

Pantheon Report

Generated at 2018-03-07 22:15:19 (UTC).

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

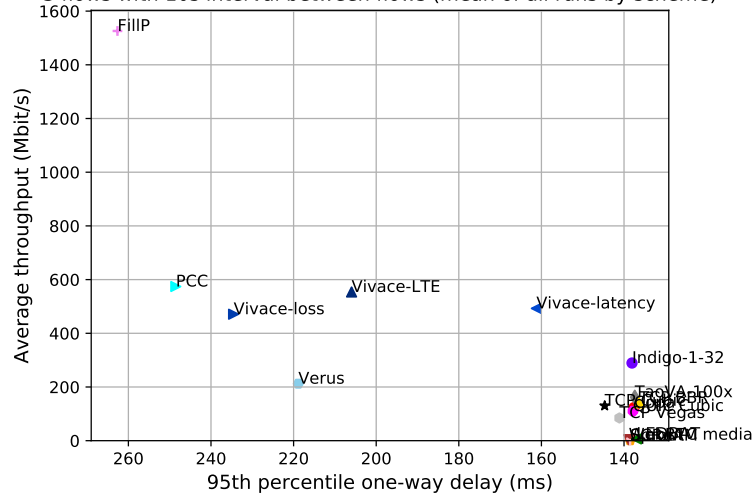
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

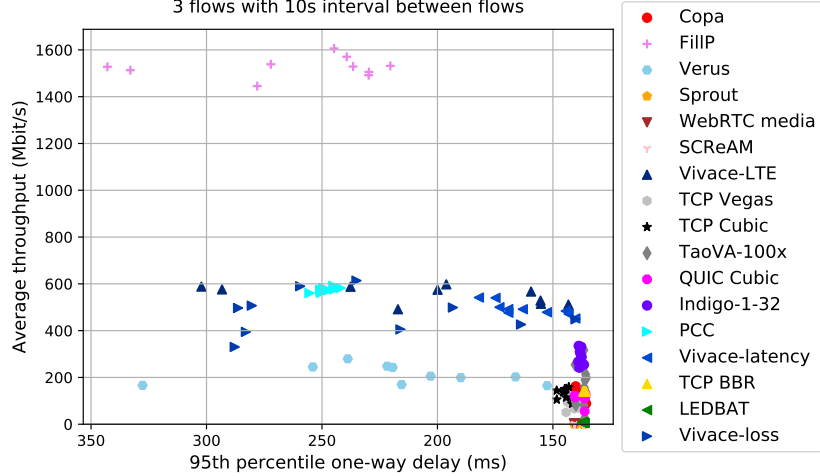
Git summary:

```
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5ce90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quick @ 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 London Ethernet to GCE Sydney Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE London Ethernet to GCE Sydney 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	72.97	70.63	63.69	136.35	136.36	136.40	1.00	1.54	3.41
TCP Cubic	10	77.57	56.95	46.17	144.18	144.24	146.53	0.92	2.15	5.09
LEDBAT	10	4.52	2.54	1.13	137.04	136.88	136.76	1.85	2.80	5.40
PCC	10	490.87	100.33	52.51	249.91	245.12	246.30	3.59	3.89	6.76
QUIC Cubic	10	54.25	61.07	48.46	136.05	136.85	137.00	1.07	0.48	3.35
SCReAM	10	0.22	0.22	0.22	136.96	137.92	136.25	0.82	1.42	2.63
WebRTC media	10	2.04	1.29	0.44	137.80	137.45	137.11	1.04	1.85	5.30
Sprout	10	0.41	0.40	0.43	137.74	138.02	137.94	0.88	1.20	2.72
TaoVA-100x	10	81.30	86.42	89.34	136.76	147.50	136.60	0.97	1.12	2.68
TCP Vegas	10	38.96	49.52	39.54	139.42	141.46	143.22	0.98	1.48	3.11
Verus	10	112.23	111.84	81.36	188.47	214.17	243.94	1.53	2.96	3.95
Copa	10	62.27	65.78	65.54	137.55	137.15	140.47	0.66	1.41	3.22
FillP	10	812.23	774.48	619.33	236.13	268.12	284.77	5.92	6.74	10.99
Indigo-1-32	10	151.51	139.88	139.62	137.44	138.50	139.55	0.92	1.48	3.44
Vivace-latency	10	295.39	234.03	131.44	156.11	163.44	168.36	1.09	1.76	4.83
Vivace-loss	10	255.71	249.58	156.57	251.17	180.59	225.84	2.86	1.60	5.38
Vivace-LTE	10	332.82	255.59	162.69	190.54	196.54	218.42	1.22	2.17	5.50

Run 1: Statistics of TCP BBR

Start at: 2018-03-07 13:34:36

End at: 2018-03-07 13:35:06

Below is generated by plot.py at 2018-03-07 20:30:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.49 Mbit/s

95th percentile per-packet one-way delay: 136.747 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 73.90 Mbit/s

95th percentile per-packet one-way delay: 136.729 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 70.44 Mbit/s

95th percentile per-packet one-way delay: 136.750 ms

Loss rate: 1.53%

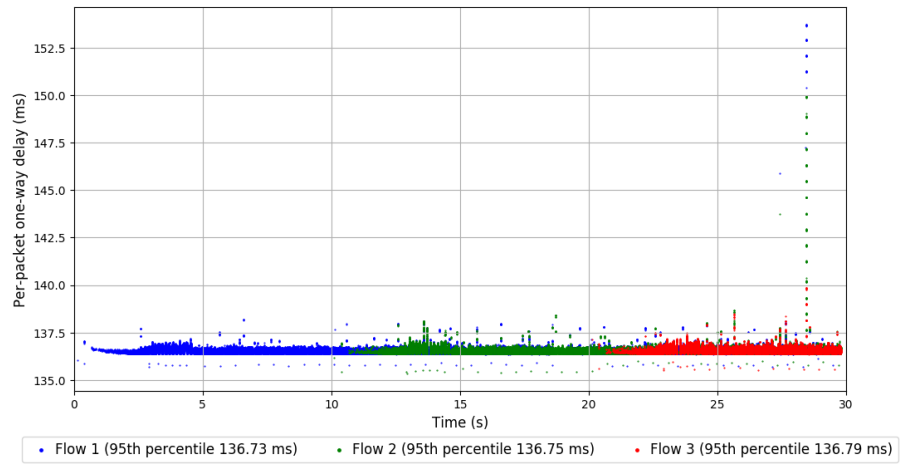
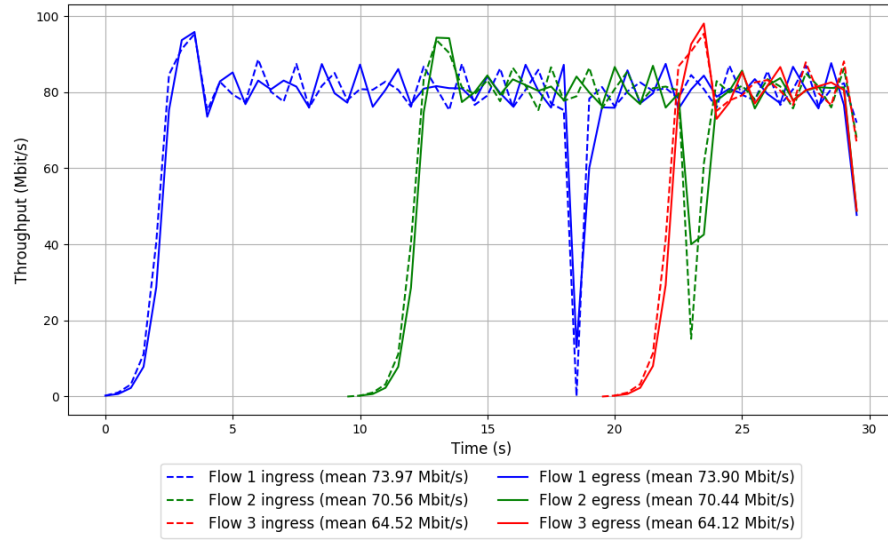
-- Flow 3:

Average throughput: 64.12 Mbit/s

95th percentile per-packet one-way delay: 136.794 ms

Loss rate: 3.35%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-03-07 13:55:11

End at: 2018-03-07 13:55:41

Below is generated by plot.py at 2018-03-07 20:30:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.43 Mbit/s

95th percentile per-packet one-way delay: 136.615 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 74.17 Mbit/s

95th percentile per-packet one-way delay: 136.609 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 70.58 Mbit/s

95th percentile per-packet one-way delay: 136.606 ms

Loss rate: 1.66%

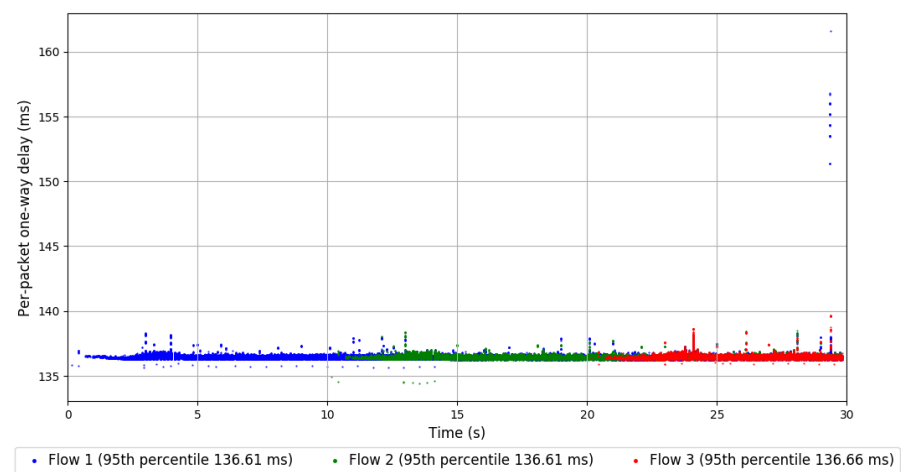
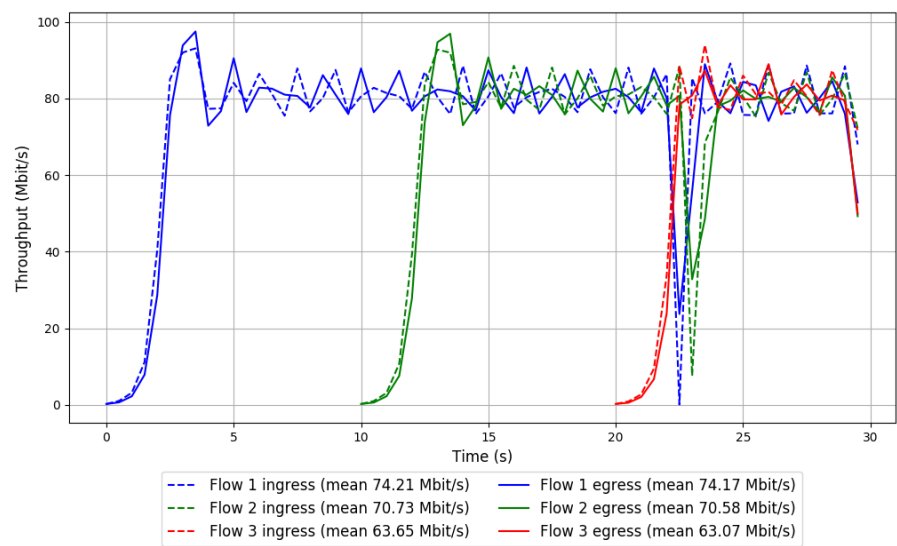
-- Flow 3:

Average throughput: 63.07 Mbit/s

95th percentile per-packet one-way delay: 136.655 ms

Loss rate: 3.63%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-03-07 14:15:50

End at: 2018-03-07 14:16:20

Below is generated by plot.py at 2018-03-07 20:30:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.72 Mbit/s

95th percentile per-packet one-way delay: 136.603 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 73.20 Mbit/s

95th percentile per-packet one-way delay: 136.606 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 70.41 Mbit/s

95th percentile per-packet one-way delay: 136.597 ms

Loss rate: 1.52%

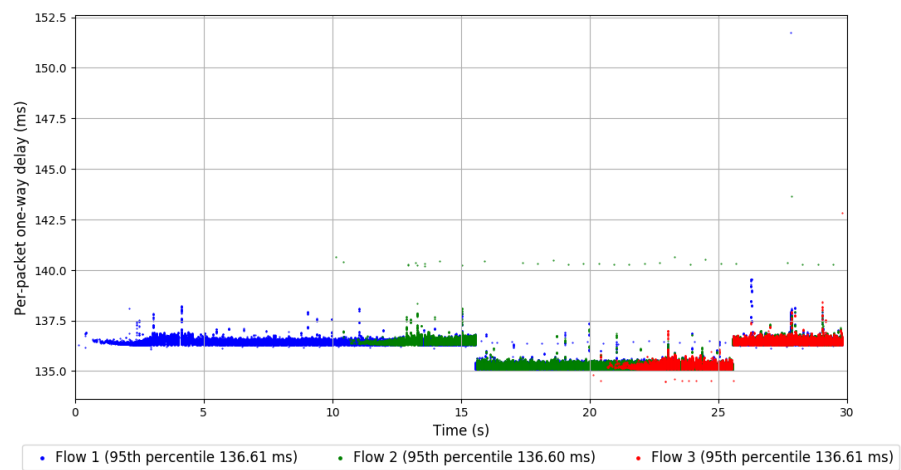
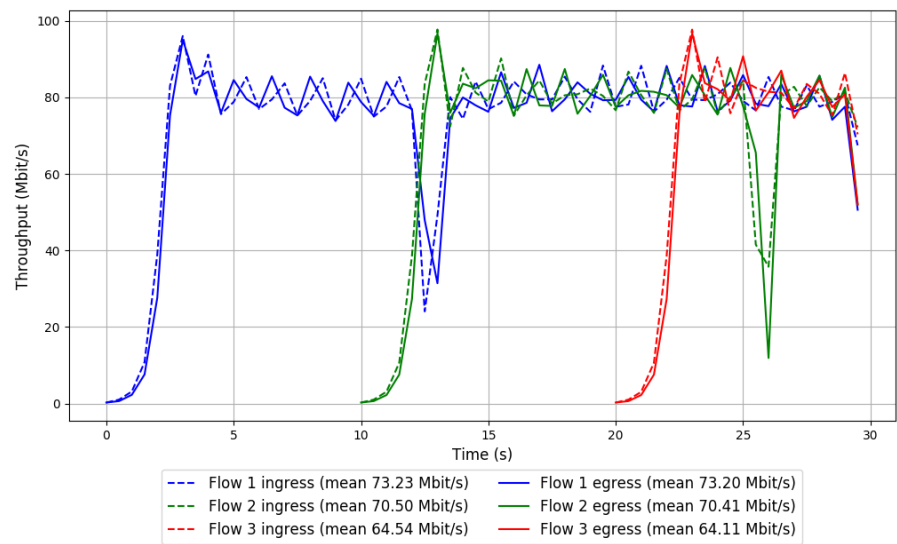
-- Flow 3:

Average throughput: 64.11 Mbit/s

95th percentile per-packet one-way delay: 136.606 ms

Loss rate: 3.32%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-03-07 14:36:01

End at: 2018-03-07 14:36:31

Below is generated by plot.py at 2018-03-07 20:30:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 138.51 Mbit/s

95th percentile per-packet one-way delay: 136.676 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 71.39 Mbit/s

95th percentile per-packet one-way delay: 136.667 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 69.85 Mbit/s

95th percentile per-packet one-way delay: 136.669 ms

Loss rate: 1.50%

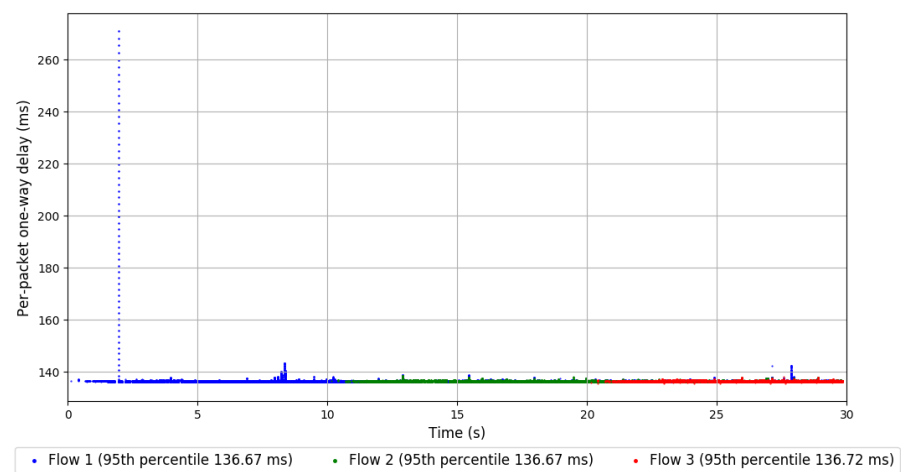
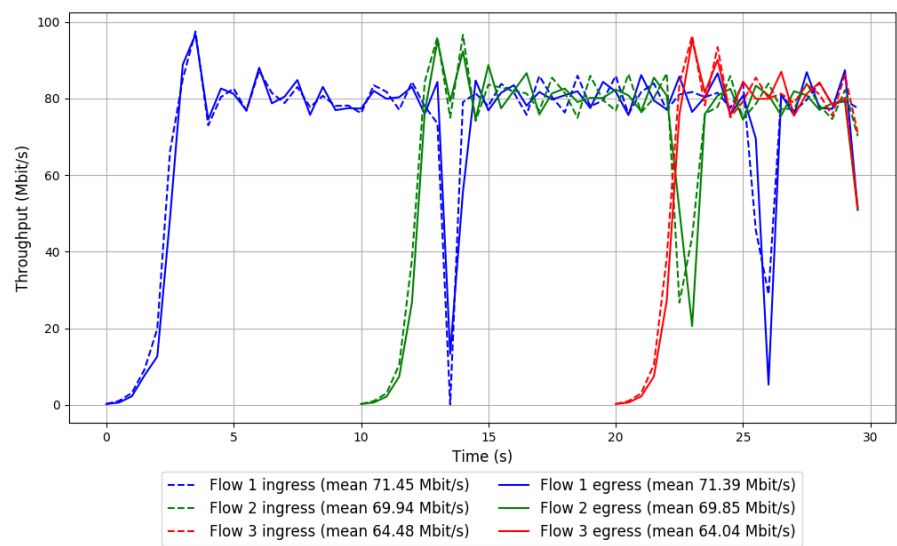
-- Flow 3:

Average throughput: 64.04 Mbit/s

95th percentile per-packet one-way delay: 136.718 ms

Loss rate: 3.41%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-03-07 14:56:20

End at: 2018-03-07 14:56:50

Below is generated by plot.py at 2018-03-07 20:30:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.06 Mbit/s

95th percentile per-packet one-way delay: 135.873 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 73.87 Mbit/s

95th percentile per-packet one-way delay: 135.874 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 70.09 Mbit/s

95th percentile per-packet one-way delay: 135.868 ms

Loss rate: 1.56%

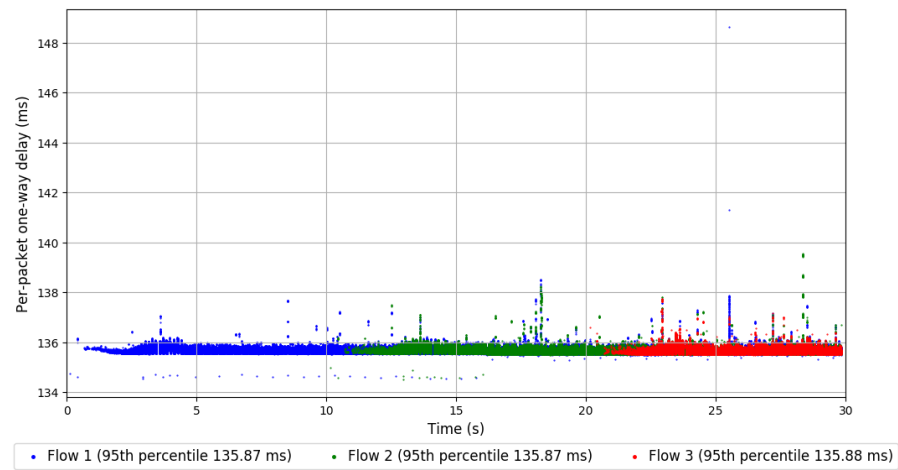
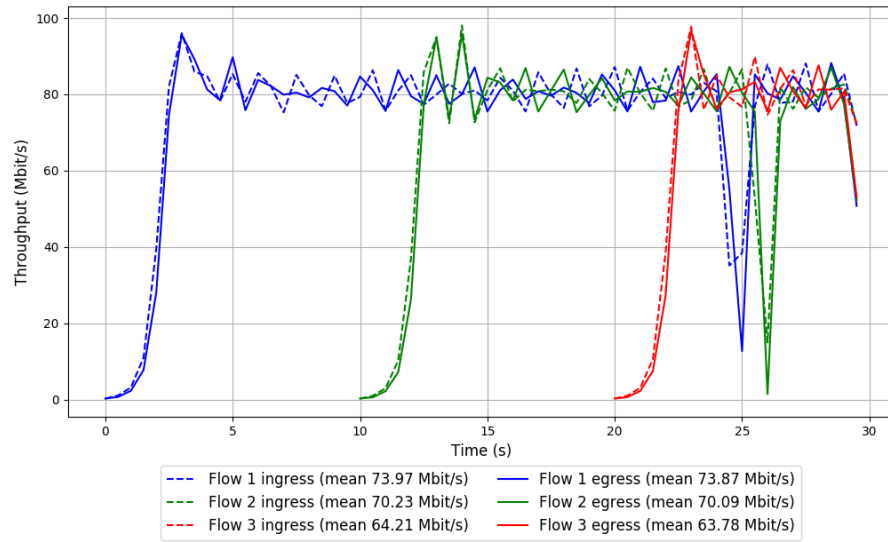
-- Flow 3:

Average throughput: 63.78 Mbit/s

95th percentile per-packet one-way delay: 135.879 ms

Loss rate: 3.40%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-03-07 15:16:59

End at: 2018-03-07 15:17:29

Below is generated by plot.py at 2018-03-07 20:30:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.52 Mbit/s

95th percentile per-packet one-way delay: 135.857 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 73.55 Mbit/s

95th percentile per-packet one-way delay: 135.831 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 70.06 Mbit/s

95th percentile per-packet one-way delay: 135.873 ms

Loss rate: 1.54%

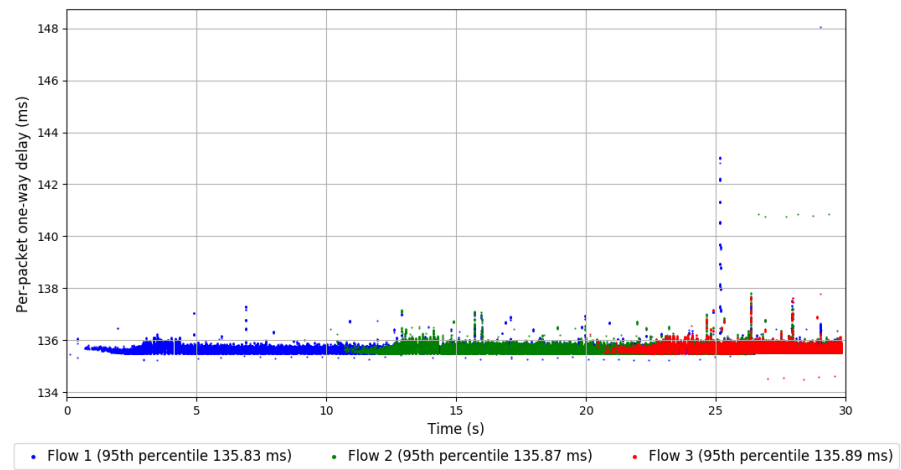
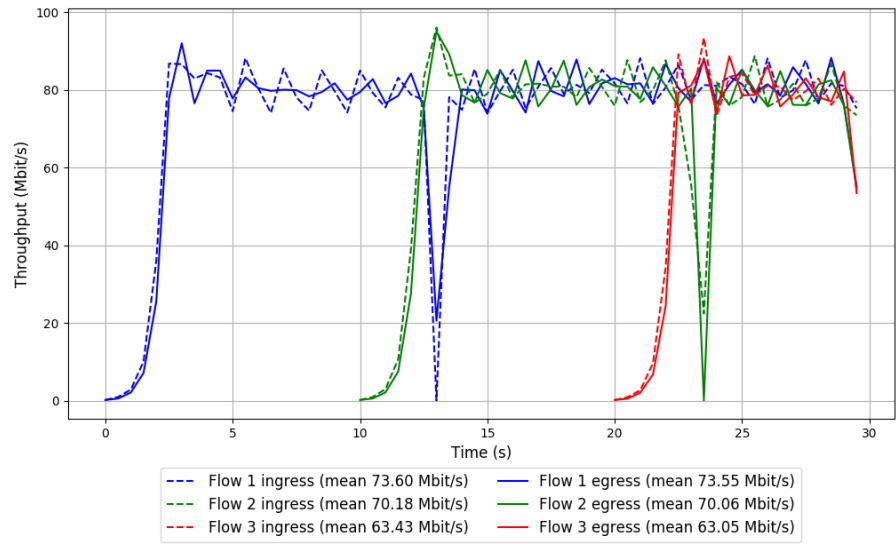
-- Flow 3:

Average throughput: 63.05 Mbit/s

95th percentile per-packet one-way delay: 135.893 ms

Loss rate: 3.32%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-03-07 15:37:42

End at: 2018-03-07 15:38:12

Below is generated by plot.py at 2018-03-07 20:30:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.39 Mbit/s

95th percentile per-packet one-way delay: 135.873 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 72.74 Mbit/s

95th percentile per-packet one-way delay: 135.855 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 70.42 Mbit/s

95th percentile per-packet one-way delay: 135.879 ms

Loss rate: 1.51%

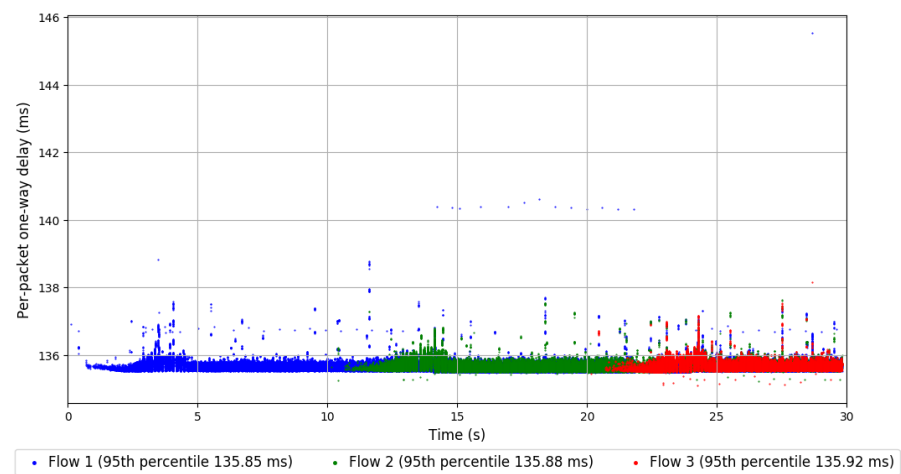
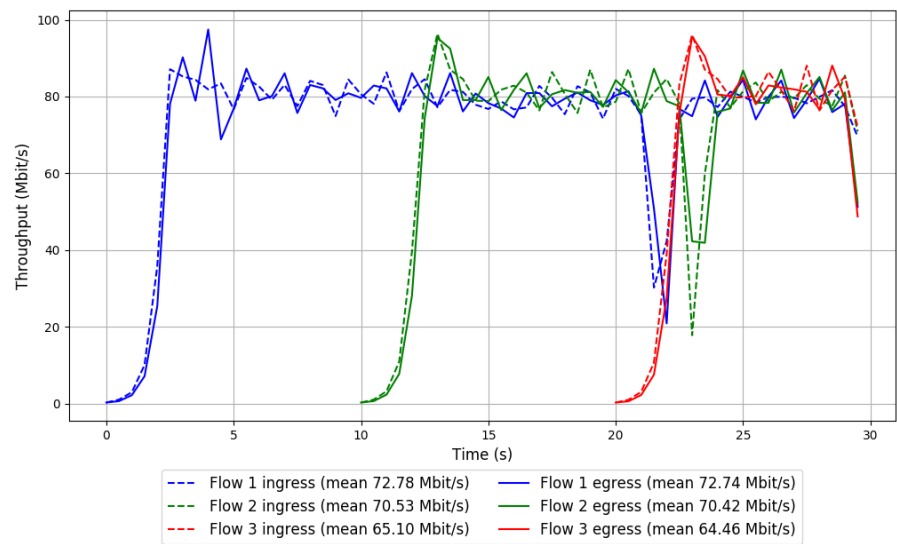
-- Flow 3:

Average throughput: 64.46 Mbit/s

95th percentile per-packet one-way delay: 135.920 ms

Loss rate: 3.67%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-03-07 15:58:17

End at: 2018-03-07 15:58:47

Below is generated by plot.py at 2018-03-07 20:30:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.60 Mbit/s

95th percentile per-packet one-way delay: 136.479 ms

Loss rate: 1.60%

-- Flow 1:

Average throughput: 72.27 Mbit/s

95th percentile per-packet one-way delay: 136.467 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 71.86 Mbit/s

95th percentile per-packet one-way delay: 136.441 ms

Loss rate: 1.59%

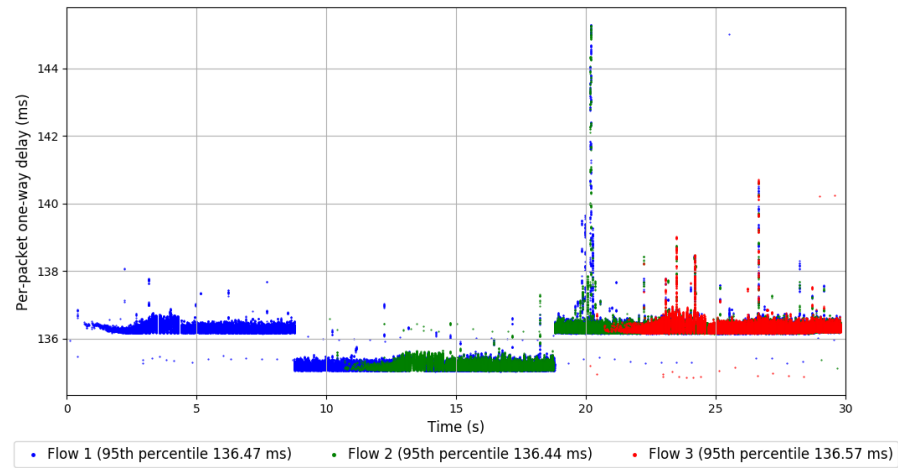
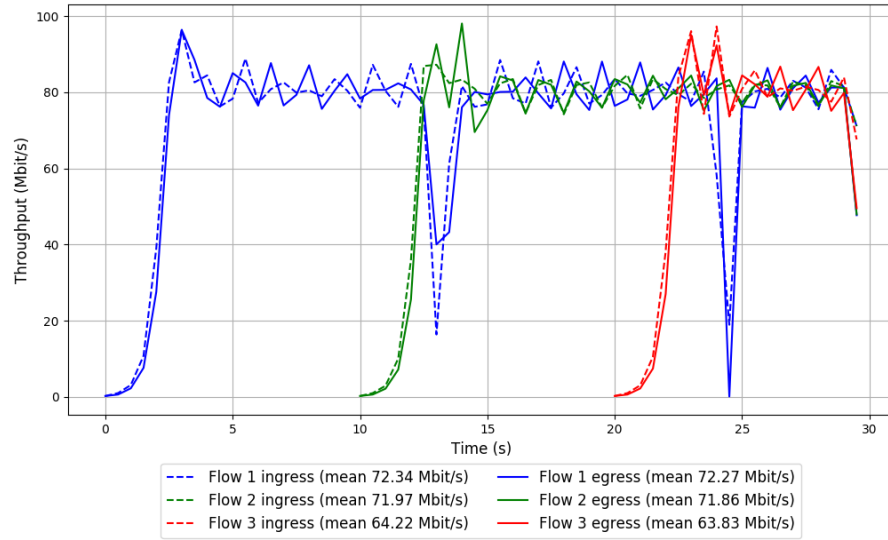
-- Flow 3:

Average throughput: 63.83 Mbit/s

95th percentile per-packet one-way delay: 136.569 ms

Loss rate: 3.34%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-03-07 16:18:20

End at: 2018-03-07 16:18:50

Below is generated by plot.py at 2018-03-07 20:32:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 138.37 Mbit/s

95th percentile per-packet one-way delay: 136.476 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 71.34 Mbit/s

95th percentile per-packet one-way delay: 136.453 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 70.53 Mbit/s

95th percentile per-packet one-way delay: 136.480 ms

Loss rate: 1.52%

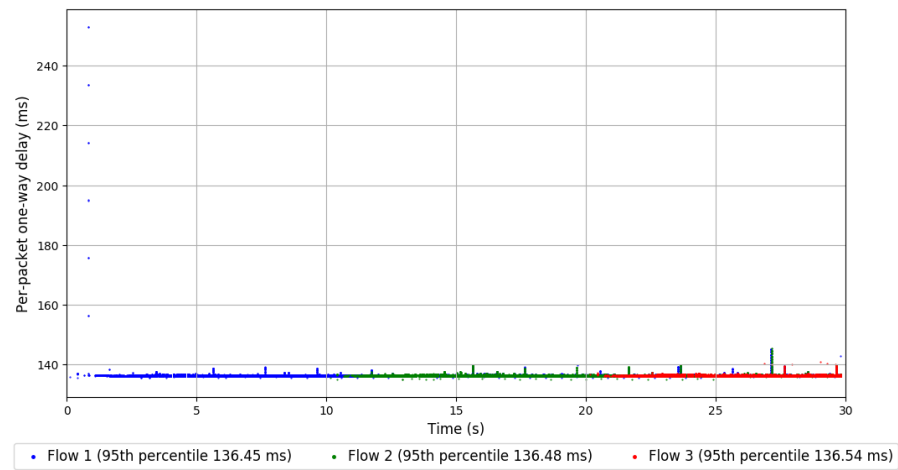
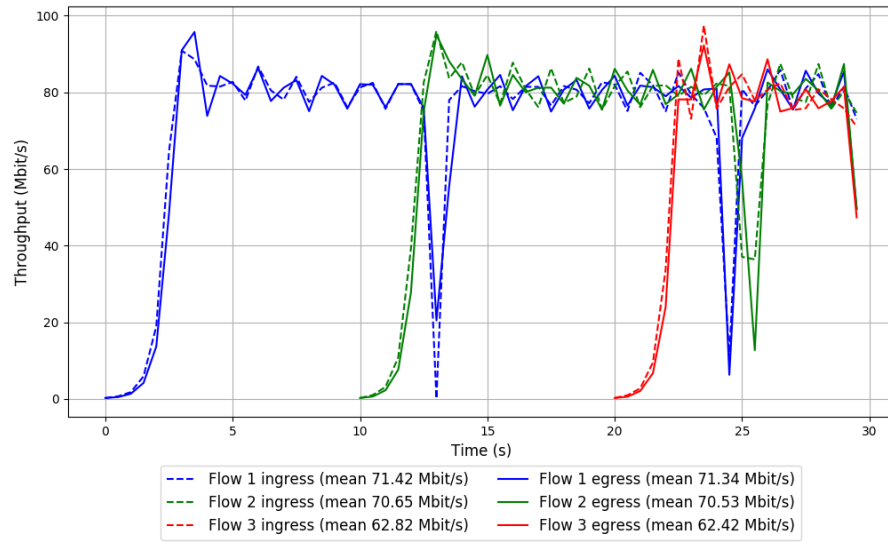
-- Flow 3:

Average throughput: 62.42 Mbit/s

95th percentile per-packet one-way delay: 136.538 ms

Loss rate: 3.36%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-03-07 16:38:30

End at: 2018-03-07 16:39:00

Below is generated by plot.py at 2018-03-07 20:32:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.83 Mbit/s

95th percentile per-packet one-way delay: 136.389 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 73.27 Mbit/s

95th percentile per-packet one-way delay: 136.365 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 72.05 Mbit/s

95th percentile per-packet one-way delay: 136.391 ms

Loss rate: 1.49%

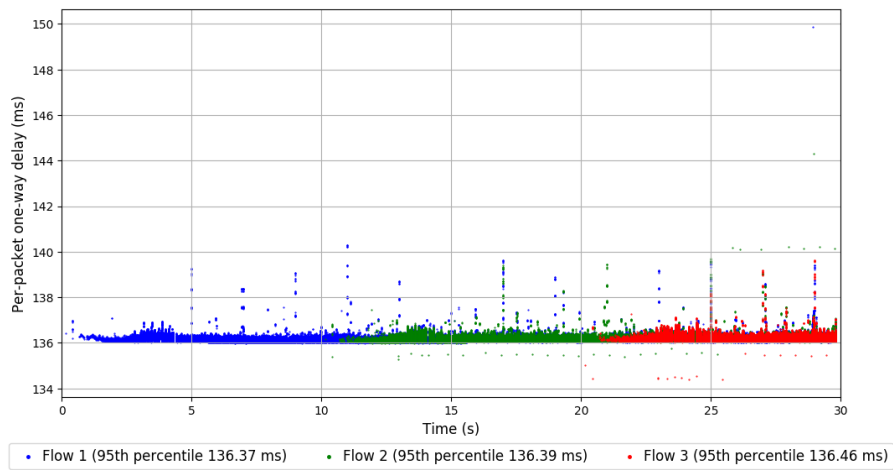
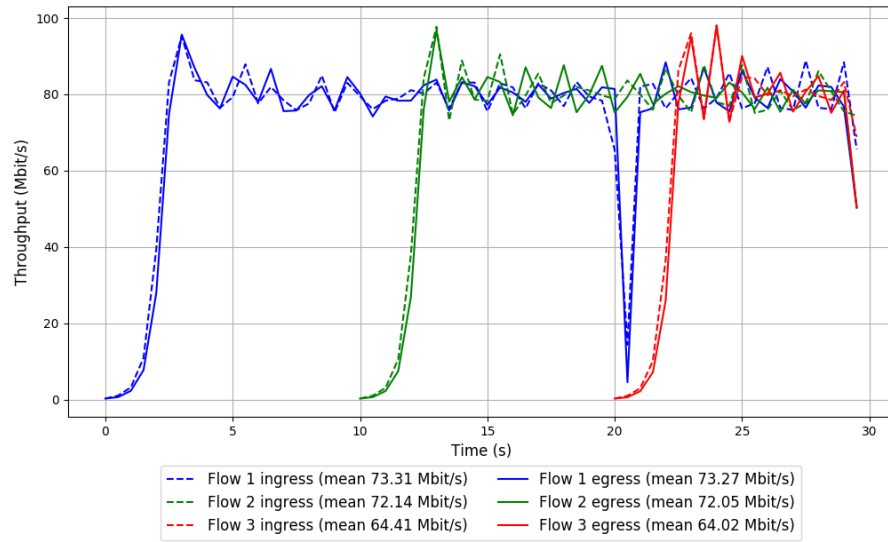
-- Flow 3:

Average throughput: 64.02 Mbit/s

95th percentile per-packet one-way delay: 136.458 ms

Loss rate: 3.33%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-03-07 13:48:38

End at: 2018-03-07 13:49:08

Below is generated by plot.py at 2018-03-07 20:32:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 143.87 Mbit/s

95th percentile per-packet one-way delay: 148.386 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 79.50 Mbit/s

95th percentile per-packet one-way delay: 145.481 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 79.92 Mbit/s

95th percentile per-packet one-way delay: 147.610 ms

Loss rate: 1.57%

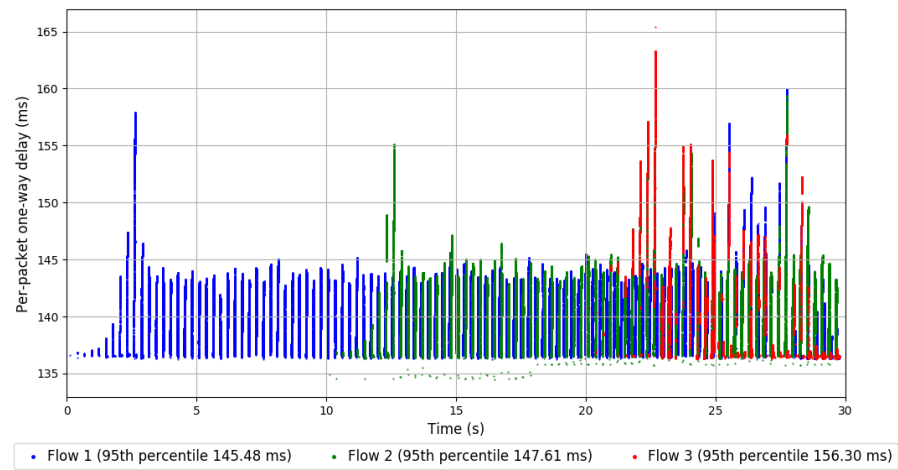
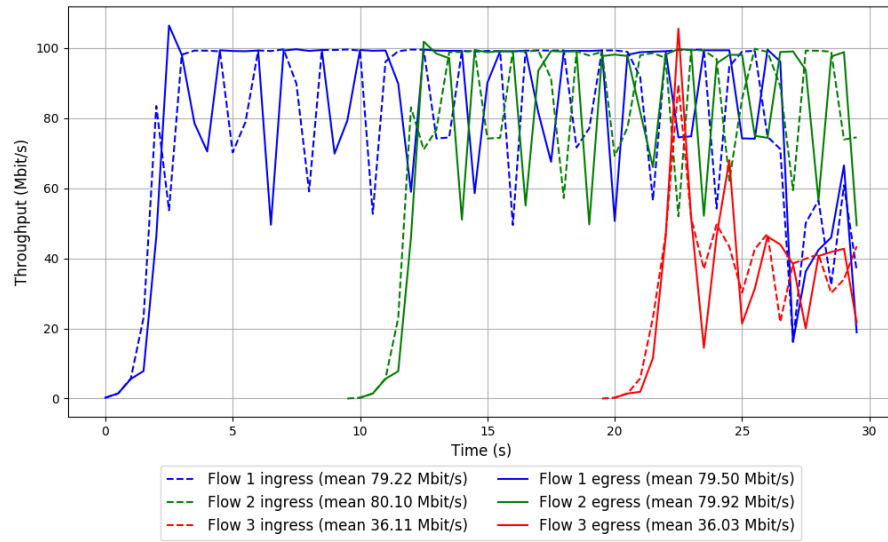
-- Flow 3:

Average throughput: 36.03 Mbit/s

95th percentile per-packet one-way delay: 156.301 ms

Loss rate: 3.05%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-03-07 14:09:14

End at: 2018-03-07 14:09:44

Below is generated by plot.py at 2018-03-07 20:32:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 150.08 Mbit/s

95th percentile per-packet one-way delay: 144.921 ms

Loss rate: 1.60%

-- Flow 1:

Average throughput: 82.94 Mbit/s

95th percentile per-packet one-way delay: 144.646 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 67.36 Mbit/s

95th percentile per-packet one-way delay: 144.224 ms

Loss rate: 1.66%

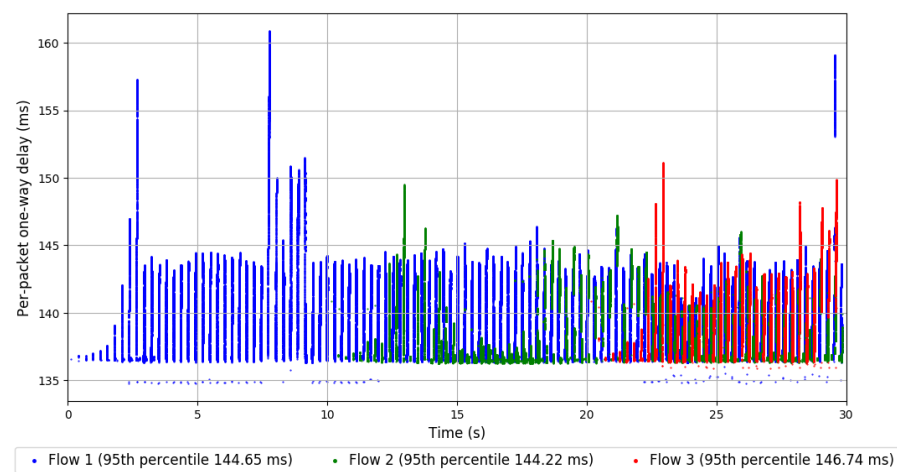
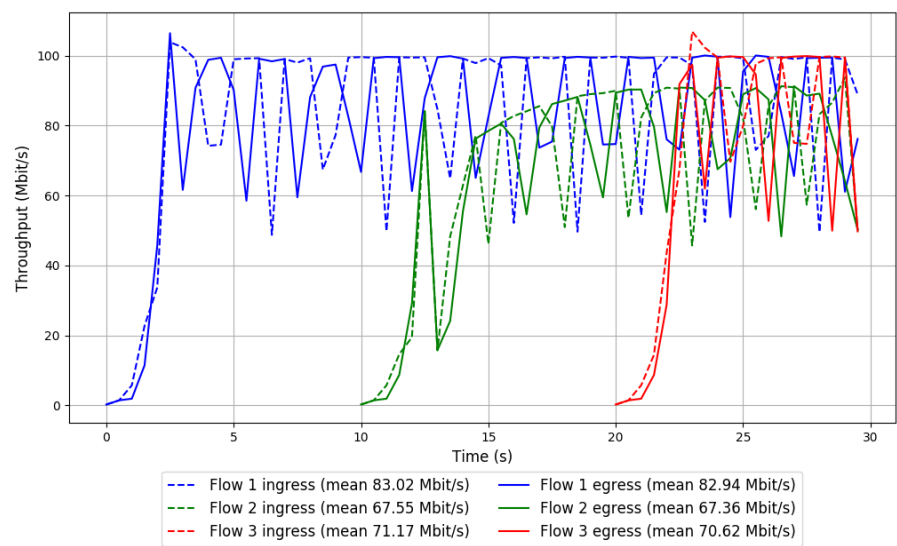
-- Flow 3:

Average throughput: 70.62 Mbit/s

95th percentile per-packet one-way delay: 146.738 ms

Loss rate: 3.58%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-03-07 14:29:38

End at: 2018-03-07 14:30:08

Below is generated by plot.py at 2018-03-07 20:32:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 151.41 Mbit/s

95th percentile per-packet one-way delay: 144.209 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 83.84 Mbit/s

95th percentile per-packet one-way delay: 144.184 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 67.47 Mbit/s

95th percentile per-packet one-way delay: 143.116 ms

Loss rate: 1.72%

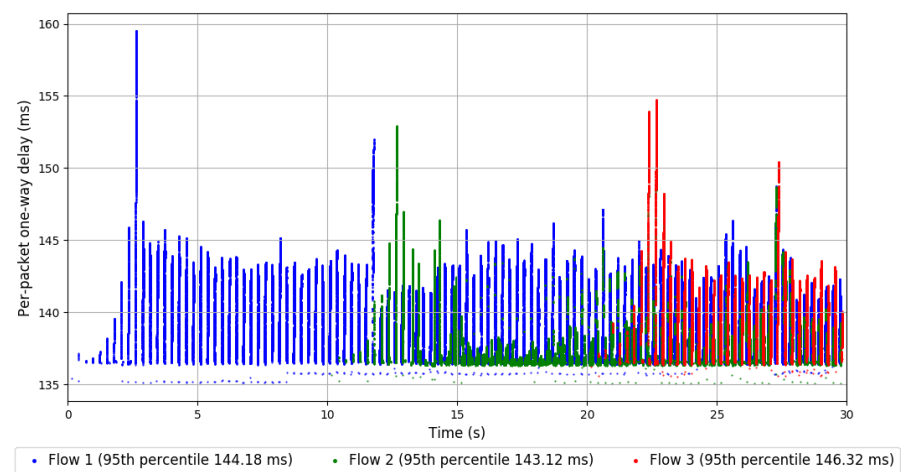
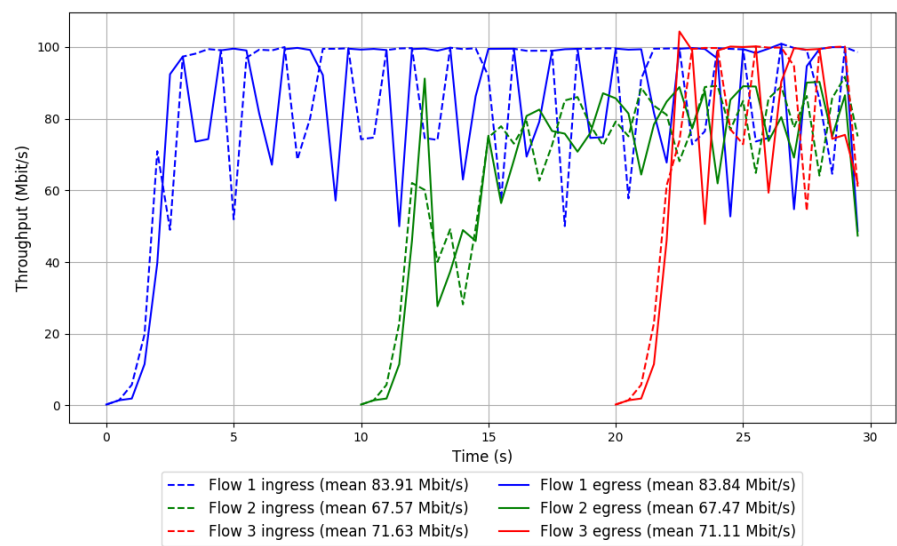
-- Flow 3:

Average throughput: 71.11 Mbit/s

95th percentile per-packet one-way delay: 146.320 ms

Loss rate: 3.45%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-03-07 14:49:44

End at: 2018-03-07 14:50:14

Below is generated by plot.py at 2018-03-07 20:32:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 158.87 Mbit/s

95th percentile per-packet one-way delay: 143.132 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 82.40 Mbit/s

95th percentile per-packet one-way delay: 142.537 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 81.14 Mbit/s

95th percentile per-packet one-way delay: 143.819 ms

Loss rate: 1.54%

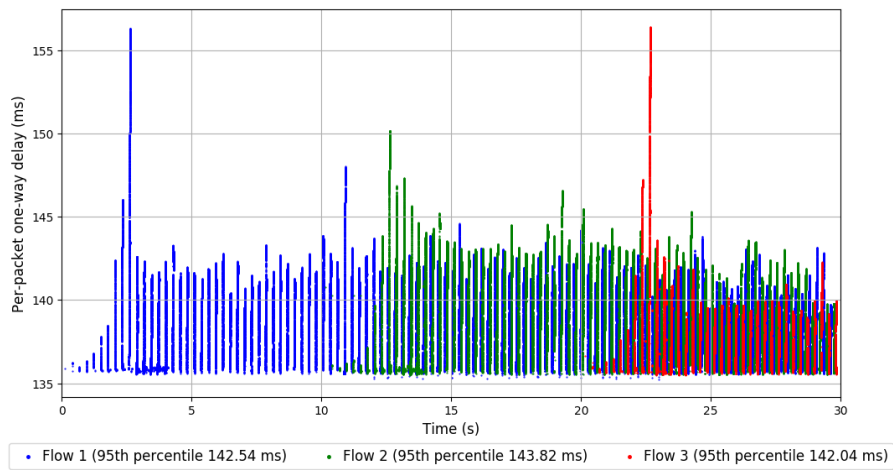
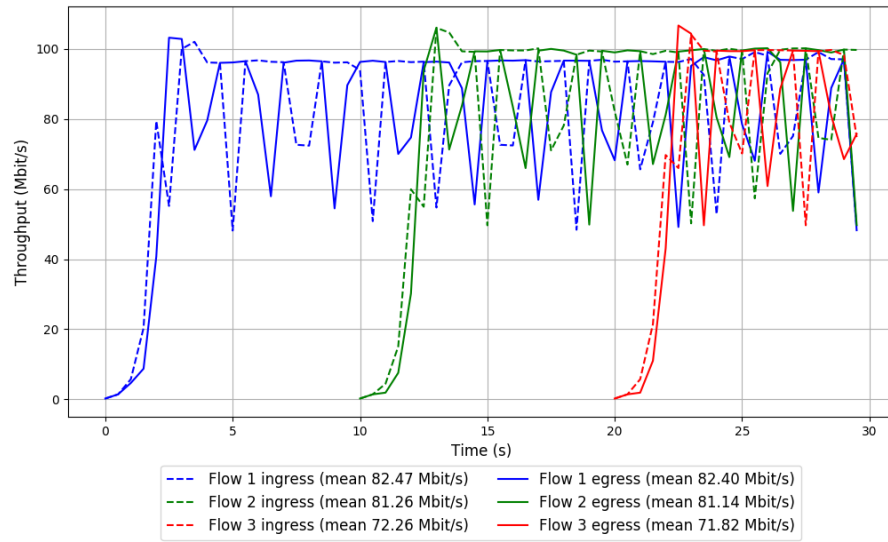
-- Flow 3:

Average throughput: 71.82 Mbit/s

95th percentile per-packet one-way delay: 142.042 ms

Loss rate: 3.31%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-03-07 15:10:25

End at: 2018-03-07 15:10:55

Below is generated by plot.py at 2018-03-07 20:32:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.77 Mbit/s

95th percentile per-packet one-way delay: 144.593 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 83.85 Mbit/s

95th percentile per-packet one-way delay: 143.980 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 80.56 Mbit/s

95th percentile per-packet one-way delay: 144.283 ms

Loss rate: 1.55%

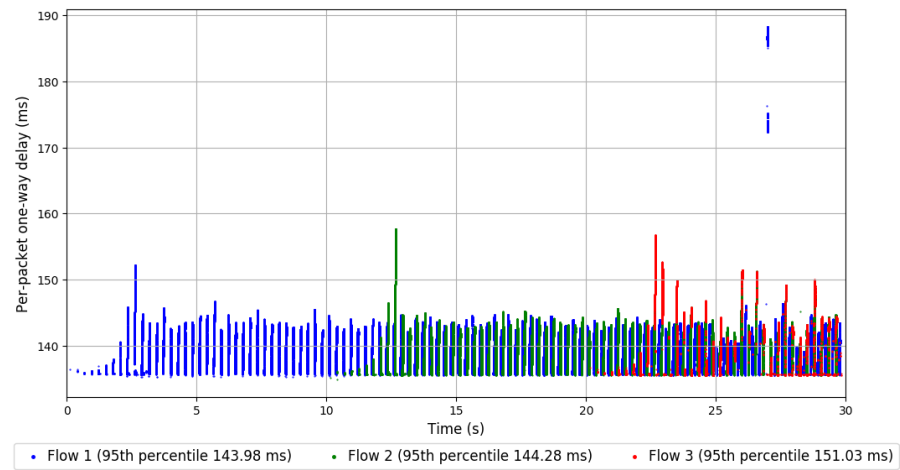
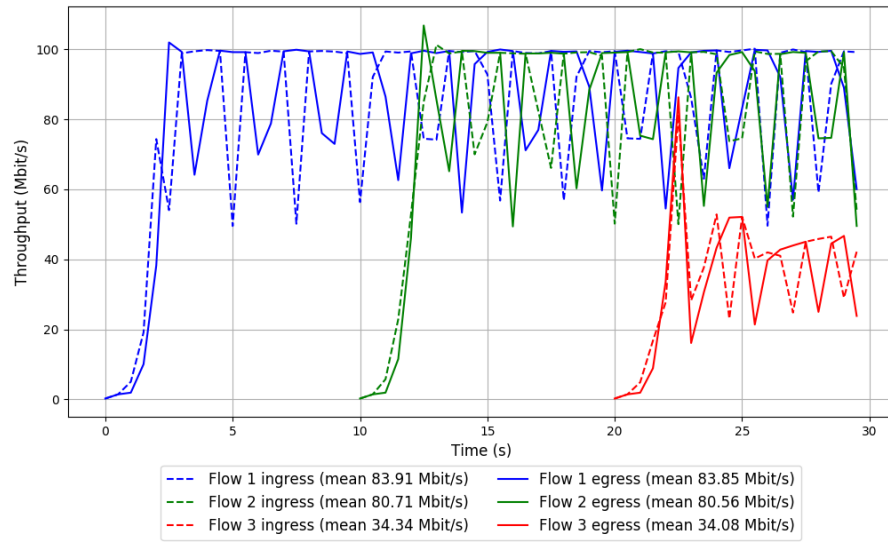
-- Flow 3:

Average throughput: 34.08 Mbit/s

95th percentile per-packet one-way delay: 151.029 ms

Loss rate: 3.47%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-03-07 15:31:14

End at: 2018-03-07 15:31:44

Below is generated by plot.py at 2018-03-07 20:32:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 136.79 Mbit/s

95th percentile per-packet one-way delay: 145.629 ms

Loss rate: 1.62%

-- Flow 1:

Average throughput: 83.63 Mbit/s

95th percentile per-packet one-way delay: 144.814 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 45.92 Mbit/s

95th percentile per-packet one-way delay: 146.987 ms

Loss rate: 1.72%

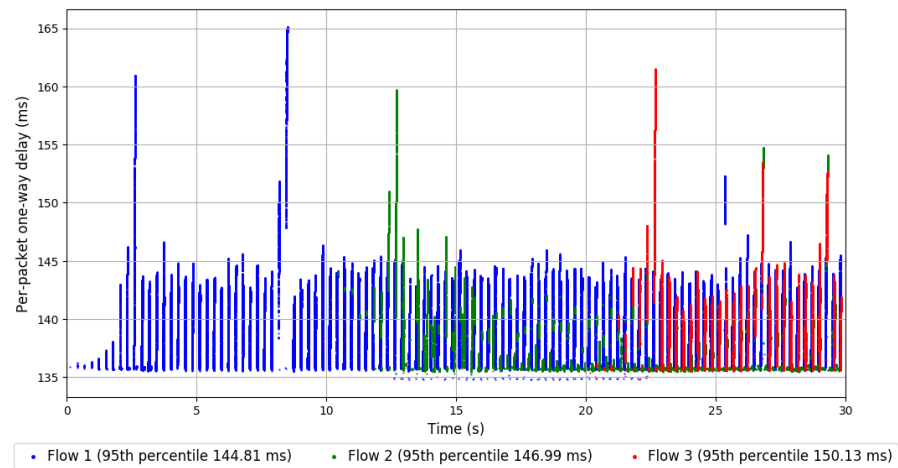
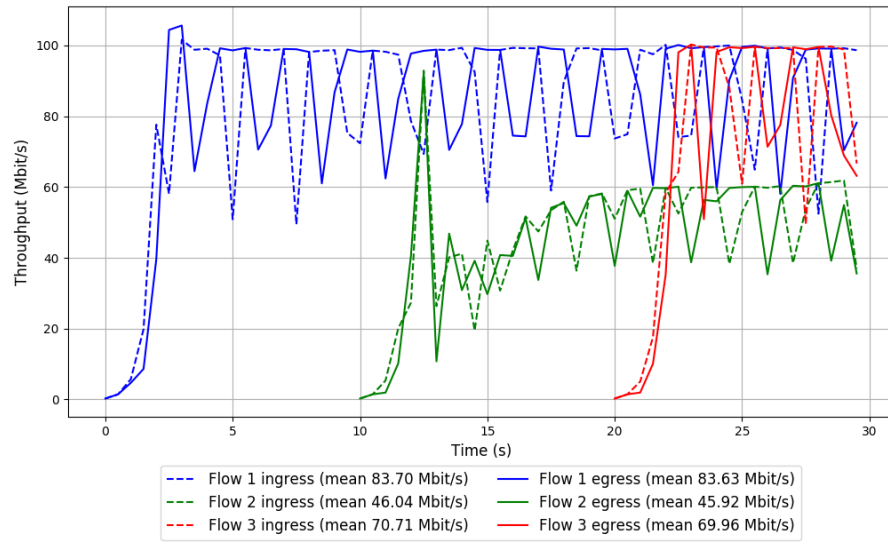
-- Flow 3:

Average throughput: 69.96 Mbit/s

95th percentile per-packet one-way delay: 150.131 ms

Loss rate: 3.76%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-03-07 15:51:45

End at: 2018-03-07 15:52:15

Below is generated by plot.py at 2018-03-07 20:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 114.27 Mbit/s

95th percentile per-packet one-way delay: 144.268 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 83.77 Mbit/s

95th percentile per-packet one-way delay: 144.427 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 45.35 Mbit/s

95th percentile per-packet one-way delay: 141.745 ms

Loss rate: 1.73%

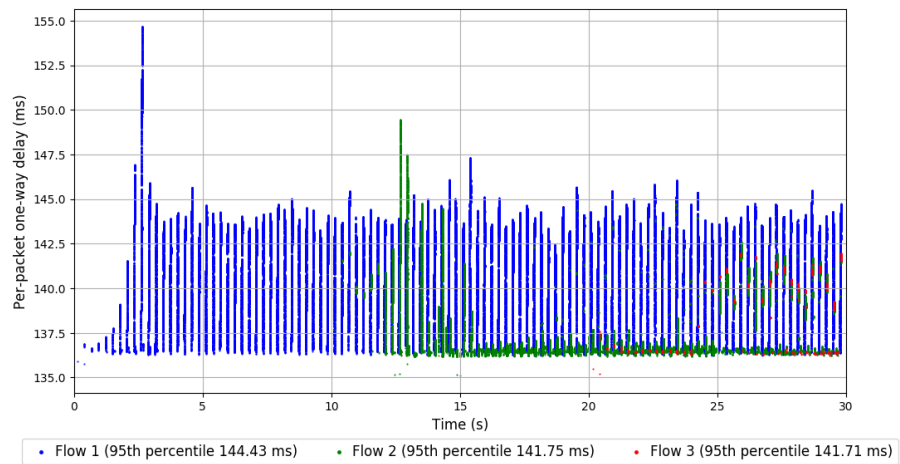
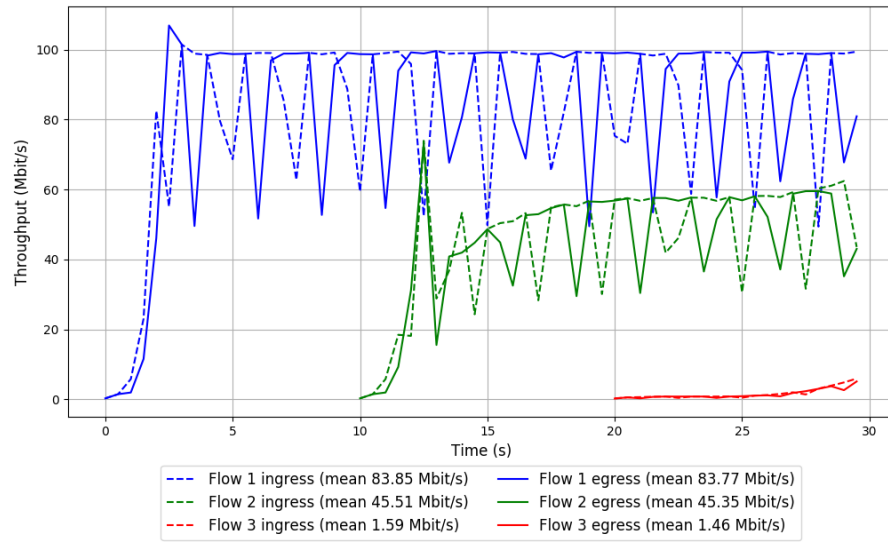
-- Flow 3:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 141.706 ms

Loss rate: 10.51%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-03-07 16:11:50

End at: 2018-03-07 16:12:20

Below is generated by plot.py at 2018-03-07 20:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.37 Mbit/s

95th percentile per-packet one-way delay: 148.345 ms

Loss rate: 1.67%

-- Flow 1:

Average throughput: 55.73 Mbit/s

95th percentile per-packet one-way delay: 148.054 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 40.63 Mbit/s

95th percentile per-packet one-way delay: 148.401 ms

Loss rate: 1.79%

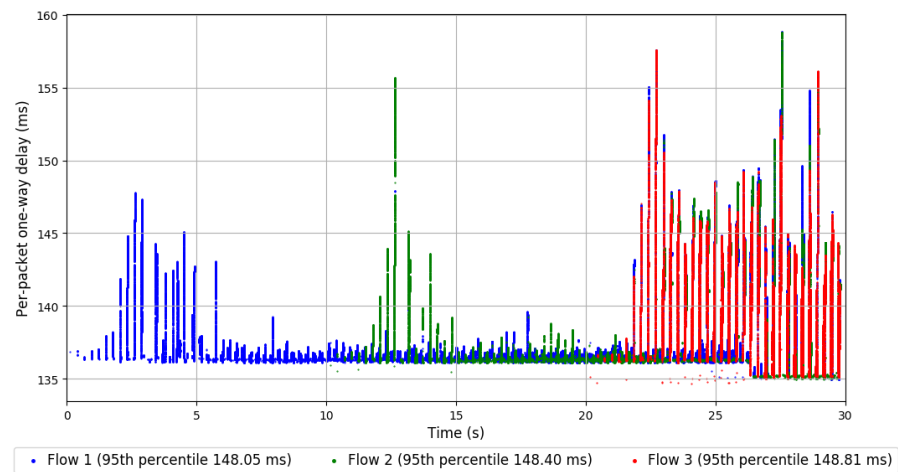
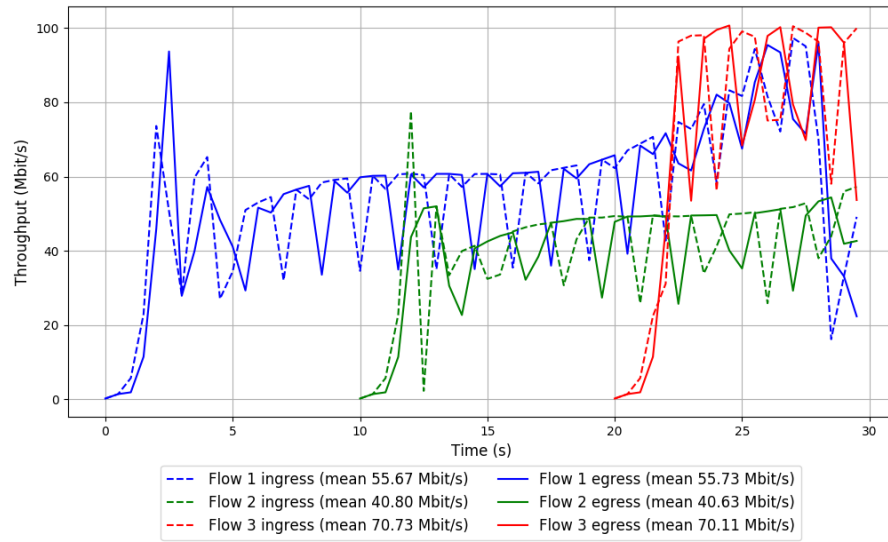
-- Flow 3:

Average throughput: 70.11 Mbit/s

95th percentile per-packet one-way delay: 148.810 ms

Loss rate: 3.59%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-03-07 16:32:01

End at: 2018-03-07 16:32:31

Below is generated by plot.py at 2018-03-07 20:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.76 Mbit/s

95th percentile per-packet one-way delay: 141.638 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 73.12 Mbit/s

95th percentile per-packet one-way delay: 141.646 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 47.37 Mbit/s

95th percentile per-packet one-way delay: 141.593 ms

Loss rate: 1.68%

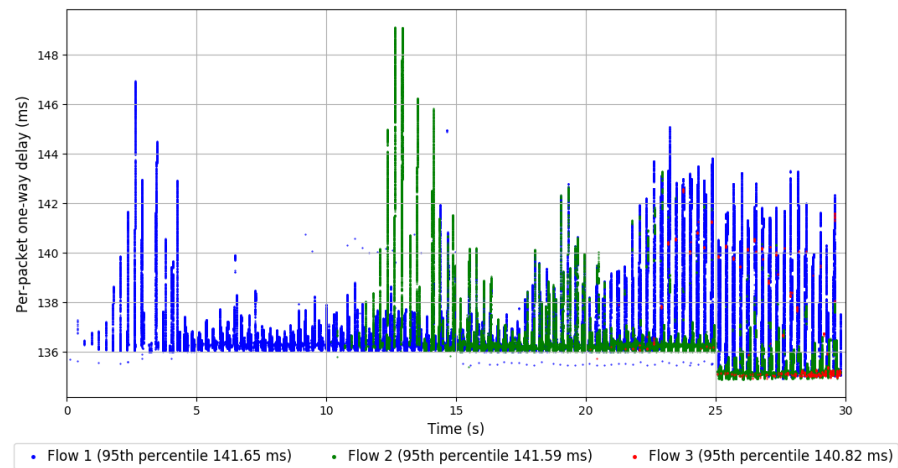
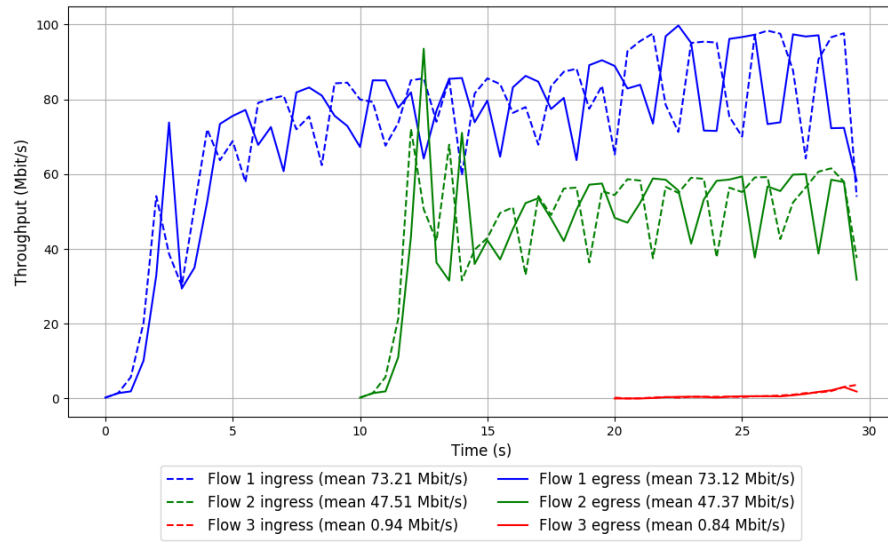
-- Flow 3:

Average throughput: 0.84 Mbit/s

95th percentile per-packet one-way delay: 140.823 ms

Loss rate: 12.68%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-03-07 16:52:34

End at: 2018-03-07 16:53:04

Below is generated by plot.py at 2018-03-07 20:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.54 Mbit/s

95th percentile per-packet one-way delay: 141.727 ms

Loss rate: 1.79%

-- Flow 1:

Average throughput: 66.90 Mbit/s

95th percentile per-packet one-way delay: 142.046 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 13.73 Mbit/s

95th percentile per-packet one-way delay: 140.658 ms

Loss rate: 6.57%

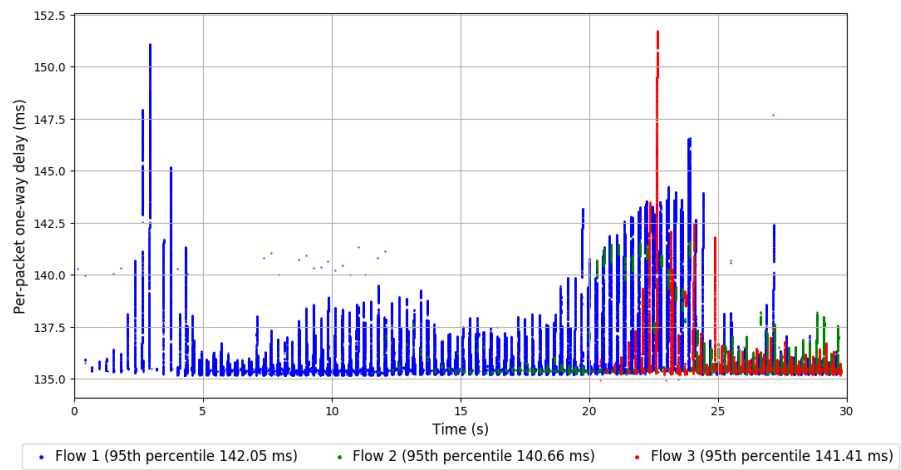
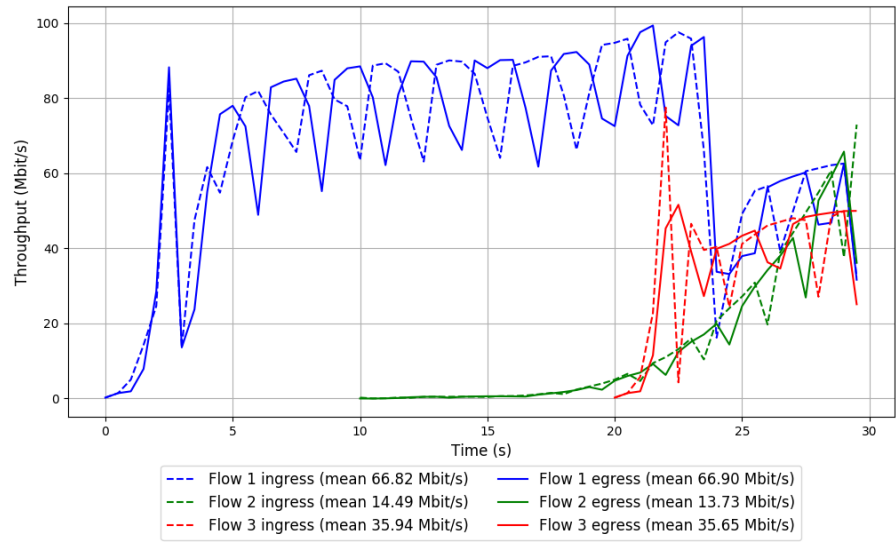
-- Flow 3:

Average throughput: 35.65 Mbit/s

95th percentile per-packet one-way delay: 141.410 ms

Loss rate: 3.52%

Run 10: Report of TCP Cubic — Data Link

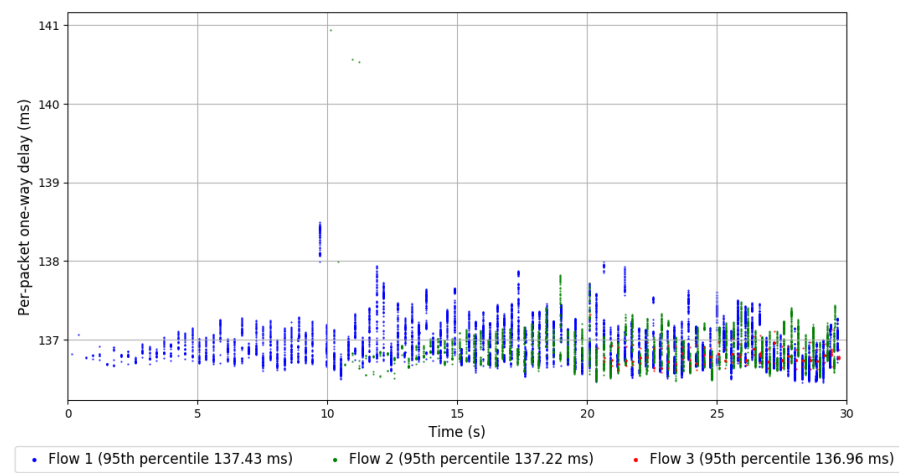
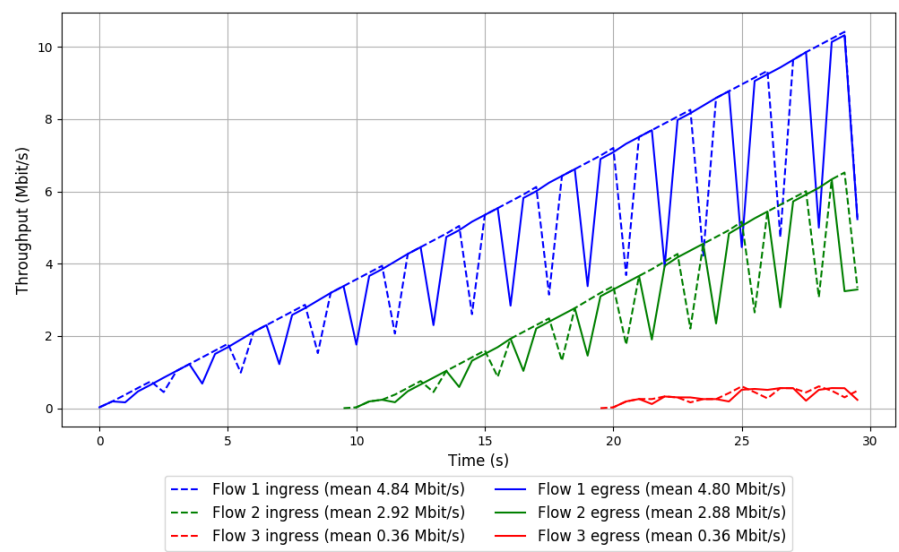


```
Run 1: Statistics of LEDBAT

Start at: 2018-03-07 13:29:54
End at: 2018-03-07 13:30:24

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.80 Mbit/s
95th percentile per-packet one-way delay: 137.389 ms
Loss rate: 2.16%
-- Flow 1:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 137.433 ms
Loss rate: 1.83%
-- Flow 2:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 137.218 ms
Loss rate: 2.89%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 136.956 ms
Loss rate: 3.52%
```


Run 1: Report of LEDBAT — Data Link

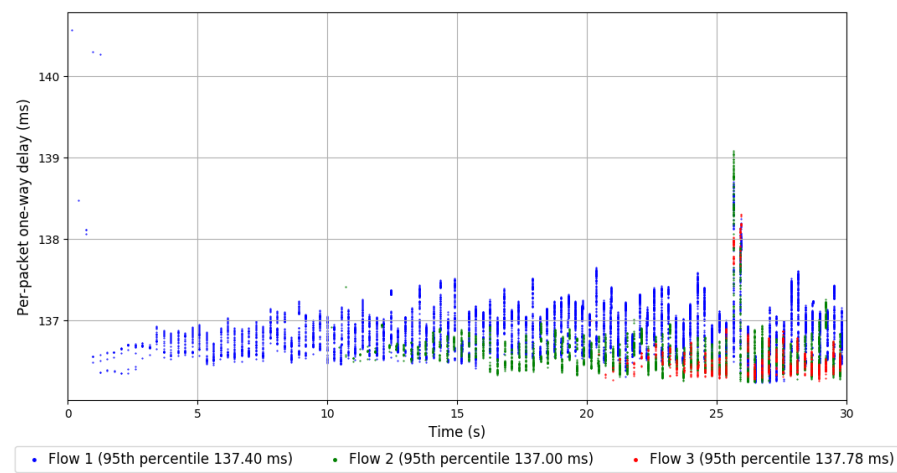
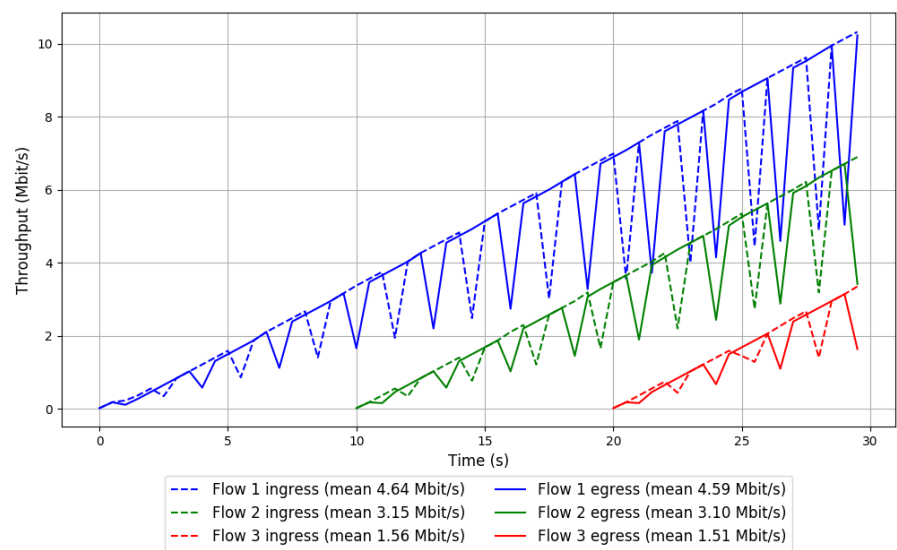


```
Run 2: Statistics of LEDBAT

Start at: 2018-03-07 13:50:26
End at: 2018-03-07 13:50:56

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.13 Mbit/s
95th percentile per-packet one-way delay: 137.389 ms
Loss rate: 2.39%
-- Flow 1:
Average throughput: 4.59 Mbit/s
95th percentile per-packet one-way delay: 137.402 ms
Loss rate: 1.87%
-- Flow 2:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 137.000 ms
Loss rate: 2.78%
-- Flow 3:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 137.783 ms
Loss rate: 5.58%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-03-07 14:11:02

End at: 2018-03-07 14:11:32

Below is generated by plot.py at 2018-03-07 20:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.20 Mbit/s

95th percentile per-packet one-way delay: 137.125 ms

Loss rate: 2.37%

-- Flow 1:

Average throughput: 4.79 Mbit/s

95th percentile per-packet one-way delay: 137.176 ms

Loss rate: 1.83%

-- Flow 2:

Average throughput: 2.95 Mbit/s

95th percentile per-packet one-way delay: 136.976 ms

Loss rate: 2.85%

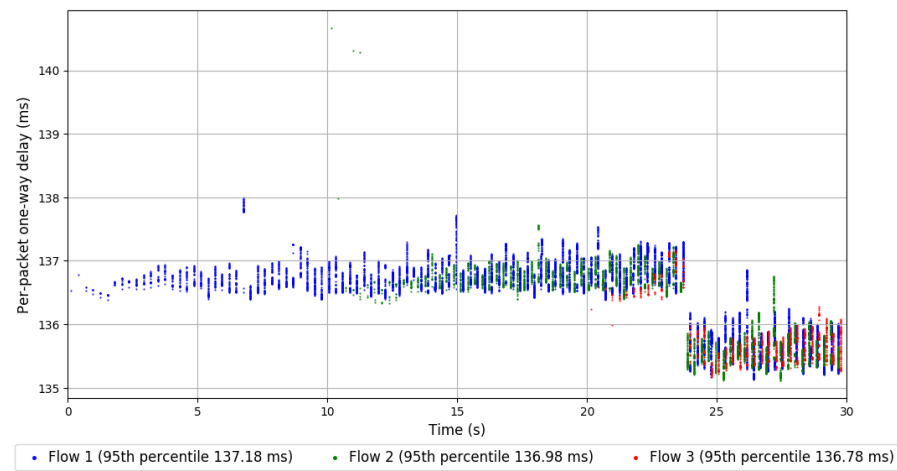
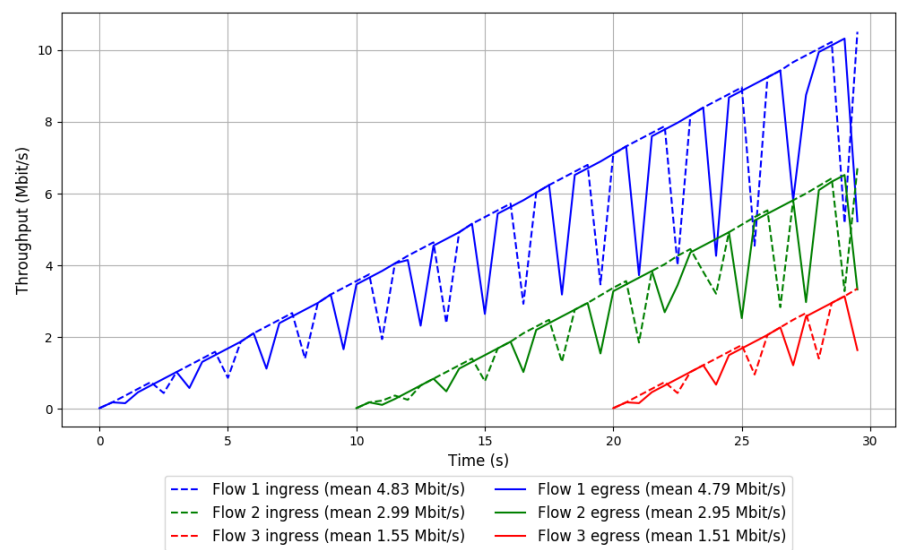
-- Flow 3:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 136.779 ms

Loss rate: 5.58%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-03-07 14:31:26

End at: 2018-03-07 14:31:56

Below is generated by plot.py at 2018-03-07 20:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.85 Mbit/s

95th percentile per-packet one-way delay: 137.169 ms

Loss rate: 2.41%

-- Flow 1:

Average throughput: 4.70 Mbit/s

95th percentile per-packet one-way delay: 137.175 ms

Loss rate: 1.84%

-- Flow 2:

Average throughput: 2.55 Mbit/s

95th percentile per-packet one-way delay: 137.175 ms

Loss rate: 3.04%

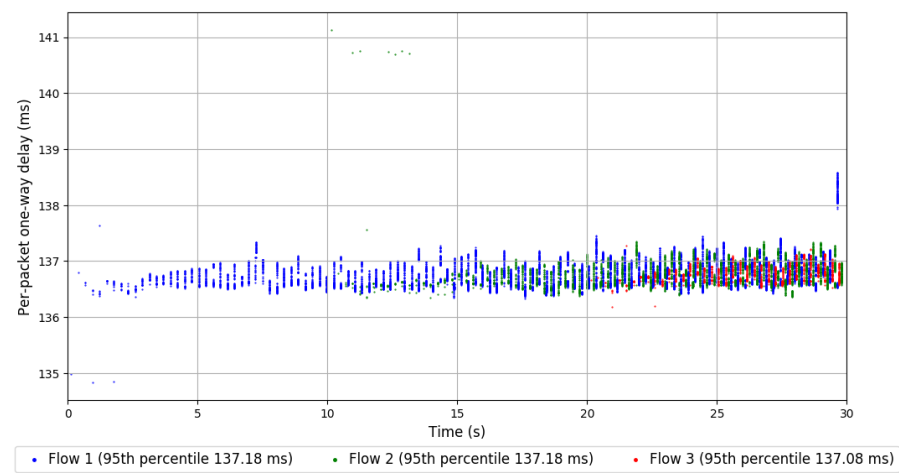
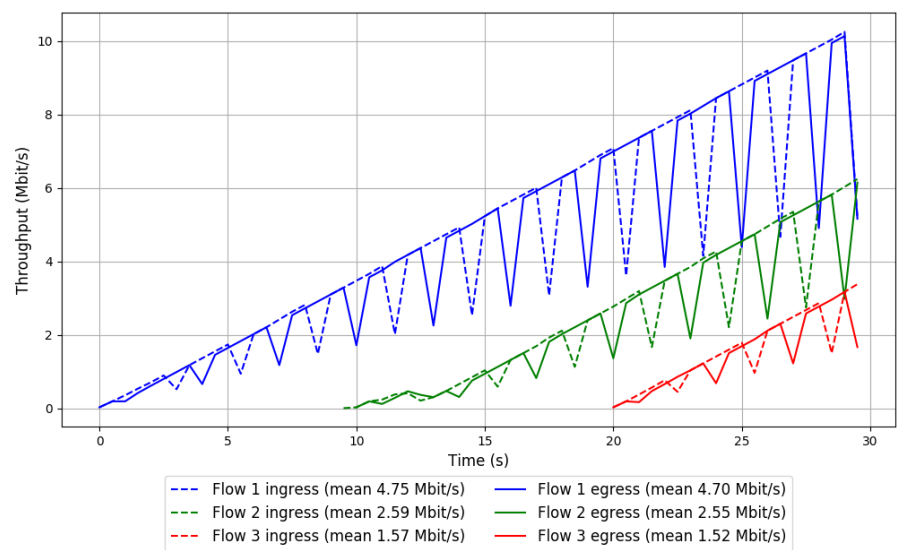
-- Flow 3:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 137.084 ms

Loss rate: 5.55%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-03-07 14:51:33

End at: 2018-03-07 14:52:03

Below is generated by plot.py at 2018-03-07 20:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.87 Mbit/s

95th percentile per-packet one-way delay: 136.665 ms

Loss rate: 2.63%

-- Flow 1:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 136.650 ms

Loss rate: 2.04%

-- Flow 2:

Average throughput: 2.42 Mbit/s

95th percentile per-packet one-way delay: 136.768 ms

Loss rate: 3.10%

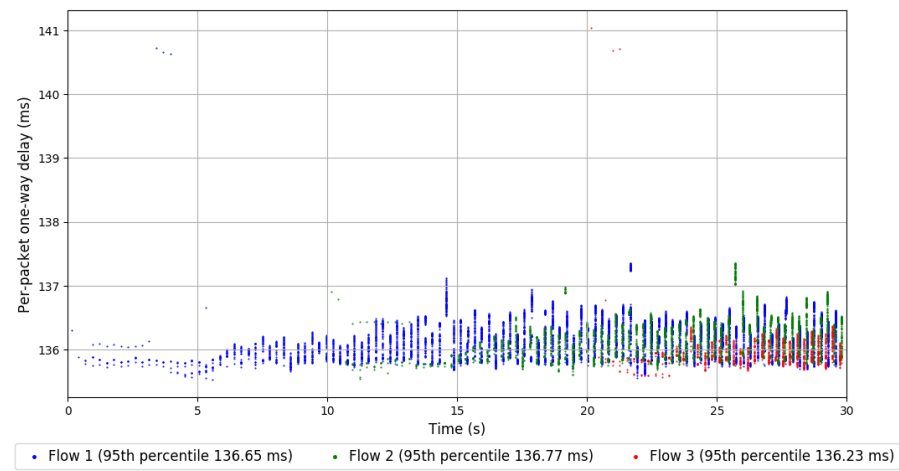
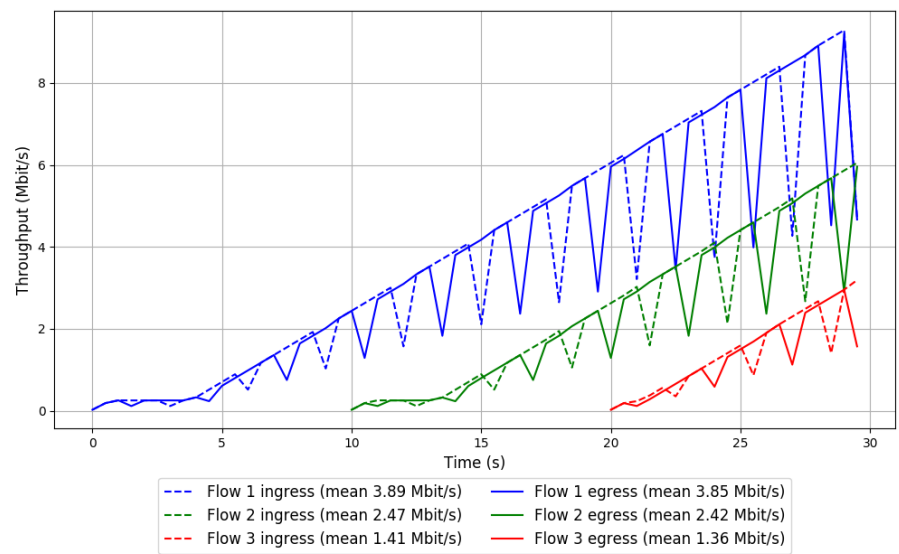
-- Flow 3:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 136.228 ms

Loss rate: 5.84%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-03-07 15:12:13

End at: 2018-03-07 15:12:43

Below is generated by plot.py at 2018-03-07 20:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.61 Mbit/s

95th percentile per-packet one-way delay: 136.268 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 136.273 ms

Loss rate: 1.92%

-- Flow 2:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 136.144 ms

Loss rate: 1.64%

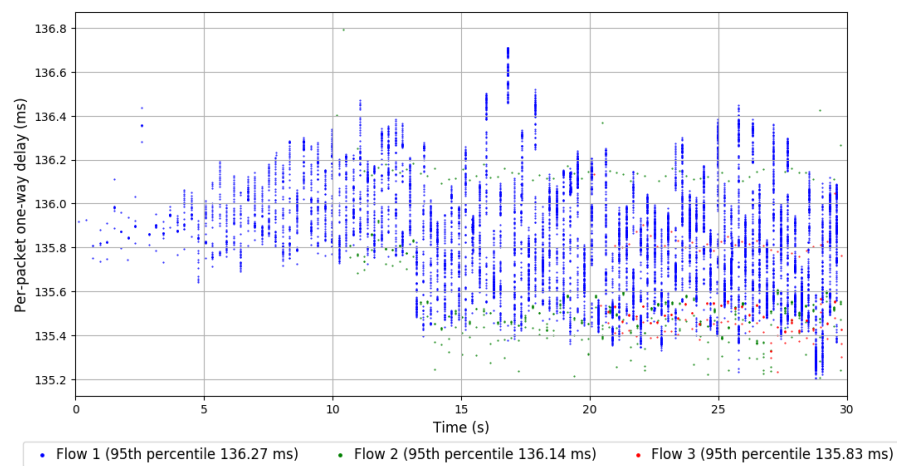
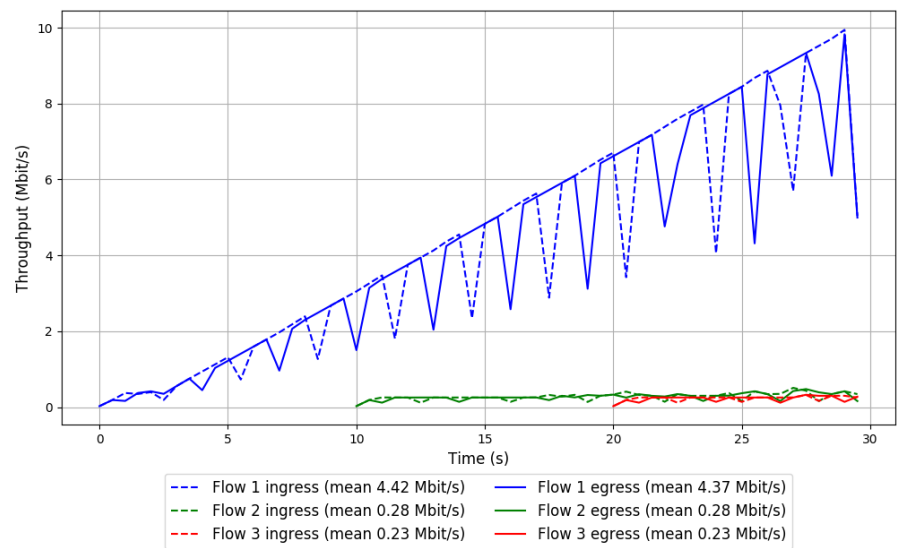
-- Flow 3:

Average throughput: 0.23 Mbit/s

95th percentile per-packet one-way delay: 135.829 ms

Loss rate: 3.00%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-03-07 15:33:01

End at: 2018-03-07 15:33:31

Below is generated by plot.py at 2018-03-07 20:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.48 Mbit/s

95th percentile per-packet one-way delay: 136.454 ms

Loss rate: 2.32%

-- Flow 1:

Average throughput: 4.63 Mbit/s

95th percentile per-packet one-way delay: 136.489 ms

Loss rate: 1.86%

-- Flow 2:

Average throughput: 2.60 Mbit/s

95th percentile per-packet one-way delay: 136.325 ms

Loss rate: 3.02%

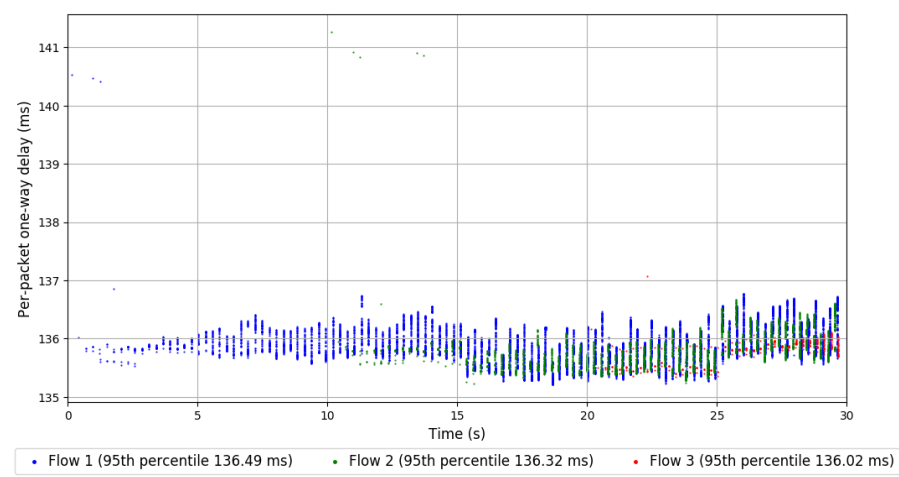
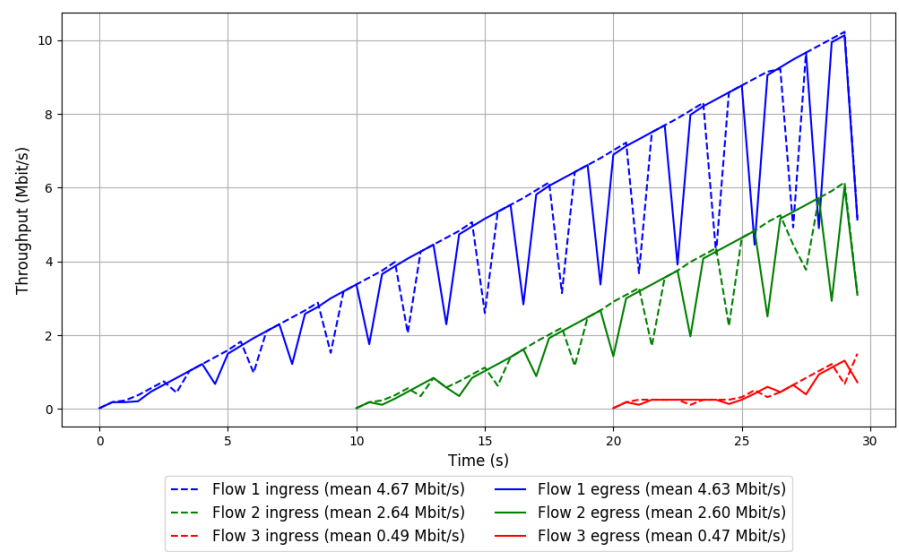
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 136.024 ms

Loss rate: 8.02%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-03-07 15:53:31

End at: 2018-03-07 15:54:01

Below is generated by plot.py at 2018-03-07 20:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.03 Mbit/s

95th percentile per-packet one-way delay: 137.442 ms

Loss rate: 2.40%

-- Flow 1:

Average throughput: 4.62 Mbit/s

95th percentile per-packet one-way delay: 137.467 ms

Loss rate: 1.86%

-- Flow 2:

Average throughput: 2.96 Mbit/s

95th percentile per-packet one-way delay: 137.451 ms

Loss rate: 2.85%

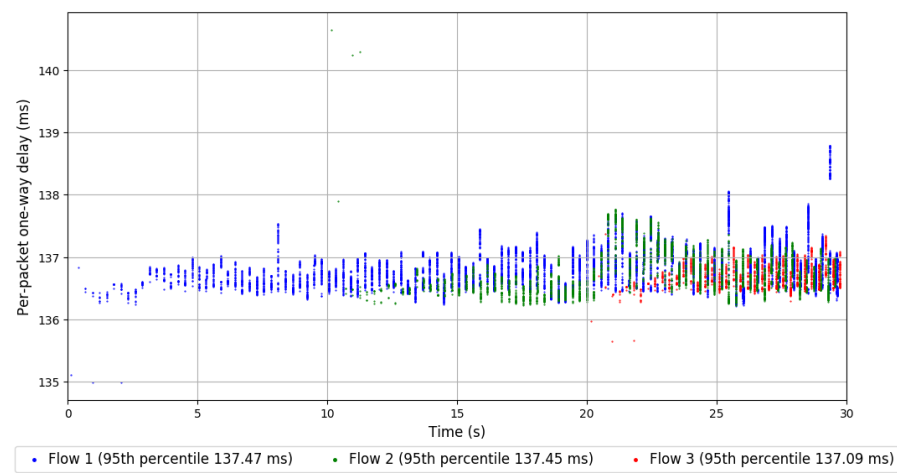
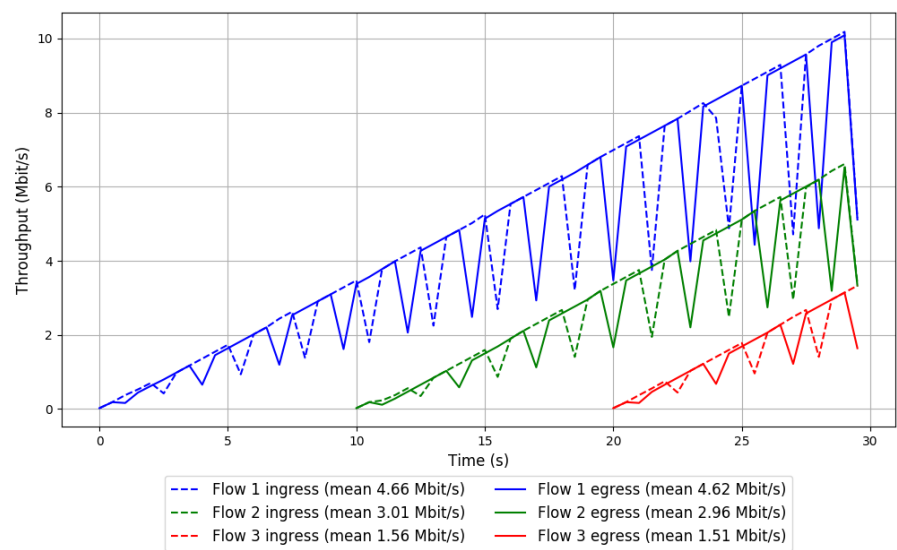
-- Flow 3:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 137.094 ms

Loss rate: 5.51%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-03-07 16:13:35

End at: 2018-03-07 16:14:05

Below is generated by plot.py at 2018-03-07 20:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.49 Mbit/s

95th percentile per-packet one-way delay: 137.045 ms

Loss rate: 2.27%

-- Flow 1:

Average throughput: 4.09 Mbit/s

95th percentile per-packet one-way delay: 137.129 ms

Loss rate: 1.60%

-- Flow 2:

Average throughput: 2.98 Mbit/s

95th percentile per-packet one-way delay: 136.855 ms

Loss rate: 2.83%

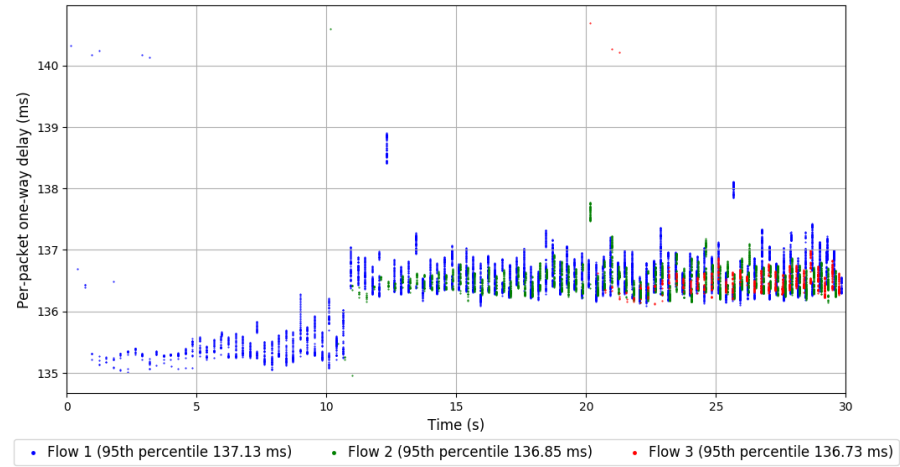
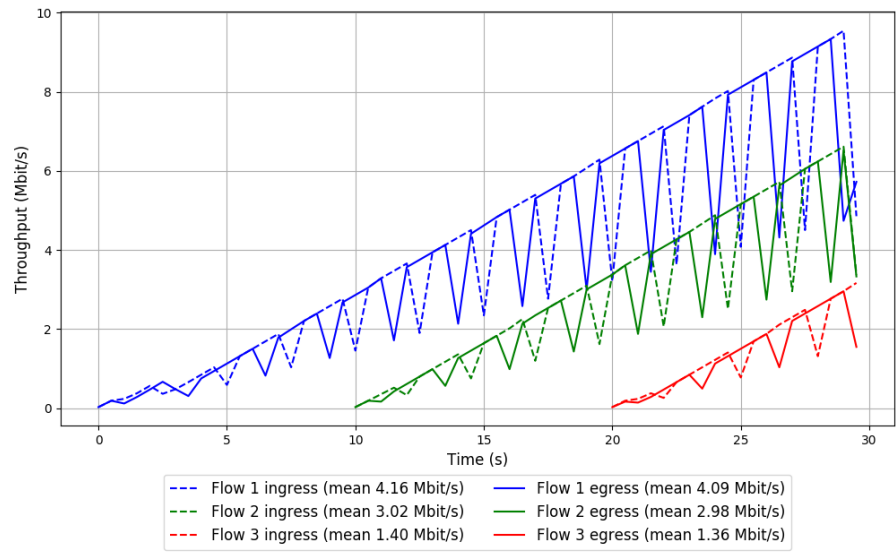
-- Flow 3:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 136.732 ms

Loss rate: 5.85%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2018-03-07 16:33:47

End at: 2018-03-07 16:34:17

Below is generated by plot.py at 2018-03-07 20:33:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.99 Mbit/s

95th percentile per-packet one-way delay: 137.151 ms

Loss rate: 2.39%

-- Flow 1:

Average throughput: 4.77 Mbit/s

95th percentile per-packet one-way delay: 137.203 ms

Loss rate: 1.84%

-- Flow 2:

Average throughput: 2.66 Mbit/s

95th percentile per-packet one-way delay: 136.917 ms

Loss rate: 3.00%

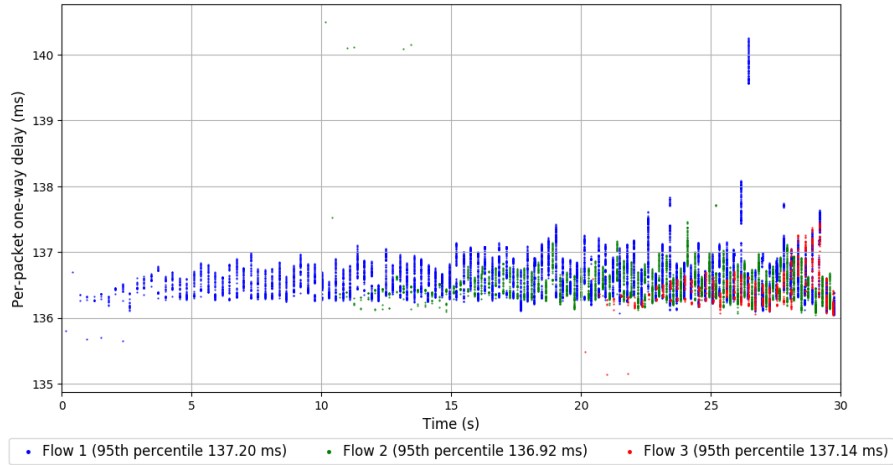
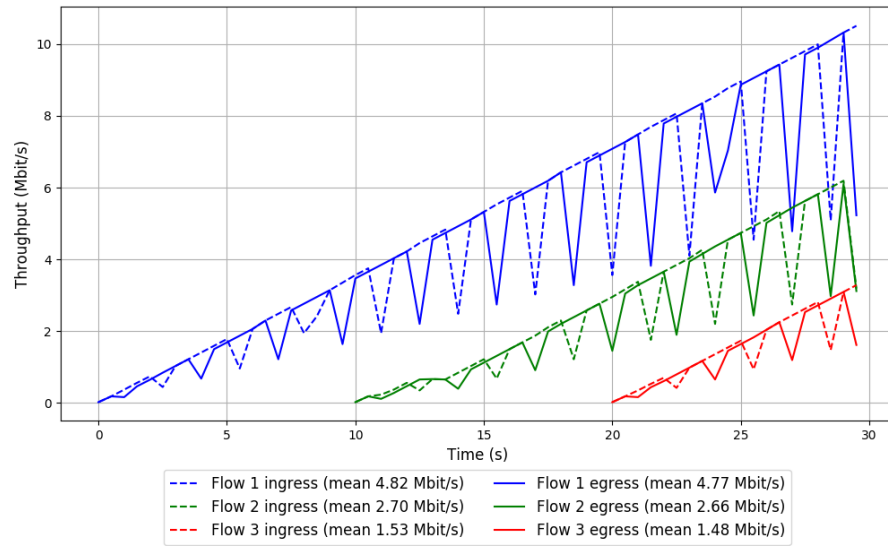
-- Flow 3:

Average throughput: 1.48 Mbit/s

95th percentile per-packet one-way delay: 137.139 ms

Loss rate: 5.55%

Run 10: Report of LEDBAT — Data Link

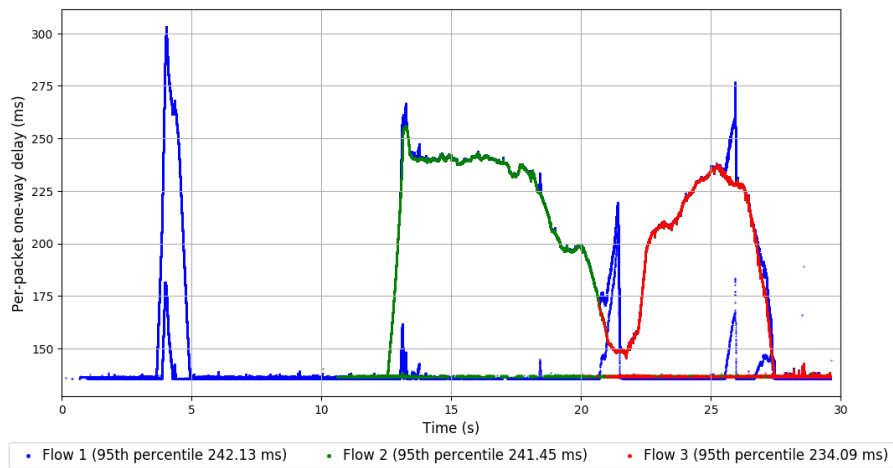
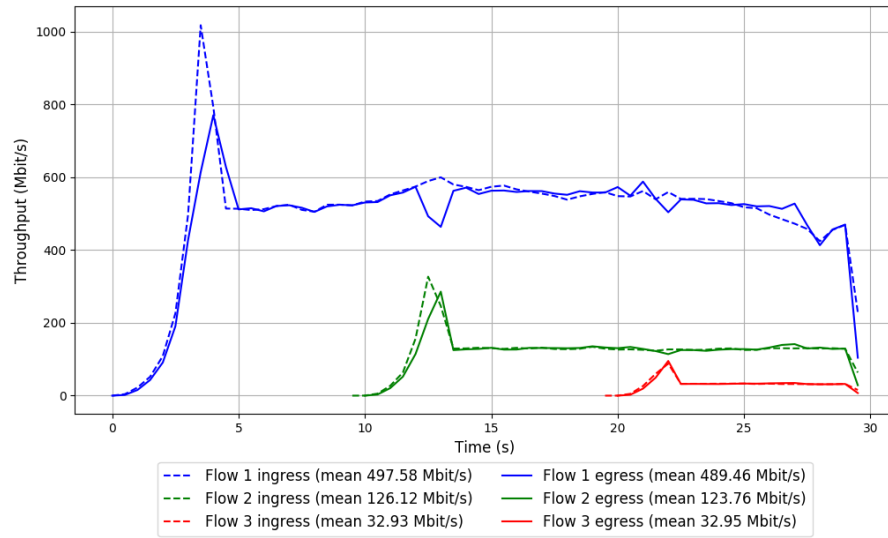


```
Run 1: Statistics of PCC

Start at: 2018-03-07 13:47:24
End at: 2018-03-07 13:47:54

# Below is generated by plot.py at 2018-03-07 20:41:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 582.16 Mbit/s
95th percentile per-packet one-way delay: 241.940 ms
Loss rate: 2.63%
-- Flow 1:
Average throughput: 489.46 Mbit/s
95th percentile per-packet one-way delay: 242.127 ms
Loss rate: 2.53%
-- Flow 2:
Average throughput: 123.76 Mbit/s
95th percentile per-packet one-way delay: 241.454 ms
Loss rate: 3.24%
-- Flow 3:
Average throughput: 32.95 Mbit/s
95th percentile per-packet one-way delay: 234.095 ms
Loss rate: 2.65%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2018-03-07 14:07:59

End at: 2018-03-07 14:08:29

Below is generated by plot.py at 2018-03-07 20:41:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 572.51 Mbit/s

95th percentile per-packet one-way delay: 247.246 ms

Loss rate: 4.29%

-- Flow 1:

Average throughput: 493.69 Mbit/s

95th percentile per-packet one-way delay: 247.952 ms

Loss rate: 3.80%

-- Flow 2:

Average throughput: 62.68 Mbit/s

95th percentile per-packet one-way delay: 242.000 ms

Loss rate: 4.21%

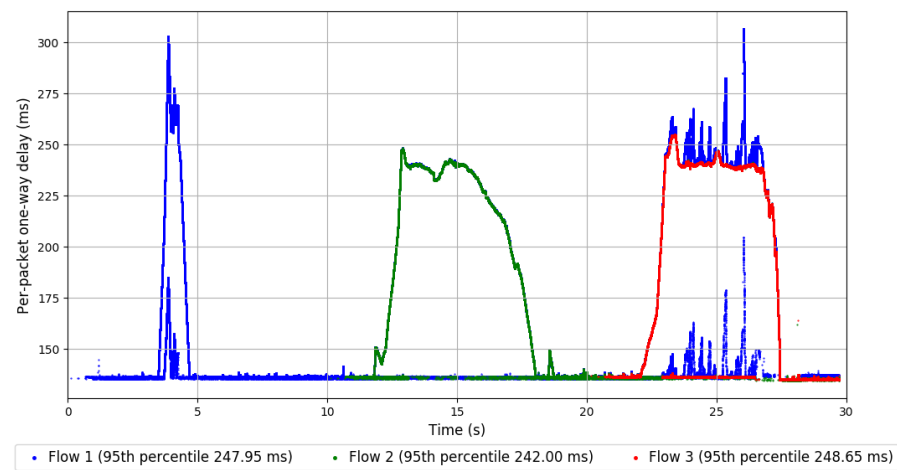
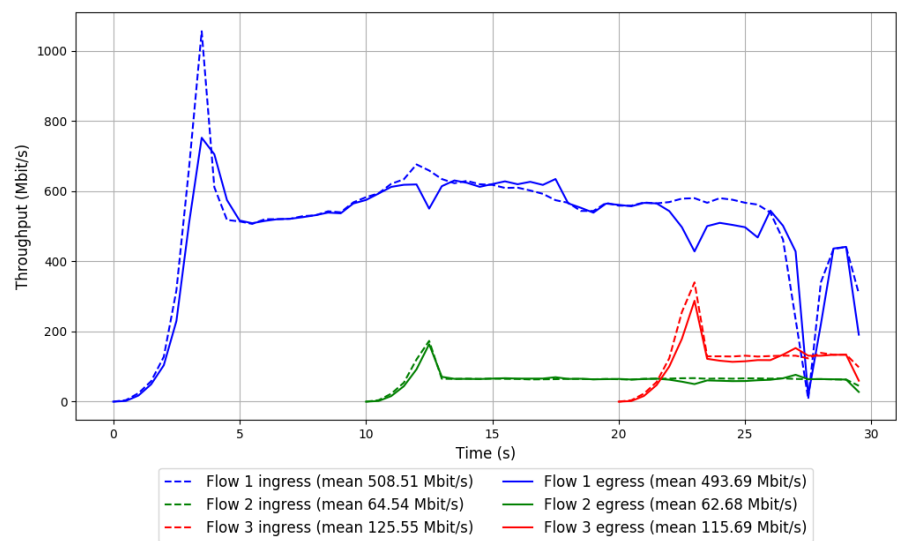
-- Flow 3:

Average throughput: 115.69 Mbit/s

95th percentile per-packet one-way delay: 248.649 ms

Loss rate: 10.40%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-03-07 14:28:24

End at: 2018-03-07 14:28:54

Below is generated by plot.py at 2018-03-07 20:41:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 572.20 Mbit/s

95th percentile per-packet one-way delay: 250.589 ms

Loss rate: 2.88%

-- Flow 1:

Average throughput: 528.11 Mbit/s

95th percentile per-packet one-way delay: 250.771 ms

Loss rate: 2.89%

-- Flow 2:

Average throughput: 64.45 Mbit/s

95th percentile per-packet one-way delay: 249.225 ms

Loss rate: 2.62%

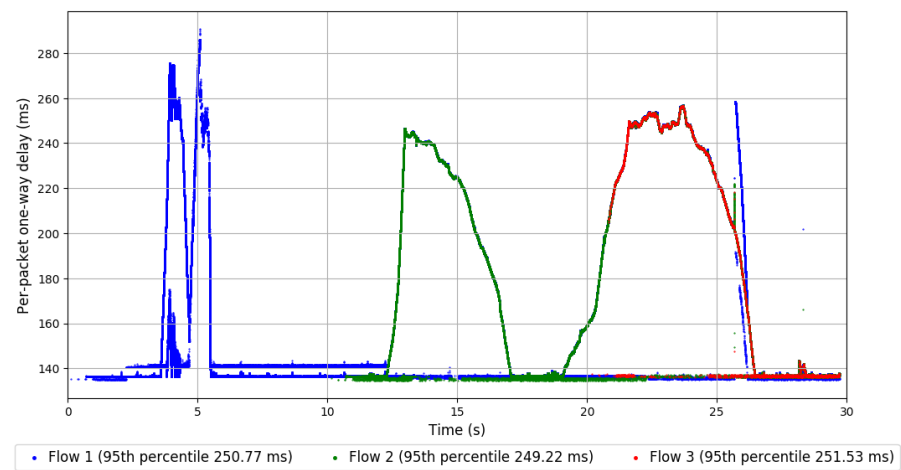
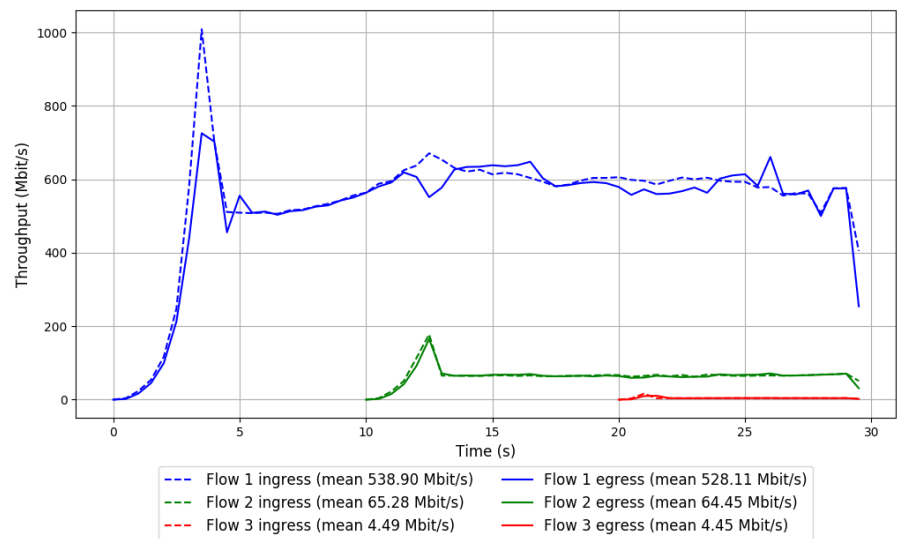
-- Flow 3:

Average throughput: 4.45 Mbit/s

95th percentile per-packet one-way delay: 251.525 ms

Loss rate: 3.71%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-03-07 14:48:29

End at: 2018-03-07 14:48:59

Below is generated by plot.py at 2018-03-07 20:41:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 576.21 Mbit/s

95th percentile per-packet one-way delay: 244.665 ms

Loss rate: 2.69%

-- Flow 1:

Average throughput: 522.99 Mbit/s

95th percentile per-packet one-way delay: 244.858 ms

Loss rate: 2.71%

-- Flow 2:

Average throughput: 64.76 Mbit/s

95th percentile per-packet one-way delay: 243.498 ms

Loss rate: 2.07%

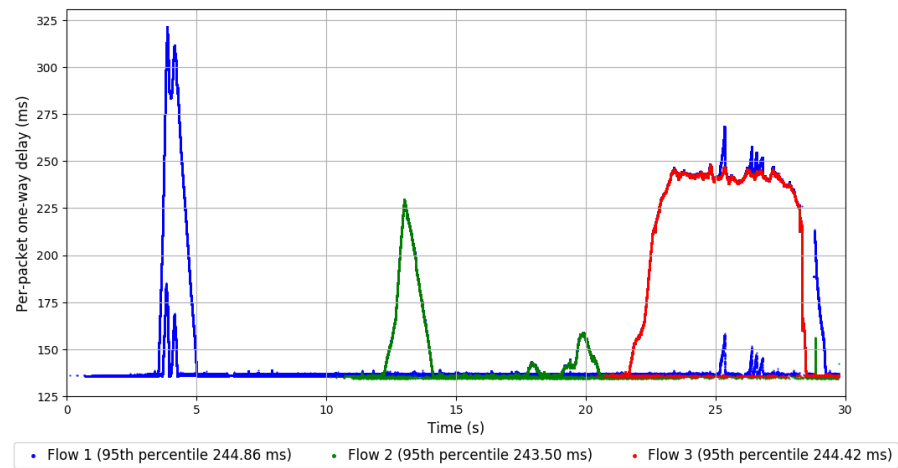
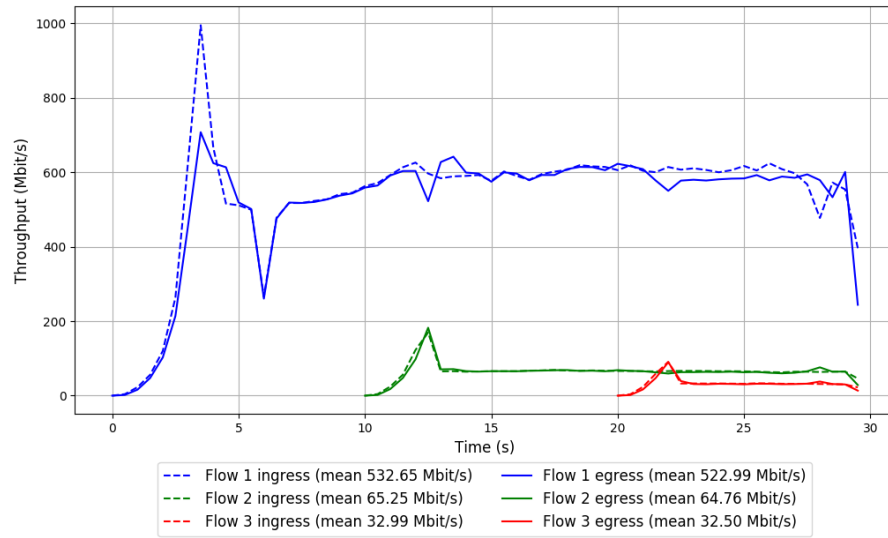
-- Flow 3:

Average throughput: 32.50 Mbit/s

95th percentile per-packet one-way delay: 244.419 ms

Loss rate: 4.23%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-03-07 15:09:10

End at: 2018-03-07 15:09:40

Below is generated by plot.py at 2018-03-07 20:42:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 573.61 Mbit/s

95th percentile per-packet one-way delay: 250.794 ms

Loss rate: 4.37%

-- Flow 1:

Average throughput: 482.06 Mbit/s

95th percentile per-packet one-way delay: 254.317 ms

Loss rate: 4.23%

-- Flow 2:

Average throughput: 123.06 Mbit/s

95th percentile per-packet one-way delay: 247.649 ms

Loss rate: 4.88%

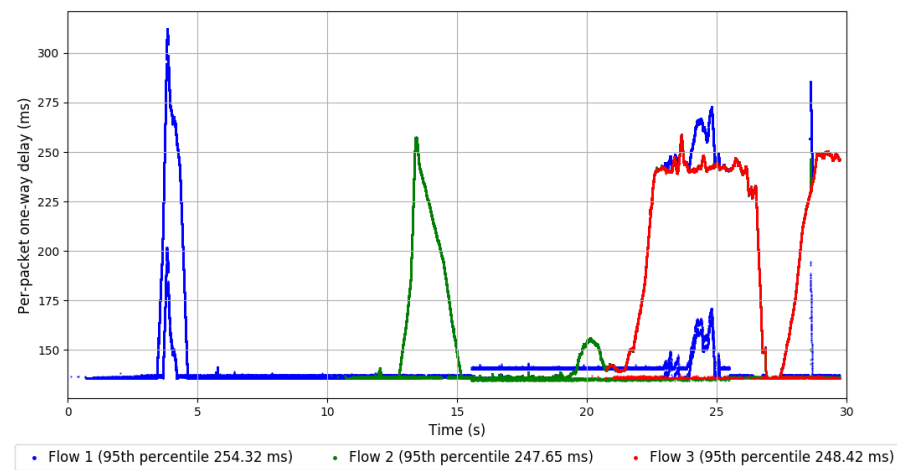
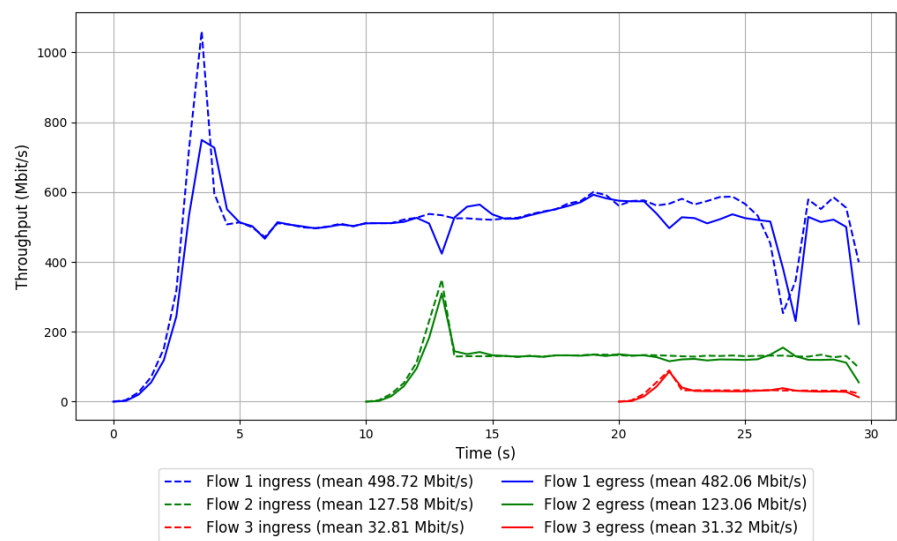
-- Flow 3:

Average throughput: 31.32 Mbit/s

95th percentile per-packet one-way delay: 248.418 ms

Loss rate: 7.26%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-03-07 15:30:00

End at: 2018-03-07 15:30:30

Below is generated by plot.py at 2018-03-07 20:42:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 568.97 Mbit/s

95th percentile per-packet one-way delay: 249.344 ms

Loss rate: 4.26%

-- Flow 1:

Average throughput: 467.48 Mbit/s

95th percentile per-packet one-way delay: 249.857 ms

Loss rate: 3.97%

-- Flow 2:

Average throughput: 123.91 Mbit/s

95th percentile per-packet one-way delay: 248.562 ms

Loss rate: 4.86%

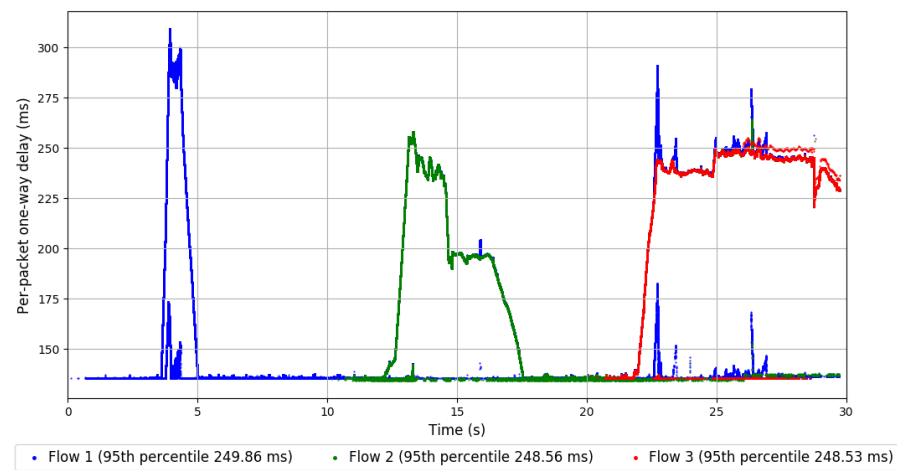
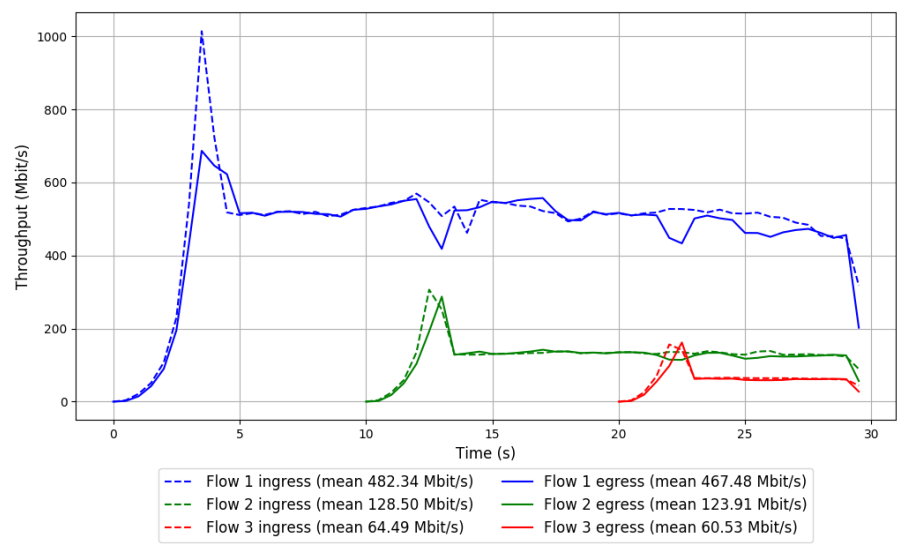
-- Flow 3:

Average throughput: 60.53 Mbit/s

95th percentile per-packet one-way delay: 248.529 ms

Loss rate: 8.67%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-03-07 15:50:31

End at: 2018-03-07 15:51:01

Below is generated by plot.py at 2018-03-07 20:42:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 561.57 Mbit/s

95th percentile per-packet one-way delay: 250.479 ms

Loss rate: 3.26%

-- Flow 1:

Average throughput: 475.15 Mbit/s

95th percentile per-packet one-way delay: 250.805 ms

Loss rate: 3.10%

-- Flow 2:

Average throughput: 122.76 Mbit/s

95th percentile per-packet one-way delay: 248.935 ms

Loss rate: 4.06%

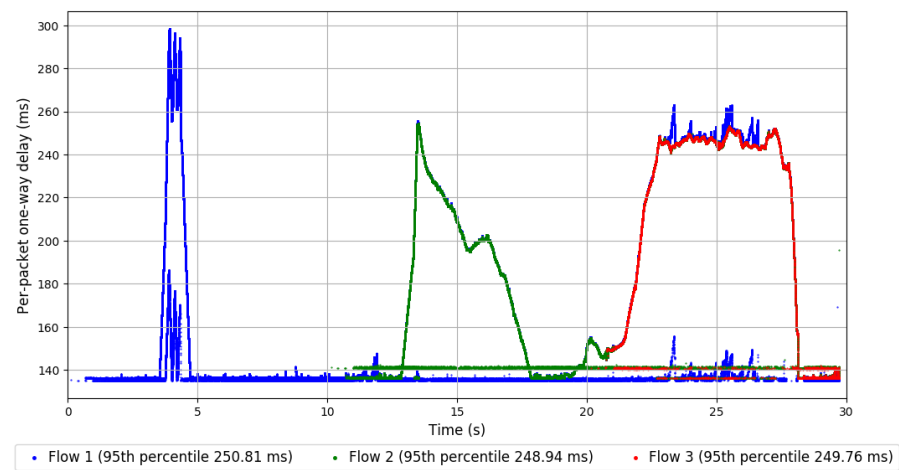
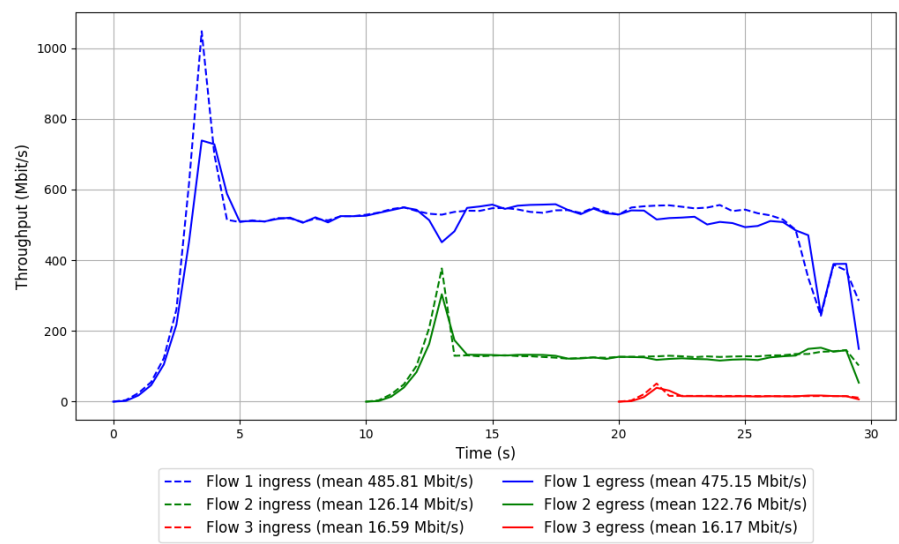
-- Flow 3:

Average throughput: 16.17 Mbit/s

95th percentile per-packet one-way delay: 249.765 ms

Loss rate: 5.35%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-03-07 16:10:35

End at: 2018-03-07 16:11:05

Below is generated by plot.py at 2018-03-07 20:43:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 592.14 Mbit/s

95th percentile per-packet one-way delay: 245.064 ms

Loss rate: 3.26%

-- Flow 1:

Average throughput: 549.07 Mbit/s

95th percentile per-packet one-way delay: 245.763 ms

Loss rate: 3.28%

-- Flow 2:

Average throughput: 62.94 Mbit/s

95th percentile per-packet one-way delay: 242.761 ms

Loss rate: 3.00%

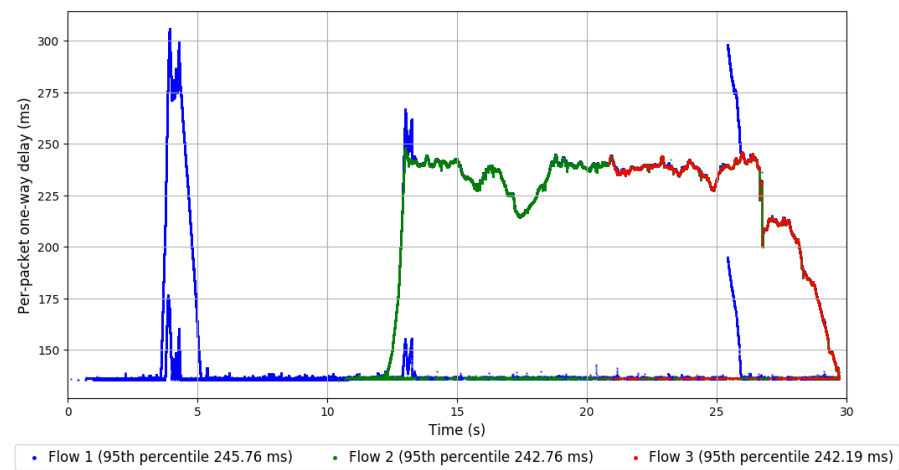
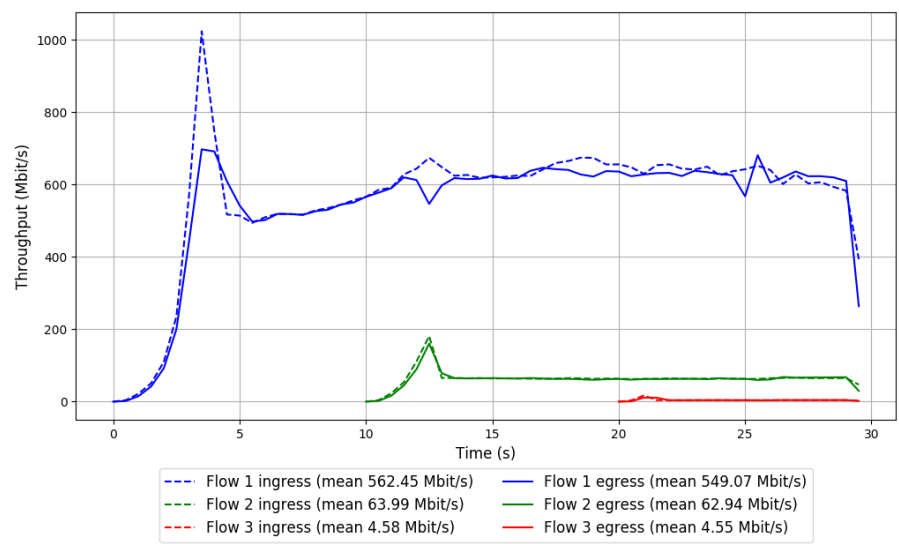
-- Flow 3:

Average throughput: 4.55 Mbit/s

95th percentile per-packet one-way delay: 242.185 ms

Loss rate: 3.47%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-03-07 16:30:47

End at: 2018-03-07 16:31:17

Below is generated by plot.py at 2018-03-07 20:51:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 560.30 Mbit/s

95th percentile per-packet one-way delay: 255.429 ms

Loss rate: 4.47%

-- Flow 1:

Average throughput: 436.59 Mbit/s

95th percentile per-packet one-way delay: 261.360 ms

Loss rate: 4.12%

-- Flow 2:

Average throughput: 131.48 Mbit/s

95th percentile per-packet one-way delay: 240.771 ms

Loss rate: 4.17%

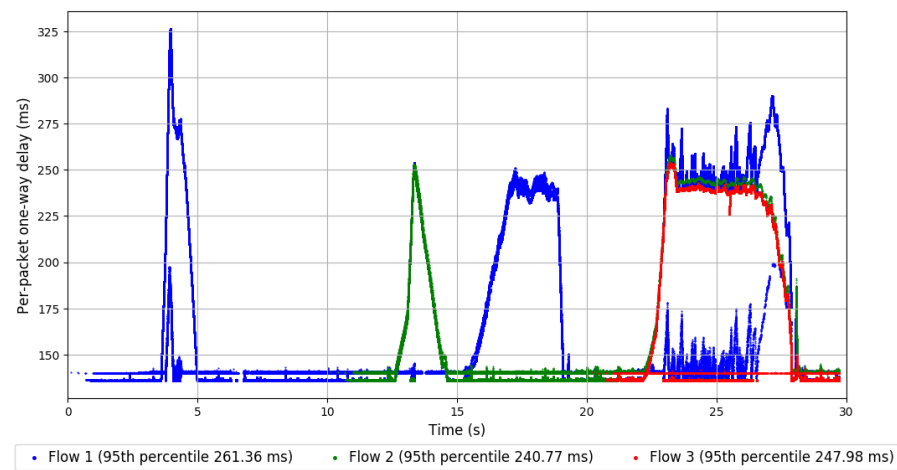
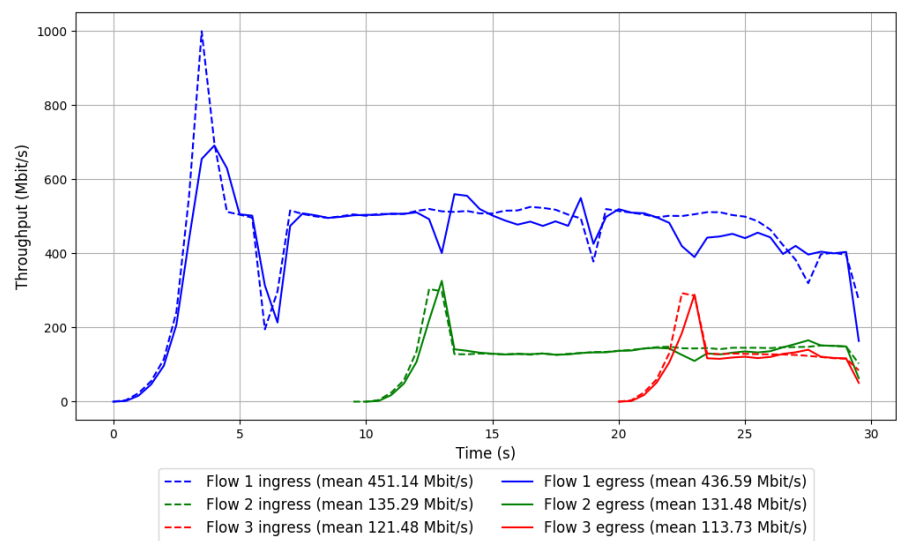
-- Flow 3:

Average throughput: 113.73 Mbit/s

95th percentile per-packet one-way delay: 247.981 ms

Loss rate: 9.03%

Run 9: Report of PCC — Data Link

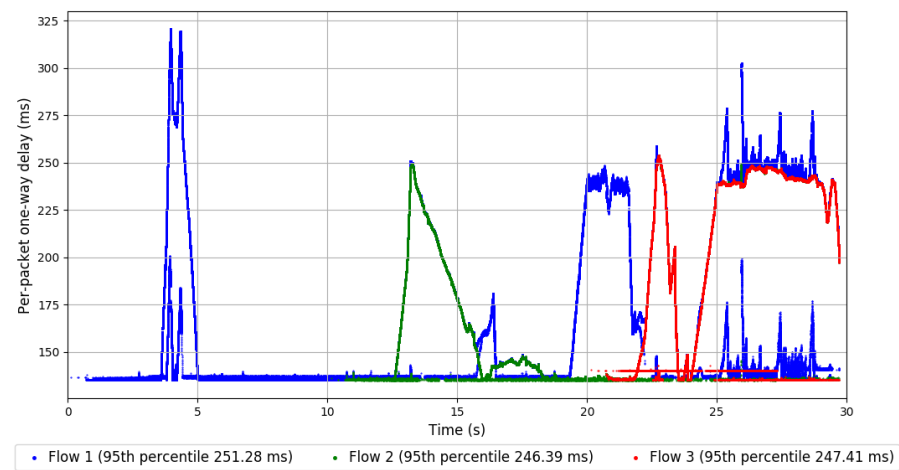
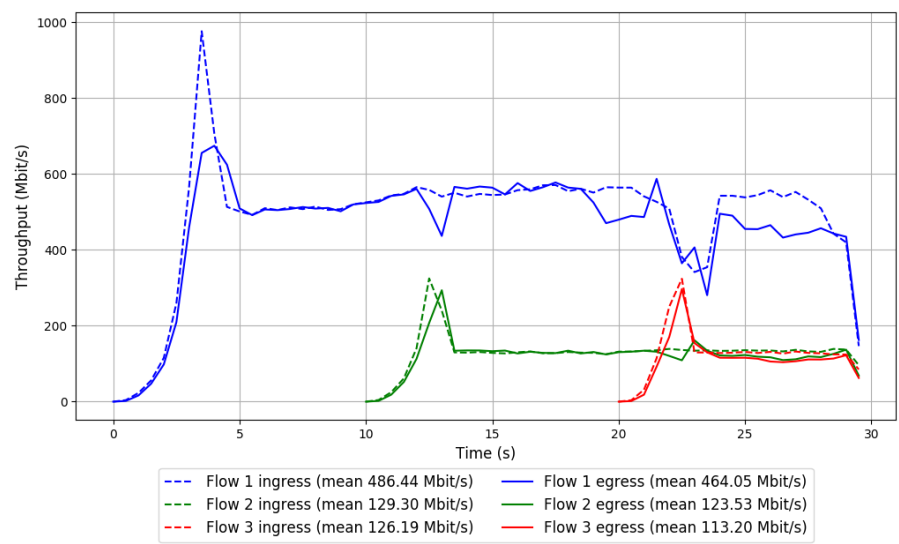


```
Run 10: Statistics of PCC

Start at: 2018-03-07 16:51:19
End at: 2018-03-07 16:51:49

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 582.33 Mbit/s
95th percentile per-packet one-way delay: 249.515 ms
Loss rate: 5.87%
-- Flow 1:
Average throughput: 464.05 Mbit/s
95th percentile per-packet one-way delay: 251.281 ms
Loss rate: 5.29%
-- Flow 2:
Average throughput: 123.53 Mbit/s
95th percentile per-packet one-way delay: 246.386 ms
Loss rate: 5.78%
-- Flow 3:
Average throughput: 113.20 Mbit/s
95th percentile per-packet one-way delay: 247.412 ms
Loss rate: 12.82%
```

Run 10: Report of PCC — Data Link

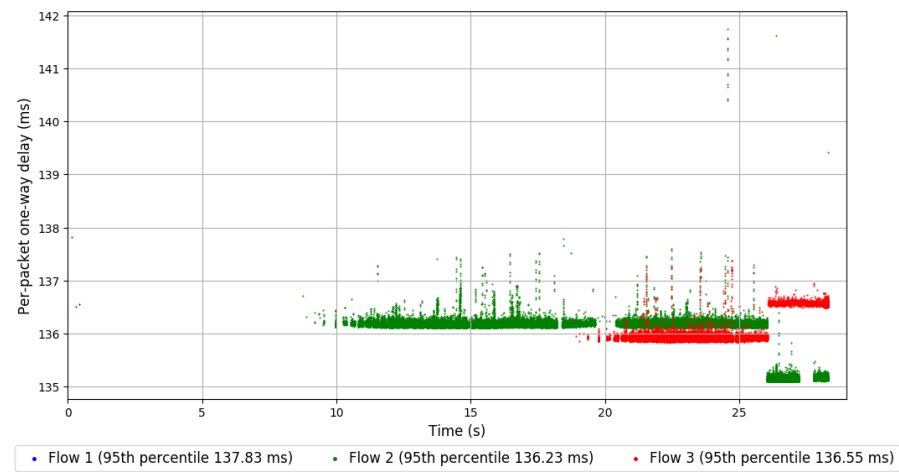
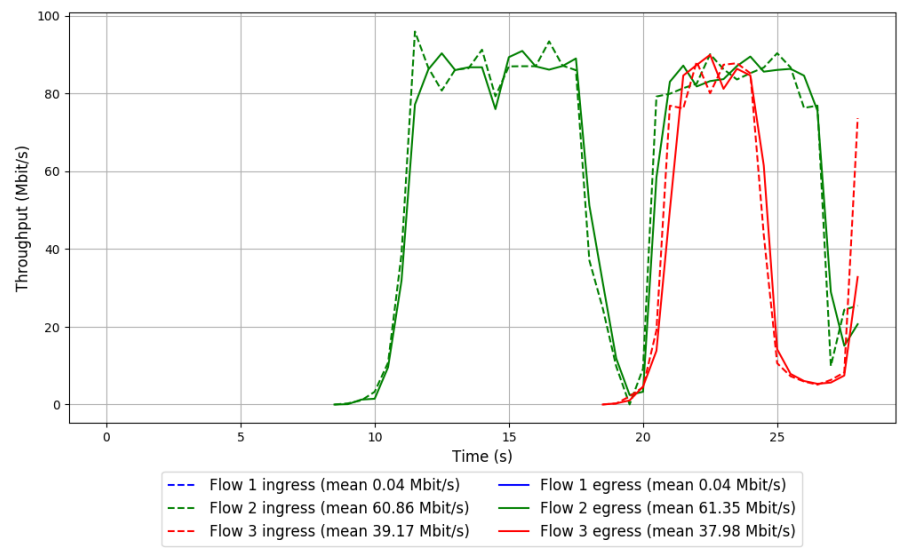


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-07 13:40:08
End at: 2018-03-07 13:40:38

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.48 Mbit/s
95th percentile per-packet one-way delay: 136.240 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 137.828 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 61.35 Mbit/s
95th percentile per-packet one-way delay: 136.233 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 37.98 Mbit/s
95th percentile per-packet one-way delay: 136.553 ms
Loss rate: 5.68%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-03-07 14:00:52

End at: 2018-03-07 14:01:22

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.14 Mbit/s

95th percentile per-packet one-way delay: 136.338 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 59.23 Mbit/s

95th percentile per-packet one-way delay: 136.359 ms

Loss rate: 1.14%

-- Flow 2:

Average throughput: 60.18 Mbit/s

95th percentile per-packet one-way delay: 136.026 ms

Loss rate: 0.75%

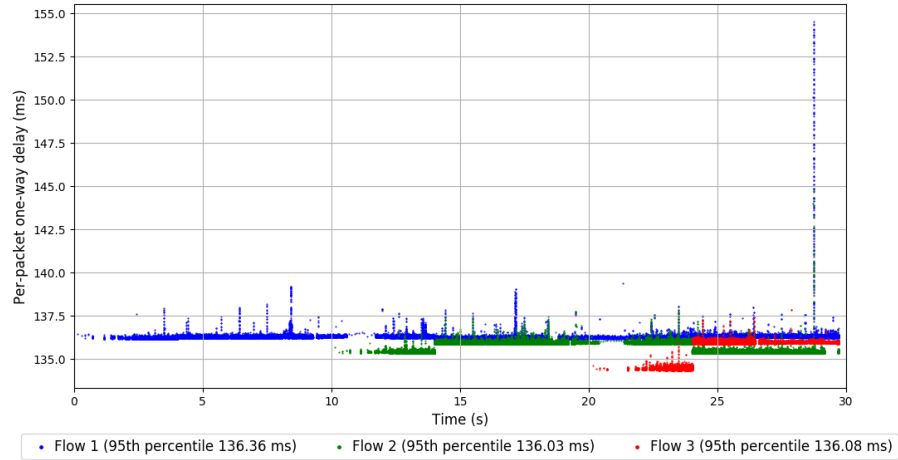
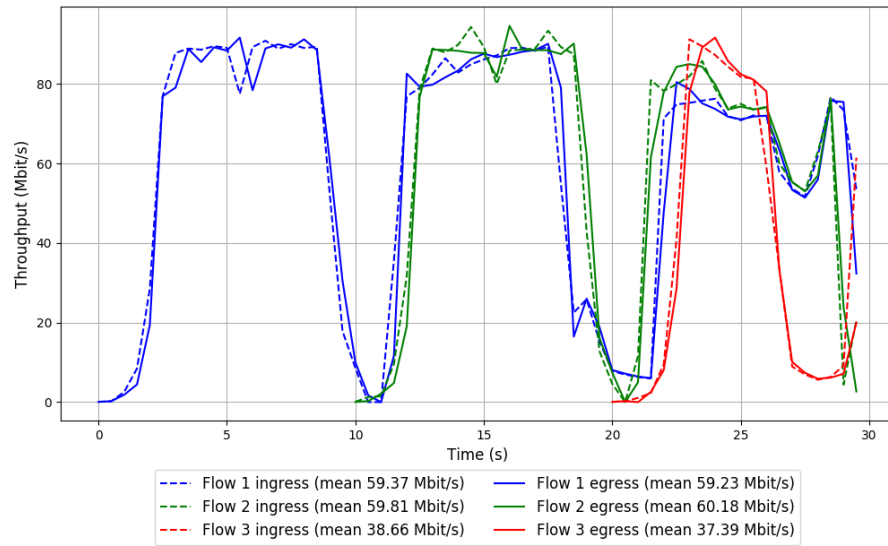
-- Flow 3:

Average throughput: 37.39 Mbit/s

95th percentile per-packet one-way delay: 136.083 ms

Loss rate: 5.93%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-03-07 14:21:35

End at: 2018-03-07 14:22:05

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.75 Mbit/s

95th percentile per-packet one-way delay: 136.403 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 61.08 Mbit/s

95th percentile per-packet one-way delay: 135.637 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 61.12 Mbit/s

95th percentile per-packet one-way delay: 135.512 ms

Loss rate: 0.38%

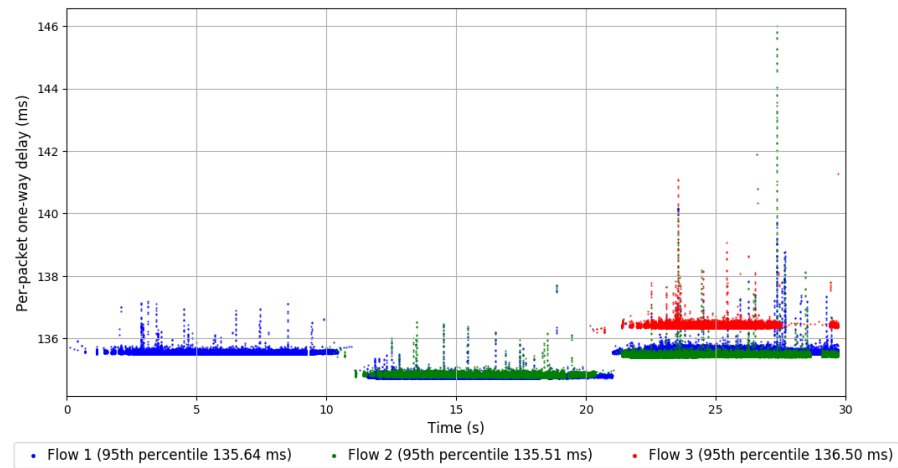
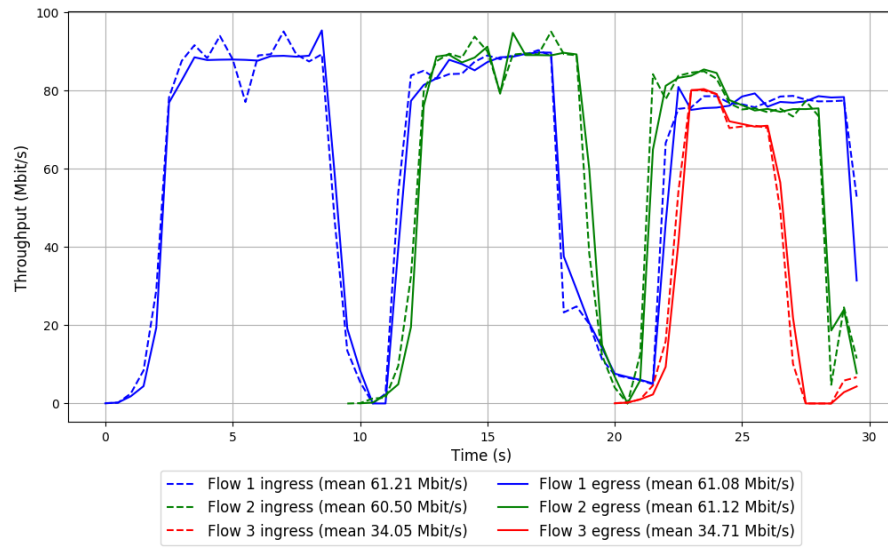
-- Flow 3:

Average throughput: 34.71 Mbit/s

95th percentile per-packet one-way delay: 136.499 ms

Loss rate: 0.80%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-03-07 14:41:35

End at: 2018-03-07 14:42:05

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 115.07 Mbit/s

95th percentile per-packet one-way delay: 140.359 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 62.37 Mbit/s

95th percentile per-packet one-way delay: 135.748 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 61.85 Mbit/s

95th percentile per-packet one-way delay: 140.397 ms

Loss rate: 0.24%

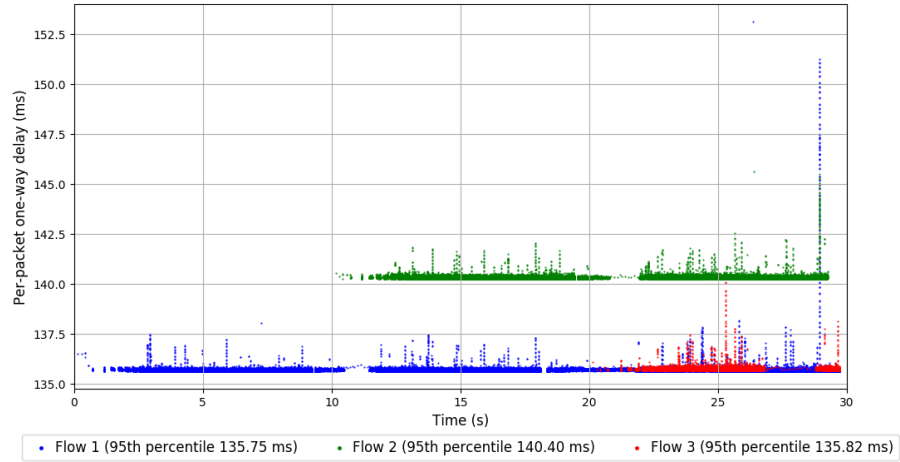
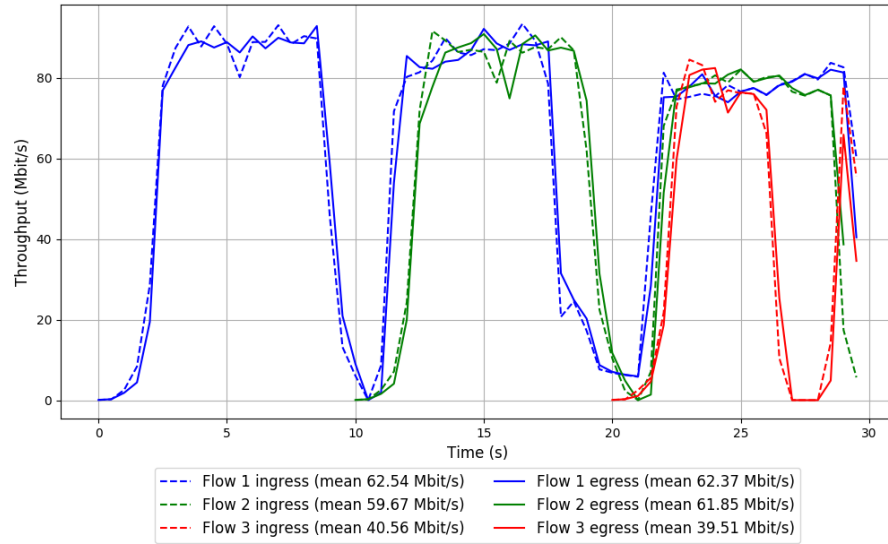
-- Flow 3:

Average throughput: 39.51 Mbit/s

95th percentile per-packet one-way delay: 135.824 ms

Loss rate: 5.30%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-03-07 15:01:57

End at: 2018-03-07 15:02:27

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 121.53 Mbit/s

95th percentile per-packet one-way delay: 140.640 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 60.56 Mbit/s

95th percentile per-packet one-way delay: 136.599 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 61.42 Mbit/s

95th percentile per-packet one-way delay: 140.685 ms

Loss rate: 0.72%

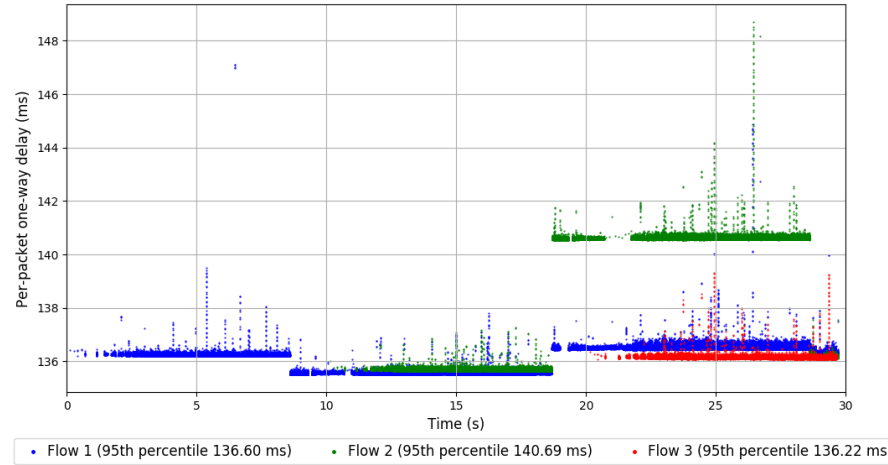
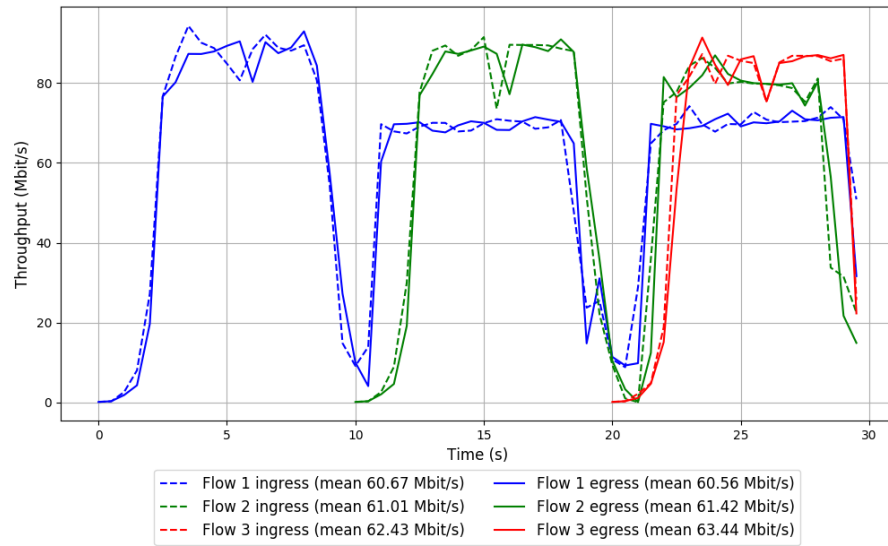
-- Flow 3:

Average throughput: 63.44 Mbit/s

95th percentile per-packet one-way delay: 136.216 ms

Loss rate: 2.09%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-03-07 15:22:51

End at: 2018-03-07 15:23:21

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.10 Mbit/s

95th percentile per-packet one-way delay: 135.776 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 64.62 Mbit/s

95th percentile per-packet one-way delay: 135.752 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 61.17 Mbit/s

95th percentile per-packet one-way delay: 135.607 ms

Loss rate: 0.37%

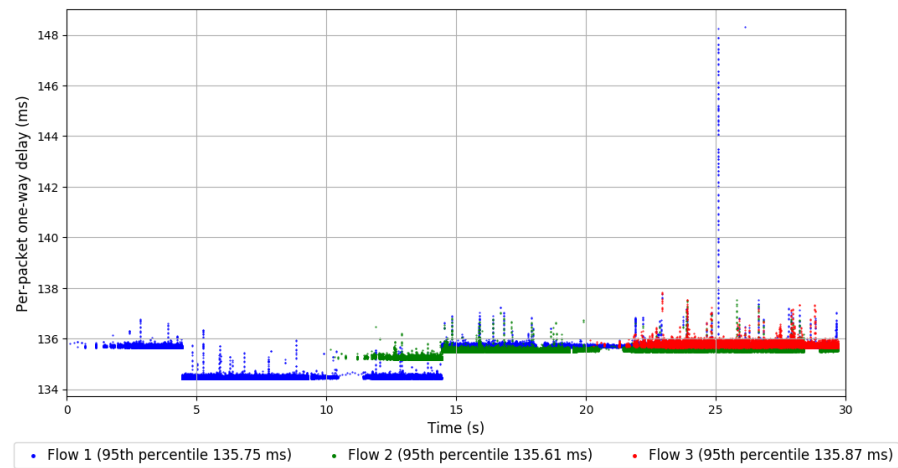
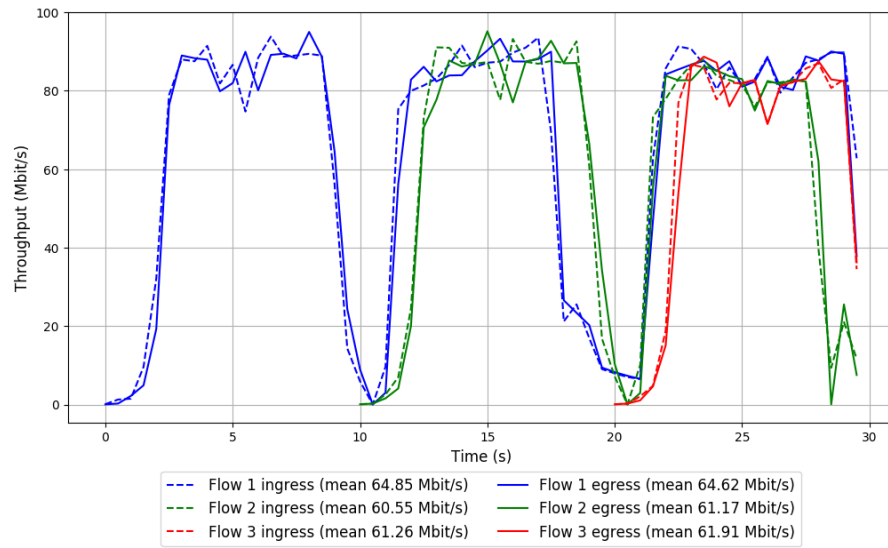
-- Flow 3:

Average throughput: 61.91 Mbit/s

95th percentile per-packet one-way delay: 135.867 ms

Loss rate: 1.74%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-03-07 15:43:23

End at: 2018-03-07 15:43:53

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.61 Mbit/s

95th percentile per-packet one-way delay: 136.204 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 61.87 Mbit/s

95th percentile per-packet one-way delay: 135.160 ms

Loss rate: 1.14%

-- Flow 2:

Average throughput: 61.49 Mbit/s

95th percentile per-packet one-way delay: 136.240 ms

Loss rate: 0.42%

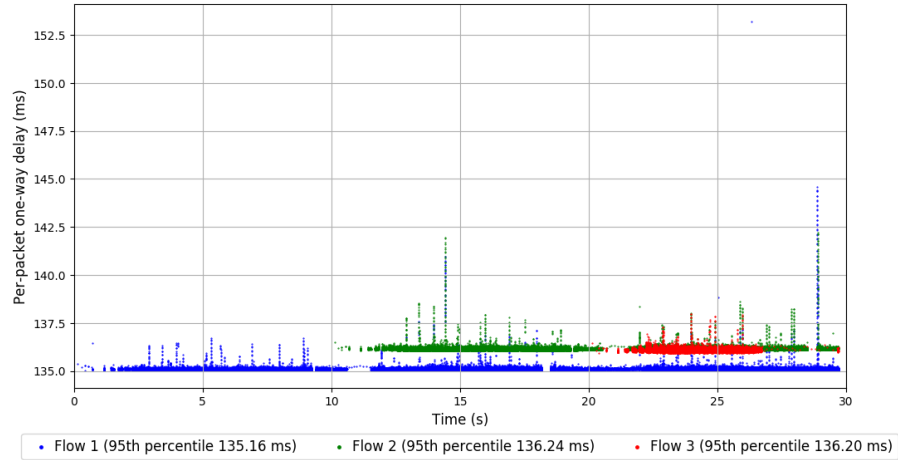
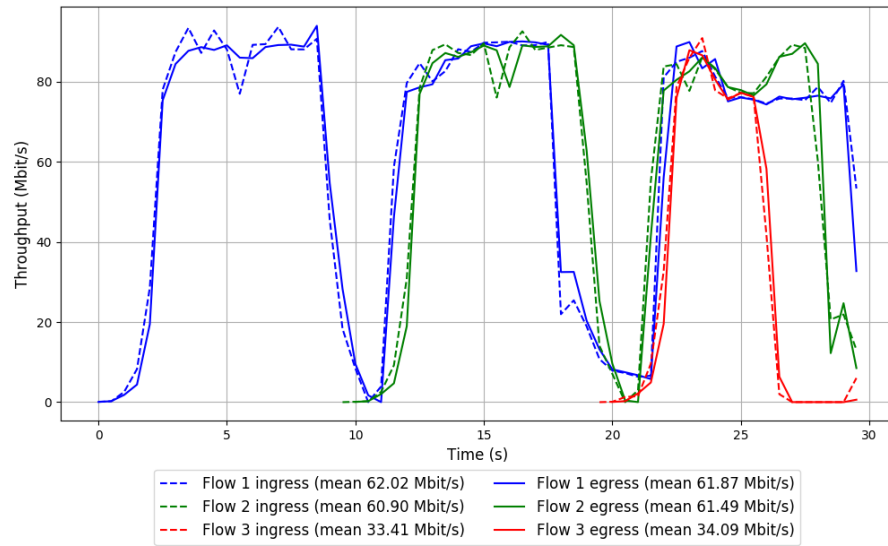
-- Flow 3:

Average throughput: 34.09 Mbit/s

95th percentile per-packet one-way delay: 136.200 ms

Loss rate: 0.82%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-03-07 16:03:48

End at: 2018-03-07 16:04:19

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 118.36 Mbit/s

95th percentile per-packet one-way delay: 140.070 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 58.92 Mbit/s

95th percentile per-packet one-way delay: 136.592 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 60.60 Mbit/s

95th percentile per-packet one-way delay: 136.417 ms

Loss rate: 0.71%

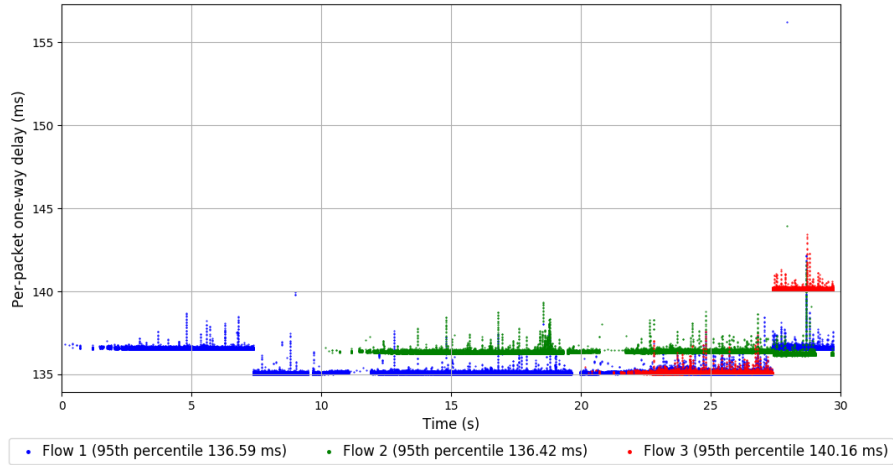
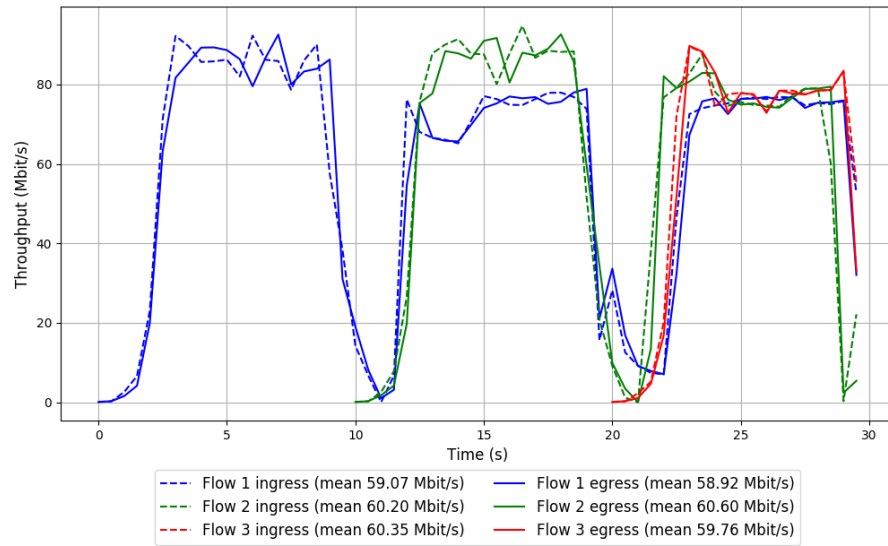
-- Flow 3:

Average throughput: 59.76 Mbit/s

95th percentile per-packet one-way delay: 140.158 ms

Loss rate: 3.70%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-03-07 16:23:58

End at: 2018-03-07 16:24:28

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 119.30 Mbit/s

95th percentile per-packet one-way delay: 140.099 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 60.75 Mbit/s

95th percentile per-packet one-way delay: 135.817 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 60.84 Mbit/s

95th percentile per-packet one-way delay: 135.429 ms

Loss rate: 0.26%

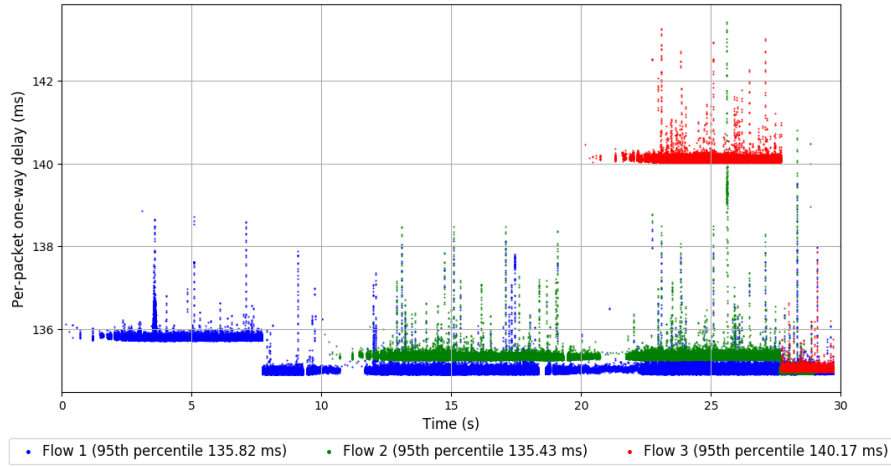
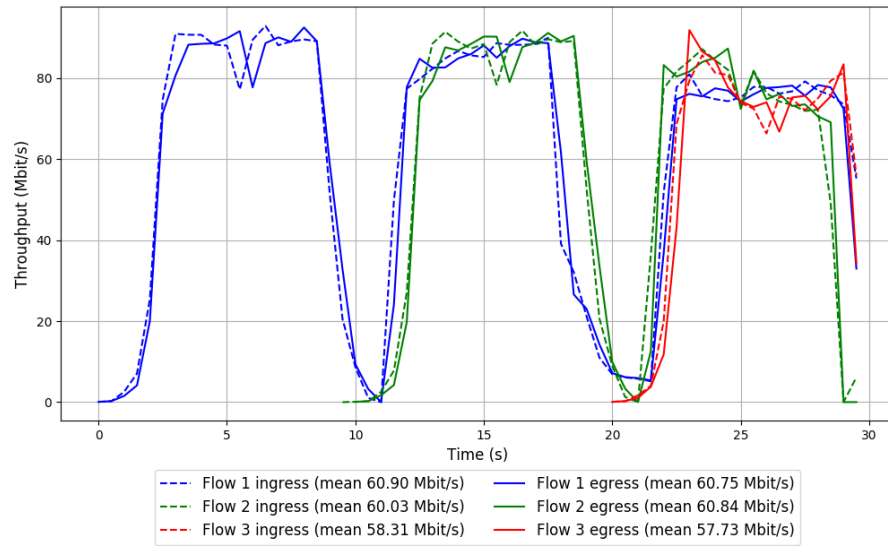
-- Flow 3:

Average throughput: 57.73 Mbit/s

95th percentile per-packet one-way delay: 140.173 ms

Loss rate: 3.80%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-03-07 16:44:15

End at: 2018-03-07 16:44:45

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.01 Mbit/s

95th percentile per-packet one-way delay: 136.300 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 53.08 Mbit/s

95th percentile per-packet one-way delay: 135.002 ms

Loss rate: 1.41%

-- Flow 2:

Average throughput: 60.67 Mbit/s

95th percentile per-packet one-way delay: 135.940 ms

Loss rate: 0.33%

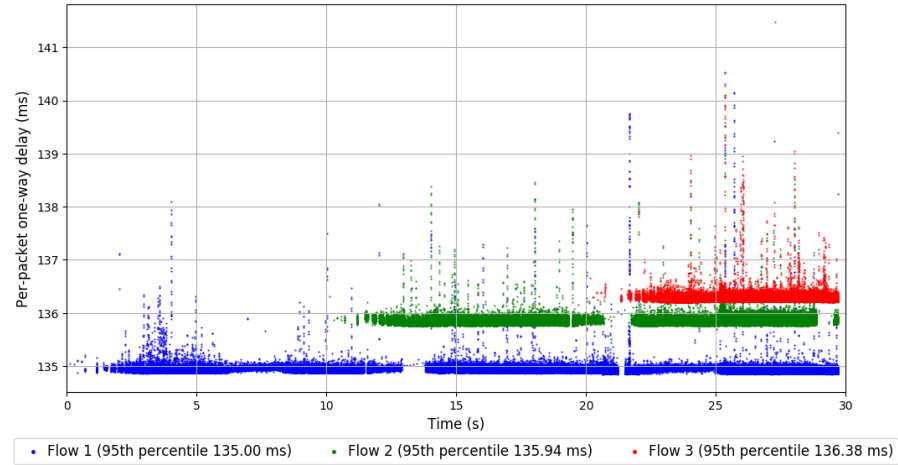
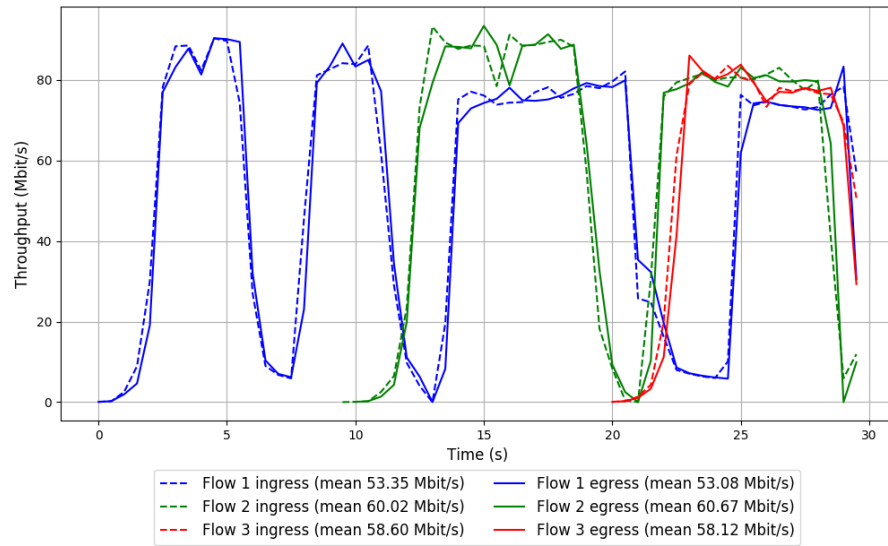
-- Flow 3:

Average throughput: 58.12 Mbit/s

95th percentile per-packet one-way delay: 136.378 ms

Loss rate: 3.60%

Run 10: Report of QUIC Cubic — Data Link

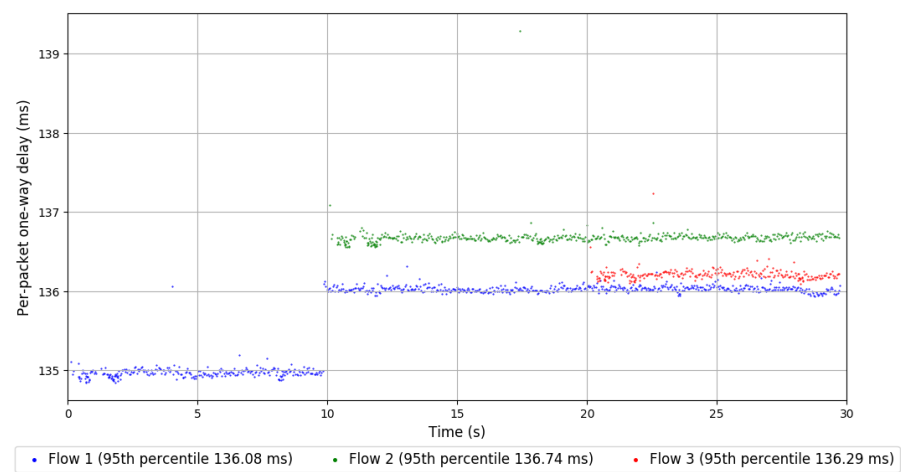
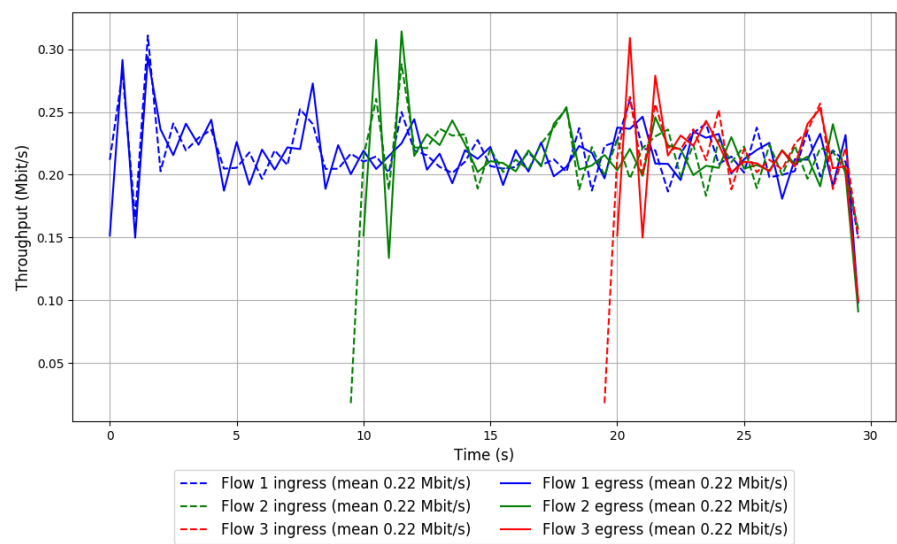


```
Run 1: Statistics of SCReAM

Start at: 2018-03-07 13:49:36
End at: 2018-03-07 13:50:06

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.709 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.082 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.736 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.295 ms
Loss rate: 2.64%
```

Run 1: Report of SReAM — Data Link

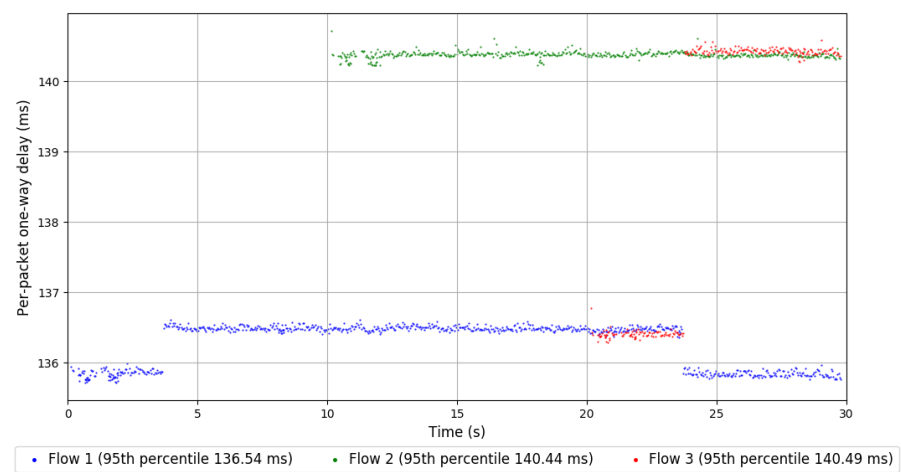
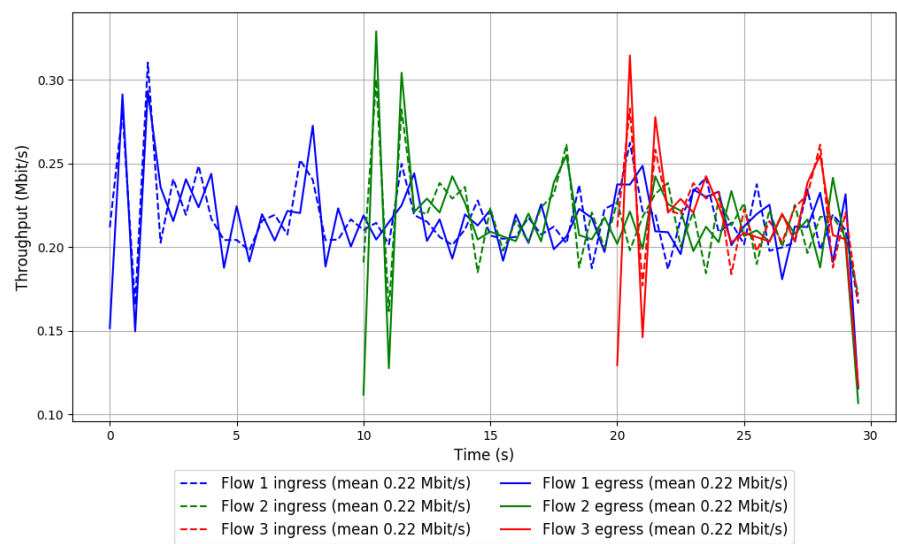


```
Run 2: Statistics of SReAM

Start at: 2018-03-07 14:10:12
End at: 2018-03-07 14:10:42

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 140.446 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.545 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 140.442 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 140.485 ms
Loss rate: 2.65%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-03-07 14:30:36

End at: 2018-03-07 14:31:06

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 140.380 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.931 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 140.404 ms

Loss rate: 1.43%

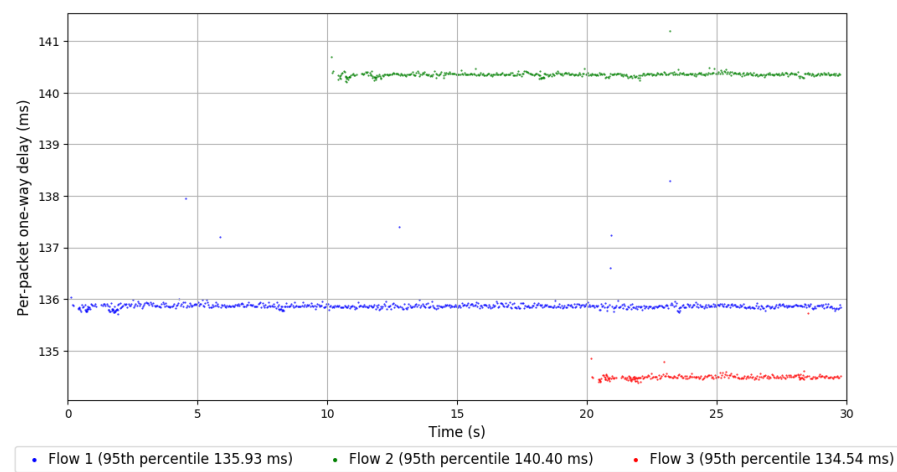
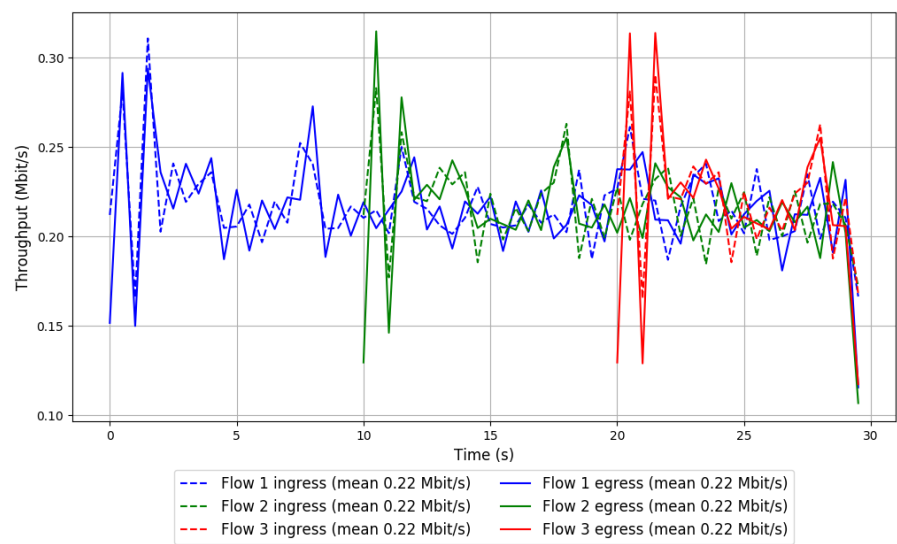
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 134.543 ms

Loss rate: 2.63%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SReAM

Start at: 2018-03-07 14:50:43

End at: 2018-03-07 14:51:13

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.486 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.434 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.062 ms

Loss rate: 1.42%

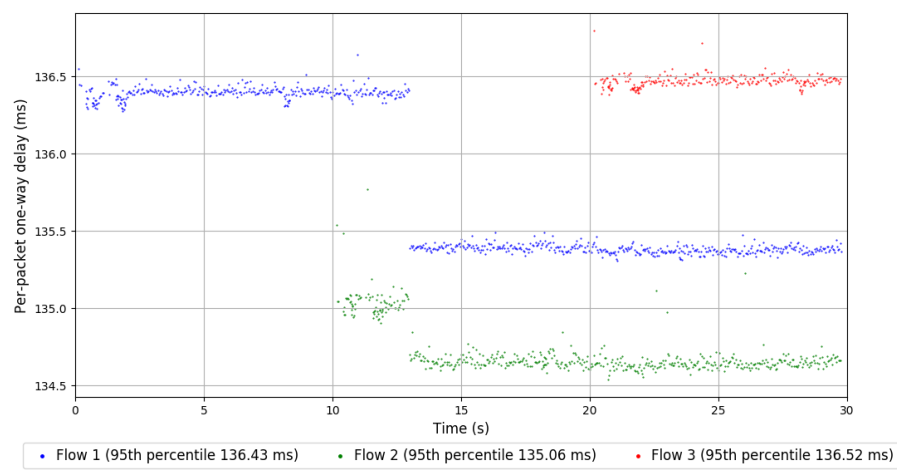
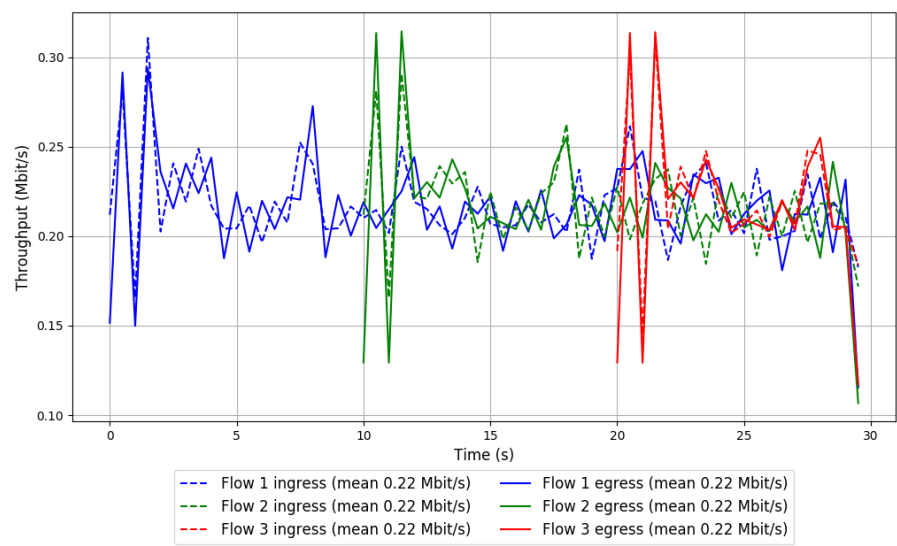
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.522 ms

Loss rate: 2.63%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2018-03-07 15:11:23

End at: 2018-03-07 15:11:53

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 140.707 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.417 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 140.726 ms

Loss rate: 1.42%

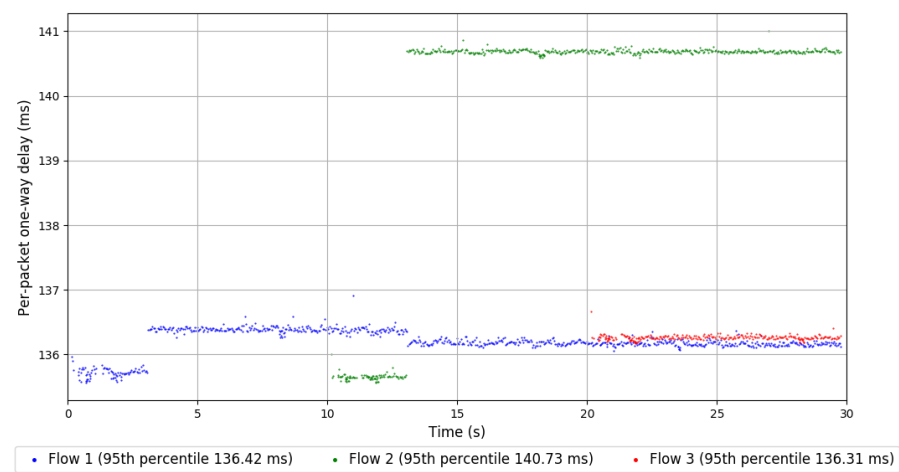
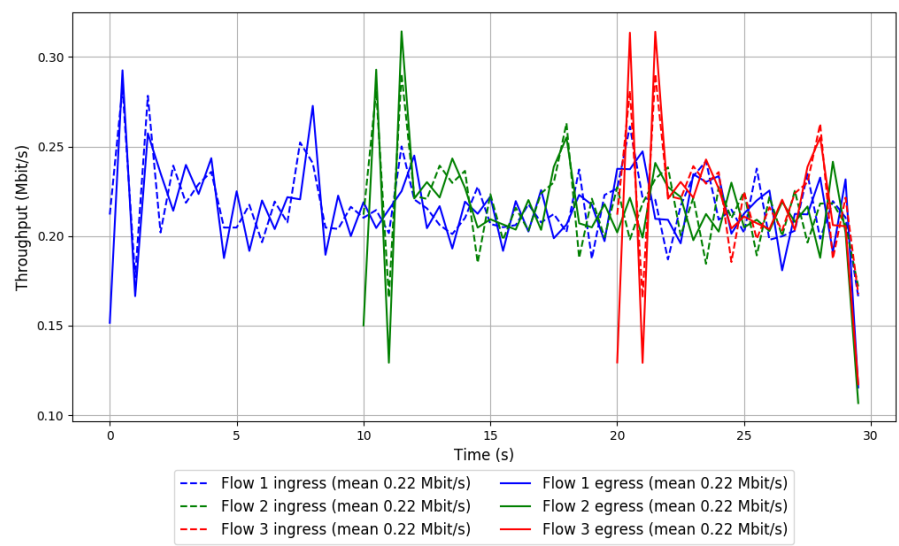
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.309 ms

Loss rate: 2.63%

Run 5: Report of SCSReAM — Data Link



Run 6: Statistics of SReAM

Start at: 2018-03-07 15:32:11

End at: 2018-03-07 15:32:41

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.864 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.432 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.890 ms

Loss rate: 1.42%

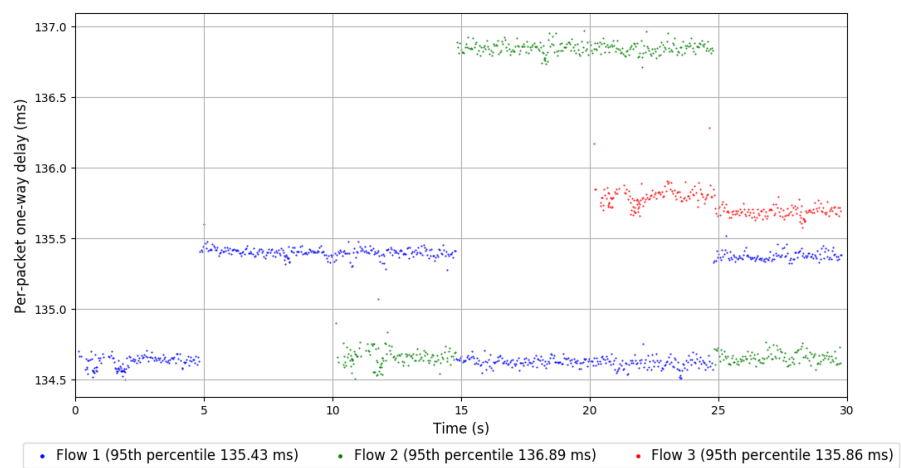
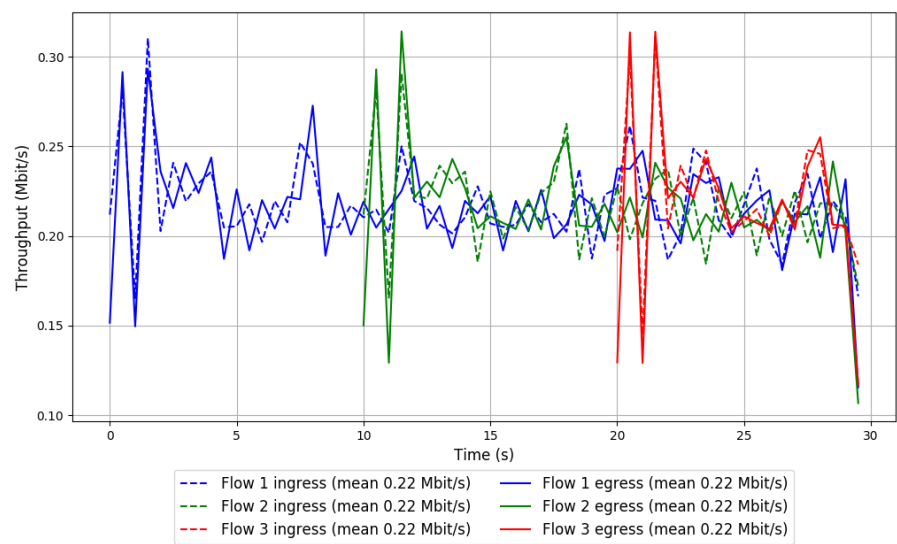
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.860 ms

Loss rate: 2.63%

Run 6: Report of SCRaM — Data Link

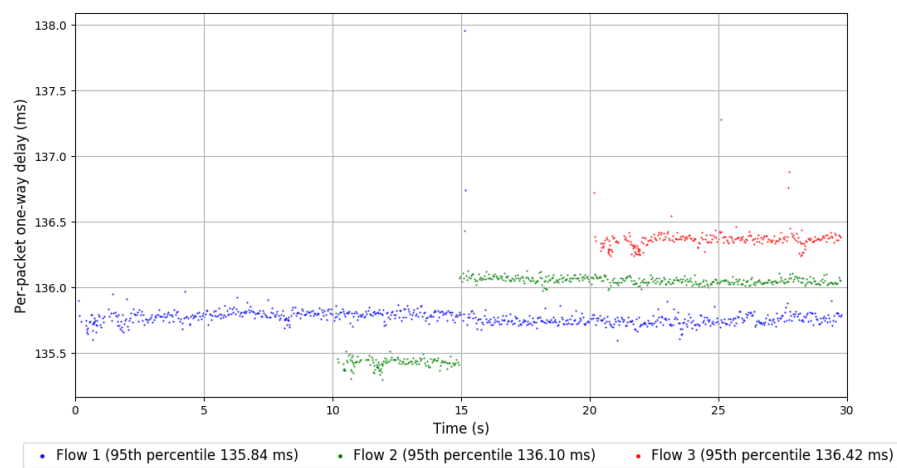
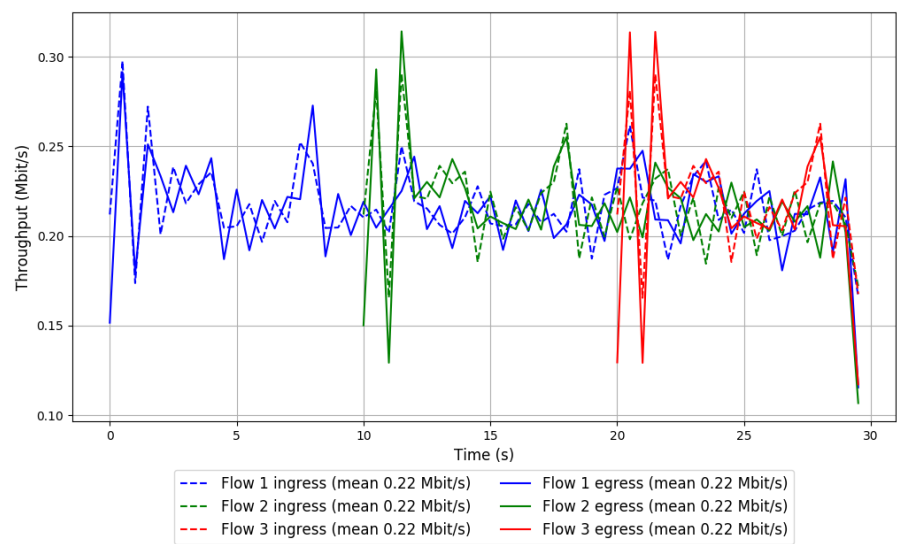


```
Run 7: Statistics of SReAM

Start at: 2018-03-07 15:52:41
End at: 2018-03-07 15:53:11

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.384 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.836 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.098 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.422 ms
Loss rate: 2.63%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2018-03-07 16:12:45

End at: 2018-03-07 16:13:15

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 140.747 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 140.762 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.598 ms

Loss rate: 1.43%

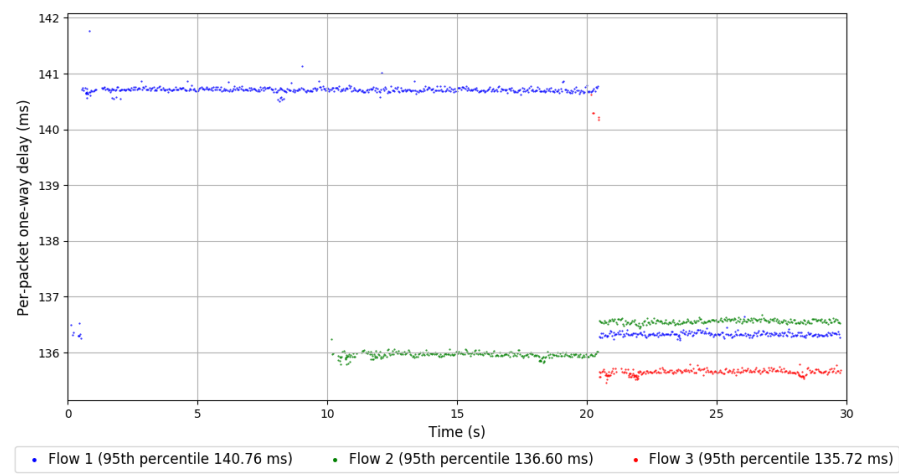
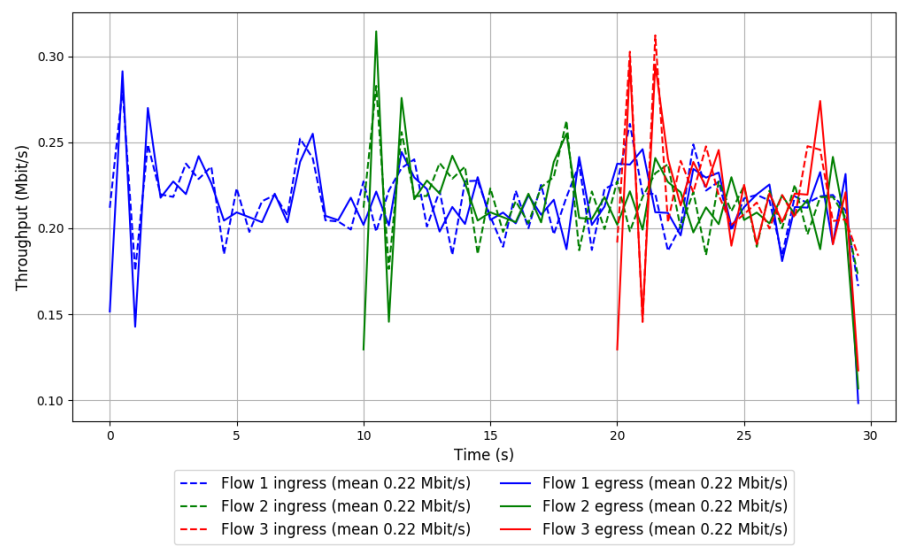
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.725 ms

Loss rate: 2.63%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-03-07 16:32:57

End at: 2018-03-07 16:33:27

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 135.945 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.966 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.559 ms

Loss rate: 1.42%

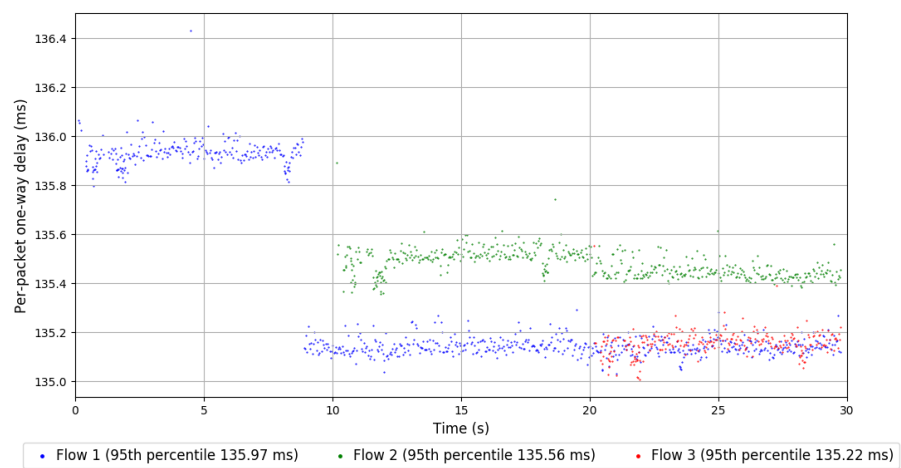
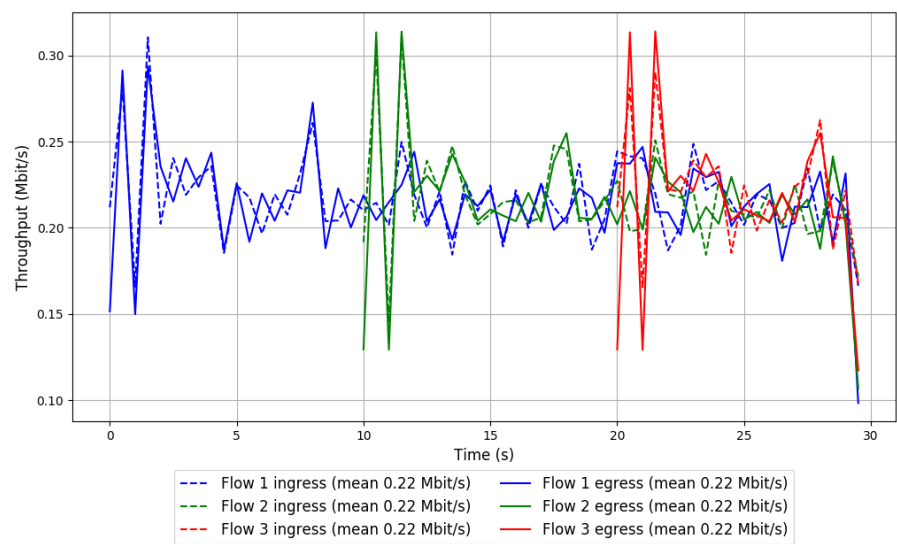
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.215 ms

Loss rate: 2.63%

Run 9: Report of SCRaM — Data Link

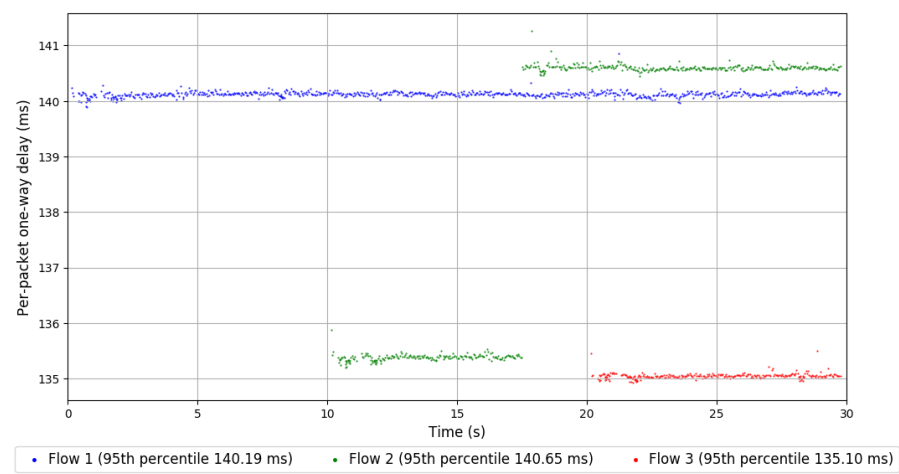
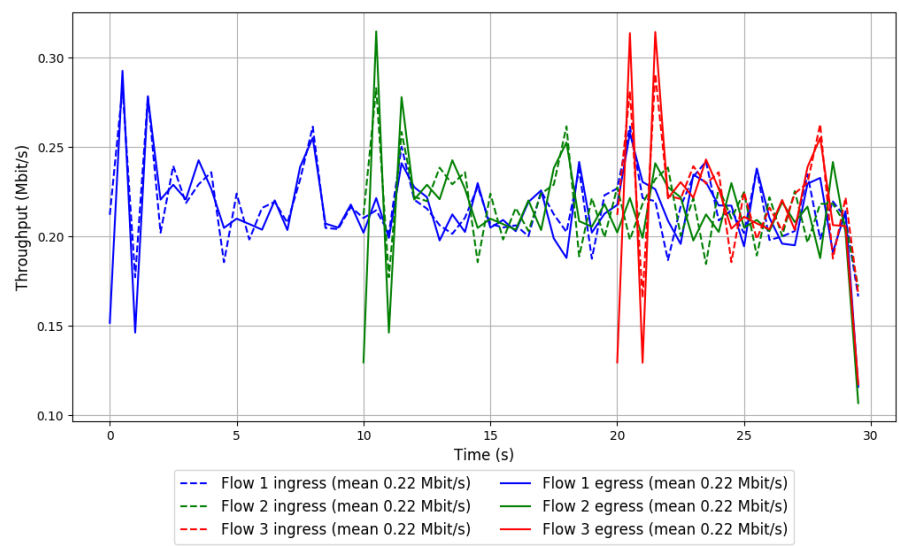


```
Run 10: Statistics of SReAM

Start at: 2018-03-07 16:53:28
End at: 2018-03-07 16:53:58

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 140.616 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 140.189 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 140.653 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.100 ms
Loss rate: 2.63%
```

Run 10: Report of SReAM — Data Link

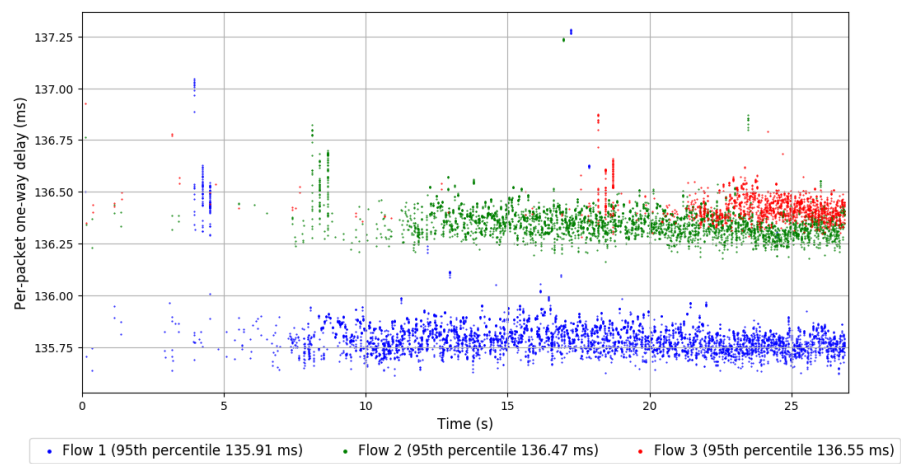
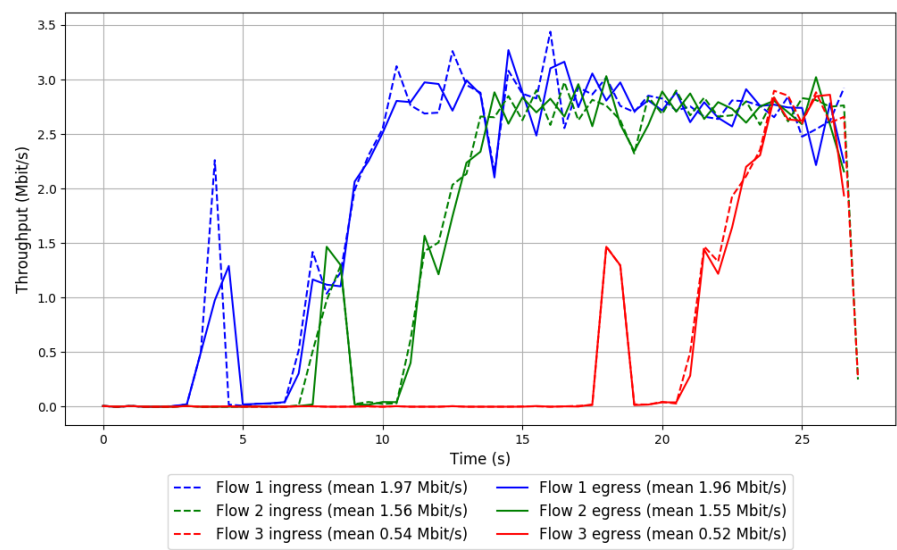


```
Run 1: Statistics of WebRTC media

Start at: 2018-03-07 13:43:46
End at: 2018-03-07 13:44:16

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 136.479 ms
Loss rate: 2.12%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 135.915 ms
Loss rate: 1.27%
-- Flow 2:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 136.468 ms
Loss rate: 2.01%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 136.552 ms
Loss rate: 5.53%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-03-07 14:04:27

End at: 2018-03-07 14:04:57

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.71 Mbit/s

95th percentile per-packet one-way delay: 136.462 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 135.593 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 136.502 ms

Loss rate: 1.93%

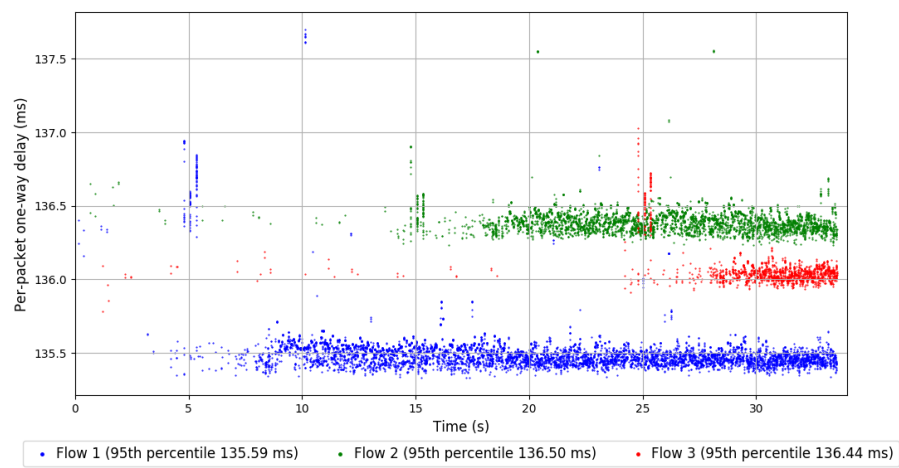
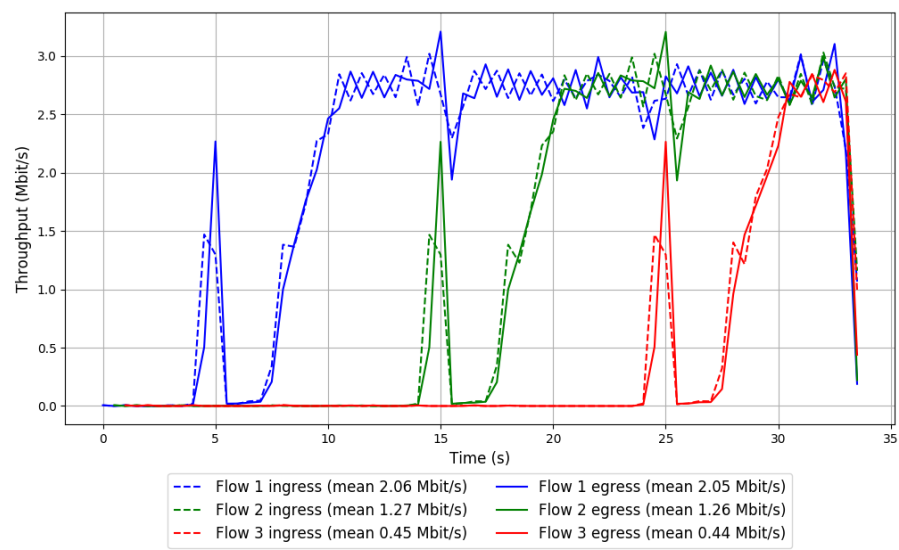
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 136.435 ms

Loss rate: 4.86%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-03-07 14:25:00

End at: 2018-03-07 14:25:30

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.70 Mbit/s

95th percentile per-packet one-way delay: 136.498 ms

Loss rate: 1.77%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 136.405 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 140.671 ms

Loss rate: 1.96%

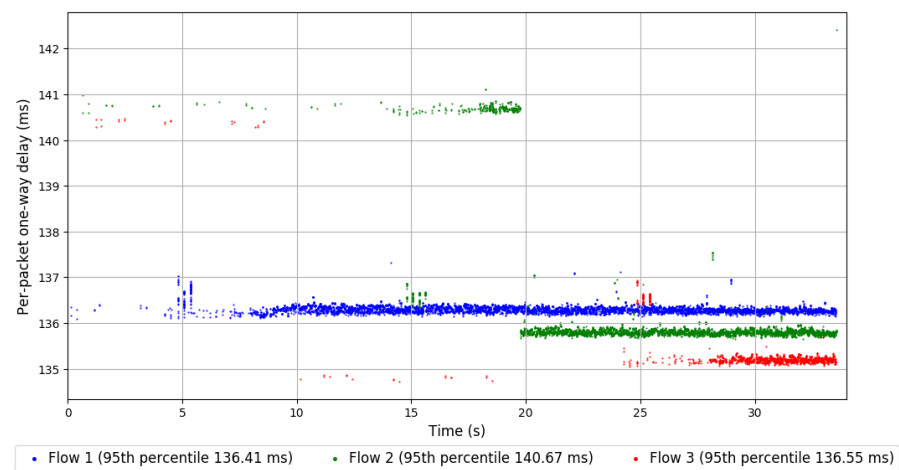
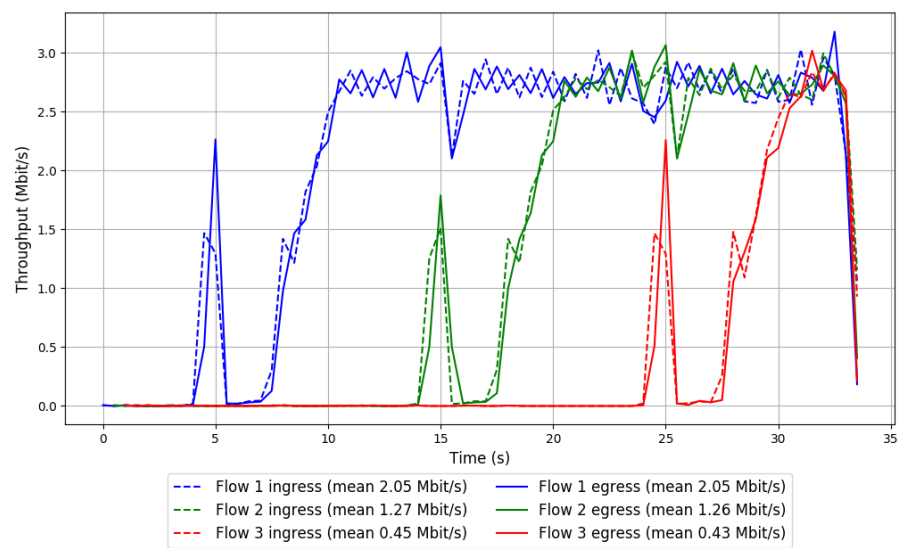
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.551 ms

Loss rate: 4.70%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-03-07 14:44:58

End at: 2018-03-07 14:45:28

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.70 Mbit/s

95th percentile per-packet one-way delay: 140.454 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 140.457 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 136.617 ms

Loss rate: 1.90%

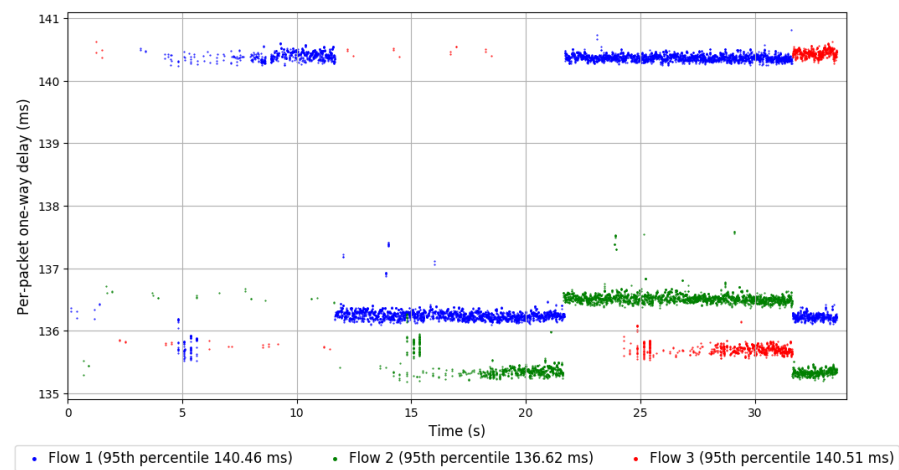
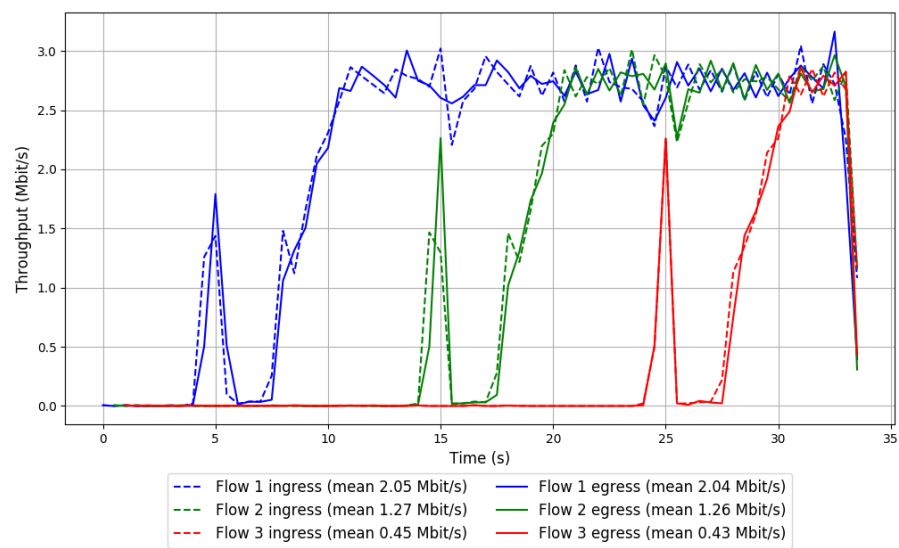
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 140.510 ms

Loss rate: 4.71%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-03-07 15:05:33

End at: 2018-03-07 15:06:03

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.70 Mbit/s

95th percentile per-packet one-way delay: 140.761 ms

Loss rate: 1.71%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 140.763 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 135.861 ms

Loss rate: 1.71%

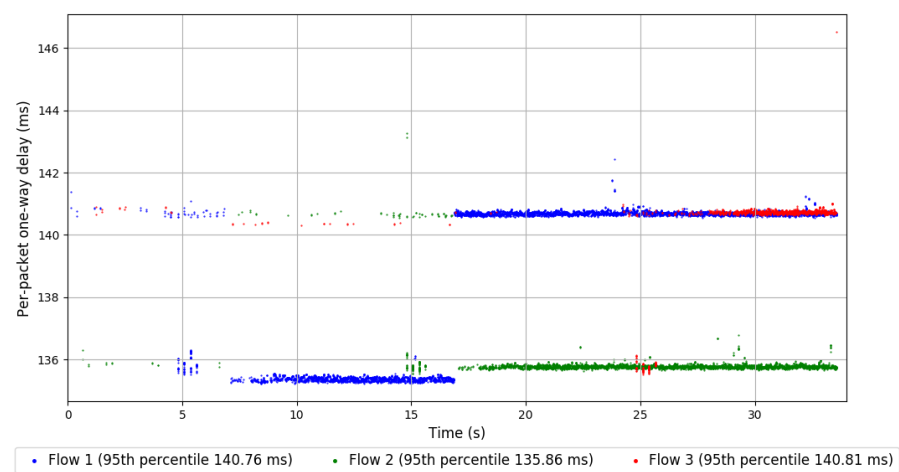
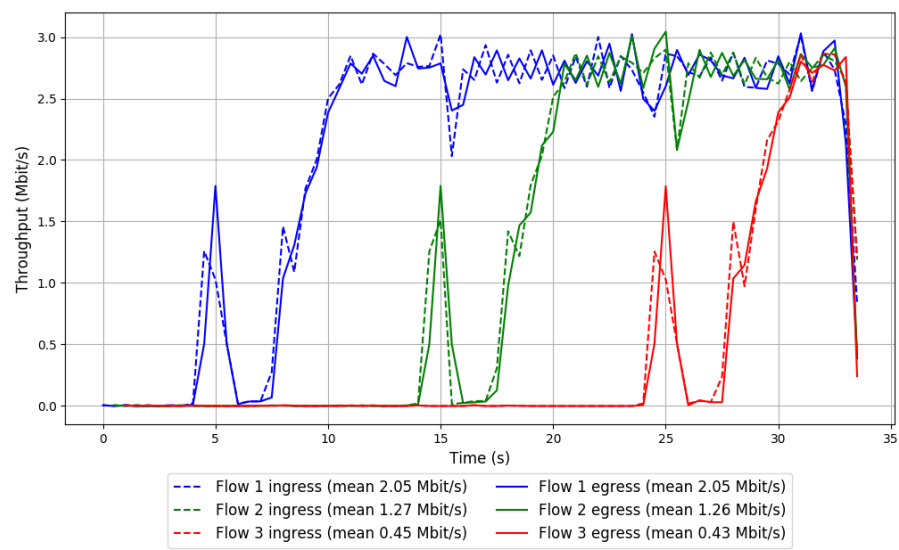
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 140.805 ms

Loss rate: 5.54%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-03-07 15:26:28

End at: 2018-03-07 15:26:58

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.71 Mbit/s

95th percentile per-packet one-way delay: 140.459 ms

Loss rate: 1.78%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 136.537 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 140.499 ms

Loss rate: 1.90%

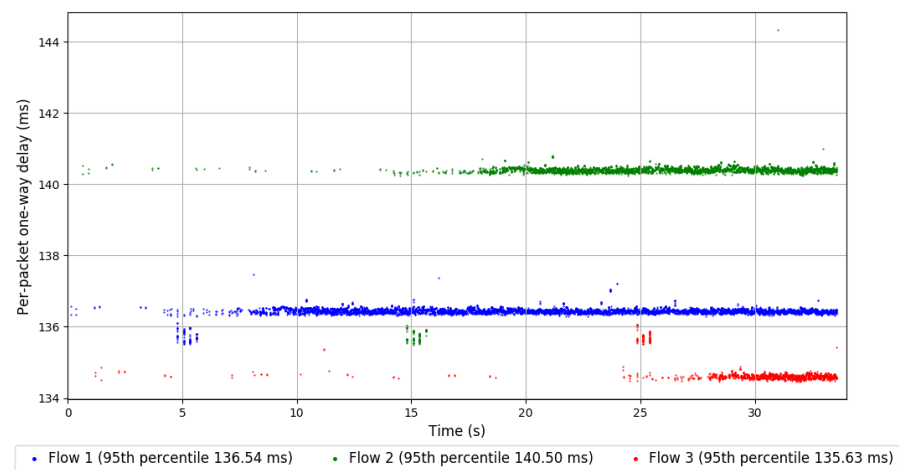
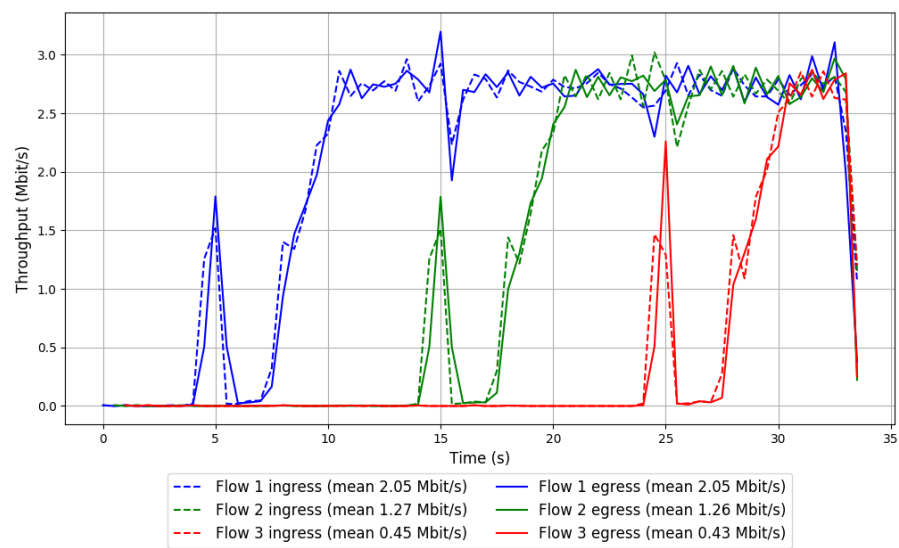
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 135.630 ms

Loss rate: 4.90%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-03-07 15:47:12

End at: 2018-03-07 15:47:42

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.70 Mbit/s

95th percentile per-packet one-way delay: 140.862 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 140.878 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 135.635 ms

Loss rate: 1.70%

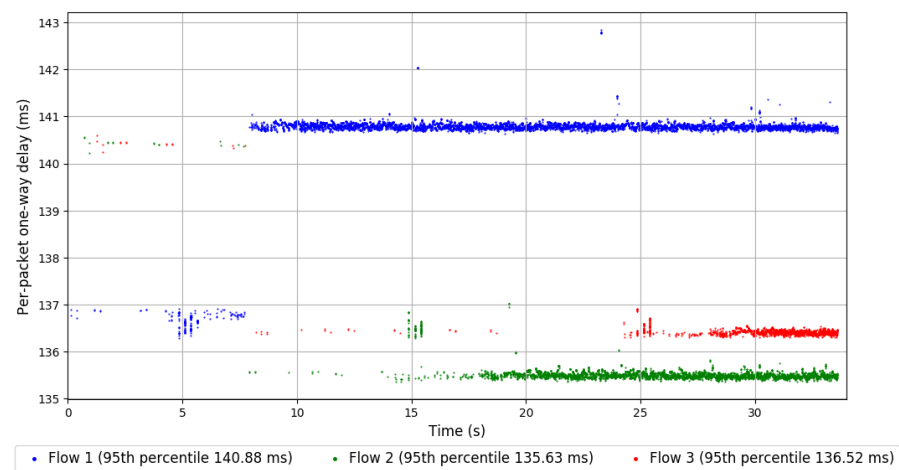
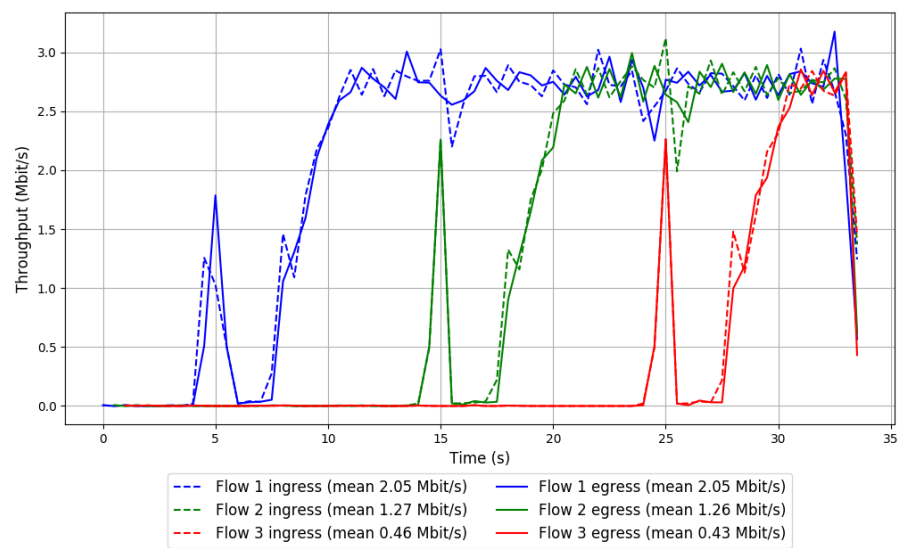
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.517 ms

Loss rate: 5.61%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-03-07 16:07:10

End at: 2018-03-07 16:07:40

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.69 Mbit/s

95th percentile per-packet one-way delay: 136.343 ms

Loss rate: 1.88%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 135.742 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 136.370 ms

Loss rate: 1.92%

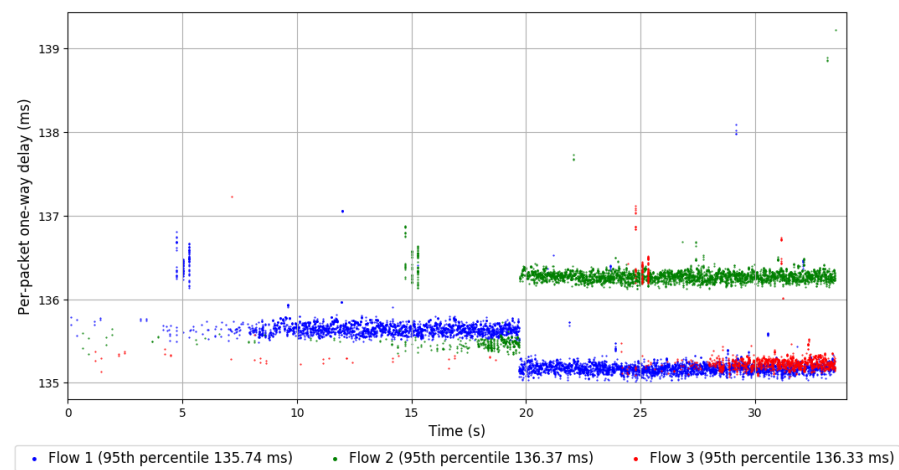
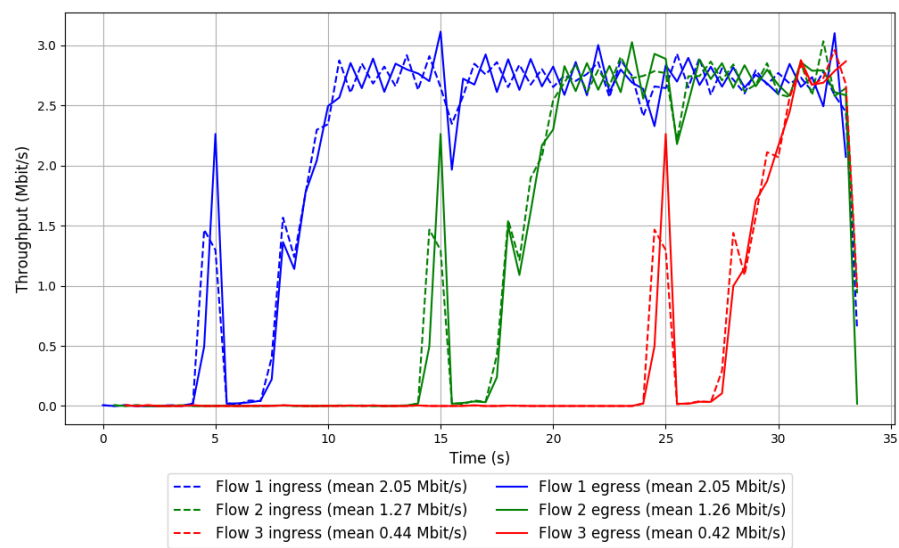
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 136.327 ms

Loss rate: 5.77%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-03-07 16:27:21

End at: 2018-03-07 16:27:51

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.66 Mbit/s

95th percentile per-packet one-way delay: 140.187 ms

Loss rate: 1.73%

-- Flow 1:

Average throughput: 2.03 Mbit/s

95th percentile per-packet one-way delay: 135.507 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 1.24 Mbit/s

95th percentile per-packet one-way delay: 140.238 ms

Loss rate: 1.73%

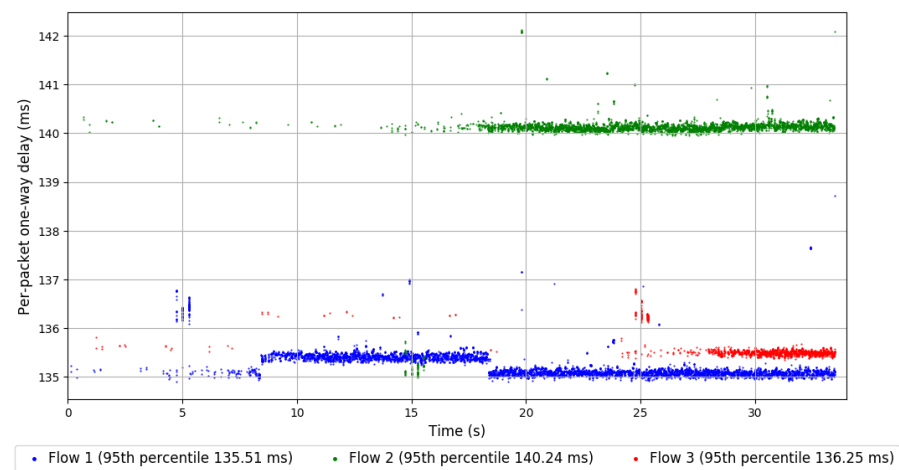
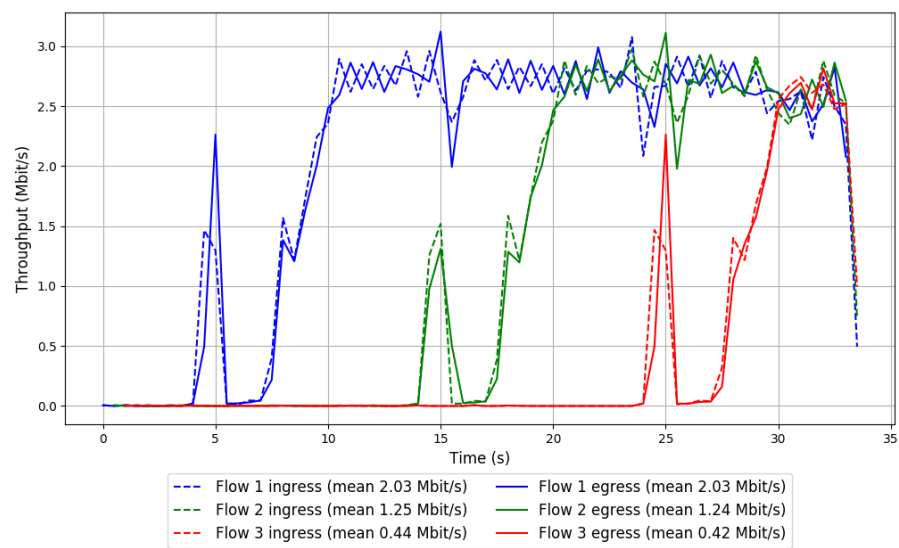
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 136.252 ms

Loss rate: 5.79%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-03-07 16:47:50

End at: 2018-03-07 16:48:20

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.68 Mbit/s

95th percentile per-packet one-way delay: 140.211 ms

Loss rate: 1.81%

-- Flow 1:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 140.231 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 135.635 ms

Loss rate: 1.72%

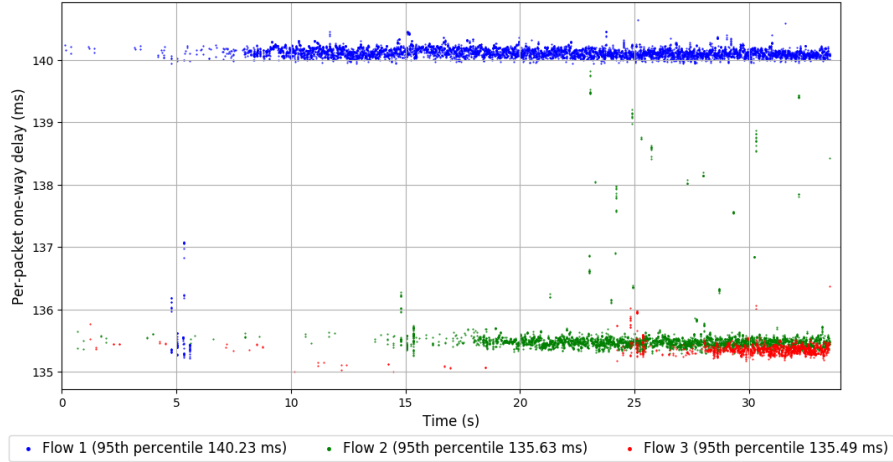
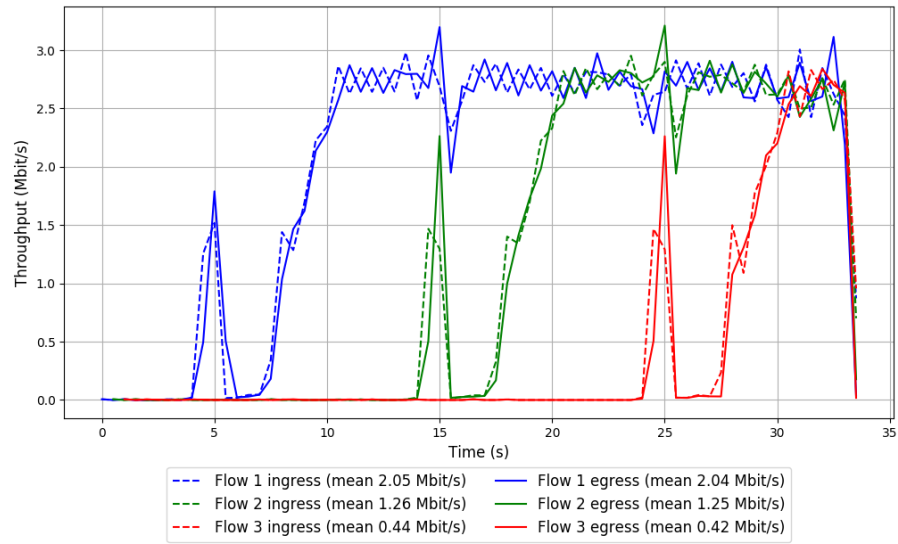
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 135.492 ms

Loss rate: 5.58%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-03-07 13:37:49

End at: 2018-03-07 13:38:19

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.90 Mbit/s

95th percentile per-packet one-way delay: 136.724 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 136.749 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 136.654 ms

Loss rate: 1.04%

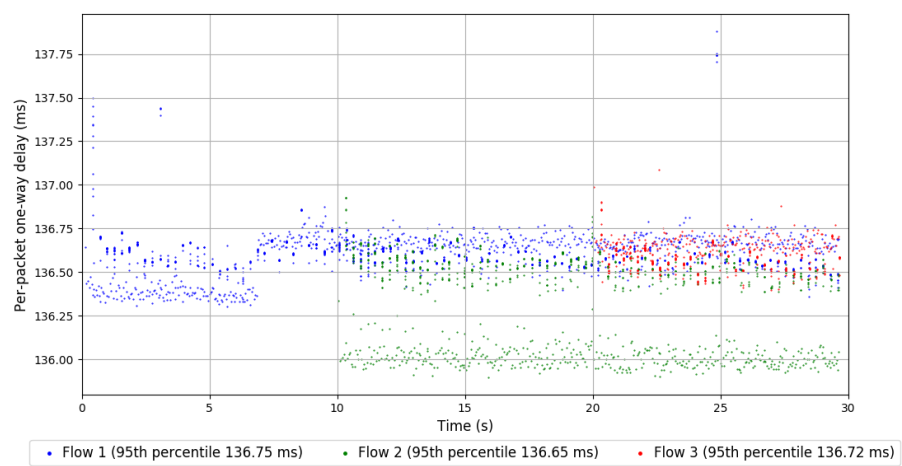
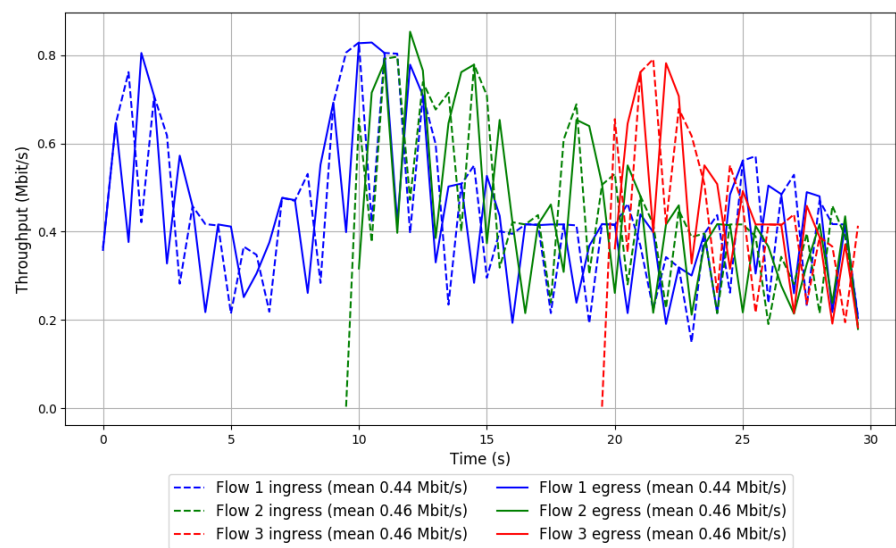
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 136.721 ms

Loss rate: 2.55%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-03-07 13:58:26

End at: 2018-03-07 13:58:56

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.89 Mbit/s

95th percentile per-packet one-way delay: 136.583 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 136.579 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 136.570 ms

Loss rate: 1.43%

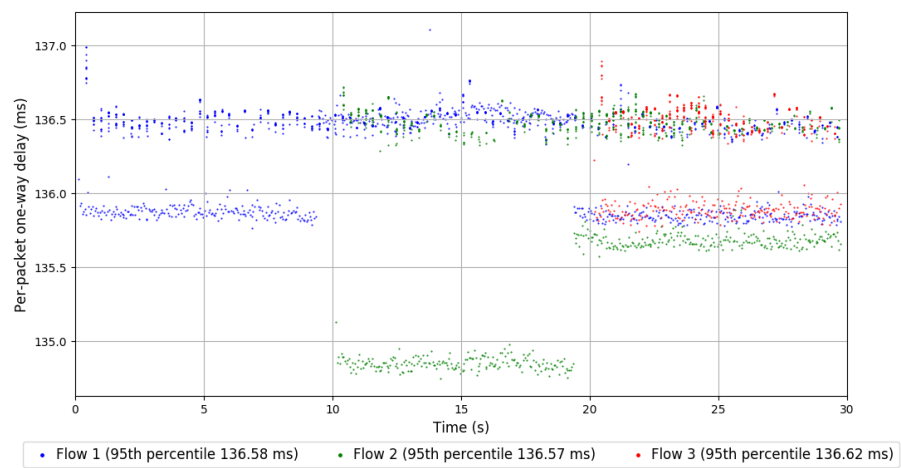
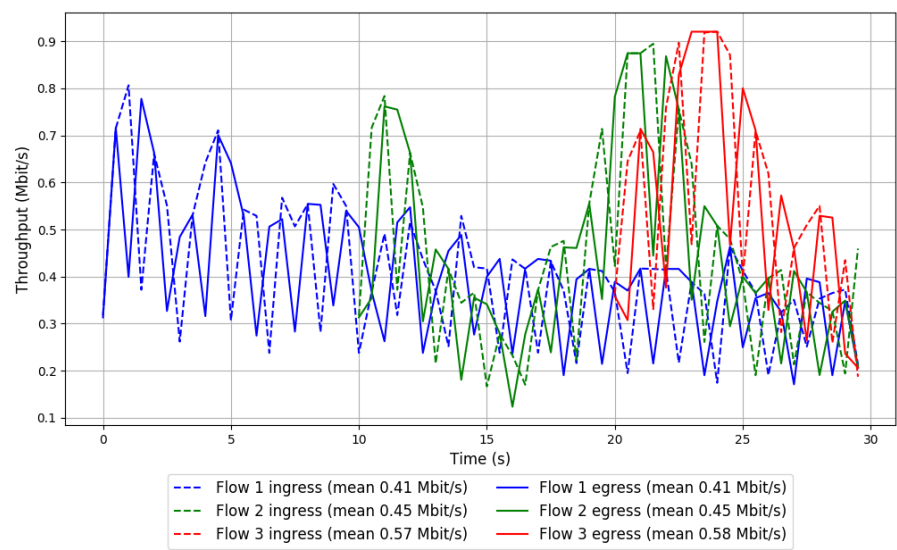
-- Flow 3:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 136.623 ms

Loss rate: 1.63%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-03-07 14:19:09

End at: 2018-03-07 14:19:39

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.84 Mbit/s

95th percentile per-packet one-way delay: 136.697 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 136.582 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 140.336 ms

Loss rate: 1.27%

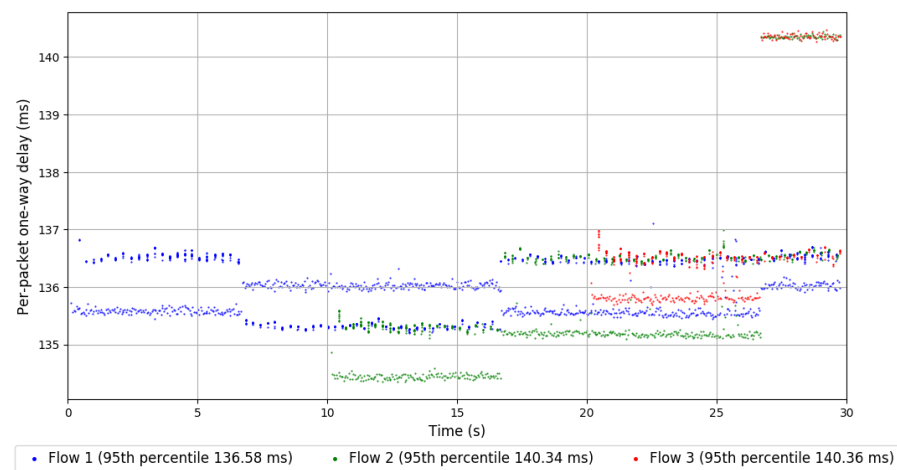
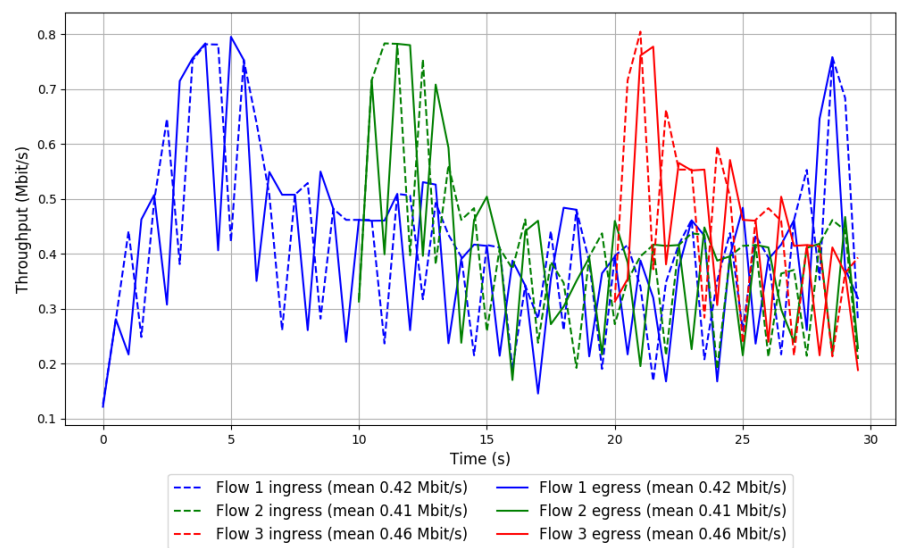
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 140.362 ms

Loss rate: 2.32%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-03-07 14:39:18

End at: 2018-03-07 14:39:48

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.81 Mbit/s

95th percentile per-packet one-way delay: 140.634 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 136.605 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.646 ms

Loss rate: 1.07%

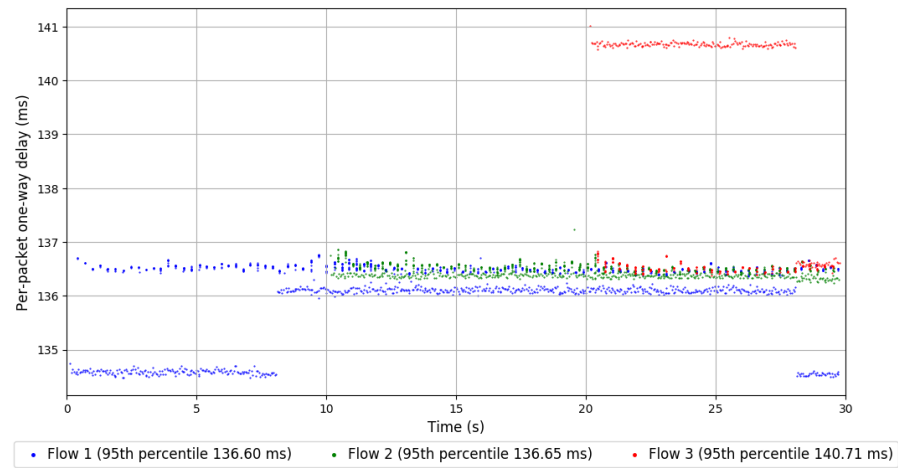
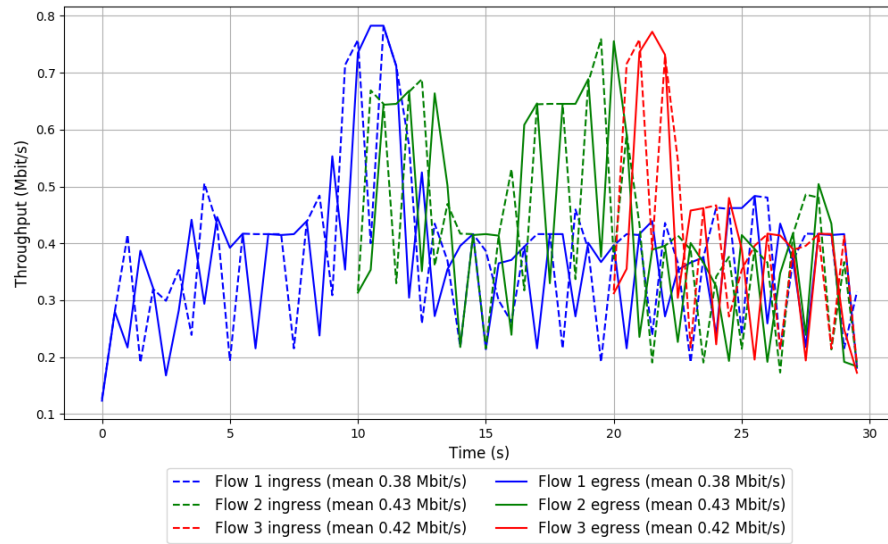
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 140.711 ms

Loss rate: 2.21%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-03-07 14:59:33

End at: 2018-03-07 15:00:03

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.81 Mbit/s

95th percentile per-packet one-way delay: 140.305 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 136.551 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 136.391 ms

Loss rate: 0.05%

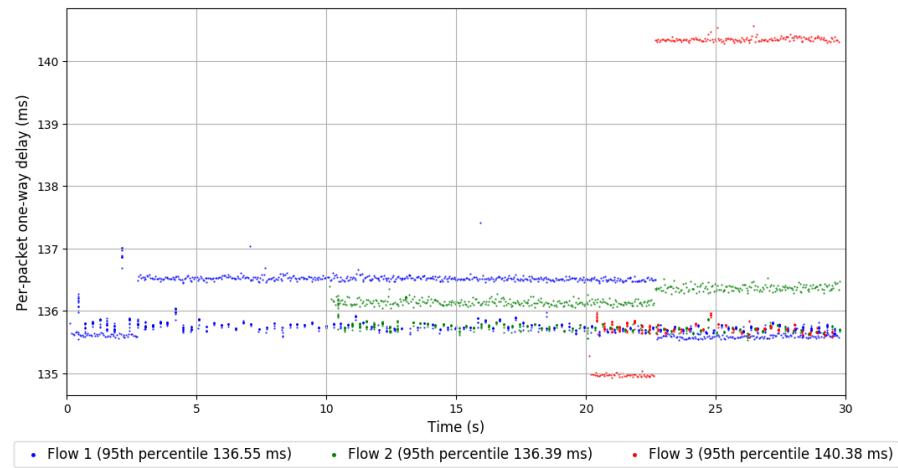
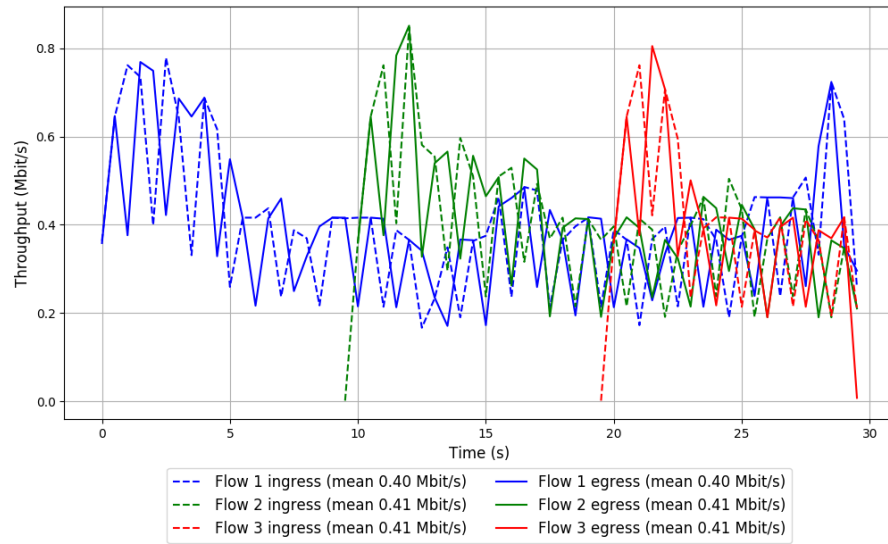
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 140.384 ms

Loss rate: 2.56%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-03-07 15:20:25

End at: 2018-03-07 15:20:55

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 136.613 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 136.637 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 136.045 ms

Loss rate: 1.32%

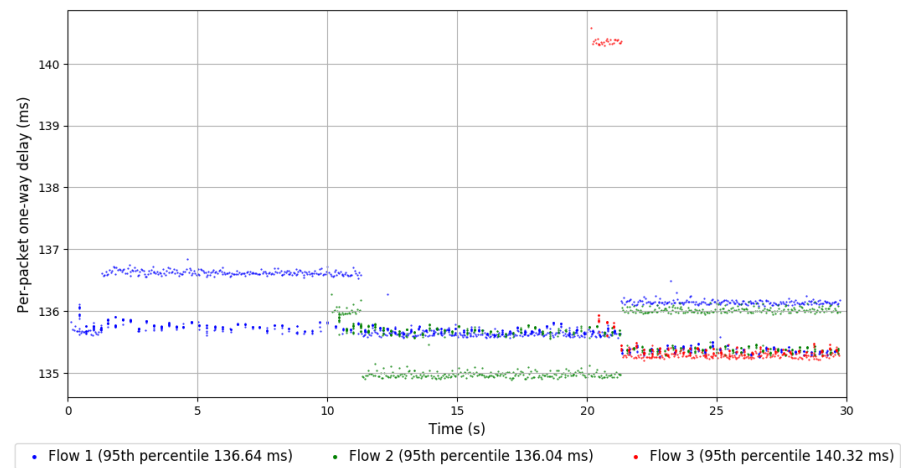
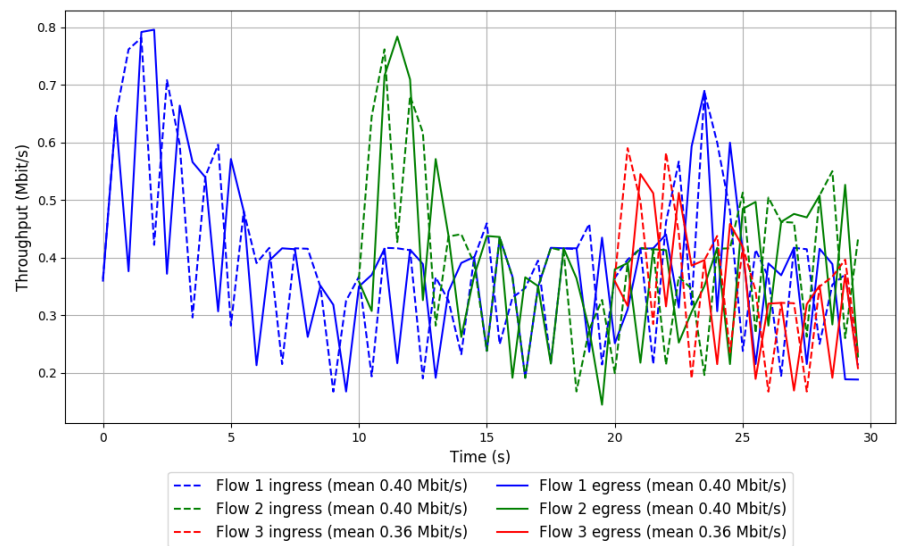
-- Flow 3:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 140.318 ms

Loss rate: 3.26%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-03-07 15:40:58

End at: 2018-03-07 15:41:28

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 140.816 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 140.816 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 140.829 ms

Loss rate: 1.38%

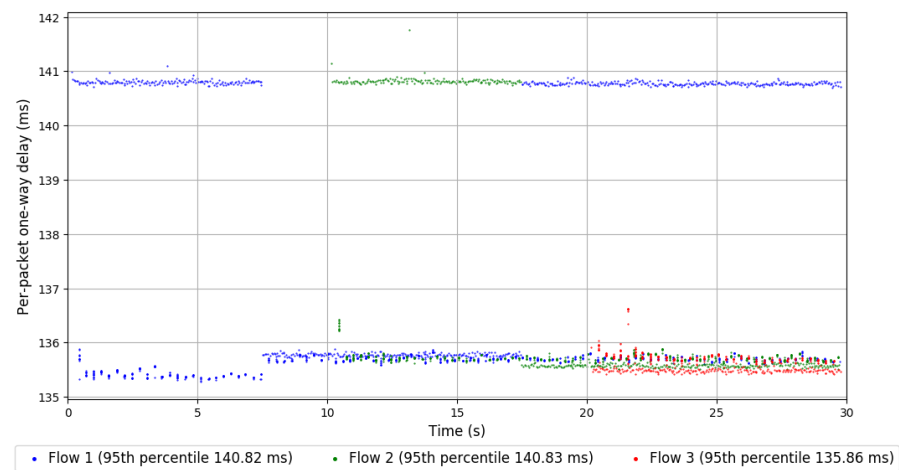
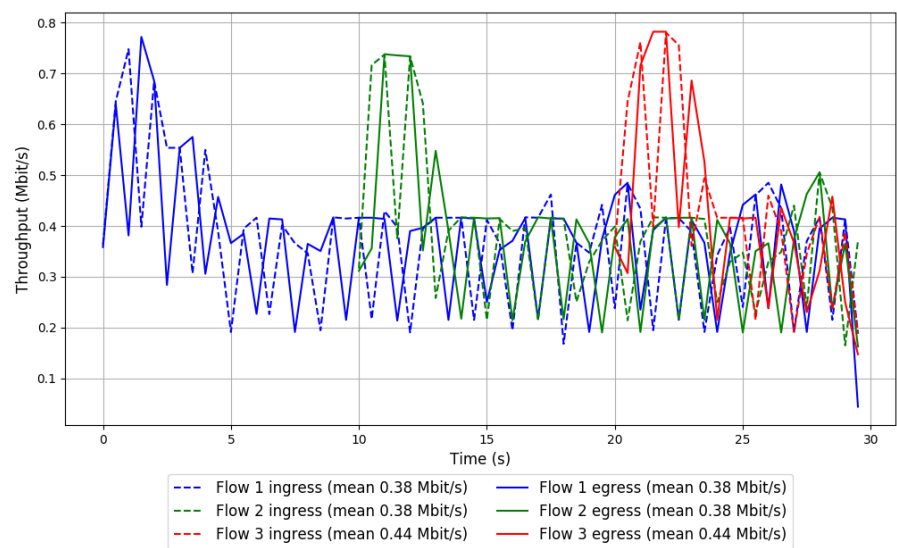
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 135.862 ms

Loss rate: 2.12%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-03-07 16:01:27

End at: 2018-03-07 16:01:57

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.77 Mbit/s

95th percentile per-packet one-way delay: 140.276 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 140.278 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 140.288 ms

Loss rate: 1.15%

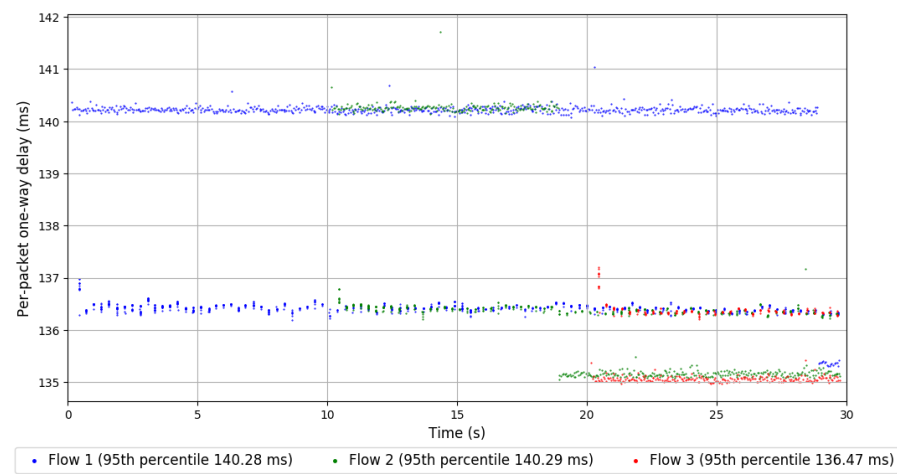
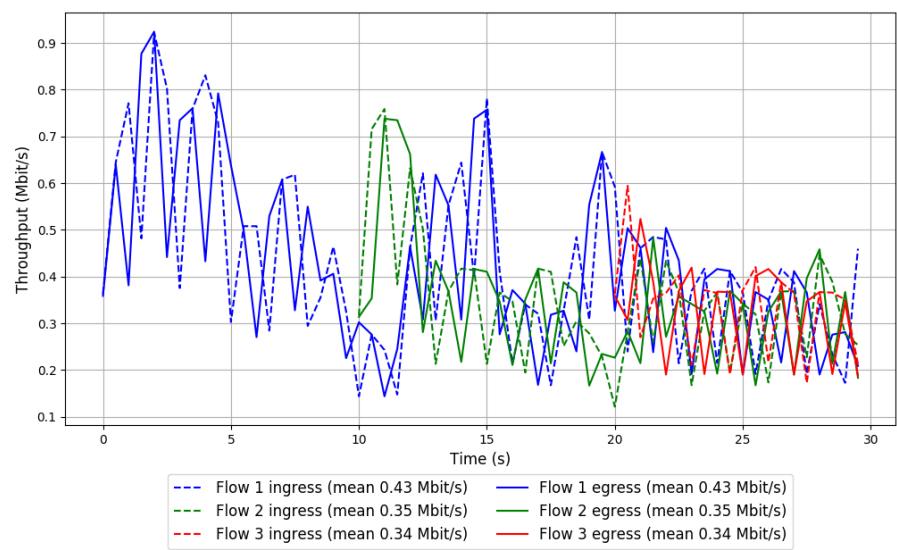
-- Flow 3:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 136.475 ms

Loss rate: 3.12%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-03-07 16:21:38

End at: 2018-03-07 16:22:08

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 136.374 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 136.387 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 136.347 ms

Loss rate: 1.86%

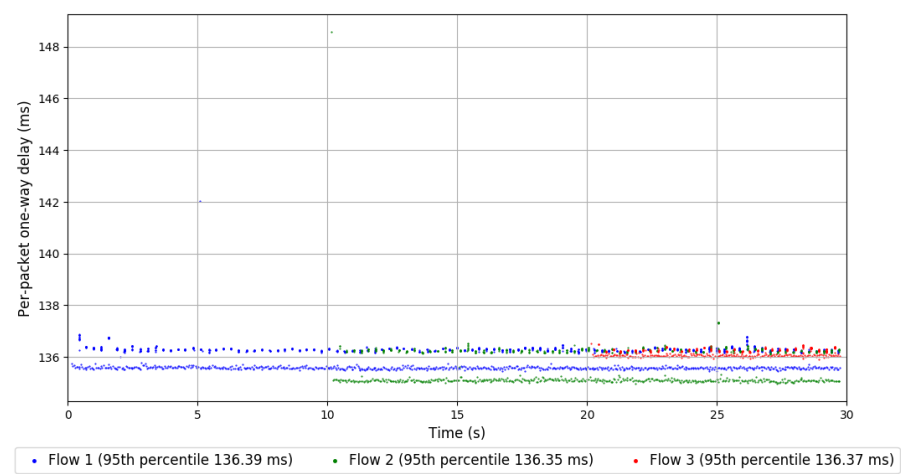
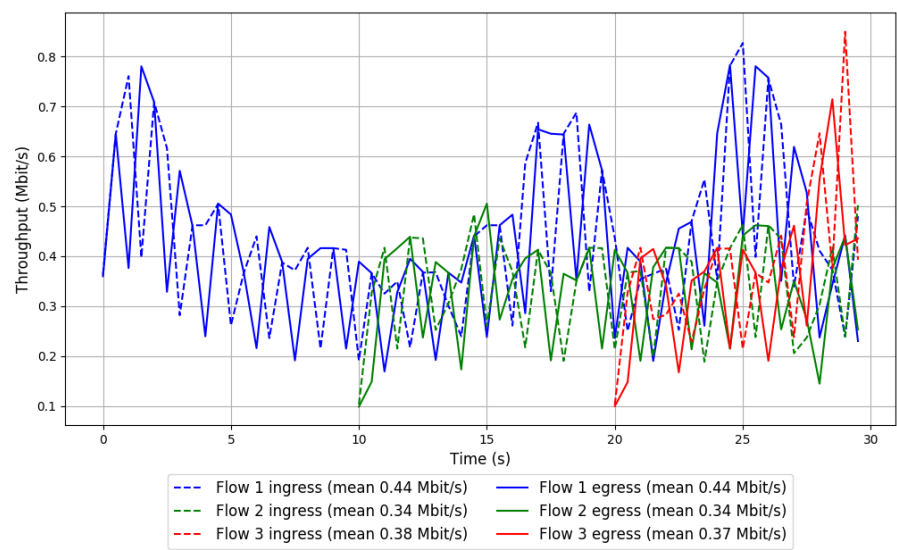
-- Flow 3:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 136.372 ms

Loss rate: 5.19%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-03-07 16:41:51

End at: 2018-03-07 16:42:21

Below is generated by plot.py at 2018-03-07 20:51:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.79 Mbit/s

95th percentile per-packet one-way delay: 140.149 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 140.176 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 140.077 ms

Loss rate: 1.43%

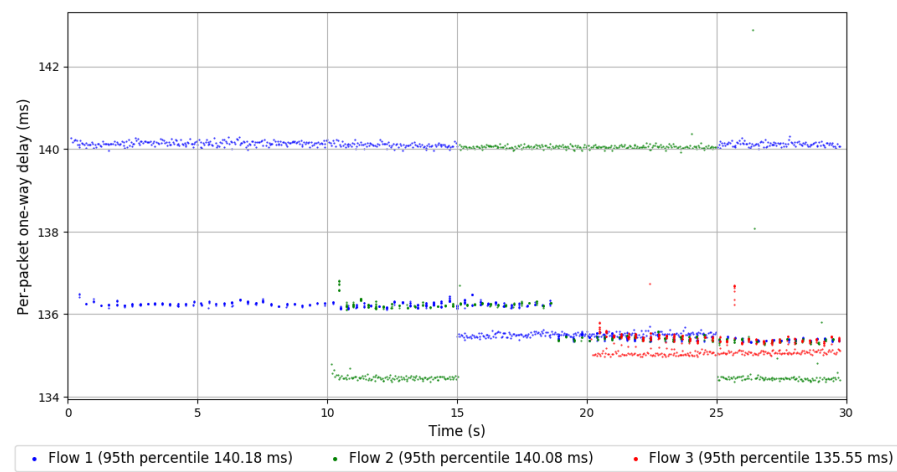
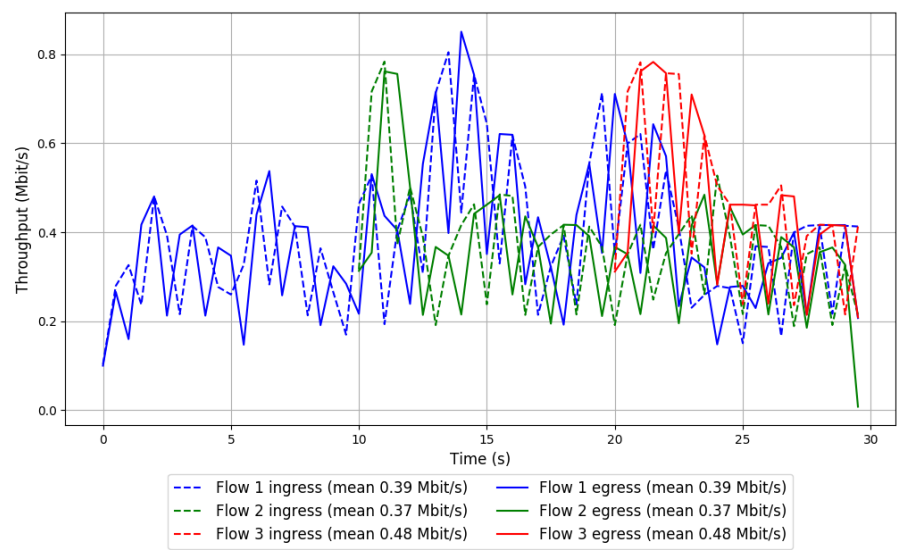
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 135.551 ms

Loss rate: 2.22%

Run 10: Report of Sprout — Data Link

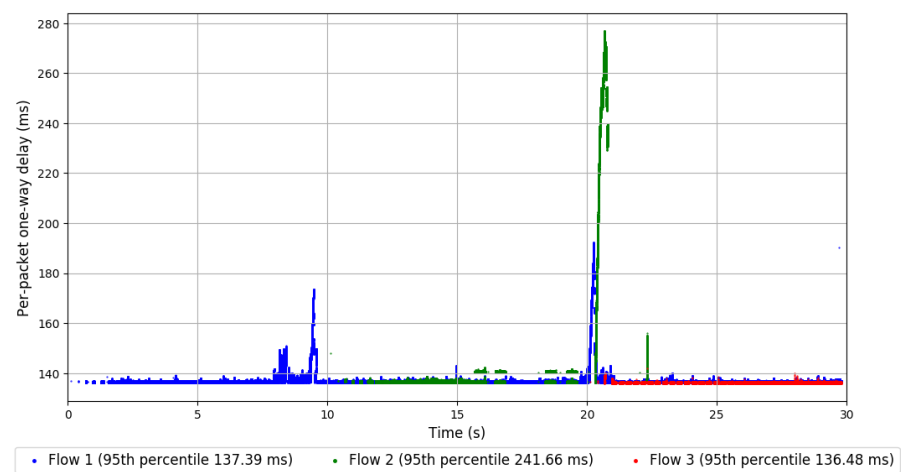
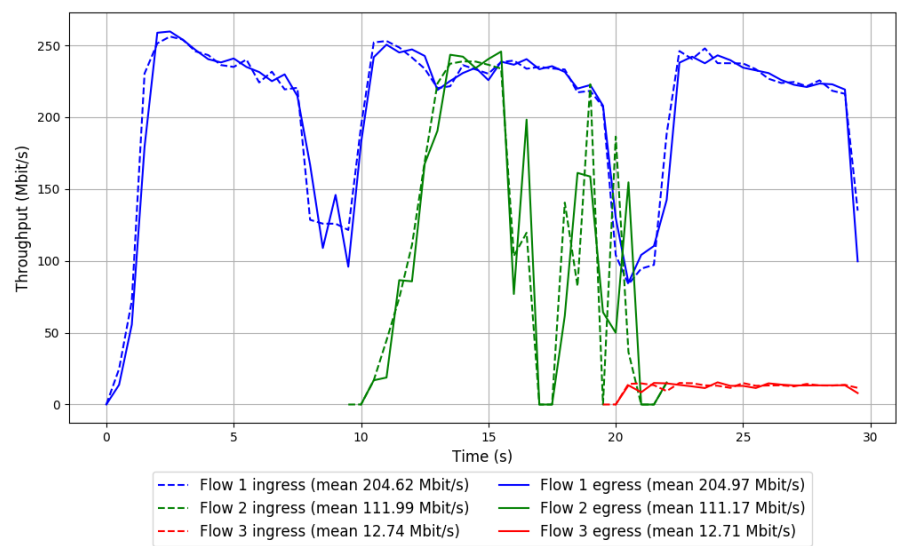


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-03-07 13:42:30
End at: 2018-03-07 13:43:00

# Below is generated by plot.py at 2018-03-07 20:53:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 254.86 Mbit/s
95th percentile per-packet one-way delay: 140.373 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 204.97 Mbit/s
95th percentile per-packet one-way delay: 137.388 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 111.17 Mbit/s
95th percentile per-packet one-way delay: 241.655 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 136.476 ms
Loss rate: 2.96%
```


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

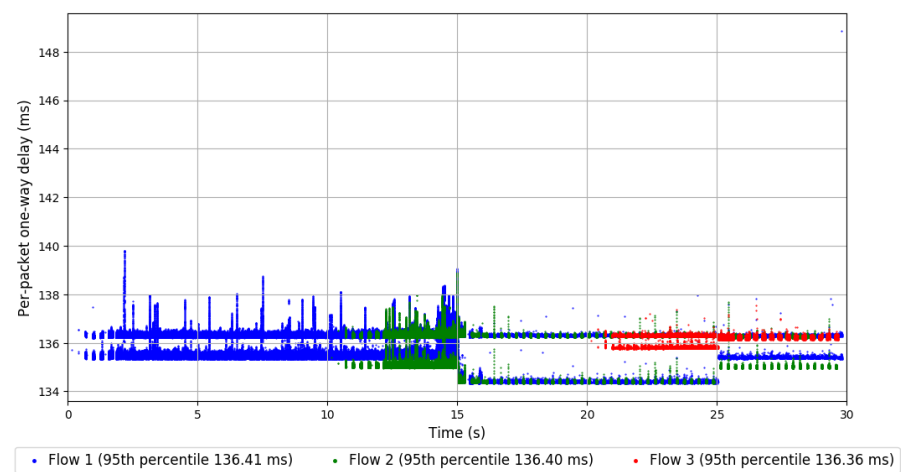
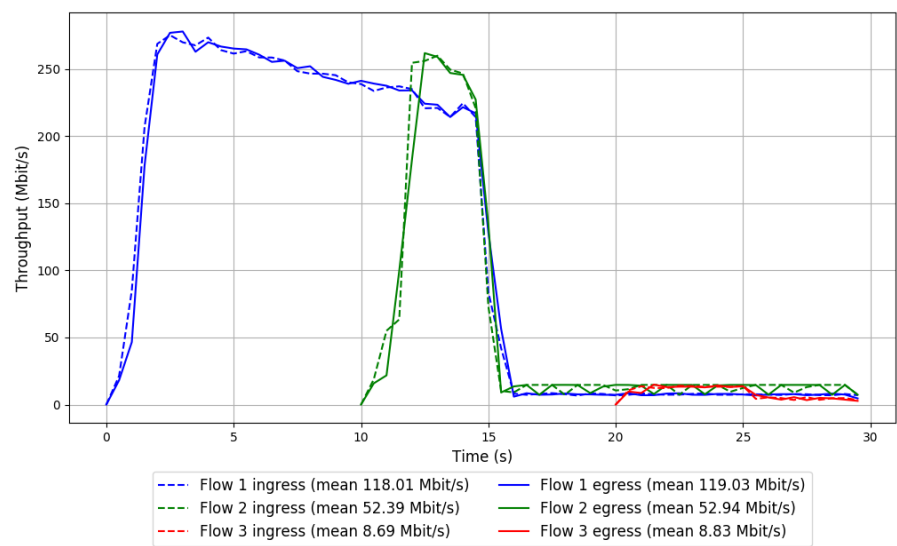


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-03-07 14:03:21
End at: 2018-03-07 14:03:51

# Below is generated by plot.py at 2018-03-07 20:53:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 156.59 Mbit/s
95th percentile per-packet one-way delay: 136.407 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 119.03 Mbit/s
95th percentile per-packet one-way delay: 136.412 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 52.94 Mbit/s
95th percentile per-packet one-way delay: 136.400 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 8.83 Mbit/s
95th percentile per-packet one-way delay: 136.358 ms
Loss rate: 1.62%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-03-07 14:24:01

End at: 2018-03-07 14:24:31

Below is generated by plot.py at 2018-03-07 20:53:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.04 Mbit/s

95th percentile per-packet one-way delay: 140.384 ms

Loss rate: 2.36%

-- Flow 1:

Average throughput: 85.50 Mbit/s

95th percentile per-packet one-way delay: 140.344 ms

Loss rate: 2.41%

-- Flow 2:

Average throughput: 12.74 Mbit/s

95th percentile per-packet one-way delay: 141.214 ms

Loss rate: 1.44%

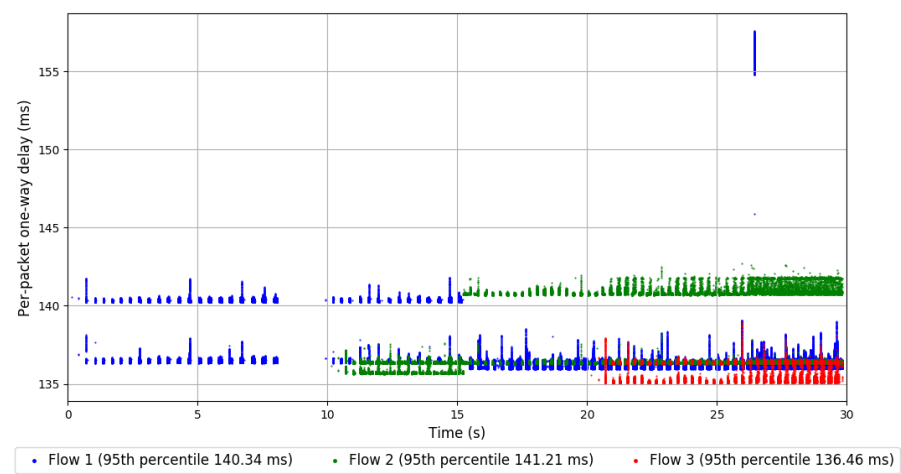
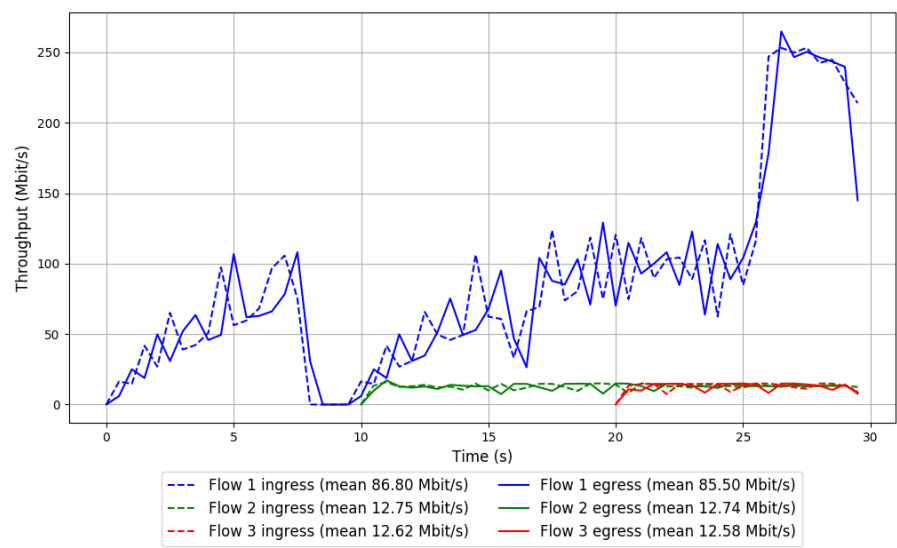
-- Flow 3:

Average throughput: 12.58 Mbit/s

95th percentile per-packet one-way delay: 136.462 ms

Loss rate: 2.99%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-03-07 14:44:06

End at: 2018-03-07 14:44:36

Below is generated by plot.py at 2018-03-07 20:53:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 26.07 Mbit/s

95th percentile per-packet one-way delay: 136.200 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 13.29 Mbit/s

95th percentile per-packet one-way delay: 136.229 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 13.00 Mbit/s

95th percentile per-packet one-way delay: 135.665 ms

Loss rate: 1.39%

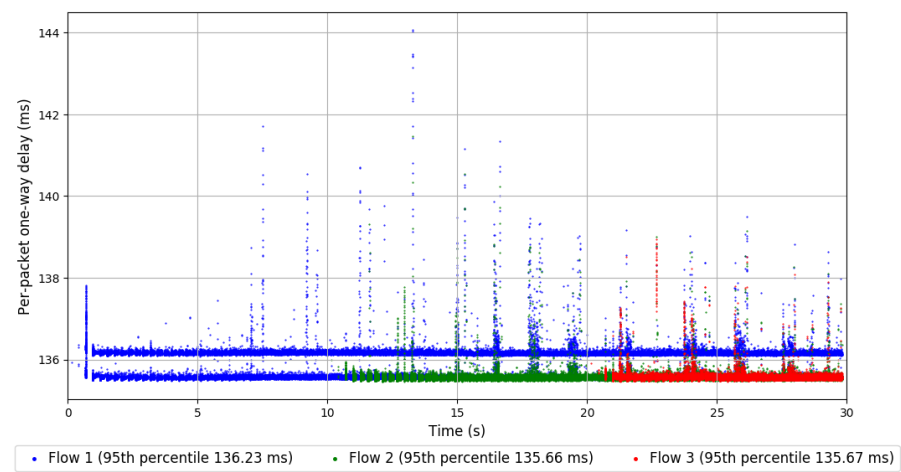
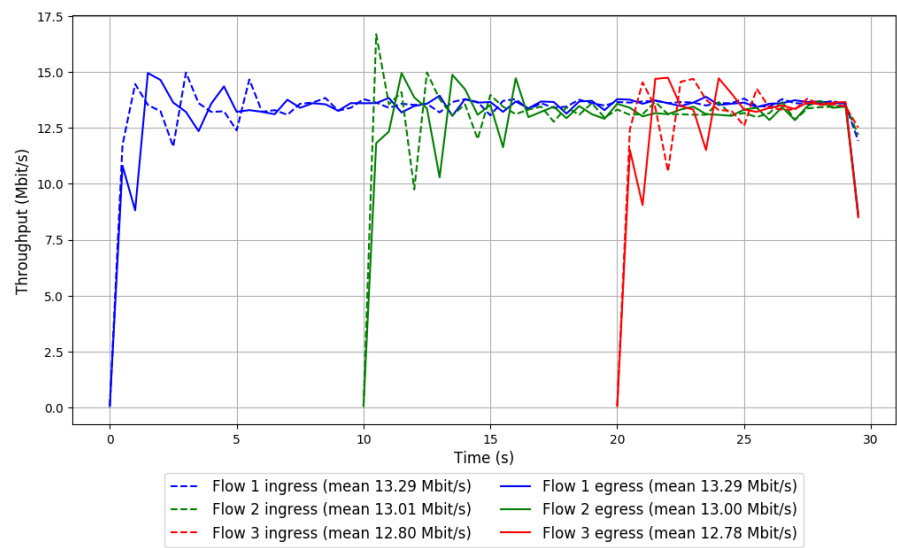
-- Flow 3:

Average throughput: 12.78 Mbit/s

95th percentile per-packet one-way delay: 135.667 ms

Loss rate: 2.93%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-03-07 15:04:23

End at: 2018-03-07 15:04:53

Below is generated by plot.py at 2018-03-07 20:53:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 189.28 Mbit/s

95th percentile per-packet one-way delay: 136.122 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 169.22 Mbit/s

95th percentile per-packet one-way delay: 136.120 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 13.30 Mbit/s

95th percentile per-packet one-way delay: 135.675 ms

Loss rate: 1.40%

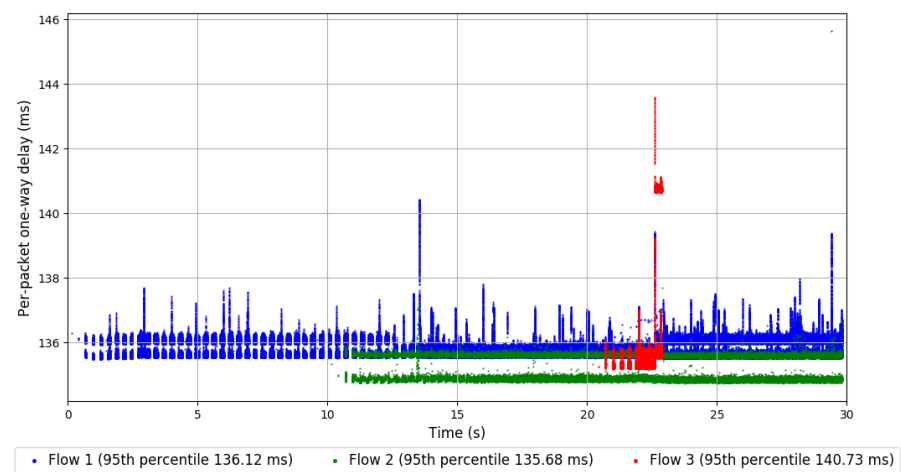
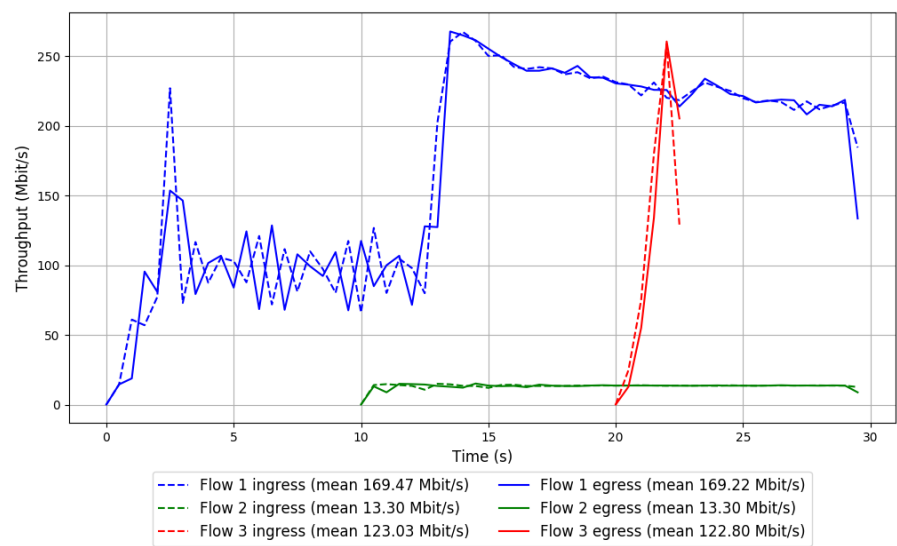
-- Flow 3:

Average throughput: 122.80 Mbit/s

95th percentile per-packet one-way delay: 140.731 ms

Loss rate: 0.00%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-03-07 15:25:16

End at: 2018-03-07 15:25:46

Below is generated by plot.py at 2018-03-07 20:53:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 213.99 Mbit/s

95th percentile per-packet one-way delay: 135.879 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 13.01 Mbit/s

95th percentile per-packet one-way delay: 136.164 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 214.74 Mbit/s

95th percentile per-packet one-way delay: 135.835 ms

Loss rate: 0.55%

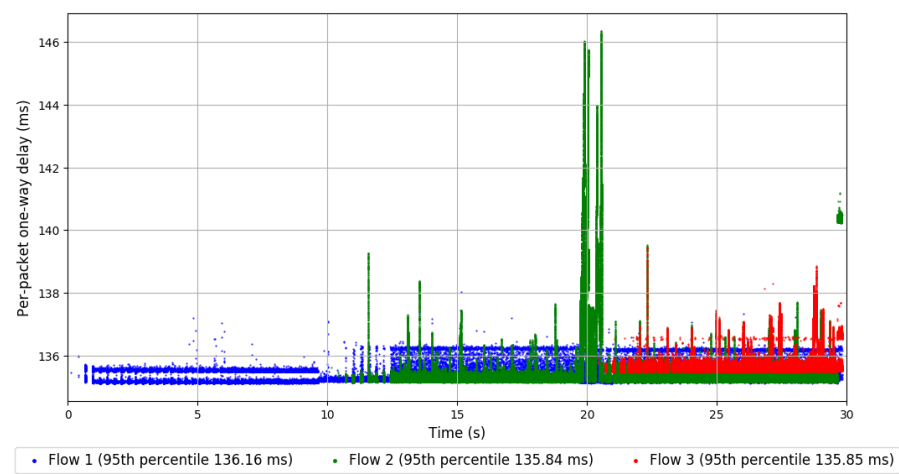
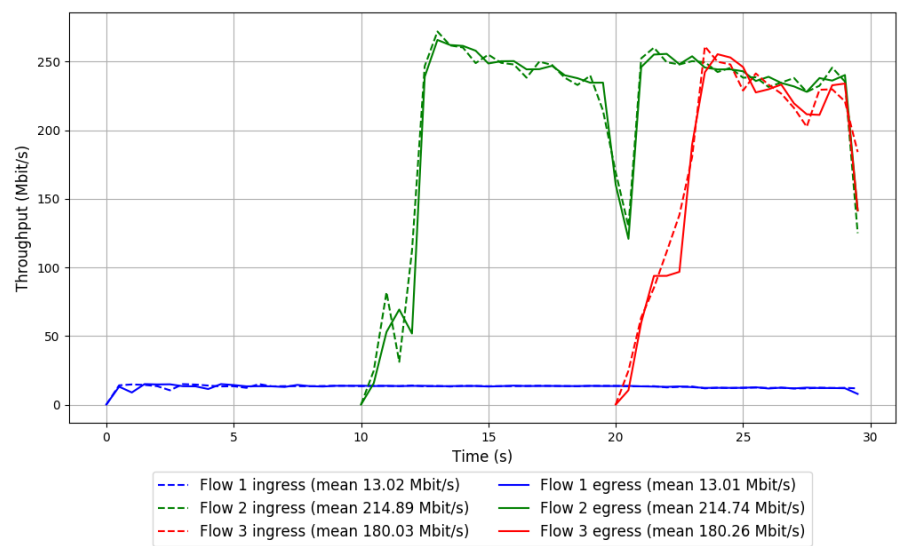
-- Flow 3:

Average throughput: 180.26 Mbit/s

95th percentile per-packet one-way delay: 135.852 ms

Loss rate: 2.61%

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

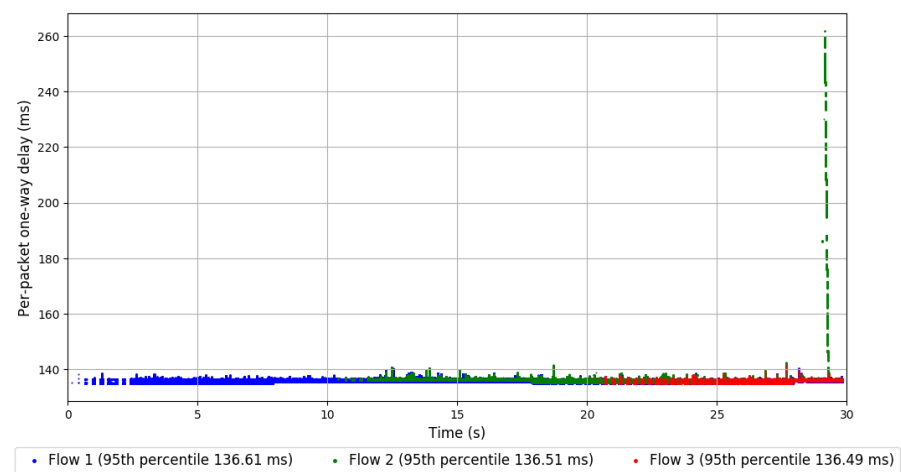
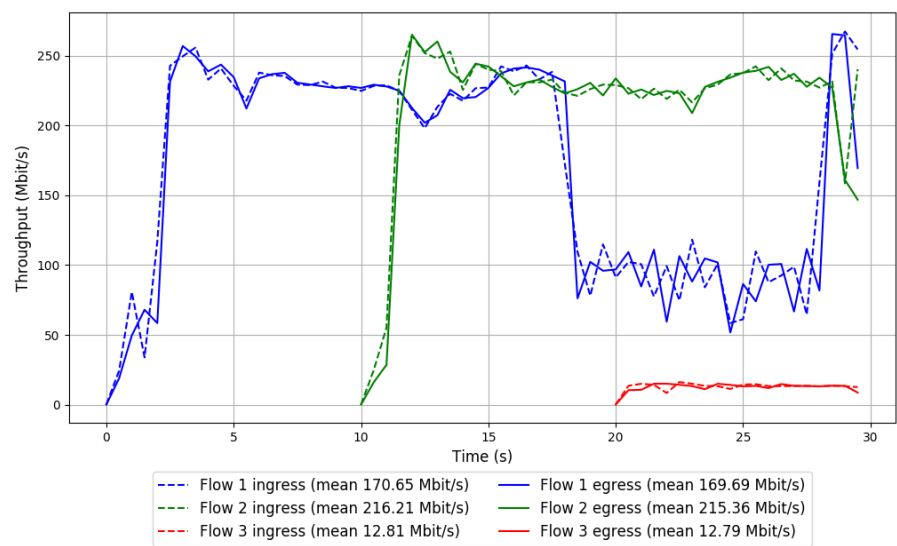


```
Run 7: Statistics of TaoVA-100x

Start at: 2018-03-07 15:45:48
End at: 2018-03-07 15:46:18

# Below is generated by plot.py at 2018-03-07 20:56:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.60 Mbit/s
95th percentile per-packet one-way delay: 136.577 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 169.69 Mbit/s
95th percentile per-packet one-way delay: 136.614 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 215.36 Mbit/s
95th percentile per-packet one-way delay: 136.514 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 12.79 Mbit/s
95th percentile per-packet one-way delay: 136.485 ms
Loss rate: 2.93%
```

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-03-07 16:06:12

End at: 2018-03-07 16:06:42

Below is generated by plot.py at 2018-03-07 20:56:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.21 Mbit/s

95th percentile per-packet one-way delay: 136.547 ms

Loss rate: 2.75%

-- Flow 1:

Average throughput: 11.66 Mbit/s

95th percentile per-packet one-way delay: 136.812 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 12.99 Mbit/s

95th percentile per-packet one-way delay: 136.299 ms

Loss rate: 1.44%

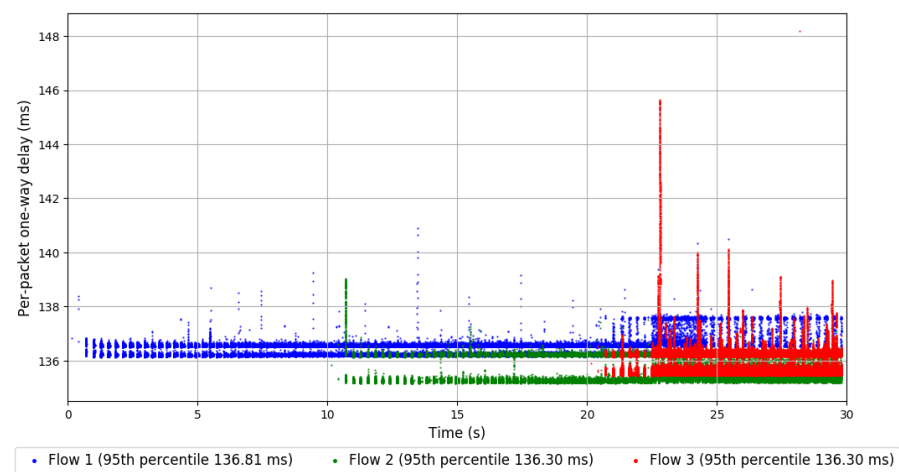
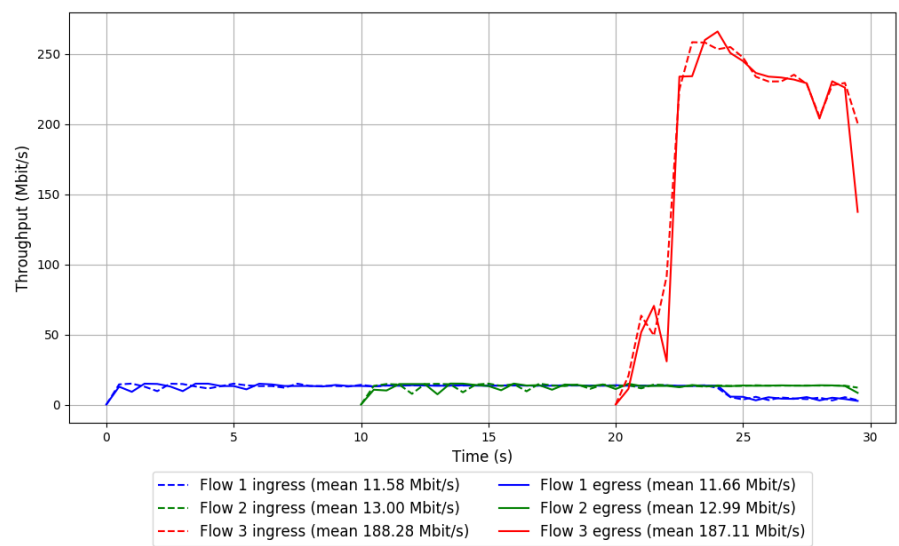
-- Flow 3:

Average throughput: 187.11 Mbit/s

95th percentile per-packet one-way delay: 136.296 ms

Loss rate: 3.39%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-03-07 16:26:24

End at: 2018-03-07 16:26:54

Below is generated by plot.py at 2018-03-07 20:56:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.09 Mbit/s

95th percentile per-packet one-way delay: 140.045 ms

Loss rate: 2.53%

-- Flow 1:

Average throughput: 13.27 Mbit/s

95th percentile per-packet one-way delay: 136.210 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 18.16 Mbit/s

95th percentile per-packet one-way delay: 140.257 ms

Loss rate: 0.60%

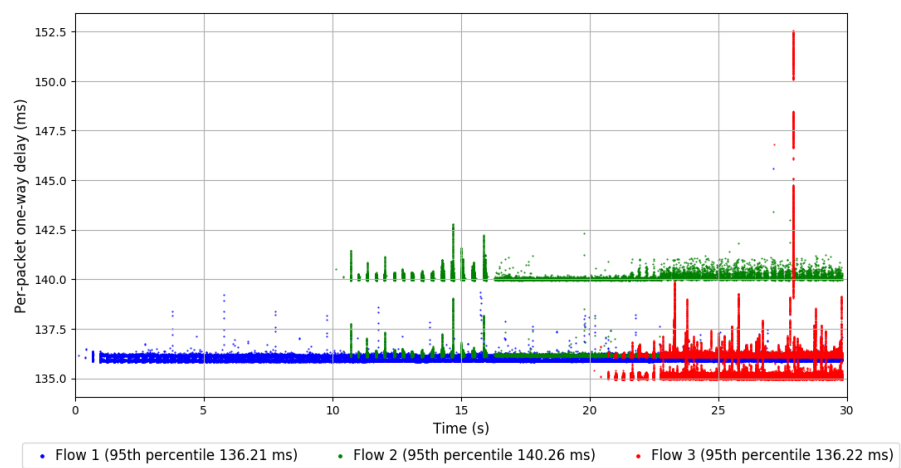
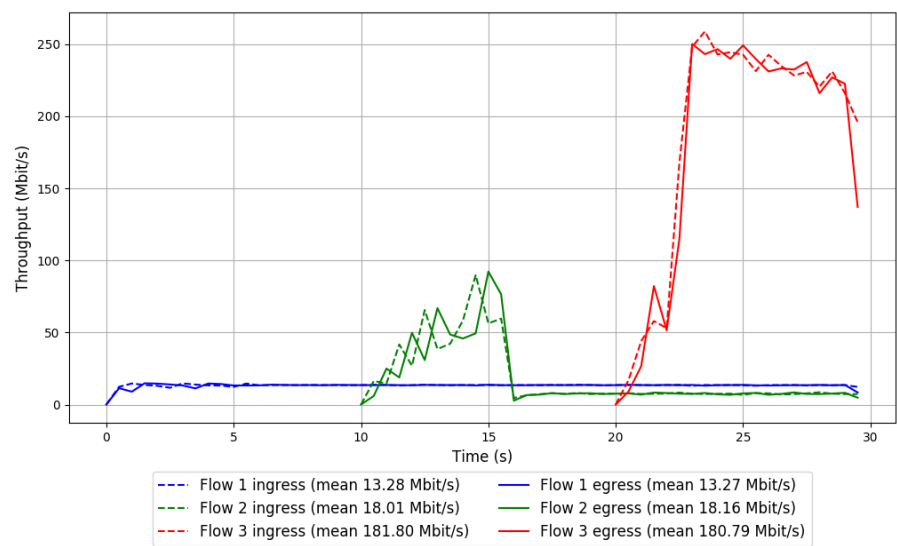
-- Flow 3:

Average throughput: 180.79 Mbit/s

95th percentile per-packet one-way delay: 136.216 ms

Loss rate: 3.27%

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

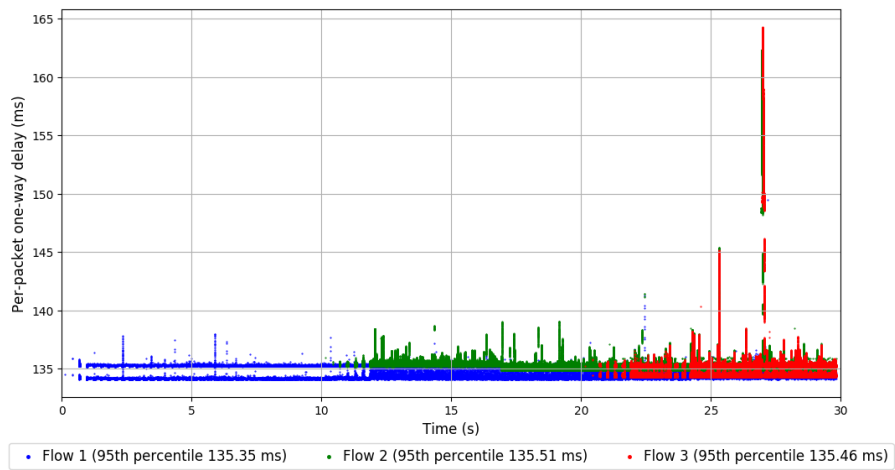
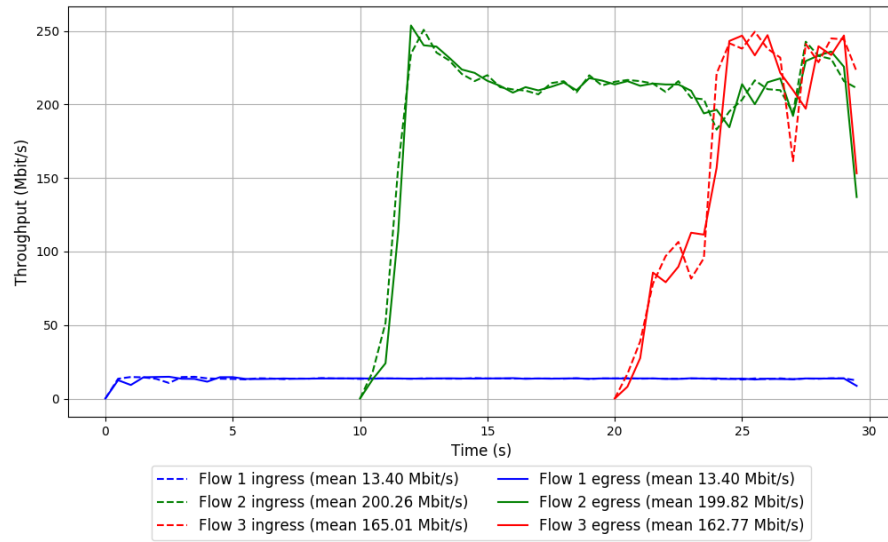


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-03-07 16:46:39
End at: 2018-03-07 16:47:09

# Below is generated by plot.py at 2018-03-07 20:57:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 198.70 Mbit/s
95th percentile per-packet one-way delay: 135.500 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 13.40 Mbit/s
95th percentile per-packet one-way delay: 135.355 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 199.82 Mbit/s
95th percentile per-packet one-way delay: 135.513 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 162.77 Mbit/s
95th percentile per-packet one-way delay: 135.459 ms
Loss rate: 4.08%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-03-07 13:30:43

End at: 2018-03-07 13:31:13

Below is generated by plot.py at 2018-03-07 20:57:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.91 Mbit/s

95th percentile per-packet one-way delay: 140.181 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 25.25 Mbit/s

95th percentile per-packet one-way delay: 139.797 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 64.75 Mbit/s

95th percentile per-packet one-way delay: 139.656 ms

Loss rate: 1.55%

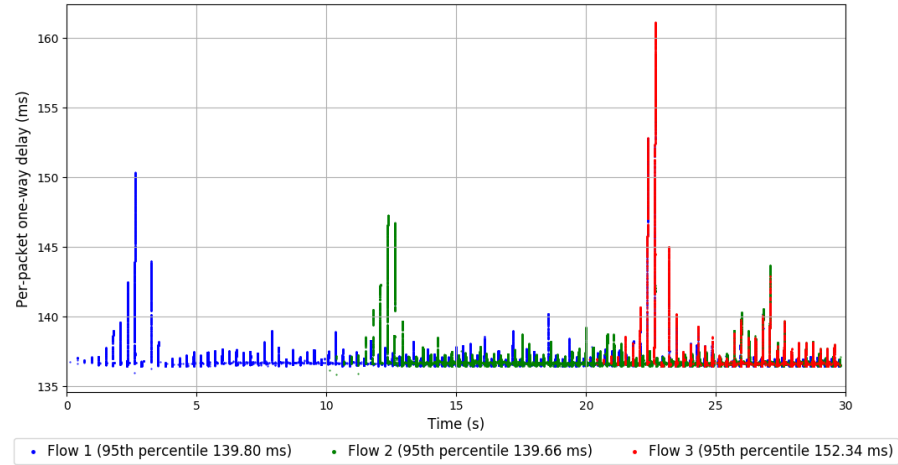
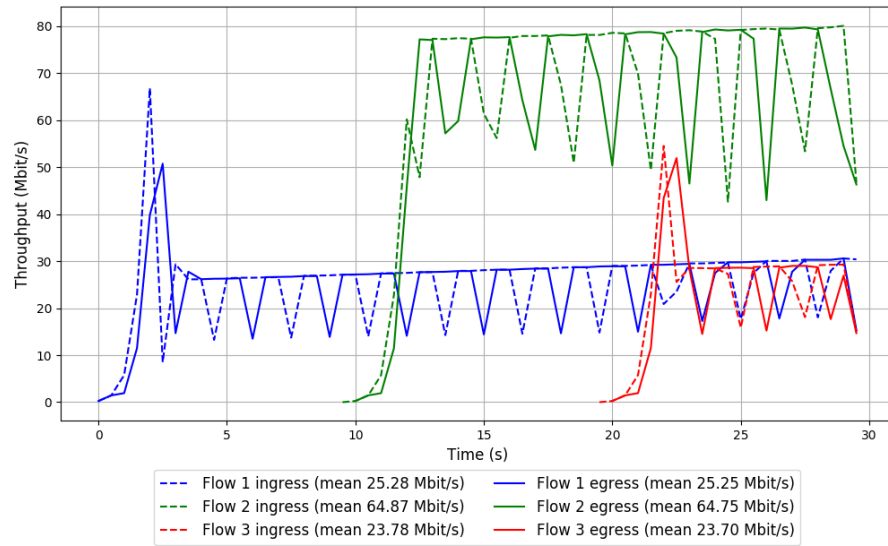
-- Flow 3:

Average throughput: 23.70 Mbit/s

95th percentile per-packet one-way delay: 152.342 ms

Loss rate: 3.12%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-03-07 13:51:15

End at: 2018-03-07 13:51:45

Below is generated by plot.py at 2018-03-07 20:57:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 50.90 Mbit/s

95th percentile per-packet one-way delay: 144.279 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 23.75 Mbit/s

95th percentile per-packet one-way delay: 141.049 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 25.59 Mbit/s

95th percentile per-packet one-way delay: 145.110 ms

Loss rate: 1.27%

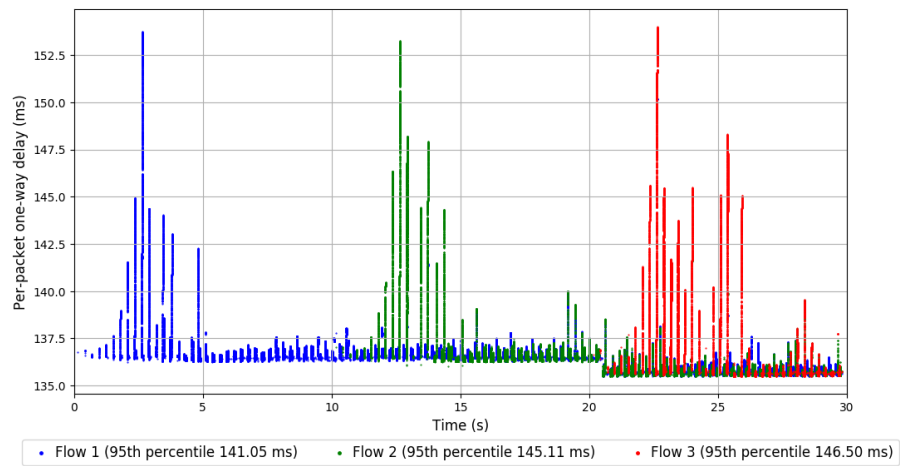
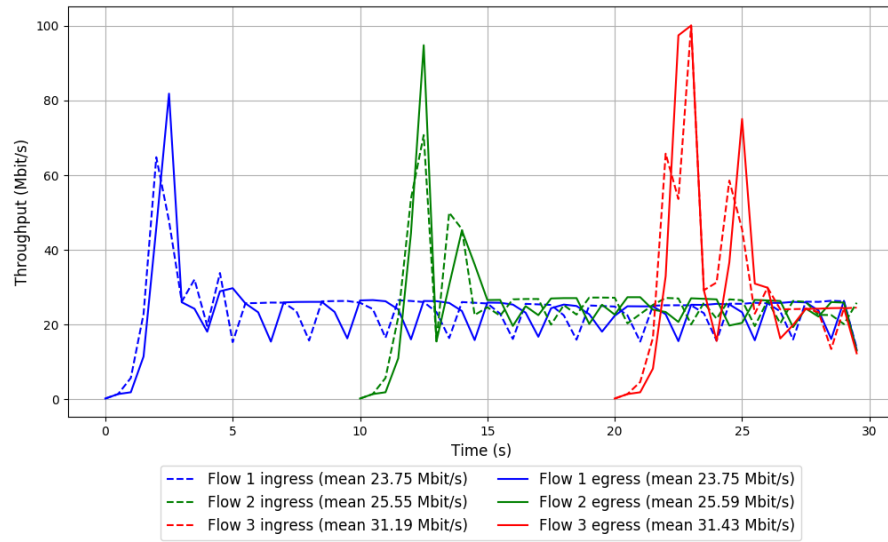
-- Flow 3:

Average throughput: 31.43 Mbit/s

95th percentile per-packet one-way delay: 146.499 ms

Loss rate: 2.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-03-07 14:11:52

End at: 2018-03-07 14:12:22

Below is generated by plot.py at 2018-03-07 20:57:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 127.13 Mbit/s

95th percentile per-packet one-way delay: 143.072 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 52.04 Mbit/s

95th percentile per-packet one-way delay: 139.747 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 79.56 Mbit/s

95th percentile per-packet one-way delay: 143.420 ms

Loss rate: 1.53%

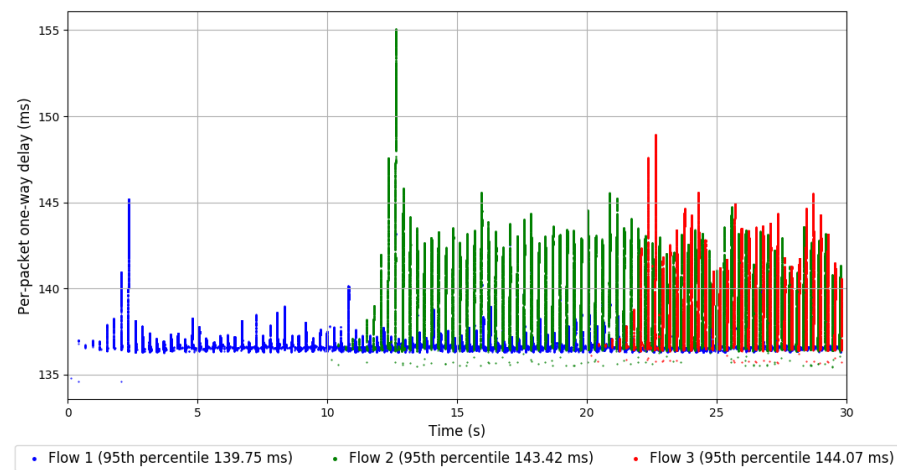
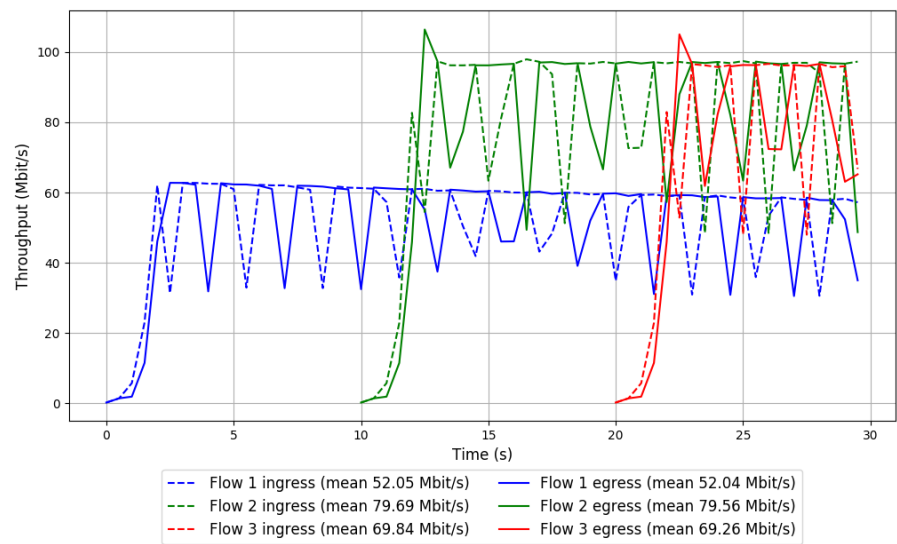
-- Flow 3:

Average throughput: 69.26 Mbit/s

95th percentile per-packet one-way delay: 144.071 ms

Loss rate: 3.57%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-03-07 14:32:16

End at: 2018-03-07 14:32:46

Below is generated by plot.py at 2018-03-07 20:57:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.22 Mbit/s

95th percentile per-packet one-way delay: 143.668 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 33.66 Mbit/s

95th percentile per-packet one-way delay: 139.977 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 79.72 Mbit/s

95th percentile per-packet one-way delay: 144.083 ms

Loss rate: 1.52%

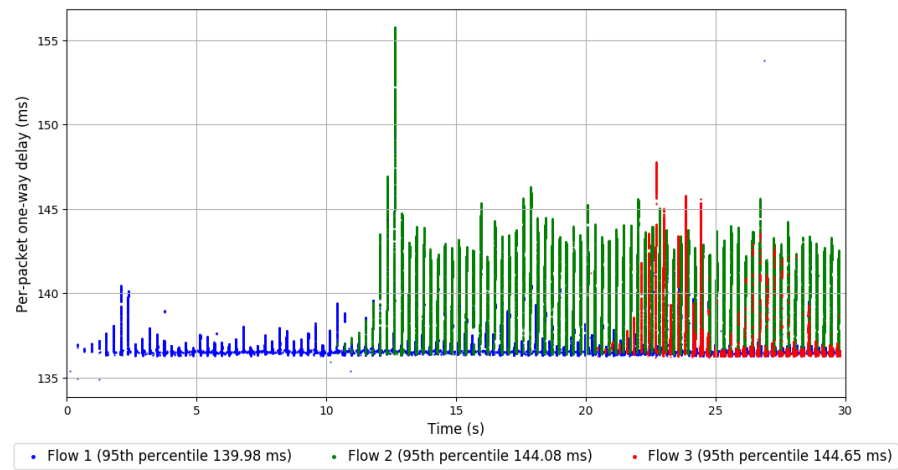
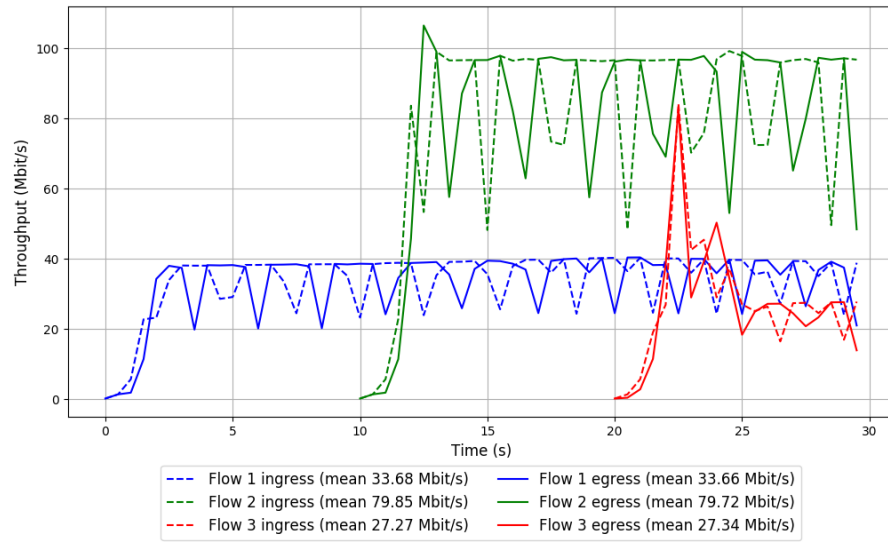
-- Flow 3:

Average throughput: 27.34 Mbit/s

95th percentile per-packet one-way delay: 144.651 ms

Loss rate: 2.58%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-03-07 14:52:23

End at: 2018-03-07 14:52:53

Below is generated by plot.py at 2018-03-07 20:57:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 115.52 Mbit/s

95th percentile per-packet one-way delay: 142.299 ms

Loss rate: 1.63%

-- Flow 1:

Average throughput: 62.80 Mbit/s

95th percentile per-packet one-way delay: 137.449 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 44.51 Mbit/s

95th percentile per-packet one-way delay: 142.378 ms

Loss rate: 1.53%

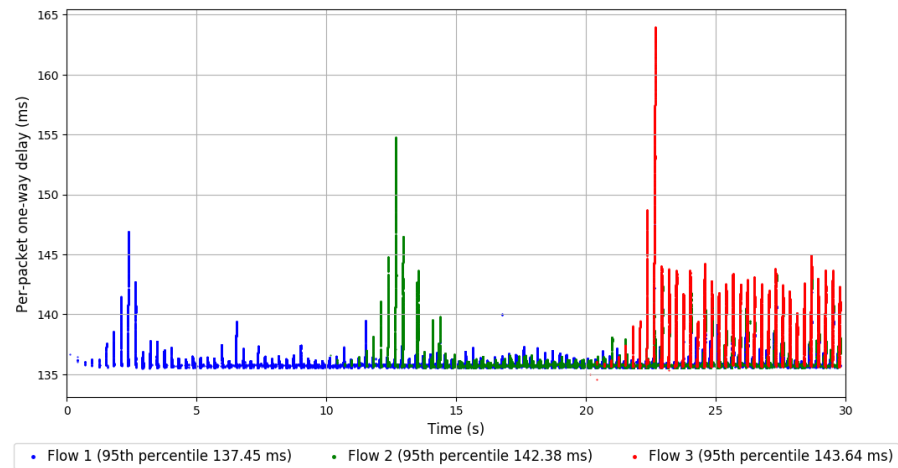
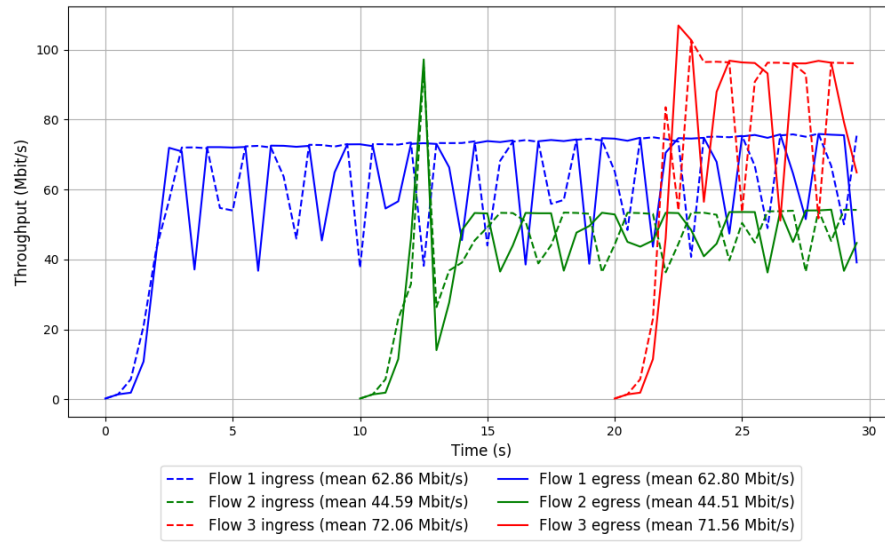
-- Flow 3:

Average throughput: 71.56 Mbit/s

95th percentile per-packet one-way delay: 143.642 ms

Loss rate: 3.37%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-03-07 15:13:02

End at: 2018-03-07 15:13:32

Below is generated by plot.py at 2018-03-07 20:57:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.76 Mbit/s

95th percentile per-packet one-way delay: 139.304 ms

Loss rate: 1.63%

-- Flow 1:

Average throughput: 38.41 Mbit/s

95th percentile per-packet one-way delay: 139.232 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 27.78 Mbit/s

95th percentile per-packet one-way delay: 140.066 ms

Loss rate: 1.47%

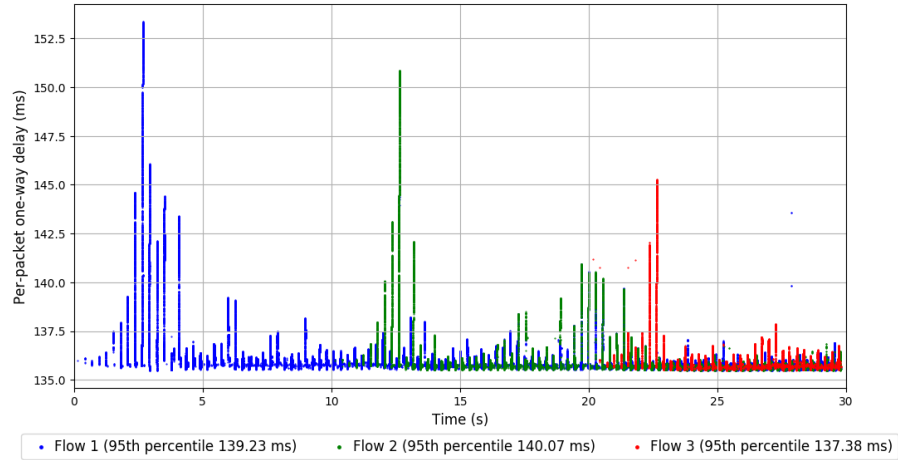
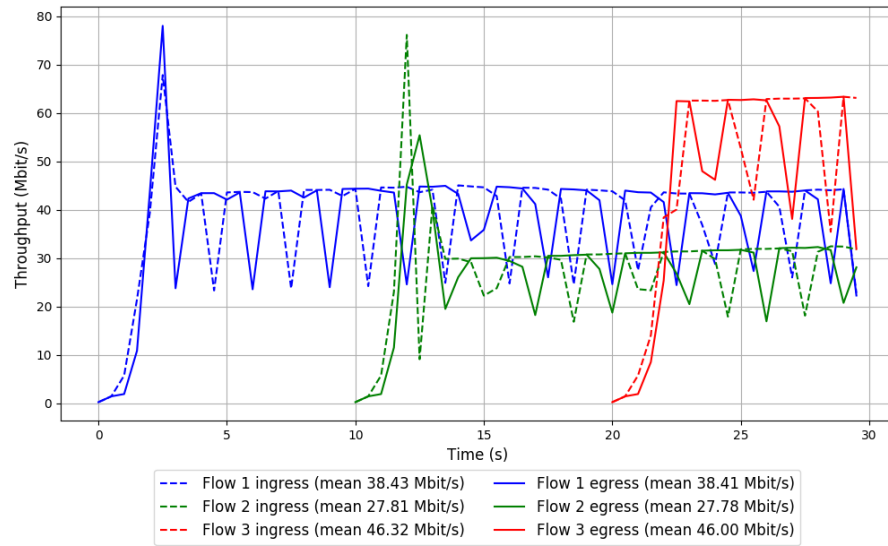
-- Flow 3:

Average throughput: 46.00 Mbit/s

95th percentile per-packet one-way delay: 137.377 ms

Loss rate: 3.46%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-03-07 15:33:51

End at: 2018-03-07 15:34:21

Below is generated by plot.py at 2018-03-07 20:57:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.08 Mbit/s

95th percentile per-packet one-way delay: 140.763 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 37.13 Mbit/s

95th percentile per-packet one-way delay: 139.629 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 31.80 Mbit/s

95th percentile per-packet one-way delay: 141.582 ms

Loss rate: 1.38%

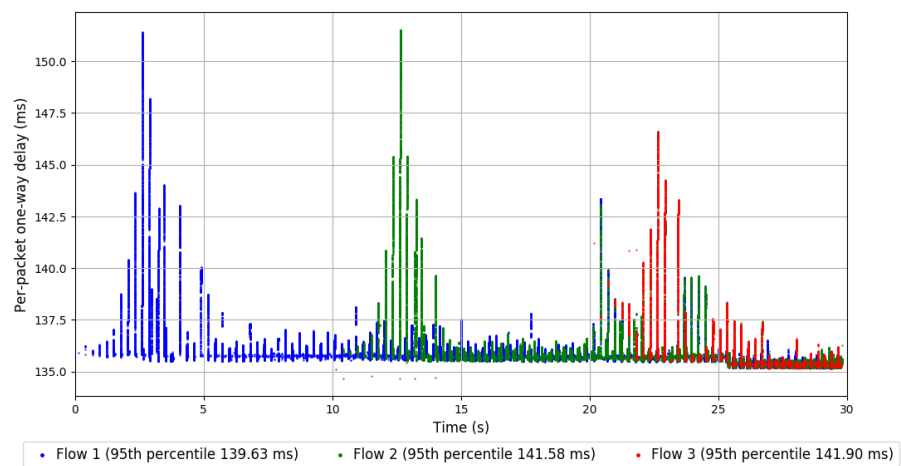
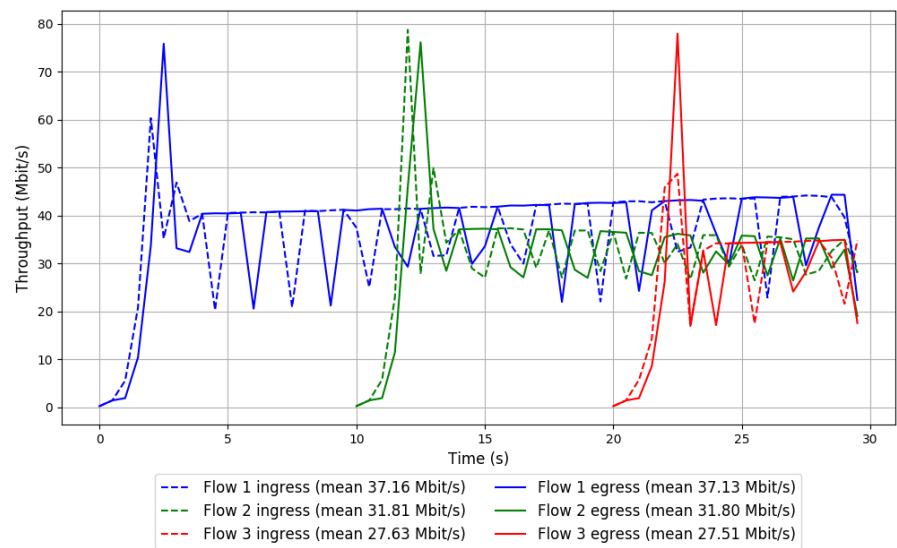
-- Flow 3:

Average throughput: 27.51 Mbit/s

95th percentile per-packet one-way delay: 141.901 ms

Loss rate: 3.21%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-03-07 15:54:21

End at: 2018-03-07 15:54:51

Below is generated by plot.py at 2018-03-07 20:57:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.74 Mbit/s

95th percentile per-packet one-way delay: 138.642 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 57.77 Mbit/s

95th percentile per-packet one-way delay: 138.298 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 27.33 Mbit/s

95th percentile per-packet one-way delay: 140.771 ms

Loss rate: 1.49%

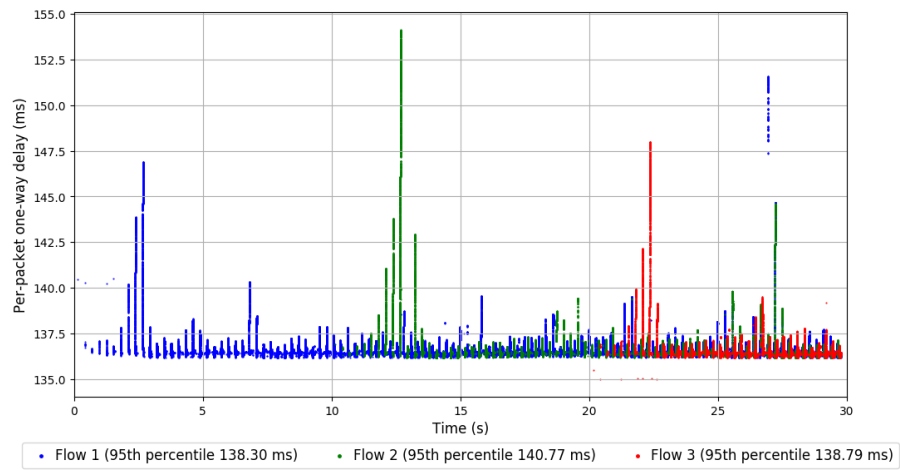
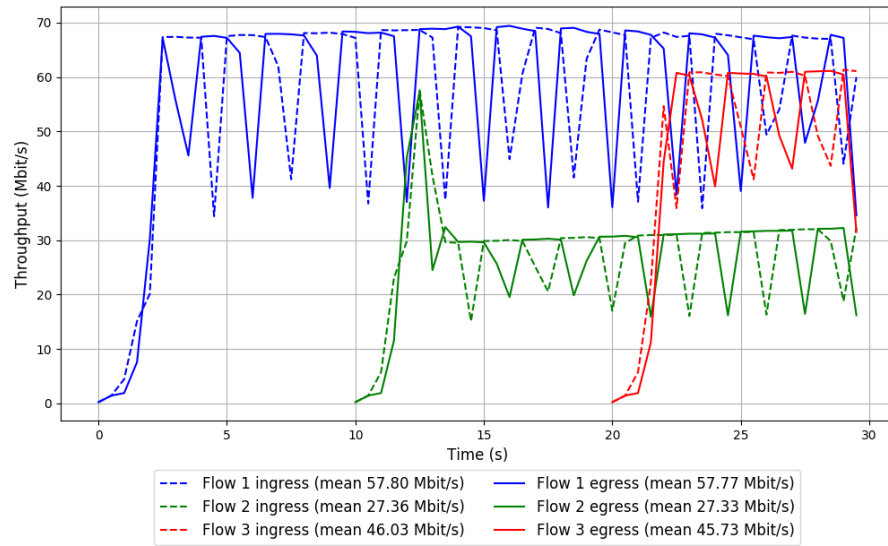
-- Flow 3:

Average throughput: 45.73 Mbit/s

95th percentile per-packet one-way delay: 138.789 ms

Loss rate: 3.36%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-03-07 16:14:25

End at: 2018-03-07 16:14:55

Below is generated by plot.py at 2018-03-07 20:57:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.60 Mbit/s

95th percentile per-packet one-way delay: 139.681 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 31.03 Mbit/s

95th percentile per-packet one-way delay: 139.255 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 62.40 Mbit/s

95th percentile per-packet one-way delay: 139.671 ms

Loss rate: 1.54%

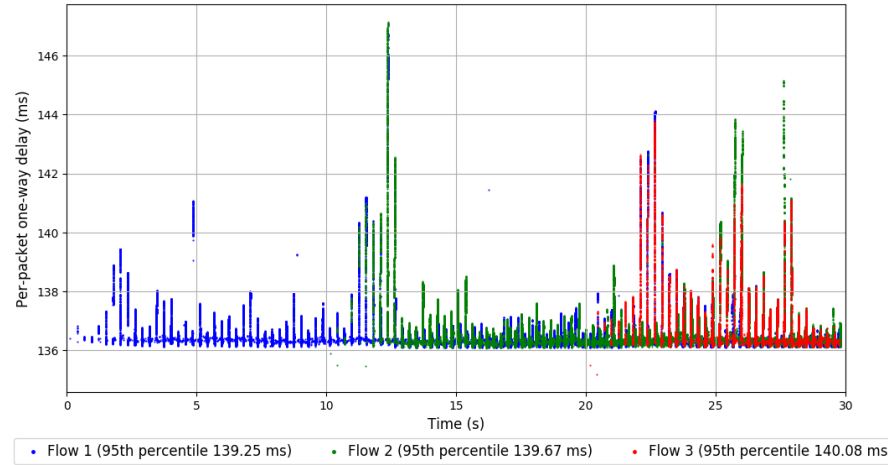
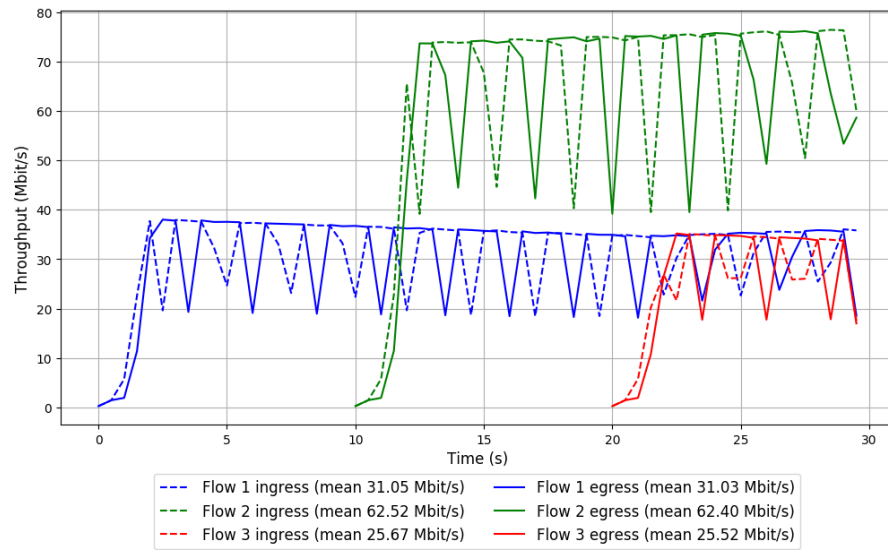
-- Flow 3:

Average throughput: 25.52 Mbit/s

95th percentile per-packet one-way delay: 140.081 ms

Loss rate: 3.34%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-03-07 16:34:37

End at: 2018-03-07 16:35:07

Below is generated by plot.py at 2018-03-07 20:57:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.88 Mbit/s

95th percentile per-packet one-way delay: 139.348 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 27.76 Mbit/s

95th percentile per-packet one-way delay: 139.812 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 51.73 Mbit/s

95th percentile per-packet one-way delay: 137.825 ms

Loss rate: 1.51%

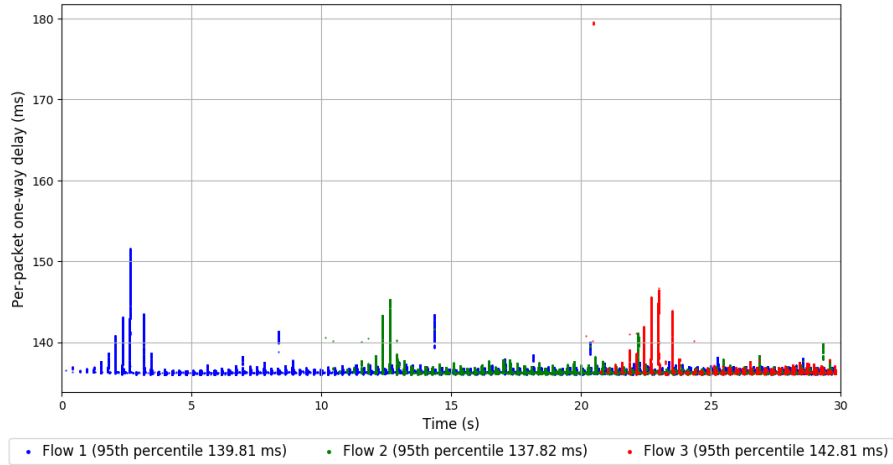
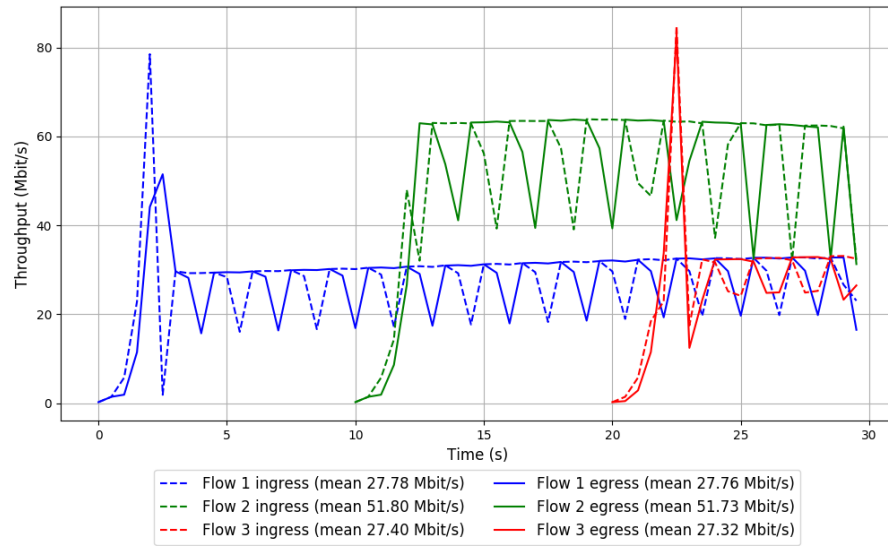
-- Flow 3:

Average throughput: 27.32 Mbit/s

95th percentile per-packet one-way delay: 142.814 ms

Loss rate: 3.07%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-03-07 13:36:46

End at: 2018-03-07 13:37:16

Below is generated by plot.py at 2018-03-07 20:57:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 166.11 Mbit/s

95th percentile per-packet one-way delay: 327.673 ms

Loss rate: 7.77%

-- Flow 1:

Average throughput: 86.77 Mbit/s

95th percentile per-packet one-way delay: 160.974 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 103.72 Mbit/s

95th percentile per-packet one-way delay: 363.339 ms

Loss rate: 16.07%

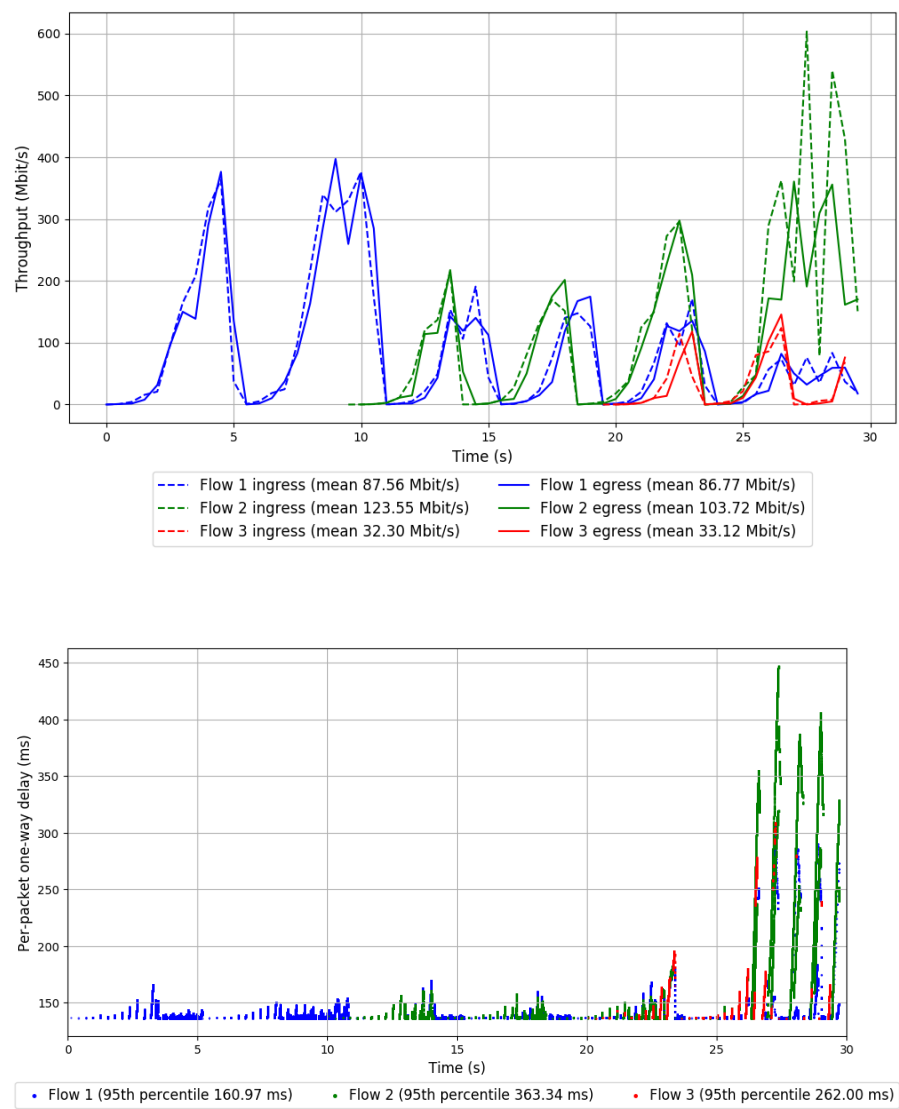
-- Flow 3:

Average throughput: 33.12 Mbit/s

95th percentile per-packet one-way delay: 261.999 ms

Loss rate: 0.47%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-03-07 13:57:20

End at: 2018-03-07 13:57:50

Below is generated by plot.py at 2018-03-07 20:57:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 202.41 Mbit/s

95th percentile per-packet one-way delay: 166.187 ms

Loss rate: 1.73%

-- Flow 1:

Average throughput: 68.73 Mbit/s

95th percentile per-packet one-way delay: 150.812 ms

Loss rate: 1.73%

-- Flow 2:

Average throughput: 154.60 Mbit/s

95th percentile per-packet one-way delay: 161.033 ms

Loss rate: 0.01%

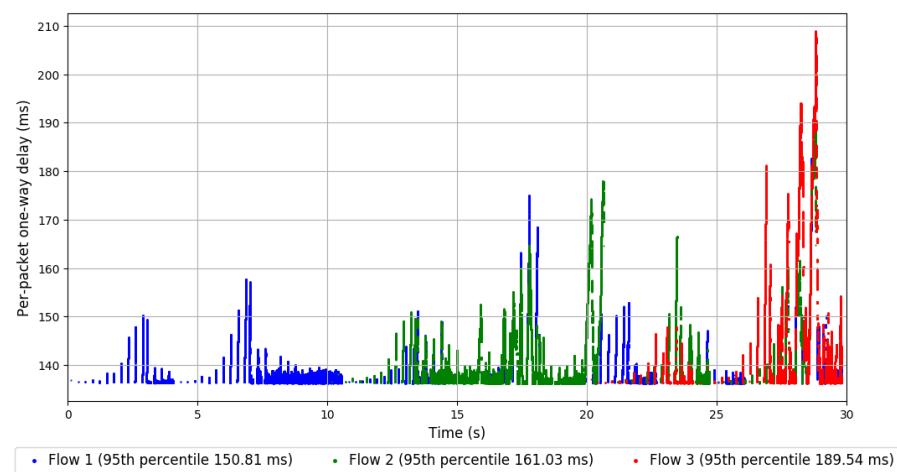
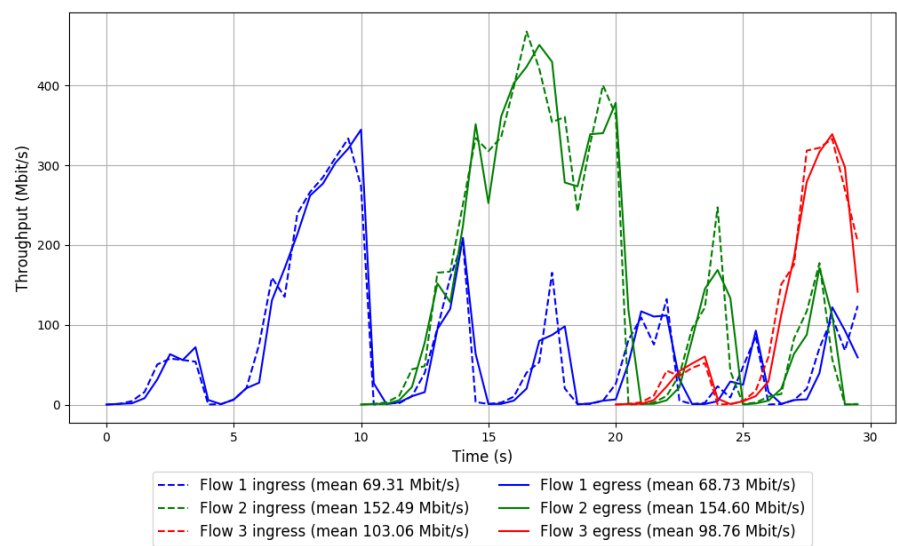
-- Flow 3:

Average throughput: 98.76 Mbit/s

95th percentile per-packet one-way delay: 189.541 ms

Loss rate: 6.81%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-03-07 14:18:00

End at: 2018-03-07 14:18:30

Below is generated by plot.py at 2018-03-07 20:58:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 247.87 Mbit/s

95th percentile per-packet one-way delay: 221.763 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 103.76 Mbit/s

95th percentile per-packet one-way delay: 166.133 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 134.73 Mbit/s

95th percentile per-packet one-way delay: 221.388 ms

Loss rate: 0.37%

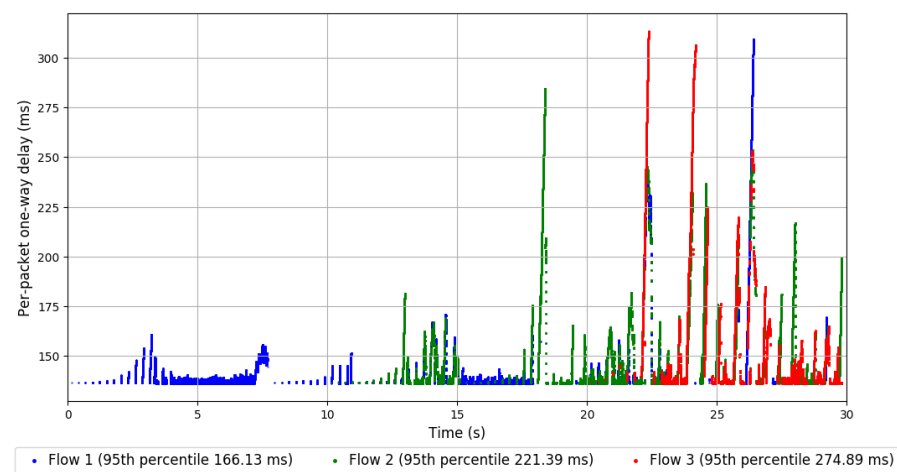
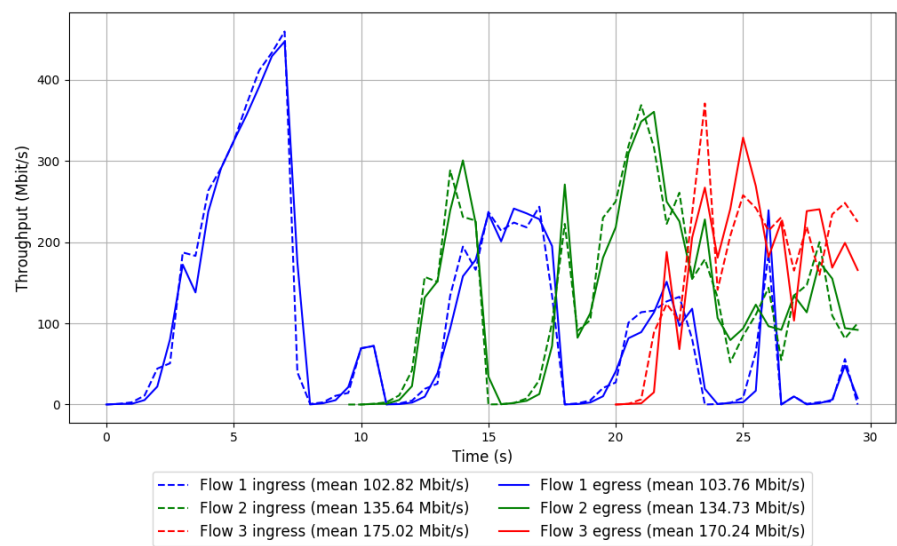
-- Flow 3:

Average throughput: 170.24 Mbit/s

95th percentile per-packet one-way delay: 274.888 ms

Loss rate: 5.34%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-03-07 14:38:12

End at: 2018-03-07 14:38:42

Below is generated by plot.py at 2018-03-07 20:58:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 199.15 Mbit/s

95th percentile per-packet one-way delay: 189.888 ms

Loss rate: 1.84%

-- Flow 1:

Average throughput: 97.17 Mbit/s

95th percentile per-packet one-way delay: 176.480 ms

Loss rate: 1.59%

-- Flow 2:

Average throughput: 113.74 Mbit/s

95th percentile per-packet one-way delay: 191.479 ms

Loss rate: 1.00%

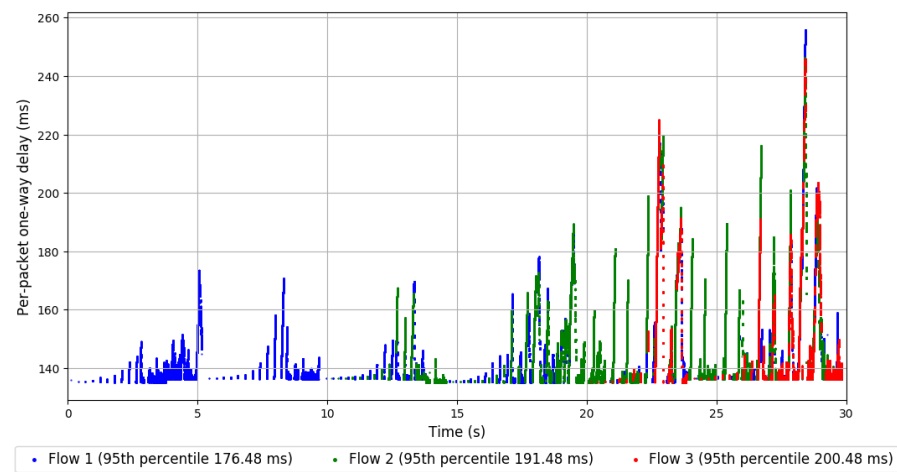
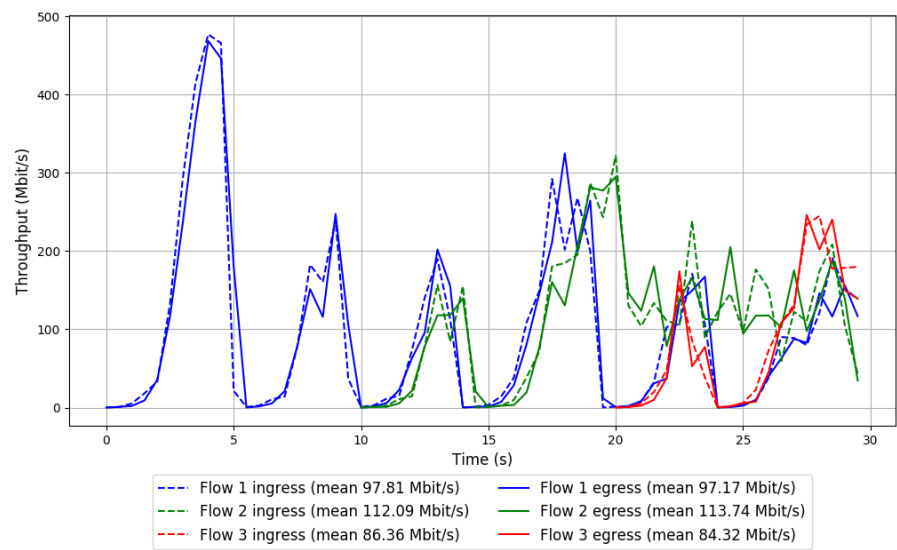
-- Flow 3:

Average throughput: 84.32 Mbit/s

95th percentile per-packet one-way delay: 200.481 ms

Loss rate: 4.89%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-03-07 14:58:27

End at: 2018-03-07 14:58:57

Below is generated by plot.py at 2018-03-07 20:58:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 205.74 Mbit/s

95th percentile per-packet one-way delay: 202.936 ms

Loss rate: 3.04%

-- Flow 1:

Average throughput: 137.83 Mbit/s

95th percentile per-packet one-way delay: 225.782 ms

Loss rate: 3.74%

-- Flow 2:

Average throughput: 68.78 Mbit/s

95th percentile per-packet one-way delay: 160.330 ms

Loss rate: 2.07%

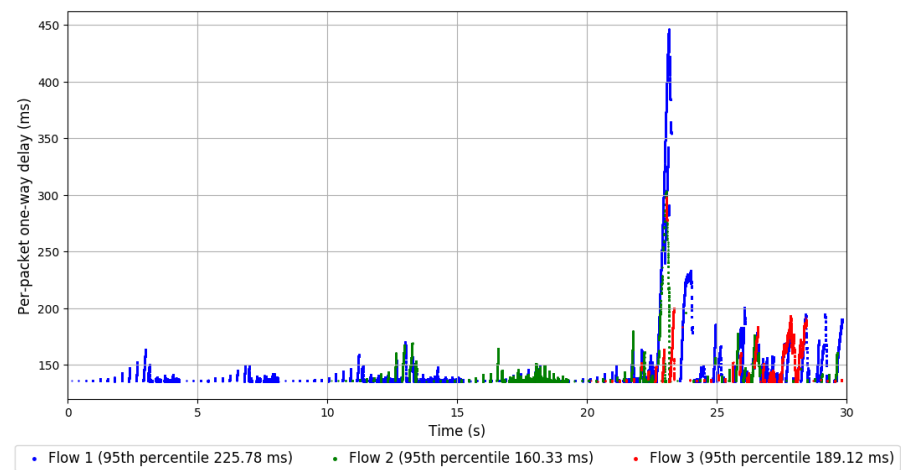
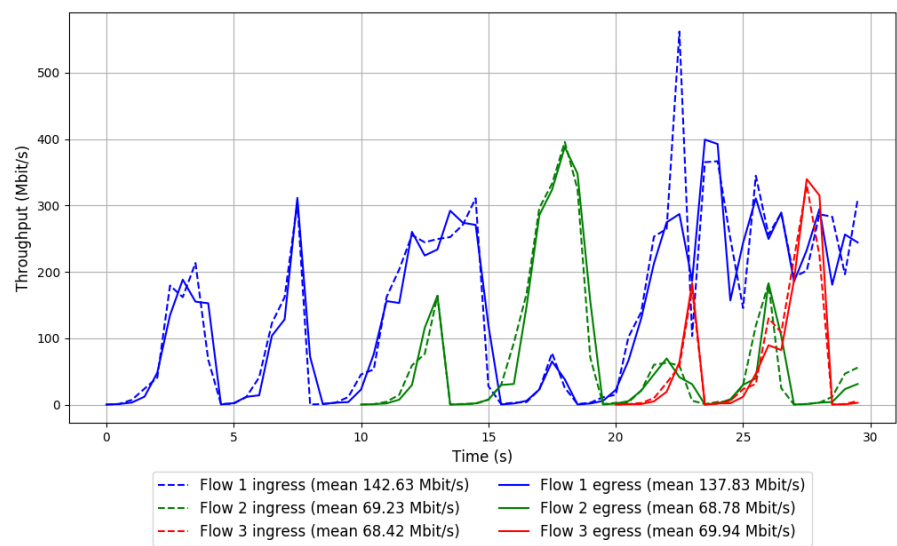
-- Flow 3:

Average throughput: 69.94 Mbit/s

95th percentile per-packet one-way delay: 189.116 ms

Loss rate: 0.60%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-03-07 15:19:13

End at: 2018-03-07 15:19:43

Below is generated by plot.py at 2018-03-07 21:00:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 279.56 Mbit/s

95th percentile per-packet one-way delay: 238.824 ms

Loss rate: 2.86%

-- Flow 1:

Average throughput: 186.85 Mbit/s

95th percentile per-packet one-way delay: 227.857 ms

Loss rate: 1.34%

-- Flow 2:

Average throughput: 88.75 Mbit/s

95th percentile per-packet one-way delay: 216.288 ms

Loss rate: 5.66%

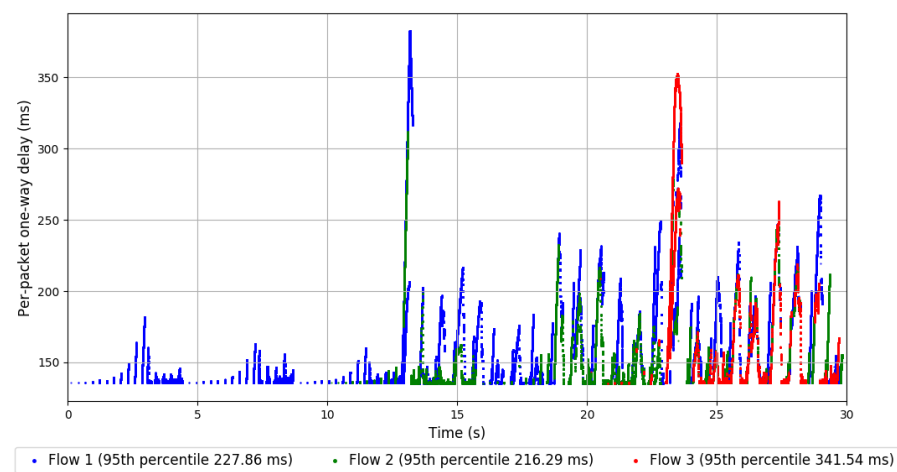
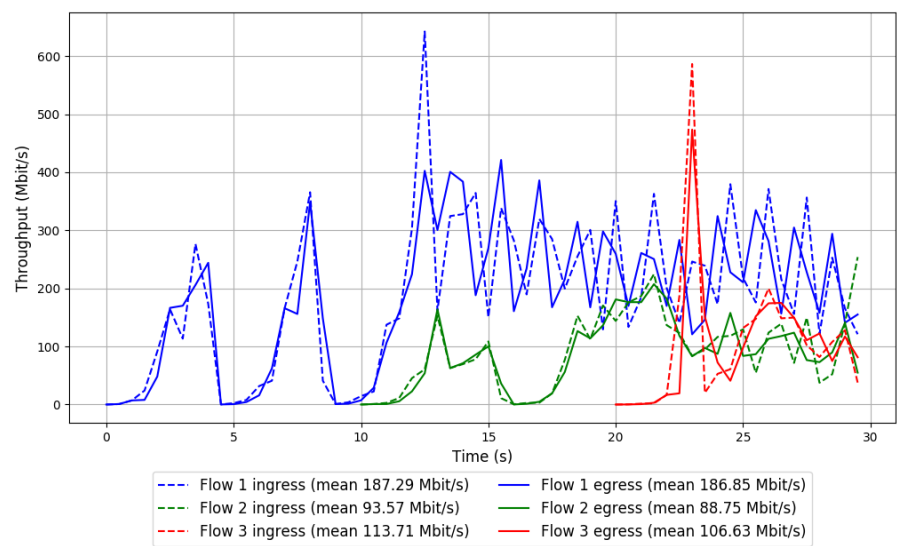
-- Flow 3:

Average throughput: 106.63 Mbit/s

95th percentile per-packet one-way delay: 341.543 ms

Loss rate: 5.99%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-03-07 15:39:55

End at: 2018-03-07 15:40:25

Below is generated by plot.py at 2018-03-07 21:00:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 169.45 Mbit/s

95th percentile per-packet one-way delay: 215.508 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 123.82 Mbit/s

95th percentile per-packet one-way delay: 222.796 ms

Loss rate: 2.03%

-- Flow 2:

Average throughput: 60.14 Mbit/s

95th percentile per-packet one-way delay: 175.833 ms

Loss rate: 0.65%

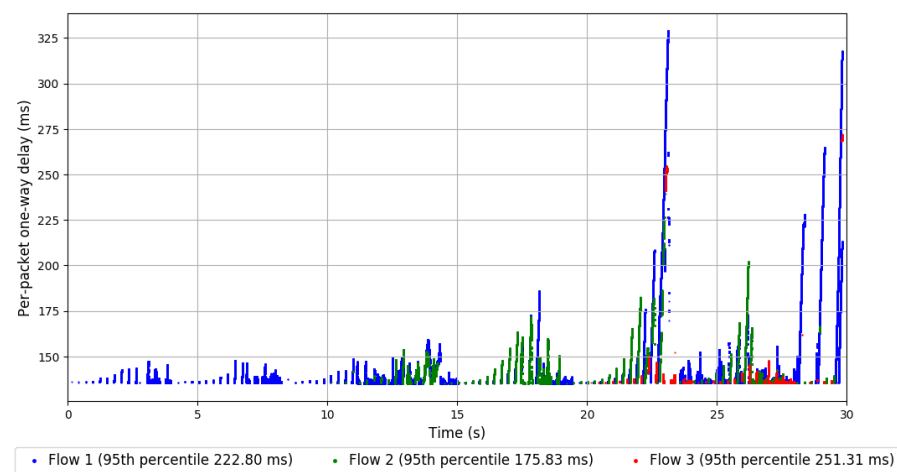
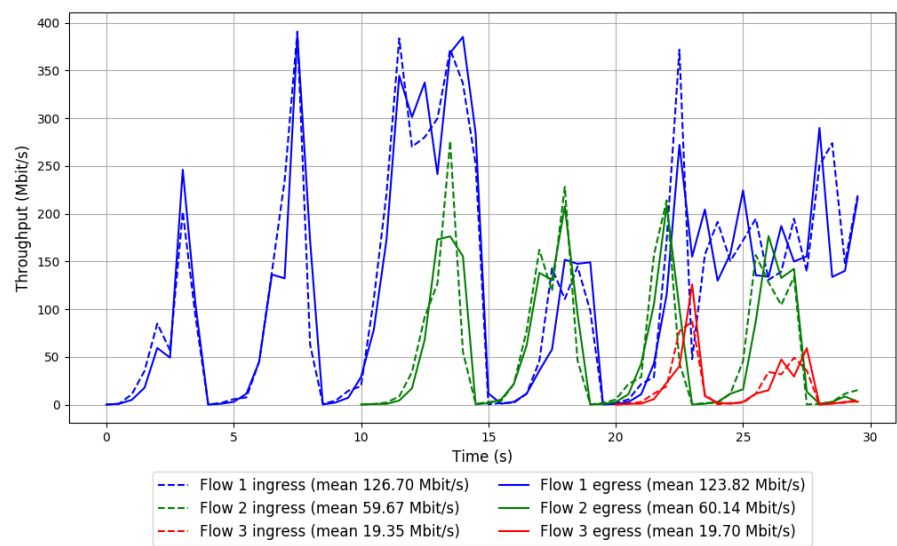
-- Flow 3:

Average throughput: 19.70 Mbit/s

95th percentile per-packet one-way delay: 251.314 ms

Loss rate: 1.00%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-03-07 16:00:24

End at: 2018-03-07 16:00:54

Below is generated by plot.py at 2018-03-07 21:00:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 165.00 Mbit/s

95th percentile per-packet one-way delay: 152.472 ms

Loss rate: 2.07%

-- Flow 1:

Average throughput: 62.95 Mbit/s

95th percentile per-packet one-way delay: 148.506 ms

Loss rate: 2.53%

-- Flow 2:

Average throughput: 134.91 Mbit/s

95th percentile per-packet one-way delay: 153.410 ms

Loss rate: 2.01%

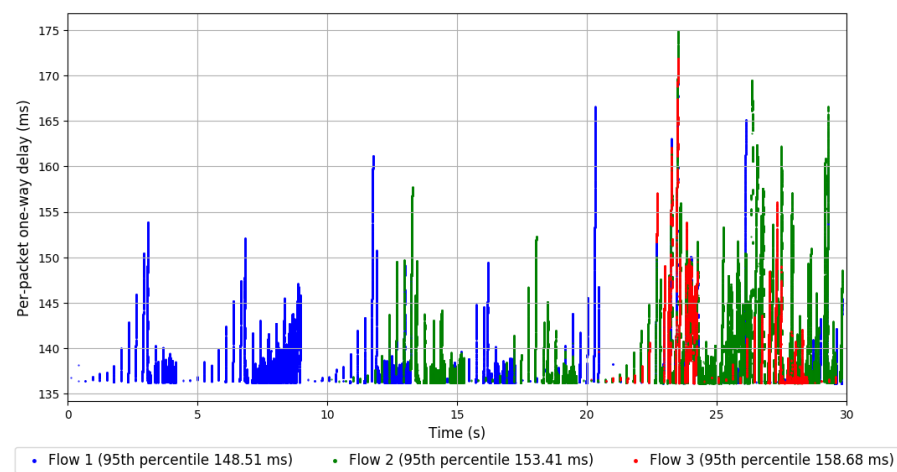
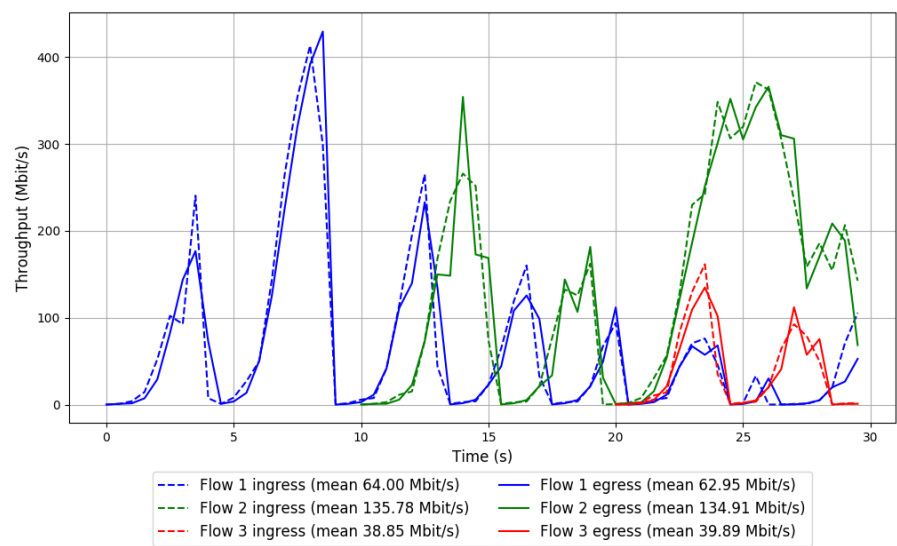
-- Flow 3:

Average throughput: 39.89 Mbit/s

95th percentile per-packet one-way delay: 158.684 ms

Loss rate: 0.22%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-03-07 16:20:30

End at: 2018-03-07 16:21:00

Below is generated by plot.py at 2018-03-07 21:01:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 242.81 Mbit/s

95th percentile per-packet one-way delay: 219.414 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 160.17 Mbit/s

95th percentile per-packet one-way delay: 213.933 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 84.96 Mbit/s

95th percentile per-packet one-way delay: 232.078 ms

Loss rate: 0.00%

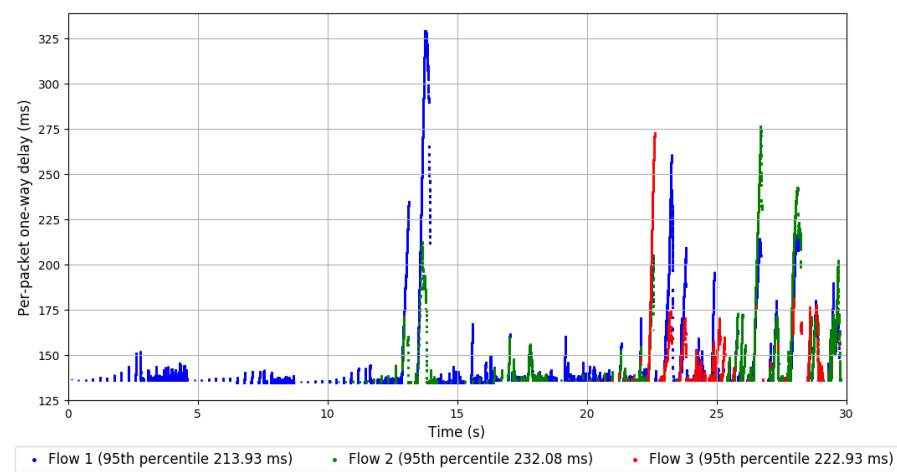
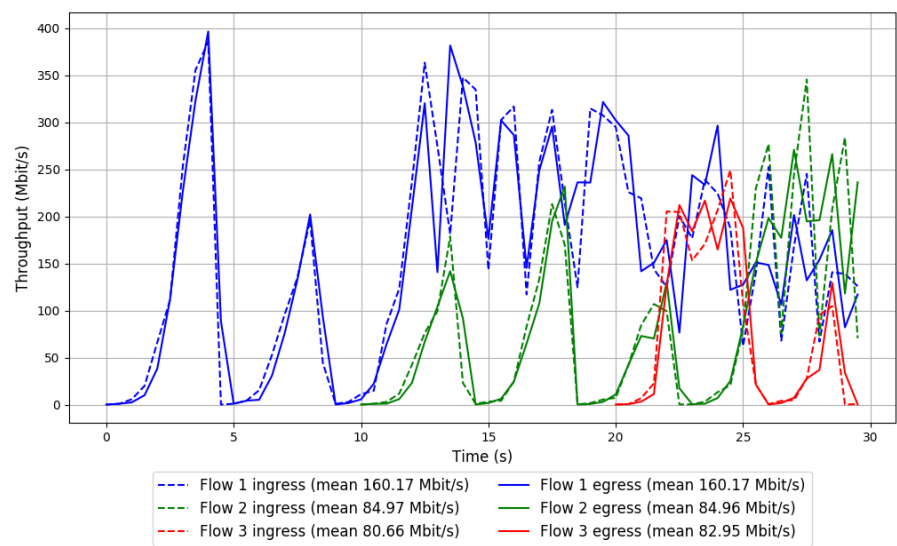
-- Flow 3:

Average throughput: 82.95 Mbit/s

95th percentile per-packet one-way delay: 222.933 ms

Loss rate: 0.03%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-03-07 16:40:41

End at: 2018-03-07 16:41:11

Below is generated by plot.py at 2018-03-07 21:01:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 244.73 Mbit/s

95th percentile per-packet one-way delay: 253.969 ms

Loss rate: 3.26%

-- Flow 1:

Average throughput: 94.26 Mbit/s

95th percentile per-packet one-way delay: 191.428 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 174.07 Mbit/s

95th percentile per-packet one-way delay: 266.479 ms

Loss rate: 1.74%

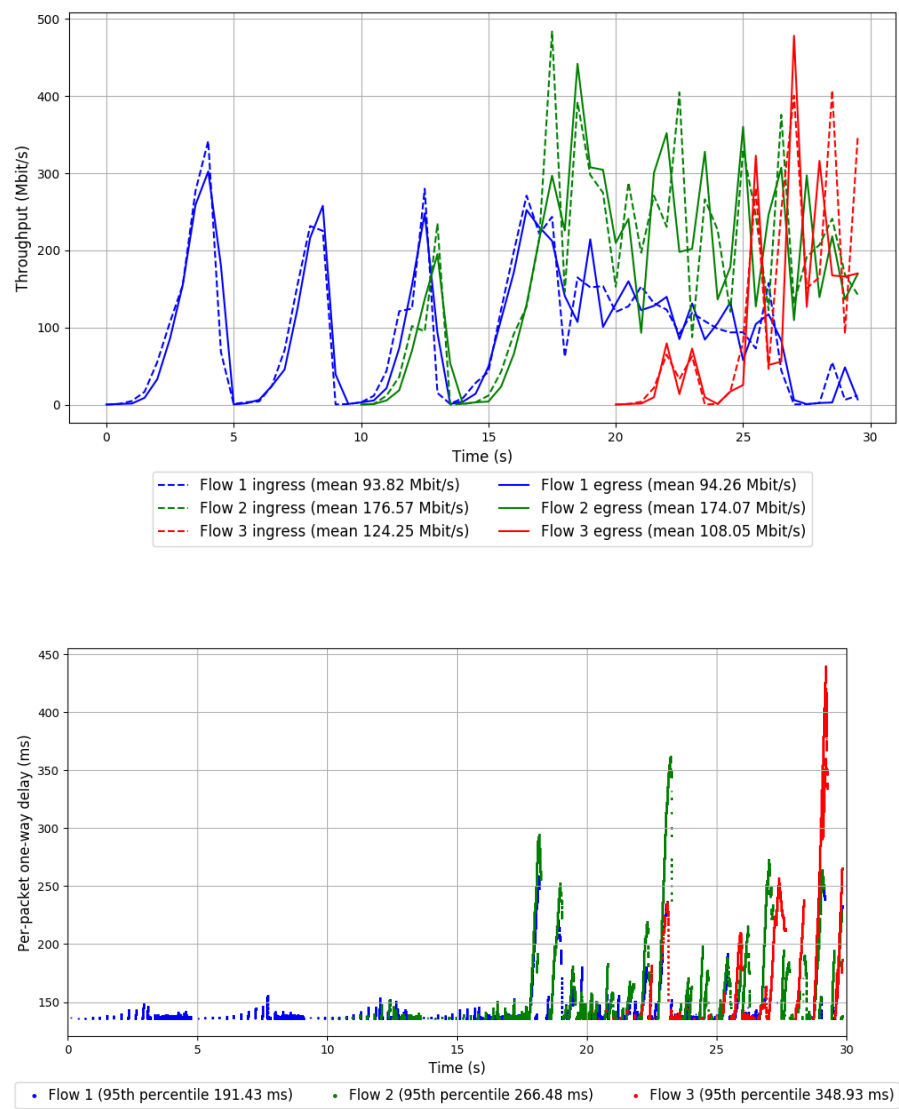
-- Flow 3:

Average throughput: 108.05 Mbit/s

95th percentile per-packet one-way delay: 348.931 ms

Loss rate: 14.14%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-03-07 13:31:37

End at: 2018-03-07 13:32:07

Below is generated by plot.py at 2018-03-07 21:01:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.02 Mbit/s

95th percentile per-packet one-way delay: 140.376 ms

Loss rate: 2.01%

-- Flow 1:

Average throughput: 35.38 Mbit/s

95th percentile per-packet one-way delay: 136.539 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 74.66 Mbit/s

95th percentile per-packet one-way delay: 137.011 ms

Loss rate: 1.33%

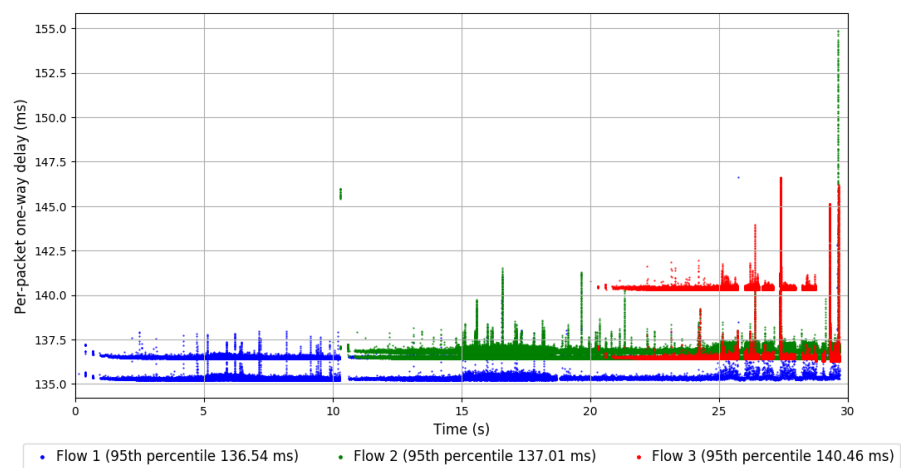
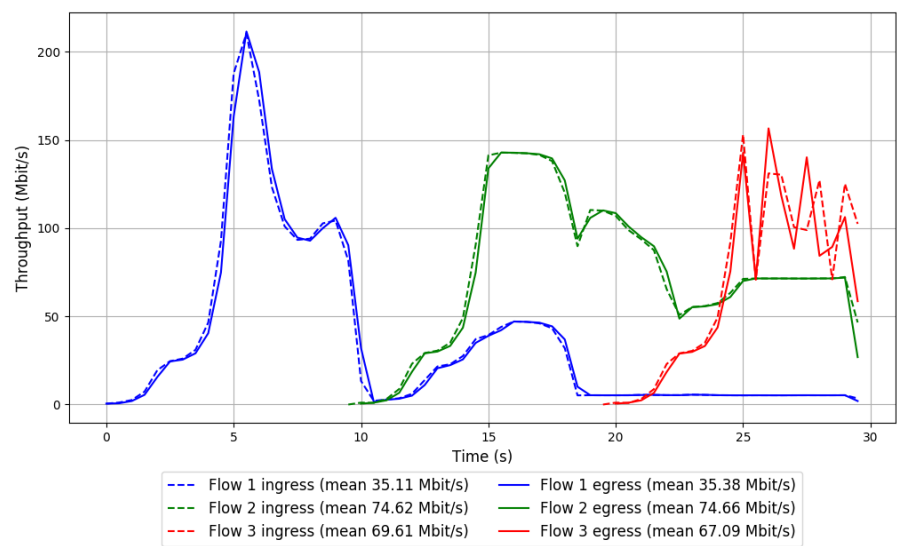
-- Flow 3:

Average throughput: 67.09 Mbit/s

95th percentile per-packet one-way delay: 140.461 ms

Loss rate: 6.30%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-03-07 13:52:08

End at: 2018-03-07 13:52:38

Below is generated by plot.py at 2018-03-07 21:02:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.01 Mbit/s

95th percentile per-packet one-way delay: 136.394 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 68.23 Mbit/s

95th percentile per-packet one-way delay: 136.380 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 64.16 Mbit/s

95th percentile per-packet one-way delay: 136.392 ms

Loss rate: 1.98%

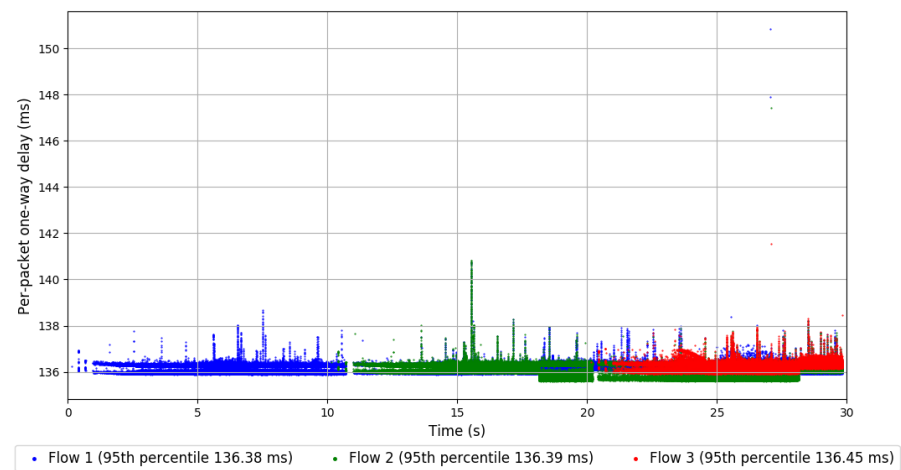
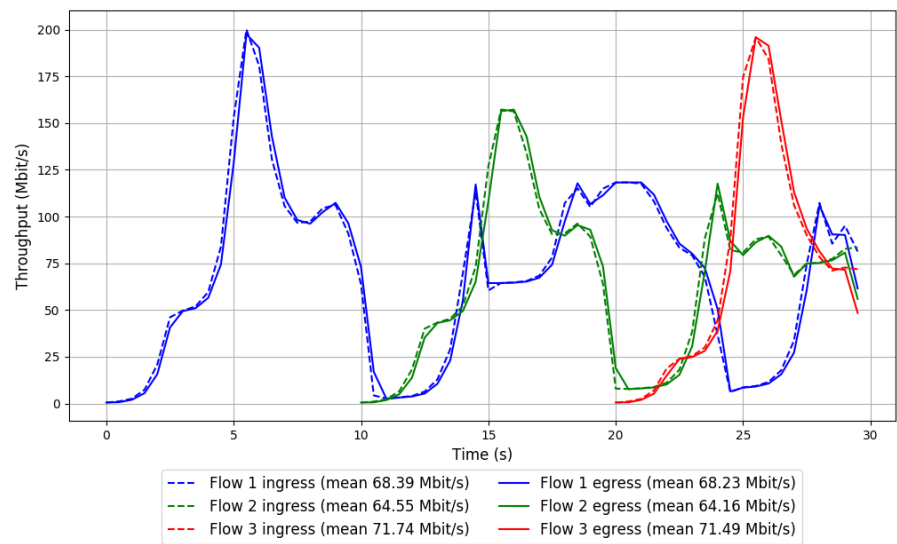
-- Flow 3:

Average throughput: 71.49 Mbit/s

95th percentile per-packet one-way delay: 136.453 ms

Loss rate: 3.07%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-03-07 14:12:49

End at: 2018-03-07 14:13:19

Below is generated by plot.py at 2018-03-07 21:02:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.41 Mbit/s

95th percentile per-packet one-way delay: 136.459 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 70.15 Mbit/s

95th percentile per-packet one-way delay: 136.409 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 48.66 Mbit/s

95th percentile per-packet one-way delay: 136.489 ms

Loss rate: 1.47%

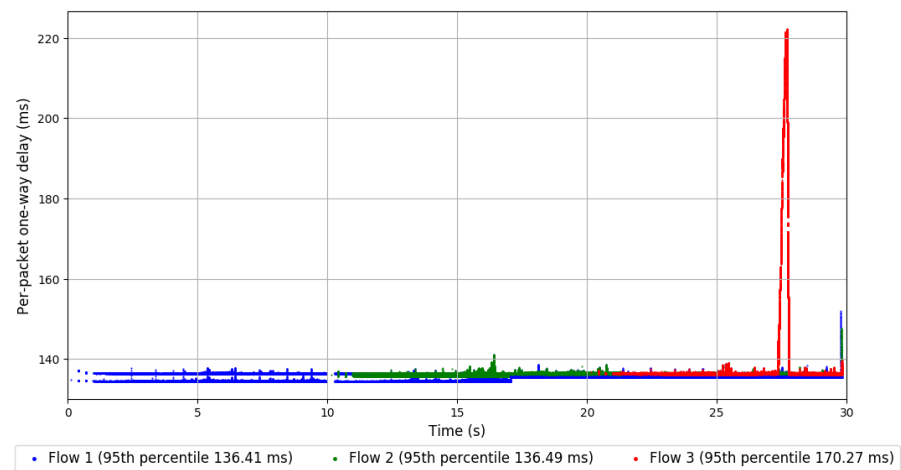
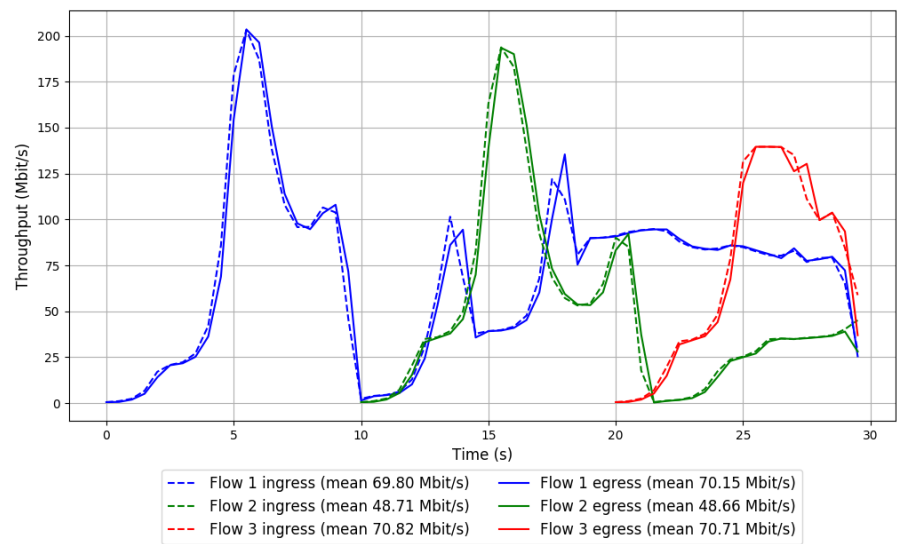
-- Flow 3:

Average throughput: 70.71 Mbit/s

95th percentile per-packet one-way delay: 170.269 ms

Loss rate: 2.89%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-03-07 14:33:10

End at: 2018-03-07 14:33:40

Below is generated by plot.py at 2018-03-07 21:02:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.37 Mbit/s

95th percentile per-packet one-way delay: 136.862 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 53.79 Mbit/s

95th percentile per-packet one-way delay: 140.882 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 66.34 Mbit/s

95th percentile per-packet one-way delay: 136.388 ms

Loss rate: 1.71%

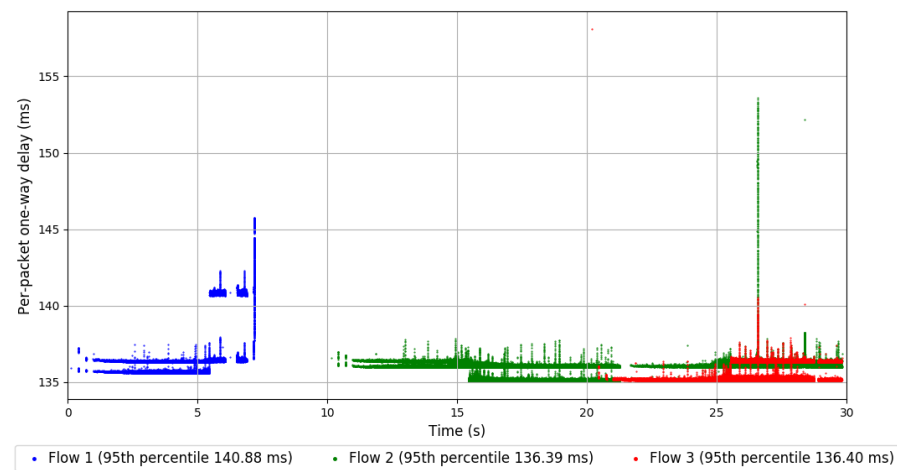
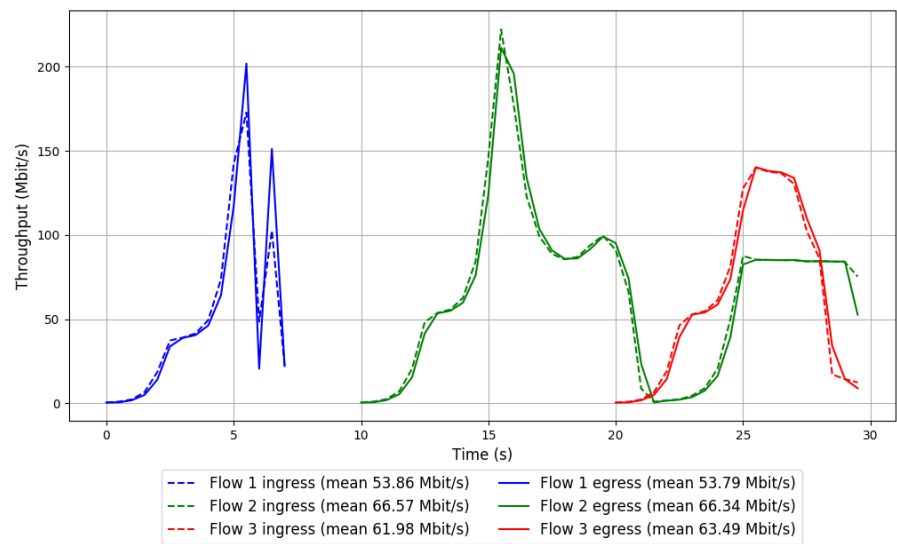
-- Flow 3:

Average throughput: 63.49 Mbit/s

95th percentile per-packet one-way delay: 136.404 ms

Loss rate: 0.60%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-03-07 14:53:19

End at: 2018-03-07 14:53:49

Below is generated by plot.py at 2018-03-07 21:04:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.26 Mbit/s

95th percentile per-packet one-way delay: 140.693 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 66.66 Mbit/s

95th percentile per-packet one-way delay: 136.189 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 69.53 Mbit/s

95th percentile per-packet one-way delay: 140.728 ms

Loss rate: 2.37%

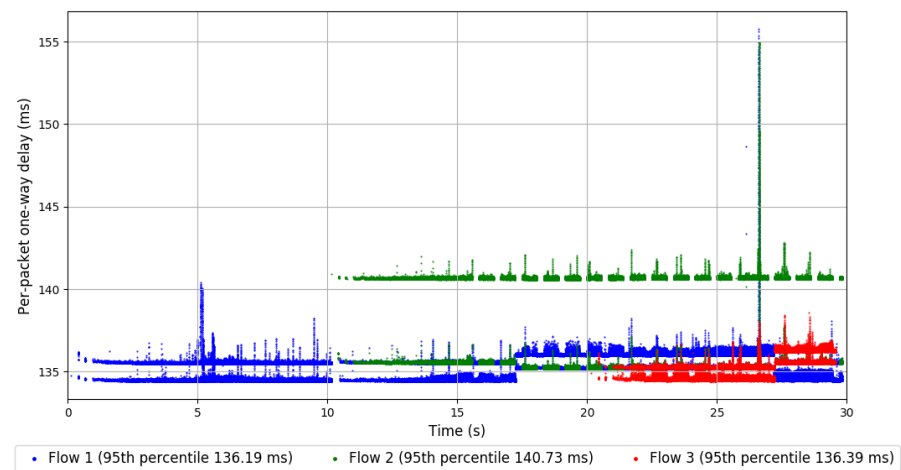
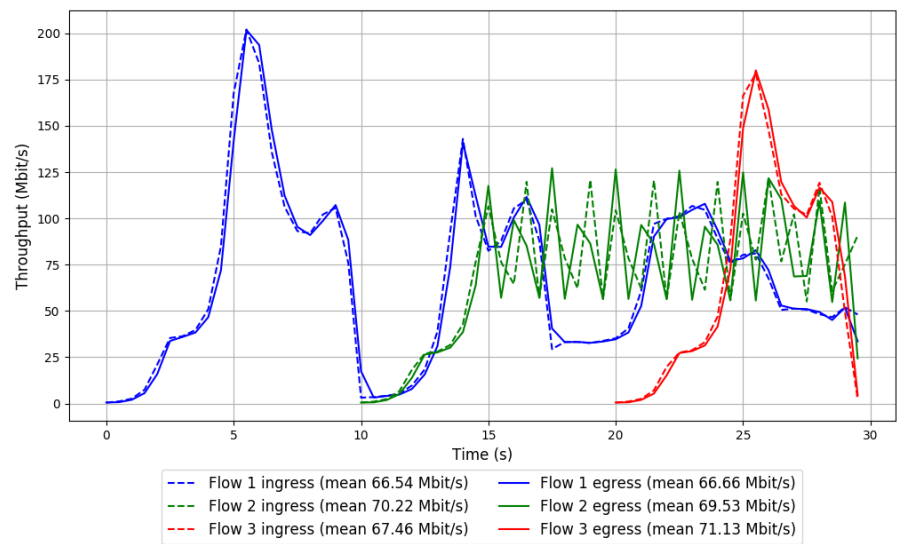
-- Flow 3:

Average throughput: 71.13 Mbit/s

95th percentile per-packet one-way delay: 136.386 ms

Loss rate: 0.18%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-03-07 15:13:56

End at: 2018-03-07 15:14:26

Below is generated by plot.py at 2018-03-07 21:04:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 126.11 Mbit/s

95th percentile per-packet one-way delay: 136.320 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 55.41 Mbit/s

95th percentile per-packet one-way delay: 140.314 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 71.11 Mbit/s

95th percentile per-packet one-way delay: 136.267 ms

Loss rate: 0.43%

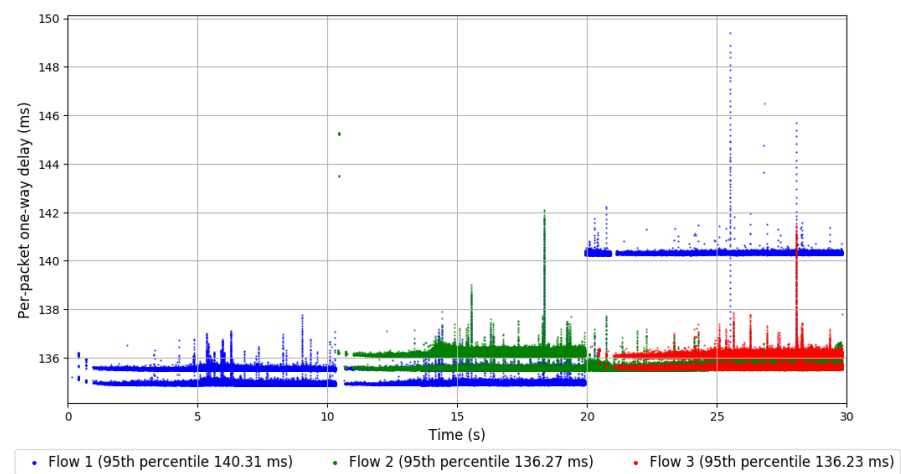
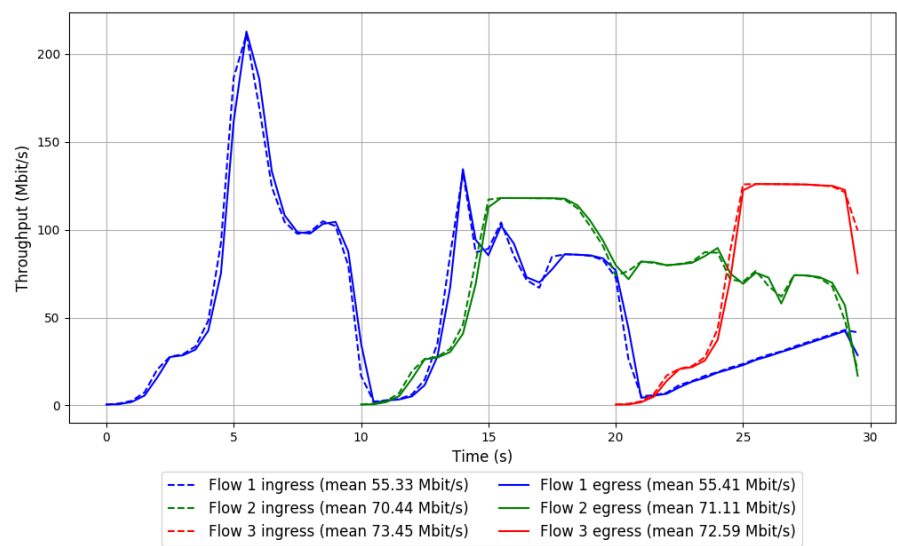
-- Flow 3:

Average throughput: 72.59 Mbit/s

95th percentile per-packet one-way delay: 136.226 ms

Loss rate: 3.89%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-03-07 15:34:44

End at: 2018-03-07 15:35:14

Below is generated by plot.py at 2018-03-07 21:04:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.44 Mbit/s

95th percentile per-packet one-way delay: 135.663 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 31.62 Mbit/s

95th percentile per-packet one-way delay: 135.637 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 61.92 Mbit/s

95th percentile per-packet one-way delay: 135.643 ms

Loss rate: 0.89%

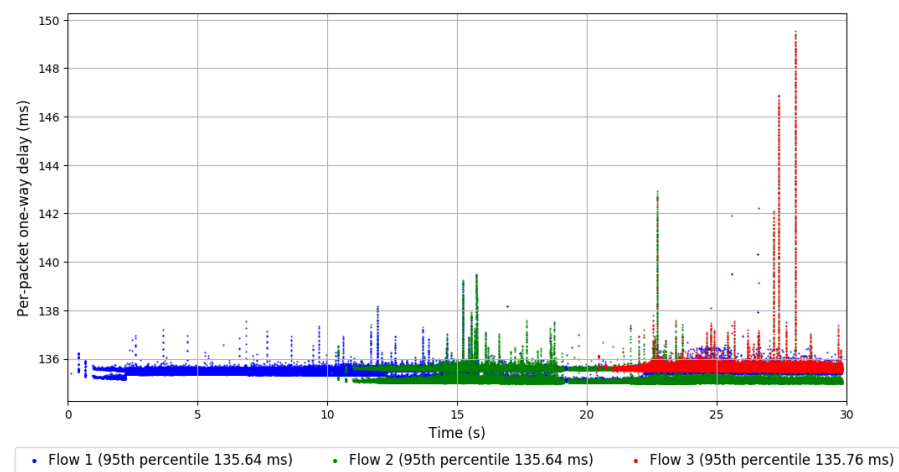
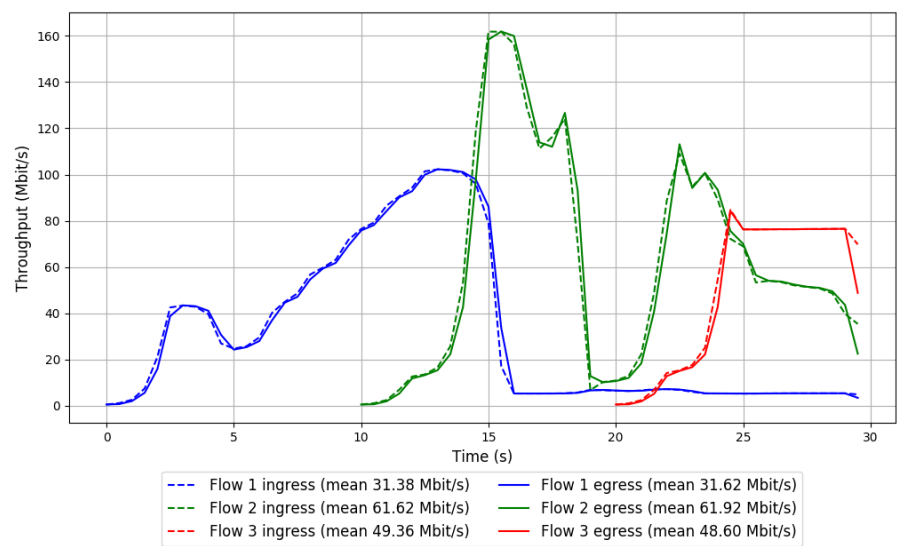
-- Flow 3:

Average throughput: 48.60 Mbit/s

95th percentile per-packet one-way delay: 135.760 ms

Loss rate: 4.26%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-03-07 15:55:16

End at: 2018-03-07 15:55:46

Below is generated by plot.py at 2018-03-07 21:05:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.72 Mbit/s

95th percentile per-packet one-way delay: 136.666 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 75.90 Mbit/s

95th percentile per-packet one-way delay: 136.707 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 66.89 Mbit/s

95th percentile per-packet one-way delay: 136.328 ms

Loss rate: 1.81%

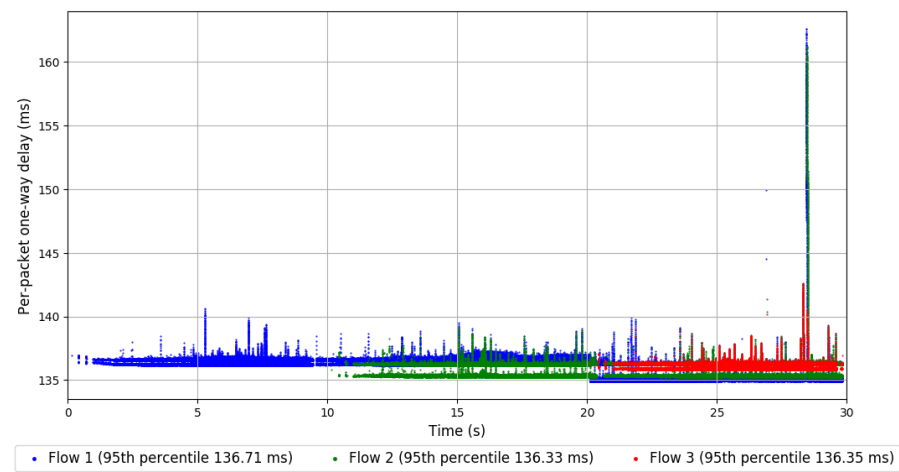
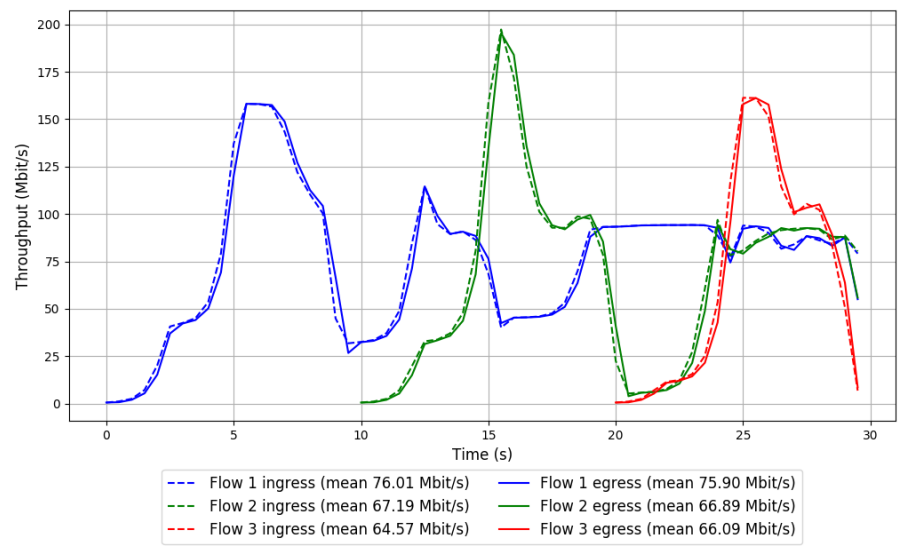
-- Flow 3:

Average throughput: 66.09 Mbit/s

95th percentile per-packet one-way delay: 136.351 ms

Loss rate: 0.45%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-03-07 16:15:19

End at: 2018-03-07 16:15:49

Below is generated by plot.py at 2018-03-07 21:05:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 133.30 Mbit/s

95th percentile per-packet one-way delay: 136.257 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 70.37 Mbit/s

95th percentile per-packet one-way delay: 136.229 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 61.71 Mbit/s

95th percentile per-packet one-way delay: 140.123 ms

Loss rate: 0.51%

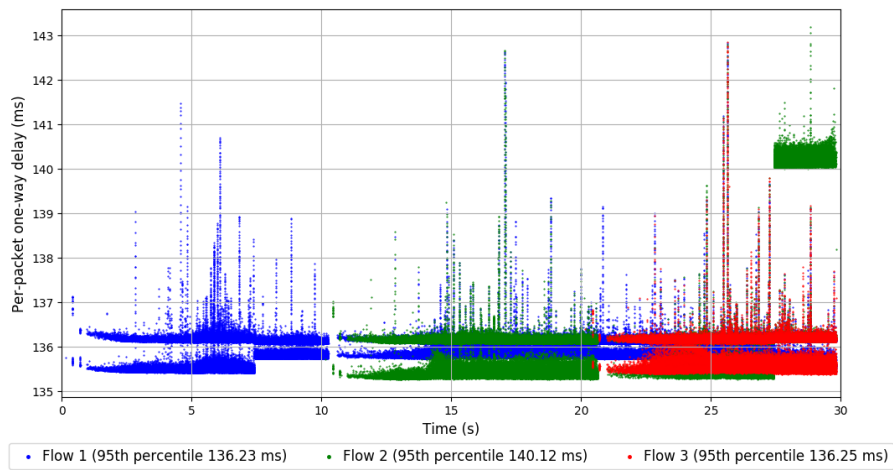
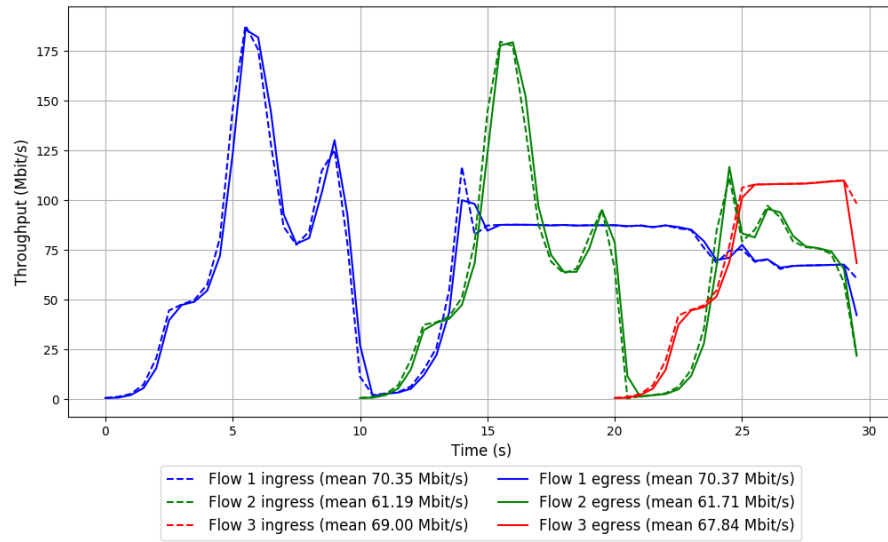
-- Flow 3:

Average throughput: 67.84 Mbit/s

95th percentile per-packet one-way delay: 136.245 ms

Loss rate: 4.37%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-03-07 16:35:31

End at: 2018-03-07 16:36:01

Below is generated by plot.py at 2018-03-07 21:06:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 161.81 Mbit/s

95th percentile per-packet one-way delay: 140.144 ms

Loss rate: 1.99%

-- Flow 1:

Average throughput: 95.24 Mbit/s

95th percentile per-packet one-way delay: 140.172 ms

Loss rate: 1.36%

-- Flow 2:

Average throughput: 72.82 Mbit/s

95th percentile per-packet one-way delay: 136.177 ms

Loss rate: 1.58%

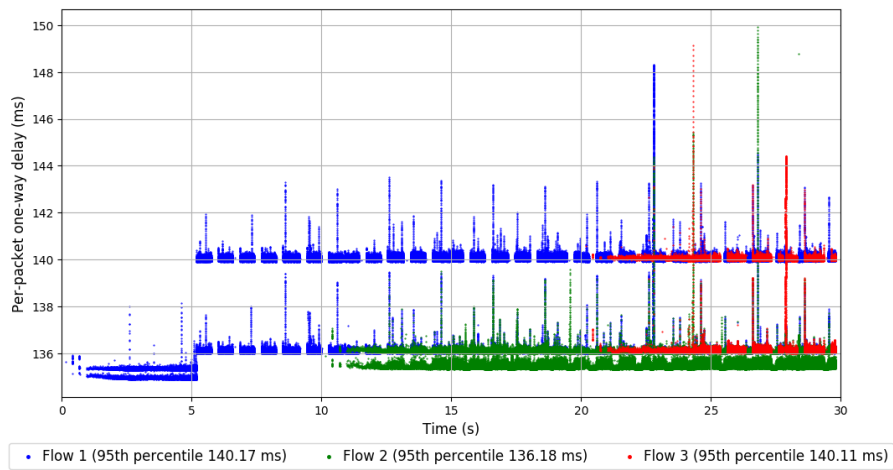
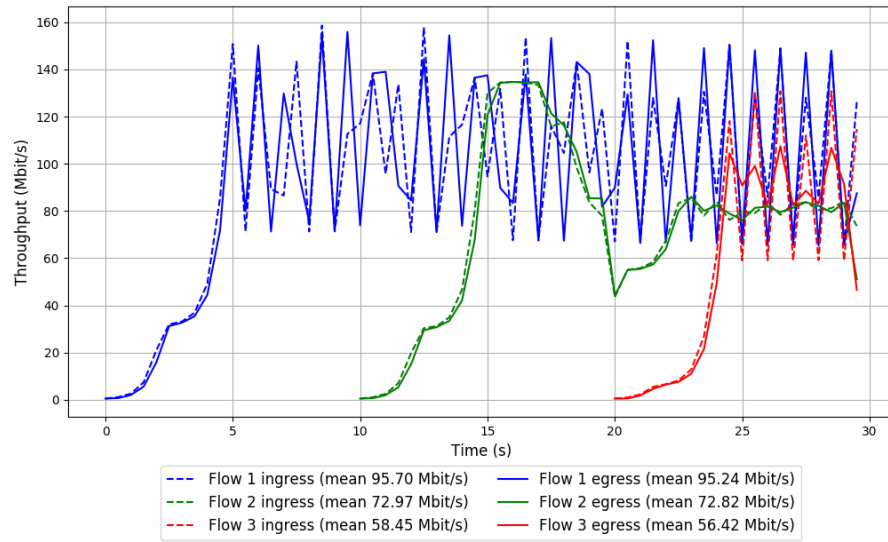
-- Flow 3:

Average throughput: 56.42 Mbit/s

95th percentile per-packet one-way delay: 140.109 ms

Loss rate: 6.18%

Run 10: Report of Copa — Data Link

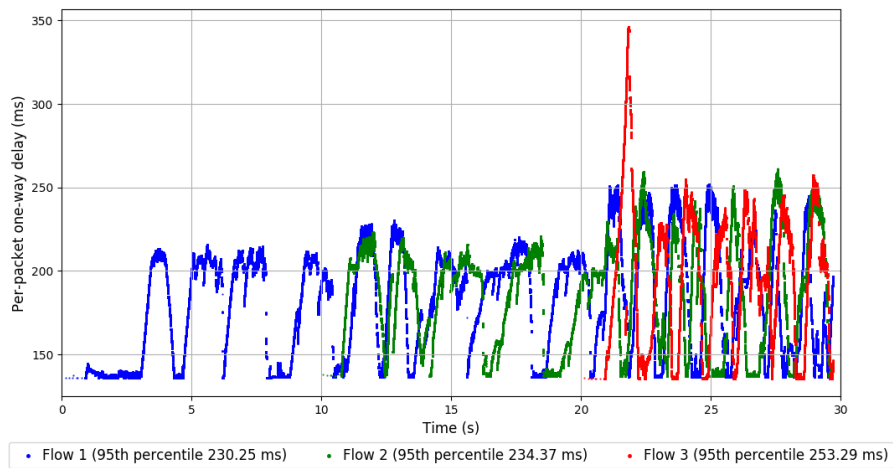
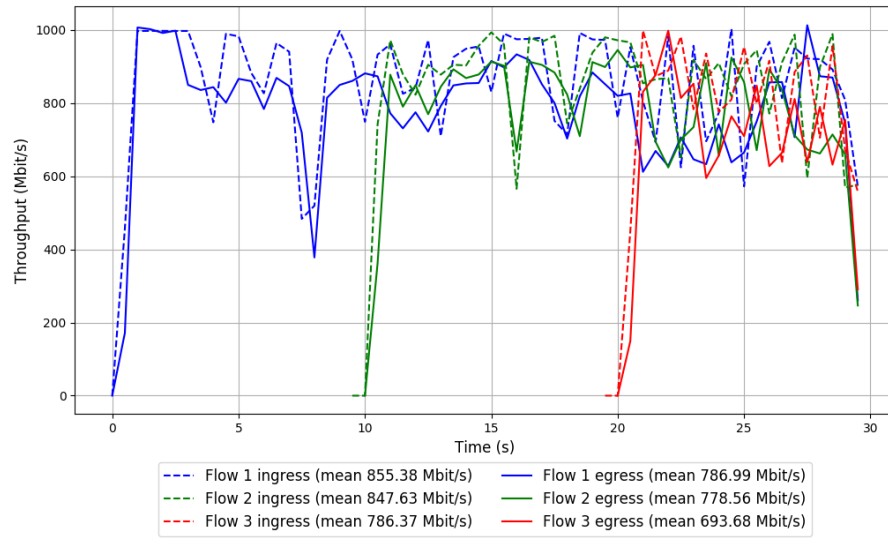


```
Run 1: Statistics of FillP

Start at: 2018-03-07 13:32:38
End at: 2018-03-07 13:33:08

# Below is generated by plot.py at 2018-03-07 21:28:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1528.91 Mbit/s
95th percentile per-packet one-way delay: 236.531 ms
Loss rate: 9.86%
-- Flow 1:
Average throughput: 786.99 Mbit/s
95th percentile per-packet one-way delay: 230.246 ms
Loss rate: 8.84%
-- Flow 2:
Average throughput: 778.56 Mbit/s
95th percentile per-packet one-way delay: 234.365 ms
Loss rate: 9.42%
-- Flow 3:
Average throughput: 693.68 Mbit/s
95th percentile per-packet one-way delay: 253.287 ms
Loss rate: 14.23%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-03-07 13:53:12

End at: 2018-03-07 13:53:42

Below is generated by plot.py at 2018-03-07 21:28:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 1527.76 Mbit/s

95th percentile per-packet one-way delay: 342.914 ms

Loss rate: 7.23%

-- Flow 1:

Average throughput: 800.69 Mbit/s

95th percentile per-packet one-way delay: 328.406 ms

Loss rate: 5.28%

-- Flow 2:

Average throughput: 793.23 Mbit/s

95th percentile per-packet one-way delay: 316.998 ms

Loss rate: 6.36%

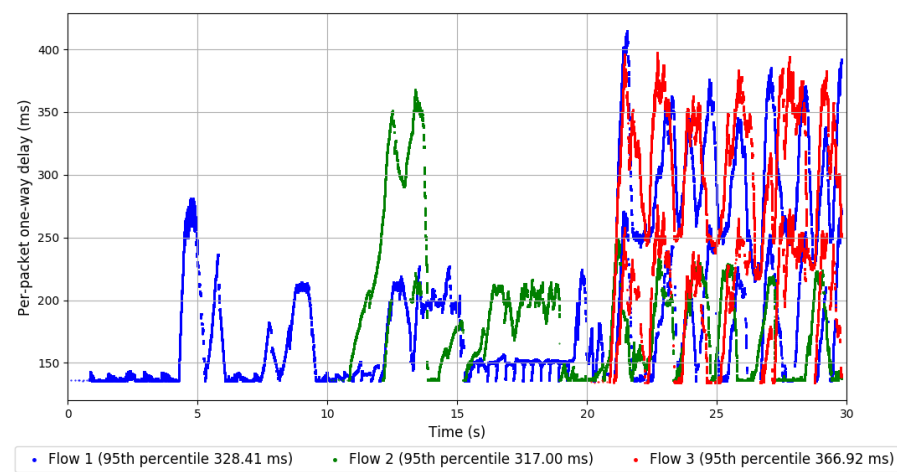
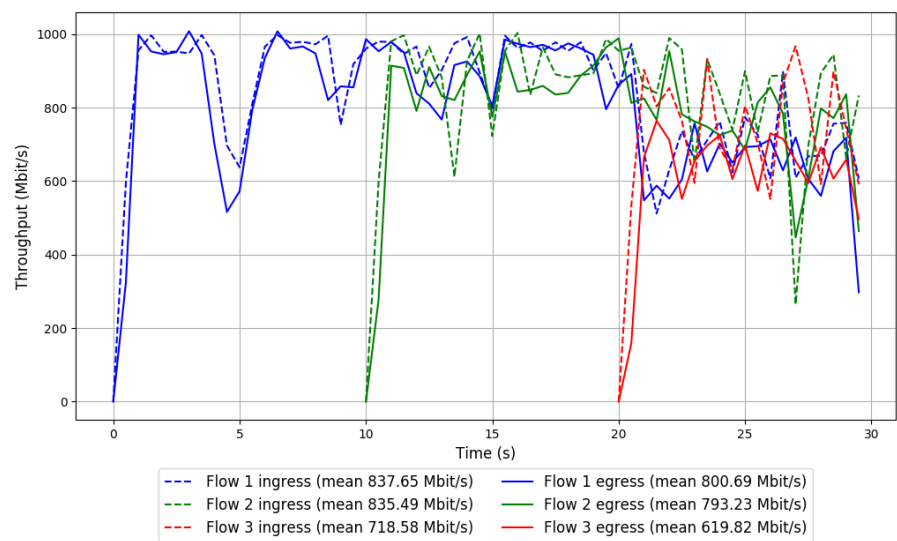
-- Flow 3:

Average throughput: 619.82 Mbit/s

95th percentile per-packet one-way delay: 366.918 ms

Loss rate: 16.11%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-03-07 14:13:52

End at: 2018-03-07 14:14:22

Below is generated by plot.py at 2018-03-07 21:29:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1513.33 Mbit/s

95th percentile per-packet one-way delay: 332.961 ms

Loss rate: 6.57%

-- Flow 1:

Average throughput: 822.64 Mbit/s

95th percentile per-packet one-way delay: 216.005 ms

Loss rate: 5.70%

-- Flow 2:

Average throughput: 741.34 Mbit/s

95th percentile per-packet one-way delay: 341.653 ms

Loss rate: 6.00%

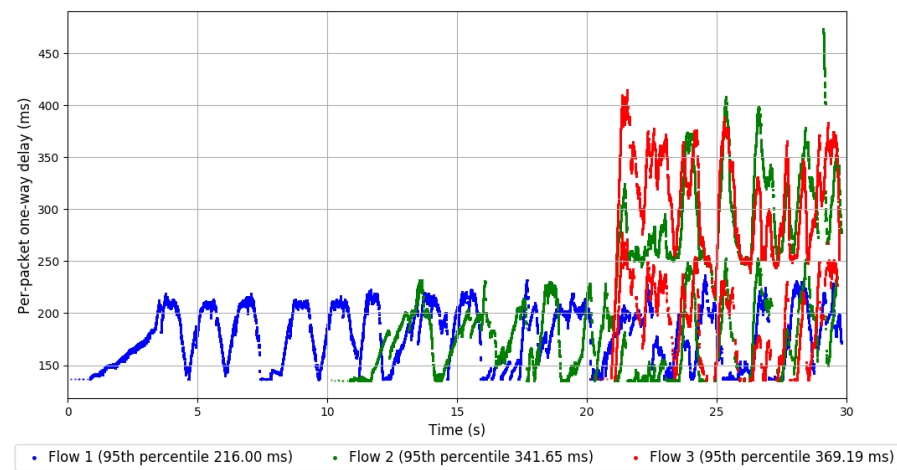
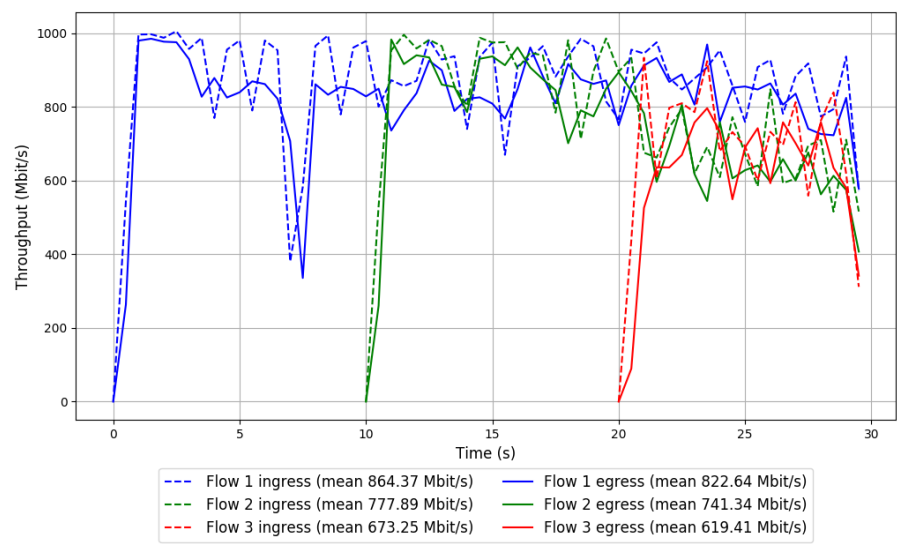
-- Flow 3:

Average throughput: 619.41 Mbit/s

95th percentile per-packet one-way delay: 369.187 ms

Loss rate: 11.25%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-03-07 14:34:08

End at: 2018-03-07 14:34:38

Below is generated by plot.py at 2018-03-07 21:29:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1445.44 Mbit/s

95th percentile per-packet one-way delay: 278.026 ms

Loss rate: 5.27%

-- Flow 1:

Average throughput: 827.14 Mbit/s

95th percentile per-packet one-way delay: 212.978 ms

Loss rate: 5.87%

-- Flow 2:

Average throughput: 820.52 Mbit/s

95th percentile per-packet one-way delay: 303.744 ms

Loss rate: 4.08%

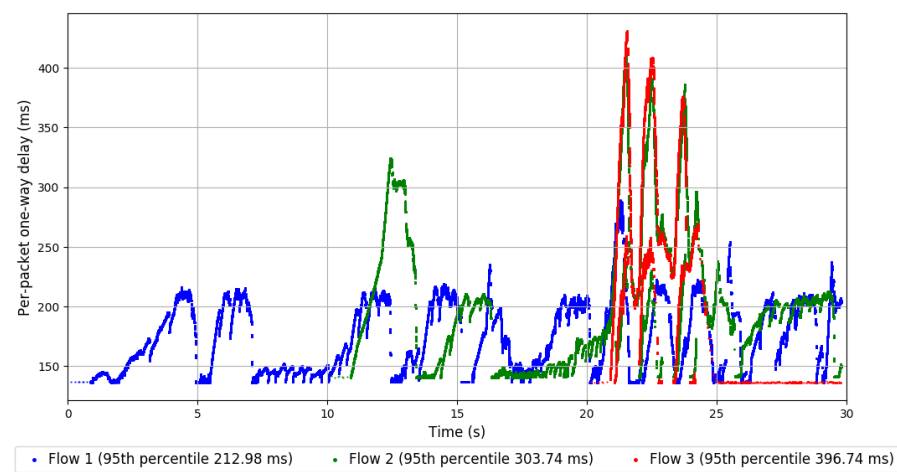
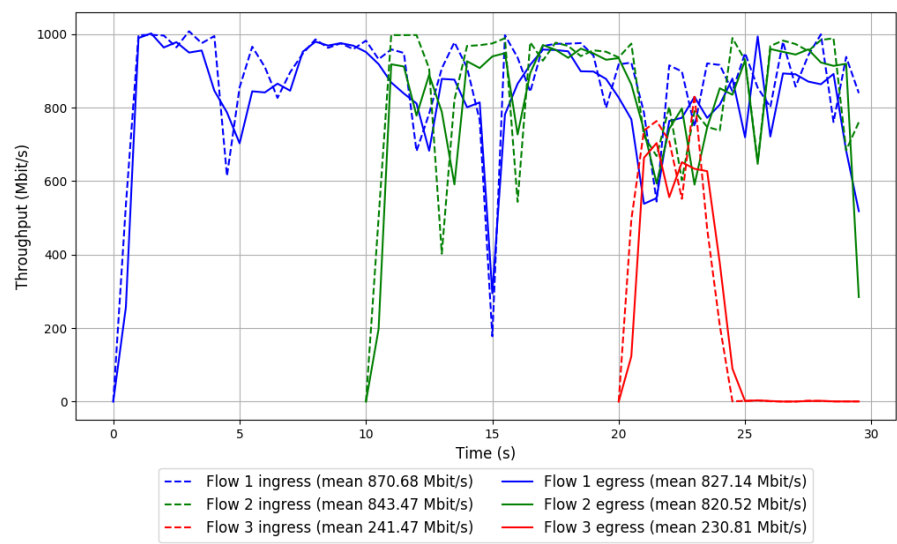
-- Flow 3:

Average throughput: 230.81 Mbit/s

95th percentile per-packet one-way delay: 396.740 ms

Loss rate: 7.22%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-03-07 14:54:22

End at: 2018-03-07 14:54:52

Below is generated by plot.py at 2018-03-07 21:30:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 1538.59 Mbit/s

95th percentile per-packet one-way delay: 272.148 ms

Loss rate: 8.80%

-- Flow 1:

Average throughput: 829.74 Mbit/s

95th percentile per-packet one-way delay: 225.376 ms

Loss rate: 7.23%

-- Flow 2:

Average throughput: 778.87 Mbit/s

95th percentile per-packet one-way delay: 300.053 ms

Loss rate: 7.82%

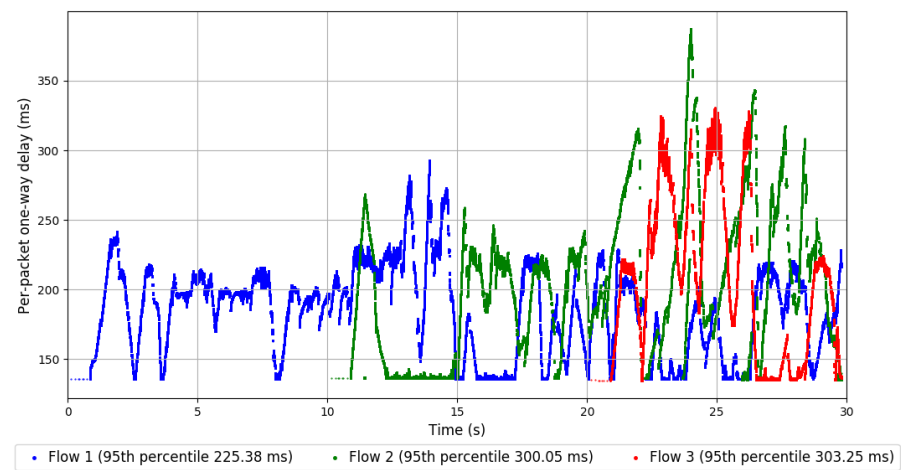
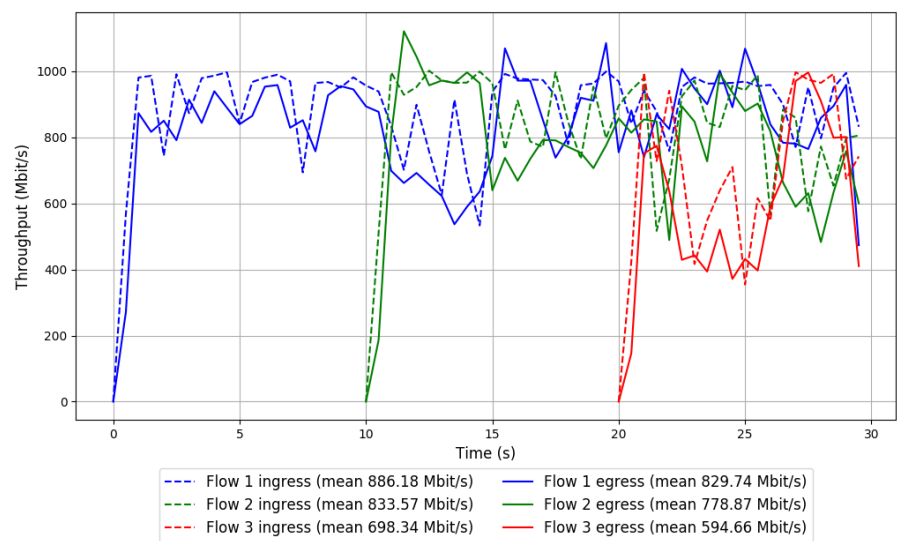
-- Flow 3:

Average throughput: 594.66 Mbit/s

95th percentile per-packet one-way delay: 303.247 ms

Loss rate: 17.19%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-03-07 15:15:00

End at: 2018-03-07 15:15:30

Below is generated by plot.py at 2018-03-07 21:33:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1606.23 Mbit/s

95th percentile per-packet one-way delay: 244.752 ms

Loss rate: 7.05%

-- Flow 1:

Average throughput: 829.42 Mbit/s

95th percentile per-packet one-way delay: 251.178 ms

Loss rate: 4.90%

-- Flow 2:

Average throughput: 848.22 Mbit/s

95th percentile per-packet one-way delay: 235.071 ms

Loss rate: 6.36%

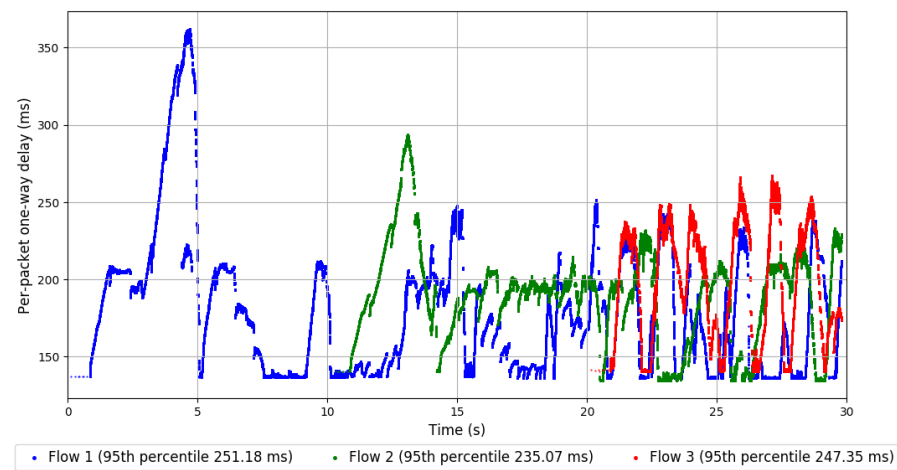
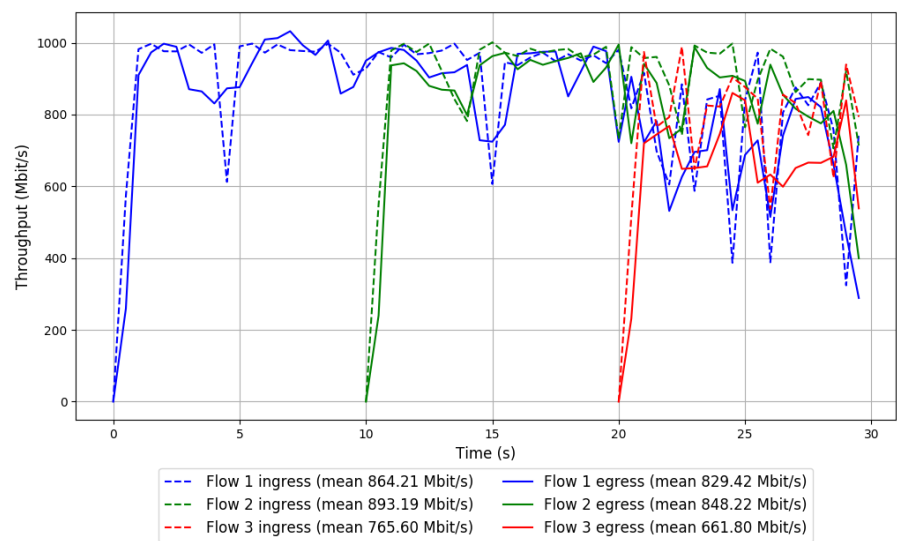
-- Flow 3:

Average throughput: 661.80 Mbit/s

95th percentile per-packet one-way delay: 247.353 ms

Loss rate: 15.98%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-03-07 15:35:43

End at: 2018-03-07 15:36:13

Below is generated by plot.py at 2018-03-07 21:33:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1570.62 Mbit/s

95th percentile per-packet one-way delay: 239.277 ms

Loss rate: 6.93%

-- Flow 1:

Average throughput: 851.24 Mbit/s

95th percentile per-packet one-way delay: 230.440 ms

Loss rate: 4.55%

-- Flow 2:

Average throughput: 726.90 Mbit/s

95th percentile per-packet one-way delay: 249.787 ms

Loss rate: 10.73%

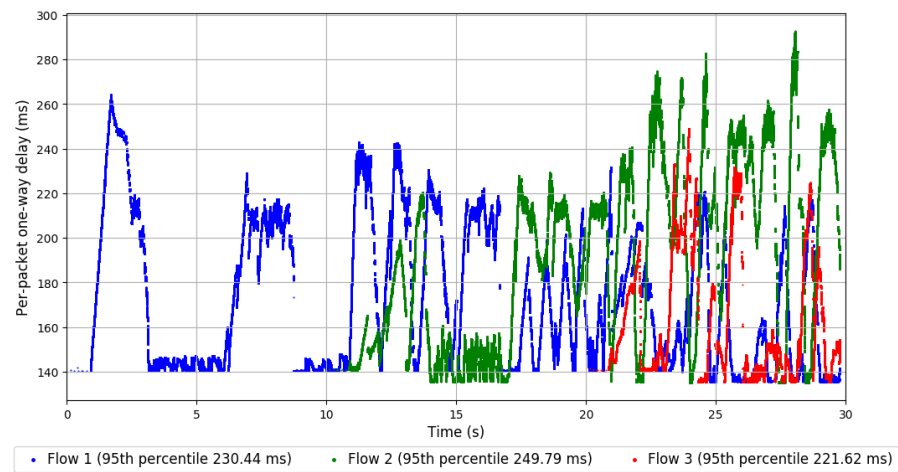
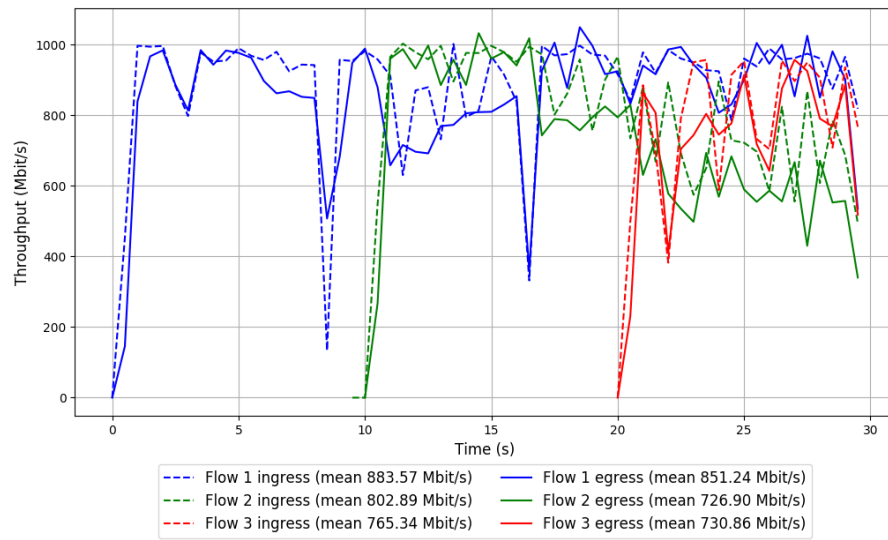
-- Flow 3:

Average throughput: 730.86 Mbit/s

95th percentile per-packet one-way delay: 221.625 ms

Loss rate: 7.19%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-03-07 15:56:21

End at: 2018-03-07 15:56:51

Below is generated by plot.py at 2018-03-07 21:33:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 1505.75 Mbit/s

95th percentile per-packet one-way delay: 229.672 ms

Loss rate: 5.61%

-- Flow 1:

Average throughput: 803.39 Mbit/s

95th percentile per-packet one-way delay: 221.370 ms

Loss rate: 4.92%

-- Flow 2:

Average throughput: 722.49 Mbit/s

95th percentile per-packet one-way delay: 236.615 ms

Loss rate: 5.63%

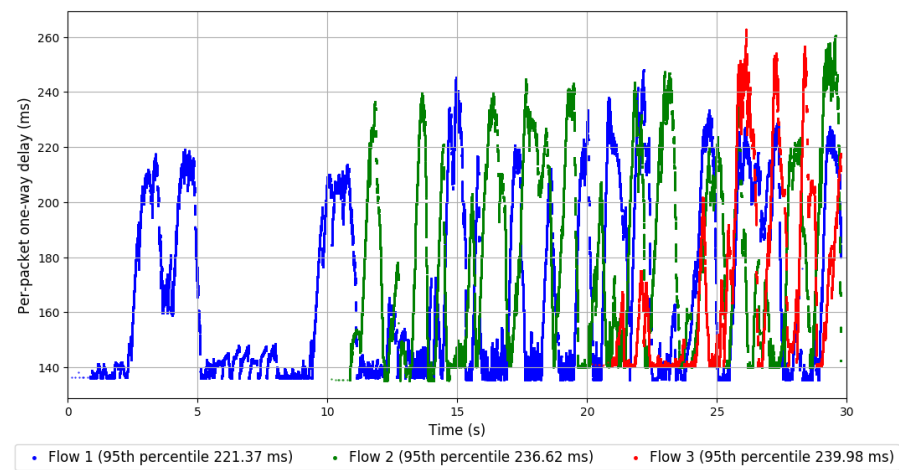
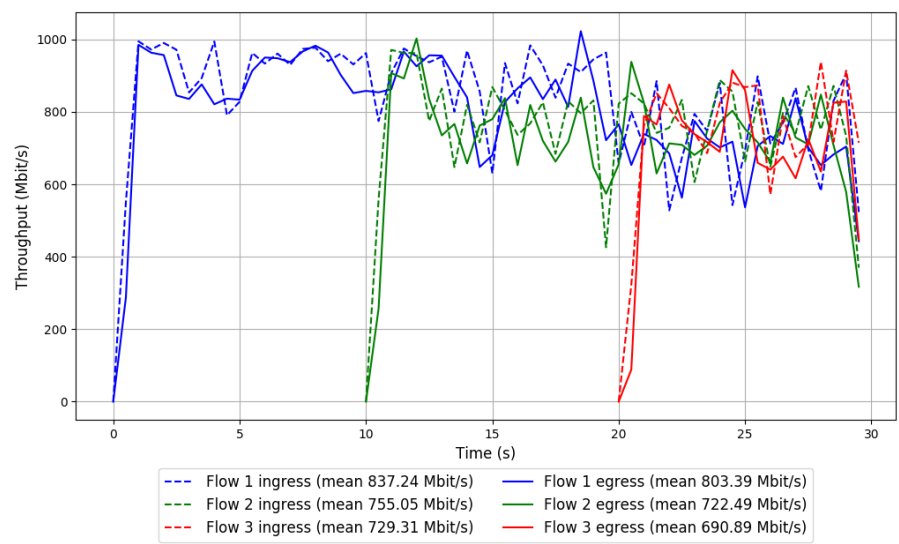
-- Flow 3:

Average throughput: 690.89 Mbit/s

95th percentile per-packet one-way delay: 239.977 ms

Loss rate: 7.94%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-03-07 16:16:23

End at: 2018-03-07 16:16:53

Below is generated by plot.py at 2018-03-07 21:56:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 1531.77 Mbit/s

95th percentile per-packet one-way delay: 220.393 ms

Loss rate: 5.41%

-- Flow 1:

Average throughput: 814.49 Mbit/s

95th percentile per-packet one-way delay: 215.358 ms

Loss rate: 5.04%

-- Flow 2:

Average throughput: 768.05 Mbit/s

95th percentile per-packet one-way delay: 231.569 ms

Loss rate: 5.74%

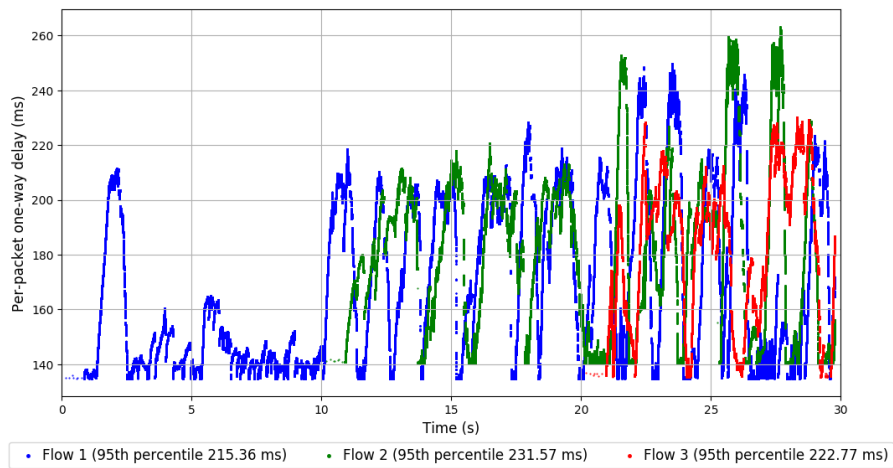
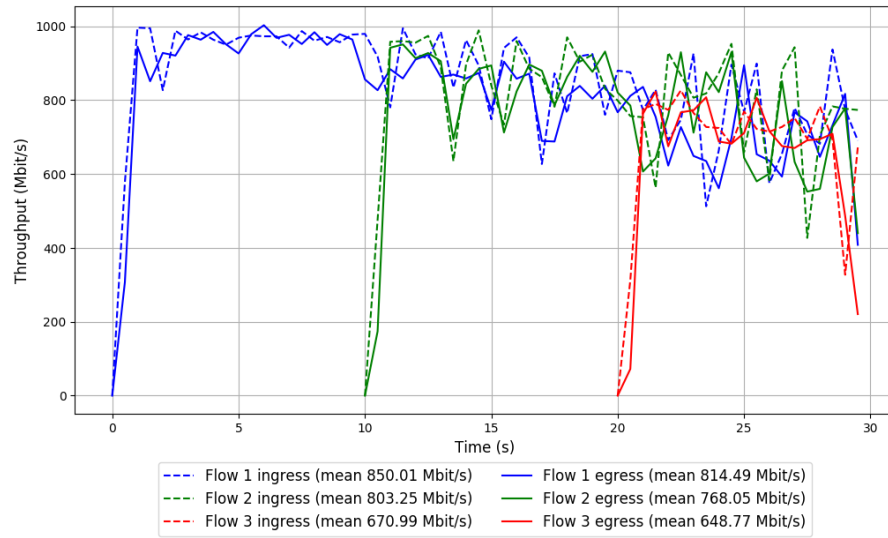
-- Flow 3:

Average throughput: 648.77 Mbit/s

95th percentile per-packet one-way delay: 222.771 ms

Loss rate: 6.05%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-03-07 16:36:35

End at: 2018-03-07 16:37:05

Below is generated by plot.py at 2018-03-07 21:56:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 1491.92 Mbit/s

95th percentile per-packet one-way delay: 229.770 ms

Loss rate: 6.29%

-- Flow 1:

Average throughput: 756.57 Mbit/s

95th percentile per-packet one-way delay: 229.970 ms

Loss rate: 6.83%

-- Flow 2:

Average throughput: 766.65 Mbit/s

95th percentile per-packet one-way delay: 231.334 ms

Loss rate: 5.28%

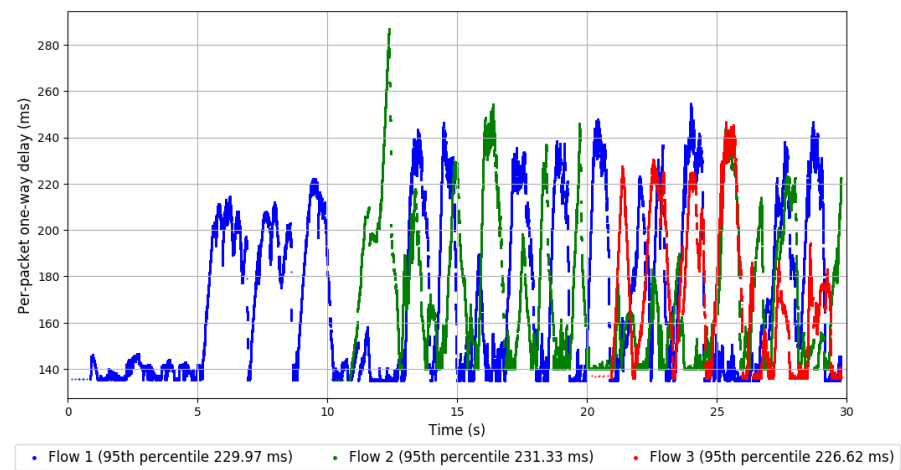
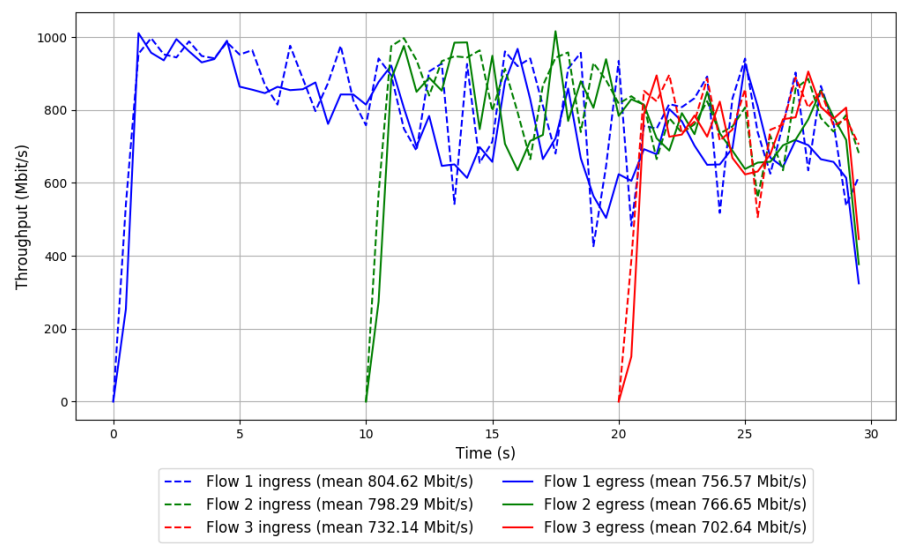
-- Flow 3:

Average throughput: 702.64 Mbit/s

95th percentile per-packet one-way delay: 226.621 ms

Loss rate: 6.69%

Run 10: Report of FillP — Data Link

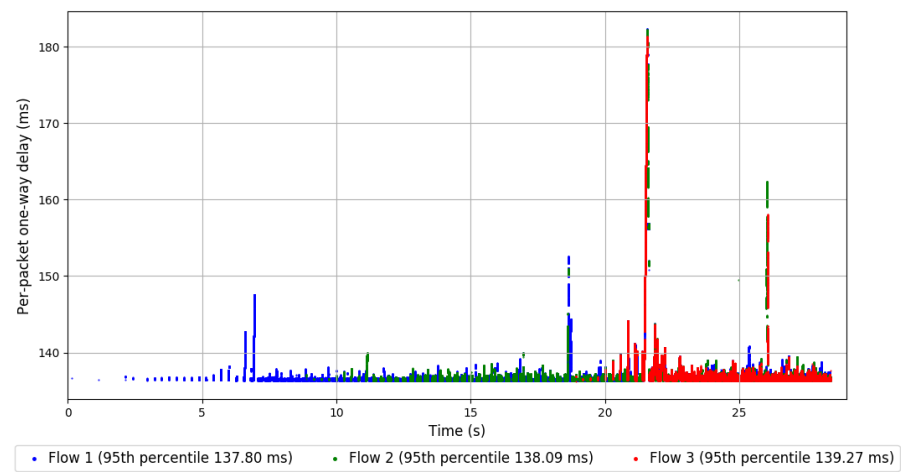
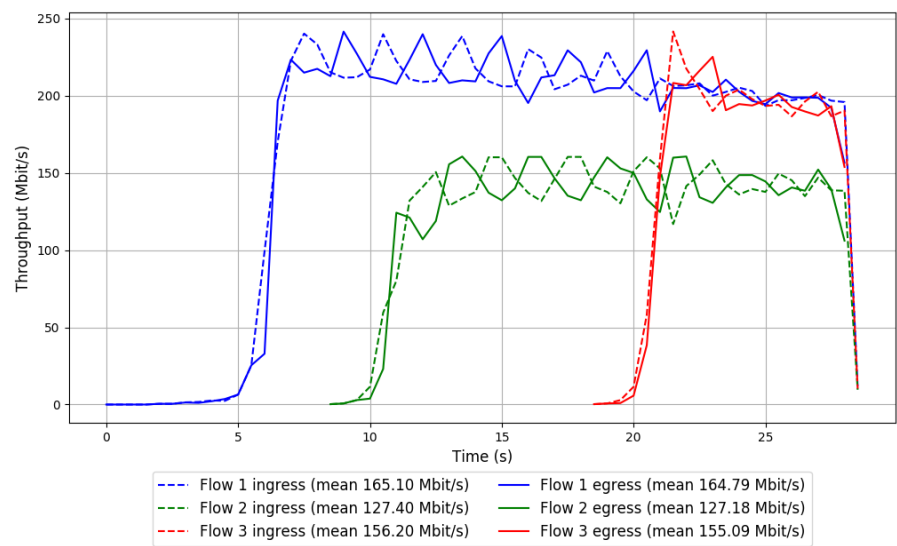


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-03-07 13:35:33
End at: 2018-03-07 13:36:03

# Below is generated by plot.py at 2018-03-07 21:56:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 304.60 Mbit/s
95th percentile per-packet one-way delay: 138.170 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 164.79 Mbit/s
95th percentile per-packet one-way delay: 137.801 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 127.18 Mbit/s
95th percentile per-packet one-way delay: 138.086 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 155.09 Mbit/s
95th percentile per-packet one-way delay: 139.274 ms
Loss rate: 3.45%
```

Run 1: Report of Indigo-1-32 — Data Link



Run 2: Statistics of Indigo-1-32

Start at: 2018-03-07 13:56:09

End at: 2018-03-07 13:56:39

Below is generated by plot.py at 2018-03-07 21:56:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 266.92 Mbit/s

95th percentile per-packet one-way delay: 139.009 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 134.11 Mbit/s

95th percentile per-packet one-way delay: 138.303 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 128.52 Mbit/s

95th percentile per-packet one-way delay: 140.016 ms

Loss rate: 1.53%

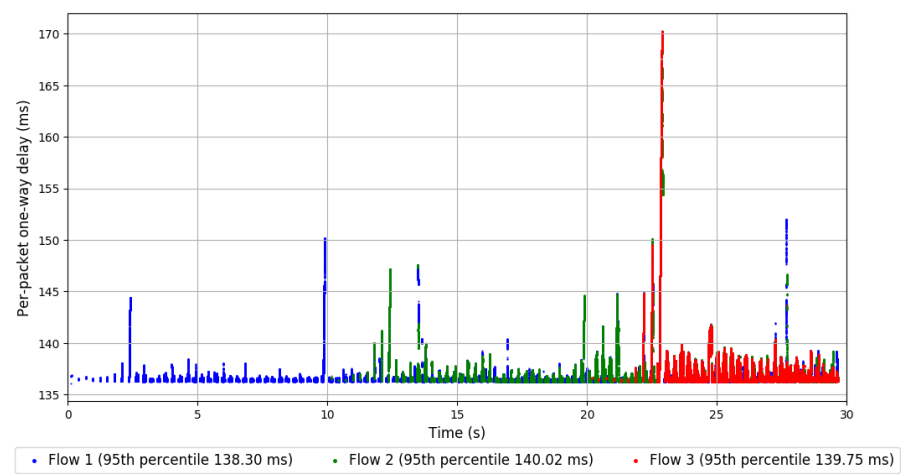
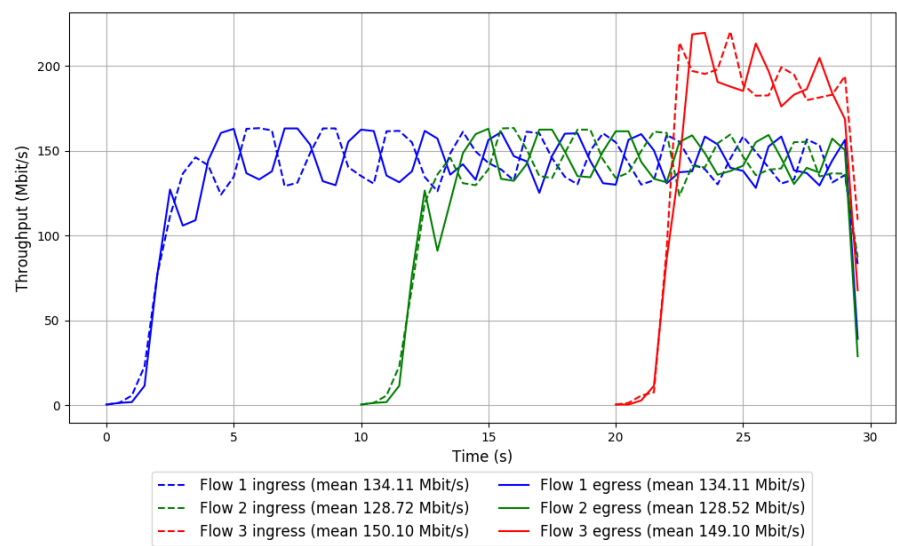
-- Flow 3:

Average throughput: 149.10 Mbit/s

95th percentile per-packet one-way delay: 139.750 ms

Loss rate: 3.49%

Run 2: Report of Indigo-1-32 — Data Link



Run 3: Statistics of Indigo-1-32

Start at: 2018-03-07 14:16:48

End at: 2018-03-07 14:17:18

Below is generated by plot.py at 2018-03-07 21:56:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 272.68 Mbit/s

95th percentile per-packet one-way delay: 138.182 ms

Loss rate: 1.62%

-- Flow 1:

Average throughput: 137.13 Mbit/s

95th percentile per-packet one-way delay: 137.861 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 128.26 Mbit/s

95th percentile per-packet one-way delay: 137.753 ms

Loss rate: 1.56%

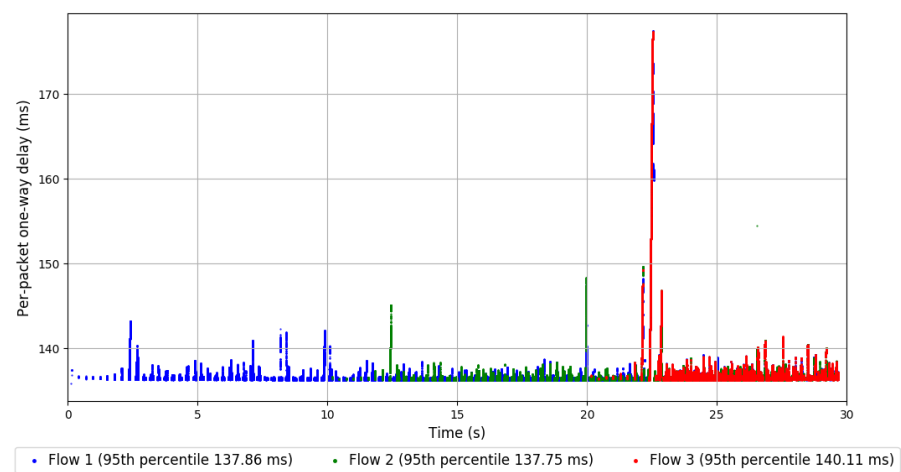
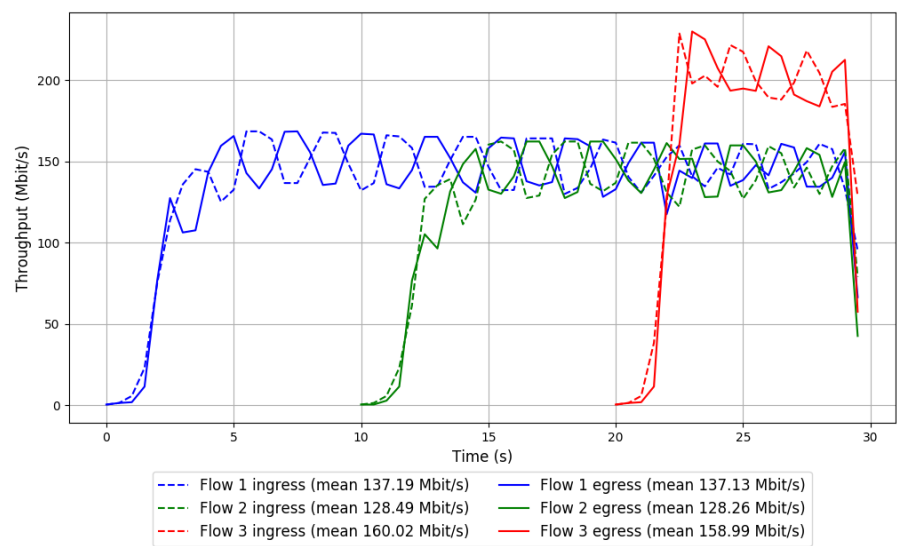
-- Flow 3:

Average throughput: 158.99 Mbit/s

95th percentile per-packet one-way delay: 140.114 ms

Loss rate: 3.42%

Run 3: Report of Indigo-1-32 — Data Link



Run 4: Statistics of Indigo-1-32

Start at: 2018-03-07 14:36:58

End at: 2018-03-07 14:37:28

Below is generated by plot.py at 2018-03-07 21:56:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 310.73 Mbit/s

95th percentile per-packet one-way delay: 138.325 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 176.37 Mbit/s

95th percentile per-packet one-way delay: 137.822 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 129.78 Mbit/s

95th percentile per-packet one-way delay: 139.008 ms

Loss rate: 1.52%

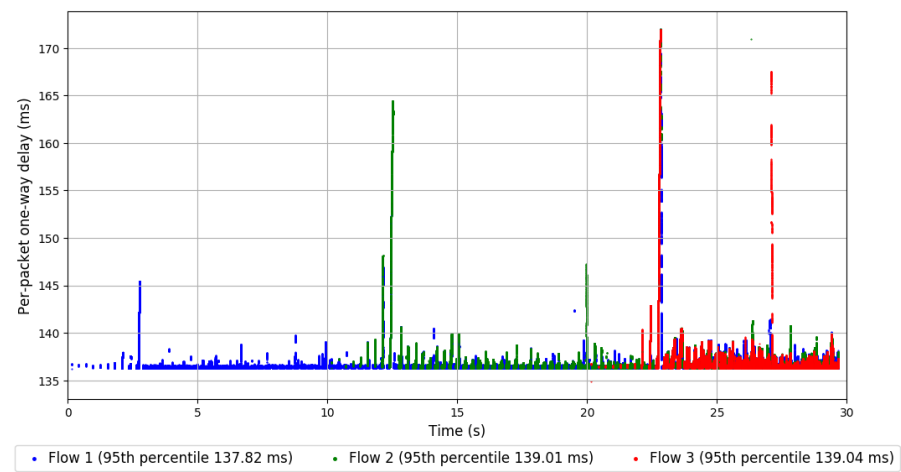
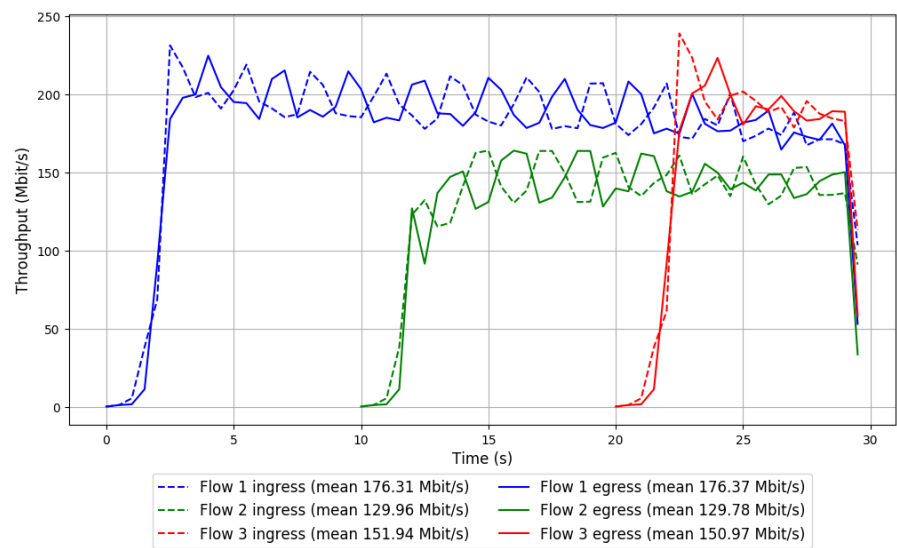
-- Flow 3:

Average throughput: 150.97 Mbit/s

95th percentile per-packet one-way delay: 139.043 ms

Loss rate: 3.39%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

Start at: 2018-03-07 14:57:18

End at: 2018-03-07 14:57:48

Below is generated by plot.py at 2018-03-07 21:56:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 254.60 Mbit/s

95th percentile per-packet one-way delay: 136.554 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 134.46 Mbit/s

95th percentile per-packet one-way delay: 136.208 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 129.18 Mbit/s

95th percentile per-packet one-way delay: 136.416 ms

Loss rate: 1.57%

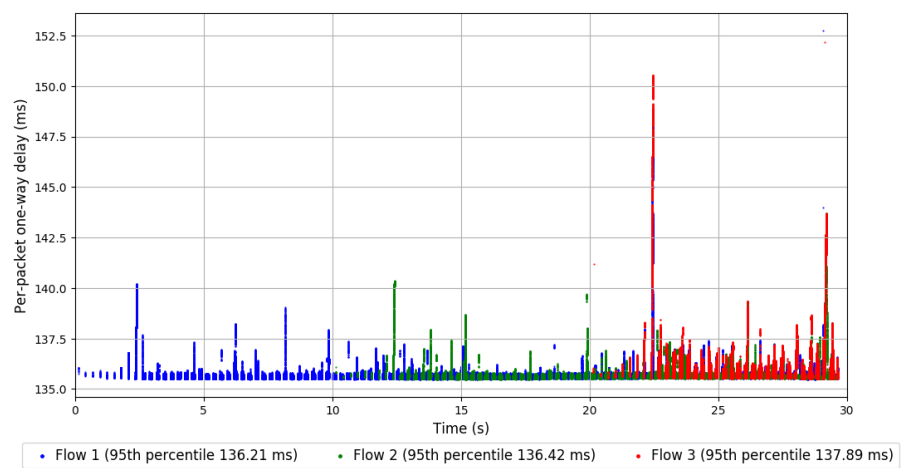
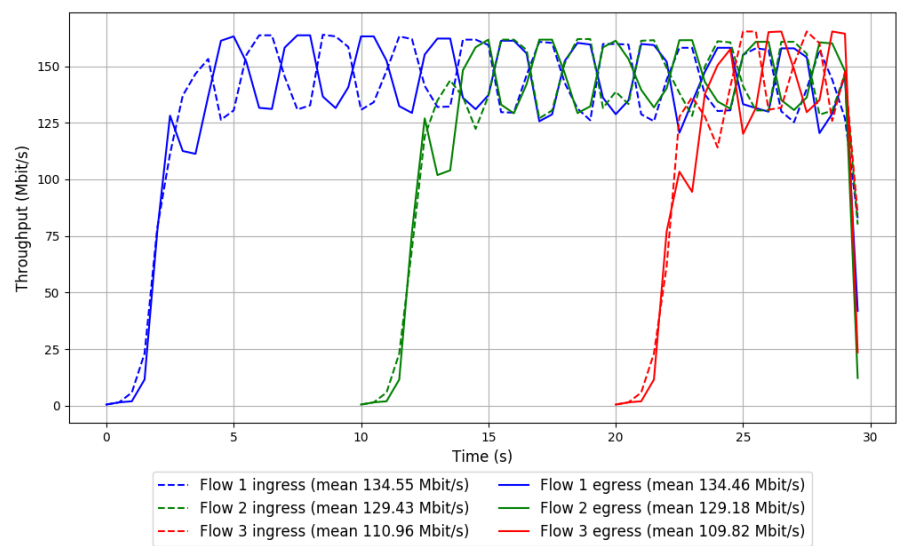
-- Flow 3:

Average throughput: 109.82 Mbit/s

95th percentile per-packet one-way delay: 137.891 ms

Loss rate: 3.79%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

Start at: 2018-03-07 15:17:57

End at: 2018-03-07 15:18:27

Below is generated by plot.py at 2018-03-07 21:56:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 334.87 Mbit/s

95th percentile per-packet one-way delay: 138.832 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 170.59 Mbit/s

95th percentile per-packet one-way delay: 137.011 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 174.91 Mbit/s

95th percentile per-packet one-way delay: 140.615 ms

Loss rate: 1.35%

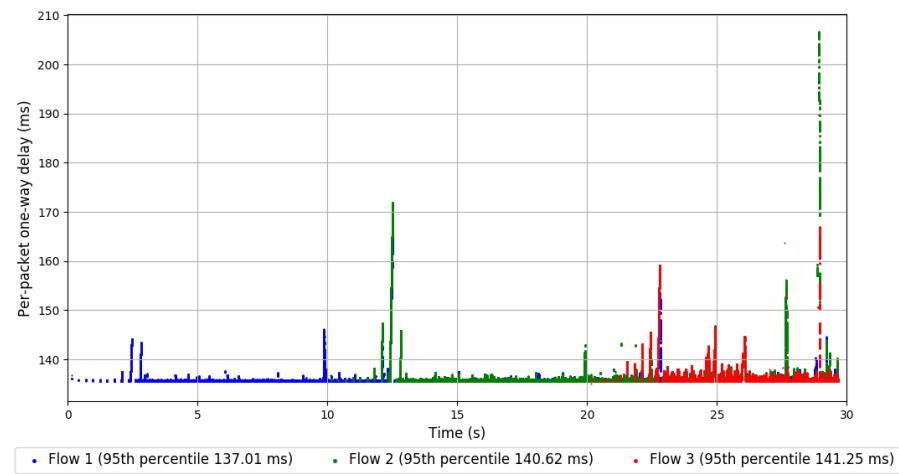
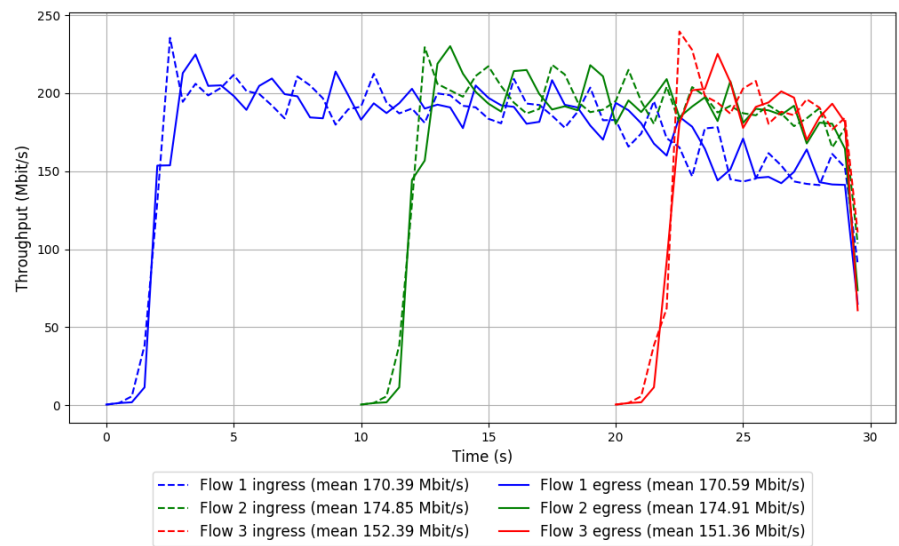
-- Flow 3:

Average throughput: 151.36 Mbit/s

95th percentile per-packet one-way delay: 141.246 ms

Loss rate: 3.40%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-03-07 15:38:39

End at: 2018-03-07 15:39:09

Below is generated by plot.py at 2018-03-07 21:56:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 330.77 Mbit/s

95th percentile per-packet one-way delay: 137.760 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 170.95 Mbit/s

95th percentile per-packet one-way delay: 137.015 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 168.34 Mbit/s

95th percentile per-packet one-way delay: 138.558 ms

Loss rate: 1.33%

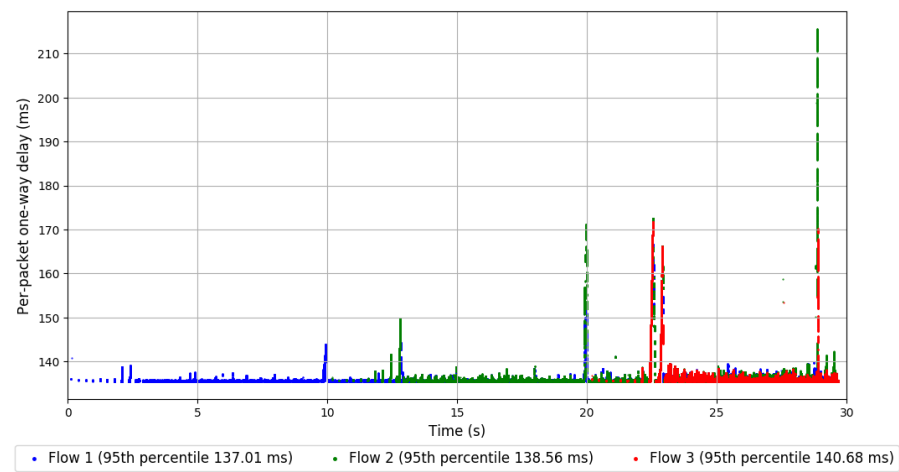
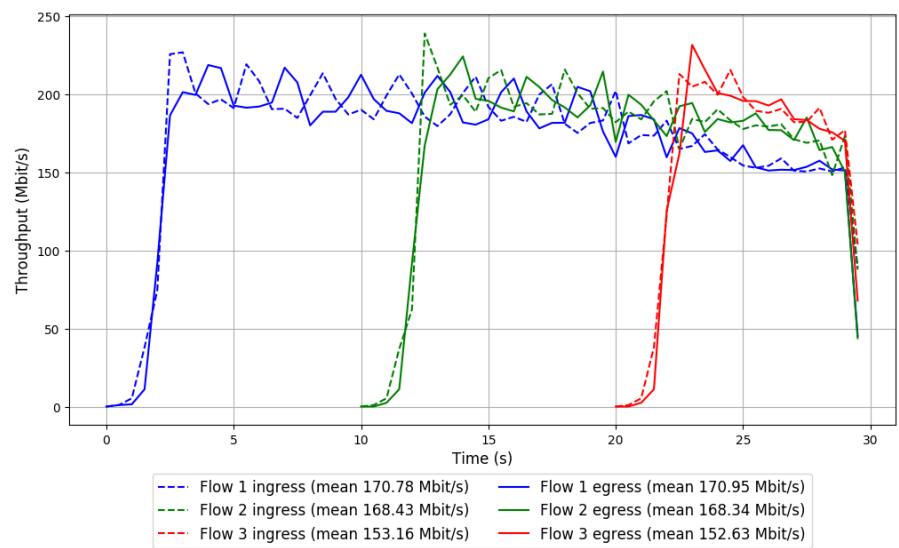
-- Flow 3:

Average throughput: 152.63 Mbit/s

95th percentile per-packet one-way delay: 140.684 ms

Loss rate: 3.14%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

Start at: 2018-03-07 15:59:15

End at: 2018-03-07 15:59:45

Below is generated by plot.py at 2018-03-07 21:56:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 241.60 Mbit/s

95th percentile per-packet one-way delay: 138.523 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 124.14 Mbit/s

95th percentile per-packet one-way delay: 138.012 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 122.49 Mbit/s

95th percentile per-packet one-way delay: 138.925 ms

Loss rate: 1.56%

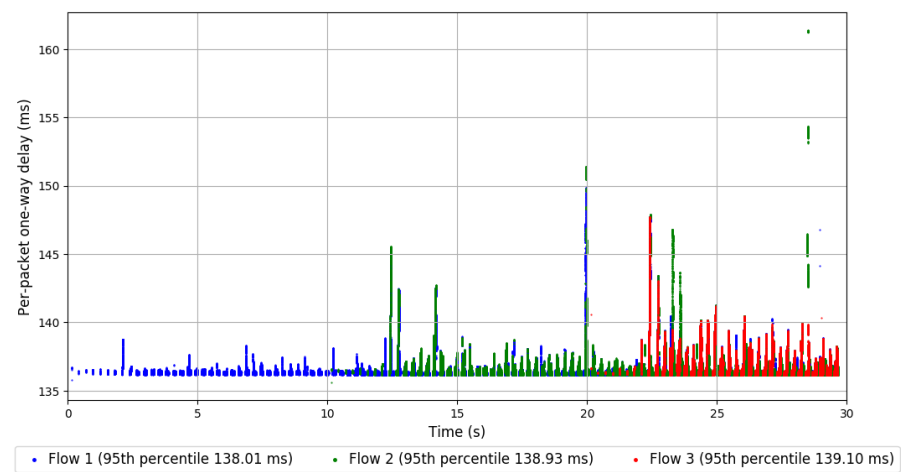
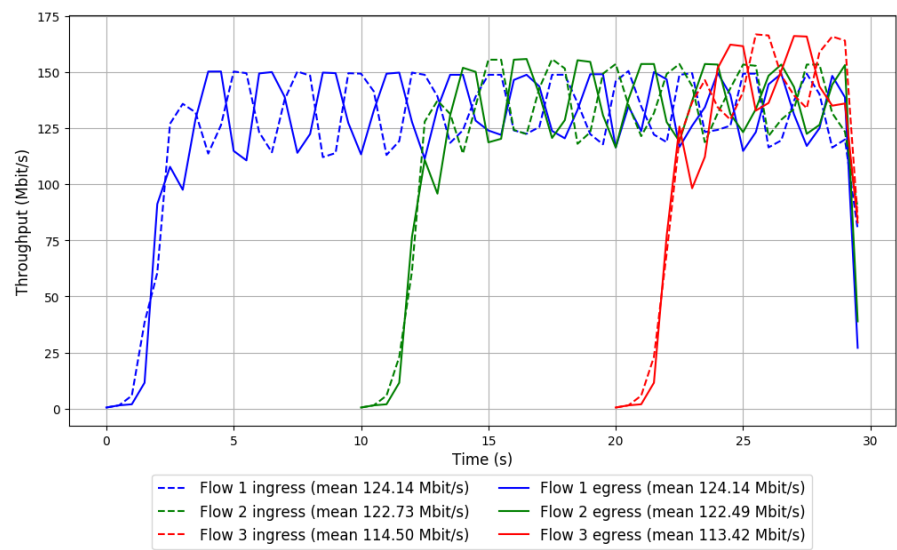
-- Flow 3:

Average throughput: 113.42 Mbit/s

95th percentile per-packet one-way delay: 139.099 ms

Loss rate: 3.71%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-03-07 16:19:17

End at: 2018-03-07 16:19:47

Below is generated by plot.py at 2018-03-07 21:56:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 285.93 Mbit/s

95th percentile per-packet one-way delay: 137.606 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 131.36 Mbit/s

95th percentile per-packet one-way delay: 137.322 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 164.64 Mbit/s

95th percentile per-packet one-way delay: 137.702 ms

Loss rate: 1.29%

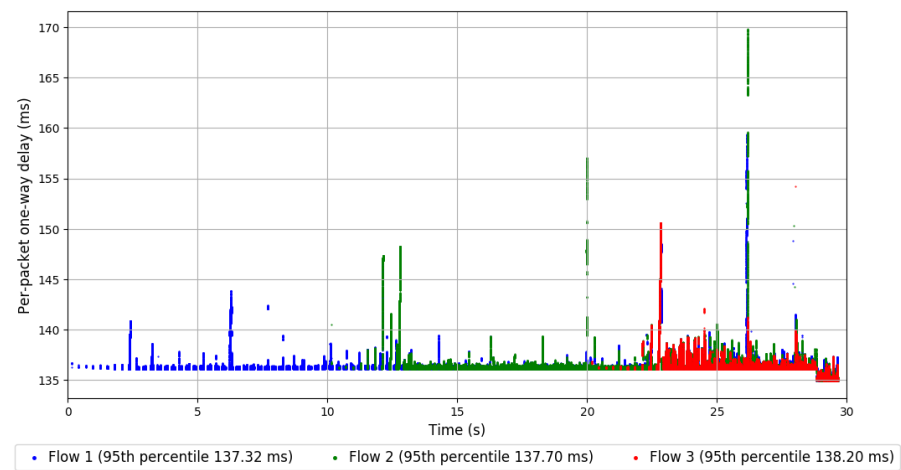
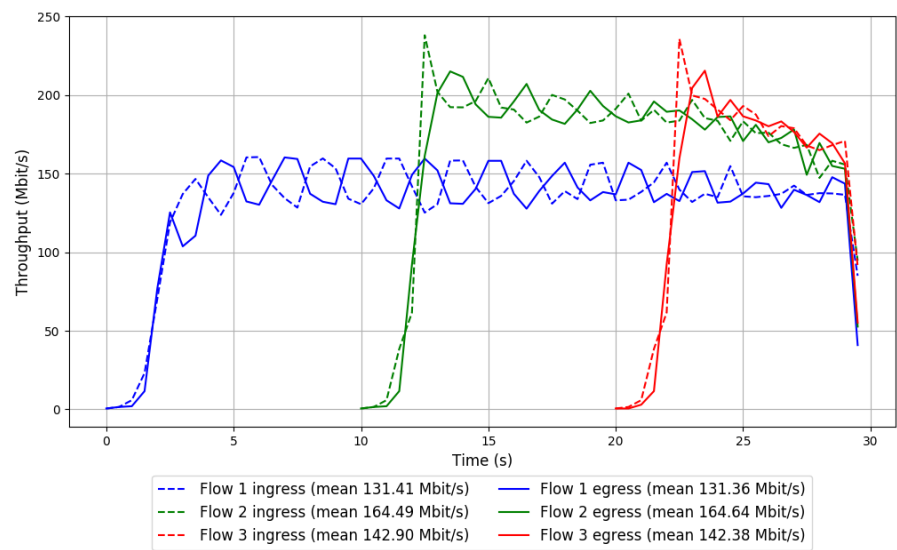
-- Flow 3:

Average throughput: 142.38 Mbit/s

95th percentile per-packet one-way delay: 138.196 ms

Loss rate: 3.15%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

Start at: 2018-03-07 16:39:28

End at: 2018-03-07 16:39:58

Below is generated by plot.py at 2018-03-07 21:56:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 290.10 Mbit/s

95th percentile per-packet one-way delay: 137.714 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 171.18 Mbit/s

95th percentile per-packet one-way delay: 137.088 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 125.46 Mbit/s

95th percentile per-packet one-way delay: 137.884 ms

Loss rate: 1.53%

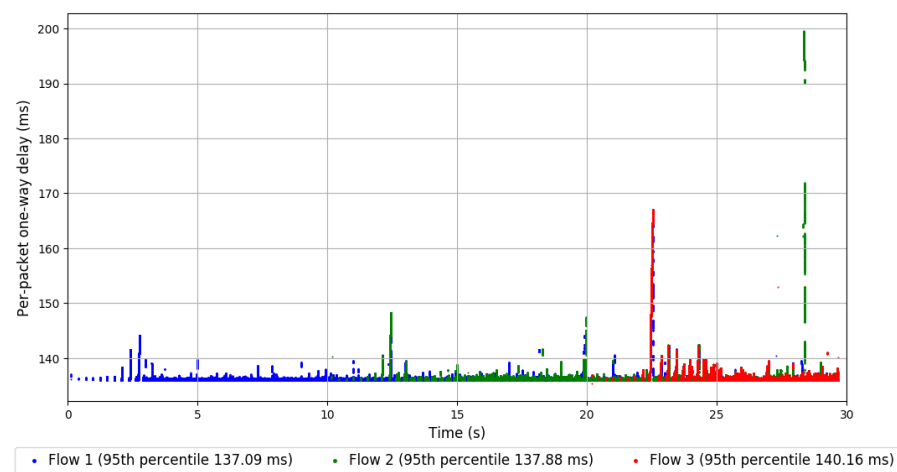
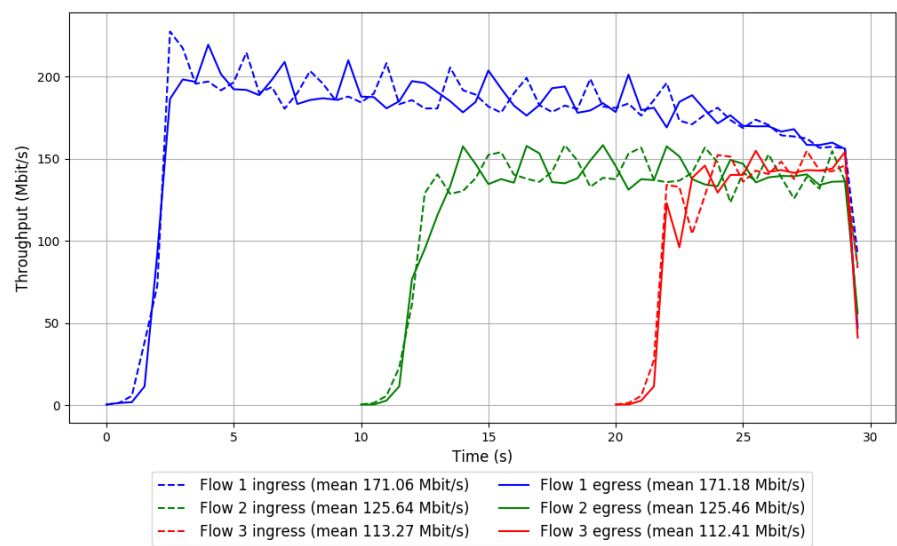
-- Flow 3:

Average throughput: 112.41 Mbit/s

95th percentile per-packet one-way delay: 140.162 ms

Loss rate: 3.50%

Run 10: Report of Indigo-1-32 — Data Link



Run 1: Statistics of Vivace-latency

Start at: 2018-03-07 13:41:01

End at: 2018-03-07 13:41:31

Below is generated by plot.py at 2018-03-07 21:56:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 491.87 Mbit/s

95th percentile per-packet one-way delay: 169.347 ms

Loss rate: 2.18%

-- Flow 1:

Average throughput: 238.23 Mbit/s

95th percentile per-packet one-way delay: 139.829 ms

Loss rate: 1.56%

-- Flow 2:

Average throughput: 284.64 Mbit/s

95th percentile per-packet one-way delay: 140.296 ms

Loss rate: 1.65%

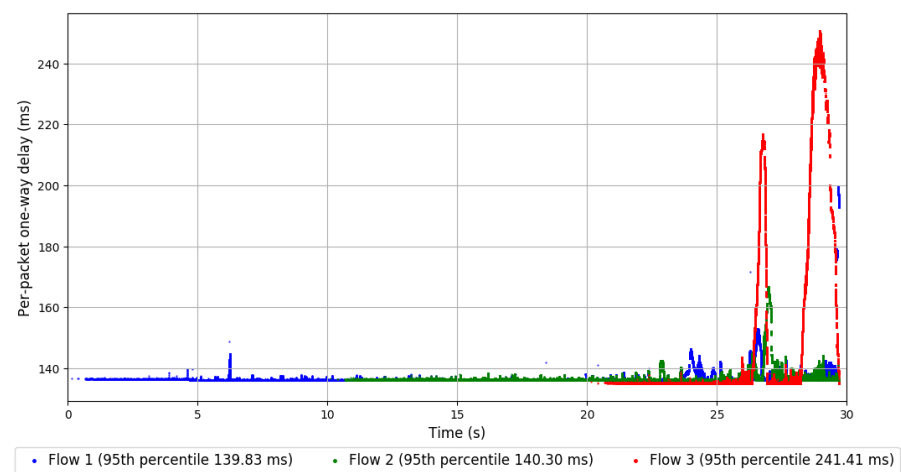
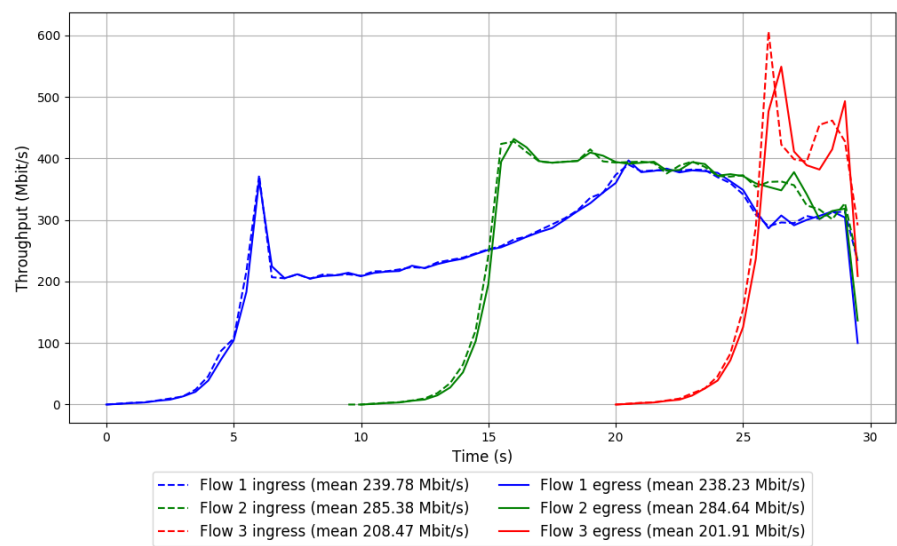
-- Flow 3:

Average throughput: 201.91 Mbit/s

95th percentile per-packet one-way delay: 241.410 ms

Loss rate: 5.83%

Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-03-07 14:01:48

End at: 2018-03-07 14:02:18

Below is generated by plot.py at 2018-03-07 21:56:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 540.06 Mbit/s

95th percentile per-packet one-way delay: 174.865 ms

Loss rate: 1.69%

-- Flow 1:

Average throughput: 336.11 Mbit/s

95th percentile per-packet one-way delay: 186.304 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 254.05 Mbit/s

95th percentile per-packet one-way delay: 149.299 ms

Loss rate: 1.25%

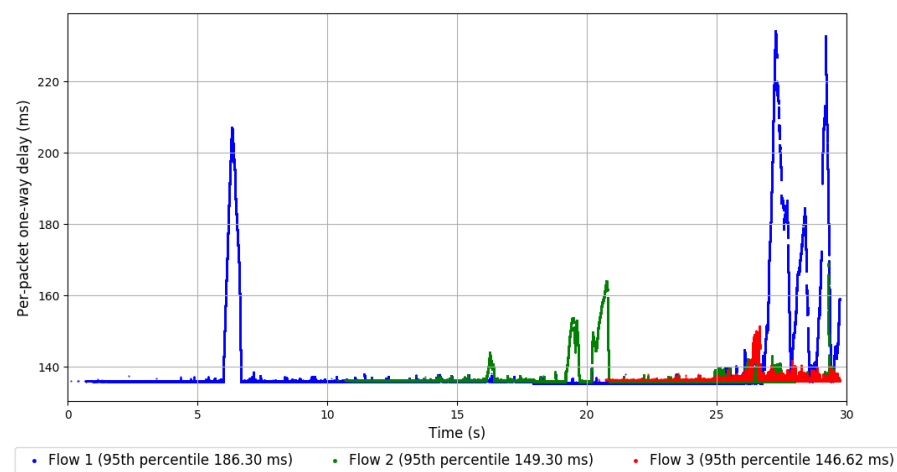
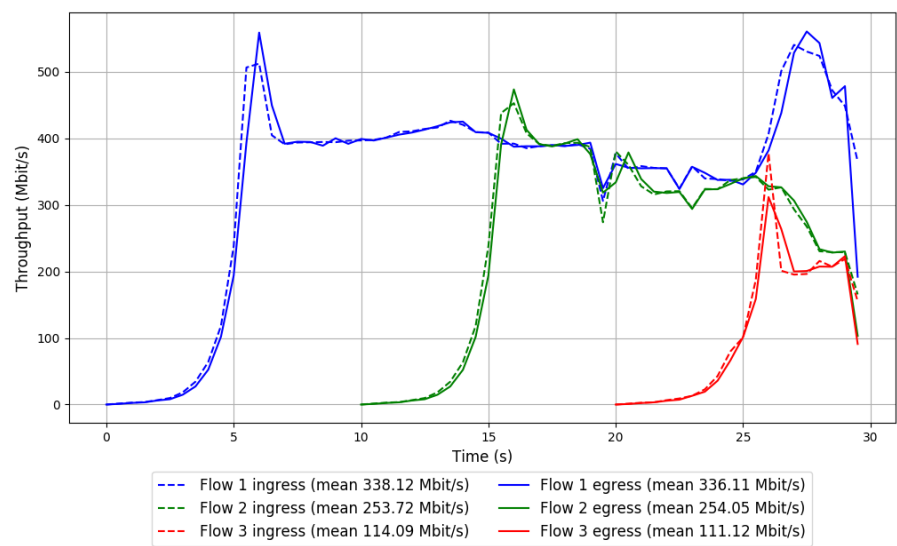
-- Flow 3:

Average throughput: 111.12 Mbit/s

95th percentile per-packet one-way delay: 146.625 ms

Loss rate: 5.32%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-03-07 14:22:31

End at: 2018-03-07 14:23:01

Below is generated by plot.py at 2018-03-07 21:56:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 500.15 Mbit/s

95th percentile per-packet one-way delay: 173.165 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 302.11 Mbit/s

95th percentile per-packet one-way delay: 209.889 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 240.93 Mbit/s

95th percentile per-packet one-way delay: 136.872 ms

Loss rate: 1.08%

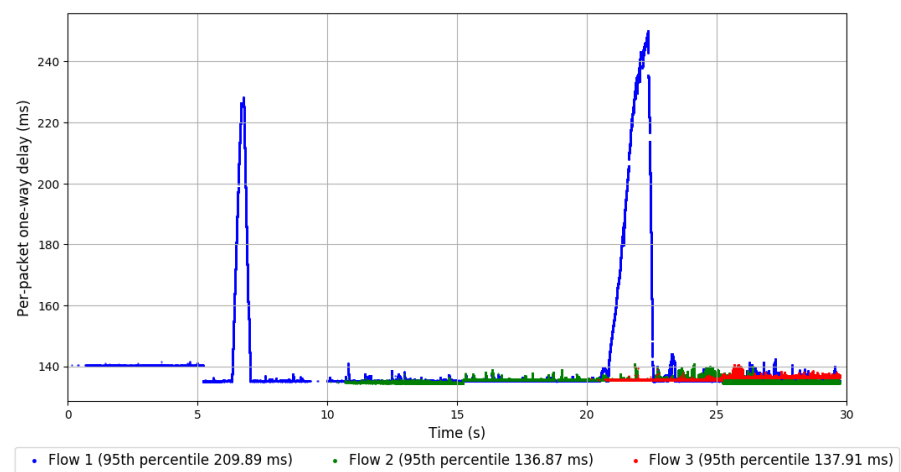
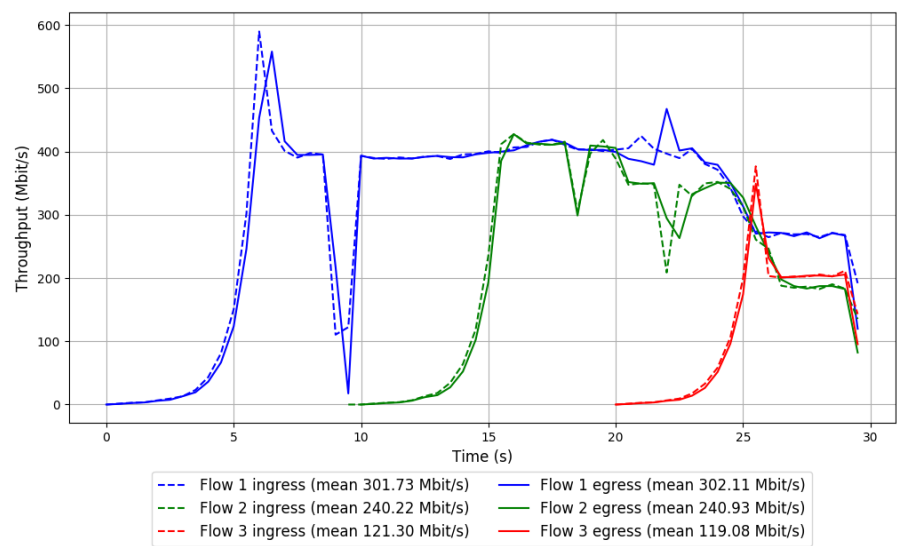
-- Flow 3:

Average throughput: 119.08 Mbit/s

95th percentile per-packet one-way delay: 137.912 ms

Loss rate: 4.56%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-03-07 14:42:32

End at: 2018-03-07 14:43:02

Below is generated by plot.py at 2018-03-07 21:56:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 541.47 Mbit/s

95th percentile per-packet one-way delay: 182.058 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 302.85 Mbit/s

95th percentile per-packet one-way delay: 145.575 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 305.04 Mbit/s

95th percentile per-packet one-way delay: 197.703 ms

Loss rate: 2.17%

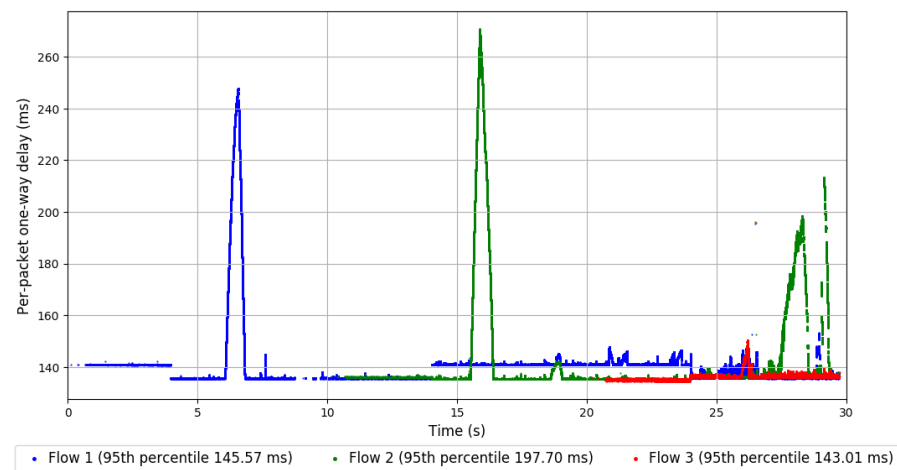
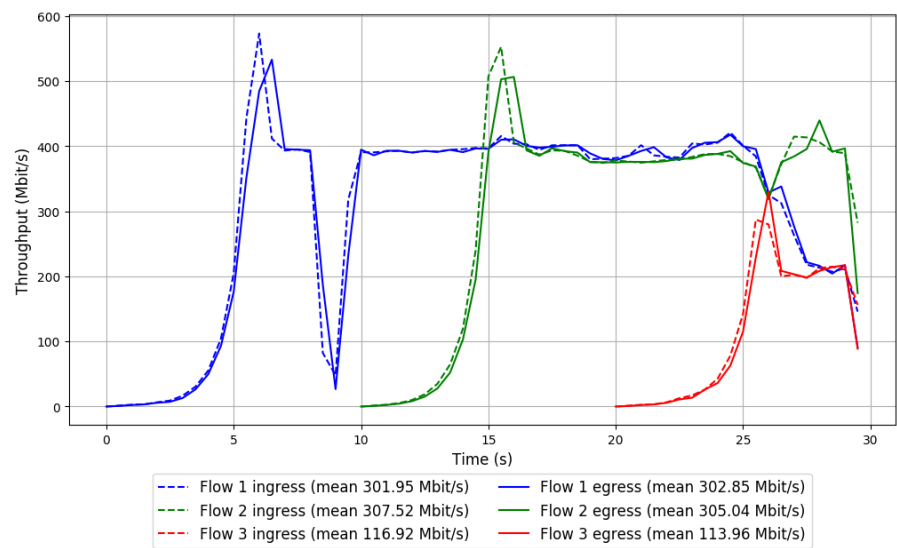
-- Flow 3:

Average throughput: 113.96 Mbit/s

95th percentile per-packet one-way delay: 143.013 ms

Loss rate: 5.22%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-03-07 15:02:54

End at: 2018-03-07 15:03:24

Below is generated by plot.py at 2018-03-07 21:56:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 491.55 Mbit/s

95th percentile per-packet one-way delay: 163.055 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 261.88 Mbit/s

95th percentile per-packet one-way delay: 166.377 ms

Loss rate: 1.33%

-- Flow 2:

Average throughput: 282.93 Mbit/s

95th percentile per-packet one-way delay: 166.490 ms

Loss rate: 1.57%

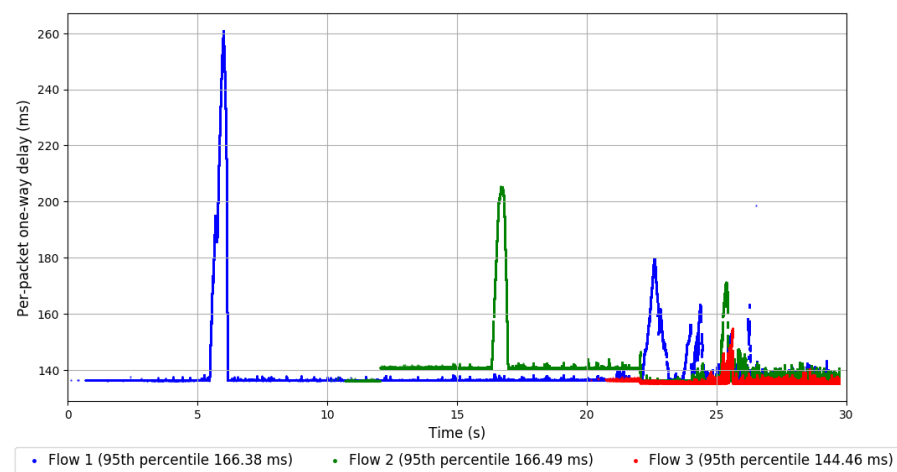
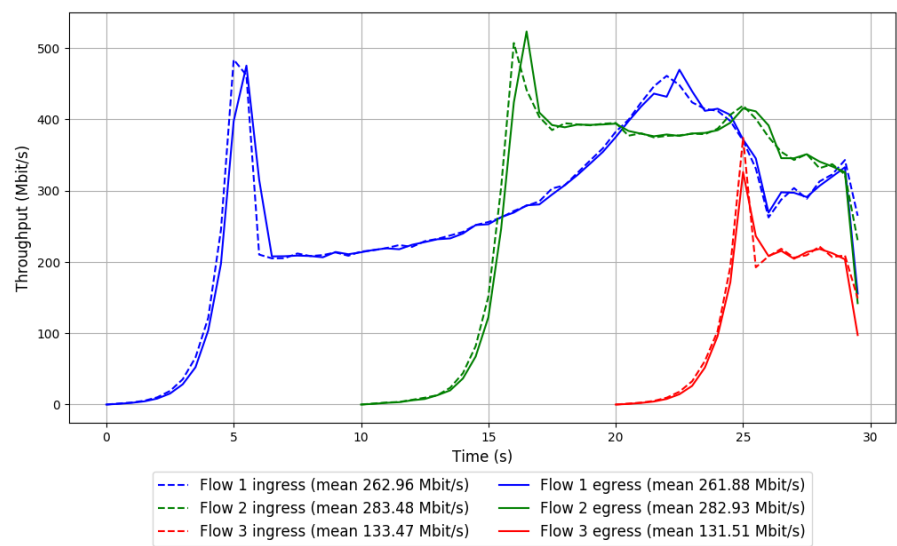
-- Flow 3:

Average throughput: 131.51 Mbit/s

95th percentile per-packet one-way delay: 144.464 ms

Loss rate: 4.22%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-03-07 15:23:48

End at: 2018-03-07 15:24:18

Below is generated by plot.py at 2018-03-07 21:56:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 476.55 Mbit/s

95th percentile per-packet one-way delay: 169.309 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 317.83 Mbit/s

95th percentile per-packet one-way delay: 142.525 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 185.52 Mbit/s

95th percentile per-packet one-way delay: 240.191 ms

Loss rate: 2.44%

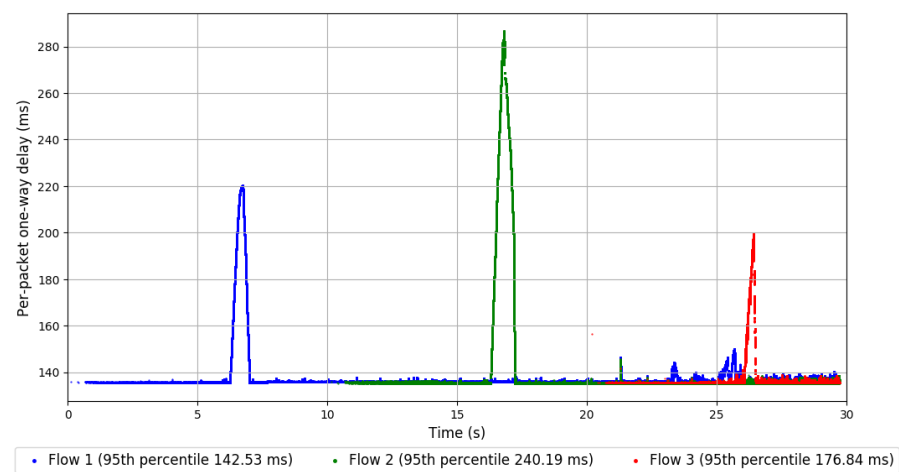
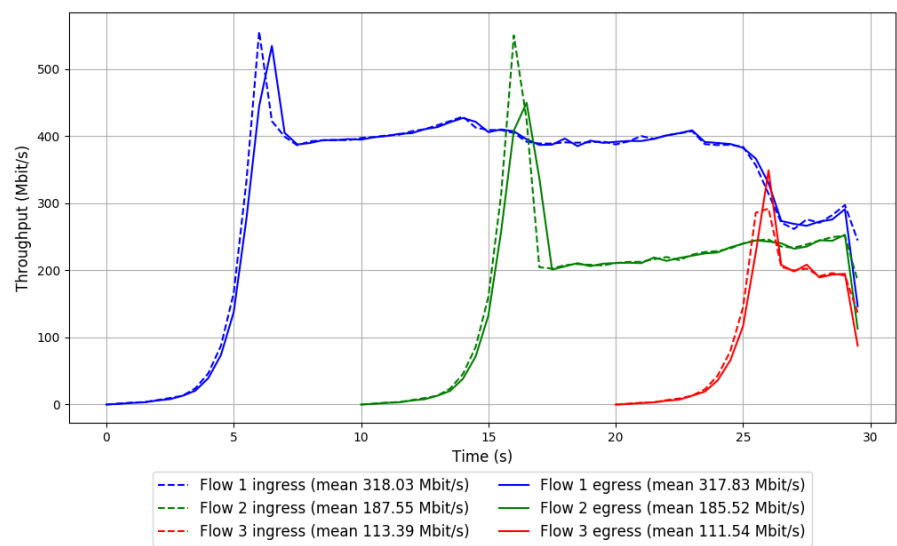
-- Flow 3:

Average throughput: 111.54 Mbit/s

95th percentile per-packet one-way delay: 176.839 ms

Loss rate: 4.57%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-03-07 15:44:20

End at: 2018-03-07 15:44:50

Below is generated by plot.py at 2018-03-07 21:56:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 478.62 Mbit/s

95th percentile per-packet one-way delay: 152.589 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 307.62 Mbit/s

95th percentile per-packet one-way delay: 138.426 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 186.35 Mbit/s

95th percentile per-packet one-way delay: 171.258 ms

Loss rate: 1.88%

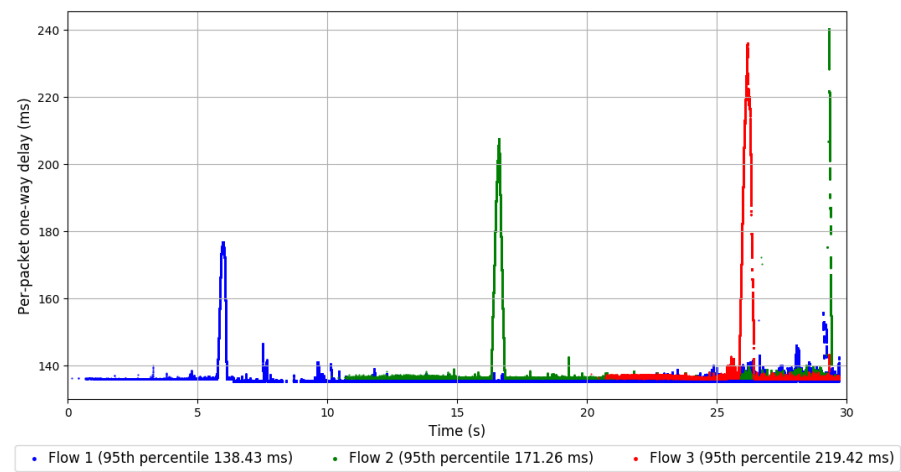
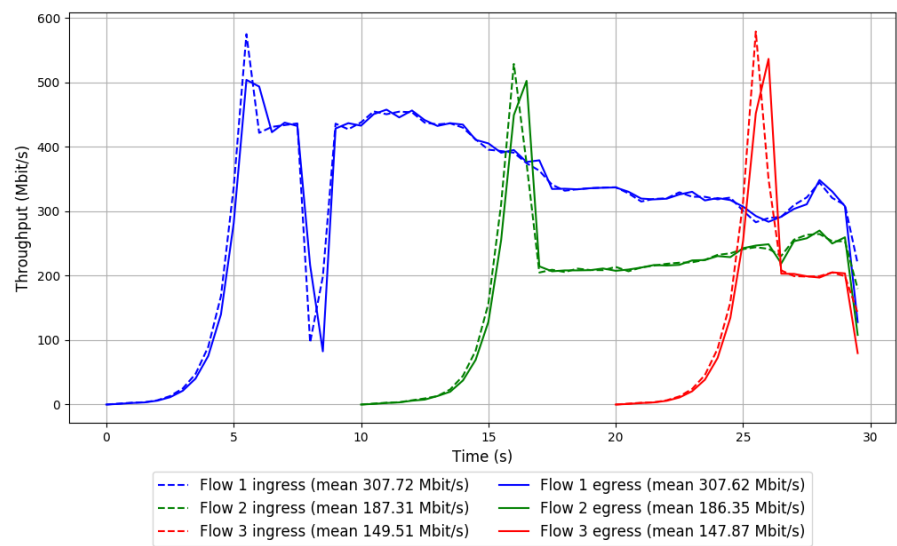
-- Flow 3:

Average throughput: 147.87 Mbit/s

95th percentile per-packet one-way delay: 219.422 ms

Loss rate: 3.92%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-03-07 16:04:45

End at: 2018-03-07 16:05:15

Below is generated by plot.py at 2018-03-07 21:56:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 451.80 Mbit/s

95th percentile per-packet one-way delay: 140.289 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 312.49 Mbit/s

95th percentile per-packet one-way delay: 143.992 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 179.75 Mbit/s

95th percentile per-packet one-way delay: 136.913 ms

Loss rate: 2.00%

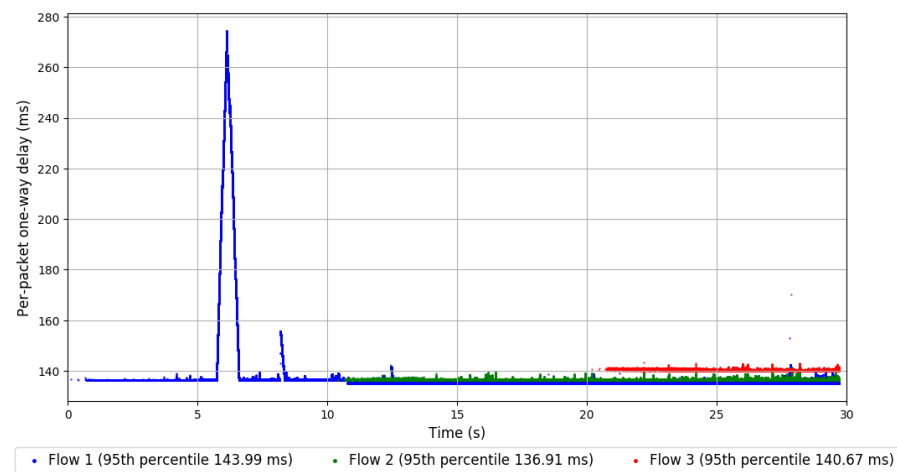
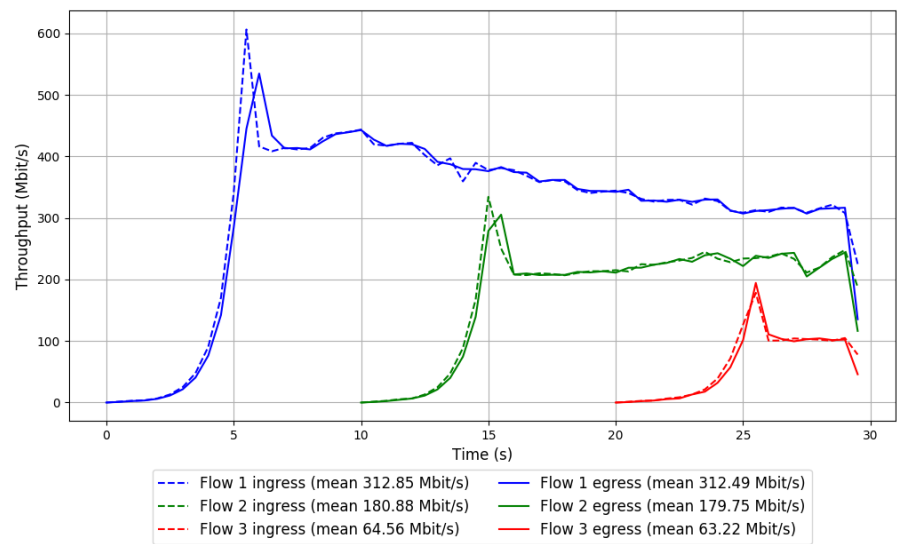
-- Flow 3:

Average throughput: 63.22 Mbit/s

95th percentile per-packet one-way delay: 140.669 ms

Loss rate: 4.85%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-03-07 16:24:55

End at: 2018-03-07 16:25:25

Below is generated by plot.py at 2018-03-07 21:56:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 483.66 Mbit/s

95th percentile per-packet one-way delay: 144.432 ms

Loss rate: 1.67%

-- Flow 1:

Average throughput: 289.77 Mbit/s

95th percentile per-packet one-way delay: 147.705 ms

Loss rate: 1.33%

-- Flow 2:

Average throughput: 234.41 Mbit/s

95th percentile per-packet one-way delay: 159.551 ms

Loss rate: 1.55%

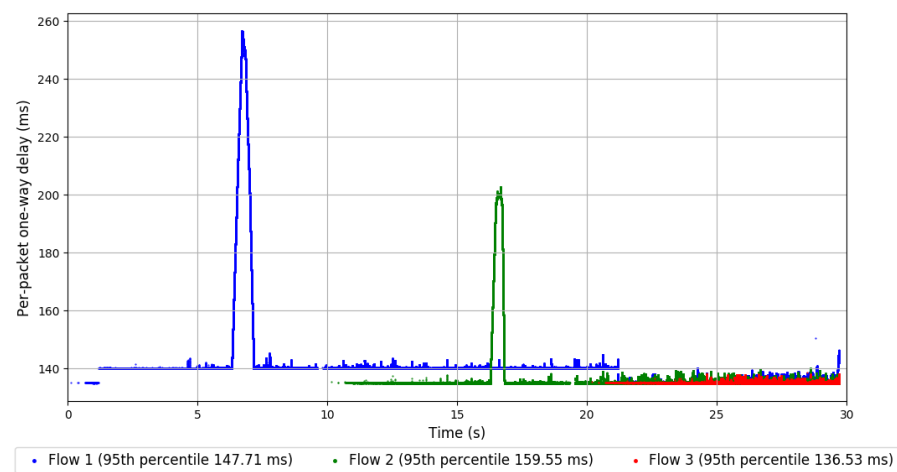
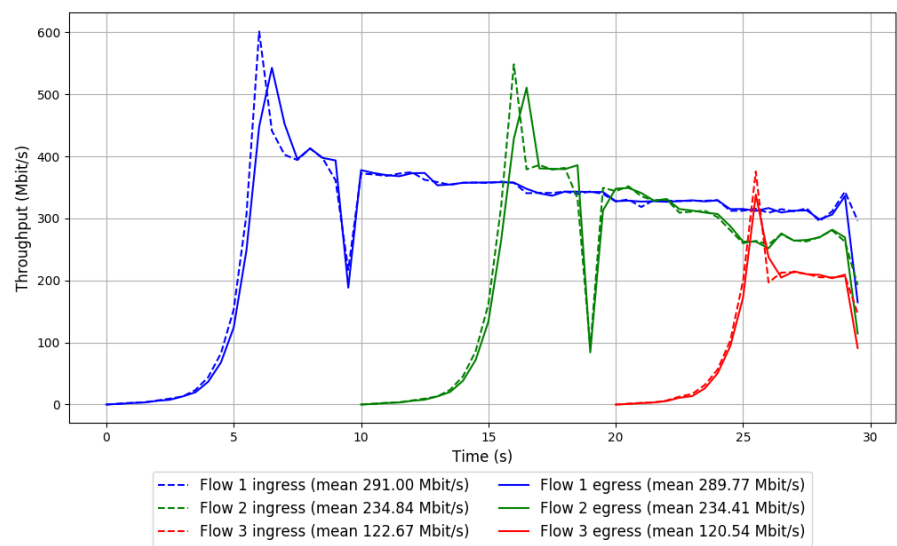
-- Flow 3:

Average throughput: 120.54 Mbit/s

95th percentile per-packet one-way delay: 136.531 ms

Loss rate: 4.55%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-03-07 16:45:11

End at: 2018-03-07 16:45:41

Below is generated by plot.py at 2018-03-07 21:56:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 470.96 Mbit/s

95th percentile per-packet one-way delay: 143.217 ms

Loss rate: 1.72%

-- Flow 1:

Average throughput: 285.00 Mbit/s

95th percentile per-packet one-way delay: 140.524 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 186.70 Mbit/s

95th percentile per-packet one-way delay: 135.874 ms

Loss rate: 2.00%

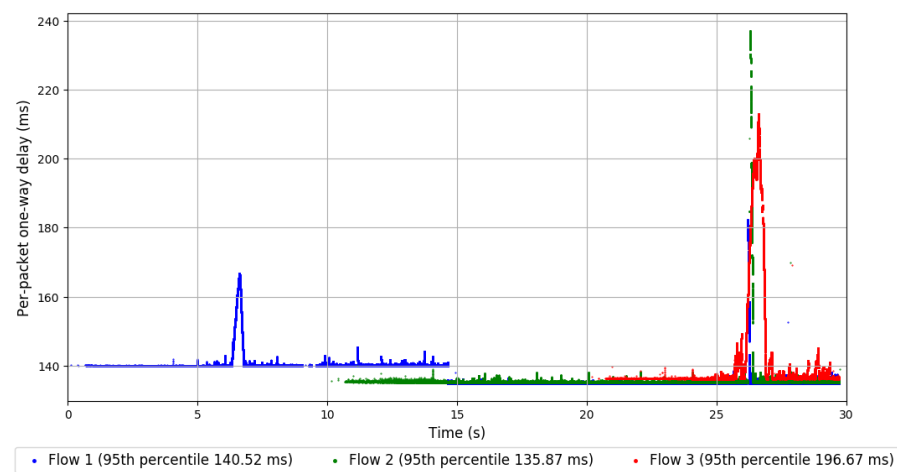
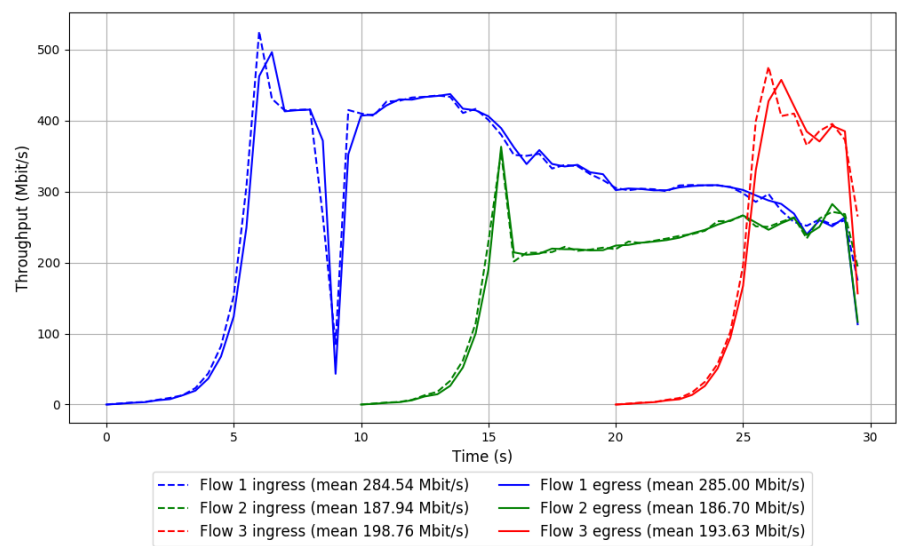
-- Flow 3:

Average throughput: 193.63 Mbit/s

95th percentile per-packet one-way delay: 196.673 ms

Loss rate: 5.29%

Run 10: Report of Vivace-latency — Data Link

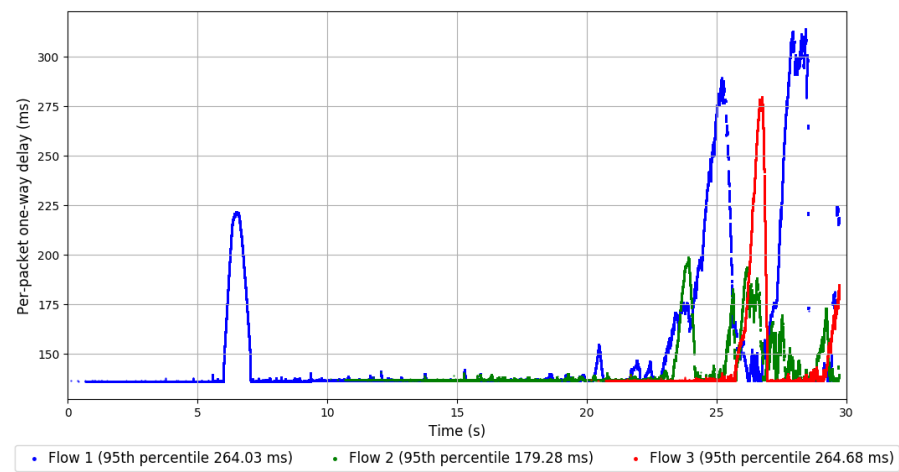
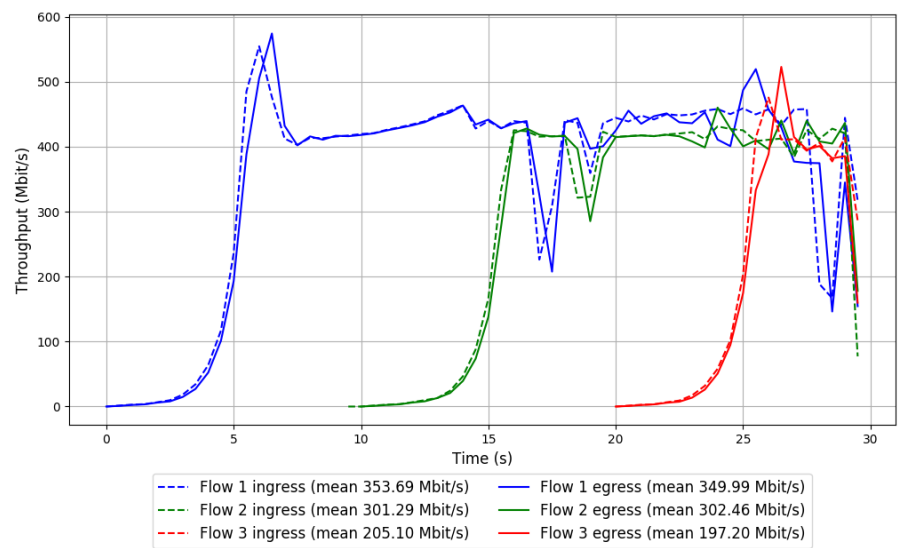


```
Run 1: Statistics of Vivace-loss

Start at: 2018-03-07 13:45:46
End at: 2018-03-07 13:46:16

# Below is generated by plot.py at 2018-03-07 21:58:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 613.83 Mbit/s
95th percentile per-packet one-way delay: 235.065 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 349.99 Mbit/s
95th percentile per-packet one-way delay: 264.032 ms
Loss rate: 1.95%
-- Flow 2:
Average throughput: 302.46 Mbit/s
95th percentile per-packet one-way delay: 179.281 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 197.20 Mbit/s
95th percentile per-packet one-way delay: 264.679 ms
Loss rate: 6.53%
```

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-03-07 14:06:28

End at: 2018-03-07 14:06:58

Below is generated by plot.py at 2018-03-07 21:59:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 506.84 Mbit/s

95th percentile per-packet one-way delay: 280.380 ms

Loss rate: 4.45%

-- Flow 1:

Average throughput: 258.78 Mbit/s

95th percentile per-packet one-way delay: 278.627 ms

Loss rate: 5.25%

-- Flow 2:

Average throughput: 293.73 Mbit/s

95th percentile per-packet one-way delay: 320.828 ms

Loss rate: 3.47%

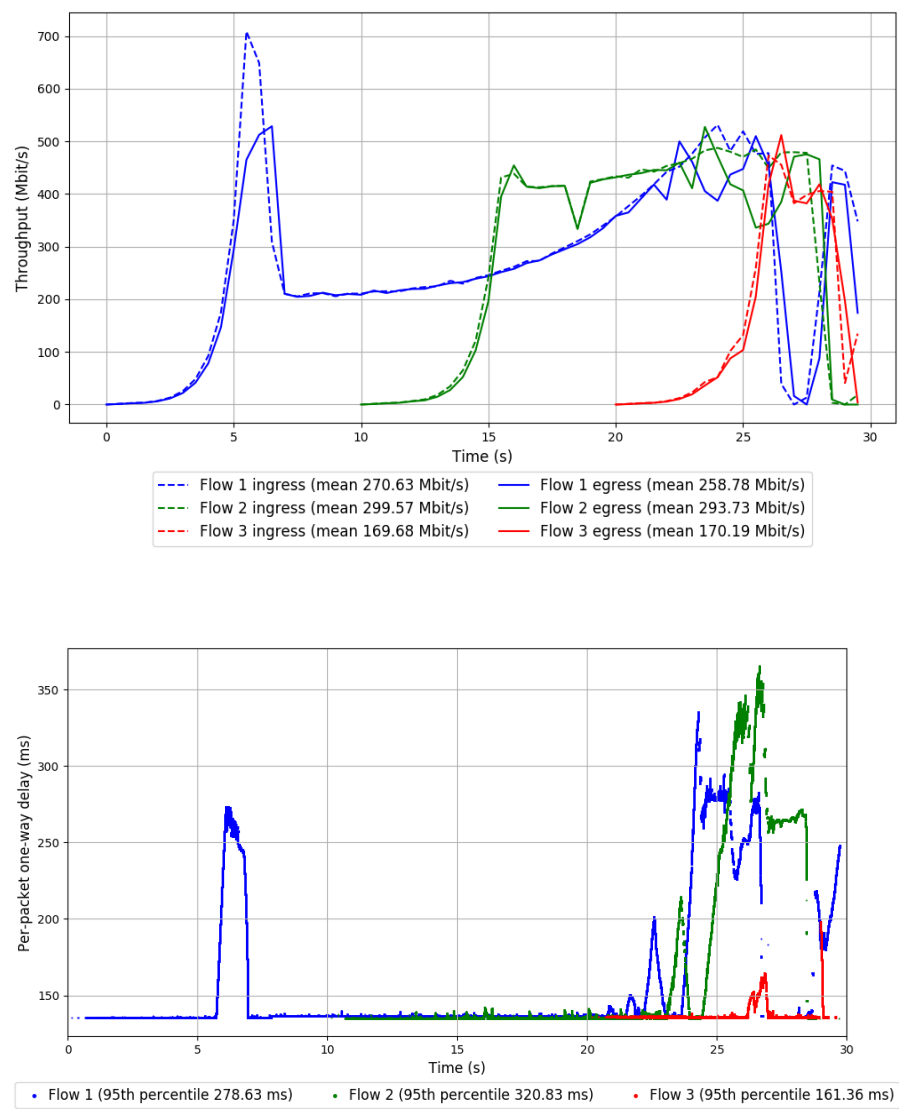
-- Flow 3:

Average throughput: 170.19 Mbit/s

95th percentile per-packet one-way delay: 161.360 ms

Loss rate: 4.04%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-03-07 14:27:01

End at: 2018-03-07 14:27:31

Below is generated by plot.py at 2018-03-07 22:00:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 394.66 Mbit/s

95th percentile per-packet one-way delay: 282.925 ms

Loss rate: 4.13%

-- Flow 1:

Average throughput: 240.60 Mbit/s

95th percentile per-packet one-way delay: 288.221 ms

Loss rate: 4.70%

-- Flow 2:

Average throughput: 170.69 Mbit/s

95th percentile per-packet one-way delay: 136.581 ms

Loss rate: 1.20%

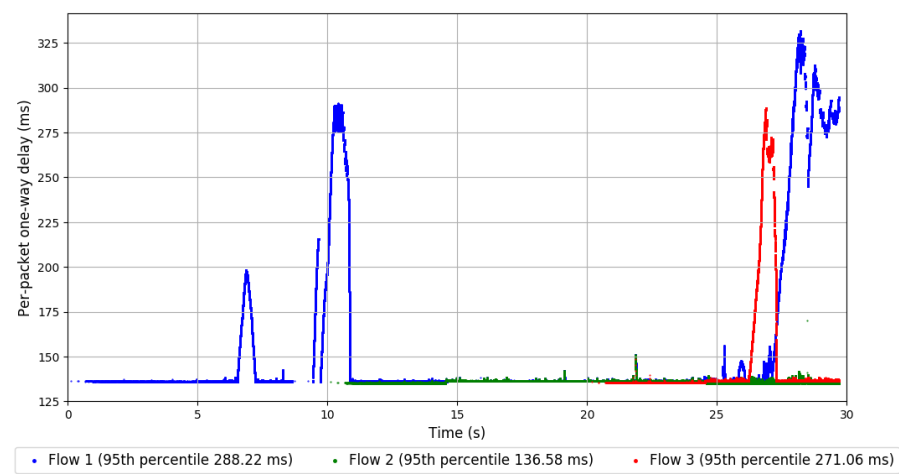
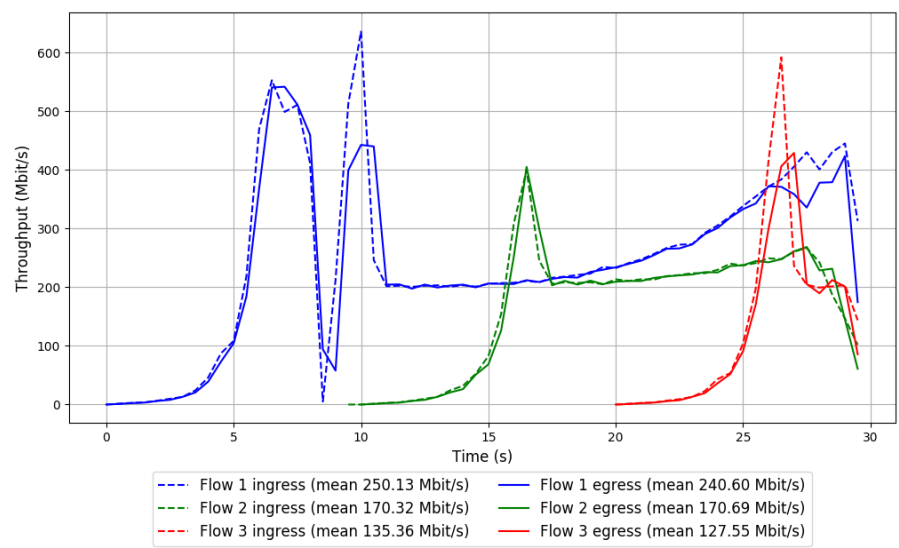
-- Flow 3:

Average throughput: 127.55 Mbit/s

95th percentile per-packet one-way delay: 271.060 ms

Loss rate: 8.39%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-03-07 14:46:59

End at: 2018-03-07 14:47:29

Below is generated by plot.py at 2018-03-07 22:02:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 498.63 Mbit/s

95th percentile per-packet one-way delay: 193.300 ms

Loss rate: 2.39%

-- Flow 1:

Average throughput: 253.11 Mbit/s

95th percentile per-packet one-way delay: 241.363 ms

Loss rate: 2.35%

-- Flow 2:

Average throughput: 291.64 Mbit/s

95th percentile per-packet one-way delay: 148.027 ms

Loss rate: 2.03%

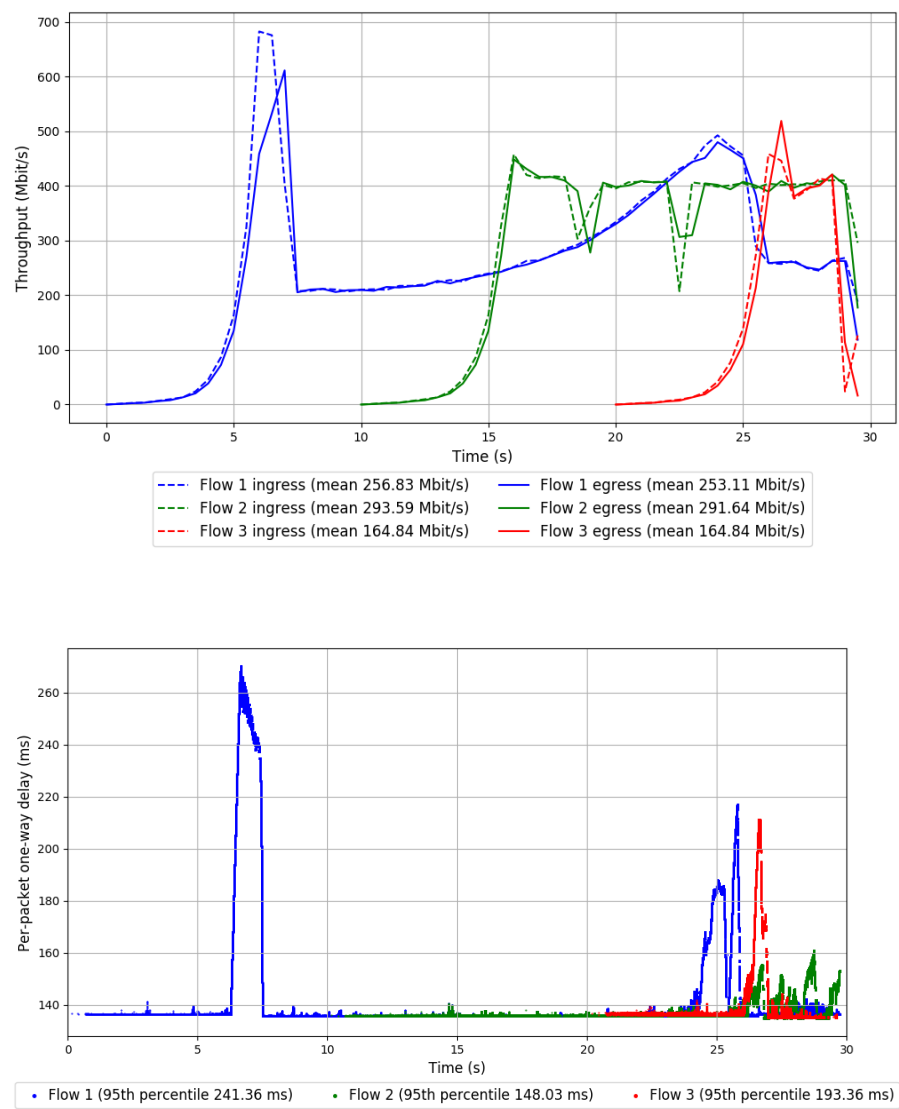
-- Flow 3:

Average throughput: 164.84 Mbit/s

95th percentile per-packet one-way delay: 193.360 ms

Loss rate: 3.91%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-03-07 15:07:34

End at: 2018-03-07 15:08:04

Below is generated by plot.py at 2018-03-07 22:05:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 589.69 Mbit/s

95th percentile per-packet one-way delay: 259.449 ms

Loss rate: 2.08%

-- Flow 1:

Average throughput: 331.97 Mbit/s

95th percentile per-packet one-way delay: 273.901 ms

Loss rate: 2.47%

-- Flow 2:

Average throughput: 290.75 Mbit/s

95th percentile per-packet one-way delay: 192.194 ms

Loss rate: 0.00%

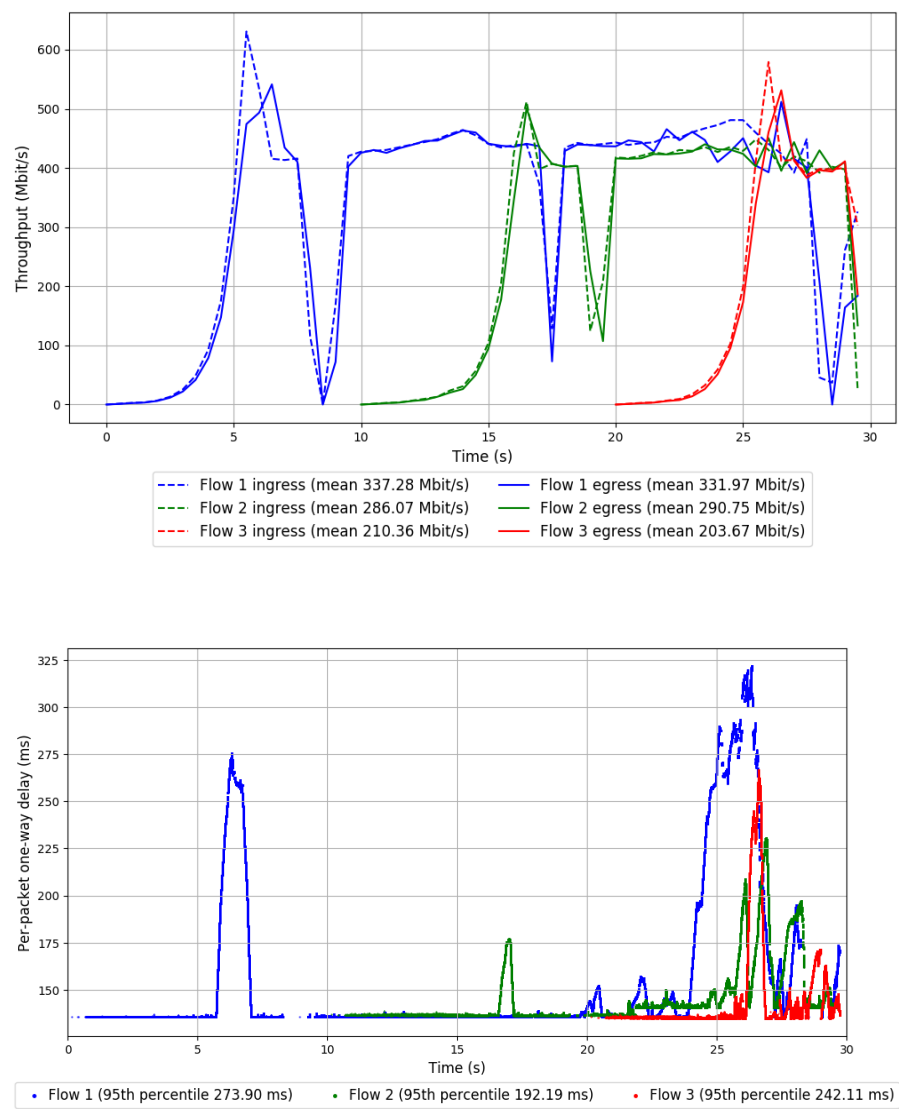
-- Flow 3:

Average throughput: 203.67 Mbit/s

95th percentile per-packet one-way delay: 242.111 ms

Loss rate: 5.86%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-03-07 15:28:30

End at: 2018-03-07 15:29:00

Below is generated by plot.py at 2018-03-07 22:05:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 496.73 Mbit/s

95th percentile per-packet one-way delay: 286.316 ms

Loss rate: 2.96%

-- Flow 1:

Average throughput: 263.28 Mbit/s

95th percentile per-packet one-way delay: 291.620 ms

Loss rate: 3.69%

-- Flow 2:

Average throughput: 305.82 Mbit/s

95th percentile per-packet one-way delay: 140.335 ms

Loss rate: 2.01%

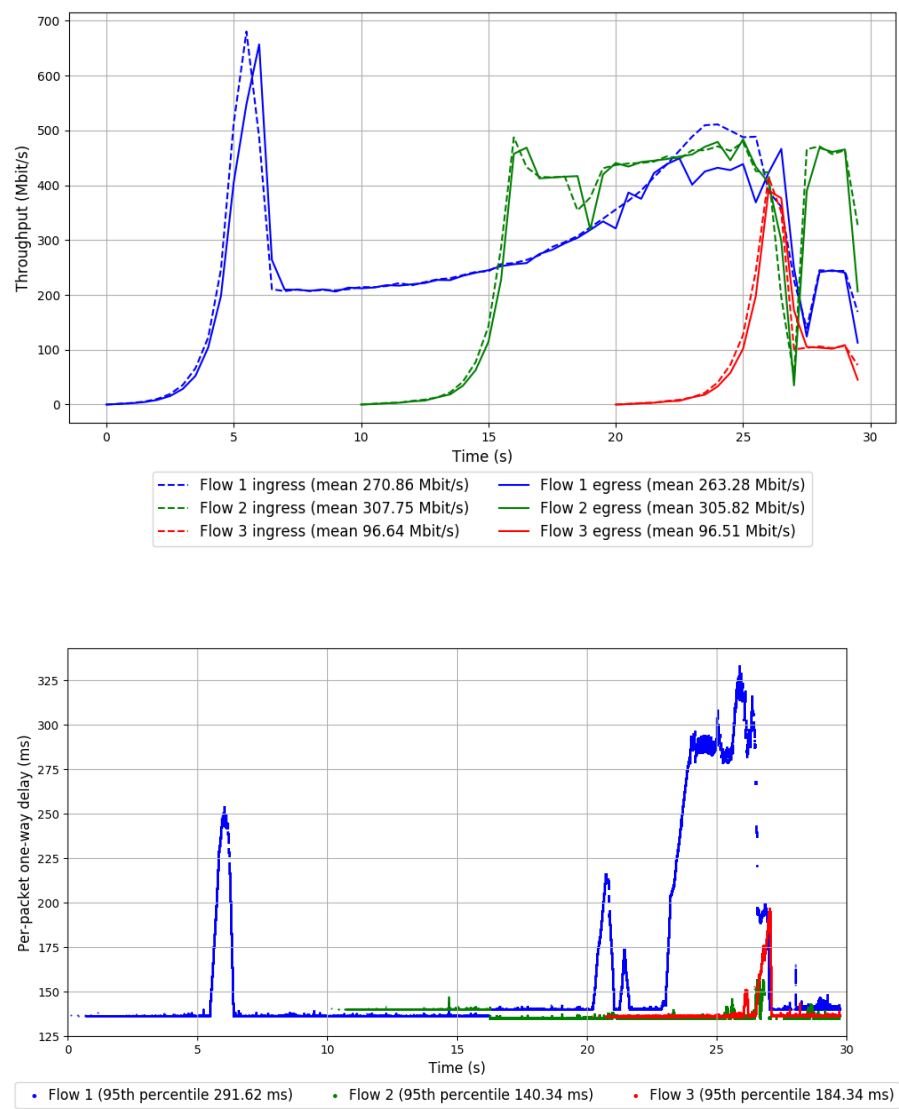
-- Flow 3:

Average throughput: 96.51 Mbit/s

95th percentile per-packet one-way delay: 184.339 ms

Loss rate: 2.90%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-03-07 15:49:13

End at: 2018-03-07 15:49:43

Below is generated by plot.py at 2018-03-07 22:05:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 330.20 Mbit/s

95th percentile per-packet one-way delay: 287.764 ms

Loss rate: 4.78%

-- Flow 1:

Average throughput: 155.98 Mbit/s

95th percentile per-packet one-way delay: 254.078 ms

Loss rate: 3.09%

-- Flow 2:

Average throughput: 188.31 Mbit/s

95th percentile per-packet one-way delay: 235.688 ms

Loss rate: 2.30%

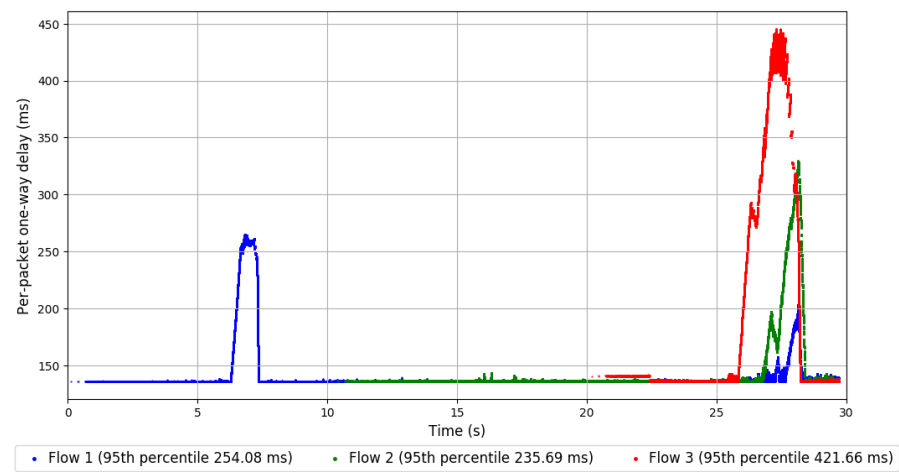
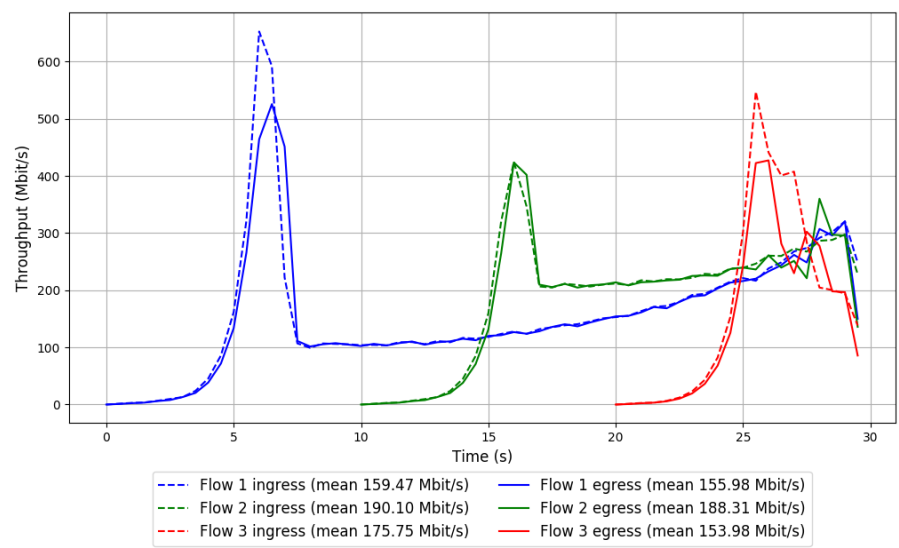
-- Flow 3:

Average throughput: 153.98 Mbit/s

95th percentile per-packet one-way delay: 421.663 ms

Loss rate: 14.86%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-03-07 16:09:12

End at: 2018-03-07 16:09:42

Below is generated by plot.py at 2018-03-07 22:05:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 405.28 Mbit/s

95th percentile per-packet one-way delay: 216.019 ms

Loss rate: 2.24%

-- Flow 1:

Average throughput: 164.76 Mbit/s

95th percentile per-packet one-way delay: 251.608 ms

Loss rate: 2.62%

-- Flow 2:

Average throughput: 282.38 Mbit/s

95th percentile per-packet one-way delay: 171.713 ms

Loss rate: 1.82%

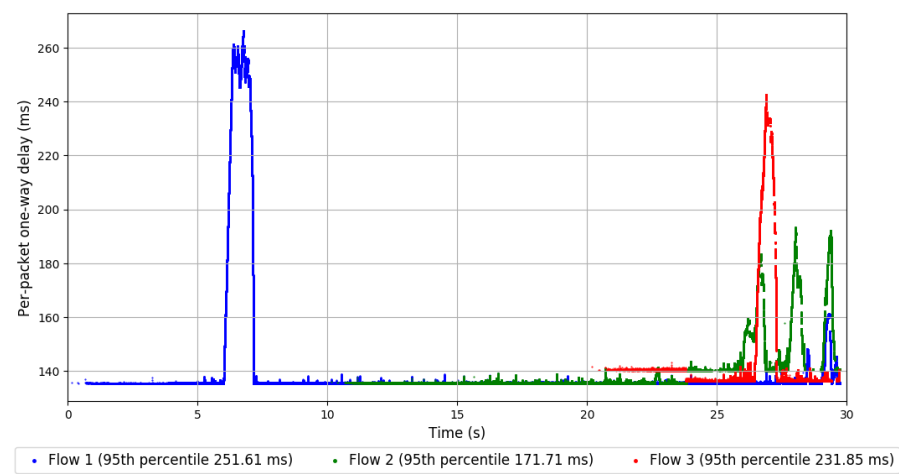
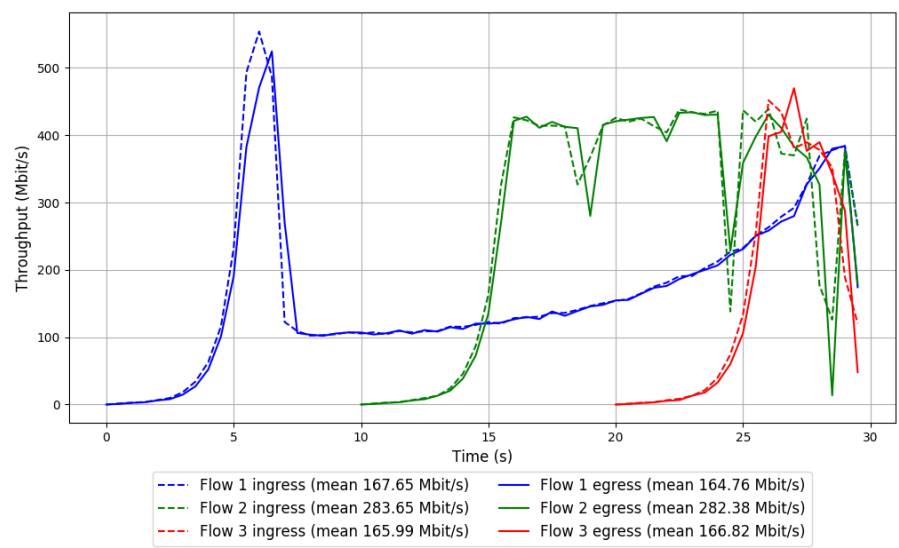
-- Flow 3:

Average throughput: 166.82 Mbit/s

95th percentile per-packet one-way delay: 231.852 ms

Loss rate: 2.58%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-03-07 16:29:23

End at: 2018-03-07 16:29:53

Below is generated by plot.py at 2018-03-07 22:05:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 426.22 Mbit/s

95th percentile per-packet one-way delay: 163.792 ms

Loss rate: 1.61%

-- Flow 1:

Average throughput: 249.56 Mbit/s

95th percentile per-packet one-way delay: 231.423 ms

Loss rate: 1.72%

-- Flow 2:

Average throughput: 189.58 Mbit/s

95th percentile per-packet one-way delay: 141.039 ms

Loss rate: 1.98%

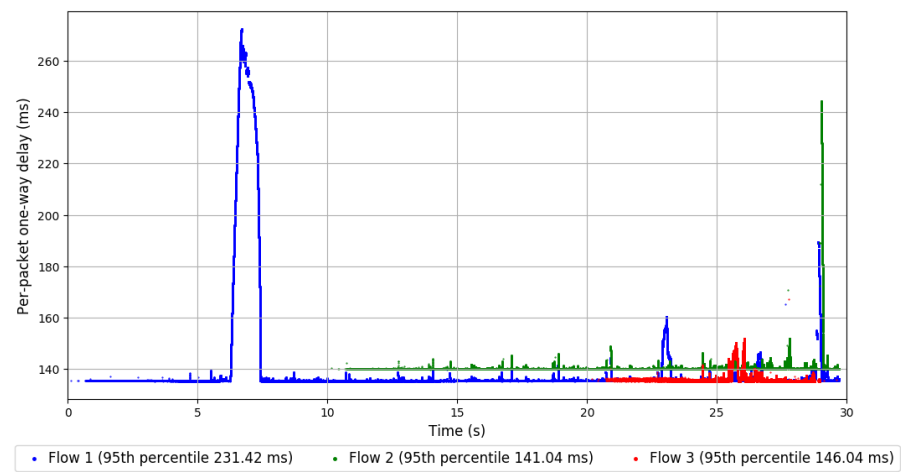
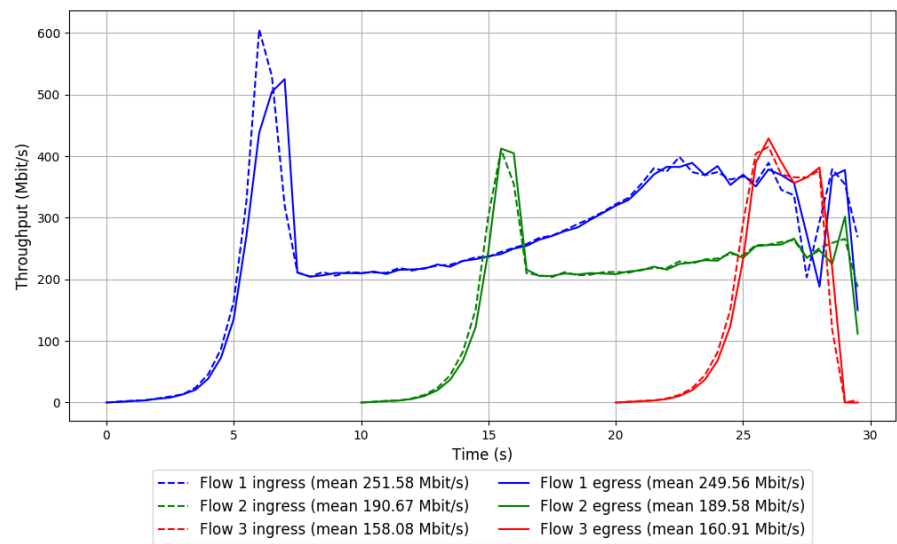
-- Flow 3:

Average throughput: 160.91 Mbit/s

95th percentile per-packet one-way delay: 146.041 ms

Loss rate: 0.14%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-03-07 16:49:52

End at: 2018-03-07 16:50:22

Below is generated by plot.py at 2018-03-07 22:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 448.43 Mbit/s

95th percentile per-packet one-way delay: 140.221 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 289.10 Mbit/s

95th percentile per-packet one-way delay: 136.824 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 180.40 Mbit/s

95th percentile per-packet one-way delay: 140.223 ms

Loss rate: 1.00%

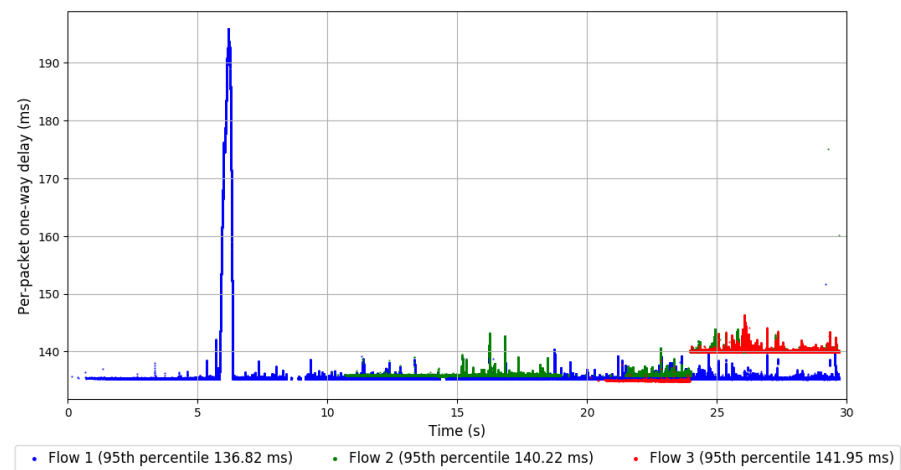
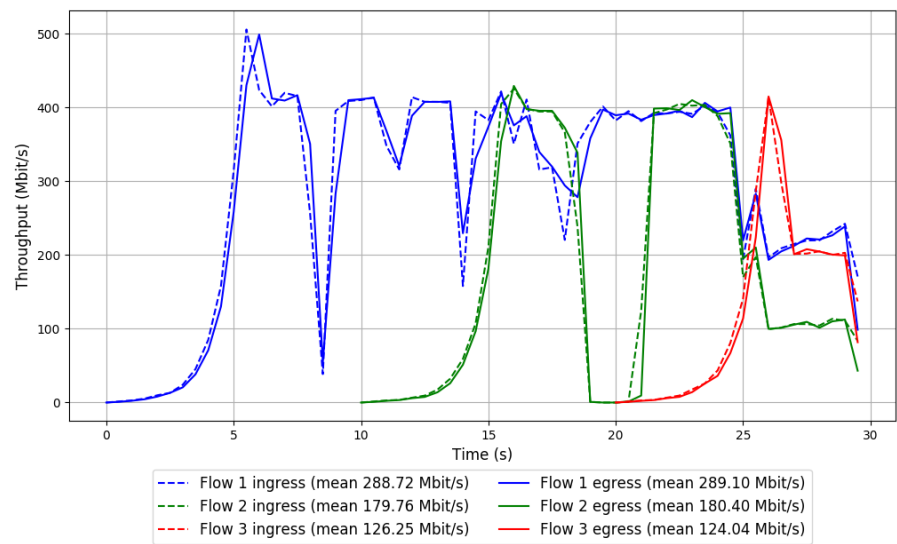
-- Flow 3:

Average throughput: 124.04 Mbit/s

95th percentile per-packet one-way delay: 141.950 ms

Loss rate: 4.56%

Run 10: Report of Vivace-loss — Data Link

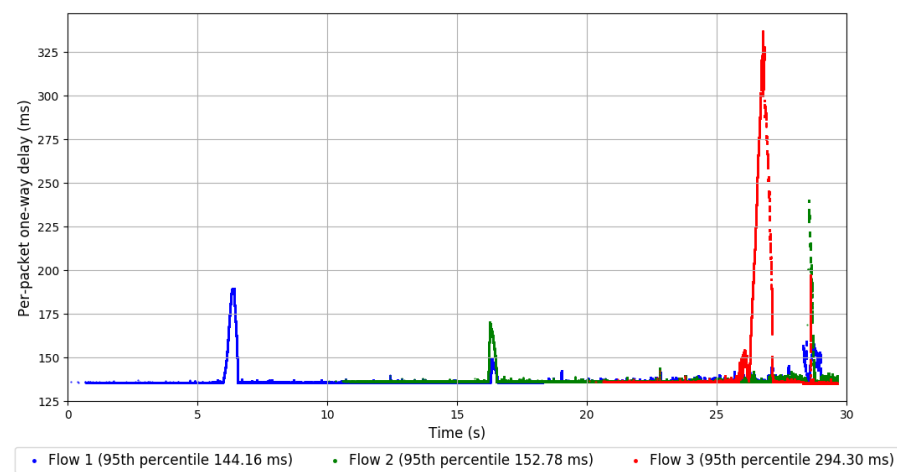
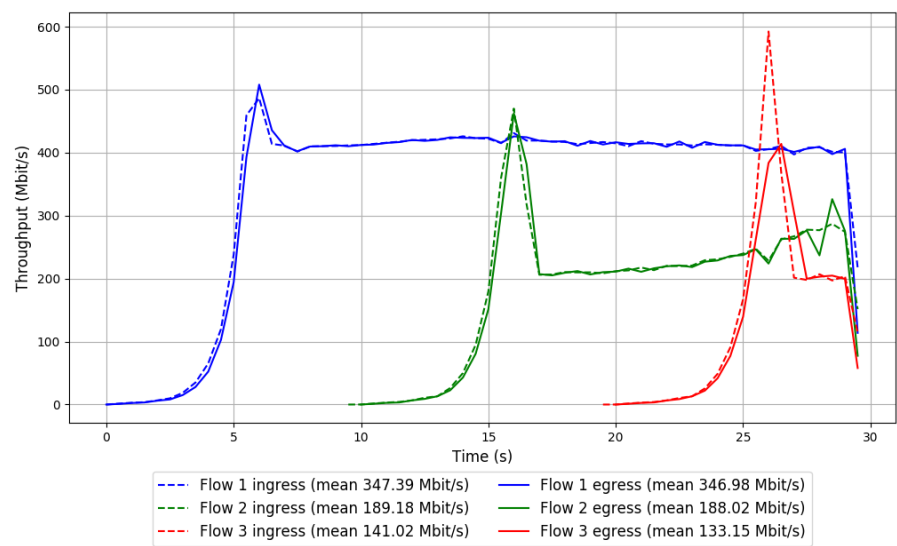


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-03-07 13:38:37
End at: 2018-03-07 13:39:07

# Below is generated by plot.py at 2018-03-07 22:09:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 514.91 Mbit/s
95th percentile per-packet one-way delay: 155.211 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 346.98 Mbit/s
95th percentile per-packet one-way delay: 144.158 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 188.02 Mbit/s
95th percentile per-packet one-way delay: 152.779 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 133.15 Mbit/s
95th percentile per-packet one-way delay: 294.298 ms
Loss rate: 8.20%
```


Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-03-07 13:59:15

End at: 2018-03-07 13:59:45

Below is generated by plot.py at 2018-03-07 22:11:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 588.40 Mbit/s

95th percentile per-packet one-way delay: 302.202 ms

Loss rate: 2.55%

-- Flow 1:

Average throughput: 348.88 Mbit/s

95th percentile per-packet one-way delay: 191.326 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 262.30 Mbit/s

95th percentile per-packet one-way delay: 333.825 ms

Loss rate: 4.40%

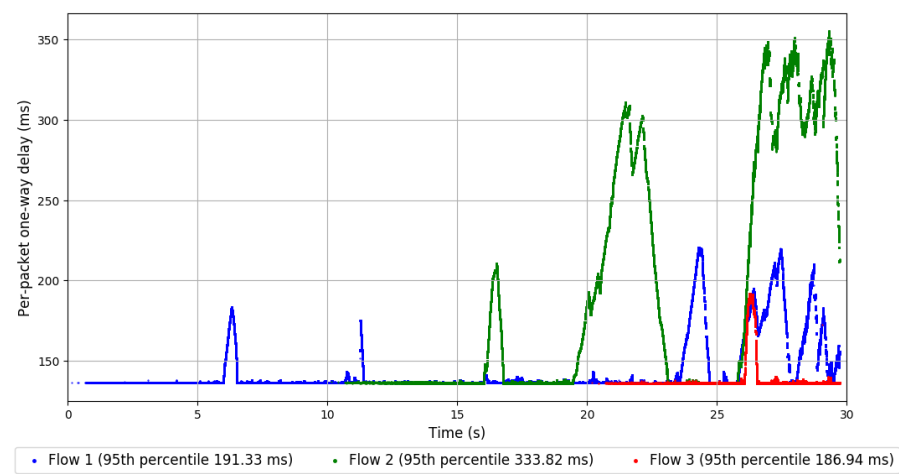
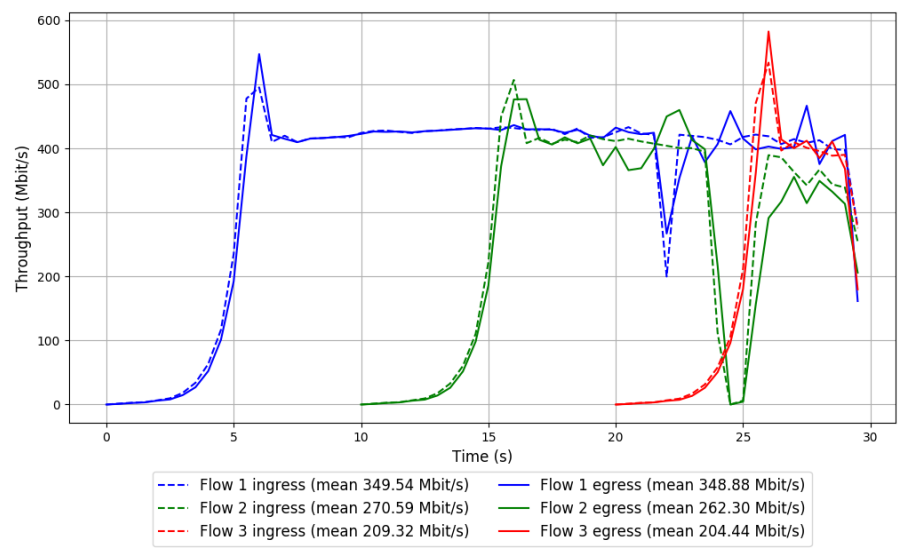
-- Flow 3:

Average throughput: 204.44 Mbit/s

95th percentile per-packet one-way delay: 186.941 ms

Loss rate: 5.05%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-03-07 14:19:58

End at: 2018-03-07 14:20:28

Below is generated by plot.py at 2018-03-07 22:12:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 587.80 Mbit/s

95th percentile per-packet one-way delay: 237.634 ms

Loss rate: 2.50%

-- Flow 1:

Average throughput: 341.45 Mbit/s

95th percentile per-packet one-way delay: 237.776 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 307.11 Mbit/s

95th percentile per-packet one-way delay: 196.611 ms

Loss rate: 2.94%

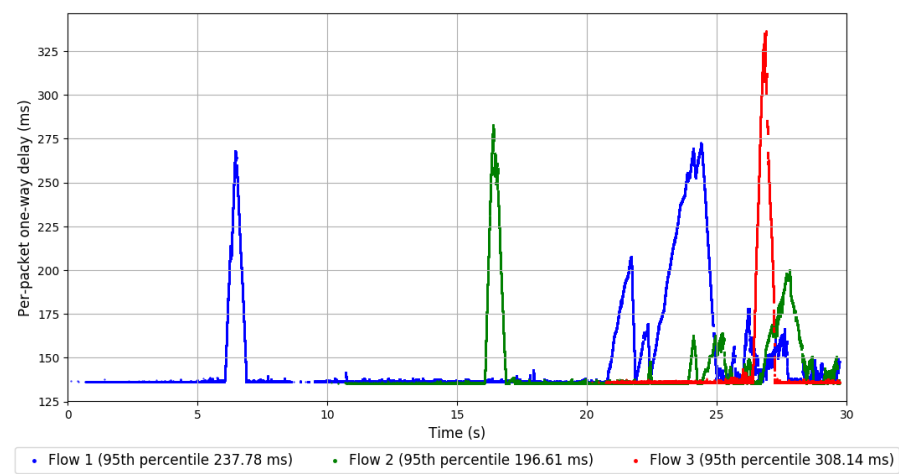
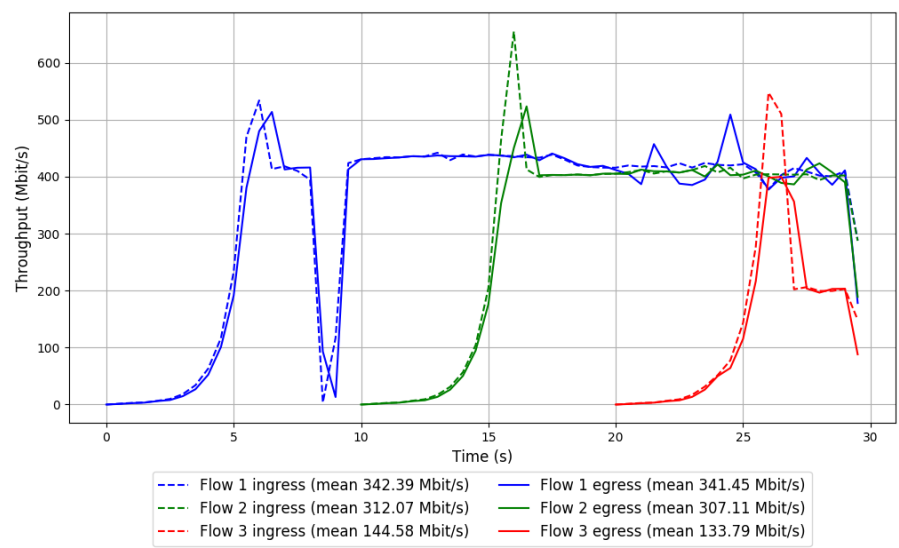
-- Flow 3:

Average throughput: 133.79 Mbit/s

95th percentile per-packet one-way delay: 308.143 ms

Loss rate: 10.03%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-03-07 14:40:07

End at: 2018-03-07 14:40:37

Below is generated by plot.py at 2018-03-07 22:12:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 491.52 Mbit/s

95th percentile per-packet one-way delay: 217.098 ms

Loss rate: 1.65%

-- Flow 1:

Average throughput: 316.19 Mbit/s

95th percentile per-packet one-way delay: 196.841 ms

Loss rate: 1.41%

-- Flow 2:

Average throughput: 185.88 Mbit/s

95th percentile per-packet one-way delay: 142.216 ms

Loss rate: 2.03%

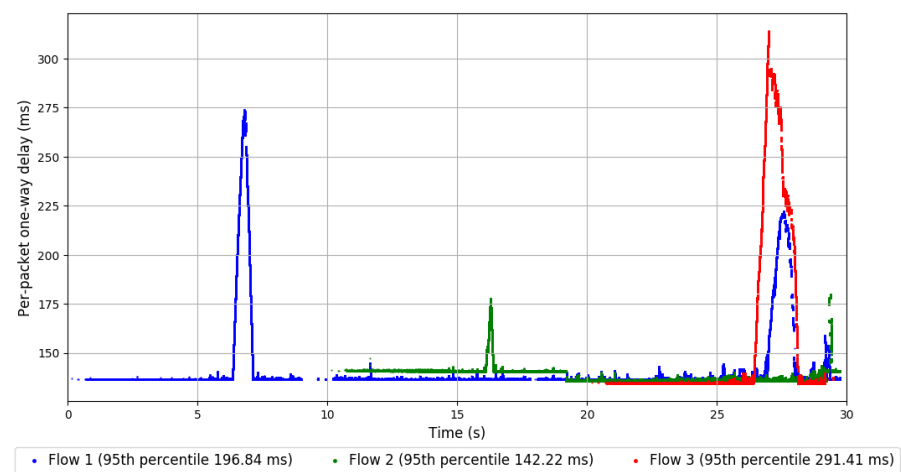
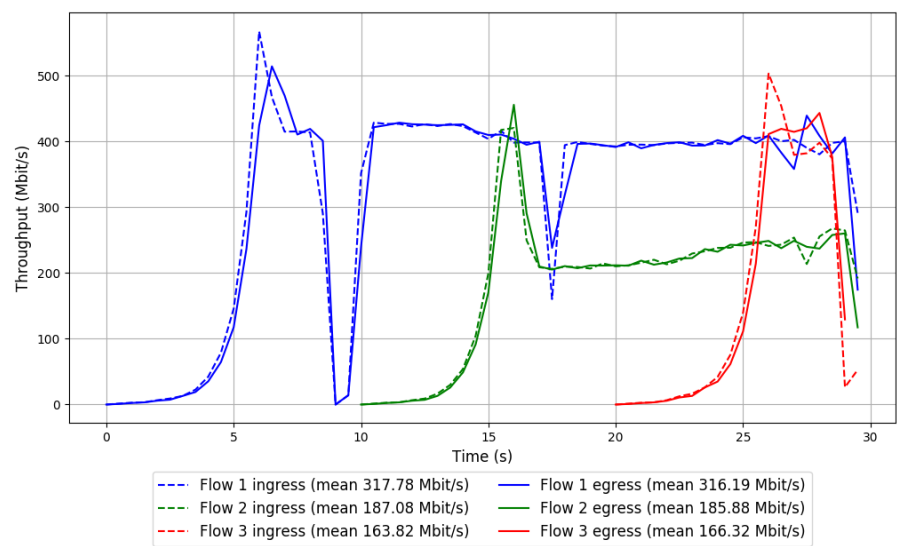
-- Flow 3:

Average throughput: 166.32 Mbit/s

95th percentile per-packet one-way delay: 291.412 ms

Loss rate: 2.16%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-03-07 15:00:22

End at: 2018-03-07 15:00:52

Below is generated by plot.py at 2018-03-07 22:13:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 575.01 Mbit/s

95th percentile per-packet one-way delay: 199.955 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 319.57 Mbit/s

95th percentile per-packet one-way delay: 148.384 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 296.74 Mbit/s

95th percentile per-packet one-way delay: 208.308 ms

Loss rate: 1.85%

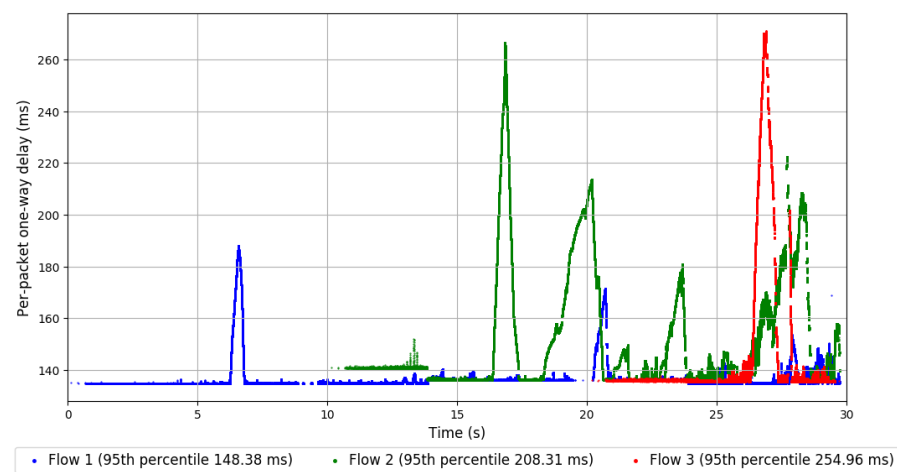
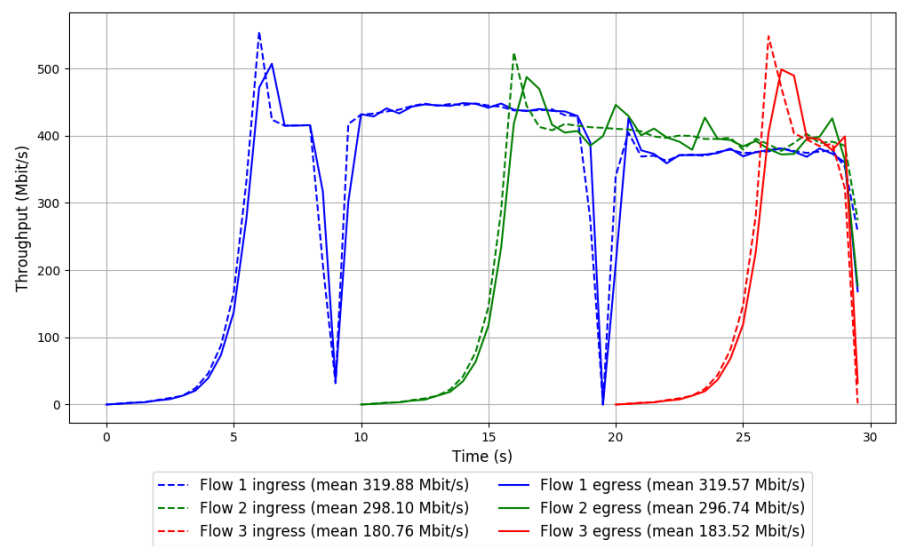
-- Flow 3:

Average throughput: 183.52 Mbit/s

95th percentile per-packet one-way delay: 254.959 ms

Loss rate: 0.80%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-03-07 15:21:13

End at: 2018-03-07 15:21:43

Below is generated by plot.py at 2018-03-07 22:14:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 598.01 Mbit/s

95th percentile per-packet one-way delay: 196.150 ms

Loss rate: 2.24%

-- Flow 1:

Average throughput: 362.82 Mbit/s

95th percentile per-packet one-way delay: 213.369 ms

Loss rate: 2.19%

-- Flow 2:

Average throughput: 298.57 Mbit/s

95th percentile per-packet one-way delay: 190.510 ms

Loss rate: 1.85%

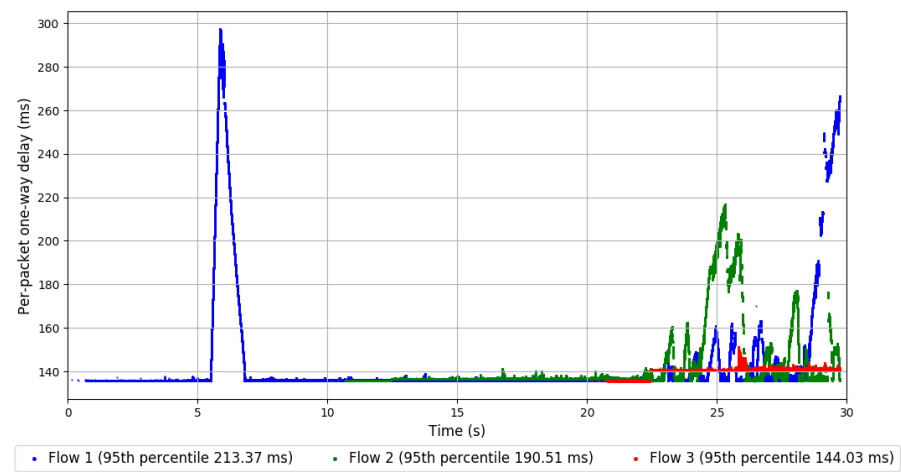
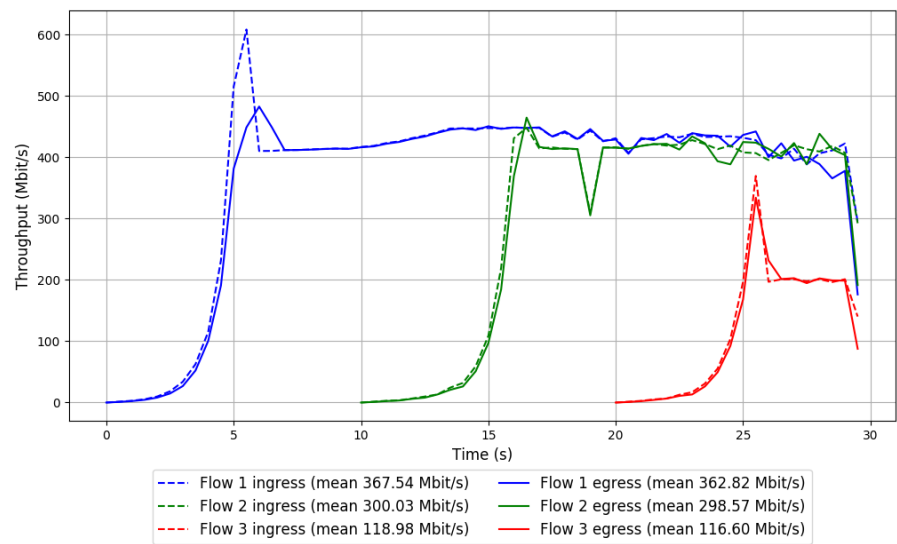
-- Flow 3:

Average throughput: 116.60 Mbit/s

95th percentile per-packet one-way delay: 144.028 ms

Loss rate: 4.72%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-03-07 15:41:47

End at: 2018-03-07 15:42:17

Below is generated by plot.py at 2018-03-07 22:14:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 576.39 Mbit/s

95th percentile per-packet one-way delay: 293.283 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 346.41 Mbit/s

95th percentile per-packet one-way delay: 273.538 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 263.45 Mbit/s

95th percentile per-packet one-way delay: 306.098 ms

Loss rate: 1.67%

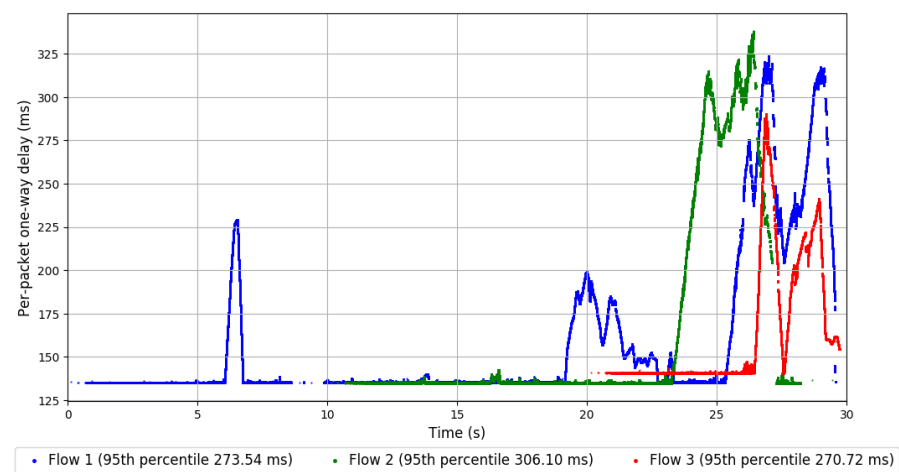
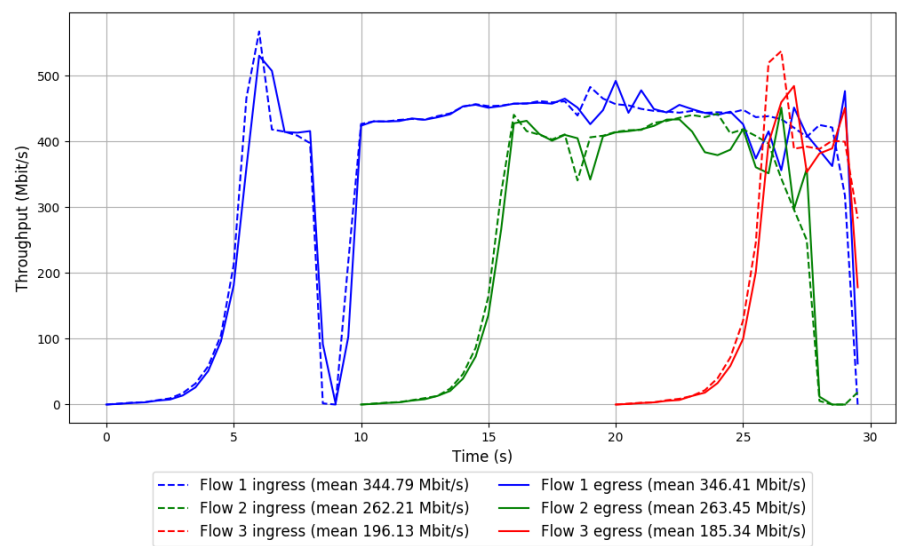
-- Flow 3:

Average throughput: 185.34 Mbit/s

95th percentile per-packet one-way delay: 270.720 ms

Loss rate: 8.17%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-03-07 16:02:16

End at: 2018-03-07 16:02:46

Below is generated by plot.py at 2018-03-07 22:14:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 528.71 Mbit/s

95th percentile per-packet one-way delay: 155.358 ms

Loss rate: 1.62%

-- Flow 1:

Average throughput: 302.96 Mbit/s

95th percentile per-packet one-way delay: 191.076 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 280.05 Mbit/s

95th percentile per-packet one-way delay: 139.399 ms

Loss rate: 1.78%

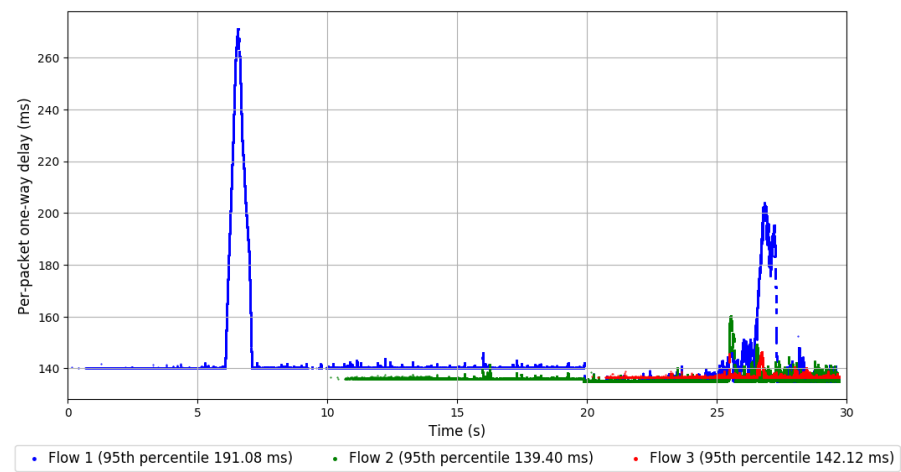
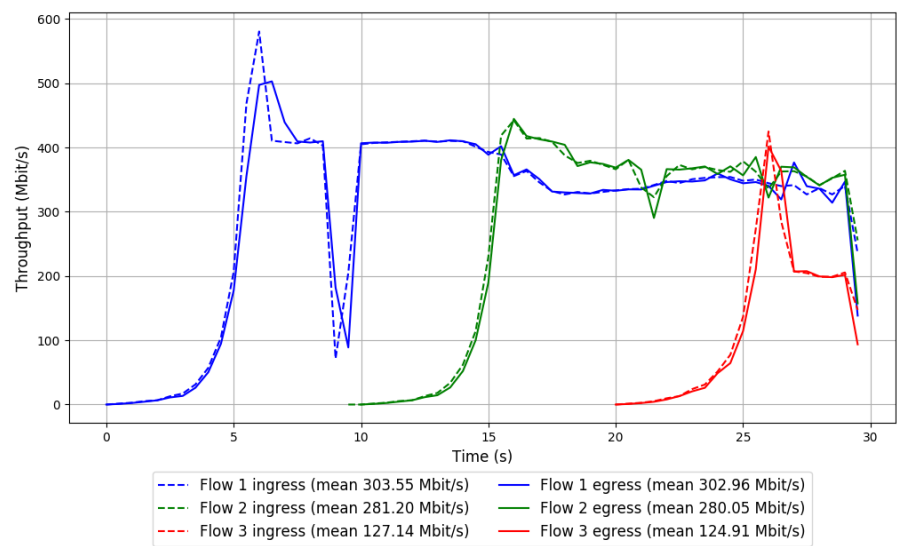
-- Flow 3:

Average throughput: 124.91 Mbit/s

95th percentile per-packet one-way delay: 142.123 ms

Loss rate: 4.50%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-03-07 16:22:27

End at: 2018-03-07 16:22:57

Below is generated by plot.py at 2018-03-07 22:15:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 511.45 Mbit/s

95th percentile per-packet one-way delay: 143.290 ms

Loss rate: 1.74%

-- Flow 1:

Average throughput: 315.02 Mbit/s

95th percentile per-packet one-way delay: 144.986 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 203.36 Mbit/s

95th percentile per-packet one-way delay: 139.259 ms

Loss rate: 1.31%

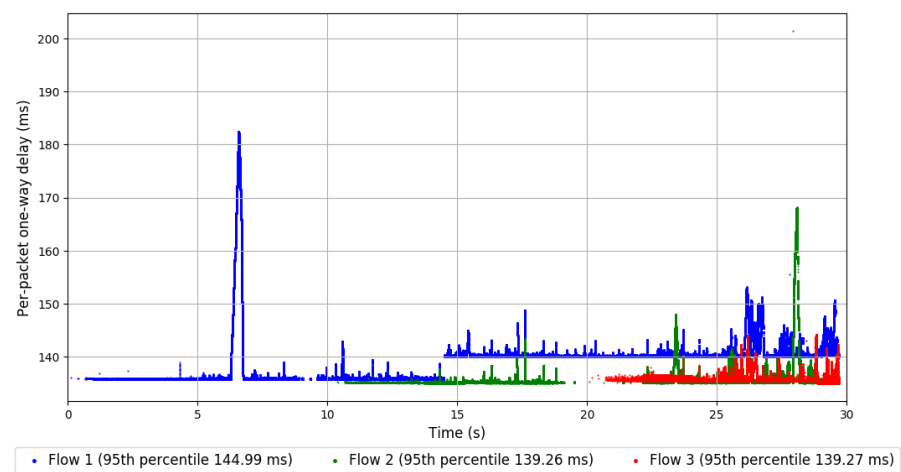
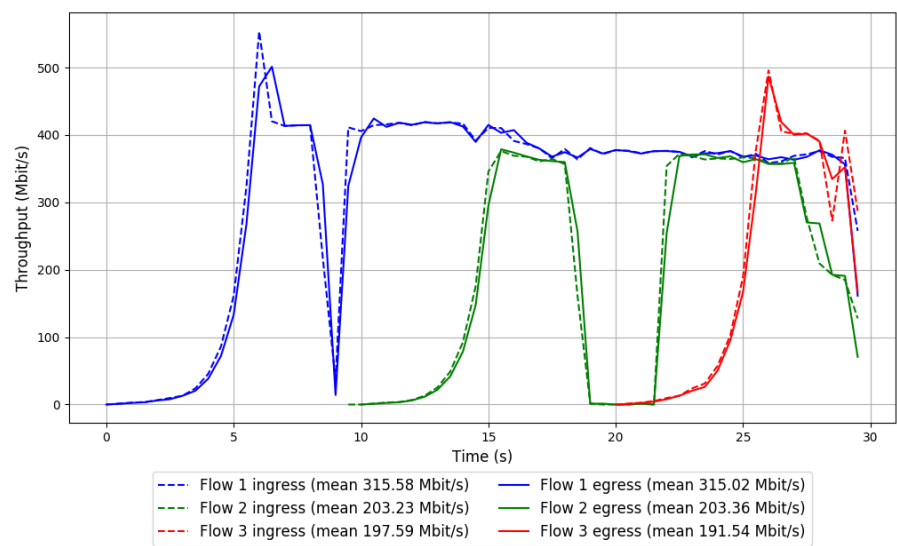
-- Flow 3:

Average throughput: 191.54 Mbit/s

95th percentile per-packet one-way delay: 139.271 ms

Loss rate: 5.76%

Run 9: Report of Vivace-LTE — Data Link



Run 10: Statistics of Vivace-LTE

Start at: 2018-03-07 16:42:40

End at: 2018-03-07 16:43:10

Below is generated by plot.py at 2018-03-07 22:15:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 567.16 Mbit/s

95th percentile per-packet one-way delay: 159.453 ms

Loss rate: 1.99%

-- Flow 1:

Average throughput: 327.94 Mbit/s

95th percentile per-packet one-way delay: 163.954 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 270.39 Mbit/s

95th percentile per-packet one-way delay: 156.421 ms

Loss rate: 1.93%

-- Flow 3:

Average throughput: 187.28 Mbit/s

95th percentile per-packet one-way delay: 152.355 ms

Loss rate: 5.62%

Run 10: Report of Vivace-LTE — Data Link

