

Pantheon Report

Generated at 2018-01-31 23:46:56 (UTC).

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

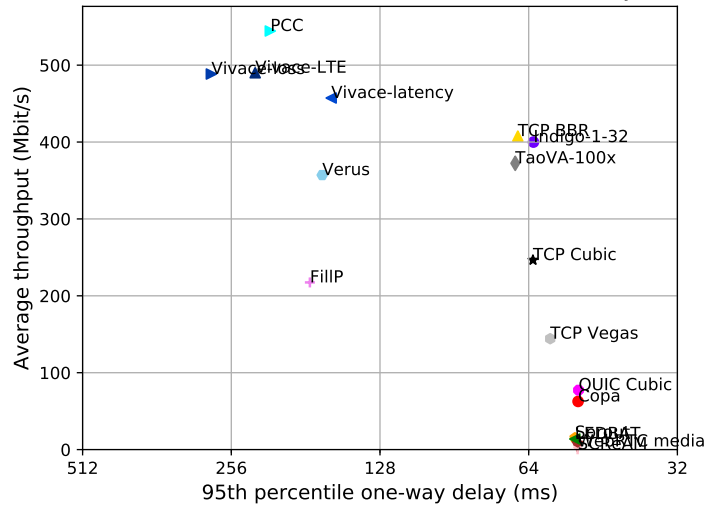
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

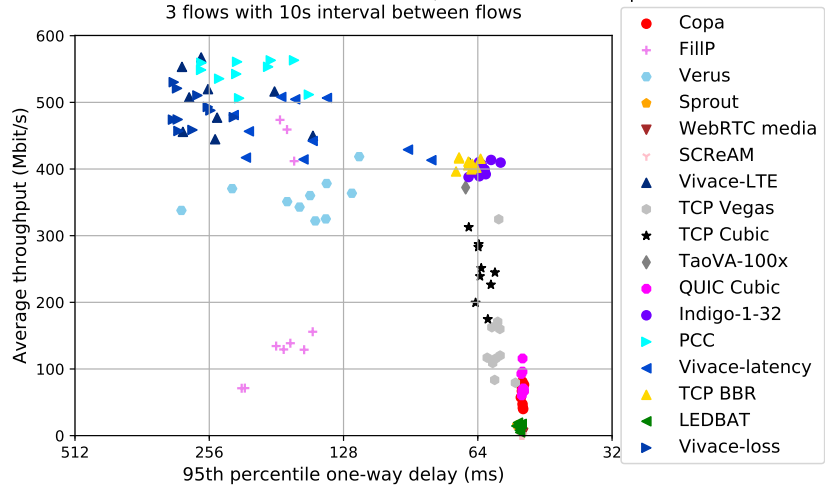
Git summary:

```
branch: master @ 70217998b3c9a7166a95460a70c0854d1326e100
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ fb9c9ab842e5614ad52911a76fb9bd1c1b0dca86
third_party/genericCC @ 80b516c448f795fd6e9675f7177b69c622f07da8
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

test from GCE London Ethernet to GCE Iowa 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 Iowa 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	205.60	205.28	199.69	65.60	68.55	69.26	0.45	0.61	1.23
TCP Cubic	9	105.08	130.01	150.19	60.05	62.99	63.62	0.51	0.38	1.18
LEDBAT	7	6.67	8.88	6.52	904.36	51.77	51.61	0.78	1.28	2.12
PCC	10	469.65	98.83	28.27	216.45	157.70	151.05	4.47	1.86	2.85
QUIC Cubic	10	43.54	37.23	27.71	50.55	50.48	50.61	0.42	0.62	1.50
SCReAM	8	0.22	0.22	0.22	50.80	50.10	50.48	0.33	0.44	0.92
WebRTC media	10	2.18	1.40	0.57	50.93	50.79	50.99	0.41	0.60	1.70
Sprout	10	7.83	7.78	7.47	51.58	51.59	51.61	0.77	0.80	1.56
TaoVA-100x	1	199.19	170.45	182.01	66.77	70.50	68.38	0.28	0.08	0.92
TCP Vegas	10	63.31	82.53	79.26	56.80	56.05	56.15	0.40	0.59	1.04
Verus	10	211.31	170.79	106.83	164.64	175.98	177.15	3.80	2.65	3.77
Copa	10	31.41	31.59	31.02	50.84	50.75	50.84	0.25	0.43	1.00
FillP	10	101.03	90.83	170.48	188.20	201.27	169.70	12.61	14.56	11.17
Indigo-1-32	10	212.24	197.86	173.88	61.62	66.16	57.35	0.38	0.55	1.18
Vivace-latency	10	265.40	227.26	125.70	159.13	135.08	66.90	1.28	0.57	1.44
Vivace-loss	10	268.64	249.26	167.16	272.24	274.65	262.04	7.28	8.71	13.48
Vivace-LTE	10	280.22	227.99	180.43	211.52	183.12	151.45	2.01	2.16	4.29

Run 1: Statistics of TCP BBR

Start at: 2018-01-31 16:22:59

End at: 2018-01-31 16:23:29

Below is generated by plot.py at 2018-01-31 22:01:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 406.77 Mbit/s

95th percentile per-packet one-way delay: 66.714 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 204.99 Mbit/s

95th percentile per-packet one-way delay: 65.171 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 205.73 Mbit/s

95th percentile per-packet one-way delay: 67.661 ms

Loss rate: 0.89%

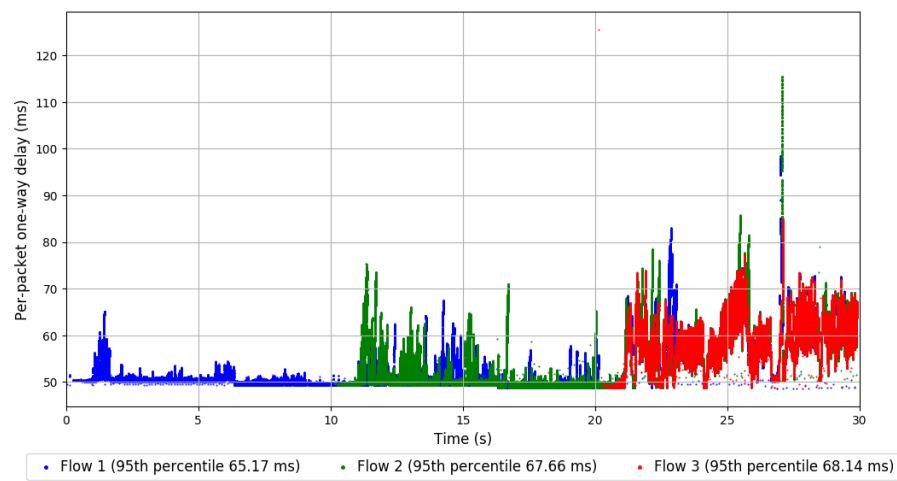
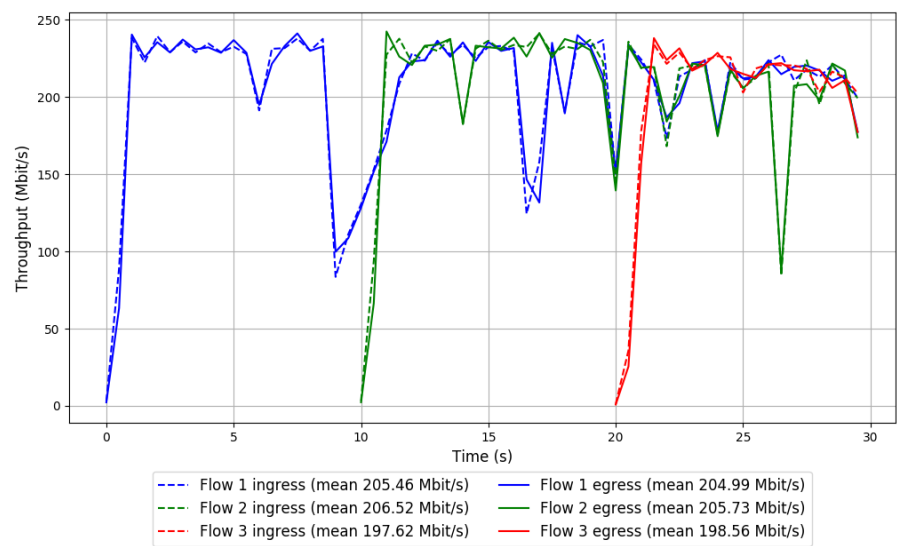
-- Flow 3:

Average throughput: 198.56 Mbit/s

95th percentile per-packet one-way delay: 68.135 ms

Loss rate: 1.31%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-01-31 16:39:23

End at: 2018-01-31 16:39:53

Below is generated by plot.py at 2018-01-31 22:01:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 415.42 Mbit/s

95th percentile per-packet one-way delay: 63.094 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 209.16 Mbit/s

95th percentile per-packet one-way delay: 62.754 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 210.54 Mbit/s

95th percentile per-packet one-way delay: 62.553 ms

Loss rate: 0.60%

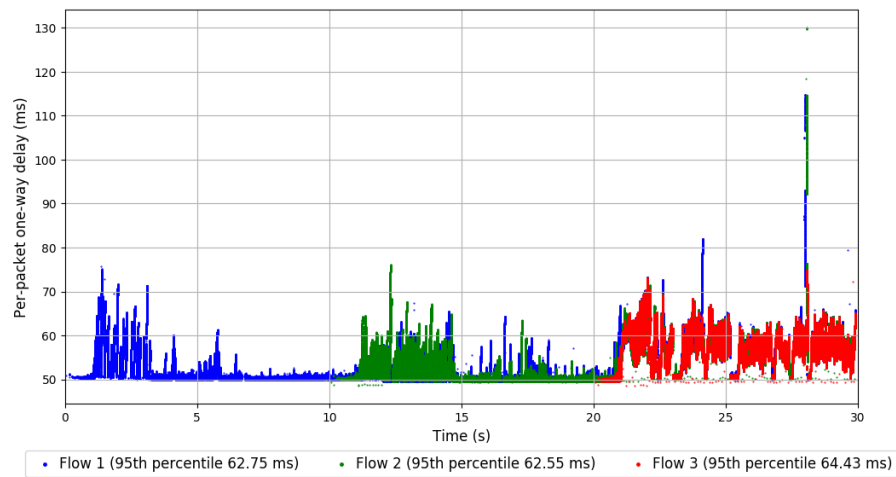
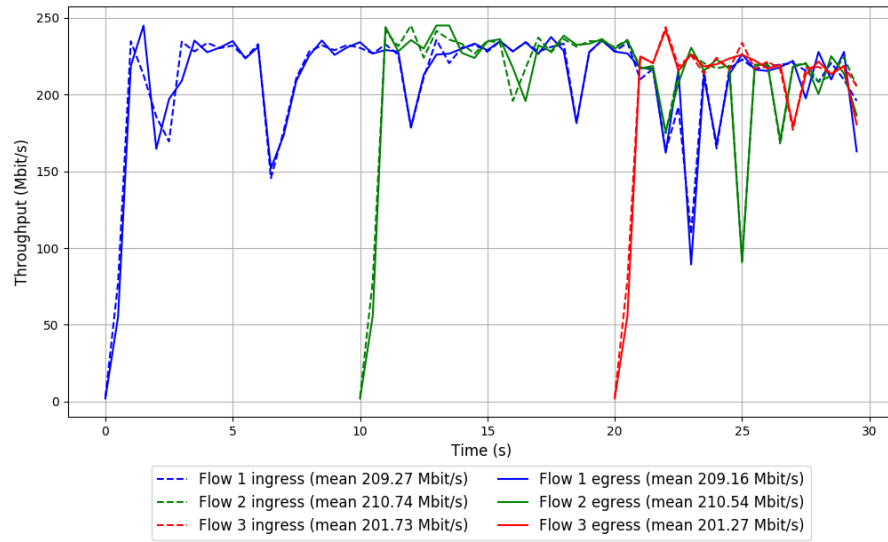
-- Flow 3:

Average throughput: 201.27 Mbit/s

95th percentile per-packet one-way delay: 64.429 ms

Loss rate: 1.22%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-01-31 16:55:59

End at: 2018-01-31 16:56:29

Below is generated by plot.py at 2018-01-31 22:01:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 396.32 Mbit/s

95th percentile per-packet one-way delay: 71.606 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 202.67 Mbit/s

95th percentile per-packet one-way delay: 68.600 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 194.69 Mbit/s

95th percentile per-packet one-way delay: 74.877 ms

Loss rate: 0.01%

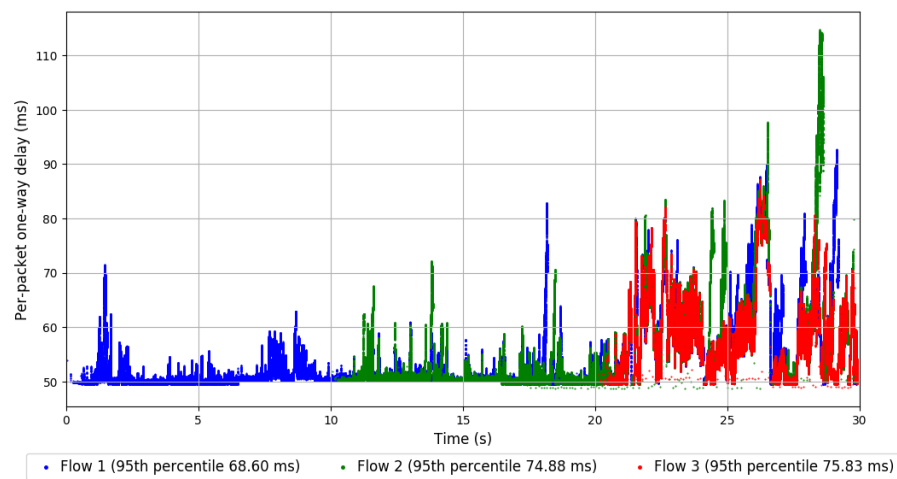
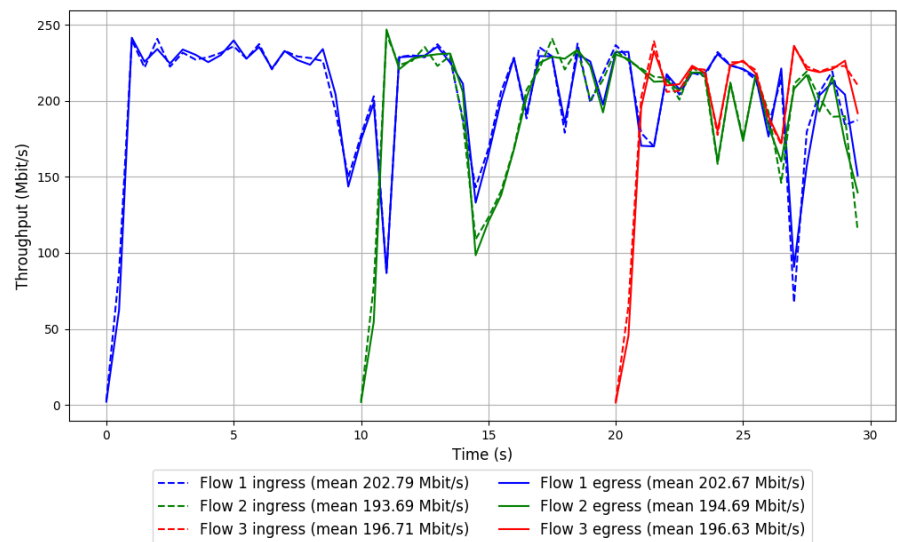
-- Flow 3:

Average throughput: 196.63 Mbit/s

95th percentile per-packet one-way delay: 75.832 ms

Loss rate: 1.07%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-01-31 17:12:57

End at: 2018-01-31 17:13:27

Below is generated by plot.py at 2018-01-31 22:01:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 411.06 Mbit/s

95th percentile per-packet one-way delay: 67.186 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 214.11 Mbit/s

95th percentile per-packet one-way delay: 66.402 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 200.81 Mbit/s

95th percentile per-packet one-way delay: 67.607 ms

Loss rate: 0.59%

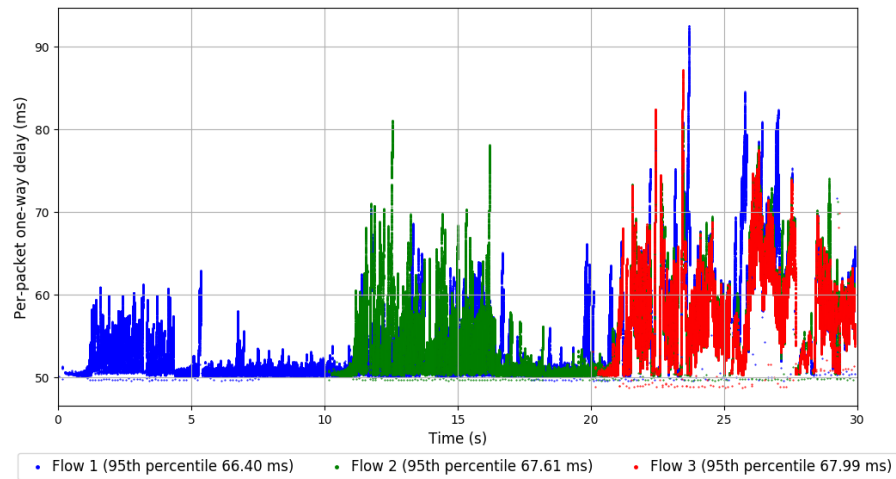
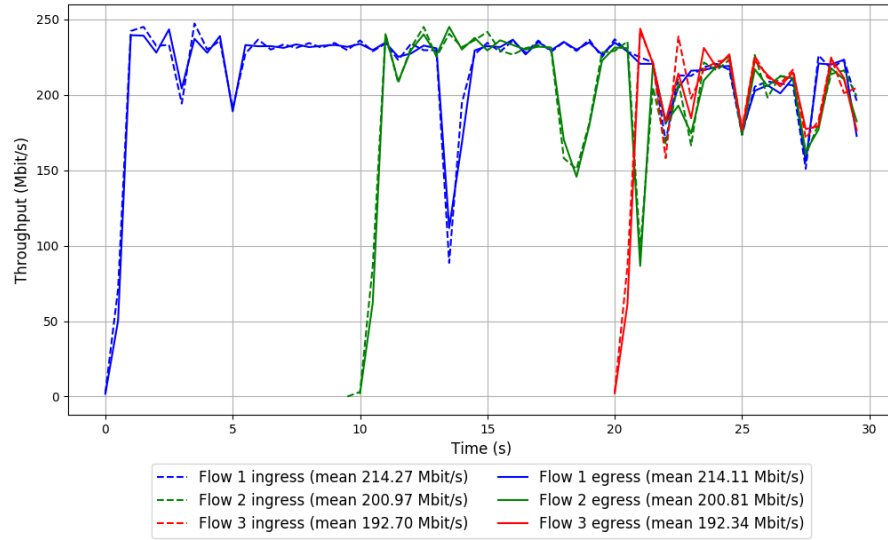
-- Flow 3:

Average throughput: 192.34 Mbit/s

95th percentile per-packet one-way delay: 67.990 ms

Loss rate: 1.23%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-01-31 17:29:58

End at: 2018-01-31 17:30:28

Below is generated by plot.py at 2018-01-31 22:01:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 407.53 Mbit/s

95th percentile per-packet one-way delay: 65.833 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 205.22 Mbit/s

95th percentile per-packet one-way delay: 64.380 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 203.71 Mbit/s

95th percentile per-packet one-way delay: 66.196 ms

Loss rate: 0.98%

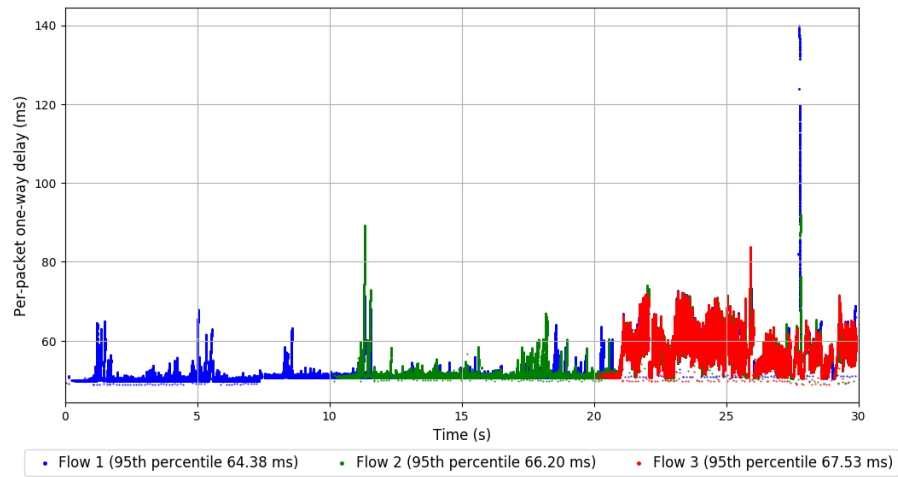
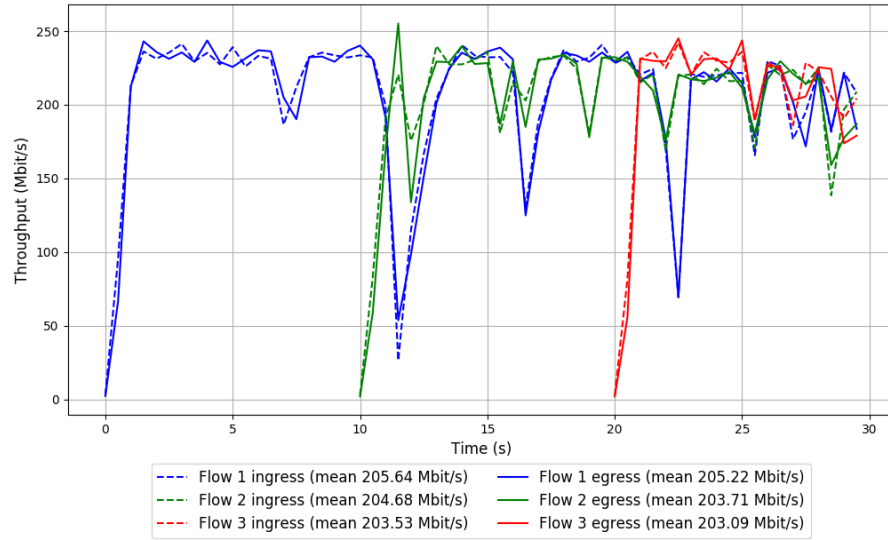
-- Flow 3:

Average throughput: 203.09 Mbit/s

95th percentile per-packet one-way delay: 67.534 ms

Loss rate: 1.23%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-01-31 17:47:24

End at: 2018-01-31 17:47:54

Below is generated by plot.py at 2018-01-31 22:01:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 399.52 Mbit/s

95th percentile per-packet one-way delay: 66.130 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 193.19 Mbit/s

95th percentile per-packet one-way delay: 64.932 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 207.17 Mbit/s

95th percentile per-packet one-way delay: 66.489 ms

Loss rate: 0.65%

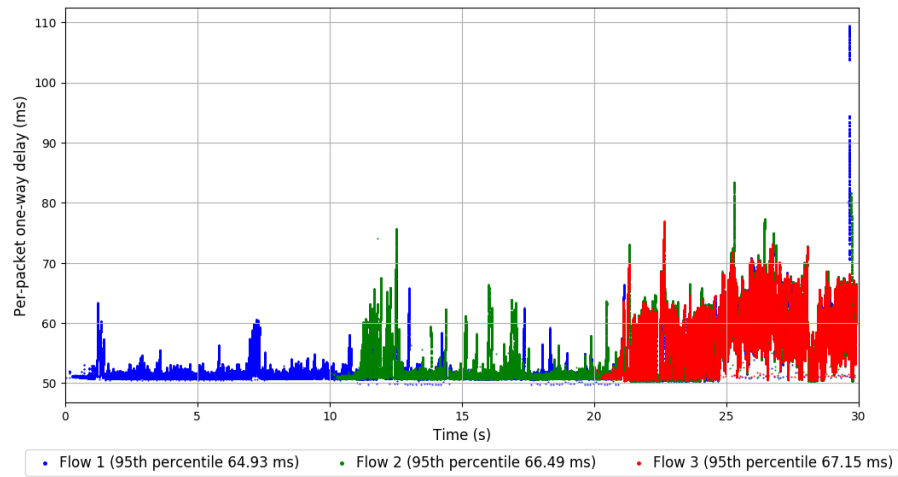
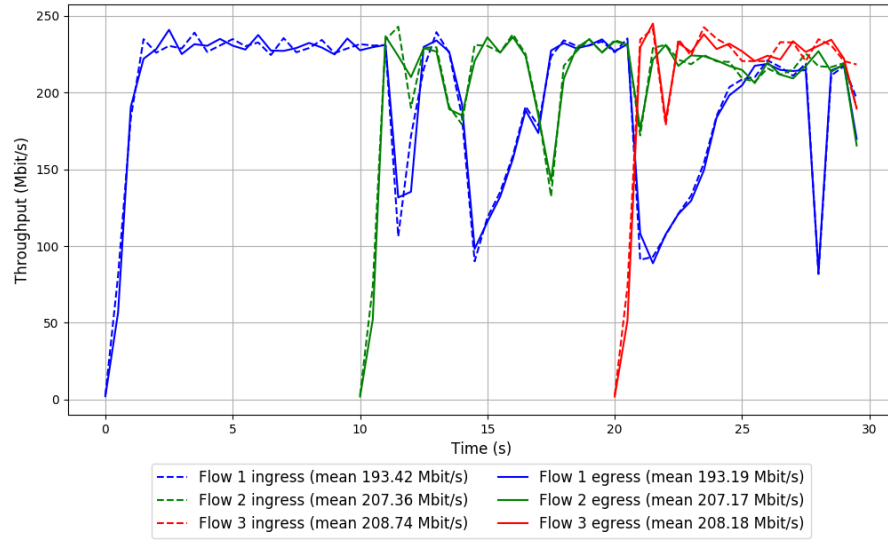
-- Flow 3:

Average throughput: 208.18 Mbit/s

95th percentile per-packet one-way delay: 67.153 ms

Loss rate: 1.29%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-01-31 18:04:08

End at: 2018-01-31 18:04:38

Below is generated by plot.py at 2018-01-31 22:01:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 401.88 Mbit/s

95th percentile per-packet one-way delay: 64.470 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 198.47 Mbit/s

95th percentile per-packet one-way delay: 62.920 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 207.46 Mbit/s

95th percentile per-packet one-way delay: 68.421 ms

Loss rate: 0.58%

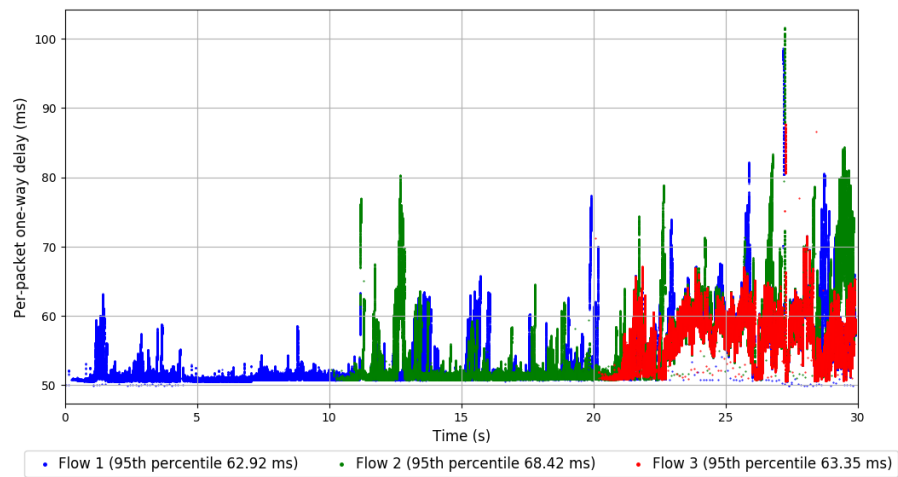
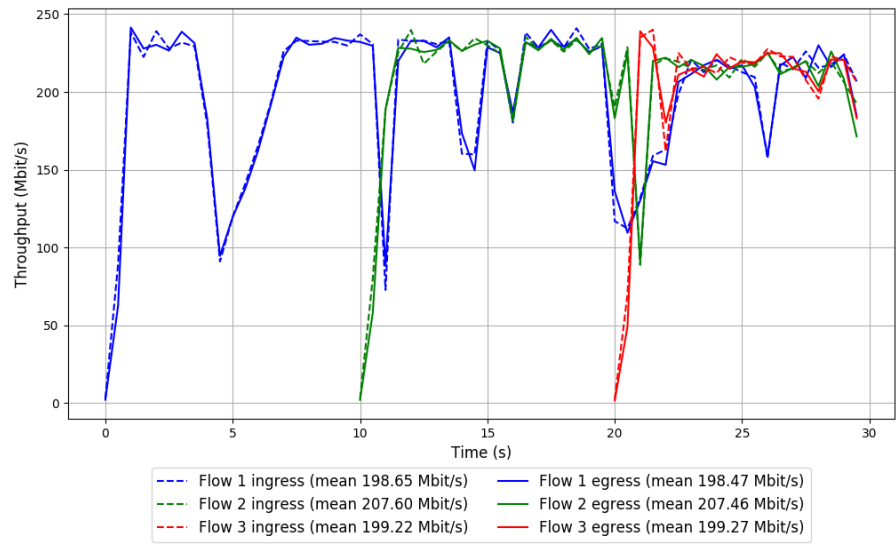
-- Flow 3:

Average throughput: 199.27 Mbit/s

95th percentile per-packet one-way delay: 63.348 ms

Loss rate: 1.21%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-01-31 18:21:29

End at: 2018-01-31 18:21:59

Below is generated by plot.py at 2018-01-31 22:01:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 417.42 Mbit/s

95th percentile per-packet one-way delay: 70.505 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 212.91 Mbit/s

95th percentile per-packet one-way delay: 66.441 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 209.47 Mbit/s

95th percentile per-packet one-way delay: 73.762 ms

Loss rate: 0.62%

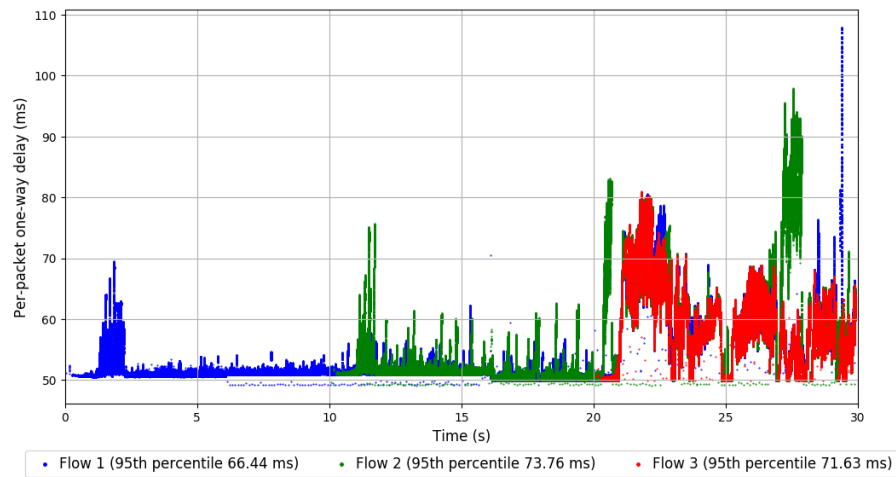
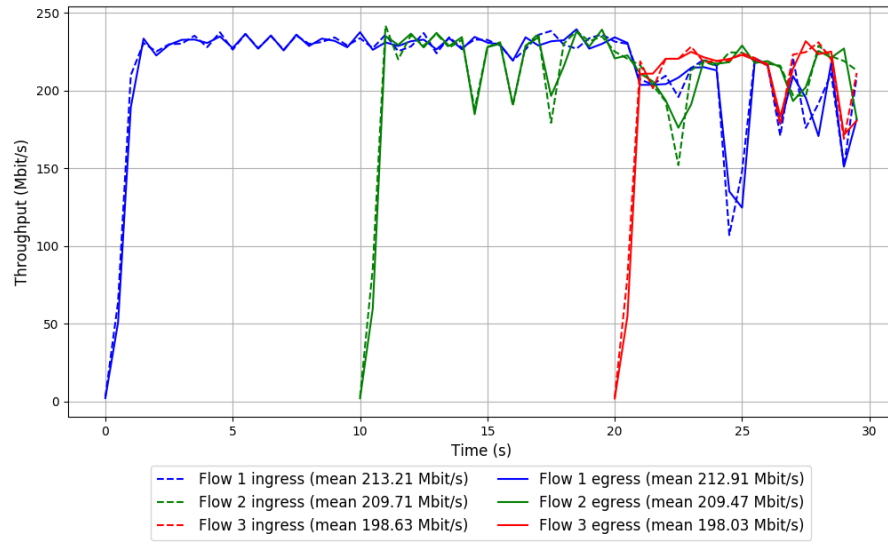
-- Flow 3:

Average throughput: 198.03 Mbit/s

95th percentile per-packet one-way delay: 71.629 ms

Loss rate: 1.32%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-01-31 18:37:59

End at: 2018-01-31 18:38:29

Below is generated by plot.py at 2018-01-31 22:09:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 405.65 Mbit/s

95th percentile per-packet one-way delay: 67.247 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 202.83 Mbit/s

95th percentile per-packet one-way delay: 66.507 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 204.10 Mbit/s

95th percentile per-packet one-way delay: 69.057 ms

Loss rate: 0.59%

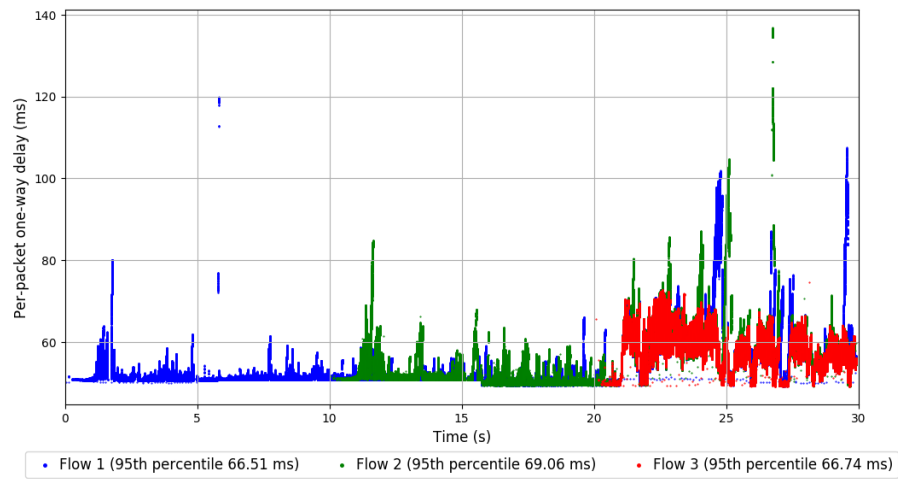
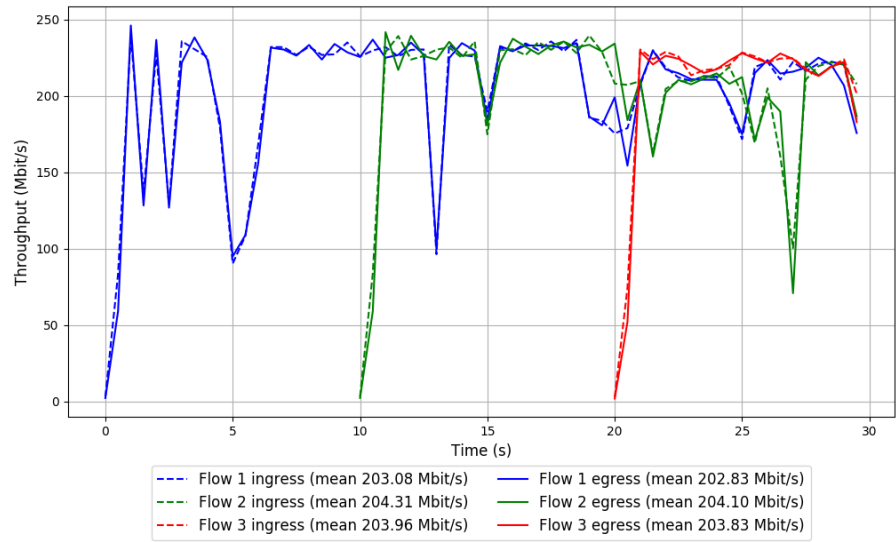
-- Flow 3:

Average throughput: 203.83 Mbit/s

95th percentile per-packet one-way delay: 66.736 ms

Loss rate: 1.12%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-01-31 18:55:19

End at: 2018-01-31 18:55:50

Below is generated by plot.py at 2018-01-31 22:09:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 415.87 Mbit/s

95th percentile per-packet one-way delay: 70.513 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 212.41 Mbit/s

95th percentile per-packet one-way delay: 67.926 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 209.09 Mbit/s

95th percentile per-packet one-way delay: 68.920 ms

Loss rate: 0.62%

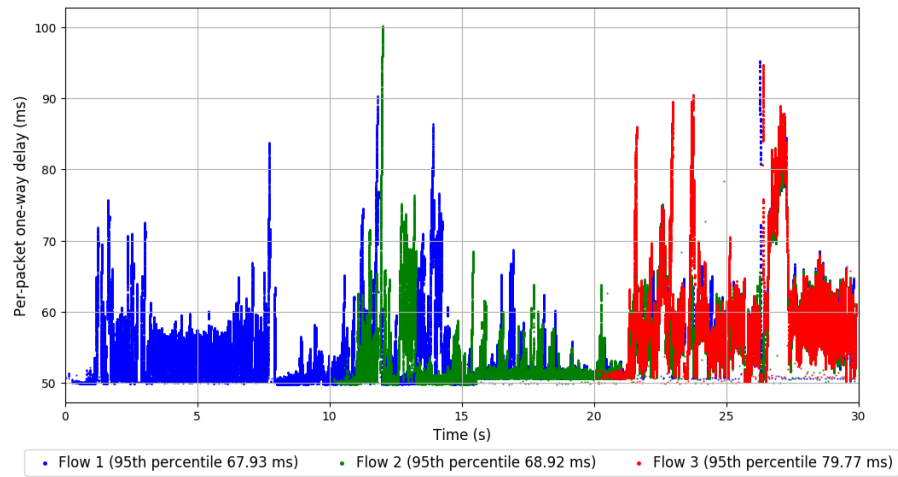
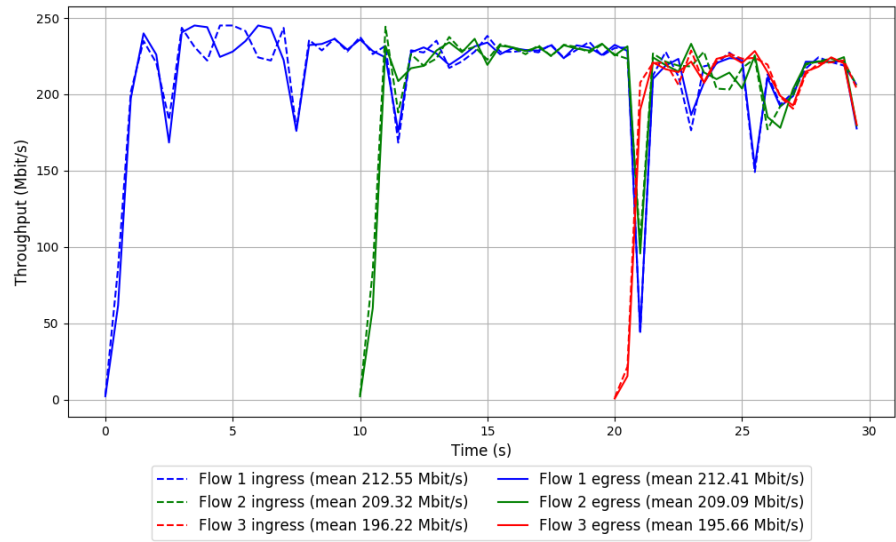
-- Flow 3:

Average throughput: 195.66 Mbit/s

95th percentile per-packet one-way delay: 79.765 ms

Loss rate: 1.27%

Run 10: Report of TCP BBR — Data Link

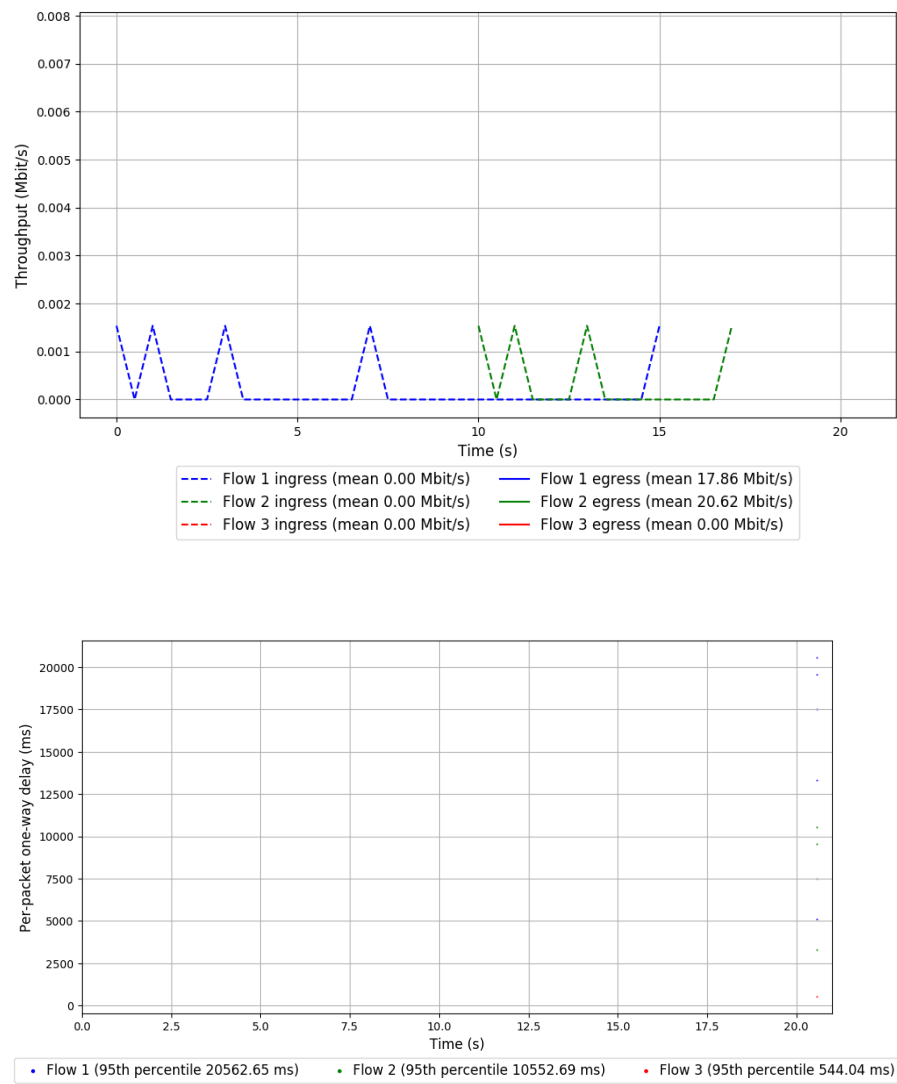


Run 1: Statistics of TCP Cubic

Start at: 2018-01-31 16:25:39

End at: 2018-01-31 16:26:09

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-01-31 16:41:58

End at: 2018-01-31 16:42:28

Below is generated by plot.py at 2018-01-31 22:09:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 239.03 Mbit/s

95th percentile per-packet one-way delay: 63.291 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 104.01 Mbit/s

95th percentile per-packet one-way delay: 58.882 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 135.44 Mbit/s

95th percentile per-packet one-way delay: 65.312 ms

Loss rate: 0.35%

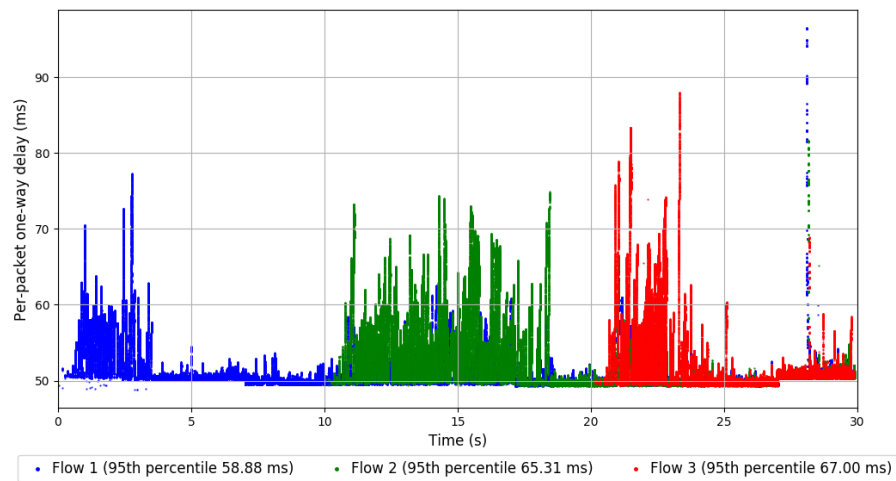
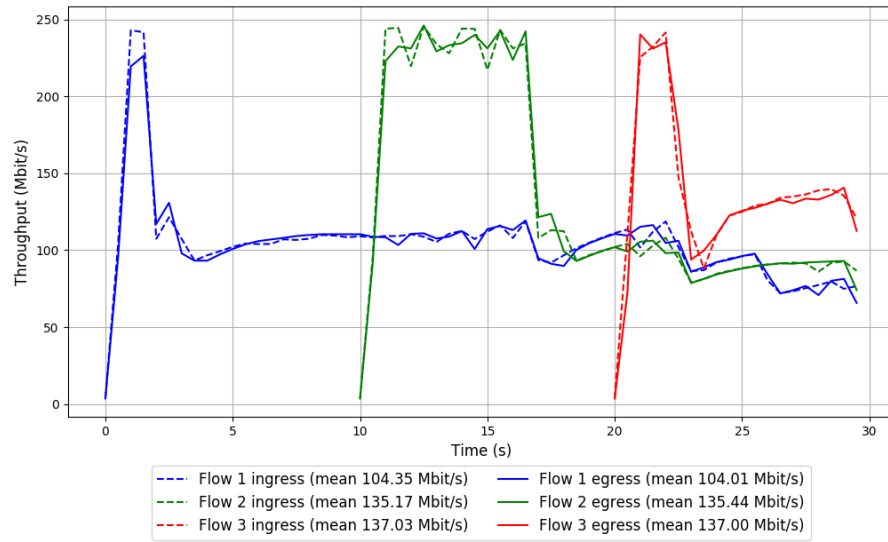
-- Flow 3:

Average throughput: 137.00 Mbit/s

95th percentile per-packet one-way delay: 66.996 ms

Loss rate: 1.04%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-01-31 16:58:37

End at: 2018-01-31 16:59:07

Below is generated by plot.py at 2018-01-31 22:09:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 226.41 Mbit/s

95th percentile per-packet one-way delay: 59.816 ms

Loss rate: 0.40%

-- Flow 1:

Average throughput: 109.63 Mbit/s

95th percentile per-packet one-way delay: 57.865 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 87.58 Mbit/s

95th percentile per-packet one-way delay: 60.236 ms

Loss rate: 0.45%

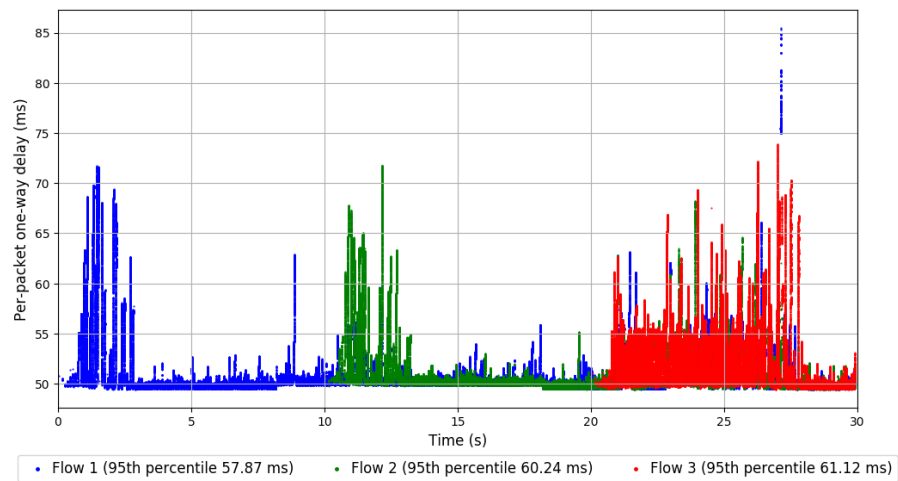
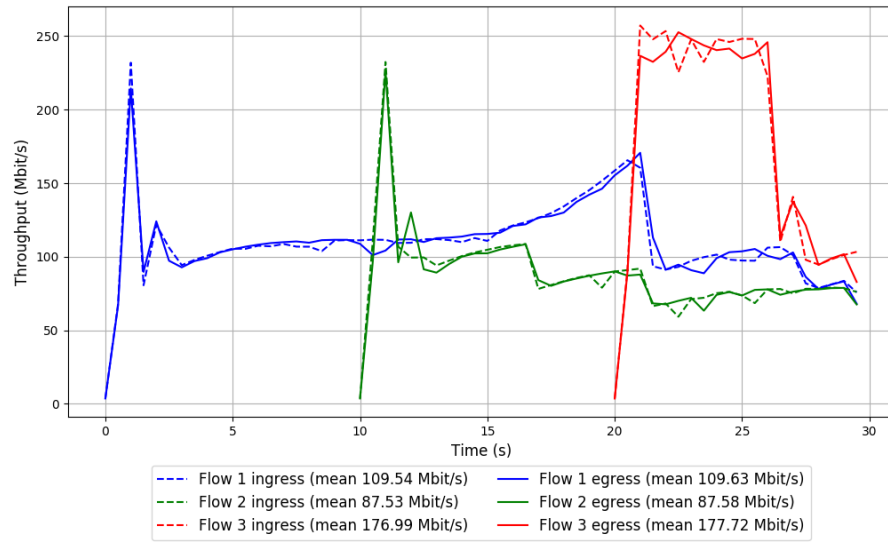
-- Flow 3:

Average throughput: 177.72 Mbit/s

95th percentile per-packet one-way delay: 61.119 ms

Loss rate: 0.61%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-01-31 17:15:56

End at: 2018-01-31 17:16:26

Below is generated by plot.py at 2018-01-31 22:09:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 199.30 Mbit/s

95th percentile per-packet one-way delay: 64.746 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 33.45 Mbit/s

95th percentile per-packet one-way delay: 55.875 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 145.24 Mbit/s

95th percentile per-packet one-way delay: 62.114 ms

Loss rate: 0.44%

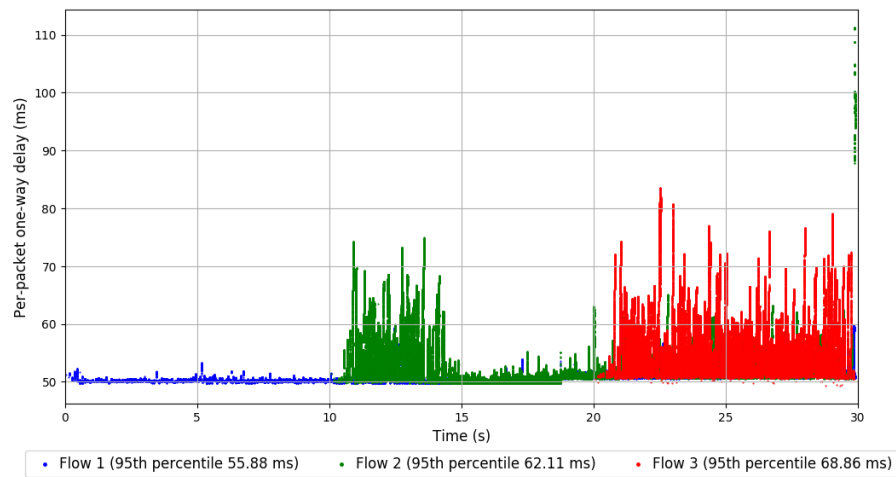
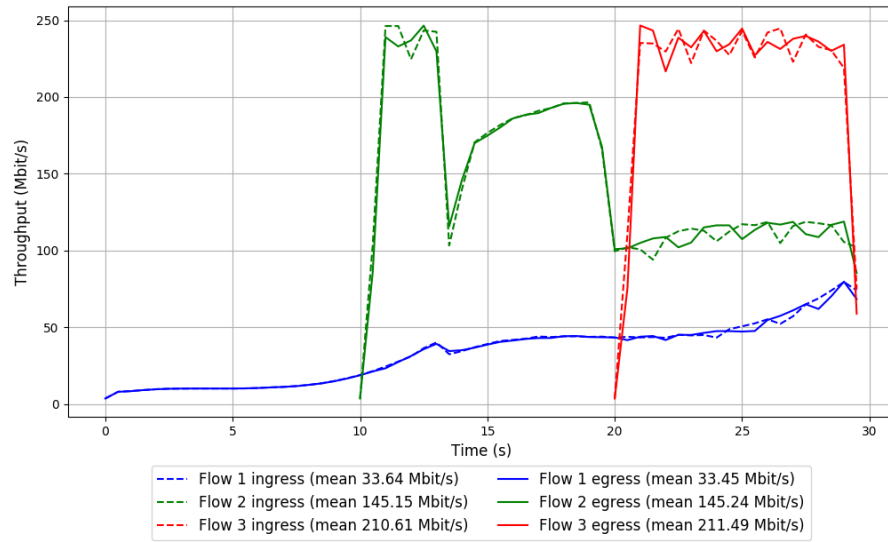
-- Flow 3:

Average throughput: 211.49 Mbit/s

95th percentile per-packet one-way delay: 68.861 ms

Loss rate: 0.60%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-01-31 17:32:56

End at: 2018-01-31 17:33:26

Below is generated by plot.py at 2018-01-31 22:09:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 287.16 Mbit/s

95th percentile per-packet one-way delay: 63.700 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 91.03 Mbit/s

95th percentile per-packet one-way delay: 64.079 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 139.52 Mbit/s

95th percentile per-packet one-way delay: 65.768 ms

Loss rate: 0.31%

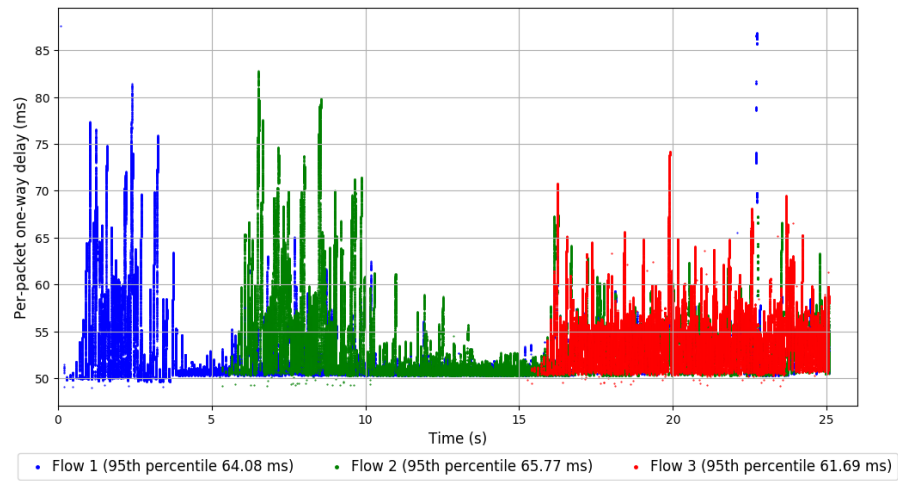
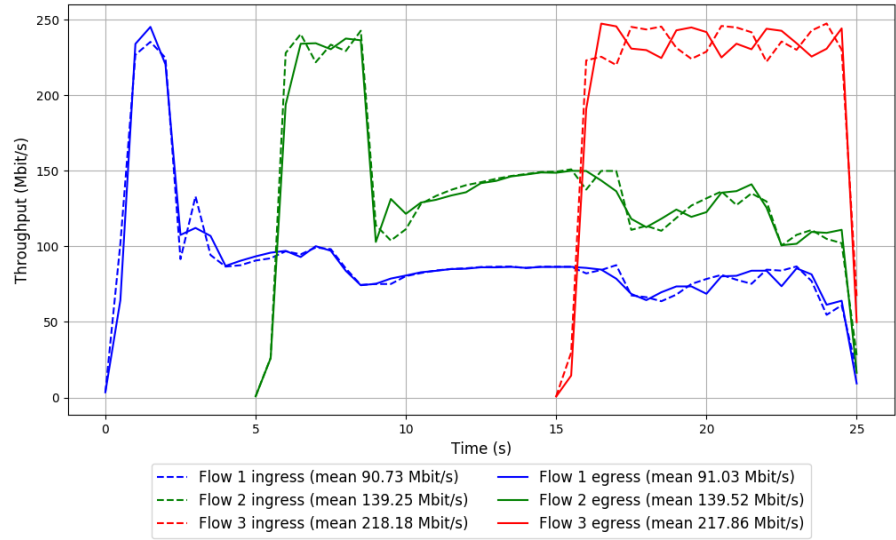
-- Flow 3:

Average throughput: 217.86 Mbit/s

95th percentile per-packet one-way delay: 61.693 ms

Loss rate: 1.15%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-01-31 17:50:13

End at: 2018-01-31 17:50:43

Below is generated by plot.py at 2018-01-31 22:09:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 174.71 Mbit/s

95th percentile per-packet one-way delay: 60.773 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 96.25 Mbit/s

95th percentile per-packet one-way delay: 56.140 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 115.42 Mbit/s

95th percentile per-packet one-way delay: 64.053 ms

Loss rate: 0.25%

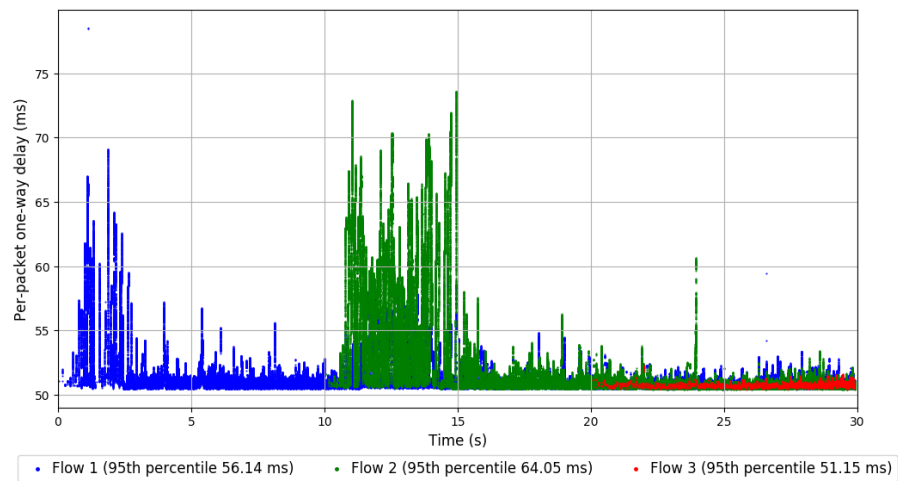
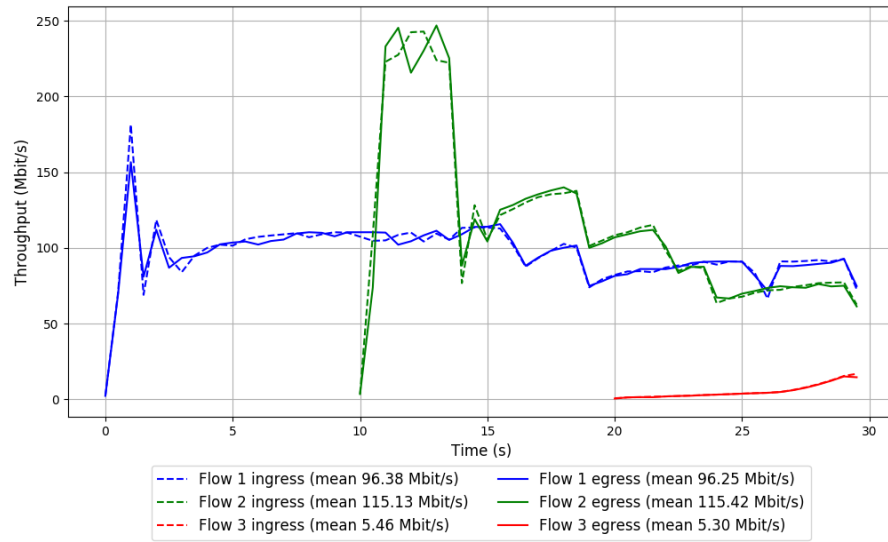
-- Flow 3:

Average throughput: 5.30 Mbit/s

95th percentile per-packet one-way delay: 51.151 ms

Loss rate: 3.88%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-01-31 18:06:40

End at: 2018-01-31 18:07:10

Below is generated by plot.py at 2018-01-31 22:09:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 251.30 Mbit/s

95th percentile per-packet one-way delay: 62.879 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 102.86 Mbit/s

95th percentile per-packet one-way delay: 60.745 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 155.67 Mbit/s

95th percentile per-packet one-way delay: 63.563 ms

Loss rate: 0.36%

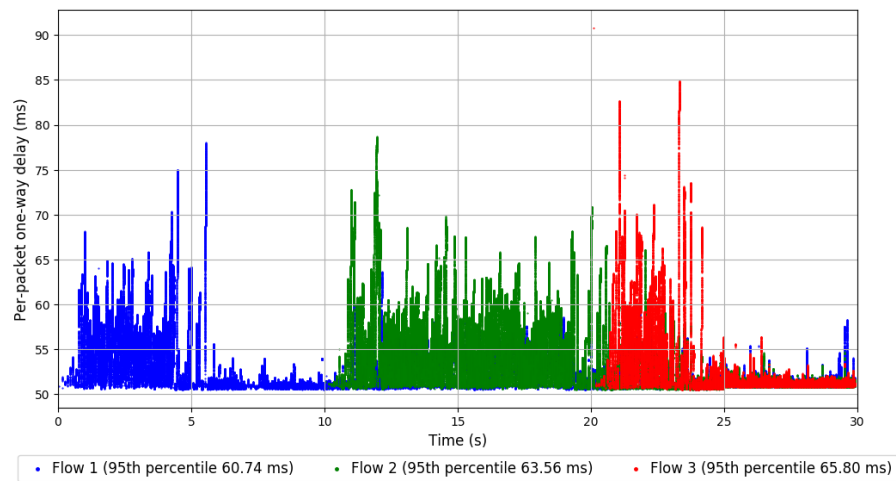
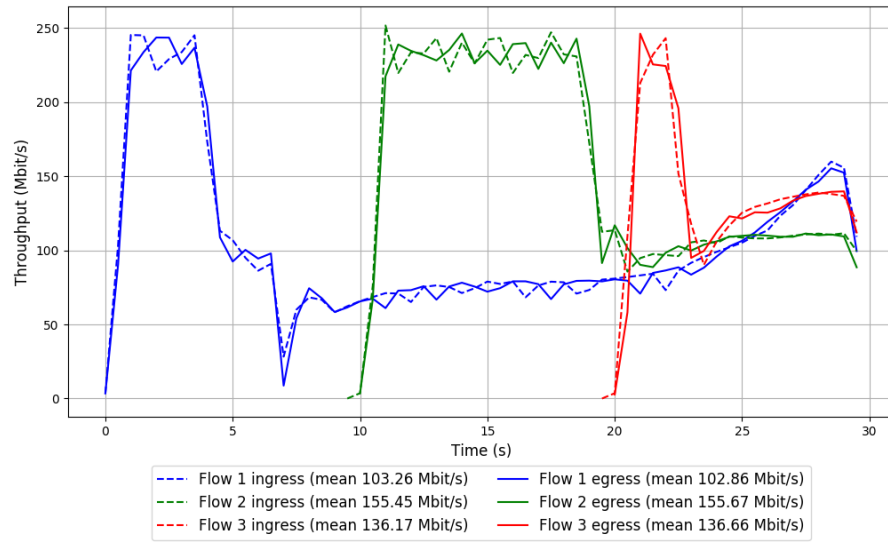
-- Flow 3:

Average throughput: 136.66 Mbit/s

95th percentile per-packet one-way delay: 65.800 ms

Loss rate: 1.06%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-01-31 18:24:03

End at: 2018-01-31 18:24:33

Below is generated by plot.py at 2018-01-31 22:10:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 312.72 Mbit/s

95th percentile per-packet one-way delay: 67.056 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 187.35 Mbit/s

95th percentile per-packet one-way delay: 66.967 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 117.22 Mbit/s

95th percentile per-packet one-way delay: 66.698 ms

Loss rate: 0.35%

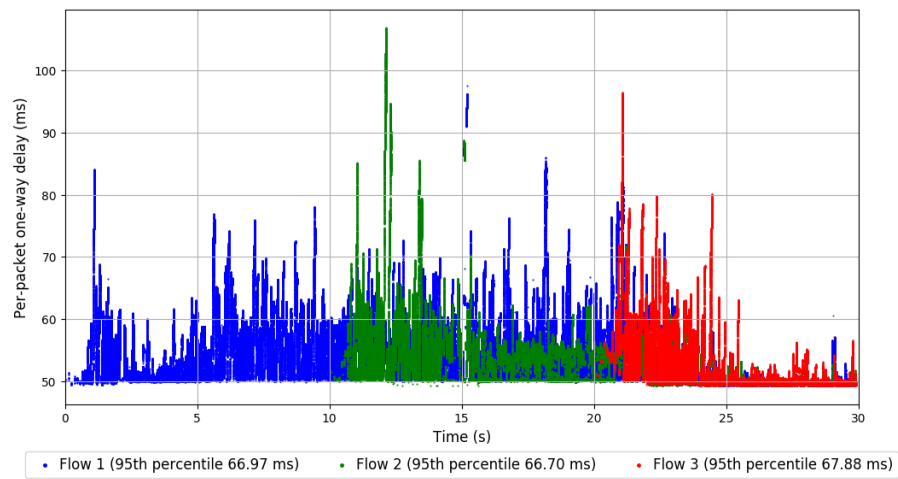
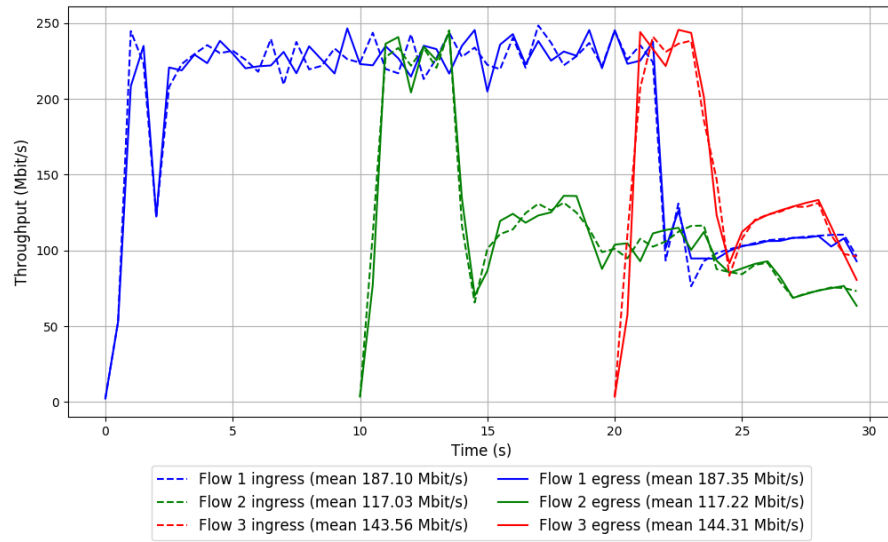
-- Flow 3:

Average throughput: 144.31 Mbit/s

95th percentile per-packet one-way delay: 67.883 ms

Loss rate: 0.73%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-01-31 18:40:59

End at: 2018-01-31 18:41:29

Below is generated by plot.py at 2018-01-31 22:10:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 244.78 Mbit/s

95th percentile per-packet one-way delay: 58.576 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 98.58 Mbit/s

95th percentile per-packet one-way delay: 59.263 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 127.46 Mbit/s

95th percentile per-packet one-way delay: 56.608 ms

Loss rate: 0.56%

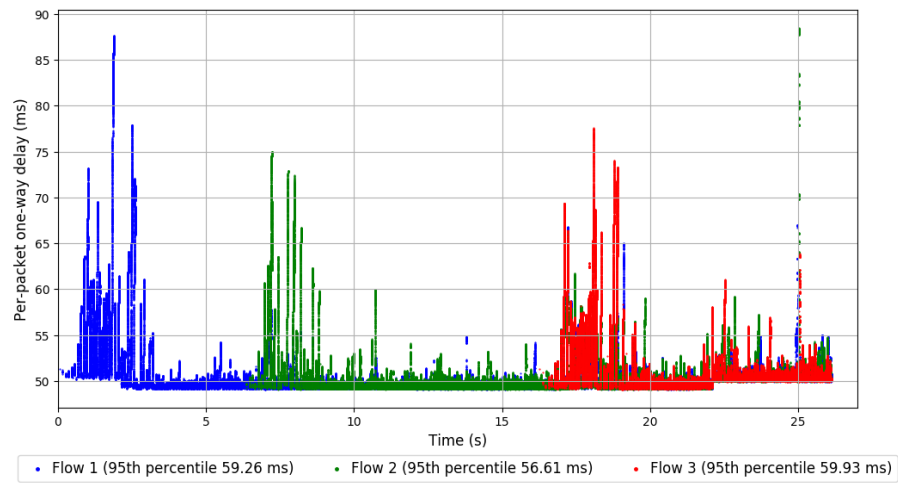
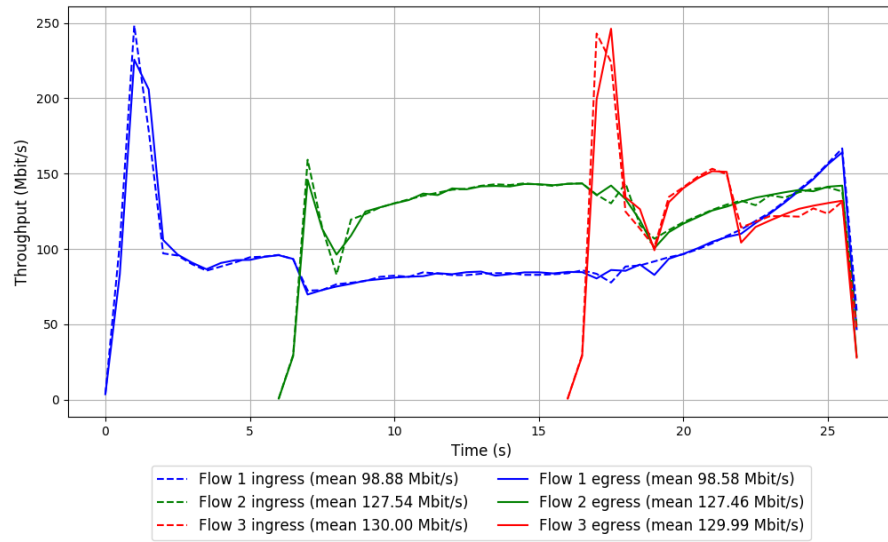
-- Flow 3:

Average throughput: 129.99 Mbit/s

95th percentile per-packet one-way delay: 59.926 ms

Loss rate: 1.03%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-01-31 18:58:00

End at: 2018-01-31 18:58:30

Below is generated by plot.py at 2018-01-31 22:10:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 282.99 Mbit/s

95th percentile per-packet one-way delay: 63.842 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 122.60 Mbit/s

95th percentile per-packet one-way delay: 60.625 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 146.58 Mbit/s

95th percentile per-packet one-way delay: 62.536 ms

Loss rate: 0.34%

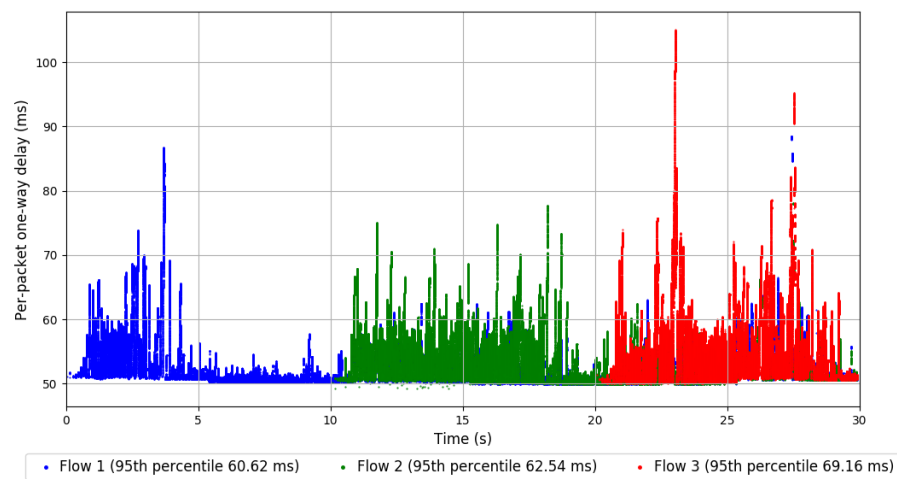
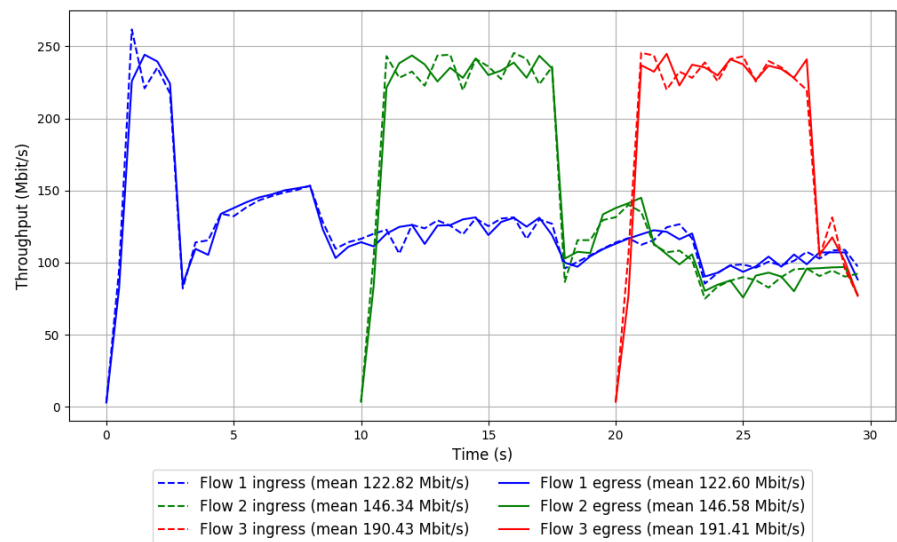
-- Flow 3:

Average throughput: 191.41 Mbit/s

95th percentile per-packet one-way delay: 69.164 ms

Loss rate: 0.50%

Run 10: Report of TCP Cubic — Data Link

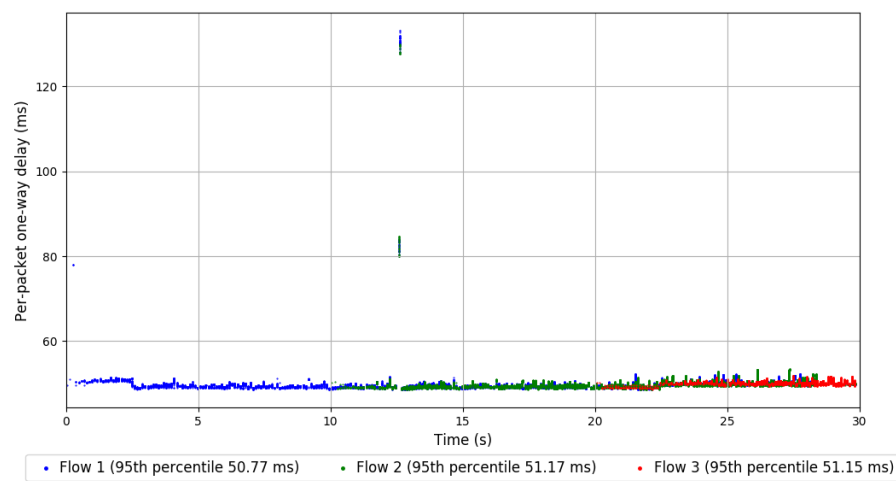
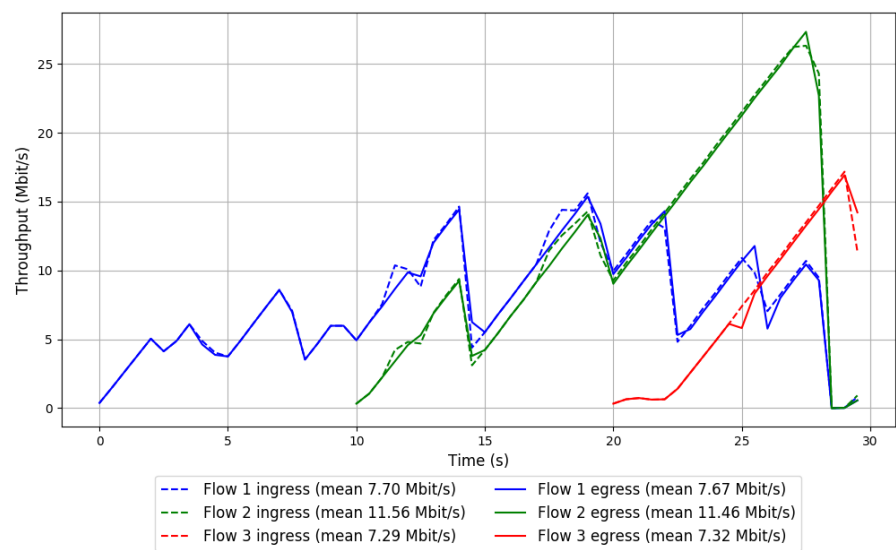


```
Run 1: Statistics of LEDBAT

Start at: 2018-01-31 16:20:32
End at: 2018-01-31 16:21:02

# Below is generated by plot.py at 2018-01-31 22:10:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.68 Mbit/s
95th percentile per-packet one-way delay: 51.015 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 7.67 Mbit/s
95th percentile per-packet one-way delay: 50.767 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 11.46 Mbit/s
95th percentile per-packet one-way delay: 51.167 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 7.32 Mbit/s
95th percentile per-packet one-way delay: 51.149 ms
Loss rate: 0.49%
```


Run 1: Report of LEDBAT — Data Link

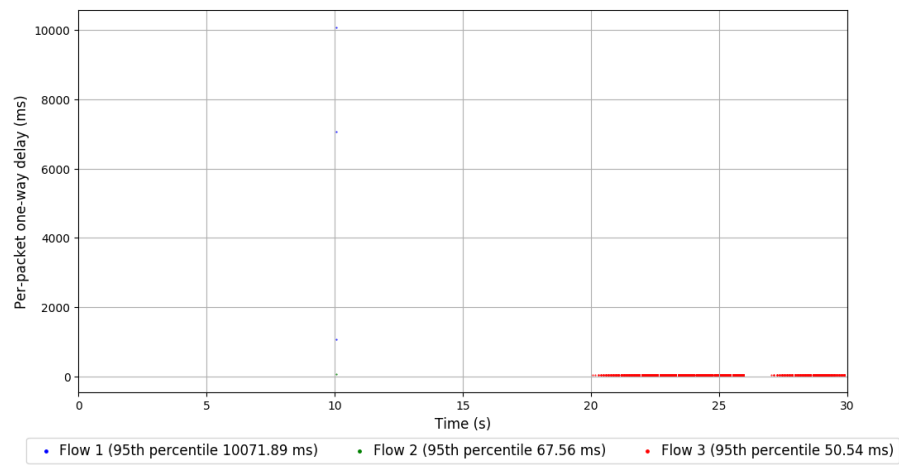
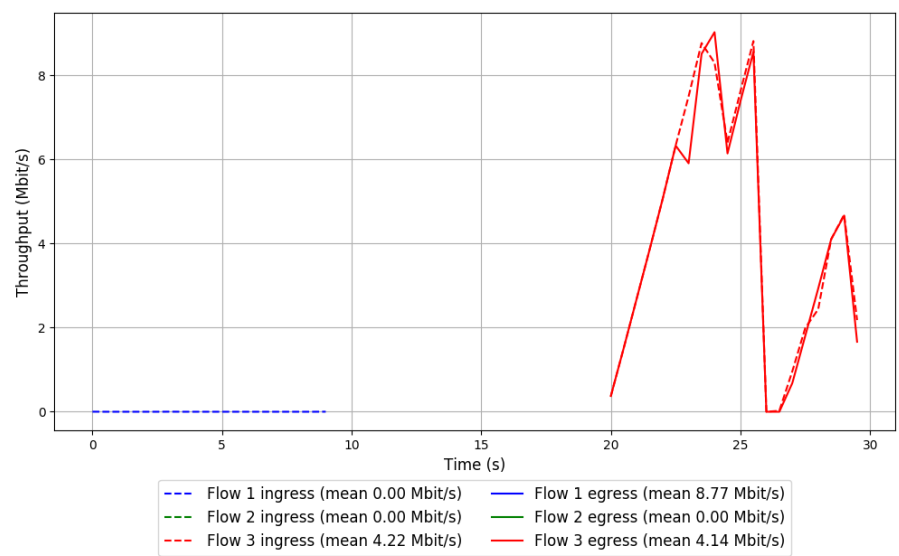


Run 2: Statistics of LEDBAT

Start at: 2018-01-31 16:36:56

End at: 2018-01-31 16:37:26

Run 2: Report of LEDBAT — Data Link

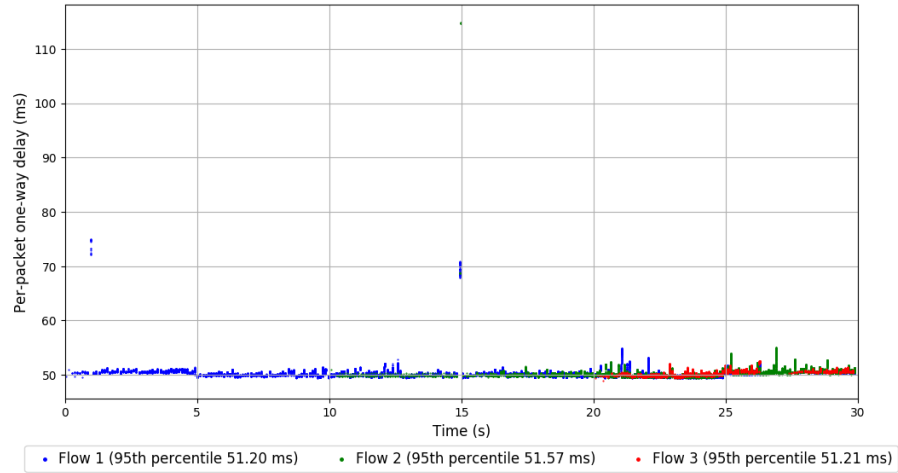
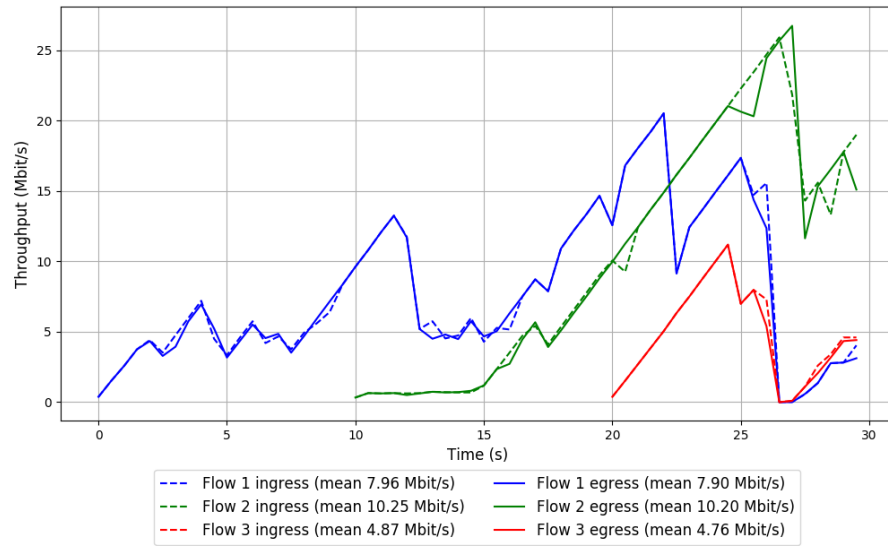


```
Run 3: Statistics of LEDBAT

Start at: 2018-01-31 16:53:30
End at: 2018-01-31 16:54:00

# Below is generated by plot.py at 2018-01-31 22:10:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.23 Mbit/s
95th percentile per-packet one-way delay: 51.412 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 7.90 Mbit/s
95th percentile per-packet one-way delay: 51.202 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 10.20 Mbit/s
95th percentile per-packet one-way delay: 51.571 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 4.76 Mbit/s
95th percentile per-packet one-way delay: 51.208 ms
Loss rate: 3.25%
```

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-01-31 17:10:29

End at: 2018-01-31 17:10:59

Below is generated by plot.py at 2018-01-31 22:10:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 19.52 Mbit/s

95th percentile per-packet one-way delay: 52.008 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 10.84 Mbit/s

95th percentile per-packet one-way delay: 51.692 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 8.67 Mbit/s

95th percentile per-packet one-way delay: 52.681 ms

Loss rate: 1.81%

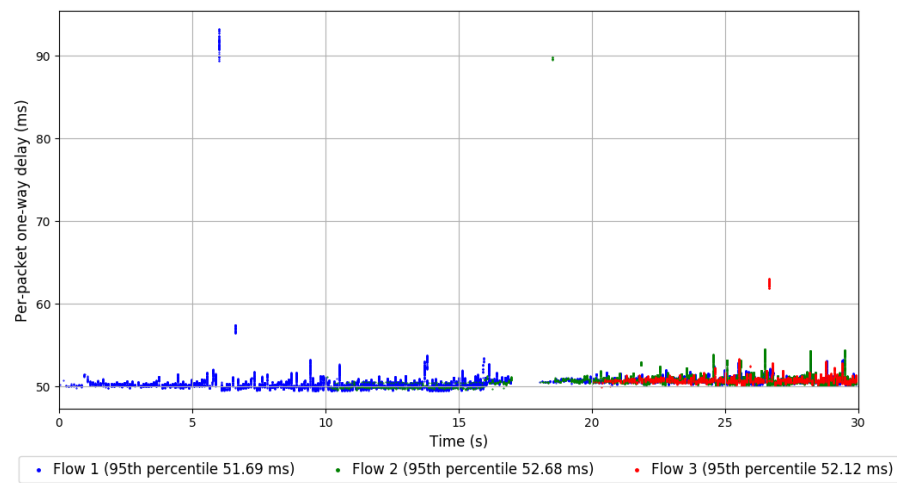
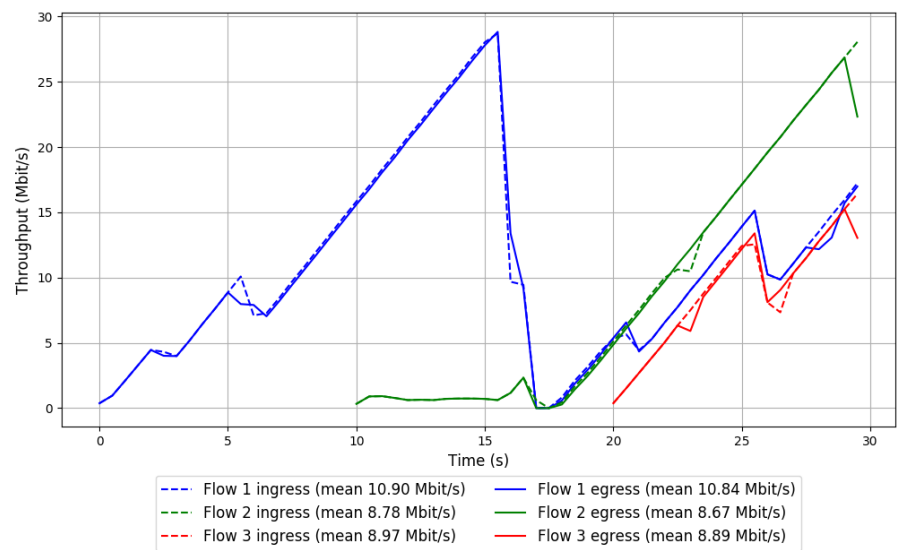
-- Flow 3:

Average throughput: 8.89 Mbit/s

95th percentile per-packet one-way delay: 52.125 ms

Loss rate: 1.90%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-01-31 17:27:32

End at: 2018-01-31 17:28:02

Below is generated by plot.py at 2018-01-31 22:10:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.89 Mbit/s

95th percentile per-packet one-way delay: 51.547 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 7.91 Mbit/s

95th percentile per-packet one-way delay: 4544.493 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 8.96 Mbit/s

95th percentile per-packet one-way delay: 51.635 ms

Loss rate: 1.38%

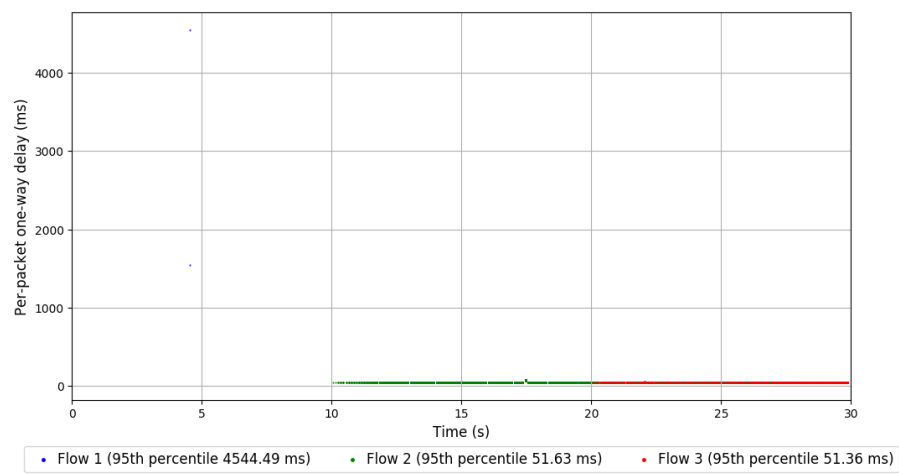
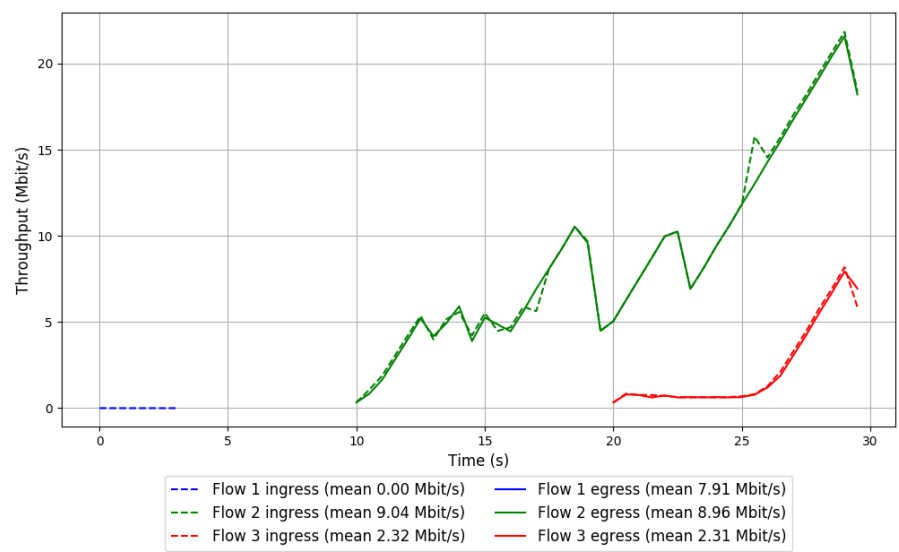
-- Flow 3:

Average throughput: 2.31 Mbit/s

95th percentile per-packet one-way delay: 51.358 ms

Loss rate: 1.53%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-01-31 17:44:41

End at: 2018-01-31 17:45:11

Below is generated by plot.py at 2018-01-31 22:10:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.85 Mbit/s

95th percentile per-packet one-way delay: 51.433 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1528.117 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 5.13 Mbit/s

95th percentile per-packet one-way delay: 51.289 ms

Loss rate: 1.27%

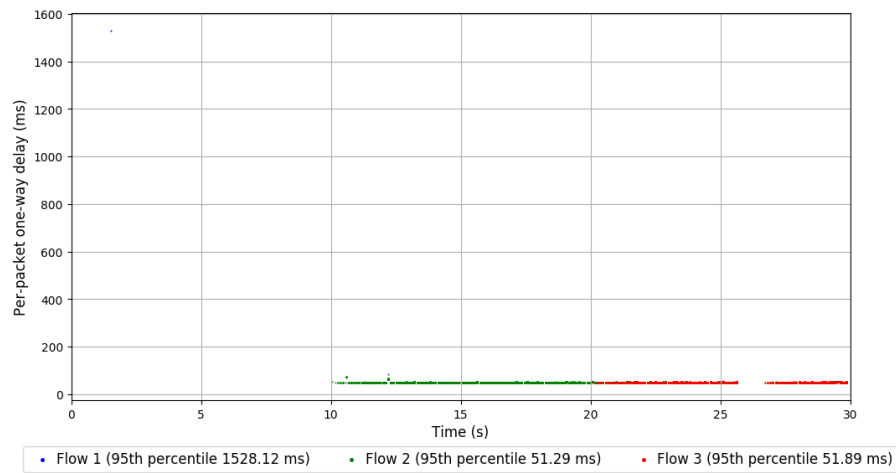
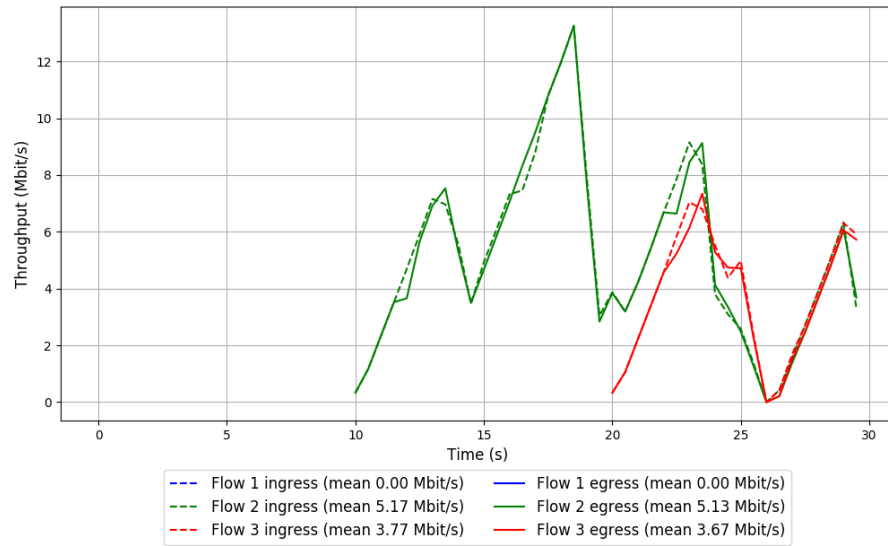
-- Flow 3:

Average throughput: 3.67 Mbit/s

95th percentile per-packet one-way delay: 51.886 ms

Loss rate: 3.69%

Run 6: Report of LEDBAT — Data Link

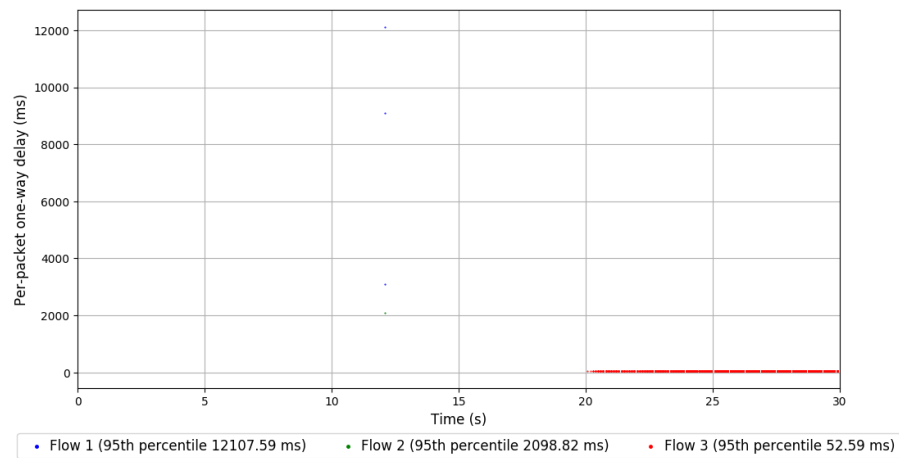
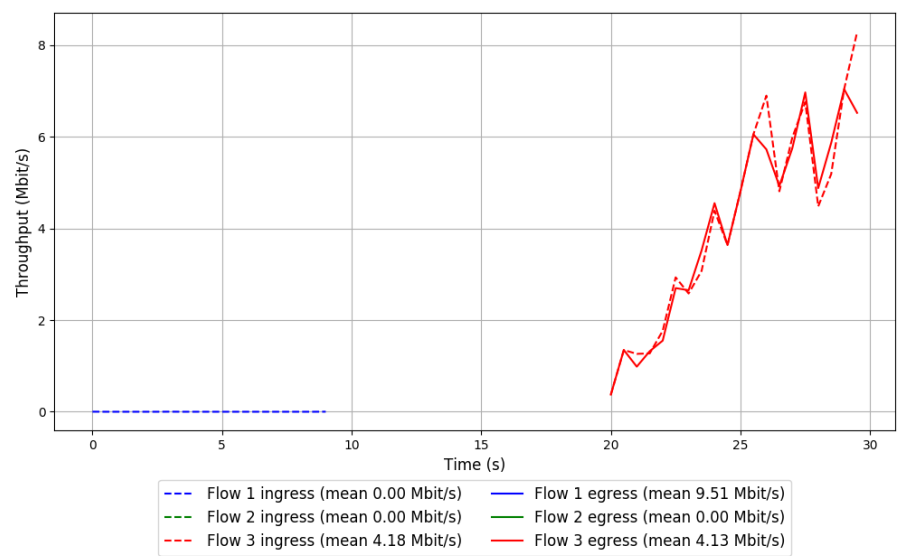


Run 7: Statistics of LEDBAT

Start at: 2018-01-31 18:01:41

End at: 2018-01-31 18:02:11

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-01-31 18:18:59

End at: 2018-01-31 18:19:29

Below is generated by plot.py at 2018-01-31 22:10:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.48 Mbit/s

95th percentile per-packet one-way delay: 52.487 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 5.37 Mbit/s

95th percentile per-packet one-way delay: 52.707 ms

Loss rate: 1.48%

-- Flow 2:

Average throughput: 8.76 Mbit/s

95th percentile per-packet one-way delay: 52.534 ms

Loss rate: 1.57%

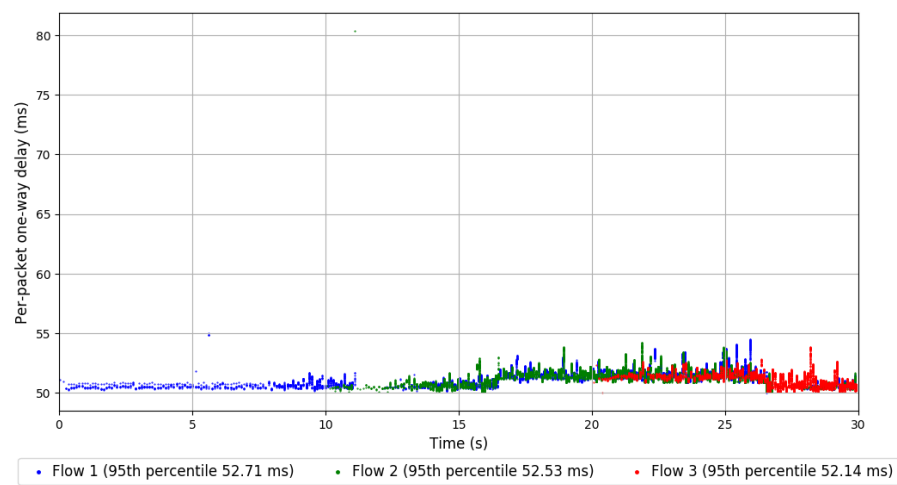
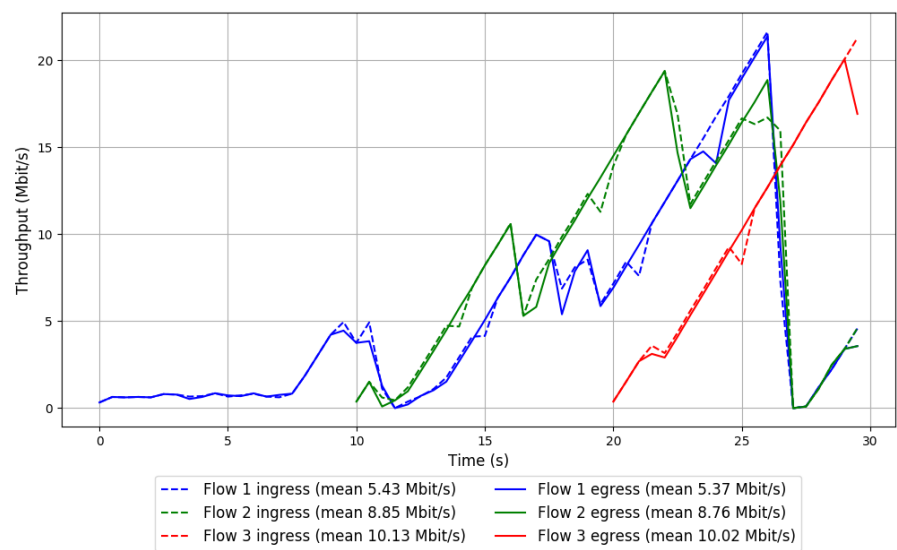
-- Flow 3:

Average throughput: 10.02 Mbit/s

95th percentile per-packet one-way delay: 52.143 ms

Loss rate: 2.17%

Run 8: Report of LEDBAT — Data Link

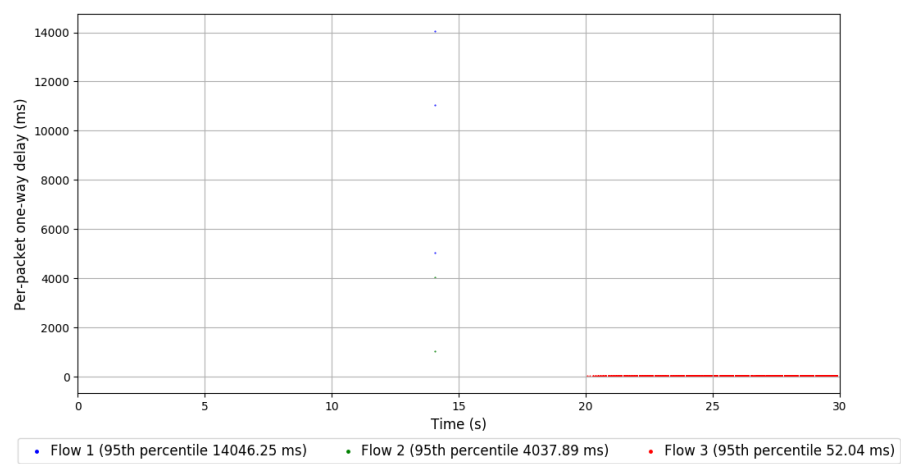
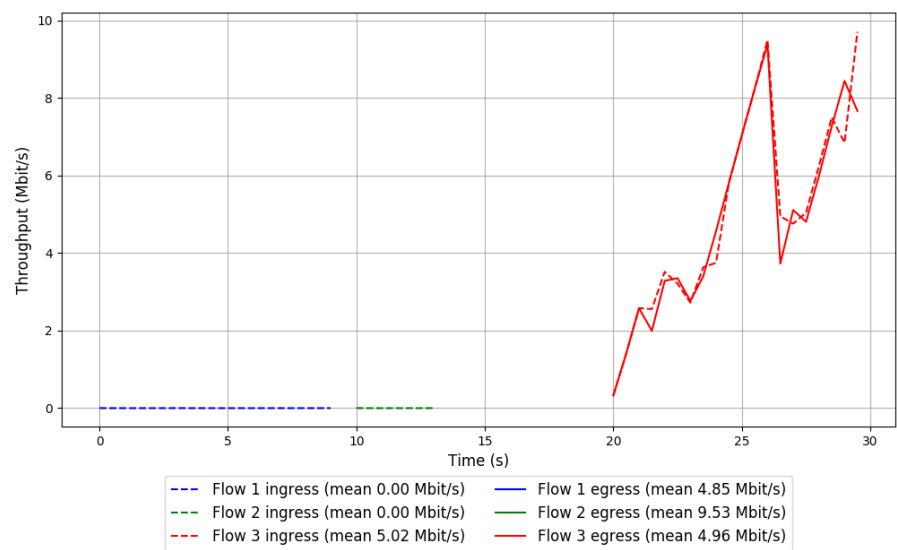


Run 9: Statistics of LEDBAT

Start at: 2018-01-31 18:35:32

End at: 2018-01-31 18:36:02

Run 9: Report of LEDBAT — Data Link

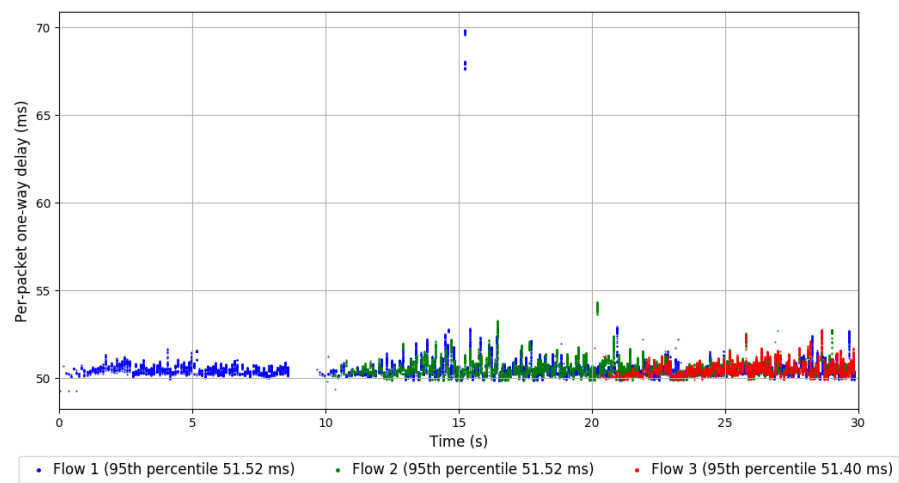
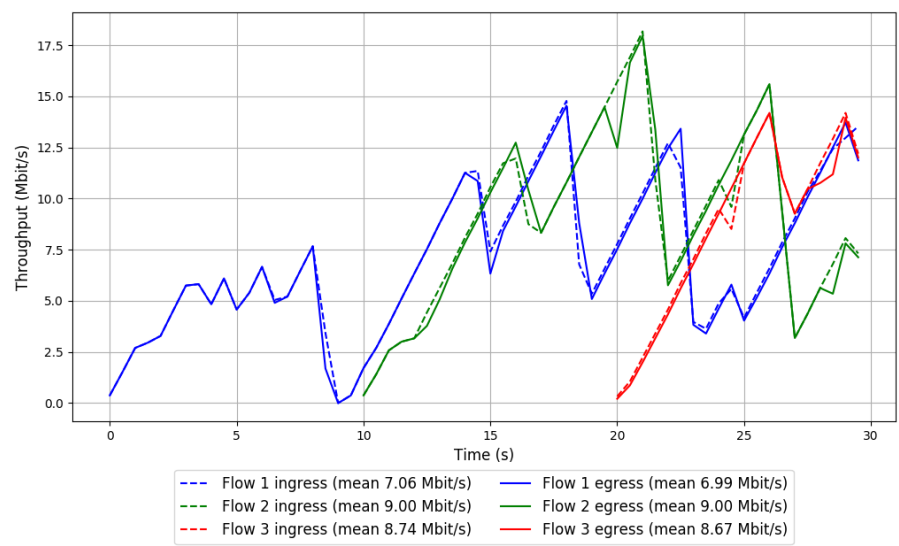


```
Run 10: Statistics of LEDBAT

Start at: 2018-01-31 18:52:50
End at: 2018-01-31 18:53:20

# Below is generated by plot.py at 2018-01-31 22:10:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.78 Mbit/s
95th percentile per-packet one-way delay: 51.499 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 51.519 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 51.523 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 8.67 Mbit/s
95th percentile per-packet one-way delay: 51.399 ms
Loss rate: 1.82%
```

Run 10: Report of LEDBAT — Data Link

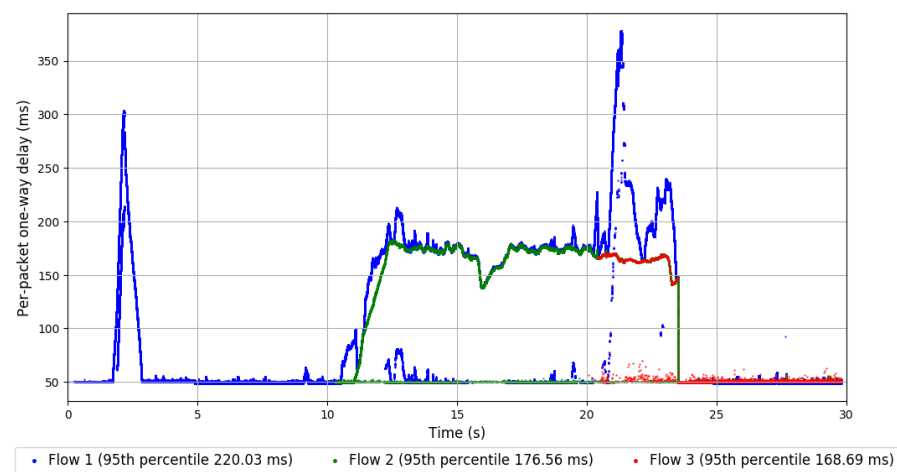
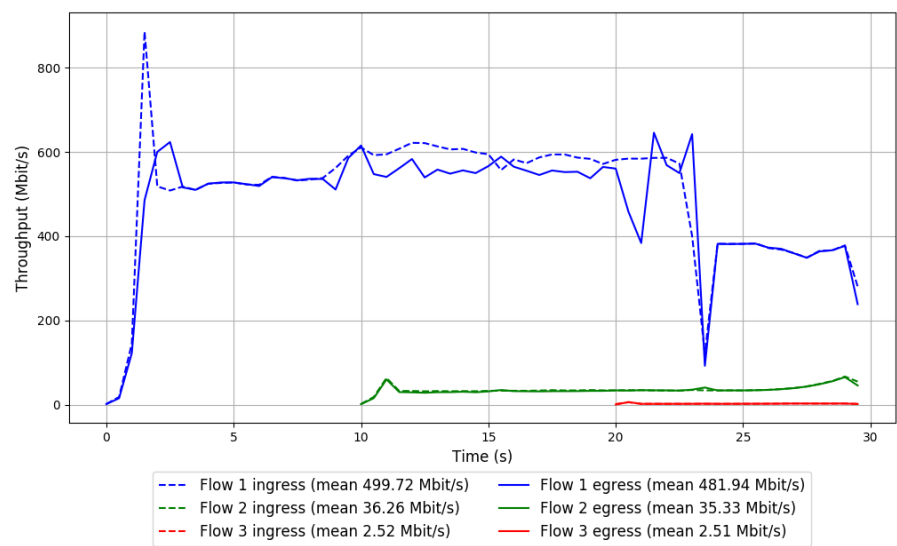


```
Run 1: Statistics of PCC

Start at: 2018-01-31 16:13:50
End at: 2018-01-31 16:14:20

# Below is generated by plot.py at 2018-01-31 22:16:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 506.18 Mbit/s
95th percentile per-packet one-way delay: 219.414 ms
Loss rate: 3.84%
-- Flow 1:
Average throughput: 481.94 Mbit/s
95th percentile per-packet one-way delay: 220.025 ms
Loss rate: 3.89%
-- Flow 2:
Average throughput: 35.33 Mbit/s
95th percentile per-packet one-way delay: 176.562 ms
Loss rate: 3.07%
-- Flow 3:
Average throughput: 2.51 Mbit/s
95th percentile per-packet one-way delay: 168.687 ms
Loss rate: 1.45%
```

Run 1: Report of PCC — Data Link

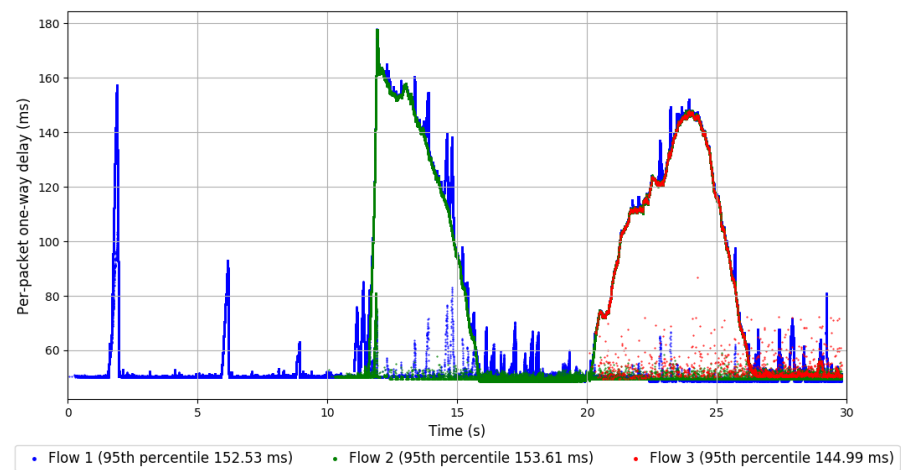
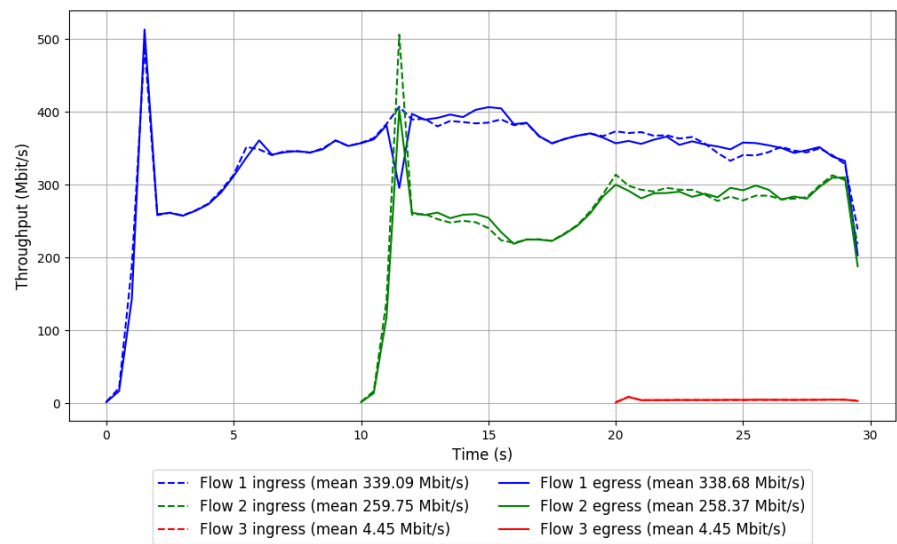


```
Run 2: Statistics of PCC

Start at: 2018-01-31 16:30:23
End at: 2018-01-31 16:30:53

# Below is generated by plot.py at 2018-01-31 22:16:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 511.62 Mbit/s
95th percentile per-packet one-way delay: 153.076 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 338.68 Mbit/s
95th percentile per-packet one-way delay: 152.526 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 258.37 Mbit/s
95th percentile per-packet one-way delay: 153.609 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 4.45 Mbit/s
95th percentile per-packet one-way delay: 144.988 ms
Loss rate: 1.11%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-01-31 16:46:55

End at: 2018-01-31 16:47:25

Below is generated by plot.py at 2018-01-31 22:17:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 563.15 Mbit/s

95th percentile per-packet one-way delay: 165.261 ms

Loss rate: 1.41%

-- Flow 1:

Average throughput: 498.19 Mbit/s

95th percentile per-packet one-way delay: 165.222 ms

Loss rate: 1.35%

-- Flow 2:

Average throughput: 68.15 Mbit/s

95th percentile per-packet one-way delay: 165.003 ms

Loss rate: 1.47%

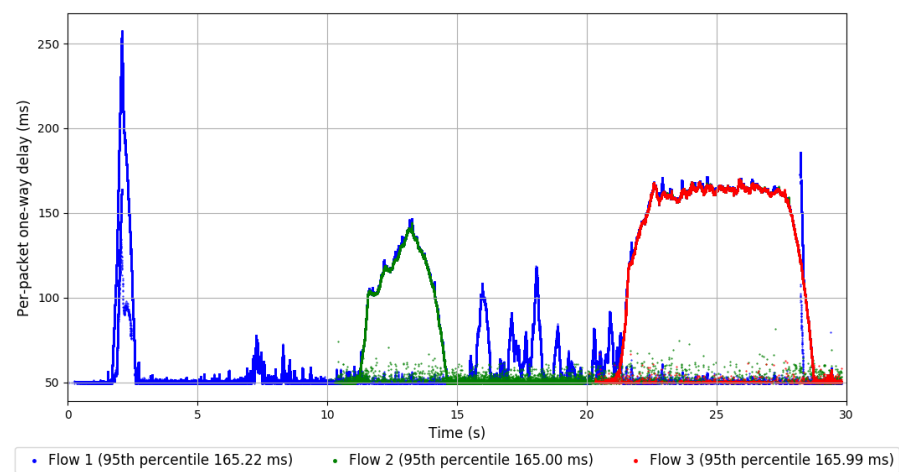
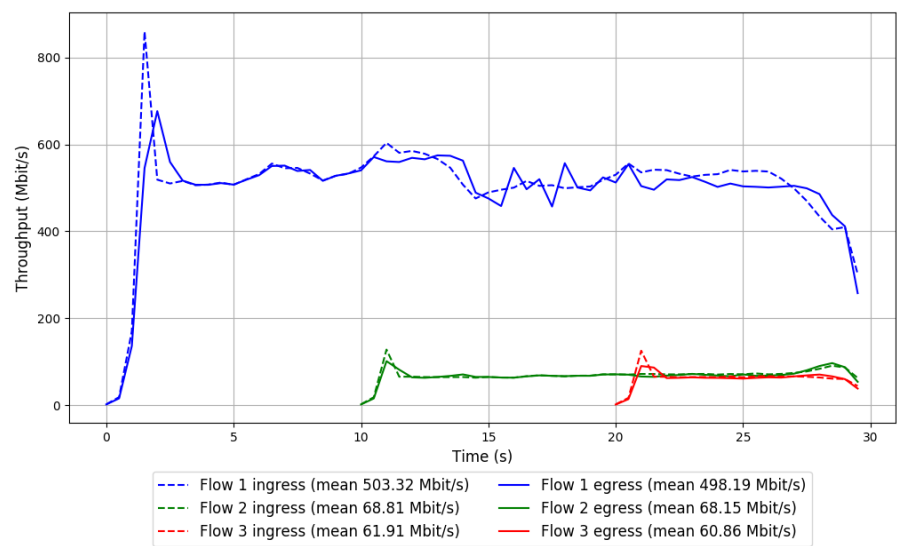
-- Flow 3:

Average throughput: 60.86 Mbit/s

95th percentile per-packet one-way delay: 165.989 ms

Loss rate: 2.68%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-01-31 17:03:39

End at: 2018-01-31 17:04:09

Below is generated by plot.py at 2018-01-31 22:20:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 563.07 Mbit/s

95th percentile per-packet one-way delay: 186.329 ms

Loss rate: 2.46%

-- Flow 1:

Average throughput: 468.22 Mbit/s

95th percentile per-packet one-way delay: 192.430 ms

Loss rate: 2.61%

-- Flow 2:

Average throughput: 109.99 Mbit/s

95th percentile per-packet one-way delay: 165.934 ms

Loss rate: 1.70%

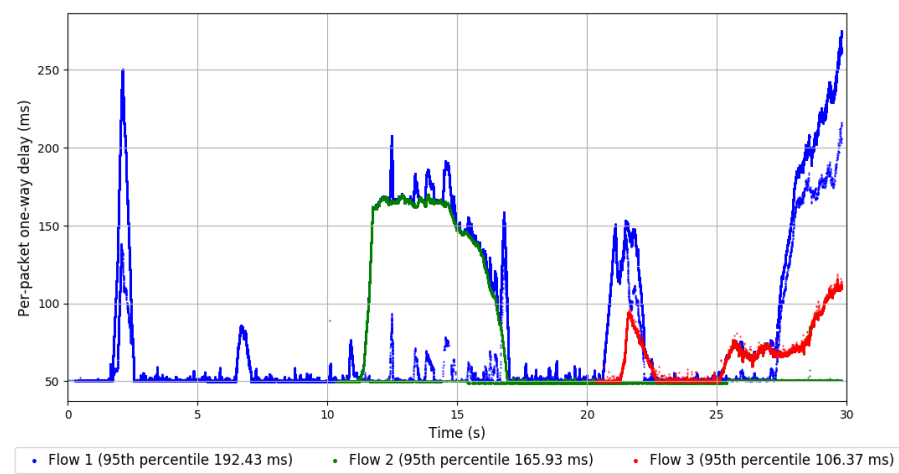
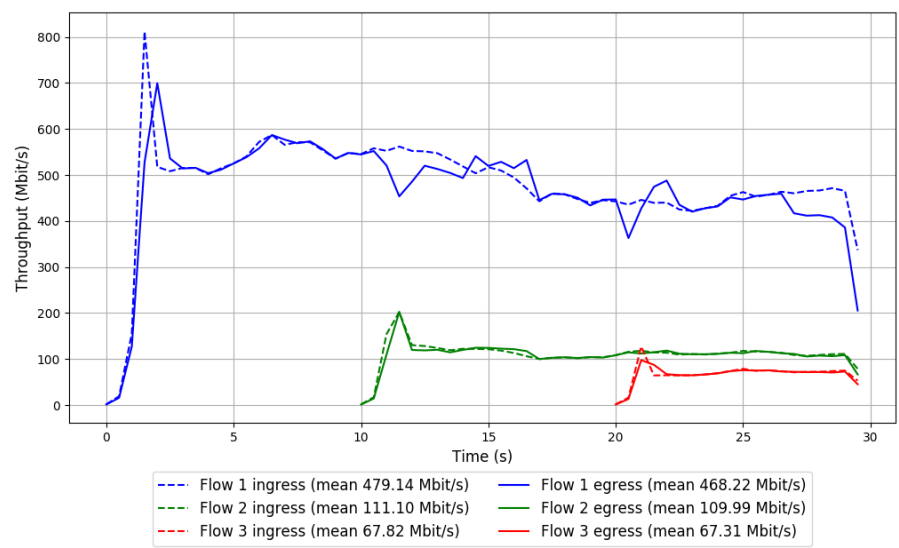
-- Flow 3:

Average throughput: 67.31 Mbit/s

95th percentile per-packet one-way delay: 106.369 ms

Loss rate: 1.78%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-01-31 17:20:52

End at: 2018-01-31 17:21:22

Below is generated by plot.py at 2018-01-31 22:20:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 542.54 Mbit/s

95th percentile per-packet one-way delay: 222.717 ms

Loss rate: 6.48%

-- Flow 1:

Average throughput: 495.66 Mbit/s

95th percentile per-packet one-way delay: 223.690 ms

Loss rate: 6.99%

-- Flow 2:

Average throughput: 62.81 Mbit/s

95th percentile per-packet one-way delay: 120.539 ms

Loss rate: 0.56%

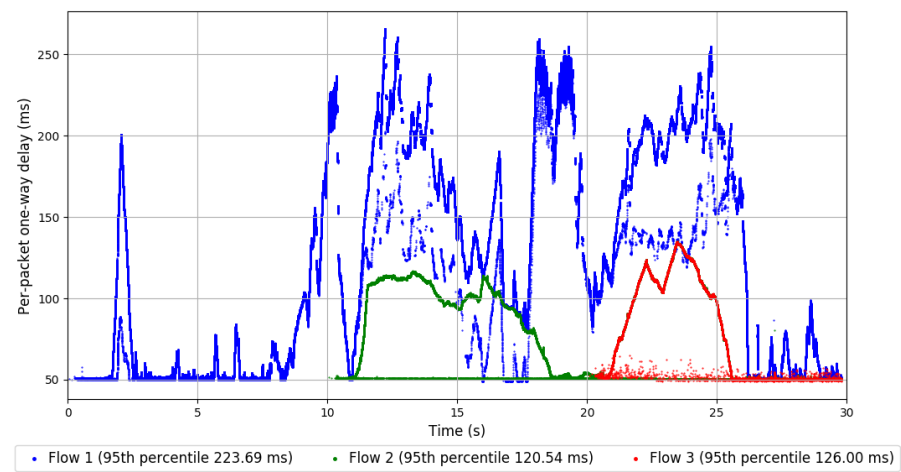
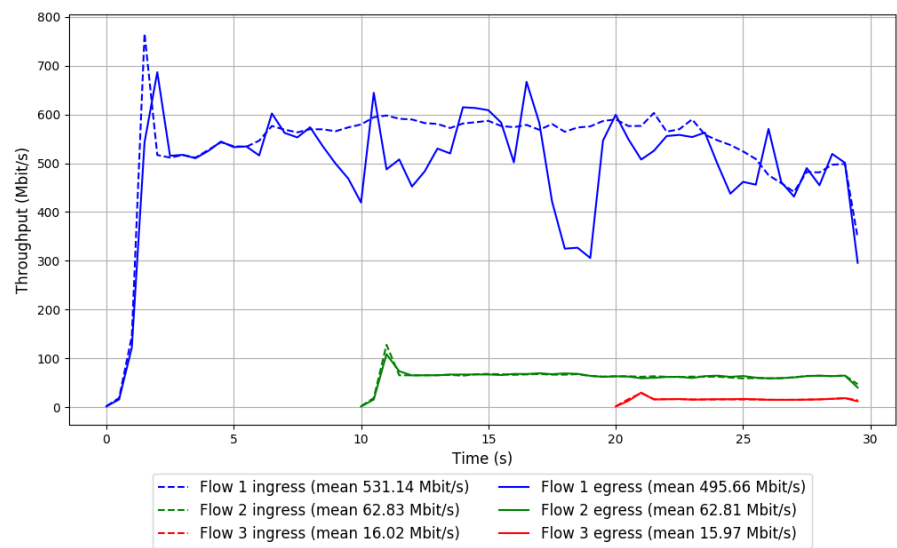
-- Flow 3:

Average throughput: 15.97 Mbit/s

95th percentile per-packet one-way delay: 125.995 ms

Loss rate: 1.36%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-01-31 17:37:55

End at: 2018-01-31 17:38:25

Below is generated by plot.py at 2018-01-31 22:20:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 560.83 Mbit/s

95th percentile per-packet one-way delay: 221.728 ms

Loss rate: 5.25%

-- Flow 1:

Average throughput: 522.72 Mbit/s

95th percentile per-packet one-way delay: 222.934 ms

Loss rate: 5.56%

-- Flow 2:

Average throughput: 56.35 Mbit/s

95th percentile per-packet one-way delay: 164.580 ms

Loss rate: 0.78%

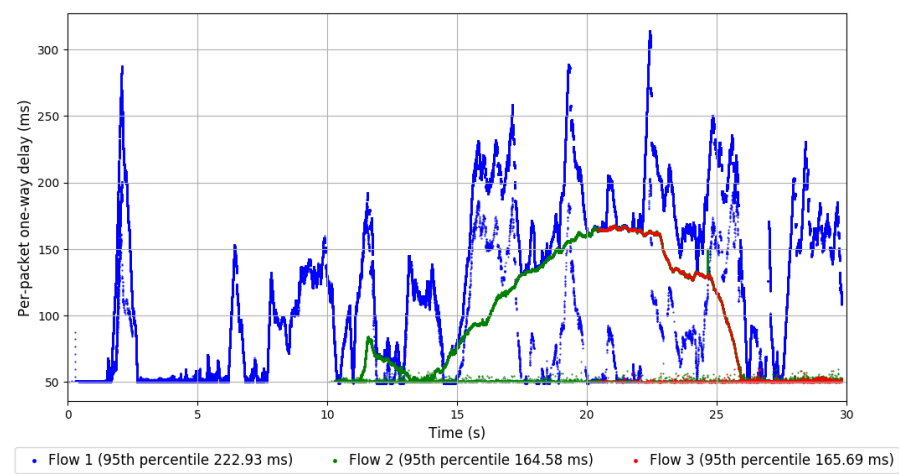
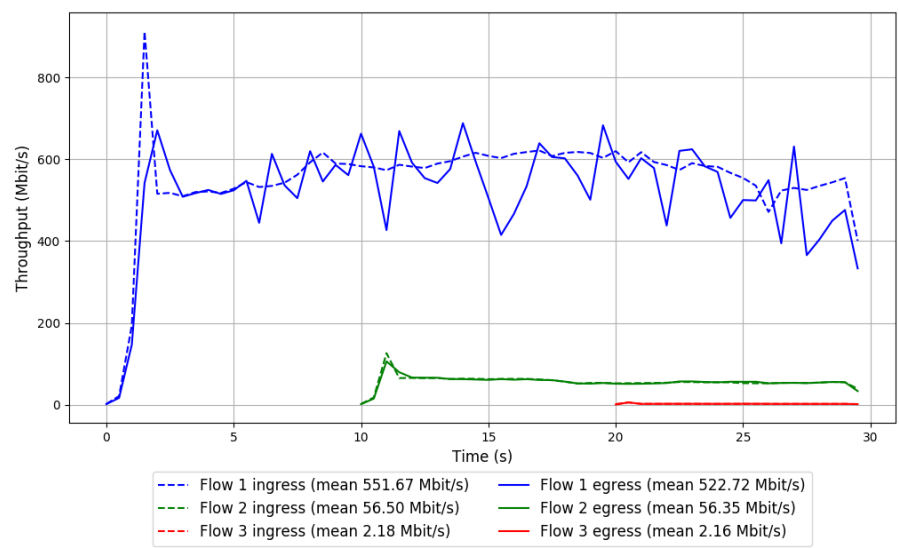
-- Flow 3:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 165.687 ms

Loss rate: 1.60%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-01-31 17:55:06

End at: 2018-01-31 17:55:36

Below is generated by plot.py at 2018-01-31 22:22:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 559.43 Mbit/s

95th percentile per-packet one-way delay: 266.575 ms

Loss rate: 4.69%

-- Flow 1:

Average throughput: 461.59 Mbit/s

95th percentile per-packet one-way delay: 274.794 ms

Loss rate: 5.16%

-- Flow 2:

Average throughput: 146.30 Mbit/s

95th percentile per-packet one-way delay: 167.351 ms

Loss rate: 2.37%

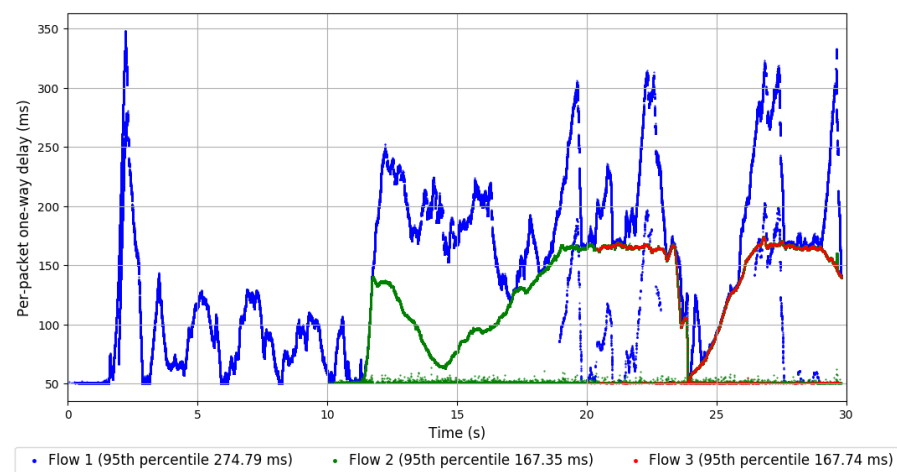
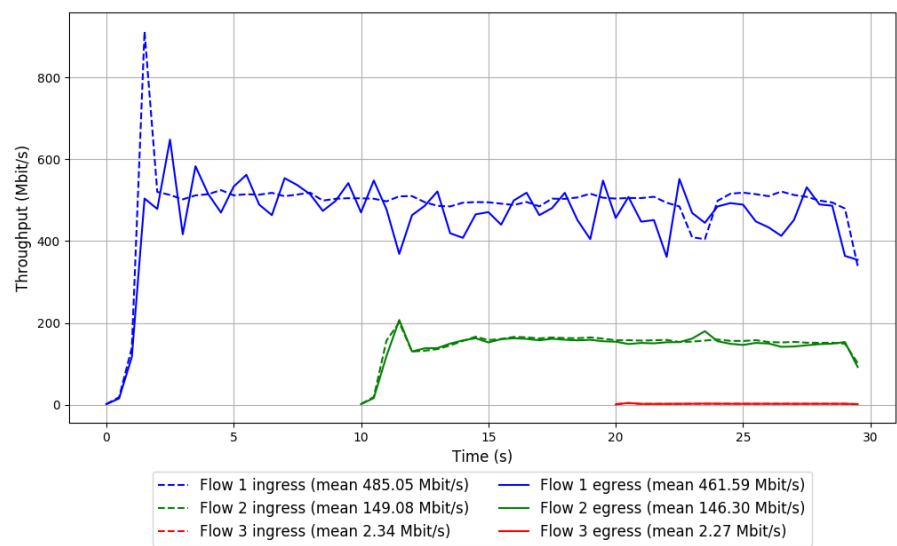
-- Flow 3:

Average throughput: 2.27 Mbit/s

95th percentile per-packet one-way delay: 167.740 ms

Loss rate: 3.98%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-01-31 18:11:44

End at: 2018-01-31 18:12:14

Below is generated by plot.py at 2018-01-31 22:22:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 553.34 Mbit/s

95th percentile per-packet one-way delay: 188.904 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 528.77 Mbit/s

95th percentile per-packet one-way delay: 189.582 ms

Loss rate: 1.30%

-- Flow 2:

Average throughput: 5.13 Mbit/s

95th percentile per-packet one-way delay: 125.275 ms

Loss rate: 0.55%

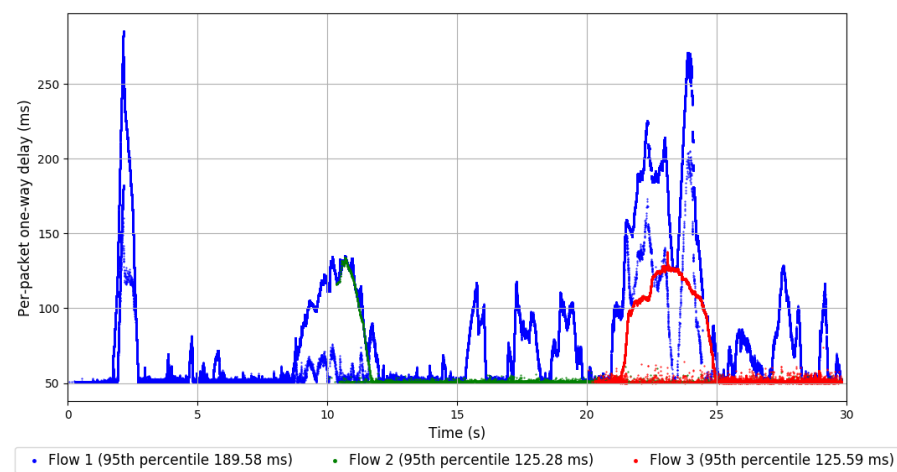
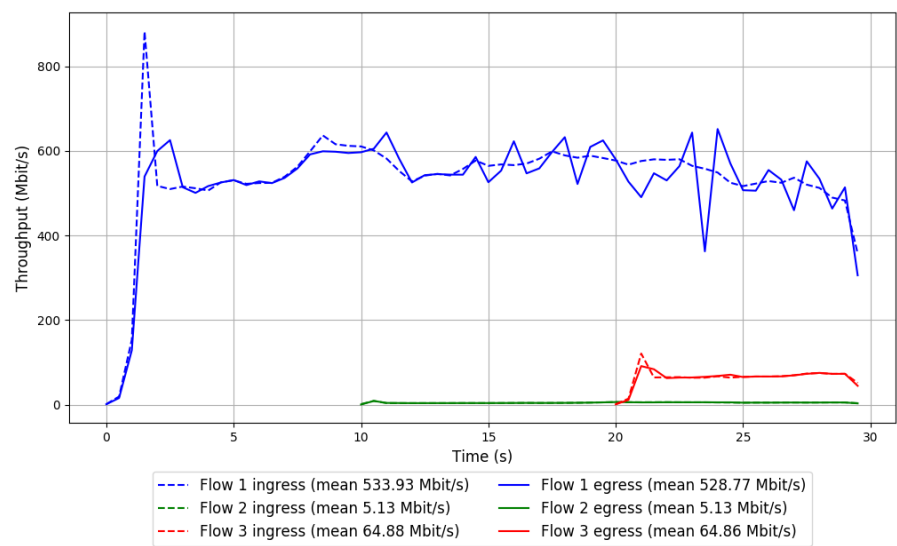
-- Flow 3:

Average throughput: 64.86 Mbit/s

95th percentile per-packet one-way delay: 125.587 ms

Loss rate: 1.14%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-01-31 18:29:03

End at: 2018-01-31 18:29:33

Below is generated by plot.py at 2018-01-31 22:28:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 535.48 Mbit/s

95th percentile per-packet one-way delay: 243.232 ms

Loss rate: 6.49%

-- Flow 1:

Average throughput: 446.55 Mbit/s

95th percentile per-packet one-way delay: 250.677 ms

Loss rate: 7.17%

-- Flow 2:

Average throughput: 132.09 Mbit/s

95th percentile per-packet one-way delay: 172.868 ms

Loss rate: 2.89%

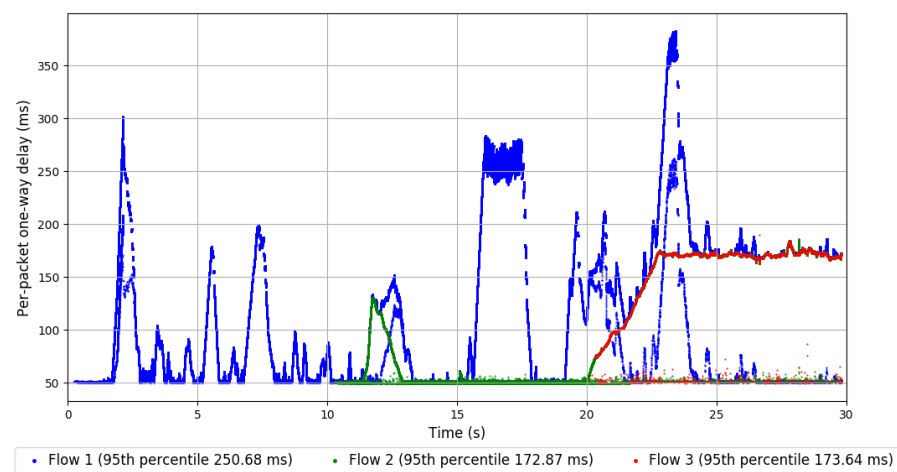
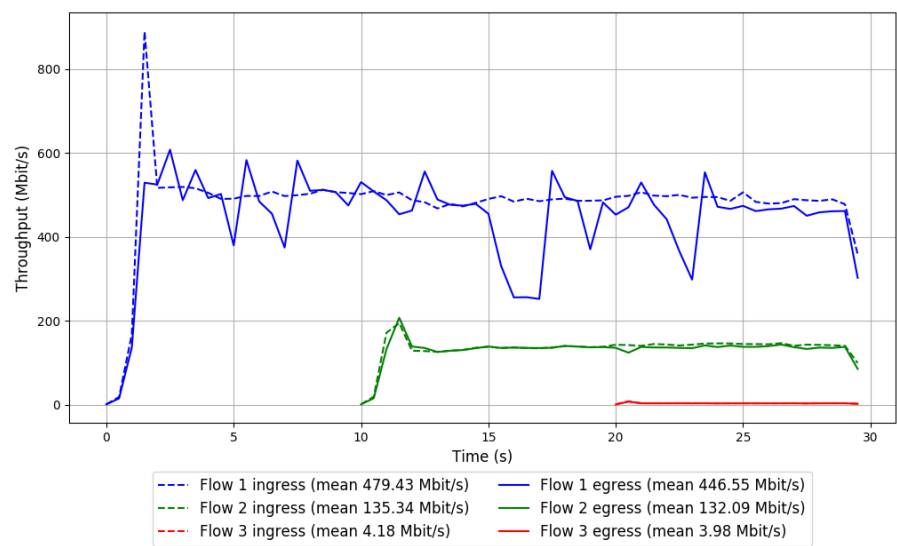
-- Flow 3:

Average throughput: 3.98 Mbit/s

95th percentile per-packet one-way delay: 173.644 ms

Loss rate: 6.00%

Run 9: Report of PCC — Data Link

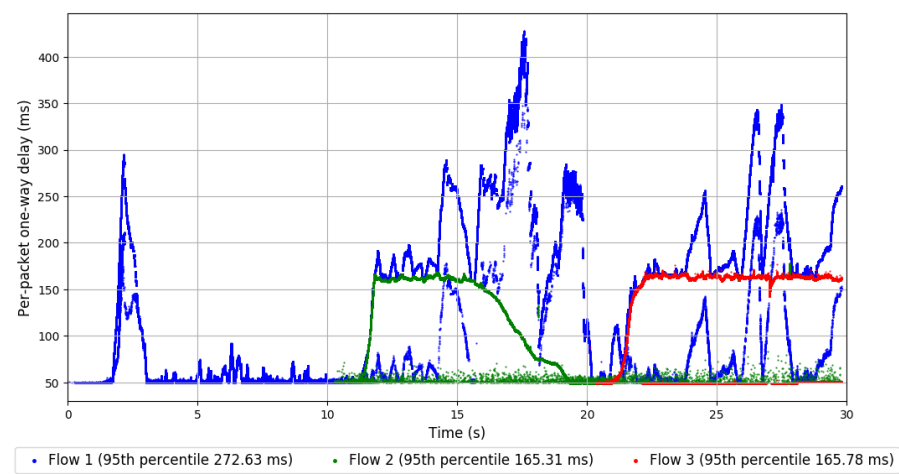
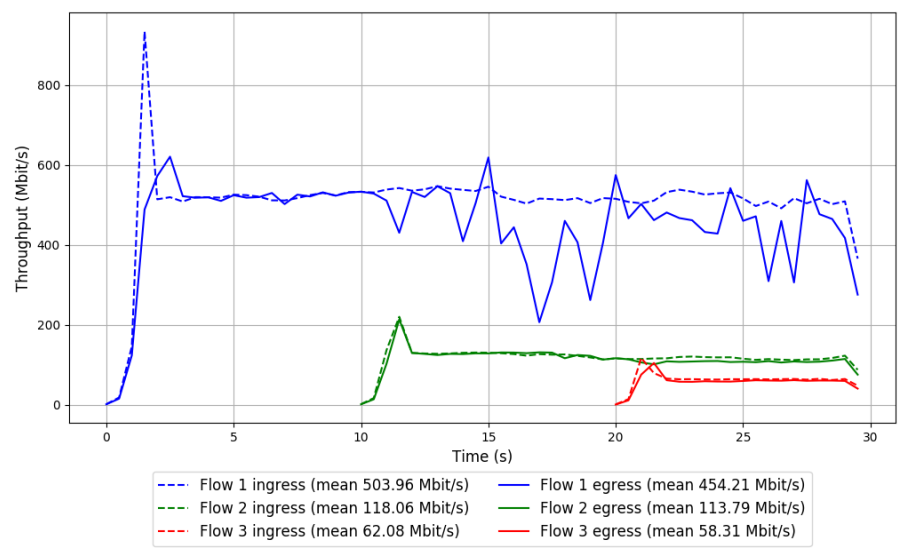


```
Run 10: Statistics of PCC

Start at: 2018-01-31 18:45:57
End at: 2018-01-31 18:46:27

# Below is generated by plot.py at 2018-01-31 22:28:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 548.65 Mbit/s
95th percentile per-packet one-way delay: 267.022 ms
Loss rate: 9.30%
-- Flow 1:
Average throughput: 454.21 Mbit/s
95th percentile per-packet one-way delay: 272.631 ms
Loss rate: 10.18%
-- Flow 2:
Average throughput: 113.79 Mbit/s
95th percentile per-packet one-way delay: 165.307 ms
Loss rate: 4.13%
-- Flow 3:
Average throughput: 58.31 Mbit/s
95th percentile per-packet one-way delay: 165.783 ms
Loss rate: 7.39%
```

Run 10: Report of PCC — Data Link

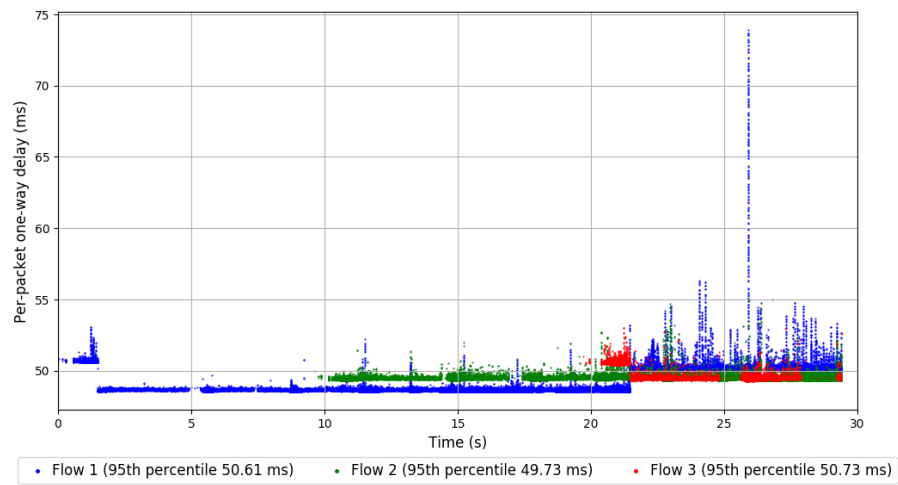
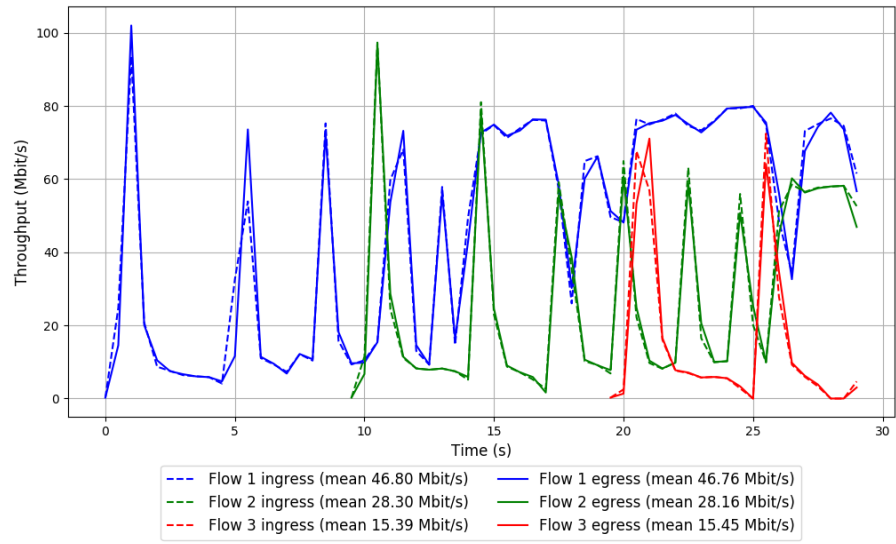


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-01-31 16:15:33
End at: 2018-01-31 16:16:03

# Below is generated by plot.py at 2018-01-31 22:28:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.80 Mbit/s
95th percentile per-packet one-way delay: 50.585 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 46.76 Mbit/s
95th percentile per-packet one-way delay: 50.614 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 28.16 Mbit/s
95th percentile per-packet one-way delay: 49.731 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 15.45 Mbit/s
95th percentile per-packet one-way delay: 50.730 ms
Loss rate: 0.54%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-01-31 16:32:06

End at: 2018-01-31 16:32:36

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 69.60 Mbit/s

95th percentile per-packet one-way delay: 50.506 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 41.67 Mbit/s

95th percentile per-packet one-way delay: 49.053 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 31.52 Mbit/s

95th percentile per-packet one-way delay: 50.506 ms

Loss rate: 0.28%

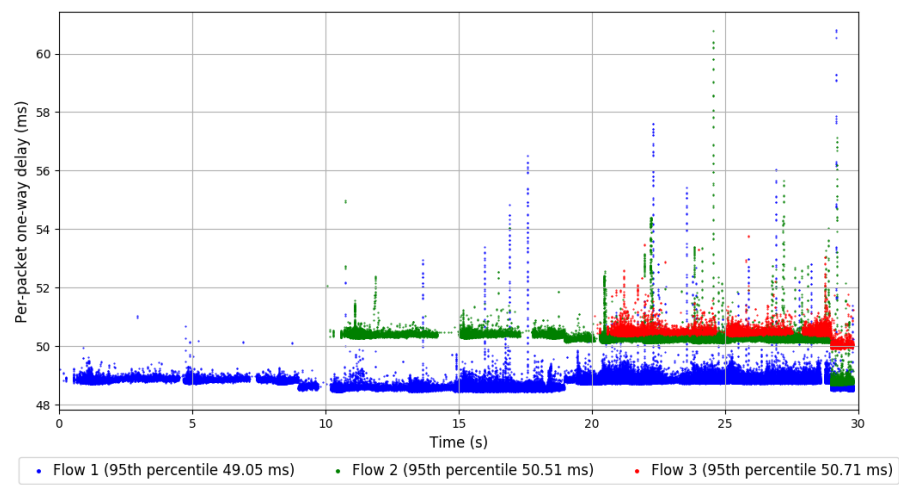
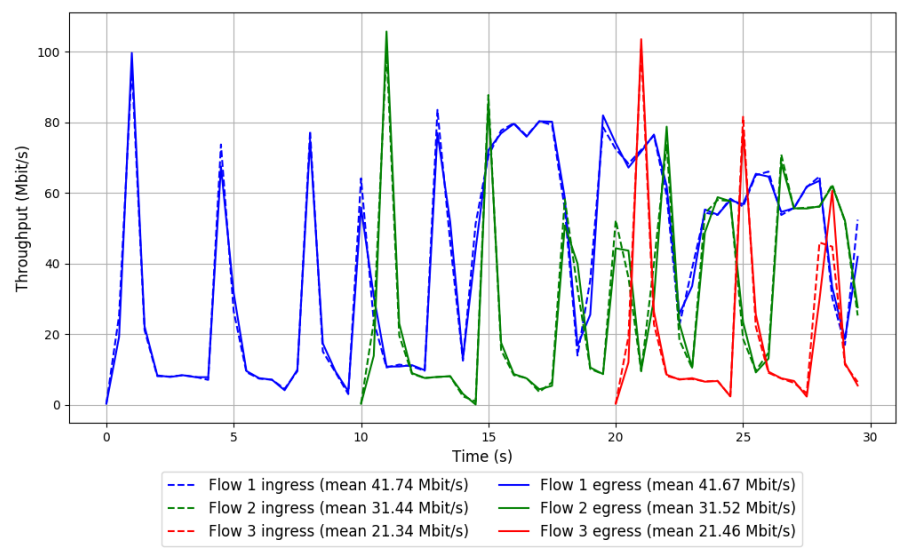
-- Flow 3:

Average throughput: 21.46 Mbit/s

95th percentile per-packet one-way delay: 50.706 ms

Loss rate: 0.47%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-01-31 16:48:45

End at: 2018-01-31 16:49:15

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.62 Mbit/s

95th percentile per-packet one-way delay: 50.505 ms

Loss rate: 0.38%

-- Flow 1:

Average throughput: 40.63 Mbit/s

95th percentile per-packet one-way delay: 50.531 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 31.41 Mbit/s

95th percentile per-packet one-way delay: 49.567 ms

Loss rate: 0.21%

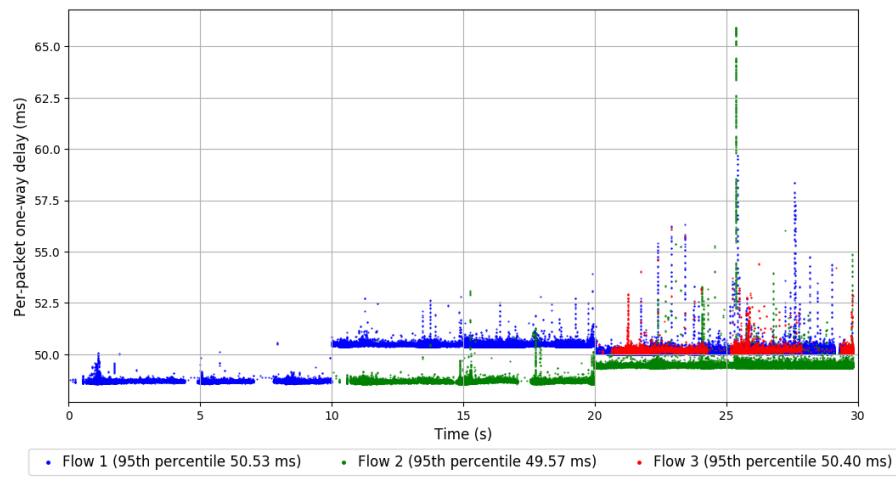
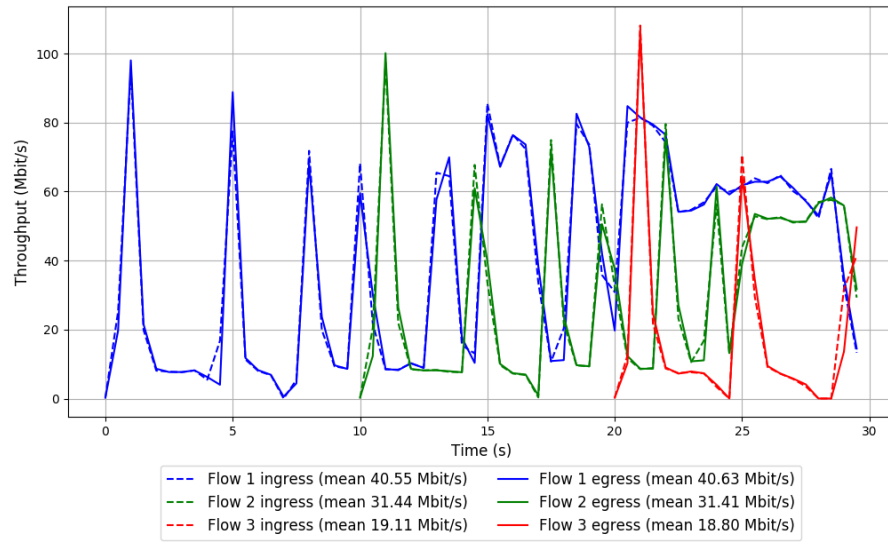
-- Flow 3:

Average throughput: 18.80 Mbit/s

95th percentile per-packet one-way delay: 50.401 ms

Loss rate: 2.63%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-01-31 17:05:31

End at: 2018-01-31 17:06:01

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 66.72 Mbit/s

95th percentile per-packet one-way delay: 50.418 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 43.17 Mbit/s

95th percentile per-packet one-way delay: 50.435 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 27.88 Mbit/s

95th percentile per-packet one-way delay: 49.596 ms

Loss rate: 0.22%

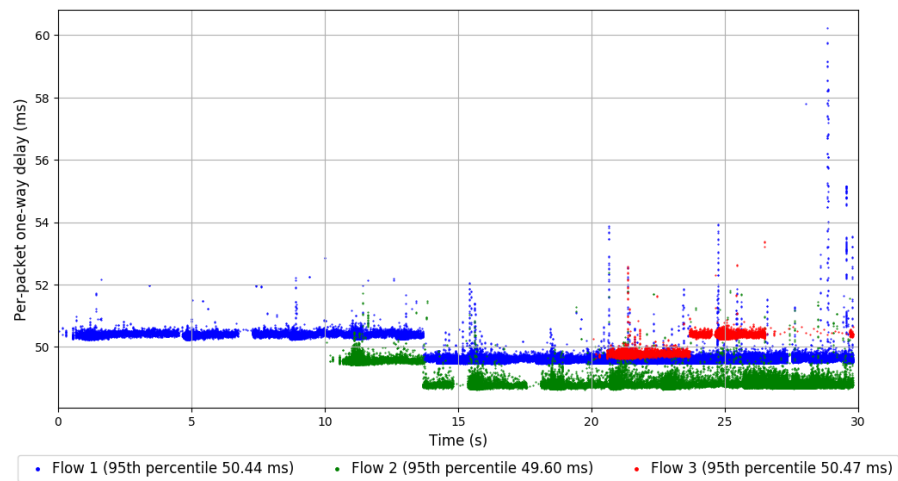
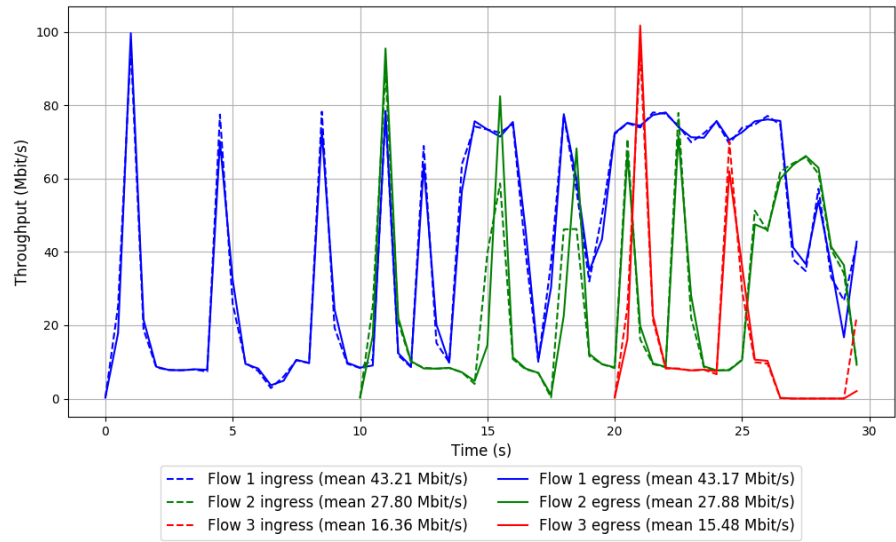
-- Flow 3:

Average throughput: 15.48 Mbit/s

95th percentile per-packet one-way delay: 50.468 ms

Loss rate: 6.29%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-01-31 17:22:40

End at: 2018-01-31 17:23:10

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.40 Mbit/s

95th percentile per-packet one-way delay: 50.722 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 37.91 Mbit/s

95th percentile per-packet one-way delay: 50.748 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 30.88 Mbit/s

95th percentile per-packet one-way delay: 50.480 ms

Loss rate: 0.81%

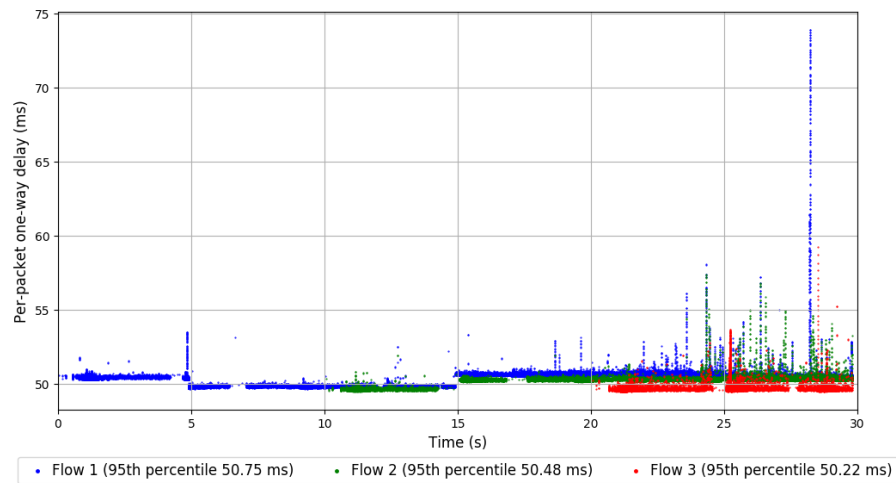
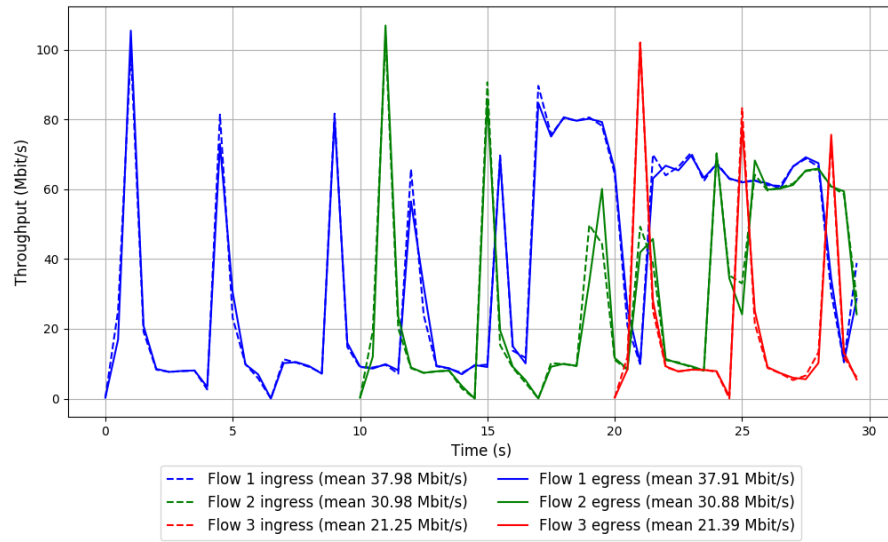
-- Flow 3:

Average throughput: 21.39 Mbit/s

95th percentile per-packet one-way delay: 50.220 ms

Loss rate: 0.38%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-01-31 17:39:46

End at: 2018-01-31 17:40:16

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.96 Mbit/s

95th percentile per-packet one-way delay: 50.866 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 40.32 Mbit/s

95th percentile per-packet one-way delay: 50.731 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 31.22 Mbit/s

95th percentile per-packet one-way delay: 50.969 ms

Loss rate: 0.90%

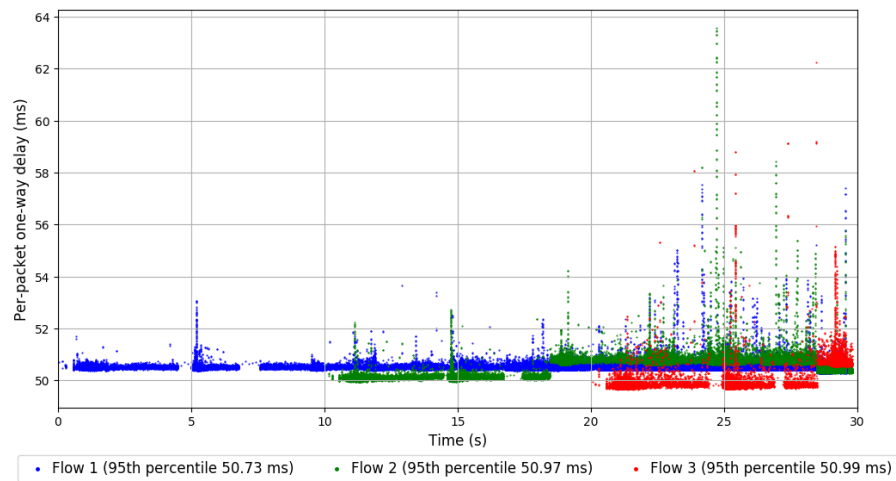
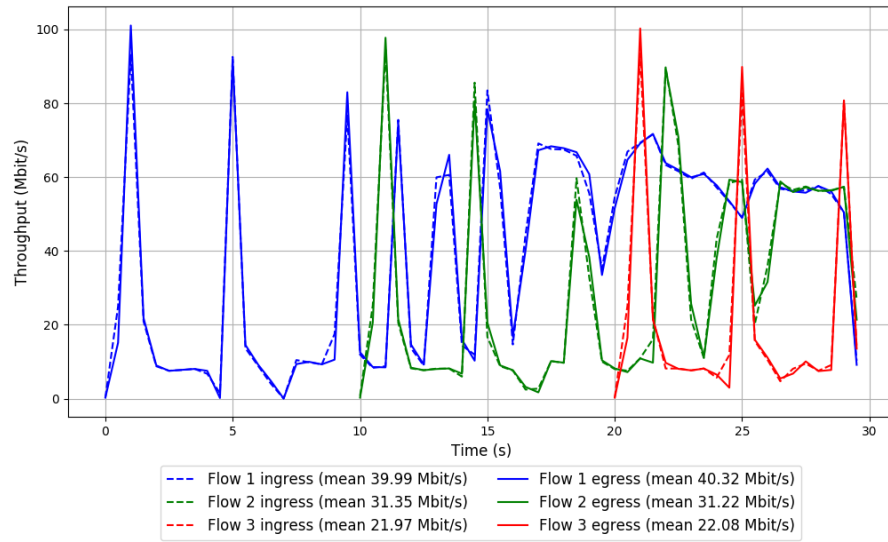
-- Flow 3:

Average throughput: 22.08 Mbit/s

95th percentile per-packet one-way delay: 50.988 ms

Loss rate: 0.54%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-01-31 17:56:54

End at: 2018-01-31 17:57:24

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.62 Mbit/s

95th percentile per-packet one-way delay: 51.111 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 39.79 Mbit/s

95th percentile per-packet one-way delay: 50.967 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 55.46 Mbit/s

95th percentile per-packet one-way delay: 51.112 ms

Loss rate: 0.47%

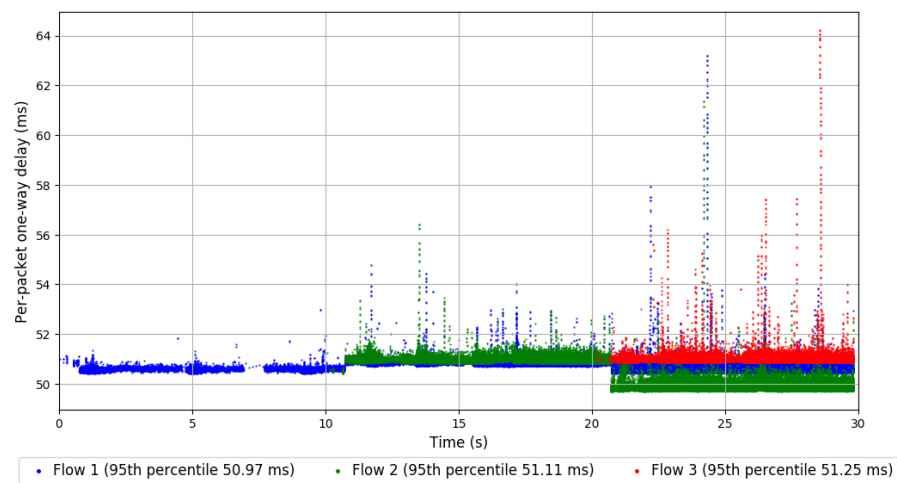
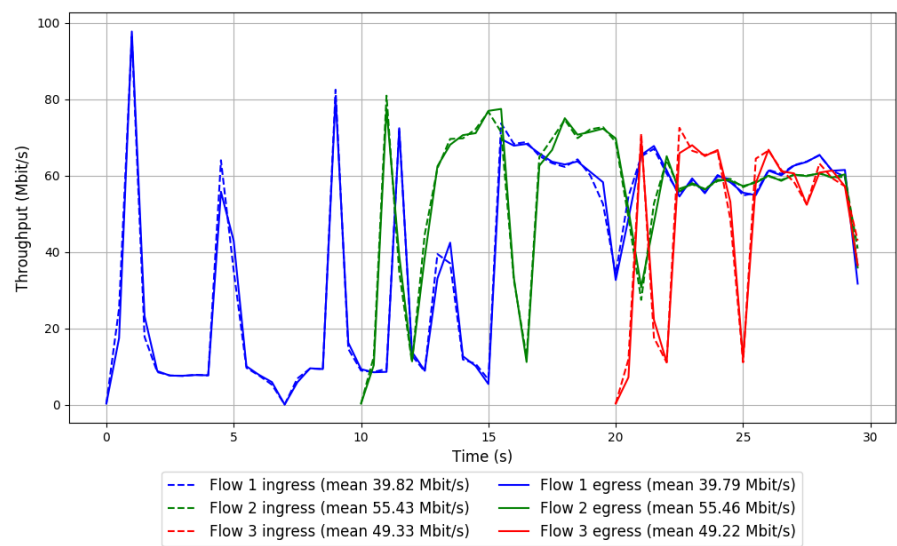
-- Flow 3:

Average throughput: 49.22 Mbit/s

95th percentile per-packet one-way delay: 51.248 ms

Loss rate: 1.25%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-01-31 18:13:44

End at: 2018-01-31 18:14:14

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 115.77 Mbit/s

95th percentile per-packet one-way delay: 50.799 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 64.03 Mbit/s

95th percentile per-packet one-way delay: 50.776 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 53.83 Mbit/s

95th percentile per-packet one-way delay: 50.804 ms

Loss rate: 0.50%

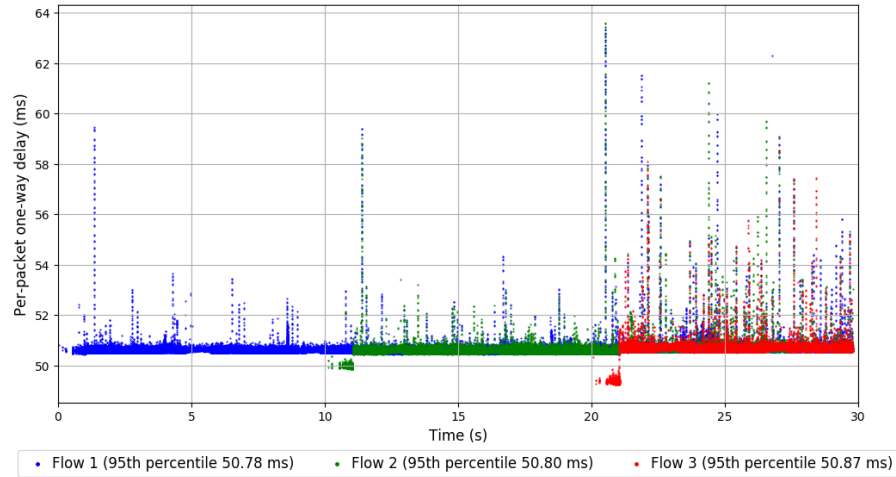
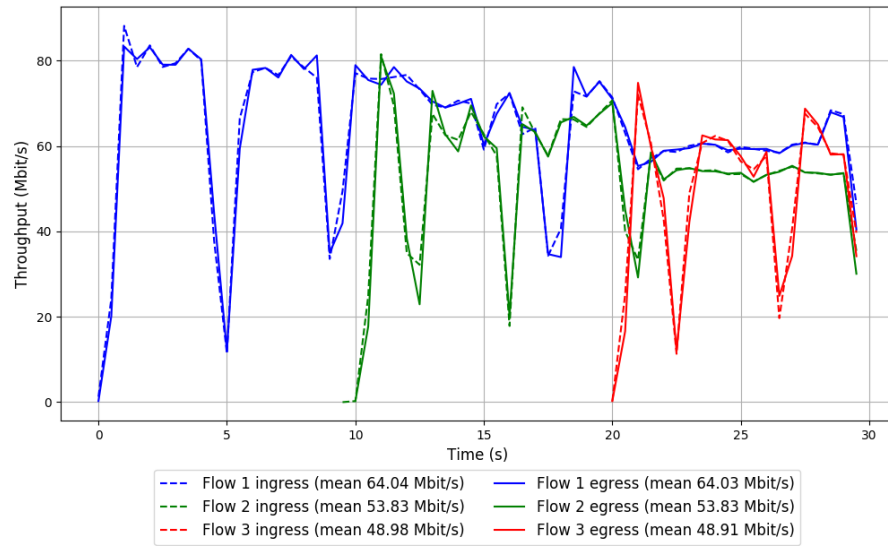
-- Flow 3:

Average throughput: 48.91 Mbit/s

95th percentile per-packet one-way delay: 50.866 ms

Loss rate: 1.17%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-01-31 18:30:49

End at: 2018-01-31 18:31:19

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 60.47 Mbit/s

95th percentile per-packet one-way delay: 50.996 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 36.22 Mbit/s

95th percentile per-packet one-way delay: 50.919 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 26.34 Mbit/s

95th percentile per-packet one-way delay: 51.041 ms

Loss rate: 1.31%

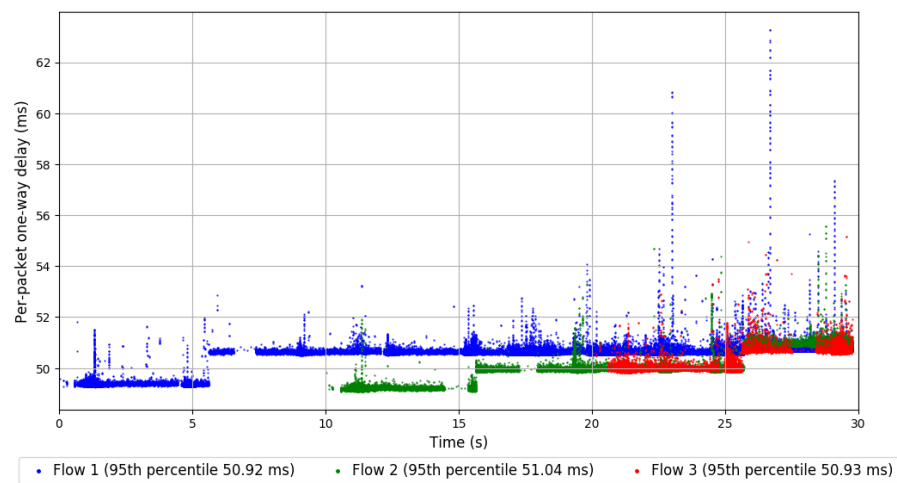
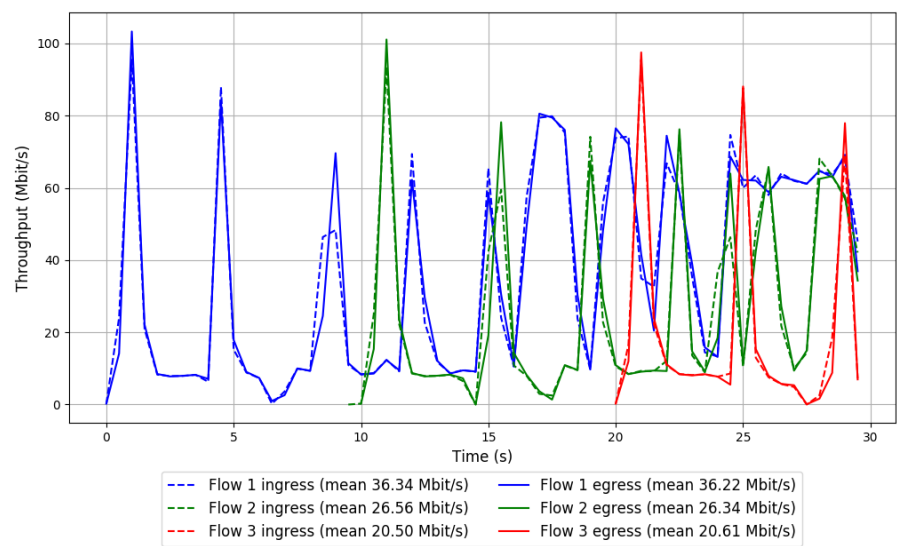
-- Flow 3:

Average throughput: 20.61 Mbit/s

95th percentile per-packet one-way delay: 50.930 ms

Loss rate: 0.49%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-01-31 18:47:44

End at: 2018-01-31 18:48:14

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.11 Mbit/s

95th percentile per-packet one-way delay: 50.820 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 44.87 Mbit/s

95th percentile per-packet one-way delay: 50.720 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 55.61 Mbit/s

95th percentile per-packet one-way delay: 50.975 ms

Loss rate: 0.49%

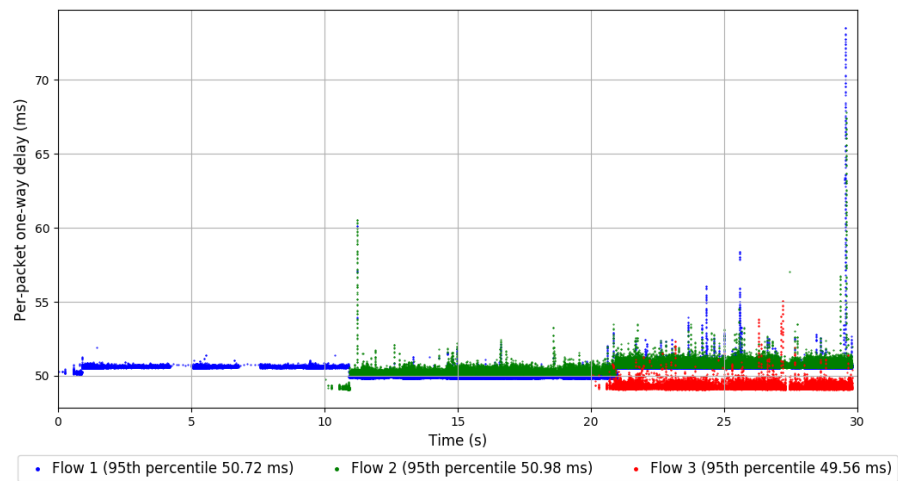
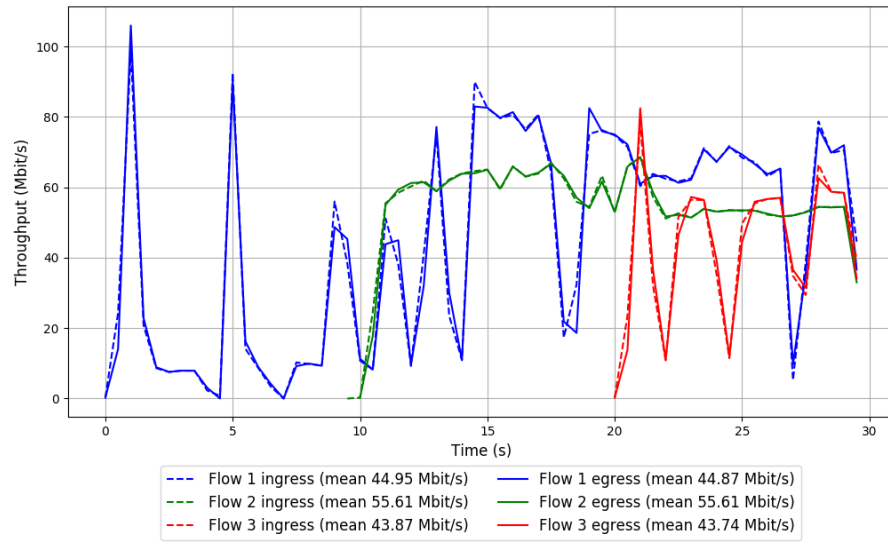
-- Flow 3:

Average throughput: 43.74 Mbit/s

95th percentile per-packet one-way delay: 49.557 ms

Loss rate: 1.28%

Run 10: Report of QUIC Cubic — Data Link

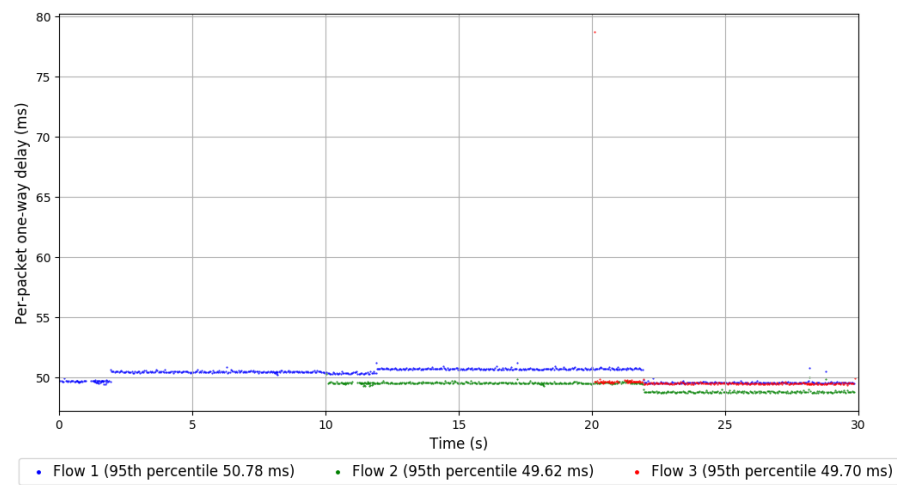
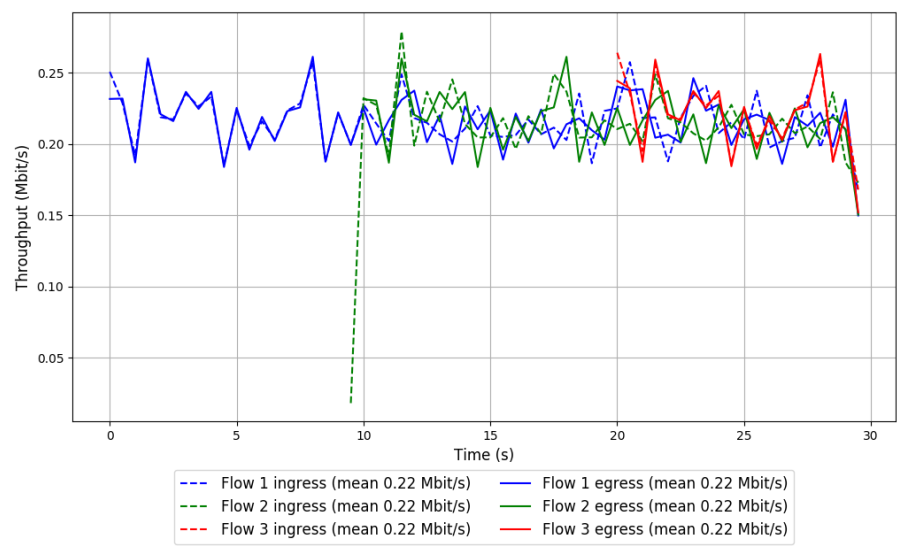


```
Run 1: Statistics of SCReAM

Start at: 2018-01-31 16:27:23
End at: 2018-01-31 16:27:53

# Below is generated by plot.py at 2018-01-31 22:28:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.729 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.778 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.618 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.697 ms
Loss rate: 0.73%
```

Run 1: Report of SCReAM — Data Link

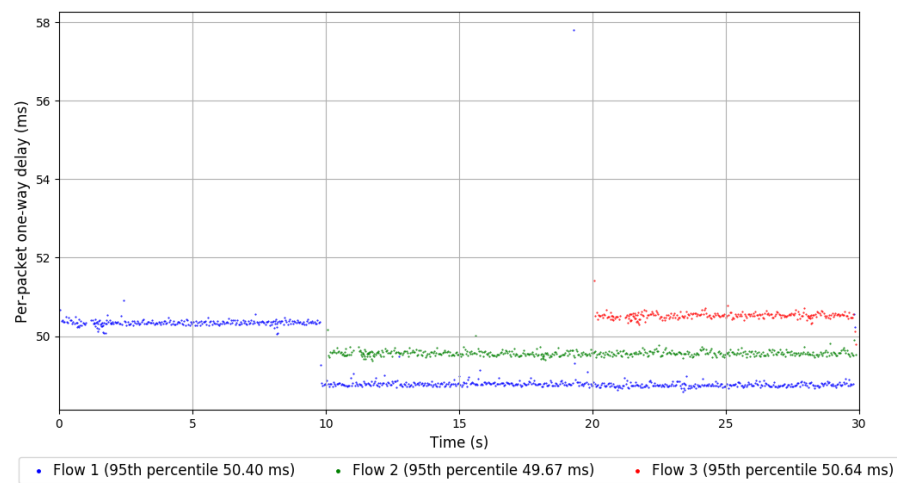
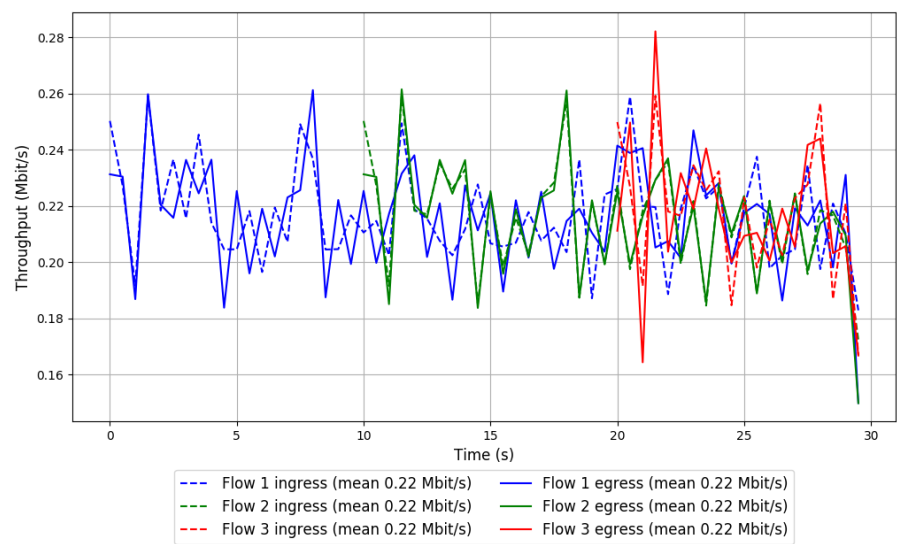


```
Run 2: Statistics of SCReAM

Start at: 2018-01-31 16:43:55
End at: 2018-01-31 16:44:25

# Below is generated by plot.py at 2018-01-31 22:28:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.558 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.399 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.672 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.636 ms
Loss rate: 0.74%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-01-31 17:00:33

End at: 2018-01-31 17:01:03

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 50.715 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.741 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.113 ms

Loss rate: 0.42%

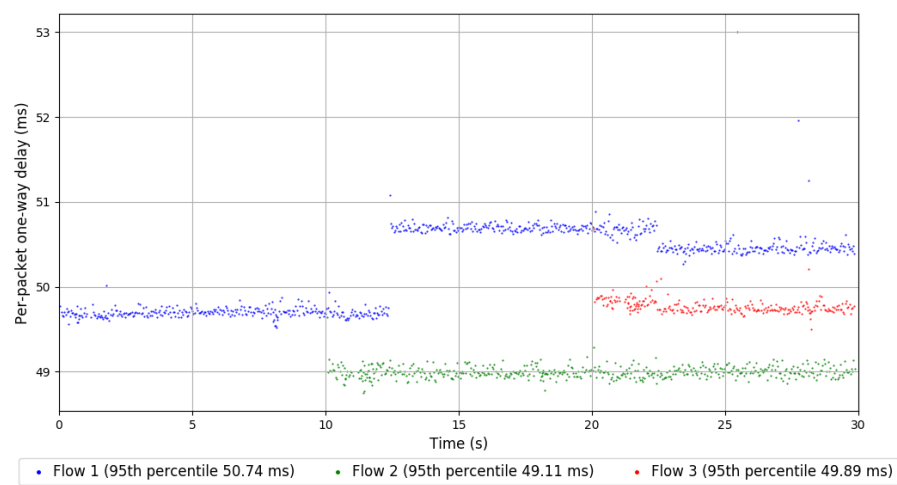
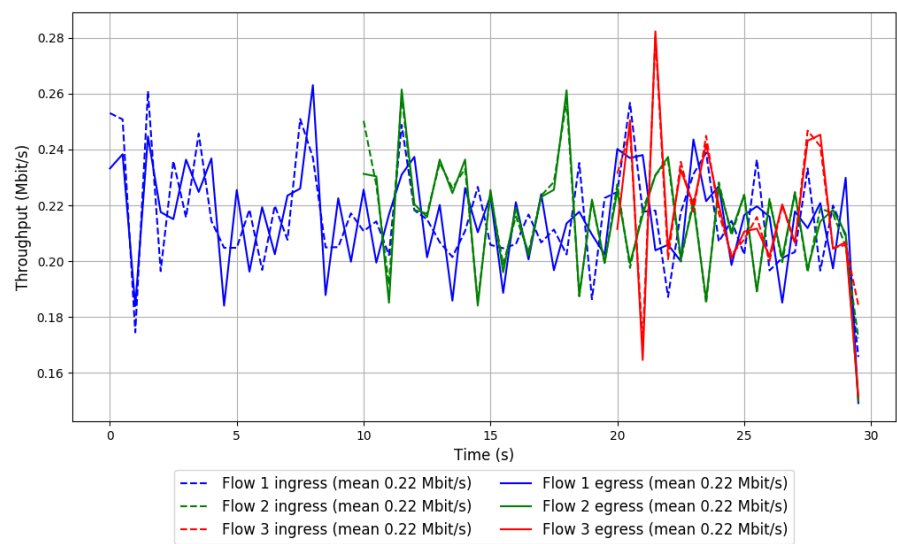
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.889 ms

Loss rate: 1.11%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-01-31 17:17:49

End at: 2018-01-31 17:18:19

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 51.027 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 51.085 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.056 ms

Loss rate: 0.61%

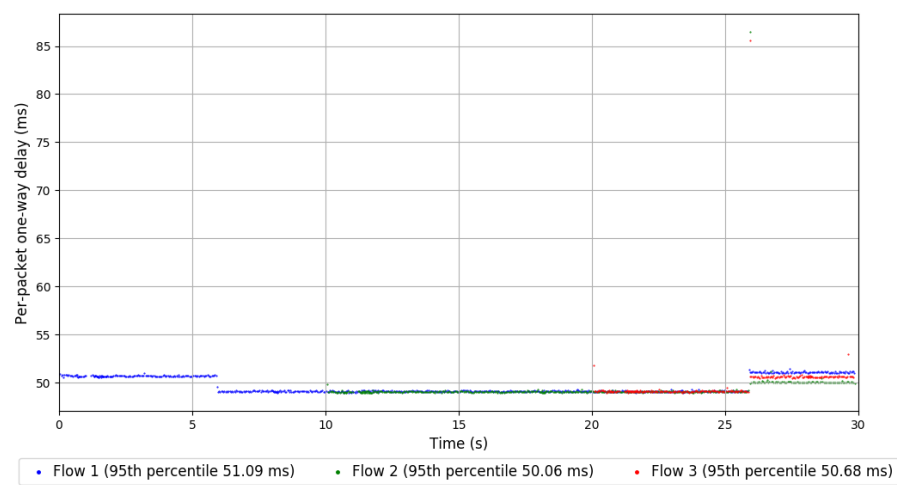
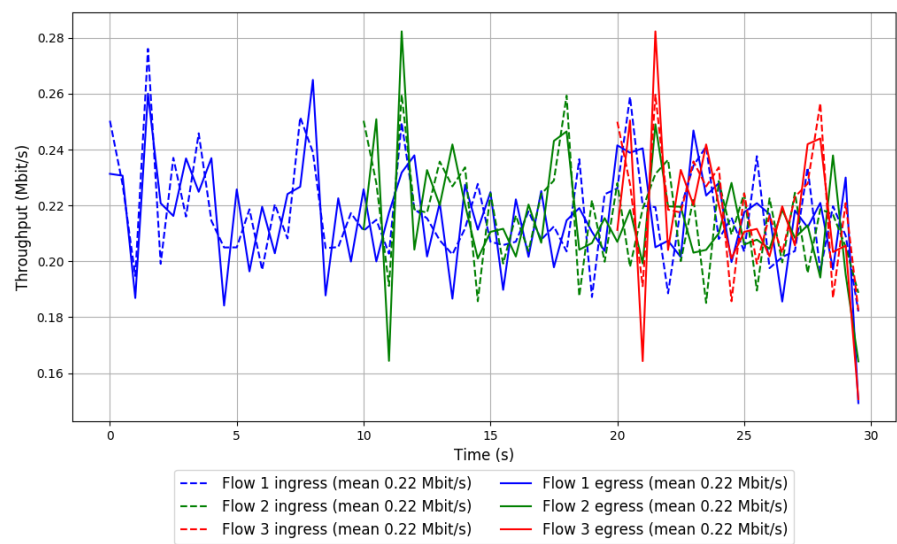
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.676 ms

Loss rate: 1.45%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2018-01-31 17:34:53

End at: 2018-01-31 17:35:23

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 51.107 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.833 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.632 ms

Loss rate: 0.42%

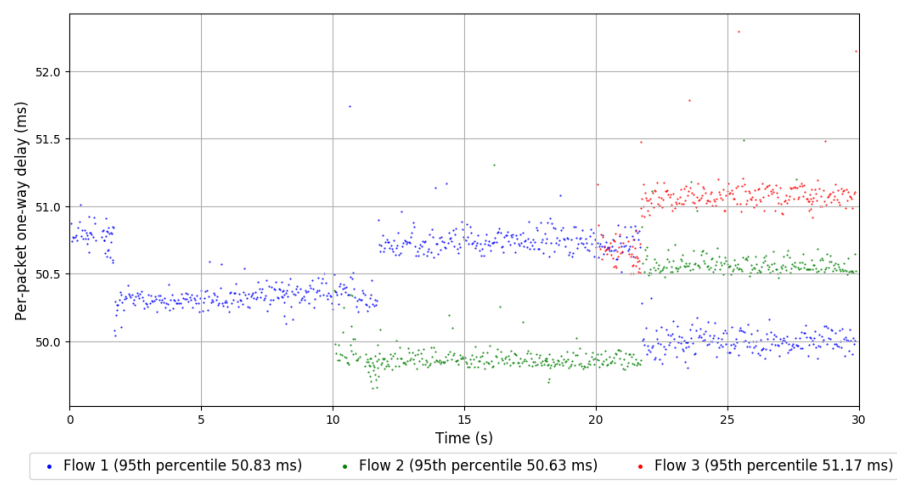
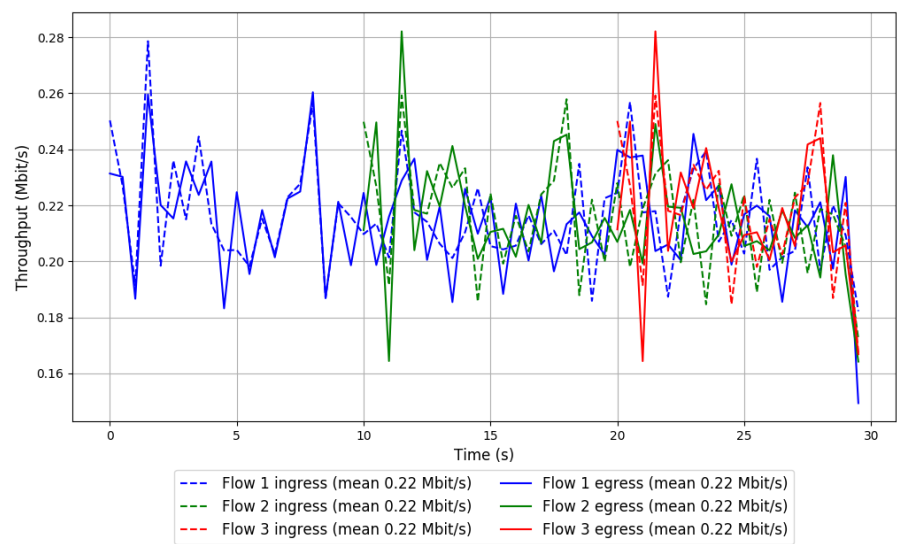
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 51.167 ms

Loss rate: 0.74%

Run 5: Report of SReAM — Data Link

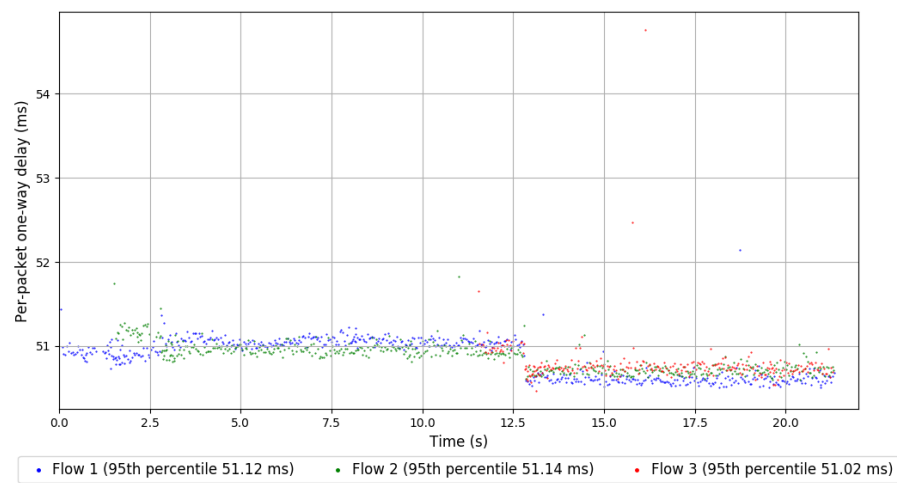
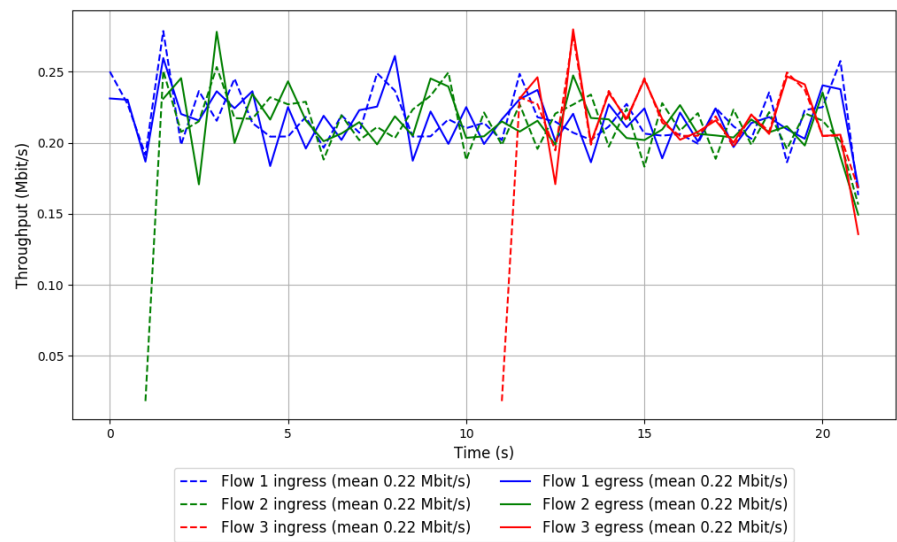


Run 6: Statistics of SReAM

Start at: 2018-01-31 17:52:04

End at: 2018-01-31 17:52:34

Run 6: Report of SReAM — Data Link

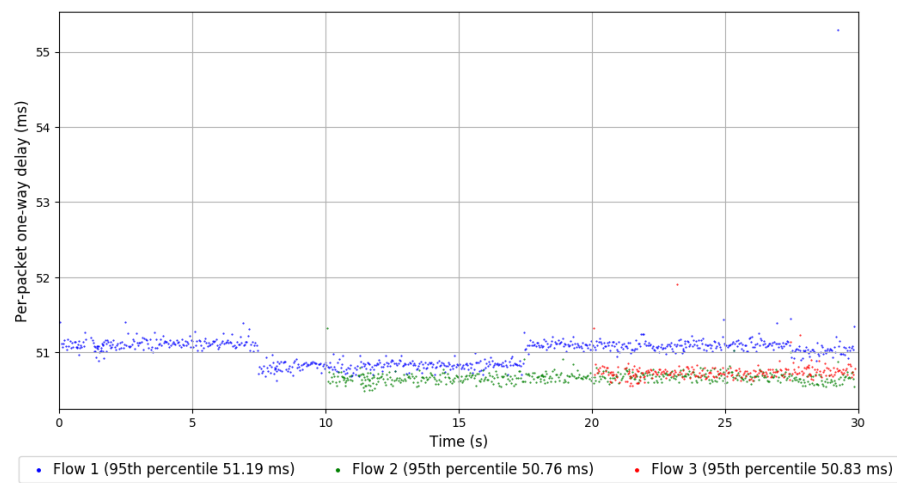
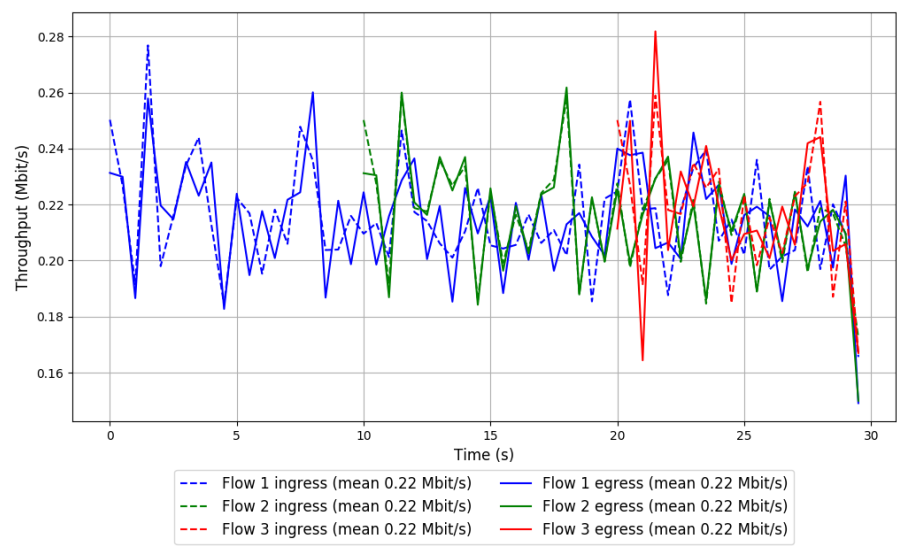


```
Run 7: Statistics of SReAM

Start at: 2018-01-31 18:08:38
End at: 2018-01-31 18:09:08

# Below is generated by plot.py at 2018-01-31 22:28:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.156 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.190 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.762 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.833 ms
Loss rate: 0.74%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2018-01-31 18:26:04

End at: 2018-01-31 18:26:34

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 50.904 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.924 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 49.505 ms

Loss rate: 0.42%

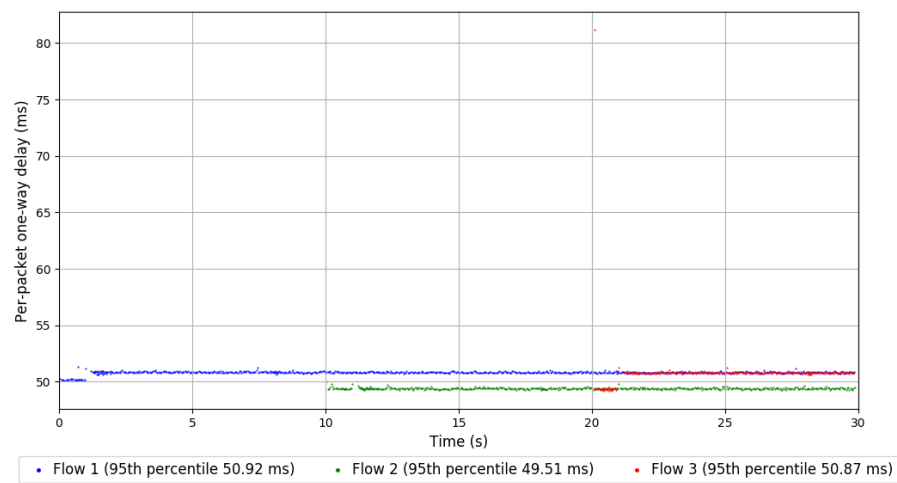
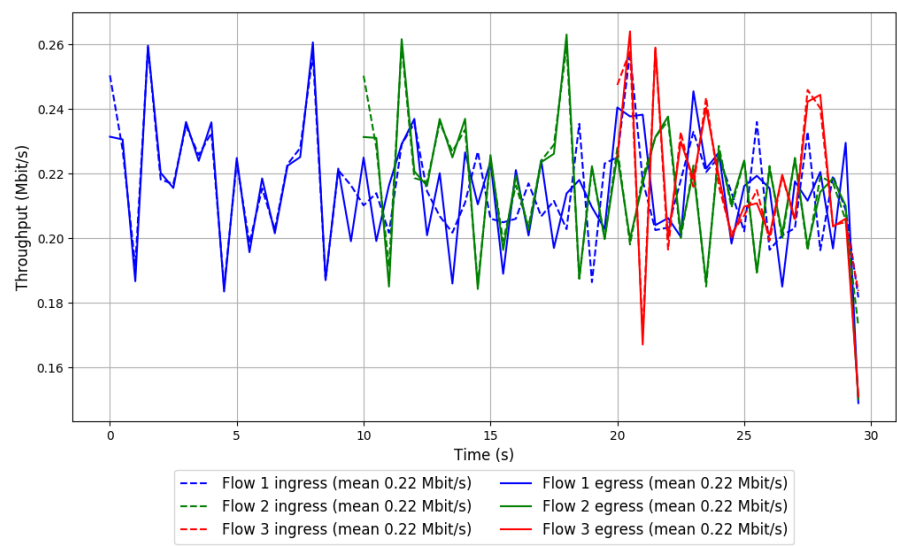
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.867 ms

Loss rate: 1.11%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-01-31 18:42:54

End at: 2018-01-31 18:43:24

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 51.418 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.488 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 51.468 ms

Loss rate: 0.42%

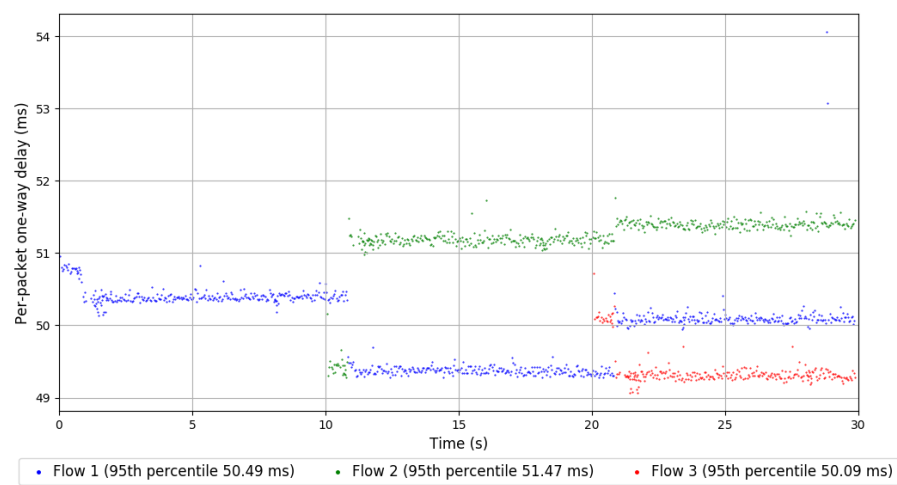
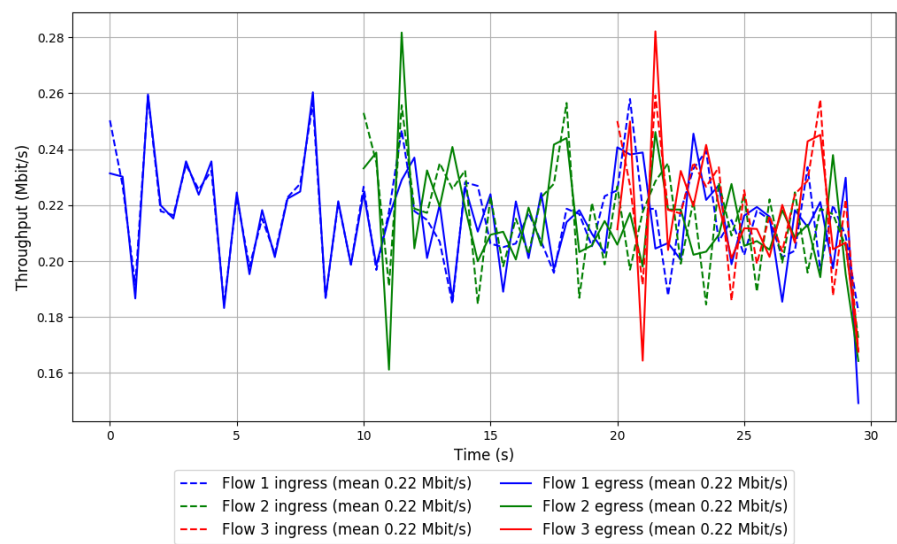
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 50.092 ms

Loss rate: 0.74%

Run 9: Report of SReAM — Data Link

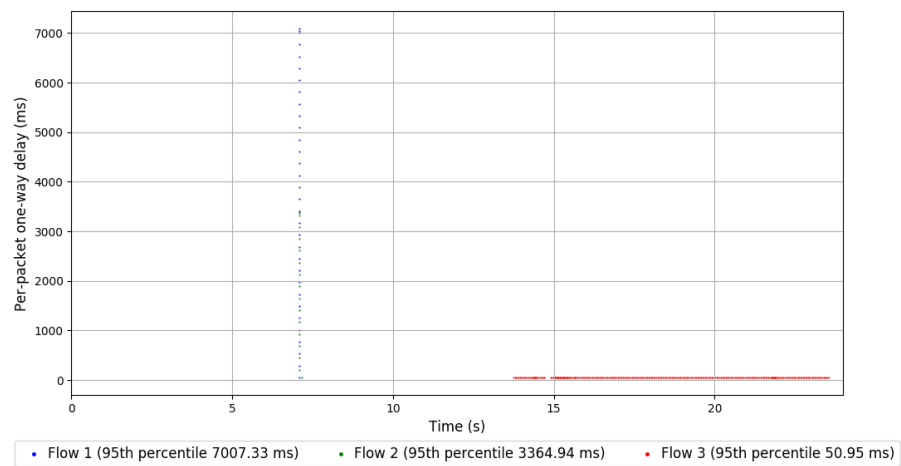
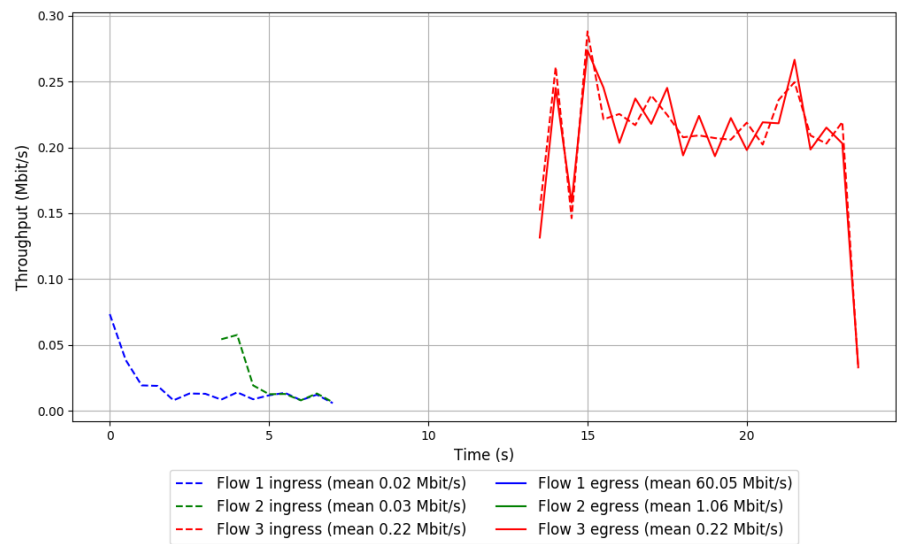


Run 10: Statistics of SCReAM

Start at: 2018-01-31 18:59:59

End at: 2018-01-31 19:00:29

Run 10: Report of SReAM — Data Link

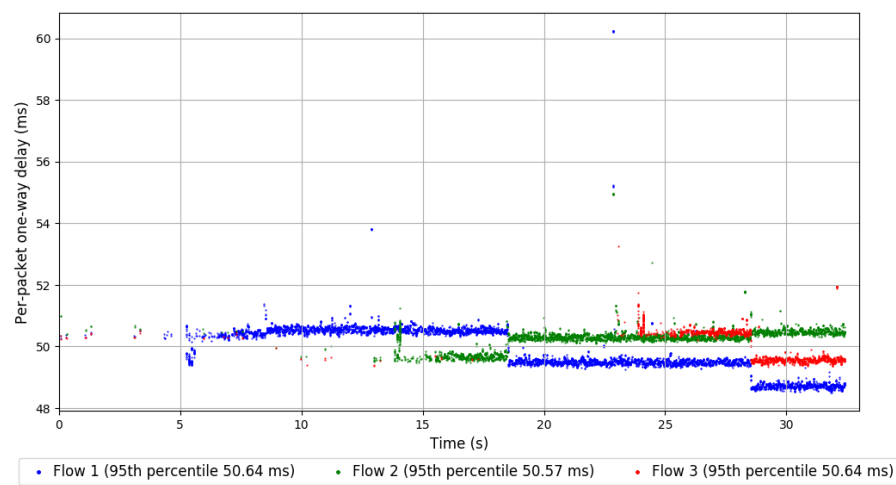
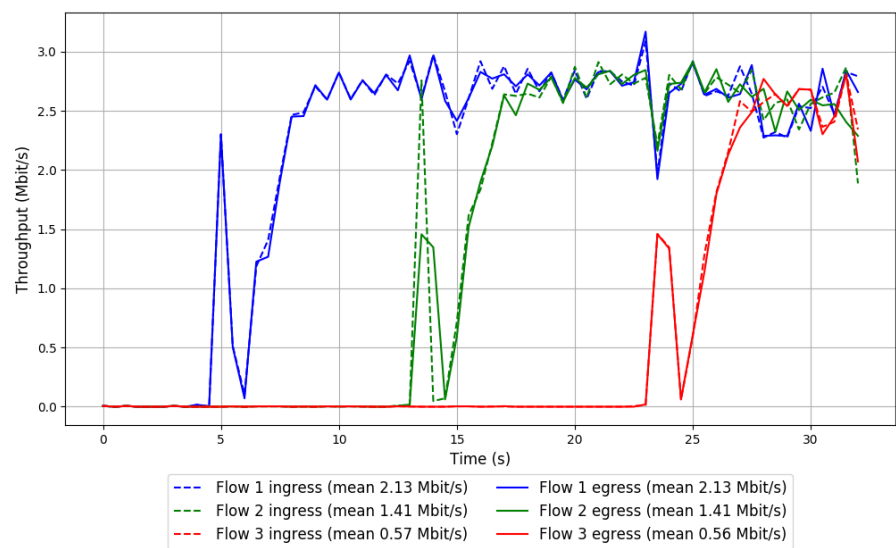


```
Run 1: Statistics of WebRTC media

Start at: 2018-01-31 16:22:19
End at: 2018-01-31 16:22:49

# Below is generated by plot.py at 2018-01-31 22:28:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 50.630 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 50.643 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 50.573 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 50.641 ms
Loss rate: 1.36%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-01-31 16:38:43

End at: 2018-01-31 16:39:13

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.19 Mbit/s

95th percentile per-packet one-way delay: 50.745 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 2.24 Mbit/s

95th percentile per-packet one-way delay: 50.789 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 49.763 ms

Loss rate: 0.50%

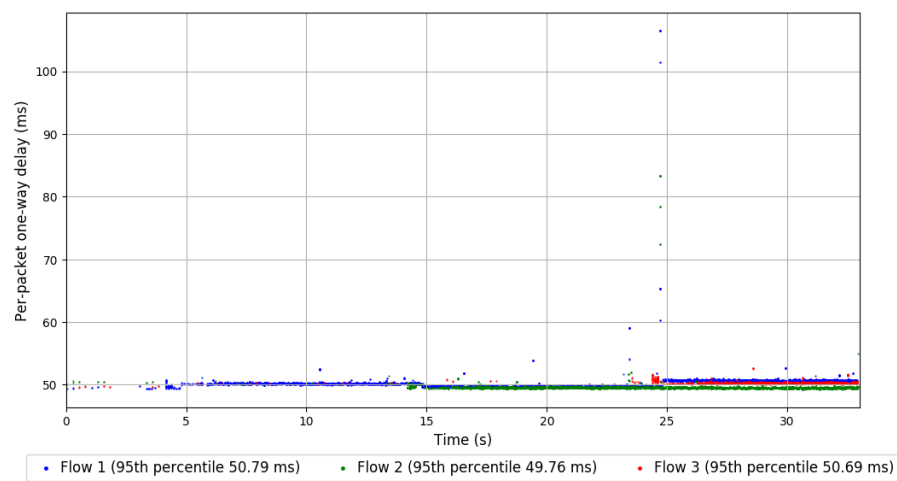
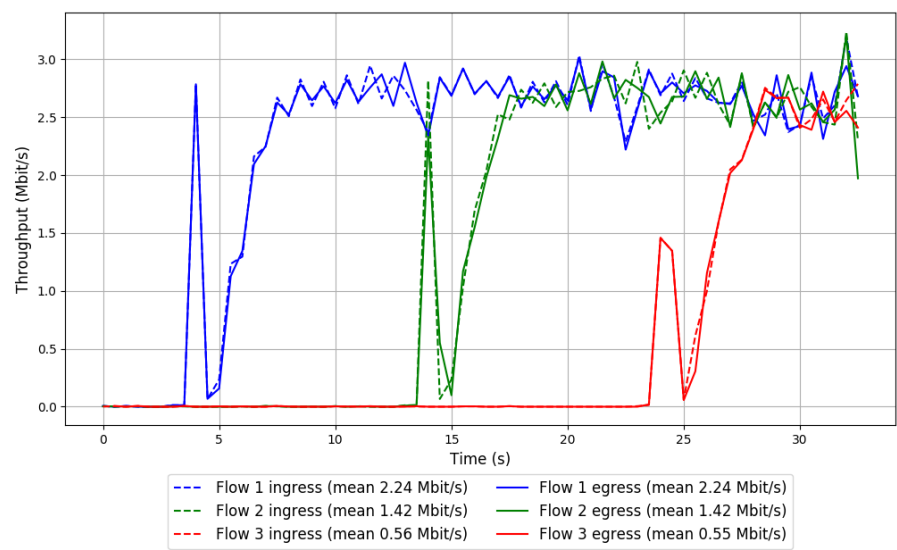
-- Flow 3:

Average throughput: 0.55 Mbit/s

95th percentile per-packet one-way delay: 50.693 ms

Loss rate: 1.92%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-01-31 16:55:19

End at: 2018-01-31 16:55:49

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.18 Mbit/s

95th percentile per-packet one-way delay: 50.992 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 50.998 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 50.011 ms

Loss rate: 0.68%

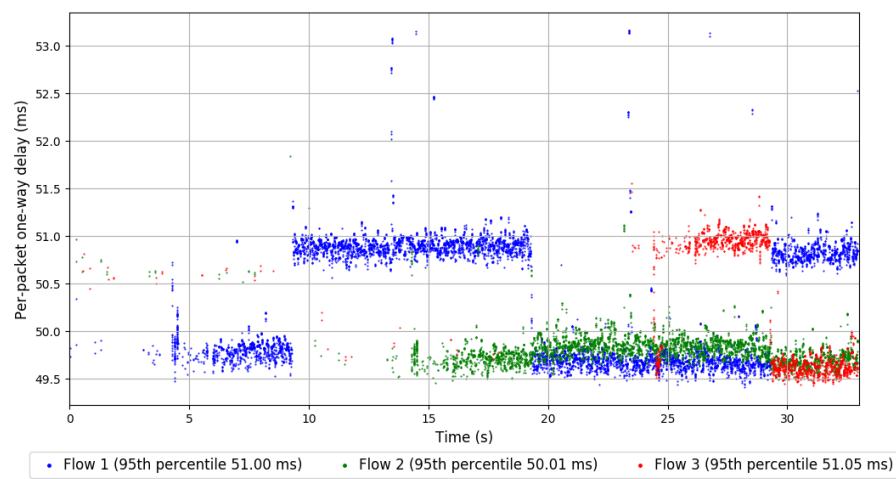
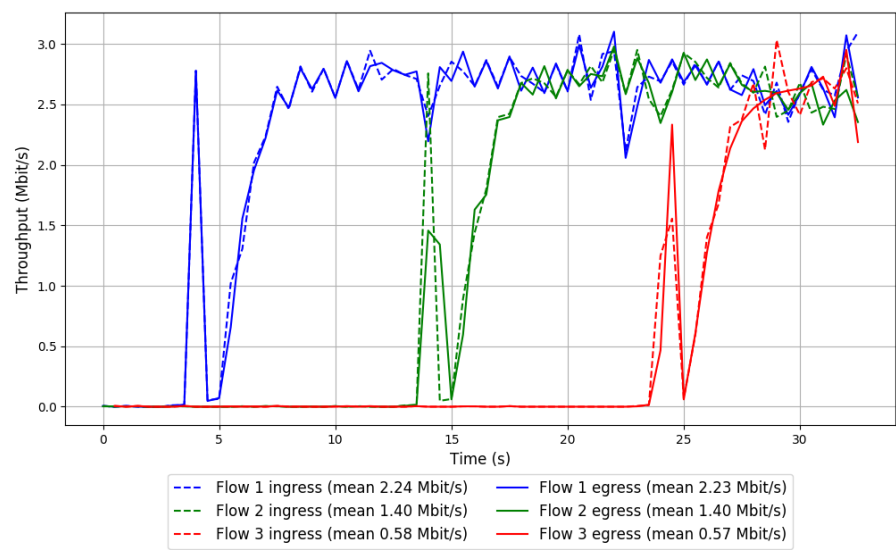
-- Flow 3:

Average throughput: 0.57 Mbit/s

95th percentile per-packet one-way delay: 51.055 ms

Loss rate: 1.43%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-01-31 17:12:18

End at: 2018-01-31 17:12:48

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.13 Mbit/s

95th percentile per-packet one-way delay: 50.778 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 2.21 Mbit/s

95th percentile per-packet one-way delay: 50.577 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 50.852 ms

Loss rate: 0.91%

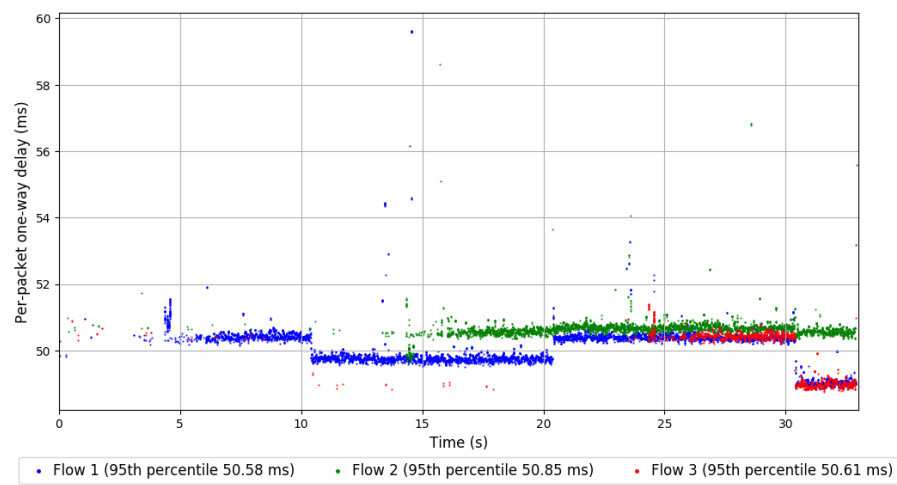
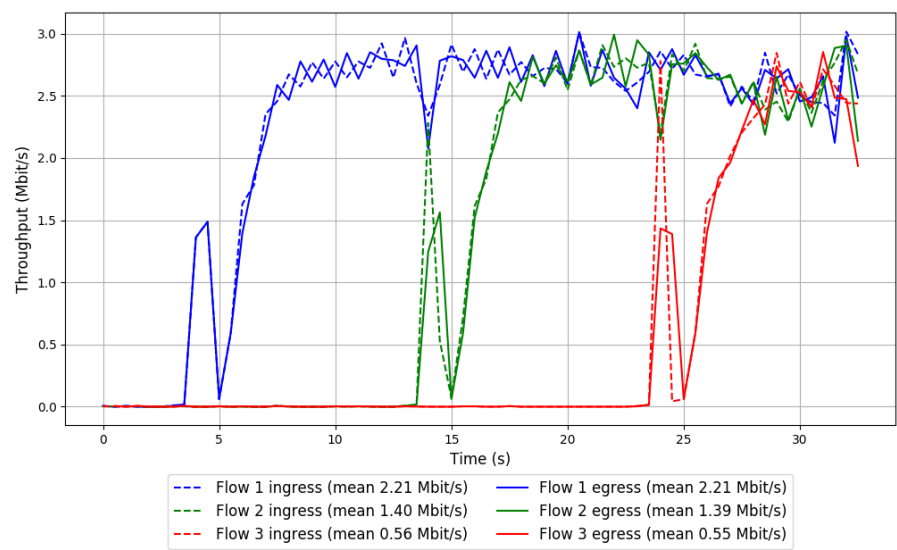
-- Flow 3:

Average throughput: 0.55 Mbit/s

95th percentile per-packet one-way delay: 50.609 ms

Loss rate: 1.98%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-01-31 17:29:18

End at: 2018-01-31 17:29:48

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.15 Mbit/s

95th percentile per-packet one-way delay: 50.917 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 50.479 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 50.772 ms

Loss rate: 0.73%

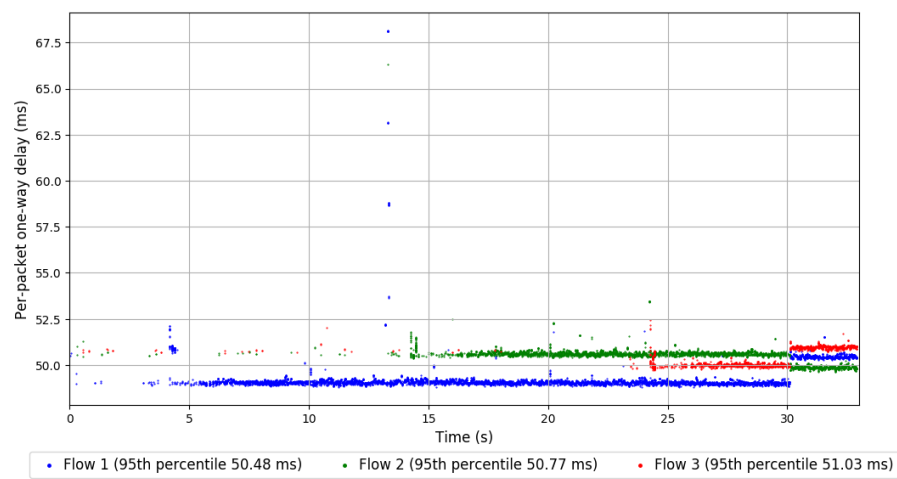
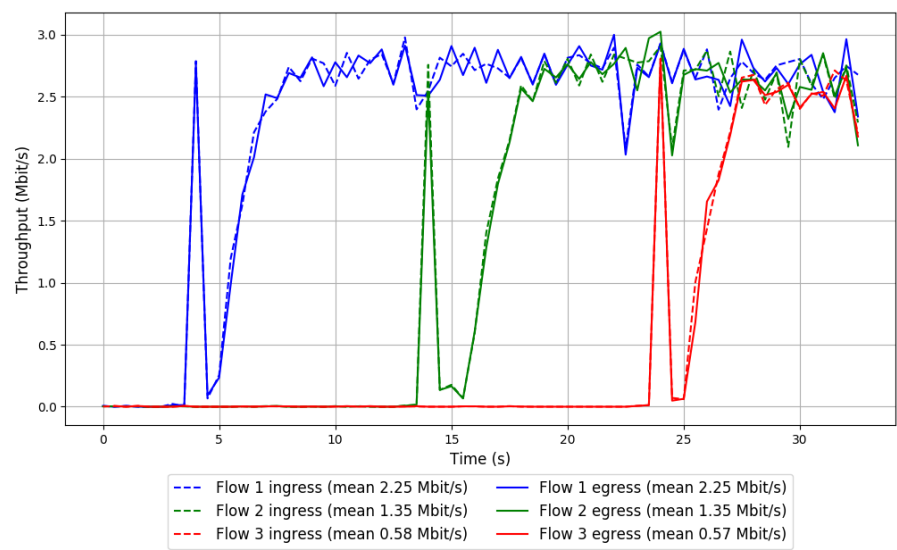
-- Flow 3:

Average throughput: 0.57 Mbit/s

95th percentile per-packet one-way delay: 51.030 ms

Loss rate: 1.29%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-01-31 17:46:43

End at: 2018-01-31 17:47:13

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.54 Mbit/s

95th percentile per-packet one-way delay: 51.240 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 1.85 Mbit/s

95th percentile per-packet one-way delay: 51.188 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 1.37 Mbit/s

95th percentile per-packet one-way delay: 51.298 ms

Loss rate: 0.68%

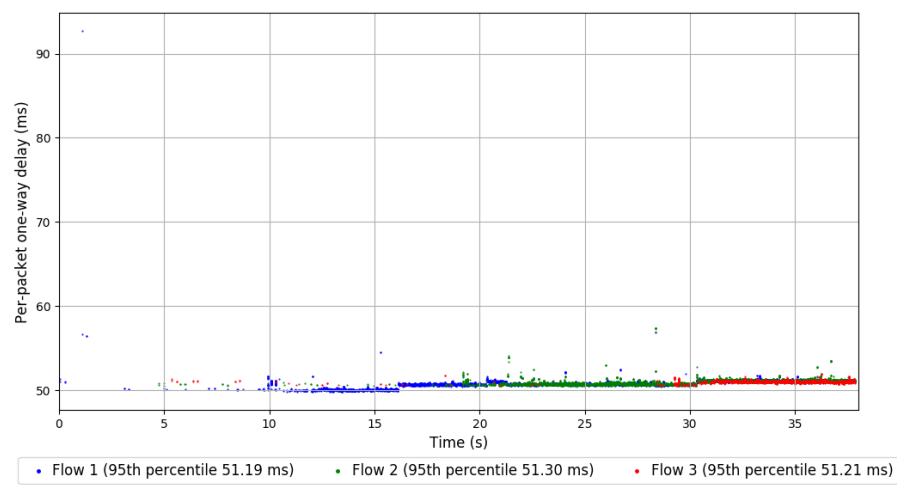
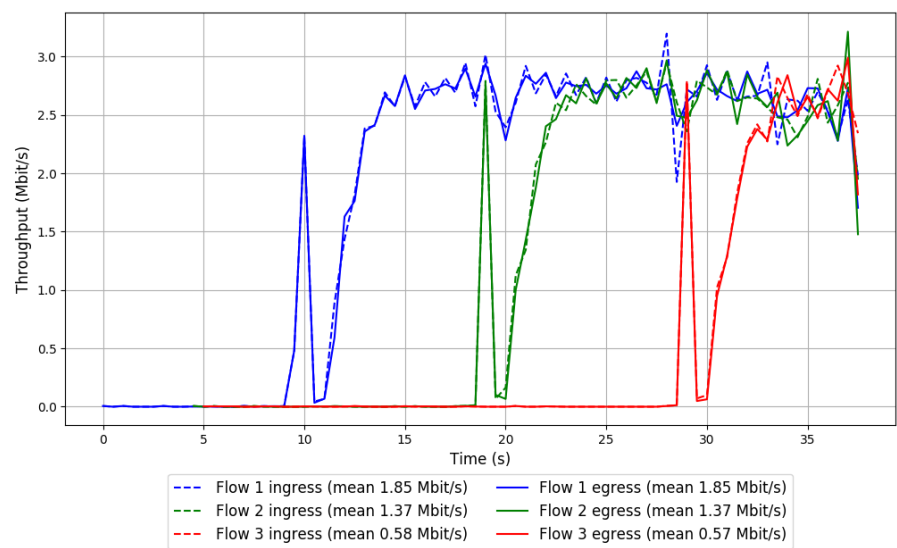
-- Flow 3:

Average throughput: 0.57 Mbit/s

95th percentile per-packet one-way delay: 51.211 ms

Loss rate: 1.97%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-01-31 18:03:28

End at: 2018-01-31 18:03:58

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.20 Mbit/s

95th percentile per-packet one-way delay: 51.104 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 51.047 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 51.096 ms

Loss rate: 0.47%

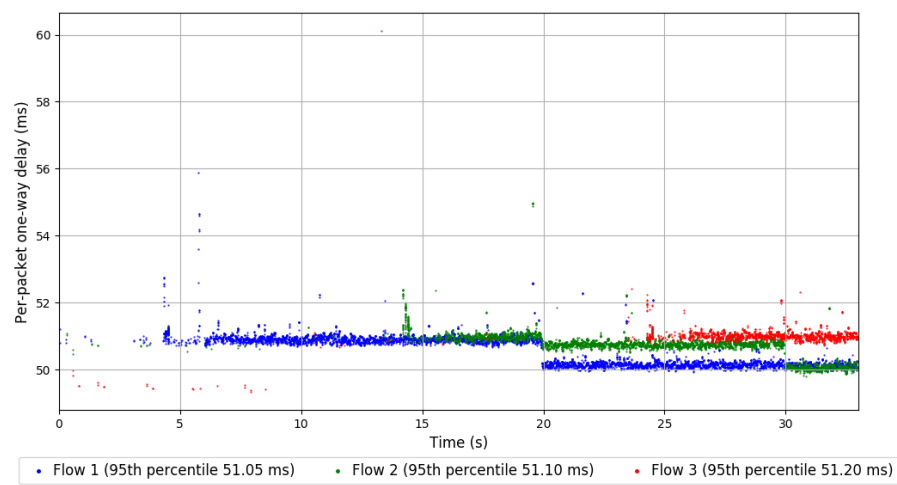
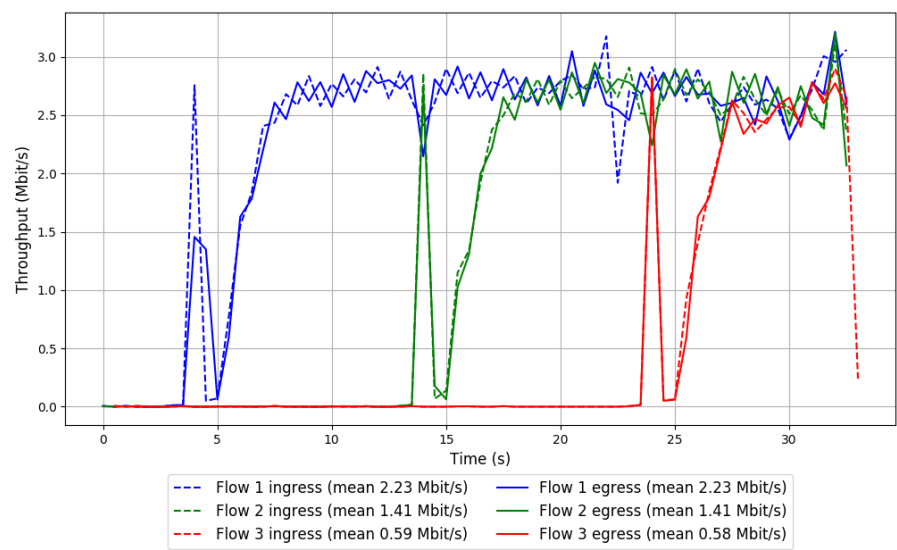
-- Flow 3:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 51.205 ms

Loss rate: 1.88%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-01-31 18:20:49

End at: 2018-01-31 18:21:19

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.15 Mbit/s

95th percentile per-packet one-way delay: 51.232 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 2.21 Mbit/s

95th percentile per-packet one-way delay: 51.246 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 51.187 ms

Loss rate: 0.47%

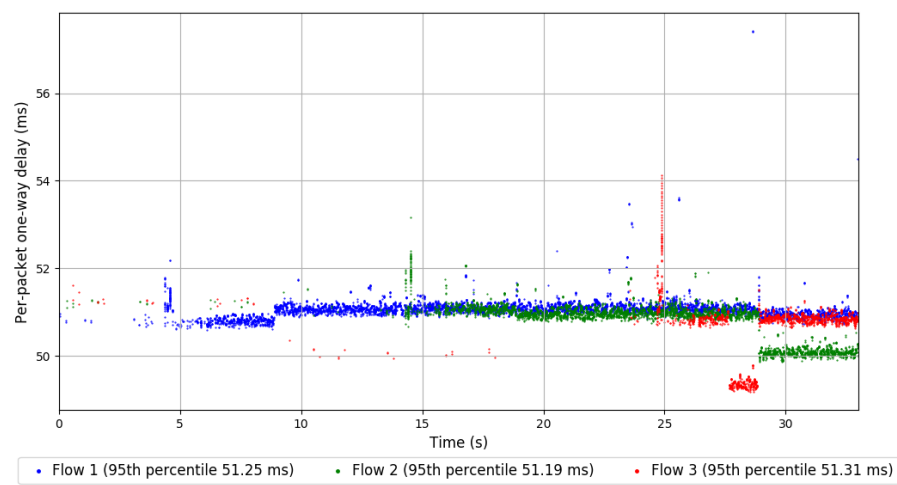
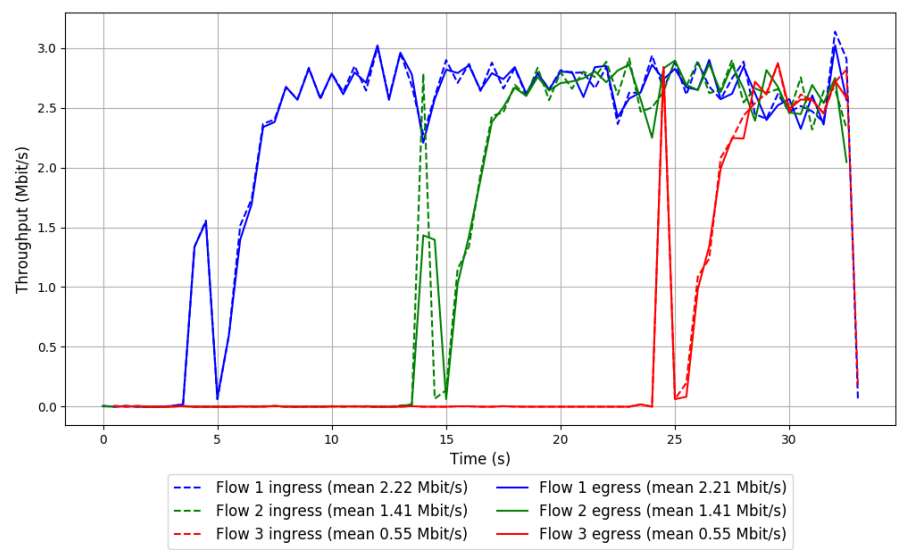
-- Flow 3:

Average throughput: 0.55 Mbit/s

95th percentile per-packet one-way delay: 51.315 ms

Loss rate: 1.72%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-01-31 18:37:20

End at: 2018-01-31 18:37:50

Below is generated by plot.py at 2018-01-31 22:28:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.18 Mbit/s

95th percentile per-packet one-way delay: 51.234 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 2.23 Mbit/s

95th percentile per-packet one-way delay: 51.222 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 51.261 ms

Loss rate: 0.49%

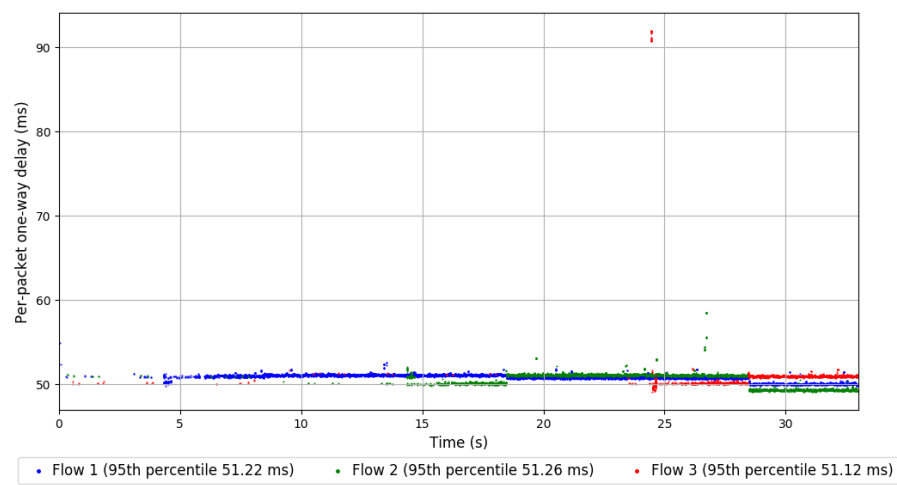
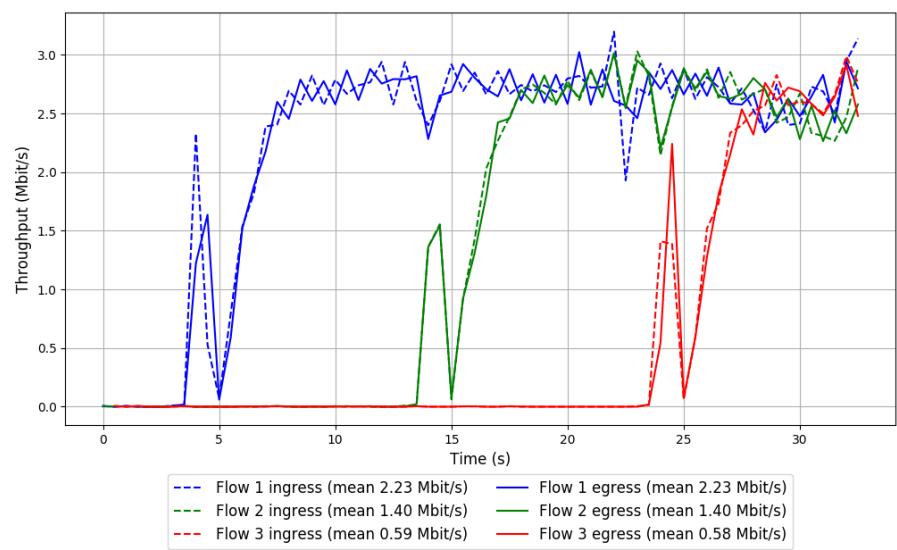
-- Flow 3:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 51.118 ms

Loss rate: 1.54%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-01-31 18:54:40

End at: 2018-01-31 18:55:10

Below is generated by plot.py at 2018-01-31 22:28:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.16 Mbit/s

95th percentile per-packet one-way delay: 51.062 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 2.22 Mbit/s

95th percentile per-packet one-way delay: 51.068 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 51.044 ms

Loss rate: 0.70%

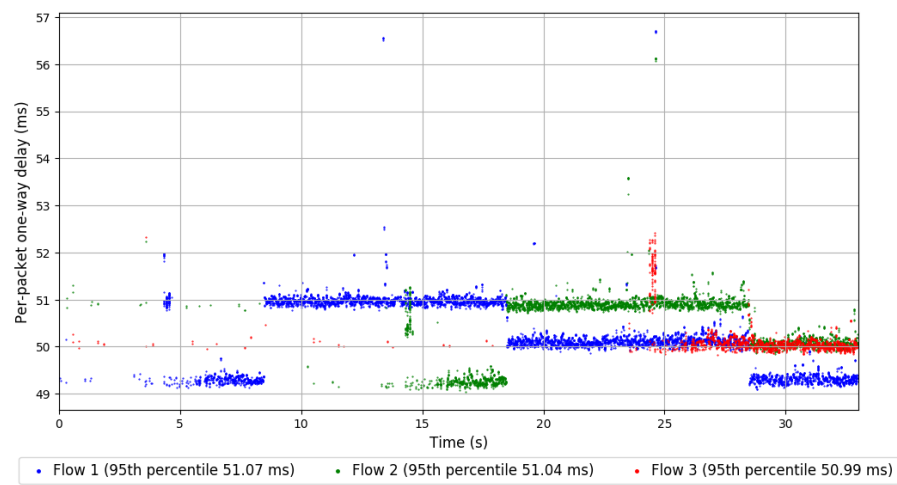
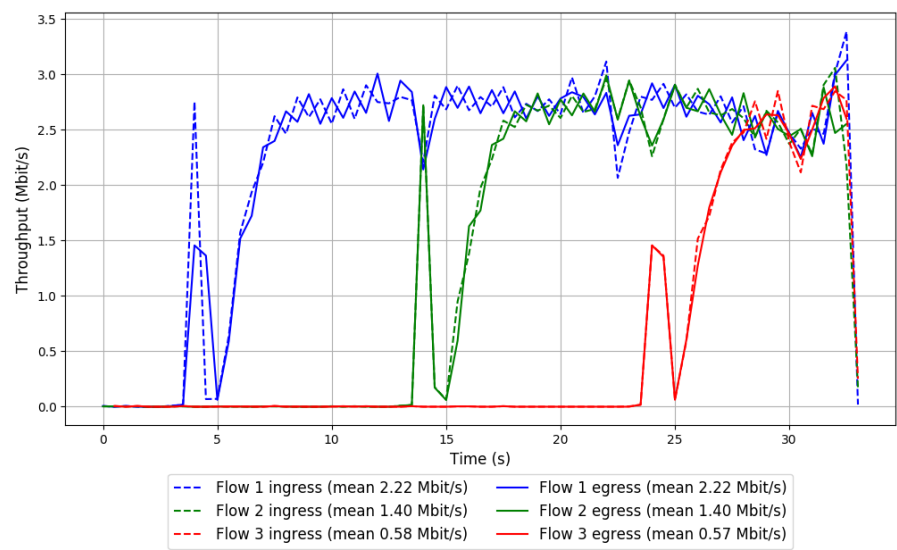
-- Flow 3:

Average throughput: 0.57 Mbit/s

95th percentile per-packet one-way delay: 50.993 ms

Loss rate: 1.94%

Run 10: Report of WebRTC media — Data Link

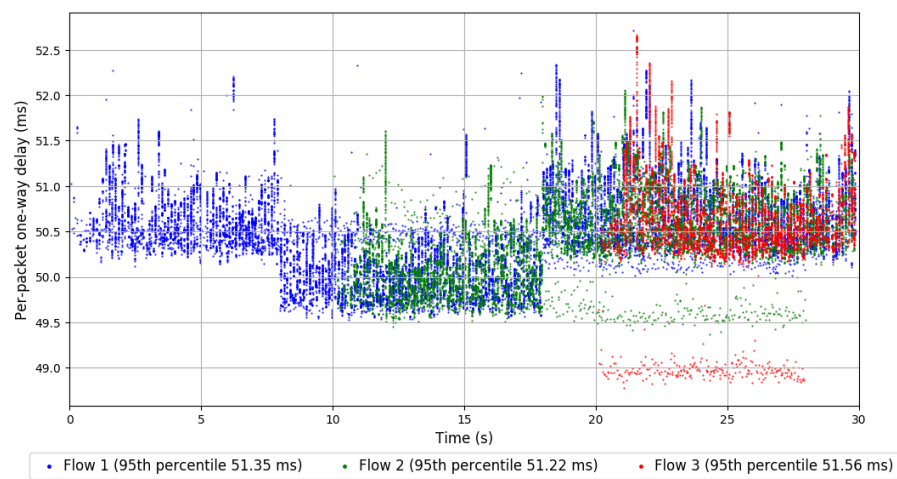
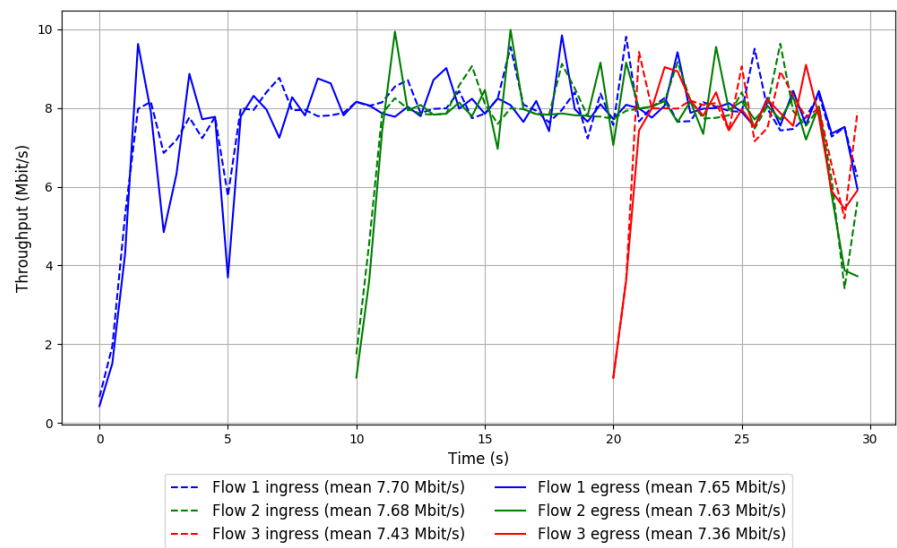


```
Run 1: Statistics of Sprout

Start at: 2018-01-31 16:16:17
End at: 2018-01-31 16:16:47

# Below is generated by plot.py at 2018-01-31 22:28:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.10 Mbit/s
95th percentile per-packet one-way delay: 51.344 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 7.65 Mbit/s
95th percentile per-packet one-way delay: 51.352 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 7.63 Mbit/s
95th percentile per-packet one-way delay: 51.223 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 7.36 Mbit/s
95th percentile per-packet one-way delay: 51.561 ms
Loss rate: 2.12%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-01-31 16:32:49

End at: 2018-01-31 16:33:19

Below is generated by plot.py at 2018-01-31 22:28:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.43 Mbit/s

95th percentile per-packet one-way delay: 51.247 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 7.81 Mbit/s

95th percentile per-packet one-way delay: 51.347 ms

Loss rate: 1.35%

-- Flow 2:

Average throughput: 7.79 Mbit/s

95th percentile per-packet one-way delay: 51.199 ms

Loss rate: 1.09%

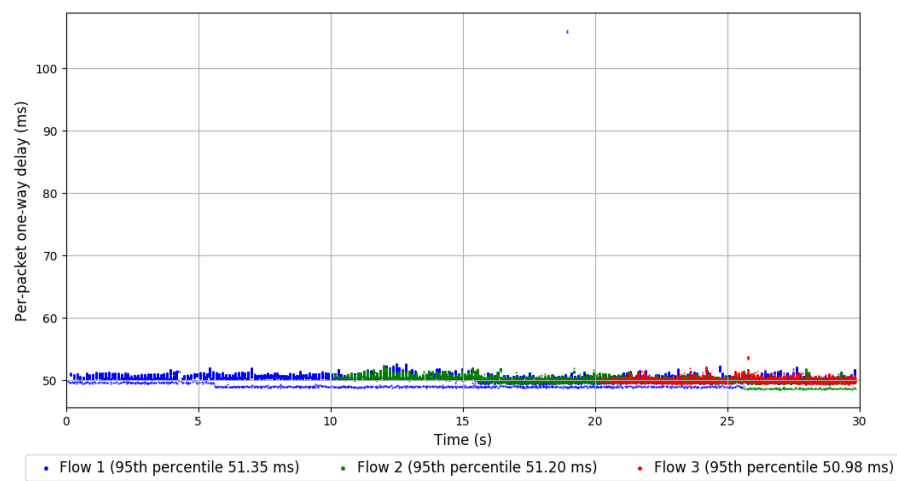
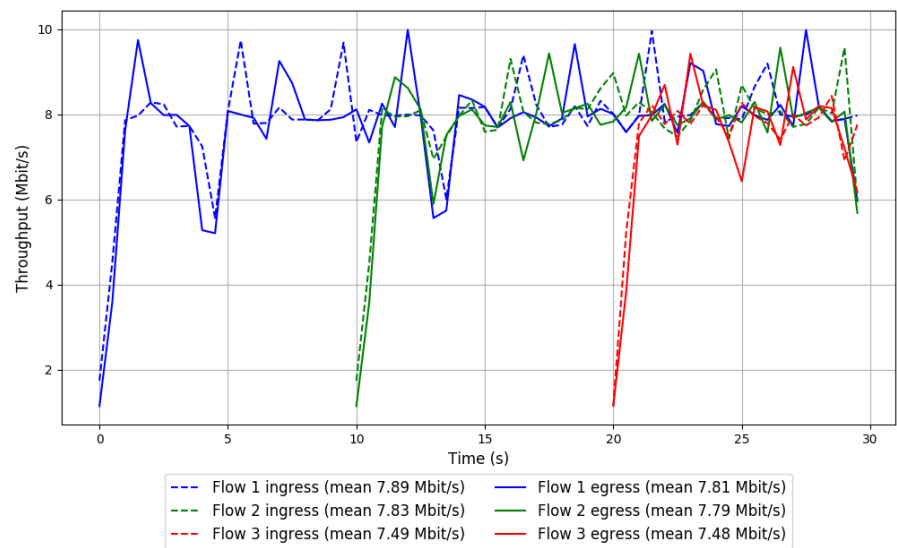
-- Flow 3:

Average throughput: 7.48 Mbit/s

95th percentile per-packet one-way delay: 50.985 ms

Loss rate: 1.14%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-01-31 16:49:29

End at: 2018-01-31 16:49:59

Below is generated by plot.py at 2018-01-31 22:28:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.42 Mbit/s

95th percentile per-packet one-way delay: 51.466 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 7.95 Mbit/s

95th percentile per-packet one-way delay: 51.371 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 7.71 Mbit/s

95th percentile per-packet one-way delay: 51.635 ms

Loss rate: 1.17%

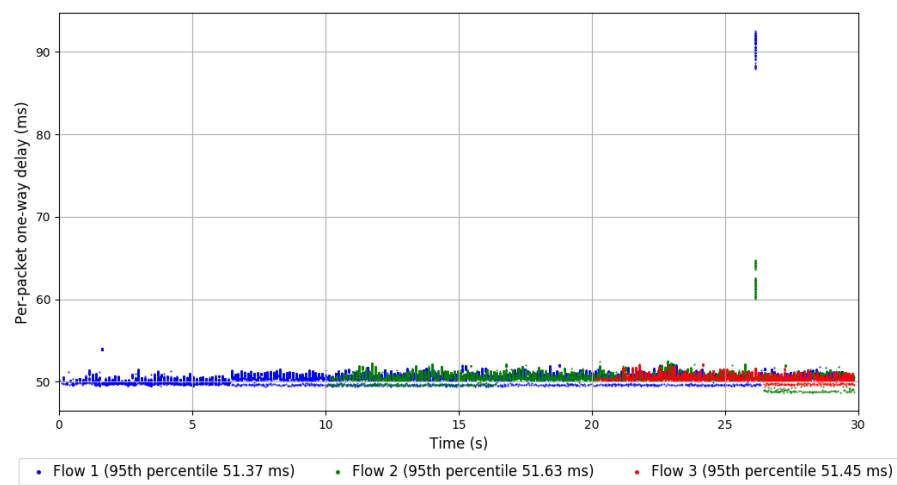
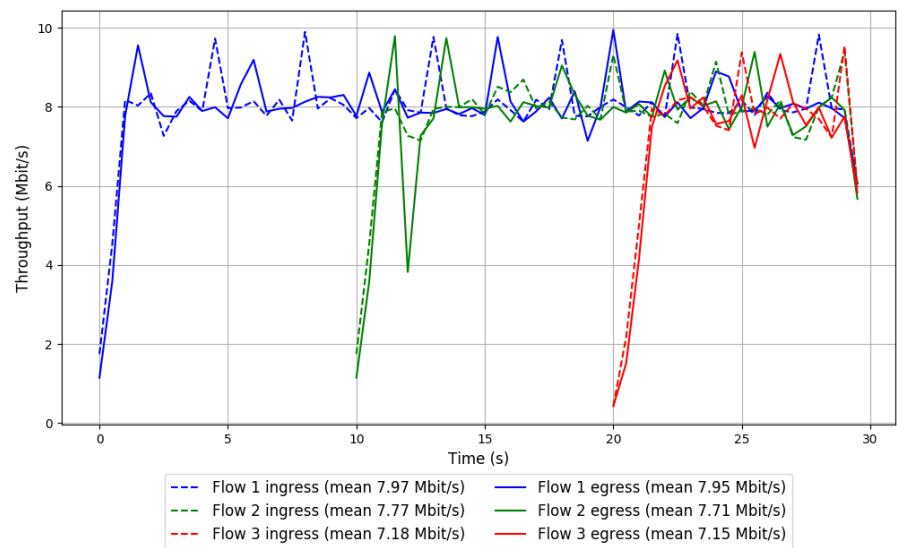
-- Flow 3:

Average throughput: 7.15 Mbit/s

95th percentile per-packet one-way delay: 51.445 ms

Loss rate: 1.52%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-01-31 17:06:15

End at: 2018-01-31 17:06:45

Below is generated by plot.py at 2018-01-31 22:28:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.26 Mbit/s

95th percentile per-packet one-way delay: 51.228 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 7.67 Mbit/s

95th percentile per-packet one-way delay: 51.130 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 7.70 Mbit/s

95th percentile per-packet one-way delay: 51.197 ms

Loss rate: 1.15%

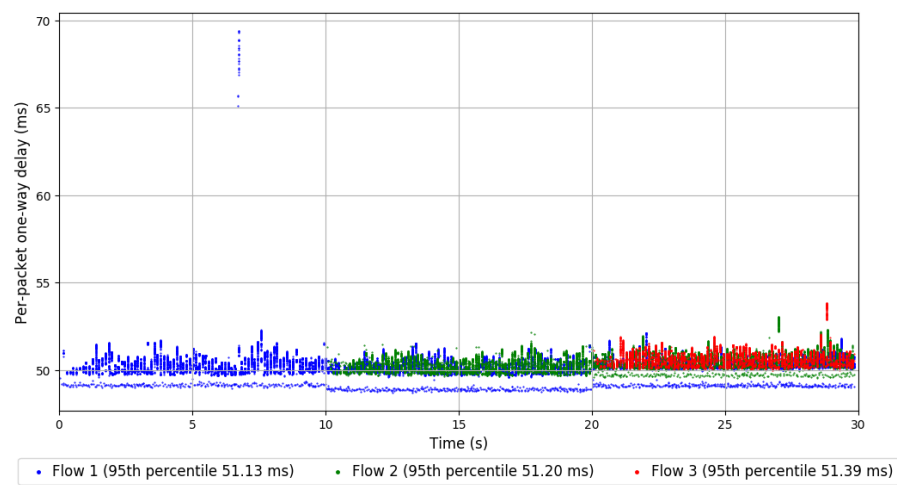
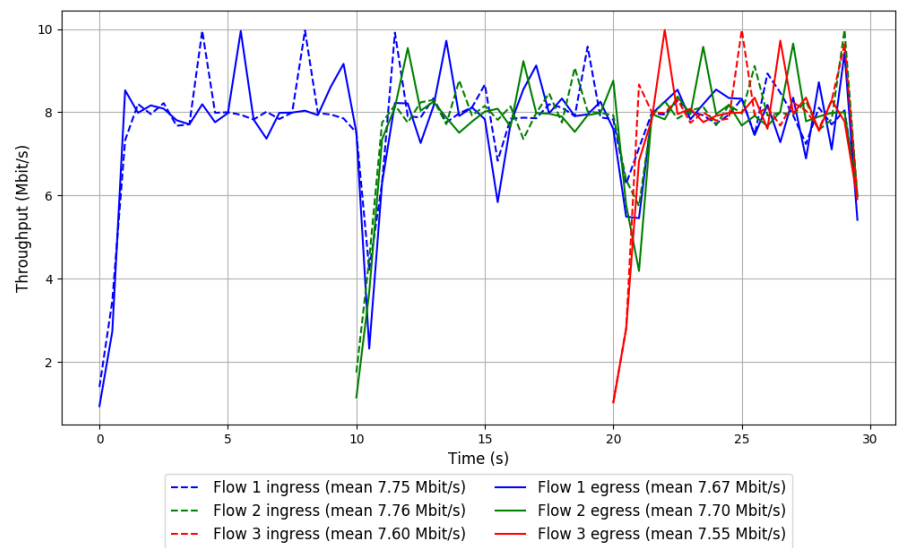
-- Flow 3:

Average throughput: 7.55 Mbit/s

95th percentile per-packet one-way delay: 51.390 ms

Loss rate: 1.32%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-01-31 17:23:24

End at: 2018-01-31 17:23:54

Below is generated by plot.py at 2018-01-31 22:28:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.72 Mbit/s

95th percentile per-packet one-way delay: 51.702 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 7.99 Mbit/s

95th percentile per-packet one-way delay: 51.692 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 7.89 Mbit/s

95th percentile per-packet one-way delay: 51.783 ms

Loss rate: 0.00%

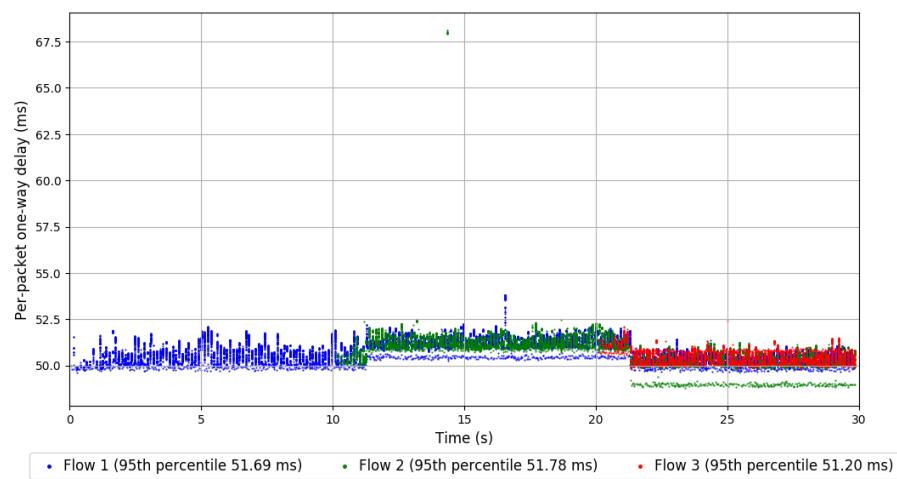
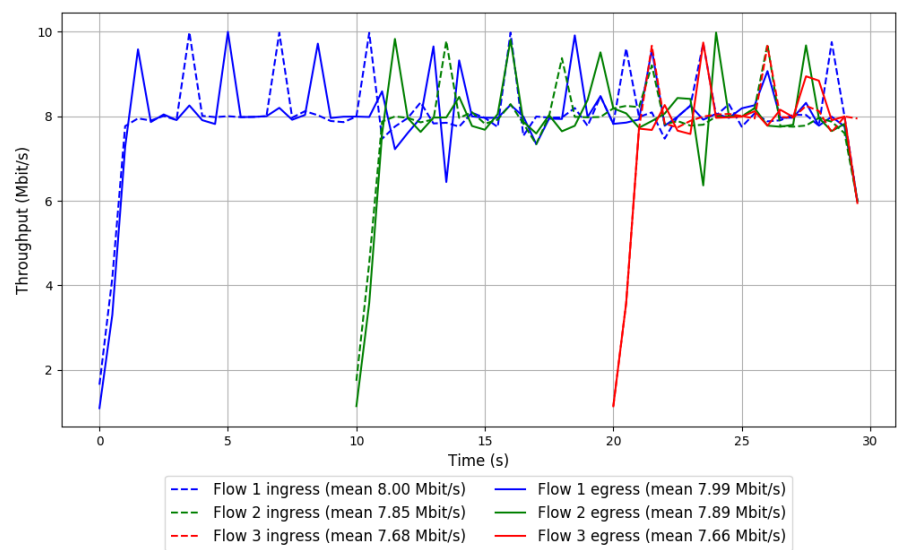
-- Flow 3:

Average throughput: 7.66 Mbit/s

95th percentile per-packet one-way delay: 51.201 ms

Loss rate: 1.45%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-01-31 17:40:30

End at: 2018-01-31 17:41:00

Below is generated by plot.py at 2018-01-31 22:28:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.62 Mbit/s

95th percentile per-packet one-way delay: 51.538 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 7.93 Mbit/s

95th percentile per-packet one-way delay: 51.522 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 7.87 Mbit/s

95th percentile per-packet one-way delay: 51.563 ms

Loss rate: 0.39%

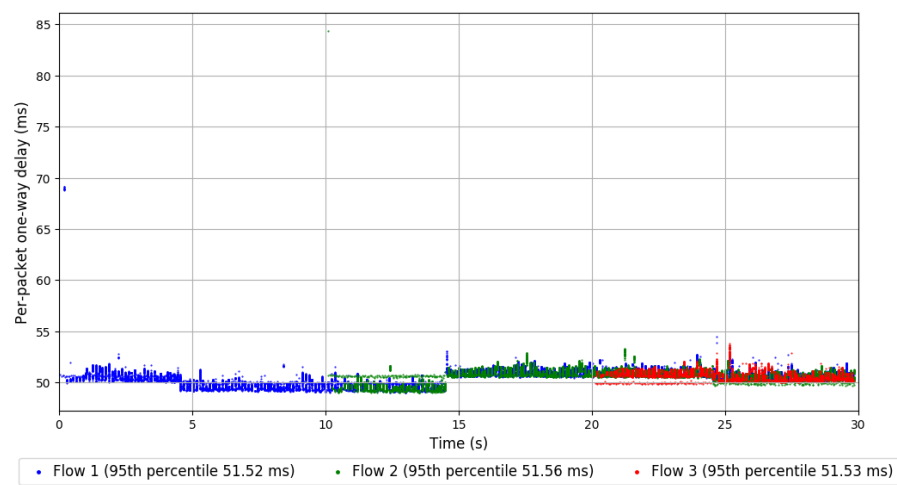
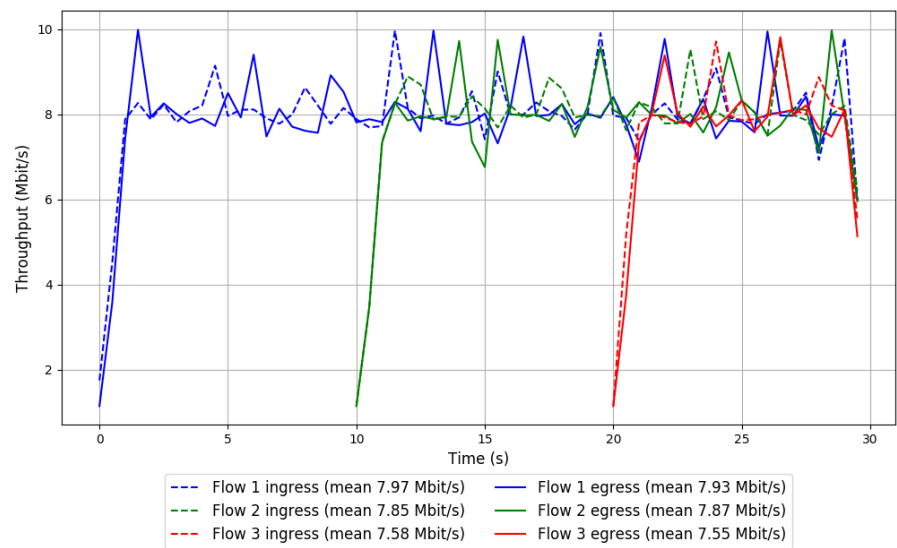
-- Flow 3:

Average throughput: 7.55 Mbit/s

95th percentile per-packet one-way delay: 51.527 ms

Loss rate: 1.55%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-01-31 17:57:40

End at: 2018-01-31 17:58:10

Below is generated by plot.py at 2018-01-31 22:28:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.24 Mbit/s

95th percentile per-packet one-way delay: 52.088 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 7.79 Mbit/s

95th percentile per-packet one-way delay: 52.095 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 7.58 Mbit/s

95th percentile per-packet one-way delay: 52.091 ms

Loss rate: 1.44%

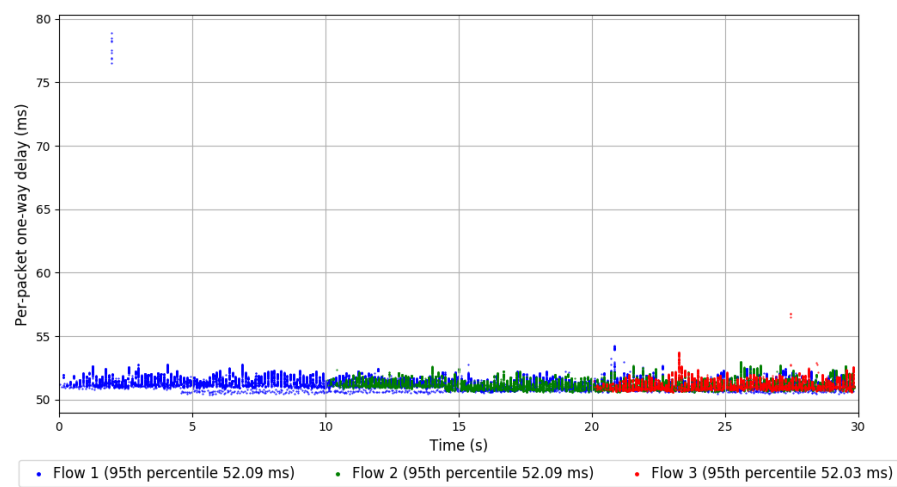
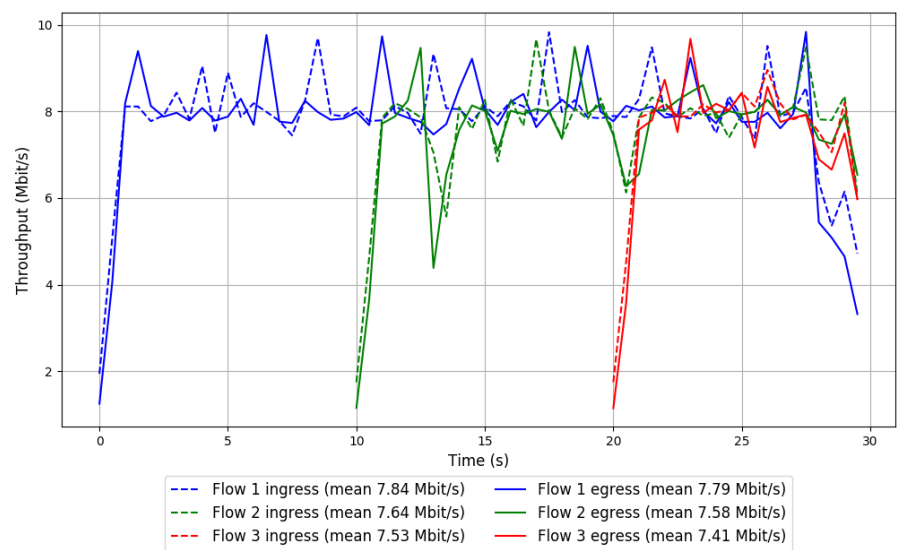
-- Flow 3:

Average throughput: 7.41 Mbit/s

95th percentile per-packet one-way delay: 52.034 ms

Loss rate: 2.33%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-01-31 18:14:31

End at: 2018-01-31 18:15:01

Below is generated by plot.py at 2018-01-31 22:28:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.65 Mbit/s

95th percentile per-packet one-way delay: 52.289 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 7.95 Mbit/s

95th percentile per-packet one-way delay: 52.284 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 7.87 Mbit/s

95th percentile per-packet one-way delay: 52.186 ms

Loss rate: 0.62%

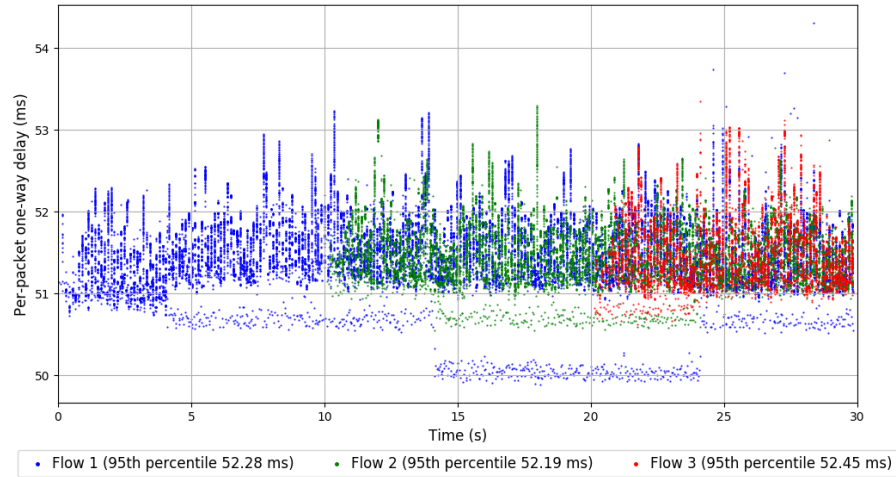
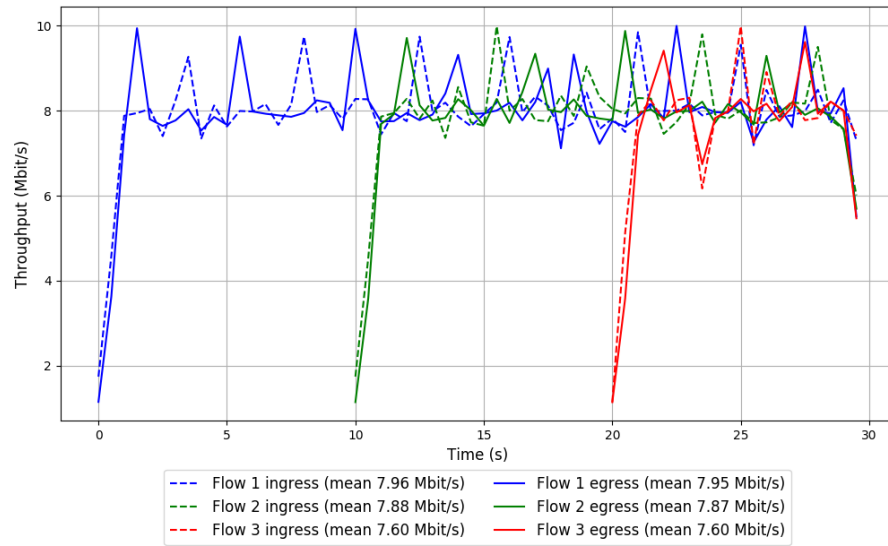
-- Flow 3:

Average throughput: 7.60 Mbit/s

95th percentile per-packet one-way delay: 52.454 ms

Loss rate: 1.30%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-01-31 18:31:32

End at: 2018-01-31 18:32:02

Below is generated by plot.py at 2018-01-31 22:28:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.65 Mbit/s

95th percentile per-packet one-way delay: 51.911 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 7.91 Mbit/s

95th percentile per-packet one-way delay: 51.839 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 7.90 Mbit/s

95th percentile per-packet one-way delay: 51.890 ms

Loss rate: 0.20%

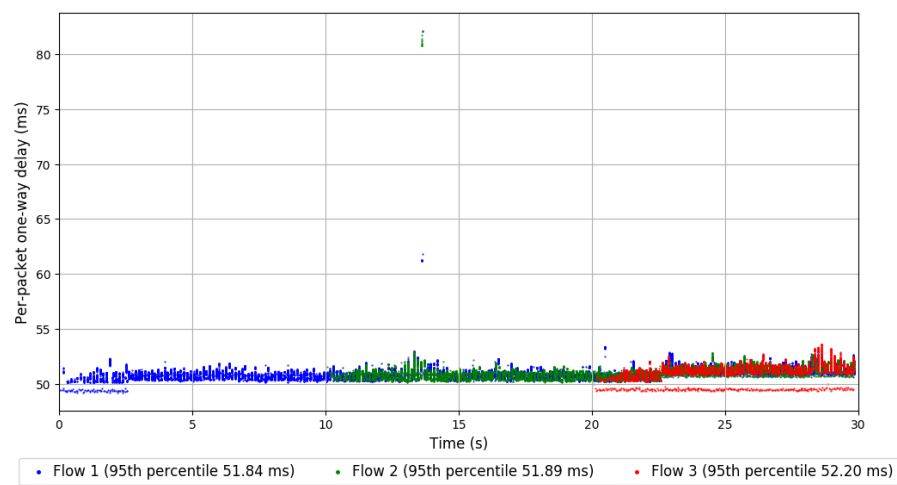
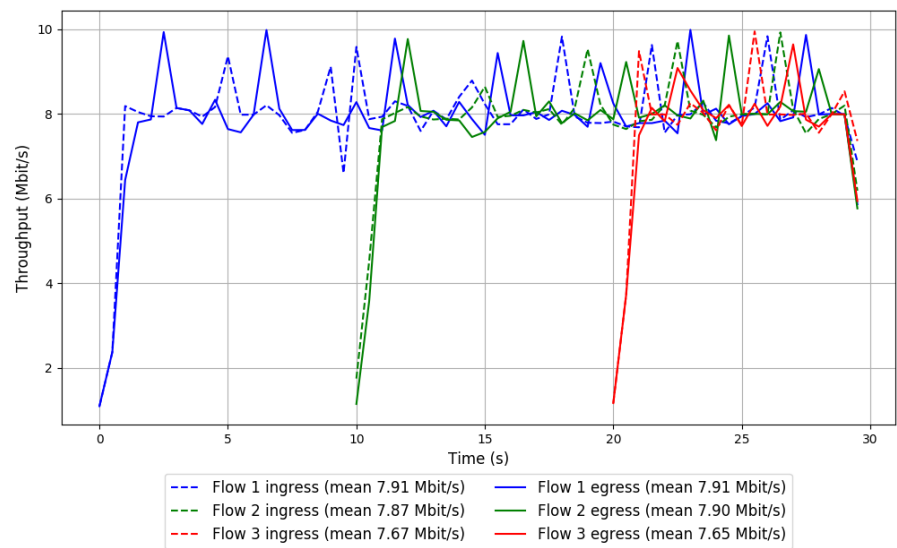
-- Flow 3:

Average throughput: 7.65 Mbit/s

95th percentile per-packet one-way delay: 52.197 ms

Loss rate: 1.39%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-01-31 18:48:29

End at: 2018-01-31 18:48:59

Below is generated by plot.py at 2018-01-31 22:28:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.28 Mbit/s

95th percentile per-packet one-way delay: 51.209 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 7.69 Mbit/s

95th percentile per-packet one-way delay: 51.189 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 7.84 Mbit/s

95th percentile per-packet one-way delay: 51.155 ms

Loss rate: 0.72%

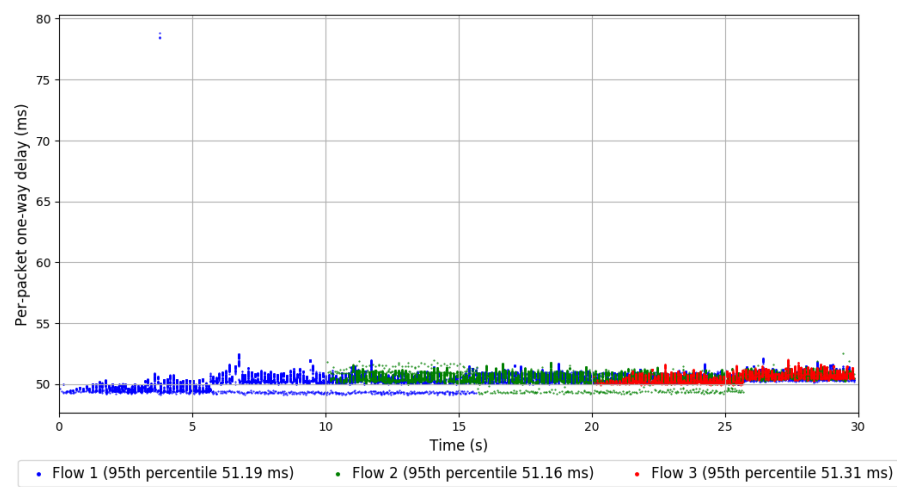
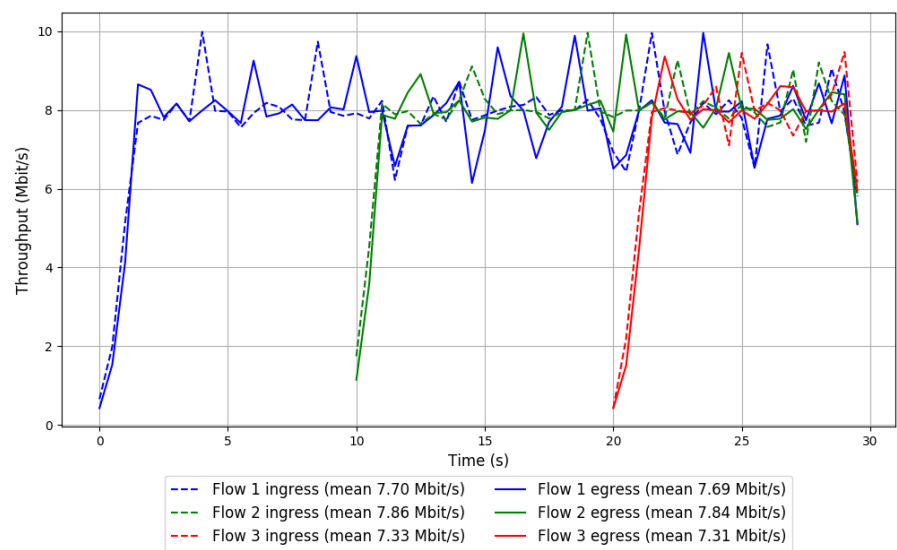
-- Flow 3:

Average throughput: 7.31 Mbit/s

95th percentile per-packet one-way delay: 51.313 ms

Loss rate: 1.52%

Run 10: Report of Sprout — Data Link

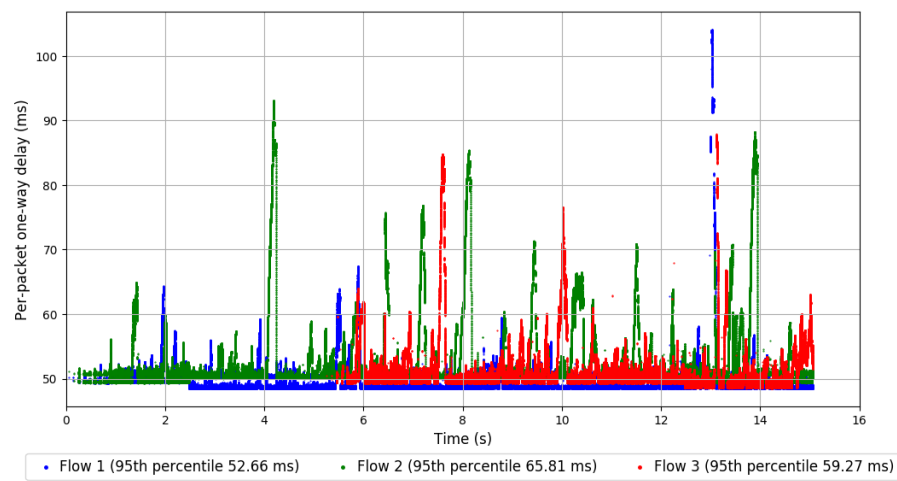
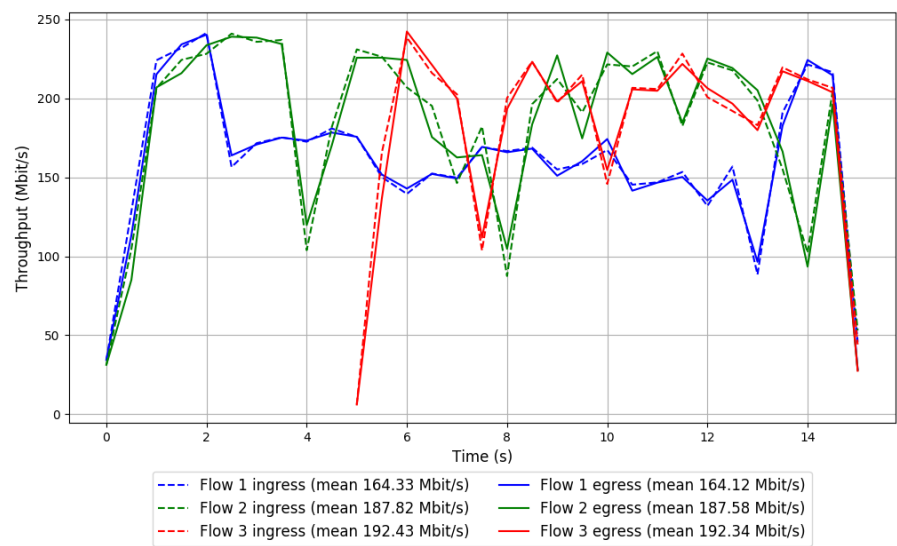


Run 1: Statistics of TaoVA-100x

Start at: 2018-01-31 16:18:18

End at: 2018-01-31 16:18:48

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

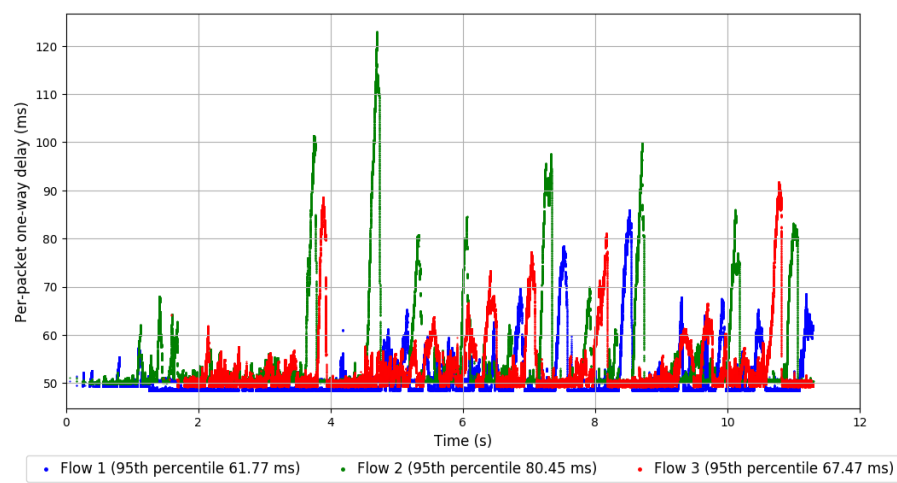
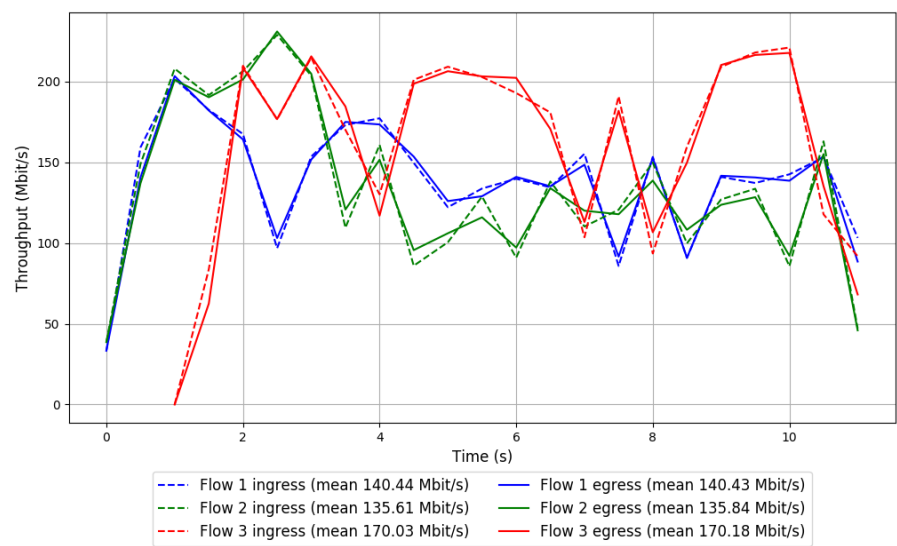


Run 2: Statistics of TaoVA-100x

Start at: 2018-01-31 16:34:45

End at: 2018-01-31 16:35:15

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

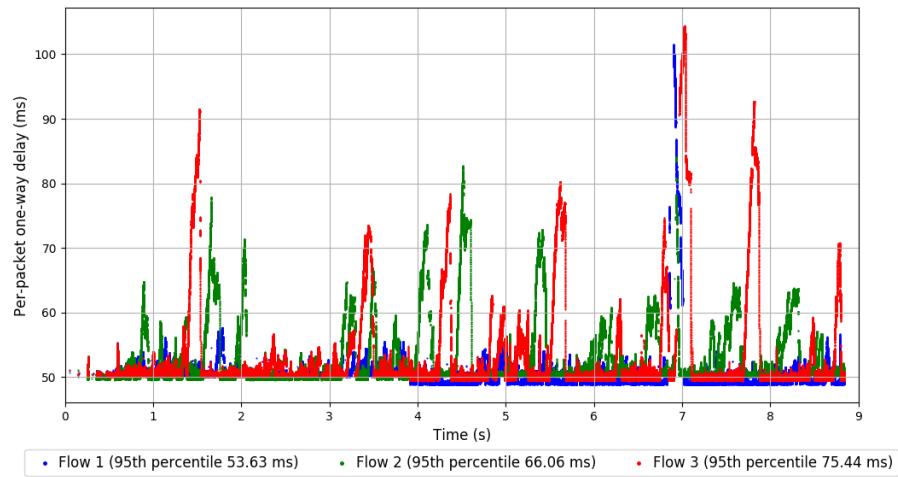
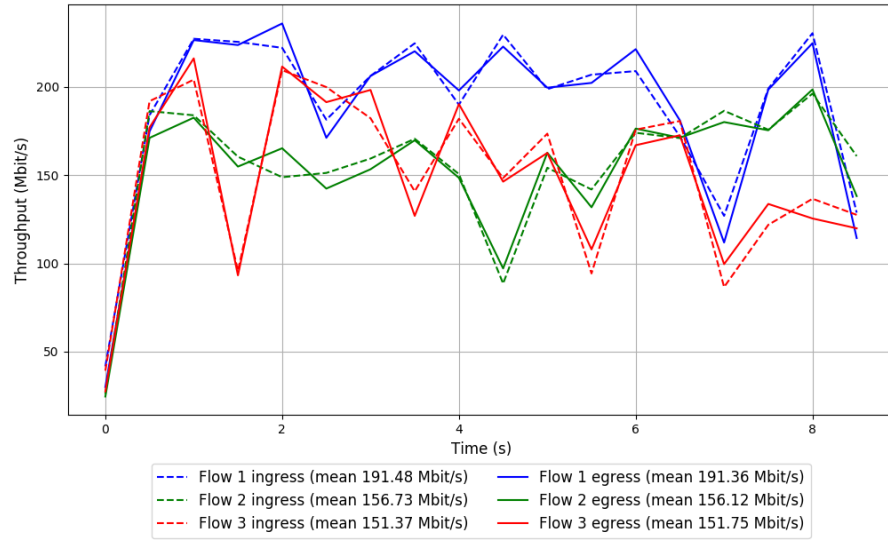


Run 3: Statistics of TaoVA-100x

Start at: 2018-01-31 16:51:20

End at: 2018-01-31 16:51:50

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

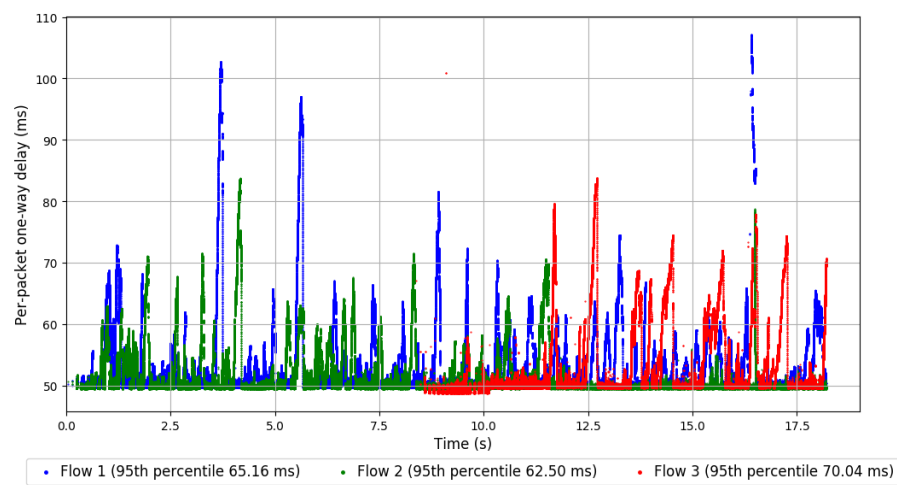
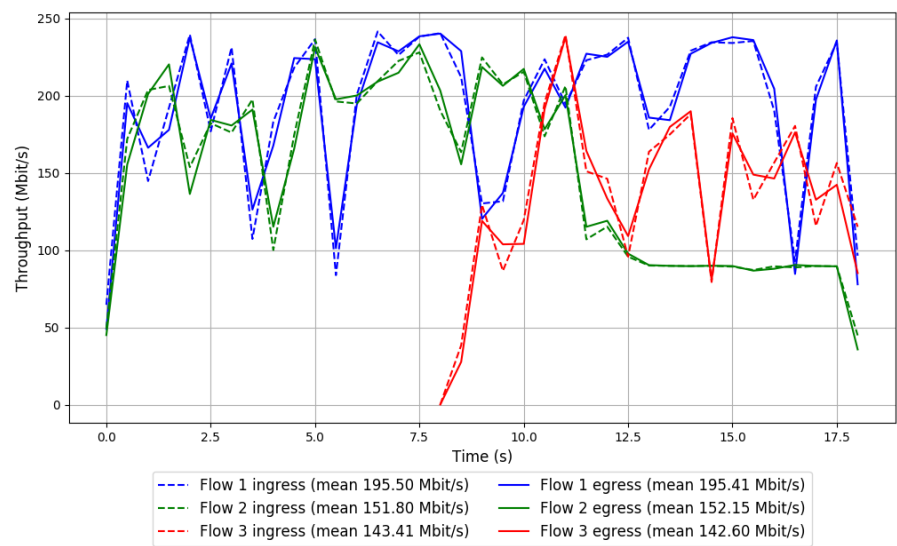


Run 4: Statistics of TaoVA-100x

Start at: 2018-01-31 17:08:13

End at: 2018-01-31 17:08:43

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

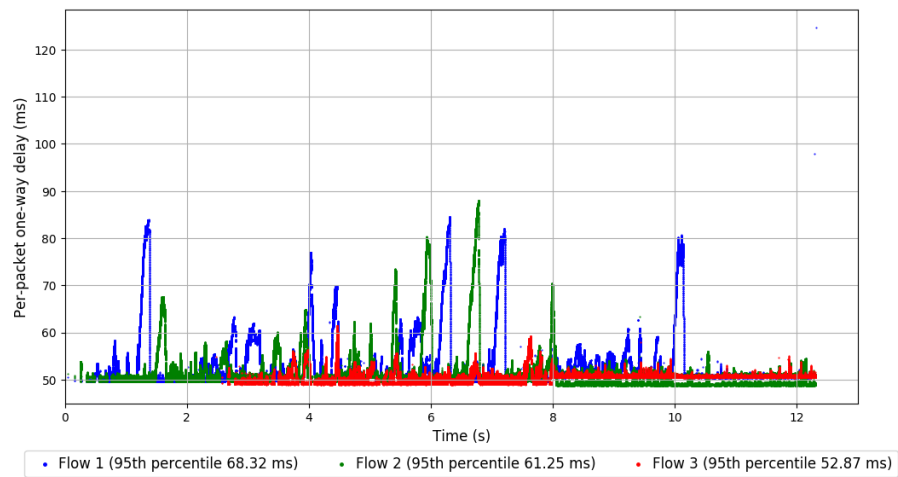
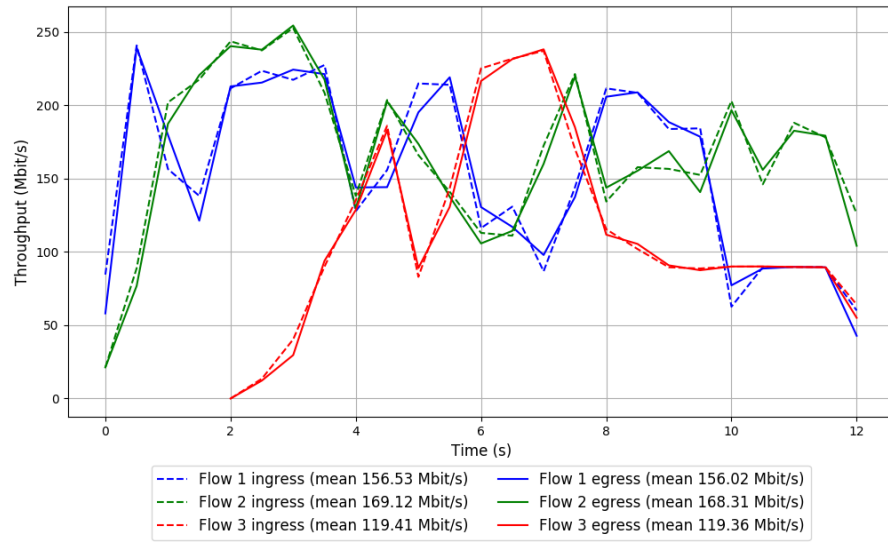


Run 5: Statistics of TaoVA-100x

Start at: 2018-01-31 17:25:19

End at: 2018-01-31 17:25:49

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

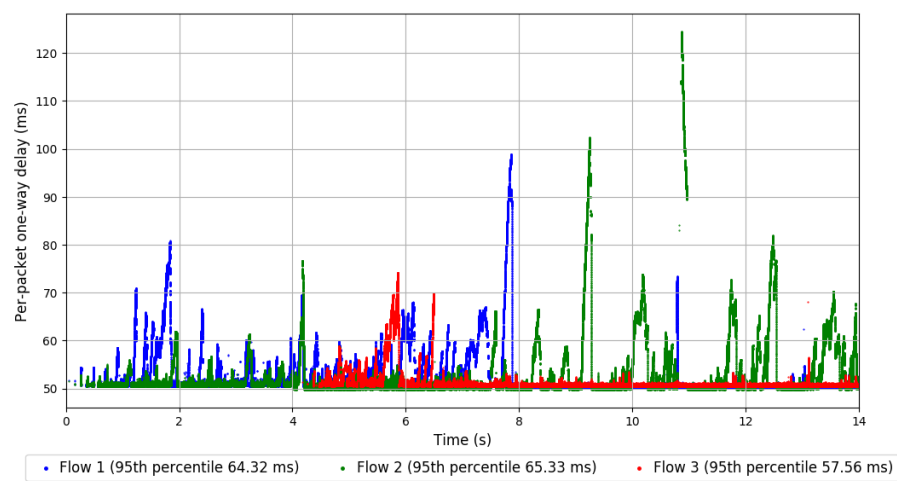
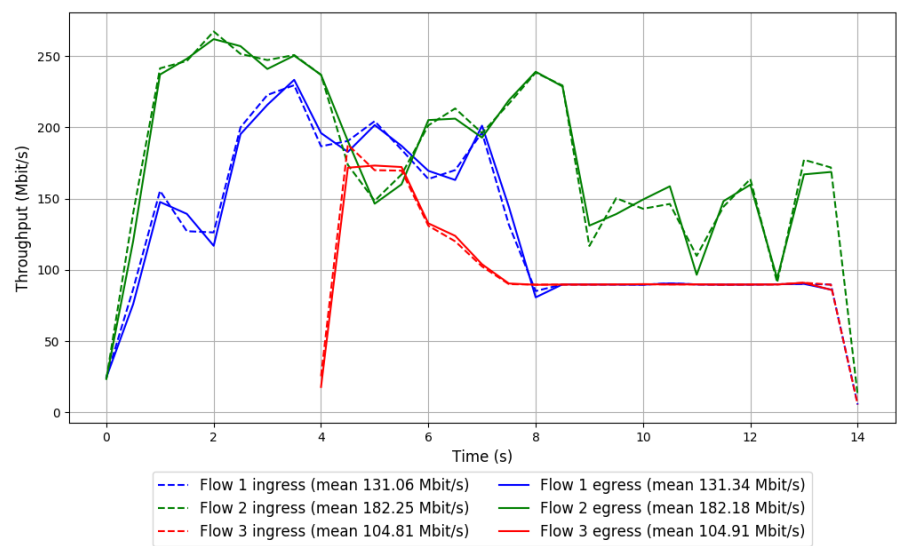


Run 6: Statistics of TaoVA-100x

Start at: 2018-01-31 17:42:25

End at: 2018-01-31 17:42:55

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

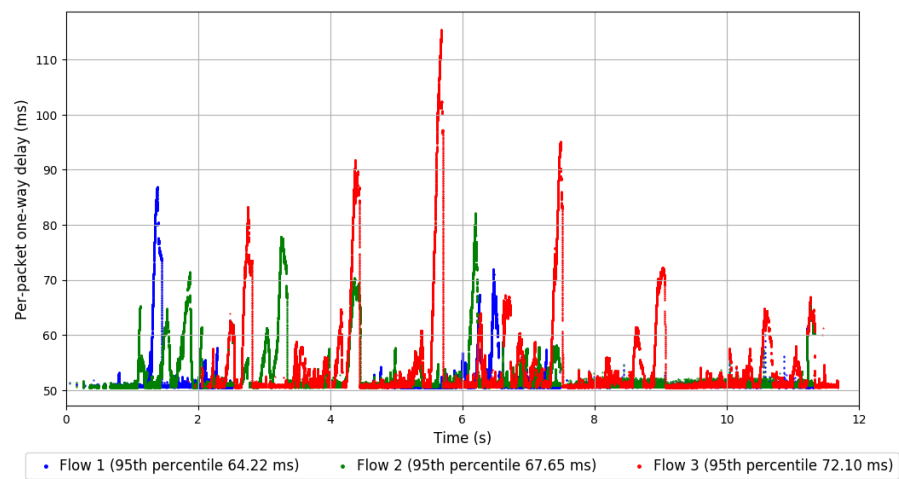
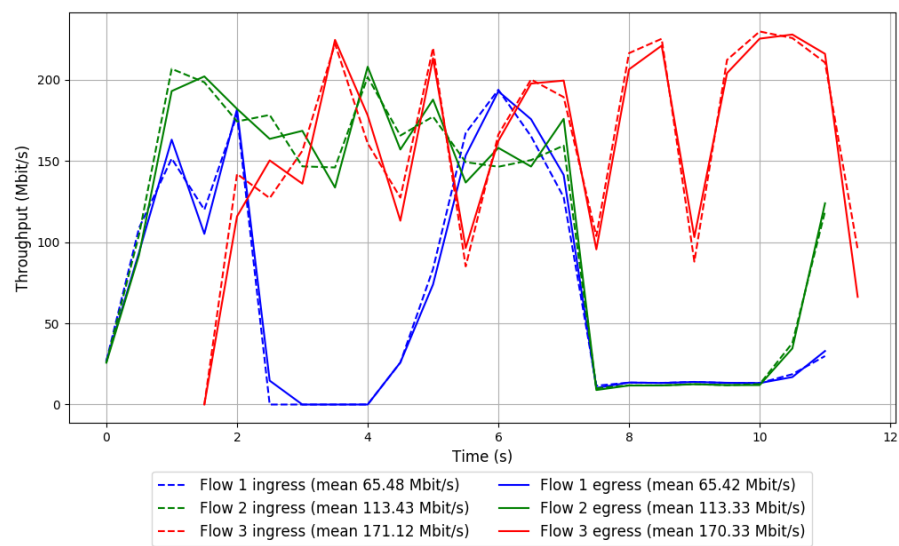


Run 7: Statistics of TaoVA-100x

Start at: 2018-01-31 17:59:35

End at: 2018-01-31 18:00:05

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-01-31 18:16:30

End at: 2018-01-31 18:17:00

Below is generated by plot.py at 2018-01-31 22:42:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 372.32 Mbit/s

95th percentile per-packet one-way delay: 68.146 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 199.19 Mbit/s

95th percentile per-packet one-way delay: 66.774 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 170.45 Mbit/s

95th percentile per-packet one-way delay: 70.496 ms

Loss rate: 0.08%

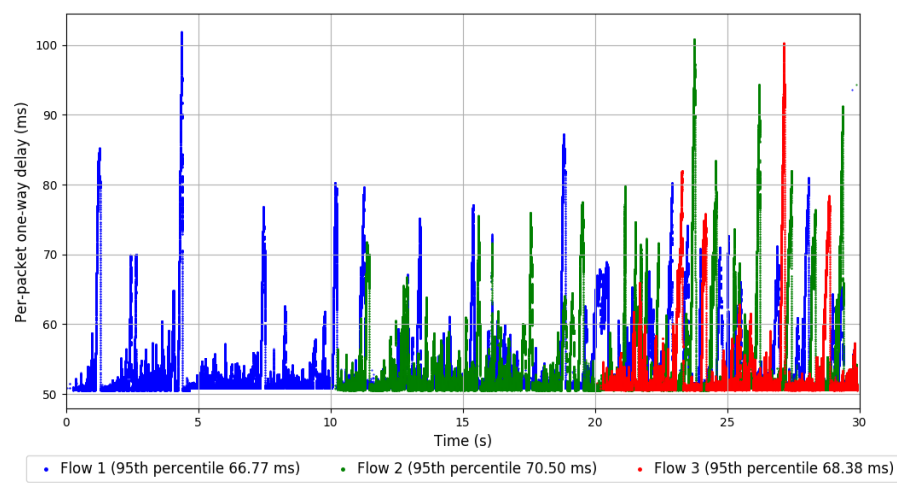
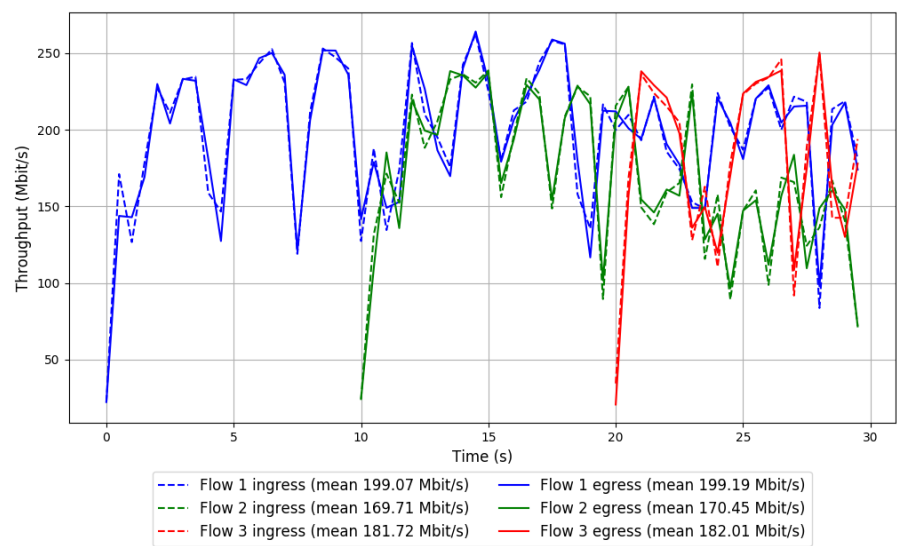
-- Flow 3:

Average throughput: 182.01 Mbit/s

95th percentile per-packet one-way delay: 68.379 ms

Loss rate: 0.92%

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

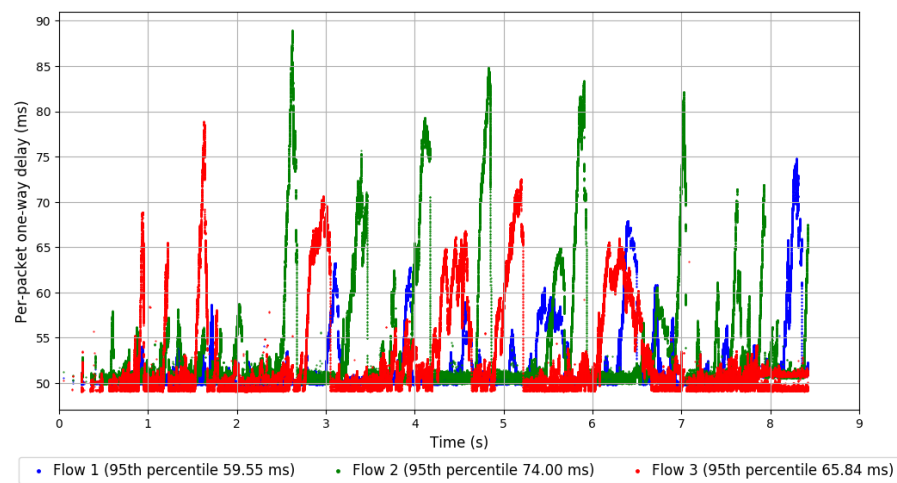
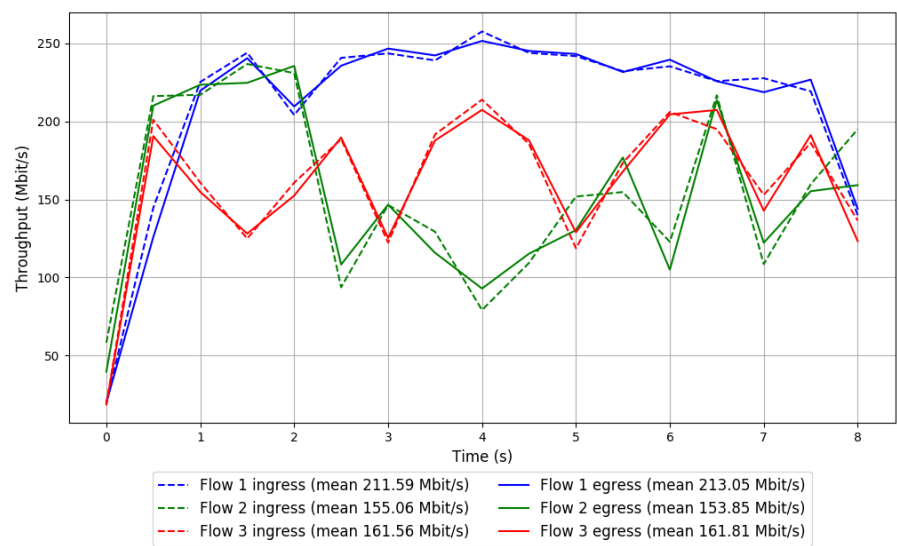


Run 9: Statistics of TaoVA-100x

Start at: 2018-01-31 18:33:26

End at: 2018-01-31 18:33:56

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

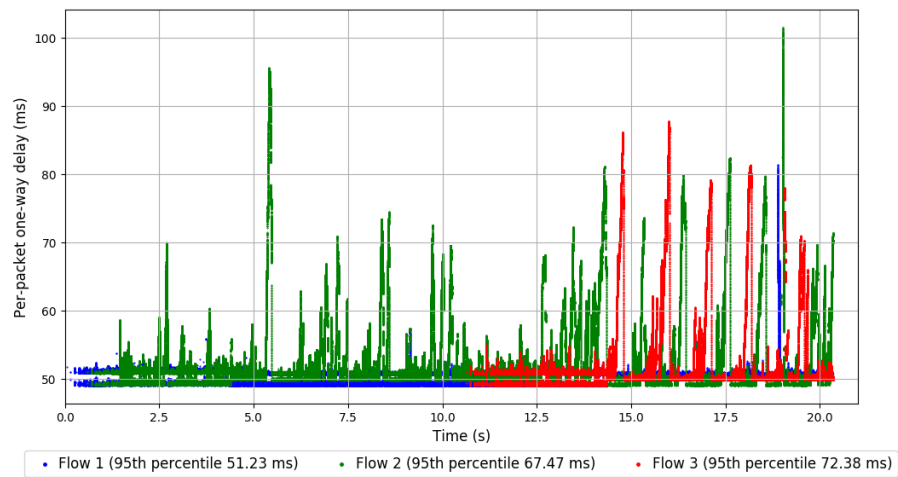
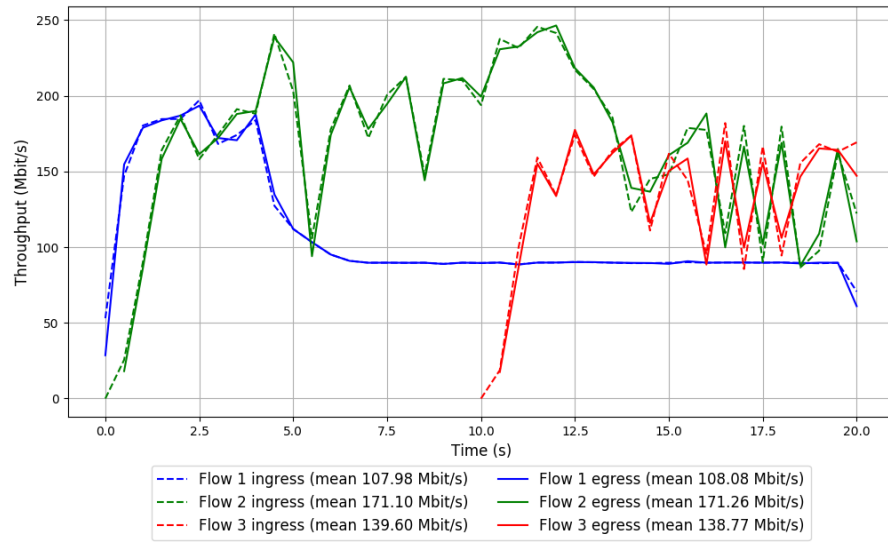


Run 10: Statistics of TaoVA-100x

Start at: 2018-01-31 18:50:31

End at: 2018-01-31 18:51:01

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



Run 1: Statistics of TCP Vegas

Start at: 2018-01-31 16:14:49

End at: 2018-01-31 16:15:19

Below is generated by plot.py at 2018-01-31 22:42:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.57 Mbit/s

95th percentile per-packet one-way delay: 58.670 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 51.38 Mbit/s

95th percentile per-packet one-way delay: 61.183 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 22.39 Mbit/s

95th percentile per-packet one-way delay: 51.364 ms

Loss rate: 0.95%

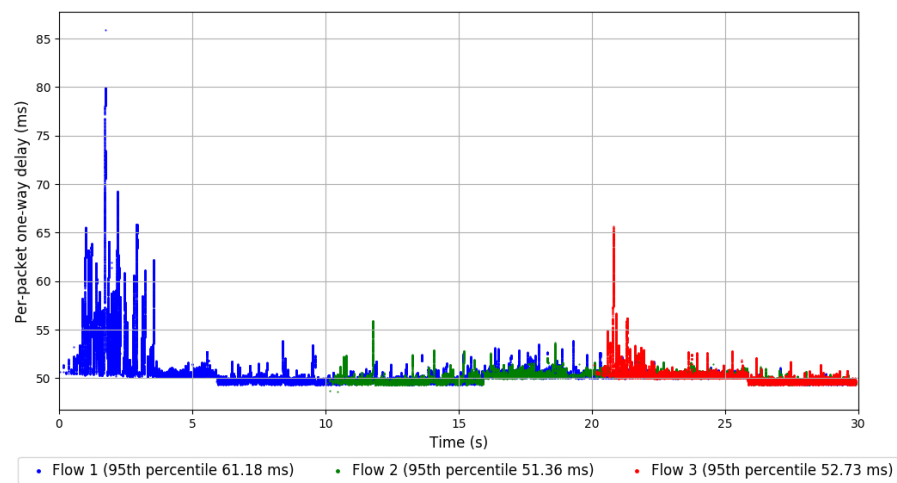
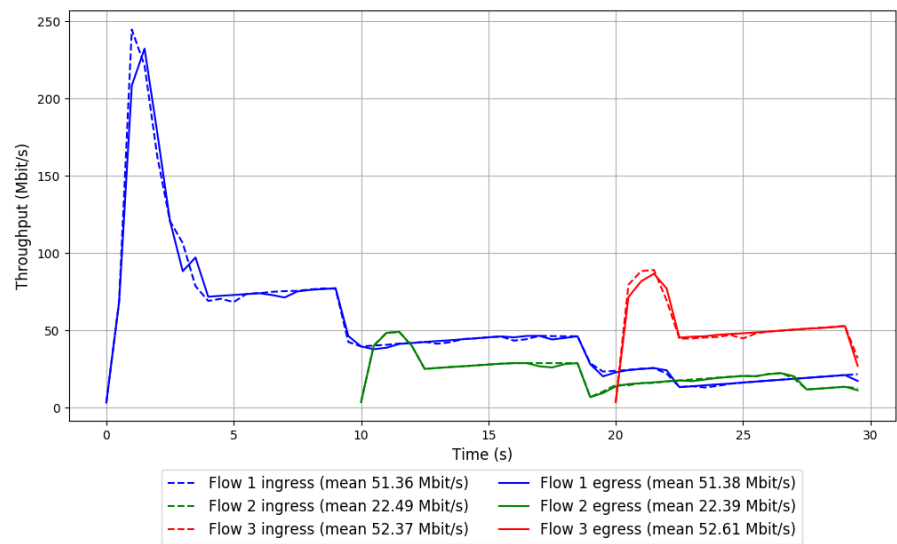
-- Flow 3:

Average throughput: 52.61 Mbit/s

95th percentile per-packet one-way delay: 52.732 ms

Loss rate: 0.57%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-01-31 16:31:22

End at: 2018-01-31 16:31:52

Below is generated by plot.py at 2018-01-31 22:42:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.31 Mbit/s

95th percentile per-packet one-way delay: 52.710 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 27.24 Mbit/s

95th percentile per-packet one-way delay: 52.042 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 44.53 Mbit/s

95th percentile per-packet one-way delay: 51.892 ms

Loss rate: 1.03%

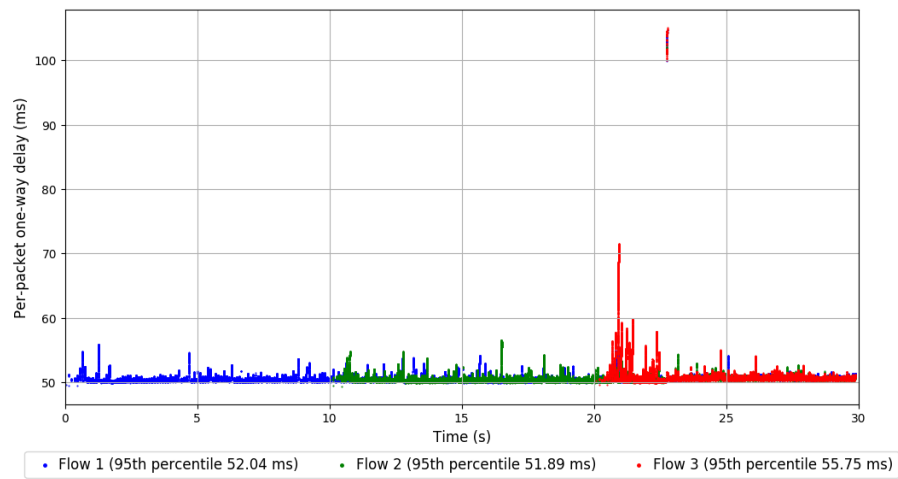
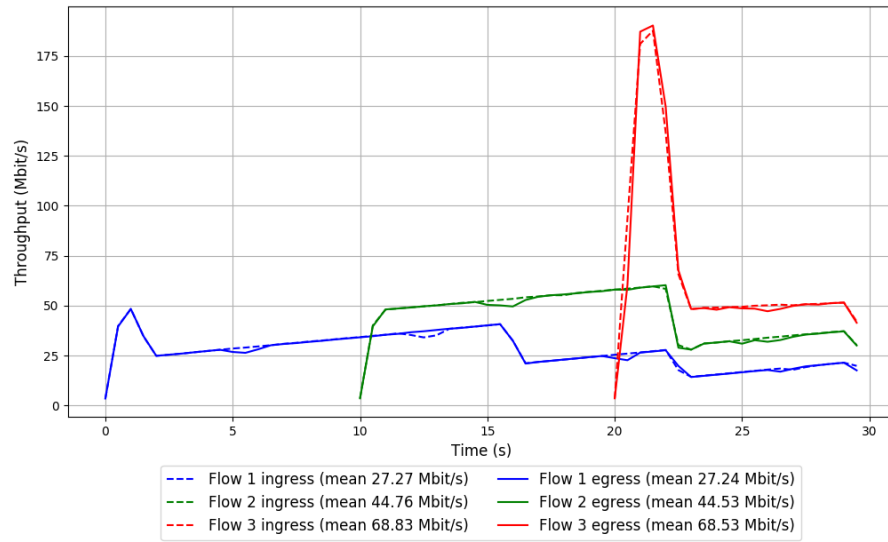
-- Flow 3:

Average throughput: 68.53 Mbit/s

95th percentile per-packet one-way delay: 55.748 ms

Loss rate: 1.45%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-01-31 16:47:56

End at: 2018-01-31 16:48:26

Below is generated by plot.py at 2018-01-31 22:42:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 162.56 Mbit/s

95th percentile per-packet one-way delay: 59.527 ms

Loss rate: 0.29%

-- Flow 1:

Average throughput: 52.59 Mbit/s

95th percentile per-packet one-way delay: 54.419 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 129.59 Mbit/s

95th percentile per-packet one-way delay: 64.176 ms

Loss rate: 0.26%

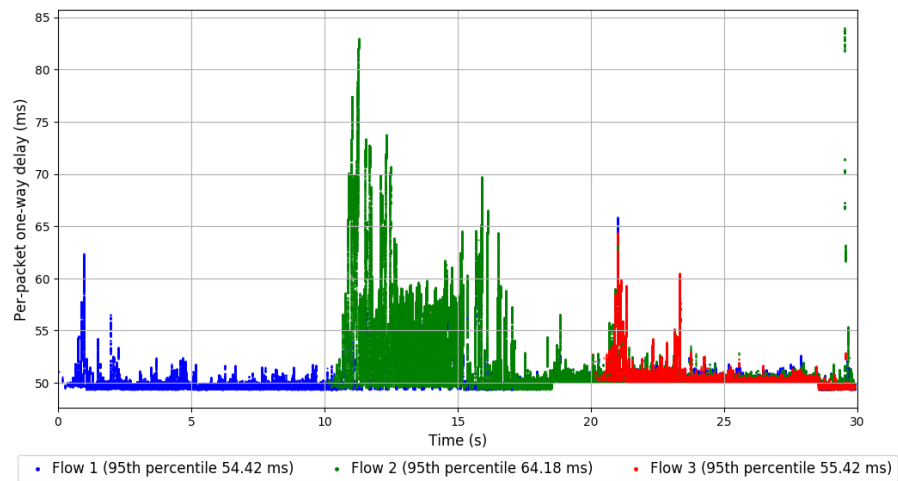
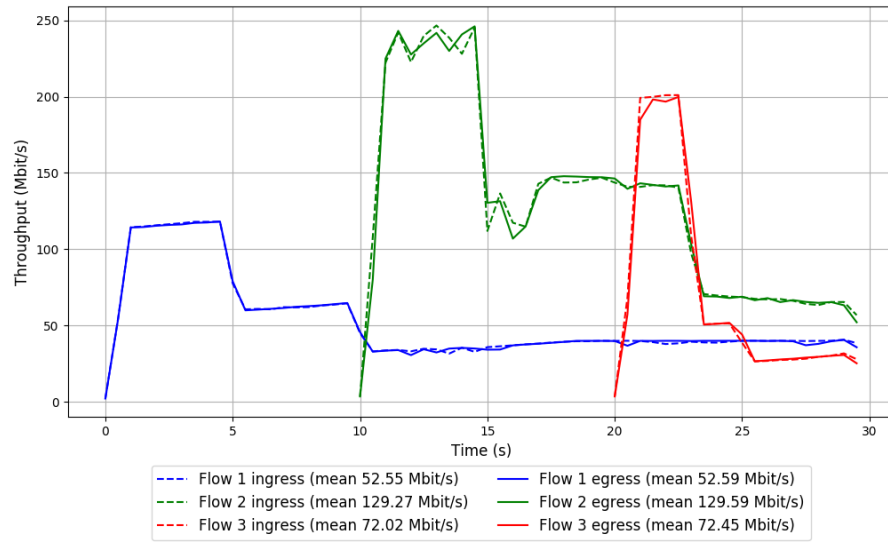
-- Flow 3:

Average throughput: 72.45 Mbit/s

95th percentile per-packet one-way delay: 55.422 ms

Loss rate: 0.45%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-01-31 17:04:42

End at: 2018-01-31 17:05:12

Below is generated by plot.py at 2018-01-31 22:42:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 170.83 Mbit/s

95th percentile per-packet one-way delay: 57.752 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 80.72 Mbit/s

95th percentile per-packet one-way delay: 53.487 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 85.80 Mbit/s

95th percentile per-packet one-way delay: 55.179 ms

Loss rate: 0.35%

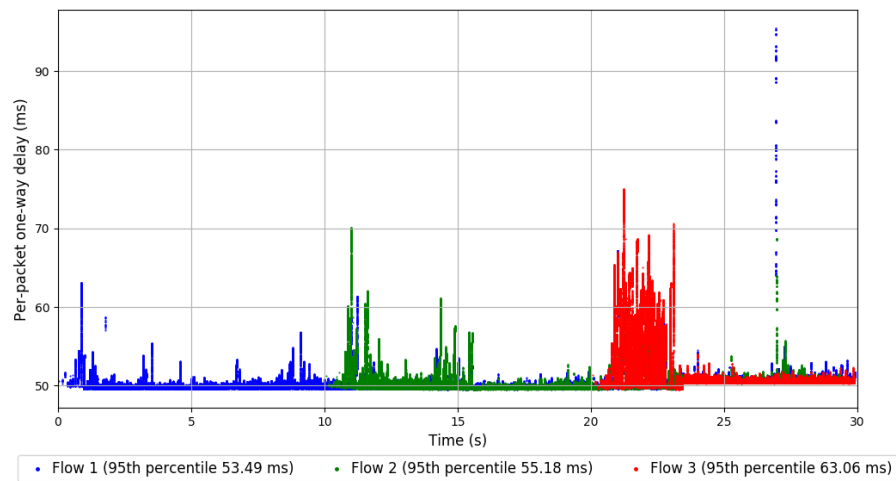
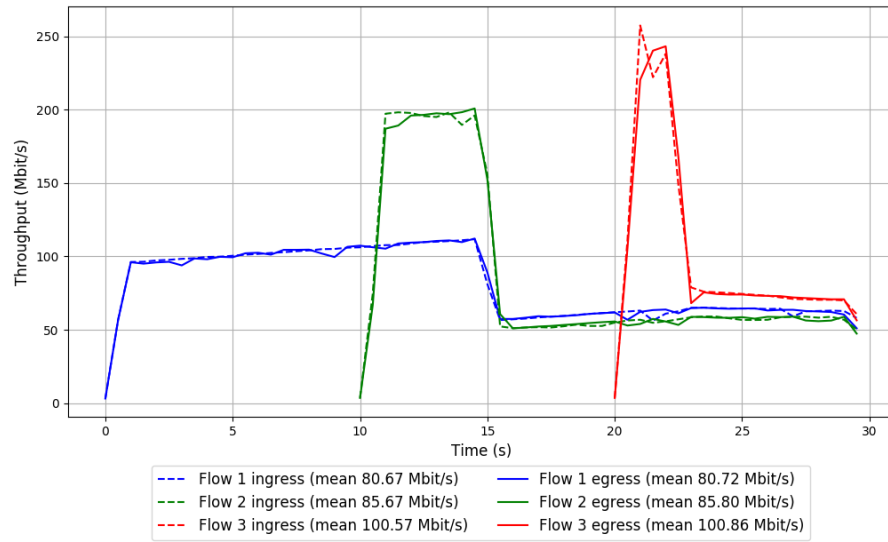
-- Flow 3:

Average throughput: 100.86 Mbit/s

95th percentile per-packet one-way delay: 63.059 ms

Loss rate: 0.73%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-01-31 17:21:54

End at: 2018-01-31 17:22:24

Below is generated by plot.py at 2018-01-31 22:42:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 115.37 Mbit/s

95th percentile per-packet one-way delay: 58.440 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 43.33 Mbit/s

95th percentile per-packet one-way delay: 60.061 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 30.11 Mbit/s

95th percentile per-packet one-way delay: 51.255 ms

Loss rate: 1.30%

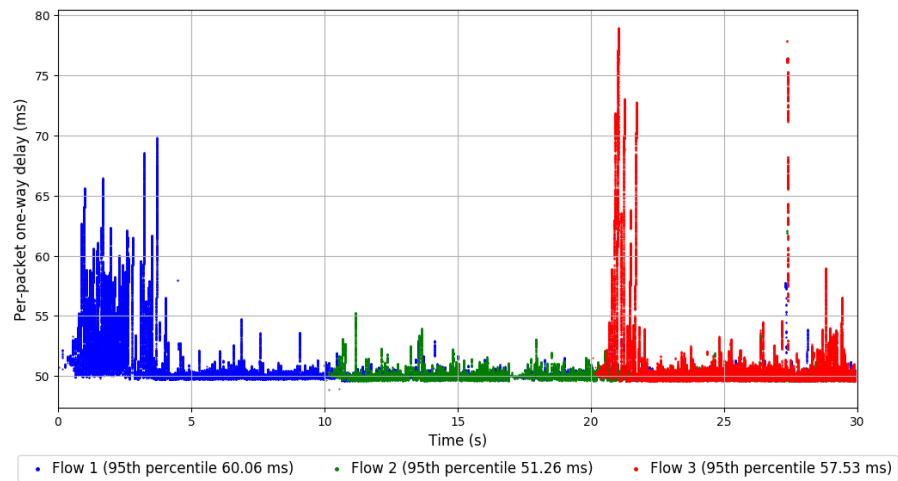
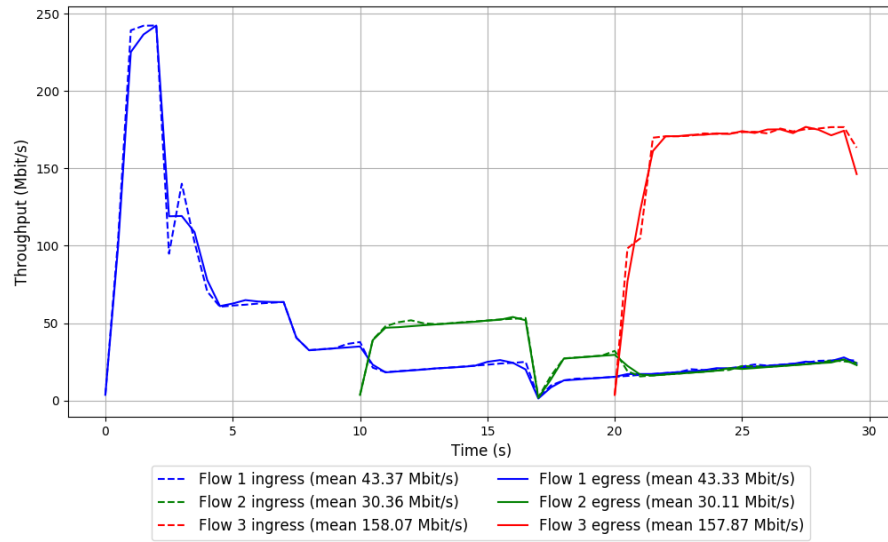
-- Flow 3:

Average throughput: 157.87 Mbit/s

95th percentile per-packet one-way delay: 57.526 ms

Loss rate: 1.14%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-01-31 17:38:58

End at: 2018-01-31 17:39:28

Below is generated by plot.py at 2018-01-31 22:42:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 160.00 Mbit/s

95th percentile per-packet one-way delay: 57.109 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 23.49 Mbit/s

95th percentile per-packet one-way delay: 53.058 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 158.49 Mbit/s

95th percentile per-packet one-way delay: 55.044 ms

Loss rate: 0.54%

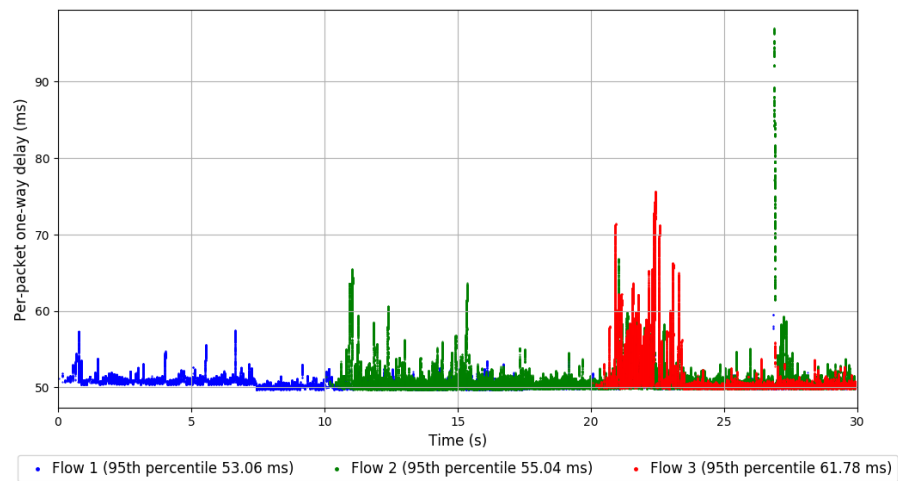
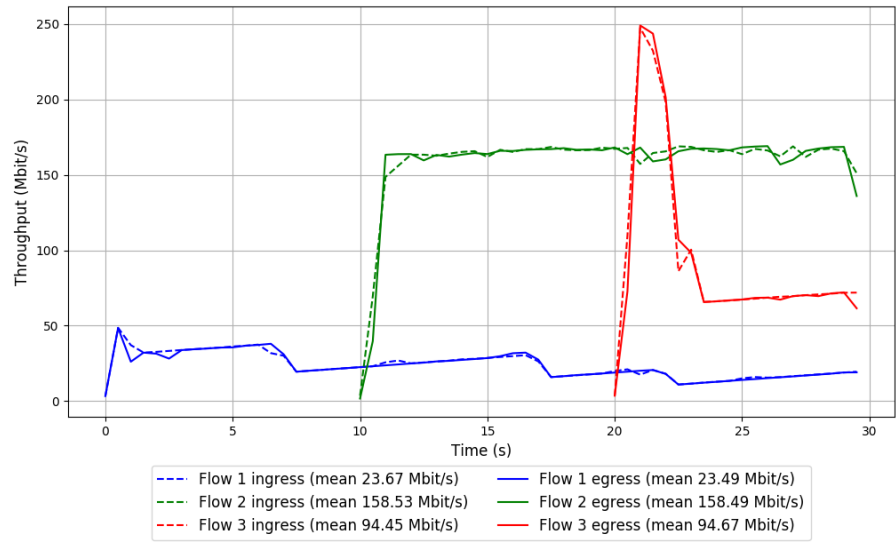
-- Flow 3:

Average throughput: 94.67 Mbit/s

95th percentile per-packet one-way delay: 61.776 ms

Loss rate: 0.78%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-01-31 17:56:08

End at: 2018-01-31 17:56:38

Below is generated by plot.py at 2018-01-31 22:42:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 120.16 Mbit/s

95th percentile per-packet one-way delay: 57.036 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 37.76 Mbit/s

95th percentile per-packet one-way delay: 59.341 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 122.15 Mbit/s

95th percentile per-packet one-way delay: 54.526 ms

Loss rate: 0.38%

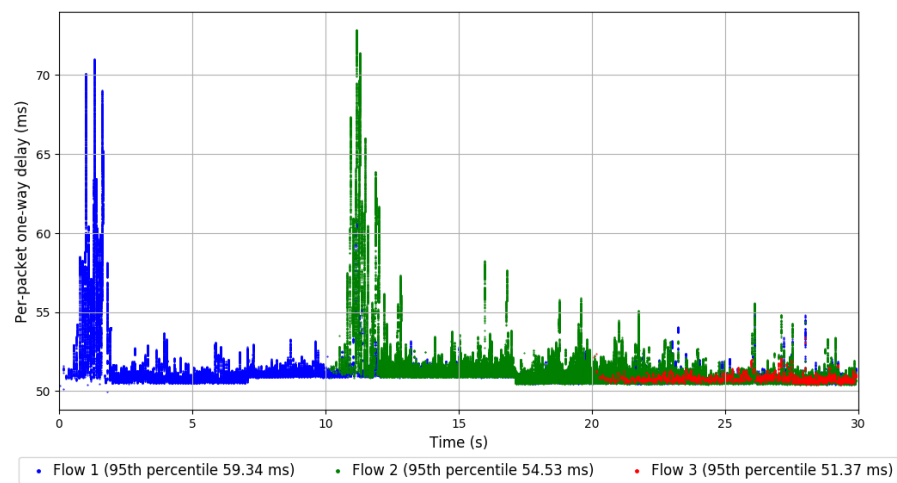
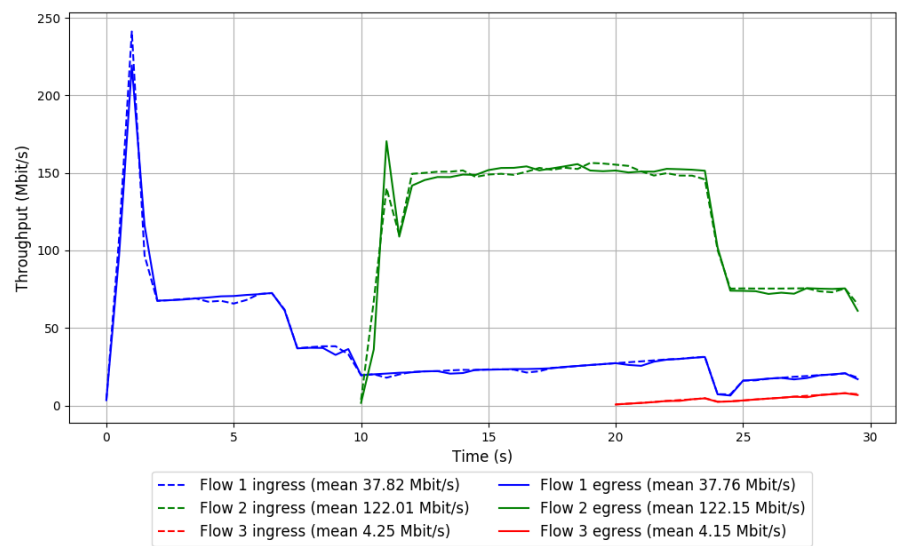
-- Flow 3:

Average throughput: 4.15 Mbit/s

95th percentile per-packet one-way delay: 51.369 ms

Loss rate: 3.16%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-01-31 18:12:46

End at: 2018-01-31 18:13:16

Below is generated by plot.py at 2018-01-31 22:42:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 324.60 Mbit/s

95th percentile per-packet one-way delay: 57.444 ms

Loss rate: 0.36%

-- Flow 1:

Average throughput: 207.93 Mbit/s

95th percentile per-packet one-way delay: 55.912 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 115.77 Mbit/s

95th percentile per-packet one-way delay: 61.215 ms

Loss rate: 0.30%

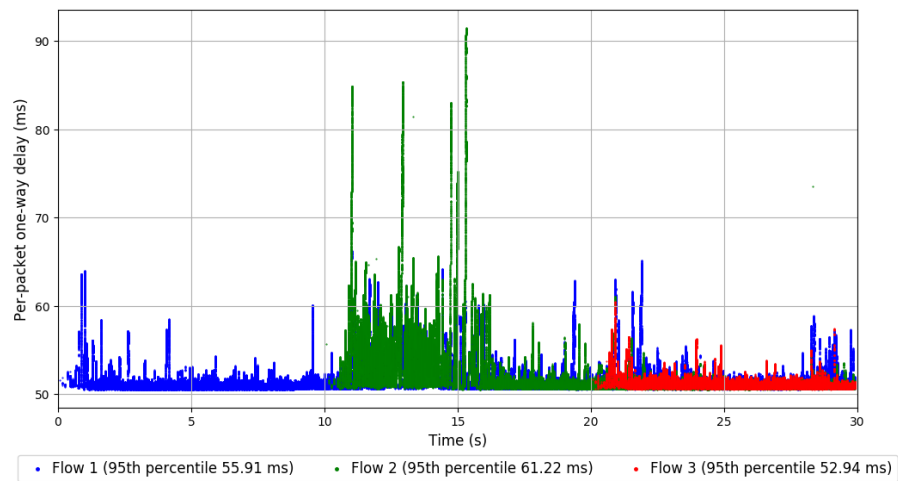
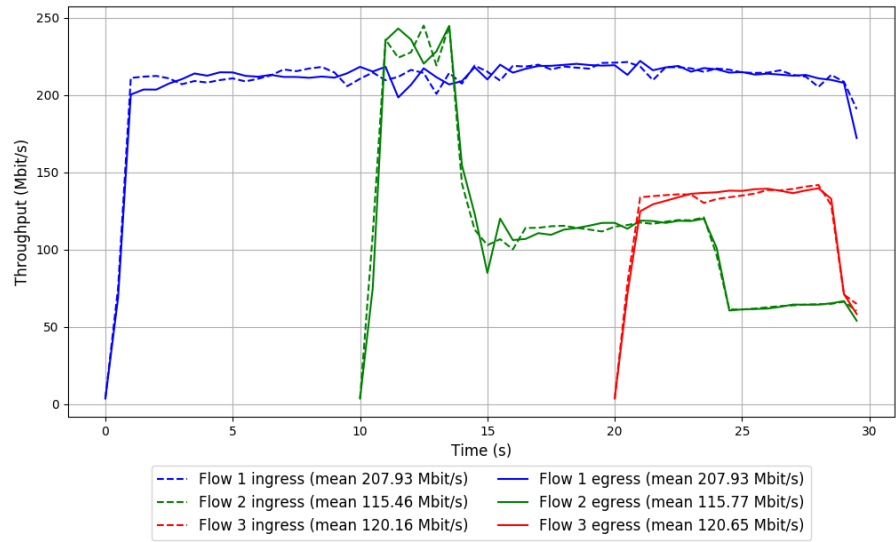
-- Flow 3:

Average throughput: 120.65 Mbit/s

95th percentile per-packet one-way delay: 52.942 ms

Loss rate: 0.61%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-01-31 18:30:03

End at: 2018-01-31 18:30:33

Below is generated by plot.py at 2018-01-31 22:42:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.90 Mbit/s

95th percentile per-packet one-way delay: 60.975 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 58.99 Mbit/s

95th percentile per-packet one-way delay: 63.861 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 45.93 Mbit/s

95th percentile per-packet one-way delay: 52.427 ms

Loss rate: 0.52%

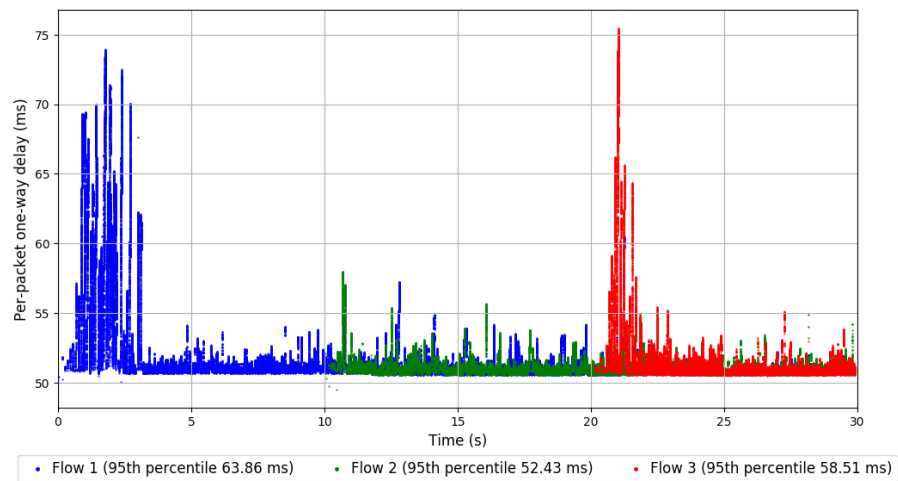
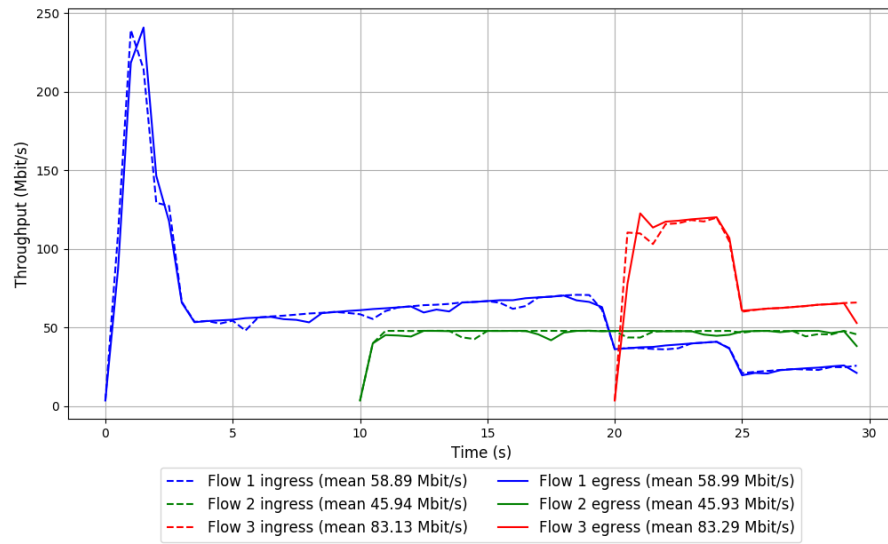
-- Flow 3:

Average throughput: 83.29 Mbit/s

95th percentile per-packet one-way delay: 58.505 ms

Loss rate: 0.82%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-01-31 18:46:58

End at: 2018-01-31 18:47:28

Below is generated by plot.py at 2018-01-31 22:42:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.93 Mbit/s

95th percentile per-packet one-way delay: 59.274 ms

Loss rate: 0.30%

-- Flow 1:

Average throughput: 49.67 Mbit/s

95th percentile per-packet one-way delay: 54.657 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 70.56 Mbit/s

95th percentile per-packet one-way delay: 63.424 ms

Loss rate: 0.28%

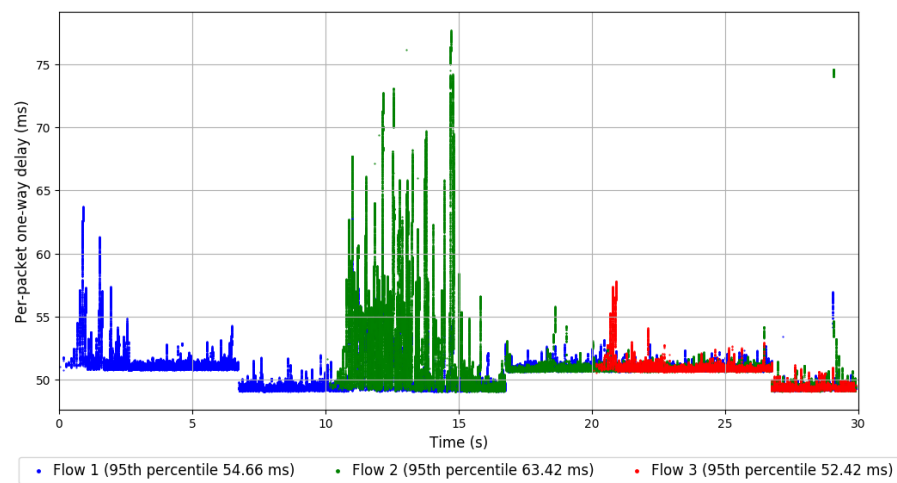
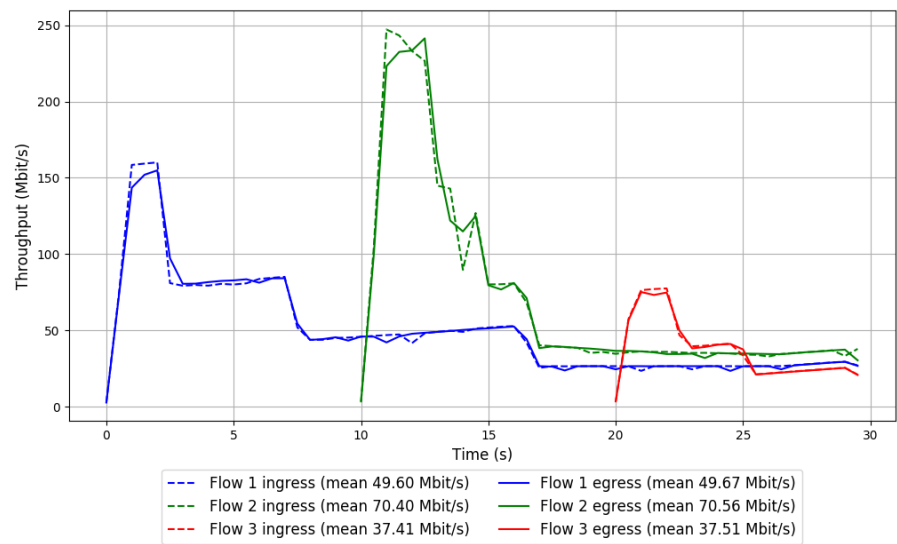
-- Flow 3:

Average throughput: 37.51 Mbit/s

95th percentile per-packet one-way delay: 52.417 ms

Loss rate: 0.73%

Run 10: Report of TCP Vegas — Data Link

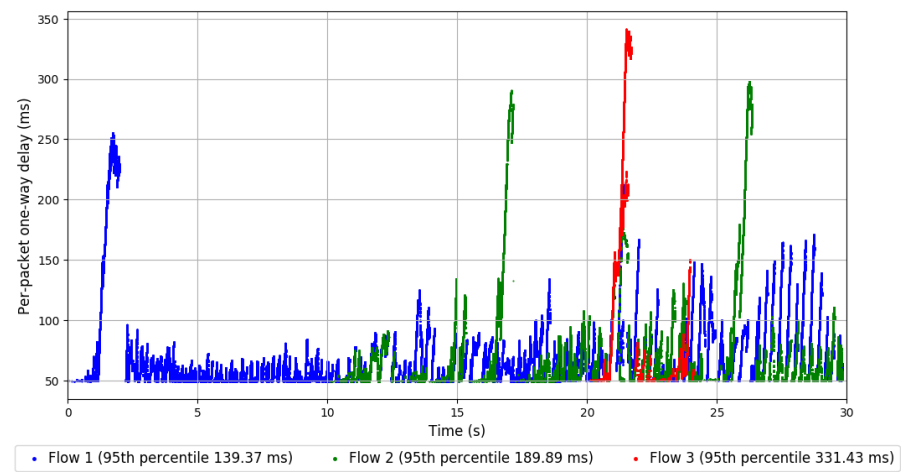
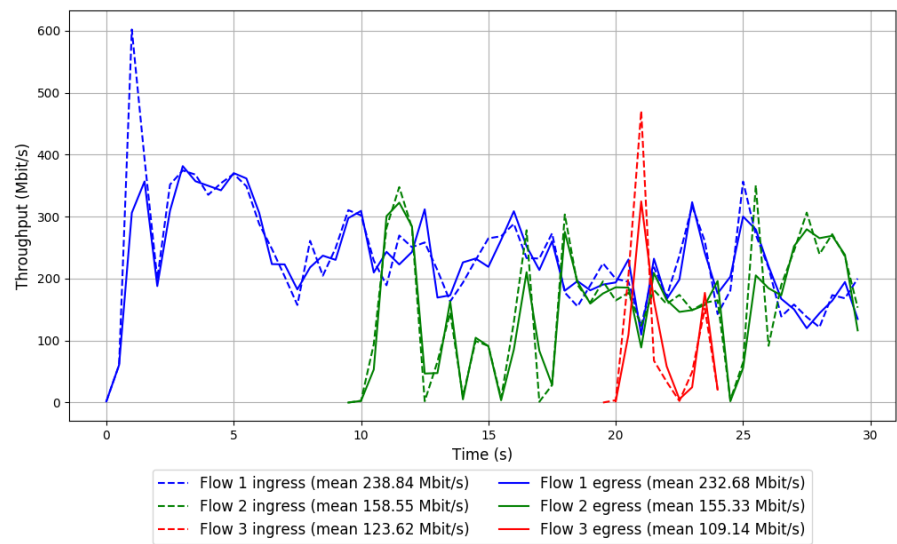


```
Run 1: Statistics of Verus

Start at: 2018-01-31 16:12:46
End at: 2018-01-31 16:13:16

# Below is generated by plot.py at 2018-01-31 22:43:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 351.06 Mbit/s
95th percentile per-packet one-way delay: 171.205 ms
Loss rate: 3.21%
-- Flow 1:
Average throughput: 232.68 Mbit/s
95th percentile per-packet one-way delay: 139.372 ms
Loss rate: 2.90%
-- Flow 2:
Average throughput: 155.33 Mbit/s
95th percentile per-packet one-way delay: 189.889 ms
Loss rate: 2.53%
-- Flow 3:
Average throughput: 109.14 Mbit/s
95th percentile per-packet one-way delay: 331.425 ms
Loss rate: 11.81%
```


Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-01-31 16:29:18

End at: 2018-01-31 16:29:48

Below is generated by plot.py at 2018-01-31 22:43:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 337.87 Mbit/s

95th percentile per-packet one-way delay: 295.565 ms

Loss rate: 13.91%

-- Flow 1:

Average throughput: 229.02 Mbit/s

95th percentile per-packet one-way delay: 278.760 ms

Loss rate: 14.72%

-- Flow 2:

Average throughput: 148.52 Mbit/s

95th percentile per-packet one-way delay: 335.341 ms

Loss rate: 12.89%

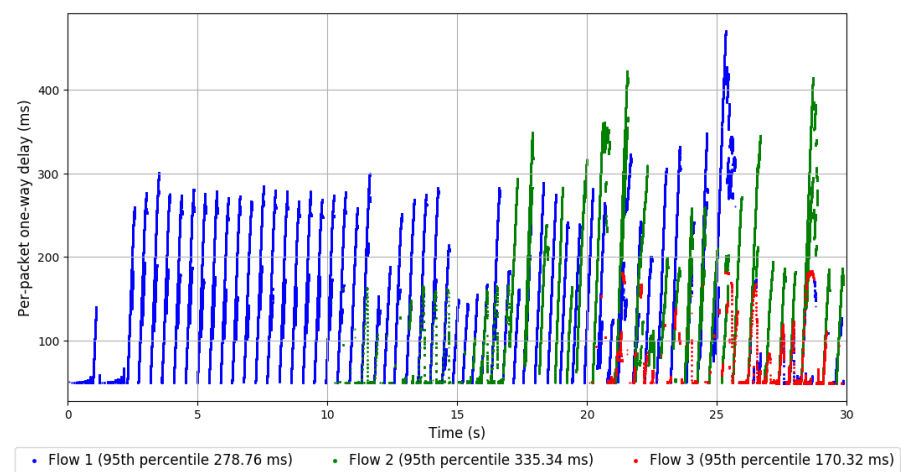
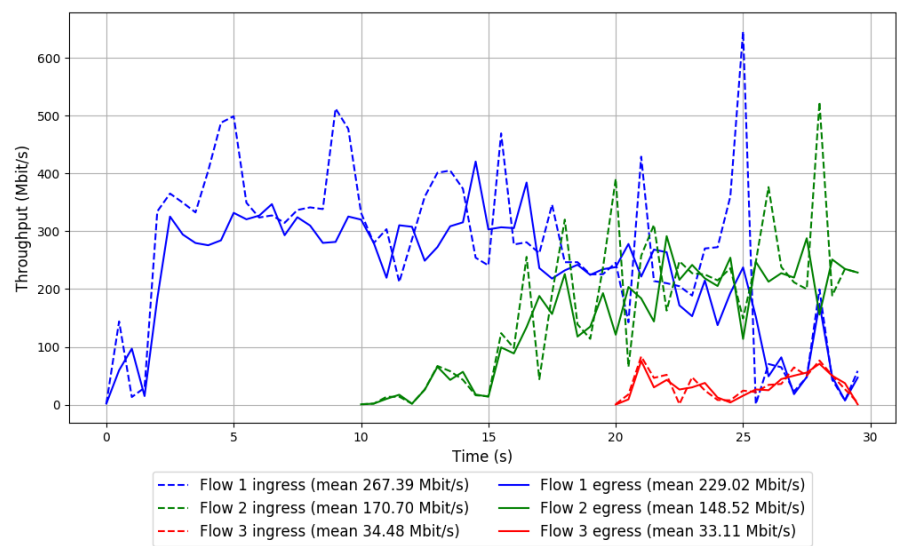
-- Flow 3:

Average throughput: 33.11 Mbit/s

95th percentile per-packet one-way delay: 170.316 ms

Loss rate: 4.96%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-01-31 16:45:49

End at: 2018-01-31 16:46:19

Below is generated by plot.py at 2018-01-31 22:44:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 370.57 Mbit/s

95th percentile per-packet one-way delay: 227.459 ms

Loss rate: 3.85%

-- Flow 1:

Average throughput: 230.71 Mbit/s

95th percentile per-packet one-way delay: 235.861 ms

Loss rate: 3.83%

-- Flow 2:

Average throughput: 185.19 Mbit/s

95th percentile per-packet one-way delay: 180.684 ms

Loss rate: 3.63%

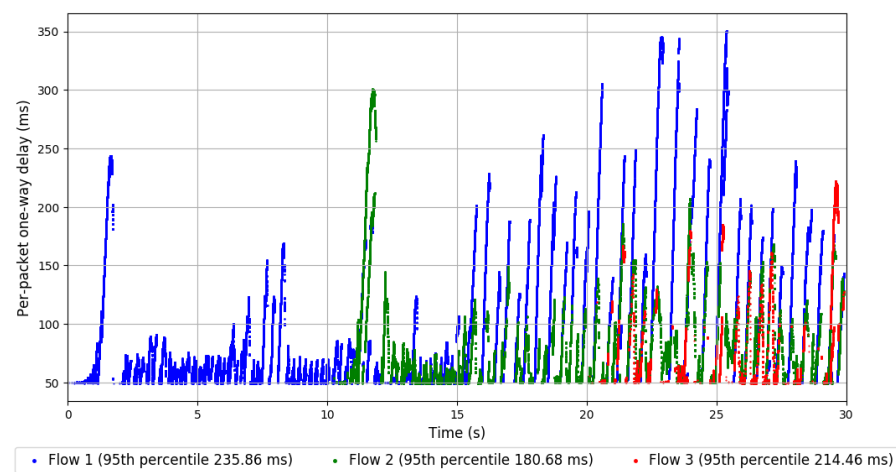
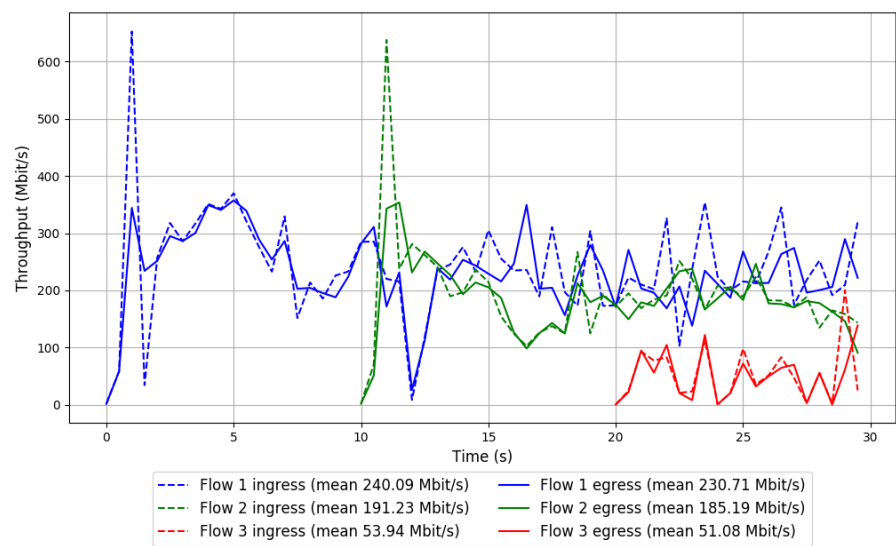
-- Flow 3:

Average throughput: 51.08 Mbit/s

95th percentile per-packet one-way delay: 214.456 ms

Loss rate: 5.73%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-01-31 17:02:29

End at: 2018-01-31 17:02:59

Below is generated by plot.py at 2018-01-31 22:46:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 418.55 Mbit/s

95th percentile per-packet one-way delay: 118.062 ms

Loss rate: 1.92%

-- Flow 1:

Average throughput: 247.98 Mbit/s

95th percentile per-packet one-way delay: 108.922 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 194.47 Mbit/s

95th percentile per-packet one-way delay: 173.281 ms

Loss rate: 3.24%

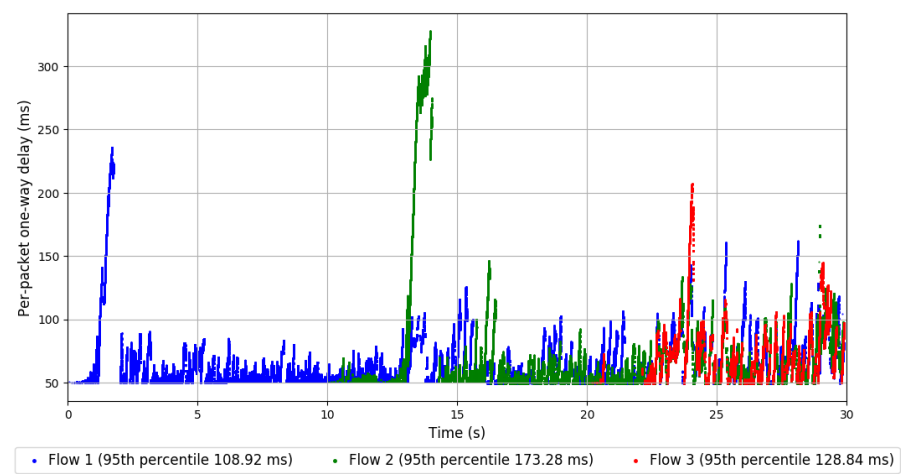
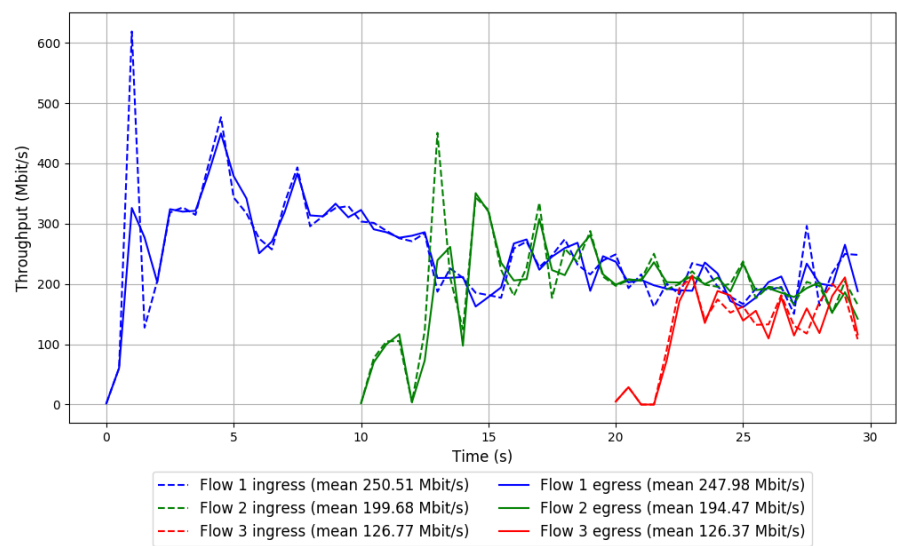
-- Flow 3:

Average throughput: 126.37 Mbit/s

95th percentile per-packet one-way delay: 128.839 ms

Loss rate: 1.35%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-01-31 17:19:48

End at: 2018-01-31 17:20:18

Below is generated by plot.py at 2018-01-31 22:46:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 342.92 Mbit/s

95th percentile per-packet one-way delay: 160.600 ms

Loss rate: 2.64%

-- Flow 1:

Average throughput: 195.64 Mbit/s

95th percentile per-packet one-way delay: 154.314 ms

Loss rate: 3.38%

-- Flow 2:

Average throughput: 171.90 Mbit/s

95th percentile per-packet one-way delay: 127.075 ms

Loss rate: 0.80%

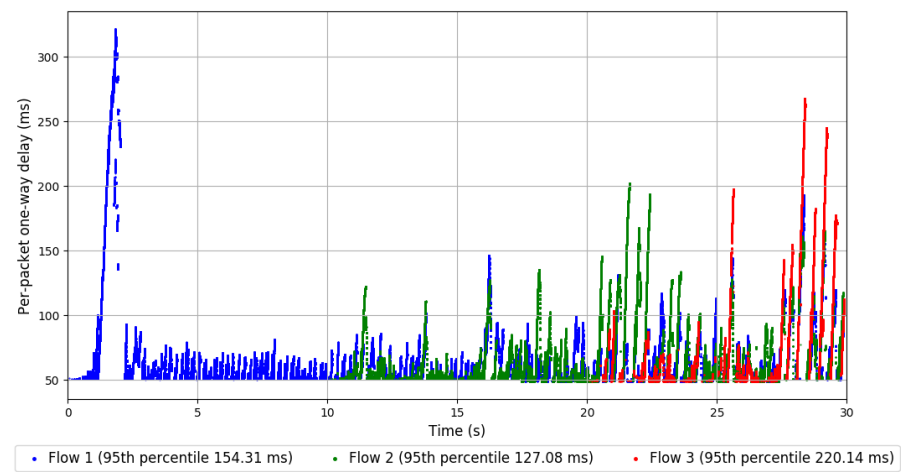
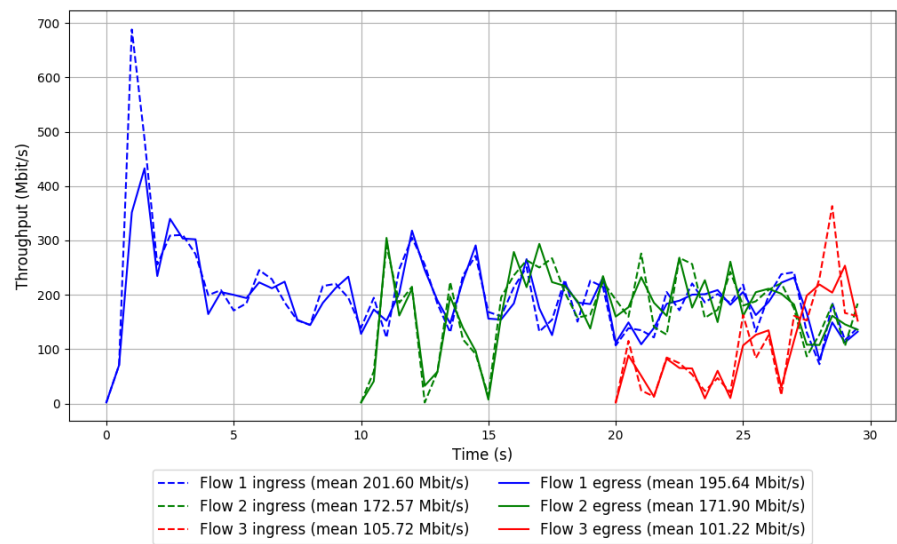
-- Flow 3:

Average throughput: 101.22 Mbit/s

95th percentile per-packet one-way delay: 220.141 ms

Loss rate: 4.42%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-01-31 17:36:52

End at: 2018-01-31 17:37:22

Below is generated by plot.py at 2018-01-31 22:46:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 322.15 Mbit/s

95th percentile per-packet one-way delay: 148.099 ms

Loss rate: 2.40%

-- Flow 1:

Average throughput: 193.42 Mbit/s

95th percentile per-packet one-way delay: 128.979 ms

Loss rate: 3.46%

-- Flow 2:

Average throughput: 154.48 Mbit/s

95th percentile per-packet one-way delay: 155.634 ms

Loss rate: 0.55%

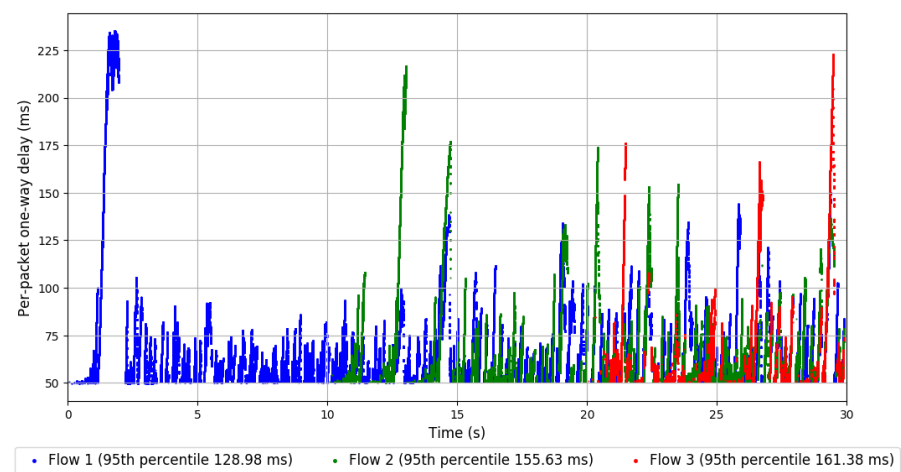
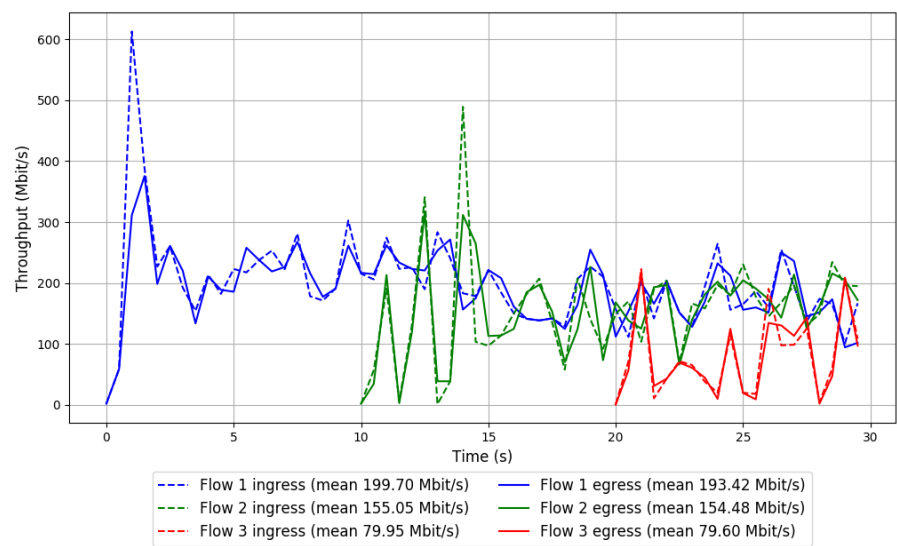
-- Flow 3:

Average throughput: 79.60 Mbit/s

95th percentile per-packet one-way delay: 161.384 ms

Loss rate: 1.53%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-01-31 17:54:03

End at: 2018-01-31 17:54:33

Below is generated by plot.py at 2018-01-31 22:48:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 325.17 Mbit/s

95th percentile per-packet one-way delay: 140.254 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 162.24 Mbit/s

95th percentile per-packet one-way delay: 138.360 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 168.71 Mbit/s

95th percentile per-packet one-way delay: 189.381 ms

Loss rate: 0.51%

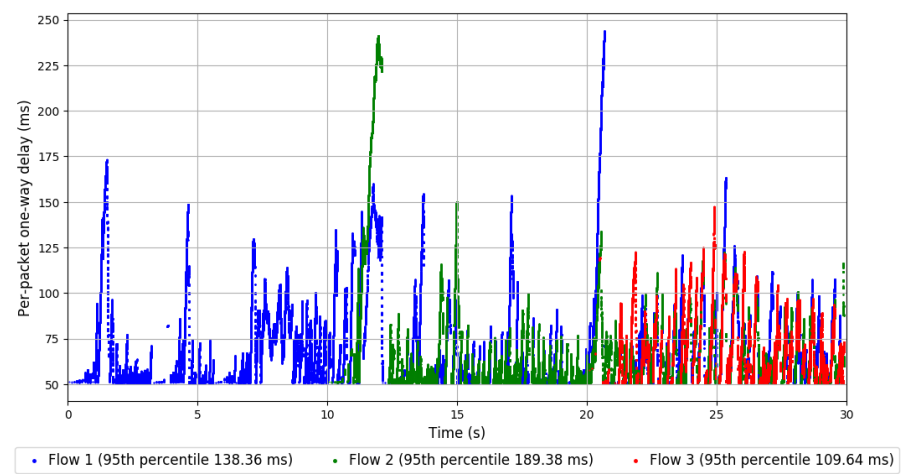
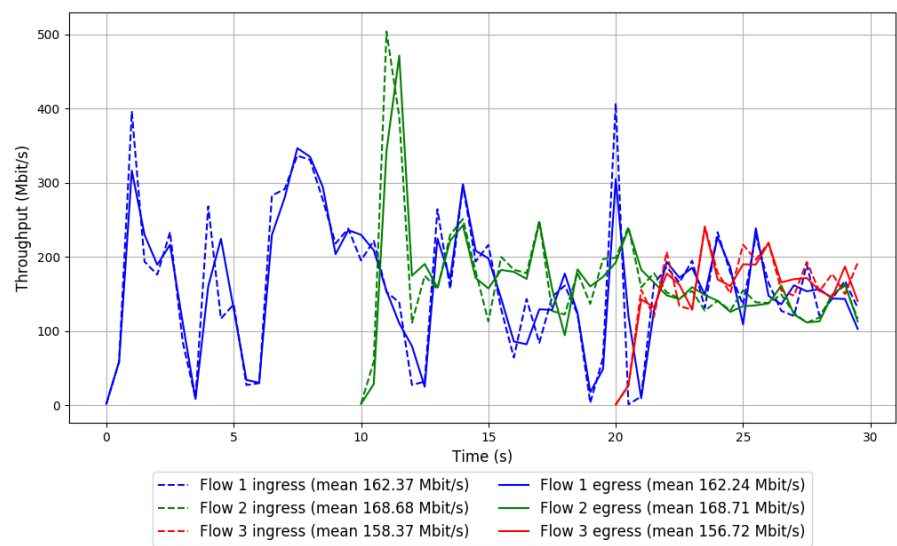
-- Flow 3:

Average throughput: 156.72 Mbit/s

95th percentile per-packet one-way delay: 109.643 ms

Loss rate: 2.13%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-01-31 18:10:35

End at: 2018-01-31 18:11:05

Below is generated by plot.py at 2018-01-31 22:50:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 378.25 Mbit/s

95th percentile per-packet one-way delay: 139.667 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 218.75 Mbit/s

95th percentile per-packet one-way delay: 139.921 ms

Loss rate: 1.62%

-- Flow 2:

Average throughput: 180.58 Mbit/s

95th percentile per-packet one-way delay: 144.974 ms

Loss rate: 0.47%

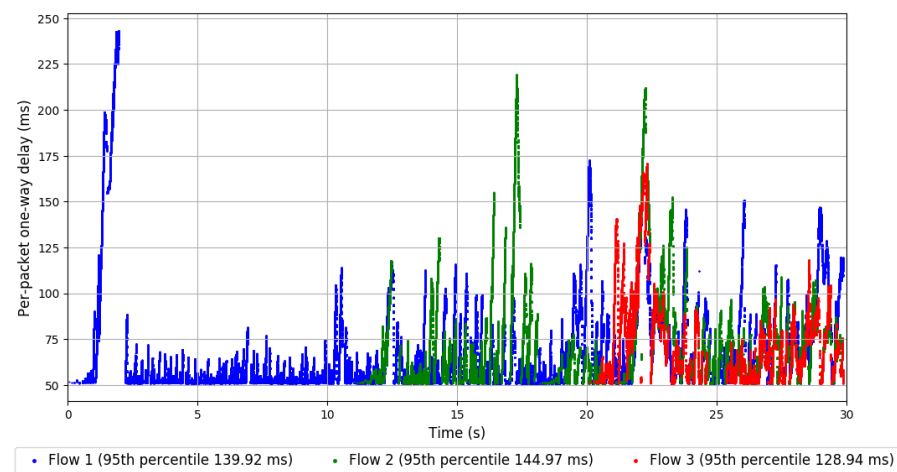
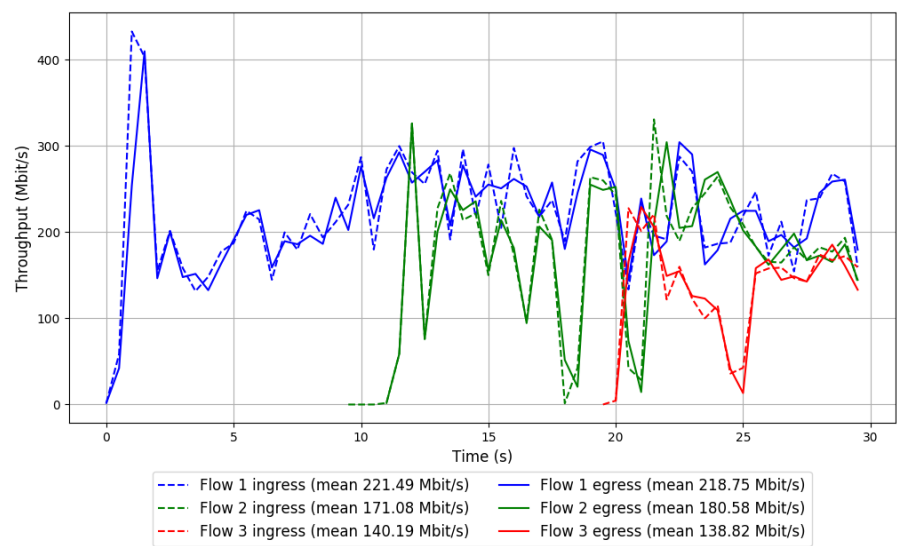
-- Flow 3:

Average throughput: 138.82 Mbit/s

95th percentile per-packet one-way delay: 128.945 ms

Loss rate: 1.99%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-01-31 18:27:58

End at: 2018-01-31 18:28:28

Below is generated by plot.py at 2018-01-31 22:51:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 363.63 Mbit/s

95th percentile per-packet one-way delay: 122.603 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 209.29 Mbit/s

95th percentile per-packet one-way delay: 113.440 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 167.35 Mbit/s

95th percentile per-packet one-way delay: 122.445 ms

Loss rate: 1.05%

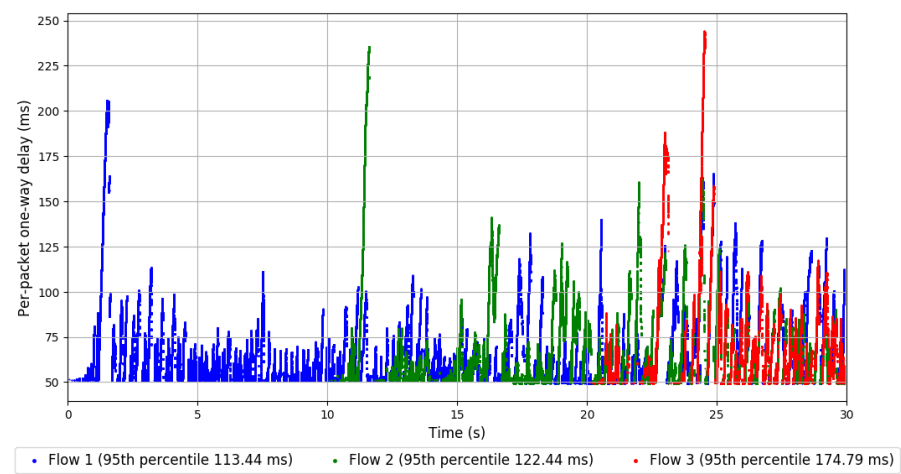
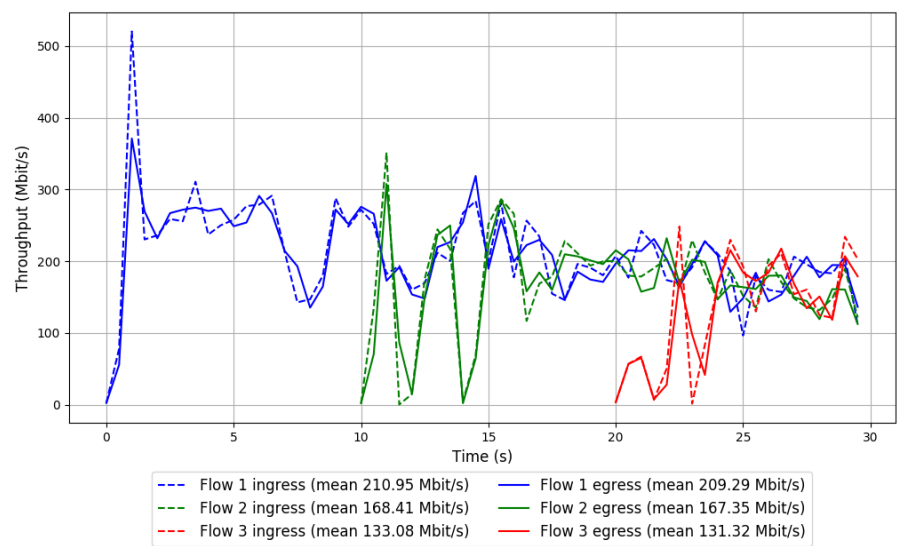
-- Flow 3:

Average throughput: 131.32 Mbit/s

95th percentile per-packet one-way delay: 174.793 ms

Loss rate: 2.29%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-01-31 18:44:52

End at: 2018-01-31 18:45:22

Below is generated by plot.py at 2018-01-31 22:51:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 360.15 Mbit/s

95th percentile per-packet one-way delay: 152.120 ms

Loss rate: 3.28%

-- Flow 1:

Average throughput: 193.39 Mbit/s

95th percentile per-packet one-way delay: 208.428 ms

Loss rate: 5.15%

-- Flow 2:

Average throughput: 181.33 Mbit/s

95th percentile per-packet one-way delay: 141.069 ms

Loss rate: 0.81%

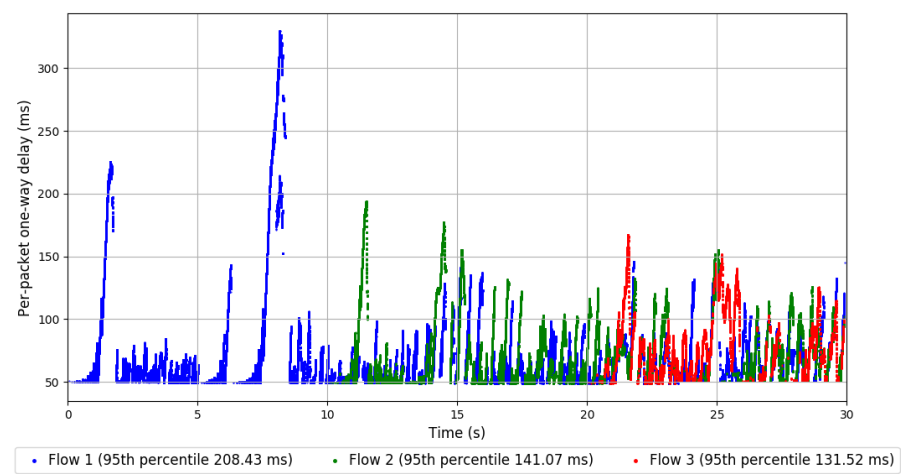
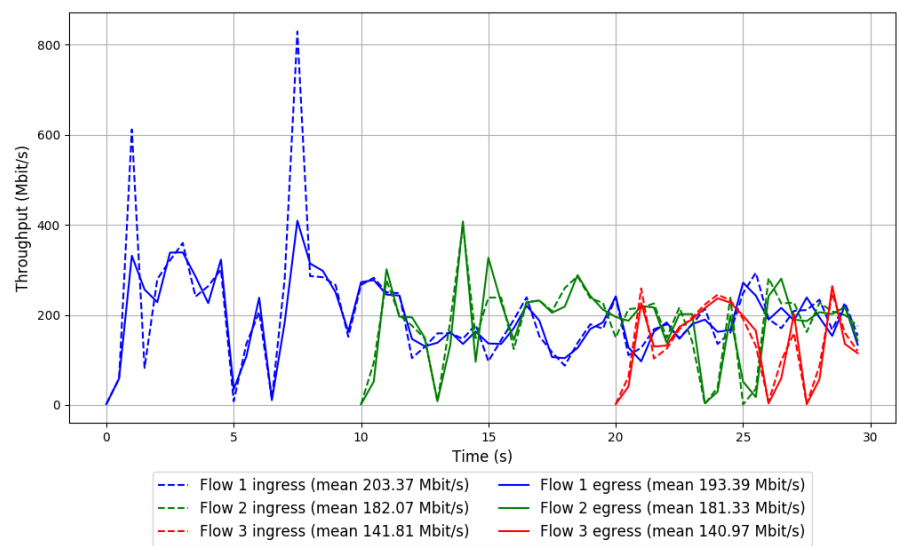
-- Flow 3:

Average throughput: 140.97 Mbit/s

95th percentile per-packet one-way delay: 131.520 ms

Loss rate: 1.54%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-01-31 16:24:52

End at: 2018-01-31 16:25:22

Below is generated by plot.py at 2018-01-31 22:51:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.44 Mbit/s

95th percentile per-packet one-way delay: 50.417 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 43.23 Mbit/s

95th percentile per-packet one-way delay: 50.452 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 29.60 Mbit/s

95th percentile per-packet one-way delay: 50.377 ms

Loss rate: 0.60%

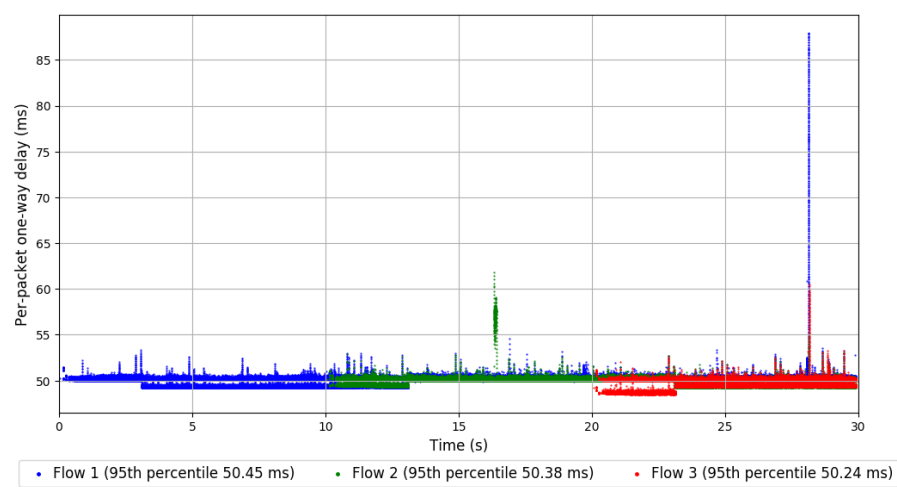
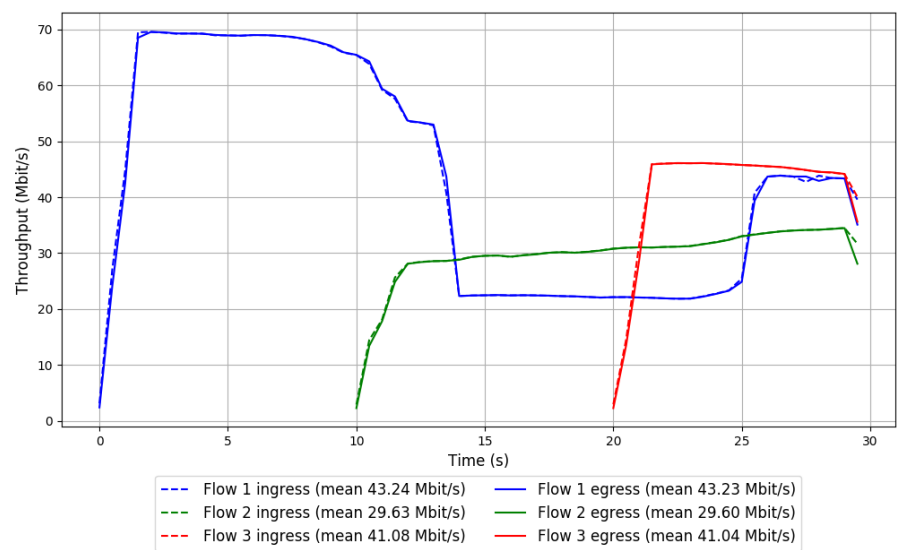
-- Flow 3:

Average throughput: 41.04 Mbit/s

95th percentile per-packet one-way delay: 50.241 ms

Loss rate: 1.09%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-01-31 16:41:15

End at: 2018-01-31 16:41:45

Below is generated by plot.py at 2018-01-31 22:51:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 39.93 Mbit/s

95th percentile per-packet one-way delay: 50.637 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 13.52 Mbit/s

95th percentile per-packet one-way delay: 50.658 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 26.48 Mbit/s

95th percentile per-packet one-way delay: 50.555 ms

Loss rate: 0.92%

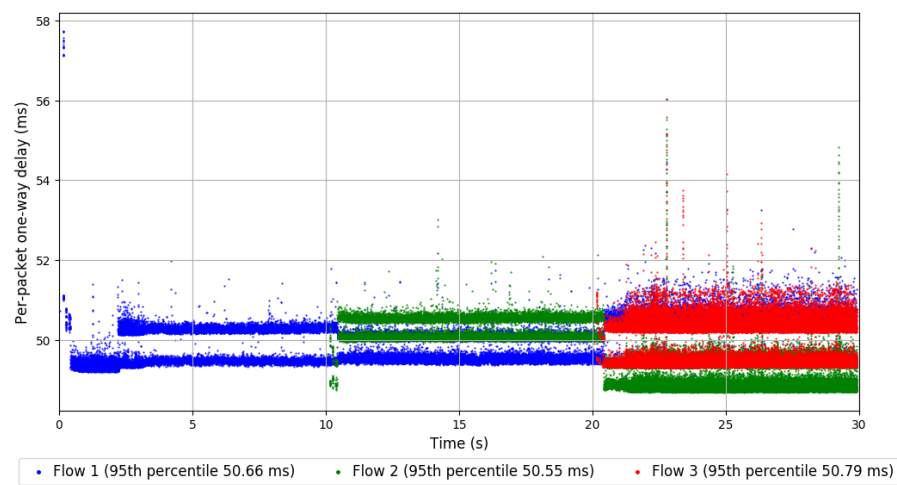
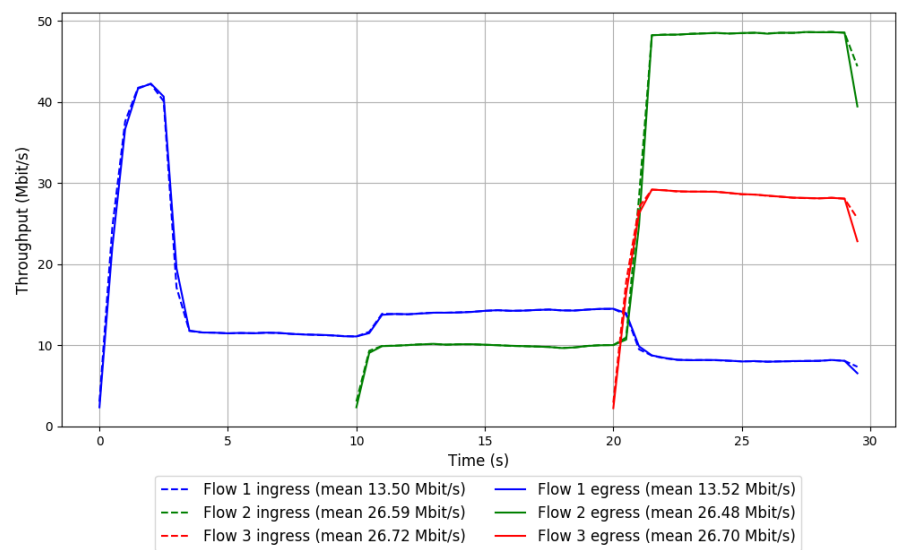
-- Flow 3:

Average throughput: 26.70 Mbit/s

95th percentile per-packet one-way delay: 50.787 ms

Loss rate: 1.06%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-01-31 16:57:50

End at: 2018-01-31 16:58:20

Below is generated by plot.py at 2018-01-31 22:51:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 72.44 Mbit/s

95th percentile per-packet one-way delay: 50.914 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 41.49 Mbit/s

95th percentile per-packet one-way delay: 51.022 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 35.01 Mbit/s

95th percentile per-packet one-way delay: 50.474 ms

Loss rate: 0.17%

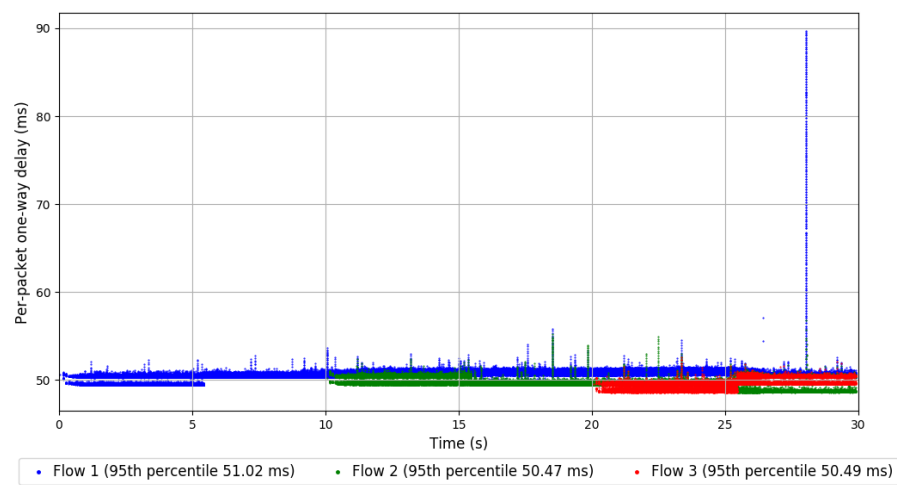
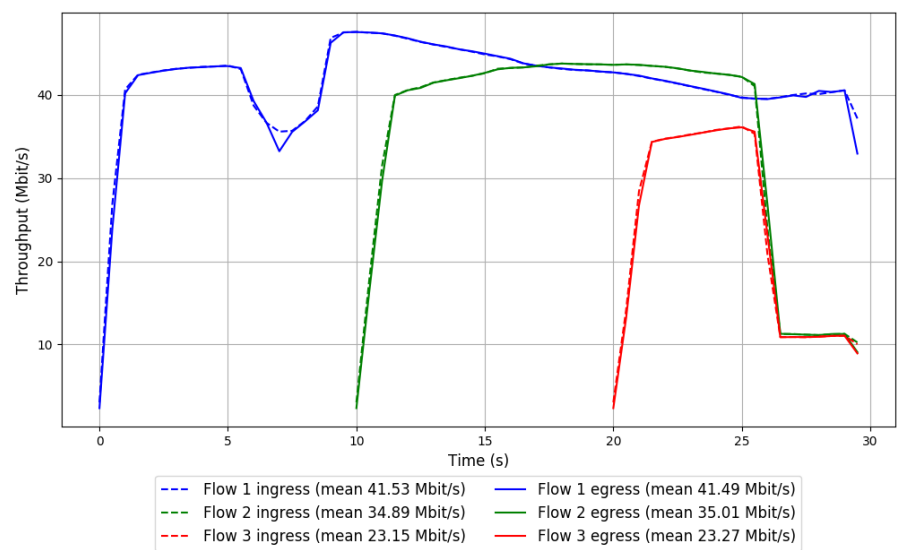
-- Flow 3:

Average throughput: 23.27 Mbit/s

95th percentile per-packet one-way delay: 50.493 ms

Loss rate: 0.48%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-01-31 17:15:12

End at: 2018-01-31 17:15:42

Below is generated by plot.py at 2018-01-31 22:51:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 41.72 Mbit/s

95th percentile per-packet one-way delay: 50.723 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 21.51 Mbit/s

95th percentile per-packet one-way delay: 50.665 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 23.96 Mbit/s

95th percentile per-packet one-way delay: 50.588 ms

Loss rate: 0.20%

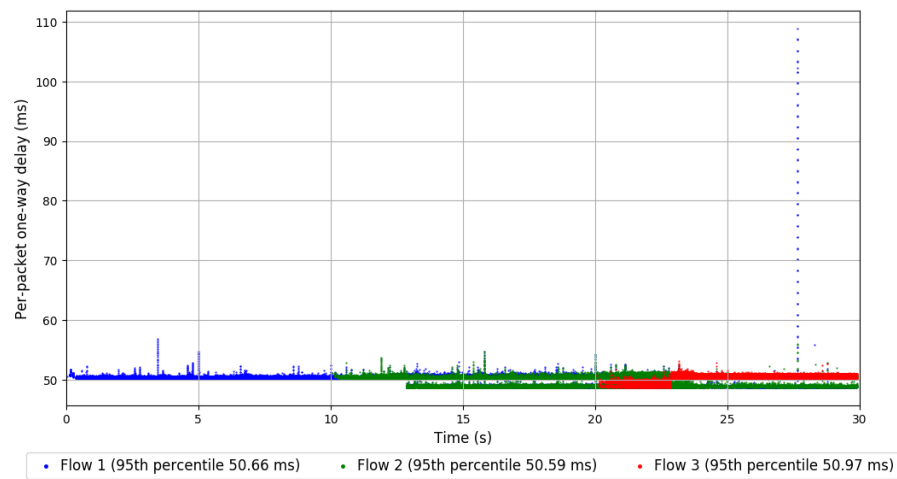
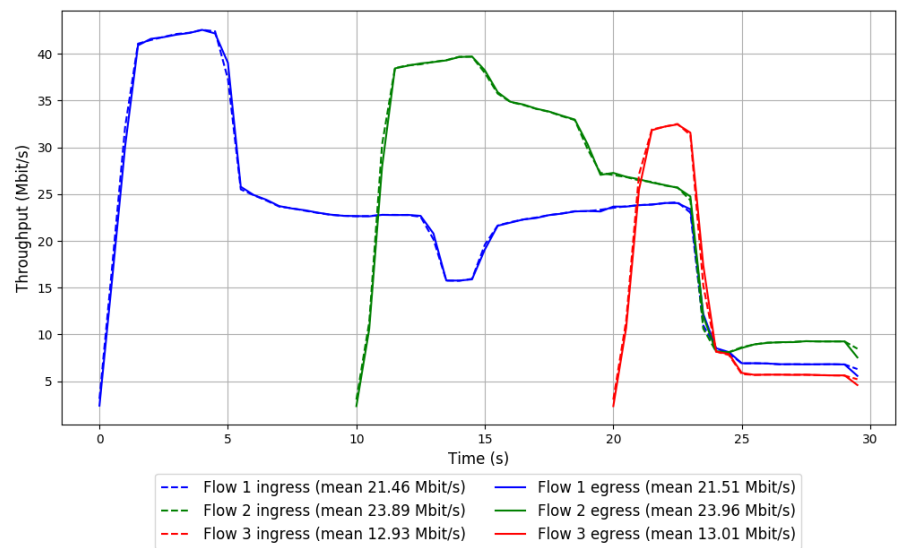
-- Flow 3:

Average throughput: 13.01 Mbit/s

95th percentile per-packet one-way delay: 50.974 ms

Loss rate: 0.45%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-01-31 17:32:09

End at: 2018-01-31 17:32:39

Below is generated by plot.py at 2018-01-31 22:51:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.98 Mbit/s

95th percentile per-packet one-way delay: 50.838 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 40.11 Mbit/s

95th percentile per-packet one-way delay: 50.870 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 42.29 Mbit/s

95th percentile per-packet one-way delay: 50.825 ms

Loss rate: 0.41%

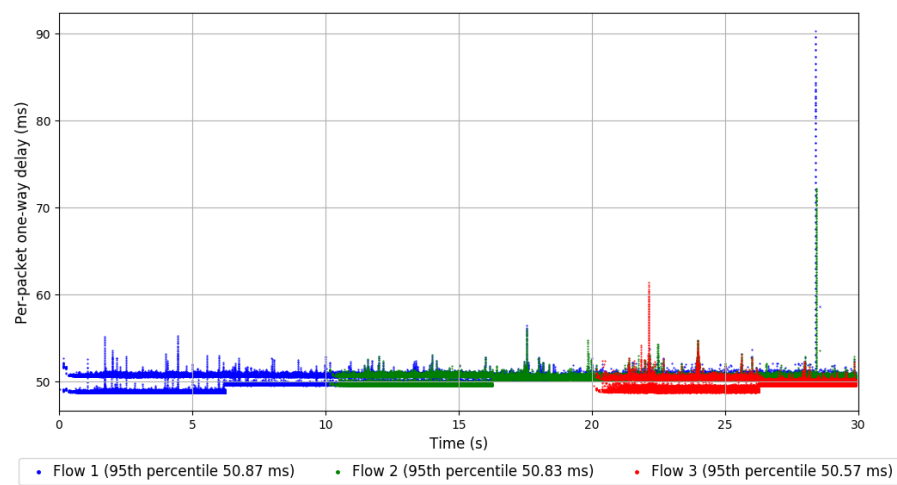
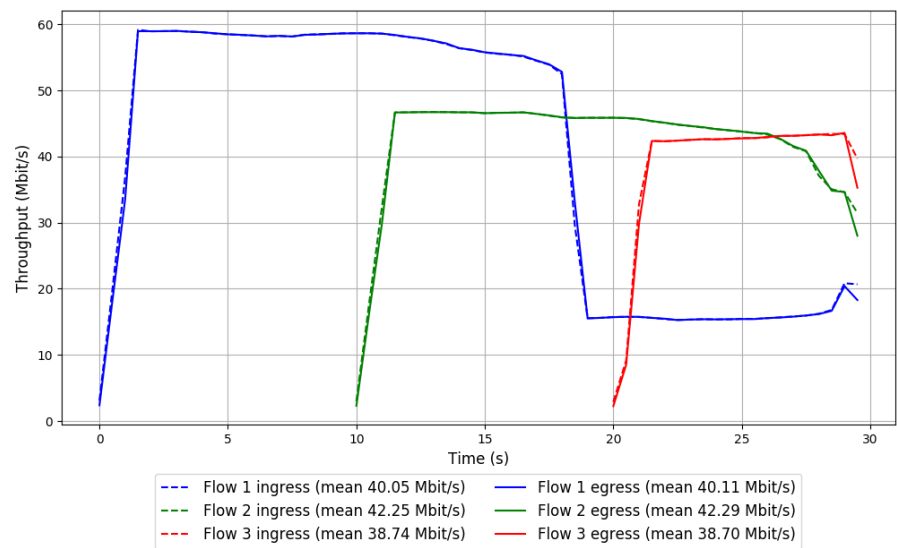
-- Flow 3:

Average throughput: 38.70 Mbit/s

95th percentile per-packet one-way delay: 50.566 ms

Loss rate: 1.13%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-01-31 17:49:25

End at: 2018-01-31 17:49:55

Below is generated by plot.py at 2018-01-31 22:51:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.56 Mbit/s

95th percentile per-packet one-way delay: 50.933 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 31.81 Mbit/s

95th percentile per-packet one-way delay: 50.940 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 41.90 Mbit/s

95th percentile per-packet one-way delay: 50.931 ms

Loss rate: 0.56%

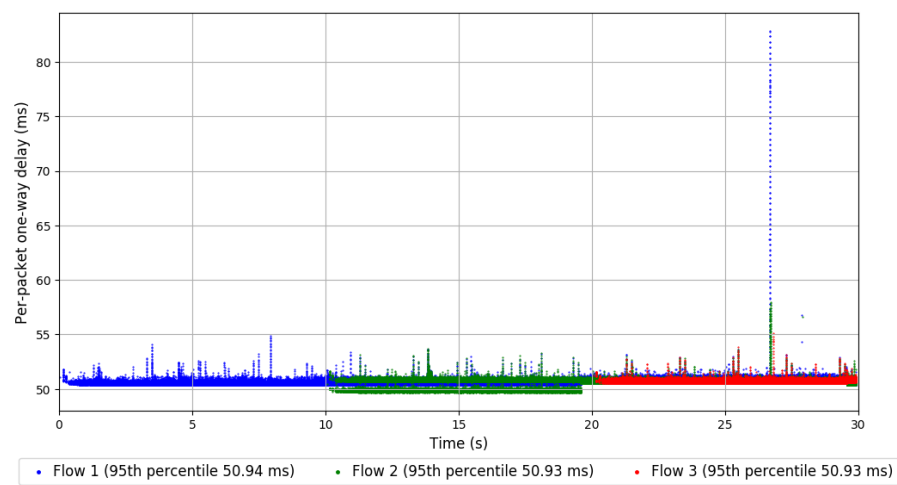
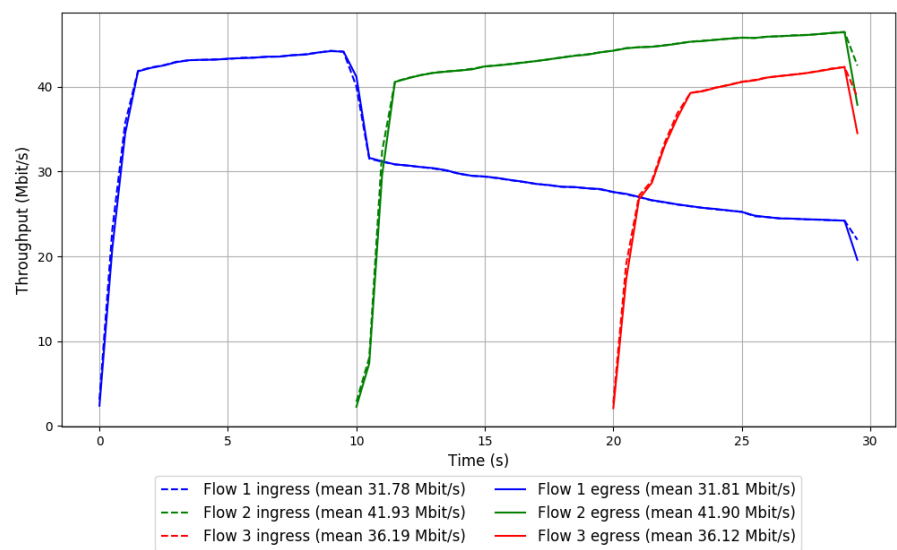
-- Flow 3:

Average throughput: 36.12 Mbit/s

95th percentile per-packet one-way delay: 50.926 ms

Loss rate: 1.19%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-01-31 18:05:54

End at: 2018-01-31 18:06:24

Below is generated by plot.py at 2018-01-31 22:51:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 57.35 Mbit/s

95th percentile per-packet one-way delay: 51.255 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 36.09 Mbit/s

95th percentile per-packet one-way delay: 51.238 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 16.84 Mbit/s

95th percentile per-packet one-way delay: 51.206 ms

Loss rate: 0.47%

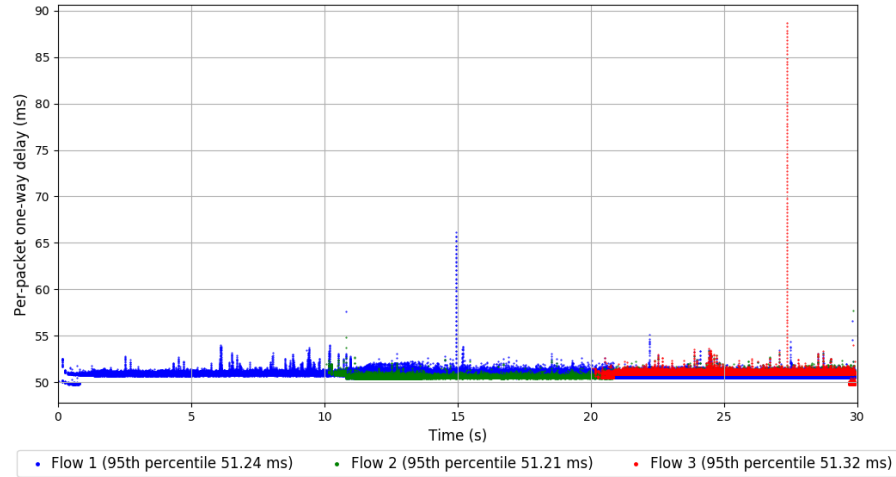
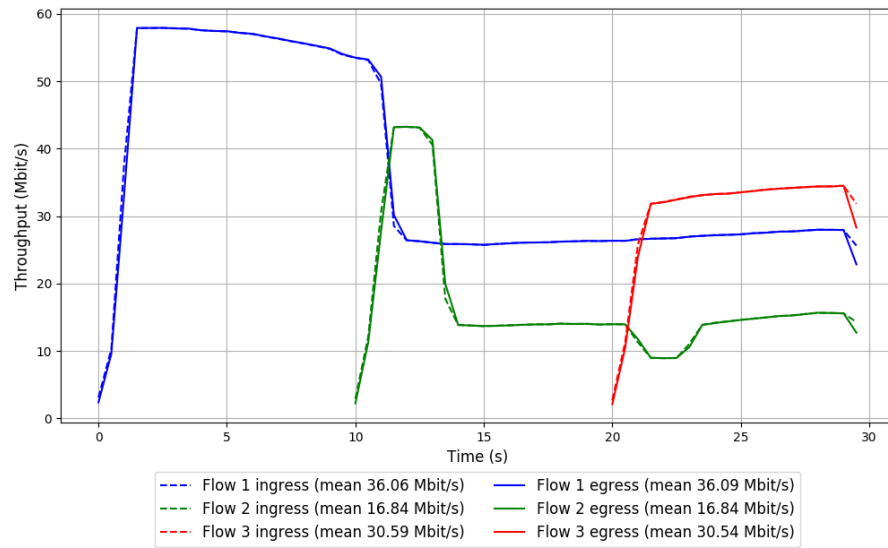
-- Flow 3:

Average throughput: 30.54 Mbit/s

95th percentile per-packet one-way delay: 51.317 ms

Loss rate: 1.16%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-01-31 18:23:17

End at: 2018-01-31 18:23:47

Below is generated by plot.py at 2018-01-31 22:51:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 66.83 Mbit/s

95th percentile per-packet one-way delay: 50.972 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 24.75 Mbit/s

95th percentile per-packet one-way delay: 50.913 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 47.02 Mbit/s

95th percentile per-packet one-way delay: 51.000 ms

Loss rate: 0.50%

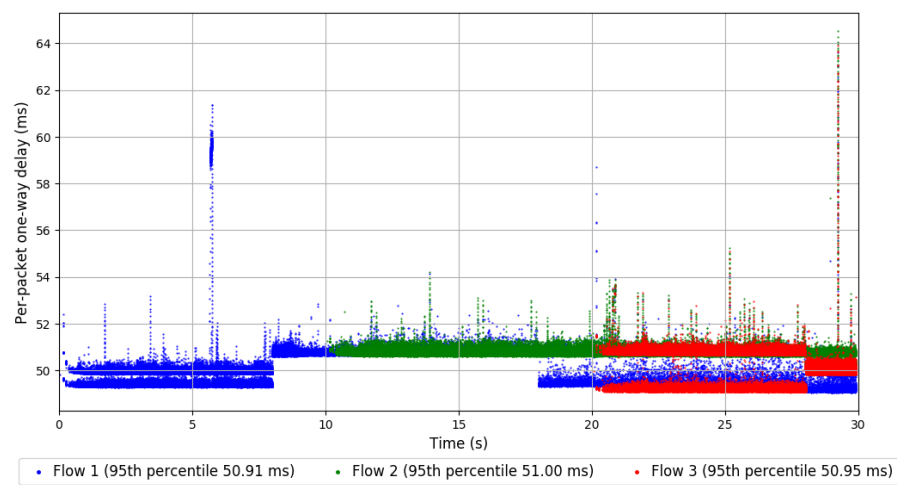
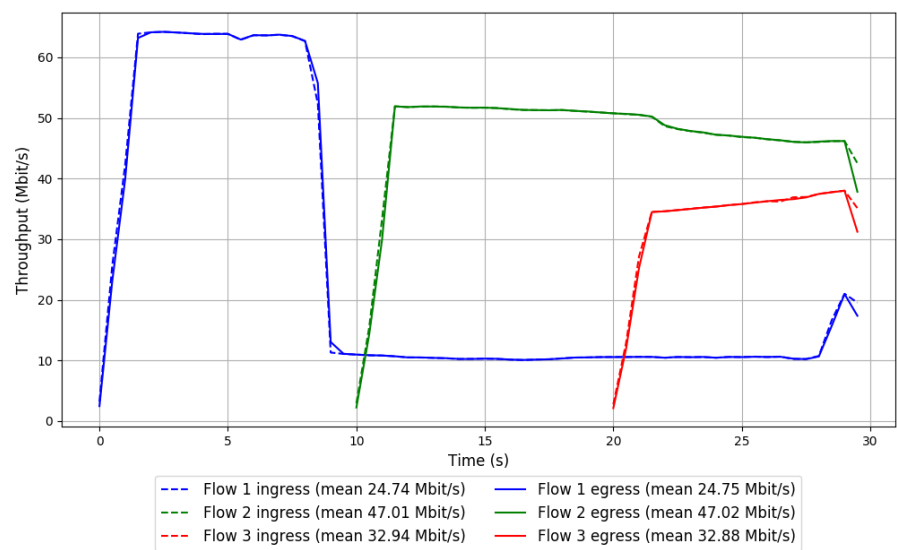
-- Flow 3:

Average throughput: 32.88 Mbit/s

95th percentile per-packet one-way delay: 50.955 ms

Loss rate: 1.18%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-01-31 18:40:15

End at: 2018-01-31 18:40:45

Below is generated by plot.py at 2018-01-31 22:51:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 47.33 Mbit/s

95th percentile per-packet one-way delay: 50.808 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 24.87 Mbit/s

95th percentile per-packet one-way delay: 50.816 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 15.18 Mbit/s

95th percentile per-packet one-way delay: 50.715 ms

Loss rate: 0.30%

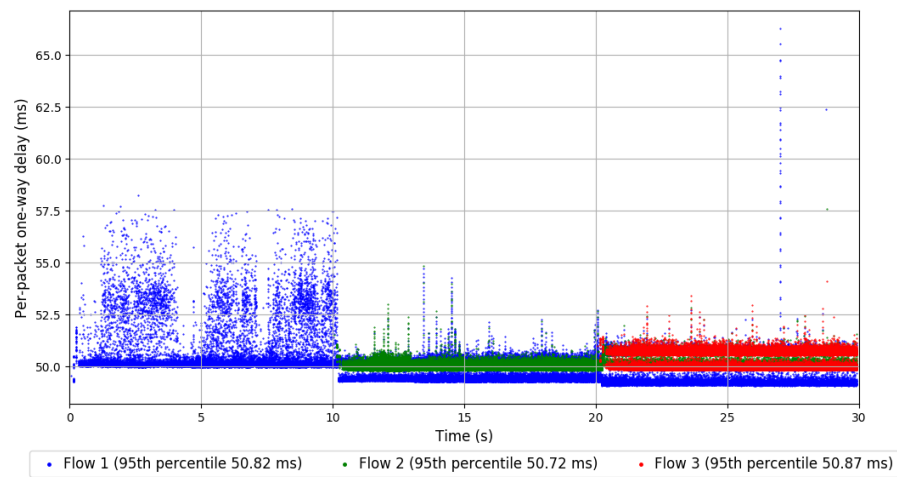
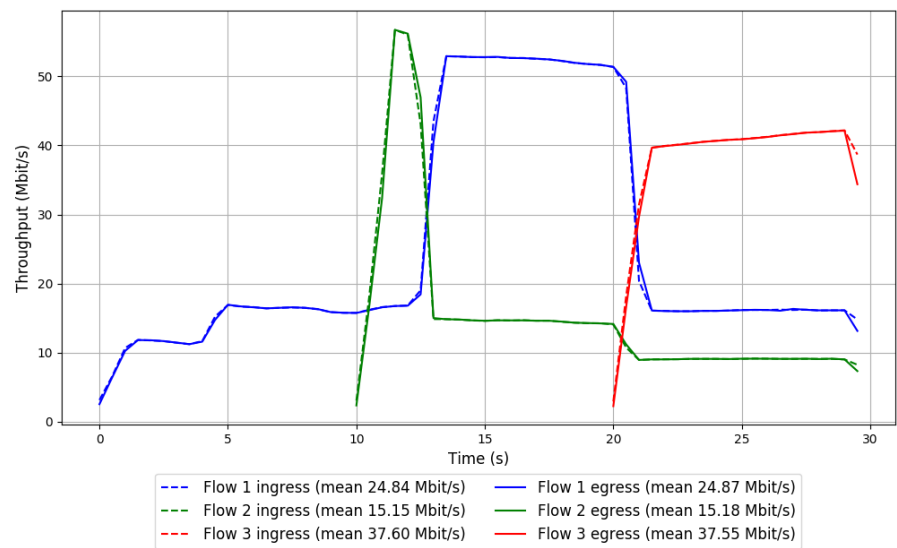
-- Flow 3:

Average throughput: 37.55 Mbit/s

95th percentile per-packet one-way delay: 50.866 ms

Loss rate: 1.15%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-01-31 18:57:13

End at: 2018-01-31 18:57:43

Below is generated by plot.py at 2018-01-31 22:52:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.71 Mbit/s

95th percentile per-packet one-way delay: 50.885 ms

Loss rate: 0.31%

-- Flow 1:

Average throughput: 36.68 Mbit/s

95th percentile per-packet one-way delay: 50.805 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 37.61 Mbit/s

95th percentile per-packet one-way delay: 50.824 ms

Loss rate: 0.19%

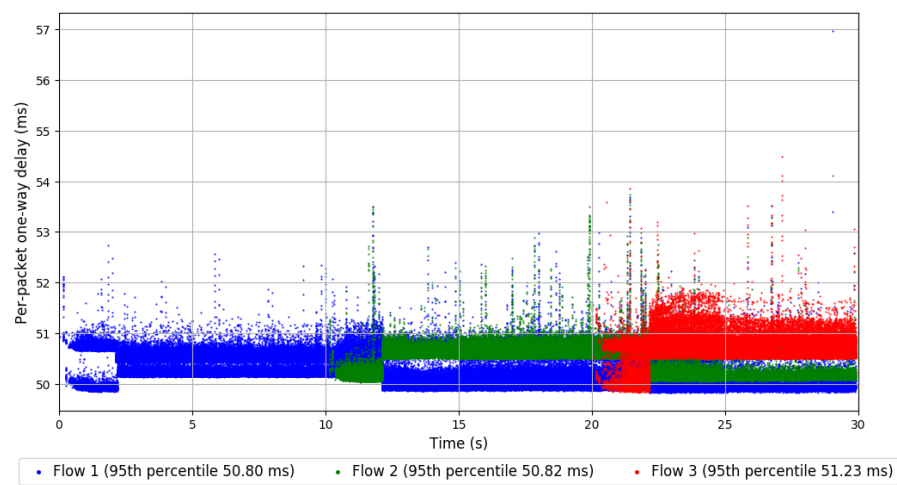
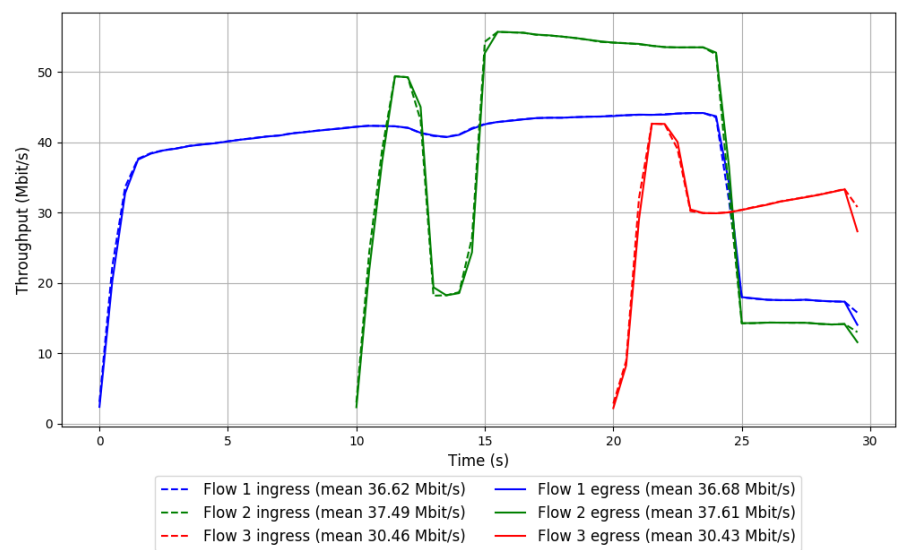
-- Flow 3:

Average throughput: 30.43 Mbit/s

95th percentile per-packet one-way delay: 51.233 ms

Loss rate: 1.13%

Run 10: Report of Copa — Data Link

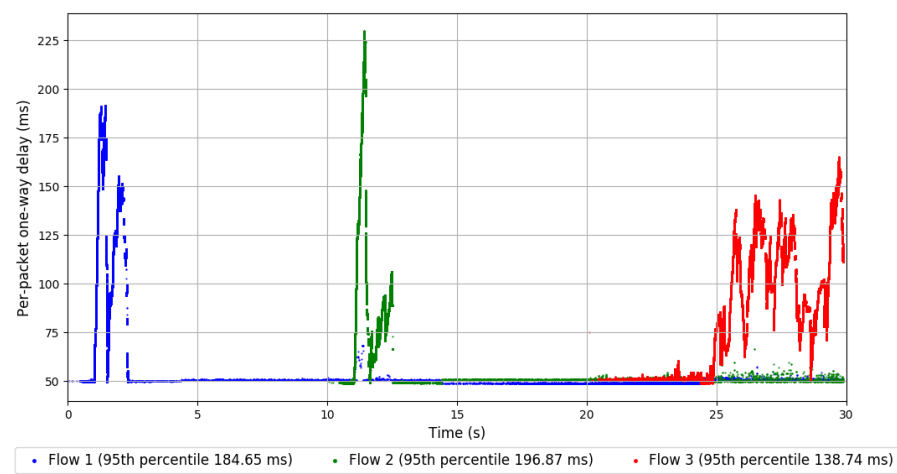
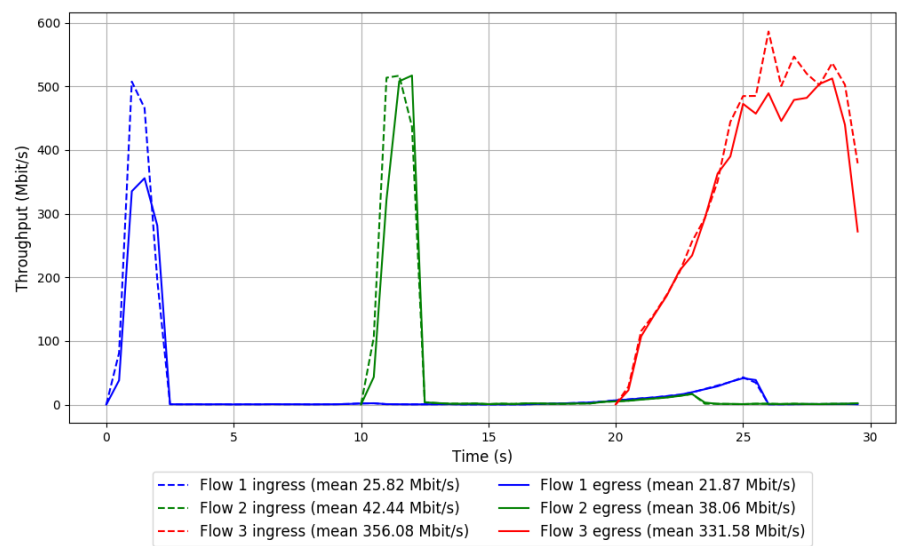


```
Run 1: Statistics of FillP

Start at: 2018-01-31 16:24:01
End at: 2018-01-31 16:24:31

# Below is generated by plot.py at 2018-01-31 22:55:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 155.85 Mbit/s
95th percentile per-packet one-way delay: 150.080 ms
Loss rate: 9.65%
-- Flow 1:
Average throughput: 21.87 Mbit/s
95th percentile per-packet one-way delay: 184.653 ms
Loss rate: 15.57%
-- Flow 2:
Average throughput: 38.06 Mbit/s
95th percentile per-packet one-way delay: 196.872 ms
Loss rate: 10.78%
-- Flow 3:
Average throughput: 331.58 Mbit/s
95th percentile per-packet one-way delay: 138.737 ms
Loss rate: 8.08%
```


Run 1: Report of FillP — Data Link

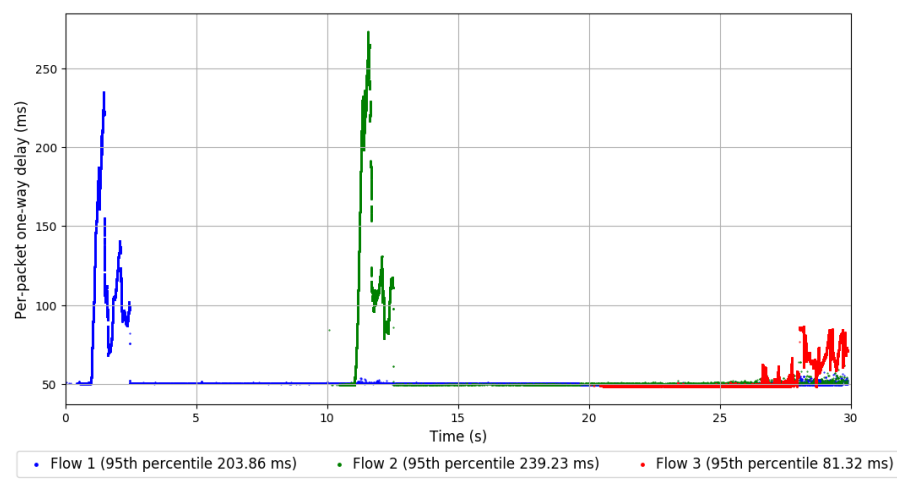
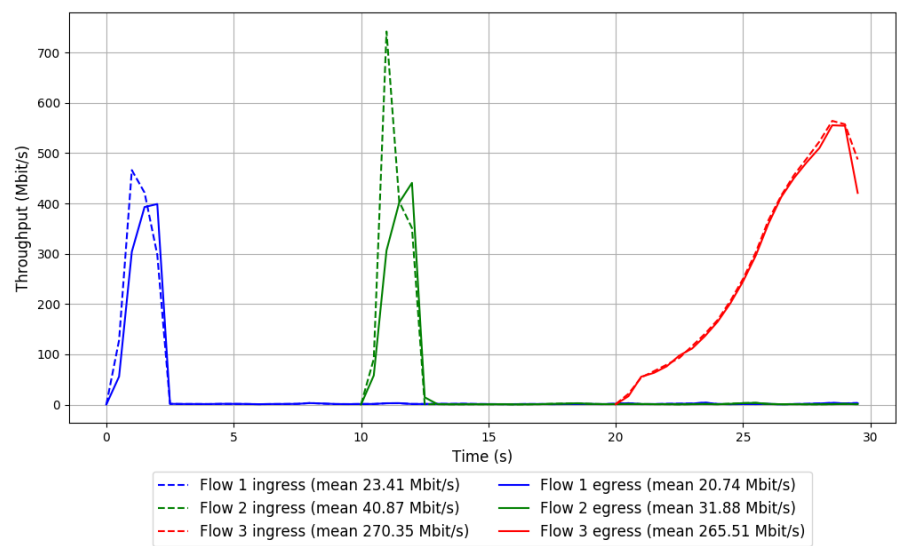


```
Run 2: Statistics of FillP

Start at: 2018-01-31 16:40:25
End at: 2018-01-31 16:40:55

# Below is generated by plot.py at 2018-01-31 22:55:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 129.29 Mbit/s
95th percentile per-packet one-way delay: 174.333 ms
Loss rate: 8.10%
-- Flow 1:
Average throughput: 20.74 Mbit/s
95th percentile per-packet one-way delay: 203.860 ms
Loss rate: 11.68%
-- Flow 2:
Average throughput: 31.88 Mbit/s
95th percentile per-packet one-way delay: 239.228 ms
Loss rate: 22.52%
-- Flow 3:
Average throughput: 265.51 Mbit/s
95th percentile per-packet one-way delay: 81.323 ms
Loss rate: 2.79%
```

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-01-31 16:57:00

End at: 2018-01-31 16:57:30

Below is generated by plot.py at 2018-01-31 22:55:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.38 Mbit/s

95th percentile per-packet one-way delay: 181.254 ms

Loss rate: 10.53%

-- Flow 1:

Average throughput: 28.28 Mbit/s

95th percentile per-packet one-way delay: 197.705 ms

Loss rate: 10.52%

-- Flow 2:

Average throughput: 39.54 Mbit/s

95th percentile per-packet one-way delay: 207.497 ms

Loss rate: 12.13%

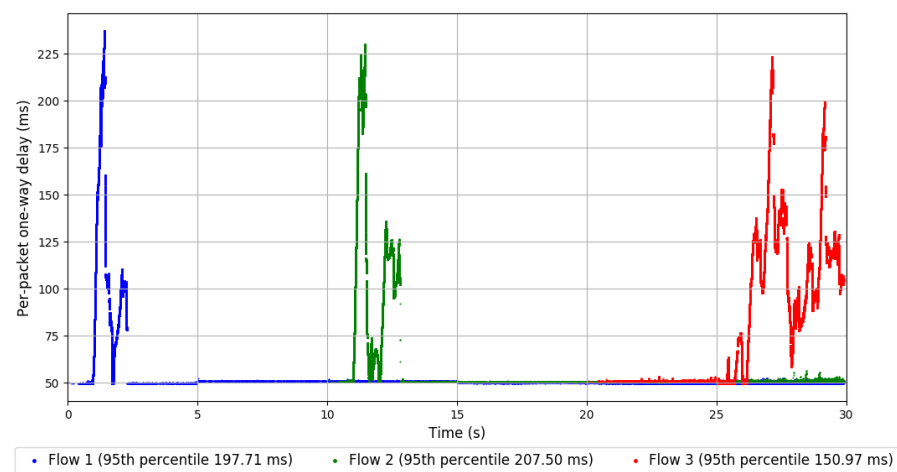
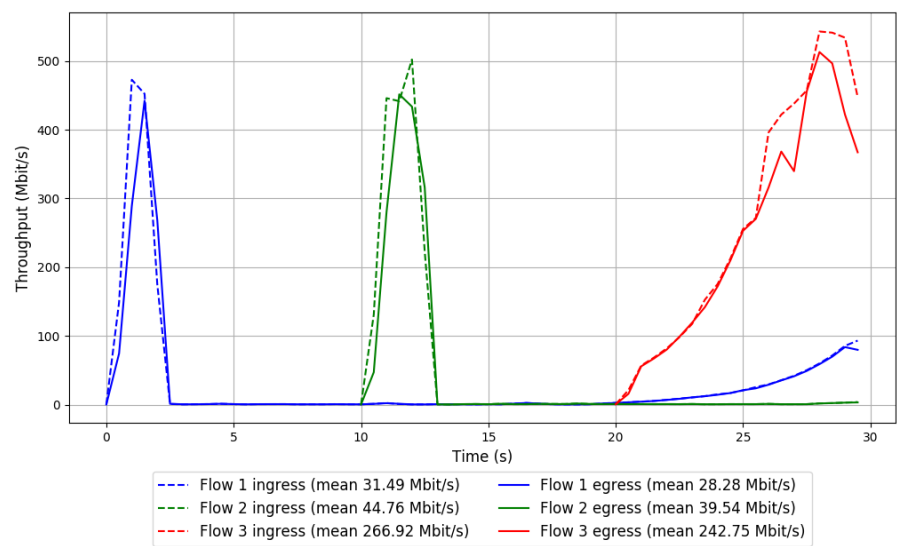
-- Flow 3:

Average throughput: 242.75 Mbit/s

95th percentile per-packet one-way delay: 150.970 ms

Loss rate: 9.99%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-01-31 17:13:59

End at: 2018-01-31 17:14:29

Below is generated by plot.py at 2018-01-31 23:07:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 459.19 Mbit/s

95th percentile per-packet one-way delay: 171.358 ms

Loss rate: 10.09%

-- Flow 1:

Average throughput: 237.50 Mbit/s

95th percentile per-packet one-way delay: 138.513 ms

Loss rate: 8.70%

-- Flow 2:

Average throughput: 303.90 Mbit/s

95th percentile per-packet one-way delay: 186.593 ms

Loss rate: 11.20%

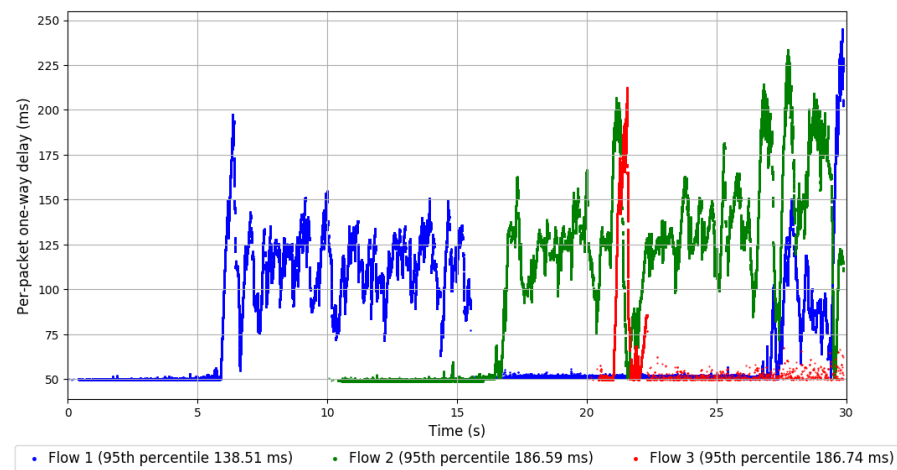
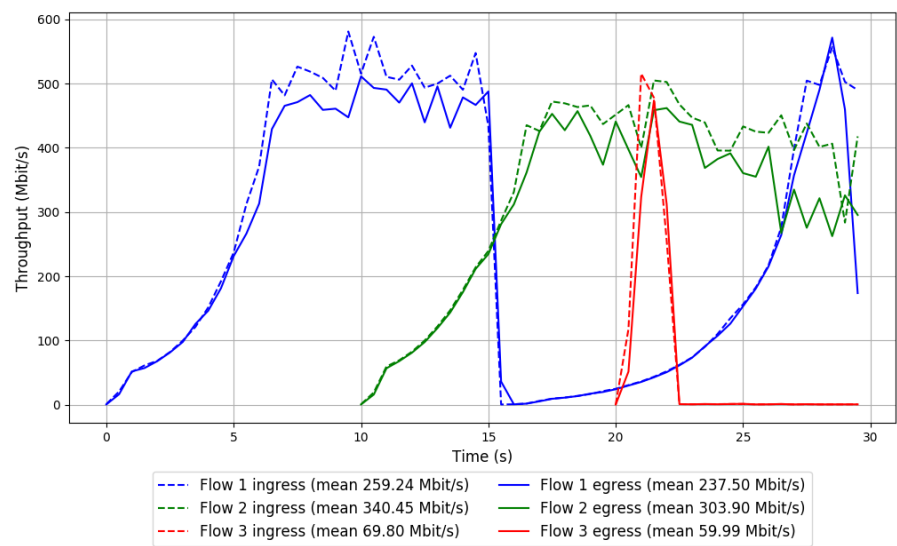
-- Flow 3:

Average throughput: 59.99 Mbit/s

95th percentile per-packet one-way delay: 186.740 ms

Loss rate: 14.93%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-01-31 17:30:59

End at: 2018-01-31 17:31:29

Below is generated by plot.py at 2018-01-31 23:07:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 411.83 Mbit/s

95th percentile per-packet one-way delay: 165.153 ms

Loss rate: 9.58%

-- Flow 1:

Average throughput: 372.45 Mbit/s

95th percentile per-packet one-way delay: 161.872 ms

Loss rate: 9.07%

-- Flow 2:

Average throughput: 29.80 Mbit/s

95th percentile per-packet one-way delay: 159.924 ms

Loss rate: 9.35%

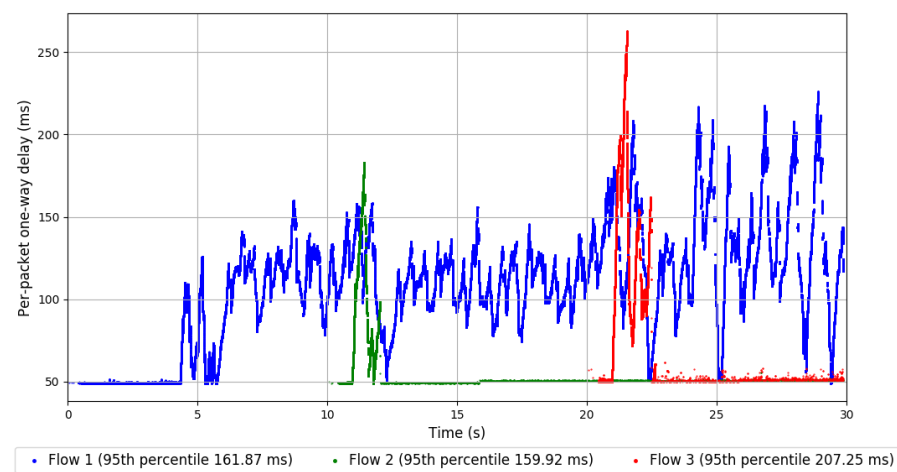
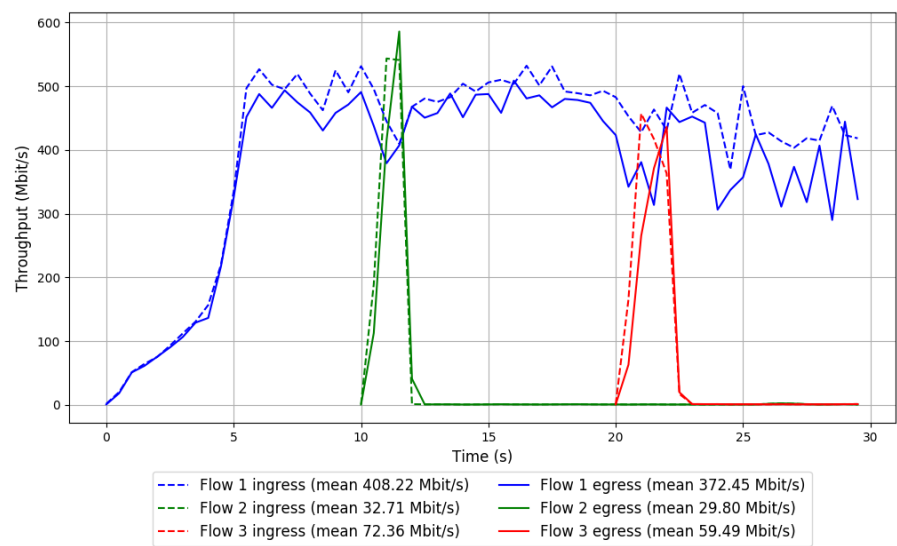
-- Flow 3:

Average throughput: 59.49 Mbit/s

95th percentile per-packet one-way delay: 207.249 ms

Loss rate: 18.51%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-01-31 17:48:36

End at: 2018-01-31 17:49:06

Below is generated by plot.py at 2018-01-31 23:07:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.89 Mbit/s

95th percentile per-packet one-way delay: 156.875 ms

Loss rate: 9.59%

-- Flow 1:

Average throughput: 24.21 Mbit/s

95th percentile per-packet one-way delay: 199.352 ms

Loss rate: 14.79%

-- Flow 2:

Average throughput: 30.69 Mbit/s

95th percentile per-packet one-way delay: 198.786 ms

Loss rate: 14.67%

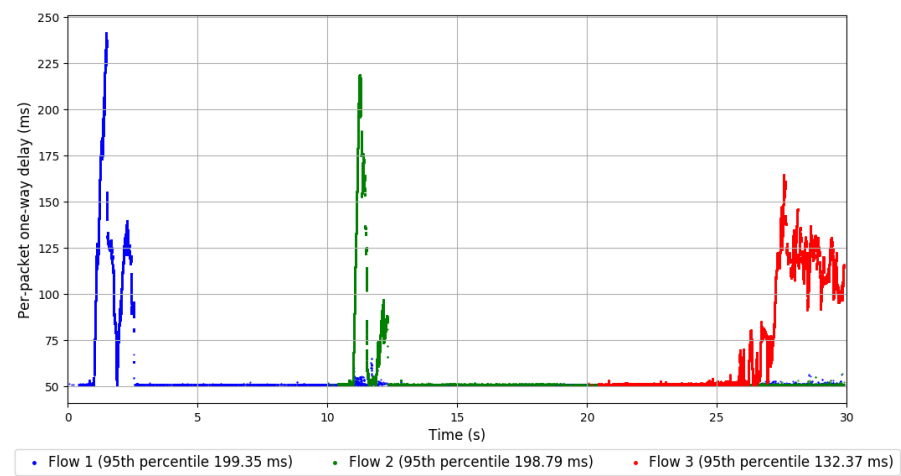
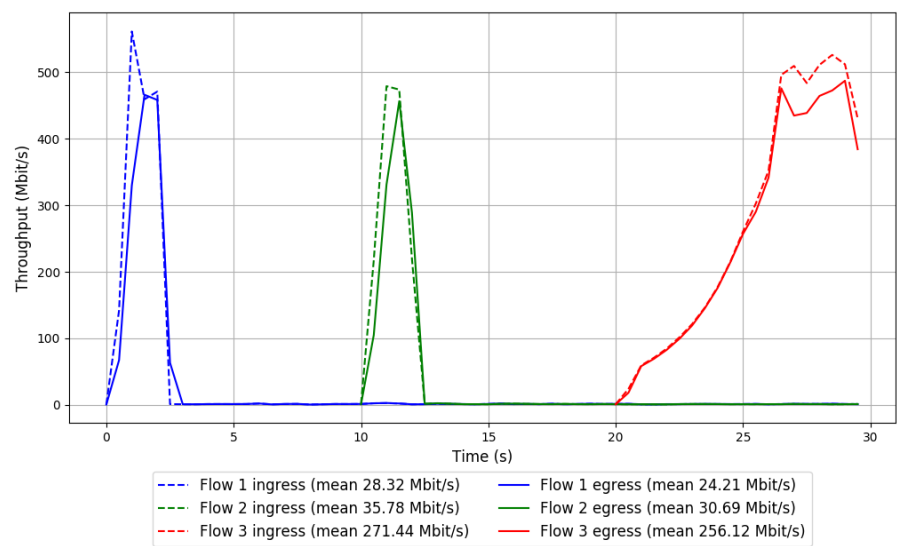
-- Flow 3:

Average throughput: 256.12 Mbit/s

95th percentile per-packet one-way delay: 132.372 ms

Loss rate: 6.61%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-01-31 18:05:09

End at: 2018-01-31 18:05:39

Below is generated by plot.py at 2018-01-31 23:07:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.10 Mbit/s

95th percentile per-packet one-way delay: 216.542 ms

Loss rate: 16.56%

-- Flow 1:

Average throughput: 27.00 Mbit/s

95th percentile per-packet one-way delay: 202.061 ms

Loss rate: 11.14%

-- Flow 2:

Average throughput: 31.36 Mbit/s

95th percentile per-packet one-way delay: 261.588 ms

Loss rate: 26.75%

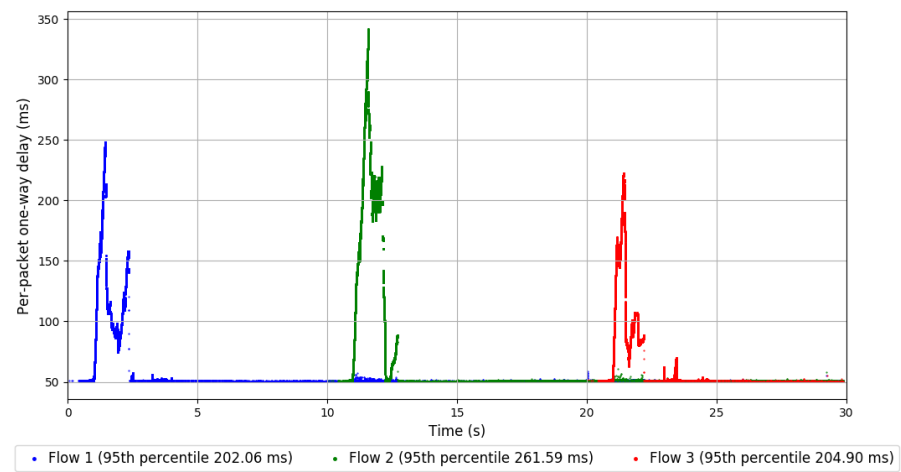
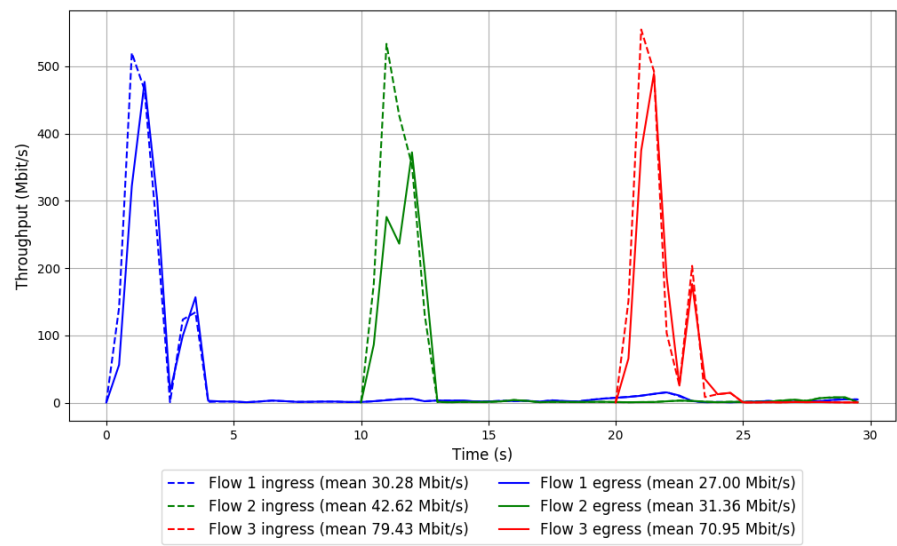
-- Flow 3:

Average throughput: 70.95 Mbit/s

95th percentile per-packet one-way delay: 204.898 ms

Loss rate: 11.83%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-01-31 18:22:31

End at: 2018-01-31 18:23:01

Below is generated by plot.py at 2018-01-31 23:07:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.31 Mbit/s

95th percentile per-packet one-way delay: 213.061 ms

Loss rate: 15.61%

-- Flow 1:

Average throughput: 26.72 Mbit/s

95th percentile per-packet one-way delay: 230.011 ms

Loss rate: 19.89%

-- Flow 2:

Average throughput: 30.42 Mbit/s

95th percentile per-packet one-way delay: 196.680 ms

Loss rate: 12.49%

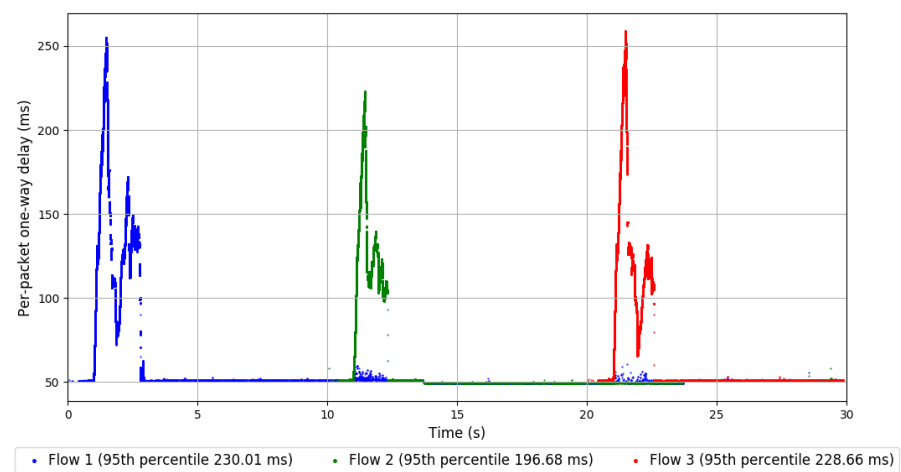
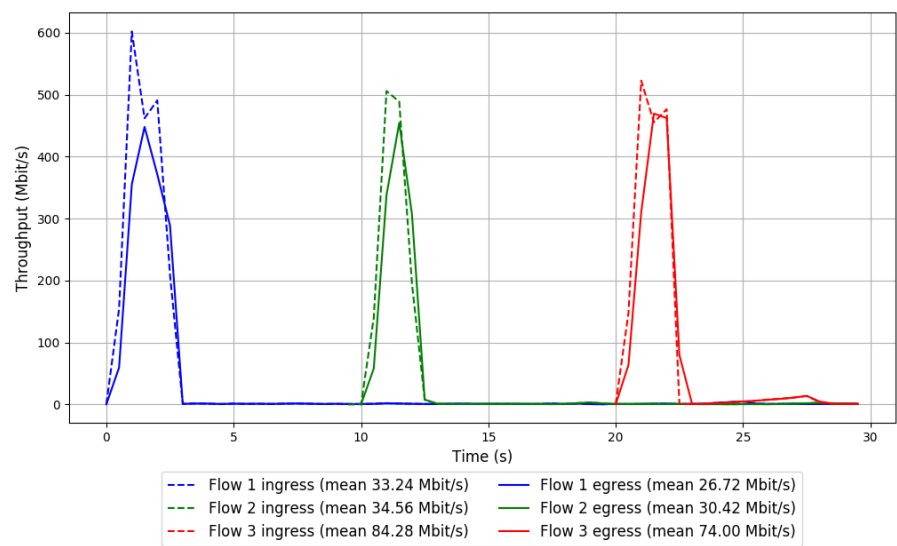
-- Flow 3:

Average throughput: 74.00 Mbit/s

95th percentile per-packet one-way delay: 228.660 ms

Loss rate: 13.09%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-01-31 18:39:01

End at: 2018-01-31 18:39:31

Below is generated by plot.py at 2018-01-31 23:11:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 473.72 Mbit/s

95th percentile per-packet one-way delay: 177.693 ms

Loss rate: 10.86%

-- Flow 1:

Average throughput: 227.34 Mbit/s

95th percentile per-packet one-way delay: 177.125 ms

Loss rate: 10.44%

-- Flow 2:

Average throughput: 337.32 Mbit/s

95th percentile per-packet one-way delay: 177.093 ms

Loss rate: 10.34%

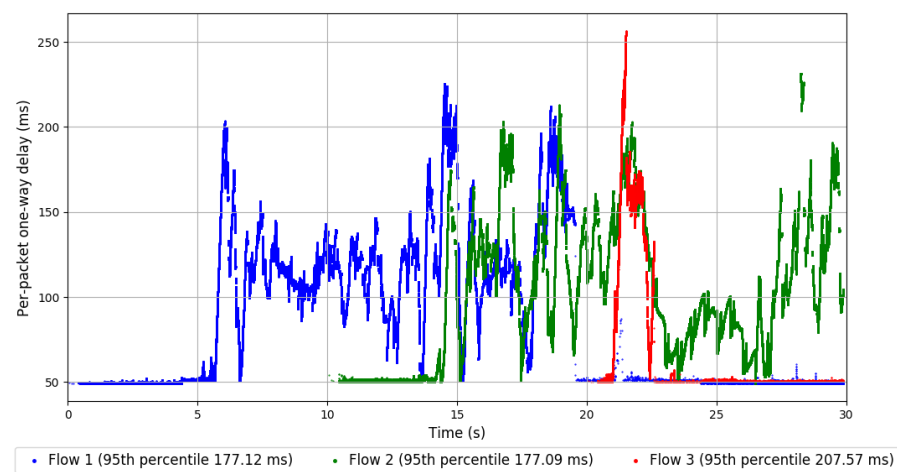
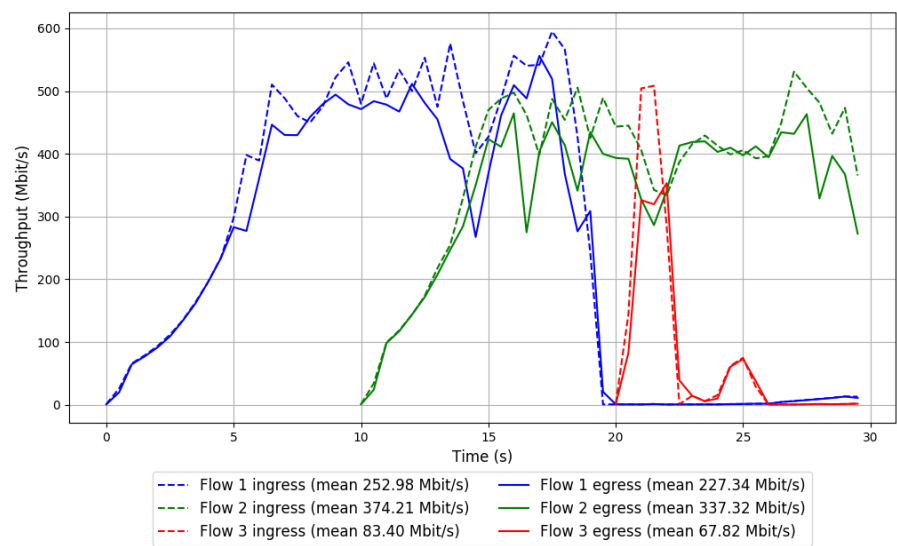
-- Flow 3:

Average throughput: 67.82 Mbit/s

95th percentile per-packet one-way delay: 207.572 ms

Loss rate: 19.54%

Run 9: Report of FillP — Data Link

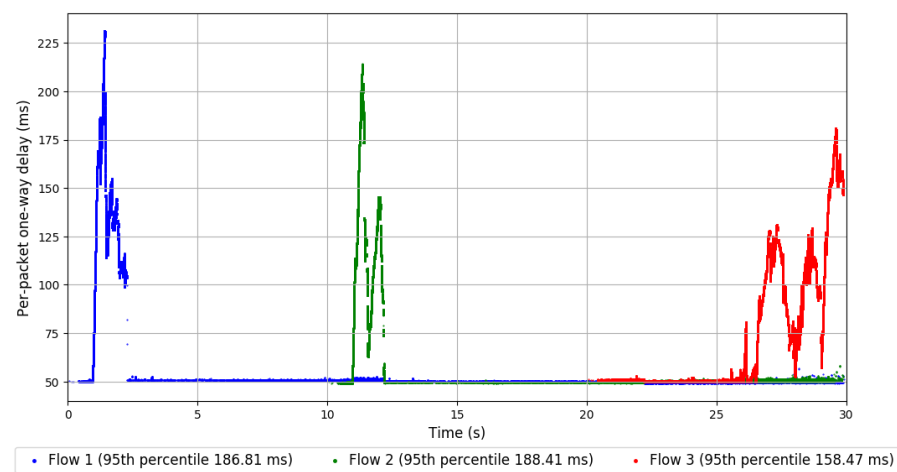
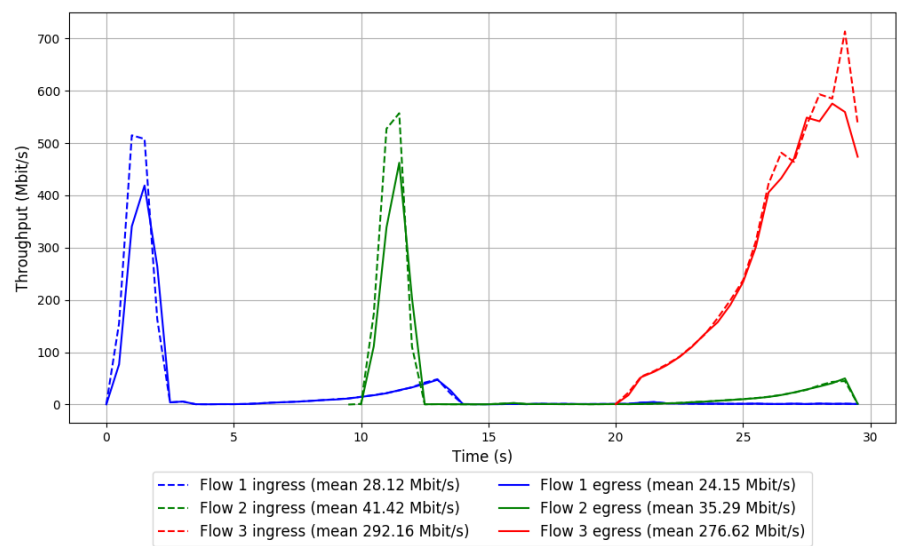


```
Run 10: Statistics of FillP

Start at: 2018-01-31 18:56:23
End at: 2018-01-31 18:56:53

# Below is generated by plot.py at 2018-01-31 23:11:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.65 Mbit/s
95th percentile per-packet one-way delay: 168.448 ms
Loss rate: 9.41%
-- Flow 1:
Average throughput: 24.15 Mbit/s
95th percentile per-packet one-way delay: 186.811 ms
Loss rate: 14.33%
-- Flow 2:
Average throughput: 35.29 Mbit/s
95th percentile per-packet one-way delay: 188.414 ms
Loss rate: 15.34%
-- Flow 3:
Average throughput: 276.62 Mbit/s
95th percentile per-packet one-way delay: 158.471 ms
Loss rate: 6.29%
```

Run 10: Report of FillP — Data Link

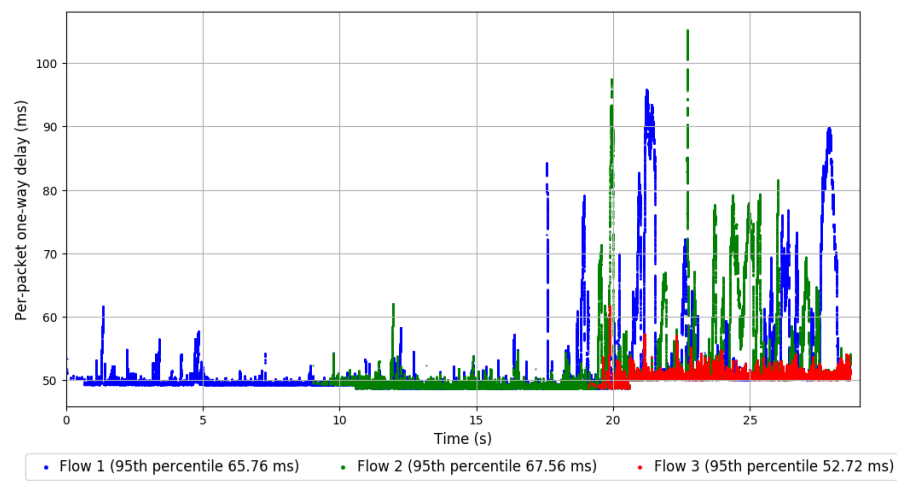
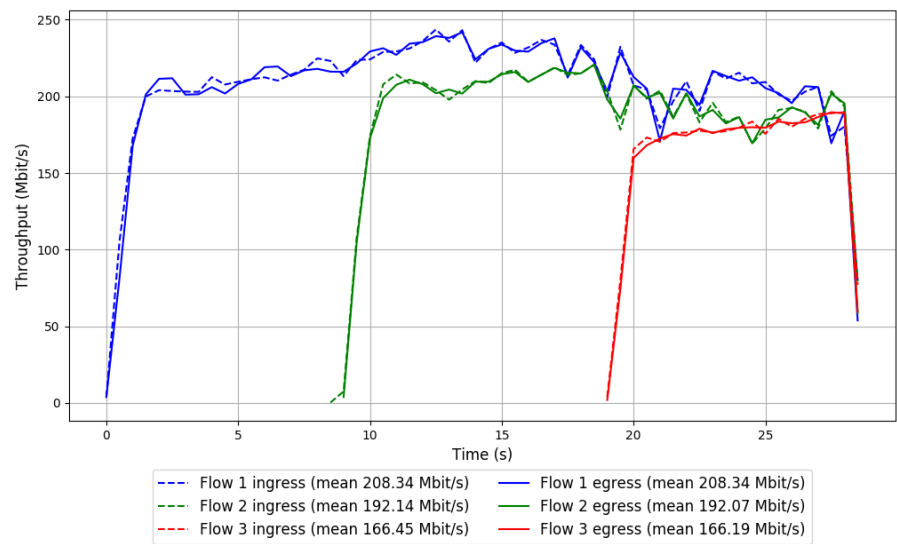


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-01-31 16:21:13
End at: 2018-01-31 16:21:43

# Below is generated by plot.py at 2018-01-31 23:11:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.69 Mbit/s
95th percentile per-packet one-way delay: 64.306 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 208.34 Mbit/s
95th percentile per-packet one-way delay: 65.764 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 192.07 Mbit/s
95th percentile per-packet one-way delay: 67.565 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 166.19 Mbit/s
95th percentile per-packet one-way delay: 52.724 ms
Loss rate: 1.19%
```

Run 1: Report of Indigo-1-32 — Data Link

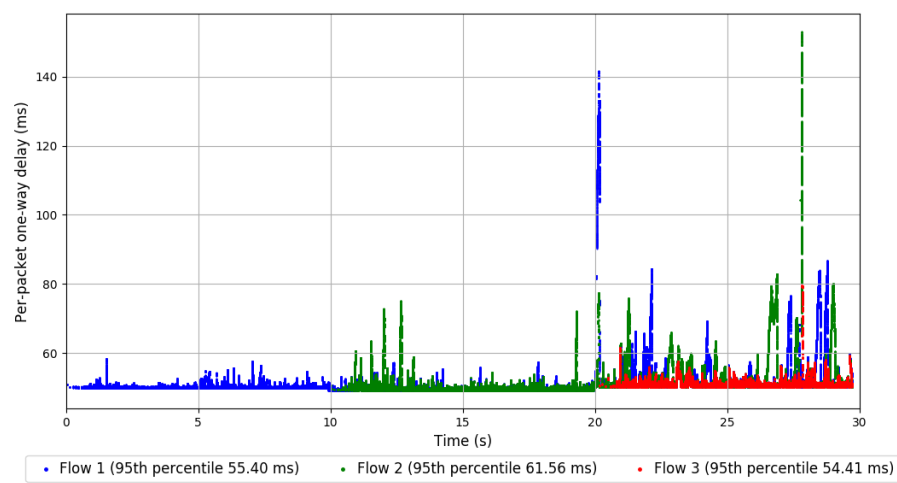
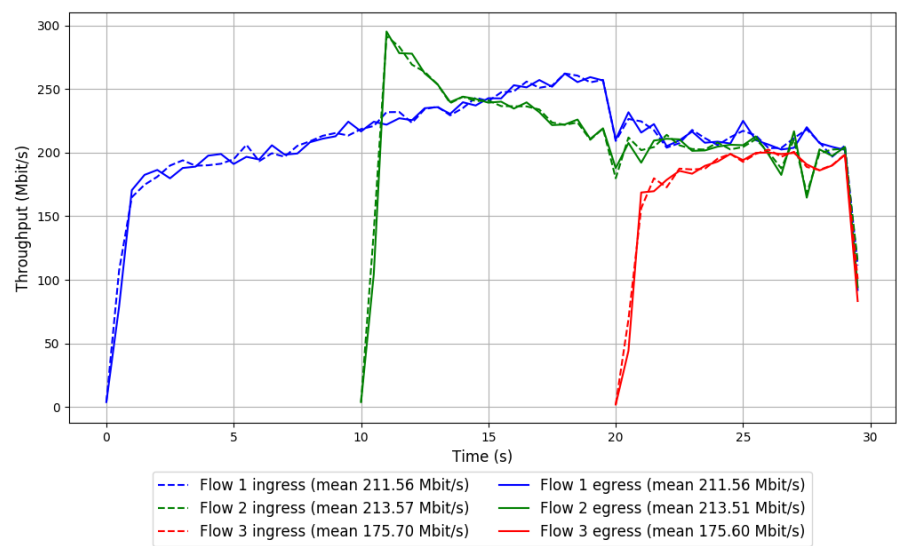


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-01-31 16:37:35
End at: 2018-01-31 16:38:05

# Below is generated by plot.py at 2018-01-31 23:11:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 409.64 Mbit/s
95th percentile per-packet one-way delay: 56.897 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 211.56 Mbit/s
95th percentile per-packet one-way delay: 55.396 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 213.51 Mbit/s
95th percentile per-packet one-way delay: 61.558 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 175.60 Mbit/s
95th percentile per-packet one-way delay: 54.410 ms
Loss rate: 1.10%
```

Run 2: Report of Indigo-1-32 — Data Link

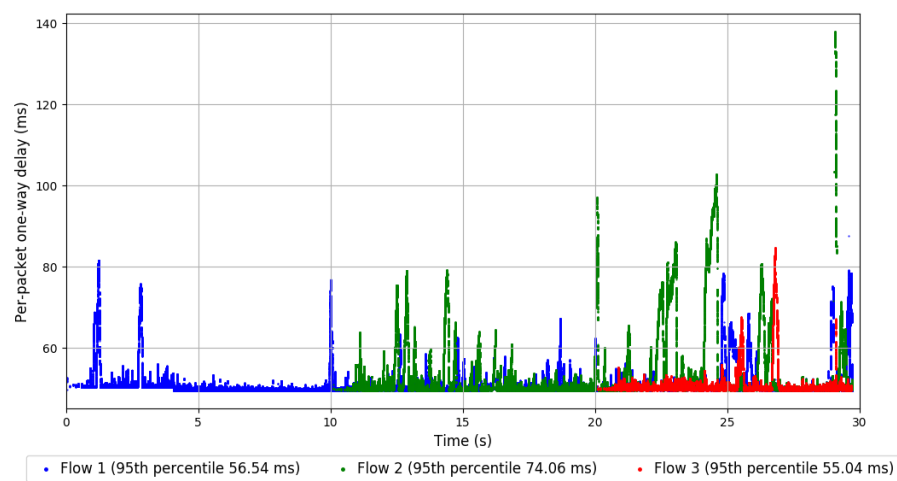
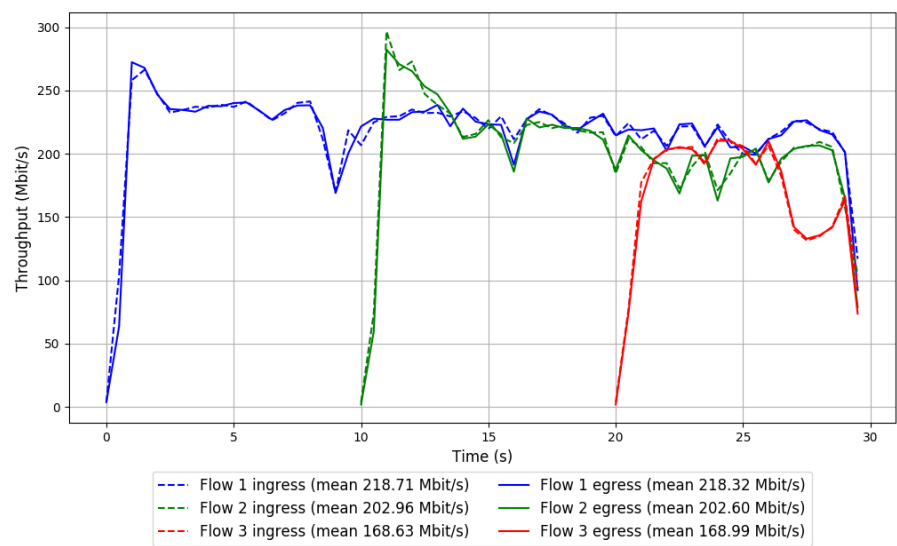


```
Run 3: Statistics of Indigo-1-32

Start at: 2018-01-31 16:54:11
End at: 2018-01-31 16:54:41

# Below is generated by plot.py at 2018-01-31 23:11:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 406.93 Mbit/s
95th percentile per-packet one-way delay: 62.771 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 218.32 Mbit/s
95th percentile per-packet one-way delay: 56.536 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 202.60 Mbit/s
95th percentile per-packet one-way delay: 74.058 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 168.99 Mbit/s
95th percentile per-packet one-way delay: 55.038 ms
Loss rate: 1.12%
```


Run 3: Report of Indigo-1-32 — Data Link



Run 4: Statistics of Indigo-1-32

Start at: 2018-01-31 17:11:10

End at: 2018-01-31 17:11:40

Below is generated by plot.py at 2018-01-31 23:11:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 389.15 Mbit/s

95th percentile per-packet one-way delay: 63.504 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 212.69 Mbit/s

95th percentile per-packet one-way delay: 62.864 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 180.71 Mbit/s

95th percentile per-packet one-way delay: 59.021 ms

Loss rate: 0.54%

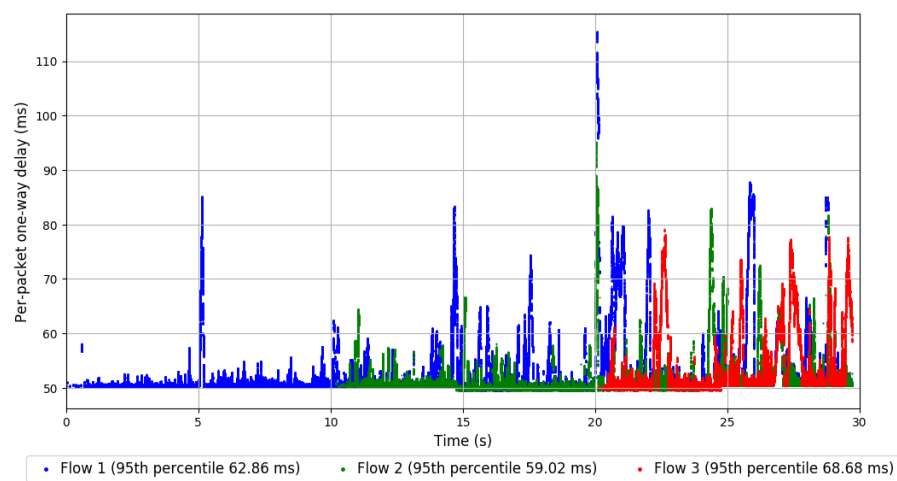
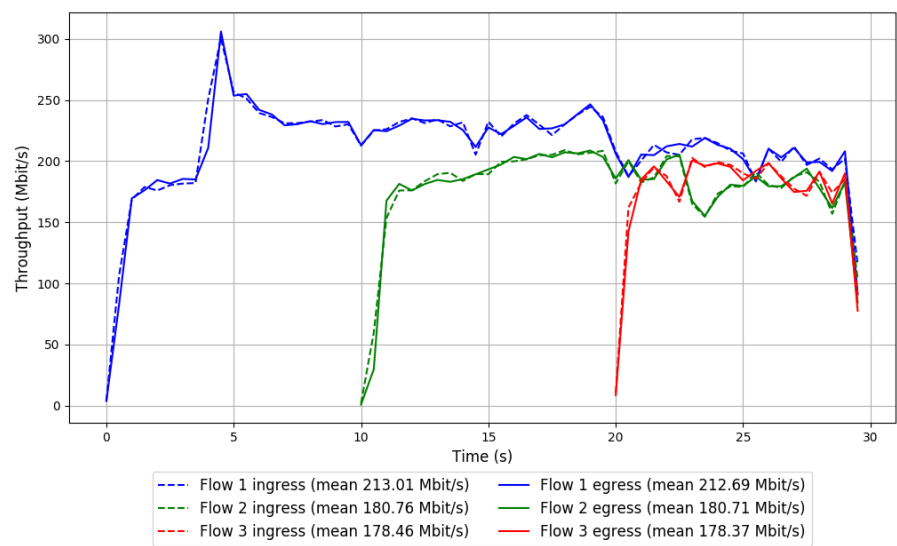
-- Flow 3:

Average throughput: 178.37 Mbit/s

95th percentile per-packet one-way delay: 68.676 ms

Loss rate: 1.09%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

Start at: 2018-01-31 17:28:12

End at: 2018-01-31 17:28:42

Below is generated by plot.py at 2018-01-31 23:11:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 387.91 Mbit/s

95th percentile per-packet one-way delay: 67.132 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 210.40 Mbit/s

95th percentile per-packet one-way delay: 65.555 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 183.66 Mbit/s

95th percentile per-packet one-way delay: 66.429 ms

Loss rate: 0.54%

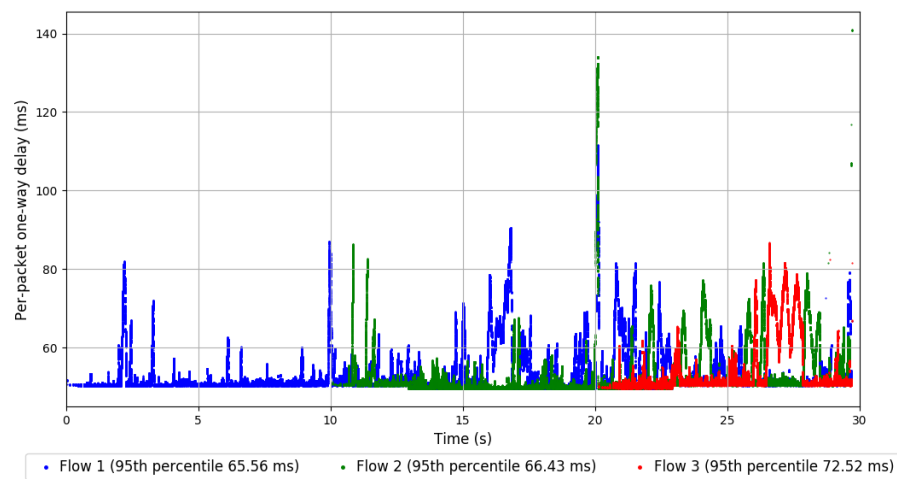
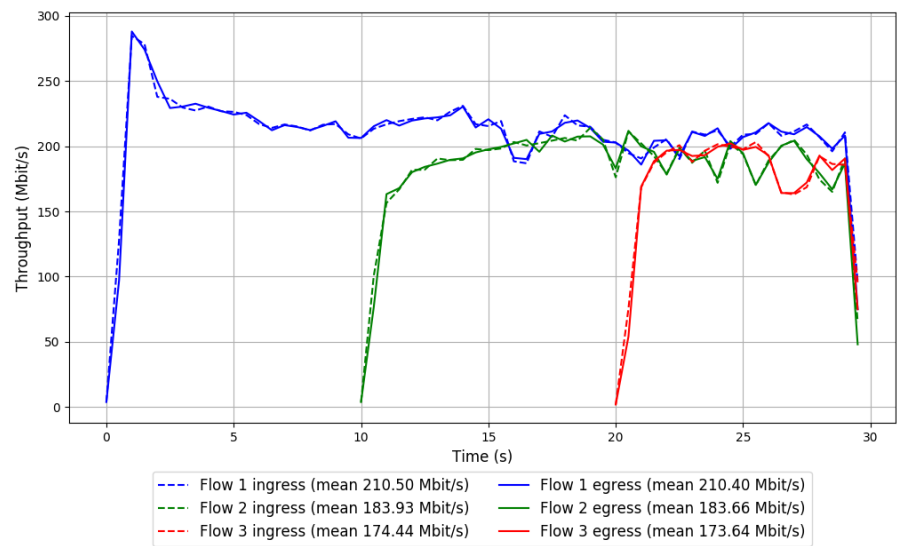
-- Flow 3:

Average throughput: 173.64 Mbit/s

95th percentile per-packet one-way delay: 72.515 ms

Loss rate: 1.18%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

Start at: 2018-01-31 17:45:21

End at: 2018-01-31 17:45:51

Below is generated by plot.py at 2018-01-31 23:11:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 399.16 Mbit/s

95th percentile per-packet one-way delay: 61.757 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 212.23 Mbit/s

95th percentile per-packet one-way delay: 58.909 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 198.35 Mbit/s

95th percentile per-packet one-way delay: 70.825 ms

Loss rate: 0.50%

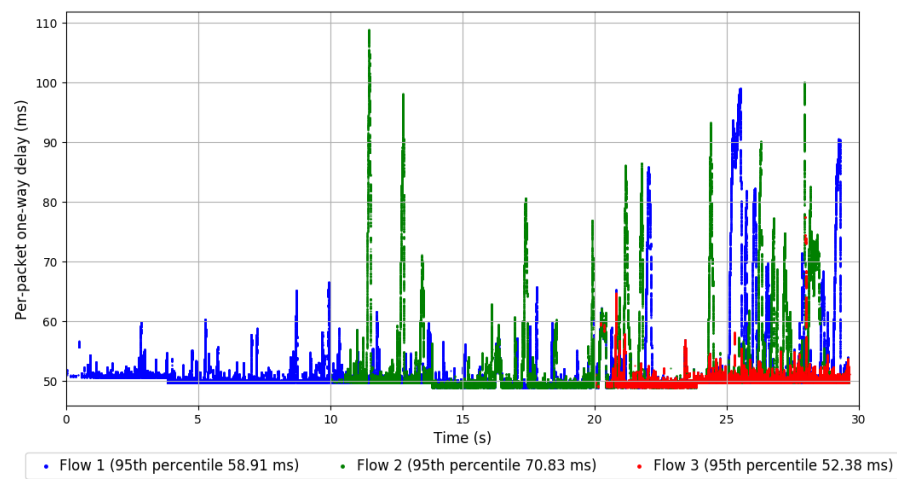
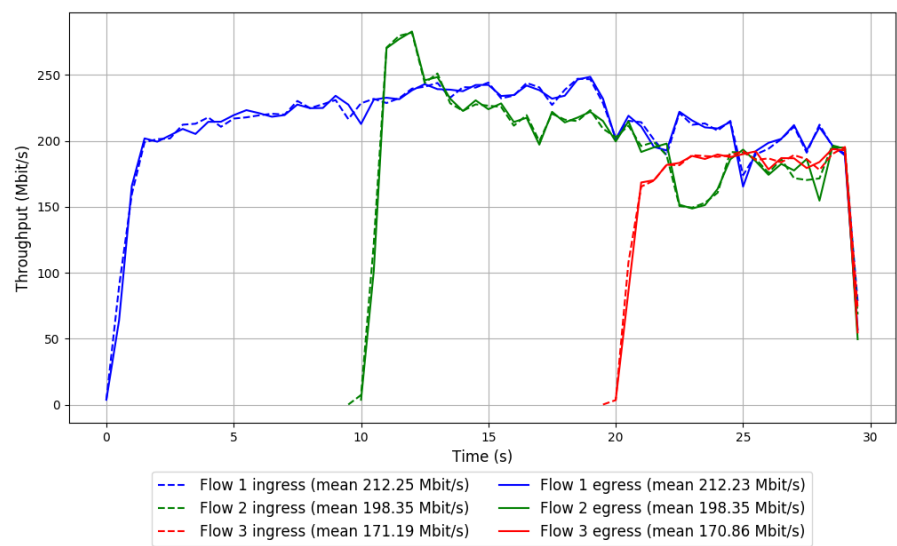
-- Flow 3:

Average throughput: 170.86 Mbit/s

95th percentile per-packet one-way delay: 52.380 ms

Loss rate: 1.21%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-01-31 18:02:20

End at: 2018-01-31 18:02:50

Below is generated by plot.py at 2018-01-31 23:11:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 392.22 Mbit/s

95th percentile per-packet one-way delay: 61.425 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 206.51 Mbit/s

95th percentile per-packet one-way delay: 62.103 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 195.18 Mbit/s

95th percentile per-packet one-way delay: 65.464 ms

Loss rate: 0.58%

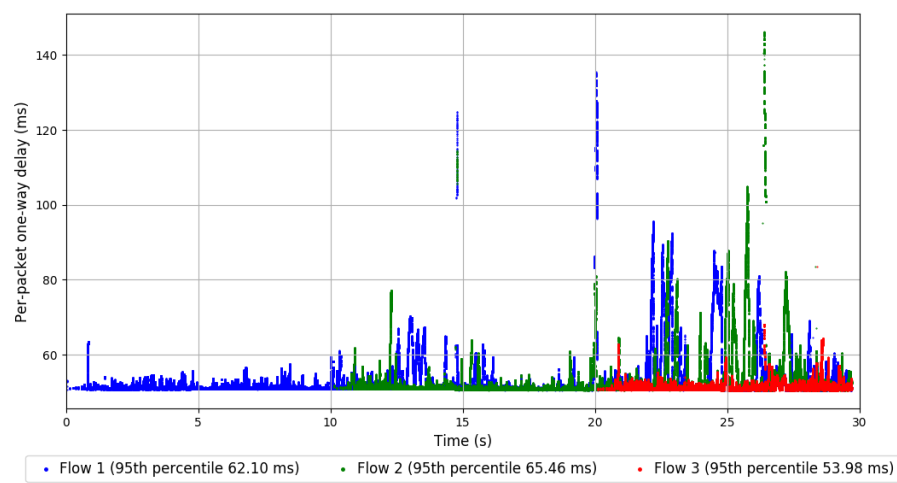
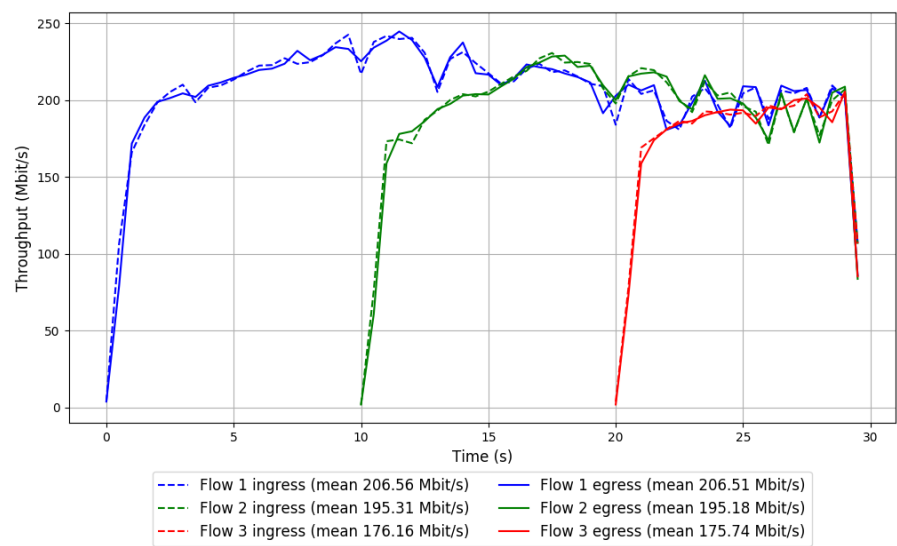
-- Flow 3:

Average throughput: 175.74 Mbit/s

95th percentile per-packet one-way delay: 53.985 ms

Loss rate: 1.27%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

Start at: 2018-01-31 18:19:39

End at: 2018-01-31 18:20:09

Below is generated by plot.py at 2018-01-31 23:11:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 413.61 Mbit/s

95th percentile per-packet one-way delay: 59.760 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 217.78 Mbit/s

95th percentile per-packet one-way delay: 62.746 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 206.81 Mbit/s

95th percentile per-packet one-way delay: 58.103 ms

Loss rate: 0.48%

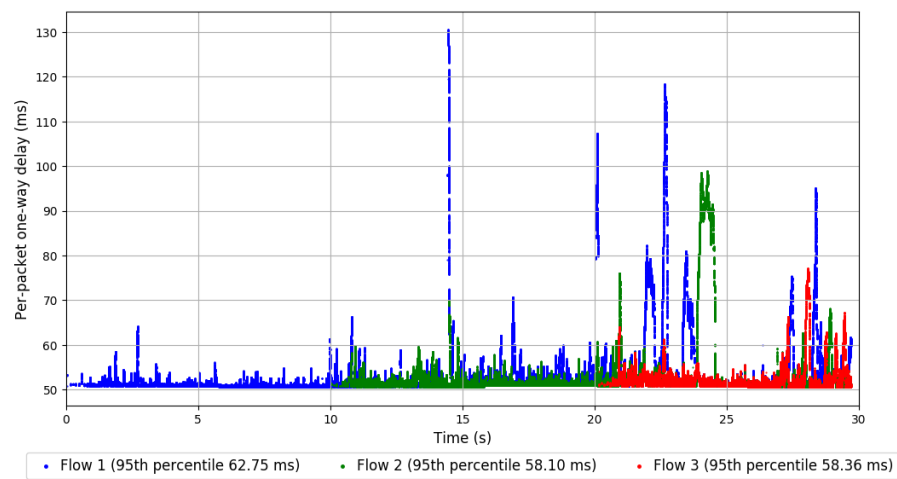
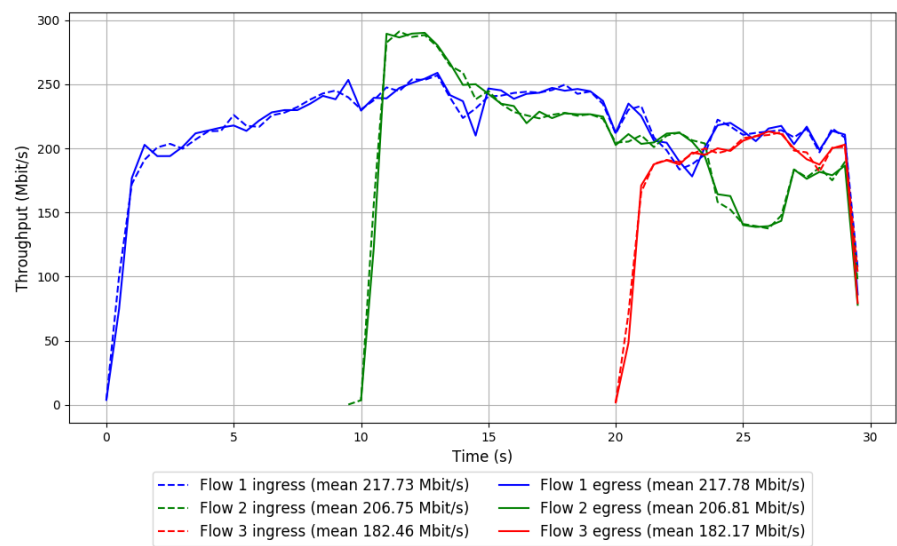
-- Flow 3:

Average throughput: 182.17 Mbit/s

95th percentile per-packet one-way delay: 58.361 ms

Loss rate: 1.20%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-01-31 18:36:12

End at: 2018-01-31 18:36:42

Below is generated by plot.py at 2018-01-31 23:11:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 394.84 Mbit/s

95th percentile per-packet one-way delay: 64.801 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 205.94 Mbit/s

95th percentile per-packet one-way delay: 60.672 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 200.49 Mbit/s

95th percentile per-packet one-way delay: 73.273 ms

Loss rate: 0.49%

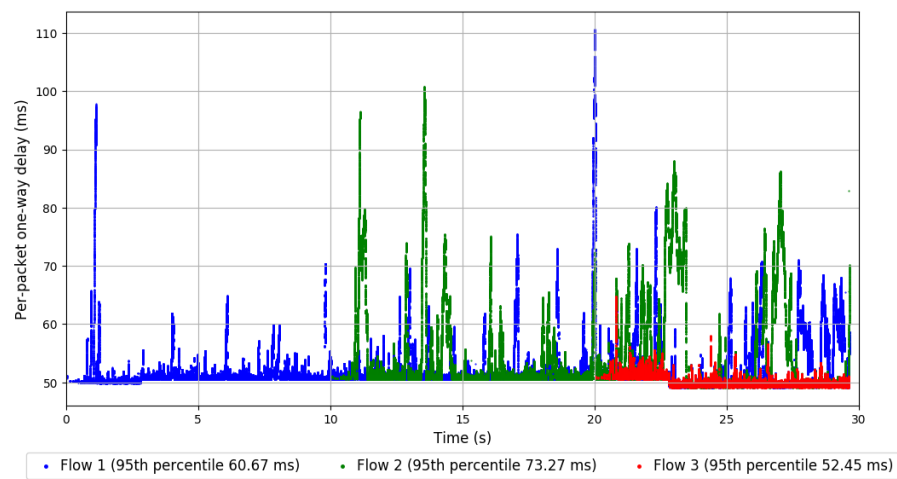
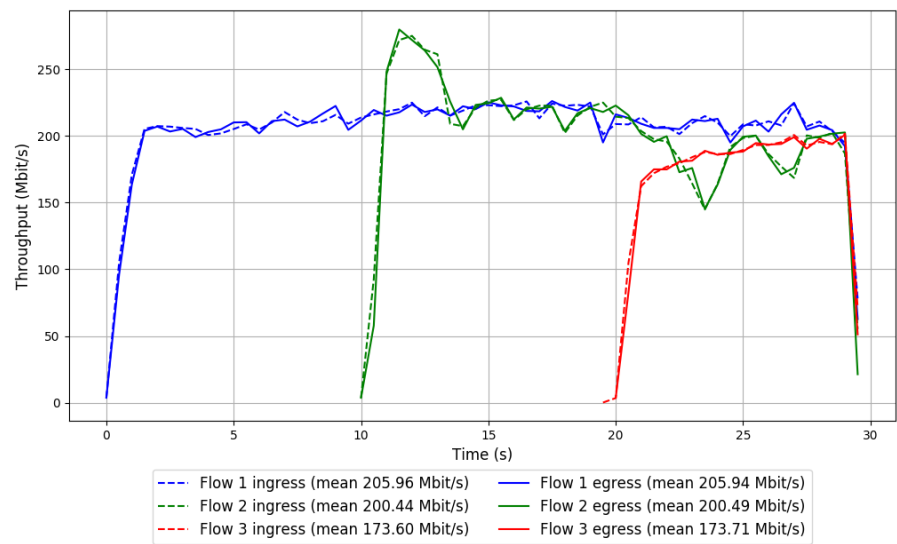
-- Flow 3:

Average throughput: 173.71 Mbit/s

95th percentile per-packet one-way delay: 52.452 ms

Loss rate: 1.21%

Run 9: Report of Indigo-1-32 — Data Link

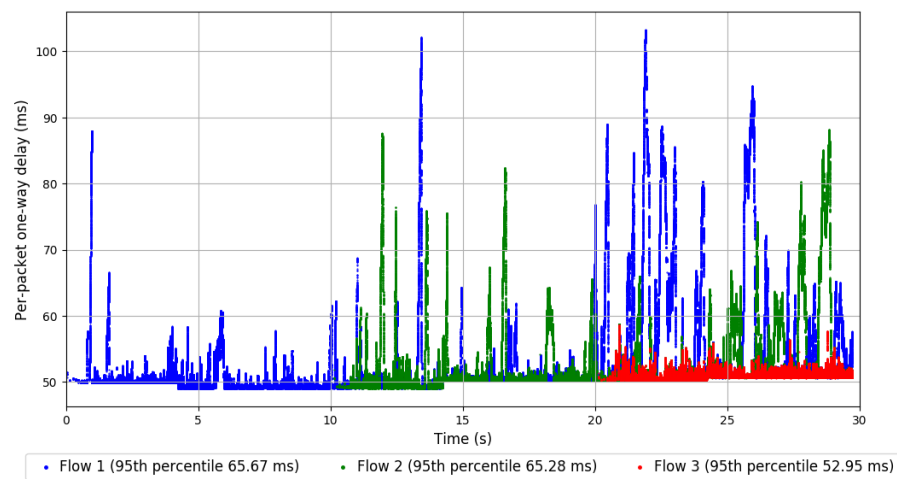
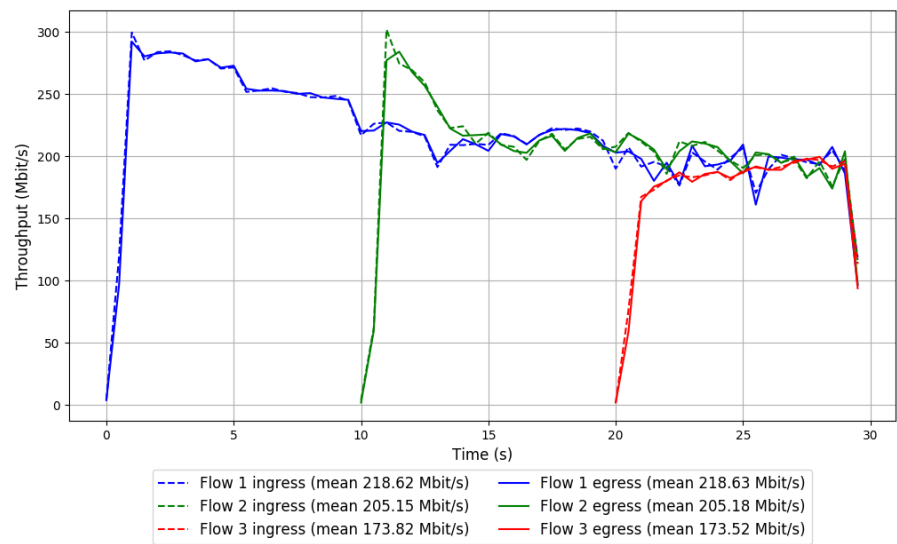


```
Run 10: Statistics of Indigo-1-32

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

# Below is generated by plot.py at 2018-01-31 23:14:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 410.28 Mbit/s
95th percentile per-packet one-way delay: 63.605 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 218.63 Mbit/s
95th percentile per-packet one-way delay: 65.671 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 205.18 Mbit/s
95th percentile per-packet one-way delay: 65.280 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 173.52 Mbit/s
95th percentile per-packet one-way delay: 52.951 ms
Loss rate: 1.22%
```

Run 10: Report of Indigo-1-32 — Data Link

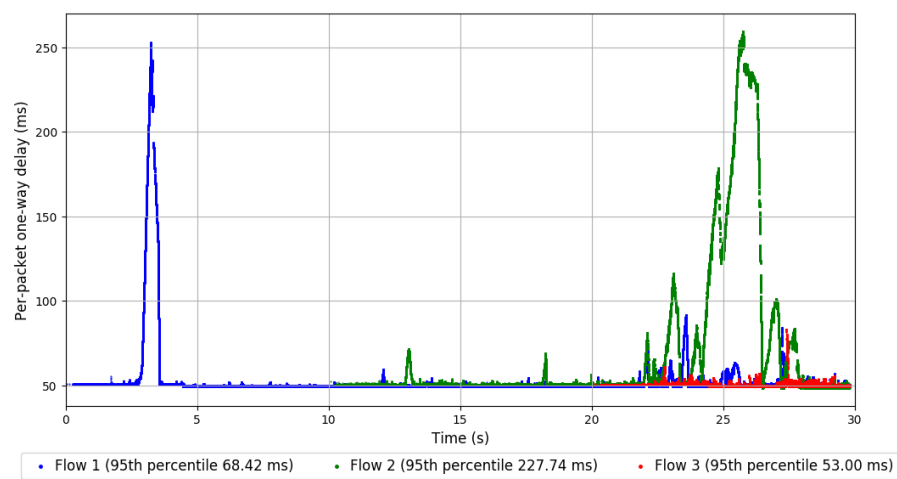
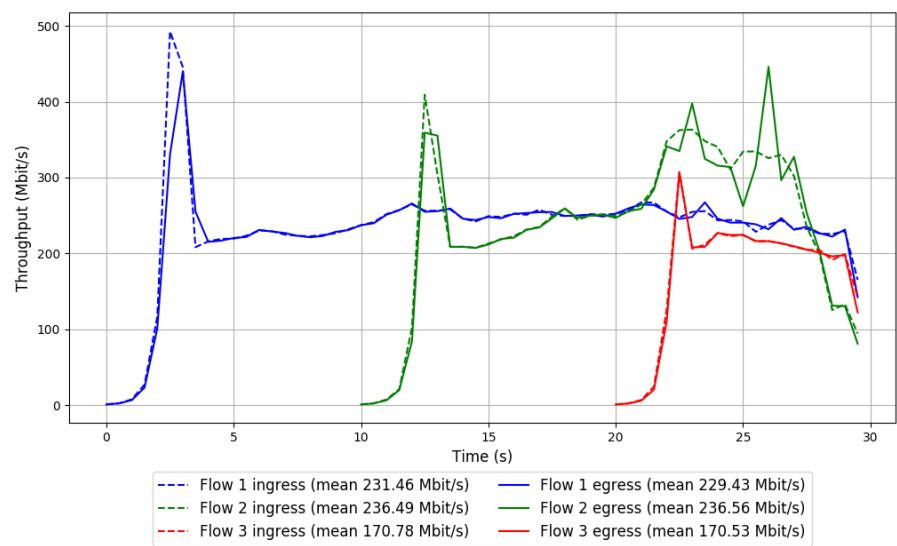


```
Run 1: Statistics of Vivace-latency

Start at: 2018-01-31 16:19:20
End at: 2018-01-31 16:19:50

# Below is generated by plot.py at 2018-01-31 23:16:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 442.09 Mbit/s
95th percentile per-packet one-way delay: 150.139 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 229.43 Mbit/s
95th percentile per-packet one-way delay: 68.425 ms
Loss rate: 1.21%
-- Flow 2:
Average throughput: 236.56 Mbit/s
95th percentile per-packet one-way delay: 227.741 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 170.53 Mbit/s
95th percentile per-packet one-way delay: 53.002 ms
Loss rate: 1.19%
```


Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-01-31 16:35:41

End at: 2018-01-31 16:36:11

Below is generated by plot.py at 2018-01-31 23:17:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 481.00 Mbit/s

95th percentile per-packet one-way delay: 225.641 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 283.19 Mbit/s

95th percentile per-packet one-way delay: 164.251 ms

Loss rate: 1.28%

-- Flow 2:

Average throughput: 208.62 Mbit/s

95th percentile per-packet one-way delay: 281.300 ms

Loss rate: 1.09%

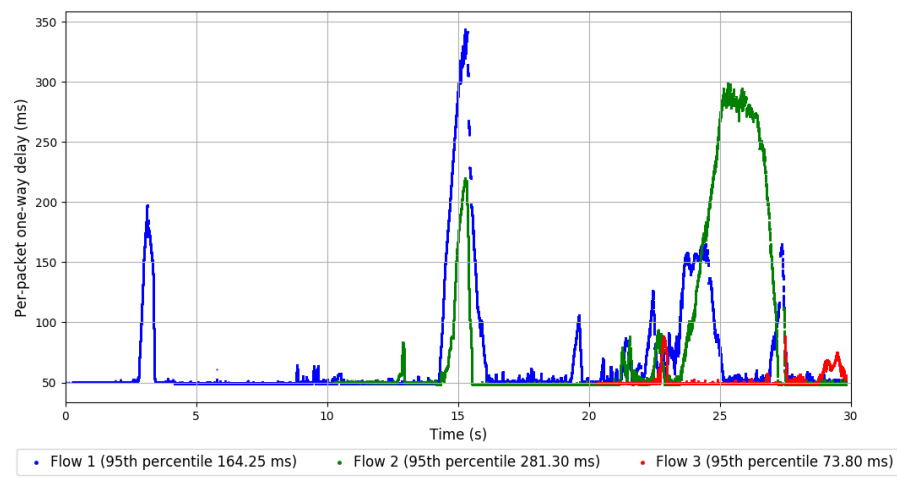
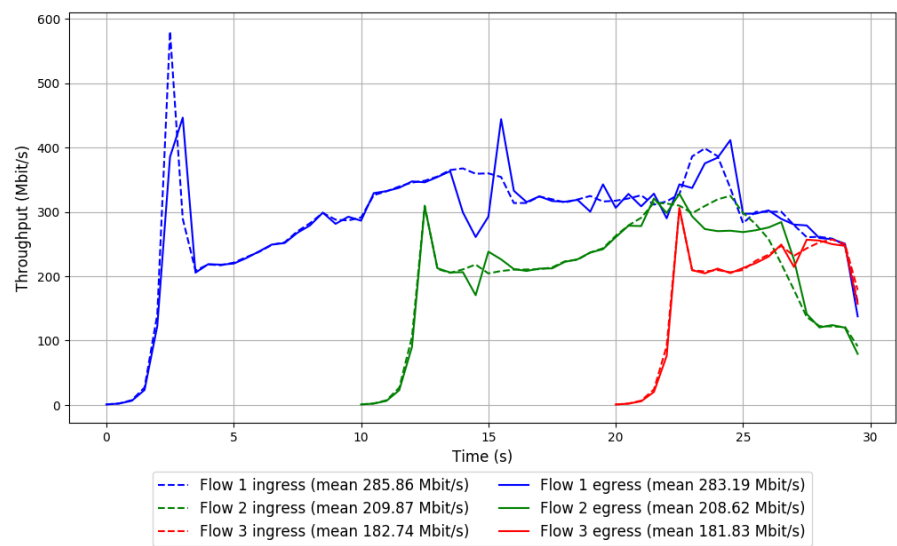
-- Flow 3:

Average throughput: 181.83 Mbit/s

95th percentile per-packet one-way delay: 73.797 ms

Loss rate: 1.55%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-01-31 16:52:15

End at: 2018-01-31 16:52:45

Below is generated by plot.py at 2018-01-31 23:20:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 504.59 Mbit/s

95th percentile per-packet one-way delay: 164.271 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 291.74 Mbit/s

95th percentile per-packet one-way delay: 165.798 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 306.69 Mbit/s

95th percentile per-packet one-way delay: 165.675 ms

Loss rate: 0.38%

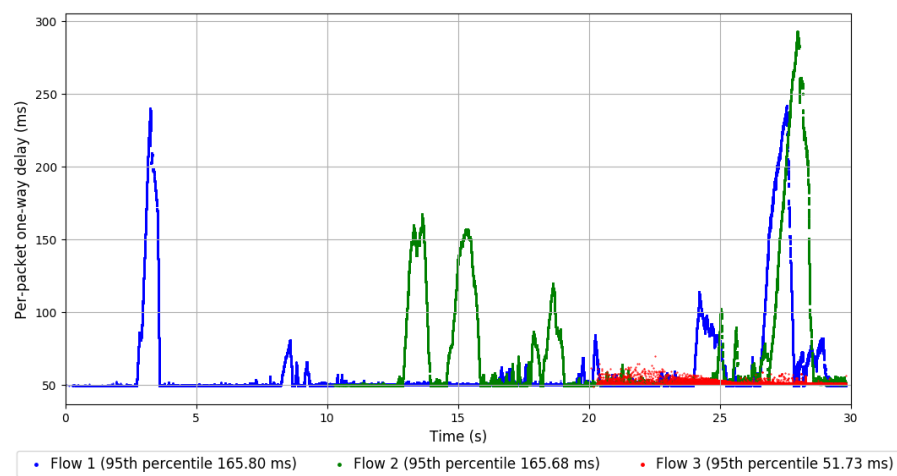
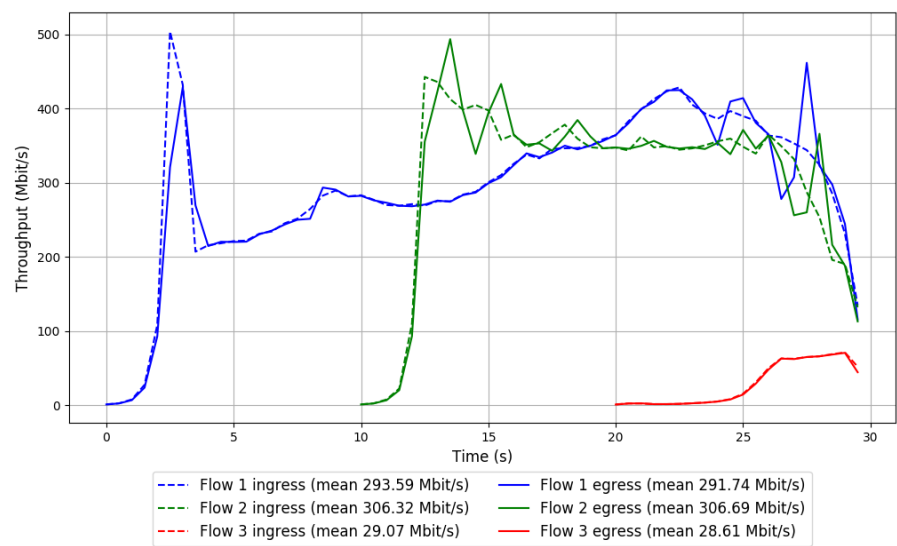
-- Flow 3:

Average throughput: 28.61 Mbit/s

95th percentile per-packet one-way delay: 51.734 ms

Loss rate: 2.64%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-01-31 17:09:19

End at: 2018-01-31 17:09:49

Below is generated by plot.py at 2018-01-31 23:20:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 413.25 Mbit/s

95th percentile per-packet one-way delay: 81.349 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 234.50 Mbit/s

95th percentile per-packet one-way delay: 84.200 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 219.19 Mbit/s

95th percentile per-packet one-way delay: 82.034 ms

Loss rate: 0.87%

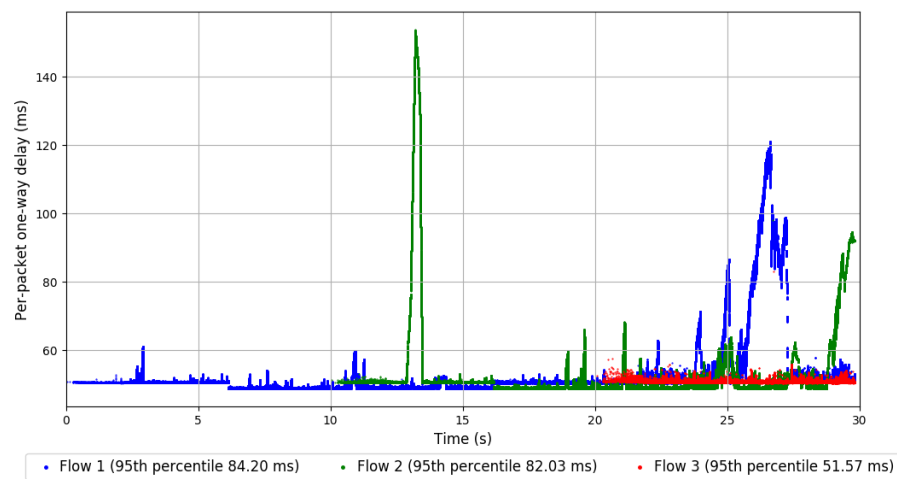
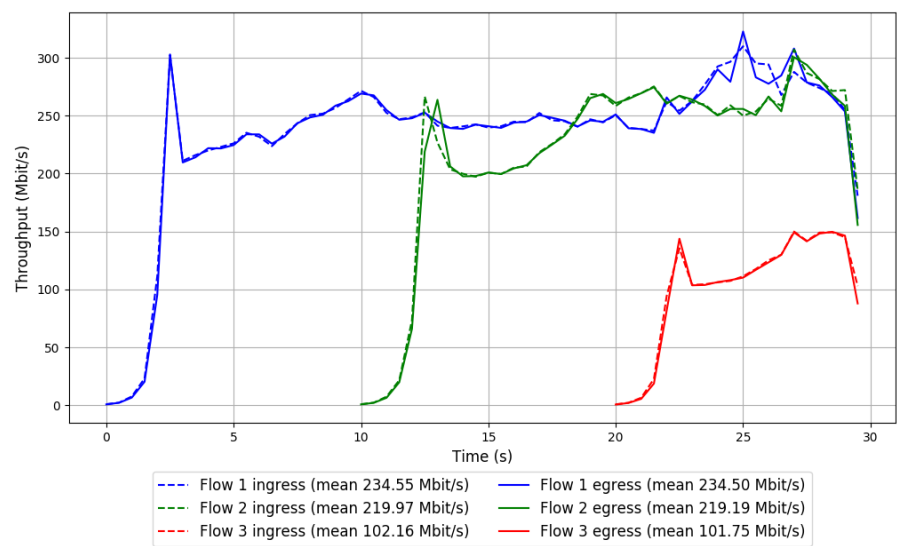
-- Flow 3:

Average throughput: 101.75 Mbit/s

95th percentile per-packet one-way delay: 51.568 ms

Loss rate: 1.45%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-01-31 17:26:16

End at: 2018-01-31 17:26:46

Below is generated by plot.py at 2018-01-31 23:21:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 506.59 Mbit/s

95th percentile per-packet one-way delay: 139.456 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 323.87 Mbit/s

95th percentile per-packet one-way delay: 156.035 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 230.79 Mbit/s

95th percentile per-packet one-way delay: 109.831 ms

Loss rate: 0.51%

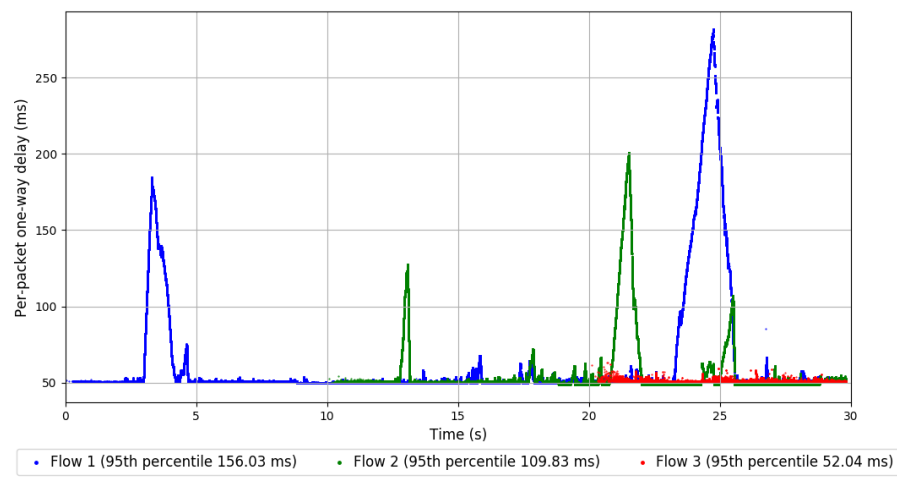
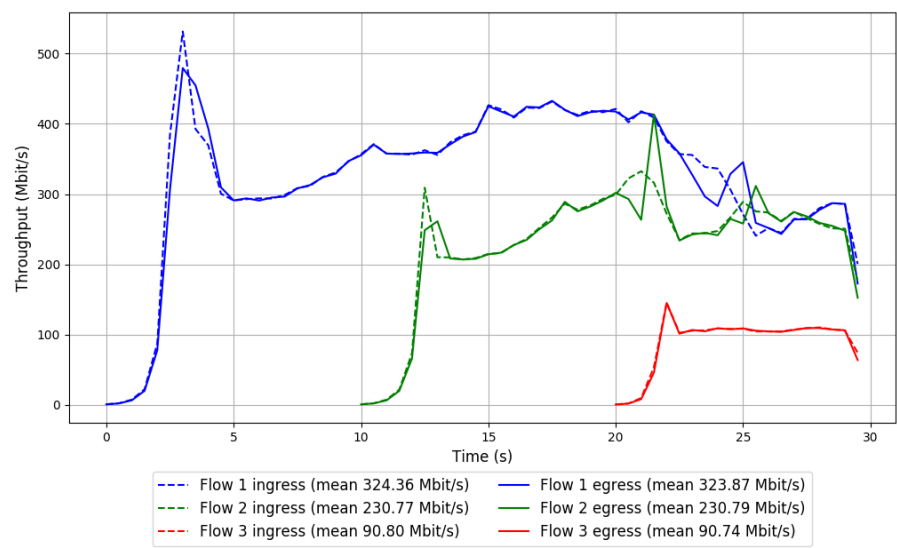
-- Flow 3:

Average throughput: 90.74 Mbit/s

95th percentile per-packet one-way delay: 52.044 ms

Loss rate: 1.21%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-01-31 17:43:23

End at: 2018-01-31 17:43:53

Below is generated by plot.py at 2018-01-31 23:21:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 508.08 Mbit/s

95th percentile per-packet one-way delay: 176.542 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 262.42 Mbit/s

95th percentile per-packet one-way delay: 230.930 ms

Loss rate: 2.65%

-- Flow 2:

Average throughput: 287.05 Mbit/s

95th percentile per-packet one-way delay: 107.860 ms

Loss rate: 0.40%

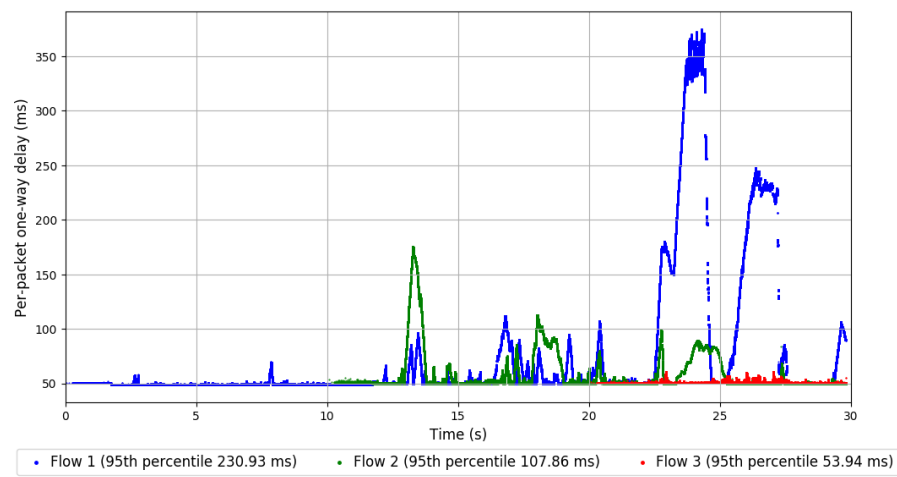
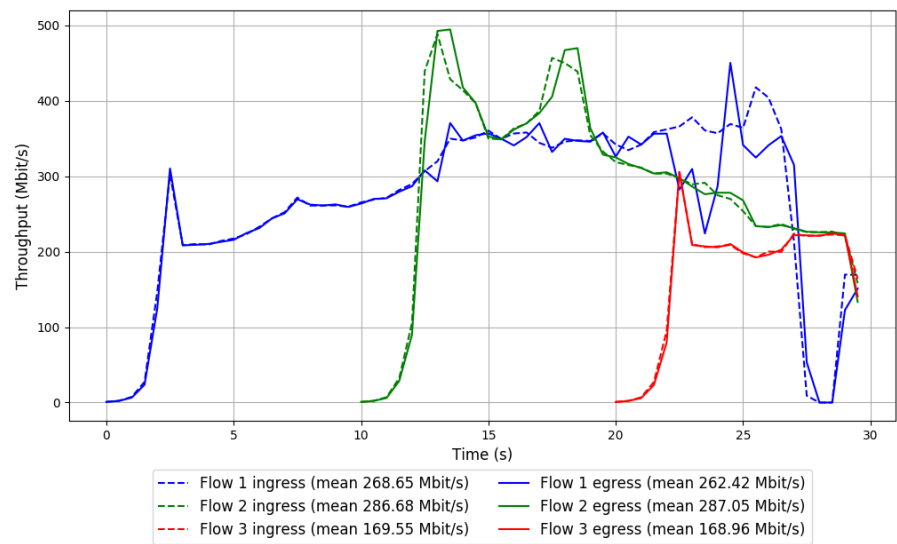
-- Flow 3:

Average throughput: 168.96 Mbit/s

95th percentile per-packet one-way delay: 53.943 ms

Loss rate: 1.36%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-01-31 18:00:28

End at: 2018-01-31 18:00:58

Below is generated by plot.py at 2018-01-31 23:21:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 414.39 Mbit/s

95th percentile per-packet one-way delay: 157.400 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 225.41 Mbit/s

95th percentile per-packet one-way delay: 156.375 ms

Loss rate: 1.46%

-- Flow 2:

Average throughput: 249.11 Mbit/s

95th percentile per-packet one-way delay: 172.594 ms

Loss rate: 0.46%

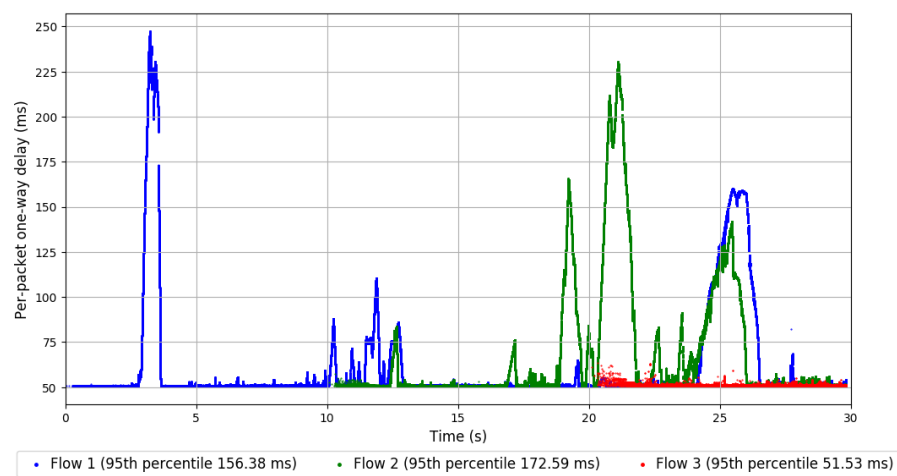
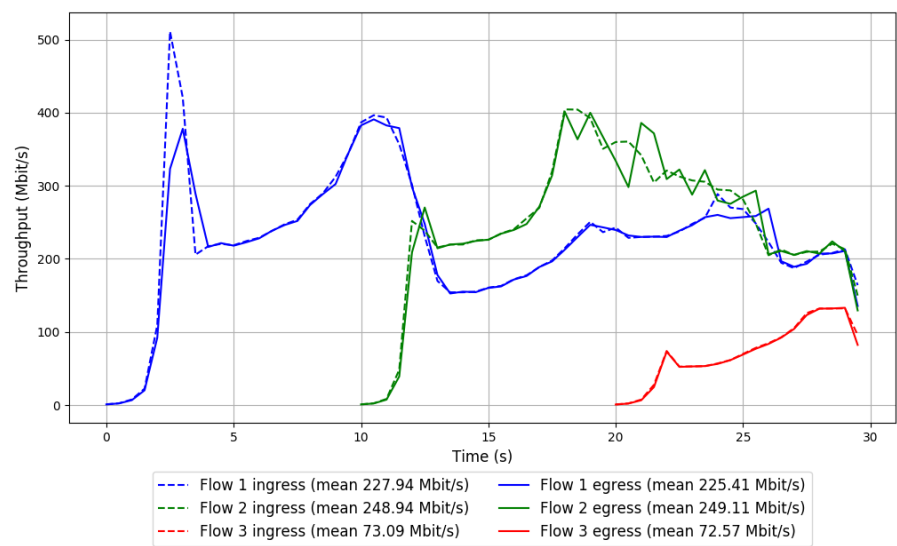
-- Flow 3:

Average throughput: 72.57 Mbit/s

95th percentile per-packet one-way delay: 51.533 ms

Loss rate: 1.85%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-01-31 18:17:47

End at: 2018-01-31 18:18:17

Below is generated by plot.py at 2018-01-31 23:22:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 417.07 Mbit/s

95th percentile per-packet one-way delay: 211.888 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 245.66 Mbit/s

95th percentile per-packet one-way delay: 236.307 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 169.30 Mbit/s

95th percentile per-packet one-way delay: 53.297 ms

Loss rate: 0.77%

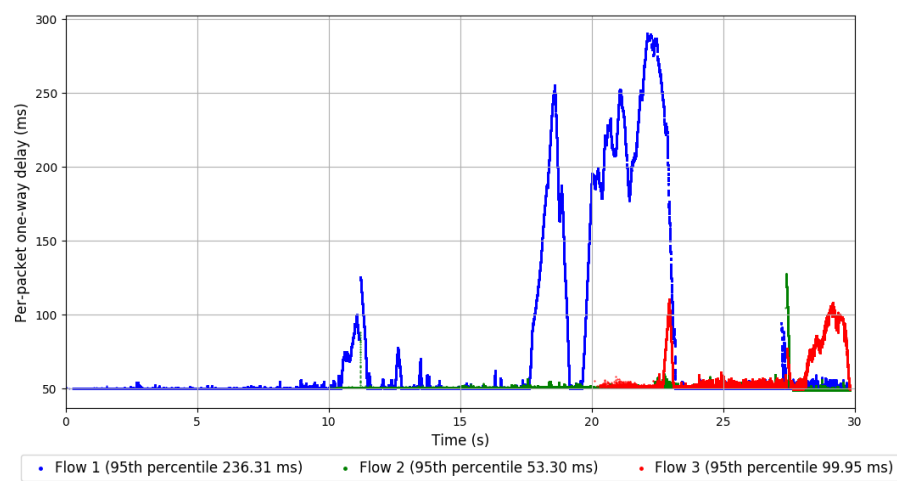
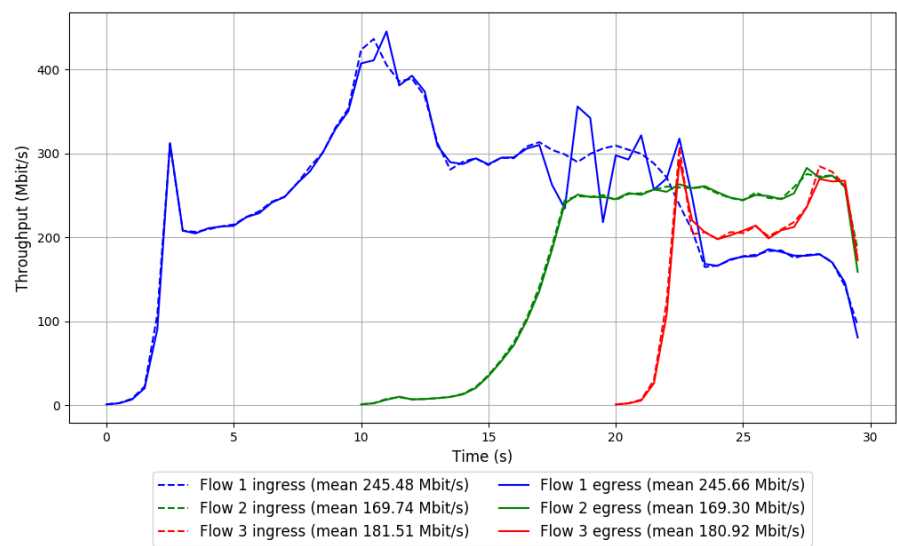
-- Flow 3:

Average throughput: 180.92 Mbit/s

95th percentile per-packet one-way delay: 99.950 ms

Loss rate: 1.41%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-01-31 18:34:21

End at: 2018-01-31 18:34:51

Below is generated by plot.py at 2018-01-31 23:24:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 429.07 Mbit/s

95th percentile per-packet one-way delay: 91.783 ms

Loss rate: 0.36%

-- Flow 1:

Average throughput: 246.54 Mbit/s

95th percentile per-packet one-way delay: 78.338 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 199.79 Mbit/s

95th percentile per-packet one-way delay: 95.573 ms

Loss rate: 0.37%

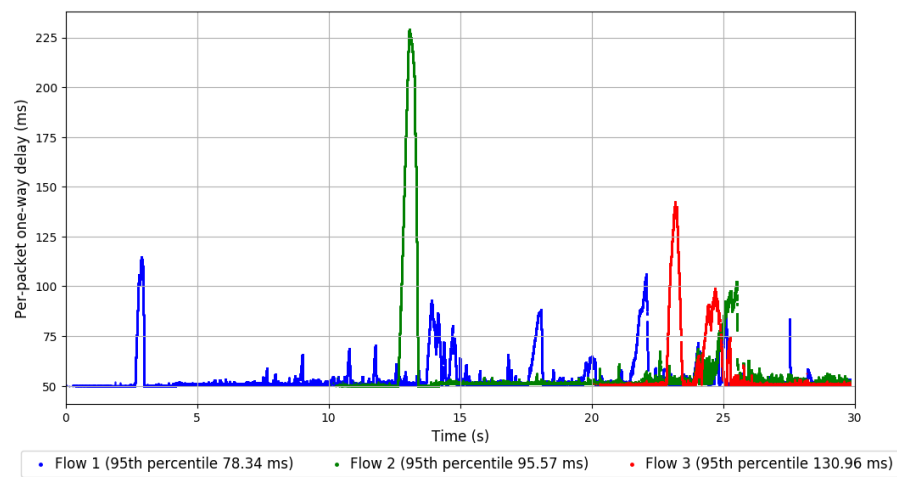
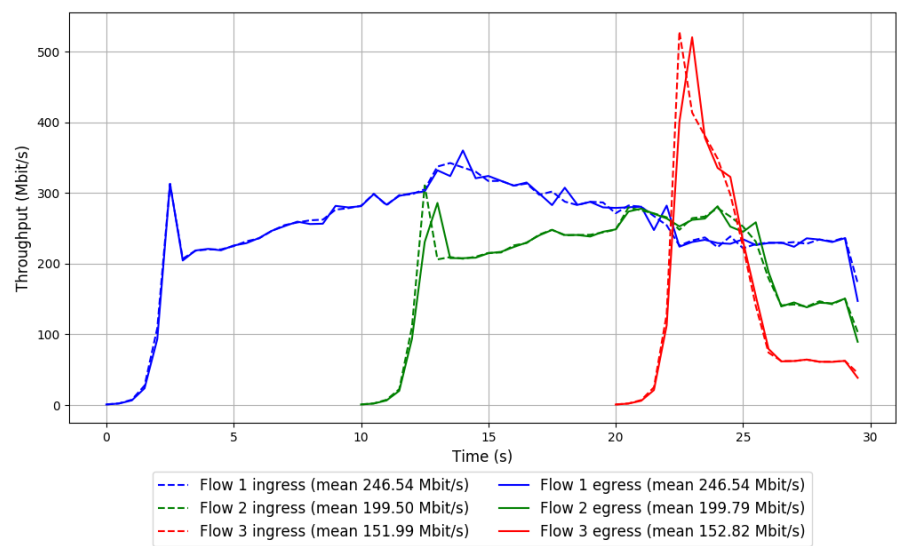
-- Flow 3:

Average throughput: 152.82 Mbit/s

95th percentile per-packet one-way delay: 130.957 ms

Loss rate: 0.44%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-01-31 18:51:35

End at: 2018-01-31 18:52:05

Below is generated by plot.py at 2018-01-31 23:26:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 456.52 Mbit/s

95th percentile per-packet one-way delay: 208.653 ms

Loss rate: 2.76%

-- Flow 1:

Average throughput: 311.26 Mbit/s

95th percentile per-packet one-way delay: 250.677 ms

Loss rate: 3.72%

-- Flow 2:

Average throughput: 165.48 Mbit/s

95th percentile per-packet one-way delay: 54.870 ms

Loss rate: 0.38%

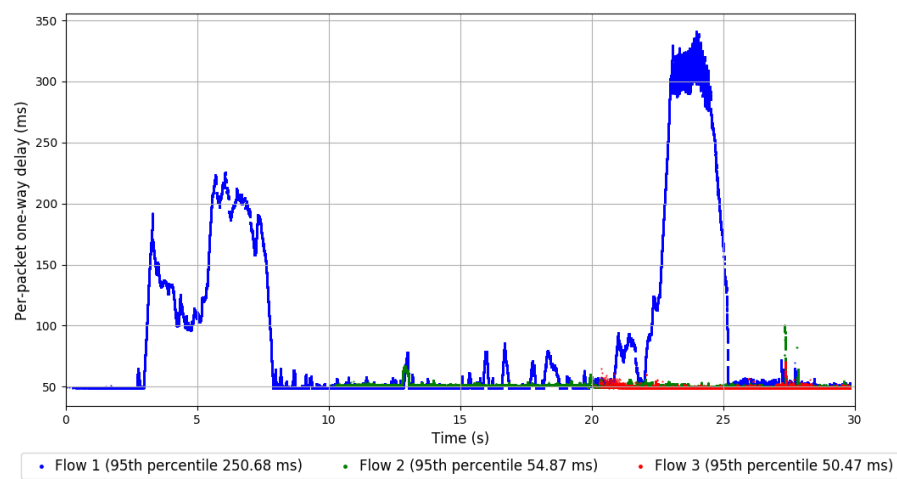
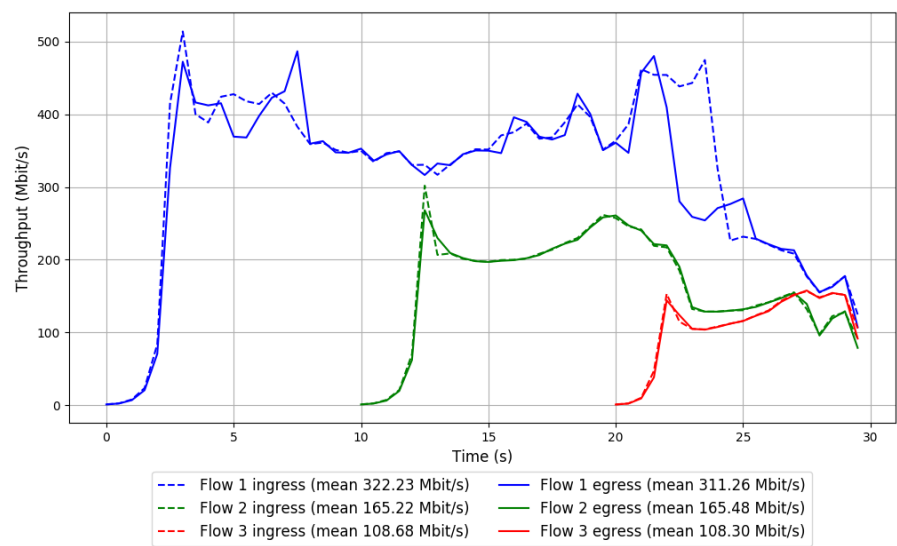
-- Flow 3:

Average throughput: 108.30 Mbit/s

95th percentile per-packet one-way delay: 50.469 ms

Loss rate: 1.35%

Run 10: Report of Vivace-latency — Data Link

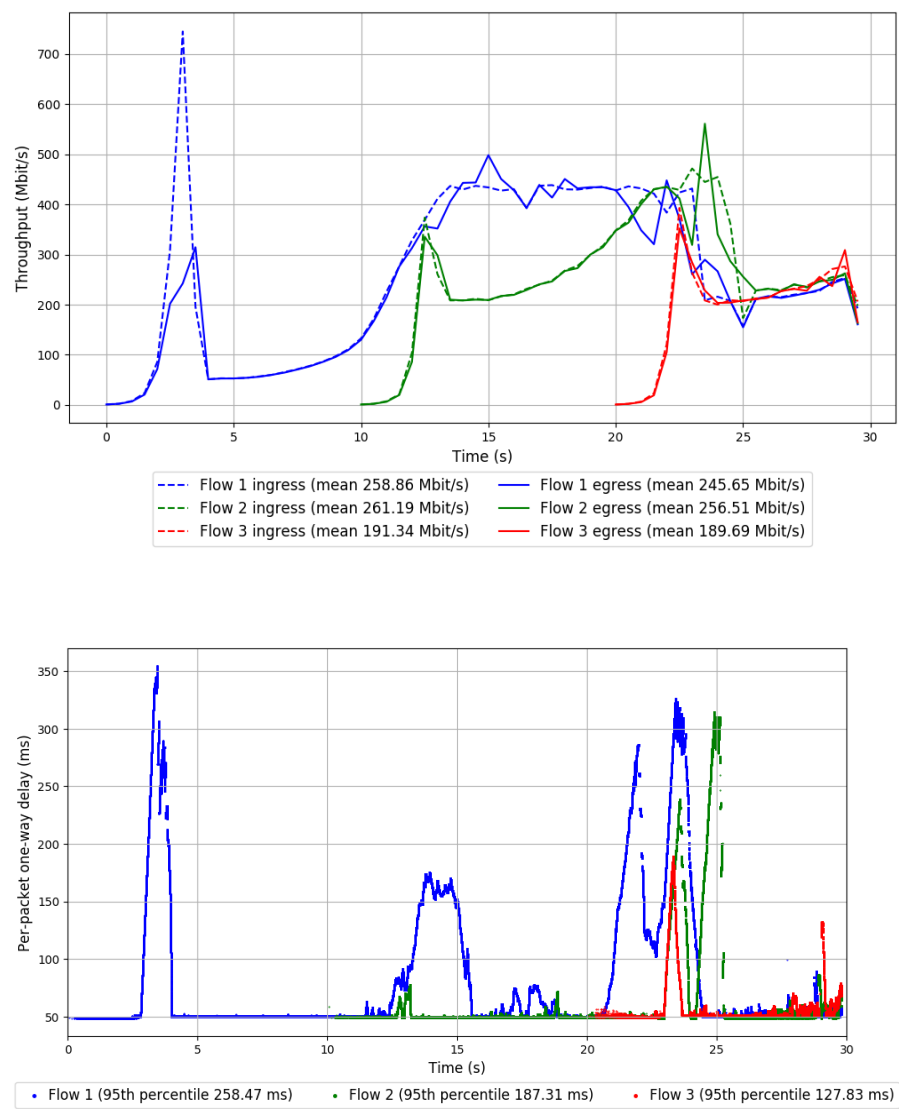


```
Run 1: Statistics of Vivace-loss

Start at: 2018-01-31 16:28:02
End at: 2018-01-31 16:28:32

# Below is generated by plot.py at 2018-01-31 23:28:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 477.81 Mbit/s
95th percentile per-packet one-way delay: 225.500 ms
Loss rate: 3.89%
-- Flow 1:
Average throughput: 245.65 Mbit/s
95th percentile per-packet one-way delay: 258.472 ms
Loss rate: 5.42%
-- Flow 2:
Average throughput: 256.51 Mbit/s
95th percentile per-packet one-way delay: 187.311 ms
Loss rate: 2.33%
-- Flow 3:
Average throughput: 189.69 Mbit/s
95th percentile per-packet one-way delay: 127.827 ms
Loss rate: 1.88%
```

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-01-31 16:44:34

End at: 2018-01-31 16:45:04

Below is generated by plot.py at 2018-01-31 23:29:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 458.61 Mbit/s

95th percentile per-packet one-way delay: 279.178 ms

Loss rate: 9.00%

-- Flow 1:

Average throughput: 281.08 Mbit/s

95th percentile per-packet one-way delay: 274.281 ms

Loss rate: 8.07%

-- Flow 2:

Average throughput: 205.83 Mbit/s

95th percentile per-packet one-way delay: 285.261 ms

Loss rate: 11.06%

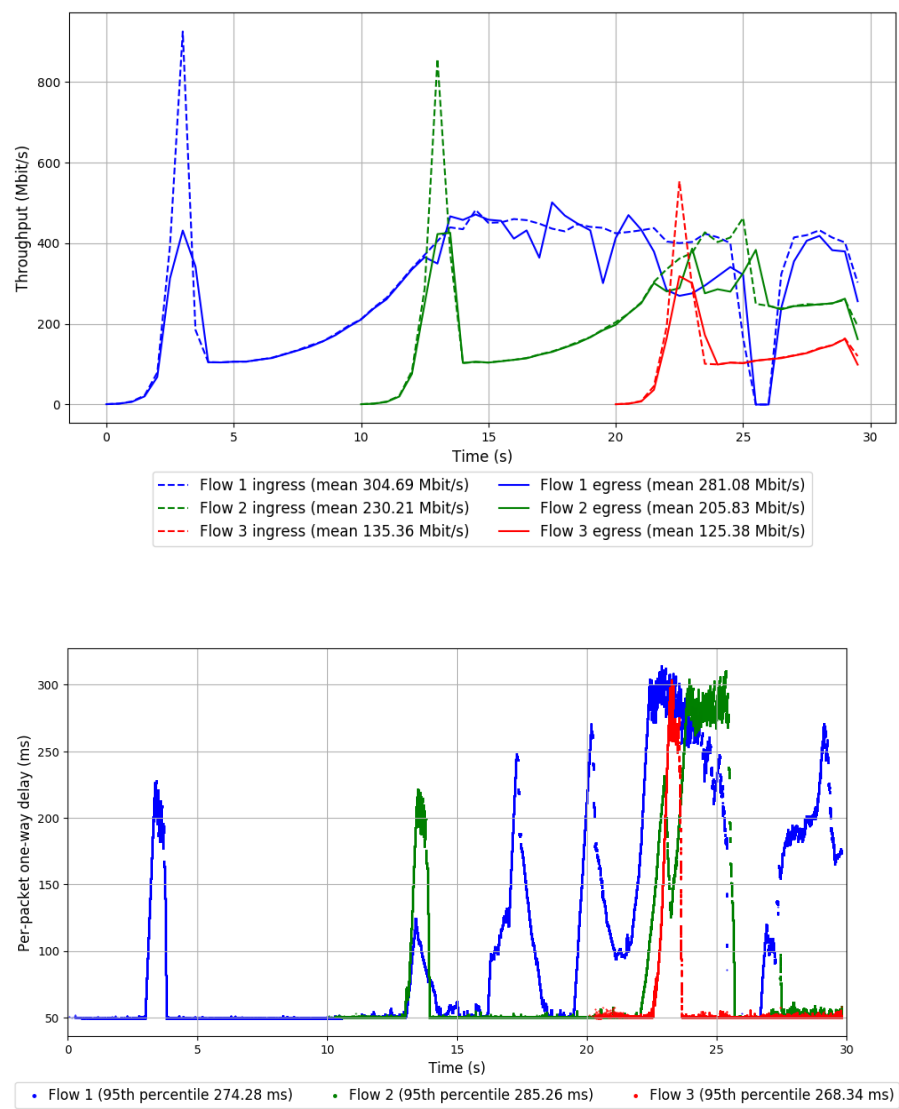
-- Flow 3:

Average throughput: 125.38 Mbit/s

95th percentile per-packet one-way delay: 268.344 ms

Loss rate: 8.30%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-01-31 17:01:12

End at: 2018-01-31 17:01:42

Below is generated by plot.py at 2018-01-31 23:30:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 487.89 Mbit/s

95th percentile per-packet one-way delay: 254.453 ms

Loss rate: 6.09%

-- Flow 1:

Average throughput: 227.25 Mbit/s

95th percentile per-packet one-way delay: 230.338 ms

Loss rate: 7.42%

-- Flow 2:

Average throughput: 297.03 Mbit/s

95th percentile per-packet one-way delay: 258.585 ms

Loss rate: 6.00%

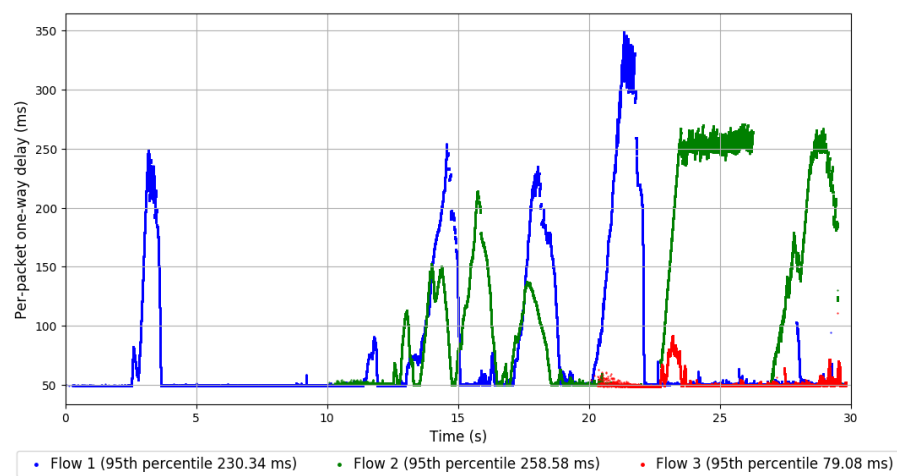
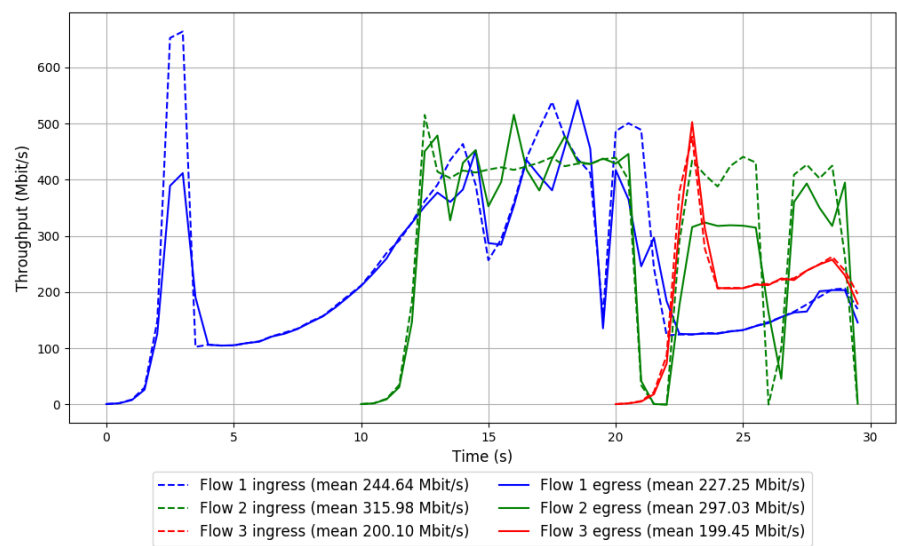
-- Flow 3:

Average throughput: 199.45 Mbit/s

95th percentile per-packet one-way delay: 79.085 ms

Loss rate: 1.41%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-01-31 17:18:28

End at: 2018-01-31 17:18:58

Below is generated by plot.py at 2018-01-31 23:31:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 530.27 Mbit/s

95th percentile per-packet one-way delay: 307.496 ms

Loss rate: 8.56%

-- Flow 1:

Average throughput: 283.91 Mbit/s

95th percentile per-packet one-way delay: 261.823 ms

Loss rate: 5.07%

-- Flow 2:

Average throughput: 281.92 Mbit/s

95th percentile per-packet one-way delay: 319.610 ms

Loss rate: 11.17%

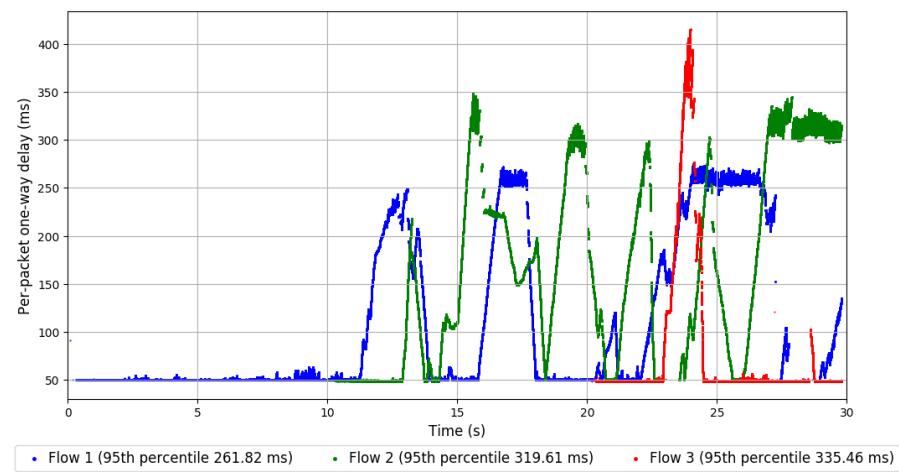
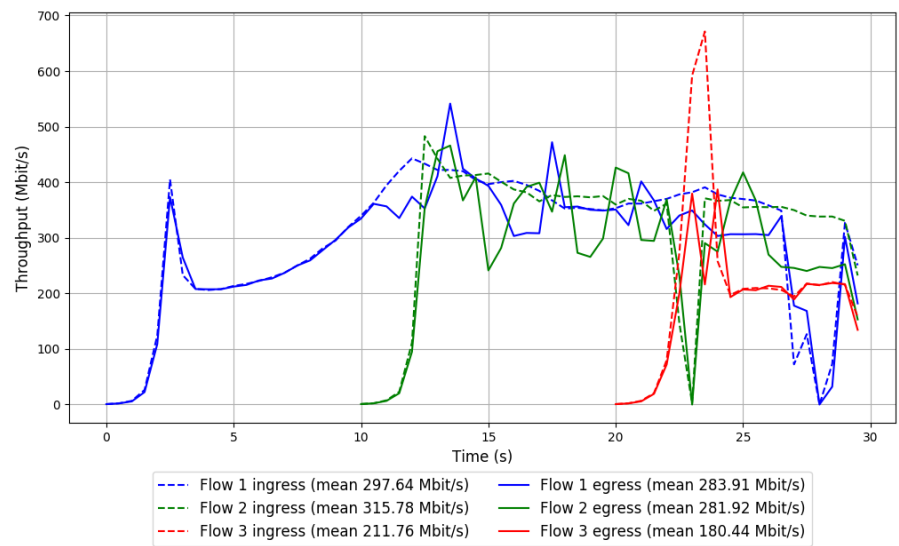
-- Flow 3:

Average throughput: 180.44 Mbit/s

95th percentile per-packet one-way delay: 335.464 ms

Loss rate: 15.65%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-01-31 17:35:32

End at: 2018-01-31 17:36:02

Below is generated by plot.py at 2018-01-31 23:31:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 493.15 Mbit/s

95th percentile per-packet one-way delay: 257.930 ms

Loss rate: 6.50%

-- Flow 1:

Average throughput: 281.34 Mbit/s

95th percentile per-packet one-way delay: 255.686 ms

Loss rate: 5.52%

-- Flow 2:

Average throughput: 228.12 Mbit/s

95th percentile per-packet one-way delay: 264.431 ms

Loss rate: 8.42%

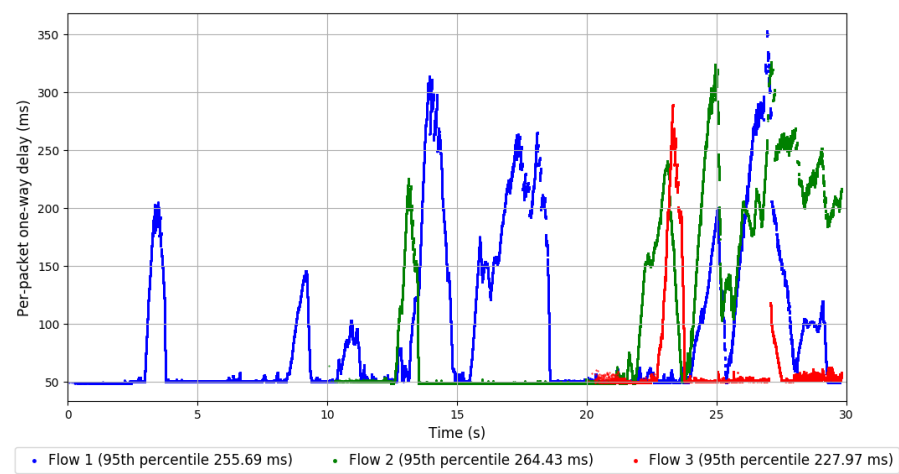
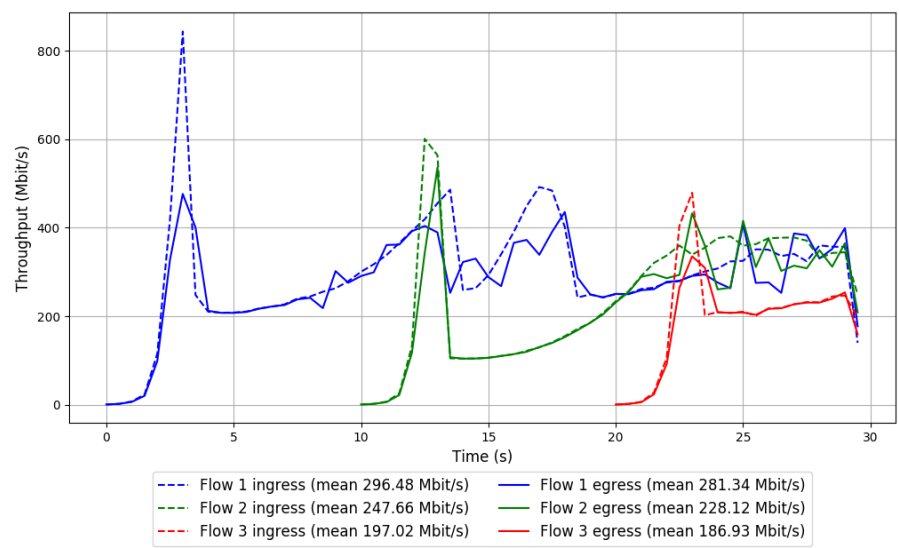
-- Flow 3:

Average throughput: 186.93 Mbit/s

95th percentile per-packet one-way delay: 227.969 ms

Loss rate: 6.10%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-01-31 17:52:43

End at: 2018-01-31 17:53:13

Below is generated by plot.py at 2018-01-31 23:34:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 521.01 Mbit/s

95th percentile per-packet one-way delay: 302.312 ms

Loss rate: 10.40%

-- Flow 1:

Average throughput: 297.55 Mbit/s

95th percentile per-packet one-way delay: 300.639 ms

Loss rate: 7.72%

-- Flow 2:

Average throughput: 291.51 Mbit/s

95th percentile per-packet one-way delay: 298.403 ms

Loss rate: 10.24%

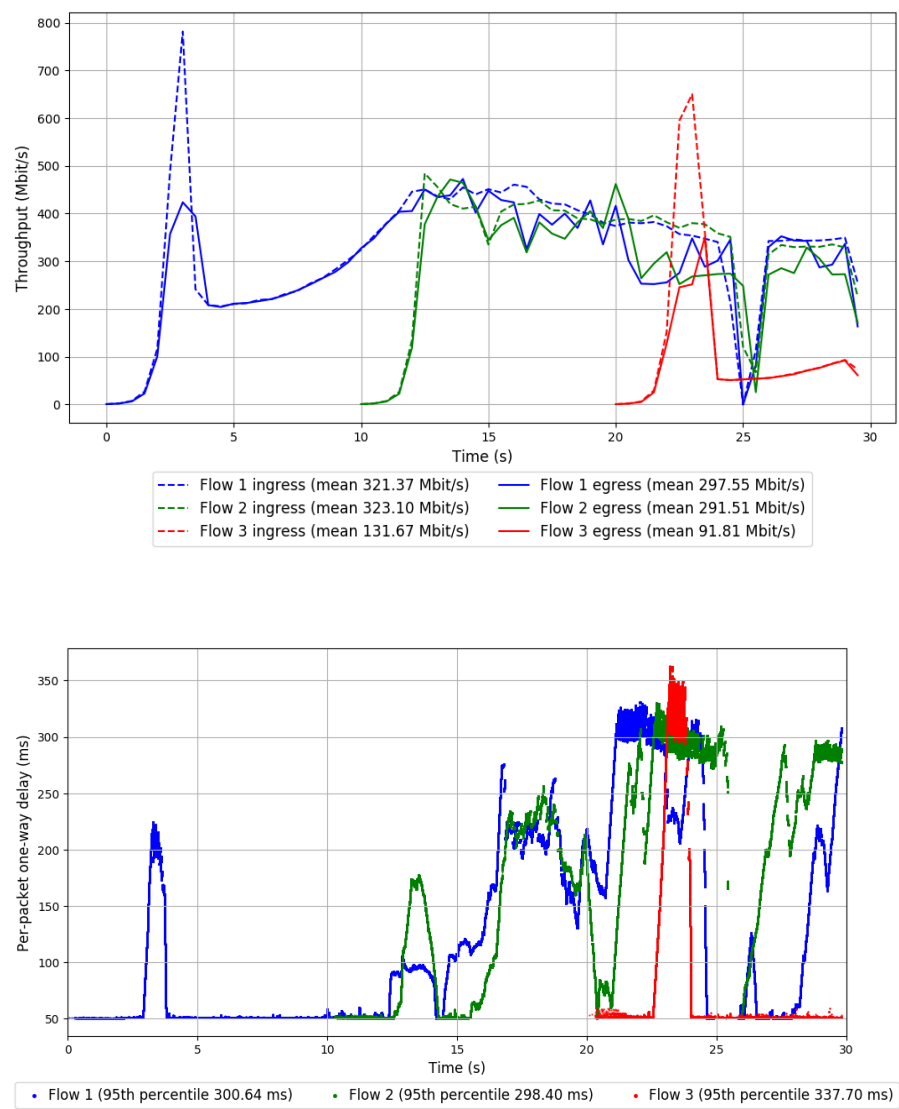
-- Flow 3:

Average throughput: 91.81 Mbit/s

95th percentile per-packet one-way delay: 337.704 ms

Loss rate: 31.00%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-01-31 18:09:17

End at: 2018-01-31 18:09:47

Below is generated by plot.py at 2018-01-31 23:35:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 474.32 Mbit/s

95th percentile per-packet one-way delay: 301.287 ms

Loss rate: 9.99%

-- Flow 1:

Average throughput: 260.29 Mbit/s

95th percentile per-packet one-way delay: 299.046 ms

Loss rate: 10.00%

-- Flow 2:

Average throughput: 281.08 Mbit/s

95th percentile per-packet one-way delay: 281.731 ms

Loss rate: 5.16%

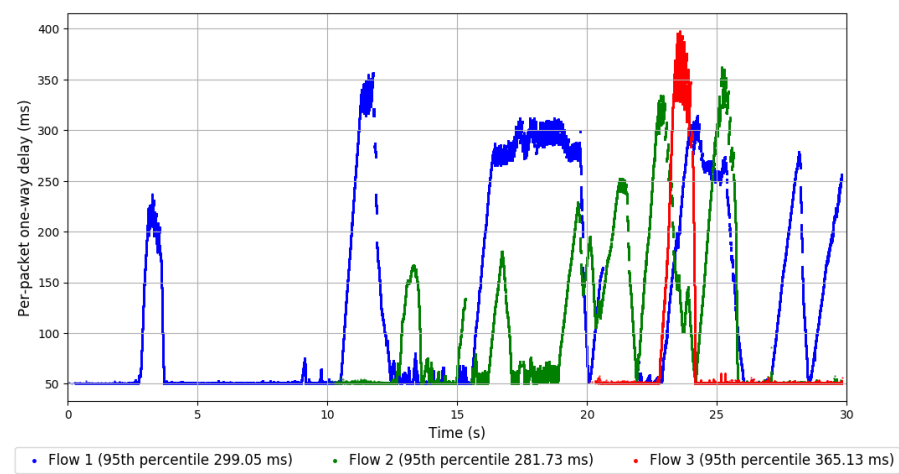
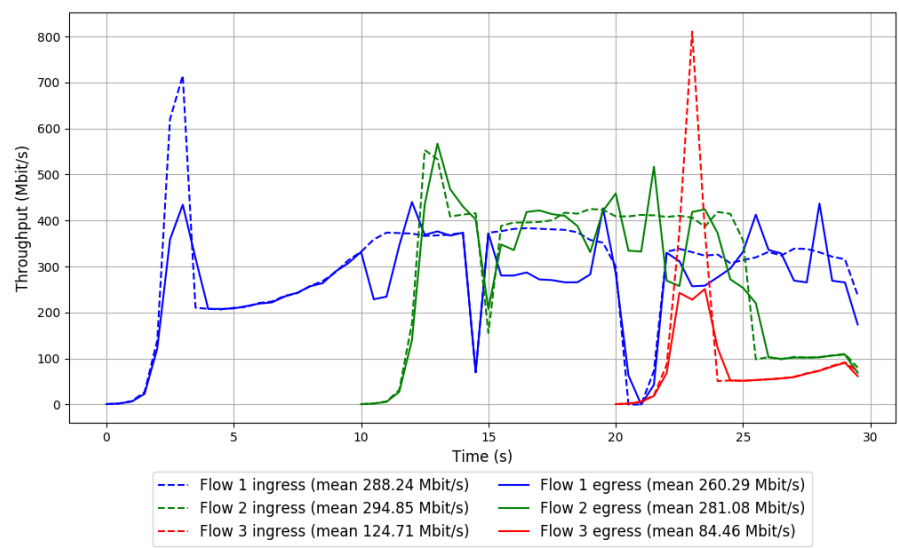
-- Flow 3:

Average throughput: 84.46 Mbit/s

95th percentile per-packet one-way delay: 365.128 ms

Loss rate: 32.95%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-01-31 18:26:43

End at: 2018-01-31 18:27:13

Below is generated by plot.py at 2018-01-31 23:36:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 457.06 Mbit/s

95th percentile per-packet one-way delay: 300.117 ms

Loss rate: 9.36%

-- Flow 1:

Average throughput: 252.20 Mbit/s

95th percentile per-packet one-way delay: 235.881 ms

Loss rate: 5.61%

-- Flow 2:

Average throughput: 185.47 Mbit/s

95th percentile per-packet one-way delay: 299.327 ms

Loss rate: 10.54%

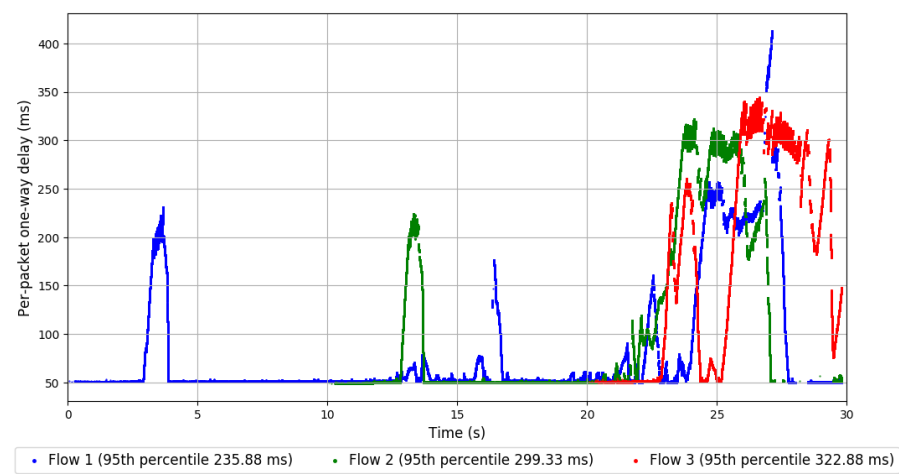
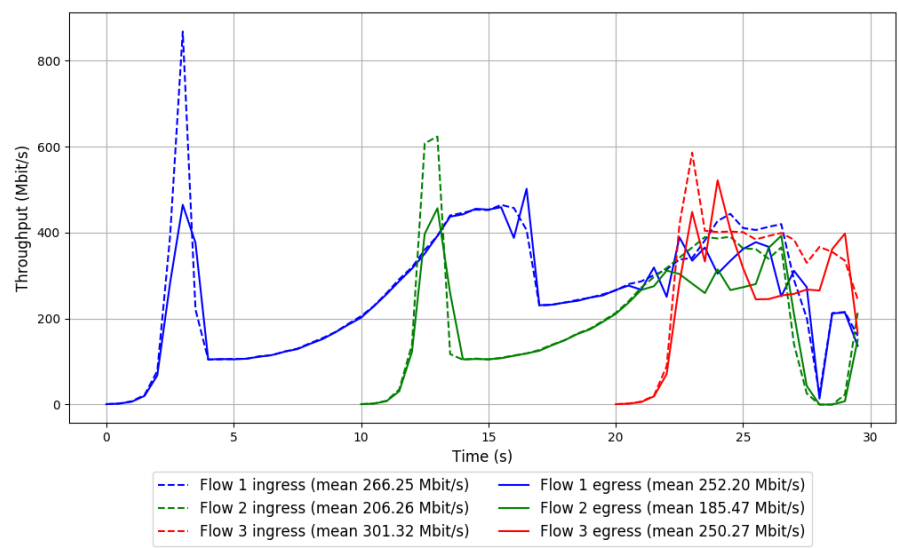
-- Flow 3:

Average throughput: 250.27 Mbit/s

95th percentile per-packet one-way delay: 322.878 ms

Loss rate: 17.82%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-01-31 18:43:33

End at: 2018-01-31 18:44:03

Below is generated by plot.py at 2018-01-31 23:38:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 474.08 Mbit/s

95th percentile per-packet one-way delay: 308.775 ms

Loss rate: 13.17%

-- Flow 1:

Average throughput: 246.95 Mbit/s

95th percentile per-packet one-way delay: 313.892 ms

Loss rate: 11.16%

-- Flow 2:

Average throughput: 251.06 Mbit/s

95th percentile per-packet one-way delay: 295.392 ms

Loss rate: 17.87%

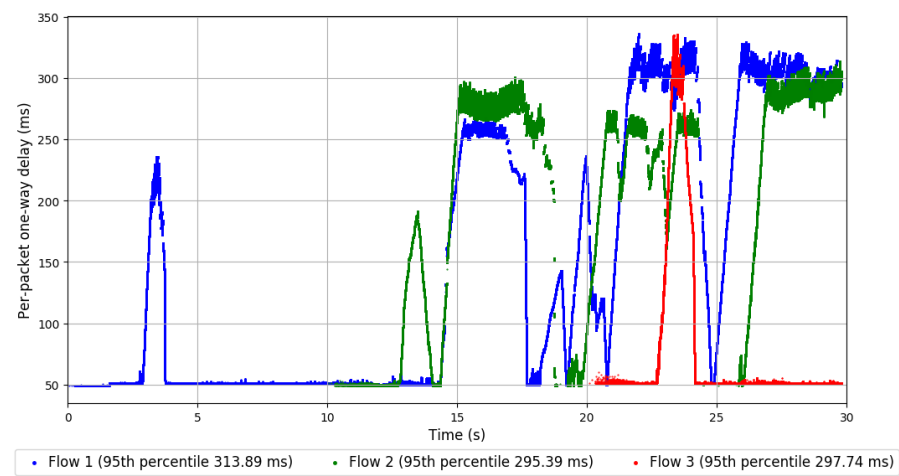
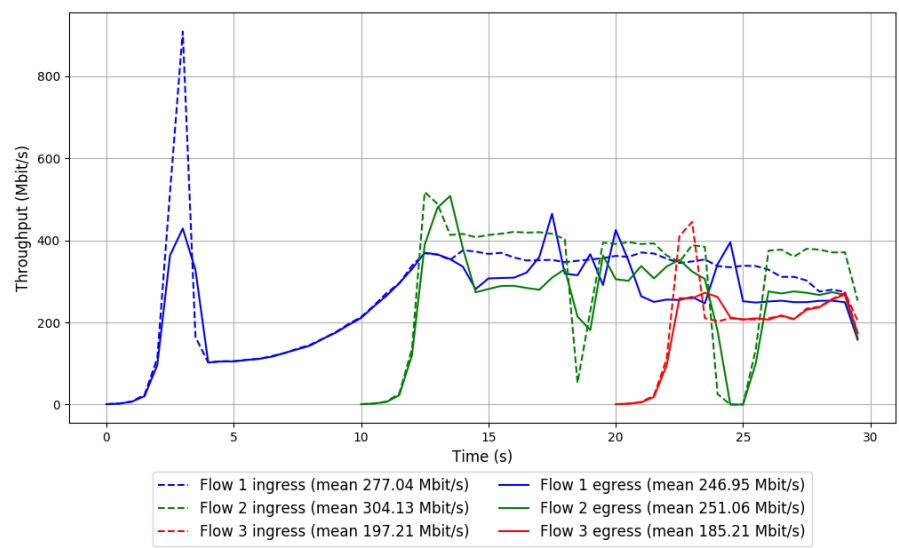
-- Flow 3:

Average throughput: 185.21 Mbit/s

95th percentile per-packet one-way delay: 297.742 ms

Loss rate: 7.06%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-01-31 19:00:38

End at: 2018-01-31 19:01:08

Below is generated by plot.py at 2018-01-31 23:40:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 510.40 Mbit/s

95th percentile per-packet one-way delay: 272.122 ms

Loss rate: 6.86%

-- Flow 1:

Average throughput: 310.20 Mbit/s

95th percentile per-packet one-way delay: 292.332 ms

Loss rate: 6.86%

-- Flow 2:

Average throughput: 214.05 Mbit/s

95th percentile per-packet one-way delay: 256.496 ms

Loss rate: 4.26%

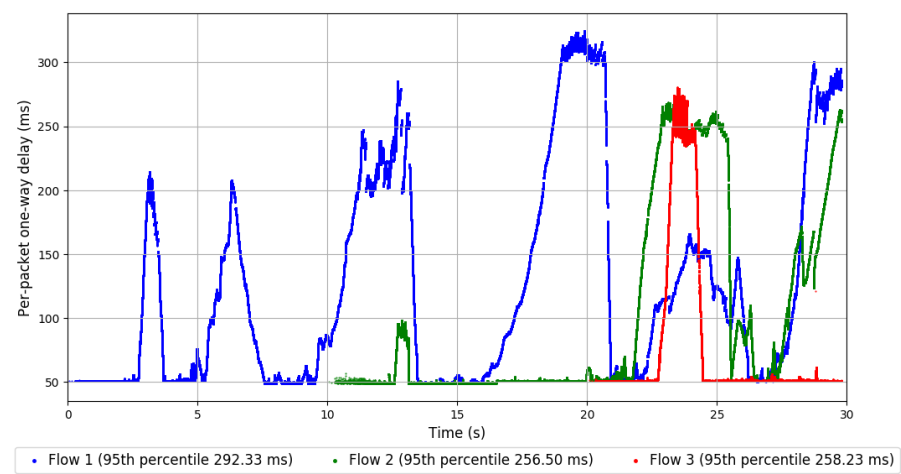
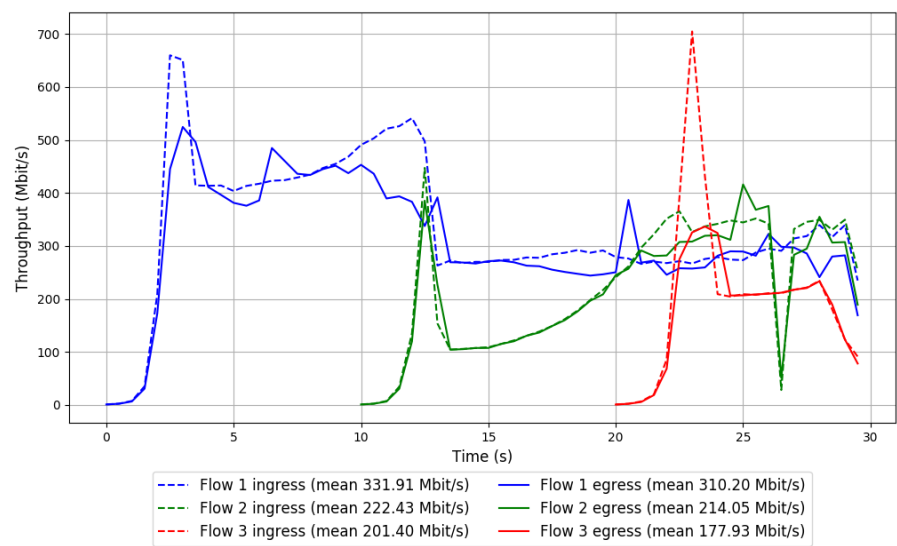
-- Flow 3:

Average throughput: 177.93 Mbit/s

95th percentile per-packet one-way delay: 258.228 ms

Loss rate: 12.64%

Run 10: Report of Vivace-loss — Data Link

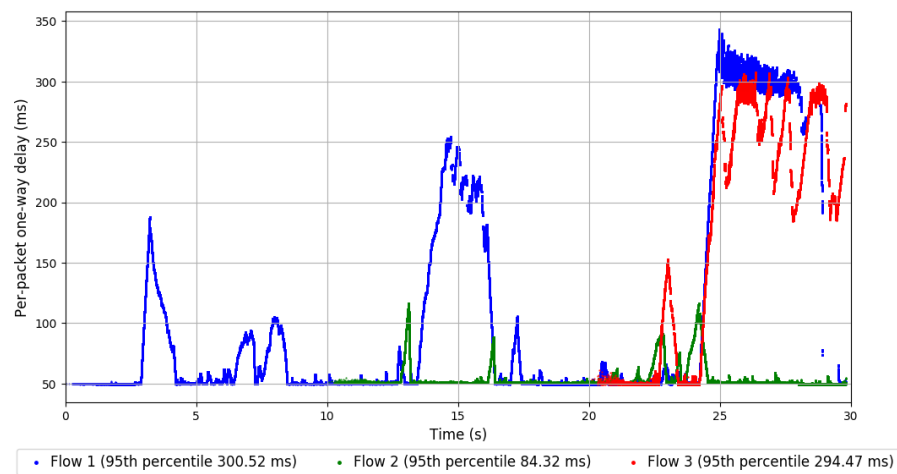
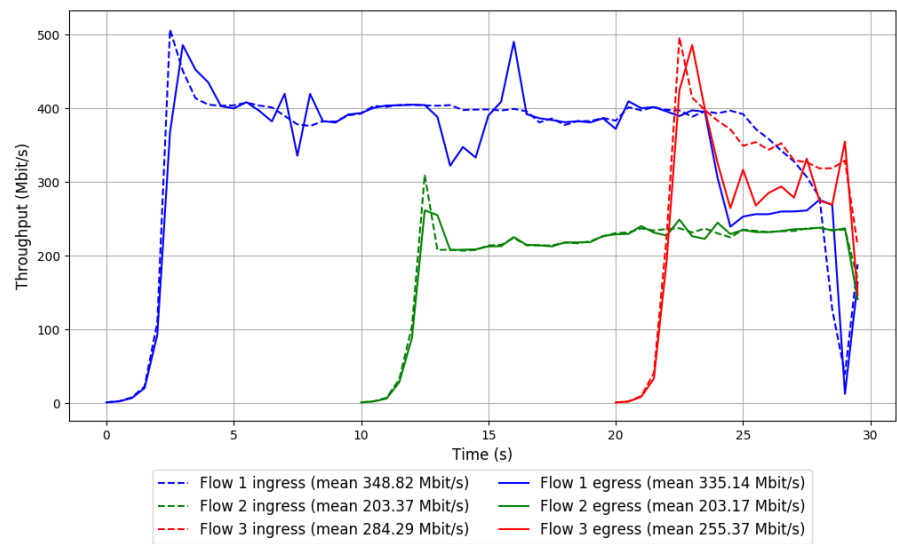


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-01-31 16:16:57
End at: 2018-01-31 16:17:27

# Below is generated by plot.py at 2018-01-31 23:41:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 553.25 Mbit/s
95th percentile per-packet one-way delay: 294.732 ms
Loss rate: 4.51%
-- Flow 1:
Average throughput: 335.14 Mbit/s
95th percentile per-packet one-way delay: 300.520 ms
Loss rate: 4.25%
-- Flow 2:
Average throughput: 203.17 Mbit/s
95th percentile per-packet one-way delay: 84.322 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 255.37 Mbit/s
95th percentile per-packet one-way delay: 294.466 ms
Loss rate: 11.13%
```


Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-01-31 16:33:30

End at: 2018-01-31 16:34:00

Below is generated by plot.py at 2018-01-31 23:41:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 477.07 Mbit/s

95th percentile per-packet one-way delay: 245.839 ms

Loss rate: 2.17%

-- Flow 1:

Average throughput: 256.66 Mbit/s

95th percentile per-packet one-way delay: 236.024 ms

Loss rate: 2.43%

-- Flow 2:

Average throughput: 245.74 Mbit/s

95th percentile per-packet one-way delay: 288.593 ms

Loss rate: 1.96%

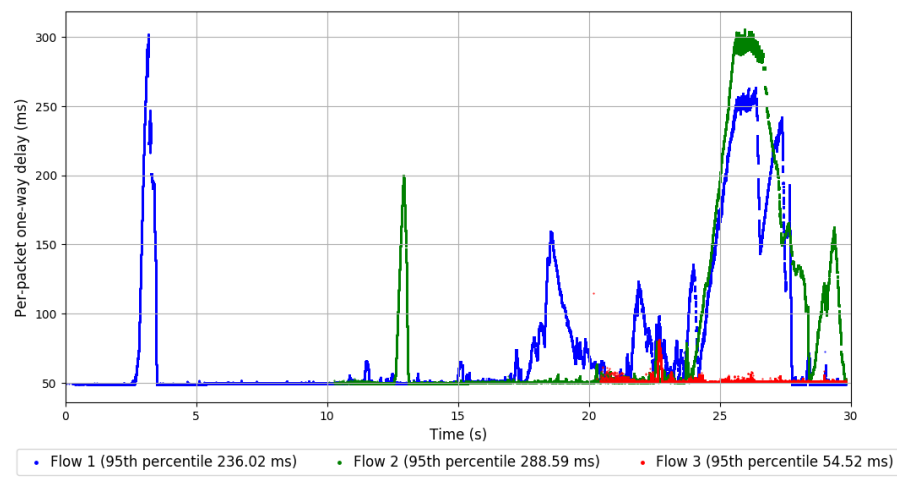
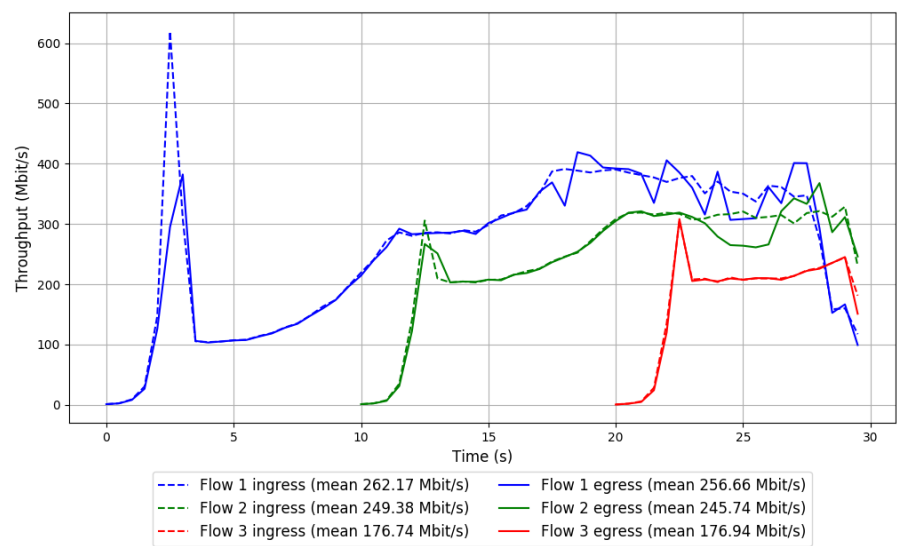
-- Flow 3:

Average throughput: 176.94 Mbit/s

95th percentile per-packet one-way delay: 54.519 ms

Loss rate: 1.56%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-01-31 16:50:09

End at: 2018-01-31 16:50:39

Below is generated by plot.py at 2018-01-31 23:41:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 409.45 Mbit/s

95th percentile per-packet one-way delay: 66.762 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 221.25 Mbit/s

95th percentile per-packet one-way delay: 60.673 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 222.40 Mbit/s

95th percentile per-packet one-way delay: 60.728 ms

Loss rate: 0.63%

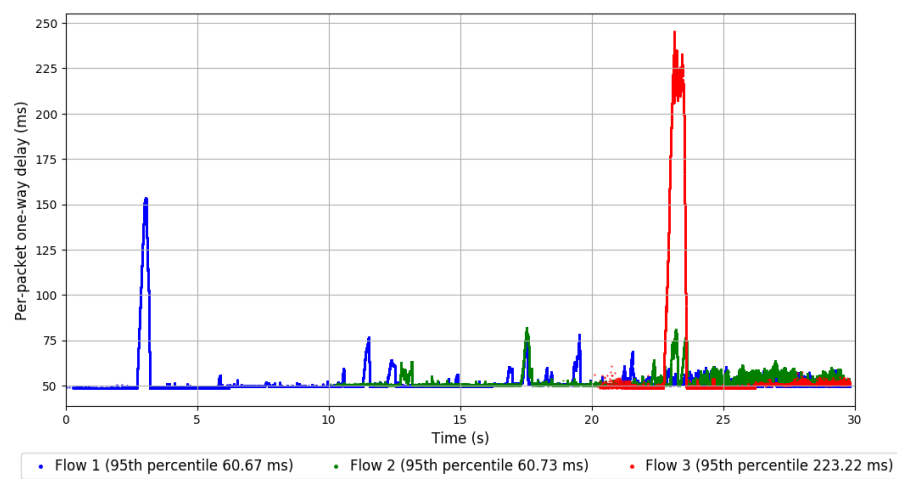
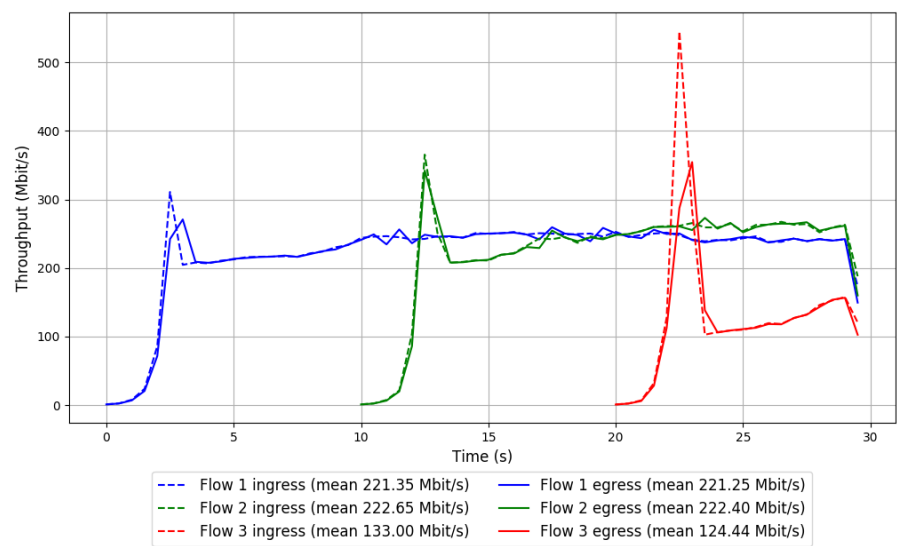
-- Flow 3:

Average throughput: 124.44 Mbit/s

95th percentile per-packet one-way delay: 223.218 ms

Loss rate: 7.46%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-01-31 17:06:55

End at: 2018-01-31 17:07:25

Below is generated by plot.py at 2018-01-31 23:44:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 519.86 Mbit/s

95th percentile per-packet one-way delay: 257.695 ms

Loss rate: 2.89%

-- Flow 1:

Average throughput: 303.27 Mbit/s

95th percentile per-packet one-way delay: 252.355 ms

Loss rate: 2.64%

-- Flow 2:

Average throughput: 205.00 Mbit/s

95th percentile per-packet one-way delay: 131.198 ms

Loss rate: 0.57%

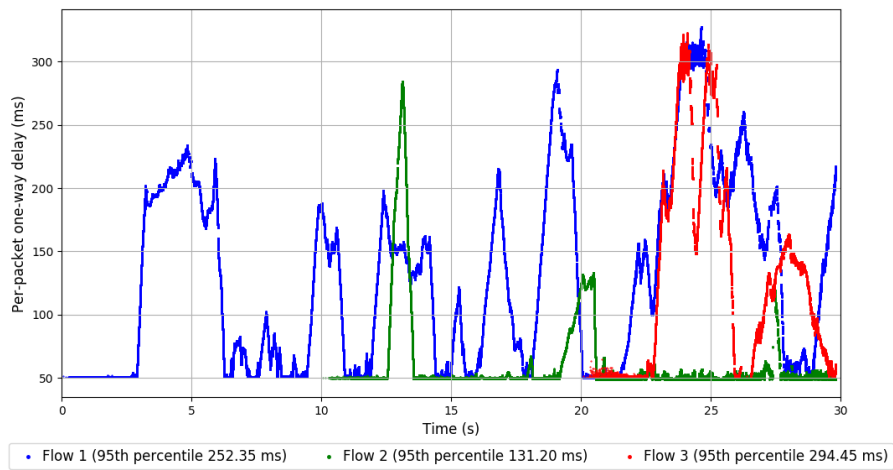
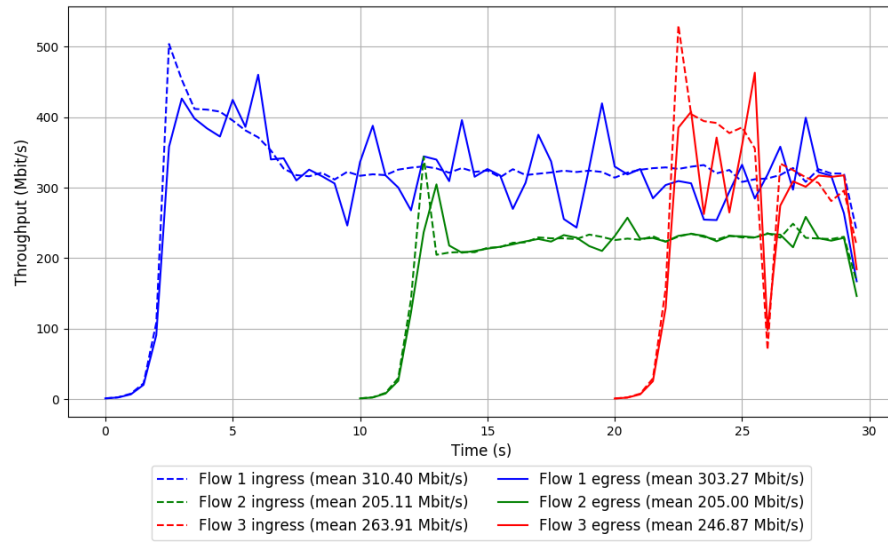
-- Flow 3:

Average throughput: 246.87 Mbit/s

95th percentile per-packet one-way delay: 294.450 ms

Loss rate: 7.45%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-01-31 17:24:04

End at: 2018-01-31 17:24:34

Below is generated by plot.py at 2018-01-31 23:44:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 507.56 Mbit/s

95th percentile per-packet one-way delay: 283.992 ms

Loss rate: 2.68%

-- Flow 1:

Average throughput: 272.15 Mbit/s

95th percentile per-packet one-way delay: 312.037 ms

Loss rate: 2.10%

-- Flow 2:

Average throughput: 221.03 Mbit/s

95th percentile per-packet one-way delay: 87.011 ms

Loss rate: 0.66%

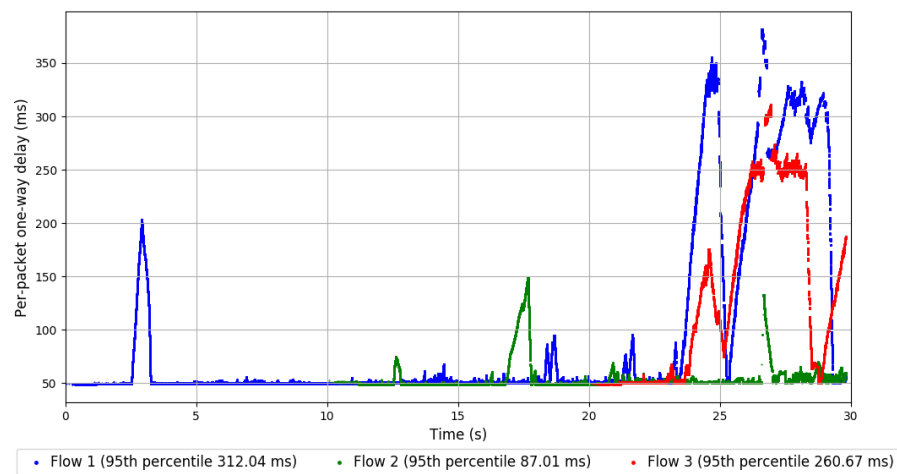
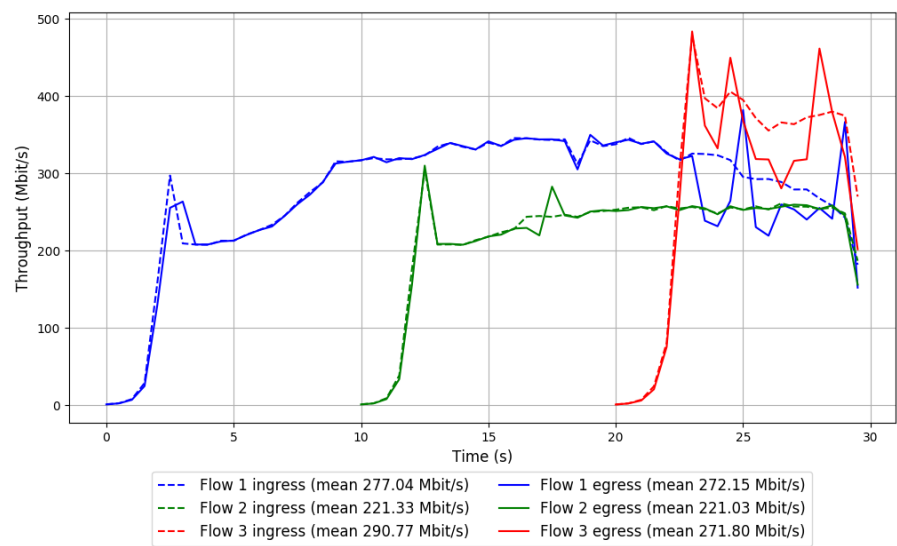
-- Flow 3:

Average throughput: 271.80 Mbit/s

95th percentile per-packet one-way delay: 260.669 ms

Loss rate: 7.49%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-01-31 17:41:11

End at: 2018-01-31 17:41:41

Below is generated by plot.py at 2018-01-31 23:44:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 455.78 Mbit/s

95th percentile per-packet one-way delay: 293.354 ms

Loss rate: 3.41%

-- Flow 1:

Average throughput: 326.84 Mbit/s

95th percentile per-packet one-way delay: 298.698 ms

Loss rate: 3.85%

-- Flow 2:

Average throughput: 179.38 Mbit/s

95th percentile per-packet one-way delay: 186.475 ms

Loss rate: 2.27%

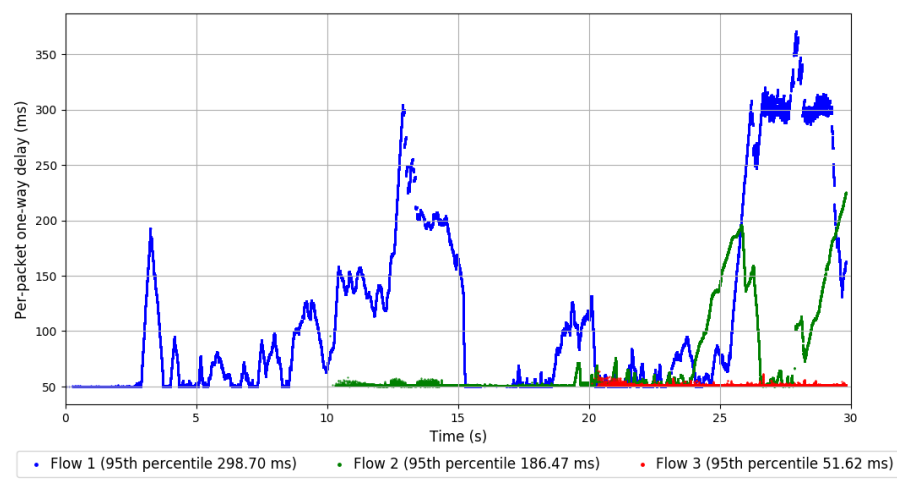
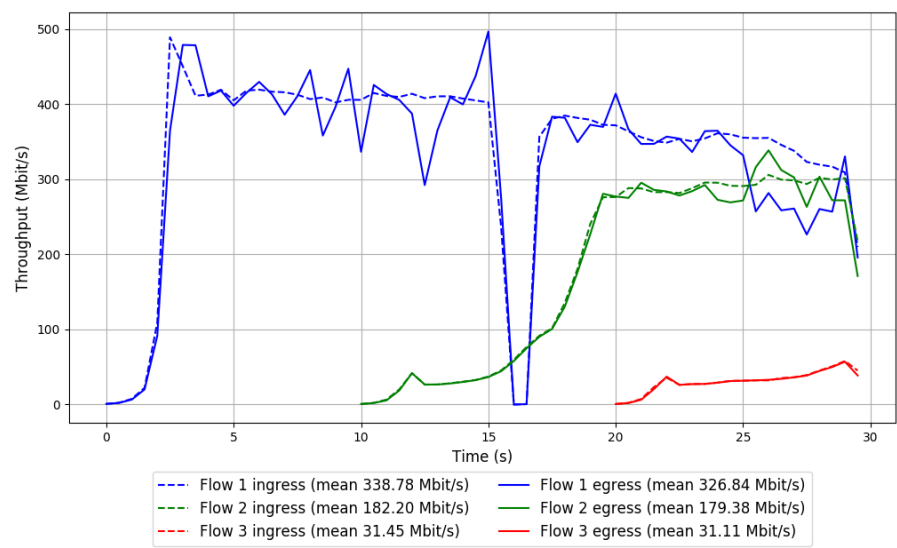
-- Flow 3:

Average throughput: 31.11 Mbit/s

95th percentile per-packet one-way delay: 51.623 ms

Loss rate: 2.13%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-01-31 17:58:21

End at: 2018-01-31 17:58:51

Below is generated by plot.py at 2018-01-31 23:45:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 449.86 Mbit/s

95th percentile per-packet one-way delay: 149.907 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 233.83 Mbit/s

95th percentile per-packet one-way delay: 100.097 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 236.53 Mbit/s

95th percentile per-packet one-way delay: 241.537 ms

Loss rate: 3.12%

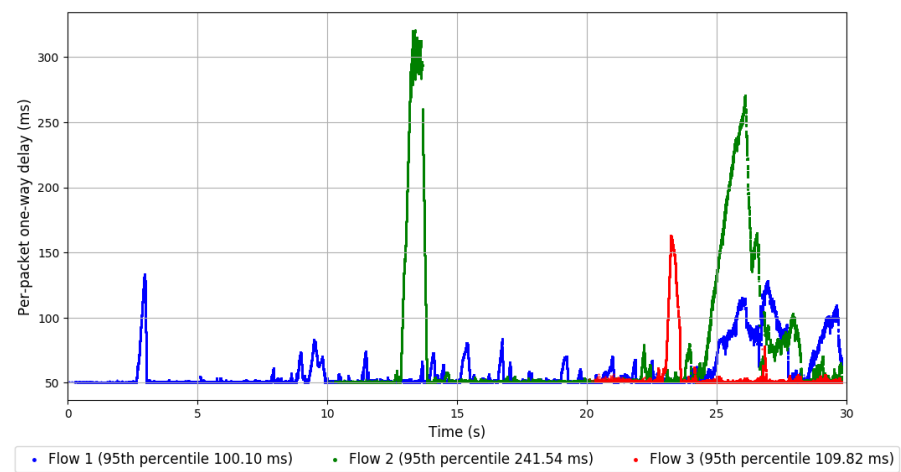
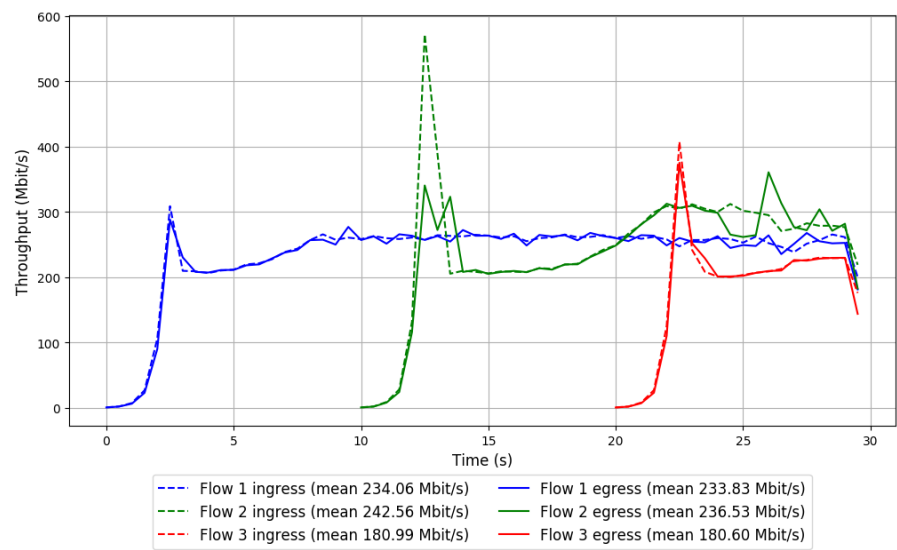
-- Flow 3:

Average throughput: 180.60 Mbit/s

95th percentile per-packet one-way delay: 109.822 ms

Loss rate: 1.56%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-01-31 18:15:11

End at: 2018-01-31 18:15:41

Below is generated by plot.py at 2018-01-31 23:46:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 516.31 Mbit/s

95th percentile per-packet one-way delay: 182.757 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 242.06 Mbit/s

95th percentile per-packet one-way delay: 72.284 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 330.23 Mbit/s

95th percentile per-packet one-way delay: 217.288 ms

Loss rate: 2.32%

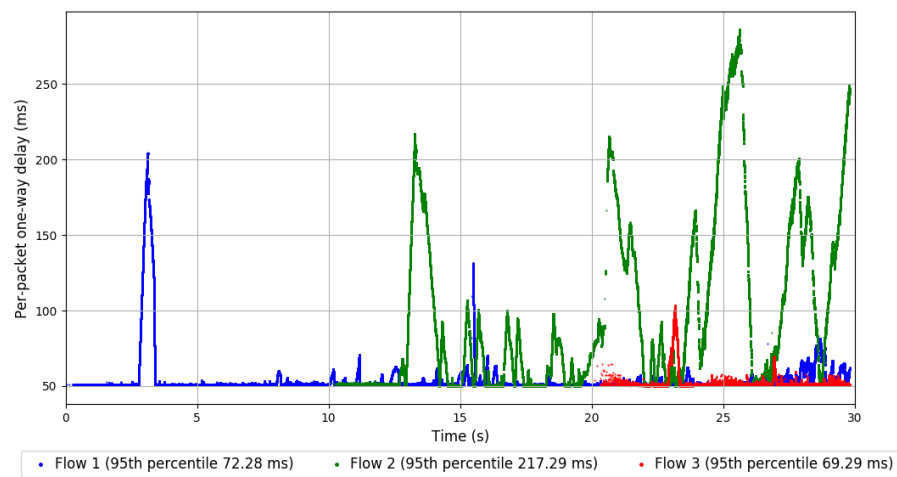
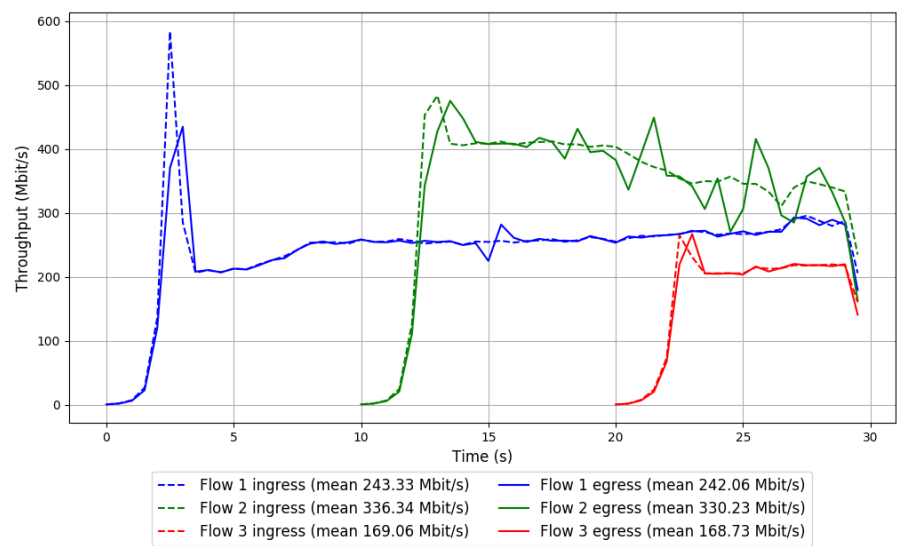
-- Flow 3:

Average throughput: 168.73 Mbit/s

95th percentile per-packet one-way delay: 69.291 ms

Loss rate: 1.30%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-01-31 18:32:13

End at: 2018-01-31 18:32:43

Below is generated by plot.py at 2018-01-31 23:46:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 444.68 Mbit/s

95th percentile per-packet one-way delay: 248.363 ms

Loss rate: 2.01%

-- Flow 1:

Average throughput: 263.74 Mbit/s

95th percentile per-packet one-way delay: 251.689 ms

Loss rate: 1.49%

-- Flow 2:

Average throughput: 186.91 Mbit/s

95th percentile per-packet one-way delay: 251.690 ms

Loss rate: 3.36%

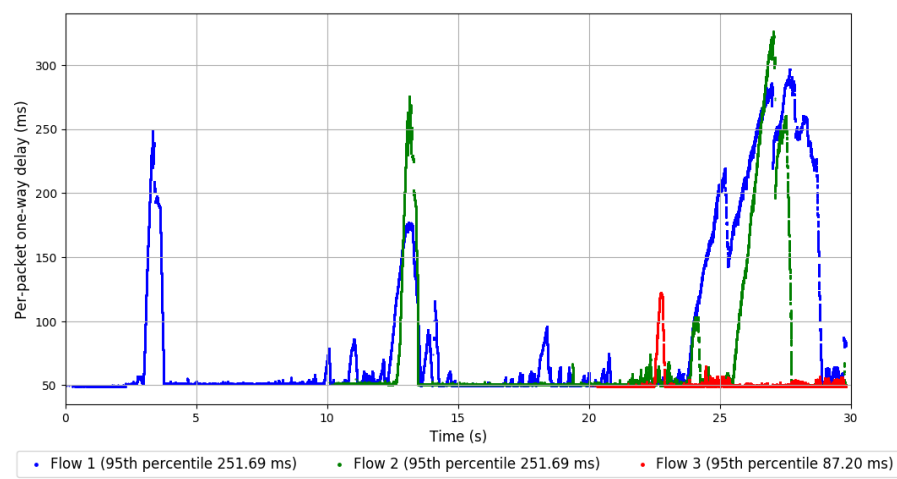
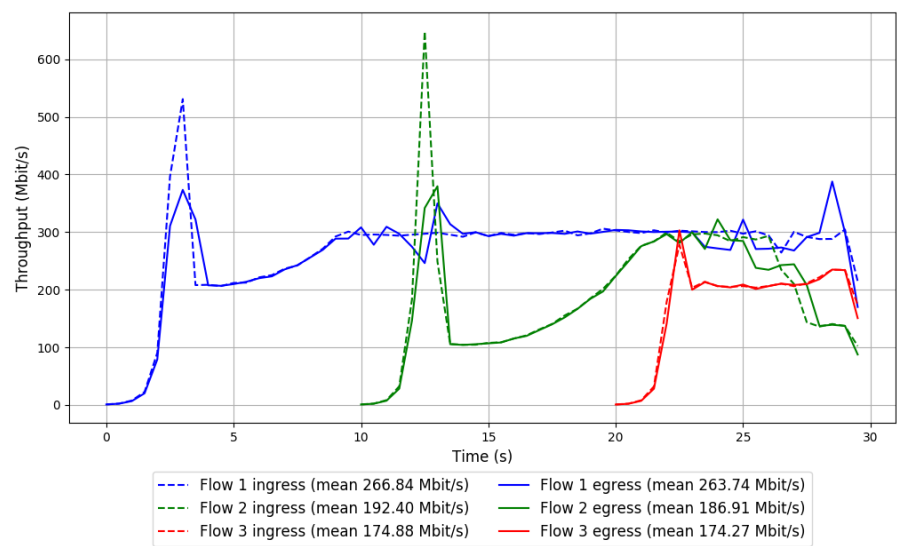
-- Flow 3:

Average throughput: 174.27 Mbit/s

95th percentile per-packet one-way delay: 87.198 ms

Loss rate: 1.39%

Run 9: Report of Vivace-LTE — Data Link



Run 10: Statistics of Vivace-LTE

Start at: 2018-01-31 18:49:09

End at: 2018-01-31 18:49:39

Below is generated by plot.py at 2018-01-31 23:46:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 567.39 Mbit/s

95th percentile per-packet one-way delay: 266.943 ms

Loss rate: 2.93%

-- Flow 1:

Average throughput: 347.27 Mbit/s

95th percentile per-packet one-way delay: 230.857 ms

Loss rate: 1.60%

-- Flow 2:

Average throughput: 249.51 Mbit/s

95th percentile per-packet one-way delay: 282.390 ms

Loss rate: 6.09%

-- Flow 3:

Average throughput: 174.21 Mbit/s

95th percentile per-packet one-way delay: 69.230 ms

Loss rate: 1.41%

Run 10: Report of Vivace-LTE — Data Link

