

Pantheon Report

Generated at 2018-02-14 03:34:45 (UTC).

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

Repeated the test of 17 congestion control schemes 10 times.

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

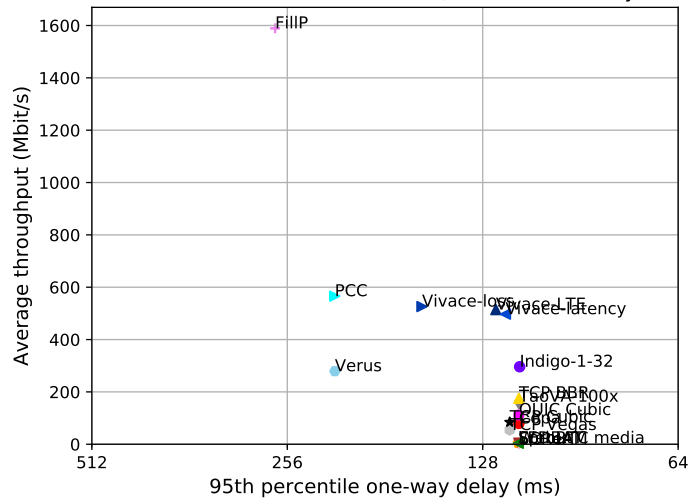
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

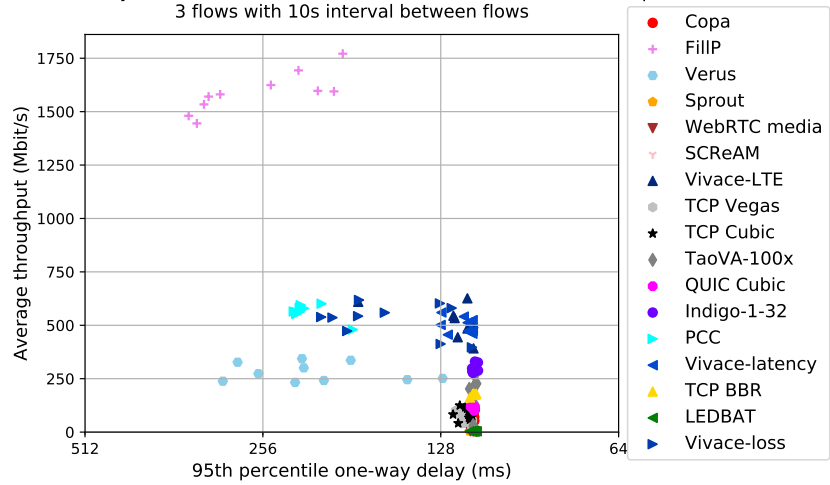
Git summary:

```
branch: master @ 2efdad57c2c56a9458b0d01ff33345e11732665
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5cec90f281d1c69ae1a5c6
third_party/genericCC @ 80b516c448f795fd6e9675f7177b69c622f07da8
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
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/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
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



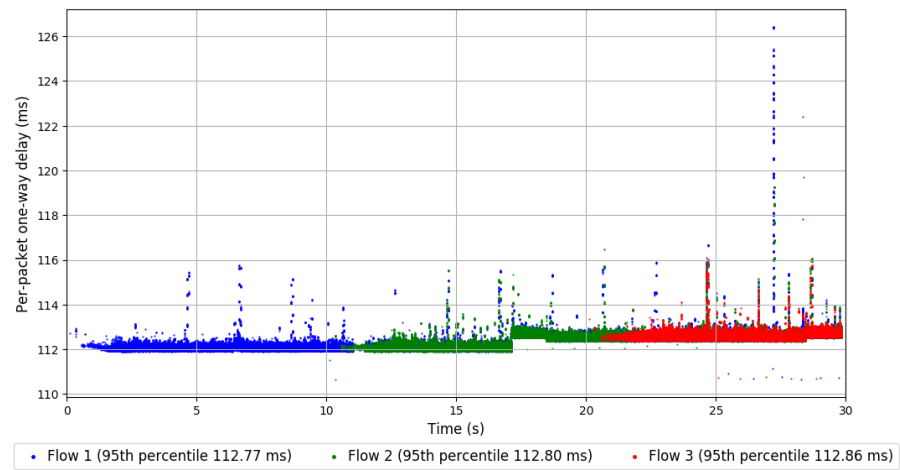
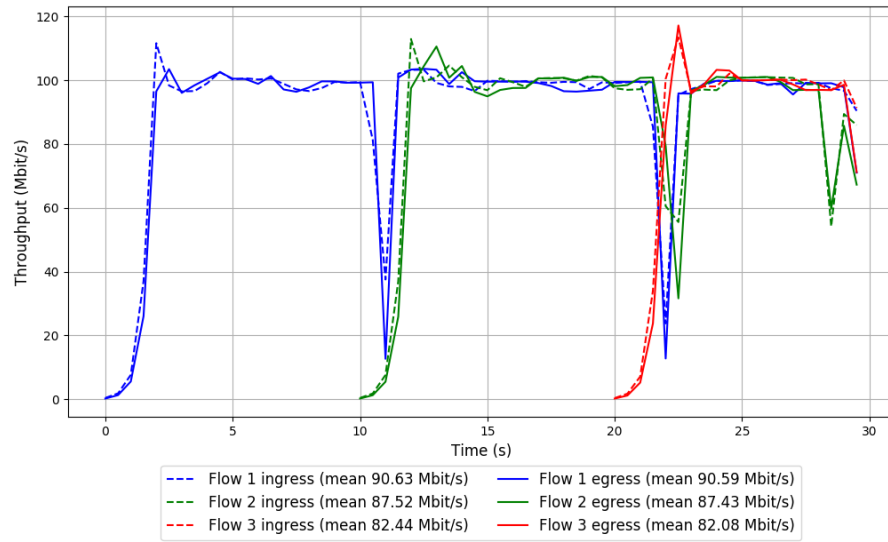
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	90.92	87.88	81.76	112.59	112.30	112.20	0.89	1.28	2.79
TCP Cubic	10	38.89	42.82	52.81	114.19	115.69	117.06	1.34	2.09	3.02
LEDBAT	10	2.23	1.58	1.18	113.01	112.63	111.89	1.83	2.78	4.48
PCC	10	490.77	92.80	41.50	217.22	215.16	209.10	2.25	2.25	3.84
QUIC Cubic	10	61.77	54.39	43.06	112.13	112.25	111.32	0.94	1.01	1.95
SCReAM	10	0.19	0.19	0.20	111.94	112.19	111.60	0.67	1.07	2.17
WebRTC media	10	2.09	1.29	0.47	112.35	112.02	112.21	0.94	1.57	3.94
Sprout	10	2.11	1.97	1.96	112.88	113.01	112.78	2.00	2.41	3.82
TaoVA-100x	10	101.98	70.40	42.39	112.44	112.36	113.17	0.87	1.09	3.60
TCP Vegas	10	24.53	25.05	40.49	115.98	114.34	117.39	1.21	1.33	2.25
Verus	10	161.83	135.14	87.25	185.88	205.68	214.26	1.93	3.69	6.07
Copa	10	43.19	35.96	38.54	112.58	112.39	112.49	0.51	1.37	2.88
FillP	10	841.56	779.46	709.12	242.35	263.38	251.85	5.25	7.38	9.09
Indigo-1-32	10	155.73	150.93	126.17	112.12	112.22	112.53	0.76	1.12	2.70
Vivace-latency	10	313.20	223.53	110.72	115.30	141.29	112.77	0.77	1.68	3.68
Vivace-loss	10	296.86	246.86	203.00	169.80	124.81	164.88	1.52	1.62	4.05
Vivace-LTE	10	317.36	211.90	176.01	125.36	122.02	123.08	1.02	1.70	3.54

```
Run 1: Statistics of TCP BBR

Start at: 2018-02-13 19:02:55
End at: 2018-02-13 19:03:25

# Below is generated by plot.py at 2018-02-14 01:40:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 175.39 Mbit/s
95th percentile per-packet one-way delay: 112.799 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 90.59 Mbit/s
95th percentile per-packet one-way delay: 112.769 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 87.43 Mbit/s
95th percentile per-packet one-way delay: 112.804 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 82.08 Mbit/s
95th percentile per-packet one-way delay: 112.857 ms
Loss rate: 2.79%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-02-13 19:22:39

End at: 2018-02-13 19:23:09

Below is generated by plot.py at 2018-02-14 01:40:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.73 Mbit/s

95th percentile per-packet one-way delay: 112.734 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 93.76 Mbit/s

95th percentile per-packet one-way delay: 112.688 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 89.46 Mbit/s

95th percentile per-packet one-way delay: 112.727 ms

Loss rate: 1.23%

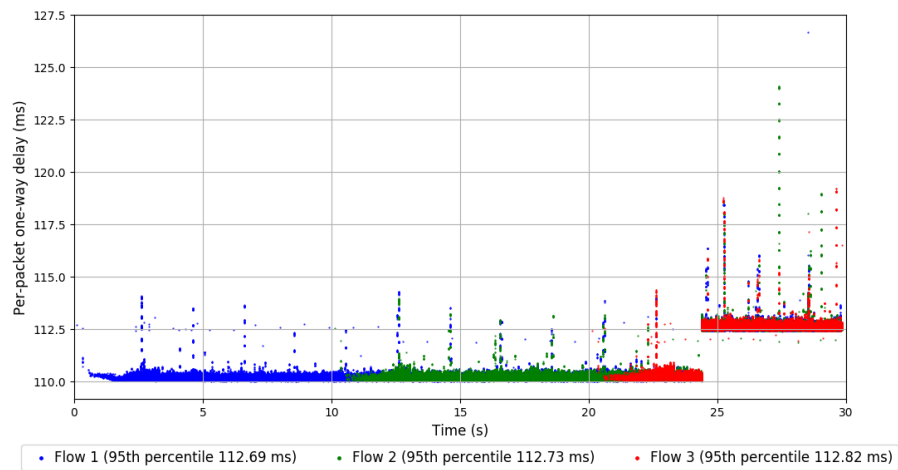
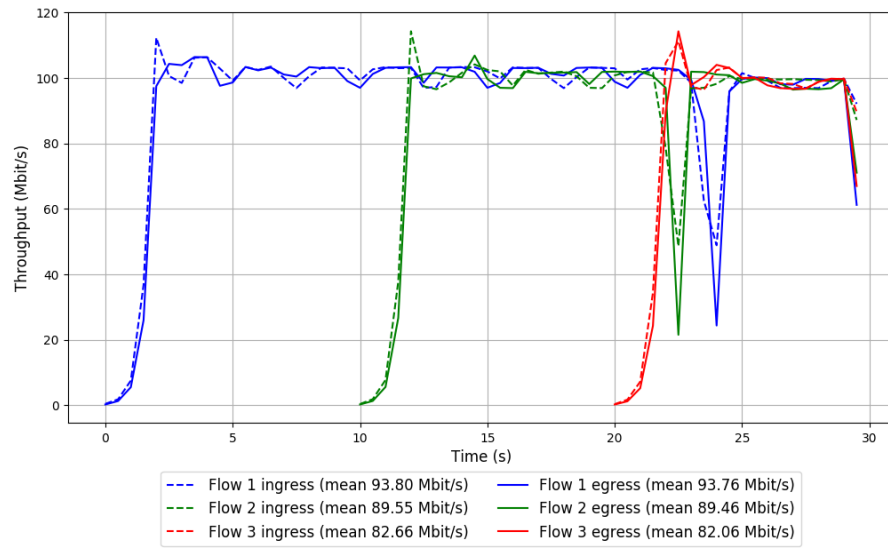
-- Flow 3:

Average throughput: 82.06 Mbit/s

95th percentile per-packet one-way delay: 112.816 ms

Loss rate: 2.86%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-02-13 19:42:25

End at: 2018-02-13 19:42:55

Below is generated by plot.py at 2018-02-14 01:40:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 176.36 Mbit/s

95th percentile per-packet one-way delay: 111.864 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 90.67 Mbit/s

95th percentile per-packet one-way delay: 111.842 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 88.97 Mbit/s

95th percentile per-packet one-way delay: 111.835 ms

Loss rate: 1.28%

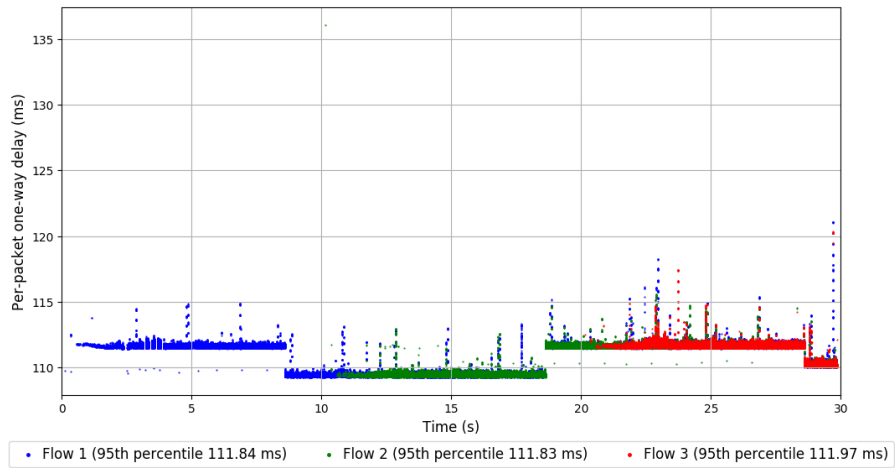
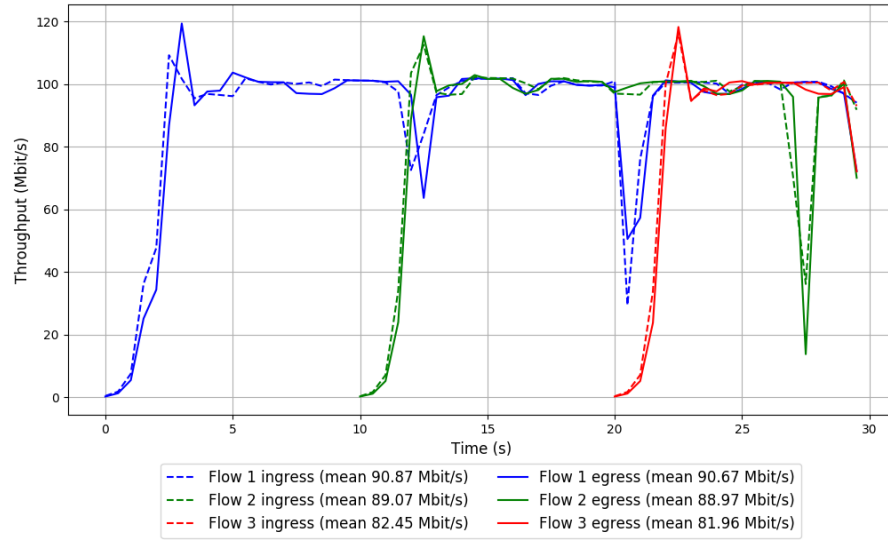
-- Flow 3:

Average throughput: 81.96 Mbit/s

95th percentile per-packet one-way delay: 111.967 ms

Loss rate: 2.86%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-02-13 20:01:49

End at: 2018-02-13 20:02:19

Below is generated by plot.py at 2018-02-14 01:40:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.62 Mbit/s

95th percentile per-packet one-way delay: 111.483 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 92.19 Mbit/s

95th percentile per-packet one-way delay: 111.610 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 90.63 Mbit/s

95th percentile per-packet one-way delay: 109.596 ms

Loss rate: 1.24%

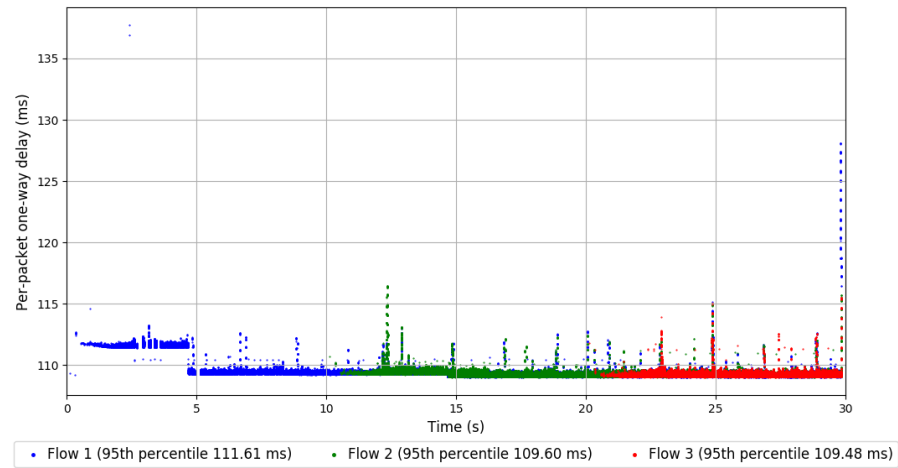
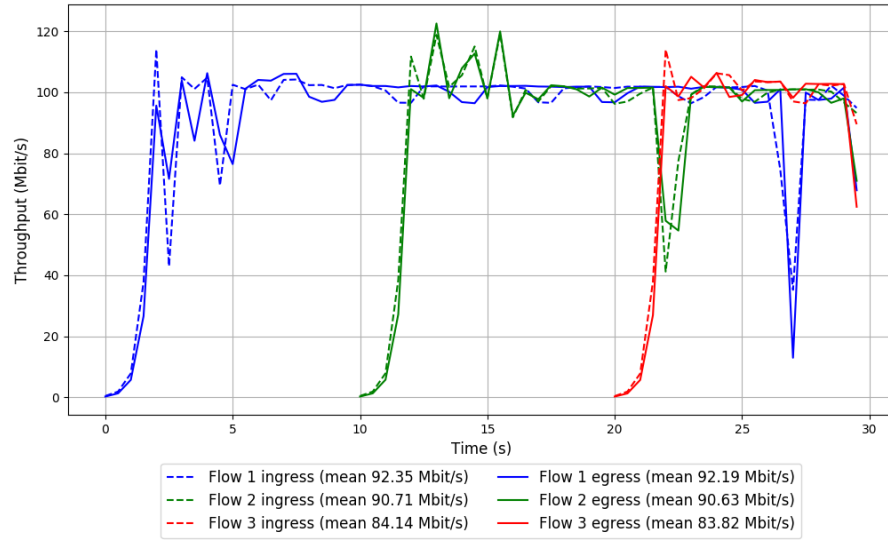
-- Flow 3:

Average throughput: 83.82 Mbit/s

95th percentile per-packet one-way delay: 109.479 ms

Loss rate: 2.64%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-02-13 20:21:44

End at: 2018-02-13 20:22:14

Below is generated by plot.py at 2018-02-14 01:40:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.30 Mbit/s

95th percentile per-packet one-way delay: 112.402 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 92.32 Mbit/s

95th percentile per-packet one-way delay: 112.412 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 89.11 Mbit/s

95th percentile per-packet one-way delay: 112.432 ms

Loss rate: 1.23%

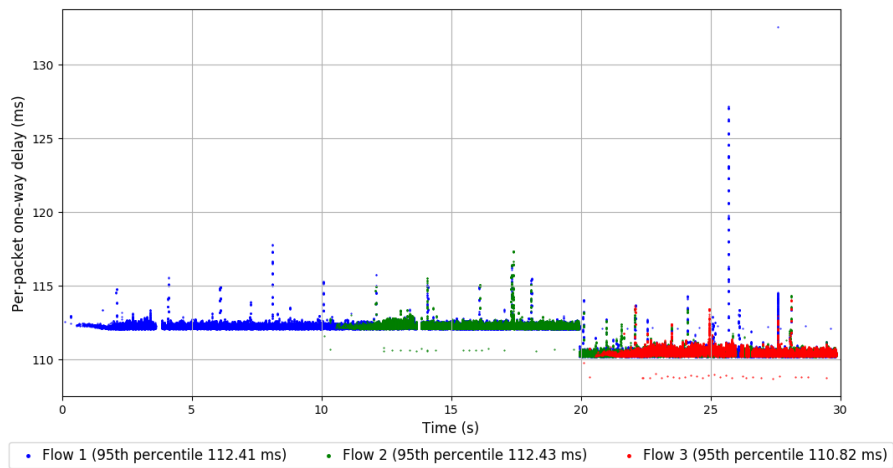
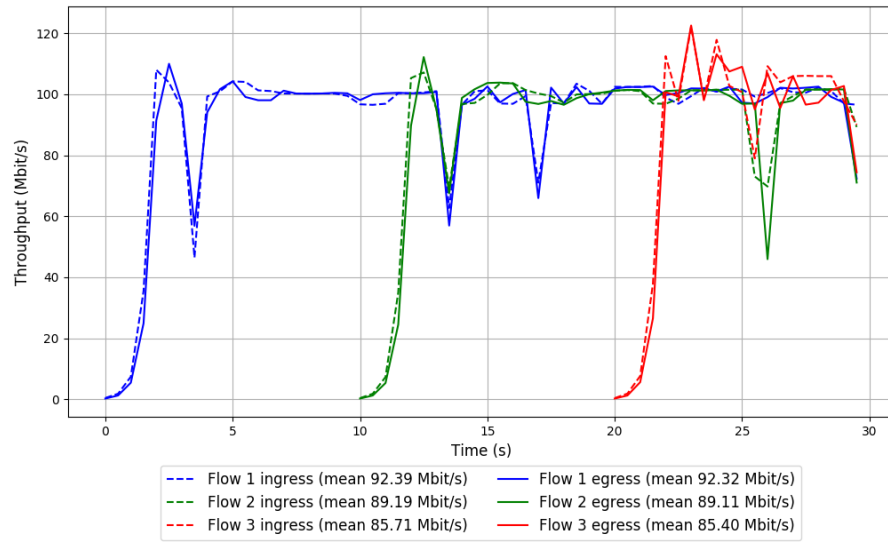
-- Flow 3:

Average throughput: 85.40 Mbit/s

95th percentile per-packet one-way delay: 110.822 ms

Loss rate: 2.59%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-02-13 20:40:55

End at: 2018-02-13 20:41:25

Below is generated by plot.py at 2018-02-14 01:40:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.69 Mbit/s

95th percentile per-packet one-way delay: 112.913 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 90.50 Mbit/s

95th percentile per-packet one-way delay: 112.971 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 89.38 Mbit/s

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

Loss rate: 1.23%

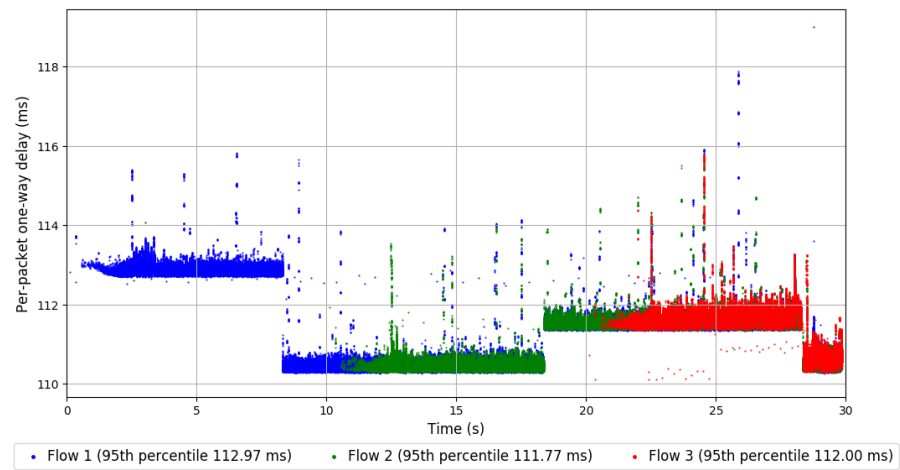
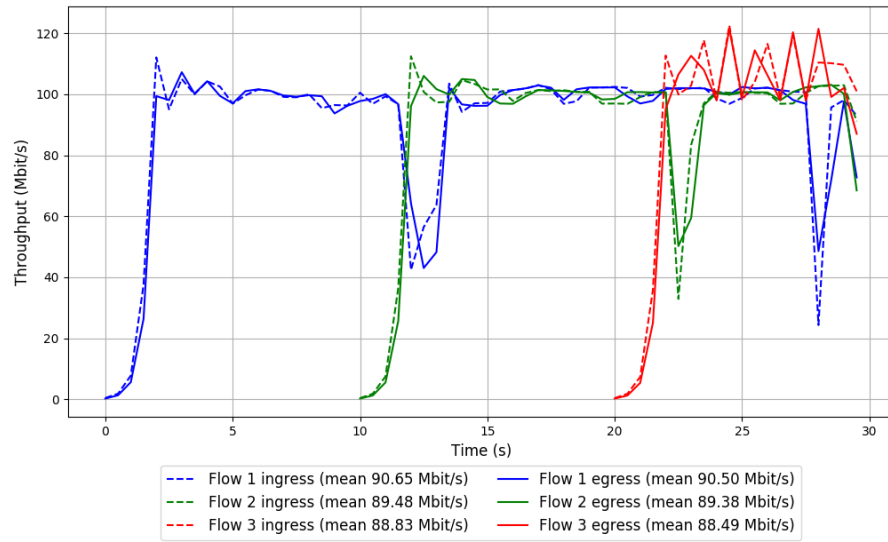
-- Flow 3:

Average throughput: 88.49 Mbit/s

95th percentile per-packet one-way delay: 112.003 ms

Loss rate: 2.61%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-02-13 21:00:25

End at: 2018-02-13 21:00:55

Below is generated by plot.py at 2018-02-14 01:40:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 174.19 Mbit/s

95th percentile per-packet one-way delay: 113.132 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 89.28 Mbit/s

95th percentile per-packet one-way delay: 113.064 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 88.33 Mbit/s

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

Loss rate: 1.29%

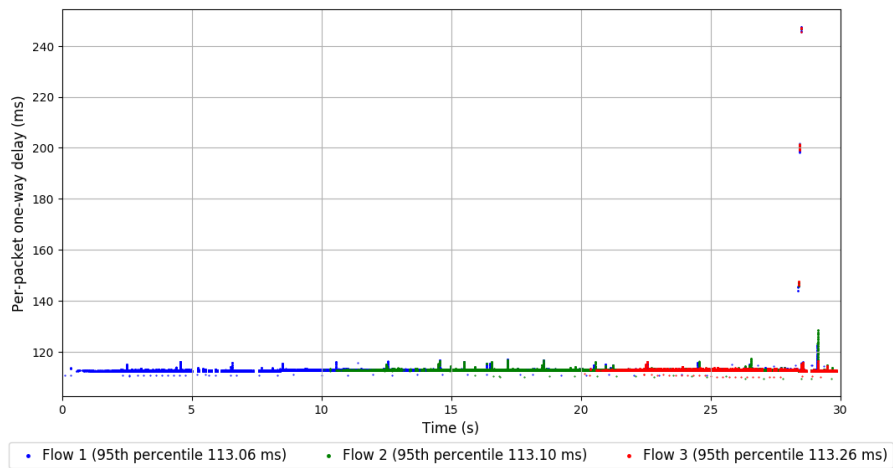
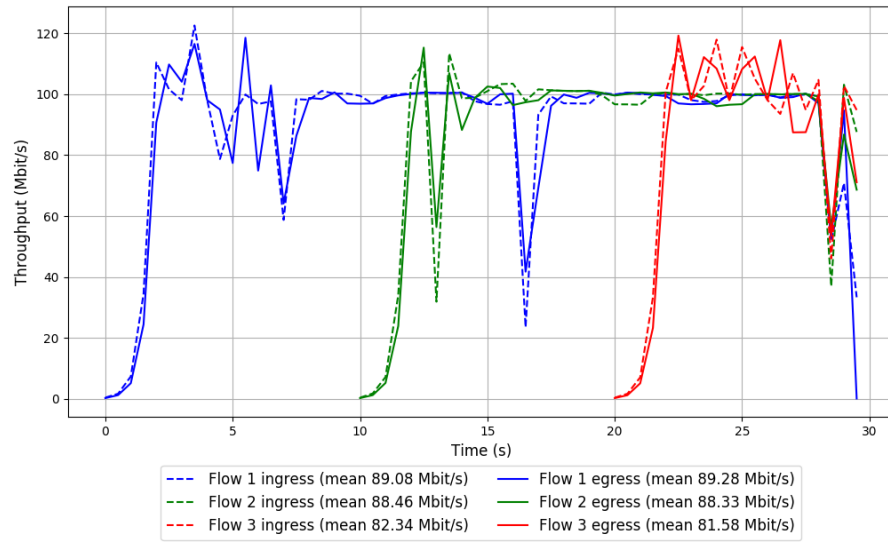
-- Flow 3:

Average throughput: 81.58 Mbit/s

95th percentile per-packet one-way delay: 113.261 ms

Loss rate: 3.17%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-02-13 21:20:05

End at: 2018-02-13 21:20:35

Below is generated by plot.py at 2018-02-14 01:40:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 176.59 Mbit/s

95th percentile per-packet one-way delay: 112.708 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 89.86 Mbit/s

95th percentile per-packet one-way delay: 112.687 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 90.08 Mbit/s

95th percentile per-packet one-way delay: 112.756 ms

Loss rate: 1.36%

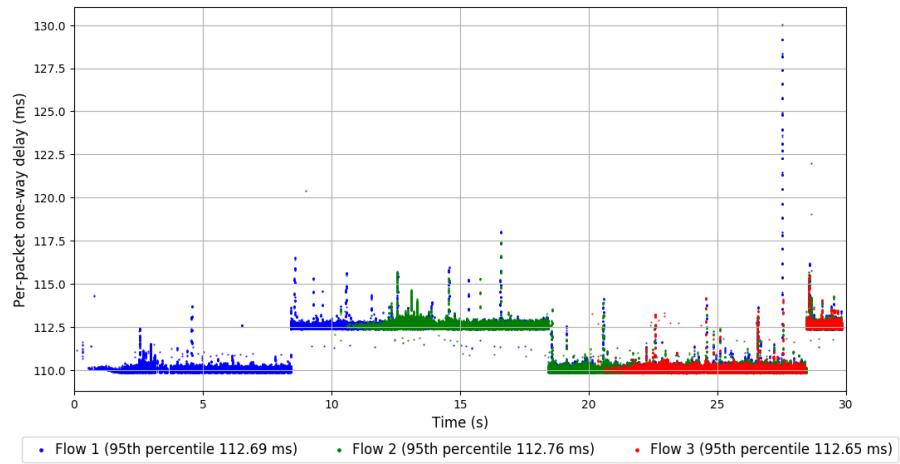
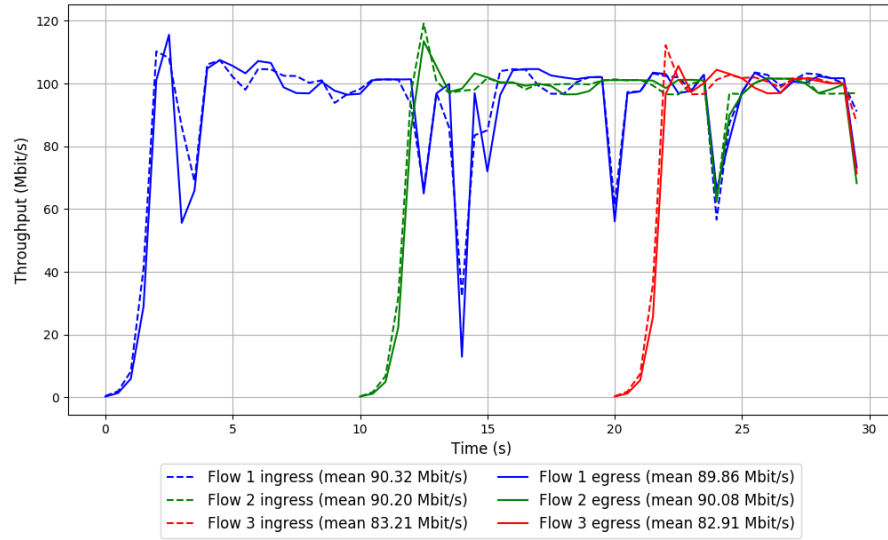
-- Flow 3:

Average throughput: 82.91 Mbit/s

95th percentile per-packet one-way delay: 112.650 ms

Loss rate: 2.63%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-02-13 21:39:44

End at: 2018-02-13 21:40:14

Below is generated by plot.py at 2018-02-14 01:42:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 162.06 Mbit/s

95th percentile per-packet one-way delay: 114.238 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 88.01 Mbit/s

95th percentile per-packet one-way delay: 114.188 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 77.33 Mbit/s

95th percentile per-packet one-way delay: 114.231 ms

Loss rate: 1.43%

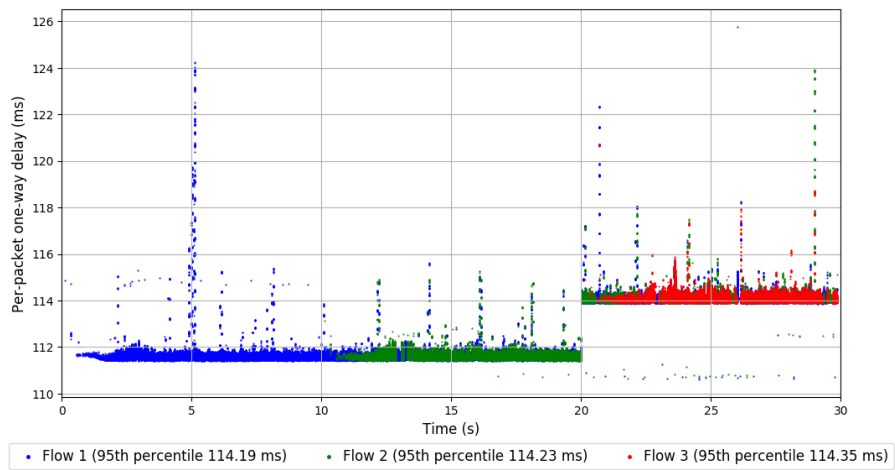
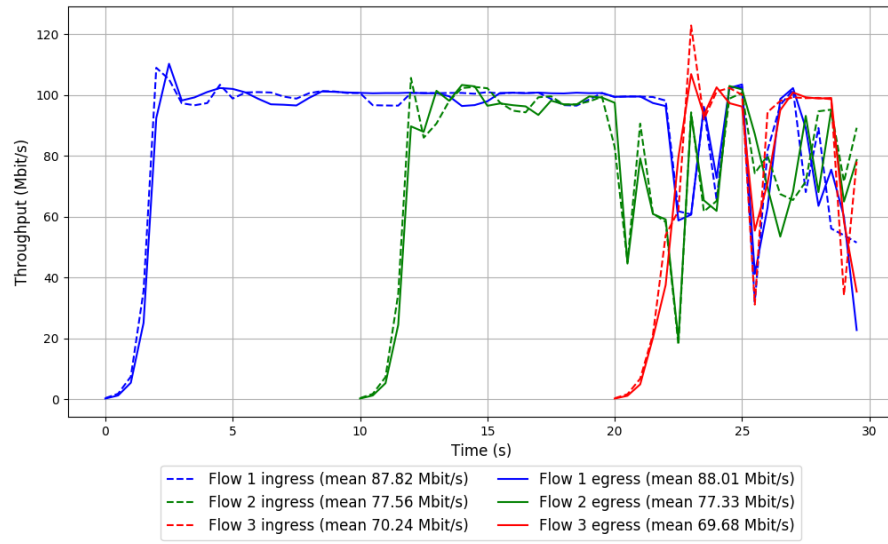
-- Flow 3:

Average throughput: 69.68 Mbit/s

95th percentile per-packet one-way delay: 114.349 ms

Loss rate: 3.07%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-02-13 21:59:36

End at: 2018-02-13 22:00:06

Below is generated by plot.py at 2018-02-14 01:43:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 176.41 Mbit/s

95th percentile per-packet one-way delay: 111.701 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 92.01 Mbit/s

95th percentile per-packet one-way delay: 111.662 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 88.05 Mbit/s

95th percentile per-packet one-way delay: 111.710 ms

Loss rate: 1.24%

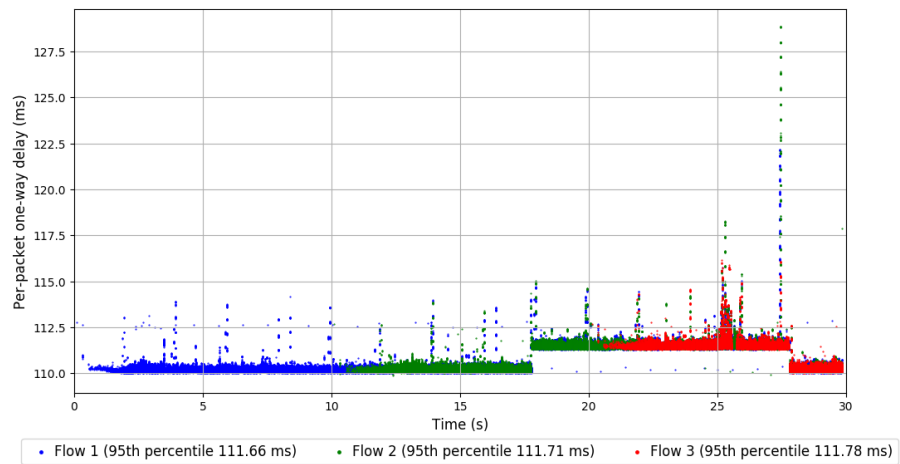
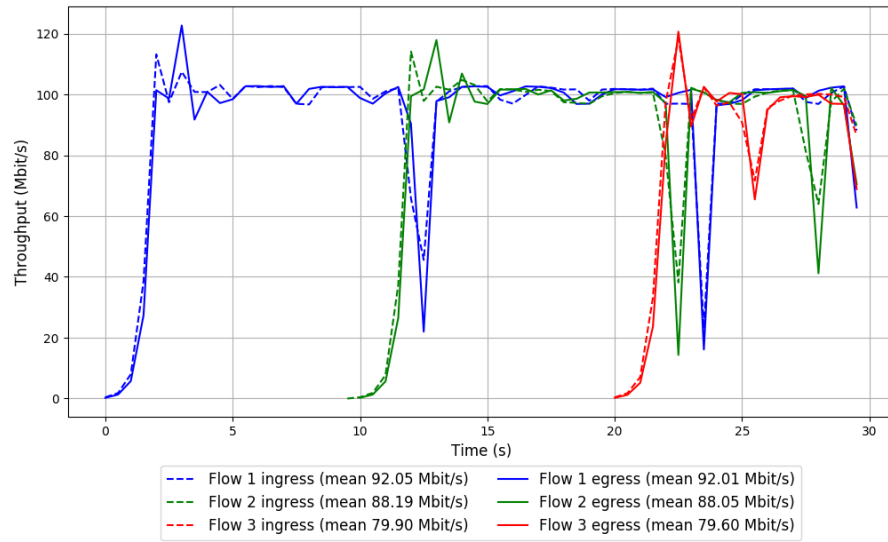
-- Flow 3:

Average throughput: 79.60 Mbit/s

95th percentile per-packet one-way delay: 111.782 ms

Loss rate: 2.64%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-02-13 19:00:38

End at: 2018-02-13 19:01:08

Below is generated by plot.py at 2018-02-14 01:43:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 58.68 Mbit/s

95th percentile per-packet one-way delay: 114.215 ms

Loss rate: 1.85%

-- Flow 1:

Average throughput: 36.78 Mbit/s

95th percentile per-packet one-way delay: 113.476 ms

Loss rate: 1.39%

-- Flow 2:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 112.961 ms

Loss rate: 4.12%

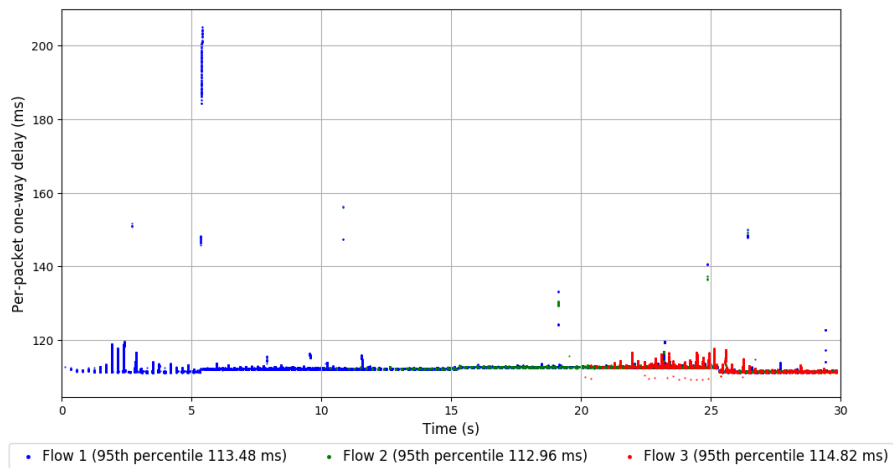
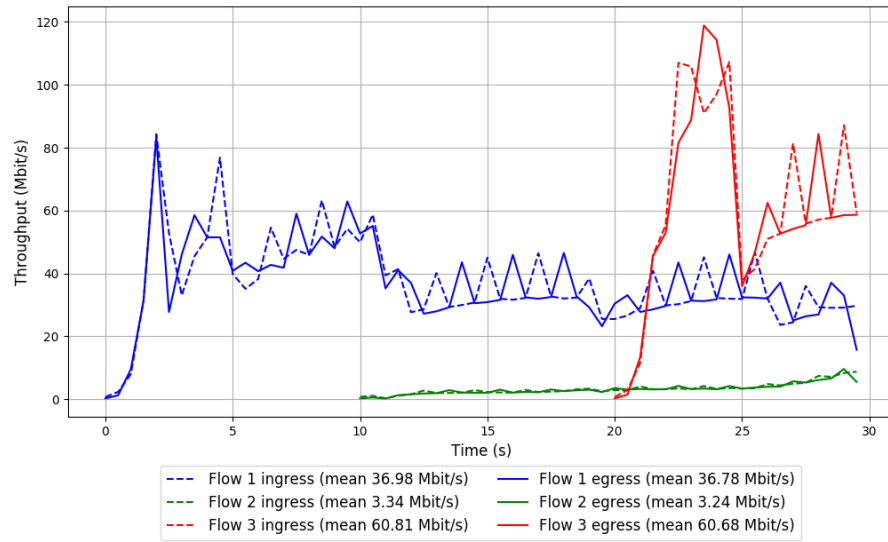
-- Flow 3:

Average throughput: 60.68 Mbit/s

95th percentile per-packet one-way delay: 114.817 ms

Loss rate: 2.46%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-02-13 19:20:19

End at: 2018-02-13 19:20:49

Below is generated by plot.py at 2018-02-14 01:43:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.52 Mbit/s

95th percentile per-packet one-way delay: 114.745 ms

Loss rate: 1.70%

-- Flow 1:

Average throughput: 45.87 Mbit/s

95th percentile per-packet one-way delay: 114.889 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 47.34 Mbit/s

95th percentile per-packet one-way delay: 113.934 ms

Loss rate: 1.67%

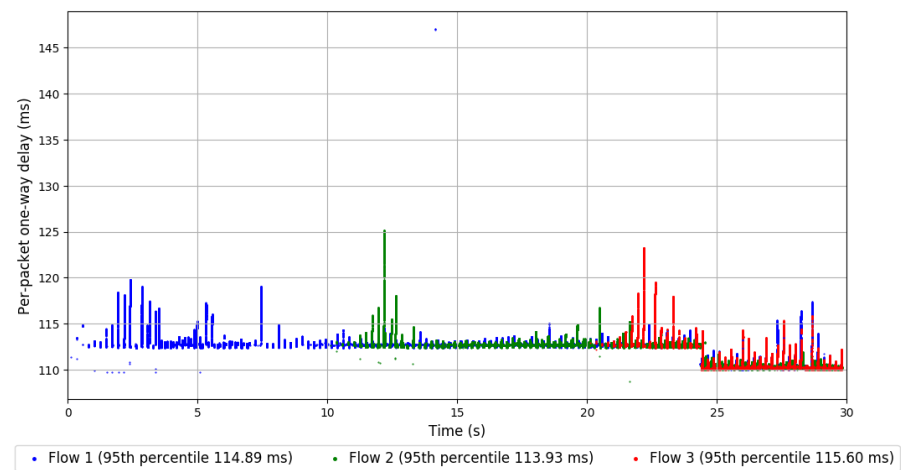
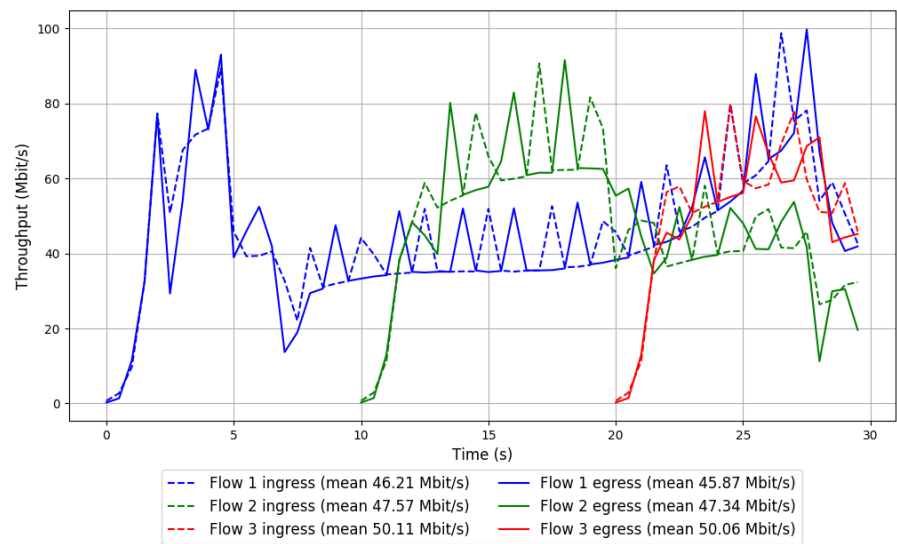
-- Flow 3:

Average throughput: 50.06 Mbit/s

95th percentile per-packet one-way delay: 115.600 ms

Loss rate: 2.36%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-02-13 19:40:01

End at: 2018-02-13 19:40:31

Below is generated by plot.py at 2018-02-14 01:43:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.85 Mbit/s

95th percentile per-packet one-way delay: 115.498 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 59.93 Mbit/s

95th percentile per-packet one-way delay: 113.854 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 49.82 Mbit/s

95th percentile per-packet one-way delay: 116.545 ms

Loss rate: 2.66%

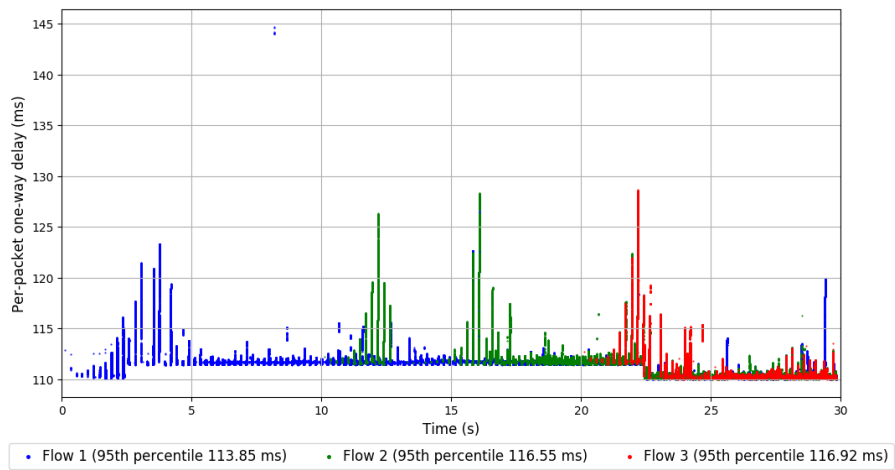
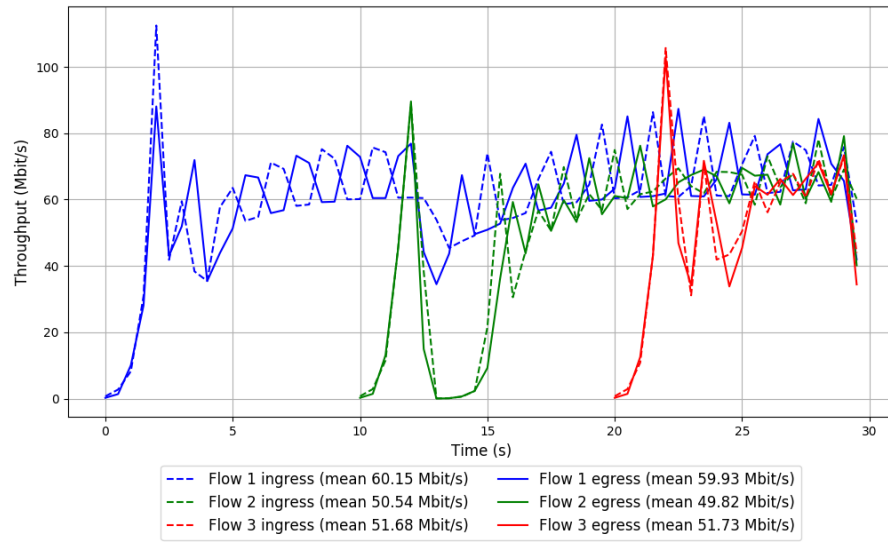
-- Flow 3:

Average throughput: 51.73 Mbit/s

95th percentile per-packet one-way delay: 116.915 ms

Loss rate: 2.16%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-02-13 19:59:23

End at: 2018-02-13 19:59:53

Below is generated by plot.py at 2018-02-14 01:43:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.47 Mbit/s

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

Loss rate: 2.03%

-- Flow 1:

Average throughput: 54.20 Mbit/s

95th percentile per-packet one-way delay: 112.304 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 8.73 Mbit/s

95th percentile per-packet one-way delay: 110.843 ms

Loss rate: 1.89%

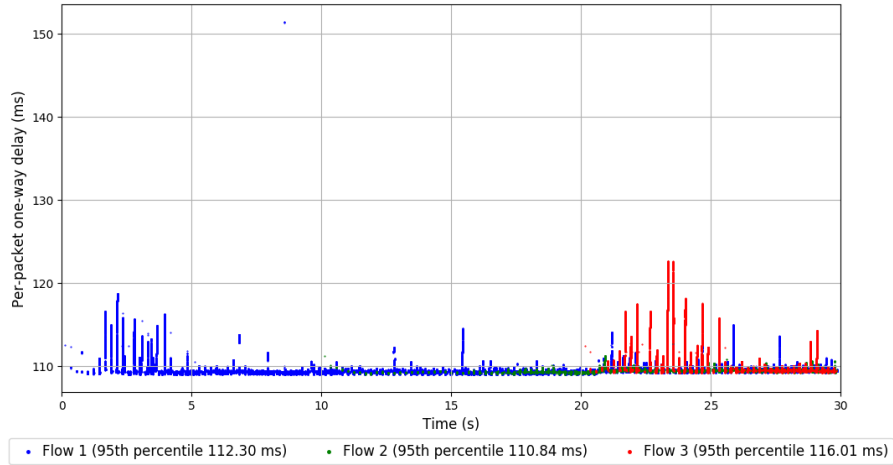
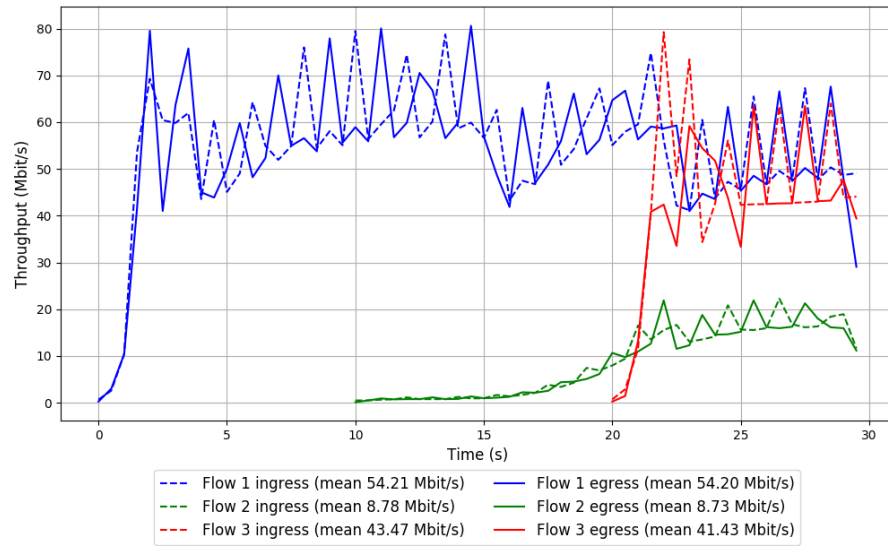
-- Flow 3:

Average throughput: 41.43 Mbit/s

95th percentile per-packet one-way delay: 116.011 ms

Loss rate: 6.85%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-02-13 20:19:27

End at: 2018-02-13 20:19:57

Below is generated by plot.py at 2018-02-14 01:43:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.30 Mbit/s

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

Loss rate: 1.32%

-- Flow 1:

Average throughput: 44.63 Mbit/s

95th percentile per-packet one-way delay: 114.196 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 48.80 Mbit/s

95th percentile per-packet one-way delay: 114.402 ms

Loss rate: 1.27%

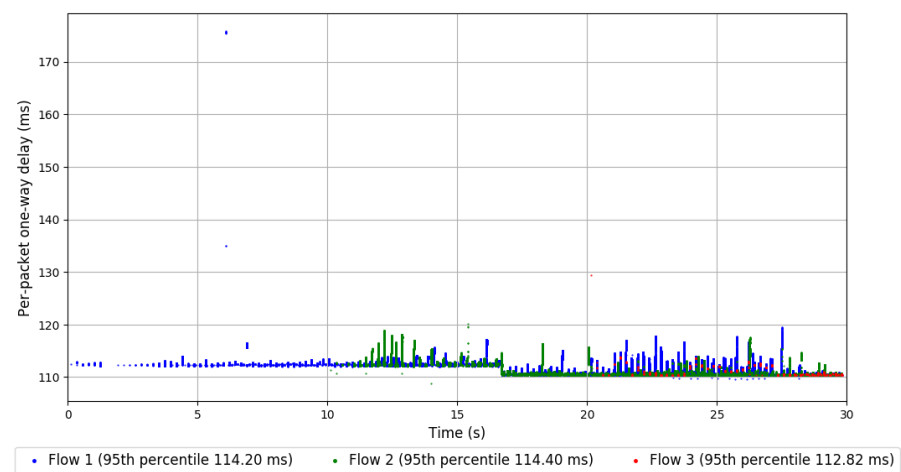
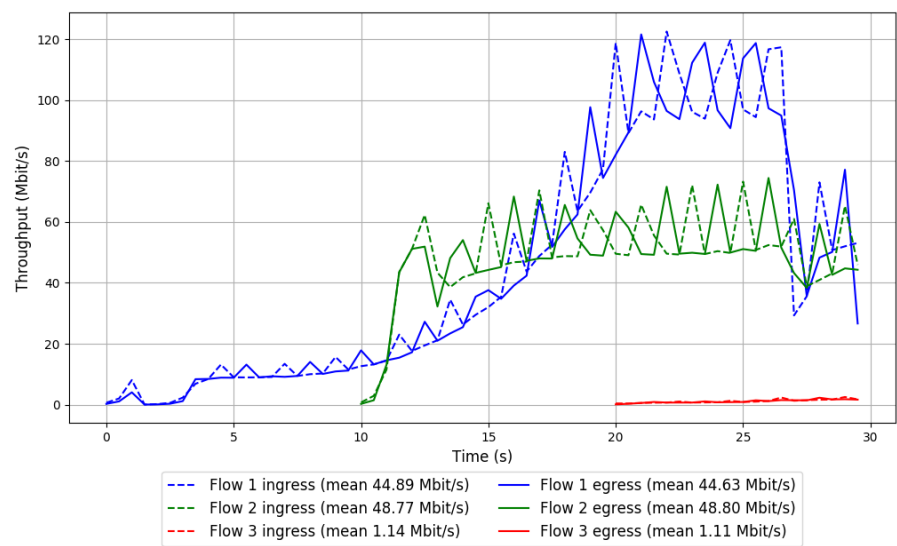
-- Flow 3:

Average throughput: 1.11 Mbit/s

95th percentile per-packet one-way delay: 112.824 ms

Loss rate: 4.68%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-02-13 20:38:40

End at: 2018-02-13 20:39:10

Below is generated by plot.py at 2018-02-14 01:43:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.32 Mbit/s

95th percentile per-packet one-way delay: 114.673 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 17.40 Mbit/s

95th percentile per-packet one-way delay: 113.591 ms

Loss rate: 1.96%

-- Flow 2:

Average throughput: 50.33 Mbit/s

95th percentile per-packet one-way delay: 115.703 ms

Loss rate: 1.49%

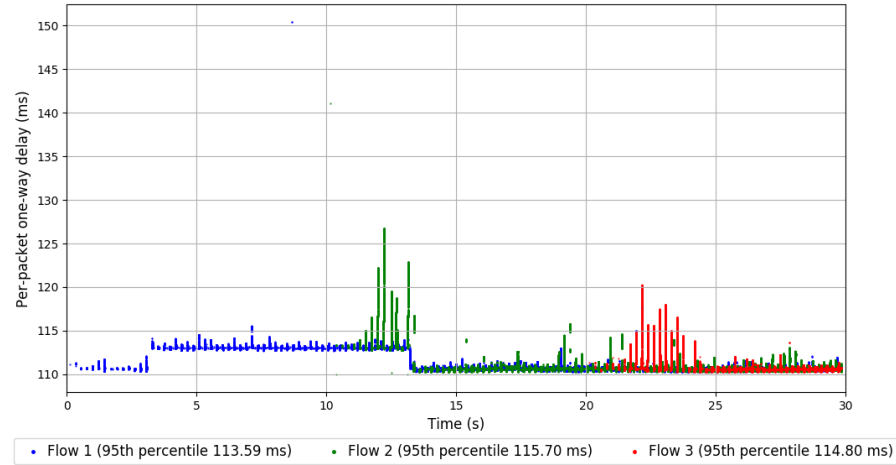
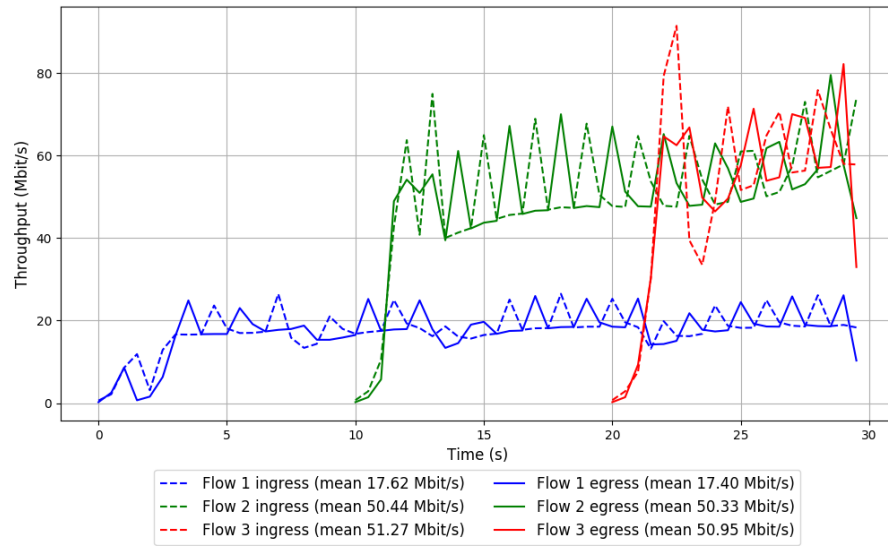
-- Flow 3:

Average throughput: 50.95 Mbit/s

95th percentile per-packet one-way delay: 114.797 ms

Loss rate: 2.85%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-02-13 20:58:00

End at: 2018-02-13 20:58:30

Below is generated by plot.py at 2018-02-14 01:43:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 41.46 Mbit/s

95th percentile per-packet one-way delay: 119.582 ms

Loss rate: 2.57%

-- Flow 1:

Average throughput: 13.02 Mbit/s

95th percentile per-packet one-way delay: 115.856 ms

Loss rate: 1.39%

-- Flow 2:

Average throughput: 10.48 Mbit/s

95th percentile per-packet one-way delay: 115.065 ms

Loss rate: 5.53%

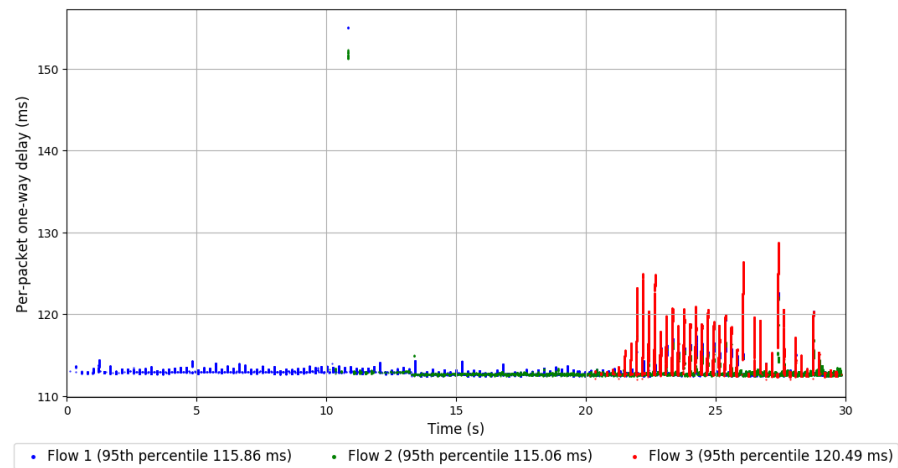
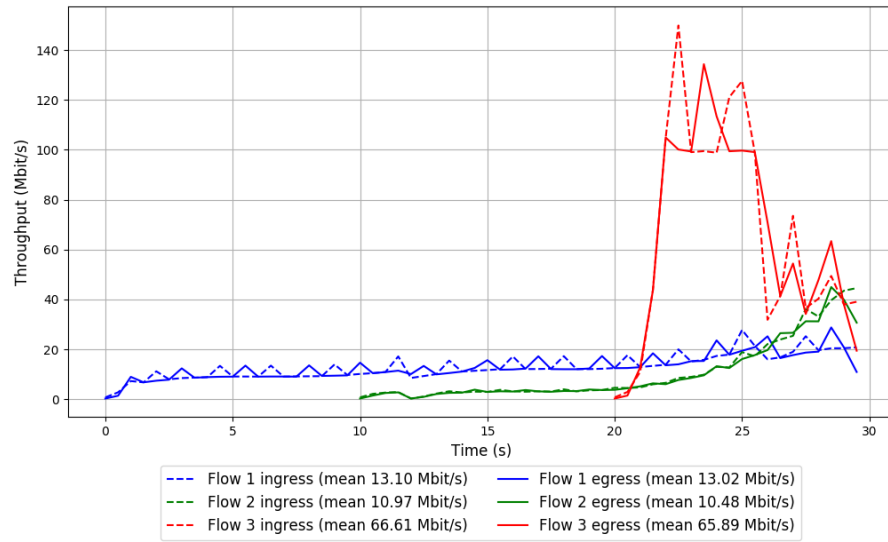
-- Flow 3:

Average throughput: 65.89 Mbit/s

95th percentile per-packet one-way delay: 120.491 ms

Loss rate: 2.30%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-02-13 21:17:55

End at: 2018-02-13 21:18:25

Below is generated by plot.py at 2018-02-14 01:43:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.47 Mbit/s

95th percentile per-packet one-way delay: 122.006 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 9.69 Mbit/s

95th percentile per-packet one-way delay: 114.551 ms

Loss rate: 2.15%

-- Flow 2:

Average throughput: 65.70 Mbit/s

95th percentile per-packet one-way delay: 122.696 ms

Loss rate: 0.75%

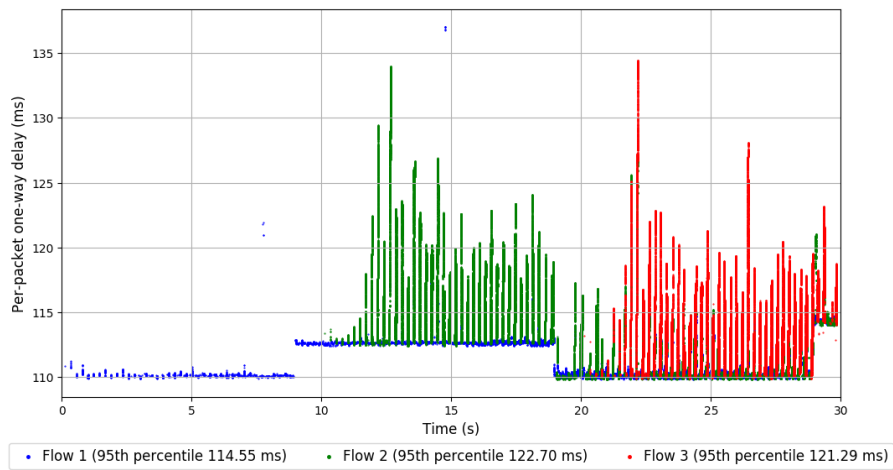
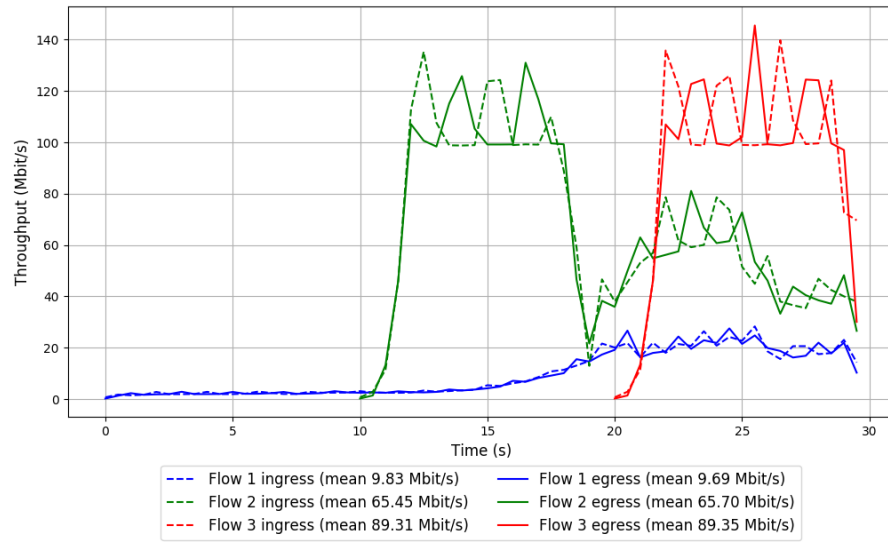
-- Flow 3:

Average throughput: 89.35 Mbit/s

95th percentile per-packet one-way delay: 121.286 ms

Loss rate: 2.24%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-02-13 21:37:21

End at: 2018-02-13 21:37:51

Below is generated by plot.py at 2018-02-14 01:43:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.71 Mbit/s

95th percentile per-packet one-way delay: 118.860 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 58.77 Mbit/s

95th percentile per-packet one-way delay: 115.592 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 77.53 Mbit/s

95th percentile per-packet one-way delay: 120.574 ms

Loss rate: 0.73%

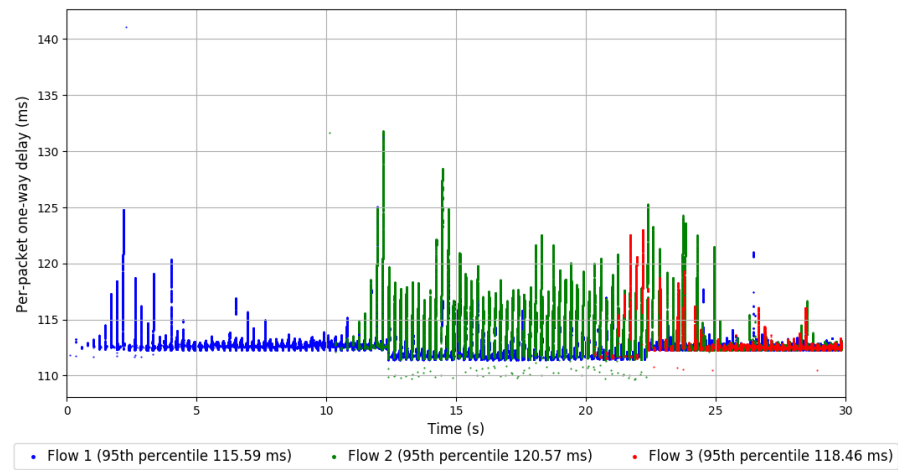
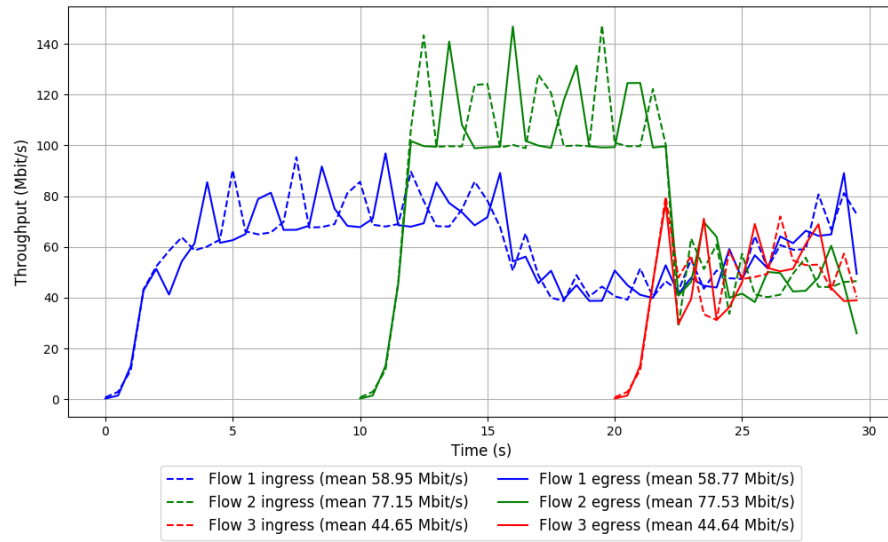
-- Flow 3:

Average throughput: 44.64 Mbit/s

95th percentile per-packet one-way delay: 118.463 ms

Loss rate: 2.29%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-02-13 21:57:14

End at: 2018-02-13 21:57:44

Below is generated by plot.py at 2018-02-14 01:43:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.08 Mbit/s

95th percentile per-packet one-way delay: 116.313 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 48.64 Mbit/s

95th percentile per-packet one-way delay: 113.575 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 66.26 Mbit/s

95th percentile per-packet one-way delay: 114.153 ms

Loss rate: 0.84%

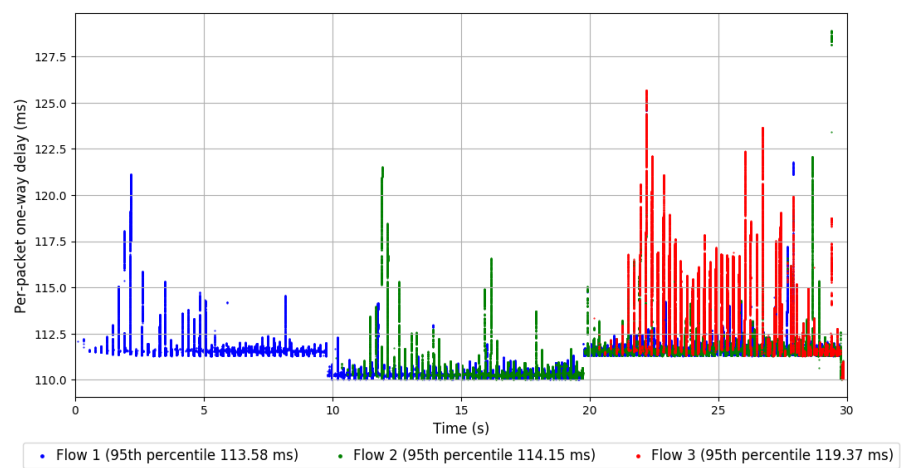
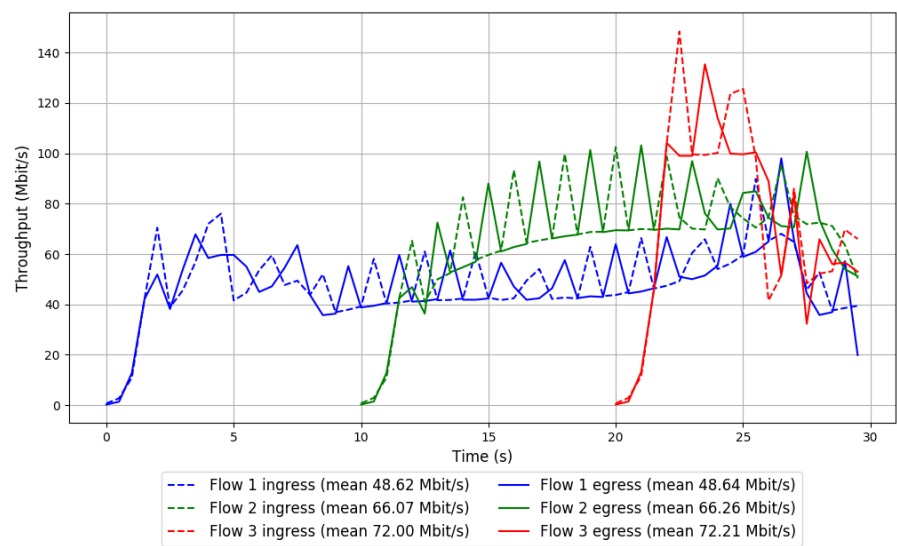
-- Flow 3:

Average throughput: 72.21 Mbit/s

95th percentile per-packet one-way delay: 119.370 ms

Loss rate: 1.98%

Run 10: Report of TCP Cubic — Data Link

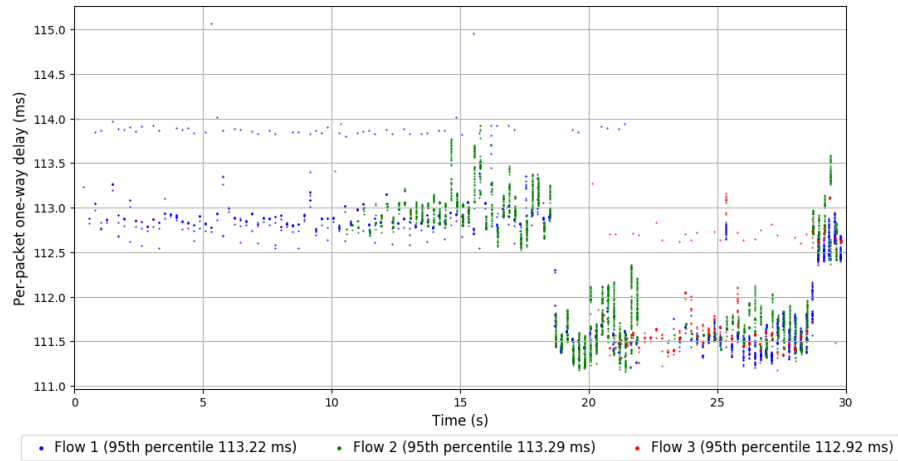
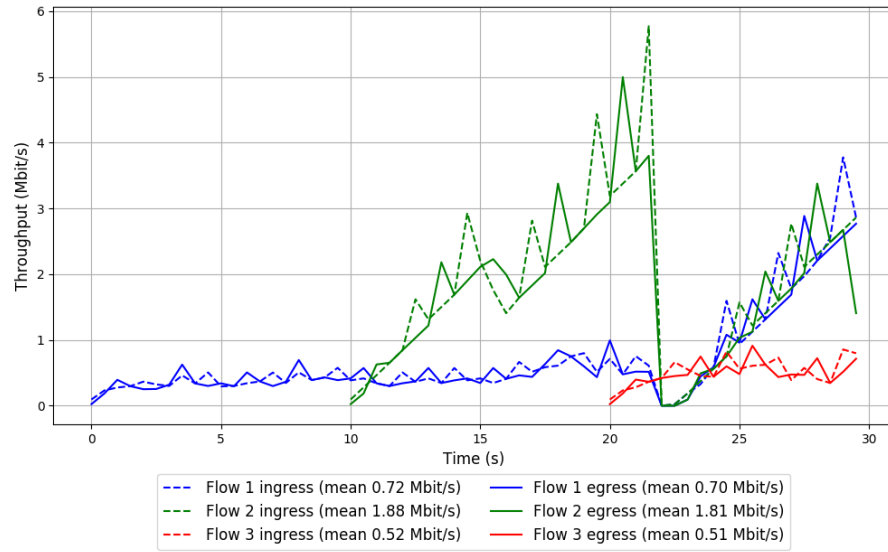


```
Run 1: Statistics of LEDBAT

Start at: 2018-02-13 19:04:45
End at: 2018-02-13 19:05:15

# Below is generated by plot.py at 2018-02-14 01:43:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 113.255 ms
Loss rate: 4.48%
-- Flow 1:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 113.222 ms
Loss rate: 4.14%
-- Flow 2:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 113.289 ms
Loss rate: 4.72%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 112.924 ms
Loss rate: 4.13%
```


Run 1: Report of LEDBAT — Data Link

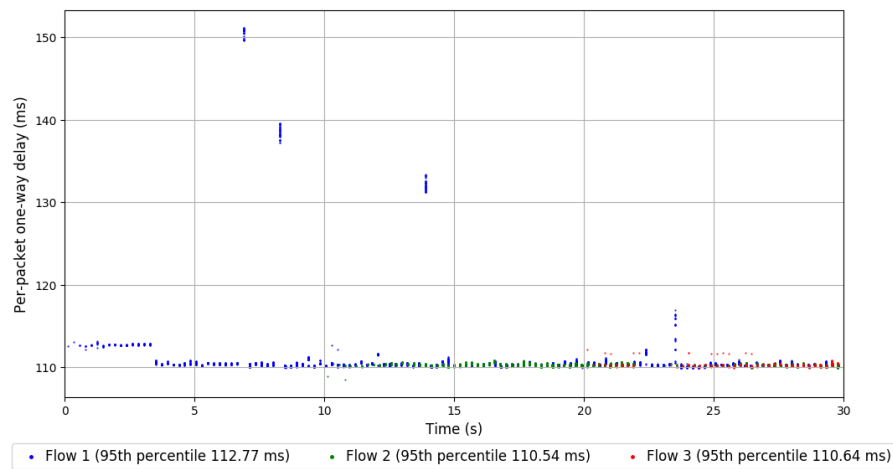
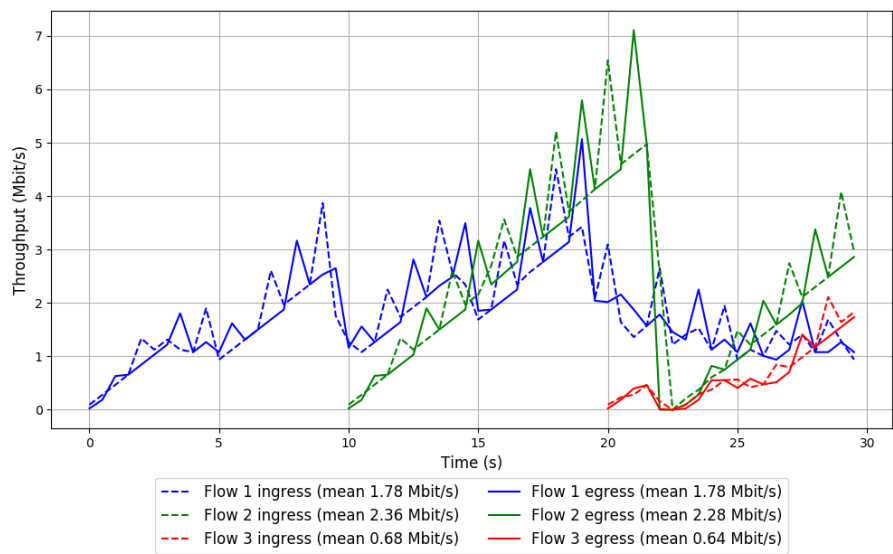


```
Run 2: Statistics of LEDBAT

Start at: 2018-02-13 19:24:30
End at: 2018-02-13 19:25:00

# Below is generated by plot.py at 2018-02-14 01:43:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.50 Mbit/s
95th percentile per-packet one-way delay: 111.231 ms
Loss rate: 2.71%
-- Flow 1:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 112.774 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 110.540 ms
Loss rate: 4.33%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 110.644 ms
Loss rate: 8.06%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-02-13 19:44:16

End at: 2018-02-13 19:44:46

Below is generated by plot.py at 2018-02-14 01:43:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.46 Mbit/s

95th percentile per-packet one-way delay: 112.068 ms

Loss rate: 2.12%

-- Flow 1:

Average throughput: 1.84 Mbit/s

95th percentile per-packet one-way delay: 112.079 ms

Loss rate: 1.42%

-- Flow 2:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 111.873 ms

Loss rate: 3.42%

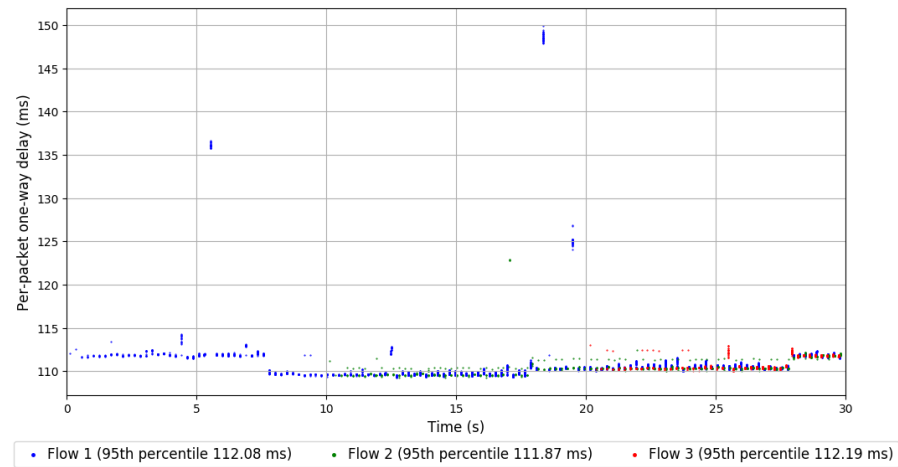
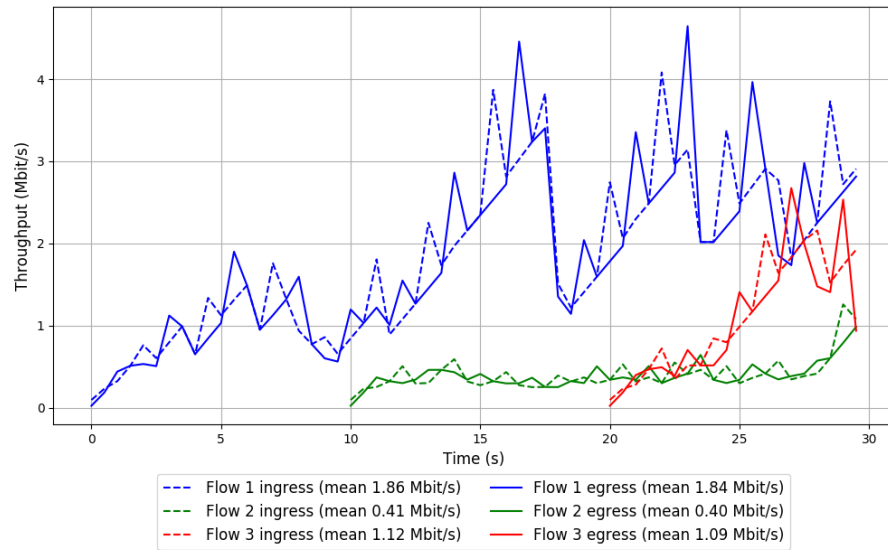
-- Flow 3:

Average throughput: 1.09 Mbit/s

95th percentile per-packet one-way delay: 112.186 ms

Loss rate: 4.70%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-02-13 20:03:39

End at: 2018-02-13 20:04:09

Below is generated by plot.py at 2018-02-14 01:43:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.03 Mbit/s

95th percentile per-packet one-way delay: 112.351 ms

Loss rate: 1.82%

-- Flow 1:

Average throughput: 3.13 Mbit/s

95th percentile per-packet one-way delay: 112.344 ms

Loss rate: 1.79%

-- Flow 2:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 112.464 ms

Loss rate: 1.62%

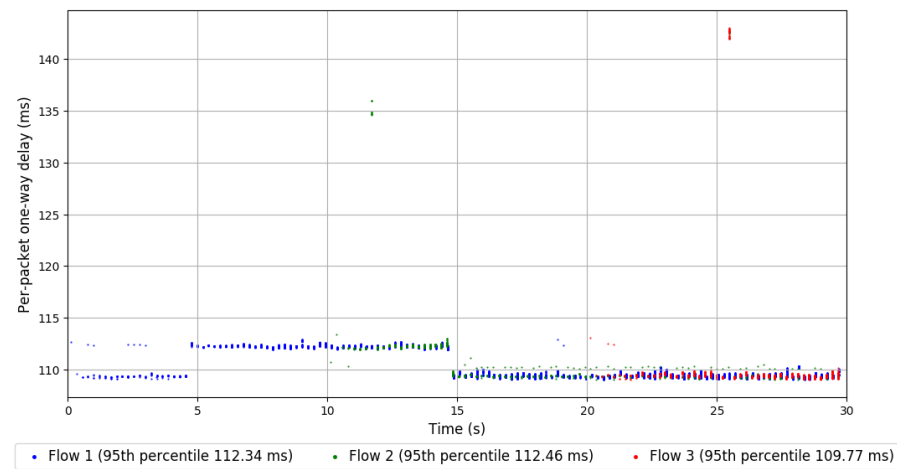
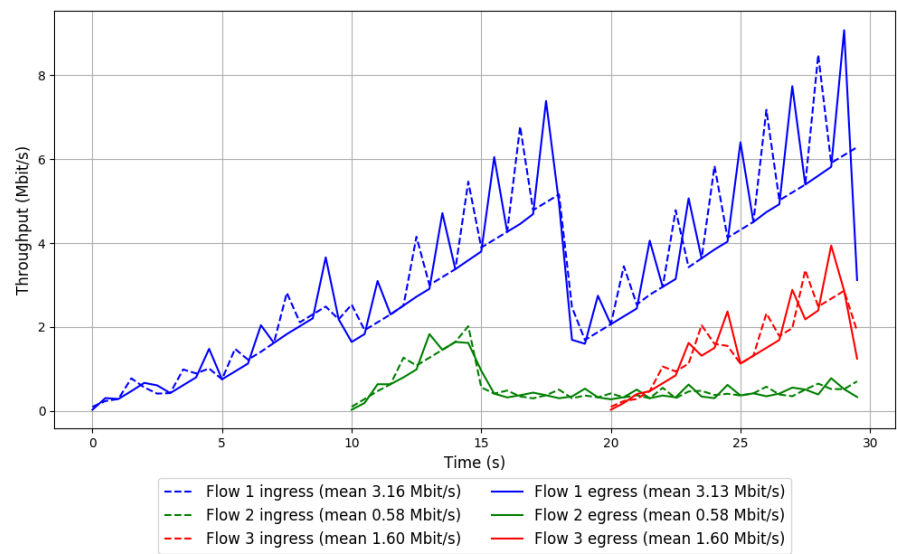
-- Flow 3:

Average throughput: 1.60 Mbit/s

95th percentile per-packet one-way delay: 109.772 ms

Loss rate: 2.11%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-02-13 20:23:34

End at: 2018-02-13 20:24:04

Below is generated by plot.py at 2018-02-14 01:43:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.01 Mbit/s

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

Loss rate: 3.80%

-- Flow 1:

Average throughput: 1.59 Mbit/s

95th percentile per-packet one-way delay: 112.888 ms

Loss rate: 3.56%

-- Flow 2:

Average throughput: 1.04 Mbit/s

95th percentile per-packet one-way delay: 112.845 ms

Loss rate: 3.53%

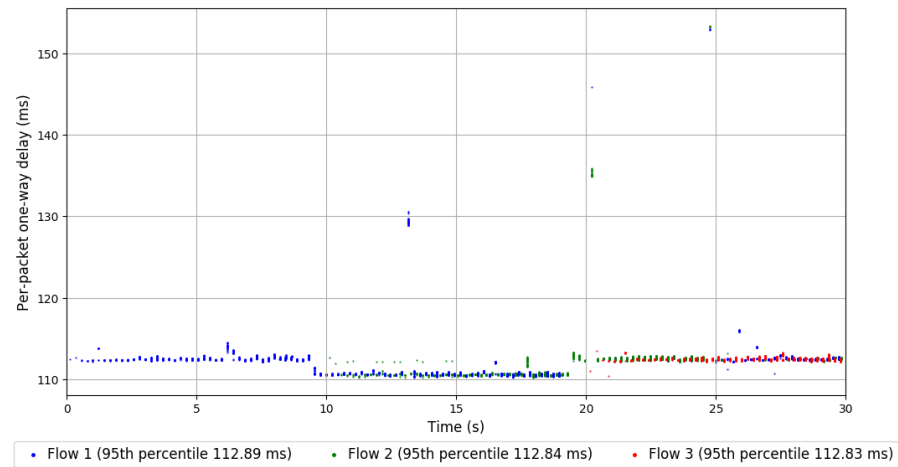
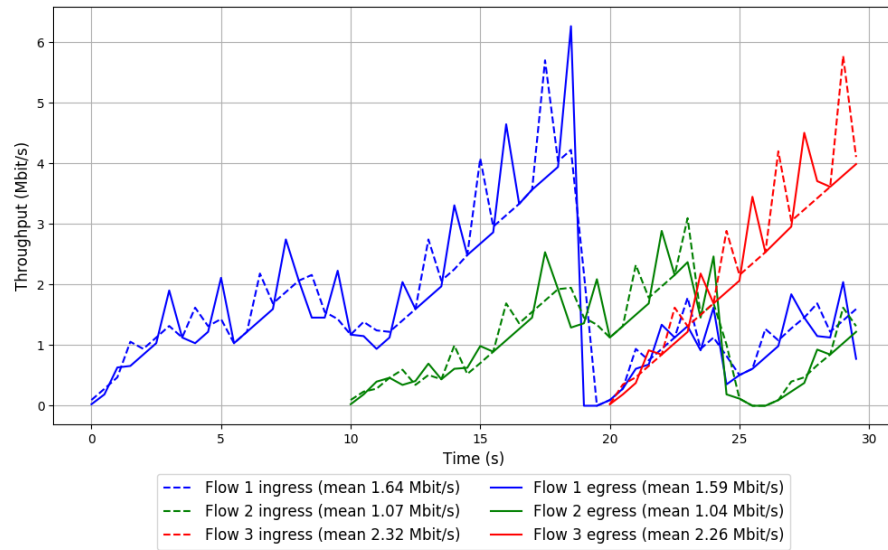
-- Flow 3:

Average throughput: 2.26 Mbit/s

95th percentile per-packet one-way delay: 112.830 ms

Loss rate: 4.56%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-02-13 20:42:46

End at: 2018-02-13 20:43:16

Below is generated by plot.py at 2018-02-14 01:43:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.64 Mbit/s

95th percentile per-packet one-way delay: 113.162 ms

Loss rate: 2.45%

-- Flow 1:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 113.327 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 112.173 ms

Loss rate: 2.76%

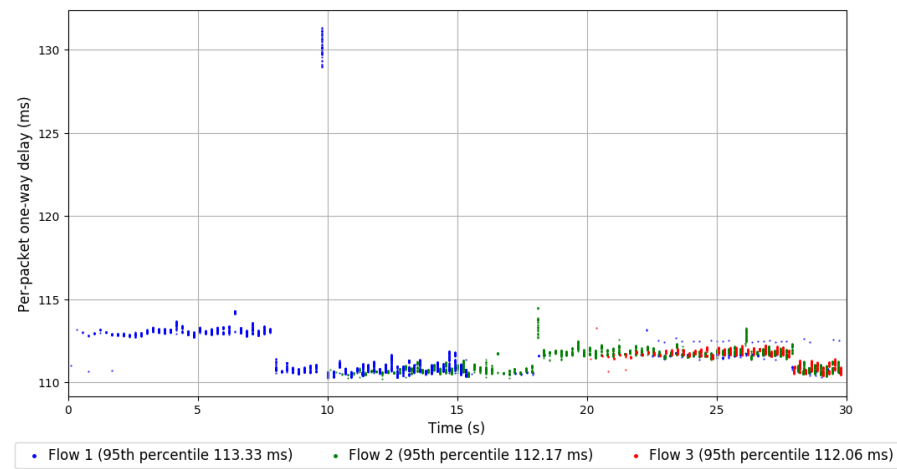
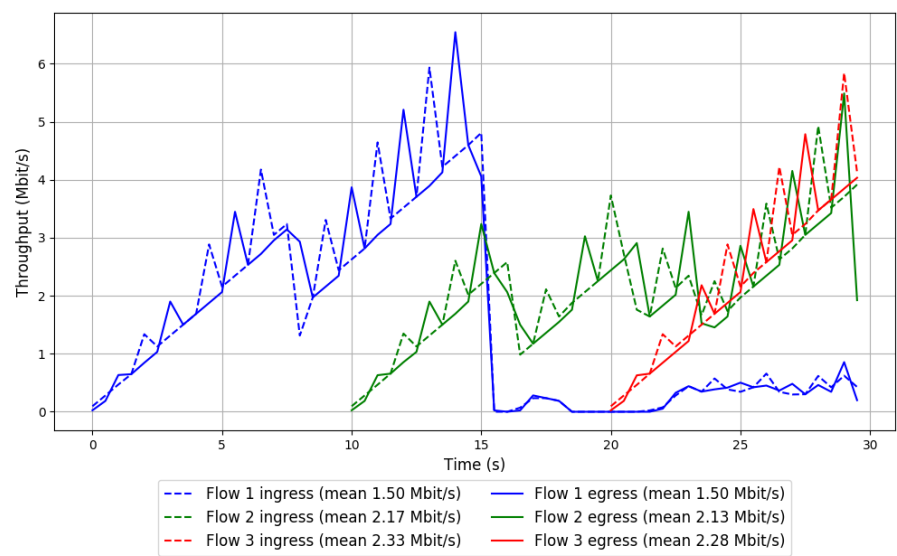
-- Flow 3:

Average throughput: 2.28 Mbit/s

95th percentile per-packet one-way delay: 112.061 ms

Loss rate: 4.53%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-02-13 21:02:15

End at: 2018-02-13 21:02:45

Below is generated by plot.py at 2018-02-14 01:43:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.69 Mbit/s

95th percentile per-packet one-way delay: 113.500 ms

Loss rate: 2.67%

-- Flow 1:

Average throughput: 1.55 Mbit/s

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

Loss rate: 1.54%

-- Flow 2:

Average throughput: 2.62 Mbit/s

95th percentile per-packet one-way delay: 113.622 ms

Loss rate: 2.47%

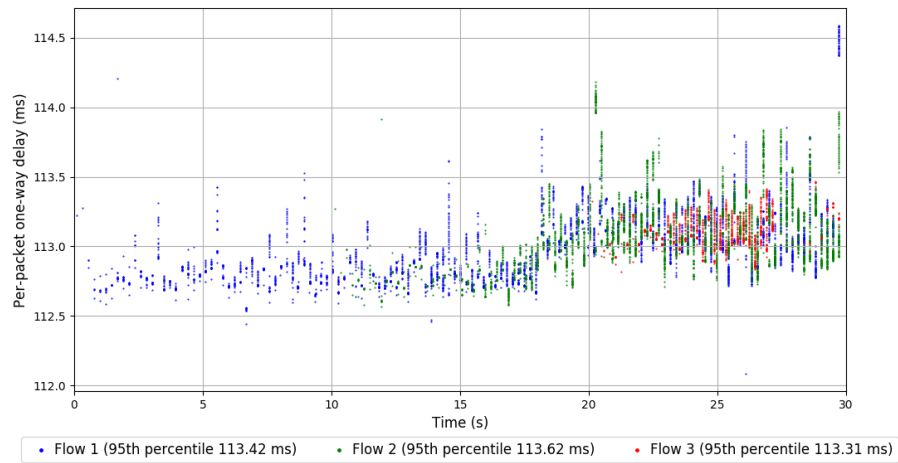
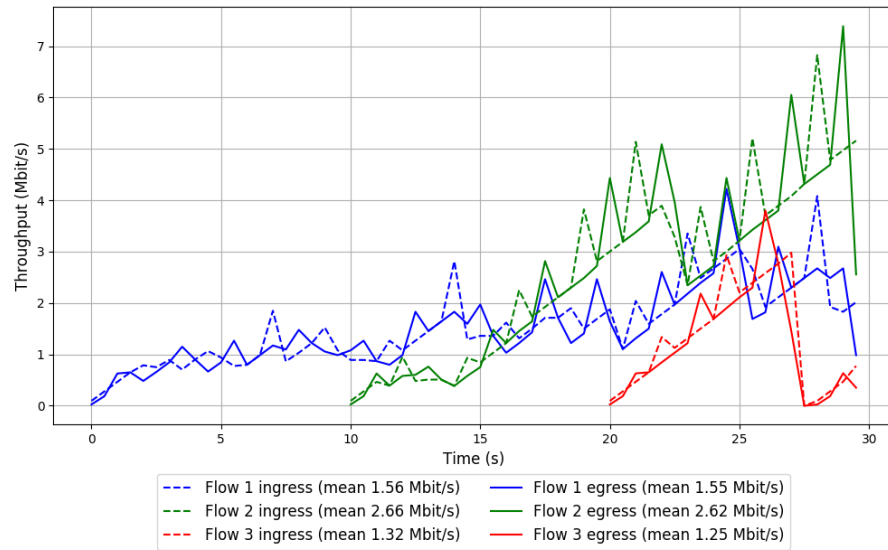
-- Flow 3:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 113.313 ms

Loss rate: 7.51%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-02-13 21:21:56

End at: 2018-02-13 21:22:26

Below is generated by plot.py at 2018-02-14 01:43:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.69 Mbit/s

95th percentile per-packet one-way delay: 113.086 ms

Loss rate: 1.79%

-- Flow 1:

Average throughput: 2.31 Mbit/s

95th percentile per-packet one-way delay: 113.076 ms

Loss rate: 1.31%

-- Flow 2:

Average throughput: 2.06 Mbit/s

95th percentile per-packet one-way delay: 113.103 ms

Loss rate: 2.59%

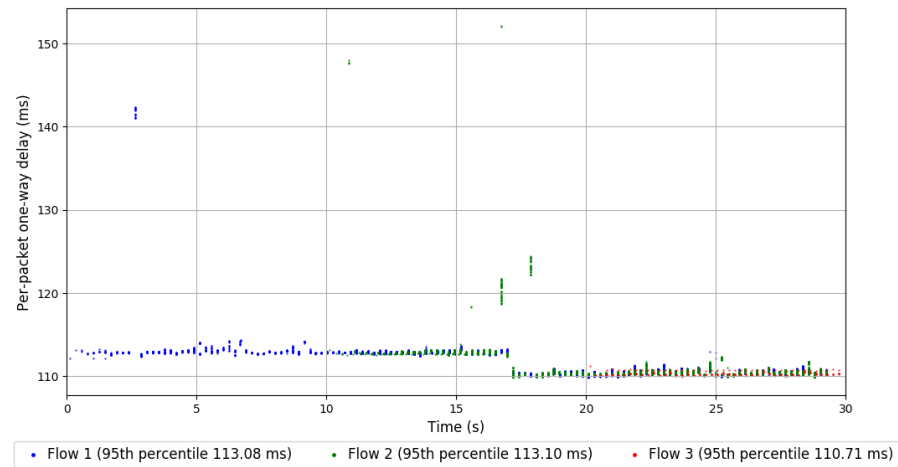
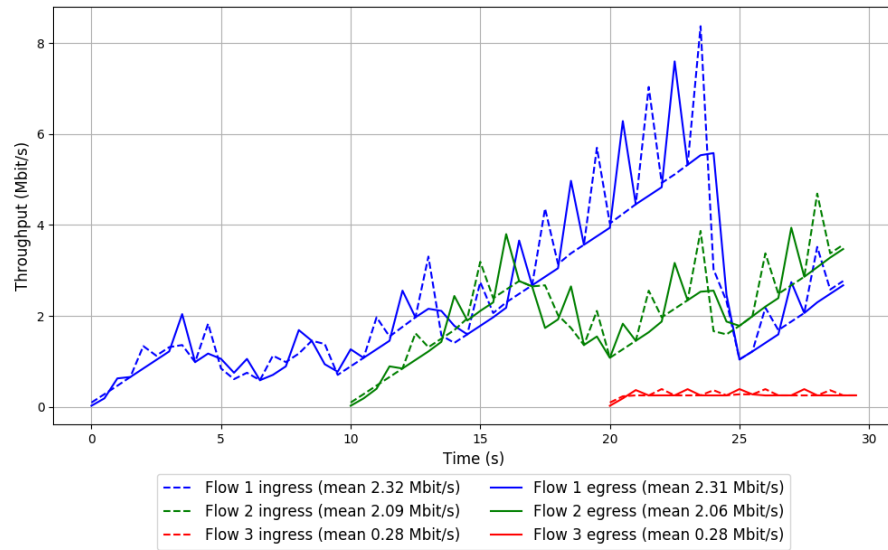
-- Flow 3:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 110.713 ms

Loss rate: 2.12%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-02-13 21:41:35

End at: 2018-02-13 21:42:05

Below is generated by plot.py at 2018-02-14 01:43:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.71 Mbit/s

95th percentile per-packet one-way delay: 114.487 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 114.515 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 2.49 Mbit/s

95th percentile per-packet one-way delay: 114.443 ms

Loss rate: 1.33%

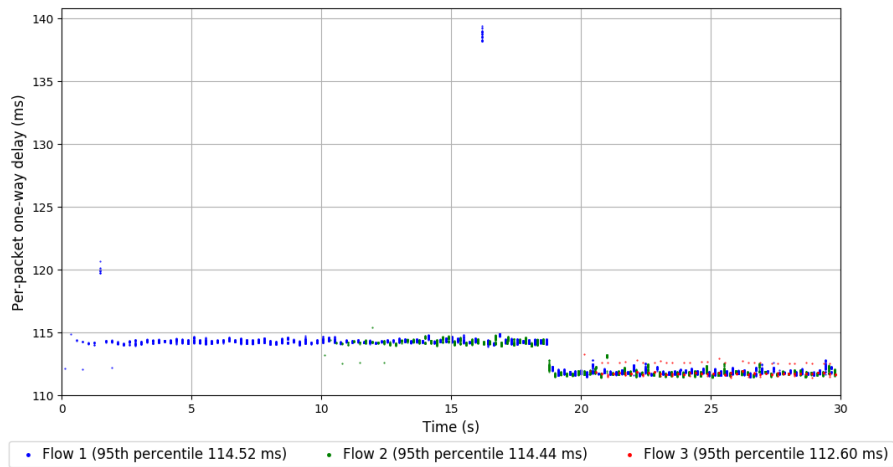
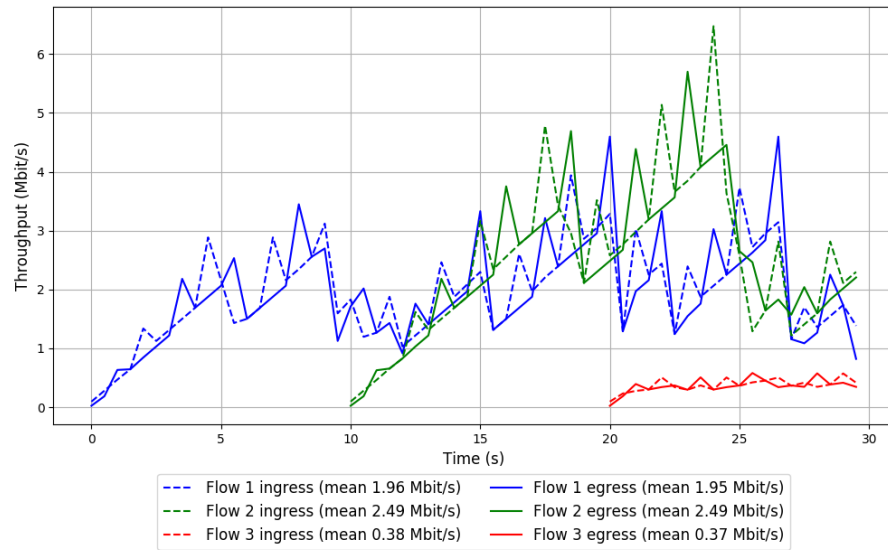
-- Flow 3:

Average throughput: 0.37 Mbit/s

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

Loss rate: 3.05%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2018-02-13 22:01:27

End at: 2018-02-13 22:01:57

Below is generated by plot.py at 2018-02-14 01:43:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.74 Mbit/s

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

Loss rate: 1.79%

-- Flow 1:

Average throughput: 6.00 Mbit/s

95th percentile per-packet one-way delay: 112.492 ms

Loss rate: 1.64%

-- Flow 2:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 111.911 ms

Loss rate: 1.04%

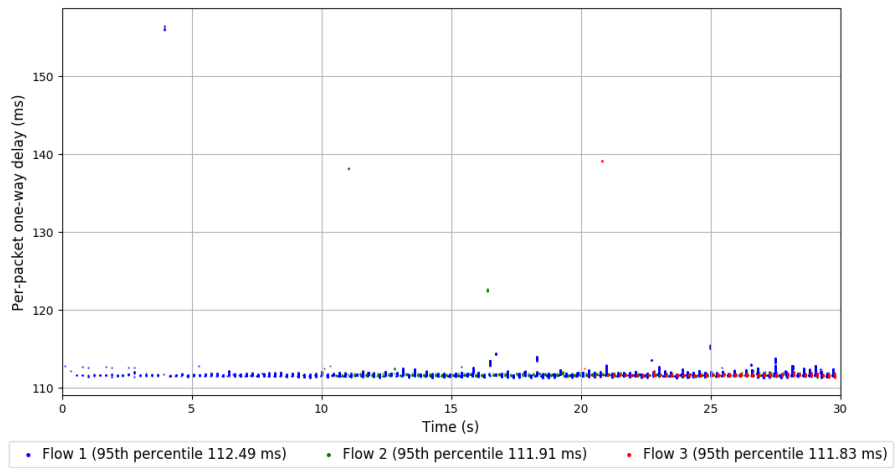
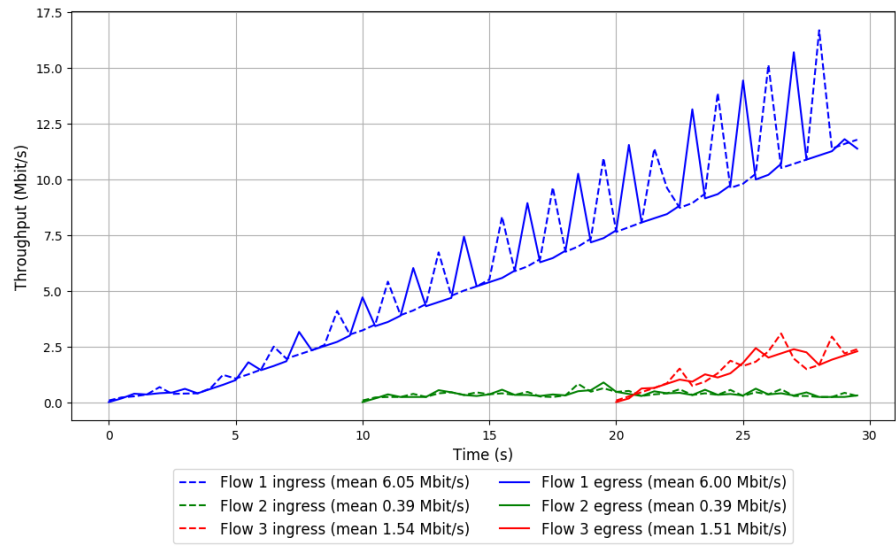
-- Flow 3:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 111.830 ms

Loss rate: 4.02%

Run 10: Report of LEDBAT — Data Link

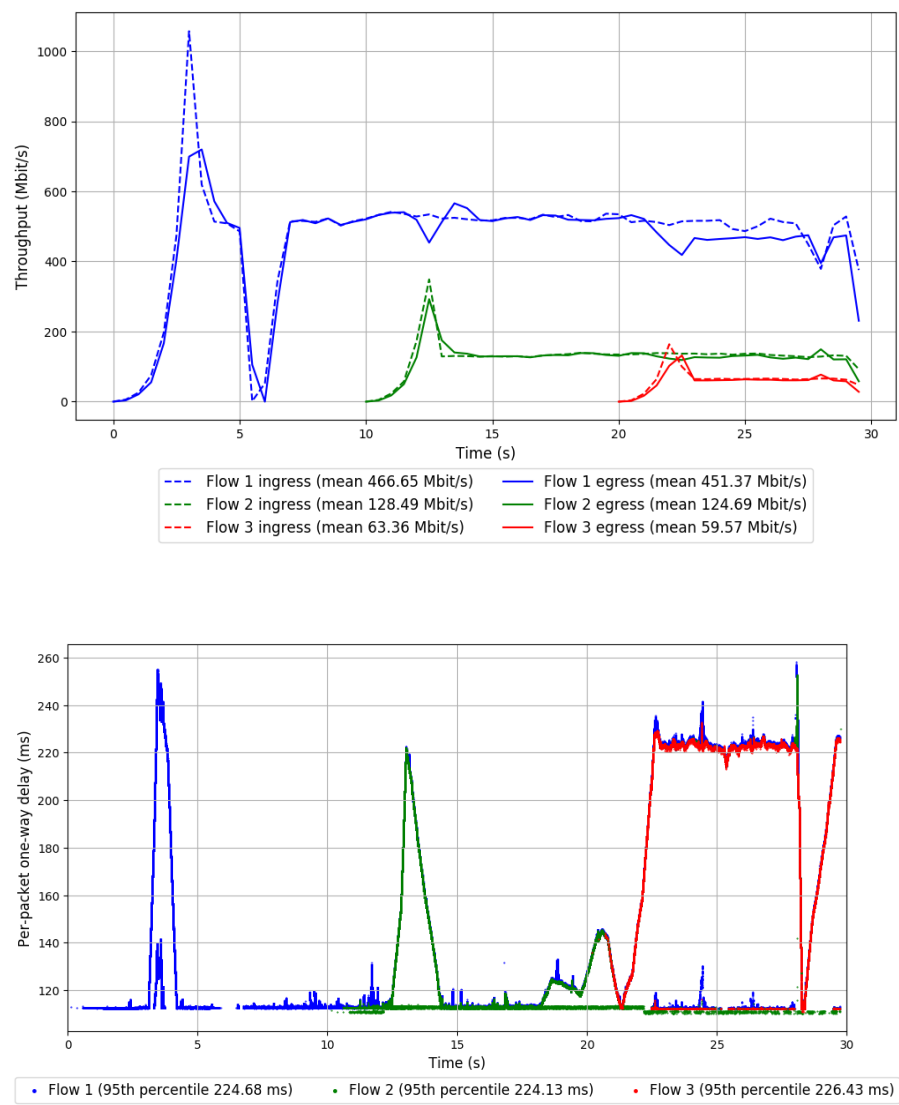


```
Run 1: Statistics of PCC

Start at: 2018-02-13 19:09:51
End at: 2018-02-13 19:10:21

# Below is generated by plot.py at 2018-02-14 01:51:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 553.00 Mbit/s
95th percentile per-packet one-way delay: 224.690 ms
Loss rate: 4.17%
-- Flow 1:
Average throughput: 451.37 Mbit/s
95th percentile per-packet one-way delay: 224.682 ms
Loss rate: 4.01%
-- Flow 2:
Average throughput: 124.69 Mbit/s
95th percentile per-packet one-way delay: 224.126 ms
Loss rate: 4.04%
-- Flow 3:
Average throughput: 59.57 Mbit/s
95th percentile per-packet one-way delay: 226.426 ms
Loss rate: 8.38%
```

Run 1: Report of PCC — Data Link

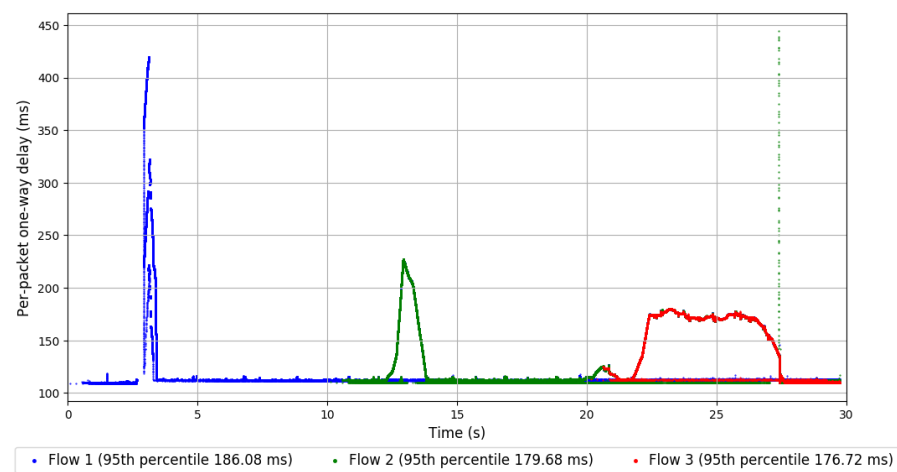
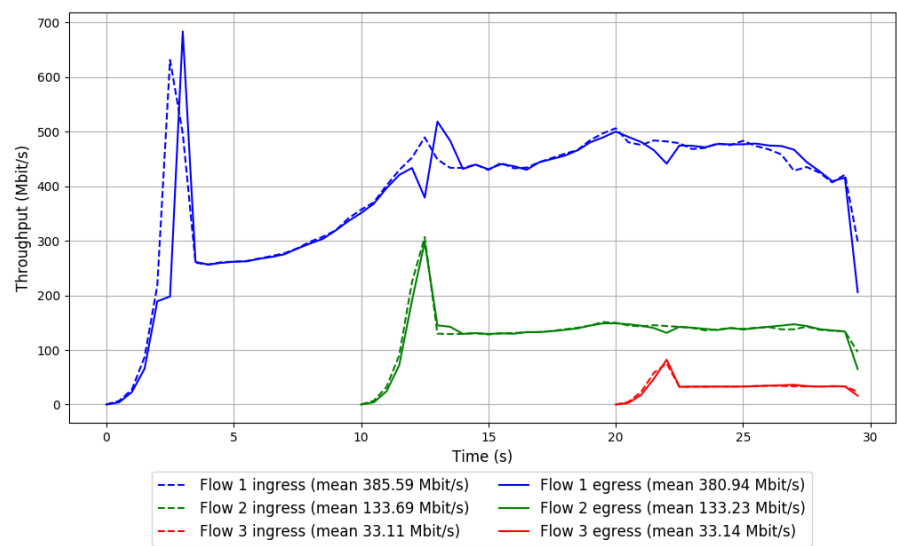


```
Run 2: Statistics of PCC

Start at: 2018-02-13 19:29:41
End at: 2018-02-13 19:30:11

# Below is generated by plot.py at 2018-02-14 01:51:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 479.83 Mbit/s
95th percentile per-packet one-way delay: 180.304 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 380.94 Mbit/s
95th percentile per-packet one-way delay: 186.080 ms
Loss rate: 1.94%
-- Flow 2:
Average throughput: 133.23 Mbit/s
95th percentile per-packet one-way delay: 179.680 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 33.14 Mbit/s
95th percentile per-packet one-way delay: 176.717 ms
Loss rate: 2.24%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-02-13 19:49:16

End at: 2018-02-13 19:49:46

Below is generated by plot.py at 2018-02-14 01:51:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 564.77 Mbit/s

95th percentile per-packet one-way delay: 226.951 ms

Loss rate: 2.38%

-- Flow 1:

Average throughput: 515.54 Mbit/s

95th percentile per-packet one-way delay: 226.900 ms

Loss rate: 2.41%

-- Flow 2:

Average throughput: 70.29 Mbit/s

95th percentile per-packet one-way delay: 227.048 ms

Loss rate: 1.98%

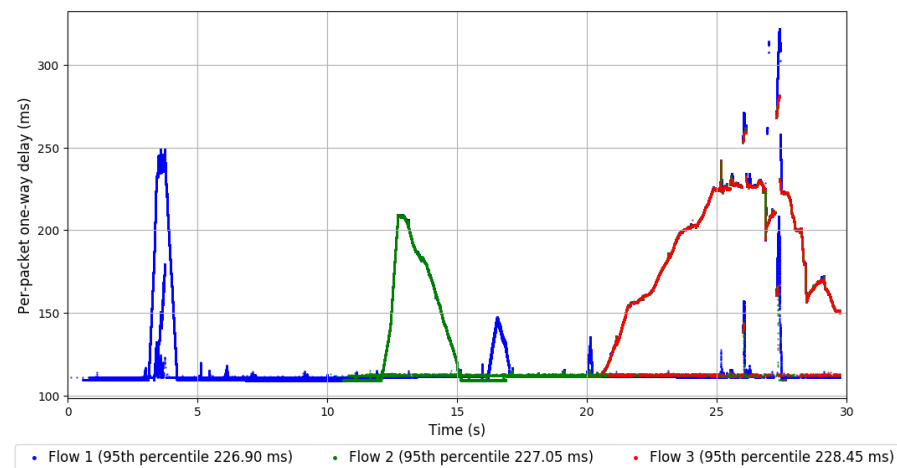
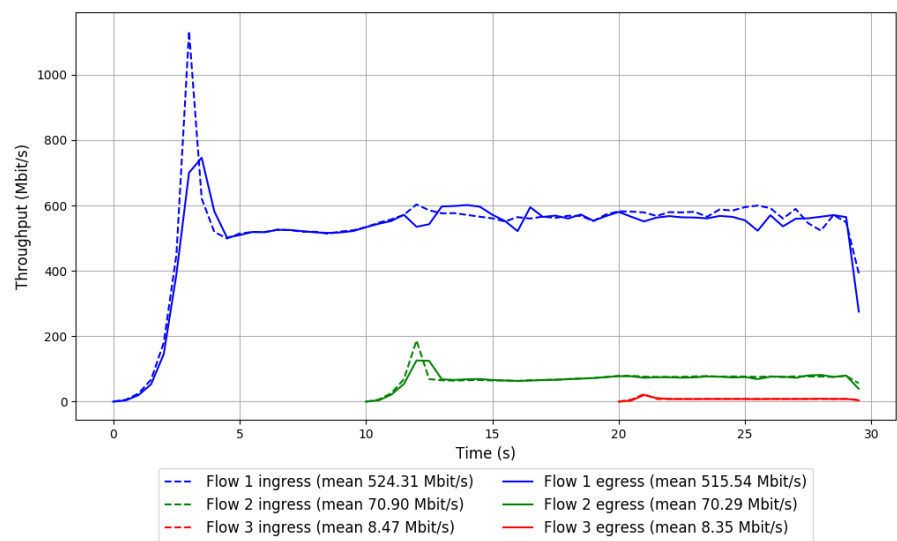
-- Flow 3:

Average throughput: 8.35 Mbit/s

95th percentile per-packet one-way delay: 228.452 ms

Loss rate: 3.69%

Run 3: Report of PCC — Data Link

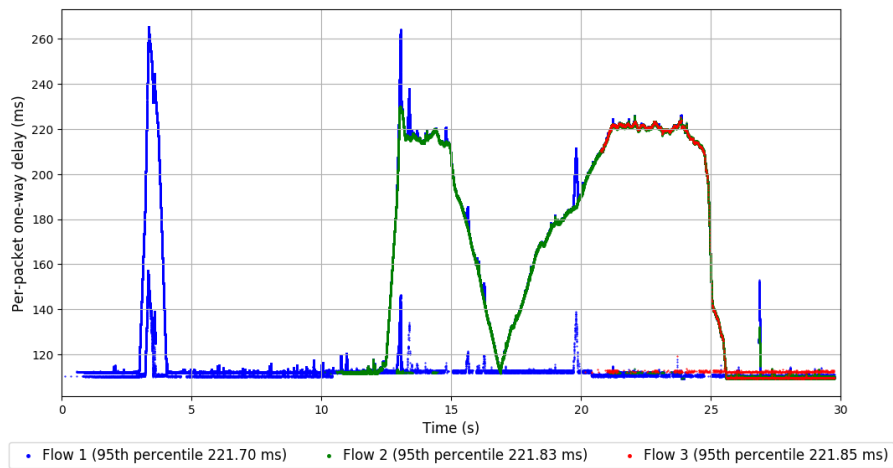
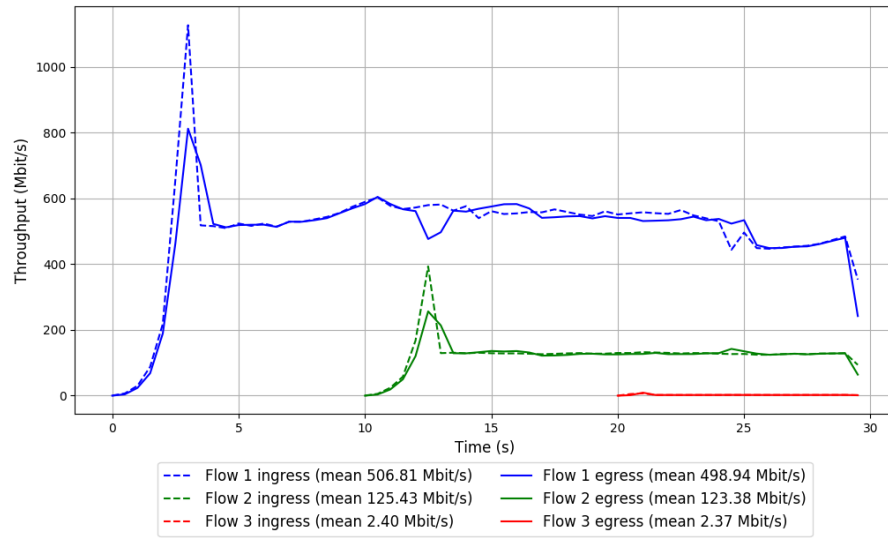


```
Run 4: Statistics of PCC

Start at: 2018-02-13 20:08:50
End at: 2018-02-13 20:09:20

# Below is generated by plot.py at 2018-02-14 01:51:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 581.34 Mbit/s
95th percentile per-packet one-way delay: 221.728 ms
Loss rate: 2.36%
-- Flow 1:
Average throughput: 498.94 Mbit/s
95th percentile per-packet one-way delay: 221.700 ms
Loss rate: 2.29%
-- Flow 2:
Average throughput: 123.38 Mbit/s
95th percentile per-packet one-way delay: 221.826 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 221.846 ms
Loss rate: 3.44%
```

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-02-13 20:28:41

End at: 2018-02-13 20:29:11

Below is generated by plot.py at 2018-02-14 01:52:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 579.11 Mbit/s

95th percentile per-packet one-way delay: 218.141 ms

Loss rate: 2.86%

-- Flow 1:

Average throughput: 538.71 Mbit/s

95th percentile per-packet one-way delay: 217.740 ms

Loss rate: 2.58%

-- Flow 2:

Average throughput: 4.44 Mbit/s

95th percentile per-packet one-way delay: 217.065 ms

Loss rate: 2.36%

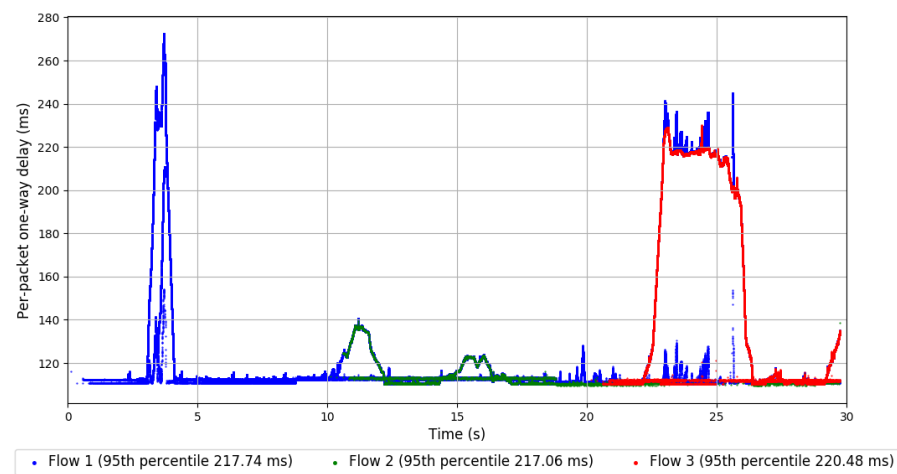
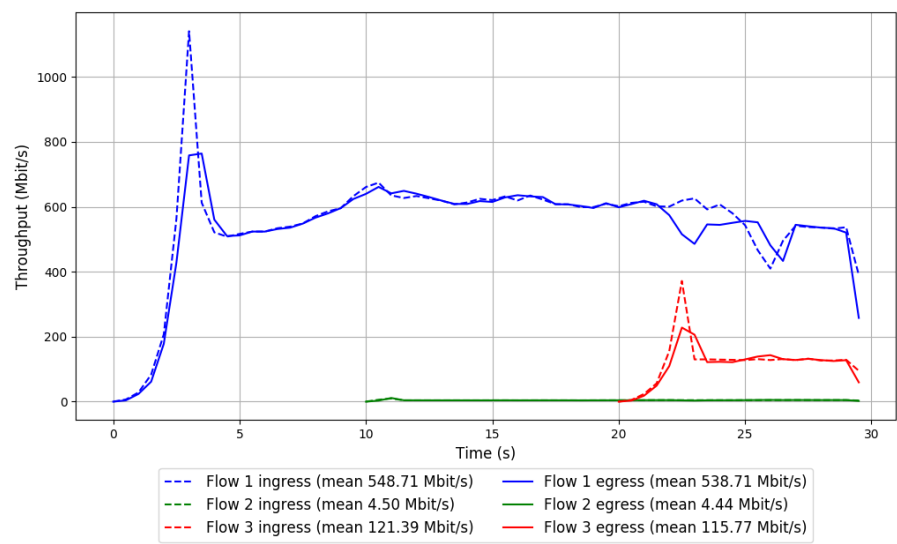
-- Flow 3:

Average throughput: 115.77 Mbit/s

95th percentile per-packet one-way delay: 220.484 ms

Loss rate: 6.81%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-02-13 20:47:47

End at: 2018-02-13 20:48:17

Below is generated by plot.py at 2018-02-14 01:52:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 593.82 Mbit/s

95th percentile per-packet one-way delay: 220.873 ms

Loss rate: 2.04%

-- Flow 1:

Average throughput: 547.30 Mbit/s

95th percentile per-packet one-way delay: 222.972 ms

Loss rate: 2.02%

-- Flow 2:

Average throughput: 39.75 Mbit/s

95th percentile per-packet one-way delay: 213.178 ms

Loss rate: 1.78%

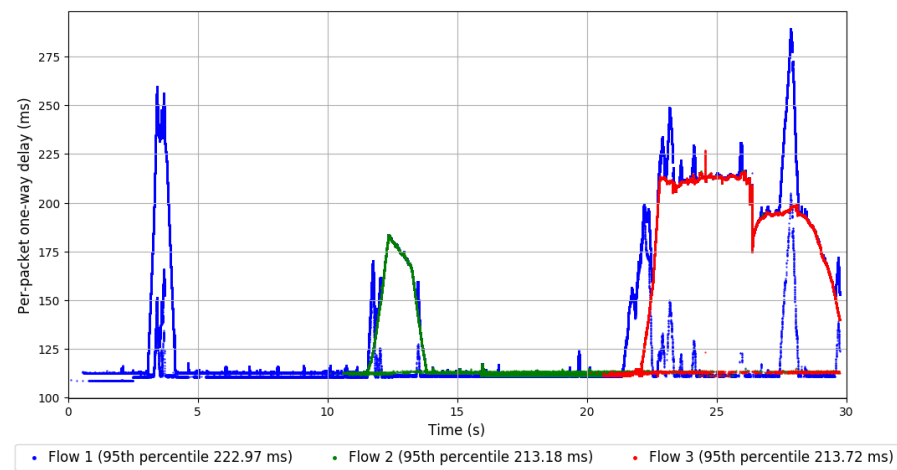
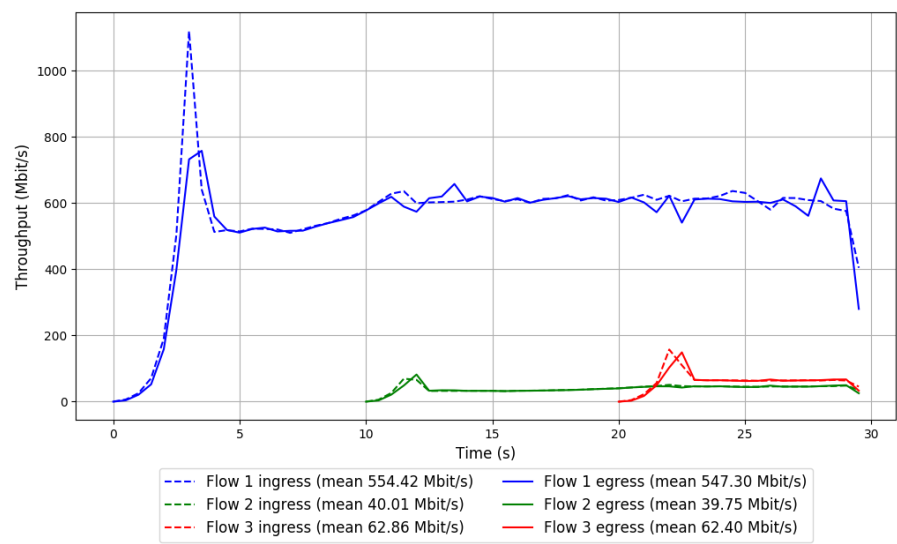
-- Flow 3:

Average throughput: 62.40 Mbit/s

95th percentile per-packet one-way delay: 213.718 ms

Loss rate: 3.02%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-02-13 21:07:17

End at: 2018-02-13 21:07:47

Below is generated by plot.py at 2018-02-14 01:52:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 562.10 Mbit/s

95th percentile per-packet one-way delay: 224.898 ms

Loss rate: 2.08%

-- Flow 1:

Average throughput: 475.18 Mbit/s

95th percentile per-packet one-way delay: 224.886 ms

Loss rate: 2.07%

-- Flow 2:

Average throughput: 130.30 Mbit/s

95th percentile per-packet one-way delay: 224.915 ms

Loss rate: 2.06%

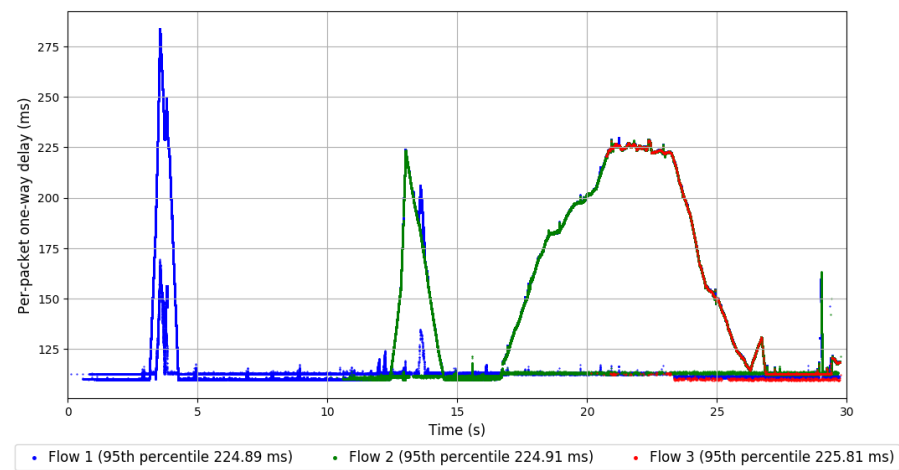
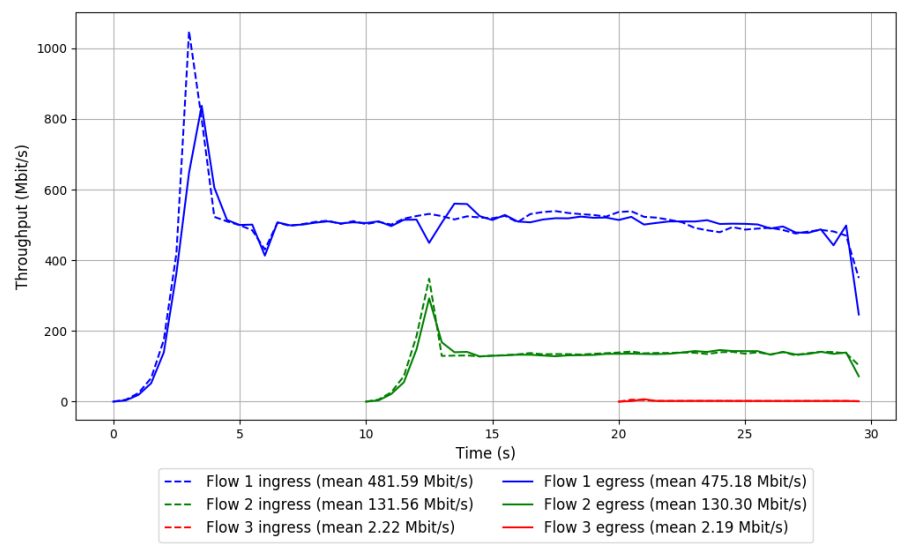
-- Flow 3:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 225.813 ms

Loss rate: 3.58%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-02-13 21:27:04

End at: 2018-02-13 21:27:34

Below is generated by plot.py at 2018-02-14 01:52:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 563.75 Mbit/s

95th percentile per-packet one-way delay: 221.495 ms

Loss rate: 1.62%

-- Flow 1:

Average throughput: 483.21 Mbit/s

95th percentile per-packet one-way delay: 221.488 ms

Loss rate: 1.47%

-- Flow 2:

Average throughput: 119.43 Mbit/s

95th percentile per-packet one-way delay: 221.543 ms

Loss rate: 2.52%

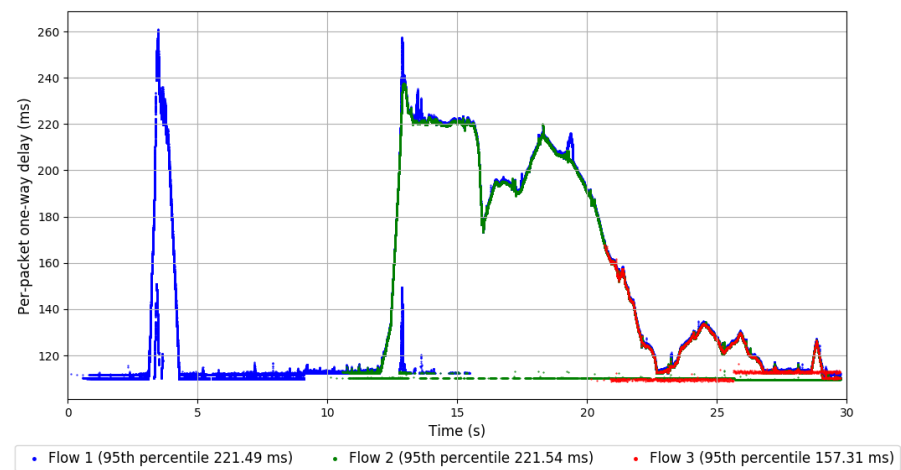
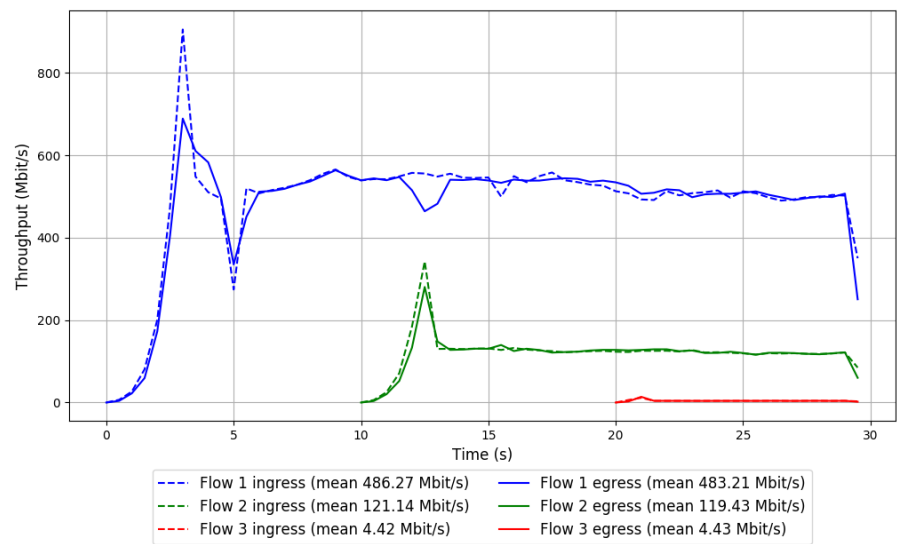
-- Flow 3:

Average throughput: 4.43 Mbit/s

95th percentile per-packet one-way delay: 157.312 ms

Loss rate: 2.03%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-02-13 21:46:40

End at: 2018-02-13 21:47:10

Below is generated by plot.py at 2018-02-14 02:01:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 600.99 Mbit/s

95th percentile per-packet one-way delay: 203.623 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 538.21 Mbit/s

95th percentile per-packet one-way delay: 205.159 ms

Loss rate: 1.75%

-- Flow 2:

Average throughput: 63.94 Mbit/s

95th percentile per-packet one-way delay: 199.340 ms

Loss rate: 1.30%

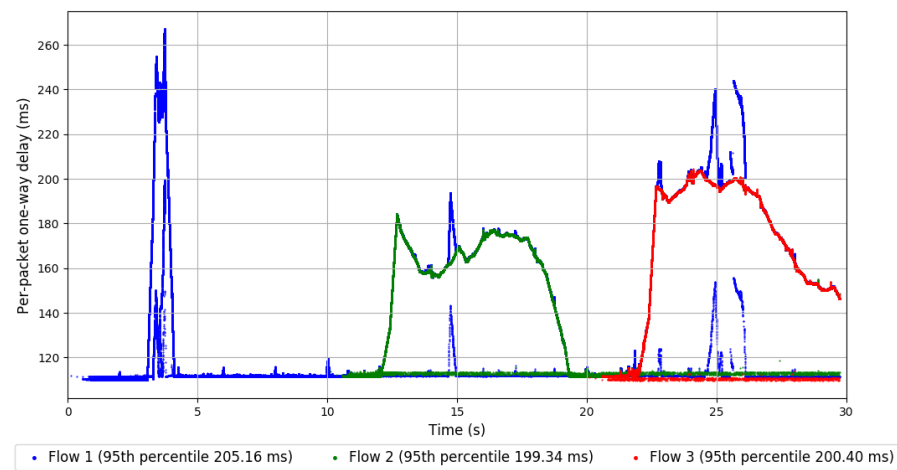
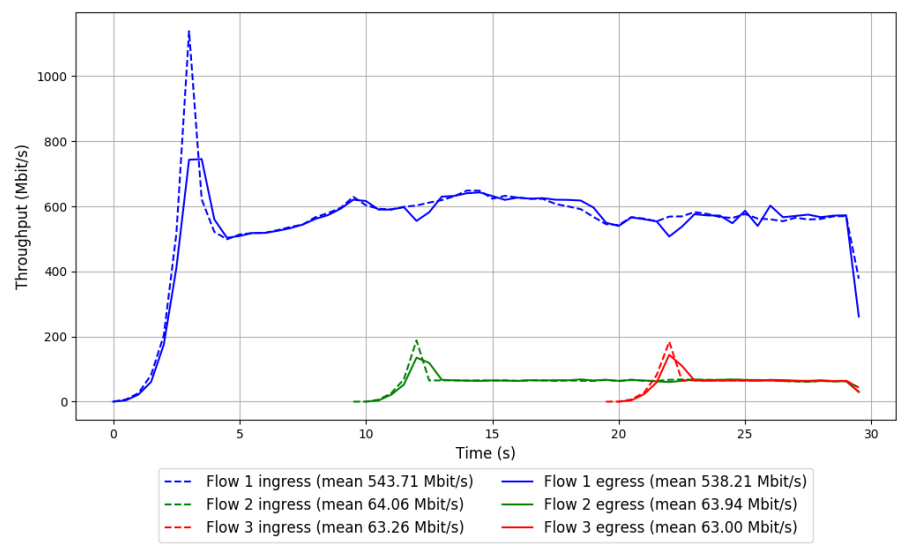
-- Flow 3:

Average throughput: 63.00 Mbit/s

95th percentile per-packet one-way delay: 200.396 ms

Loss rate: 2.65%

Run 9: Report of PCC — Data Link

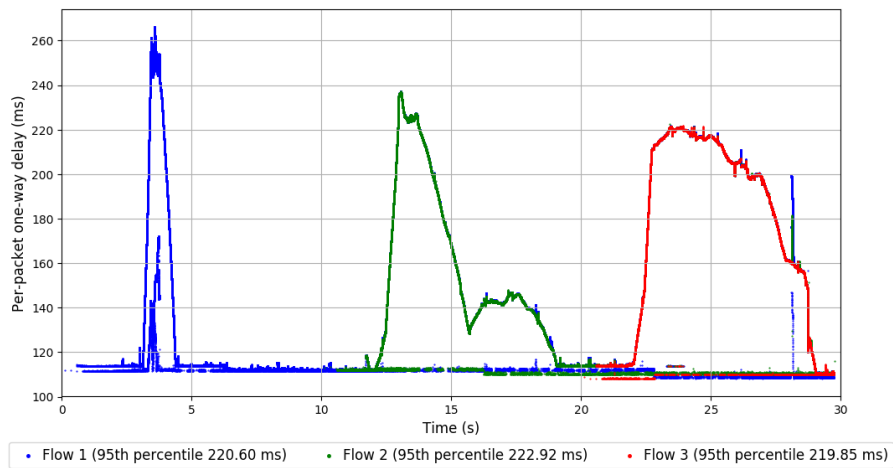
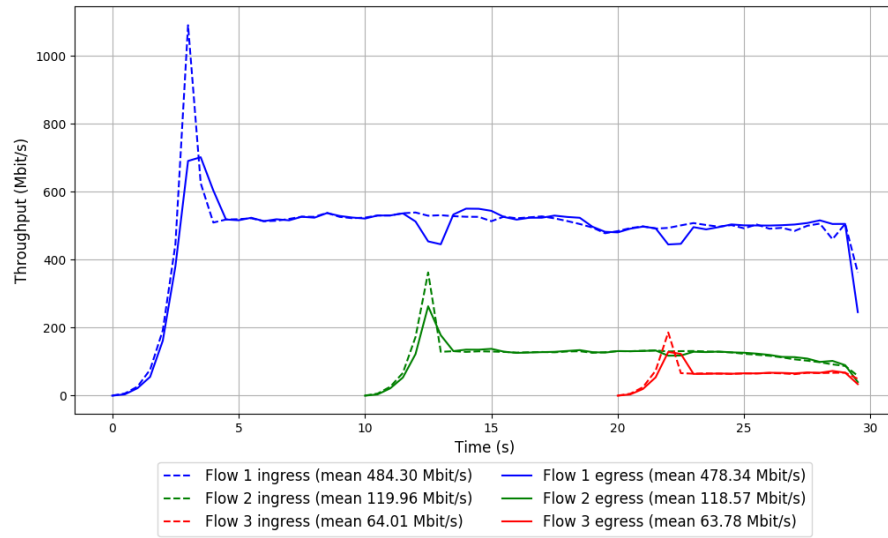


```
Run 10: Statistics of PCC

Start at: 2018-02-13 22:06:27
End at: 2018-02-13 22:06:57

# Below is generated by plot.py at 2018-02-14 02:01:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 577.48 Mbit/s
95th percentile per-packet one-way delay: 220.664 ms
Loss rate: 2.03%
-- Flow 1:
Average throughput: 478.34 Mbit/s
95th percentile per-packet one-way delay: 220.602 ms
Loss rate: 1.97%
-- Flow 2:
Average throughput: 118.57 Mbit/s
95th percentile per-packet one-way delay: 222.918 ms
Loss rate: 2.24%
-- Flow 3:
Average throughput: 63.78 Mbit/s
95th percentile per-packet one-way delay: 219.849 ms
Loss rate: 2.59%
```

Run 10: Report of PCC — Data Link

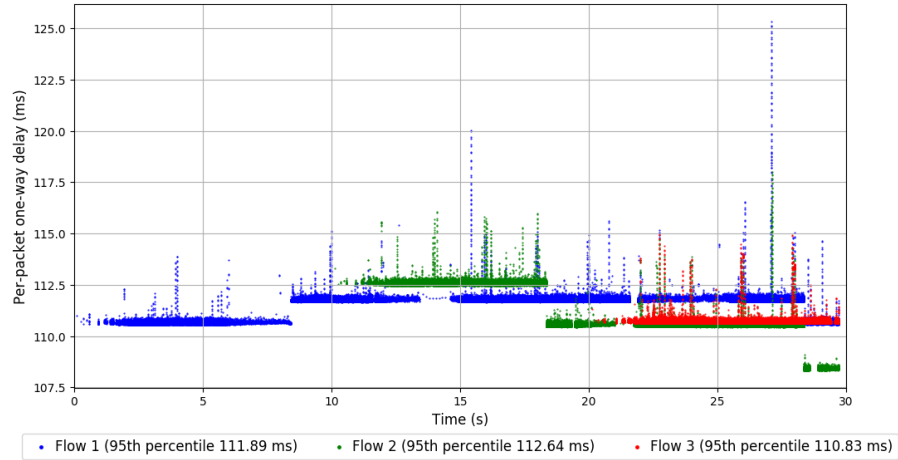
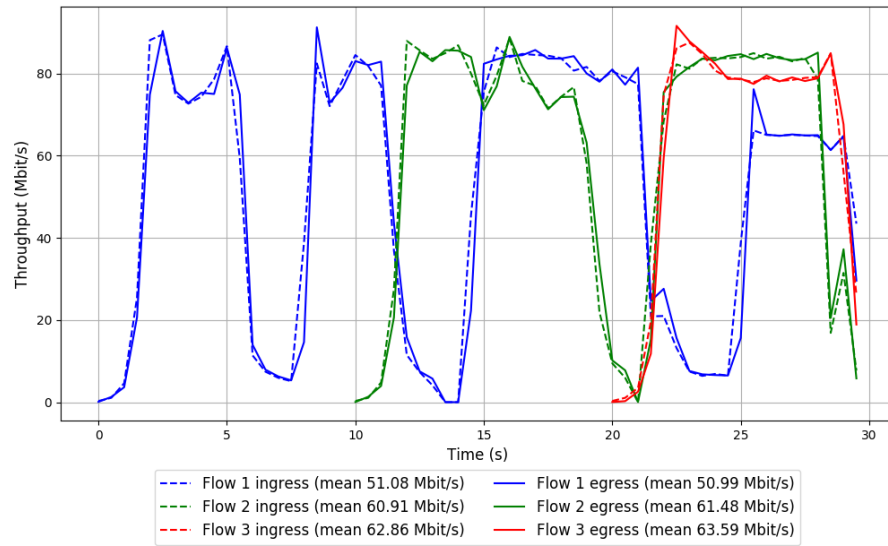


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-02-13 19:03:52
End at: 2018-02-13 19:04:22

# Below is generated by plot.py at 2018-02-14 02:01:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 112.30 Mbit/s
95th percentile per-packet one-way delay: 112.571 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 50.99 Mbit/s
95th percentile per-packet one-way delay: 111.893 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 61.48 Mbit/s
95th percentile per-packet one-way delay: 112.639 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 63.59 Mbit/s
95th percentile per-packet one-way delay: 110.827 ms
Loss rate: 1.10%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-02-13 19:23:36

End at: 2018-02-13 19:24:06

Below is generated by plot.py at 2018-02-14 02:01:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.17 Mbit/s

95th percentile per-packet one-way delay: 112.447 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 69.36 Mbit/s

95th percentile per-packet one-way delay: 112.293 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 34.82 Mbit/s

95th percentile per-packet one-way delay: 112.539 ms

Loss rate: 1.55%

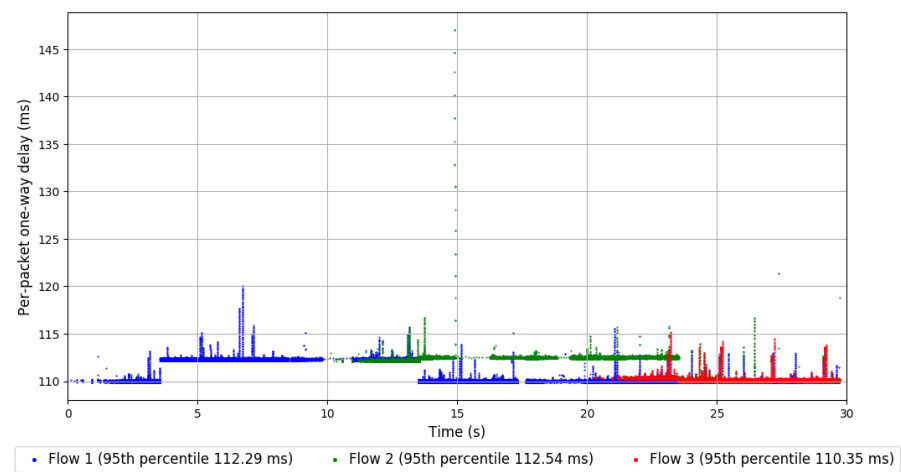
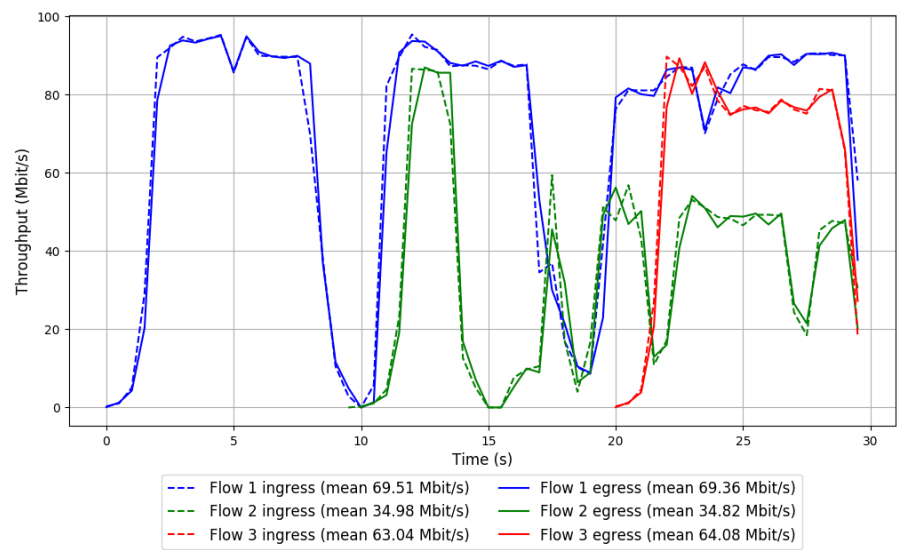
-- Flow 3:

Average throughput: 64.08 Mbit/s

95th percentile per-packet one-way delay: 110.352 ms

Loss rate: 0.67%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-02-13 19:43:22

End at: 2018-02-13 19:43:52

Below is generated by plot.py at 2018-02-14 02:01:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 117.10 Mbit/s

95th percentile per-packet one-way delay: 112.425 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 57.77 Mbit/s

95th percentile per-packet one-way delay: 111.352 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 62.22 Mbit/s

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

Loss rate: 0.13%

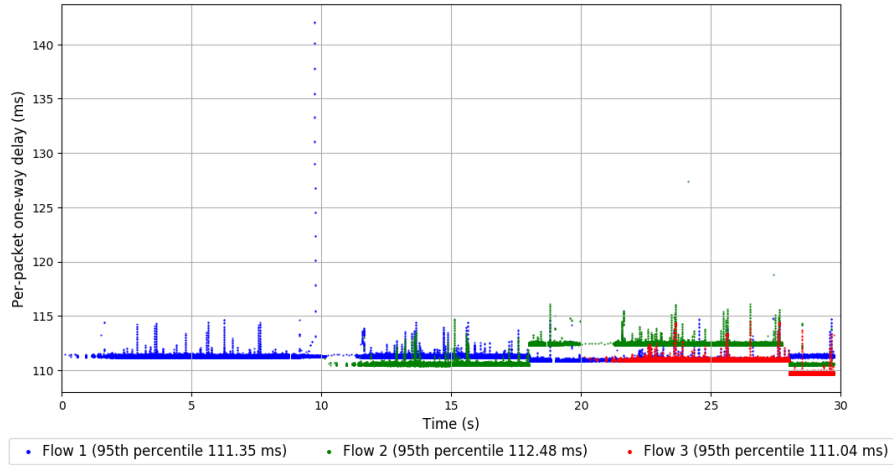
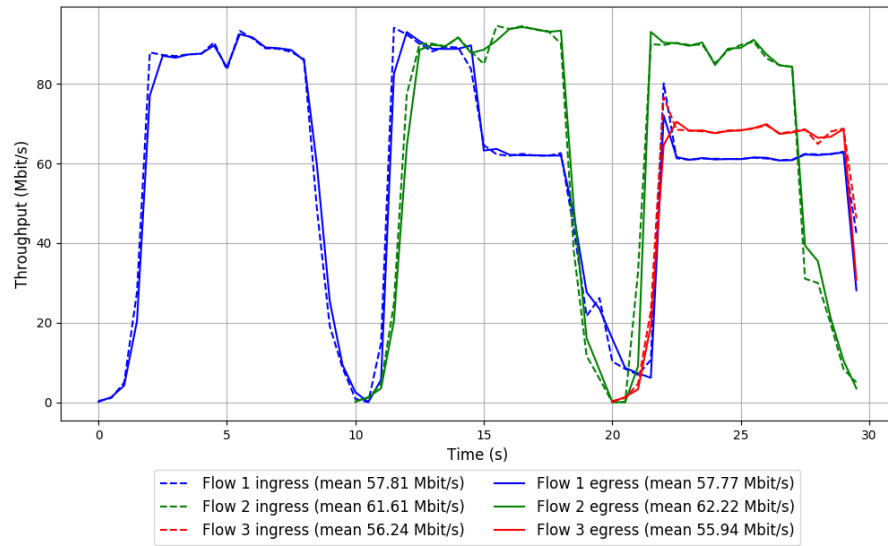
-- Flow 3:

Average throughput: 55.94 Mbit/s

95th percentile per-packet one-way delay: 111.040 ms

Loss rate: 2.78%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-02-13 20:02:46

End at: 2018-02-13 20:03:16

Below is generated by plot.py at 2018-02-14 02:01:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.12 Mbit/s

95th percentile per-packet one-way delay: 112.352 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 63.38 Mbit/s

95th percentile per-packet one-way delay: 111.195 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 54.60 Mbit/s

95th percentile per-packet one-way delay: 112.410 ms

Loss rate: 1.74%

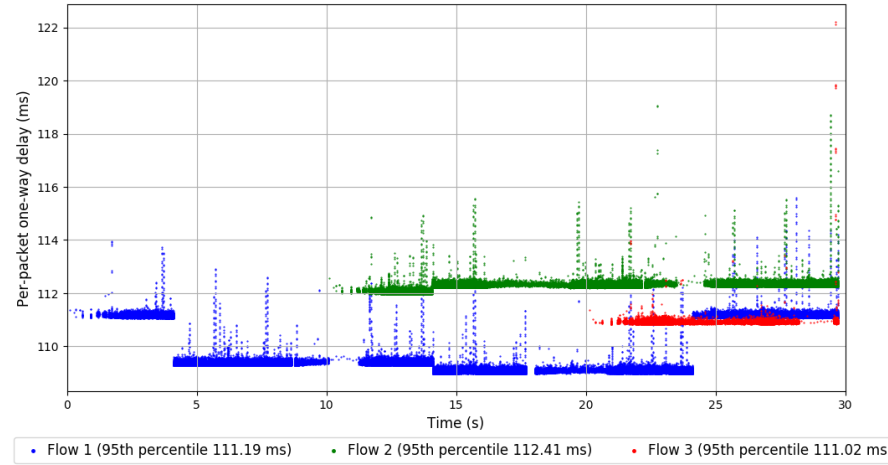
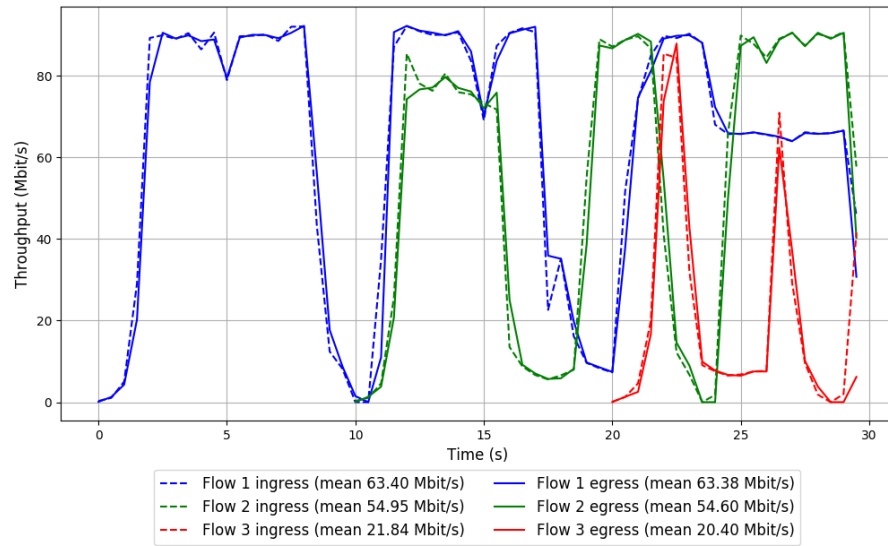
-- Flow 3:

Average throughput: 20.40 Mbit/s

95th percentile per-packet one-way delay: 111.016 ms

Loss rate: 8.72%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-02-13 20:22:41

End at: 2018-02-13 20:23:11

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.90 Mbit/s

95th percentile per-packet one-way delay: 112.150 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 64.91 Mbit/s

95th percentile per-packet one-way delay: 112.181 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 52.58 Mbit/s

95th percentile per-packet one-way delay: 110.278 ms

Loss rate: 1.43%

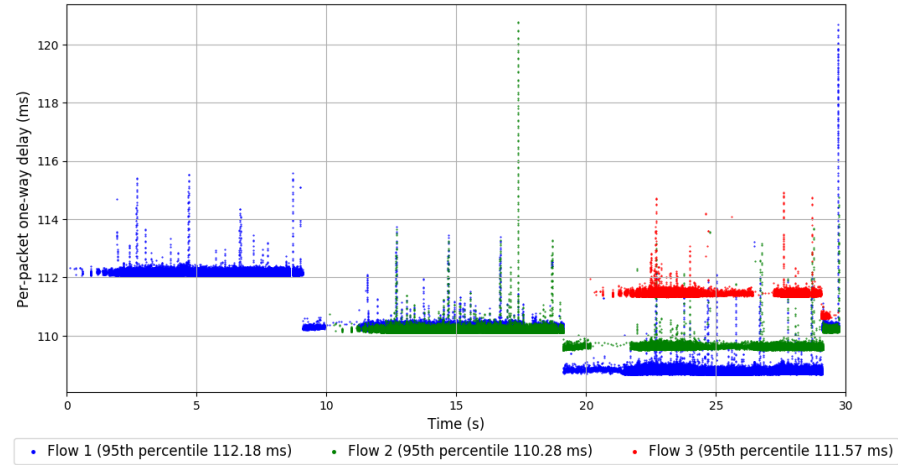
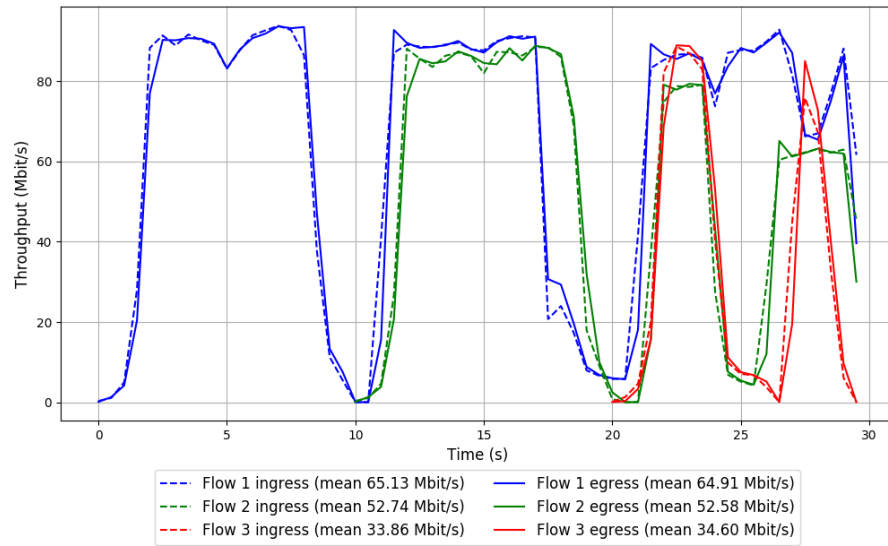
-- Flow 3:

Average throughput: 34.60 Mbit/s

95th percentile per-packet one-way delay: 111.566 ms

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-02-13 20:41:52

End at: 2018-02-13 20:42:22

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.07 Mbit/s

95th percentile per-packet one-way delay: 112.967 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 63.89 Mbit/s

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

Loss rate: 1.08%

-- Flow 2:

Average throughput: 54.55 Mbit/s

95th percentile per-packet one-way delay: 112.958 ms

Loss rate: 1.32%

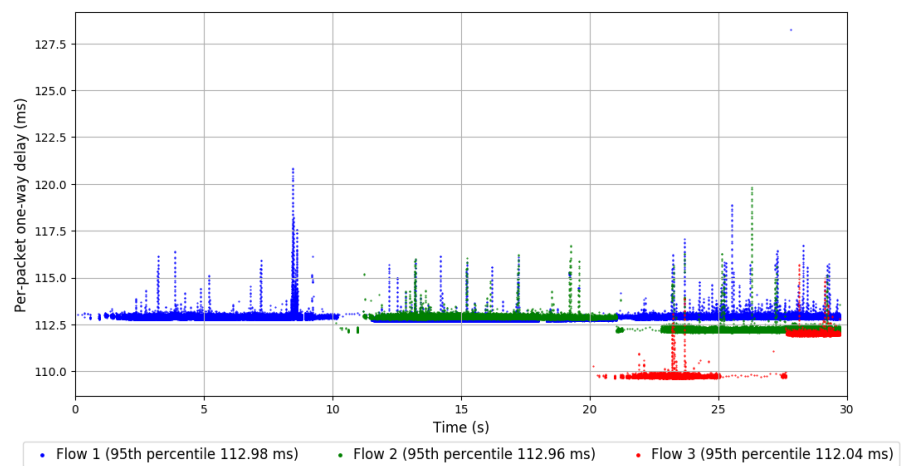
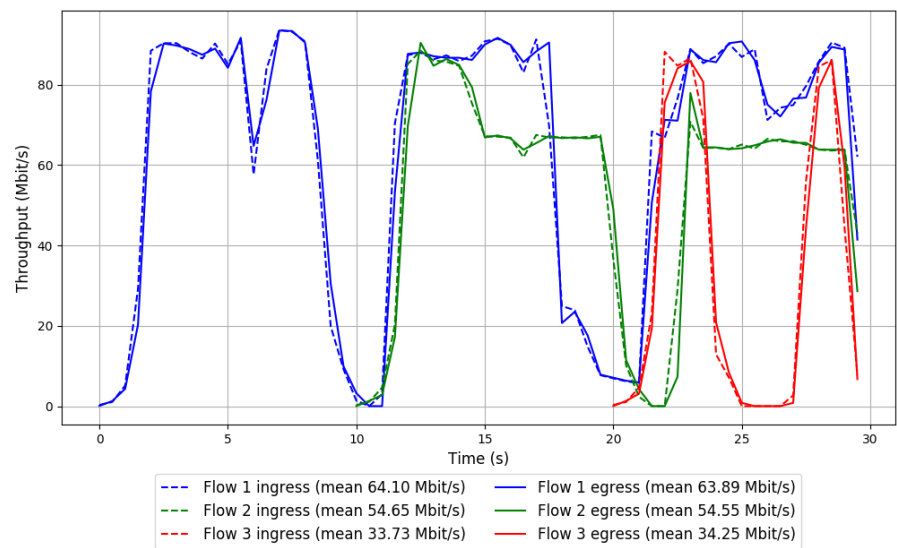
-- Flow 3:

Average throughput: 34.25 Mbit/s

95th percentile per-packet one-way delay: 112.037 ms

Loss rate: 0.73%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-02-13 21:01:22

End at: 2018-02-13 21:01:52

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.48 Mbit/s

95th percentile per-packet one-way delay: 112.783 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 56.42 Mbit/s

95th percentile per-packet one-way delay: 112.726 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 61.26 Mbit/s

95th percentile per-packet one-way delay: 112.830 ms

Loss rate: 0.39%

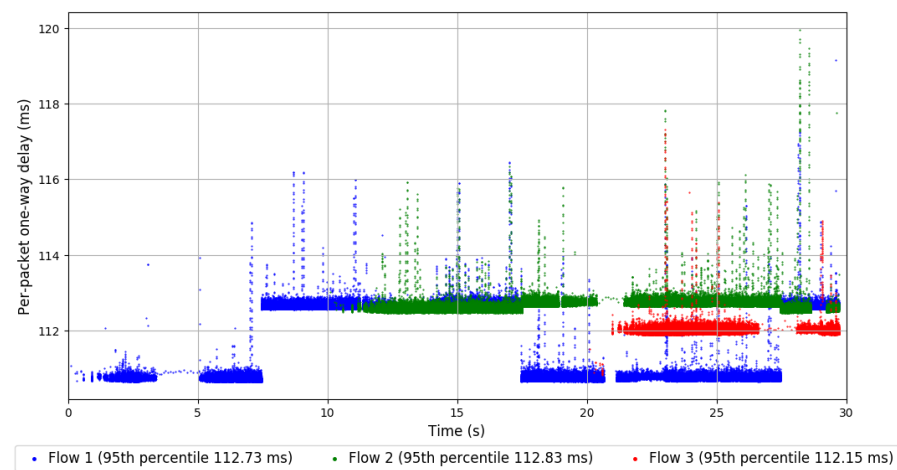
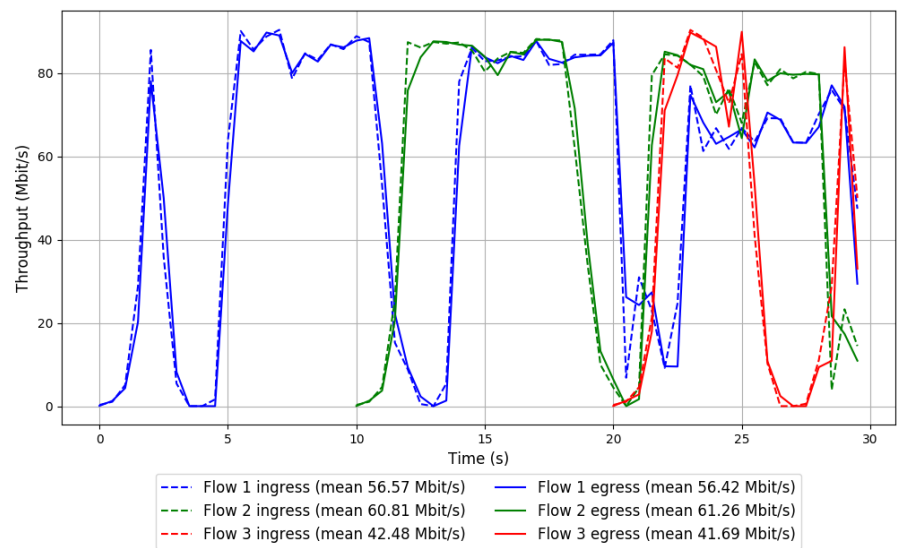
-- Flow 3:

Average throughput: 41.69 Mbit/s

95th percentile per-packet one-way delay: 112.149 ms

Loss rate: 4.06%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-02-13 21:21:03

End at: 2018-02-13 21:21:33

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.25 Mbit/s

95th percentile per-packet one-way delay: 112.385 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 58.36 Mbit/s

95th percentile per-packet one-way delay: 110.726 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 51.98 Mbit/s

95th percentile per-packet one-way delay: 112.445 ms

Loss rate: 1.85%

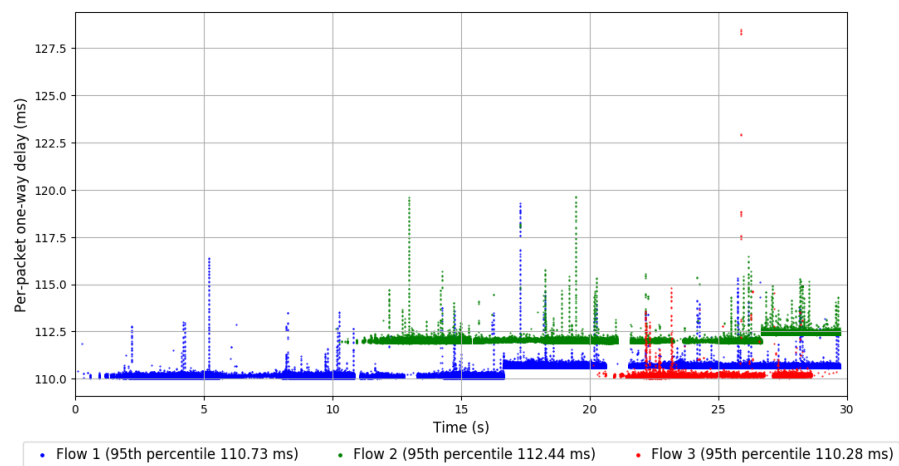
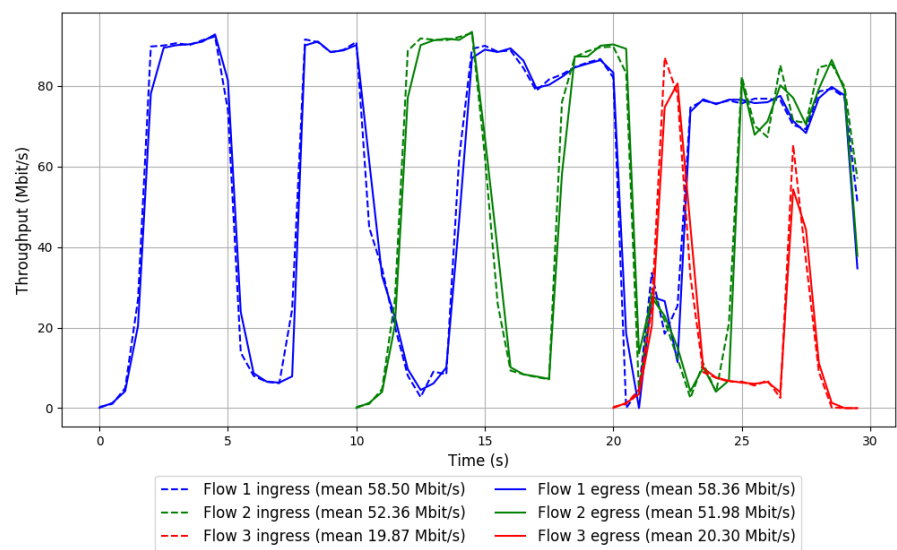
-- Flow 3:

Average throughput: 20.30 Mbit/s

95th percentile per-packet one-way delay: 110.283 ms

Loss rate: 0.00%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-02-13 21:40:40

End at: 2018-02-13 21:41:10

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 118.40 Mbit/s

95th percentile per-packet one-way delay: 113.923 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 65.47 Mbit/s

95th percentile per-packet one-way delay: 113.958 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 48.91 Mbit/s

95th percentile per-packet one-way delay: 111.973 ms

Loss rate: 1.52%

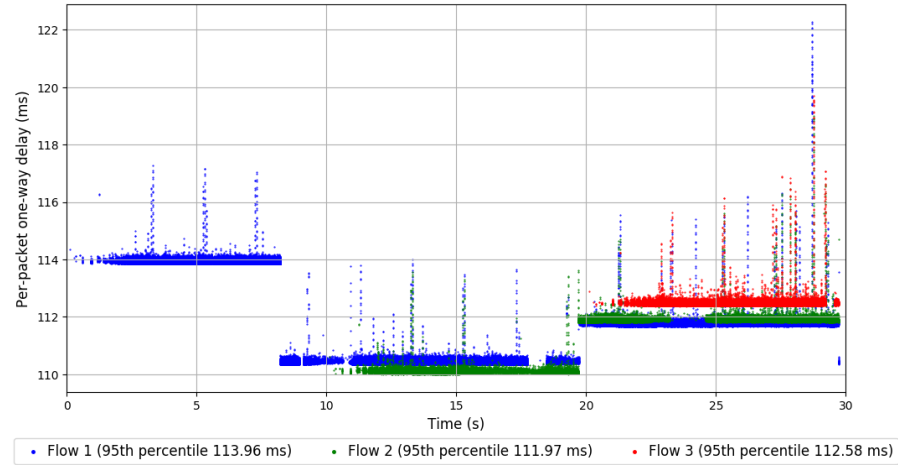
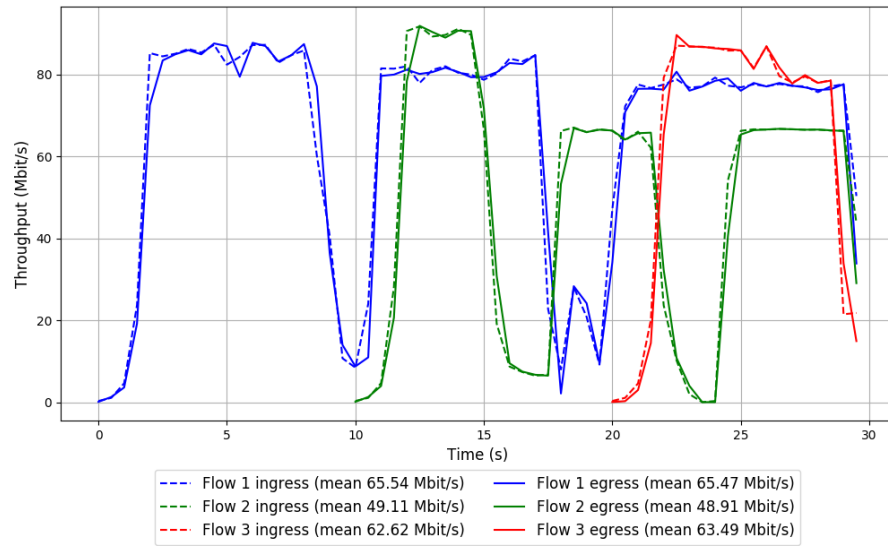
-- Flow 3:

Average throughput: 63.49 Mbit/s

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

Loss rate: 0.97%

Run 9: Report of QUIC Cubic — Data Link

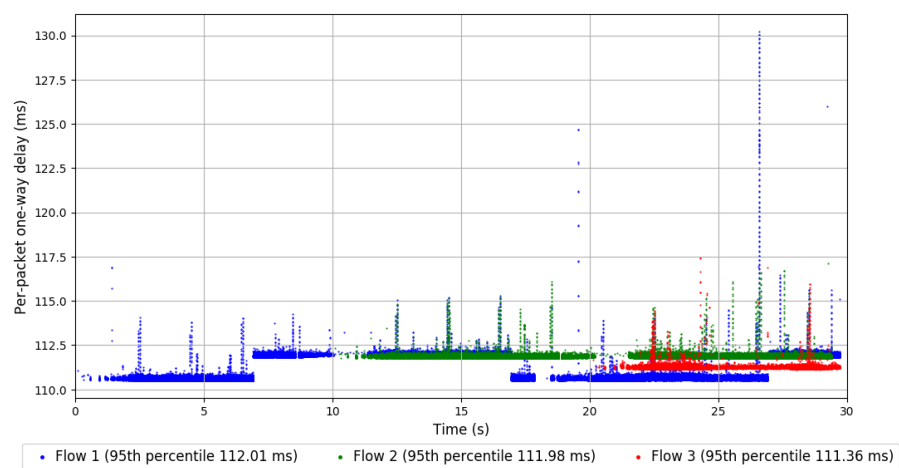
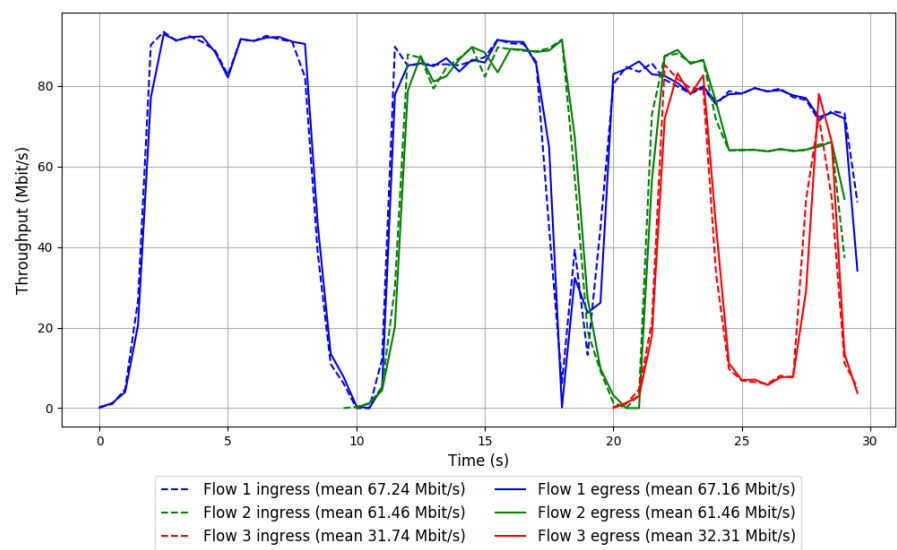


```
Run 10: Statistics of QUIC Cubic

Start at: 2018-02-13 22:00:33
End at: 2018-02-13 22:01:03

# Below is generated by plot.py at 2018-02-14 02:01:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 117.64 Mbit/s
95th percentile per-packet one-way delay: 111.995 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 67.16 Mbit/s
95th percentile per-packet one-way delay: 112.013 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 61.46 Mbit/s
95th percentile per-packet one-way delay: 111.976 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.31 Mbit/s
95th percentile per-packet one-way delay: 111.365 ms
Loss rate: 0.52%
```

Run 10: Report of QUIC Cubic — Data Link

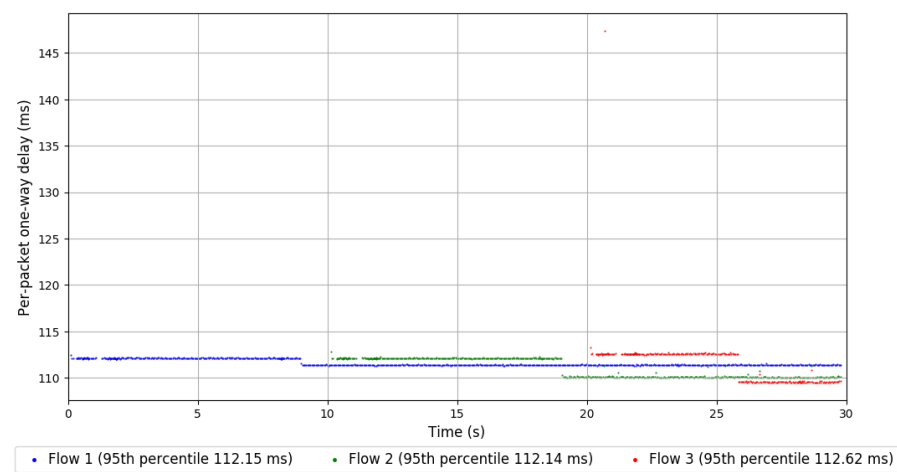
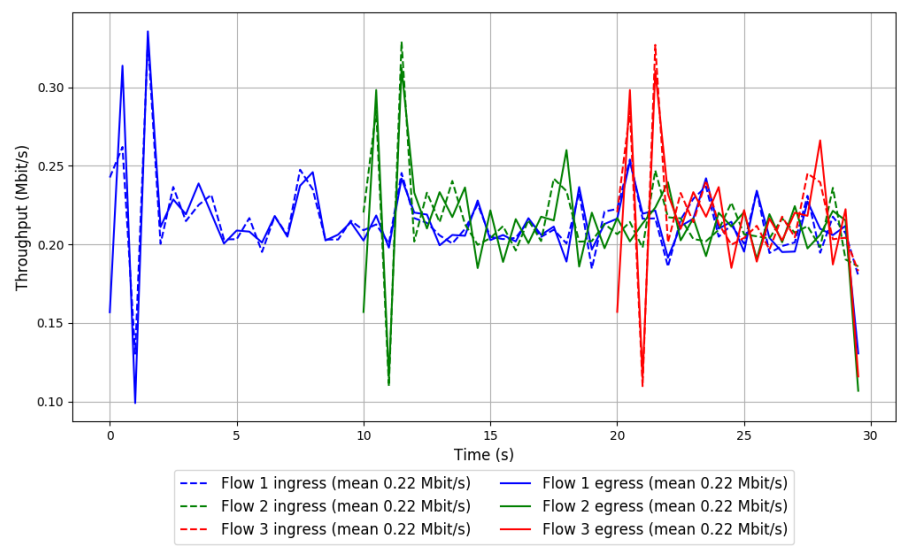


```
Run 1: Statistics of SCReAM

Start at: 2018-02-13 19:05:31
End at: 2018-02-13 19:06:01

# Below is generated by plot.py at 2018-02-14 02:01:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.560 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.149 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.138 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.623 ms
Loss rate: 2.27%
```

Run 1: Report of SReAM — Data Link

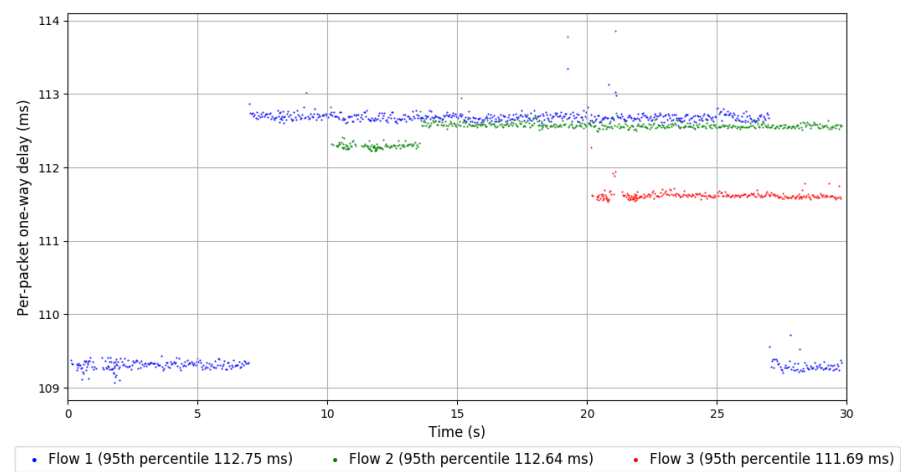
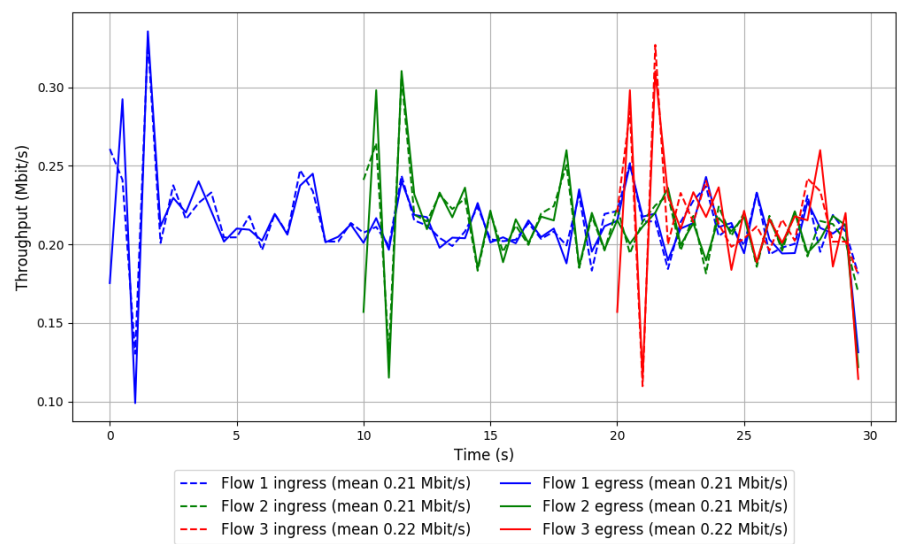


```
Run 2: Statistics of SCReAM

Start at: 2018-02-13 19:25:16
End at: 2018-02-13 19:25:46

# Below is generated by plot.py at 2018-02-14 02:01:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.731 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.750 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.637 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.689 ms
Loss rate: 2.25%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-02-13 19:45:02

End at: 2018-02-13 19:45:32

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 112.453 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 0.11 Mbit/s

95th percentile per-packet one-way delay: 111.828 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 0.12 Mbit/s

95th percentile per-packet one-way delay: 112.118 ms

Loss rate: 0.98%

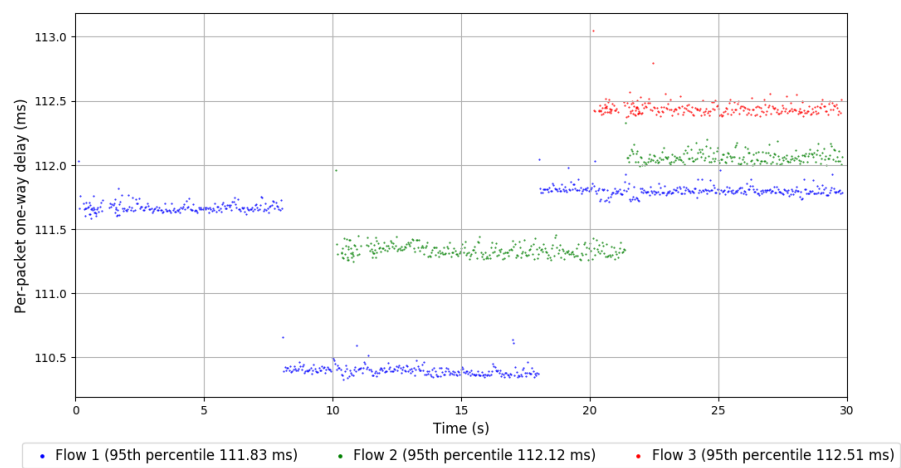
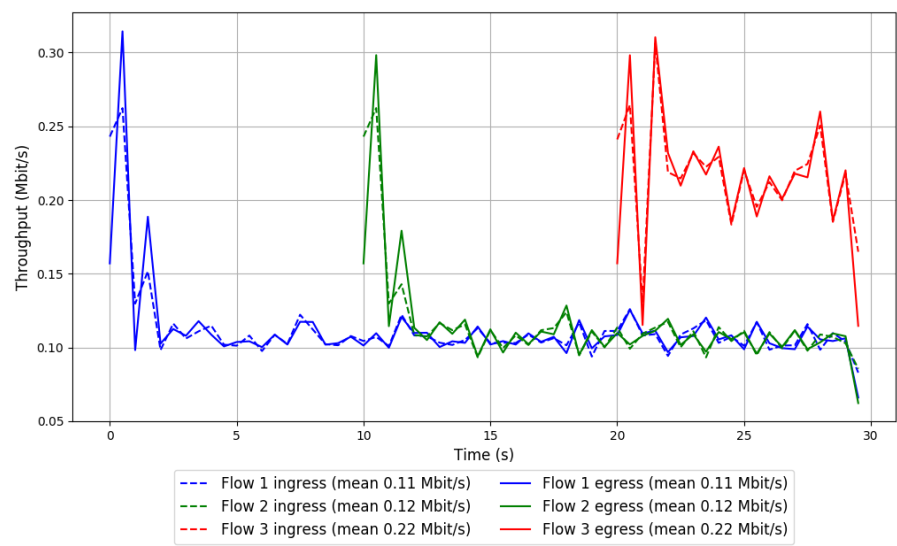
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 2.25%

Run 3: Report of SCSReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-02-13 20:04:25

End at: 2018-02-13 20:04:55

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 112.090 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 0.11 Mbit/s

95th percentile per-packet one-way delay: 112.080 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.104 ms

Loss rate: 1.24%

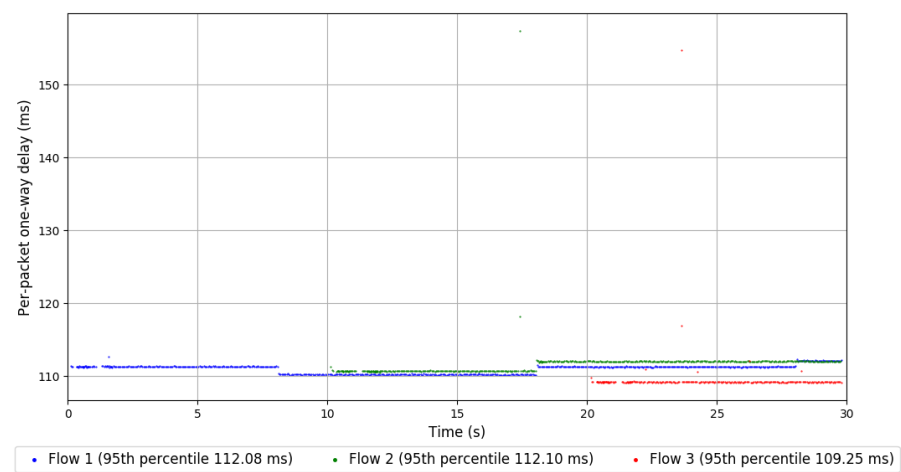
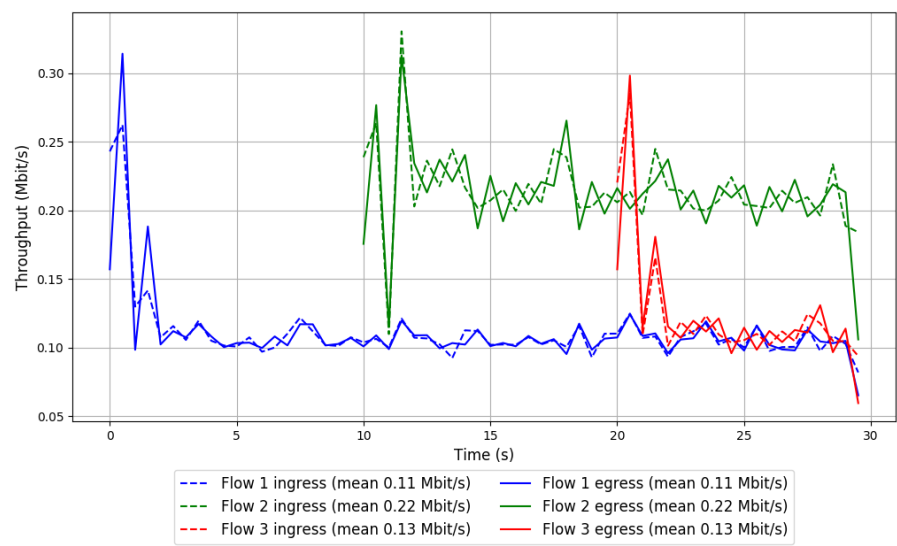
-- Flow 3:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 109.250 ms

Loss rate: 2.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-02-13 20:24:21

End at: 2018-02-13 20:24:51

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 112.707 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 111.517 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 112.732 ms

Loss rate: 1.07%

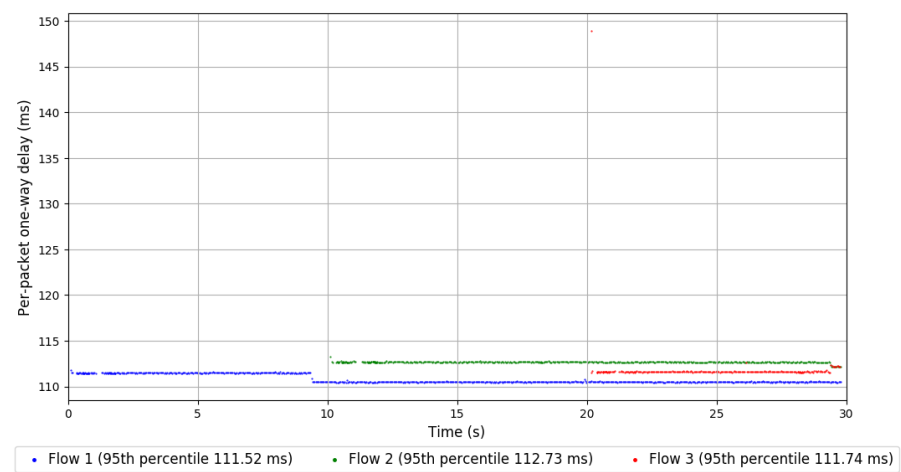
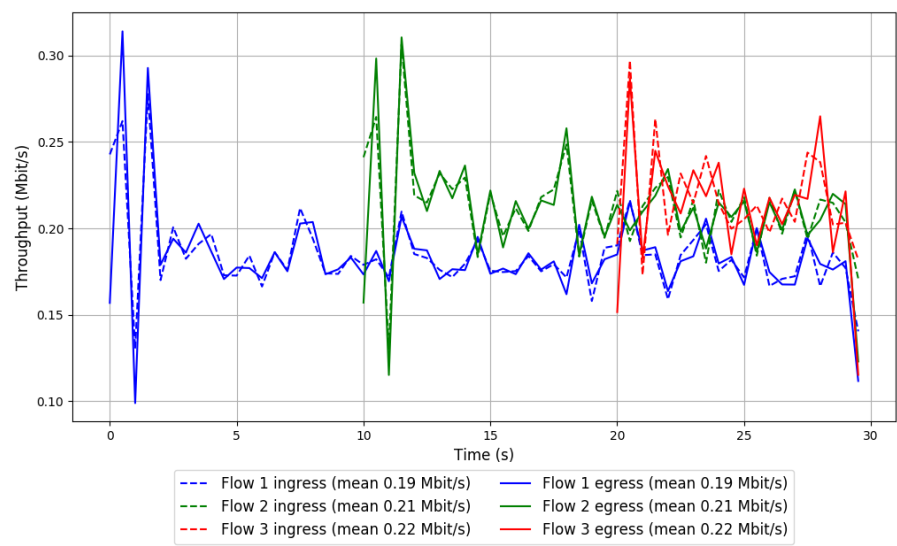
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.737 ms

Loss rate: 2.27%

Run 5: Report of SCSReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-02-13 20:43:32

End at: 2018-02-13 20:44:02

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.864 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 112.875 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.621 ms

Loss rate: 1.05%

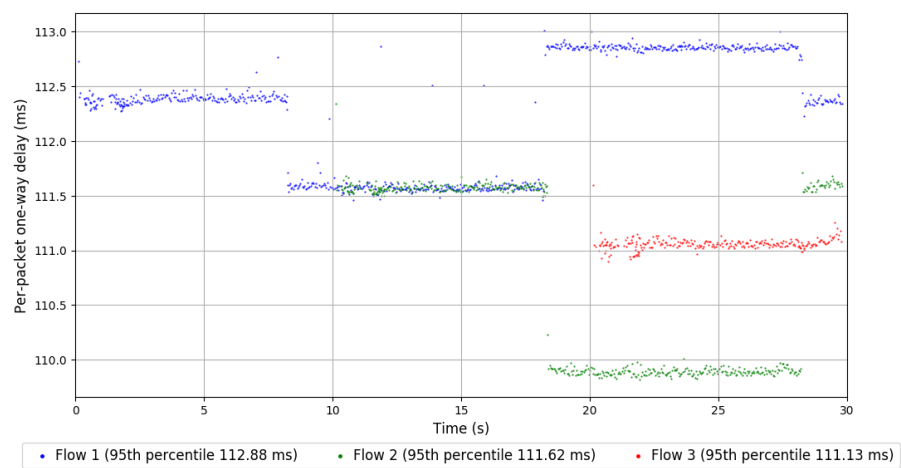
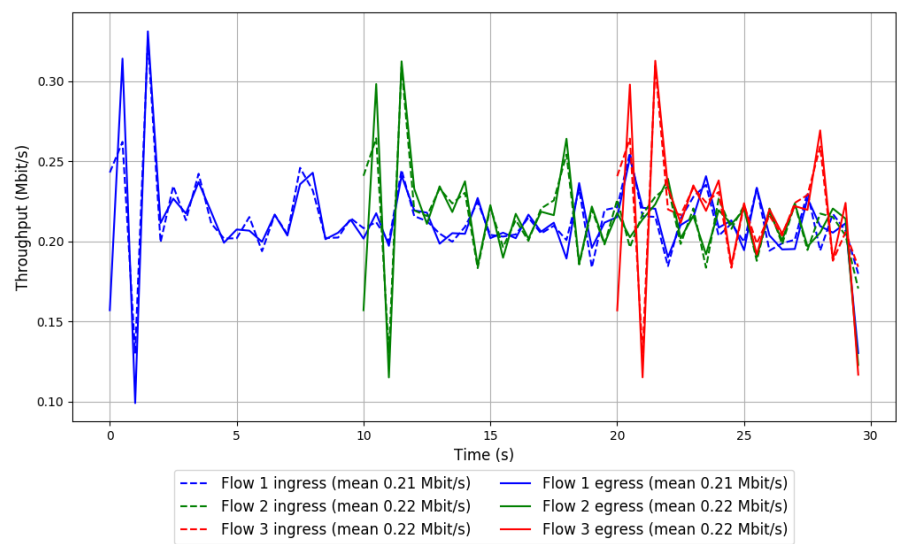
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.130 ms

Loss rate: 2.26%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2018-02-13 21:03:02

End at: 2018-02-13 21:03:32

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.787 ms

Loss rate: 1.05%

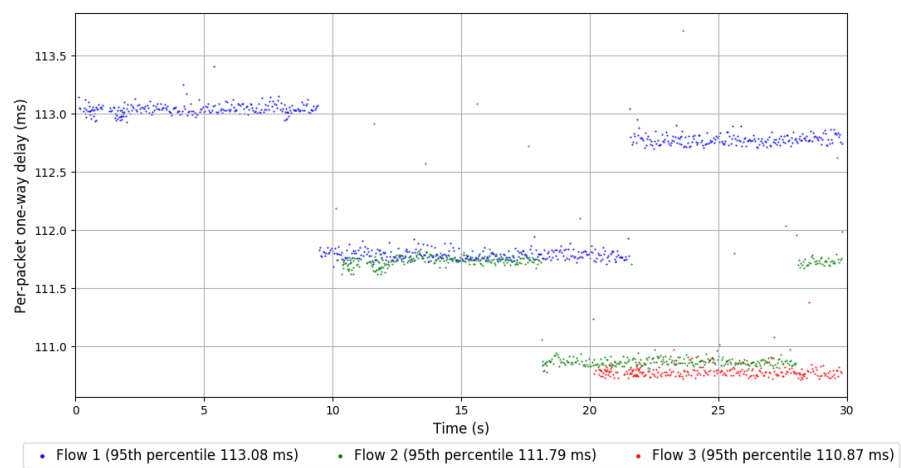
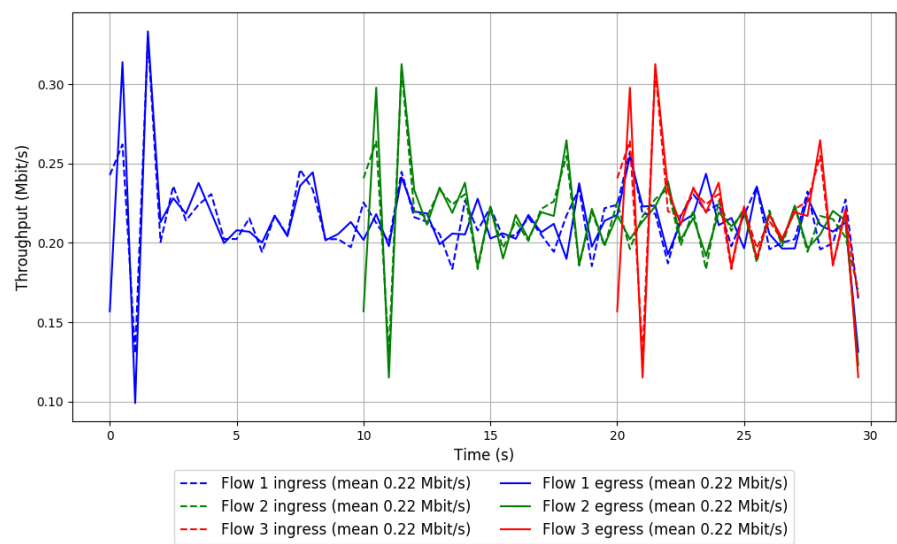
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.874 ms

Loss rate: 2.25%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2018-02-13 21:22:43

End at: 2018-02-13 21:23:13

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 111.739 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.394 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.11 Mbit/s

95th percentile per-packet one-way delay: 111.768 ms

Loss rate: 0.97%

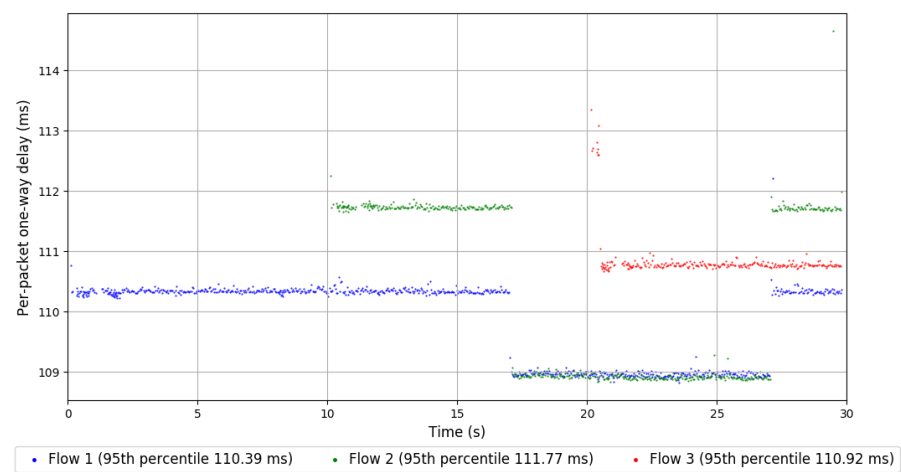
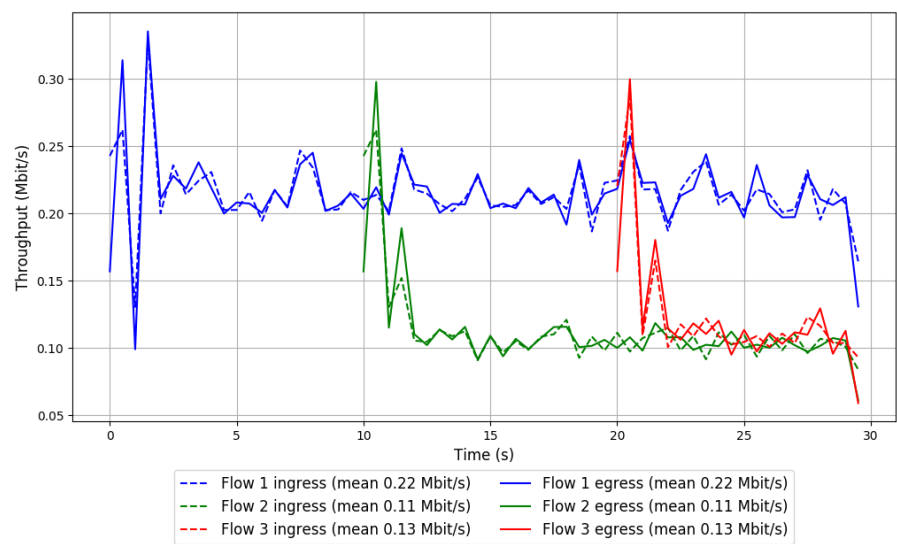
-- Flow 3:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 110.923 ms

Loss rate: 2.00%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-02-13 21:42:21

End at: 2018-02-13 21:42:51

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 112.606 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.699 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.12 Mbit/s

95th percentile per-packet one-way delay: 112.305 ms

Loss rate: 0.98%

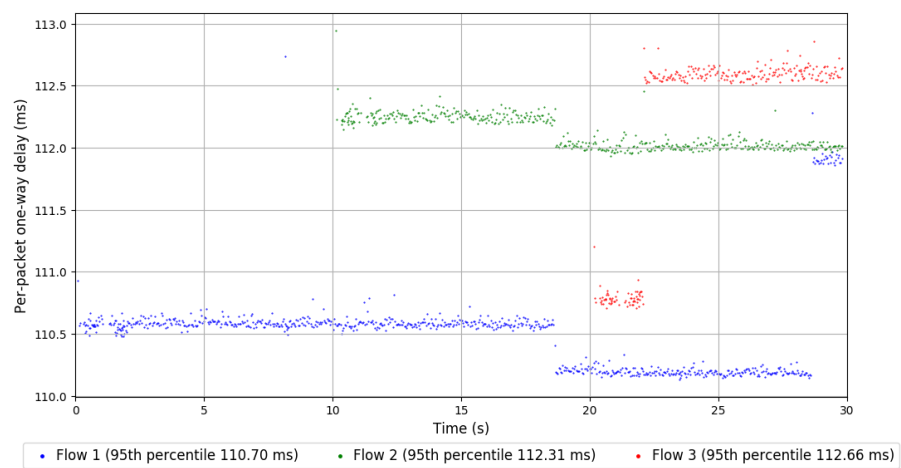
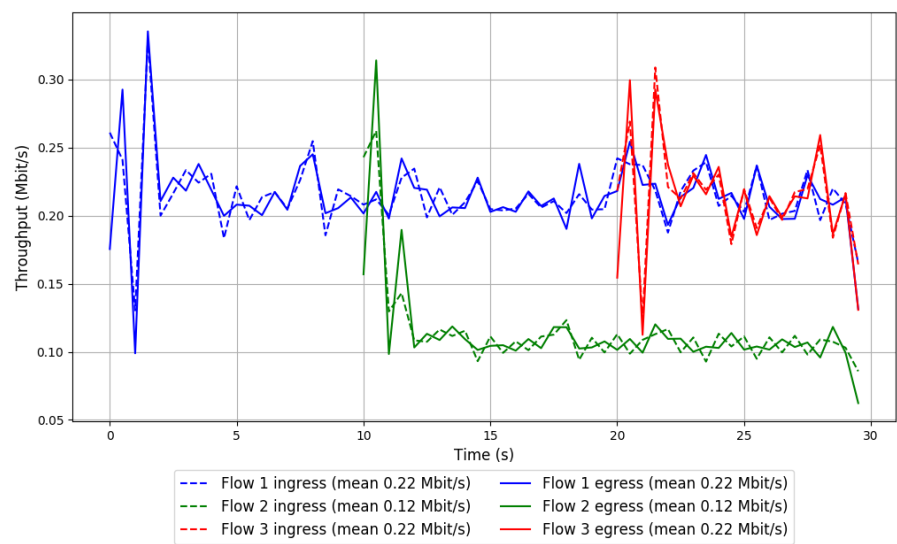
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 1.90%

Run 9: Report of SReAM — Data Link

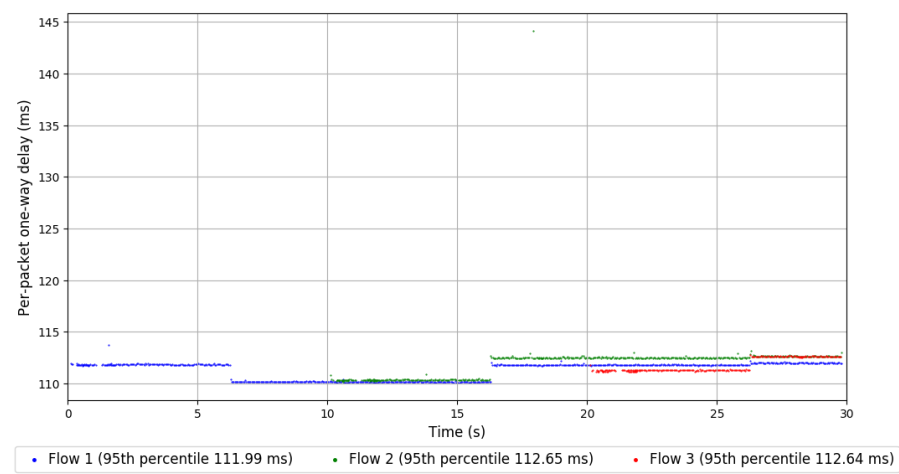
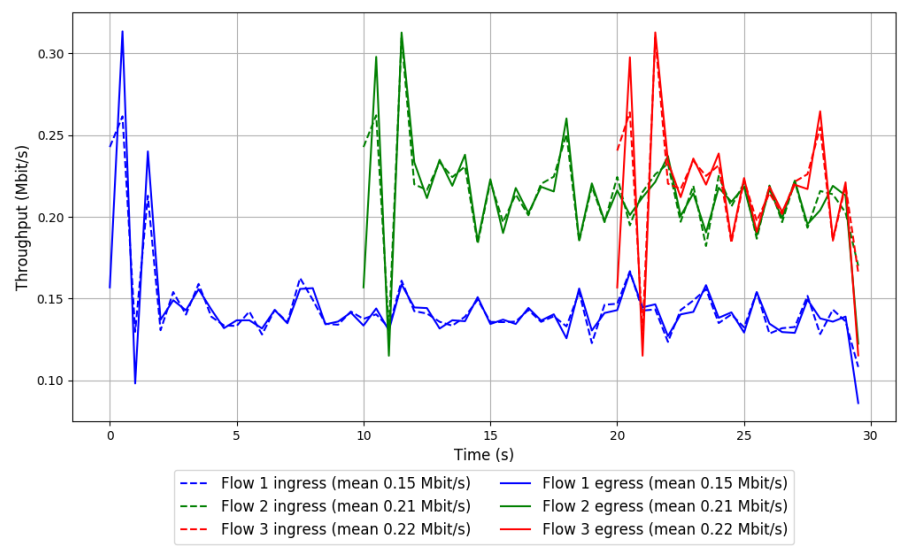


```
Run 10: Statistics of SCReAM

Start at: 2018-02-13 22:02:14
End at: 2018-02-13 22:02:44

# Below is generated by plot.py at 2018-02-14 02:01:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 112.627 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 111.989 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.651 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.638 ms
Loss rate: 2.25%
```

Run 10: Report of SReAM — Data Link

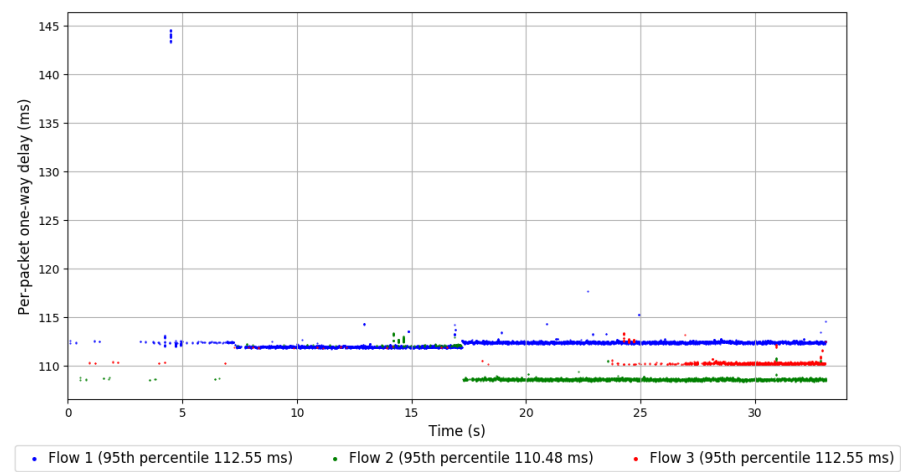
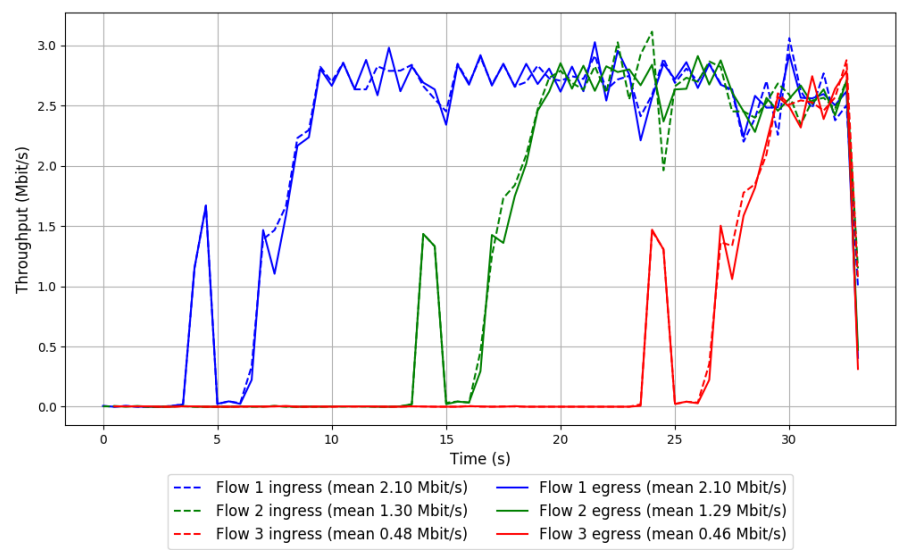


```
Run 1: Statistics of WebRTC media

Start at: 2018-02-13 18:51:36
End at: 2018-02-13 18:52:06

# Below is generated by plot.py at 2018-02-14 02:01:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.82 Mbit/s
95th percentile per-packet one-way delay: 112.529 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 112.547 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 110.477 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 112.545 ms
Loss rate: 4.18%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-02-13 19:11:02

End at: 2018-02-13 19:11:32

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.79 Mbit/s

95th percentile per-packet one-way delay: 113.955 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 113.982 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 112.802 ms

Loss rate: 1.36%

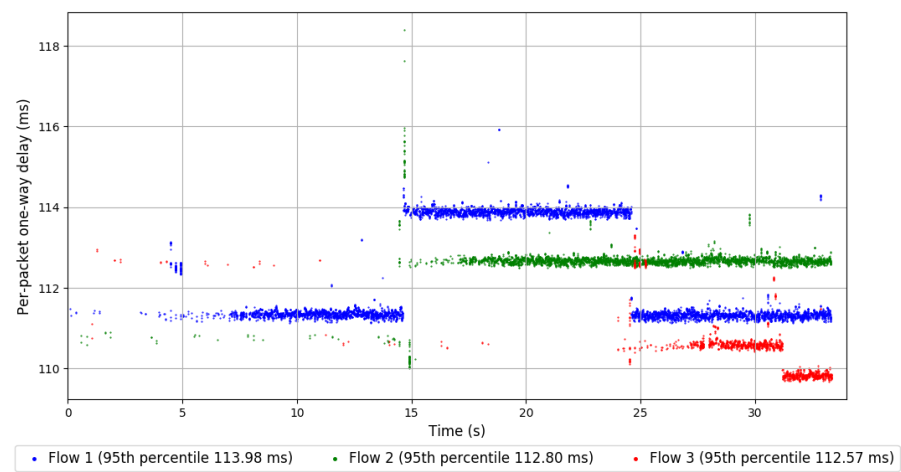
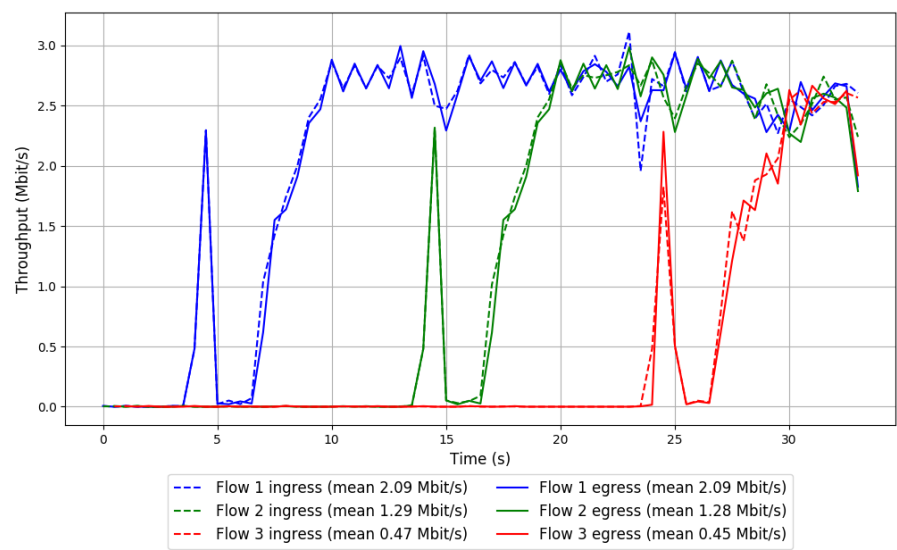
-- Flow 3:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 112.568 ms

Loss rate: 3.69%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-02-13 19:30:49

End at: 2018-02-13 19:31:19

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 112.538 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 112.563 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 111.840 ms

Loss rate: 1.53%

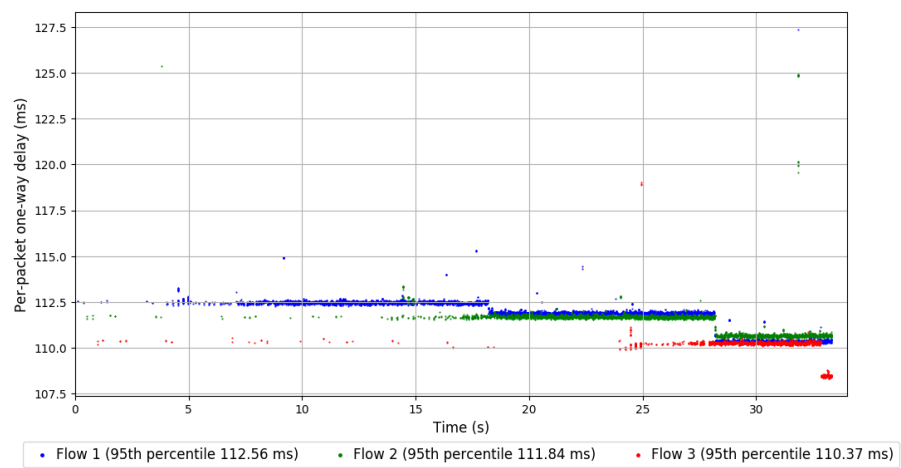
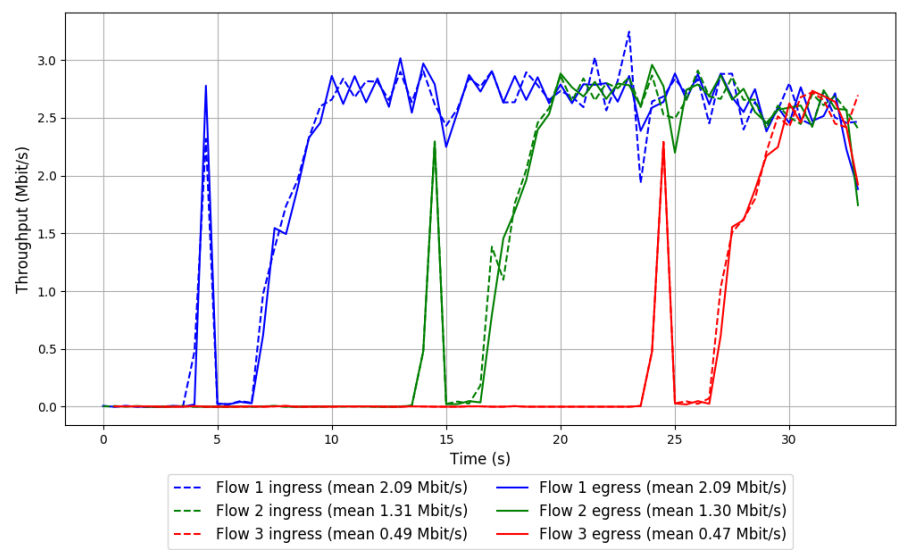
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 110.374 ms

Loss rate: 3.82%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-02-13 19:50:27

End at: 2018-02-13 19:50:57

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.82 Mbit/s

95th percentile per-packet one-way delay: 111.647 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 110.389 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 111.701 ms

Loss rate: 2.06%

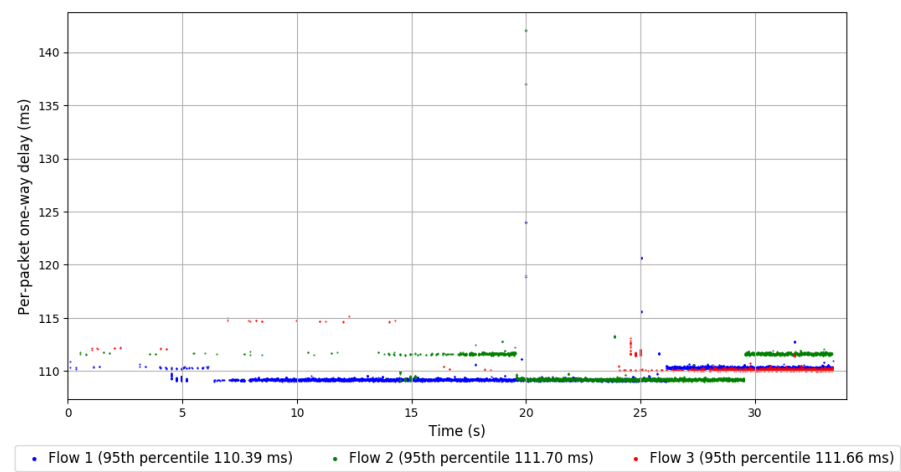
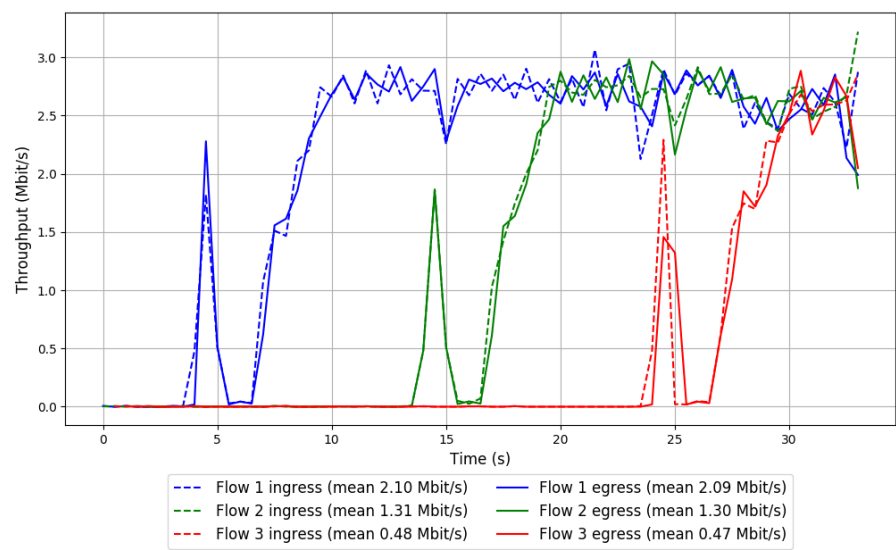
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 111.663 ms

Loss rate: 3.93%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-02-13 20:10:01

End at: 2018-02-13 20:10:31

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.82 Mbit/s

95th percentile per-packet one-way delay: 112.048 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 111.473 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 112.104 ms

Loss rate: 1.15%

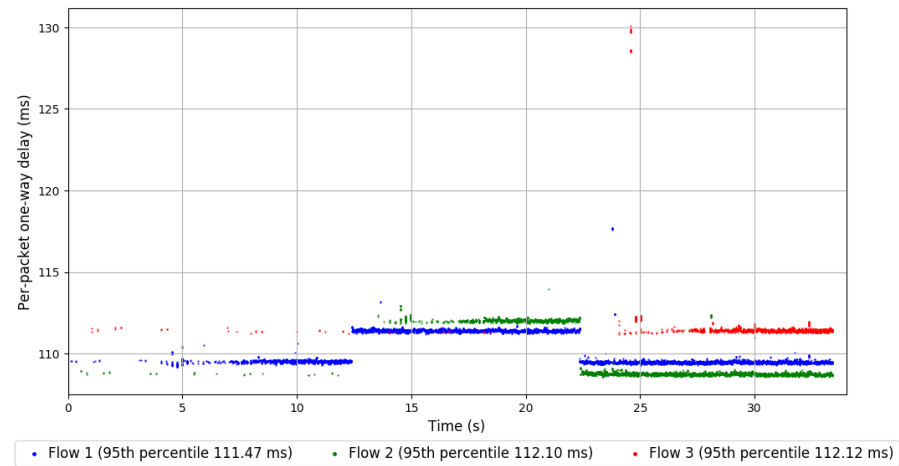
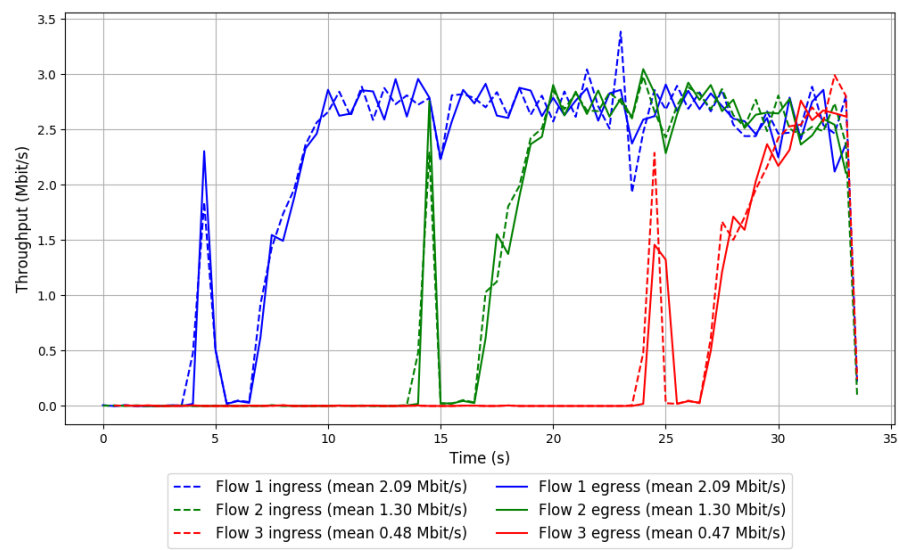
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 112.119 ms

Loss rate: 3.93%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-02-13 20:29:53

End at: 2018-02-13 20:30:23

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 112.725 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 112.705 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 1.29 Mbit/s

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

Loss rate: 1.36%

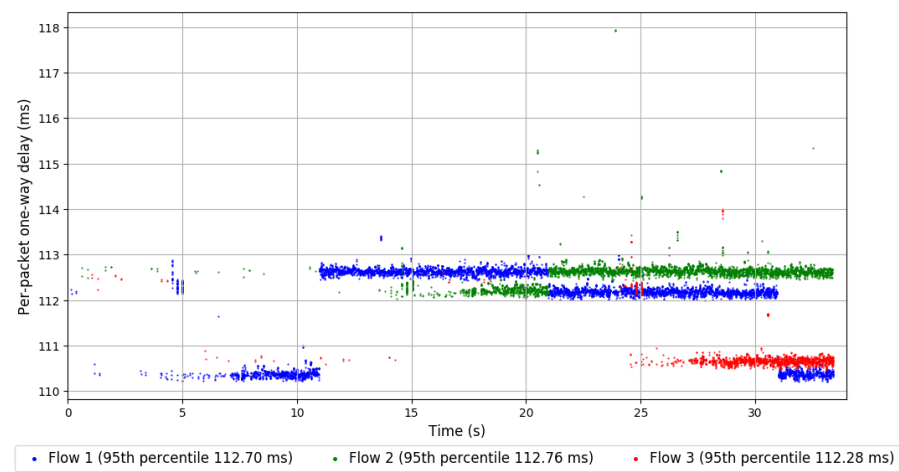
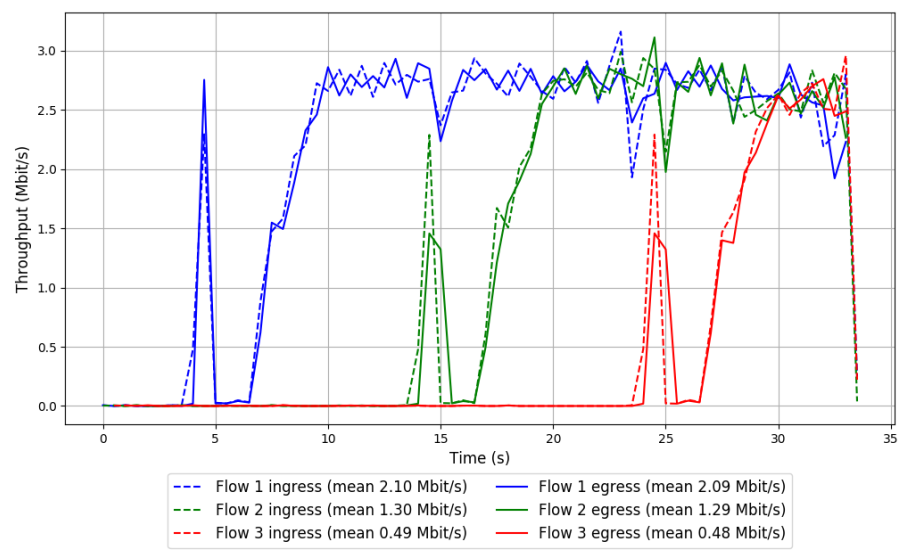
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 112.285 ms

Loss rate: 3.64%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-02-13 20:49:00

End at: 2018-02-13 20:49:30

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.84 Mbit/s

95th percentile per-packet one-way delay: 113.020 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 113.047 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 112.648 ms

Loss rate: 1.59%

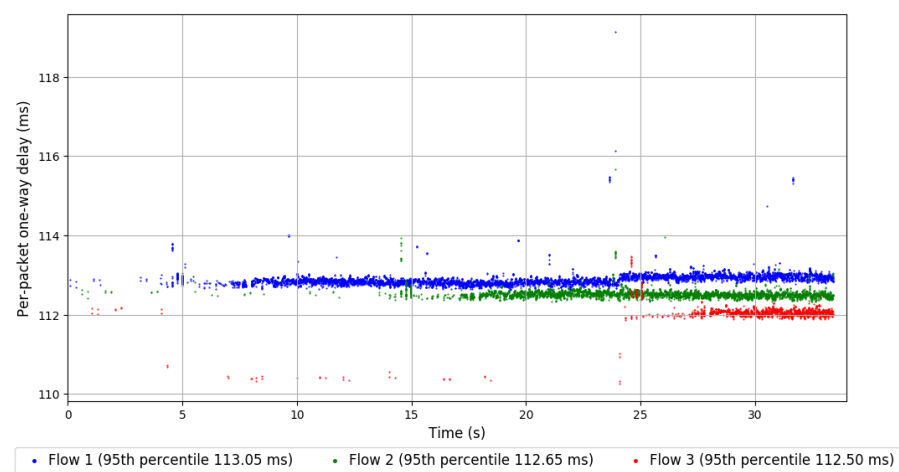
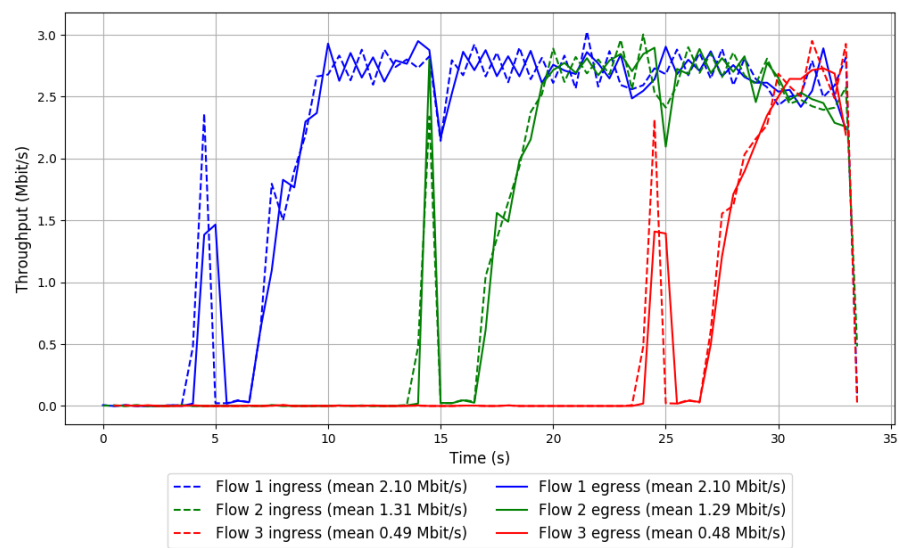
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 112.500 ms

Loss rate: 3.79%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-02-13 21:08:28

End at: 2018-02-13 21:08:58

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.82 Mbit/s

95th percentile per-packet one-way delay: 112.830 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 112.028 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 111.061 ms

Loss rate: 1.29%

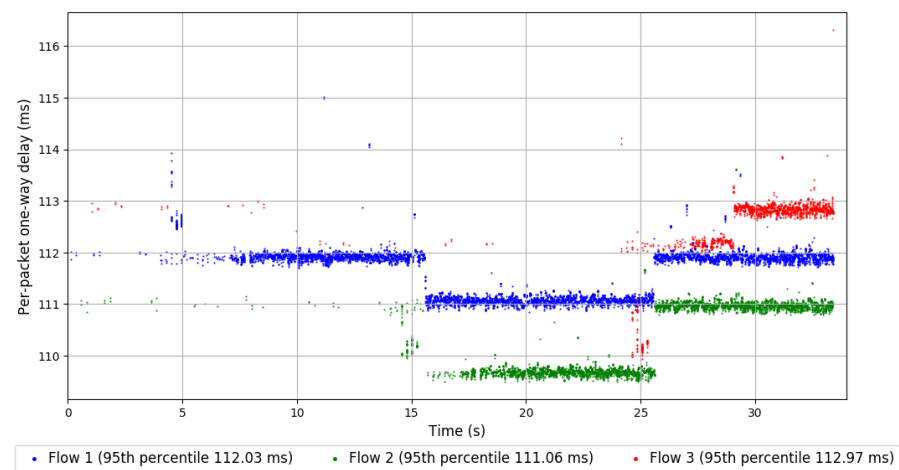
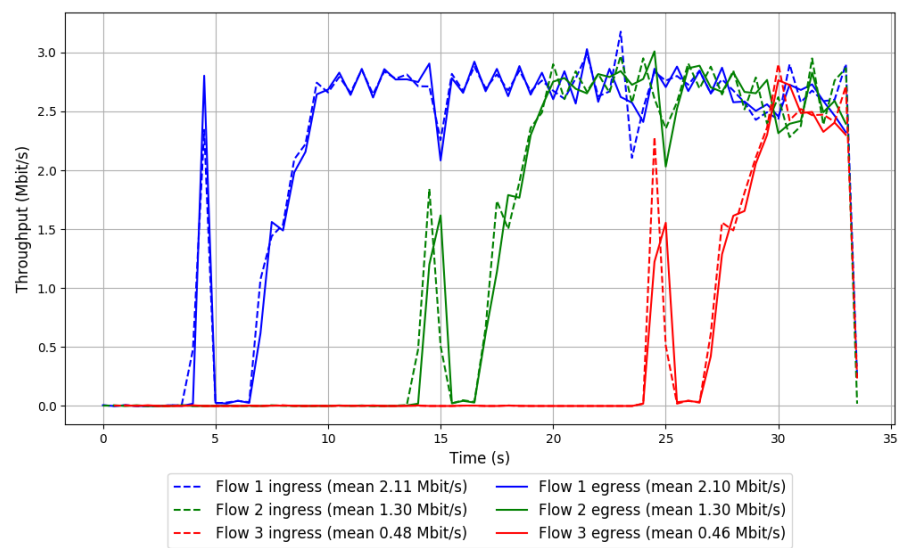
-- Flow 3:

Average throughput: 0.46 Mbit/s

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

Loss rate: 4.03%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-02-13 21:28:16

End at: 2018-02-13 21:28:46

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 112.237 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 112.257 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 112.180 ms

Loss rate: 1.85%

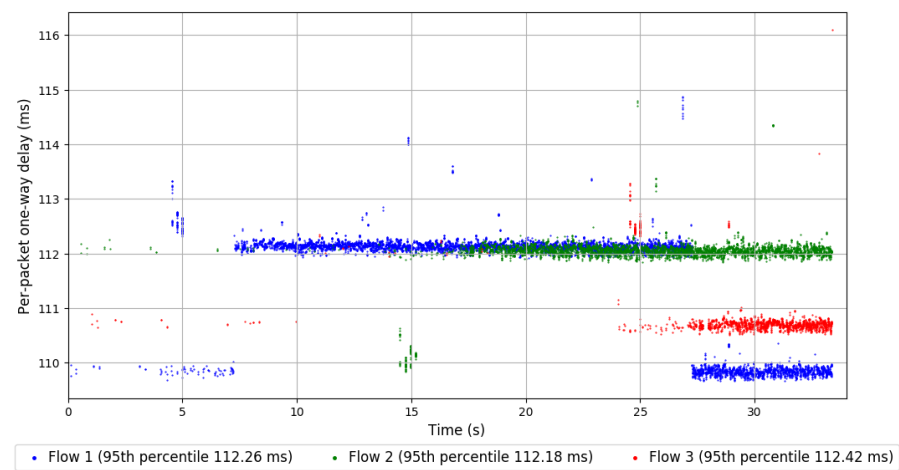
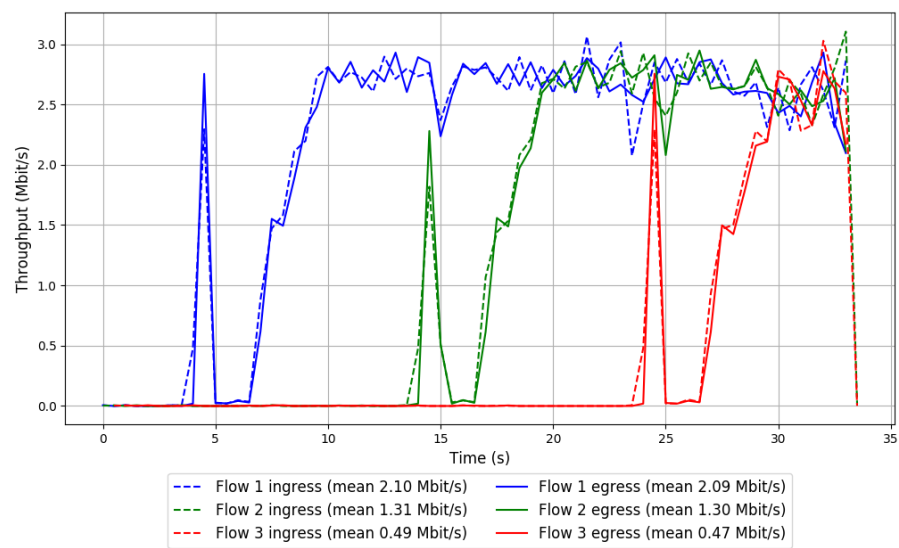
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 112.419 ms

Loss rate: 3.70%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-02-13 21:47:52

End at: 2018-02-13 21:48:22

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 112.609 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 2.09 Mbit/s

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

Loss rate: 1.15%

-- Flow 2:

Average throughput: 1.29 Mbit/s

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

Loss rate: 2.12%

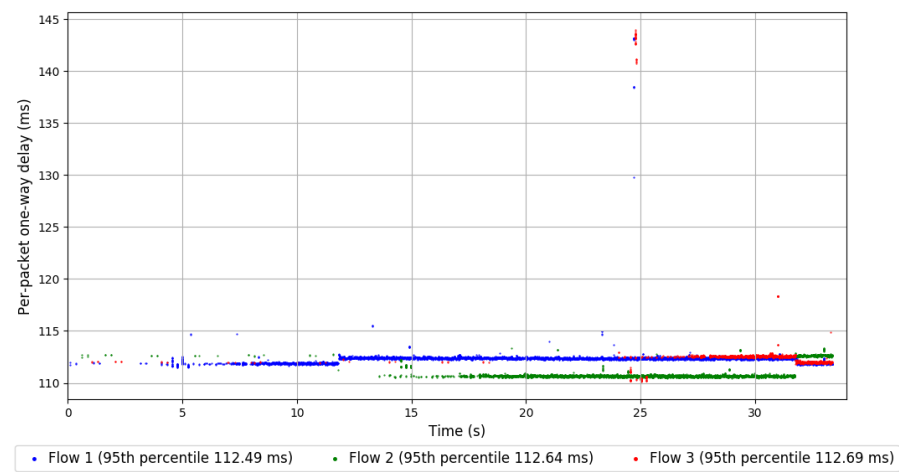
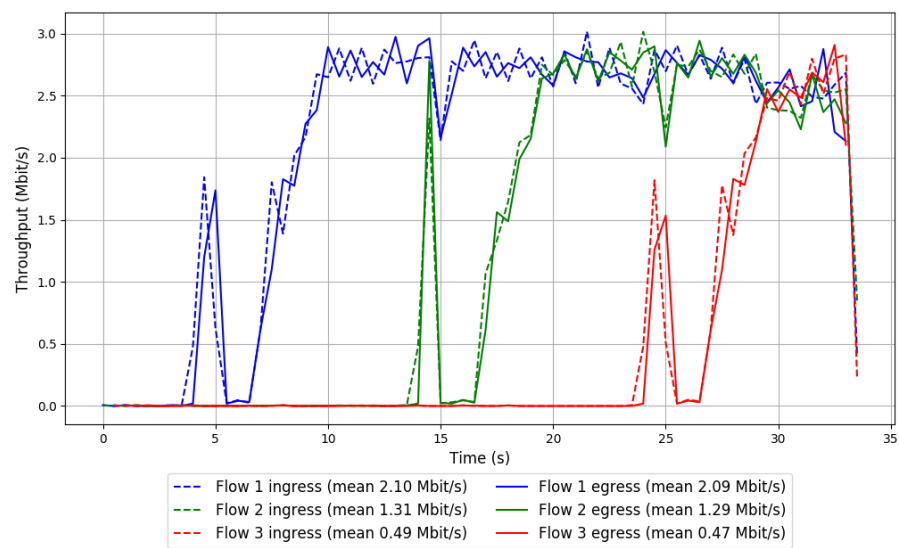
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 112.691 ms

Loss rate: 4.66%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-02-13 18:54:44

End at: 2018-02-13 18:55:14

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.06 Mbit/s

95th percentile per-packet one-way delay: 113.127 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 2.06 Mbit/s

95th percentile per-packet one-way delay: 113.150 ms

Loss rate: 1.38%

-- Flow 2:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 113.119 ms

Loss rate: 0.93%

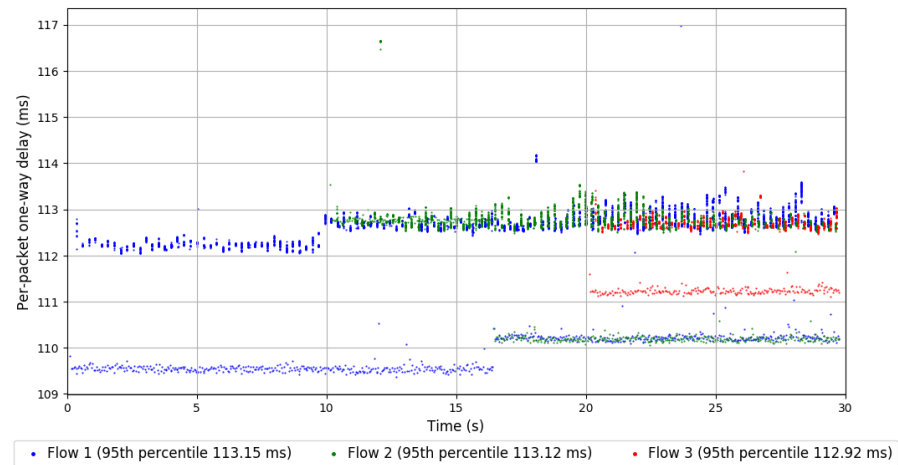
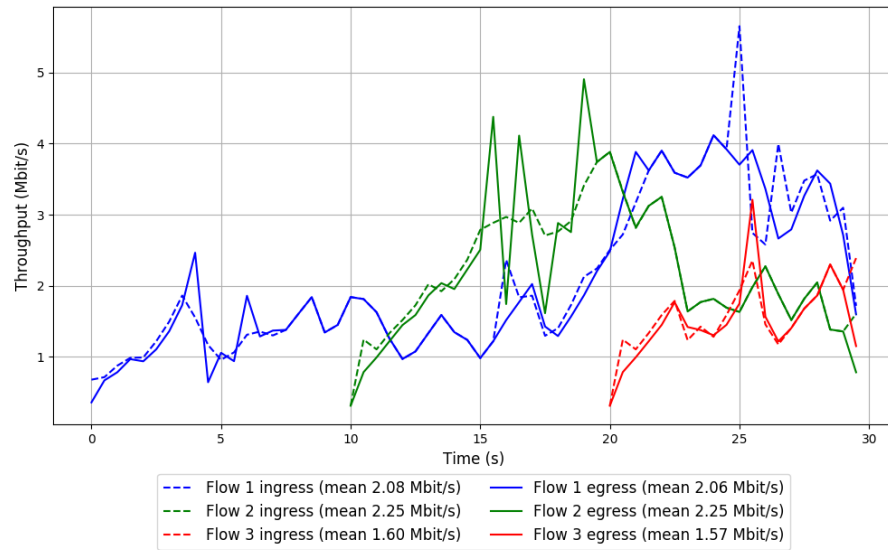
-- Flow 3:

Average throughput: 1.57 Mbit/s

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

Loss rate: 3.95%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-02-13 19:14:03

End at: 2018-02-13 19:14:33

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.29 Mbit/s

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

Loss rate: 1.78%

-- Flow 1:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 112.993 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 1.74 Mbit/s

95th percentile per-packet one-way delay: 113.087 ms

Loss rate: 2.09%

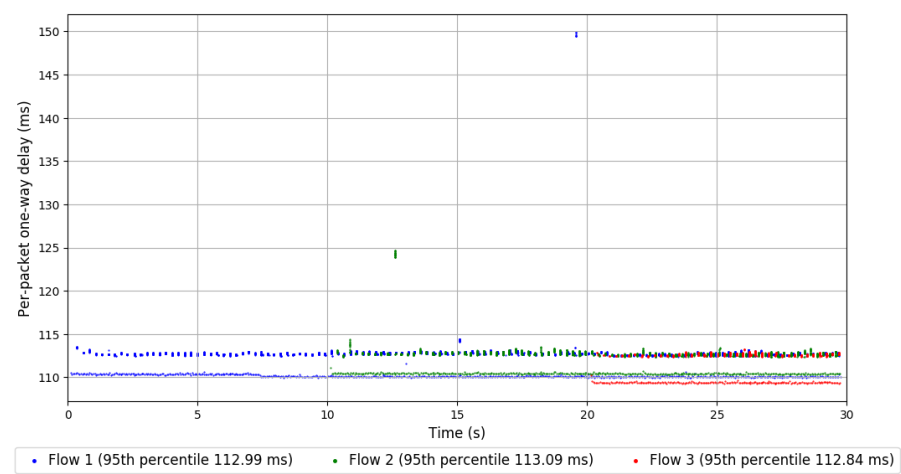
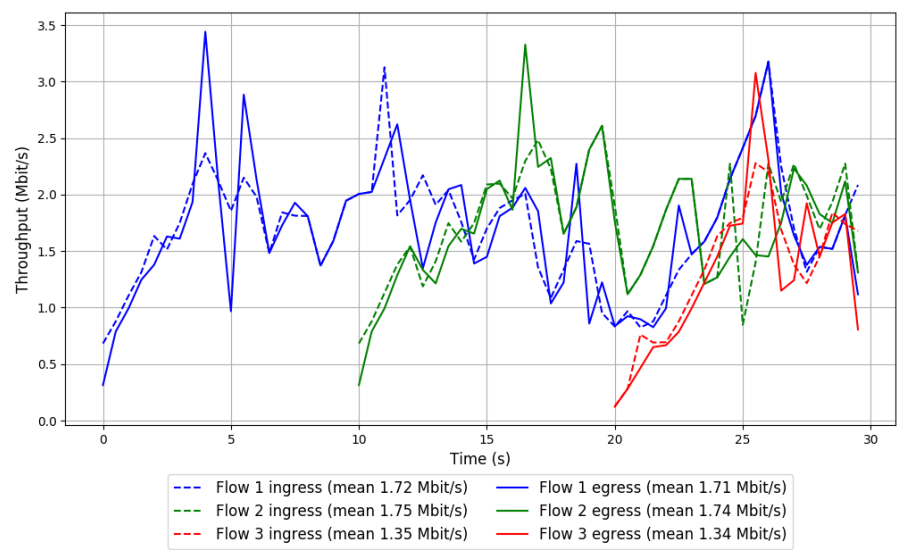
-- Flow 3:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 112.843 ms

Loss rate: 3.30%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-02-13 19:33:55

End at: 2018-02-13 19:34:25

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.72 Mbit/s

95th percentile per-packet one-way delay: 112.220 ms

Loss rate: 2.88%

-- Flow 1:

Average throughput: 2.19 Mbit/s

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

Loss rate: 2.85%

-- Flow 2:

Average throughput: 2.65 Mbit/s

95th percentile per-packet one-way delay: 112.427 ms

Loss rate: 2.39%

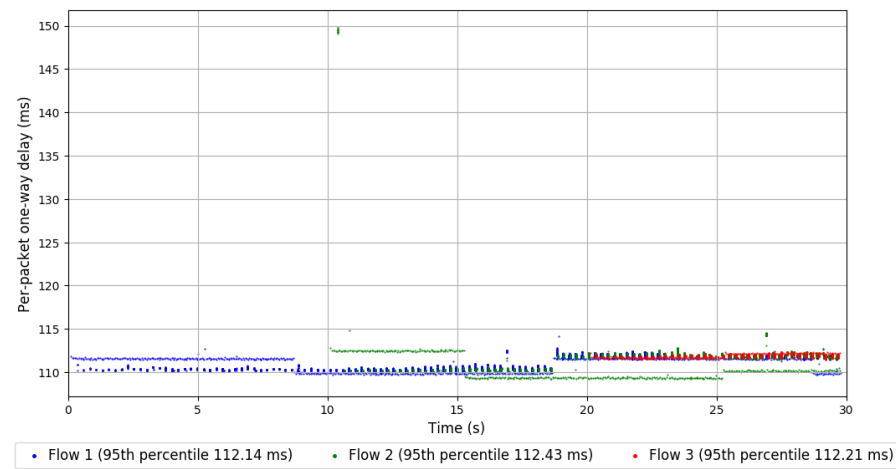
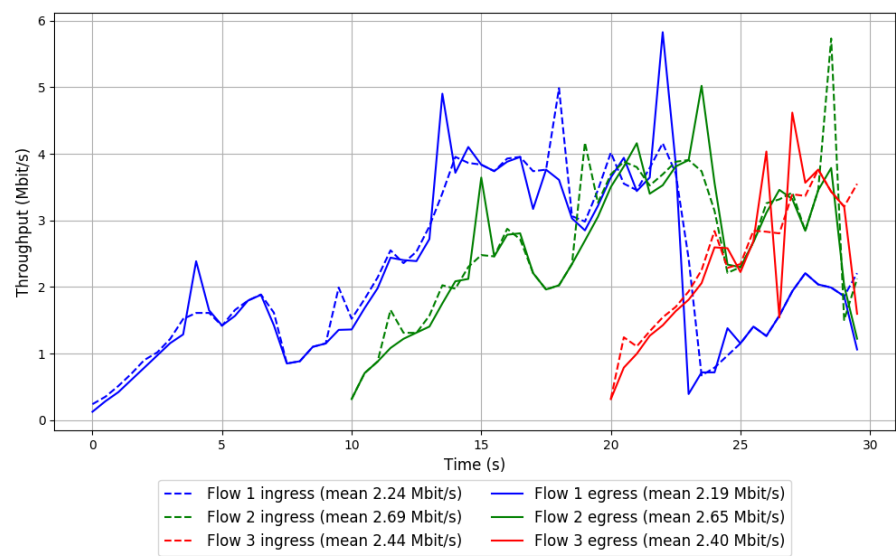
-- Flow 3:

Average throughput: 2.40 Mbit/s

95th percentile per-packet one-way delay: 112.209 ms

Loss rate: 4.07%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-02-13 19:53:30

End at: 2018-02-13 19:54:00

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.45 Mbit/s

95th percentile per-packet one-way delay: 112.230 ms

Loss rate: 2.43%

-- Flow 1:

Average throughput: 2.64 Mbit/s

95th percentile per-packet one-way delay: 112.198 ms

Loss rate: 1.94%

-- Flow 2:

Average throughput: 1.57 Mbit/s

95th percentile per-packet one-way delay: 112.452 ms

Loss rate: 2.28%

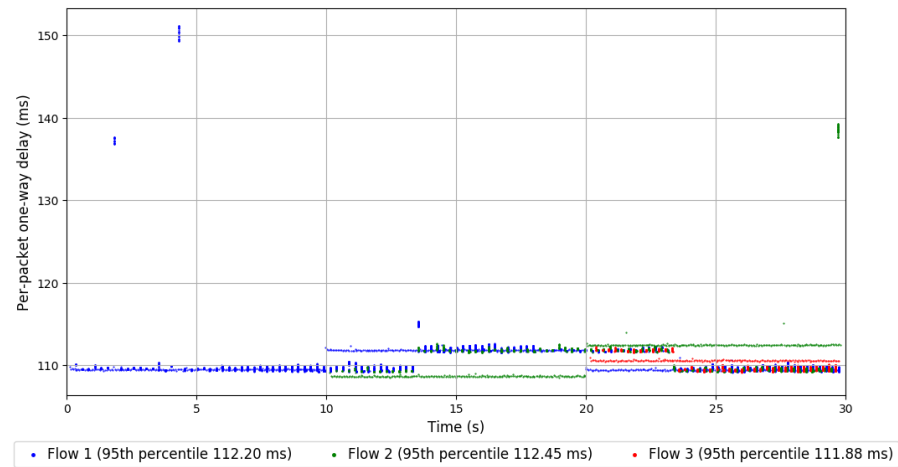
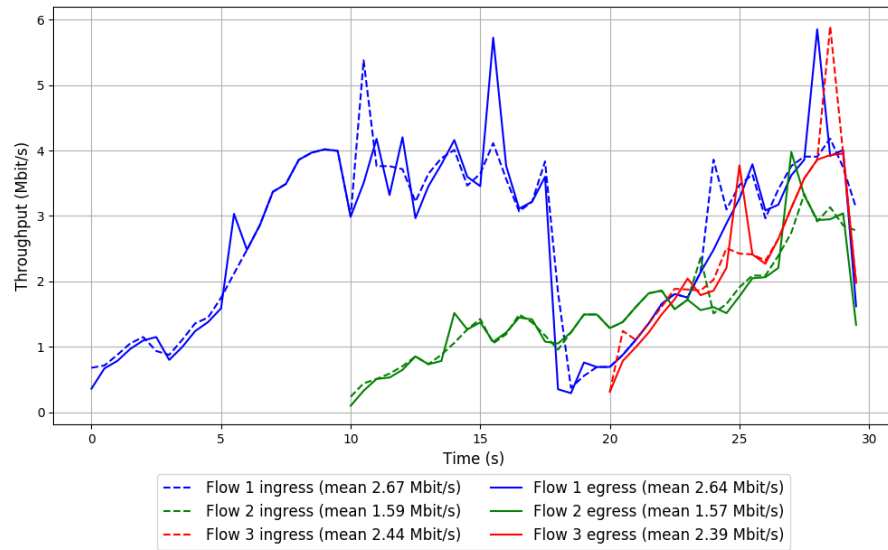
-- Flow 3:

Average throughput: 2.39 Mbit/s

95th percentile per-packet one-way delay: 111.883 ms

Loss rate: 4.22%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-02-13 20:13:13

End at: 2018-02-13 20:13:43

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.54 Mbit/s

95th percentile per-packet one-way delay: 112.195 ms

Loss rate: 3.59%

-- Flow 1:

Average throughput: 1.75 Mbit/s

95th percentile per-packet one-way delay: 112.182 ms

Loss rate: 2.78%

-- Flow 2:

Average throughput: 1.51 Mbit/s

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

Loss rate: 4.41%

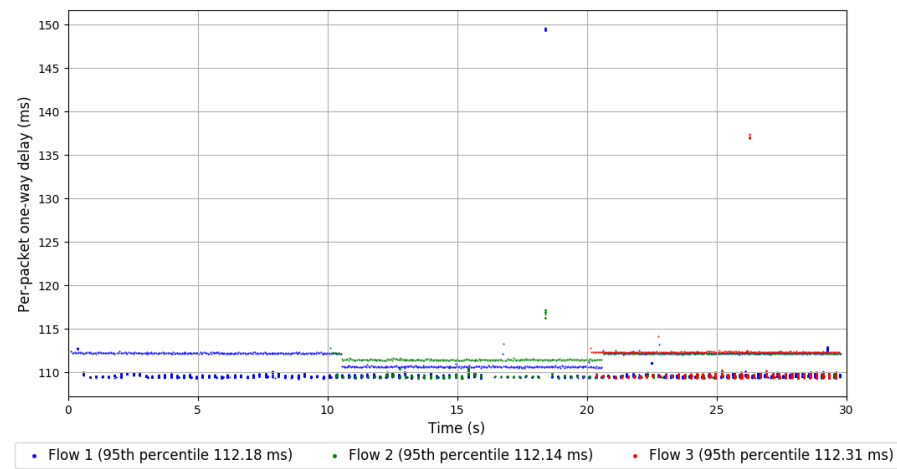
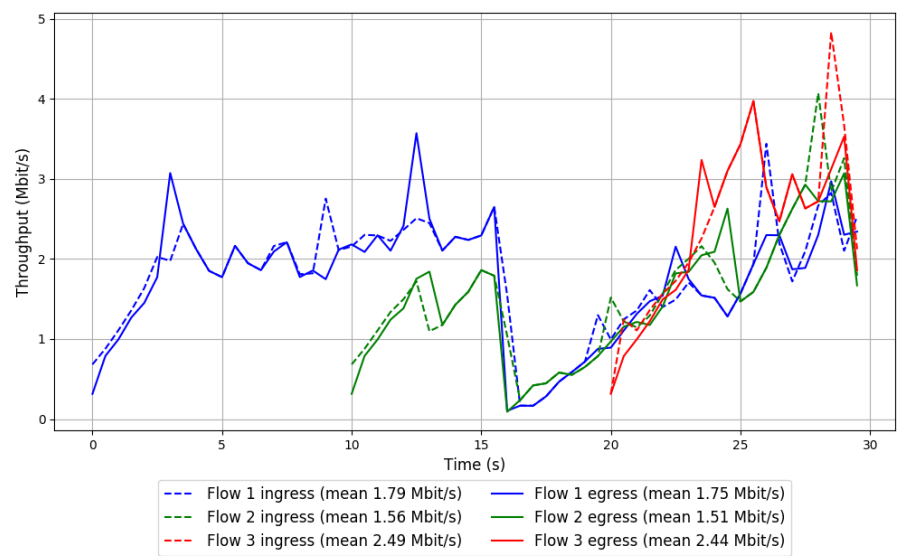
-- Flow 3:

Average throughput: 2.44 Mbit/s

95th percentile per-packet one-way delay: 112.309 ms

Loss rate: 4.31%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-02-13 20:32:54

End at: 2018-02-13 20:33:24

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.27 Mbit/s

95th percentile per-packet one-way delay: 113.377 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 2.59 Mbit/s

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

Loss rate: 1.16%

-- Flow 2:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 114.311 ms

Loss rate: 0.76%

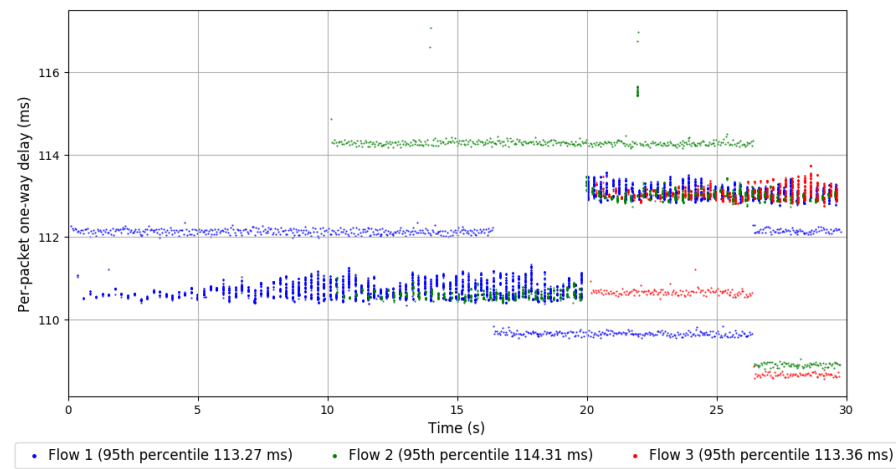
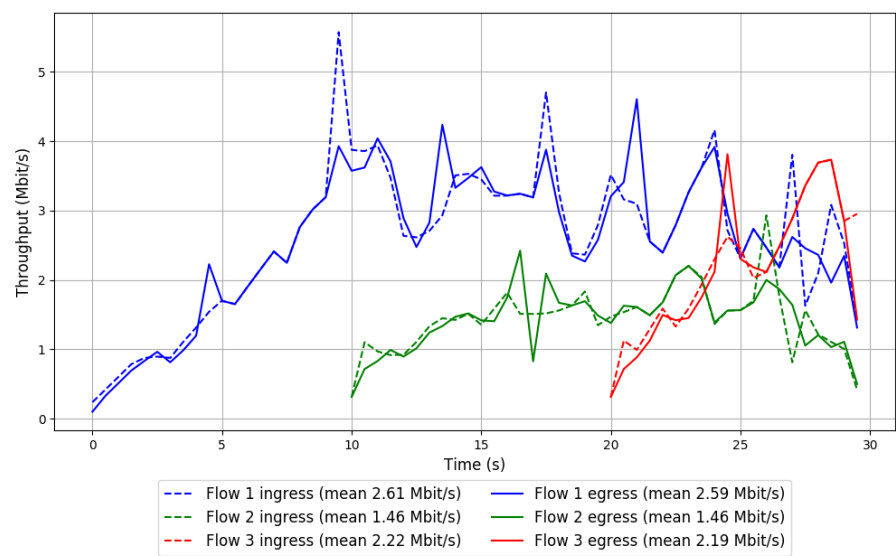
-- Flow 3:

Average throughput: 2.19 Mbit/s

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

Loss rate: 3.50%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-02-13 20:52:04

End at: 2018-02-13 20:52:34

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.28 Mbit/s

95th percentile per-packet one-way delay: 113.071 ms

Loss rate: 2.86%

-- Flow 1:

Average throughput: 1.64 Mbit/s

95th percentile per-packet one-way delay: 113.099 ms

Loss rate: 1.96%

-- Flow 2:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 113.031 ms

Loss rate: 4.24%

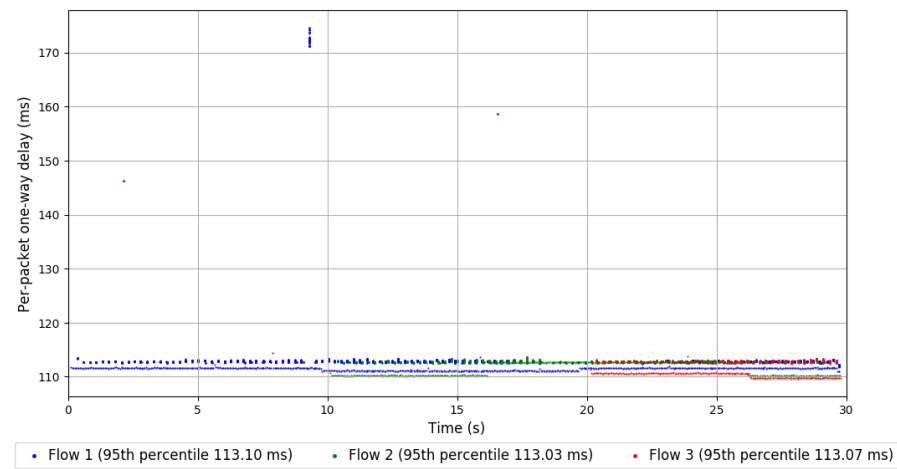
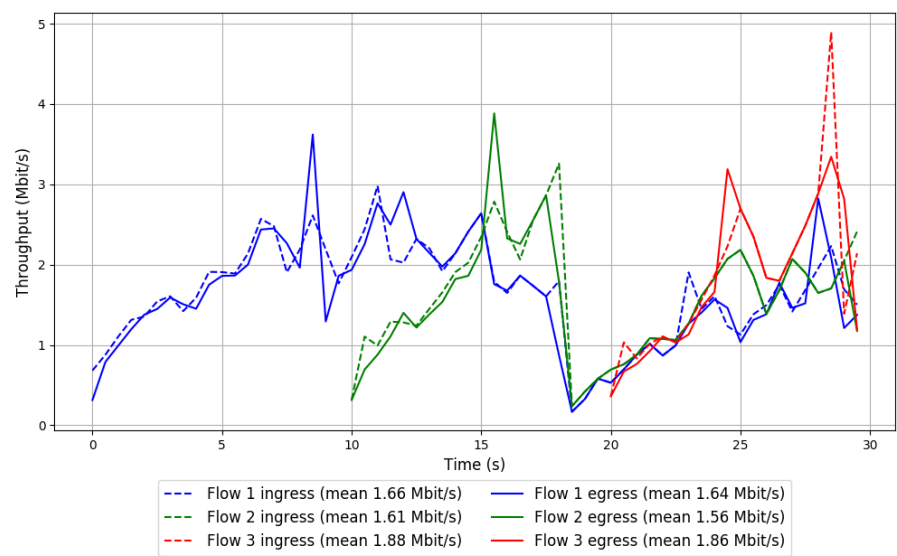
-- Flow 3:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 113.066 ms

Loss rate: 2.91%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-02-13 21:11:37

End at: 2018-02-13 21:12:07

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.88 Mbit/s

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

Loss rate: 2.82%

-- Flow 1:

Average throughput: 1.86 Mbit/s

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

Loss rate: 3.18%

-- Flow 2:

Average throughput: 2.21 Mbit/s

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

Loss rate: 2.33%

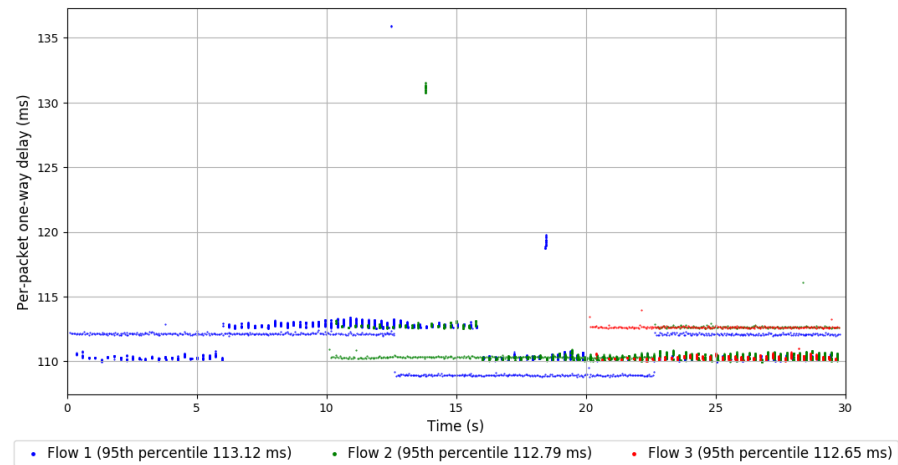
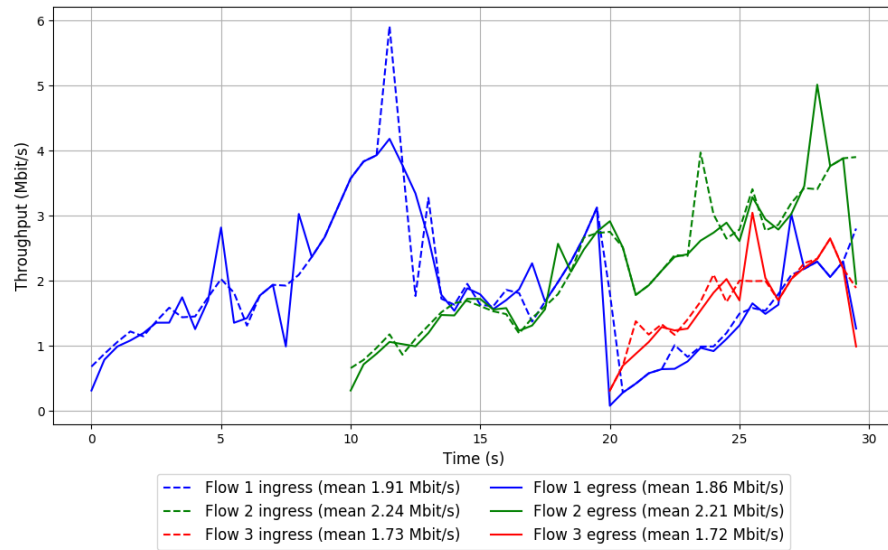
-- Flow 3:

Average throughput: 1.72 Mbit/s

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

Loss rate: 2.87%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-02-13 21:31:20

End at: 2018-02-13 21:31:50

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 114.389 ms

Loss rate: 2.86%

-- Flow 1:

Average throughput: 2.06 Mbit/s

95th percentile per-packet one-way delay: 114.418 ms

Loss rate: 2.60%

-- Flow 2:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 114.315 ms

Loss rate: 2.76%

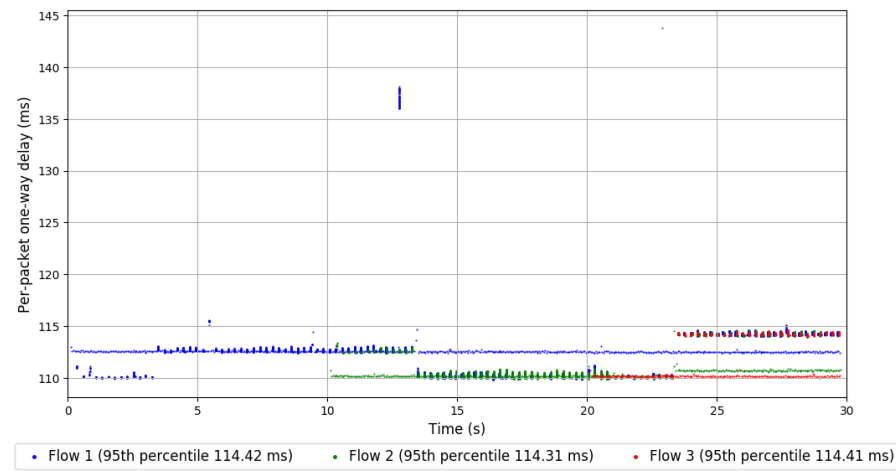
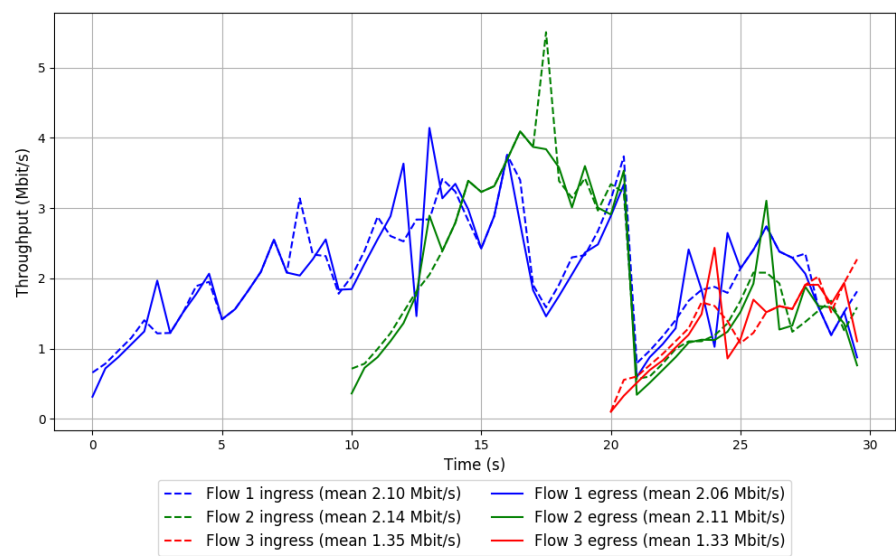
-- Flow 3:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 114.406 ms

Loss rate: 4.39%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-02-13 21:50:55

End at: 2018-02-13 21:51:25

Below is generated by plot.py at 2018-02-14 02:01:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.09 Mbit/s

95th percentile per-packet one-way delay: 112.267 ms

Loss rate: 1.88%

-- Flow 1:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 112.214 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 112.382 ms

Loss rate: 1.91%

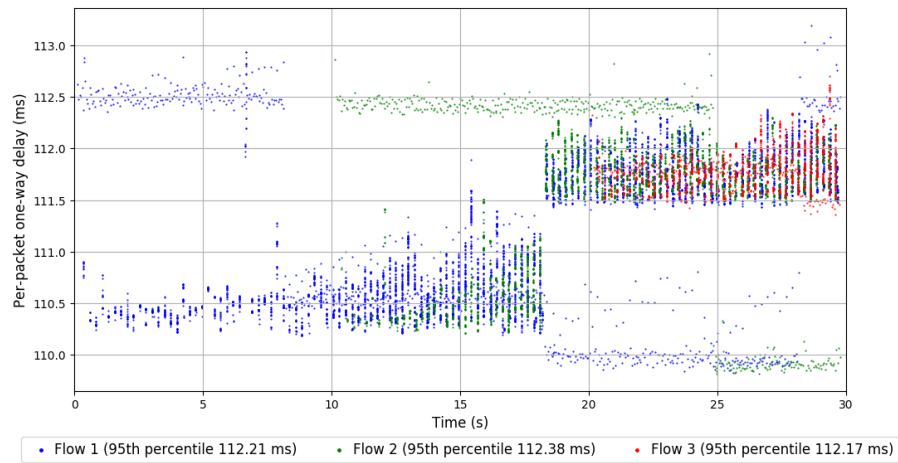
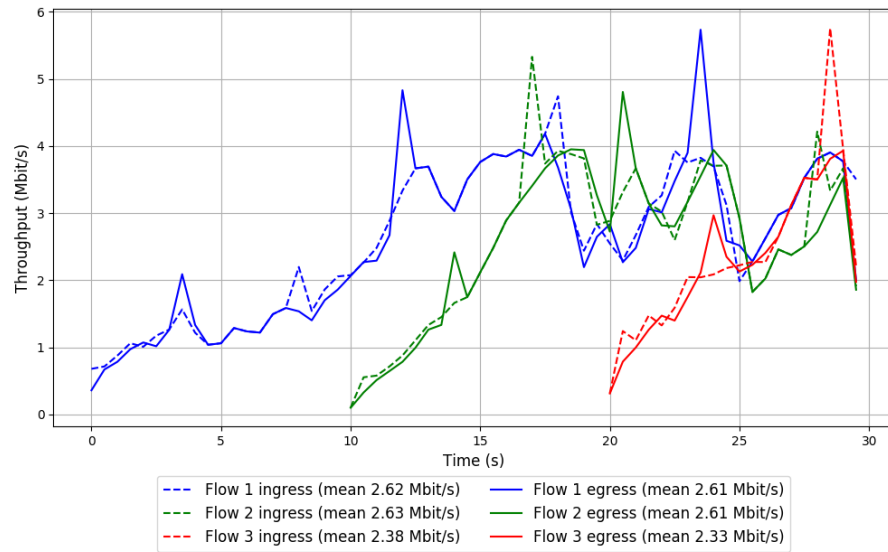
-- Flow 3:

Average throughput: 2.33 Mbit/s

95th percentile per-packet one-way delay: 112.170 ms

Loss rate: 4.70%

Run 10: Report of Sprout — Data Link

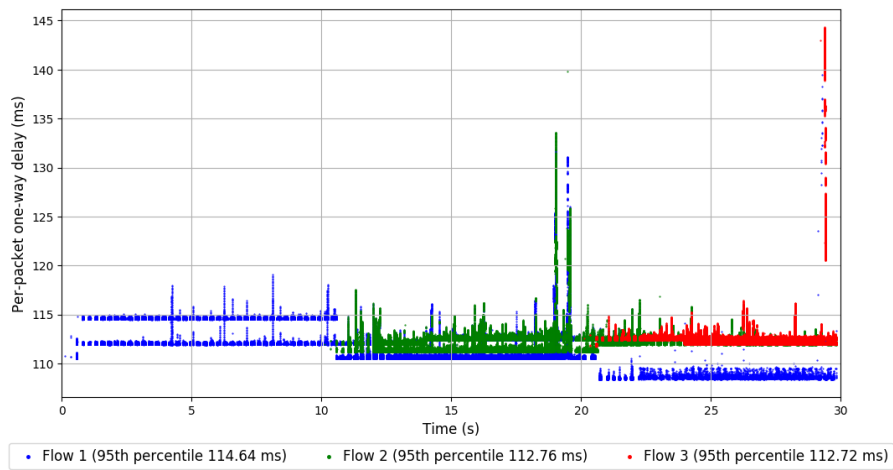
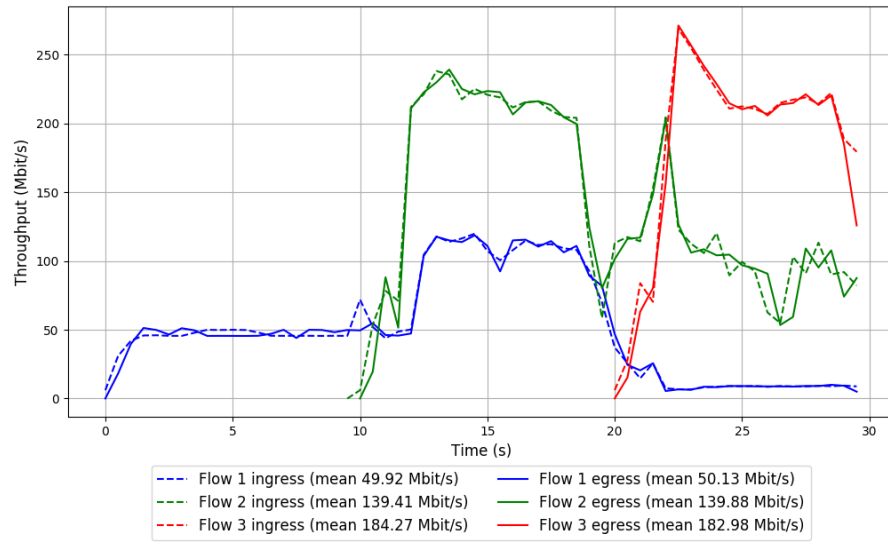


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-02-13 18:56:49
End at: 2018-02-13 18:57:19

# Below is generated by plot.py at 2018-02-14 02:02:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 202.67 Mbit/s
95th percentile per-packet one-way delay: 114.504 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 50.13 Mbit/s
95th percentile per-packet one-way delay: 114.642 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 139.88 Mbit/s
95th percentile per-packet one-way delay: 112.759 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 182.98 Mbit/s
95th percentile per-packet one-way delay: 112.719 ms
Loss rate: 2.96%
```


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

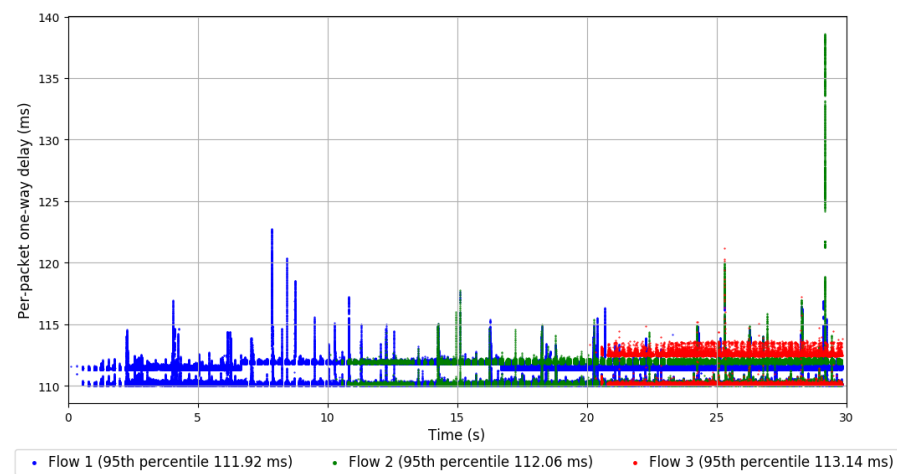
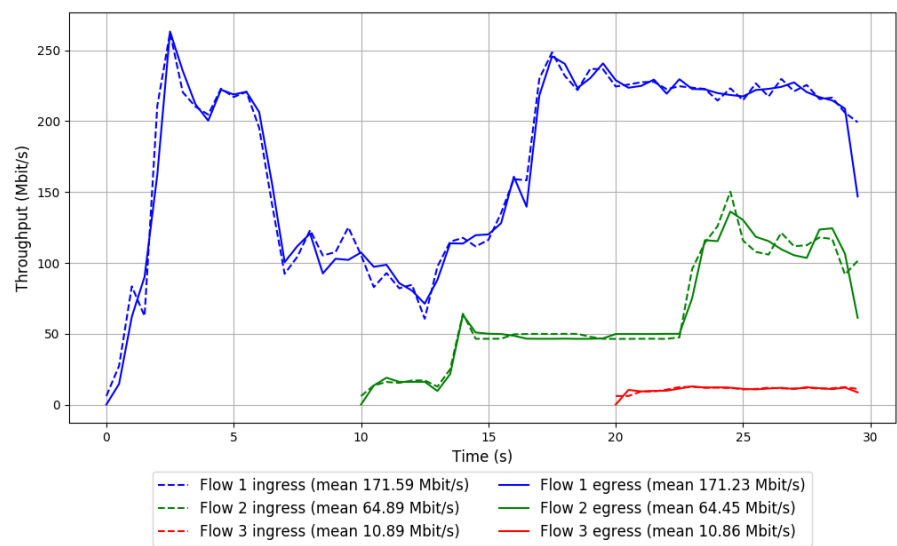


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-02-13 19:16:23
End at: 2018-02-13 19:16:53

# Below is generated by plot.py at 2018-02-14 02:03:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 217.50 Mbit/s
95th percentile per-packet one-way delay: 111.988 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 171.23 Mbit/s
95th percentile per-packet one-way delay: 111.923 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 64.45 Mbit/s
95th percentile per-packet one-way delay: 112.055 ms
Loss rate: 1.86%
-- Flow 3:
Average throughput: 10.86 Mbit/s
95th percentile per-packet one-way delay: 113.142 ms
Loss rate: 2.53%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-02-13 19:36:11

End at: 2018-02-13 19:36:41

Below is generated by plot.py at 2018-02-14 02:03:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 130.82 Mbit/s

95th percentile per-packet one-way delay: 112.100 ms

Loss rate: 2.11%

-- Flow 1:

Average throughput: 93.95 Mbit/s

95th percentile per-packet one-way delay: 112.062 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 15.88 Mbit/s

95th percentile per-packet one-way delay: 112.200 ms

Loss rate: 1.16%

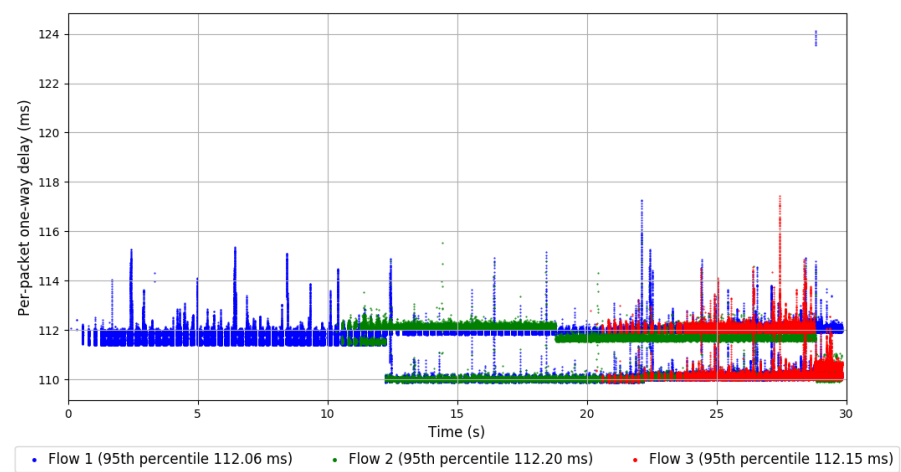
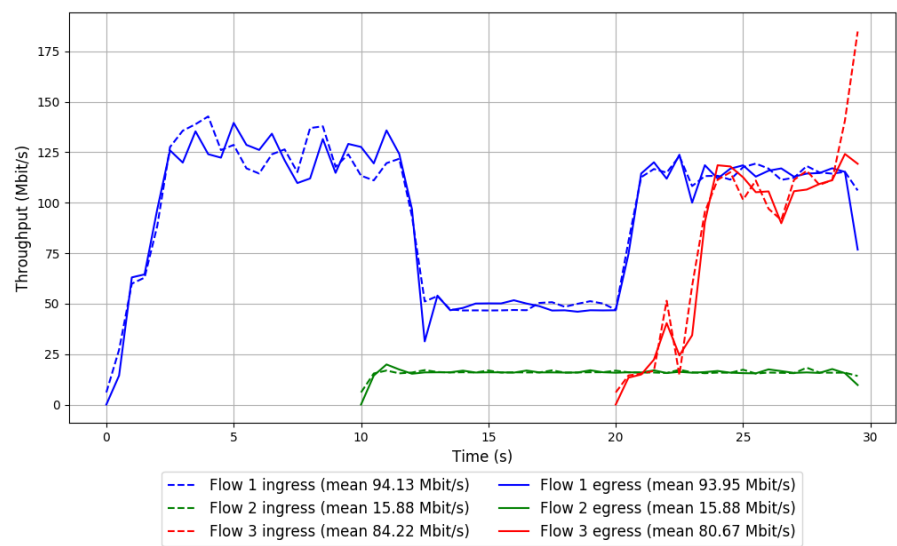
-- Flow 3:

Average throughput: 80.67 Mbit/s

95th percentile per-packet one-way delay: 112.149 ms

Loss rate: 6.40%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-02-13 19:55:46

End at: 2018-02-13 19:56:16

Below is generated by plot.py at 2018-02-14 02:03:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 24.32 Mbit/s

95th percentile per-packet one-way delay: 112.385 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 8.60 Mbit/s

95th percentile per-packet one-way delay: 111.884 ms

Loss rate: 1.21%

-- Flow 2:

Average throughput: 11.72 Mbit/s

95th percentile per-packet one-way delay: 111.564 ms

Loss rate: 0.46%

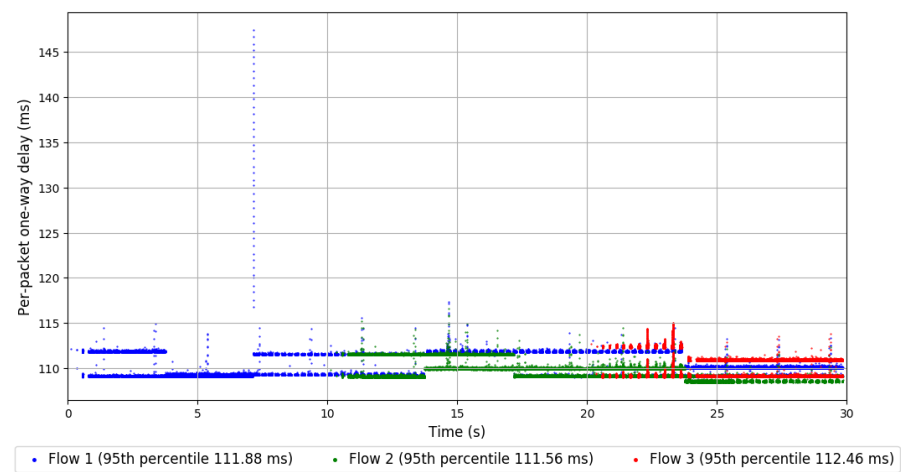
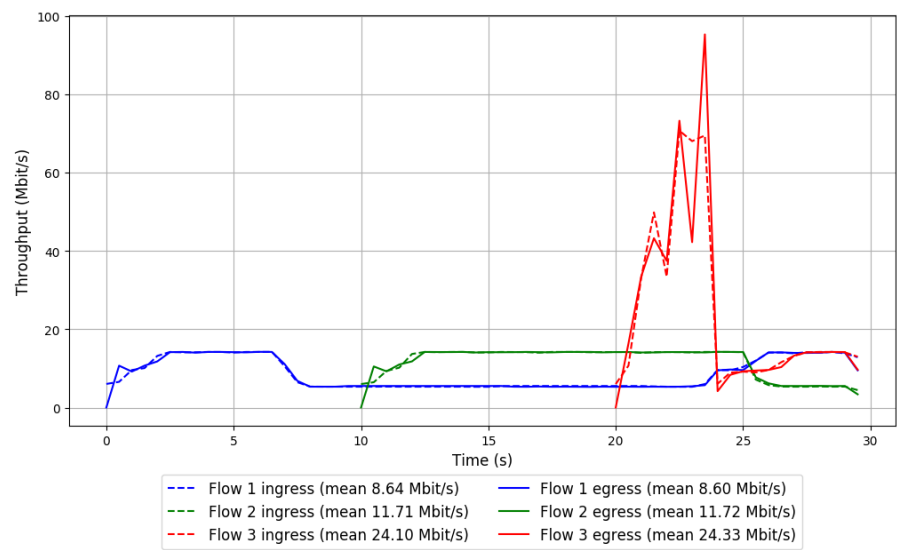
-- Flow 3:

Average throughput: 24.33 Mbit/s

95th percentile per-packet one-way delay: 112.459 ms

Loss rate: 1.33%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-02-13 20:15:31

End at: 2018-02-13 20:16:01

Below is generated by plot.py at 2018-02-14 02:04:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 226.93 Mbit/s

95th percentile per-packet one-way delay: 111.152 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 211.98 Mbit/s

95th percentile per-packet one-way delay: 110.721 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 15.11 Mbit/s

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

Loss rate: 1.21%

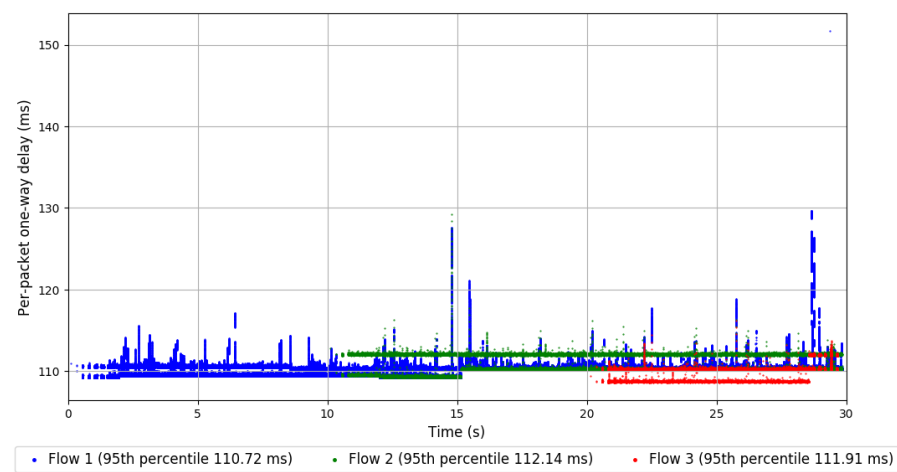
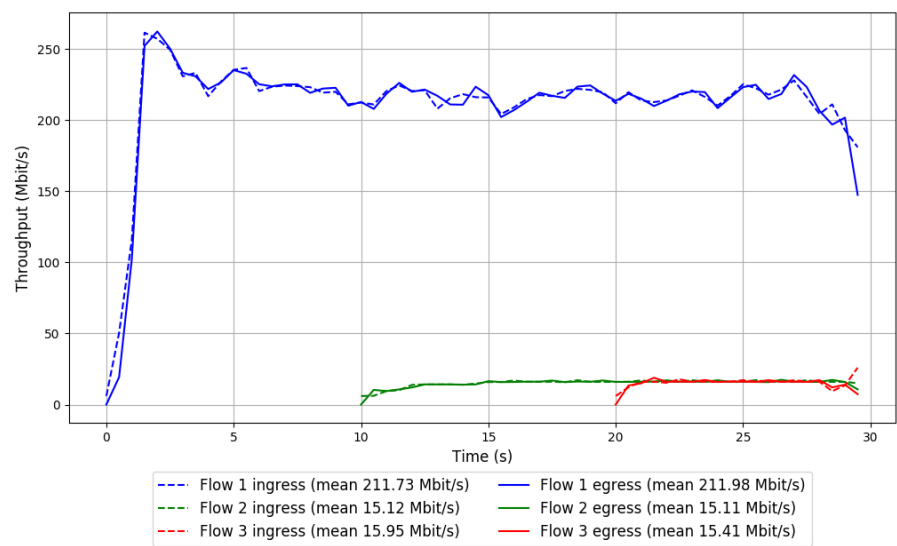
-- Flow 3:

Average throughput: 15.41 Mbit/s

95th percentile per-packet one-way delay: 111.911 ms

Loss rate: 5.98%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-02-13 20:35:05

End at: 2018-02-13 20:35:35

Below is generated by plot.py at 2018-02-14 02:04:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 32.61 Mbit/s

95th percentile per-packet one-way delay: 112.788 ms

Loss rate: 1.78%

-- Flow 1:

Average throughput: 8.49 Mbit/s

95th percentile per-packet one-way delay: 112.820 ms

Loss rate: 1.79%

-- Flow 2:

Average throughput: 14.66 Mbit/s

95th percentile per-packet one-way delay: 112.806 ms

Loss rate: 1.25%

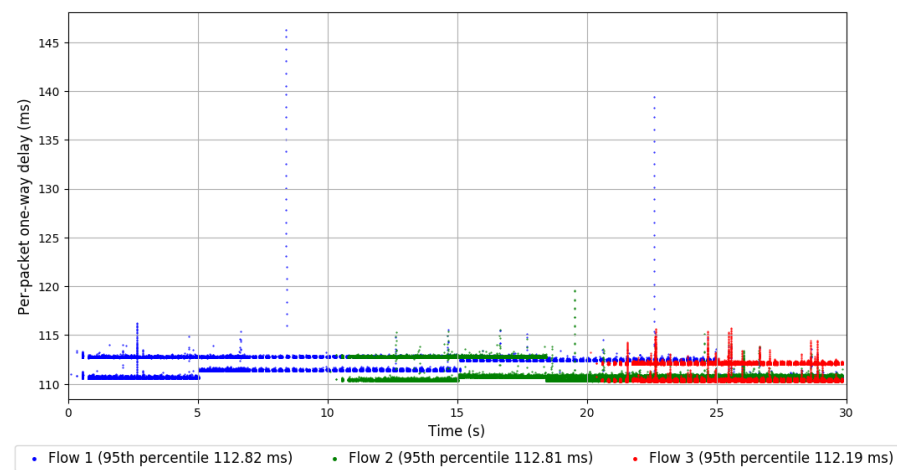
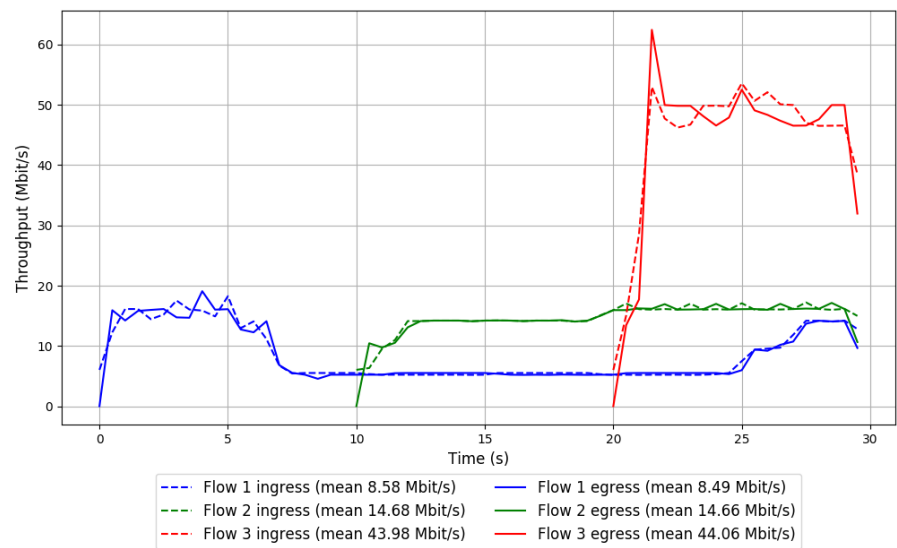
-- Flow 3:

Average throughput: 44.06 Mbit/s

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

Loss rate: 2.12%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-02-13 20:54:19

End at: 2018-02-13 20:54:49

Below is generated by plot.py at 2018-02-14 02:04:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 27.36 Mbit/s

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

Loss rate: 1.22%

-- Flow 1:

Average throughput: 16.01 Mbit/s

95th percentile per-packet one-way delay: 112.796 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 10.74 Mbit/s

95th percentile per-packet one-way delay: 112.823 ms

Loss rate: 1.48%

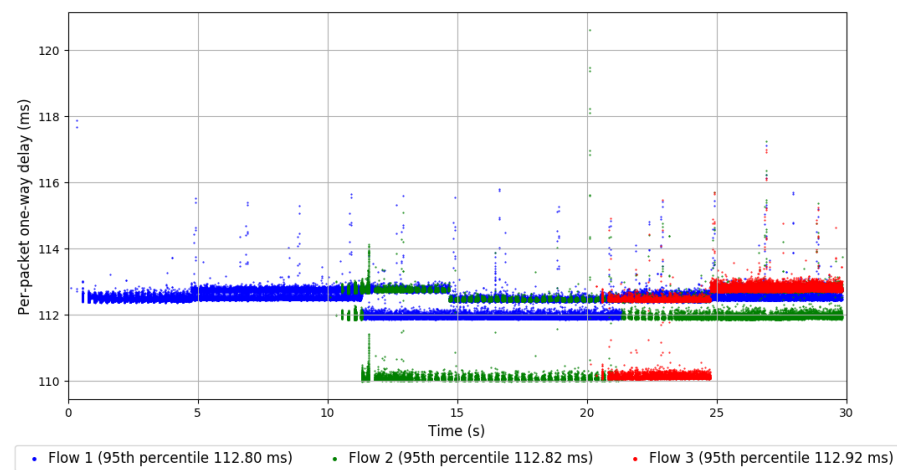
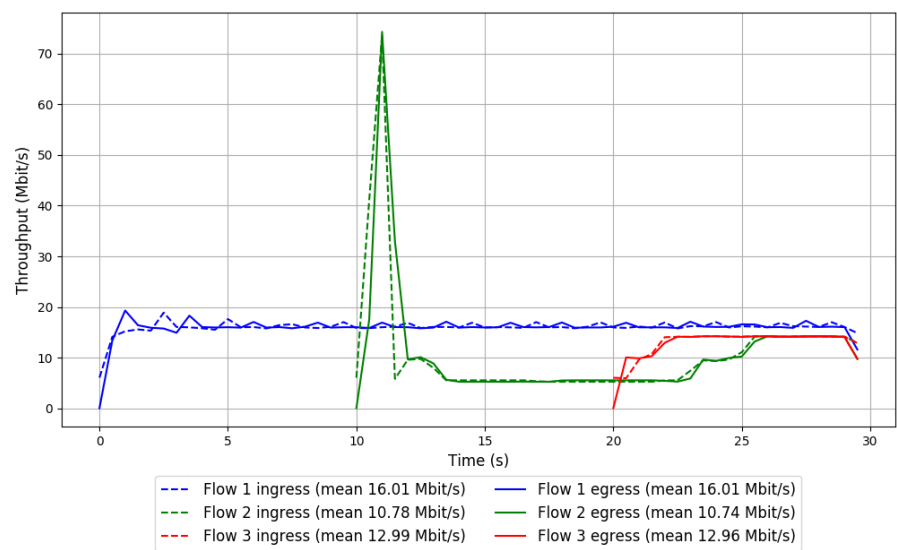
-- Flow 3:

Average throughput: 12.96 Mbit/s

95th percentile per-packet one-way delay: 112.925 ms

Loss rate: 2.46%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-02-13 21:13:54

End at: 2018-02-13 21:14:24

Below is generated by plot.py at 2018-02-14 02:07:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 287.75 Mbit/s

95th percentile per-packet one-way delay: 112.807 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 144.61 Mbit/s

95th percentile per-packet one-way delay: 112.736 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 208.35 Mbit/s

95th percentile per-packet one-way delay: 112.827 ms

Loss rate: 0.77%

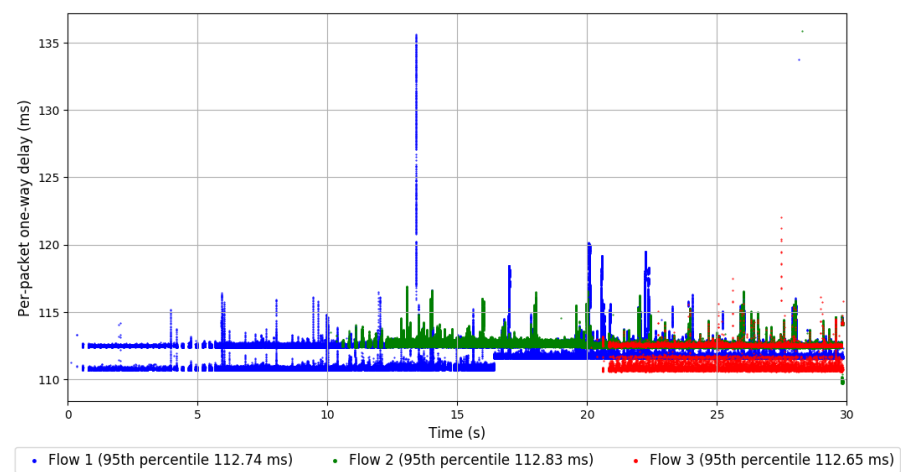
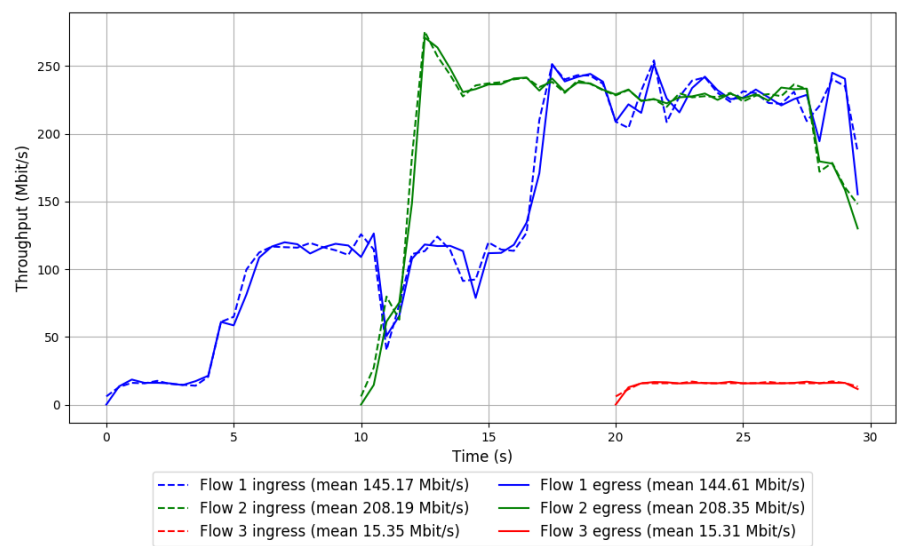
-- Flow 3:

Average throughput: 15.31 Mbit/s

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

Loss rate: 1.95%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-02-13 21:33:27

End at: 2018-02-13 21:33:57

Below is generated by plot.py at 2018-02-14 02:07:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 211.96 Mbit/s

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

Loss rate: 0.74%

-- Flow 1:

Average throughput: 196.38 Mbit/s

95th percentile per-packet one-way delay: 112.656 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 17.23 Mbit/s

95th percentile per-packet one-way delay: 112.369 ms

Loss rate: 1.08%

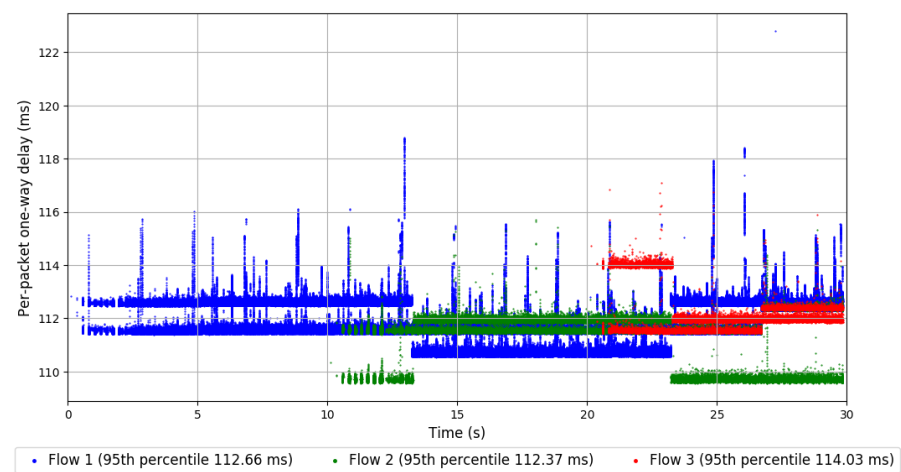
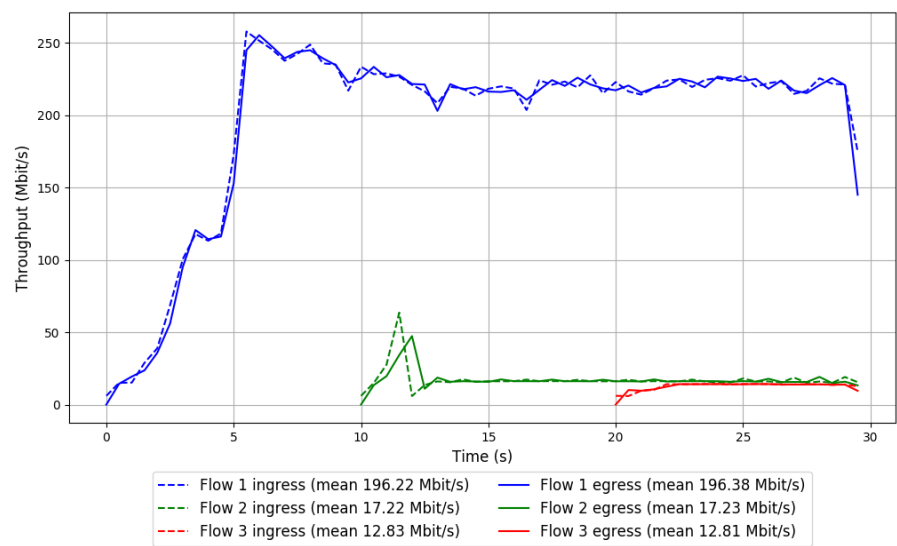
-- Flow 3:

Average throughput: 12.81 Mbit/s

95th percentile per-packet one-way delay: 114.032 ms

Loss rate: 2.44%

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

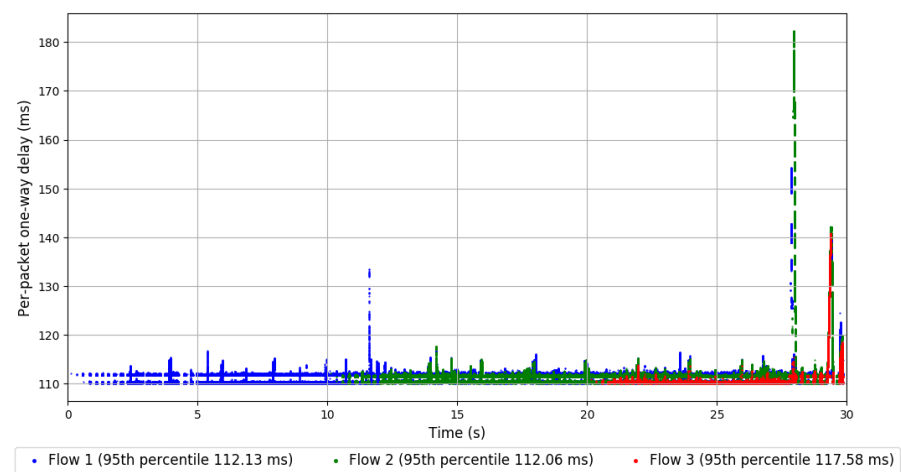
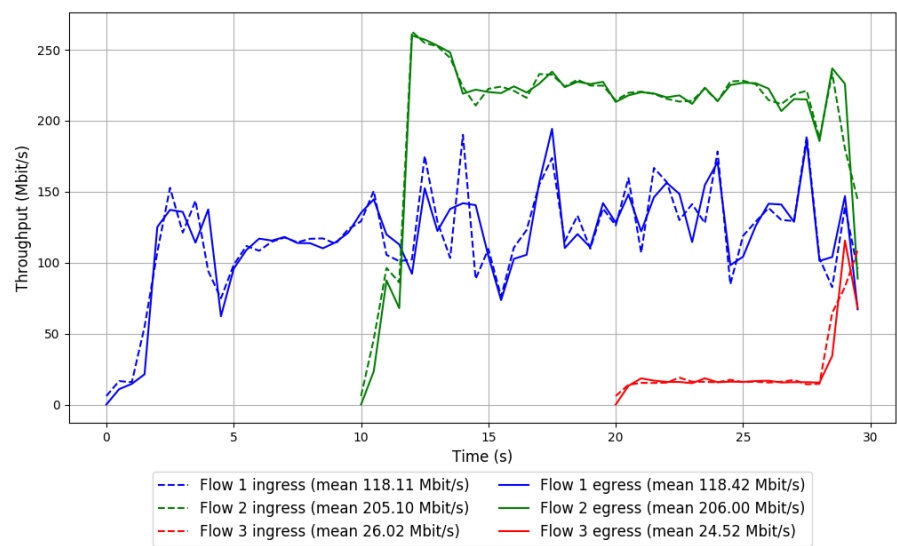


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-02-13 21:53:16
End at: 2018-02-13 21:53:46

# Below is generated by plot.py at 2018-02-14 02:08:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 262.91 Mbit/s
95th percentile per-packet one-way delay: 112.131 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 118.42 Mbit/s
95th percentile per-packet one-way delay: 112.126 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 206.00 Mbit/s
95th percentile per-packet one-way delay: 112.065 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 24.52 Mbit/s
95th percentile per-packet one-way delay: 117.575 ms
Loss rate: 7.87%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-02-13 18:59:51

End at: 2018-02-13 19:00:21

Below is generated by plot.py at 2018-02-14 02:08:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.90 Mbit/s

95th percentile per-packet one-way delay: 113.446 ms

Loss rate: 2.02%

-- Flow 1:

Average throughput: 4.20 Mbit/s

95th percentile per-packet one-way delay: 112.799 ms

Loss rate: 2.46%

-- Flow 2:

Average throughput: 10.19 Mbit/s

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

Loss rate: 1.18%

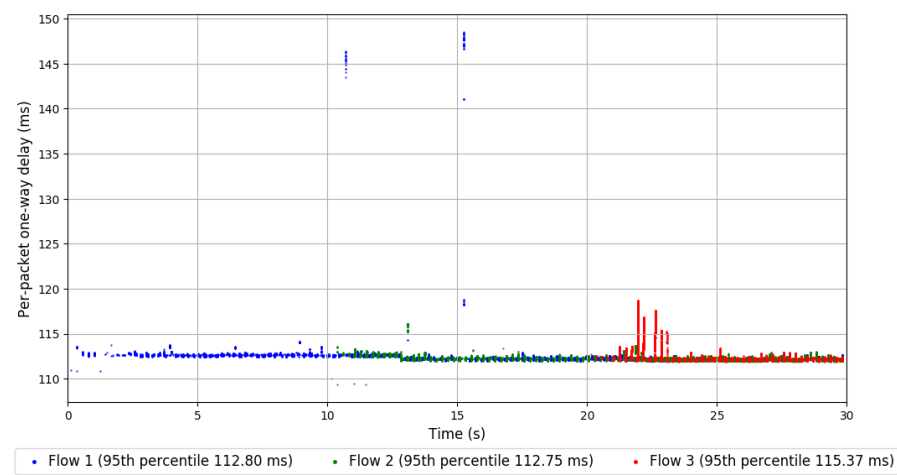
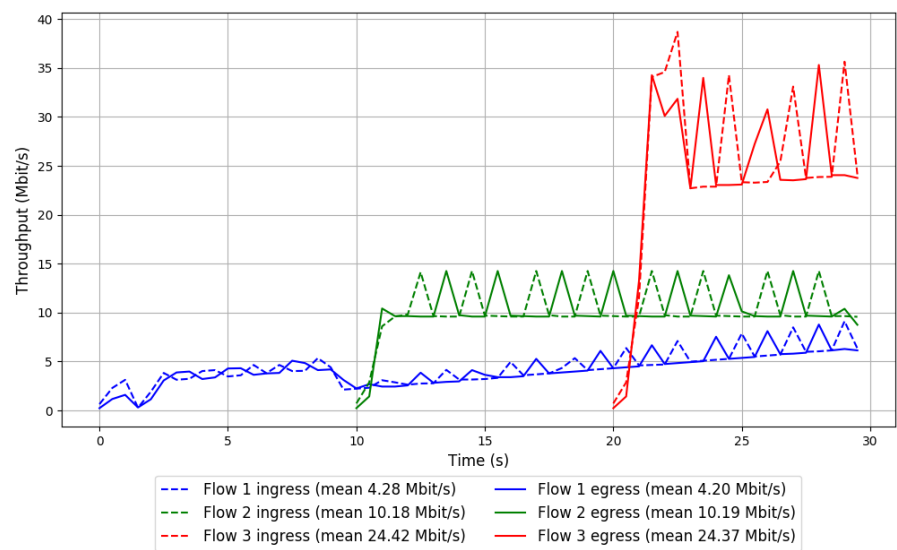
-- Flow 3:

Average throughput: 24.37 Mbit/s

95th percentile per-packet one-way delay: 115.368 ms

Loss rate: 2.48%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-02-13 19:19:28

End at: 2018-02-13 19:19:58

Below is generated by plot.py at 2018-02-14 02:08:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.88 Mbit/s

95th percentile per-packet one-way delay: 118.418 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 33.60 Mbit/s

95th percentile per-packet one-way delay: 115.349 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 32.31 Mbit/s

95th percentile per-packet one-way delay: 117.663 ms

Loss rate: 1.18%

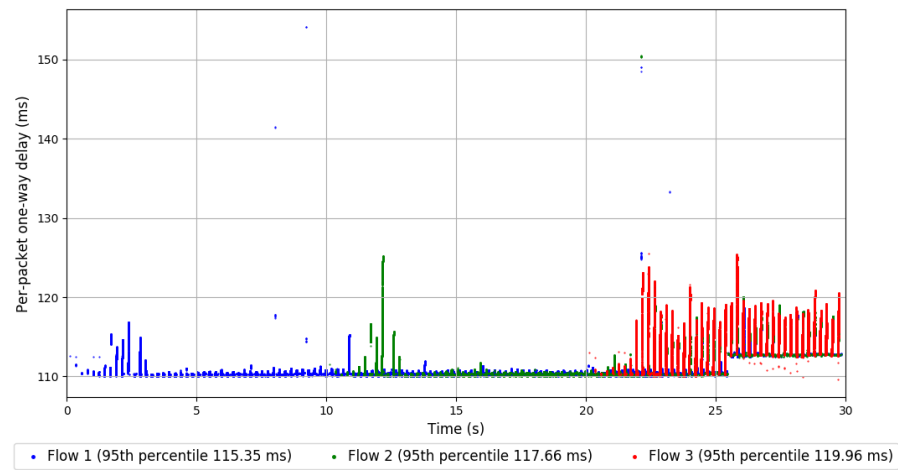
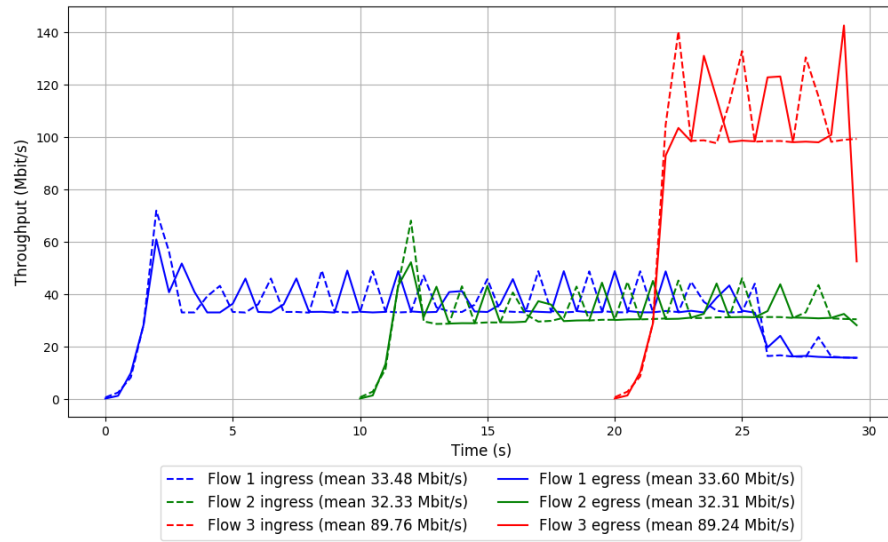
-- Flow 3:

Average throughput: 89.24 Mbit/s

95th percentile per-packet one-way delay: 119.958 ms

Loss rate: 2.85%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-02-13 19:39:12

End at: 2018-02-13 19:39:42

Below is generated by plot.py at 2018-02-14 02:08:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 38.90 Mbit/s

95th percentile per-packet one-way delay: 113.466 ms

Loss rate: 1.88%

-- Flow 1:

Average throughput: 15.56 Mbit/s

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

Loss rate: 2.51%

-- Flow 2:

Average throughput: 27.33 Mbit/s

95th percentile per-packet one-way delay: 112.412 ms

Loss rate: 1.11%

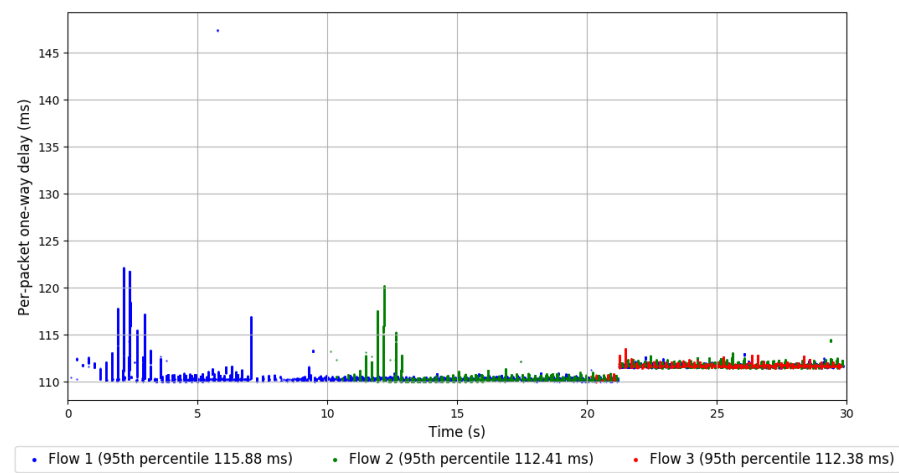
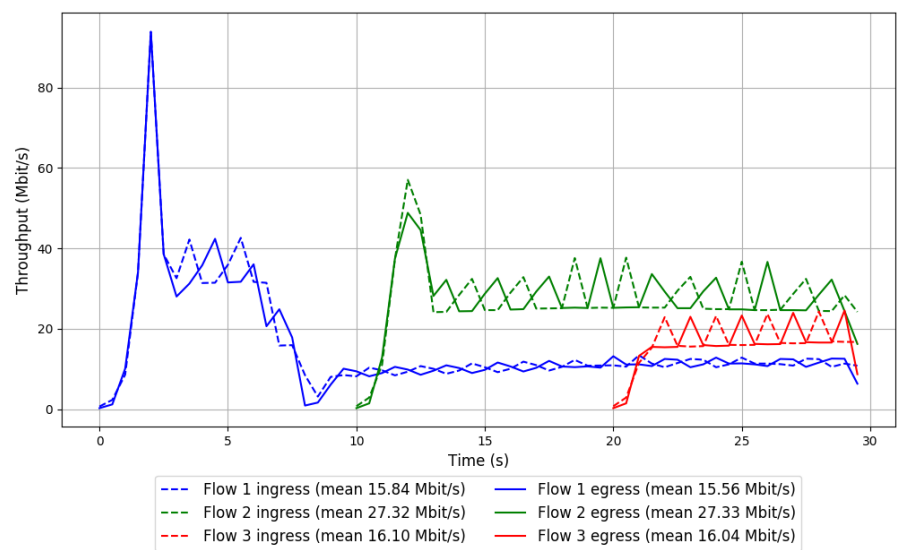
-- Flow 3:

Average throughput: 16.04 Mbit/s

95th percentile per-packet one-way delay: 112.378 ms

Loss rate: 2.63%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-02-13 19:58:33

End at: 2018-02-13 19:59:03

Below is generated by plot.py at 2018-02-14 02:08:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 53.82 Mbit/s

95th percentile per-packet one-way delay: 113.137 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 24.38 Mbit/s

95th percentile per-packet one-way delay: 111.307 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 28.78 Mbit/s

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

Loss rate: 1.01%

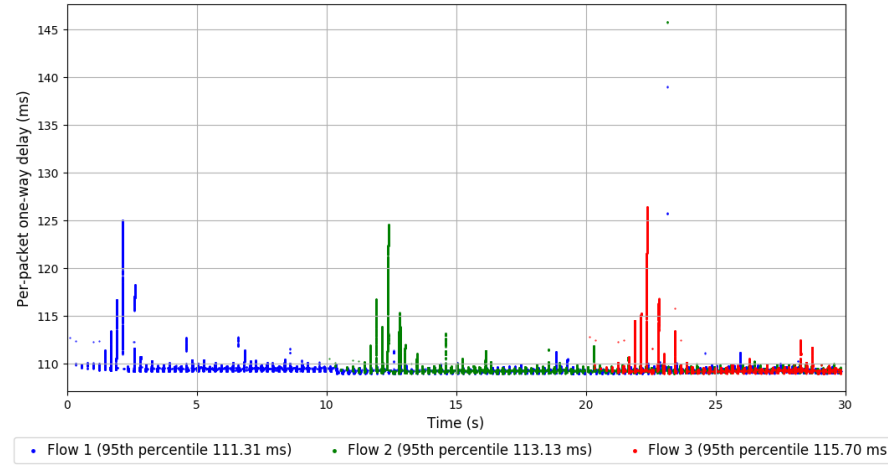
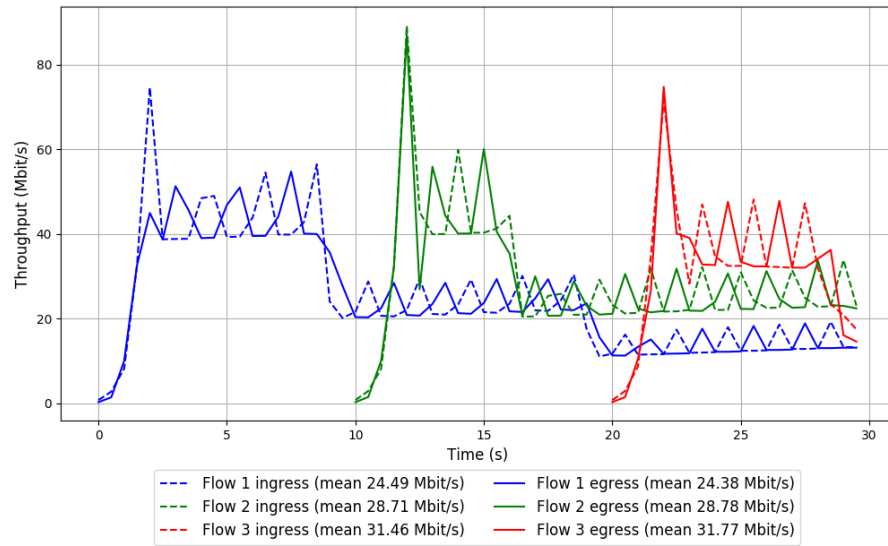
-- Flow 3:

Average throughput: 31.77 Mbit/s

95th percentile per-packet one-way delay: 115.704 ms

Loss rate: 1.30%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-02-13 20:18:38

End at: 2018-02-13 20:19:08

Below is generated by plot.py at 2018-02-14 02:08:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 42.18 Mbit/s

95th percentile per-packet one-way delay: 116.988 ms

Loss rate: 2.05%

-- Flow 1:

Average throughput: 16.05 Mbit/s

95th percentile per-packet one-way delay: 116.431 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 25.60 Mbit/s

95th percentile per-packet one-way delay: 113.944 ms

Loss rate: 3.29%

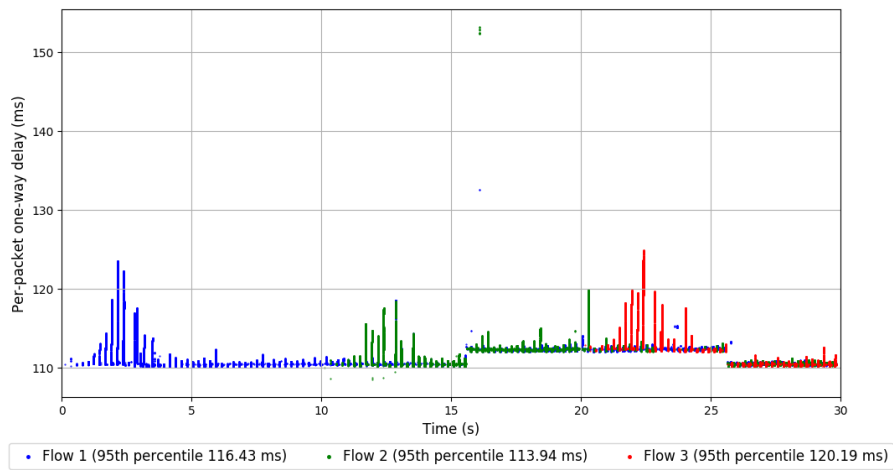
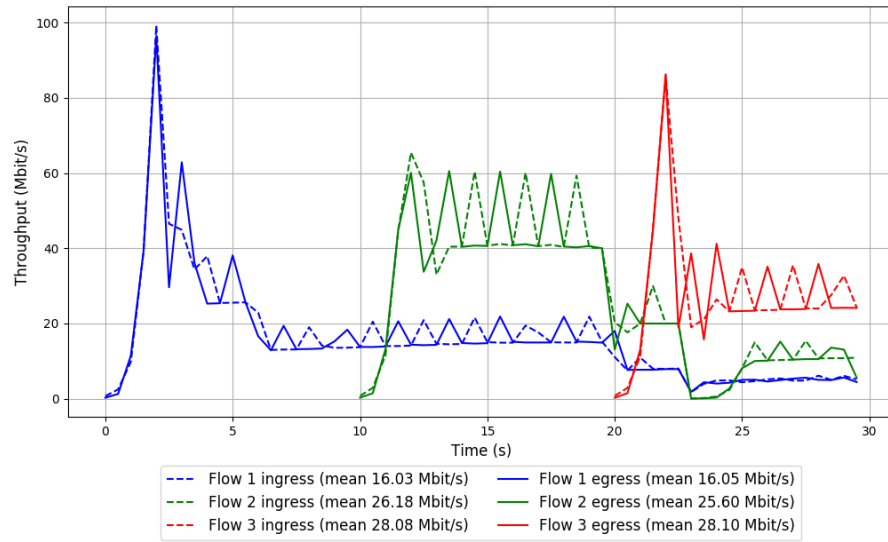
-- Flow 3:

Average throughput: 28.10 Mbit/s

95th percentile per-packet one-way delay: 120.188 ms

Loss rate: 2.18%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-02-13 20:37:51

End at: 2018-02-13 20:38:21

Below is generated by plot.py at 2018-02-14 02:08:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 53.81 Mbit/s

95th percentile per-packet one-way delay: 116.247 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 26.94 Mbit/s

95th percentile per-packet one-way delay: 115.742 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 27.00 Mbit/s

95th percentile per-packet one-way delay: 116.247 ms

Loss rate: 0.72%

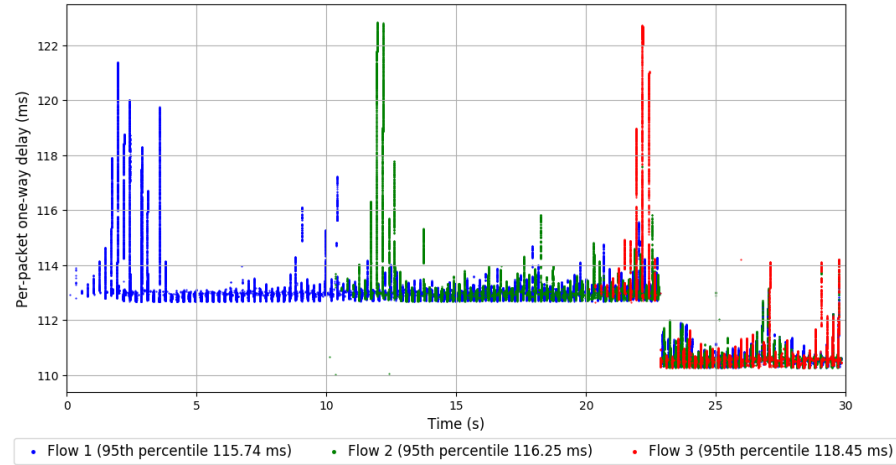
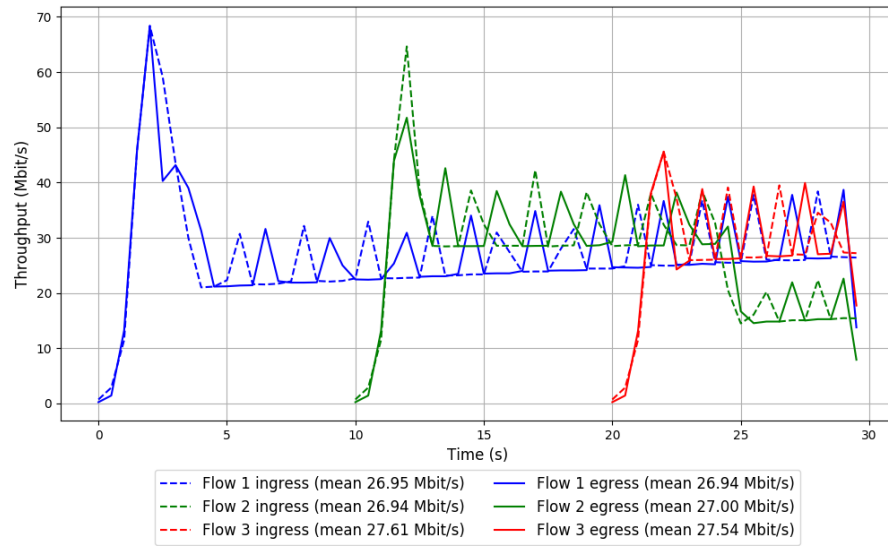
-- Flow 3:

Average throughput: 27.54 Mbit/s

95th percentile per-packet one-way delay: 118.448 ms

Loss rate: 2.49%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-02-13 20:57:08

End at: 2018-02-13 20:57:38

Below is generated by plot.py at 2018-02-14 02:08:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.06 Mbit/s

95th percentile per-packet one-way delay: 120.794 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 66.28 Mbit/s

95th percentile per-packet one-way delay: 121.097 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 30.95 Mbit/s

95th percentile per-packet one-way delay: 114.526 ms

Loss rate: 1.23%

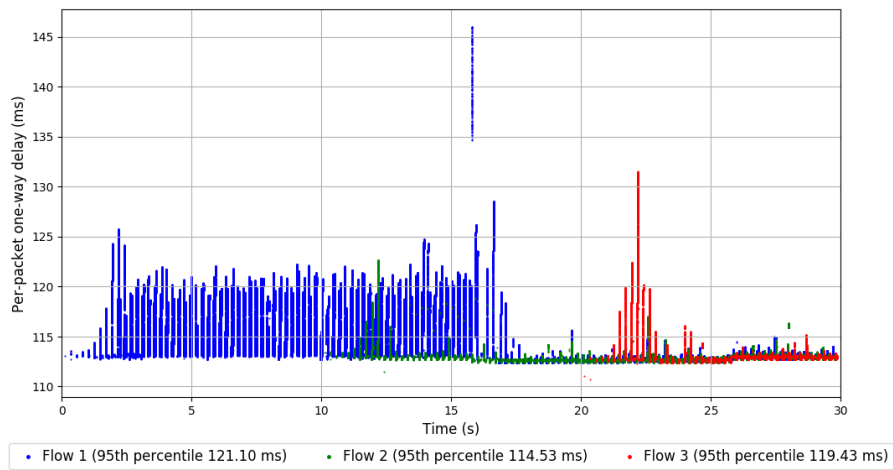
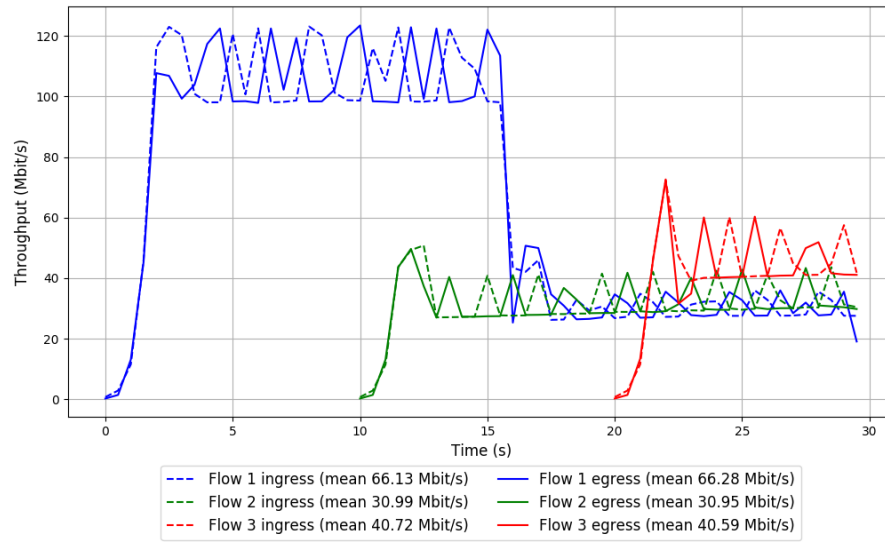
-- Flow 3:

Average throughput: 40.59 Mbit/s

95th percentile per-packet one-way delay: 119.432 ms

Loss rate: 2.56%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-02-13 21:17:05

End at: 2018-02-13 21:17:35

Below is generated by plot.py at 2018-02-14 02:08:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 60.85 Mbit/s

95th percentile per-packet one-way delay: 114.669 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 31.34 Mbit/s

95th percentile per-packet one-way delay: 117.988 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 28.34 Mbit/s

95th percentile per-packet one-way delay: 112.750 ms

Loss rate: 0.77%

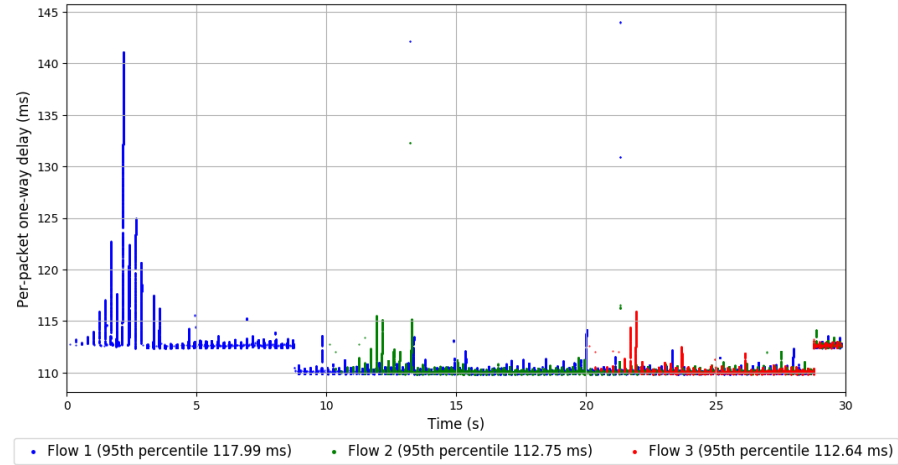
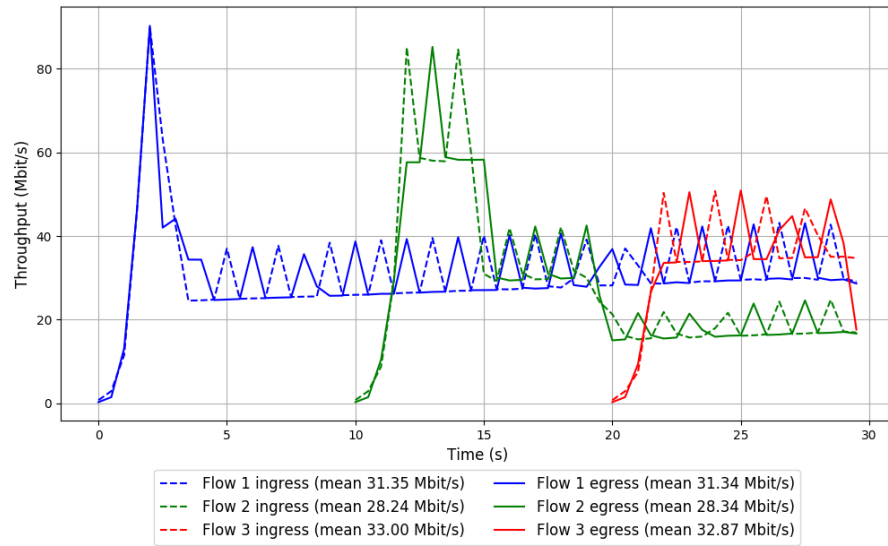
-- Flow 3:

Average throughput: 32.87 Mbit/s

95th percentile per-packet one-way delay: 112.645 ms

Loss rate: 2.64%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-02-13 21:36:32

End at: 2018-02-13 21:37:02

Below is generated by plot.py at 2018-02-14 02:08:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 49.44 Mbit/s

95th percentile per-packet one-way delay: 118.048 ms

Loss rate: 2.05%

-- Flow 1:

Average throughput: 20.44 Mbit/s

95th percentile per-packet one-way delay: 117.244 ms

Loss rate: 2.28%

-- Flow 2:

Average throughput: 28.01 Mbit/s

95th percentile per-packet one-way delay: 115.676 ms

Loss rate: 1.77%

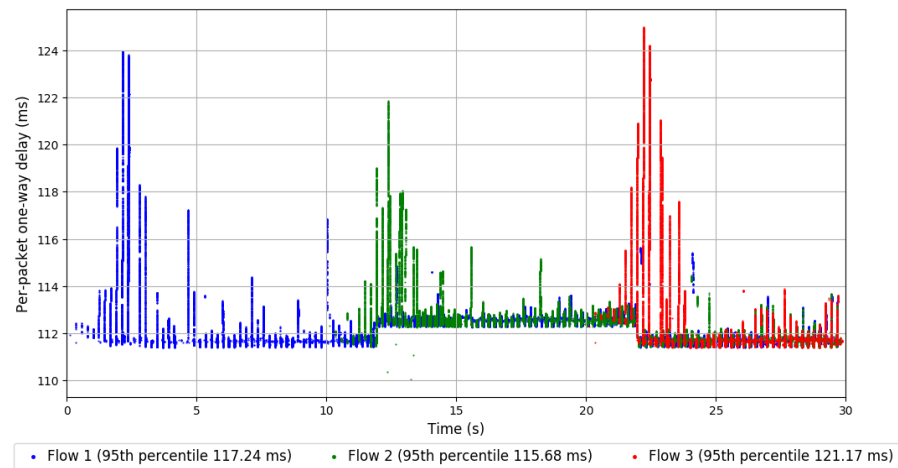
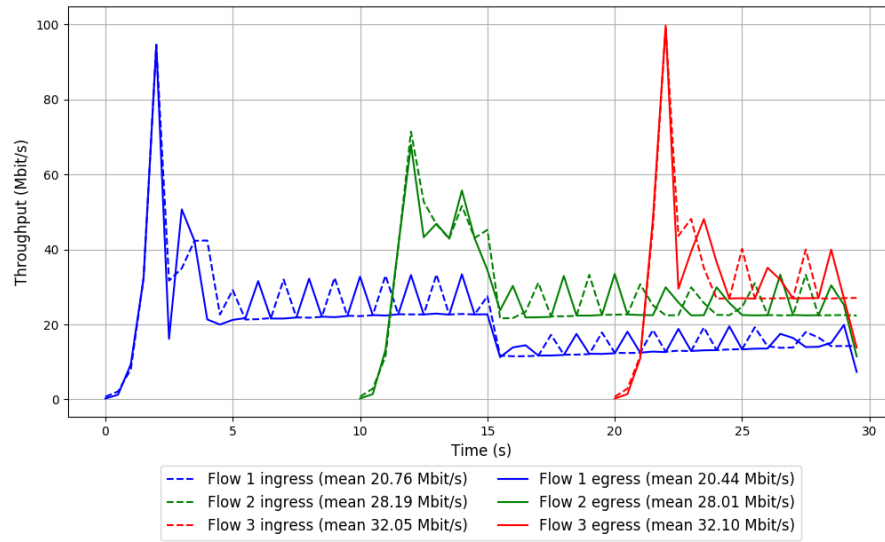
-- Flow 3:

Average throughput: 32.10 Mbit/s

95th percentile per-packet one-way delay: 121.172 ms

Loss rate: 2.11%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-02-13 21:56:25

End at: 2018-02-13 21:56:55

Below is generated by plot.py at 2018-02-14 02:08:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 41.10 Mbit/s

95th percentile per-packet one-way delay: 118.040 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 6.53 Mbit/s

95th percentile per-packet one-way delay: 115.937 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 12.02 Mbit/s

95th percentile per-packet one-way delay: 114.325 ms

Loss rate: 1.06%

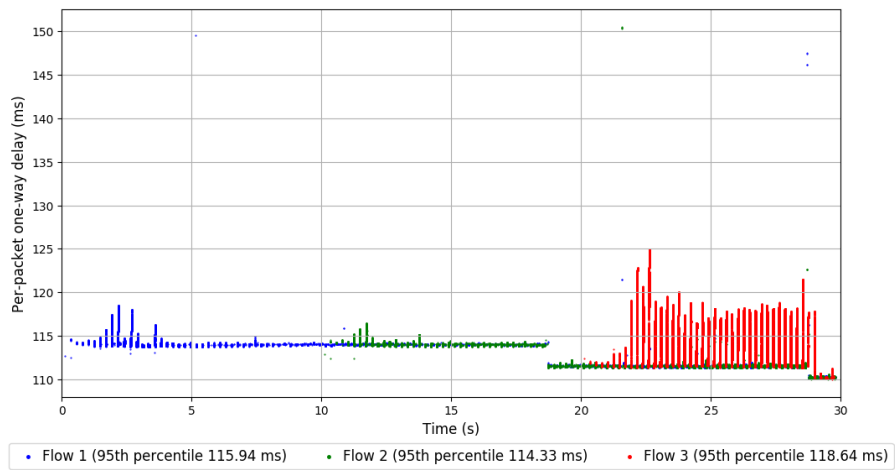
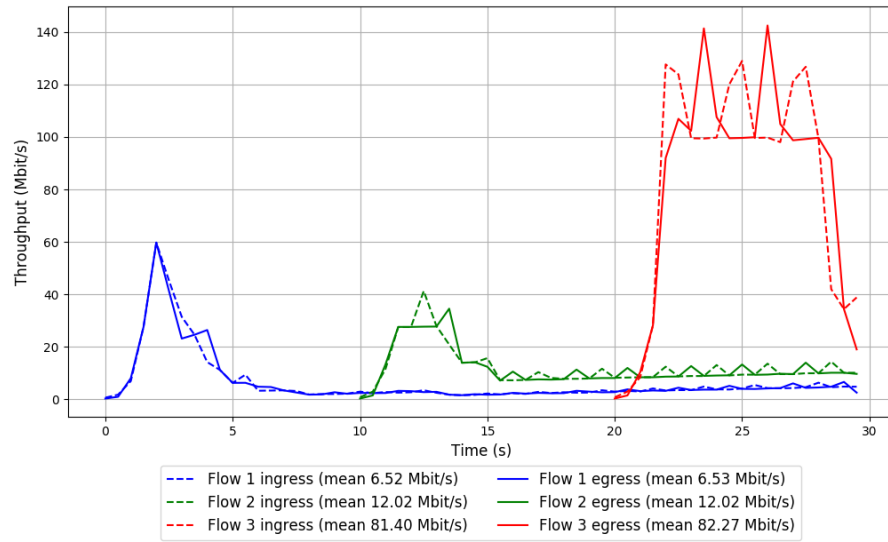
-- Flow 3:

Average throughput: 82.27 Mbit/s

95th percentile per-packet one-way delay: 118.640 ms

Loss rate: 1.24%

Run 10: Report of TCP Vegas — Data Link

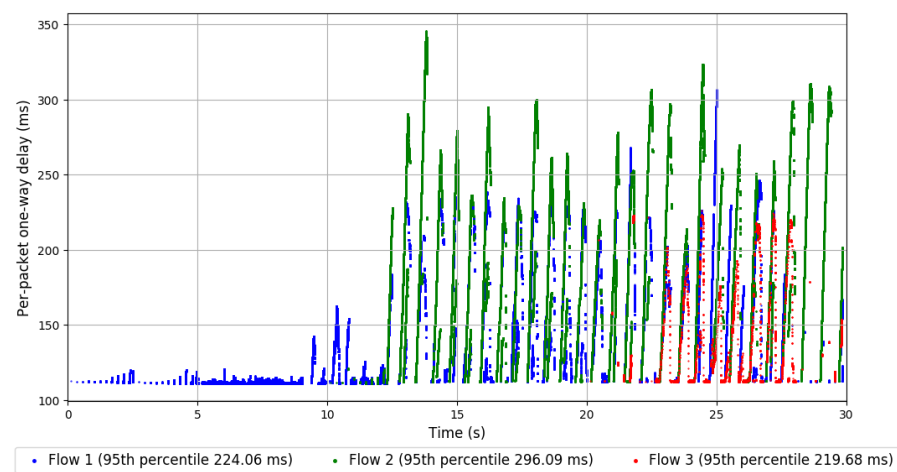
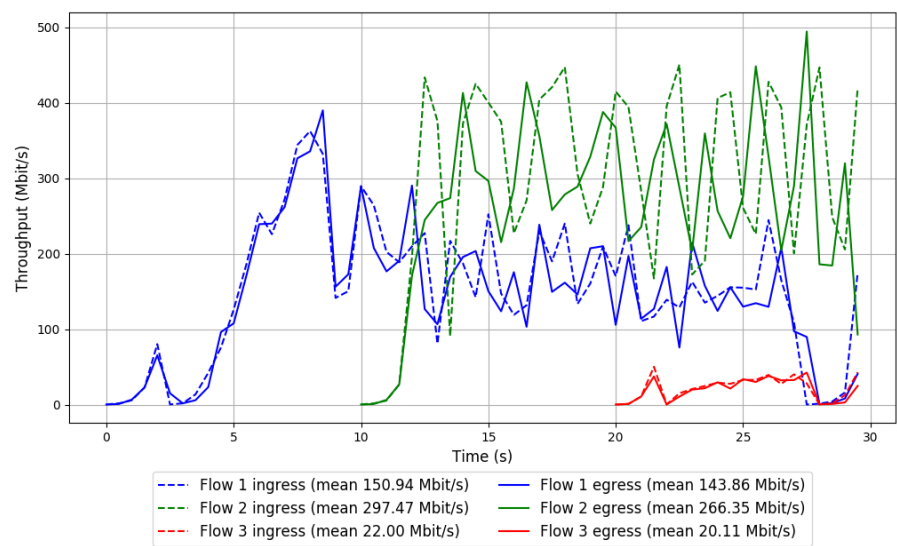


```
Run 1: Statistics of Verus

Start at: 2018-02-13 18:53:31
End at: 2018-02-13 18:54:01

# Below is generated by plot.py at 2018-02-14 02:10:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.11 Mbit/s
95th percentile per-packet one-way delay: 282.463 ms
Loss rate: 8.34%
-- Flow 1:
Average throughput: 143.86 Mbit/s
95th percentile per-packet one-way delay: 224.056 ms
Loss rate: 4.80%
-- Flow 2:
Average throughput: 266.35 Mbit/s
95th percentile per-packet one-way delay: 296.089 ms
Loss rate: 10.96%
-- Flow 3:
Average throughput: 20.11 Mbit/s
95th percentile per-packet one-way delay: 219.684 ms
Loss rate: 10.68%
```


Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-02-13 19:12:58

End at: 2018-02-13 19:13:28

Below is generated by plot.py at 2018-02-14 02:10:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 238.20 Mbit/s

95th percentile per-packet one-way delay: 299.238 ms

Loss rate: 4.62%

-- Flow 1:

Average throughput: 34.48 Mbit/s

95th percentile per-packet one-way delay: 205.509 ms

Loss rate: 2.02%

-- Flow 2:

Average throughput: 291.80 Mbit/s

95th percentile per-packet one-way delay: 306.257 ms

Loss rate: 4.56%

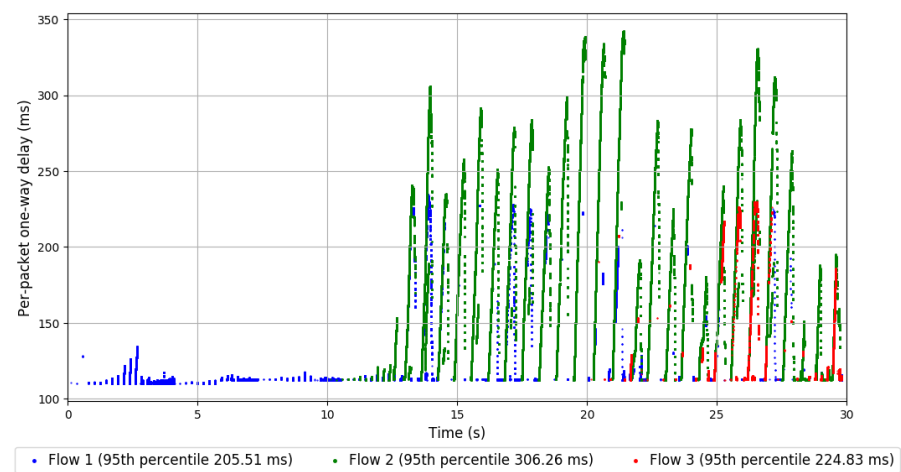
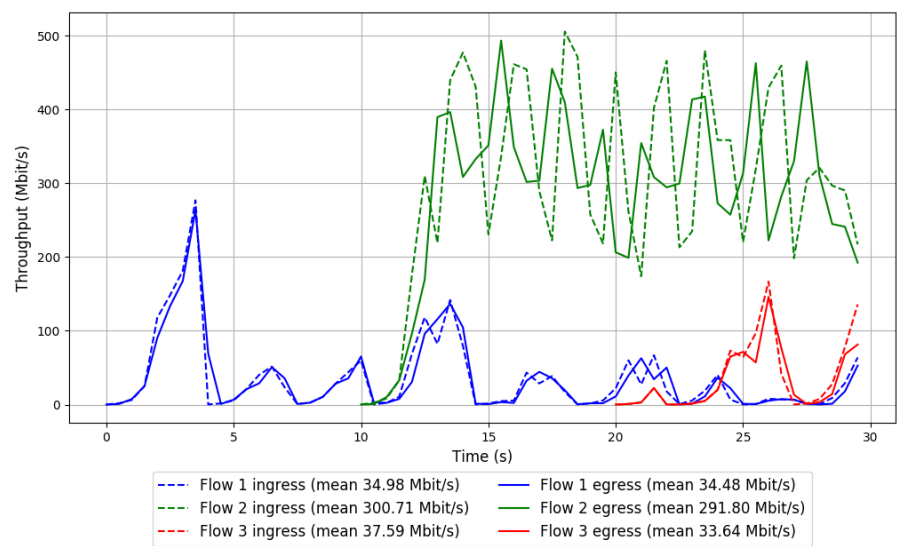
-- Flow 3:

Average throughput: 33.64 Mbit/s

95th percentile per-packet one-way delay: 224.832 ms

Loss rate: 12.87%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-02-13 19:32:44

End at: 2018-02-13 19:33:14

Below is generated by plot.py at 2018-02-14 02:10:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 300.66 Mbit/s

95th percentile per-packet one-way delay: 218.275 ms

Loss rate: 2.40%

-- Flow 1:

Average throughput: 176.32 Mbit/s

95th percentile per-packet one-way delay: 214.420 ms

Loss rate: 2.14%

-- Flow 2:

Average throughput: 132.14 Mbit/s

95th percentile per-packet one-way delay: 215.255 ms

Loss rate: 3.17%

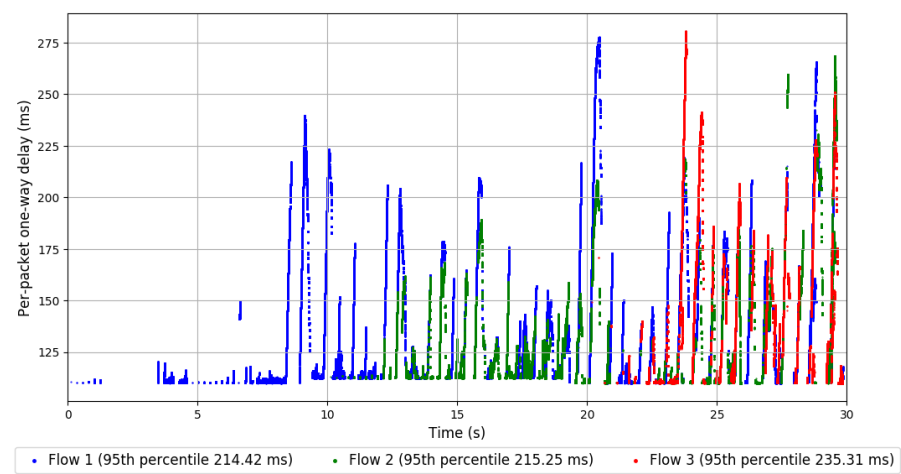
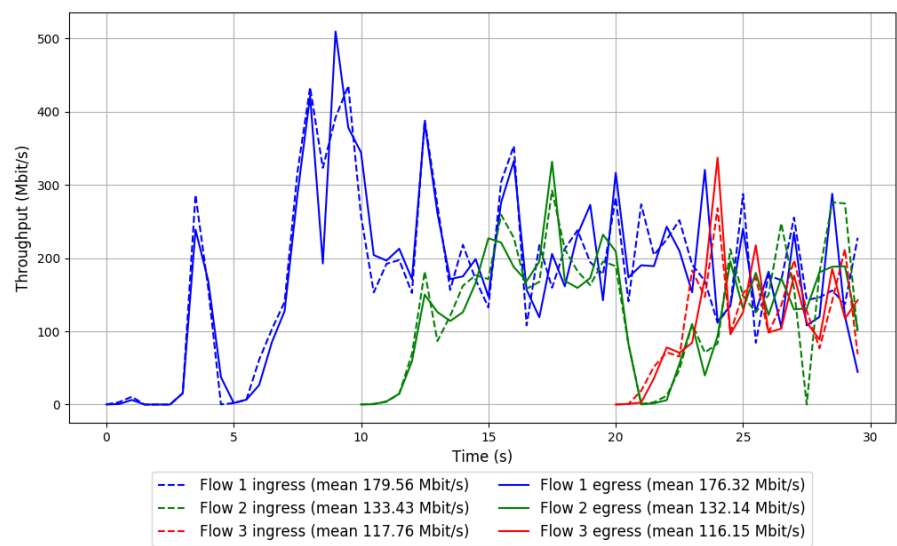
-- Flow 3:

Average throughput: 116.15 Mbit/s

95th percentile per-packet one-way delay: 235.311 ms

Loss rate: 1.82%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-02-13 19:52:24

End at: 2018-02-13 19:52:54

Below is generated by plot.py at 2018-02-14 02:10:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 245.40 Mbit/s

95th percentile per-packet one-way delay: 145.842 ms

Loss rate: 2.26%

-- Flow 1:

Average throughput: 160.78 Mbit/s

95th percentile per-packet one-way delay: 143.575 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 95.18 Mbit/s

95th percentile per-packet one-way delay: 141.267 ms

Loss rate: 2.91%

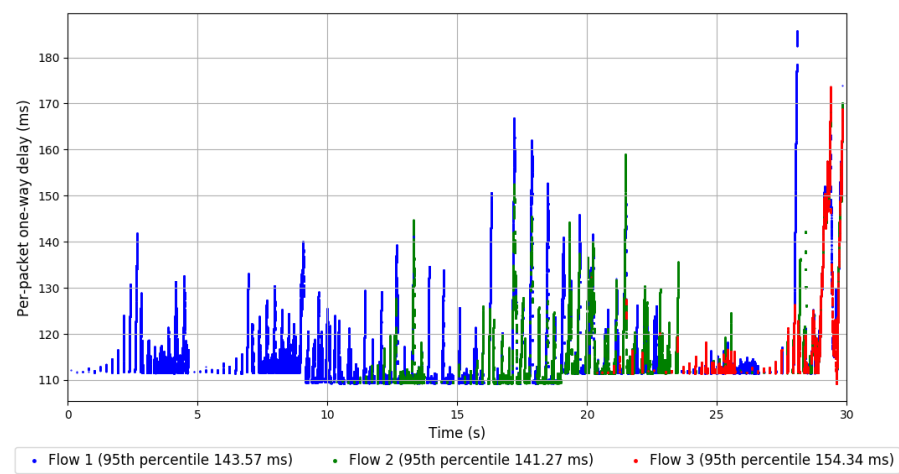
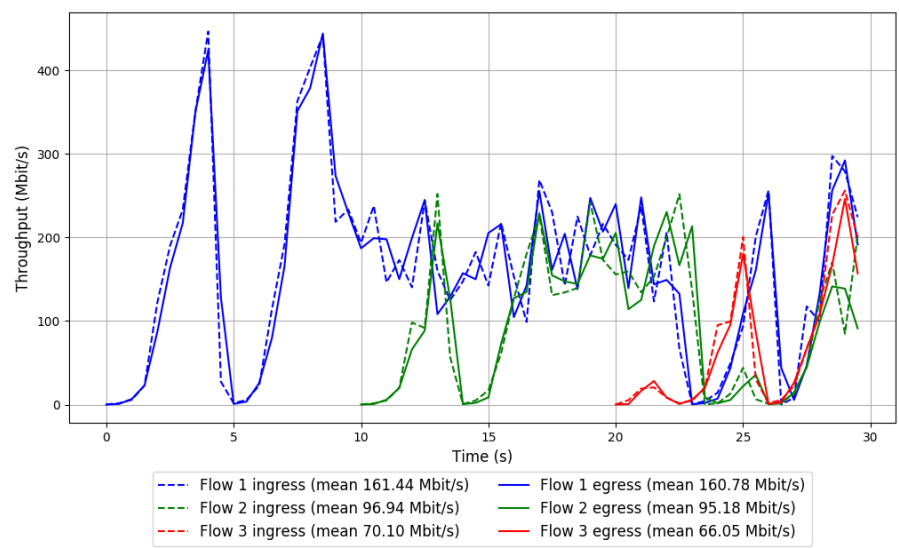
-- Flow 3:

Average throughput: 66.05 Mbit/s

95th percentile per-packet one-way delay: 154.339 ms

Loss rate: 8.12%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-02-13 20:12:00

End at: 2018-02-13 20:12:30

Below is generated by plot.py at 2018-02-14 02:10:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 343.74 Mbit/s

95th percentile per-packet one-way delay: 219.820 ms

Loss rate: 1.73%

-- Flow 1:

Average throughput: 234.07 Mbit/s

95th percentile per-packet one-way delay: 203.551 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 101.56 Mbit/s

95th percentile per-packet one-way delay: 215.806 ms

Loss rate: 1.39%

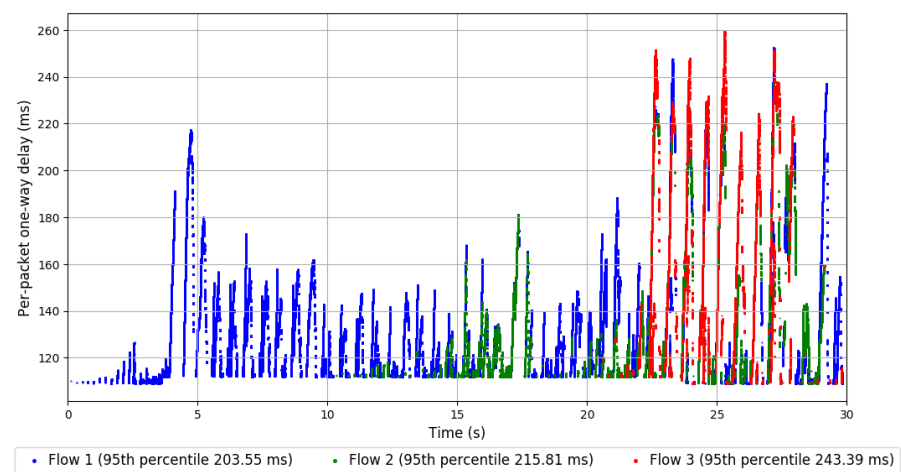
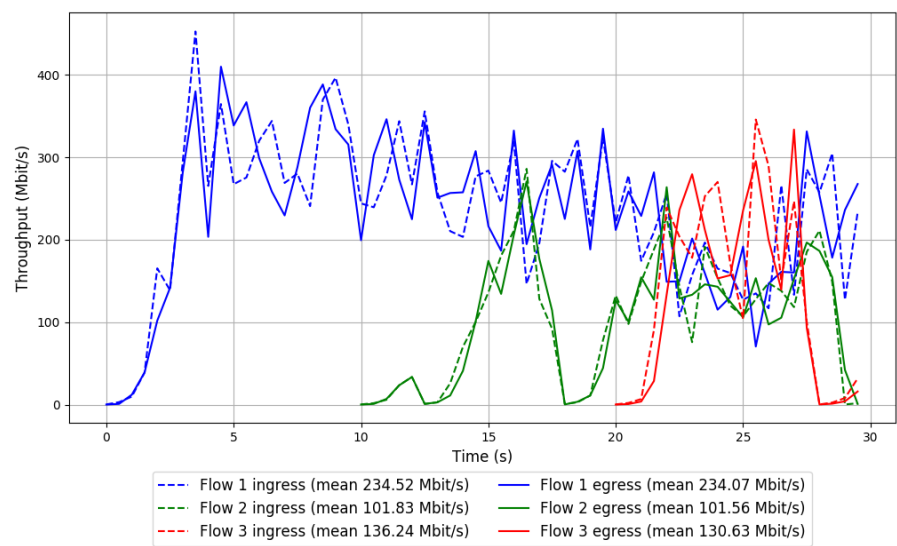
-- Flow 3:

Average throughput: 130.63 Mbit/s

95th percentile per-packet one-way delay: 243.393 ms

Loss rate: 6.36%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-02-13 20:31:49

End at: 2018-02-13 20:32:19

Below is generated by plot.py at 2018-02-14 02:10:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 232.66 Mbit/s

95th percentile per-packet one-way delay: 225.788 ms

Loss rate: 2.83%

-- Flow 1:

Average throughput: 52.99 Mbit/s

95th percentile per-packet one-way delay: 125.302 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 184.90 Mbit/s

95th percentile per-packet one-way delay: 213.588 ms

Loss rate: 1.96%

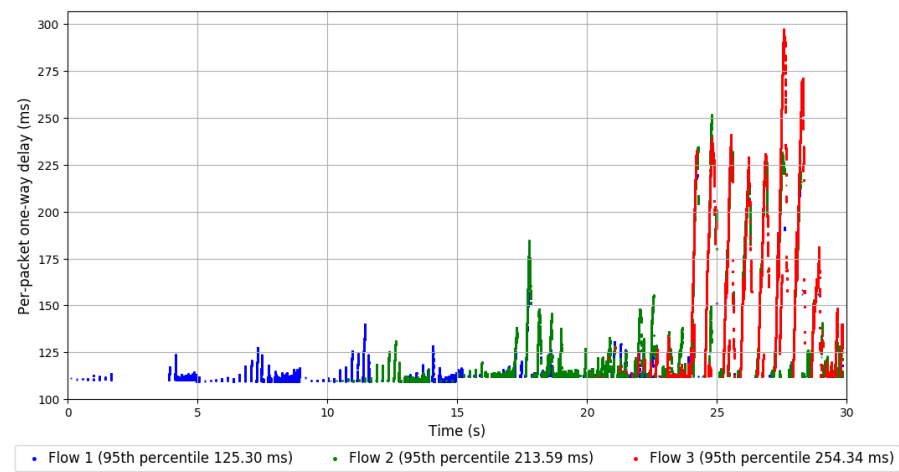
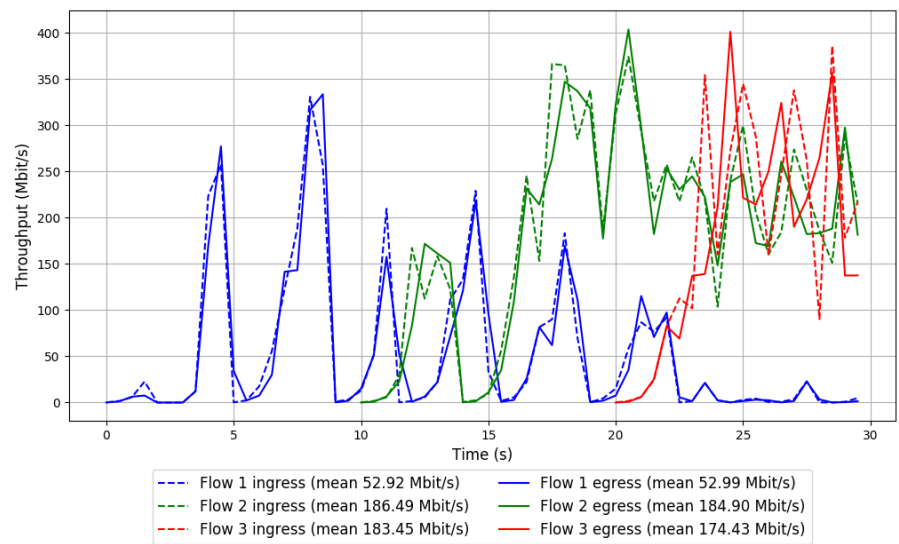
-- Flow 3:

Average throughput: 174.43 Mbit/s

95th percentile per-packet one-way delay: 254.341 ms

Loss rate: 6.56%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-02-13 20:50:56

End at: 2018-02-13 20:51:26

Below is generated by plot.py at 2018-02-14 02:12:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 251.44 Mbit/s

95th percentile per-packet one-way delay: 127.056 ms

Loss rate: 1.98%

-- Flow 1:

Average throughput: 209.45 Mbit/s

95th percentile per-packet one-way delay: 126.357 ms

Loss rate: 1.60%

-- Flow 2:

Average throughput: 34.95 Mbit/s

95th percentile per-packet one-way delay: 128.473 ms

Loss rate: 0.30%

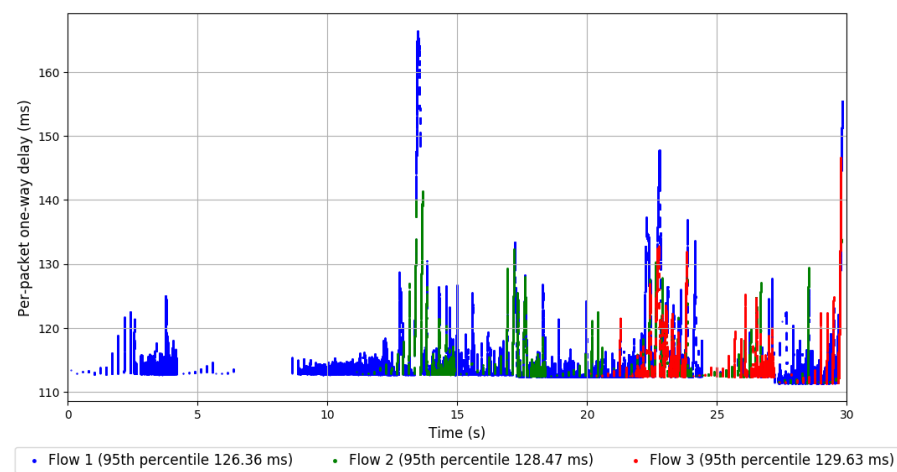
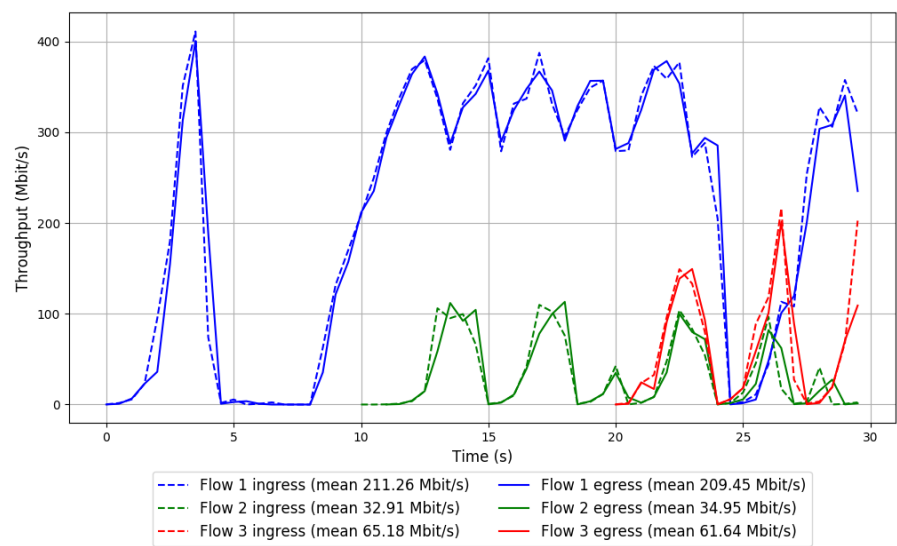
-- Flow 3:

Average throughput: 61.64 Mbit/s

95th percentile per-packet one-way delay: 129.632 ms

Loss rate: 7.41%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-02-13 21:10:25

End at: 2018-02-13 21:10:55

Below is generated by plot.py at 2018-02-14 02:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 336.25 Mbit/s

95th percentile per-packet one-way delay: 181.784 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 243.33 Mbit/s

95th percentile per-packet one-way delay: 190.365 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 130.67 Mbit/s

95th percentile per-packet one-way delay: 159.377 ms

Loss rate: 0.70%

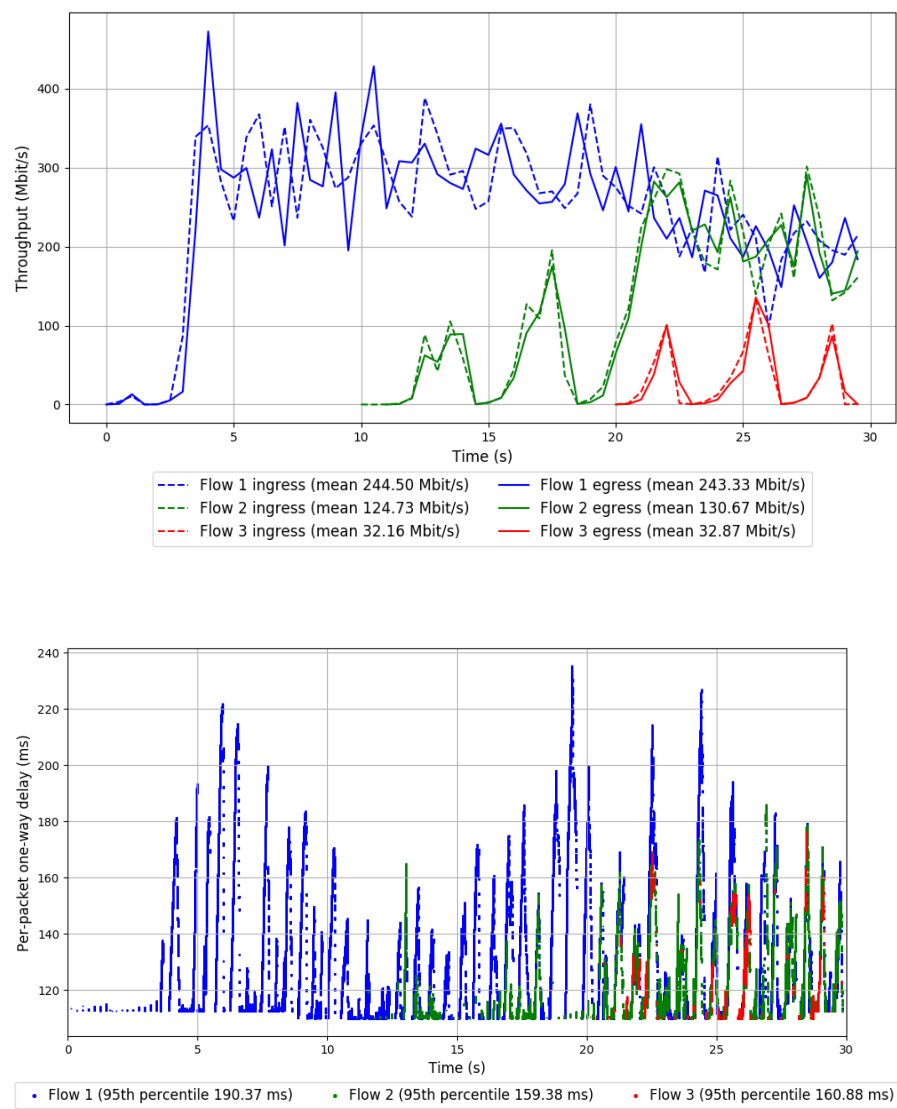
-- Flow 3:

Average throughput: 32.87 Mbit/s

95th percentile per-packet one-way delay: 160.878 ms

Loss rate: 0.09%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-02-13 21:30:12

End at: 2018-02-13 21:30:42

Below is generated by plot.py at 2018-02-14 02:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 273.45 Mbit/s

95th percentile per-packet one-way delay: 260.535 ms

Loss rate: 4.41%

-- Flow 1:

Average throughput: 193.09 Mbit/s

95th percentile per-packet one-way delay: 272.104 ms

Loss rate: 4.34%

-- Flow 2:

Average throughput: 64.61 Mbit/s

95th percentile per-packet one-way delay: 244.051 ms

Loss rate: 7.94%

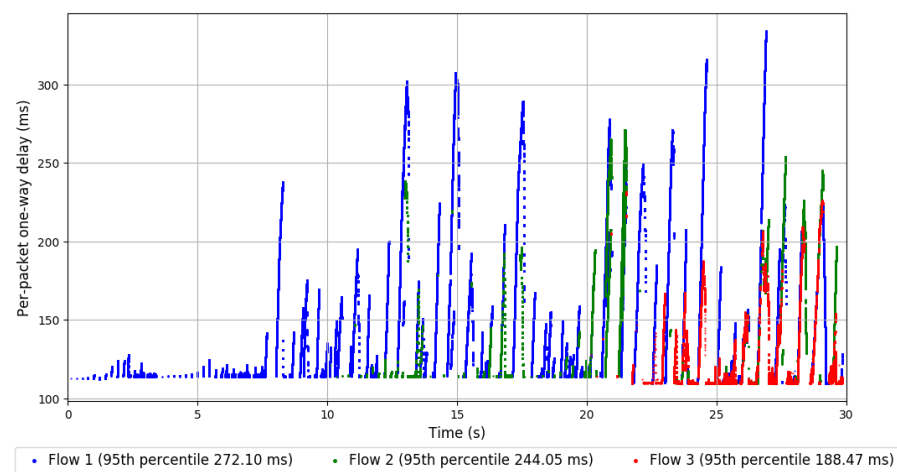
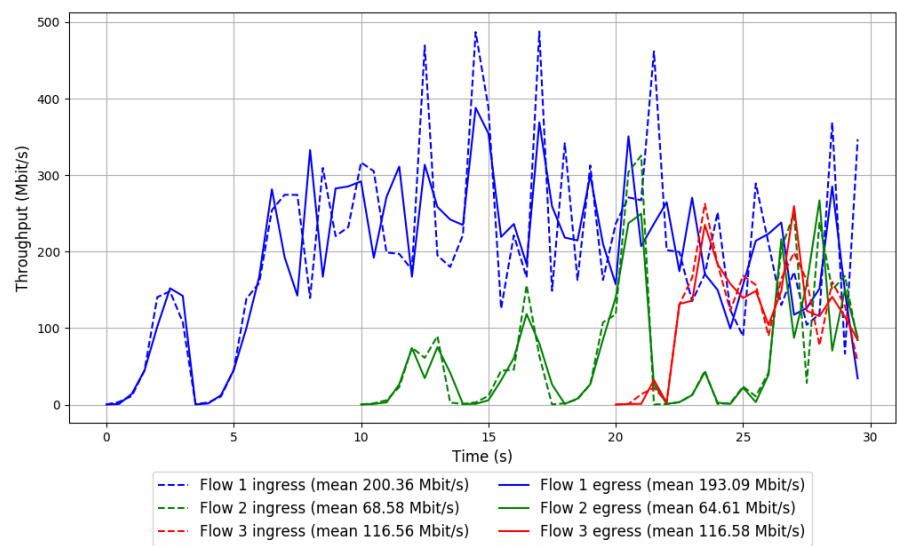
-- Flow 3:

Average throughput: 116.58 Mbit/s

95th percentile per-packet one-way delay: 188.471 ms

Loss rate: 0.47%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-02-13 21:49:50

End at: 2018-02-13 21:50:20

Below is generated by plot.py at 2018-02-14 02:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 241.60 Mbit/s

95th percentile per-packet one-way delay: 201.819 ms

Loss rate: 2.03%

-- Flow 1:

Average throughput: 169.96 Mbit/s

95th percentile per-packet one-way delay: 153.537 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 49.24 Mbit/s

95th percentile per-packet one-way delay: 136.590 ms

Loss rate: 2.98%

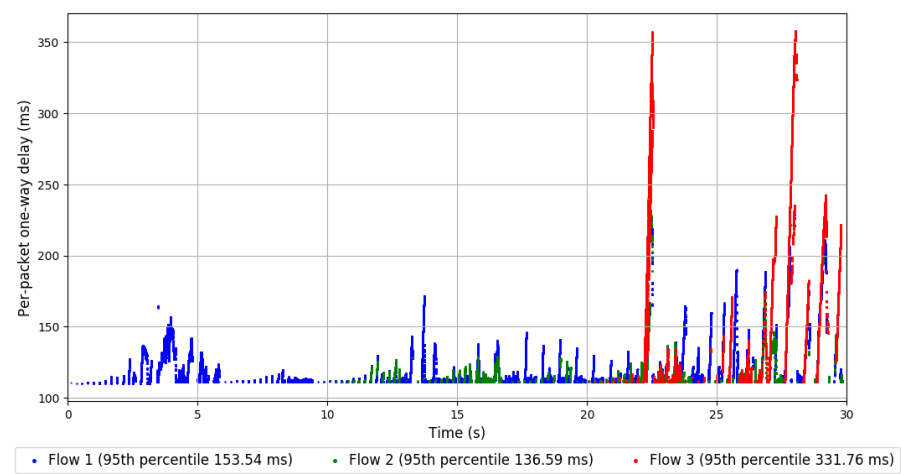
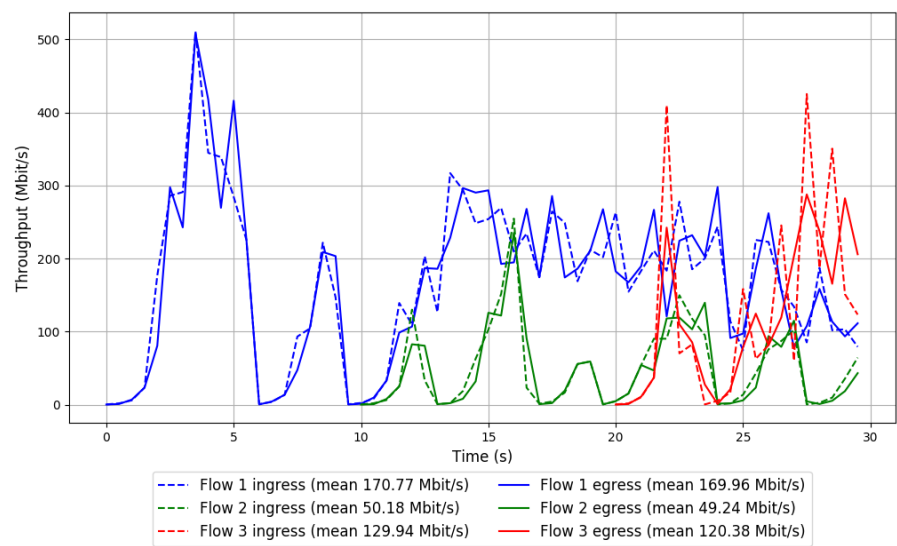
-- Flow 3:

Average throughput: 120.38 Mbit/s

95th percentile per-packet one-way delay: 331.763 ms

Loss rate: 6.29%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-02-13 19:08:52

End at: 2018-02-13 19:09:22

Below is generated by plot.py at 2018-02-14 02:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.02 Mbit/s

95th percentile per-packet one-way delay: 112.679 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 72.89 Mbit/s

95th percentile per-packet one-way delay: 112.672 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 40.31 Mbit/s

95th percentile per-packet one-way delay: 112.676 ms

Loss rate: 1.31%

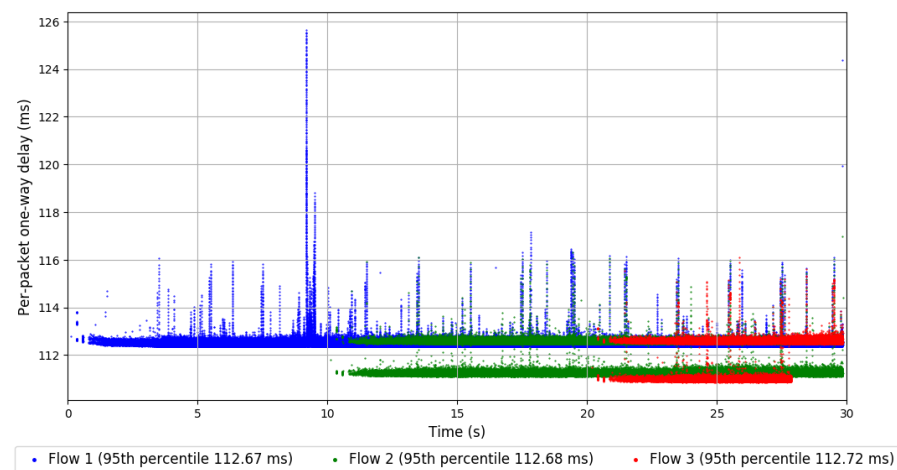
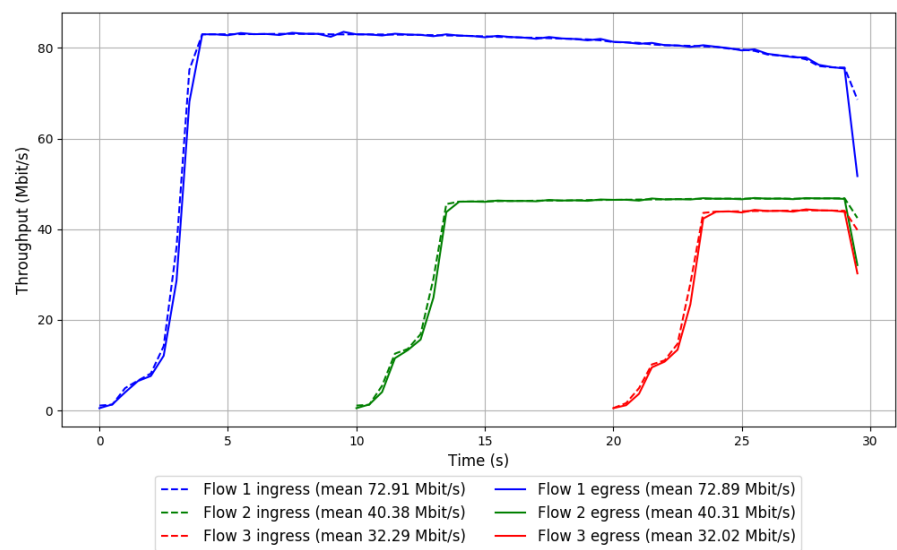
-- Flow 3:

Average throughput: 32.02 Mbit/s

95th percentile per-packet one-way delay: 112.717 ms

Loss rate: 3.09%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-02-13 19:28:44

End at: 2018-02-13 19:29:14

Below is generated by plot.py at 2018-02-14 02:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.37 Mbit/s

95th percentile per-packet one-way delay: 112.566 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 34.79 Mbit/s

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

Loss rate: 0.70%

-- Flow 2:

Average throughput: 67.64 Mbit/s

95th percentile per-packet one-way delay: 110.948 ms

Loss rate: 0.89%

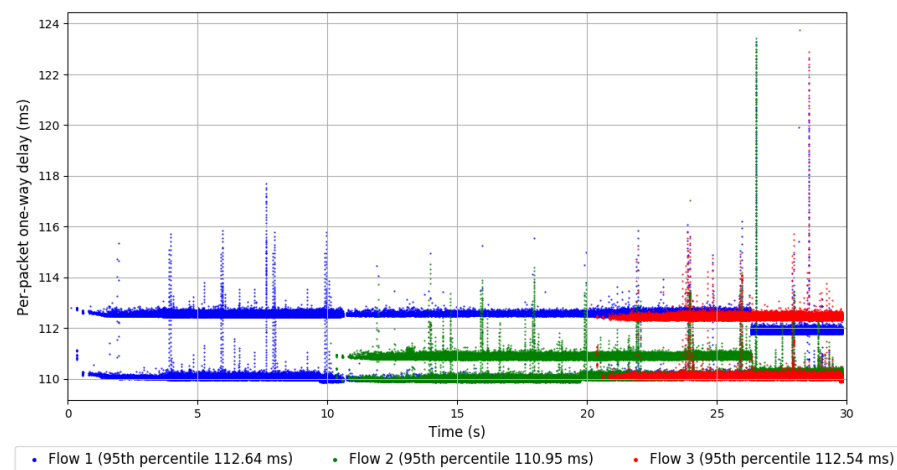
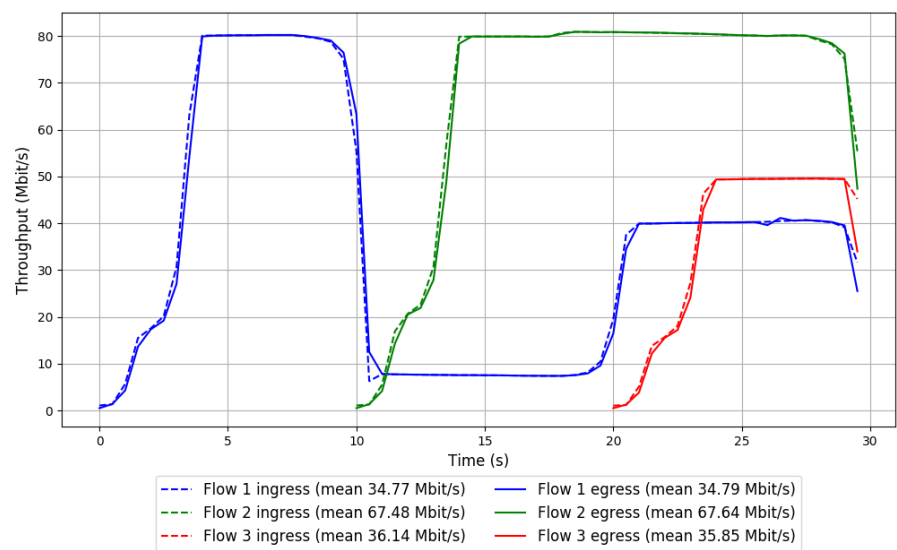
-- Flow 3:

Average throughput: 35.85 Mbit/s

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

Loss rate: 3.08%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-02-13 19:48:23

End at: 2018-02-13 19:48:53

Below is generated by plot.py at 2018-02-14 02:14:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.20 Mbit/s

95th percentile per-packet one-way delay: 112.366 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 38.33 Mbit/s

95th percentile per-packet one-way delay: 112.392 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 27.63 Mbit/s

95th percentile per-packet one-way delay: 112.372 ms

Loss rate: 1.87%

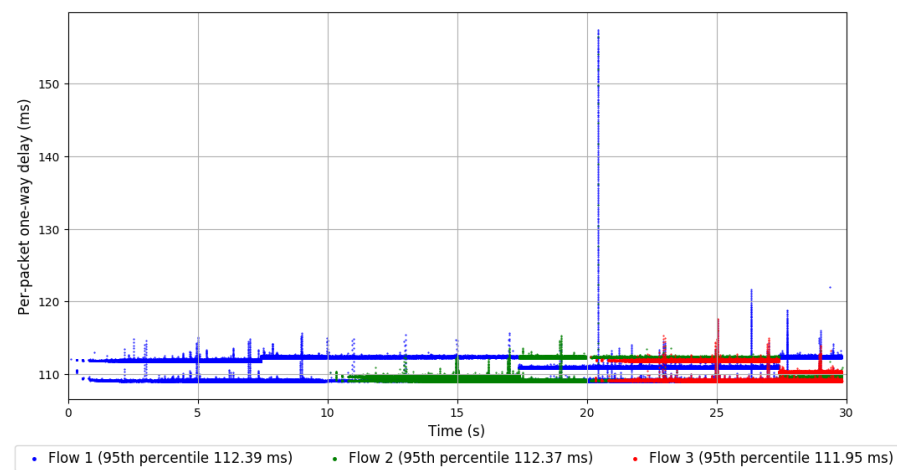
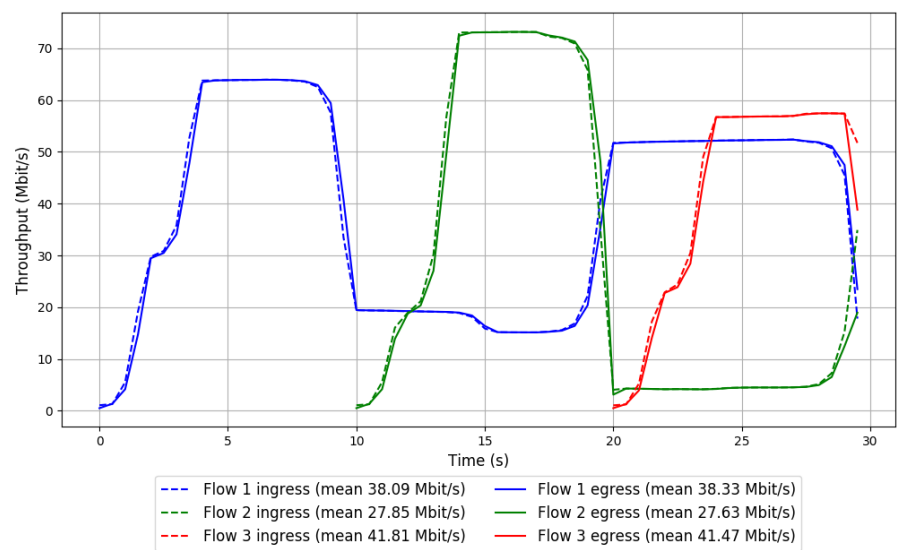
-- Flow 3:

Average throughput: 41.47 Mbit/s

95th percentile per-packet one-way delay: 111.950 ms

Loss rate: 3.06%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-02-13 20:07:51

End at: 2018-02-13 20:08:21

Below is generated by plot.py at 2018-02-14 02:14:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.62 Mbit/s

95th percentile per-packet one-way delay: 112.050 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 78.56 Mbit/s

95th percentile per-packet one-way delay: 112.054 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 31.58 Mbit/s

95th percentile per-packet one-way delay: 112.001 ms

Loss rate: 0.19%

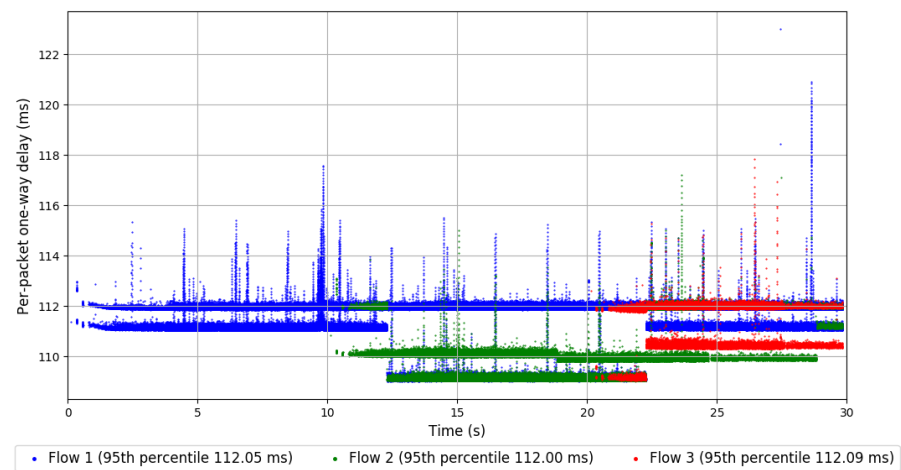
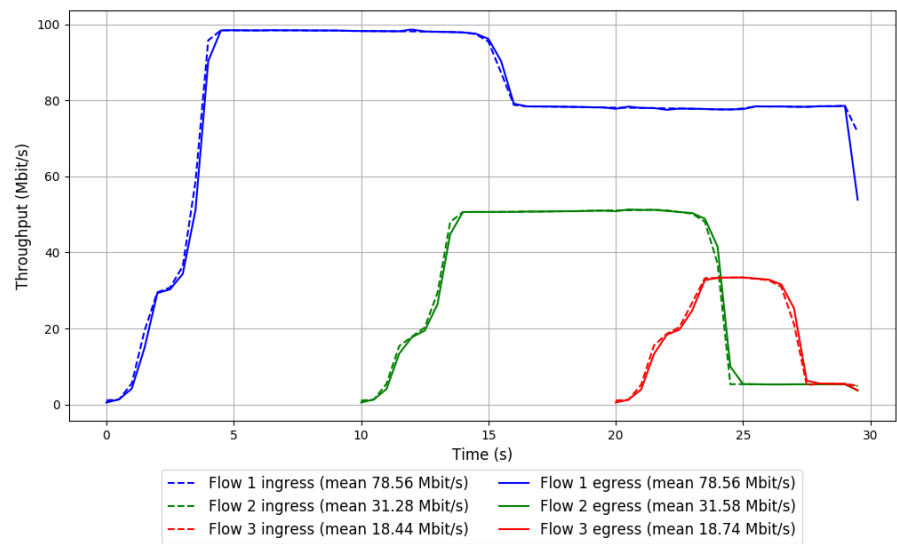
-- Flow 3:

Average throughput: 18.74 Mbit/s

95th percentile per-packet one-way delay: 112.089 ms

Loss rate: 0.66%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-02-13 20:27:43

End at: 2018-02-13 20:28:13

Below is generated by plot.py at 2018-02-14 02:15:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.20 Mbit/s

95th percentile per-packet one-way delay: 112.389 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 67.71 Mbit/s

95th percentile per-packet one-way delay: 112.264 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 29.32 Mbit/s

95th percentile per-packet one-way delay: 112.504 ms

Loss rate: 1.71%

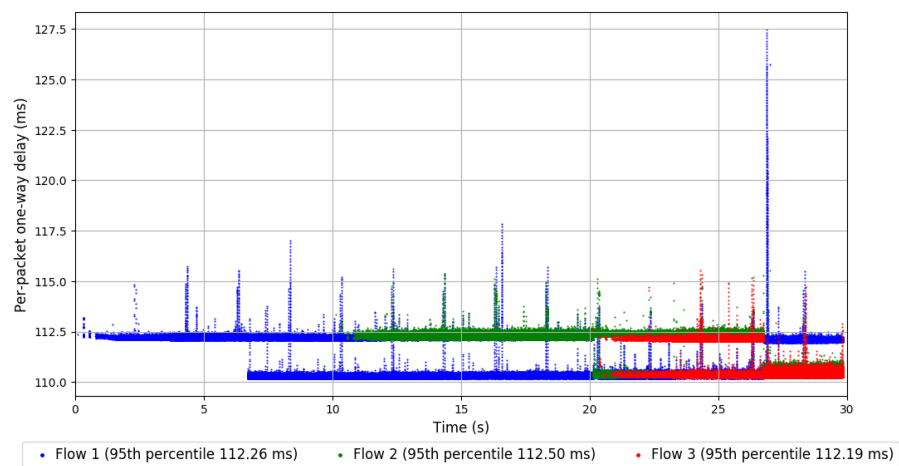
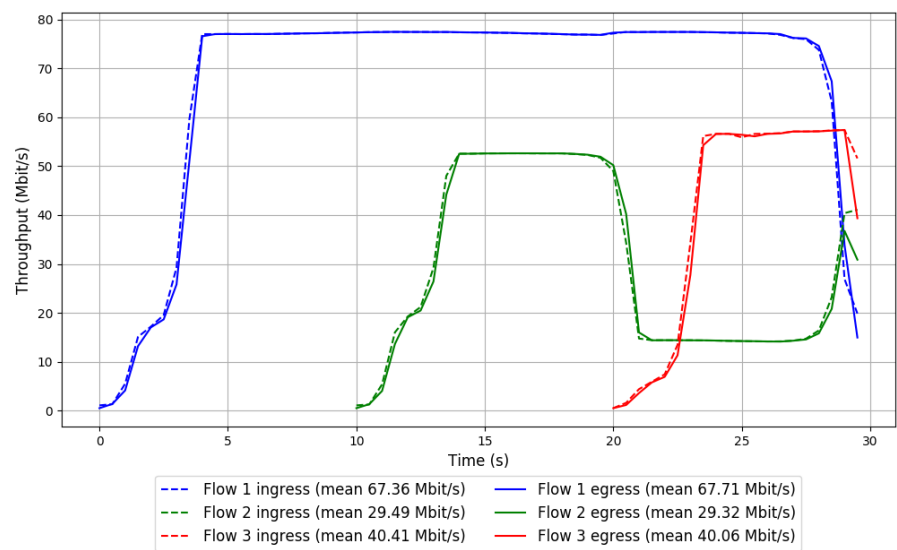
-- Flow 3:

Average throughput: 40.06 Mbit/s

95th percentile per-packet one-way delay: 112.194 ms

Loss rate: 3.11%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-02-13 20:46:53

End at: 2018-02-13 20:47:23

Below is generated by plot.py at 2018-02-14 02:15:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.87 Mbit/s

95th percentile per-packet one-way delay: 112.645 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 12.28 Mbit/s

95th percentile per-packet one-way delay: 112.481 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 68.43 Mbit/s

95th percentile per-packet one-way delay: 112.532 ms

Loss rate: 1.04%

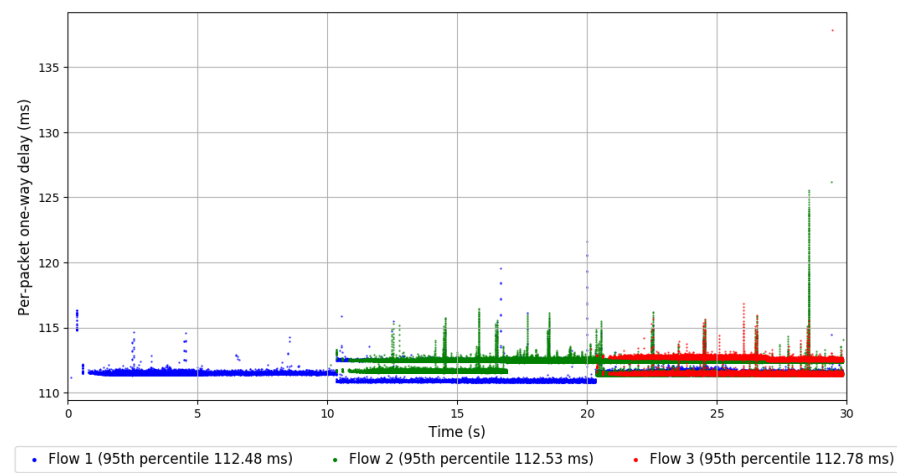
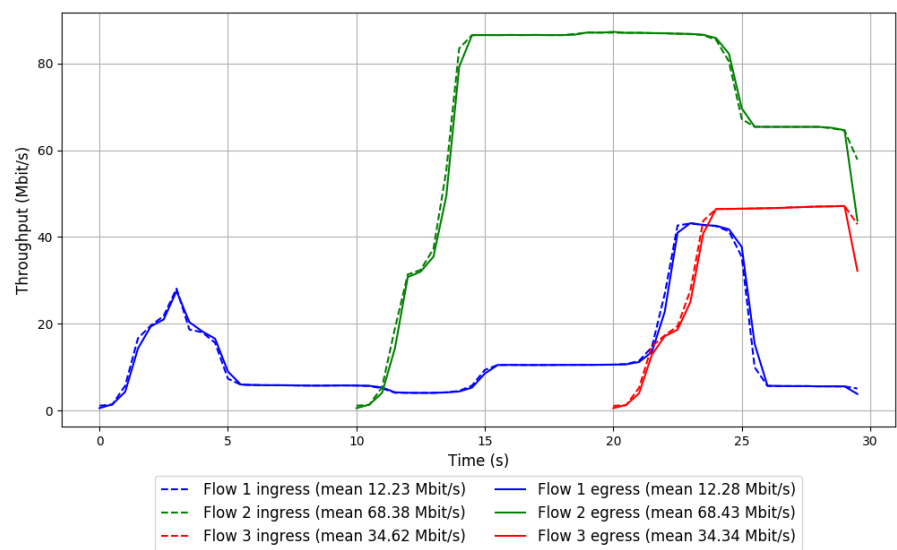
-- Flow 3:

Average throughput: 34.34 Mbit/s

95th percentile per-packet one-way delay: 112.782 ms

Loss rate: 3.09%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-02-13 21:06:22

End at: 2018-02-13 21:06:52

Below is generated by plot.py at 2018-02-14 02:15:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.51 Mbit/s

95th percentile per-packet one-way delay: 112.462 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 34.35 Mbit/s

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

Loss rate: 0.58%

-- Flow 2:

Average throughput: 34.94 Mbit/s

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

Loss rate: 1.35%

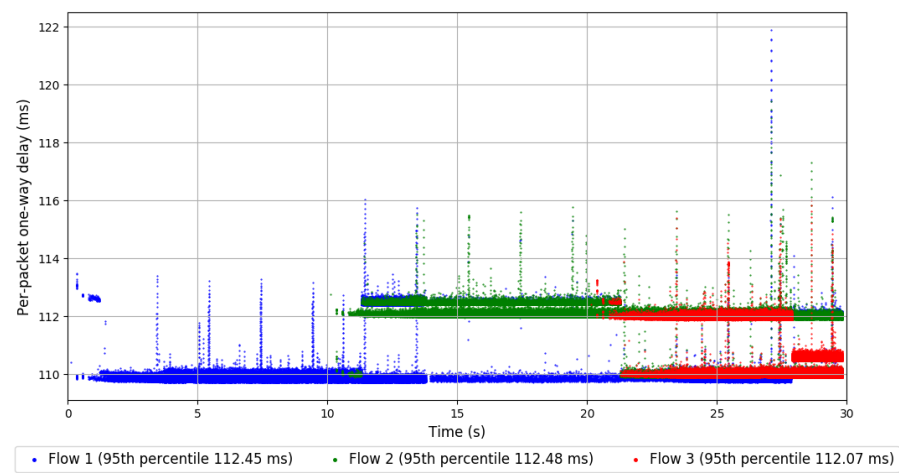
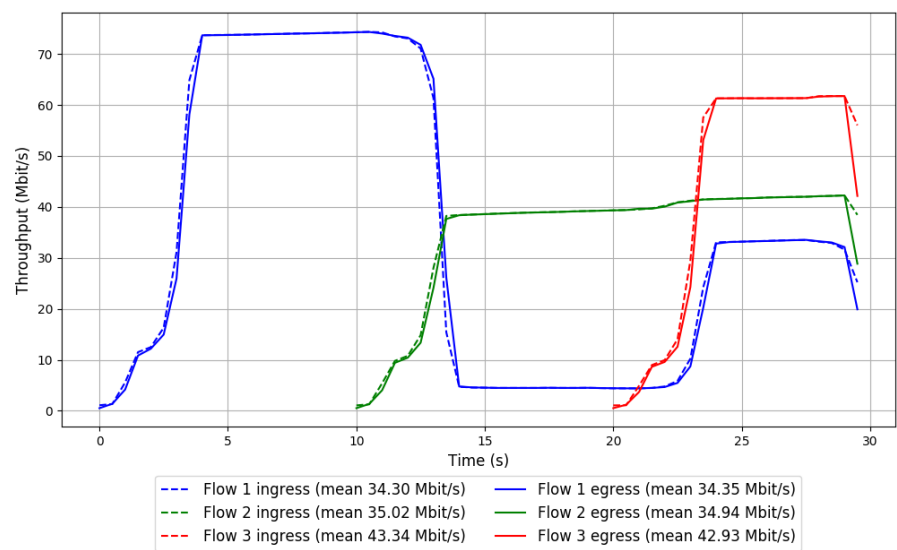
-- Flow 3:

Average throughput: 42.93 Mbit/s

95th percentile per-packet one-way delay: 112.070 ms

Loss rate: 3.20%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-02-13 21:26:08

End at: 2018-02-13 21:26:38

Below is generated by plot.py at 2018-02-14 02:15:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.41 Mbit/s

95th percentile per-packet one-way delay: 112.556 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 62.54 Mbit/s

95th percentile per-packet one-way delay: 112.566 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 23.66 Mbit/s

95th percentile per-packet one-way delay: 112.449 ms

Loss rate: 2.39%

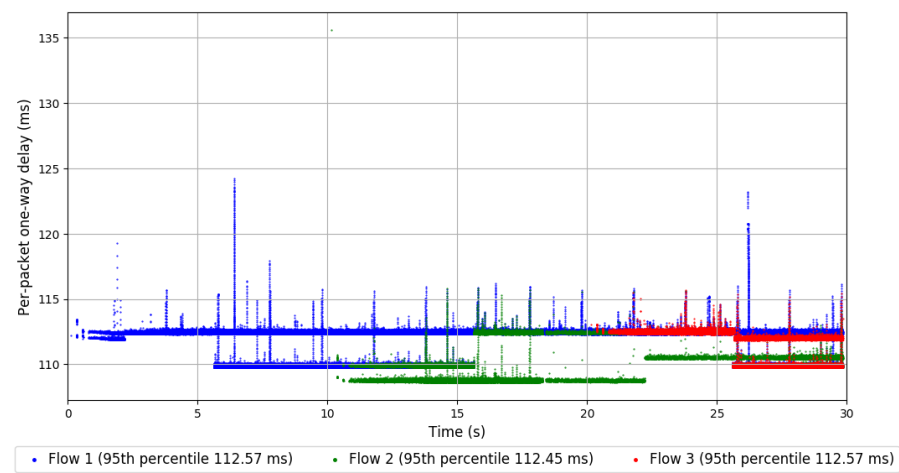
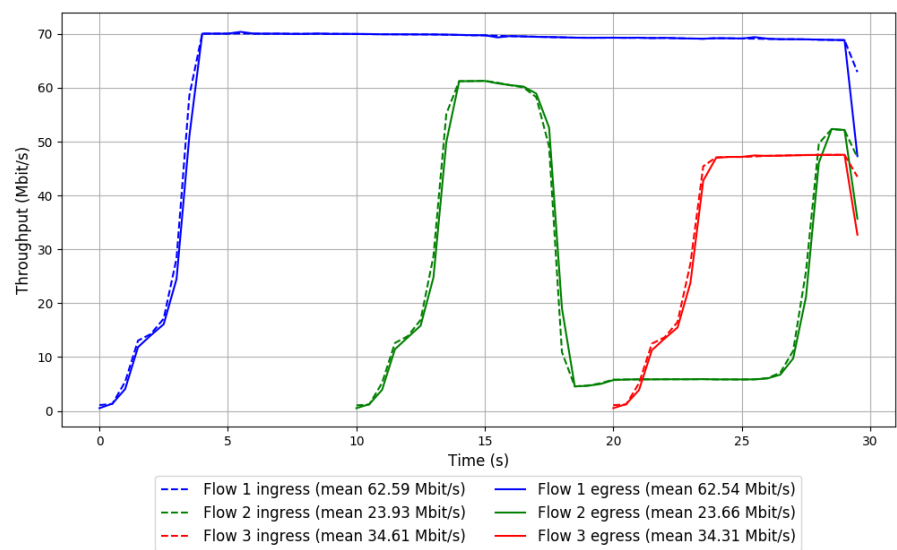
-- Flow 3:

Average throughput: 34.31 Mbit/s

95th percentile per-packet one-way delay: 112.573 ms

Loss rate: 3.09%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-02-13 21:45:49

End at: 2018-02-13 21:46:19

Below is generated by plot.py at 2018-02-14 02:15:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.19 Mbit/s

95th percentile per-packet one-way delay: 113.966 ms

Loss rate: 2.31%

-- Flow 1:

Average throughput: 9.69 Mbit/s

95th percentile per-packet one-way delay: 113.966 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 15.81 Mbit/s

95th percentile per-packet one-way delay: 114.005 ms

Loss rate: 2.61%

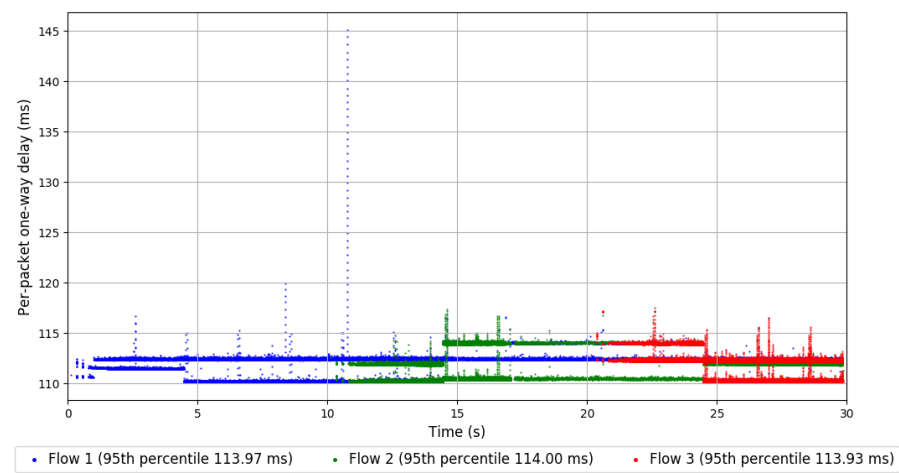
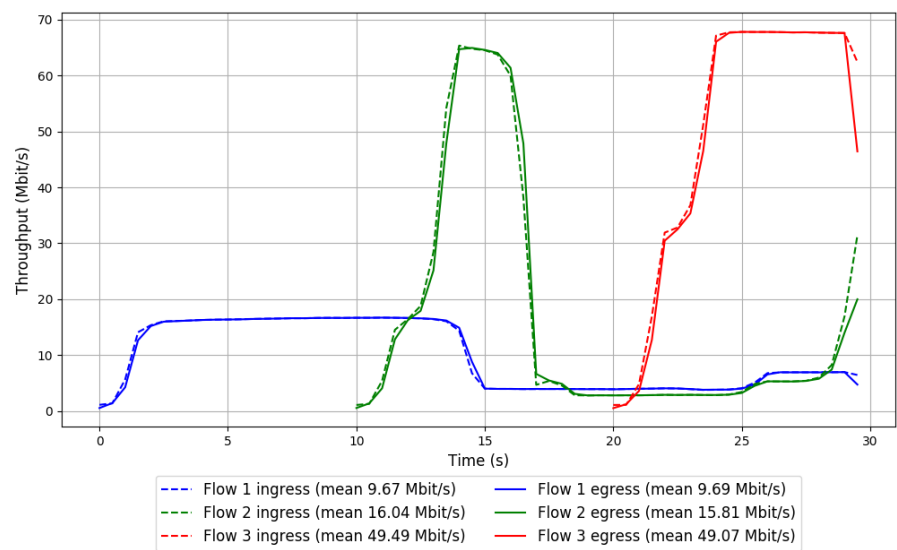
-- Flow 3:

Average throughput: 49.07 Mbit/s

95th percentile per-packet one-way delay: 113.932 ms

Loss rate: 3.15%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-02-13 22:05:35

End at: 2018-02-13 22:06:05

Below is generated by plot.py at 2018-02-14 02:15:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 52.73 Mbit/s

95th percentile per-packet one-way delay: 112.284 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 20.74 Mbit/s

95th percentile per-packet one-way delay: 112.357 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 20.33 Mbit/s

95th percentile per-packet one-way delay: 111.932 ms

Loss rate: 0.32%

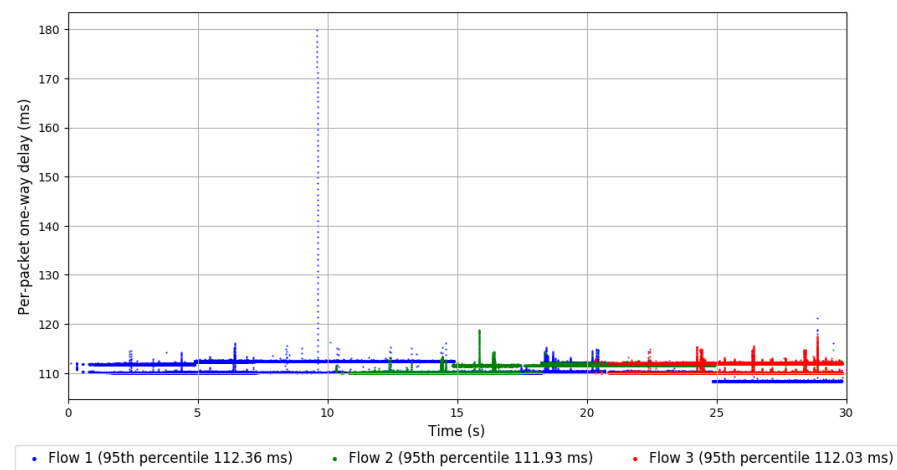
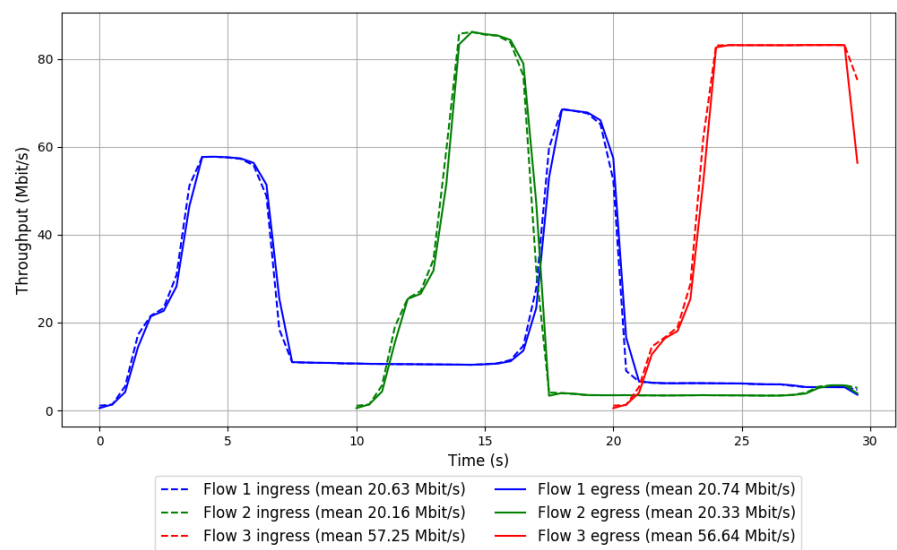
-- Flow 3:

Average throughput: 56.64 Mbit/s

95th percentile per-packet one-way delay: 112.031 ms

Loss rate: 3.29%

Run 10: Report of Copa — Data Link

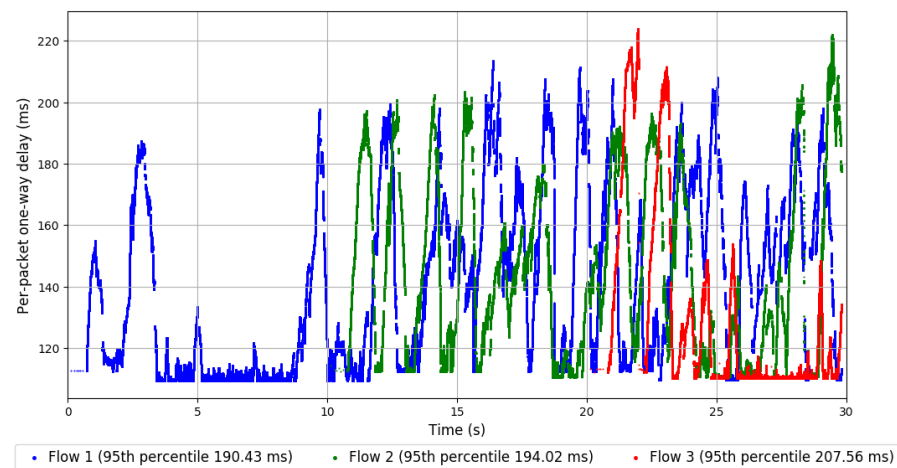
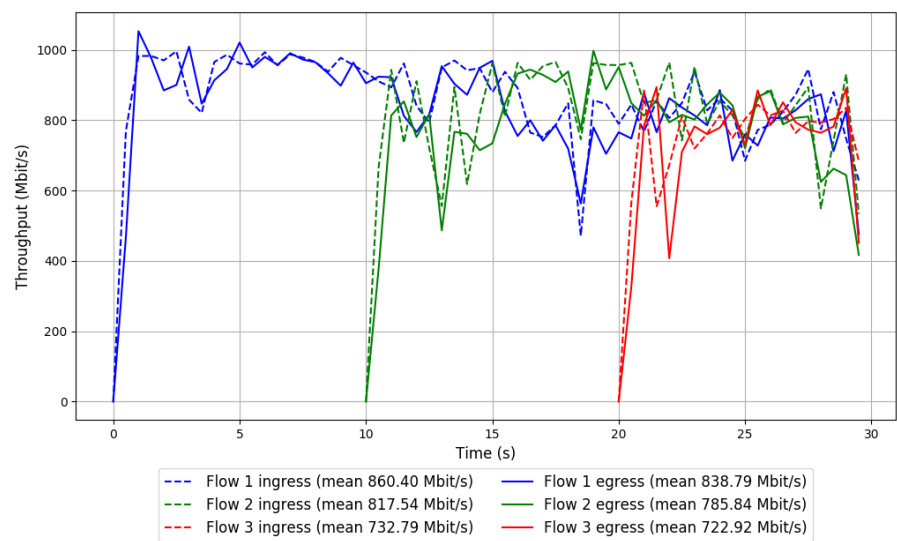


```
Run 1: Statistics of FillP

Start at: 2018-02-13 18:57:57
End at: 2018-02-13 18:58:27

# Below is generated by plot.py at 2018-02-14 02:43:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1594.72 Mbit/s
95th percentile per-packet one-way delay: 194.074 ms
Loss rate: 3.85%
-- Flow 1:
Average throughput: 838.79 Mbit/s
95th percentile per-packet one-way delay: 190.428 ms
Loss rate: 3.24%
-- Flow 2:
Average throughput: 785.84 Mbit/s
95th percentile per-packet one-way delay: 194.016 ms
Loss rate: 4.96%
-- Flow 3:
Average throughput: 722.92 Mbit/s
95th percentile per-packet one-way delay: 207.559 ms
Loss rate: 3.57%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-02-13 19:17:32

End at: 2018-02-13 19:18:02

Below is generated by plot.py at 2018-02-14 02:43:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 1570.54 Mbit/s

95th percentile per-packet one-way delay: 316.279 ms

Loss rate: 5.77%

-- Flow 1:

Average throughput: 845.96 Mbit/s

95th percentile per-packet one-way delay: 300.824 ms

Loss rate: 4.57%

-- Flow 2:

Average throughput: 802.19 Mbit/s

95th percentile per-packet one-way delay: 307.336 ms

Loss rate: 5.36%

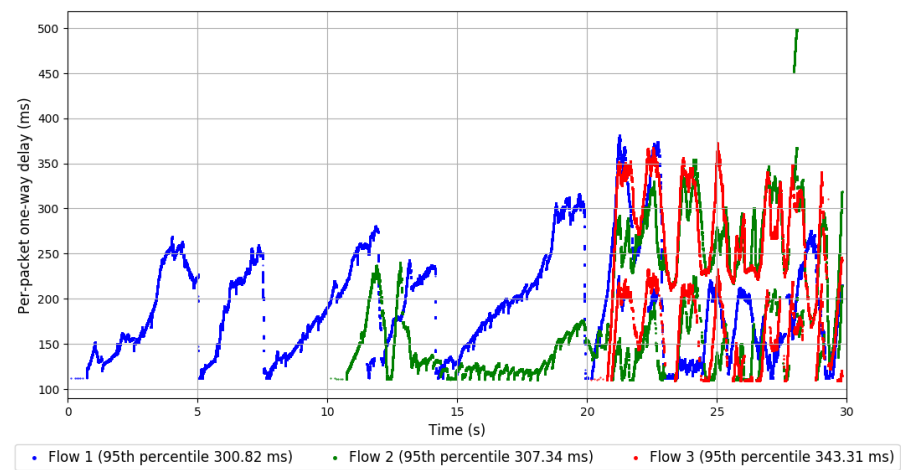
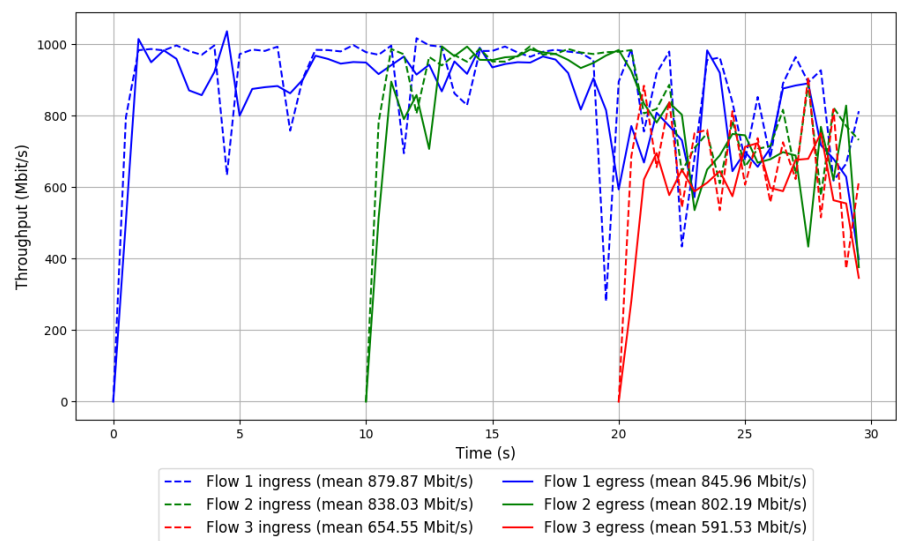
-- Flow 3:

Average throughput: 591.53 Mbit/s

95th percentile per-packet one-way delay: 343.309 ms

Loss rate: 11.68%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-02-13 19:37:12

End at: 2018-02-13 19:37:42

Below is generated by plot.py at 2018-02-14 02:46:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 1771.20 Mbit/s

95th percentile per-packet one-way delay: 187.509 ms

Loss rate: 3.78%

-- Flow 1:

Average throughput: 911.27 Mbit/s

95th percentile per-packet one-way delay: 185.174 ms

Loss rate: 2.92%

-- Flow 2:

Average throughput: 883.33 Mbit/s

95th percentile per-packet one-way delay: 188.971 ms

Loss rate: 4.49%

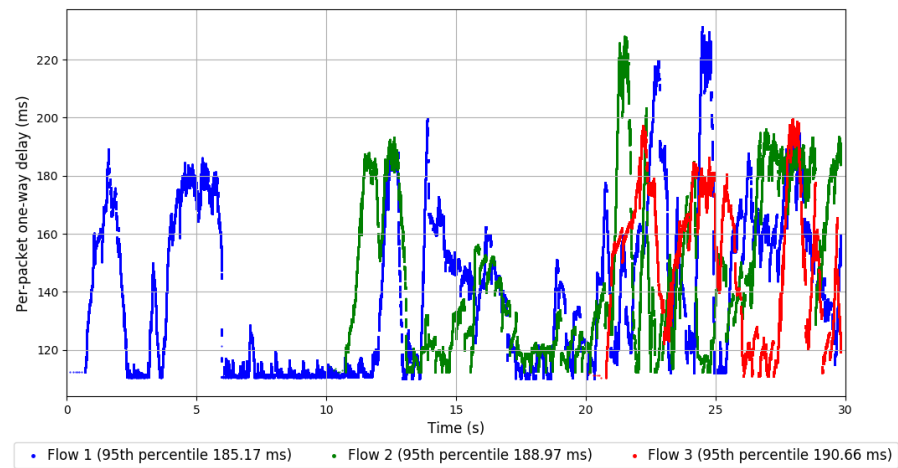
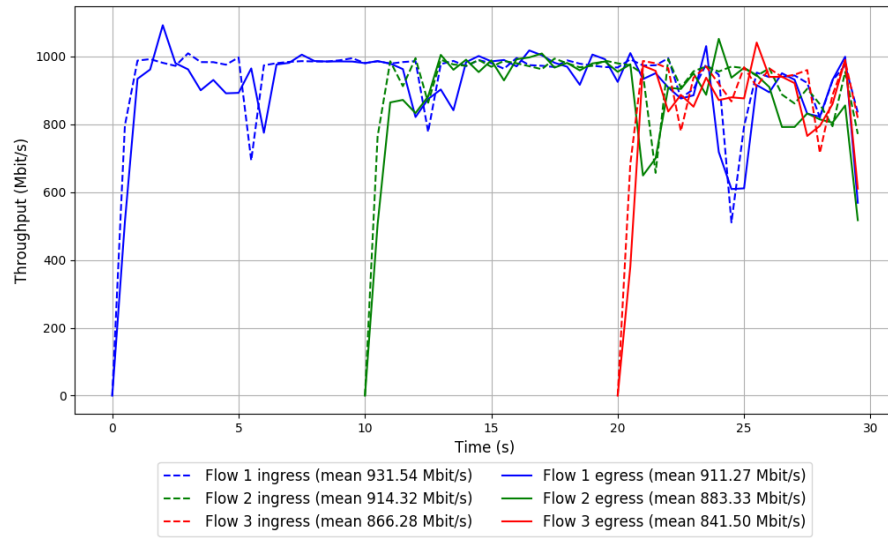
-- Flow 3:

Average throughput: 841.50 Mbit/s

95th percentile per-packet one-way delay: 190.660 ms

Loss rate: 5.07%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-02-13 19:56:36

End at: 2018-02-13 19:57:06

Below is generated by plot.py at 2018-02-14 02:46:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 1444.98 Mbit/s

95th percentile per-packet one-way delay: 331.097 ms

Loss rate: 6.28%

-- Flow 1:

Average throughput: 772.08 Mbit/s

95th percentile per-packet one-way delay: 329.137 ms

Loss rate: 4.94%

-- Flow 2:

Average throughput: 672.37 Mbit/s

95th percentile per-packet one-way delay: 339.033 ms

Loss rate: 7.32%

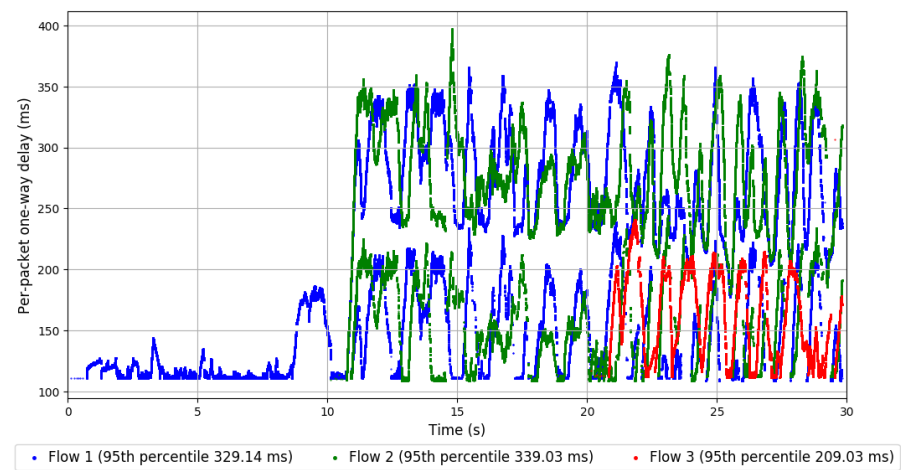
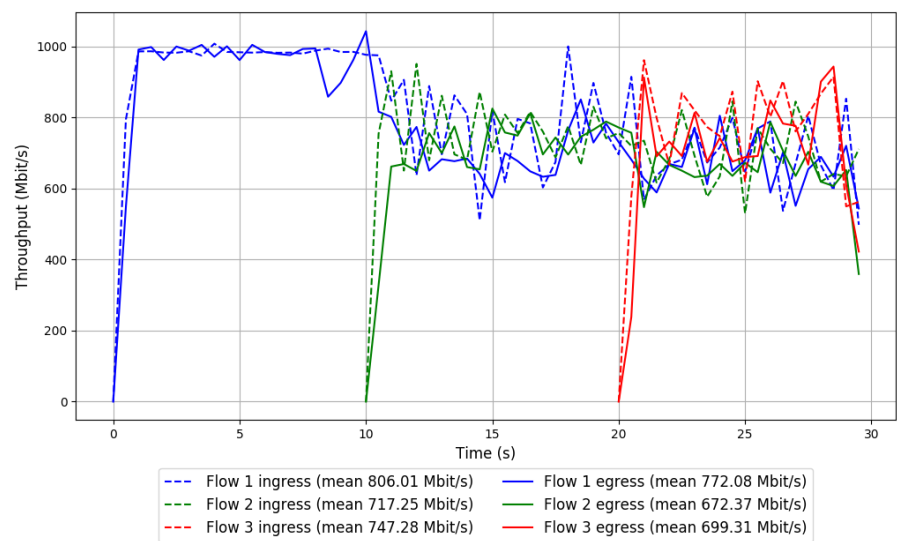
-- Flow 3:

Average throughput: 699.31 Mbit/s

95th percentile per-packet one-way delay: 209.030 ms

Loss rate: 8.63%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-02-13 20:16:42

End at: 2018-02-13 20:17:12

Below is generated by plot.py at 2018-02-14 02:46:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 1597.40 Mbit/s

95th percentile per-packet one-way delay: 206.669 ms

Loss rate: 8.31%

-- Flow 1:

Average throughput: 836.31 Mbit/s

95th percentile per-packet one-way delay: 200.936 ms

Loss rate: 6.96%

-- Flow 2:

Average throughput: 793.28 Mbit/s

95th percentile per-packet one-way delay: 207.139 ms

Loss rate: 8.96%

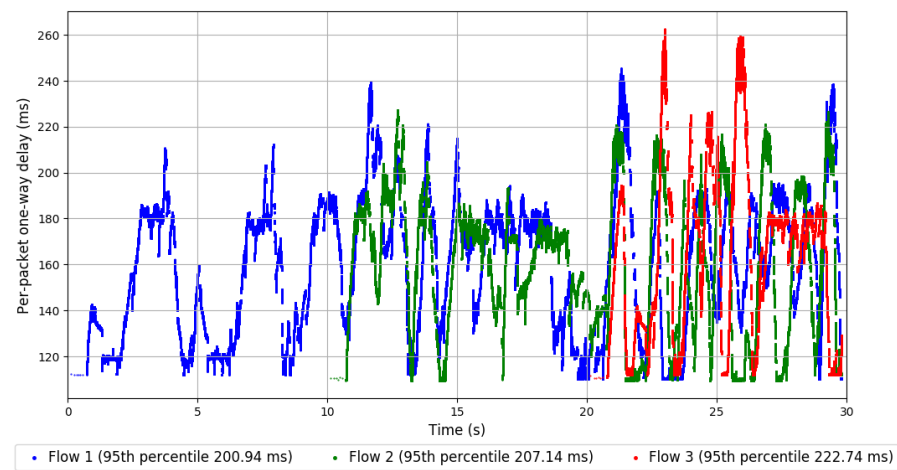
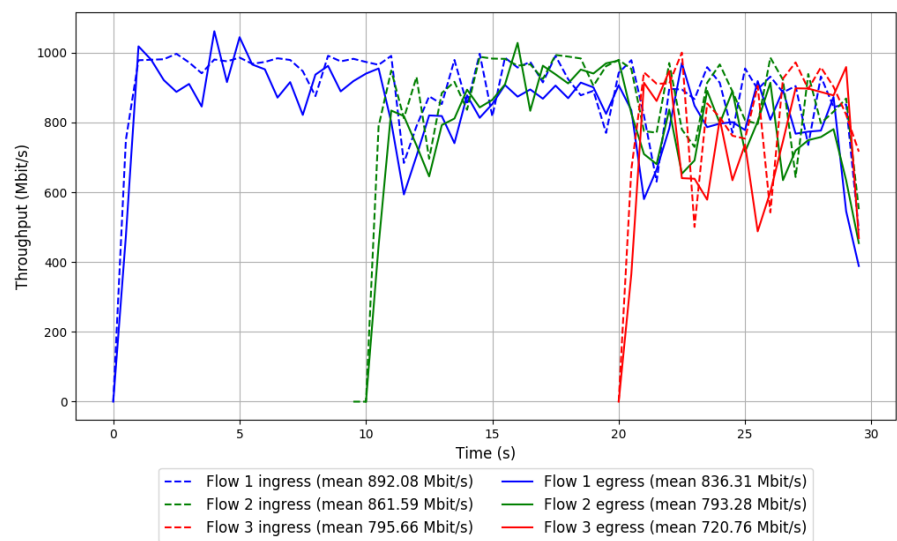
-- Flow 3:

Average throughput: 720.76 Mbit/s

95th percentile per-packet one-way delay: 222.740 ms

Loss rate: 11.47%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-02-13 20:35:55

End at: 2018-02-13 20:36:25

Below is generated by plot.py at 2018-02-14 02:46:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 1624.52 Mbit/s

95th percentile per-packet one-way delay: 248.170 ms

Loss rate: 6.77%

-- Flow 1:

Average throughput: 847.24 Mbit/s

95th percentile per-packet one-way delay: 264.552 ms

Loss rate: 5.80%

-- Flow 2:

Average throughput: 816.88 Mbit/s

95th percentile per-packet one-way delay: 206.415 ms

Loss rate: 7.15%

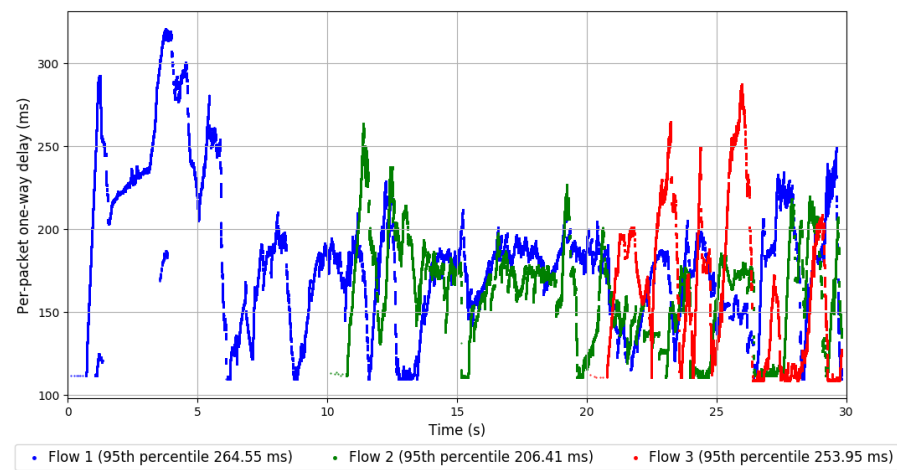
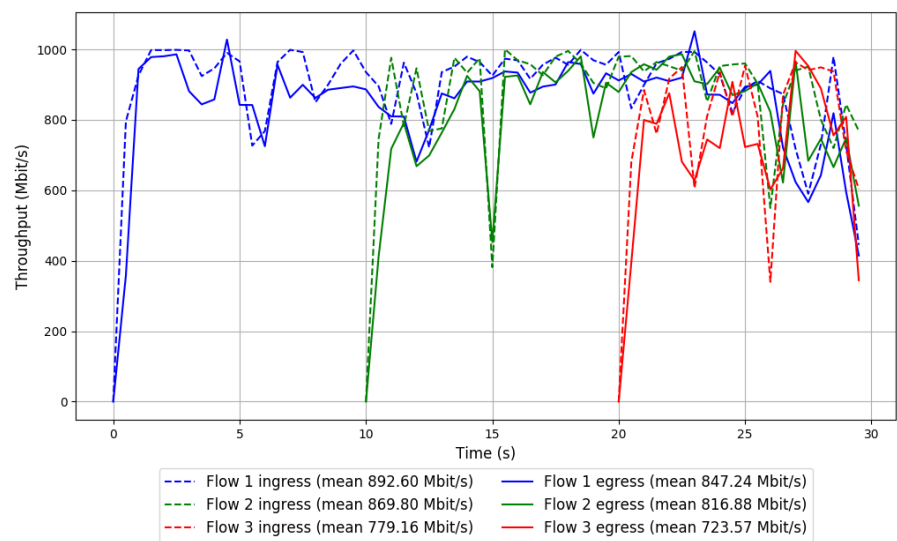
-- Flow 3:

Average throughput: 723.57 Mbit/s

95th percentile per-packet one-way delay: 253.948 ms

Loss rate: 9.25%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-02-13 20:55:08

End at: 2018-02-13 20:55:38

Below is generated by plot.py at 2018-02-14 02:46:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 1693.13 Mbit/s

95th percentile per-packet one-way delay: 222.839 ms

Loss rate: 5.90%

-- Flow 1:

Average throughput: 885.16 Mbit/s

95th percentile per-packet one-way delay: 194.526 ms

Loss rate: 5.20%

-- Flow 2:

Average throughput: 845.99 Mbit/s

95th percentile per-packet one-way delay: 259.470 ms

Loss rate: 4.90%

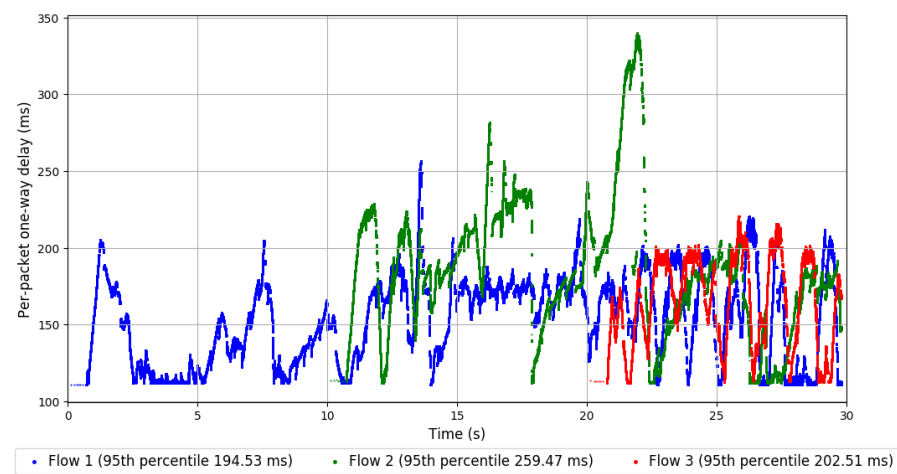
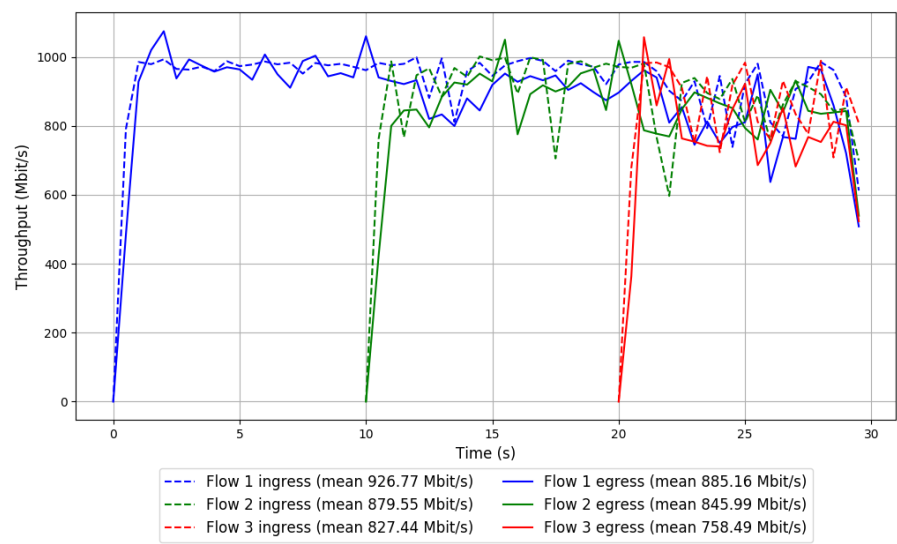
-- Flow 3:

Average throughput: 758.49 Mbit/s

95th percentile per-packet one-way delay: 202.512 ms

Loss rate: 10.41%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-02-13 21:15:10

End at: 2018-02-13 21:15:40

Below is generated by plot.py at 2018-02-14 02:46:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 1480.62 Mbit/s

95th percentile per-packet one-way delay: 341.854 ms

Loss rate: 7.39%

-- Flow 1:

Average throughput: 825.19 Mbit/s

95th percentile per-packet one-way delay: 212.876 ms

Loss rate: 5.48%

-- Flow 2:

Average throughput: 693.77 Mbit/s

95th percentile per-packet one-way delay: 368.989 ms

Loss rate: 10.90%

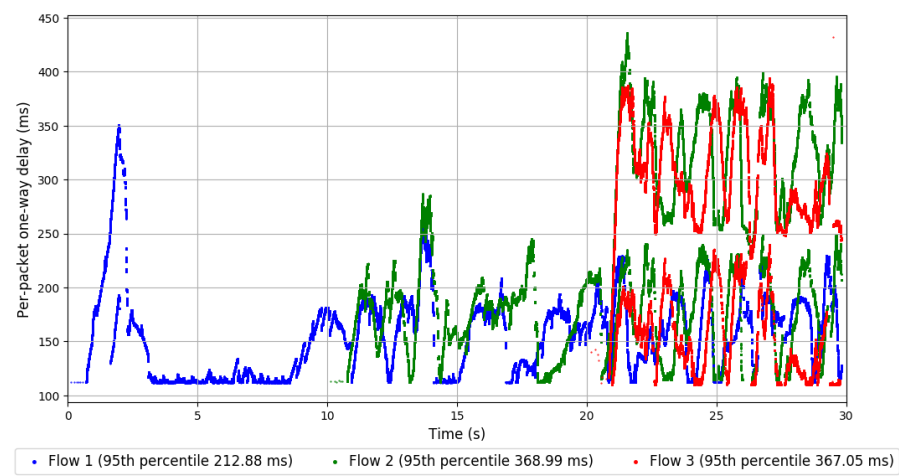
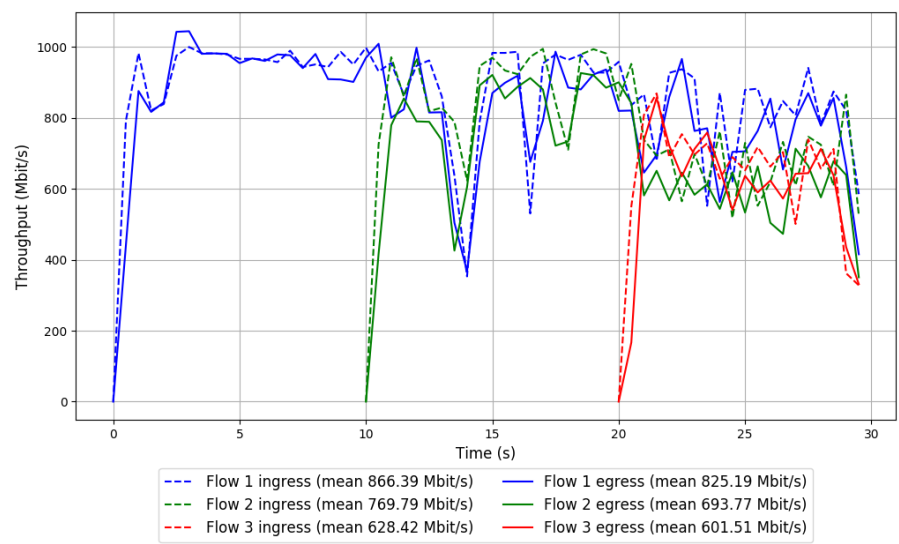
-- Flow 3:

Average throughput: 601.51 Mbit/s

95th percentile per-packet one-way delay: 367.048 ms

Loss rate: 6.72%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-02-13 21:34:36

End at: 2018-02-13 21:35:06

Below is generated by plot.py at 2018-02-14 03:11:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 1534.08 Mbit/s

95th percentile per-packet one-way delay: 322.082 ms

Loss rate: 9.57%

-- Flow 1:

Average throughput: 828.29 Mbit/s

95th percentile per-packet one-way delay: 342.451 ms

Loss rate: 6.91%

-- Flow 2:

Average throughput: 708.37 Mbit/s

95th percentile per-packet one-way delay: 228.860 ms

Loss rate: 12.16%

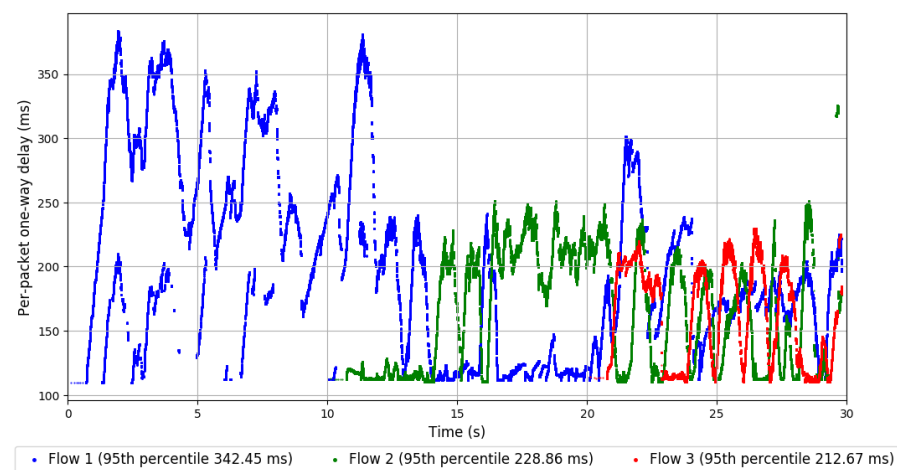
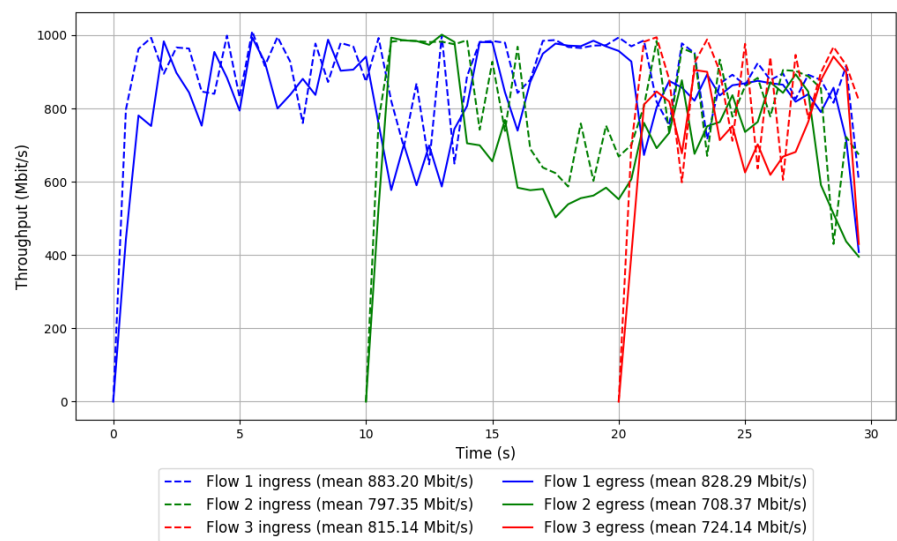
-- Flow 3:

Average throughput: 724.14 Mbit/s

95th percentile per-packet one-way delay: 212.672 ms

Loss rate: 13.17%

Run 9: Report of FillP — Data Link

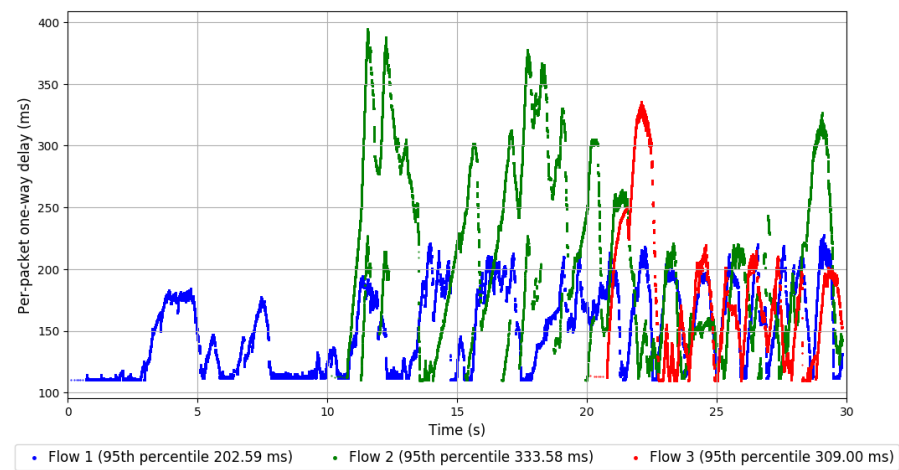
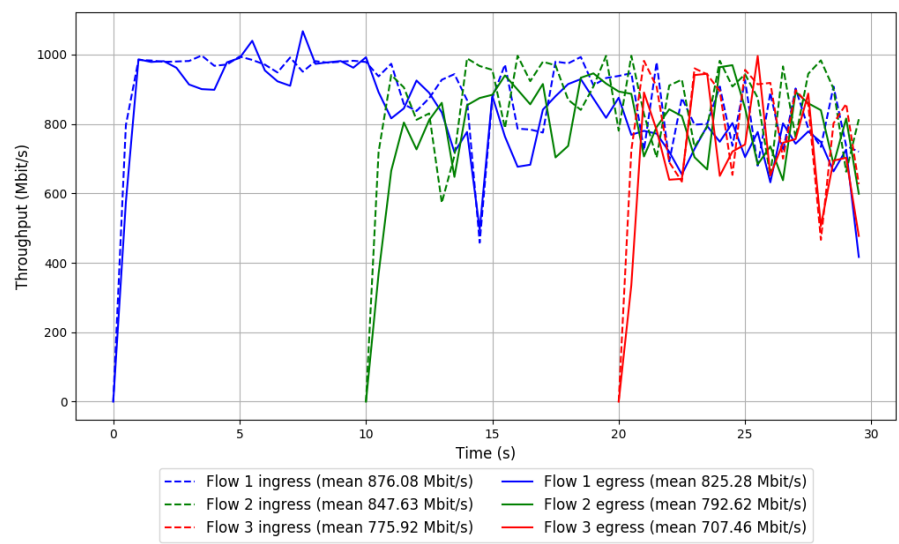


```
Run 10: Statistics of FillP

Start at: 2018-02-13 21:54:29
End at: 2018-02-13 21:54:59

# Below is generated by plot.py at 2018-02-14 03:13:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1580.87 Mbit/s
95th percentile per-packet one-way delay: 302.397 ms
Loss rate: 7.52%
-- Flow 1:
Average throughput: 825.28 Mbit/s
95th percentile per-packet one-way delay: 202.591 ms
Loss rate: 6.50%
-- Flow 2:
Average throughput: 792.62 Mbit/s
95th percentile per-packet one-way delay: 333.580 ms
Loss rate: 7.56%
-- Flow 3:
Average throughput: 707.46 Mbit/s
95th percentile per-packet one-way delay: 309.005 ms
Loss rate: 10.91%
```

Run 10: Report of FillP — Data Link

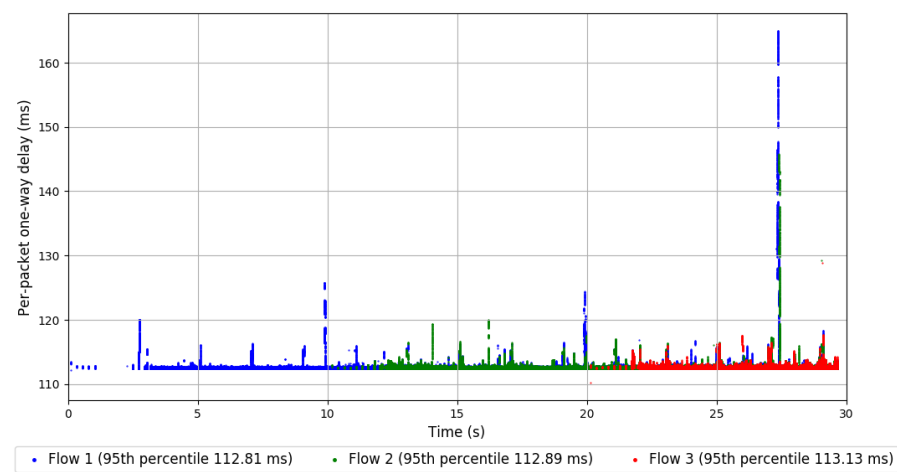
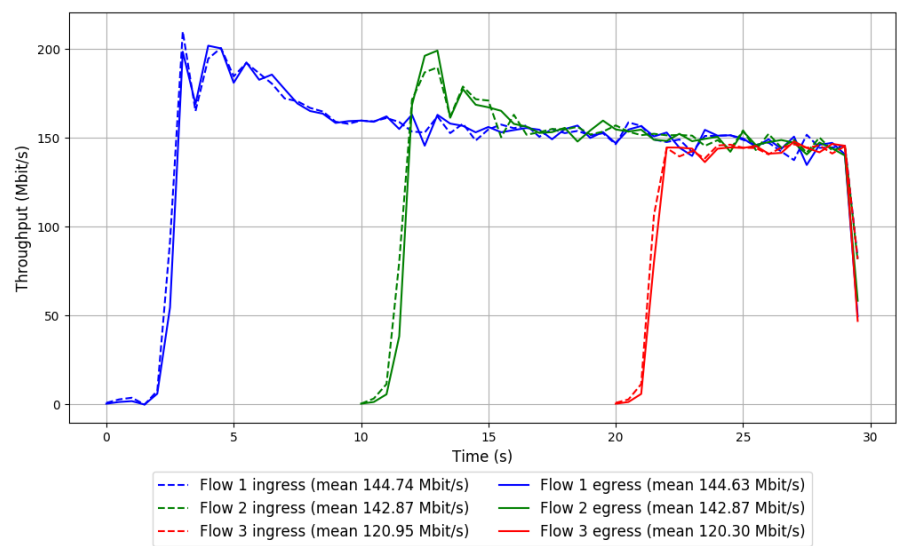


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-02-13 18:52:22
End at: 2018-02-13 18:52:52

# Below is generated by plot.py at 2018-02-14 03:13:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 277.62 Mbit/s
95th percentile per-packet one-way delay: 112.894 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 144.63 Mbit/s
95th percentile per-packet one-way delay: 112.813 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 142.87 Mbit/s
95th percentile per-packet one-way delay: 112.892 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 120.30 Mbit/s
95th percentile per-packet one-way delay: 113.128 ms
Loss rate: 2.79%
```

Run 1: Report of Indigo-1-32 — Data Link

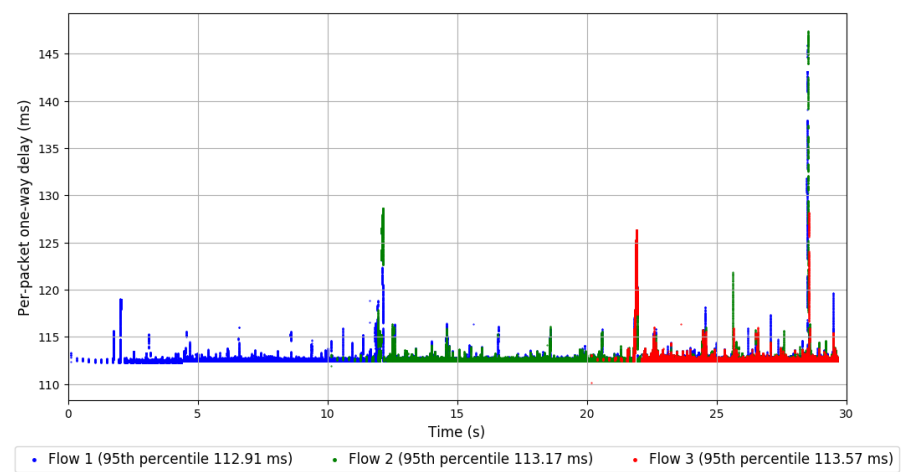
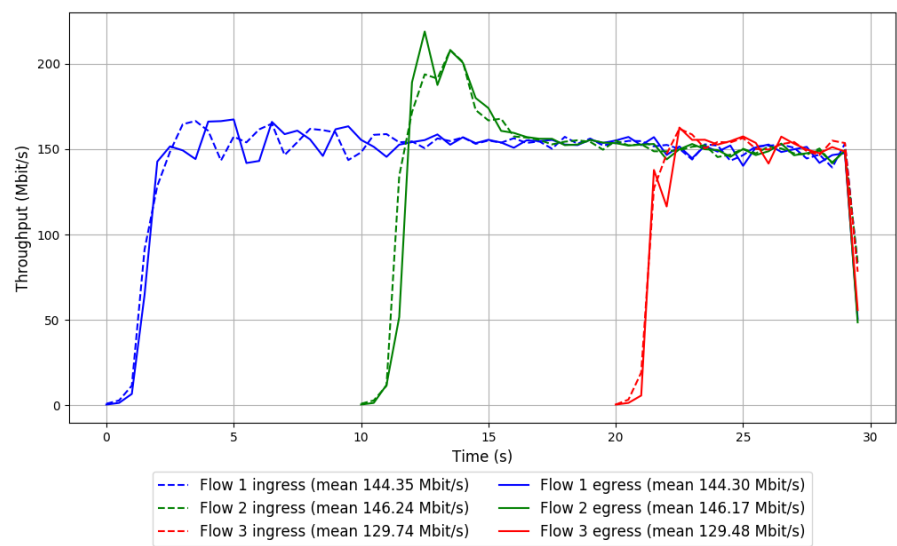


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-02-13 19:11:49
End at: 2018-02-13 19:12:19

# Below is generated by plot.py at 2018-02-14 03:13:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 282.50 Mbit/s
95th percentile per-packet one-way delay: 113.053 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 144.30 Mbit/s
95th percentile per-packet one-way delay: 112.907 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 146.17 Mbit/s
95th percentile per-packet one-way delay: 113.172 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 129.48 Mbit/s
95th percentile per-packet one-way delay: 113.574 ms
Loss rate: 2.50%
```

Run 2: Report of Indigo-1-32 — Data Link

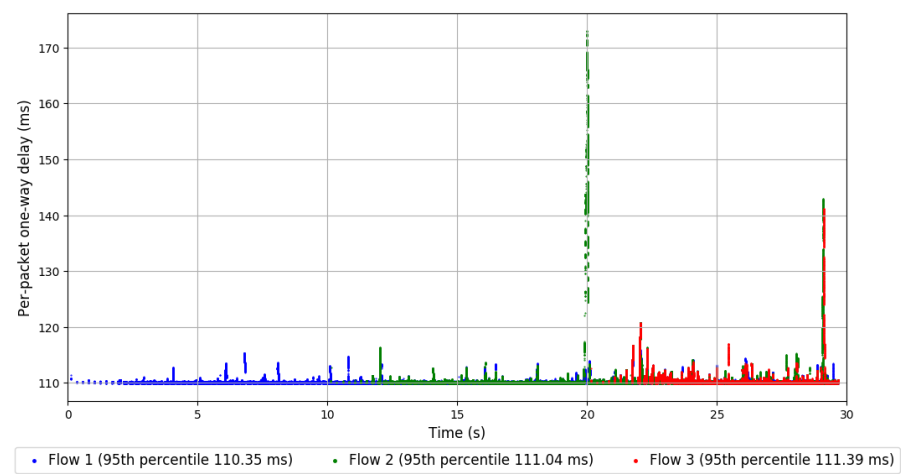
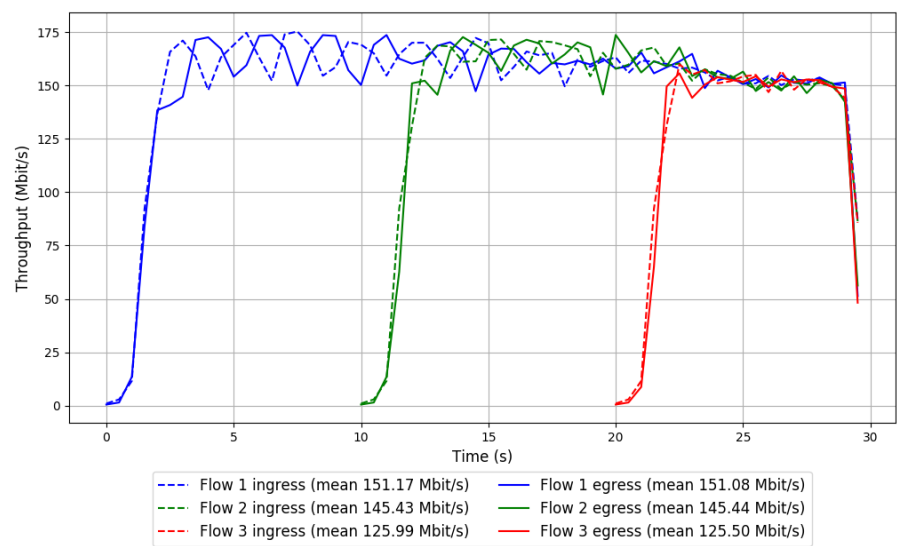


```
Run 3: Statistics of Indigo-1-32

Start at: 2018-02-13 19:31:35
End at: 2018-02-13 19:32:05

# Below is generated by plot.py at 2018-02-14 03:13:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 287.72 Mbit/s
95th percentile per-packet one-way delay: 110.691 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 151.08 Mbit/s
95th percentile per-packet one-way delay: 110.349 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 145.44 Mbit/s
95th percentile per-packet one-way delay: 111.041 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 125.50 Mbit/s
95th percentile per-packet one-way delay: 111.391 ms
Loss rate: 2.66%
```


Run 3: Report of Indigo-1-32 — Data Link



Run 4: Statistics of Indigo-1-32

Start at: 2018-02-13 19:51:14

End at: 2018-02-13 19:51:44

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 304.69 Mbit/s

95th percentile per-packet one-way delay: 111.692 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 150.44 Mbit/s

95th percentile per-packet one-way delay: 111.674 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 173.46 Mbit/s

95th percentile per-packet one-way delay: 111.822 ms

Loss rate: 1.02%

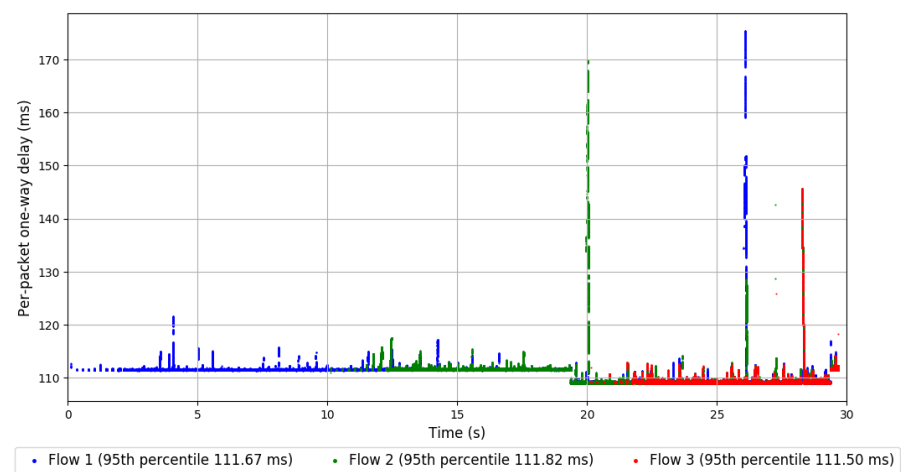
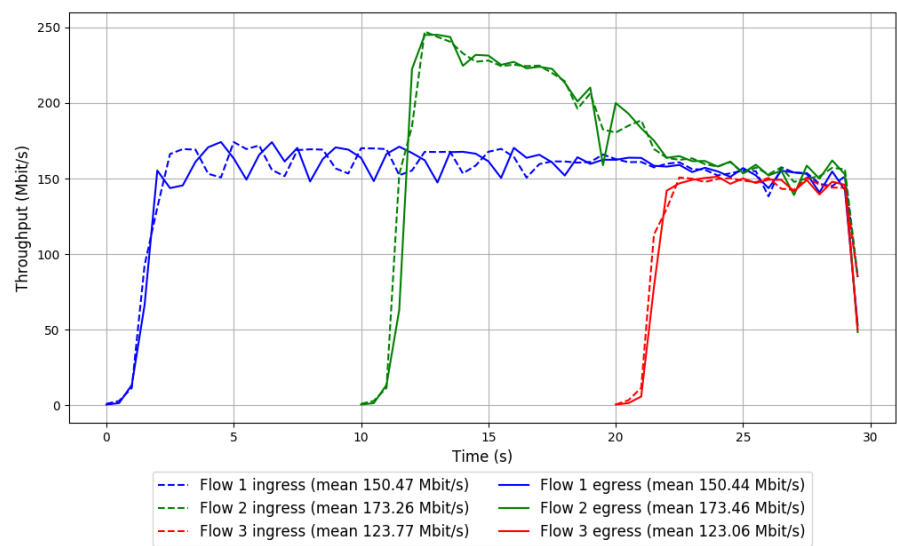
-- Flow 3:

Average throughput: 123.06 Mbit/s

95th percentile per-packet one-way delay: 111.502 ms

Loss rate: 2.79%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

Start at: 2018-02-13 20:10:48

End at: 2018-02-13 20:11:18

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 330.13 Mbit/s

95th percentile per-packet one-way delay: 112.019 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 186.22 Mbit/s

95th percentile per-packet one-way delay: 112.044 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 154.01 Mbit/s

95th percentile per-packet one-way delay: 109.986 ms

Loss rate: 1.11%

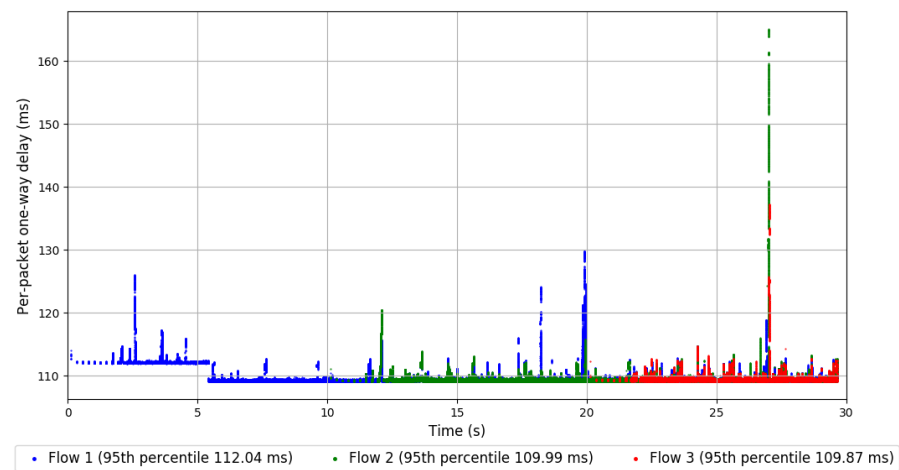
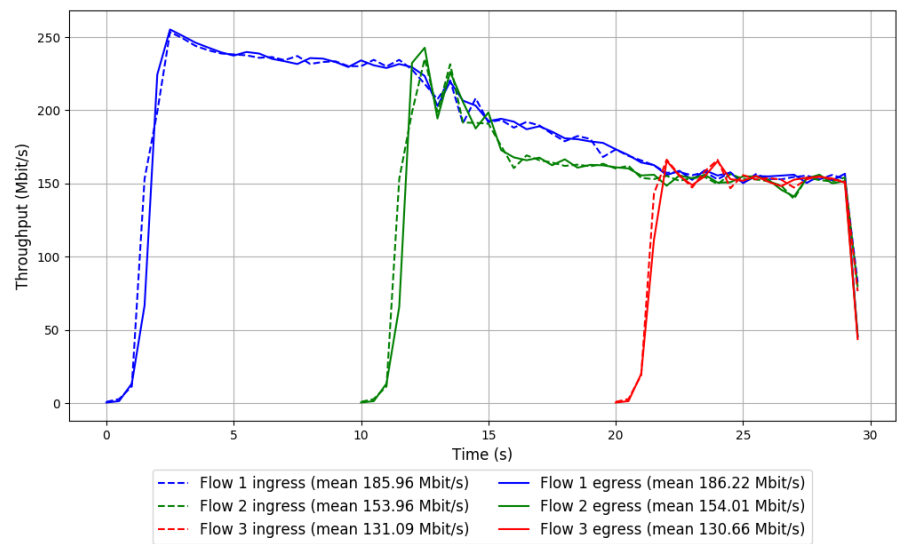
-- Flow 3:

Average throughput: 130.66 Mbit/s

95th percentile per-packet one-way delay: 109.868 ms

Loss rate: 2.58%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

Start at: 2018-02-13 20:30:39

End at: 2018-02-13 20:31:09

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 286.12 Mbit/s

95th percentile per-packet one-way delay: 112.384 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 149.88 Mbit/s

95th percentile per-packet one-way delay: 112.335 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 144.23 Mbit/s

95th percentile per-packet one-way delay: 112.396 ms

Loss rate: 1.21%

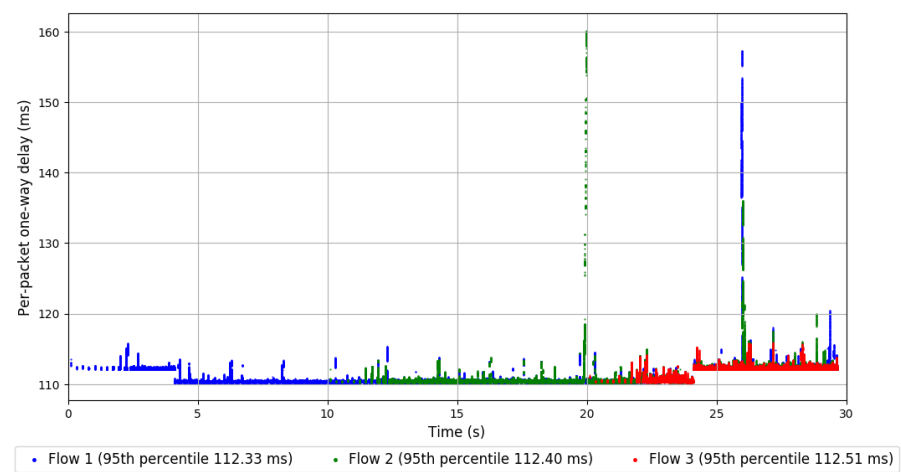
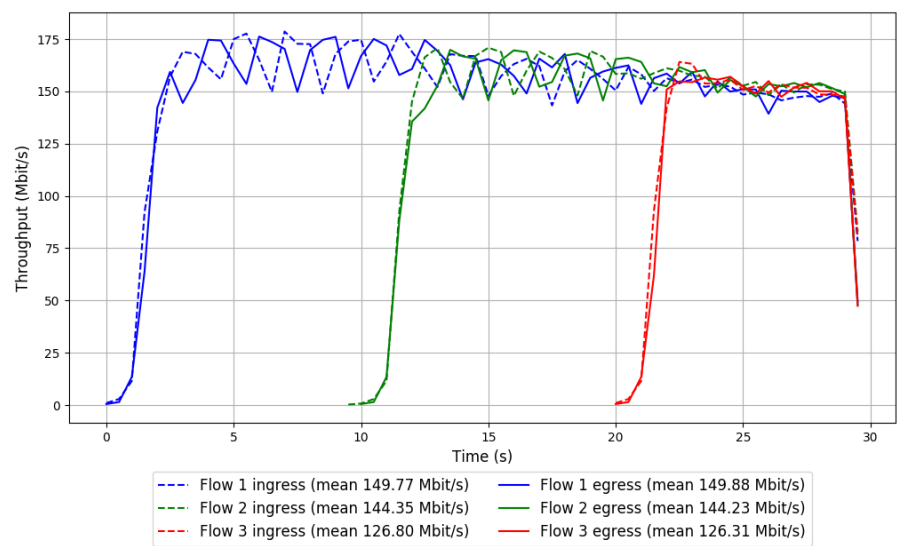
-- Flow 3:

Average throughput: 126.31 Mbit/s

95th percentile per-packet one-way delay: 112.511 ms

Loss rate: 2.66%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-02-13 20:49:46

End at: 2018-02-13 20:50:16

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 297.93 Mbit/s

95th percentile per-packet one-way delay: 113.296 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 148.87 Mbit/s

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

Loss rate: 0.74%

-- Flow 2:

Average throughput: 162.99 Mbit/s

95th percentile per-packet one-way delay: 113.709 ms

Loss rate: 1.09%

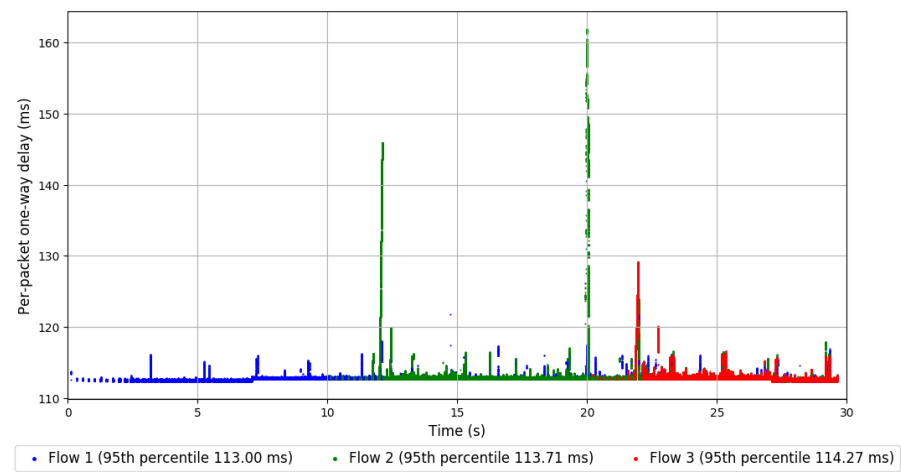
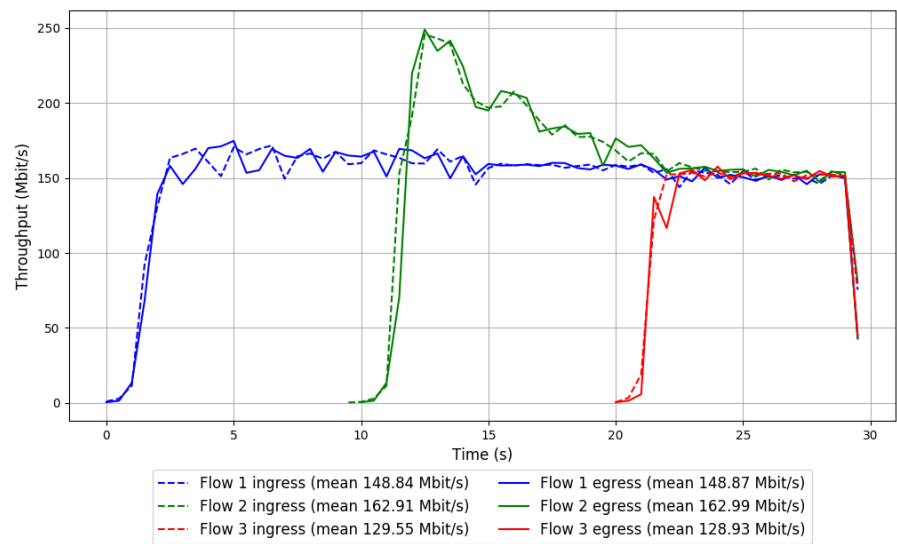
-- Flow 3:

Average throughput: 128.93 Mbit/s

95th percentile per-packet one-way delay: 114.272 ms

Loss rate: 2.79%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

Start at: 2018-02-13 21:09:15

End at: 2018-02-13 21:09:45

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 288.42 Mbit/s

95th percentile per-packet one-way delay: 113.189 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 154.17 Mbit/s

95th percentile per-packet one-way delay: 112.956 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 142.75 Mbit/s

95th percentile per-packet one-way delay: 113.198 ms

Loss rate: 1.10%

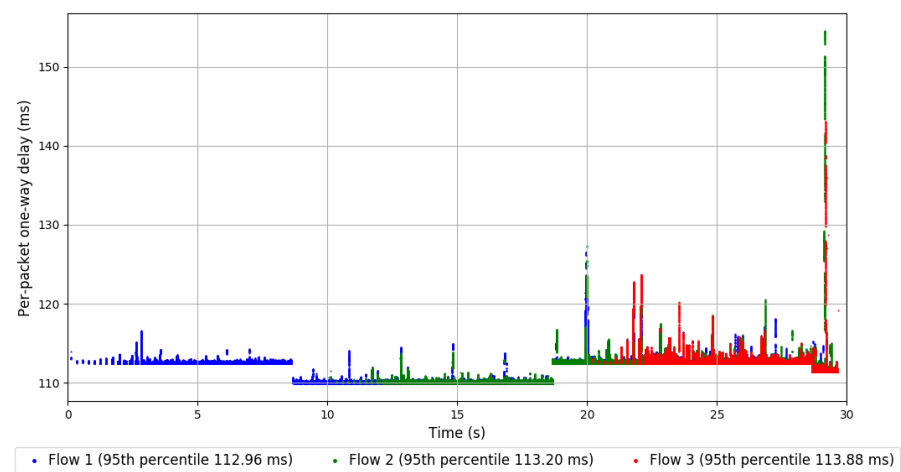
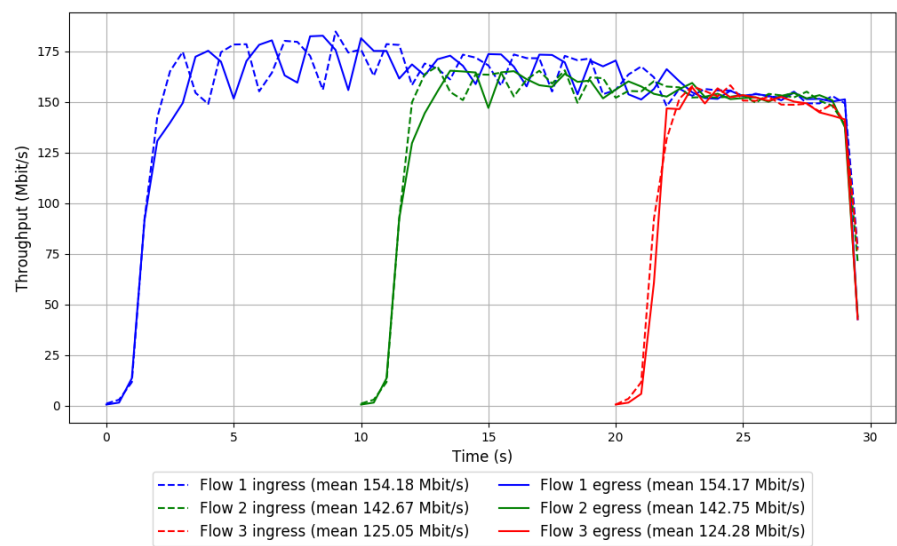
-- Flow 3:

Average throughput: 124.28 Mbit/s

95th percentile per-packet one-way delay: 113.884 ms

Loss rate: 2.84%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-02-13 21:29:03

End at: 2018-02-13 21:29:33

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 279.69 Mbit/s

95th percentile per-packet one-way delay: 112.880 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 148.69 Mbit/s

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

Loss rate: 0.75%

-- Flow 2:

Average throughput: 136.13 Mbit/s

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

Loss rate: 1.26%

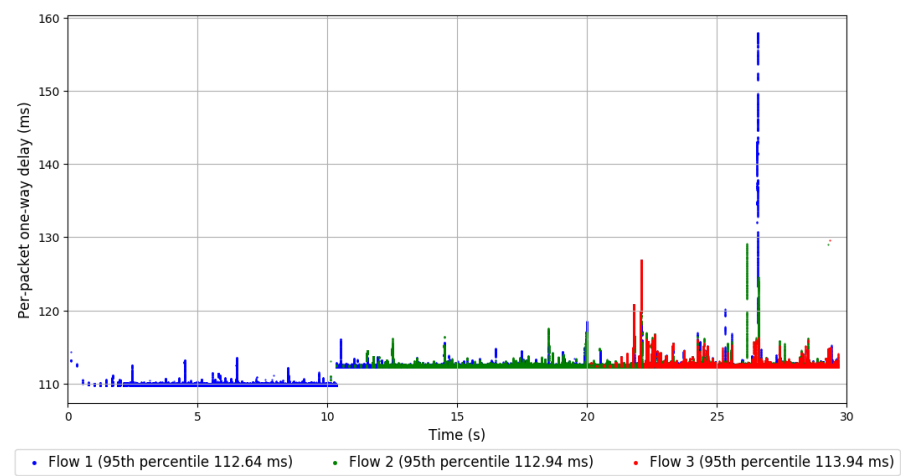
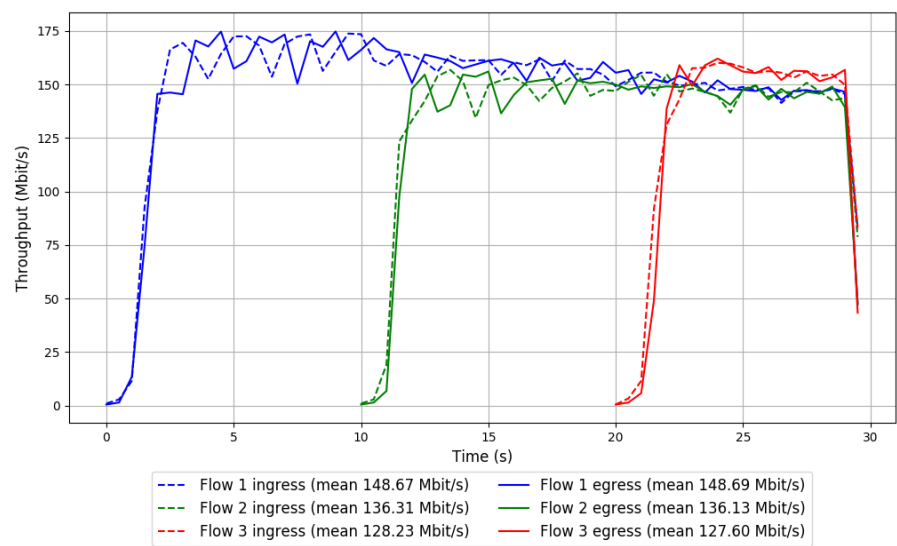
-- Flow 3:

Average throughput: 127.60 Mbit/s

95th percentile per-packet one-way delay: 113.935 ms

Loss rate: 2.80%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

Start at: 2018-02-13 21:48:39

End at: 2018-02-13 21:49:09

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 325.96 Mbit/s

95th percentile per-packet one-way delay: 110.752 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 178.99 Mbit/s

95th percentile per-packet one-way delay: 110.525 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 161.22 Mbit/s

95th percentile per-packet one-way delay: 111.020 ms

Loss rate: 0.97%

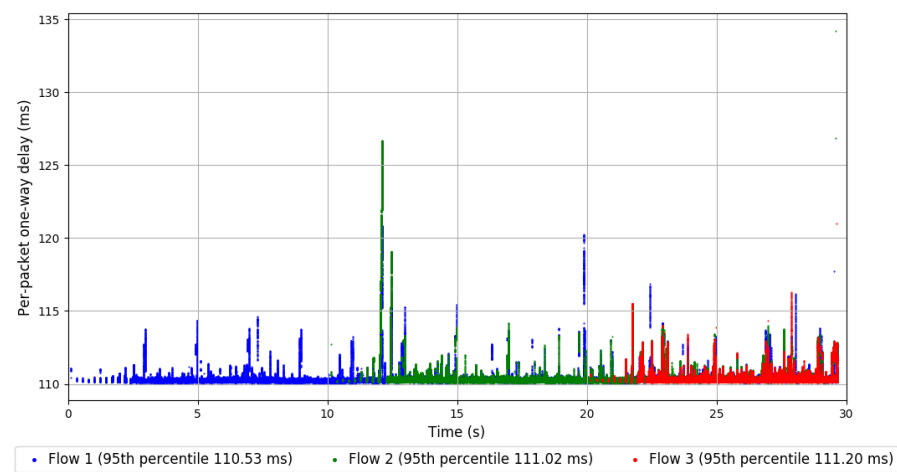
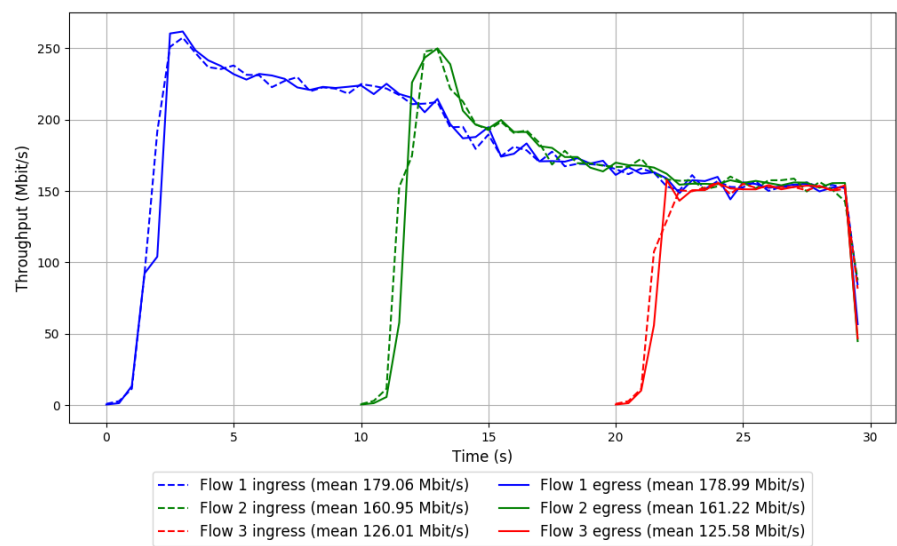
-- Flow 3:

Average throughput: 125.58 Mbit/s

95th percentile per-packet one-way delay: 111.201 ms

Loss rate: 2.63%

Run 10: Report of Indigo-1-32 — Data Link



Run 1: Statistics of Vivace-latency

Start at: 2018-02-13 19:07:28

End at: 2018-02-13 19:07:58

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 466.56 Mbit/s

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

Loss rate: 1.19%

-- Flow 1:

Average throughput: 299.86 Mbit/s

95th percentile per-packet one-way delay: 113.864 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 187.45 Mbit/s

95th percentile per-packet one-way delay: 114.171 ms

Loss rate: 1.35%

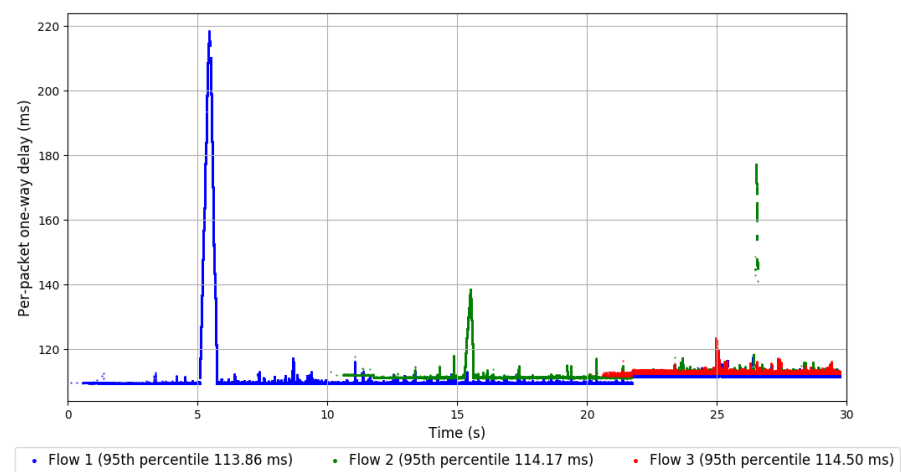
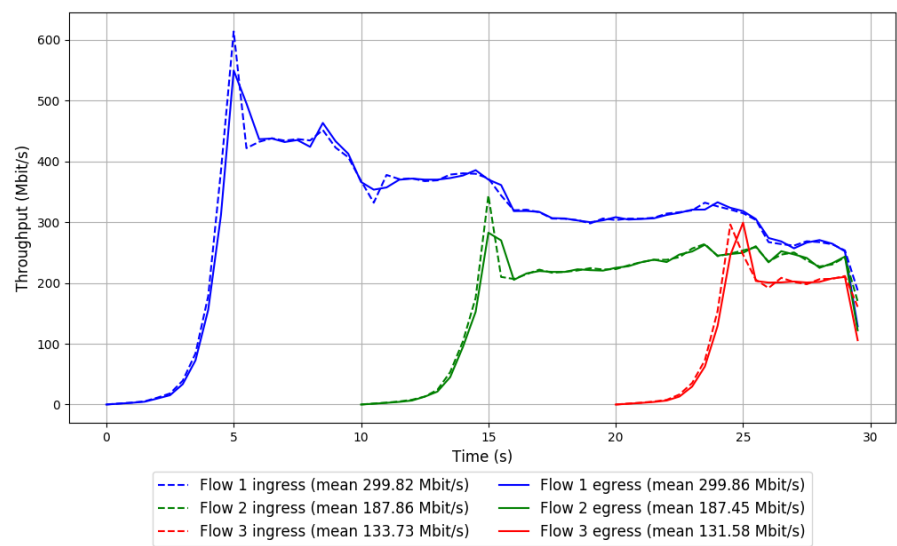
-- Flow 3:

Average throughput: 131.58 Mbit/s

95th percentile per-packet one-way delay: 114.496 ms

Loss rate: 3.86%

Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-02-13 19:27:14

End at: 2018-02-13 19:27:44

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 540.70 Mbit/s

95th percentile per-packet one-way delay: 117.018 ms

Loss rate: 1.41%

-- Flow 1:

Average throughput: 331.00 Mbit/s

95th percentile per-packet one-way delay: 114.680 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 280.42 Mbit/s

95th percentile per-packet one-way delay: 120.153 ms

Loss rate: 1.94%

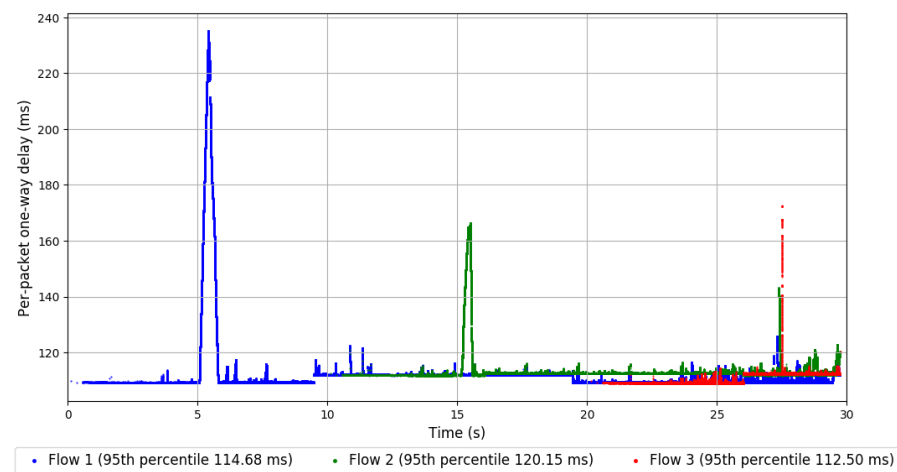
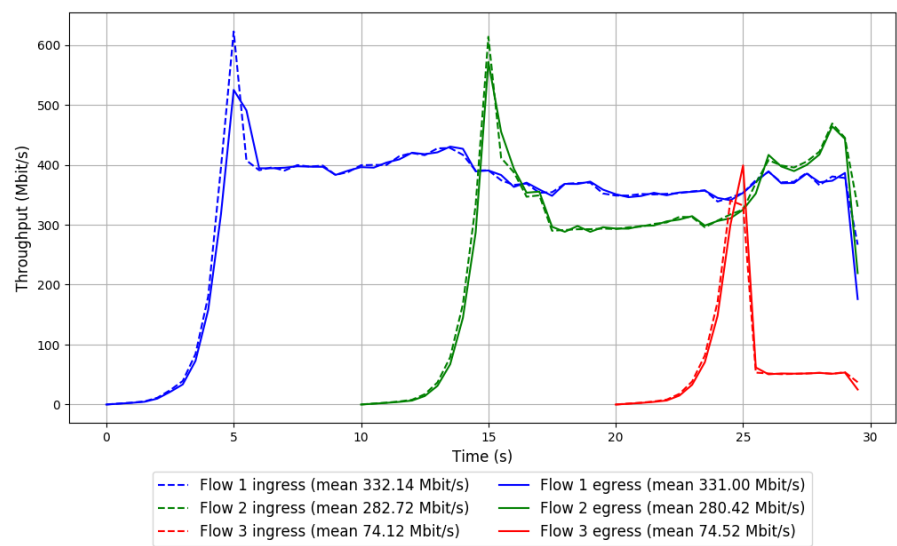
-- Flow 3:

Average throughput: 74.52 Mbit/s

95th percentile per-packet one-way delay: 112.496 ms

Loss rate: 1.67%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-02-13 19:46:59

End at: 2018-02-13 19:47:29

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 473.20 Mbit/s

95th percentile per-packet one-way delay: 115.095 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 291.02 Mbit/s

95th percentile per-packet one-way delay: 114.000 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 239.89 Mbit/s

95th percentile per-packet one-way delay: 117.772 ms

Loss rate: 1.12%

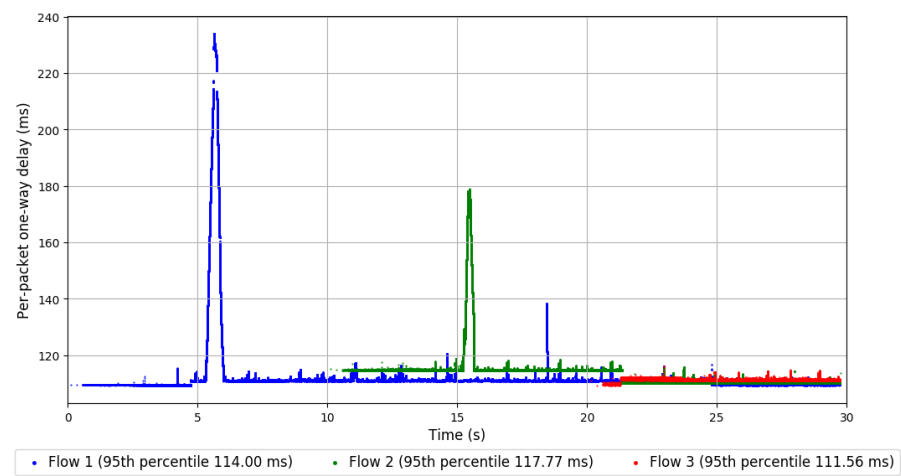
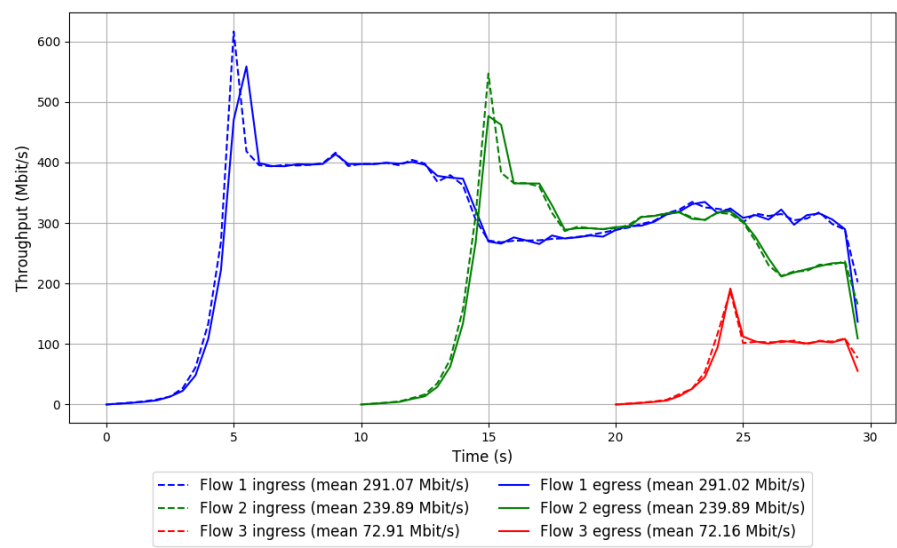
-- Flow 3:

Average throughput: 72.16 Mbit/s

95th percentile per-packet one-way delay: 111.559 ms

Loss rate: 3.29%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-02-13 20:06:23

End at: 2018-02-13 20:06:53

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 524.52 Mbit/s

95th percentile per-packet one-way delay: 113.047 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 329.69 Mbit/s

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

Loss rate: 0.80%

-- Flow 2:

Average throughput: 181.98 Mbit/s

95th percentile per-packet one-way delay: 111.851 ms

Loss rate: 0.78%

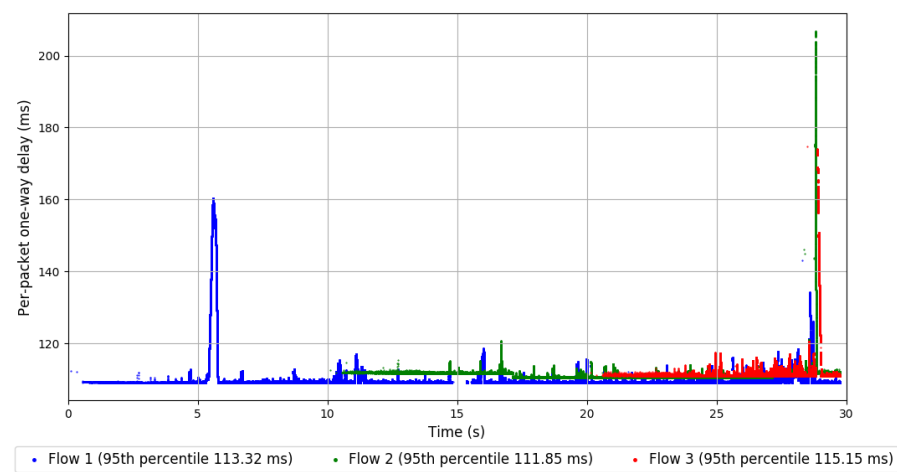
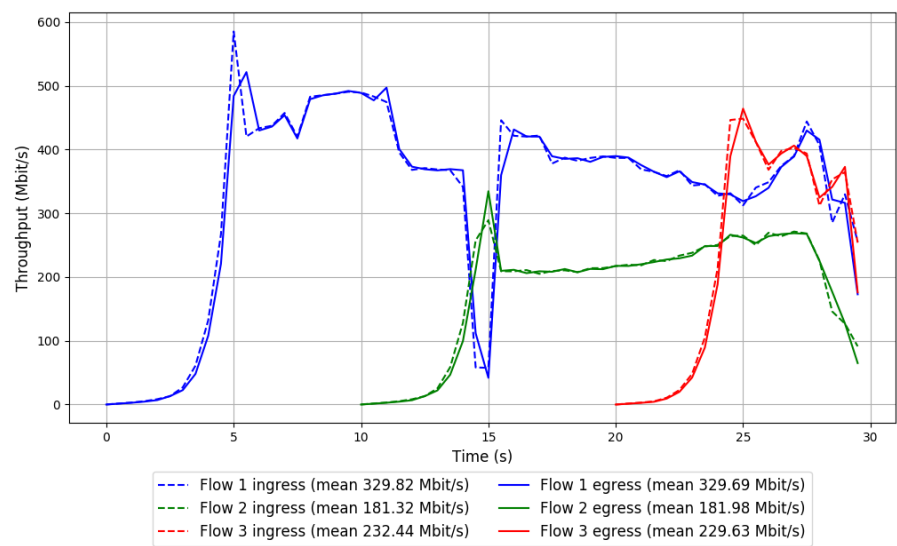
-- Flow 3:

Average throughput: 229.63 Mbit/s

95th percentile per-packet one-way delay: 115.149 ms

Loss rate: 3.47%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-02-13 20:26:18

End at: 2018-02-13 20:26:48

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 501.71 Mbit/s

95th percentile per-packet one-way delay: 128.069 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 296.32 Mbit/s

95th percentile per-packet one-way delay: 122.853 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 305.80 Mbit/s

95th percentile per-packet one-way delay: 141.935 ms

Loss rate: 1.22%

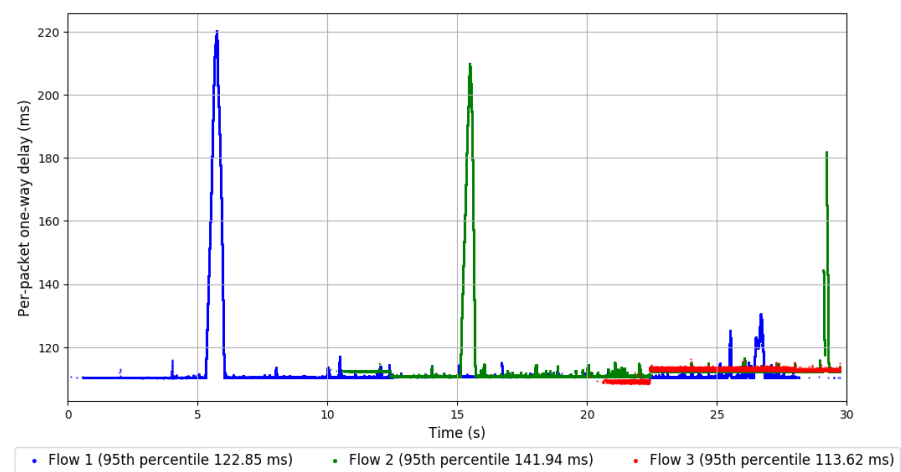
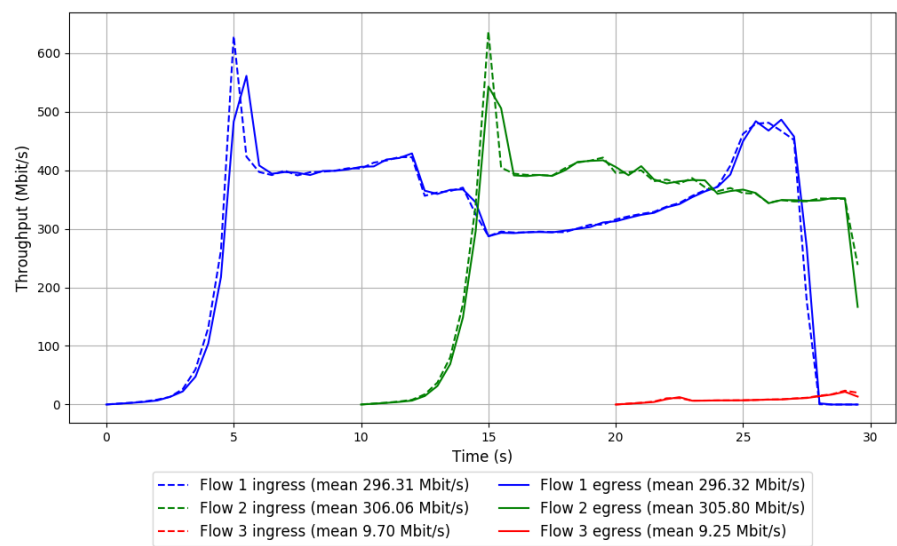
-- Flow 3:

Average throughput: 9.25 Mbit/s

95th percentile per-packet one-way delay: 113.621 ms

Loss rate: 6.75%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-02-13 20:45:28

End at: 2018-02-13 20:45:58

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 460.61 Mbit/s

95th percentile per-packet one-way delay: 113.149 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 301.03 Mbit/s

95th percentile per-packet one-way delay: 115.718 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 177.90 Mbit/s

95th percentile per-packet one-way delay: 111.002 ms

Loss rate: 0.90%

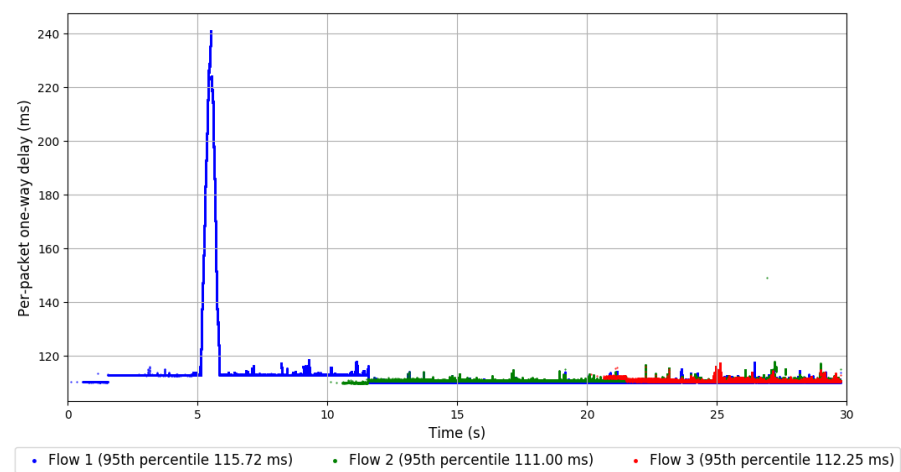
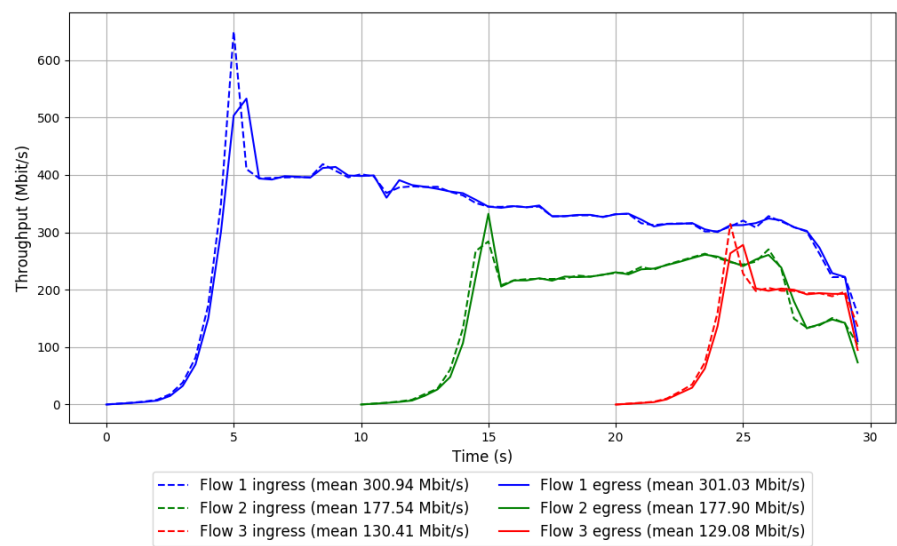
-- Flow 3:

Average throughput: 129.08 Mbit/s

95th percentile per-packet one-way delay: 112.255 ms

Loss rate: 3.29%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-02-13 21:04:59

End at: 2018-02-13 21:05:29

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 455.95 Mbit/s

95th percentile per-packet one-way delay: 124.554 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 305.10 Mbit/s

95th percentile per-packet one-way delay: 114.796 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 193.48 Mbit/s

95th percentile per-packet one-way delay: 216.928 ms

Loss rate: 3.01%

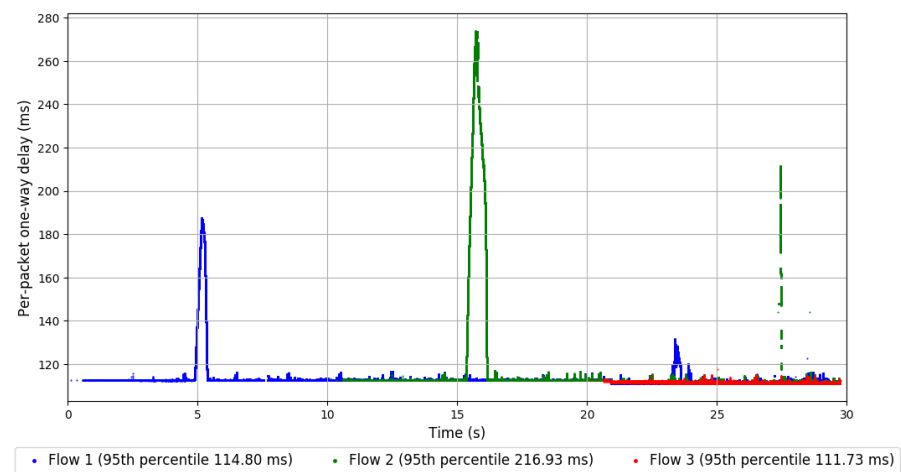
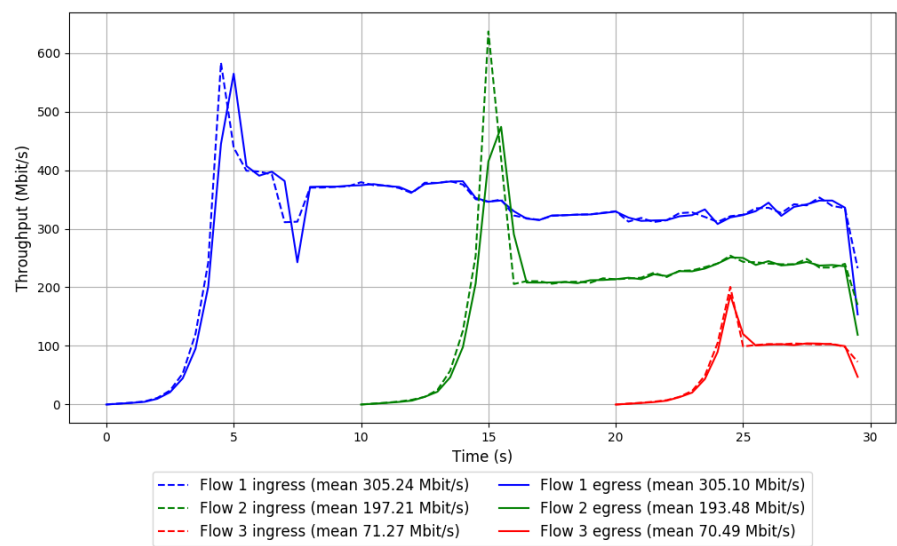
-- Flow 3:

Average throughput: 70.49 Mbit/s

95th percentile per-packet one-way delay: 111.728 ms

Loss rate: 3.36%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-02-13 21:24:41

End at: 2018-02-13 21:25:11

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 512.29 Mbit/s

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

Loss rate: 1.72%

-- Flow 1:

Average throughput: 342.13 Mbit/s

95th percentile per-packet one-way delay: 113.769 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 193.17 Mbit/s

95th percentile per-packet one-way delay: 194.953 ms

Loss rate: 3.24%

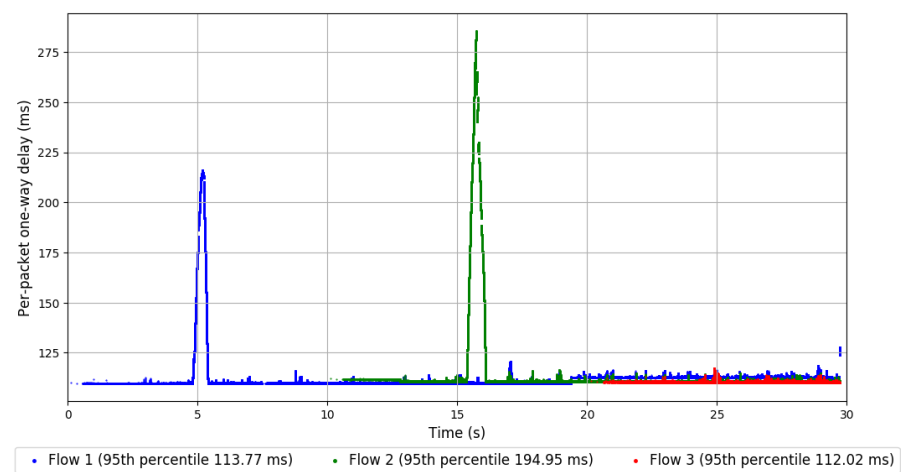
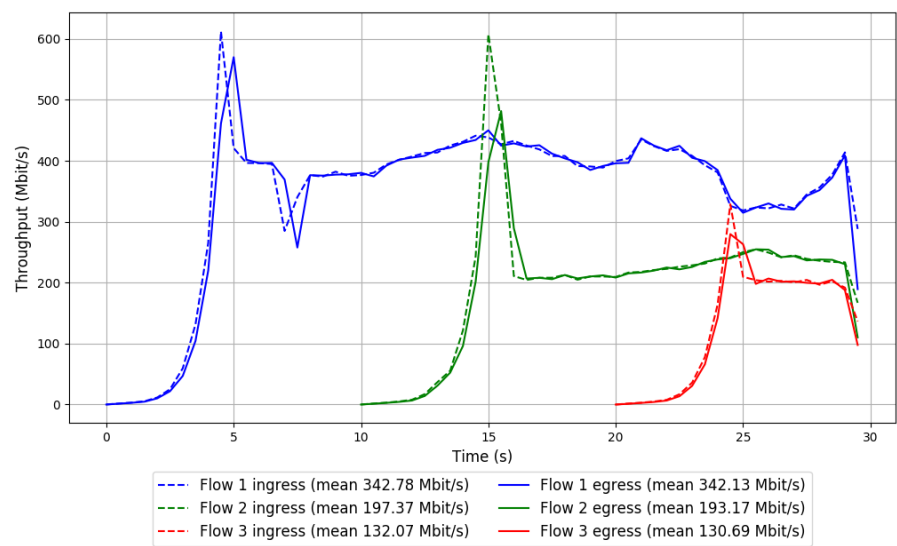
-- Flow 3:

Average throughput: 130.69 Mbit/s

95th percentile per-packet one-way delay: 112.017 ms

Loss rate: 3.28%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-02-13 21:44:19

End at: 2018-02-13 21:44:49

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 559.73 Mbit/s

95th percentile per-packet one-way delay: 127.688 ms

Loss rate: 1.41%

-- Flow 1:

Average throughput: 327.48 Mbit/s

95th percentile per-packet one-way delay: 116.567 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 288.01 Mbit/s

95th percentile per-packet one-way delay: 173.424 ms

Loss rate: 1.81%

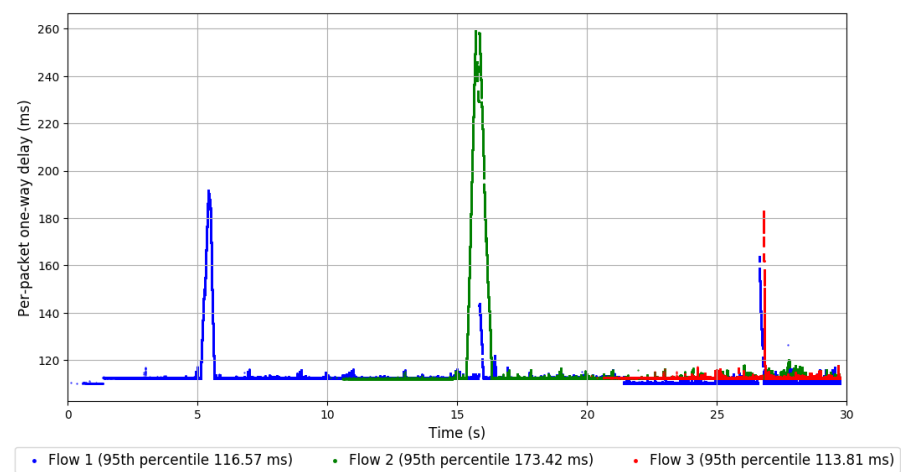
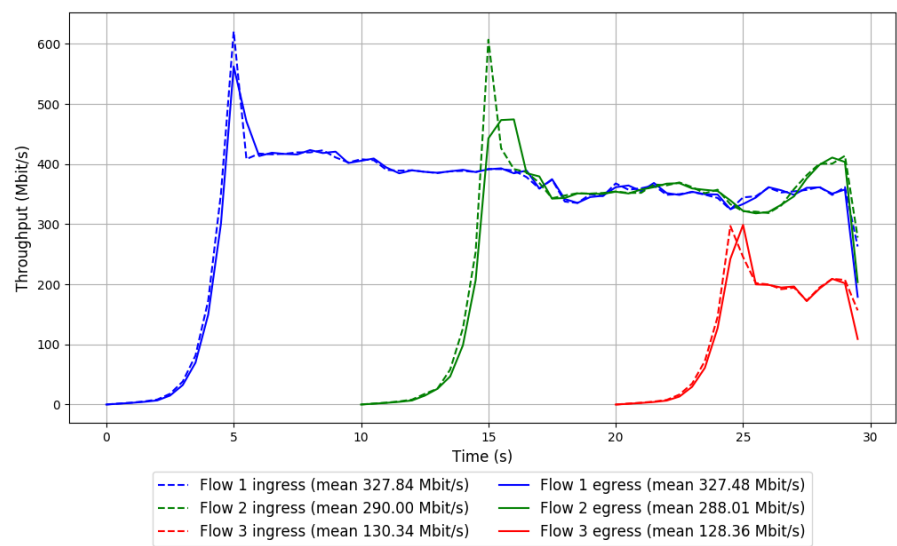
-- Flow 3:

Average throughput: 128.36 Mbit/s

95th percentile per-packet one-way delay: 113.807 ms

Loss rate: 3.78%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-02-13 22:04:11

End at: 2018-02-13 22:04:41

Below is generated by plot.py at 2018-02-14 03:13:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 474.66 Mbit/s

95th percentile per-packet one-way delay: 112.969 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 308.35 Mbit/s

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

Loss rate: 1.00%

-- Flow 2:

Average throughput: 187.15 Mbit/s

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

Loss rate: 1.42%

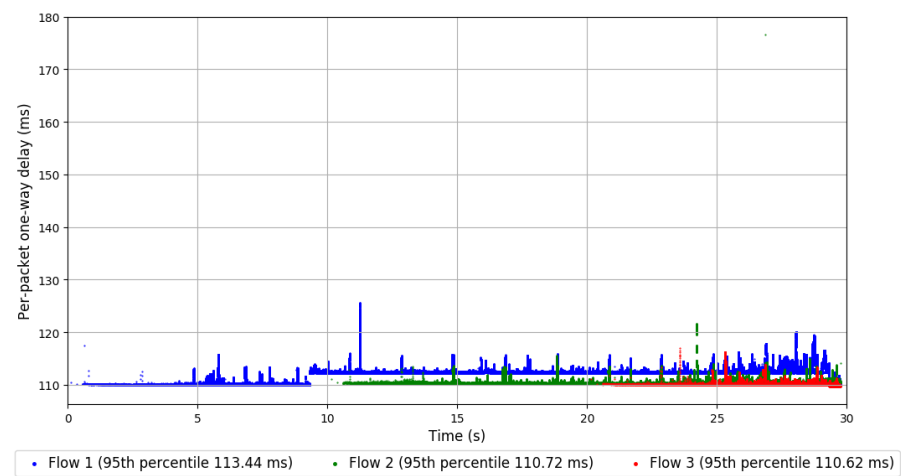
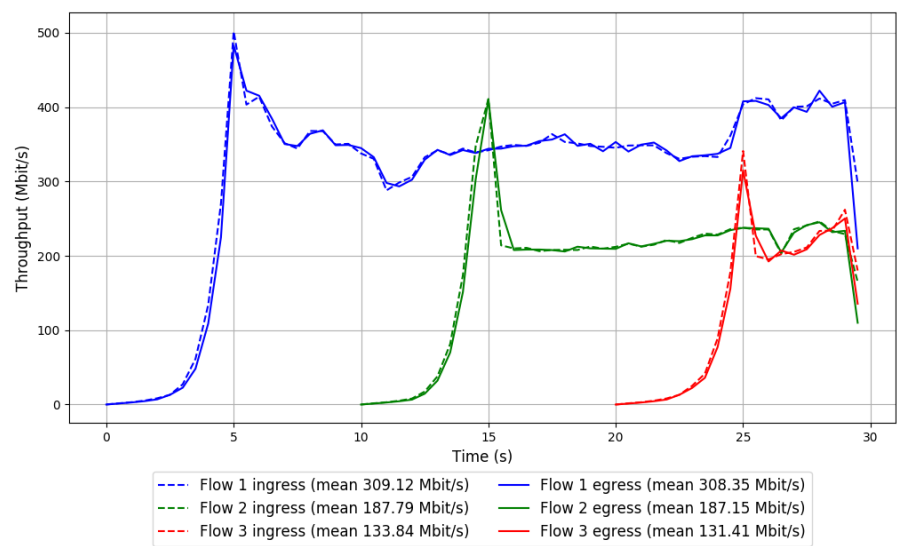
-- Flow 3:

Average throughput: 131.41 Mbit/s

95th percentile per-packet one-way delay: 110.618 ms

Loss rate: 4.06%

Run 10: Report of Vivace-latency — Data Link

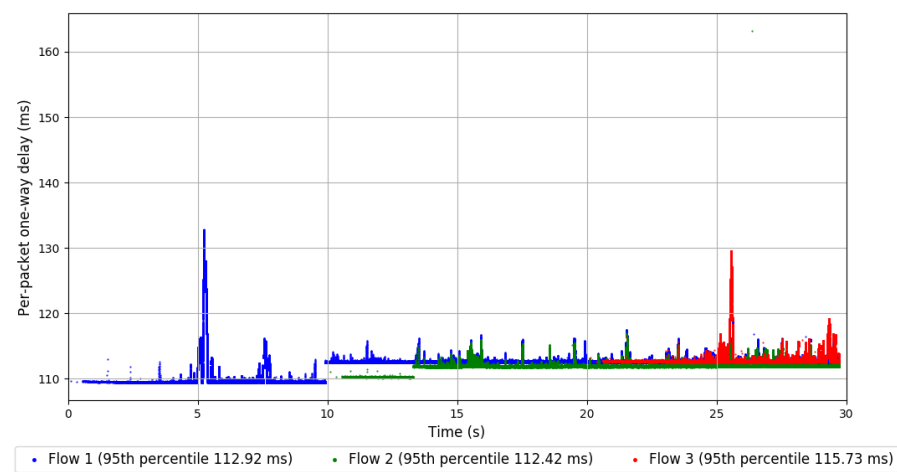
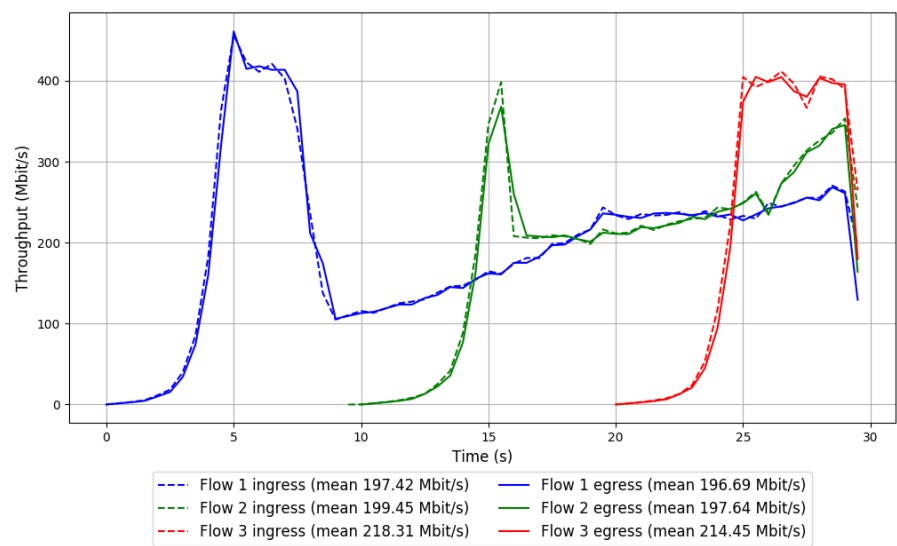


```
Run 1: Statistics of Vivace-loss

Start at: 2018-02-13 18:55:30
End at: 2018-02-13 18:56:00

# Below is generated by plot.py at 2018-02-14 03:13:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 396.94 Mbit/s
95th percentile per-packet one-way delay: 113.354 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 196.69 Mbit/s
95th percentile per-packet one-way delay: 112.918 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 197.64 Mbit/s
95th percentile per-packet one-way delay: 112.420 ms
Loss rate: 2.03%
-- Flow 3:
Average throughput: 214.45 Mbit/s
95th percentile per-packet one-way delay: 115.733 ms
Loss rate: 4.04%
```

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-02-13 19:14:49

End at: 2018-02-13 19:15:19

Below is generated by plot.py at 2018-02-14 03:16:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 602.40 Mbit/s

95th percentile per-packet one-way delay: 128.403 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 329.37 Mbit/s

95th percentile per-packet one-way delay: 135.590 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 306.24 Mbit/s

95th percentile per-packet one-way delay: 111.474 ms

Loss rate: 1.72%

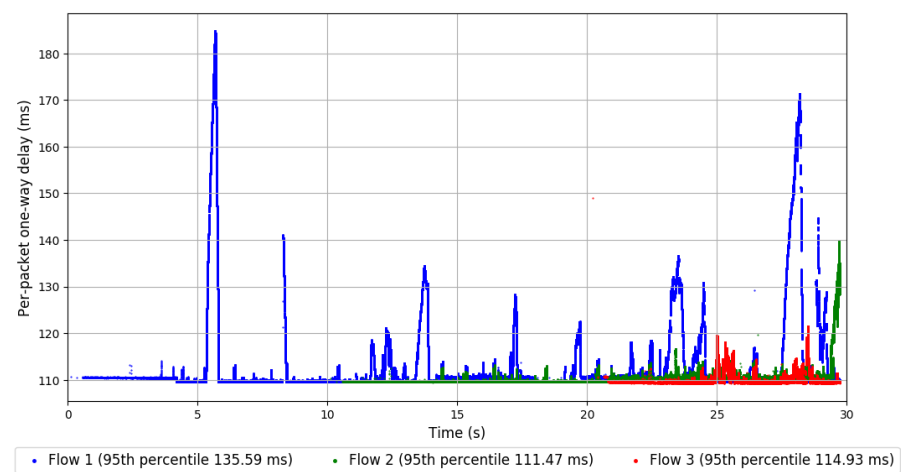
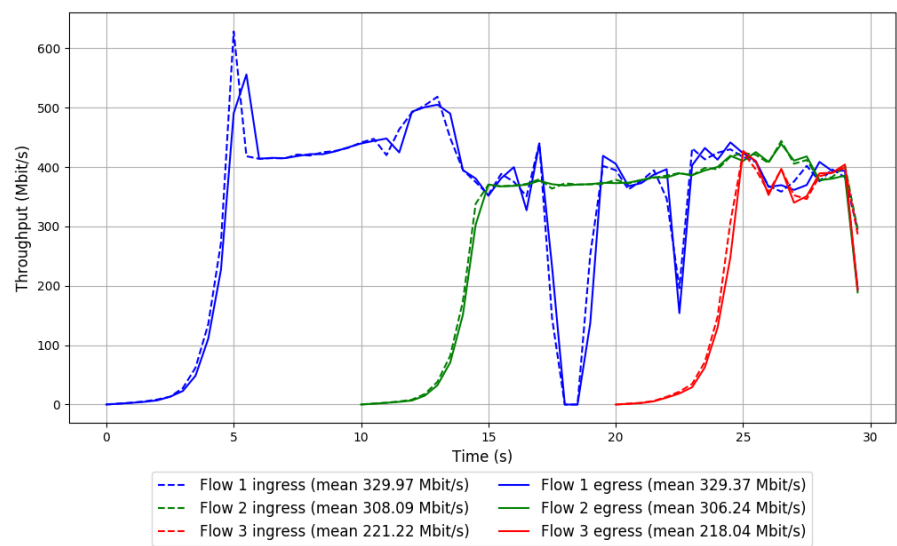
-- Flow 3:

Average throughput: 218.04 Mbit/s

95th percentile per-packet one-way delay: 114.927 ms

Loss rate: 4.08%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-02-13 19:34:41

End at: 2018-02-13 19:35:11

Below is generated by plot.py at 2018-02-14 03:19:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 559.01 Mbit/s

95th percentile per-packet one-way delay: 159.166 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 314.08 Mbit/s

95th percentile per-packet one-way delay: 157.848 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 260.59 Mbit/s

95th percentile per-packet one-way delay: 112.260 ms

Loss rate: 1.20%

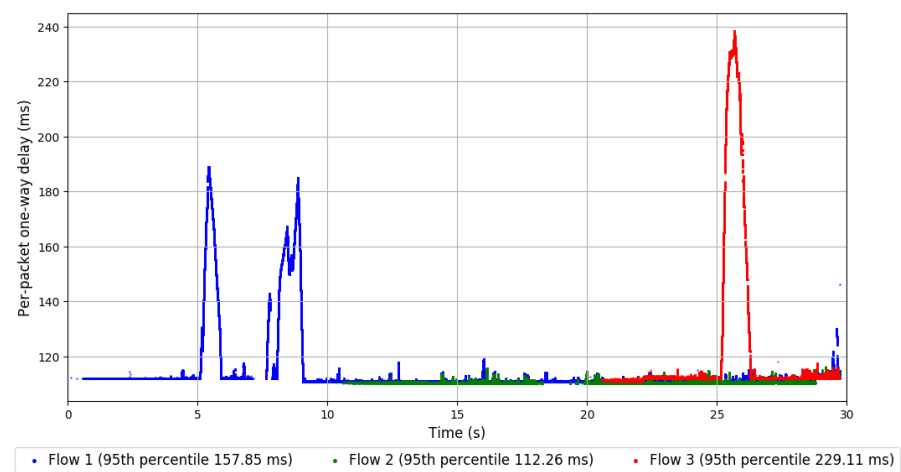
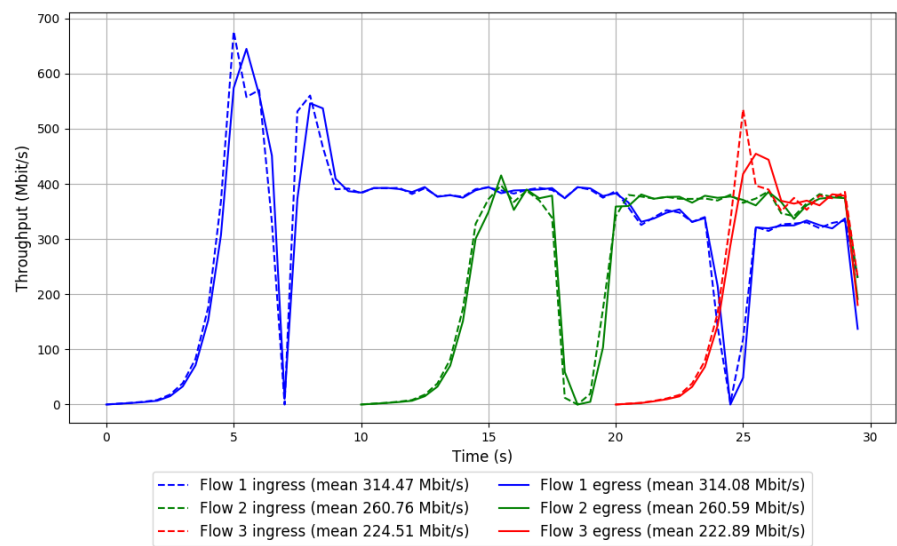
-- Flow 3:

Average throughput: 222.89 Mbit/s

95th percentile per-packet one-way delay: 229.110 ms

Loss rate: 3.06%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-02-13 19:54:17

End at: 2018-02-13 19:54:47

Below is generated by plot.py at 2018-02-14 03:21:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 542.72 Mbit/s

95th percentile per-packet one-way delay: 176.625 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 301.23 Mbit/s

95th percentile per-packet one-way delay: 211.397 ms

Loss rate: 1.65%

-- Flow 2:

Average throughput: 295.44 Mbit/s

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

Loss rate: 0.72%

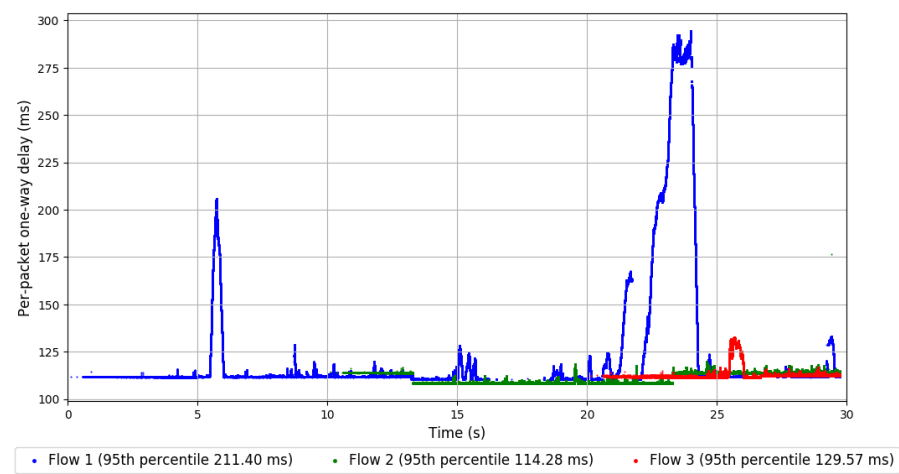
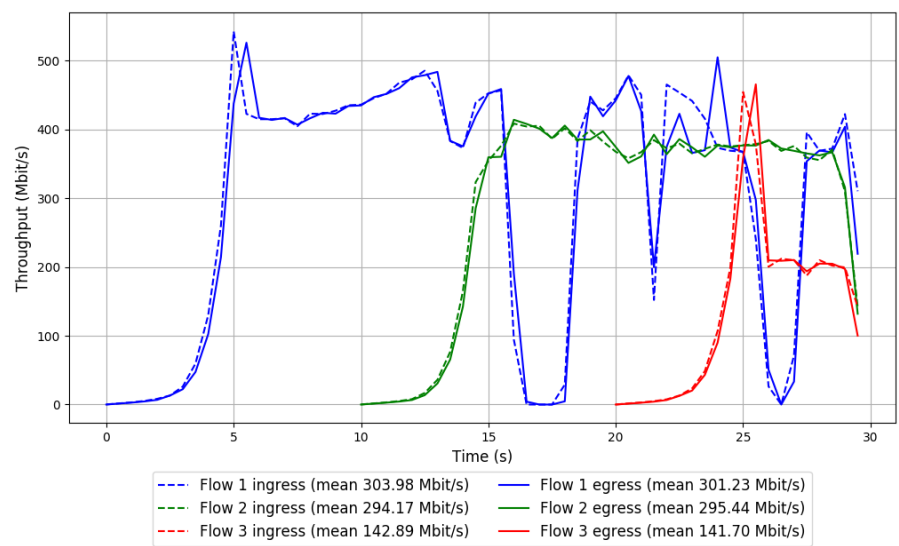
-- Flow 3:

Average throughput: 141.70 Mbit/s

95th percentile per-packet one-way delay: 129.566 ms

Loss rate: 3.12%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-02-13 20:13:59

End at: 2018-02-13 20:14:29

Below is generated by plot.py at 2018-02-14 03:22:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 580.50 Mbit/s

95th percentile per-packet one-way delay: 122.627 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 352.31 Mbit/s

95th percentile per-packet one-way delay: 143.419 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 277.61 Mbit/s

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

Loss rate: 1.64%

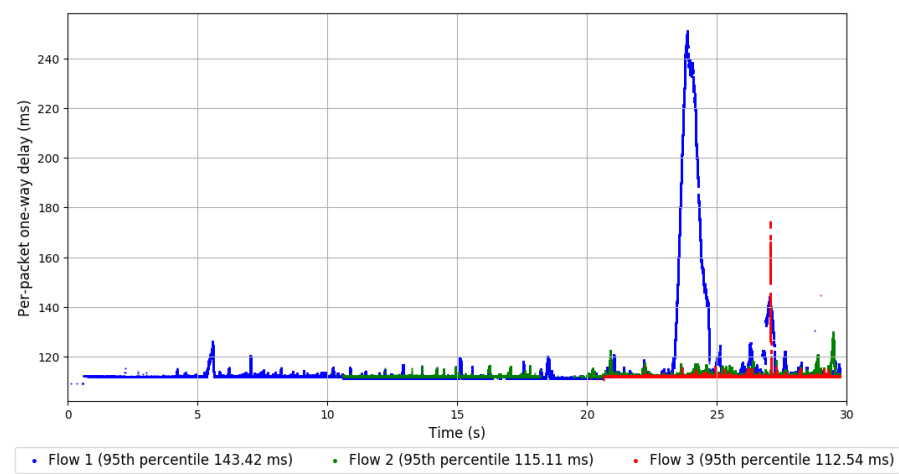
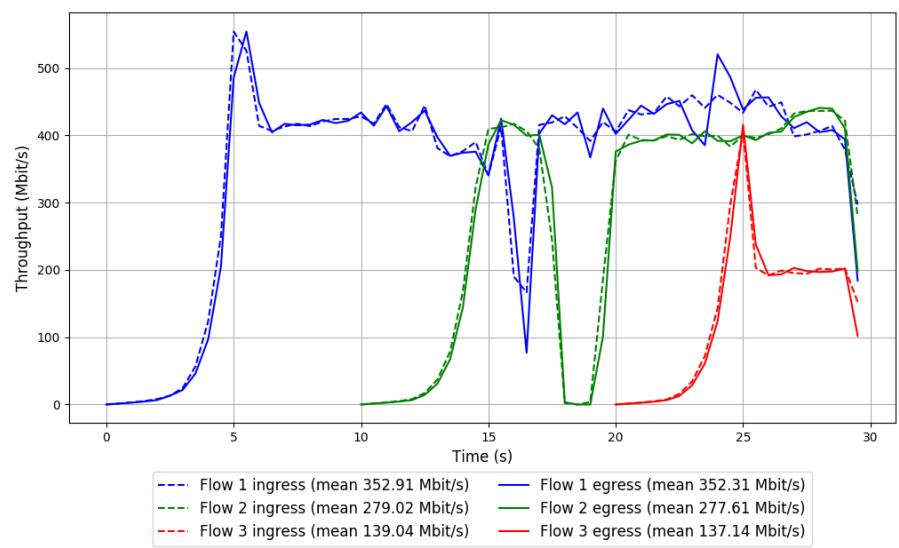
-- Flow 3:

Average throughput: 137.14 Mbit/s

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

Loss rate: 3.61%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-02-13 20:33:40

End at: 2018-02-13 20:34:10

Below is generated by plot.py at 2018-02-14 03:22:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 473.12 Mbit/s

95th percentile per-packet one-way delay: 184.303 ms

Loss rate: 3.29%

-- Flow 1:

Average throughput: 274.24 Mbit/s

95th percentile per-packet one-way delay: 207.699 ms

Loss rate: 3.60%

-- Flow 2:

Average throughput: 202.79 Mbit/s

95th percentile per-packet one-way delay: 115.847 ms

Loss rate: 2.07%

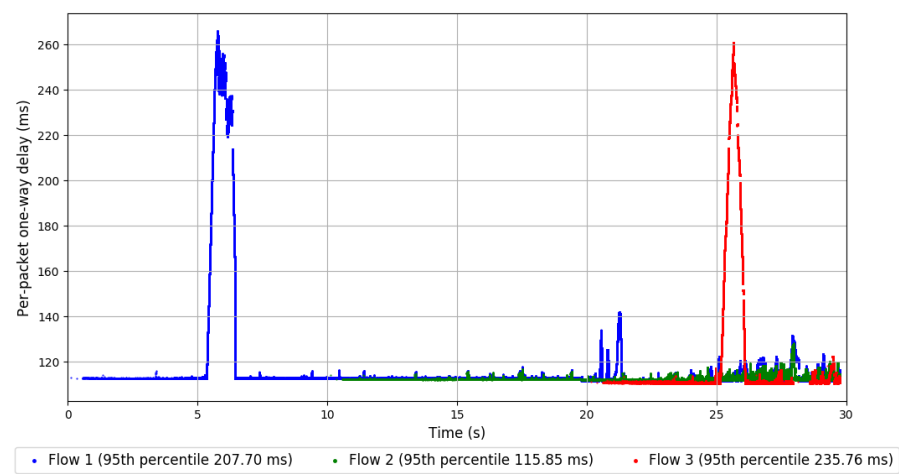
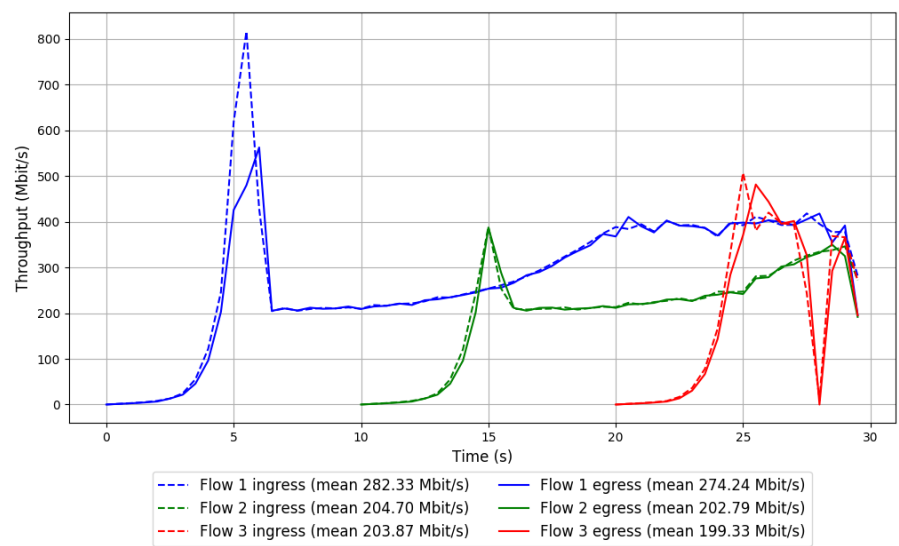
-- Flow 3:

Average throughput: 199.33 Mbit/s

95th percentile per-packet one-way delay: 235.763 ms

Loss rate: 4.46%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-02-13 20:52:50

End at: 2018-02-13 20:53:20

Below is generated by plot.py at 2018-02-14 03:22:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 535.96 Mbit/s

95th percentile per-packet one-way delay: 195.164 ms

Loss rate: 1.84%

-- Flow 1:

Average throughput: 379.97 Mbit/s

95th percentile per-packet one-way delay: 209.854 ms

Loss rate: 1.35%

-- Flow 2:

Average throughput: 121.69 Mbit/s

95th percentile per-packet one-way delay: 112.544 ms

Loss rate: 1.78%

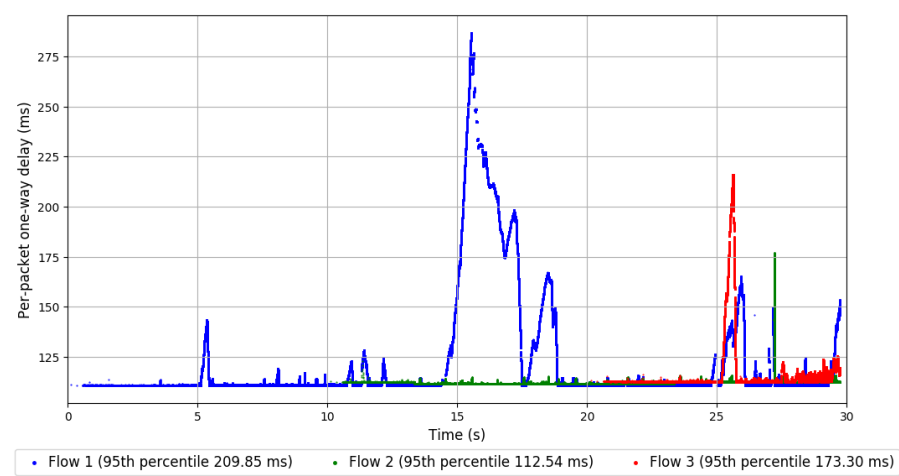
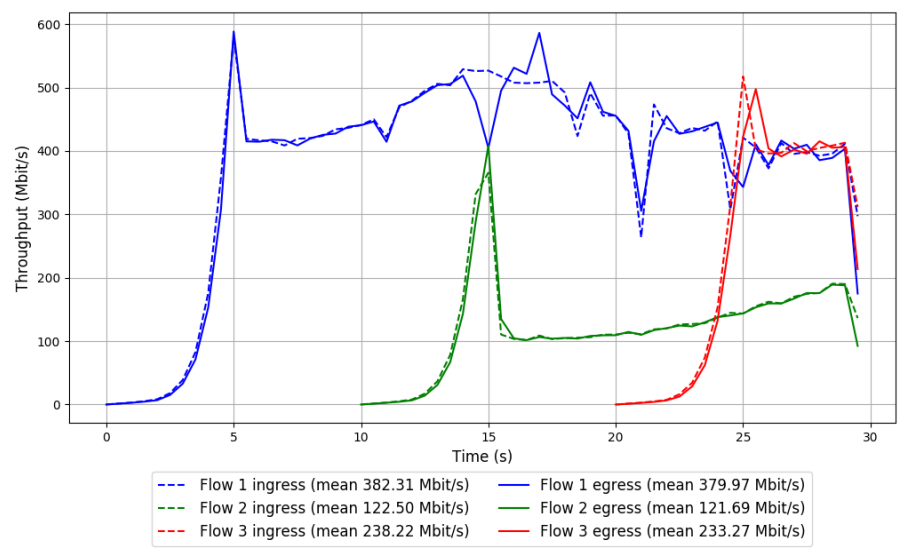
-- Flow 3:

Average throughput: 233.27 Mbit/s

95th percentile per-packet one-way delay: 173.301 ms

Loss rate: 4.32%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-02-13 21:12:24

End at: 2018-02-13 21:12:54

Below is generated by plot.py at 2018-02-14 03:23:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 538.49 Mbit/s

95th percentile per-packet one-way delay: 203.964 ms

Loss rate: 2.06%

-- Flow 1:

Average throughput: 267.34 Mbit/s

95th percentile per-packet one-way delay: 208.200 ms

Loss rate: 2.07%

-- Flow 2:

Average throughput: 303.09 Mbit/s

95th percentile per-packet one-way delay: 204.580 ms

Loss rate: 1.48%

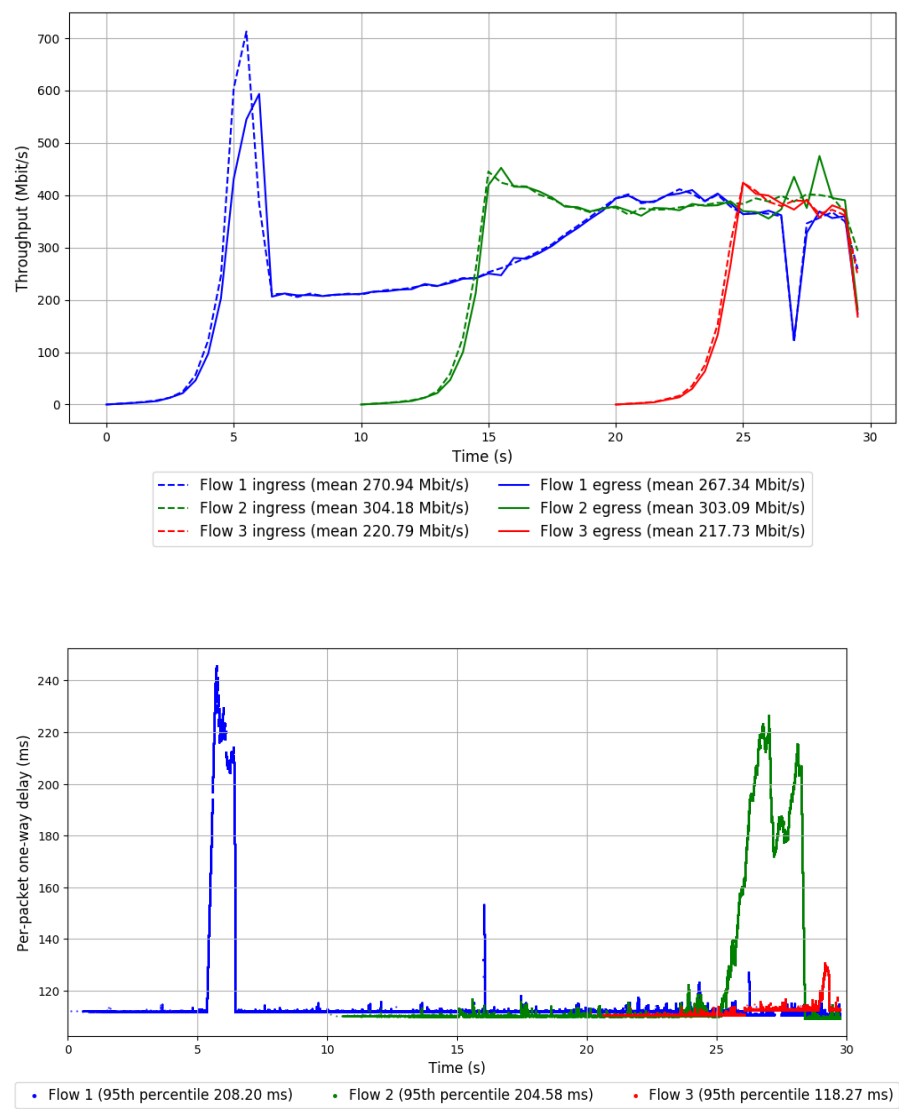
-- Flow 3:

Average throughput: 217.73 Mbit/s

95th percentile per-packet one-way delay: 118.269 ms

Loss rate: 3.65%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-02-13 21:32:07

End at: 2018-02-13 21:32:37

Below is generated by plot.py at 2018-02-14 03:23:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 412.46 Mbit/s

95th percentile per-packet one-way delay: 128.026 ms

Loss rate: 2.31%

-- Flow 1:

Average throughput: 199.59 Mbit/s

95th percentile per-packet one-way delay: 136.191 ms

Loss rate: 1.88%

-- Flow 2:

Average throughput: 204.66 Mbit/s

95th percentile per-packet one-way delay: 114.039 ms

Loss rate: 2.00%

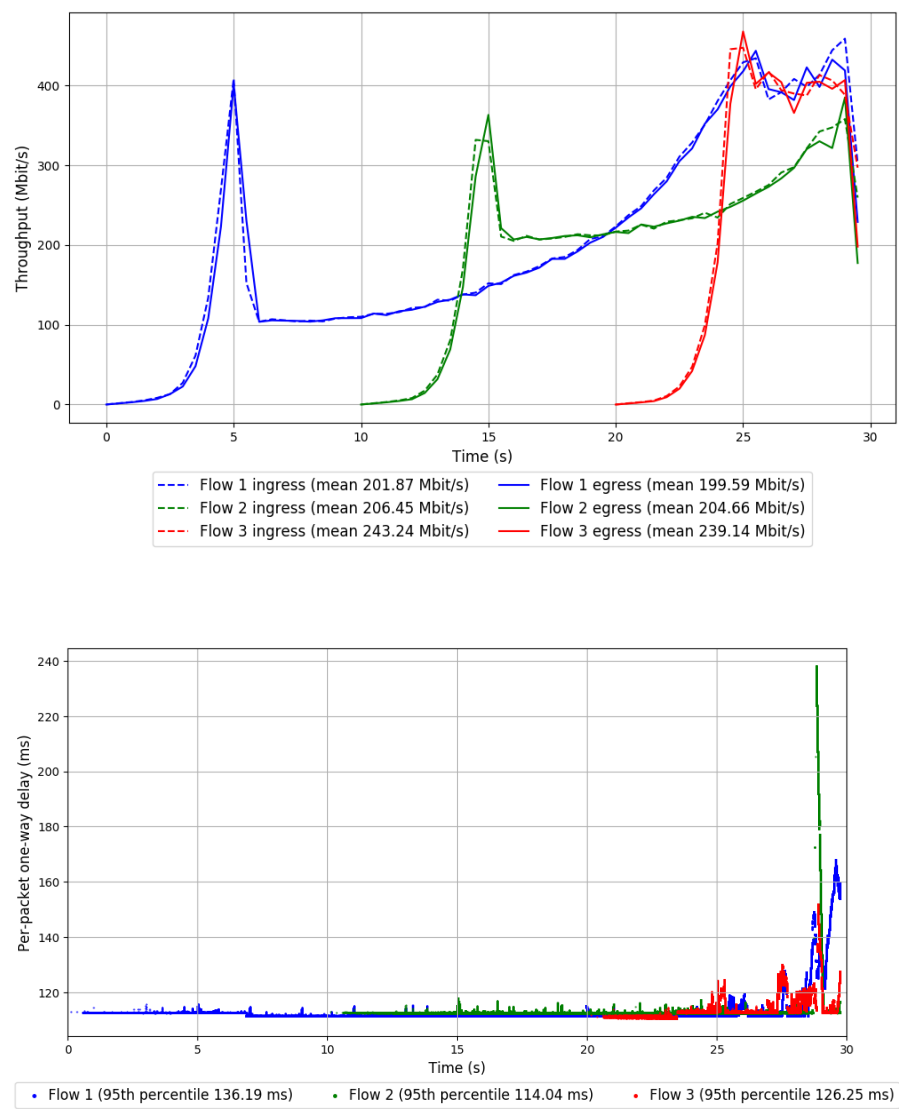
-- Flow 3:

Average throughput: 239.14 Mbit/s

95th percentile per-packet one-way delay: 126.249 ms

Loss rate: 3.94%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-02-13 21:51:42

End at: 2018-02-13 21:52:12

Below is generated by plot.py at 2018-02-14 03:29:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 618.29 Mbit/s

95th percentile per-packet one-way delay: 176.007 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 353.79 Mbit/s

95th percentile per-packet one-way delay: 174.856 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 298.88 Mbit/s

95th percentile per-packet one-way delay: 135.514 ms

Loss rate: 1.57%

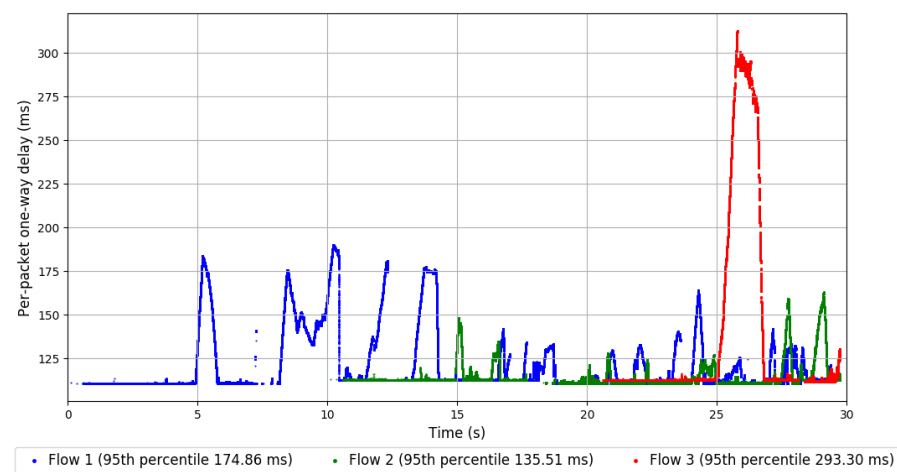
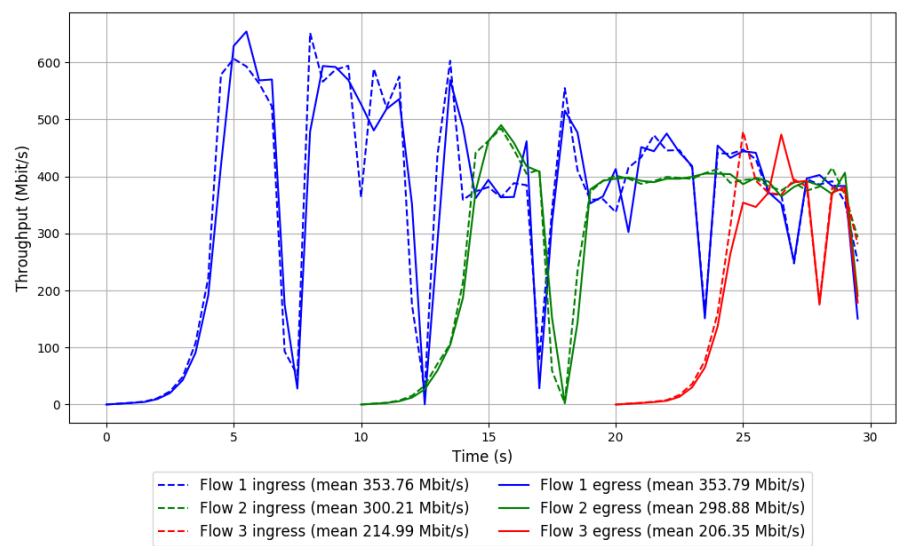
-- Flow 3:

Average throughput: 206.35 Mbit/s

95th percentile per-packet one-way delay: 293.295 ms

Loss rate: 6.23%

Run 10: Report of Vivace-loss — Data Link

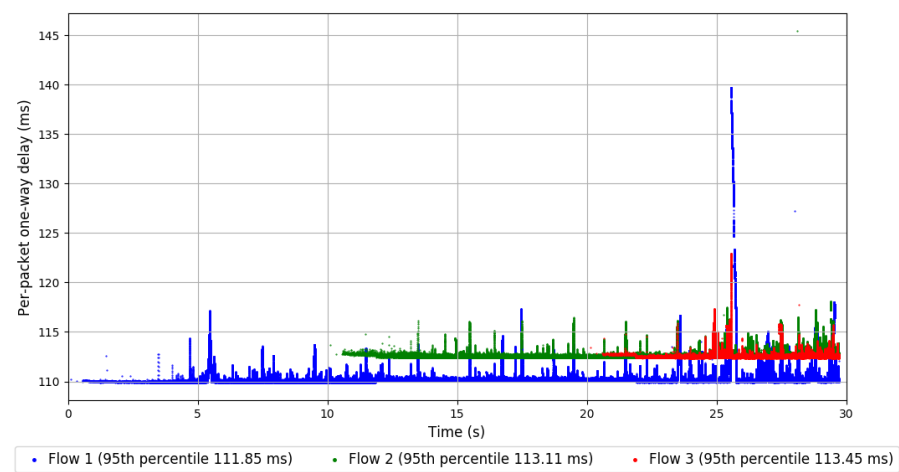
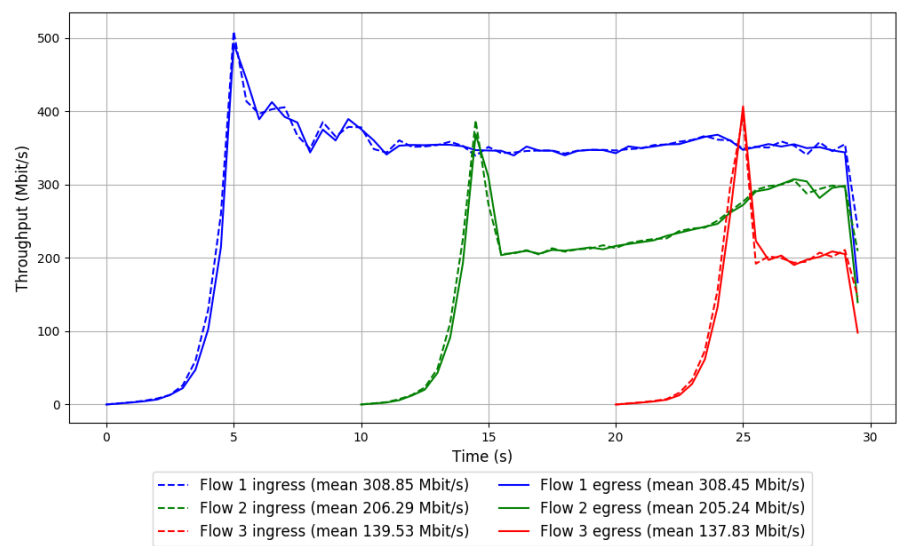


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-02-13 19:01:28
End at: 2018-02-13 19:01:58

# Below is generated by plot.py at 2018-02-14 03:29:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 488.92 Mbit/s
95th percentile per-packet one-way delay: 112.856 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 308.45 Mbit/s
95th percentile per-packet one-way delay: 111.846 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 205.24 Mbit/s
95th percentile per-packet one-way delay: 113.113 ms
Loss rate: 1.65%
-- Flow 3:
Average throughput: 137.83 Mbit/s
95th percentile per-packet one-way delay: 113.455 ms
Loss rate: 3.52%
```


Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-02-13 19:21:11

End at: 2018-02-13 19:21:41

Below is generated by plot.py at 2018-02-14 03:29:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 511.64 Mbit/s

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

Loss rate: 1.17%

-- Flow 1:

Average throughput: 320.18 Mbit/s

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

Loss rate: 0.98%

-- Flow 2:

Average throughput: 212.62 Mbit/s

95th percentile per-packet one-way delay: 113.152 ms

Loss rate: 2.01%

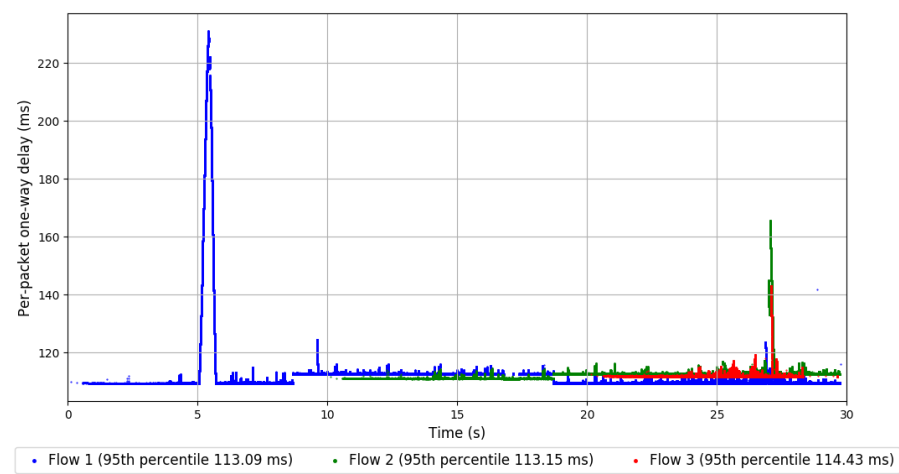
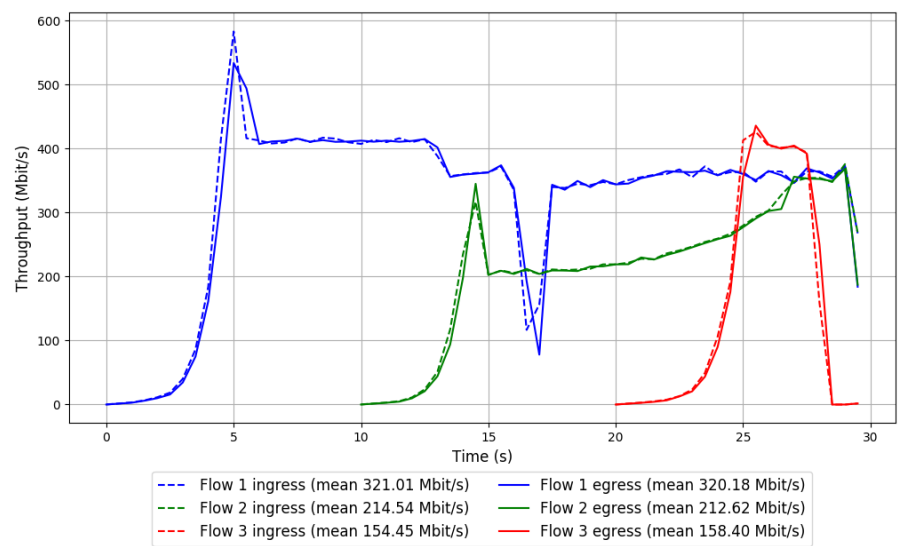
-- Flow 3:

Average throughput: 158.40 Mbit/s

95th percentile per-packet one-way delay: 114.432 ms

Loss rate: 0.00%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-02-13 19:40:54

End at: 2018-02-13 19:41:24

Below is generated by plot.py at 2018-02-14 03:31:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 545.03 Mbit/s

95th percentile per-packet one-way delay: 121.841 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 341.29 Mbit/s

95th percentile per-packet one-way delay: 117.391 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 197.75 Mbit/s

95th percentile per-packet one-way delay: 194.466 ms

Loss rate: 1.95%

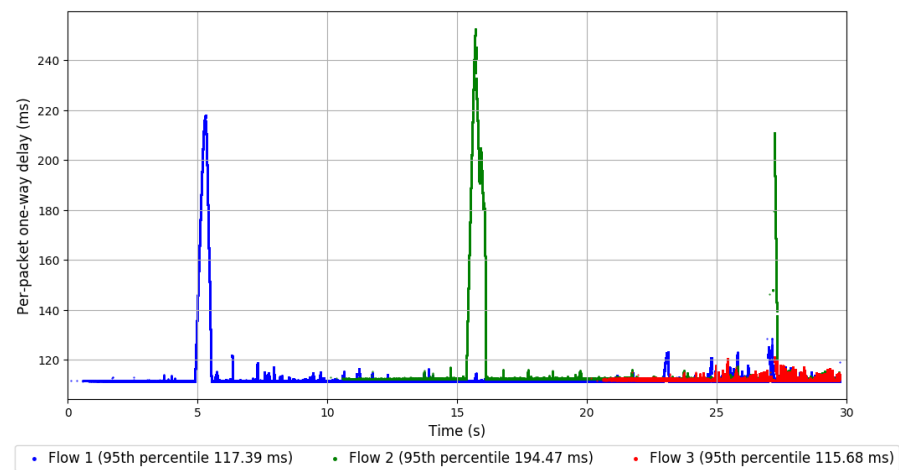
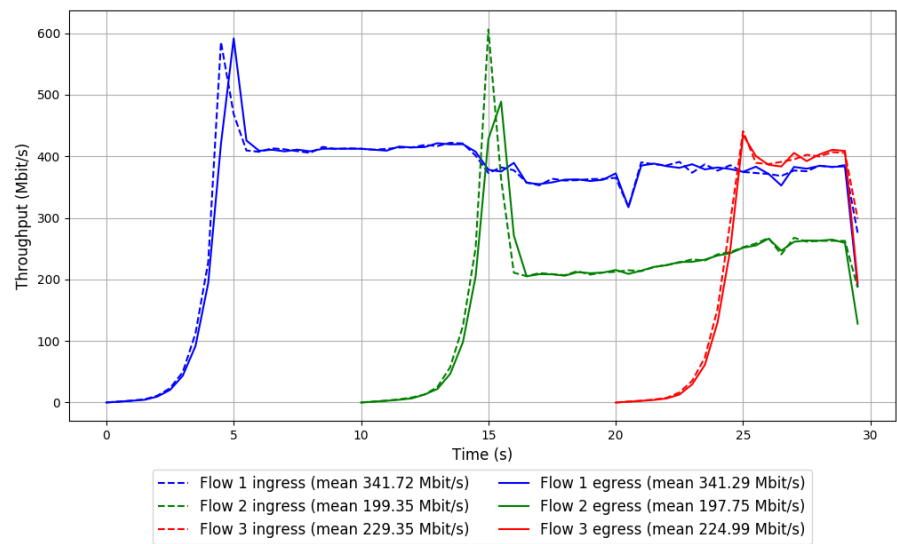
-- Flow 3:

Average throughput: 224.99 Mbit/s

95th percentile per-packet one-way delay: 115.681 ms

Loss rate: 4.19%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-02-13 20:00:14

End at: 2018-02-13 20:00:44

Below is generated by plot.py at 2018-02-14 03:32:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 626.30 Mbit/s

95th percentile per-packet one-way delay: 115.384 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 349.24 Mbit/s

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

Loss rate: 0.84%

-- Flow 2:

Average throughput: 309.03 Mbit/s

95th percentile per-packet one-way delay: 116.664 ms

Loss rate: 1.48%

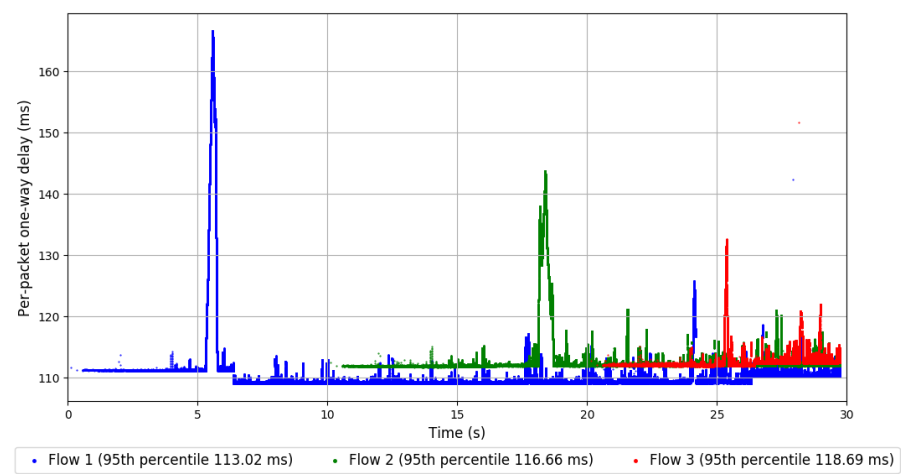
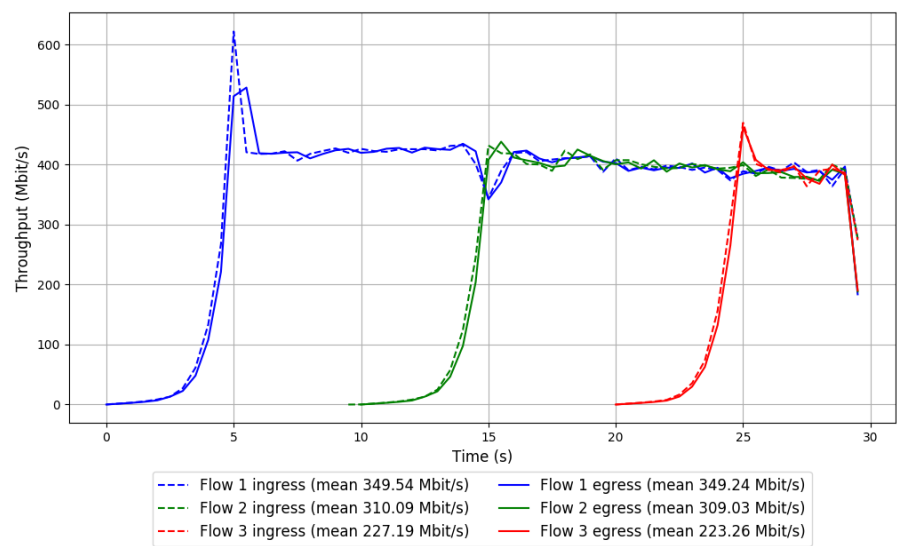
-- Flow 3:

Average throughput: 223.26 Mbit/s

95th percentile per-packet one-way delay: 118.690 ms

Loss rate: 4.00%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-02-13 20:20:18

End at: 2018-02-13 20:20:48

Below is generated by plot.py at 2018-02-14 03:32:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 485.19 Mbit/s

95th percentile per-packet one-way delay: 115.335 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 323.25 Mbit/s

95th percentile per-packet one-way delay: 118.587 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 180.29 Mbit/s

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

Loss rate: 1.40%

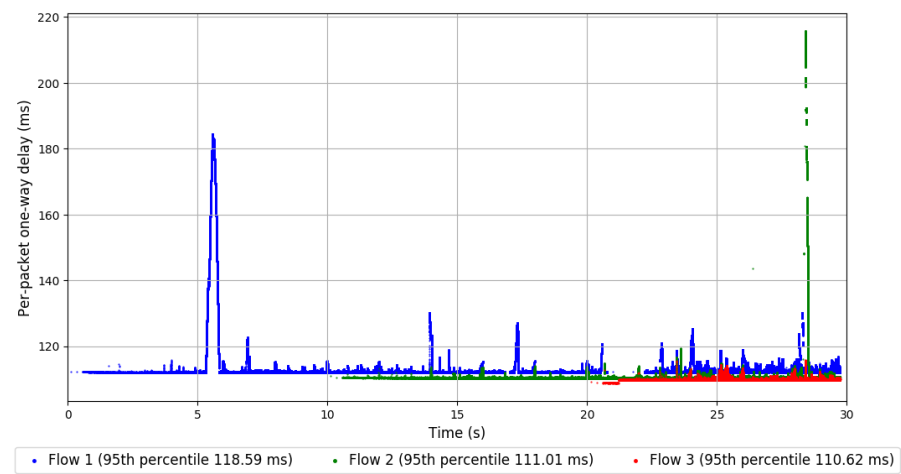
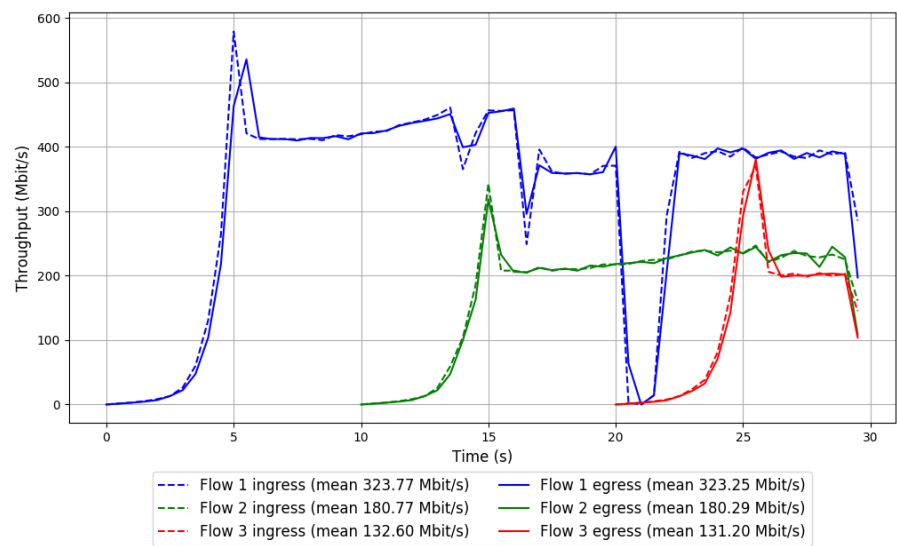
-- Flow 3:

Average throughput: 131.20 Mbit/s

95th percentile per-packet one-way delay: 110.623 ms

Loss rate: 3.31%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-02-13 20:39:31

End at: 2018-02-13 20:40:01

Below is generated by plot.py at 2018-02-14 03:32:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 444.12 Mbit/s

95th percentile per-packet one-way delay: 119.797 ms

Loss rate: 1.71%

-- Flow 1:

Average throughput: 269.44 Mbit/s

95th percentile per-packet one-way delay: 121.113 ms

Loss rate: 1.41%

-- Flow 2:

Average throughput: 199.37 Mbit/s

95th percentile per-packet one-way delay: 120.642 ms

Loss rate: 1.68%

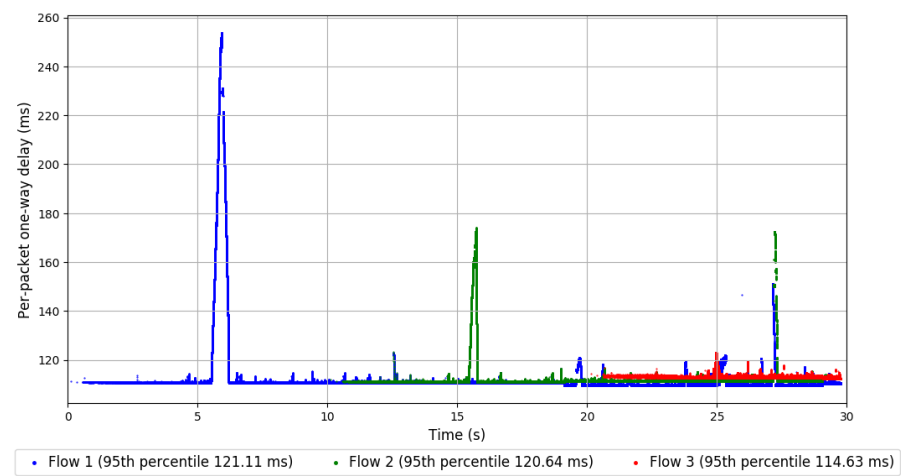
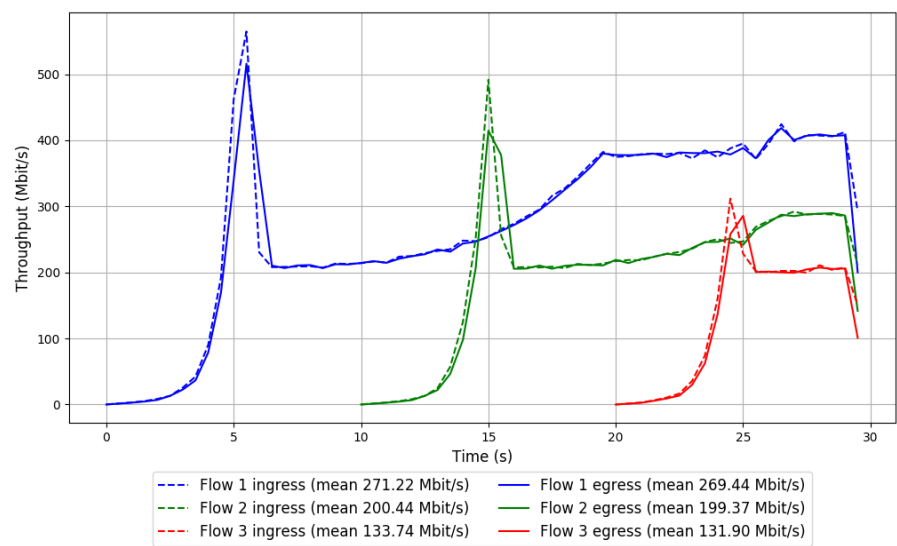
-- Flow 3:

Average throughput: 131.90 Mbit/s

95th percentile per-packet one-way delay: 114.632 ms

Loss rate: 3.69%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-02-13 20:58:50

End at: 2018-02-13 20:59:20

Below is generated by plot.py at 2018-02-14 03:33:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 609.87 Mbit/s

95th percentile per-packet one-way delay: 176.534 ms

Loss rate: 1.61%

-- Flow 1:

Average throughput: 341.79 Mbit/s

95th percentile per-packet one-way delay: 214.784 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 302.38 Mbit/s

95th percentile per-packet one-way delay: 114.217 ms

Loss rate: 1.34%

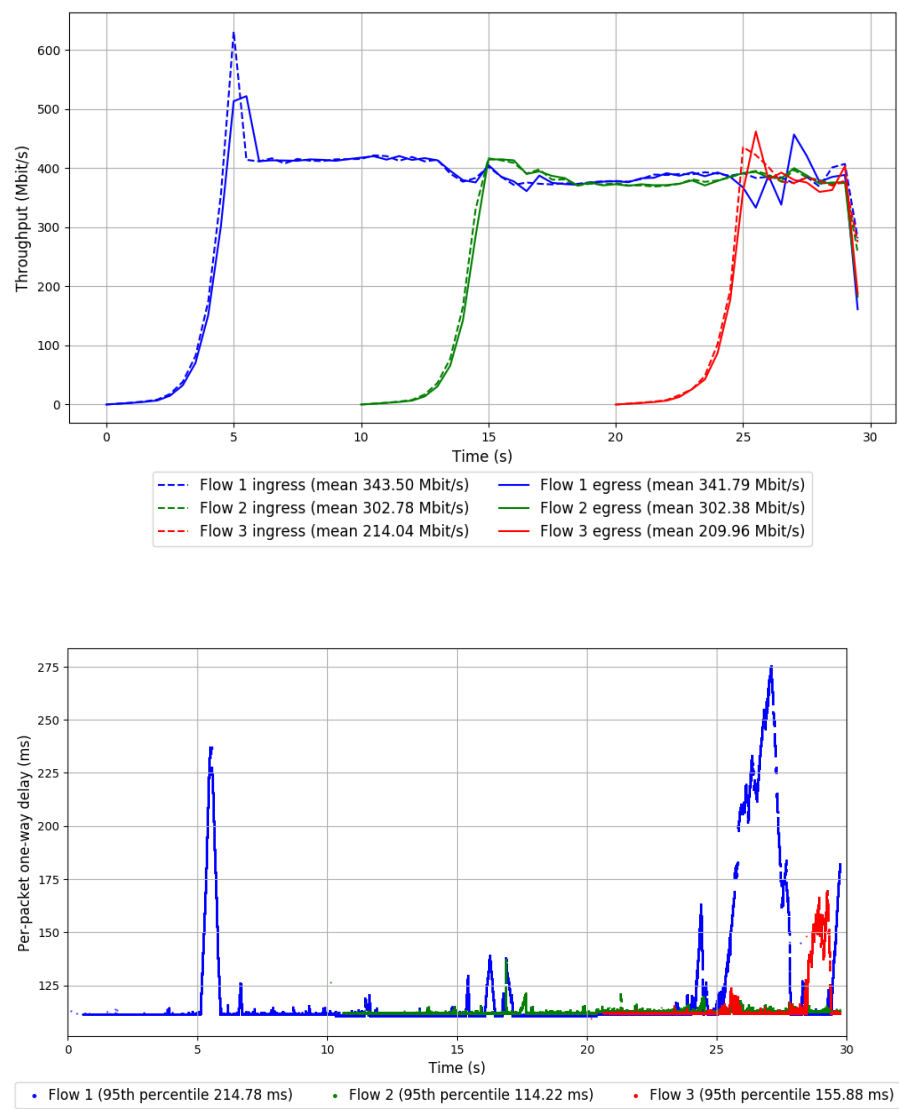
-- Flow 3:

Average throughput: 209.96 Mbit/s

95th percentile per-packet one-way delay: 155.881 ms

Loss rate: 4.13%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-02-13 21:18:46

End at: 2018-02-13 21:19:16

Below is generated by plot.py at 2018-02-14 03:33:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 391.97 Mbit/s

95th percentile per-packet one-way delay: 112.662 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 262.14 Mbit/s

95th percentile per-packet one-way delay: 112.524 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 123.07 Mbit/s

95th percentile per-packet one-way delay: 112.173 ms

Loss rate: 2.13%

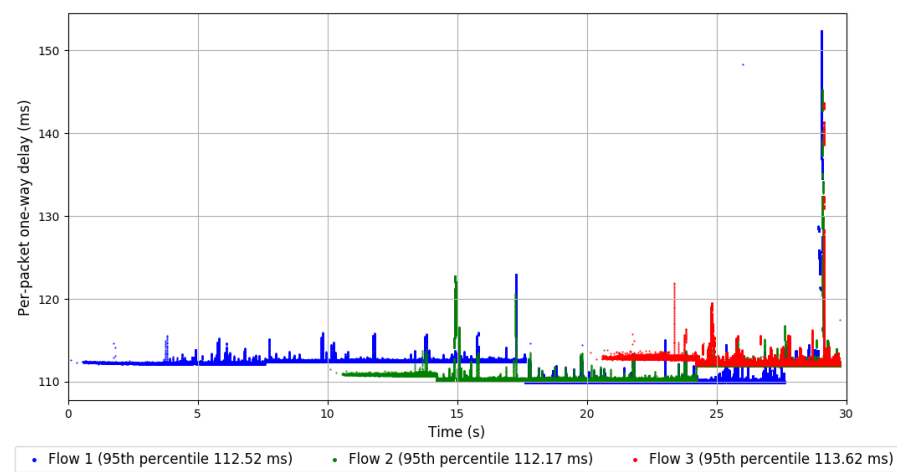
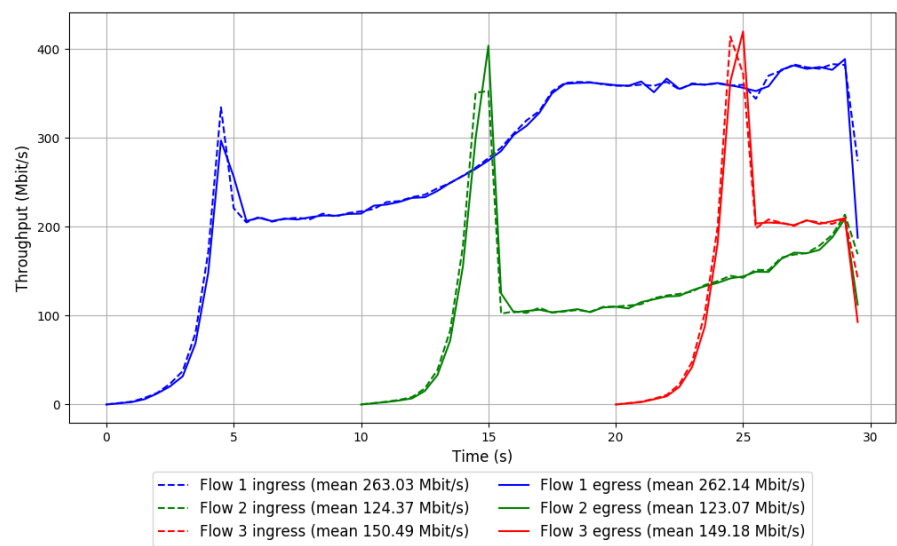
-- Flow 3:

Average throughput: 149.18 Mbit/s

95th percentile per-packet one-way delay: 113.625 ms

Loss rate: 3.18%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-02-13 21:38:15

End at: 2018-02-13 21:38:45

Below is generated by plot.py at 2018-02-14 03:34:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 533.84 Mbit/s

95th percentile per-packet one-way delay: 121.249 ms

Loss rate: 1.77%

-- Flow 1:

Average throughput: 333.54 Mbit/s

95th percentile per-packet one-way delay: 117.825 ms

Loss rate: 1.13%

-- Flow 2:

Average throughput: 196.92 Mbit/s

95th percentile per-packet one-way delay: 113.332 ms

Loss rate: 1.72%

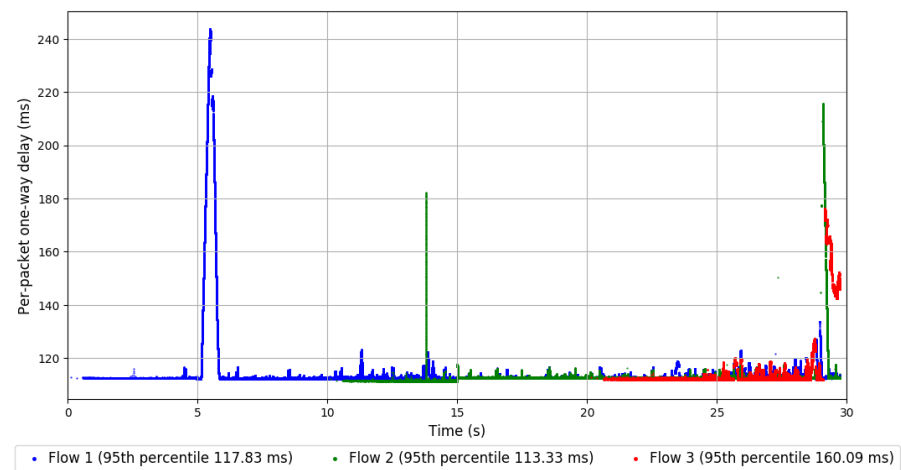
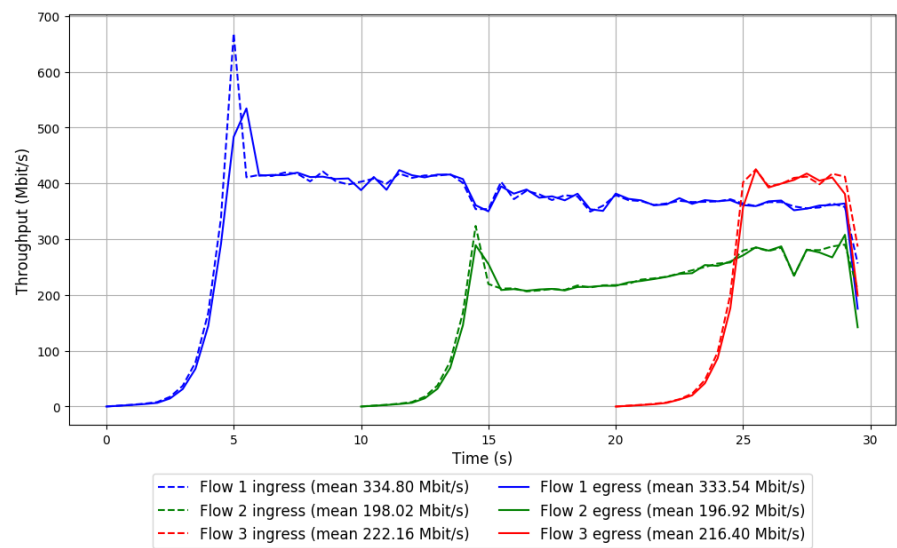
-- Flow 3:

Average throughput: 216.40 Mbit/s

95th percentile per-packet one-way delay: 160.095 ms

Loss rate: 4.84%

Run 9: Report of Vivace-LTE — Data Link



```
Run 10: Statistics of Vivace-LTE

Start at: 2018-02-13 21:58:07
End at: 2018-02-13 21:58:37

# Below is generated by plot.py at 2018-02-14 03:34:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 508.87 Mbit/s
95th percentile per-packet one-way delay: 112.756 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 324.29 Mbit/s
95th percentile per-packet one-way delay: 113.369 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 192.28 Mbit/s
95th percentile per-packet one-way delay: 111.442 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 177.02 Mbit/s
95th percentile per-packet one-way delay: 113.645 ms
Loss rate: 4.50%
```

Run 10: Report of Vivace-LTE — Data Link

