

Pantheon Report

Generated at 2018-01-31 14:53:17 (UTC).

Data path: GCE Sydney 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.

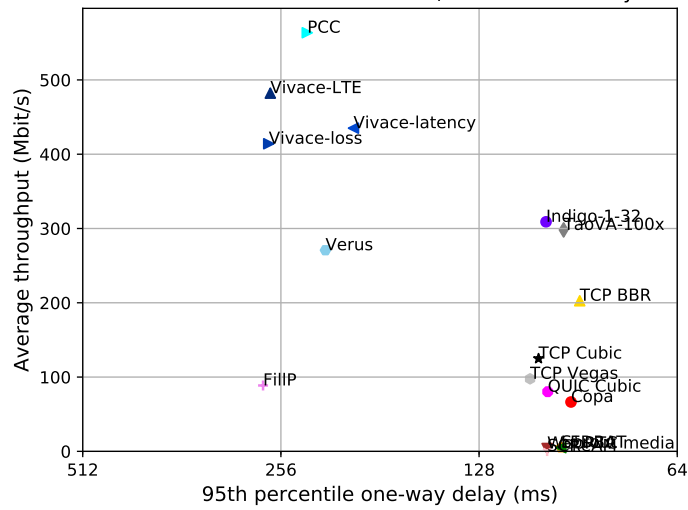
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

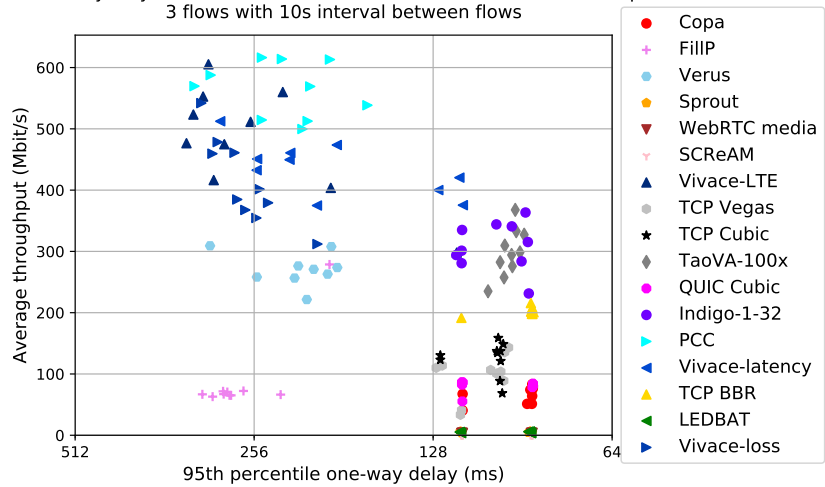
Git summary:

```
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 Sydney 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 Sydney 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	103.96	101.19	96.99	89.99	87.28	87.37	0.74	1.15	2.21
TCP Cubic	10	58.36	64.11	73.85	103.21	103.85	105.03	1.14	1.50	2.01
LEDBAT	10	2.89	2.24	1.81	96.22	96.06	93.28	1.52	2.61	3.92
PCC	10	451.06	136.39	68.22	240.14	185.84	184.17	4.75	2.79	4.70
QUIC Cubic	10	43.81	42.83	25.16	97.93	92.51	92.54	0.73	1.58	3.51
SCReAM	10	0.19	0.21	0.22	98.11	92.61	89.81	0.63	1.02	1.91
WebRTC media	10	2.08	1.30	0.47	92.72	95.45	95.35	0.86	1.35	3.60
Sprout	10	2.82	2.61	1.67	98.57	95.89	98.46	1.30	1.90	3.89
TaoVA-100x	10	172.95	141.46	127.36	93.02	103.89	102.45	0.48	0.63	2.57
TCP Vegas	10	49.82	47.00	51.11	105.45	106.20	101.09	0.85	0.71	1.69
Verus	9	168.79	111.61	88.91	211.19	222.97	208.94	2.75	3.89	7.35
Copa	10	42.29	28.08	20.35	89.78	95.57	100.69	0.27	0.73	2.72
FillP	10	22.22	66.88	67.95	275.71	271.91	279.56	21.65	19.51	19.38
Indigo-1-32	10	164.02	153.16	135.81	100.73	102.90	97.06	0.80	1.18	2.67
Vivace-latency	10	240.04	216.73	158.61	209.25	142.43	224.77	1.48	1.32	6.57
Vivace-loss	10	237.13	196.74	144.85	265.08	249.83	272.37	6.97	6.57	14.64
Vivace-LTE	10	275.76	237.58	154.74	258.90	270.63	203.06	3.70	4.90	5.79

Run 1: Statistics of TCP BBR

Start at: 2018-01-31 07:09:48

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

Below is generated by plot.py at 2018-01-31 13:21:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 198.24 Mbit/s

95th percentile per-packet one-way delay: 87.317 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 102.32 Mbit/s

95th percentile per-packet one-way delay: 87.285 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 98.69 Mbit/s

95th percentile per-packet one-way delay: 87.327 ms

Loss rate: 1.36%

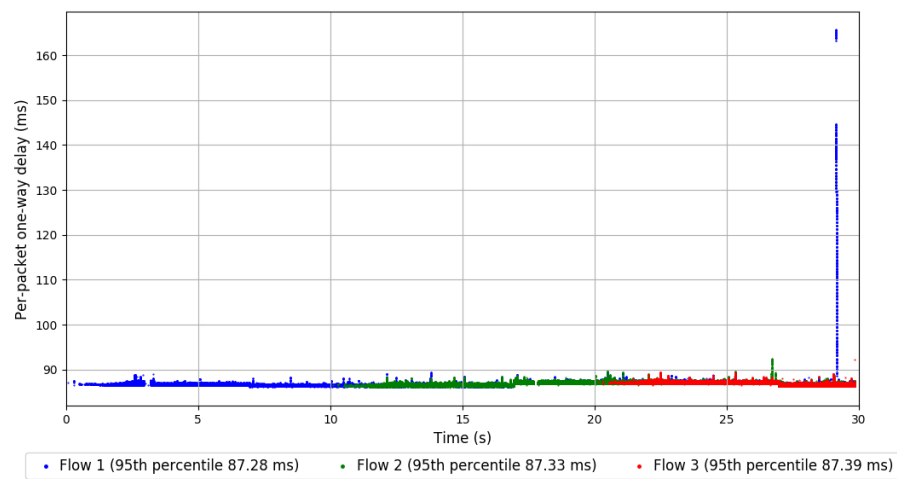
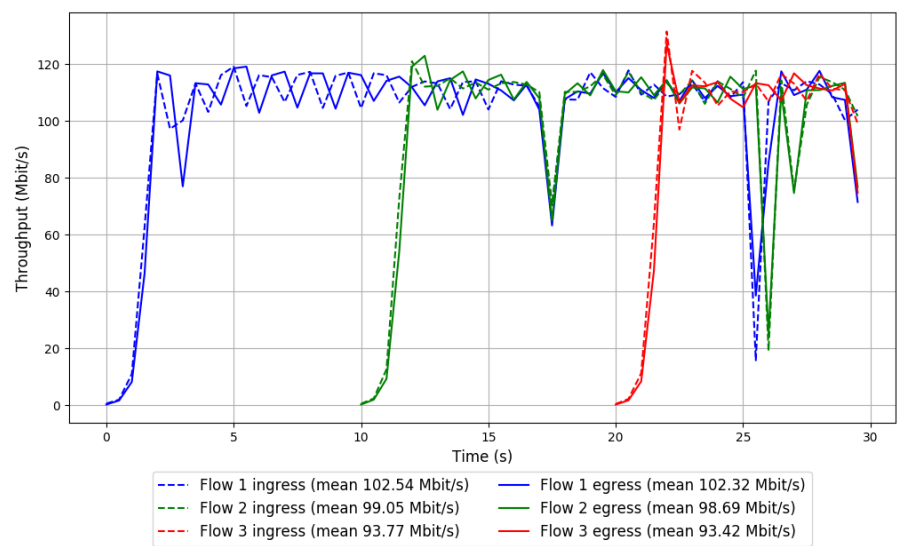
-- Flow 3:

Average throughput: 93.42 Mbit/s

95th percentile per-packet one-way delay: 87.387 ms

Loss rate: 2.34%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-01-31 07:28:19

End at: 2018-01-31 07:28:49

Below is generated by plot.py at 2018-01-31 13:21:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 200.73 Mbit/s

95th percentile per-packet one-way delay: 86.760 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 101.92 Mbit/s

95th percentile per-packet one-way delay: 86.769 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 103.35 Mbit/s

95th percentile per-packet one-way delay: 86.792 ms

Loss rate: 1.19%

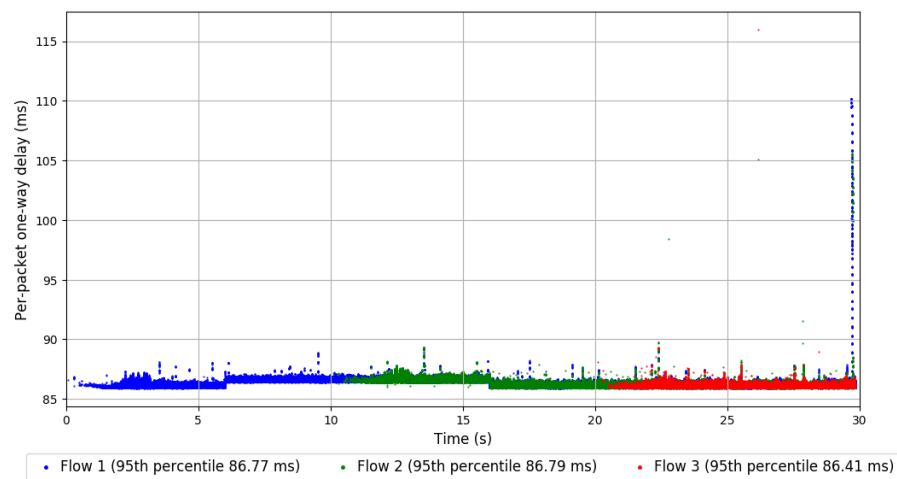
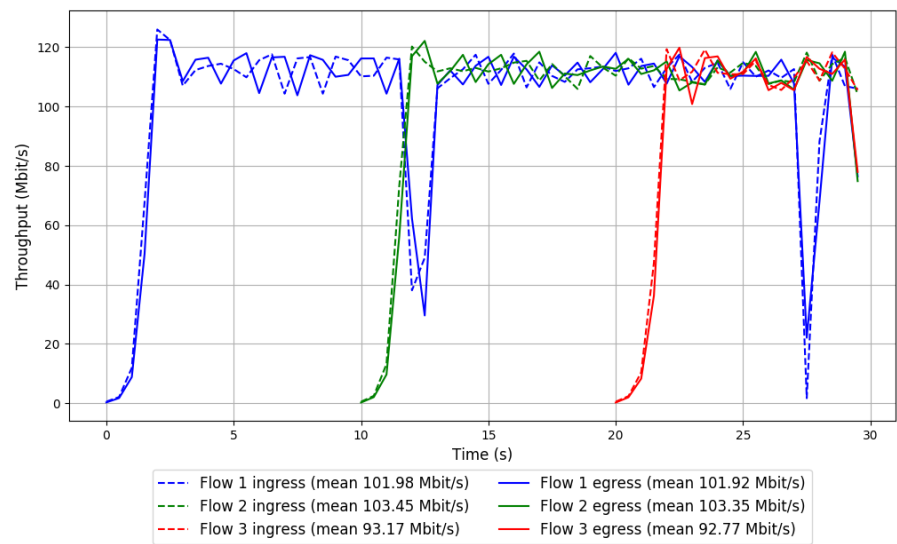
-- Flow 3:

Average throughput: 92.77 Mbit/s

95th percentile per-packet one-way delay: 86.413 ms

Loss rate: 2.58%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-01-31 07:46:42

End at: 2018-01-31 07:47:12

Below is generated by plot.py at 2018-01-31 13:21:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 201.10 Mbit/s

95th percentile per-packet one-way delay: 87.252 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 103.83 Mbit/s

95th percentile per-packet one-way delay: 87.279 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 100.86 Mbit/s

95th percentile per-packet one-way delay: 87.148 ms

Loss rate: 1.07%

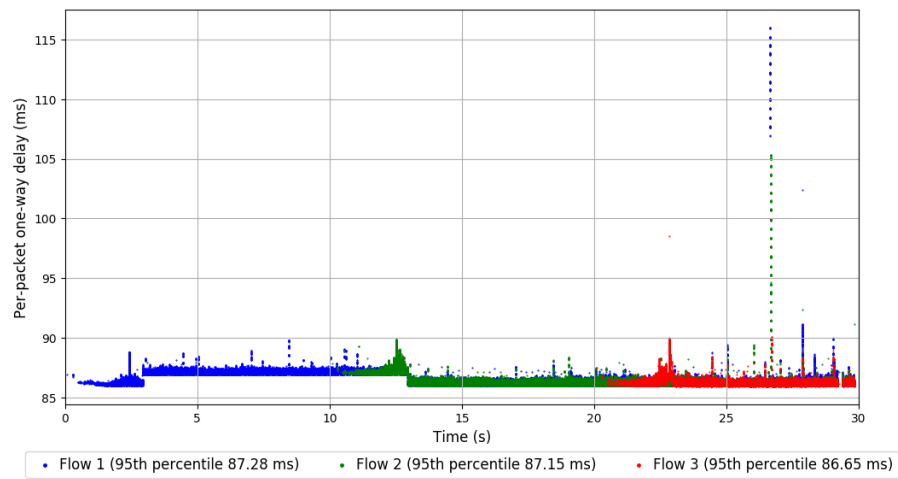
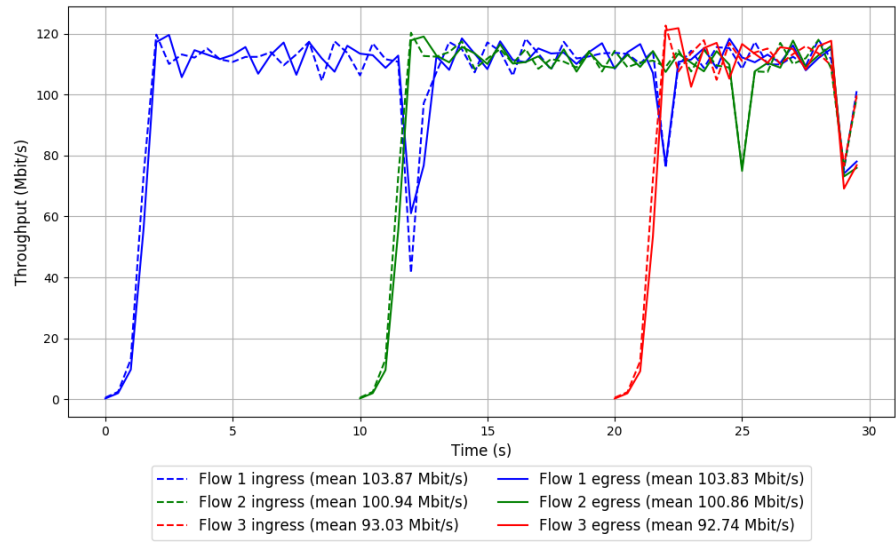
-- Flow 3:

Average throughput: 92.74 Mbit/s

95th percentile per-packet one-way delay: 86.649 ms

Loss rate: 2.34%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-01-31 08:04:55

End at: 2018-01-31 08:05:25

Below is generated by plot.py at 2018-01-31 13:21:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 197.92 Mbit/s

95th percentile per-packet one-way delay: 87.145 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 102.75 Mbit/s

95th percentile per-packet one-way delay: 87.068 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 98.32 Mbit/s

95th percentile per-packet one-way delay: 87.230 ms

Loss rate: 1.22%

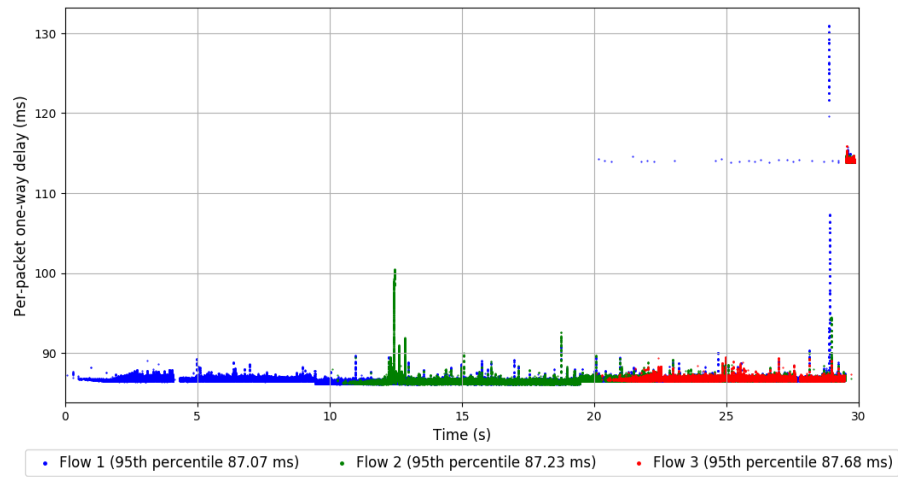
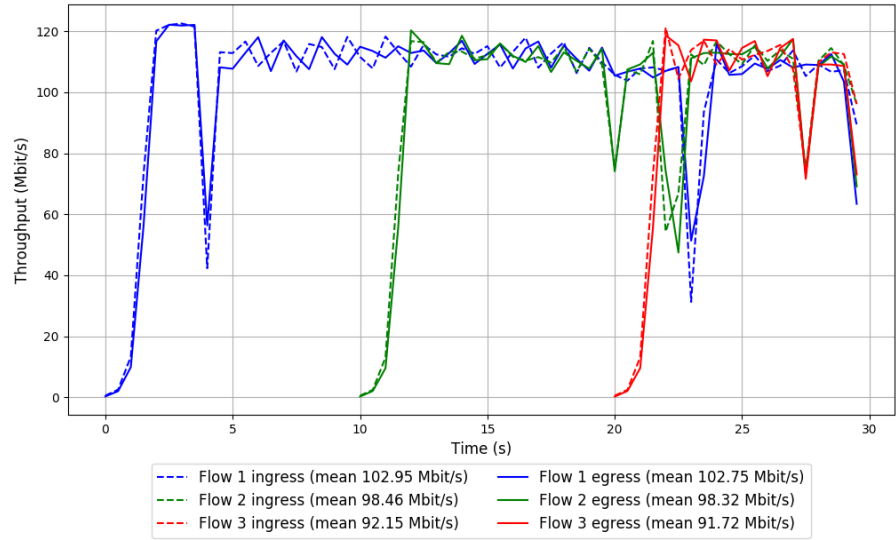
-- Flow 3:

Average throughput: 91.72 Mbit/s

95th percentile per-packet one-way delay: 87.684 ms

Loss rate: 2.59%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-01-31 08:23:04

End at: 2018-01-31 08:23:34

Below is generated by plot.py at 2018-01-31 13:21:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 191.59 Mbit/s

95th percentile per-packet one-way delay: 114.735 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 96.71 Mbit/s

95th percentile per-packet one-way delay: 114.842 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 96.83 Mbit/s

95th percentile per-packet one-way delay: 87.451 ms

Loss rate: 1.13%

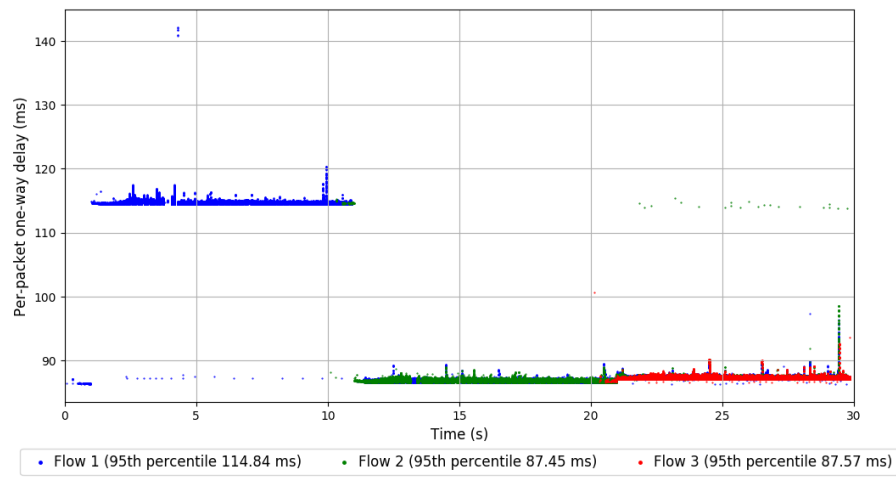
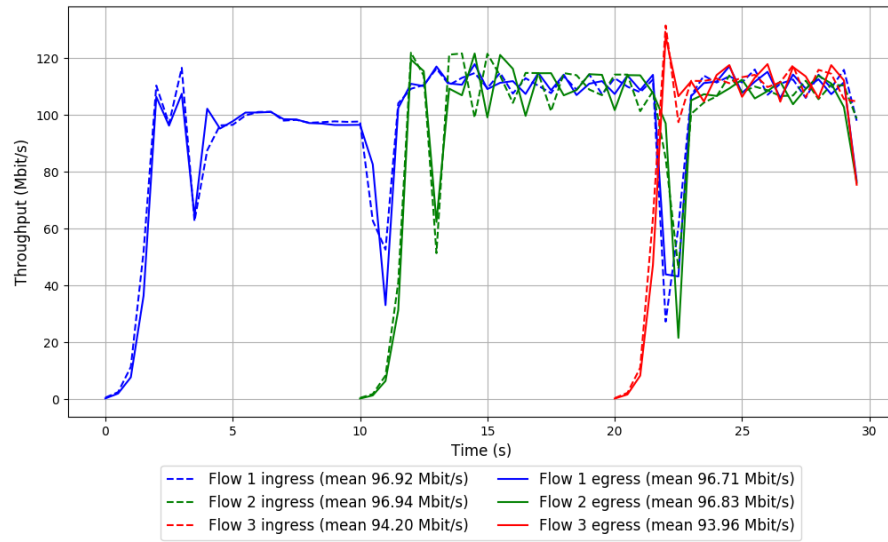
-- Flow 3:

Average throughput: 93.96 Mbit/s

95th percentile per-packet one-way delay: 87.566 ms

Loss rate: 2.37%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-01-31 08:41:05

End at: 2018-01-31 08:41:35

Below is generated by plot.py at 2018-01-31 13:21:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 207.13 Mbit/s

95th percentile per-packet one-way delay: 87.075 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 102.94 Mbit/s

95th percentile per-packet one-way delay: 87.026 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 102.41 Mbit/s

95th percentile per-packet one-way delay: 87.106 ms

Loss rate: 1.19%

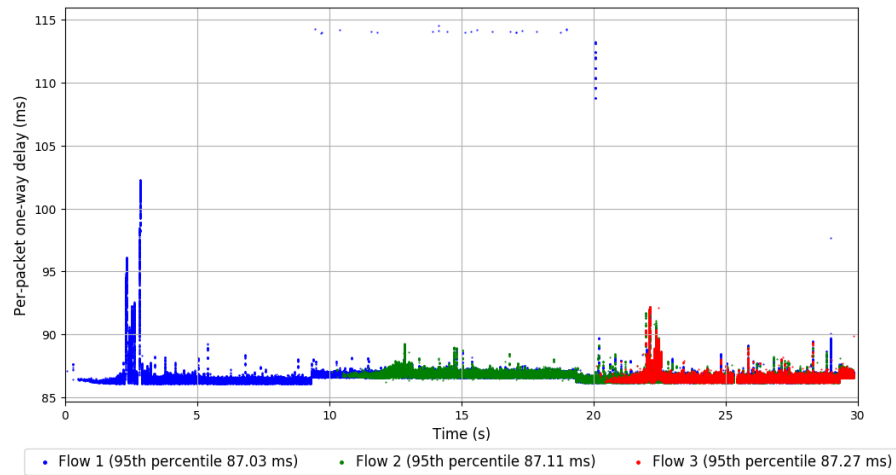
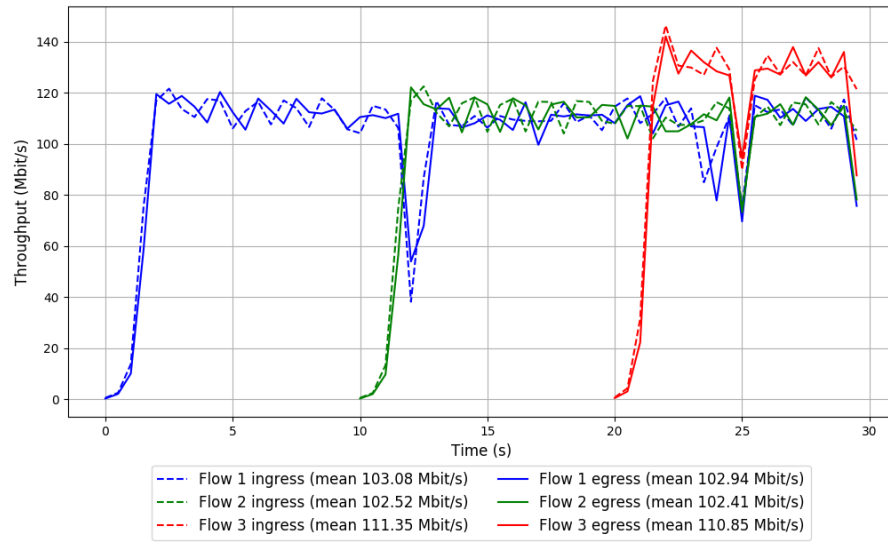
-- Flow 3:

Average throughput: 110.85 Mbit/s

95th percentile per-packet one-way delay: 87.265 ms

Loss rate: 2.41%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-01-31 08:59:04

End at: 2018-01-31 08:59:34

Below is generated by plot.py at 2018-01-31 13:21:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 206.75 Mbit/s

95th percentile per-packet one-way delay: 87.300 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 102.59 Mbit/s

95th percentile per-packet one-way delay: 87.184 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 101.94 Mbit/s

95th percentile per-packet one-way delay: 87.265 ms

Loss rate: 0.89%

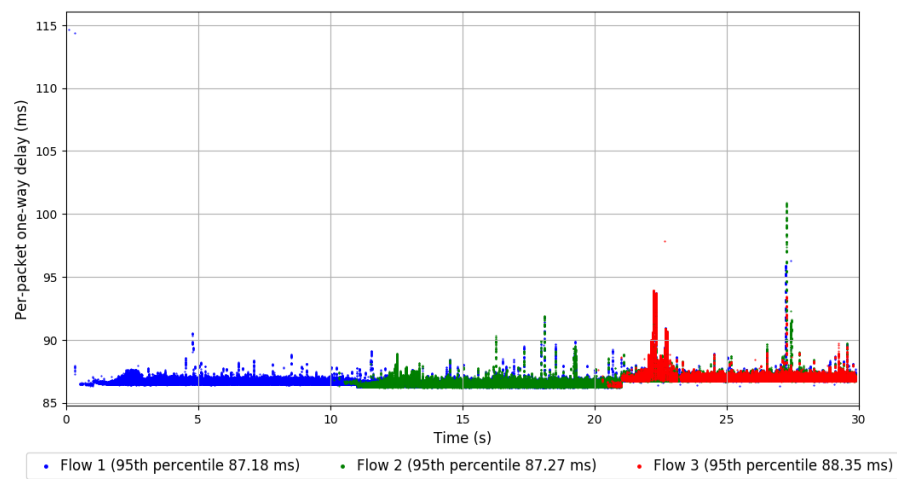
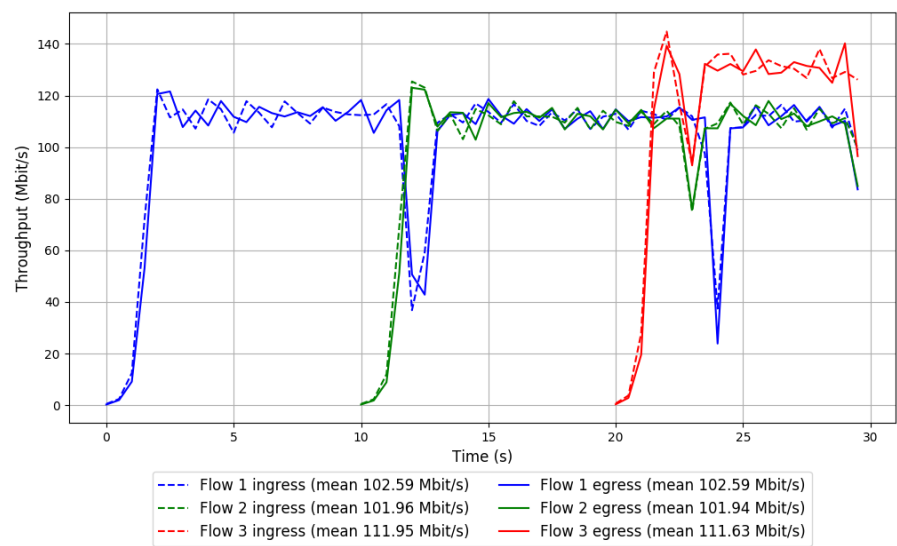
-- Flow 3:

Average throughput: 111.63 Mbit/s

95th percentile per-packet one-way delay: 88.349 ms

Loss rate: 2.09%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-01-31 09:17:02

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

Below is generated by plot.py at 2018-01-31 13:21:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 206.63 Mbit/s

95th percentile per-packet one-way delay: 87.254 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 102.44 Mbit/s

95th percentile per-packet one-way delay: 87.252 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 111.01 Mbit/s

95th percentile per-packet one-way delay: 87.243 ms

Loss rate: 1.03%

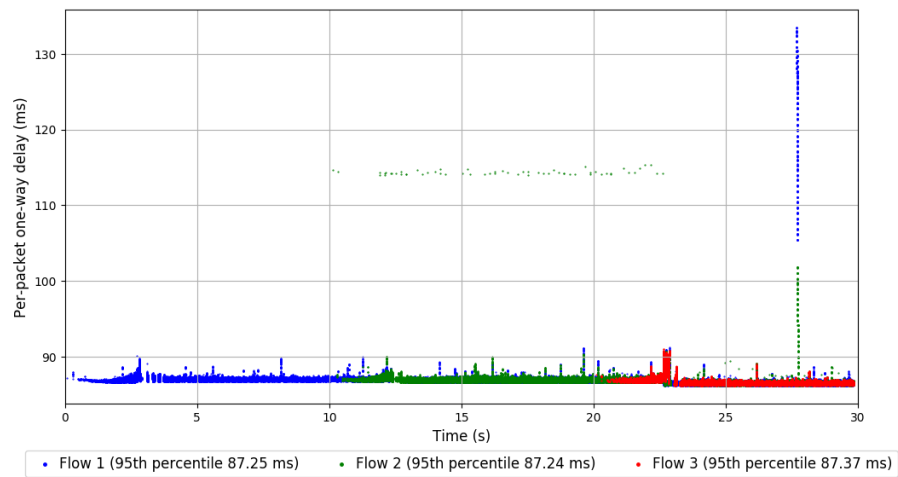
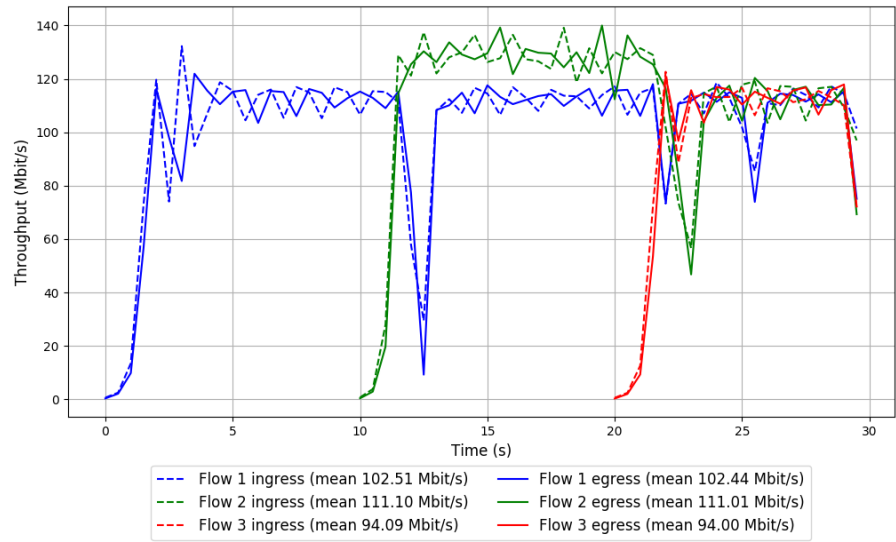
-- Flow 3:

Average throughput: 94.00 Mbit/s

95th percentile per-packet one-way delay: 87.367 ms

Loss rate: 0.66%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-01-31 09:35:23

End at: 2018-01-31 09:35:53

Below is generated by plot.py at 2018-01-31 13:25:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 201.73 Mbit/s

95th percentile per-packet one-way delay: 87.604 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 104.50 Mbit/s

95th percentile per-packet one-way delay: 87.566 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 99.81 Mbit/s

95th percentile per-packet one-way delay: 87.572 ms

Loss rate: 1.17%

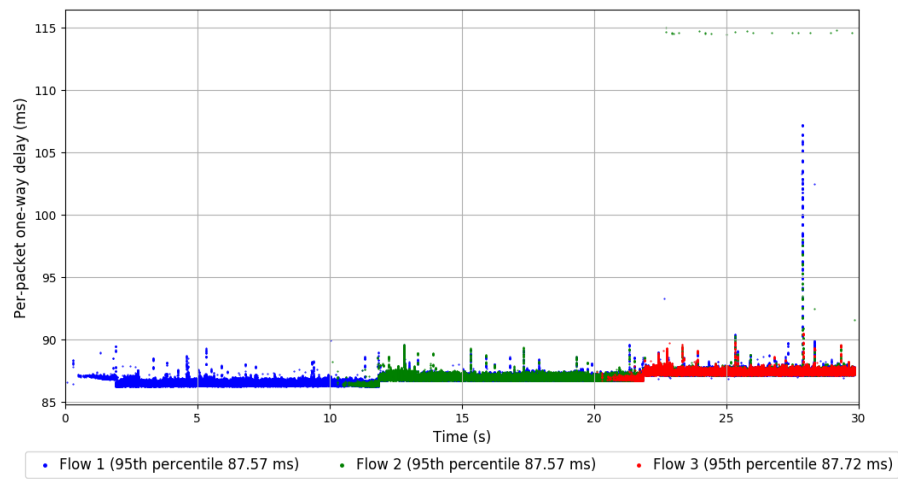
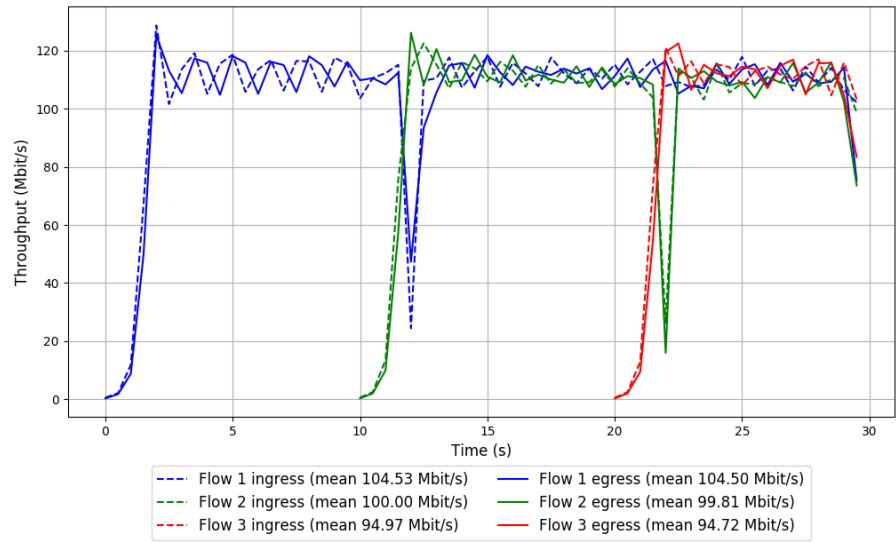
-- Flow 3:

Average throughput: 94.72 Mbit/s

95th percentile per-packet one-way delay: 87.717 ms

Loss rate: 2.34%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-01-31 09:53:24

End at: 2018-01-31 09:53:54

Below is generated by plot.py at 2018-01-31 13:25:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 215.67 Mbit/s

95th percentile per-packet one-way delay: 87.661 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 119.62 Mbit/s

95th percentile per-packet one-way delay: 87.666 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 98.68 Mbit/s

95th percentile per-packet one-way delay: 87.696 ms

Loss rate: 1.25%

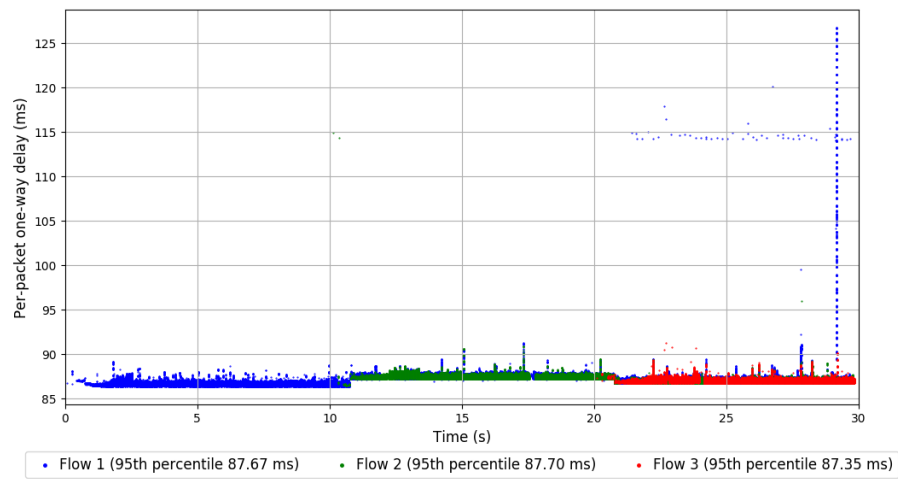
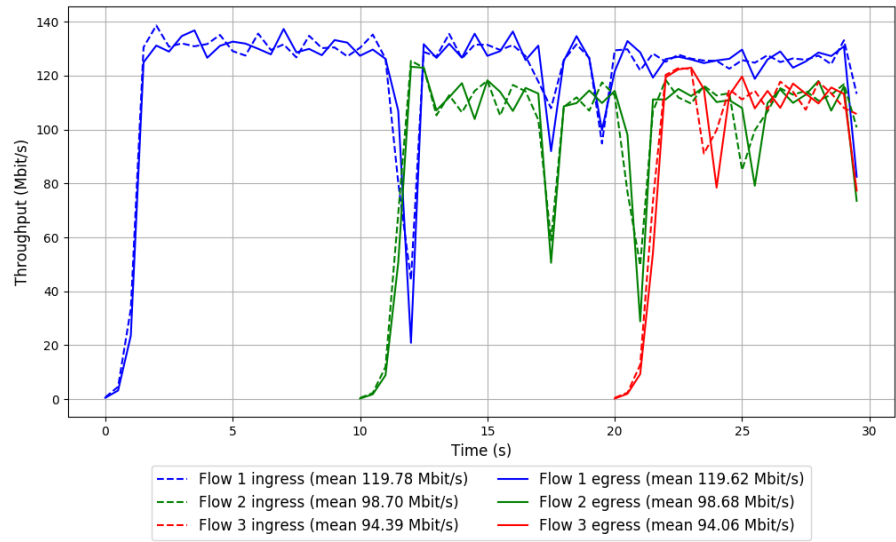
-- Flow 3:

Average throughput: 94.06 Mbit/s

95th percentile per-packet one-way delay: 87.349 ms

Loss rate: 2.37%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-01-31 07:21:49

End at: 2018-01-31 07:22:19

Below is generated by plot.py at 2018-01-31 13:25:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 123.17 Mbit/s

95th percentile per-packet one-way delay: 124.476 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 66.08 Mbit/s

95th percentile per-packet one-way delay: 125.055 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 84.32 Mbit/s

95th percentile per-packet one-way delay: 123.679 ms

Loss rate: 0.82%

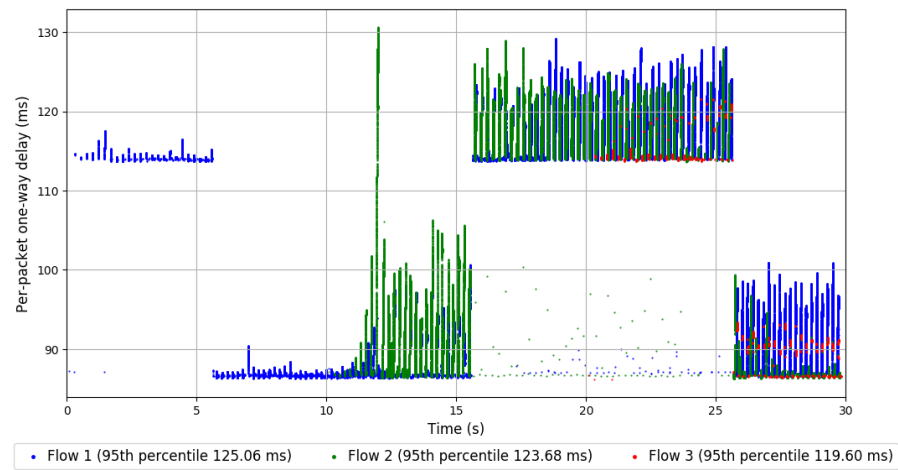
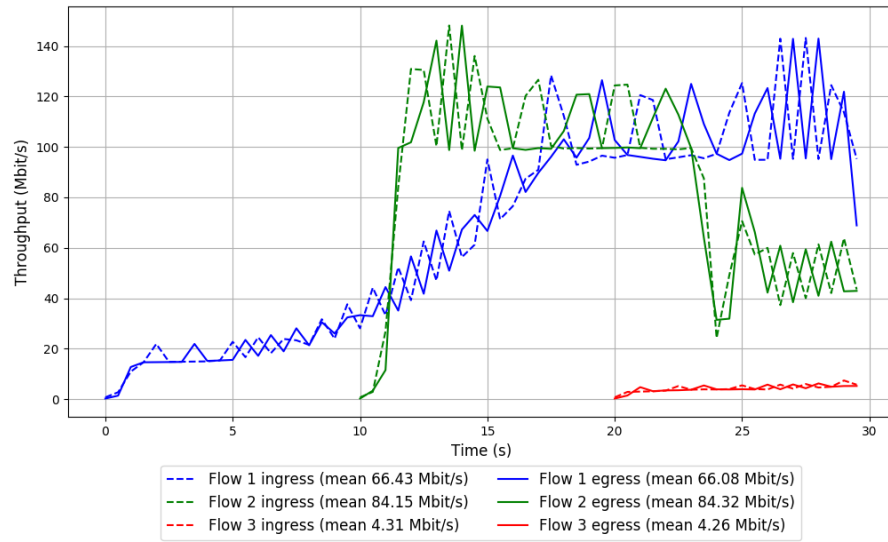
-- Flow 3:

Average throughput: 4.26 Mbit/s

95th percentile per-packet one-way delay: 119.597 ms

Loss rate: 3.42%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-01-31 07:40:21

End at: 2018-01-31 07:40:51

Below is generated by plot.py at 2018-01-31 13:25:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.30 Mbit/s

95th percentile per-packet one-way delay: 98.632 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 69.06 Mbit/s

95th percentile per-packet one-way delay: 95.377 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 54.82 Mbit/s

95th percentile per-packet one-way delay: 96.687 ms

Loss rate: 1.20%

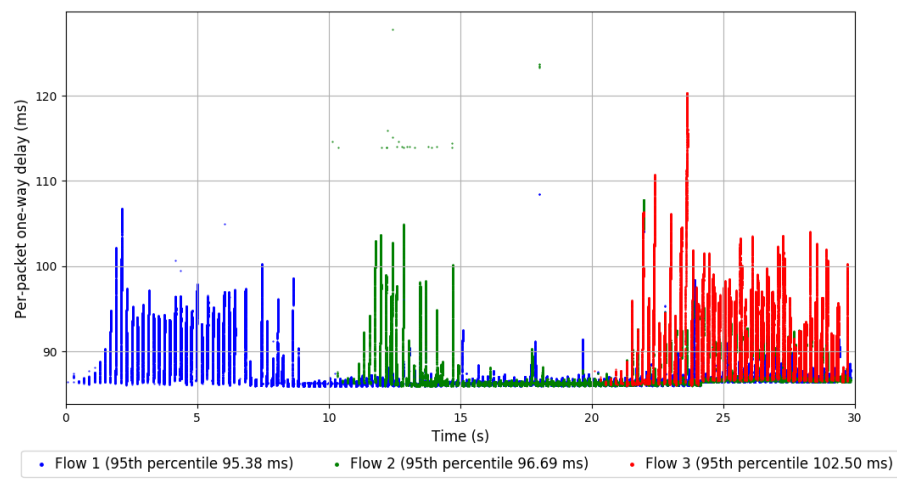
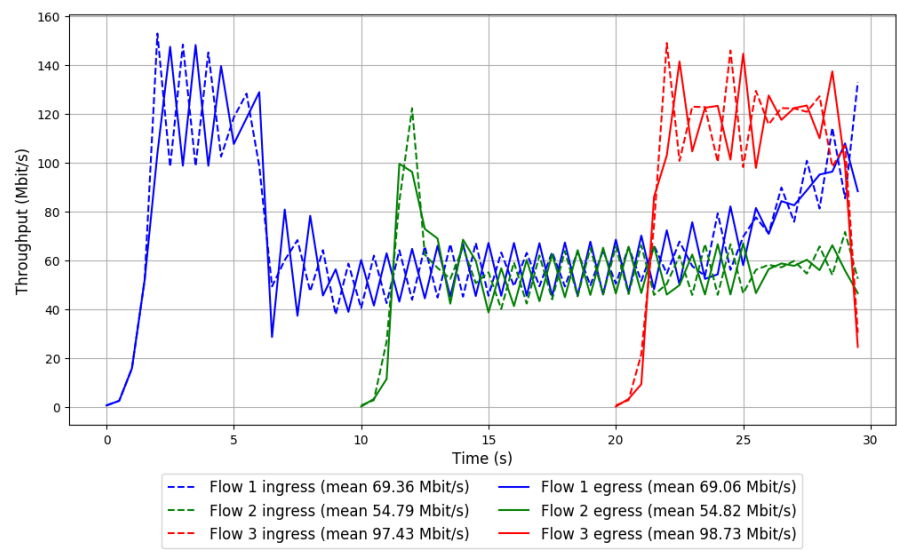
-- Flow 3:

Average throughput: 98.73 Mbit/s

95th percentile per-packet one-way delay: 102.505 ms

Loss rate: 0.72%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-01-31 07:58:32

End at: 2018-01-31 07:59:02

Below is generated by plot.py at 2018-01-31 13:26:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.58 Mbit/s

95th percentile per-packet one-way delay: 97.943 ms

Loss rate: 2.15%

-- Flow 1:

Average throughput: 26.20 Mbit/s

95th percentile per-packet one-way delay: 114.382 ms

Loss rate: 1.45%

-- Flow 2:

Average throughput: 13.02 Mbit/s

95th percentile per-packet one-way delay: 94.402 ms

Loss rate: 3.26%

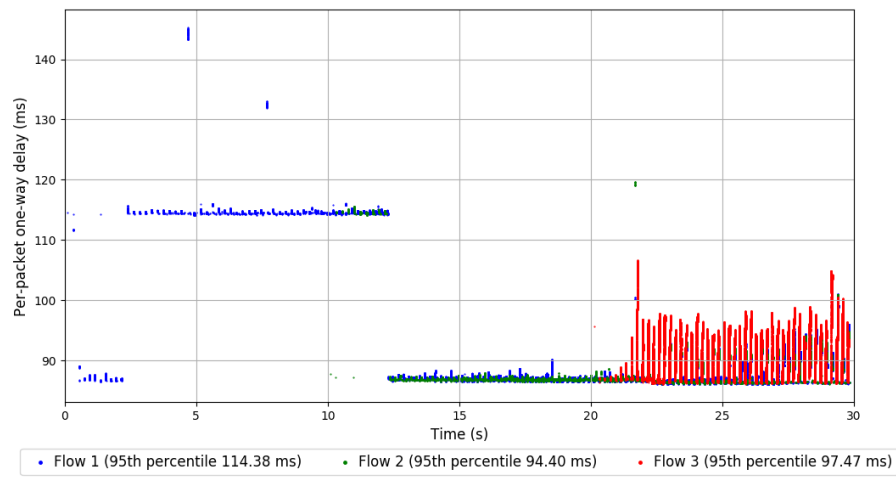
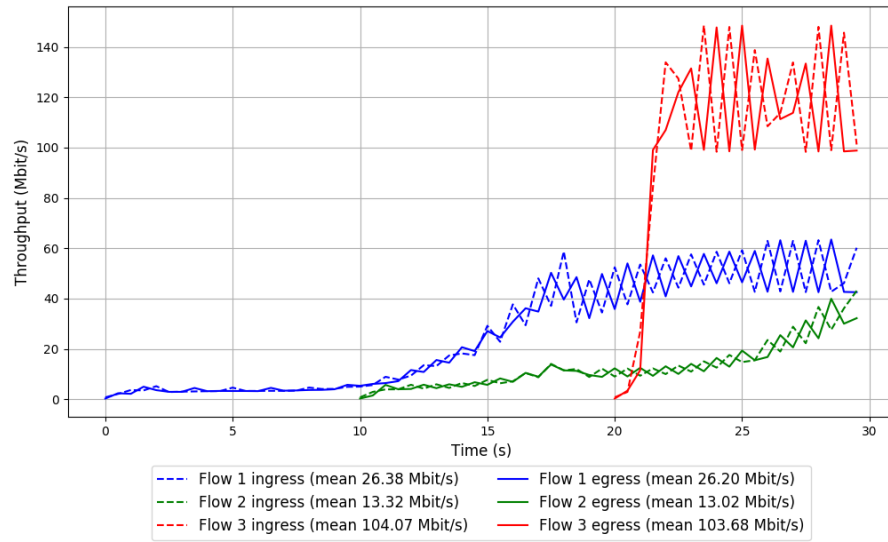
-- Flow 3:

Average throughput: 103.68 Mbit/s

95th percentile per-packet one-way delay: 97.466 ms

Loss rate: 2.41%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-01-31 08:16:57

End at: 2018-01-31 08:17:27

Below is generated by plot.py at 2018-01-31 13:26:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.45 Mbit/s

95th percentile per-packet one-way delay: 99.776 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 53.90 Mbit/s

95th percentile per-packet one-way delay: 97.632 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 70.99 Mbit/s

95th percentile per-packet one-way delay: 101.400 ms

Loss rate: 1.21%

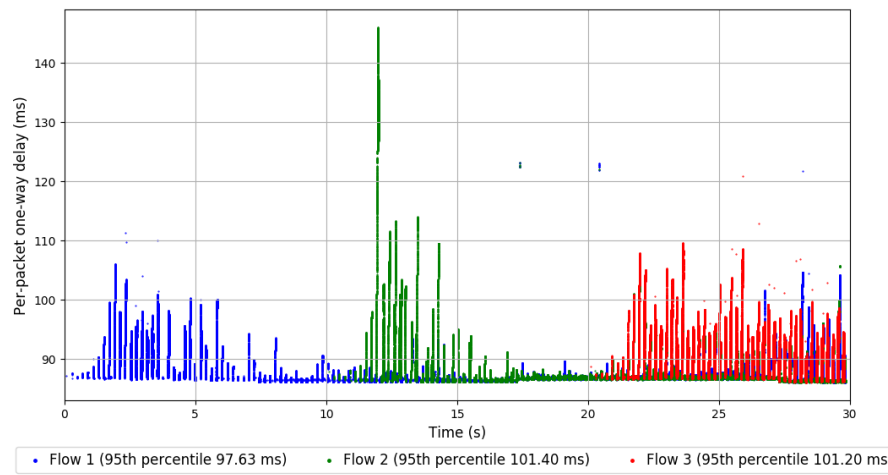
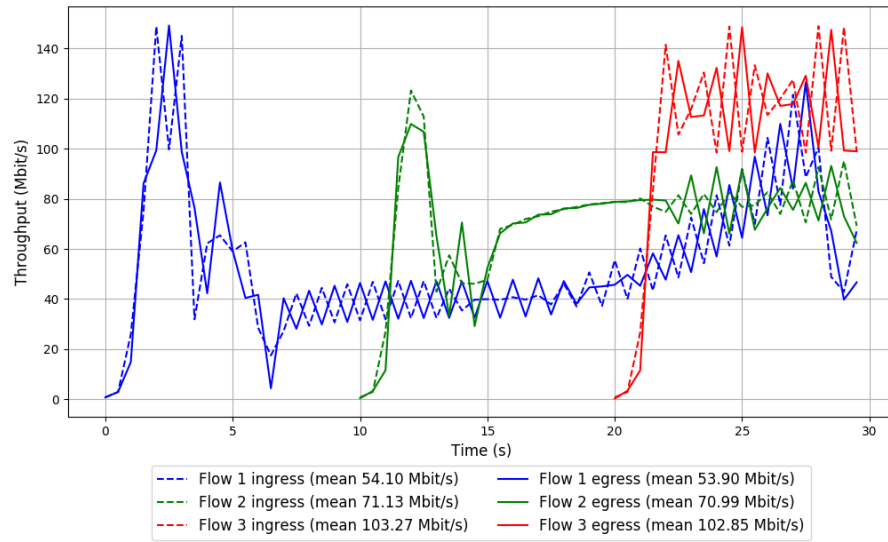
-- Flow 3:

Average throughput: 102.85 Mbit/s

95th percentile per-packet one-way delay: 101.197 ms

Loss rate: 2.41%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-01-31 08:34:53

End at: 2018-01-31 08:35:23

Below is generated by plot.py at 2018-01-31 13:26:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 158.79 Mbit/s

95th percentile per-packet one-way delay: 99.455 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 84.89 Mbit/s

95th percentile per-packet one-way delay: 97.398 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 80.25 Mbit/s

95th percentile per-packet one-way delay: 101.109 ms

Loss rate: 0.72%

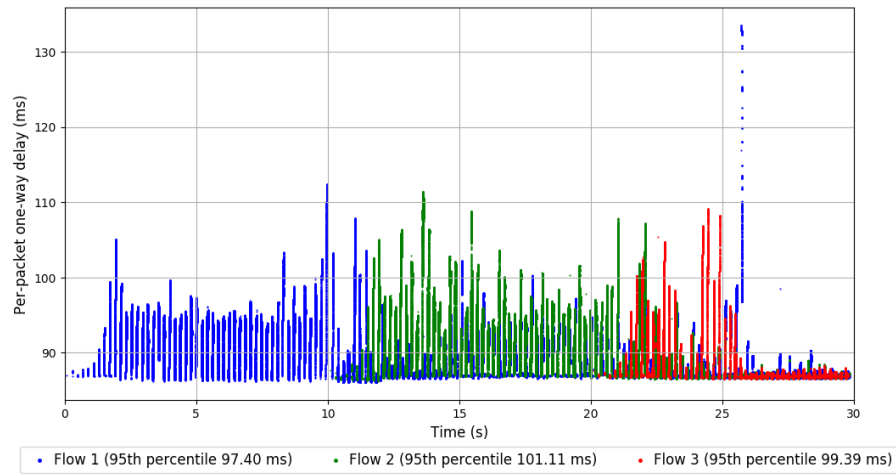
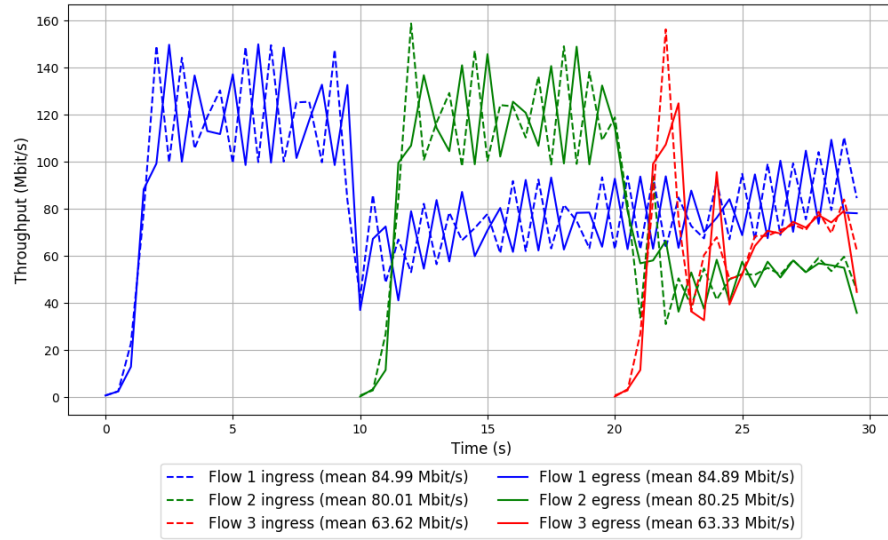
-- Flow 3:

Average throughput: 63.33 Mbit/s

95th percentile per-packet one-way delay: 99.392 ms

Loss rate: 2.48%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-01-31 08:52:55

End at: 2018-01-31 08:53:25

Below is generated by plot.py at 2018-01-31 13:26:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 148.79 Mbit/s

95th percentile per-packet one-way delay: 97.553 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 85.12 Mbit/s

95th percentile per-packet one-way delay: 96.679 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 50.68 Mbit/s

95th percentile per-packet one-way delay: 97.380 ms

Loss rate: 1.07%

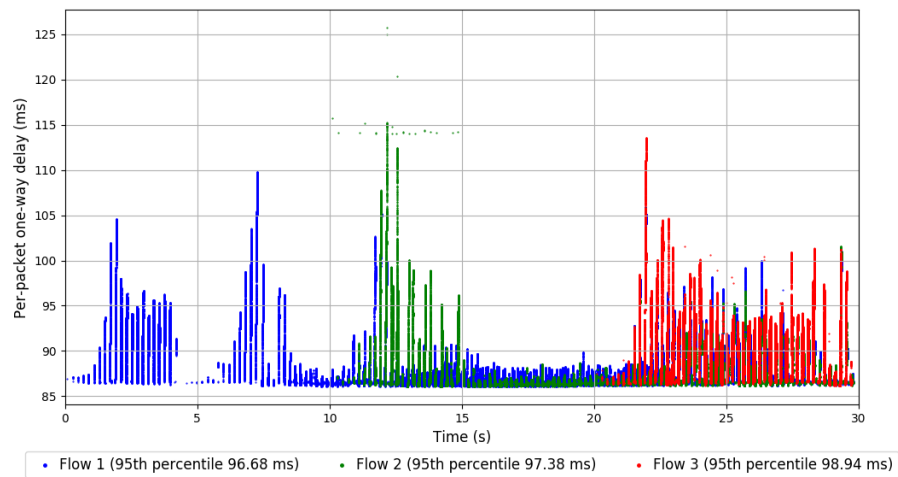
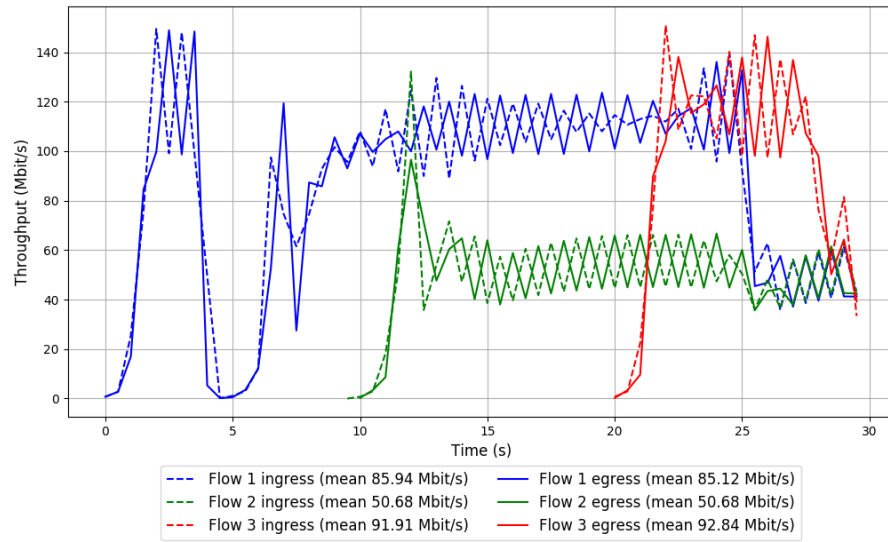
-- Flow 3:

Average throughput: 92.84 Mbit/s

95th percentile per-packet one-way delay: 98.936 ms

Loss rate: 1.11%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-01-31 09:10:49

End at: 2018-01-31 09:11:19

Below is generated by plot.py at 2018-01-31 13:26:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.39 Mbit/s

95th percentile per-packet one-way delay: 100.020 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 56.97 Mbit/s

95th percentile per-packet one-way delay: 95.257 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 82.28 Mbit/s

95th percentile per-packet one-way delay: 102.658 ms

Loss rate: 1.44%

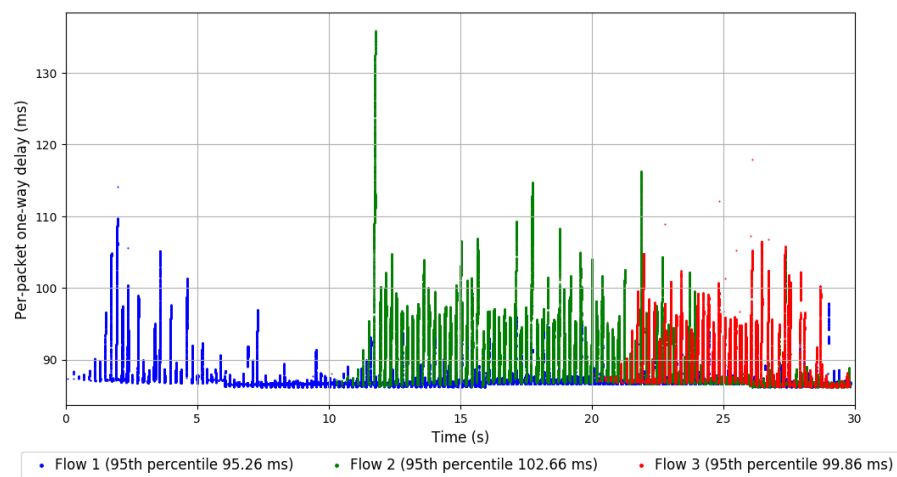
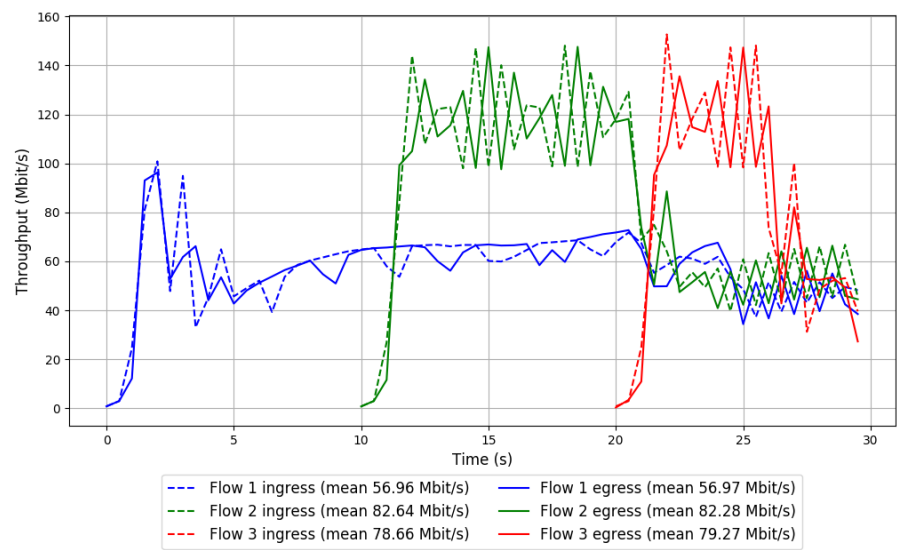
-- Flow 3:

Average throughput: 79.27 Mbit/s

95th percentile per-packet one-way delay: 99.855 ms

Loss rate: 1.27%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-01-31 09:29:11

End at: 2018-01-31 09:29:41

Below is generated by plot.py at 2018-01-31 13:26:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 130.46 Mbit/s

95th percentile per-packet one-way delay: 124.466 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 52.53 Mbit/s

95th percentile per-packet one-way delay: 122.599 ms

Loss rate: 1.53%

-- Flow 2:

Average throughput: 72.44 Mbit/s

95th percentile per-packet one-way delay: 122.388 ms

Loss rate: 1.97%

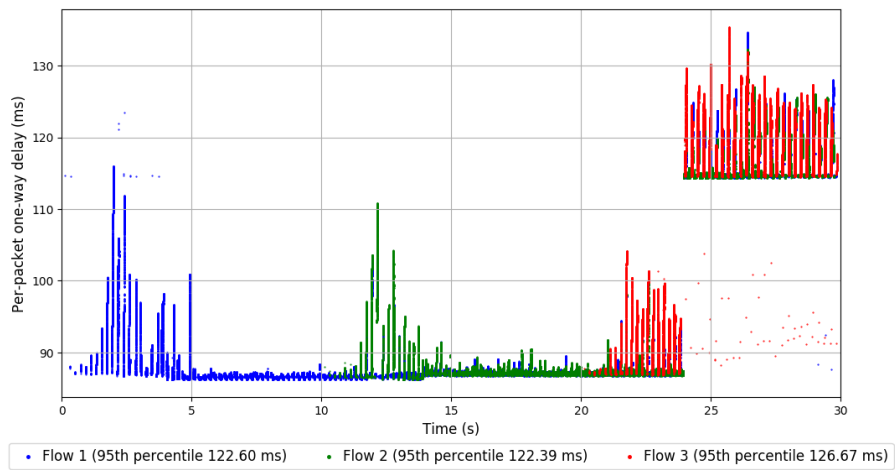
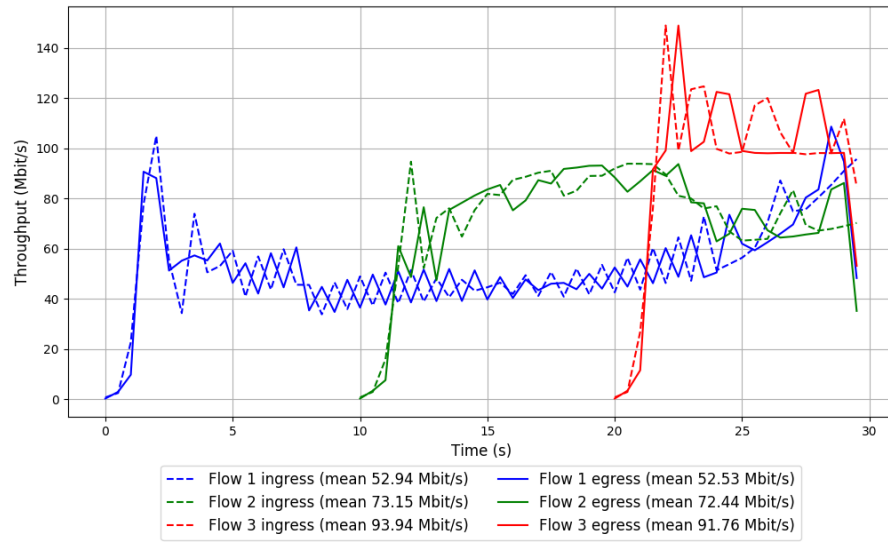
-- Flow 3:

Average throughput: 91.76 Mbit/s

95th percentile per-packet one-way delay: 126.668 ms

Loss rate: 2.47%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-01-31 09:47:05

End at: 2018-01-31 09:47:35

Below is generated by plot.py at 2018-01-31 13:26:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 121.15 Mbit/s

95th percentile per-packet one-way delay: 98.528 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 63.68 Mbit/s

95th percentile per-packet one-way delay: 96.853 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 60.18 Mbit/s

95th percentile per-packet one-way delay: 99.065 ms

Loss rate: 2.37%

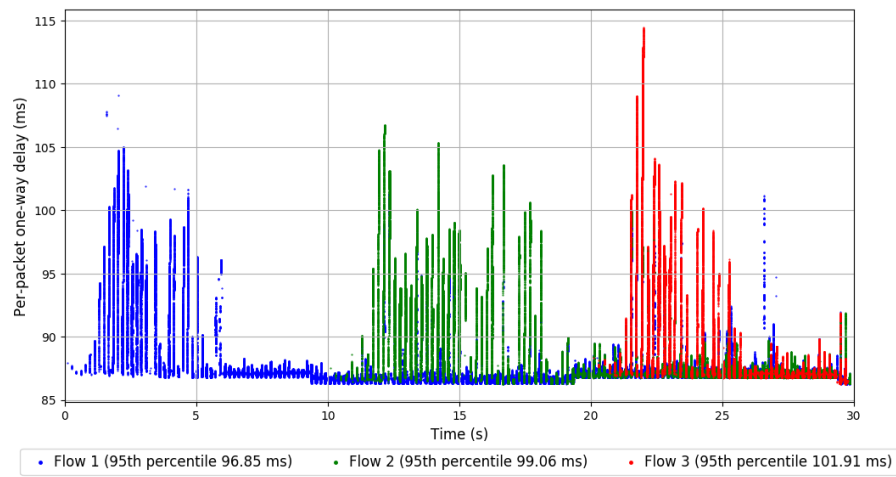
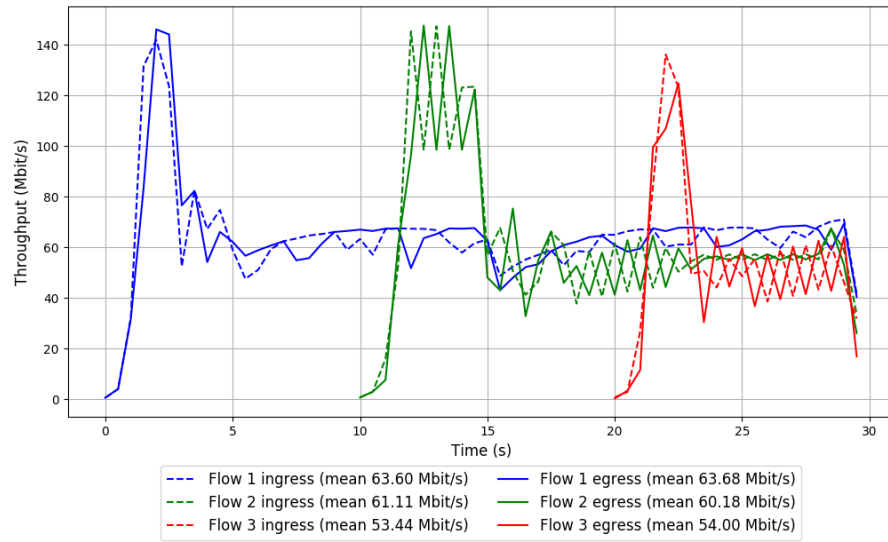
-- Flow 3:

Average throughput: 54.00 Mbit/s

95th percentile per-packet one-way delay: 101.912 ms

Loss rate: 1.46%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-01-31 10:05:10

End at: 2018-01-31 10:05:40

Below is generated by plot.py at 2018-01-31 13:26:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.54 Mbit/s

95th percentile per-packet one-way delay: 98.805 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 25.13 Mbit/s

95th percentile per-packet one-way delay: 90.908 ms

Loss rate: 1.66%

-- Flow 2:

Average throughput: 72.17 Mbit/s

95th percentile per-packet one-way delay: 99.720 ms

Loss rate: 0.90%

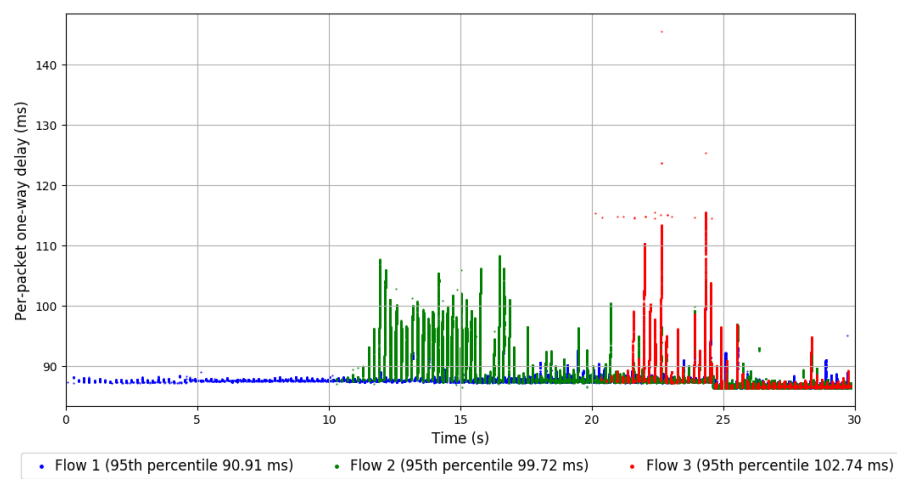
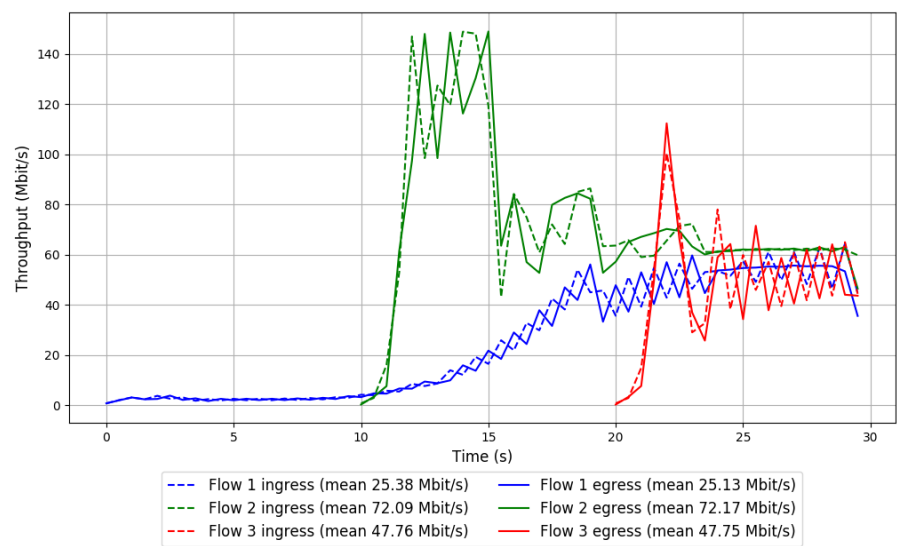
-- Flow 3:

Average throughput: 47.75 Mbit/s

95th percentile per-packet one-way delay: 102.744 ms

Loss rate: 2.33%

Run 10: Report of TCP Cubic — Data Link

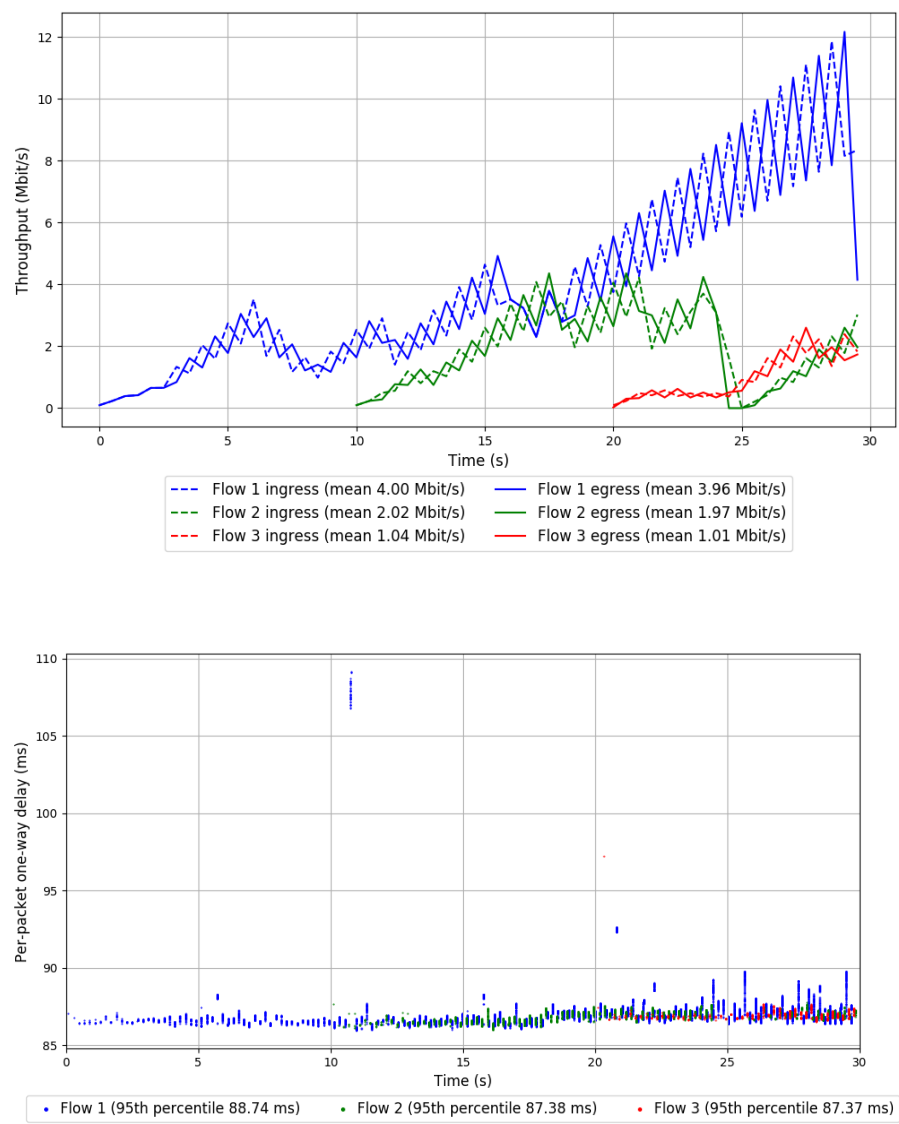


```
Run 1: Statistics of LEDBAT

Start at: 2018-01-31 07:17:37
End at: 2018-01-31 07:18:07

# Below is generated by plot.py at 2018-01-31 13:26:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.58 Mbit/s
95th percentile per-packet one-way delay: 88.350 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 3.96 Mbit/s
95th percentile per-packet one-way delay: 88.741 ms
Loss rate: 1.76%
-- Flow 2:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 87.383 ms
Loss rate: 3.32%
-- Flow 3:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 87.367 ms
Loss rate: 4.57%
```


Run 1: Report of LEDBAT — Data Link

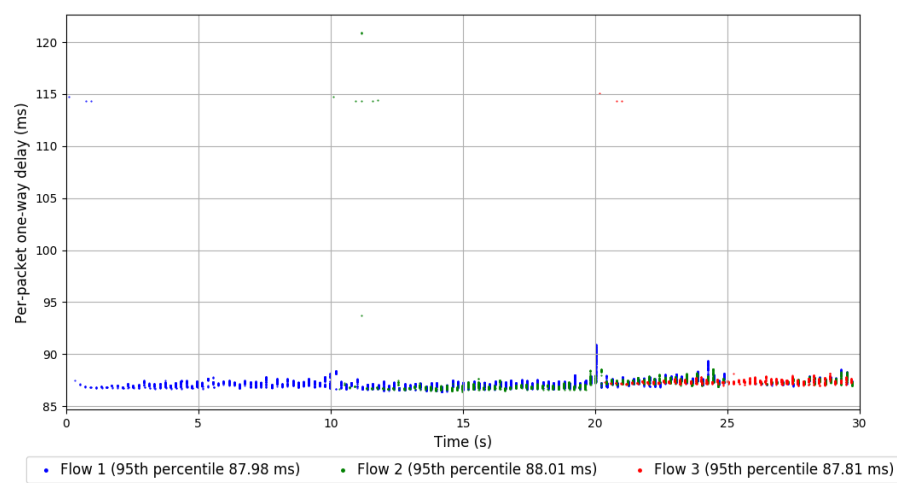
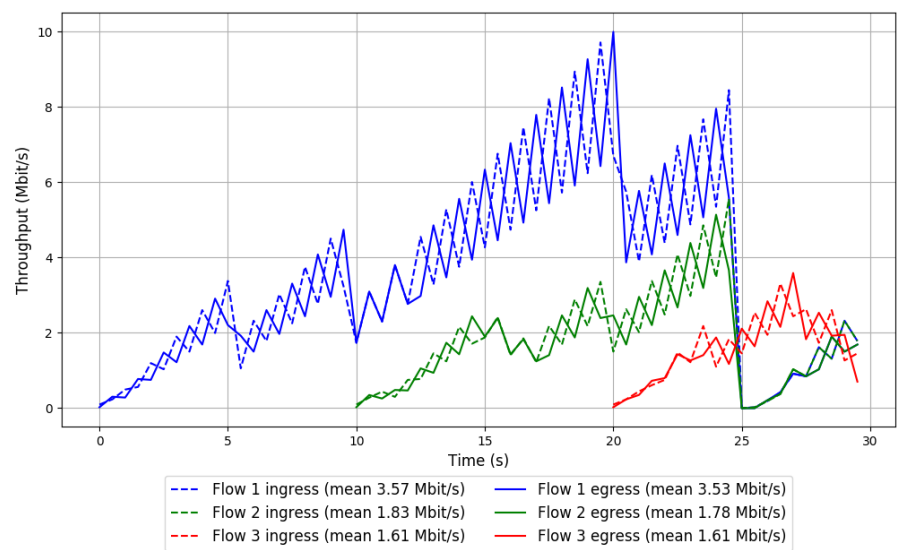


```
Run 2: Statistics of LEDBAT

Start at: 2018-01-31 07:36:15
End at: 2018-01-31 07:36:45

# Below is generated by plot.py at 2018-01-31 13:26:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 87.977 ms
Loss rate: 2.42%
-- Flow 1:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 87.982 ms
Loss rate: 1.94%
-- Flow 2:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 88.014 ms
Loss rate: 3.87%
-- Flow 3:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 87.807 ms
Loss rate: 2.40%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-01-31 07:54:28

End at: 2018-01-31 07:54:58

Below is generated by plot.py at 2018-01-31 13:26:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.48 Mbit/s

95th percentile per-packet one-way delay: 114.811 ms

Loss rate: 1.73%

-- Flow 1:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 114.904 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 114.724 ms

Loss rate: 2.28%

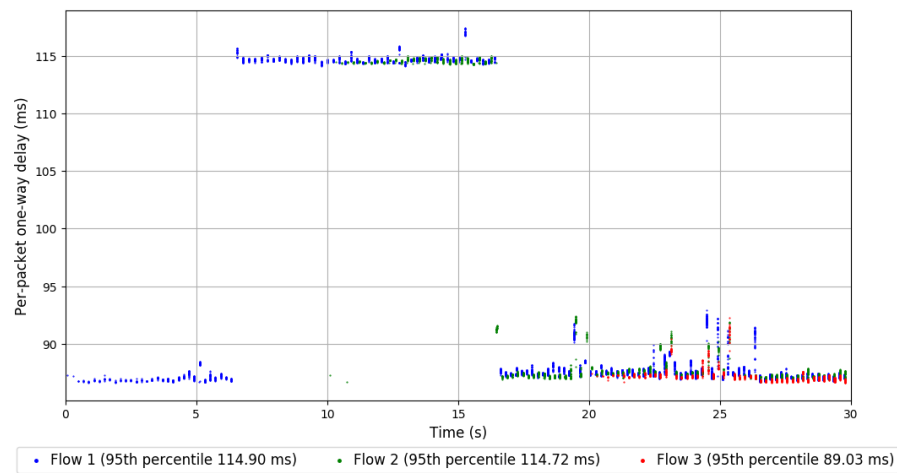
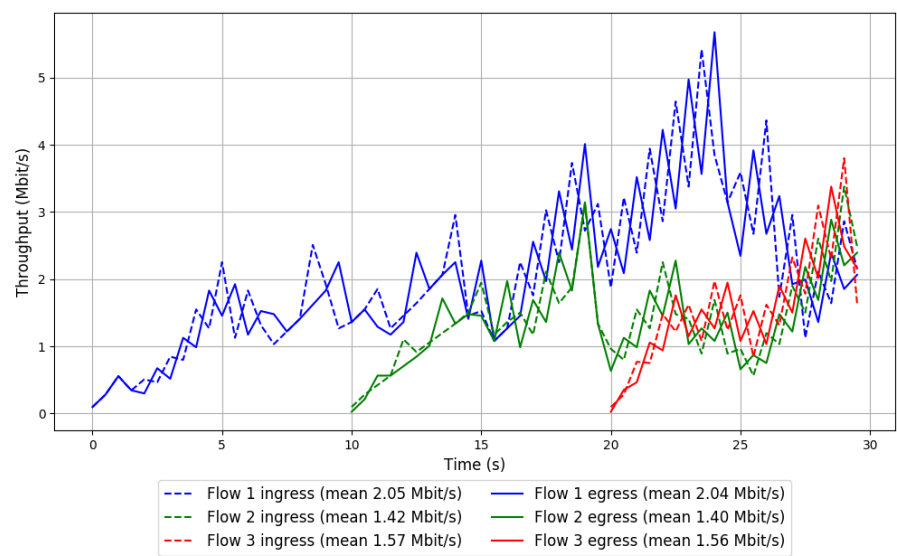
-- Flow 3:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 89.027 ms

Loss rate: 2.57%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-01-31 08:12:54

End at: 2018-01-31 08:13:24

Below is generated by plot.py at 2018-01-31 13:26:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.22 Mbit/s

95th percentile per-packet one-way delay: 115.483 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 3.33 Mbit/s

95th percentile per-packet one-way delay: 115.494 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 2.22 Mbit/s

95th percentile per-packet one-way delay: 115.503 ms

Loss rate: 1.41%

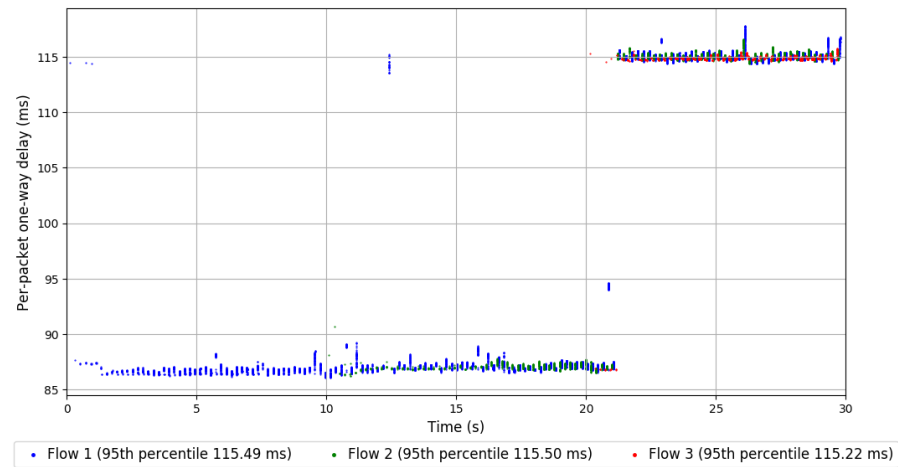
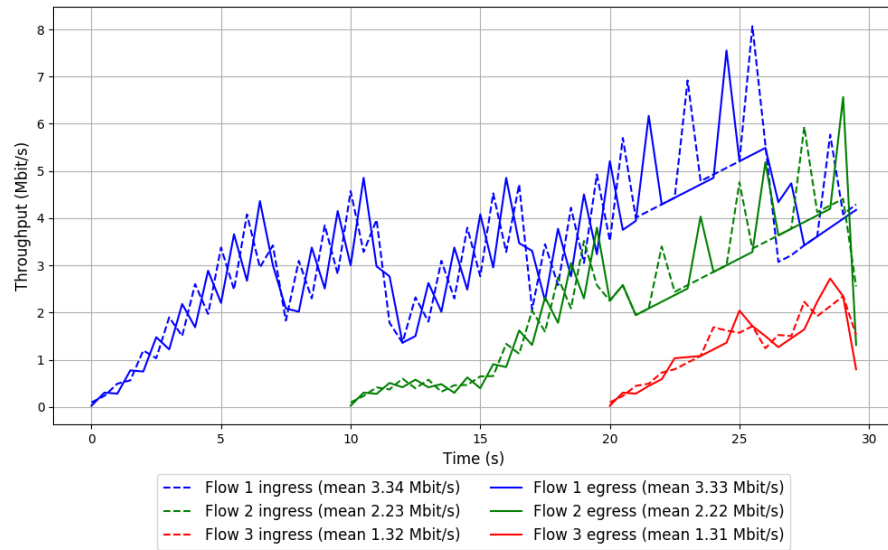
-- Flow 3:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 115.220 ms

Loss rate: 2.82%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-01-31 08:30:56

End at: 2018-01-31 08:31:26

Below is generated by plot.py at 2018-01-31 13:26:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.72 Mbit/s

95th percentile per-packet one-way delay: 87.501 ms

Loss rate: 2.28%

-- Flow 1:

Average throughput: 2.50 Mbit/s

95th percentile per-packet one-way delay: 87.487 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 1.67 Mbit/s

95th percentile per-packet one-way delay: 87.531 ms

Loss rate: 4.92%

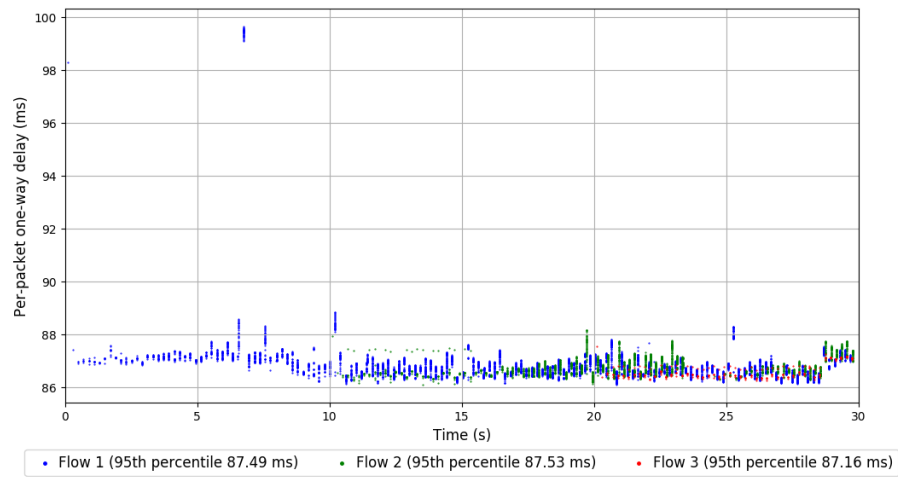
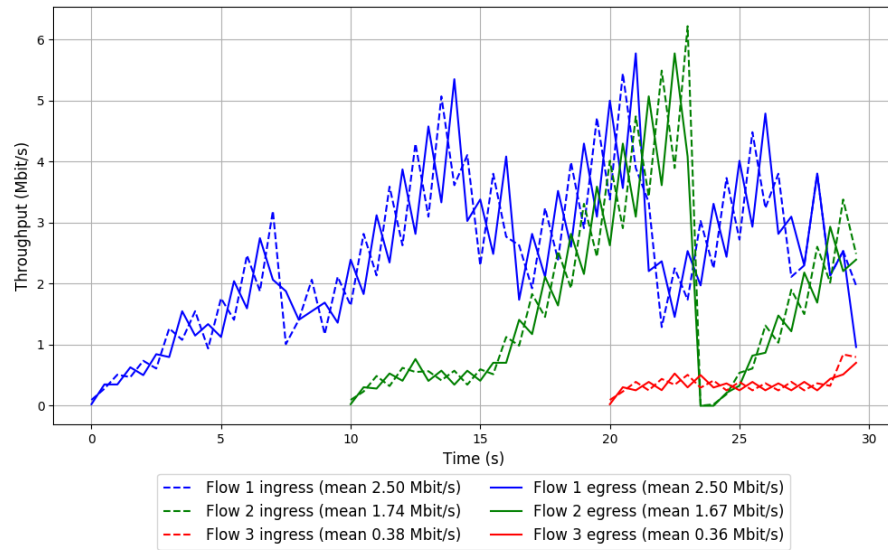
-- Flow 3:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 87.155 ms

Loss rate: 5.66%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-01-31 08:48:53

End at: 2018-01-31 08:49:23

Below is generated by plot.py at 2018-01-31 13:26:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.75 Mbit/s

95th percentile per-packet one-way delay: 87.955 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 88.021 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 3.15 Mbit/s

95th percentile per-packet one-way delay: 87.934 ms

Loss rate: 0.98%

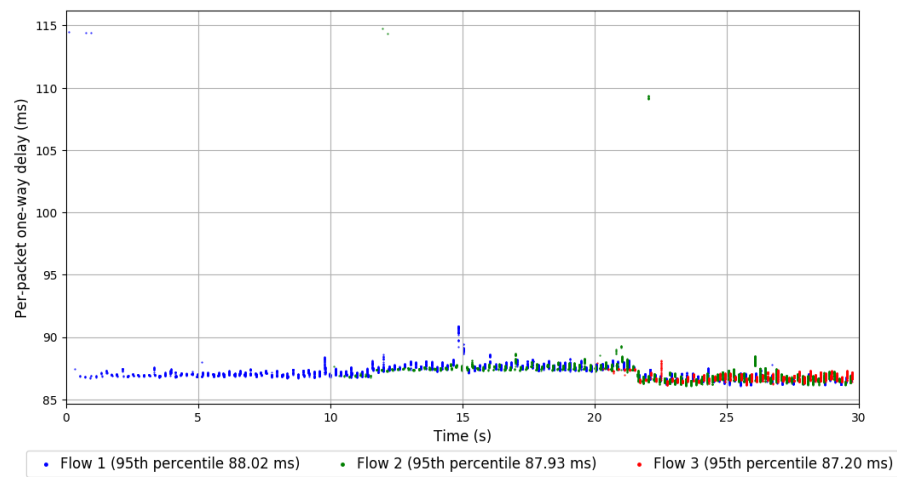
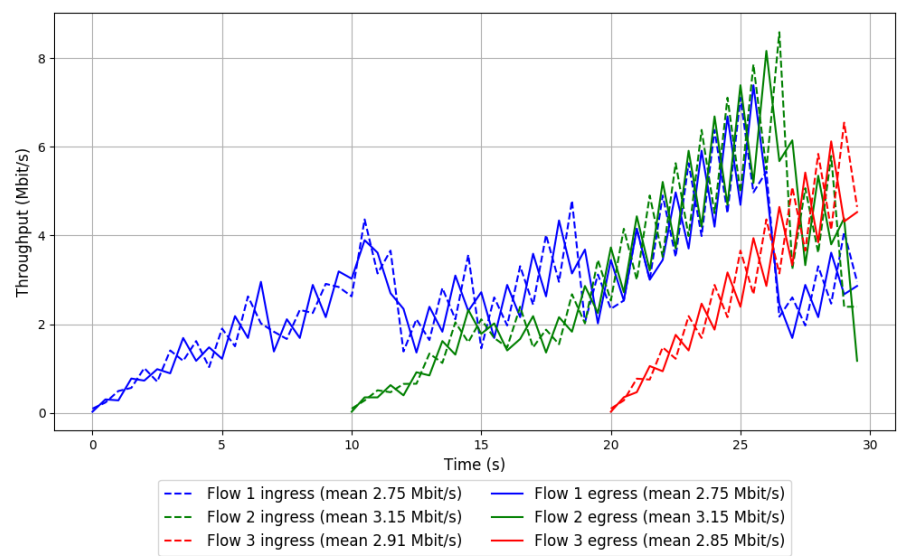
-- Flow 3:

Average throughput: 2.85 Mbit/s

95th percentile per-packet one-way delay: 87.205 ms

Loss rate: 4.10%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-01-31 09:06:44

End at: 2018-01-31 09:07:14

Below is generated by plot.py at 2018-01-31 13:26:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.84 Mbit/s

95th percentile per-packet one-way delay: 88.566 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 3.16 Mbit/s

95th percentile per-packet one-way delay: 88.568 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 2.63 Mbit/s

95th percentile per-packet one-way delay: 88.619 ms

Loss rate: 2.04%

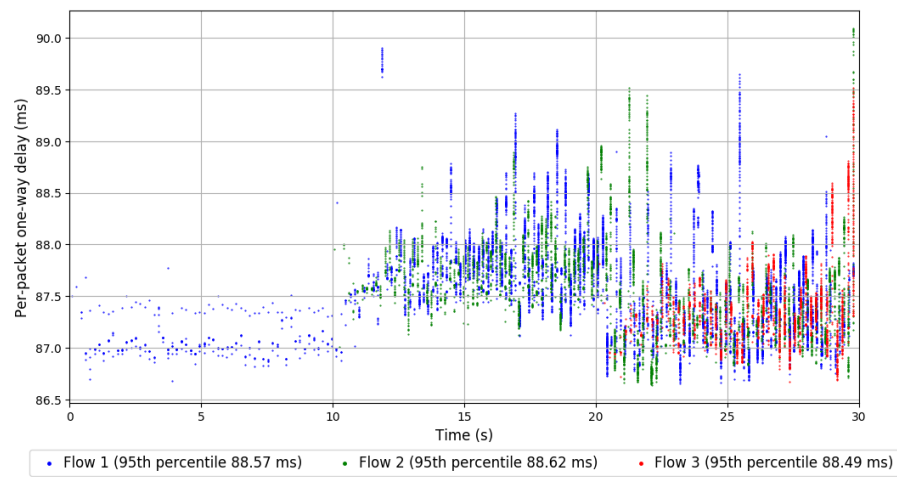
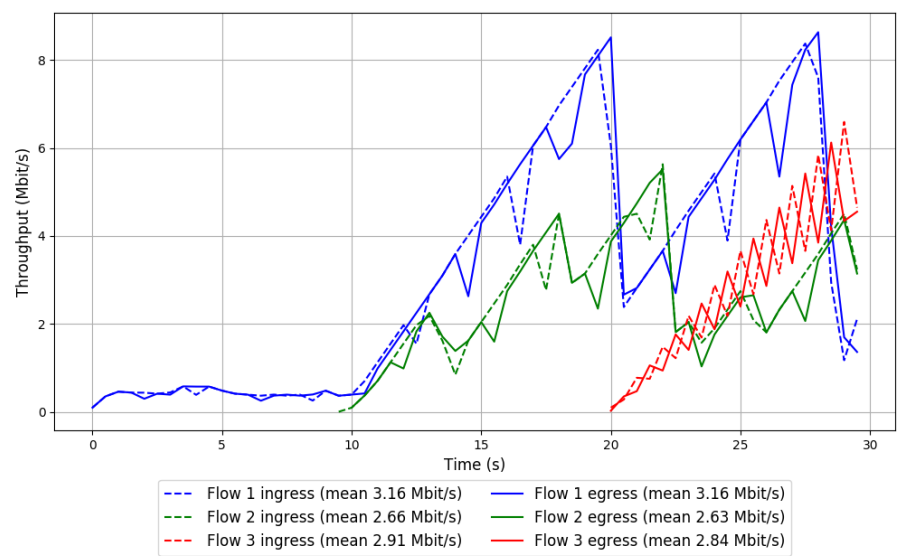
-- Flow 3:

Average throughput: 2.84 Mbit/s

95th percentile per-packet one-way delay: 88.491 ms

Loss rate: 4.09%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-01-31 09:25:12

End at: 2018-01-31 09:25:42

Below is generated by plot.py at 2018-01-31 13:26:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.39 Mbit/s

95th percentile per-packet one-way delay: 115.413 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 2.97 Mbit/s

95th percentile per-packet one-way delay: 115.536 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 3.17 Mbit/s

95th percentile per-packet one-way delay: 115.241 ms

Loss rate: 1.51%

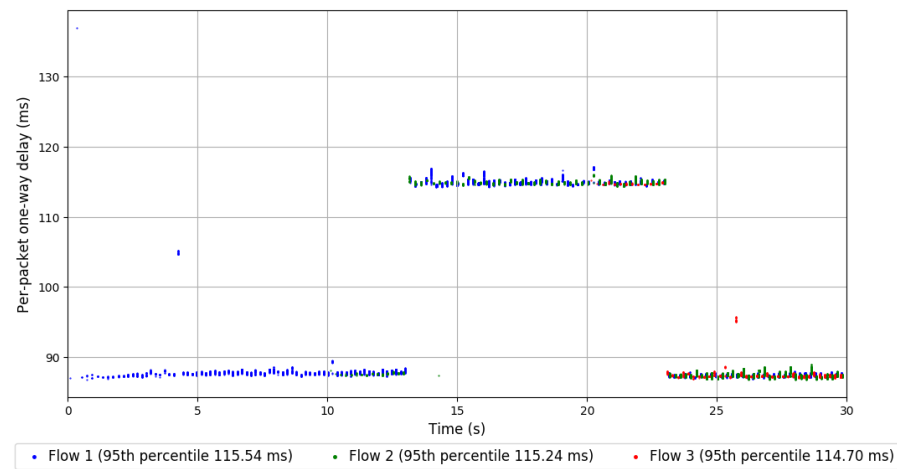
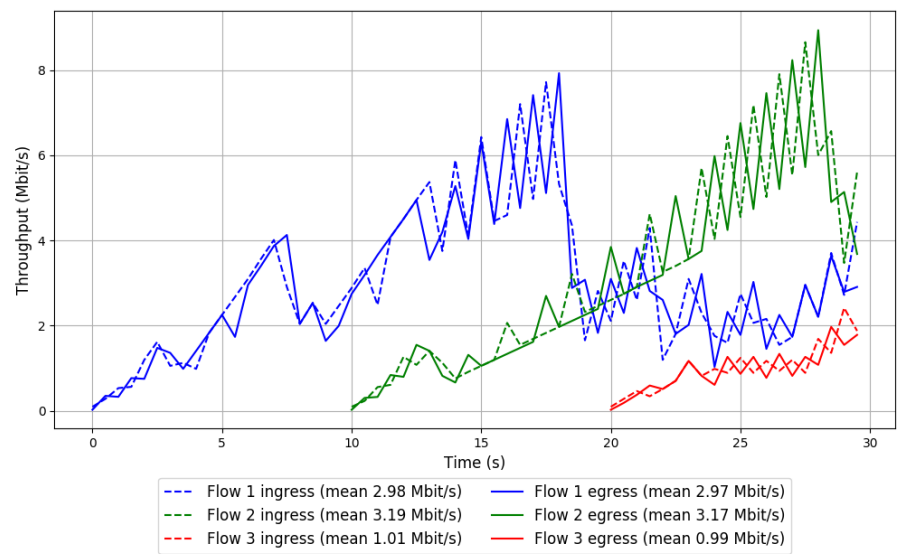
-- Flow 3:

Average throughput: 0.99 Mbit/s

95th percentile per-packet one-way delay: 114.702 ms

Loss rate: 4.82%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-01-31 09:43:13

End at: 2018-01-31 09:43:43

Below is generated by plot.py at 2018-01-31 13:26:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.39 Mbit/s

95th percentile per-packet one-way delay: 87.656 ms

Loss rate: 4.14%

-- Flow 1:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 87.505 ms

Loss rate: 3.73%

-- Flow 2:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 87.672 ms

Loss rate: 4.62%

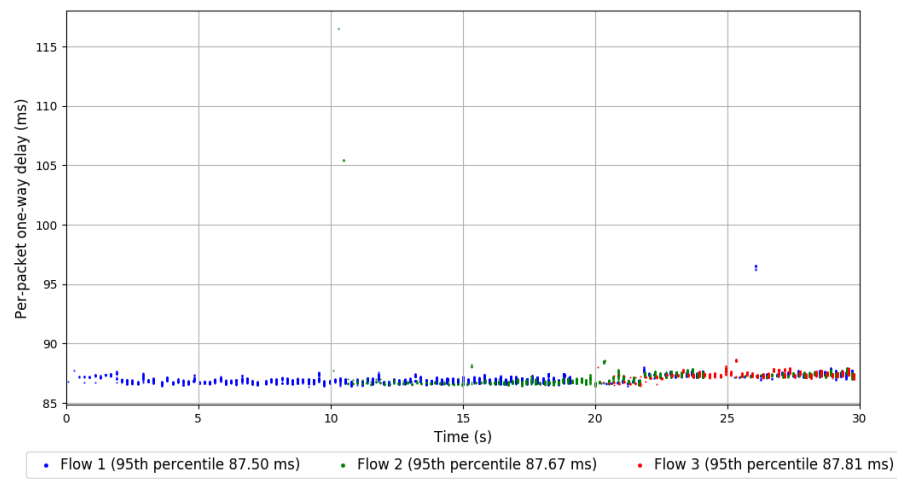
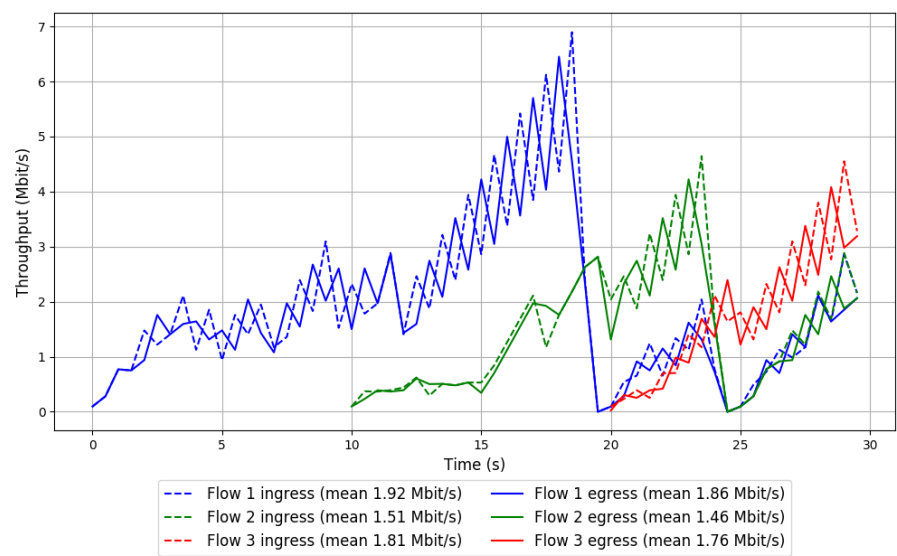
-- Flow 3:

Average throughput: 1.76 Mbit/s

95th percentile per-packet one-way delay: 87.814 ms

Loss rate: 4.66%

Run 9: Report of LEDBAT — Data Link

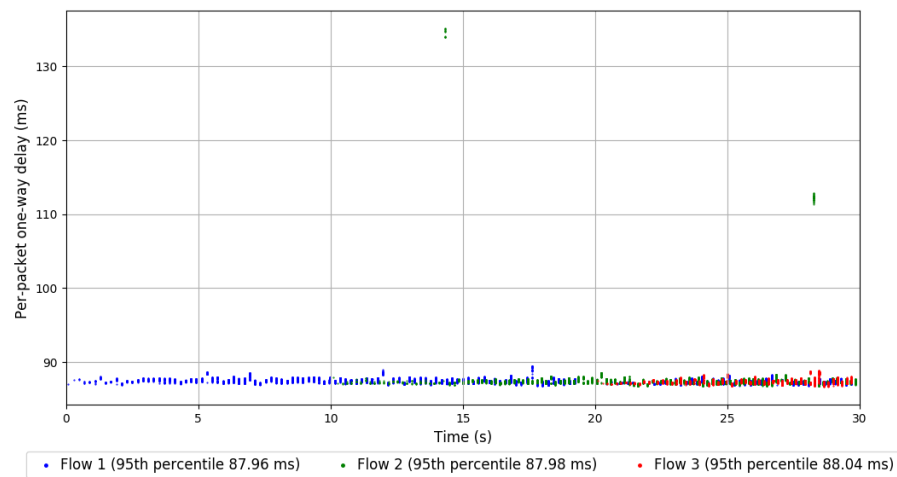
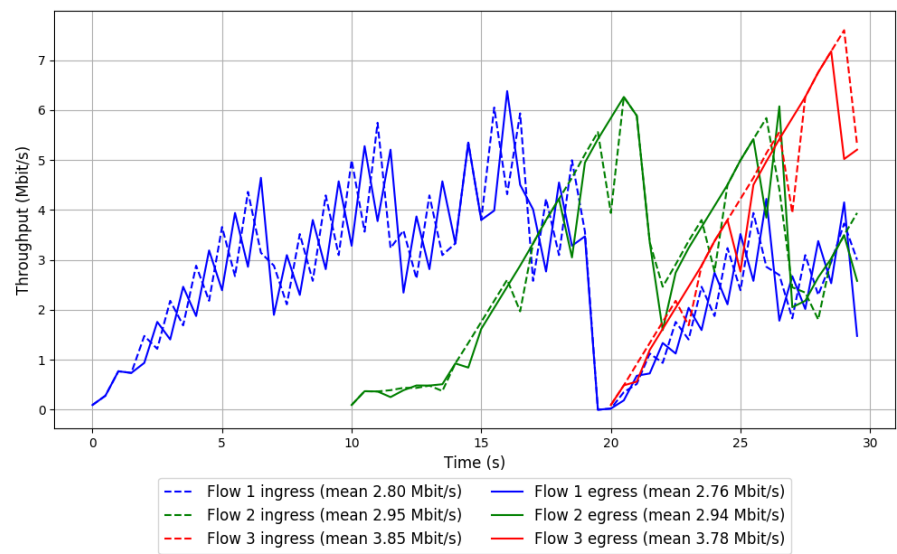


```
Run 10: Statistics of LEDBAT

Start at: 2018-01-31 10:01:04
End at: 2018-01-31 10:01:34

# Below is generated by plot.py at 2018-01-31 13:26:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.91 Mbit/s
95th percentile per-packet one-way delay: 87.983 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 2.76 Mbit/s
95th percentile per-packet one-way delay: 87.962 ms
Loss rate: 2.04%
-- Flow 2:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 87.977 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 88.037 ms
Loss rate: 3.56%
```

Run 10: Report of LEDBAT — Data Link

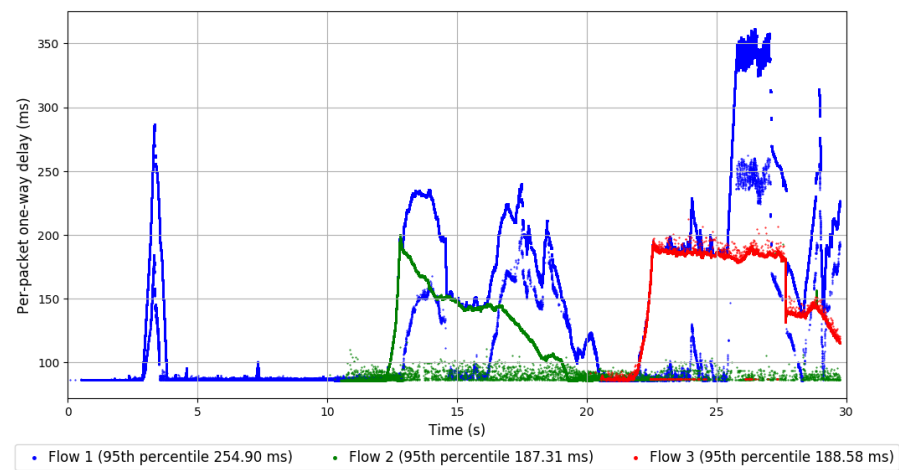
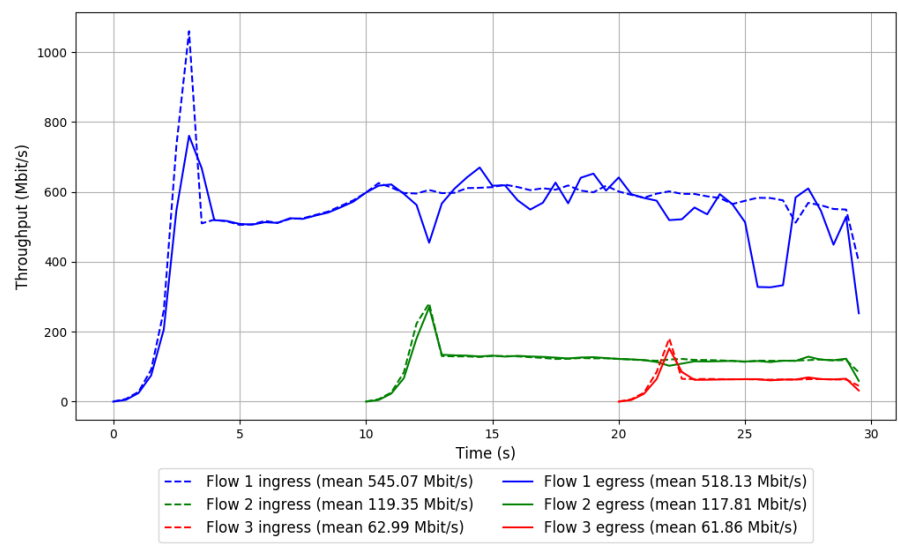


```
Run 1: Statistics of PCC

Start at: 2018-01-31 07:15:34
End at: 2018-01-31 07:16:04

# Below is generated by plot.py at 2018-01-31 13:37:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 616.26 Mbit/s
95th percentile per-packet one-way delay: 248.383 ms
Loss rate: 5.13%
-- Flow 1:
Average throughput: 518.13 Mbit/s
95th percentile per-packet one-way delay: 254.895 ms
Loss rate: 5.59%
-- Flow 2:
Average throughput: 117.81 Mbit/s
95th percentile per-packet one-way delay: 187.315 ms
Loss rate: 2.31%
-- Flow 3:
Average throughput: 61.86 Mbit/s
95th percentile per-packet one-way delay: 188.582 ms
Loss rate: 3.86%
```

Run 1: Report of PCC — Data Link

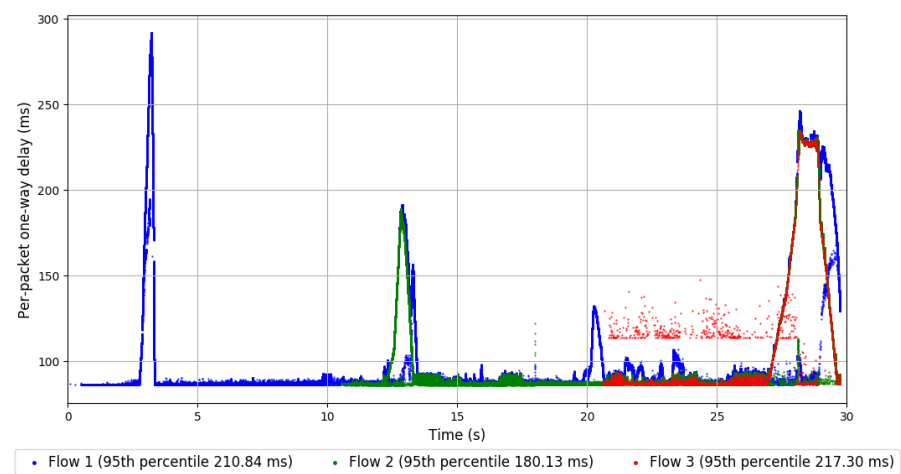
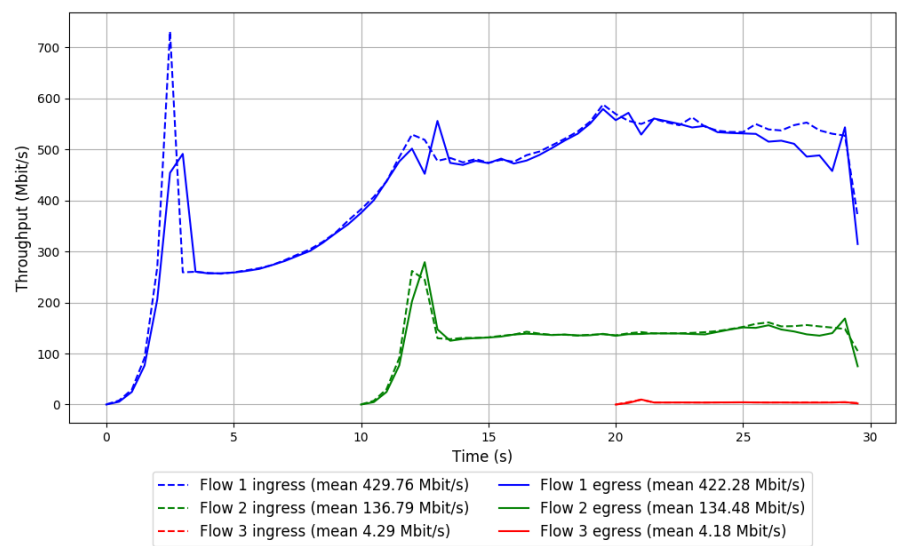


```
Run 2: Statistics of PCC

Start at: 2018-01-31 07:34:17
End at: 2018-01-31 07:34:47

# Below is generated by plot.py at 2018-01-31 13:37:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 512.59 Mbit/s
95th percentile per-packet one-way delay: 208.082 ms
Loss rate: 2.46%
-- Flow 1:
Average throughput: 422.28 Mbit/s
95th percentile per-packet one-way delay: 210.835 ms
Loss rate: 2.40%
-- Flow 2:
Average throughput: 134.48 Mbit/s
95th percentile per-packet one-way delay: 180.135 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 217.299 ms
Loss rate: 4.70%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-01-31 07:52:29

End at: 2018-01-31 07:52:59

Below is generated by plot.py at 2018-01-31 13:37:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 538.47 Mbit/s

95th percentile per-packet one-way delay: 165.061 ms

Loss rate: 2.40%

-- Flow 1:

Average throughput: 495.40 Mbit/s

95th percentile per-packet one-way delay: 163.060 ms

Loss rate: 2.34%

-- Flow 2:

Average throughput: 5.34 Mbit/s

95th percentile per-packet one-way delay: 144.851 ms

Loss rate: 1.30%

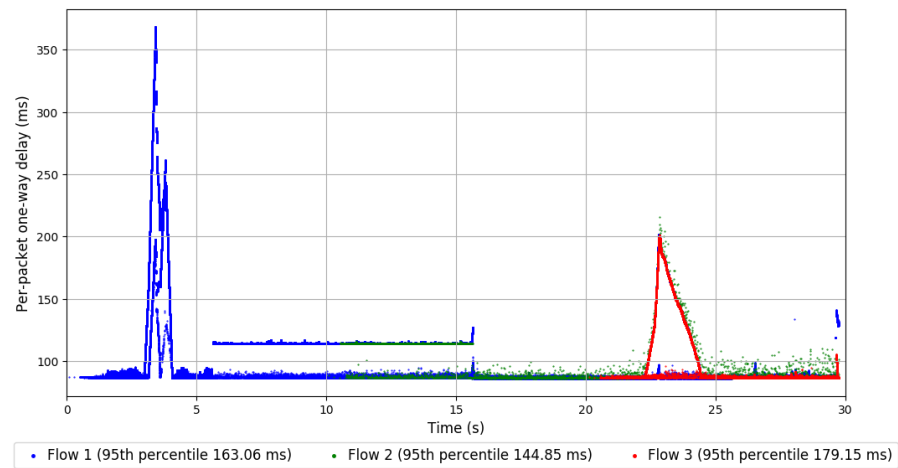
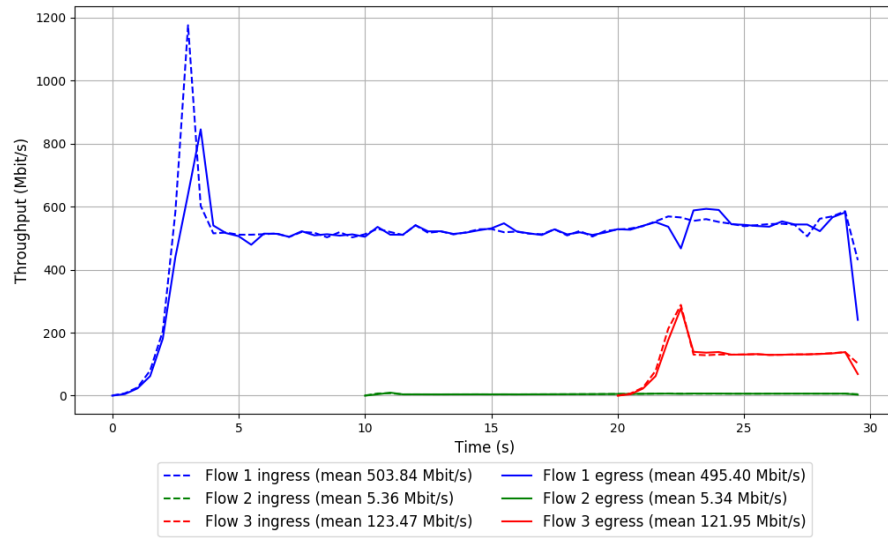
-- Flow 3:

Average throughput: 121.95 Mbit/s

95th percentile per-packet one-way delay: 179.152 ms

Loss rate: 3.26%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-01-31 08:10:52

End at: 2018-01-31 08:11:22

Below is generated by plot.py at 2018-01-31 13:37:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 587.72 Mbit/s

95th percentile per-packet one-way delay: 302.904 ms

Loss rate: 8.43%

-- Flow 1:

Average throughput: 474.34 Mbit/s

95th percentile per-packet one-way delay: 316.194 ms

Loss rate: 9.07%

-- Flow 2:

Average throughput: 117.54 Mbit/s

95th percentile per-packet one-way delay: 191.852 ms

Loss rate: 4.03%

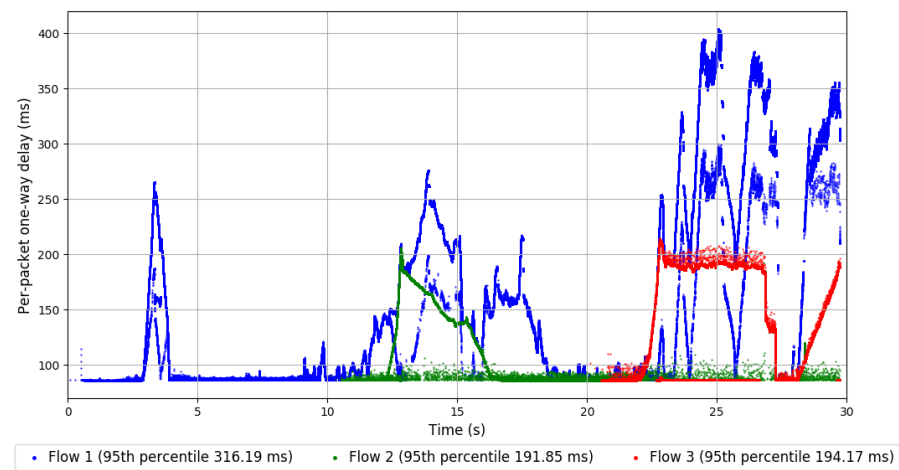
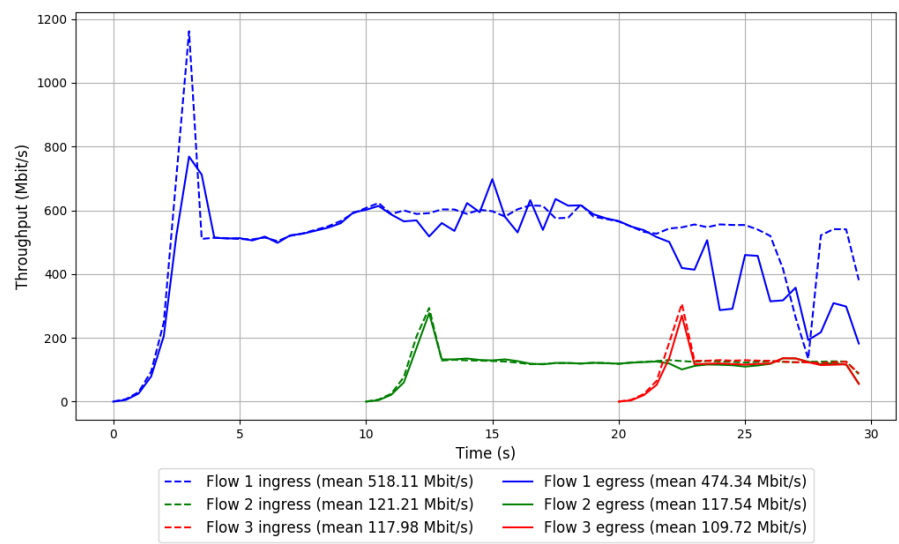
-- Flow 3:

Average throughput: 109.72 Mbit/s

95th percentile per-packet one-way delay: 194.169 ms

Loss rate: 9.06%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-01-31 08:28:54

End at: 2018-01-31 08:29:24

Below is generated by plot.py at 2018-01-31 13:37:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 613.94 Mbit/s

95th percentile per-packet one-way delay: 229.893 ms

Loss rate: 2.28%

-- Flow 1:

Average throughput: 530.01 Mbit/s

95th percentile per-packet one-way delay: 232.089 ms

Loss rate: 2.28%

-- Flow 2:

Average throughput: 124.68 Mbit/s

95th percentile per-packet one-way delay: 189.202 ms

Loss rate: 2.32%

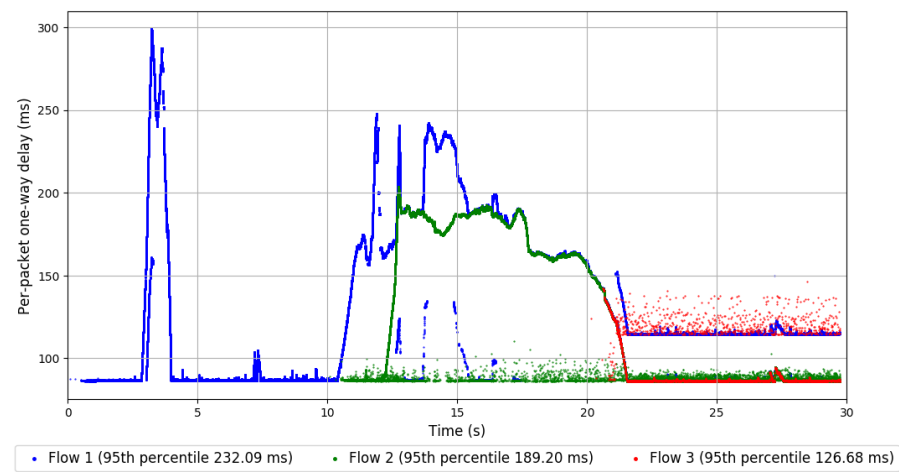
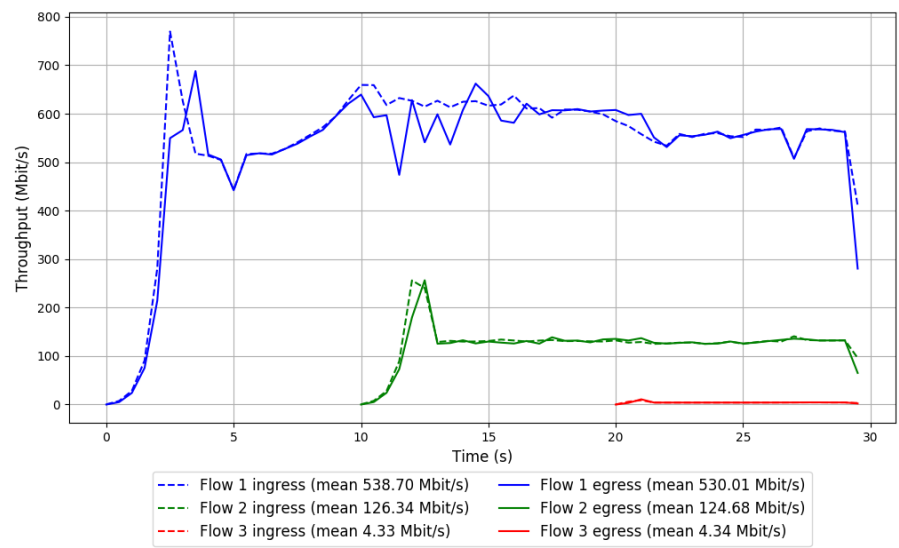
-- Flow 3:

Average throughput: 4.34 Mbit/s

95th percentile per-packet one-way delay: 126.684 ms

Loss rate: 2.03%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-01-31 08:46:55

End at: 2018-01-31 08:47:25

Below is generated by plot.py at 2018-01-31 13:37:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 569.18 Mbit/s

95th percentile per-packet one-way delay: 205.987 ms

Loss rate: 2.74%

-- Flow 1:

Average throughput: 484.36 Mbit/s

95th percentile per-packet one-way delay: 206.267 ms

Loss rate: 2.89%

-- Flow 2:

Average throughput: 126.06 Mbit/s

95th percentile per-packet one-way delay: 204.904 ms

Loss rate: 1.89%

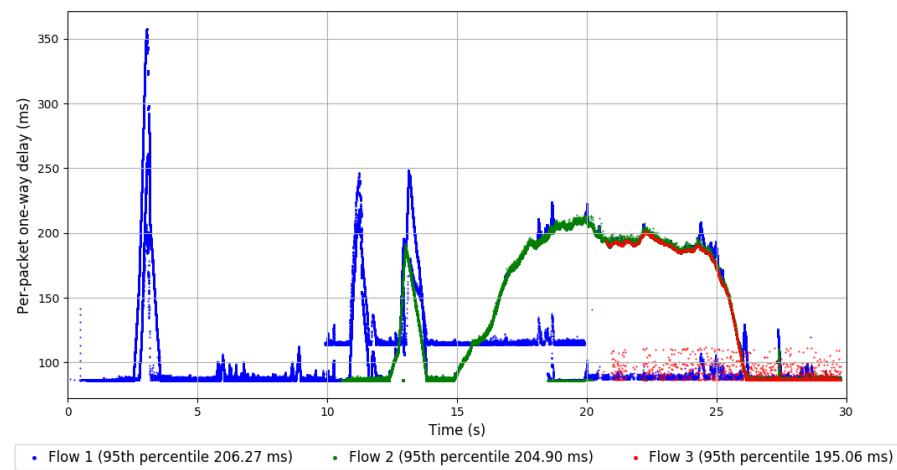
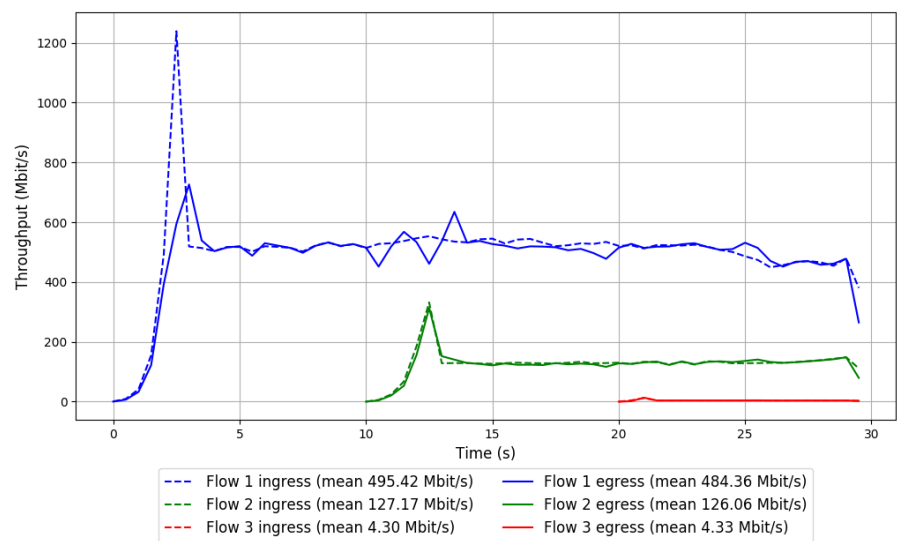
-- Flow 3:

Average throughput: 4.33 Mbit/s

95th percentile per-packet one-way delay: 195.065 ms

Loss rate: 1.94%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-01-31 09:04:47

End at: 2018-01-31 09:05:17

Below is generated by plot.py at 2018-01-31 13:37:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 514.48 Mbit/s

95th percentile per-packet one-way delay: 248.481 ms

Loss rate: 4.41%

-- Flow 1:

Average throughput: 336.66 Mbit/s

95th percentile per-packet one-way delay: 263.087 ms

Loss rate: 5.32%

-- Flow 2:

Average throughput: 144.42 Mbit/s

95th percentile per-packet one-way delay: 176.552 ms

Loss rate: 1.74%

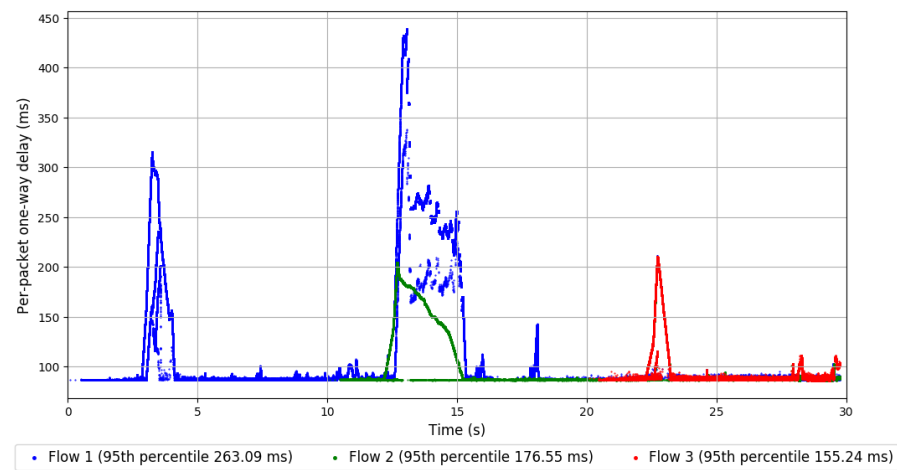
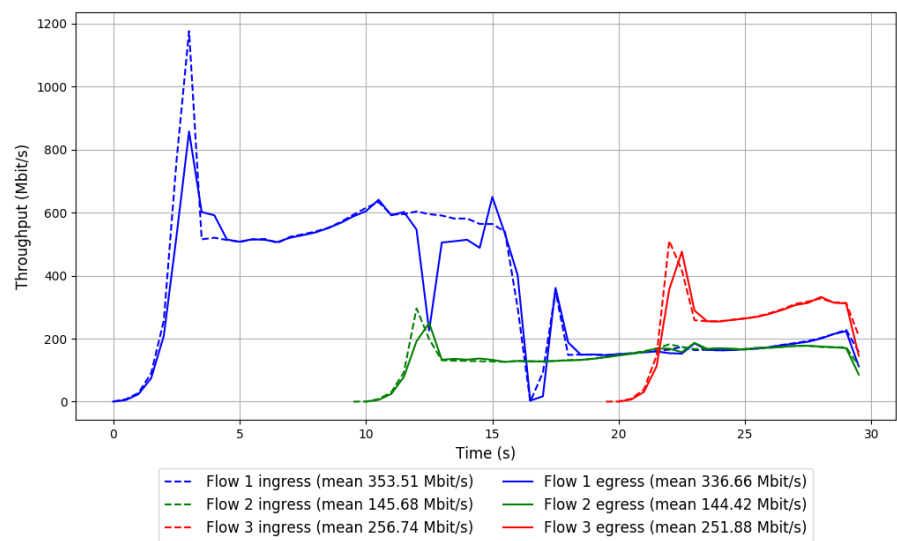
-- Flow 3:

Average throughput: 251.88 Mbit/s

95th percentile per-packet one-way delay: 155.239 ms

Loss rate: 3.65%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-01-31 09:22:58

End at: 2018-01-31 09:23:28

Below is generated by plot.py at 2018-01-31 13:37:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 499.70 Mbit/s

95th percentile per-packet one-way delay: 212.301 ms

Loss rate: 3.28%

-- Flow 1:

Average throughput: 346.51 Mbit/s

95th percentile per-packet one-way delay: 219.103 ms

Loss rate: 2.93%

-- Flow 2:

Average throughput: 229.96 Mbit/s

95th percentile per-packet one-way delay: 208.028 ms

Loss rate: 4.05%

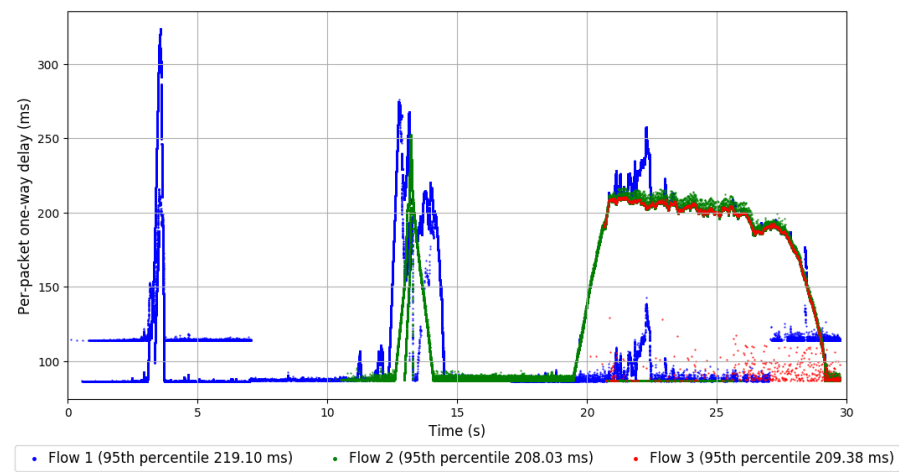
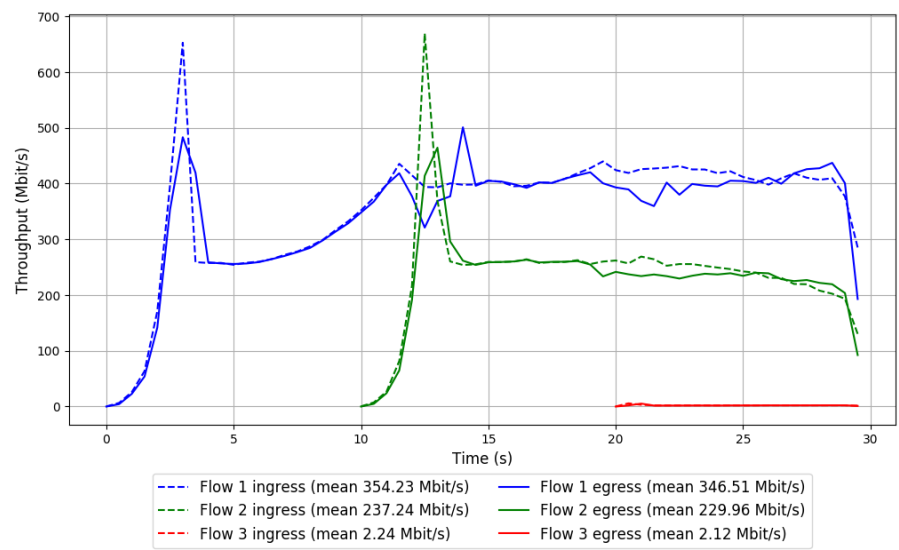
-- Flow 3:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 209.381 ms

Loss rate: 7.40%

Run 8: Report of PCC — Data Link

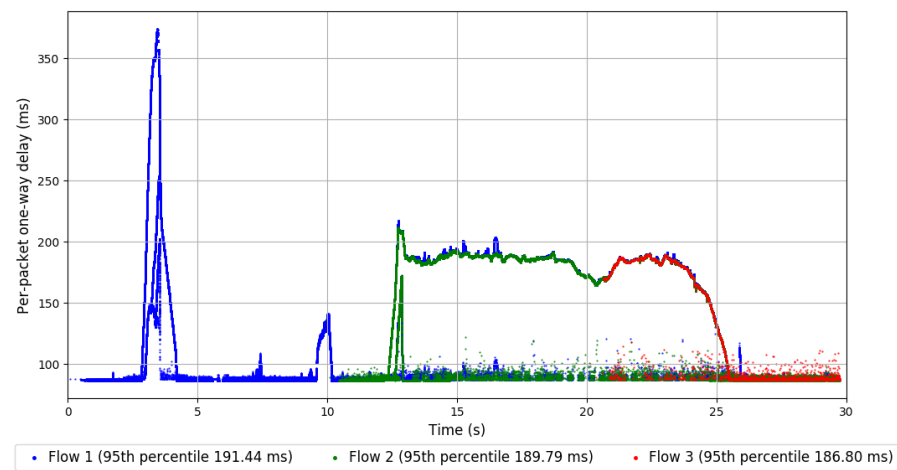
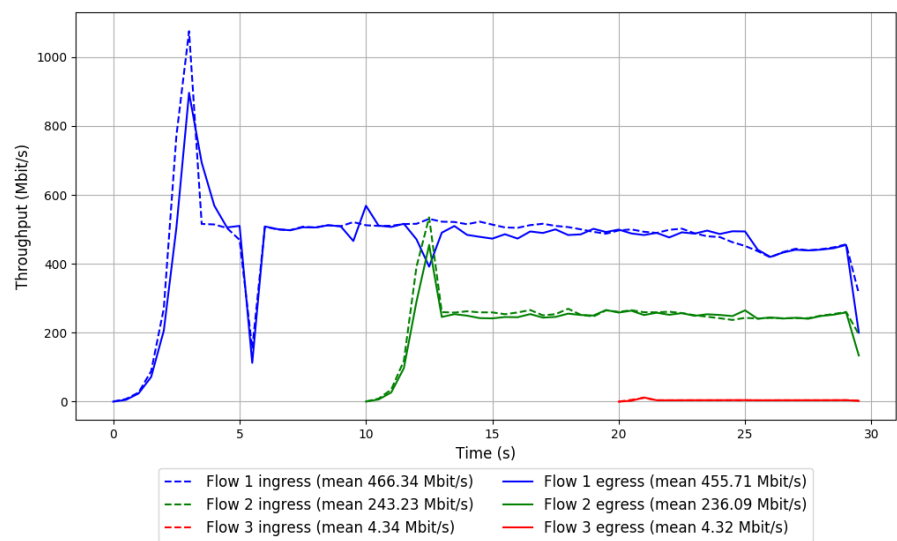


```
Run 9: Statistics of PCC

Start at: 2018-01-31 09:41:10
End at: 2018-01-31 09:41:40

# Below is generated by plot.py at 2018-01-31 13:47:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 613.09 Mbit/s
95th percentile per-packet one-way delay: 190.854 ms
Loss rate: 3.26%
-- Flow 1:
Average throughput: 455.71 Mbit/s
95th percentile per-packet one-way delay: 191.444 ms
Loss rate: 3.03%
-- Flow 2:
Average throughput: 236.09 Mbit/s
95th percentile per-packet one-way delay: 189.791 ms
Loss rate: 3.93%
-- Flow 3:
Average throughput: 4.32 Mbit/s
95th percentile per-packet one-way delay: 186.804 ms
Loss rate: 2.82%
```

Run 9: Report of PCC — Data Link

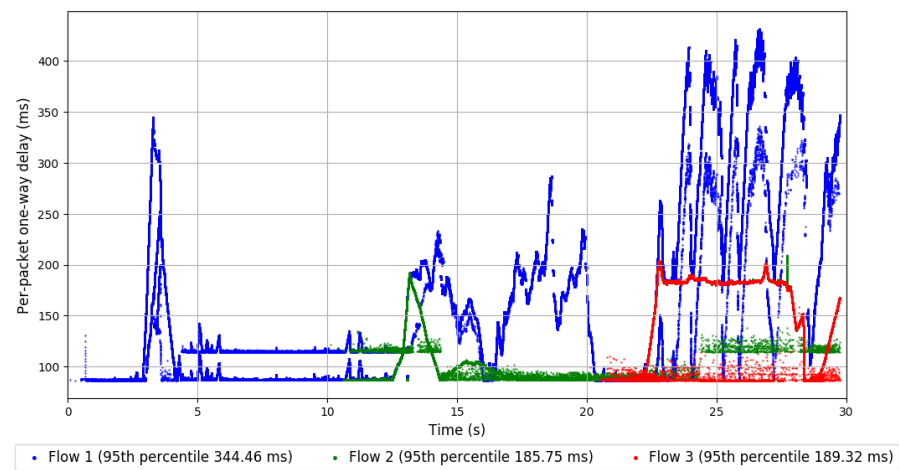
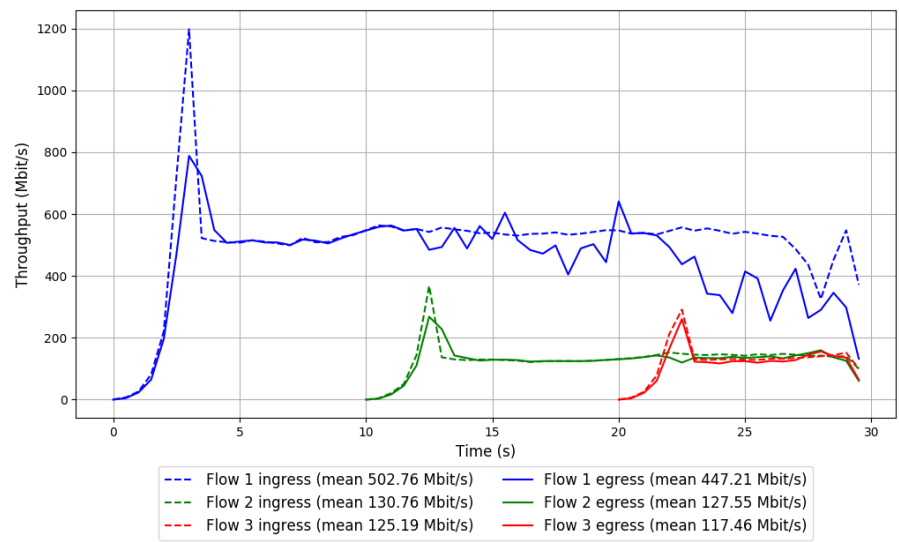


```
Run 10: Statistics of PCC

Start at: 2018-01-31 09:59:00
End at: 2018-01-31 09:59:30

# Below is generated by plot.py at 2018-01-31 13:47:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 569.67 Mbit/s
95th percentile per-packet one-way delay: 322.466 ms
Loss rate: 10.32%
-- Flow 1:
Average throughput: 447.21 Mbit/s
95th percentile per-packet one-way delay: 344.457 ms
Loss rate: 11.65%
-- Flow 2:
Average throughput: 127.55 Mbit/s
95th percentile per-packet one-way delay: 185.748 ms
Loss rate: 3.61%
-- Flow 3:
Average throughput: 117.46 Mbit/s
95th percentile per-packet one-way delay: 189.324 ms
Loss rate: 8.29%
```

Run 10: Report of PCC — Data Link

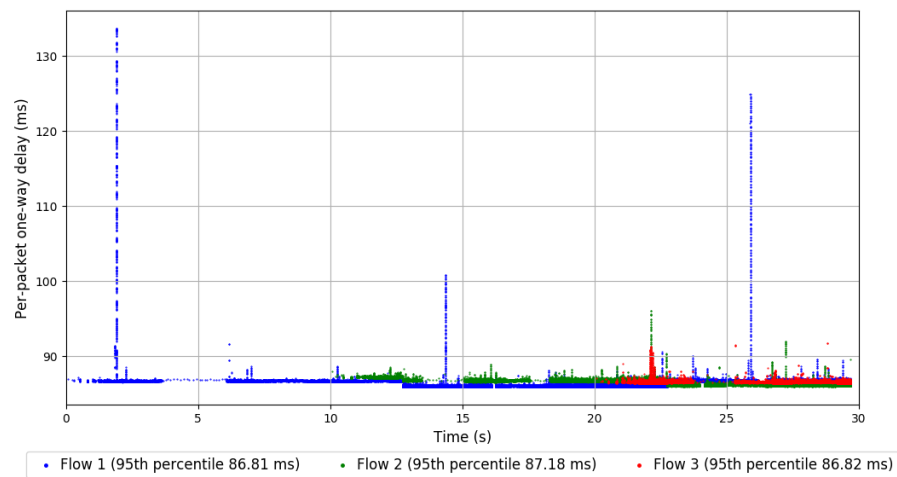
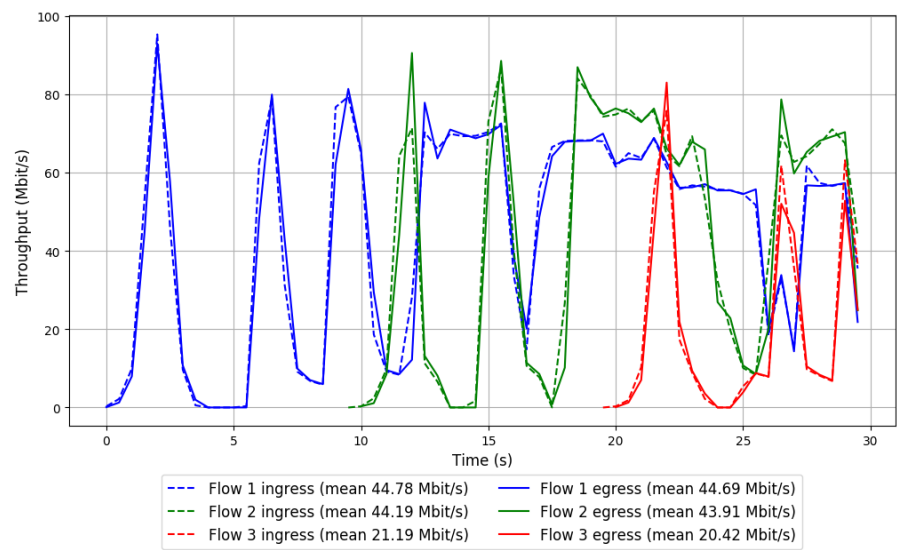


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-01-31 07:12:42
End at: 2018-01-31 07:13:12

# Below is generated by plot.py at 2018-01-31 13:47:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.43 Mbit/s
95th percentile per-packet one-way delay: 86.975 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 44.69 Mbit/s
95th percentile per-packet one-way delay: 86.807 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 43.91 Mbit/s
95th percentile per-packet one-way delay: 87.177 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 20.42 Mbit/s
95th percentile per-packet one-way delay: 86.823 ms
Loss rate: 5.57%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-01-31 07:31:09

End at: 2018-01-31 07:31:39

Below is generated by plot.py at 2018-01-31 13:47:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.28 Mbit/s

95th percentile per-packet one-way delay: 114.076 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 46.94 Mbit/s

95th percentile per-packet one-way delay: 114.020 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 38.42 Mbit/s

95th percentile per-packet one-way delay: 87.023 ms

Loss rate: 1.93%

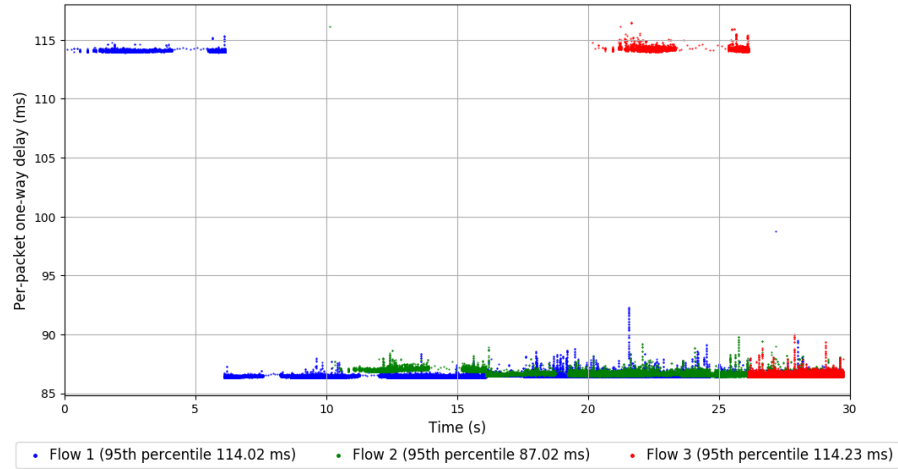
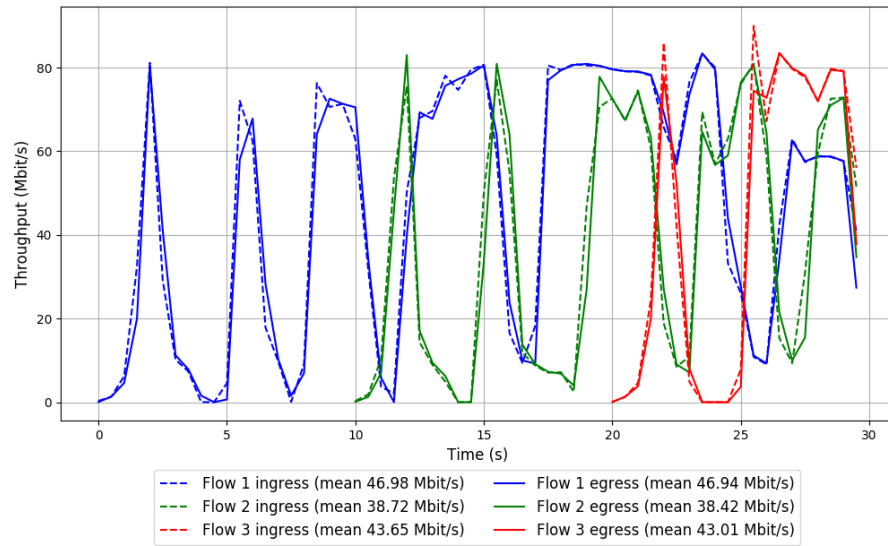
-- Flow 3:

Average throughput: 43.01 Mbit/s

95th percentile per-packet one-way delay: 114.232 ms

Loss rate: 3.76%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-01-31 07:49:35

End at: 2018-01-31 07:50:05

Below is generated by plot.py at 2018-01-31 13:47:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.21 Mbit/s

95th percentile per-packet one-way delay: 86.967 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 46.91 Mbit/s

95th percentile per-packet one-way delay: 87.000 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 46.33 Mbit/s

95th percentile per-packet one-way delay: 86.726 ms

Loss rate: 1.30%

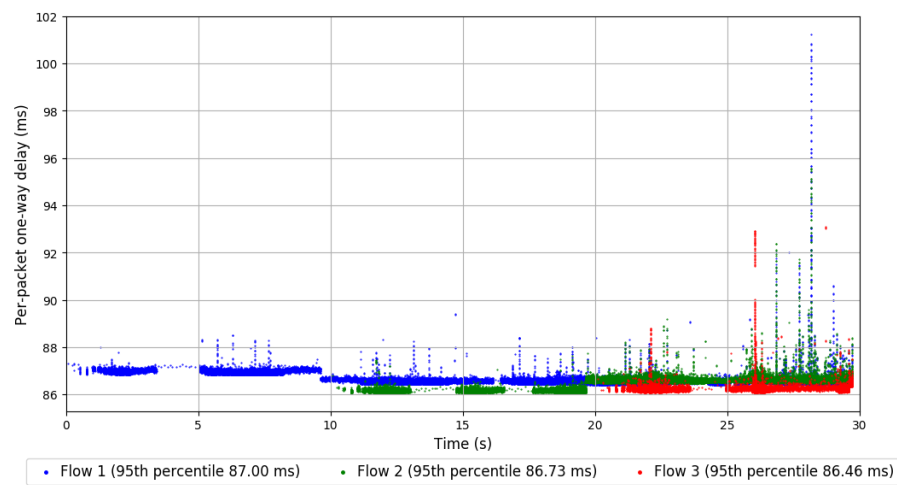
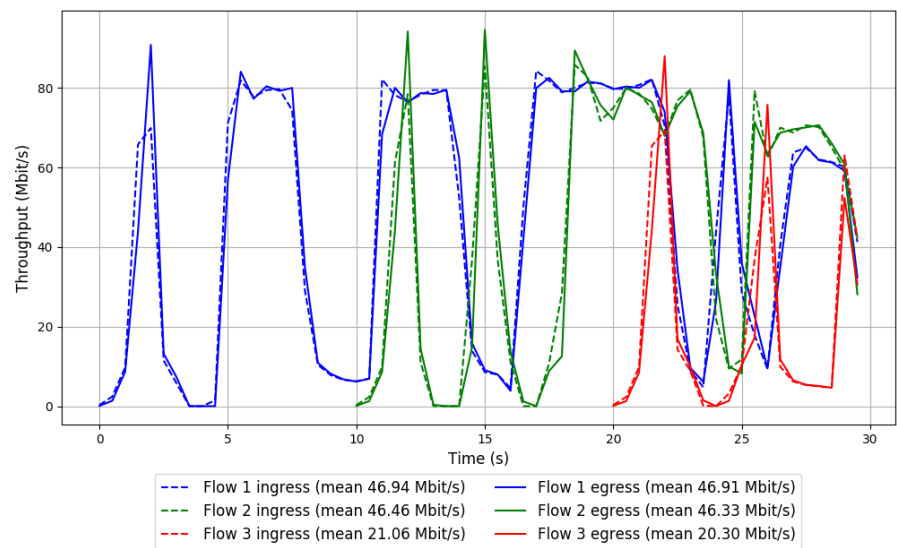
-- Flow 3:

Average throughput: 20.30 Mbit/s

95th percentile per-packet one-way delay: 86.458 ms

Loss rate: 5.58%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-01-31 08:07:50

End at: 2018-01-31 08:08:20

Below is generated by plot.py at 2018-01-31 13:47:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.06 Mbit/s

95th percentile per-packet one-way delay: 86.937 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 44.22 Mbit/s

95th percentile per-packet one-way delay: 86.680 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 47.81 Mbit/s

95th percentile per-packet one-way delay: 86.840 ms

Loss rate: 1.65%

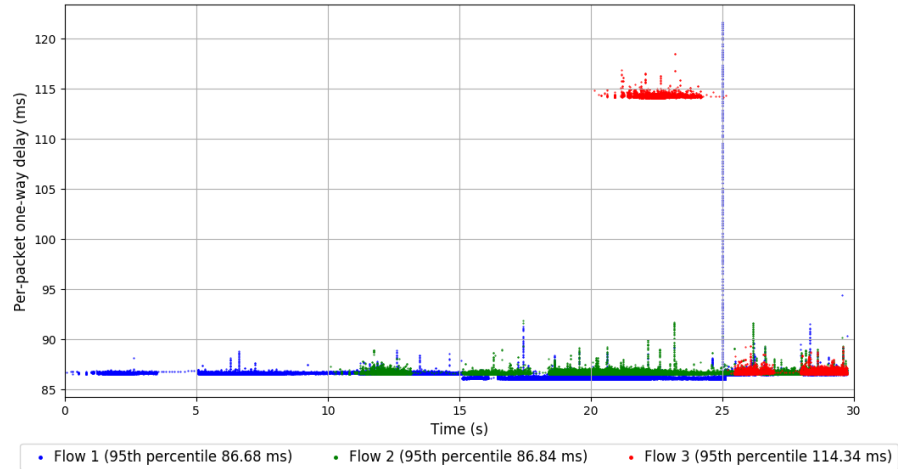
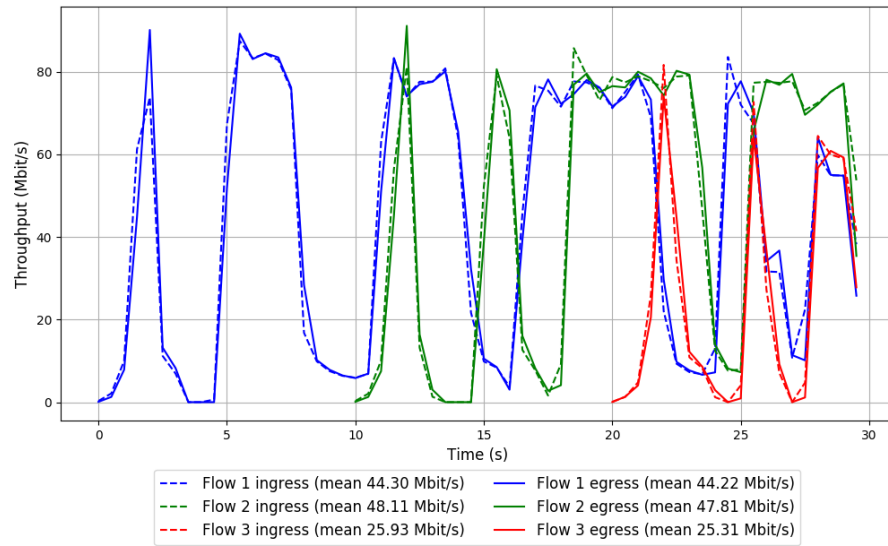
-- Flow 3:

Average throughput: 25.31 Mbit/s

95th percentile per-packet one-way delay: 114.342 ms

Loss rate: 4.67%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-01-31 08:25:53

End at: 2018-01-31 08:26:23

Below is generated by plot.py at 2018-01-31 13:47:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 55.31 Mbit/s

95th percentile per-packet one-way delay: 114.294 ms

Loss rate: 1.79%

-- Flow 1:

Average throughput: 23.02 Mbit/s

95th percentile per-packet one-way delay: 114.346 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 35.68 Mbit/s

95th percentile per-packet one-way delay: 87.423 ms

Loss rate: 1.51%

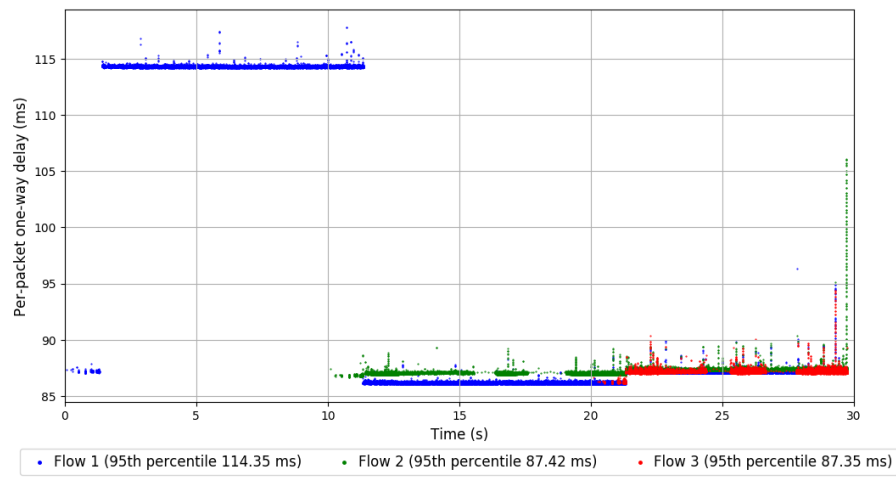
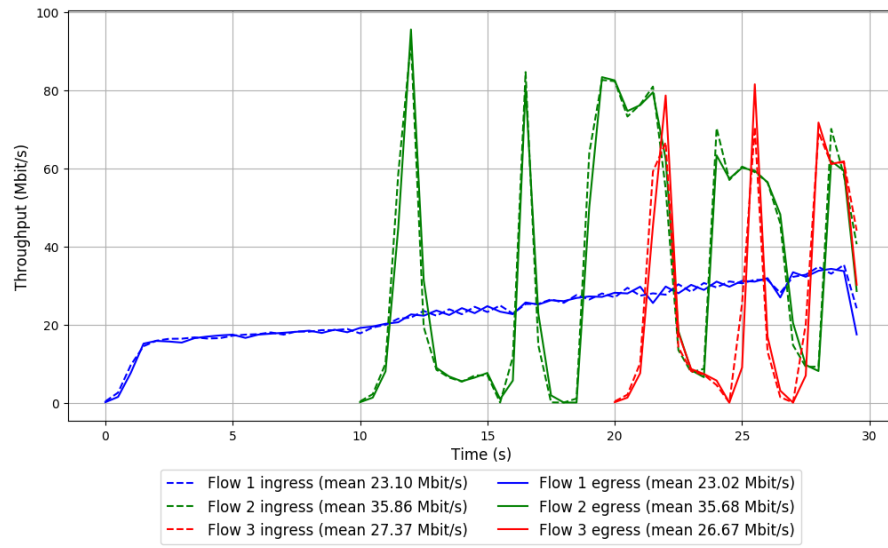
-- Flow 3:

Average throughput: 26.67 Mbit/s

95th percentile per-packet one-way delay: 87.354 ms

Loss rate: 4.54%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-01-31 08:43:54

End at: 2018-01-31 08:44:24

Below is generated by plot.py at 2018-01-31 13:47:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.40 Mbit/s

95th percentile per-packet one-way delay: 87.167 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 48.42 Mbit/s

95th percentile per-packet one-way delay: 87.183 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 35.63 Mbit/s

95th percentile per-packet one-way delay: 87.078 ms

Loss rate: 1.52%

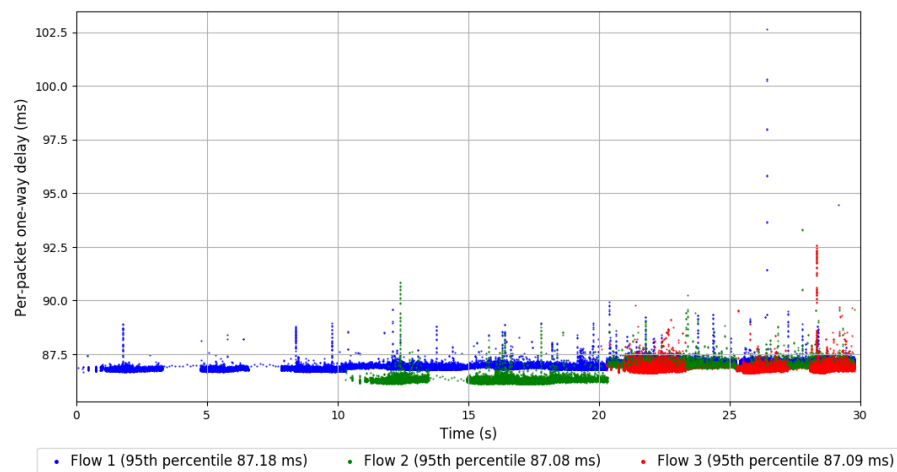
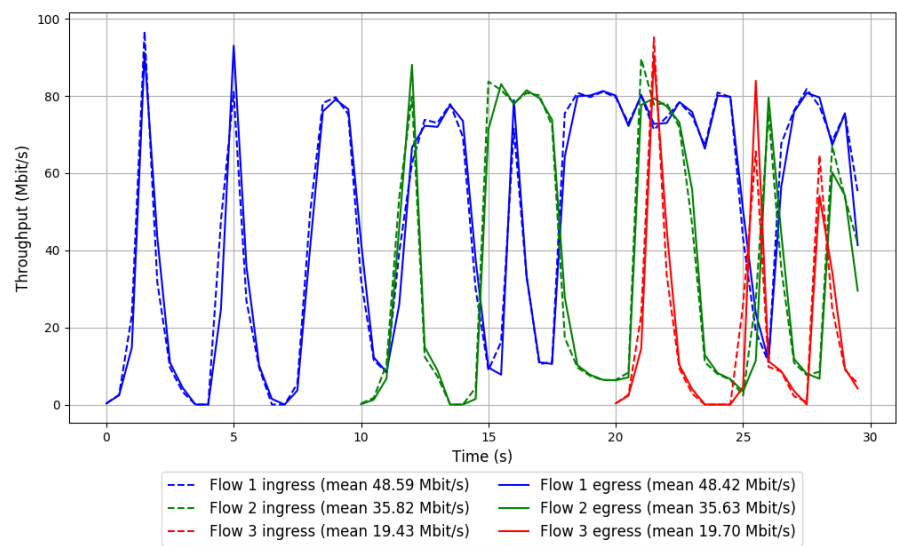
-- Flow 3:

Average throughput: 19.70 Mbit/s

95th percentile per-packet one-way delay: 87.090 ms

Loss rate: 0.70%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-01-31 09:01:51

End at: 2018-01-31 09:02:21

Below is generated by plot.py at 2018-01-31 13:47:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.54 Mbit/s

95th percentile per-packet one-way delay: 86.946 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 47.38 Mbit/s

95th percentile per-packet one-way delay: 86.797 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 41.74 Mbit/s

95th percentile per-packet one-way delay: 87.041 ms

Loss rate: 1.52%

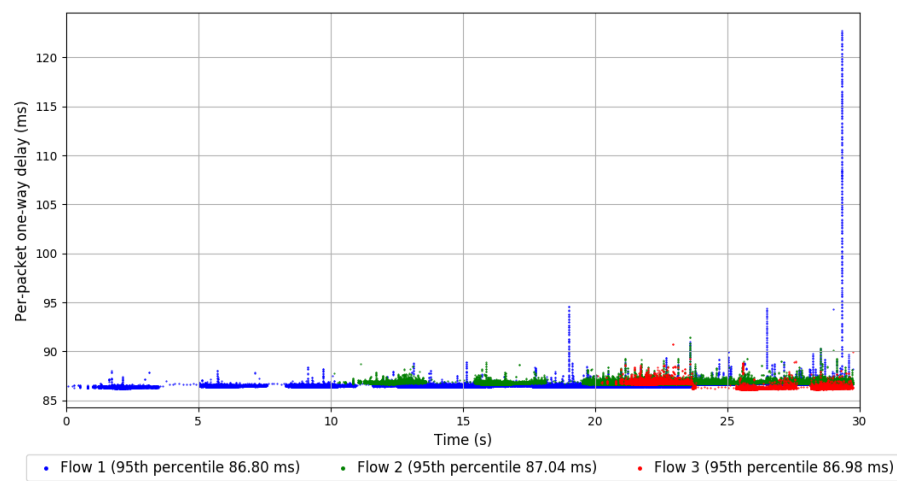
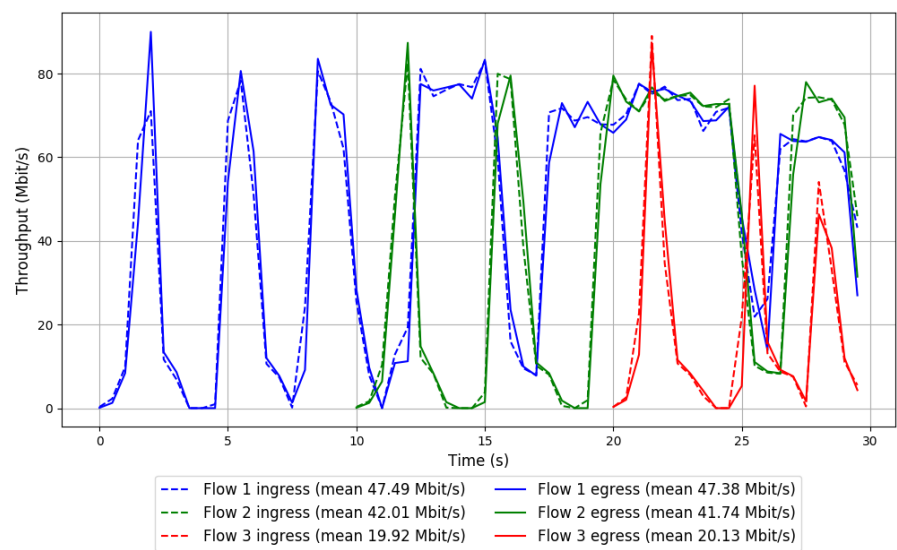
-- Flow 3:

Average throughput: 20.13 Mbit/s

95th percentile per-packet one-way delay: 86.981 ms

Loss rate: 0.72%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-01-31 09:19:54

End at: 2018-01-31 09:20:24

Below is generated by plot.py at 2018-01-31 13:47:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.37 Mbit/s

95th percentile per-packet one-way delay: 114.408 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 44.11 Mbit/s

95th percentile per-packet one-way delay: 114.457 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 45.38 Mbit/s

95th percentile per-packet one-way delay: 87.065 ms

Loss rate: 1.61%

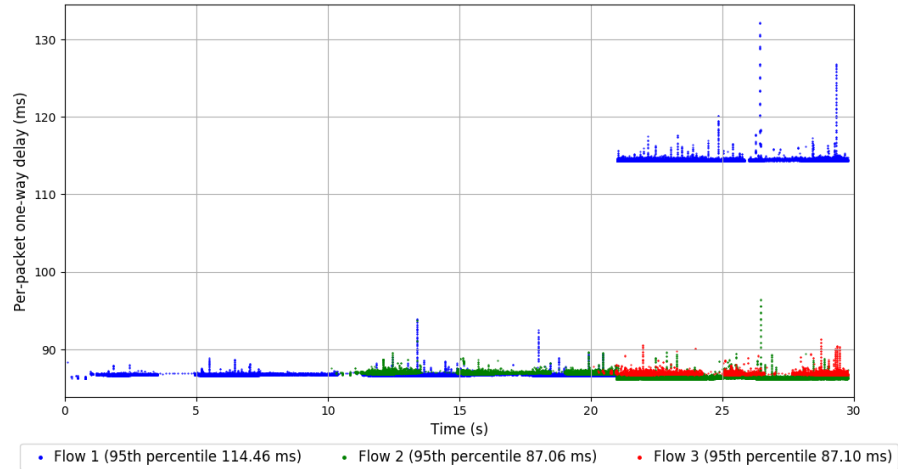
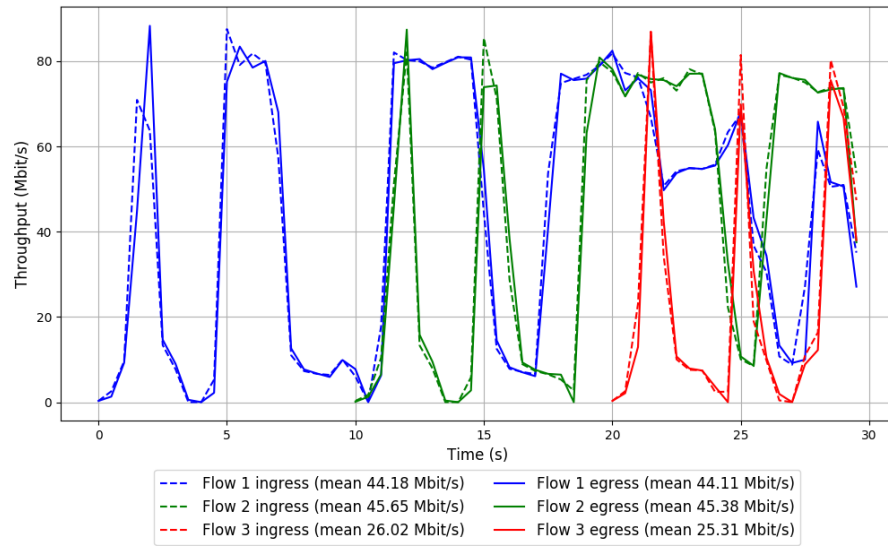
-- Flow 3:

Average throughput: 25.31 Mbit/s

95th percentile per-packet one-way delay: 87.102 ms

Loss rate: 4.46%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

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

End at: 2018-01-31 09:38:38

Below is generated by plot.py at 2018-01-31 13:47:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.70 Mbit/s

95th percentile per-packet one-way delay: 114.496 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 52.53 Mbit/s

95th percentile per-packet one-way delay: 114.544 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 41.86 Mbit/s

95th percentile per-packet one-way delay: 114.127 ms

Loss rate: 1.89%

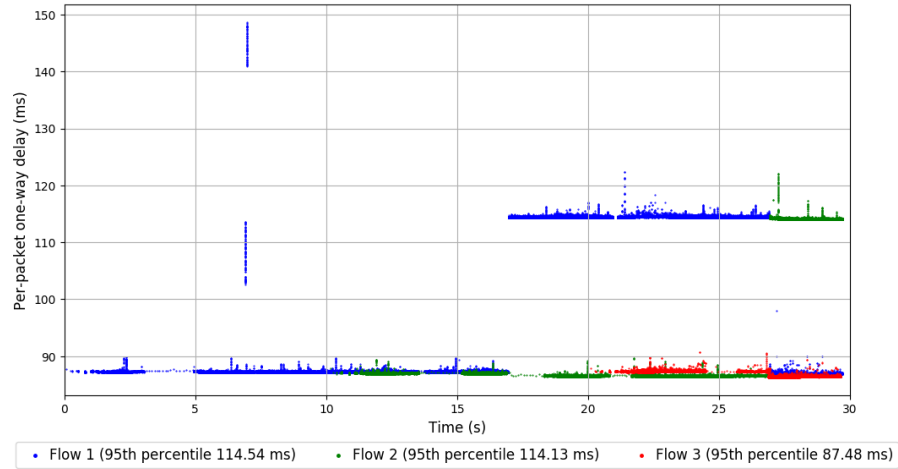
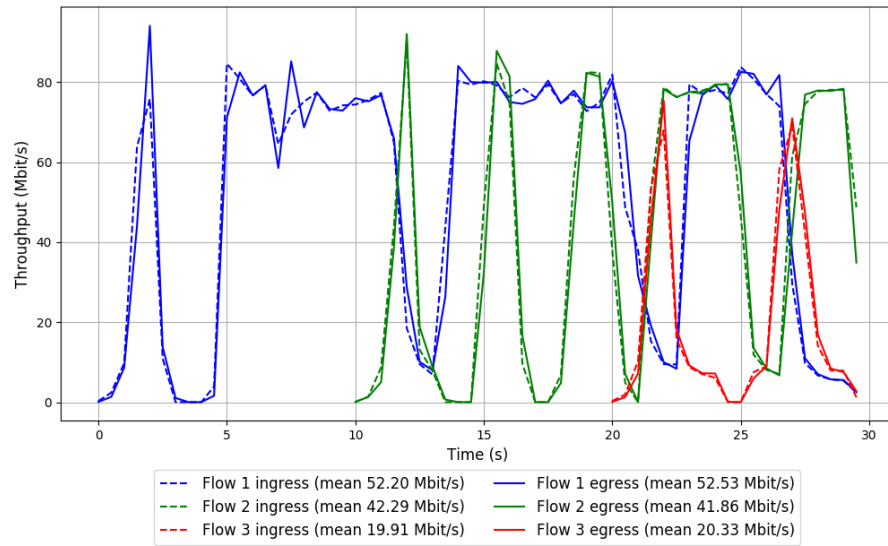
-- Flow 3:

Average throughput: 20.33 Mbit/s

95th percentile per-packet one-way delay: 87.479 ms

Loss rate: 0.00%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-01-31 09:56:15

End at: 2018-01-31 09:56:45

Below is generated by plot.py at 2018-01-31 13:47:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.85 Mbit/s

95th percentile per-packet one-way delay: 114.516 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 39.92 Mbit/s

95th percentile per-packet one-way delay: 87.432 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 51.51 Mbit/s

95th percentile per-packet one-way delay: 114.575 ms

Loss rate: 1.28%

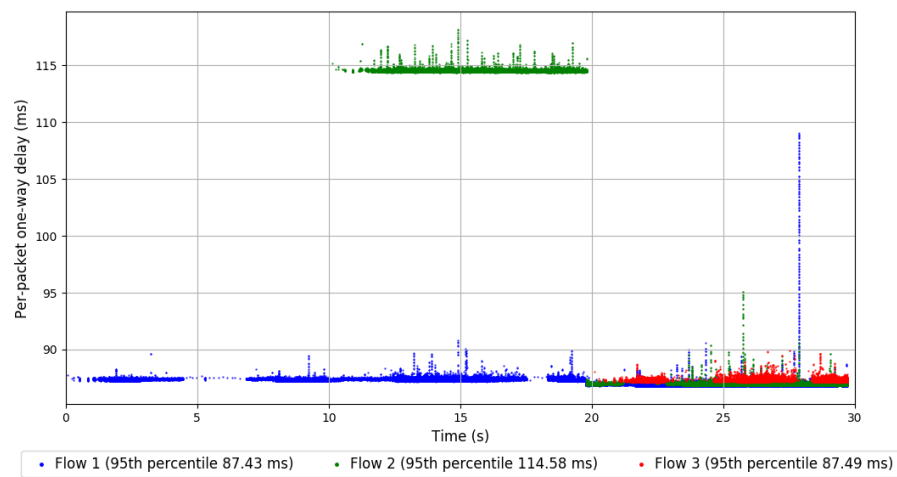
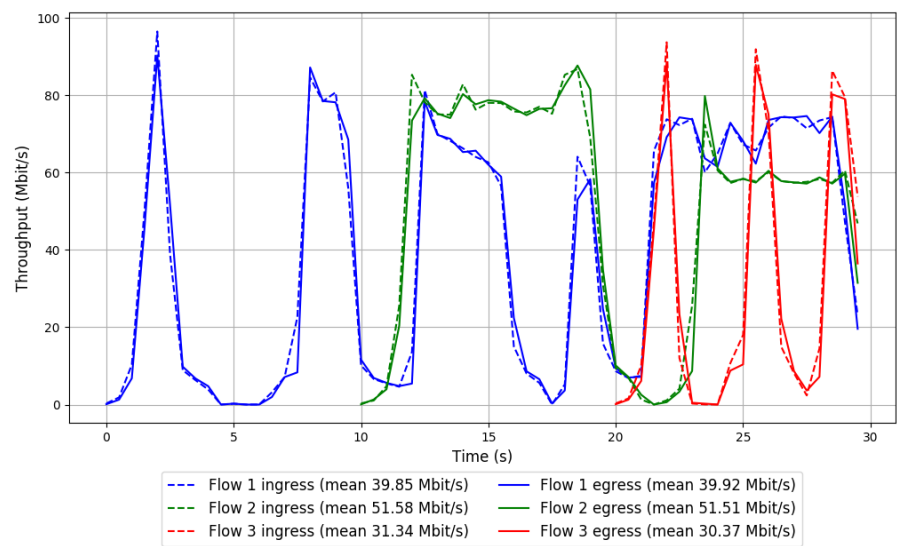
-- Flow 3:

Average throughput: 30.37 Mbit/s

95th percentile per-packet one-way delay: 87.494 ms

Loss rate: 5.08%

Run 10: Report of QUIC Cubic — Data Link

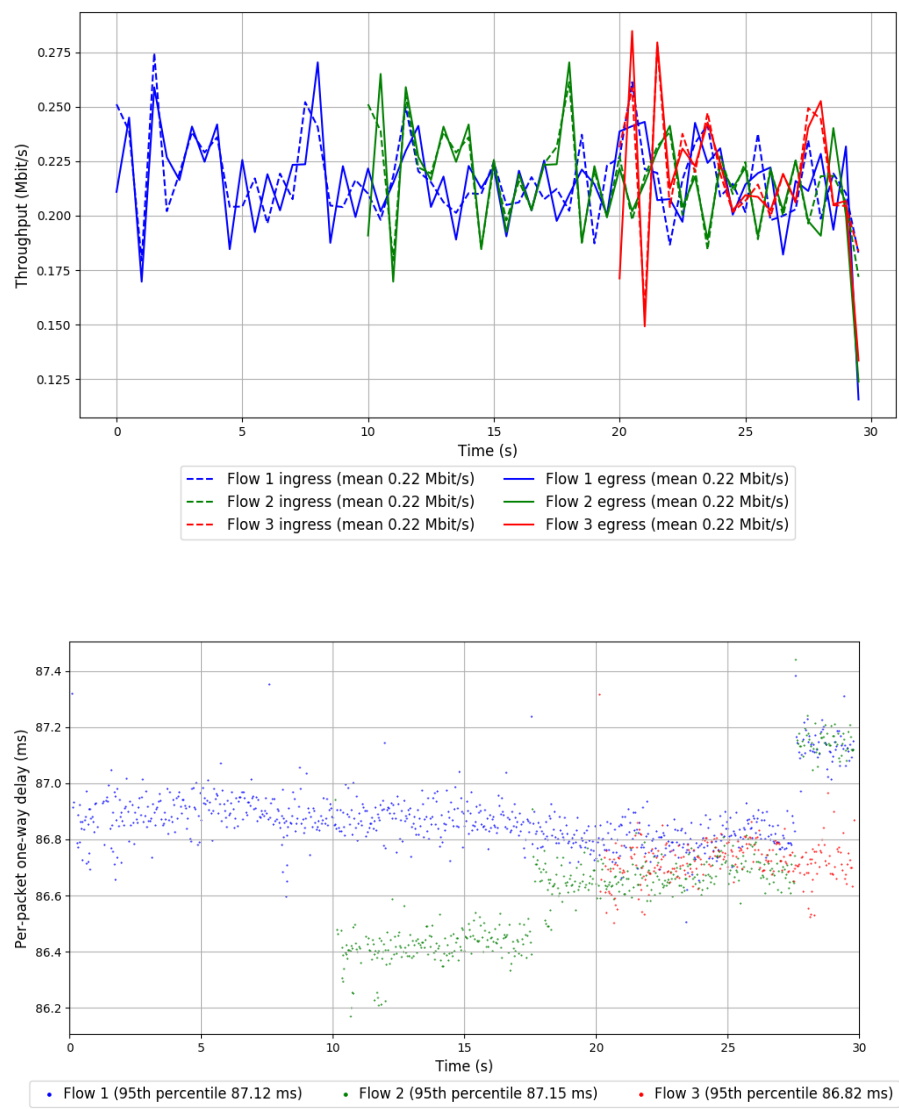


```
Run 1: Statistics of SCReAM

Start at: 2018-01-31 07:11:57
End at: 2018-01-31 07:12:27

# Below is generated by plot.py at 2018-01-31 13:47:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 87.124 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.117 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.150 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.819 ms
Loss rate: 1.87%
```

Run 1: Report of SReAM — Data Link

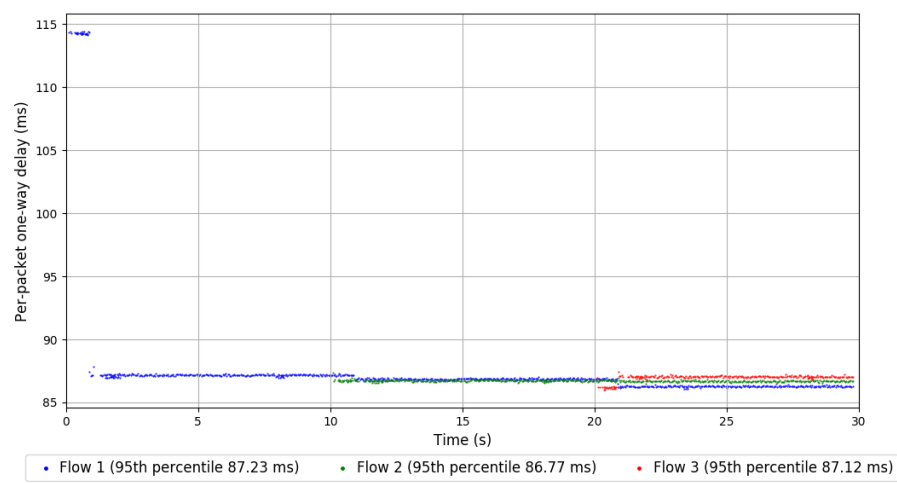
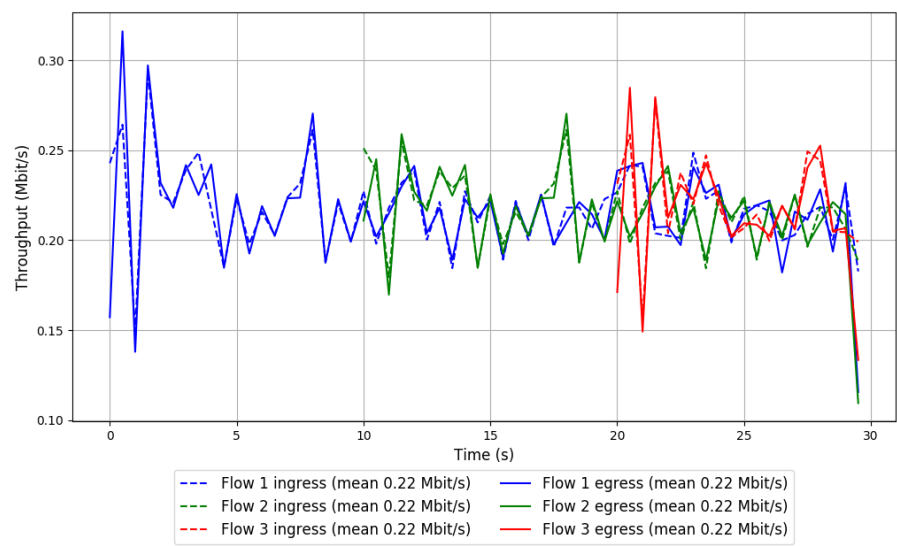


```
Run 2: Statistics of SCReAM

Start at: 2018-01-31 07:30:24
End at: 2018-01-31 07:30:54

# Below is generated by plot.py at 2018-01-31 13:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 87.187 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.230 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.772 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.120 ms
Loss rate: 2.21%
```

Run 2: Report of SReAM — Data Link

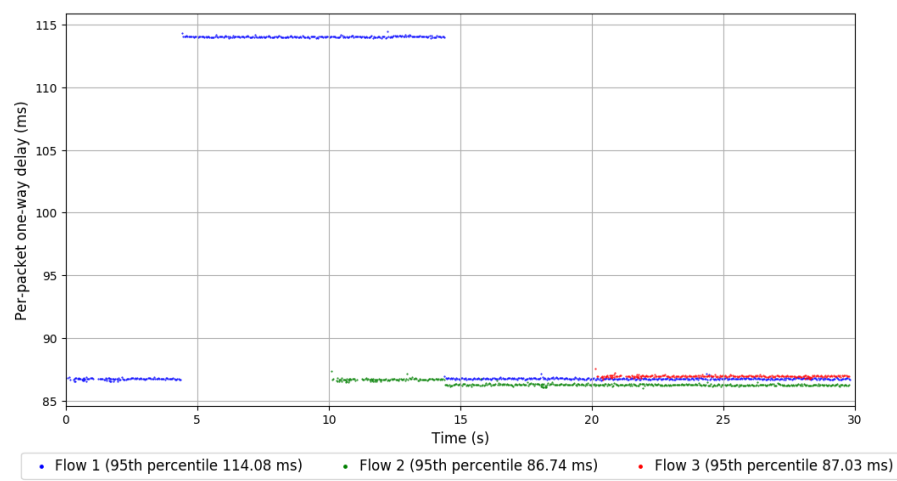
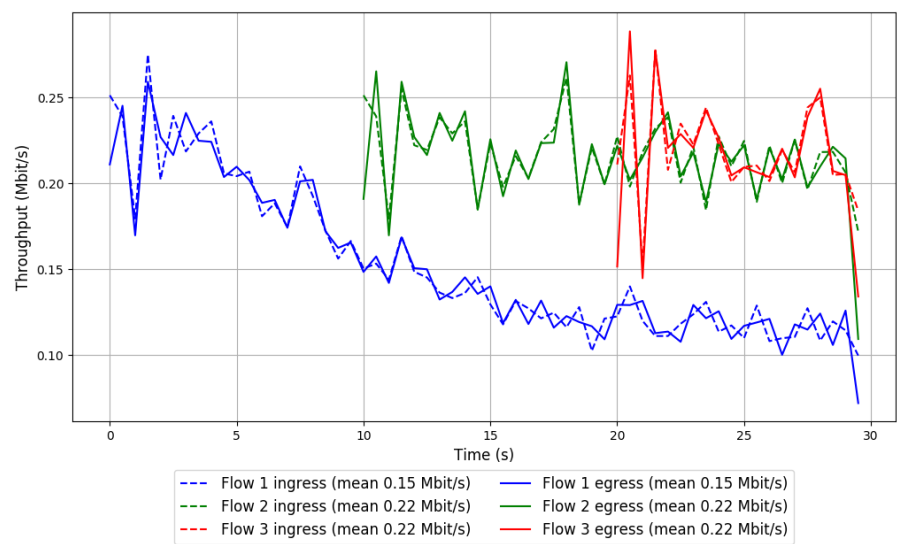


```
Run 3: Statistics of SCReAM

Start at: 2018-01-31 07:48:50
End at: 2018-01-31 07:49:20

# Below is generated by plot.py at 2018-01-31 13:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 114.061 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 114.085 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.738 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.033 ms
Loss rate: 1.91%
```


Run 3: Report of SReAM — Data Link

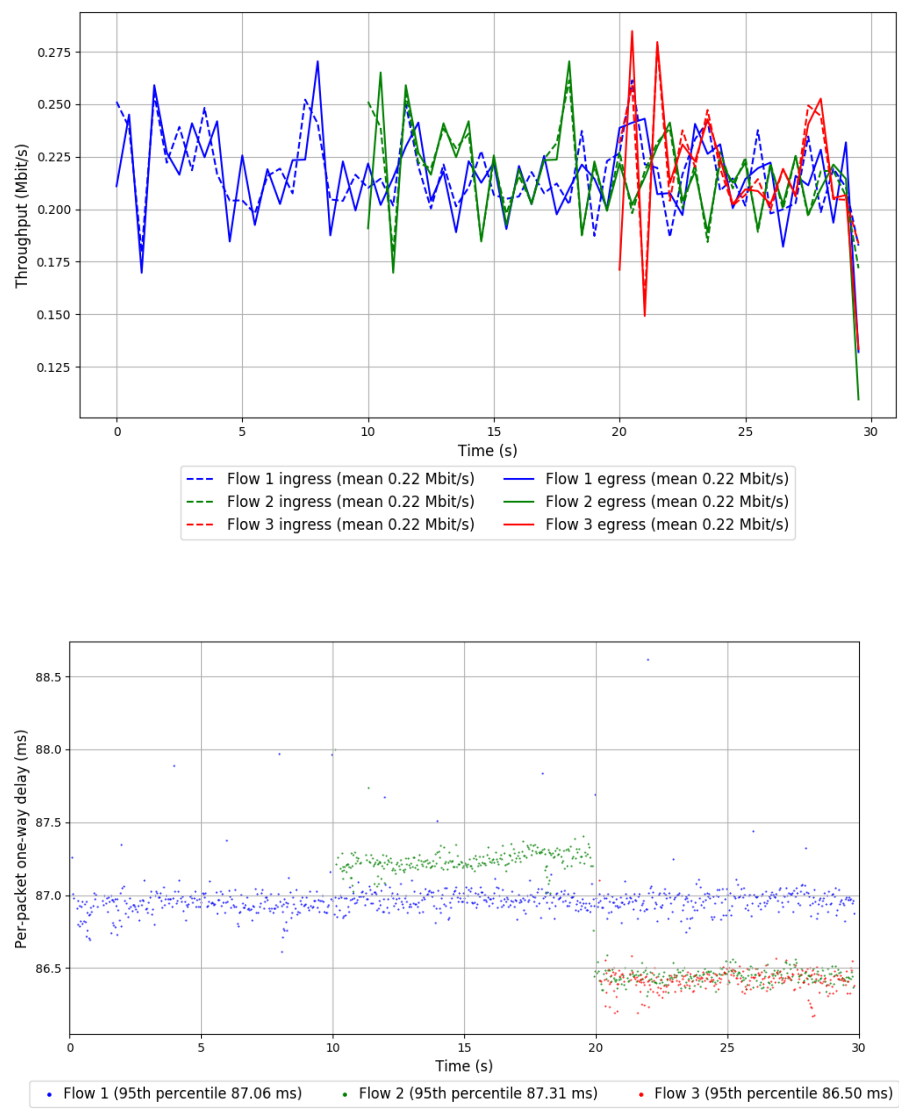


```
Run 4: Statistics of SCReAM

Start at: 2018-01-31 08:07:05
End at: 2018-01-31 08:07:35

# Below is generated by plot.py at 2018-01-31 13:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 87.278 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.057 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.315 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.501 ms
Loss rate: 1.87%
```

Run 4: Report of SCRaM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-01-31 08:25:09

End at: 2018-01-31 08:25:39

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 114.489 ms

Loss rate: 1.13%

-- Flow 1:

Average throughput: 0.11 Mbit/s

95th percentile per-packet one-way delay: 114.509 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.305 ms

Loss rate: 1.06%

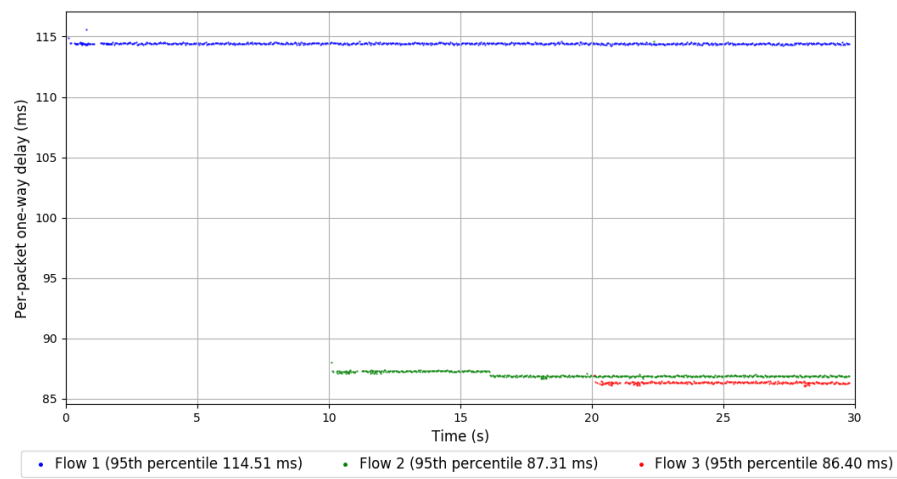
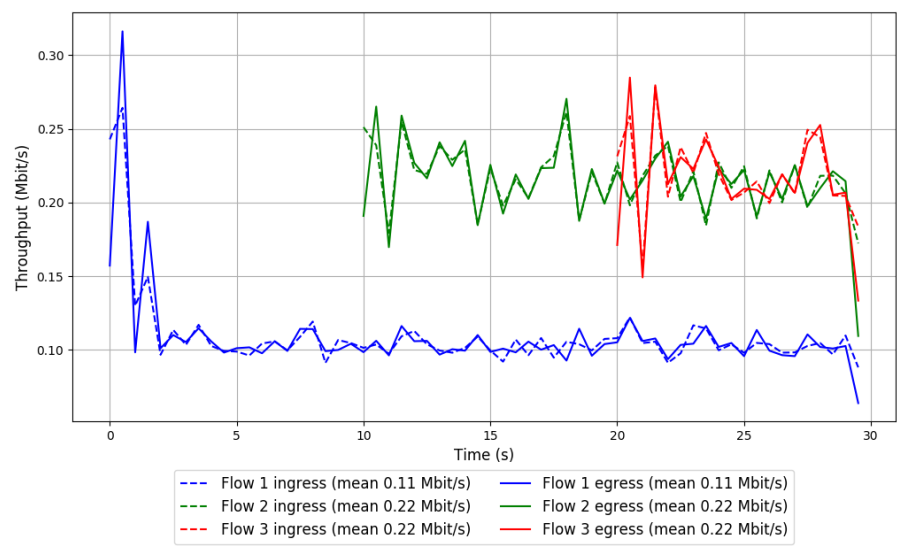
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.404 ms

Loss rate: 1.87%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-01-31 08:43:11

End at: 2018-01-31 08:43:41

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 114.213 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.228 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 114.267 ms

Loss rate: 0.75%

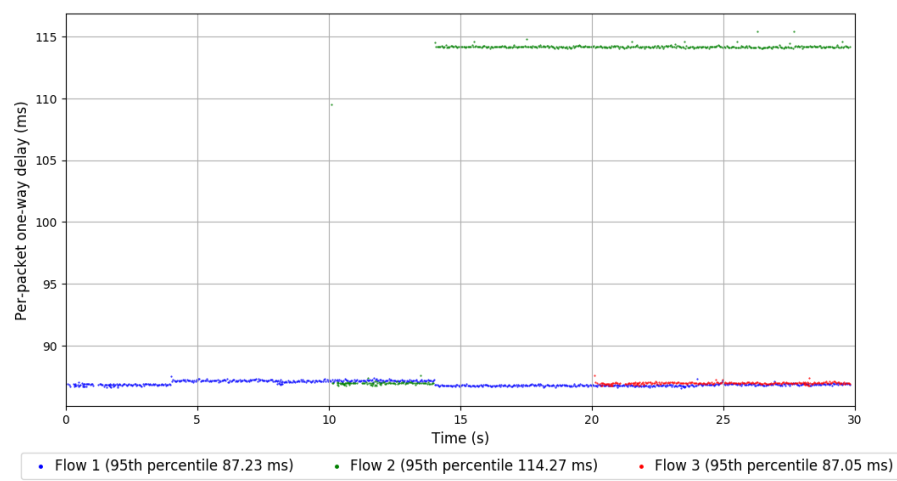
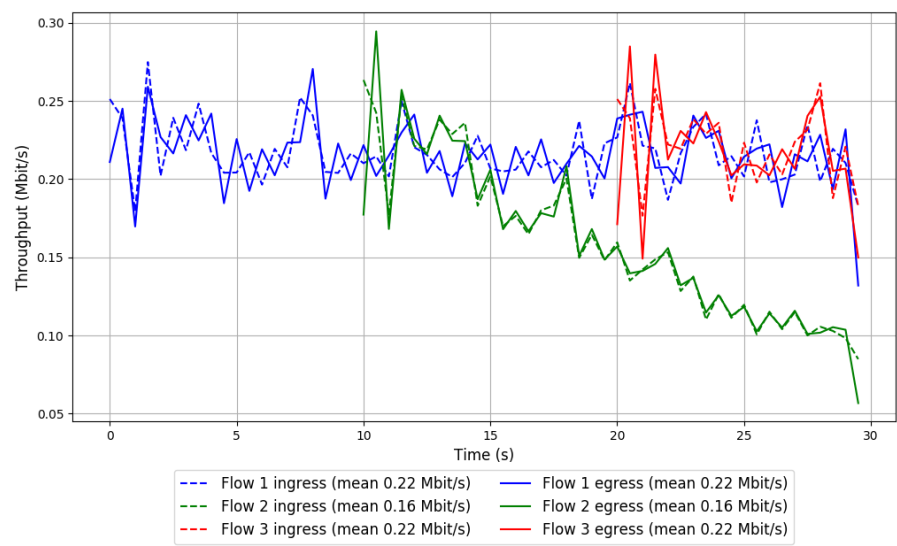
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.053 ms

Loss rate: 1.84%

Run 6: Report of SReAM — Data Link

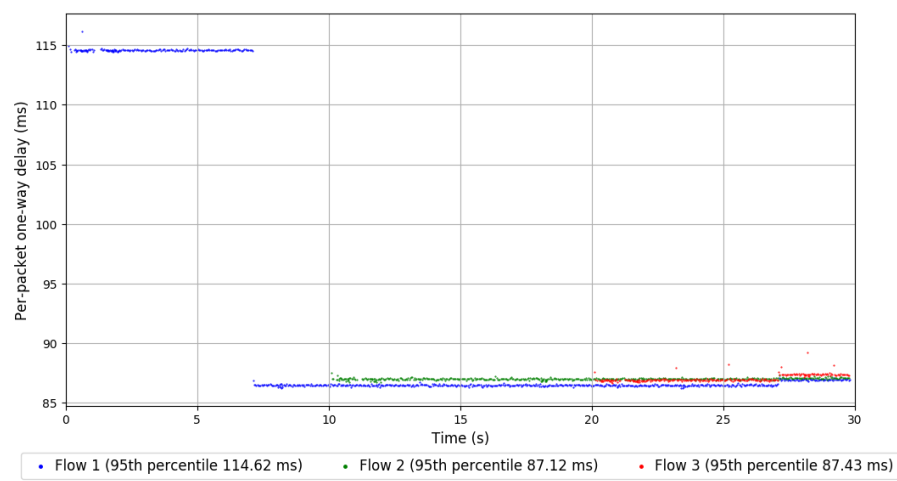
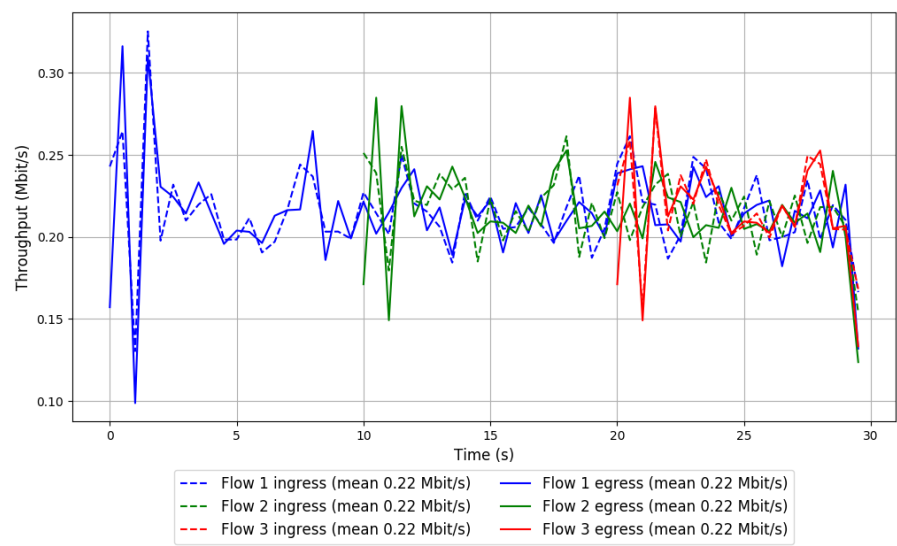


```
Run 7: Statistics of SCReAM

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

# Below is generated by plot.py at 2018-01-31 13:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 114.597 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.624 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.122 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.432 ms
Loss rate: 1.52%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2018-01-31 09:19:09

End at: 2018-01-31 09:19:39

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 87.391 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.260 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.968 ms

Loss rate: 1.06%

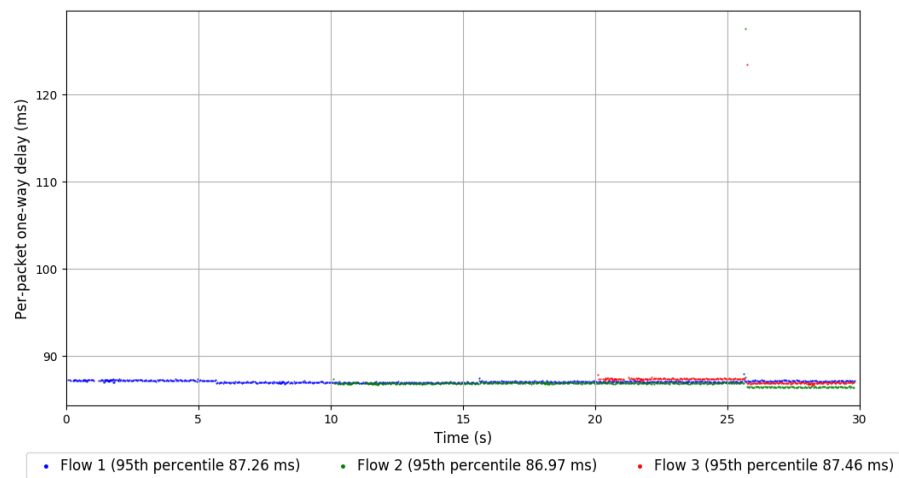
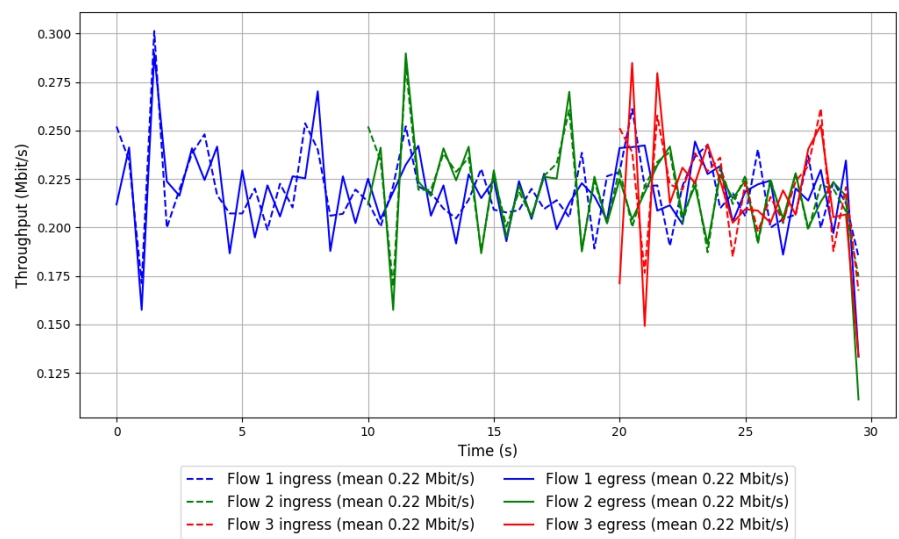
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.459 ms

Loss rate: 1.87%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2018-01-31 09:37:23

End at: 2018-01-31 09:37:53

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 114.713 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 114.694 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 114.631 ms

Loss rate: 1.05%

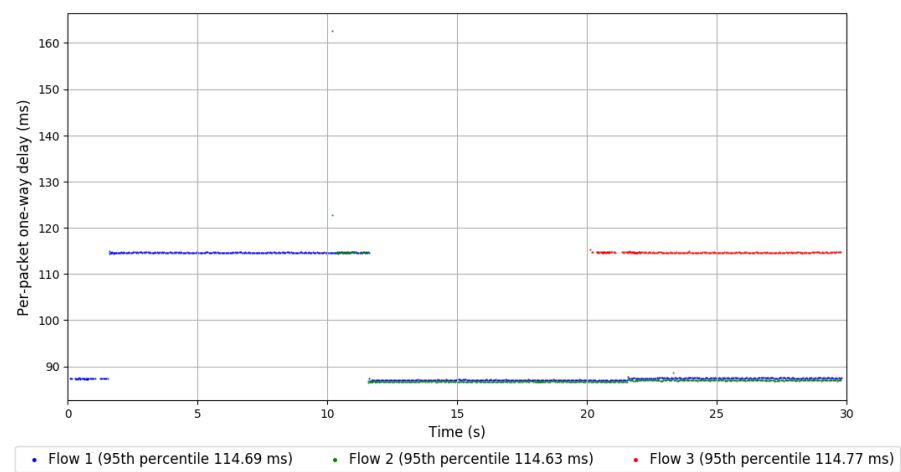
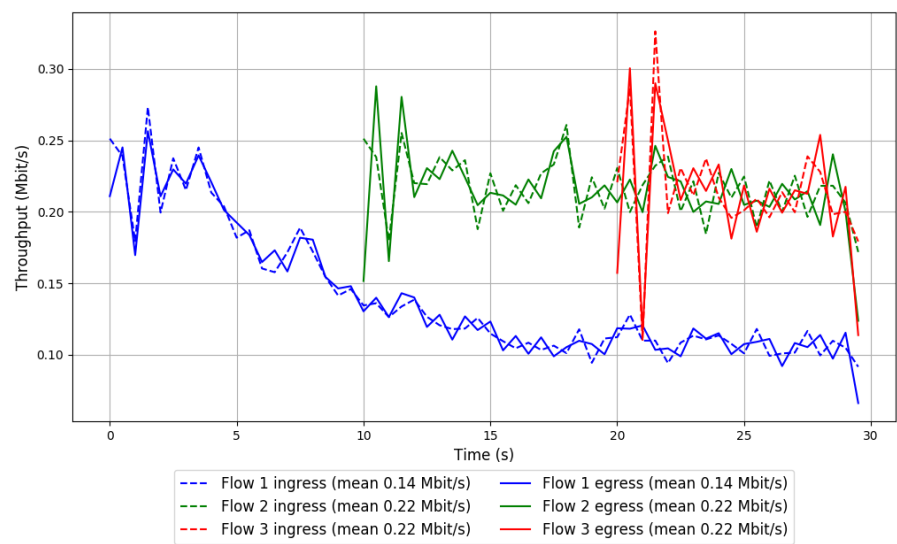
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 114.765 ms

Loss rate: 2.25%

Run 9: Report of SReAM — Data Link



Run 10: Statistics of SCReAM

Start at: 2018-01-31 09:55:30

End at: 2018-01-31 09:56:00

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 87.780 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.265 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.812 ms

Loss rate: 1.05%

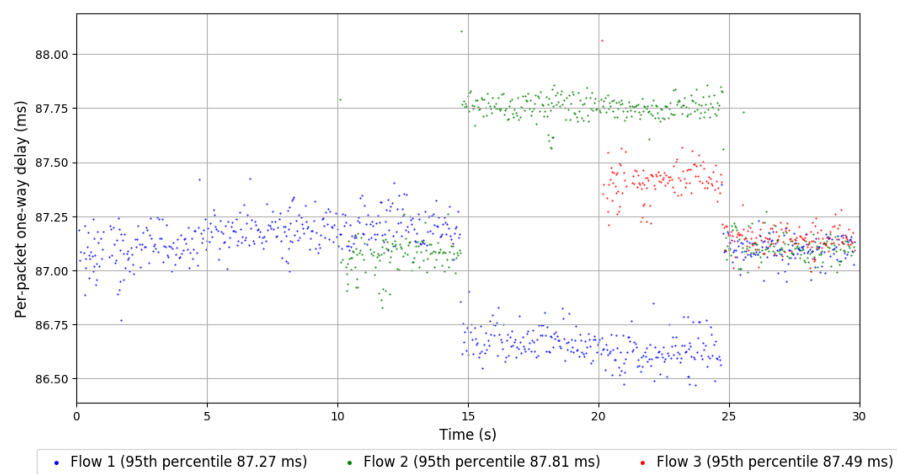
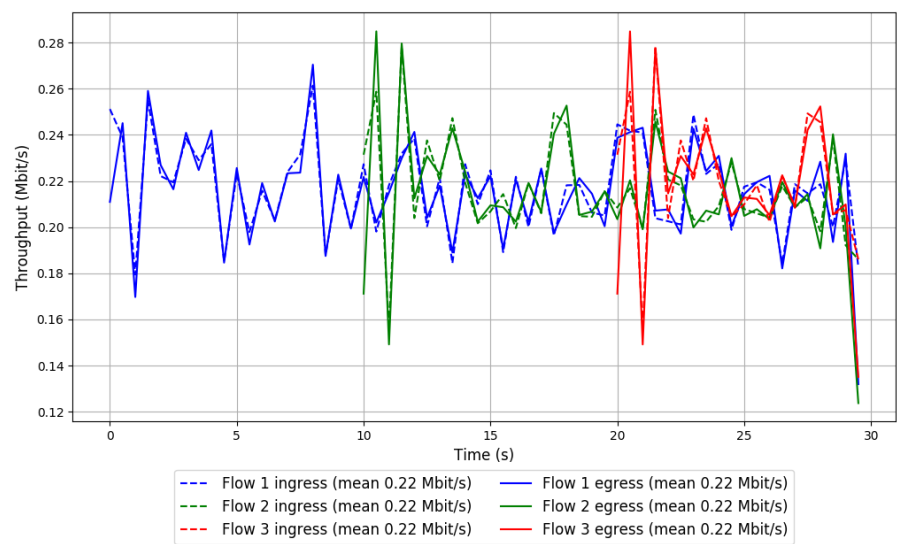
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.487 ms

Loss rate: 1.88%

Run 10: Report of SCReAM — Data Link

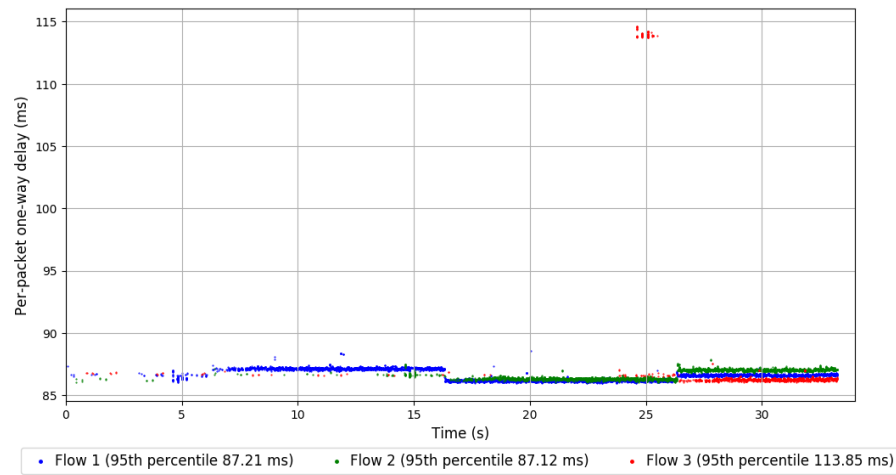
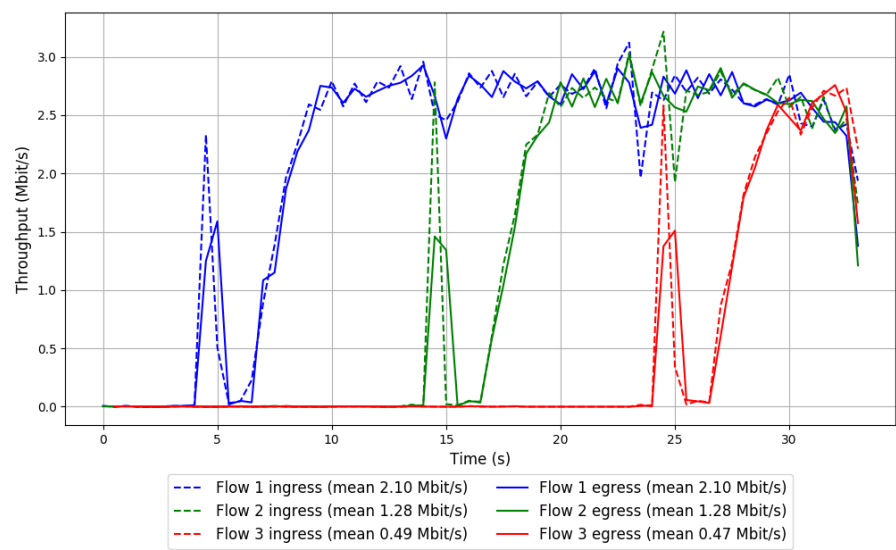


```
Run 1: Statistics of WebRTC media

Start at: 2018-01-31 07:13:32
End at: 2018-01-31 07:14:02

# Below is generated by plot.py at 2018-01-31 13:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.82 Mbit/s
95th percentile per-packet one-way delay: 87.201 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 87.212 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 87.123 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 113.849 ms
Loss rate: 3.82%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-01-31 07:31:59

End at: 2018-01-31 07:32:29

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 87.093 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 87.135 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 86.840 ms

Loss rate: 1.39%

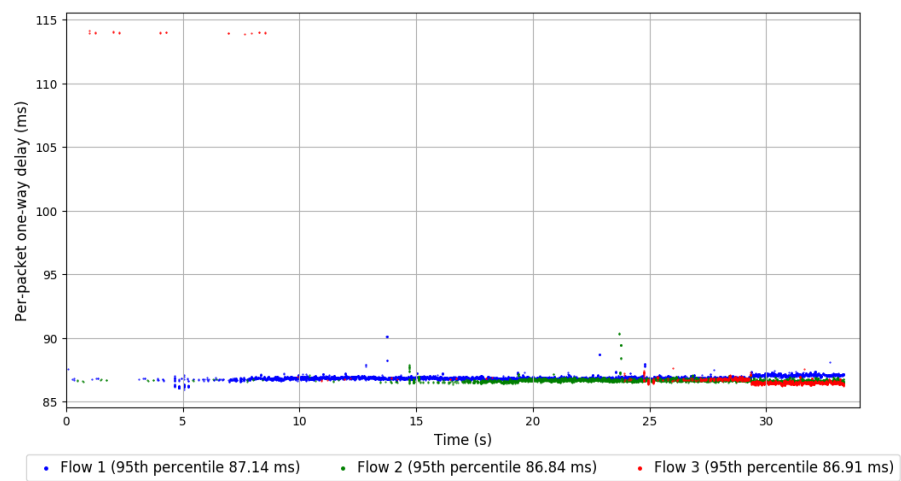
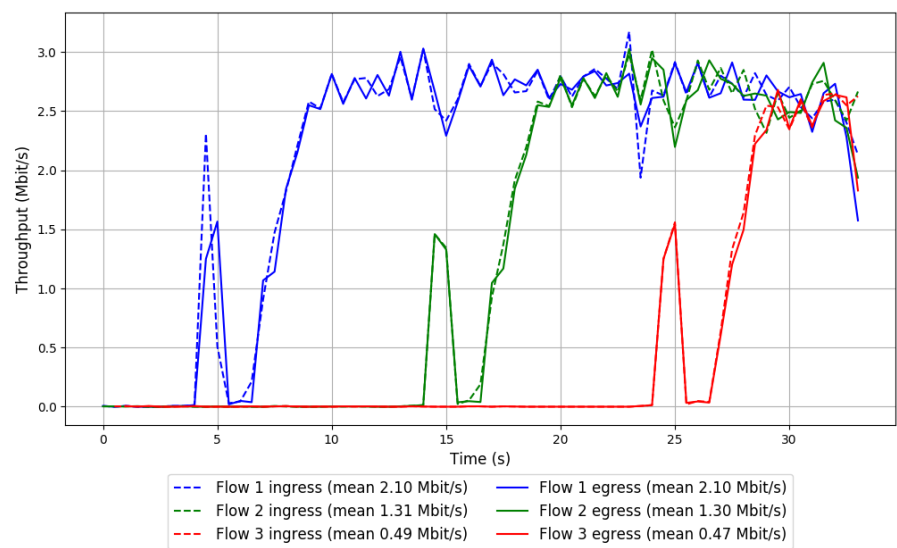
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 86.912 ms

Loss rate: 3.75%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-01-31 07:50:25

End at: 2018-01-31 07:50:55

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 87.365 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 87.359 ms

Loss rate: 1.34%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 87.356 ms

Loss rate: 1.39%

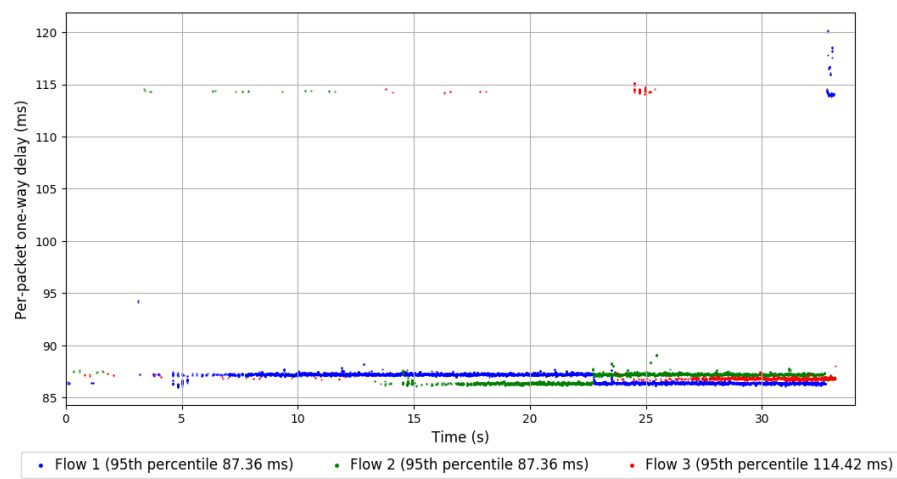
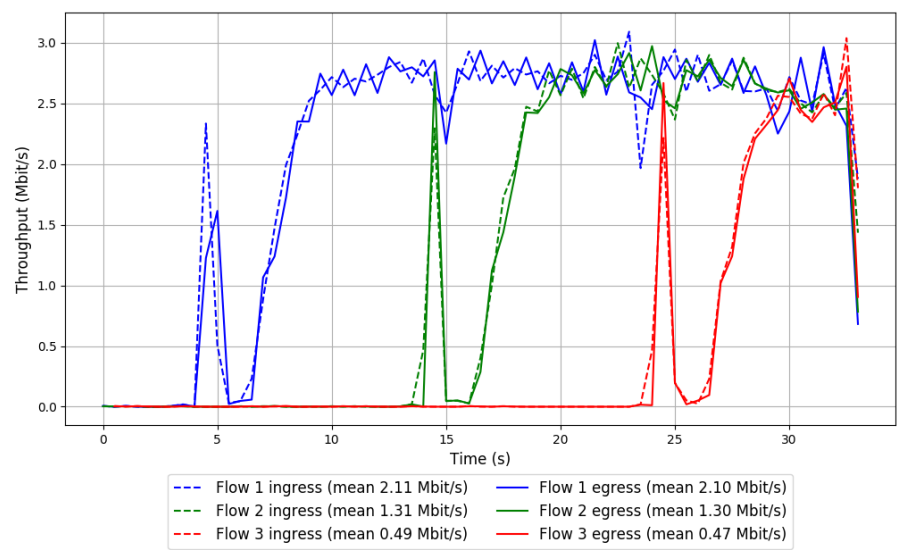
-- Flow 3:

Average throughput: 0.47 Mbit/s

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

Loss rate: 4.91%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-01-31 08:08:40

End at: 2018-01-31 08:09:10

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.79 Mbit/s

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

Loss rate: 1.26%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 114.106 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 87.357 ms

Loss rate: 1.26%

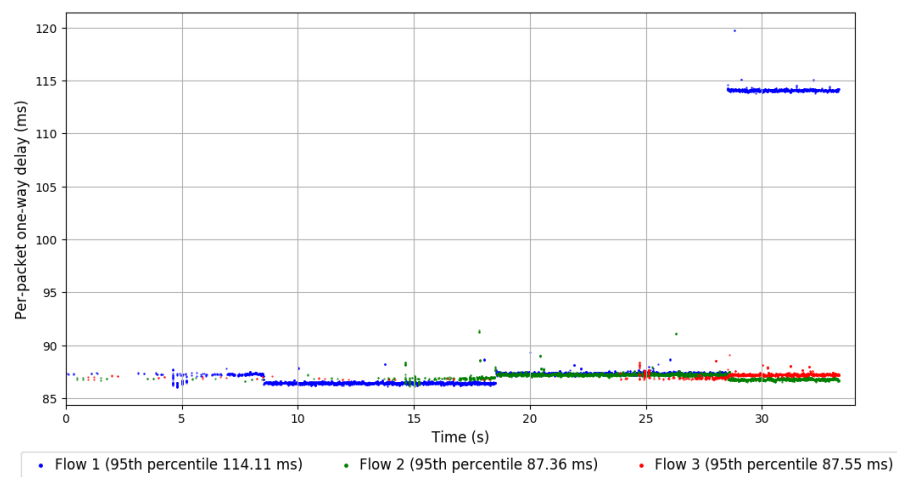
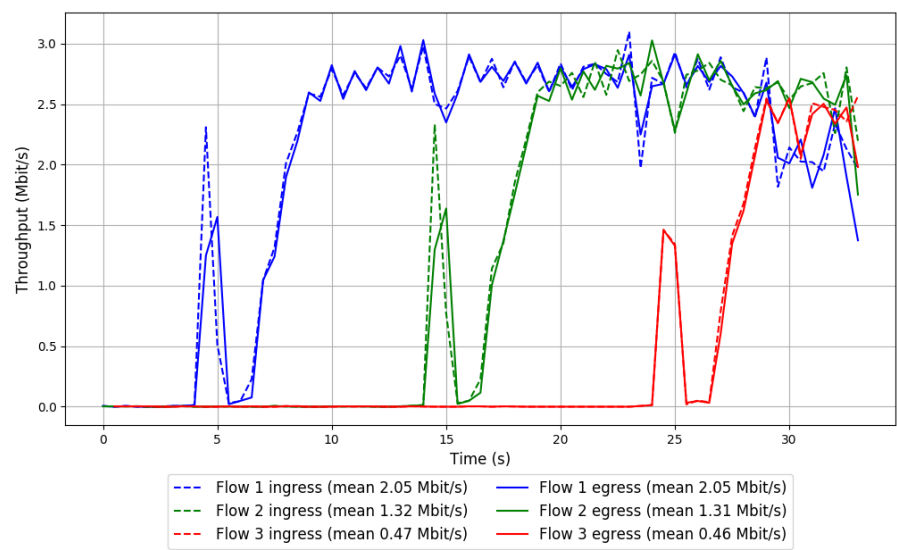
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 87.548 ms

Loss rate: 3.32%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-01-31 08:26:42

End at: 2018-01-31 08:27:12

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 87.519 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 87.038 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 87.566 ms

Loss rate: 1.72%

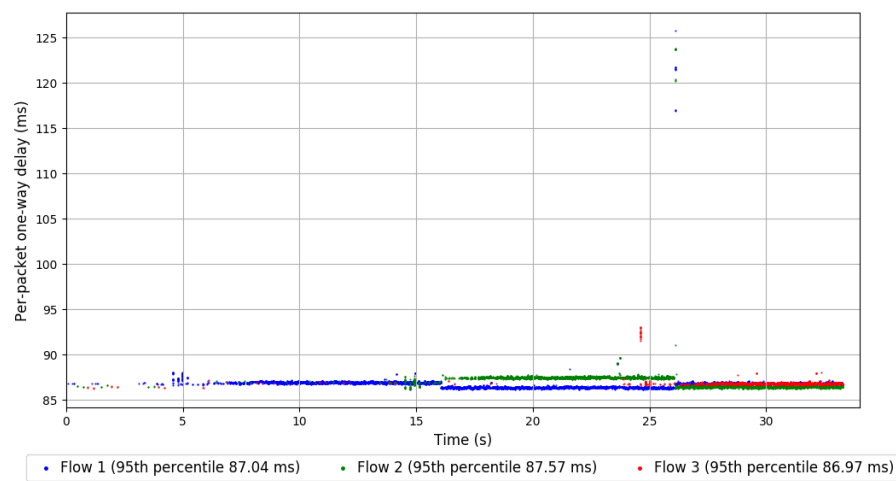
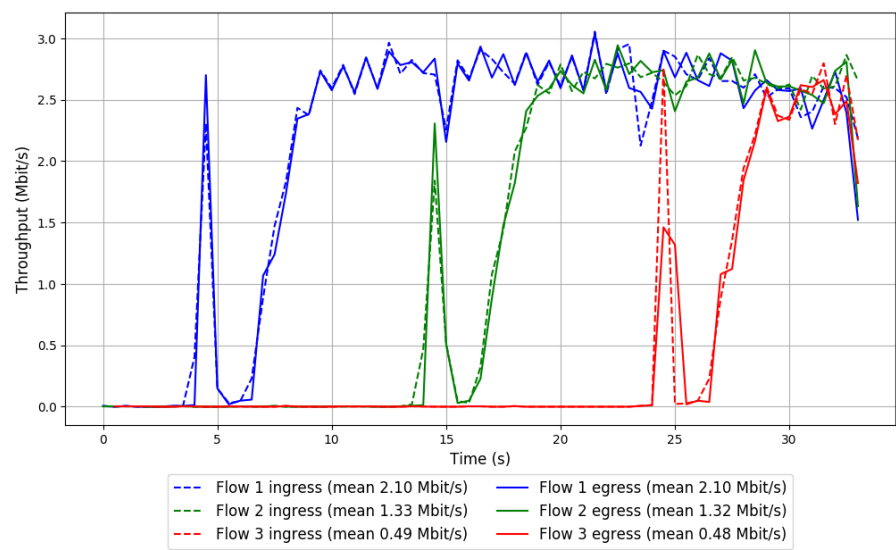
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 86.966 ms

Loss rate: 2.99%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-01-31 08:44:44

End at: 2018-01-31 08:45:14

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.76 Mbit/s

95th percentile per-packet one-way delay: 114.199 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 2.00 Mbit/s

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

Loss rate: 0.74%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 87.154 ms

Loss rate: 1.02%

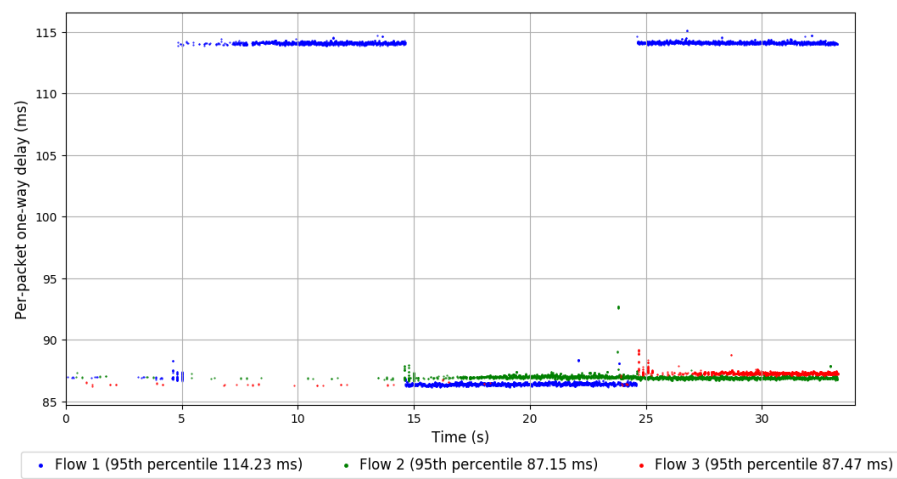
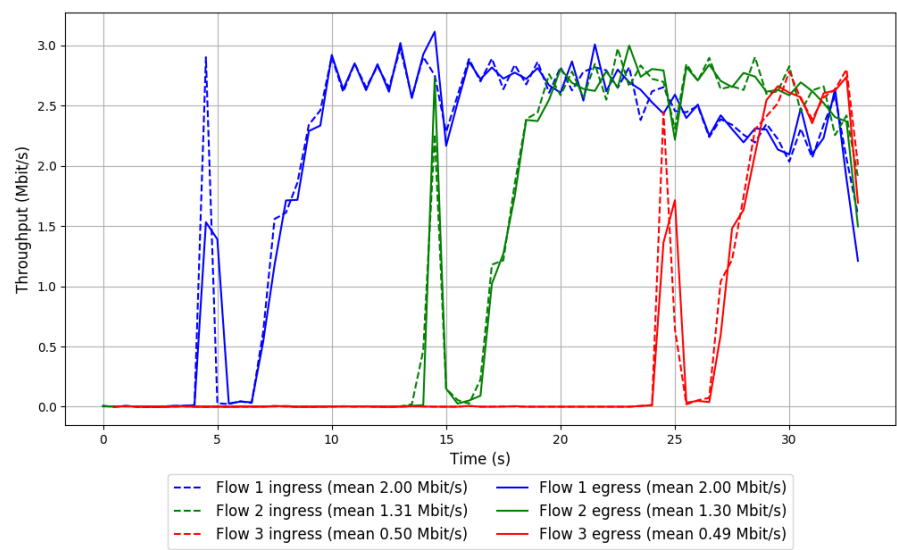
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 87.471 ms

Loss rate: 2.50%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-01-31 09:02:39

End at: 2018-01-31 09:03:09

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.88 Mbit/s

95th percentile per-packet one-way delay: 114.571 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 87.064 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 114.643 ms

Loss rate: 1.17%

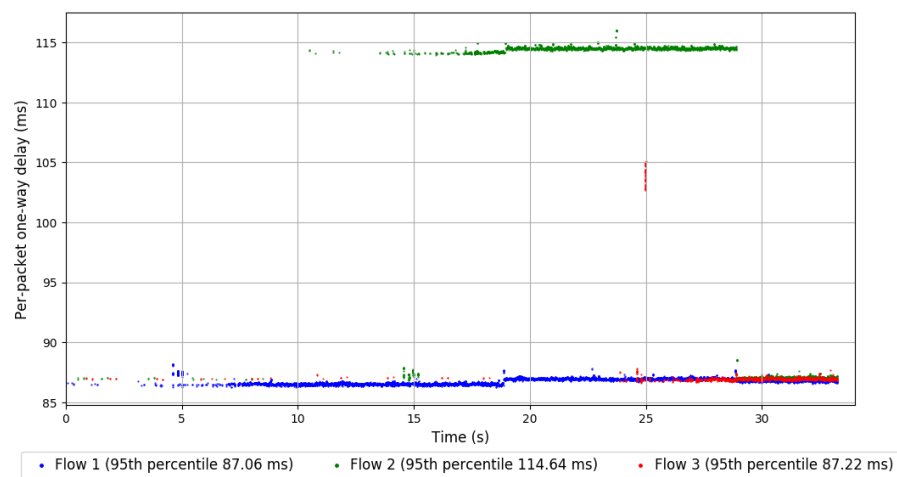
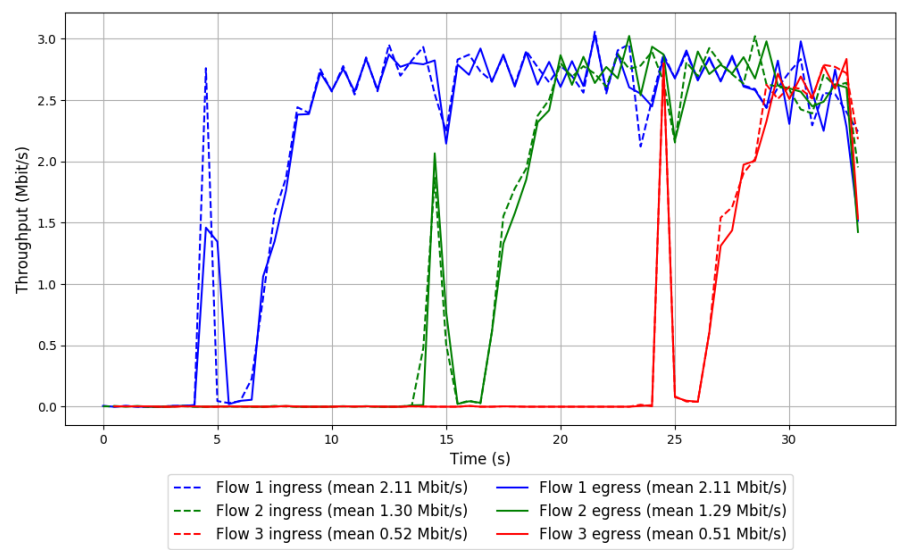
-- Flow 3:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 87.224 ms

Loss rate: 3.42%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-01-31 09:20:44

End at: 2018-01-31 09:21:14

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.82 Mbit/s

95th percentile per-packet one-way delay: 114.575 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 87.745 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 114.630 ms

Loss rate: 1.36%

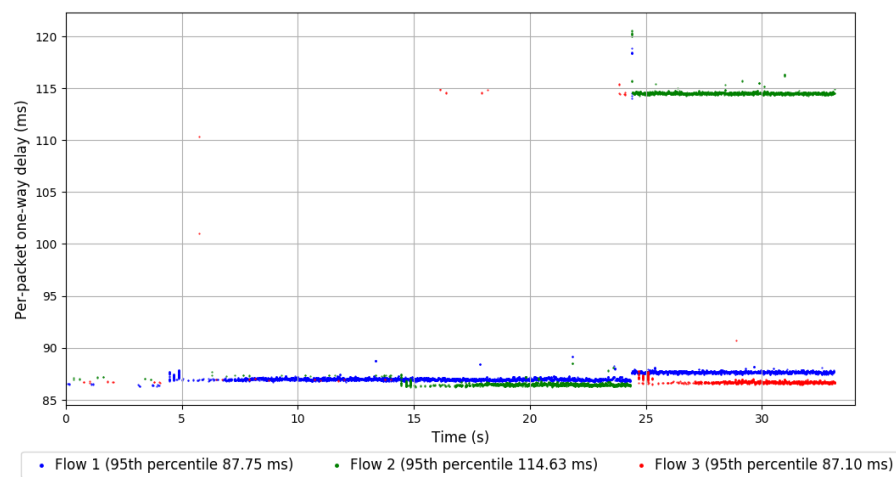
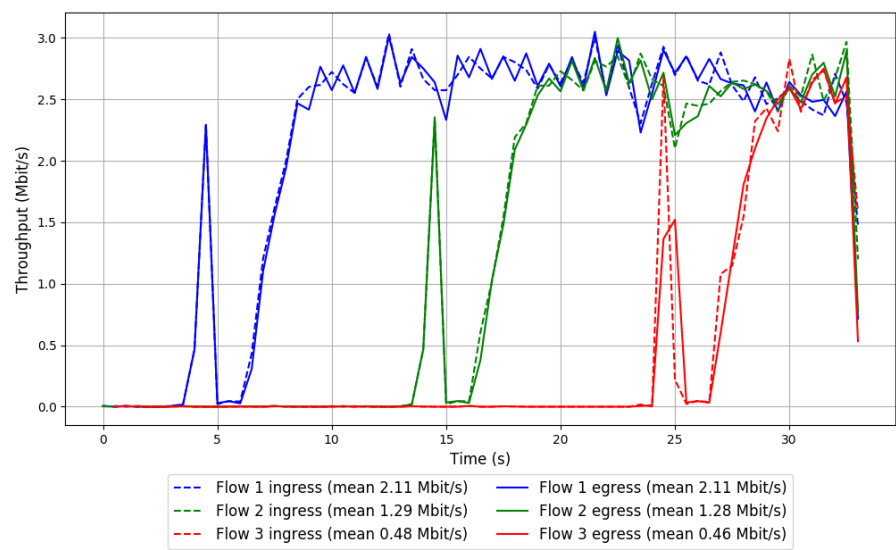
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 87.100 ms

Loss rate: 4.31%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-01-31 09:38:59

End at: 2018-01-31 09:39:29

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.76 Mbit/s

95th percentile per-packet one-way delay: 114.694 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 87.587 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 114.705 ms

Loss rate: 1.43%

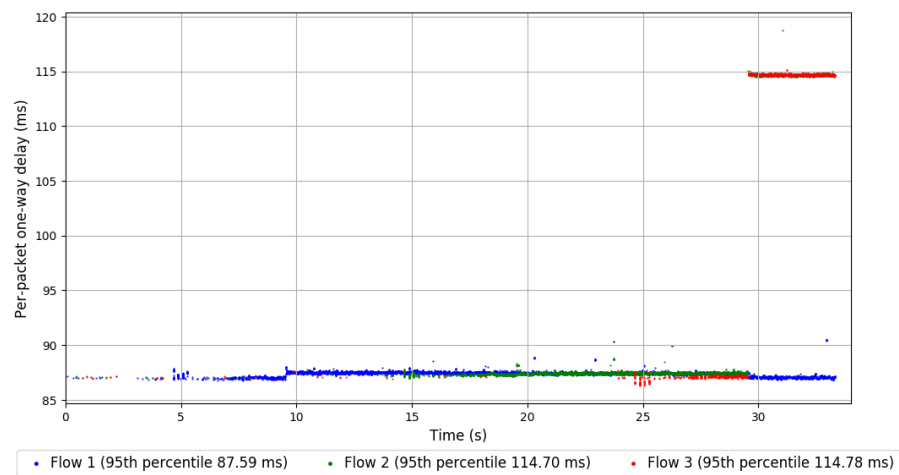
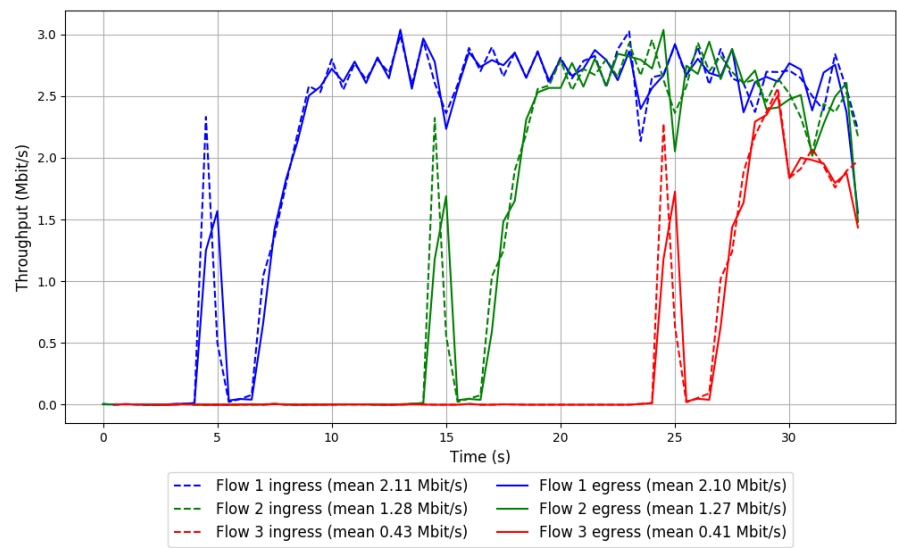
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 114.778 ms

Loss rate: 3.47%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-01-31 09:57:05

End at: 2018-01-31 09:57:35

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 87.663 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 87.704 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 87.121 ms

Loss rate: 1.50%

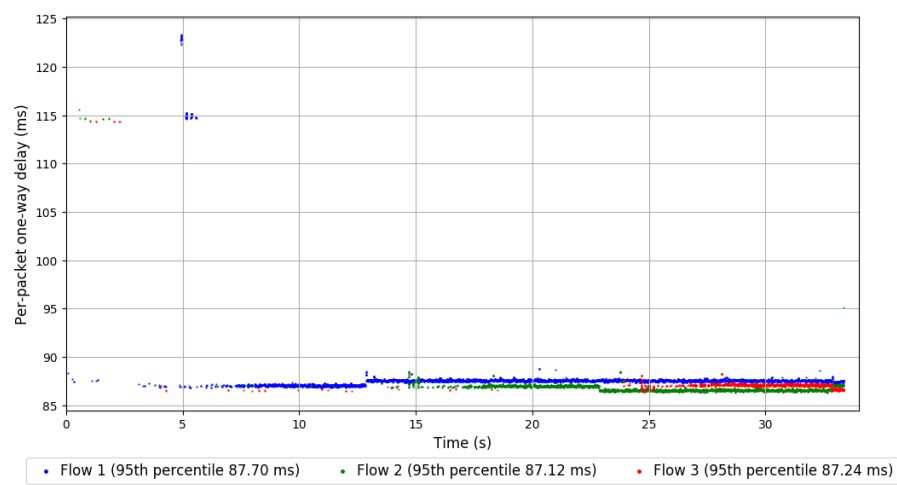
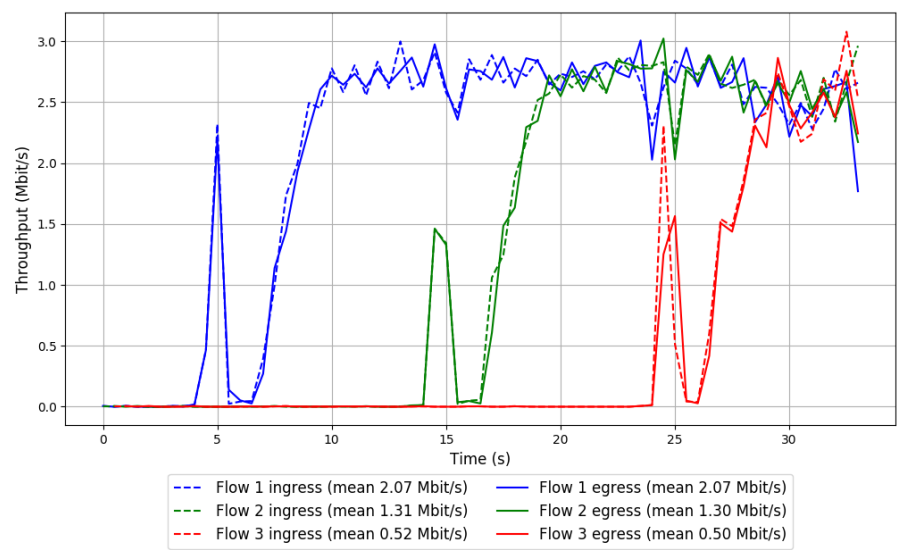
-- Flow 3:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 87.243 ms

Loss rate: 3.48%

Run 10: Report of WebRTC media — Data Link

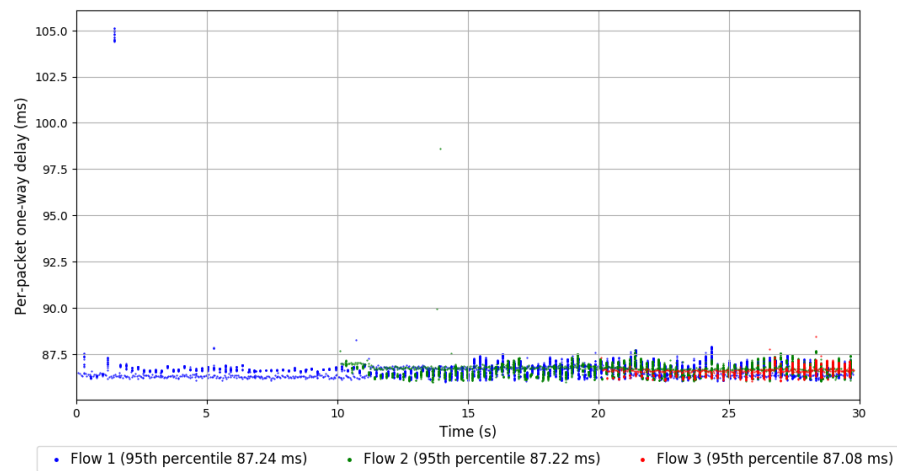
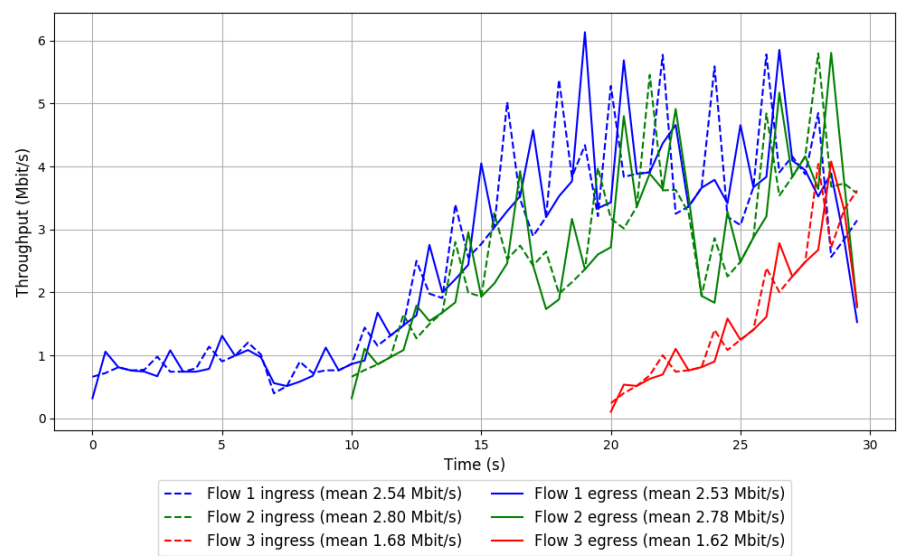


```
Run 1: Statistics of Sprout

Start at: 2018-01-31 07:24:03
End at: 2018-01-31 07:24:34

# Below is generated by plot.py at 2018-01-31 13:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.89 Mbit/s
95th percentile per-packet one-way delay: 87.217 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 2.53 Mbit/s
95th percentile per-packet one-way delay: 87.243 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 2.78 Mbit/s
95th percentile per-packet one-way delay: 87.224 ms
Loss rate: 1.67%
-- Flow 3:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 87.081 ms
Loss rate: 5.54%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-01-31 07:42:36

End at: 2018-01-31 07:43:06

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.47 Mbit/s

95th percentile per-packet one-way delay: 87.733 ms

Loss rate: 2.37%

-- Flow 1:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 87.794 ms

Loss rate: 2.45%

-- Flow 2:

Average throughput: 2.85 Mbit/s

95th percentile per-packet one-way delay: 87.667 ms

Loss rate: 1.61%

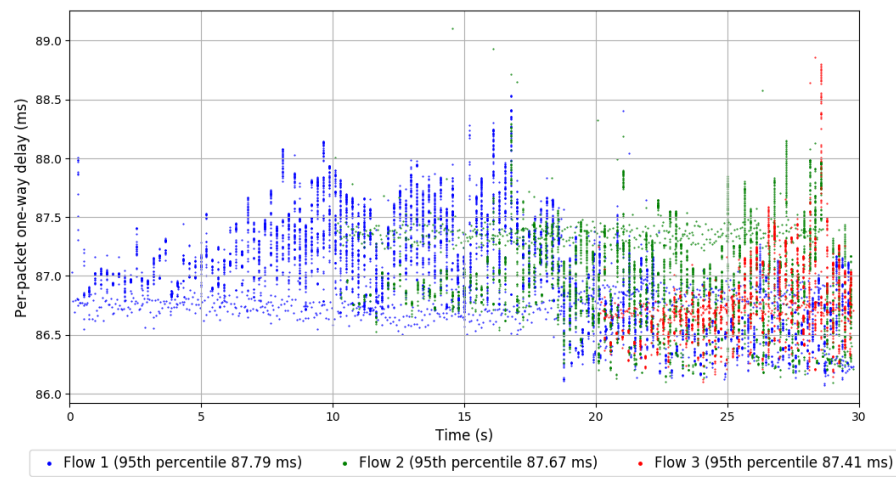
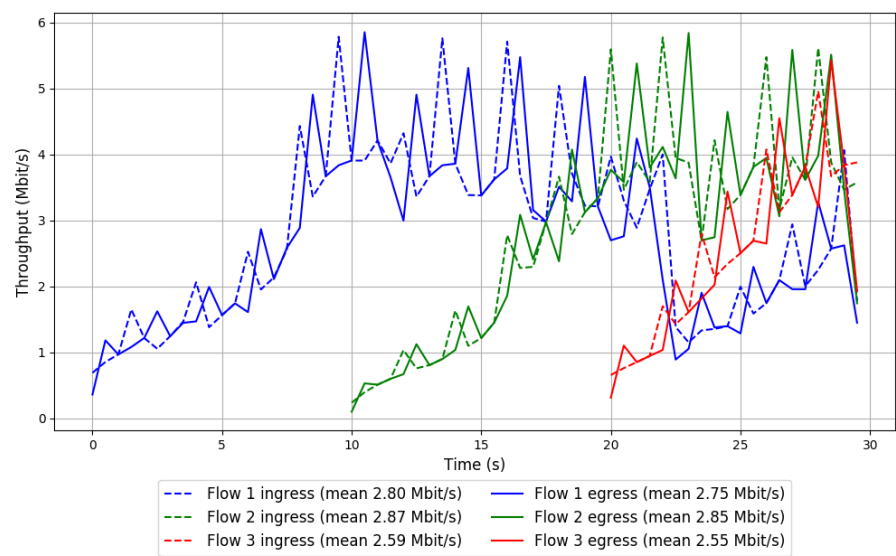
-- Flow 3:

Average throughput: 2.55 Mbit/s

95th percentile per-packet one-way delay: 87.407 ms

Loss rate: 3.81%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-01-31 08:00:48

End at: 2018-01-31 08:01:18

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.49 Mbit/s

95th percentile per-packet one-way delay: 114.702 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 3.49 Mbit/s

95th percentile per-packet one-way delay: 114.594 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 2.11 Mbit/s

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

Loss rate: 2.73%

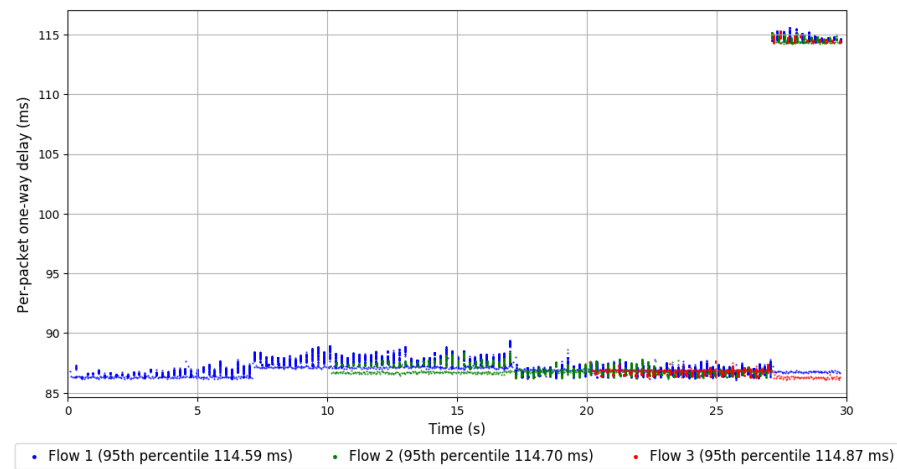
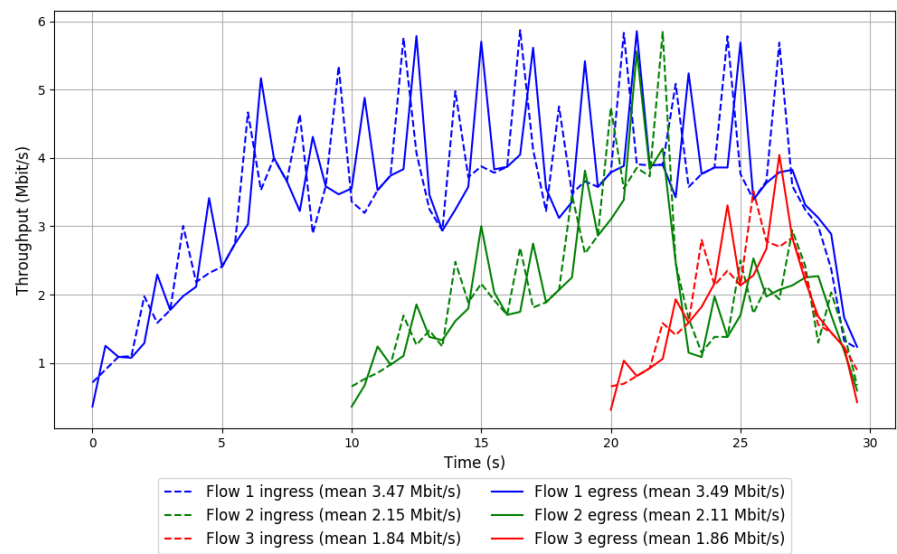
-- Flow 3:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 114.873 ms

Loss rate: 1.30%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-01-31 08:19:06

End at: 2018-01-31 08:19:36

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.27 Mbit/s

95th percentile per-packet one-way delay: 87.937 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 3.42 Mbit/s

95th percentile per-packet one-way delay: 87.894 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 3.11 Mbit/s

95th percentile per-packet one-way delay: 87.960 ms

Loss rate: 1.38%

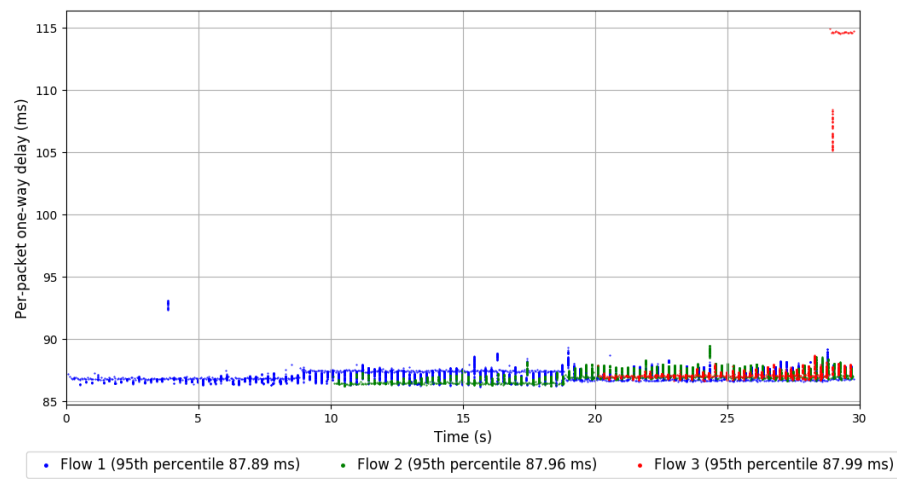
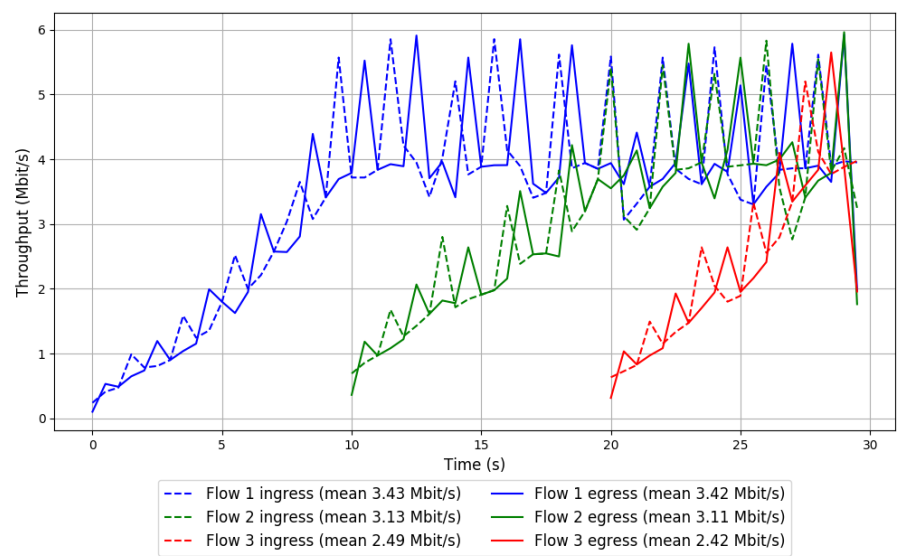
-- Flow 3:

Average throughput: 2.42 Mbit/s

95th percentile per-packet one-way delay: 87.991 ms

Loss rate: 4.41%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-01-31 08:37:06

End at: 2018-01-31 08:37:36

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.21 Mbit/s

95th percentile per-packet one-way delay: 88.092 ms

Loss rate: 2.03%

-- Flow 1:

Average throughput: 1.98 Mbit/s

95th percentile per-packet one-way delay: 88.076 ms

Loss rate: 2.58%

-- Flow 2:

Average throughput: 4.14 Mbit/s

95th percentile per-packet one-way delay: 88.150 ms

Loss rate: 1.02%

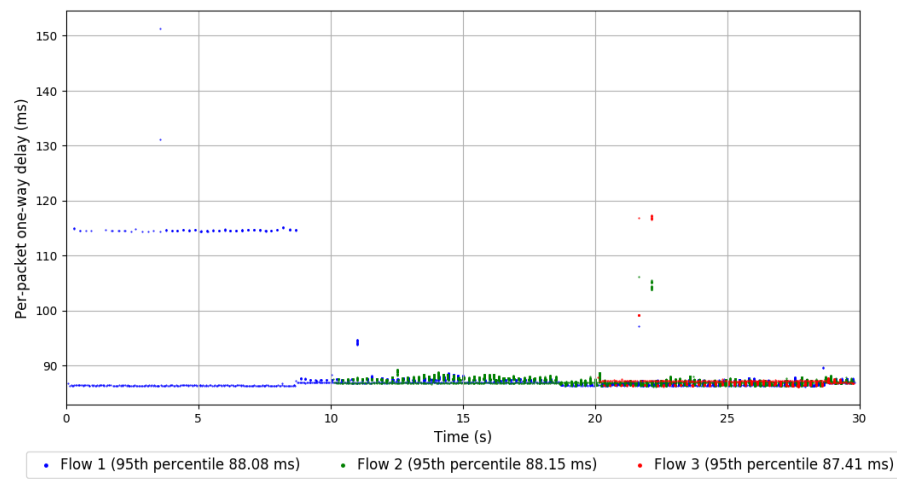
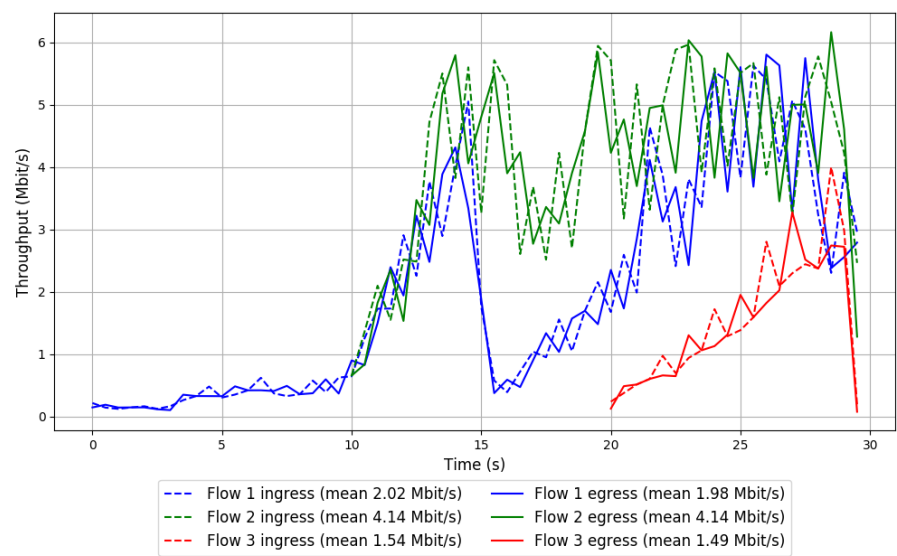
-- Flow 3:

Average throughput: 1.49 Mbit/s

95th percentile per-packet one-way delay: 87.409 ms

Loss rate: 5.36%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-01-31 08:55:02

End at: 2018-01-31 08:55:32

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.67 Mbit/s

95th percentile per-packet one-way delay: 114.498 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 114.360 ms

Loss rate: 1.59%

-- Flow 2:

Average throughput: 1.77 Mbit/s

95th percentile per-packet one-way delay: 114.594 ms

Loss rate: 0.34%

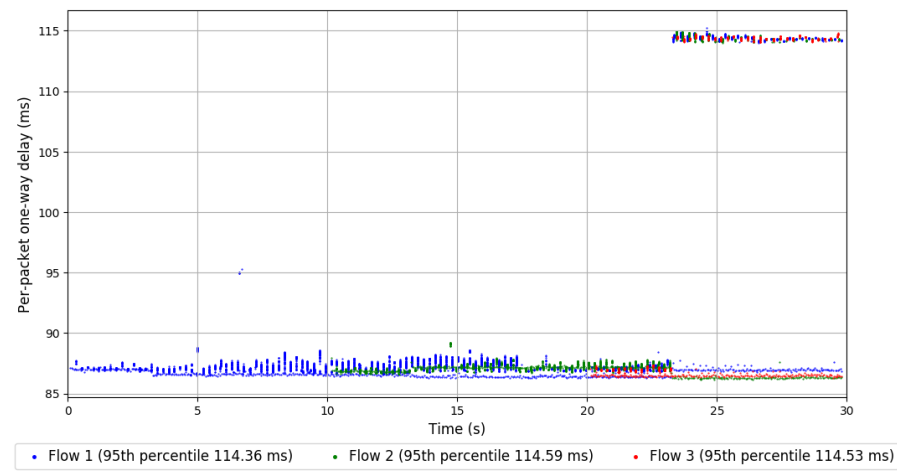
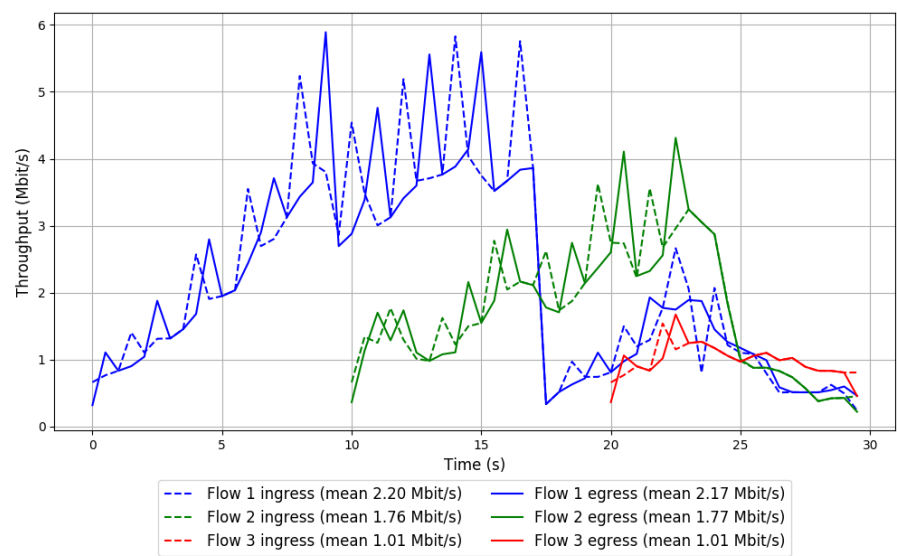
-- Flow 3:

Average throughput: 1.01 Mbit/s

95th percentile per-packet one-way delay: 114.534 ms

Loss rate: 1.78%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-01-31 09:13:05

End at: 2018-01-31 09:13:35

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.69 Mbit/s

95th percentile per-packet one-way delay: 88.376 ms

Loss rate: 1.85%

-- Flow 1:

Average throughput: 2.36 Mbit/s

95th percentile per-packet one-way delay: 114.214 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 2.67 Mbit/s

95th percentile per-packet one-way delay: 88.146 ms

Loss rate: 2.21%

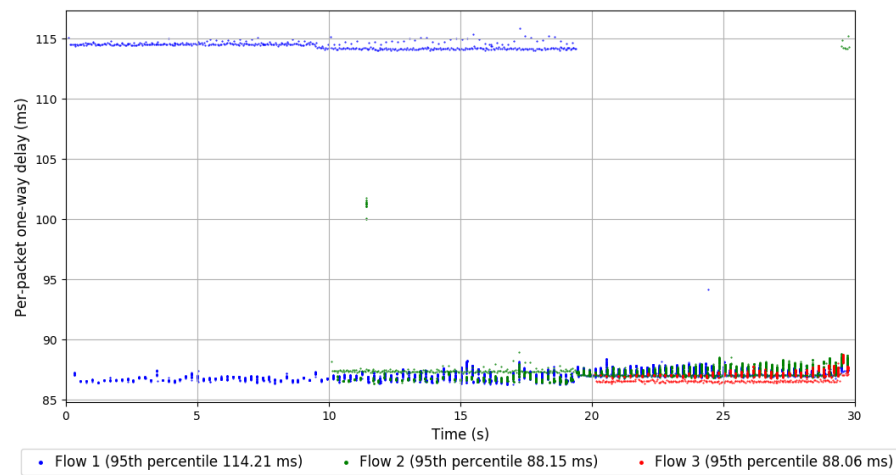
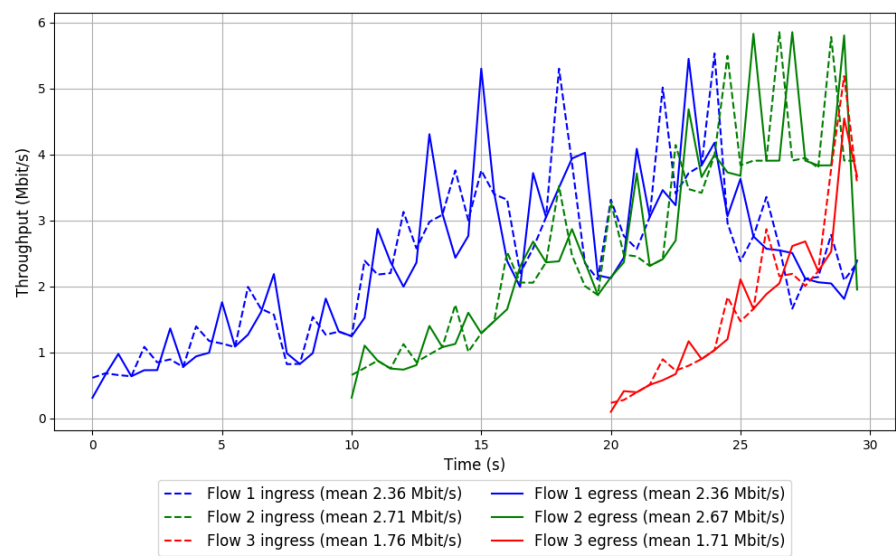
-- Flow 3:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 88.058 ms

Loss rate: 5.16%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-01-31 09:31:22

End at: 2018-01-31 09:31:52

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.50 Mbit/s

95th percentile per-packet one-way delay: 88.087 ms

Loss rate: 2.61%

-- Flow 1:

Average throughput: 3.01 Mbit/s

95th percentile per-packet one-way delay: 88.072 ms

Loss rate: 1.95%

-- Flow 2:

Average throughput: 1.67 Mbit/s

95th percentile per-packet one-way delay: 87.528 ms

Loss rate: 3.92%

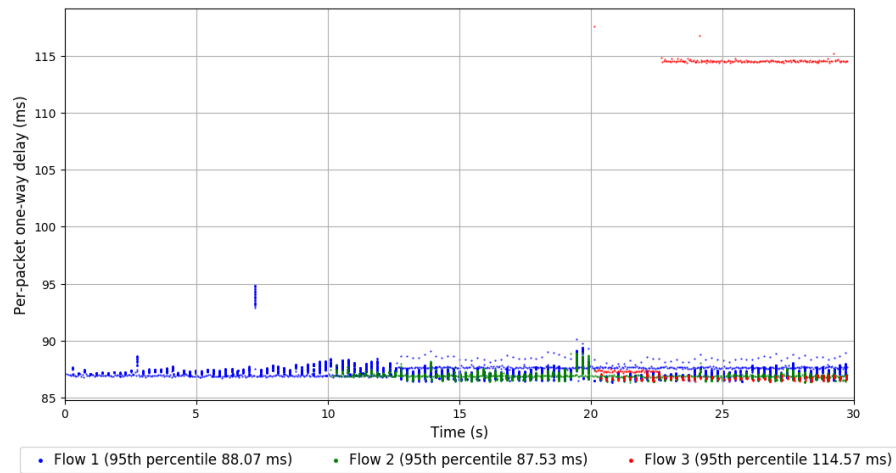
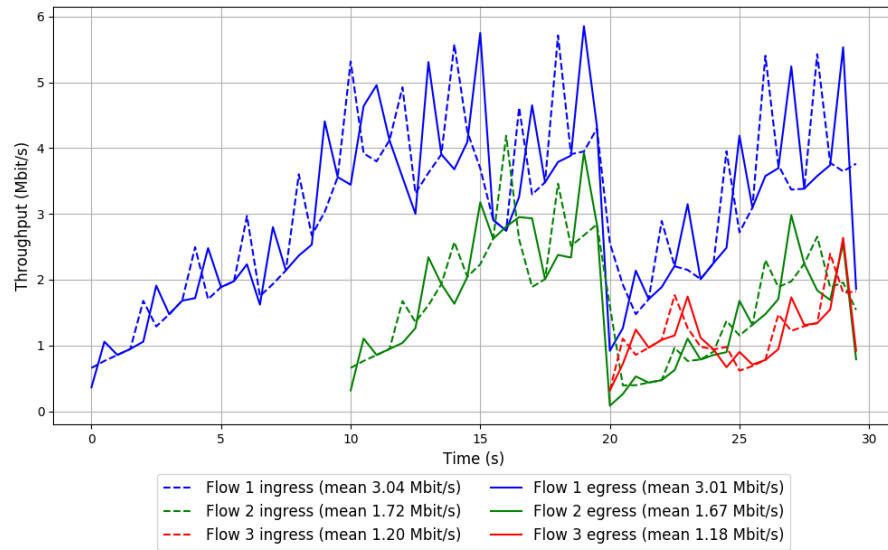
-- Flow 3:

Average throughput: 1.18 Mbit/s

95th percentile per-packet one-way delay: 114.571 ms

Loss rate: 3.87%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-01-31 09:49:19

End at: 2018-01-31 09:49:49

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.12 Mbit/s

95th percentile per-packet one-way delay: 115.203 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 3.44 Mbit/s

95th percentile per-packet one-way delay: 115.128 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 3.15 Mbit/s

95th percentile per-packet one-way delay: 115.291 ms

Loss rate: 0.31%

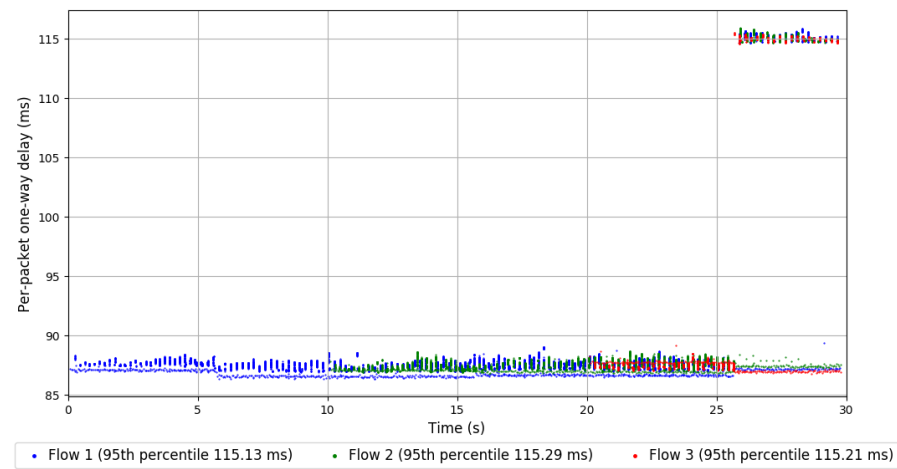
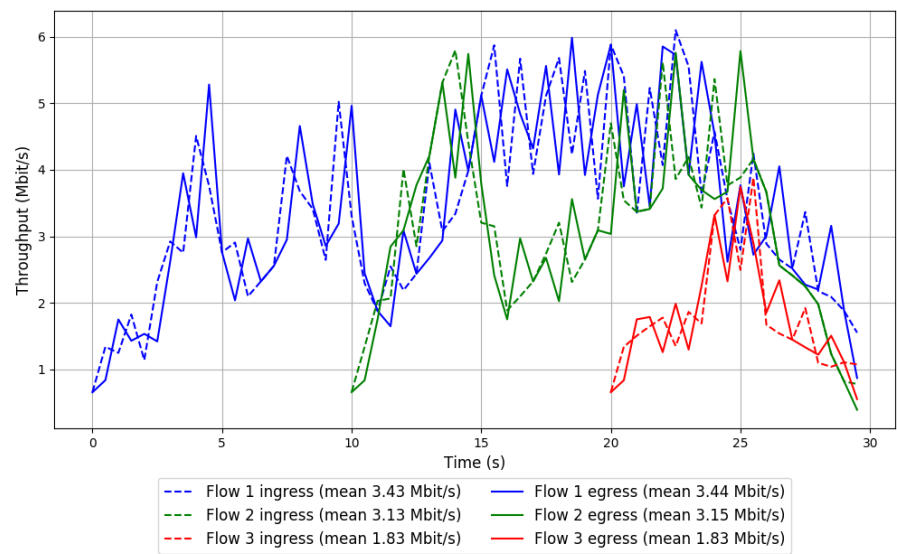
-- Flow 3:

Average throughput: 1.83 Mbit/s

95th percentile per-packet one-way delay: 115.207 ms

Loss rate: 1.45%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

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

End at: 2018-01-31 10:07:48

Below is generated by plot.py at 2018-01-31 13:47:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.63 Mbit/s

95th percentile per-packet one-way delay: 88.173 ms

Loss rate: 2.11%

-- Flow 1:

Average throughput: 3.07 Mbit/s

95th percentile per-packet one-way delay: 88.308 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 87.616 ms

Loss rate: 3.83%

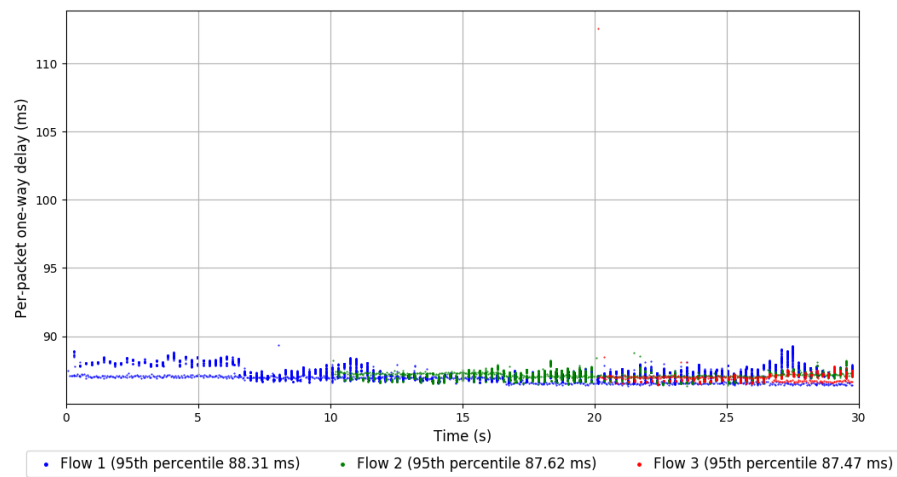
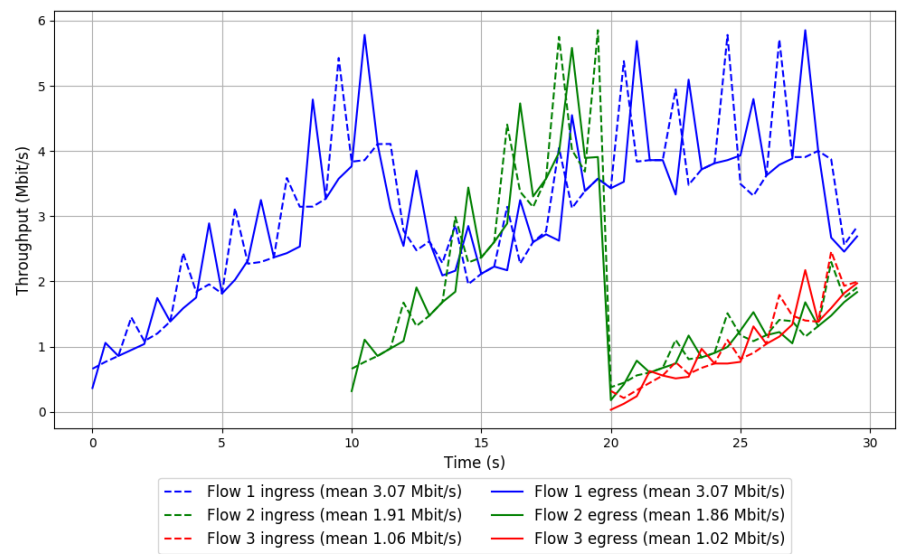
-- Flow 3:

Average throughput: 1.02 Mbit/s

95th percentile per-packet one-way delay: 87.468 ms

Loss rate: 6.18%

Run 10: Report of Sprout — Data Link

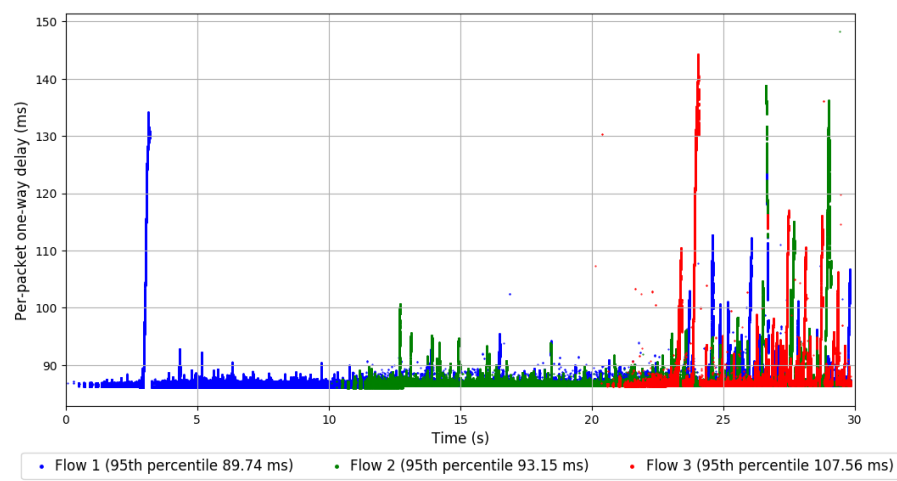
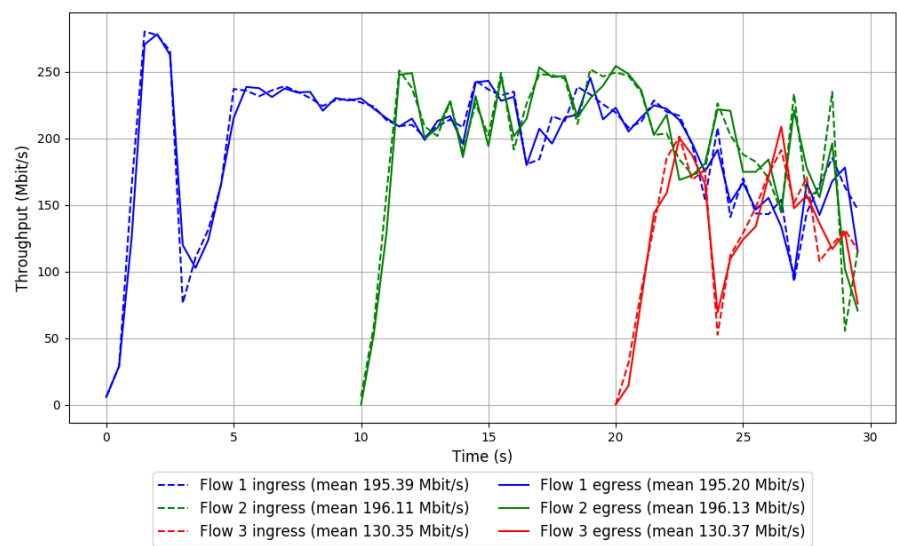


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-01-31 07:18:22
End at: 2018-01-31 07:18:52

# Below is generated by plot.py at 2018-01-31 13:53:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 367.79 Mbit/s
95th percentile per-packet one-way delay: 93.125 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 195.20 Mbit/s
95th percentile per-packet one-way delay: 89.737 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 196.13 Mbit/s
95th percentile per-packet one-way delay: 93.148 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 130.37 Mbit/s
95th percentile per-packet one-way delay: 107.565 ms
Loss rate: 2.22%
```


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

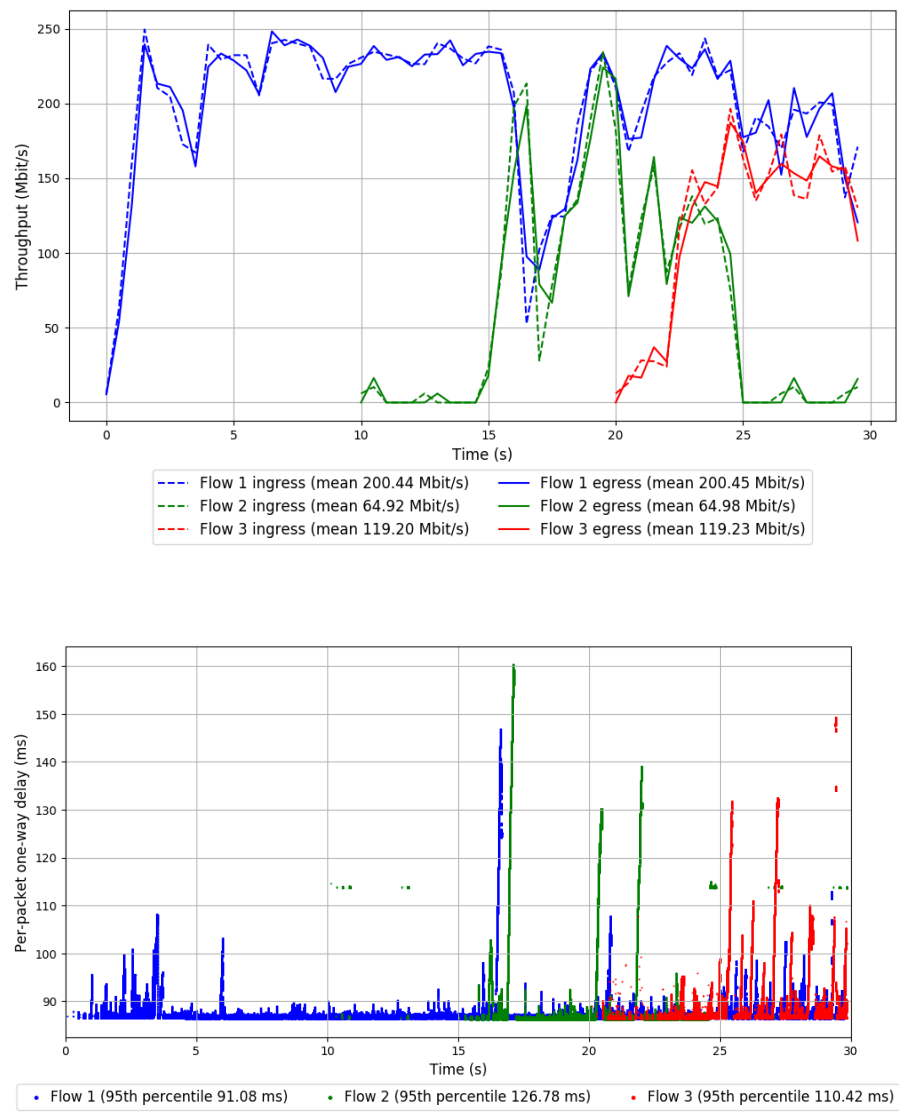


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-01-31 07:37:00
End at: 2018-01-31 07:37:30

# Below is generated by plot.py at 2018-01-31 13:53:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 282.40 Mbit/s
95th percentile per-packet one-way delay: 98.739 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 200.45 Mbit/s
95th percentile per-packet one-way delay: 91.079 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 64.98 Mbit/s
95th percentile per-packet one-way delay: 126.778 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 119.23 Mbit/s
95th percentile per-packet one-way delay: 110.419 ms
Loss rate: 2.13%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-01-31 07:55:14

End at: 2018-01-31 07:55:44

Below is generated by plot.py at 2018-01-31 13:53:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 298.40 Mbit/s

95th percentile per-packet one-way delay: 91.444 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 144.45 Mbit/s

95th percentile per-packet one-way delay: 97.750 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 194.92 Mbit/s

95th percentile per-packet one-way delay: 89.362 ms

Loss rate: 1.33%

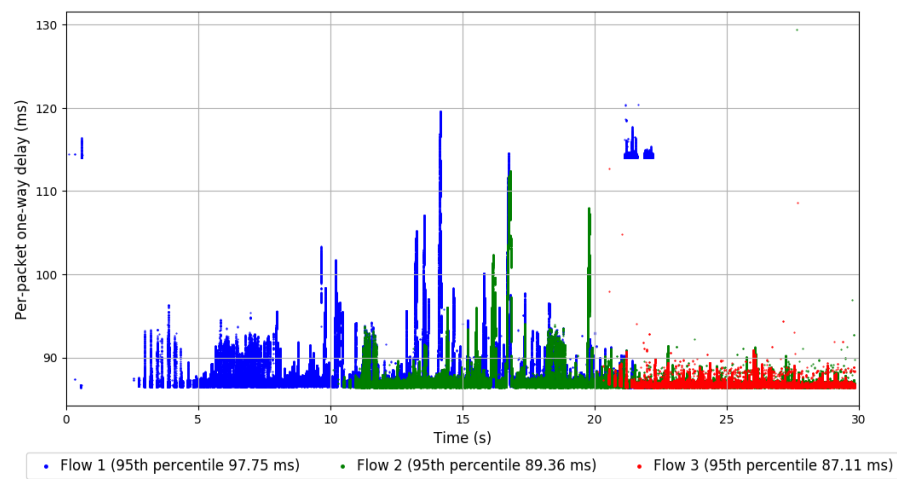
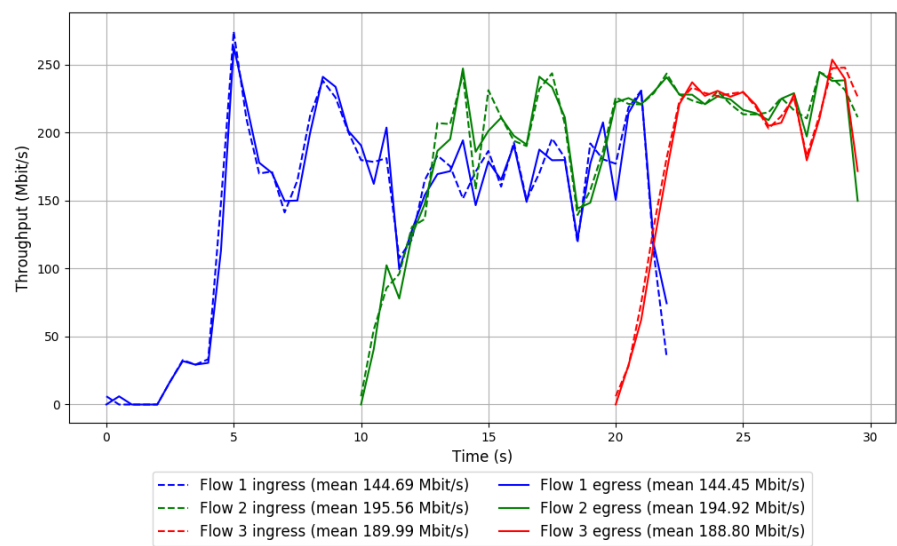
-- Flow 3:

Average throughput: 188.80 Mbit/s

95th percentile per-packet one-way delay: 87.113 ms

Loss rate: 2.67%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-01-31 08:13:39

End at: 2018-01-31 08:14:09

Below is generated by plot.py at 2018-01-31 13:53:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 294.20 Mbit/s

95th percentile per-packet one-way delay: 94.463 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 192.41 Mbit/s

95th percentile per-packet one-way delay: 91.283 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 100.25 Mbit/s

95th percentile per-packet one-way delay: 100.345 ms

Loss rate: 1.46%

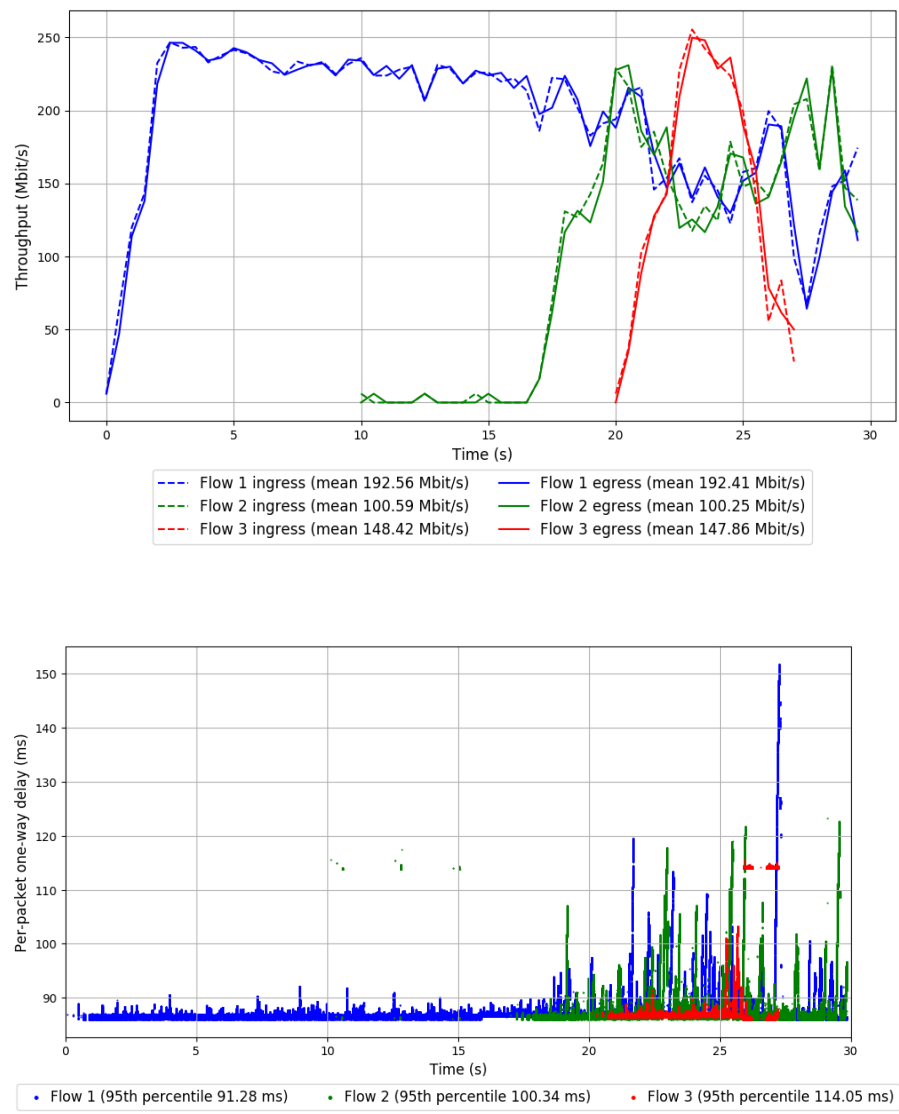
-- Flow 3:

Average throughput: 147.86 Mbit/s

95th percentile per-packet one-way delay: 114.052 ms

Loss rate: 0.00%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-01-31 08:31:41

End at: 2018-01-31 08:32:11

Below is generated by plot.py at 2018-01-31 13:53:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 257.52 Mbit/s

95th percentile per-packet one-way delay: 97.258 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 205.25 Mbit/s

95th percentile per-packet one-way delay: 91.918 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 15.98 Mbit/s

95th percentile per-packet one-way delay: 115.557 ms

Loss rate: 0.00%

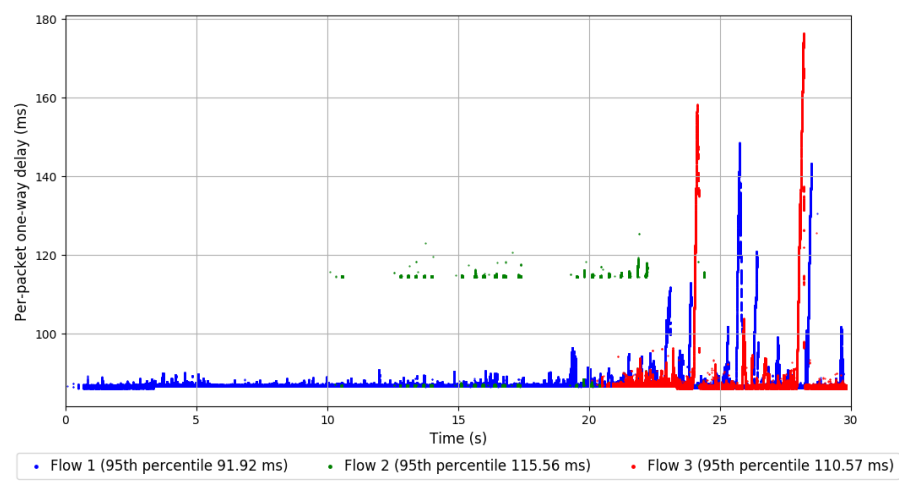
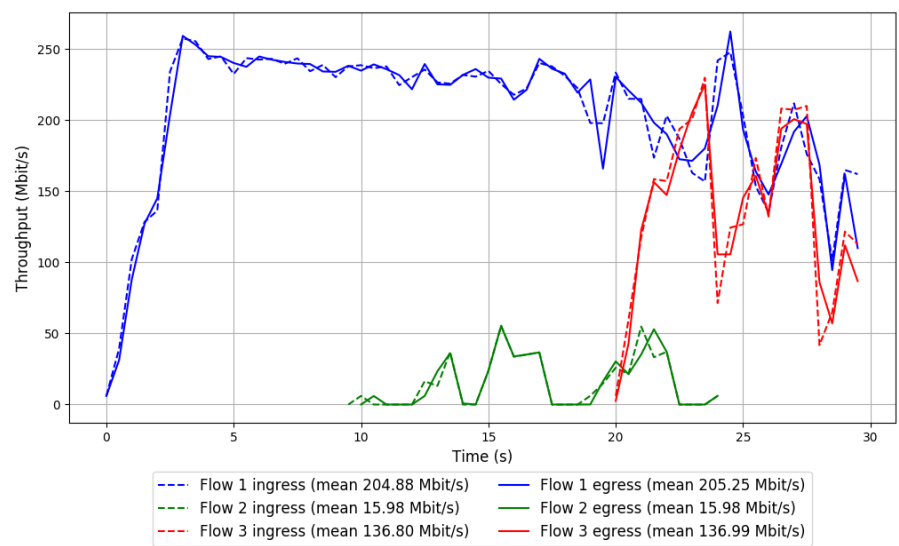
-- Flow 3:

Average throughput: 136.99 Mbit/s

95th percentile per-packet one-way delay: 110.571 ms

Loss rate: 1.90%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-01-31 08:49:37

End at: 2018-01-31 08:50:07

Below is generated by plot.py at 2018-01-31 13:53:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 275.82 Mbit/s

95th percentile per-packet one-way delay: 94.170 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 105.15 Mbit/s

95th percentile per-packet one-way delay: 90.686 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 180.99 Mbit/s

95th percentile per-packet one-way delay: 95.730 ms

Loss rate: 0.88%

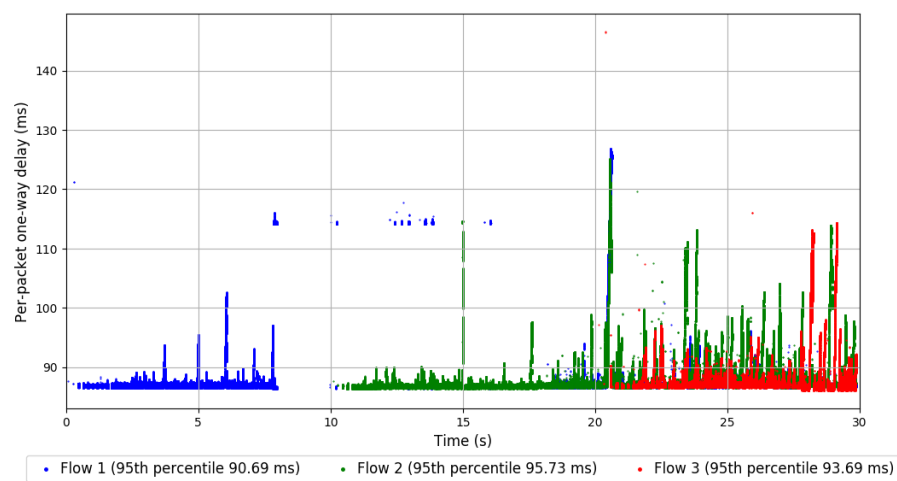
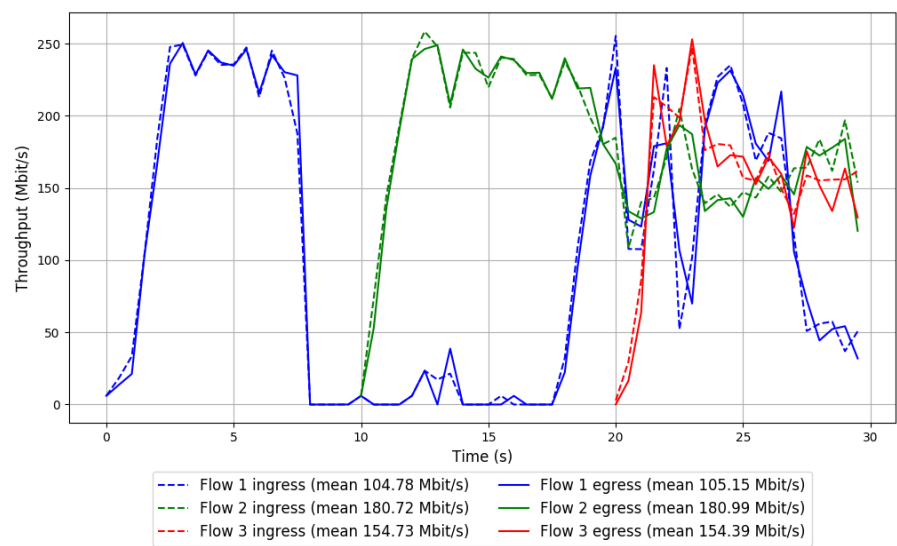
-- Flow 3:

Average throughput: 154.39 Mbit/s

95th percentile per-packet one-way delay: 93.693 ms

Loss rate: 2.15%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-01-31 09:07:28

End at: 2018-01-31 09:07:58

Below is generated by plot.py at 2018-01-31 13:59:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 327.28 Mbit/s

95th percentile per-packet one-way delay: 89.953 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 221.53 Mbit/s

95th percentile per-packet one-way delay: 89.090 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 132.19 Mbit/s

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

Loss rate: 0.00%

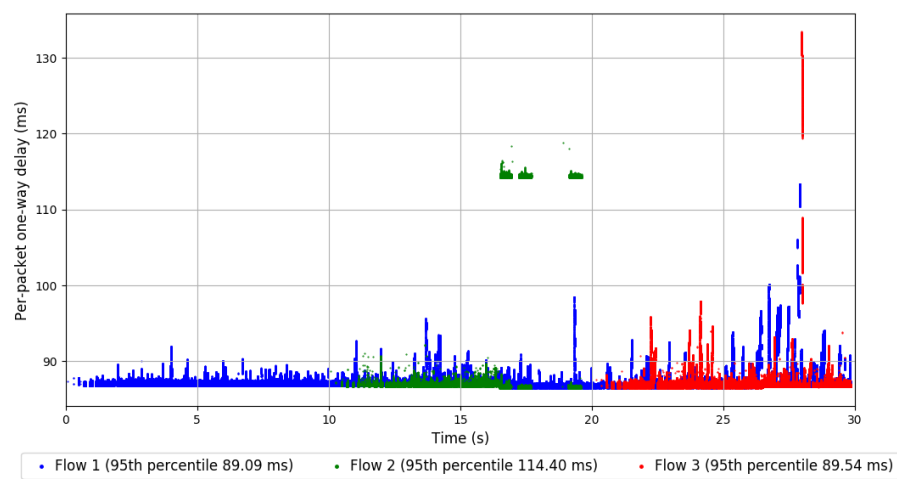
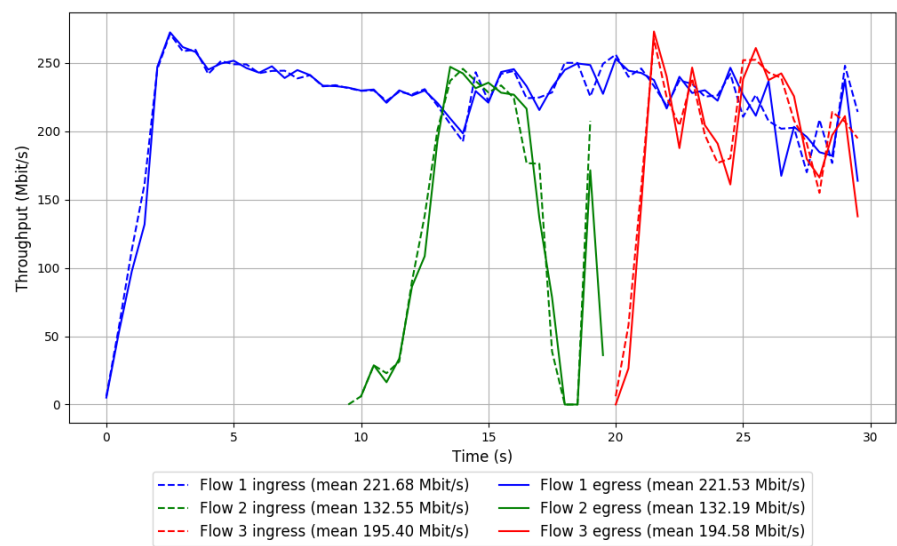
-- Flow 3:

Average throughput: 194.58 Mbit/s

95th percentile per-packet one-way delay: 89.541 ms

Loss rate: 2.47%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-01-31 09:25:57

End at: 2018-01-31 09:26:27

Below is generated by plot.py at 2018-01-31 13:59:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 332.95 Mbit/s

95th percentile per-packet one-way delay: 92.769 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 169.65 Mbit/s

95th percentile per-packet one-way delay: 95.096 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 169.03 Mbit/s

95th percentile per-packet one-way delay: 91.695 ms

Loss rate: 0.48%

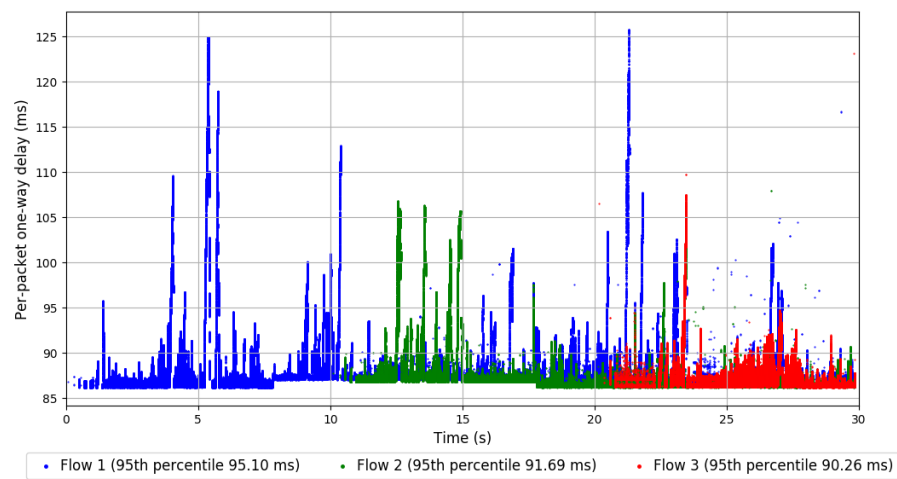
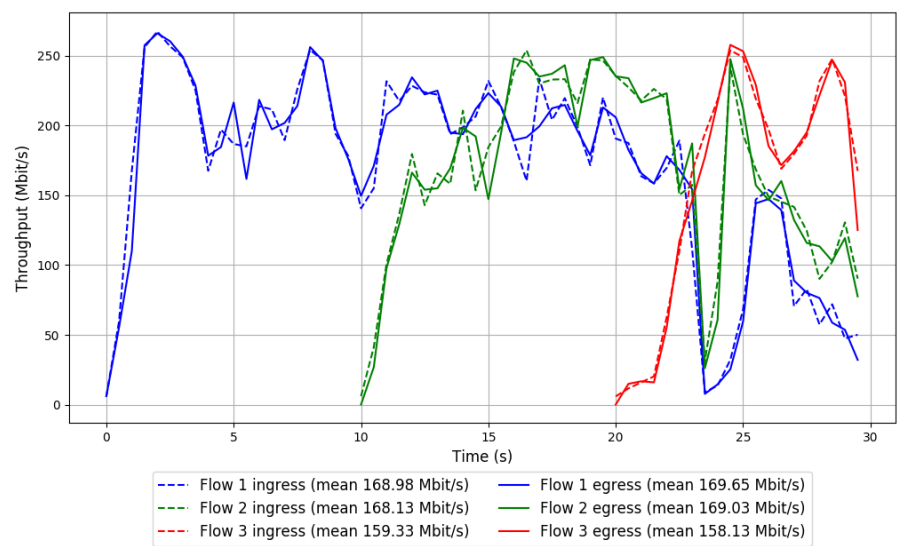
-- Flow 3:

Average throughput: 158.13 Mbit/s

95th percentile per-packet one-way delay: 90.261 ms

Loss rate: 2.45%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-01-31 09:43:58

End at: 2018-01-31 09:44:28

Below is generated by plot.py at 2018-01-31 13:59:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 234.97 Mbit/s

95th percentile per-packet one-way delay: 103.472 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 112.40 Mbit/s

95th percentile per-packet one-way delay: 97.171 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 186.58 Mbit/s

95th percentile per-packet one-way delay: 114.496 ms

Loss rate: 0.00%

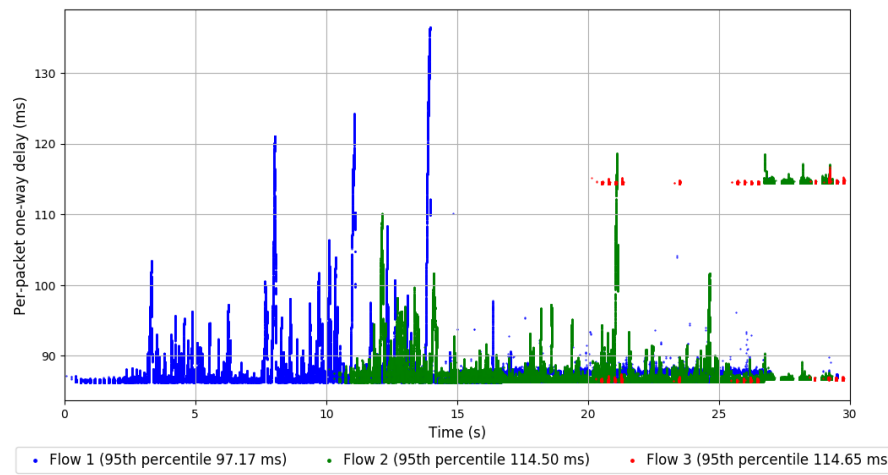
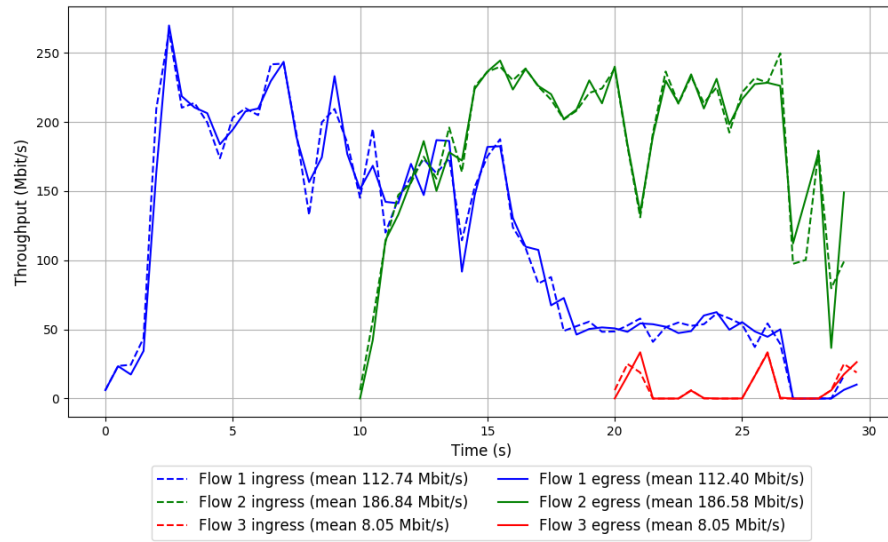
-- Flow 3:

Average throughput: 8.05 Mbit/s

95th percentile per-packet one-way delay: 114.647 ms

Loss rate: 0.00%

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

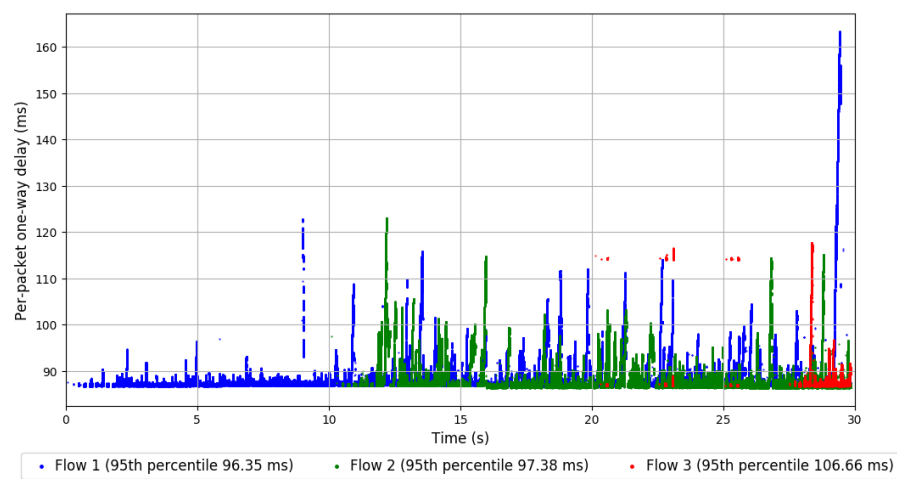
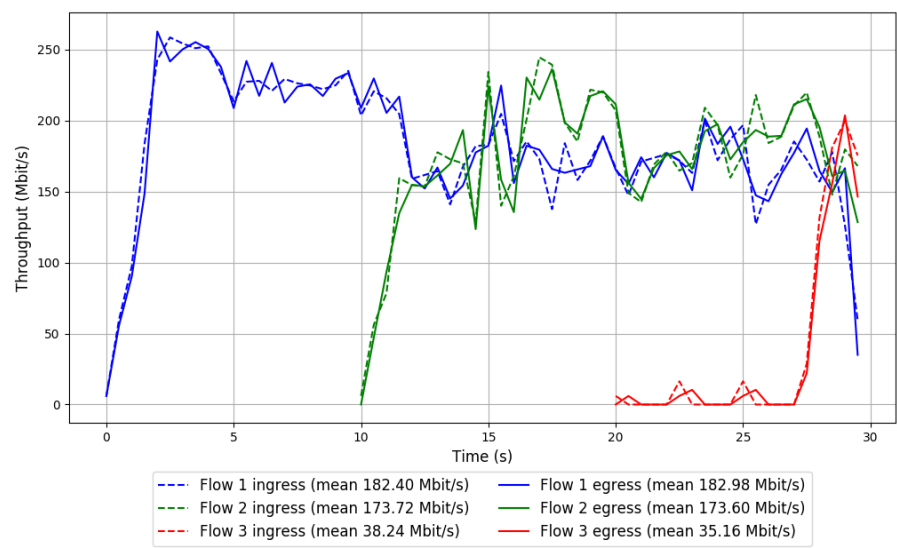


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-01-31 10:01:49
End at: 2018-01-31 10:02:19

# Below is generated by plot.py at 2018-01-31 14:01:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 309.54 Mbit/s
95th percentile per-packet one-way delay: 96.980 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 182.98 Mbit/s
95th percentile per-packet one-way delay: 96.348 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 173.60 Mbit/s
95th percentile per-packet one-way delay: 97.384 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 35.16 Mbit/s
95th percentile per-packet one-way delay: 106.657 ms
Loss rate: 9.70%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-01-31 07:20:56

End at: 2018-01-31 07:21:26

Below is generated by plot.py at 2018-01-31 14:01:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 143.17 Mbit/s

95th percentile per-packet one-way delay: 95.582 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 77.74 Mbit/s

95th percentile per-packet one-way delay: 96.856 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 90.11 Mbit/s

95th percentile per-packet one-way delay: 88.797 ms

Loss rate: 1.12%

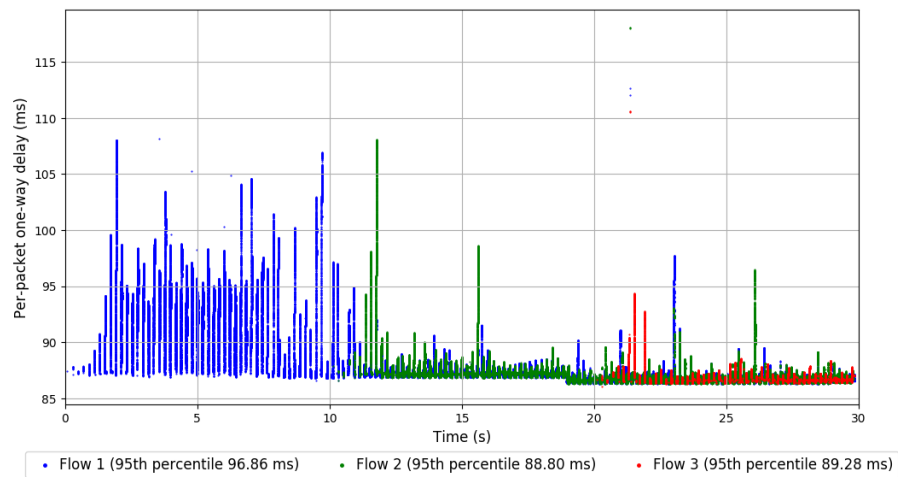
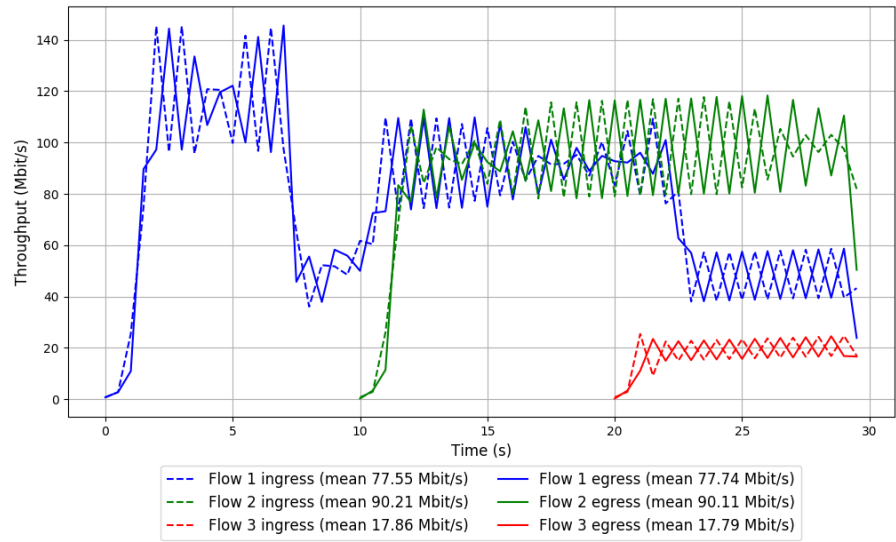
-- Flow 3:

Average throughput: 17.79 Mbit/s

95th percentile per-packet one-way delay: 89.281 ms

Loss rate: 2.39%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-01-31 07:39:27

End at: 2018-01-31 07:39:57

Below is generated by plot.py at 2018-01-31 14:01:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.47 Mbit/s

95th percentile per-packet one-way delay: 97.066 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 91.31 Mbit/s

95th percentile per-packet one-way delay: 96.670 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 45.68 Mbit/s

95th percentile per-packet one-way delay: 91.724 ms

Loss rate: 0.61%

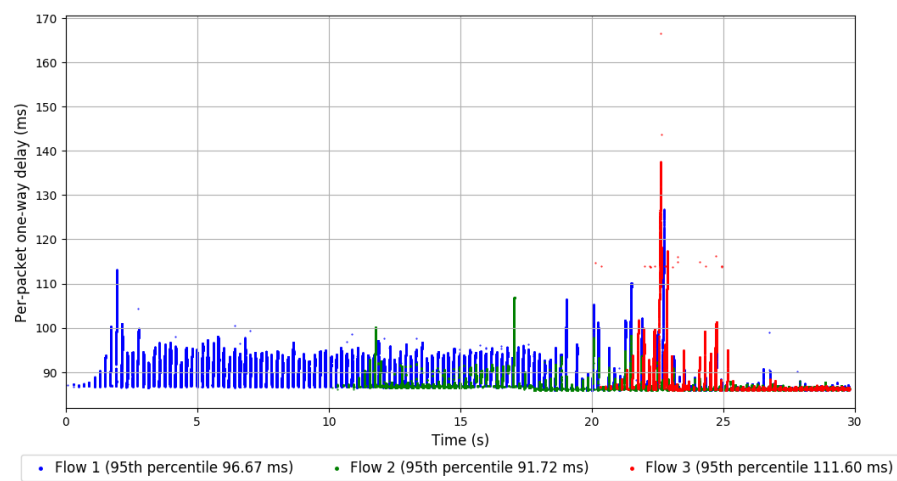
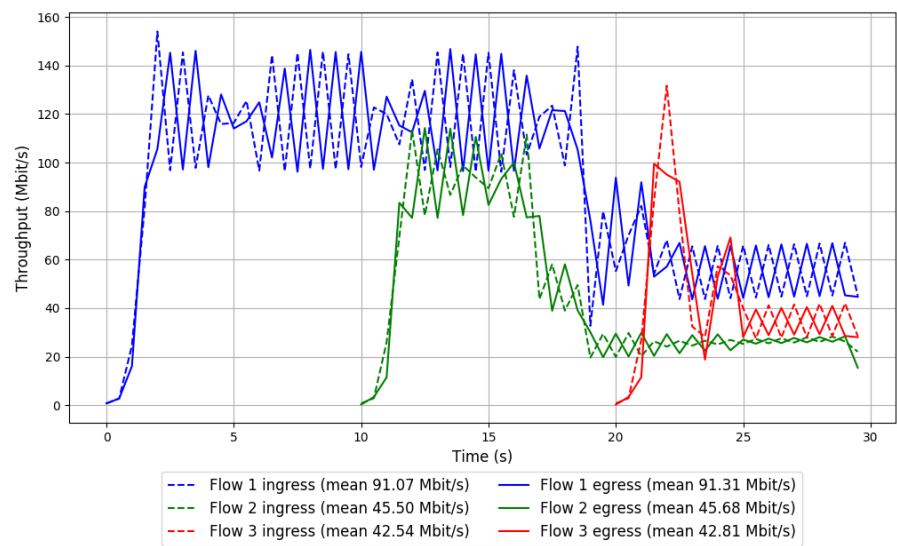
-- Flow 3:

Average throughput: 42.81 Mbit/s

95th percentile per-packet one-way delay: 111.599 ms

Loss rate: 1.68%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-01-31 07:57:41

End at: 2018-01-31 07:58:11

Below is generated by plot.py at 2018-01-31 14:01:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.55 Mbit/s

95th percentile per-packet one-way delay: 102.437 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 44.10 Mbit/s

95th percentile per-packet one-way delay: 99.933 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 49.44 Mbit/s

95th percentile per-packet one-way delay: 96.789 ms

Loss rate: 1.06%

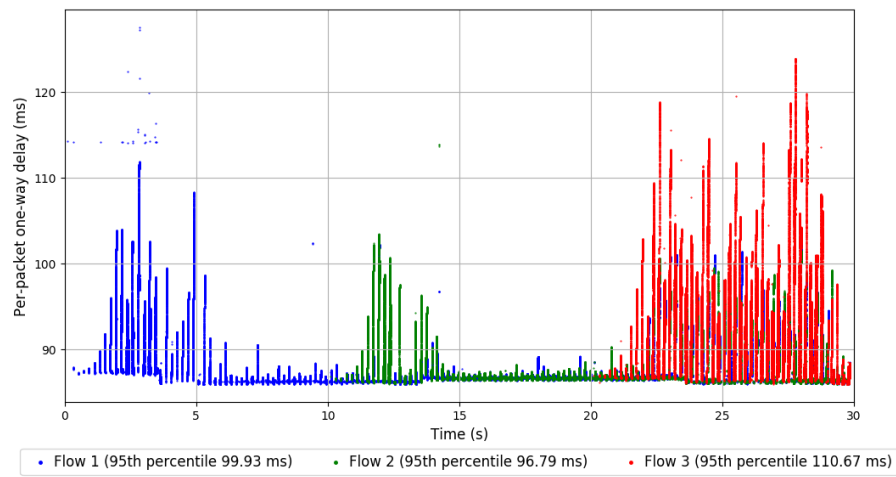
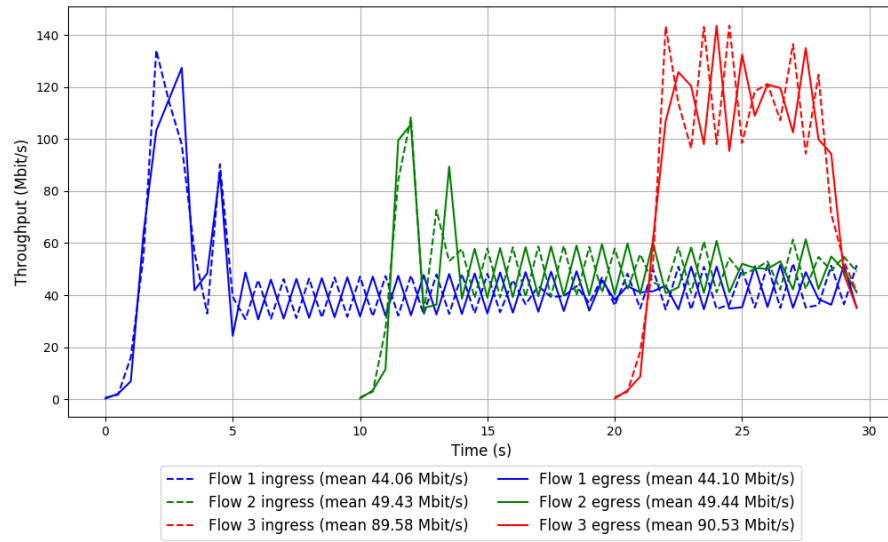
-- Flow 3:

Average throughput: 90.53 Mbit/s

95th percentile per-packet one-way delay: 110.665 ms

Loss rate: 0.99%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-01-31 08:16:06

End at: 2018-01-31 08:16:36

Below is generated by plot.py at 2018-01-31 14:01:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 103.70 Mbit/s

95th percentile per-packet one-way delay: 98.498 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 44.07 Mbit/s

95th percentile per-packet one-way delay: 96.866 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 43.19 Mbit/s

95th percentile per-packet one-way delay: 101.958 ms

Loss rate: 0.68%

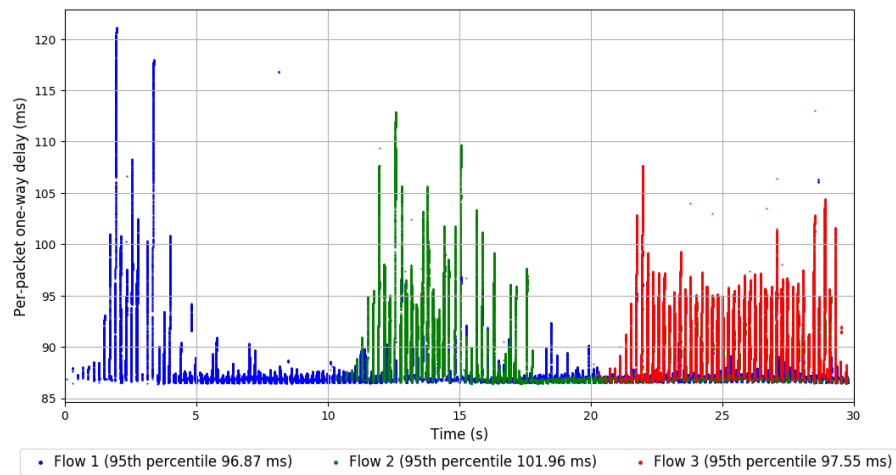
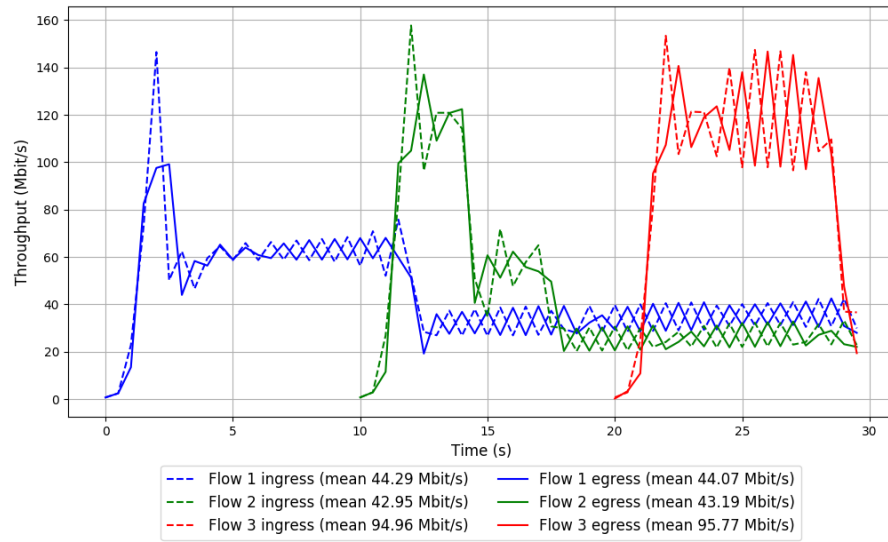
-- Flow 3:

Average throughput: 95.77 Mbit/s

95th percentile per-packet one-way delay: 97.550 ms

Loss rate: 1.22%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-01-31 08:34:05

End at: 2018-01-31 08:34:35

Below is generated by plot.py at 2018-01-31 14:01:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 40.80 Mbit/s

95th percentile per-packet one-way delay: 114.653 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 9.35 Mbit/s

95th percentile per-packet one-way delay: 114.638 ms

Loss rate: 2.26%

-- Flow 2:

Average throughput: 10.39 Mbit/s

95th percentile per-packet one-way delay: 115.867 ms

Loss rate: 0.59%

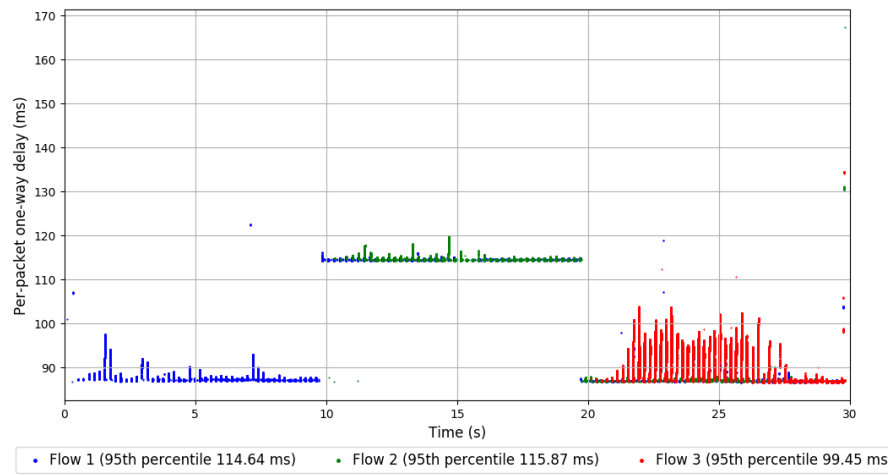
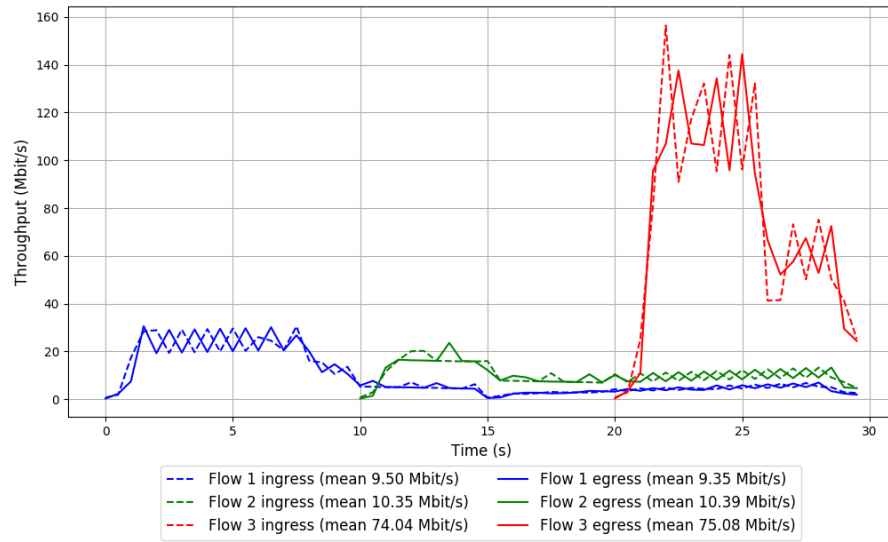
-- Flow 3:

Average throughput: 75.08 Mbit/s

95th percentile per-packet one-way delay: 99.450 ms

Loss rate: 0.86%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-01-31 08:52:03

End at: 2018-01-31 08:52:33

Below is generated by plot.py at 2018-01-31 14:01:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.04 Mbit/s

95th percentile per-packet one-way delay: 126.499 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 54.39 Mbit/s

95th percentile per-packet one-way delay: 114.930 ms

Loss rate: 1.37%

-- Flow 2:

Average throughput: 74.42 Mbit/s

95th percentile per-packet one-way delay: 128.229 ms

Loss rate: 0.53%

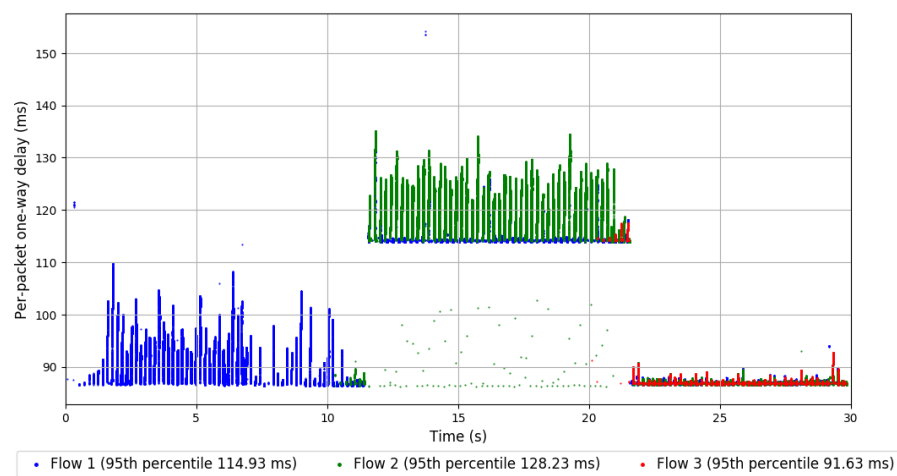
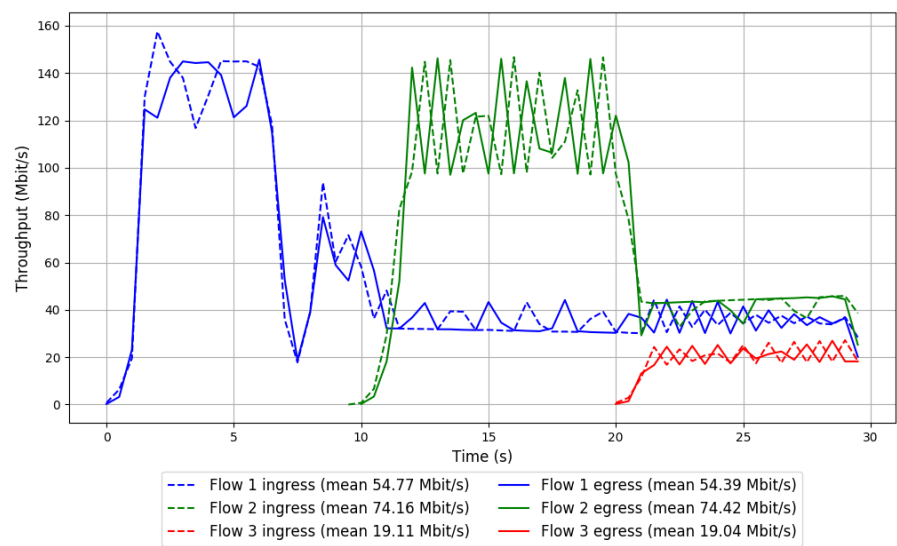
-- Flow 3:

Average throughput: 19.04 Mbit/s

95th percentile per-packet one-way delay: 91.629 ms

Loss rate: 2.42%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-01-31 09:09:58

End at: 2018-01-31 09:10:28

Below is generated by plot.py at 2018-01-31 14:01:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.94 Mbit/s

95th percentile per-packet one-way delay: 97.385 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 49.00 Mbit/s

95th percentile per-packet one-way delay: 96.469 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 39.06 Mbit/s

95th percentile per-packet one-way delay: 100.761 ms

Loss rate: 0.58%

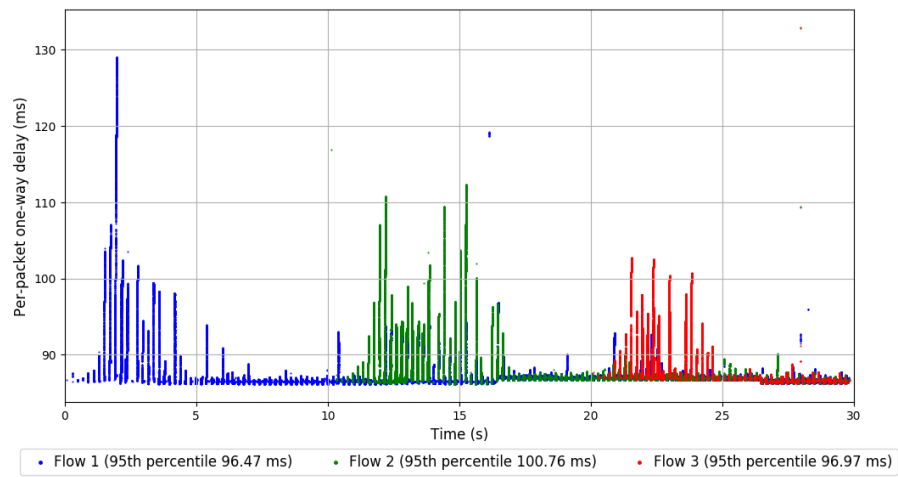
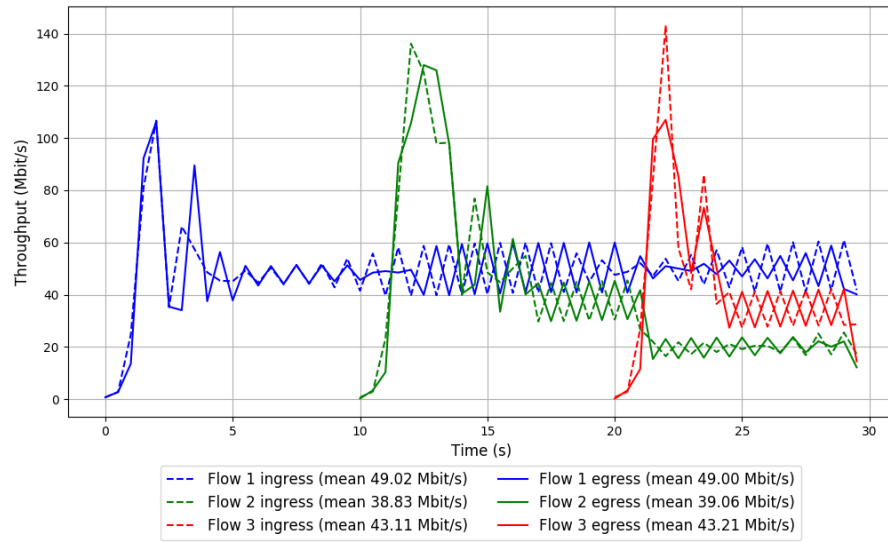
-- Flow 3:

Average throughput: 43.21 Mbit/s

95th percentile per-packet one-way delay: 96.971 ms

Loss rate: 1.81%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-01-31 09:28:19

End at: 2018-01-31 09:28:49

Below is generated by plot.py at 2018-01-31 14:01:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.58 Mbit/s

95th percentile per-packet one-way delay: 100.070 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 52.65 Mbit/s

95th percentile per-packet one-way delay: 99.544 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 38.52 Mbit/s

95th percentile per-packet one-way delay: 98.415 ms

Loss rate: 0.96%

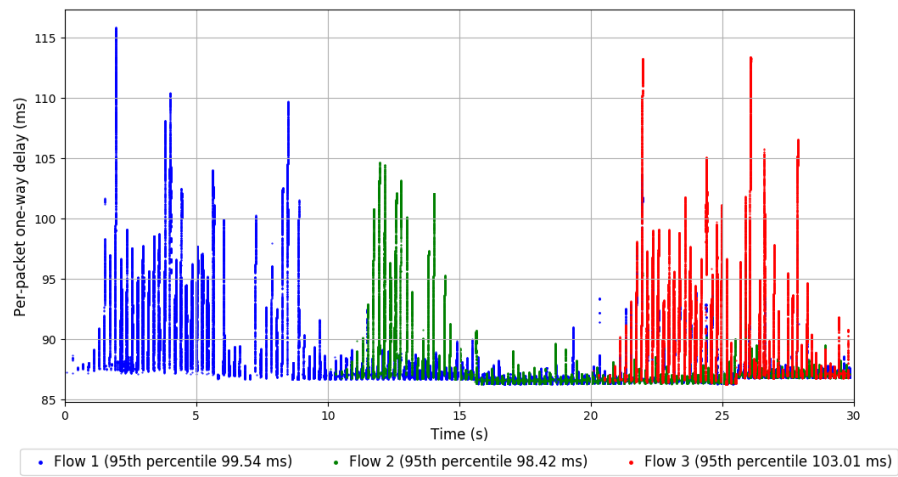
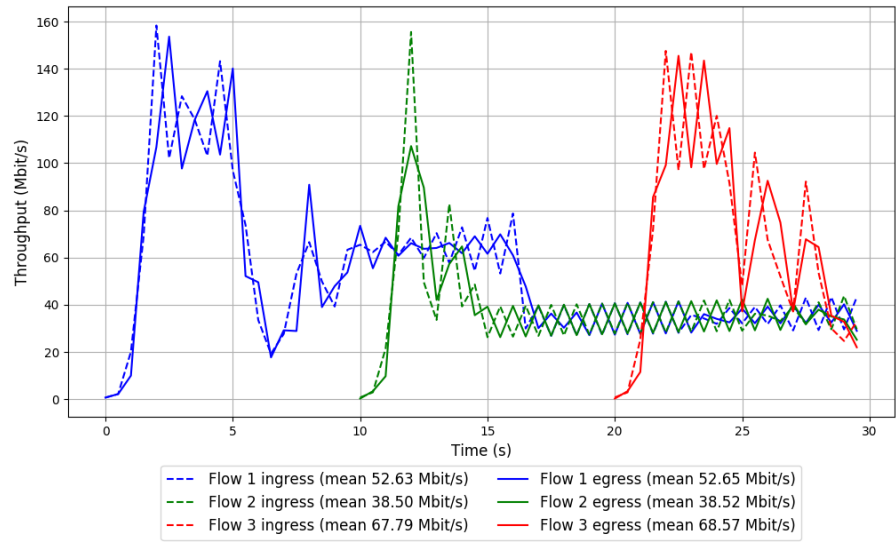
-- Flow 3:

Average throughput: 68.57 Mbit/s

95th percentile per-packet one-way delay: 103.010 ms

Loss rate: 0.82%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-01-31 09:46:18

End at: 2018-01-31 09:46:48

Below is generated by plot.py at 2018-01-31 14:01:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.38 Mbit/s

95th percentile per-packet one-way delay: 115.153 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 16.21 Mbit/s

95th percentile per-packet one-way delay: 114.894 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 17.24 Mbit/s

95th percentile per-packet one-way delay: 115.138 ms

Loss rate: 0.58%

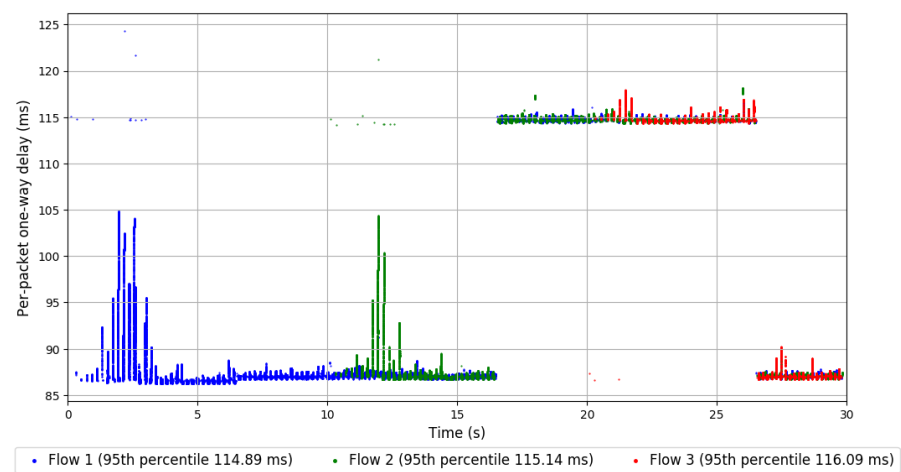
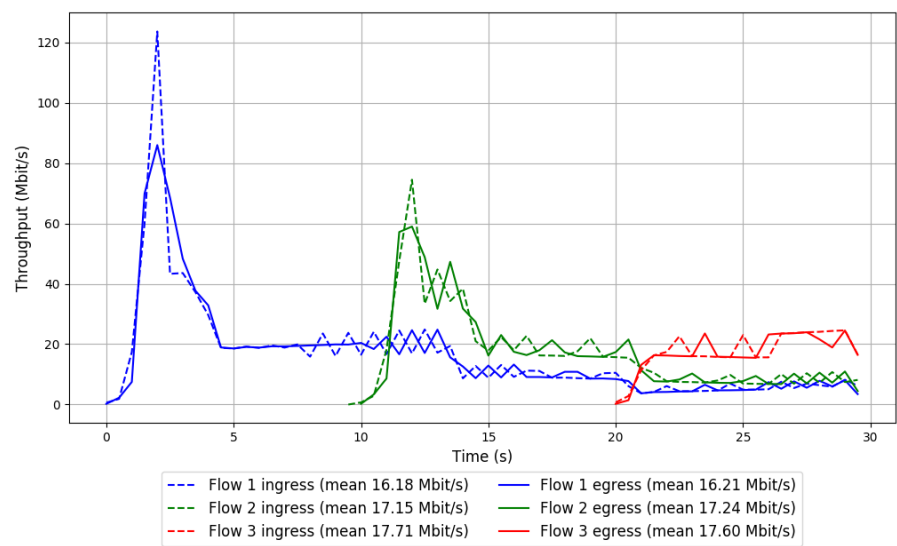
-- Flow 3:

Average throughput: 17.60 Mbit/s

95th percentile per-packet one-way delay: 116.091 ms

Loss rate: 2.36%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-01-31 10:04:18

End at: 2018-01-31 10:04:48

Below is generated by plot.py at 2018-01-31 14:01:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.72 Mbit/s

95th percentile per-packet one-way delay: 123.562 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 59.34 Mbit/s

95th percentile per-packet one-way delay: 123.651 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 61.95 Mbit/s

95th percentile per-packet one-way delay: 124.355 ms

Loss rate: 0.40%

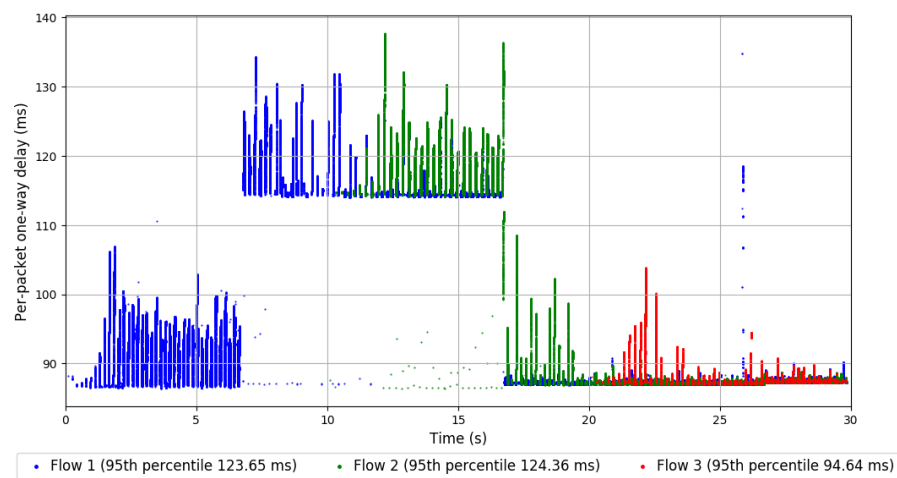
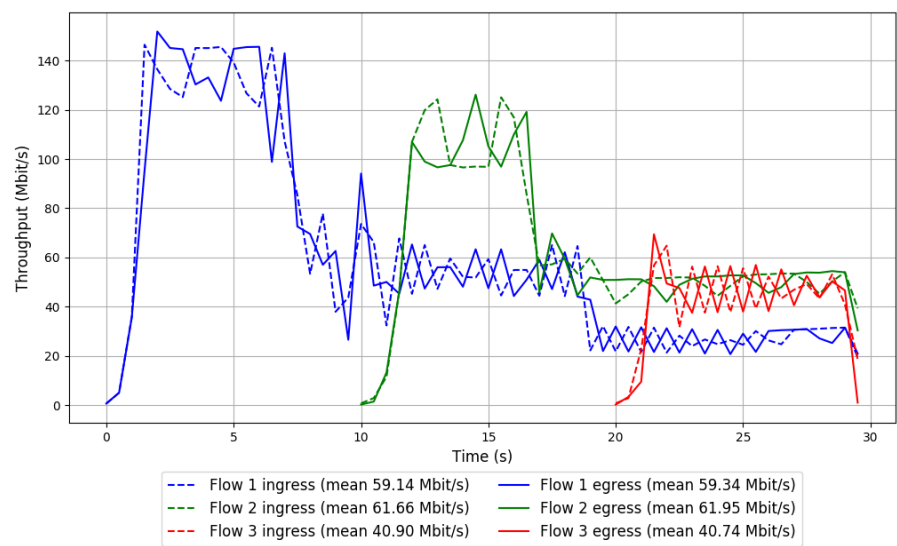
-- Flow 3:

Average throughput: 40.74 Mbit/s

95th percentile per-packet one-way delay: 94.641 ms

Loss rate: 2.40%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-01-31 07:25:43

End at: 2018-01-31 07:26:13

Below is generated by plot.py at 2018-01-31 14:01:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 258.19 Mbit/s

95th percentile per-packet one-way delay: 253.313 ms

Loss rate: 6.63%

-- Flow 1:

Average throughput: 149.57 Mbit/s

95th percentile per-packet one-way delay: 274.976 ms

Loss rate: 6.67%

-- Flow 2:

Average throughput: 131.89 Mbit/s

95th percentile per-packet one-way delay: 272.393 ms

Loss rate: 5.76%

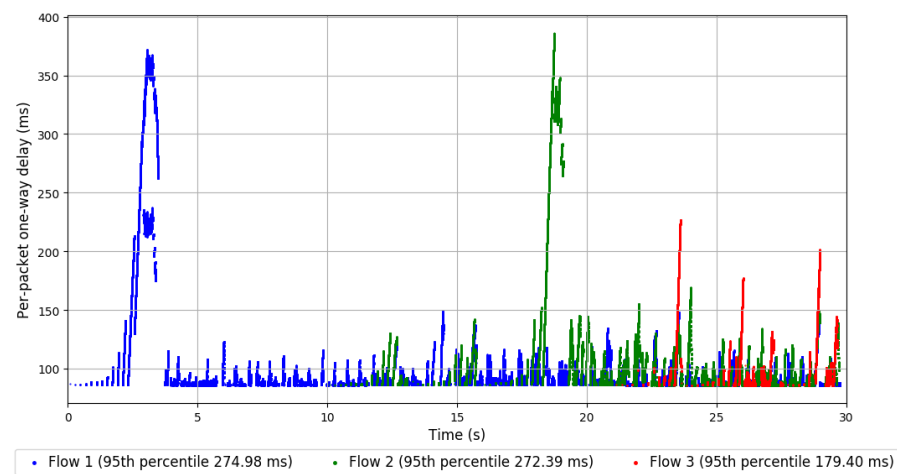
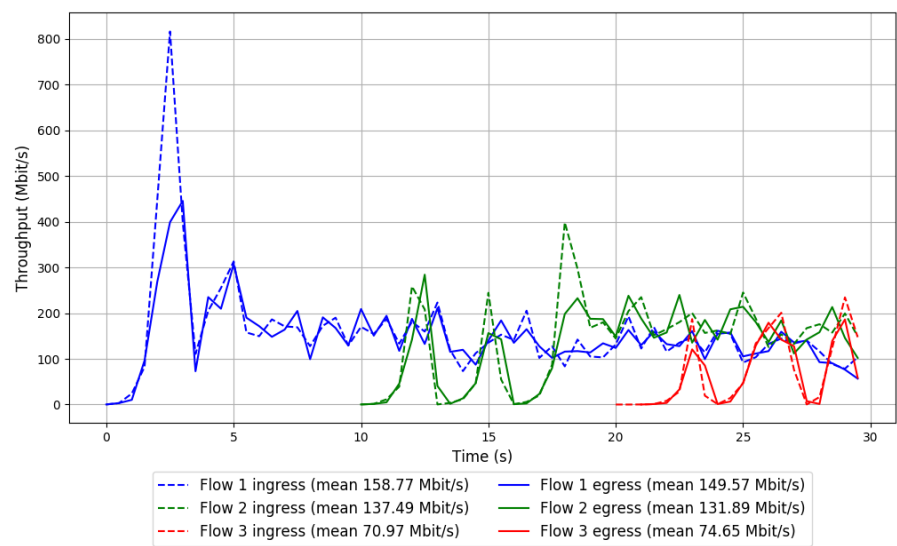
-- Flow 3:

Average throughput: 74.65 Mbit/s

95th percentile per-packet one-way delay: 179.398 ms

Loss rate: 9.75%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-01-31 07:44:15

End at: 2018-01-31 07:44:45

Below is generated by plot.py at 2018-01-31 14:01:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 276.25 Mbit/s

95th percentile per-packet one-way delay: 215.783 ms

Loss rate: 4.02%

-- Flow 1:

Average throughput: 153.93 Mbit/s

95th percentile per-packet one-way delay: 199.663 ms

Loss rate: 2.63%

-- Flow 2:

Average throughput: 124.28 Mbit/s

95th percentile per-packet one-way delay: 261.473 ms

Loss rate: 7.04%

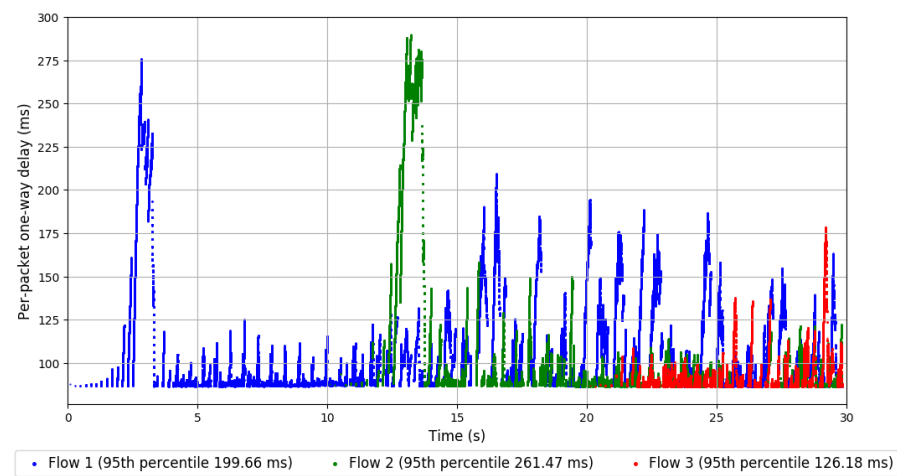
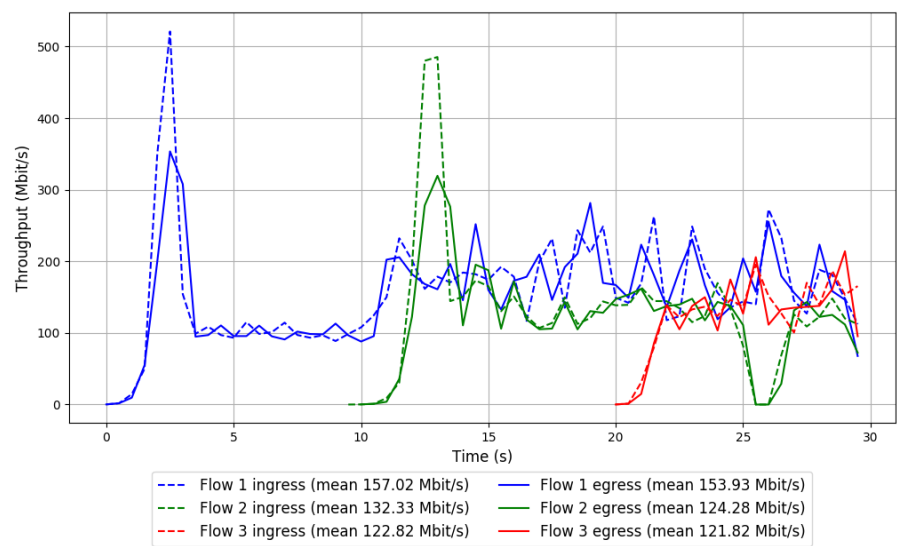
-- Flow 3:

Average throughput: 121.82 Mbit/s

95th percentile per-packet one-way delay: 126.176 ms

Loss rate: 2.87%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-01-31 08:02:26

End at: 2018-01-31 08:02:56

Below is generated by plot.py at 2018-01-31 14:02:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 309.16 Mbit/s

95th percentile per-packet one-way delay: 303.656 ms

Loss rate: 6.77%

-- Flow 1:

Average throughput: 179.19 Mbit/s

95th percentile per-packet one-way delay: 190.362 ms

Loss rate: 2.11%

-- Flow 2:

Average throughput: 176.40 Mbit/s

95th percentile per-packet one-way delay: 336.178 ms

Loss rate: 10.34%

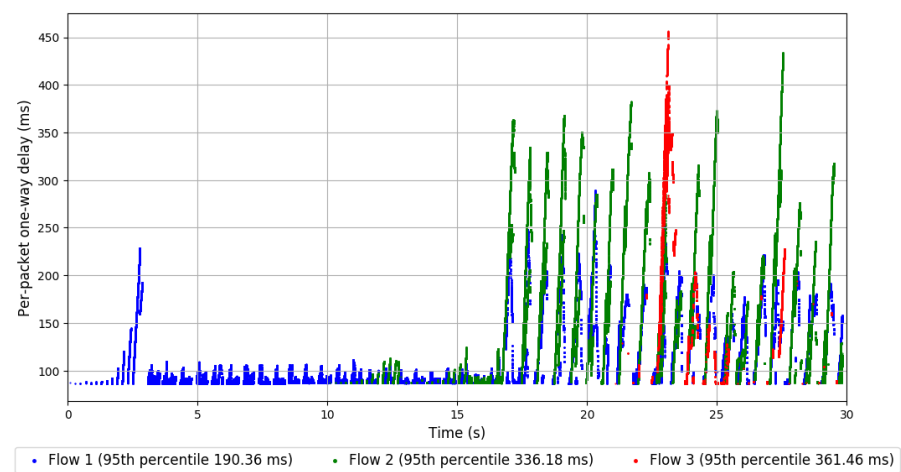
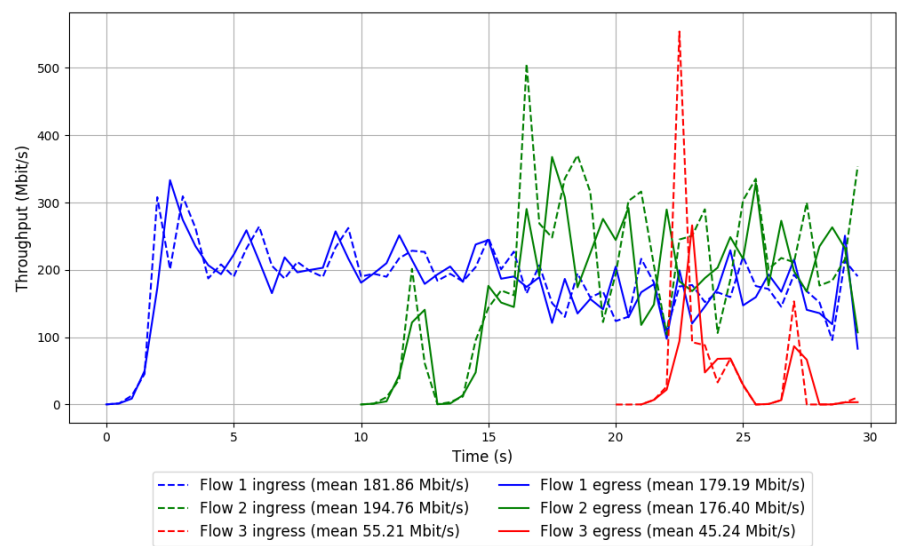
-- Flow 3:

Average throughput: 45.24 Mbit/s

95th percentile per-packet one-way delay: 361.460 ms

Loss rate: 28.20%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-01-31 08:20:45

End at: 2018-01-31 08:21:15

Below is generated by plot.py at 2018-01-31 14:02:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 221.49 Mbit/s

95th percentile per-packet one-way delay: 208.772 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 163.70 Mbit/s

95th percentile per-packet one-way delay: 206.882 ms

Loss rate: 1.29%

-- Flow 2:

Average throughput: 56.44 Mbit/s

95th percentile per-packet one-way delay: 133.206 ms

Loss rate: 0.79%

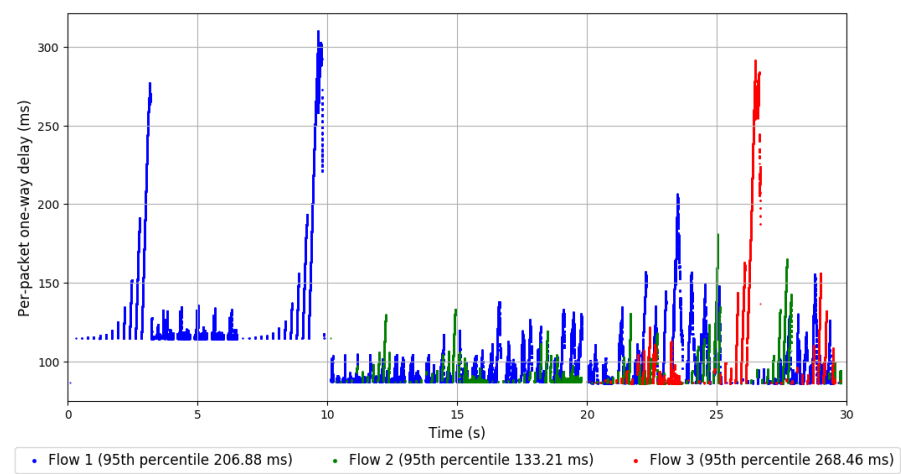
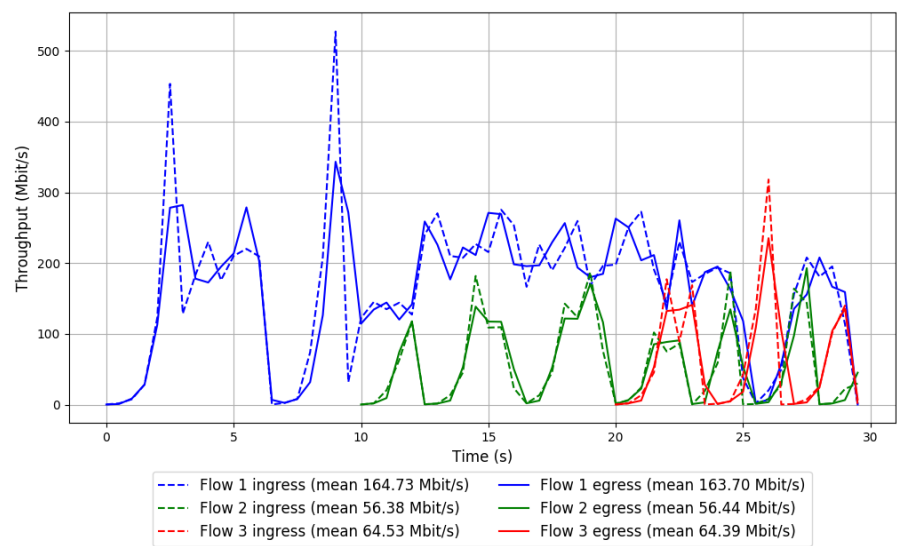
-- Flow 3:

Average throughput: 64.39 Mbit/s

95th percentile per-packet one-way delay: 268.462 ms

Loss rate: 2.27%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-01-31 08:38:38

End at: 2018-01-31 08:39:08

Below is generated by plot.py at 2018-01-31 14:02:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 256.51 Mbit/s

95th percentile per-packet one-way delay: 218.895 ms

Loss rate: 1.79%

-- Flow 1:

Average throughput: 185.18 Mbit/s

95th percentile per-packet one-way delay: 214.435 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 96.37 Mbit/s

95th percentile per-packet one-way delay: 207.150 ms

Loss rate: 4.43%

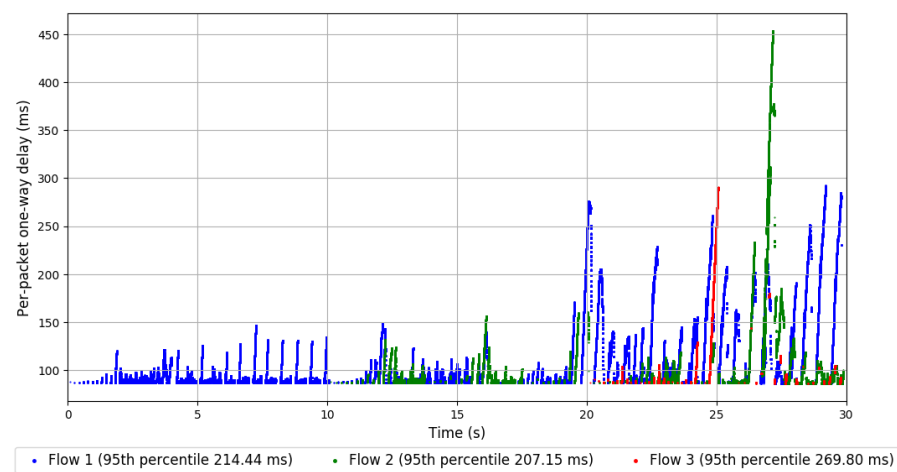
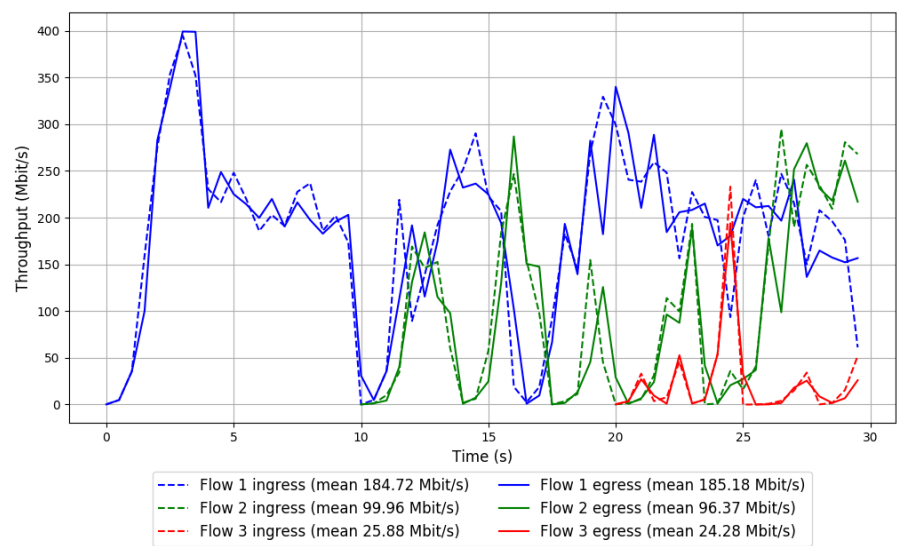
-- Flow 3:

Average throughput: 24.28 Mbit/s

95th percentile per-packet one-way delay: 269.799 ms

Loss rate: 8.16%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-01-31 08:56:35

End at: 2018-01-31 08:57:05

Below is generated by plot.py at 2018-01-31 14:05:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 307.81 Mbit/s

95th percentile per-packet one-way delay: 189.854 ms

Loss rate: 2.70%

-- Flow 1:

Average throughput: 195.38 Mbit/s

95th percentile per-packet one-way delay: 191.425 ms

Loss rate: 2.74%

-- Flow 2:

Average throughput: 107.38 Mbit/s

95th percentile per-packet one-way delay: 227.499 ms

Loss rate: 2.86%

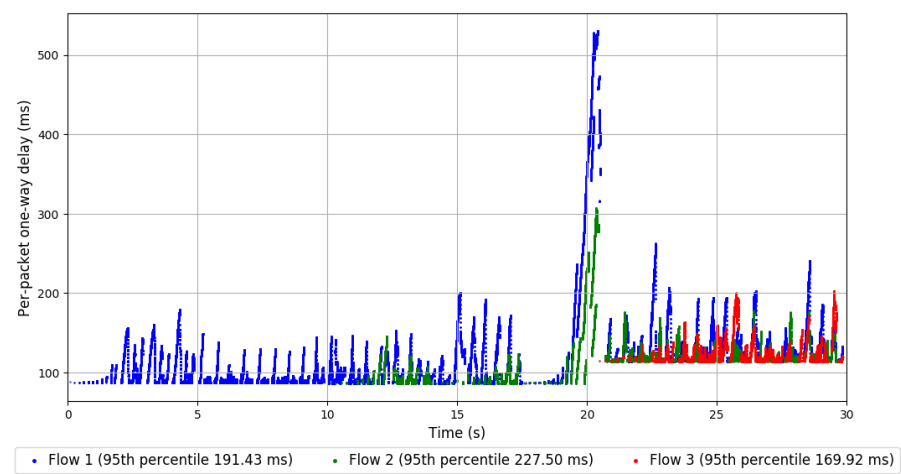
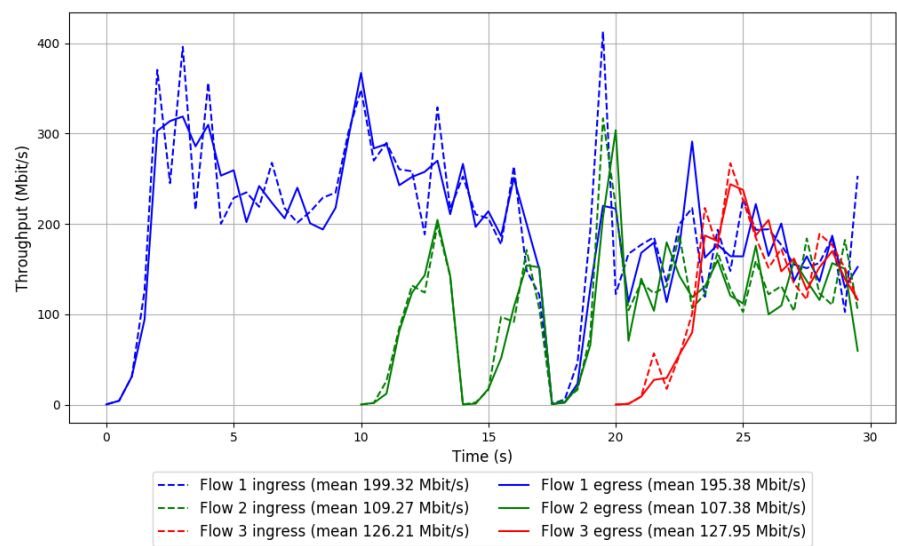
-- Flow 3:

Average throughput: 127.95 Mbit/s

95th percentile per-packet one-way delay: 169.917 ms

Loss rate: 2.29%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-01-31 09:14:43

End at: 2018-01-31 09:15:13

Below is generated by plot.py at 2018-01-31 14:05:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 273.69 Mbit/s

95th percentile per-packet one-way delay: 185.511 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 170.00 Mbit/s

95th percentile per-packet one-way delay: 188.490 ms

Loss rate: 1.79%

-- Flow 2:

Average throughput: 86.92 Mbit/s

95th percentile per-packet one-way delay: 194.778 ms

Loss rate: 1.78%

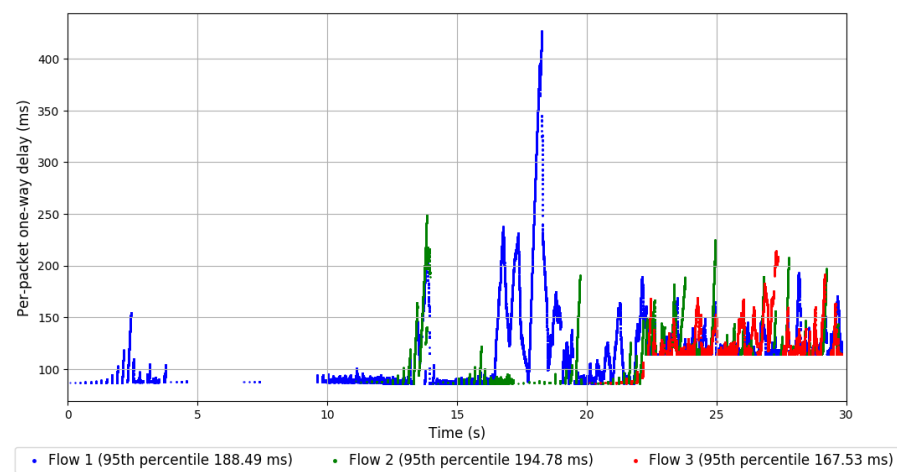
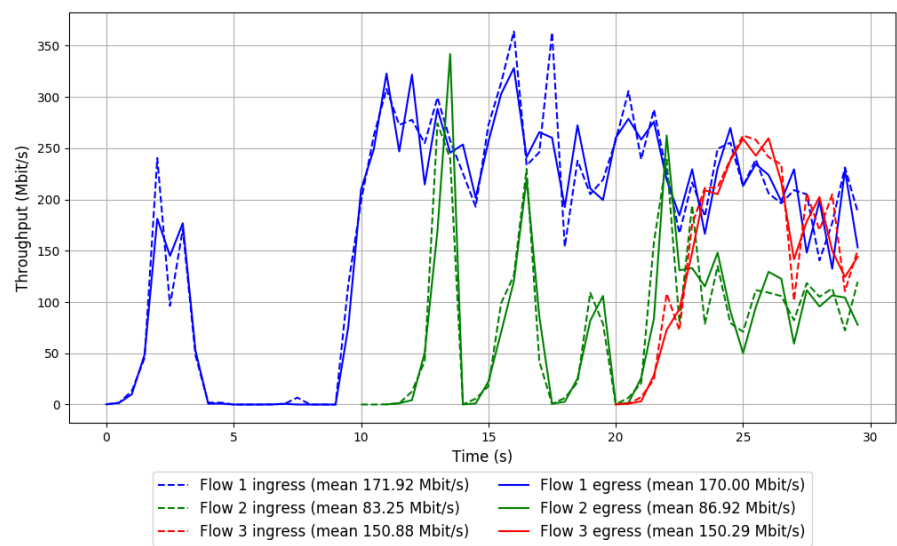
-- Flow 3:

Average throughput: 150.29 Mbit/s

95th percentile per-packet one-way delay: 167.526 ms

Loss rate: 2.41%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-01-31 09:33:01

End at: 2018-01-31 09:33:31

Below is generated by plot.py at 2018-01-31 14:06:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 262.93 Mbit/s

95th percentile per-packet one-way delay: 192.587 ms

Loss rate: 3.87%

-- Flow 1:

Average throughput: 153.45 Mbit/s

95th percentile per-packet one-way delay: 273.474 ms

Loss rate: 5.86%

-- Flow 2:

Average throughput: 147.58 Mbit/s

95th percentile per-packet one-way delay: 152.825 ms

Loss rate: 0.18%

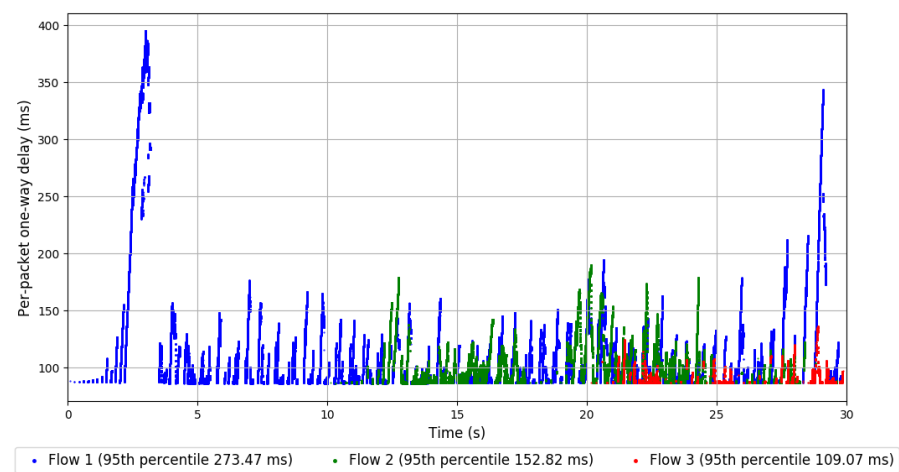
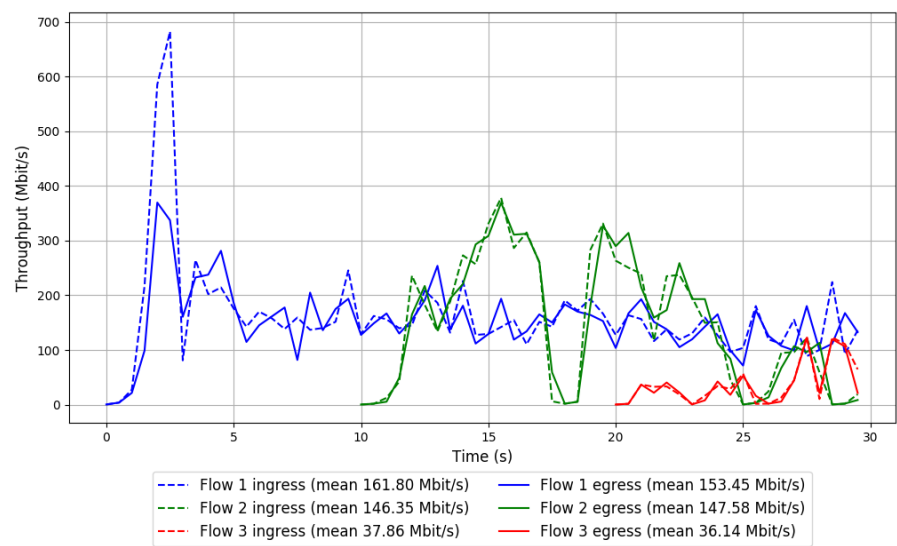
-- Flow 3:

Average throughput: 36.14 Mbit/s

95th percentile per-packet one-way delay: 109.070 ms

Loss rate: 6.76%

Run 8: Report of Verus — Data Link

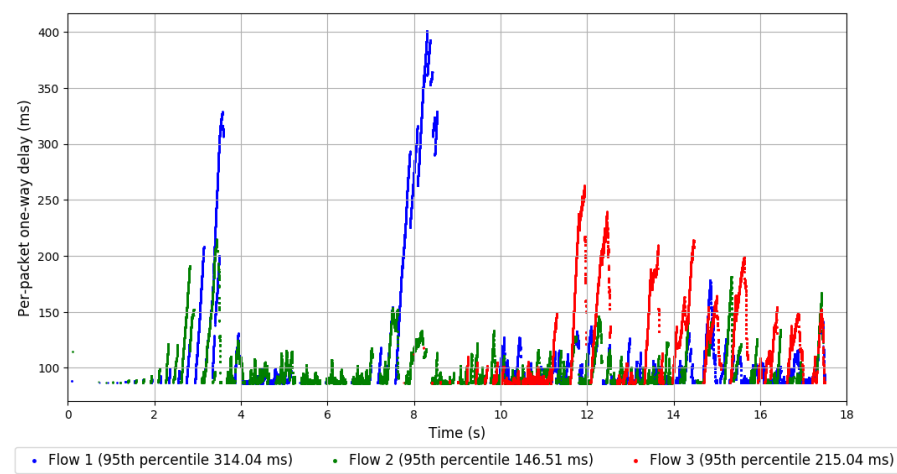
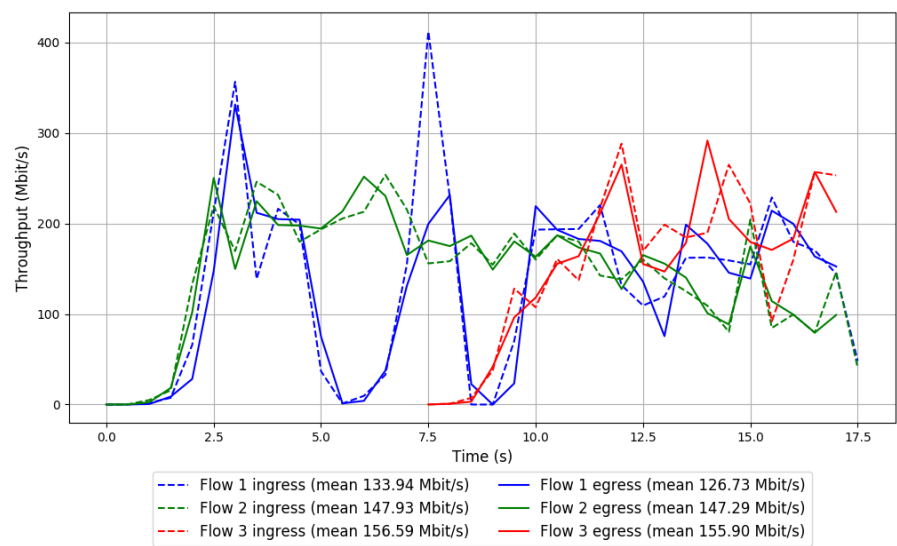


Run 9: Statistics of Verus

Start at: 2018-01-31 09:50:58

End at: 2018-01-31 09:51:28

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-01-31 10:08:54

End at: 2018-01-31 10:09:24

Below is generated by plot.py at 2018-01-31 14:06:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 270.81 Mbit/s

95th percentile per-packet one-way delay: 203.259 ms

Loss rate: 1.69%

-- Flow 1:

Average throughput: 168.75 Mbit/s

95th percentile per-packet one-way delay: 161.020 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 77.26 Mbit/s

95th percentile per-packet one-way delay: 221.225 ms

Loss rate: 1.83%

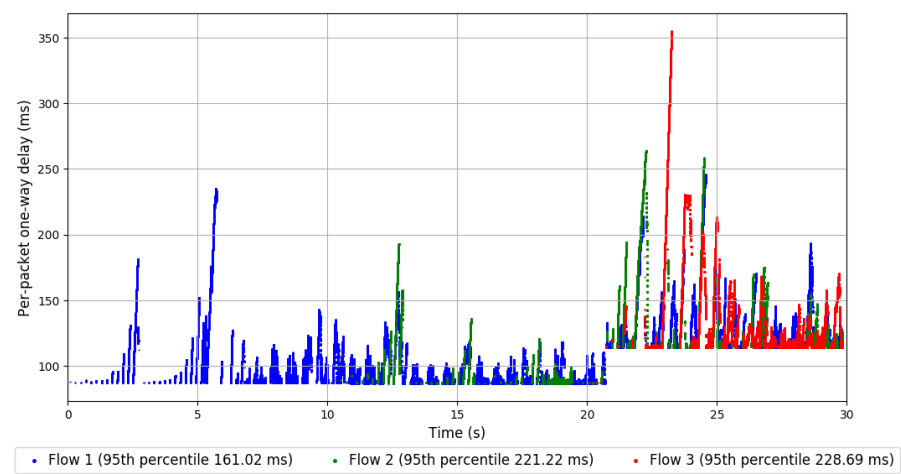
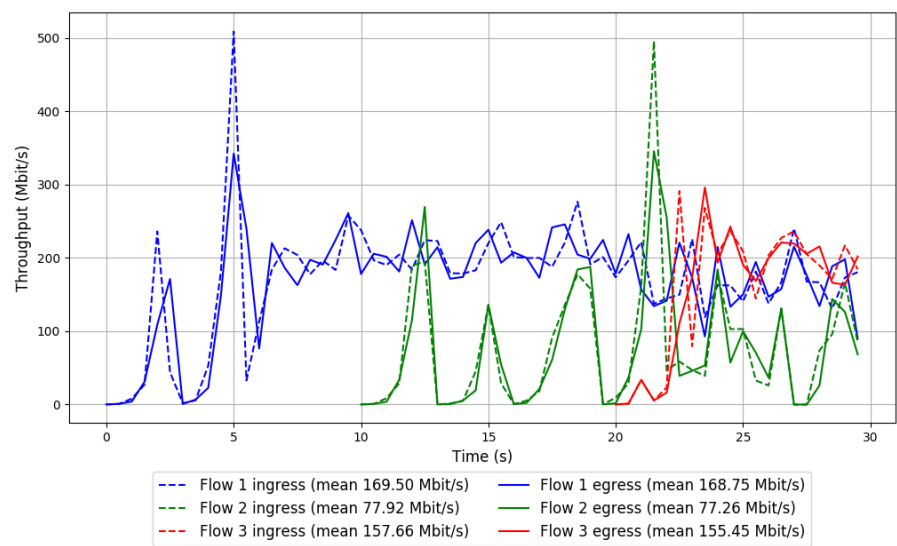
-- Flow 3:

Average throughput: 155.45 Mbit/s

95th percentile per-packet one-way delay: 228.694 ms

Loss rate: 3.42%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-01-31 07:24:49

End at: 2018-01-31 07:25:19

Below is generated by plot.py at 2018-01-31 14:06:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.40 Mbit/s

95th percentile per-packet one-way delay: 86.981 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 54.11 Mbit/s

95th percentile per-packet one-way delay: 86.733 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 21.01 Mbit/s

95th percentile per-packet one-way delay: 114.122 ms

Loss rate: 1.27%

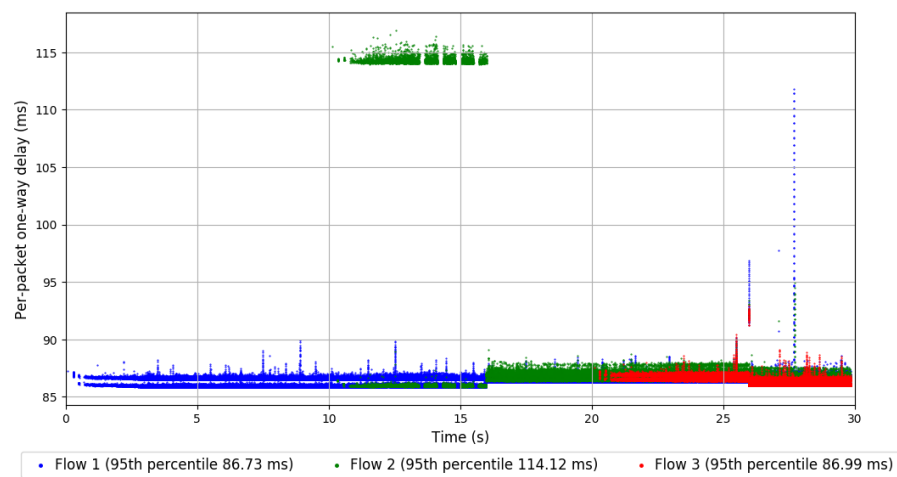
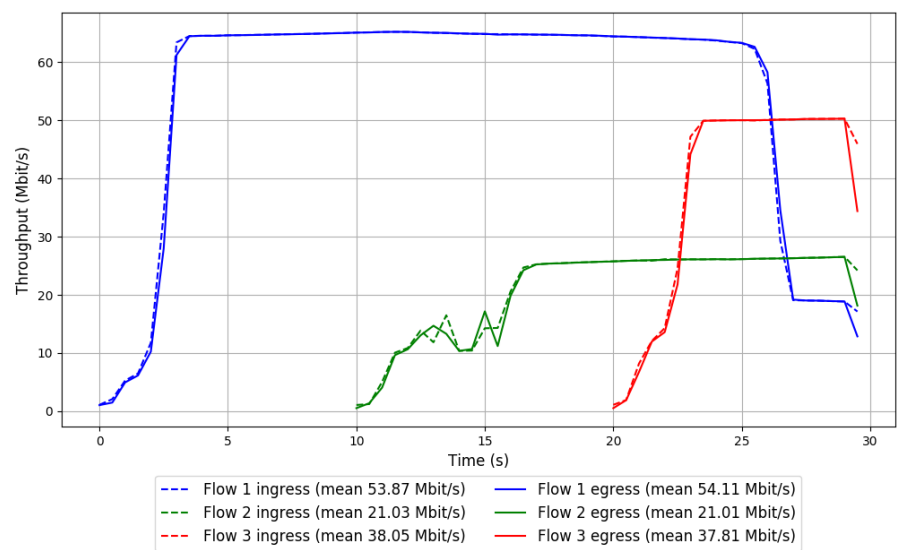
-- Flow 3:

Average throughput: 37.81 Mbit/s

95th percentile per-packet one-way delay: 86.987 ms

Loss rate: 2.67%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-01-31 07:43:21

End at: 2018-01-31 07:43:51

Below is generated by plot.py at 2018-01-31 14:06:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.28 Mbit/s

95th percentile per-packet one-way delay: 86.998 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 38.53 Mbit/s

95th percentile per-packet one-way delay: 87.079 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 45.04 Mbit/s

95th percentile per-packet one-way delay: 86.807 ms

Loss rate: 1.13%

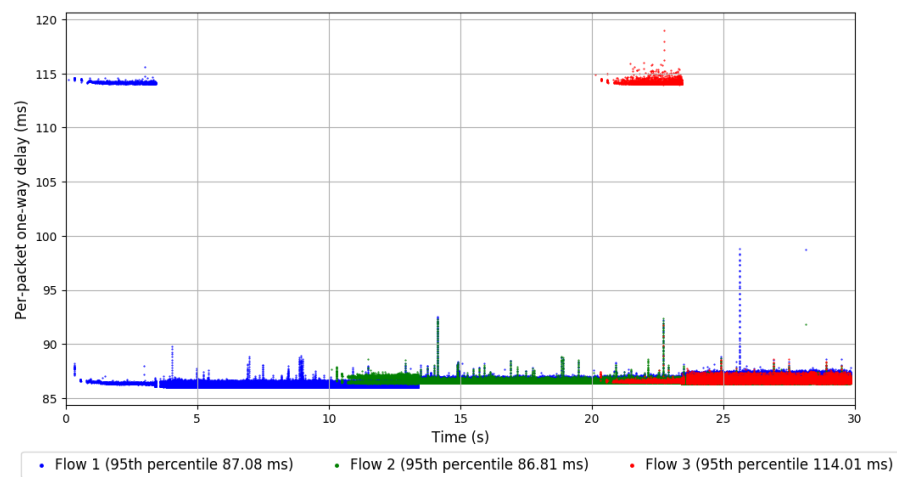
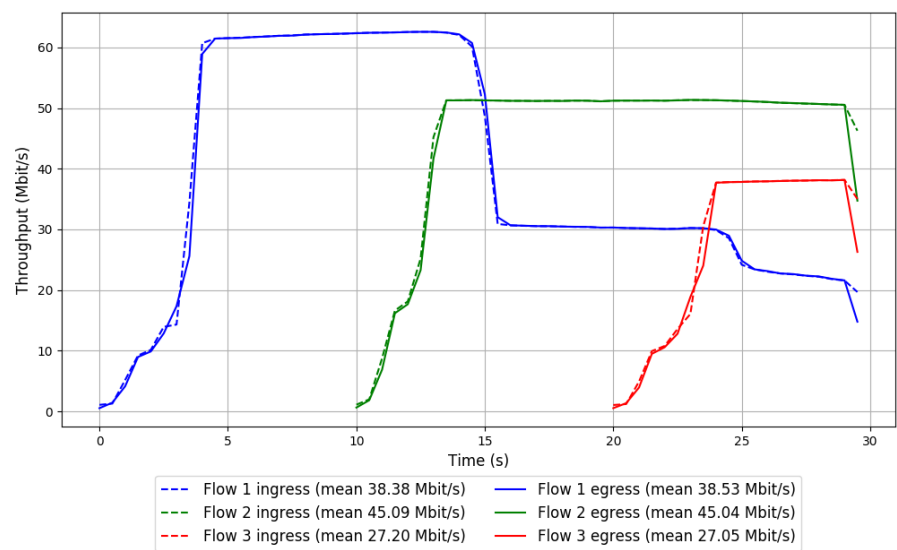
-- Flow 3:

Average throughput: 27.05 Mbit/s

95th percentile per-packet one-way delay: 114.012 ms

Loss rate: 2.84%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-01-31 08:01:34

End at: 2018-01-31 08:02:04

Below is generated by plot.py at 2018-01-31 14:06:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.43 Mbit/s

95th percentile per-packet one-way delay: 114.191 ms

Loss rate: 0.87%

-- Flow 1:

Average throughput: 50.05 Mbit/s

95th percentile per-packet one-way delay: 86.702 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 13.86 Mbit/s

95th percentile per-packet one-way delay: 114.572 ms

Loss rate: 0.13%

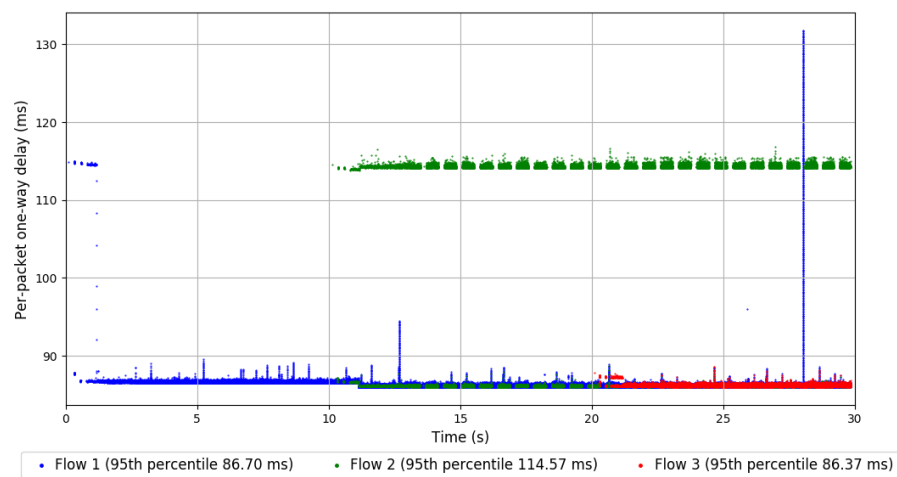
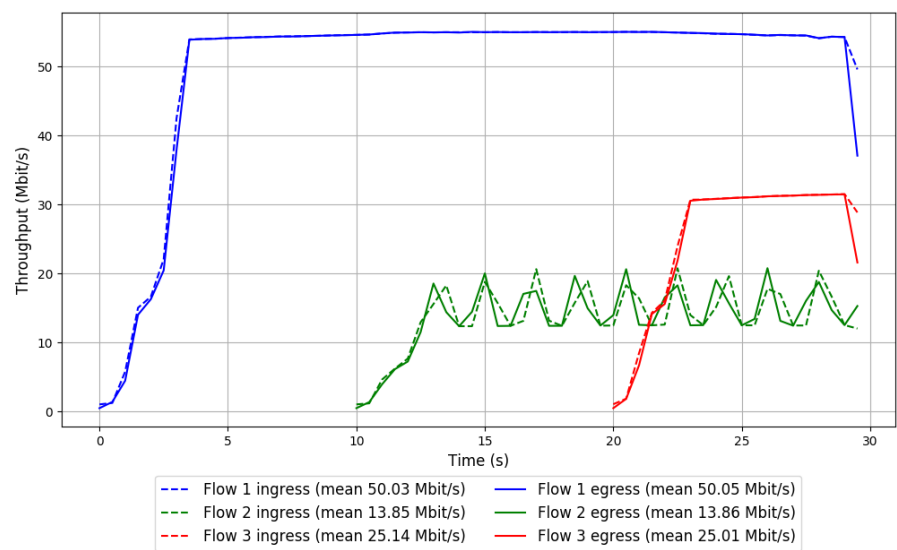
-- Flow 3:

Average throughput: 25.01 Mbit/s

95th percentile per-packet one-way delay: 86.366 ms

Loss rate: 2.54%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-01-31 08:19:51

End at: 2018-01-31 08:20:21

Below is generated by plot.py at 2018-01-31 14:07:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.62 Mbit/s

95th percentile per-packet one-way delay: 87.165 ms

Loss rate: 0.36%

-- Flow 1:

Average throughput: 52.91 Mbit/s

95th percentile per-packet one-way delay: 87.168 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 35.01 Mbit/s

95th percentile per-packet one-way delay: 86.970 ms

Loss rate: 0.00%

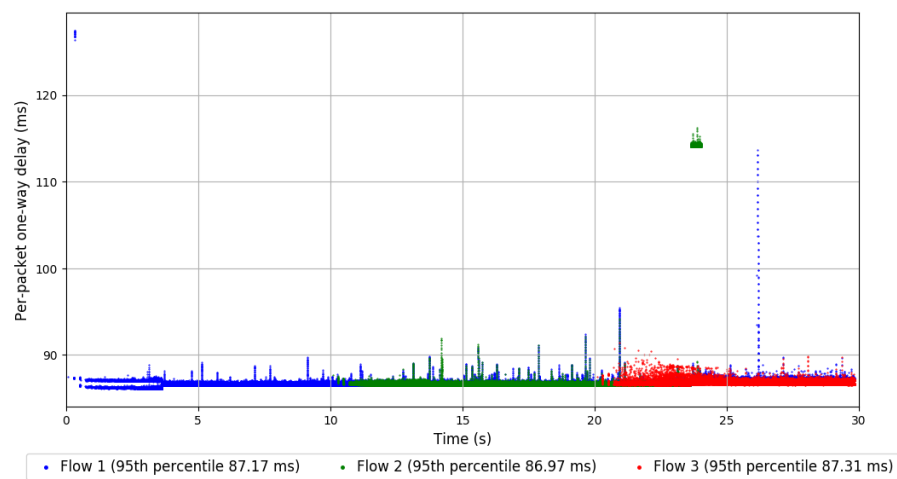
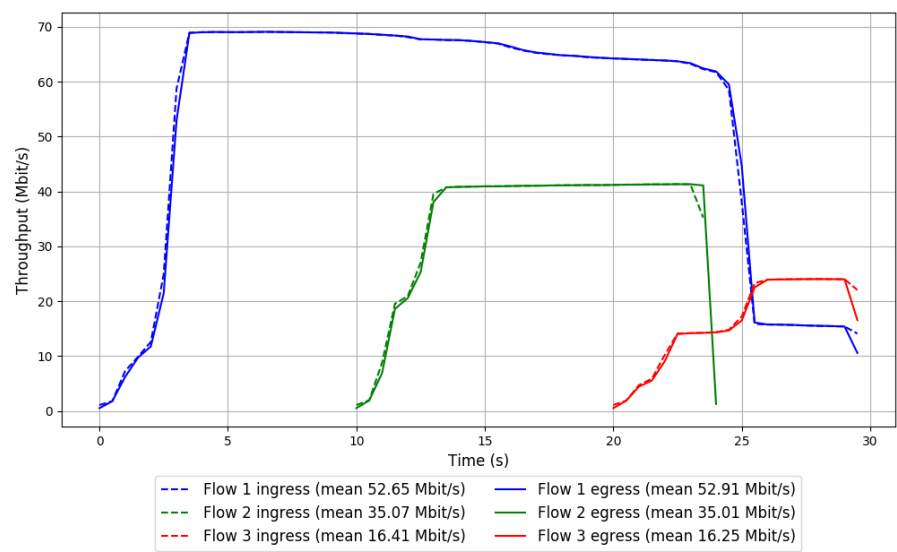
-- Flow 3:

Average throughput: 16.25 Mbit/s

95th percentile per-packet one-way delay: 87.308 ms

Loss rate: 2.96%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-01-31 08:37:51

End at: 2018-01-31 08:38:21

Below is generated by plot.py at 2018-01-31 14:07:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 40.53 Mbit/s

95th percentile per-packet one-way delay: 114.198 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 22.68 Mbit/s

95th percentile per-packet one-way delay: 114.267 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 29.02 Mbit/s

95th percentile per-packet one-way delay: 88.503 ms

Loss rate: 0.16%

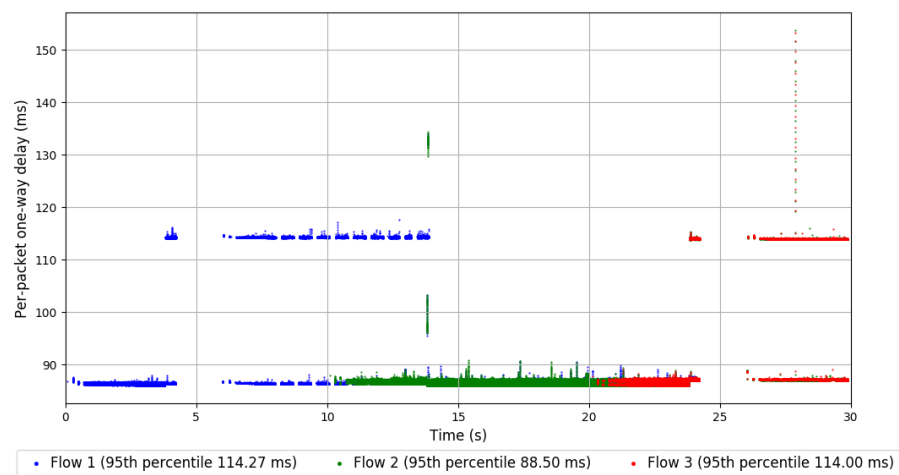
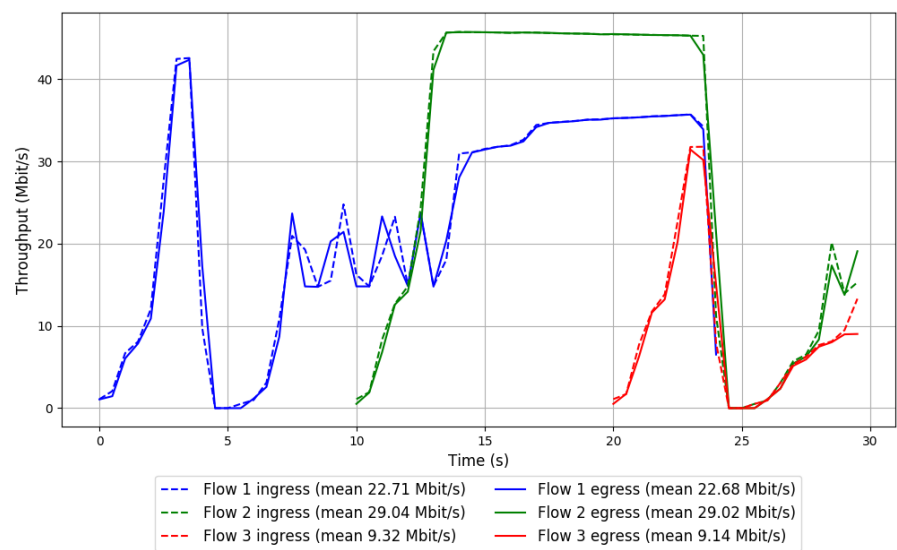
-- Flow 3:

Average throughput: 9.14 Mbit/s

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

Loss rate: 3.60%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-01-31 08:55:45

End at: 2018-01-31 08:56:15

Below is generated by plot.py at 2018-01-31 14:07:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 51.26 Mbit/s

95th percentile per-packet one-way delay: 87.326 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 20.32 Mbit/s

95th percentile per-packet one-way delay: 87.007 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 40.03 Mbit/s

95th percentile per-packet one-way delay: 87.173 ms

Loss rate: 0.35%

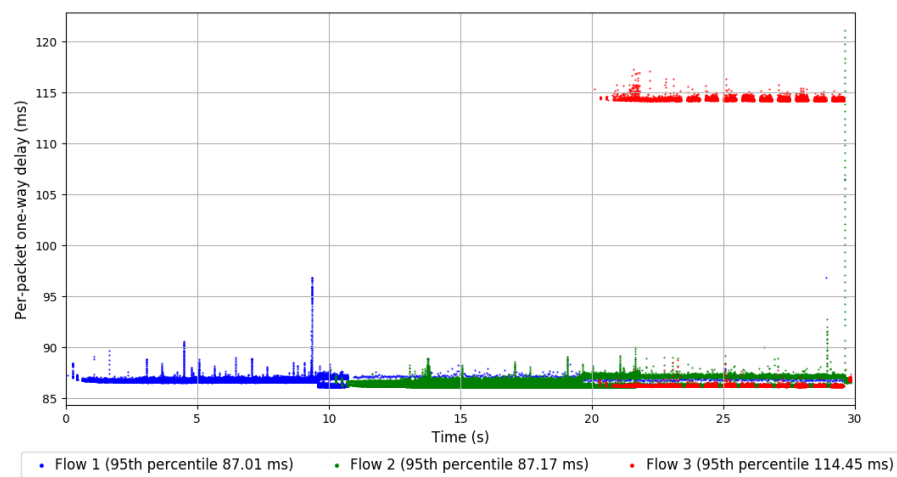
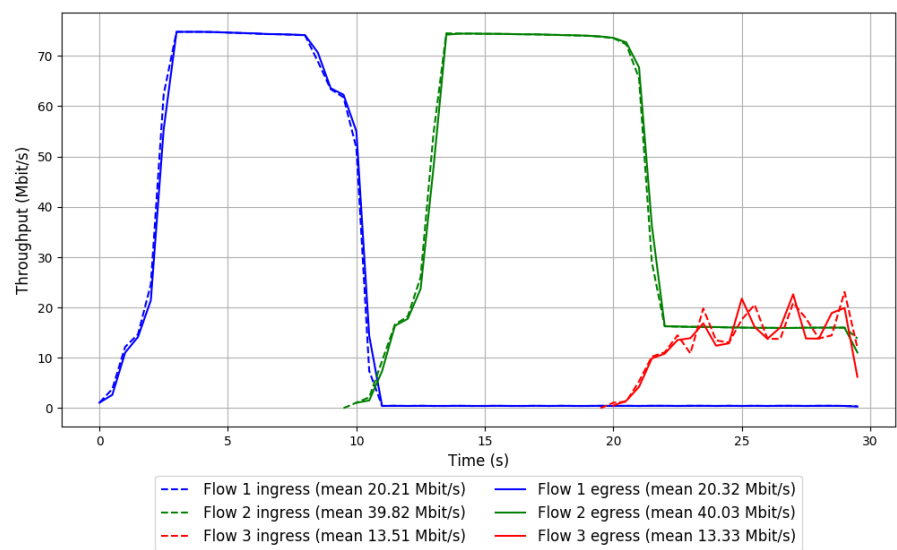
-- Flow 3:

Average throughput: 13.33 Mbit/s

95th percentile per-packet one-way delay: 114.452 ms

Loss rate: 3.32%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-01-31 09:13:50

End at: 2018-01-31 09:14:20

Below is generated by plot.py at 2018-01-31 14:07:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.13 Mbit/s

95th percentile per-packet one-way delay: 87.233 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 35.08 Mbit/s

95th percentile per-packet one-way delay: 87.222 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 20.58 Mbit/s

95th percentile per-packet one-way delay: 87.270 ms

Loss rate: 1.29%

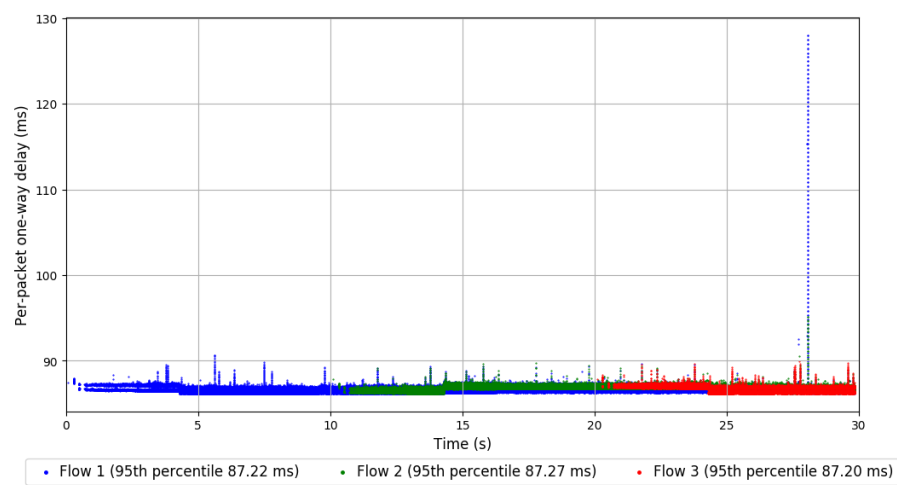
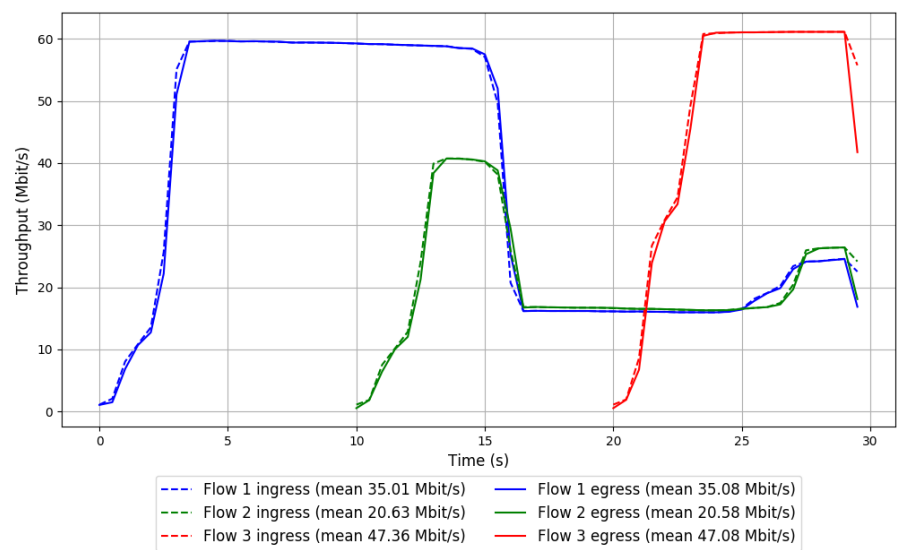
-- Flow 3:

Average throughput: 47.08 Mbit/s

95th percentile per-packet one-way delay: 87.203 ms

Loss rate: 2.61%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-01-31 09:32:07

End at: 2018-01-31 09:32:37

Below is generated by plot.py at 2018-01-31 14:08:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.25 Mbit/s

95th percentile per-packet one-way delay: 87.854 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 56.36 Mbit/s

95th percentile per-packet one-way delay: 87.013 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 20.41 Mbit/s

95th percentile per-packet one-way delay: 88.670 ms

Loss rate: 1.00%

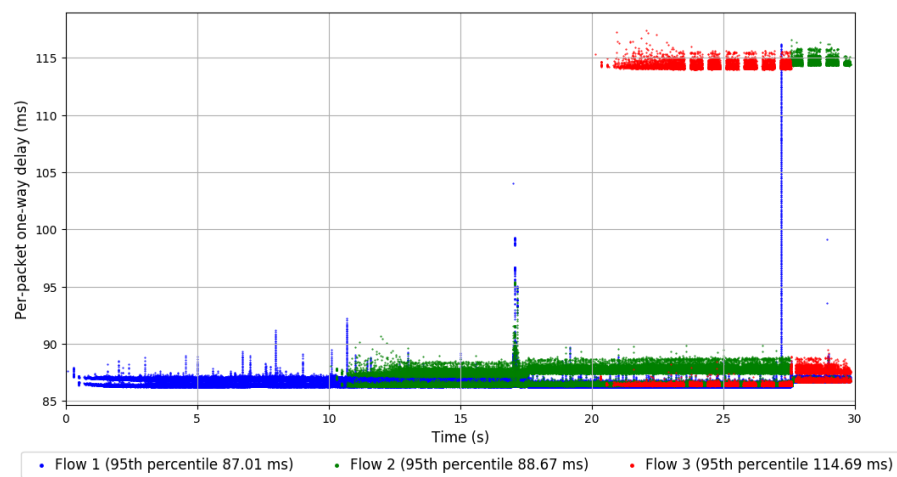
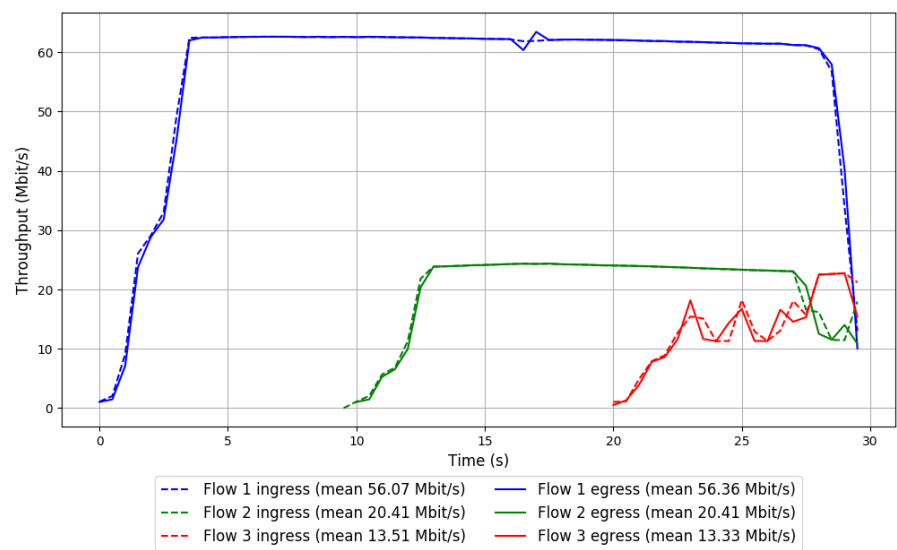
-- Flow 3:

Average throughput: 13.33 Mbit/s

95th percentile per-packet one-way delay: 114.687 ms

Loss rate: 3.64%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-01-31 09:50:04

End at: 2018-01-31 09:50:34

Below is generated by plot.py at 2018-01-31 14:08:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.33 Mbit/s

95th percentile per-packet one-way delay: 87.200 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 60.97 Mbit/s

95th percentile per-packet one-way delay: 87.018 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 27.71 Mbit/s

95th percentile per-packet one-way delay: 87.434 ms

Loss rate: 1.10%

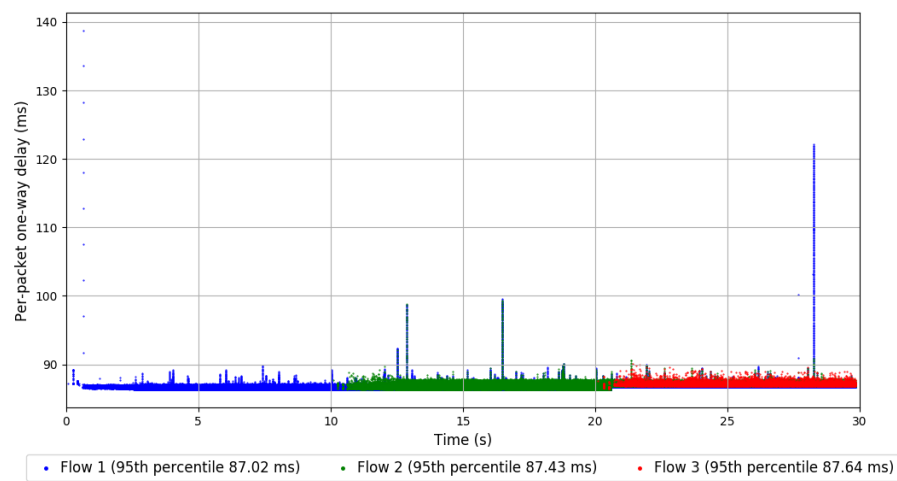
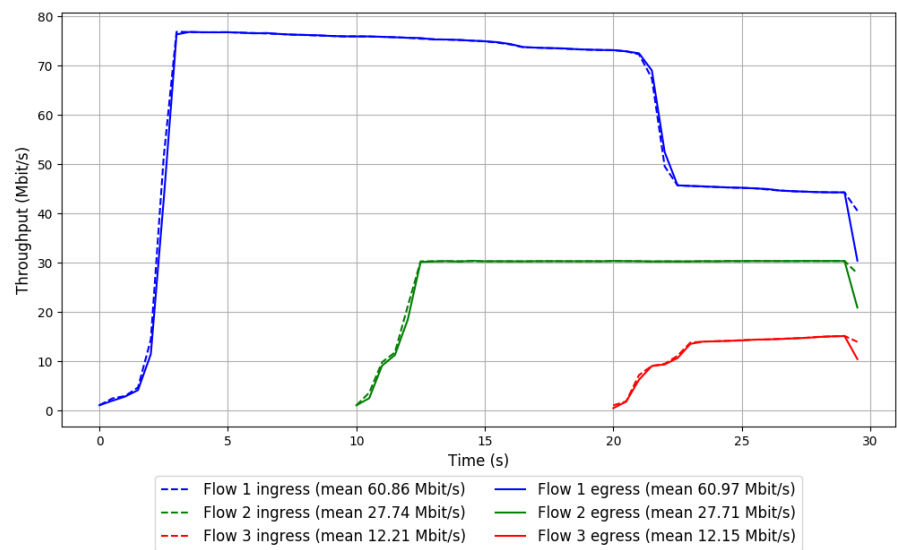
-- Flow 3:

Average throughput: 12.15 Mbit/s

95th percentile per-packet one-way delay: 87.635 ms

Loss rate: 2.53%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-01-31 10:08:03

End at: 2018-01-31 10:08:33

Below is generated by plot.py at 2018-01-31 14:08:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 51.25 Mbit/s

95th percentile per-packet one-way delay: 88.932 ms

Loss rate: 0.34%

-- Flow 1:

Average throughput: 31.85 Mbit/s

95th percentile per-packet one-way delay: 87.577 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 28.10 Mbit/s

95th percentile per-packet one-way delay: 114.149 ms

Loss rate: 0.89%

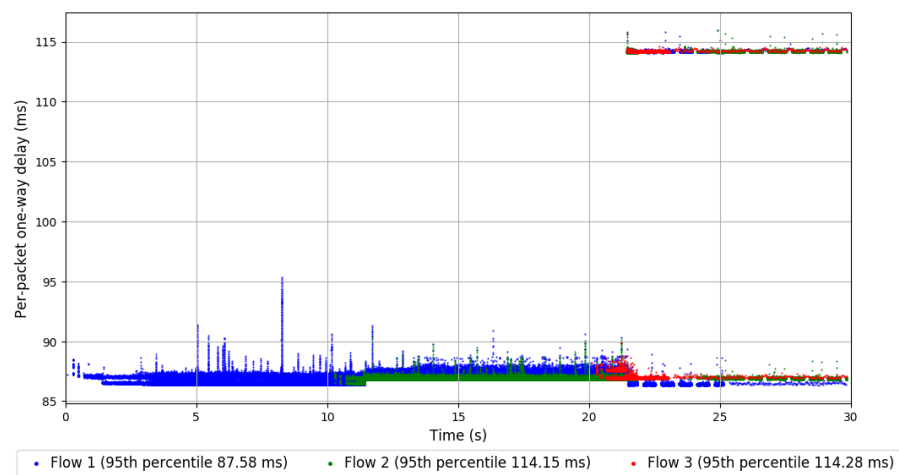
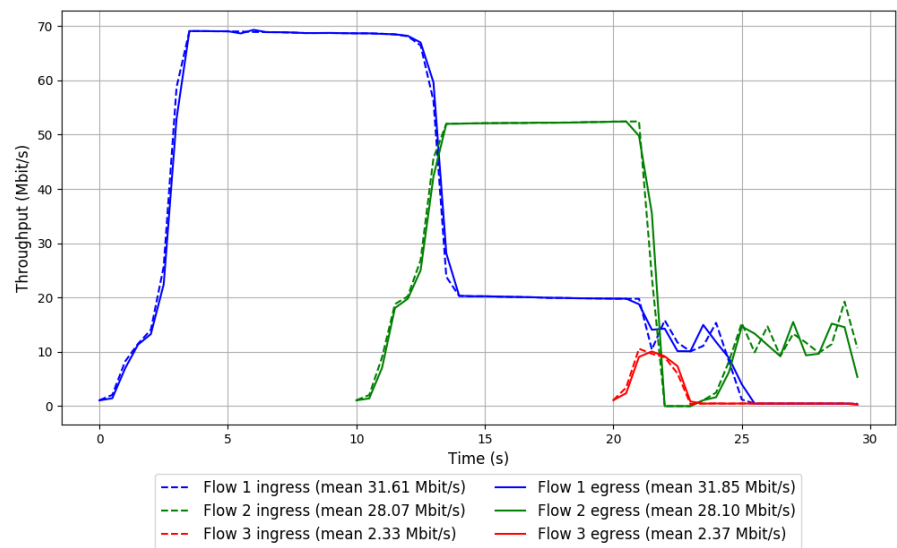
-- Flow 3:

Average throughput: 2.37 Mbit/s

95th percentile per-packet one-way delay: 114.276 ms

Loss rate: 0.50%

Run 10: Report of Copa — Data Link

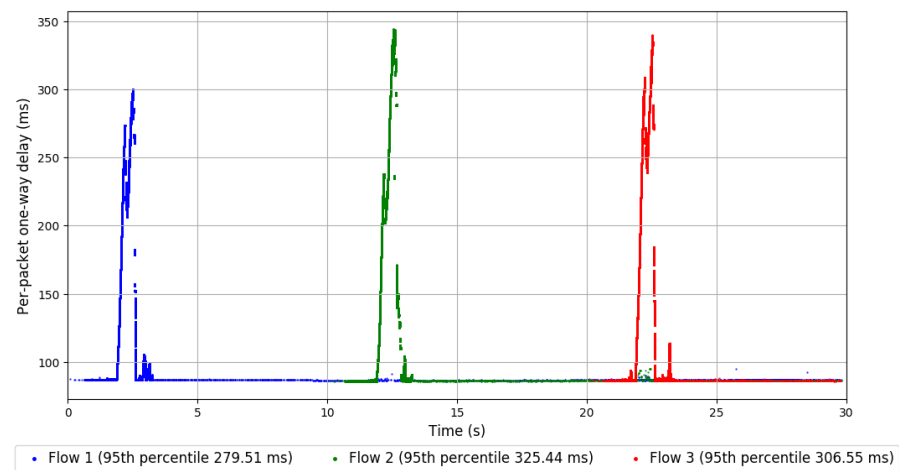
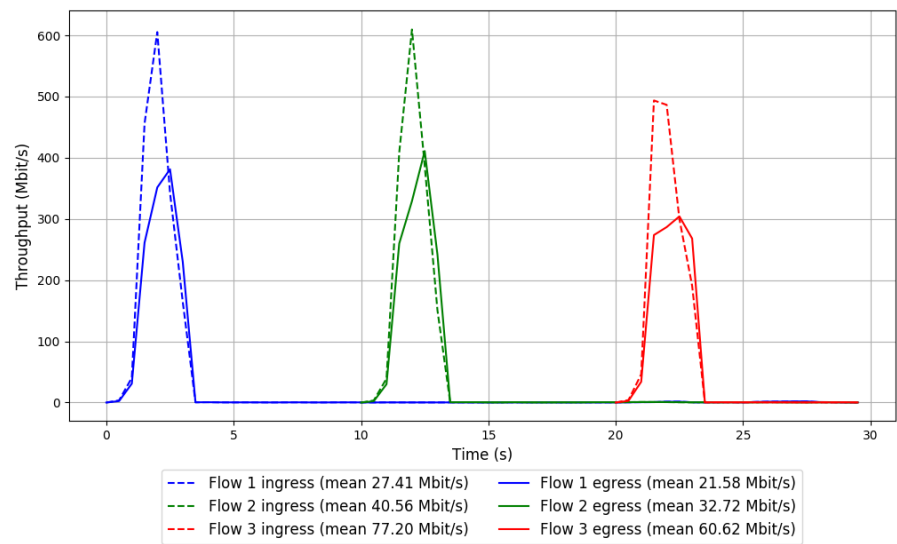


```
Run 1: Statistics of FillP

Start at: 2018-01-31 07:16:45
End at: 2018-01-31 07:17:15

# Below is generated by plot.py at 2018-01-31 14:09:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.01 Mbit/s
95th percentile per-packet one-way delay: 300.656 ms
Loss rate: 21.60%
-- Flow 1:
Average throughput: 21.58 Mbit/s
95th percentile per-packet one-way delay: 279.515 ms
Loss rate: 21.70%
-- Flow 2:
Average throughput: 32.72 Mbit/s
95th percentile per-packet one-way delay: 325.440 ms
Loss rate: 20.11%
-- Flow 3:
Average throughput: 60.62 Mbit/s
95th percentile per-packet one-way delay: 306.547 ms
Loss rate: 23.05%
```


Run 1: Report of FillP — Data Link

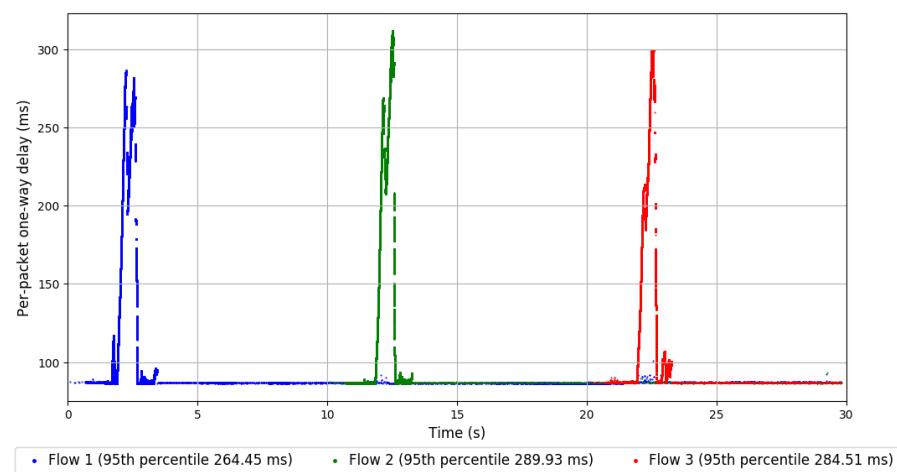
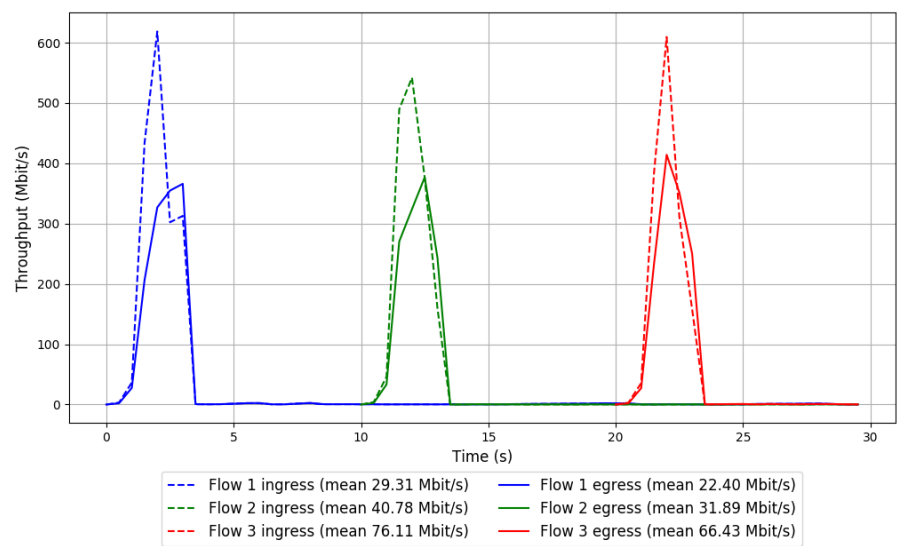


```
Run 2: Statistics of FillP

Start at: 2018-01-31 07:35:23
End at: 2018-01-31 07:35:53

# Below is generated by plot.py at 2018-01-31 14:09:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.13 Mbit/s
95th percentile per-packet one-way delay: 279.903 ms
Loss rate: 20.73%
-- Flow 1:
Average throughput: 22.40 Mbit/s
95th percentile per-packet one-way delay: 264.453 ms
Loss rate: 24.14%
-- Flow 2:
Average throughput: 31.89 Mbit/s
95th percentile per-packet one-way delay: 289.929 ms
Loss rate: 22.58%
-- Flow 3:
Average throughput: 66.43 Mbit/s
95th percentile per-packet one-way delay: 284.506 ms
Loss rate: 14.77%
```

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-01-31 07:53:37

End at: 2018-01-31 07:54:07

Below is generated by plot.py at 2018-01-31 14:09:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.22 Mbit/s

95th percentile per-packet one-way delay: 281.615 ms

Loss rate: 22.32%

-- Flow 1:

Average throughput: 22.77 Mbit/s

95th percentile per-packet one-way delay: 295.378 ms

Loss rate: 23.62%

-- Flow 2:

Average throughput: 31.85 Mbit/s

95th percentile per-packet one-way delay: 266.283 ms

Loss rate: 21.12%

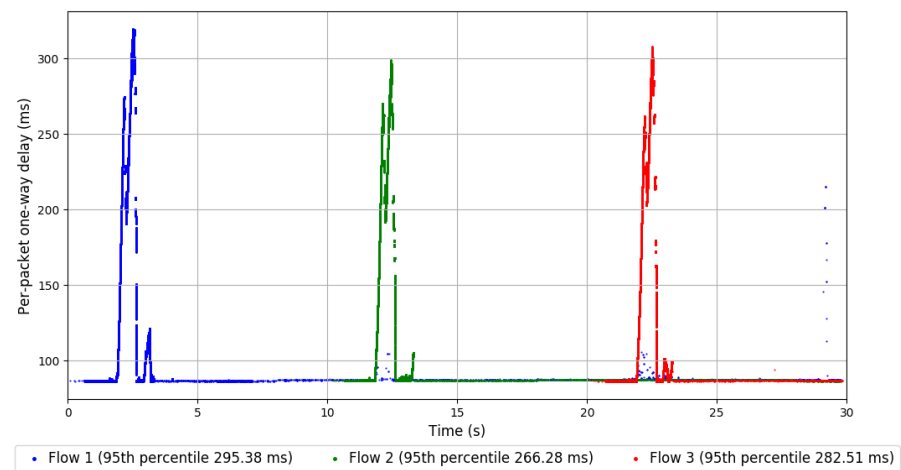
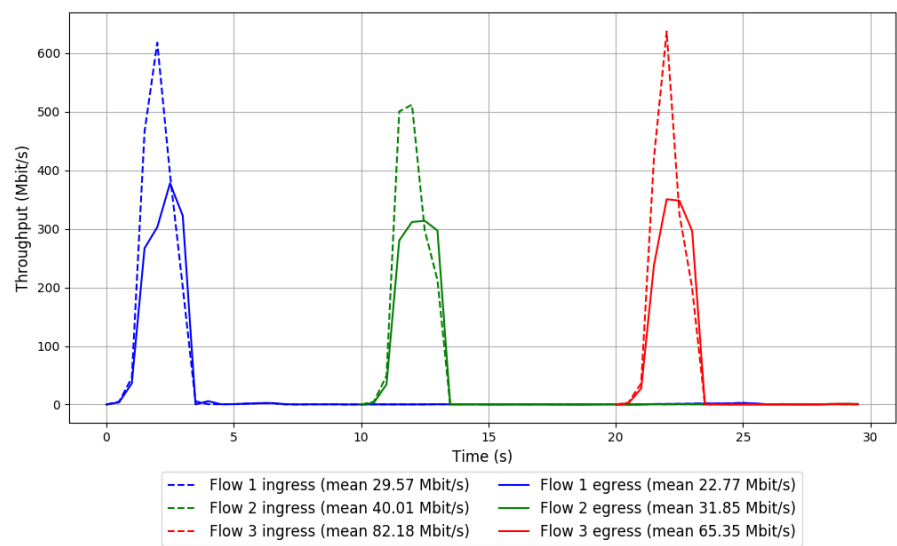
-- Flow 3:

Average throughput: 65.35 Mbit/s

95th percentile per-packet one-way delay: 282.509 ms

Loss rate: 22.09%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-01-31 08:12:02

End at: 2018-01-31 08:12:32

Below is generated by plot.py at 2018-01-31 14:10:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 66.33 Mbit/s

95th percentile per-packet one-way delay: 231.028 ms

Loss rate: 18.54%

-- Flow 1:

Average throughput: 22.12 Mbit/s

95th percentile per-packet one-way delay: 236.429 ms

Loss rate: 21.15%

-- Flow 2:

Average throughput: 33.34 Mbit/s

95th percentile per-packet one-way delay: 242.531 ms

Loss rate: 22.28%

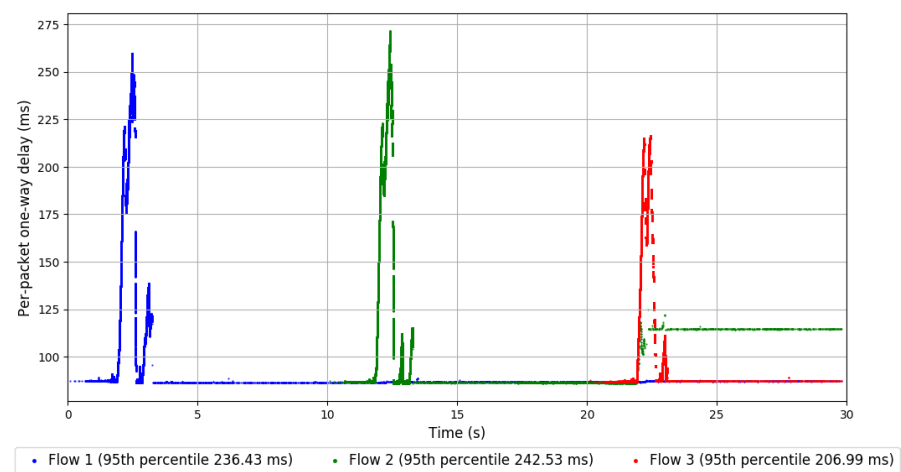
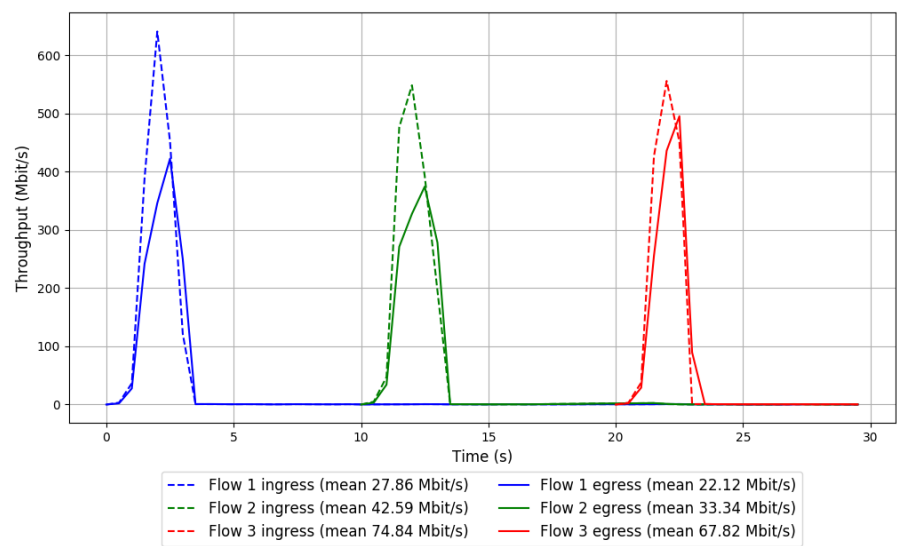
-- Flow 3:

Average throughput: 67.82 Mbit/s

95th percentile per-packet one-way delay: 206.985 ms

Loss rate: 11.33%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-01-31 08:30:05

End at: 2018-01-31 08:30:35

Below is generated by plot.py at 2018-01-31 14:10:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.13 Mbit/s

95th percentile per-packet one-way delay: 288.072 ms

Loss rate: 19.73%

-- Flow 1:

Average throughput: 21.53 Mbit/s

95th percentile per-packet one-way delay: 309.540 ms

Loss rate: 22.79%

-- Flow 2:

Average throughput: 37.85 Mbit/s

95th percentile per-packet one-way delay: 282.684 ms

Loss rate: 16.93%

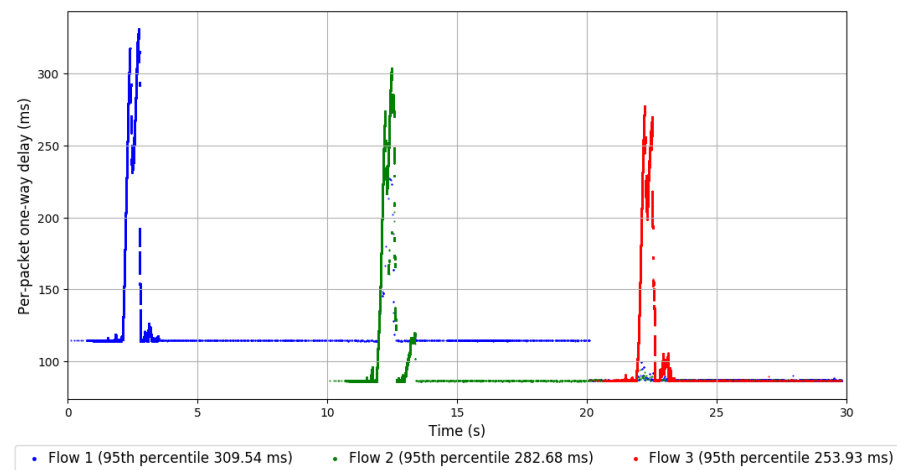
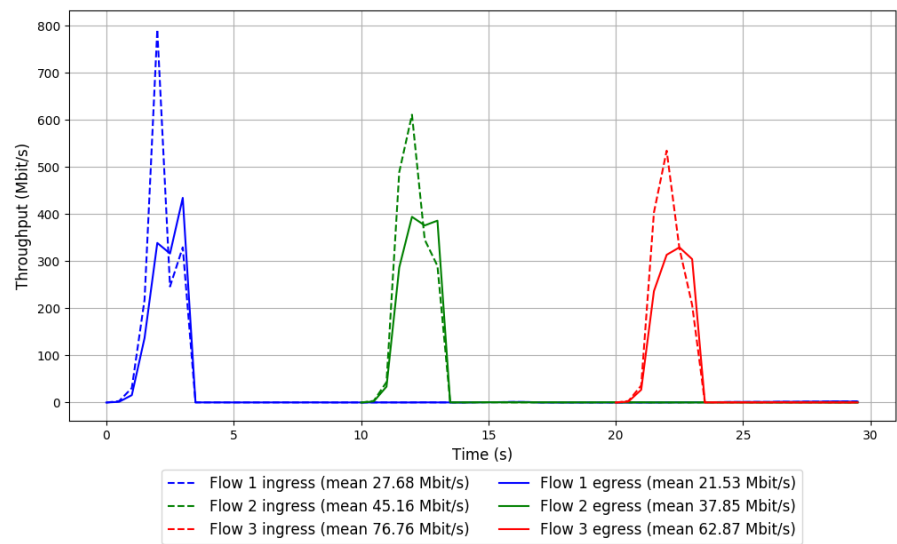
-- Flow 3:

Average throughput: 62.87 Mbit/s

95th percentile per-packet one-way delay: 253.926 ms

Loss rate: 19.72%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-01-31 08:48:03

End at: 2018-01-31 08:48:33

Below is generated by plot.py at 2018-01-31 14:10:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.50 Mbit/s

95th percentile per-packet one-way delay: 284.009 ms

Loss rate: 19.47%

-- Flow 1:

Average throughput: 24.10 Mbit/s

95th percentile per-packet one-way delay: 285.569 ms

Loss rate: 16.40%

-- Flow 2:

Average throughput: 33.38 Mbit/s

95th percentile per-packet one-way delay: 236.023 ms

Loss rate: 21.95%

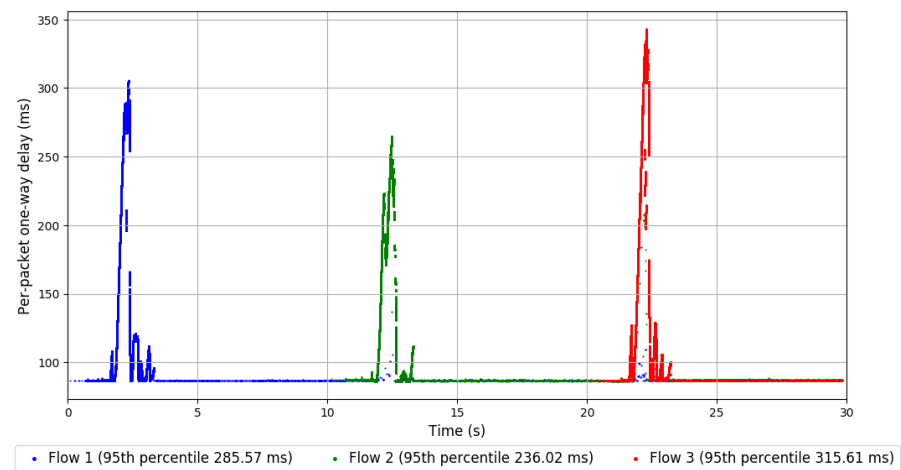
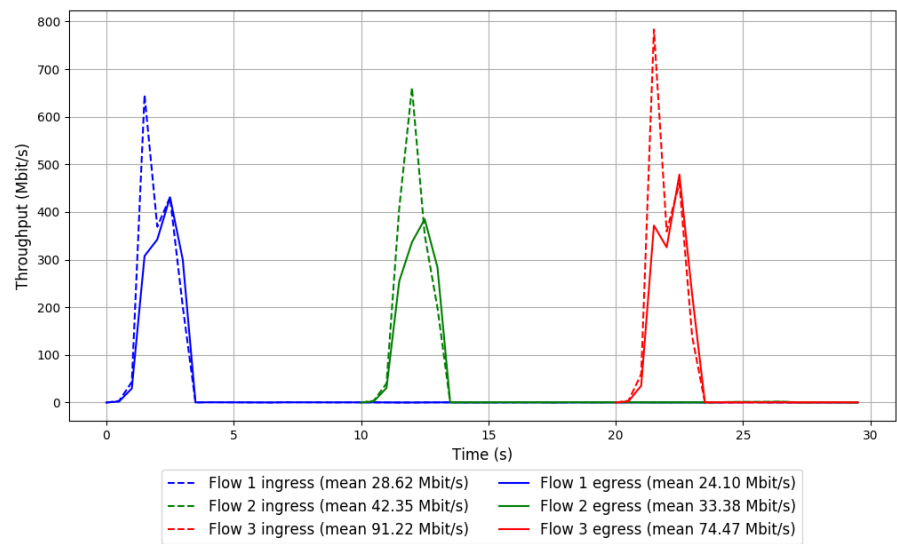
-- Flow 3:

Average throughput: 74.47 Mbit/s

95th percentile per-packet one-way delay: 315.606 ms

Loss rate: 20.09%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-01-31 09:05:53

End at: 2018-01-31 09:06:23

Below is generated by plot.py at 2018-01-31 14:11:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.70 Mbit/s

95th percentile per-packet one-way delay: 288.730 ms

Loss rate: 19.49%

-- Flow 1:

Average throughput: 22.60 Mbit/s

95th percentile per-packet one-way delay: 287.641 ms

Loss rate: 19.41%

-- Flow 2:

Average throughput: 32.97 Mbit/s

95th percentile per-packet one-way delay: 286.771 ms

Loss rate: 21.47%

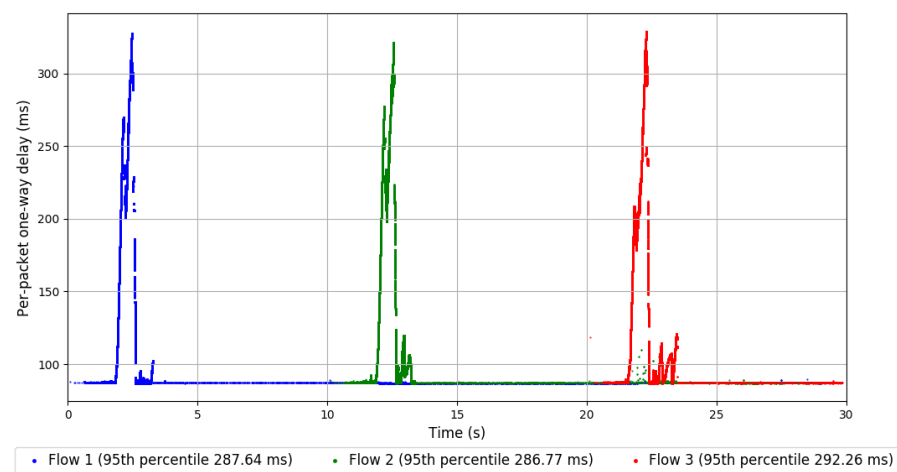
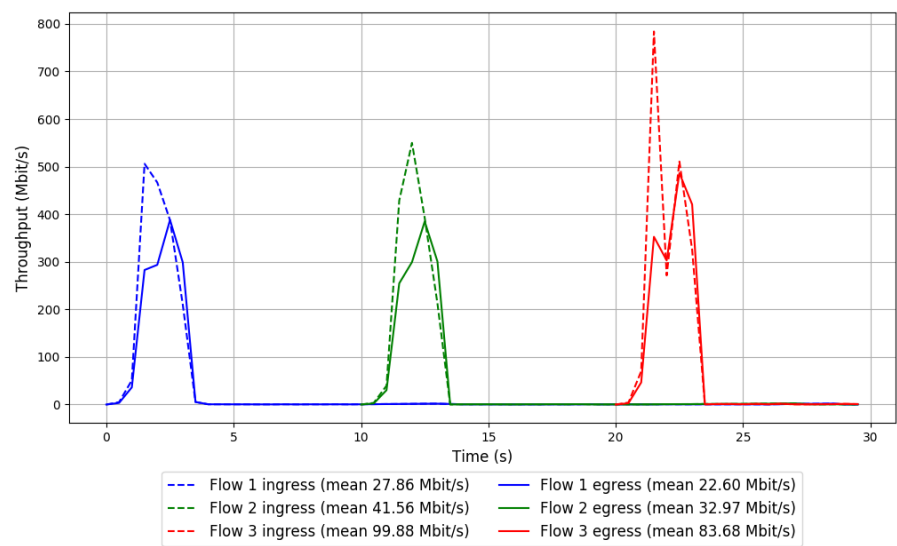
-- Flow 3:

Average throughput: 83.68 Mbit/s

95th percentile per-packet one-way delay: 292.259 ms

Loss rate: 17.91%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-01-31 09:24:04

End at: 2018-01-31 09:24:34

Below is generated by plot.py at 2018-01-31 14:19:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 278.71 Mbit/s

95th percentile per-packet one-way delay: 191.210 ms

Loss rate: 10.83%

-- Flow 1:

Average throughput: 21.71 Mbit/s

95th percentile per-packet one-way delay: 267.885 ms

Loss rate: 23.43%

-- Flow 2:

Average throughput: 356.65 Mbit/s

95th percentile per-packet one-way delay: 173.726 ms

Loss rate: 8.59%

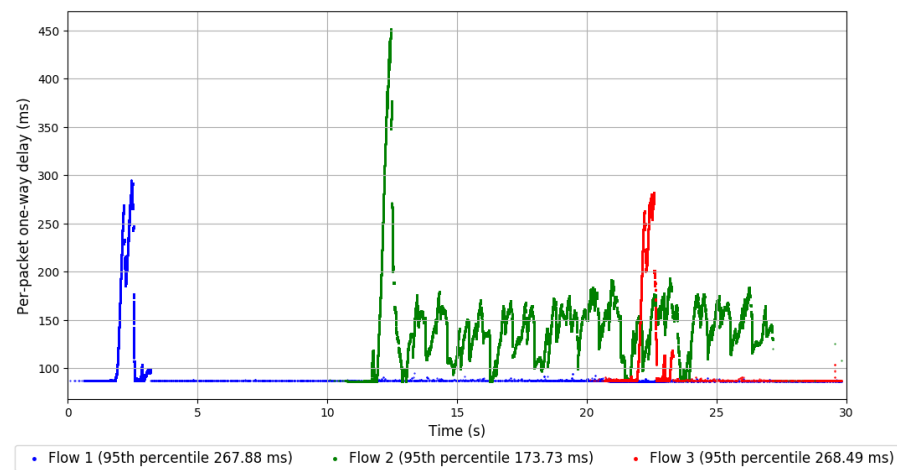
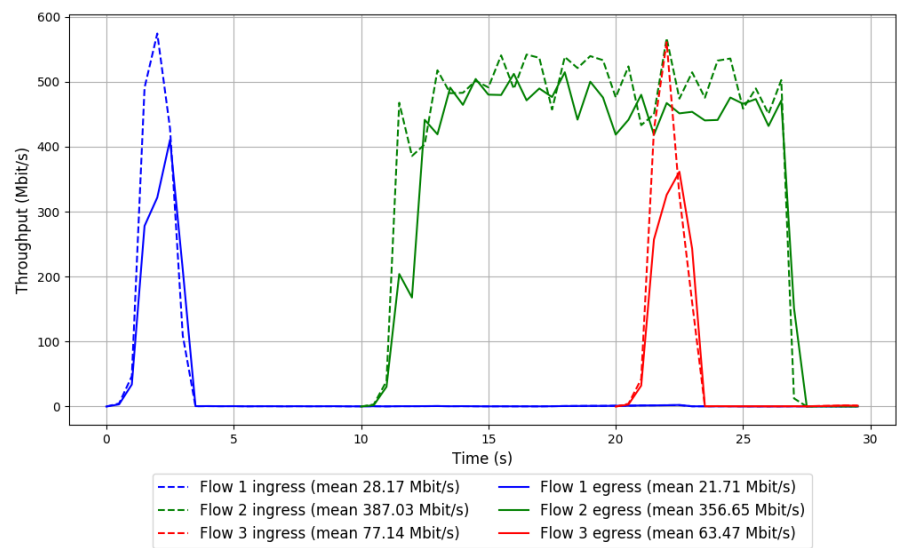
-- Flow 3:

Average throughput: 63.47 Mbit/s

95th percentile per-packet one-way delay: 268.489 ms

Loss rate: 19.41%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-01-31 09:42:21

End at: 2018-01-31 09:42:51

Below is generated by plot.py at 2018-01-31 14:19:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 72.29 Mbit/s

95th percentile per-packet one-way delay: 266.793 ms

Loss rate: 18.99%

-- Flow 1:

Average throughput: 21.34 Mbit/s

95th percentile per-packet one-way delay: 272.447 ms

Loss rate: 22.03%

-- Flow 2:

Average throughput: 43.47 Mbit/s

95th percentile per-packet one-way delay: 266.115 ms

Loss rate: 15.82%

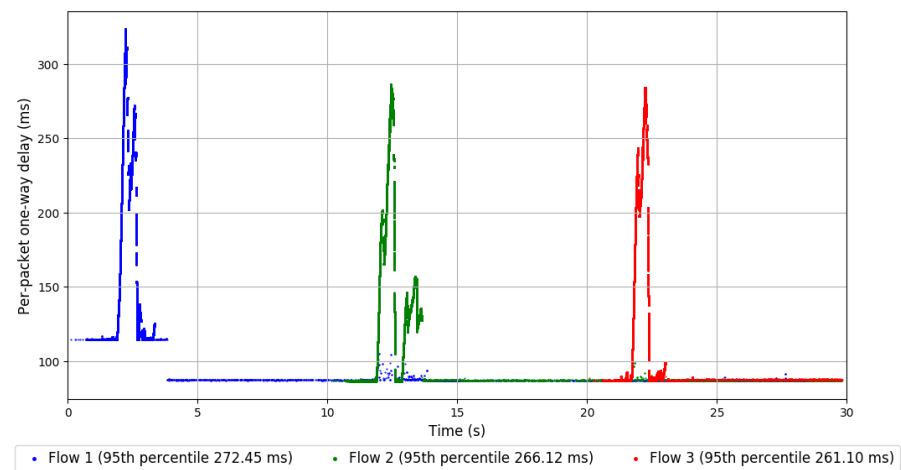
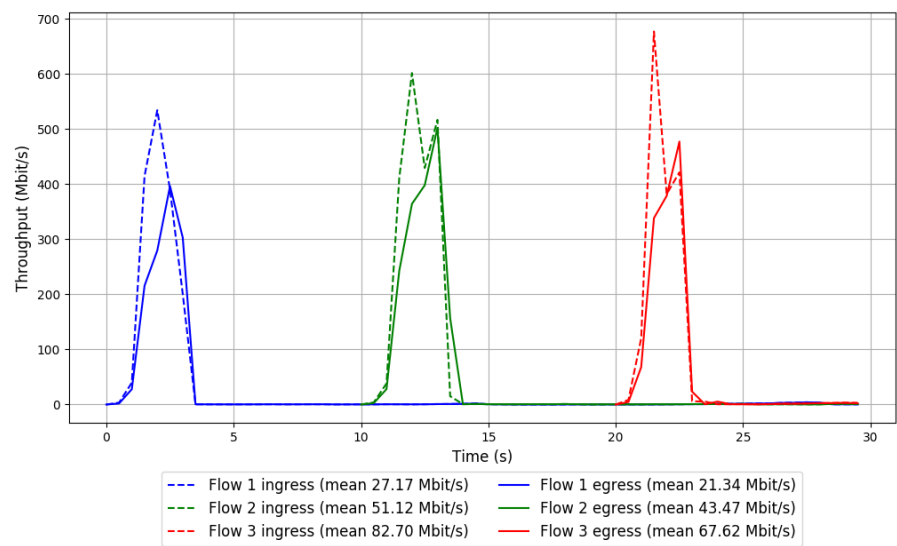
-- Flow 3:

Average throughput: 67.62 Mbit/s

95th percentile per-packet one-way delay: 261.102 ms

Loss rate: 19.91%

Run 9: Report of FillP — Data Link

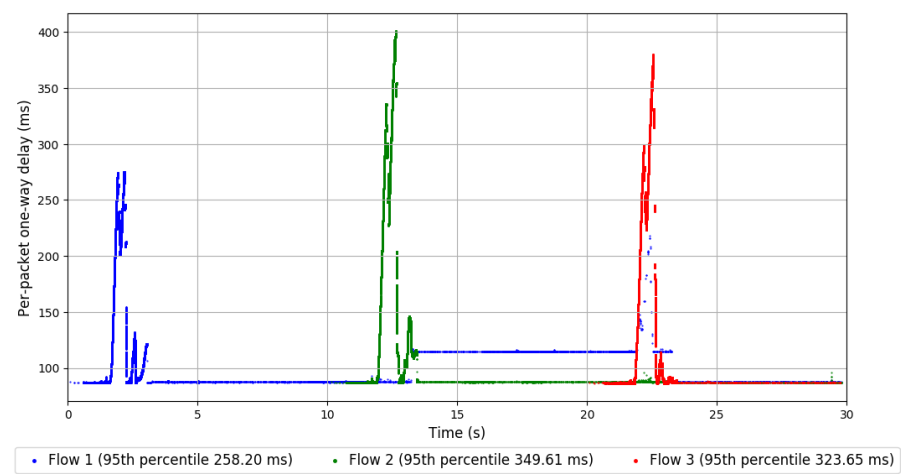
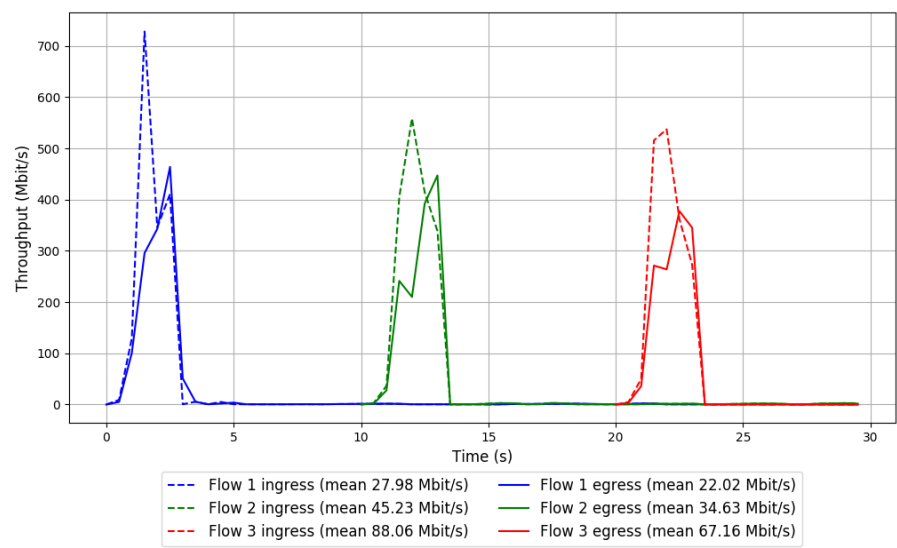


```
Run 10: Statistics of FillP

Start at: 2018-01-31 10:00:12
End at: 2018-01-31 10:00:42

# Below is generated by plot.py at 2018-01-31 14:19:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.82 Mbit/s
95th percentile per-packet one-way delay: 312.835 ms
Loss rate: 23.90%
-- Flow 1:
Average throughput: 22.02 Mbit/s
95th percentile per-packet one-way delay: 258.198 ms
Loss rate: 21.82%
-- Flow 2:
Average throughput: 34.63 Mbit/s
95th percentile per-packet one-way delay: 349.611 ms
Loss rate: 24.25%
-- Flow 3:
Average throughput: 67.16 Mbit/s
95th percentile per-packet one-way delay: 323.655 ms
Loss rate: 25.53%
```

Run 10: Report of FillP — Data Link

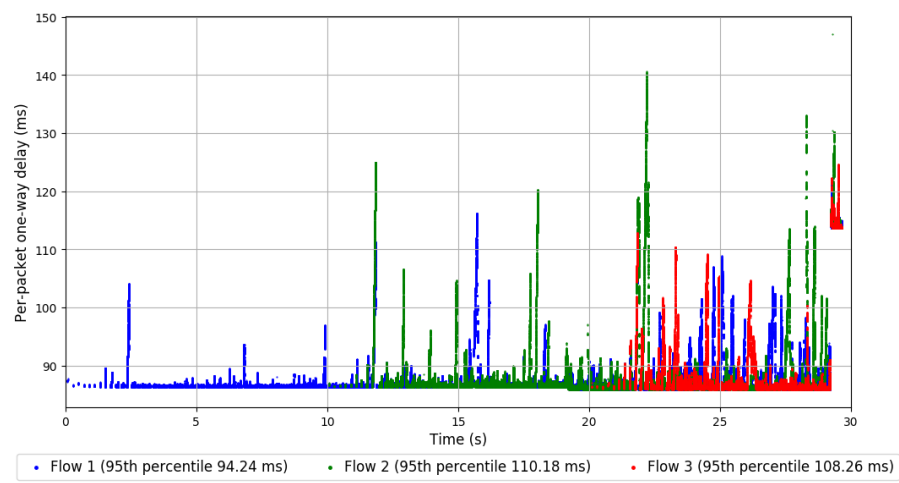
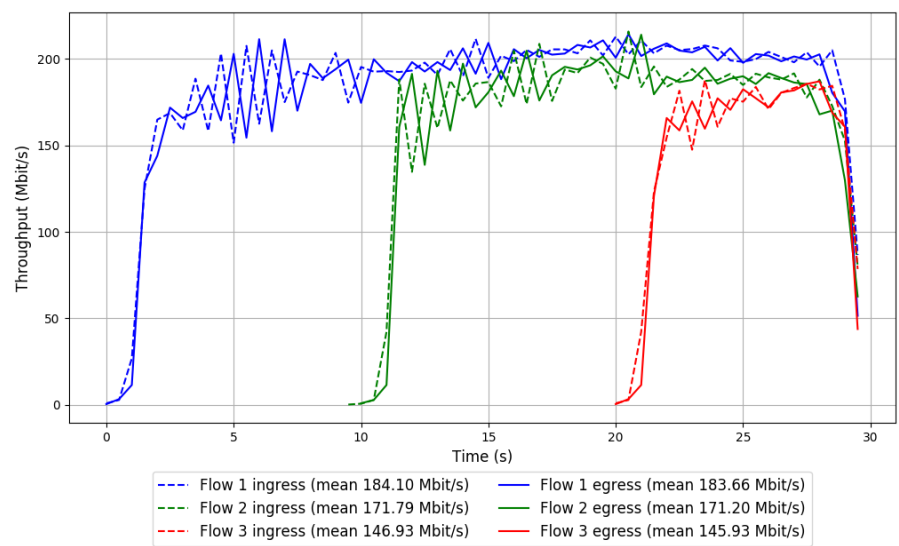


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-01-31 07:10:45
End at: 2018-01-31 07:11:15

# Below is generated by plot.py at 2018-01-31 14:19:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 344.07 Mbit/s
95th percentile per-packet one-way delay: 100.203 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 183.66 Mbit/s
95th percentile per-packet one-way delay: 94.244 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 171.20 Mbit/s
95th percentile per-packet one-way delay: 110.182 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 145.93 Mbit/s
95th percentile per-packet one-way delay: 108.256 ms
Loss rate: 2.74%
```

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

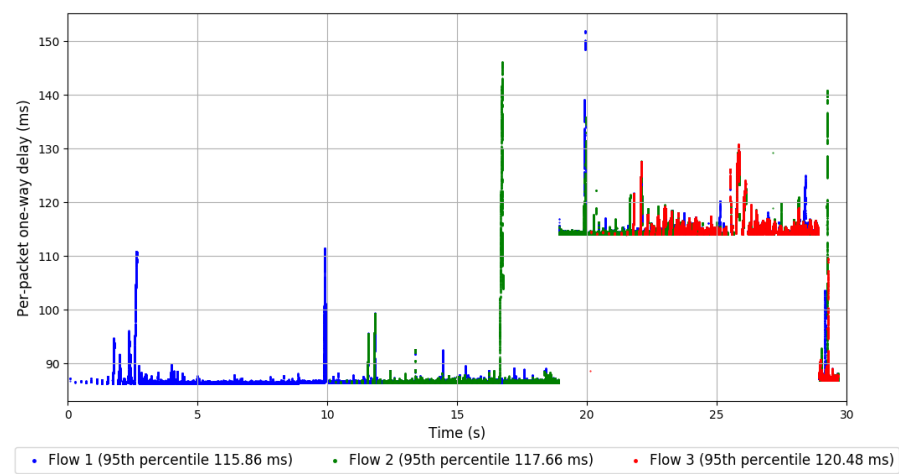
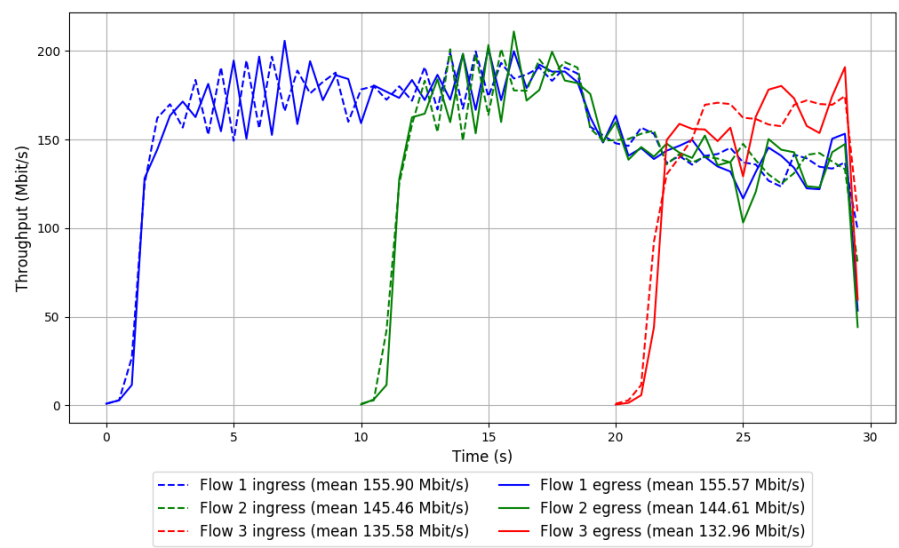


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-01-31 07:29:16
End at: 2018-01-31 07:29:46

# Below is generated by plot.py at 2018-01-31 14:19:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 294.08 Mbit/s
95th percentile per-packet one-way delay: 117.022 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 155.57 Mbit/s
95th percentile per-packet one-way delay: 115.864 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 144.61 Mbit/s
95th percentile per-packet one-way delay: 117.657 ms
Loss rate: 1.61%
-- Flow 3:
Average throughput: 132.96 Mbit/s
95th percentile per-packet one-way delay: 120.481 ms
Loss rate: 3.97%
```

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



Run 3: Statistics of Indigo-1-32

Start at: 2018-01-31 07:47:39

End at: 2018-01-31 07:48:09

Below is generated by plot.py at 2018-01-31 14:19:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 340.86 Mbit/s

95th percentile per-packet one-way delay: 94.383 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 183.40 Mbit/s

95th percentile per-packet one-way delay: 97.455 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 162.36 Mbit/s

95th percentile per-packet one-way delay: 95.423 ms

Loss rate: 1.05%

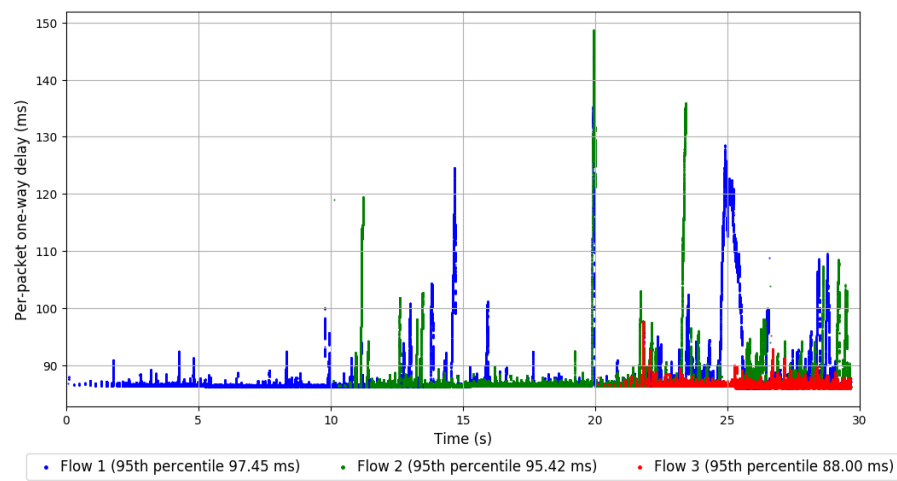
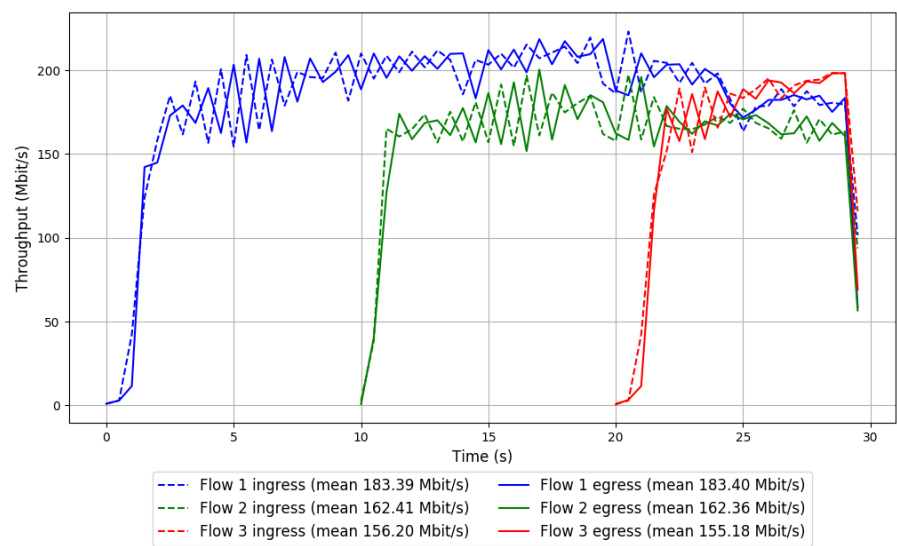
-- Flow 3:

Average throughput: 155.18 Mbit/s

95th percentile per-packet one-way delay: 88.001 ms

Loss rate: 2.68%

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



Run 4: Statistics of Indigo-1-32

Start at: 2018-01-31 08:05:52

End at: 2018-01-31 08:06:22

Below is generated by plot.py at 2018-01-31 14:19:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 363.50 Mbit/s

95th percentile per-packet one-way delay: 89.504 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 185.39 Mbit/s

95th percentile per-packet one-way delay: 88.733 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 203.03 Mbit/s

95th percentile per-packet one-way delay: 91.925 ms

Loss rate: 0.96%

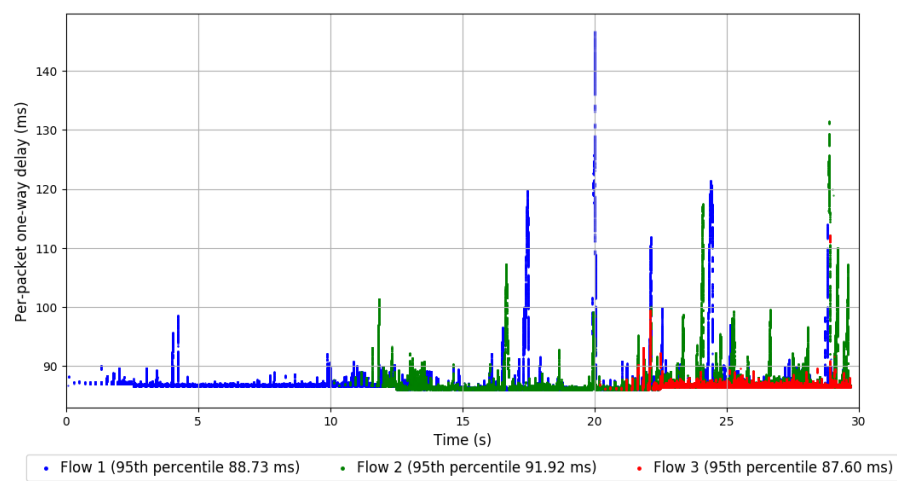
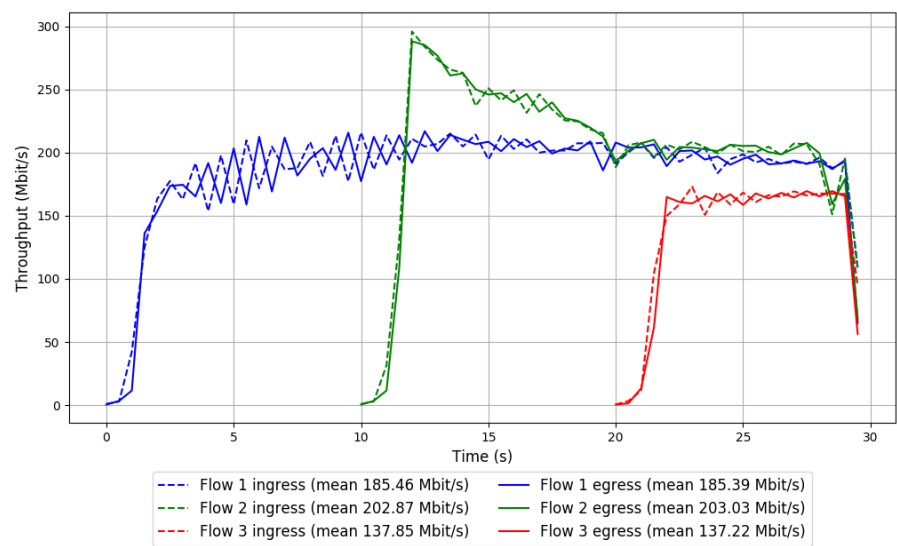
-- Flow 3:

Average throughput: 137.22 Mbit/s

95th percentile per-packet one-way delay: 87.600 ms

Loss rate: 2.53%

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



Run 5: Statistics of Indigo-1-32

Start at: 2018-01-31 08:24:00

End at: 2018-01-31 08:24:30

Below is generated by plot.py at 2018-01-31 14:19:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 301.17 Mbit/s

95th percentile per-packet one-way delay: 114.619 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 140.89 Mbit/s

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

Loss rate: 0.73%

-- Flow 2:

Average throughput: 166.63 Mbit/s

95th percentile per-packet one-way delay: 114.652 ms

Loss rate: 1.18%

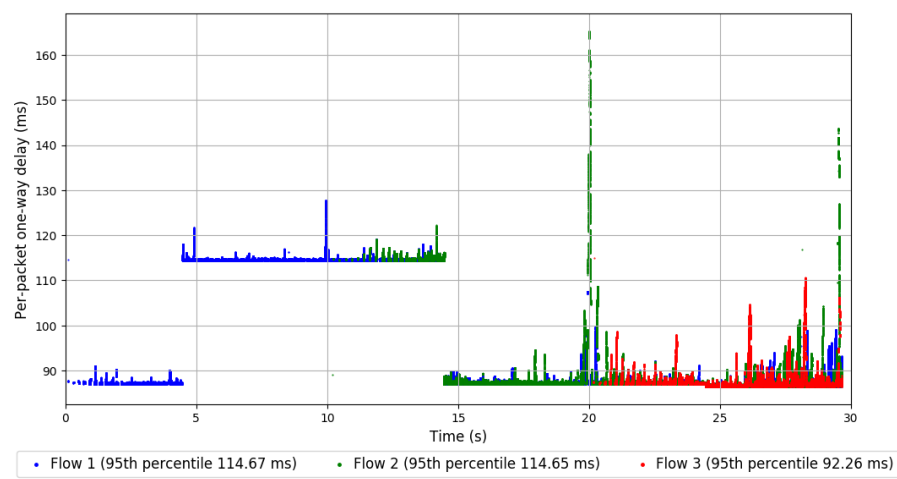
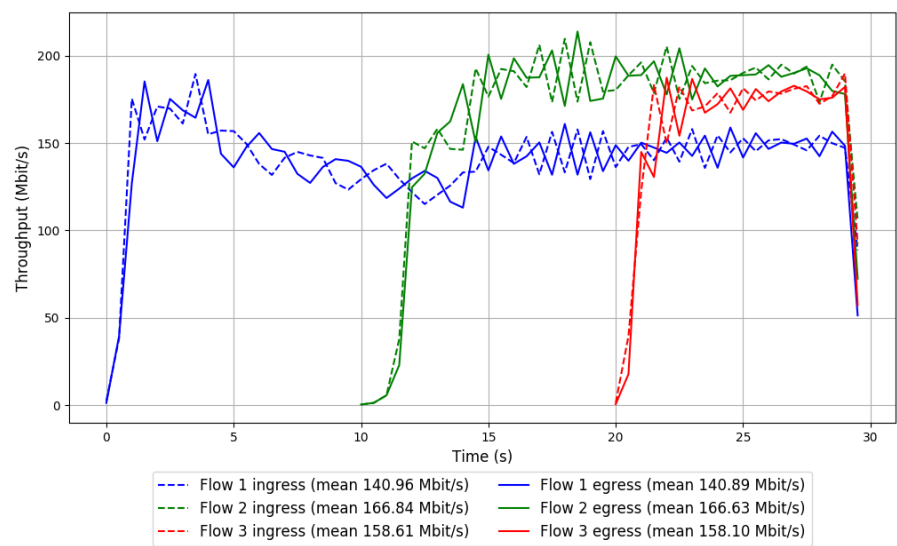
-- Flow 3:

Average throughput: 158.10 Mbit/s

95th percentile per-packet one-way delay: 92.262 ms

Loss rate: 2.40%

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



Run 6: Statistics of Indigo-1-32

Start at: 2018-01-31 08:42:02

End at: 2018-01-31 08:42:32

Below is generated by plot.py at 2018-01-31 14:19:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 334.99 Mbit/s

95th percentile per-packet one-way delay: 114.417 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 153.20 Mbit/s

95th percentile per-packet one-way delay: 114.501 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 205.13 Mbit/s

95th percentile per-packet one-way delay: 114.432 ms

Loss rate: 0.97%

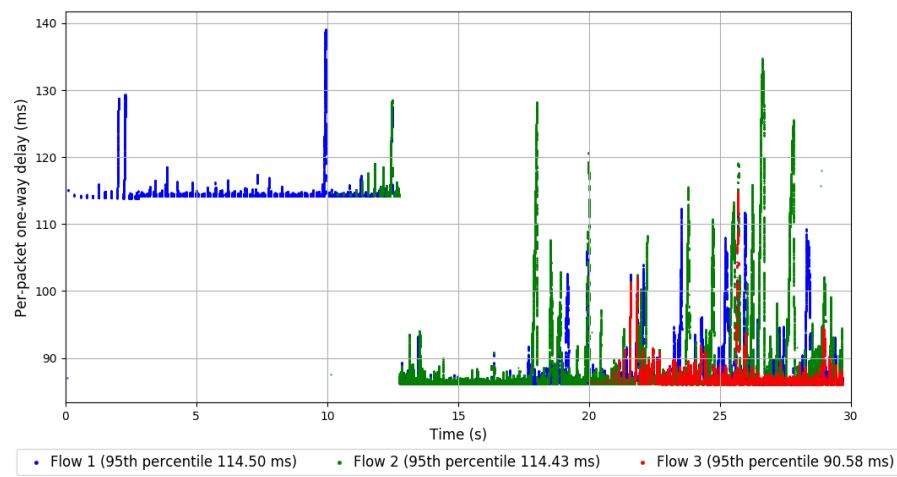
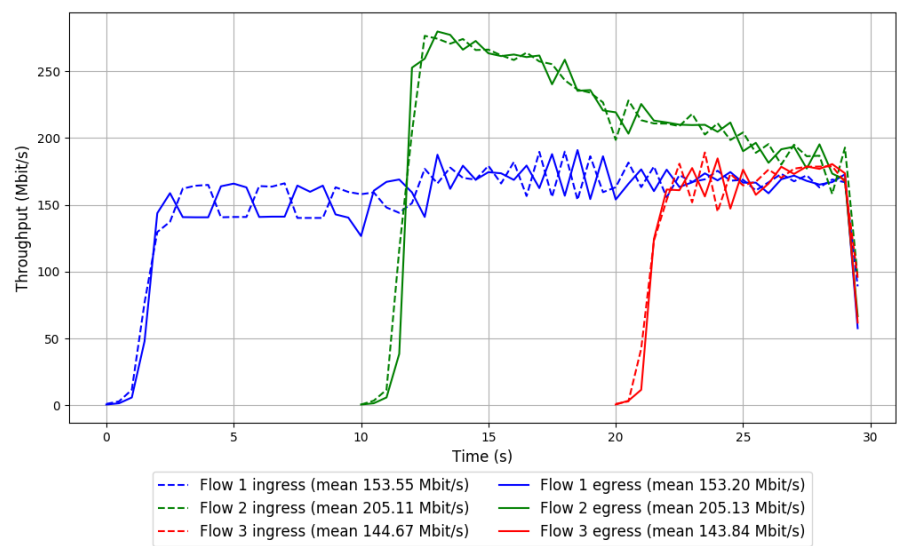
-- Flow 3:

Average throughput: 143.84 Mbit/s

95th percentile per-packet one-way delay: 90.579 ms

Loss rate: 2.34%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-01-31 09:00:01

End at: 2018-01-31 09:00:31

Below is generated by plot.py at 2018-01-31 14:19:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 283.78 Mbit/s

95th percentile per-packet one-way delay: 90.890 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 132.41 Mbit/s

95th percentile per-packet one-way delay: 90.403 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 152.18 Mbit/s

95th percentile per-packet one-way delay: 91.562 ms

Loss rate: 1.13%

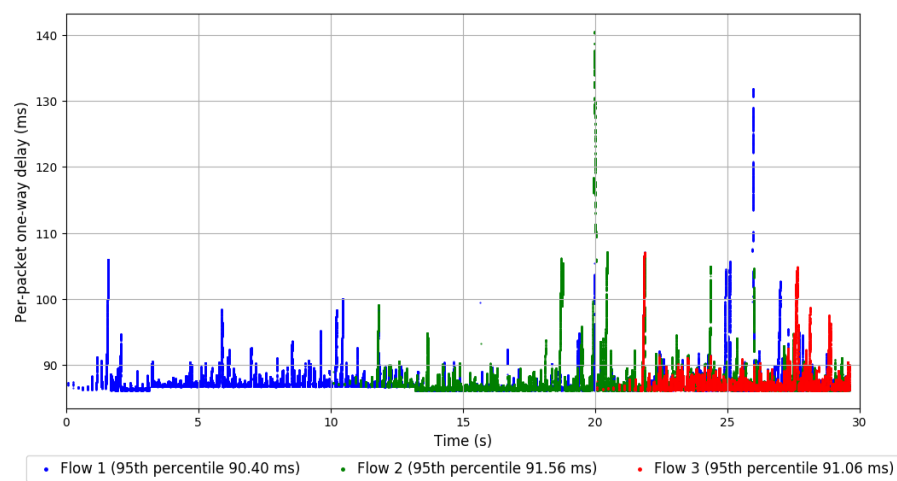
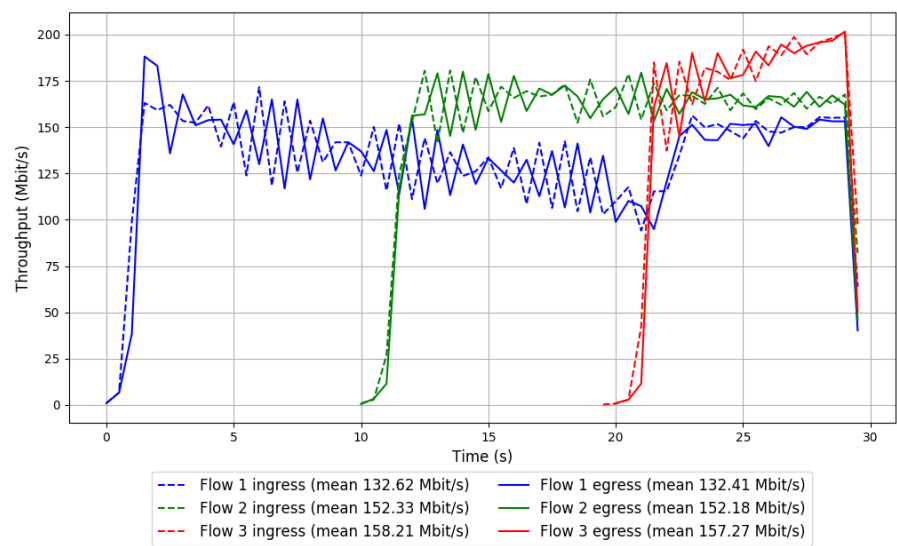
-- Flow 3:

Average throughput: 157.27 Mbit/s

95th percentile per-packet one-way delay: 91.060 ms

Loss rate: 2.64%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

Start at: 2018-01-31 09:18:00

End at: 2018-01-31 09:18:30

Below is generated by plot.py at 2018-01-31 14:21:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 315.32 Mbit/s

95th percentile per-packet one-way delay: 88.696 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 163.34 Mbit/s

95th percentile per-packet one-way delay: 88.911 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 151.89 Mbit/s

95th percentile per-packet one-way delay: 88.578 ms

Loss rate: 1.09%

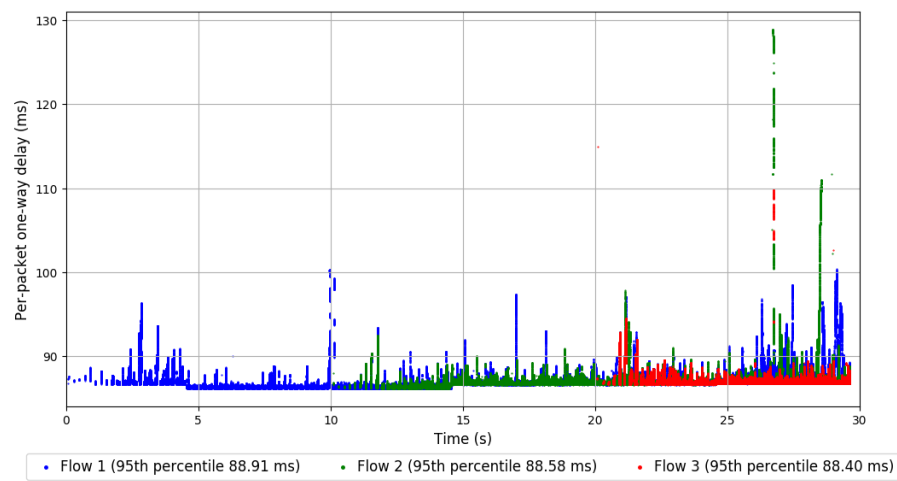
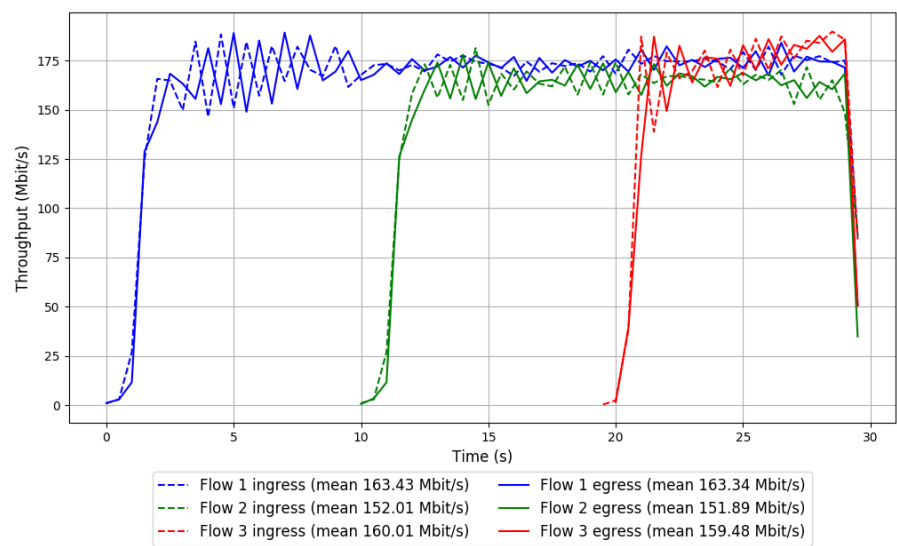
-- Flow 3:

Average throughput: 159.48 Mbit/s

95th percentile per-packet one-way delay: 88.397 ms

Loss rate: 2.40%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-01-31 09:36:20

End at: 2018-01-31 09:36:50

Below is generated by plot.py at 2018-01-31 14:21:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 231.36 Mbit/s

95th percentile per-packet one-way delay: 88.375 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 165.23 Mbit/s

95th percentile per-packet one-way delay: 87.935 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 18.82 Mbit/s

95th percentile per-packet one-way delay: 89.953 ms

Loss rate: 1.74%

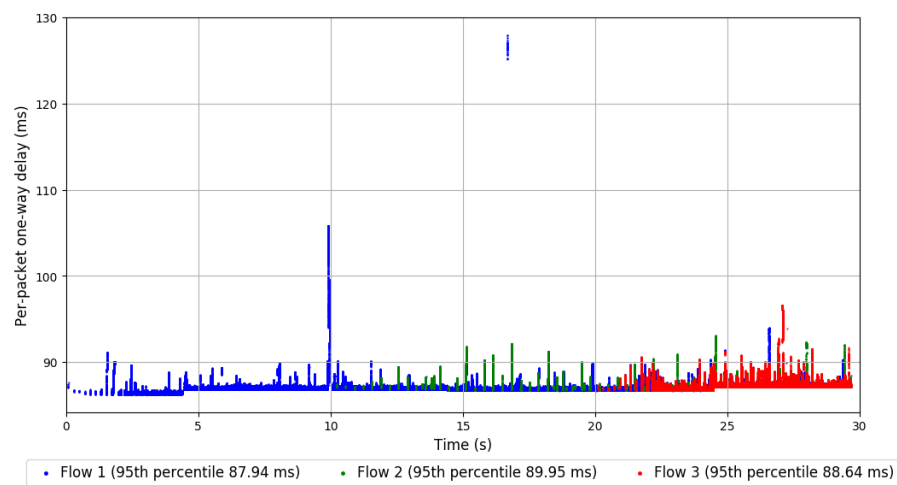
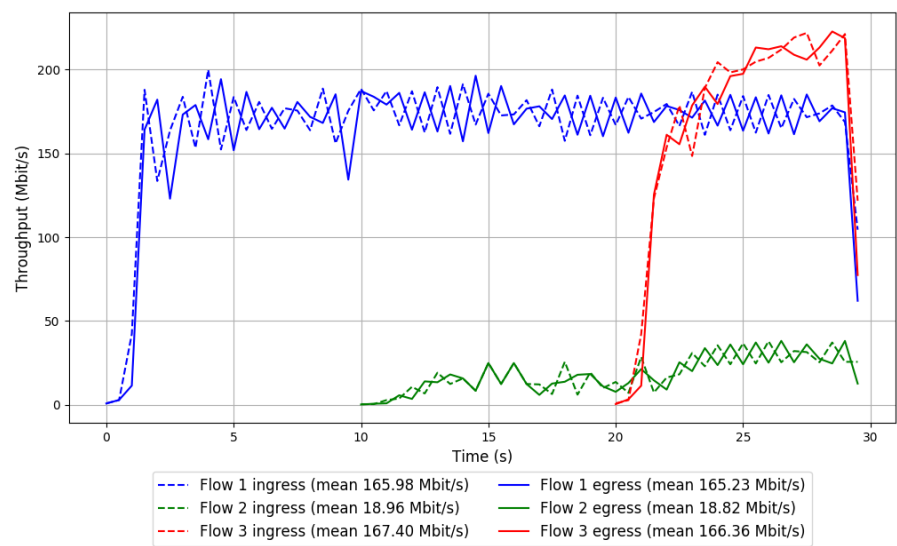
-- Flow 3:

Average throughput: 166.36 Mbit/s

95th percentile per-packet one-way delay: 88.636 ms

Loss rate: 2.40%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

Start at: 2018-01-31 09:54:23

End at: 2018-01-31 09:54:53

Below is generated by plot.py at 2018-01-31 14:21:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 280.76 Mbit/s

95th percentile per-packet one-way delay: 114.635 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 177.15 Mbit/s

95th percentile per-packet one-way delay: 114.617 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 155.73 Mbit/s

95th percentile per-packet one-way delay: 114.652 ms

Loss rate: 0.75%

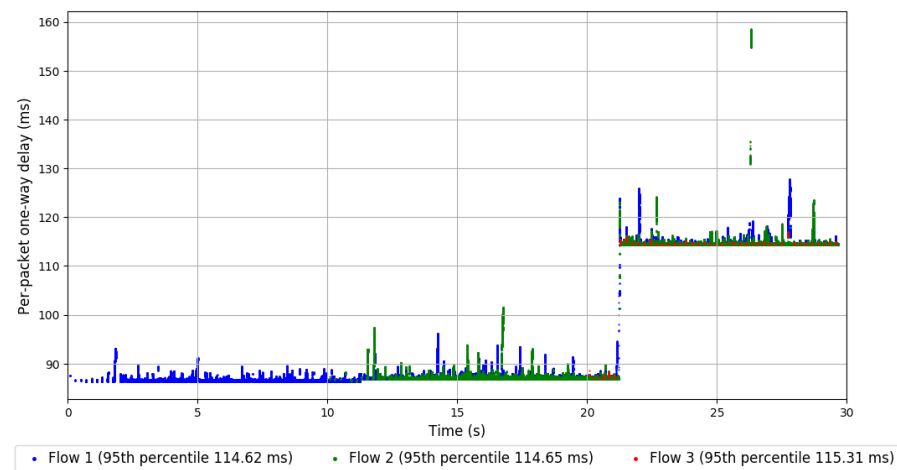
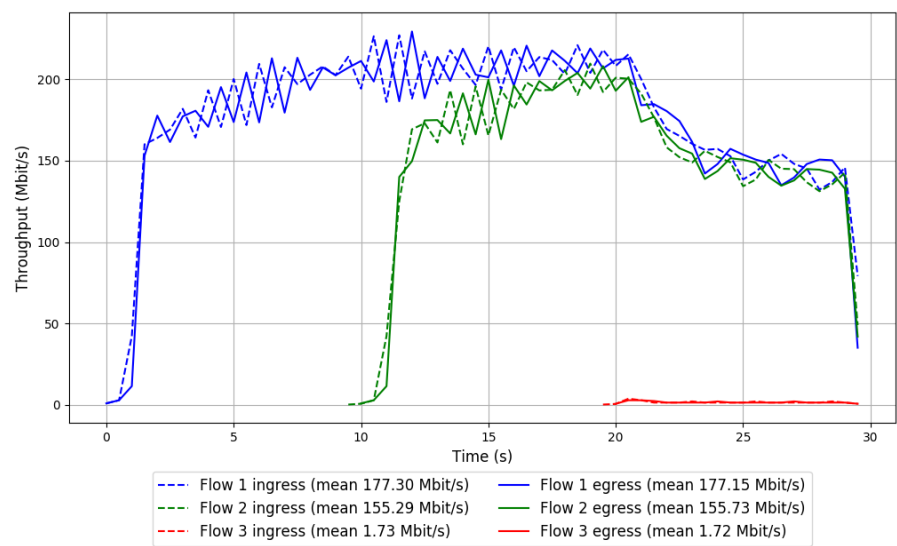
-- Flow 3:

Average throughput: 1.72 Mbit/s

95th percentile per-packet one-way delay: 115.314 ms

Loss rate: 2.58%

Run 10: Report of Indigo-1-32 — Data Link



Run 1: Statistics of Vivace-latency

Start at: 2018-01-31 07:22:42

End at: 2018-01-31 07:23:12

Below is generated by plot.py at 2018-01-31 14:26:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 460.78 Mbit/s

95th percentile per-packet one-way delay: 222.559 ms

Loss rate: 1.63%

-- Flow 1:

Average throughput: 232.83 Mbit/s

95th percentile per-packet one-way delay: 117.187 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 262.08 Mbit/s

95th percentile per-packet one-way delay: 237.535 ms

Loss rate: 0.82%

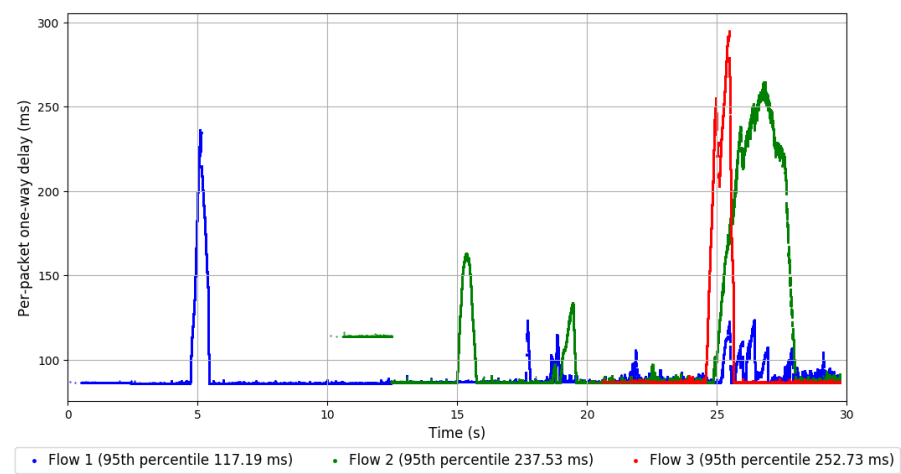
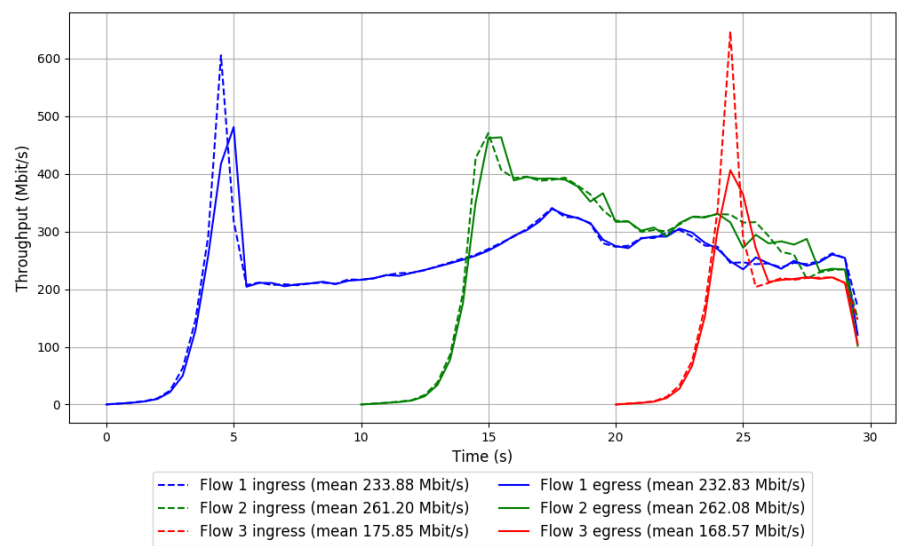
-- Flow 3:

Average throughput: 168.57 Mbit/s

95th percentile per-packet one-way delay: 252.730 ms

Loss rate: 6.12%

Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-01-31 07:41:14

End at: 2018-01-31 07:41:44

Below is generated by plot.py at 2018-01-31 14:26:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 450.82 Mbit/s

95th percentile per-packet one-way delay: 253.092 ms

Loss rate: 2.17%

-- Flow 1:

Average throughput: 221.68 Mbit/s

95th percentile per-packet one-way delay: 260.951 ms

Loss rate: 1.43%

-- Flow 2:

Average throughput: 273.94 Mbit/s

95th percentile per-packet one-way delay: 288.613 ms

Loss rate: 2.75%

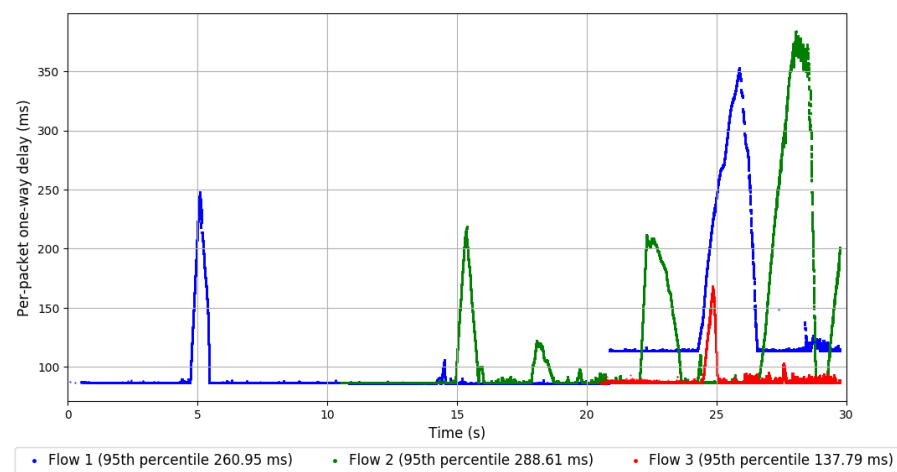
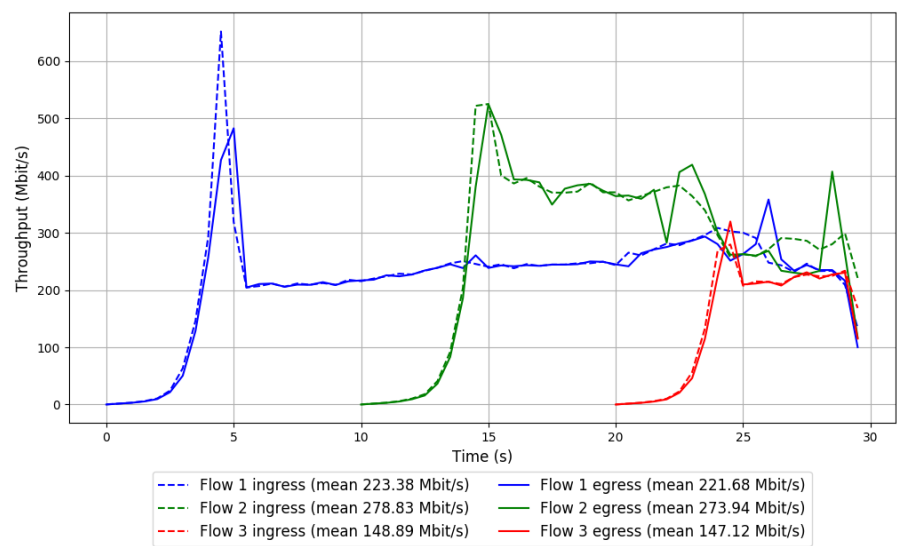
-- Flow 3:

Average throughput: 147.12 Mbit/s

95th percentile per-packet one-way delay: 137.791 ms

Loss rate: 3.28%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-01-31 07:59:22

End at: 2018-01-31 07:59:52

Below is generated by plot.py at 2018-01-31 14:27:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 512.37 Mbit/s

95th percentile per-packet one-way delay: 291.958 ms

Loss rate: 3.26%

-- Flow 1:

Average throughput: 318.17 Mbit/s

95th percentile per-packet one-way delay: 235.297 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 193.12 Mbit/s

95th percentile per-packet one-way delay: 98.546 ms

Loss rate: 1.25%

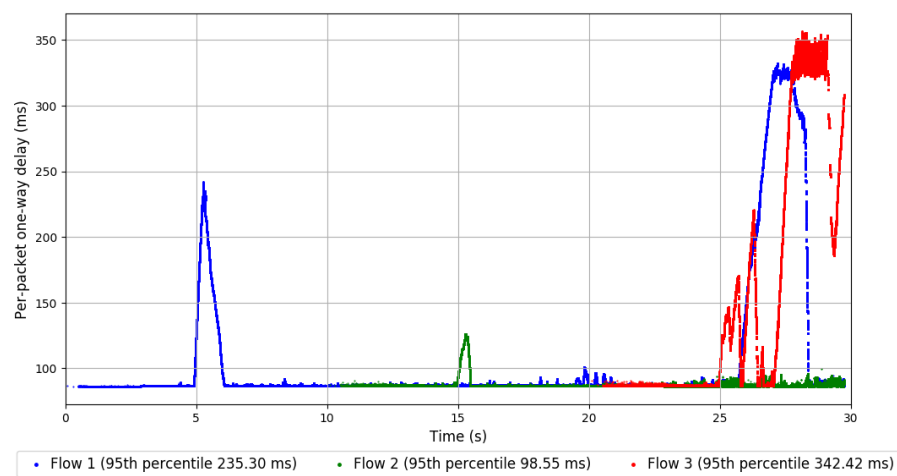
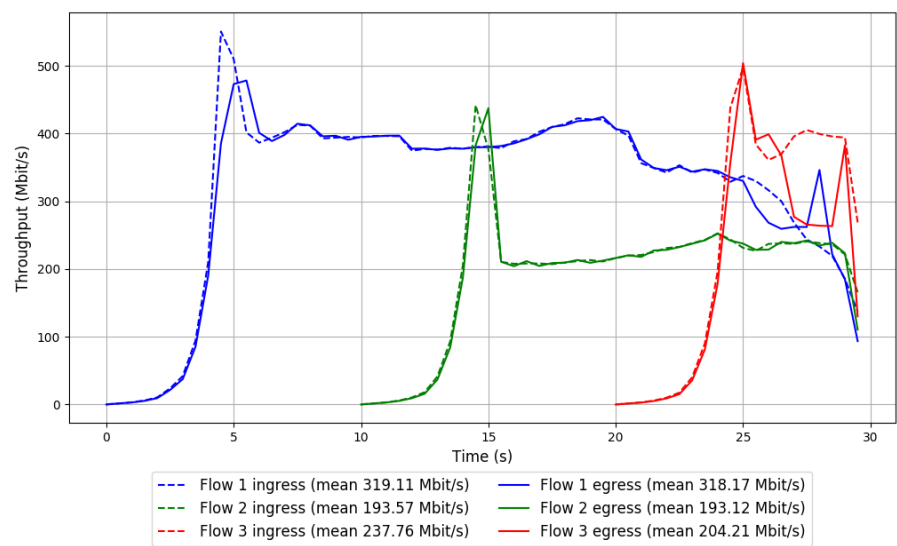
-- Flow 3:

Average throughput: 204.21 Mbit/s

95th percentile per-packet one-way delay: 342.424 ms

Loss rate: 15.91%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-01-31 08:17:50

End at: 2018-01-31 08:18:20

Below is generated by plot.py at 2018-01-31 14:27:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 374.87 Mbit/s

95th percentile per-packet one-way delay: 200.749 ms

Loss rate: 2.02%

-- Flow 1:

Average throughput: 145.41 Mbit/s

95th percentile per-packet one-way delay: 298.671 ms

Loss rate: 1.86%

-- Flow 2:

Average throughput: 265.63 Mbit/s

95th percentile per-packet one-way delay: 91.299 ms

Loss rate: 1.04%

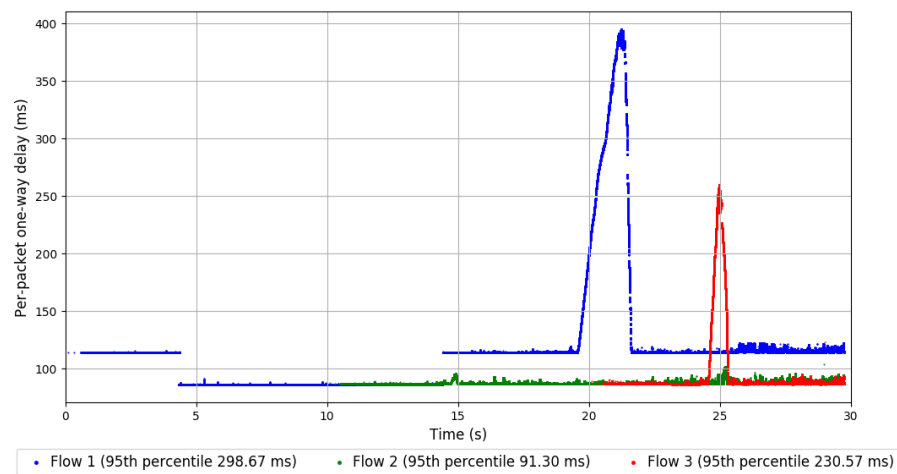
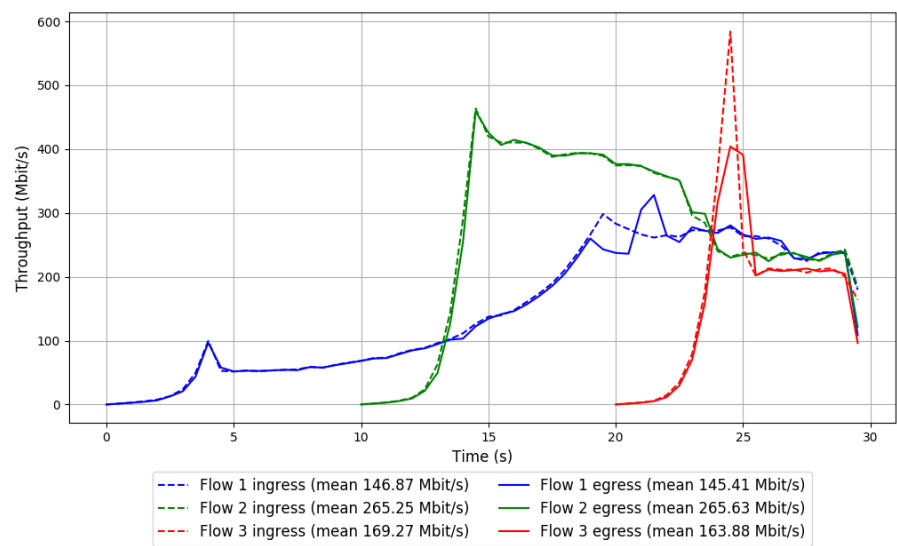
-- Flow 3:

Average throughput: 163.88 Mbit/s

95th percentile per-packet one-way delay: 230.574 ms

Loss rate: 5.50%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-01-31 08:35:48

End at: 2018-01-31 08:36:18

Below is generated by plot.py at 2018-01-31 14:28:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 432.48 Mbit/s

95th percentile per-packet one-way delay: 253.602 ms

Loss rate: 2.45%

-- Flow 1:

Average throughput: 269.90 Mbit/s

95th percentile per-packet one-way delay: 289.464 ms

Loss rate: 2.47%

-- Flow 2:

Average throughput: 168.61 Mbit/s

95th percentile per-packet one-way delay: 115.431 ms

Loss rate: 1.06%

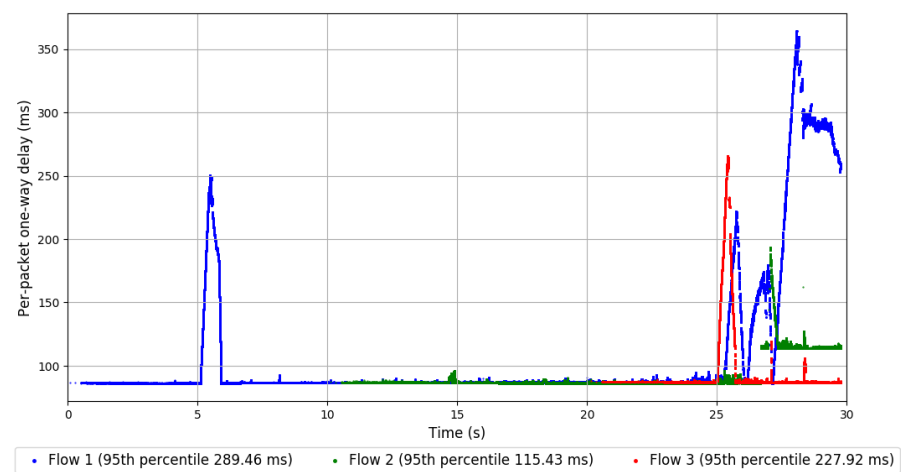
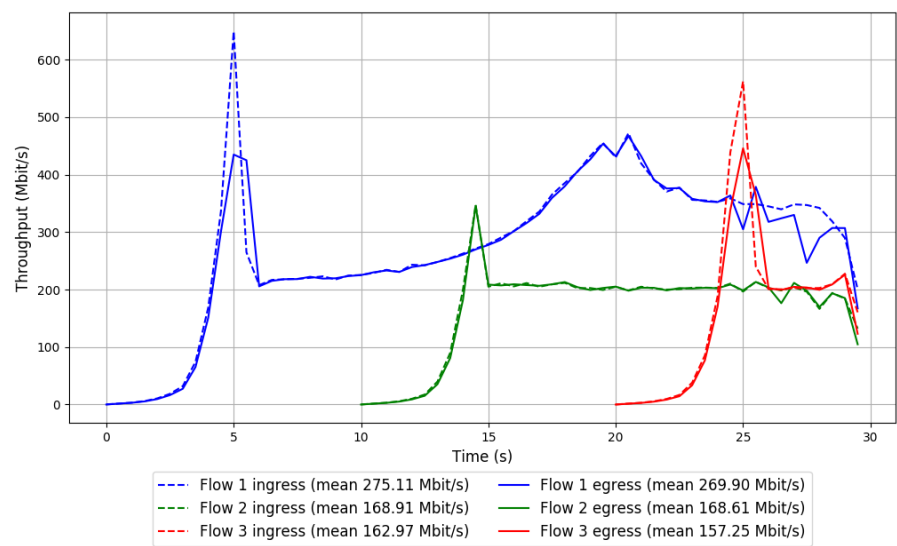
-- Flow 3:

Average throughput: 157.25 Mbit/s

95th percentile per-packet one-way delay: 227.916 ms

Loss rate: 5.23%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-01-31 08:53:48

End at: 2018-01-31 08:54:18

Below is generated by plot.py at 2018-01-31 14:28:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 375.43 Mbit/s

95th percentile per-packet one-way delay: 114.092 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 209.18 Mbit/s

95th percentile per-packet one-way delay: 112.139 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 187.94 Mbit/s

95th percentile per-packet one-way delay: 92.112 ms

Loss rate: 1.00%

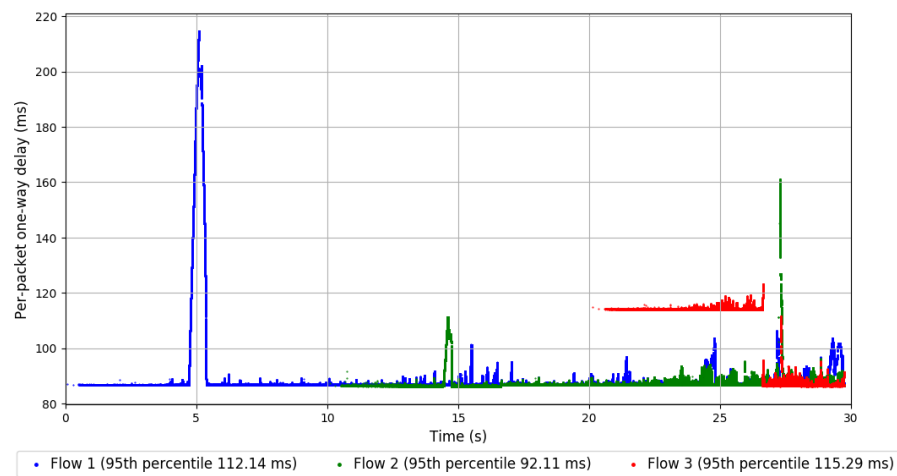
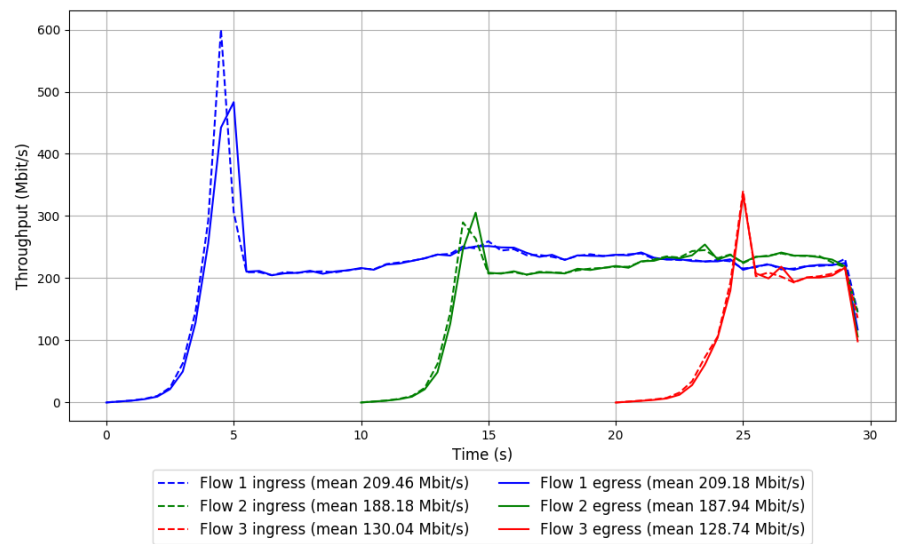
-- Flow 3:

Average throughput: 128.74 Mbit/s

95th percentile per-packet one-way delay: 115.288 ms

Loss rate: 3.03%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-01-31 09:11:42

End at: 2018-01-31 09:12:12

Below is generated by plot.py at 2018-01-31 14:31:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 473.63 Mbit/s

95th percentile per-packet one-way delay: 185.895 ms

Loss rate: 1.94%

-- Flow 1:

Average throughput: 296.30 Mbit/s

95th percentile per-packet one-way delay: 192.904 ms

Loss rate: 1.38%

-- Flow 2:

Average throughput: 189.57 Mbit/s

95th percentile per-packet one-way delay: 128.795 ms

Loss rate: 1.32%

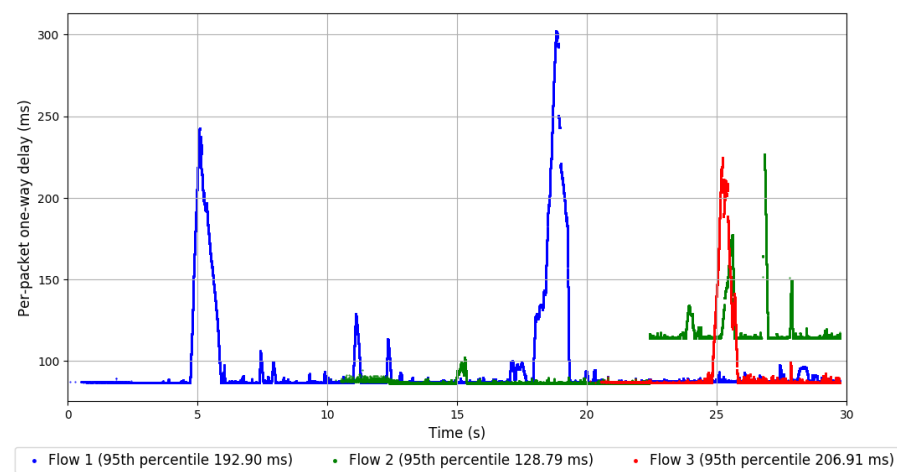
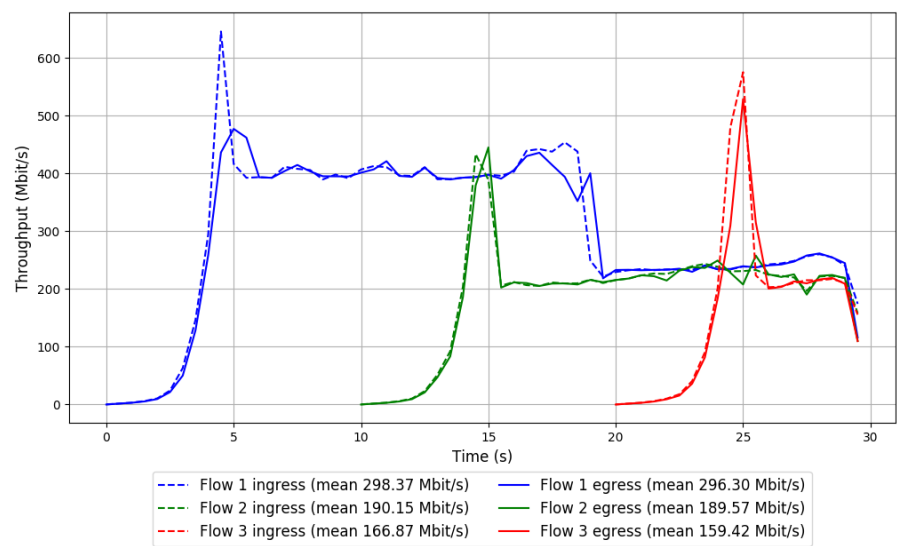
-- Flow 3:

Average throughput: 159.42 Mbit/s

95th percentile per-packet one-way delay: 206.907 ms

Loss rate: 6.43%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-01-31 09:30:04

End at: 2018-01-31 09:30:34

Below is generated by plot.py at 2018-01-31 14:31:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 420.37 Mbit/s

95th percentile per-packet one-way delay: 115.640 ms

Loss rate: 2.11%

-- Flow 1:

Average throughput: 251.10 Mbit/s

95th percentile per-packet one-way delay: 242.218 ms

Loss rate: 2.32%

-- Flow 2:

Average throughput: 181.33 Mbit/s

95th percentile per-packet one-way delay: 114.345 ms

Loss rate: 1.30%

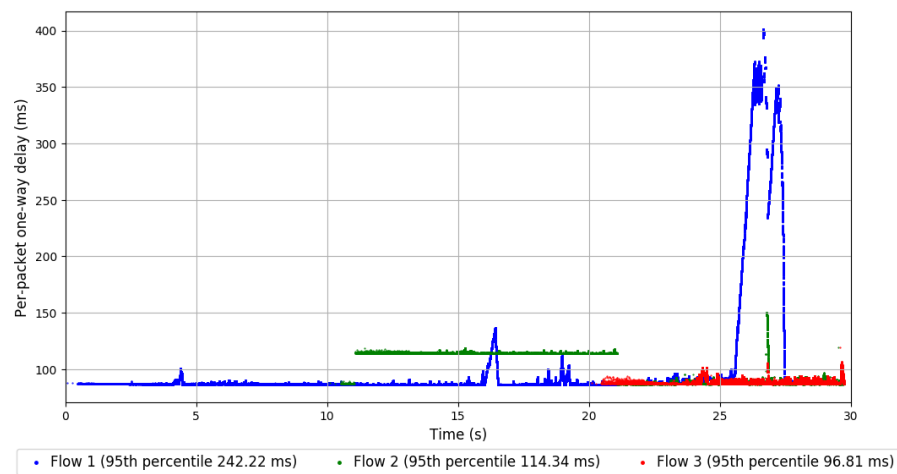
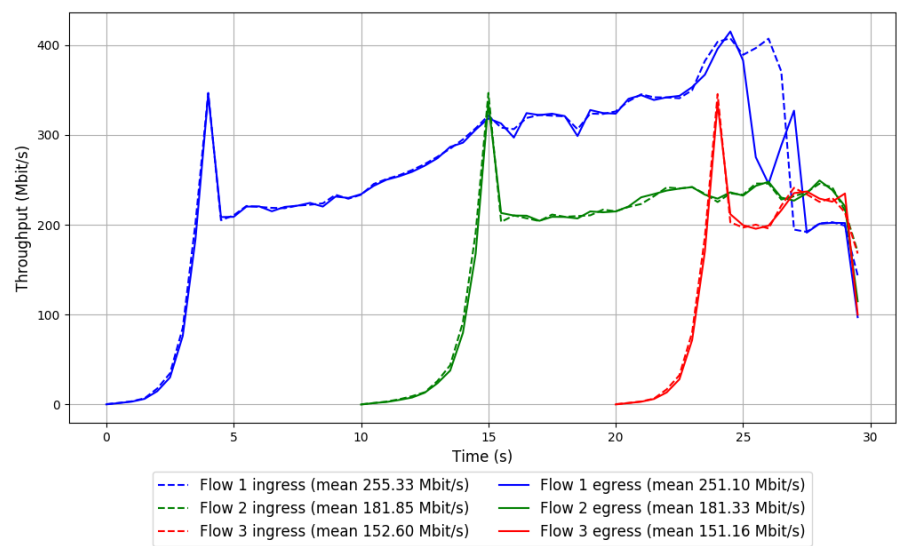
-- Flow 3:

Average throughput: 151.16 Mbit/s

95th percentile per-packet one-way delay: 96.815 ms

Loss rate: 2.98%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-01-31 09:47:58

End at: 2018-01-31 09:48:28

Below is generated by plot.py at 2018-01-31 14:35:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 449.62 Mbit/s

95th percentile per-packet one-way delay: 223.226 ms

Loss rate: 2.54%

-- Flow 1:

Average throughput: 226.11 Mbit/s

95th percentile per-packet one-way delay: 232.733 ms

Loss rate: 1.81%

-- Flow 2:

Average throughput: 264.54 Mbit/s

95th percentile per-packet one-way delay: 168.987 ms

Loss rate: 1.39%

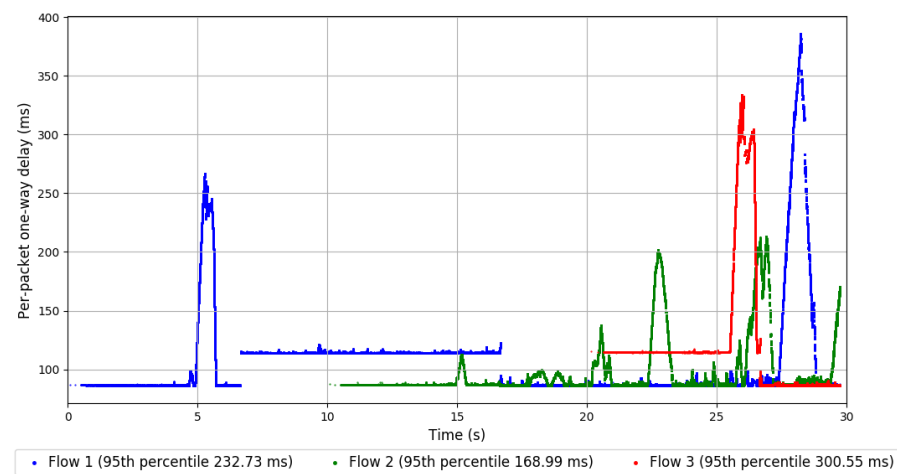
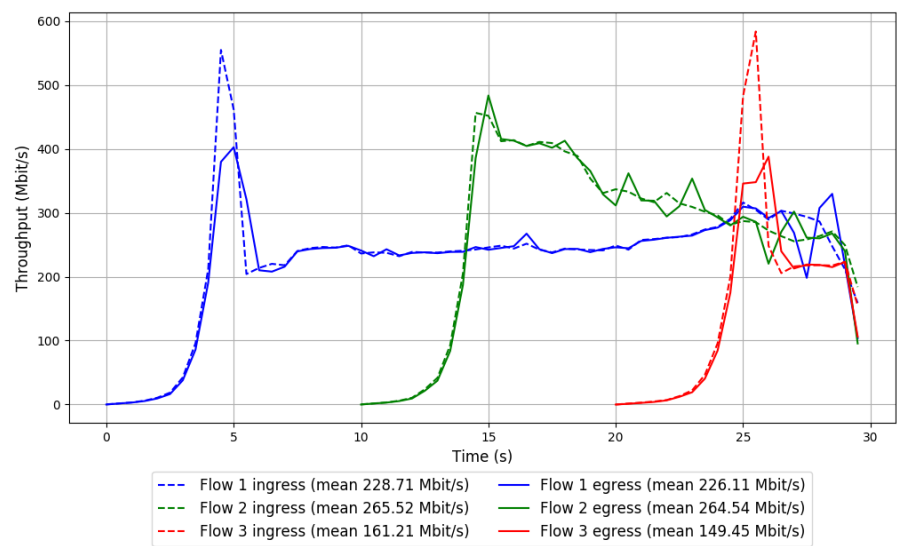
-- Flow 3:

Average throughput: 149.45 Mbit/s

95th percentile per-packet one-way delay: 300.552 ms

Loss rate: 9.49%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-01-31 10:06:01

End at: 2018-01-31 10:06:31

Below is generated by plot.py at 2018-01-31 14:35:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 400.08 Mbit/s

95th percentile per-packet one-way delay: 125.467 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 229.75 Mbit/s

95th percentile per-packet one-way delay: 110.895 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 180.56 Mbit/s

95th percentile per-packet one-way delay: 88.633 ms

Loss rate: 1.24%

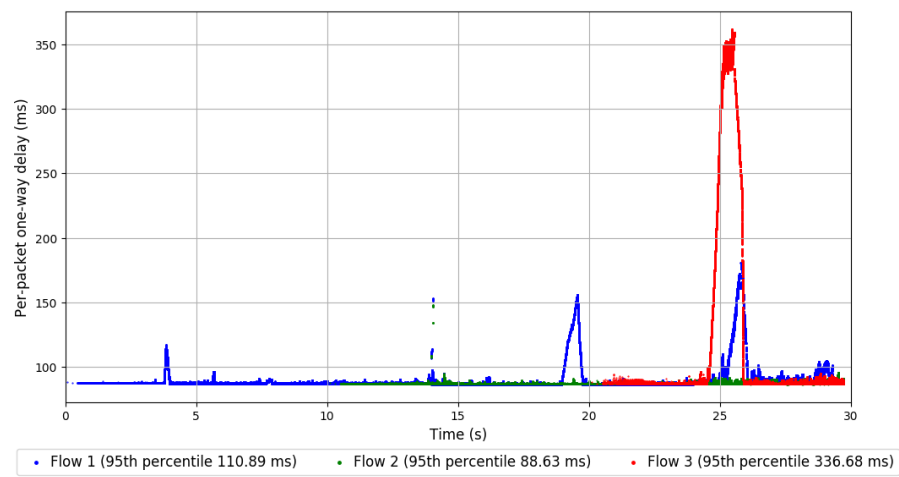
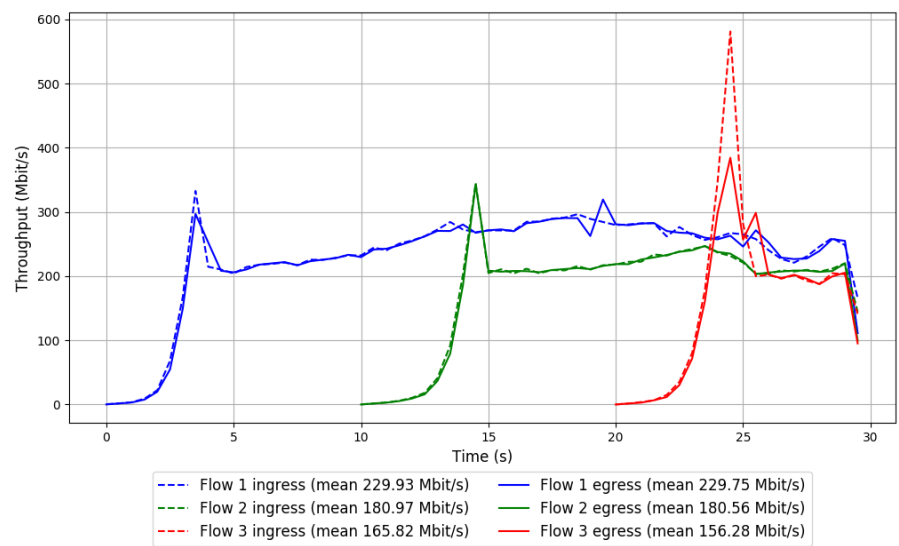
-- Flow 3:

Average throughput: 156.28 Mbit/s

95th percentile per-packet one-way delay: 336.675 ms

Loss rate: 7.70%

Run 10: Report of Vivace-latency — Data Link

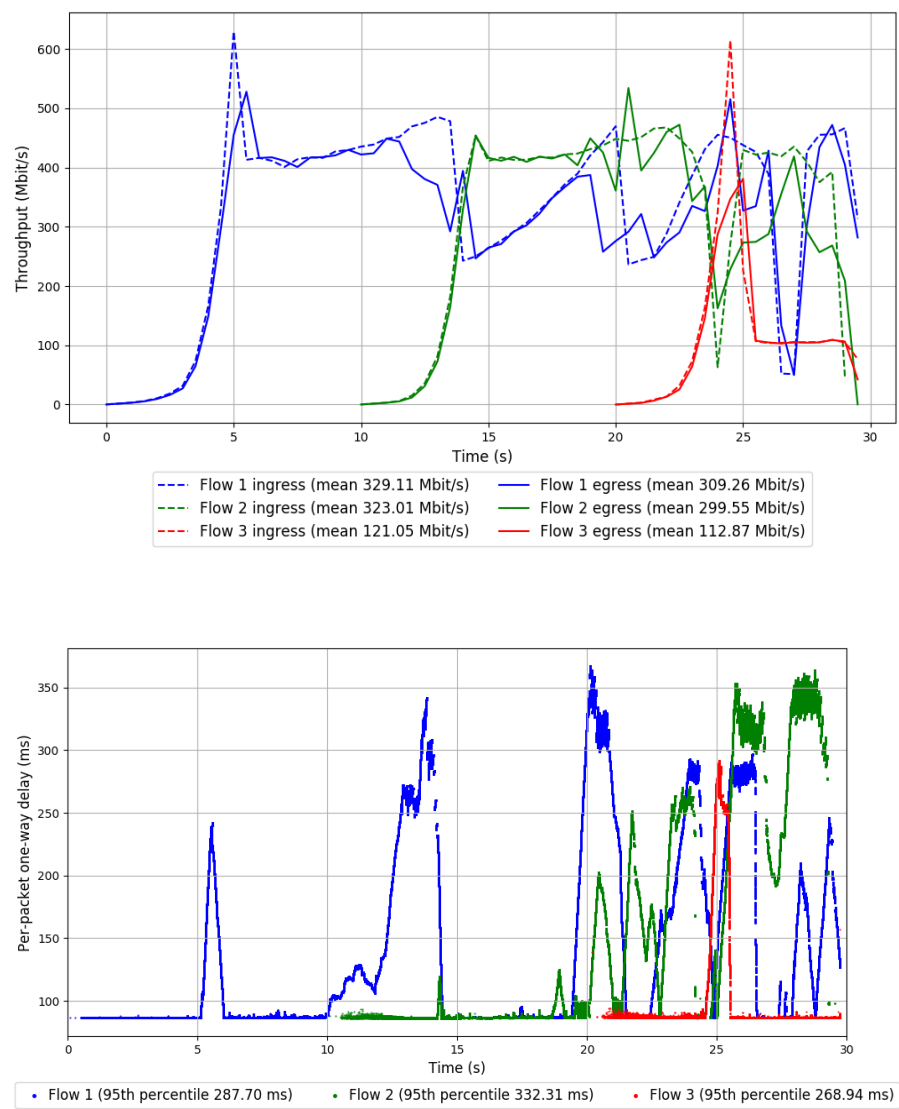


```
Run 1: Statistics of Vivace-loss

Start at: 2018-01-31 07:26:50
End at: 2018-01-31 07:27:20

# Below is generated by plot.py at 2018-01-31 14:37:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 541.98 Mbit/s
95th percentile per-packet one-way delay: 314.078 ms
Loss rate: 7.04%
-- Flow 1:
Average throughput: 309.26 Mbit/s
95th percentile per-packet one-way delay: 287.701 ms
Loss rate: 6.66%
-- Flow 2:
Average throughput: 299.55 Mbit/s
95th percentile per-packet one-way delay: 332.313 ms
Loss rate: 7.22%
-- Flow 3:
Average throughput: 112.87 Mbit/s
95th percentile per-packet one-way delay: 268.943 ms
Loss rate: 9.17%
```

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-01-31 07:45:24

End at: 2018-01-31 07:45:54

Below is generated by plot.py at 2018-01-31 14:37:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 379.34 Mbit/s

95th percentile per-packet one-way delay: 242.508 ms

Loss rate: 5.42%

-- Flow 1:

Average throughput: 260.02 Mbit/s

95th percentile per-packet one-way delay: 246.002 ms

Loss rate: 5.41%

-- Flow 2:

Average throughput: 103.08 Mbit/s

95th percentile per-packet one-way delay: 228.236 ms

Loss rate: 7.19%

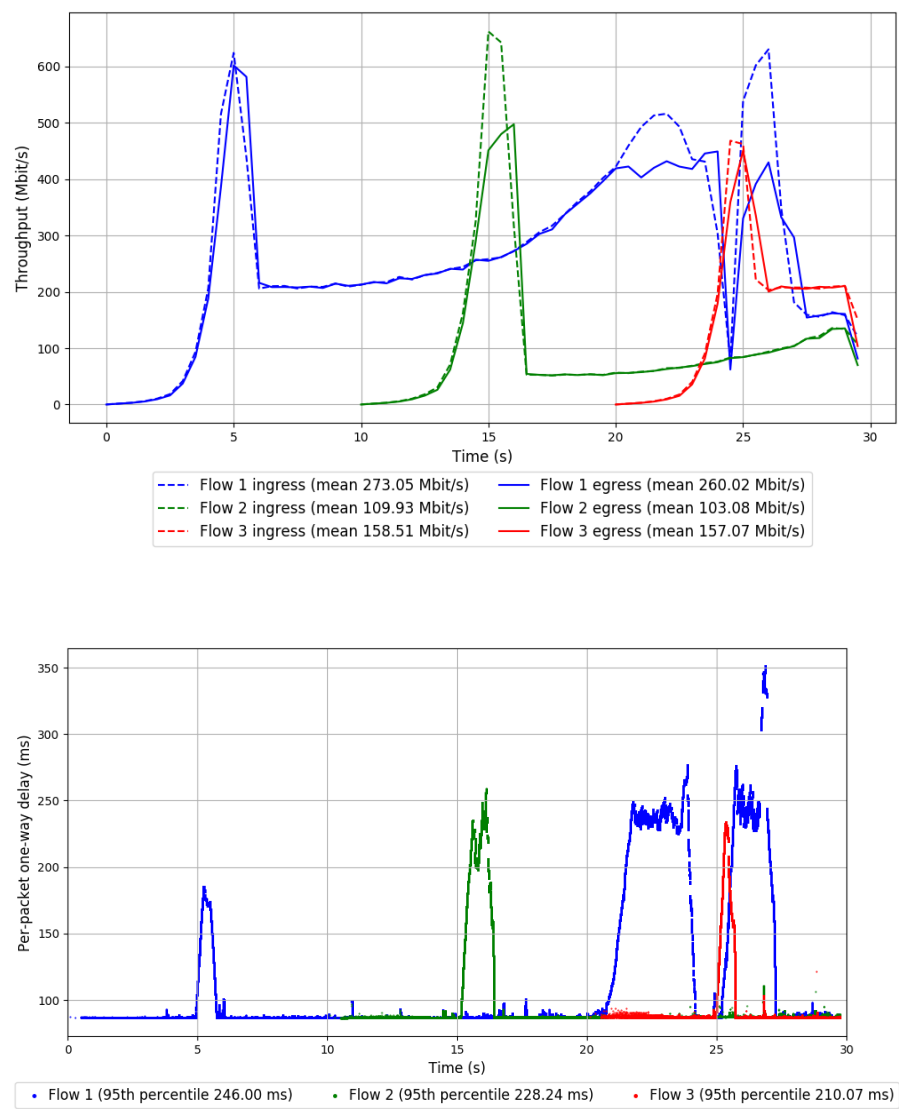
-- Flow 3:

Average throughput: 157.07 Mbit/s

95th percentile per-packet one-way delay: 210.071 ms

Loss rate: 2.97%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-01-31 08:03:36

End at: 2018-01-31 08:04:06

Below is generated by plot.py at 2018-01-31 14:37:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 401.44 Mbit/s

95th percentile per-packet one-way delay: 250.579 ms

Loss rate: 7.12%

-- Flow 1:

Average throughput: 264.36 Mbit/s

95th percentile per-packet one-way delay: 246.835 ms

Loss rate: 4.60%

-- Flow 2:

Average throughput: 98.94 Mbit/s

95th percentile per-packet one-way delay: 242.306 ms

Loss rate: 13.74%

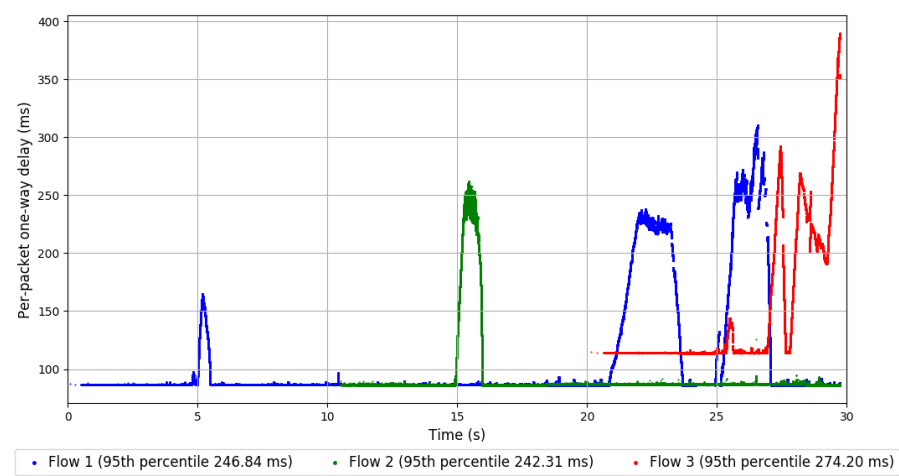
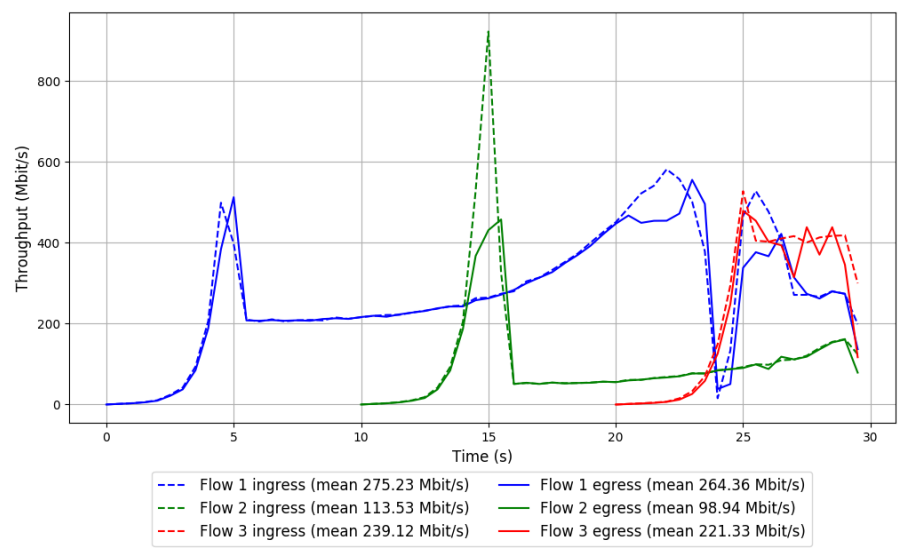
-- Flow 3:

Average throughput: 221.33 Mbit/s

95th percentile per-packet one-way delay: 274.198 ms

Loss rate: 9.61%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-01-31 08:21:48

End at: 2018-01-31 08:22:18

Below is generated by plot.py at 2018-01-31 14:37:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 367.64 Mbit/s

95th percentile per-packet one-way delay: 264.872 ms

Loss rate: 6.44%

-- Flow 1:

Average throughput: 197.48 Mbit/s

95th percentile per-packet one-way delay: 288.187 ms

Loss rate: 7.91%

-- Flow 2:

Average throughput: 187.85 Mbit/s

95th percentile per-packet one-way delay: 248.002 ms

Loss rate: 5.29%

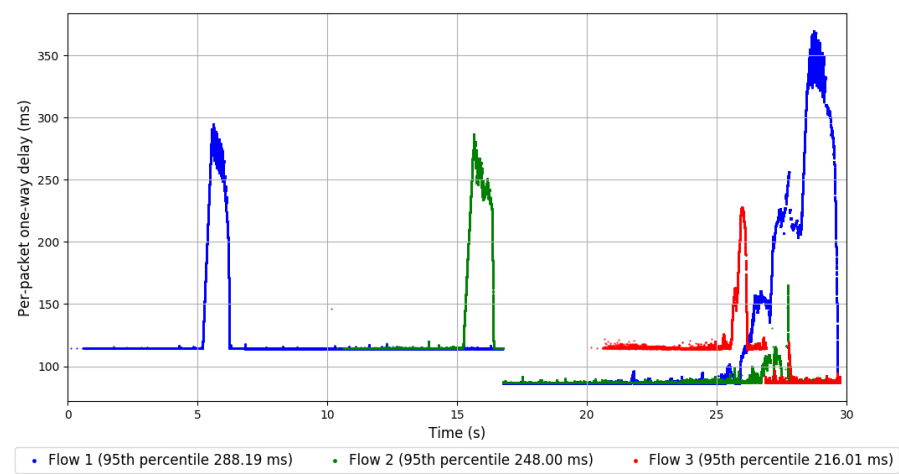
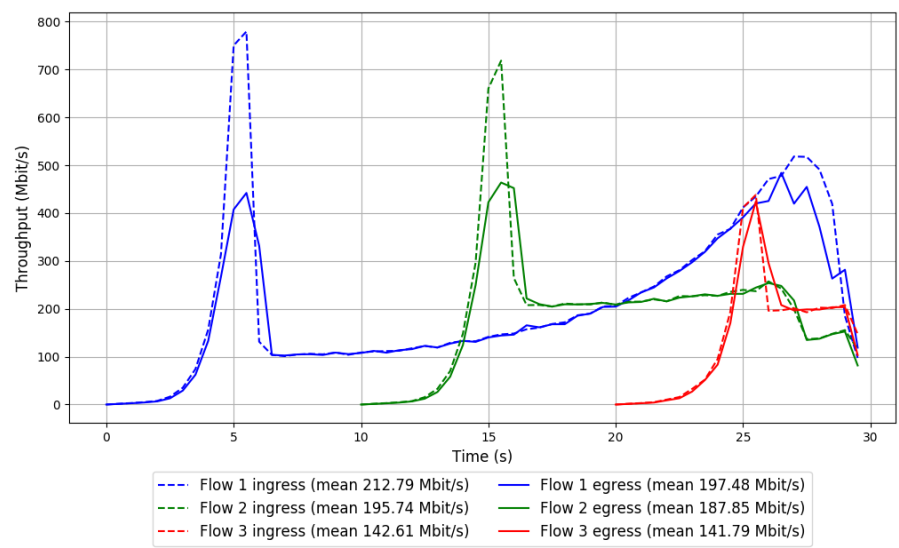
-- Flow 3:

Average throughput: 141.79 Mbit/s

95th percentile per-packet one-way delay: 216.010 ms

Loss rate: 2.93%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-01-31 08:39:42

End at: 2018-01-31 08:40:12

Below is generated by plot.py at 2018-01-31 14:40:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 478.44 Mbit/s

95th percentile per-packet one-way delay: 294.794 ms

Loss rate: 8.26%

-- Flow 1:

Average throughput: 315.55 Mbit/s

95th percentile per-packet one-way delay: 287.347 ms

Loss rate: 5.98%

-- Flow 2:

Average throughput: 204.45 Mbit/s

95th percentile per-packet one-way delay: 232.771 ms

Loss rate: 4.82%

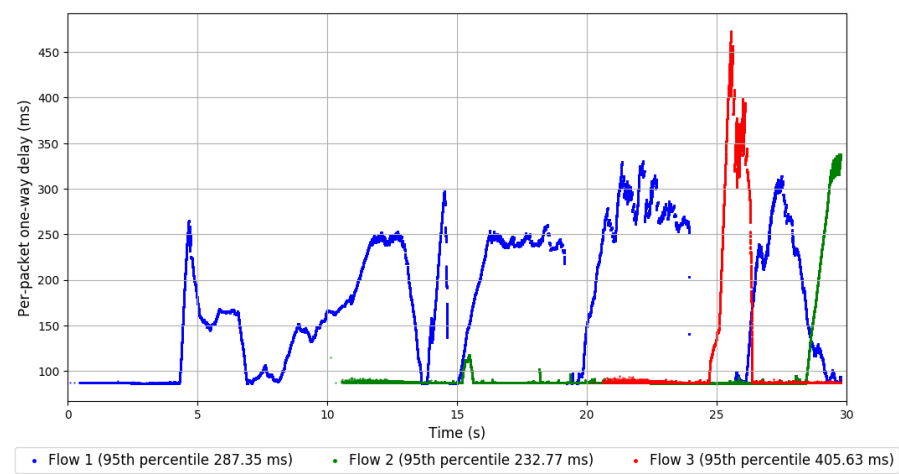
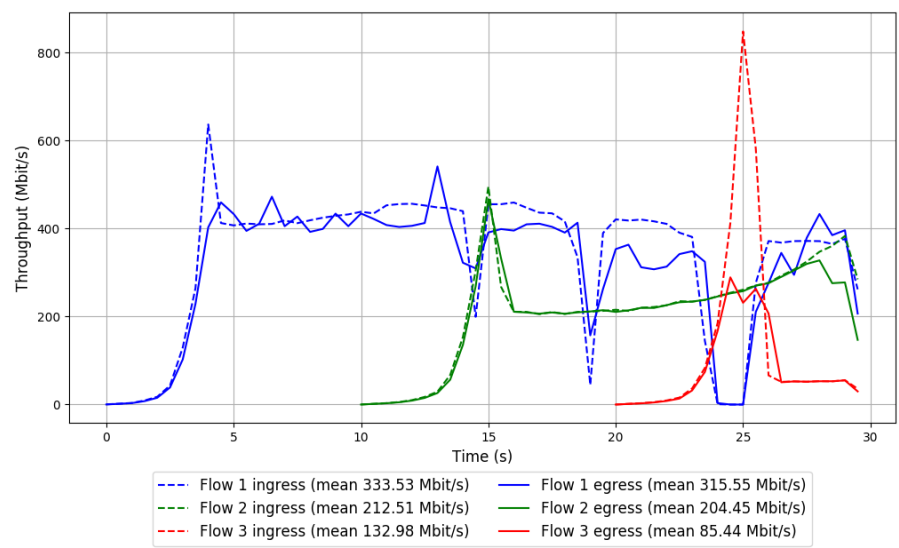
-- Flow 3:

Average throughput: 85.44 Mbit/s

95th percentile per-packet one-way delay: 405.626 ms

Loss rate: 36.94%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-01-31 08:57:43

End at: 2018-01-31 08:58:13

Below is generated by plot.py at 2018-01-31 14:40:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 461.04 Mbit/s

95th percentile per-packet one-way delay: 276.186 ms

Loss rate: 7.94%

-- Flow 1:

Average throughput: 232.13 Mbit/s

95th percentile per-packet one-way delay: 266.966 ms

Loss rate: 7.63%

-- Flow 2:

Average throughput: 293.09 Mbit/s

95th percentile per-packet one-way delay: 250.314 ms

Loss rate: 4.10%

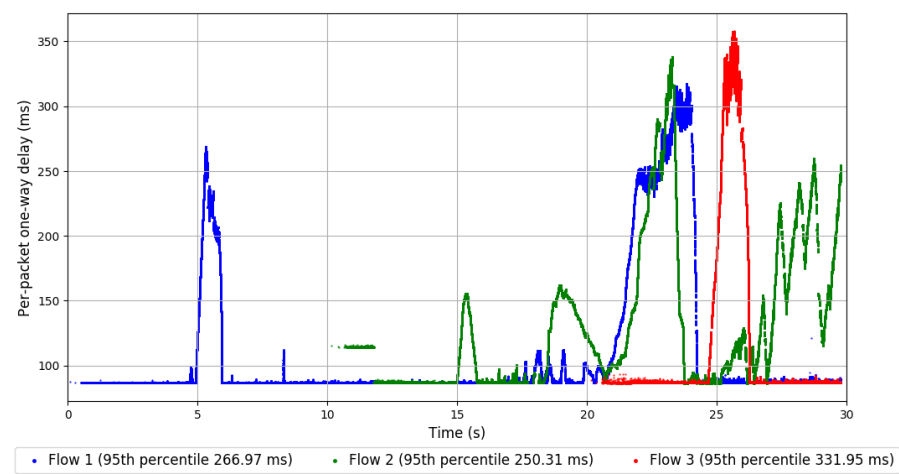
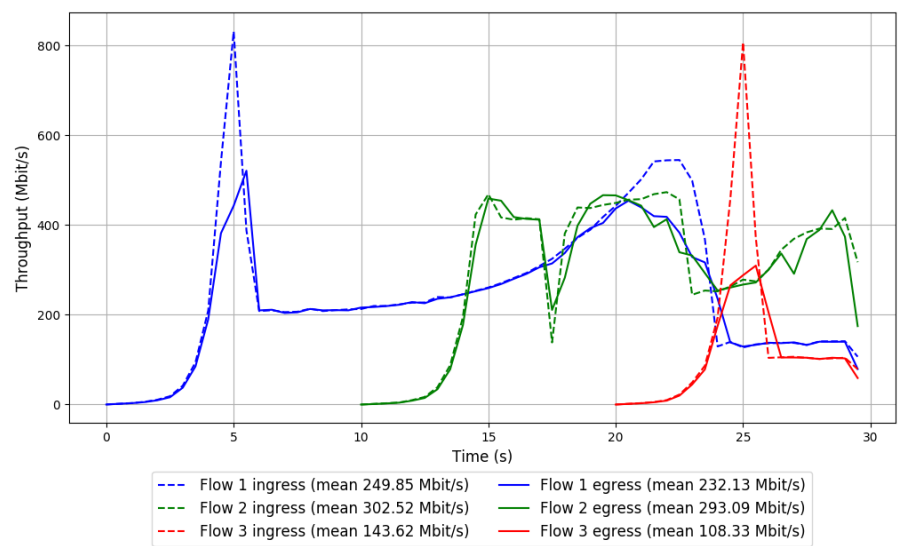
-- Flow 3:

Average throughput: 108.33 Mbit/s

95th percentile per-packet one-way delay: 331.947 ms

Loss rate: 25.92%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-01-31 09:15:50

End at: 2018-01-31 09:16:20

Below is generated by plot.py at 2018-01-31 14:40:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 312.01 Mbit/s

95th percentile per-packet one-way delay: 200.306 ms

Loss rate: 5.33%

-- Flow 1:

Average throughput: 206.82 Mbit/s

95th percentile per-packet one-way delay: 191.814 ms

Loss rate: 4.72%

-- Flow 2:

Average throughput: 92.11 Mbit/s

95th percentile per-packet one-way delay: 221.000 ms

Loss rate: 8.04%

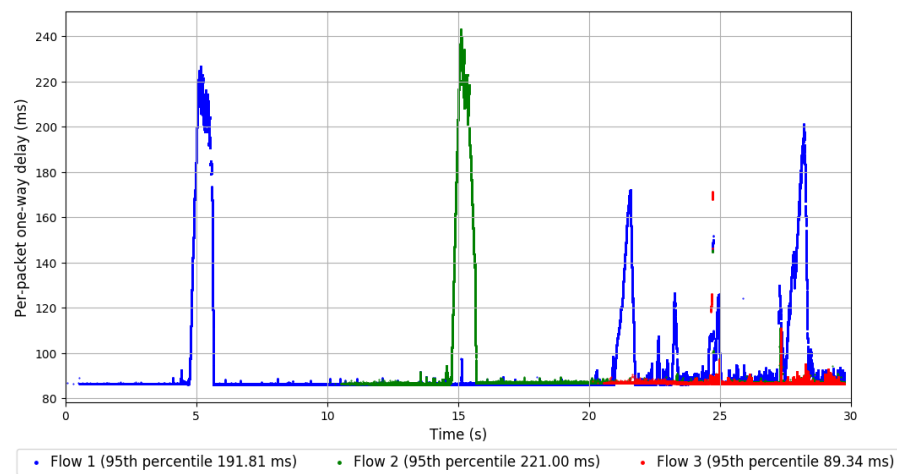
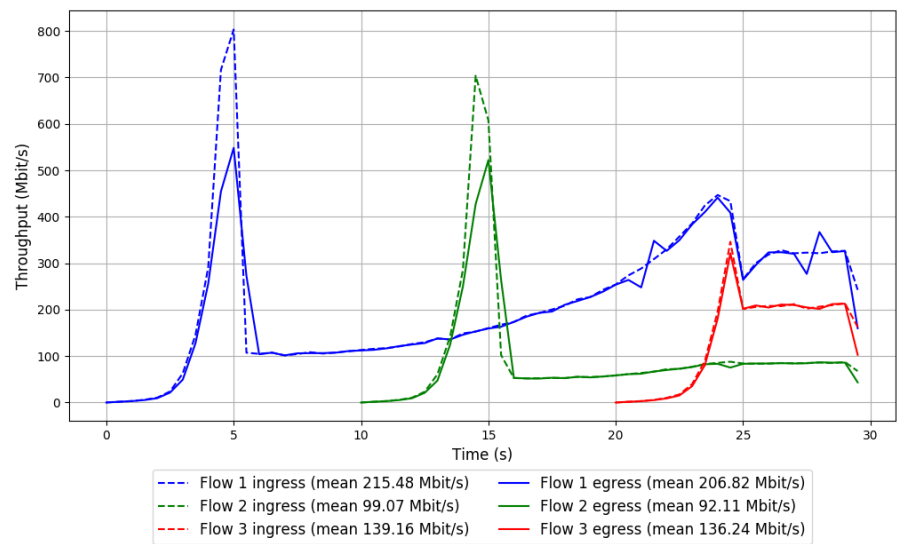
-- Flow 3:

Average throughput: 136.24 Mbit/s

95th percentile per-packet one-way delay: 89.339 ms

Loss rate: 4.30%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-01-31 09:34:07

End at: 2018-01-31 09:34:37

Below is generated by plot.py at 2018-01-31 14:42:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 354.56 Mbit/s

95th percentile per-packet one-way delay: 253.762 ms

Loss rate: 8.68%

-- Flow 1:

Average throughput: 179.50 Mbit/s

95th percentile per-packet one-way delay: 266.595 ms

Loss rate: 9.22%

-- Flow 2:

Average throughput: 195.80 Mbit/s

95th percentile per-packet one-way delay: 213.106 ms

Loss rate: 5.68%

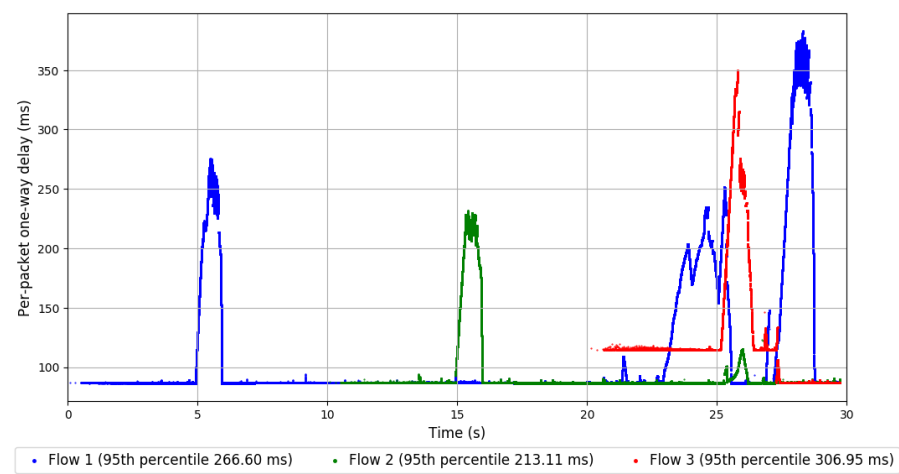
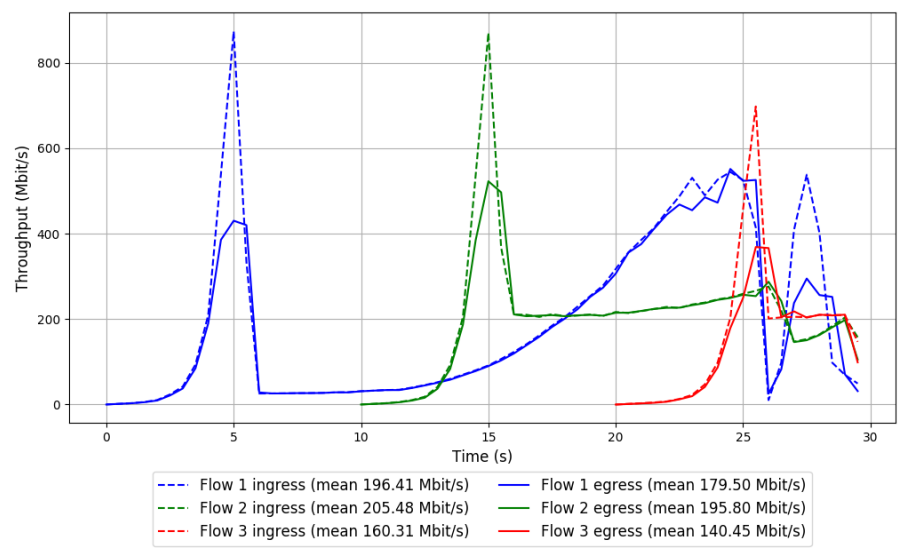
-- Flow 3:

Average throughput: 140.45 Mbit/s

95th percentile per-packet one-way delay: 306.946 ms

Loss rate: 14.44%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-01-31 09:52:01

End at: 2018-01-31 09:52:31

Below is generated by plot.py at 2018-01-31 14:44:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 459.47 Mbit/s

95th percentile per-packet one-way delay: 300.829 ms

Loss rate: 8.81%

-- Flow 1:

Average throughput: 235.88 Mbit/s

95th percentile per-packet one-way delay: 292.752 ms

Loss rate: 8.83%

-- Flow 2:

Average throughput: 279.76 Mbit/s

95th percentile per-packet one-way delay: 306.629 ms

Loss rate: 5.34%

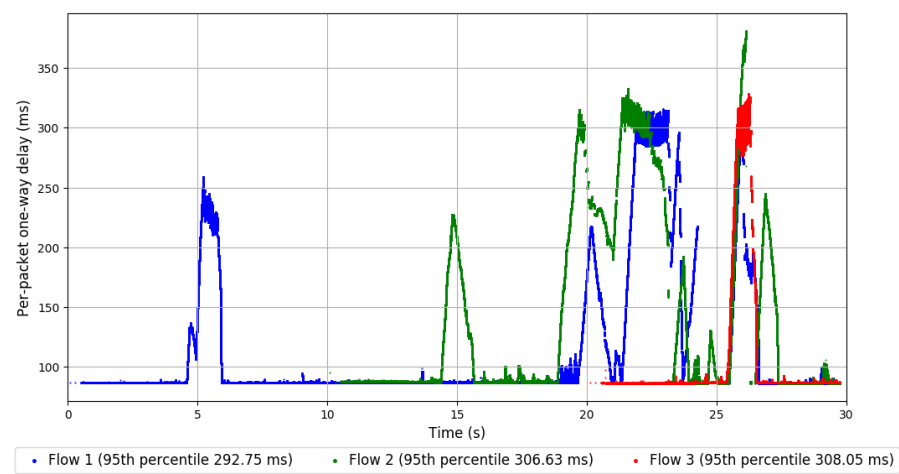
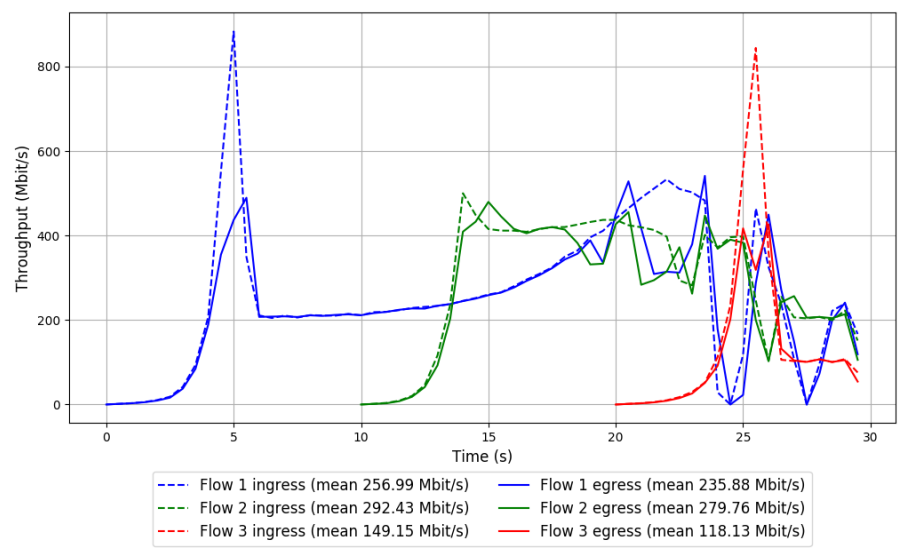
-- Flow 3:

Average throughput: 118.13 Mbit/s

95th percentile per-packet one-way delay: 308.045 ms

Loss rate: 22.42%

Run 9: Report of Vivace-loss — Data Link

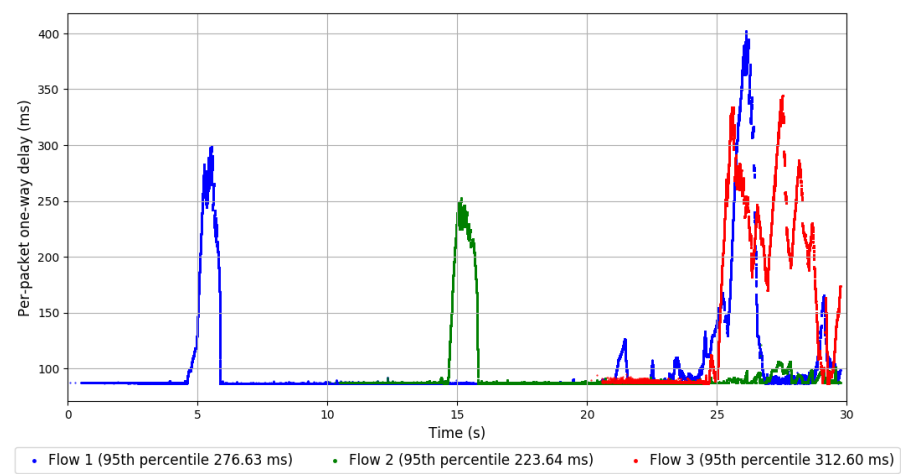
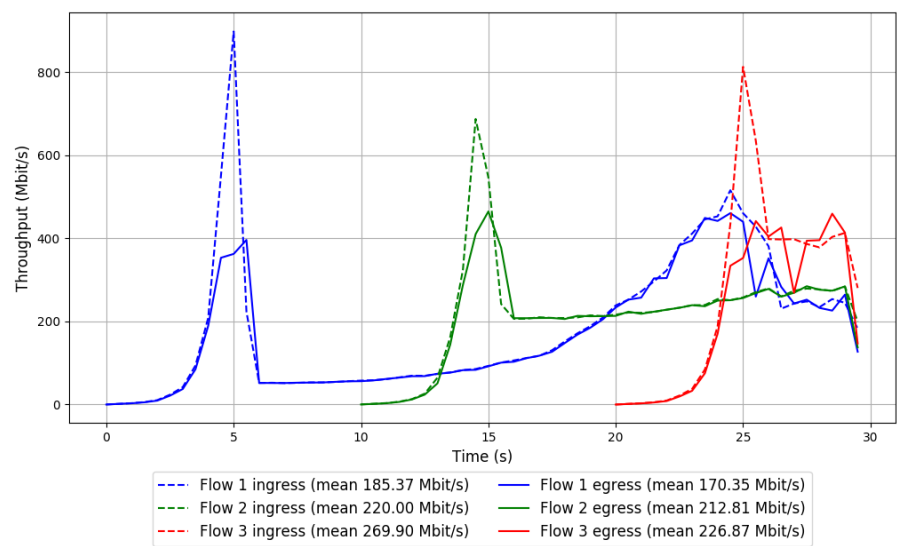


```
Run 10: Statistics of Vivace-loss

Start at: 2018-01-31 10:10:00
End at: 2018-01-31 10:10:30

# Below is generated by plot.py at 2018-01-31 14:44:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.76 Mbit/s
95th percentile per-packet one-way delay: 273.295 ms
Loss rate: 9.06%
-- Flow 1:
Average throughput: 170.35 Mbit/s
95th percentile per-packet one-way delay: 276.634 ms
Loss rate: 8.72%
-- Flow 2:
Average throughput: 212.81 Mbit/s
95th percentile per-packet one-way delay: 223.642 ms
Loss rate: 4.26%
-- Flow 3:
Average throughput: 226.87 Mbit/s
95th percentile per-packet one-way delay: 312.601 ms
Loss rate: 17.69%
```

Run 10: Report of Vivace-loss — Data Link

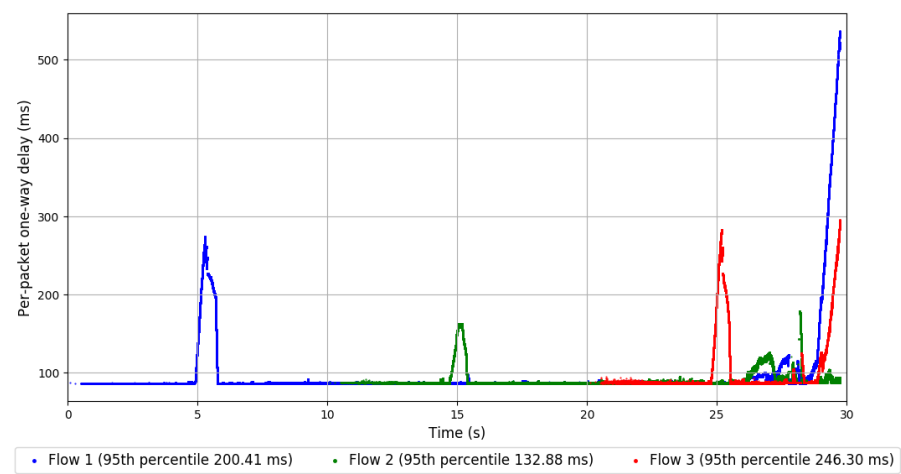
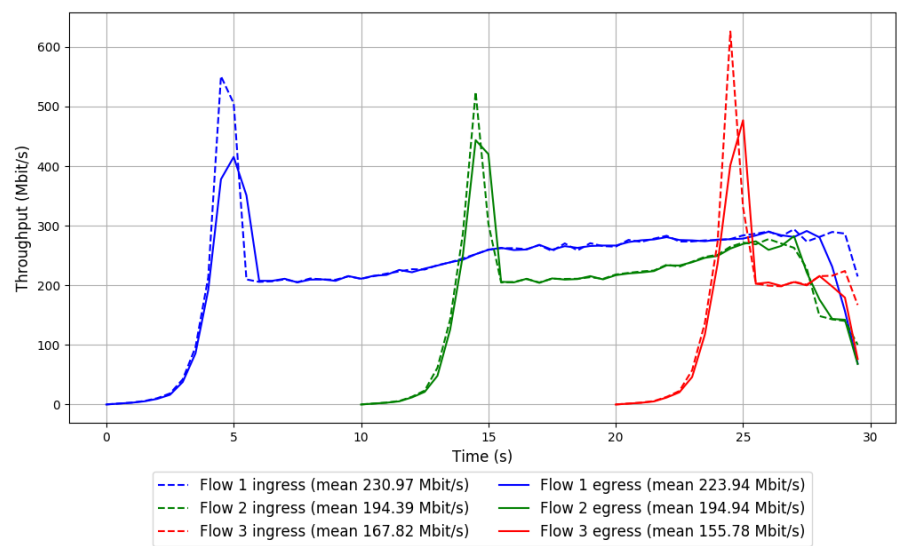


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-01-31 07:14:17
End at: 2018-01-31 07:14:47

# Below is generated by plot.py at 2018-01-31 14:44:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 403.71 Mbit/s
95th percentile per-packet one-way delay: 190.260 ms
Loss rate: 3.48%
-- Flow 1:
Average throughput: 223.94 Mbit/s
95th percentile per-packet one-way delay: 200.408 ms
Loss rate: 3.69%
-- Flow 2:
Average throughput: 194.94 Mbit/s
95th percentile per-packet one-way delay: 132.885 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 155.78 Mbit/s
95th percentile per-packet one-way delay: 246.304 ms
Loss rate: 9.06%
```


Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-01-31 07:32:44

End at: 2018-01-31 07:33:14

Below is generated by plot.py at 2018-01-31 14:50:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 605.37 Mbit/s

95th percentile per-packet one-way delay: 305.554 ms

Loss rate: 3.69%

-- Flow 1:

Average throughput: 348.89 Mbit/s

95th percentile per-packet one-way delay: 304.013 ms

Loss rate: 3.25%

-- Flow 2:

Average throughput: 289.05 Mbit/s

95th percentile per-packet one-way delay: 335.626 ms

Loss rate: 4.89%

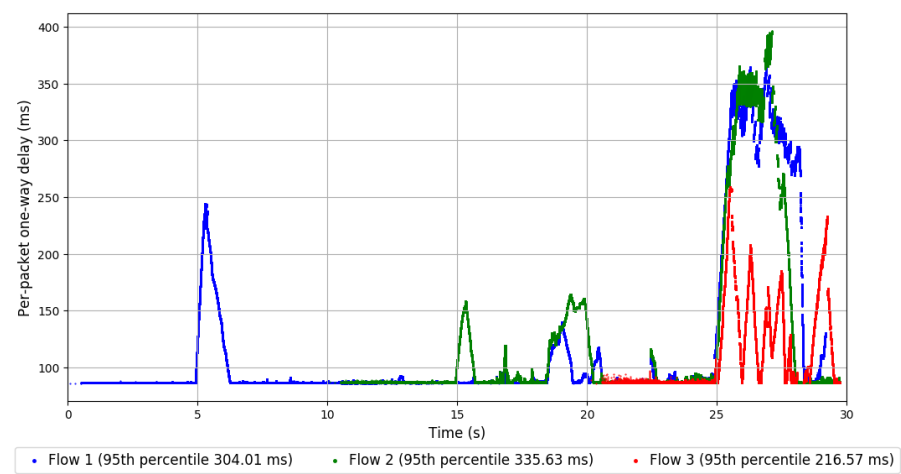
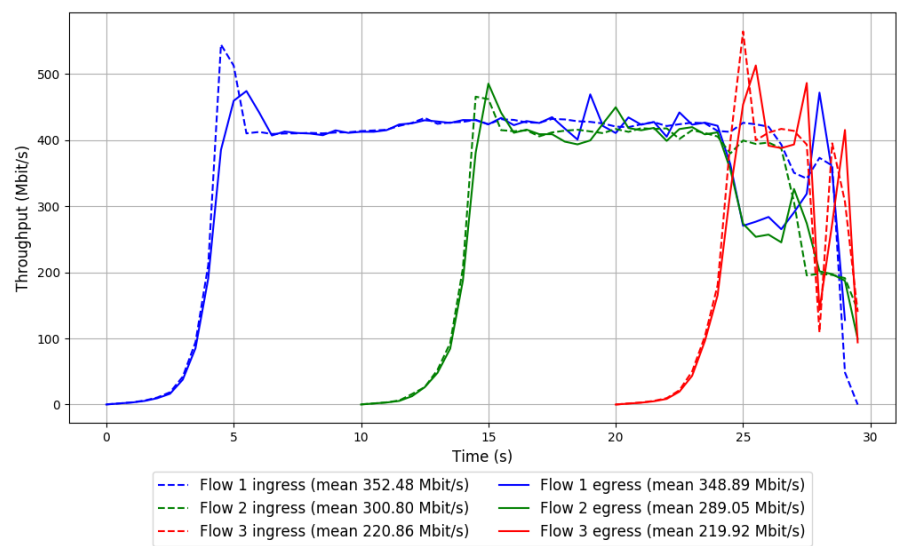
-- Flow 3:

Average throughput: 219.92 Mbit/s

95th percentile per-packet one-way delay: 216.567 ms

Loss rate: 2.50%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-01-31 07:51:11

End at: 2018-01-31 07:51:41

Below is generated by plot.py at 2018-01-31 14:50:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 416.35 Mbit/s

95th percentile per-packet one-way delay: 299.374 ms

Loss rate: 2.95%

-- Flow 1:

Average throughput: 180.84 Mbit/s

95th percentile per-packet one-way delay: 322.597 ms

Loss rate: 3.67%

-- Flow 2:

Average throughput: 289.04 Mbit/s

95th percentile per-packet one-way delay: 226.842 ms

Loss rate: 2.20%

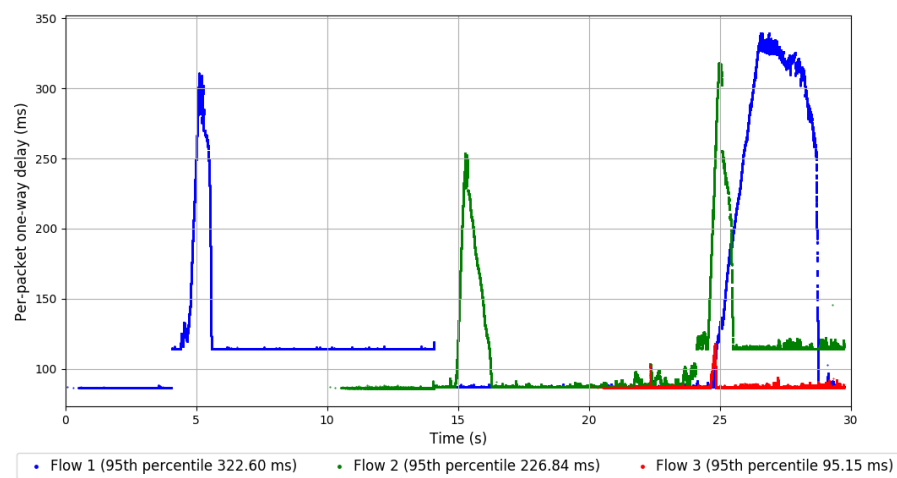
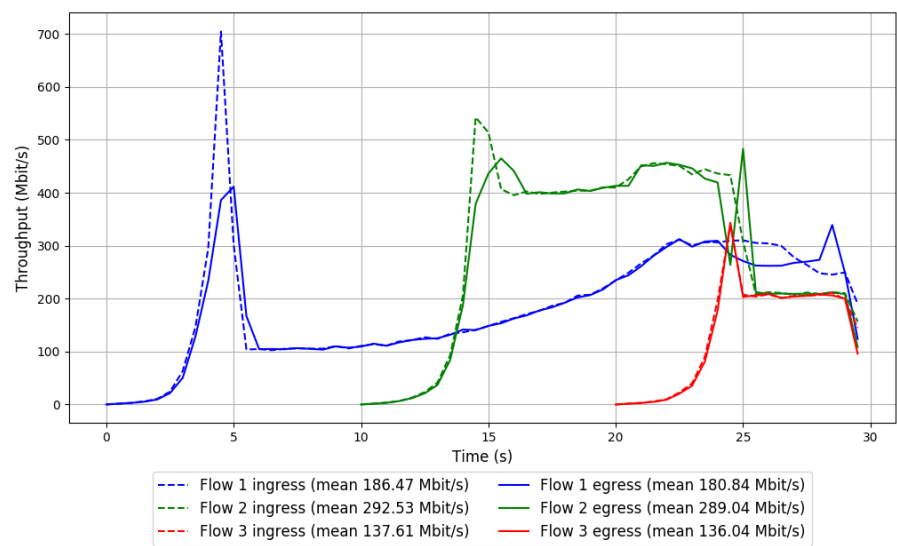
-- Flow 3:

Average throughput: 136.04 Mbit/s

95th percentile per-packet one-way delay: 95.153 ms

Loss rate: 3.18%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-01-31 08:09:25

End at: 2018-01-31 08:09:55

Below is generated by plot.py at 2018-01-31 14:50:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 511.44 Mbit/s

95th percentile per-packet one-way delay: 259.551 ms

Loss rate: 3.28%

-- Flow 1:

Average throughput: 342.55 Mbit/s

95th percentile per-packet one-way delay: 251.210 ms

Loss rate: 2.50%

-- Flow 2:

Average throughput: 201.86 Mbit/s

95th percentile per-packet one-way delay: 316.186 ms

Loss rate: 4.22%

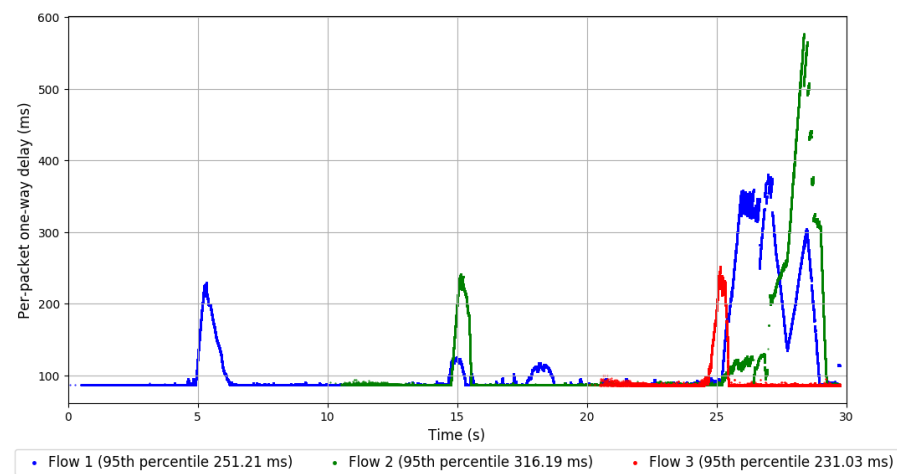
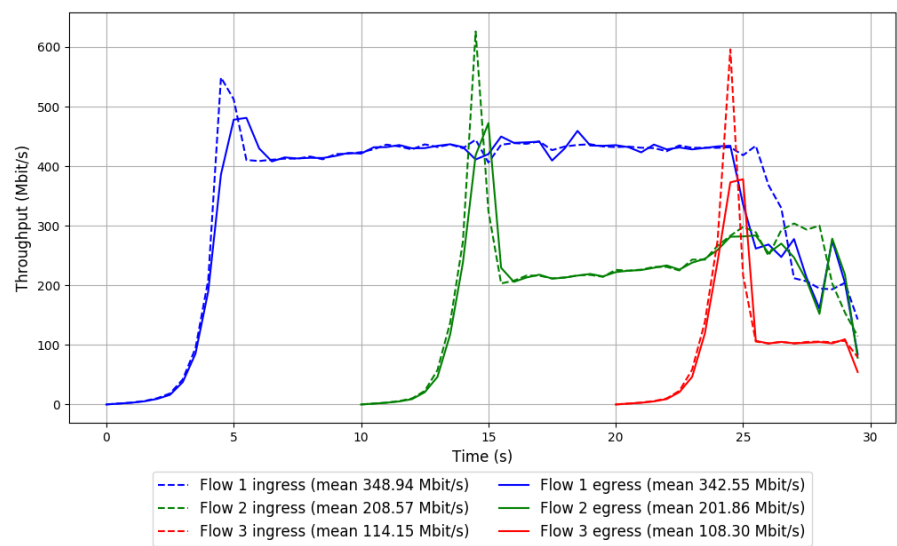
-- Flow 3:

Average throughput: 108.30 Mbit/s

95th percentile per-packet one-way delay: 231.027 ms

Loss rate: 7.05%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-01-31 08:27:27

End at: 2018-01-31 08:27:57

Below is generated by plot.py at 2018-01-31 14:51:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 523.36 Mbit/s

95th percentile per-packet one-way delay: 323.906 ms

Loss rate: 7.42%

-- Flow 1:

Average throughput: 298.65 Mbit/s

95th percentile per-packet one-way delay: 313.612 ms

Loss rate: 5.17%

-- Flow 2:

Average throughput: 242.47 Mbit/s

95th percentile per-packet one-way delay: 306.148 ms

Loss rate: 5.90%

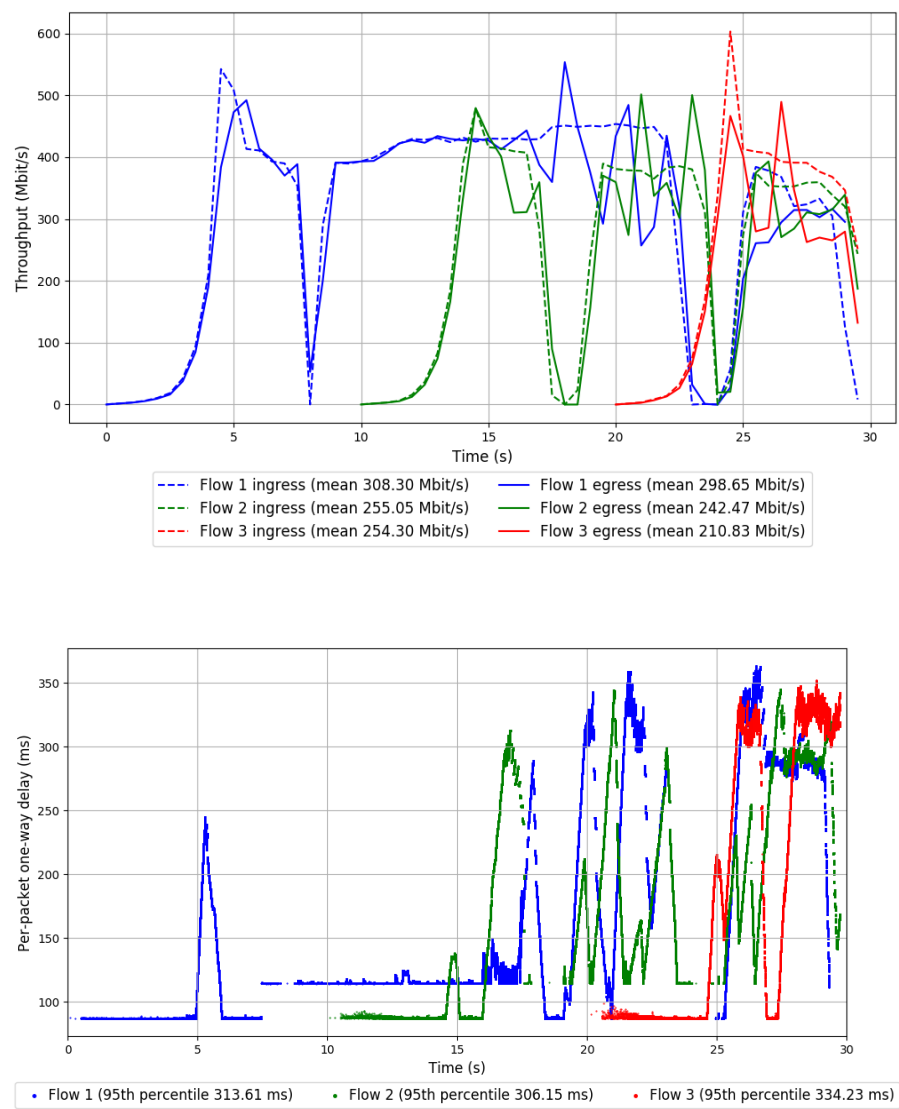
-- Flow 3:

Average throughput: 210.83 Mbit/s

95th percentile per-packet one-way delay: 334.233 ms

Loss rate: 18.82%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-01-31 08:45:27

End at: 2018-01-31 08:45:57

Below is generated by plot.py at 2018-01-31 14:52:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 560.00 Mbit/s

95th percentile per-packet one-way delay: 229.111 ms

Loss rate: 2.47%

-- Flow 1:

Average throughput: 311.79 Mbit/s

95th percentile per-packet one-way delay: 225.995 ms

Loss rate: 2.68%

-- Flow 2:

Average throughput: 307.61 Mbit/s

95th percentile per-packet one-way delay: 257.611 ms

Loss rate: 1.99%

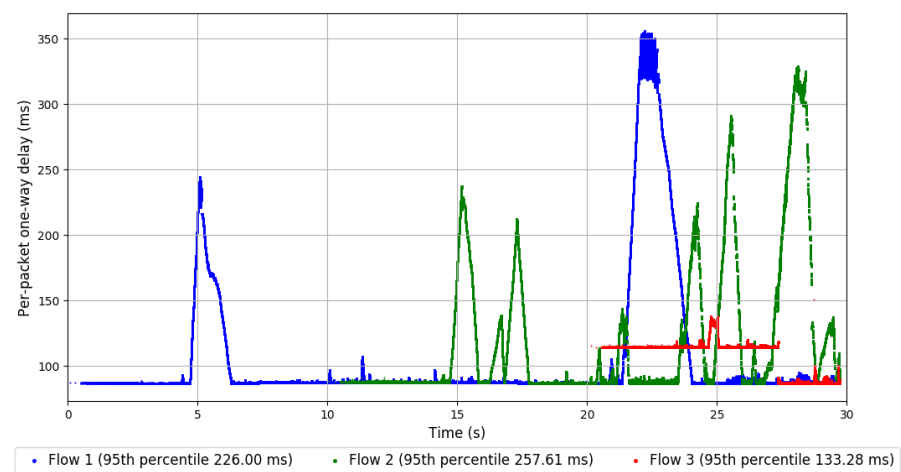
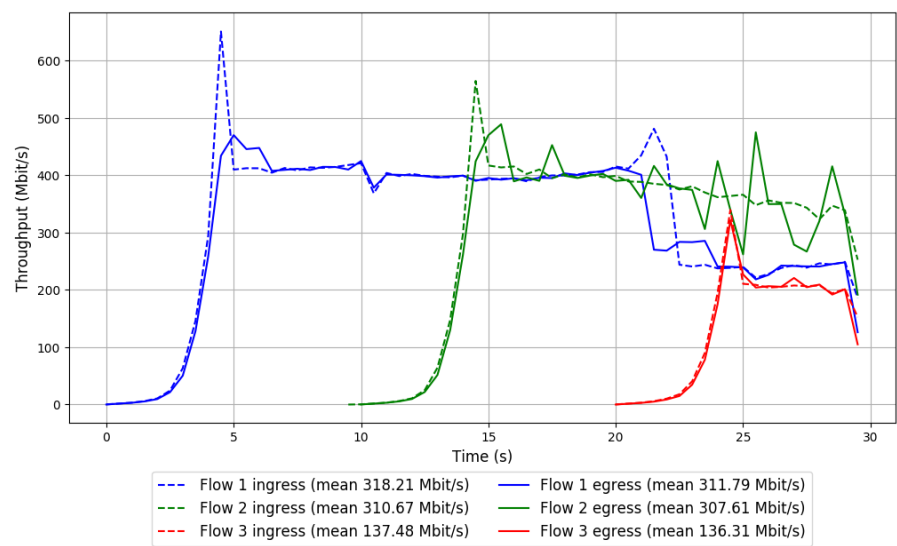
-- Flow 3:

Average throughput: 136.31 Mbit/s

95th percentile per-packet one-way delay: 133.283 ms

Loss rate: 3.13%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-01-31 09:03:25

End at: 2018-01-31 09:03:55

Below is generated by plot.py at 2018-01-31 14:52:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 476.56 Mbit/s

95th percentile per-packet one-way delay: 332.698 ms

Loss rate: 7.79%

-- Flow 1:

Average throughput: 265.37 Mbit/s

95th percentile per-packet one-way delay: 325.613 ms

Loss rate: 6.56%

-- Flow 2:

Average throughput: 236.91 Mbit/s

95th percentile per-packet one-way delay: 341.998 ms

Loss rate: 10.93%

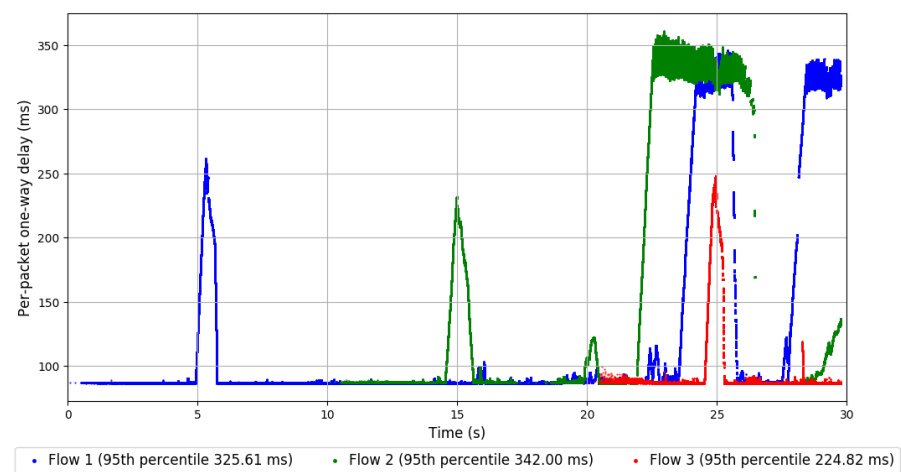
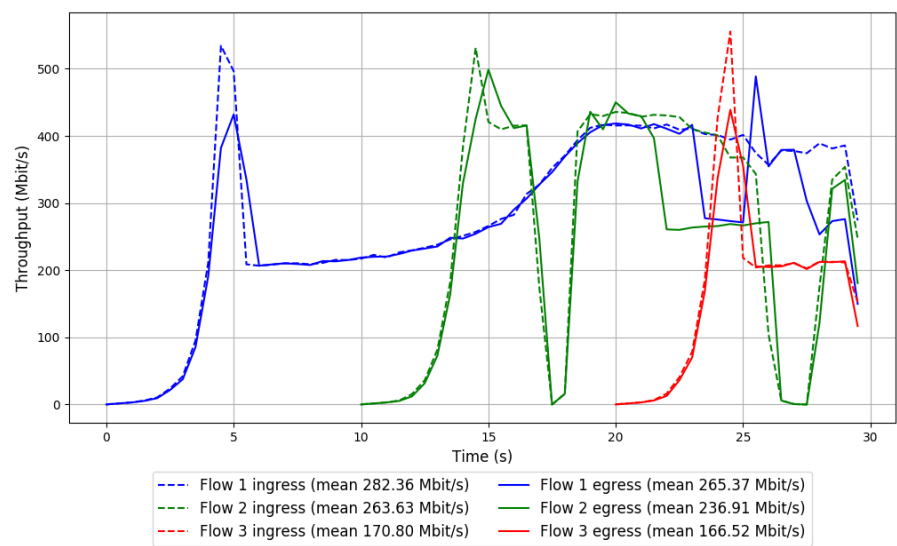
-- Flow 3:

Average throughput: 166.52 Mbit/s

95th percentile per-packet one-way delay: 224.824 ms

Loss rate: 4.22%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-01-31 09:21:29

End at: 2018-01-31 09:21:59

Below is generated by plot.py at 2018-01-31 14:53:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 552.73 Mbit/s

95th percentile per-packet one-way delay: 311.939 ms

Loss rate: 6.08%

-- Flow 1:

Average throughput: 336.77 Mbit/s

95th percentile per-packet one-way delay: 322.883 ms

Loss rate: 5.54%

-- Flow 2:

Average throughput: 259.10 Mbit/s

95th percentile per-packet one-way delay: 296.550 ms

Loss rate: 7.84%

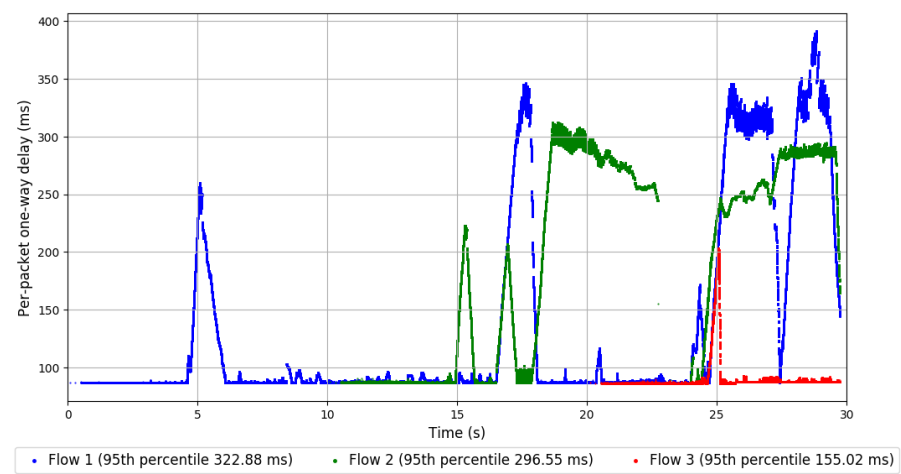
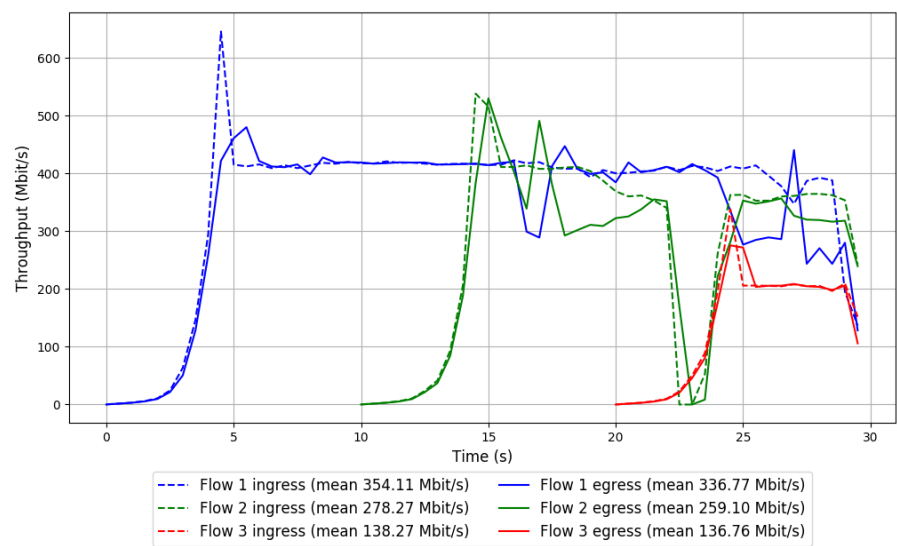
-- Flow 3:

Average throughput: 136.76 Mbit/s

95th percentile per-packet one-way delay: 155.018 ms

Loss rate: 3.12%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-01-31 09:39:44

End at: 2018-01-31 09:40:14

Below is generated by plot.py at 2018-01-31 14:53:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 474.93 Mbit/s

95th percentile per-packet one-way delay: 287.335 ms

Loss rate: 4.26%

-- Flow 1:

Average throughput: 314.15 Mbit/s

95th percentile per-packet one-way delay: 207.863 ms

Loss rate: 2.76%

-- Flow 2:

Average throughput: 173.72 Mbit/s

95th percentile per-packet one-way delay: 370.404 ms

Loss rate: 8.36%

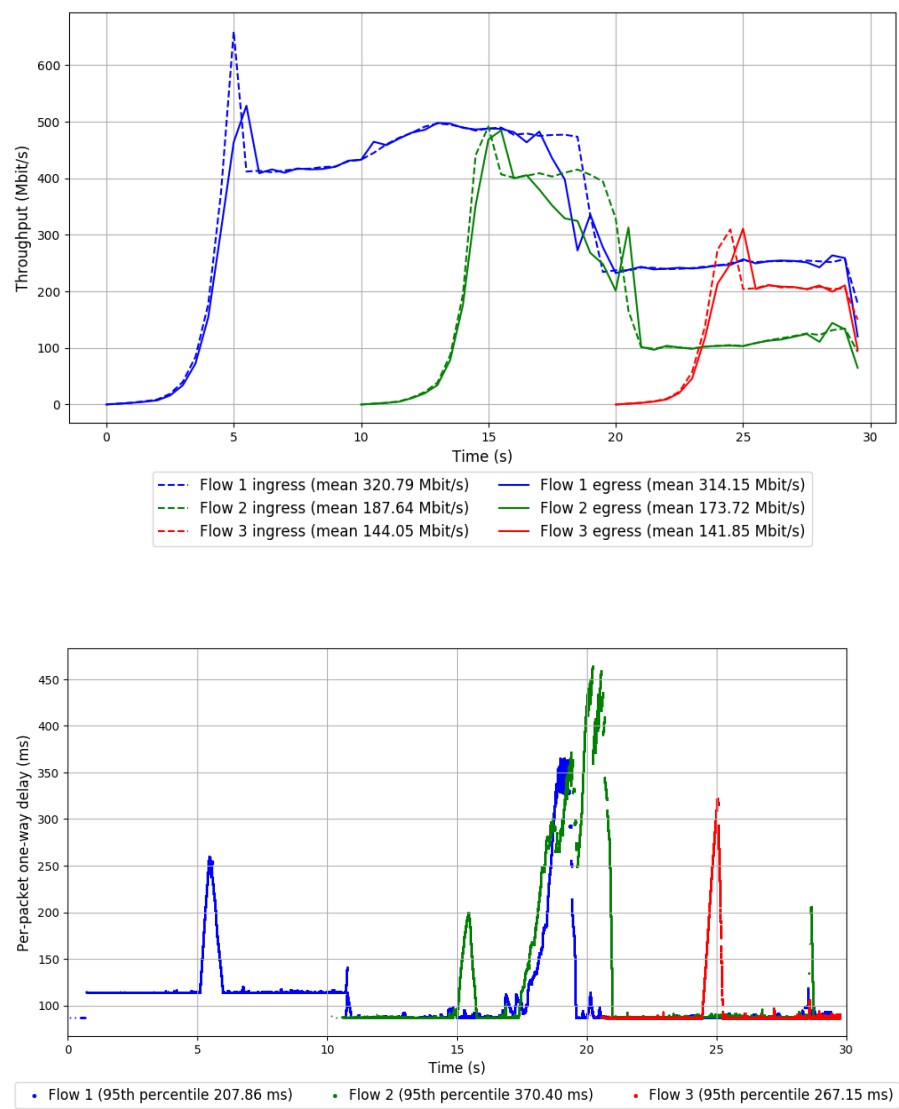
-- Flow 3:

Average throughput: 141.85 Mbit/s

95th percentile per-packet one-way delay: 267.149 ms

Loss rate: 3.56%

Run 9: Report of Vivace-LTE — Data Link



Run 10: Statistics of Vivace-LTE

Start at: 2018-01-31 09:57:51

End at: 2018-01-31 09:58:21

Below is generated by plot.py at 2018-01-31 14:53:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 298.04 Mbit/s

95th percentile per-packet one-way delay: 116.817 ms

Loss rate: 1.79%

-- Flow 1:

Average throughput: 134.67 Mbit/s

95th percentile per-packet one-way delay: 114.847 ms

Loss rate: 1.14%

-- Flow 2:

Average throughput: 181.07 Mbit/s

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

Loss rate: 1.99%

-- Flow 3:

Average throughput: 135.13 Mbit/s

95th percentile per-packet one-way delay: 127.014 ms

Loss rate: 3.23%

Run 10: Report of Vivace-LTE — Data Link

