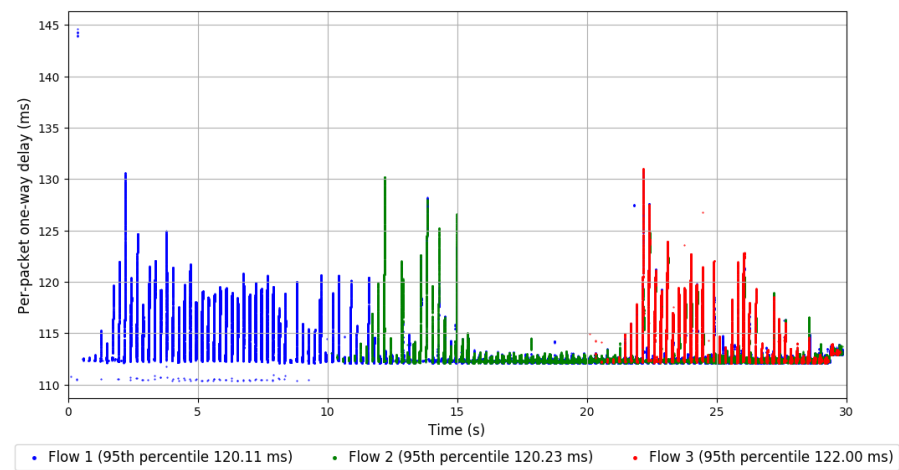
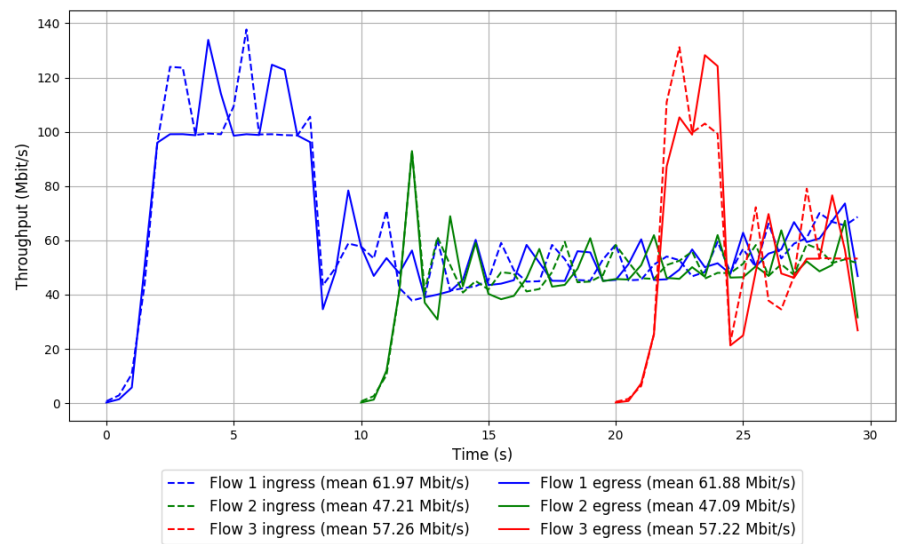
-- Flow 3:

Average throughput: 57.22 Mbit/s

95th percentile per-packet one-way delay: 121.998 ms

Loss rate: 2.37%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-11-21 13:09:36

End at: 2017-11-21 13:10:06

Below is generated by plot.py at 2017-11-21 17:25:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 122.22 Mbit/s

95th percentile per-packet one-way delay: 123.131 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 62.55 Mbit/s

95th percentile per-packet one-way delay: 121.473 ms

Loss rate: 1.28%

-- Flow 2:

Average throughput: 47.09 Mbit/s

95th percentile per-packet one-way delay: 120.575 ms

Loss rate: 1.02%

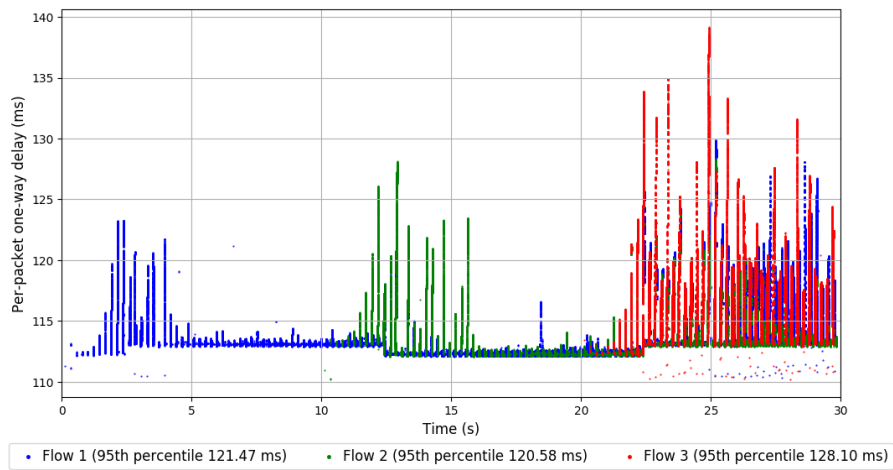
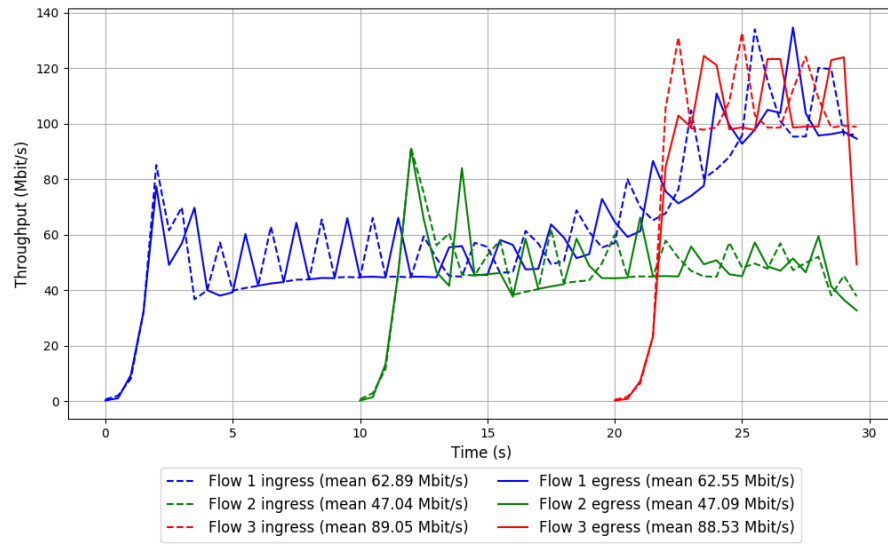
-- Flow 3:

Average throughput: 88.53 Mbit/s

95th percentile per-packet one-way delay: 128.103 ms

Loss rate: 2.84%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-11-21 13:23:20

End at: 2017-11-21 13:23:50

Below is generated by plot.py at 2017-11-21 17:25:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 123.95 Mbit/s

95th percentile per-packet one-way delay: 121.398 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 52.63 Mbit/s

95th percentile per-packet one-way delay: 118.729 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 63.24 Mbit/s

95th percentile per-packet one-way delay: 121.416 ms

Loss rate: 1.34%

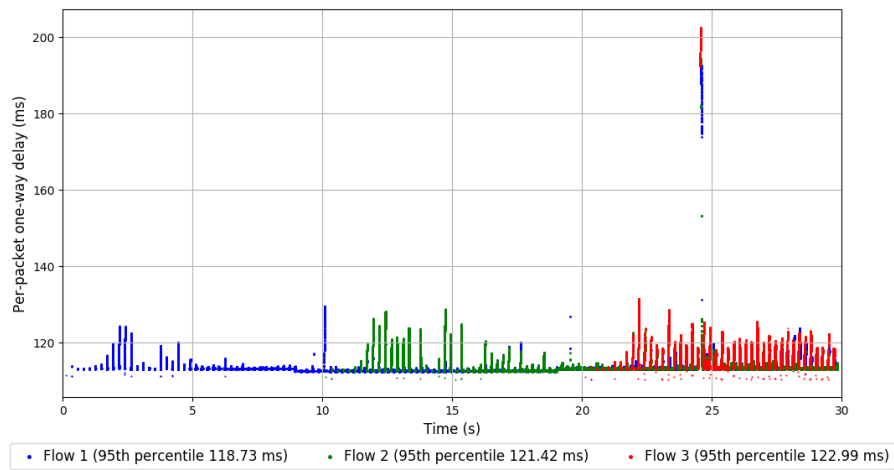
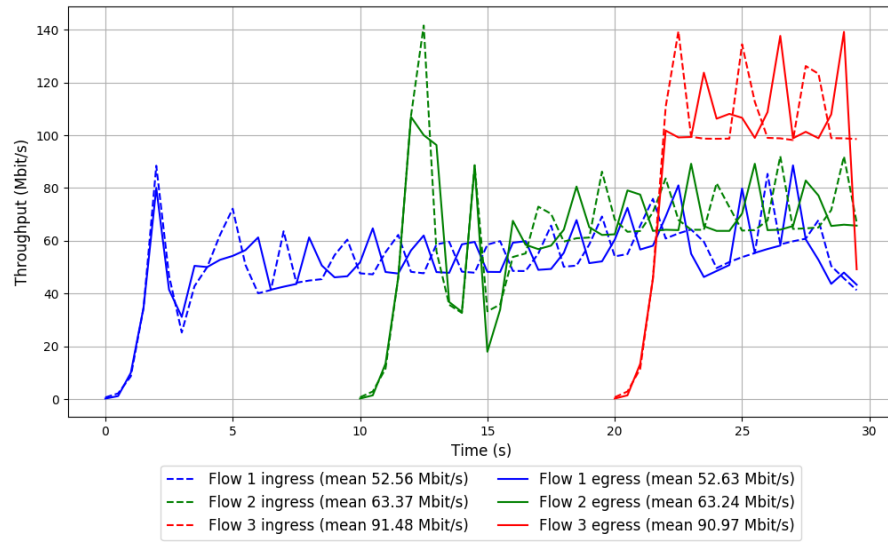
-- Flow 3:

Average throughput: 90.97 Mbit/s

95th percentile per-packet one-way delay: 122.990 ms

Loss rate: 2.75%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-11-21 13:36:47

End at: 2017-11-21 13:37:17

Below is generated by plot.py at 2017-11-21 17:25:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.35 Mbit/s

95th percentile per-packet one-way delay: 119.343 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 52.14 Mbit/s

95th percentile per-packet one-way delay: 115.081 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 56.01 Mbit/s

95th percentile per-packet one-way delay: 118.750 ms

Loss rate: 1.39%

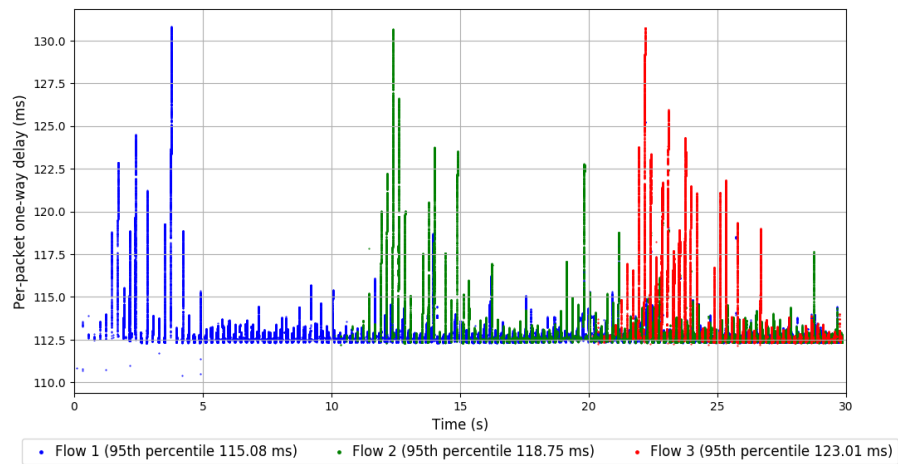
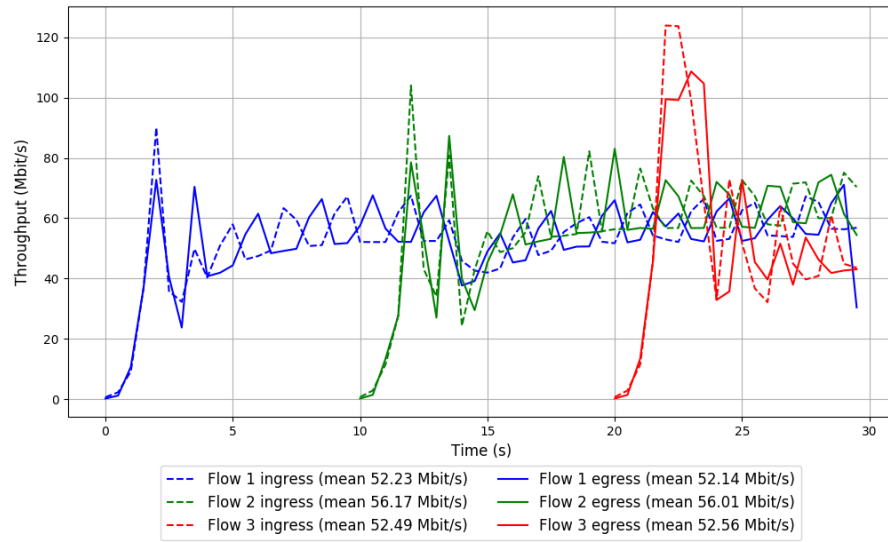
-- Flow 3:

Average throughput: 52.56 Mbit/s

95th percentile per-packet one-way delay: 123.012 ms

Loss rate: 2.11%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-11-21 13:50:25

End at: 2017-11-21 13:50:55

Below is generated by plot.py at 2017-11-21 17:25:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.08 Mbit/s

95th percentile per-packet one-way delay: 119.229 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 63.94 Mbit/s

95th percentile per-packet one-way delay: 118.332 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 40.52 Mbit/s

95th percentile per-packet one-way delay: 119.346 ms

Loss rate: 1.19%

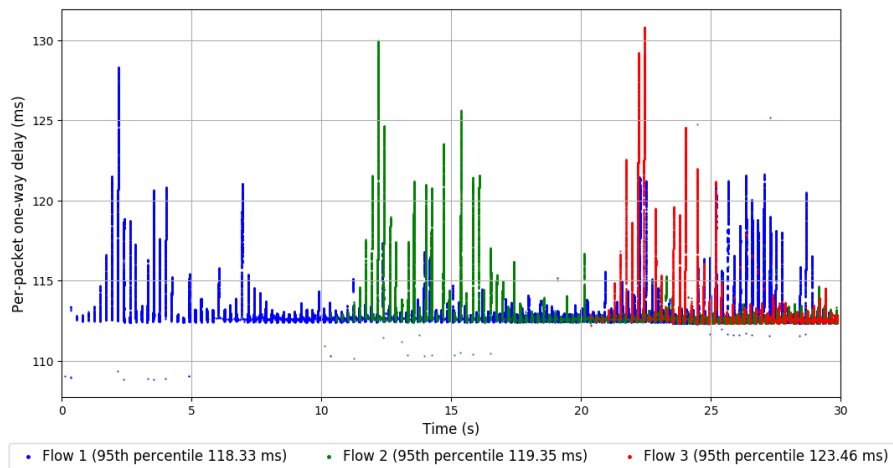
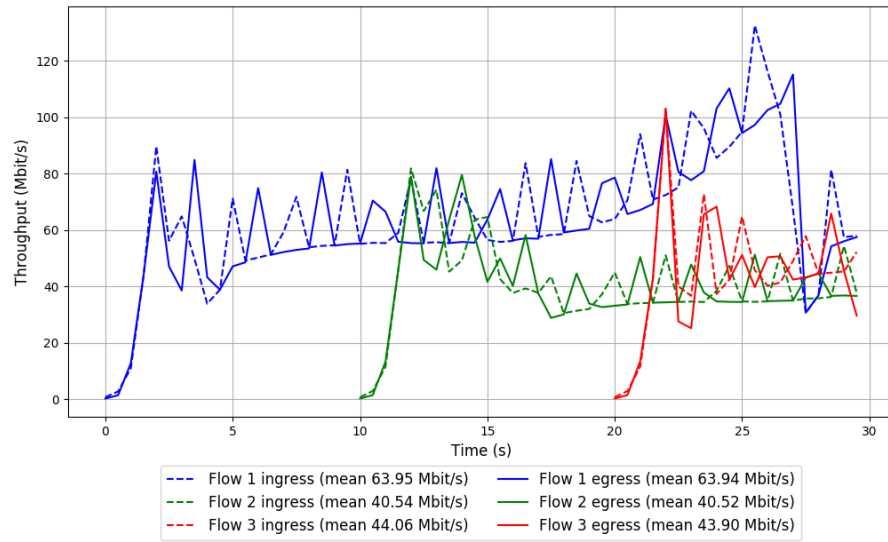
-- Flow 3:

Average throughput: 43.90 Mbit/s

95th percentile per-packet one-way delay: 123.462 ms

Loss rate: 2.61%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-11-21 14:03:51

End at: 2017-11-21 14:04:21

Below is generated by plot.py at 2017-11-21 17:25:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.50 Mbit/s

95th percentile per-packet one-way delay: 120.171 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 65.20 Mbit/s

95th percentile per-packet one-way delay: 121.038 ms

Loss rate: 1.23%

-- Flow 2:

Average throughput: 69.86 Mbit/s

95th percentile per-packet one-way delay: 119.549 ms

Loss rate: 0.69%

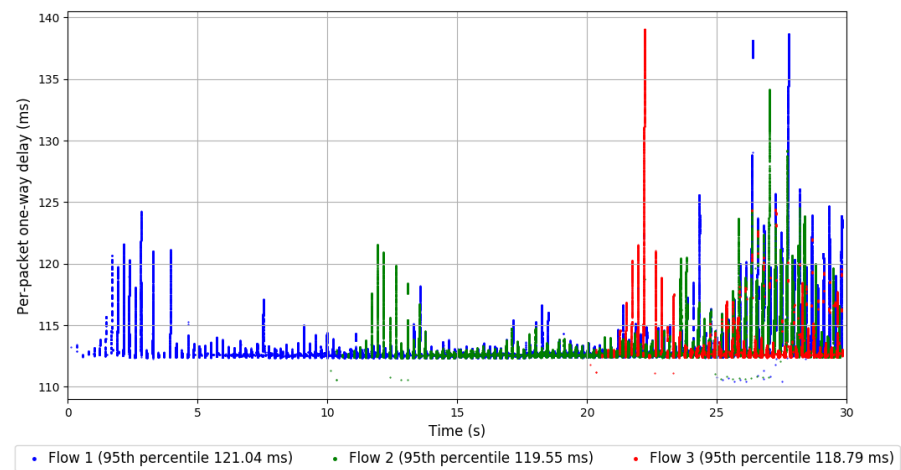
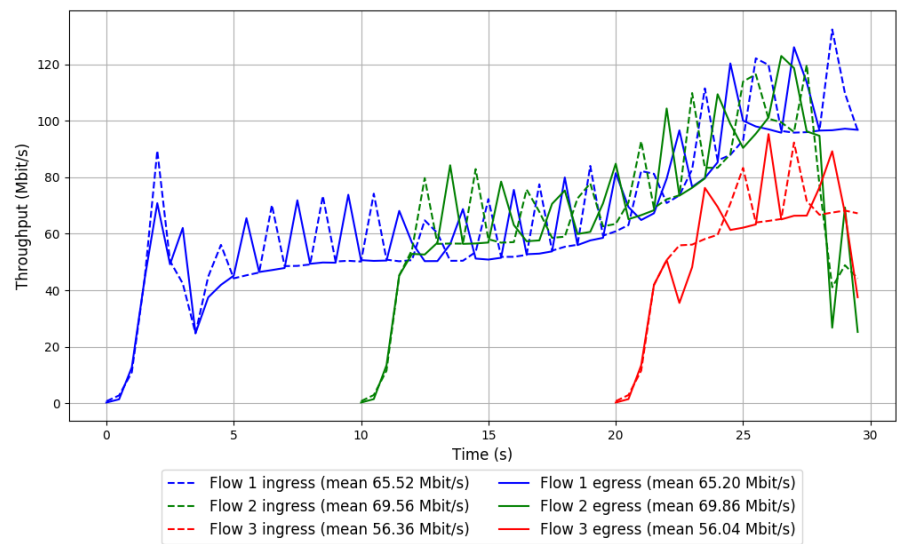
-- Flow 3:

Average throughput: 56.04 Mbit/s

95th percentile per-packet one-way delay: 118.789 ms

Loss rate: 2.79%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-11-21 14:17:07

End at: 2017-11-21 14:17:37

Below is generated by plot.py at 2017-11-21 17:25:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.87 Mbit/s

95th percentile per-packet one-way delay: 117.956 ms

Loss rate: 1.89%

-- Flow 1:

Average throughput: 16.60 Mbit/s

95th percentile per-packet one-way delay: 113.304 ms

Loss rate: 3.77%

-- Flow 2:

Average throughput: 69.87 Mbit/s

95th percentile per-packet one-way delay: 119.637 ms

Loss rate: 0.82%

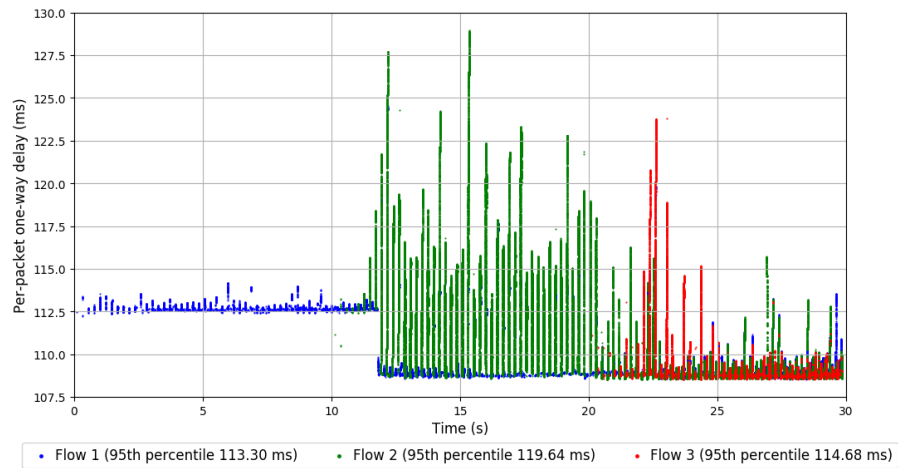
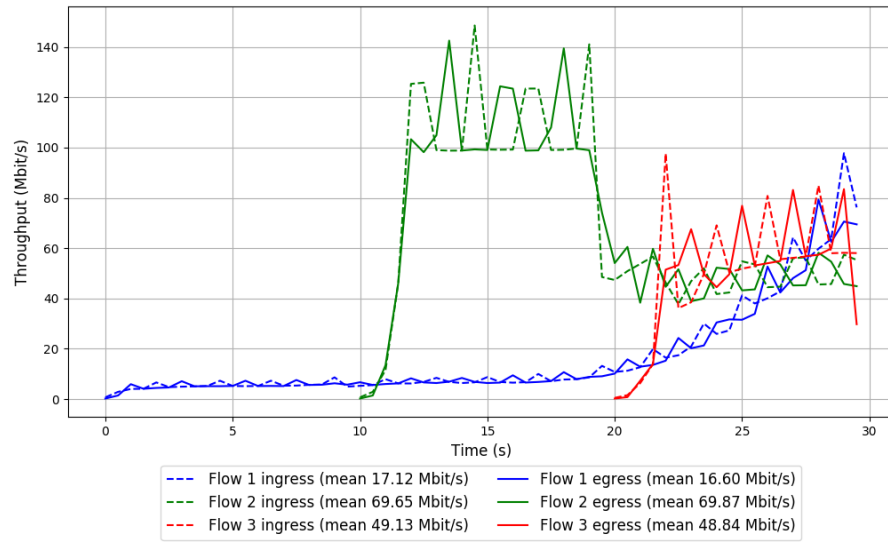
-- Flow 3:

Average throughput: 48.84 Mbit/s

95th percentile per-packet one-way delay: 114.681 ms

Loss rate: 2.98%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-11-21 14:30:30

End at: 2017-11-21 14:31:00

Below is generated by plot.py at 2017-11-21 17:26:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.89 Mbit/s

95th percentile per-packet one-way delay: 117.312 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 47.43 Mbit/s

95th percentile per-packet one-way delay: 113.046 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 53.06 Mbit/s

95th percentile per-packet one-way delay: 116.871 ms

Loss rate: 1.27%

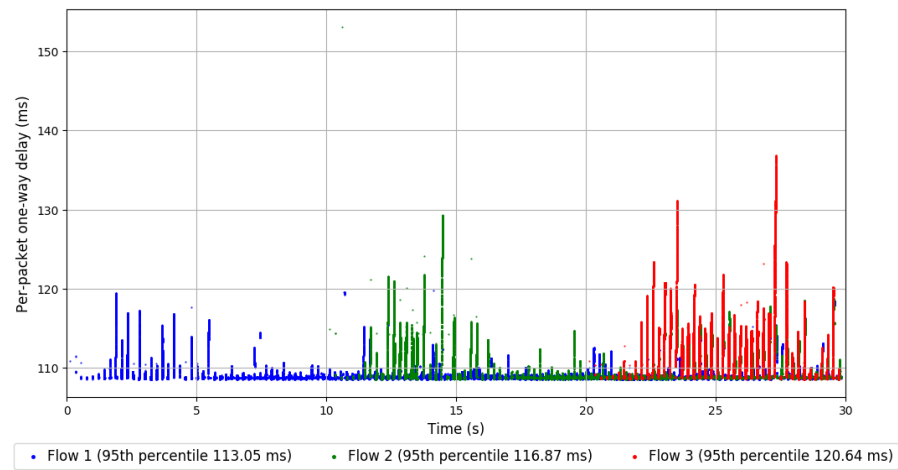
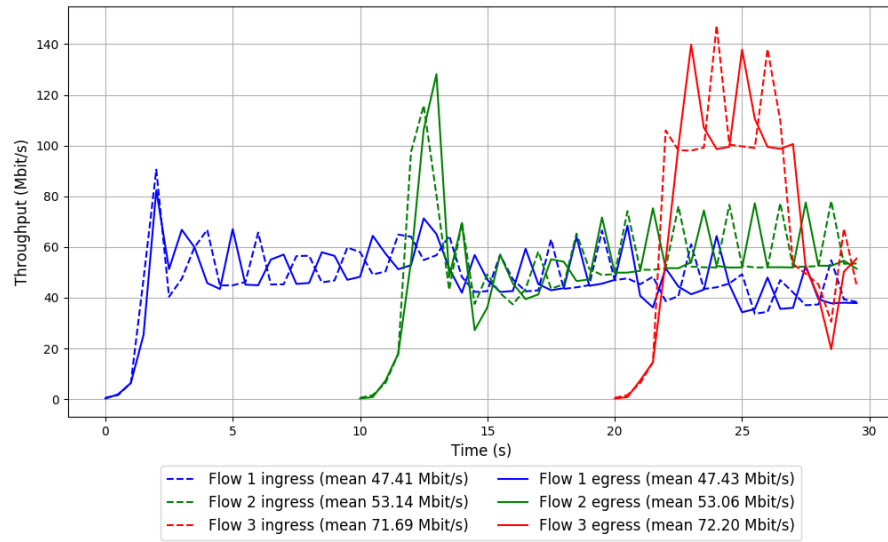
-- Flow 3:

Average throughput: 72.20 Mbit/s

95th percentile per-packet one-way delay: 120.639 ms

Loss rate: 1.56%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-11-21 14:43:59

End at: 2017-11-21 14:44:29

Below is generated by plot.py at 2017-11-21 17:26:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.99 Mbit/s

95th percentile per-packet one-way delay: 120.547 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 67.86 Mbit/s

95th percentile per-packet one-way delay: 117.358 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 70.80 Mbit/s

95th percentile per-packet one-way delay: 121.548 ms

Loss rate: 1.13%

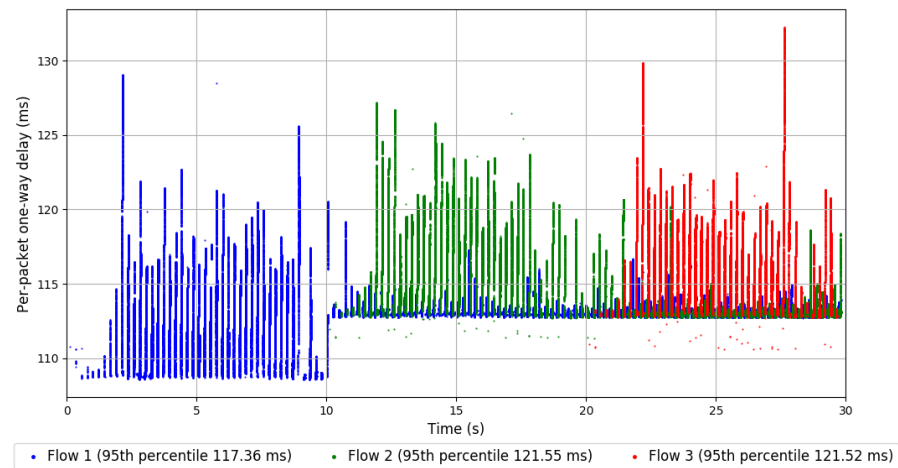
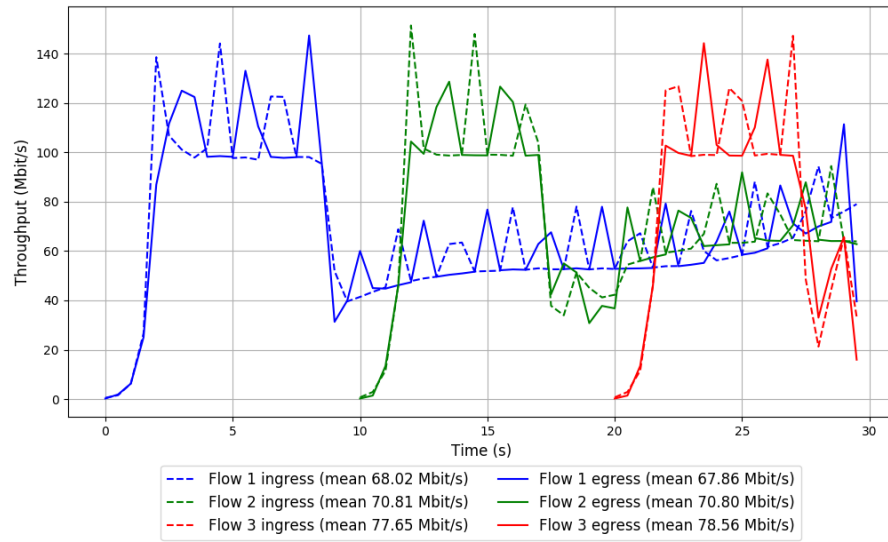
-- Flow 3:

Average throughput: 78.56 Mbit/s

95th percentile per-packet one-way delay: 121.520 ms

Loss rate: 1.14%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-11-21 14:57:36

End at: 2017-11-21 14:58:06

Below is generated by plot.py at 2017-11-21 17:26:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 126.31 Mbit/s

95th percentile per-packet one-way delay: 117.644 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 75.19 Mbit/s

95th percentile per-packet one-way delay: 117.392 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 48.71 Mbit/s

95th percentile per-packet one-way delay: 117.697 ms

Loss rate: 1.51%

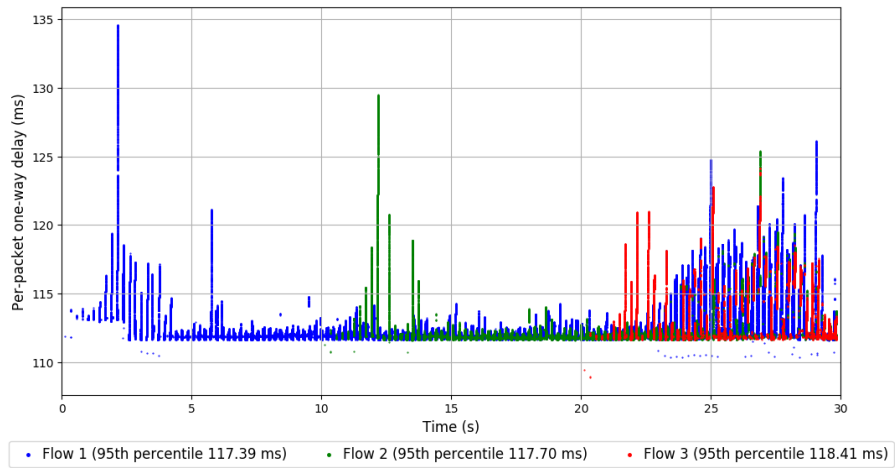
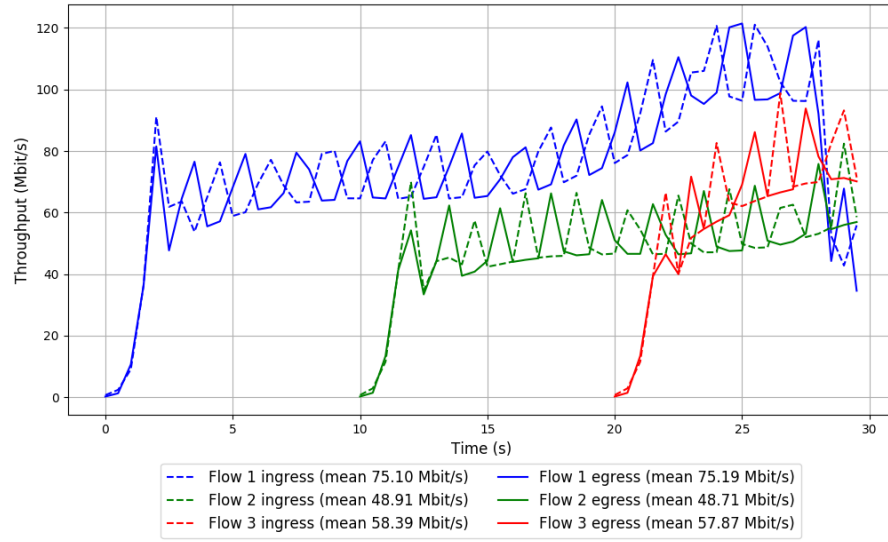
-- Flow 3:

Average throughput: 57.87 Mbit/s

95th percentile per-packet one-way delay: 118.407 ms

Loss rate: 3.08%

Run 10: Report of TCP Cubic — Data Link

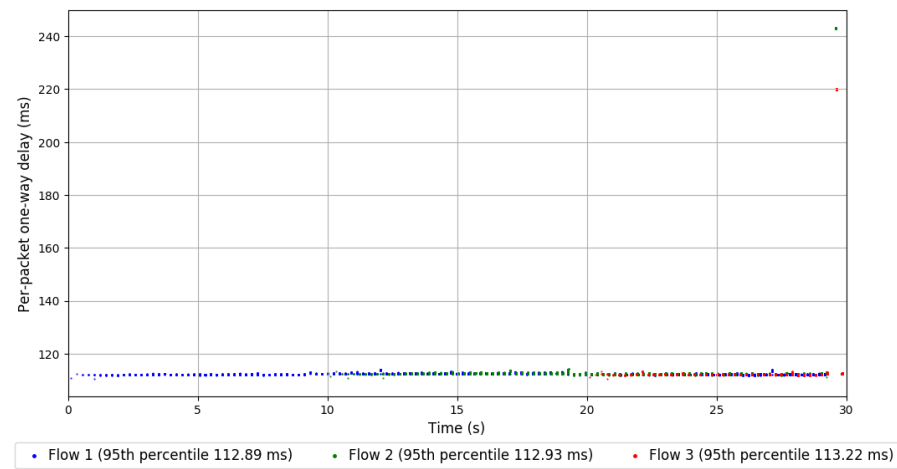
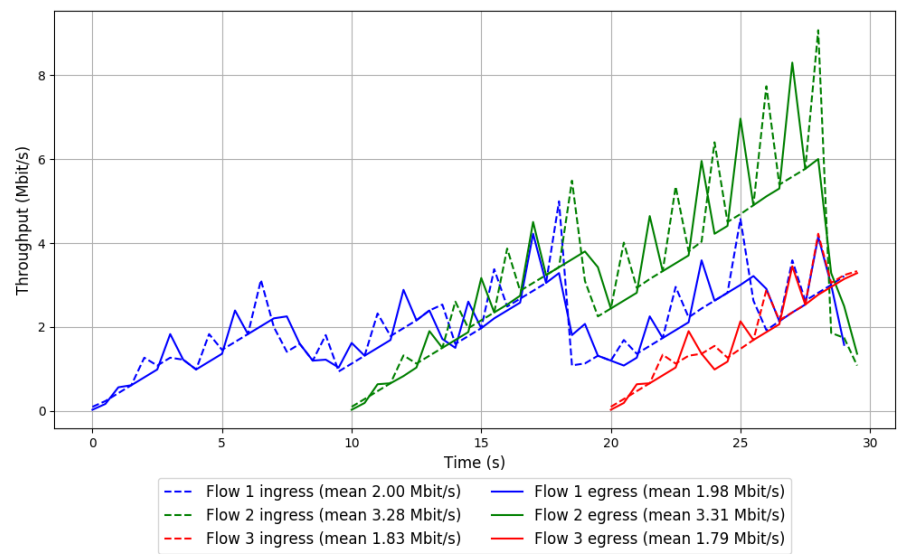


```
Run 1: Statistics of LEDBAT

Start at: 2017-11-21 12:52:10
End at: 2017-11-21 12:52:40

# Below is generated by plot.py at 2017-11-21 17:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.71 Mbit/s
95th percentile per-packet one-way delay: 112.922 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 112.885 ms
Loss rate: 1.56%
-- Flow 2:
Average throughput: 3.31 Mbit/s
95th percentile per-packet one-way delay: 112.933 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 113.223 ms
Loss rate: 4.64%
```


Run 1: Report of LEDBAT — Data Link

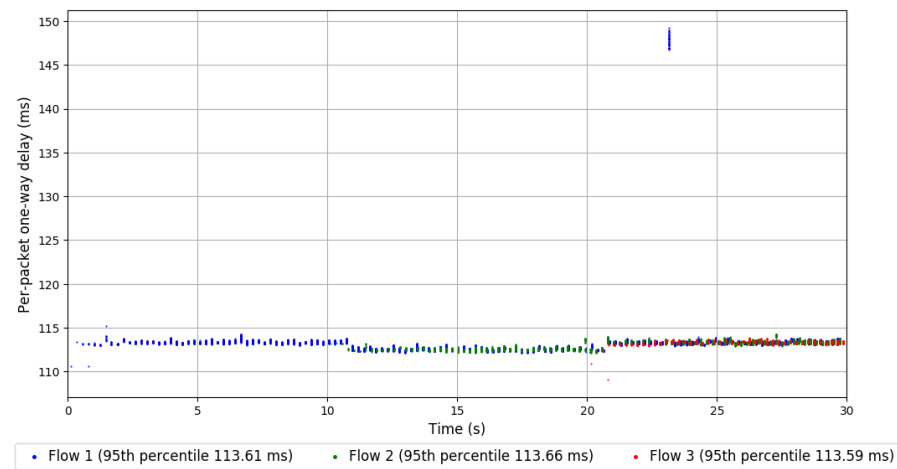
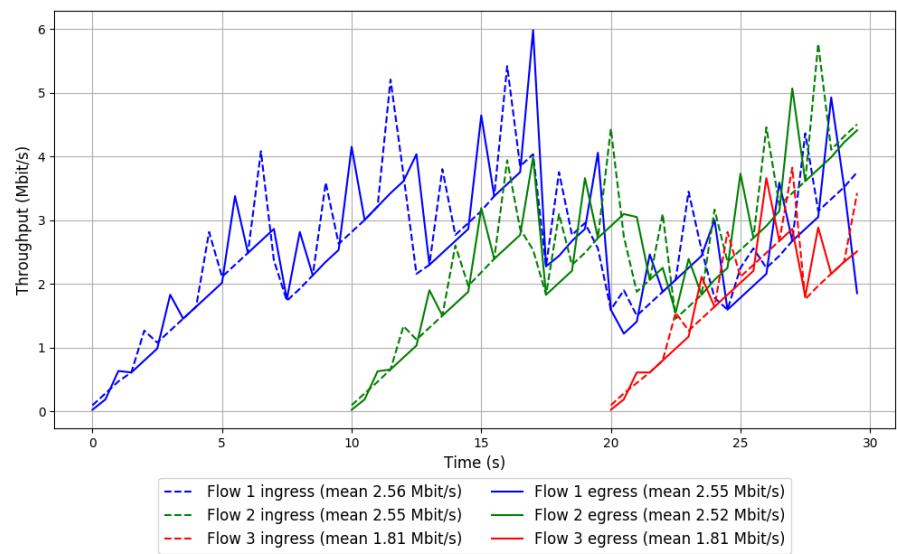


```
Run 2: Statistics of LEDBAT

Start at: 2017-11-21 13:05:28
End at: 2017-11-21 13:05:58

# Below is generated by plot.py at 2017-11-21 17:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 113.618 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 113.605 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 2.52 Mbit/s
95th percentile per-packet one-way delay: 113.659 ms
Loss rate: 2.25%
-- Flow 3:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 113.591 ms
Loss rate: 2.54%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-11-21 13:19:10

End at: 2017-11-21 13:19:40

Below is generated by plot.py at 2017-11-21 17:26:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.64 Mbit/s

95th percentile per-packet one-way delay: 113.439 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 4.63 Mbit/s

95th percentile per-packet one-way delay: 113.517 ms

Loss rate: 1.30%

-- Flow 2:

Average throughput: 2.37 Mbit/s

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

Loss rate: 1.64%

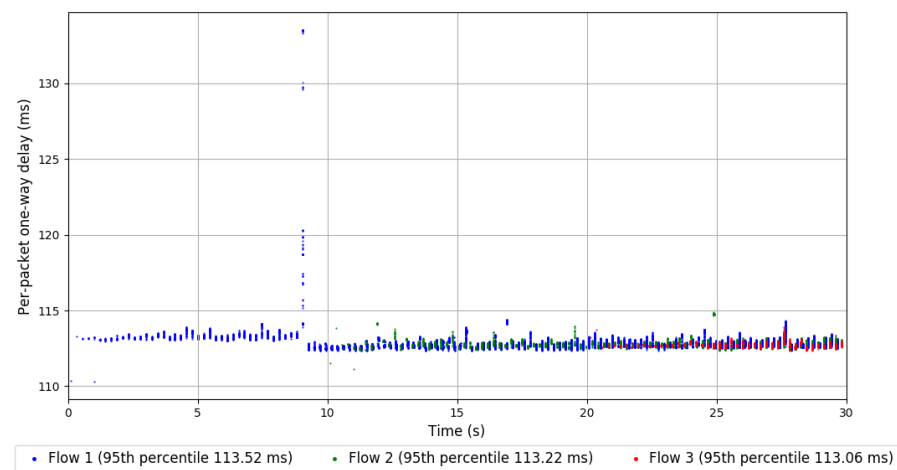
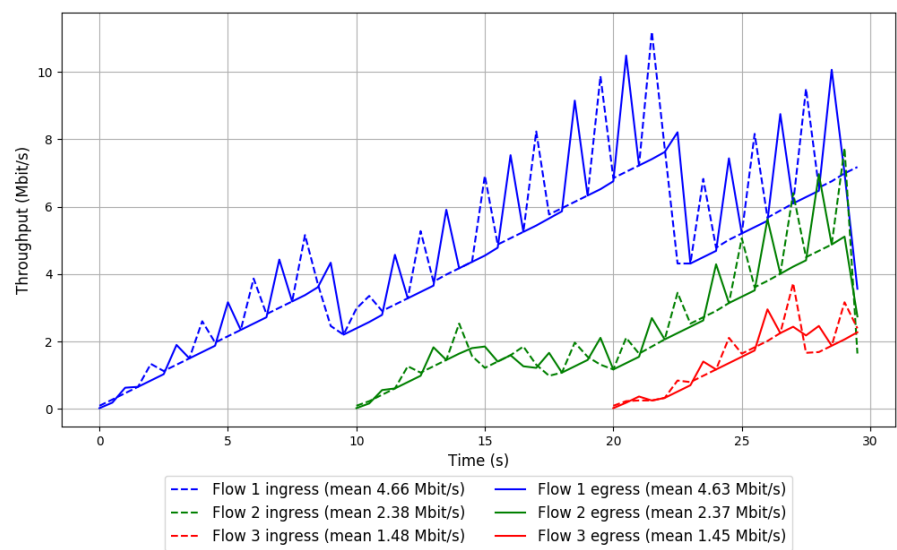
-- Flow 3:

Average throughput: 1.45 Mbit/s

95th percentile per-packet one-way delay: 113.058 ms

Loss rate: 4.16%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-11-21 13:32:39

End at: 2017-11-21 13:33:09

Below is generated by plot.py at 2017-11-21 17:26:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.03 Mbit/s

95th percentile per-packet one-way delay: 113.156 ms

Loss rate: 2.66%

-- Flow 1:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 113.209 ms

Loss rate: 2.25%

-- Flow 2:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 113.164 ms

Loss rate: 2.25%

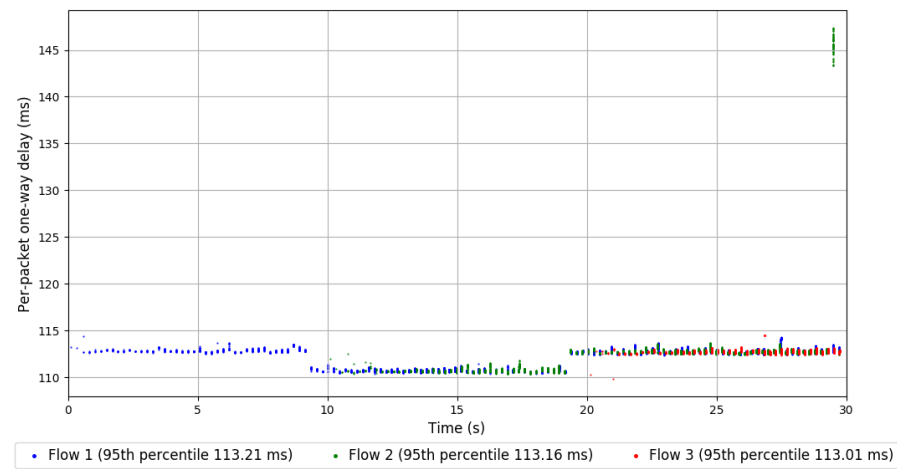
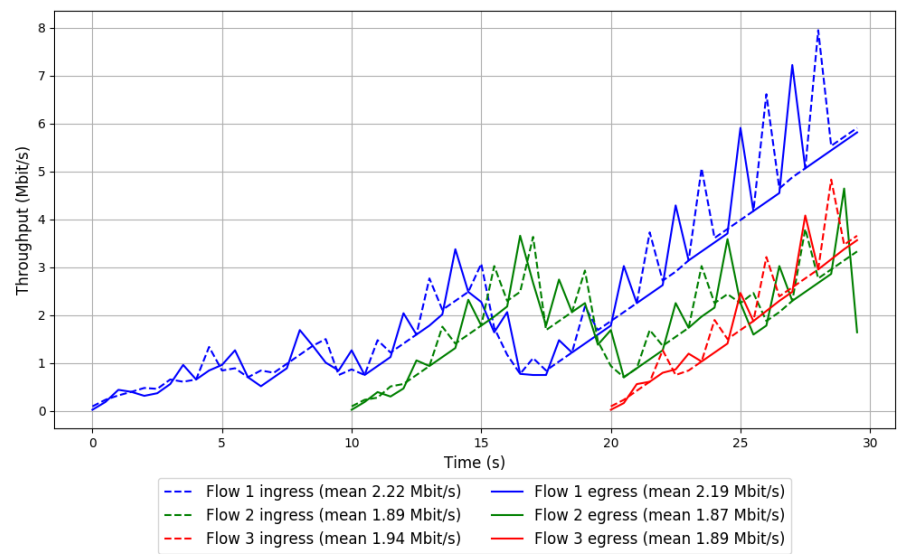
-- Flow 3:

Average throughput: 1.89 Mbit/s

95th percentile per-packet one-way delay: 113.010 ms

Loss rate: 4.86%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-11-21 13:46:17

End at: 2017-11-21 13:46:47

Below is generated by plot.py at 2017-11-21 17:26:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.86 Mbit/s

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

Loss rate: 2.55%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 112.440 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.69 Mbit/s

95th percentile per-packet one-way delay: 113.098 ms

Loss rate: 1.19%

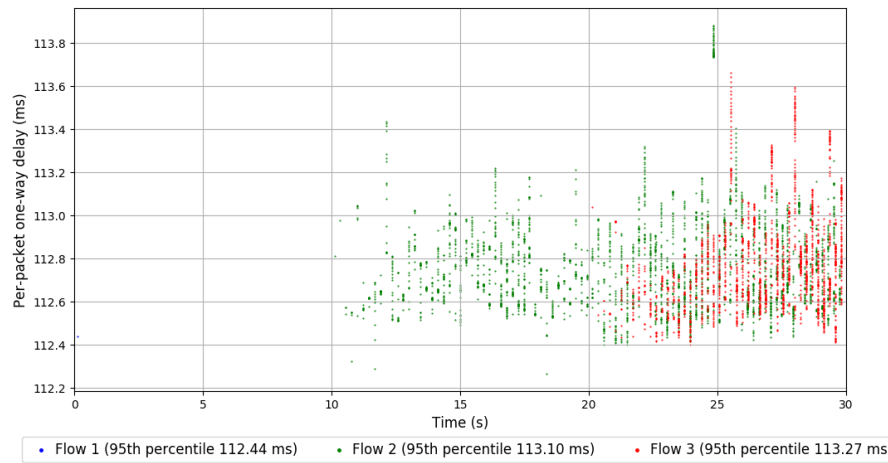
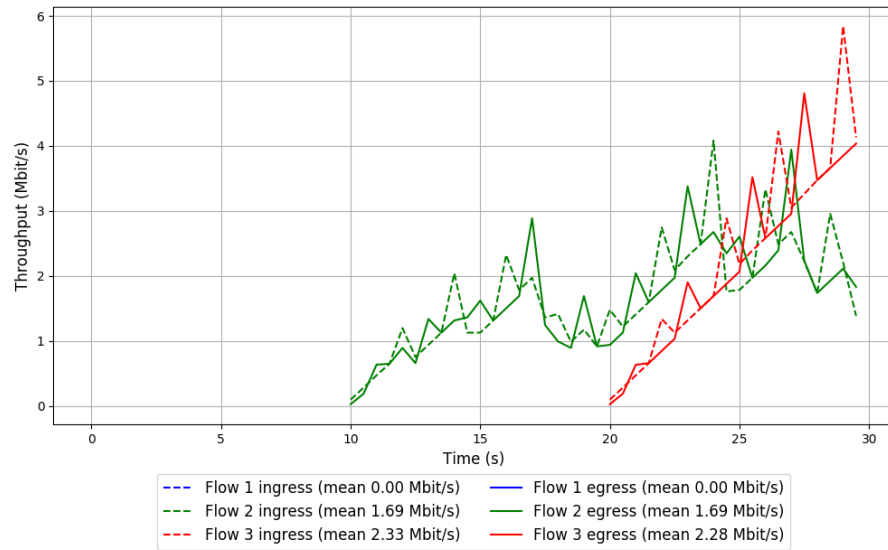
-- Flow 3:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 113.269 ms

Loss rate: 4.52%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-11-21 13:59:40

End at: 2017-11-21 14:00:10

Below is generated by plot.py at 2017-11-21 17:26:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.21 Mbit/s

95th percentile per-packet one-way delay: 113.384 ms

Loss rate: 1.69%

-- Flow 1:

Average throughput: 3.22 Mbit/s

95th percentile per-packet one-way delay: 113.357 ms

Loss rate: 1.60%

-- Flow 2:

Average throughput: 3.73 Mbit/s

95th percentile per-packet one-way delay: 113.435 ms

Loss rate: 1.45%

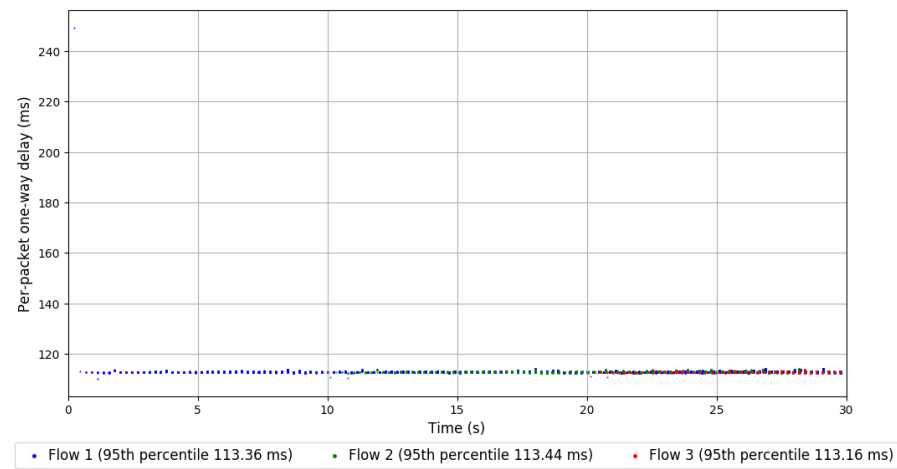
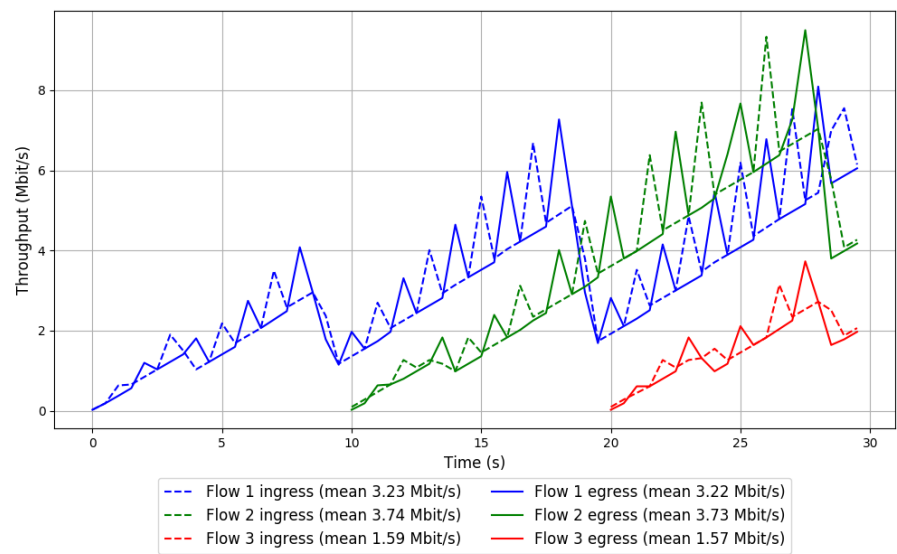
-- Flow 3:

Average throughput: 1.57 Mbit/s

95th percentile per-packet one-way delay: 113.156 ms

Loss rate: 3.37%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2017-11-21 14:12:57

End at: 2017-11-21 14:13:27

Below is generated by plot.py at 2017-11-21 17:26:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.25 Mbit/s

95th percentile per-packet one-way delay: 113.419 ms

Loss rate: 1.67%

-- Flow 1:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 113.175 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 3.41 Mbit/s

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

Loss rate: 1.37%

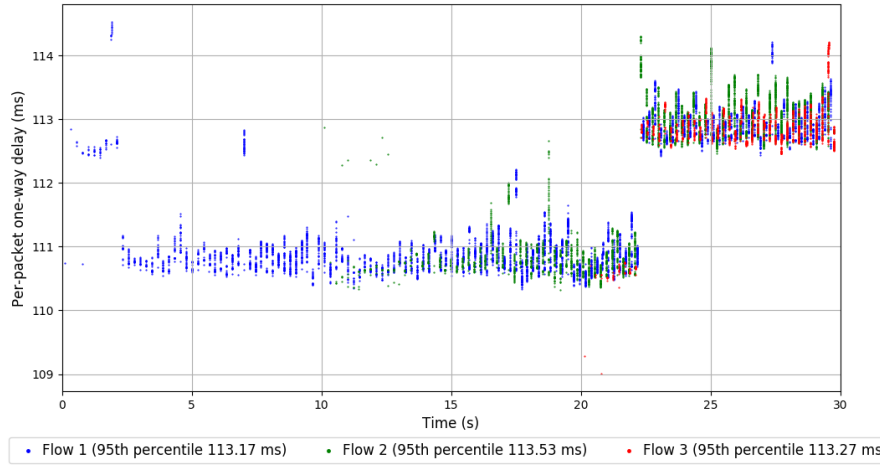
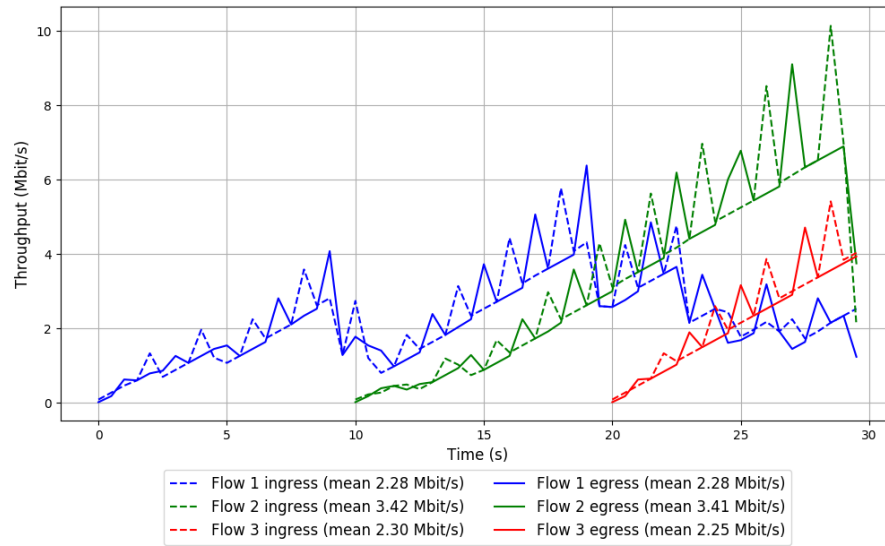
-- Flow 3:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 113.271 ms

Loss rate: 4.49%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-11-21 14:26:18

End at: 2017-11-21 14:26:48

Below is generated by plot.py at 2017-11-21 17:26:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.20 Mbit/s

95th percentile per-packet one-way delay: 109.713 ms

Loss rate: 2.16%

-- Flow 1:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 109.789 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 4.40 Mbit/s

95th percentile per-packet one-way delay: 109.729 ms

Loss rate: 2.33%

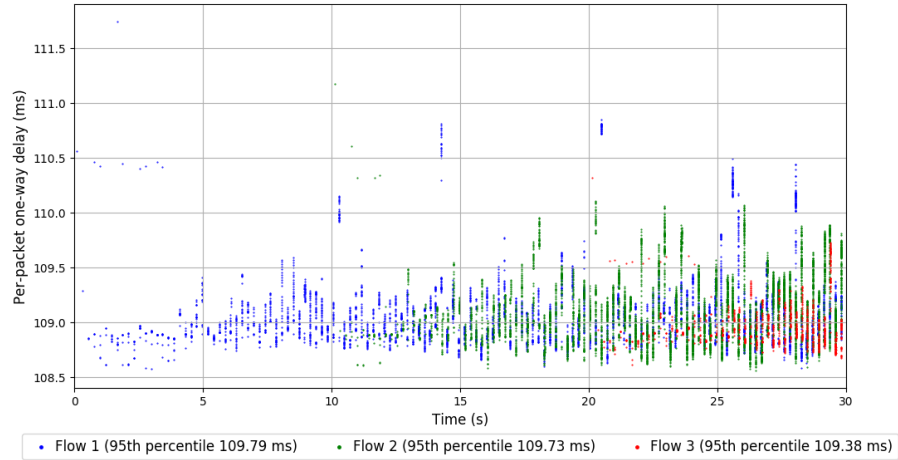
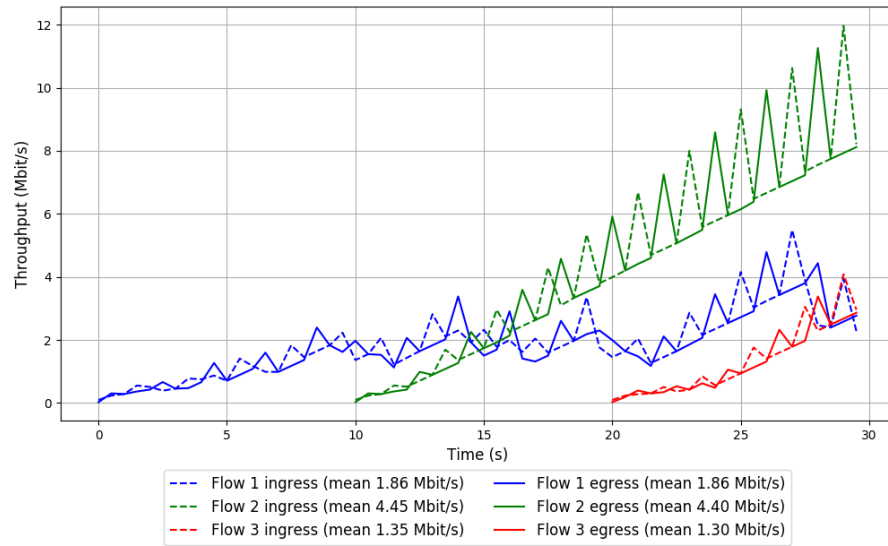
-- Flow 3:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 109.379 ms

Loss rate: 5.62%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-11-21 14:39:49

End at: 2017-11-21 14:40:19

Below is generated by plot.py at 2017-11-21 17:26:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.79 Mbit/s

95th percentile per-packet one-way delay: 111.156 ms

Loss rate: 4.81%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 559.878 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.03 Mbit/s

95th percentile per-packet one-way delay: 111.119 ms

Loss rate: 5.16%

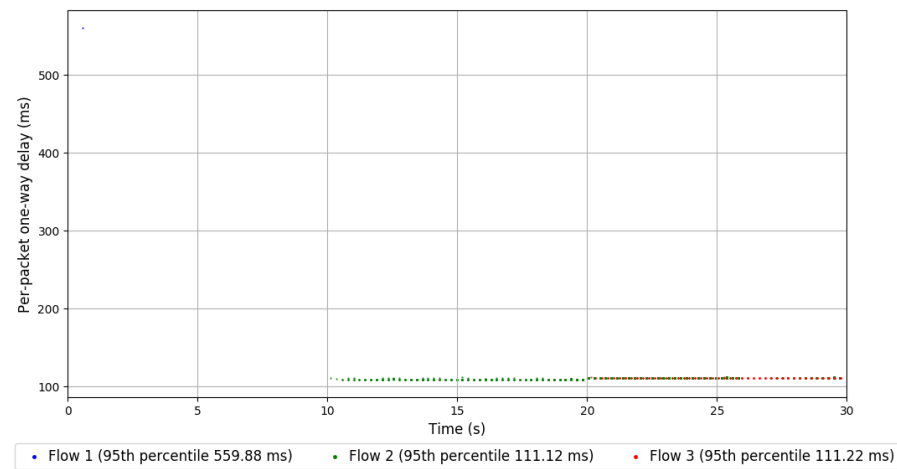
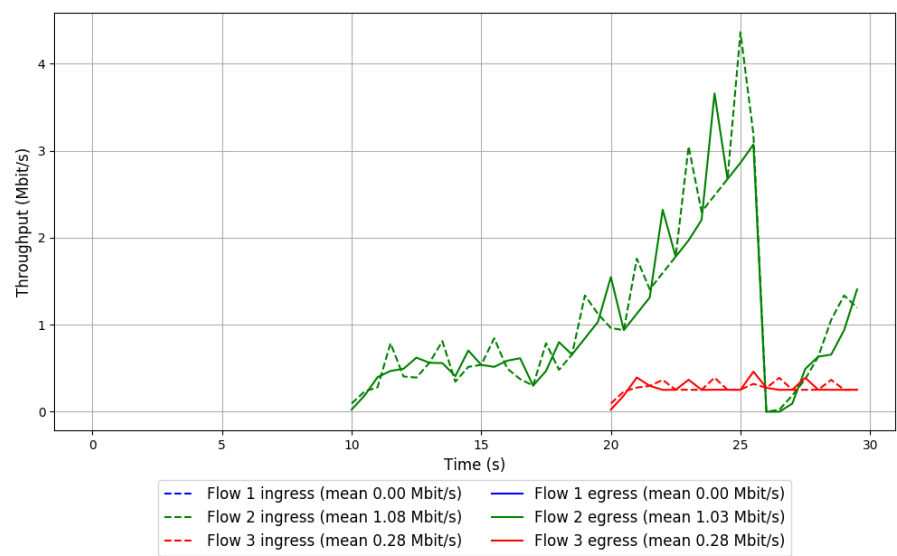
-- Flow 3:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 111.222 ms

Loss rate: 2.07%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2017-11-21 14:53:27

End at: 2017-11-21 14:53:57

Below is generated by plot.py at 2017-11-21 17:26:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.09 Mbit/s

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

Loss rate: 2.09%

-- Flow 1:

Average throughput: 3.13 Mbit/s

95th percentile per-packet one-way delay: 113.376 ms

Loss rate: 1.59%

-- Flow 2:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 113.088 ms

Loss rate: 0.97%

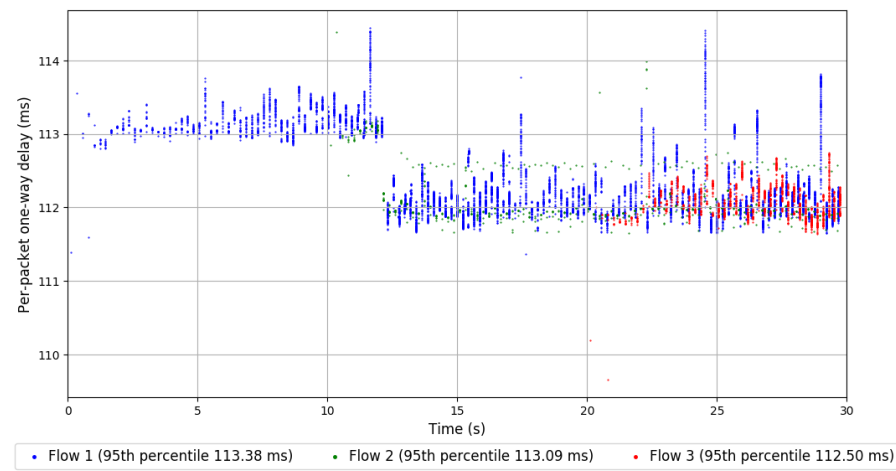
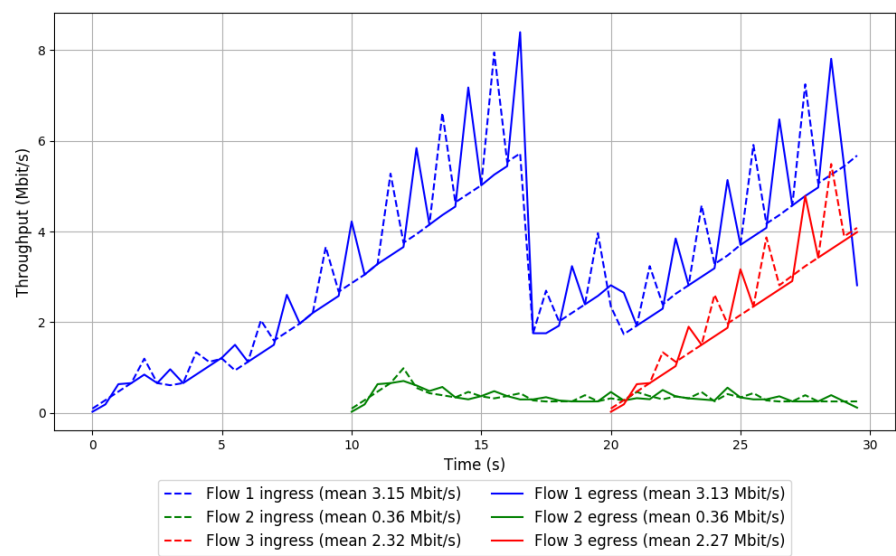
-- Flow 3:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 112.502 ms

Loss rate: 4.52%

Run 10: Report of LEDBAT — Data Link

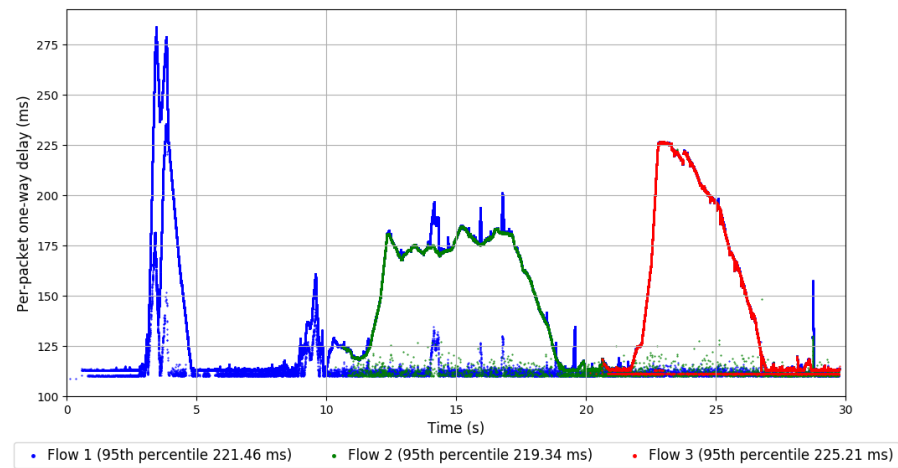
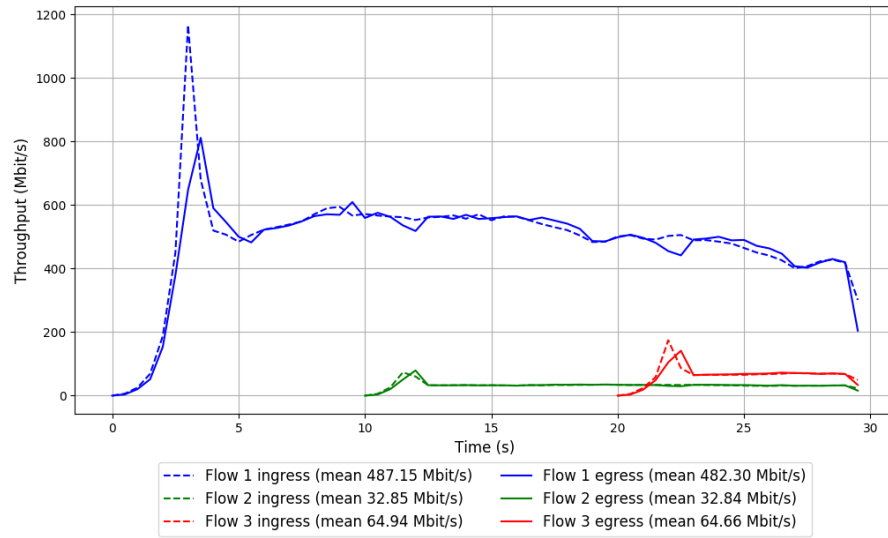


```
Run 1: Statistics of PCC

Start at: 2017-11-21 12:55:08
End at: 2017-11-21 12:55:38

# Below is generated by plot.py at 2017-11-21 17:34:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 524.98 Mbit/s
95th percentile per-packet one-way delay: 221.543 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 482.30 Mbit/s
95th percentile per-packet one-way delay: 221.457 ms
Loss rate: 1.73%
-- Flow 2:
Average throughput: 32.84 Mbit/s
95th percentile per-packet one-way delay: 219.341 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 64.66 Mbit/s
95th percentile per-packet one-way delay: 225.213 ms
Loss rate: 2.69%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2017-11-21 13:08:26

End at: 2017-11-21 13:08:56

Below is generated by plot.py at 2017-11-21 17:34:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 518.65 Mbit/s

95th percentile per-packet one-way delay: 165.515 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 505.97 Mbit/s

95th percentile per-packet one-way delay: 165.845 ms

Loss rate: 1.64%

-- Flow 2:

Average throughput: 10.96 Mbit/s

95th percentile per-packet one-way delay: 147.408 ms

Loss rate: 1.26%

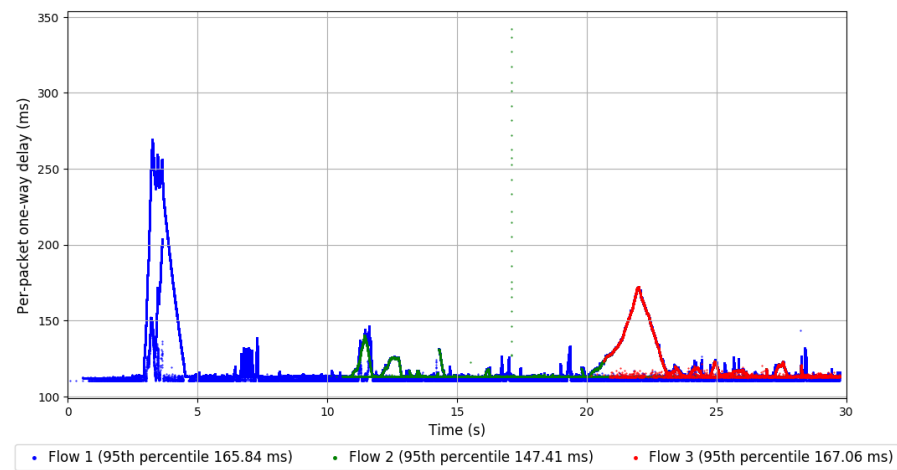
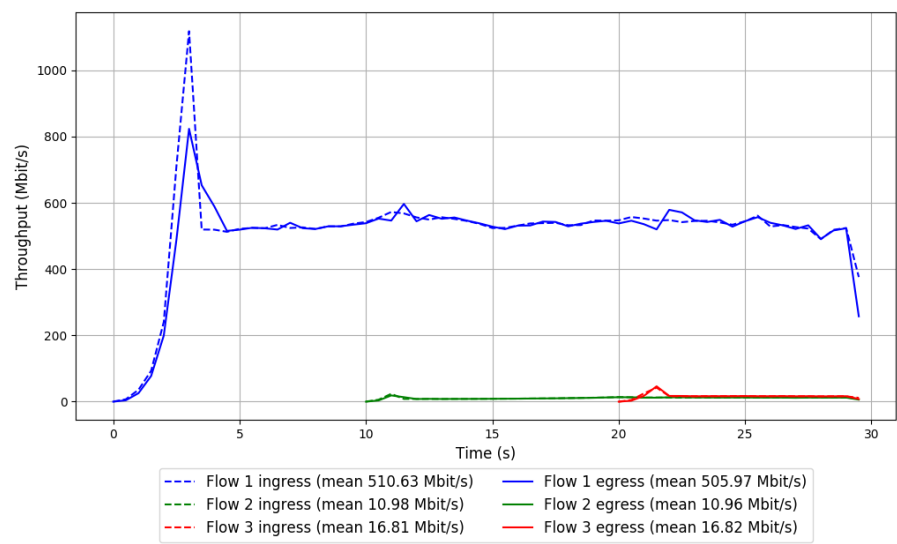
-- Flow 3:

Average throughput: 16.82 Mbit/s

95th percentile per-packet one-way delay: 167.060 ms

Loss rate: 2.21%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-11-21 13:22:09

End at: 2017-11-21 13:22:39

Below is generated by plot.py at 2017-11-21 17:34:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 524.41 Mbit/s

95th percentile per-packet one-way delay: 176.421 ms

Loss rate: 2.32%

-- Flow 1:

Average throughput: 497.03 Mbit/s

95th percentile per-packet one-way delay: 177.287 ms

Loss rate: 2.37%

-- Flow 2:

Average throughput: 33.13 Mbit/s

95th percentile per-packet one-way delay: 170.915 ms

Loss rate: 1.17%

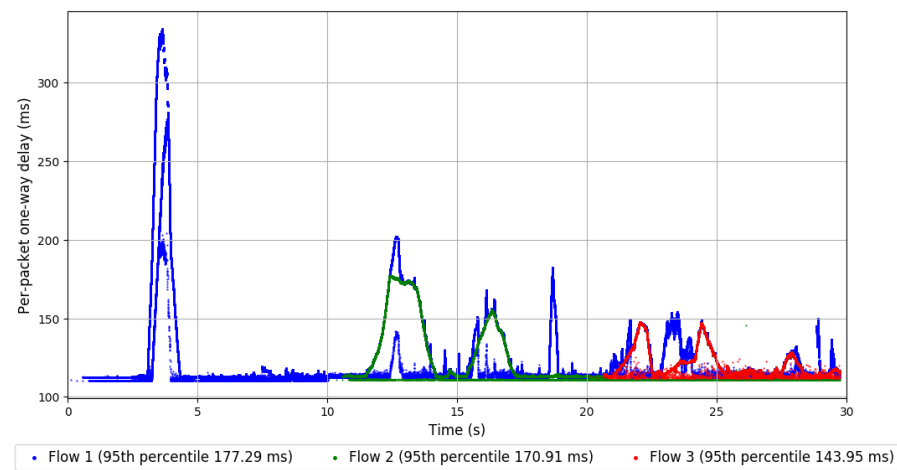
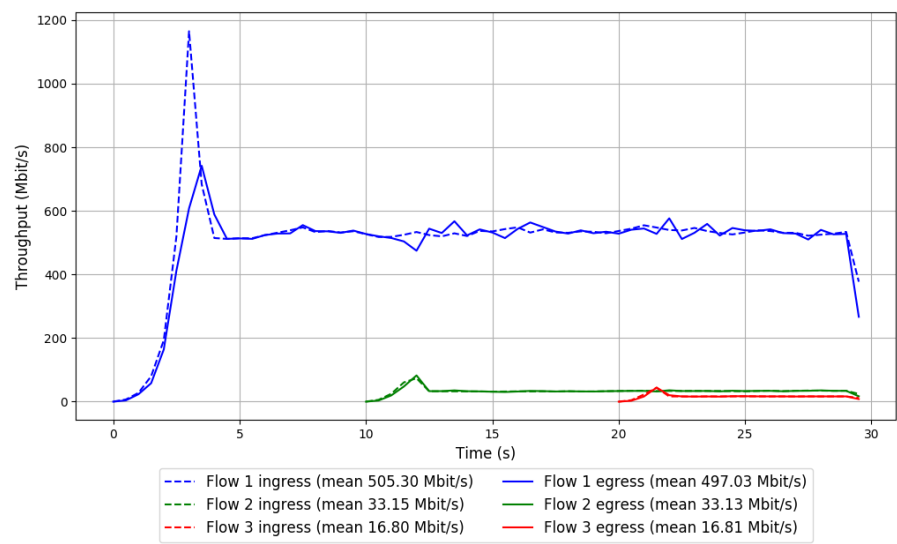
-- Flow 3:

Average throughput: 16.81 Mbit/s

95th percentile per-packet one-way delay: 143.952 ms

Loss rate: 2.24%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-11-21 13:35:37

End at: 2017-11-21 13:36:07

Below is generated by plot.py at 2017-11-21 17:34:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 480.11 Mbit/s

95th percentile per-packet one-way delay: 236.747 ms

Loss rate: 2.66%

-- Flow 1:

Average throughput: 312.62 Mbit/s

95th percentile per-packet one-way delay: 235.790 ms

Loss rate: 2.13%

-- Flow 2:

Average throughput: 250.97 Mbit/s

95th percentile per-packet one-way delay: 260.210 ms

Loss rate: 3.64%

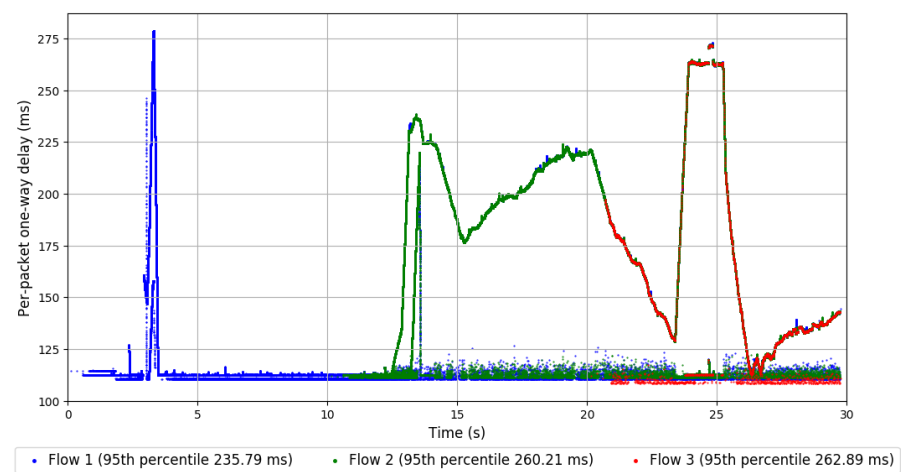
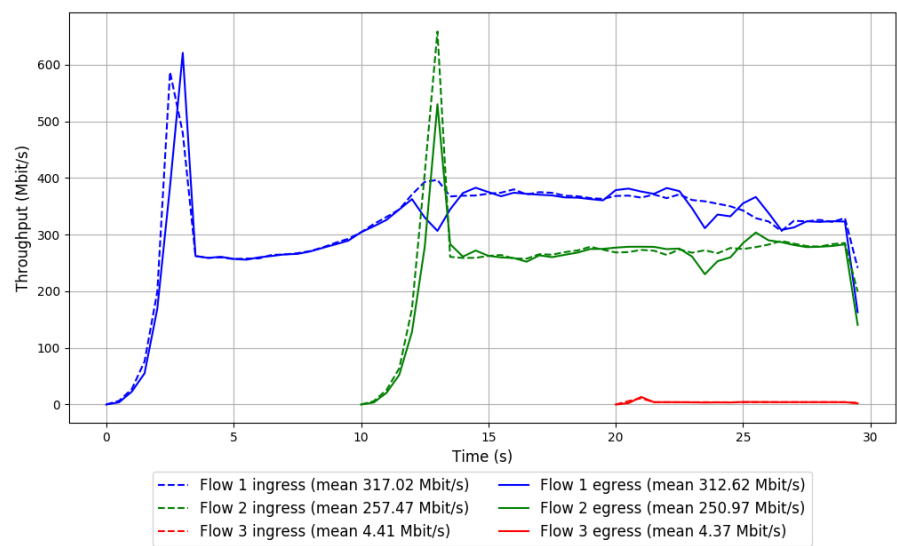
-- Flow 3:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 262.892 ms

Loss rate: 3.09%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-11-21 13:49:15

End at: 2017-11-21 13:49:45

Below is generated by plot.py at 2017-11-21 17:34:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 519.62 Mbit/s

95th percentile per-packet one-way delay: 210.487 ms

Loss rate: 2.85%

-- Flow 1:

Average throughput: 470.14 Mbit/s

95th percentile per-packet one-way delay: 211.504 ms

Loss rate: 3.00%

-- Flow 2:

Average throughput: 66.43 Mbit/s

95th percentile per-packet one-way delay: 203.894 ms

Loss rate: 1.32%

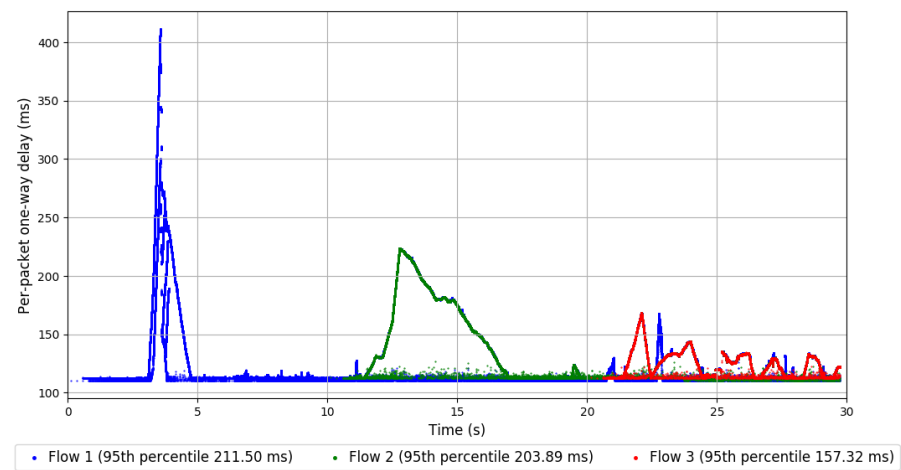
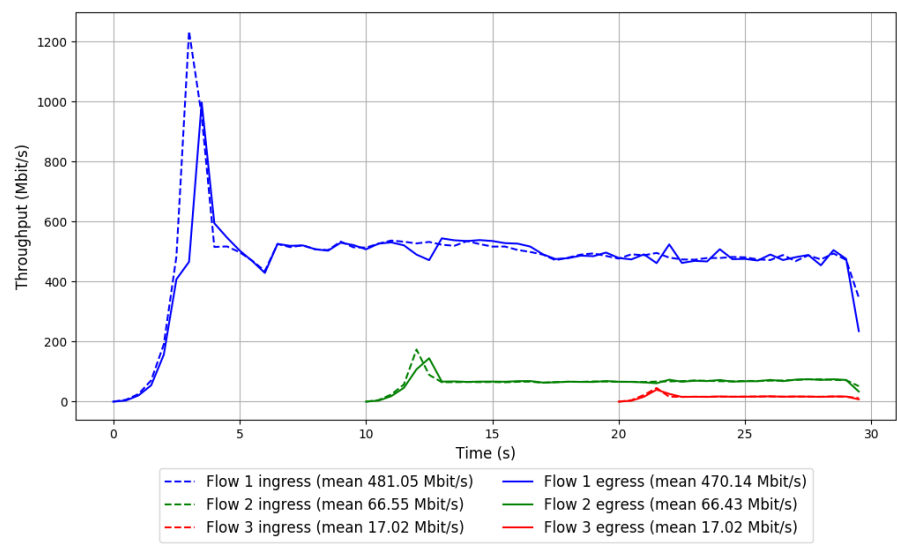
-- Flow 3:

Average throughput: 17.02 Mbit/s

95th percentile per-packet one-way delay: 157.321 ms

Loss rate: 2.32%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-11-21 14:02:39

End at: 2017-11-21 14:03:09

Below is generated by plot.py at 2017-11-21 17:35:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 543.78 Mbit/s

95th percentile per-packet one-way delay: 225.976 ms

Loss rate: 3.32%

-- Flow 1:

Average throughput: 478.04 Mbit/s

95th percentile per-packet one-way delay: 227.247 ms

Loss rate: 3.43%

-- Flow 2:

Average throughput: 68.66 Mbit/s

95th percentile per-packet one-way delay: 223.899 ms

Loss rate: 2.22%

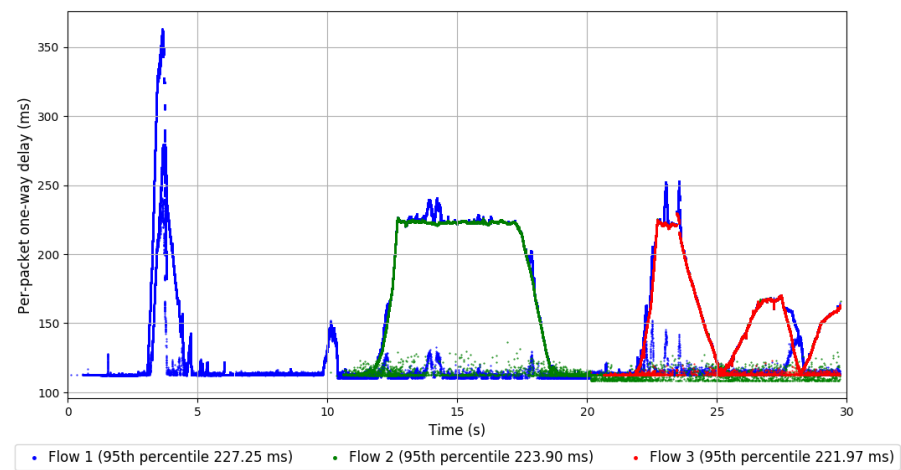
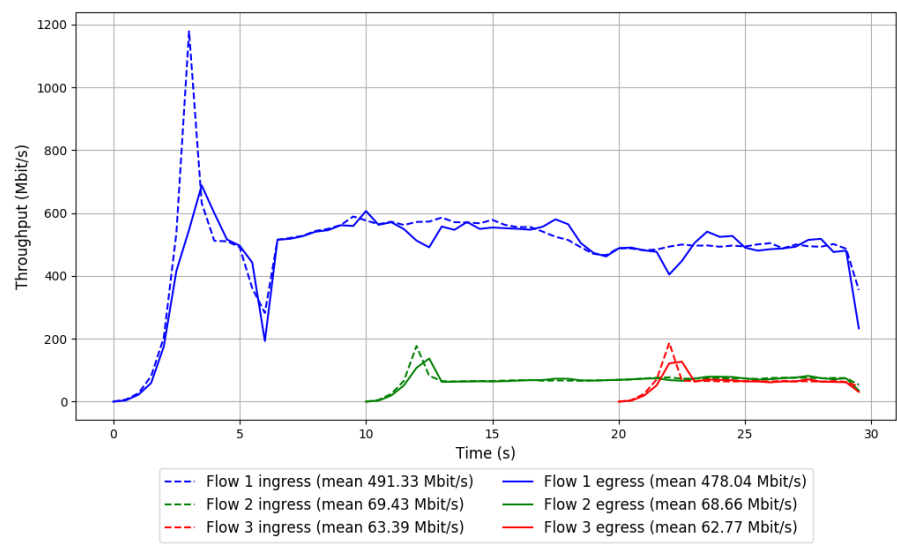
-- Flow 3:

Average throughput: 62.77 Mbit/s

95th percentile per-packet one-way delay: 221.965 ms

Loss rate: 3.25%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-11-21 14:15:55

End at: 2017-11-21 14:16:25

Below is generated by plot.py at 2017-11-21 17:35:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 525.96 Mbit/s

95th percentile per-packet one-way delay: 224.117 ms

Loss rate: 2.38%

-- Flow 1:

Average throughput: 426.85 Mbit/s

95th percentile per-packet one-way delay: 224.146 ms

Loss rate: 2.25%

-- Flow 2:

Average throughput: 118.85 Mbit/s

95th percentile per-packet one-way delay: 224.443 ms

Loss rate: 3.06%

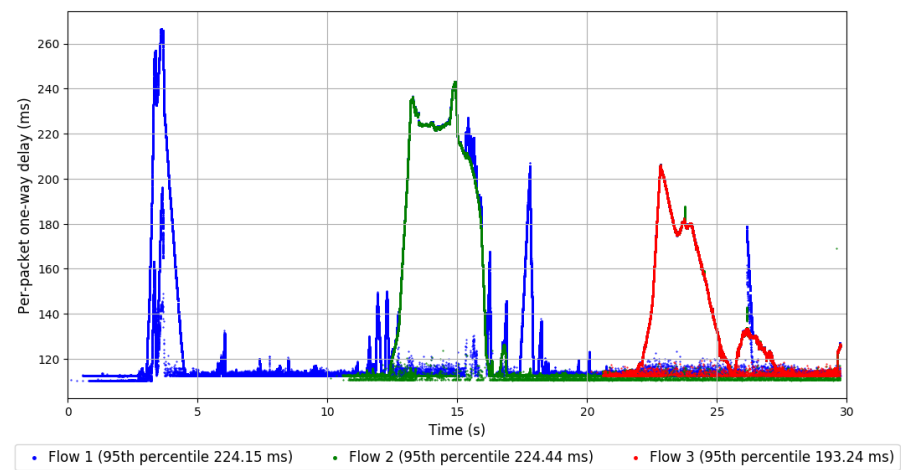
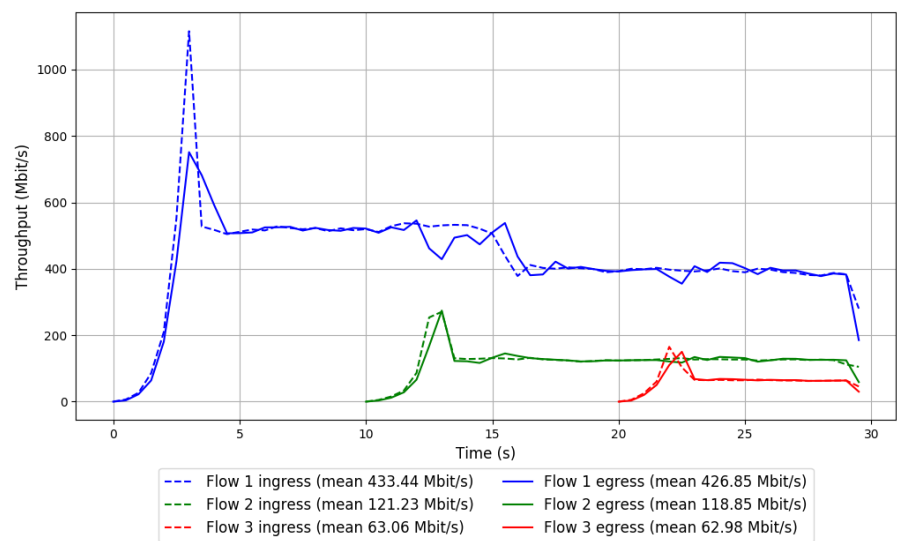
-- Flow 3:

Average throughput: 62.98 Mbit/s

95th percentile per-packet one-way delay: 193.238 ms

Loss rate: 2.42%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-11-21 14:29:17

End at: 2017-11-21 14:29:47

Below is generated by plot.py at 2017-11-21 17:36:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 573.87 Mbit/s

95th percentile per-packet one-way delay: 234.406 ms

Loss rate: 2.38%

-- Flow 1:

Average throughput: 490.00 Mbit/s

95th percentile per-packet one-way delay: 240.114 ms

Loss rate: 2.37%

-- Flow 2:

Average throughput: 124.41 Mbit/s

95th percentile per-packet one-way delay: 217.057 ms

Loss rate: 2.42%

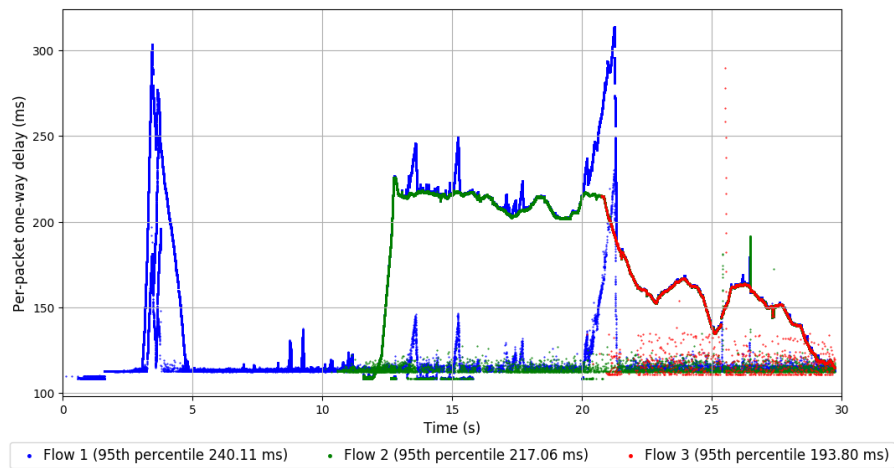
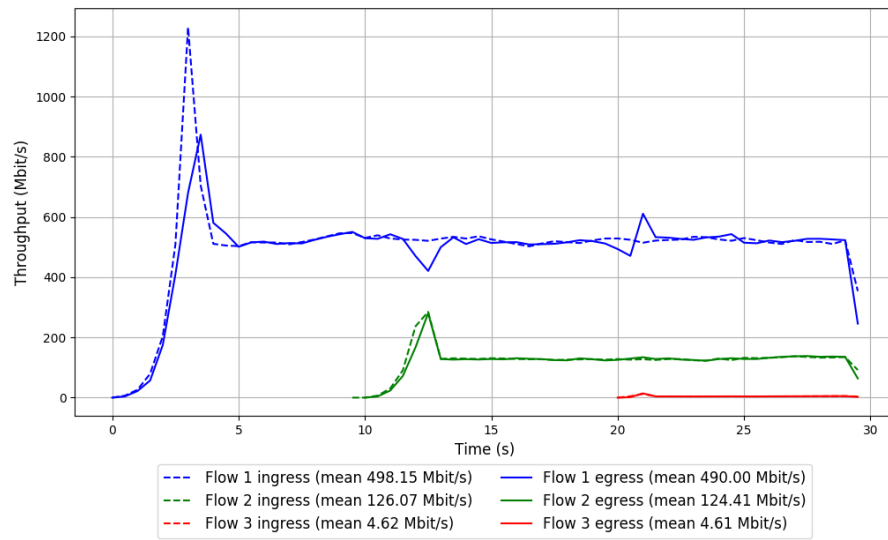
-- Flow 3:

Average throughput: 4.61 Mbit/s

95th percentile per-packet one-way delay: 193.800 ms

Loss rate: 2.68%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-11-21 14:42:47

End at: 2017-11-21 14:43:17

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 555.14 Mbit/s

95th percentile per-packet one-way delay: 223.242 ms

Loss rate: 2.90%

-- Flow 1:

Average throughput: 508.28 Mbit/s

95th percentile per-packet one-way delay: 223.494 ms

Loss rate: 2.97%

-- Flow 2:

Average throughput: 62.76 Mbit/s

95th percentile per-packet one-way delay: 221.458 ms

Loss rate: 1.93%

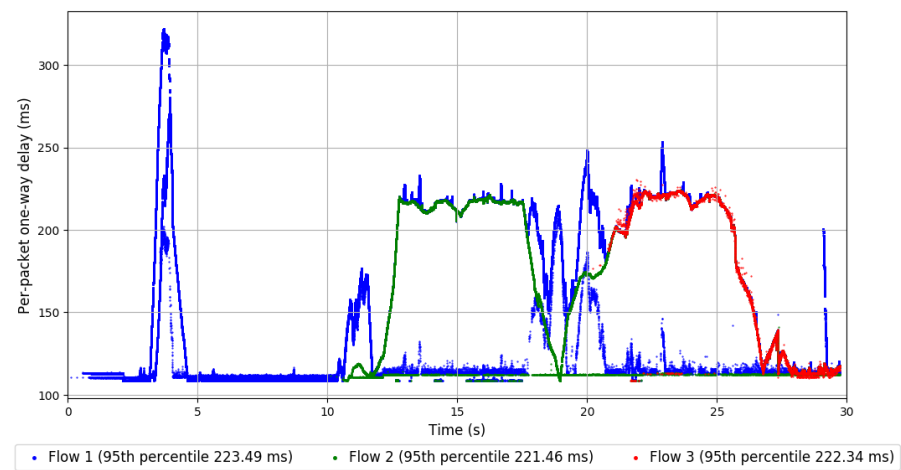
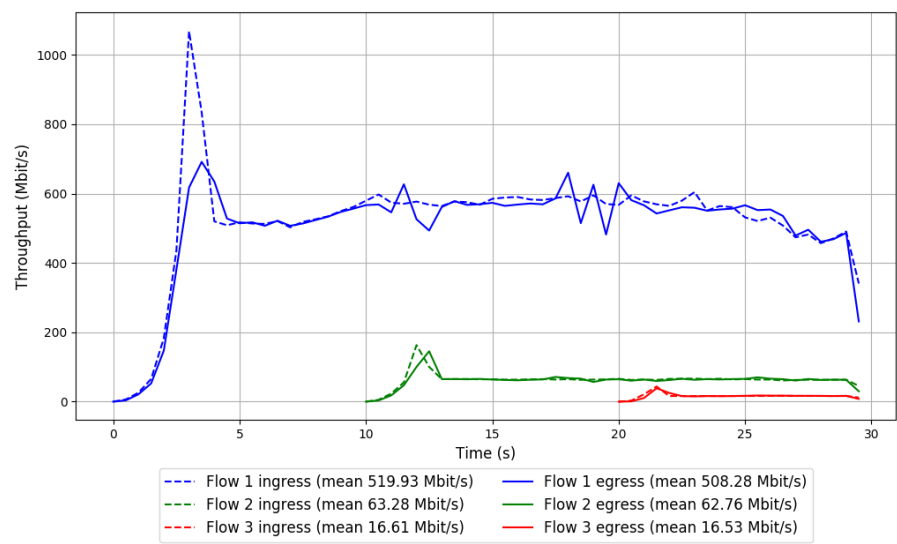
-- Flow 3:

Average throughput: 16.53 Mbit/s

95th percentile per-packet one-way delay: 222.339 ms

Loss rate: 3.39%

Run 9: Report of PCC — Data Link

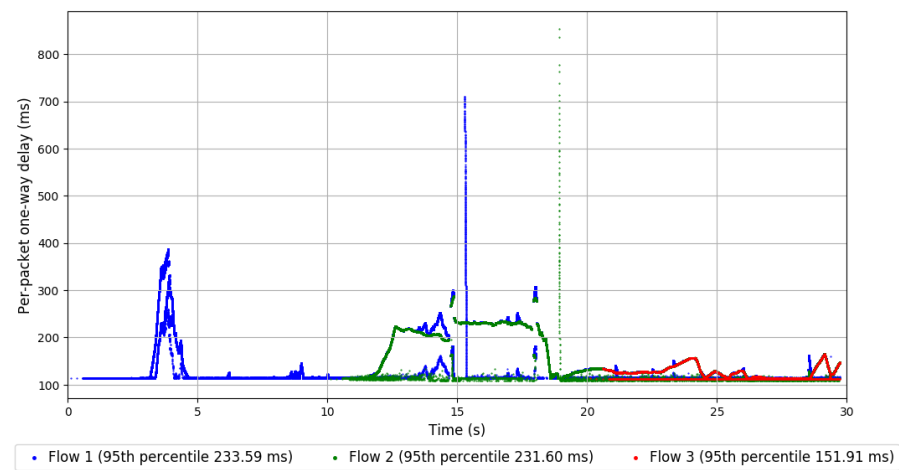
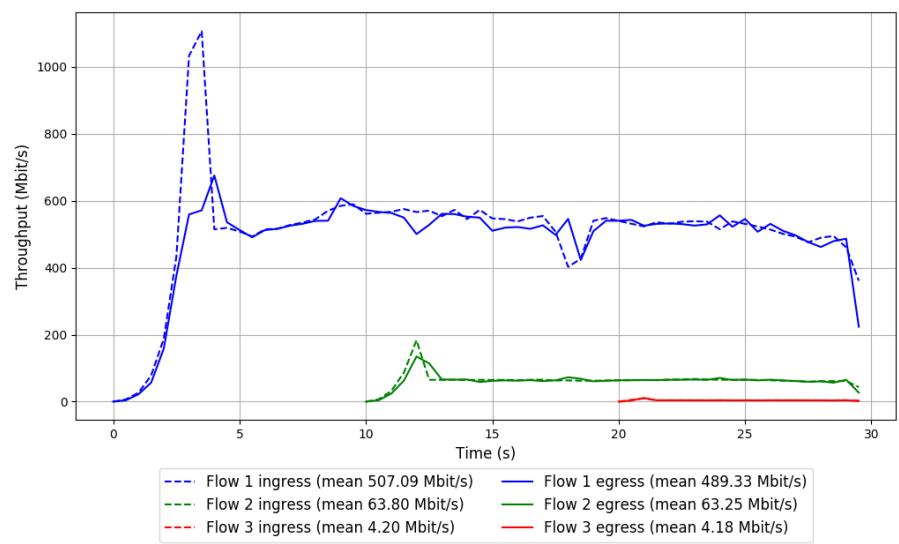


```
Run 10: Statistics of PCC

Start at: 2017-11-21 14:56:25
End at: 2017-11-21 14:56:55

# Below is generated by plot.py at 2017-11-21 17:44:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 532.59 Mbit/s
95th percentile per-packet one-way delay: 233.240 ms
Loss rate: 4.06%
-- Flow 1:
Average throughput: 489.33 Mbit/s
95th percentile per-packet one-way delay: 233.589 ms
Loss rate: 4.23%
-- Flow 2:
Average throughput: 63.25 Mbit/s
95th percentile per-packet one-way delay: 231.602 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 151.907 ms
Loss rate: 2.63%
```

Run 10: Report of PCC — Data Link

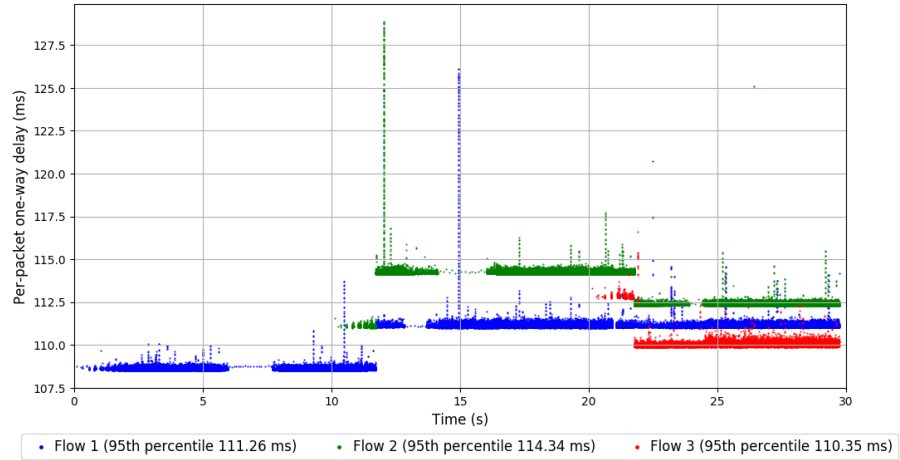
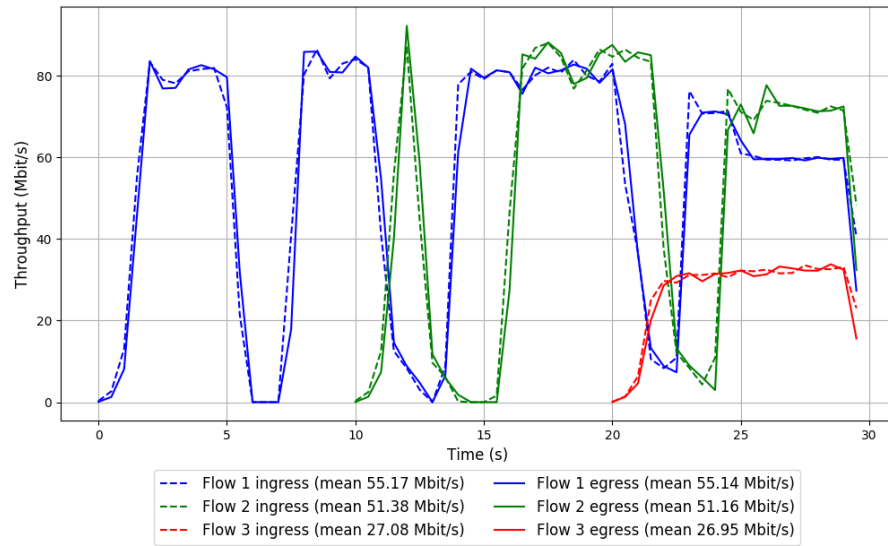


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-11-21 12:50:27
End at: 2017-11-21 12:50:57

# Below is generated by plot.py at 2017-11-21 17:44:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.72 Mbit/s
95th percentile per-packet one-way delay: 114.258 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 55.14 Mbit/s
95th percentile per-packet one-way delay: 111.264 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 51.16 Mbit/s
95th percentile per-packet one-way delay: 114.344 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 26.95 Mbit/s
95th percentile per-packet one-way delay: 110.348 ms
Loss rate: 2.76%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-11-21 13:03:46

End at: 2017-11-21 13:04:16

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.27 Mbit/s

95th percentile per-packet one-way delay: 113.055 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 63.76 Mbit/s

95th percentile per-packet one-way delay: 113.091 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 47.92 Mbit/s

95th percentile per-packet one-way delay: 111.192 ms

Loss rate: 1.56%

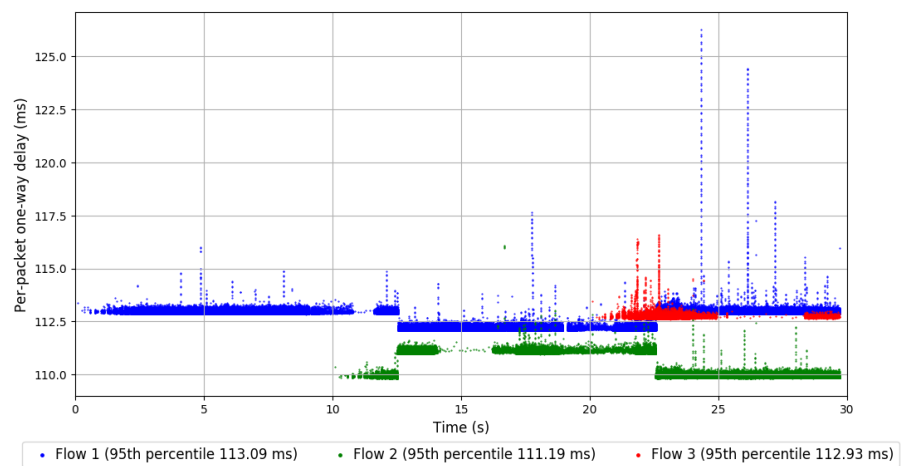
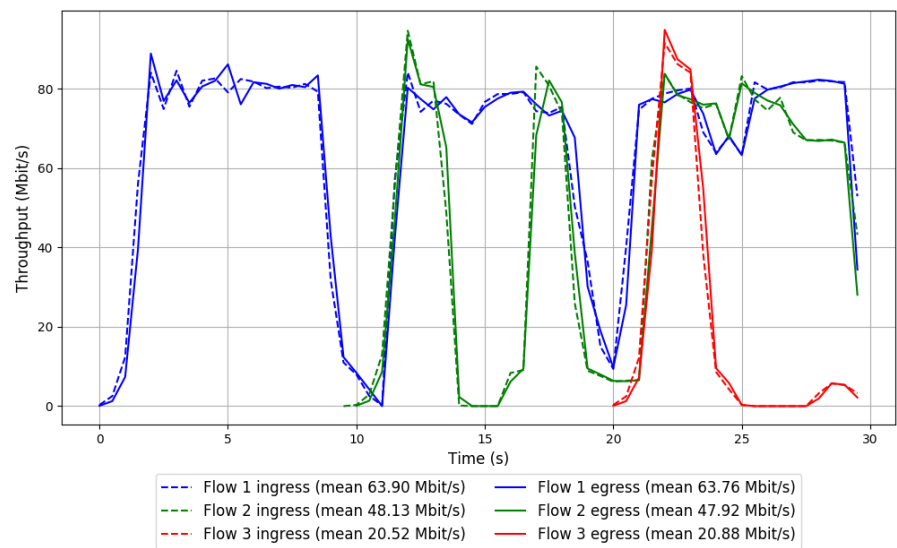
-- Flow 3:

Average throughput: 20.88 Mbit/s

95th percentile per-packet one-way delay: 112.933 ms

Loss rate: 0.57%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-11-21 13:17:29

End at: 2017-11-21 13:17:59

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.99 Mbit/s

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

Loss rate: 1.09%

-- Flow 1:

Average throughput: 57.60 Mbit/s

95th percentile per-packet one-way delay: 111.288 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 37.77 Mbit/s

95th percentile per-packet one-way delay: 112.586 ms

Loss rate: 1.77%

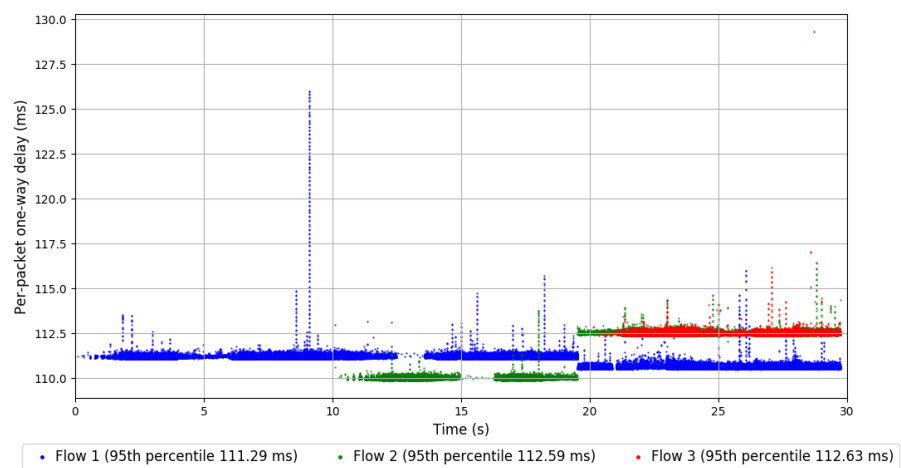
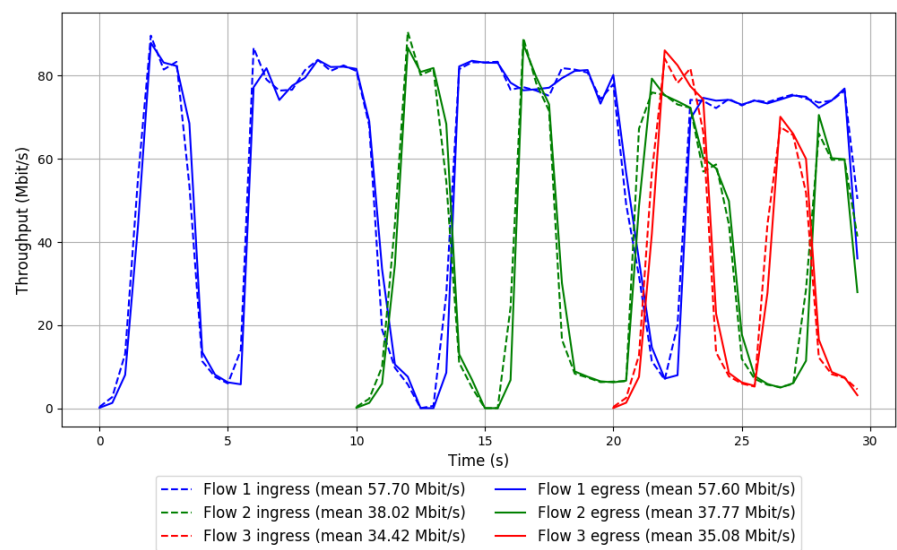
-- Flow 3:

Average throughput: 35.08 Mbit/s

95th percentile per-packet one-way delay: 112.630 ms

Loss rate: 0.44%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-11-21 13:30:57

End at: 2017-11-21 13:31:27

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.63 Mbit/s

95th percentile per-packet one-way delay: 112.437 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 50.34 Mbit/s

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

Loss rate: 0.97%

-- Flow 2:

Average throughput: 58.21 Mbit/s

95th percentile per-packet one-way delay: 111.158 ms

Loss rate: 1.29%

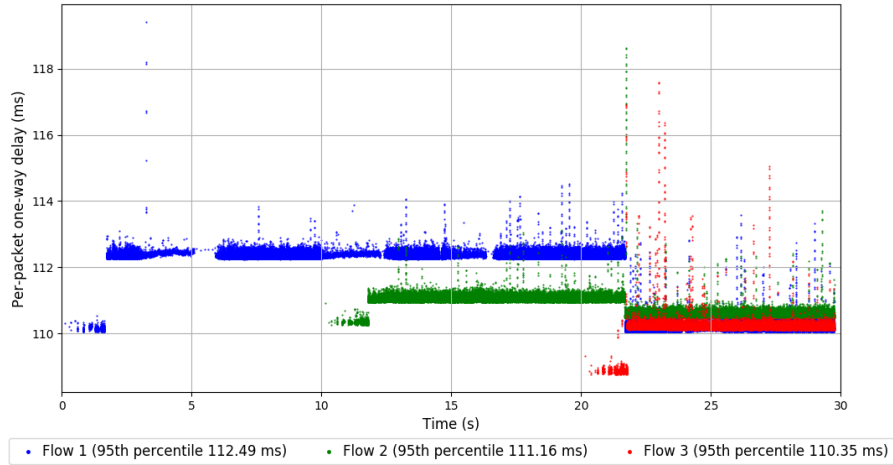
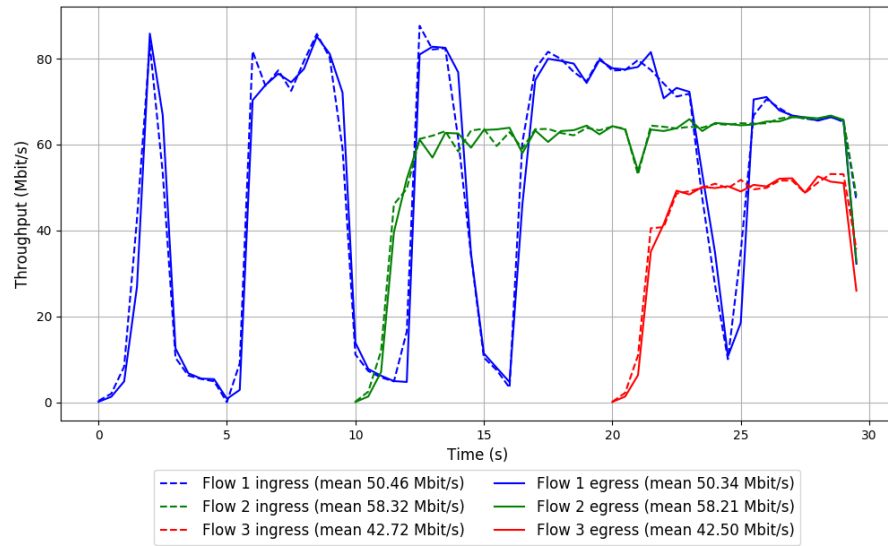
-- Flow 3:

Average throughput: 42.50 Mbit/s

95th percentile per-packet one-way delay: 110.346 ms

Loss rate: 2.75%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-11-21 13:44:35

End at: 2017-11-21 13:45:05

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.87 Mbit/s

95th percentile per-packet one-way delay: 112.536 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 40.60 Mbit/s

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

Loss rate: 0.20%

-- Flow 2:

Average throughput: 53.77 Mbit/s

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

Loss rate: 1.31%

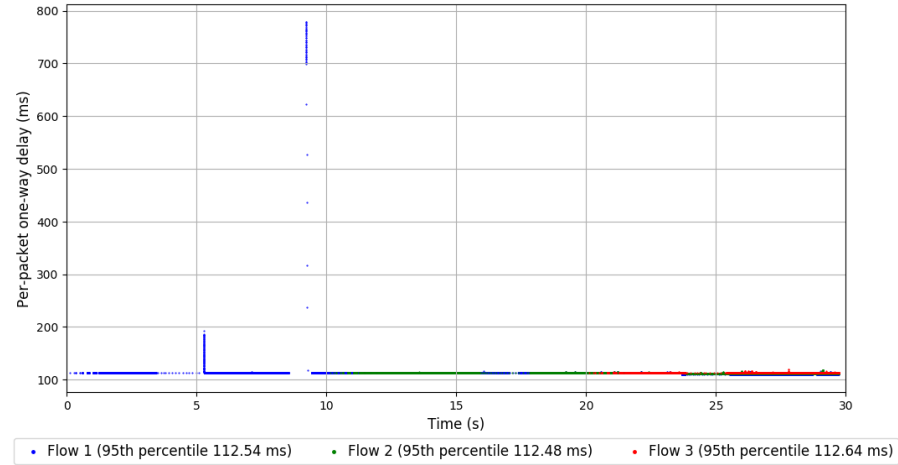
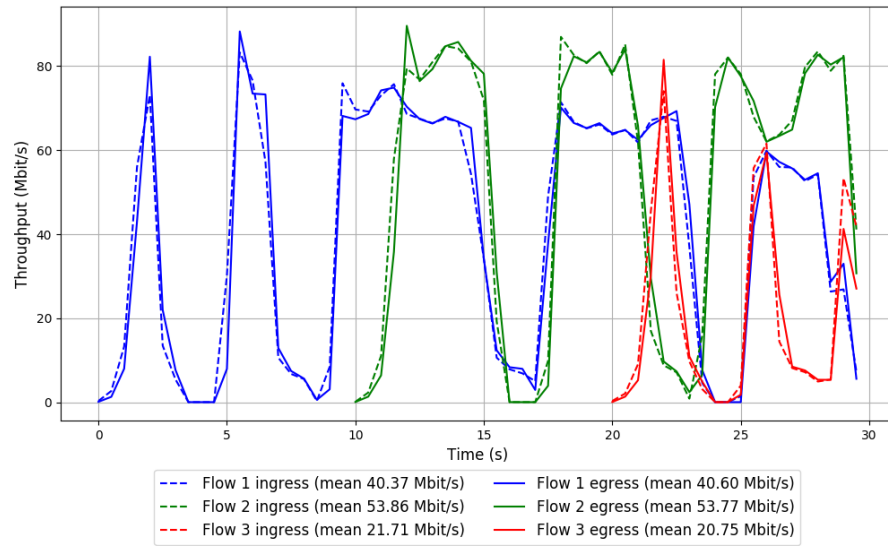
-- Flow 3:

Average throughput: 20.75 Mbit/s

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

Loss rate: 6.57%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-11-21 13:57:56

End at: 2017-11-21 13:58:26

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.23 Mbit/s

95th percentile per-packet one-way delay: 112.722 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 59.88 Mbit/s

95th percentile per-packet one-way delay: 112.762 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 44.45 Mbit/s

95th percentile per-packet one-way delay: 112.580 ms

Loss rate: 1.50%

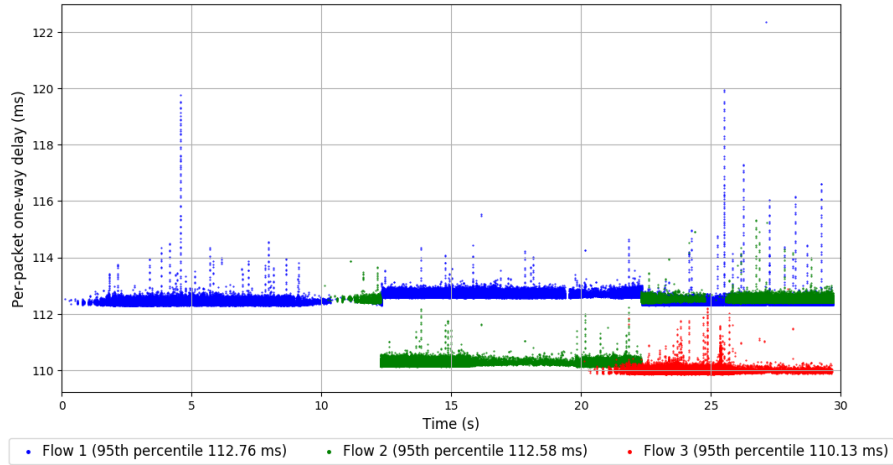
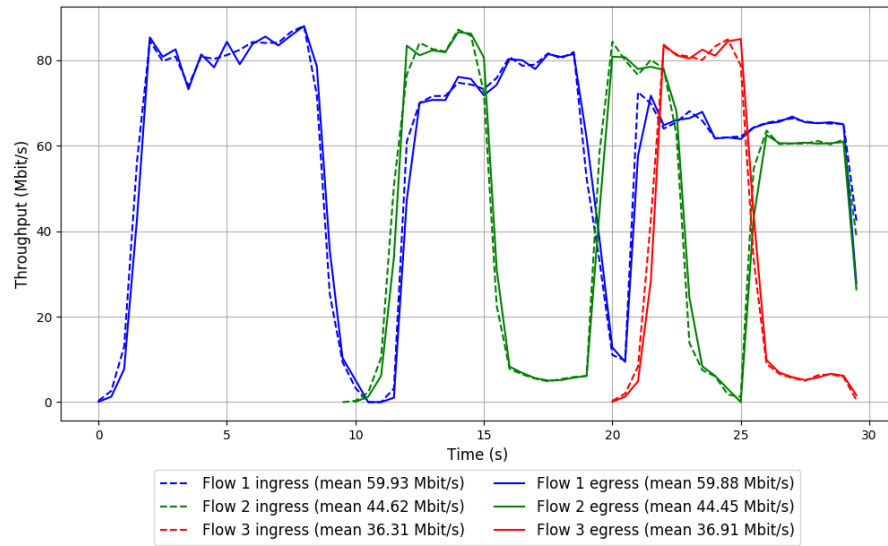
-- Flow 3:

Average throughput: 36.91 Mbit/s

95th percentile per-packet one-way delay: 110.133 ms

Loss rate: 0.00%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-11-21 14:11:13

End at: 2017-11-21 14:11:43

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.73 Mbit/s

95th percentile per-packet one-way delay: 112.520 ms

Loss rate: 1.41%

-- Flow 1:

Average throughput: 54.92 Mbit/s

95th percentile per-packet one-way delay: 112.513 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 51.07 Mbit/s

95th percentile per-packet one-way delay: 112.542 ms

Loss rate: 1.41%

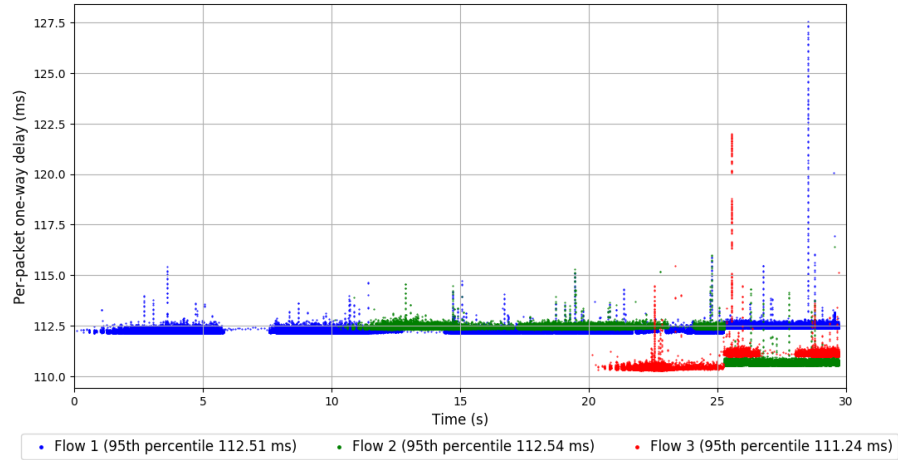
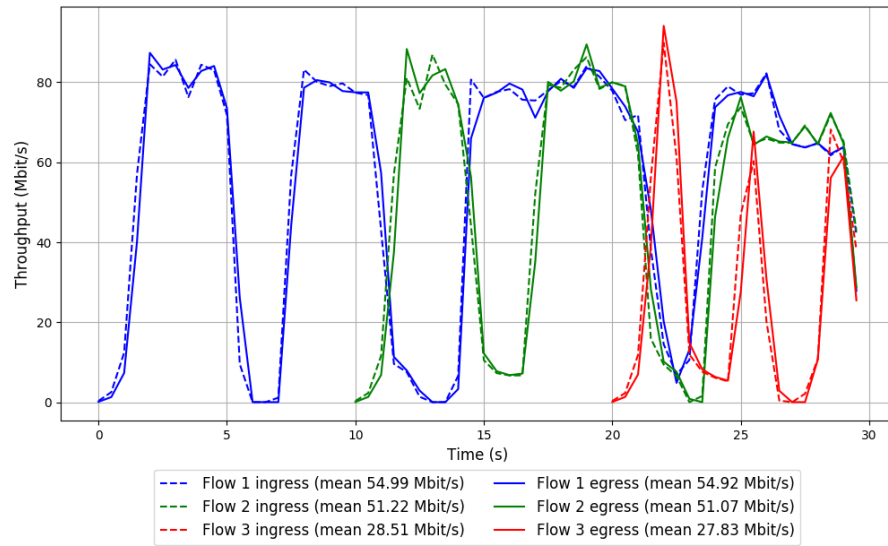
-- Flow 3:

Average throughput: 27.83 Mbit/s

95th percentile per-packet one-way delay: 111.239 ms

Loss rate: 4.57%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-11-21 14:24:31

End at: 2017-11-21 14:25:01

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.40 Mbit/s

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

Loss rate: 1.54%

-- Flow 1:

Average throughput: 57.32 Mbit/s

95th percentile per-packet one-way delay: 111.134 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 36.07 Mbit/s

95th percentile per-packet one-way delay: 112.595 ms

Loss rate: 1.65%

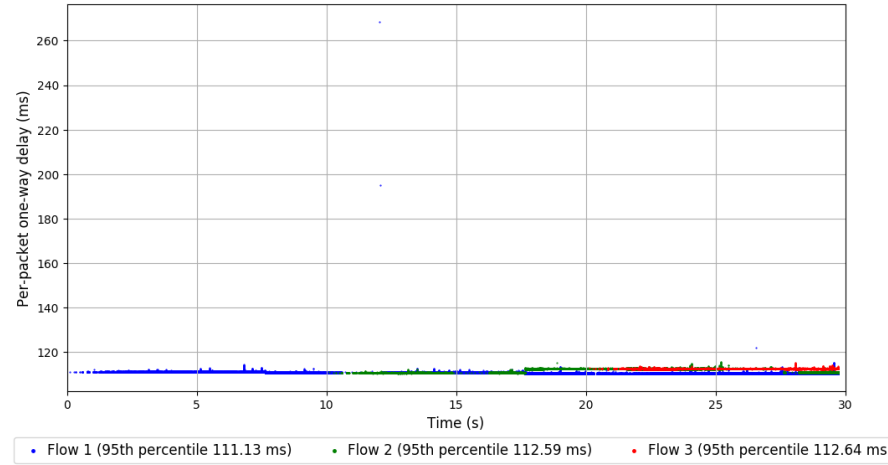
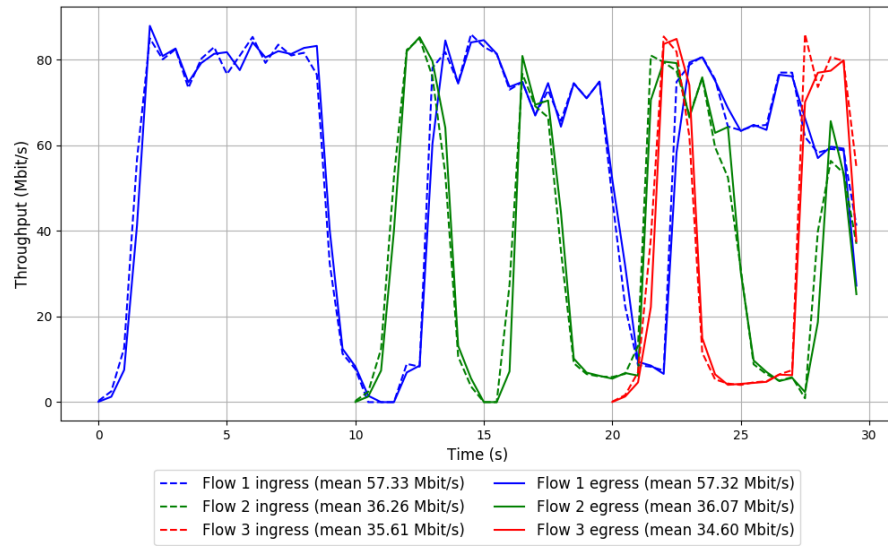
-- Flow 3:

Average throughput: 34.60 Mbit/s

95th percentile per-packet one-way delay: 112.641 ms

Loss rate: 5.06%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-11-21 14:38:06

End at: 2017-11-21 14:38:36

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.46 Mbit/s

95th percentile per-packet one-way delay: 112.608 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 51.72 Mbit/s

95th percentile per-packet one-way delay: 112.638 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 58.82 Mbit/s

95th percentile per-packet one-way delay: 110.932 ms

Loss rate: 1.18%

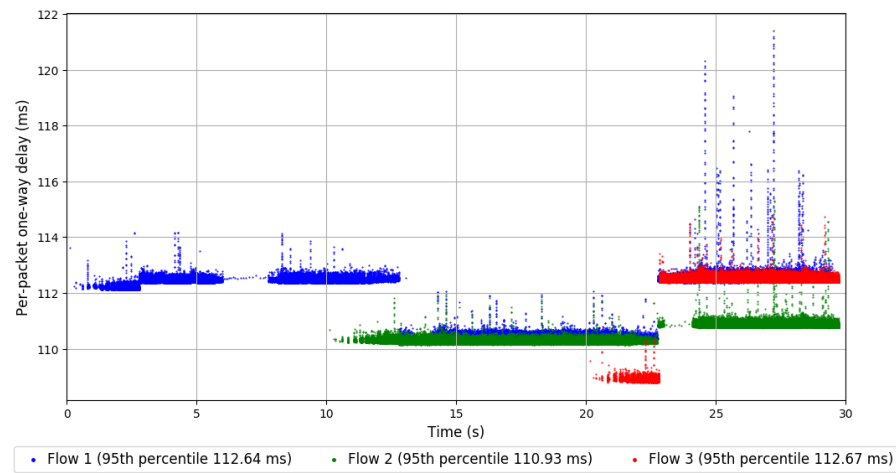
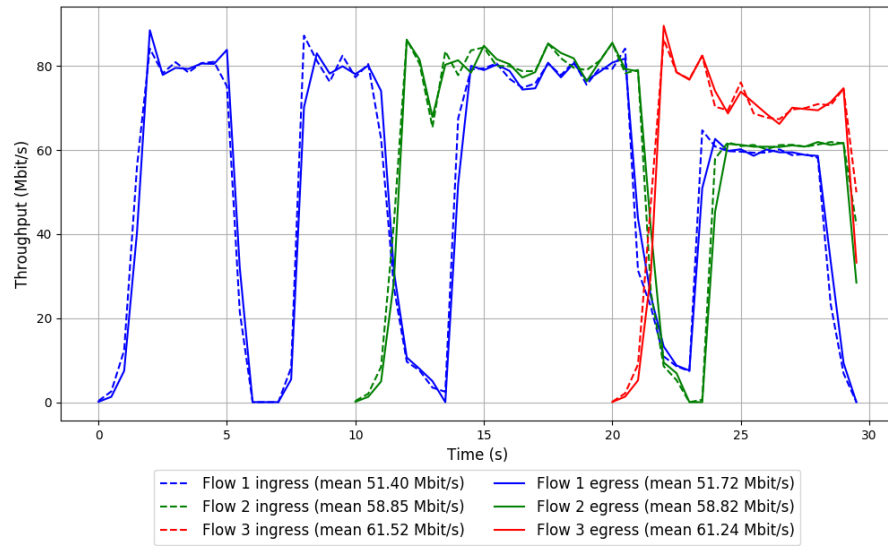
-- Flow 3:

Average throughput: 61.24 Mbit/s

95th percentile per-packet one-way delay: 112.668 ms

Loss rate: 2.70%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2017-11-21 14:51:43

End at: 2017-11-21 14:52:13

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.34 Mbit/s

95th percentile per-packet one-way delay: 112.994 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 55.64 Mbit/s

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

Loss rate: 0.99%

-- Flow 2:

Average throughput: 61.29 Mbit/s

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

Loss rate: 0.18%

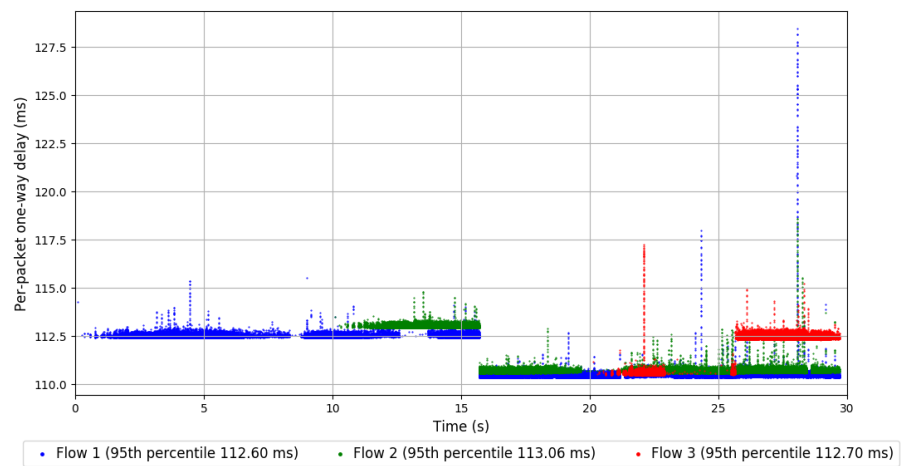
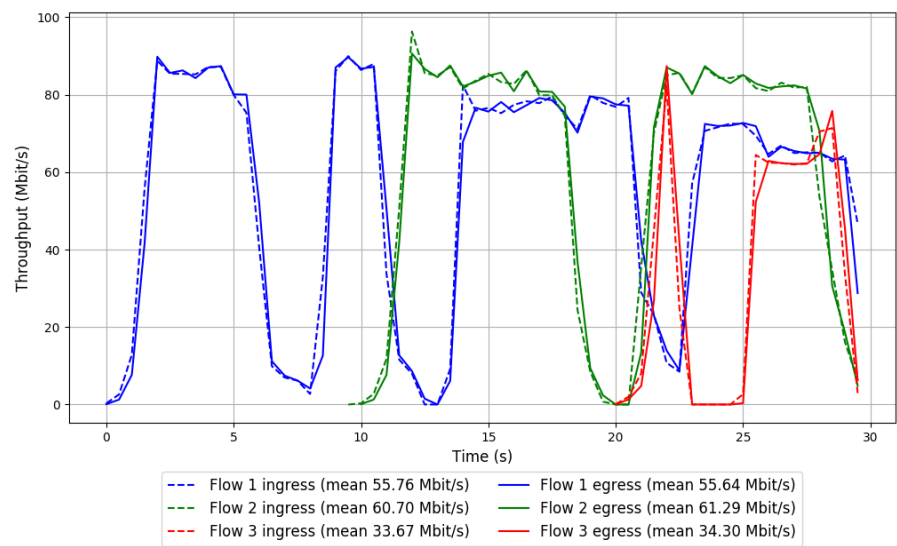
-- Flow 3:

Average throughput: 34.30 Mbit/s

95th percentile per-packet one-way delay: 112.698 ms

Loss rate: 0.05%

Run 10: Report of QUIC Cubic — Data Link

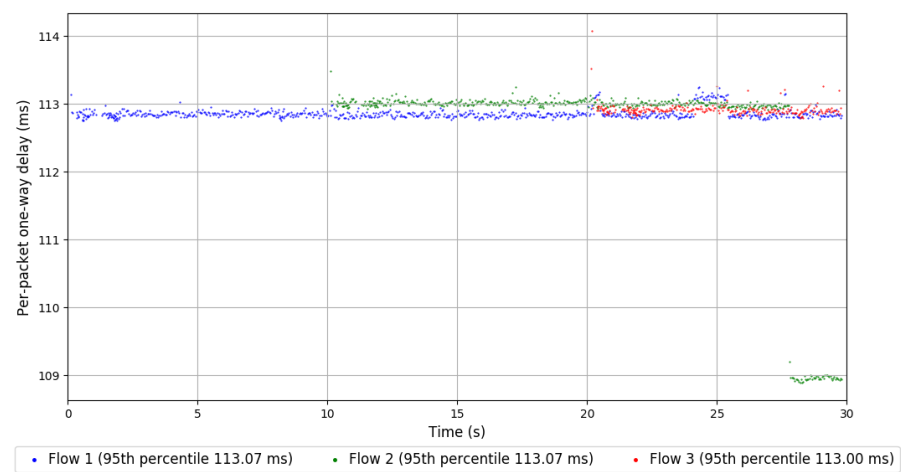
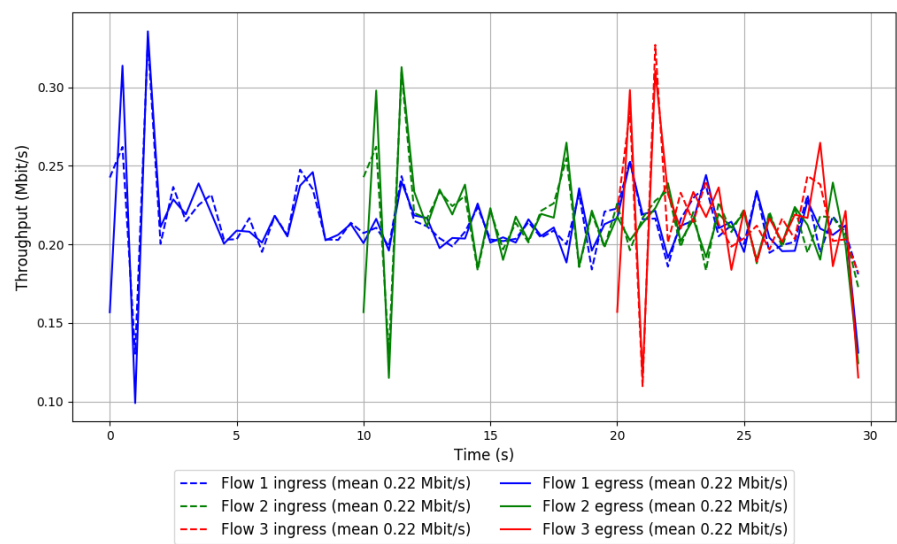


```
Run 1: Statistics of SCReAM

Start at: 2017-11-21 12:49:41
End at: 2017-11-21 12:50:11

# Below is generated by plot.py at 2017-11-21 17:44:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.068 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.068 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.072 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.005 ms
Loss rate: 2.26%
```

Run 1: Report of SReAM — Data Link

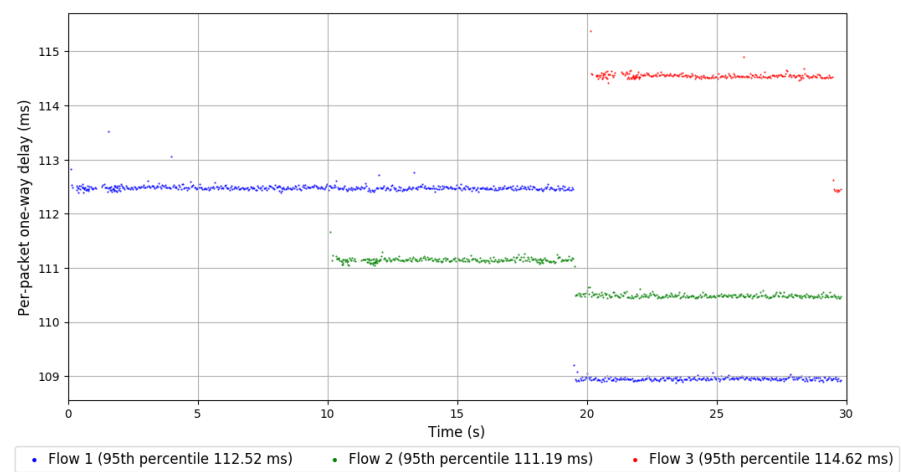
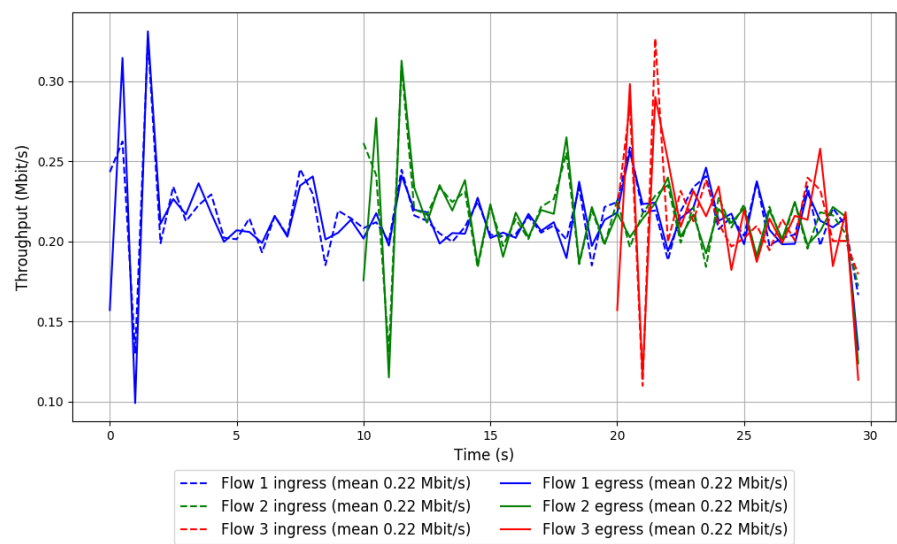


```
Run 2: Statistics of SReAM

Start at: 2017-11-21 13:02:59
End at: 2017-11-21 13:03:29

# Below is generated by plot.py at 2017-11-21 17:44:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 114.562 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.523 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.188 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.616 ms
Loss rate: 2.25%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2017-11-21 13:16:43

End at: 2017-11-21 13:17:13

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.997 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 112.577 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.526 ms

Loss rate: 1.05%

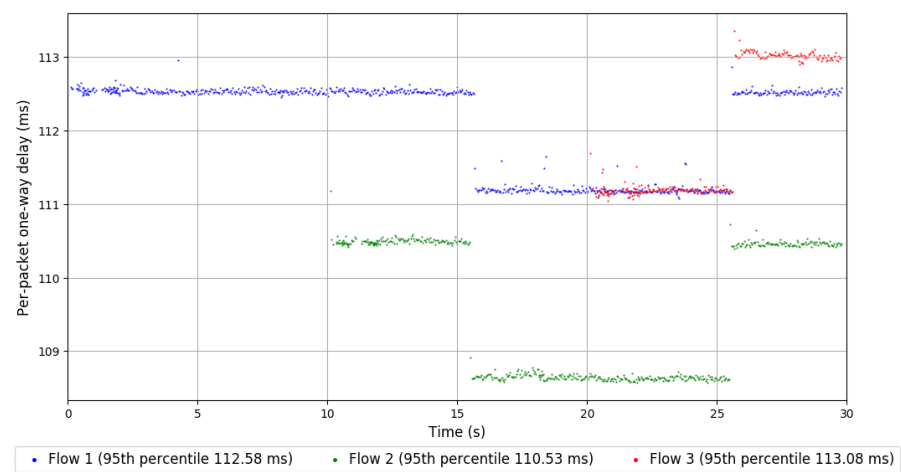
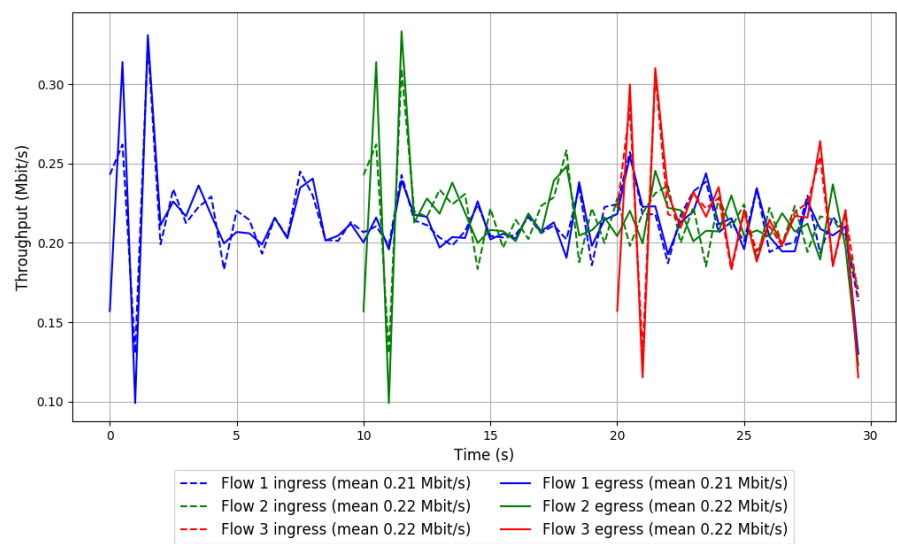
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.081 ms

Loss rate: 2.26%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2017-11-21 13:30:11

End at: 2017-11-21 13:30:41

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 112.478 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.724 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.12 Mbit/s

95th percentile per-packet one-way delay: 112.342 ms

Loss rate: 0.98%

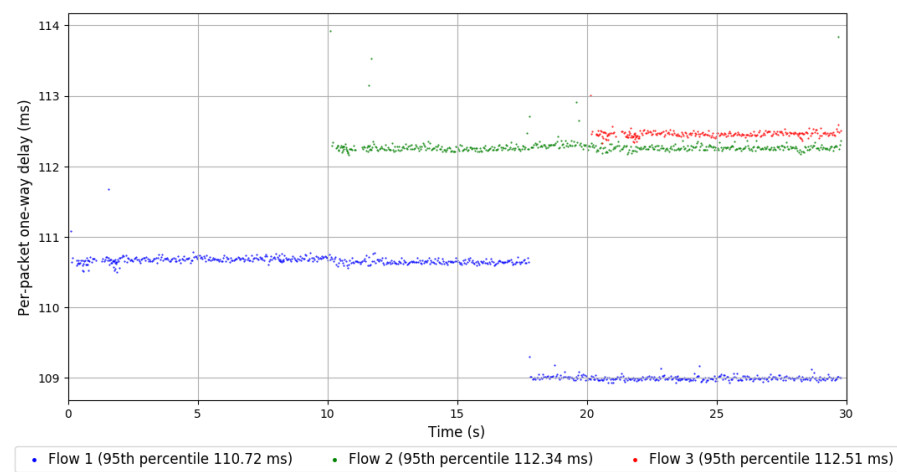
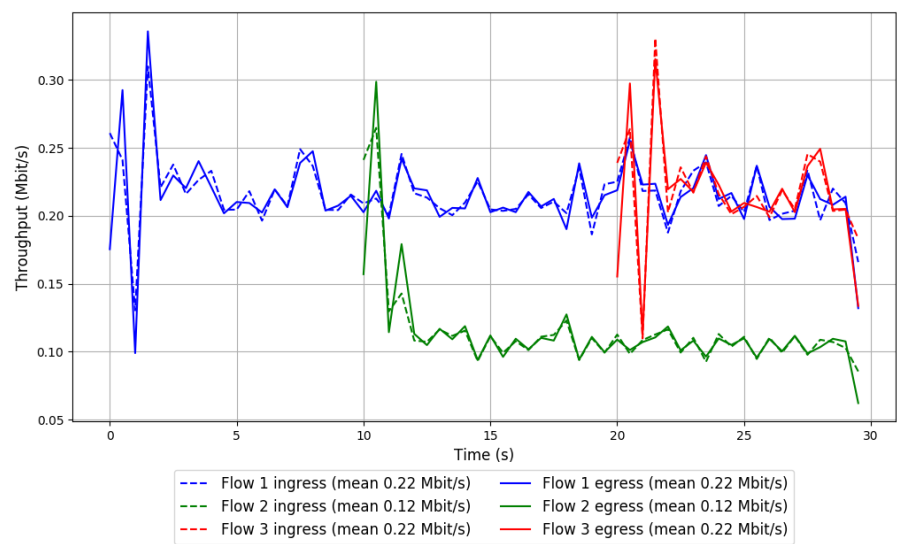
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 2.26%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2017-11-21 13:43:49

End at: 2017-11-21 13:44:19

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.479 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.489 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.291 ms

Loss rate: 1.06%

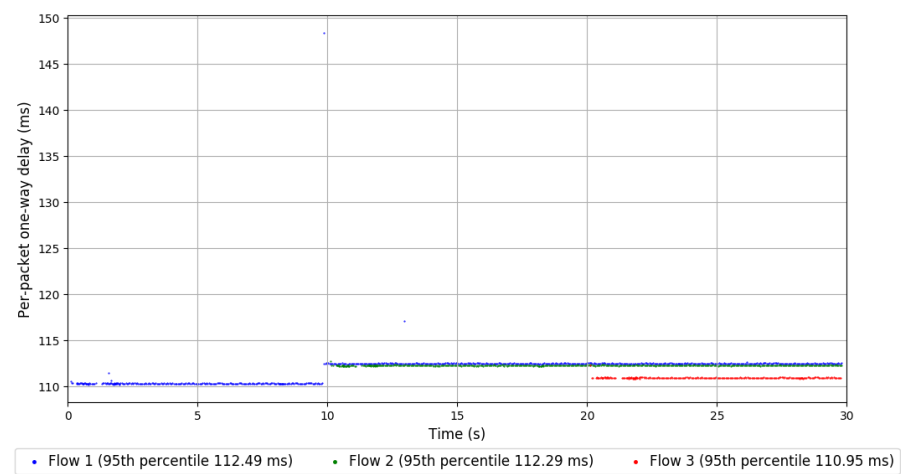
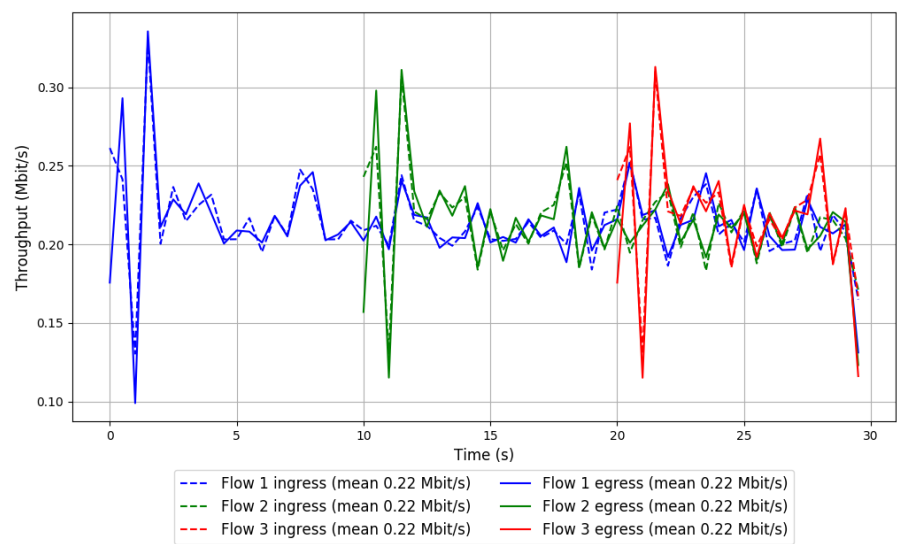
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.953 ms

Loss rate: 2.25%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2017-11-21 13:57:10

End at: 2017-11-21 13:57:40

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.23 Mbit/s

95th percentile per-packet one-way delay: 112.498 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 0.11 Mbit/s

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

Loss rate: 0.62%

-- Flow 2:

Average throughput: 0.12 Mbit/s

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

Loss rate: 0.98%

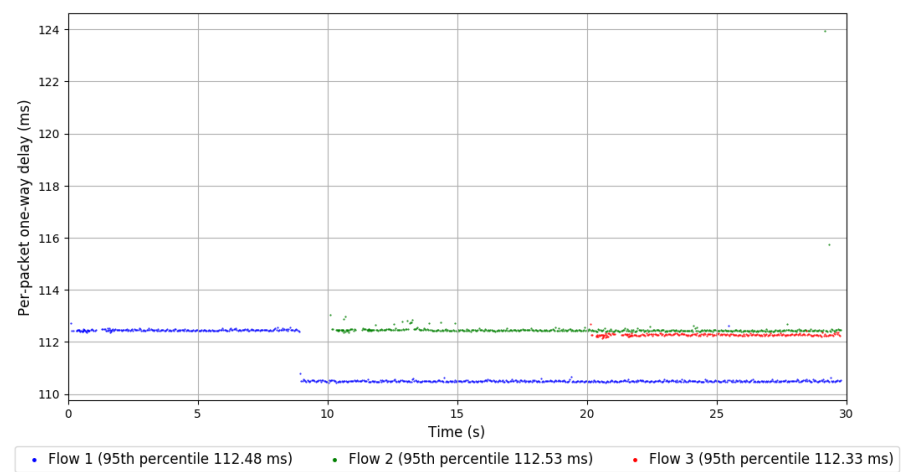
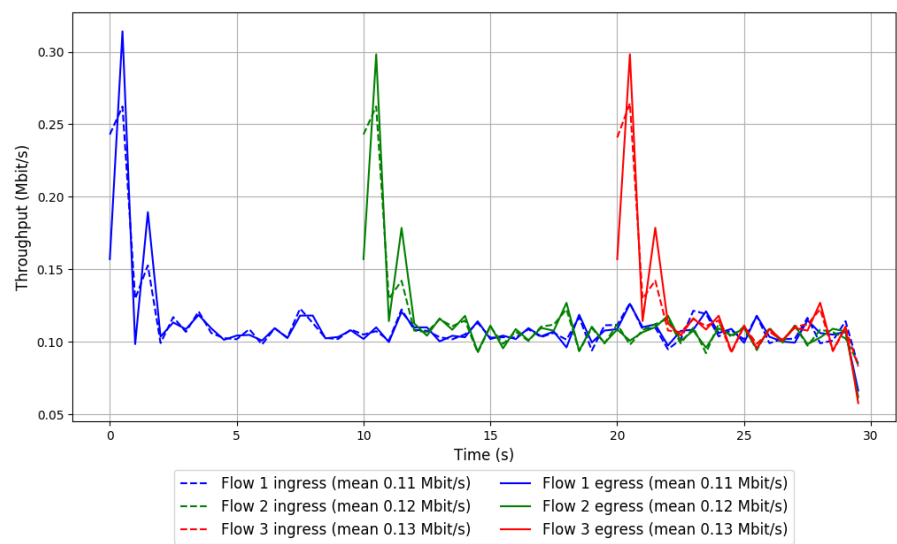
-- Flow 3:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 112.329 ms

Loss rate: 1.99%

Run 6: Report of SReAM — Data Link

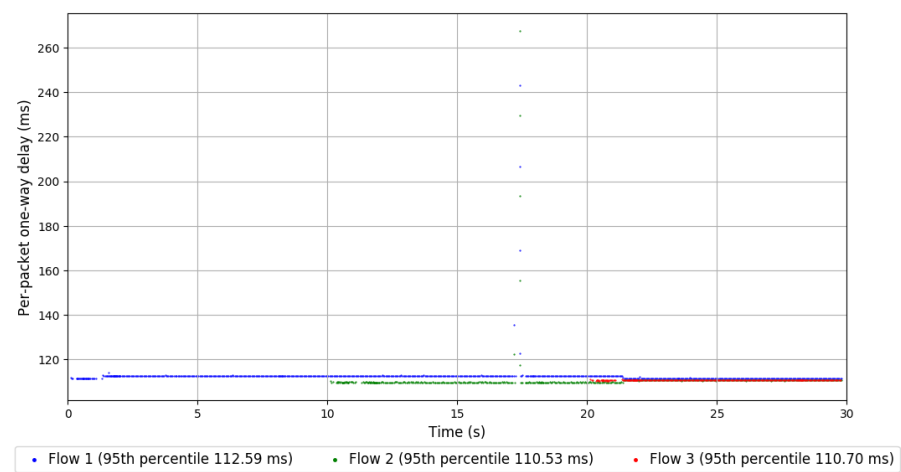
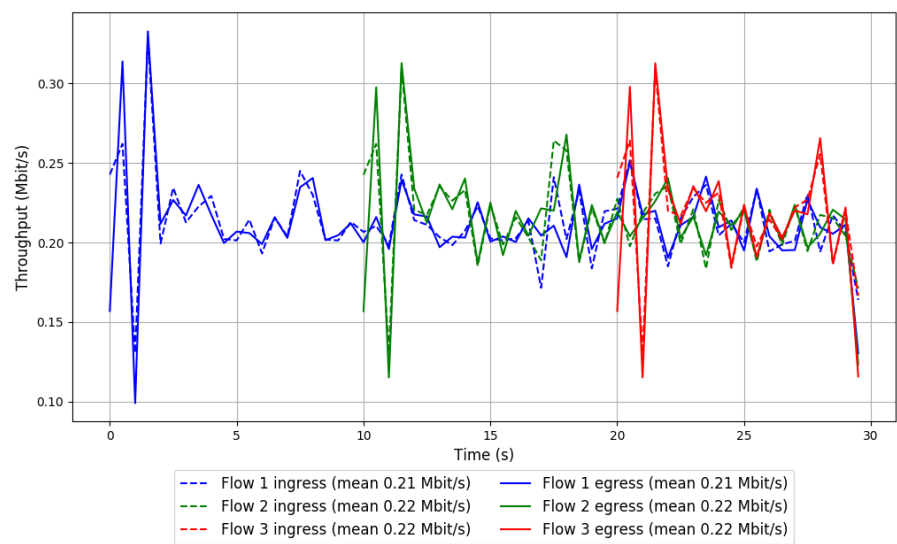


```
Run 7: Statistics of SReAM

Start at: 2017-11-21 14:10:27
End at: 2017-11-21 14:10:57

# Below is generated by plot.py at 2017-11-21 17:44:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.568 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.588 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.525 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.704 ms
Loss rate: 2.25%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2017-11-21 14:23:45

End at: 2017-11-21 14:24:15

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.361 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.789 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.727 ms

Loss rate: 1.05%

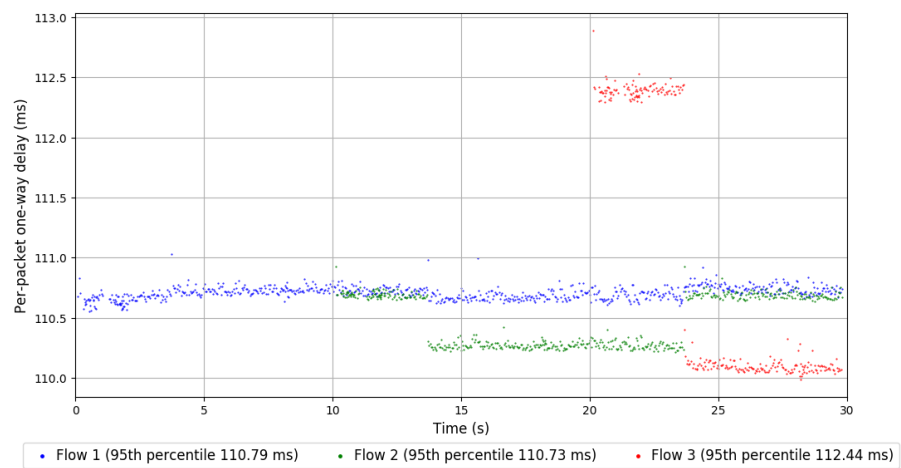
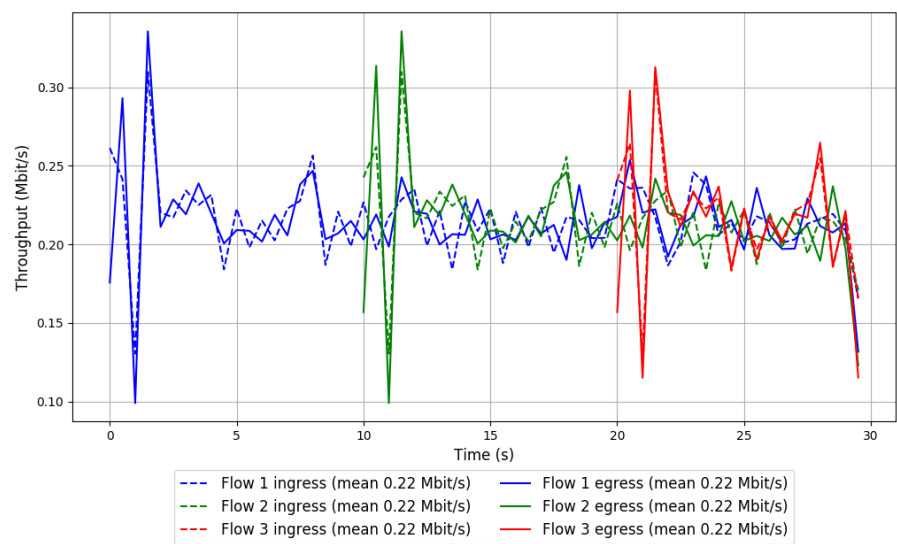
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.436 ms

Loss rate: 2.25%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2017-11-21 14:37:20

End at: 2017-11-21 14:37:50

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 113.027 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 113.036 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.079 ms

Loss rate: 1.04%

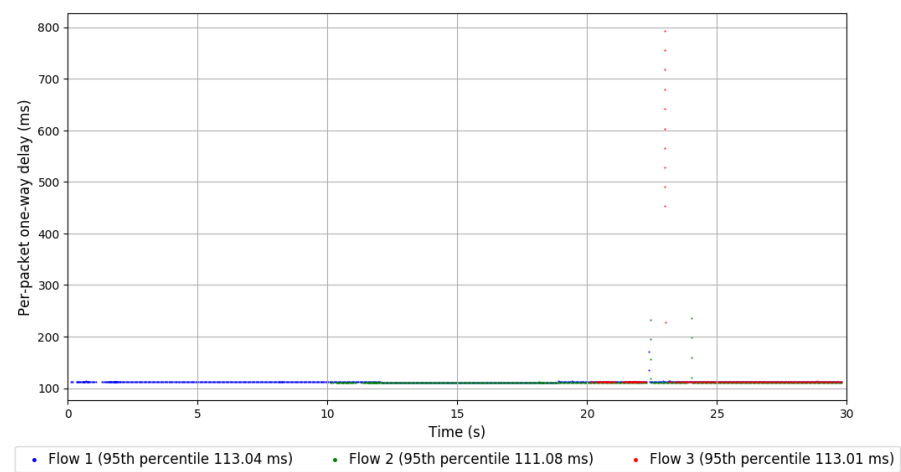
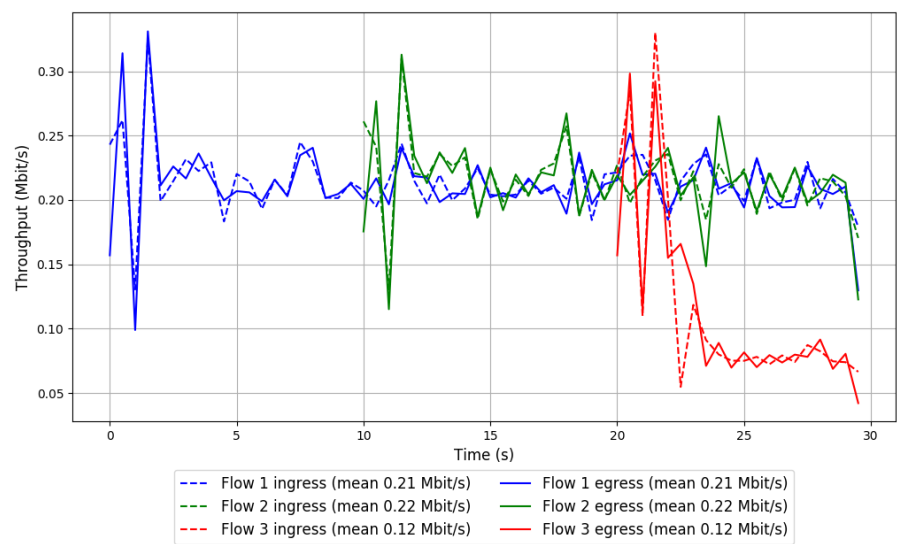
-- Flow 3:

Average throughput: 0.12 Mbit/s

95th percentile per-packet one-way delay: 113.008 ms

Loss rate: 1.54%

Run 9: Report of SReAM — Data Link

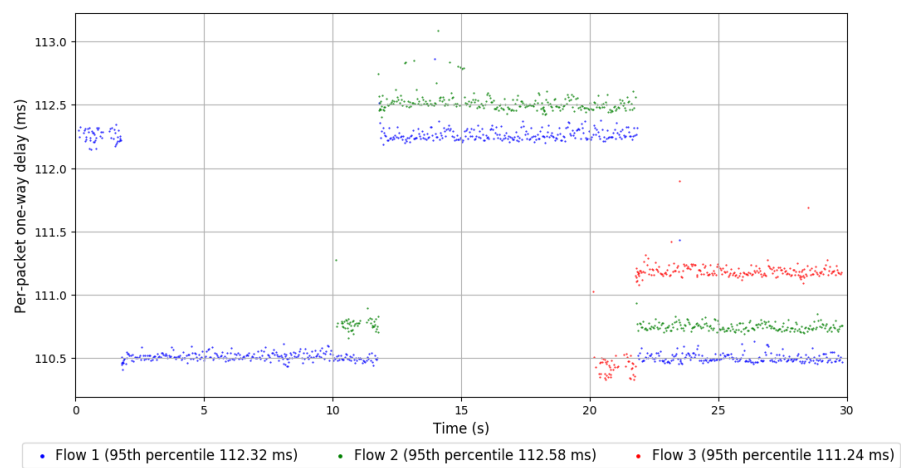
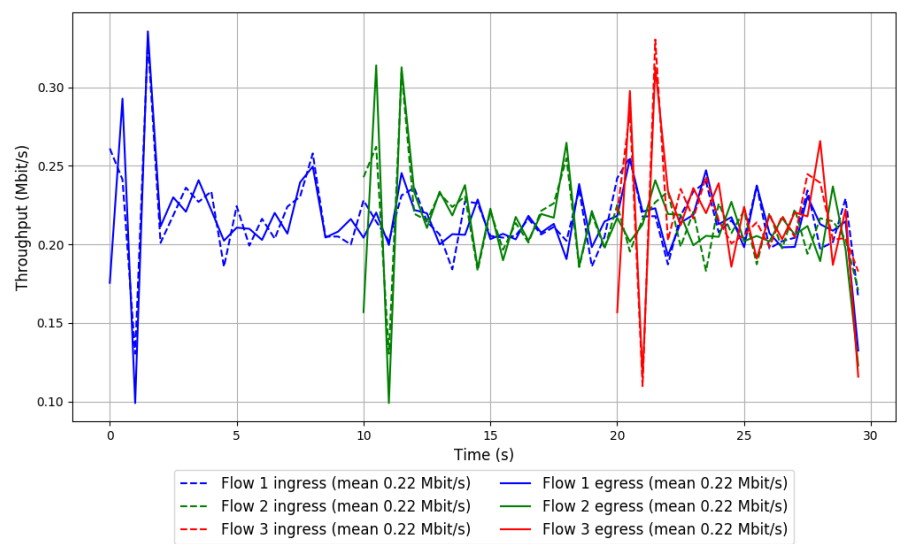


```
Run 10: Statistics of SReAM

Start at: 2017-11-21 14:50:57
End at: 2017-11-21 14:51:27

# Below is generated by plot.py at 2017-11-21 17:44:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.529 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.319 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.577 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.244 ms
Loss rate: 2.25%
```

Run 10: Report of SCReAM — Data Link

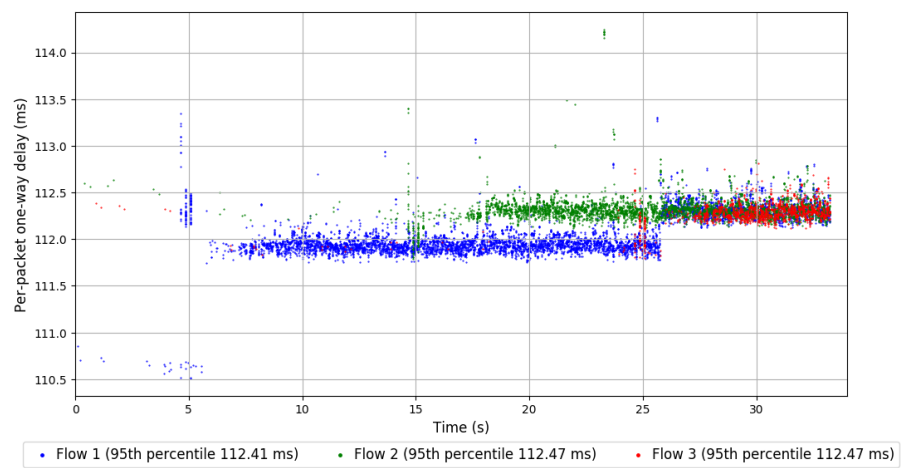
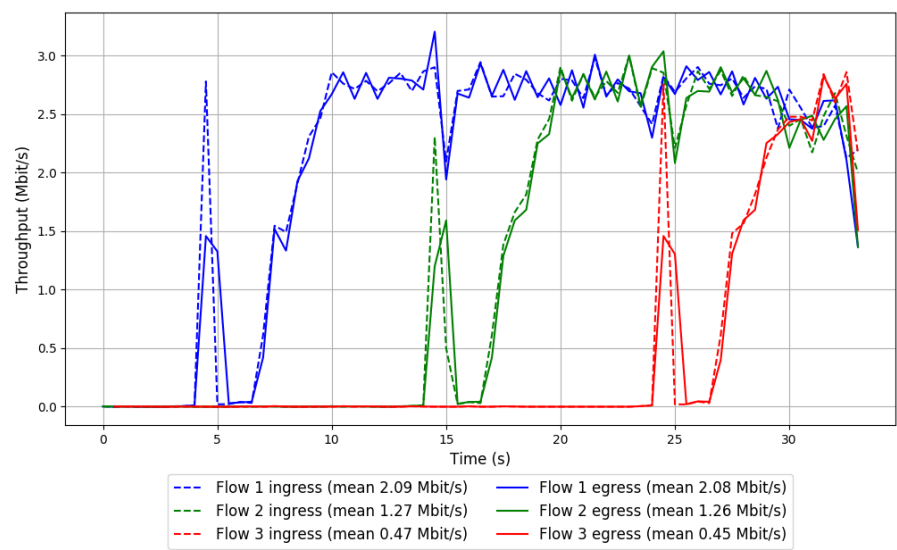


```
Run 1: Statistics of WebRTC media

Start at: 2017-11-21 12:46:46
End at: 2017-11-21 12:47:16

# Below is generated by plot.py at 2017-11-21 17:44:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 112.442 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 112.409 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 112.470 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 112.467 ms
Loss rate: 4.52%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-11-21 13:00:22

End at: 2017-11-21 13:00:52

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.76 Mbit/s

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

Loss rate: 1.54%

-- Flow 1:

Average throughput: 2.06 Mbit/s

95th percentile per-packet one-way delay: 112.872 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 113.312 ms

Loss rate: 1.47%

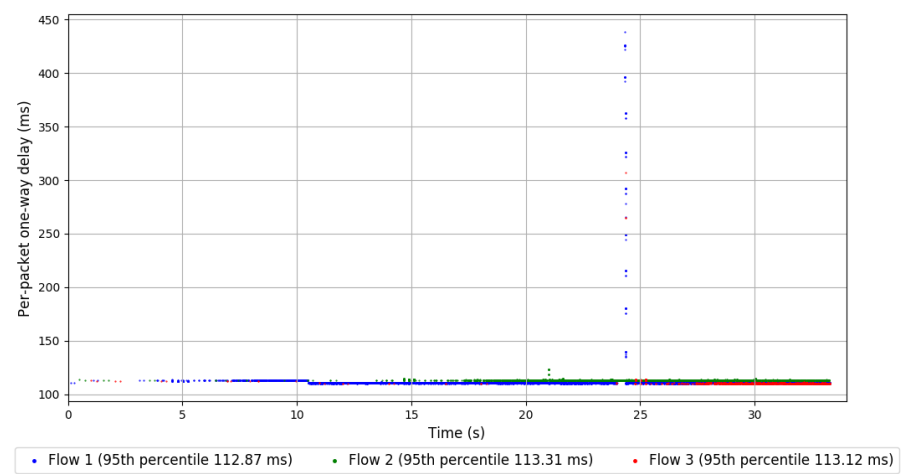
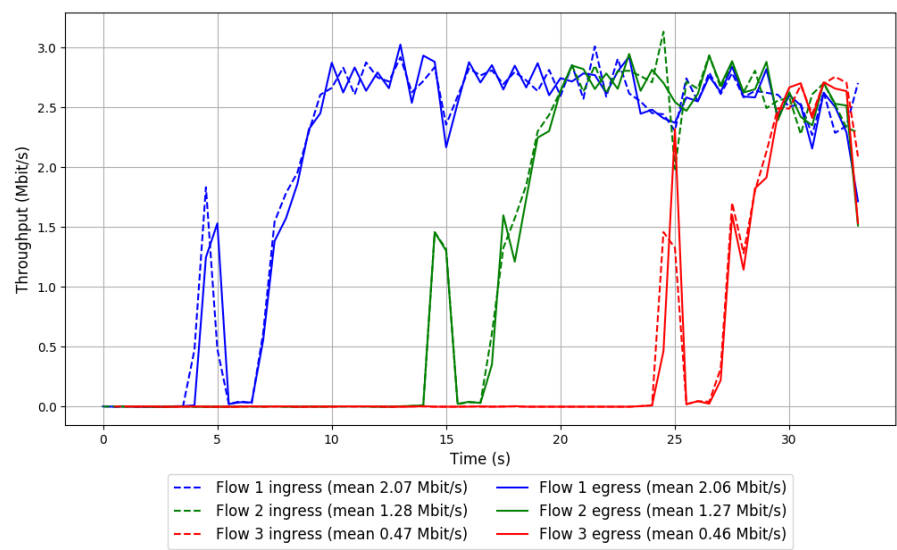
-- Flow 3:

Average throughput: 0.46 Mbit/s

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

Loss rate: 3.79%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-11-21 13:13:39

End at: 2017-11-21 13:14:09

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.76 Mbit/s

95th percentile per-packet one-way delay: 112.991 ms

Loss rate: 1.62%

-- Flow 1:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 111.326 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 112.613 ms

Loss rate: 1.53%

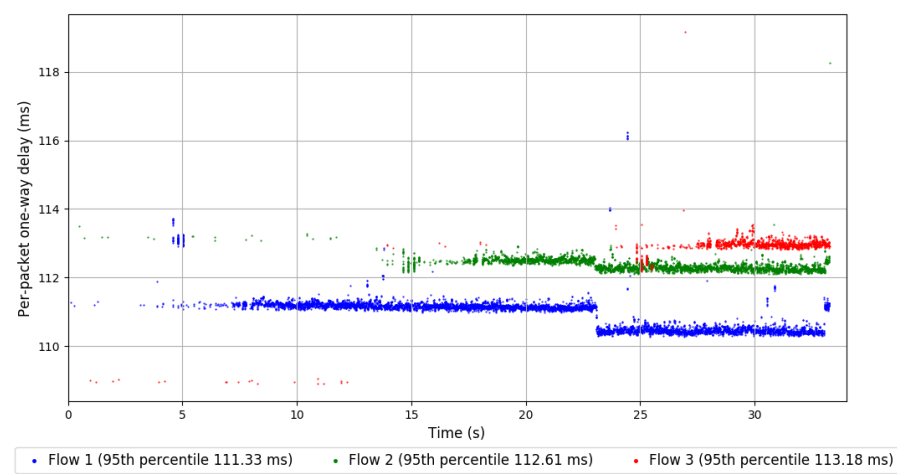
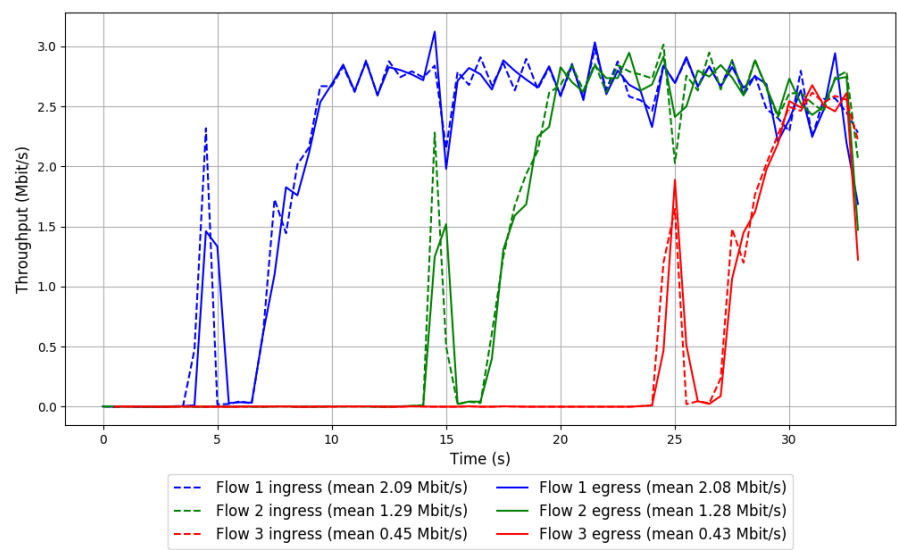
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 113.180 ms

Loss rate: 5.24%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-11-21 13:27:21

End at: 2017-11-21 13:27:51

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.78 Mbit/s

95th percentile per-packet one-way delay: 112.834 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 112.876 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 111.364 ms

Loss rate: 1.26%

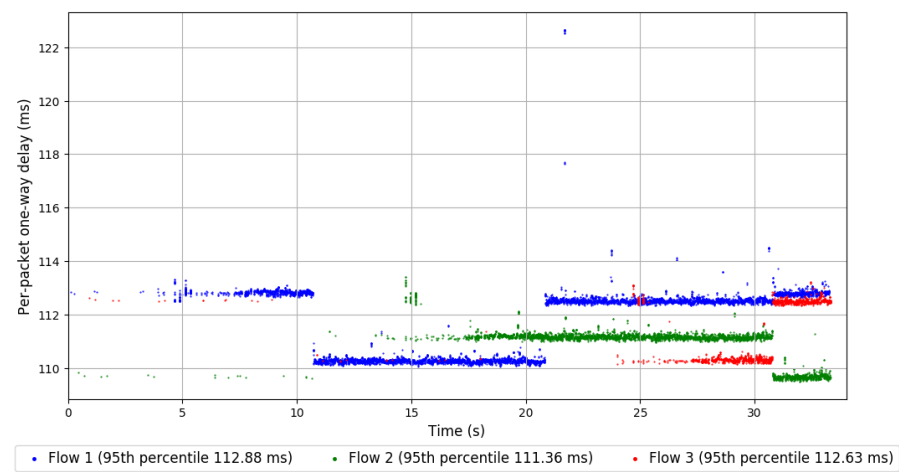
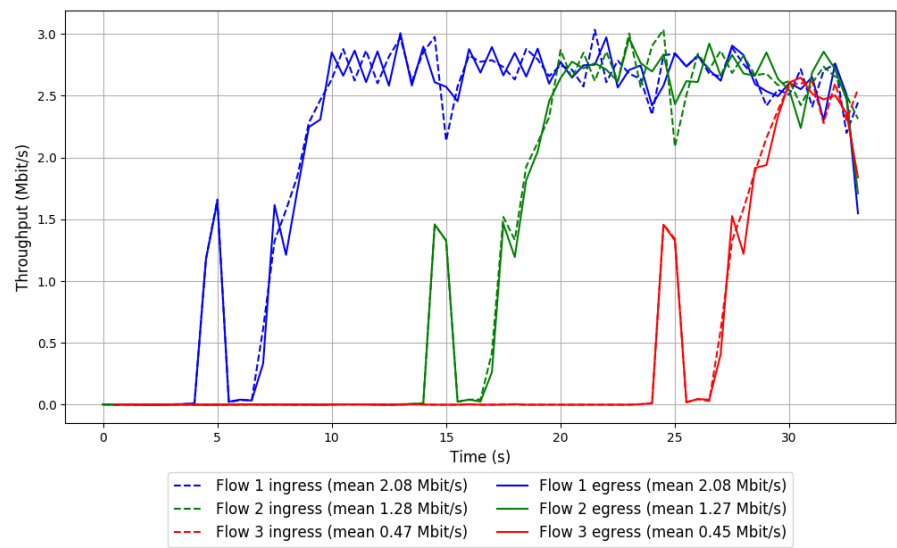
-- Flow 3:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 112.633 ms

Loss rate: 3.96%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-11-21 13:40:43

End at: 2017-11-21 13:41:13

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.79 Mbit/s

95th percentile per-packet one-way delay: 112.585 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 112.597 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 111.645 ms

Loss rate: 1.31%

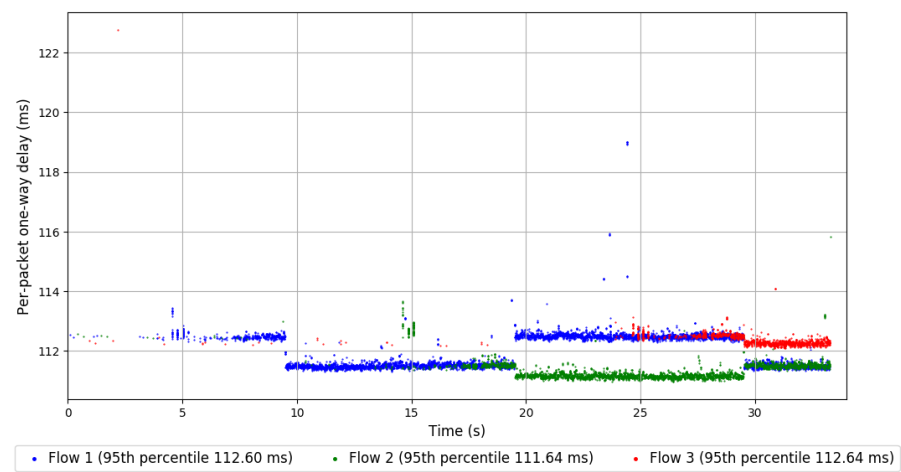
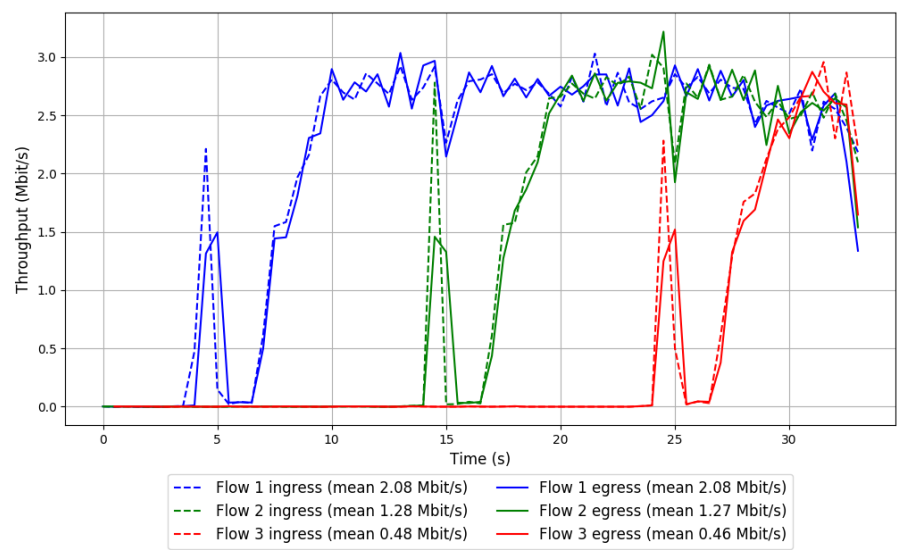
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 112.635 ms

Loss rate: 4.00%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-11-21 13:54:26

End at: 2017-11-21 13:54:56

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.75 Mbit/s

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

Loss rate: 1.70%

-- Flow 1:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 112.542 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 112.612 ms

Loss rate: 1.73%

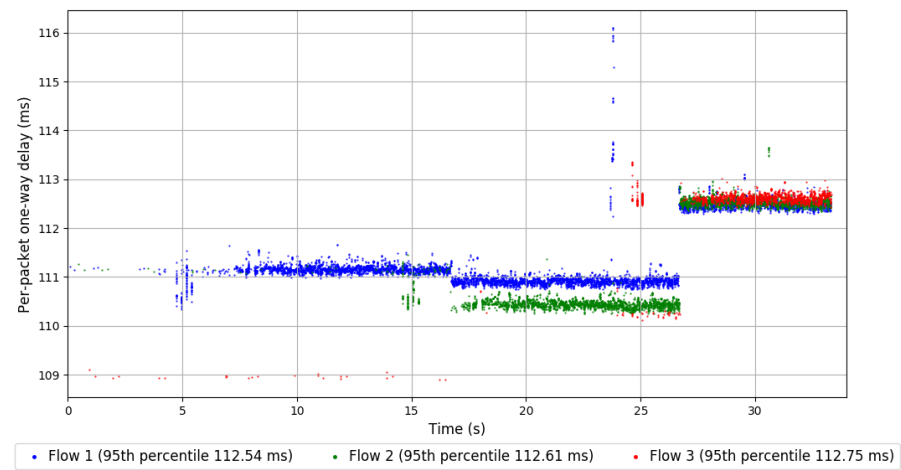
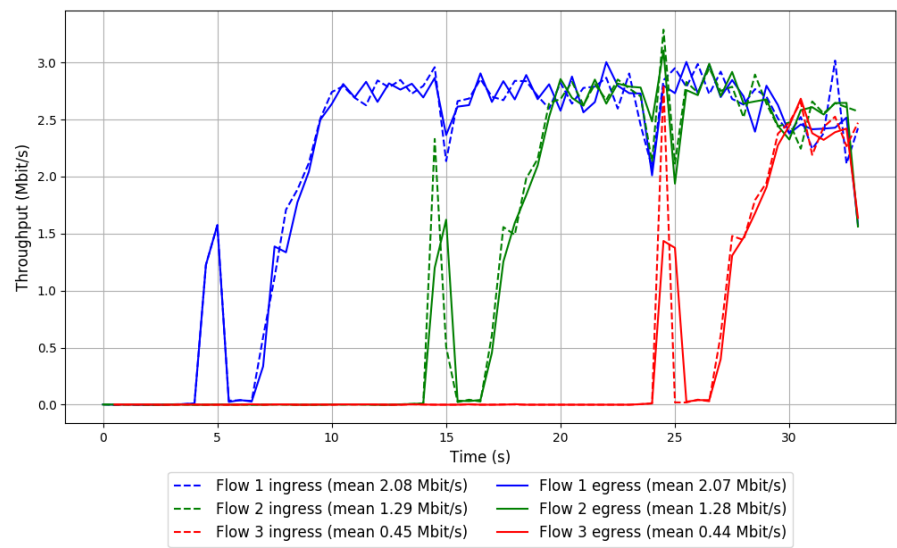
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 112.748 ms

Loss rate: 4.58%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-11-21 14:07:47

End at: 2017-11-21 14:08:17

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.75 Mbit/s

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

Loss rate: 1.59%

-- Flow 1:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 110.866 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 114.876 ms

Loss rate: 1.42%

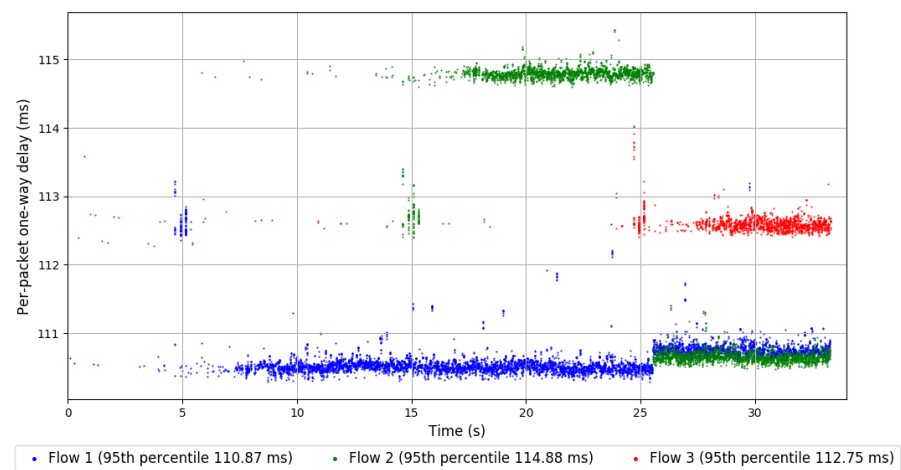
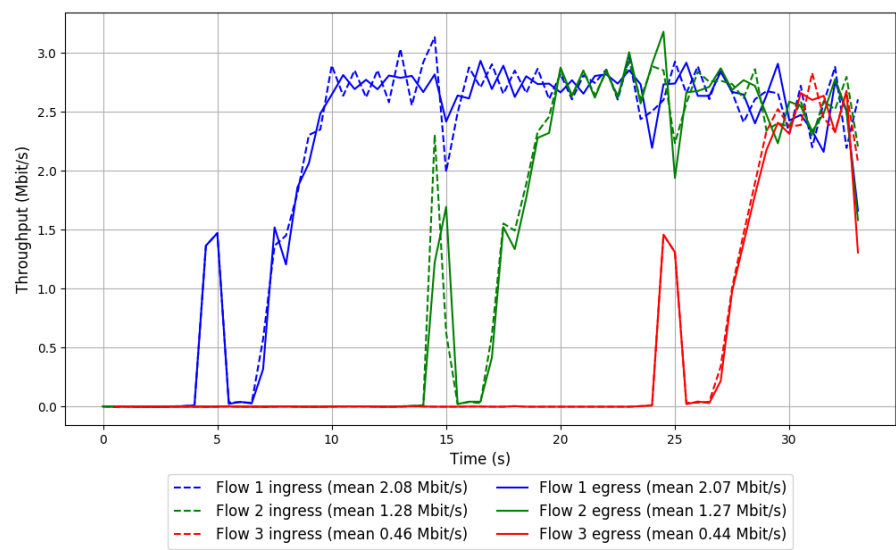
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 112.755 ms

Loss rate: 4.12%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2017-11-21 14:21:07

End at: 2017-11-21 14:21:37

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.79 Mbit/s

95th percentile per-packet one-way delay: 112.404 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 112.434 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 108.963 ms

Loss rate: 1.61%

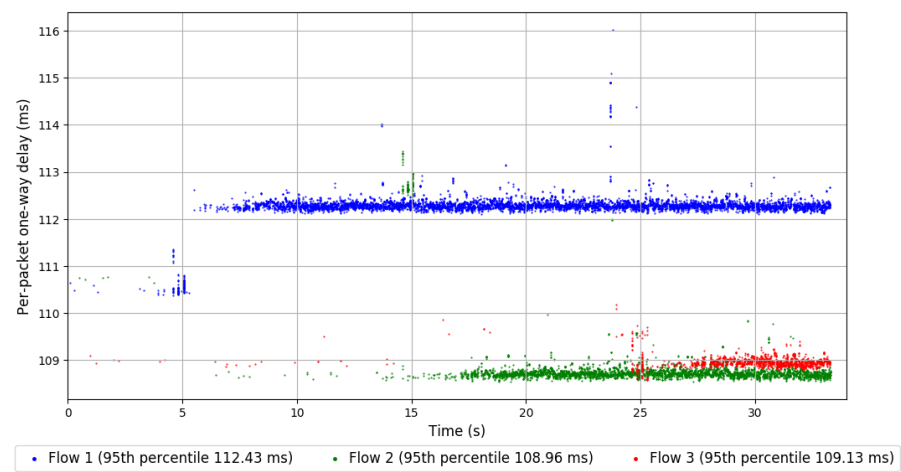
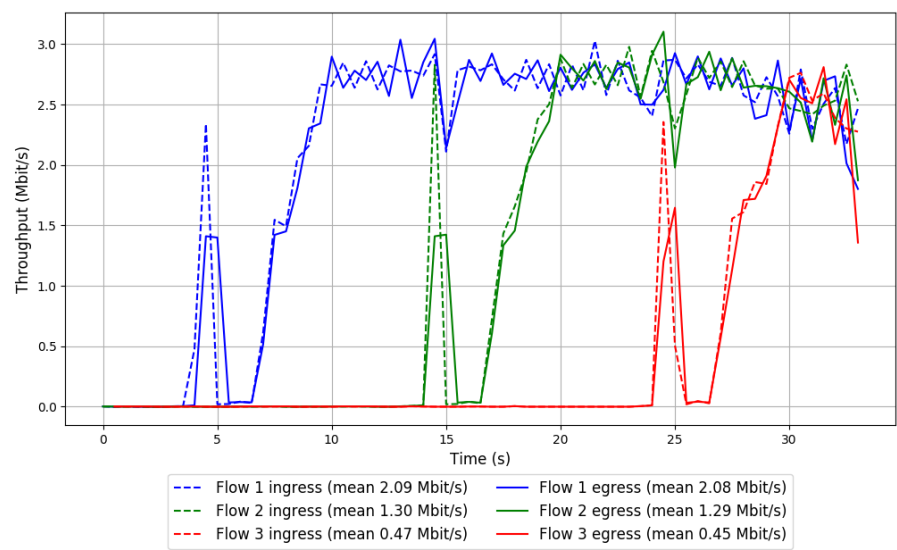
-- Flow 3:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 109.134 ms

Loss rate: 4.48%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-11-21 14:34:30

End at: 2017-11-21 14:35:00

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.77 Mbit/s

95th percentile per-packet one-way delay: 112.841 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 112.867 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 111.391 ms

Loss rate: 1.22%

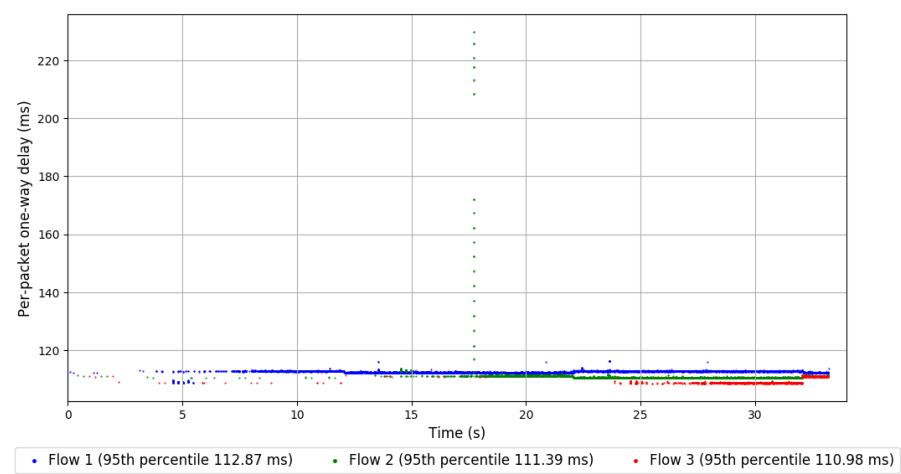
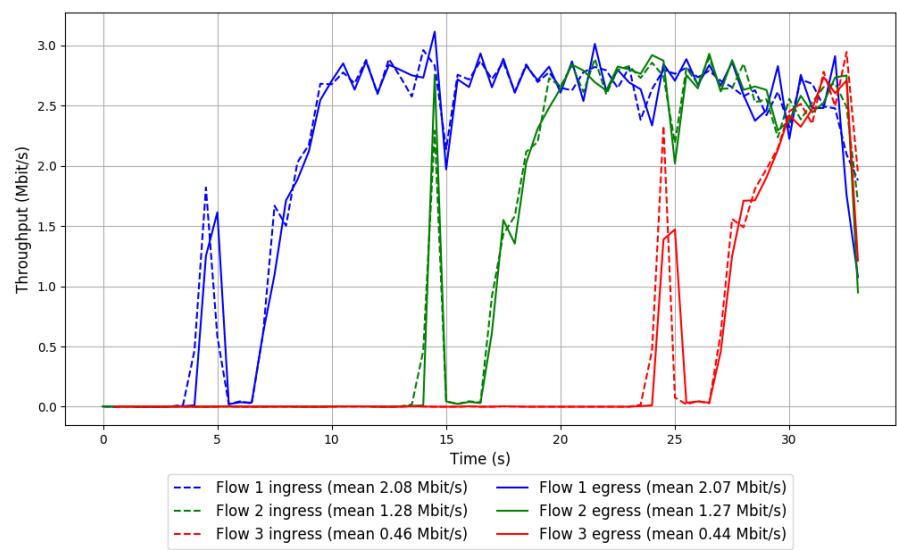
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 110.983 ms

Loss rate: 4.73%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-11-21 14:48:02

End at: 2017-11-21 14:48:32

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.79 Mbit/s

95th percentile per-packet one-way delay: 112.960 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 112.534 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 113.044 ms

Loss rate: 1.47%

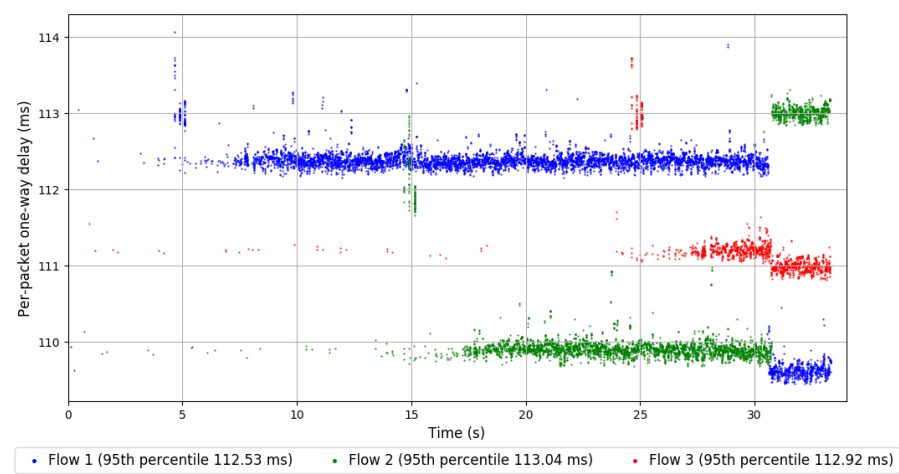
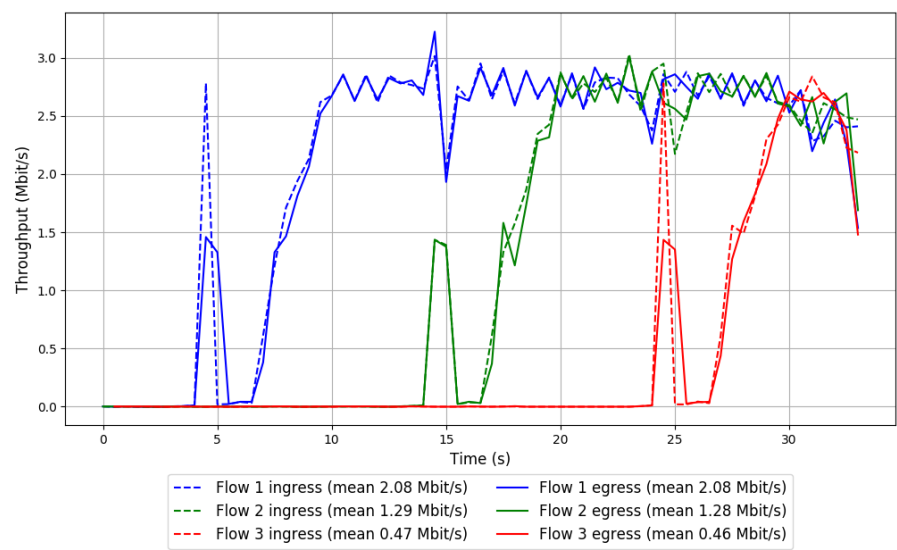
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 112.923 ms

Loss rate: 3.88%

Run 10: Report of WebRTC media — Data Link

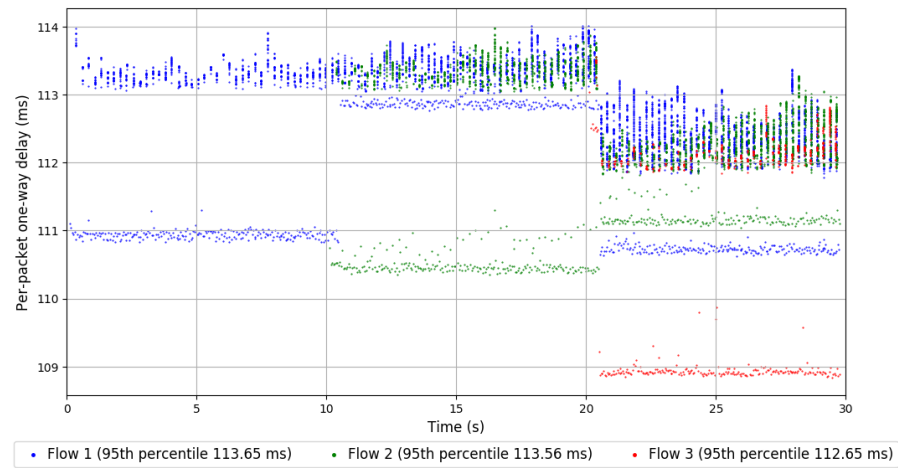
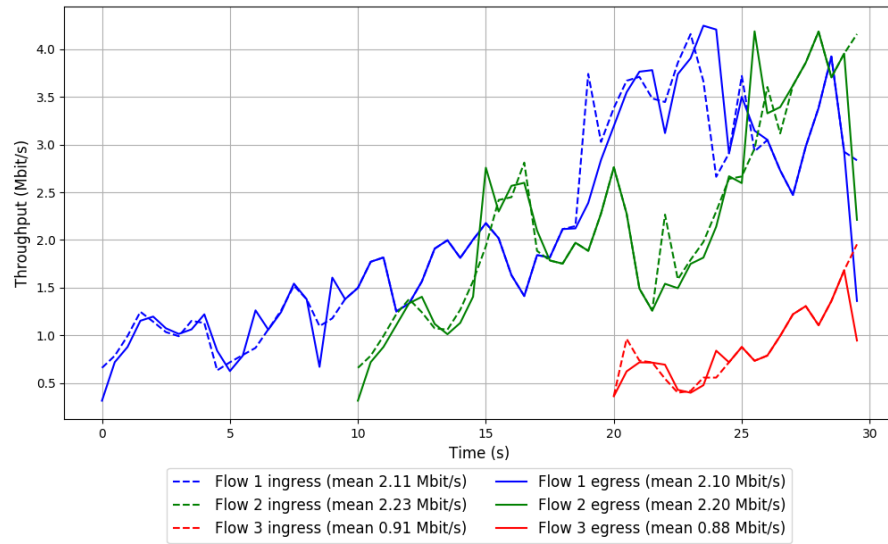


```
Run 1: Statistics of Sprout

Start at: 2017-11-21 12:44:48
End at: 2017-11-21 12:45:18

# Below is generated by plot.py at 2017-11-21 17:44:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 113.595 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 113.650 ms
Loss rate: 1.25%
-- Flow 2:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 113.556 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 112.651 ms
Loss rate: 5.63%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-11-21 12:58:23

End at: 2017-11-21 12:58:53

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.36 Mbit/s

95th percentile per-packet one-way delay: 113.675 ms

Loss rate: 1.89%

-- Flow 1:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 113.568 ms

Loss rate: 1.45%

-- Flow 2:

Average throughput: 2.68 Mbit/s

95th percentile per-packet one-way delay: 113.781 ms

Loss rate: 1.82%

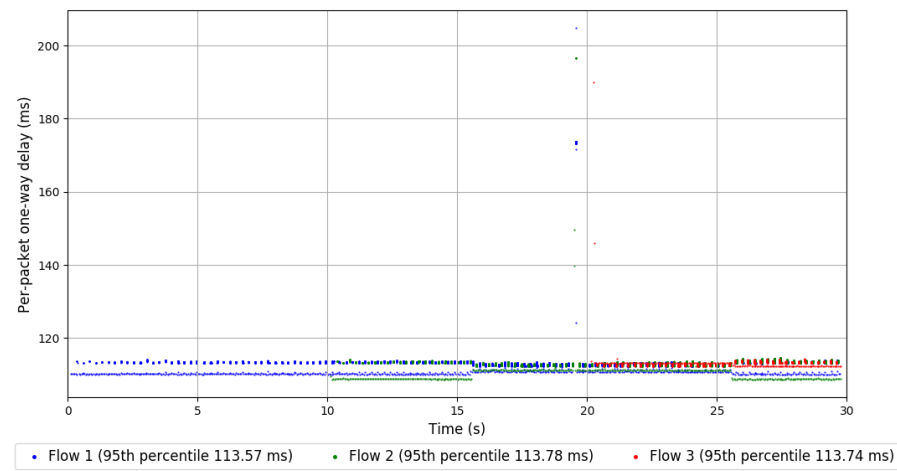
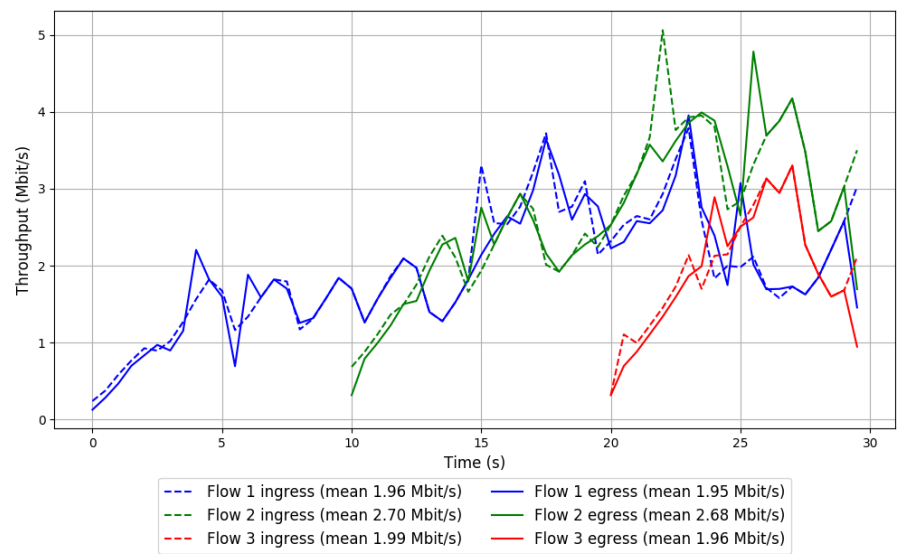
-- Flow 3:

Average throughput: 1.96 Mbit/s

95th percentile per-packet one-way delay: 113.739 ms

Loss rate: 3.41%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-11-21 13:11:41

End at: 2017-11-21 13:12:11

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.68 Mbit/s

95th percentile per-packet one-way delay: 114.056 ms

Loss rate: 1.63%

-- Flow 1:

Average throughput: 2.69 Mbit/s

95th percentile per-packet one-way delay: 114.058 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 114.079 ms

Loss rate: 1.77%

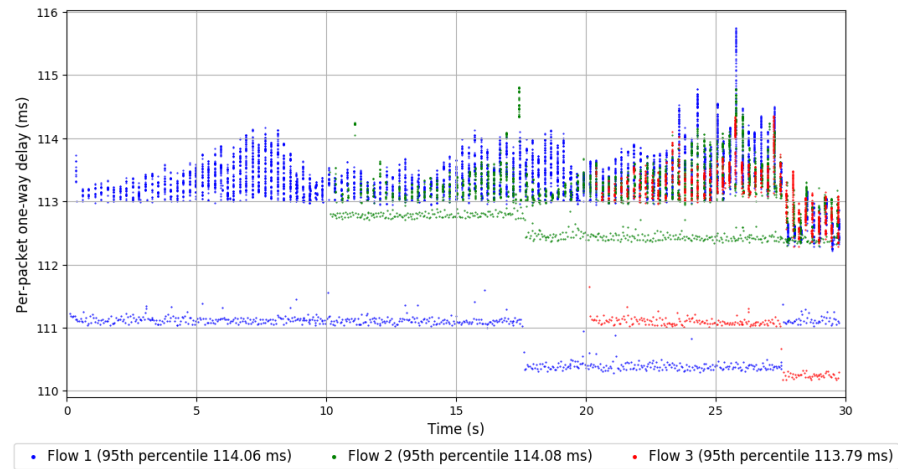
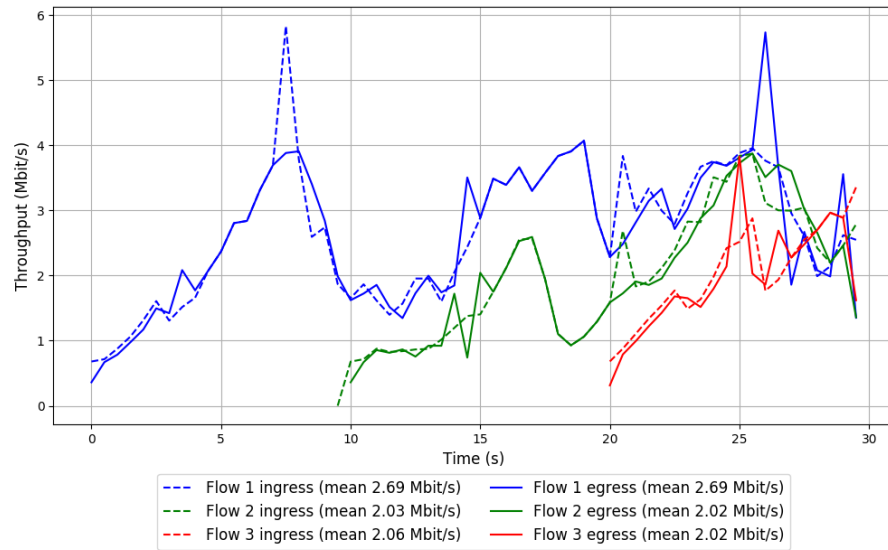
-- Flow 3:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 113.793 ms

Loss rate: 4.45%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-11-21 13:25:24

End at: 2017-11-21 13:25:54

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 113.228 ms

Loss rate: 2.11%

-- Flow 1:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 113.110 ms

Loss rate: 1.65%

-- Flow 2:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 113.246 ms

Loss rate: 1.66%

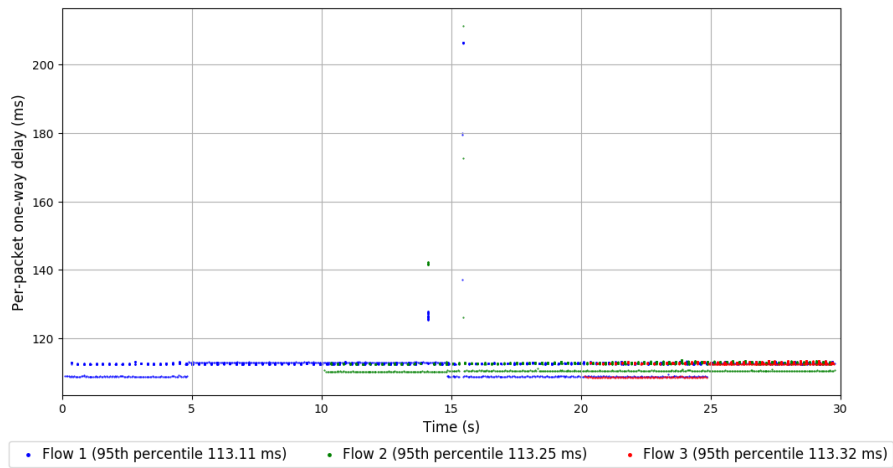
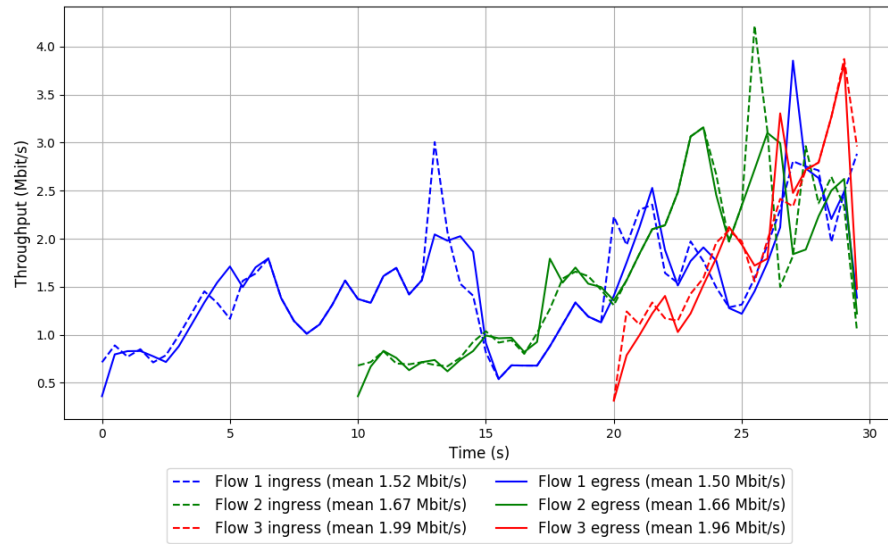
-- Flow 3:

Average throughput: 1.96 Mbit/s

95th percentile per-packet one-way delay: 113.320 ms

Loss rate: 3.90%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-11-21 13:38:46

End at: 2017-11-21 13:39:16

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.17 Mbit/s

95th percentile per-packet one-way delay: 113.423 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 2.84 Mbit/s

95th percentile per-packet one-way delay: 113.509 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 2.78 Mbit/s

95th percentile per-packet one-way delay: 113.303 ms

Loss rate: 0.87%

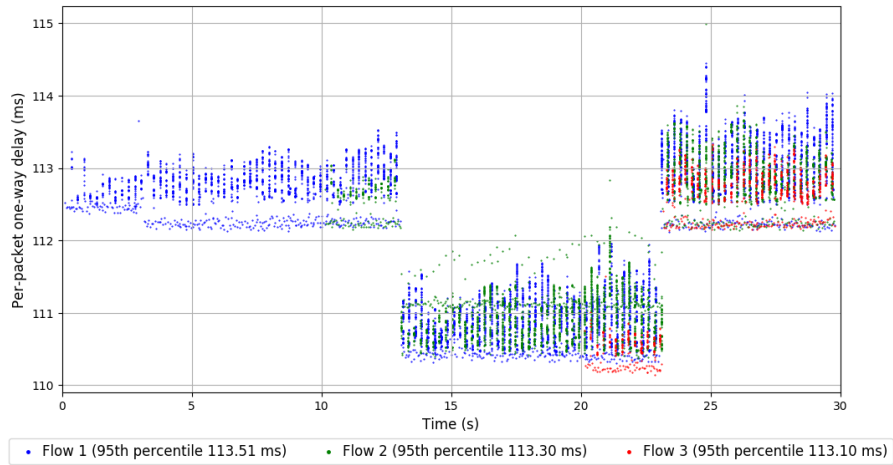
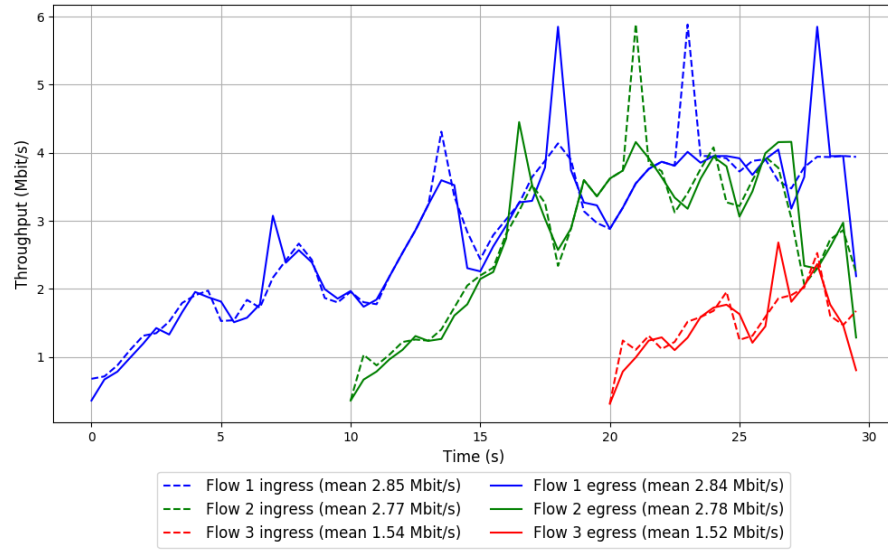
-- Flow 3:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 113.101 ms

Loss rate: 3.12%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-11-21 13:52:28

End at: 2017-11-21 13:52:58

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.99 Mbit/s

95th percentile per-packet one-way delay: 113.444 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 113.503 ms

Loss rate: 1.27%

-- Flow 2:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 113.376 ms

Loss rate: 0.01%

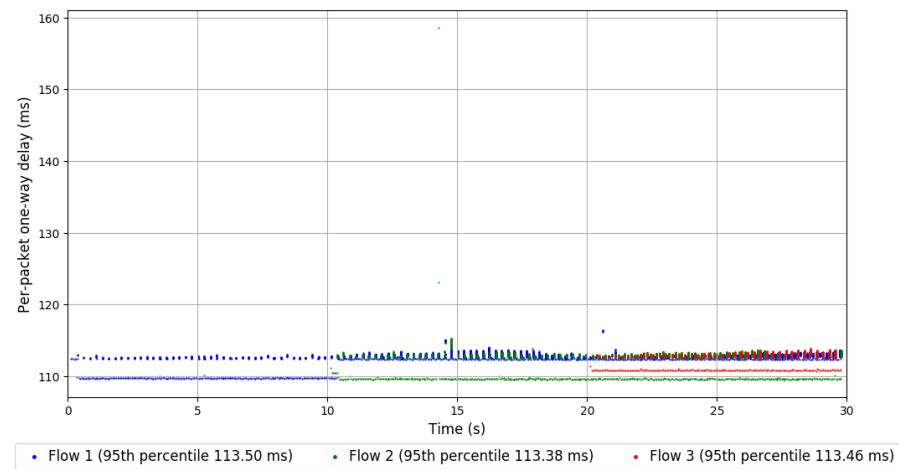
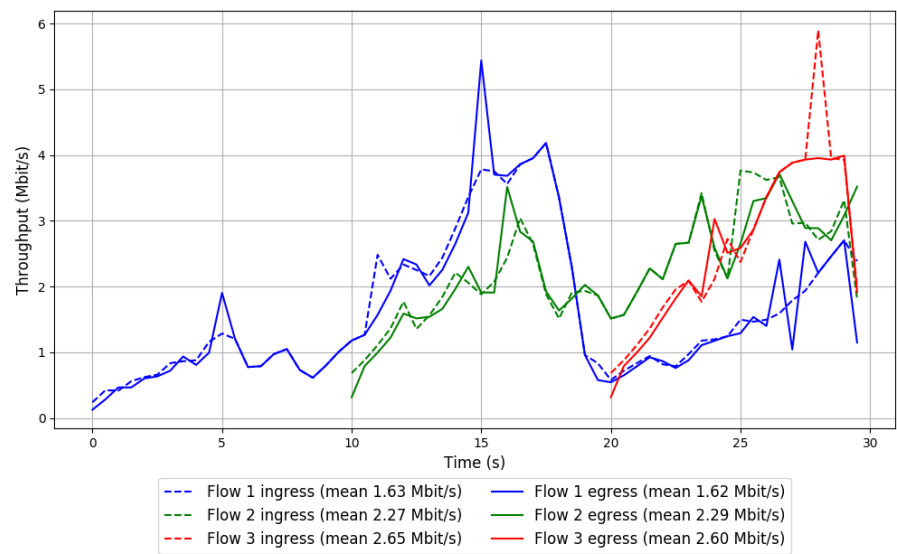
-- Flow 3:

Average throughput: 2.60 Mbit/s

95th percentile per-packet one-way delay: 113.461 ms

Loss rate: 3.78%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-11-21 14:05:49

End at: 2017-11-21 14:06:19

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.53 Mbit/s

95th percentile per-packet one-way delay: 113.566 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 2.87 Mbit/s

95th percentile per-packet one-way delay: 113.609 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 1.83 Mbit/s

95th percentile per-packet one-way delay: 113.546 ms

Loss rate: 1.97%

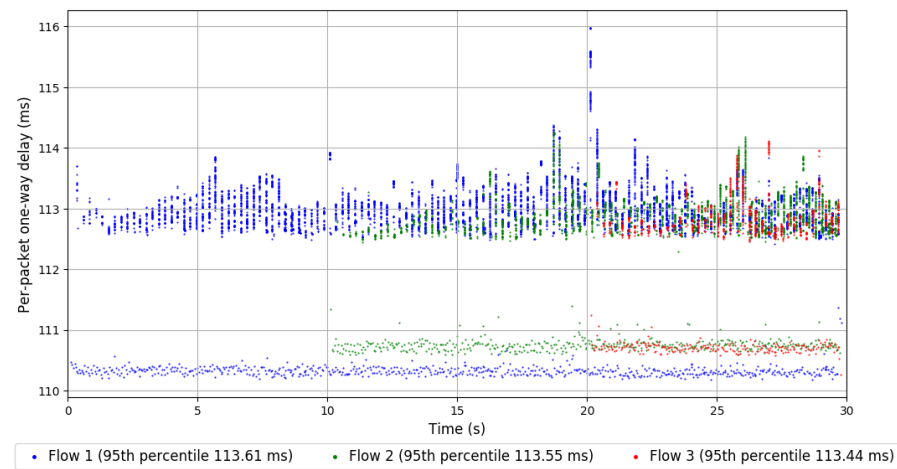
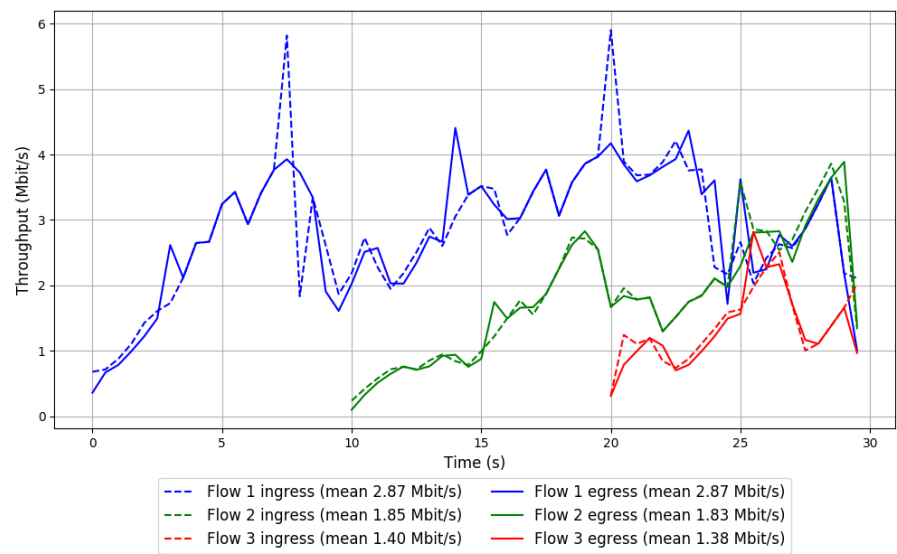
-- Flow 3:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 113.438 ms

Loss rate: 3.83%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-11-21 14:19:10

End at: 2017-11-21 14:19:40

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.59 Mbit/s

95th percentile per-packet one-way delay: 112.738 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 1.99 Mbit/s

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

Loss rate: 0.97%

-- Flow 2:

Average throughput: 2.96 Mbit/s

95th percentile per-packet one-way delay: 112.383 ms

Loss rate: 0.01%

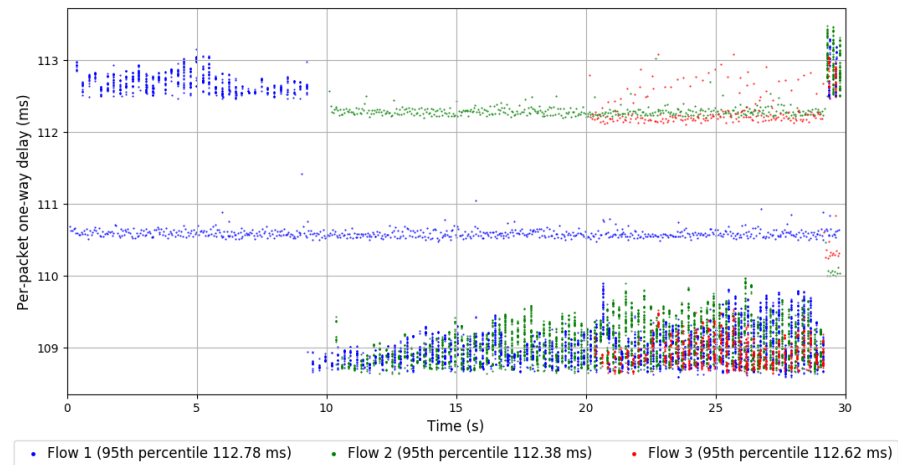
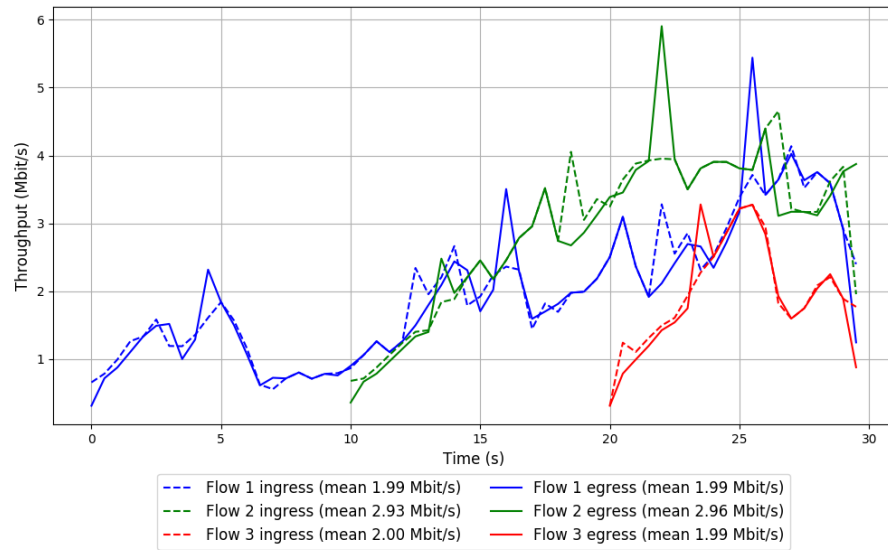
-- Flow 3:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 112.619 ms

Loss rate: 2.28%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-11-21 14:32:33

End at: 2017-11-21 14:33:03

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.10 Mbit/s

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

Loss rate: 1.40%

-- Flow 1:

Average throughput: 2.45 Mbit/s

95th percentile per-packet one-way delay: 113.574 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 113.560 ms

Loss rate: 2.05%

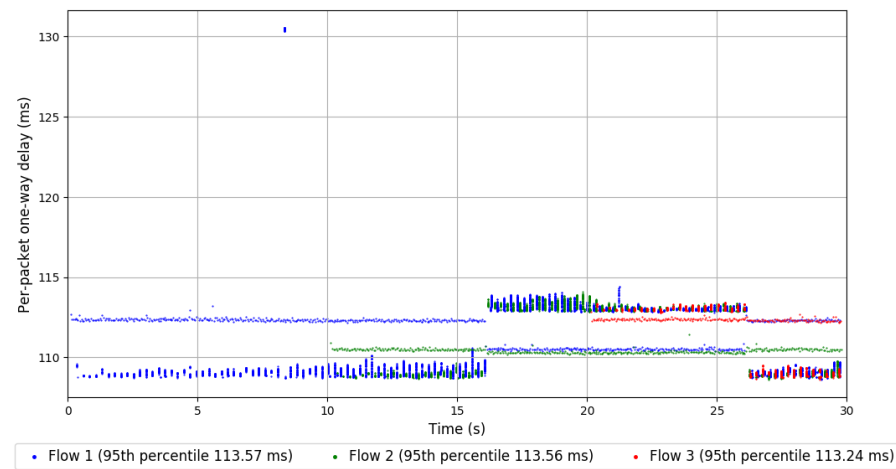
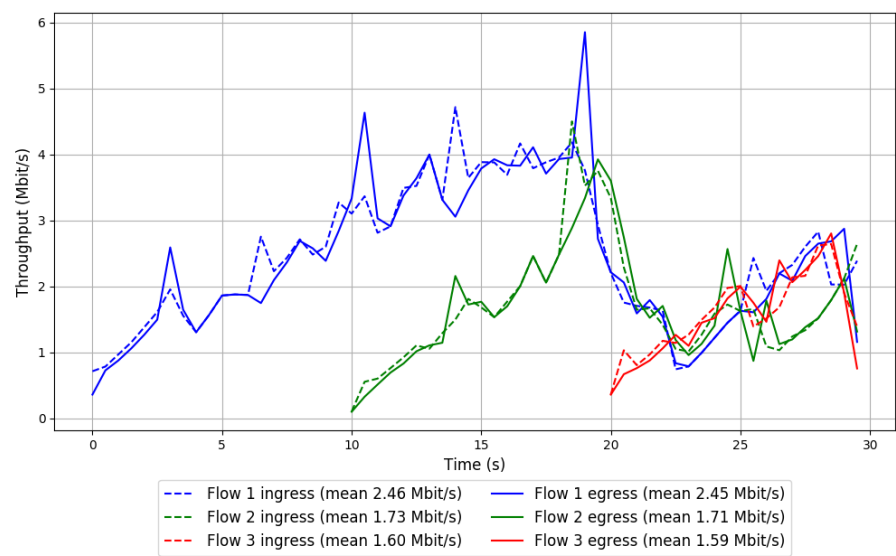
-- Flow 3:

Average throughput: 1.59 Mbit/s

95th percentile per-packet one-way delay: 113.236 ms

Loss rate: 2.04%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-11-21 14:46:04

End at: 2017-11-21 14:46:34

Below is generated by plot.py at 2017-11-21 17:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.53 Mbit/s

95th percentile per-packet one-way delay: 113.417 ms

Loss rate: 1.70%

-- Flow 1:

Average throughput: 2.58 Mbit/s

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

Loss rate: 1.06%

-- Flow 2:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 113.002 ms

Loss rate: 1.68%

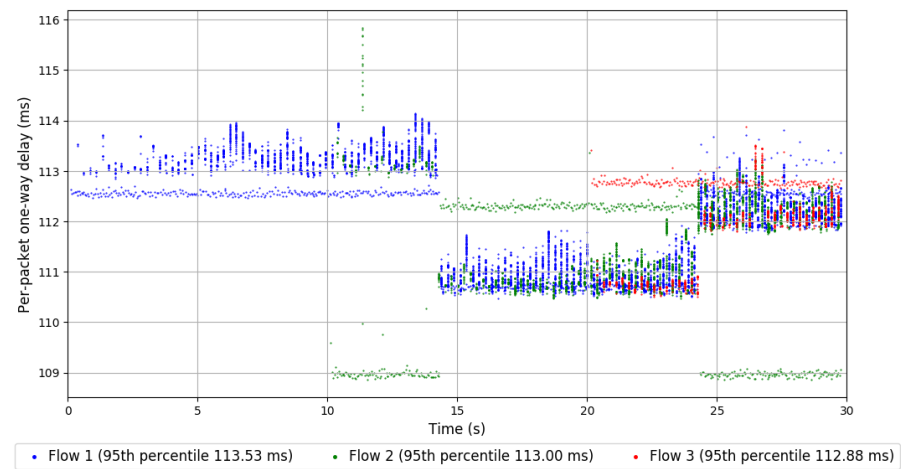
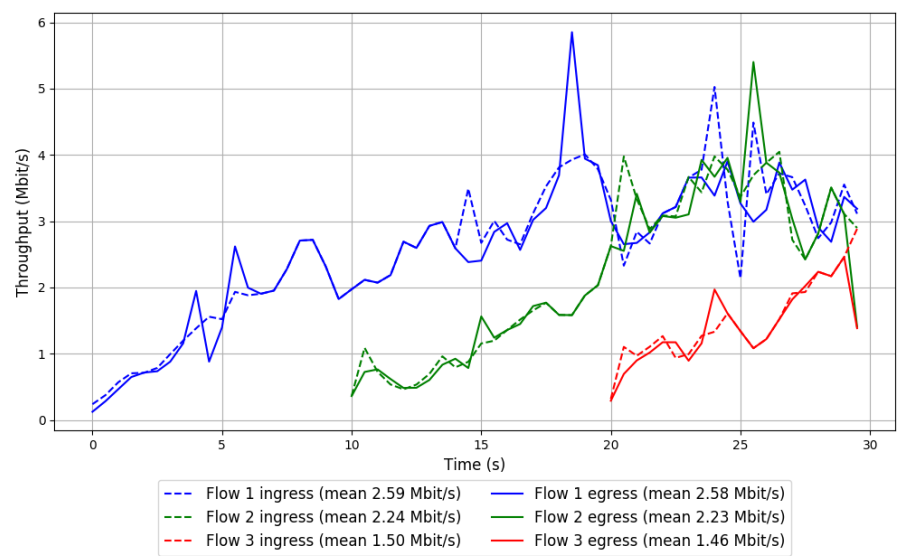
-- Flow 3:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 112.876 ms

Loss rate: 5.14%

Run 10: Report of Sprout — Data Link

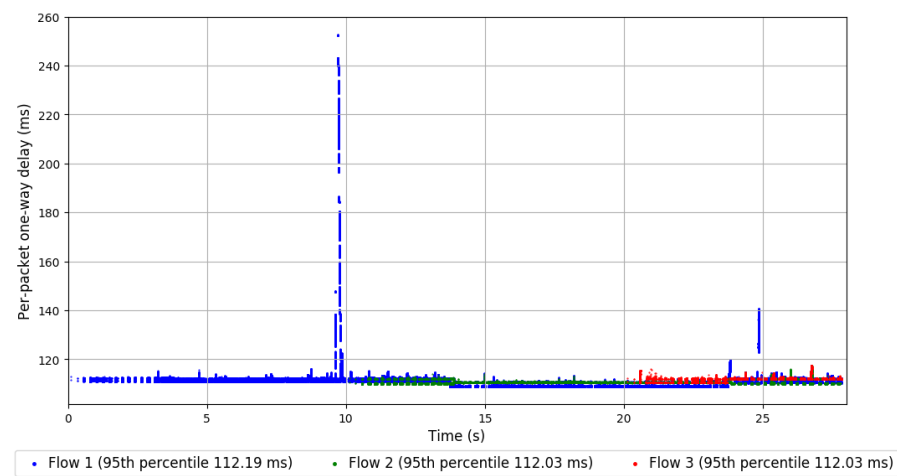
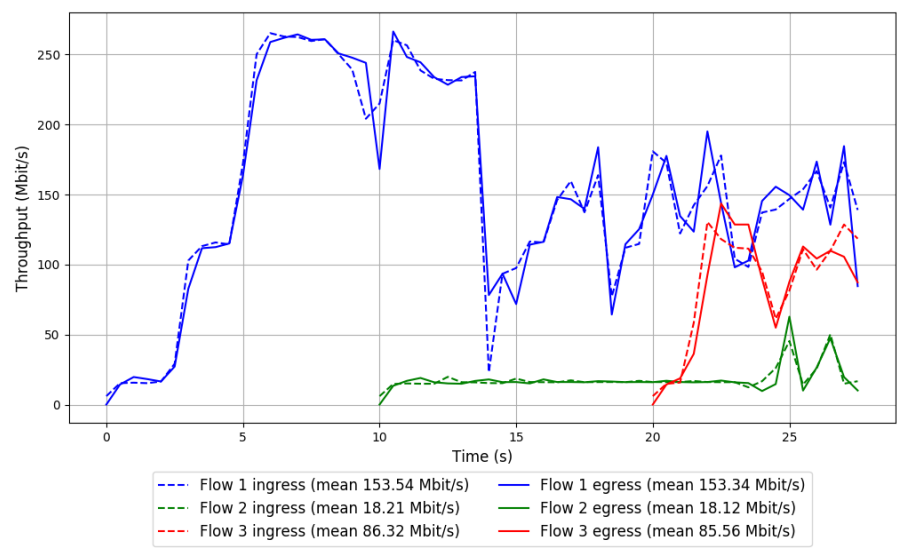


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-11-21 12:47:33
End at: 2017-11-21 12:48:03

# Below is generated by plot.py at 2017-11-21 17:44:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 188.60 Mbit/s
95th percentile per-packet one-way delay: 112.166 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 153.34 Mbit/s
95th percentile per-packet one-way delay: 112.195 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 18.12 Mbit/s
95th percentile per-packet one-way delay: 112.028 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 85.56 Mbit/s
95th percentile per-packet one-way delay: 112.032 ms
Loss rate: 3.96%
```


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

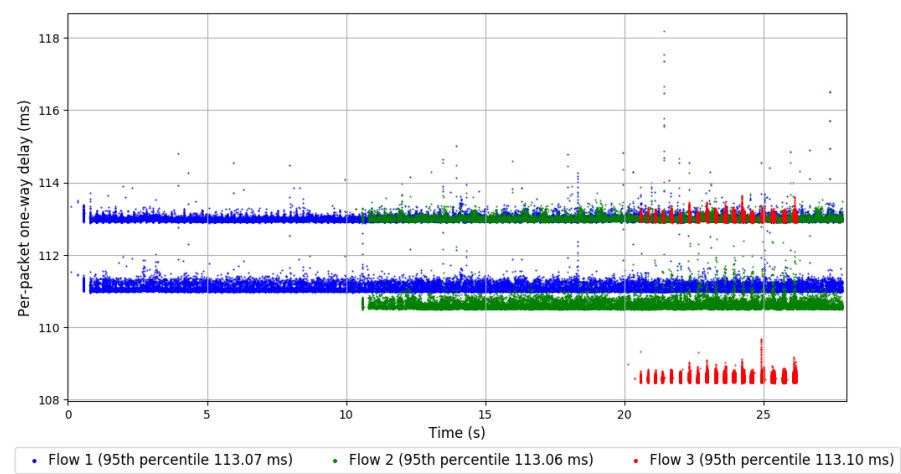
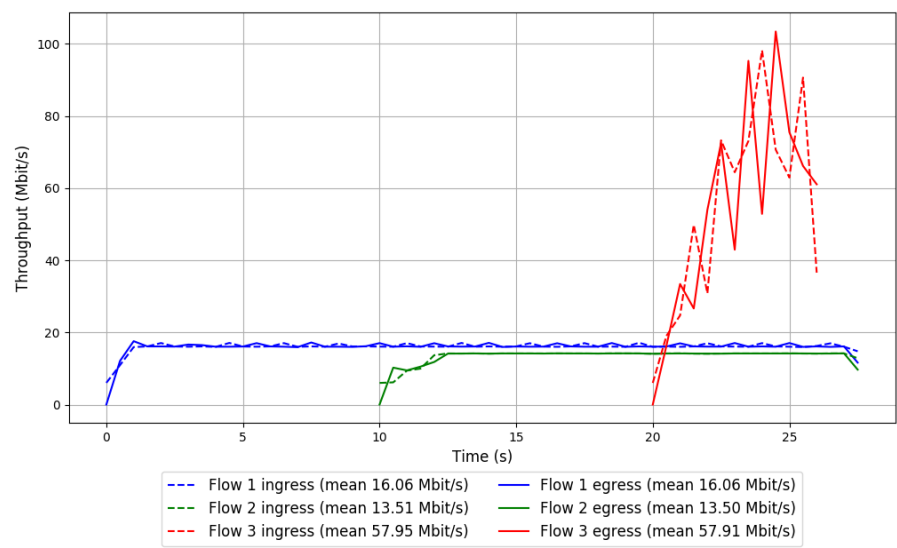


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-11-21 13:01:08
End at: 2017-11-21 13:01:38

# Below is generated by plot.py at 2017-11-21 17:44:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.31 Mbit/s
95th percentile per-packet one-way delay: 113.081 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 16.06 Mbit/s
95th percentile per-packet one-way delay: 113.066 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 13.50 Mbit/s
95th percentile per-packet one-way delay: 113.062 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 57.91 Mbit/s
95th percentile per-packet one-way delay: 113.100 ms
Loss rate: 0.00%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2017-11-21 13:14:26

End at: 2017-11-21 13:14:56

Below is generated by plot.py at 2017-11-21 17:47:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 273.14 Mbit/s

95th percentile per-packet one-way delay: 114.612 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 191.22 Mbit/s

95th percentile per-packet one-way delay: 114.994 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 61.29 Mbit/s

95th percentile per-packet one-way delay: 114.476 ms

Loss rate: 0.35%

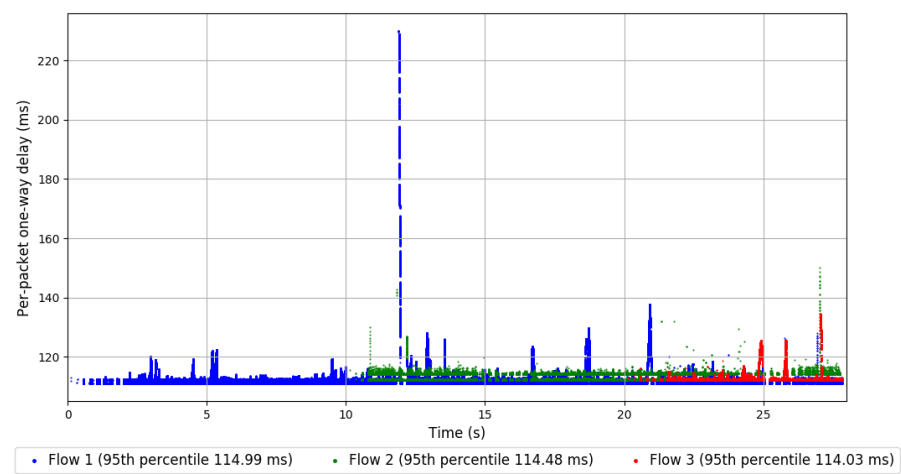
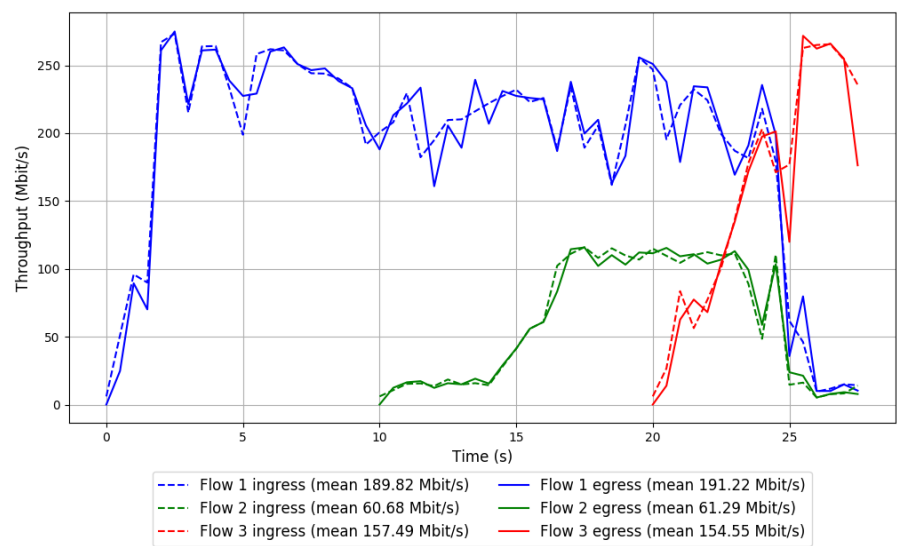
-- Flow 3:

Average throughput: 154.55 Mbit/s

95th percentile per-packet one-way delay: 114.030 ms

Loss rate: 4.65%

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



Run 4: Statistics of TaoVA-100x

Start at: 2017-11-21 13:28:08

End at: 2017-11-21 13:28:38

Below is generated by plot.py at 2017-11-21 17:47:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.65 Mbit/s

95th percentile per-packet one-way delay: 113.023 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 127.46 Mbit/s

95th percentile per-packet one-way delay: 113.164 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 13.58 Mbit/s

95th percentile per-packet one-way delay: 112.637 ms

Loss rate: 1.30%

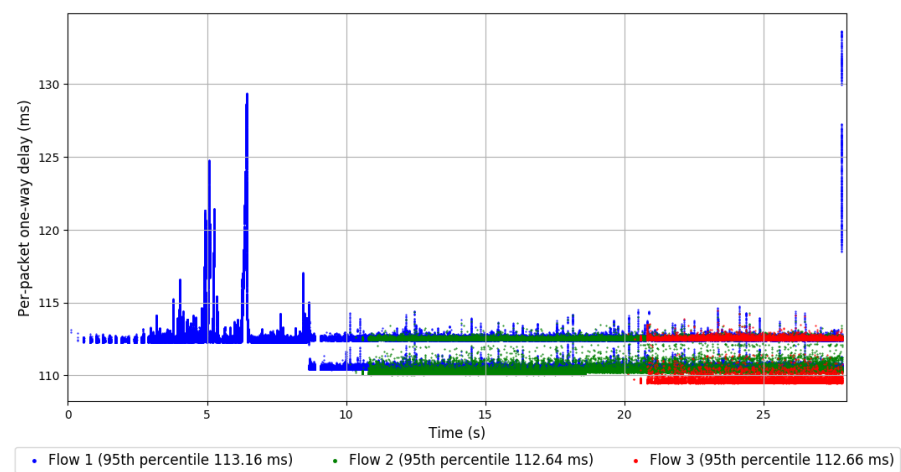
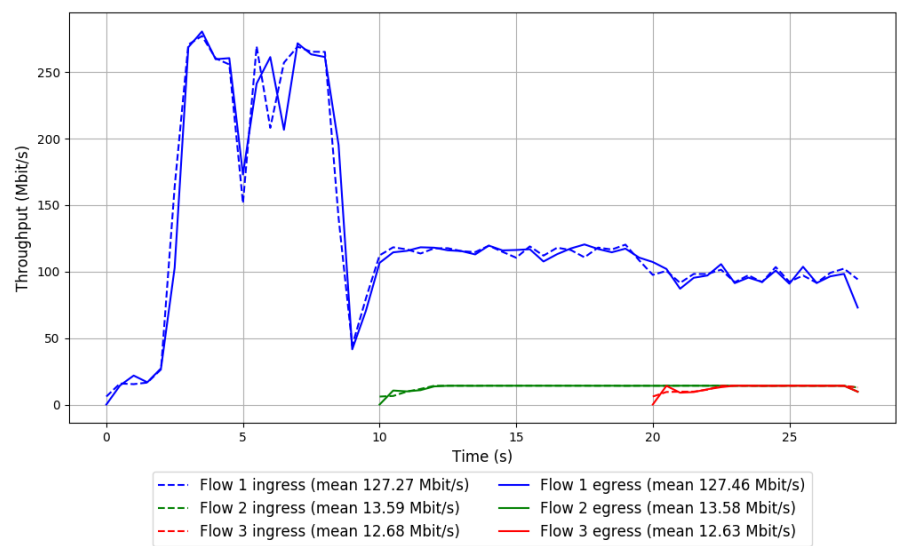
-- Flow 3:

Average throughput: 12.63 Mbit/s

95th percentile per-packet one-way delay: 112.658 ms

Loss rate: 3.14%

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



Run 5: Statistics of TaoVA-100x

Start at: 2017-11-21 13:41:29

End at: 2017-11-21 13:41:59

Below is generated by plot.py at 2017-11-21 17:49:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 298.97 Mbit/s

95th percentile per-packet one-way delay: 114.825 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 164.02 Mbit/s

95th percentile per-packet one-way delay: 114.854 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 136.59 Mbit/s

95th percentile per-packet one-way delay: 113.773 ms

Loss rate: 1.16%

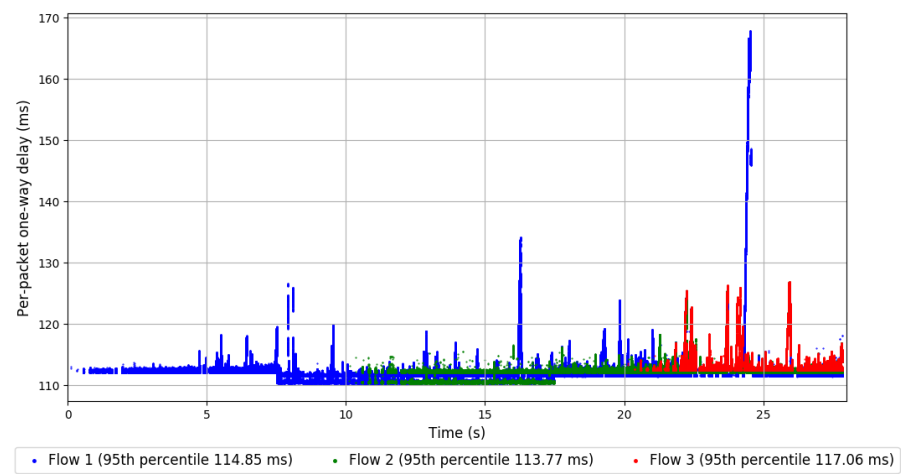
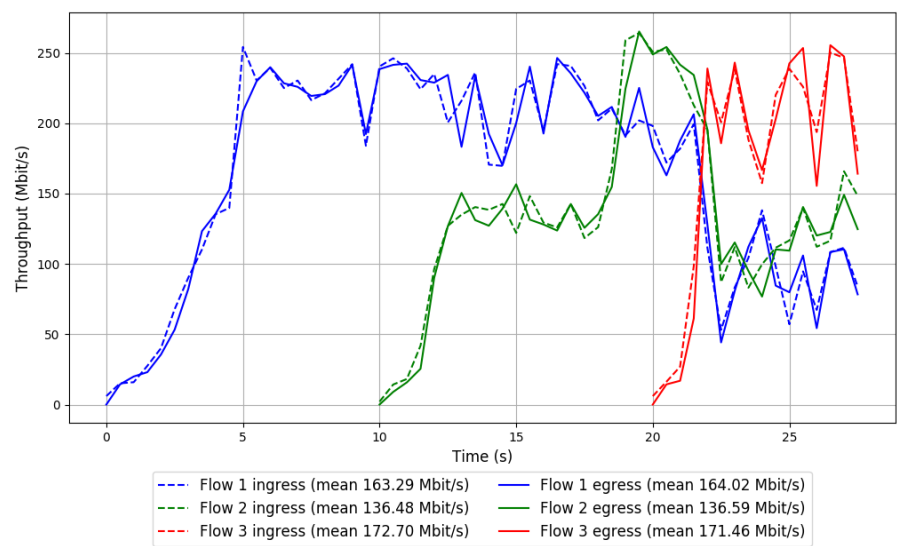
-- Flow 3:

Average throughput: 171.46 Mbit/s

95th percentile per-packet one-way delay: 117.056 ms

Loss rate: 2.70%

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



Run 6: Statistics of TaoVA-100x

Start at: 2017-11-21 13:55:12

End at: 2017-11-21 13:55:42

Below is generated by plot.py at 2017-11-21 17:49:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.61 Mbit/s

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

Loss rate: 1.17%

-- Flow 1:

Average throughput: 86.49 Mbit/s

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

Loss rate: 1.05%

-- Flow 2:

Average throughput: 13.83 Mbit/s

95th percentile per-packet one-way delay: 112.552 ms

Loss rate: 1.46%

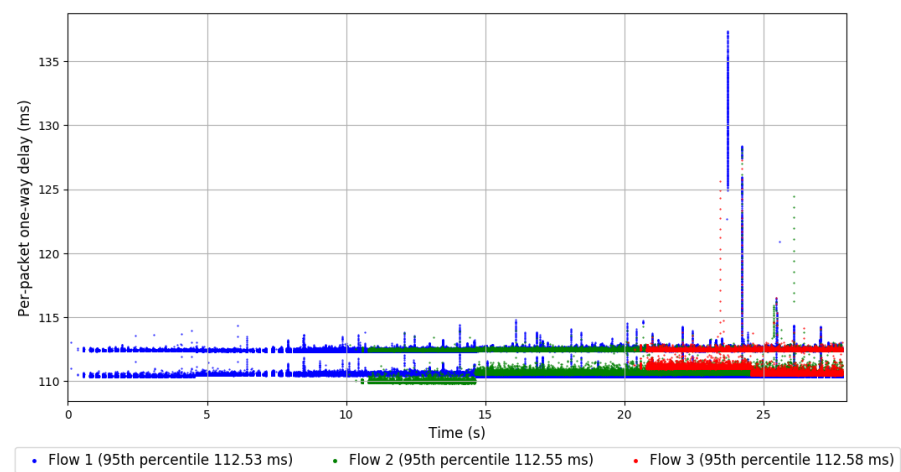
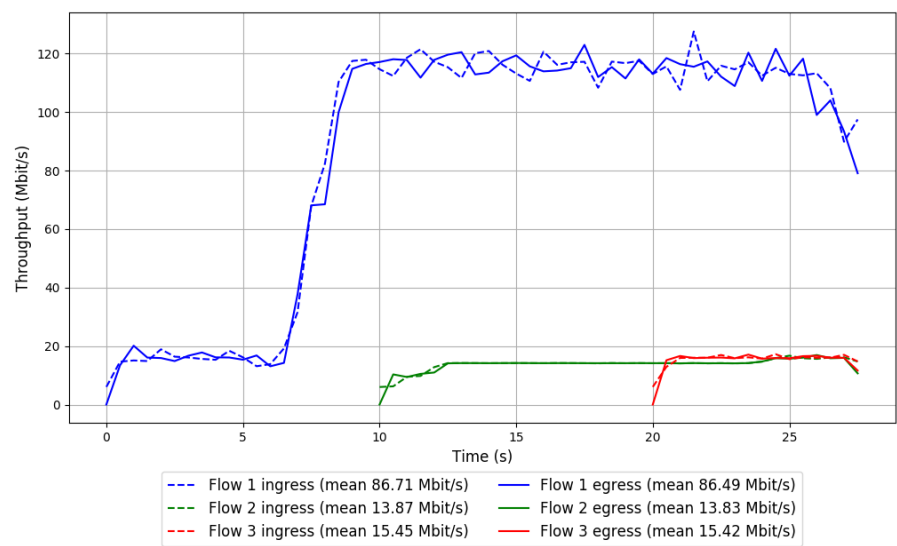
-- Flow 3:

Average throughput: 15.42 Mbit/s

95th percentile per-packet one-way delay: 112.578 ms

Loss rate: 2.98%

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



Run 7: Statistics of TaoVA-100x

Start at: 2017-11-21 14:08:33

End at: 2017-11-21 14:09:03

Below is generated by plot.py at 2017-11-21 17:49:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.91 Mbit/s

95th percentile per-packet one-way delay: 112.629 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 33.97 Mbit/s

95th percentile per-packet one-way delay: 112.655 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 68.26 Mbit/s

95th percentile per-packet one-way delay: 112.608 ms

Loss rate: 1.99%

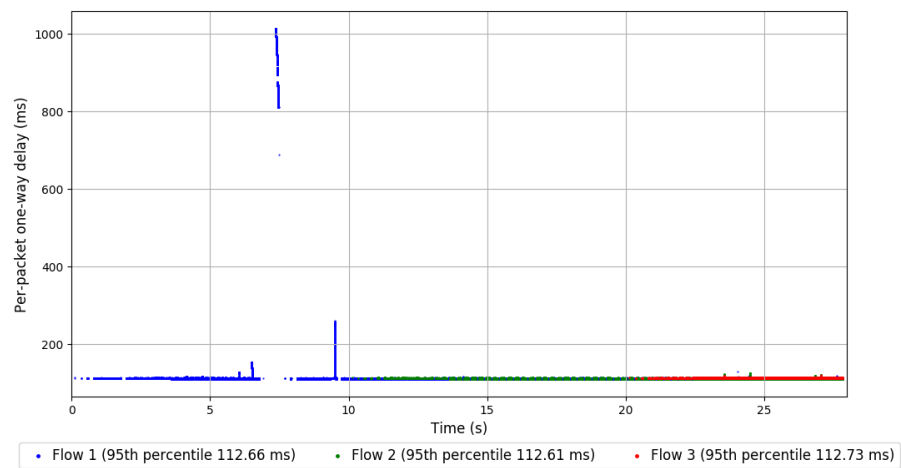
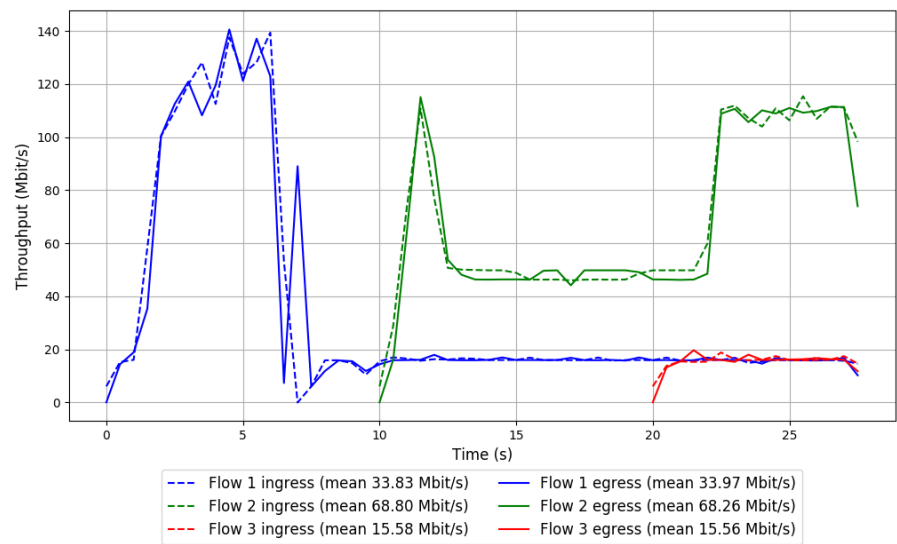
-- Flow 3:

Average throughput: 15.56 Mbit/s

95th percentile per-packet one-way delay: 112.731 ms

Loss rate: 2.95%

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



Run 8: Statistics of TaoVA-100x

Start at: 2017-11-21 14:21:54

End at: 2017-11-21 14:22:24

Below is generated by plot.py at 2017-11-21 17:49:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.14 Mbit/s

95th percentile per-packet one-way delay: 112.595 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 38.20 Mbit/s

95th percentile per-packet one-way delay: 112.614 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 38.90 Mbit/s

95th percentile per-packet one-way delay: 112.554 ms

Loss rate: 1.31%

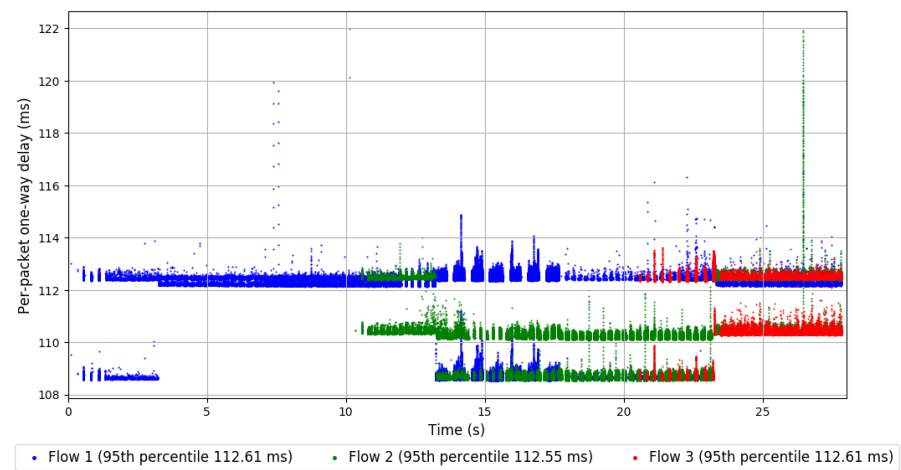
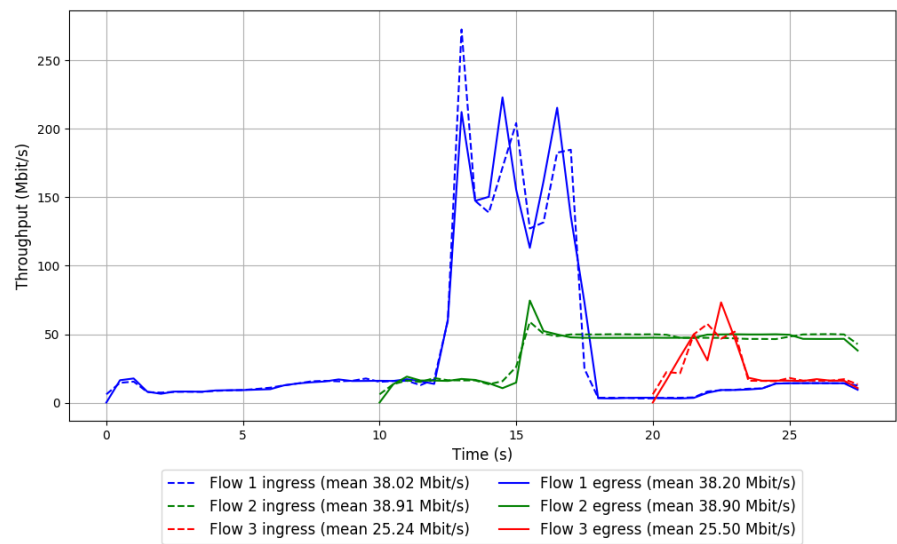
-- Flow 3:

Average throughput: 25.50 Mbit/s

95th percentile per-packet one-way delay: 112.611 ms

Loss rate: 1.76%

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



Run 9: Statistics of TaoVA-100x

Start at: 2017-11-21 14:35:17

End at: 2017-11-21 14:35:47

Below is generated by plot.py at 2017-11-21 17:49:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 153.71 Mbit/s

95th percentile per-packet one-way delay: 112.861 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 80.09 Mbit/s

95th percentile per-packet one-way delay: 112.866 ms

Loss rate: 1.93%

-- Flow 2:

Average throughput: 110.79 Mbit/s

95th percentile per-packet one-way delay: 112.700 ms

Loss rate: 0.07%

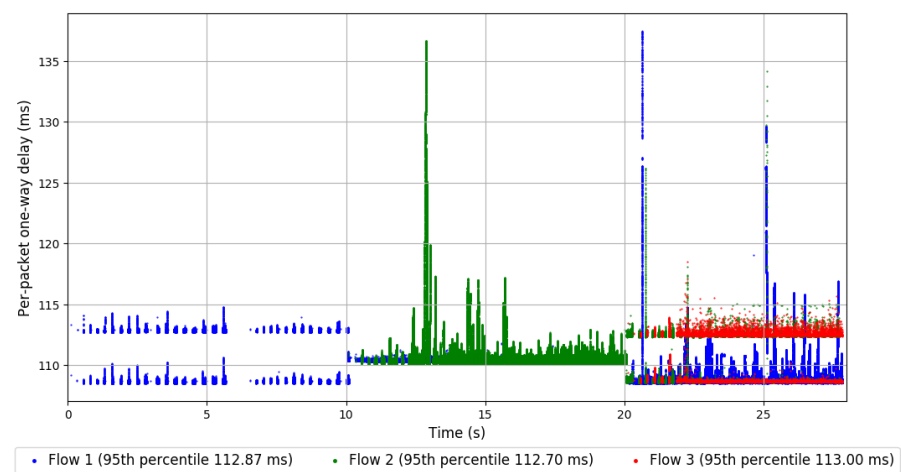
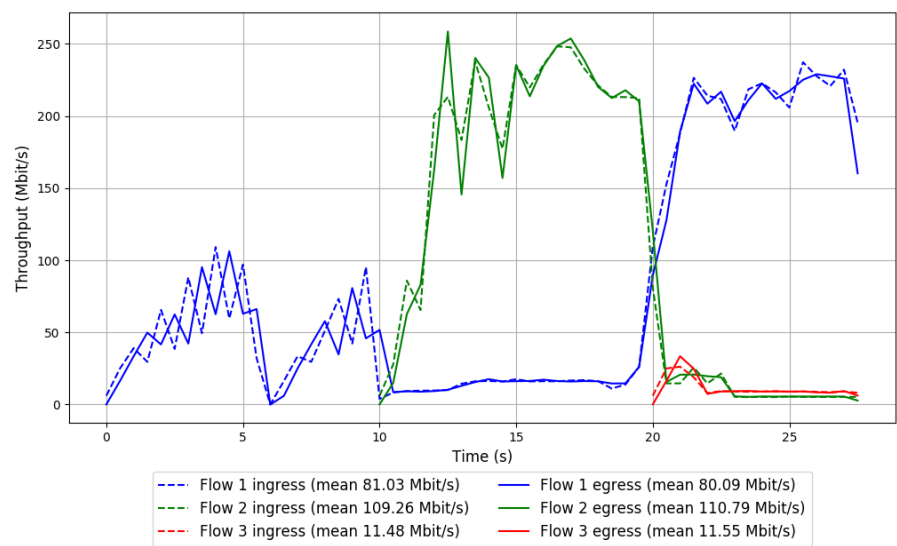
-- Flow 3:

Average throughput: 11.55 Mbit/s

95th percentile per-packet one-way delay: 112.998 ms

Loss rate: 2.19%

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

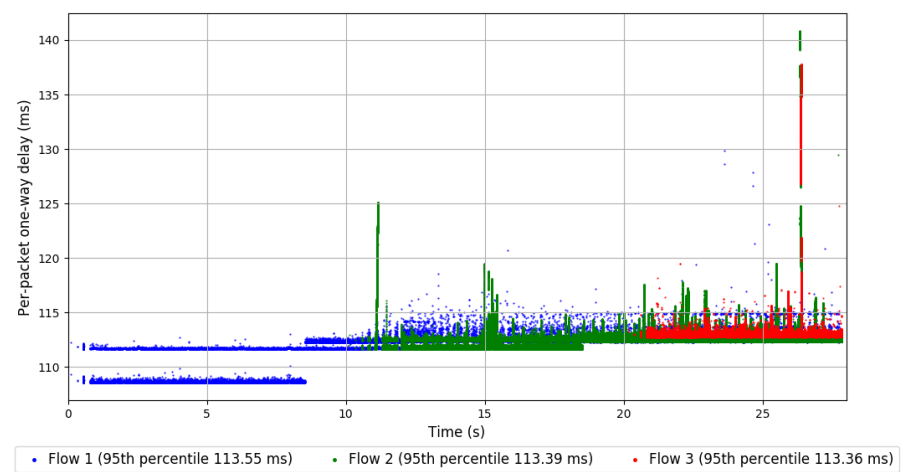
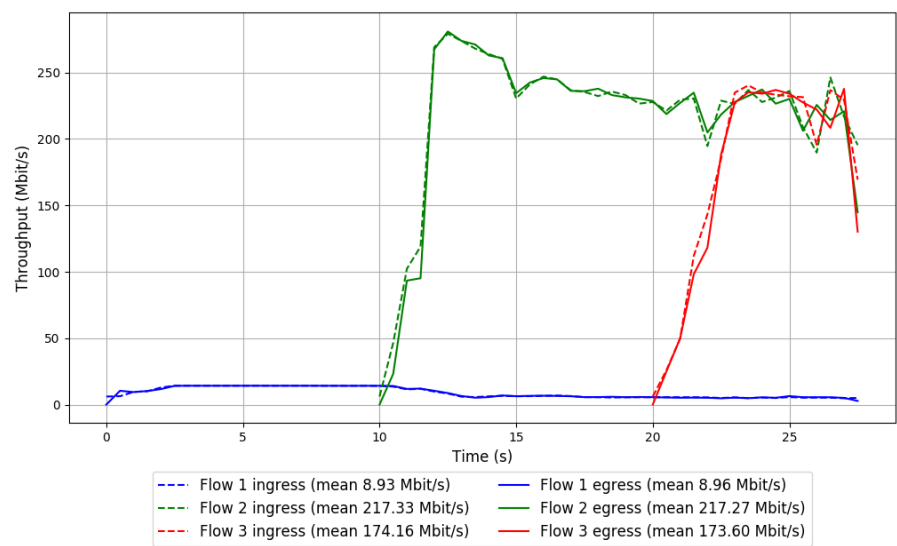


```
Run 10: Statistics of TaoVA-100x

Start at: 2017-11-21 14:48:48
End at: 2017-11-21 14:49:18

# Below is generated by plot.py at 2017-11-21 17:49:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 195.93 Mbit/s
95th percentile per-packet one-way delay: 113.384 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 8.96 Mbit/s
95th percentile per-packet one-way delay: 113.553 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 217.27 Mbit/s
95th percentile per-packet one-way delay: 113.393 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 173.60 Mbit/s
95th percentile per-packet one-way delay: 113.362 ms
Loss rate: 3.16%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2017-11-21 12:51:20

End at: 2017-11-21 12:51:50

Below is generated by plot.py at 2017-11-21 17:49:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 50.91 Mbit/s

95th percentile per-packet one-way delay: 117.895 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 36.44 Mbit/s

95th percentile per-packet one-way delay: 114.670 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 6.40 Mbit/s

95th percentile per-packet one-way delay: 112.891 ms

Loss rate: 1.33%

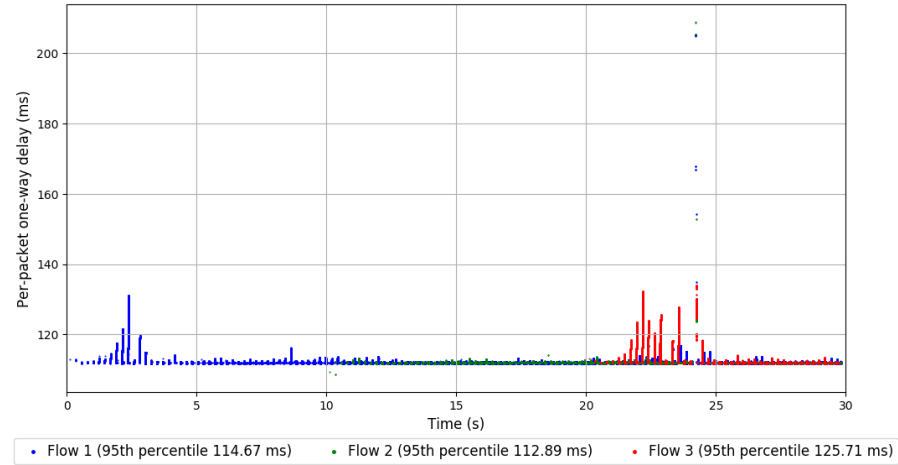
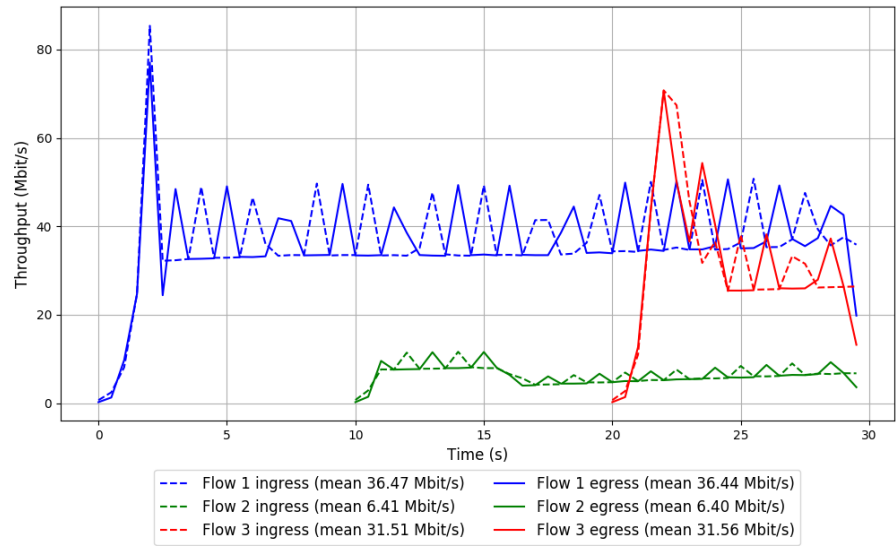
-- Flow 3:

Average throughput: 31.56 Mbit/s

95th percentile per-packet one-way delay: 125.710 ms

Loss rate: 2.14%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-11-21 13:04:39

End at: 2017-11-21 13:05:09

Below is generated by plot.py at 2017-11-21 17:49:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 25.85 Mbit/s

95th percentile per-packet one-way delay: 124.303 ms

Loss rate: 1.60%

-- Flow 1:

Average throughput: 5.14 Mbit/s

95th percentile per-packet one-way delay: 113.812 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 8.08 Mbit/s

95th percentile per-packet one-way delay: 116.360 ms

Loss rate: 1.17%

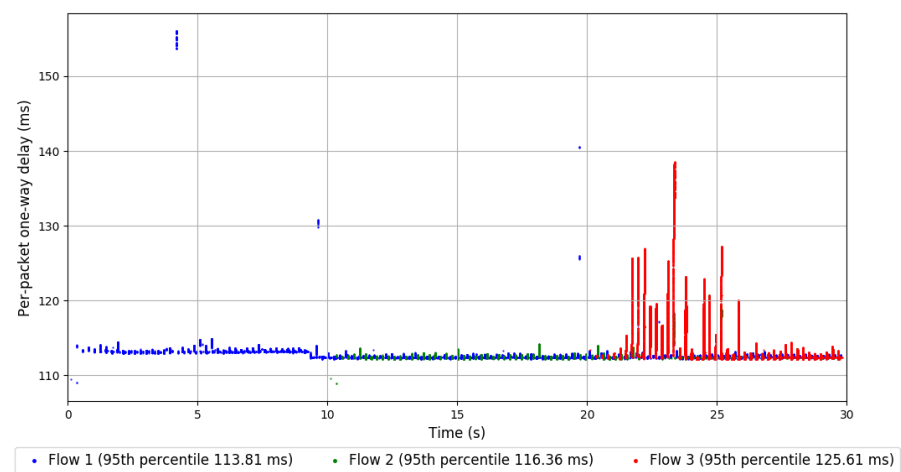
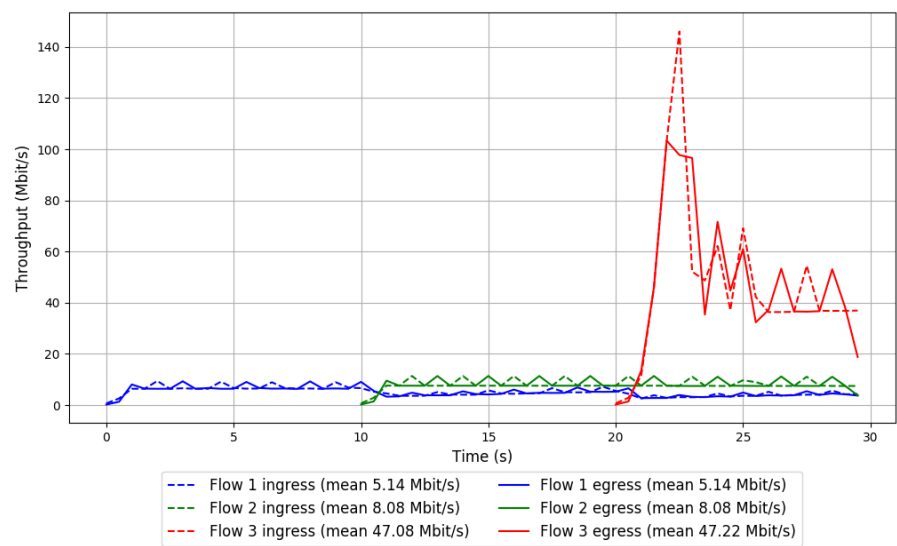
-- Flow 3:

Average throughput: 47.22 Mbit/s

95th percentile per-packet one-way delay: 125.614 ms

Loss rate: 2.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-11-21 13:18:22

End at: 2017-11-21 13:18:52

Below is generated by plot.py at 2017-11-21 17:49:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.95 Mbit/s

95th percentile per-packet one-way delay: 113.753 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 8.07 Mbit/s

95th percentile per-packet one-way delay: 113.567 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 9.47 Mbit/s

95th percentile per-packet one-way delay: 114.113 ms

Loss rate: 1.33%

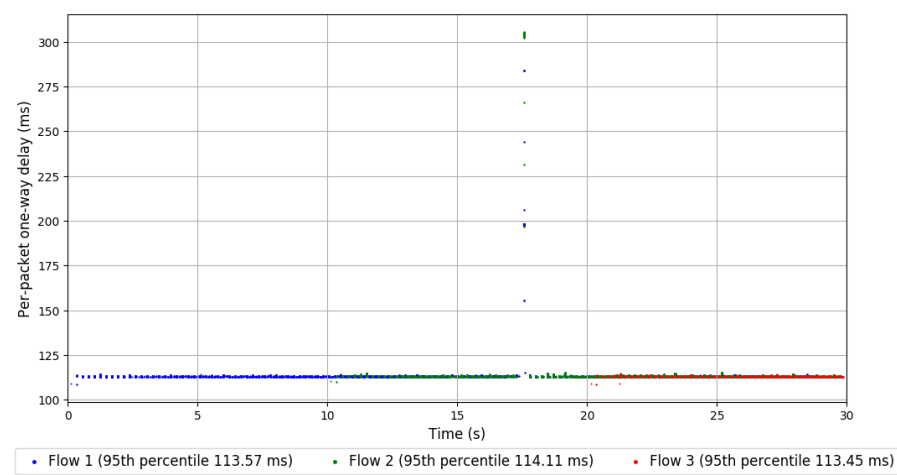
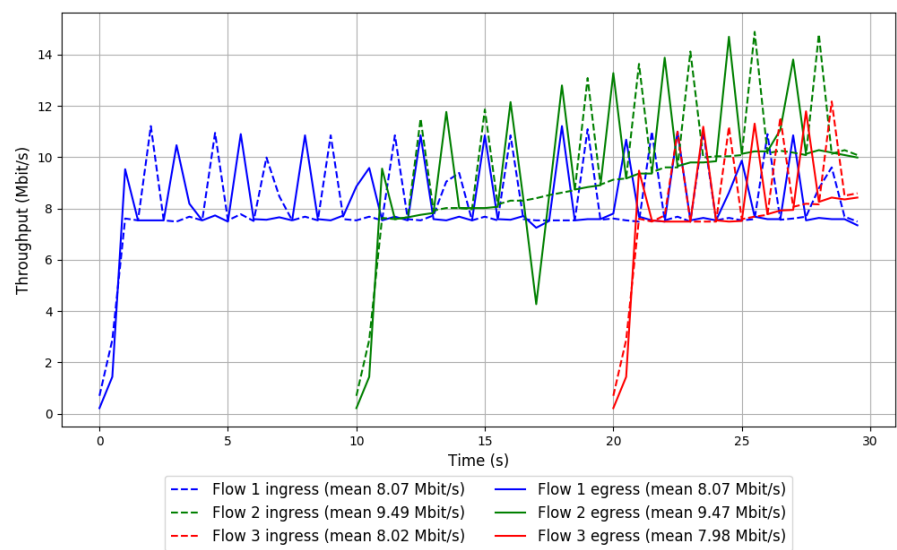
-- Flow 3:

Average throughput: 7.98 Mbit/s

95th percentile per-packet one-way delay: 113.454 ms

Loss rate: 2.65%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-11-21 13:31:50

End at: 2017-11-21 13:32:20

Below is generated by plot.py at 2017-11-21 17:49:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 37.90 Mbit/s

95th percentile per-packet one-way delay: 113.871 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 24.02 Mbit/s

95th percentile per-packet one-way delay: 113.853 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 17.11 Mbit/s

95th percentile per-packet one-way delay: 114.003 ms

Loss rate: 1.20%

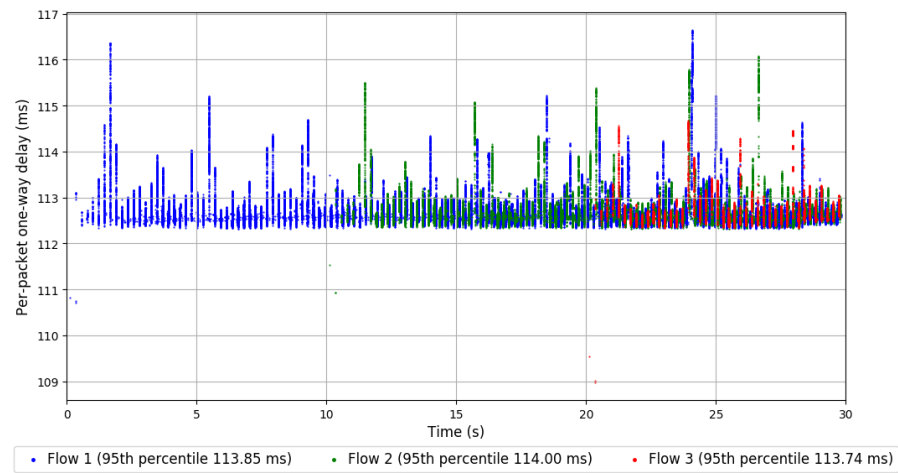
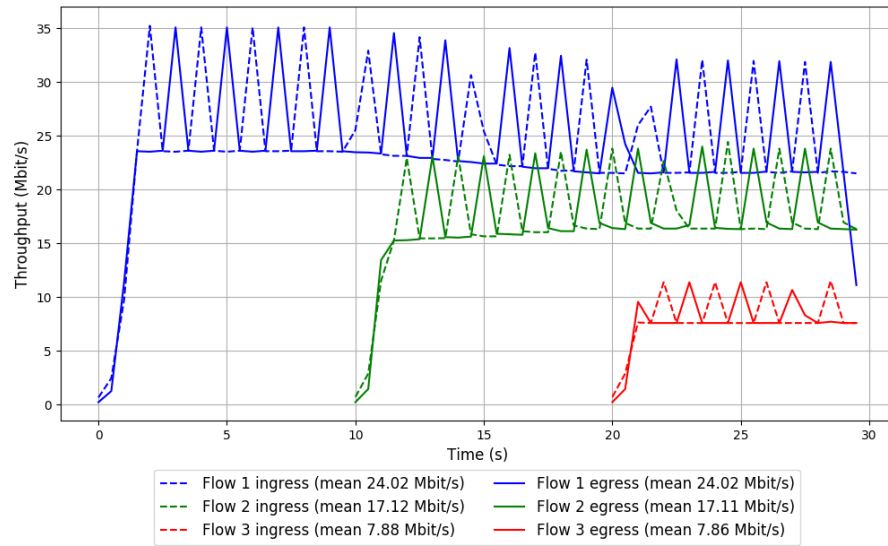
-- Flow 3:

Average throughput: 7.86 Mbit/s

95th percentile per-packet one-way delay: 113.744 ms

Loss rate: 2.44%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-11-21 13:45:27

End at: 2017-11-21 13:45:57

Below is generated by plot.py at 2017-11-21 17:49:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 54.63 Mbit/s

95th percentile per-packet one-way delay: 114.158 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 28.26 Mbit/s

95th percentile per-packet one-way delay: 114.130 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 29.43 Mbit/s

95th percentile per-packet one-way delay: 113.916 ms

Loss rate: 0.63%

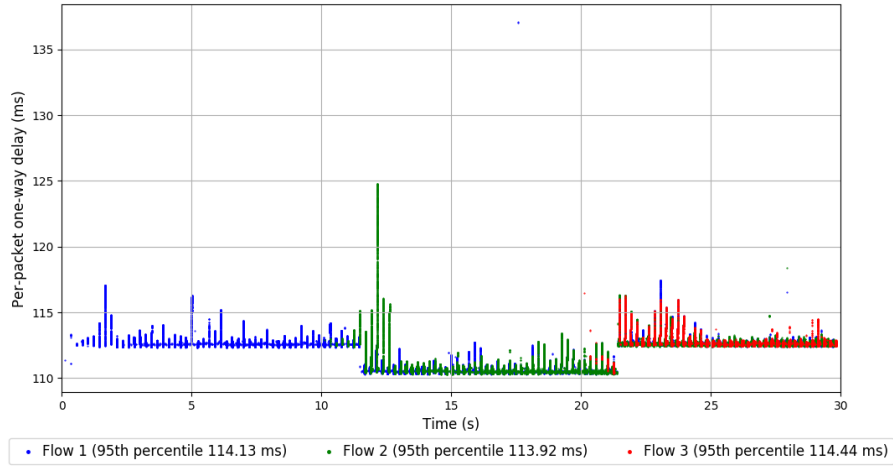
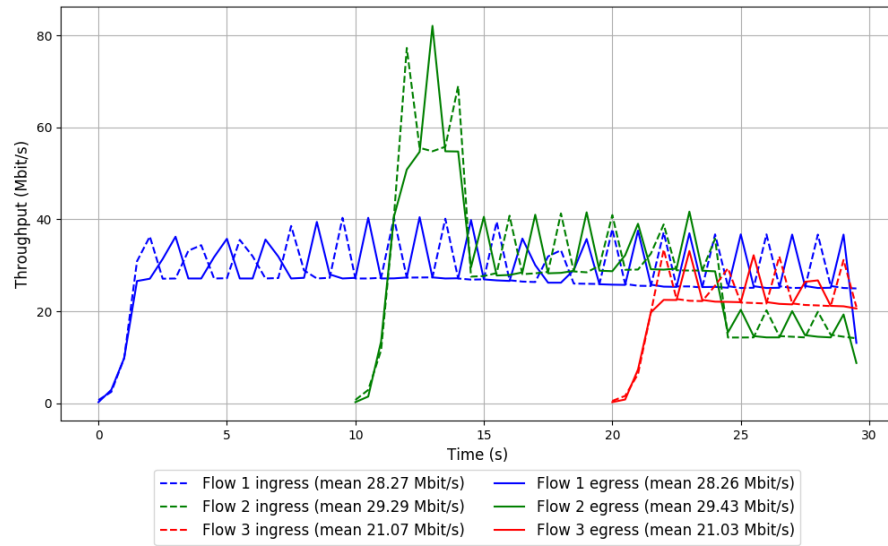
-- Flow 3:

Average throughput: 21.03 Mbit/s

95th percentile per-packet one-way delay: 114.436 ms

Loss rate: 2.50%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-11-21 13:58:50

End at: 2017-11-21 13:59:20

Below is generated by plot.py at 2017-11-21 17:49:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 52.45 Mbit/s

95th percentile per-packet one-way delay: 119.623 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 34.50 Mbit/s

95th percentile per-packet one-way delay: 120.651 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 11.41 Mbit/s

95th percentile per-packet one-way delay: 113.361 ms

Loss rate: 1.19%

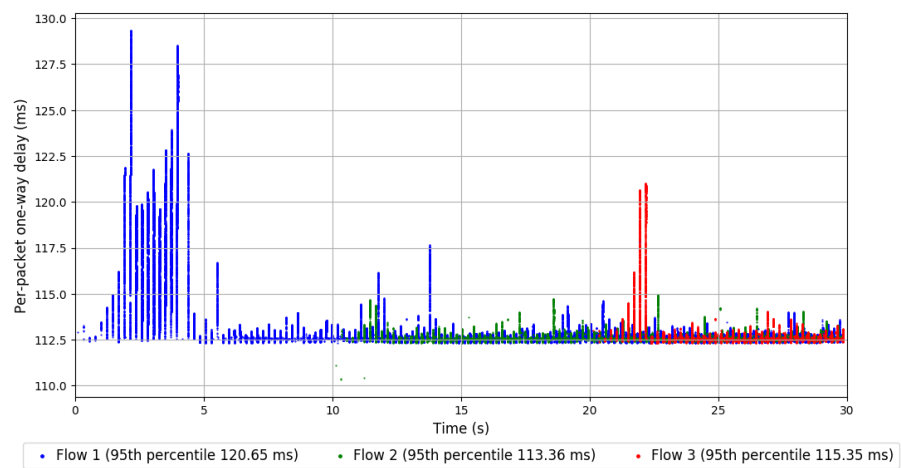
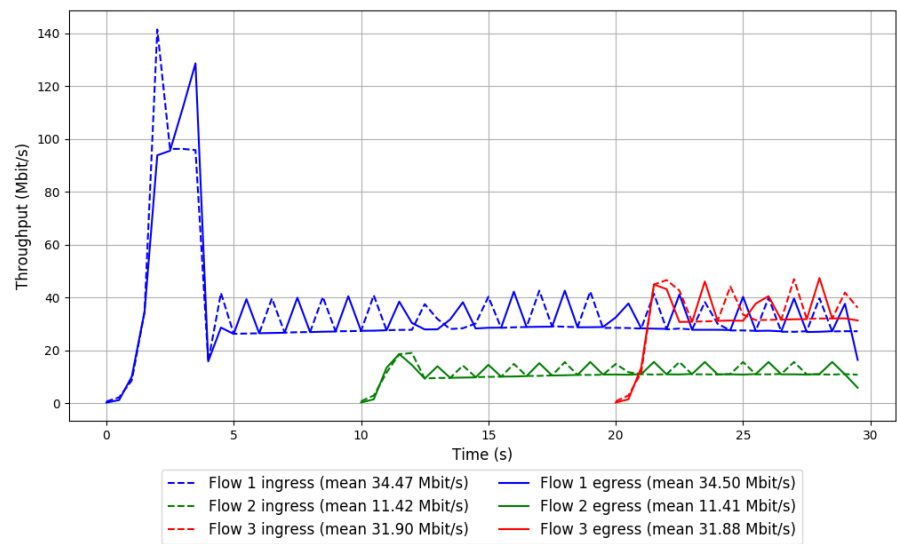
-- Flow 3:

Average throughput: 31.88 Mbit/s

95th percentile per-packet one-way delay: 115.353 ms

Loss rate: 2.33%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-11-21 14:12:07

End at: 2017-11-21 14:12:37

Below is generated by plot.py at 2017-11-21 17:49:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 50.23 Mbit/s

95th percentile per-packet one-way delay: 113.963 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 13.90 Mbit/s

95th percentile per-packet one-way delay: 113.339 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 45.45 Mbit/s

95th percentile per-packet one-way delay: 114.861 ms

Loss rate: 1.13%

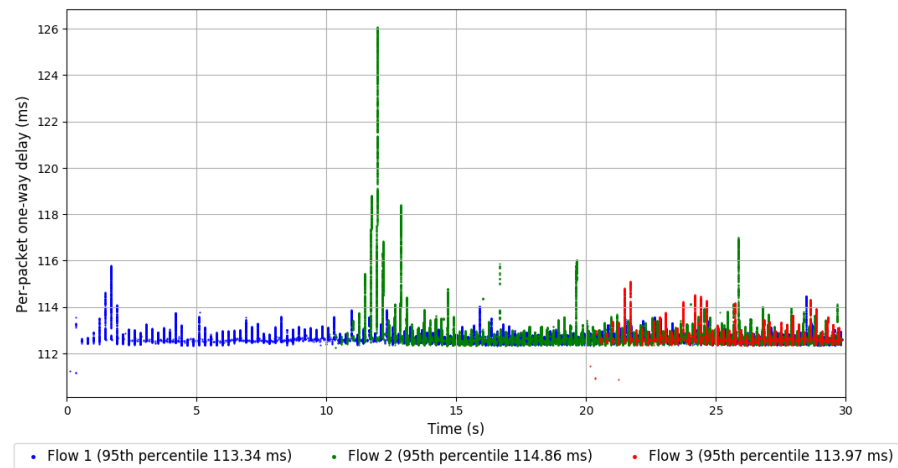
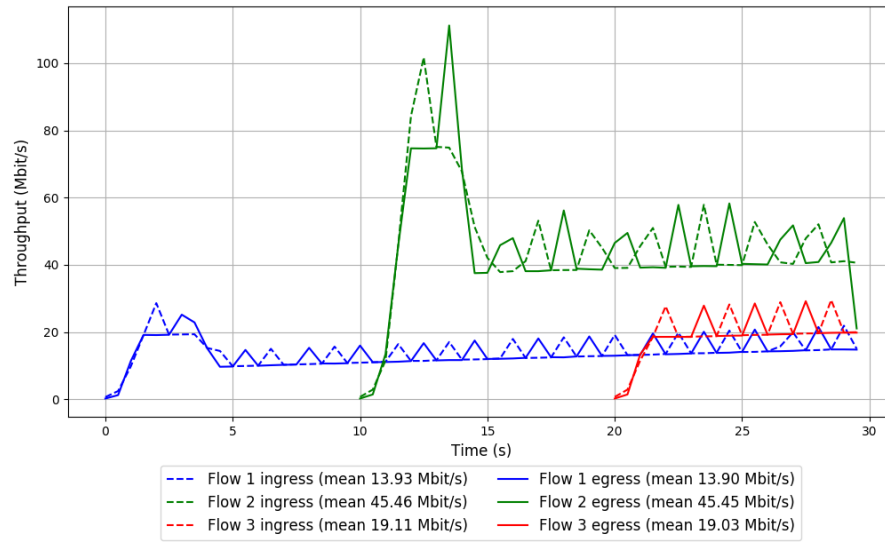
-- Flow 3:

Average throughput: 19.03 Mbit/s

95th percentile per-packet one-way delay: 113.973 ms

Loss rate: 2.64%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-11-21 14:25:24

End at: 2017-11-21 14:25:54

Below is generated by plot.py at 2017-11-21 17:49:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.84 Mbit/s

95th percentile per-packet one-way delay: 115.315 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 68.43 Mbit/s

95th percentile per-packet one-way delay: 114.278 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 46.16 Mbit/s

95th percentile per-packet one-way delay: 116.227 ms

Loss rate: 1.20%

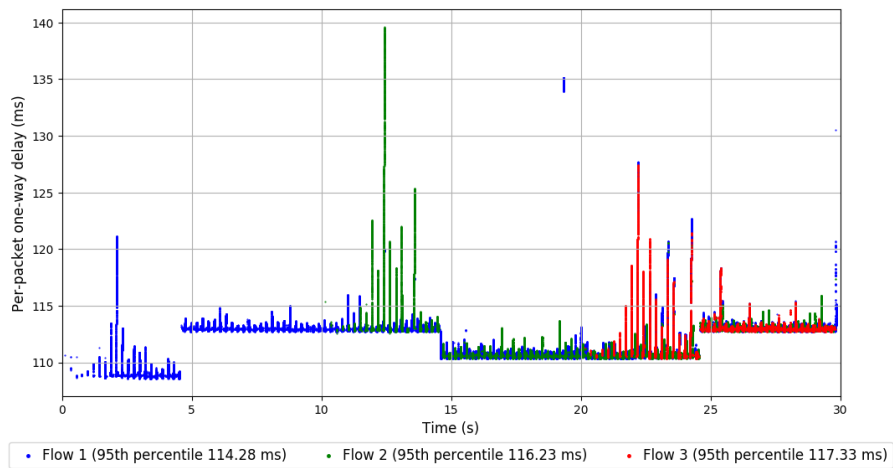
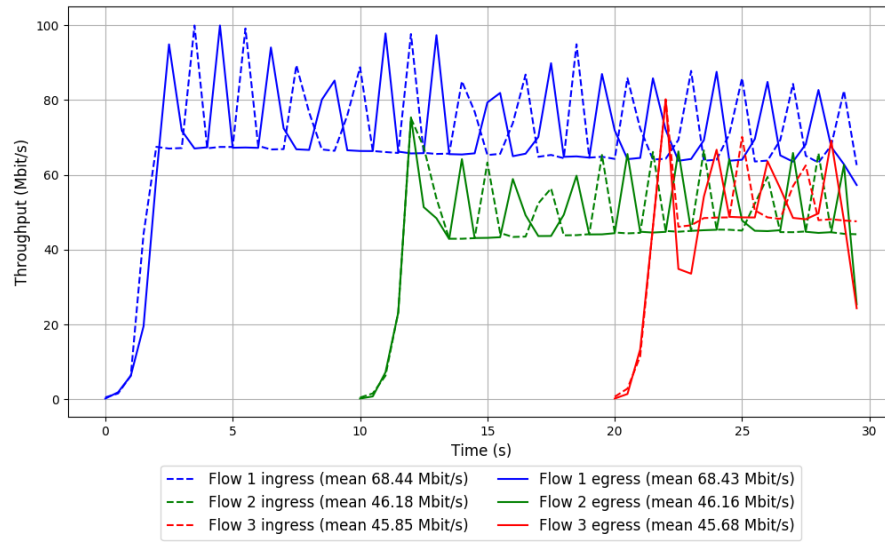
-- Flow 3:

Average throughput: 45.68 Mbit/s

95th percentile per-packet one-way delay: 117.327 ms

Loss rate: 2.62%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-11-21 14:39:00

End at: 2017-11-21 14:39:30

Below is generated by plot.py at 2017-11-21 17:49:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 30.97 Mbit/s

95th percentile per-packet one-way delay: 114.105 ms

Loss rate: 1.65%

-- Flow 1:

Average throughput: 7.45 Mbit/s

95th percentile per-packet one-way delay: 113.505 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 17.77 Mbit/s

95th percentile per-packet one-way delay: 114.202 ms

Loss rate: 1.14%

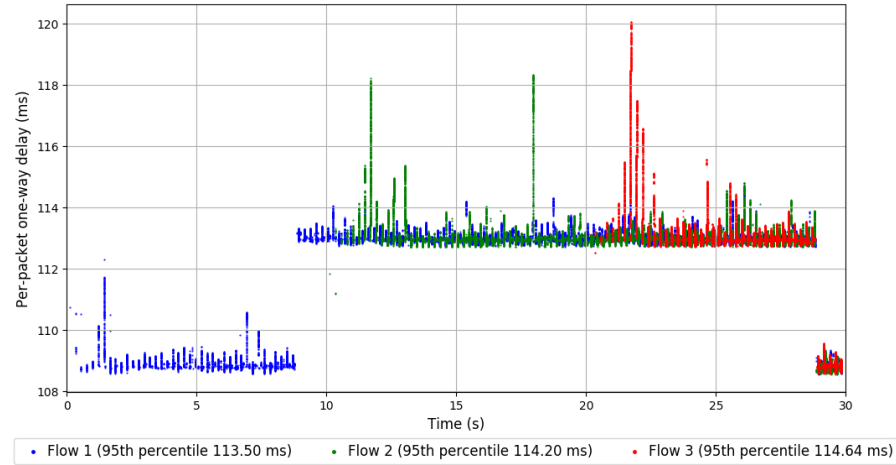
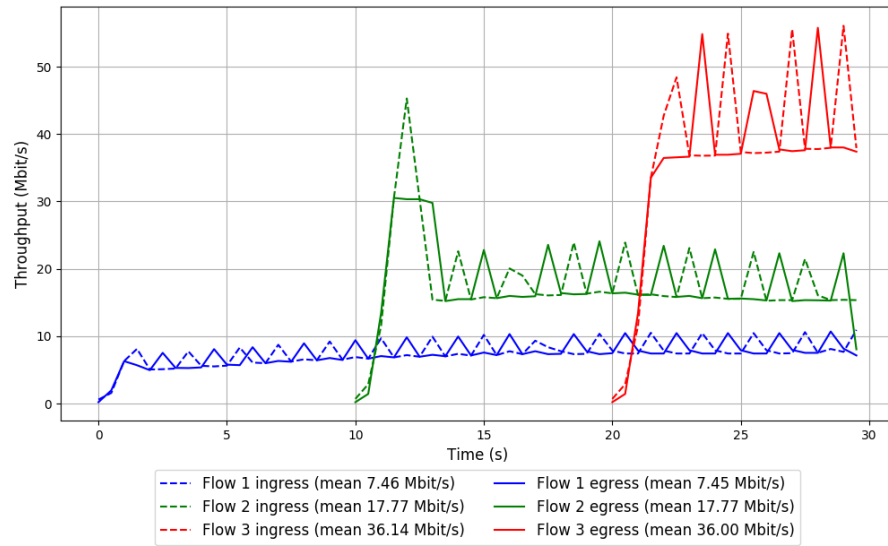
-- Flow 3:

Average throughput: 36.00 Mbit/s

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

Loss rate: 2.64%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-11-21 14:52:37

End at: 2017-11-21 14:53:07

Below is generated by plot.py at 2017-11-21 17:49:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 54.68 Mbit/s

95th percentile per-packet one-way delay: 121.105 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 23.94 Mbit/s

95th percentile per-packet one-way delay: 115.429 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 16.34 Mbit/s

95th percentile per-packet one-way delay: 114.308 ms

Loss rate: 1.28%

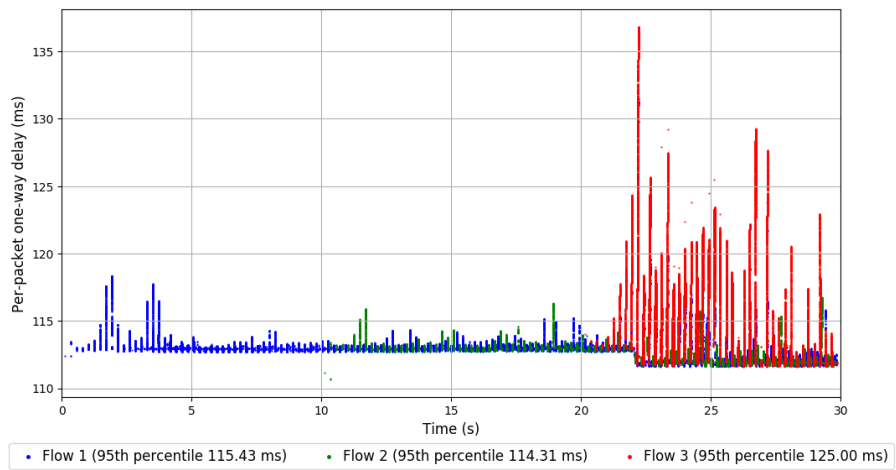
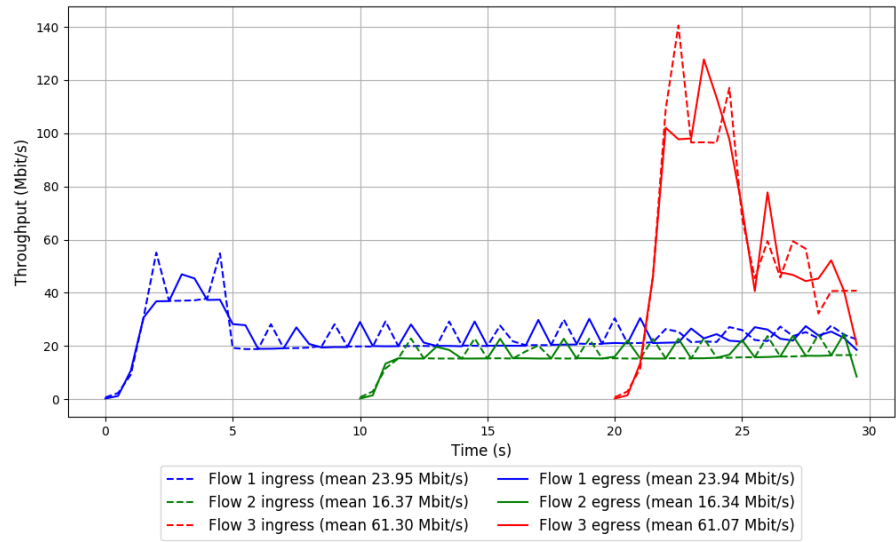
-- Flow 3:

Average throughput: 61.07 Mbit/s

95th percentile per-packet one-way delay: 124.995 ms

Loss rate: 1.68%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2017-11-21 12:43:44

End at: 2017-11-21 12:44:14

Below is generated by plot.py at 2017-11-21 17:49:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 196.92 Mbit/s

95th percentile per-packet one-way delay: 147.711 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 120.35 Mbit/s

95th percentile per-packet one-way delay: 135.524 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 108.44 Mbit/s

95th percentile per-packet one-way delay: 163.386 ms

Loss rate: 0.01%

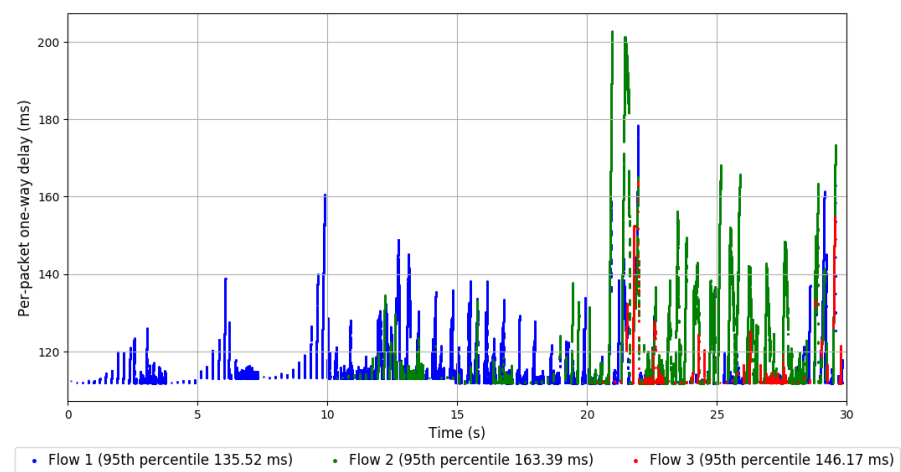
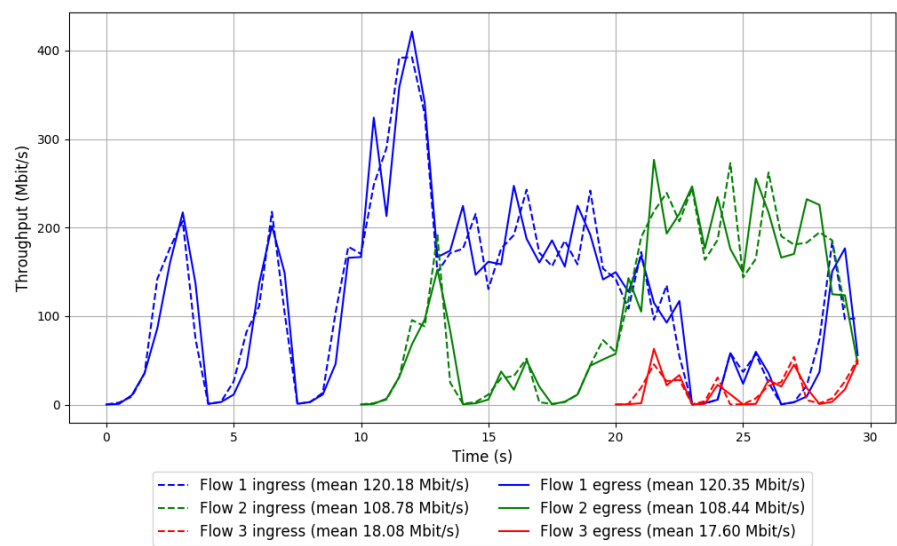
-- Flow 3:

Average throughput: 17.60 Mbit/s

95th percentile per-packet one-way delay: 146.173 ms

Loss rate: 4.62%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-11-21 12:57:14

End at: 2017-11-21 12:57:44

Below is generated by plot.py at 2017-11-21 17:51:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 247.73 Mbit/s

95th percentile per-packet one-way delay: 257.969 ms

Loss rate: 3.02%

-- Flow 1:

Average throughput: 143.39 Mbit/s

95th percentile per-packet one-way delay: 265.621 ms

Loss rate: 2.83%

-- Flow 2:

Average throughput: 138.41 Mbit/s

95th percentile per-packet one-way delay: 237.292 ms

Loss rate: 3.30%

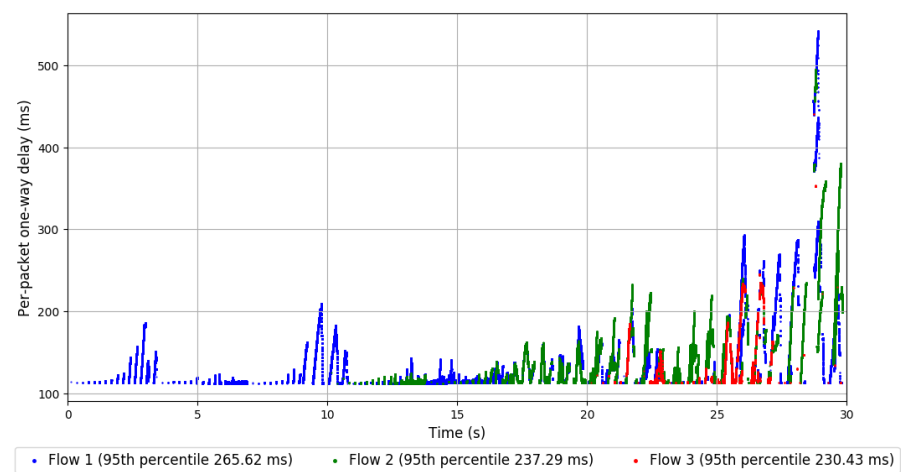
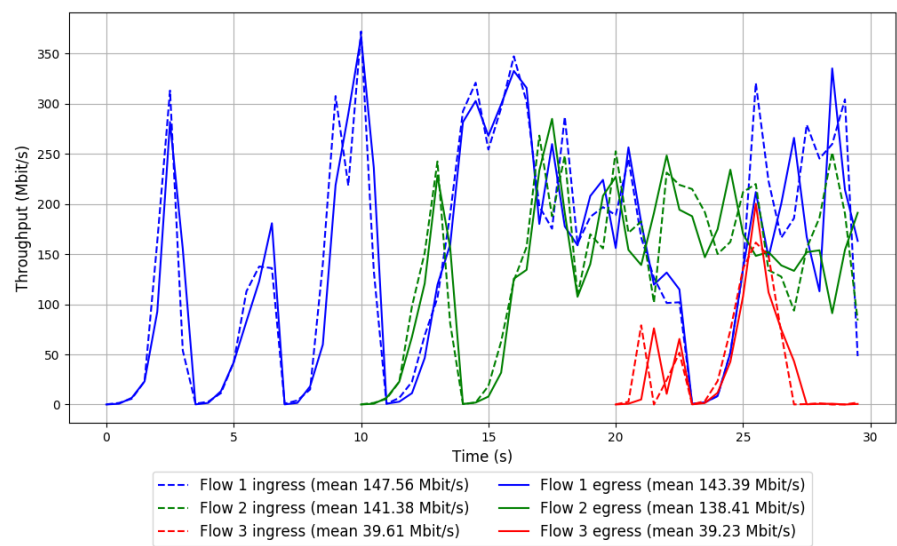
-- Flow 3:

Average throughput: 39.23 Mbit/s

95th percentile per-packet one-way delay: 230.425 ms

Loss rate: 3.23%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-11-21 13:10:32

End at: 2017-11-21 13:11:02

Below is generated by plot.py at 2017-11-21 17:51:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 256.35 Mbit/s

95th percentile per-packet one-way delay: 201.510 ms

Loss rate: 3.90%

-- Flow 1:

Average throughput: 172.38 Mbit/s

95th percentile per-packet one-way delay: 229.273 ms

Loss rate: 1.47%

-- Flow 2:

Average throughput: 97.70 Mbit/s

95th percentile per-packet one-way delay: 179.149 ms

Loss rate: 8.33%

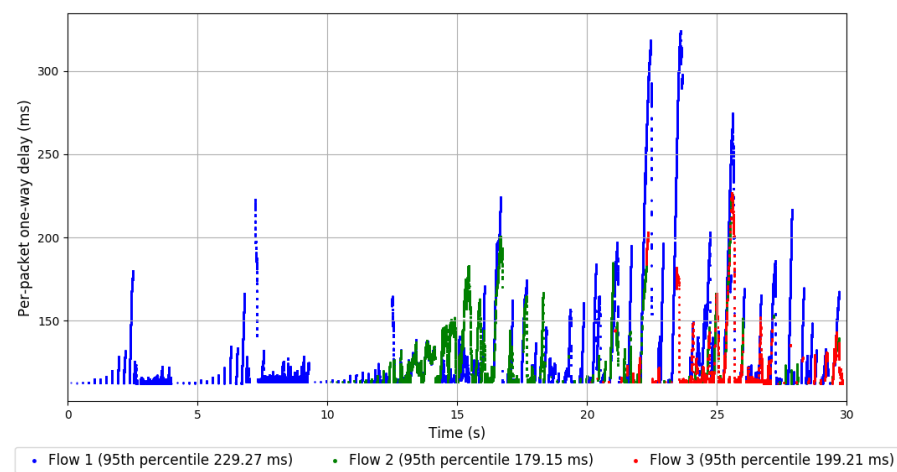
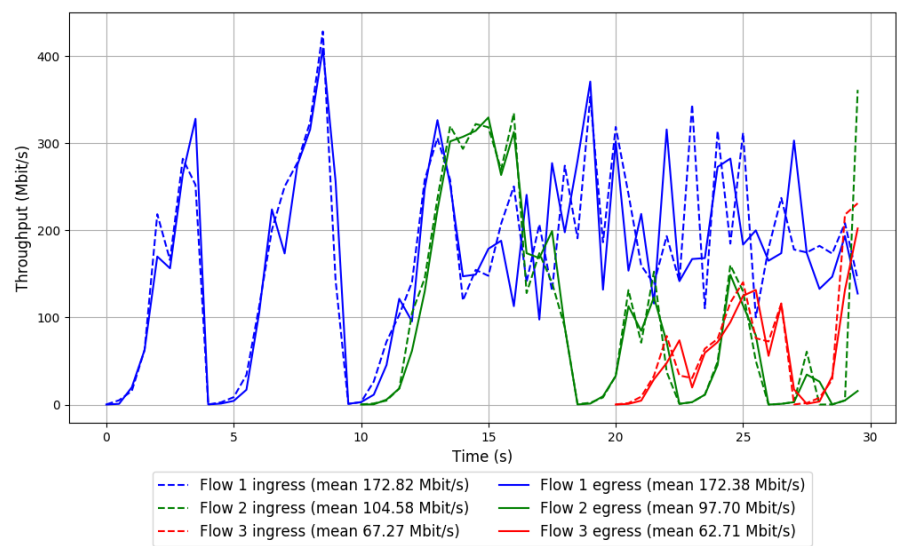
-- Flow 3:

Average throughput: 62.71 Mbit/s

95th percentile per-packet one-way delay: 199.214 ms

Loss rate: 8.90%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-11-21 13:24:15

End at: 2017-11-21 13:24:45

Below is generated by plot.py at 2017-11-21 17:52:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 255.14 Mbit/s

95th percentile per-packet one-way delay: 299.163 ms

Loss rate: 5.41%

-- Flow 1:

Average throughput: 222.72 Mbit/s

95th percentile per-packet one-way delay: 302.650 ms

Loss rate: 5.62%

-- Flow 2:

Average throughput: 30.20 Mbit/s

95th percentile per-packet one-way delay: 224.657 ms

Loss rate: 5.16%

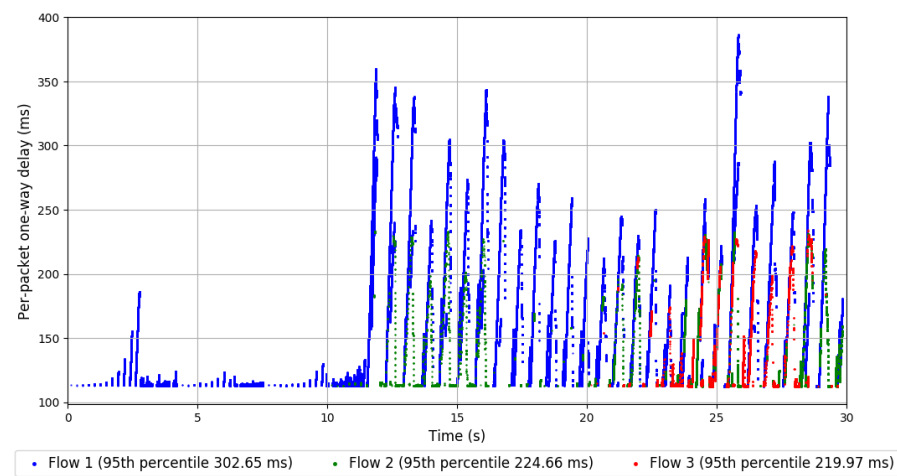
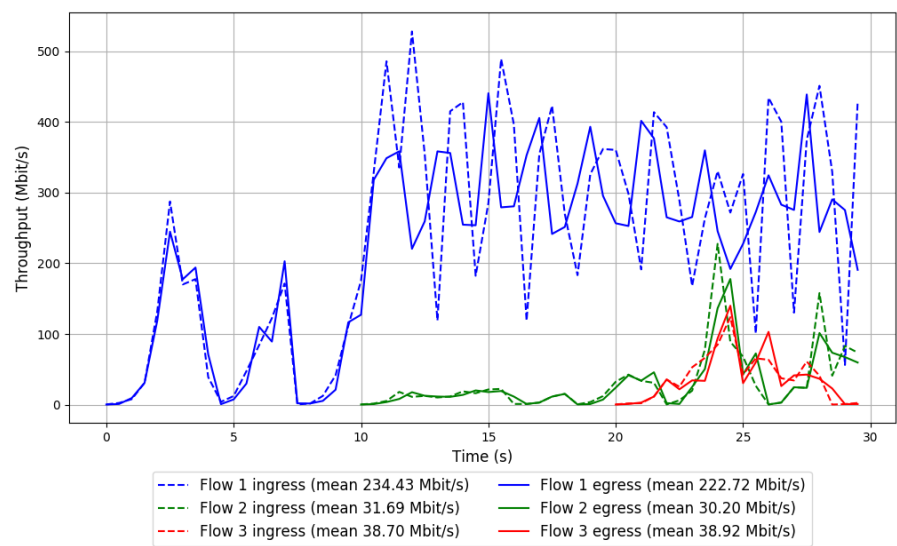
-- Flow 3:

Average throughput: 38.92 Mbit/s

95th percentile per-packet one-way delay: 219.969 ms

Loss rate: 1.75%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-11-21 13:37:41

End at: 2017-11-21 13:38:11

Below is generated by plot.py at 2017-11-21 17:52:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 192.23 Mbit/s

95th percentile per-packet one-way delay: 318.665 ms

Loss rate: 8.90%

-- Flow 1:

Average throughput: 84.78 Mbit/s

95th percentile per-packet one-way delay: 187.966 ms

Loss rate: 1.23%

-- Flow 2:

Average throughput: 156.94 Mbit/s

95th percentile per-packet one-way delay: 333.167 ms

Loss rate: 14.70%

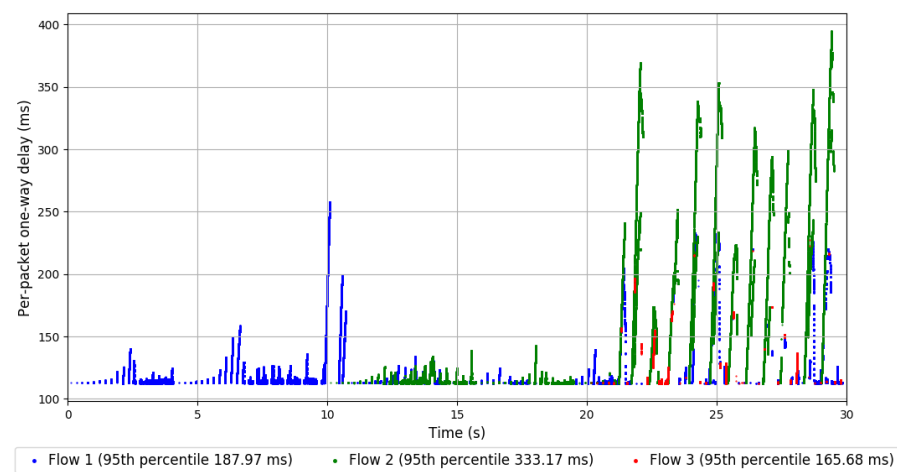
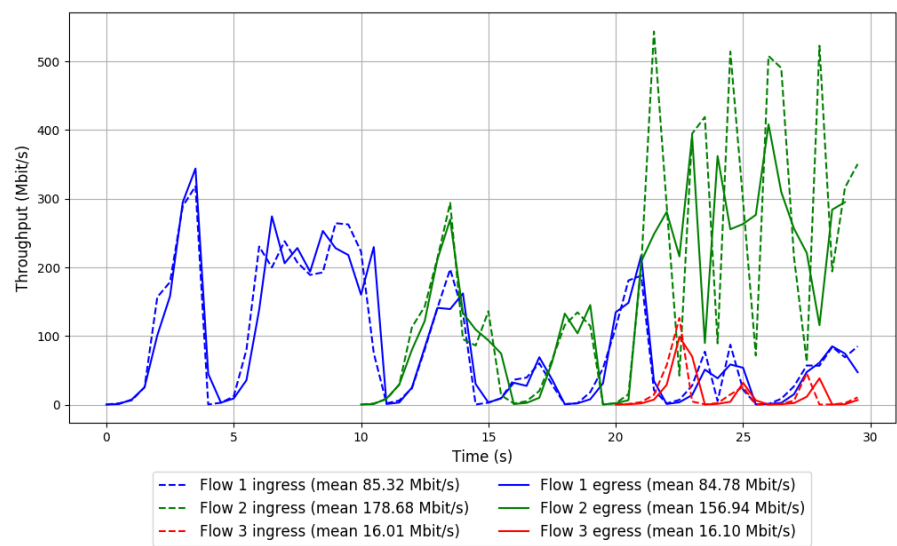
-- Flow 3:

Average throughput: 16.10 Mbit/s

95th percentile per-packet one-way delay: 165.677 ms

Loss rate: 1.76%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-11-21 13:51:20

End at: 2017-11-21 13:51:50

Below is generated by plot.py at 2017-11-21 17:52:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 249.67 Mbit/s

95th percentile per-packet one-way delay: 330.894 ms

Loss rate: 13.57%

-- Flow 1:

Average throughput: 214.11 Mbit/s

95th percentile per-packet one-way delay: 334.626 ms

Loss rate: 14.96%

-- Flow 2:

Average throughput: 42.58 Mbit/s

95th percentile per-packet one-way delay: 212.239 ms

Loss rate: 3.06%

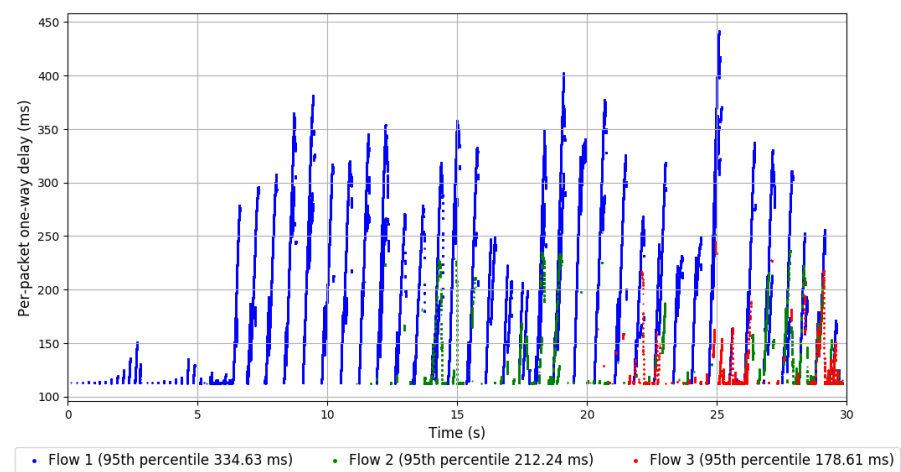
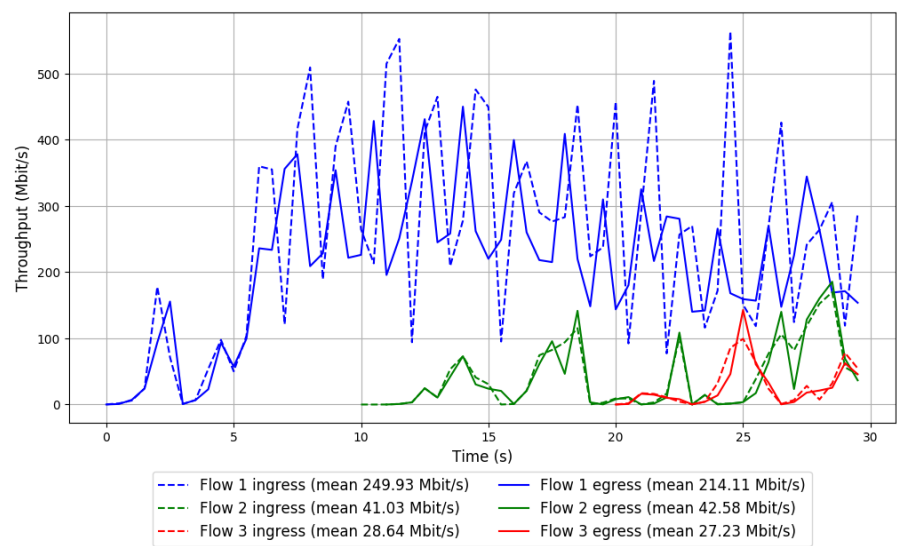
-- Flow 3:

Average throughput: 27.23 Mbit/s

95th percentile per-packet one-way delay: 178.614 ms

Loss rate: 7.03%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-11-21 14:04:48

End at: 2017-11-21 14:05:18

Below is generated by plot.py at 2017-11-21 17:52:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 155.11 Mbit/s

95th percentile per-packet one-way delay: 243.994 ms

Loss rate: 4.39%

-- Flow 1:

Average throughput: 105.55 Mbit/s

95th percentile per-packet one-way delay: 285.455 ms

Loss rate: 5.90%

-- Flow 2:

Average throughput: 61.25 Mbit/s

95th percentile per-packet one-way delay: 171.711 ms

Loss rate: 0.10%

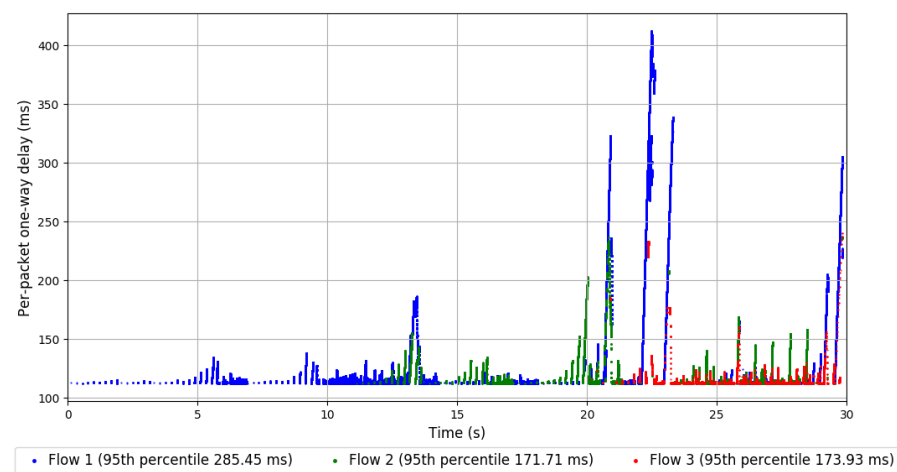
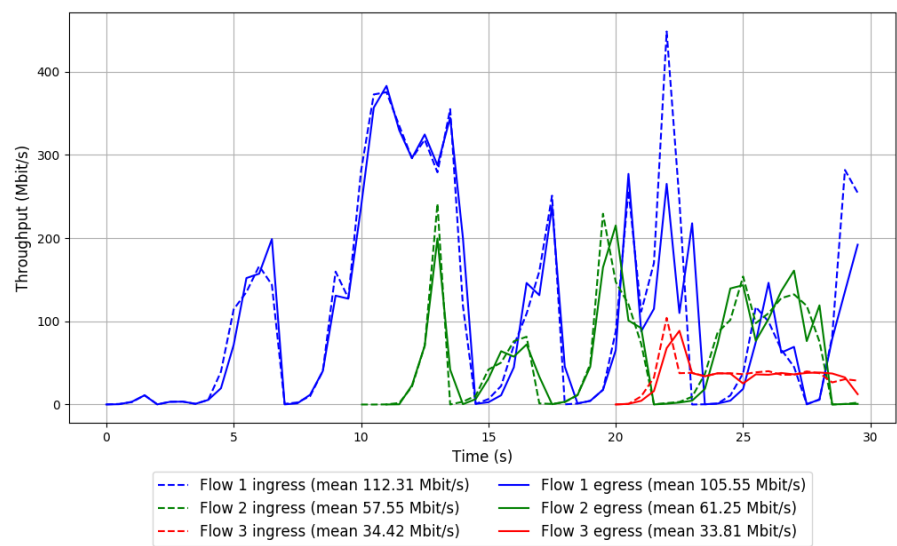
-- Flow 3:

Average throughput: 33.81 Mbit/s

95th percentile per-packet one-way delay: 173.926 ms

Loss rate: 4.01%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-11-21 14:17:59

End at: 2017-11-21 14:18:29

Below is generated by plot.py at 2017-11-21 17:54:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 276.59 Mbit/s

95th percentile per-packet one-way delay: 235.433 ms

Loss rate: 3.58%

-- Flow 1:

Average throughput: 206.90 Mbit/s

95th percentile per-packet one-way delay: 167.460 ms

Loss rate: 1.31%

-- Flow 2:

Average throughput: 56.32 Mbit/s

95th percentile per-packet one-way delay: 126.483 ms

Loss rate: 2.72%

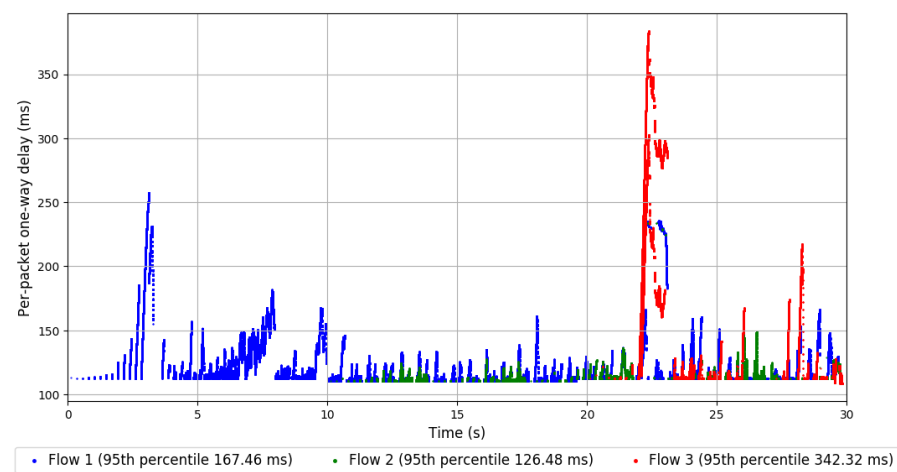
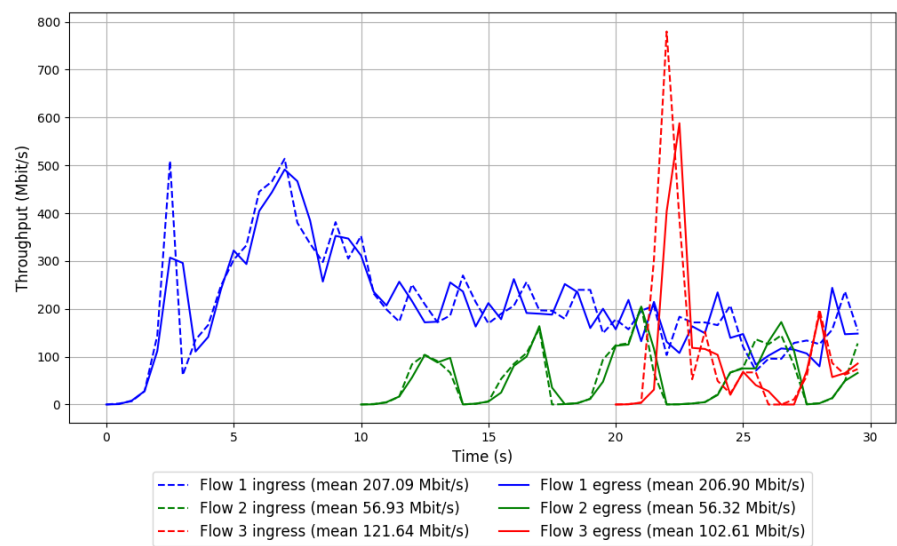
-- Flow 3:

Average throughput: 102.61 Mbit/s

95th percentile per-packet one-way delay: 342.323 ms

Loss rate: 16.26%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2017-11-21 14:31:24

End at: 2017-11-21 14:31:54

Below is generated by plot.py at 2017-11-21 17:54:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 252.65 Mbit/s

95th percentile per-packet one-way delay: 207.890 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 179.21 Mbit/s

95th percentile per-packet one-way delay: 209.645 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 80.39 Mbit/s

95th percentile per-packet one-way delay: 185.277 ms

Loss rate: 0.16%

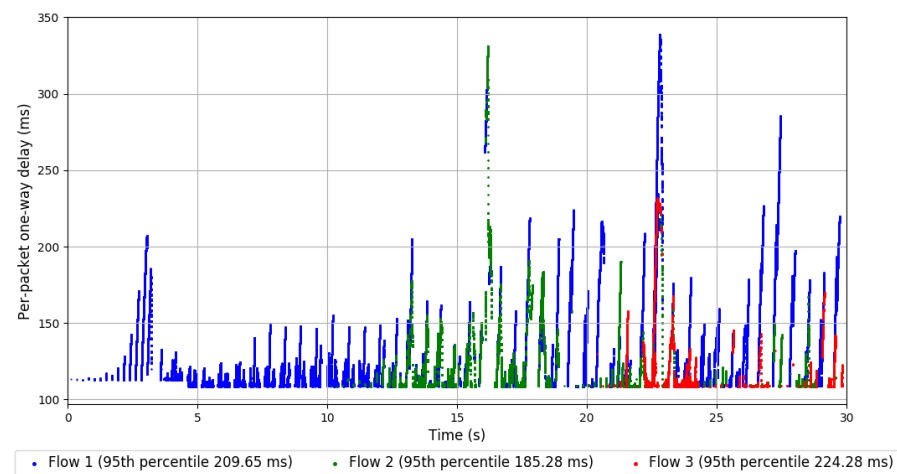
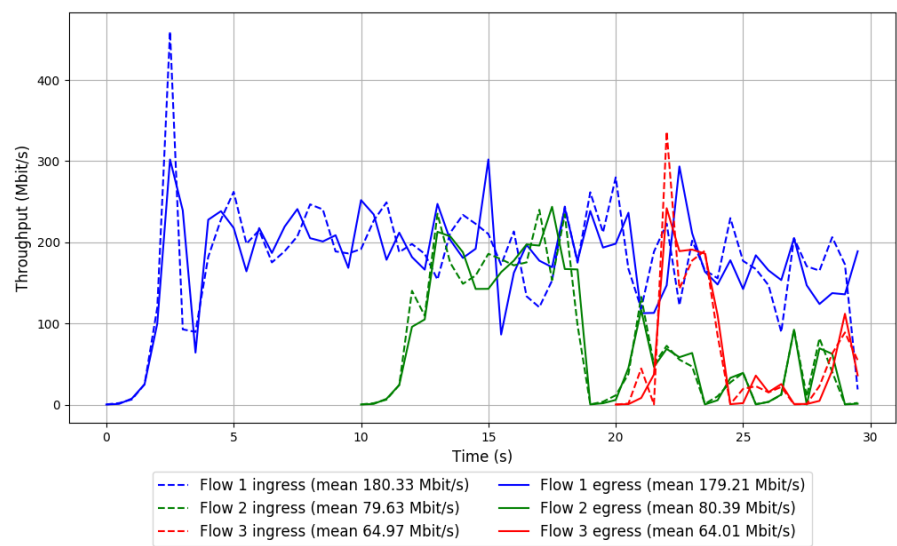
-- Flow 3:

Average throughput: 64.01 Mbit/s

95th percentile per-packet one-way delay: 224.281 ms

Loss rate: 3.69%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-11-21 14:44:55

End at: 2017-11-21 14:45:25

Below is generated by plot.py at 2017-11-21 17:55:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 255.30 Mbit/s

95th percentile per-packet one-way delay: 305.197 ms

Loss rate: 5.96%

-- Flow 1:

Average throughput: 151.36 Mbit/s

95th percentile per-packet one-way delay: 287.084 ms

Loss rate: 1.49%

-- Flow 2:

Average throughput: 122.83 Mbit/s

95th percentile per-packet one-way delay: 334.487 ms

Loss rate: 13.24%

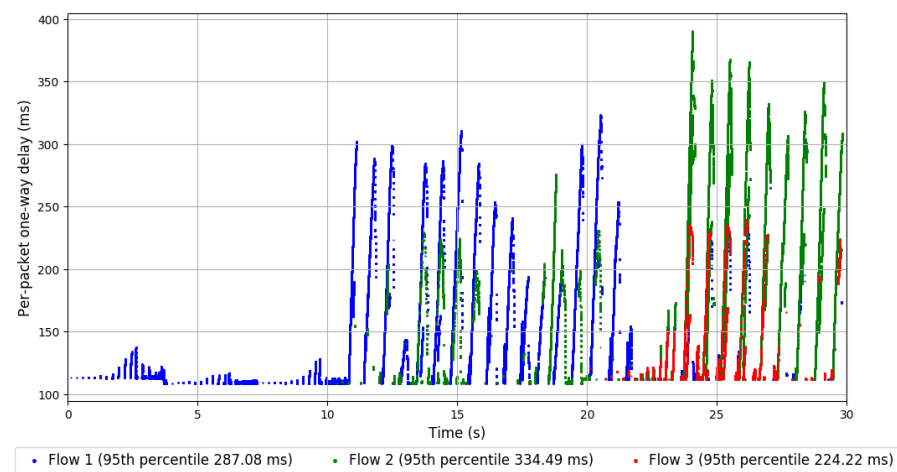
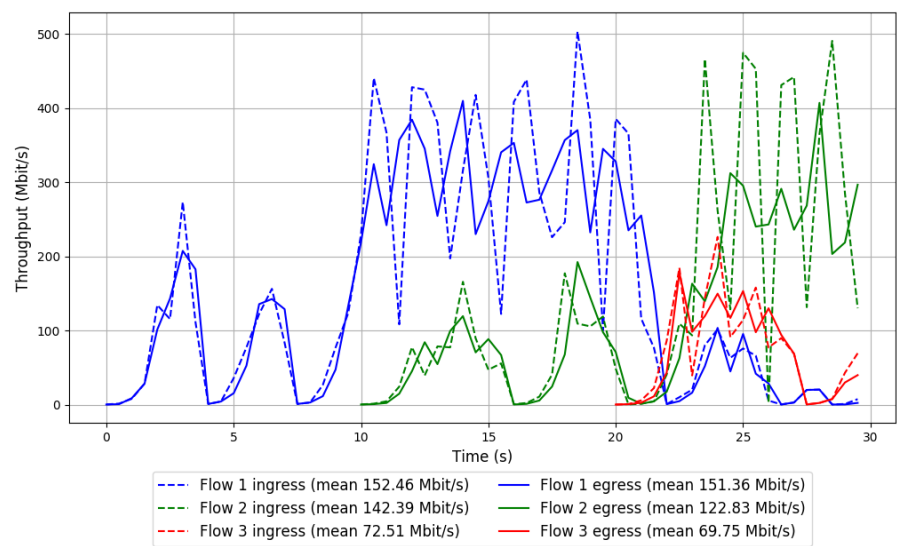
-- Flow 3:

Average throughput: 69.75 Mbit/s

95th percentile per-packet one-way delay: 224.219 ms

Loss rate: 6.06%

Run 10: Report of Verus — Data Link

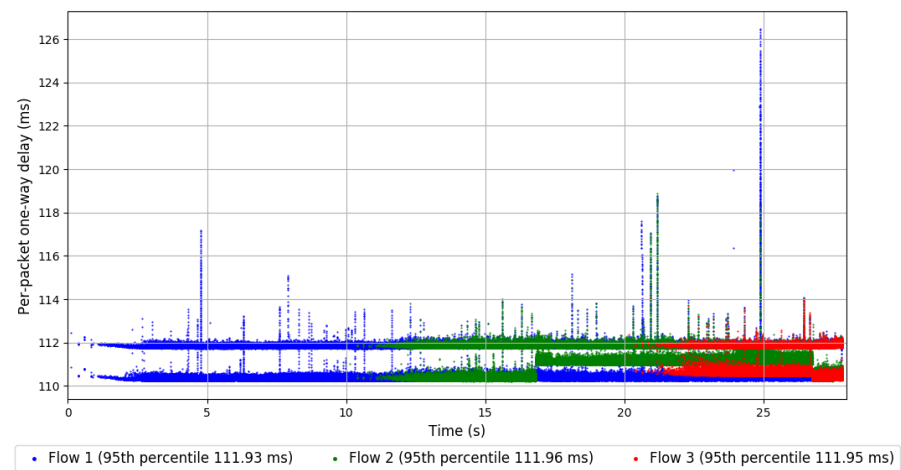
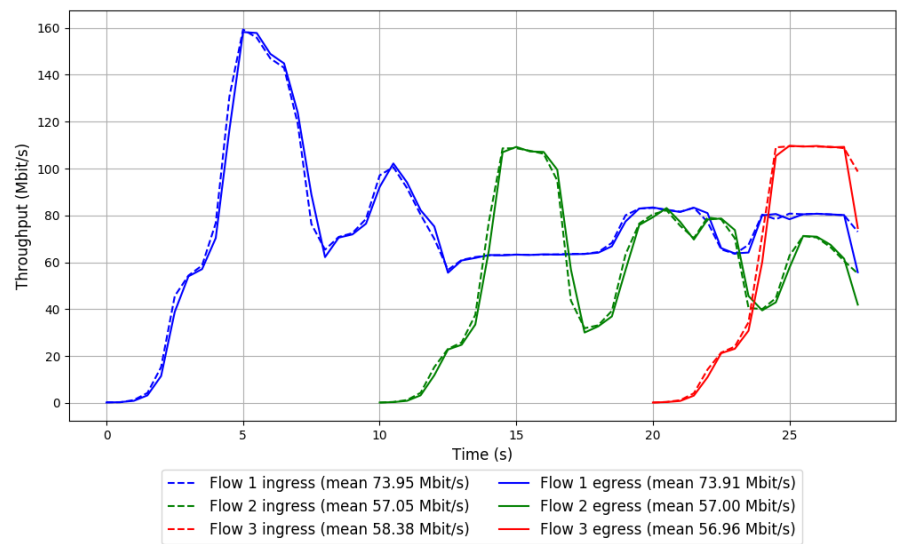


```
Run 1: Statistics of Copa

Start at: 2017-11-21 12:48:40
End at: 2017-11-21 12:49:10

# Below is generated by plot.py at 2017-11-21 17:55:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 126.14 Mbit/s
95th percentile per-packet one-way delay: 111.946 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 73.91 Mbit/s
95th percentile per-packet one-way delay: 111.934 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 57.00 Mbit/s
95th percentile per-packet one-way delay: 111.961 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 56.96 Mbit/s
95th percentile per-packet one-way delay: 111.953 ms
Loss rate: 5.18%
```

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-11-21 13:01:59

End at: 2017-11-21 13:02:29

Below is generated by plot.py at 2017-11-21 17:55:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 118.79 Mbit/s

95th percentile per-packet one-way delay: 113.117 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 73.34 Mbit/s

95th percentile per-packet one-way delay: 113.095 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 52.48 Mbit/s

95th percentile per-packet one-way delay: 113.142 ms

Loss rate: 1.42%

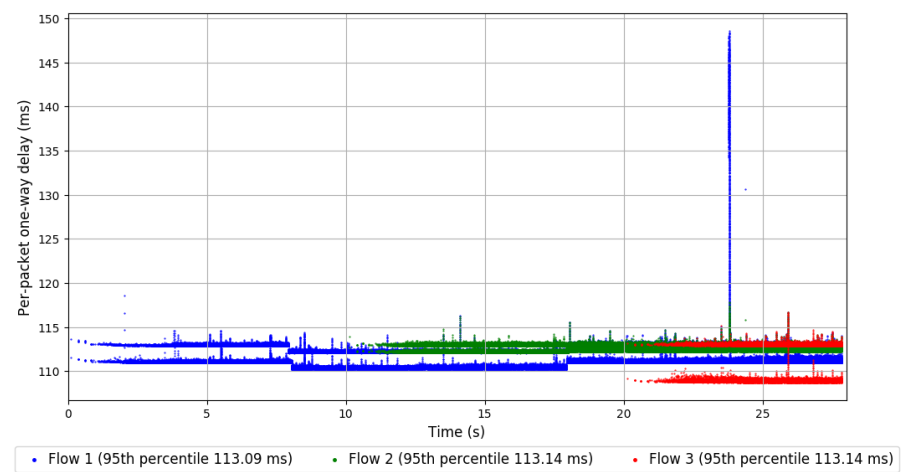
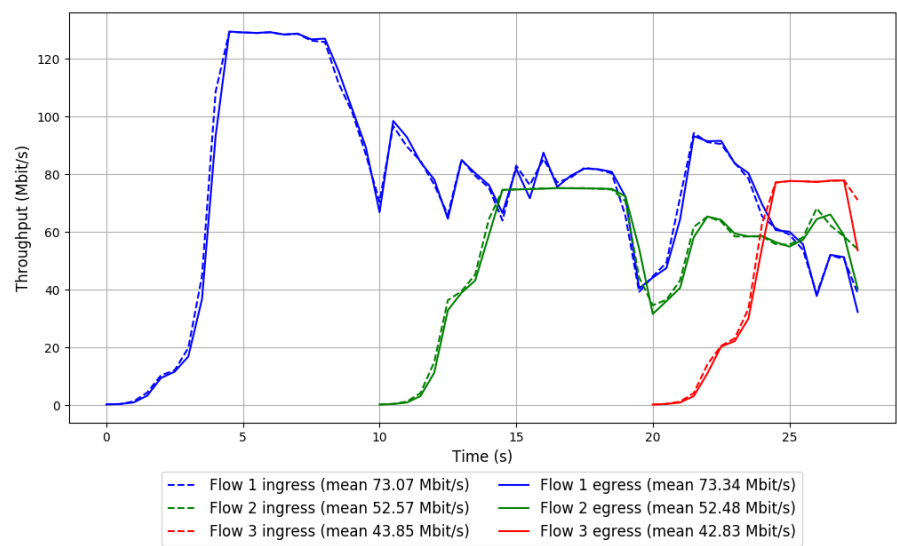
-- Flow 3:

Average throughput: 42.83 Mbit/s

95th percentile per-packet one-way delay: 113.143 ms

Loss rate: 5.03%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-11-21 13:15:45

End at: 2017-11-21 13:16:15

Below is generated by plot.py at 2017-11-21 17:55:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.66 Mbit/s

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

Loss rate: 1.73%

-- Flow 1:

Average throughput: 52.93 Mbit/s

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

Loss rate: 0.25%

-- Flow 2:

Average throughput: 55.65 Mbit/s

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

Loss rate: 2.24%

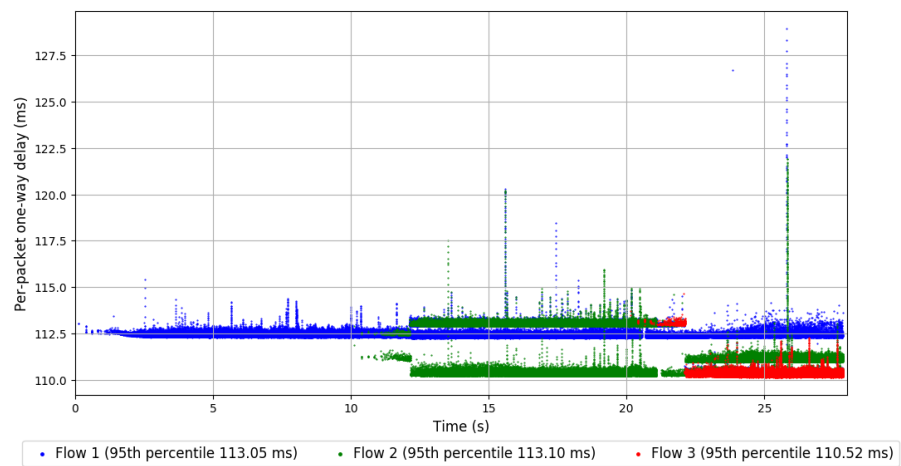
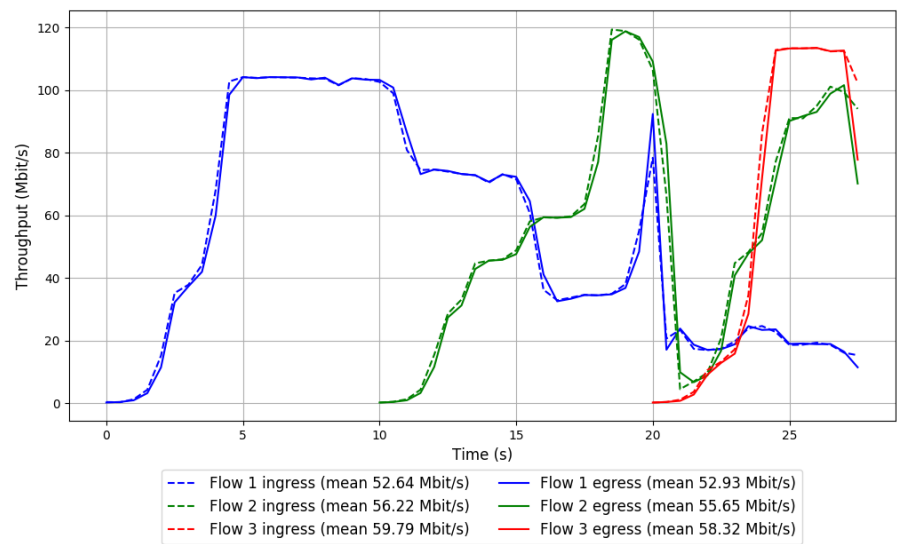
-- Flow 3:

Average throughput: 58.32 Mbit/s

95th percentile per-packet one-way delay: 110.521 ms

Loss rate: 5.22%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-11-21 13:29:10

End at: 2017-11-21 13:29:40

Below is generated by plot.py at 2017-11-21 17:55:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 119.04 Mbit/s

95th percentile per-packet one-way delay: 112.583 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 68.64 Mbit/s

95th percentile per-packet one-way delay: 112.553 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 63.10 Mbit/s

95th percentile per-packet one-way delay: 112.601 ms

Loss rate: 1.05%

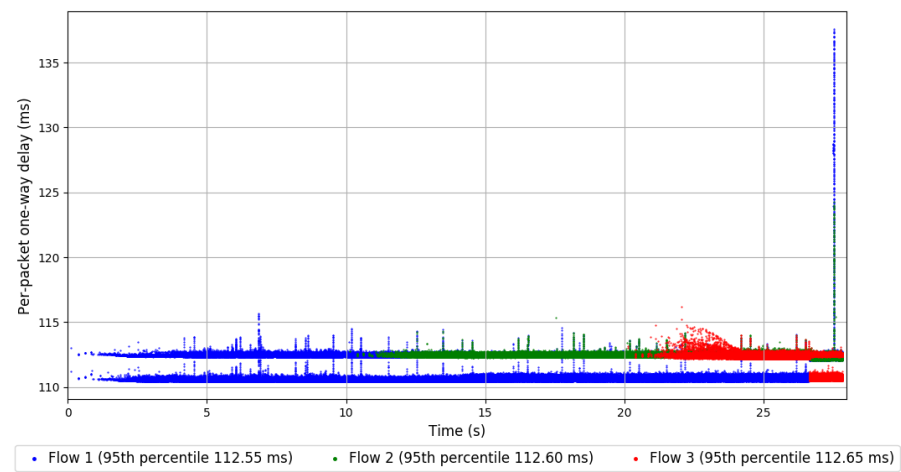
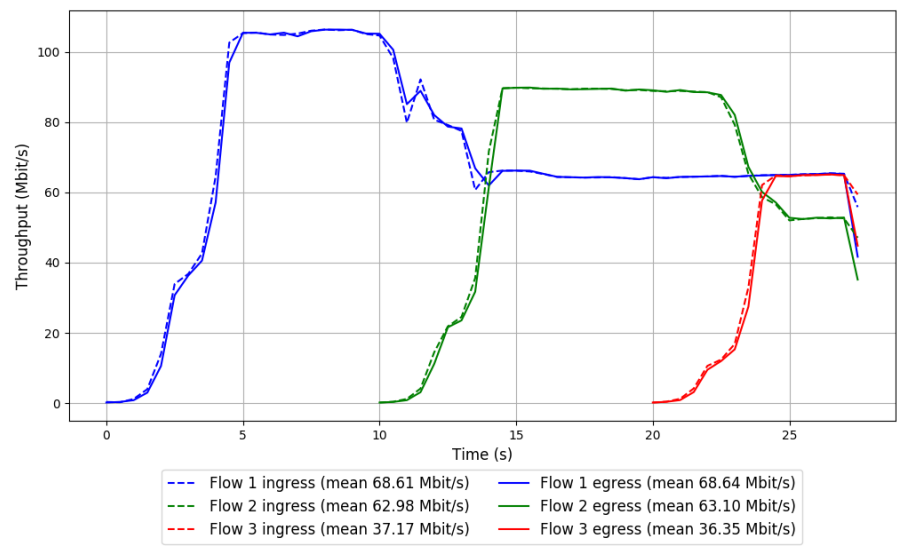
-- Flow 3:

Average throughput: 36.35 Mbit/s

95th percentile per-packet one-way delay: 112.646 ms

Loss rate: 4.96%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-11-21 13:42:48

End at: 2017-11-21 13:43:18

Below is generated by plot.py at 2017-11-21 17:56:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 120.78 Mbit/s

95th percentile per-packet one-way delay: 112.646 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 70.36 Mbit/s

95th percentile per-packet one-way delay: 112.646 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 57.31 Mbit/s

95th percentile per-packet one-way delay: 112.640 ms

Loss rate: 1.74%

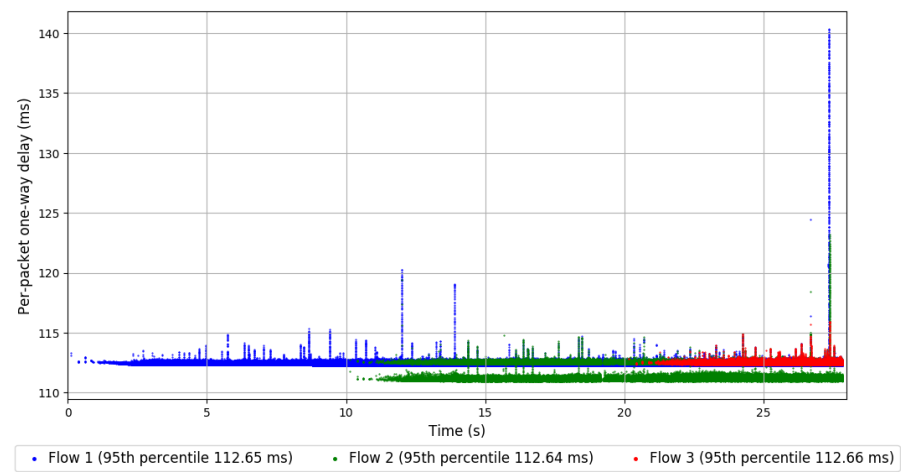
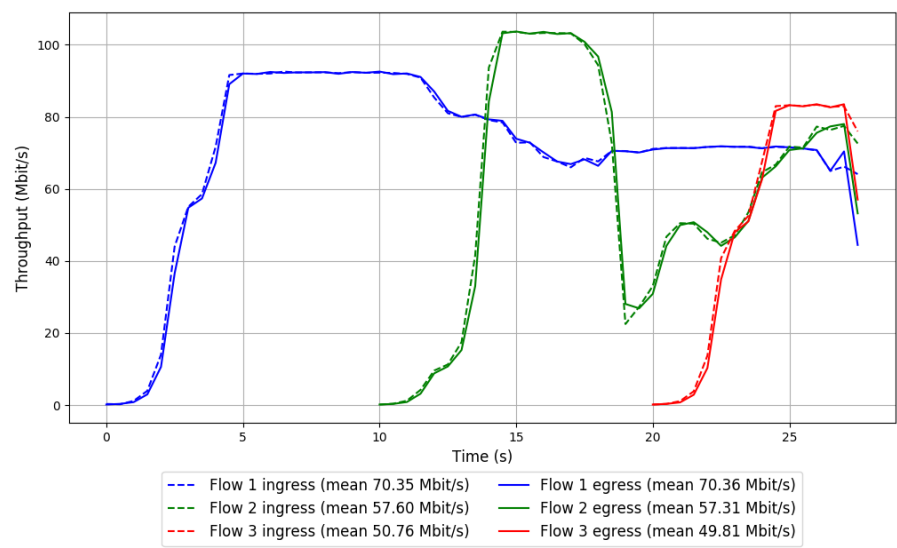
-- Flow 3:

Average throughput: 49.81 Mbit/s

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

Loss rate: 4.64%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-11-21 13:56:10

End at: 2017-11-21 13:56:40

Below is generated by plot.py at 2017-11-21 17:57:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 119.78 Mbit/s

95th percentile per-packet one-way delay: 112.597 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 68.74 Mbit/s

95th percentile per-packet one-way delay: 112.570 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 60.73 Mbit/s

95th percentile per-packet one-way delay: 112.641 ms

Loss rate: 1.10%

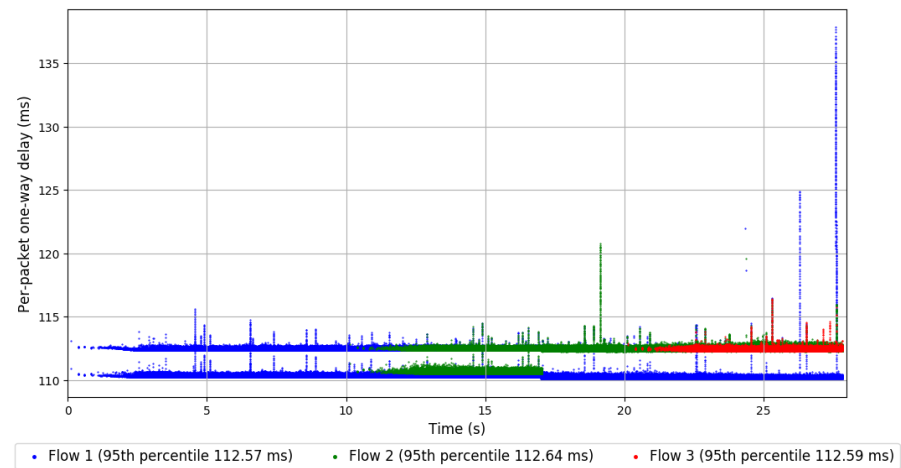
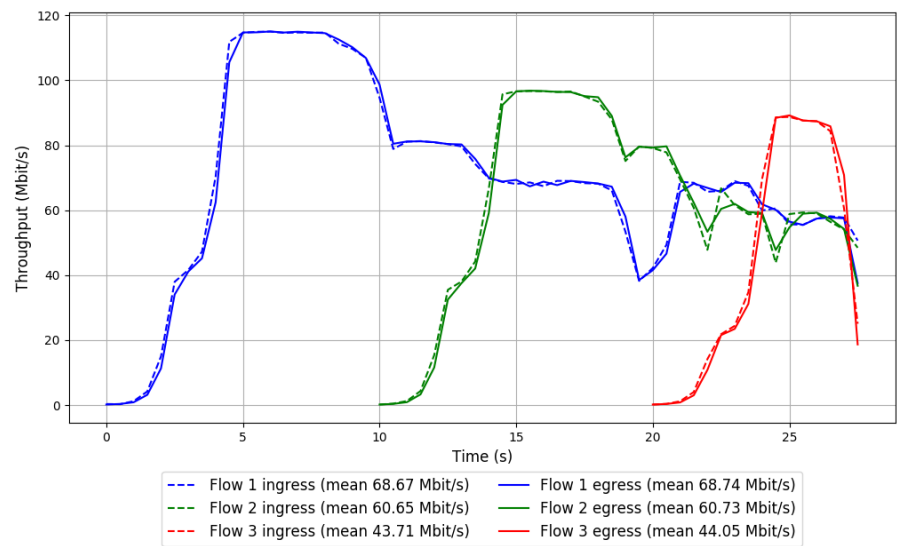
-- Flow 3:

Average throughput: 44.05 Mbit/s

95th percentile per-packet one-way delay: 112.593 ms

Loss rate: 2.05%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-11-21 14:09:28

End at: 2017-11-21 14:09:58

Below is generated by plot.py at 2017-11-21 17:57:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.52 Mbit/s

95th percentile per-packet one-way delay: 112.608 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 52.48 Mbit/s

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

Loss rate: 1.07%

-- Flow 2:

Average throughput: 66.44 Mbit/s

95th percentile per-packet one-way delay: 112.596 ms

Loss rate: 1.23%

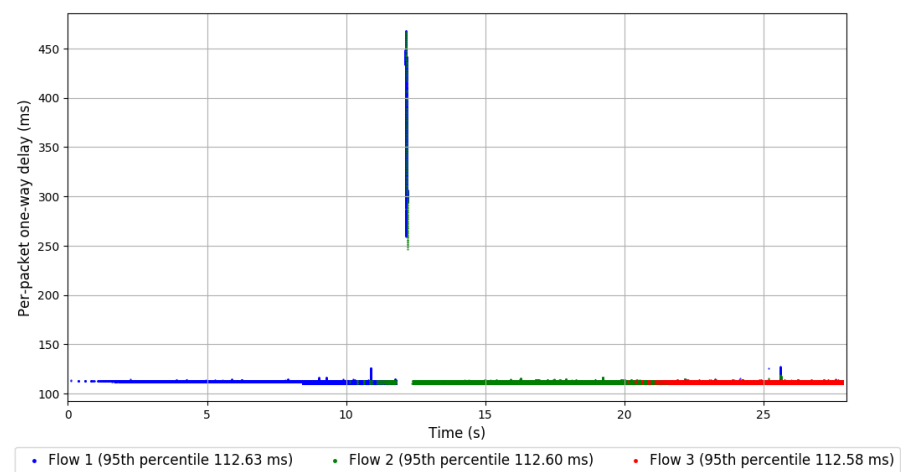
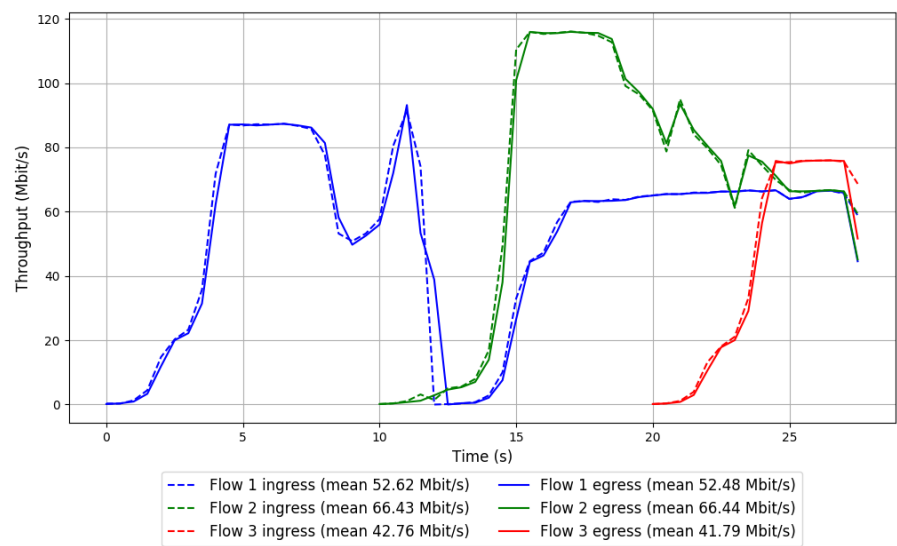
-- Flow 3:

Average throughput: 41.79 Mbit/s

95th percentile per-packet one-way delay: 112.579 ms

Loss rate: 5.01%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-11-21 14:22:47

End at: 2017-11-21 14:23:17

Below is generated by plot.py at 2017-11-21 17:58:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.89 Mbit/s

95th percentile per-packet one-way delay: 112.605 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 57.17 Mbit/s

95th percentile per-packet one-way delay: 112.612 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 51.81 Mbit/s

95th percentile per-packet one-way delay: 112.625 ms

Loss rate: 1.18%

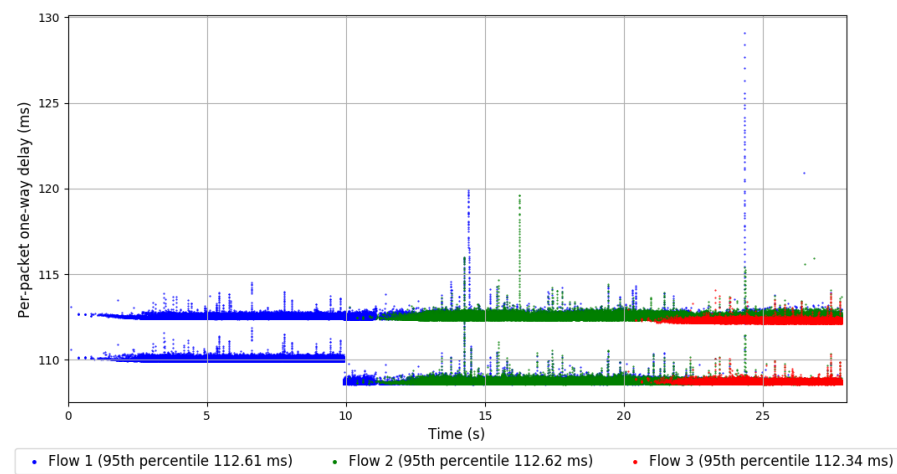
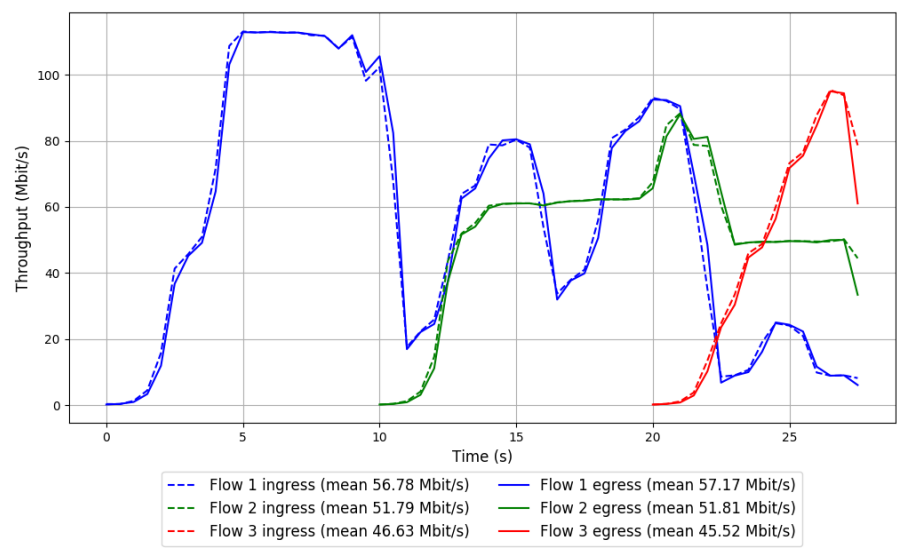
-- Flow 3:

Average throughput: 45.52 Mbit/s

95th percentile per-packet one-way delay: 112.345 ms

Loss rate: 5.12%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-11-21 14:36:21

End at: 2017-11-21 14:36:51

Below is generated by plot.py at 2017-11-21 17:58:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.15 Mbit/s

95th percentile per-packet one-way delay: 112.848 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 64.96 Mbit/s

95th percentile per-packet one-way delay: 112.856 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 58.13 Mbit/s

95th percentile per-packet one-way delay: 112.858 ms

Loss rate: 0.76%

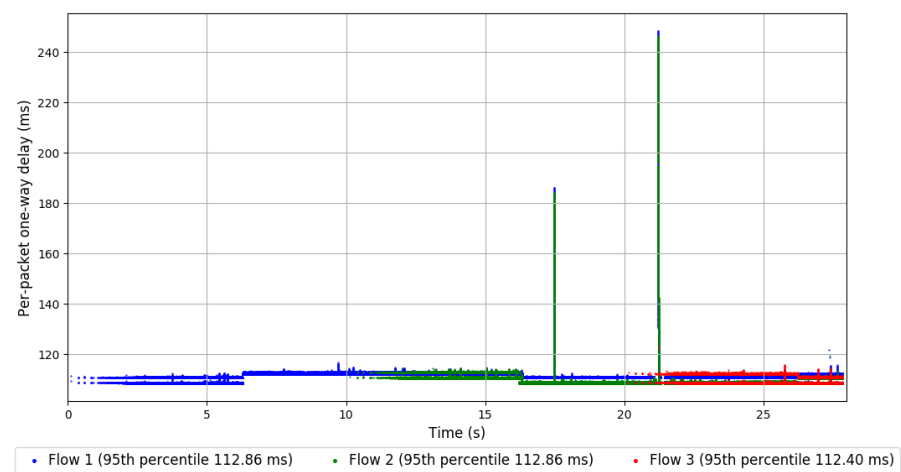
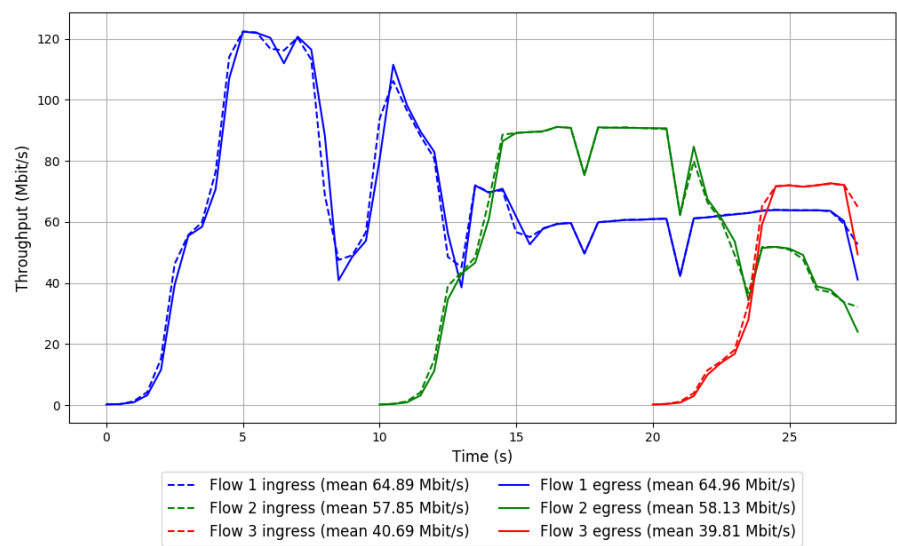
-- Flow 3:

Average throughput: 39.81 Mbit/s

95th percentile per-packet one-way delay: 112.400 ms

Loss rate: 4.86%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-11-21 14:49:56

End at: 2017-11-21 14:50:26

Below is generated by plot.py at 2017-11-21 17:58:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 122.83 Mbit/s

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

Loss rate: 1.43%

-- Flow 1:

Average throughput: 69.85 Mbit/s

95th percentile per-packet one-way delay: 112.870 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 61.19 Mbit/s

95th percentile per-packet one-way delay: 113.201 ms

Loss rate: 1.36%

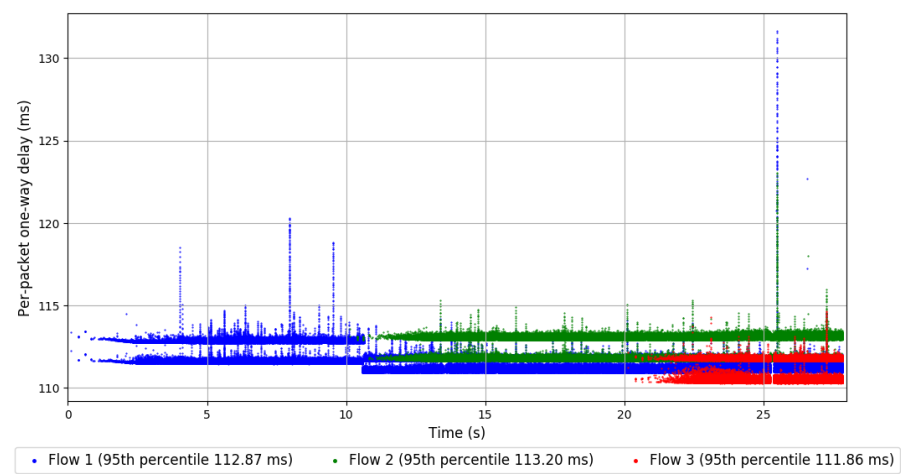
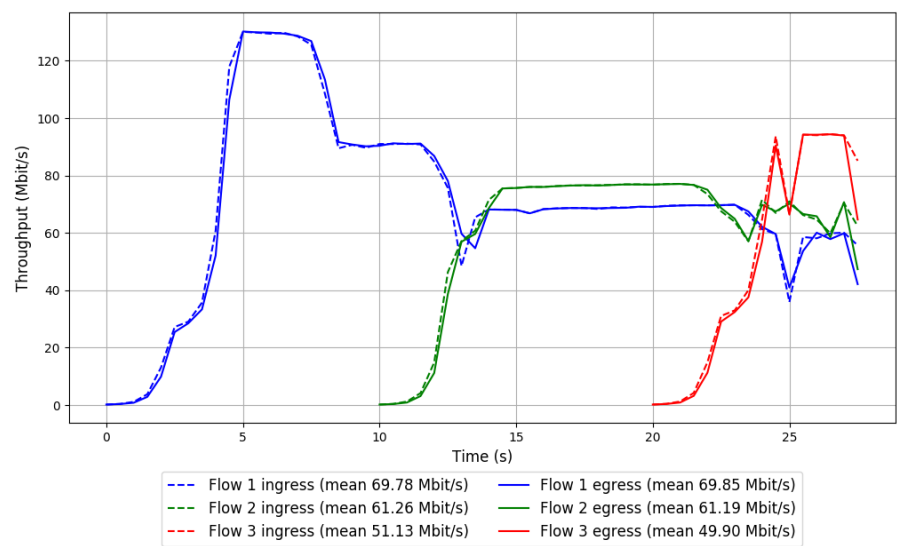
-- Flow 3:

Average throughput: 49.90 Mbit/s

95th percentile per-packet one-way delay: 111.865 ms

Loss rate: 5.13%

Run 10: Report of Copa — Data Link

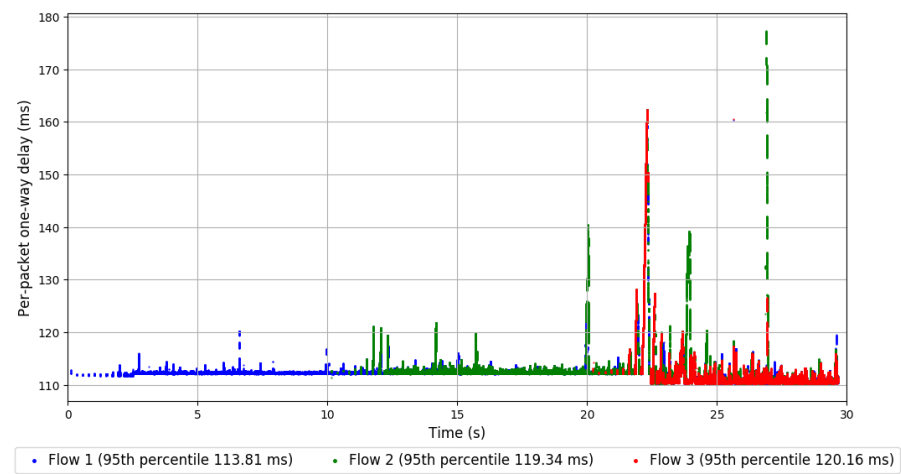
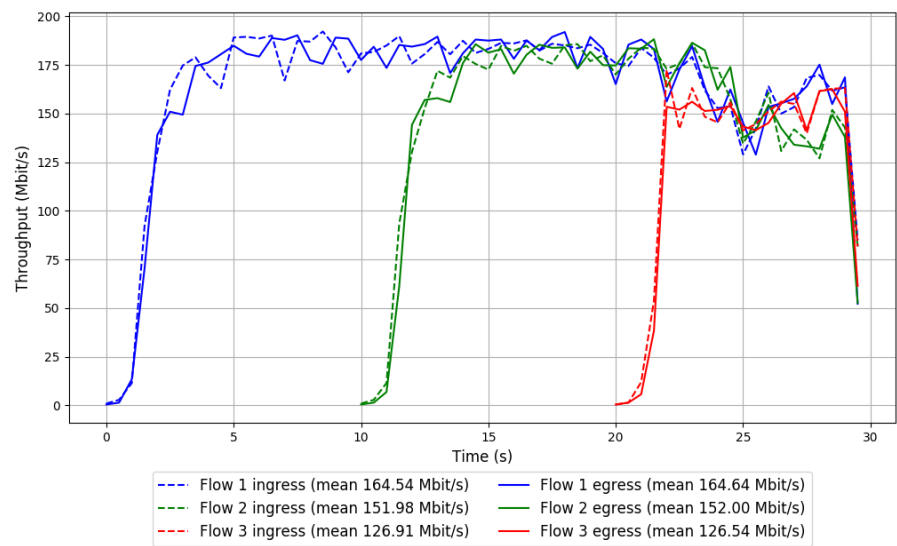


```
Run 1: Statistics of Indigo

Start at: 2017-11-21 12:52:56
End at: 2017-11-21 12:53:26

# Below is generated by plot.py at 2017-11-21 18:00:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 305.45 Mbit/s
95th percentile per-packet one-way delay: 116.046 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 164.64 Mbit/s
95th percentile per-packet one-way delay: 113.815 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 152.00 Mbit/s
95th percentile per-packet one-way delay: 119.343 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 126.54 Mbit/s
95th percentile per-packet one-way delay: 120.155 ms
Loss rate: 2.61%
```


Run 1: Report of Indigo — Data Link

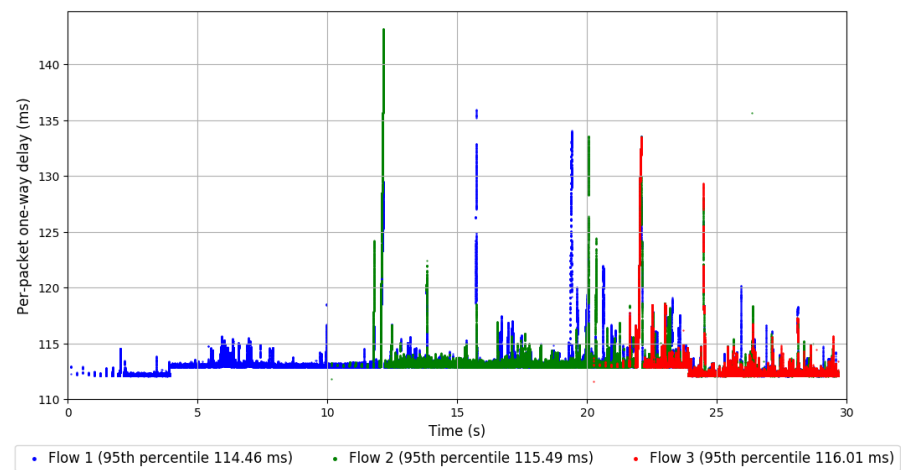
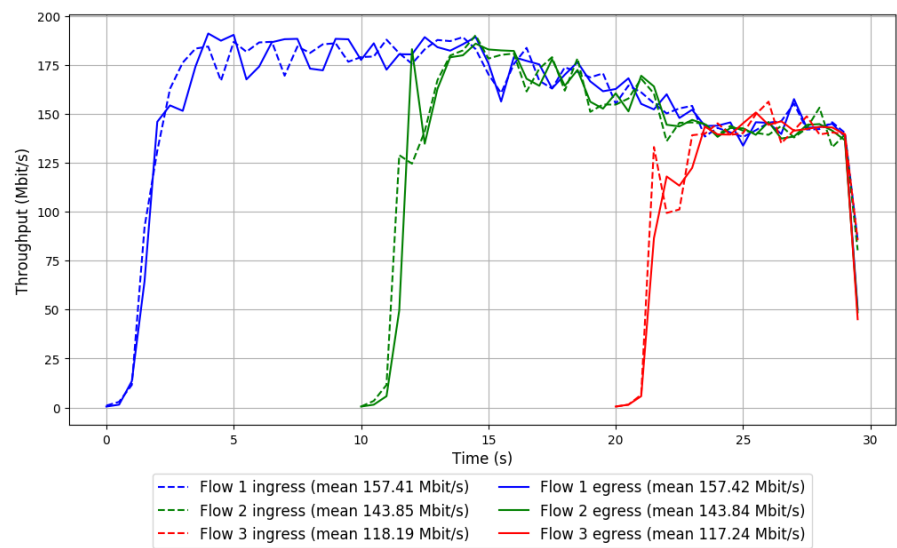


```
Run 2: Statistics of Indigo

Start at: 2017-11-21 13:06:15
End at: 2017-11-21 13:06:45

# Below is generated by plot.py at 2017-11-21 18:00:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 289.78 Mbit/s
95th percentile per-packet one-way delay: 114.949 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 157.42 Mbit/s
95th percentile per-packet one-way delay: 114.462 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 143.84 Mbit/s
95th percentile per-packet one-way delay: 115.490 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 117.24 Mbit/s
95th percentile per-packet one-way delay: 116.008 ms
Loss rate: 3.09%
```

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2017-11-21 13:19:57

End at: 2017-11-21 13:20:27

Below is generated by plot.py at 2017-11-21 18:01:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 297.98 Mbit/s

95th percentile per-packet one-way delay: 114.678 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 161.62 Mbit/s

95th percentile per-packet one-way delay: 114.173 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 154.29 Mbit/s

95th percentile per-packet one-way delay: 116.093 ms

Loss rate: 0.90%

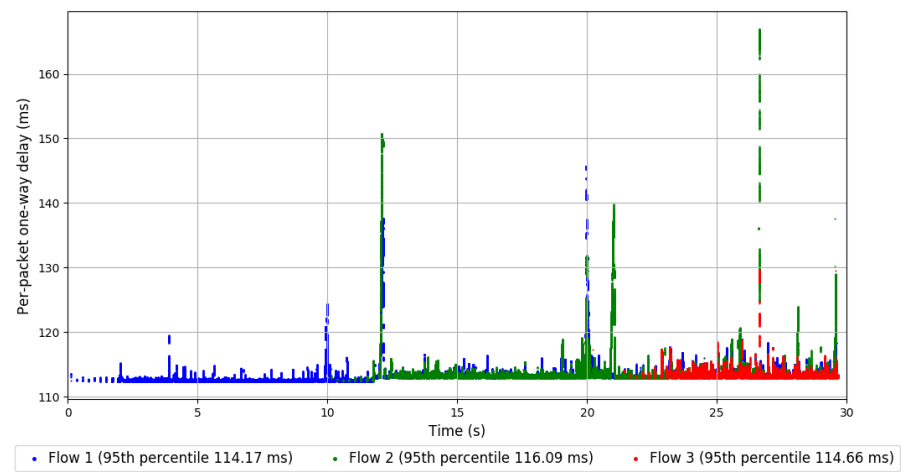
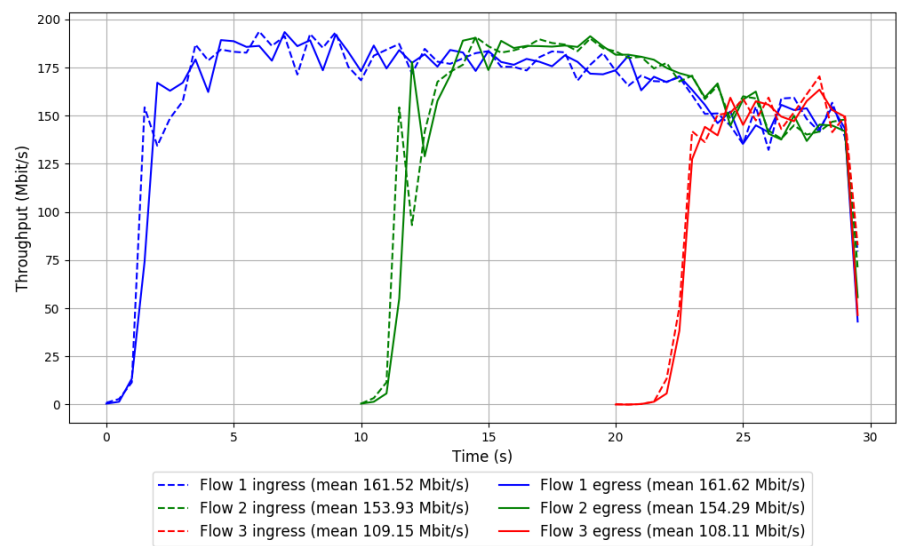
-- Flow 3:

Average throughput: 108.11 Mbit/s

95th percentile per-packet one-way delay: 114.659 ms

Loss rate: 3.32%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2017-11-21 13:33:26

End at: 2017-11-21 13:33:56

Below is generated by plot.py at 2017-11-21 18:02:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 288.15 Mbit/s

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

Loss rate: 1.19%

-- Flow 1:

Average throughput: 154.18 Mbit/s

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

Loss rate: 0.71%

-- Flow 2:

Average throughput: 143.43 Mbit/s

95th percentile per-packet one-way delay: 113.199 ms

Loss rate: 1.22%

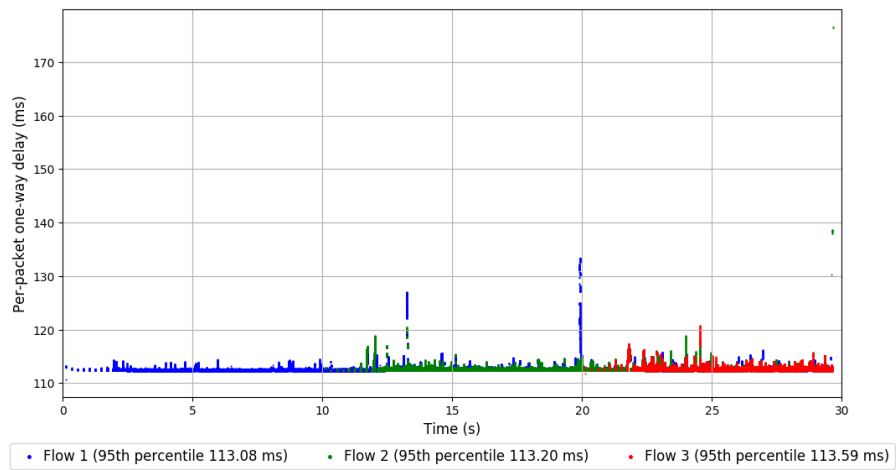
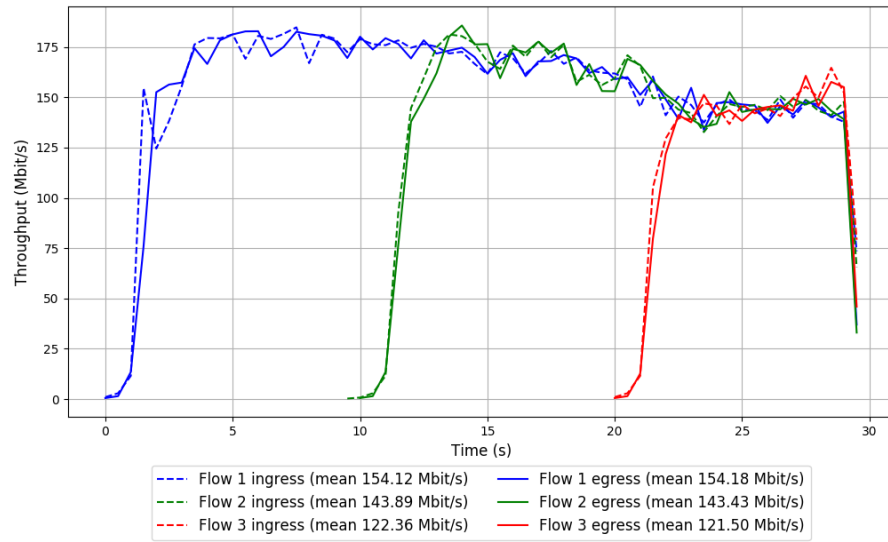
-- Flow 3:

Average throughput: 121.50 Mbit/s

95th percentile per-packet one-way delay: 113.589 ms

Loss rate: 2.97%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2017-11-21 13:47:04

End at: 2017-11-21 13:47:34

Below is generated by plot.py at 2017-11-21 18:02:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 287.84 Mbit/s

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

Loss rate: 1.05%

-- Flow 1:

Average throughput: 157.37 Mbit/s

95th percentile per-packet one-way delay: 113.967 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 139.44 Mbit/s

95th percentile per-packet one-way delay: 114.228 ms

Loss rate: 1.07%

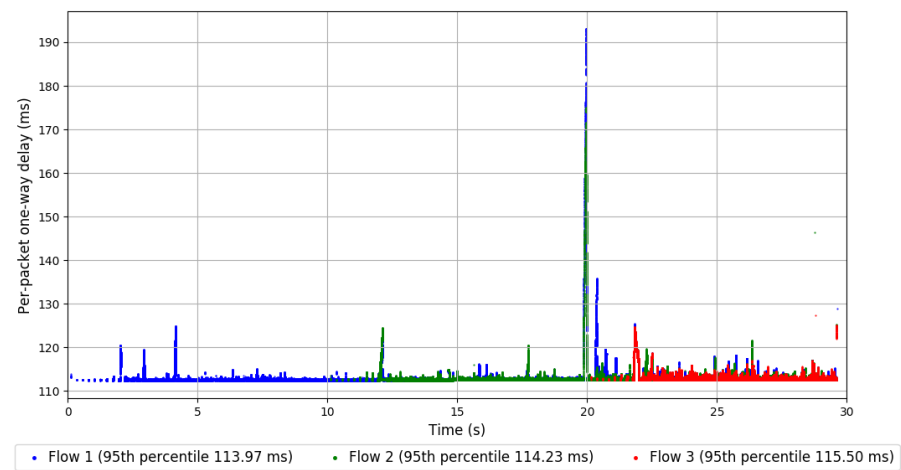
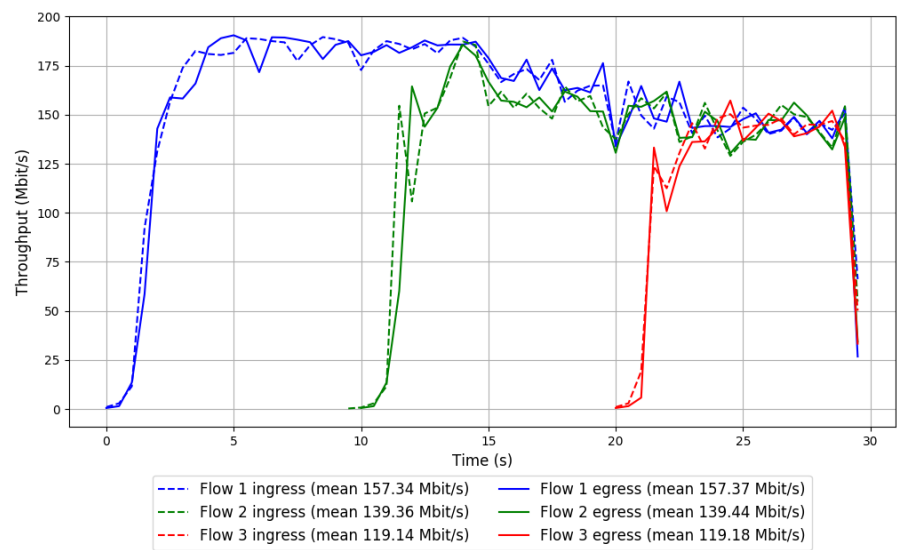
-- Flow 3:

Average throughput: 119.18 Mbit/s

95th percentile per-packet one-way delay: 115.496 ms

Loss rate: 2.28%

Run 5: Report of Indigo — Data Link



Run 6: Statistics of Indigo

Start at: 2017-11-21 14:00:27

End at: 2017-11-21 14:00:57

Below is generated by plot.py at 2017-11-21 18:03:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 299.71 Mbit/s

95th percentile per-packet one-way delay: 114.011 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 162.43 Mbit/s

95th percentile per-packet one-way delay: 113.497 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 148.81 Mbit/s

95th percentile per-packet one-way delay: 114.336 ms

Loss rate: 1.10%

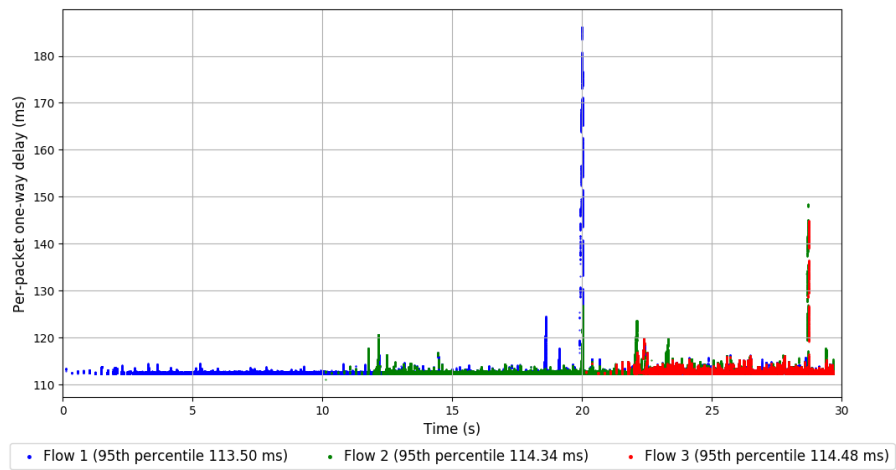
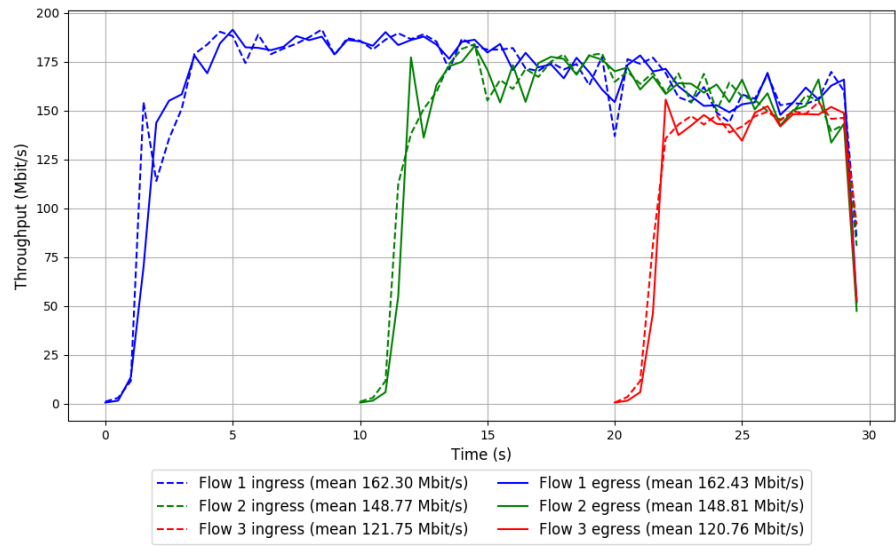
-- Flow 3:

Average throughput: 120.76 Mbit/s

95th percentile per-packet one-way delay: 114.479 ms

Loss rate: 3.08%

Run 6: Report of Indigo — Data Link



Run 7: Statistics of Indigo

Start at: 2017-11-21 14:13:43

End at: 2017-11-21 14:14:13

Below is generated by plot.py at 2017-11-21 18:03:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 304.35 Mbit/s

95th percentile per-packet one-way delay: 114.122 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 161.71 Mbit/s

95th percentile per-packet one-way delay: 113.773 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 152.50 Mbit/s

95th percentile per-packet one-way delay: 114.380 ms

Loss rate: 1.26%

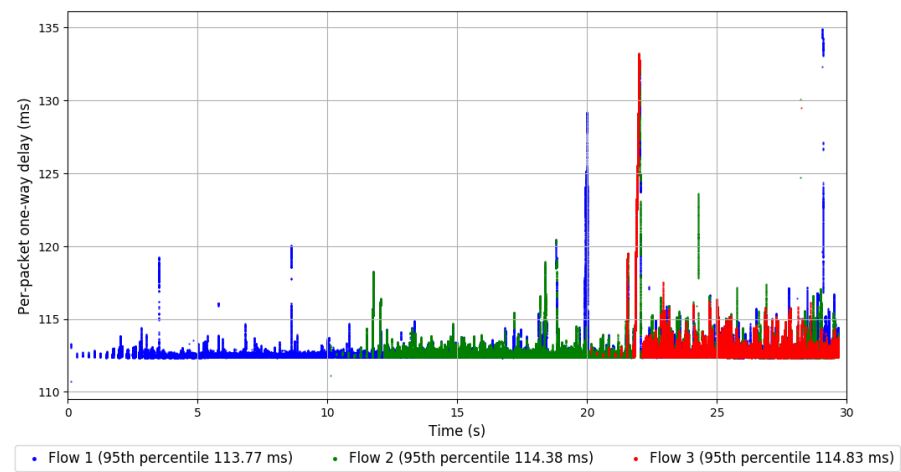
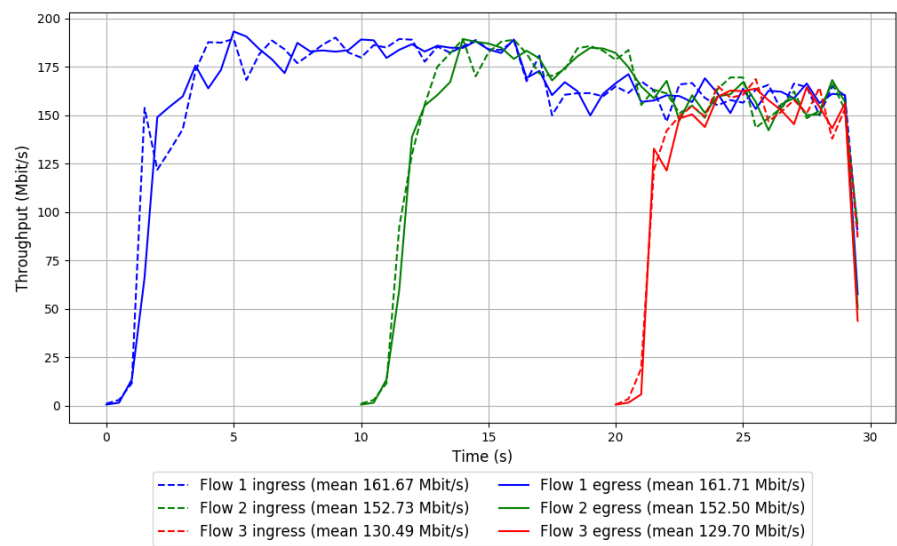
-- Flow 3:

Average throughput: 129.70 Mbit/s

95th percentile per-packet one-way delay: 114.828 ms

Loss rate: 2.86%

Run 7: Report of Indigo — Data Link



Run 8: Statistics of Indigo

Start at: 2017-11-21 14:27:05

End at: 2017-11-21 14:27:35

Below is generated by plot.py at 2017-11-21 18:04:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 297.75 Mbit/s

95th percentile per-packet one-way delay: 113.327 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 158.60 Mbit/s

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

Loss rate: 0.72%

-- Flow 2:

Average throughput: 146.90 Mbit/s

95th percentile per-packet one-way delay: 113.488 ms

Loss rate: 1.30%

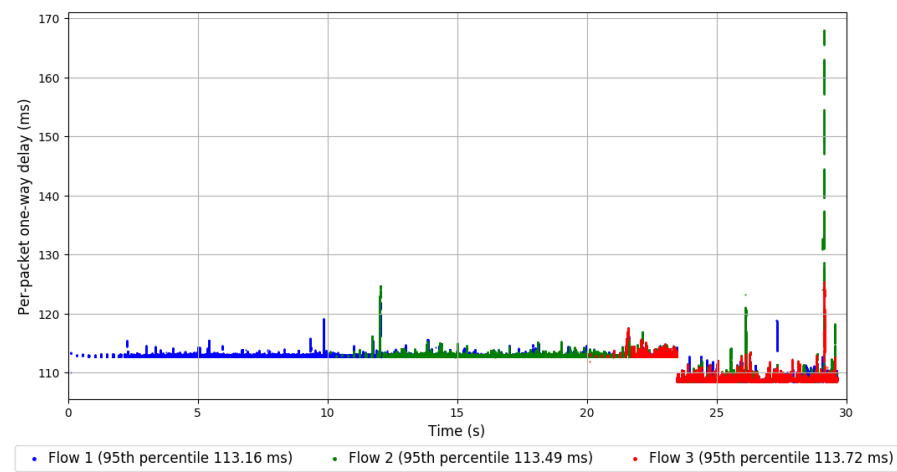
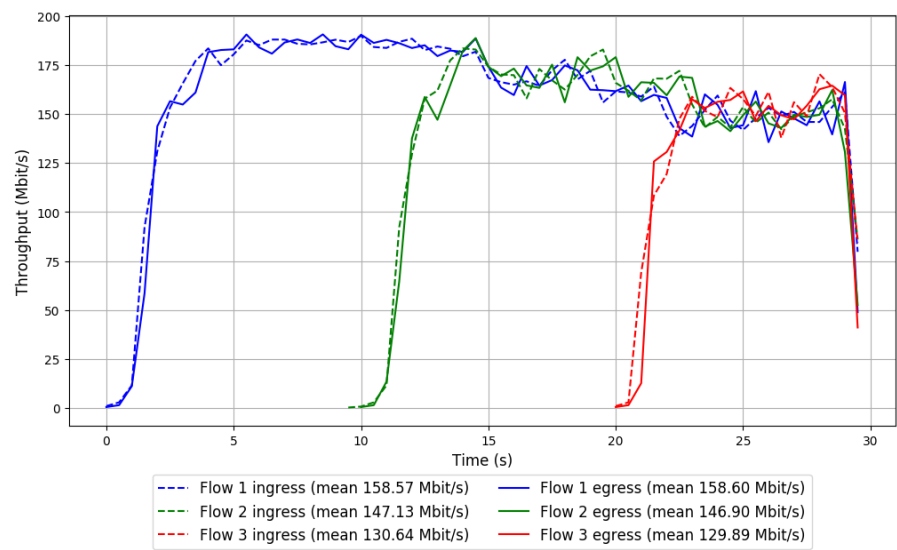
-- Flow 3:

Average throughput: 129.89 Mbit/s

95th percentile per-packet one-way delay: 113.722 ms

Loss rate: 2.86%

Run 8: Report of Indigo — Data Link



Run 9: Statistics of Indigo

Start at: 2017-11-21 14:40:35

End at: 2017-11-21 14:41:05

Below is generated by plot.py at 2017-11-21 18:06:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 295.82 Mbit/s

95th percentile per-packet one-way delay: 113.806 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 161.29 Mbit/s

95th percentile per-packet one-way delay: 113.488 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 146.11 Mbit/s

95th percentile per-packet one-way delay: 113.679 ms

Loss rate: 1.16%

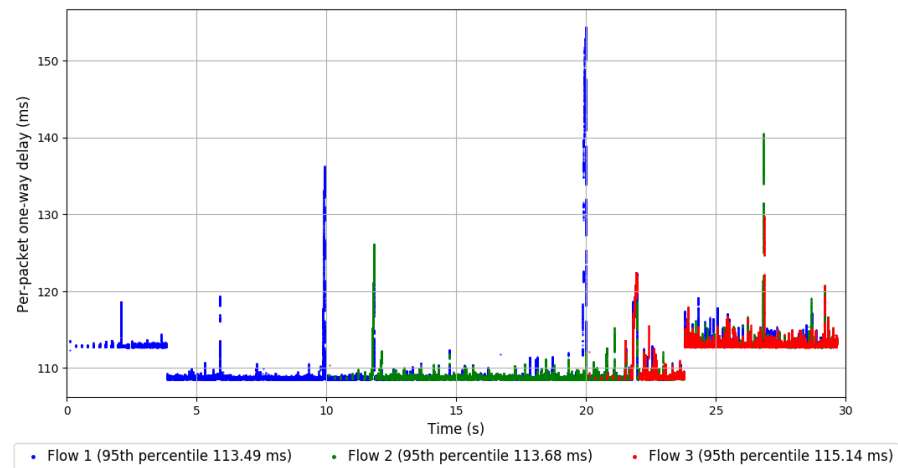
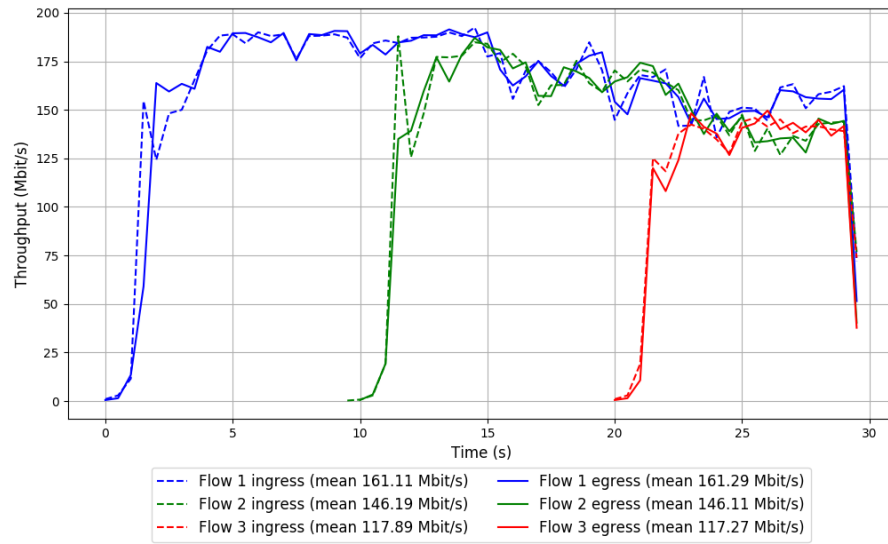
-- Flow 3:

Average throughput: 117.27 Mbit/s

95th percentile per-packet one-way delay: 115.144 ms

Loss rate: 2.78%

Run 9: Report of Indigo — Data Link



Run 10: Statistics of Indigo

Start at: 2017-11-21 14:54:13

End at: 2017-11-21 14:54:43

Below is generated by plot.py at 2017-11-21 18:06:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 294.93 Mbit/s

95th percentile per-packet one-way delay: 114.123 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 159.00 Mbit/s

95th percentile per-packet one-way delay: 113.721 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 146.33 Mbit/s

95th percentile per-packet one-way delay: 114.364 ms

Loss rate: 0.96%

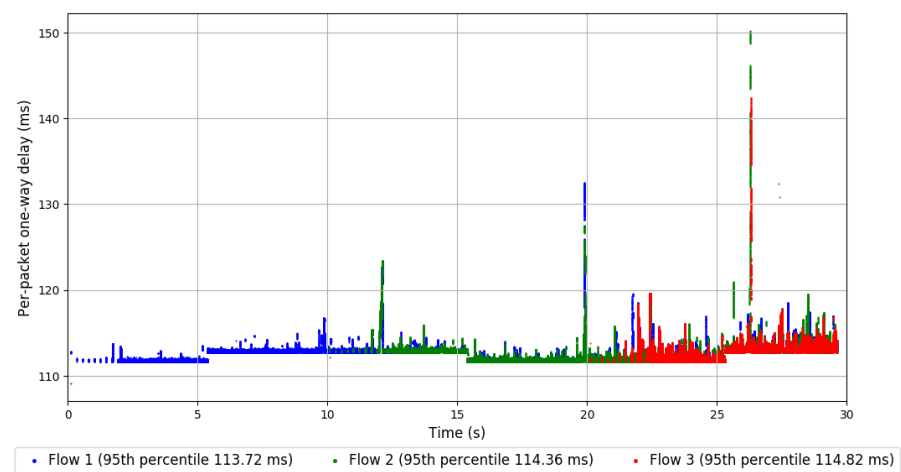
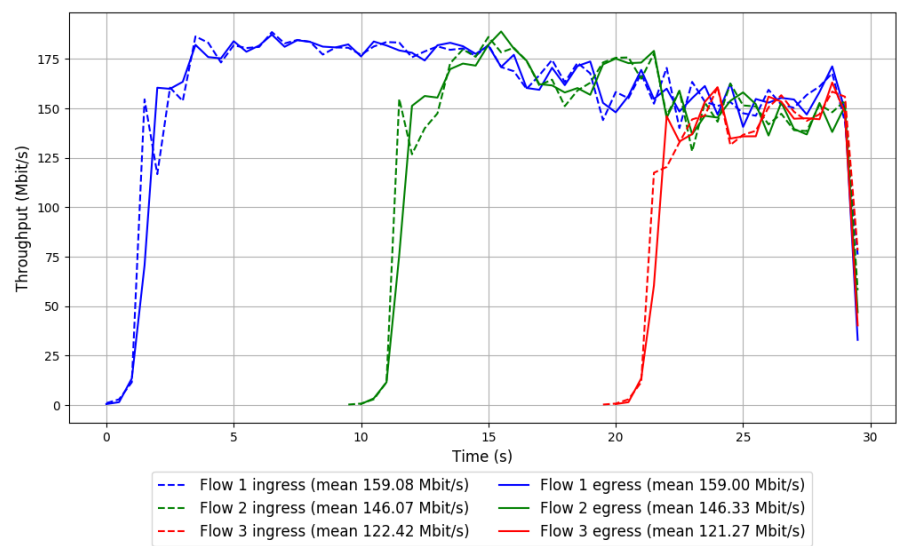
-- Flow 3:

Average throughput: 121.27 Mbit/s

95th percentile per-packet one-way delay: 114.822 ms

Loss rate: 3.19%

Run 10: Report of Indigo — Data Link

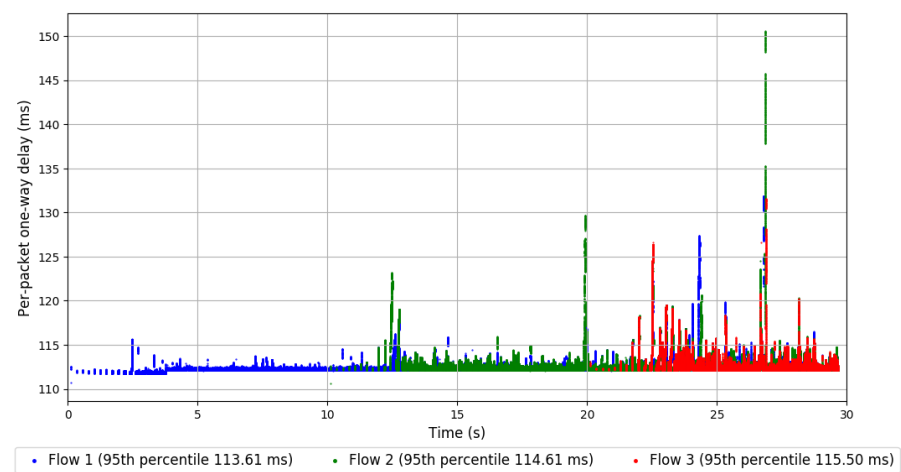
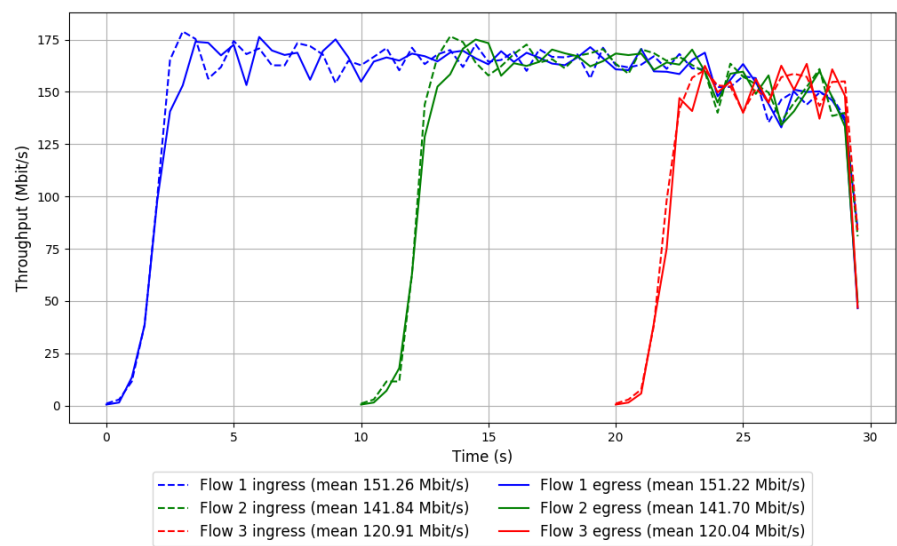


```
Run 1: Statistics of Indigo-calib

Start at: 2017-11-21 12:45:35
End at: 2017-11-21 12:46:05

# Below is generated by plot.py at 2017-11-21 18:06:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 283.60 Mbit/s
95th percentile per-packet one-way delay: 114.251 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 151.22 Mbit/s
95th percentile per-packet one-way delay: 113.605 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 141.70 Mbit/s
95th percentile per-packet one-way delay: 114.606 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 120.04 Mbit/s
95th percentile per-packet one-way delay: 115.503 ms
Loss rate: 3.01%
```

Run 1: Report of Indigo-calib — Data Link

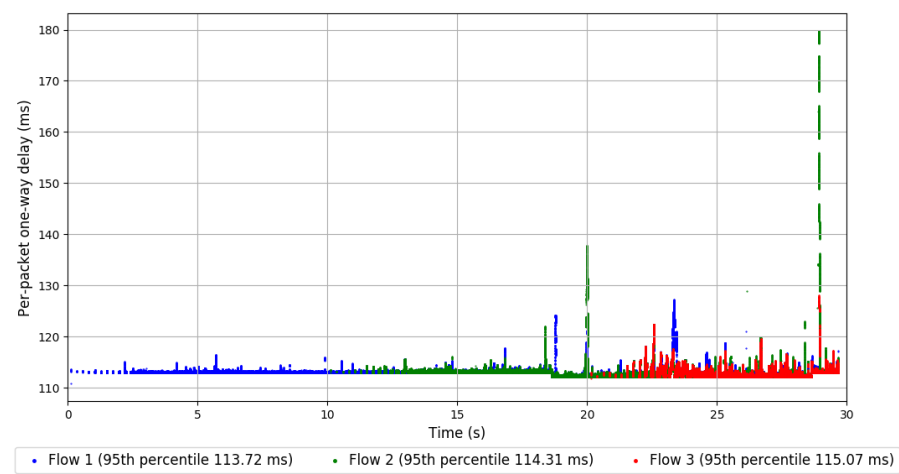
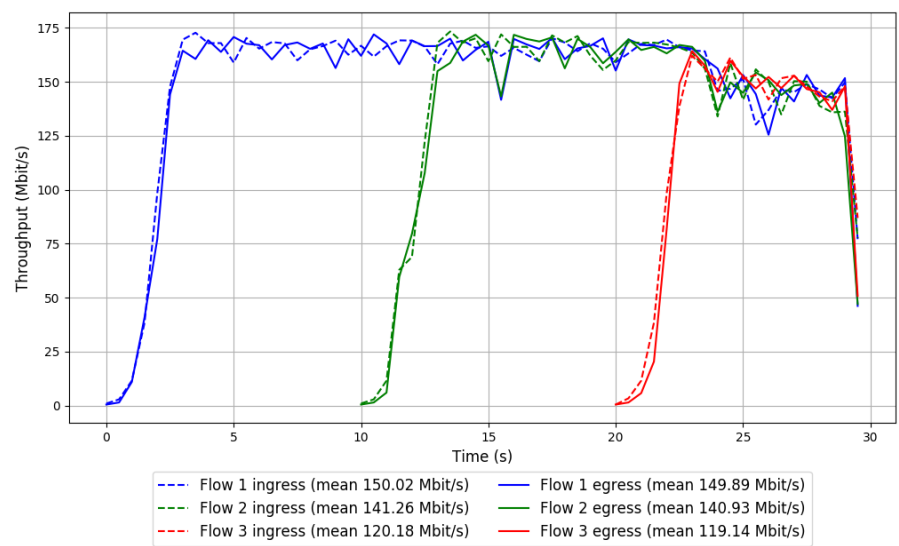


```
Run 2: Statistics of Indigo-calib

Start at: 2017-11-21 12:59:10
End at: 2017-11-21 12:59:40

# Below is generated by plot.py at 2017-11-21 18:07:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 281.36 Mbit/s
95th percentile per-packet one-way delay: 114.152 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 149.89 Mbit/s
95th percentile per-packet one-way delay: 113.716 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 140.93 Mbit/s
95th percentile per-packet one-way delay: 114.307 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 119.14 Mbit/s
95th percentile per-packet one-way delay: 115.066 ms
Loss rate: 3.13%
```

Run 2: Report of Indigo-calib — Data Link

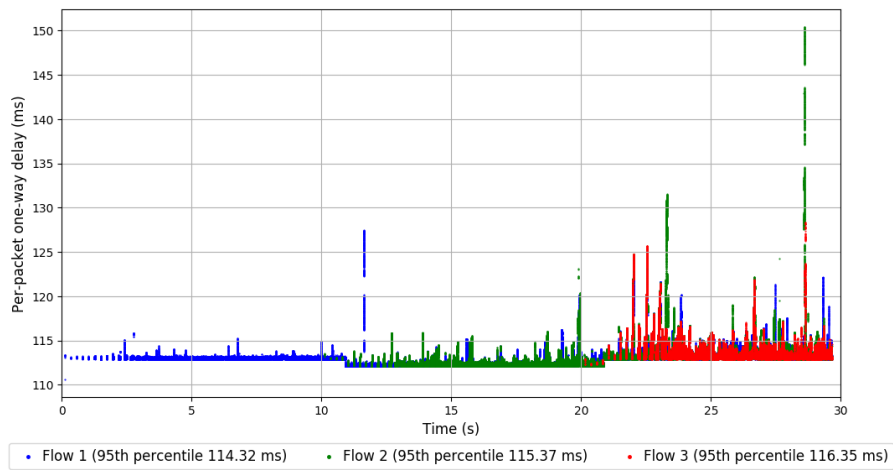
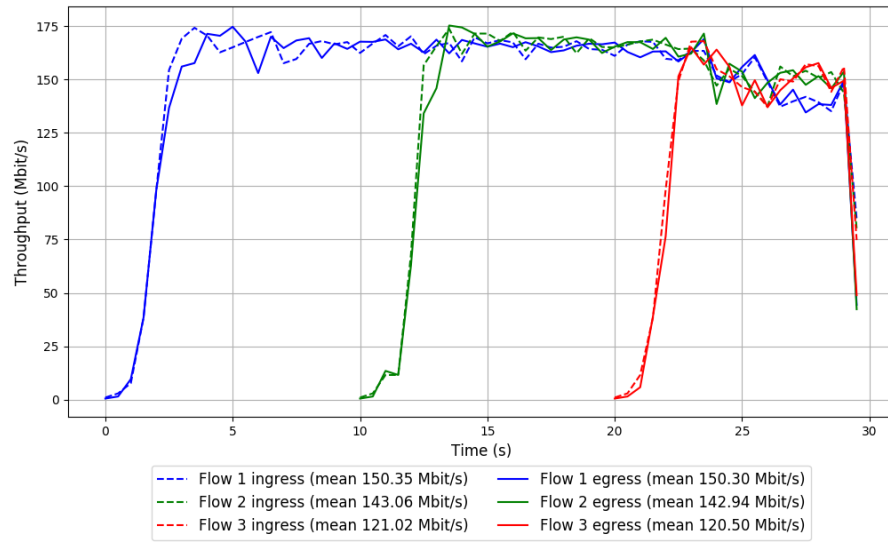


```
Run 3: Statistics of Indigo-calib

Start at: 2017-11-21 13:12:28
End at: 2017-11-21 13:12:58

# Below is generated by plot.py at 2017-11-21 18:07:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 283.62 Mbit/s
95th percentile per-packet one-way delay: 115.012 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 150.30 Mbit/s
95th percentile per-packet one-way delay: 114.318 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 142.94 Mbit/s
95th percentile per-packet one-way delay: 115.366 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 120.50 Mbit/s
95th percentile per-packet one-way delay: 116.351 ms
Loss rate: 2.72%
```


Run 3: Report of Indigo-calib — Data Link



Run 4: Statistics of Indigo-calib

Start at: 2017-11-21 13:26:10

End at: 2017-11-21 13:26:40

Below is generated by plot.py at 2017-11-21 18:08:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 277.47 Mbit/s

95th percentile per-packet one-way delay: 114.010 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 148.64 Mbit/s

95th percentile per-packet one-way delay: 113.616 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 138.44 Mbit/s

95th percentile per-packet one-way delay: 114.179 ms

Loss rate: 1.12%

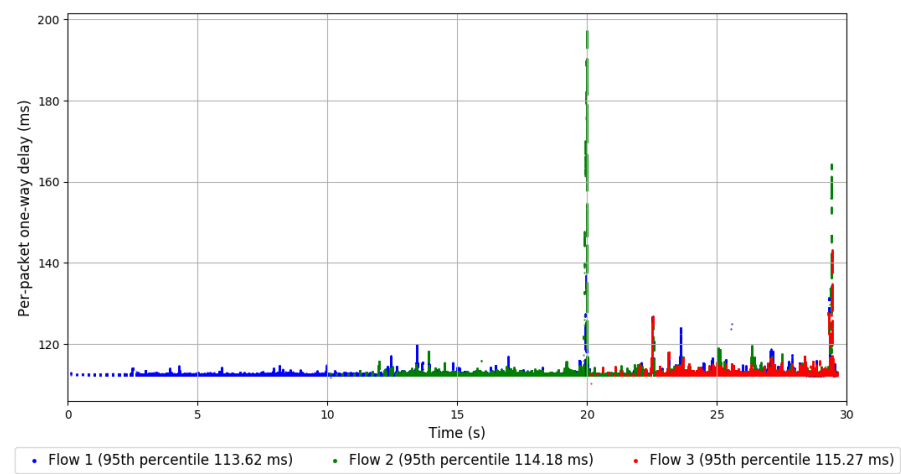
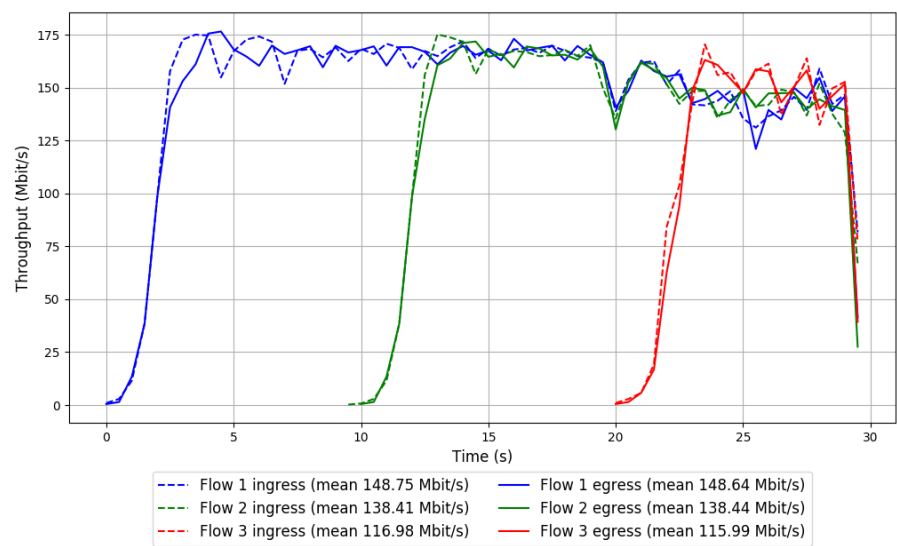
-- Flow 3:

Average throughput: 115.99 Mbit/s

95th percentile per-packet one-way delay: 115.274 ms

Loss rate: 3.15%

Run 4: Report of Indigo-calib — Data Link



Run 5: Statistics of Indigo-calib

Start at: 2017-11-21 13:39:32

End at: 2017-11-21 13:40:02

Below is generated by plot.py at 2017-11-21 18:08:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 273.33 Mbit/s

95th percentile per-packet one-way delay: 114.146 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 148.97 Mbit/s

95th percentile per-packet one-way delay: 114.026 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 131.75 Mbit/s

95th percentile per-packet one-way delay: 114.008 ms

Loss rate: 1.09%

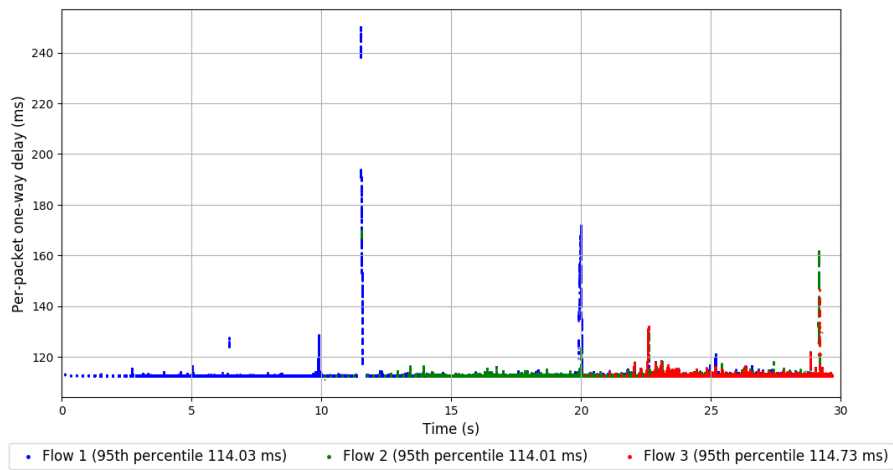
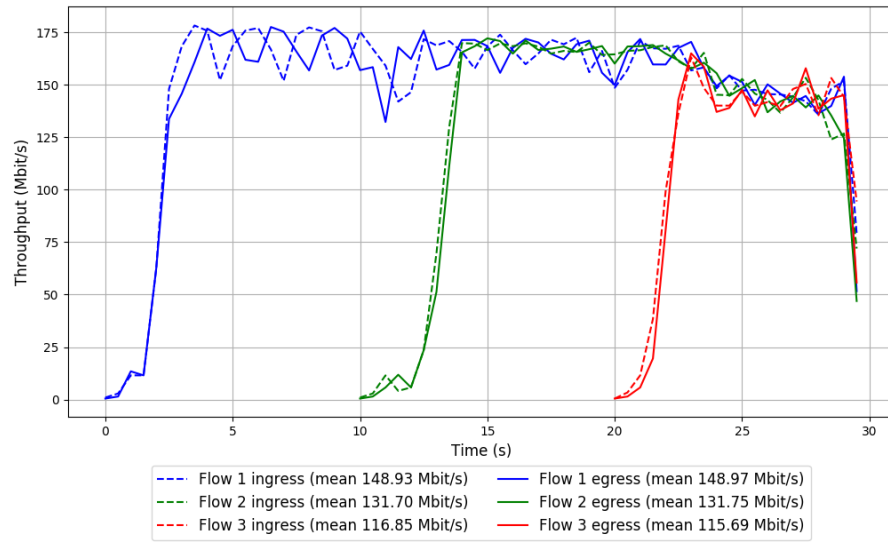
-- Flow 3:

Average throughput: 115.69 Mbit/s

95th percentile per-packet one-way delay: 114.731 ms

Loss rate: 3.30%

Run 5: Report of Indigo-calib — Data Link



Run 6: Statistics of Indigo-calib

Start at: 2017-11-21 13:53:15

End at: 2017-11-21 13:53:45

Below is generated by plot.py at 2017-11-21 18:08:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 276.03 Mbit/s

95th percentile per-packet one-way delay: 123.786 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 148.43 Mbit/s

95th percentile per-packet one-way delay: 115.870 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 136.94 Mbit/s

95th percentile per-packet one-way delay: 123.923 ms

Loss rate: 1.25%

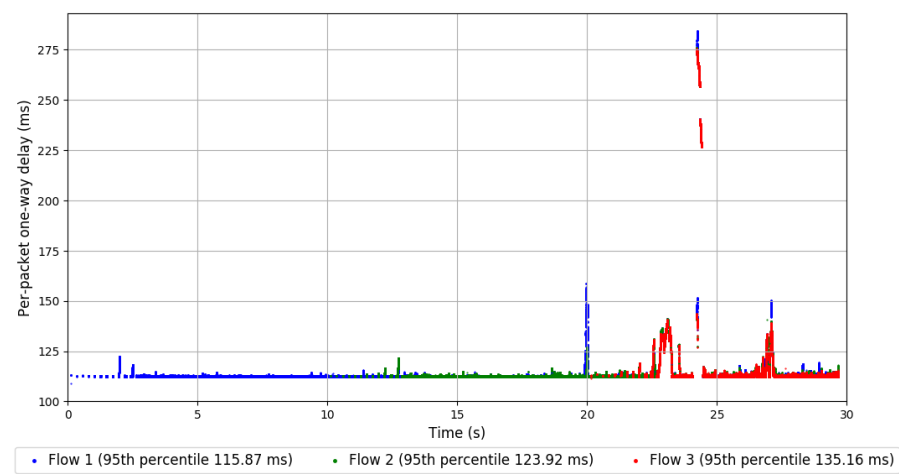
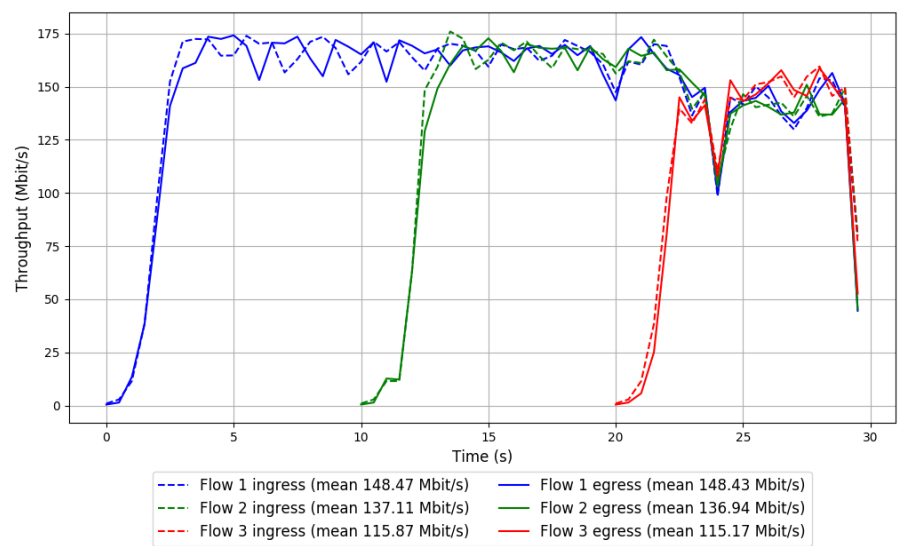
-- Flow 3:

Average throughput: 115.17 Mbit/s

95th percentile per-packet one-way delay: 135.158 ms

Loss rate: 2.86%

Run 6: Report of Indigo-calib — Data Link



Run 7: Statistics of Indigo-calib

Start at: 2017-11-21 14:06:36

End at: 2017-11-21 14:07:06

Below is generated by plot.py at 2017-11-21 18:09:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 276.30 Mbit/s

95th percentile per-packet one-way delay: 113.902 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 146.85 Mbit/s

95th percentile per-packet one-way delay: 113.447 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 137.53 Mbit/s

95th percentile per-packet one-way delay: 114.250 ms

Loss rate: 1.24%

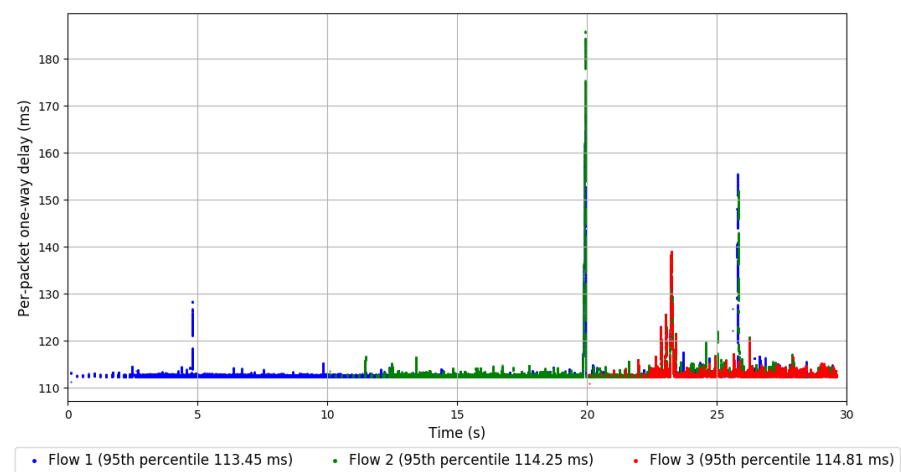
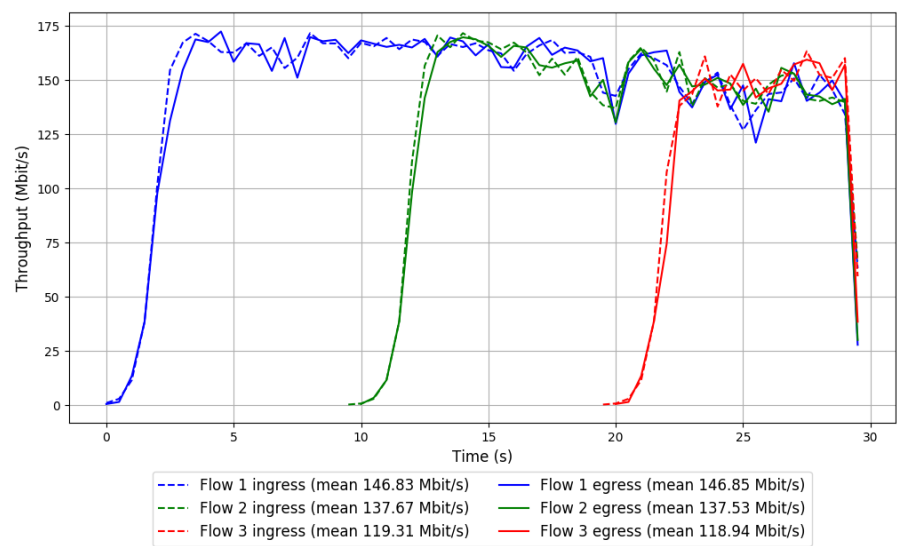
-- Flow 3:

Average throughput: 118.94 Mbit/s

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

Loss rate: 2.59%

Run 7: Report of Indigo-calib — Data Link



Run 8: Statistics of Indigo-calib

Start at: 2017-11-21 14:19:56

End at: 2017-11-21 14:20:26

Below is generated by plot.py at 2017-11-21 18:09:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 276.59 Mbit/s

95th percentile per-packet one-way delay: 113.427 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 146.03 Mbit/s

95th percentile per-packet one-way delay: 112.923 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 139.21 Mbit/s

95th percentile per-packet one-way delay: 113.694 ms

Loss rate: 1.00%

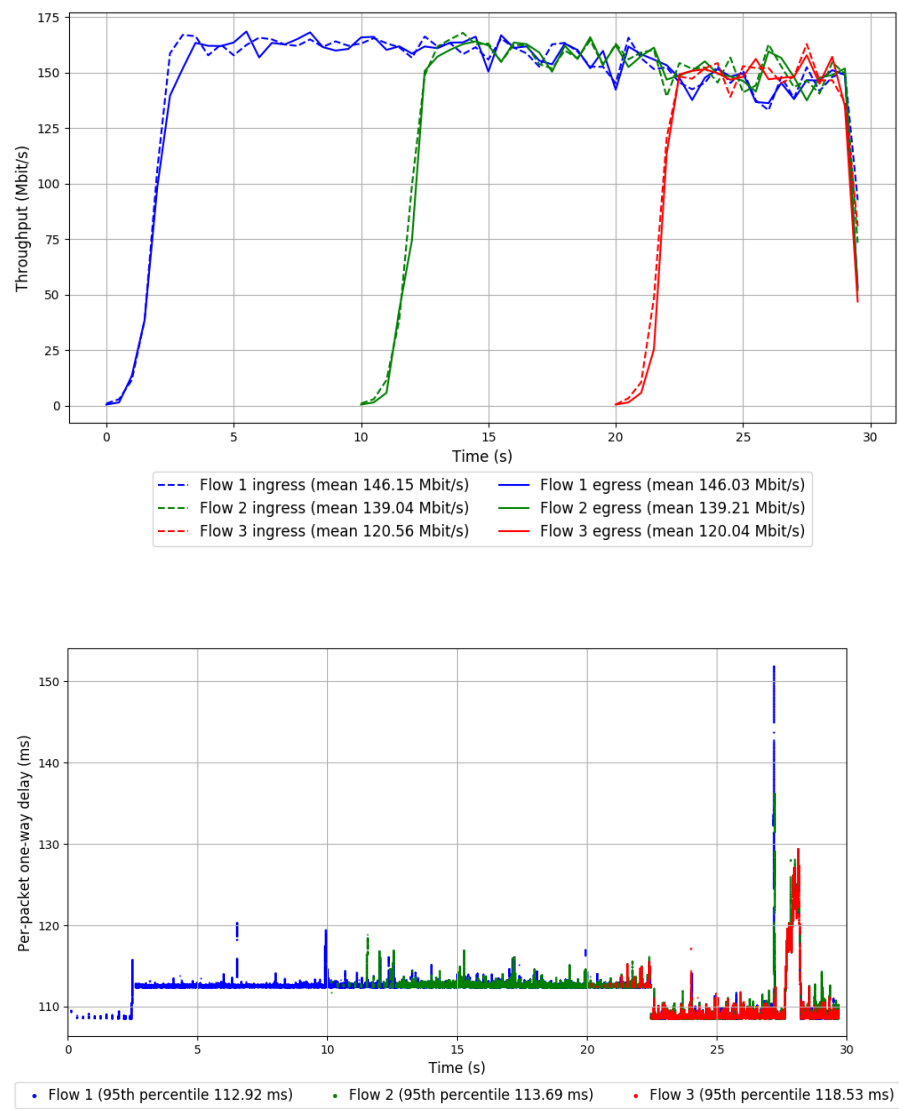
-- Flow 3:

Average throughput: 120.04 Mbit/s

95th percentile per-packet one-way delay: 118.532 ms

Loss rate: 2.76%

Run 8: Report of Indigo-calib — Data Link

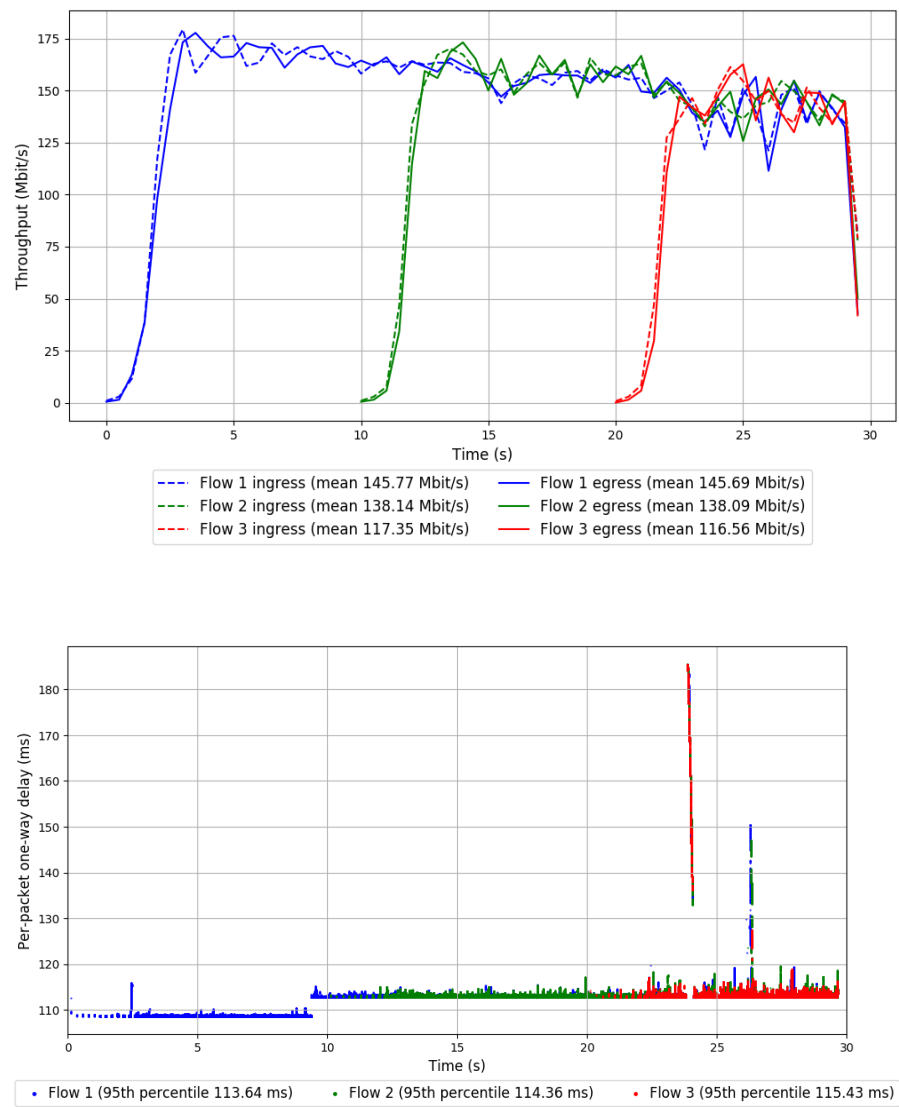


```
Run 9: Statistics of Indigo-calib

Start at: 2017-11-21 14:33:19
End at: 2017-11-21 14:33:49

# Below is generated by plot.py at 2017-11-21 18:09:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 274.56 Mbit/s
95th percentile per-packet one-way delay: 114.139 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 145.69 Mbit/s
95th percentile per-packet one-way delay: 113.645 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 138.09 Mbit/s
95th percentile per-packet one-way delay: 114.362 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 116.56 Mbit/s
95th percentile per-packet one-way delay: 115.430 ms
Loss rate: 2.95%
```

Run 9: Report of Indigo-calib — Data Link



Run 10: Statistics of Indigo-calib

Start at: 2017-11-21 14:46:51

End at: 2017-11-21 14:47:21

Below is generated by plot.py at 2017-11-21 18:09:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 279.02 Mbit/s

95th percentile per-packet one-way delay: 113.818 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 148.08 Mbit/s

95th percentile per-packet one-way delay: 113.548 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 140.38 Mbit/s

95th percentile per-packet one-way delay: 113.918 ms

Loss rate: 1.30%

-- Flow 3:

Average throughput: 119.41 Mbit/s

95th percentile per-packet one-way delay: 114.448 ms

Loss rate: 3.02%

Run 10: Report of Indigo-calib — Data Link

