

Pantheon Report

Generated at 2018-02-28 17:43:00 (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.

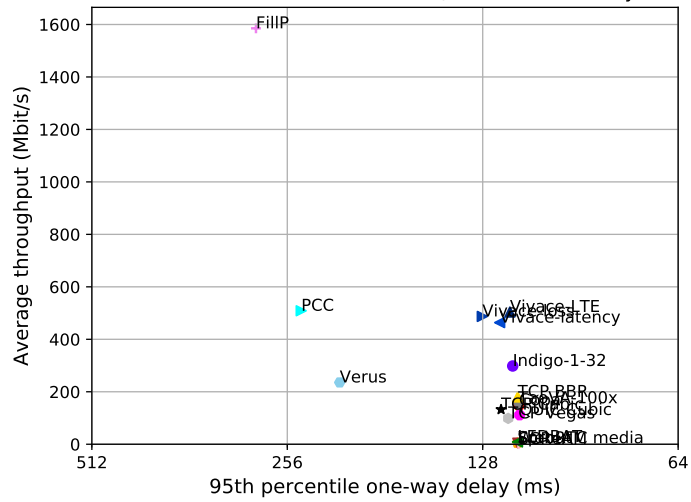
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

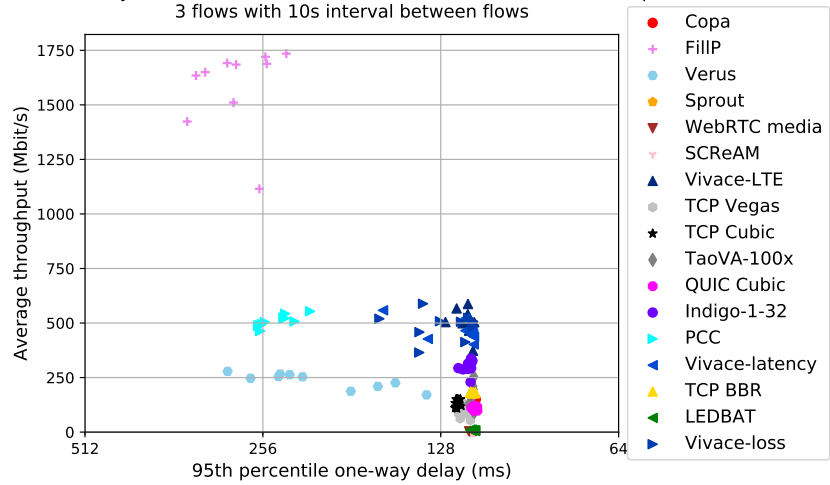
Git summary:

```
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5cec90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
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



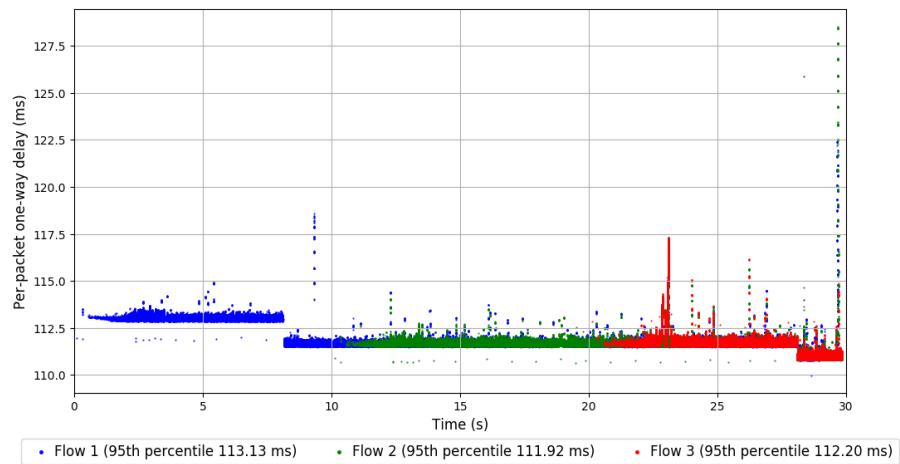
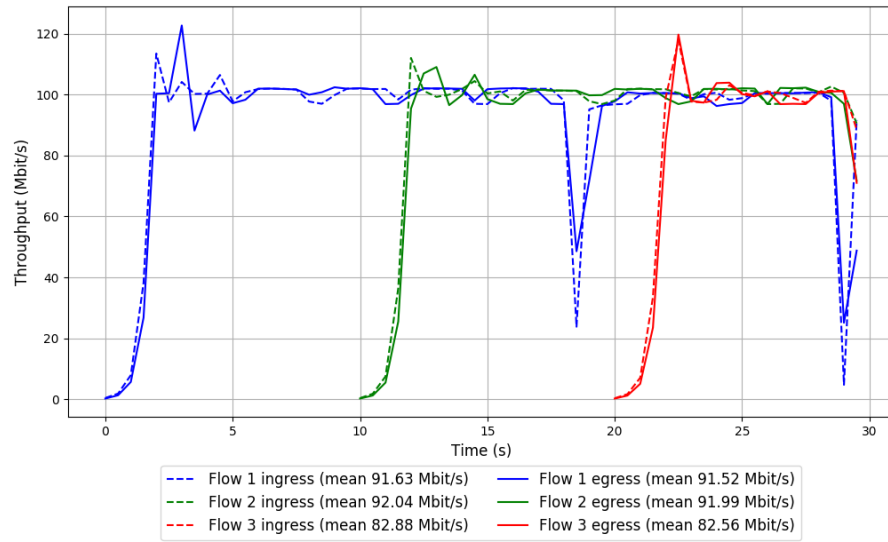
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	92.94	90.05	85.08	112.83	112.71	113.48	0.82	1.23	2.71
TCP Cubic	10	70.83	60.05	66.81	120.01	119.22	119.19	0.89	1.78	2.71
LEDBAT	10	5.88	3.08	2.15	113.19	113.01	112.75	1.63	2.38	4.68
PCC	10	482.26	22.39	36.18	243.67	244.00	220.72	3.09	3.01	3.52
QUIC Cubic	10	61.88	56.01	38.54	111.98	111.78	111.31	0.93	0.95	2.29
SCReAM	10	0.21	0.21	0.21	111.92	112.19	111.13	0.66	1.00	2.06
WebRTC media	10	2.11	1.31	0.48	112.42	112.10	112.48	0.98	1.66	3.90
Sprout	10	2.40	2.38	1.66	113.21	113.10	112.91	0.72	1.57	3.50
TaoVA-100x	10	81.45	55.43	116.61	112.54	112.96	112.88	0.81	0.99	2.45
TCP Vegas	10	60.31	38.83	38.47	116.69	116.08	115.22	0.73	1.13	2.69
Verus	10	128.14	137.63	51.20	206.87	207.11	196.79	2.99	2.33	5.07
Copa	10	81.46	69.00	64.94	112.35	112.56	112.38	0.57	1.05	2.68
FillP	10	784.88	834.99	758.27	269.72	260.14	264.30	3.93	4.09	7.48
Indigo-1-32	10	159.18	145.38	133.33	113.78	115.14	120.17	0.79	1.27	2.65
Vivace-latency	10	287.21	195.16	146.04	119.12	121.40	119.82	0.91	1.44	3.54
Vivace-loss	10	299.05	212.51	148.54	142.93	113.94	113.66	1.30	1.49	2.75
Vivace-LTE	10	322.70	182.10	188.11	118.11	112.82	122.89	0.93	2.40	3.60

```
Run 1: Statistics of TCP BBR

Start at: 2018-02-28 09:15:03
End at: 2018-02-28 09:15:33

# Below is generated by plot.py at 2018-02-28 15:56:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 179.48 Mbit/s
95th percentile per-packet one-way delay: 113.078 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 91.52 Mbit/s
95th percentile per-packet one-way delay: 113.126 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 91.99 Mbit/s
95th percentile per-packet one-way delay: 111.920 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 82.56 Mbit/s
95th percentile per-packet one-way delay: 112.196 ms
Loss rate: 2.61%
```


Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-02-28 09:34:53

End at: 2018-02-28 09:35:23

Below is generated by plot.py at 2018-02-28 15:56:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 180.31 Mbit/s

95th percentile per-packet one-way delay: 114.072 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 91.84 Mbit/s

95th percentile per-packet one-way delay: 113.402 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 90.89 Mbit/s

95th percentile per-packet one-way delay: 113.751 ms

Loss rate: 1.34%

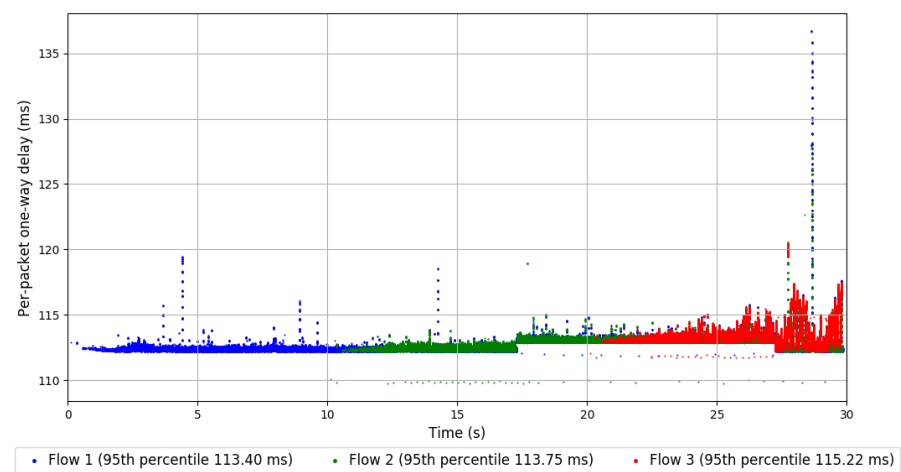
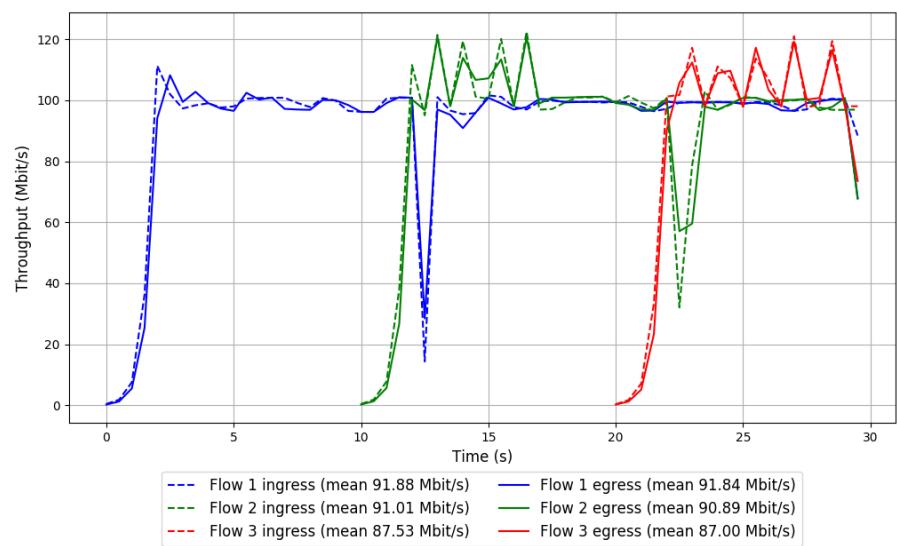
-- Flow 3:

Average throughput: 87.00 Mbit/s

95th percentile per-packet one-way delay: 115.222 ms

Loss rate: 2.84%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-02-28 09:54:03

End at: 2018-02-28 09:54:33

Below is generated by plot.py at 2018-02-28 15:56:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 179.24 Mbit/s

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

Loss rate: 1.21%

-- Flow 1:

Average throughput: 92.47 Mbit/s

95th percentile per-packet one-way delay: 112.607 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 90.16 Mbit/s

95th percentile per-packet one-way delay: 112.626 ms

Loss rate: 1.22%

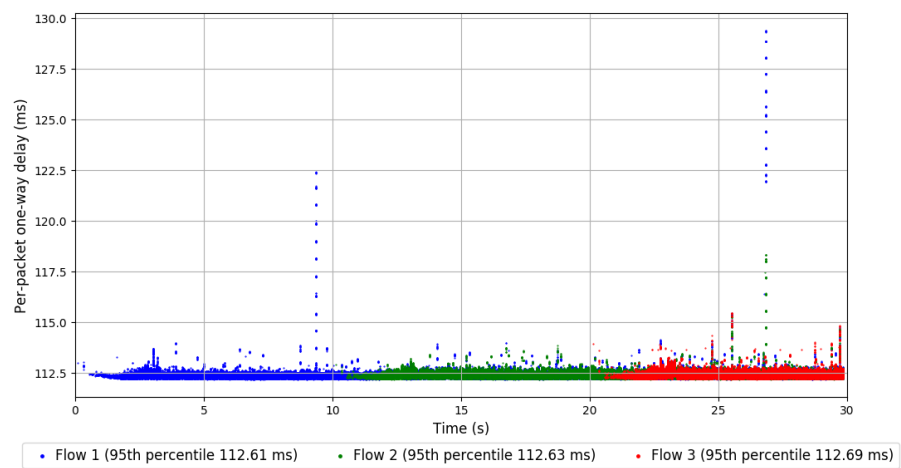
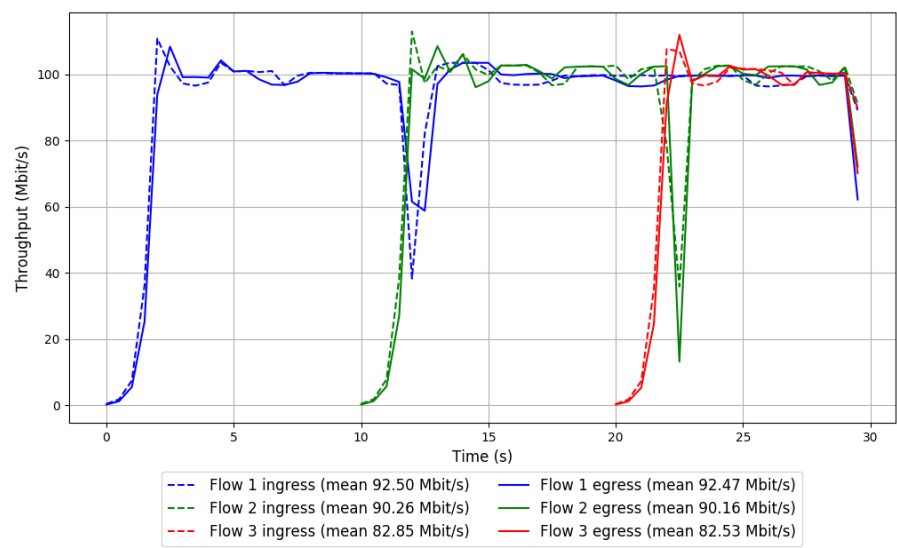
-- Flow 3:

Average throughput: 82.53 Mbit/s

95th percentile per-packet one-way delay: 112.689 ms

Loss rate: 2.64%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-02-28 10:13:30

End at: 2018-02-28 10:14:00

Below is generated by plot.py at 2018-02-28 15:56:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.03 Mbit/s

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

Loss rate: 1.31%

-- Flow 1:

Average throughput: 90.96 Mbit/s

95th percentile per-packet one-way delay: 112.869 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 88.93 Mbit/s

95th percentile per-packet one-way delay: 113.147 ms

Loss rate: 1.25%

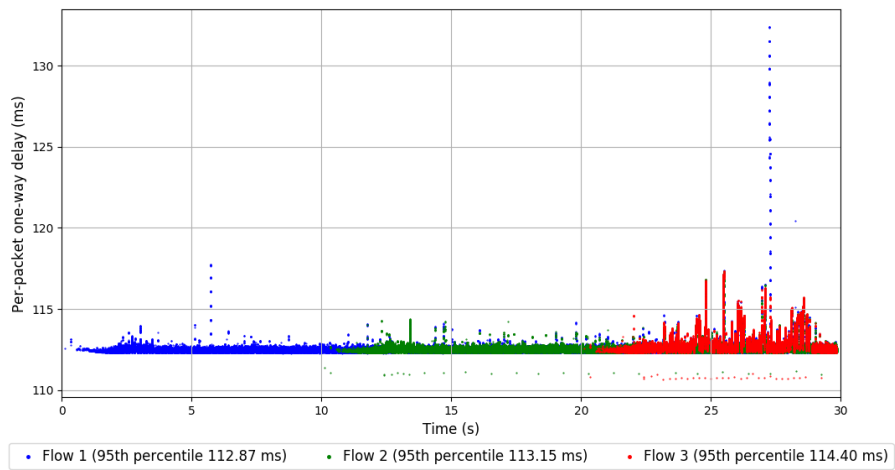
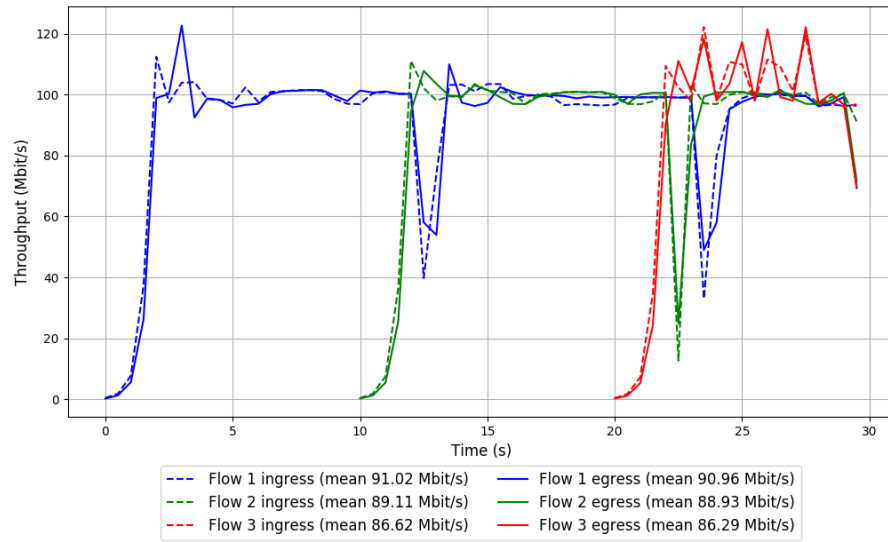
-- Flow 3:

Average throughput: 86.29 Mbit/s

95th percentile per-packet one-way delay: 114.399 ms

Loss rate: 2.81%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-02-28 10:33:03

End at: 2018-02-28 10:33:33

Below is generated by plot.py at 2018-02-28 15:56:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 186.01 Mbit/s

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

Loss rate: 1.20%

-- Flow 1:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 113.455 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 90.90 Mbit/s

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

Loss rate: 1.18%

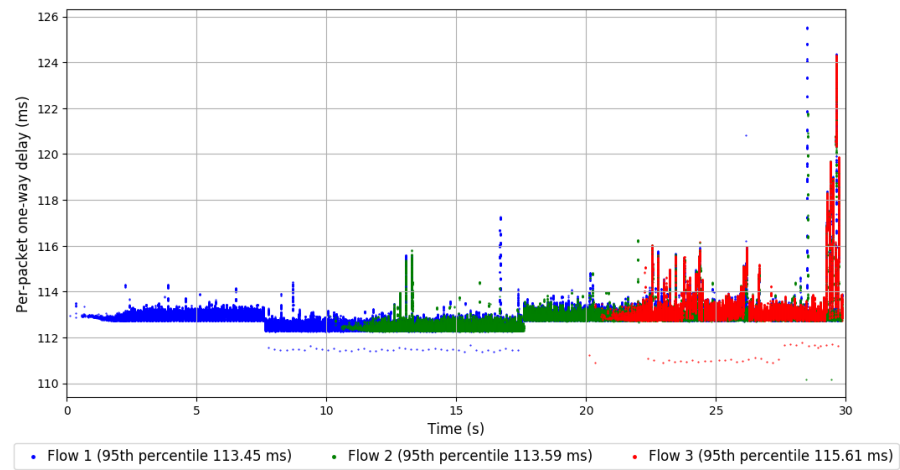
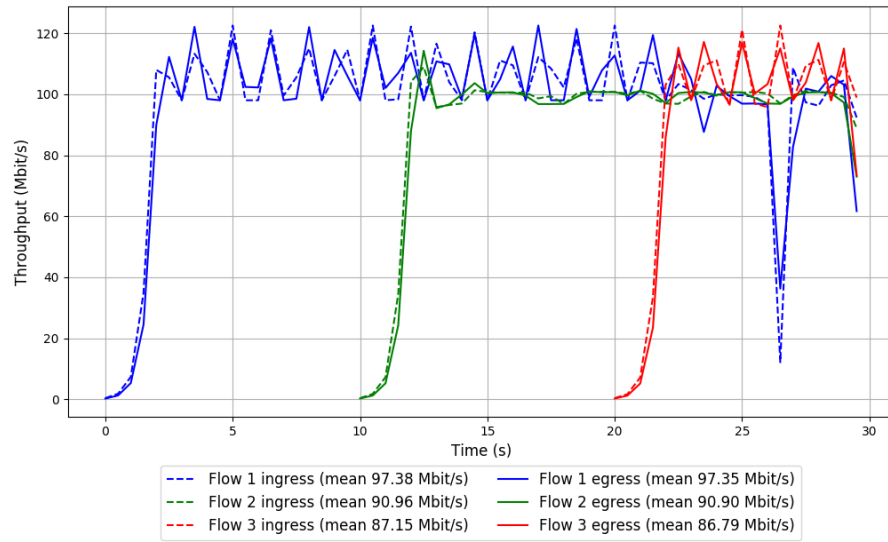
-- Flow 3:

Average throughput: 86.79 Mbit/s

95th percentile per-packet one-way delay: 115.610 ms

Loss rate: 2.63%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-02-28 10:52:14

End at: 2018-02-28 10:52:44

Below is generated by plot.py at 2018-02-28 15:56:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.60 Mbit/s

95th percentile per-packet one-way delay: 111.952 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 93.07 Mbit/s

95th percentile per-packet one-way delay: 111.609 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 89.72 Mbit/s

95th percentile per-packet one-way delay: 111.502 ms

Loss rate: 1.19%

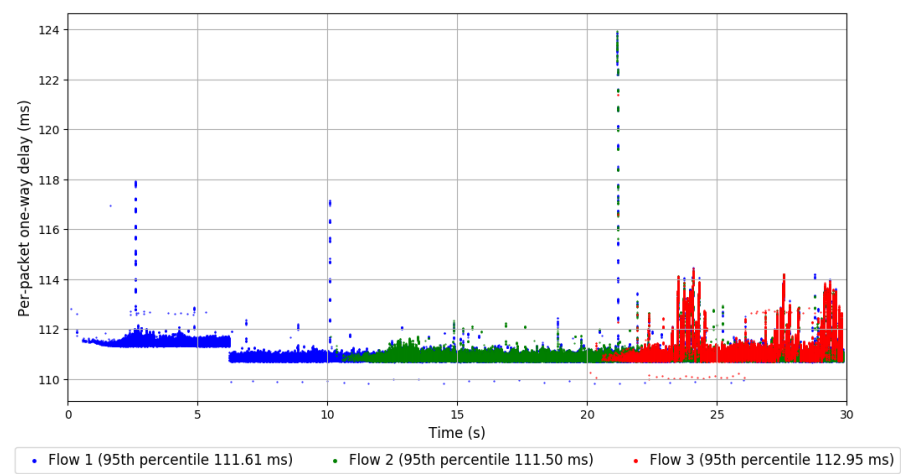
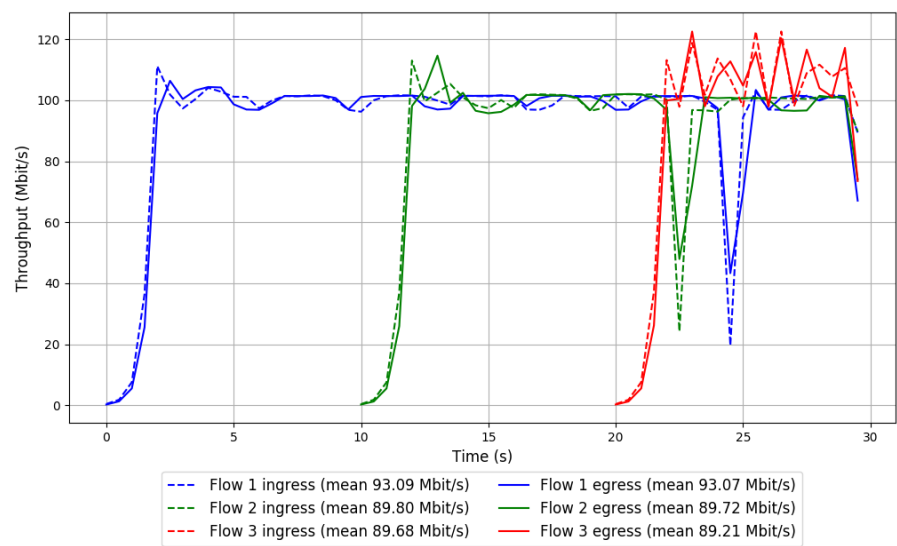
-- Flow 3:

Average throughput: 89.21 Mbit/s

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

Loss rate: 2.76%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-02-28 11:11:48

End at: 2018-02-28 11:12:18

Below is generated by plot.py at 2018-02-28 15:56:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 177.87 Mbit/s

95th percentile per-packet one-way delay: 111.846 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 91.41 Mbit/s

95th percentile per-packet one-way delay: 111.793 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 89.50 Mbit/s

95th percentile per-packet one-way delay: 111.827 ms

Loss rate: 1.29%

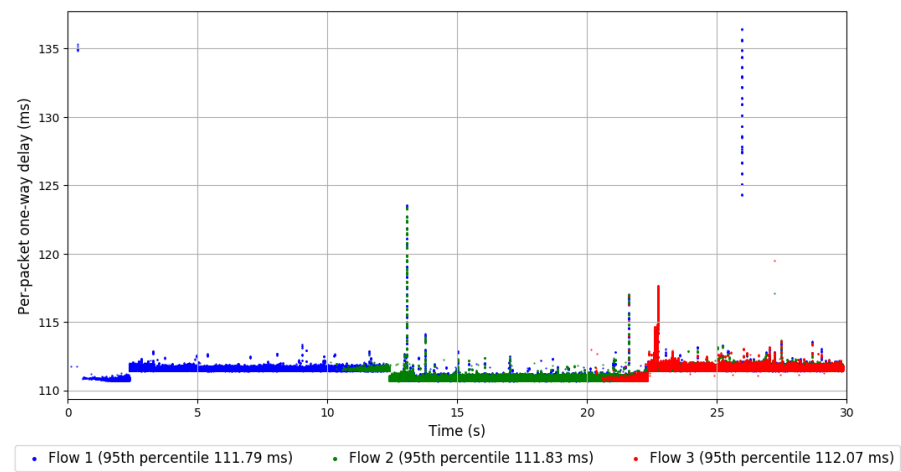
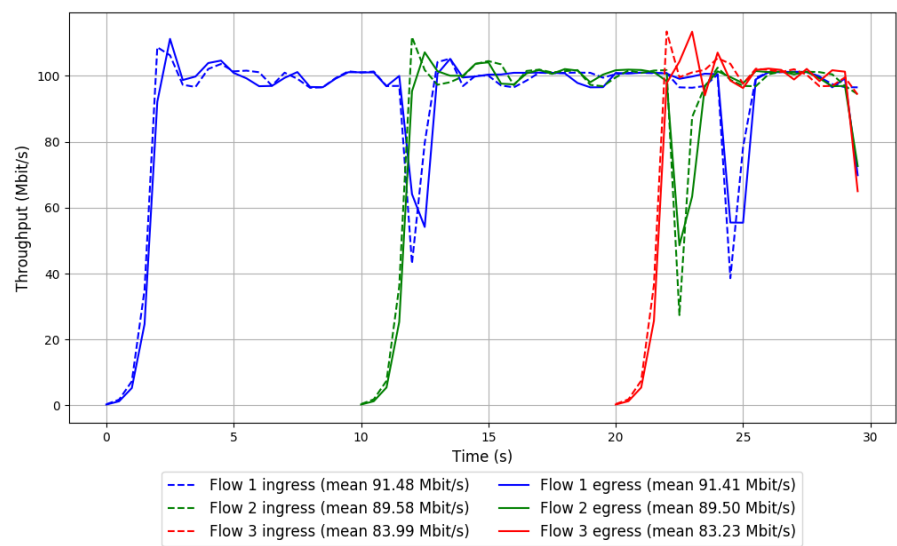
-- Flow 3:

Average throughput: 83.23 Mbit/s

95th percentile per-packet one-way delay: 112.069 ms

Loss rate: 2.80%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-02-28 11:31:18

End at: 2018-02-28 11:31:48

Below is generated by plot.py at 2018-02-28 15:56:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.70 Mbit/s

95th percentile per-packet one-way delay: 112.741 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 94.77 Mbit/s

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

Loss rate: 0.81%

-- Flow 2:

Average throughput: 90.42 Mbit/s

95th percentile per-packet one-way delay: 111.956 ms

Loss rate: 1.21%

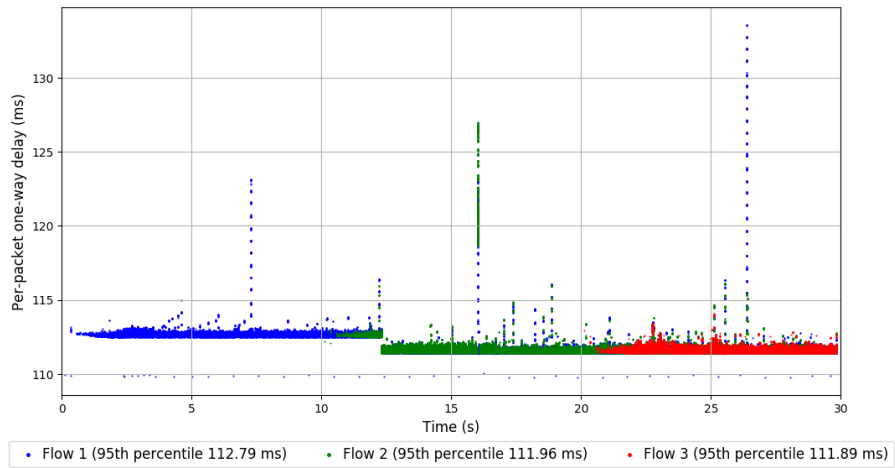
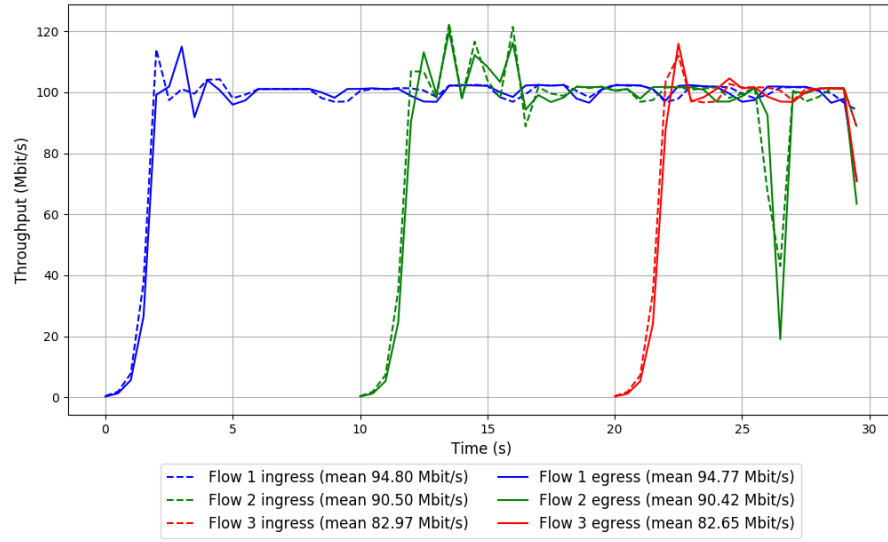
-- Flow 3:

Average throughput: 82.65 Mbit/s

95th percentile per-packet one-way delay: 111.888 ms

Loss rate: 2.65%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-02-28 11:50:22

End at: 2018-02-28 11:50:52

Below is generated by plot.py at 2018-02-28 15:59:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.48 Mbit/s

95th percentile per-packet one-way delay: 112.943 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 92.84 Mbit/s

95th percentile per-packet one-way delay: 112.916 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 88.28 Mbit/s

95th percentile per-packet one-way delay: 112.942 ms

Loss rate: 1.22%

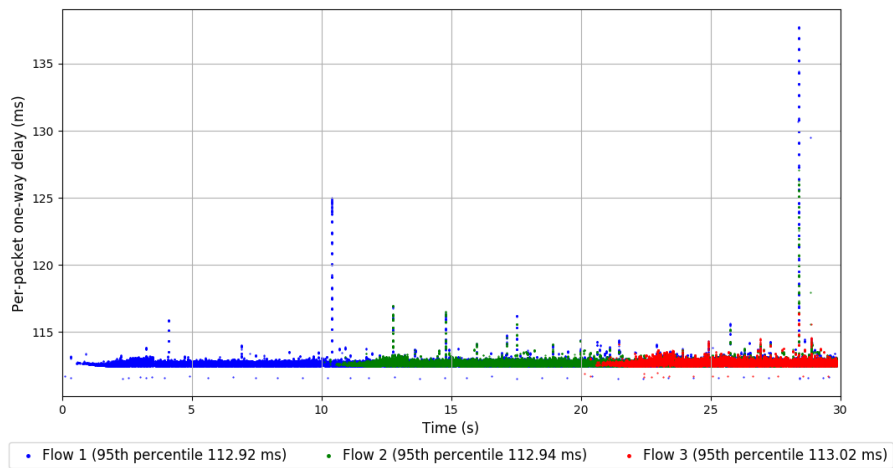
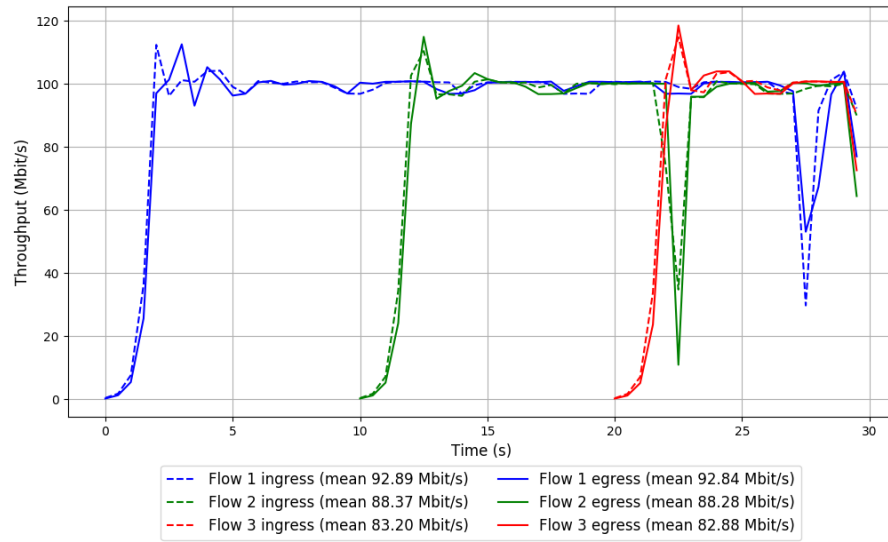
-- Flow 3:

Average throughput: 82.88 Mbit/s

95th percentile per-packet one-way delay: 113.016 ms

Loss rate: 2.61%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-02-28 12:09:57

End at: 2018-02-28 12:10:27

Below is generated by plot.py at 2018-02-28 15:59:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.25 Mbit/s

95th percentile per-packet one-way delay: 113.980 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 93.13 Mbit/s

95th percentile per-packet one-way delay: 113.779 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 89.71 Mbit/s

95th percentile per-packet one-way delay: 113.882 ms

Loss rate: 1.22%

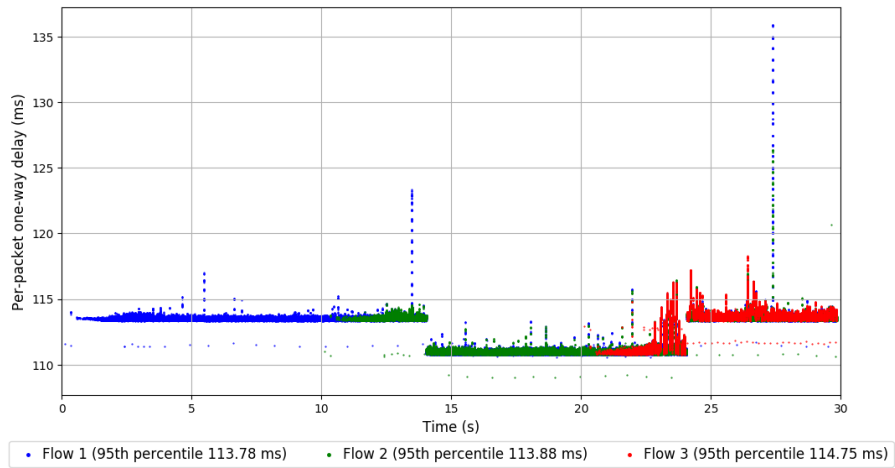
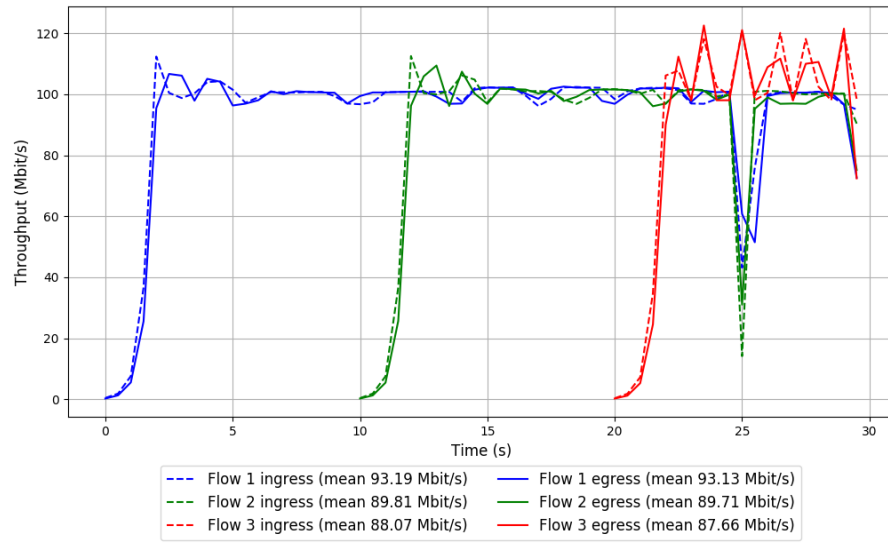
-- Flow 3:

Average throughput: 87.66 Mbit/s

95th percentile per-packet one-way delay: 114.746 ms

Loss rate: 2.74%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-02-28 09:12:44

End at: 2018-02-28 09:13:14

Below is generated by plot.py at 2018-02-28 15:59:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 151.26 Mbit/s

95th percentile per-packet one-way delay: 118.584 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 69.54 Mbit/s

95th percentile per-packet one-way delay: 118.497 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 101.14 Mbit/s

95th percentile per-packet one-way delay: 117.951 ms

Loss rate: 1.23%

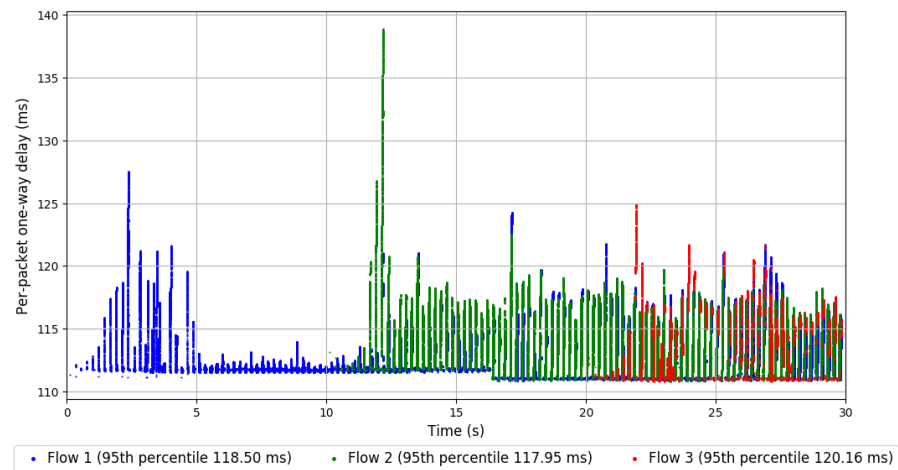
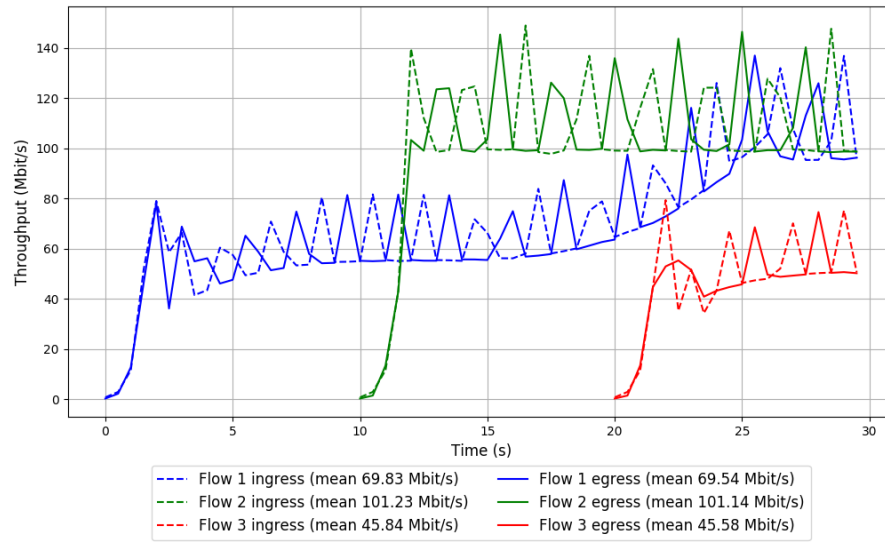
-- Flow 3:

Average throughput: 45.58 Mbit/s

95th percentile per-packet one-way delay: 120.161 ms

Loss rate: 2.78%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-02-28 09:32:27

End at: 2018-02-28 09:32:57

Below is generated by plot.py at 2018-02-28 15:59:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.45 Mbit/s

95th percentile per-packet one-way delay: 119.784 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 73.63 Mbit/s

95th percentile per-packet one-way delay: 119.537 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 49.17 Mbit/s

95th percentile per-packet one-way delay: 120.475 ms

Loss rate: 1.50%

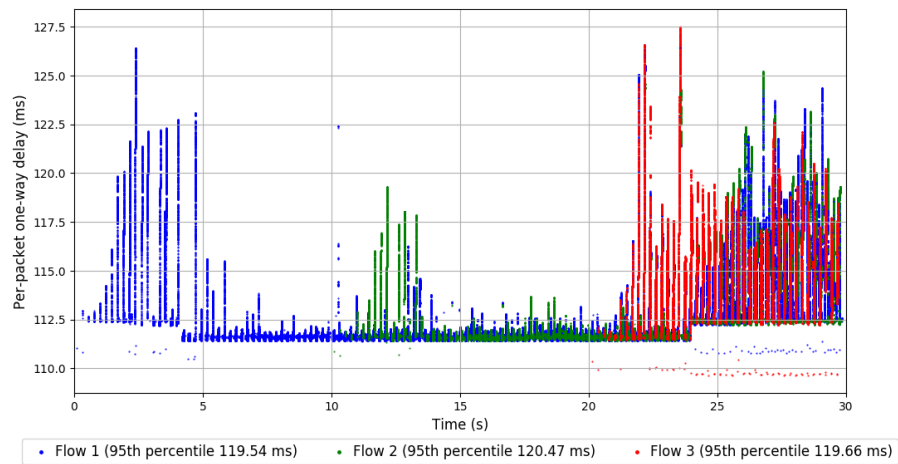
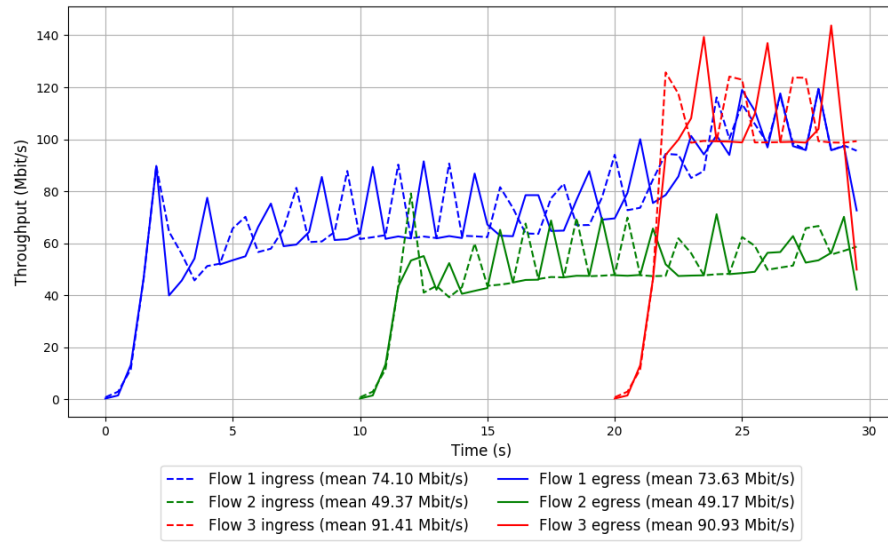
-- Flow 3:

Average throughput: 90.93 Mbit/s

95th percentile per-packet one-way delay: 119.655 ms

Loss rate: 2.76%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-02-28 09:51:52

End at: 2018-02-28 09:52:23

Below is generated by plot.py at 2018-02-28 15:59:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 151.44 Mbit/s

95th percentile per-packet one-way delay: 119.804 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 65.82 Mbit/s

95th percentile per-packet one-way delay: 120.858 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 84.70 Mbit/s

95th percentile per-packet one-way delay: 119.007 ms

Loss rate: 0.79%

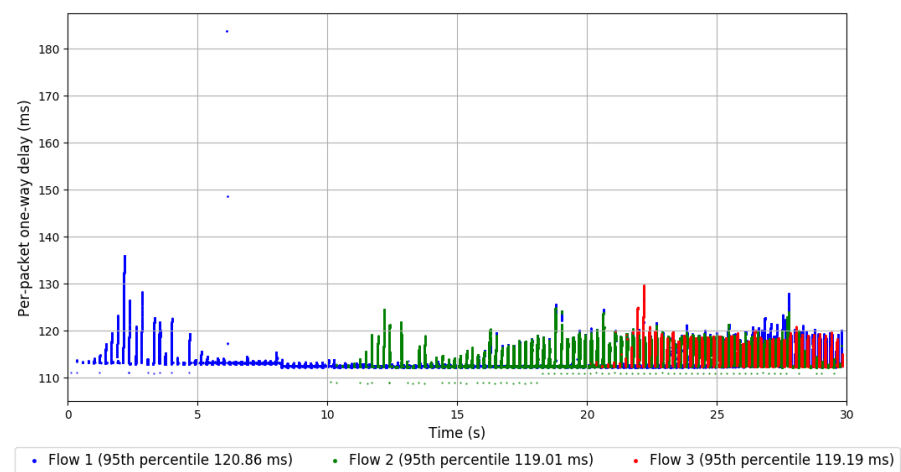
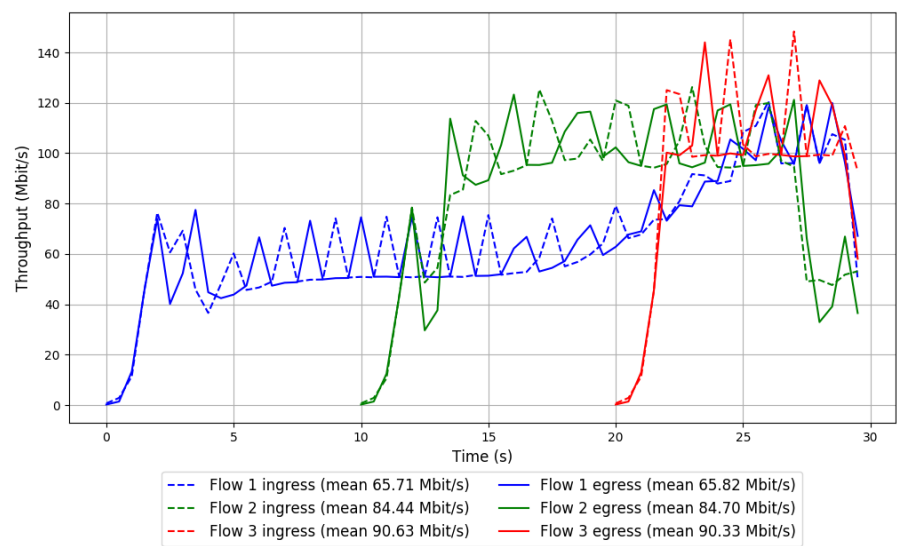
-- Flow 3:

Average throughput: 90.33 Mbit/s

95th percentile per-packet one-way delay: 119.189 ms

Loss rate: 2.58%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-02-28 10:11:11

End at: 2018-02-28 10:11:41

Below is generated by plot.py at 2018-02-28 15:59:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 120.37 Mbit/s

95th percentile per-packet one-way delay: 118.121 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 61.56 Mbit/s

95th percentile per-packet one-way delay: 118.878 ms

Loss rate: 1.30%

-- Flow 2:

Average throughput: 64.40 Mbit/s

95th percentile per-packet one-way delay: 117.354 ms

Loss rate: 1.46%

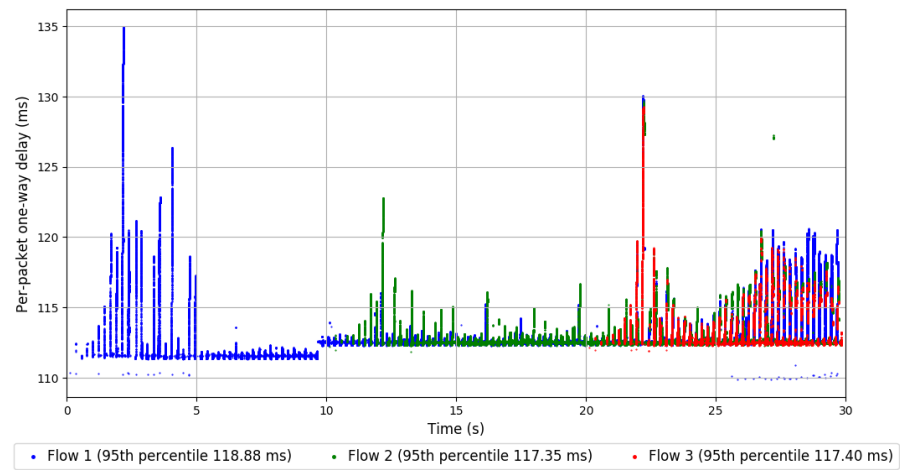
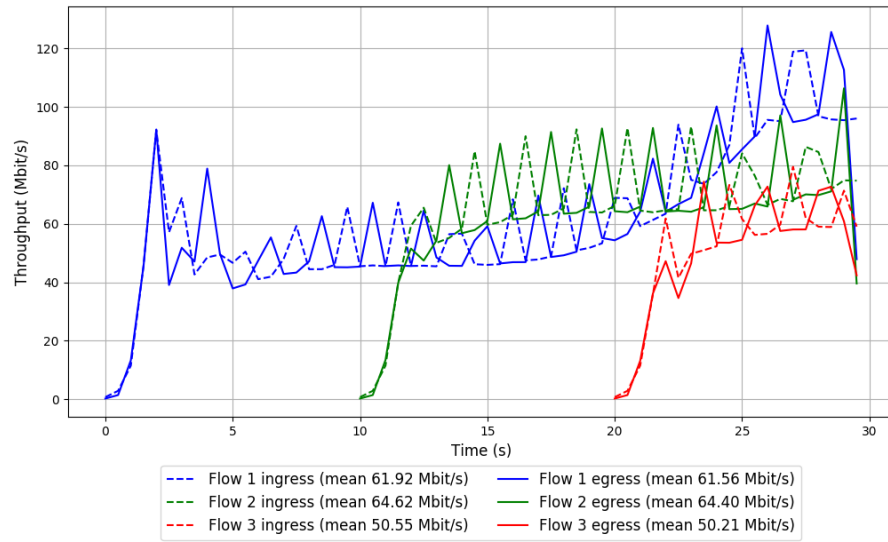
-- Flow 3:

Average throughput: 50.21 Mbit/s

95th percentile per-packet one-way delay: 117.402 ms

Loss rate: 2.92%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-02-28 10:30:42

End at: 2018-02-28 10:31:12

Below is generated by plot.py at 2018-02-28 15:59:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.57 Mbit/s

95th percentile per-packet one-way delay: 121.034 ms

Loss rate: 1.77%

-- Flow 1:

Average throughput: 66.84 Mbit/s

95th percentile per-packet one-way delay: 119.918 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 39.39 Mbit/s

95th percentile per-packet one-way delay: 122.623 ms

Loss rate: 2.53%

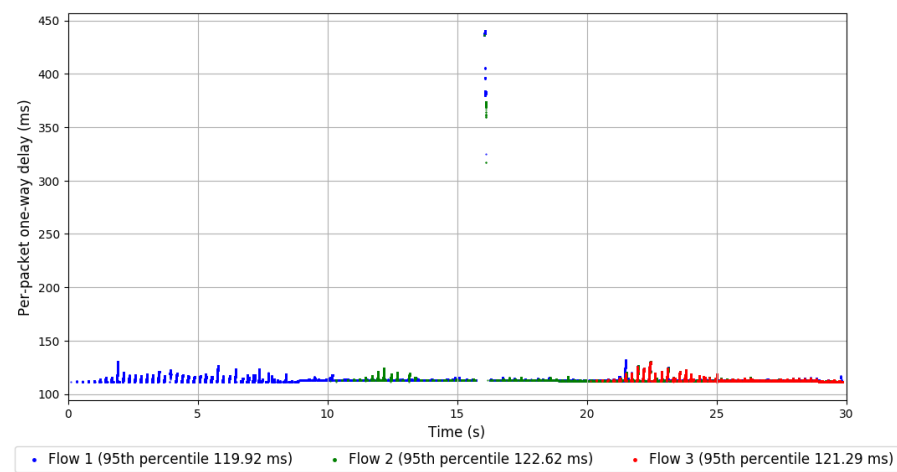
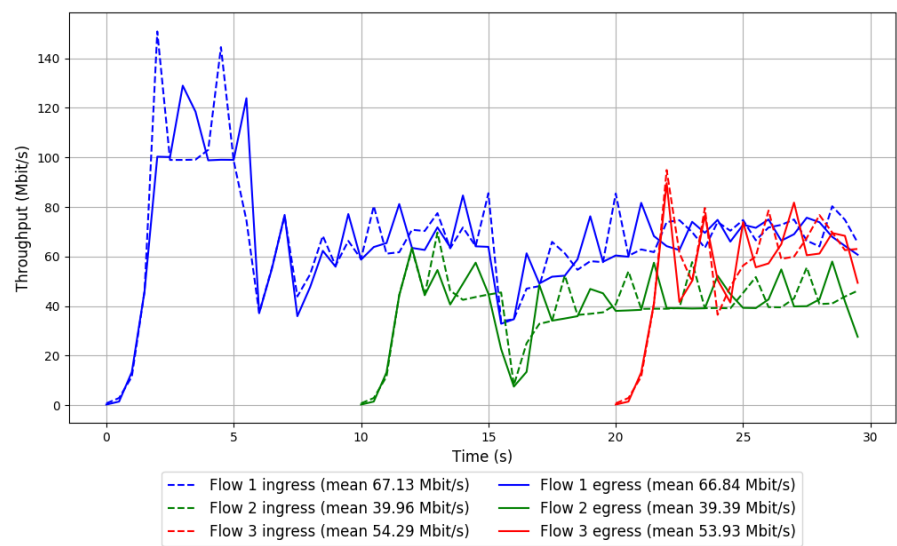
-- Flow 3:

Average throughput: 53.93 Mbit/s

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

Loss rate: 2.89%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-02-28 10:49:54

End at: 2018-02-28 10:50:24

Below is generated by plot.py at 2018-02-28 15:59:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.96 Mbit/s

95th percentile per-packet one-way delay: 120.922 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 76.42 Mbit/s

95th percentile per-packet one-way delay: 121.931 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 63.62 Mbit/s

95th percentile per-packet one-way delay: 119.654 ms

Loss rate: 1.37%

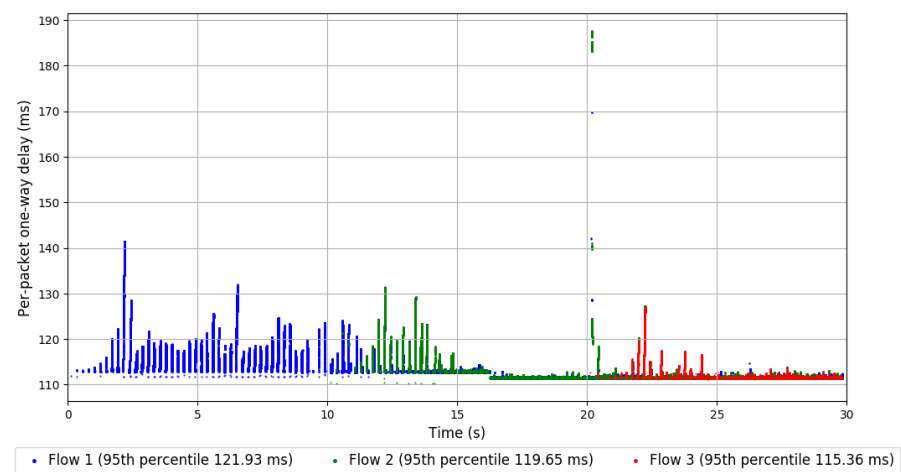
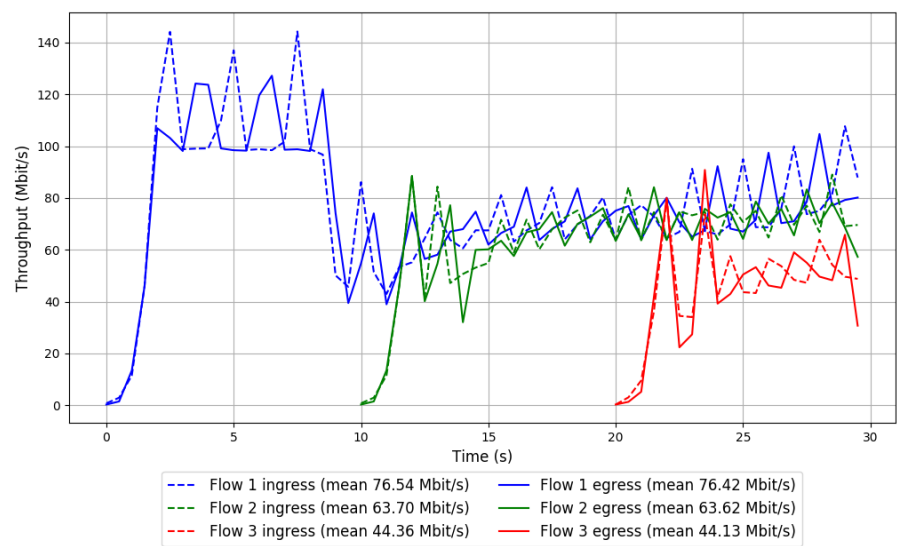
-- Flow 3:

Average throughput: 44.13 Mbit/s

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

Loss rate: 2.78%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-02-28 11:09:27

End at: 2018-02-28 11:09:58

Below is generated by plot.py at 2018-02-28 16:00:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 144.20 Mbit/s

95th percentile per-packet one-way delay: 119.834 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 72.54 Mbit/s

95th percentile per-packet one-way delay: 118.807 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 63.77 Mbit/s

95th percentile per-packet one-way delay: 119.952 ms

Loss rate: 1.46%

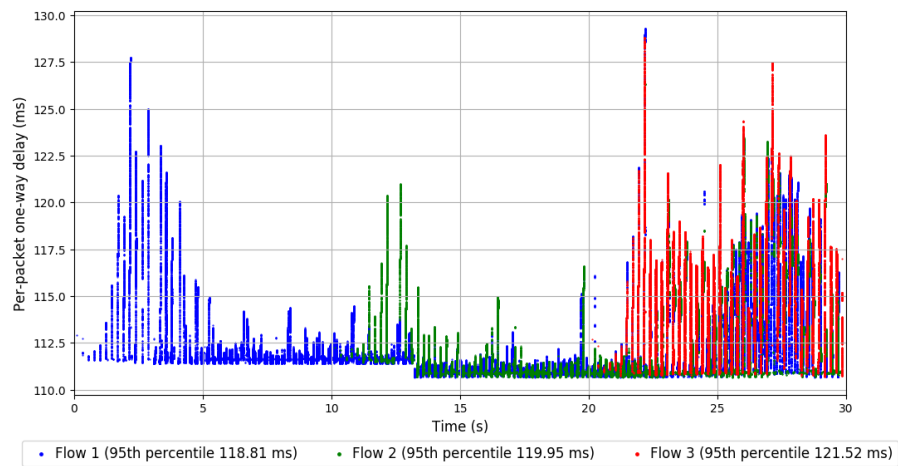
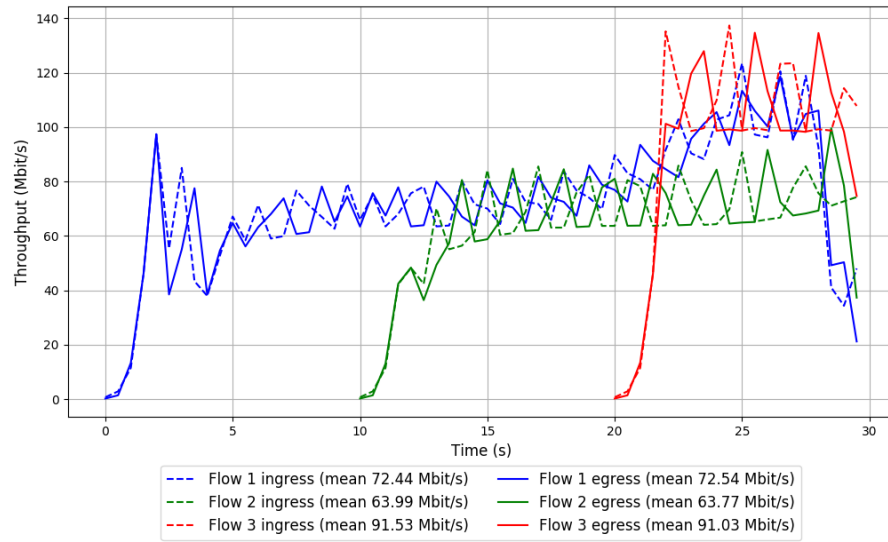
-- Flow 3:

Average throughput: 91.03 Mbit/s

95th percentile per-packet one-way delay: 121.518 ms

Loss rate: 2.70%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-02-28 11:28:54

End at: 2018-02-28 11:29:24

Below is generated by plot.py at 2018-02-28 16:00:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.45 Mbit/s

95th percentile per-packet one-way delay: 120.782 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 67.12 Mbit/s

95th percentile per-packet one-way delay: 120.627 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 46.48 Mbit/s

95th percentile per-packet one-way delay: 120.133 ms

Loss rate: 1.38%

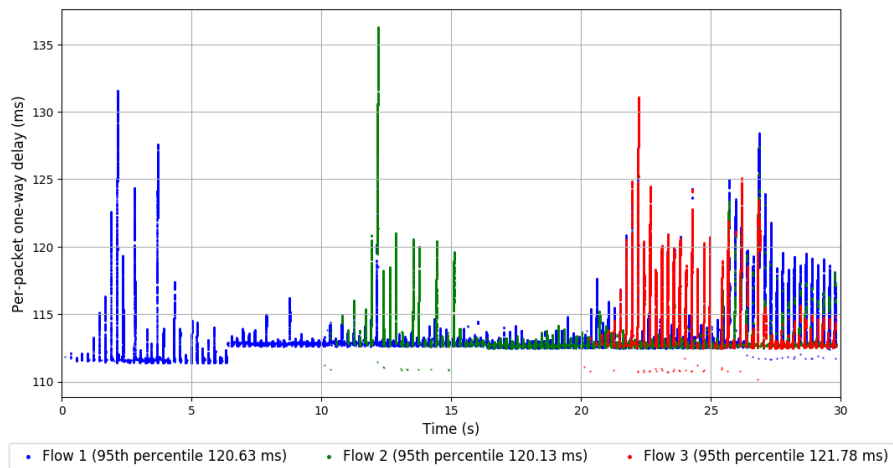
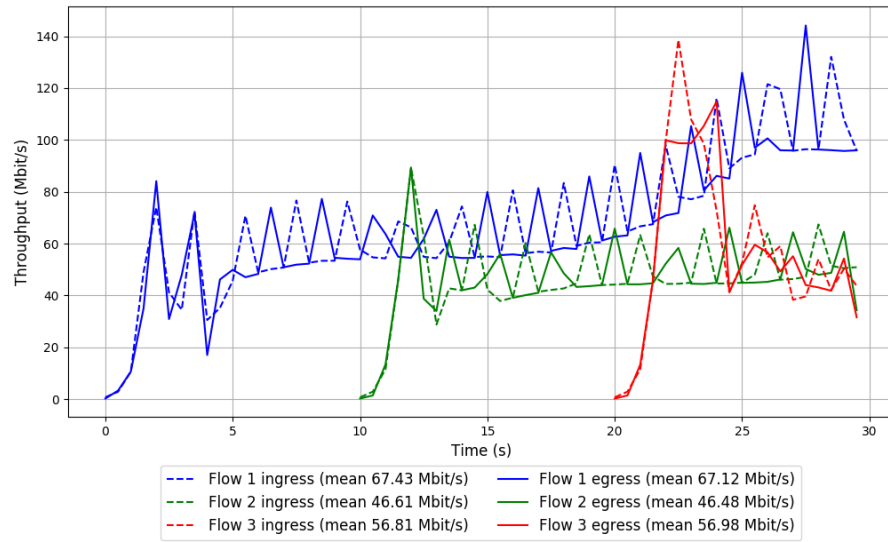
-- Flow 3:

Average throughput: 56.98 Mbit/s

95th percentile per-packet one-way delay: 121.785 ms

Loss rate: 1.94%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-02-28 11:48:04

End at: 2018-02-28 11:48:34

Below is generated by plot.py at 2018-02-28 16:00:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.75 Mbit/s

95th percentile per-packet one-way delay: 120.124 ms

Loss rate: 1.69%

-- Flow 1:

Average throughput: 76.97 Mbit/s

95th percentile per-packet one-way delay: 121.232 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 21.18 Mbit/s

95th percentile per-packet one-way delay: 114.118 ms

Loss rate: 4.93%

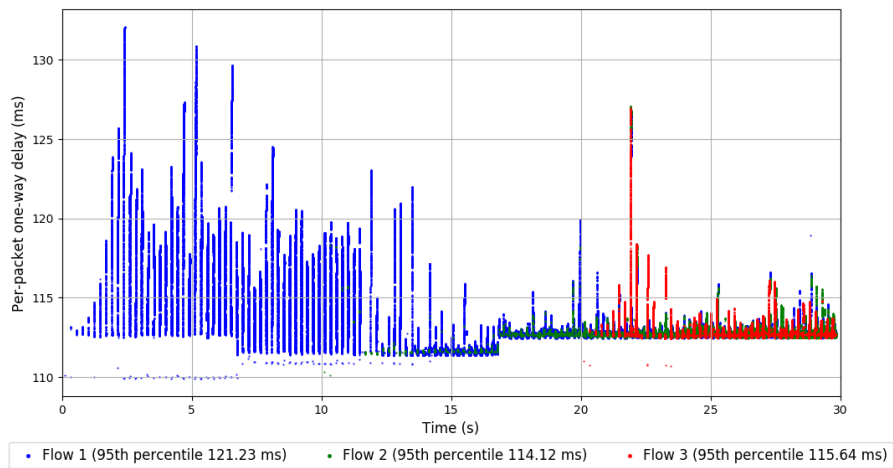
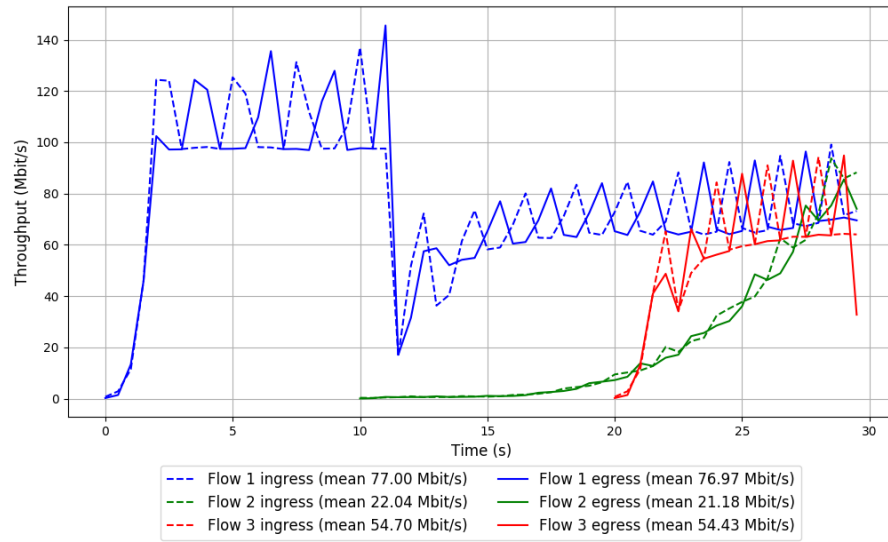
-- Flow 3:

Average throughput: 54.43 Mbit/s

95th percentile per-packet one-way delay: 115.642 ms

Loss rate: 2.95%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-02-28 12:07:35

End at: 2018-02-28 12:08:05

Below is generated by plot.py at 2018-02-28 16:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 151.21 Mbit/s

95th percentile per-packet one-way delay: 120.473 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 77.88 Mbit/s

95th percentile per-packet one-way delay: 119.798 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 66.64 Mbit/s

95th percentile per-packet one-way delay: 120.955 ms

Loss rate: 1.20%

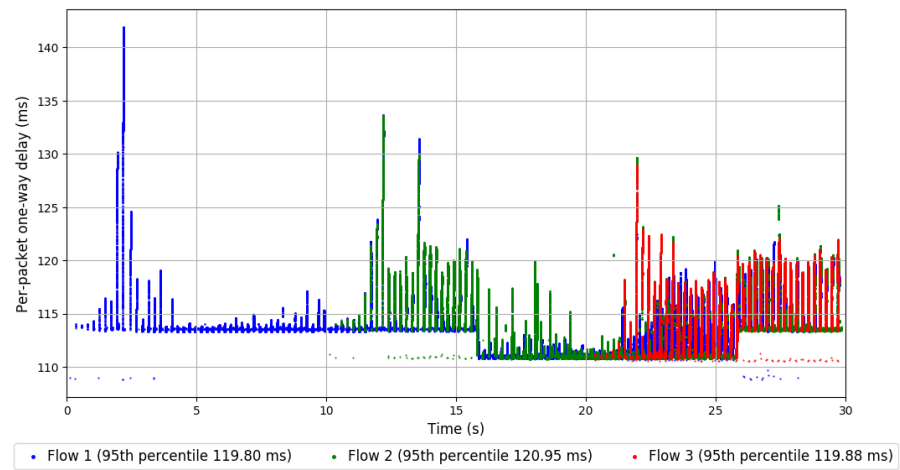
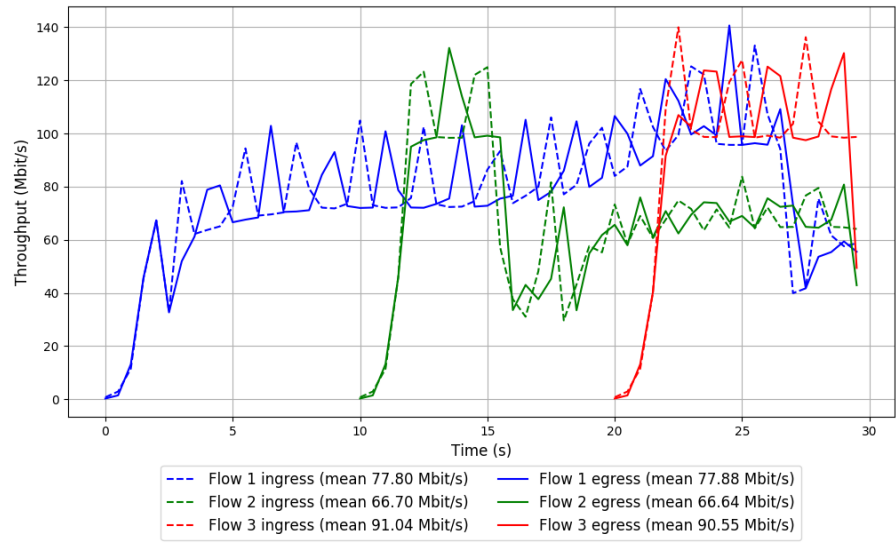
-- Flow 3:

Average throughput: 90.55 Mbit/s

95th percentile per-packet one-way delay: 119.880 ms

Loss rate: 2.76%

Run 10: Report of TCP Cubic — Data Link

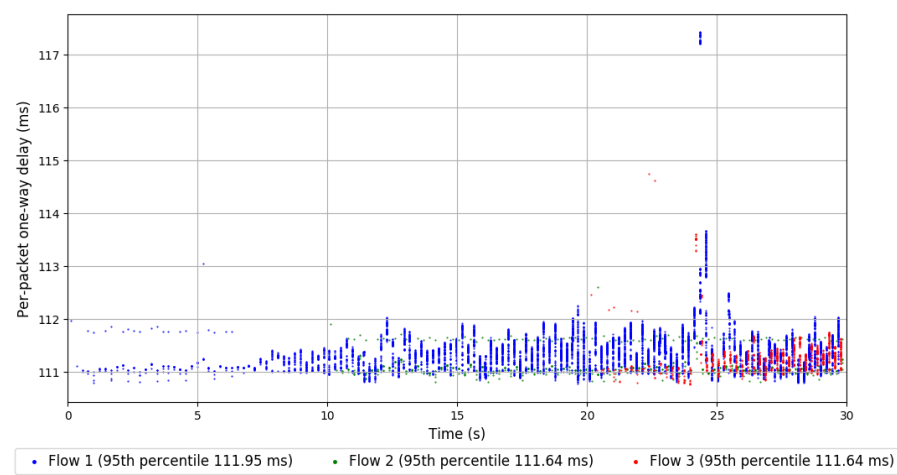
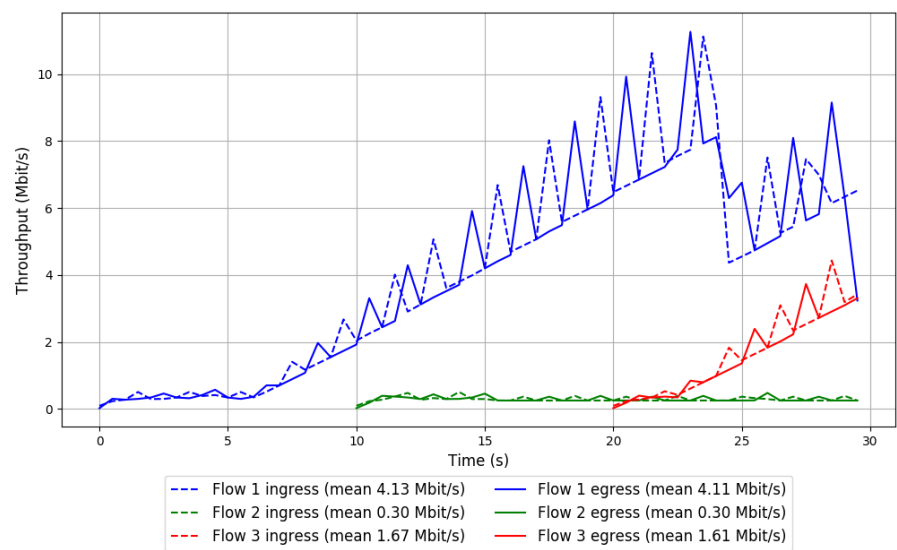


```
Run 1: Statistics of LEDBAT

Start at: 2018-02-28 09:15:59
End at: 2018-02-28 09:16:29

# Below is generated by plot.py at 2018-02-28 16:00:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 111.925 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 111.953 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 111.641 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 111.640 ms
Loss rate: 5.29%
```


Run 1: Report of LEDBAT — Data Link

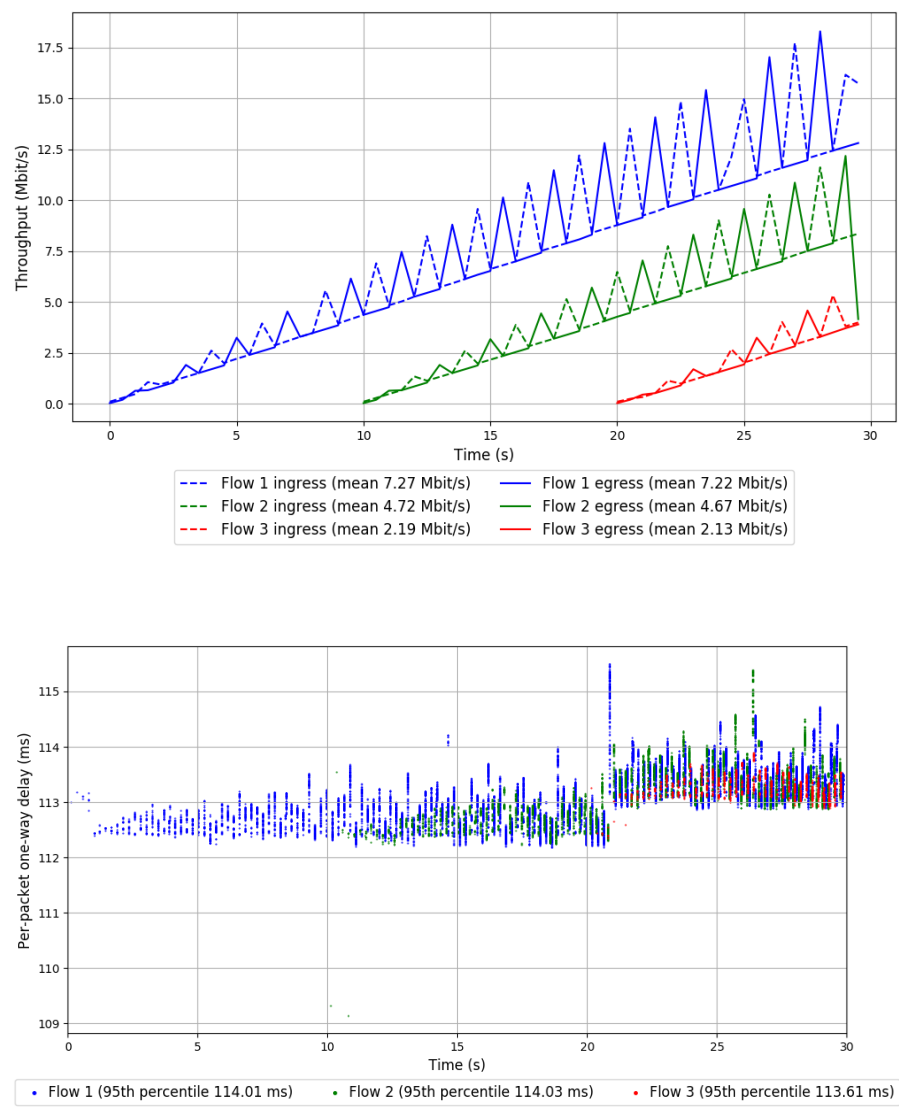


```
Run 2: Statistics of LEDBAT

Start at: 2018-02-28 09:35:50
End at: 2018-02-28 09:36:20

# Below is generated by plot.py at 2018-02-28 16:00:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.99 Mbit/s
95th percentile per-packet one-way delay: 113.997 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 7.22 Mbit/s
95th percentile per-packet one-way delay: 114.012 ms
Loss rate: 1.49%
-- Flow 2:
Average throughput: 4.67 Mbit/s
95th percentile per-packet one-way delay: 114.027 ms
Loss rate: 2.24%
-- Flow 3:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 113.613 ms
Loss rate: 4.68%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-02-28 09:54:59

End at: 2018-02-28 09:55:29

Below is generated by plot.py at 2018-02-28 16:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.51 Mbit/s

95th percentile per-packet one-way delay: 113.594 ms

Loss rate: 1.85%

-- Flow 1:

Average throughput: 6.61 Mbit/s

95th percentile per-packet one-way delay: 113.625 ms

Loss rate: 1.56%

-- Flow 2:

Average throughput: 0.31 Mbit/s

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

Loss rate: 1.14%

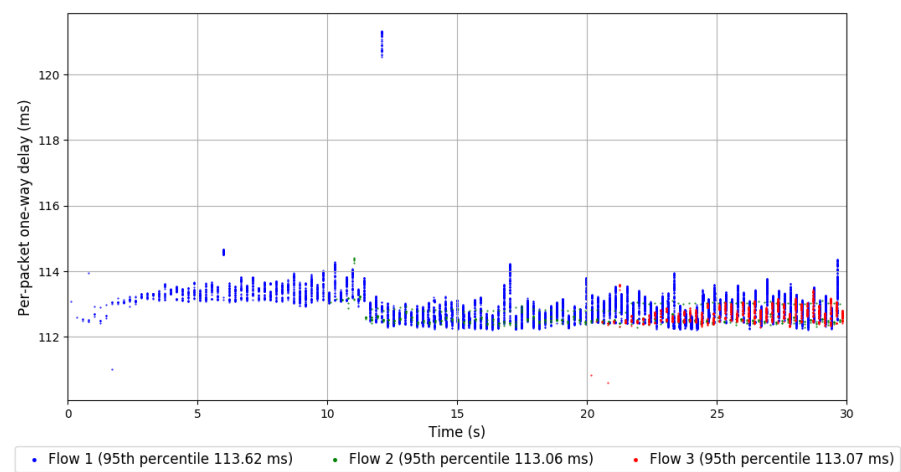
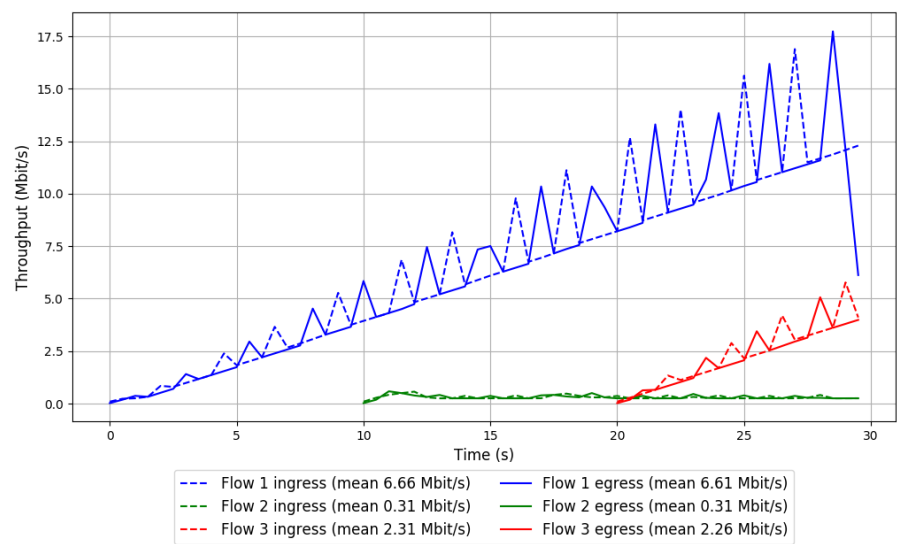
-- Flow 3:

Average throughput: 2.26 Mbit/s

95th percentile per-packet one-way delay: 113.073 ms

Loss rate: 4.56%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-02-28 10:14:27

End at: 2018-02-28 10:14:57

Below is generated by plot.py at 2018-02-28 16:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.38 Mbit/s

95th percentile per-packet one-way delay: 113.230 ms

Loss rate: 2.38%

-- Flow 1:

Average throughput: 4.48 Mbit/s

95th percentile per-packet one-way delay: 113.238 ms

Loss rate: 1.87%

-- Flow 2:

Average throughput: 3.28 Mbit/s

95th percentile per-packet one-way delay: 113.233 ms

Loss rate: 2.69%

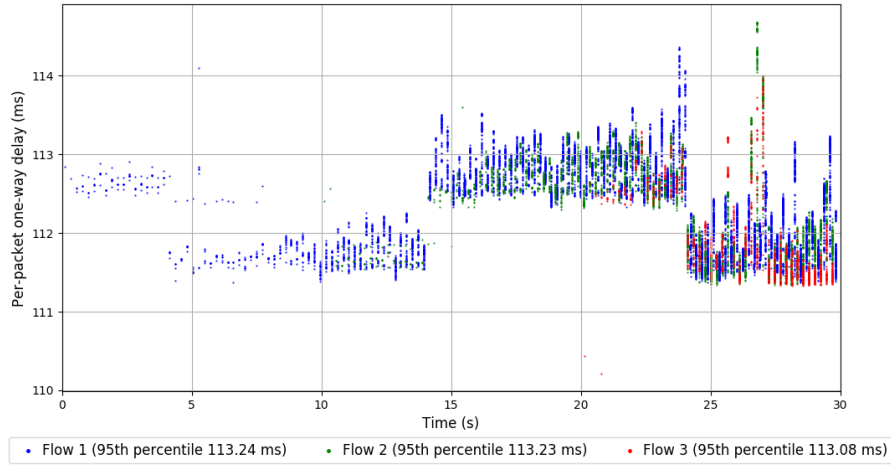
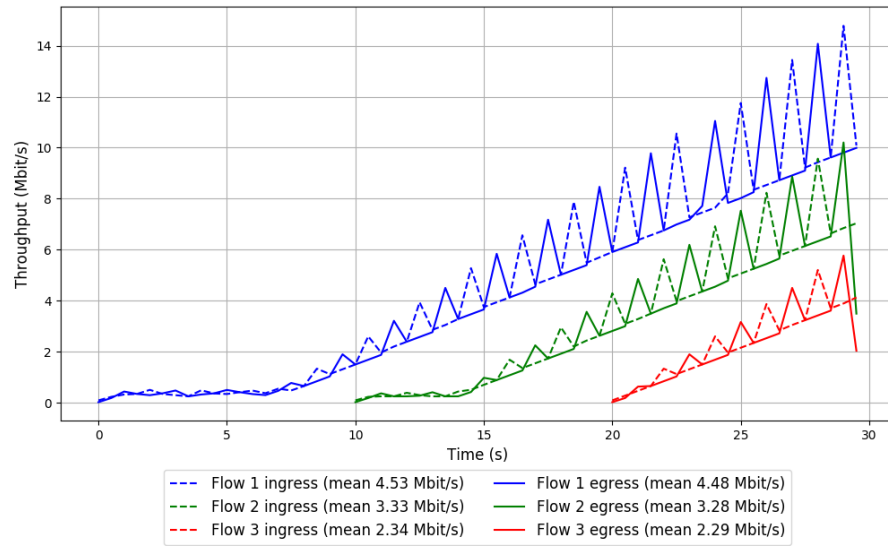
-- Flow 3:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 113.079 ms

Loss rate: 4.56%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-02-28 10:34:00

End at: 2018-02-28 10:34:30

Below is generated by plot.py at 2018-02-28 16:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.05 Mbit/s

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

Loss rate: 2.47%

-- Flow 1:

Average throughput: 3.17 Mbit/s

95th percentile per-packet one-way delay: 113.504 ms

Loss rate: 2.19%

-- Flow 2:

Average throughput: 4.74 Mbit/s

95th percentile per-packet one-way delay: 113.522 ms

Loss rate: 2.25%

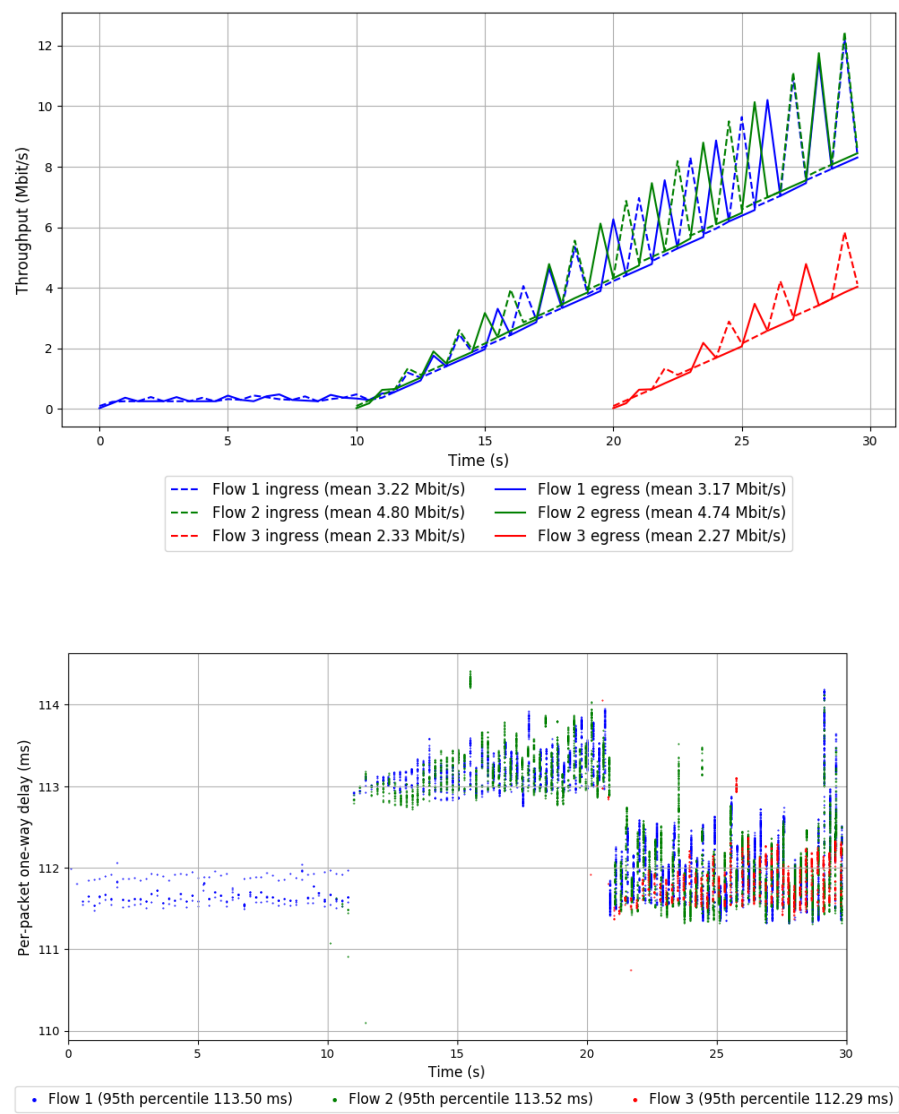
-- Flow 3:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 112.288 ms

Loss rate: 4.54%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-02-28 10:53:11

End at: 2018-02-28 10:53:41

Below is generated by plot.py at 2018-02-28 16:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.95 Mbit/s

95th percentile per-packet one-way delay: 114.042 ms

Loss rate: 1.92%

-- Flow 1:

Average throughput: 7.18 Mbit/s

95th percentile per-packet one-way delay: 114.062 ms

Loss rate: 1.49%

-- Flow 2:

Average throughput: 4.62 Mbit/s

95th percentile per-packet one-way delay: 113.989 ms

Loss rate: 2.27%

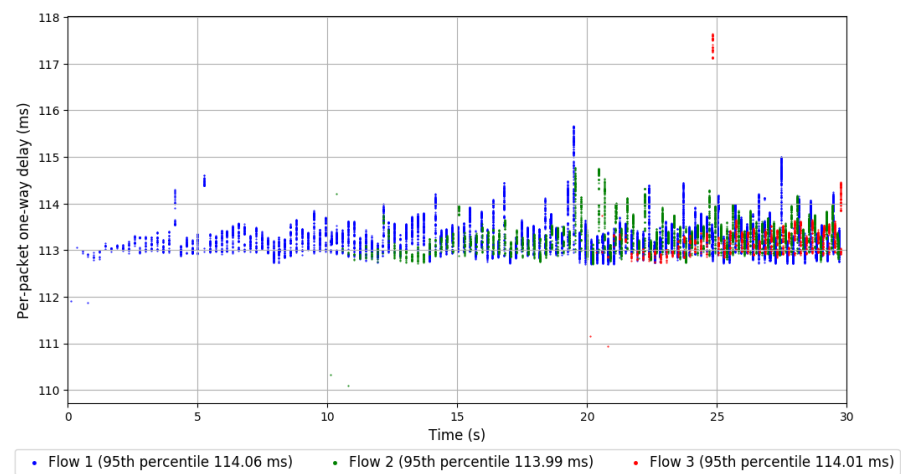
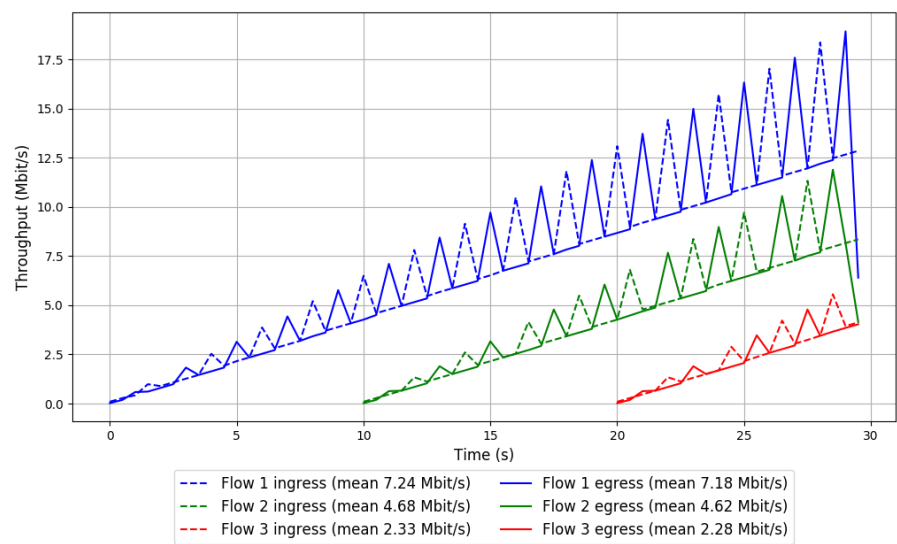
-- Flow 3:

Average throughput: 2.28 Mbit/s

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

Loss rate: 4.53%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-02-28 11:12:45

End at: 2018-02-28 11:13:15

Below is generated by plot.py at 2018-02-28 16:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.30 Mbit/s

95th percentile per-packet one-way delay: 112.490 ms

Loss rate: 2.26%

-- Flow 1:

Average throughput: 4.57 Mbit/s

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

Loss rate: 1.86%

-- Flow 2:

Average throughput: 4.53 Mbit/s

95th percentile per-packet one-way delay: 112.358 ms

Loss rate: 2.29%

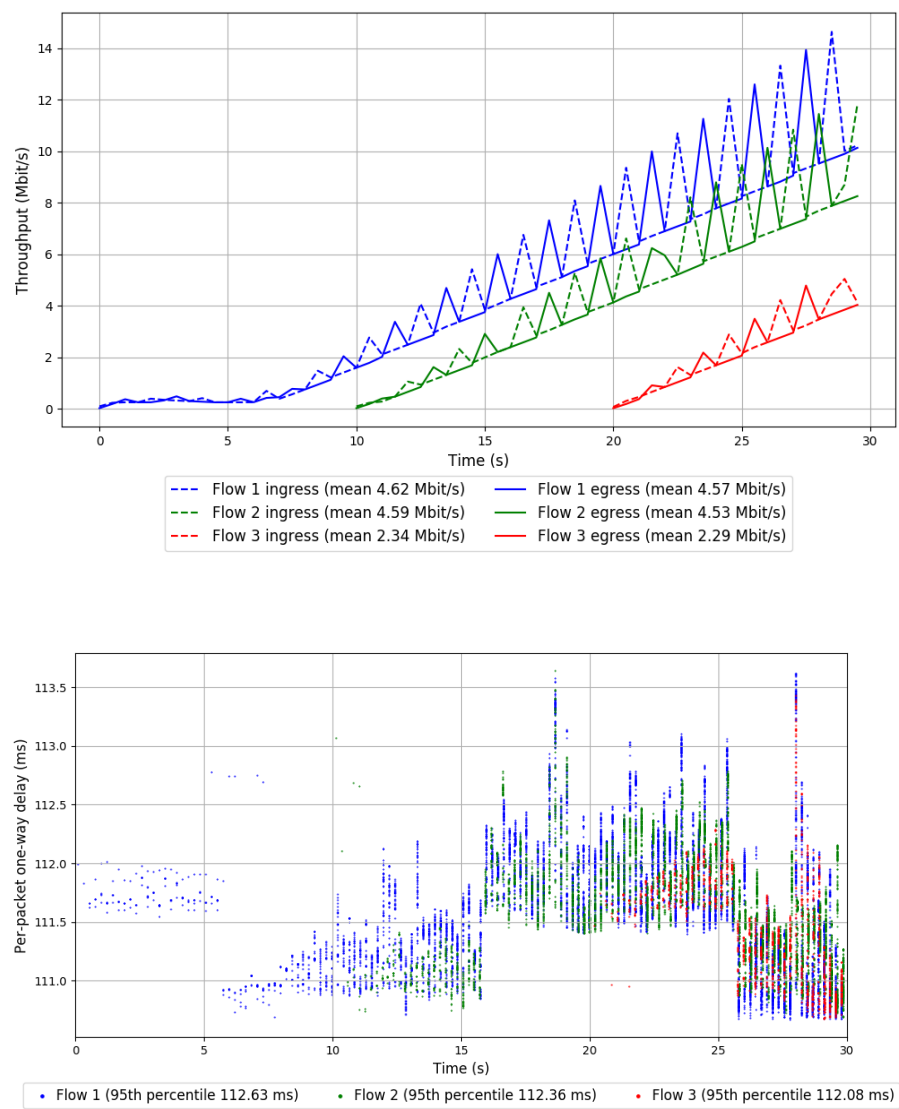
-- Flow 3:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 112.085 ms

Loss rate: 4.53%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-02-28 11:32:16

End at: 2018-02-28 11:32:46

Below is generated by plot.py at 2018-02-28 16:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.90 Mbit/s

95th percentile per-packet one-way delay: 113.690 ms

Loss rate: 1.99%

-- Flow 1:

Average throughput: 7.11 Mbit/s

95th percentile per-packet one-way delay: 113.738 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 3.17 Mbit/s

95th percentile per-packet one-way delay: 113.570 ms

Loss rate: 2.72%

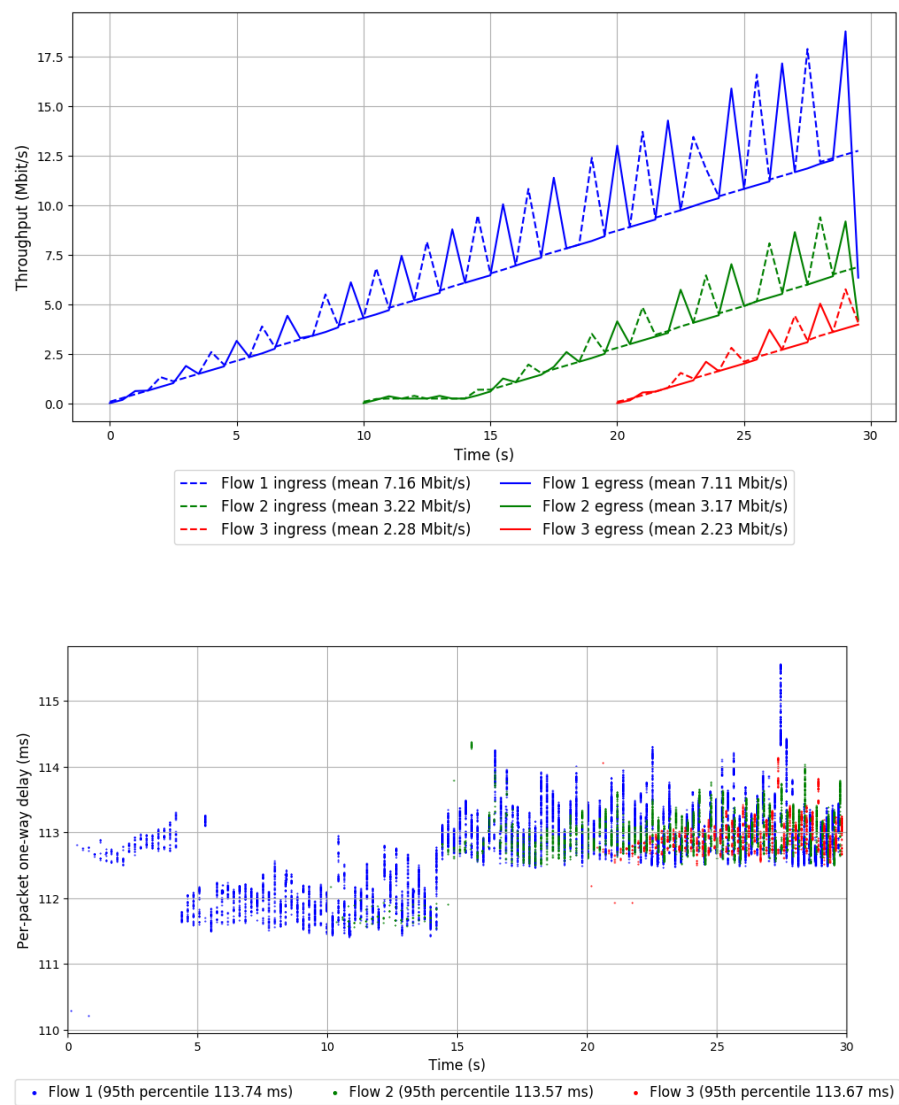
-- Flow 3:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 113.670 ms

Loss rate: 4.58%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-02-28 11:51:19

End at: 2018-02-28 11:51:49

Below is generated by plot.py at 2018-02-28 16:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.84 Mbit/s

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

Loss rate: 1.94%

-- Flow 1:

Average throughput: 6.96 Mbit/s

95th percentile per-packet one-way delay: 113.216 ms

Loss rate: 1.51%

-- Flow 2:

Average throughput: 4.78 Mbit/s

95th percentile per-packet one-way delay: 113.247 ms

Loss rate: 2.25%

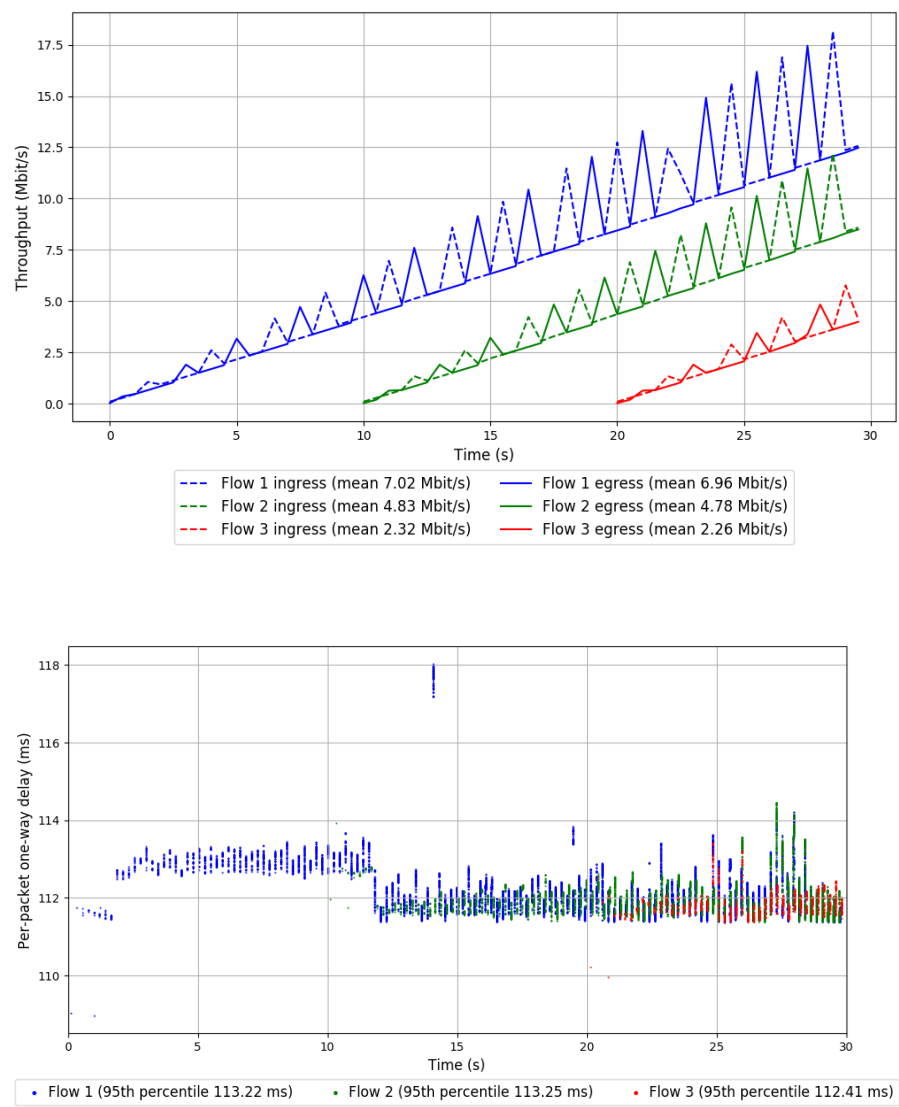
-- Flow 3:

Average throughput: 2.26 Mbit/s

95th percentile per-packet one-way delay: 112.407 ms

Loss rate: 4.56%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2018-02-28 12:10:54

End at: 2018-02-28 12:11:24

Below is generated by plot.py at 2018-02-28 16:00:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.23 Mbit/s

95th percentile per-packet one-way delay: 111.935 ms

Loss rate: 1.85%

-- Flow 1:

Average throughput: 7.37 Mbit/s

95th percentile per-packet one-way delay: 111.961 ms

Loss rate: 1.48%

-- Flow 2:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 111.487 ms

Loss rate: 4.79%

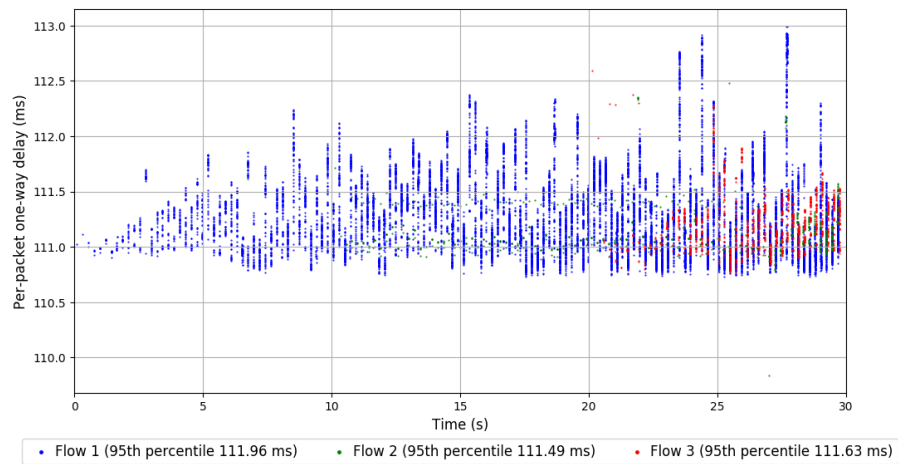
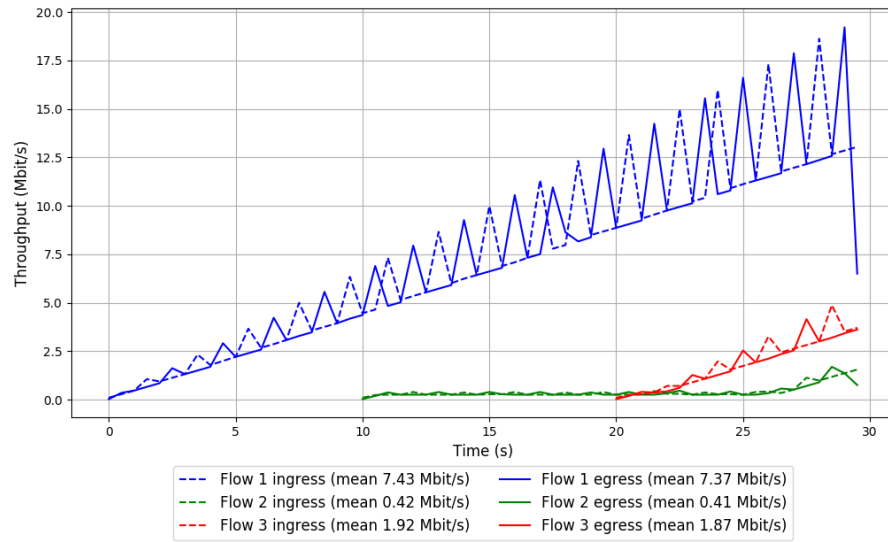
-- Flow 3:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 111.628 ms

Loss rate: 4.97%

Run 10: Report of LEDBAT — Data Link

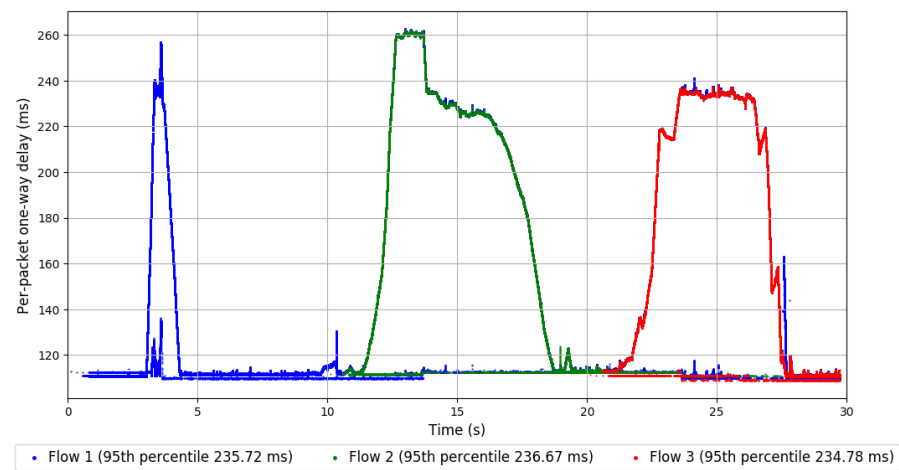
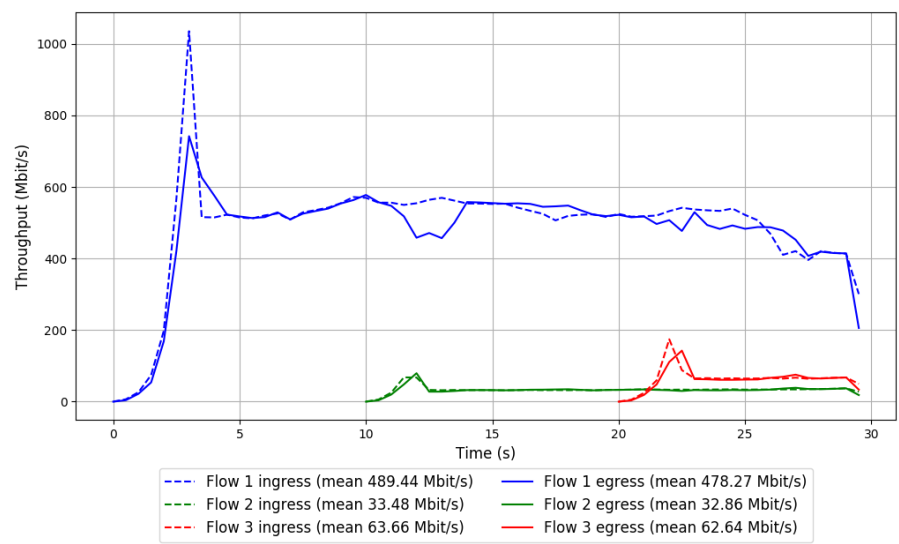


```
Run 1: Statistics of PCC

Start at: 2018-02-28 09:20:37
End at: 2018-02-28 09:21:07

# Below is generated by plot.py at 2018-02-28 16:07:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 520.33 Mbit/s
95th percentile per-packet one-way delay: 235.603 ms
Loss rate: 3.05%
-- Flow 1:
Average throughput: 478.27 Mbit/s
95th percentile per-packet one-way delay: 235.716 ms
Loss rate: 3.02%
-- Flow 2:
Average throughput: 32.86 Mbit/s
95th percentile per-packet one-way delay: 236.668 ms
Loss rate: 2.95%
-- Flow 3:
Average throughput: 62.64 Mbit/s
95th percentile per-packet one-way delay: 234.785 ms
Loss rate: 3.82%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2018-02-28 09:40:28

End at: 2018-02-28 09:40:58

Below is generated by plot.py at 2018-02-28 16:07:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 489.94 Mbit/s

95th percentile per-packet one-way delay: 259.669 ms

Loss rate: 4.73%

-- Flow 1:

Average throughput: 467.19 Mbit/s

95th percentile per-packet one-way delay: 259.651 ms

Loss rate: 4.68%

-- Flow 2:

Average throughput: 4.12 Mbit/s

95th percentile per-packet one-way delay: 259.935 ms

Loss rate: 5.63%

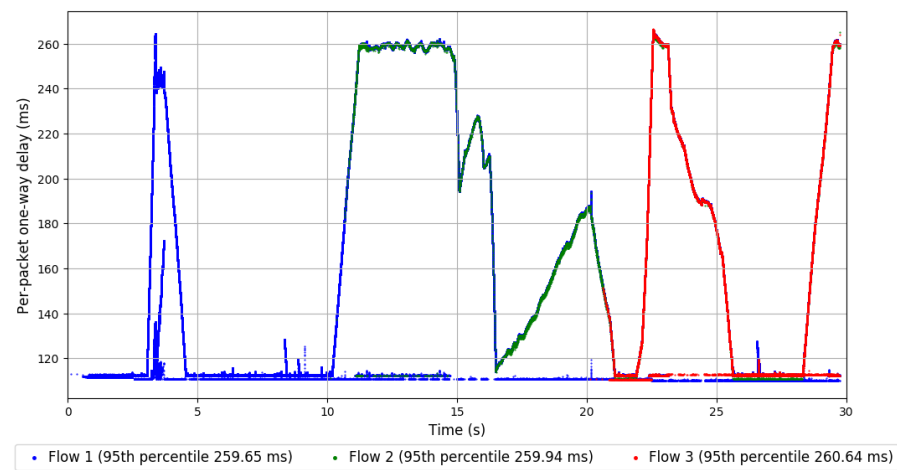
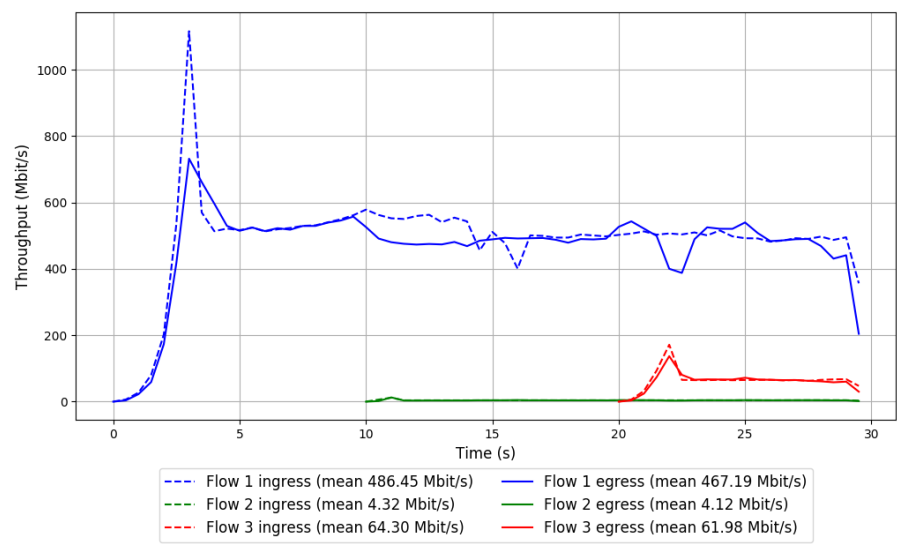
-- Flow 3:

Average throughput: 61.98 Mbit/s

95th percentile per-packet one-way delay: 260.642 ms

Loss rate: 5.73%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-02-28 09:59:36

End at: 2018-02-28 10:00:06

Below is generated by plot.py at 2018-02-28 16:07:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 507.24 Mbit/s

95th percentile per-packet one-way delay: 226.349 ms

Loss rate: 2.20%

-- Flow 1:

Average throughput: 503.62 Mbit/s

95th percentile per-packet one-way delay: 226.199 ms

Loss rate: 2.20%

-- Flow 2:

Average throughput: 4.32 Mbit/s

95th percentile per-packet one-way delay: 227.949 ms

Loss rate: 1.87%

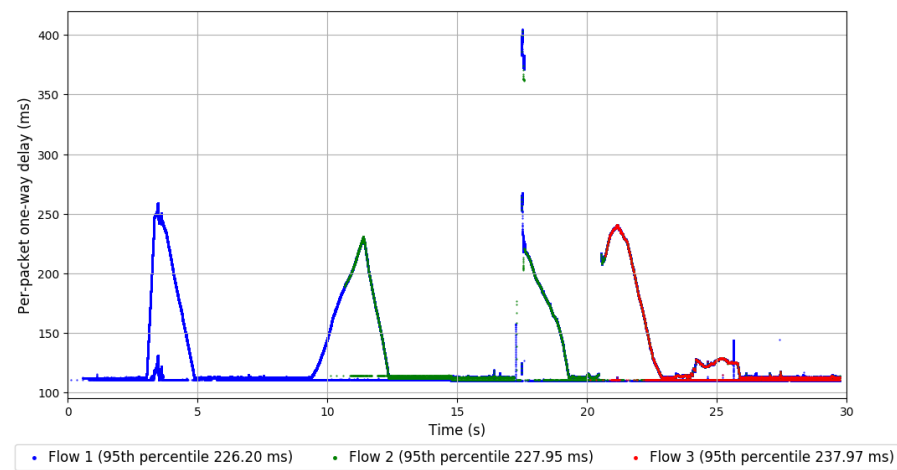
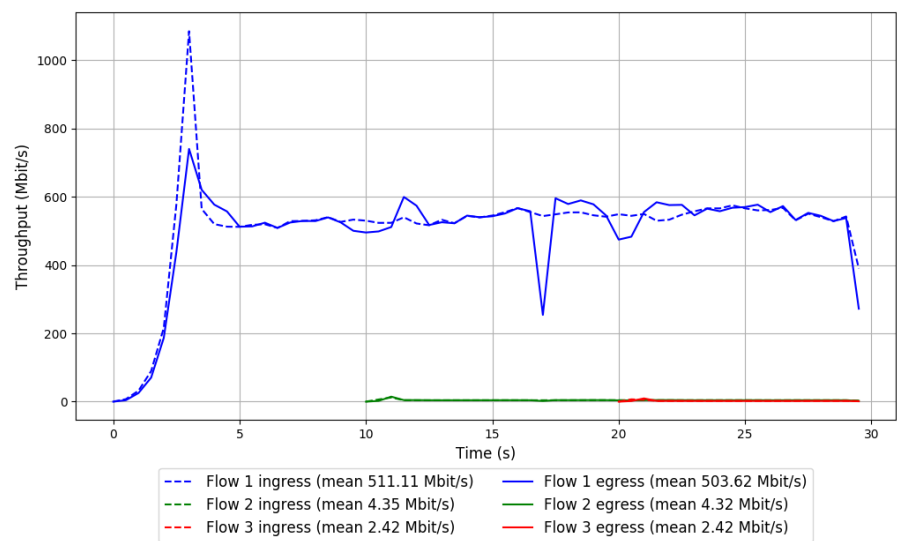
-- Flow 3:

Average throughput: 2.42 Mbit/s

95th percentile per-packet one-way delay: 237.966 ms

Loss rate: 2.20%

Run 3: Report of PCC — Data Link

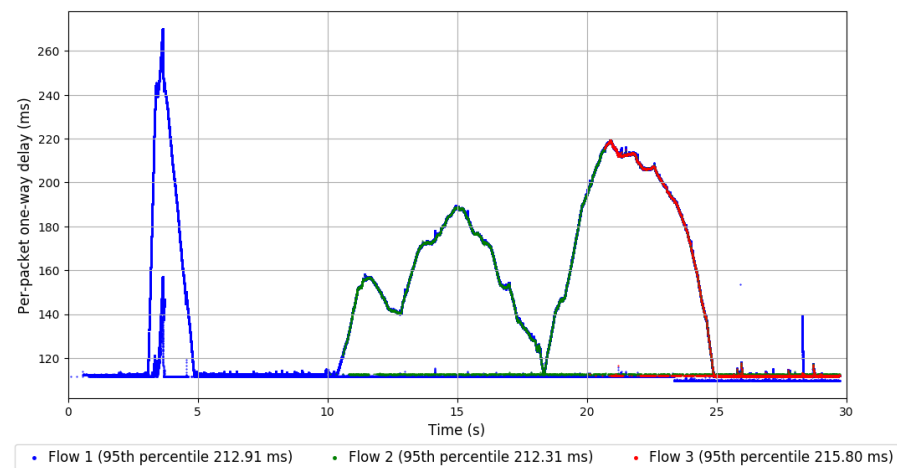
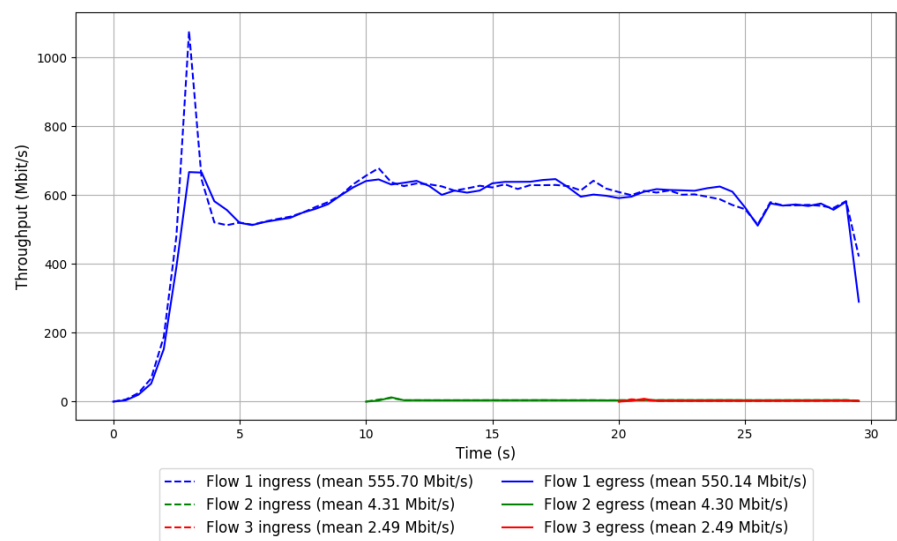


```
Run 4: Statistics of PCC

Start at: 2018-02-28 10:19:07
End at: 2018-02-28 10:19:37

# Below is generated by plot.py at 2018-02-28 16:08:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 553.80 Mbit/s
95th percentile per-packet one-way delay: 212.916 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 550.14 Mbit/s
95th percentile per-packet one-way delay: 212.915 ms
Loss rate: 1.74%
-- Flow 2:
Average throughput: 4.30 Mbit/s
95th percentile per-packet one-way delay: 212.308 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 215.802 ms
Loss rate: 2.52%
```

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-02-28 10:38:31

End at: 2018-02-28 10:39:01

Below is generated by plot.py at 2018-02-28 16:08:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 542.90 Mbit/s

95th percentile per-packet one-way delay: 234.758 ms

Loss rate: 3.39%

-- Flow 1:

Average throughput: 512.04 Mbit/s

95th percentile per-packet one-way delay: 234.857 ms

Loss rate: 3.32%

-- Flow 2:

Average throughput: 16.33 Mbit/s

95th percentile per-packet one-way delay: 234.675 ms

Loss rate: 2.97%

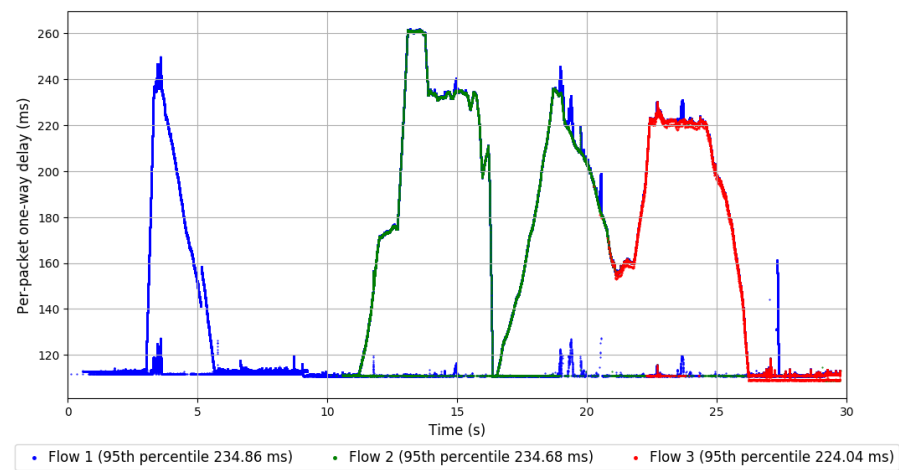
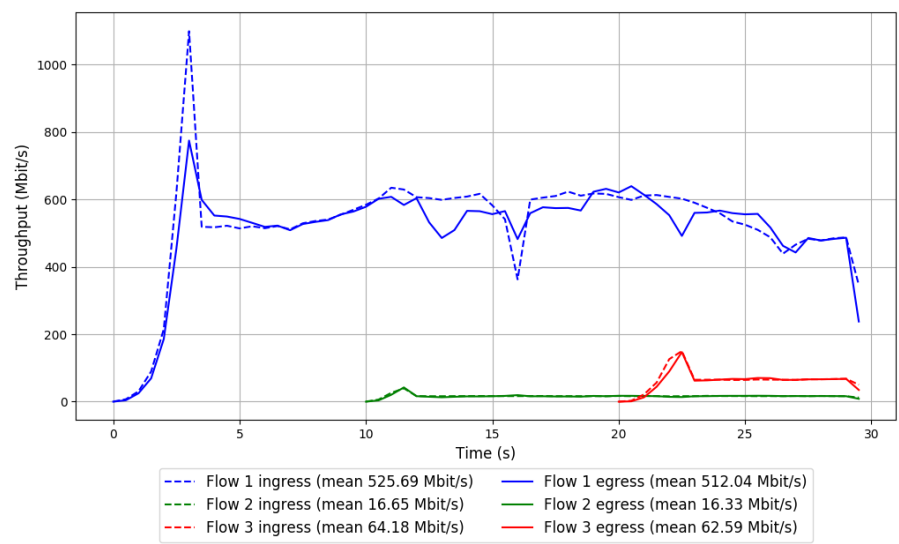
-- Flow 3:

Average throughput: 62.59 Mbit/s

95th percentile per-packet one-way delay: 224.036 ms

Loss rate: 5.48%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-02-28 10:57:46

End at: 2018-02-28 10:58:16

Below is generated by plot.py at 2018-02-28 16:08:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 463.49 Mbit/s

95th percentile per-packet one-way delay: 258.774 ms

Loss rate: 2.70%

-- Flow 1:

Average throughput: 459.32 Mbit/s

95th percentile per-packet one-way delay: 258.778 ms

Loss rate: 2.70%

-- Flow 2:

Average throughput: 4.12 Mbit/s

95th percentile per-packet one-way delay: 258.964 ms

Loss rate: 2.53%

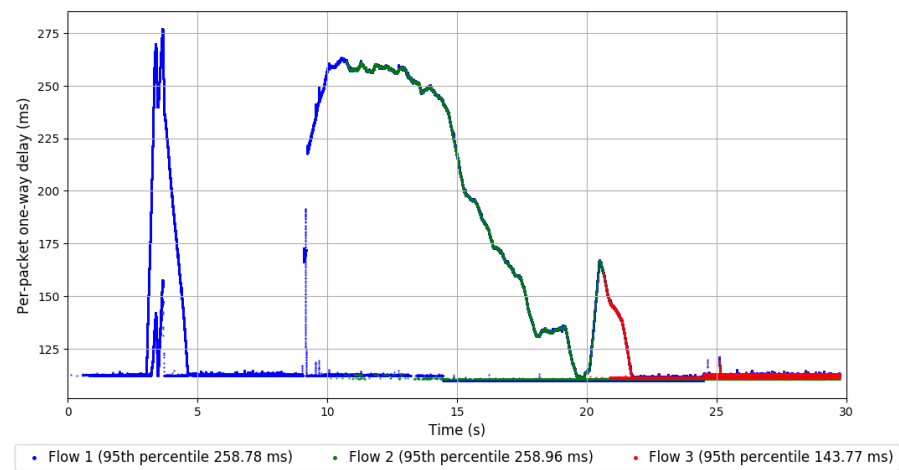
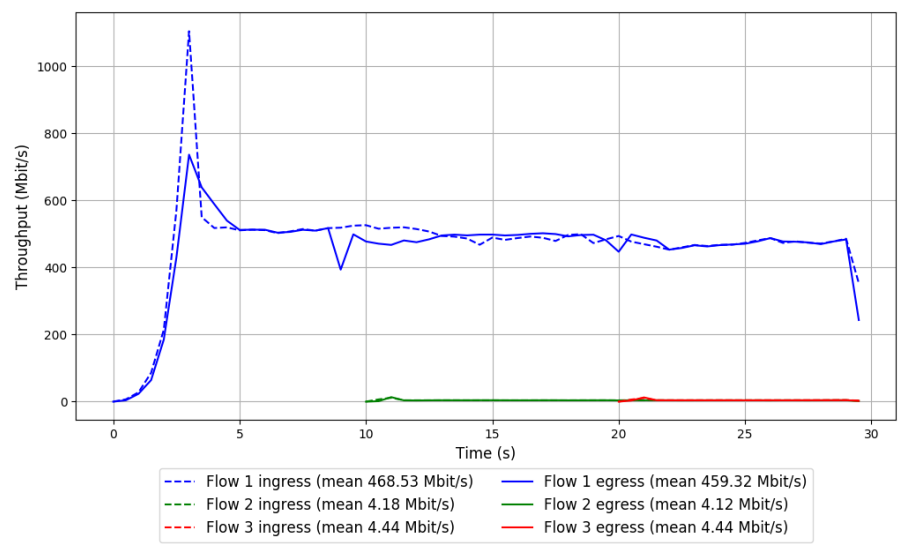
-- Flow 3:

Average throughput: 4.44 Mbit/s

95th percentile per-packet one-way delay: 143.766 ms

Loss rate: 2.40%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-02-28 11:17:22

End at: 2018-02-28 11:17:52

Below is generated by plot.py at 2018-02-28 16:08:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 504.33 Mbit/s

95th percentile per-packet one-way delay: 254.201 ms

Loss rate: 2.27%

-- Flow 1:

Average throughput: 481.29 Mbit/s

95th percentile per-packet one-way delay: 254.283 ms

Loss rate: 2.26%

-- Flow 2:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 254.687 ms

Loss rate: 1.96%

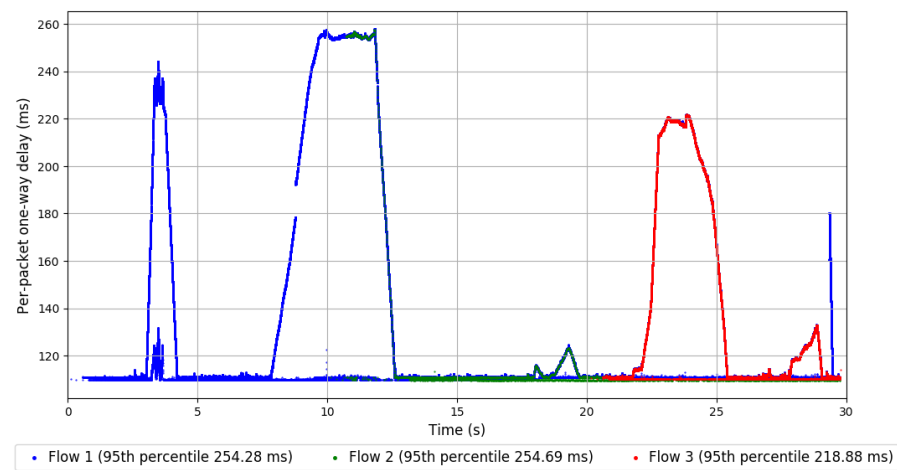
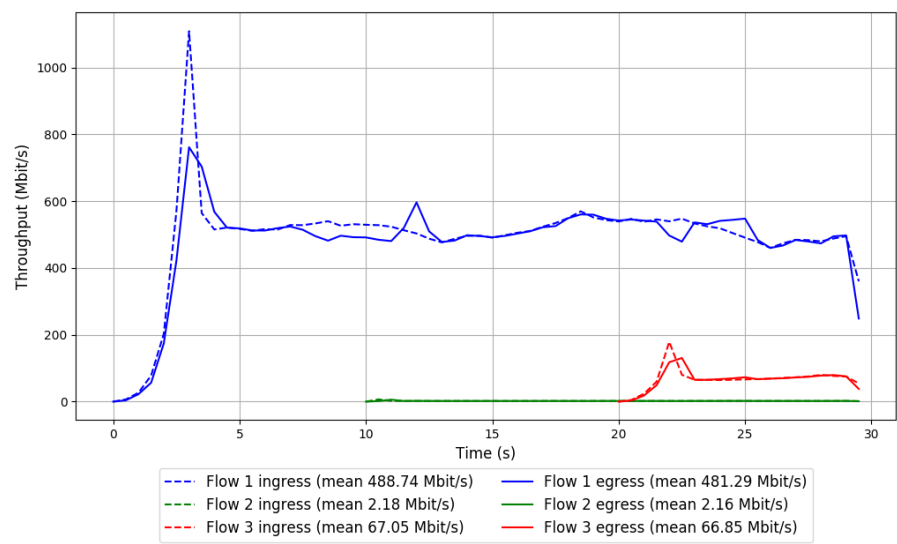
-- Flow 3:

Average throughput: 66.85 Mbit/s

95th percentile per-packet one-way delay: 218.881 ms

Loss rate: 2.52%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-02-28 11:36:35

End at: 2018-02-28 11:37:05

Below is generated by plot.py at 2018-02-28 16:09:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 494.46 Mbit/s

95th percentile per-packet one-way delay: 257.060 ms

Loss rate: 3.54%

-- Flow 1:

Average throughput: 452.59 Mbit/s

95th percentile per-packet one-way delay: 257.084 ms

Loss rate: 3.60%

-- Flow 2:

Average throughput: 32.19 Mbit/s

95th percentile per-packet one-way delay: 257.851 ms

Loss rate: 3.38%

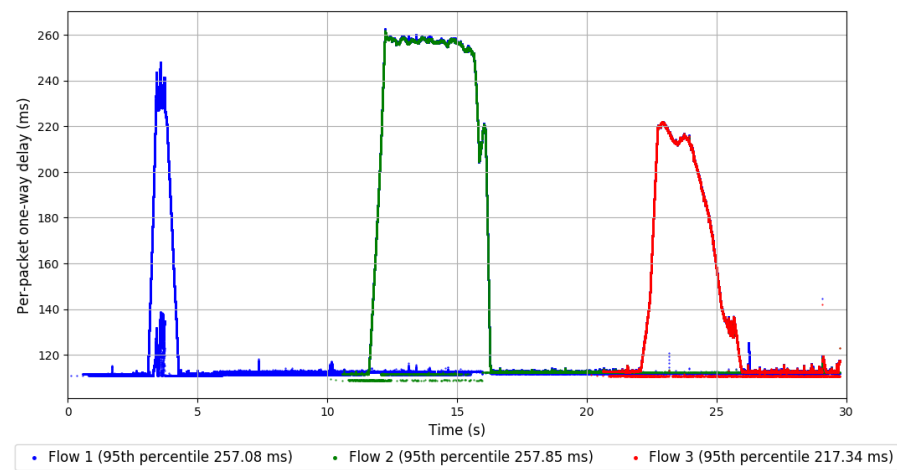
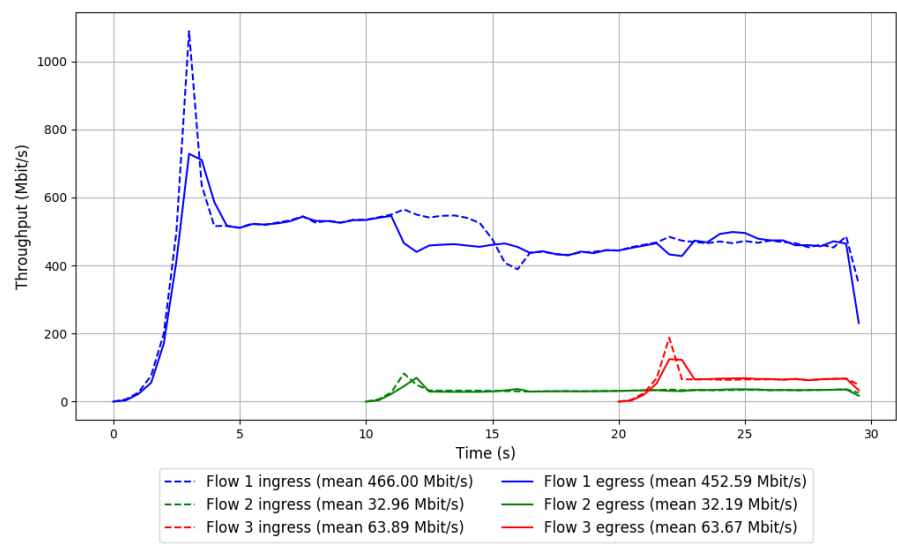
-- Flow 3:

Average throughput: 63.67 Mbit/s

95th percentile per-packet one-way delay: 217.335 ms

Loss rate: 2.53%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-02-28 11:56:02

End at: 2018-02-28 11:56:32

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 524.48 Mbit/s

95th percentile per-packet one-way delay: 236.289 ms

Loss rate: 4.25%

-- Flow 1:

Average throughput: 444.69 Mbit/s

95th percentile per-packet one-way delay: 236.306 ms

Loss rate: 4.25%

-- Flow 2:

Average throughput: 119.47 Mbit/s

95th percentile per-packet one-way delay: 236.222 ms

Loss rate: 4.26%

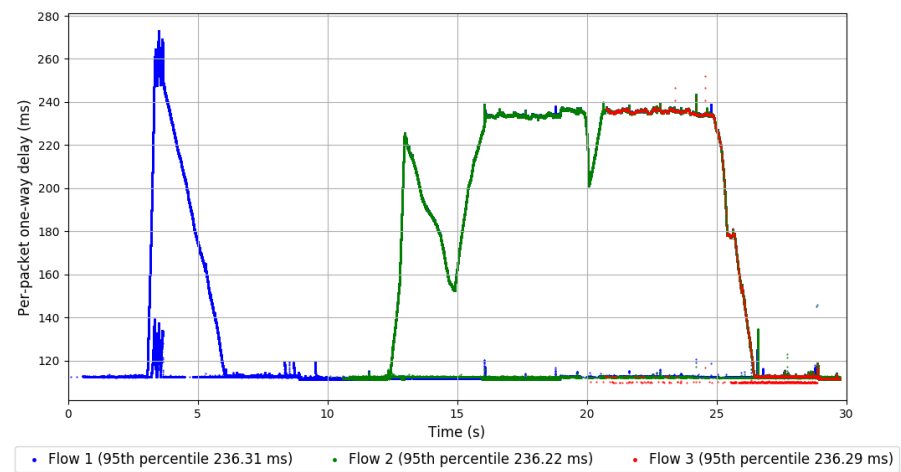
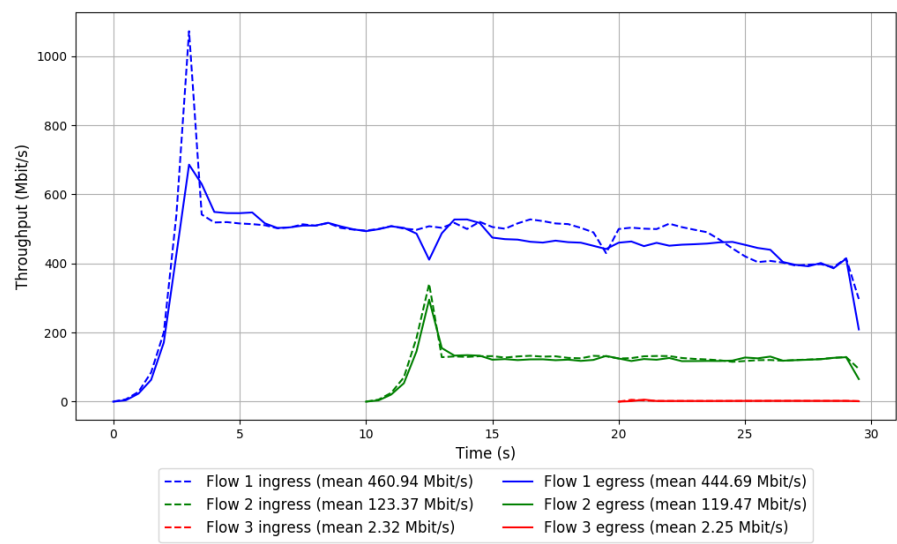
-- Flow 3:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 236.289 ms

Loss rate: 5.25%

Run 9: Report of PCC — Data Link



Run 10: Statistics of PCC

Start at: 2018-02-28 12:15:29

End at: 2018-02-28 12:16:00

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 486.62 Mbit/s

95th percentile per-packet one-way delay: 260.902 ms

Loss rate: 3.13%

-- Flow 1:

Average throughput: 473.46 Mbit/s

95th percentile per-packet one-way delay: 260.943 ms

Loss rate: 3.14%

-- Flow 2:

Average throughput: 4.04 Mbit/s

95th percentile per-packet one-way delay: 260.708 ms

Loss rate: 3.41%

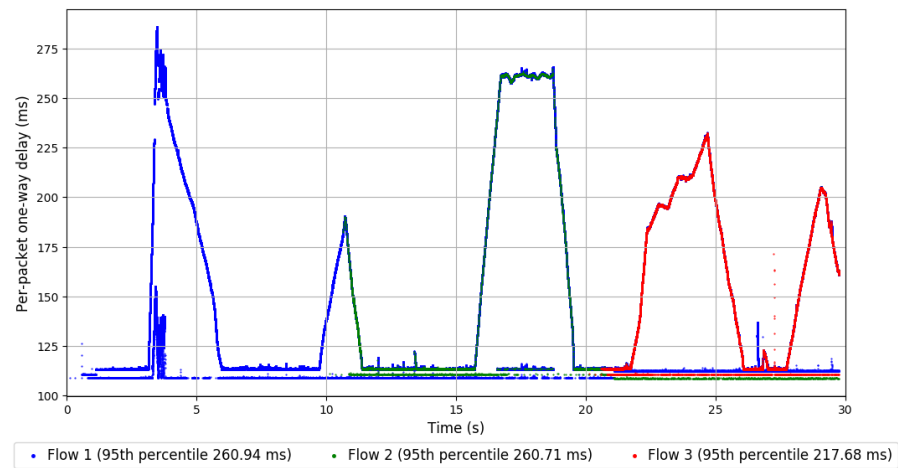
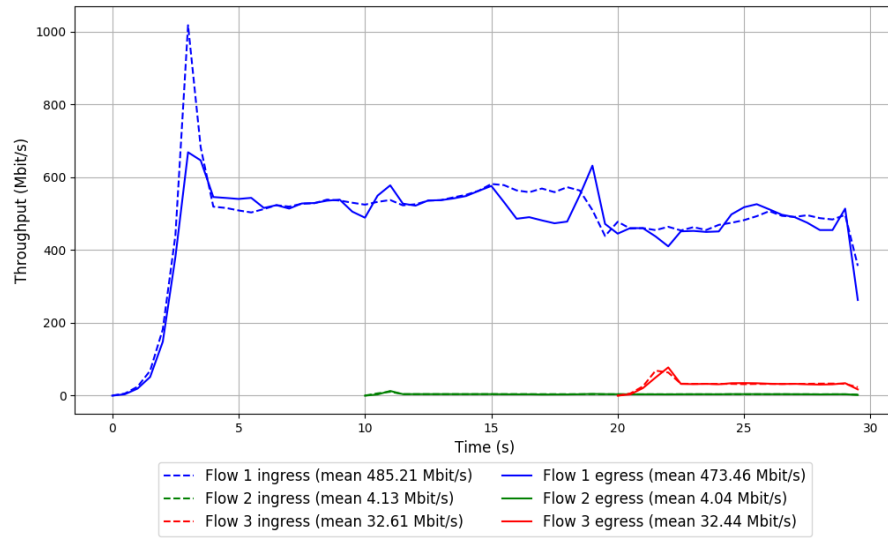
-- Flow 3:

Average throughput: 32.44 Mbit/s

95th percentile per-packet one-way delay: 217.680 ms

Loss rate: 2.74%

Run 10: Report of PCC — Data Link

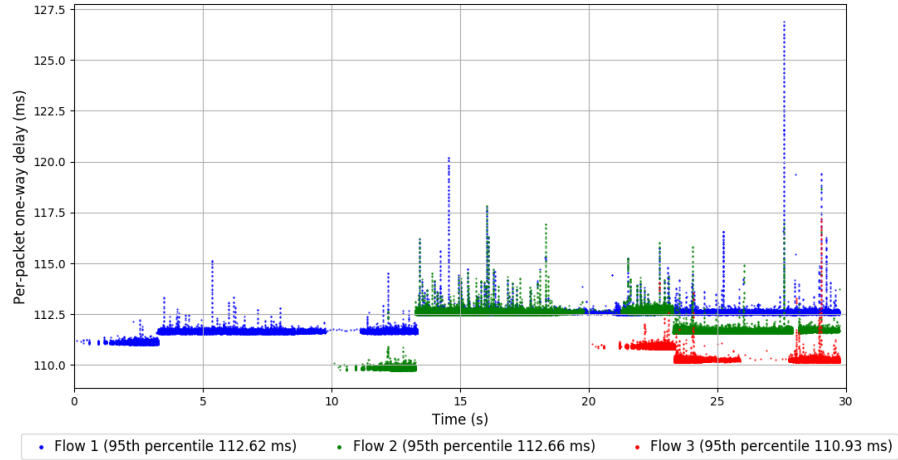
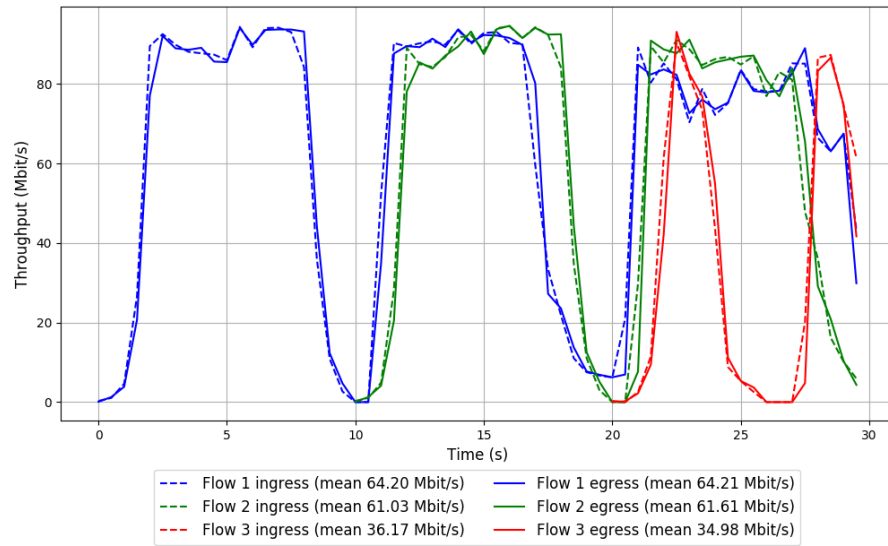


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-02-28 09:07:57
End at: 2018-02-28 09:08:27

# Below is generated by plot.py at 2018-02-28 16:15:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 116.37 Mbit/s
95th percentile per-packet one-way delay: 112.629 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 64.21 Mbit/s
95th percentile per-packet one-way delay: 112.616 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 61.61 Mbit/s
95th percentile per-packet one-way delay: 112.664 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 34.98 Mbit/s
95th percentile per-packet one-way delay: 110.934 ms
Loss rate: 5.47%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-02-28 09:27:26

End at: 2018-02-28 09:27:56

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 119.10 Mbit/s

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

Loss rate: 1.22%

-- Flow 1:

Average throughput: 63.65 Mbit/s

95th percentile per-packet one-way delay: 112.567 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 53.67 Mbit/s

95th percentile per-packet one-way delay: 111.018 ms

Loss rate: 1.28%

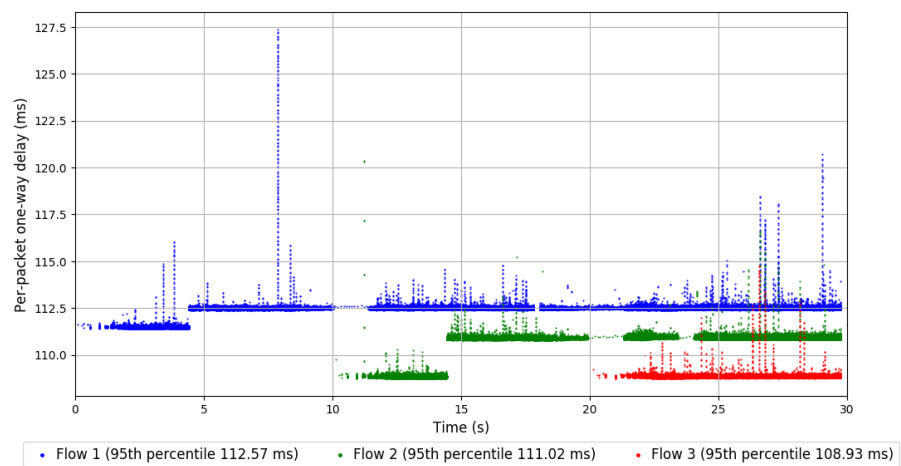
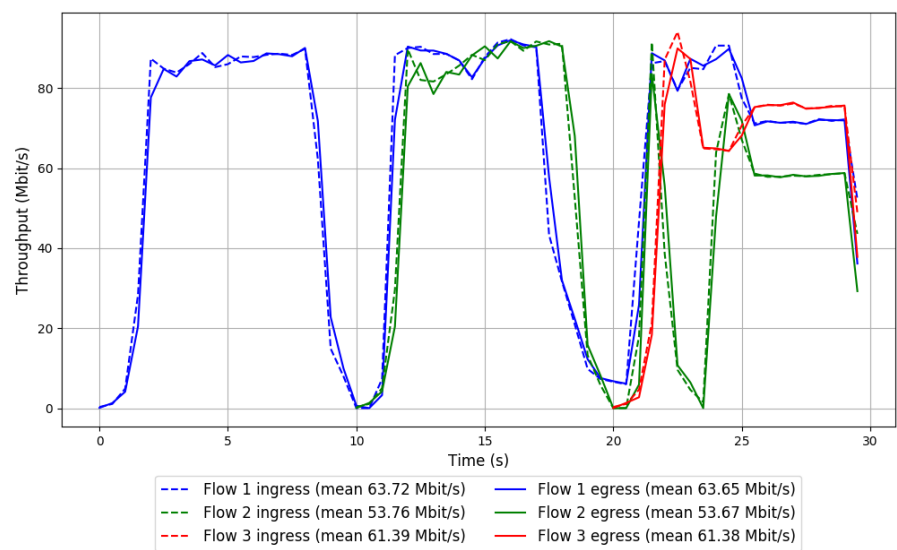
-- Flow 3:

Average throughput: 61.38 Mbit/s

95th percentile per-packet one-way delay: 108.933 ms

Loss rate: 2.26%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-02-28 09:47:05

End at: 2018-02-28 09:47:35

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.94 Mbit/s

95th percentile per-packet one-way delay: 112.906 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 66.29 Mbit/s

95th percentile per-packet one-way delay: 112.929 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 59.63 Mbit/s

95th percentile per-packet one-way delay: 112.661 ms

Loss rate: 0.91%

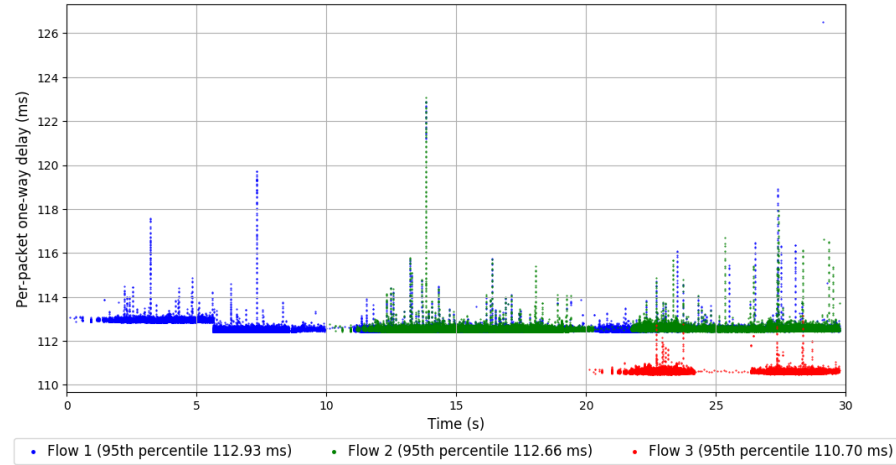
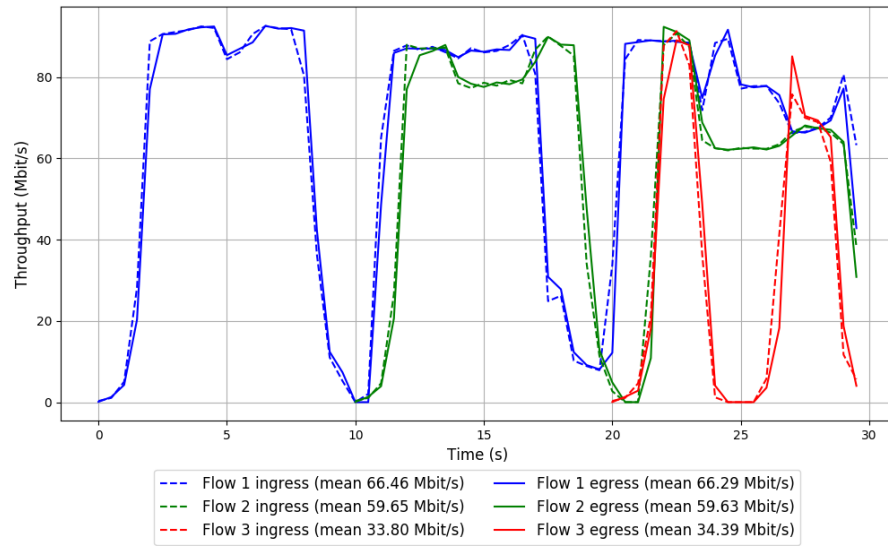
-- Flow 3:

Average throughput: 34.39 Mbit/s

95th percentile per-packet one-way delay: 110.702 ms

Loss rate: 0.54%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-02-28 10:06:07

End at: 2018-02-28 10:06:37

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 119.87 Mbit/s

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

Loss rate: 1.04%

-- Flow 1:

Average throughput: 60.16 Mbit/s

95th percentile per-packet one-way delay: 112.278 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 60.85 Mbit/s

95th percentile per-packet one-way delay: 111.612 ms

Loss rate: 0.41%

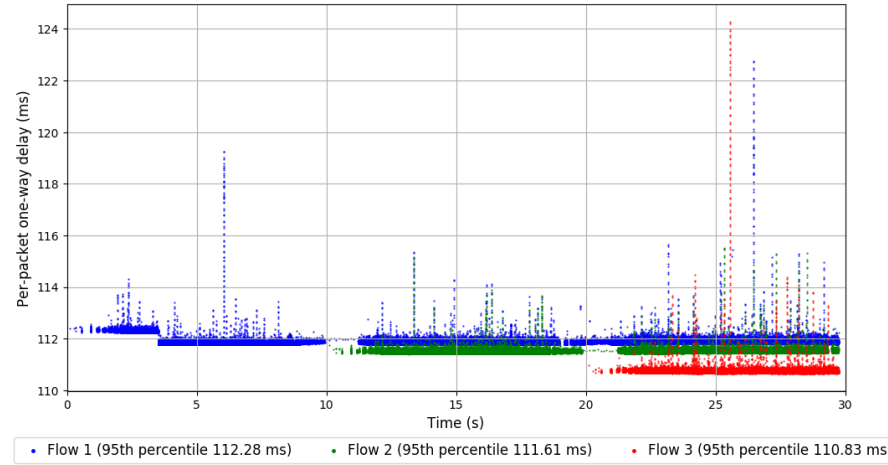
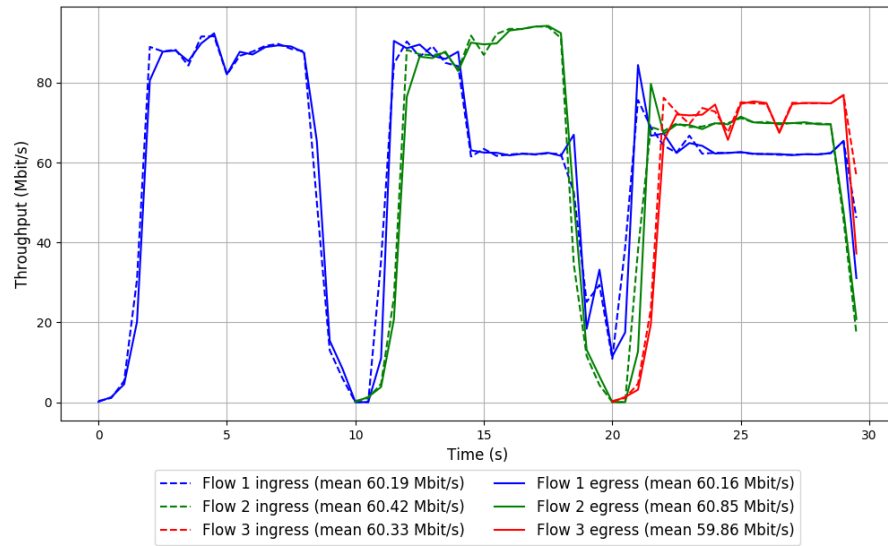
-- Flow 3:

Average throughput: 59.86 Mbit/s

95th percentile per-packet one-way delay: 110.831 ms

Loss rate: 3.03%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-02-28 10:25:52

End at: 2018-02-28 10:26:22

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 115.70 Mbit/s

95th percentile per-packet one-way delay: 111.988 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 62.43 Mbit/s

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

Loss rate: 0.77%

-- Flow 2:

Average throughput: 51.44 Mbit/s

95th percentile per-packet one-way delay: 112.020 ms

Loss rate: 1.79%

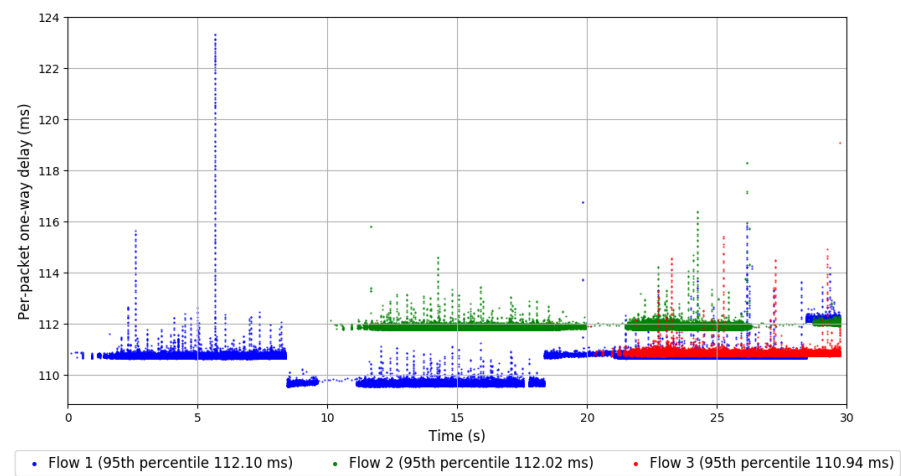
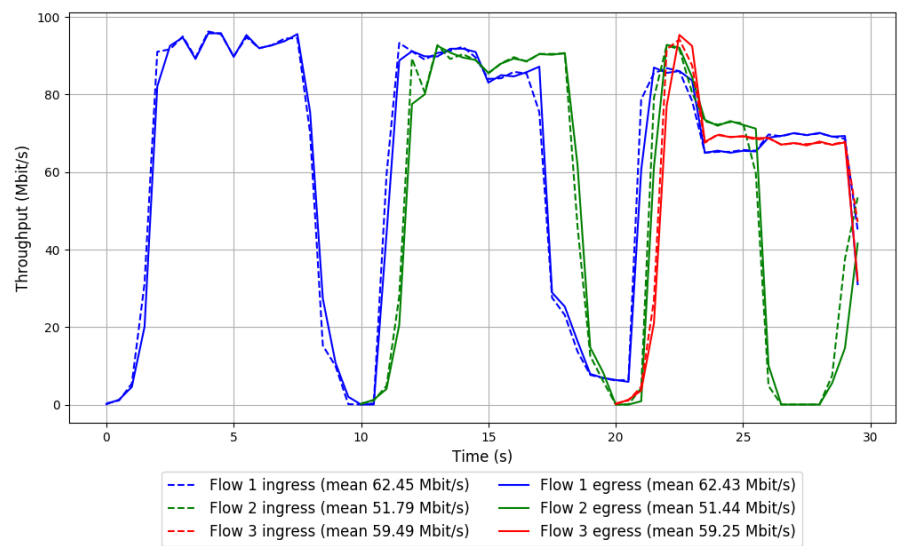
-- Flow 3:

Average throughput: 59.25 Mbit/s

95th percentile per-packet one-way delay: 110.940 ms

Loss rate: 2.58%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-02-28 10:45:04

End at: 2018-02-28 10:45:34

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.32 Mbit/s

95th percentile per-packet one-way delay: 111.042 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 66.68 Mbit/s

95th percentile per-packet one-way delay: 111.075 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 57.30 Mbit/s

95th percentile per-packet one-way delay: 108.979 ms

Loss rate: 1.28%

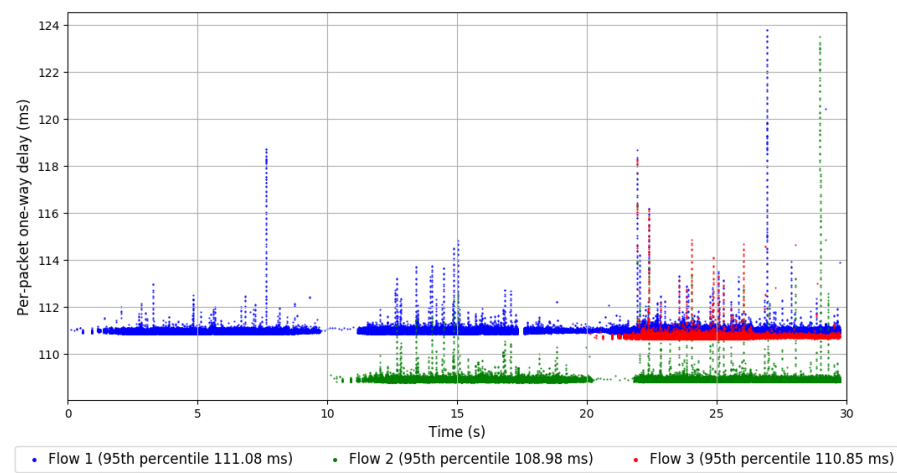
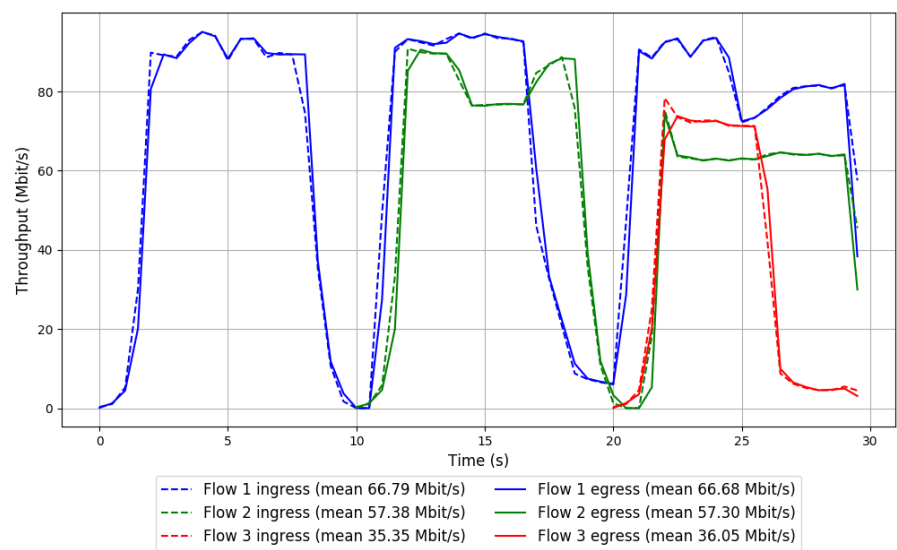
-- Flow 3:

Average throughput: 36.05 Mbit/s

95th percentile per-packet one-way delay: 110.850 ms

Loss rate: 0.41%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-02-28 11:04:30

End at: 2018-02-28 11:05:00

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 103.68 Mbit/s

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

Loss rate: 0.60%

-- Flow 1:

Average throughput: 58.80 Mbit/s

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

Loss rate: 0.84%

-- Flow 2:

Average throughput: 61.94 Mbit/s

95th percentile per-packet one-way delay: 112.970 ms

Loss rate: 0.14%

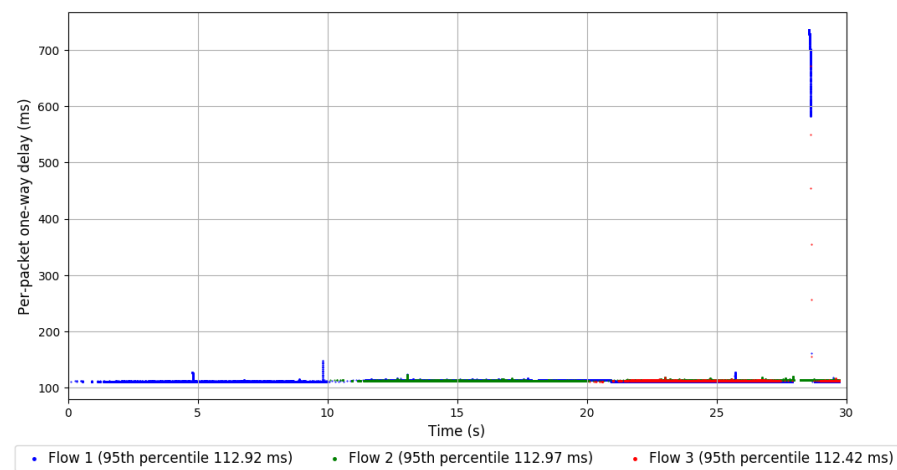
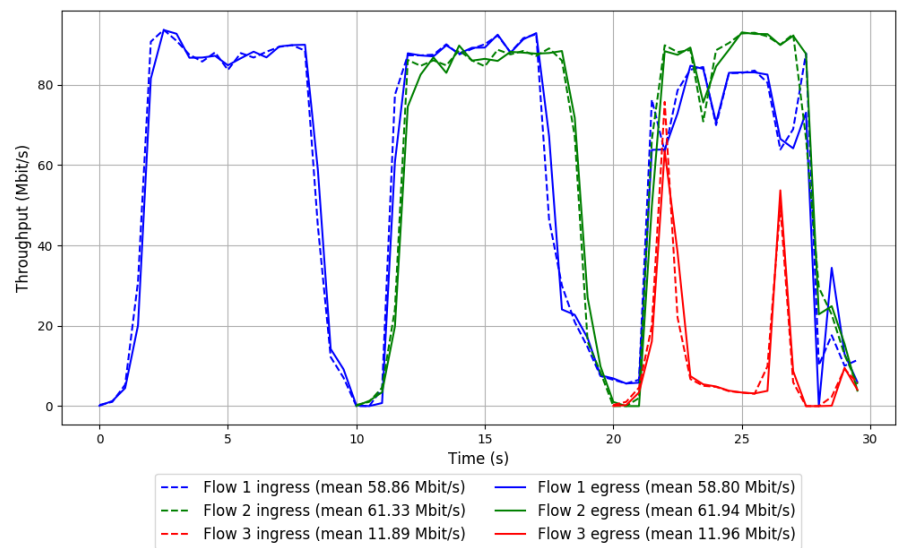
-- Flow 3:

Average throughput: 11.96 Mbit/s

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

Loss rate: 1.63%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-02-28 11:23:56

End at: 2018-02-28 11:24:26

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.28 Mbit/s

95th percentile per-packet one-way delay: 110.939 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 70.95 Mbit/s

95th percentile per-packet one-way delay: 110.880 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 38.68 Mbit/s

95th percentile per-packet one-way delay: 110.958 ms

Loss rate: 1.83%

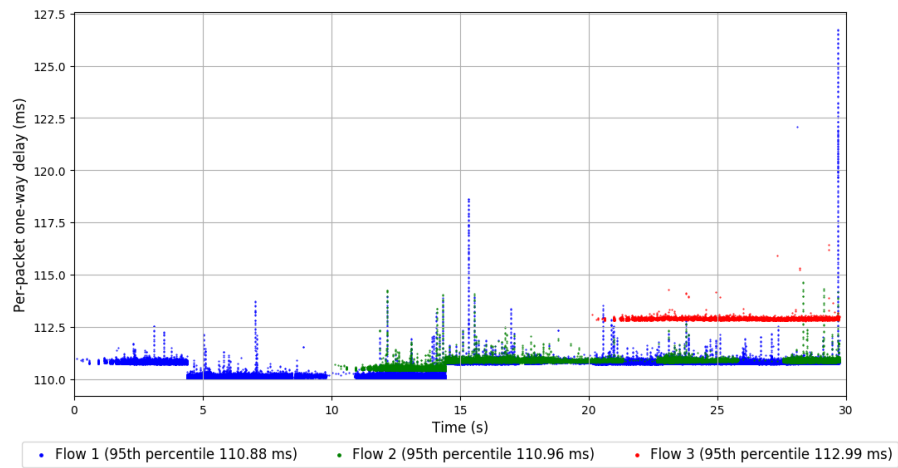
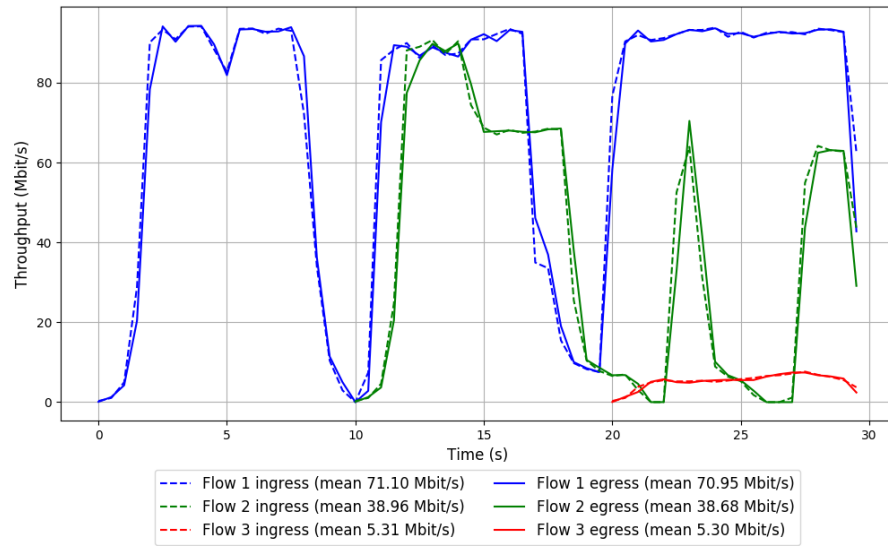
-- Flow 3:

Average throughput: 5.30 Mbit/s

95th percentile per-packet one-way delay: 112.988 ms

Loss rate: 2.41%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-02-28 11:43:07

End at: 2018-02-28 11:43:37

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.62 Mbit/s

95th percentile per-packet one-way delay: 113.659 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 54.46 Mbit/s

95th percentile per-packet one-way delay: 112.535 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 61.54 Mbit/s

95th percentile per-packet one-way delay: 112.496 ms

Loss rate: 0.12%

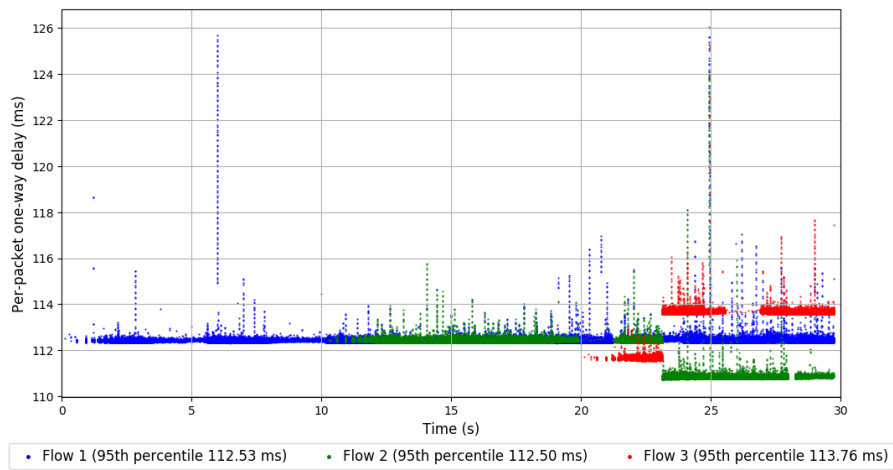
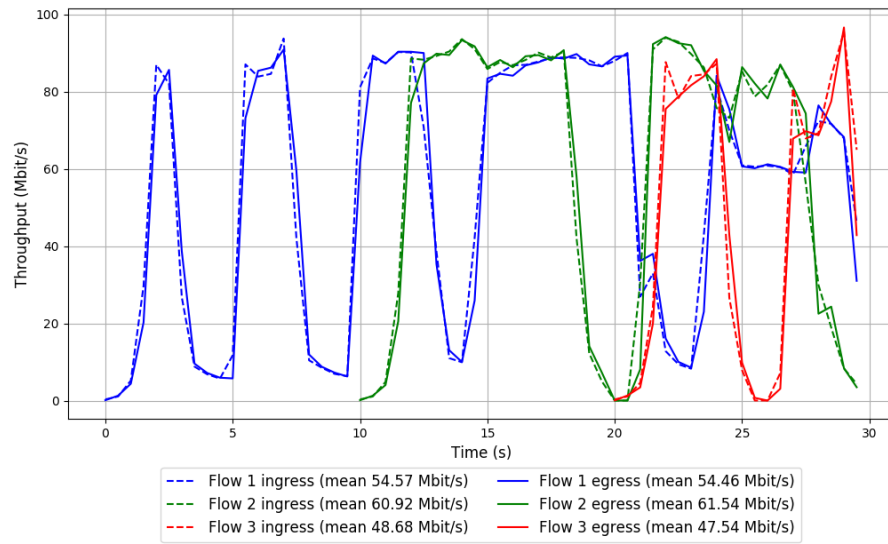
-- Flow 3:

Average throughput: 47.54 Mbit/s

95th percentile per-packet one-way delay: 113.763 ms

Loss rate: 4.53%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-02-28 12:02:43

End at: 2018-02-28 12:03:13

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.71 Mbit/s

95th percentile per-packet one-way delay: 112.423 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 51.13 Mbit/s

95th percentile per-packet one-way delay: 109.856 ms

Loss rate: 1.53%

-- Flow 2:

Average throughput: 53.40 Mbit/s

95th percentile per-packet one-way delay: 112.470 ms

Loss rate: 1.60%

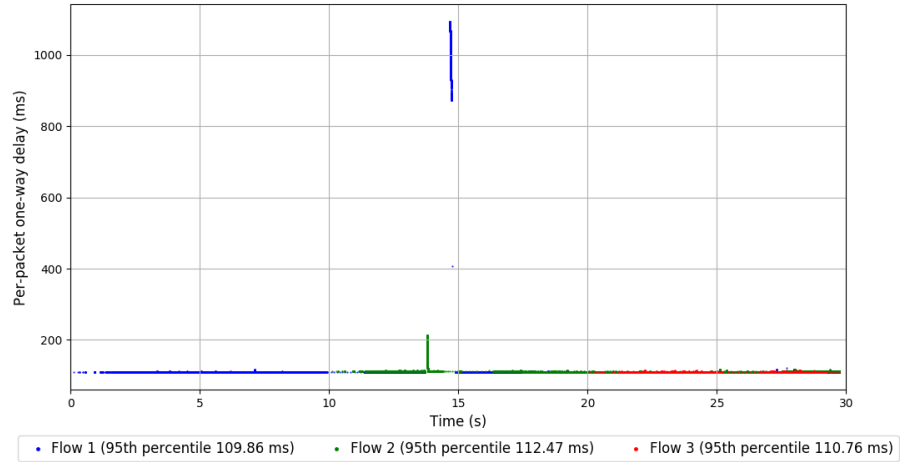
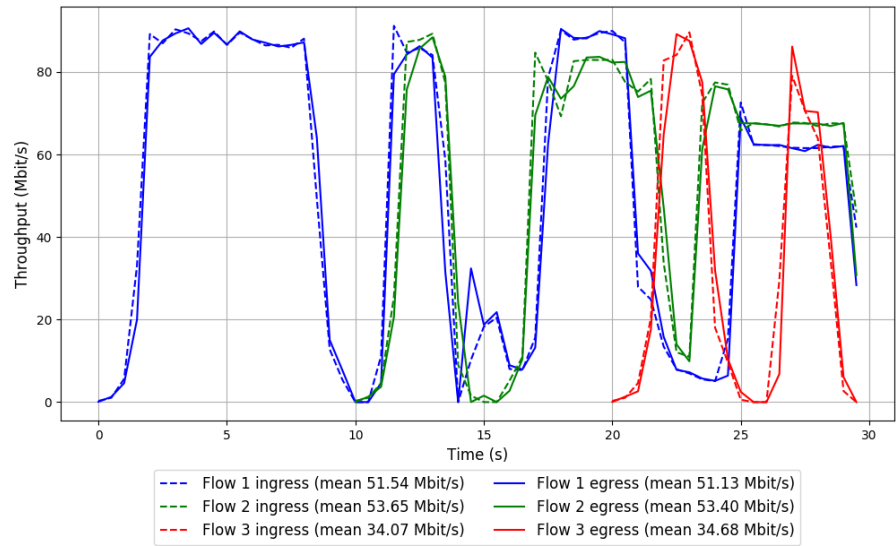
-- Flow 3:

Average throughput: 34.68 Mbit/s

95th percentile per-packet one-way delay: 110.756 ms

Loss rate: 0.00%

Run 10: Report of QUIC Cubic — Data Link

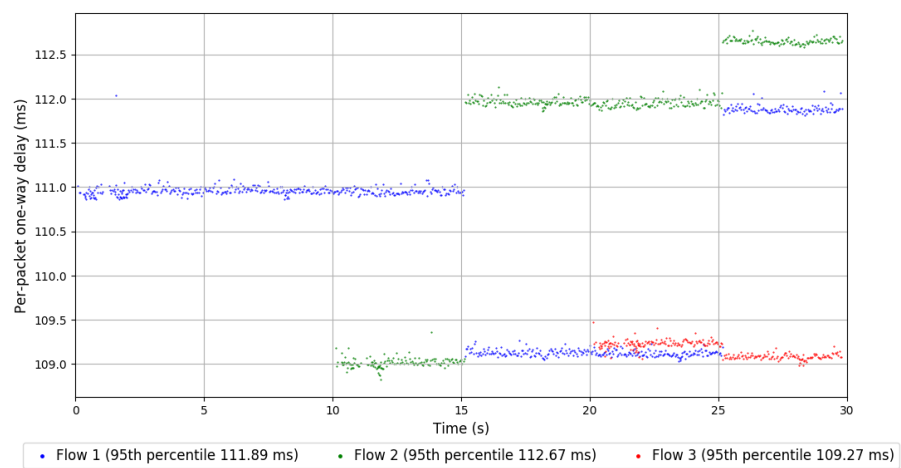
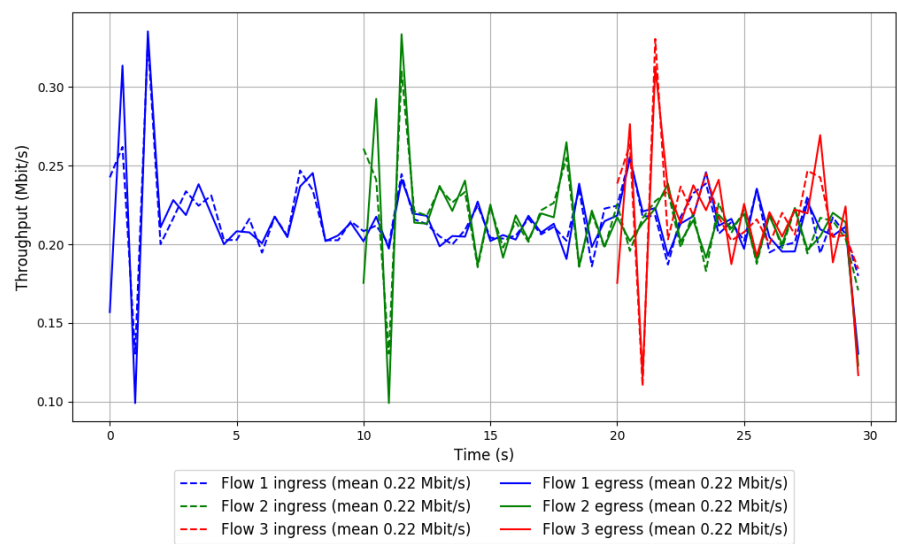


```
Run 1: Statistics of SReAM

Start at: 2018-02-28 09:16:45
End at: 2018-02-28 09:17:15

# Below is generated by plot.py at 2018-02-28 16:15:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.635 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.885 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.668 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.272 ms
Loss rate: 2.26%
```

Run 1: Report of SReAM — Data Link

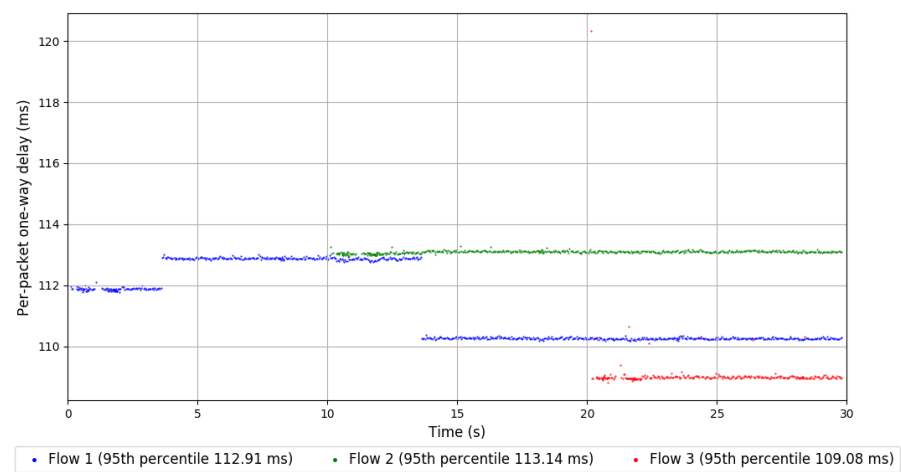
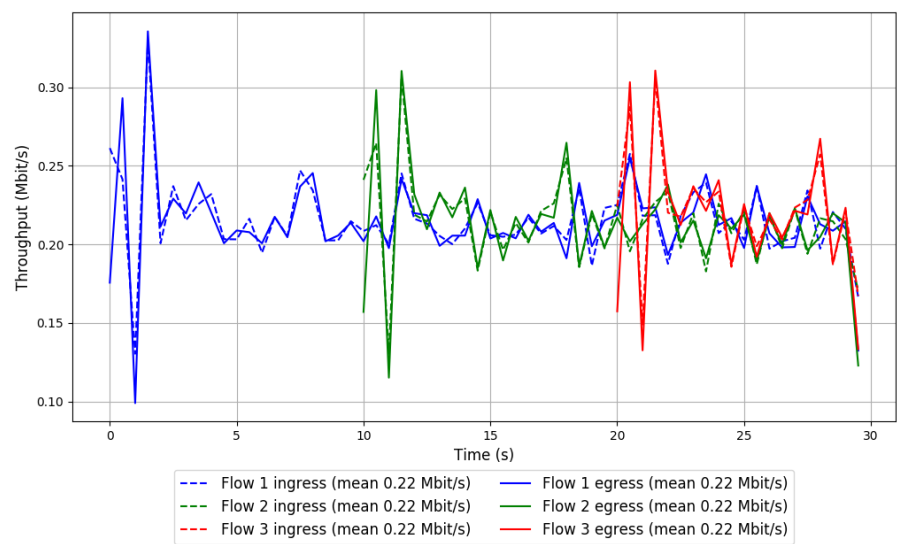


```
Run 2: Statistics of SReAM

Start at: 2018-02-28 09:36:37
End at: 2018-02-28 09:37:07

# Below is generated by plot.py at 2018-02-28 16:15:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.121 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.906 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.143 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.082 ms
Loss rate: 1.86%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-02-28 09:55:46

End at: 2018-02-28 09:56:16

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.812 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.347 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.21 Mbit/s

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

Loss rate: 1.06%

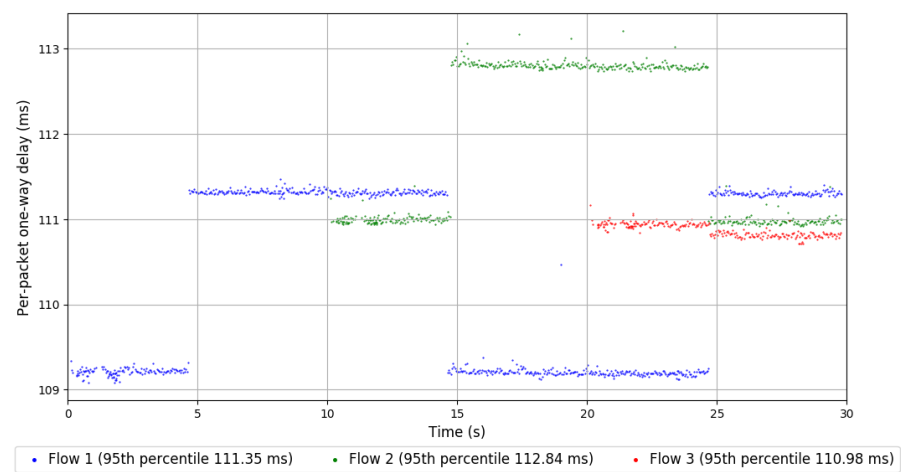
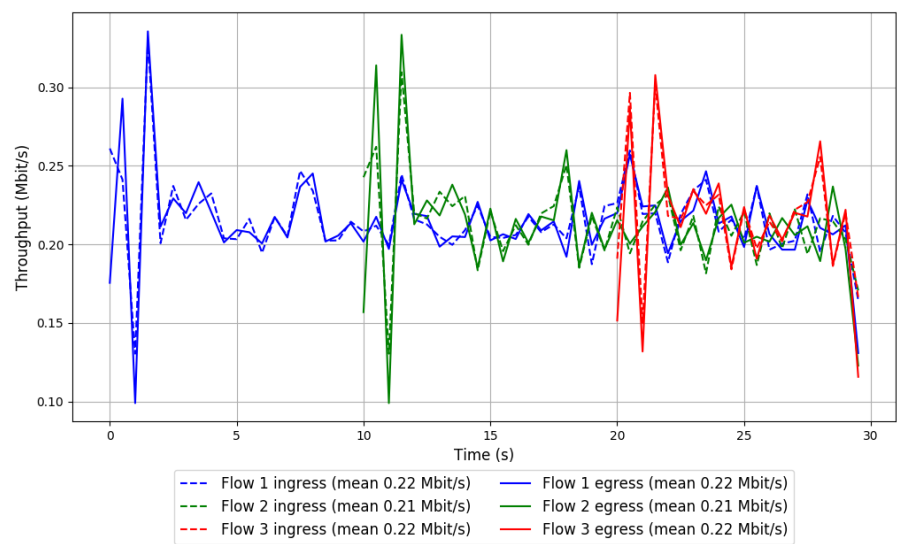
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.980 ms

Loss rate: 2.26%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-02-28 10:15:13

End at: 2018-02-28 10:15:43

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.571 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.550 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.565 ms

Loss rate: 1.06%

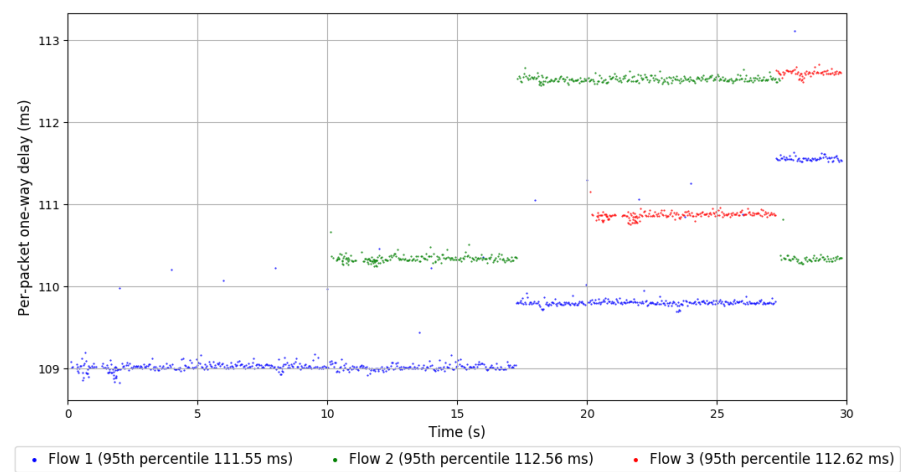
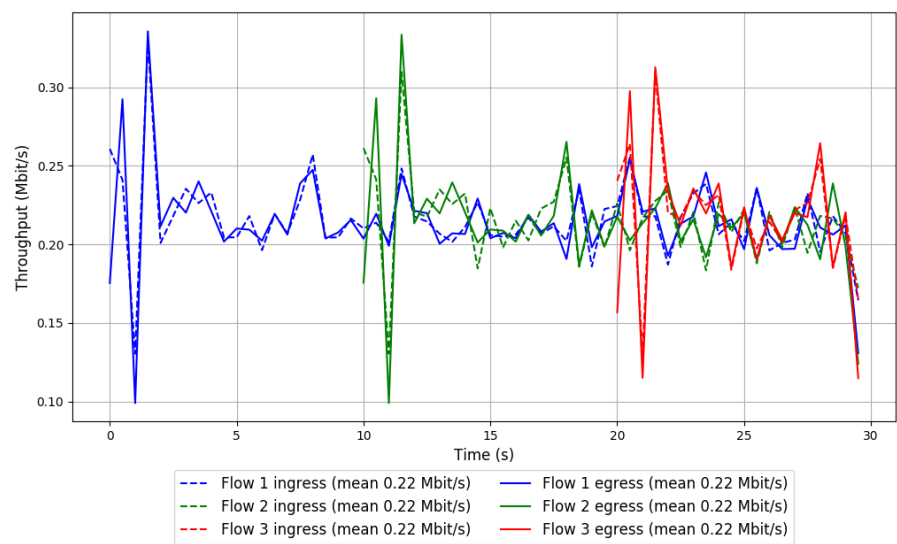
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.622 ms

Loss rate: 2.24%

Run 4: Report of SCSReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2018-02-28 10:34:46

End at: 2018-02-28 10:35:16

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.920 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 113.671 ms

Loss rate: 1.05%

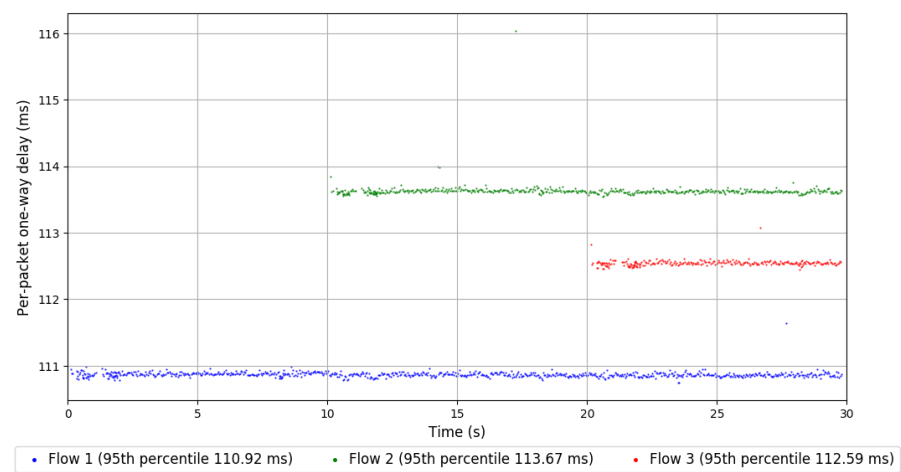
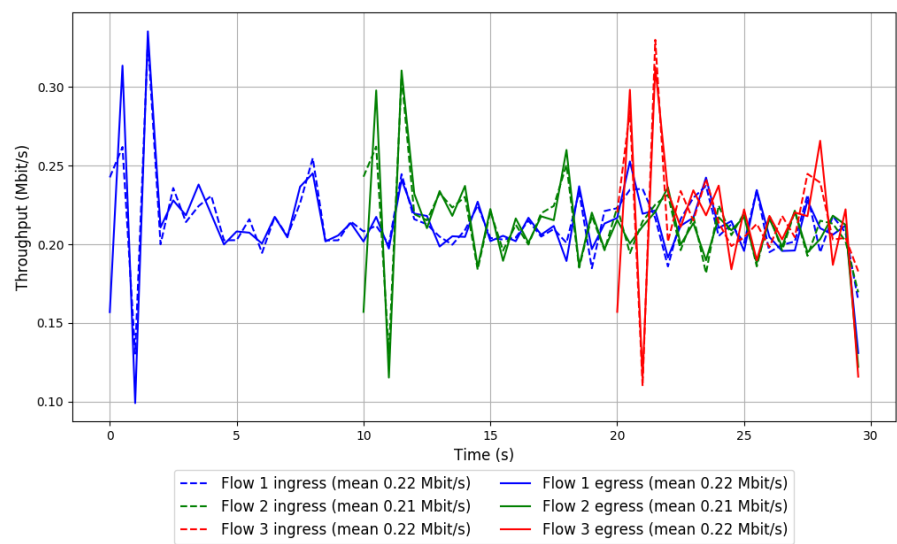
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 2.26%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SReAM

Start at: 2018-02-28 10:53:58

End at: 2018-02-28 10:54:28

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.952 ms

Loss rate: 1.06%

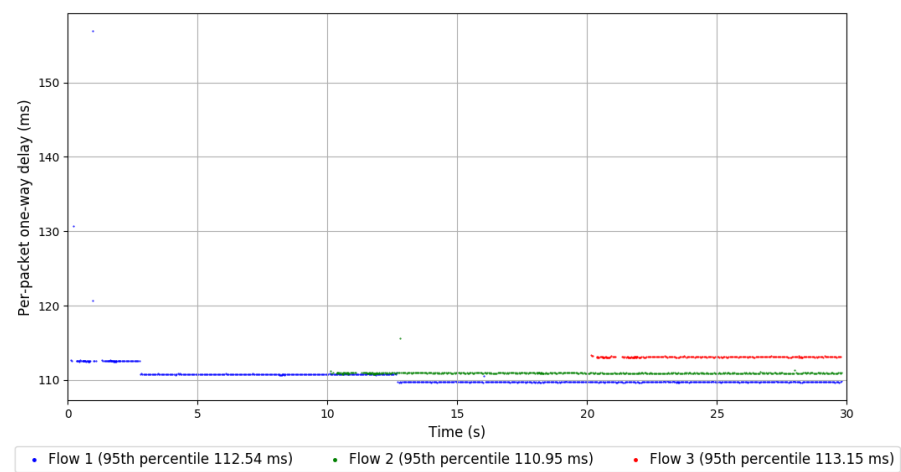
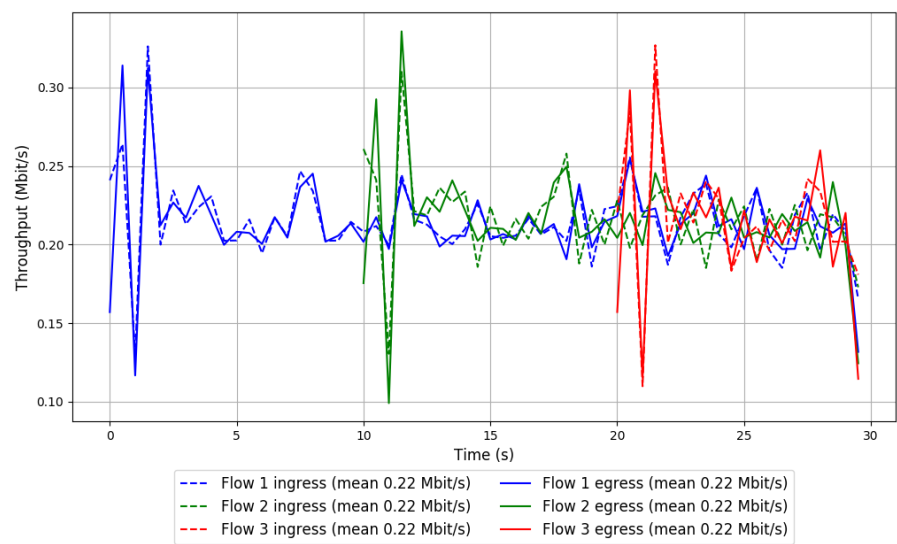
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.147 ms

Loss rate: 2.25%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2018-02-28 11:13:32

End at: 2018-02-28 11:14:02

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 112.620 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 110.095 ms

Loss rate: 0.52%

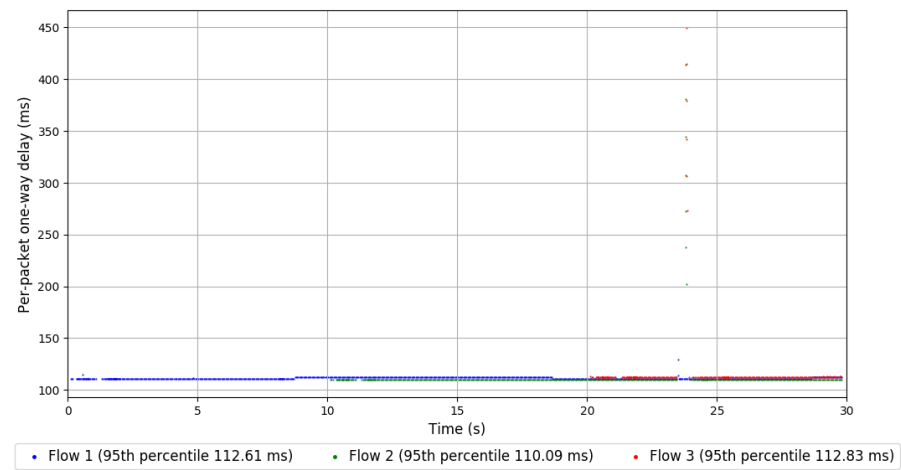
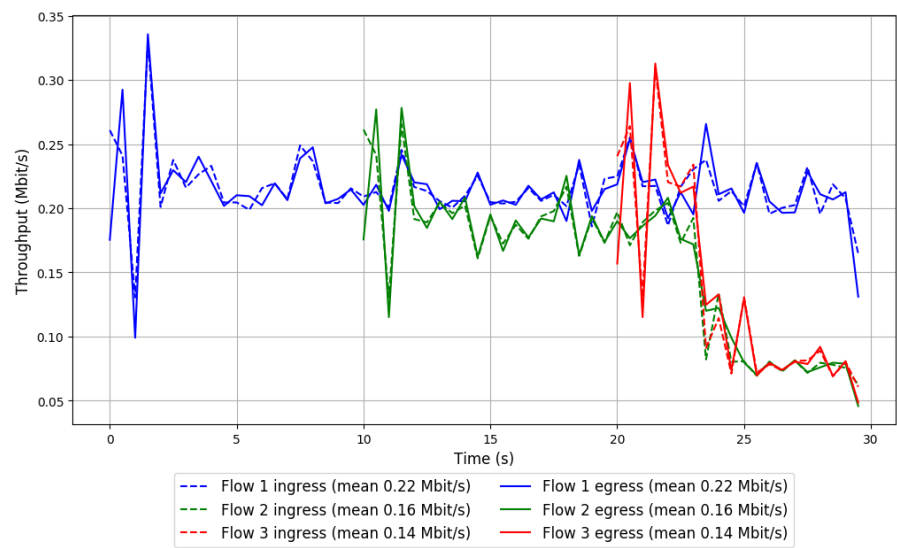
-- Flow 3:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 112.828 ms

Loss rate: 1.10%

Run 7: Report of SReAM — Data Link

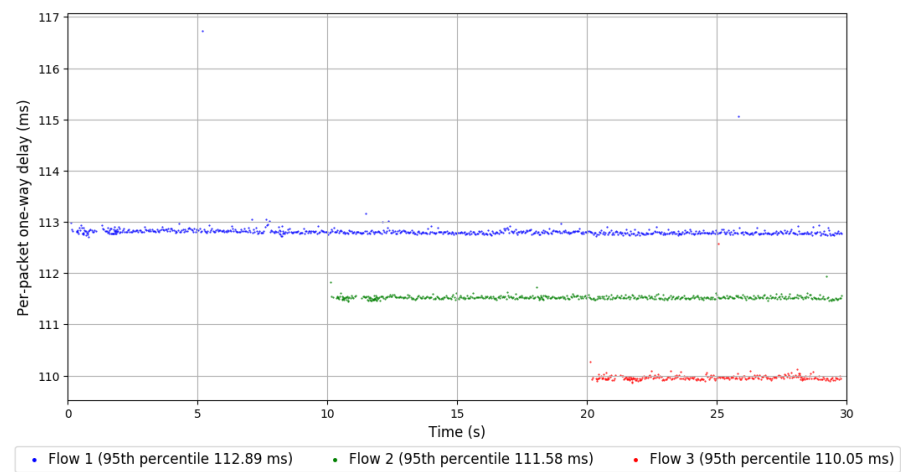
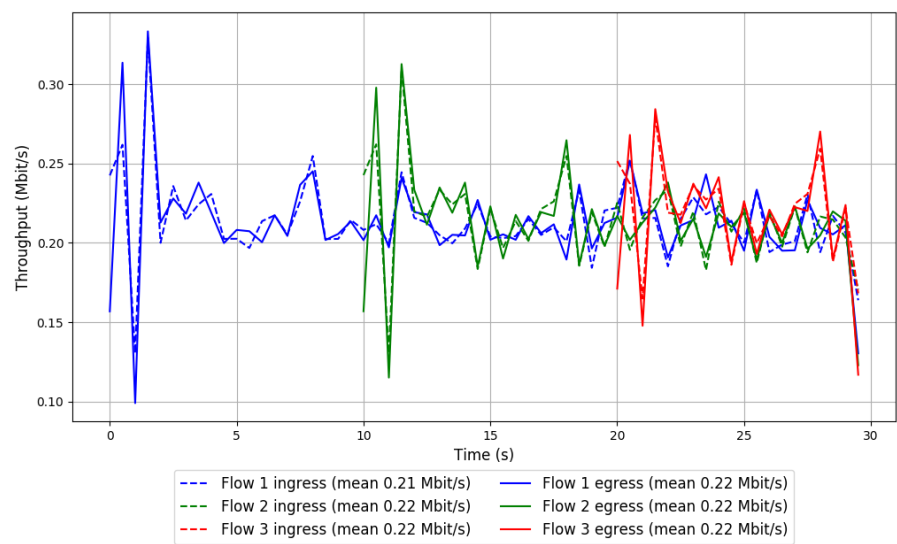


```
Run 8: Statistics of SCReAM

Start at: 2018-02-28 11:33:03
End at: 2018-02-28 11:33:33

# Below is generated by plot.py at 2018-02-28 16:15:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.858 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.889 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.577 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.046 ms
Loss rate: 2.27%
```

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2018-02-28 11:52:06

End at: 2018-02-28 11:52:36

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

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

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.578 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 0.22 Mbit/s

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

Loss rate: 1.05%

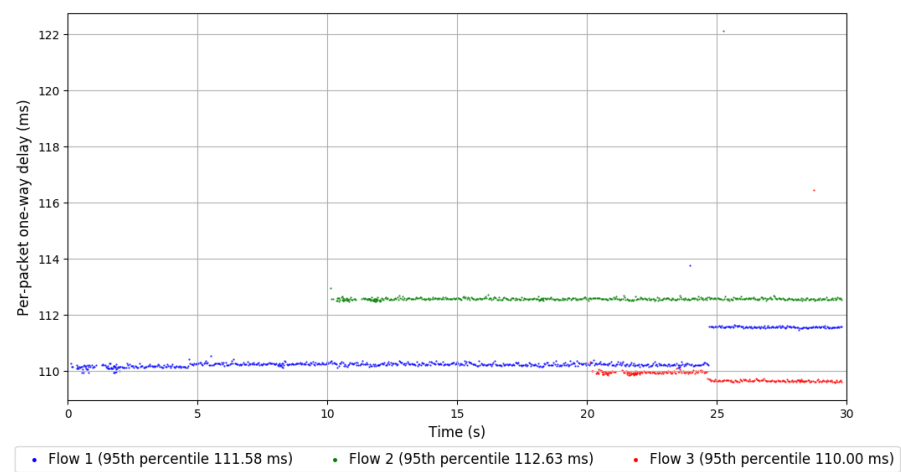
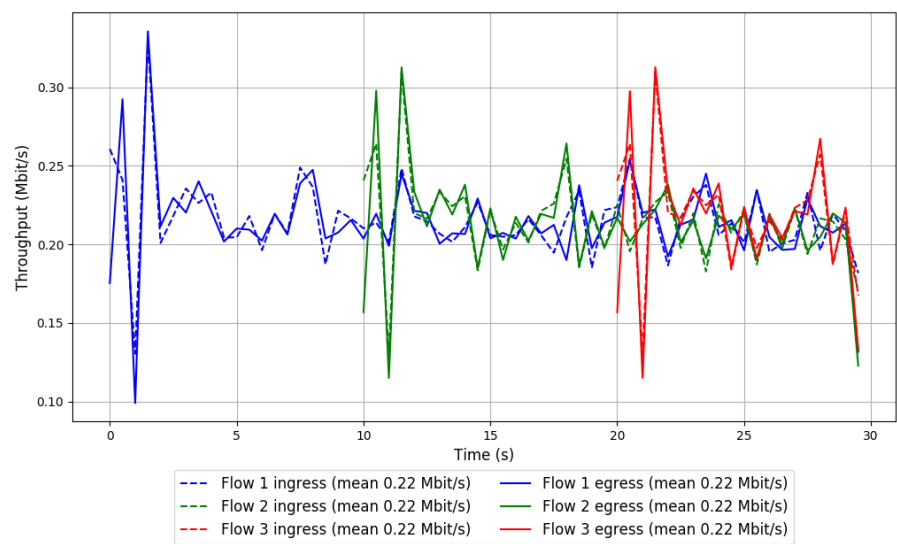
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.001 ms

Loss rate: 1.87%

Run 9: Report of SReAM — Data Link

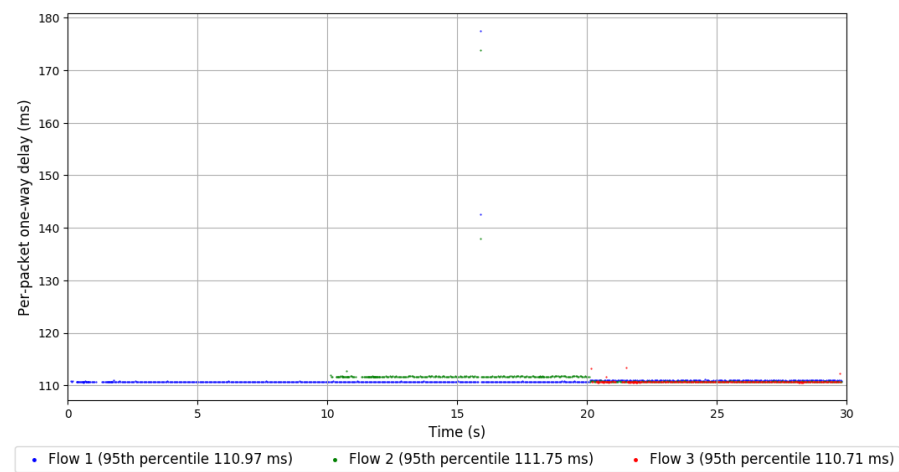
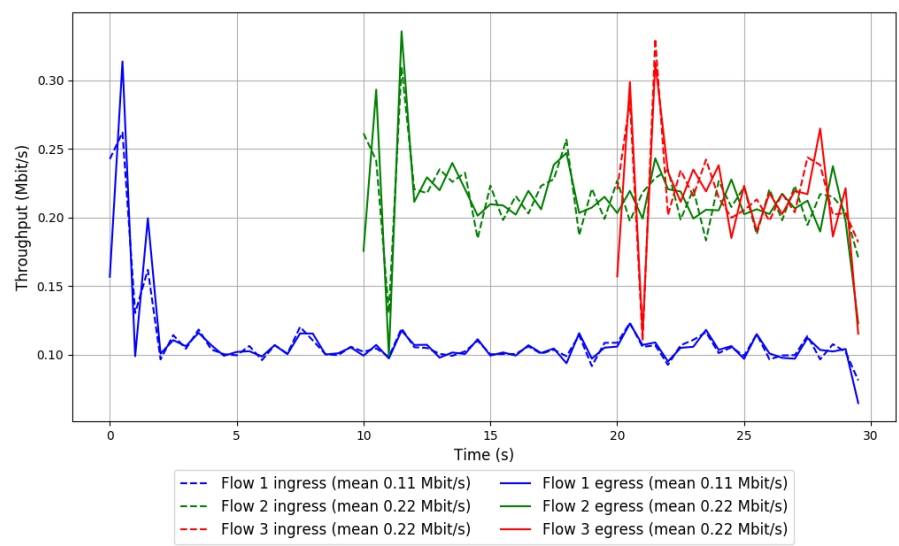


```
Run 10: Statistics of SCReAM

Start at: 2018-02-28 12:11:41
End at: 2018-02-28 12:12:11

# Below is generated by plot.py at 2018-02-28 16:15:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 111.713 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 110.968 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.751 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.711 ms
Loss rate: 2.25%
```

Run 10: Report of SReAM — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-02-28 09:08:51

End at: 2018-02-28 09:09:21

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 112.795 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 111.817 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 112.871 ms

Loss rate: 1.77%

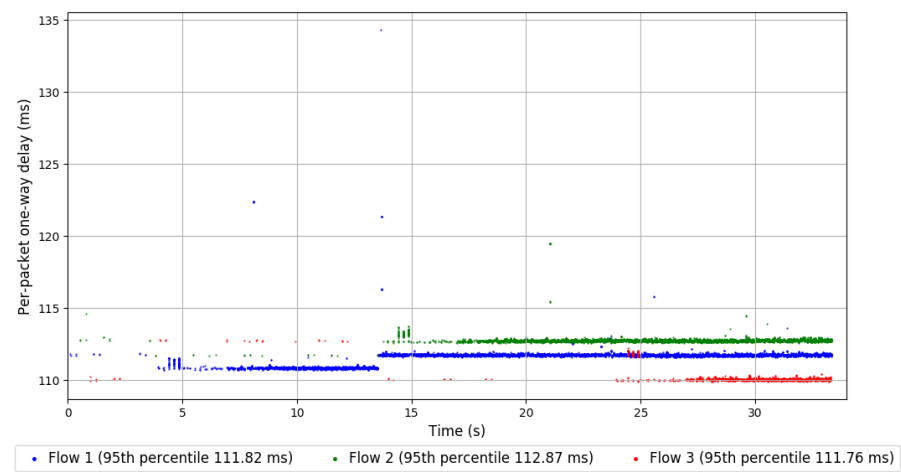
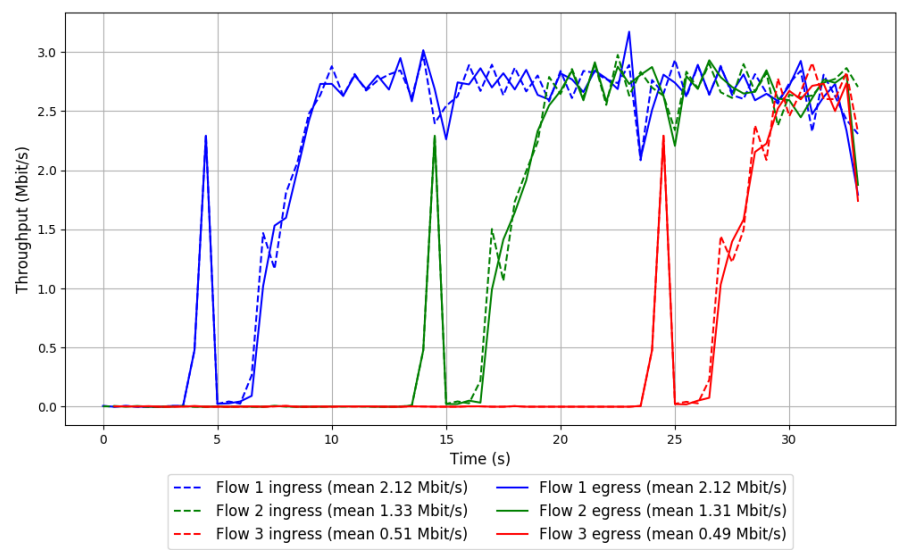
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 111.763 ms

Loss rate: 4.05%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-02-28 09:28:20

End at: 2018-02-28 09:28:50

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 111.988 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 2.11 Mbit/s

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

Loss rate: 0.88%

-- Flow 2:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 111.824 ms

Loss rate: 1.66%

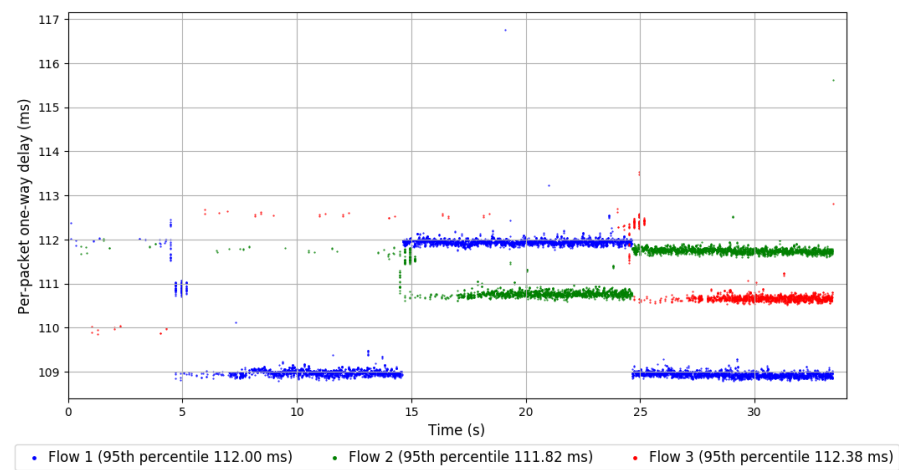
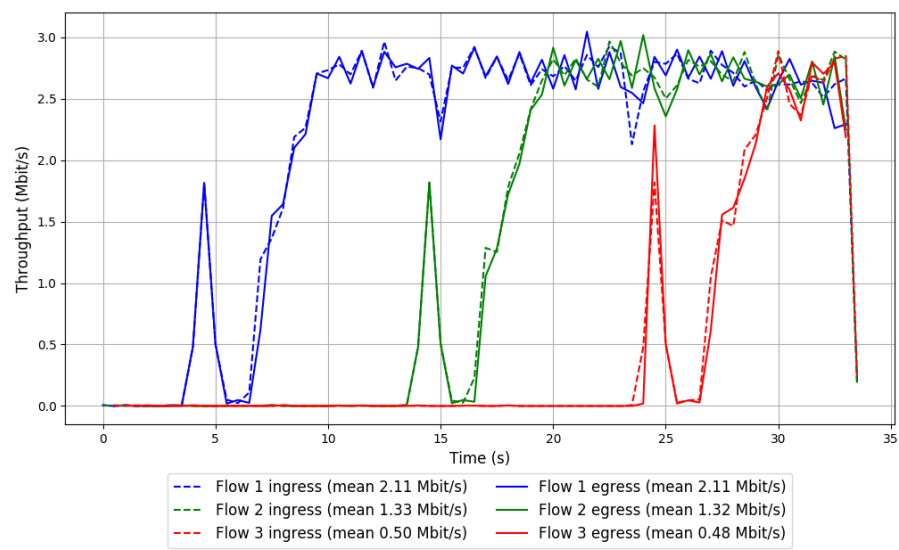
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 112.377 ms

Loss rate: 4.10%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-02-28 09:47:58

End at: 2018-02-28 09:48:28

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.90 Mbit/s

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

Loss rate: 1.50%

-- Flow 1:

Average throughput: 2.12 Mbit/s

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

Loss rate: 1.01%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 109.357 ms

Loss rate: 1.58%

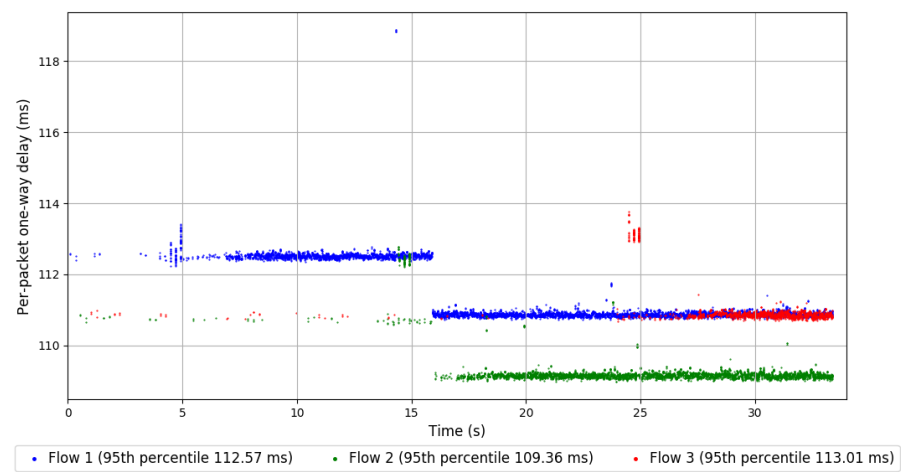
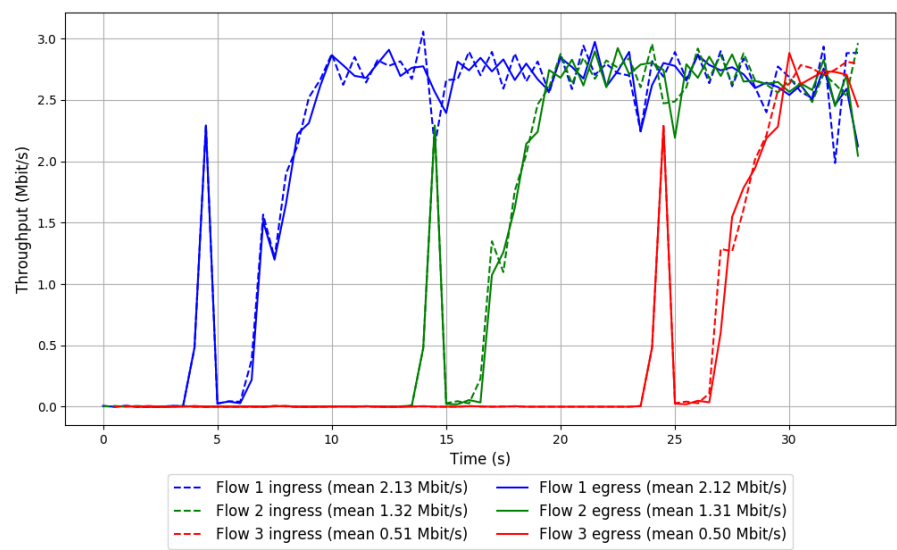
-- Flow 3:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 113.007 ms

Loss rate: 3.36%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-02-28 10:07:01

End at: 2018-02-28 10:07:31

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.86 Mbit/s

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

Loss rate: 1.82%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 114.580 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 1.30 Mbit/s

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

Loss rate: 1.95%

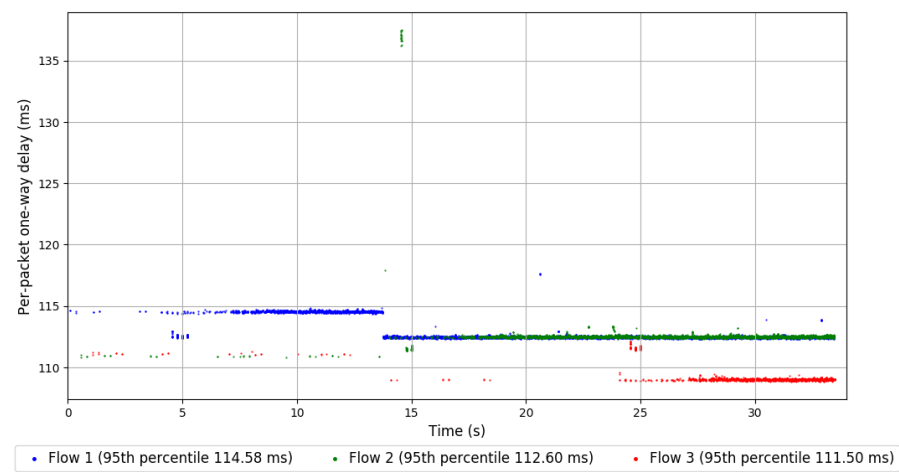
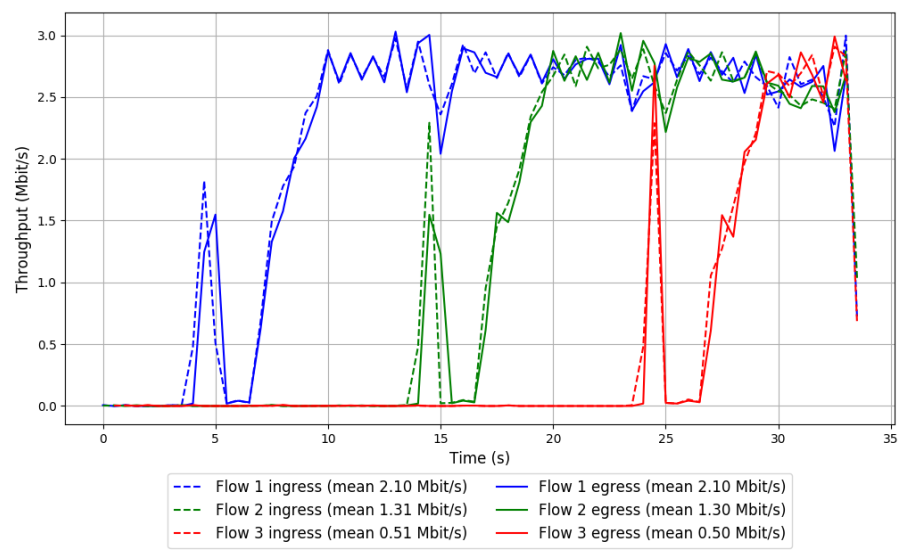
-- Flow 3:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 111.495 ms

Loss rate: 4.22%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-02-28 10:26:45

End at: 2018-02-28 10:27:15

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 112.723 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 2.10 Mbit/s

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

Loss rate: 0.85%

-- Flow 2:

Average throughput: 1.32 Mbit/s

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

Loss rate: 1.70%

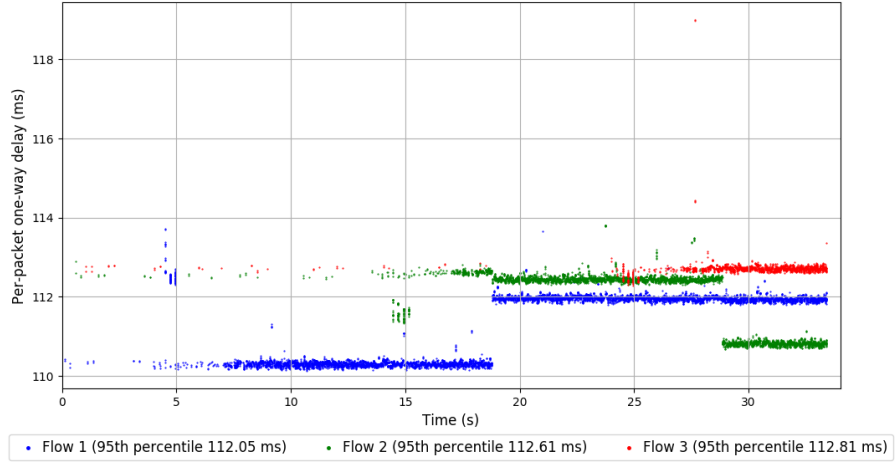
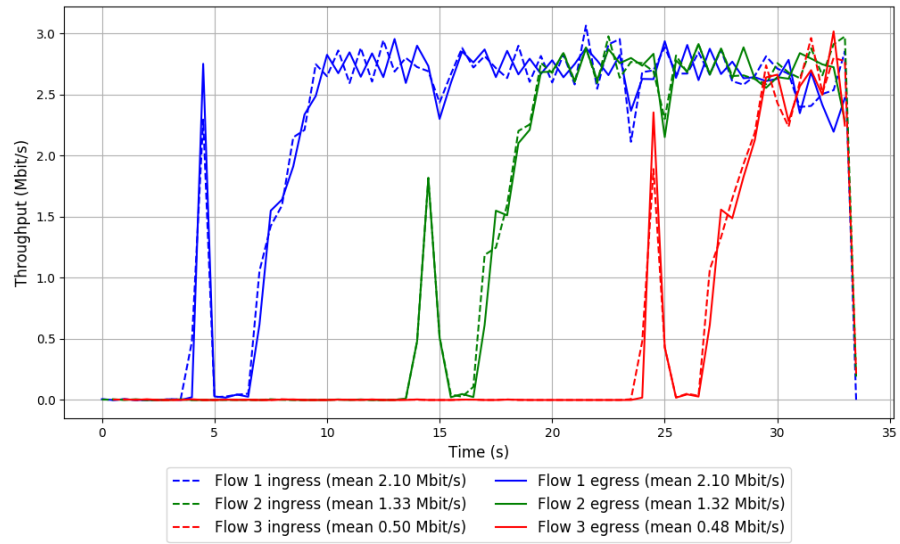
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 112.805 ms

Loss rate: 3.81%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-02-28 10:45:58

End at: 2018-02-28 10:46:28

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 112.353 ms

Loss rate: 1.60%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 111.811 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 110.801 ms

Loss rate: 1.94%

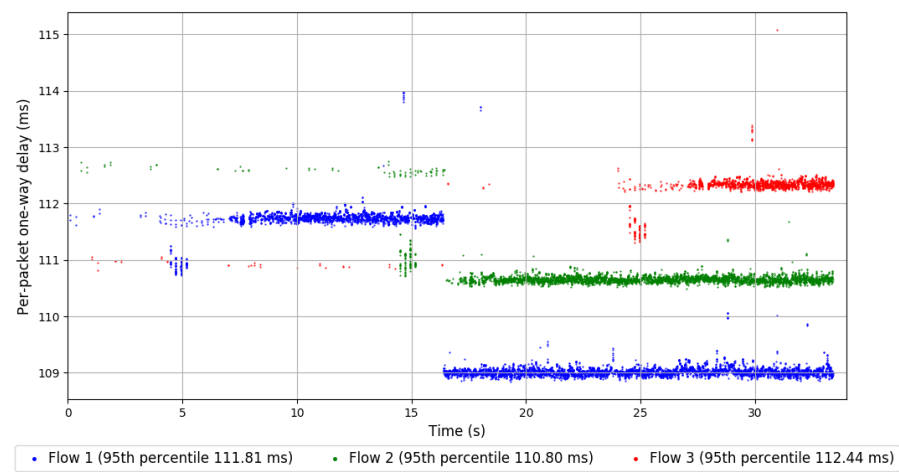
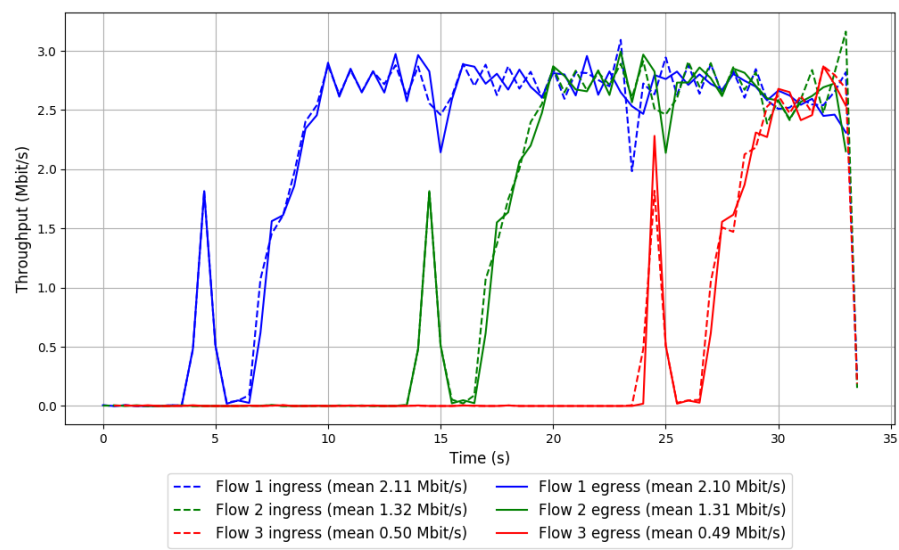
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 112.441 ms

Loss rate: 3.27%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-02-28 11:05:22

End at: 2018-02-28 11:05:52

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.86 Mbit/s

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

Loss rate: 1.61%

-- Flow 1:

Average throughput: 2.10 Mbit/s

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

Loss rate: 1.01%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 114.554 ms

Loss rate: 1.68%

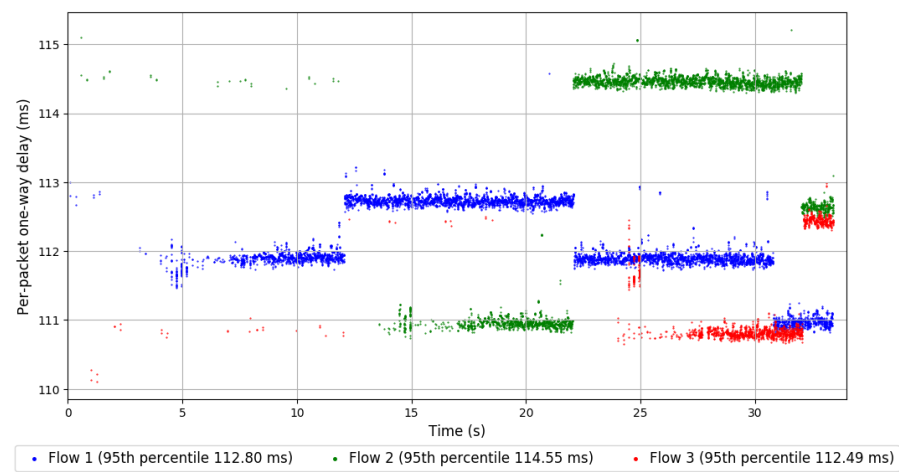
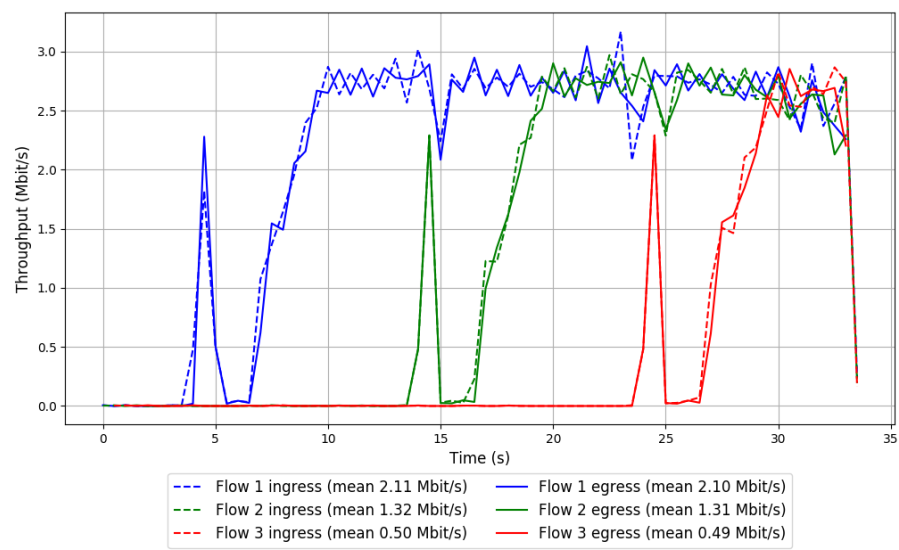
-- Flow 3:

Average throughput: 0.49 Mbit/s

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

Loss rate: 3.99%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-02-28 11:24:49

End at: 2018-02-28 11:25:19

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 114.075 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 112.840 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 112.765 ms

Loss rate: 1.79%

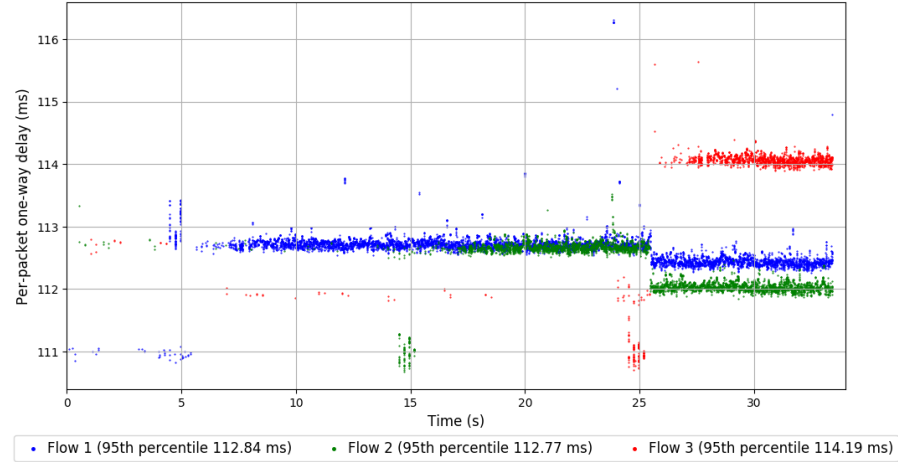
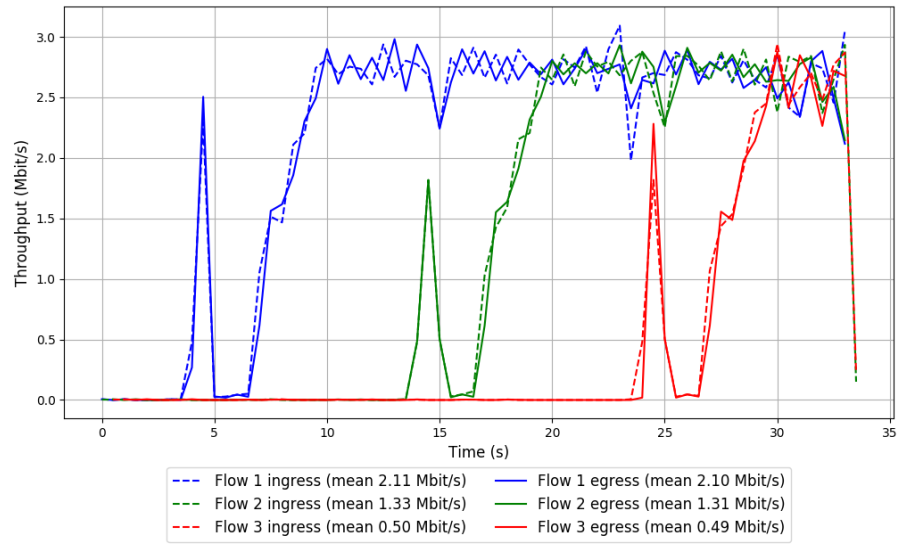
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 114.186 ms

Loss rate: 3.49%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-02-28 11:44:01

End at: 2018-02-28 11:44:31

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.87 Mbit/s

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

Loss rate: 1.46%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 112.137 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 1.32 Mbit/s

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

Loss rate: 1.43%

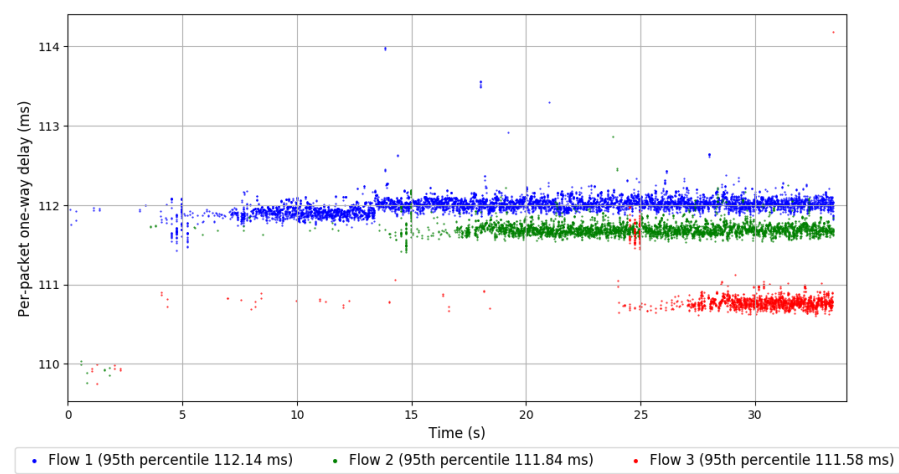
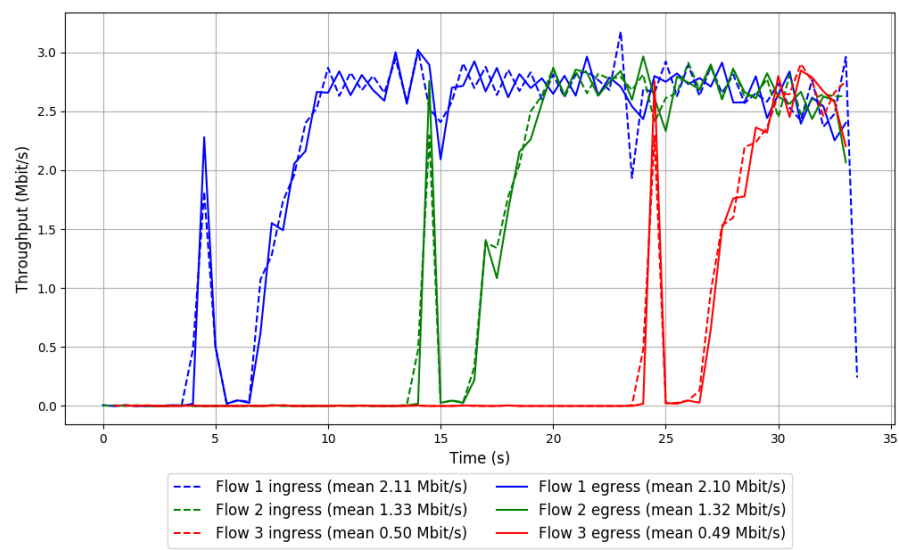
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 111.578 ms

Loss rate: 3.42%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-02-28 12:03:35

End at: 2018-02-28 12:04:05

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.85 Mbit/s

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

Loss rate: 1.56%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 111.541 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 111.812 ms

Loss rate: 1.05%

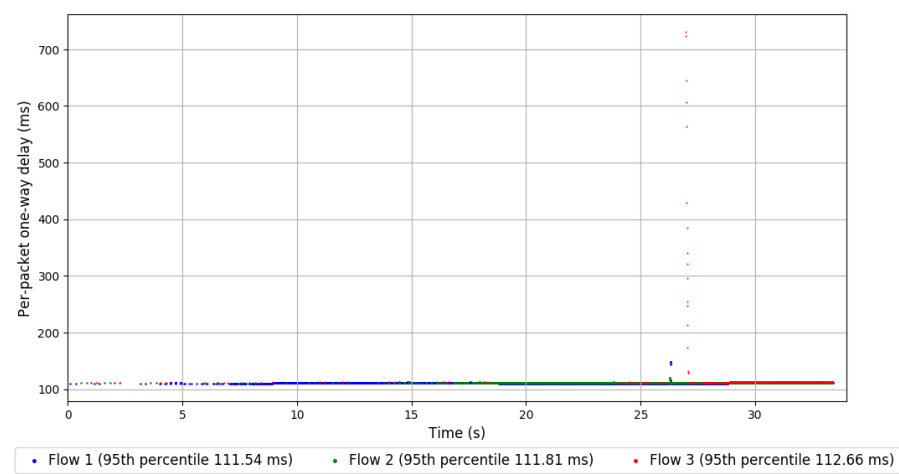
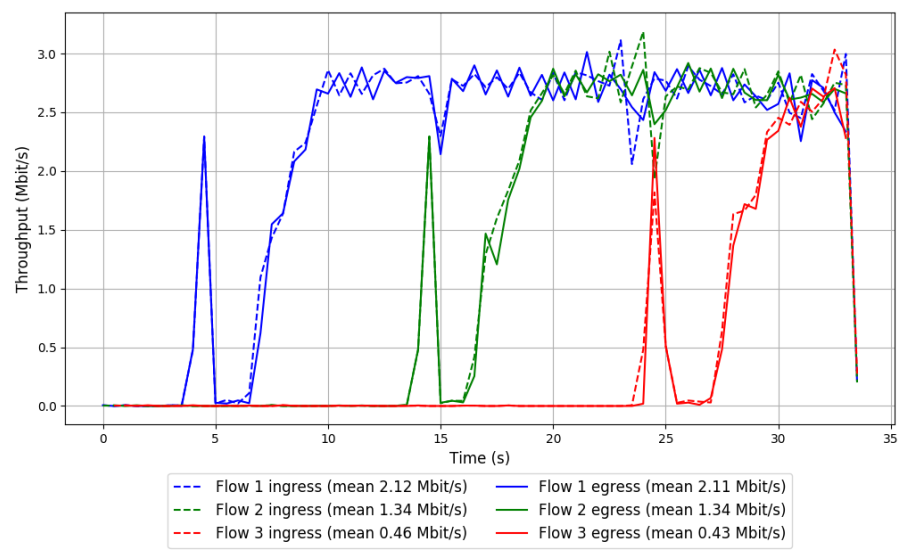
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.657 ms

Loss rate: 5.33%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-02-28 09:05:50

End at: 2018-02-28 09:06:20

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.58 Mbit/s

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

Loss rate: 1.92%

-- Flow 1:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 112.989 ms

Loss rate: 1.28%

-- Flow 2:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 112.269 ms

Loss rate: 2.06%

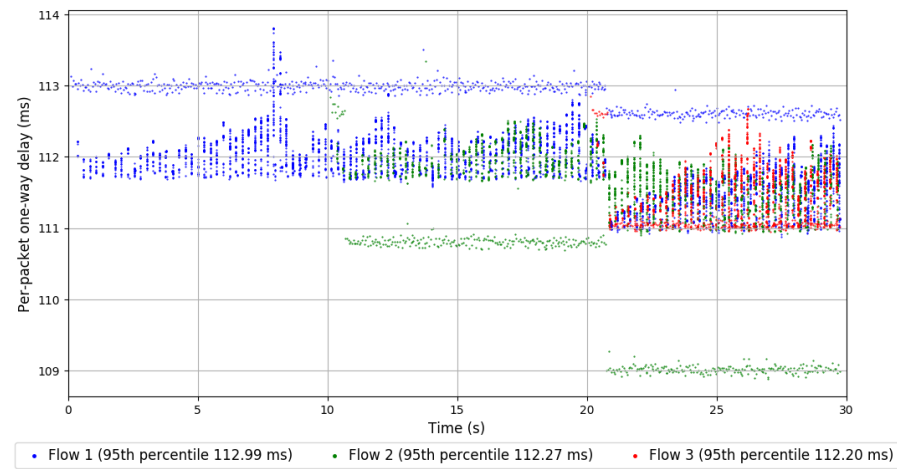
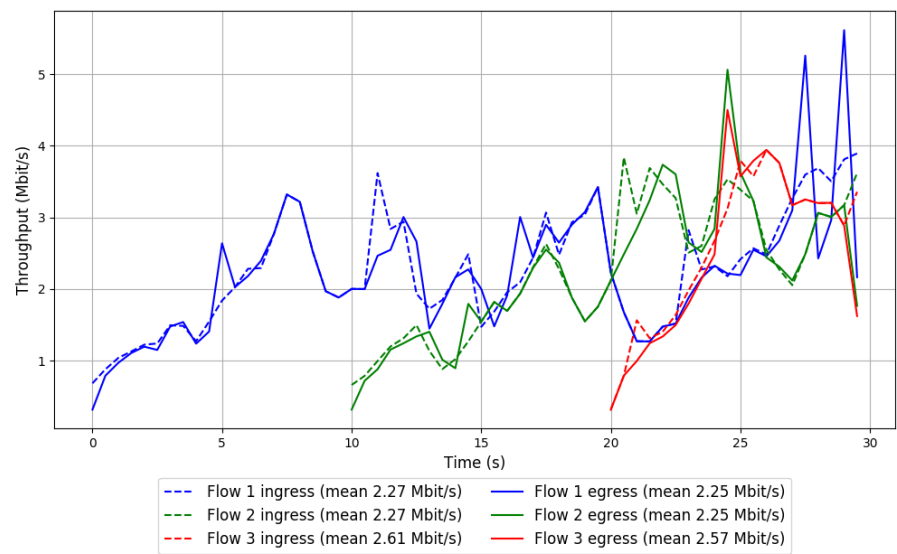
-- Flow 3:

Average throughput: 2.57 Mbit/s

95th percentile per-packet one-way delay: 112.196 ms

Loss rate: 3.39%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-02-28 09:25:11

End at: 2018-02-28 09:25:41

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.27 Mbit/s

95th percentile per-packet one-way delay: 114.080 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 3.10 Mbit/s

95th percentile per-packet one-way delay: 113.999 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 2.53 Mbit/s

95th percentile per-packet one-way delay: 114.376 ms

Loss rate: 0.94%

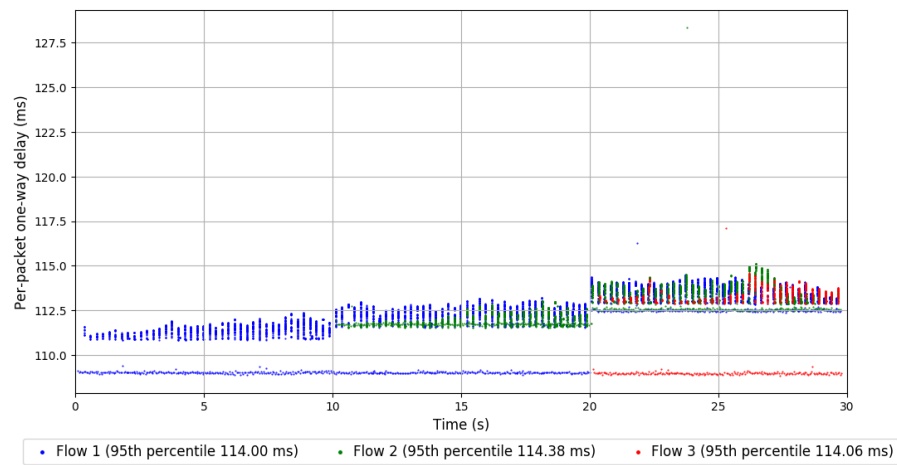
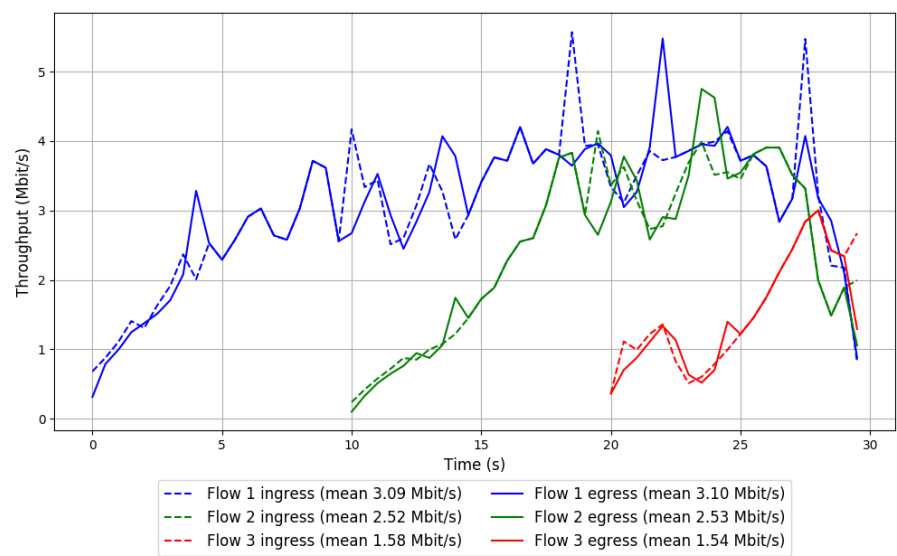
-- Flow 3:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 114.057 ms

Loss rate: 4.45%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-02-28 09:44:57

End at: 2018-02-28 09:45:27

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.15 Mbit/s

95th percentile per-packet one-way delay: 113.381 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 1.96 Mbit/s

95th percentile per-packet one-way delay: 113.234 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 2.60 Mbit/s

95th percentile per-packet one-way delay: 113.508 ms

Loss rate: 1.52%

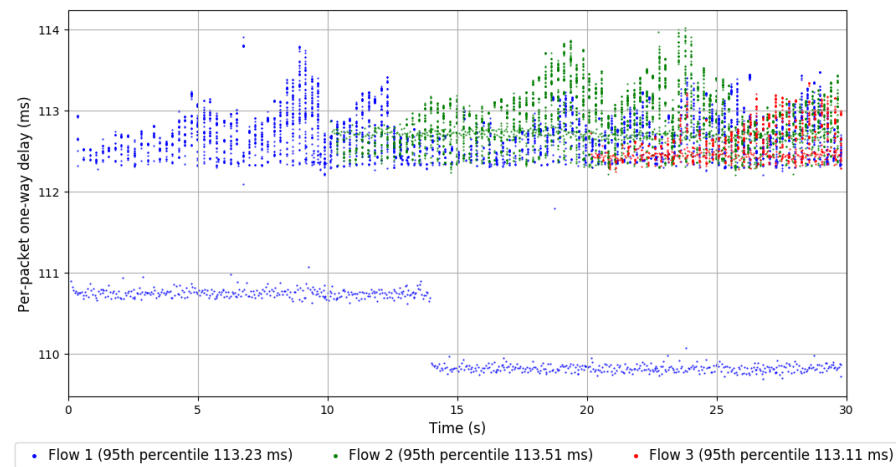
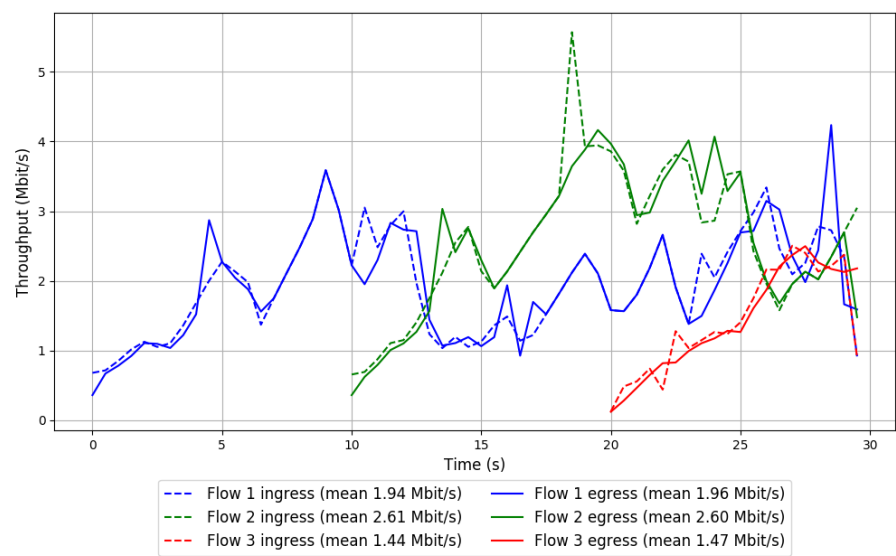
-- Flow 3:

Average throughput: 1.47 Mbit/s

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

Loss rate: 0.13%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-02-28 10:04:00

End at: 2018-02-28 10:04:30

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.00 Mbit/s

95th percentile per-packet one-way delay: 113.553 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 1.81 Mbit/s

95th percentile per-packet one-way delay: 113.265 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 2.26 Mbit/s

95th percentile per-packet one-way delay: 113.667 ms

Loss rate: 1.48%

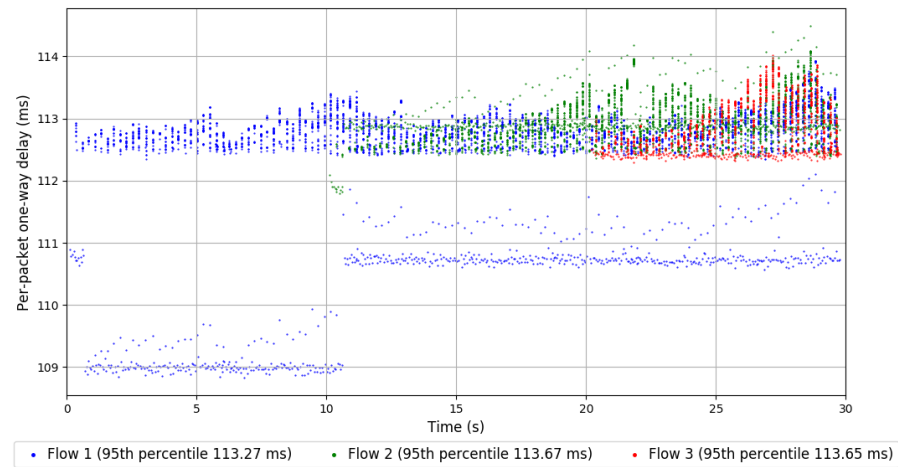
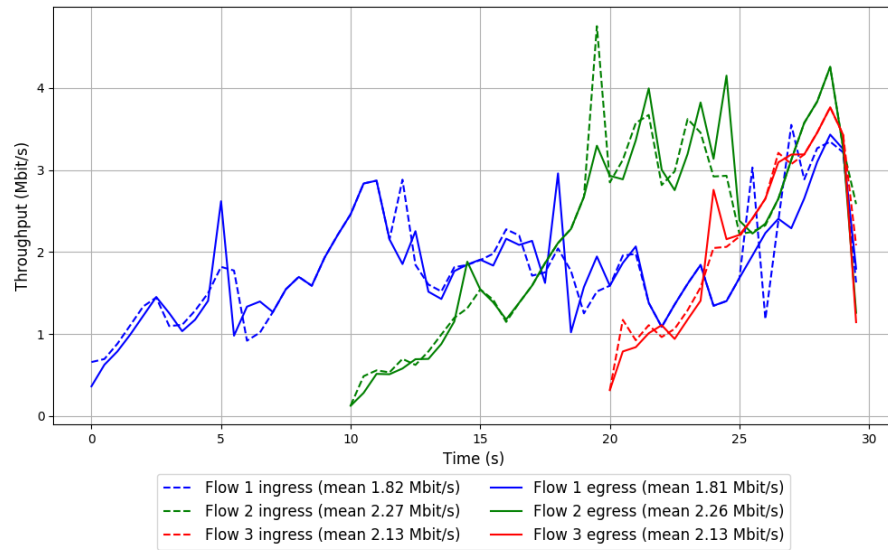
-- Flow 3:

Average throughput: 2.13 Mbit/s

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

Loss rate: 2.24%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-02-28 10:23:43

End at: 2018-02-28 10:24:13

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.23 Mbit/s

95th percentile per-packet one-way delay: 113.665 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 113.733 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 1.88 Mbit/s

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

Loss rate: 1.31%

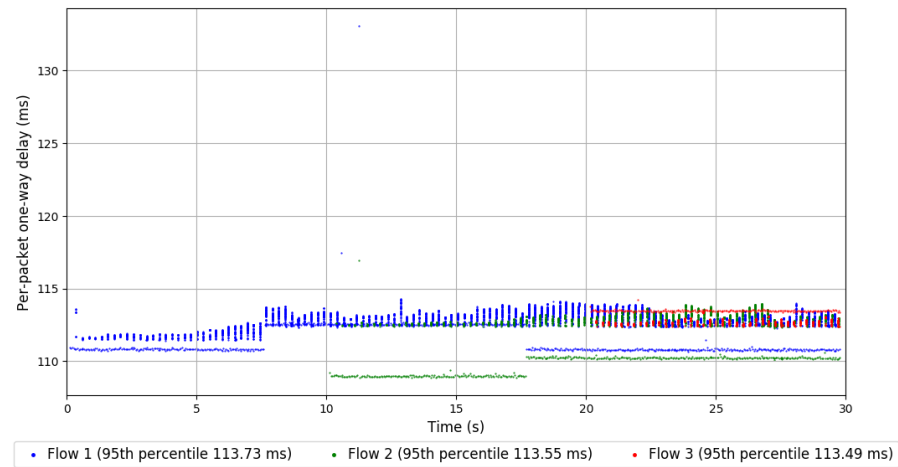
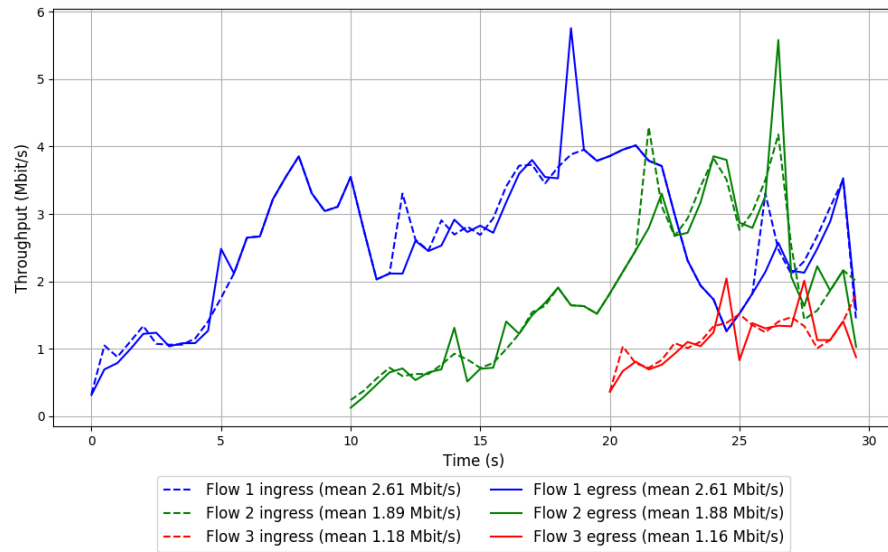
-- Flow 3:

Average throughput: 1.16 Mbit/s

95th percentile per-packet one-way delay: 113.486 ms

Loss rate: 4.03%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-02-28 10:43:01

End at: 2018-02-28 10:43:31

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.46 Mbit/s

95th percentile per-packet one-way delay: 113.159 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 113.285 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 2.60 Mbit/s

95th percentile per-packet one-way delay: 112.692 ms

Loss rate: 1.36%

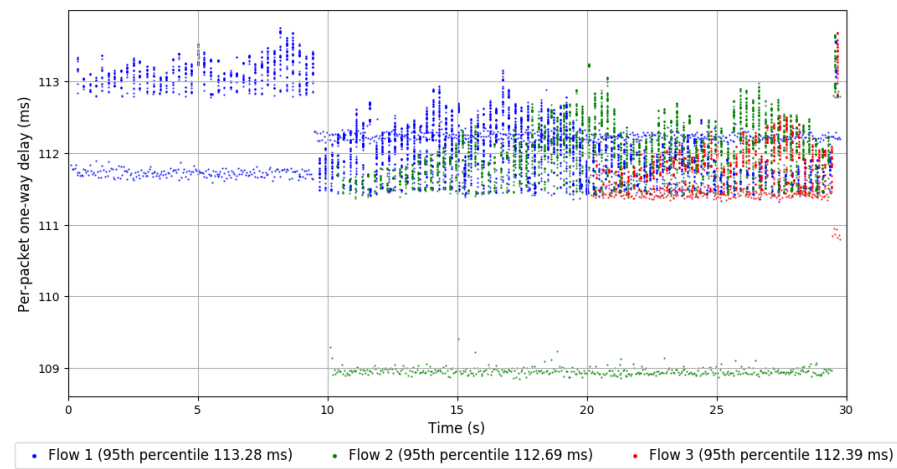
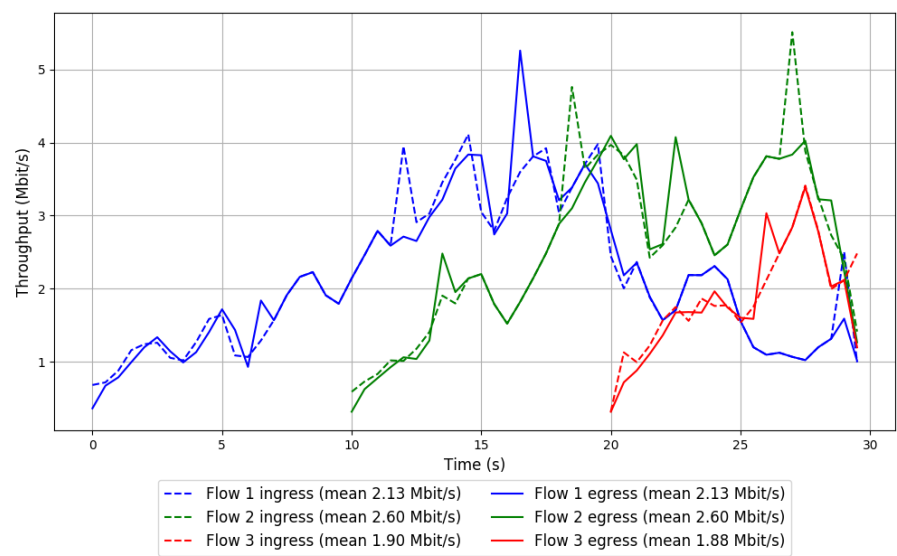
-- Flow 3:

Average throughput: 1.88 Mbit/s

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

Loss rate: 3.44%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-02-28 11:02:16

End at: 2018-02-28 11:02:46

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.22 Mbit/s

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

Loss rate: 0.91%

-- Flow 1:

Average throughput: 2.77 Mbit/s

95th percentile per-packet one-way delay: 112.721 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 2.95 Mbit/s

95th percentile per-packet one-way delay: 112.647 ms

Loss rate: 1.42%

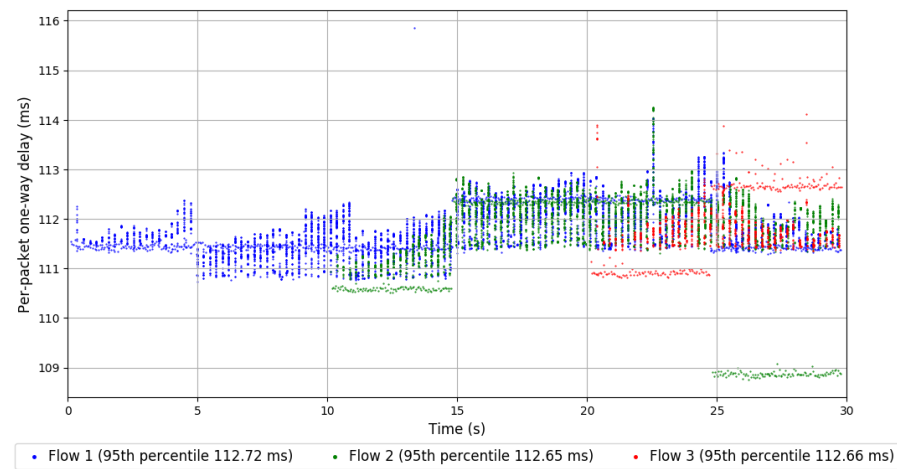
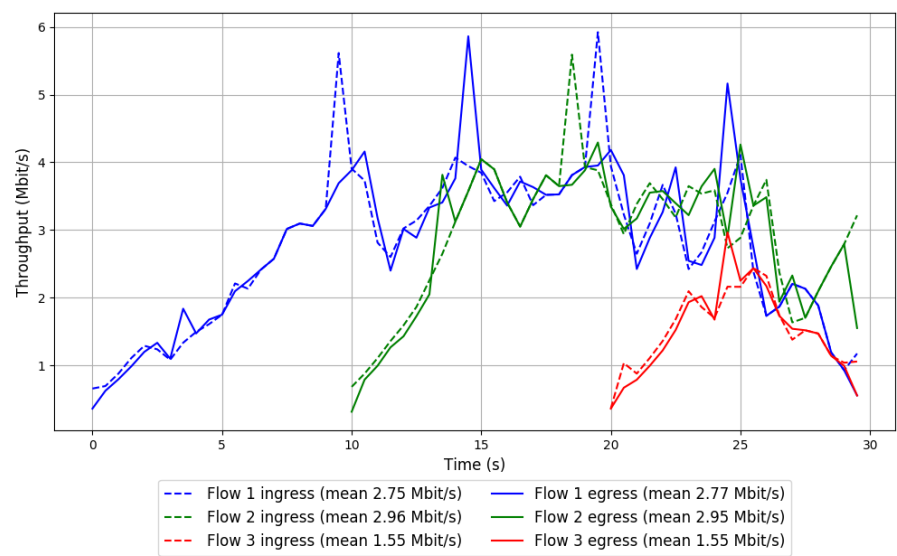
-- Flow 3:

Average throughput: 1.55 Mbit/s

95th percentile per-packet one-way delay: 112.662 ms

Loss rate: 1.81%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-02-28 11:21:50

End at: 2018-02-28 11:22:20

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.63 Mbit/s

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

Loss rate: 2.21%

-- Flow 1:

Average throughput: 1.90 Mbit/s

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

Loss rate: 1.06%

-- Flow 2:

Average throughput: 1.79 Mbit/s

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

Loss rate: 2.48%

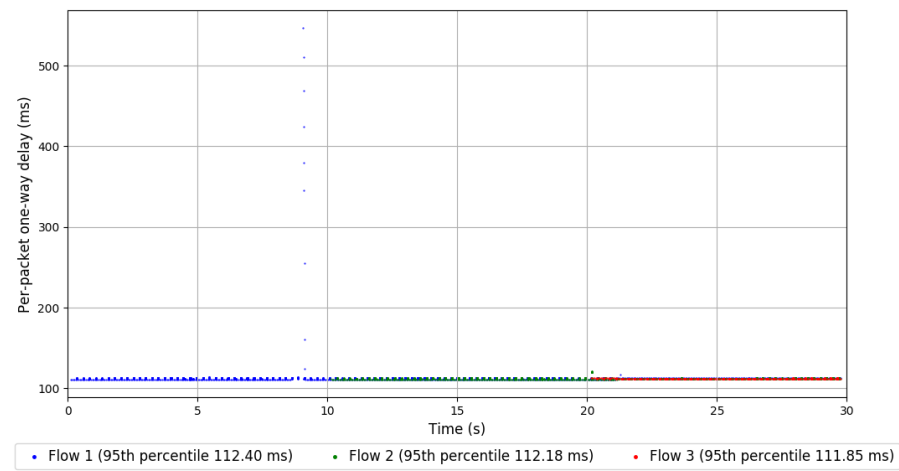
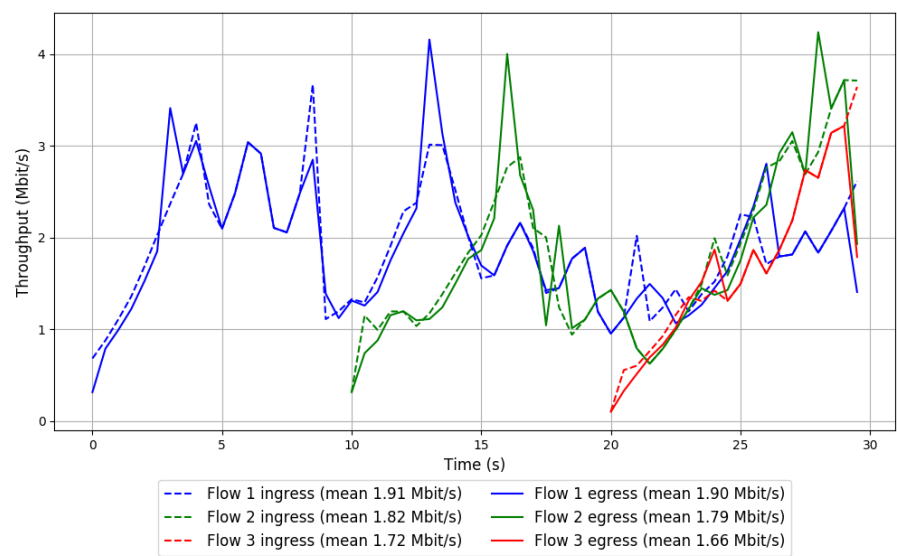
-- Flow 3:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 111.854 ms

Loss rate: 5.48%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-02-28 11:40:58

End at: 2018-02-28 11:41:28

Below is generated by plot.py at 2018-02-28 16:15:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.78 Mbit/s

95th percentile per-packet one-way delay: 113.611 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 2.70 Mbit/s

95th percentile per-packet one-way delay: 113.660 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 2.48 Mbit/s

95th percentile per-packet one-way delay: 113.600 ms

Loss rate: 1.26%

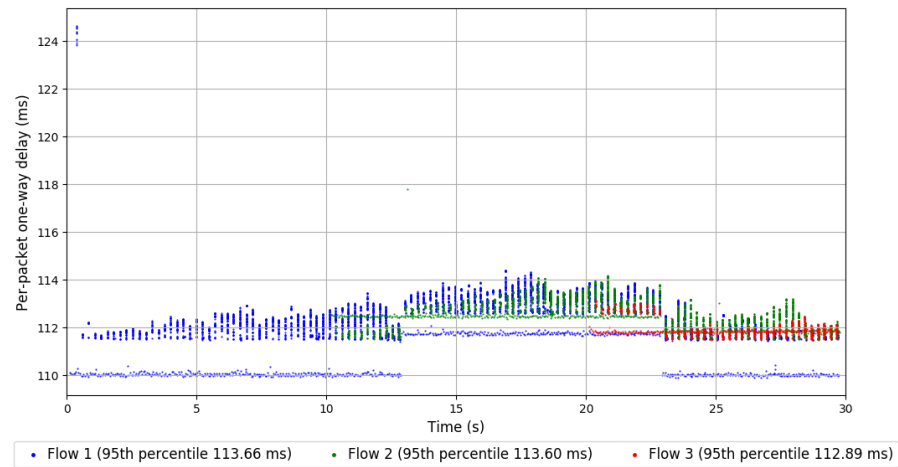
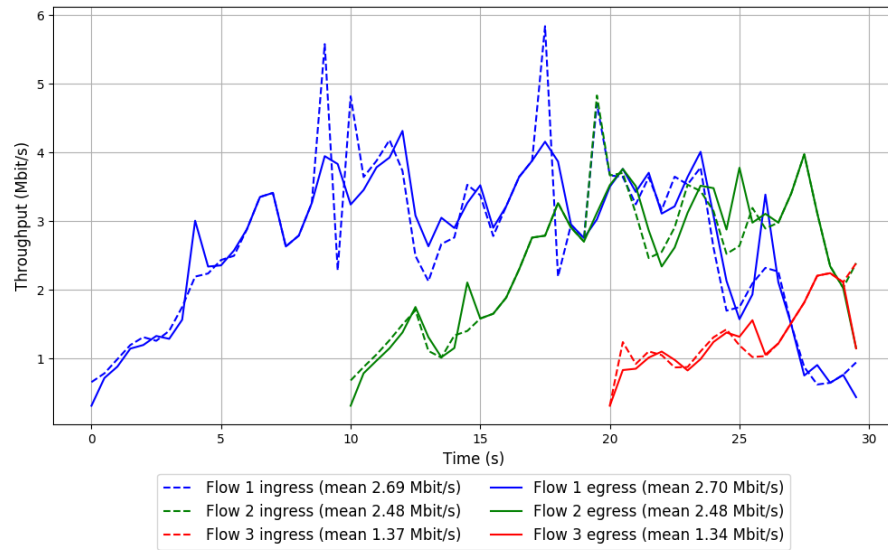
-- Flow 3:

Average throughput: 1.34 Mbit/s

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

Loss rate: 4.60%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-02-28 12:00:35

End at: 2018-02-28 12:01:05

Below is generated by plot.py at 2018-02-28 16:15:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.81 Mbit/s

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

Loss rate: 1.61%

-- Flow 1:

Average throughput: 2.73 Mbit/s

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

Loss rate: 0.83%

-- Flow 2:

Average throughput: 2.48 Mbit/s

95th percentile per-packet one-way delay: 112.480 ms

Loss rate: 1.84%

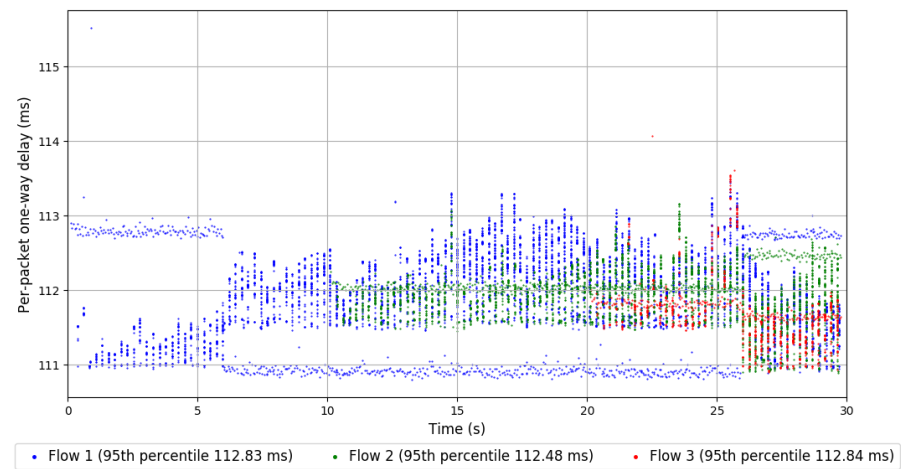
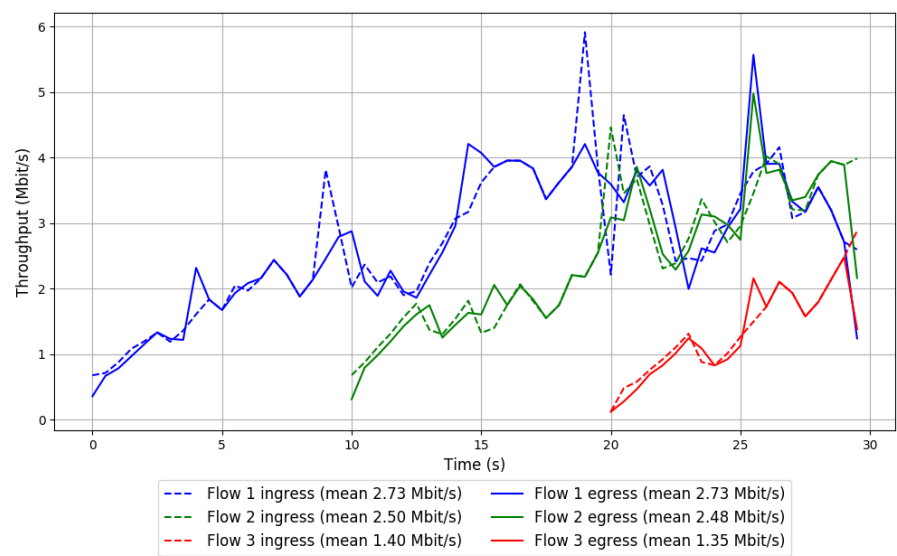
-- Flow 3:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 112.840 ms

Loss rate: 5.47%

Run 10: Report of Sprout — Data Link

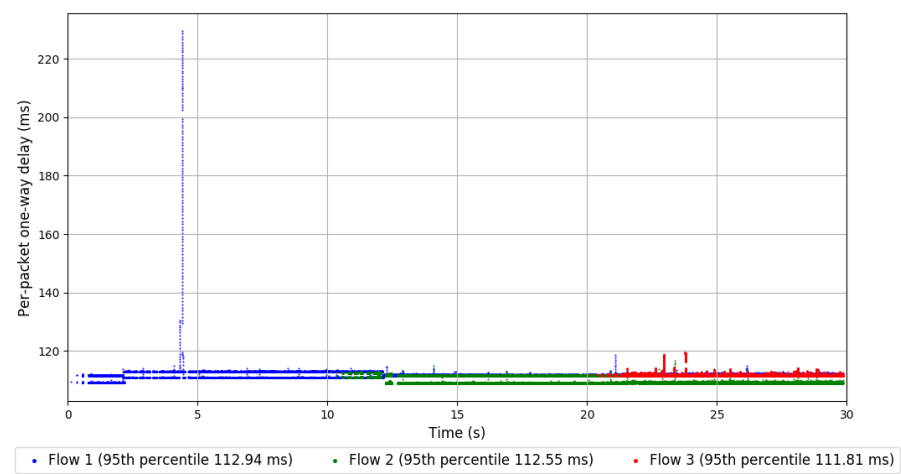
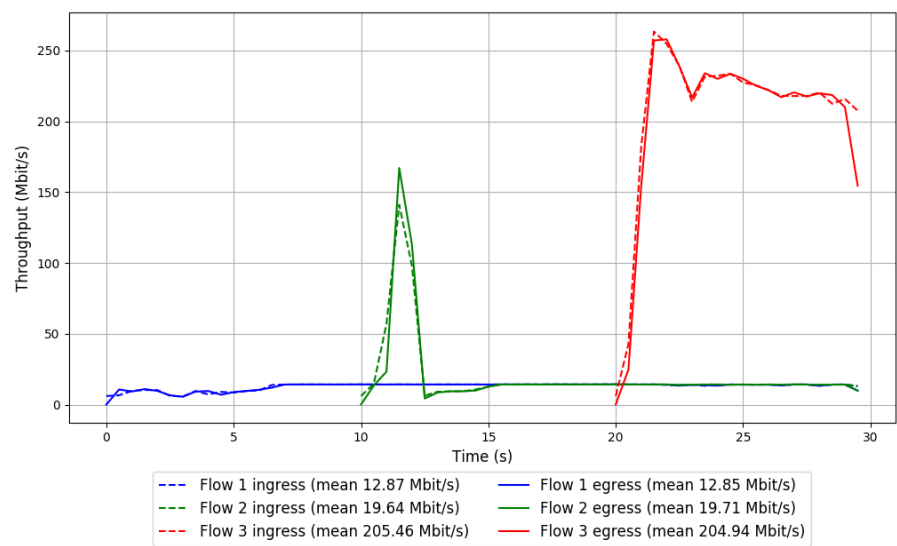


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-02-28 09:10:48
End at: 2018-02-28 09:11:18

# Below is generated by plot.py at 2018-02-28 16:15:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.87 Mbit/s
95th percentile per-packet one-way delay: 112.207 ms
Loss rate: 2.03%
-- Flow 1:
Average throughput: 12.85 Mbit/s
95th percentile per-packet one-way delay: 112.938 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 19.71 Mbit/s
95th percentile per-packet one-way delay: 112.549 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 204.94 Mbit/s
95th percentile per-packet one-way delay: 111.807 ms
Loss rate: 2.49%
```


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

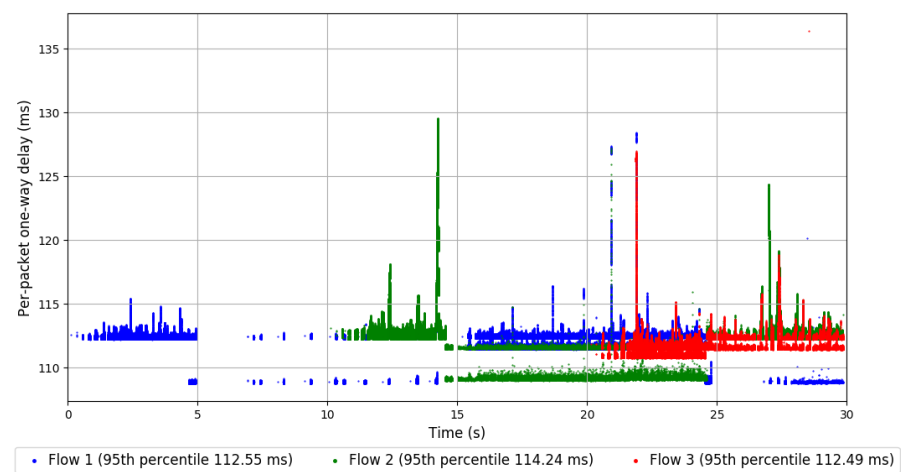
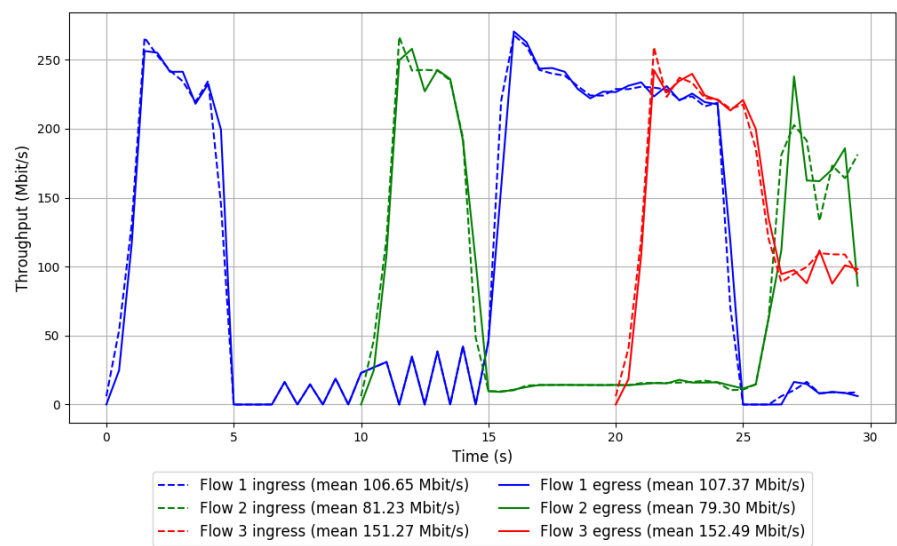


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-02-28 09:30:16
End at: 2018-02-28 09:30:46

# Below is generated by plot.py at 2018-02-28 16:18:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 209.79 Mbit/s
95th percentile per-packet one-way delay: 112.903 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 107.37 Mbit/s
95th percentile per-packet one-way delay: 112.547 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 79.30 Mbit/s
95th percentile per-packet one-way delay: 114.243 ms
Loss rate: 3.41%
-- Flow 3:
Average throughput: 152.49 Mbit/s
95th percentile per-packet one-way delay: 112.489 ms
Loss rate: 1.44%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-02-28 09:49:55

End at: 2018-02-28 09:50:25

Below is generated by plot.py at 2018-02-28 16:18:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 123.69 Mbit/s

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

Loss rate: 1.70%

-- Flow 1:

Average throughput: 14.70 Mbit/s

95th percentile per-packet one-way delay: 112.380 ms

Loss rate: 2.05%

-- Flow 2:

Average throughput: 59.89 Mbit/s

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

Loss rate: 0.31%

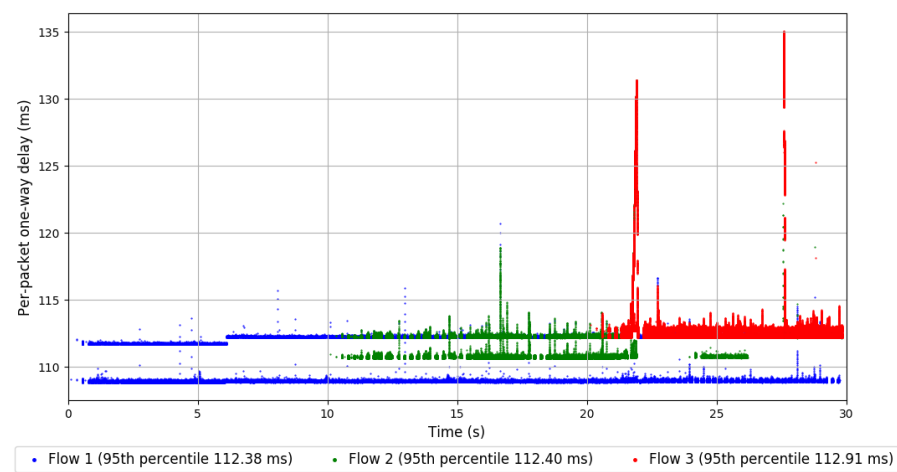
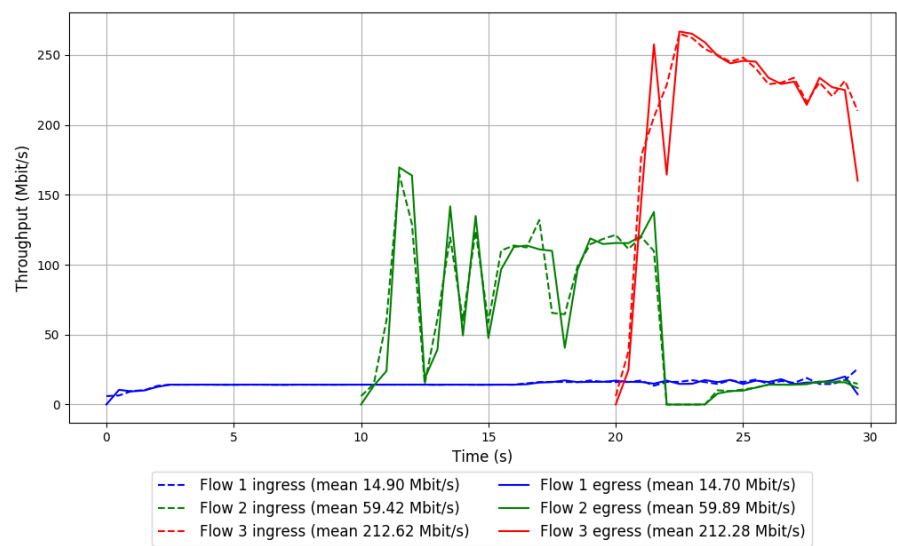
-- Flow 3:

Average throughput: 212.28 Mbit/s

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

Loss rate: 2.41%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-02-28 10:08:57

End at: 2018-02-28 10:09:27

Below is generated by plot.py at 2018-02-28 16:19:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 253.67 Mbit/s

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

Loss rate: 0.64%

-- Flow 1:

Average throughput: 216.12 Mbit/s

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

Loss rate: 0.54%

-- Flow 2:

Average throughput: 42.76 Mbit/s

95th percentile per-packet one-way delay: 112.567 ms

Loss rate: 0.17%

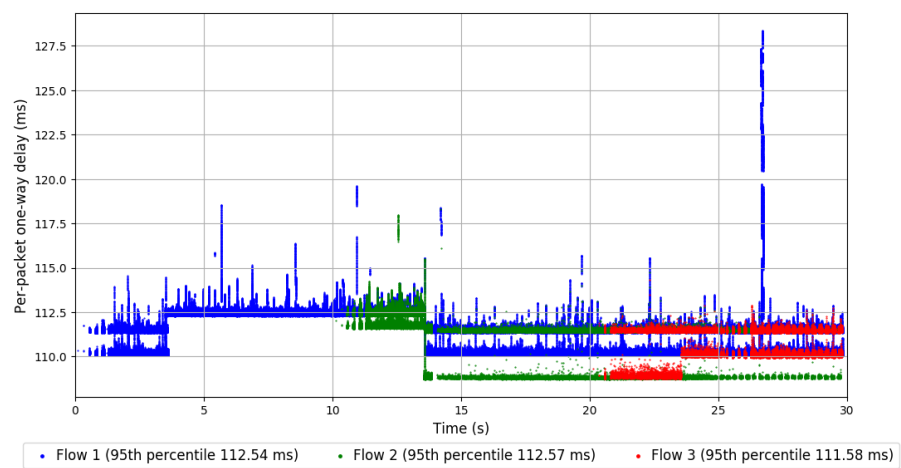
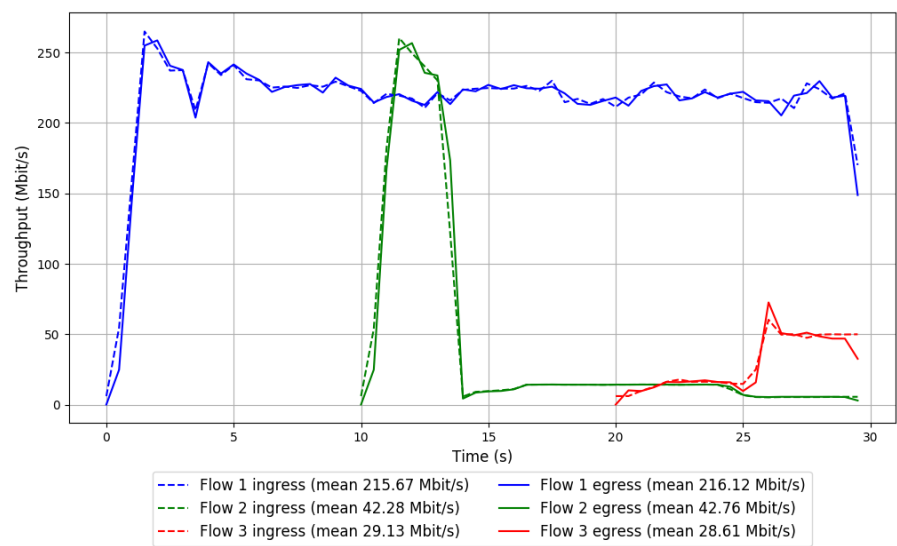
-- Flow 3:

Average throughput: 28.61 Mbit/s

95th percentile per-packet one-way delay: 111.576 ms

Loss rate: 4.31%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-02-28 10:28:43

End at: 2018-02-28 10:29:13

Below is generated by plot.py at 2018-02-28 16:19:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.30 Mbit/s

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

Loss rate: 0.48%

-- Flow 1:

Average throughput: 17.05 Mbit/s

95th percentile per-packet one-way delay: 112.826 ms

Loss rate: 2.12%

-- Flow 2:

Average throughput: 113.93 Mbit/s

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

Loss rate: 0.07%

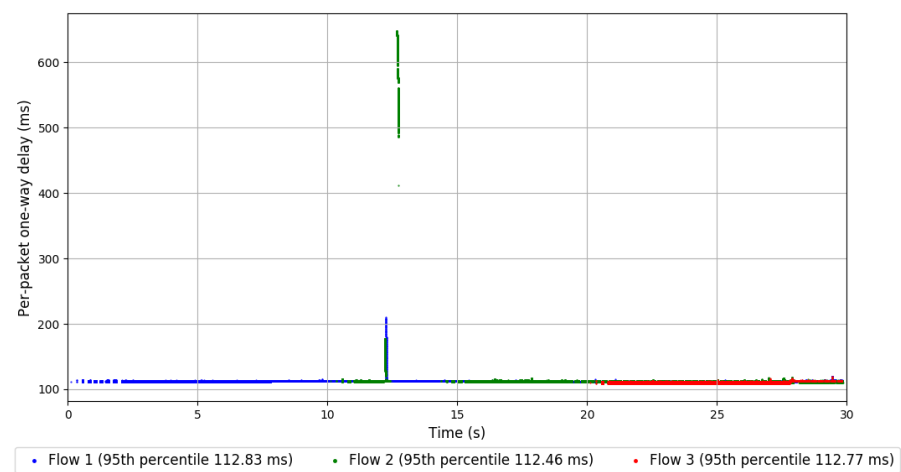
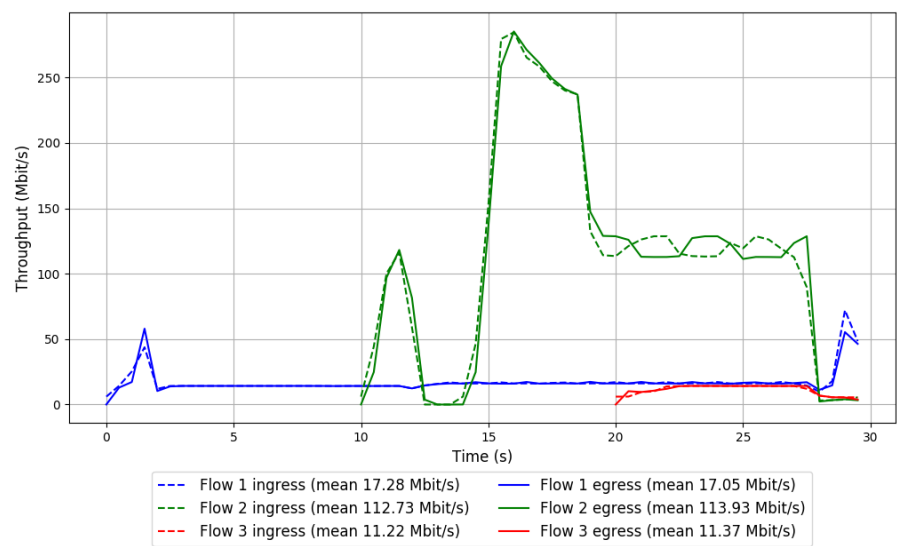
-- Flow 3:

Average throughput: 11.37 Mbit/s

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

Loss rate: 1.24%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-02-28 10:47:55

End at: 2018-02-28 10:48:25

Below is generated by plot.py at 2018-02-28 16:19:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.89 Mbit/s

95th percentile per-packet one-way delay: 112.547 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 43.11 Mbit/s

95th percentile per-packet one-way delay: 111.616 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 11.33 Mbit/s

95th percentile per-packet one-way delay: 114.810 ms

Loss rate: 0.62%

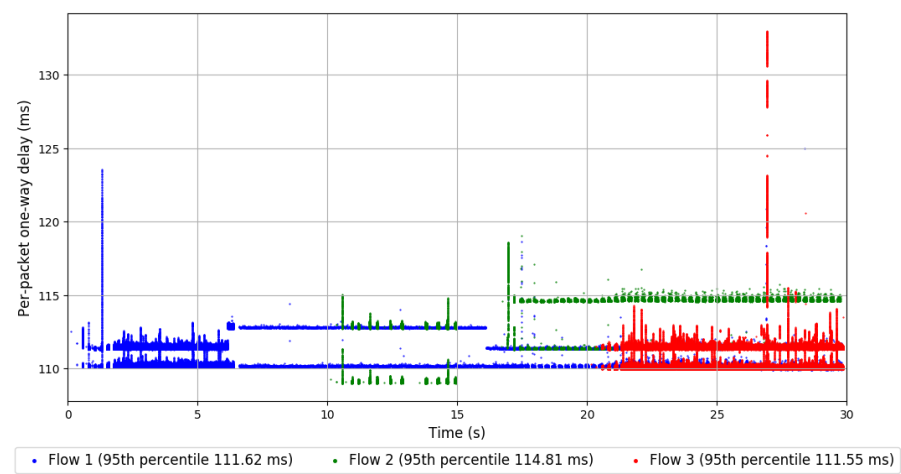
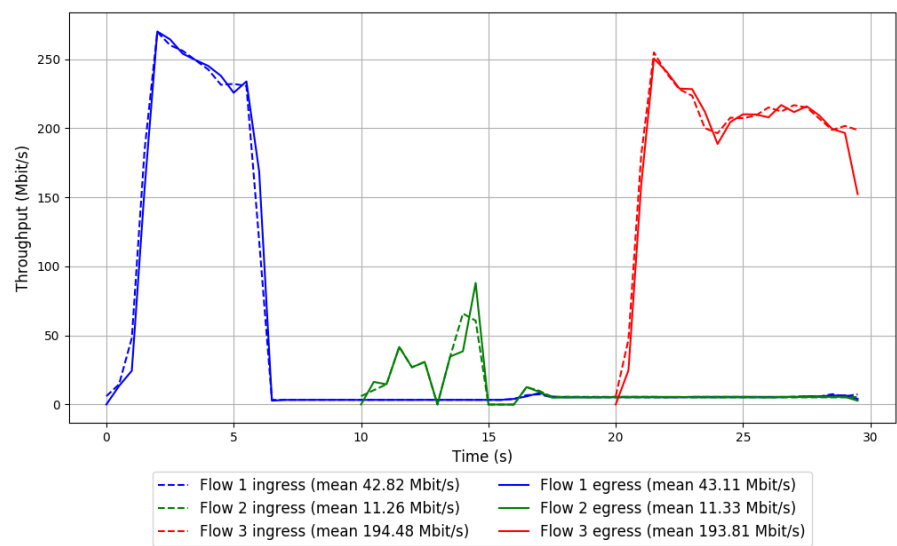
-- Flow 3:

Average throughput: 193.81 Mbit/s

95th percentile per-packet one-way delay: 111.546 ms

Loss rate: 2.54%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-02-28 11:07:19

End at: 2018-02-28 11:07:49

Below is generated by plot.py at 2018-02-28 16:20:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 195.65 Mbit/s

95th percentile per-packet one-way delay: 112.740 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 175.46 Mbit/s

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

Loss rate: 0.24%

-- Flow 2:

Average throughput: 5.63 Mbit/s

95th percentile per-packet one-way delay: 112.877 ms

Loss rate: 0.93%

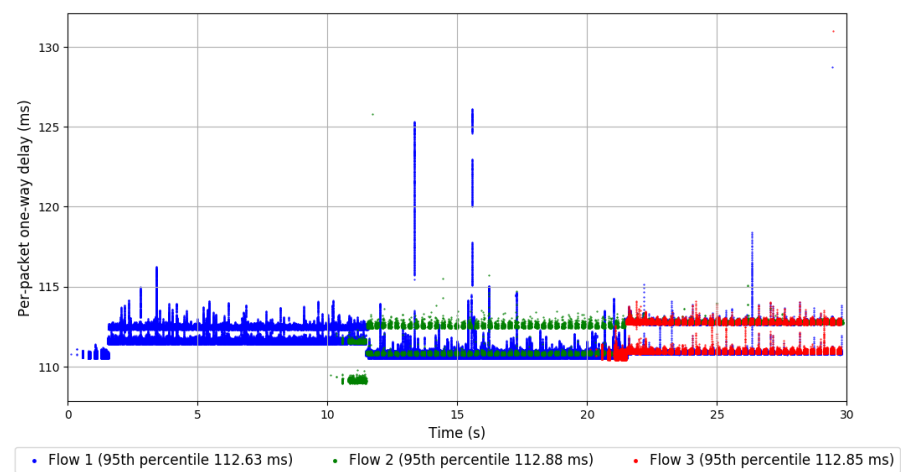
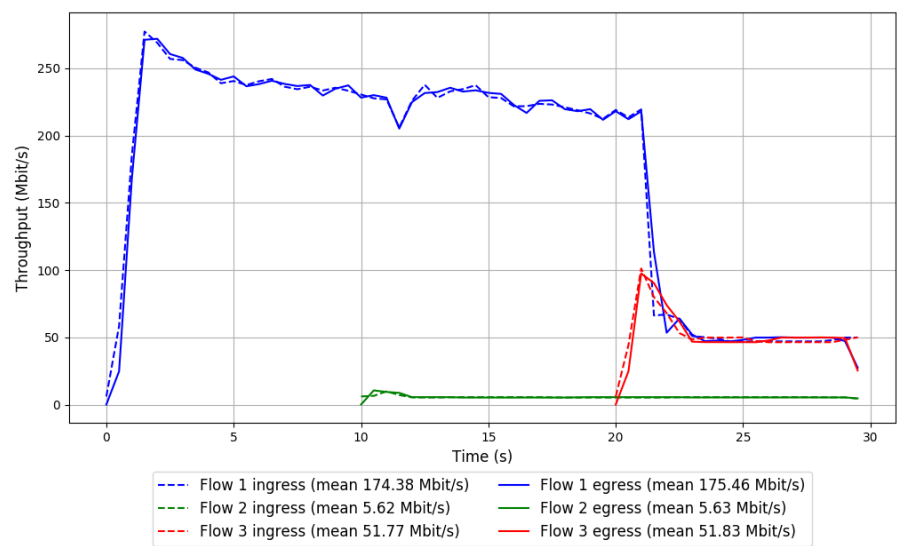
-- Flow 3:

Average throughput: 51.83 Mbit/s

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

Loss rate: 2.44%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-02-28 11:26:46

End at: 2018-02-28 11:27:16

Below is generated by plot.py at 2018-02-28 16:20:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 178.69 Mbit/s

95th percentile per-packet one-way delay: 112.805 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 17.59 Mbit/s

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

Loss rate: 0.67%

-- Flow 2:

Average throughput: 195.78 Mbit/s

95th percentile per-packet one-way delay: 111.274 ms

Loss rate: 1.42%

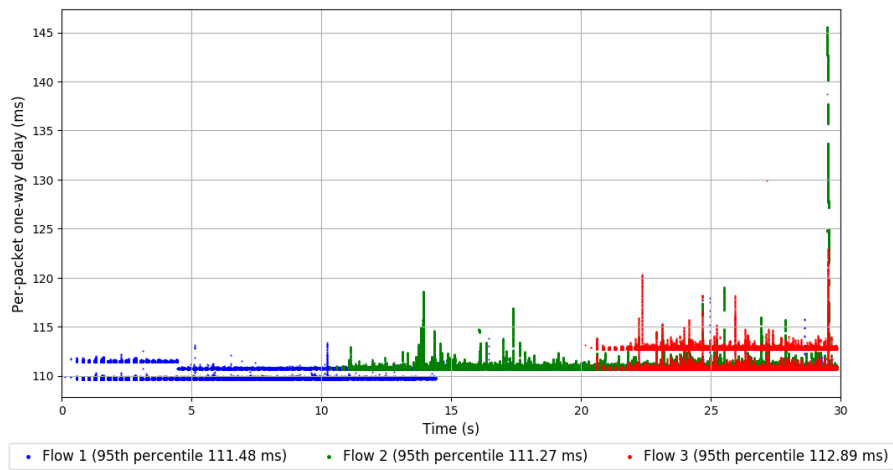
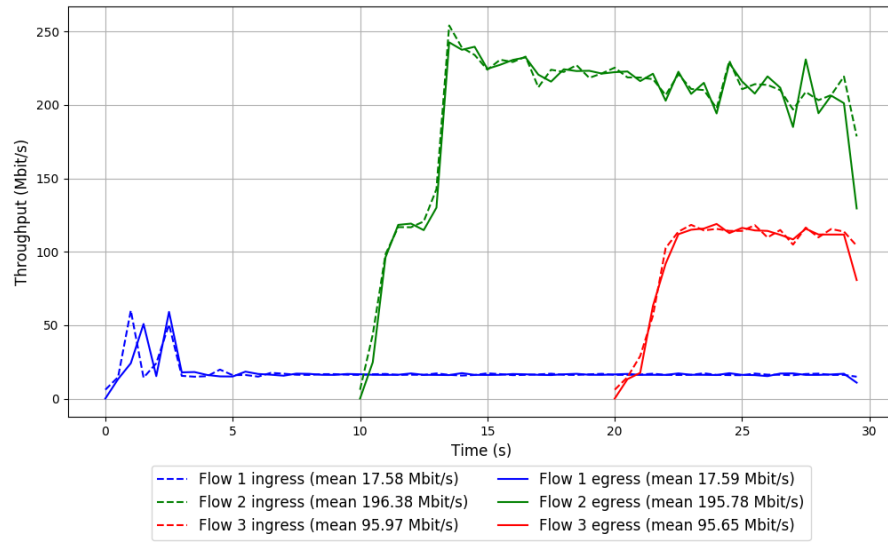
-- Flow 3:

Average throughput: 95.65 Mbit/s

95th percentile per-packet one-way delay: 112.885 ms

Loss rate: 2.60%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-02-28 11:45:57

End at: 2018-02-28 11:46:27

Below is generated by plot.py at 2018-02-28 16:20:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 170.70 Mbit/s

95th percentile per-packet one-way delay: 112.728 ms

Loss rate: 0.29%

-- Flow 1:

Average throughput: 155.21 Mbit/s

95th percentile per-packet one-way delay: 112.730 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 15.40 Mbit/s

95th percentile per-packet one-way delay: 112.719 ms

Loss rate: 0.62%

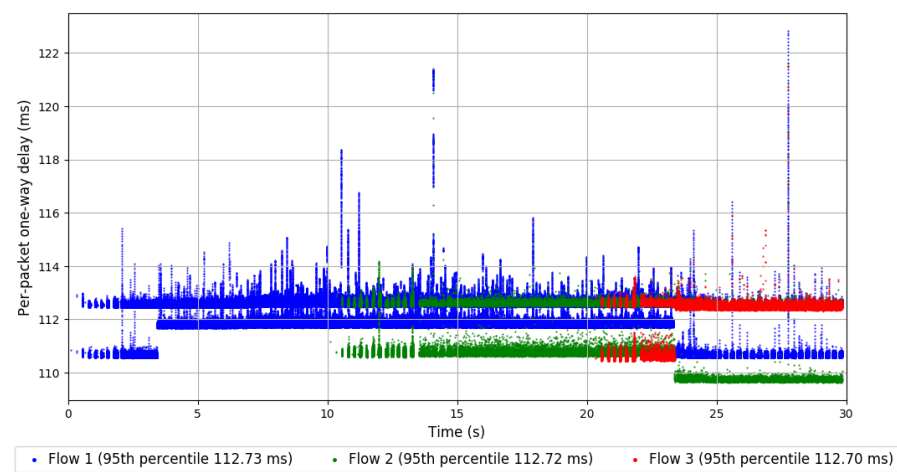
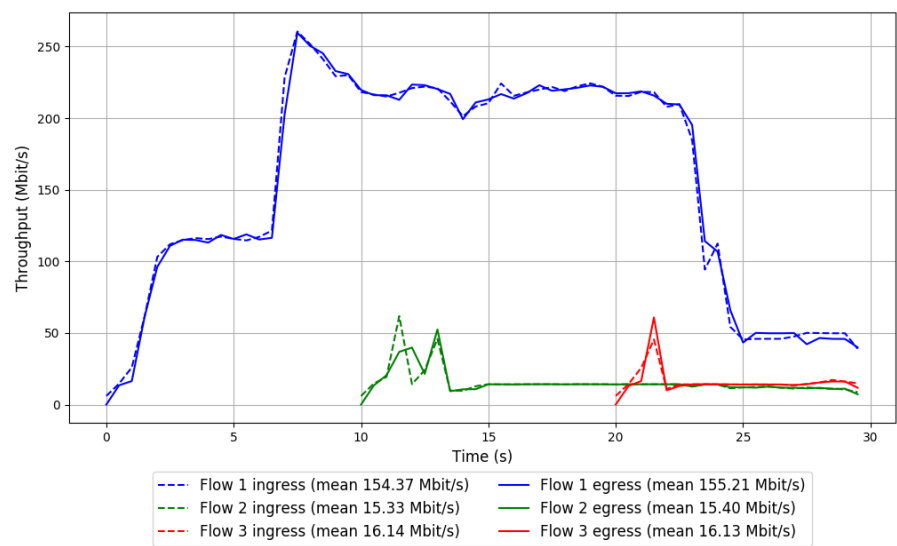
-- Flow 3:

Average throughput: 16.13 Mbit/s

95th percentile per-packet one-way delay: 112.699 ms

Loss rate: 2.29%

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

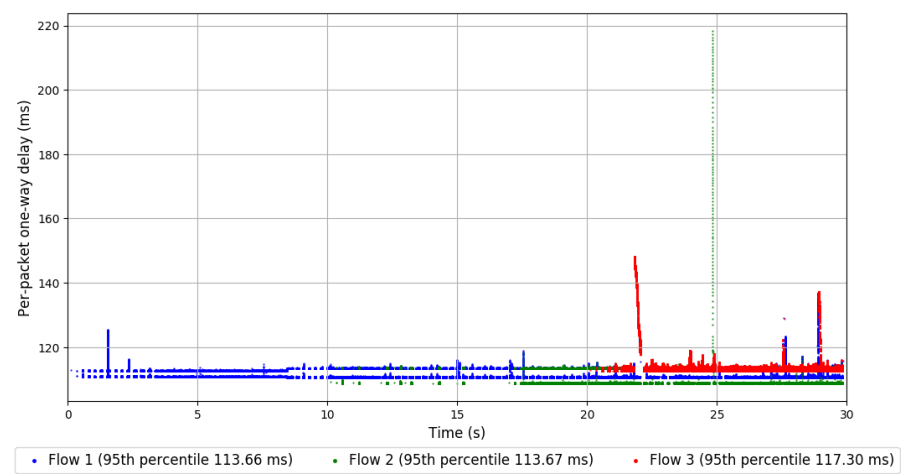
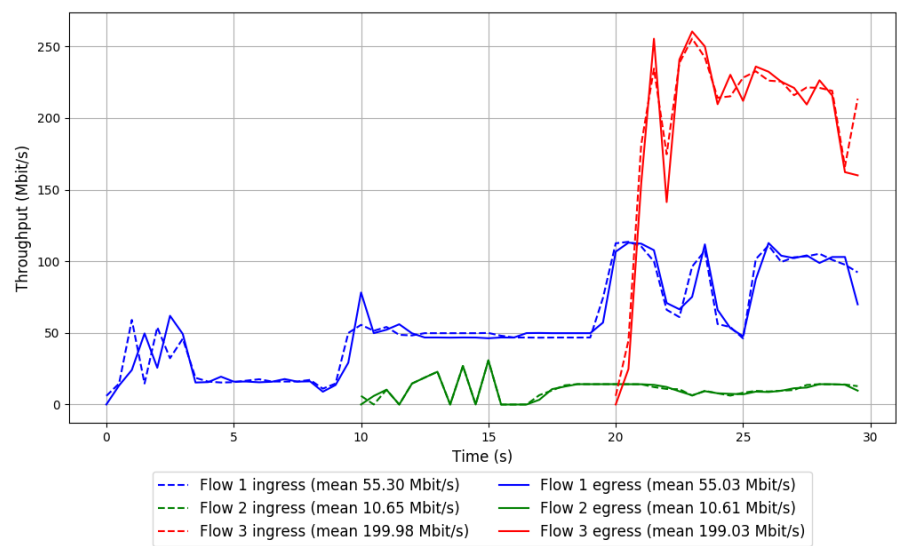


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-02-28 12:05:32
End at: 2018-02-28 12:06:02

# Below is generated by plot.py at 2018-02-28 16:20:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 127.10 Mbit/s
95th percentile per-packet one-way delay: 114.725 ms
Loss rate: 2.03%
-- Flow 1:
Average throughput: 55.03 Mbit/s
95th percentile per-packet one-way delay: 113.664 ms
Loss rate: 1.24%
-- Flow 2:
Average throughput: 10.61 Mbit/s
95th percentile per-packet one-way delay: 113.668 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 199.03 Mbit/s
95th percentile per-packet one-way delay: 117.300 ms
Loss rate: 2.74%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-02-28 09:04:55

End at: 2018-02-28 09:05:25

Below is generated by plot.py at 2018-02-28 16:20:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.73 Mbit/s

95th percentile per-packet one-way delay: 118.446 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 101.90 Mbit/s

95th percentile per-packet one-way delay: 119.123 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 37.09 Mbit/s

95th percentile per-packet one-way delay: 113.860 ms

Loss rate: 1.23%

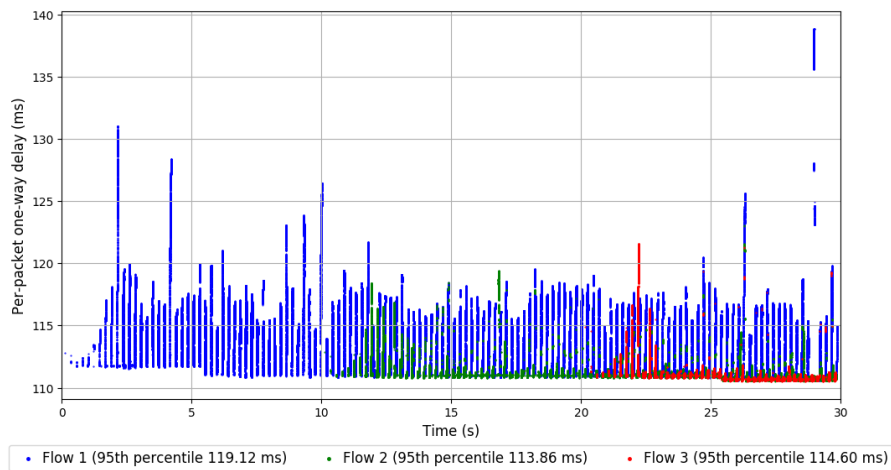
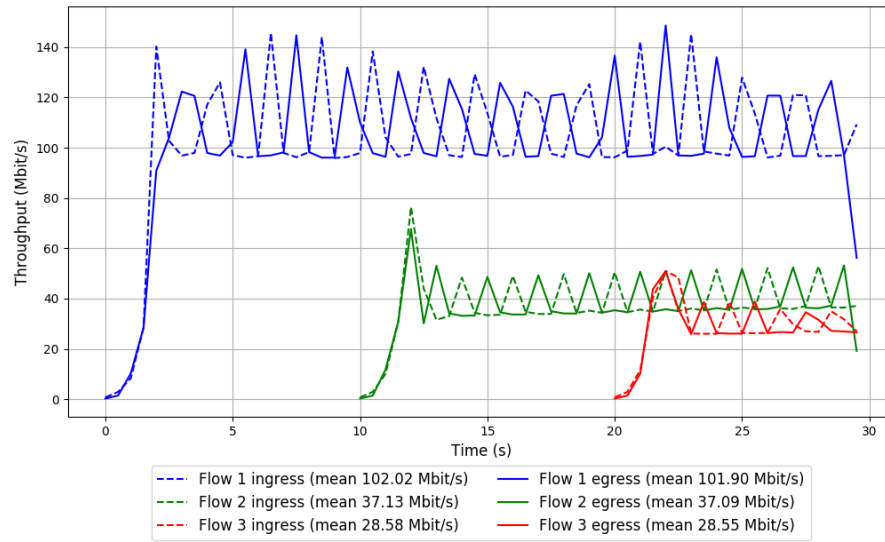
-- Flow 3:

Average throughput: 28.55 Mbit/s

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

Loss rate: 2.40%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-02-28 09:24:17

End at: 2018-02-28 09:24:47

Below is generated by plot.py at 2018-02-28 16:20:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 123.99 Mbit/s

95th percentile per-packet one-way delay: 119.770 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 85.64 Mbit/s

95th percentile per-packet one-way delay: 120.666 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 30.02 Mbit/s

95th percentile per-packet one-way delay: 117.085 ms

Loss rate: 1.14%

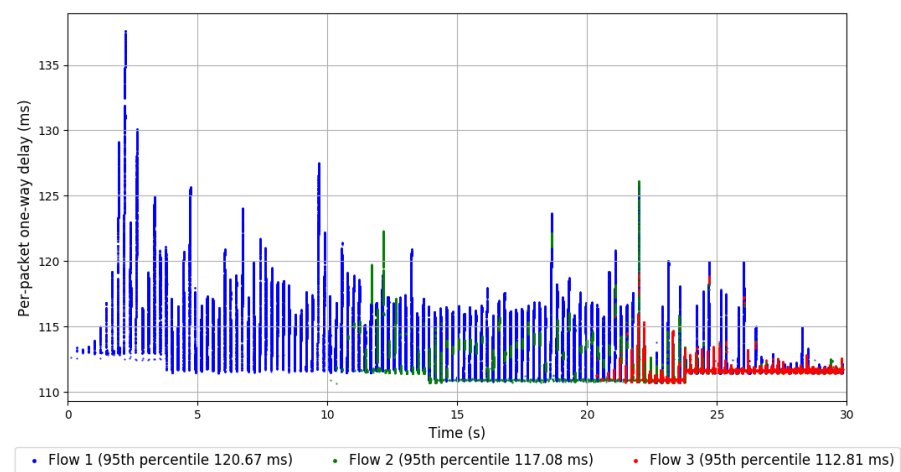
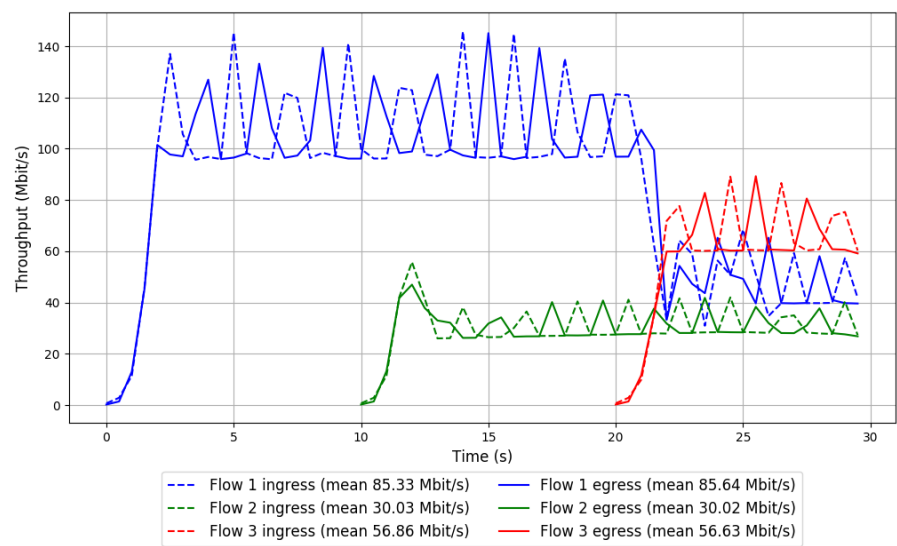
-- Flow 3:

Average throughput: 56.63 Mbit/s

95th percentile per-packet one-way delay: 112.812 ms

Loss rate: 2.66%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-02-28 09:44:06

End at: 2018-02-28 09:44:36

Below is generated by plot.py at 2018-02-28 16:20:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.43 Mbit/s

95th percentile per-packet one-way delay: 115.585 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 40.77 Mbit/s

95th percentile per-packet one-way delay: 114.704 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 48.83 Mbit/s

95th percentile per-packet one-way delay: 116.612 ms

Loss rate: 1.23%

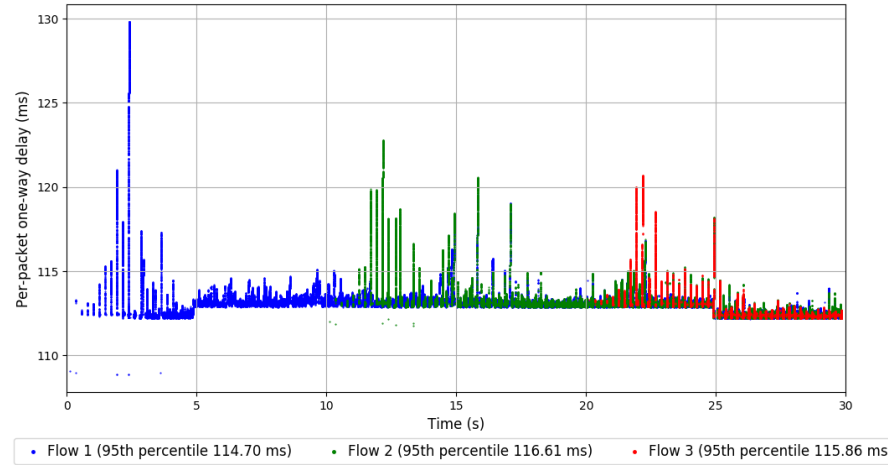
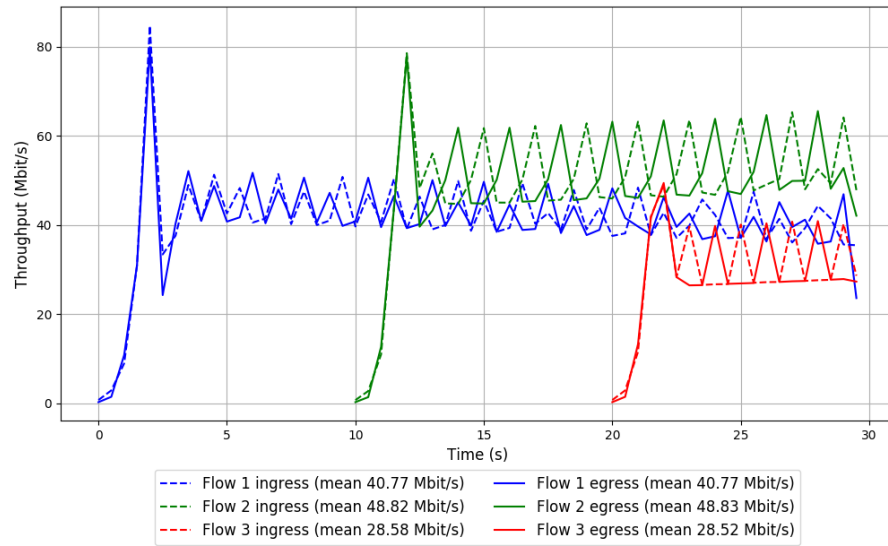
-- Flow 3:

Average throughput: 28.52 Mbit/s

95th percentile per-packet one-way delay: 115.859 ms

Loss rate: 2.45%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-02-28 10:03:10

End at: 2018-02-28 10:03:40

Below is generated by plot.py at 2018-02-28 16:20:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 62.55 Mbit/s

95th percentile per-packet one-way delay: 118.648 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 30.96 Mbit/s

95th percentile per-packet one-way delay: 116.630 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 47.02 Mbit/s

95th percentile per-packet one-way delay: 119.940 ms

Loss rate: 0.92%

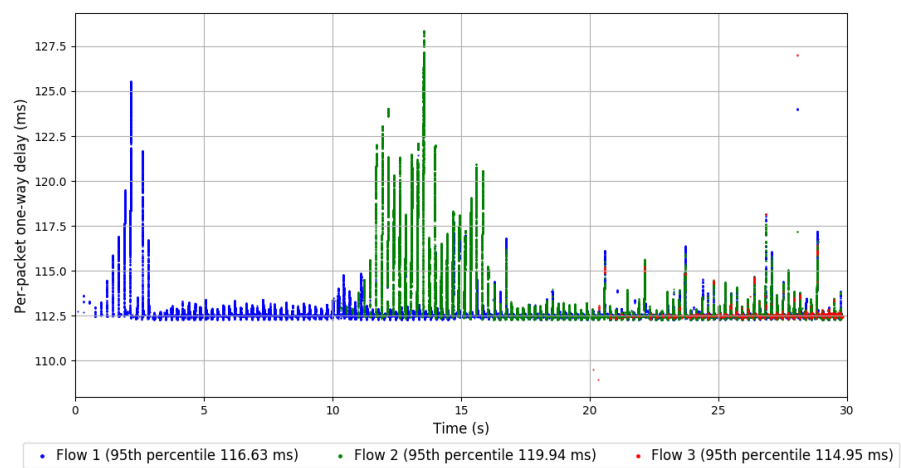
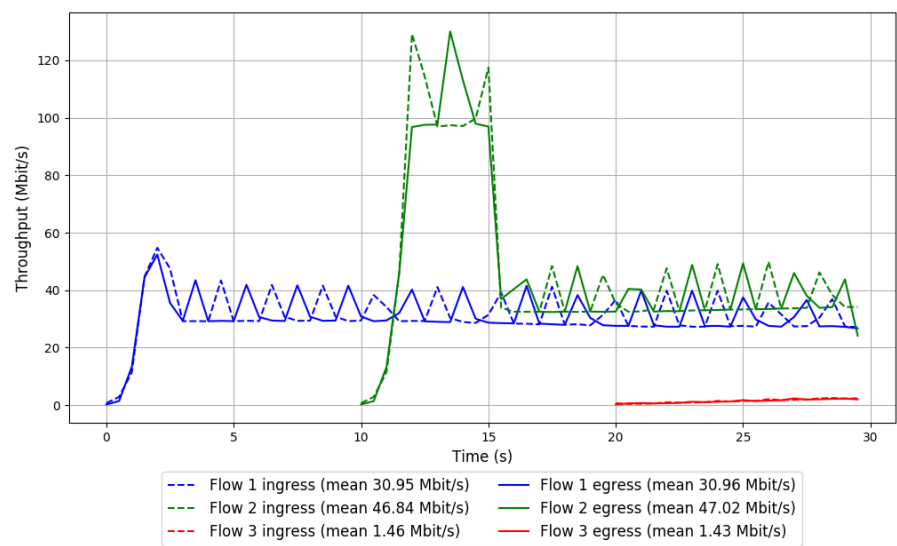
-- Flow 3:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 114.948 ms

Loss rate: 4.15%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-02-28 10:22:52

End at: 2018-02-28 10:23:22

Below is generated by plot.py at 2018-02-28 16:20:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.55 Mbit/s

95th percentile per-packet one-way delay: 119.516 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 37.42 Mbit/s

95th percentile per-packet one-way delay: 118.126 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 62.74 Mbit/s

95th percentile per-packet one-way delay: 120.764 ms

Loss rate: 0.81%

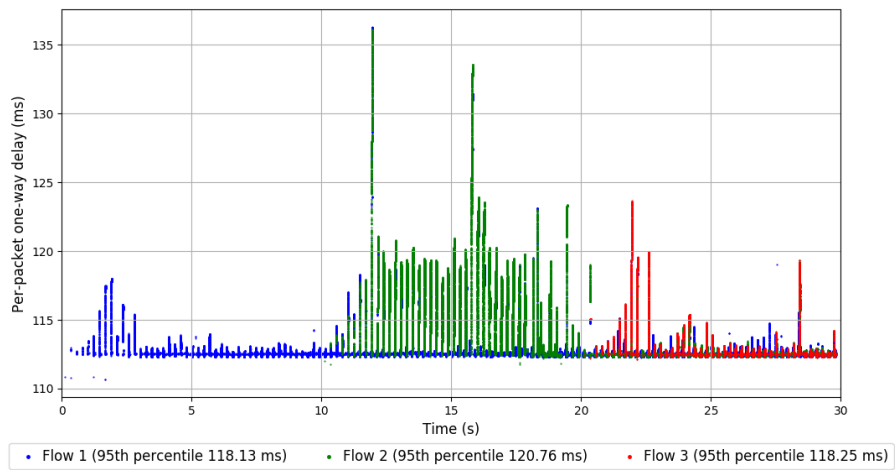
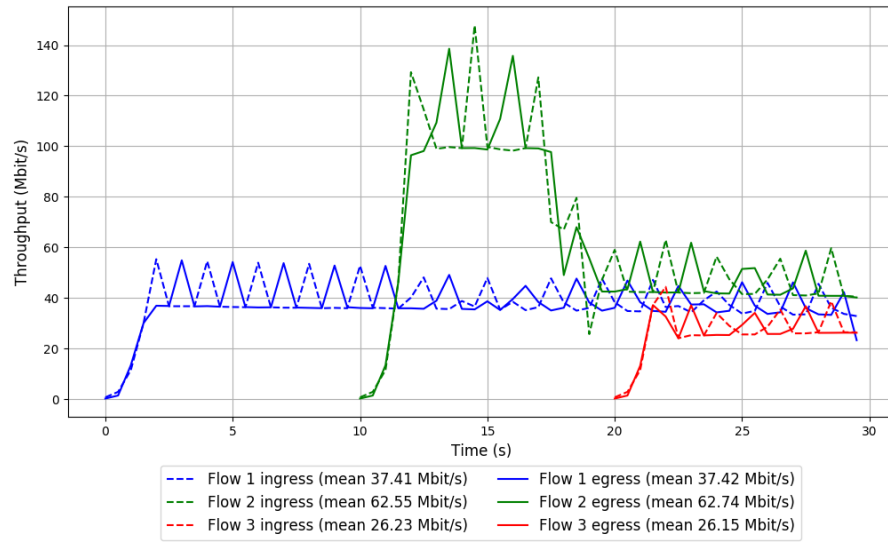
-- Flow 3:

Average throughput: 26.15 Mbit/s

95th percentile per-packet one-way delay: 118.247 ms

Loss rate: 2.54%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-02-28 10:42:12

End at: 2018-02-28 10:42:42

Below is generated by plot.py at 2018-02-28 16:20:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 54.32 Mbit/s

95th percentile per-packet one-way delay: 114.047 ms

Loss rate: 1.63%

-- Flow 1:

Average throughput: 20.41 Mbit/s

95th percentile per-packet one-way delay: 114.351 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 20.68 Mbit/s

95th percentile per-packet one-way delay: 114.002 ms

Loss rate: 1.30%

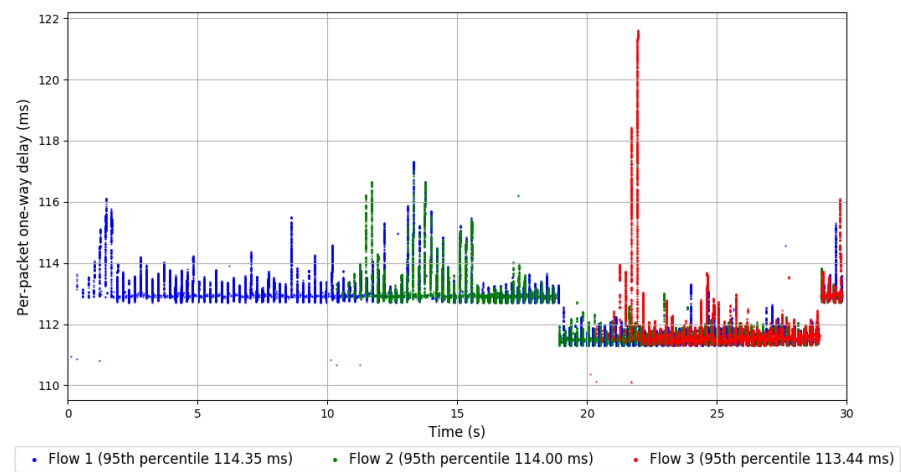
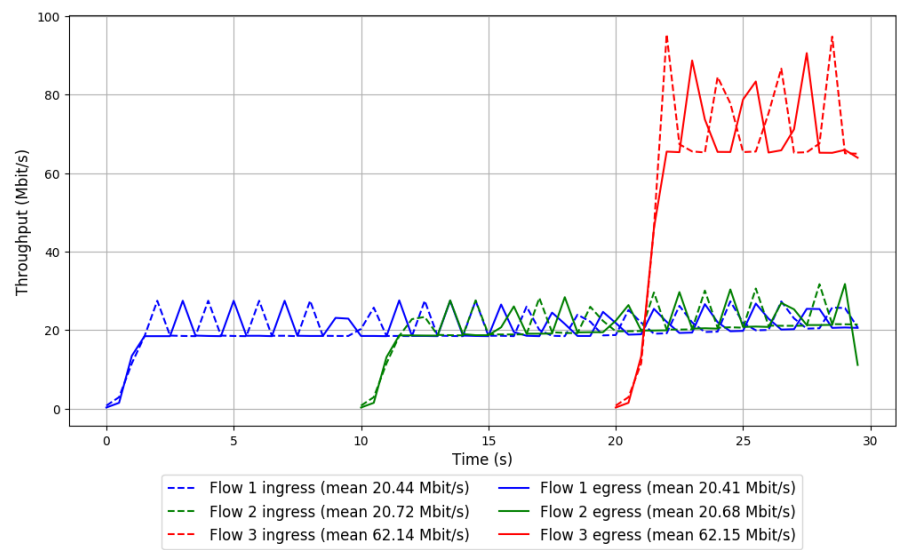
-- Flow 3:

Average throughput: 62.15 Mbit/s

95th percentile per-packet one-way delay: 113.436 ms

Loss rate: 2.64%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-02-28 11:01:23

End at: 2018-02-28 11:01:53

Below is generated by plot.py at 2018-02-28 16:21:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.76 Mbit/s

95th percentile per-packet one-way delay: 112.362 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 80.11 Mbit/s

95th percentile per-packet one-way delay: 112.288 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 19.09 Mbit/s

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

Loss rate: 1.12%

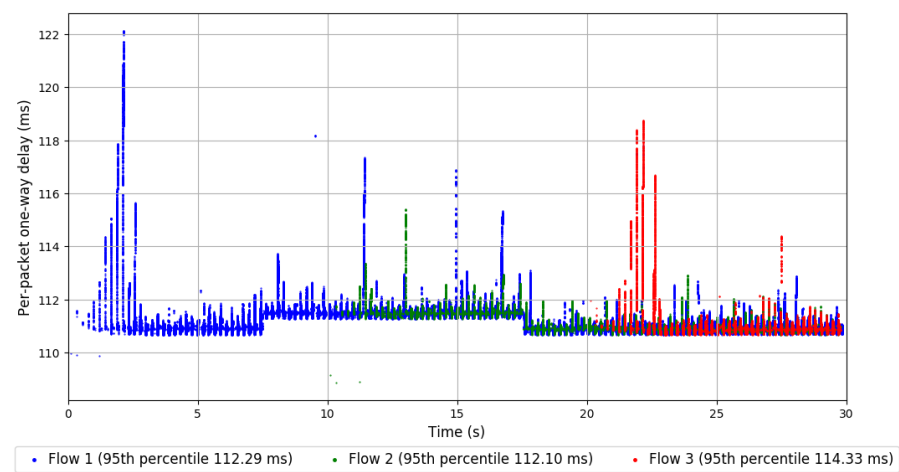
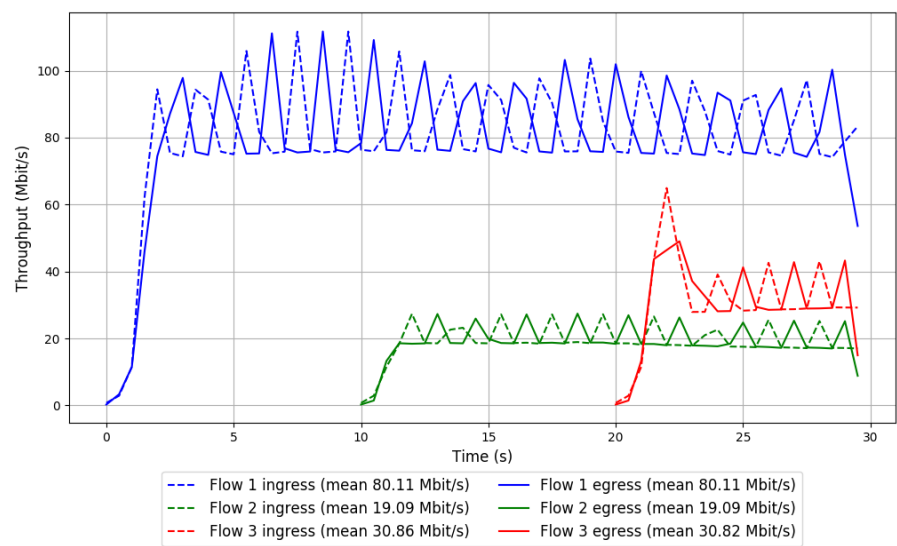
-- Flow 3:

Average throughput: 30.82 Mbit/s

95th percentile per-packet one-way delay: 114.328 ms

Loss rate: 2.39%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-02-28 11:20:55

End at: 2018-02-28 11:21:25

Below is generated by plot.py at 2018-02-28 16:21:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.38 Mbit/s

95th percentile per-packet one-way delay: 117.506 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 78.23 Mbit/s

95th percentile per-packet one-way delay: 115.331 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 36.67 Mbit/s

95th percentile per-packet one-way delay: 116.470 ms

Loss rate: 1.20%

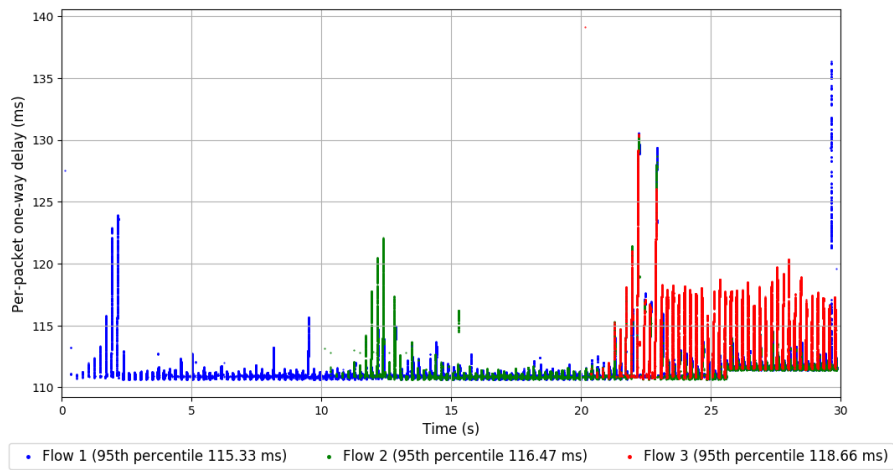
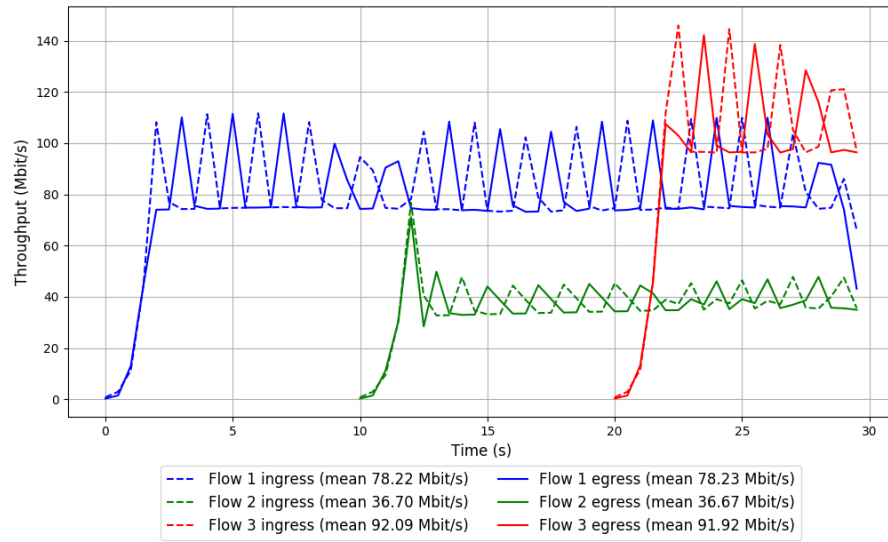
-- Flow 3:

Average throughput: 91.92 Mbit/s

95th percentile per-packet one-way delay: 118.659 ms

Loss rate: 2.67%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-02-28 11:40:05

End at: 2018-02-28 11:40:35

Below is generated by plot.py at 2018-02-28 16:21:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.47 Mbit/s

95th percentile per-packet one-way delay: 117.966 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 71.70 Mbit/s

95th percentile per-packet one-way delay: 118.389 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 31.19 Mbit/s

95th percentile per-packet one-way delay: 114.699 ms

Loss rate: 1.19%

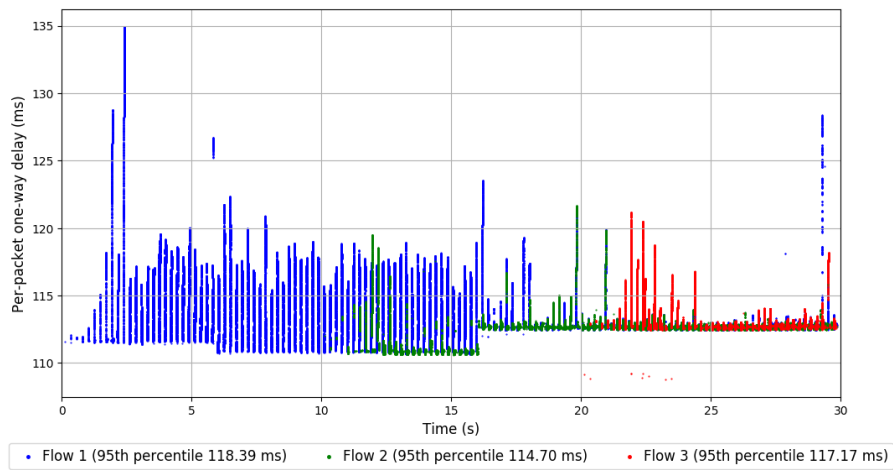
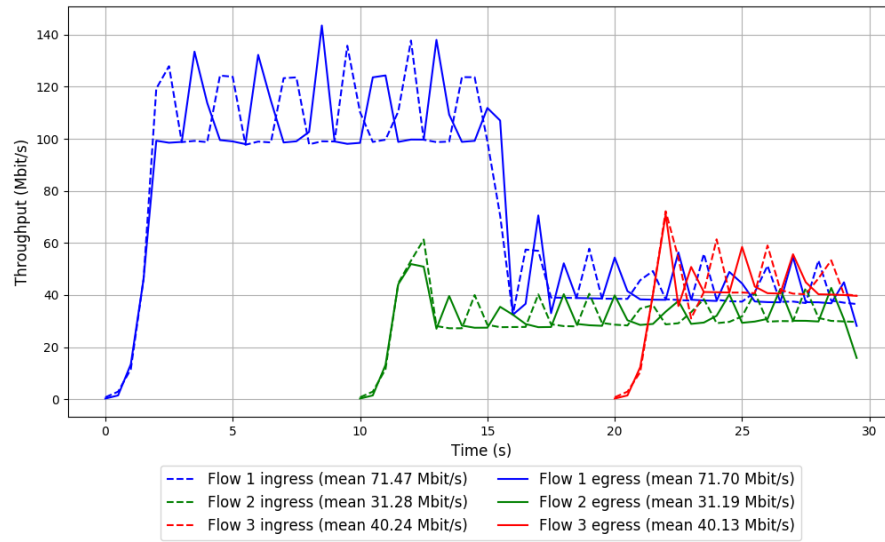
-- Flow 3:

Average throughput: 40.13 Mbit/s

95th percentile per-packet one-way delay: 117.169 ms

Loss rate: 2.49%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-02-28 11:59:43

End at: 2018-02-28 12:00:13

Below is generated by plot.py at 2018-02-28 16:21:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.40 Mbit/s

95th percentile per-packet one-way delay: 115.583 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 55.97 Mbit/s

95th percentile per-packet one-way delay: 117.268 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 55.02 Mbit/s

95th percentile per-packet one-way delay: 115.221 ms

Loss rate: 1.21%

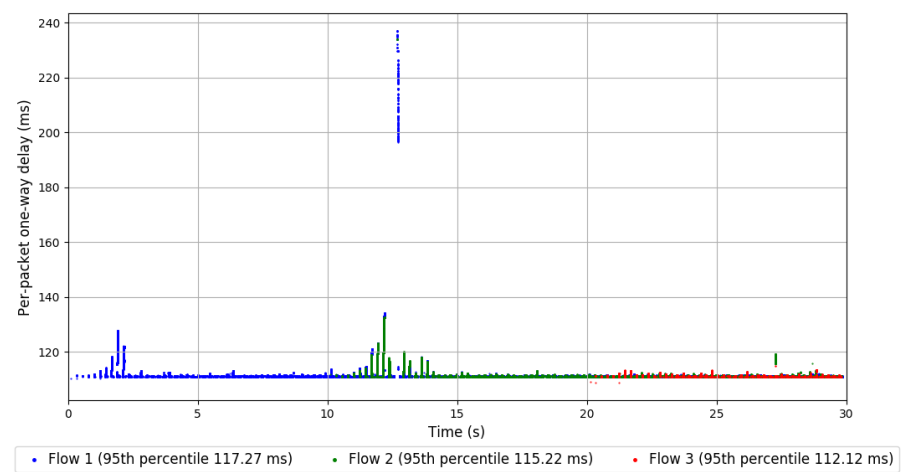
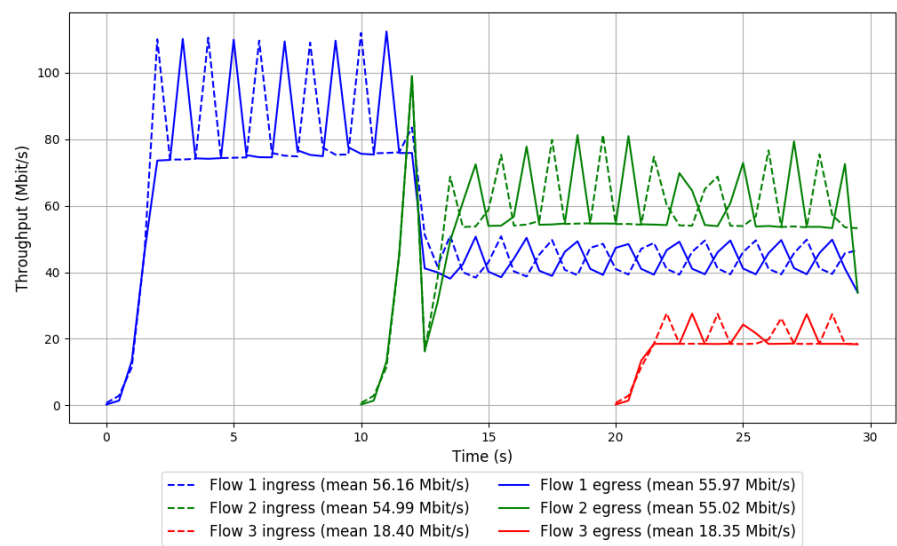
-- Flow 3:

Average throughput: 18.35 Mbit/s

95th percentile per-packet one-way delay: 112.125 ms

Loss rate: 2.52%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-02-28 09:21:45

End at: 2018-02-28 09:22:15

Below is generated by plot.py at 2018-02-28 16:22:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 170.58 Mbit/s

95th percentile per-packet one-way delay: 135.288 ms

Loss rate: 0.30%

-- Flow 1:

Average throughput: 106.79 Mbit/s

95th percentile per-packet one-way delay: 128.042 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 69.97 Mbit/s

95th percentile per-packet one-way delay: 140.954 ms

Loss rate: 0.14%

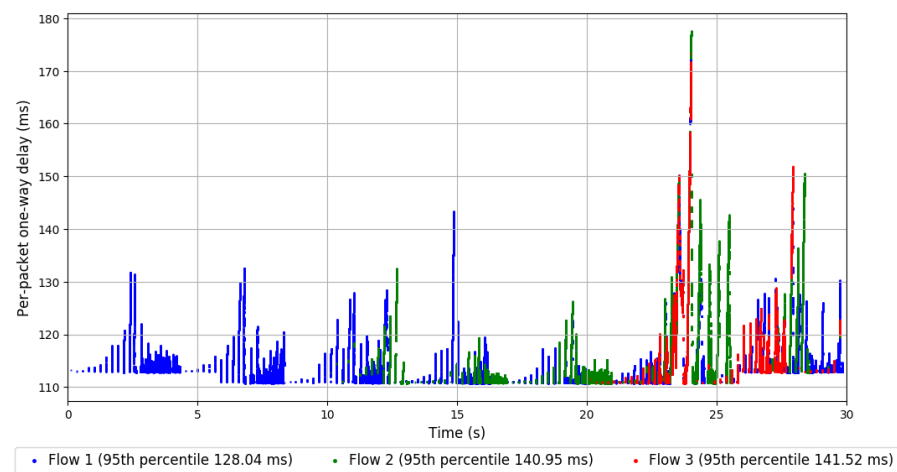
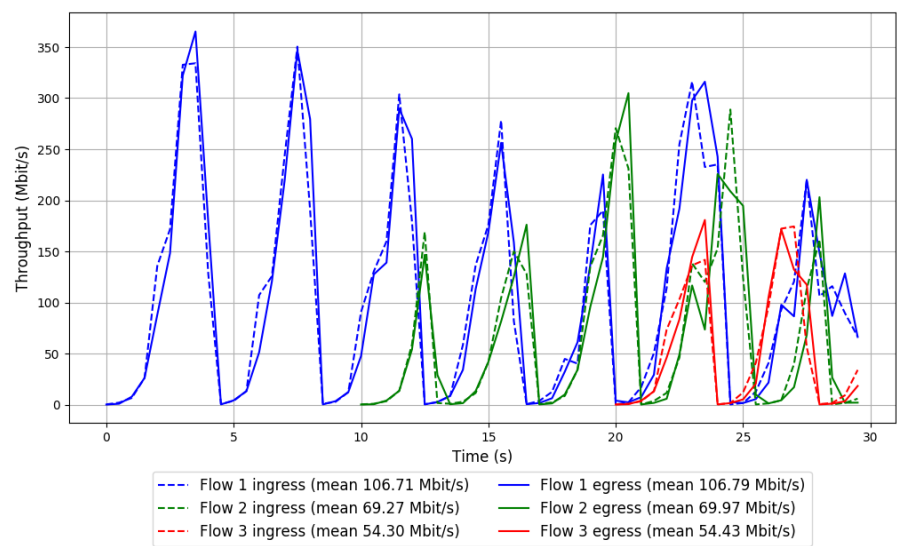
-- Flow 3:

Average throughput: 54.43 Mbit/s

95th percentile per-packet one-way delay: 141.519 ms

Loss rate: 2.11%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-02-28 09:41:34

End at: 2018-02-28 09:42:04

Below is generated by plot.py at 2018-02-28 16:24:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 263.03 Mbit/s

95th percentile per-packet one-way delay: 230.605 ms

Loss rate: 2.66%

-- Flow 1:

Average throughput: 102.51 Mbit/s

95th percentile per-packet one-way delay: 239.946 ms

Loss rate: 3.40%

-- Flow 2:

Average throughput: 210.90 Mbit/s

95th percentile per-packet one-way delay: 220.595 ms

Loss rate: 1.60%

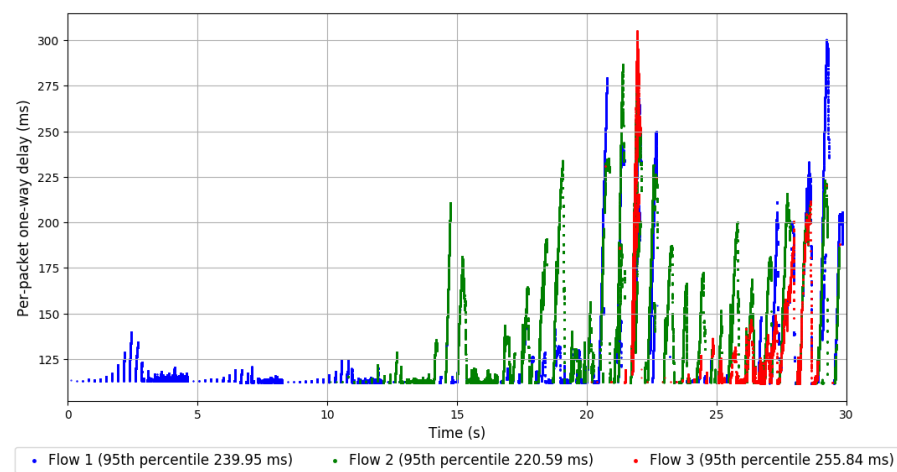
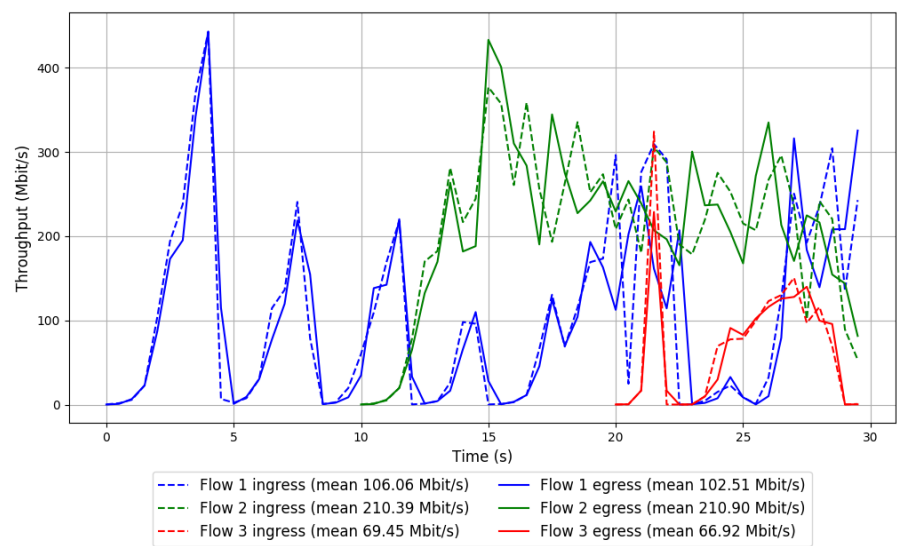
-- Flow 3:

Average throughput: 66.92 Mbit/s

95th percentile per-packet one-way delay: 255.840 ms

Loss rate: 5.83%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-02-28 10:00:43

End at: 2018-02-28 10:01:13

Below is generated by plot.py at 2018-02-28 16:25:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 265.93 Mbit/s

95th percentile per-packet one-way delay: 239.317 ms

Loss rate: 2.03%

-- Flow 1:

Average throughput: 128.94 Mbit/s

95th percentile per-packet one-way delay: 233.591 ms

Loss rate: 1.29%

-- Flow 2:

Average throughput: 185.56 Mbit/s

95th percentile per-packet one-way delay: 244.985 ms

Loss rate: 2.56%

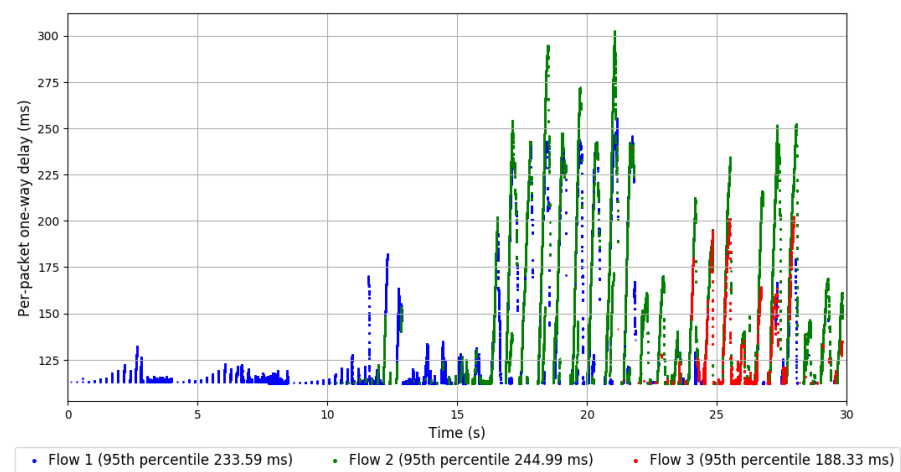
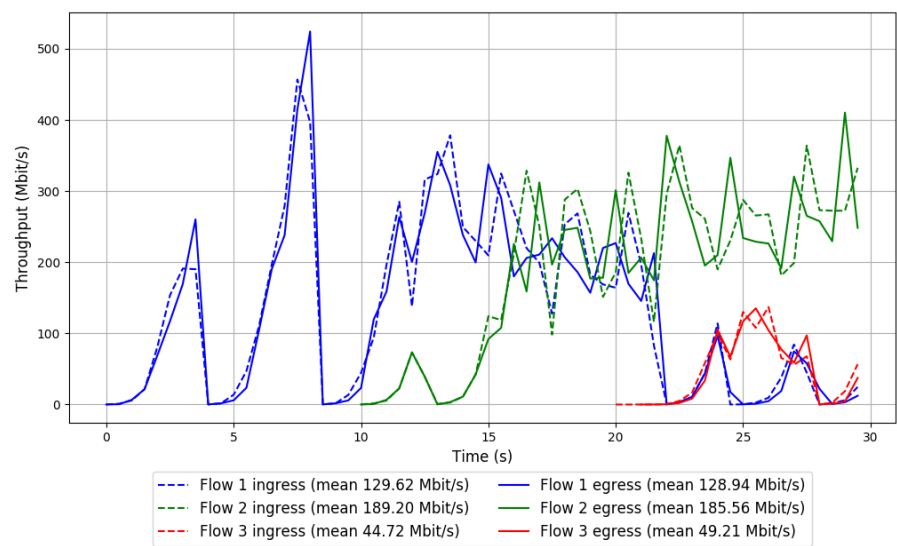
-- Flow 3:

Average throughput: 49.21 Mbit/s

95th percentile per-packet one-way delay: 188.327 ms

Loss rate: 3.97%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-02-28 10:20:16

End at: 2018-02-28 10:20:46

Below is generated by plot.py at 2018-02-28 16:25:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 278.26 Mbit/s

95th percentile per-packet one-way delay: 293.745 ms

Loss rate: 7.45%

-- Flow 1:

Average throughput: 147.23 Mbit/s

95th percentile per-packet one-way delay: 306.702 ms

Loss rate: 11.15%

-- Flow 2:

Average throughput: 193.26 Mbit/s

95th percentile per-packet one-way delay: 270.827 ms

Loss rate: 2.79%

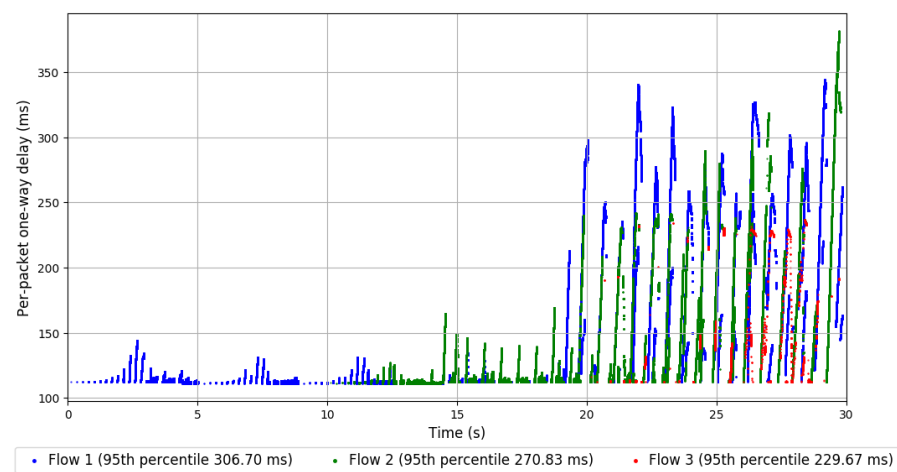
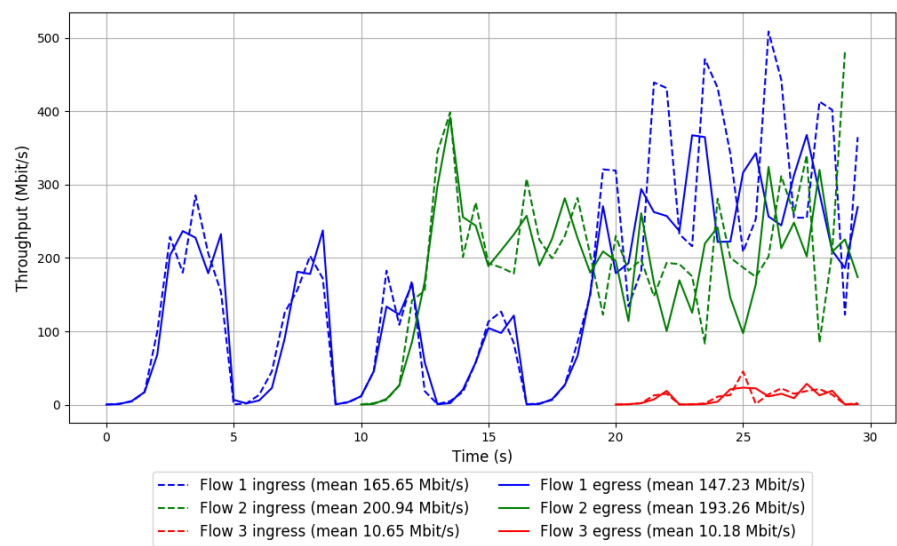
-- Flow 3:

Average throughput: 10.18 Mbit/s

95th percentile per-packet one-way delay: 229.670 ms

Loss rate: 6.63%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-02-28 10:39:40

End at: 2018-02-28 10:40:10

Below is generated by plot.py at 2018-02-28 16:25:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 254.58 Mbit/s

95th percentile per-packet one-way delay: 240.967 ms

Loss rate: 1.85%

-- Flow 1:

Average throughput: 210.96 Mbit/s

95th percentile per-packet one-way delay: 245.657 ms

Loss rate: 1.56%

-- Flow 2:

Average throughput: 46.61 Mbit/s

95th percentile per-packet one-way delay: 209.154 ms

Loss rate: 3.66%

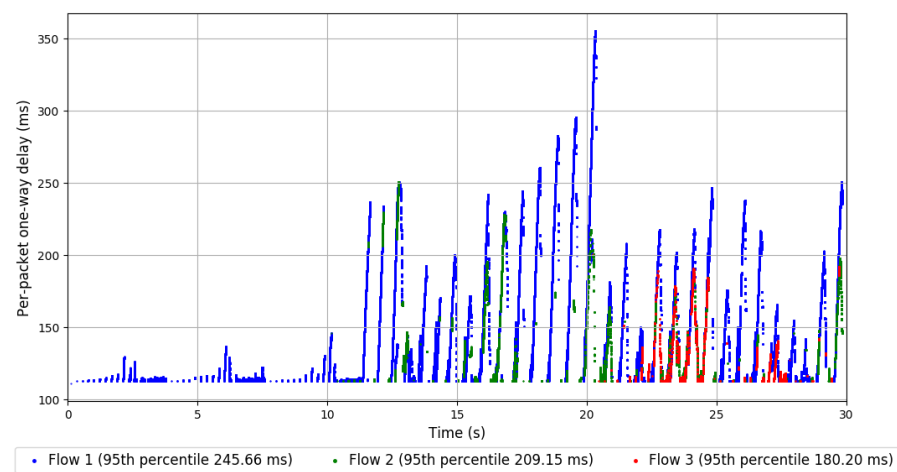
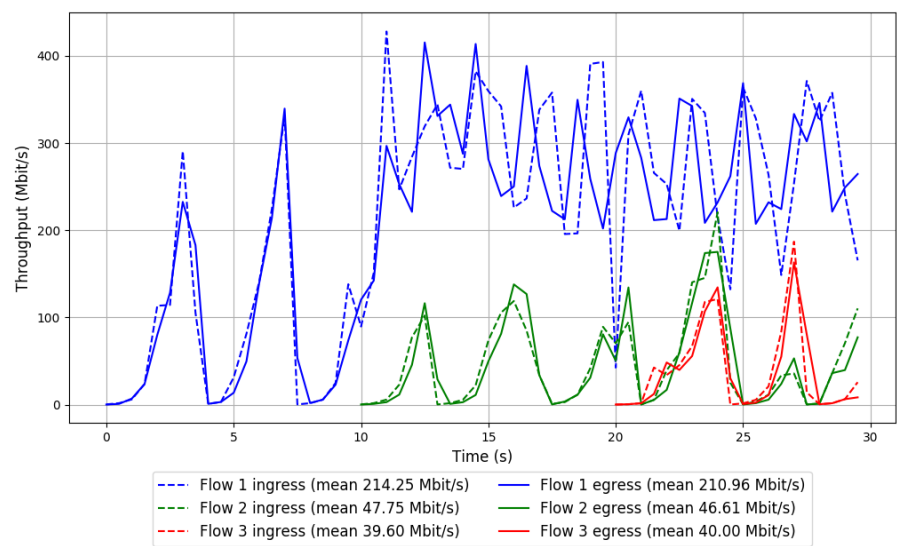
-- Flow 3:

Average throughput: 40.00 Mbit/s

95th percentile per-packet one-way delay: 180.198 ms

Loss rate: 2.24%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-02-28 10:58:52

End at: 2018-02-28 10:59:22

Below is generated by plot.py at 2018-02-28 16:25:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 209.58 Mbit/s

95th percentile per-packet one-way delay: 163.527 ms

Loss rate: 2.14%

-- Flow 1:

Average throughput: 68.86 Mbit/s

95th percentile per-packet one-way delay: 137.826 ms

Loss rate: 2.66%

-- Flow 2:

Average throughput: 192.03 Mbit/s

95th percentile per-packet one-way delay: 169.667 ms

Loss rate: 1.23%

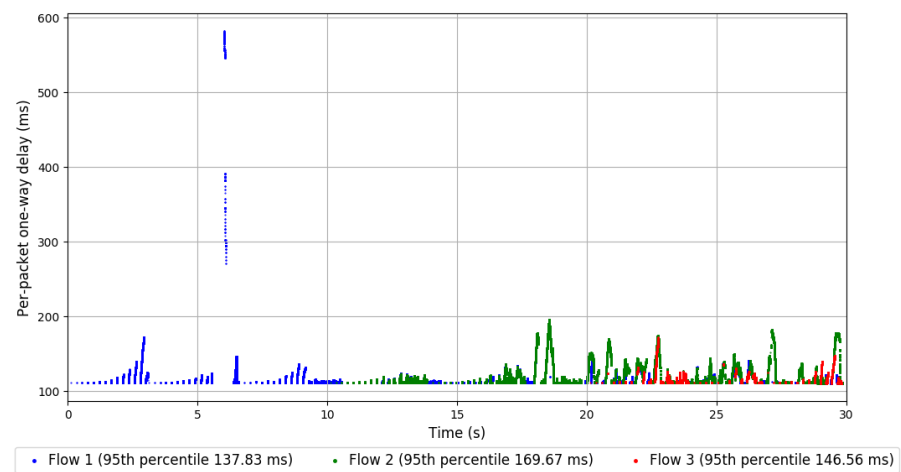
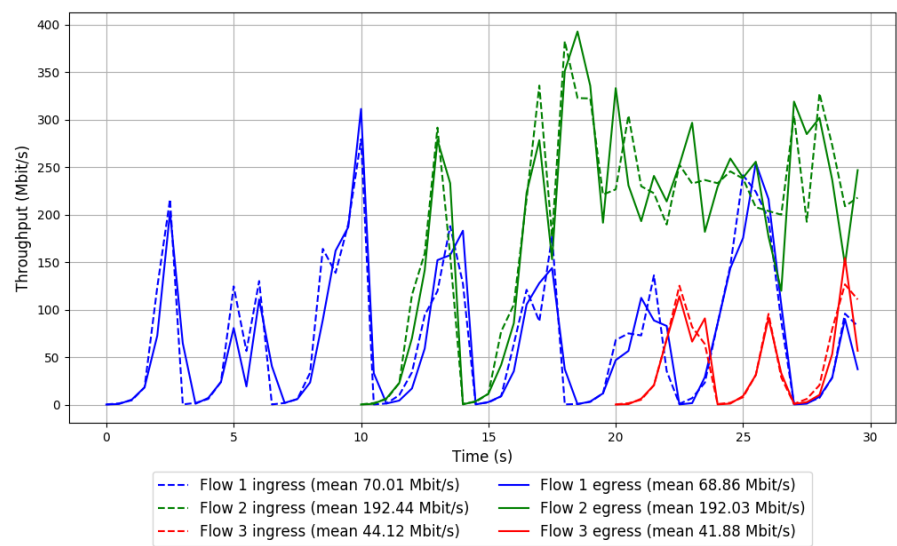
-- Flow 3:

Average throughput: 41.88 Mbit/s

95th percentile per-packet one-way delay: 146.563 ms

Loss rate: 7.55%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-02-28 11:18:30

End at: 2018-02-28 11:19:00

Below is generated by plot.py at 2018-02-28 16:25:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 187.16 Mbit/s

95th percentile per-packet one-way delay: 181.687 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 62.58 Mbit/s

95th percentile per-packet one-way delay: 143.851 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 148.74 Mbit/s

95th percentile per-packet one-way delay: 191.150 ms

Loss rate: 0.00%

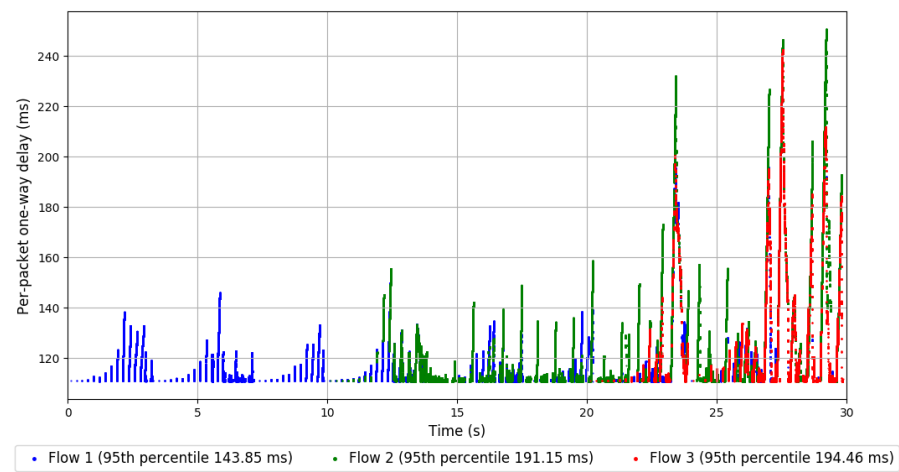
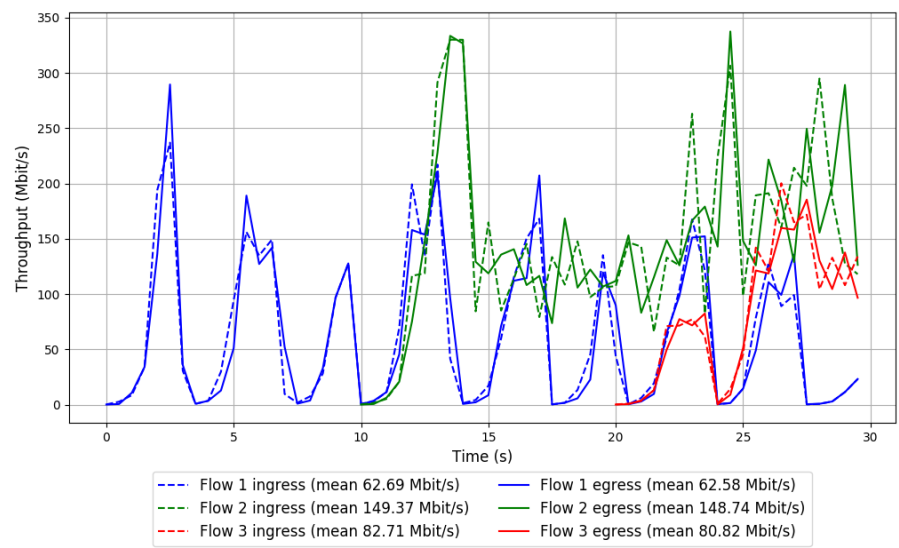
-- Flow 3:

Average throughput: 80.82 Mbit/s

95th percentile per-packet one-way delay: 194.456 ms

Loss rate: 4.07%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-02-28 11:37:42

End at: 2018-02-28 11:38:12

Below is generated by plot.py at 2018-02-28 16:26:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 253.49 Mbit/s

95th percentile per-packet one-way delay: 219.360 ms

Loss rate: 2.08%

-- Flow 1:

Average throughput: 139.12 Mbit/s

95th percentile per-packet one-way delay: 208.934 ms

Loss rate: 1.76%

-- Flow 2:

Average throughput: 123.74 Mbit/s

95th percentile per-packet one-way delay: 213.317 ms

Loss rate: 1.93%

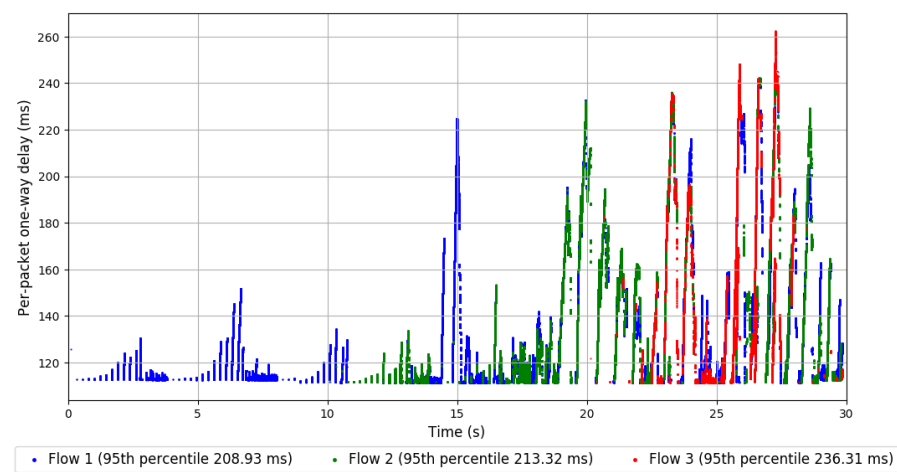
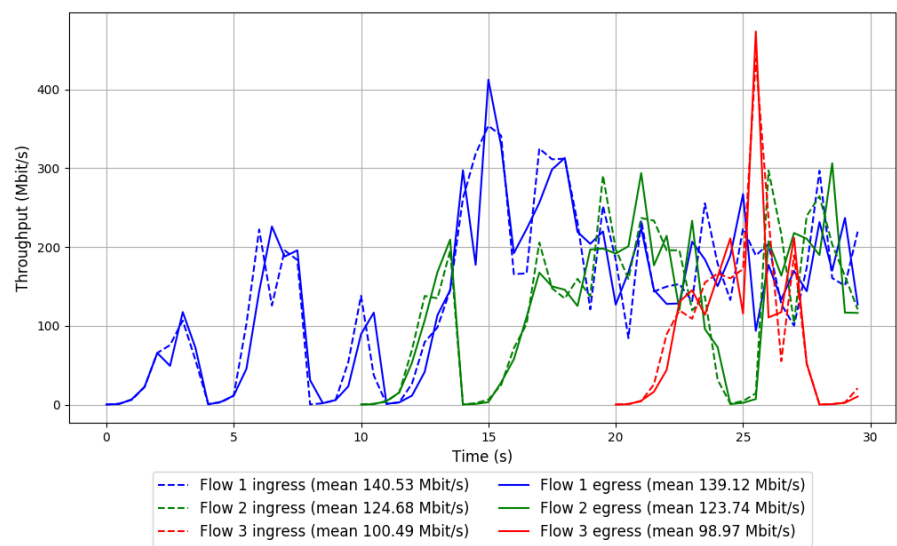
-- Flow 3:

Average throughput: 98.97 Mbit/s

95th percentile per-packet one-way delay: 236.310 ms

Loss rate: 3.83%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-02-28 11:57:10

End at: 2018-02-28 11:57:40

Below is generated by plot.py at 2018-02-28 16:26:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 226.13 Mbit/s

95th percentile per-packet one-way delay: 152.742 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 170.41 Mbit/s

95th percentile per-packet one-way delay: 155.643 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 60.69 Mbit/s

95th percentile per-packet one-way delay: 139.881 ms

Loss rate: 2.36%

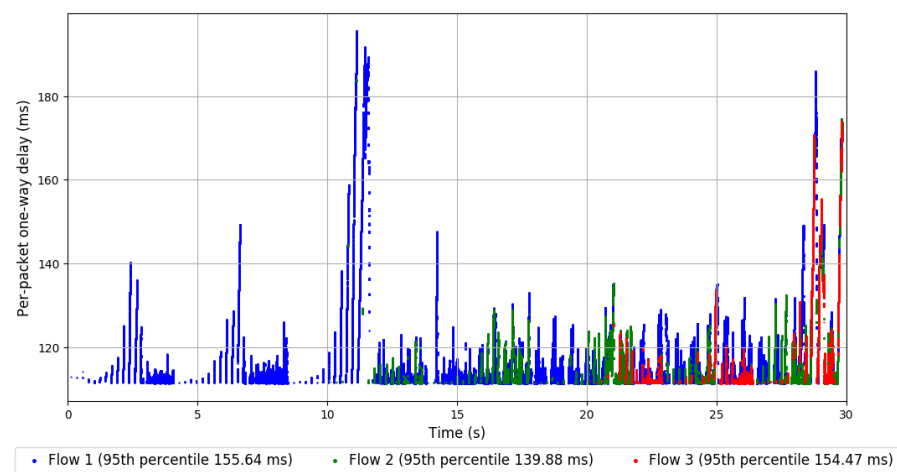
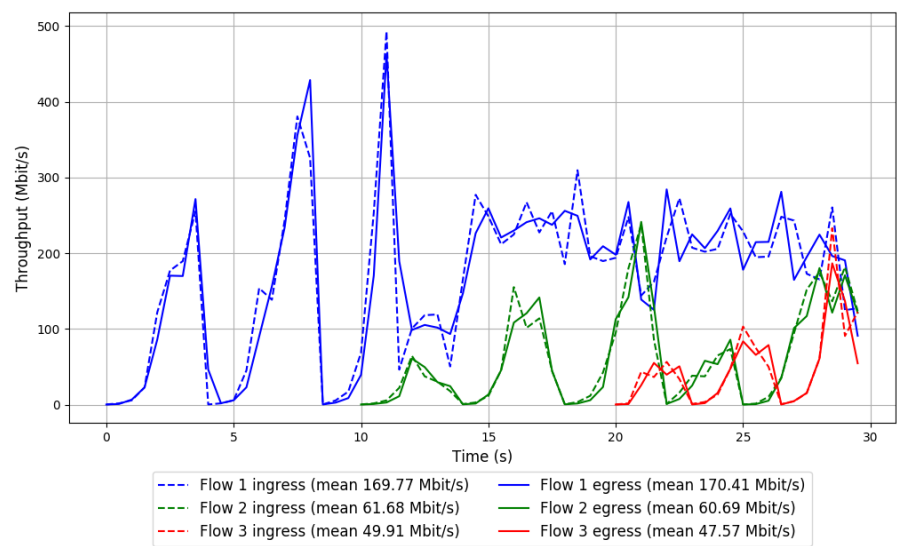
-- Flow 3:

Average throughput: 47.57 Mbit/s

95th percentile per-packet one-way delay: 154.465 ms

Loss rate: 6.87%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-02-28 12:16:36

End at: 2018-02-28 12:17:06

Below is generated by plot.py at 2018-02-28 16:28:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 246.74 Mbit/s

95th percentile per-packet one-way delay: 268.550 ms

Loss rate: 7.41%

-- Flow 1:

Average throughput: 143.99 Mbit/s

95th percentile per-packet one-way delay: 268.509 ms

Loss rate: 7.64%

-- Flow 2:

Average throughput: 144.83 Mbit/s

95th percentile per-packet one-way delay: 270.552 ms

Loss rate: 7.04%

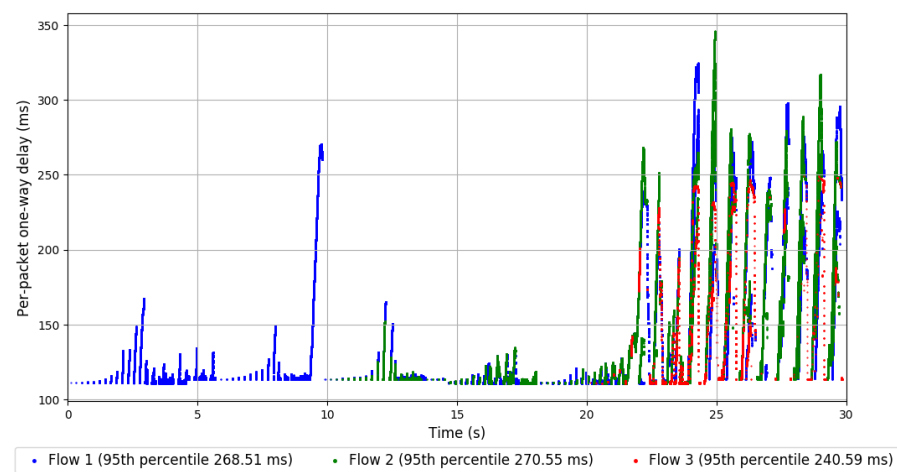
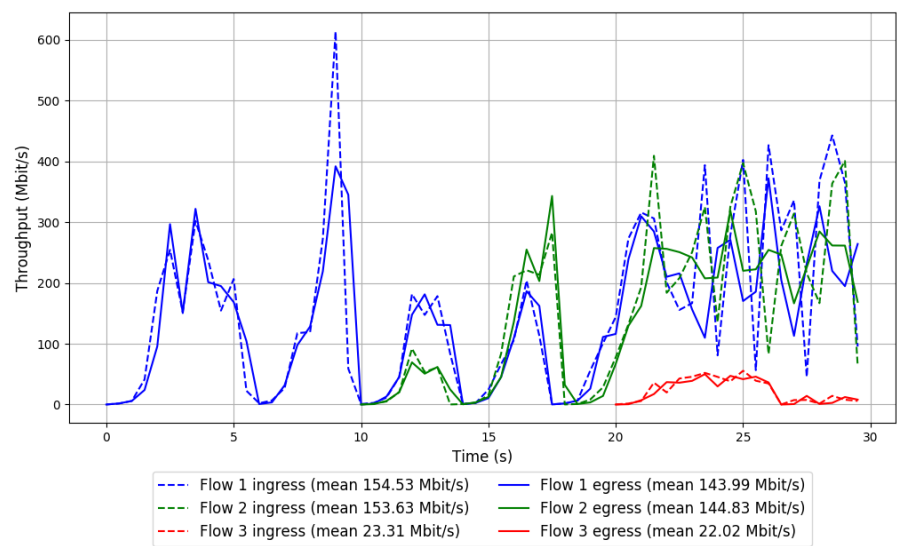
-- Flow 3:

Average throughput: 22.02 Mbit/s

95th percentile per-packet one-way delay: 240.590 ms

Loss rate: 7.63%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-02-28 09:11:44

End at: 2018-02-28 09:12:14

Below is generated by plot.py at 2018-02-28 16:28:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.72 Mbit/s

95th percentile per-packet one-way delay: 112.944 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 71.20 Mbit/s

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

Loss rate: 0.10%

-- Flow 2:

Average throughput: 67.30 Mbit/s

95th percentile per-packet one-way delay: 112.696 ms

Loss rate: 1.27%

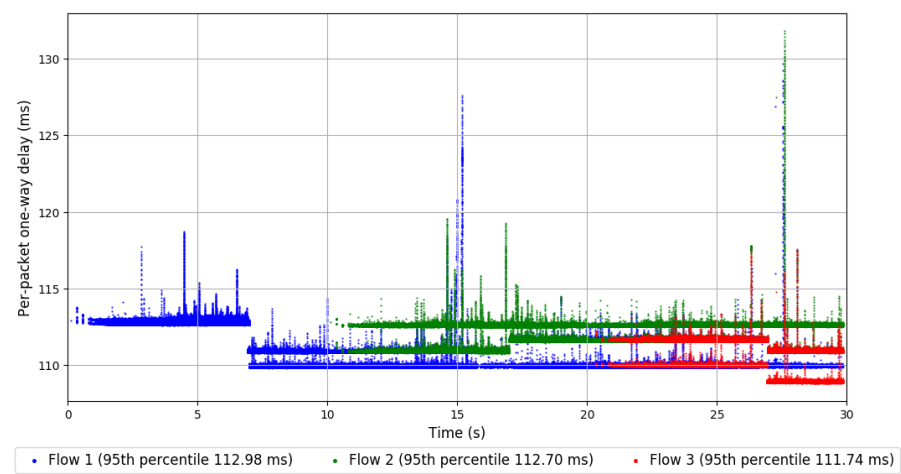
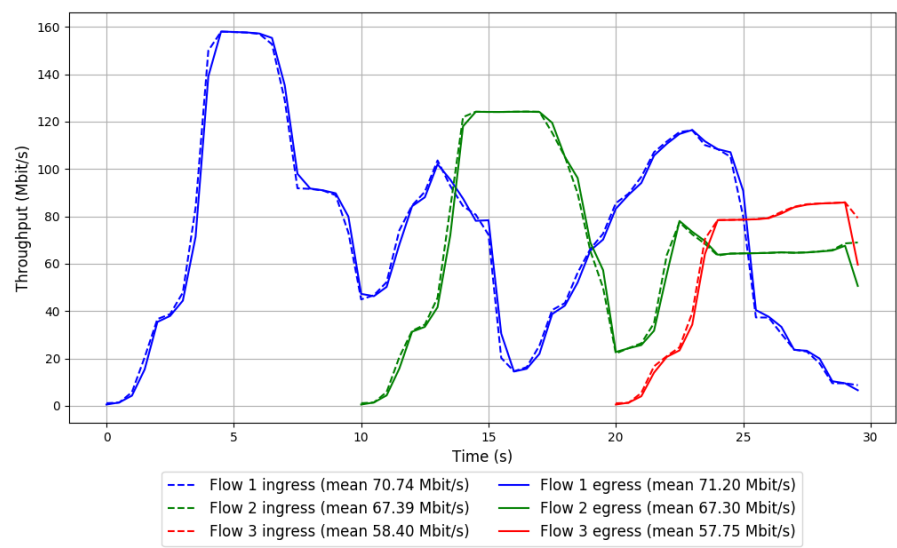
-- Flow 3:

Average throughput: 57.75 Mbit/s

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

Loss rate: 3.34%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-02-28 09:31:24

End at: 2018-02-28 09:31:54

Below is generated by plot.py at 2018-02-28 16:29:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 153.92 Mbit/s

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

Loss rate: 0.69%

-- Flow 1:

Average throughput: 86.99 Mbit/s

95th percentile per-packet one-way delay: 112.399 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 67.20 Mbit/s

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

Loss rate: 0.94%

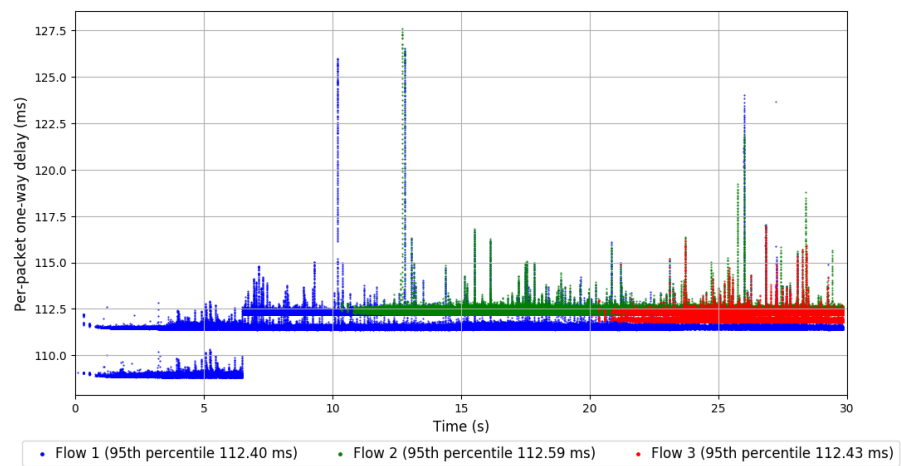
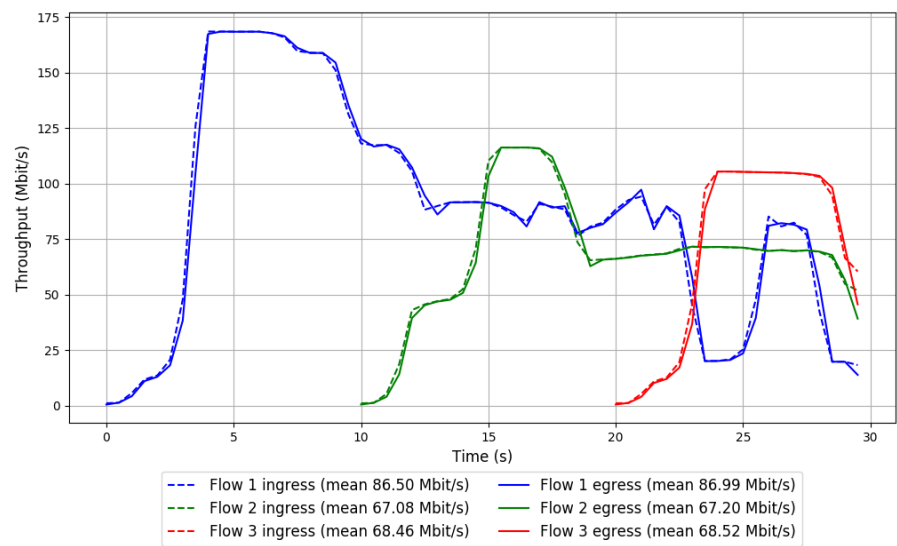
-- Flow 3:

Average throughput: 68.52 Mbit/s

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

Loss rate: 2.16%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-02-28 09:50:53

End at: 2018-02-28 09:51:23

Below is generated by plot.py at 2018-02-28 16:29:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.65 Mbit/s

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

Loss rate: 1.23%

-- Flow 1:

Average throughput: 83.25 Mbit/s

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

Loss rate: 0.92%

-- Flow 2:

Average throughput: 64.62 Mbit/s

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

Loss rate: 0.89%

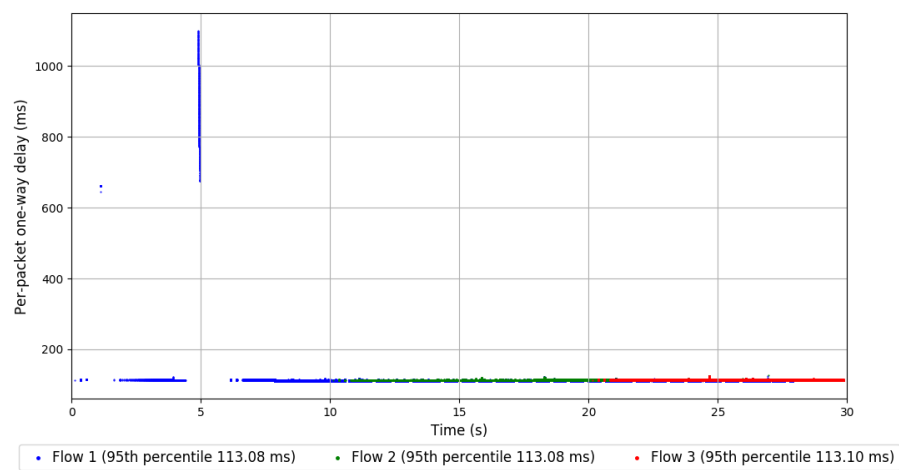
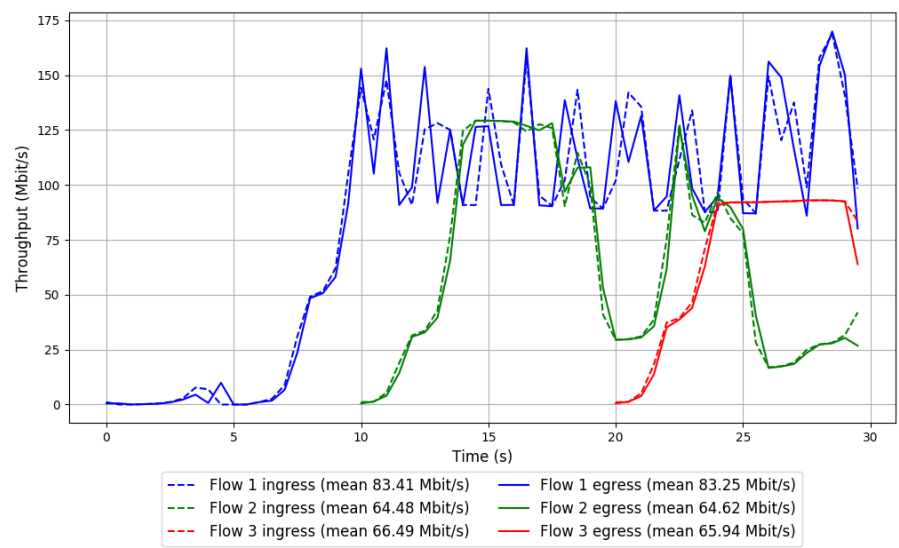
-- Flow 3:

Average throughput: 65.94 Mbit/s

95th percentile per-packet one-way delay: 113.097 ms

Loss rate: 3.05%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-02-28 10:10:08

End at: 2018-02-28 10:10:38

Below is generated by plot.py at 2018-02-28 16:29:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 151.05 Mbit/s

95th percentile per-packet one-way delay: 112.670 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 88.27 Mbit/s

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

Loss rate: 0.73%

-- Flow 2:

Average throughput: 60.69 Mbit/s

95th percentile per-packet one-way delay: 112.746 ms

Loss rate: 0.75%

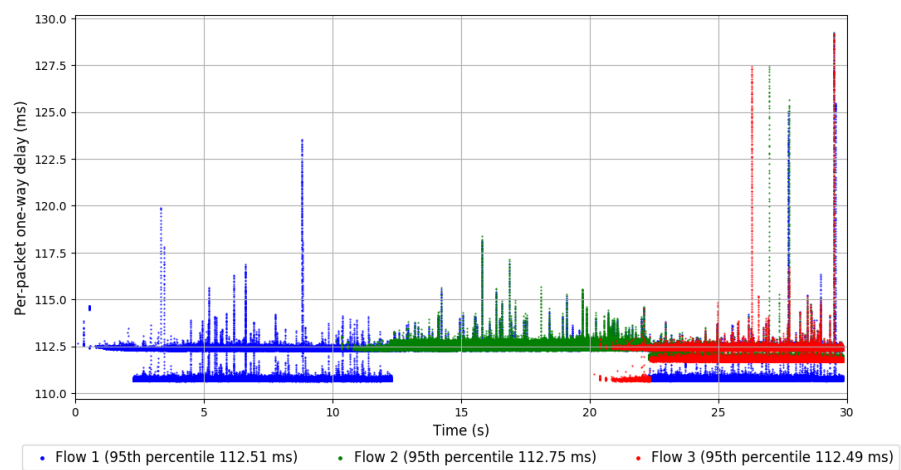
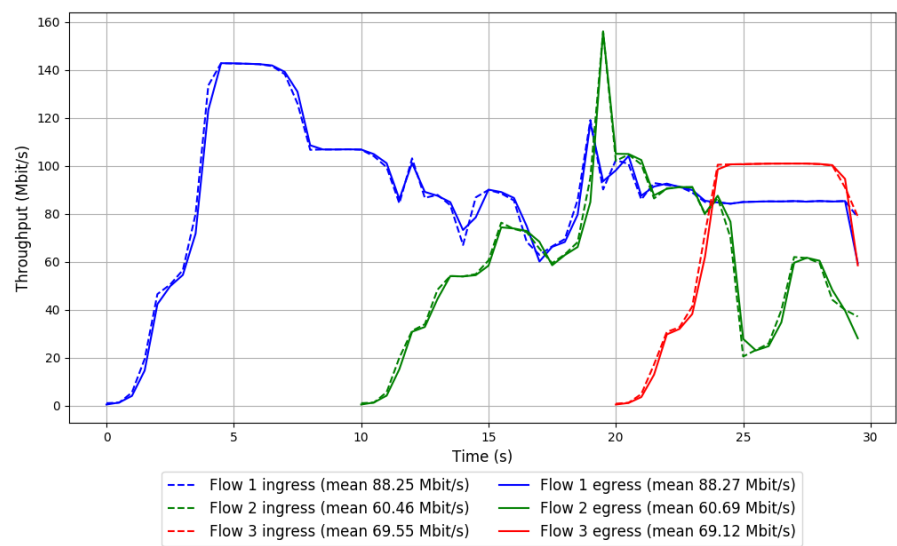
-- Flow 3:

Average throughput: 69.12 Mbit/s

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

Loss rate: 2.85%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-02-28 10:29:40

End at: 2018-02-28 10:30:10

Below is generated by plot.py at 2018-02-28 16:29:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 144.47 Mbit/s

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

Loss rate: 1.01%

-- Flow 1:

Average throughput: 83.62 Mbit/s

95th percentile per-packet one-way delay: 112.889 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 70.05 Mbit/s

95th percentile per-packet one-way delay: 112.909 ms

Loss rate: 1.09%

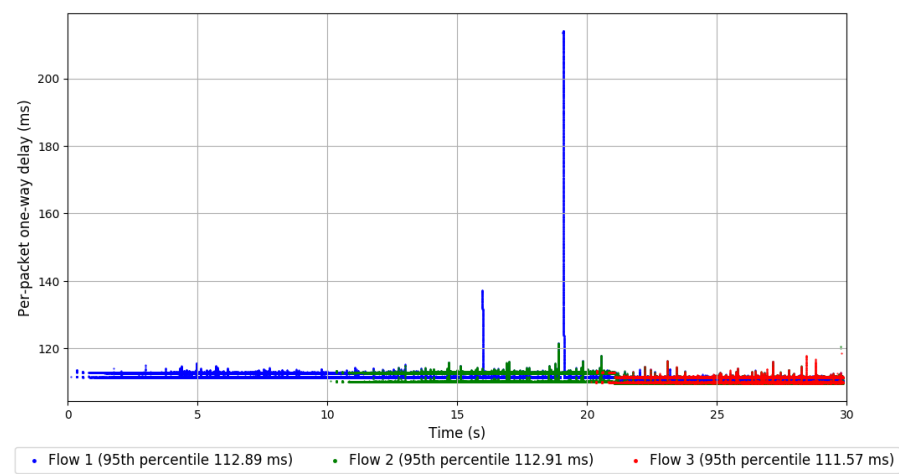
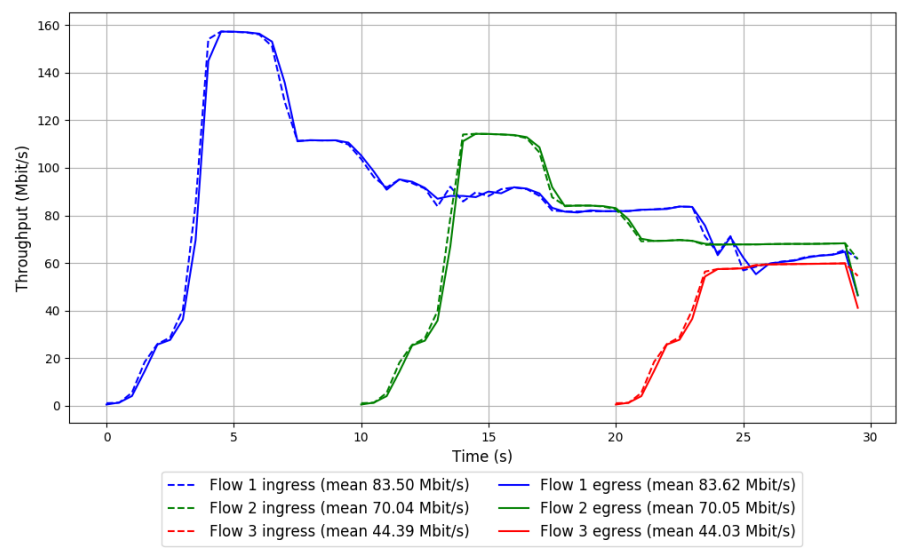
-- Flow 3:

Average throughput: 44.03 Mbit/s

95th percentile per-packet one-way delay: 111.571 ms

Loss rate: 3.03%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-02-28 10:48:52

End at: 2018-02-28 10:49:22

Below is generated by plot.py at 2018-02-28 16:30:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 162.71 Mbit/s

95th percentile per-packet one-way delay: 112.930 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 86.81 Mbit/s

95th percentile per-packet one-way delay: 112.917 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 73.90 Mbit/s

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

Loss rate: 0.97%

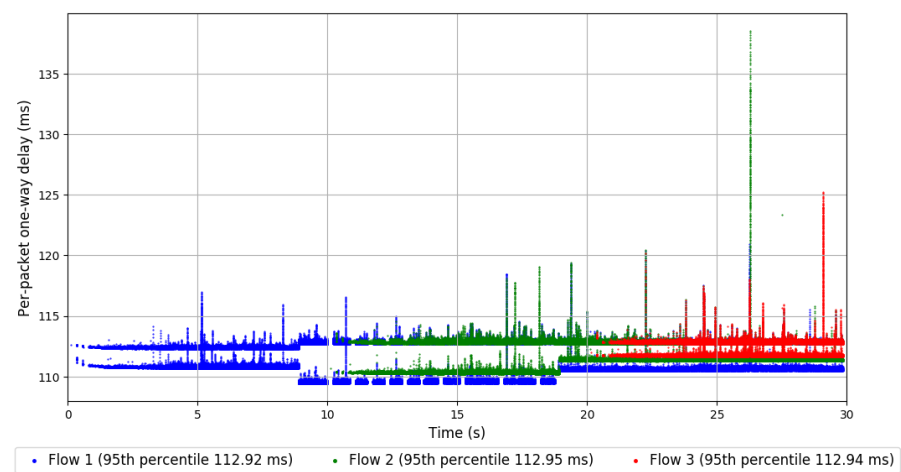
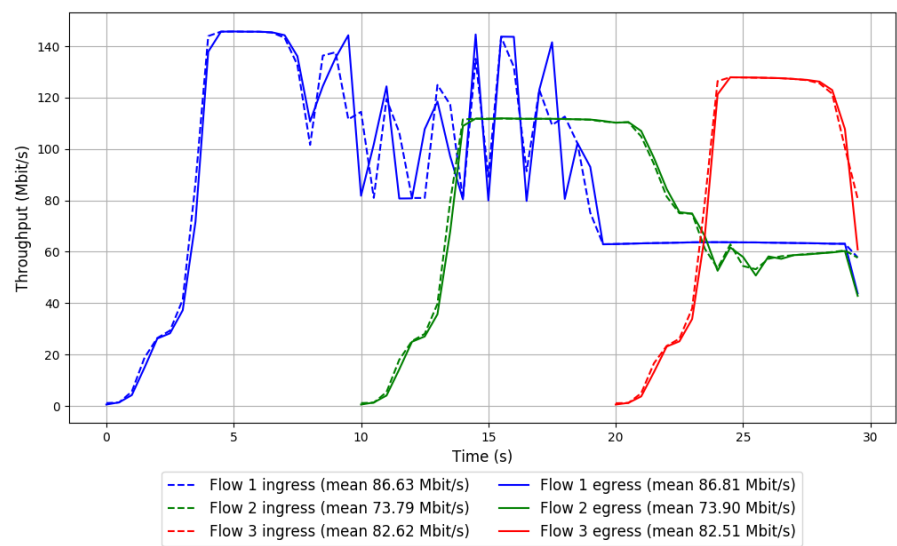
-- Flow 3:

Average throughput: 82.51 Mbit/s

95th percentile per-packet one-way delay: 112.935 ms

Loss rate: 2.38%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-02-28 11:08:26

End at: 2018-02-28 11:08:56

Below is generated by plot.py at 2018-02-28 16:31:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.51 Mbit/s

95th percentile per-packet one-way delay: 112.370 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 72.58 Mbit/s

95th percentile per-packet one-way delay: 111.832 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 69.54 Mbit/s

95th percentile per-packet one-way delay: 112.409 ms

Loss rate: 1.55%

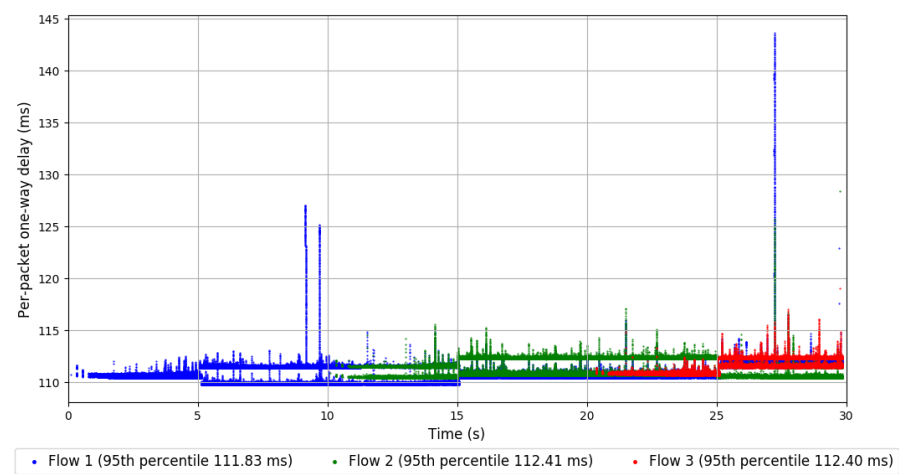
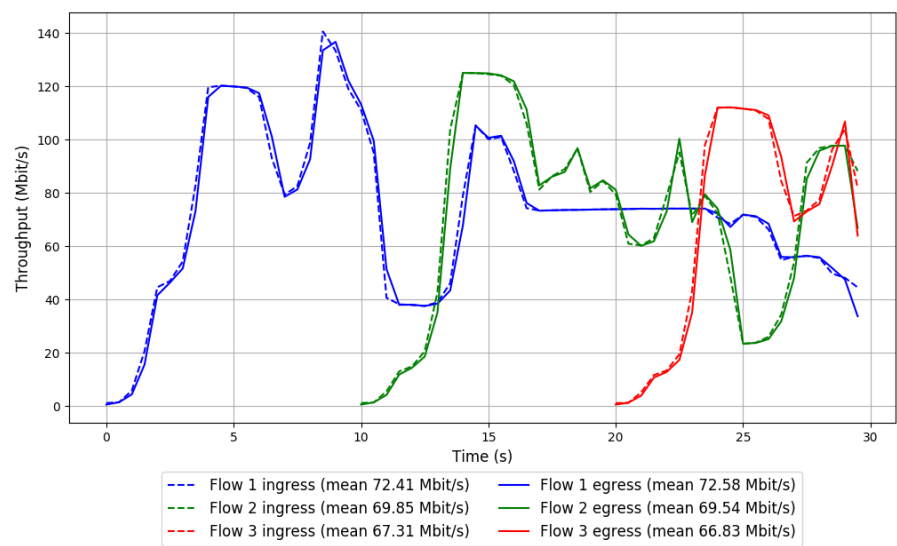
-- Flow 3:

Average throughput: 66.83 Mbit/s

95th percentile per-packet one-way delay: 112.397 ms

Loss rate: 2.94%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-02-28 11:27:51

End at: 2018-02-28 11:28:21

Below is generated by plot.py at 2018-02-28 16:32:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 154.26 Mbit/s

95th percentile per-packet one-way delay: 111.928 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 83.45 Mbit/s

95th percentile per-packet one-way delay: 110.868 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 74.16 Mbit/s

95th percentile per-packet one-way delay: 111.981 ms

Loss rate: 0.97%

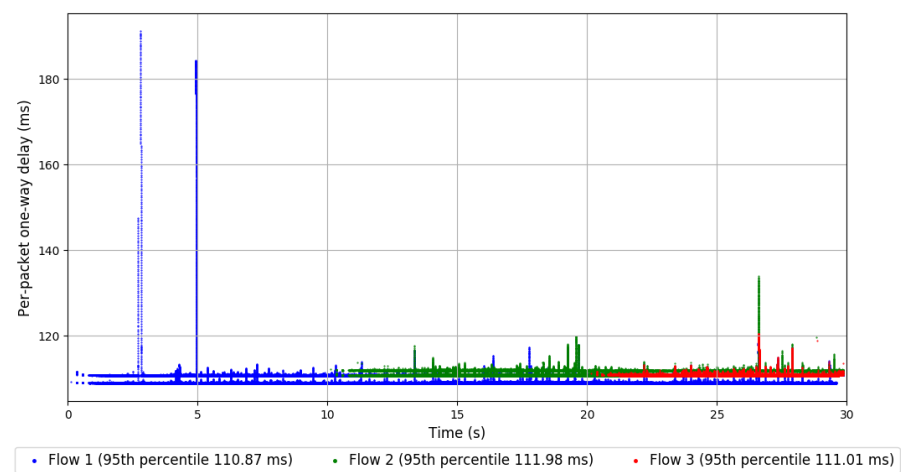
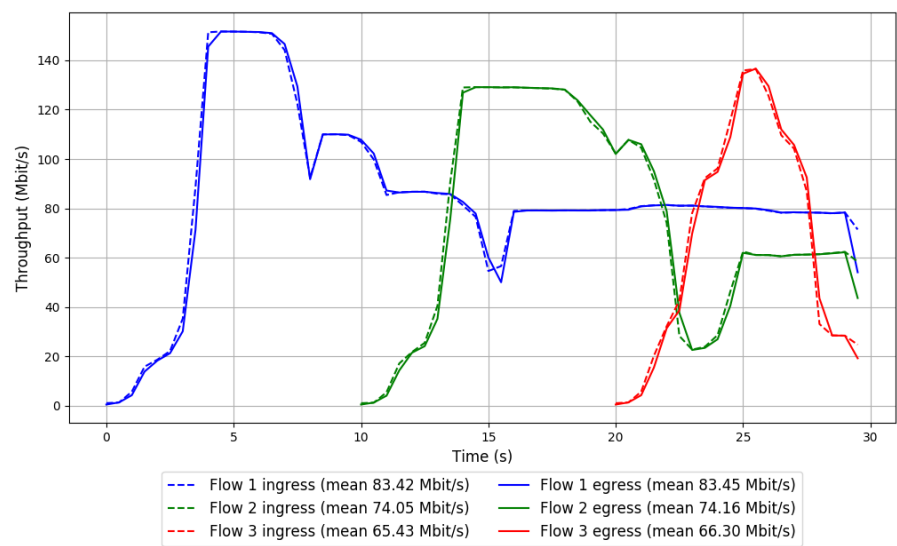
-- Flow 3:

Average throughput: 66.30 Mbit/s

95th percentile per-packet one-way delay: 111.012 ms

Loss rate: 0.91%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-02-28 11:47:02

End at: 2018-02-28 11:47:32

Below is generated by plot.py at 2018-02-28 16:32:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 144.73 Mbit/s

95th percentile per-packet one-way delay: 112.651 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 76.83 Mbit/s

95th percentile per-packet one-way delay: 112.617 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 69.73 Mbit/s

95th percentile per-packet one-way delay: 112.654 ms

Loss rate: 1.03%

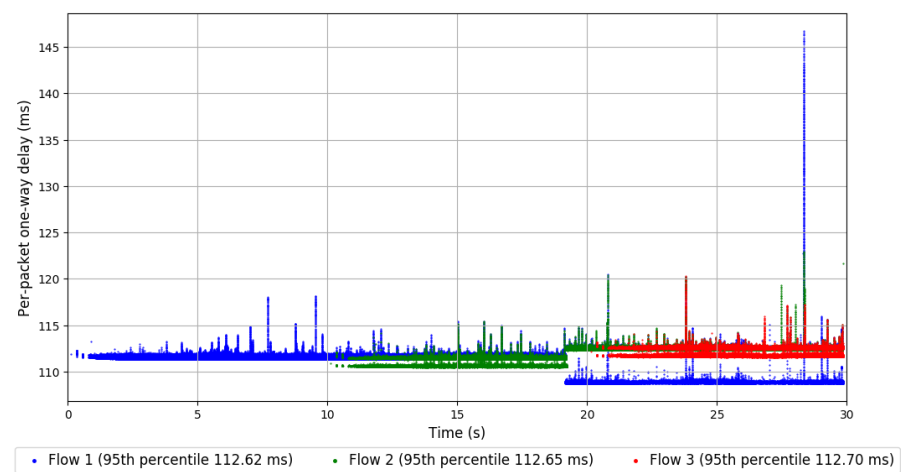
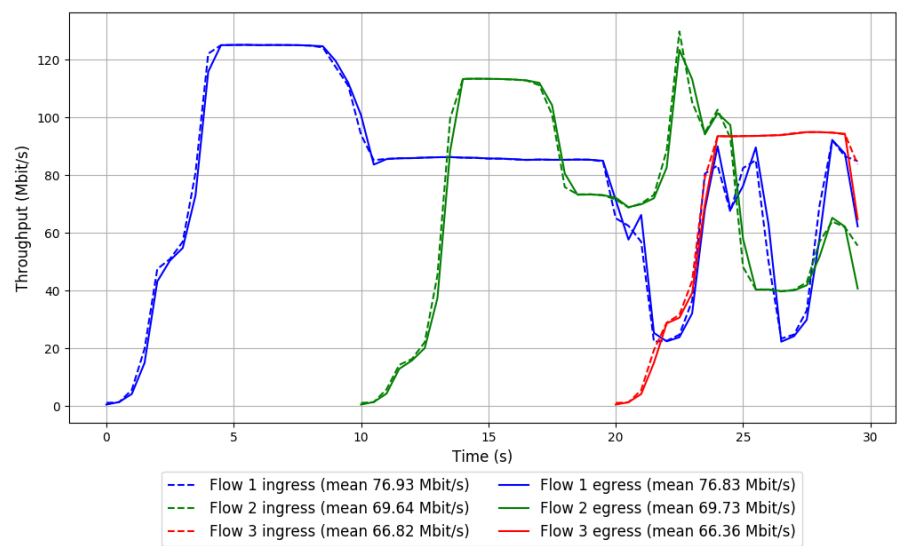
-- Flow 3:

Average throughput: 66.36 Mbit/s

95th percentile per-packet one-way delay: 112.701 ms

Loss rate: 3.02%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-02-28 12:06:32

End at: 2018-02-28 12:07:02

Below is generated by plot.py at 2018-02-28 16:33:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 150.13 Mbit/s

95th percentile per-packet one-way delay: 111.666 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 81.56 Mbit/s

95th percentile per-packet one-way delay: 111.365 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 72.85 Mbit/s

95th percentile per-packet one-way delay: 111.605 ms

Loss rate: 1.06%

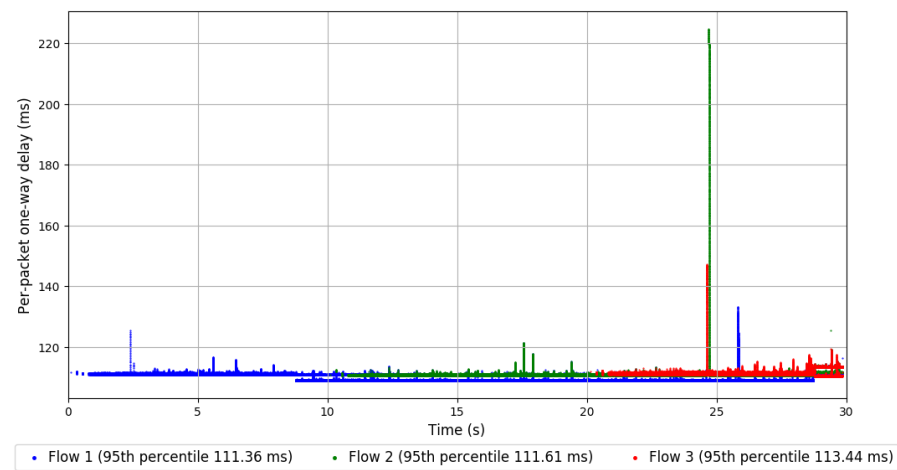
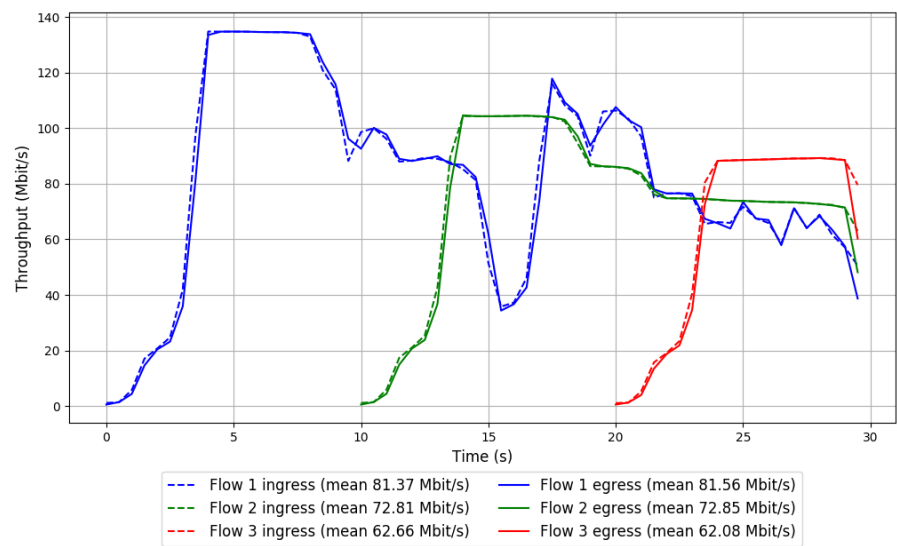
-- Flow 3:

Average throughput: 62.08 Mbit/s

95th percentile per-packet one-way delay: 113.443 ms

Loss rate: 3.16%

Run 10: Report of Copa — Data Link

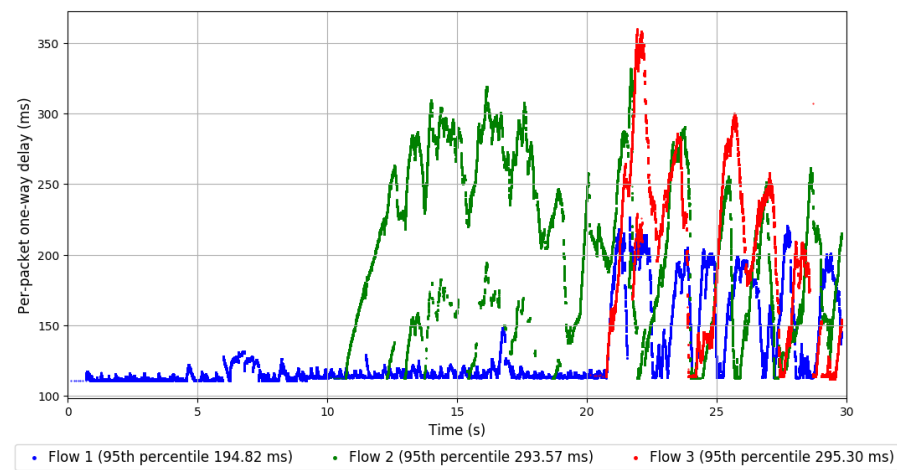
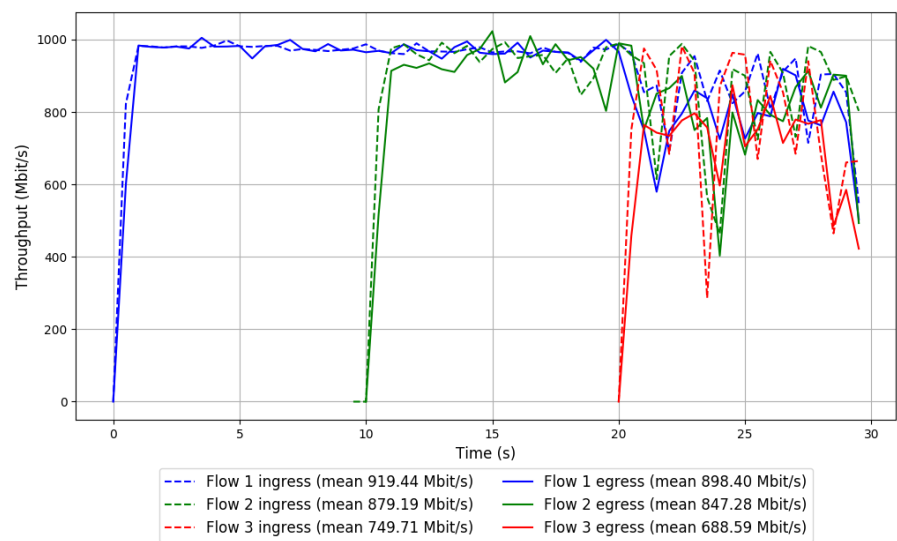


```
Run 1: Statistics of FillP

Start at: 2018-02-28 09:17:31
End at: 2018-02-28 09:18:01

# Below is generated by plot.py at 2018-02-28 16:57:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1684.84 Mbit/s
95th percentile per-packet one-way delay: 284.151 ms
Loss rate: 4.62%
-- Flow 1:
Average throughput: 898.40 Mbit/s
95th percentile per-packet one-way delay: 194.823 ms
Loss rate: 3.02%
-- Flow 2:
Average throughput: 847.28 Mbit/s
95th percentile per-packet one-way delay: 293.567 ms
Loss rate: 4.73%
-- Flow 3:
Average throughput: 688.59 Mbit/s
95th percentile per-packet one-way delay: 295.300 ms
Loss rate: 10.28%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-02-28 09:37:23

End at: 2018-02-28 09:37:53

Below is generated by plot.py at 2018-02-28 16:58:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 1734.92 Mbit/s

95th percentile per-packet one-way delay: 233.651 ms

Loss rate: 3.93%

-- Flow 1:

Average throughput: 903.72 Mbit/s

95th percentile per-packet one-way delay: 237.005 ms

Loss rate: 2.51%

-- Flow 2:

Average throughput: 869.85 Mbit/s

95th percentile per-packet one-way delay: 198.233 ms

Loss rate: 4.91%

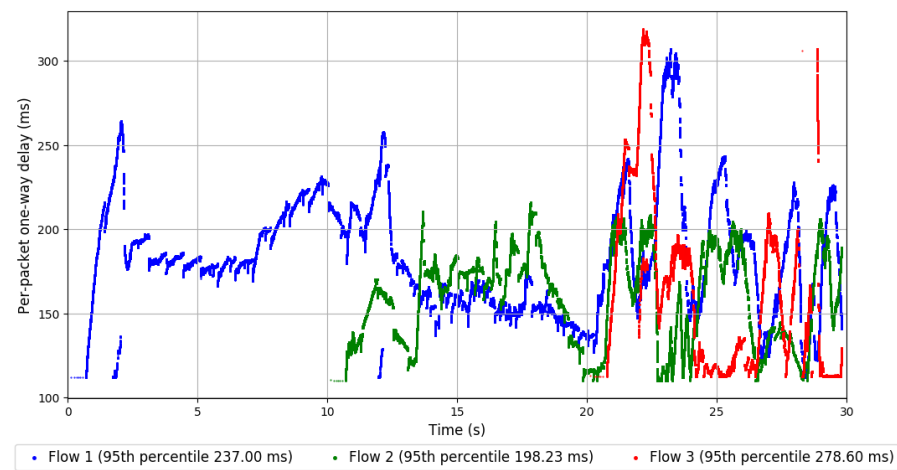
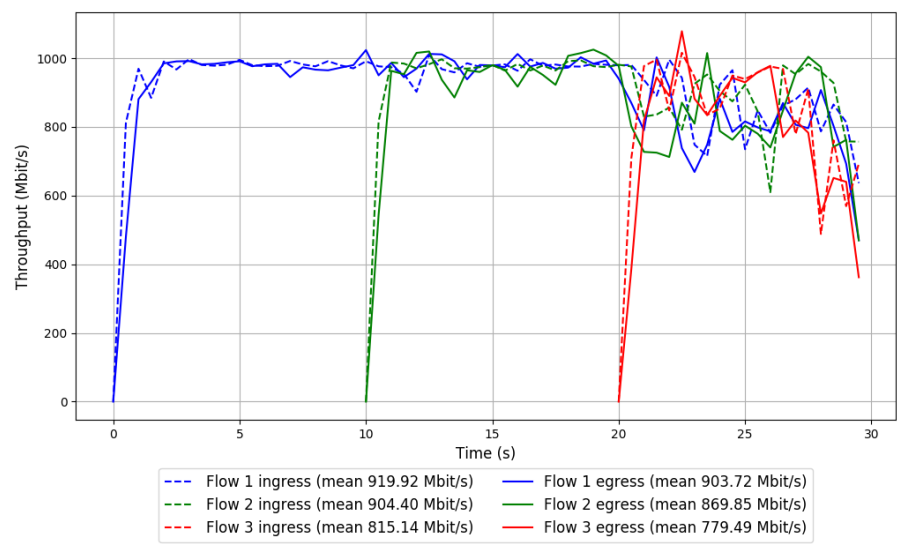
-- Flow 3:

Average throughput: 779.49 Mbit/s

95th percentile per-packet one-way delay: 278.598 ms

Loss rate: 6.58%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-02-28 09:56:32

End at: 2018-02-28 09:57:02

Below is generated by plot.py at 2018-02-28 16:58:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 1691.52 Mbit/s

95th percentile per-packet one-way delay: 294.165 ms

Loss rate: 4.89%

-- Flow 1:

Average throughput: 897.45 Mbit/s

95th percentile per-packet one-way delay: 233.490 ms

Loss rate: 3.83%

-- Flow 2:

Average throughput: 842.56 Mbit/s

95th percentile per-packet one-way delay: 308.259 ms

Loss rate: 5.67%

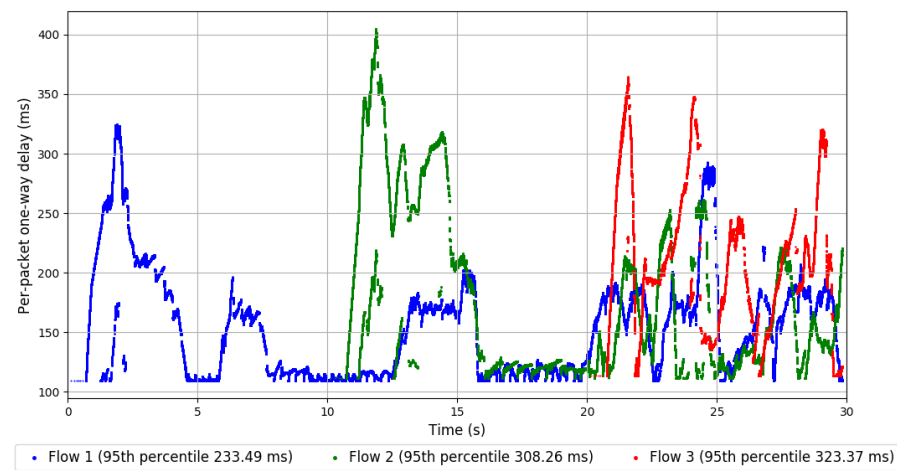
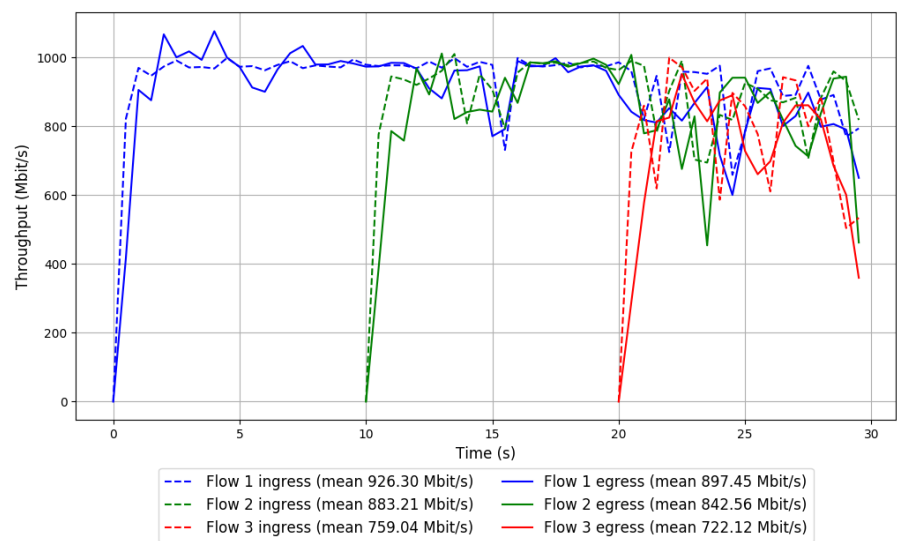
-- Flow 3:

Average throughput: 722.12 Mbit/s

95th percentile per-packet one-way delay: 323.374 ms

Loss rate: 7.01%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-02-28 10:15:59

End at: 2018-02-28 10:16:29

Below is generated by plot.py at 2018-02-28 16:59:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 1688.37 Mbit/s

95th percentile per-packet one-way delay: 252.142 ms

Loss rate: 2.95%

-- Flow 1:

Average throughput: 914.36 Mbit/s

95th percentile per-packet one-way delay: 186.387 ms

Loss rate: 2.23%

-- Flow 2:

Average throughput: 809.82 Mbit/s

95th percentile per-packet one-way delay: 261.808 ms

Loss rate: 1.98%

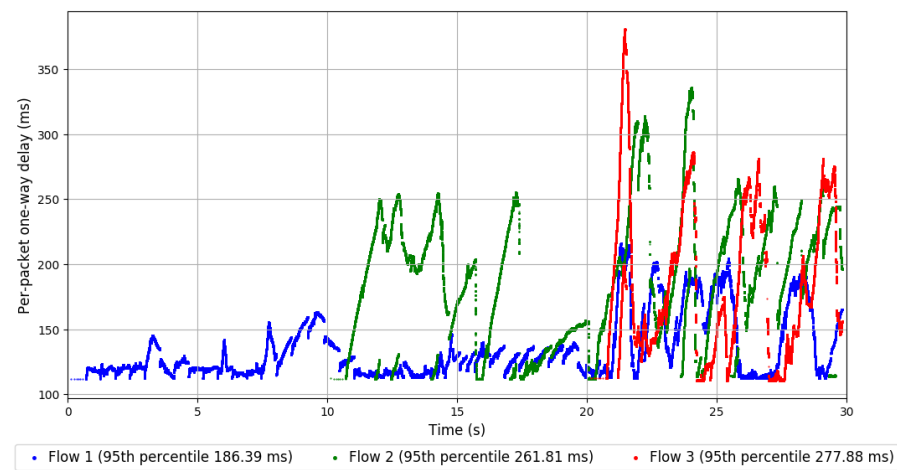
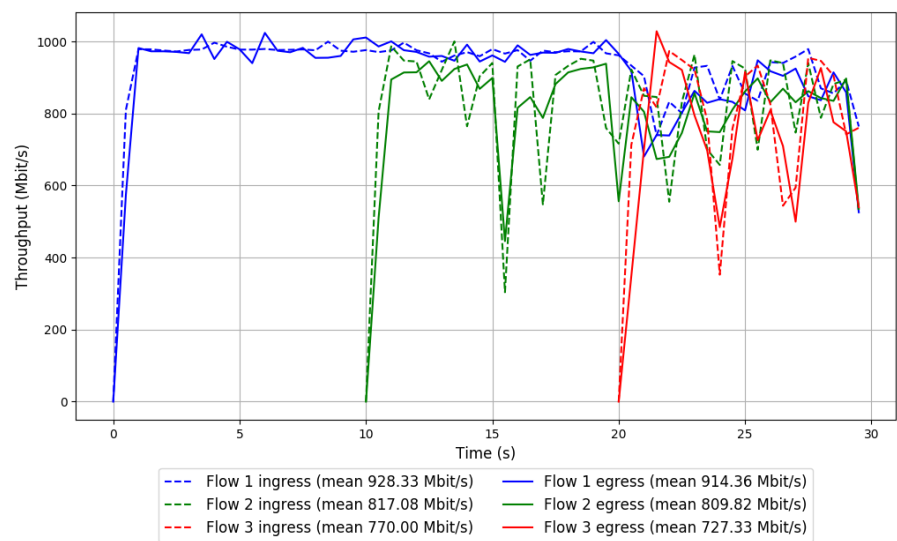
-- Flow 3:

Average throughput: 727.33 Mbit/s

95th percentile per-packet one-way delay: 277.875 ms

Loss rate: 7.68%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-02-28 10:35:32

End at: 2018-02-28 10:36:02

Below is generated by plot.py at 2018-02-28 16:59:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 1510.54 Mbit/s

95th percentile per-packet one-way delay: 287.059 ms

Loss rate: 4.57%

-- Flow 1:

Average throughput: 653.22 Mbit/s

95th percentile per-packet one-way delay: 303.810 ms

Loss rate: 4.86%

-- Flow 2:

Average throughput: 865.49 Mbit/s

95th percentile per-packet one-way delay: 268.076 ms

Loss rate: 4.51%

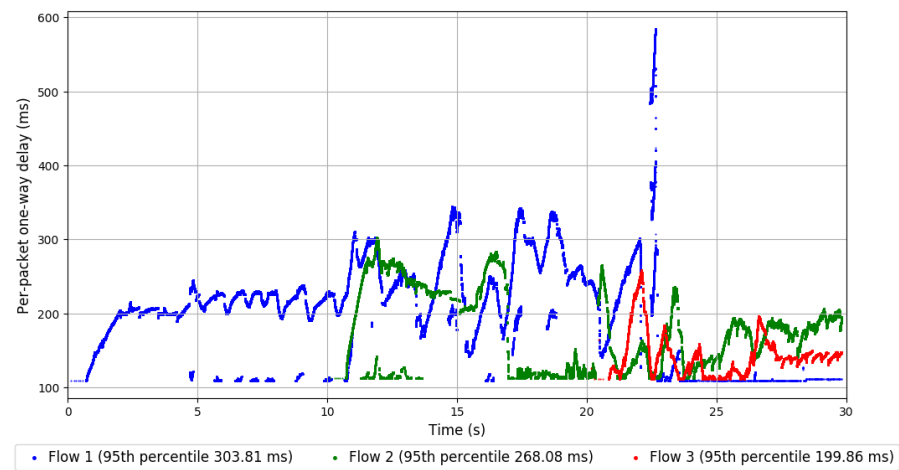
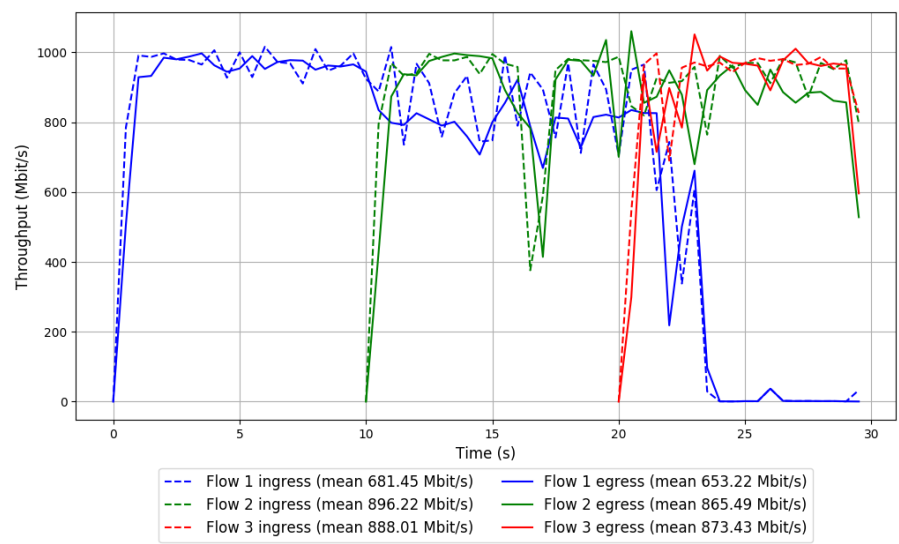
-- Flow 3:

Average throughput: 873.43 Mbit/s

95th percentile per-packet one-way delay: 199.861 ms

Loss rate: 4.00%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-02-28 10:54:44

End at: 2018-02-28 10:55:14

Below is generated by plot.py at 2018-02-28 17:01:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 1649.96 Mbit/s

95th percentile per-packet one-way delay: 320.566 ms

Loss rate: 5.52%

-- Flow 1:

Average throughput: 851.20 Mbit/s

95th percentile per-packet one-way delay: 341.654 ms

Loss rate: 5.02%

-- Flow 2:

Average throughput: 856.00 Mbit/s

95th percentile per-packet one-way delay: 271.449 ms

Loss rate: 3.46%

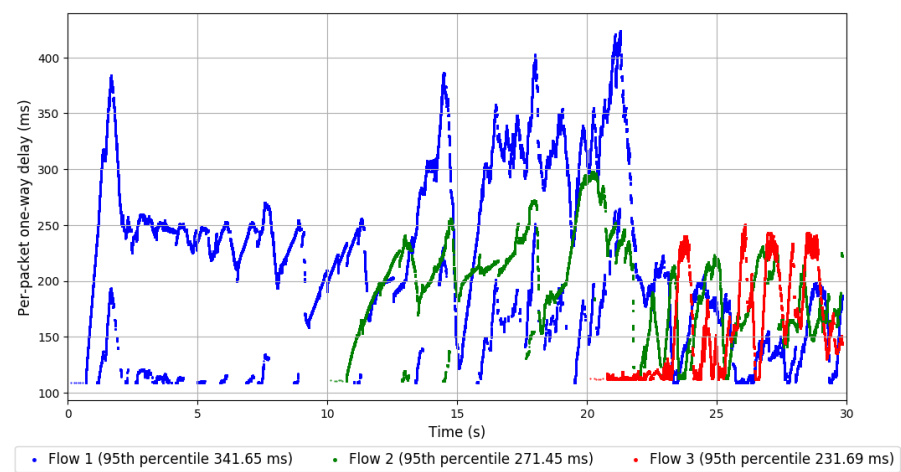
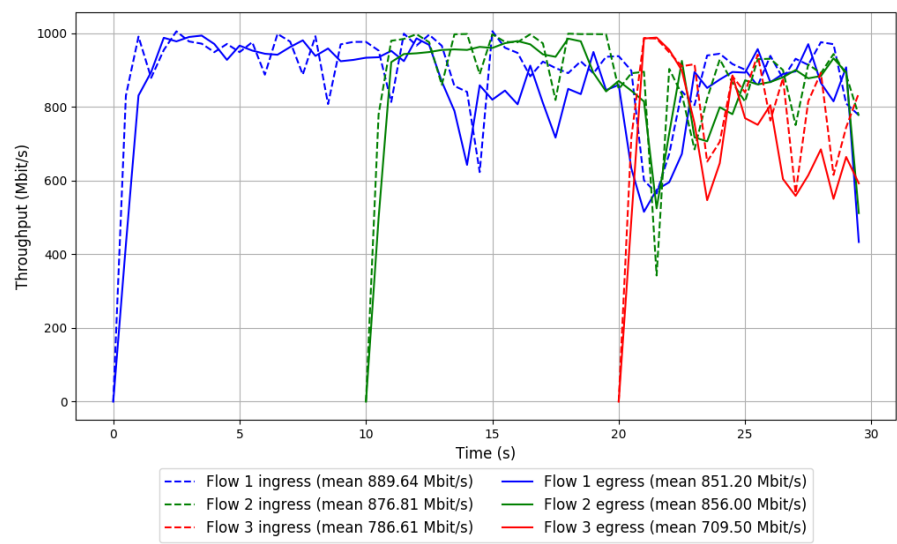
-- Flow 3:

Average throughput: 709.50 Mbit/s

95th percentile per-packet one-way delay: 231.688 ms

Loss rate: 11.84%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-02-28 11:14:18

End at: 2018-02-28 11:14:48

Below is generated by plot.py at 2018-02-28 17:01:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 1634.50 Mbit/s

95th percentile per-packet one-way delay: 332.226 ms

Loss rate: 4.95%

-- Flow 1:

Average throughput: 812.59 Mbit/s

95th percentile per-packet one-way delay: 343.565 ms

Loss rate: 4.85%

-- Flow 2:

Average throughput: 881.28 Mbit/s

95th percentile per-packet one-way delay: 228.991 ms

Loss rate: 2.84%

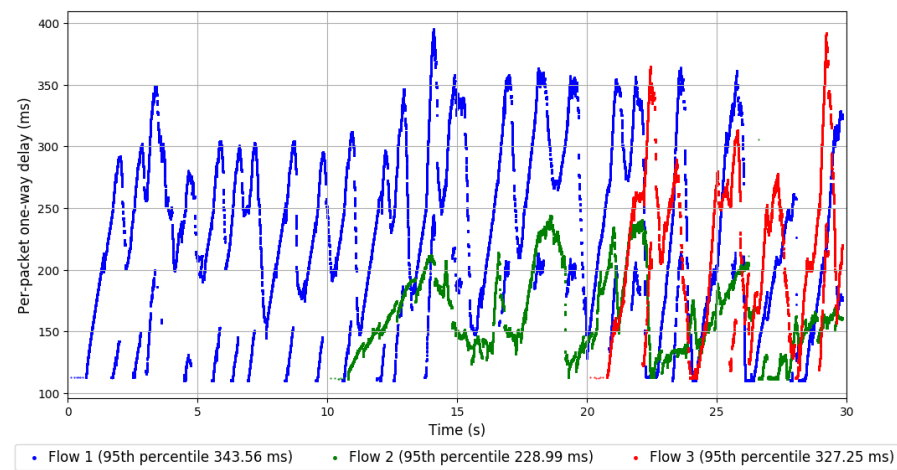
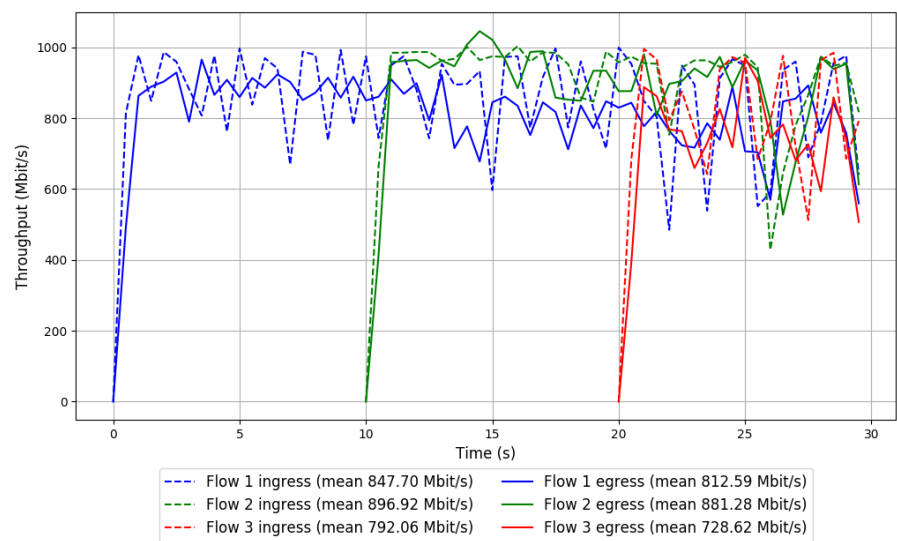
-- Flow 3:

Average throughput: 728.62 Mbit/s

95th percentile per-packet one-way delay: 327.248 ms

Loss rate: 10.08%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-02-28 11:33:49

End at: 2018-02-28 11:34:19

Below is generated by plot.py at 2018-02-28 17:01:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 1115.26 Mbit/s

95th percentile per-packet one-way delay: 259.496 ms

Loss rate: 6.02%

-- Flow 1:

Average throughput: 254.95 Mbit/s

95th percentile per-packet one-way delay: 204.964 ms

Loss rate: 7.06%

-- Flow 2:

Average throughput: 893.10 Mbit/s

95th percentile per-packet one-way delay: 202.124 ms

Loss rate: 4.38%

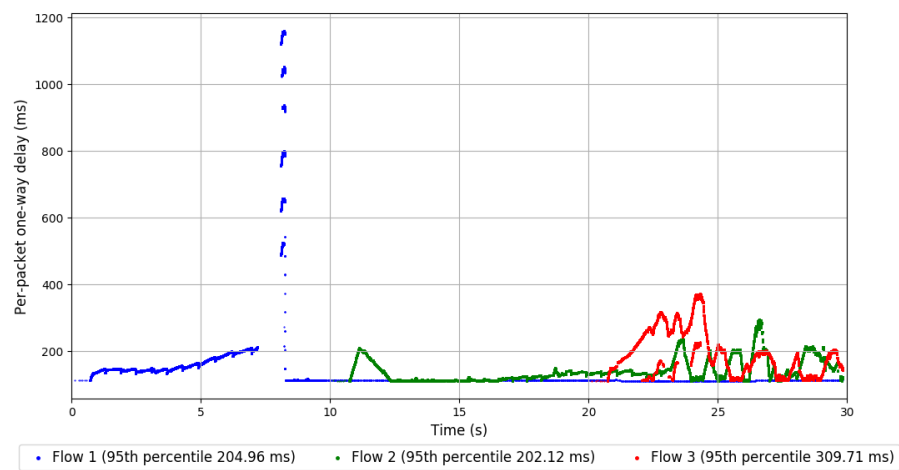
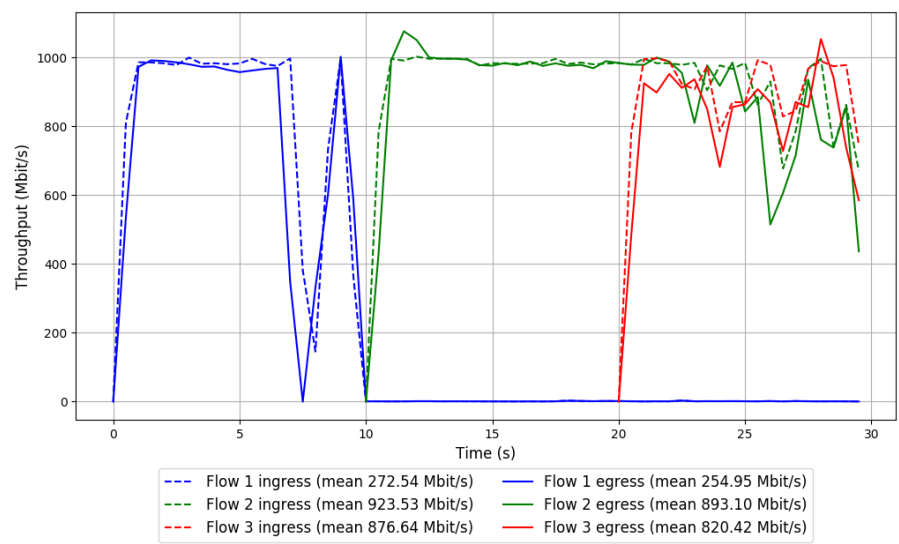
-- Flow 3:

Average throughput: 820.42 Mbit/s

95th percentile per-packet one-way delay: 309.710 ms

Loss rate: 8.52%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-02-28 11:52:52

End at: 2018-02-28 11:53:22

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 1720.25 Mbit/s

95th percentile per-packet one-way delay: 253.502 ms

Loss rate: 3.73%

-- Flow 1:

Average throughput: 909.42 Mbit/s

95th percentile per-packet one-way delay: 278.040 ms

Loss rate: 2.43%

-- Flow 2:

Average throughput: 837.08 Mbit/s

95th percentile per-packet one-way delay: 234.684 ms

Loss rate: 4.72%

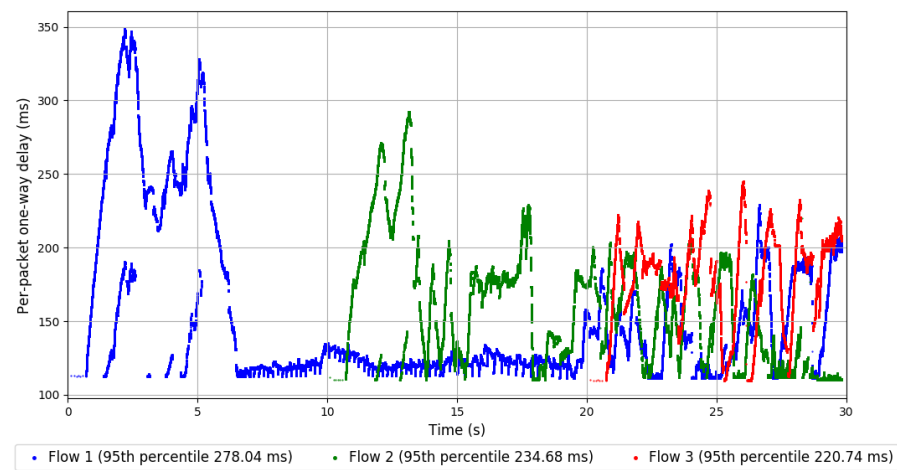
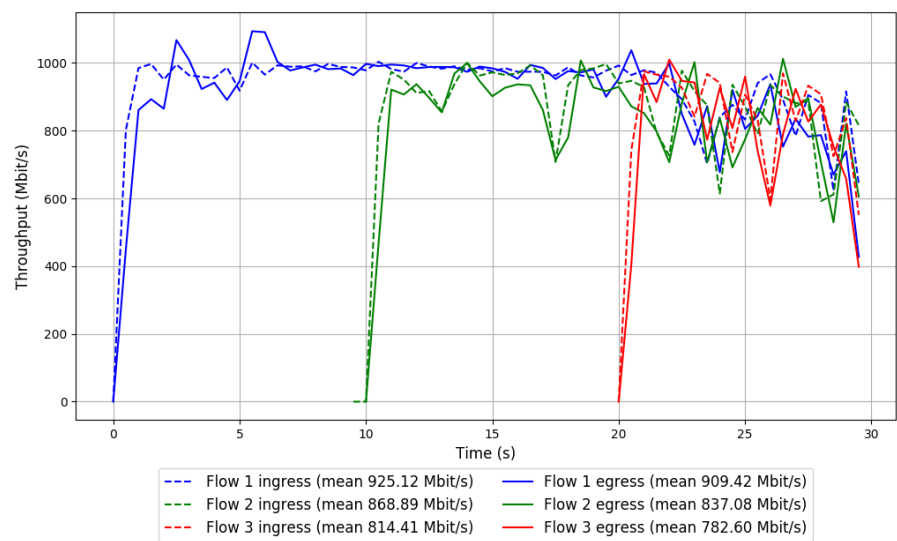
-- Flow 3:

Average throughput: 782.60 Mbit/s

95th percentile per-packet one-way delay: 220.738 ms

Loss rate: 6.04%

Run 9: Report of FillP — Data Link

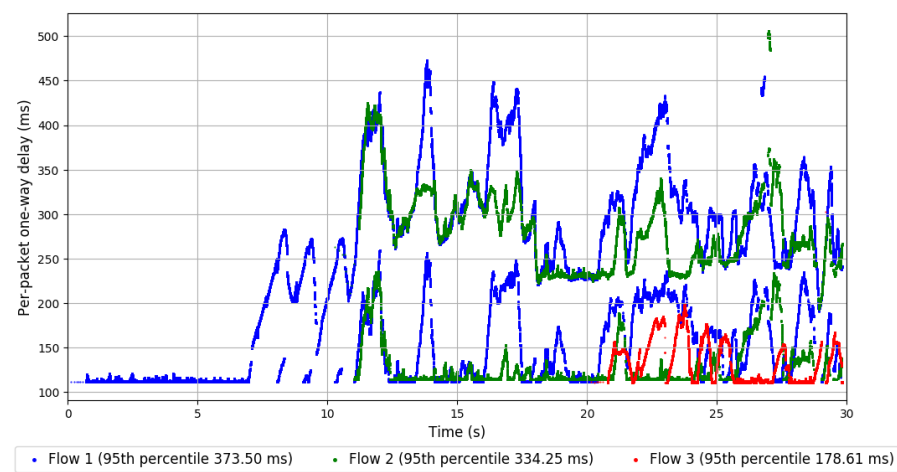
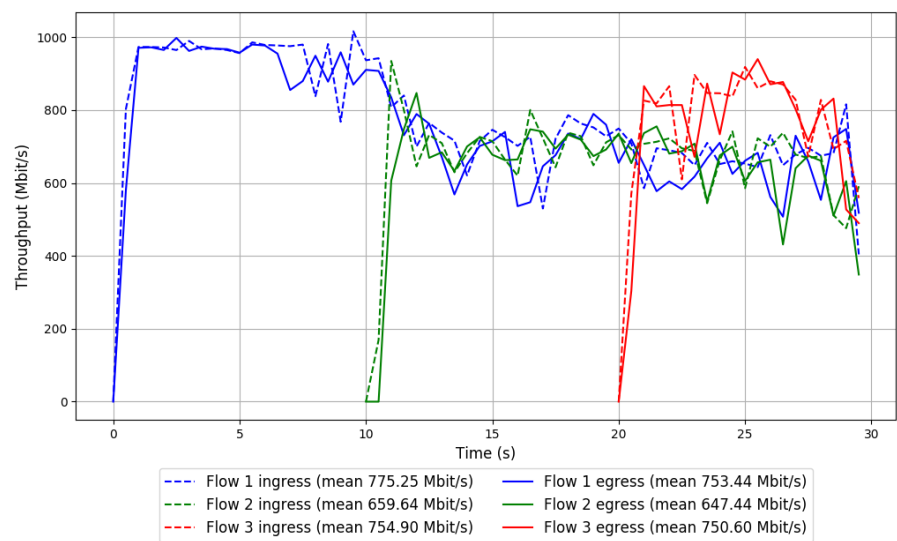


```
Run 10: Statistics of FillP

Start at: 2018-02-28 12:12:26
End at: 2018-02-28 12:12:56

# Below is generated by plot.py at 2018-02-28 17:25:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1423.62 Mbit/s
95th percentile per-packet one-way delay: 343.803 ms
Loss rate: 3.45%
-- Flow 1:
Average throughput: 753.44 Mbit/s
95th percentile per-packet one-way delay: 373.502 ms
Loss rate: 3.53%
-- Flow 2:
Average throughput: 647.44 Mbit/s
95th percentile per-packet one-way delay: 334.253 ms
Loss rate: 3.68%
-- Flow 3:
Average throughput: 750.60 Mbit/s
95th percentile per-packet one-way delay: 178.608 ms
Loss rate: 2.78%
```

Run 10: Report of FillP — Data Link

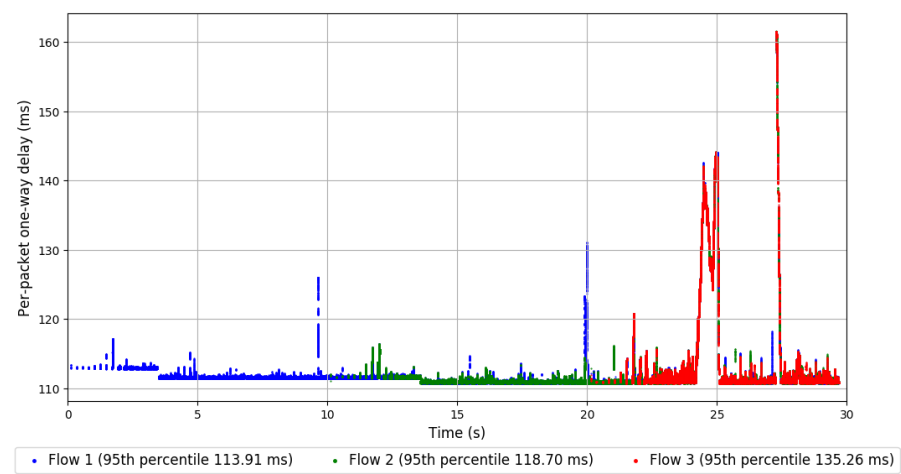
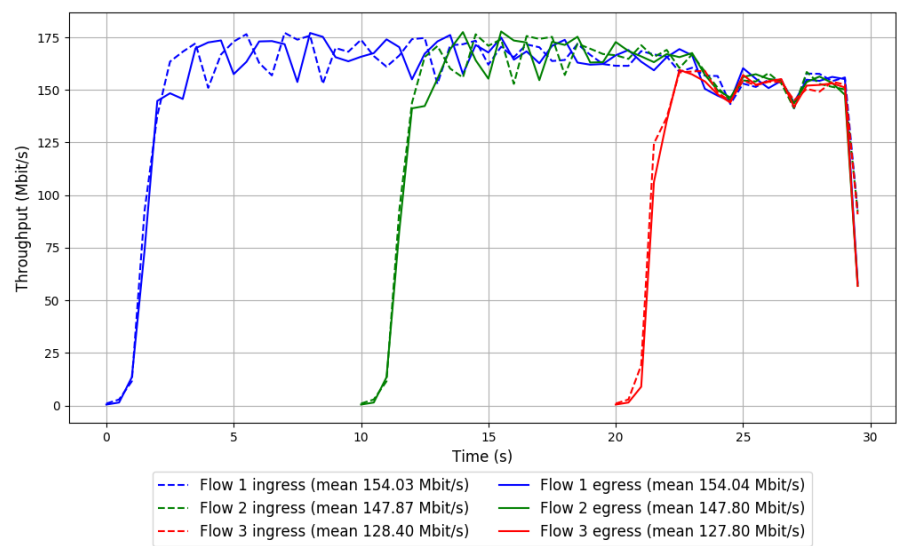


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-02-28 09:19:27
End at: 2018-02-28 09:19:57

# Below is generated by plot.py at 2018-02-28 17:25:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.13 Mbit/s
95th percentile per-packet one-way delay: 119.497 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 154.04 Mbit/s
95th percentile per-packet one-way delay: 113.908 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 147.80 Mbit/s
95th percentile per-packet one-way delay: 118.703 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 127.80 Mbit/s
95th percentile per-packet one-way delay: 135.256 ms
Loss rate: 2.74%
```

Run 1: Report of Indigo-1-32 — Data Link

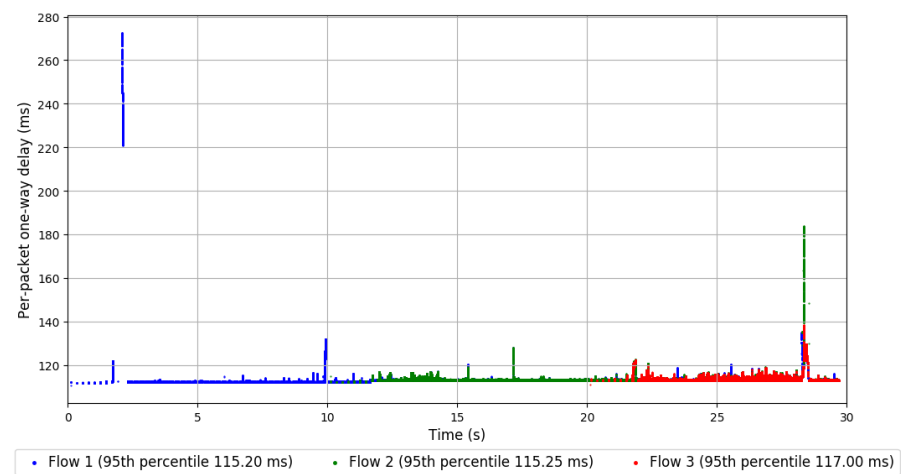
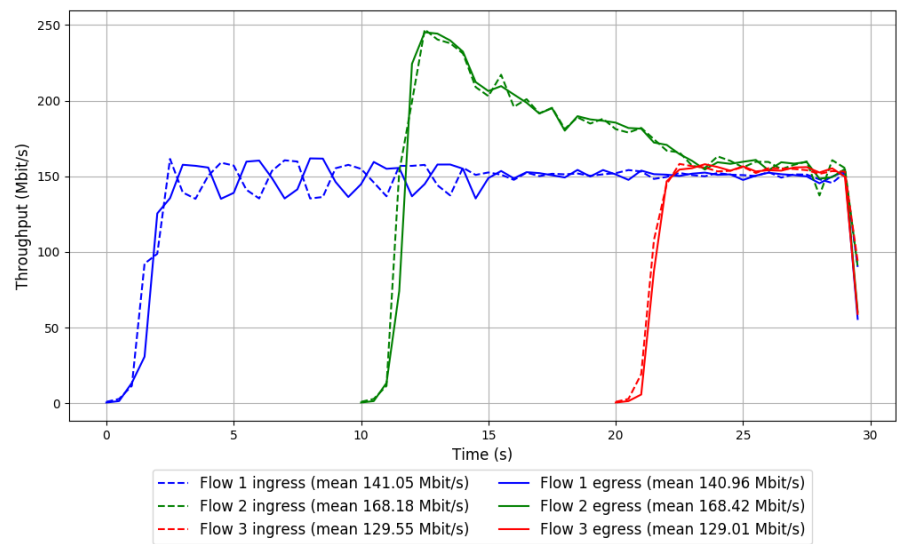


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-02-28 09:39:19
End at: 2018-02-28 09:39:49

# Below is generated by plot.py at 2018-02-28 17:25:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 294.05 Mbit/s
95th percentile per-packet one-way delay: 115.480 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 140.96 Mbit/s
95th percentile per-packet one-way delay: 115.202 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 168.42 Mbit/s
95th percentile per-packet one-way delay: 115.253 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 129.01 Mbit/s
95th percentile per-packet one-way delay: 116.998 ms
Loss rate: 2.68%
```

Run 2: Report of Indigo-1-32 — Data Link



Run 3: Statistics of Indigo-1-32

Start at: 2018-02-28 09:58:28

End at: 2018-02-28 09:58:58

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 287.51 Mbit/s

95th percentile per-packet one-way delay: 117.419 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 145.70 Mbit/s

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

Loss rate: 0.82%

-- Flow 2:

Average throughput: 143.08 Mbit/s

95th percentile per-packet one-way delay: 116.864 ms

Loss rate: 1.26%

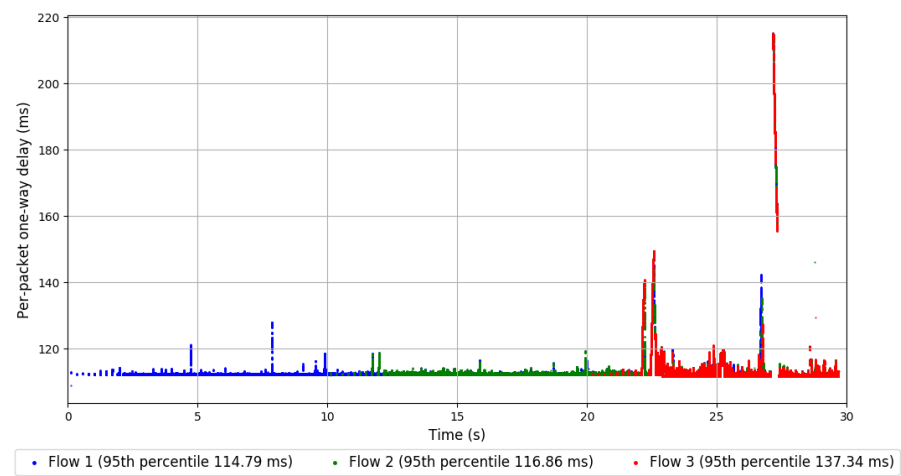
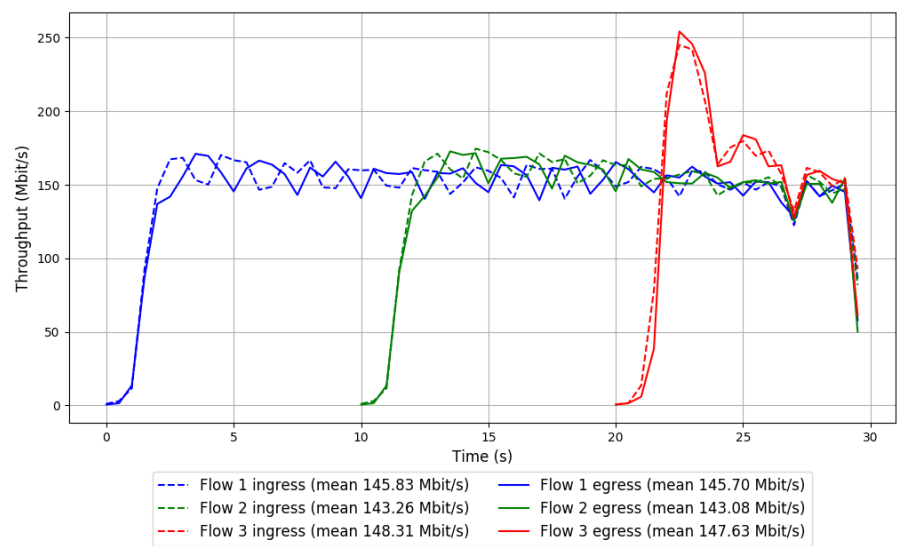
-- Flow 3:

Average throughput: 147.63 Mbit/s

95th percentile per-packet one-way delay: 137.344 ms

Loss rate: 2.58%

Run 3: Report of Indigo-1-32 — Data Link



Run 4: Statistics of Indigo-1-32

Start at: 2018-02-28 10:17:56

End at: 2018-02-28 10:18:26

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 327.04 Mbit/s

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

Loss rate: 1.03%

-- Flow 1:

Average throughput: 179.44 Mbit/s

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

Loss rate: 0.61%

-- Flow 2:

Average throughput: 163.61 Mbit/s

95th percentile per-packet one-way delay: 113.527 ms

Loss rate: 1.08%

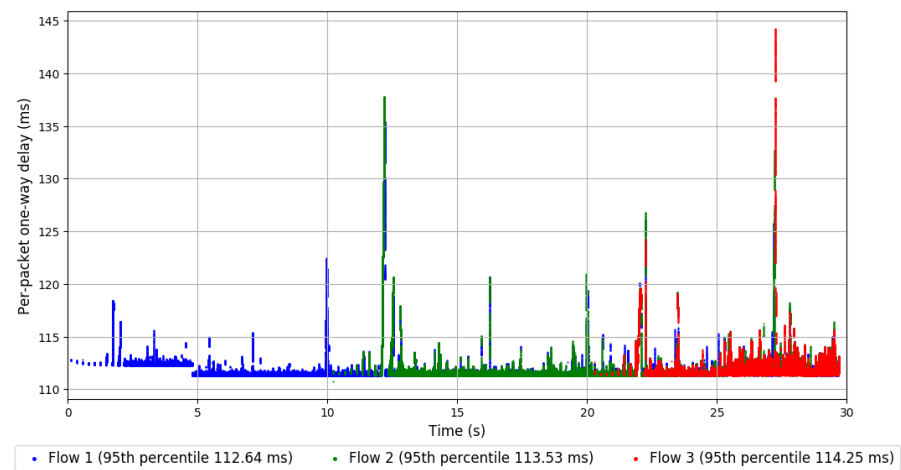
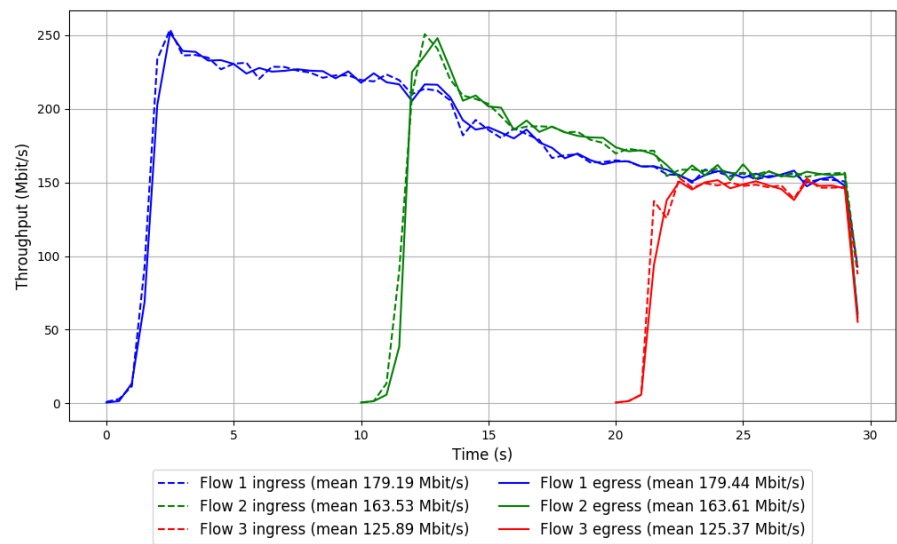
-- Flow 3:

Average throughput: 125.37 Mbit/s

95th percentile per-packet one-way delay: 114.246 ms

Loss rate: 2.72%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

Start at: 2018-02-28 10:37:21

End at: 2018-02-28 10:37:51

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 317.08 Mbit/s

95th percentile per-packet one-way delay: 113.687 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 181.78 Mbit/s

95th percentile per-packet one-way delay: 113.344 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 141.53 Mbit/s

95th percentile per-packet one-way delay: 113.722 ms

Loss rate: 1.11%

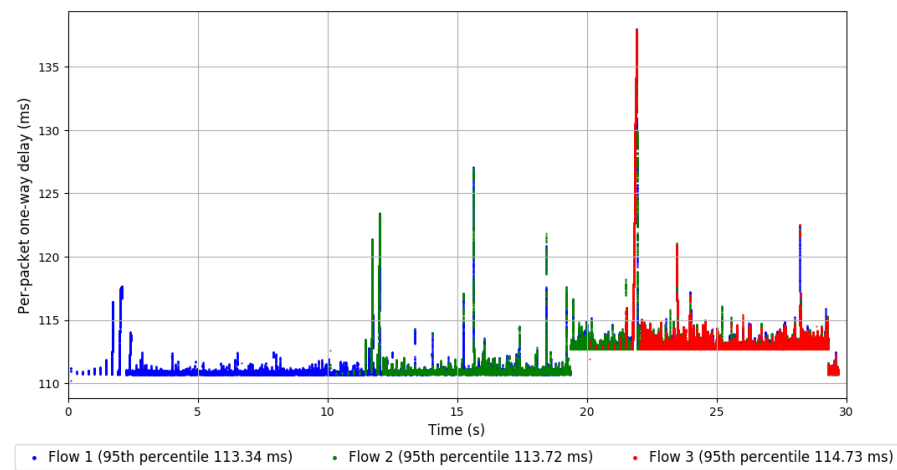
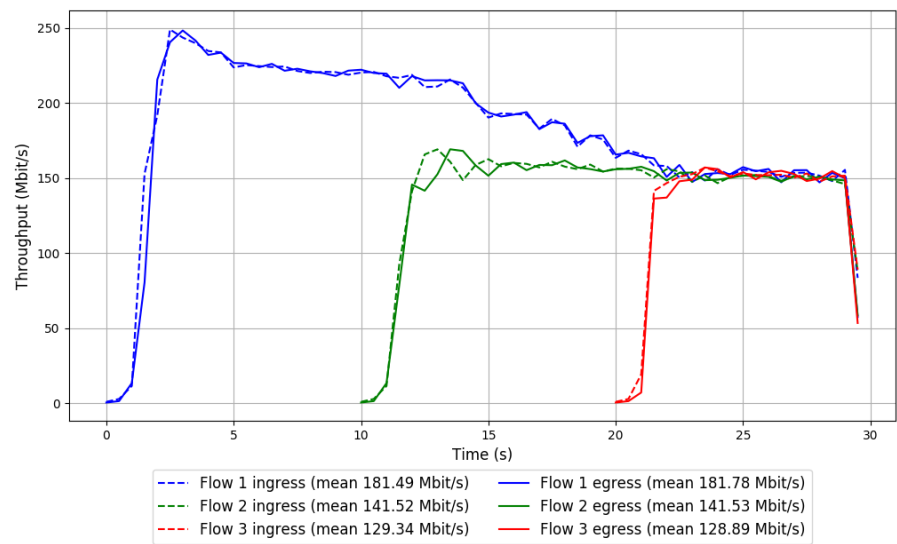
-- Flow 3:

Average throughput: 128.89 Mbit/s

95th percentile per-packet one-way delay: 114.726 ms

Loss rate: 2.61%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

Start at: 2018-02-28 10:56:42

End at: 2018-02-28 10:57:12

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 229.69 Mbit/s

95th percentile per-packet one-way delay: 113.952 ms

Loss rate: 2.03%

-- Flow 1:

Average throughput: 122.02 Mbit/s

95th percentile per-packet one-way delay: 113.593 ms

Loss rate: 1.52%

-- Flow 2:

Average throughput: 98.68 Mbit/s

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

Loss rate: 2.50%

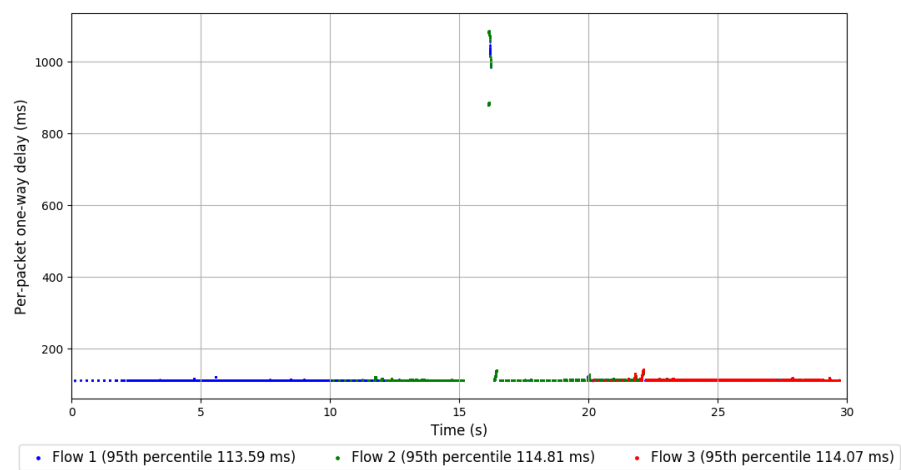
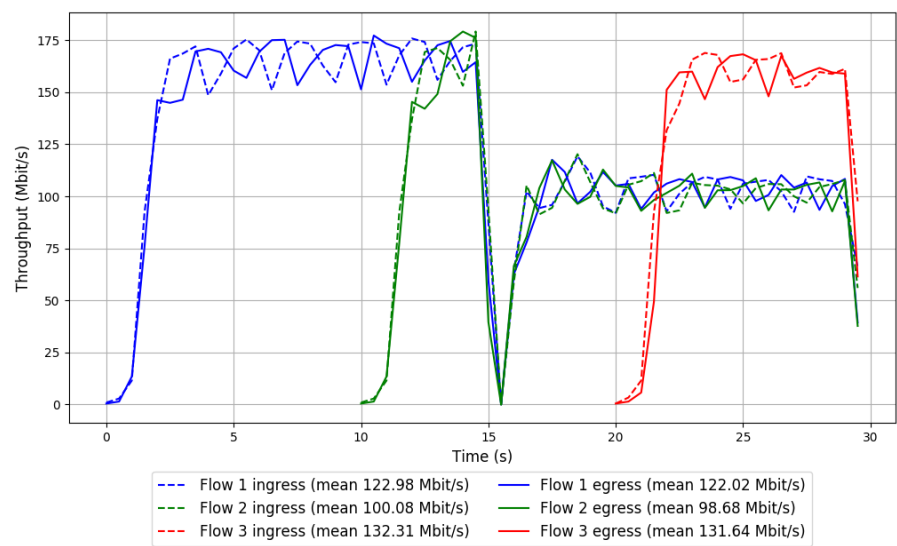
-- Flow 3:

Average throughput: 131.64 Mbit/s

95th percentile per-packet one-way delay: 114.071 ms

Loss rate: 2.74%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-02-28 11:16:13

End at: 2018-02-28 11:16:43

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 293.28 Mbit/s

95th percentile per-packet one-way delay: 113.717 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 150.09 Mbit/s

95th percentile per-packet one-way delay: 112.524 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 145.15 Mbit/s

95th percentile per-packet one-way delay: 113.564 ms

Loss rate: 1.12%

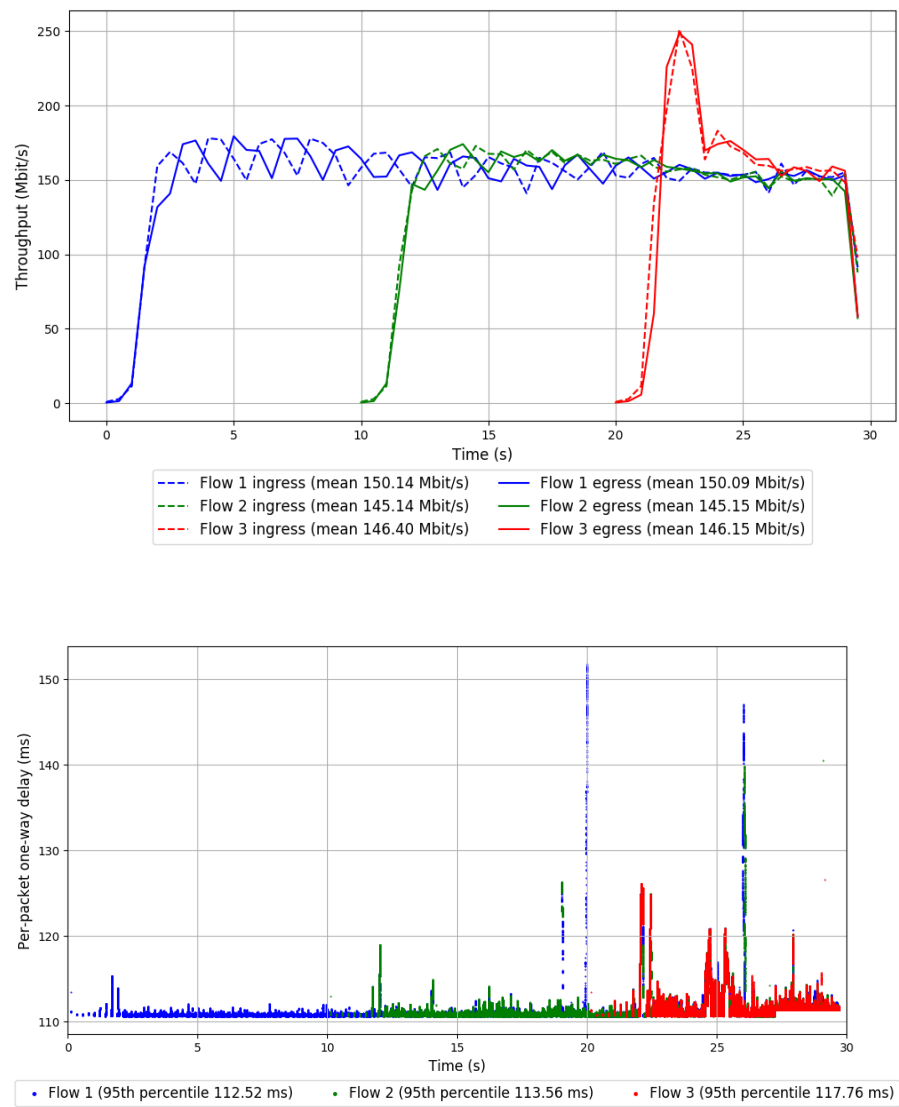
-- Flow 3:

Average throughput: 146.15 Mbit/s

95th percentile per-packet one-way delay: 117.760 ms

Loss rate: 2.45%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

Start at: 2018-02-28 11:35:24

End at: 2018-02-28 11:35:54

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 313.74 Mbit/s

95th percentile per-packet one-way delay: 115.117 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 179.70 Mbit/s

95th percentile per-packet one-way delay: 114.178 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 143.81 Mbit/s

95th percentile per-packet one-way delay: 115.525 ms

Loss rate: 1.22%

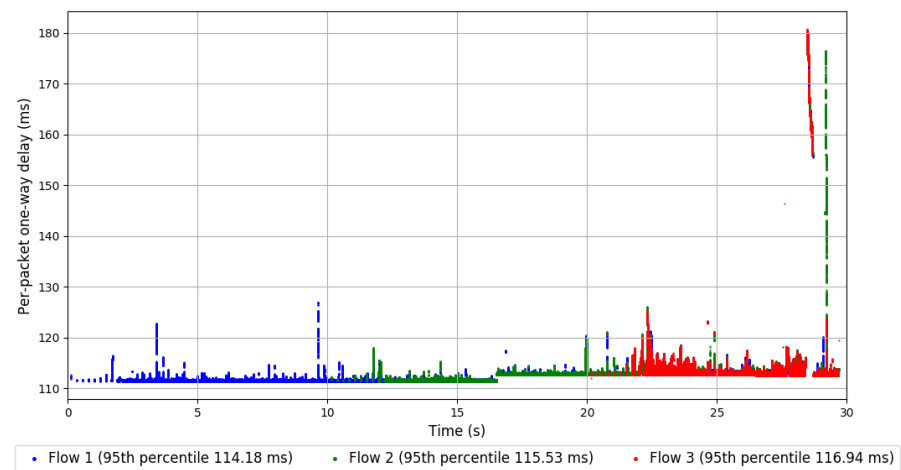
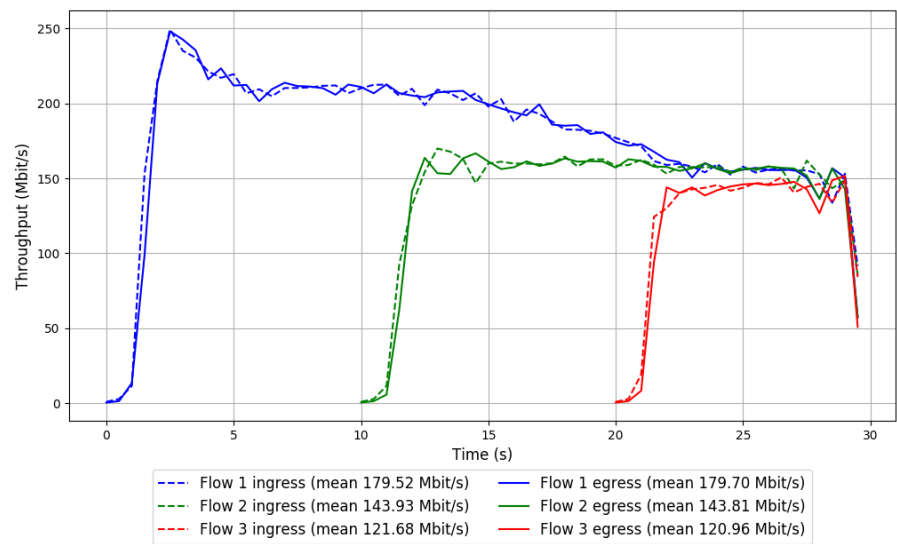
-- Flow 3:

Average throughput: 120.96 Mbit/s

95th percentile per-packet one-way delay: 116.942 ms

Loss rate: 2.78%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-02-28 11:54:49

End at: 2018-02-28 11:55:19

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 337.31 Mbit/s

95th percentile per-packet one-way delay: 113.763 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 189.68 Mbit/s

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

Loss rate: 0.64%

-- Flow 2:

Average throughput: 157.86 Mbit/s

95th percentile per-packet one-way delay: 114.114 ms

Loss rate: 1.12%

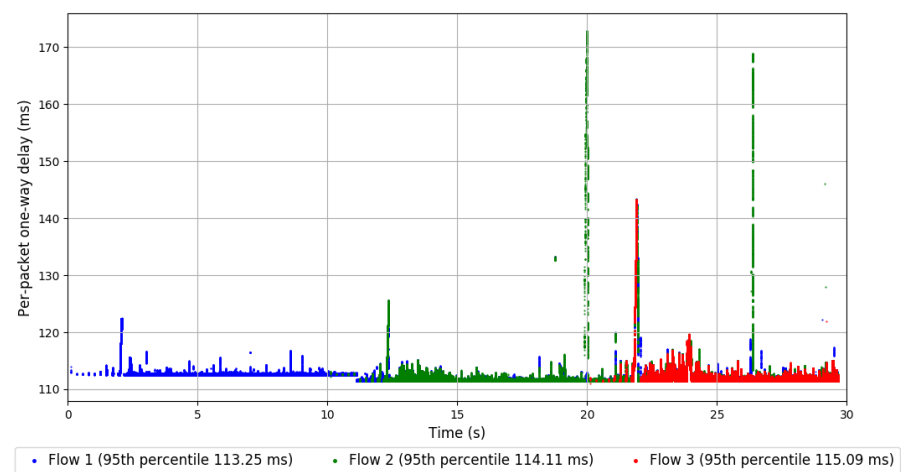
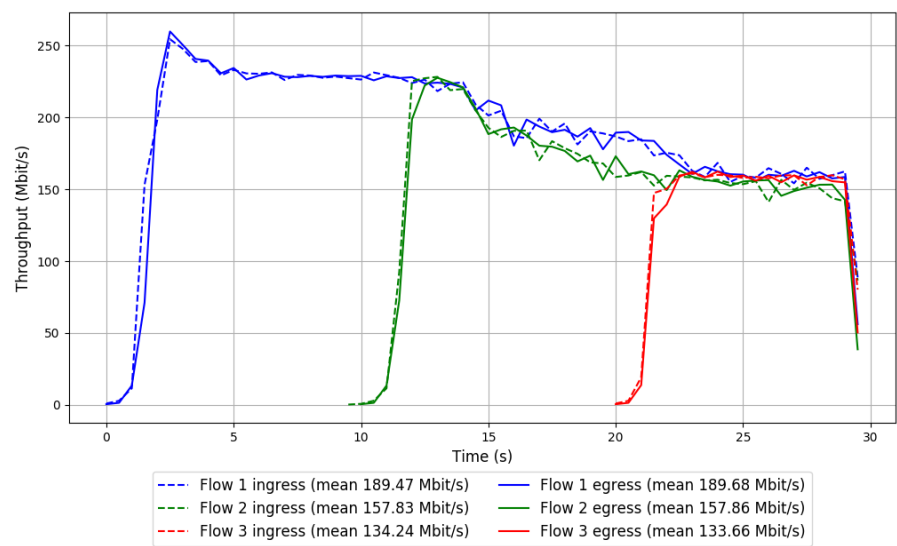
-- Flow 3:

Average throughput: 133.66 Mbit/s

95th percentile per-packet one-way delay: 115.086 ms

Loss rate: 2.70%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

Start at: 2018-02-28 12:14:21

End at: 2018-02-28 12:14:51

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 289.48 Mbit/s

95th percentile per-packet one-way delay: 115.076 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 148.39 Mbit/s

95th percentile per-packet one-way delay: 114.364 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 143.90 Mbit/s

95th percentile per-packet one-way delay: 115.281 ms

Loss rate: 1.18%

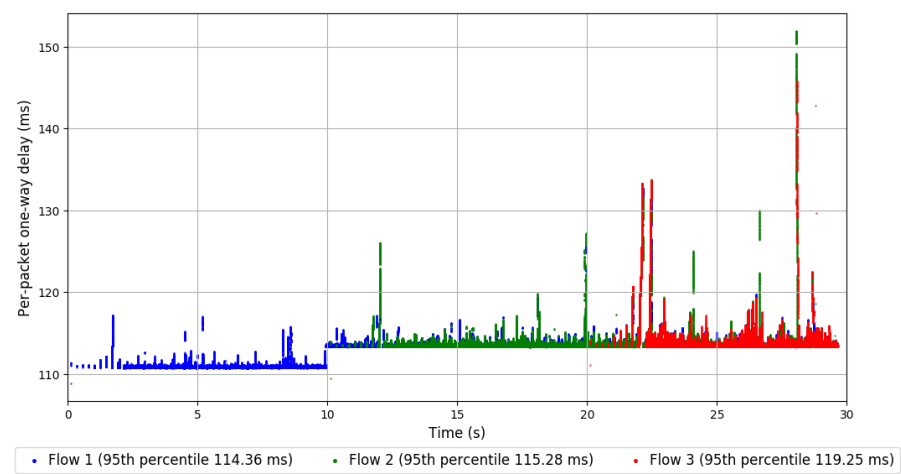
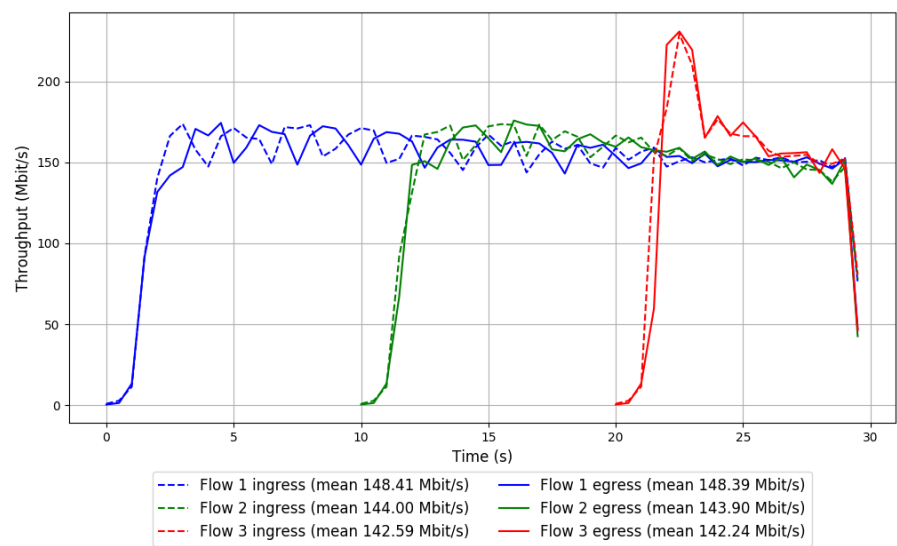
-- Flow 3:

Average throughput: 142.24 Mbit/s

95th percentile per-packet one-way delay: 119.250 ms

Loss rate: 2.51%

Run 10: Report of Indigo-1-32 — Data Link



Run 1: Statistics of Vivace-latency

Start at: 2018-02-28 09:06:36

End at: 2018-02-28 09:07:06

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 440.73 Mbit/s

95th percentile per-packet one-way delay: 112.926 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 307.07 Mbit/s

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

Loss rate: 0.92%

-- Flow 2:

Average throughput: 182.29 Mbit/s

95th percentile per-packet one-way delay: 112.954 ms

Loss rate: 0.79%

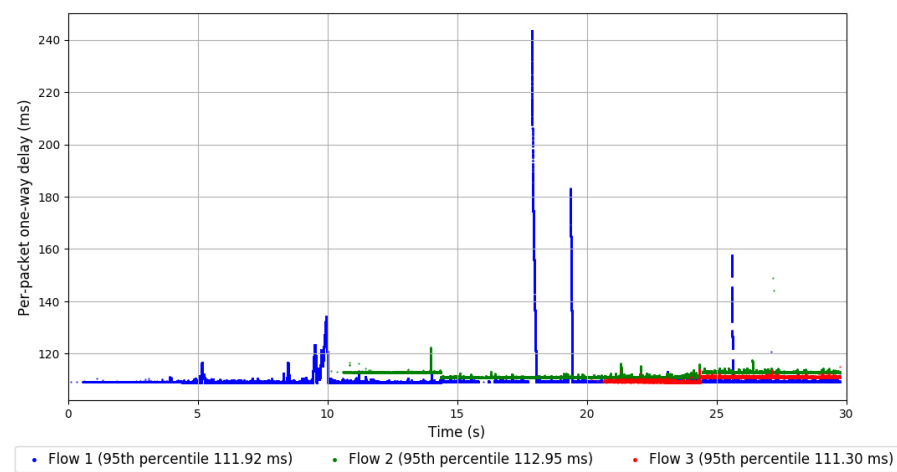
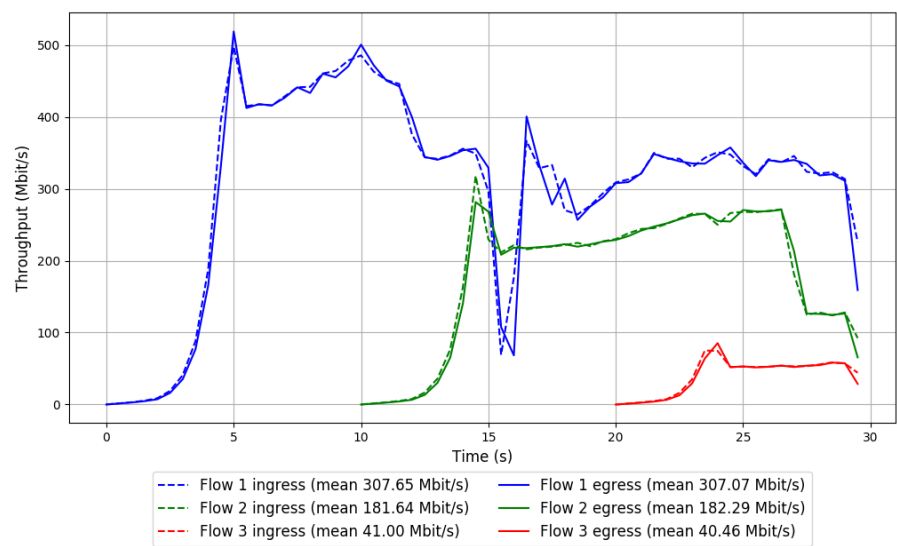
-- Flow 3:

Average throughput: 40.46 Mbit/s

95th percentile per-packet one-way delay: 111.296 ms

Loss rate: 3.54%

Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-02-28 09:25:57

End at: 2018-02-28 09:26:27

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 558.24 Mbit/s

95th percentile per-packet one-way delay: 160.281 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 338.23 Mbit/s

95th percentile per-packet one-way delay: 164.942 ms

Loss rate: 1.37%

-- Flow 2:

Average throughput: 268.07 Mbit/s

95th percentile per-packet one-way delay: 156.603 ms

Loss rate: 1.48%

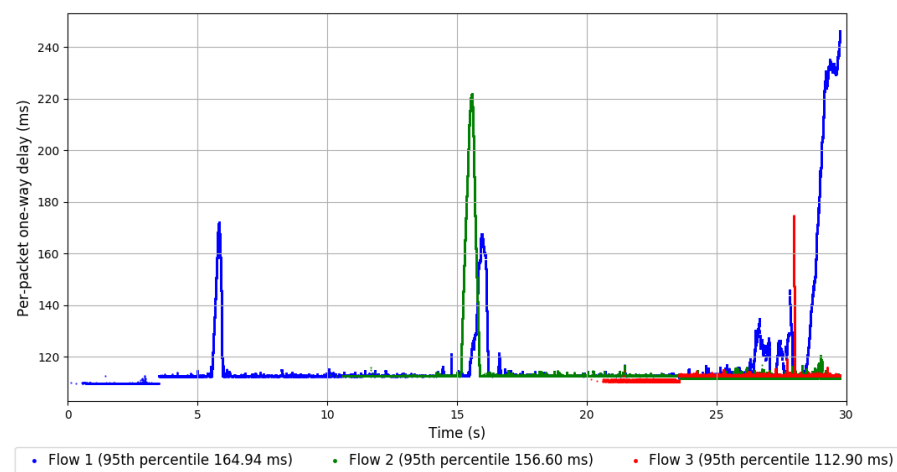
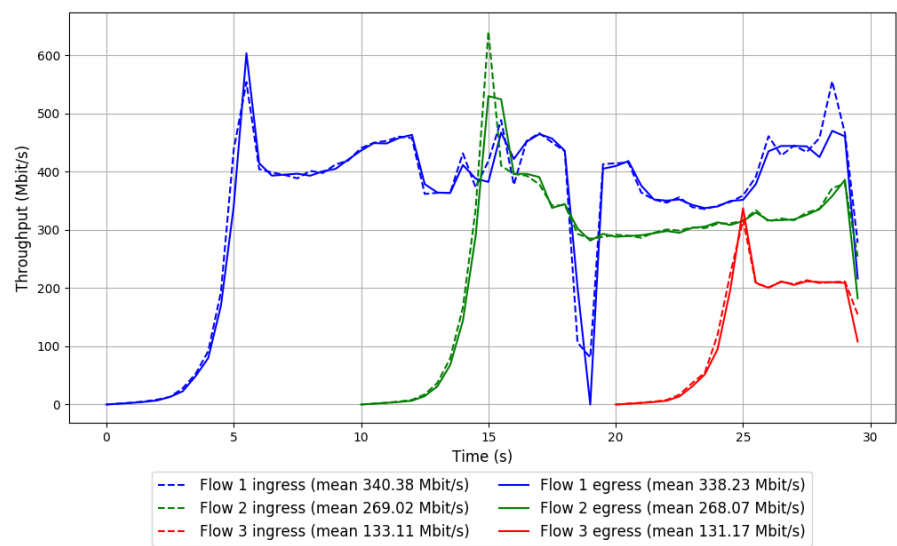
-- Flow 3:

Average throughput: 131.17 Mbit/s

95th percentile per-packet one-way delay: 112.902 ms

Loss rate: 3.69%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-02-28 09:45:43

End at: 2018-02-28 09:46:13

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 464.67 Mbit/s

95th percentile per-packet one-way delay: 113.203 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 292.50 Mbit/s

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

Loss rate: 0.93%

-- Flow 2:

Average throughput: 198.21 Mbit/s

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

Loss rate: 1.93%

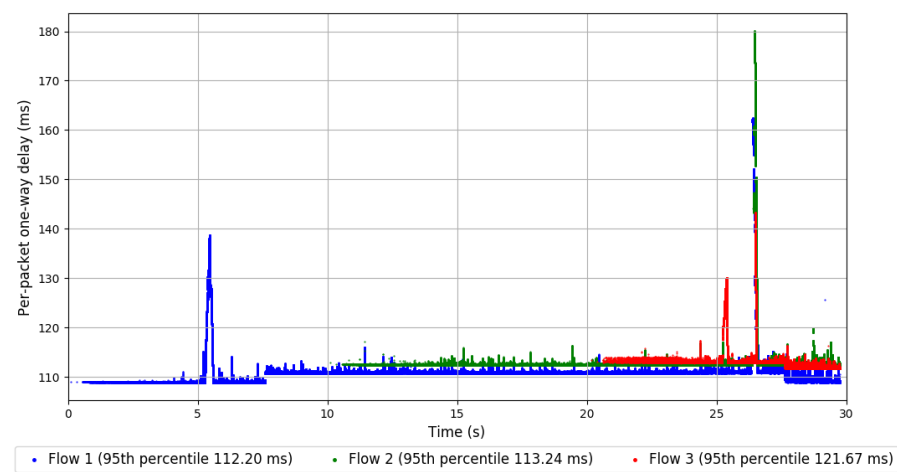
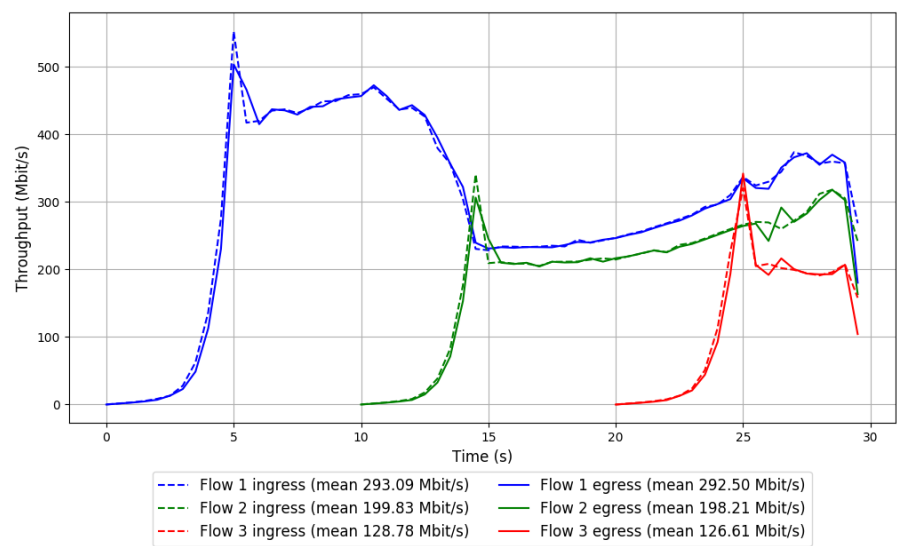
-- Flow 3:

Average throughput: 126.61 Mbit/s

95th percentile per-packet one-way delay: 121.673 ms

Loss rate: 3.97%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-02-28 10:04:46

End at: 2018-02-28 10:05:16

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 436.69 Mbit/s

95th percentile per-packet one-way delay: 112.429 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 270.94 Mbit/s

95th percentile per-packet one-way delay: 112.454 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 189.06 Mbit/s

95th percentile per-packet one-way delay: 112.065 ms

Loss rate: 1.29%

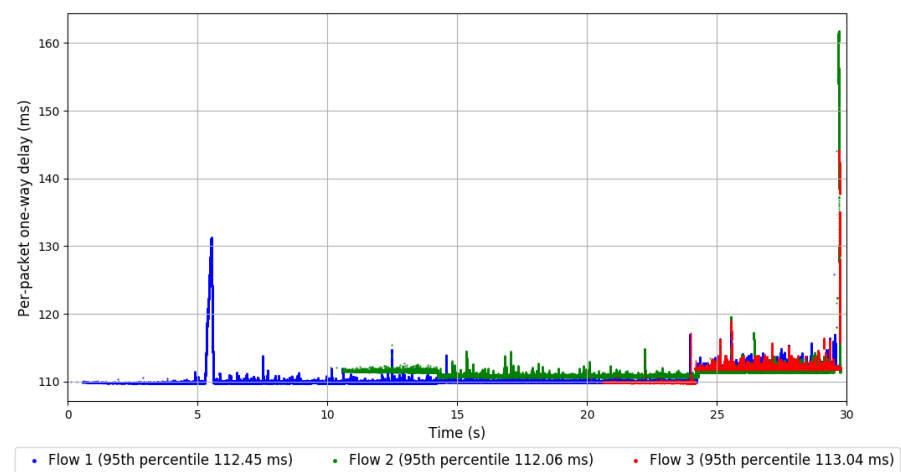
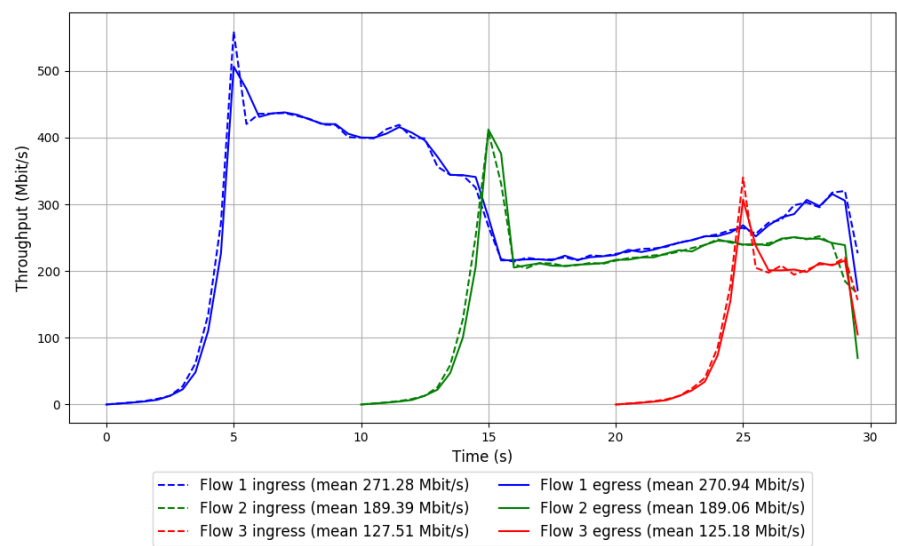
-- Flow 3:

Average throughput: 125.18 Mbit/s

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

Loss rate: 4.03%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-02-28 10:24:29

End at: 2018-02-28 10:24:59

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 469.55 Mbit/s

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

Loss rate: 1.12%

-- Flow 1:

Average throughput: 294.59 Mbit/s

95th percentile per-packet one-way delay: 115.160 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 170.08 Mbit/s

95th percentile per-packet one-way delay: 113.659 ms

Loss rate: 1.32%

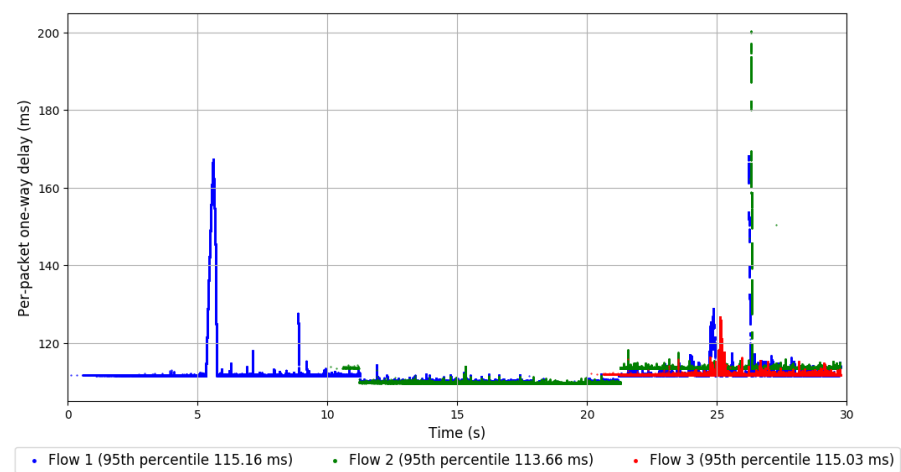
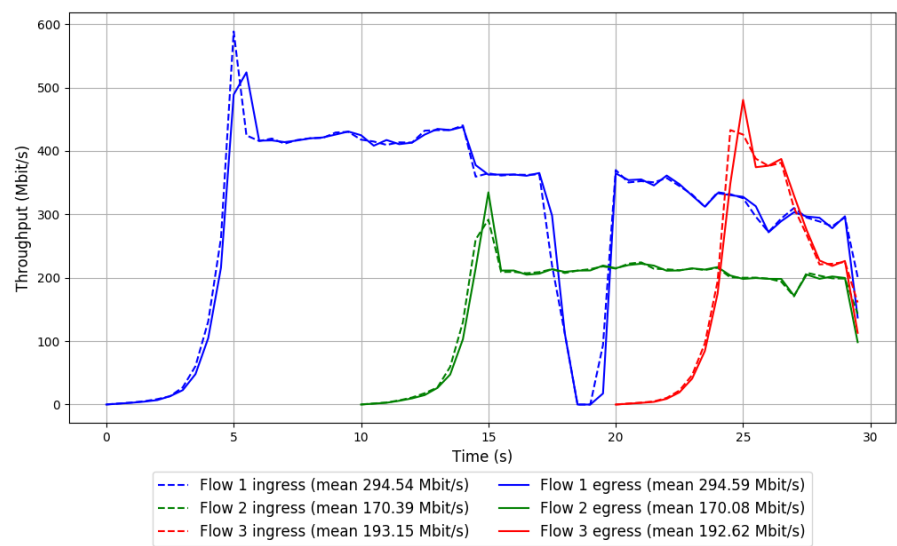
-- Flow 3:

Average throughput: 192.62 Mbit/s

95th percentile per-packet one-way delay: 115.033 ms

Loss rate: 2.55%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-02-28 10:43:48

End at: 2018-02-28 10:44:18

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 401.54 Mbit/s

95th percentile per-packet one-way delay: 112.567 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 306.64 Mbit/s

95th percentile per-packet one-way delay: 112.519 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 73.94 Mbit/s

95th percentile per-packet one-way delay: 112.620 ms

Loss rate: 2.81%

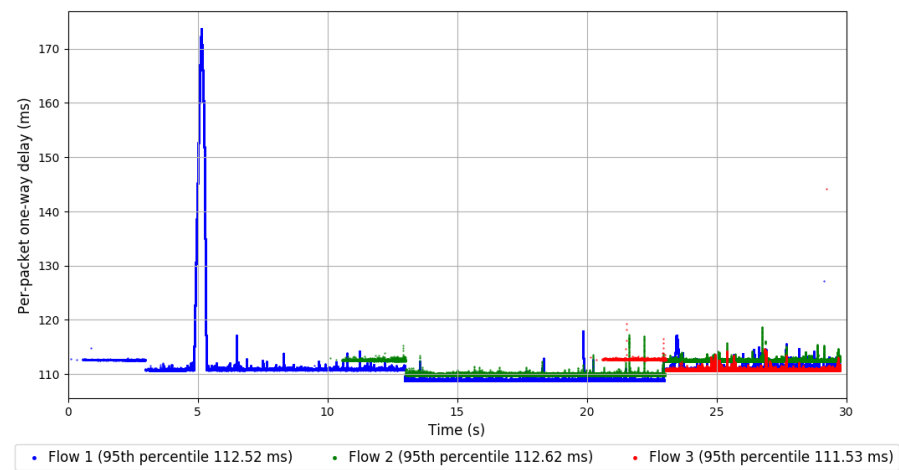
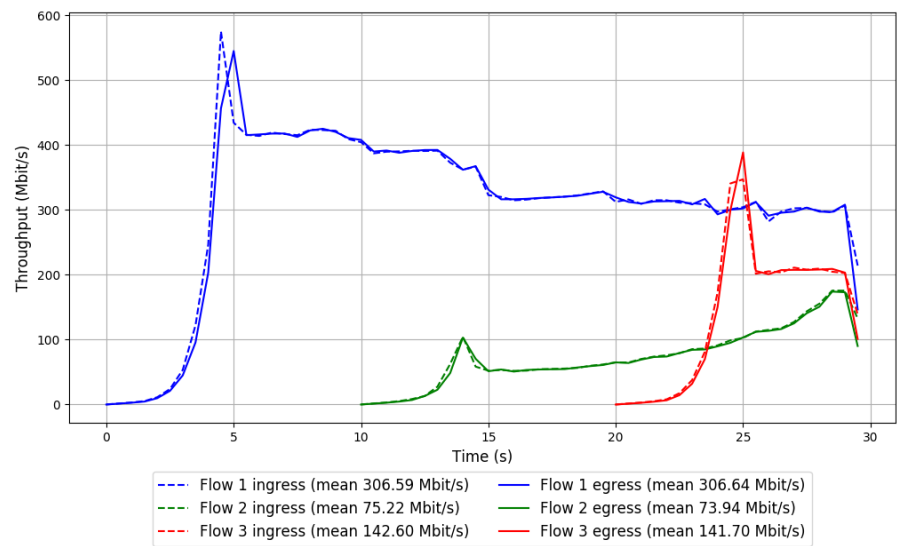
-- Flow 3:

Average throughput: 141.70 Mbit/s

95th percentile per-packet one-way delay: 111.533 ms

Loss rate: 2.89%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-02-28 11:03:02

End at: 2018-02-28 11:03:32

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 521.26 Mbit/s

95th percentile per-packet one-way delay: 116.133 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 326.03 Mbit/s

95th percentile per-packet one-way delay: 115.037 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 191.37 Mbit/s

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

Loss rate: 1.58%

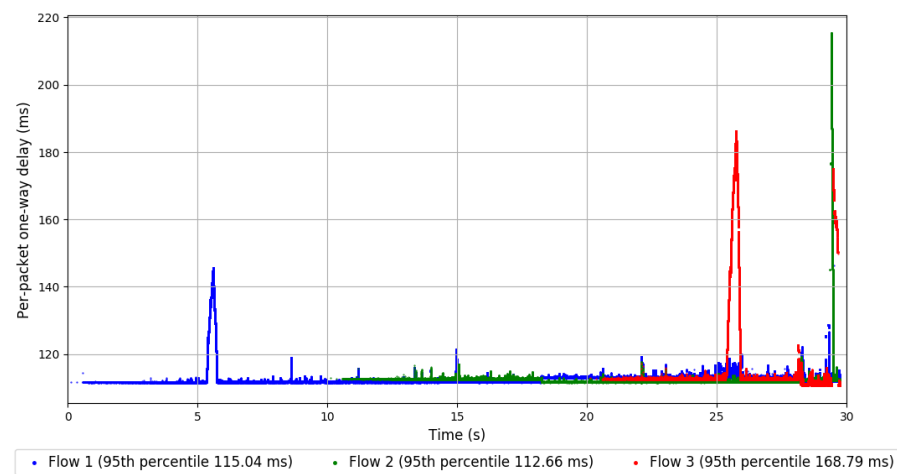
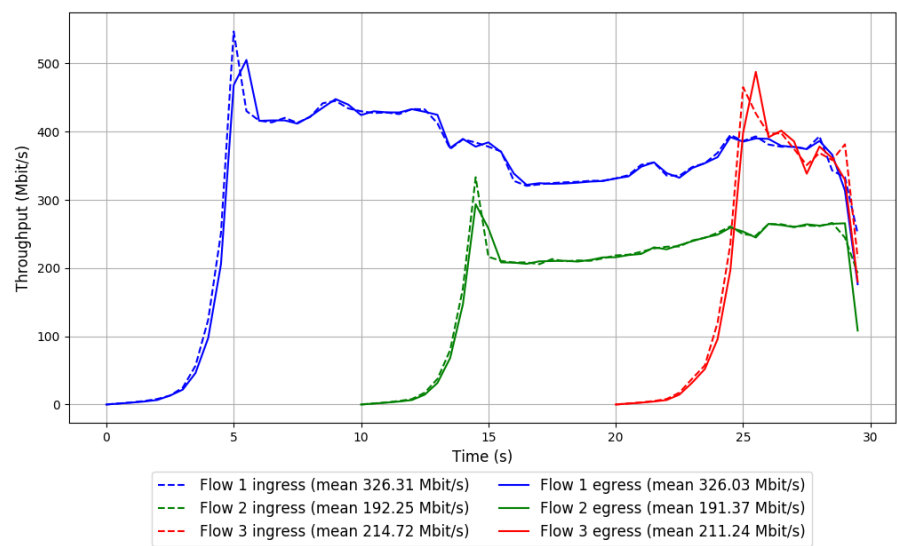
-- Flow 3:

Average throughput: 211.24 Mbit/s

95th percentile per-packet one-way delay: 168.786 ms

Loss rate: 3.86%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-02-28 11:22:36

End at: 2018-02-28 11:23:06

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 427.10 Mbit/s

95th percentile per-packet one-way delay: 134.612 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 182.60 Mbit/s

95th percentile per-packet one-way delay: 117.361 ms

Loss rate: 1.46%

-- Flow 2:

Average throughput: 301.71 Mbit/s

95th percentile per-packet one-way delay: 154.529 ms

Loss rate: 1.23%

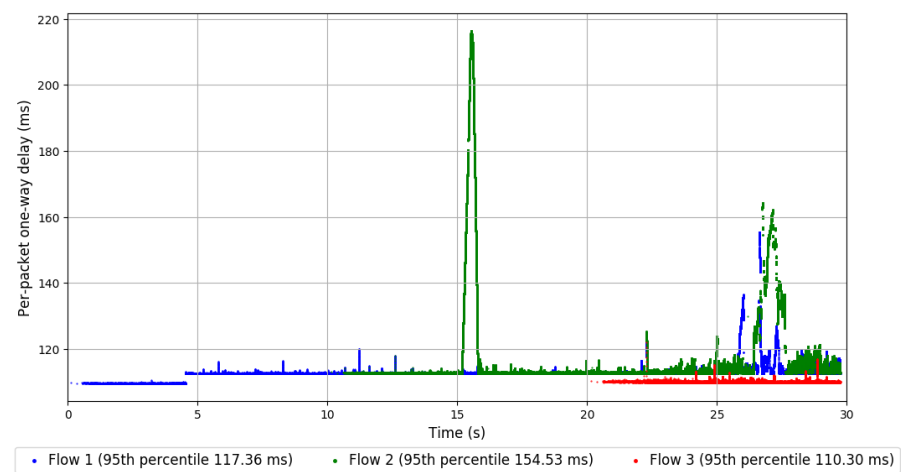
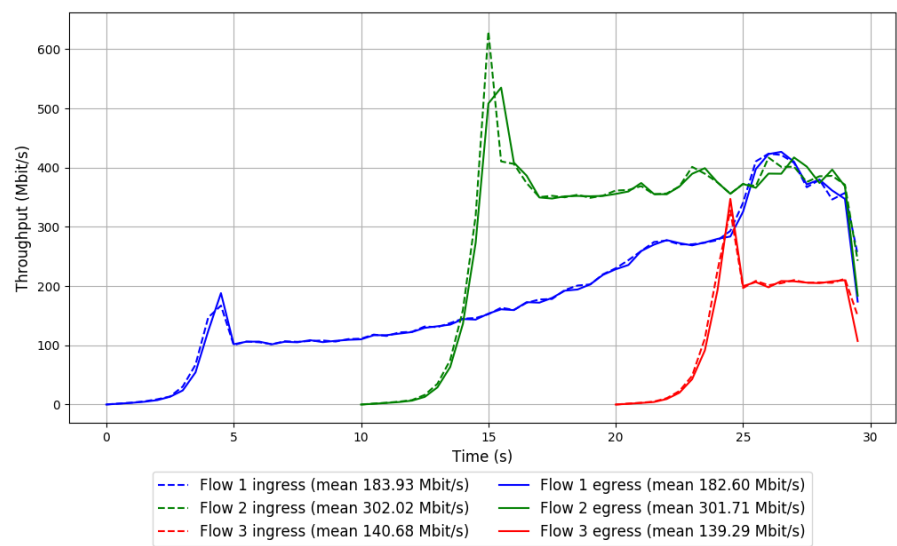
-- Flow 3:

Average throughput: 139.29 Mbit/s

95th percentile per-packet one-way delay: 110.298 ms

Loss rate: 3.25%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-02-28 11:41:44

End at: 2018-02-28 11:42:14

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 465.15 Mbit/s

95th percentile per-packet one-way delay: 116.319 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 265.16 Mbit/s

95th percentile per-packet one-way delay: 117.384 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 194.69 Mbit/s

95th percentile per-packet one-way delay: 113.319 ms

Loss rate: 1.06%

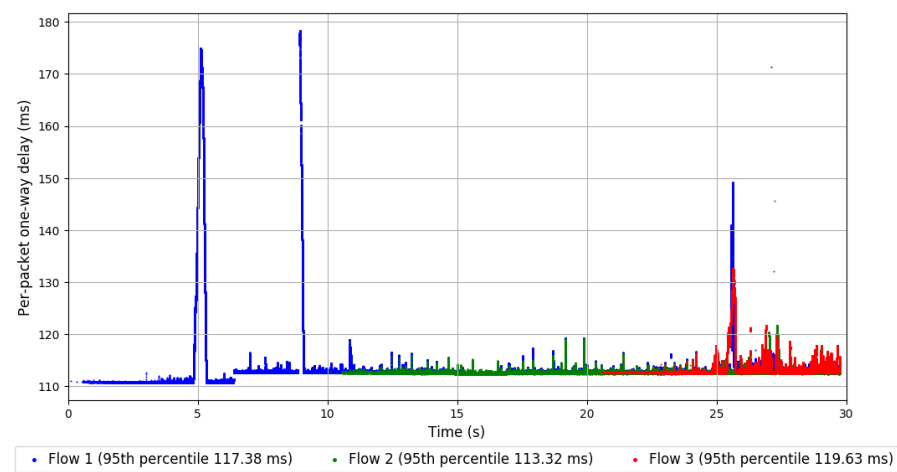
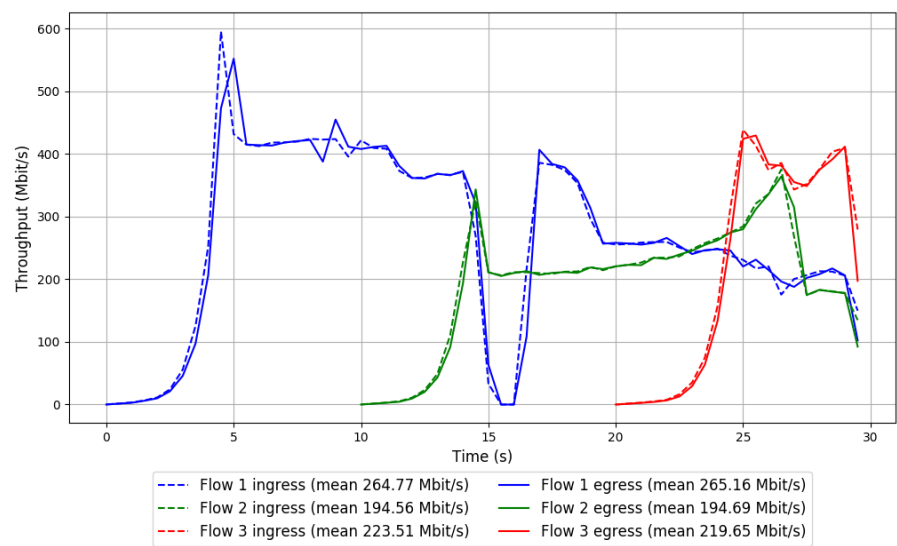
-- Flow 3:

Average throughput: 219.65 Mbit/s

95th percentile per-packet one-way delay: 119.629 ms

Loss rate: 3.98%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-02-28 12:01:21

End at: 2018-02-28 12:01:51

Below is generated by plot.py at 2018-02-28 17:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 451.78 Mbit/s

95th percentile per-packet one-way delay: 112.839 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 288.33 Mbit/s

95th percentile per-packet one-way delay: 112.223 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 182.19 Mbit/s

95th percentile per-packet one-way delay: 112.312 ms

Loss rate: 0.87%

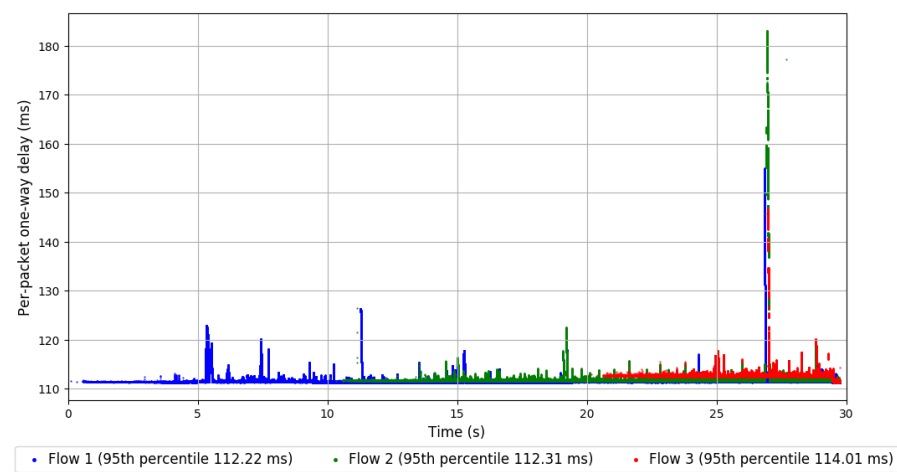
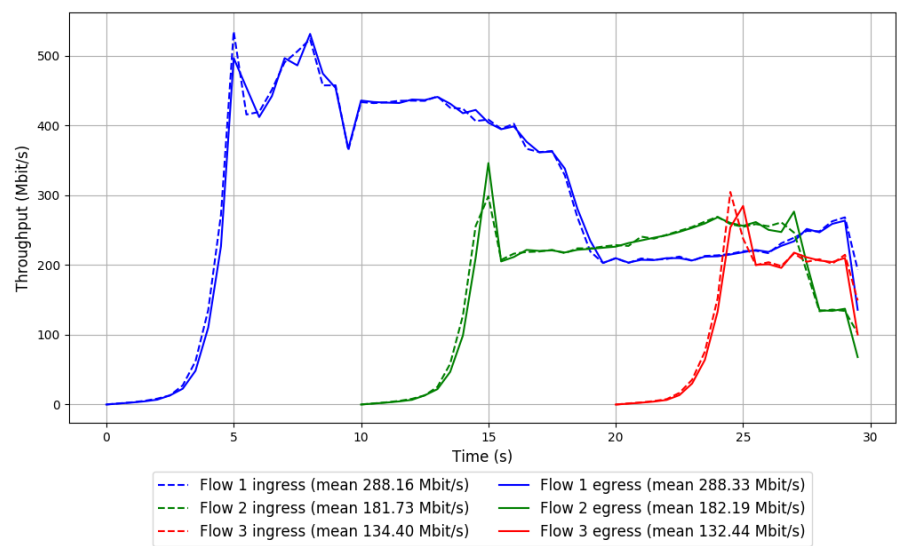
-- Flow 3:

Average throughput: 132.44 Mbit/s

95th percentile per-packet one-way delay: 114.010 ms

Loss rate: 3.66%

Run 10: Report of Vivace-latency — Data Link

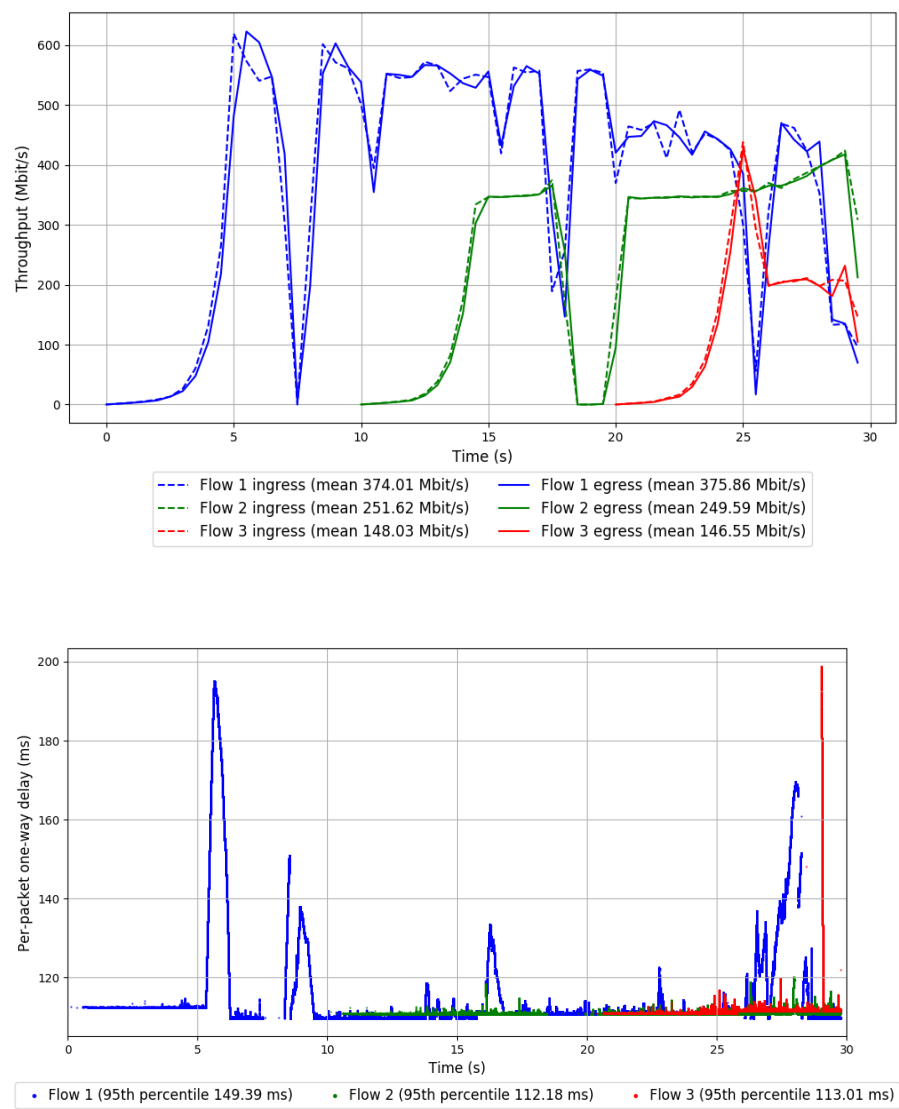


```
Run 1: Statistics of Vivace-loss

Start at: 2018-02-28 09:22:45
End at: 2018-02-28 09:23:15

# Below is generated by plot.py at 2018-02-28 17:26:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 588.46 Mbit/s
95th percentile per-packet one-way delay: 137.155 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 375.86 Mbit/s
95th percentile per-packet one-way delay: 149.394 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 249.59 Mbit/s
95th percentile per-packet one-way delay: 112.184 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 146.55 Mbit/s
95th percentile per-packet one-way delay: 113.012 ms
Loss rate: 3.13%
```

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-02-28 09:42:41

End at: 2018-02-28 09:43:11

Below is generated by plot.py at 2018-02-28 17:26:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 483.54 Mbit/s

95th percentile per-packet one-way delay: 113.063 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 349.64 Mbit/s

95th percentile per-packet one-way delay: 112.375 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 125.92 Mbit/s

95th percentile per-packet one-way delay: 113.338 ms

Loss rate: 1.88%

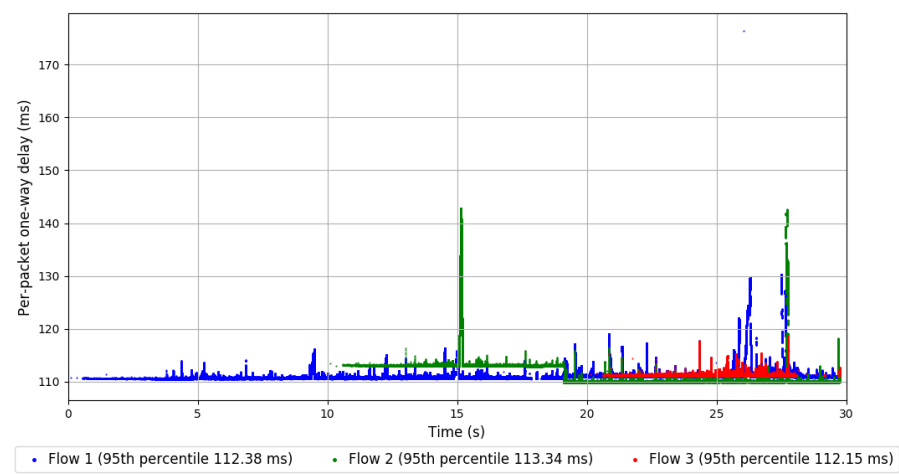
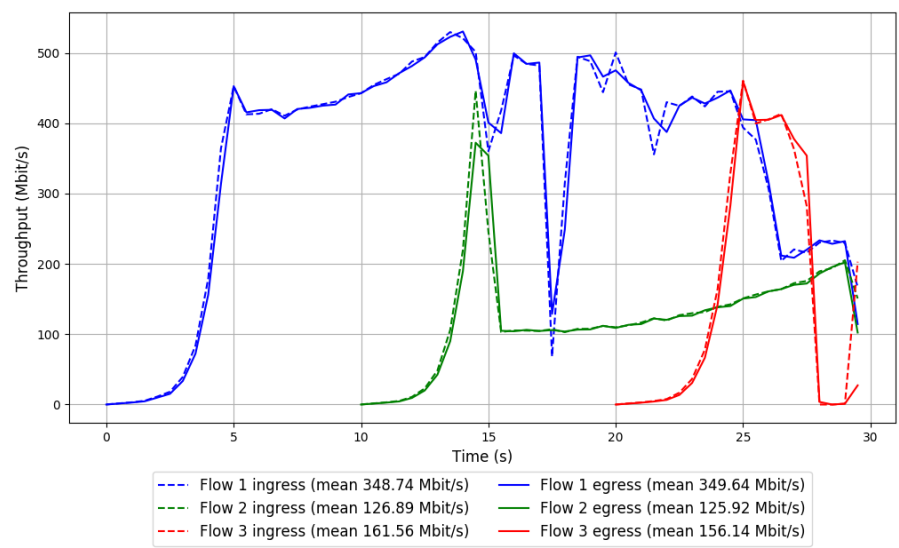
-- Flow 3:

Average throughput: 156.14 Mbit/s

95th percentile per-packet one-way delay: 112.154 ms

Loss rate: 5.54%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-02-28 10:01:50

End at: 2018-02-28 10:02:20

Below is generated by plot.py at 2018-02-28 17:28:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 412.38 Mbit/s

95th percentile per-packet one-way delay: 116.302 ms

Loss rate: 1.71%

-- Flow 1:

Average throughput: 194.36 Mbit/s

95th percentile per-packet one-way delay: 151.234 ms

Loss rate: 1.57%

-- Flow 2:

Average throughput: 253.69 Mbit/s

95th percentile per-packet one-way delay: 114.593 ms

Loss rate: 1.70%

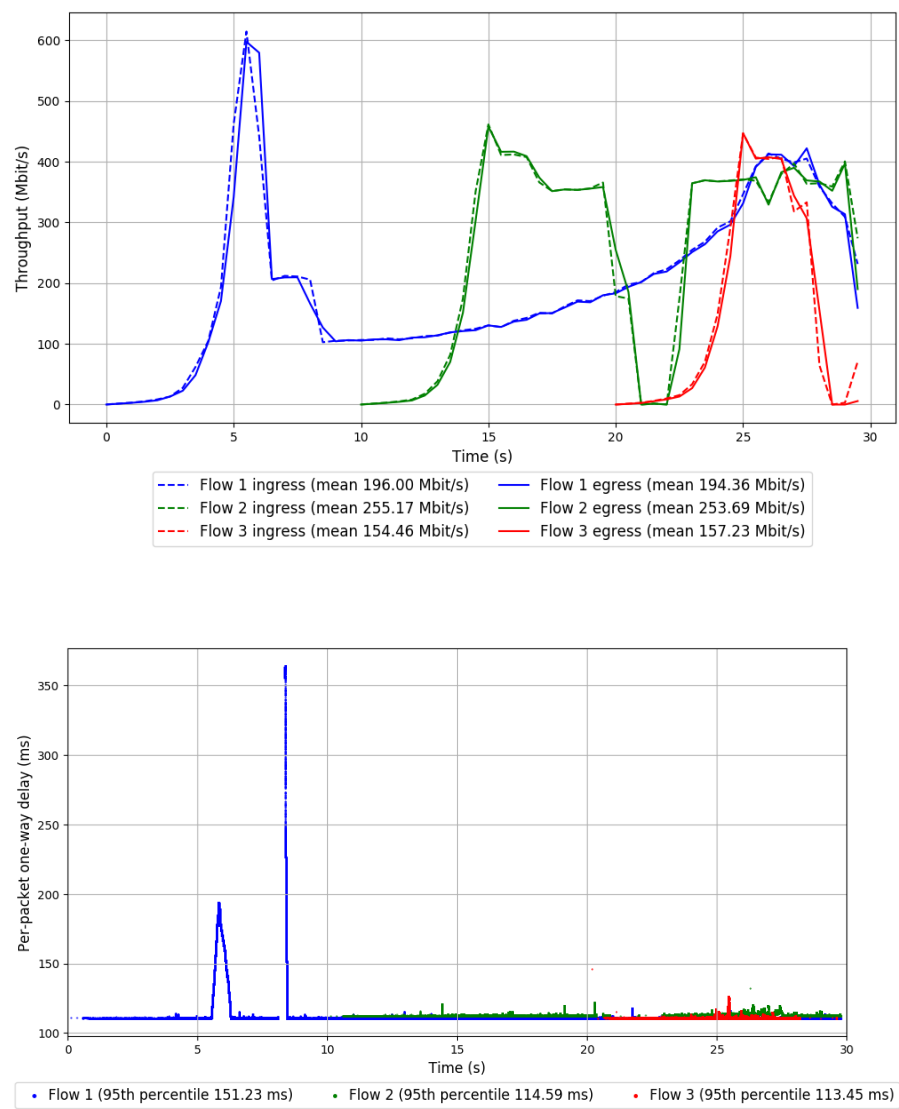
-- Flow 3:

Average throughput: 157.23 Mbit/s

95th percentile per-packet one-way delay: 113.452 ms

Loss rate: 2.24%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-02-28 10:21:25

End at: 2018-02-28 10:21:55

Below is generated by plot.py at 2018-02-28 17:30:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 507.68 Mbit/s

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

Loss rate: 1.55%

-- Flow 1:

Average throughput: 301.39 Mbit/s

95th percentile per-packet one-way delay: 118.668 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 198.67 Mbit/s

95th percentile per-packet one-way delay: 111.238 ms

Loss rate: 1.65%

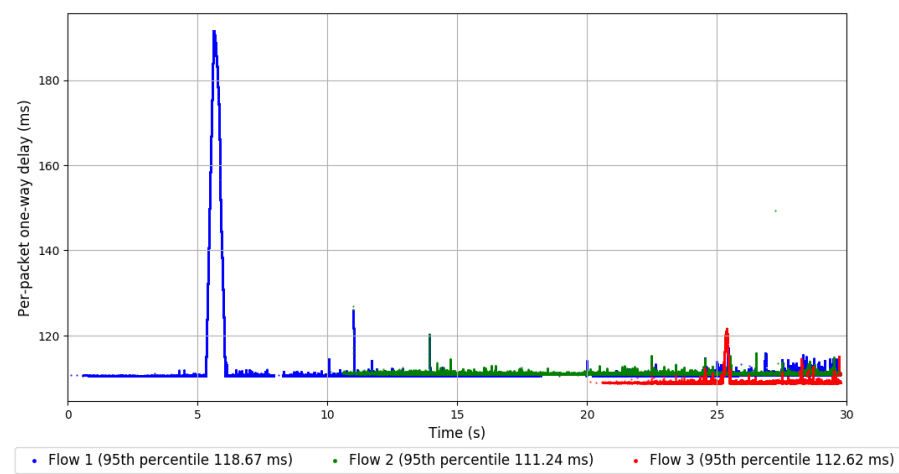
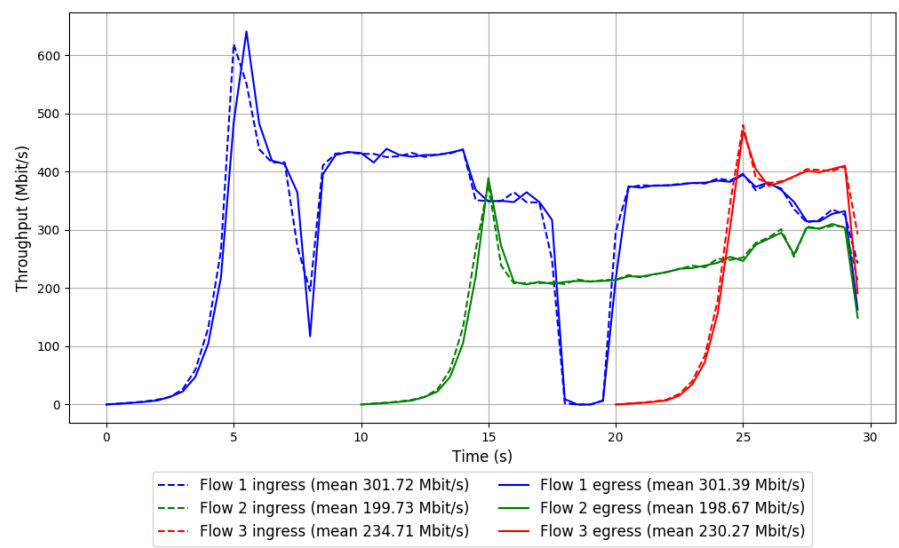
-- Flow 3:

Average throughput: 230.27 Mbit/s

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

Loss rate: 4.09%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-02-28 10:40:45

End at: 2018-02-28 10:41:15

Below is generated by plot.py at 2018-02-28 17:30:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 505.72 Mbit/s

95th percentile per-packet one-way delay: 118.270 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 338.95 Mbit/s

95th percentile per-packet one-way delay: 124.819 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 182.47 Mbit/s

95th percentile per-packet one-way delay: 112.060 ms

Loss rate: 1.07%

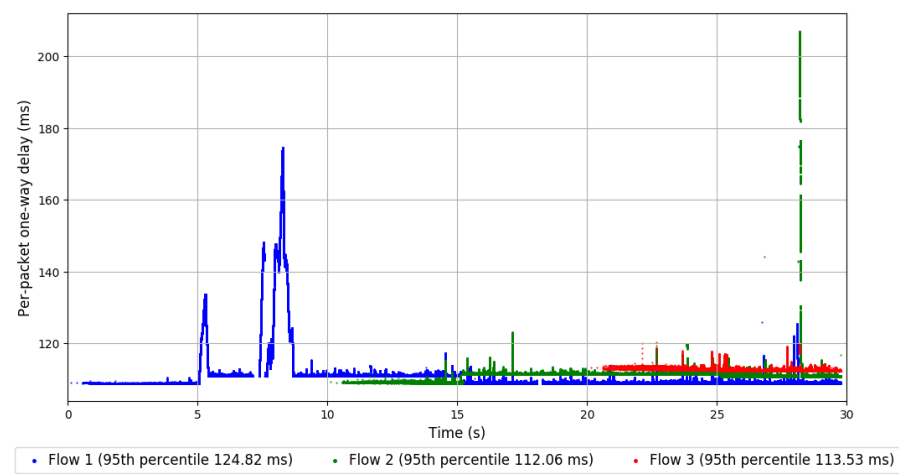
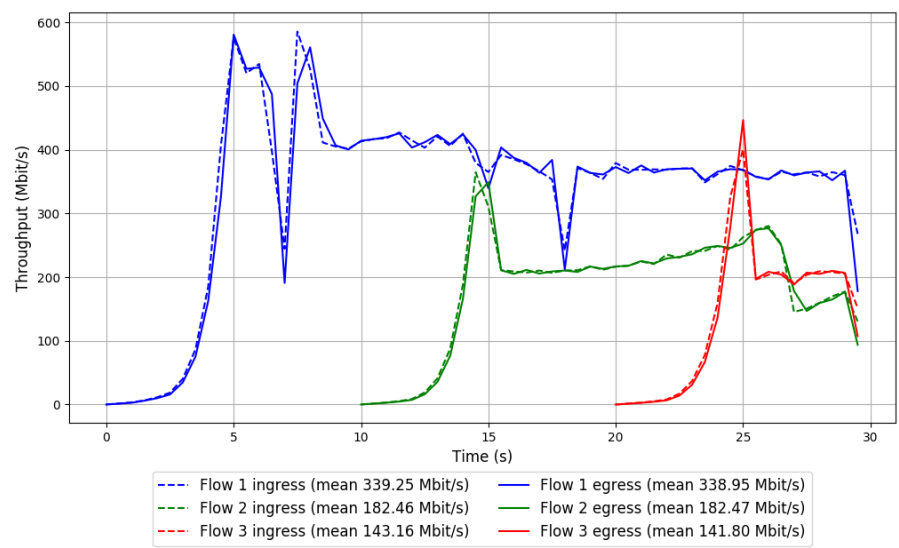
-- Flow 3:

Average throughput: 141.80 Mbit/s

95th percentile per-packet one-way delay: 113.526 ms

Loss rate: 3.21%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-02-28 10:59:55

End at: 2018-02-28 11:00:25

Below is generated by plot.py at 2018-02-28 17:32:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 523.38 Mbit/s

95th percentile per-packet one-way delay: 115.029 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 307.65 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 255.54 Mbit/s

95th percentile per-packet one-way delay: 113.486 ms

Loss rate: 1.63%

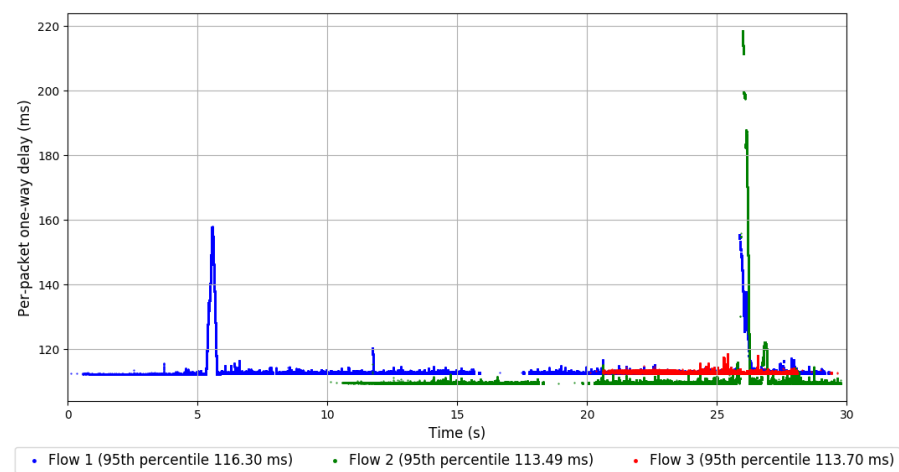
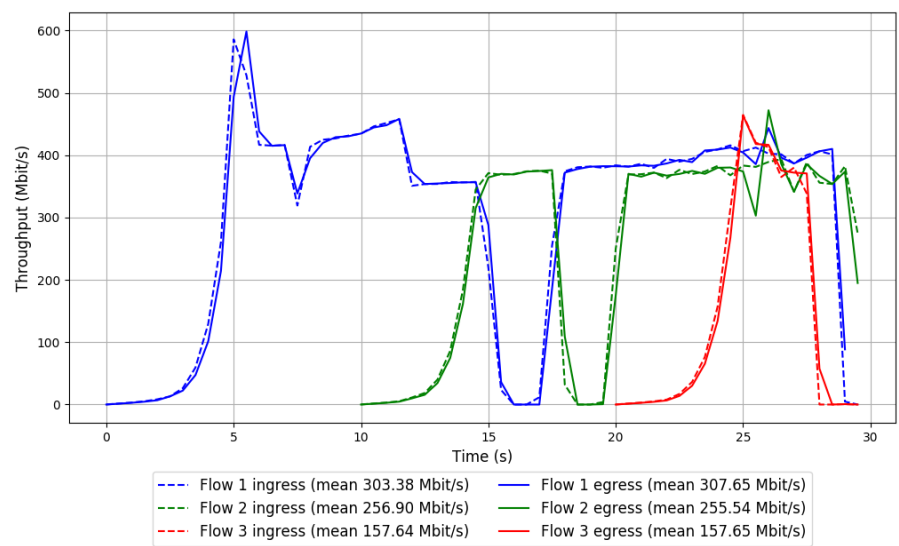
-- Flow 3:

Average throughput: 157.65 Mbit/s

95th percentile per-packet one-way delay: 113.696 ms

Loss rate: 0.00%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-02-28 11:19:31

End at: 2018-02-28 11:20:01

Below is generated by plot.py at 2018-02-28 17:32:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 458.23 Mbit/s

95th percentile per-packet one-way delay: 139.065 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 282.10 Mbit/s

95th percentile per-packet one-way delay: 160.988 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 217.14 Mbit/s

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

Loss rate: 1.25%

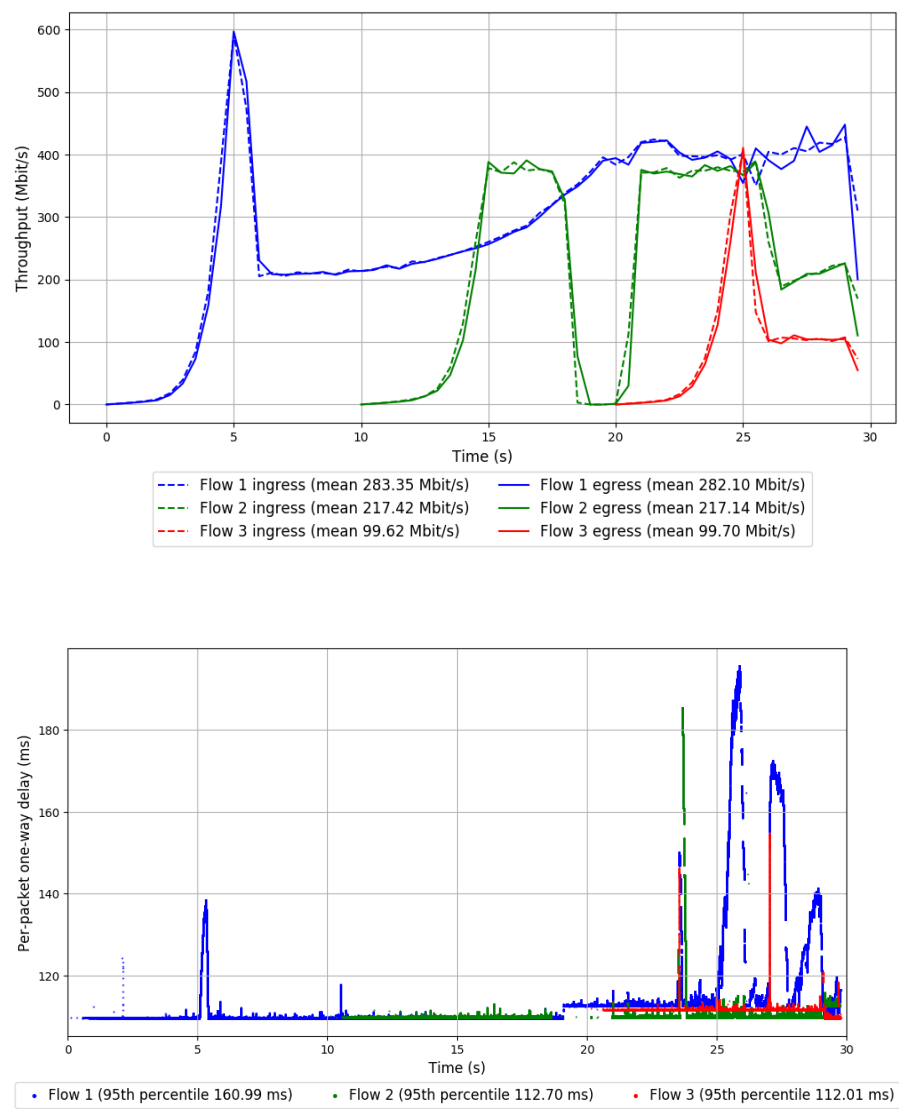
-- Flow 3:

Average throughput: 99.70 Mbit/s

95th percentile per-packet one-way delay: 112.006 ms

Loss rate: 2.20%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-02-28 11:38:48

End at: 2018-02-28 11:39:18

Below is generated by plot.py at 2018-02-28 17:32:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 364.64 Mbit/s

95th percentile per-packet one-way delay: 139.180 ms

Loss rate: 3.63%

-- Flow 1:

Average throughput: 183.15 Mbit/s

95th percentile per-packet one-way delay: 155.848 ms

Loss rate: 6.00%

-- Flow 2:

Average throughput: 198.97 Mbit/s

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

Loss rate: 1.03%

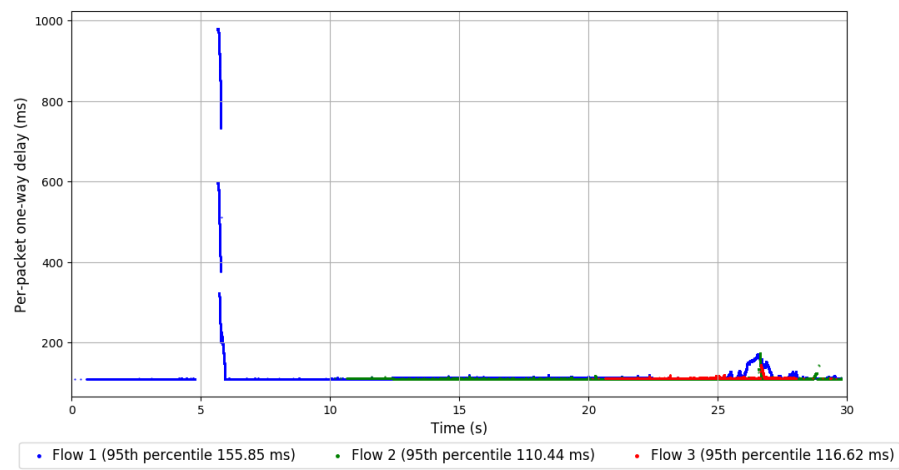
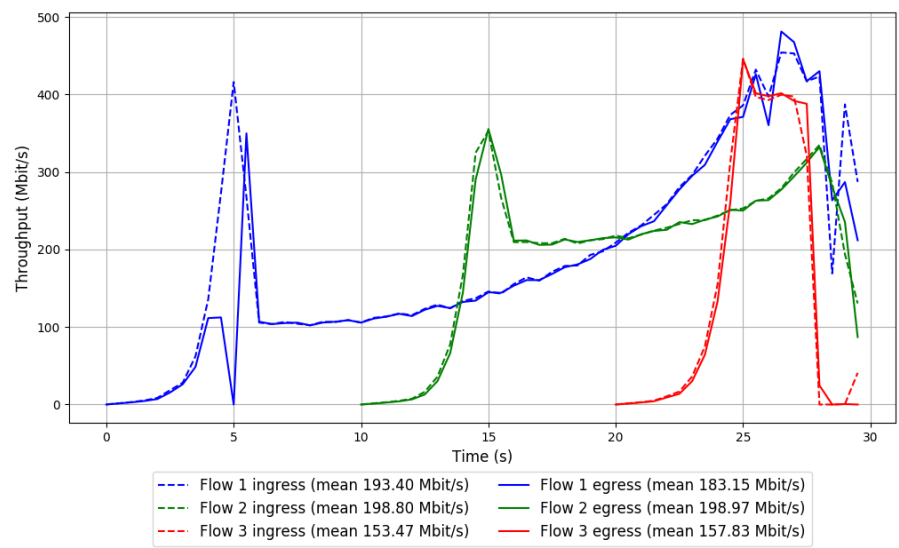
-- Flow 3:

Average throughput: 157.83 Mbit/s

95th percentile per-packet one-way delay: 116.623 ms

Loss rate: 1.36%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-02-28 11:58:14

End at: 2018-02-28 11:58:44

Below is generated by plot.py at 2018-02-28 17:34:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 519.67 Mbit/s

95th percentile per-packet one-way delay: 162.560 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 299.37 Mbit/s

95th percentile per-packet one-way delay: 202.161 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 264.37 Mbit/s

95th percentile per-packet one-way delay: 126.227 ms

Loss rate: 1.54%

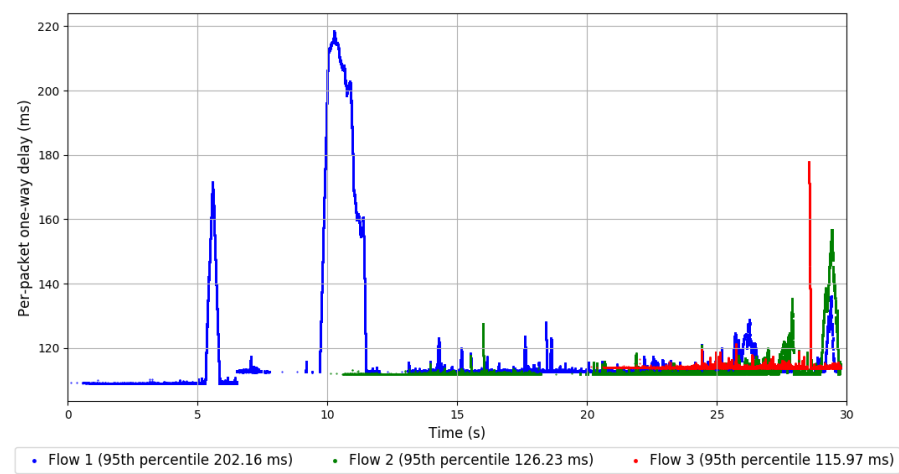
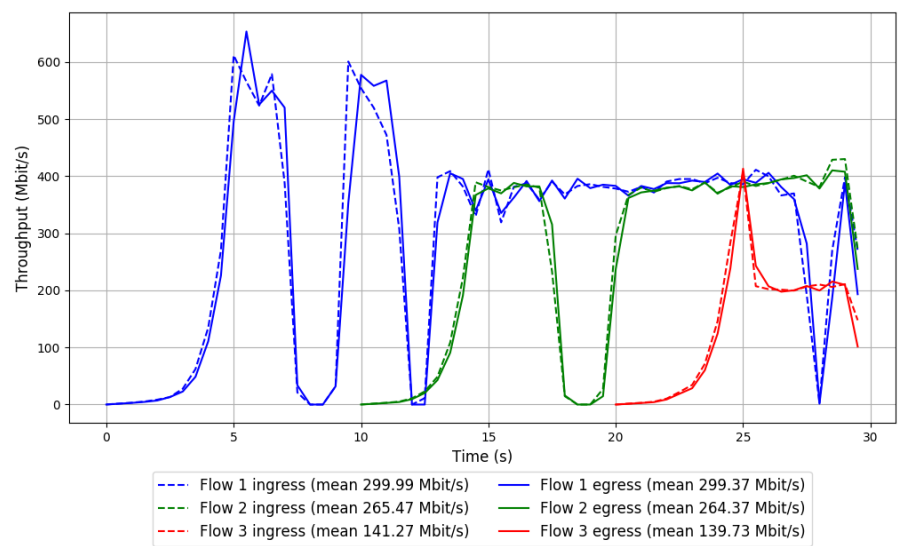
-- Flow 3:

Average throughput: 139.73 Mbit/s

95th percentile per-packet one-way delay: 115.967 ms

Loss rate: 3.37%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-02-28 12:17:43

End at: 2018-02-28 12:18:13

Below is generated by plot.py at 2018-02-28 17:35:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 508.15 Mbit/s

95th percentile per-packet one-way delay: 128.371 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 358.02 Mbit/s

95th percentile per-packet one-way delay: 137.551 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 178.72 Mbit/s

95th percentile per-packet one-way delay: 113.170 ms

Loss rate: 1.27%

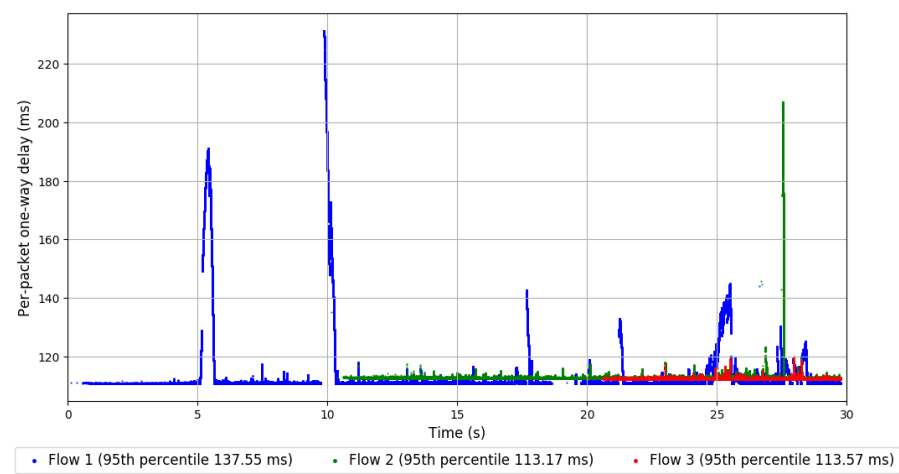
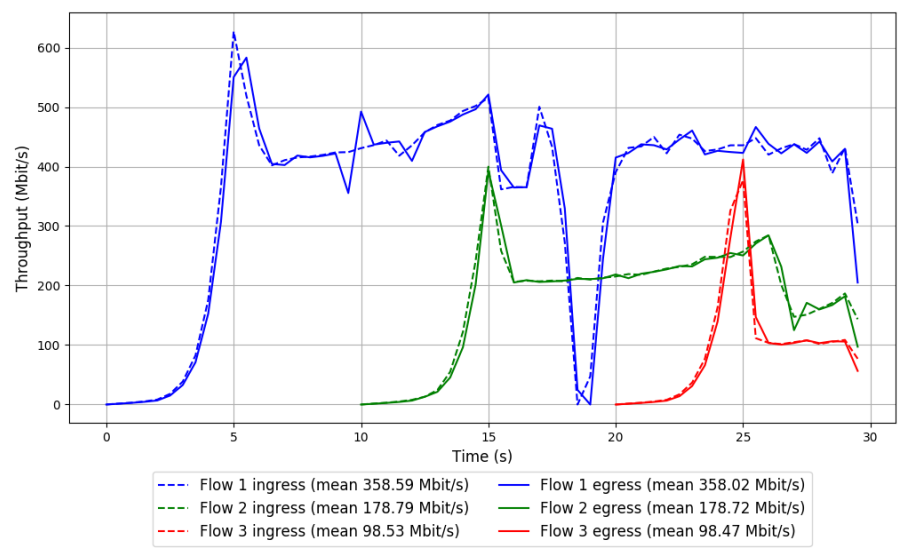
-- Flow 3:

Average throughput: 98.47 Mbit/s

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

Loss rate: 2.36%

Run 10: Report of Vivace-loss — Data Link

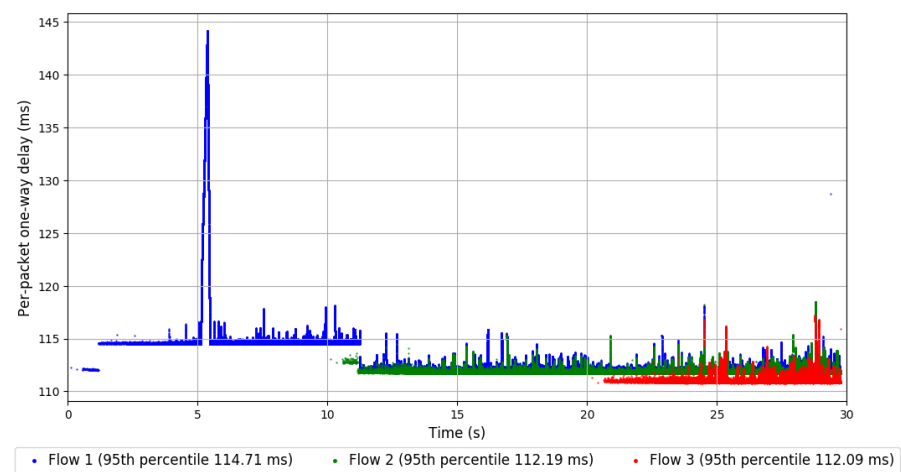
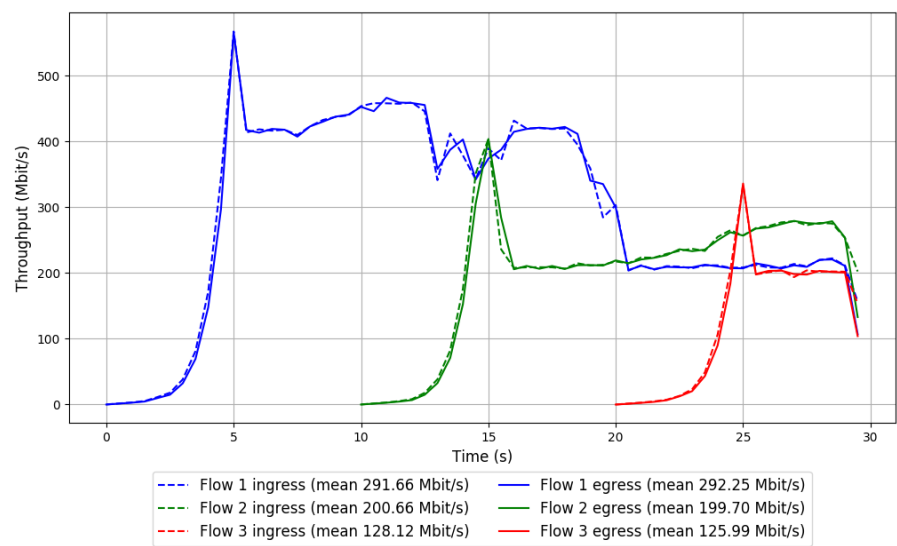


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-02-28 09:13:39
End at: 2018-02-28 09:14:09

# Below is generated by plot.py at 2018-02-28 17:36:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 465.00 Mbit/s
95th percentile per-packet one-way delay: 114.637 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 292.25 Mbit/s
95th percentile per-packet one-way delay: 114.711 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 199.70 Mbit/s
95th percentile per-packet one-way delay: 112.187 ms
Loss rate: 1.61%
-- Flow 3:
Average throughput: 125.99 Mbit/s
95th percentile per-packet one-way delay: 112.091 ms
Loss rate: 3.86%
```


Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-02-28 09:33:21

End at: 2018-02-28 09:33:51

Below is generated by plot.py at 2018-02-28 17:40:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 587.23 Mbit/s

95th percentile per-packet one-way delay: 115.120 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 318.29 Mbit/s

95th percentile per-packet one-way delay: 113.488 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 293.79 Mbit/s

95th percentile per-packet one-way delay: 118.376 ms

Loss rate: 0.78%

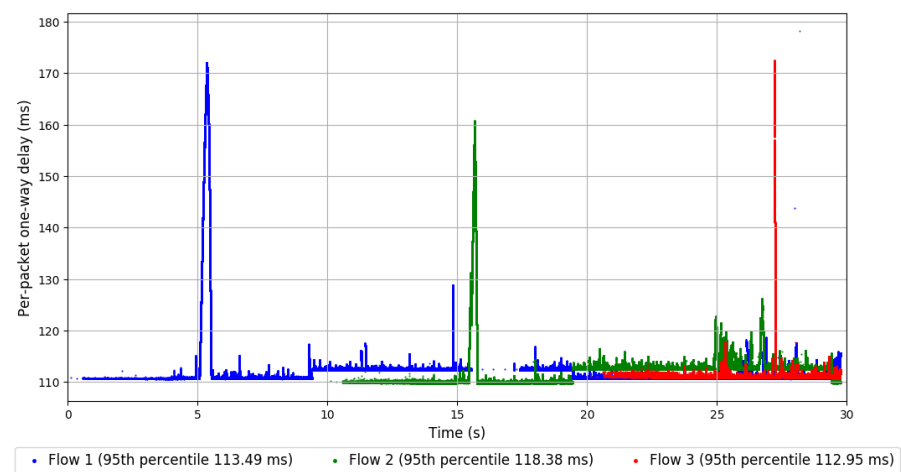
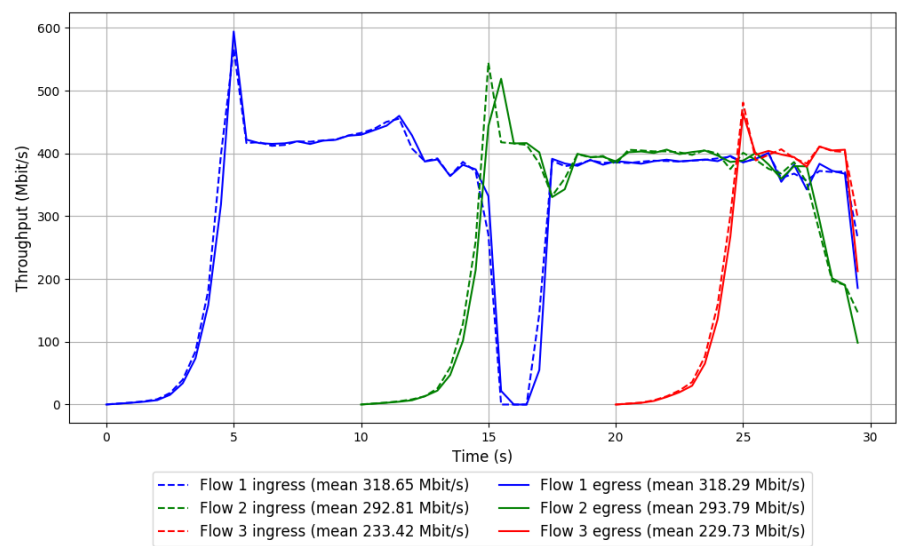
-- Flow 3:

Average throughput: 229.73 Mbit/s

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

Loss rate: 3.80%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-02-28 09:52:47

End at: 2018-02-28 09:53:17

Below is generated by plot.py at 2018-02-28 17:40:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 372.83 Mbit/s

95th percentile per-packet one-way delay: 112.881 ms

Loss rate: 2.57%

-- Flow 1:

Average throughput: 259.78 Mbit/s

95th percentile per-packet one-way delay: 124.975 ms

Loss rate: 1.96%

-- Flow 2:

Average throughput: 100.28 Mbit/s

95th percentile per-packet one-way delay: 111.846 ms

Loss rate: 4.36%

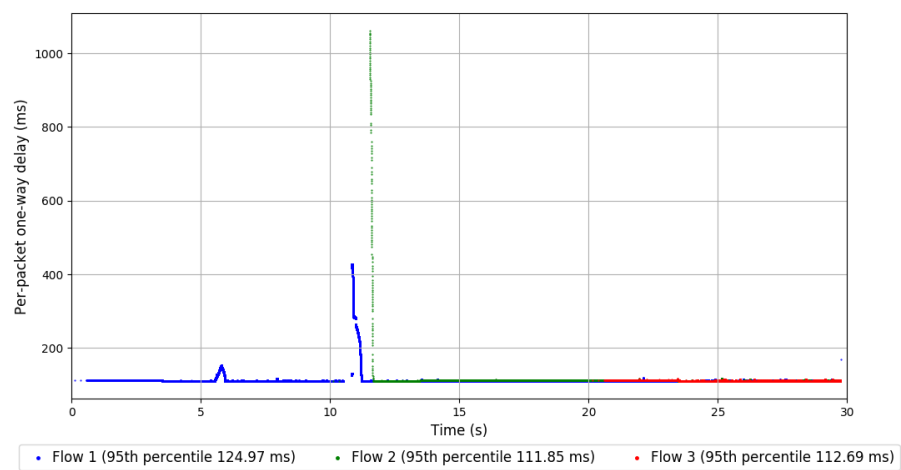
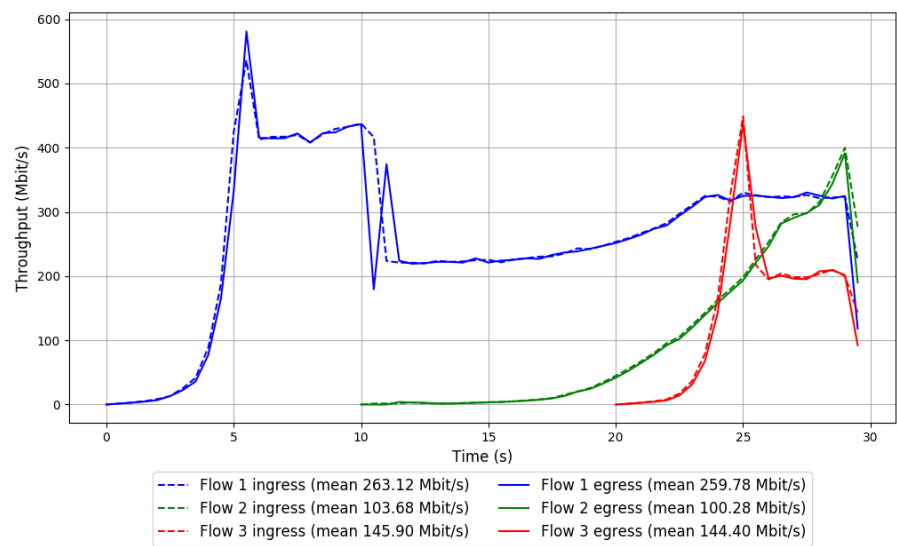
-- Flow 3:

Average throughput: 144.40 Mbit/s

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

Loss rate: 3.29%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-02-28 10:12:04

End at: 2018-02-28 10:12:34

Below is generated by plot.py at 2018-02-28 17:40:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 506.34 Mbit/s

95th percentile per-packet one-way delay: 113.984 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 298.69 Mbit/s

95th percentile per-packet one-way delay: 113.876 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 202.40 Mbit/s

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

Loss rate: 1.68%

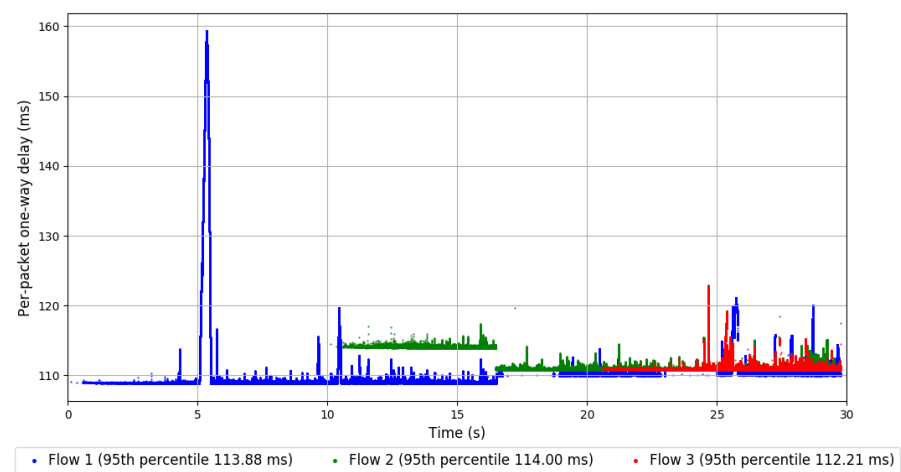
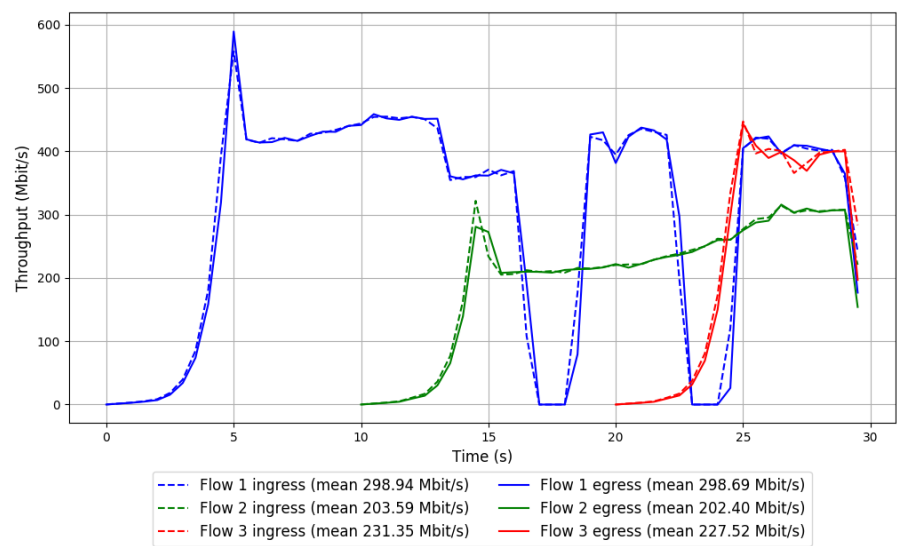
-- Flow 3:

Average throughput: 227.52 Mbit/s

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

Loss rate: 3.82%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-02-28 10:31:34

End at: 2018-02-28 10:32:04

Below is generated by plot.py at 2018-02-28 17:40:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 540.58 Mbit/s

95th percentile per-packet one-way delay: 115.212 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 345.31 Mbit/s

95th percentile per-packet one-way delay: 115.614 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 193.49 Mbit/s

95th percentile per-packet one-way delay: 111.102 ms

Loss rate: 1.58%

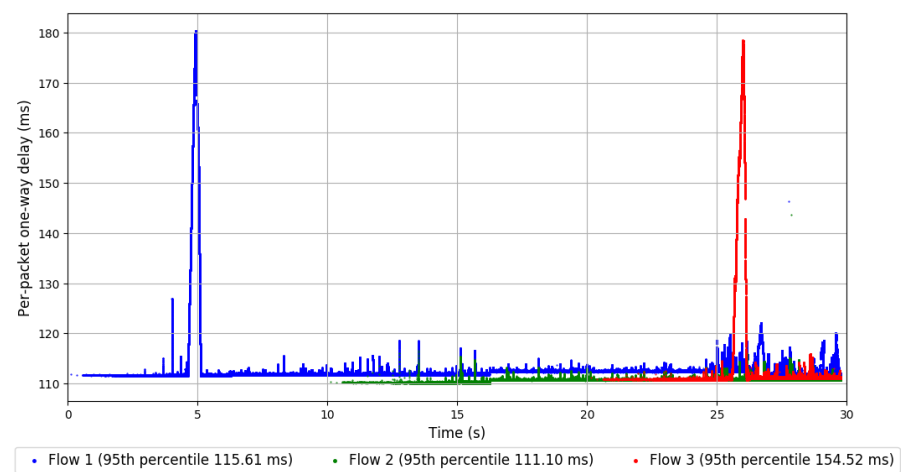
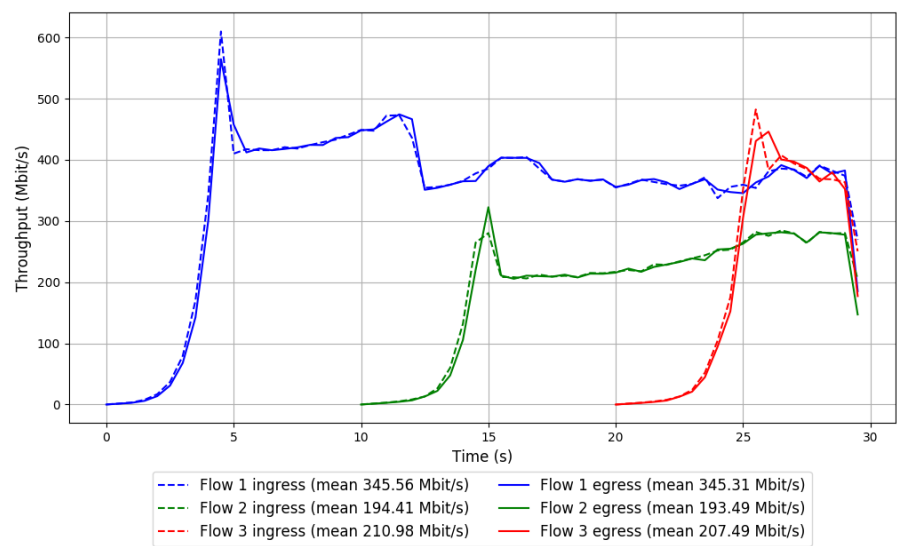
-- Flow 3:

Average throughput: 207.49 Mbit/s

95th percentile per-packet one-way delay: 154.516 ms

Loss rate: 3.90%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-02-28 10:50:49

End at: 2018-02-28 10:51:19

Below is generated by plot.py at 2018-02-28 17:40:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 503.53 Mbit/s

95th percentile per-packet one-way delay: 112.299 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 332.19 Mbit/s

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

Loss rate: 0.73%

-- Flow 2:

Average throughput: 186.49 Mbit/s

95th percentile per-packet one-way delay: 111.292 ms

Loss rate: 1.52%

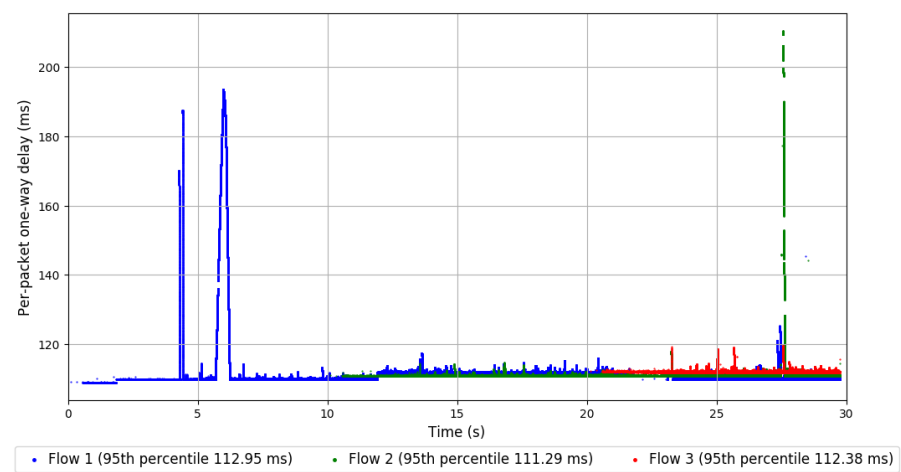
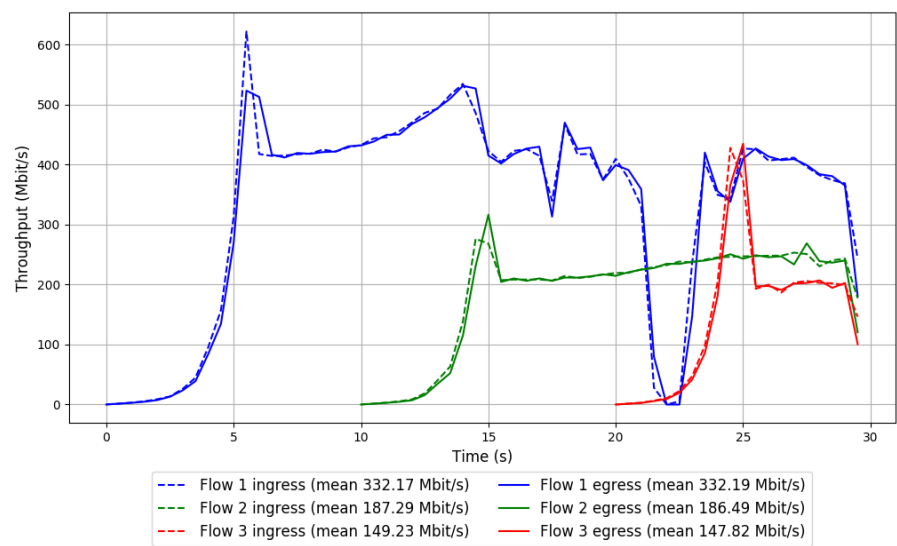
-- Flow 3:

Average throughput: 147.82 Mbit/s

95th percentile per-packet one-way delay: 112.379 ms

Loss rate: 3.16%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-02-28 11:10:22

End at: 2018-02-28 11:10:53

Below is generated by plot.py at 2018-02-28 17:42:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 498.62 Mbit/s

95th percentile per-packet one-way delay: 117.547 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 372.57 Mbit/s

95th percentile per-packet one-way delay: 128.093 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 118.78 Mbit/s

95th percentile per-packet one-way delay: 111.947 ms

Loss rate: 1.67%

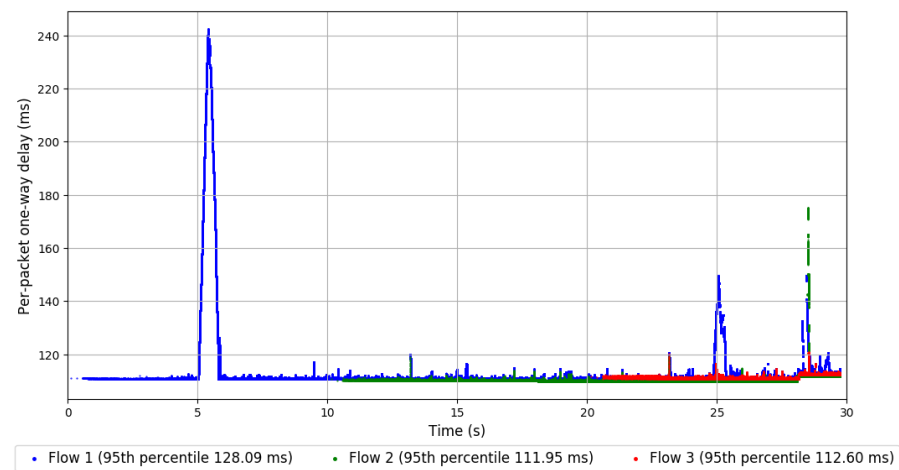
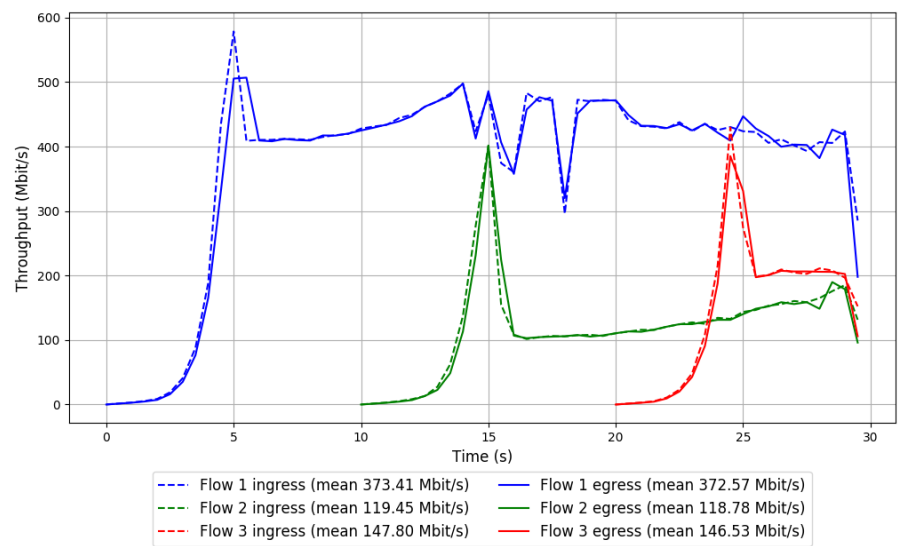
-- Flow 3:

Average throughput: 146.53 Mbit/s

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

Loss rate: 3.10%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-02-28 11:29:47

End at: 2018-02-28 11:30:17

Below is generated by plot.py at 2018-02-28 17:42:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 566.79 Mbit/s

95th percentile per-packet one-way delay: 120.323 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 370.59 Mbit/s

95th percentile per-packet one-way delay: 122.244 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 193.65 Mbit/s

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

Loss rate: 1.40%

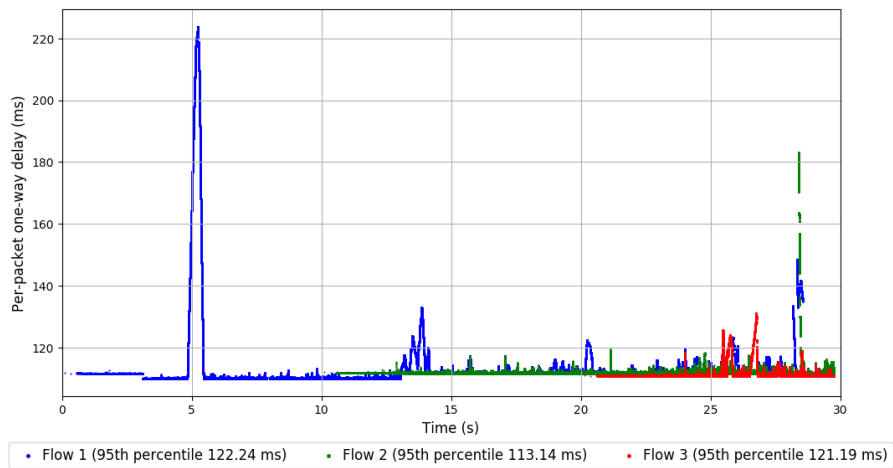
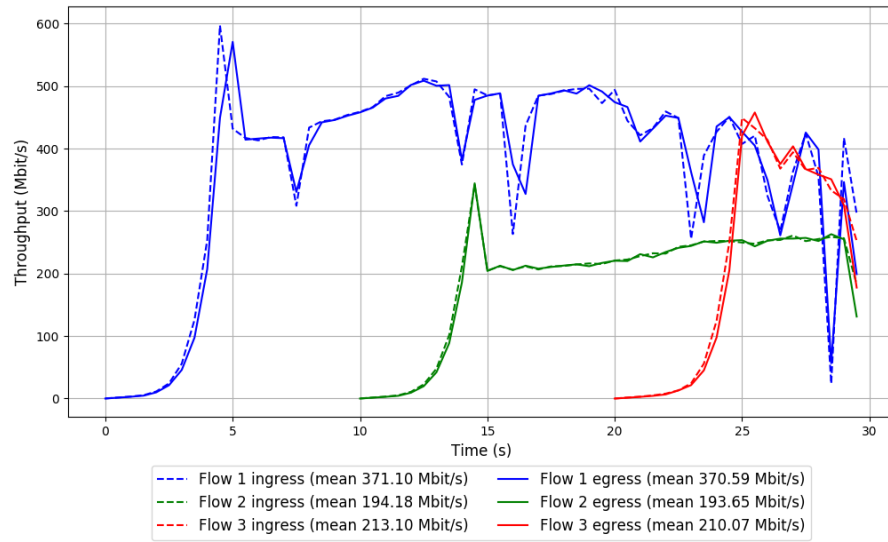
-- Flow 3:

Average throughput: 210.07 Mbit/s

95th percentile per-packet one-way delay: 121.191 ms

Loss rate: 3.67%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-02-28 11:48:57

End at: 2018-02-28 11:49:27

Below is generated by plot.py at 2018-02-28 17:42:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 496.25 Mbit/s

95th percentile per-packet one-way delay: 114.715 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 308.77 Mbit/s

95th percentile per-packet one-way delay: 119.887 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 182.15 Mbit/s

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

Loss rate: 0.92%

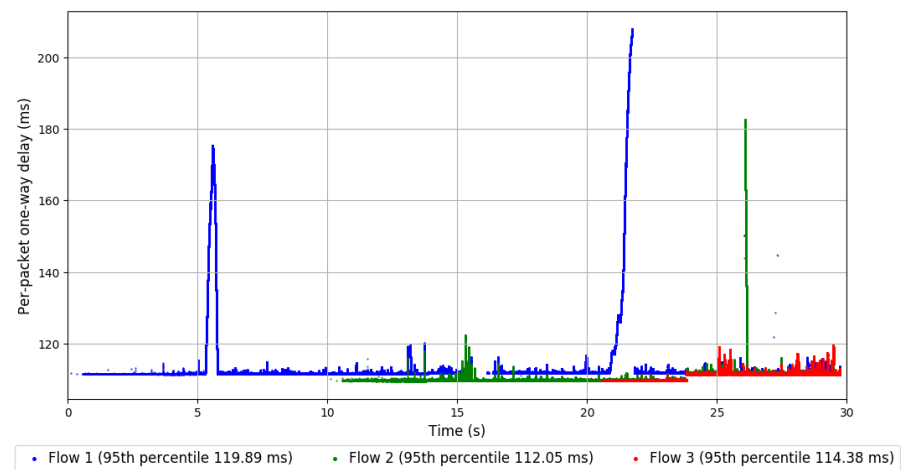
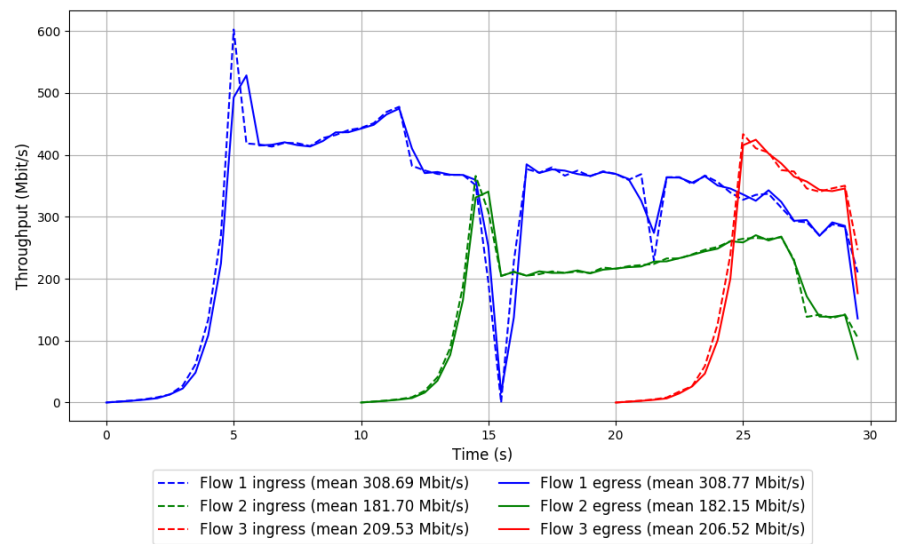
-- Flow 3:

Average throughput: 206.52 Mbit/s

95th percentile per-packet one-way delay: 114.382 ms

Loss rate: 3.67%

Run 9: Report of Vivace-LTE — Data Link



```
Run 10: Statistics of Vivace-LTE

Start at: 2018-02-28 12:08:30
End at: 2018-02-28 12:09:00

# Below is generated by plot.py at 2018-02-28 17:42:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 504.16 Mbit/s
95th percentile per-packet one-way delay: 125.657 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 328.54 Mbit/s
95th percentile per-packet one-way delay: 115.260 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 150.26 Mbit/s
95th percentile per-packet one-way delay: 112.282 ms
Loss rate: 8.50%
-- Flow 3:
Average throughput: 235.05 Mbit/s
95th percentile per-packet one-way delay: 163.896 ms
Loss rate: 3.77%
```

Run 10: Report of Vivace-LTE — Data Link

