

Pantheon Report

Generated at 2018-01-17 14:10:07 (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.

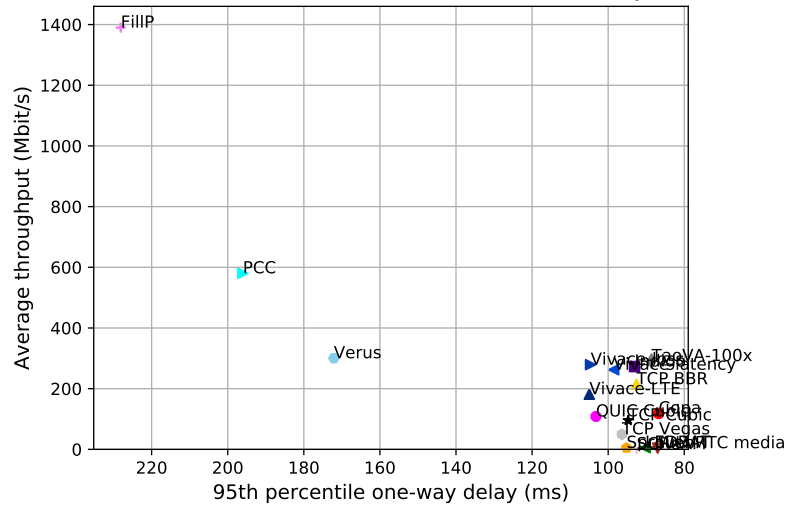
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

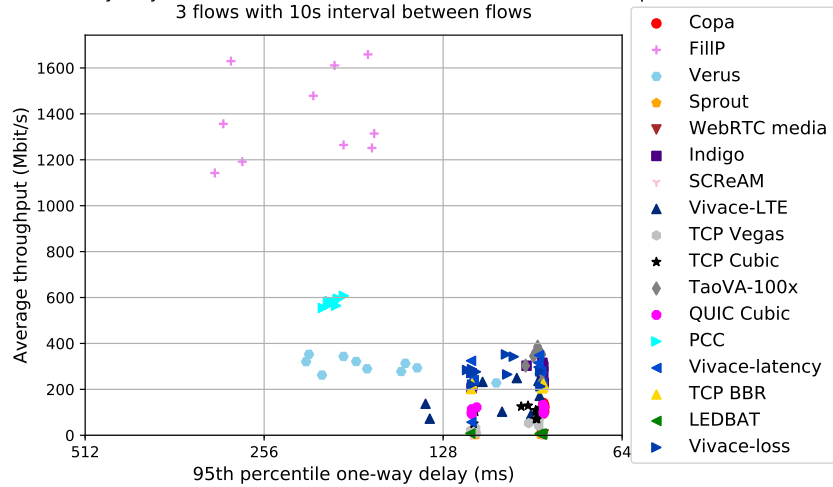
Git summary:

```
branch: master @ 54510ce29f849c716ac5c8199ca1604b6abdfbc3
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fixp @ ec9585325218d5048c4d4152fa42240af54c6e67
third_party/genericCC @ 80b516c448f795fd6e9675f7177b69c622f07da8
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaaeb30b267cde681
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 @ 423cbca3e8ea1d599e7b5cf725835e8a2b6bfac6
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	108.96	107.94	103.75	92.54	92.52	87.33	0.75	1.18	2.39
TCP Cubic	10	47.03	53.77	39.02	94.24	94.99	92.66	1.31	1.34	3.28
LEDBAT	10	3.21	2.87	1.50	93.00	90.20	87.34	1.80	2.63	3.54
PCC	10	477.79	131.72	47.16	196.78	192.74	170.59	2.61	2.67	3.64
QUIC Cubic	10	58.41	54.96	41.90	97.81	94.99	89.42	0.79	0.95	2.03
SCReAM	10	0.34	0.21	0.22	616.29	89.67	89.58	0.59	1.05	1.91
WebRTC media	10	2.15	1.30	0.45	86.91	86.87	89.50	0.89	1.50	3.85
Sprout	10	2.74	2.56	1.52	95.20	95.15	94.92	1.79	2.11	4.57
TaoVA-100x	10	138.83	174.80	164.21	91.53	91.19	93.45	0.65	0.81	2.55
TCP Vegas	10	19.33	28.79	34.00	95.76	93.50	95.99	0.88	1.27	2.66
Verus	10	196.43	116.89	84.80	154.55	158.26	194.15	0.89	1.36	7.36
Copa	10	65.39	59.02	55.21	86.69	86.77	89.46	0.55	0.67	3.79
FillP	10	710.86	739.07	580.42	219.53	231.70	208.93	4.12	6.51	7.96
Indigo	10	141.42	134.61	132.33	92.46	94.52	95.12	0.55	0.99	2.23
Vivace-latency	10	164.56	123.66	48.92	98.55	95.67	105.23	0.96	1.14	3.60
Vivace-loss	10	169.03	125.29	83.17	102.57	101.10	110.27	0.41	1.44	2.61
Vivace-LTE	10	103.26	90.58	57.21	102.75	107.05	113.63	0.34	0.35	1.06

Run 1: Statistics of TCP BBR

Start at: 2018-01-17 06:11:02

End at: 2018-01-17 06:11:32

Below is generated by plot.py at 2018-01-17 12:20:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 210.22 Mbit/s

95th percentile per-packet one-way delay: 86.914 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 104.02 Mbit/s

95th percentile per-packet one-way delay: 86.764 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 104.25 Mbit/s

95th percentile per-packet one-way delay: 86.911 ms

Loss rate: 1.15%

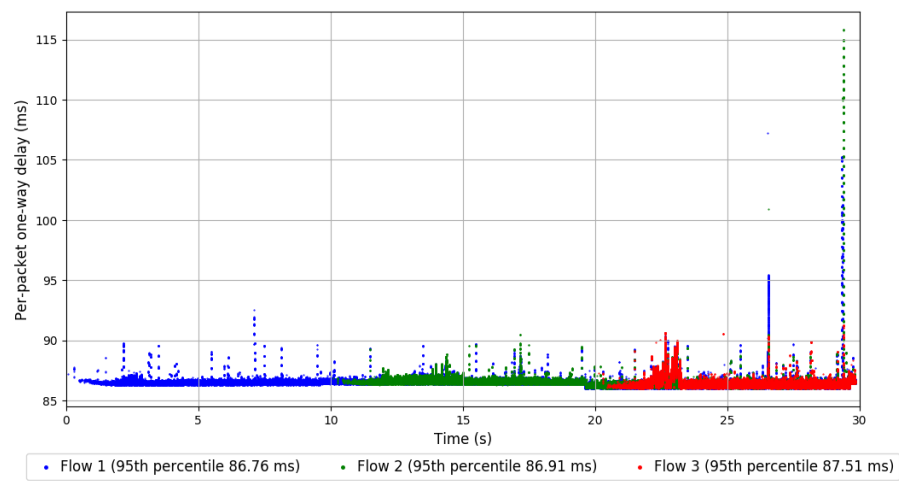
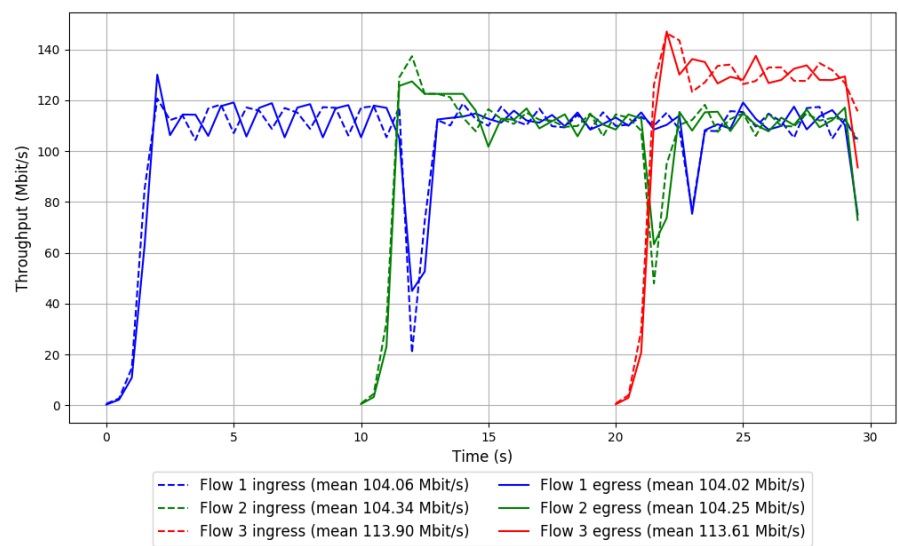
-- Flow 3:

Average throughput: 113.61 Mbit/s

95th percentile per-packet one-way delay: 87.514 ms

Loss rate: 2.08%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-01-17 06:29:57

End at: 2018-01-17 06:30:27

Below is generated by plot.py at 2018-01-17 12:21:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 217.20 Mbit/s

95th percentile per-packet one-way delay: 86.898 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 112.74 Mbit/s

95th percentile per-packet one-way delay: 86.964 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 102.24 Mbit/s

95th percentile per-packet one-way delay: 86.709 ms

Loss rate: 1.17%

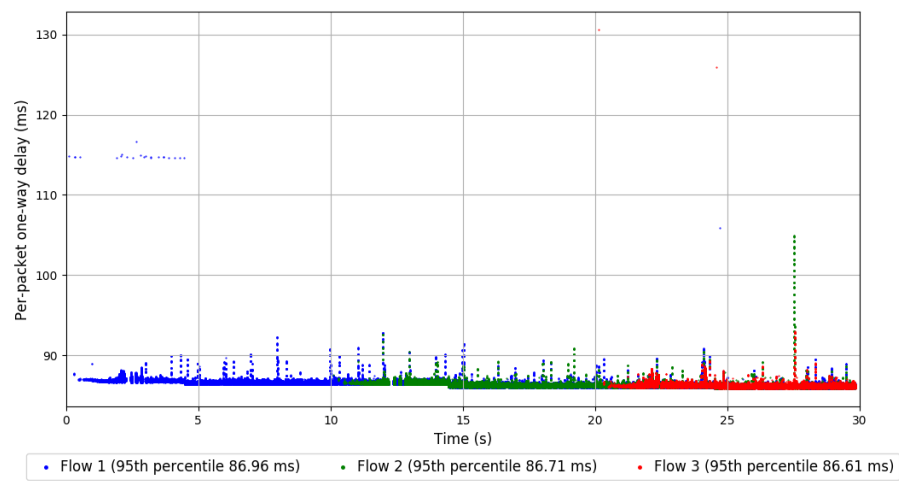
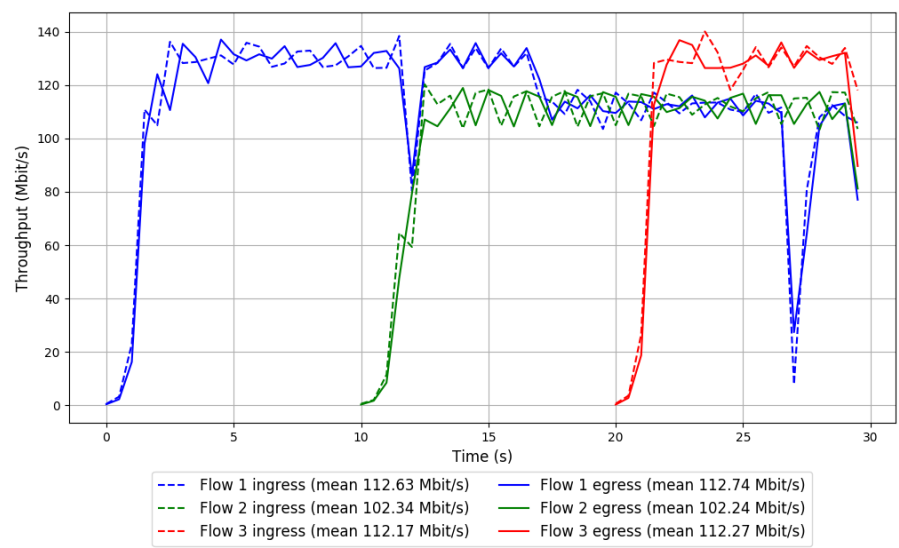
-- Flow 3:

Average throughput: 112.27 Mbit/s

95th percentile per-packet one-way delay: 86.613 ms

Loss rate: 2.33%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-01-17 06:49:01

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

Below is generated by plot.py at 2018-01-17 12:21:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 224.53 Mbit/s

95th percentile per-packet one-way delay: 86.752 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 110.08 Mbit/s

95th percentile per-packet one-way delay: 86.732 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 117.78 Mbit/s

95th percentile per-packet one-way delay: 86.776 ms

Loss rate: 0.99%

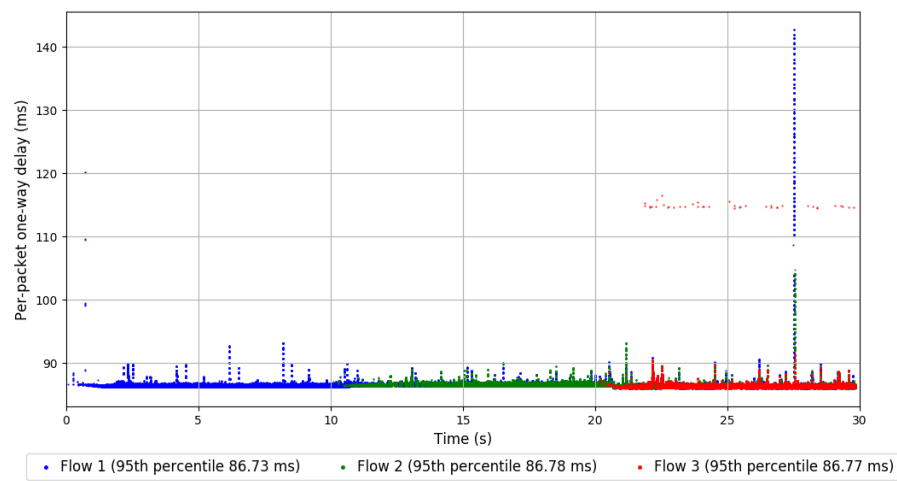
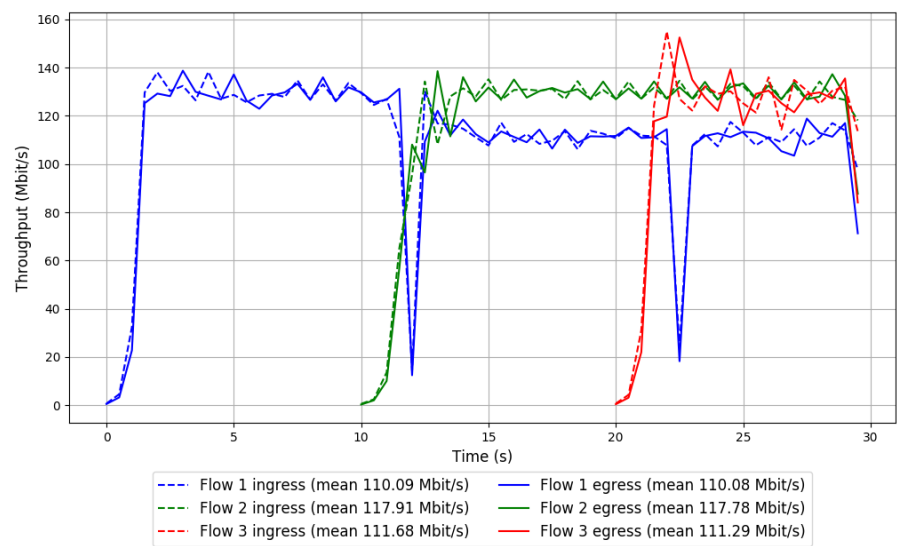
-- Flow 3:

Average throughput: 111.29 Mbit/s

95th percentile per-packet one-way delay: 86.765 ms

Loss rate: 2.35%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-01-17 07:08:25

End at: 2018-01-17 07:08:55

Below is generated by plot.py at 2018-01-17 12:21:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 201.32 Mbit/s

95th percentile per-packet one-way delay: 114.839 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 105.11 Mbit/s

95th percentile per-packet one-way delay: 114.808 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 98.20 Mbit/s

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

Loss rate: 1.18%

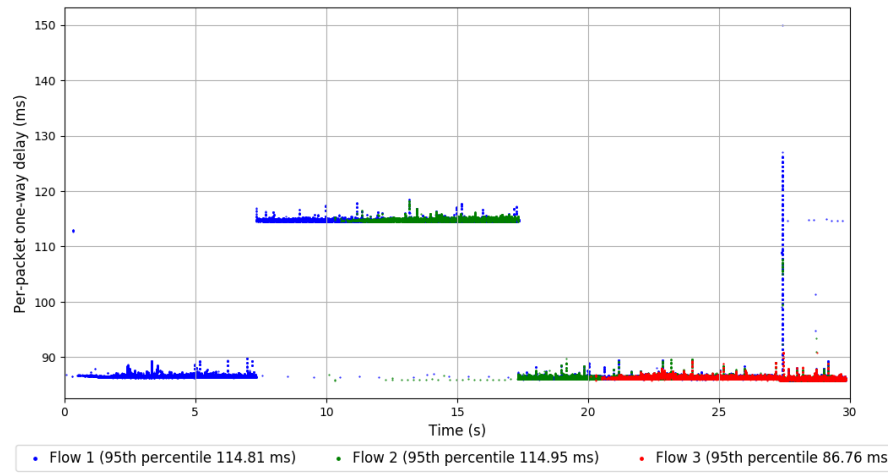
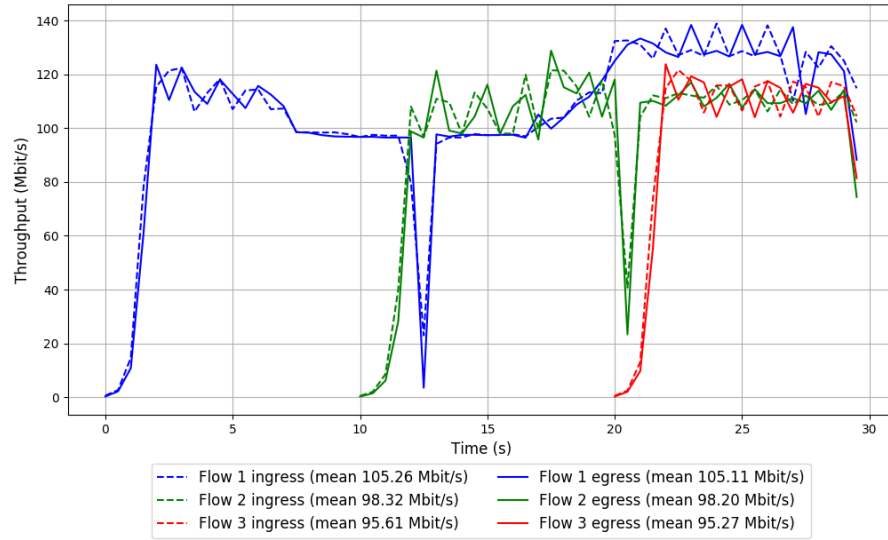
-- Flow 3:

Average throughput: 95.27 Mbit/s

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

Loss rate: 2.45%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-01-17 07:27:23

End at: 2018-01-17 07:27:53

Below is generated by plot.py at 2018-01-17 12:21:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 212.23 Mbit/s

95th percentile per-packet one-way delay: 87.027 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 109.18 Mbit/s

95th percentile per-packet one-way delay: 87.089 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 108.11 Mbit/s

95th percentile per-packet one-way delay: 86.715 ms

Loss rate: 1.23%

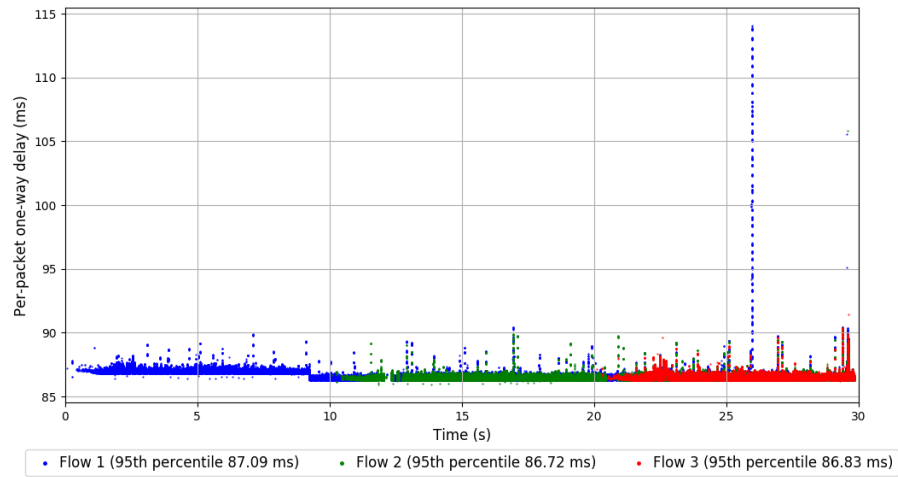
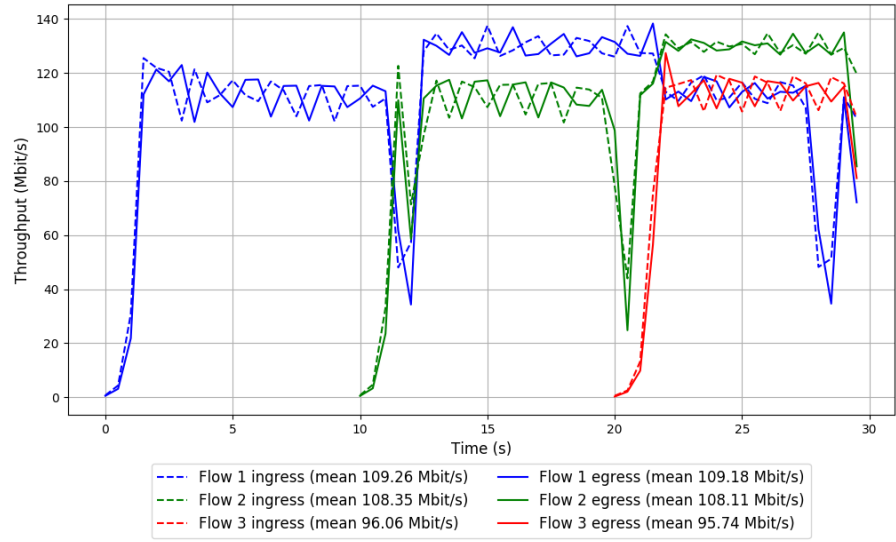
-- Flow 3:

Average throughput: 95.74 Mbit/s

95th percentile per-packet one-way delay: 86.835 ms

Loss rate: 2.40%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-01-17 07:46:17

End at: 2018-01-17 07:46:47

Below is generated by plot.py at 2018-01-17 12:21:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 212.52 Mbit/s

95th percentile per-packet one-way delay: 87.319 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 111.35 Mbit/s

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

Loss rate: 1.06%

-- Flow 2:

Average throughput: 108.78 Mbit/s

95th percentile per-packet one-way delay: 87.278 ms

Loss rate: 1.47%

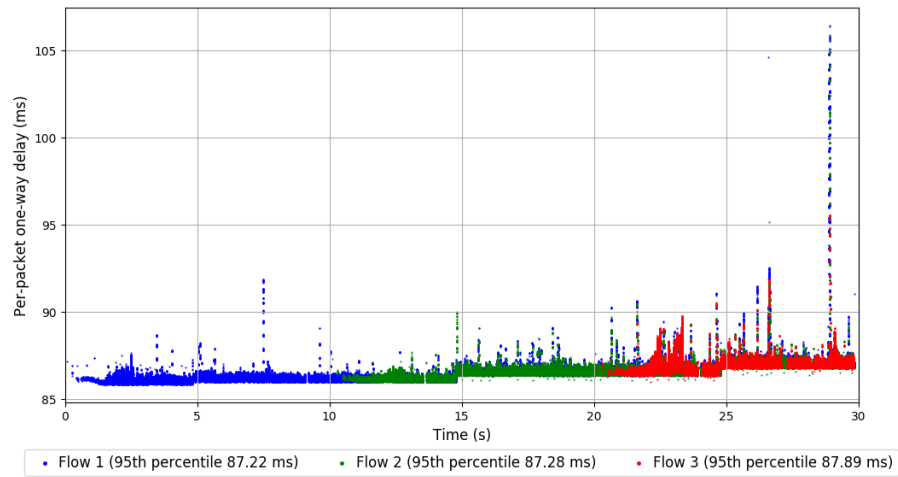
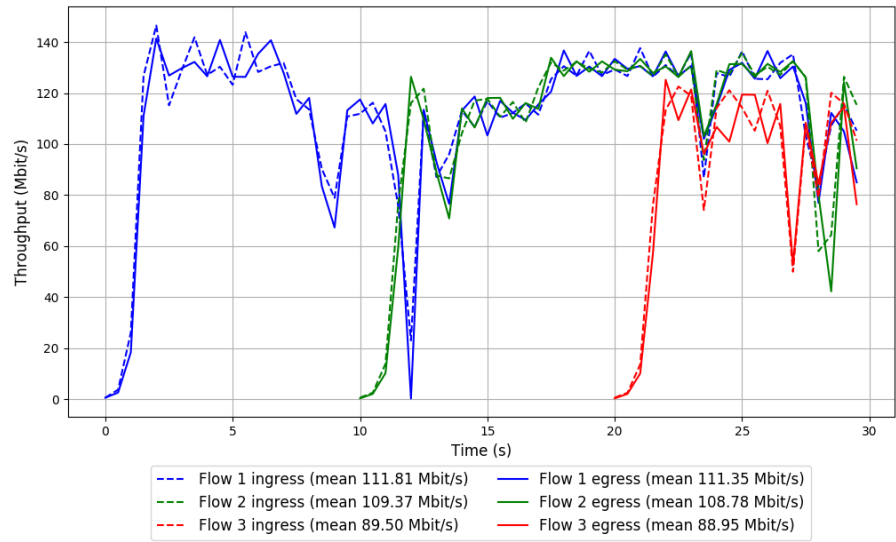
-- Flow 3:

Average throughput: 88.95 Mbit/s

95th percentile per-packet one-way delay: 87.888 ms

Loss rate: 2.78%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-01-17 08:05:35

End at: 2018-01-17 08:06:05

Below is generated by plot.py at 2018-01-17 12:21:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 225.80 Mbit/s

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

Loss rate: 1.09%

-- Flow 1:

Average throughput: 115.00 Mbit/s

95th percentile per-packet one-way delay: 114.381 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 112.99 Mbit/s

95th percentile per-packet one-way delay: 114.445 ms

Loss rate: 0.98%

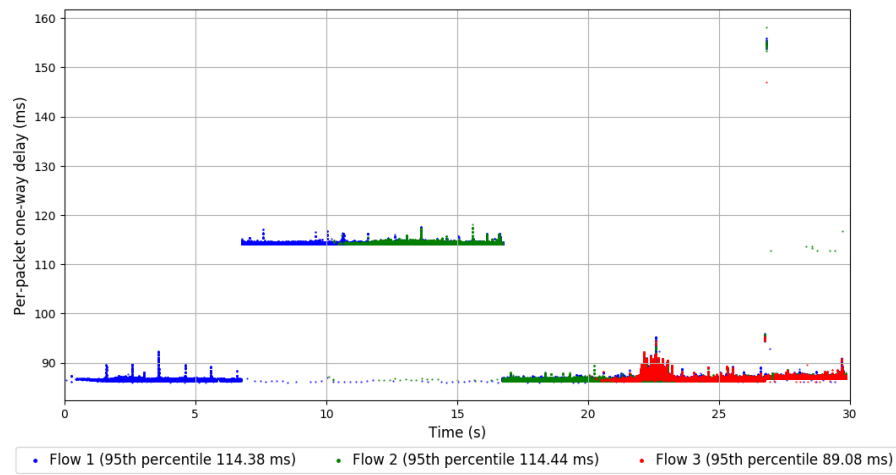
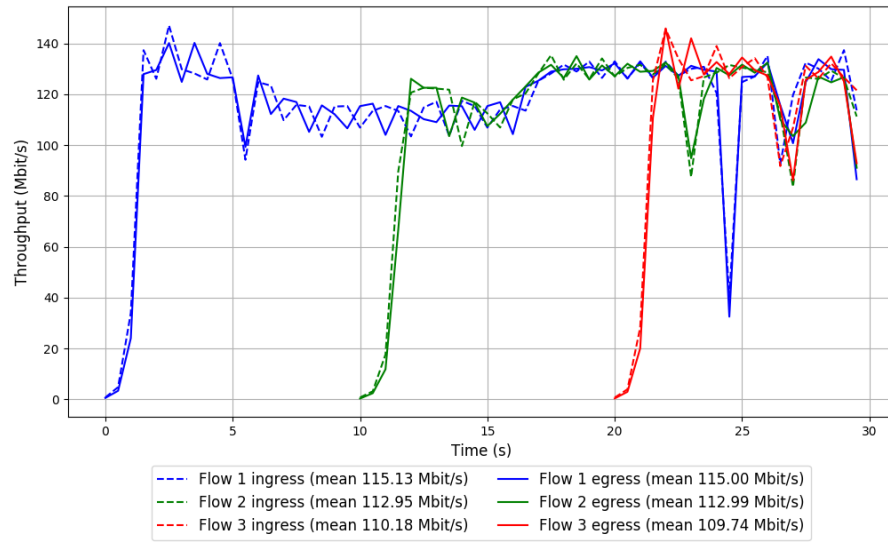
-- Flow 3:

Average throughput: 109.74 Mbit/s

95th percentile per-packet one-way delay: 89.080 ms

Loss rate: 2.35%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-01-17 08:24:23

End at: 2018-01-17 08:24:53

Below is generated by plot.py at 2018-01-17 12:21:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 216.13 Mbit/s

95th percentile per-packet one-way delay: 87.158 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 103.91 Mbit/s

95th percentile per-packet one-way delay: 87.074 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 116.26 Mbit/s

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

Loss rate: 1.01%

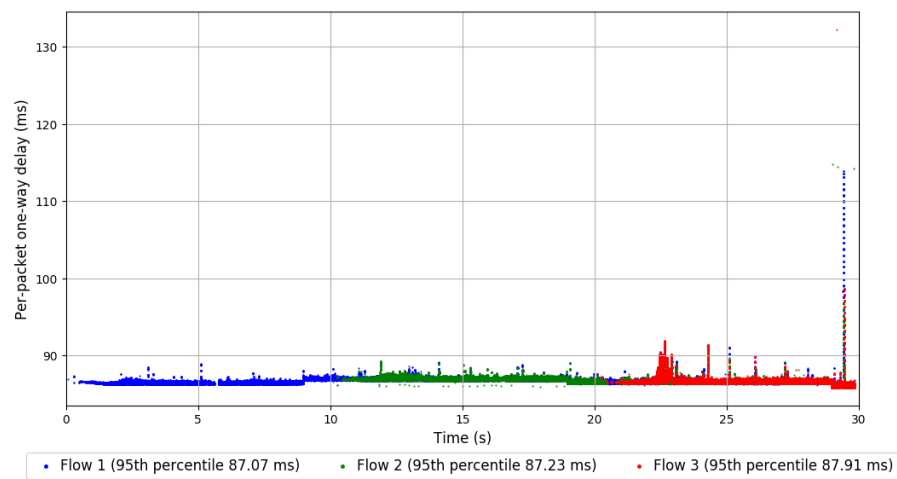
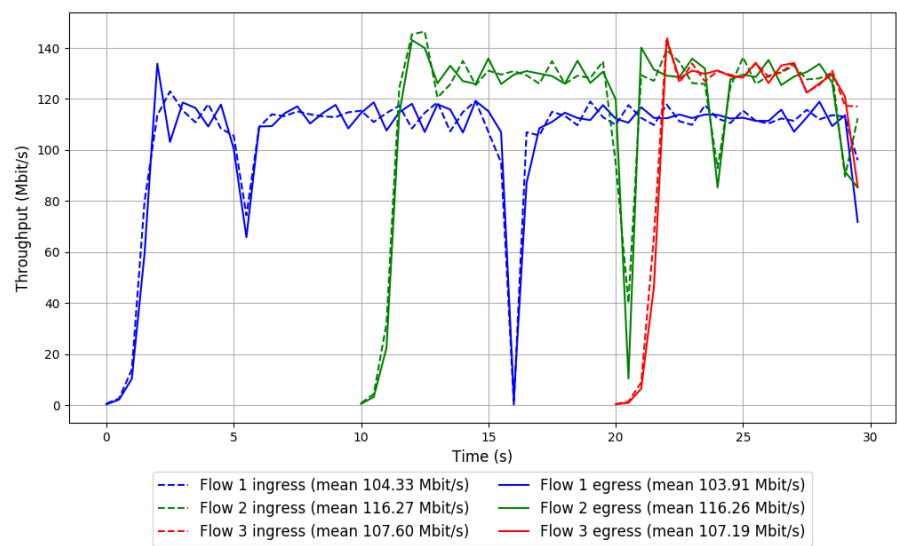
-- Flow 3:

Average throughput: 107.19 Mbit/s

95th percentile per-packet one-way delay: 87.913 ms

Loss rate: 2.38%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-01-17 08:43:34

End at: 2018-01-17 08:44:04

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 220.16 Mbit/s

95th percentile per-packet one-way delay: 87.109 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 116.03 Mbit/s

95th percentile per-packet one-way delay: 87.141 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 110.10 Mbit/s

95th percentile per-packet one-way delay: 87.070 ms

Loss rate: 1.46%

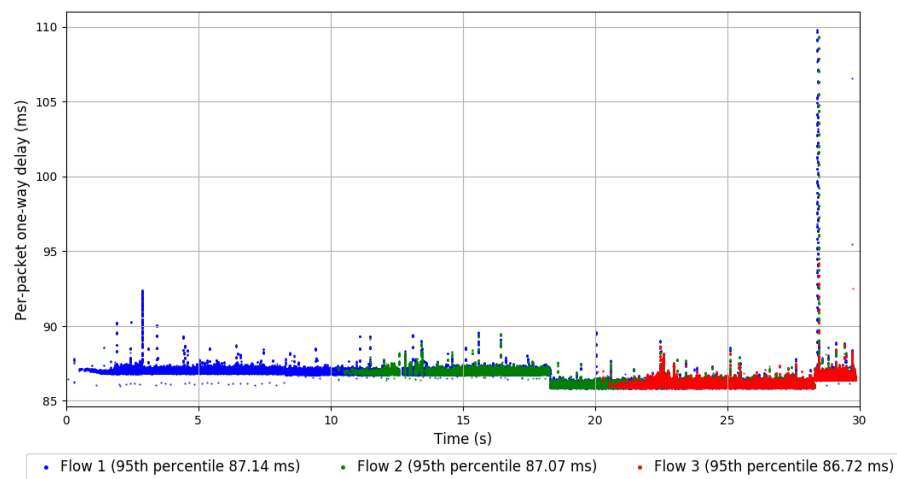
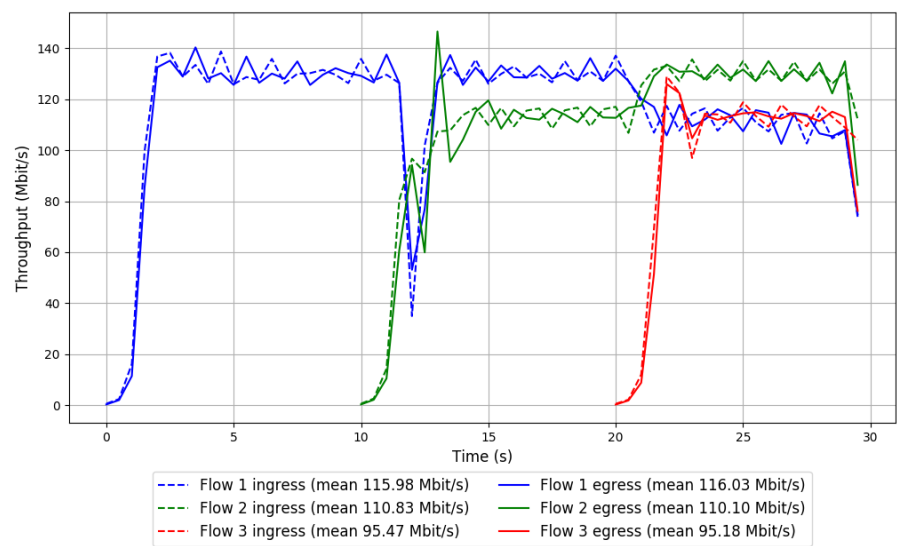
-- Flow 3:

Average throughput: 95.18 Mbit/s

95th percentile per-packet one-way delay: 86.717 ms

Loss rate: 2.33%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-01-17 09:02:12

End at: 2018-01-17 09:02:42

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 204.37 Mbit/s

95th percentile per-packet one-way delay: 87.189 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 102.20 Mbit/s

95th percentile per-packet one-way delay: 87.204 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 100.64 Mbit/s

95th percentile per-packet one-way delay: 87.158 ms

Loss rate: 1.11%

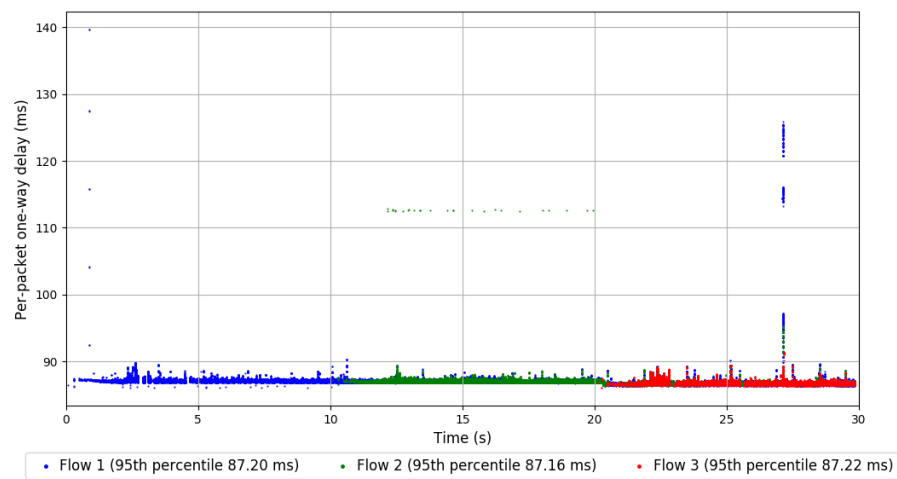
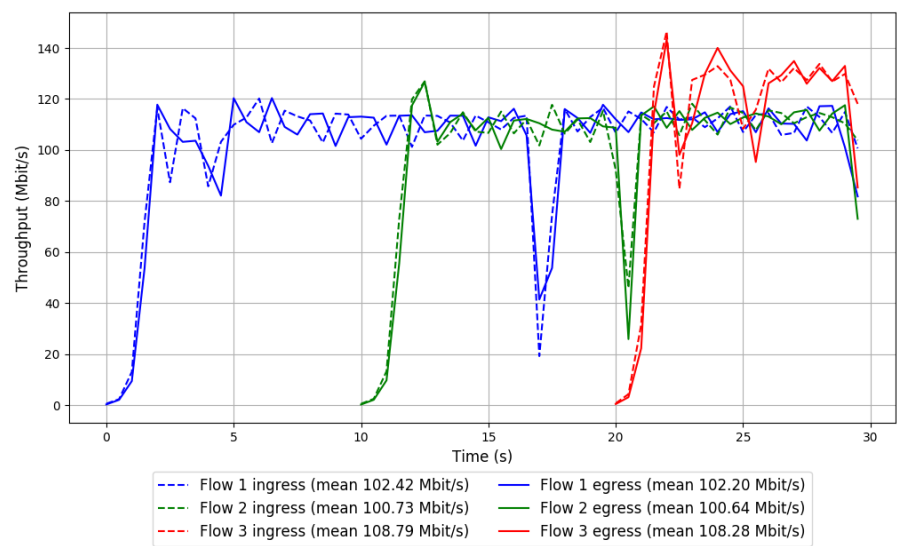
-- Flow 3:

Average throughput: 108.28 Mbit/s

95th percentile per-packet one-way delay: 87.221 ms

Loss rate: 2.48%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

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

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

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.23 Mbit/s

95th percentile per-packet one-way delay: 94.589 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 64.56 Mbit/s

95th percentile per-packet one-way delay: 91.666 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 66.61 Mbit/s

95th percentile per-packet one-way delay: 96.557 ms

Loss rate: 0.86%

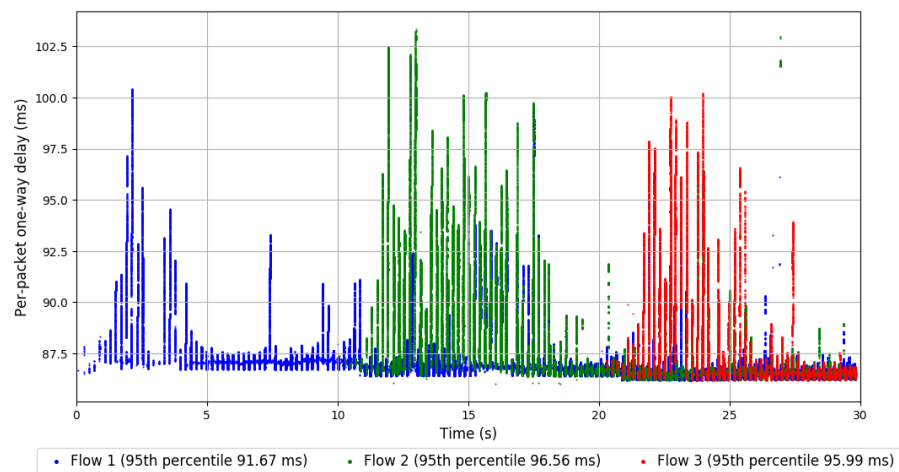
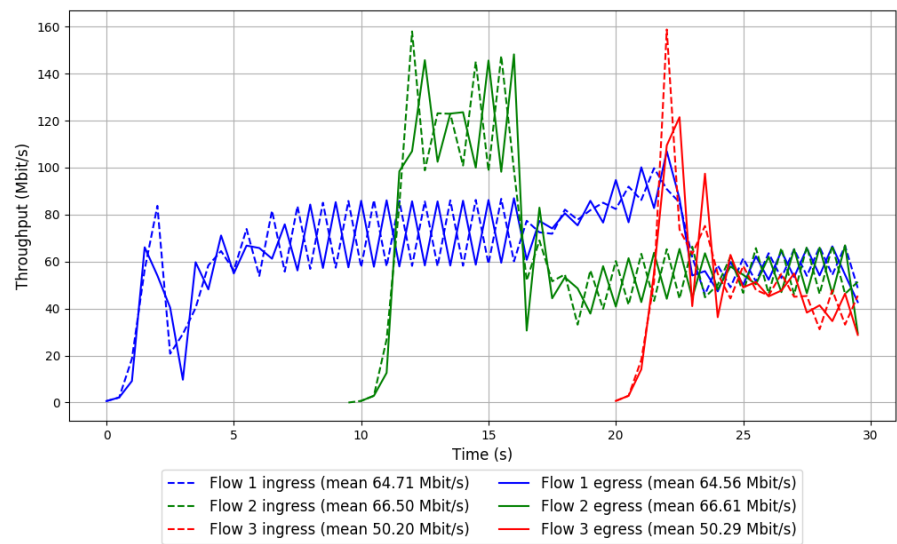
-- Flow 3:

Average throughput: 50.29 Mbit/s

95th percentile per-packet one-way delay: 95.991 ms

Loss rate: 1.85%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-01-17 06:36:15

End at: 2018-01-17 06:36:45

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.95 Mbit/s

95th percentile per-packet one-way delay: 89.369 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 37.40 Mbit/s

95th percentile per-packet one-way delay: 89.652 ms

Loss rate: 2.14%

-- Flow 2:

Average throughput: 49.94 Mbit/s

95th percentile per-packet one-way delay: 89.028 ms

Loss rate: 0.86%

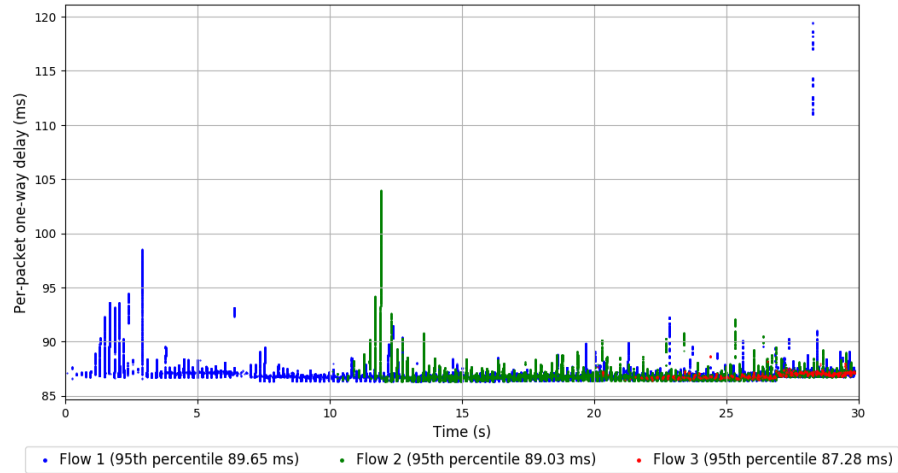
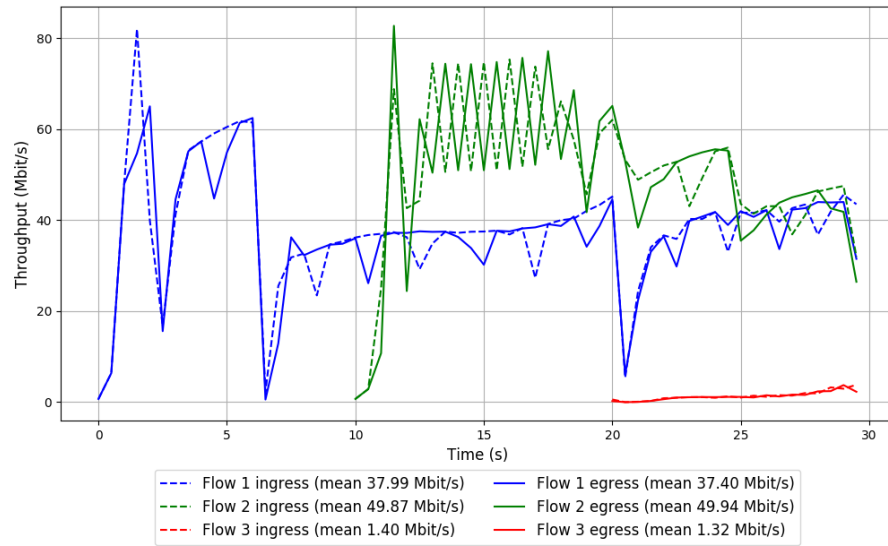
-- Flow 3:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 87.283 ms

Loss rate: 7.36%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-01-17 06:55:16

End at: 2018-01-17 06:55:46

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.97 Mbit/s

95th percentile per-packet one-way delay: 88.659 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 40.37 Mbit/s

95th percentile per-packet one-way delay: 89.039 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 63.25 Mbit/s

95th percentile per-packet one-way delay: 88.657 ms

Loss rate: 0.82%

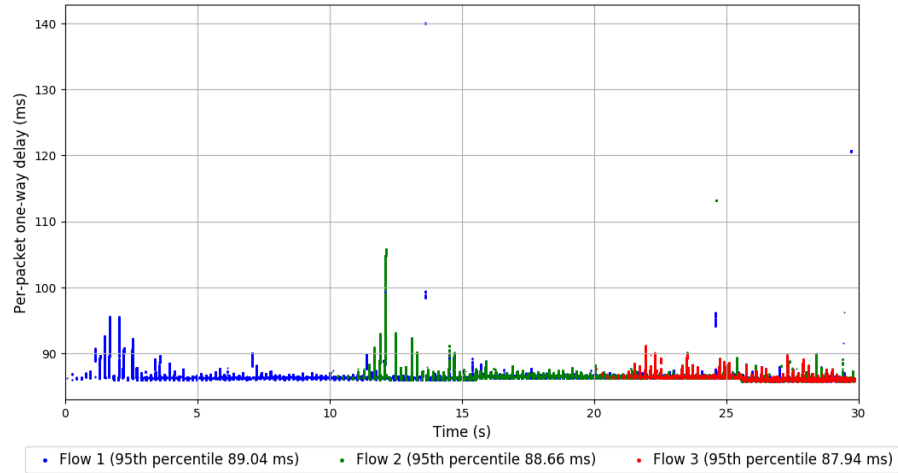
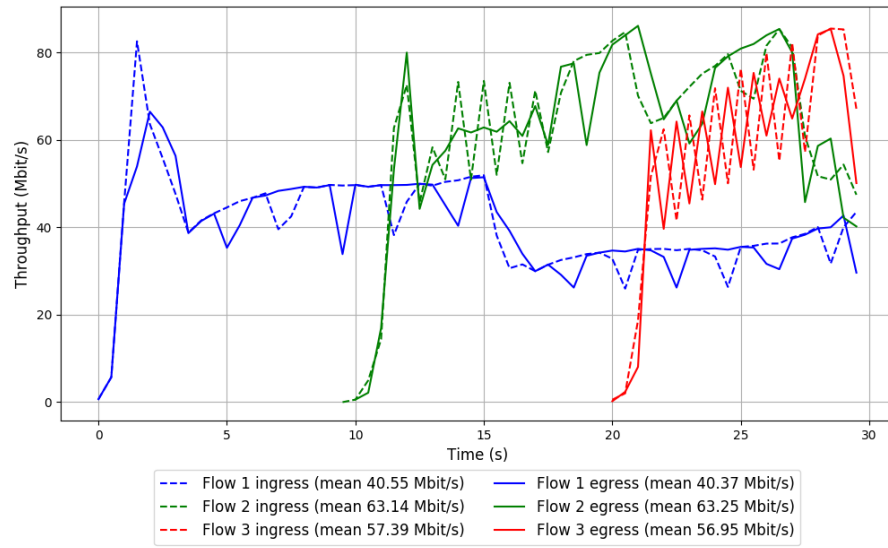
-- Flow 3:

Average throughput: 56.95 Mbit/s

95th percentile per-packet one-way delay: 87.935 ms

Loss rate: 2.52%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-01-17 07:14:27

End at: 2018-01-17 07:14:57

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.17 Mbit/s

95th percentile per-packet one-way delay: 88.798 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 32.42 Mbit/s

95th percentile per-packet one-way delay: 88.161 ms

Loss rate: 2.14%

-- Flow 2:

Average throughput: 55.90 Mbit/s

95th percentile per-packet one-way delay: 88.469 ms

Loss rate: 1.37%

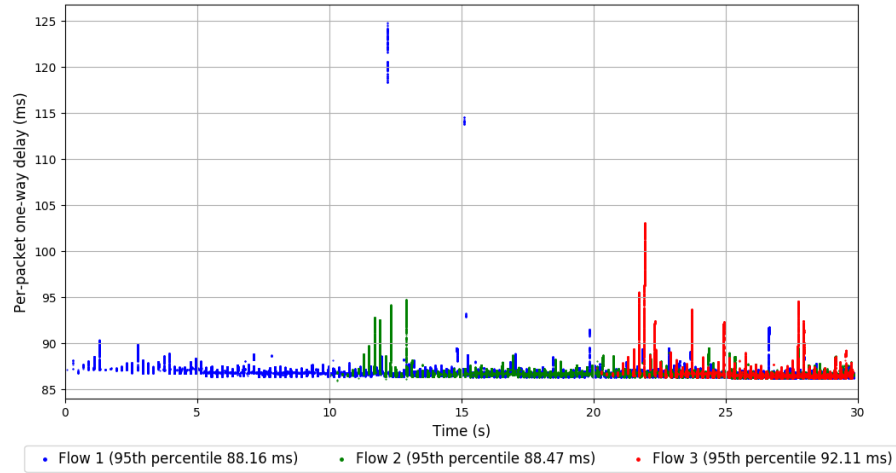
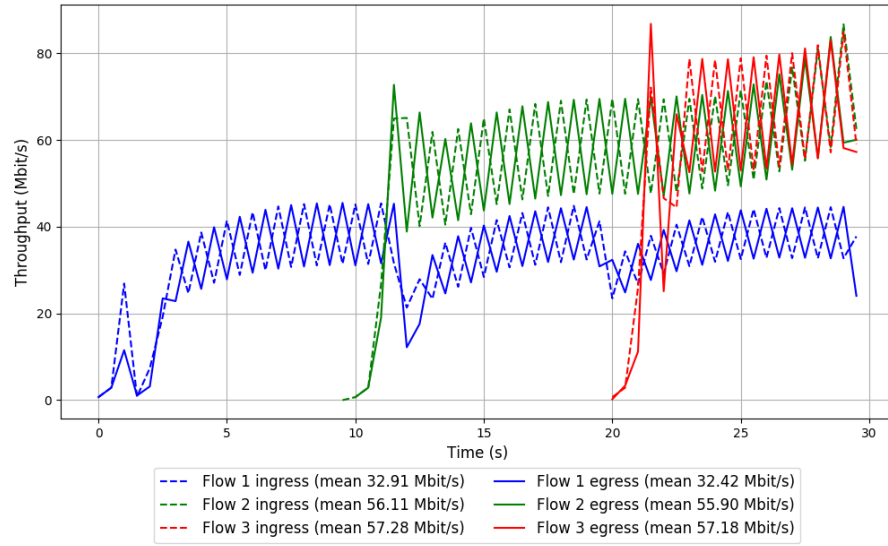
-- Flow 3:

Average throughput: 57.18 Mbit/s

95th percentile per-packet one-way delay: 92.115 ms

Loss rate: 2.58%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-01-17 07:33:37

End at: 2018-01-17 07:34:07

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.85 Mbit/s

95th percentile per-packet one-way delay: 92.130 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 68.90 Mbit/s

95th percentile per-packet one-way delay: 91.320 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 60.16 Mbit/s

95th percentile per-packet one-way delay: 93.523 ms

Loss rate: 0.71%

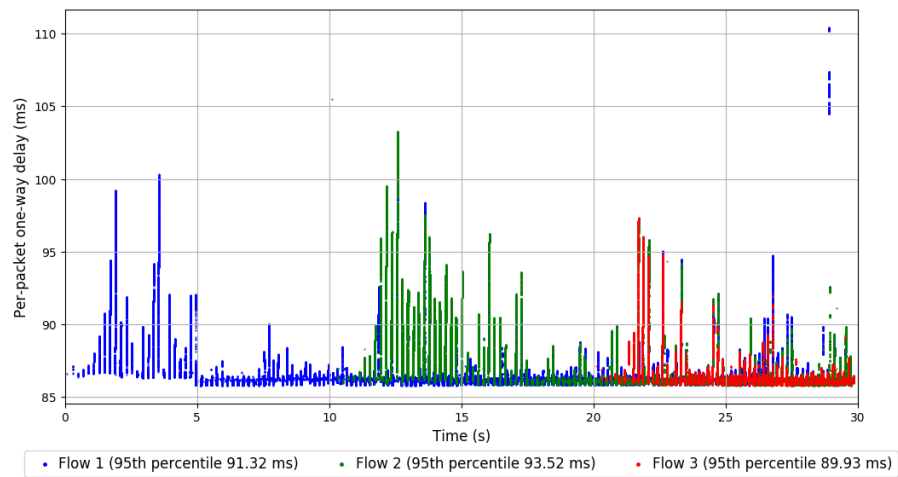
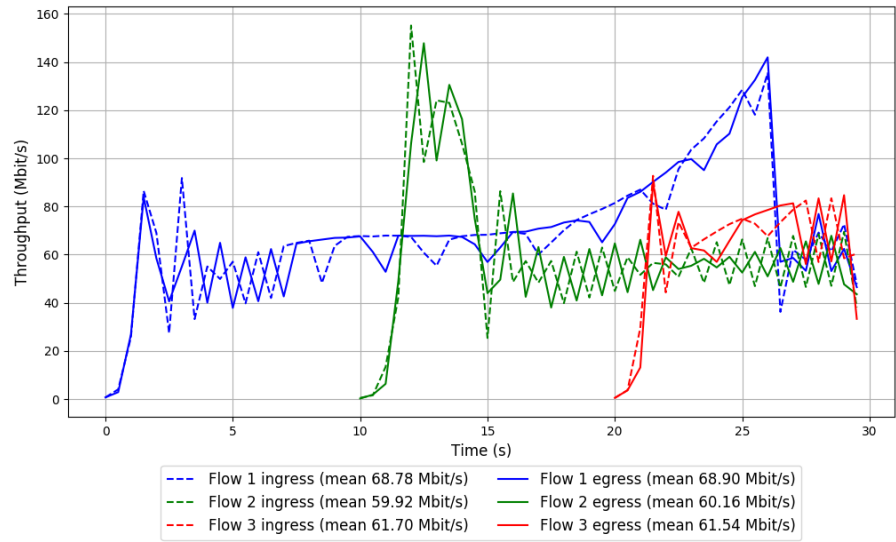
-- Flow 3:

Average throughput: 61.54 Mbit/s

95th percentile per-packet one-way delay: 89.929 ms

Loss rate: 2.27%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-01-17 07:52:37

End at: 2018-01-17 07:53:07

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.48 Mbit/s

95th percentile per-packet one-way delay: 88.624 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 70.44 Mbit/s

95th percentile per-packet one-way delay: 88.631 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 48.33 Mbit/s

95th percentile per-packet one-way delay: 88.676 ms

Loss rate: 0.98%

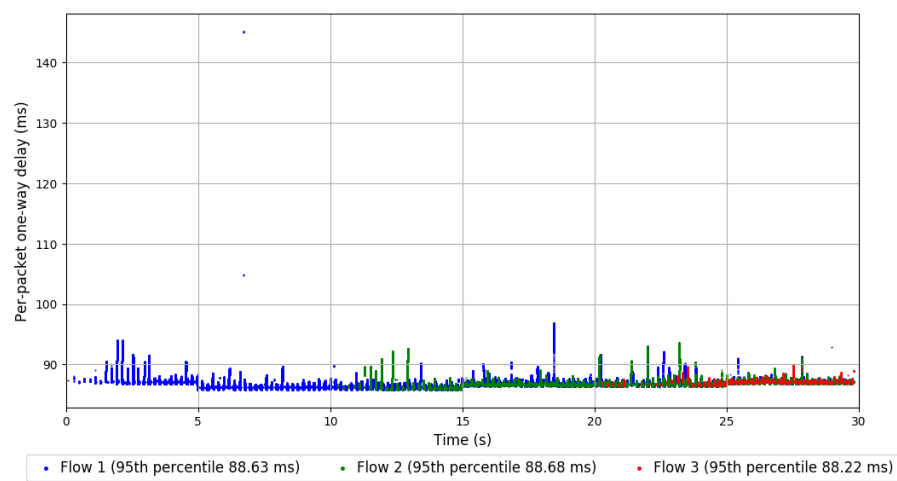
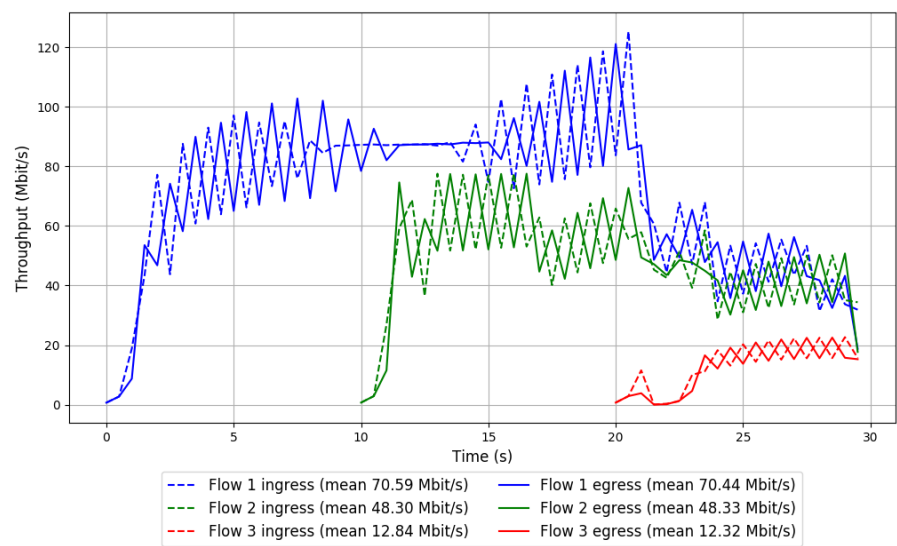
-- Flow 3:

Average throughput: 12.32 Mbit/s

95th percentile per-packet one-way delay: 88.219 ms

Loss rate: 6.04%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-01-17 08:11:47

End at: 2018-01-17 08:12:17

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.53 Mbit/s

95th percentile per-packet one-way delay: 89.434 ms

Loss rate: 0.89%

-- Flow 1:

Average throughput: 59.86 Mbit/s

95th percentile per-packet one-way delay: 88.959 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 52.71 Mbit/s

95th percentile per-packet one-way delay: 89.782 ms

Loss rate: 0.83%

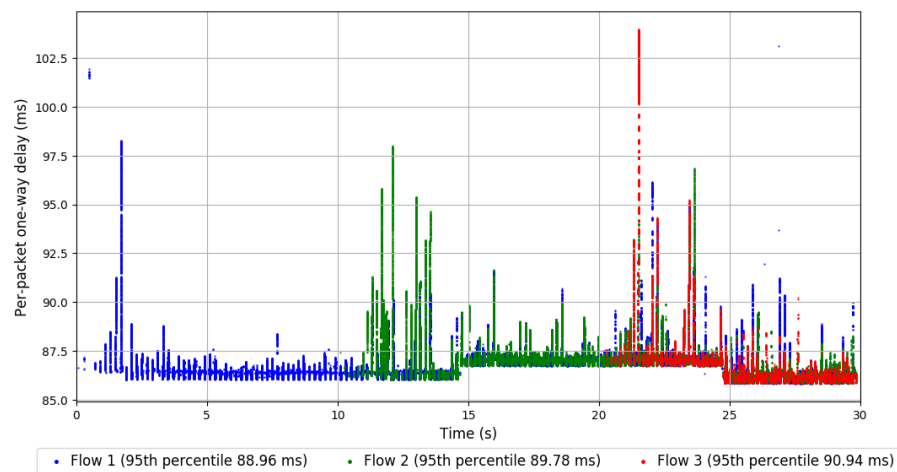
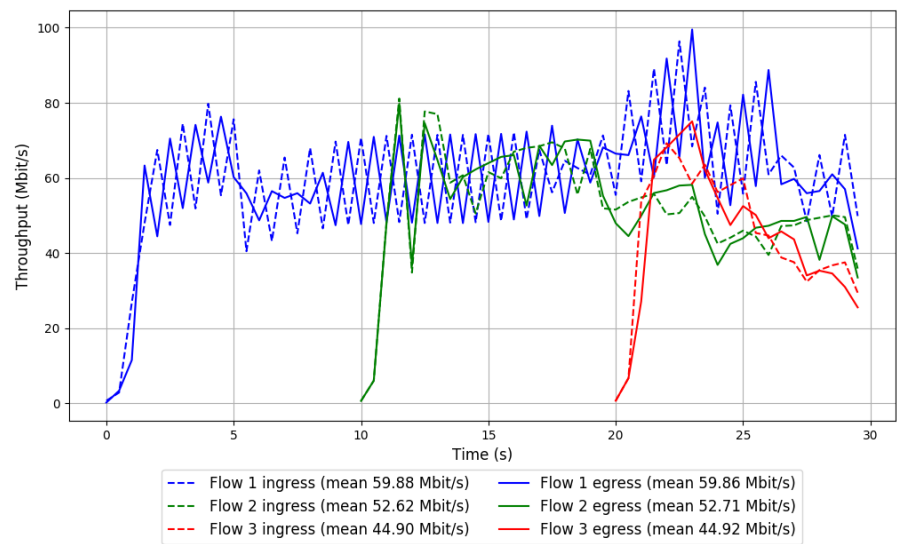
-- Flow 3:

Average throughput: 44.92 Mbit/s

95th percentile per-packet one-way delay: 90.945 ms

Loss rate: 1.74%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-01-17 08:30:32

End at: 2018-01-17 08:31:02

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.55 Mbit/s

95th percentile per-packet one-way delay: 113.068 ms

Loss rate: 1.92%

-- Flow 1:

Average throughput: 58.35 Mbit/s

95th percentile per-packet one-way delay: 113.201 ms

Loss rate: 1.30%

-- Flow 2:

Average throughput: 40.66 Mbit/s

95th percentile per-packet one-way delay: 112.836 ms

Loss rate: 2.85%

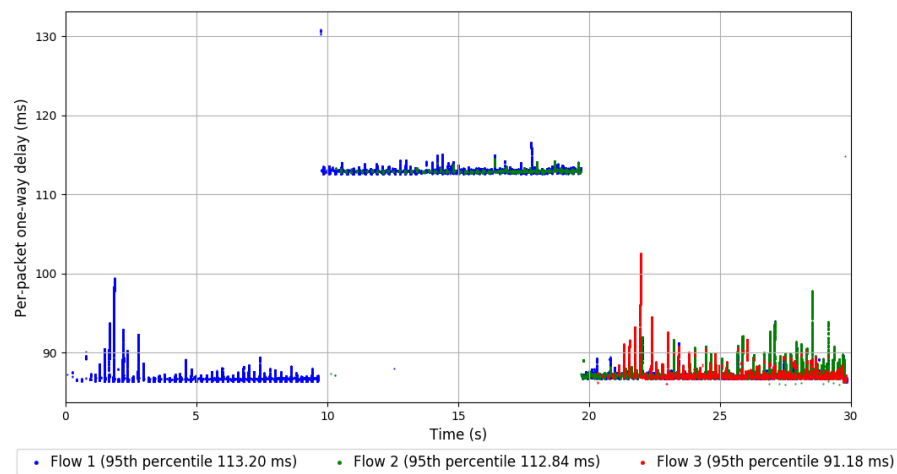
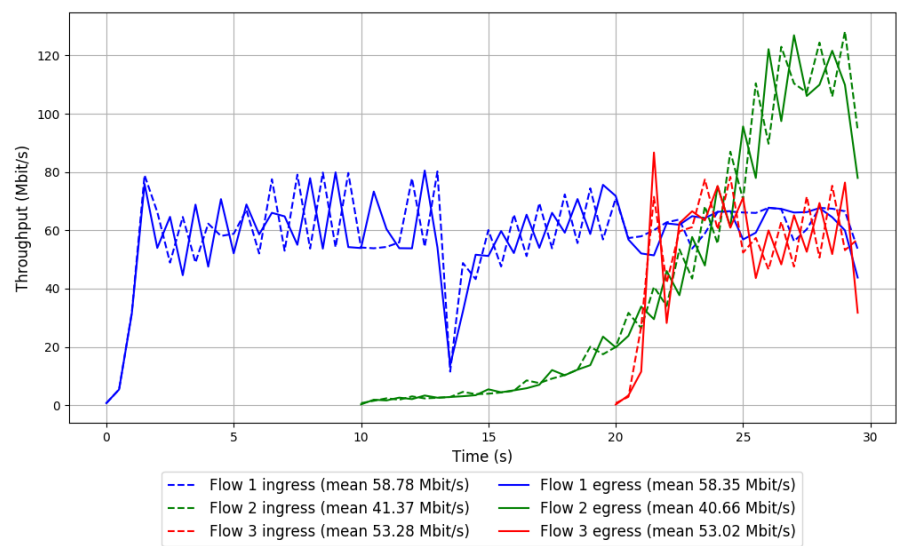
-- Flow 3:

Average throughput: 53.02 Mbit/s

95th percentile per-packet one-way delay: 91.180 ms

Loss rate: 2.51%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-01-17 08:49:38

End at: 2018-01-17 08:50:08

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 50.69 Mbit/s

95th percentile per-packet one-way delay: 113.745 ms

Loss rate: 2.01%

-- Flow 1:

Average throughput: 10.97 Mbit/s

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

Loss rate: 2.71%

-- Flow 2:

Average throughput: 58.21 Mbit/s

95th percentile per-packet one-way delay: 113.939 ms

Loss rate: 1.76%

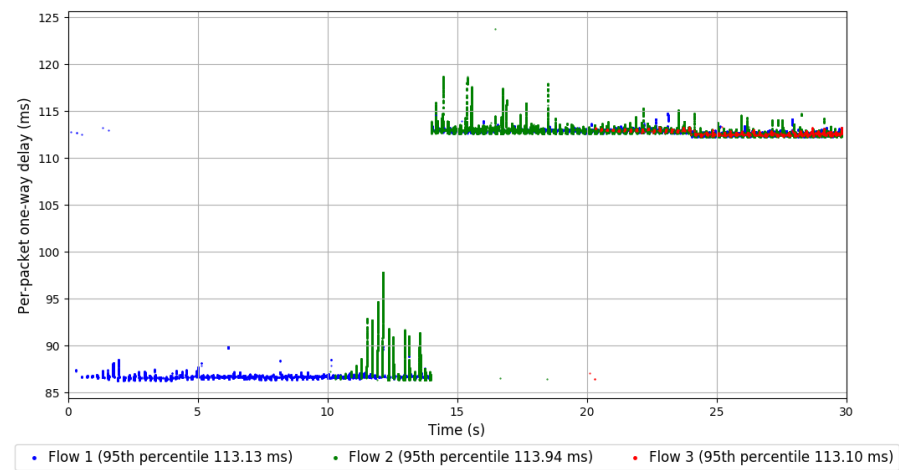
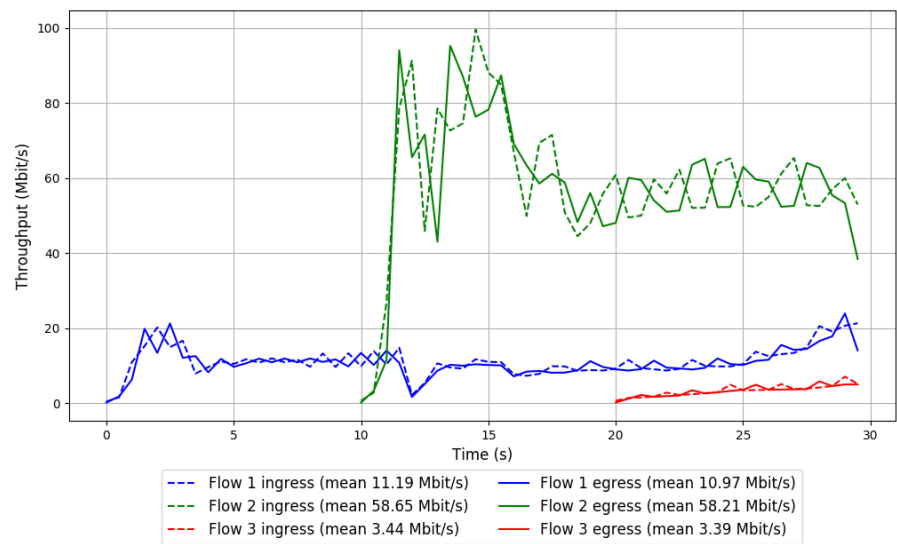
-- Flow 3:

Average throughput: 3.39 Mbit/s

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

Loss rate: 3.58%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-01-17 09:08:16

End at: 2018-01-17 09:08:46

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.91 Mbit/s

95th percentile per-packet one-way delay: 88.960 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 27.01 Mbit/s

95th percentile per-packet one-way delay: 88.618 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 41.94 Mbit/s

95th percentile per-packet one-way delay: 88.474 ms

Loss rate: 2.33%

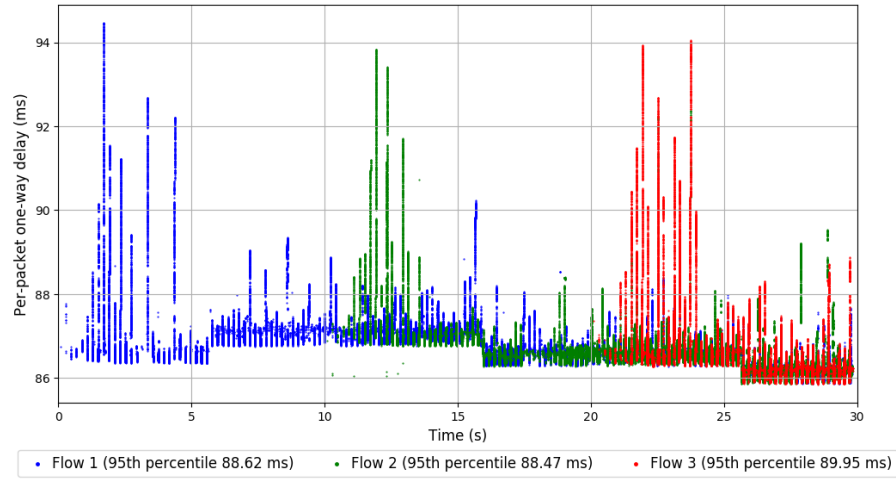
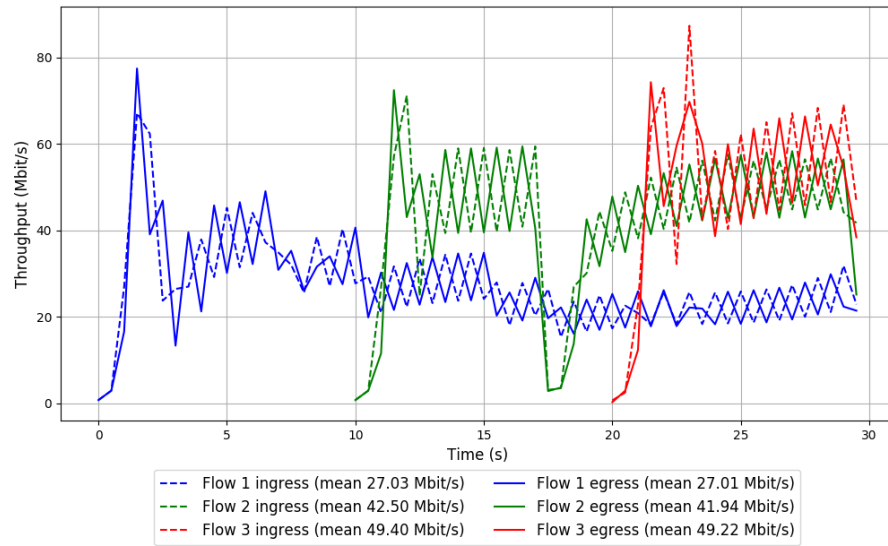
-- Flow 3:

Average throughput: 49.22 Mbit/s

95th percentile per-packet one-way delay: 89.948 ms

Loss rate: 2.37%

Run 10: Report of TCP Cubic — Data Link

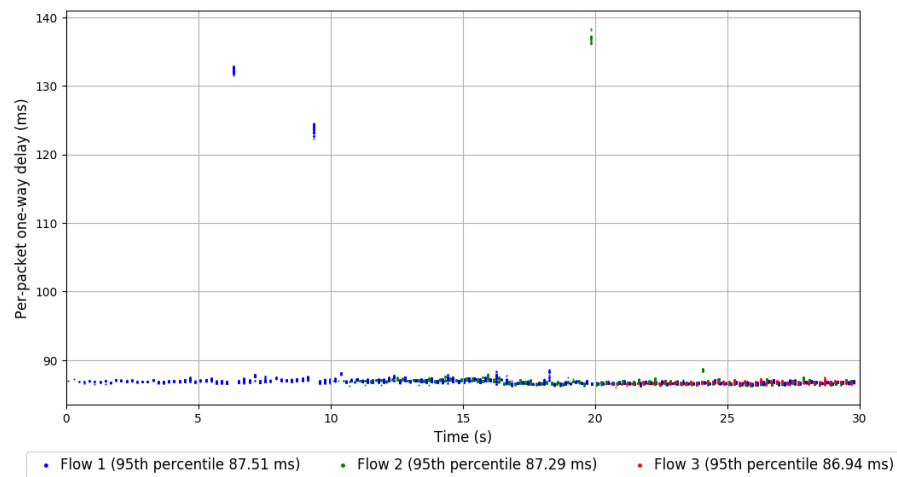
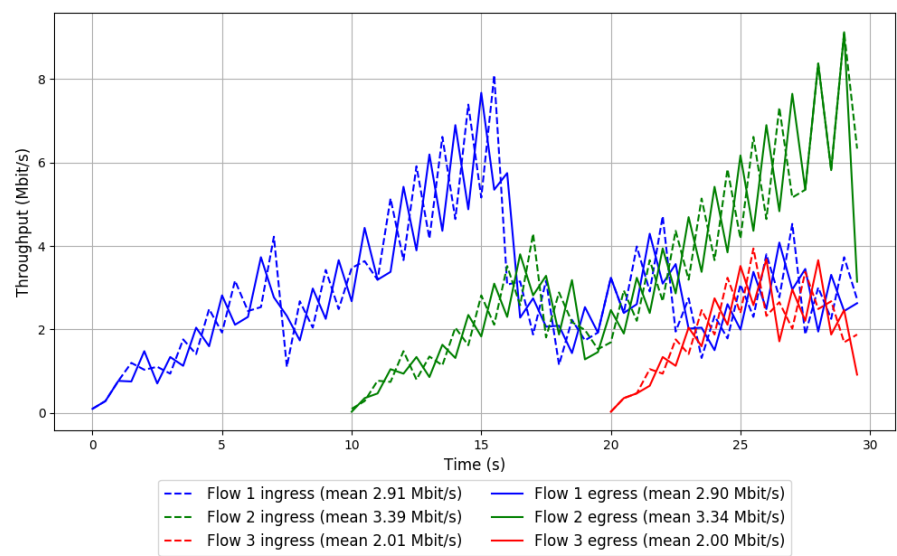


```
Run 1: Statistics of LEDBAT

Start at: 2018-01-17 06:09:16
End at: 2018-01-17 06:09:46

# Below is generated by plot.py at 2018-01-17 12:24:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.74 Mbit/s
95th percentile per-packet one-way delay: 87.388 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 87.514 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 3.34 Mbit/s
95th percentile per-packet one-way delay: 87.286 ms
Loss rate: 2.38%
-- Flow 3:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 86.938 ms
Loss rate: 2.53%
```

Run 1: Report of LEDBAT — Data Link

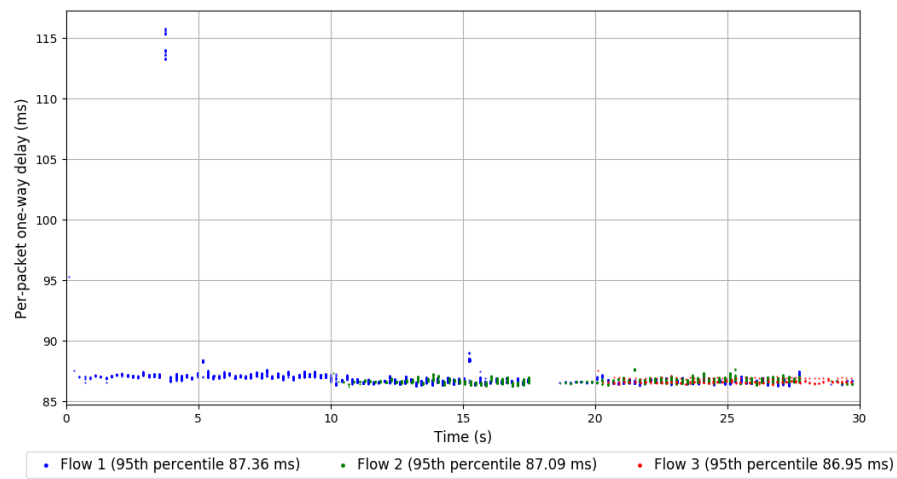
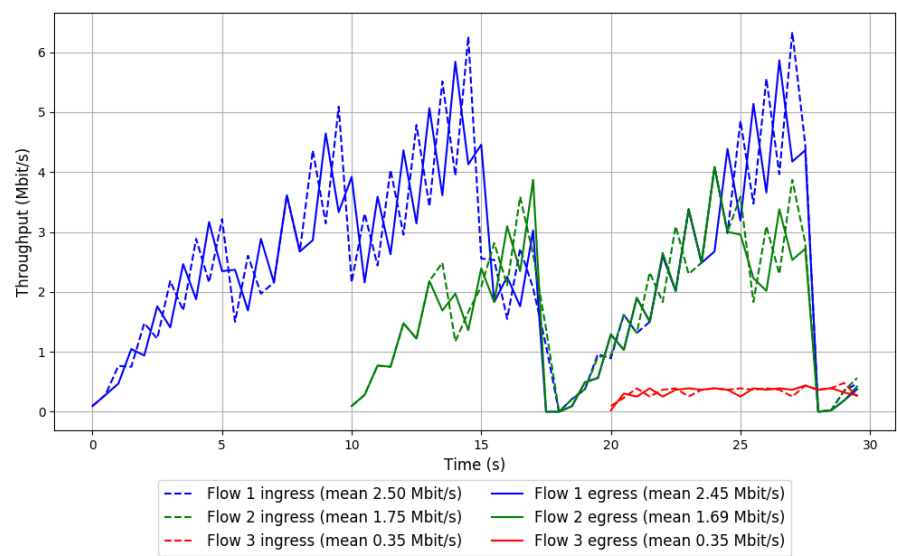


```
Run 2: Statistics of LEDBAT

Start at: 2018-01-17 06:28:12
End at: 2018-01-17 06:28:42

# Below is generated by plot.py at 2018-01-17 12:24:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.68 Mbit/s
95th percentile per-packet one-way delay: 87.294 ms
Loss rate: 3.26%
-- Flow 1:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 87.358 ms
Loss rate: 2.58%
-- Flow 2:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 87.090 ms
Loss rate: 4.82%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 86.952 ms
Loss rate: 2.07%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-01-17 06:47:16

End at: 2018-01-17 06:47:46

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.64 Mbit/s

95th percentile per-packet one-way delay: 88.131 ms

Loss rate: 2.55%

-- Flow 1:

Average throughput: 3.46 Mbit/s

95th percentile per-packet one-way delay: 114.864 ms

Loss rate: 1.58%

-- Flow 2:

Average throughput: 2.89 Mbit/s

95th percentile per-packet one-way delay: 87.551 ms

Loss rate: 3.60%

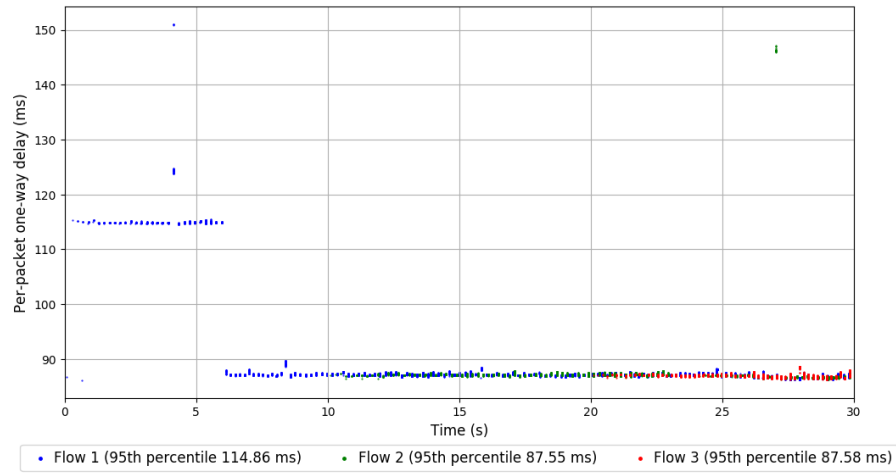
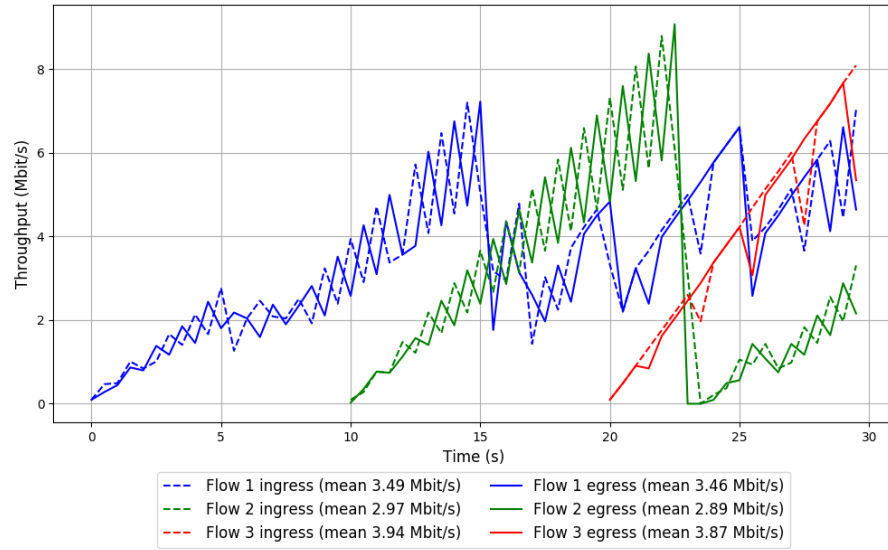
-- Flow 3:

Average throughput: 3.87 Mbit/s

95th percentile per-packet one-way delay: 87.580 ms

Loss rate: 3.51%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-01-17 07:06:40

End at: 2018-01-17 07:07:10

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.77 Mbit/s

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

Loss rate: 2.07%

-- Flow 1:

Average throughput: 4.63 Mbit/s

95th percentile per-packet one-way delay: 115.252 ms

Loss rate: 1.78%

-- Flow 2:

Average throughput: 3.08 Mbit/s

95th percentile per-packet one-way delay: 115.252 ms

Loss rate: 1.80%

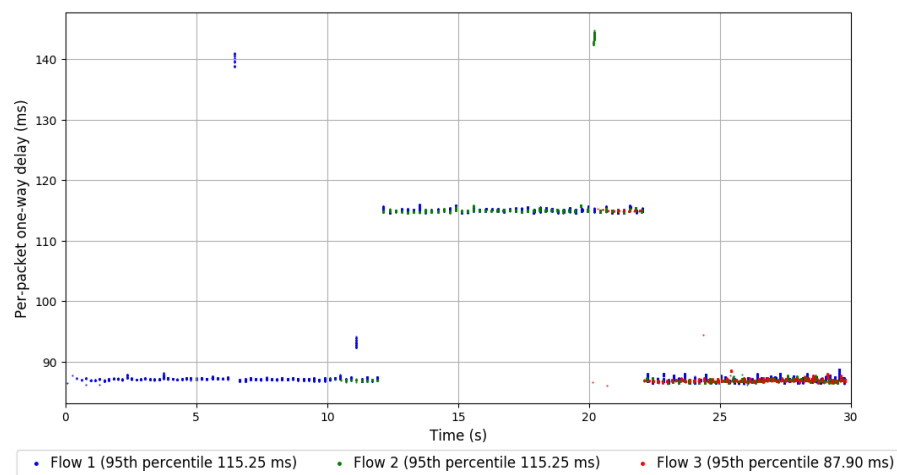
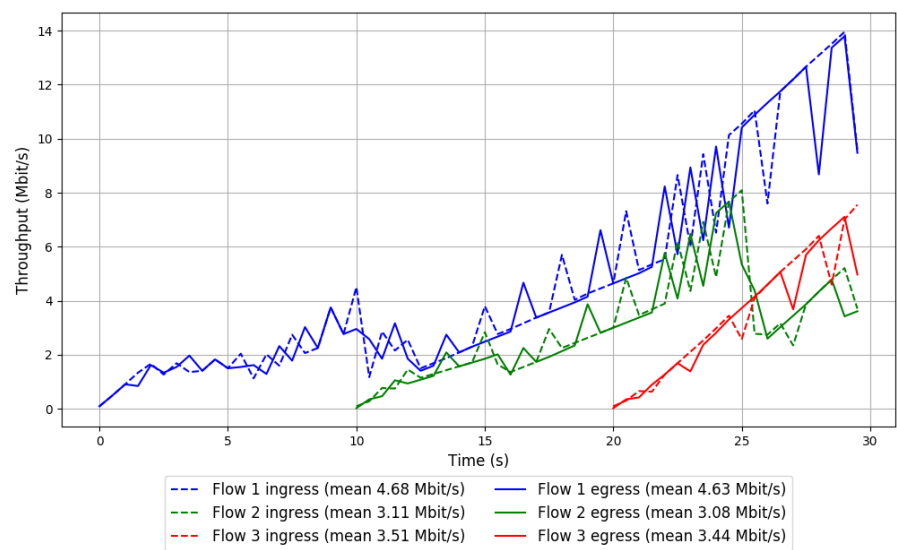
-- Flow 3:

Average throughput: 3.44 Mbit/s

95th percentile per-packet one-way delay: 87.898 ms

Loss rate: 3.74%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-01-17 07:25:39

End at: 2018-01-17 07:26:09

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.70 Mbit/s

95th percentile per-packet one-way delay: 87.214 ms

Loss rate: 1.73%

-- Flow 1:

Average throughput: 2.80 Mbit/s

95th percentile per-packet one-way delay: 87.269 ms

Loss rate: 1.90%

-- Flow 2:

Average throughput: 4.25 Mbit/s

95th percentile per-packet one-way delay: 87.089 ms

Loss rate: 1.55%

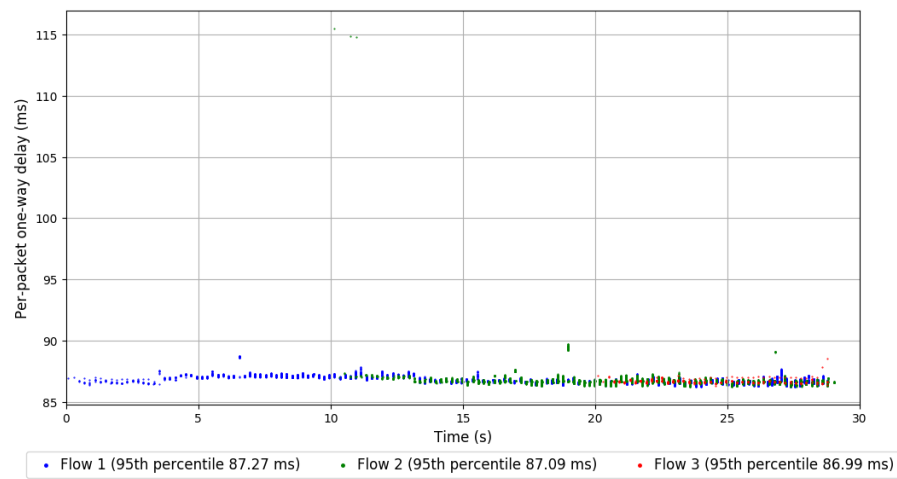
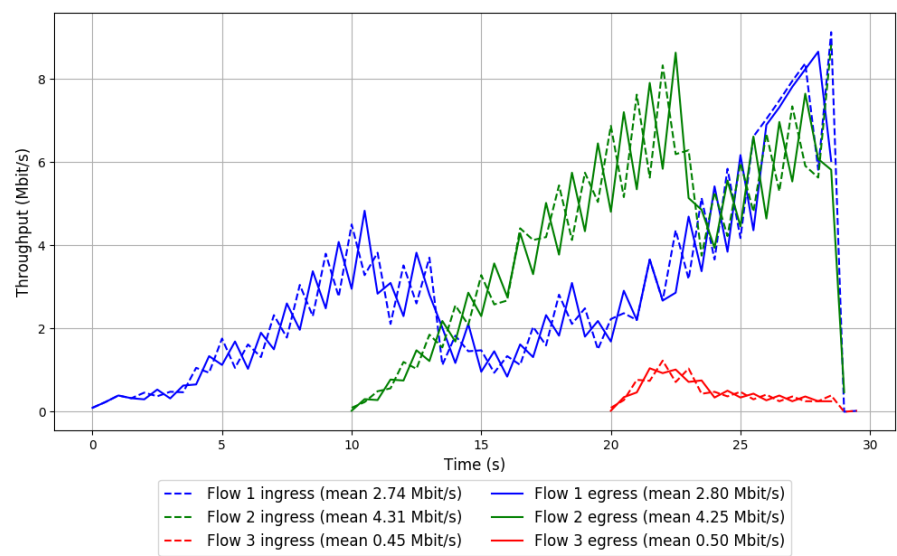
-- Flow 3:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 86.991 ms

Loss rate: 1.85%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-01-17 07:44:33

End at: 2018-01-17 07:45:03

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.82 Mbit/s

95th percentile per-packet one-way delay: 87.402 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 4.20 Mbit/s

95th percentile per-packet one-way delay: 87.242 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 3.23 Mbit/s

95th percentile per-packet one-way delay: 87.405 ms

Loss rate: 2.59%

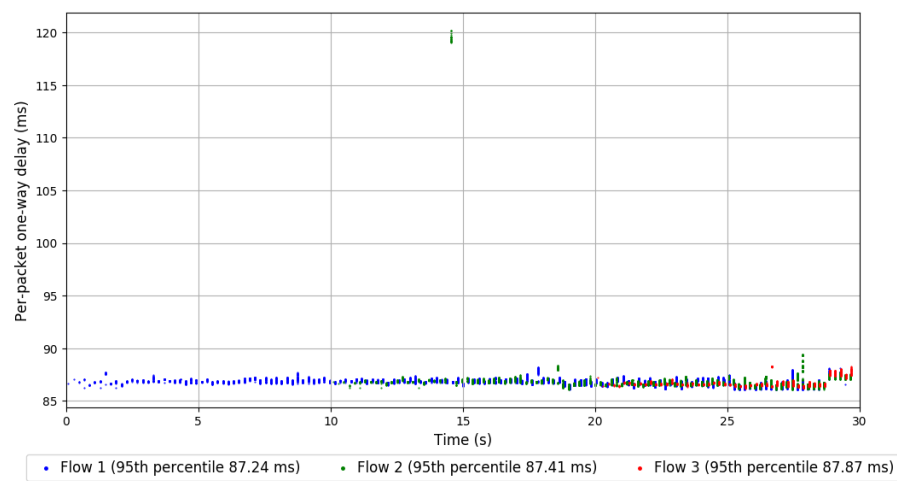
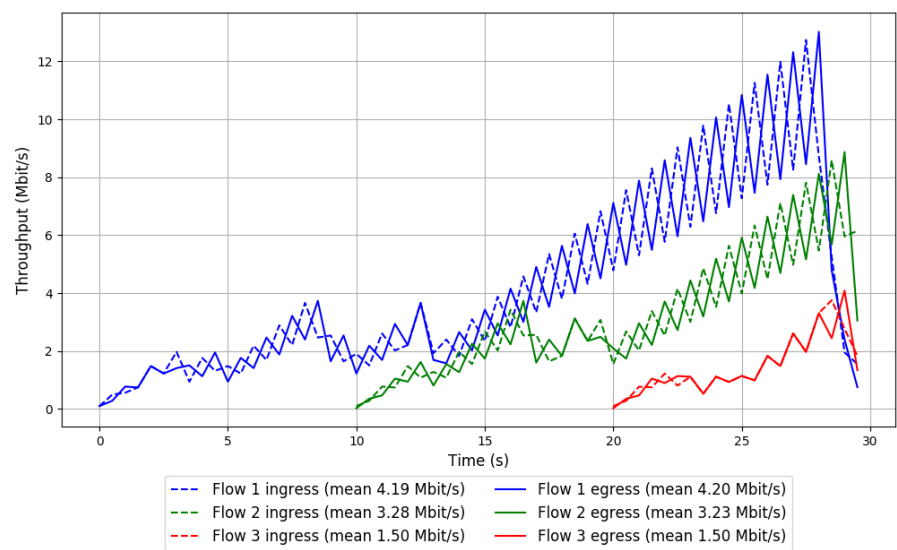
-- Flow 3:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 87.867 ms

Loss rate: 1.68%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-01-17 08:03:50

End at: 2018-01-17 08:04:20

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.56 Mbit/s

95th percentile per-packet one-way delay: 87.411 ms

Loss rate: 2.64%

-- Flow 1:

Average throughput: 3.04 Mbit/s

95th percentile per-packet one-way delay: 87.580 ms

Loss rate: 1.74%

-- Flow 2:

Average throughput: 1.81 Mbit/s

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

Loss rate: 4.16%

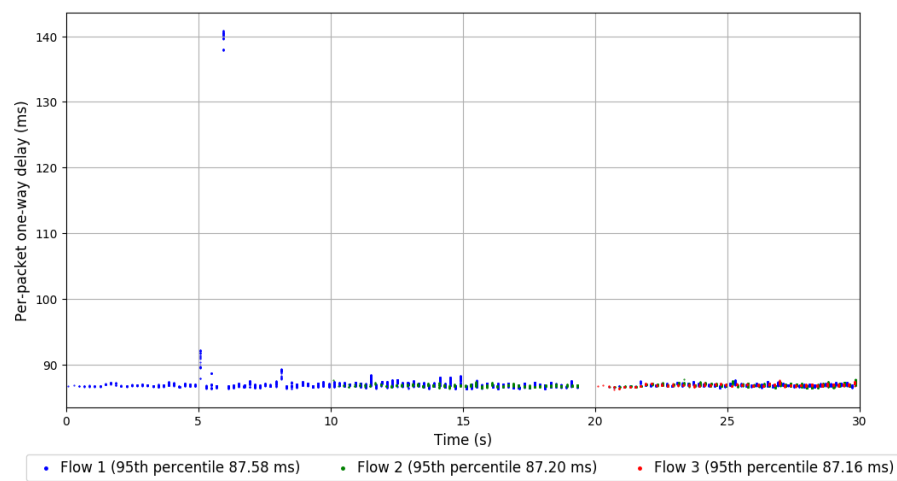
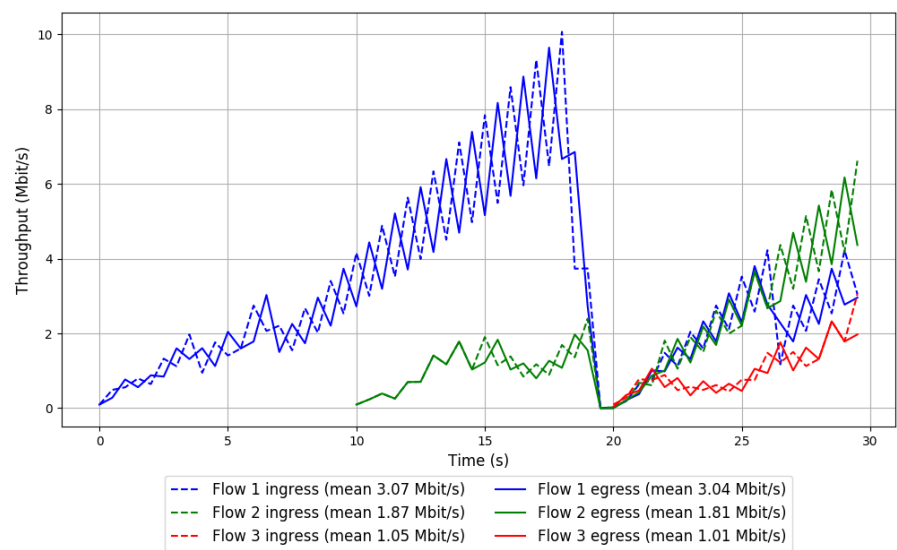
-- Flow 3:

Average throughput: 1.01 Mbit/s

95th percentile per-packet one-way delay: 87.163 ms

Loss rate: 5.21%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-01-17 08:22:40

End at: 2018-01-17 08:23:10

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.33 Mbit/s

95th percentile per-packet one-way delay: 87.784 ms

Loss rate: 1.60%

-- Flow 1:

Average throughput: 4.12 Mbit/s

95th percentile per-packet one-way delay: 87.723 ms

Loss rate: 1.87%

-- Flow 2:

Average throughput: 3.13 Mbit/s

95th percentile per-packet one-way delay: 88.179 ms

Loss rate: 1.06%

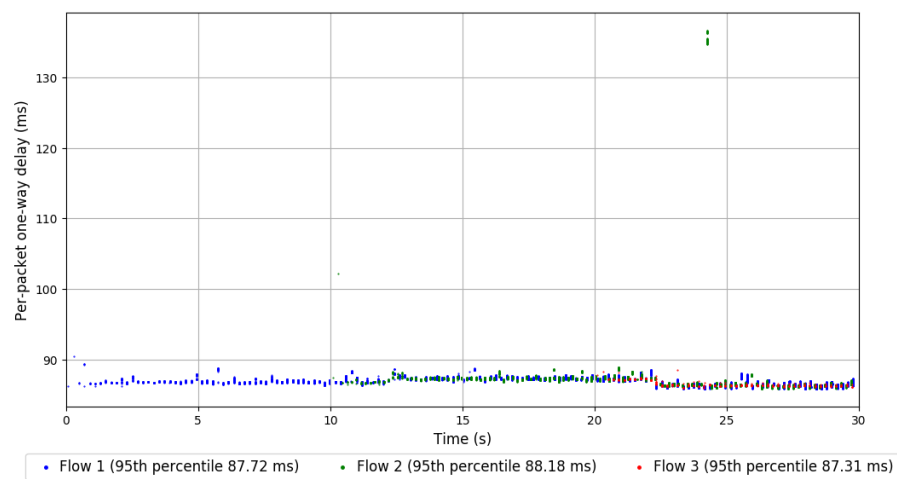
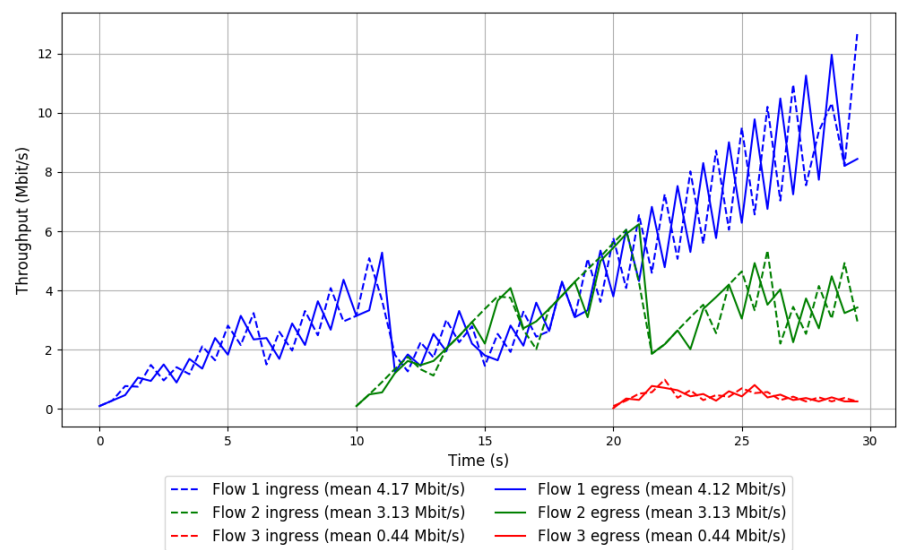
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 87.311 ms

Loss rate: 1.59%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-01-17 08:41:48

End at: 2018-01-17 08:42:18

Below is generated by plot.py at 2018-01-17 12:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.28 Mbit/s

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

Loss rate: 2.85%

-- Flow 1:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 87.355 ms

Loss rate: 2.01%

-- Flow 2:

Average throughput: 2.59 Mbit/s

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

Loss rate: 3.14%

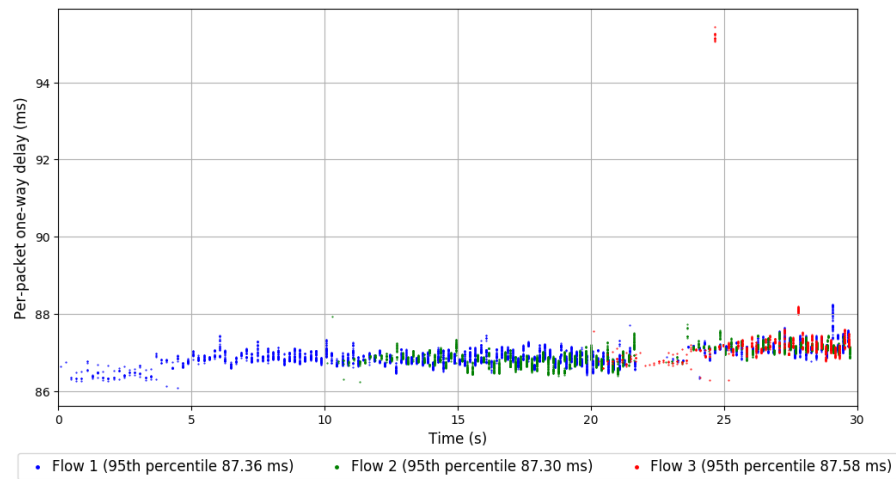
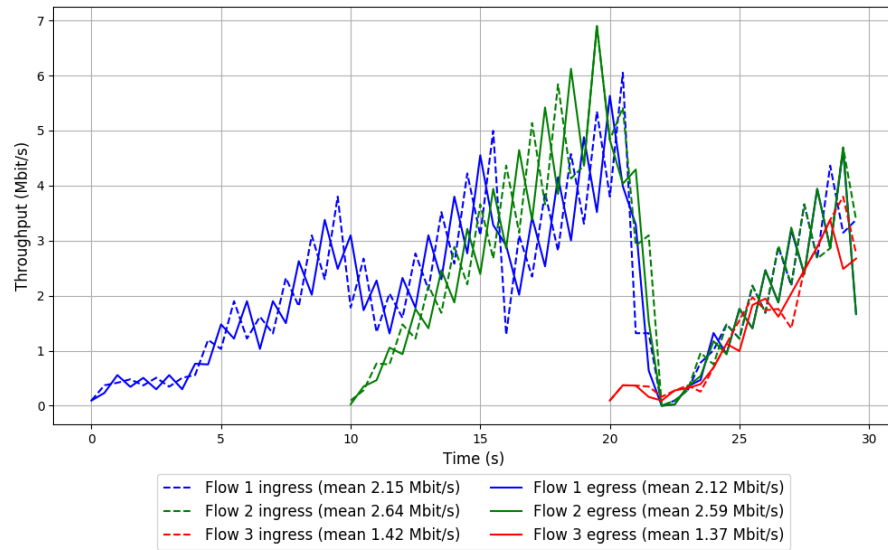
-- Flow 3:

Average throughput: 1.37 Mbit/s

95th percentile per-packet one-way delay: 87.576 ms

Loss rate: 5.66%

Run 9: Report of LEDBAT — Data Link

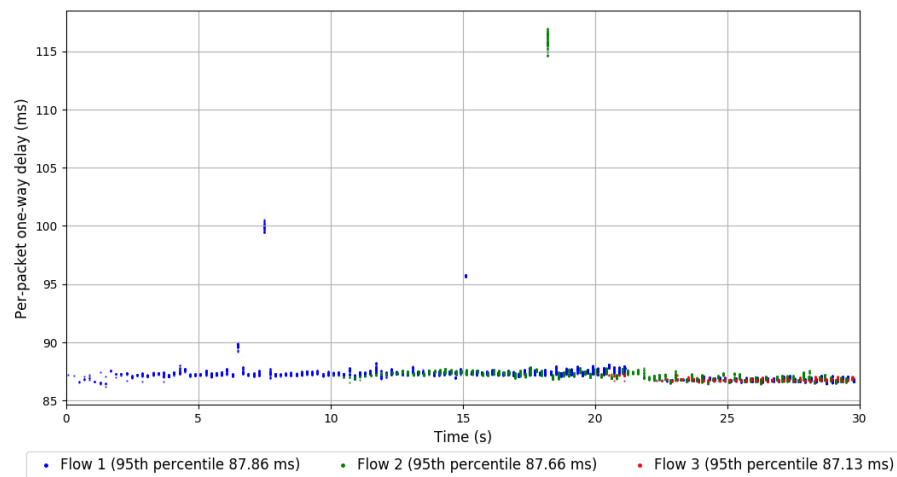
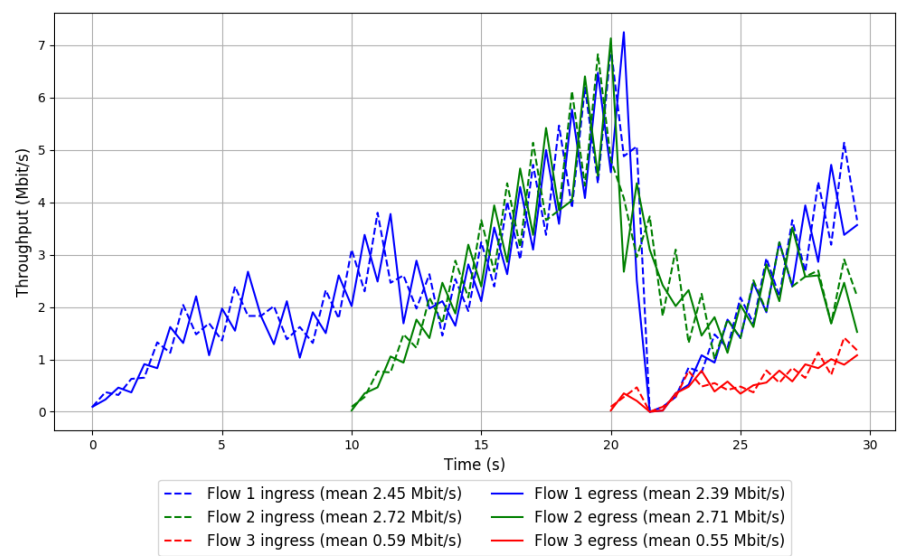


```
Run 10: Statistics of LEDBAT

Start at: 2018-01-17 09:00:30
End at: 2018-01-17 09:01:00

# Below is generated by plot.py at 2018-01-17 12:24:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 87.769 ms
Loss rate: 2.49%
-- Flow 1:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 87.858 ms
Loss rate: 3.02%
-- Flow 2:
Average throughput: 2.71 Mbit/s
95th percentile per-packet one-way delay: 87.661 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 87.126 ms
Loss rate: 7.52%
```

Run 10: Report of LEDBAT — Data Link

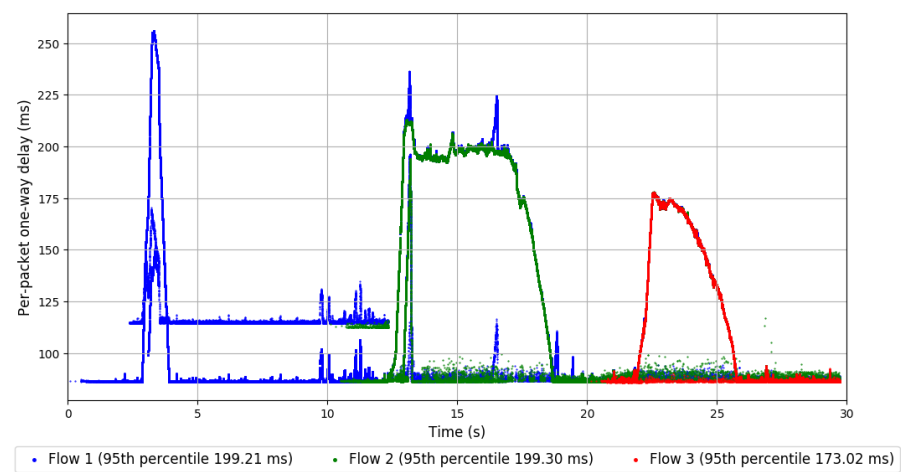
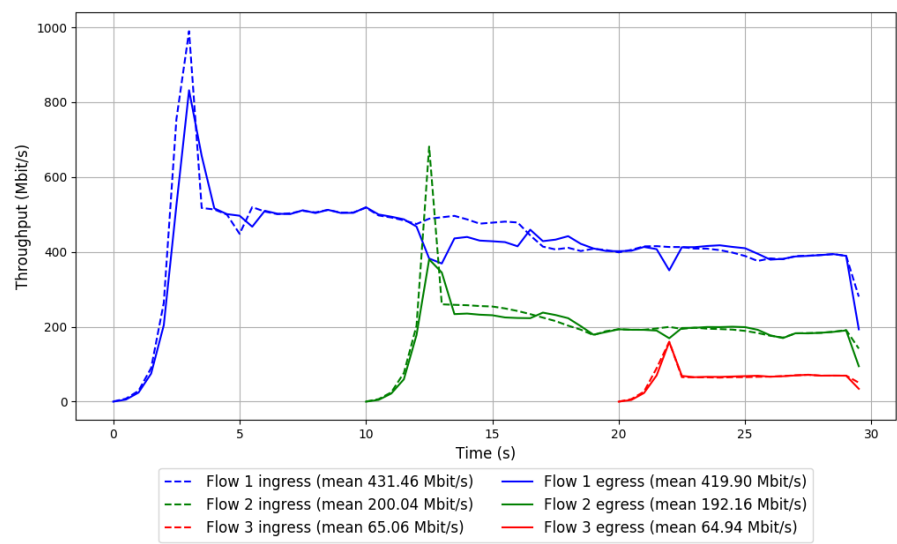


```
Run 1: Statistics of PCC

Start at: 2018-01-17 06:12:50
End at: 2018-01-17 06:13:20

# Below is generated by plot.py at 2018-01-17 12:33:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 568.05 Mbit/s
95th percentile per-packet one-way delay: 199.160 ms
Loss rate: 3.69%
-- Flow 1:
Average throughput: 419.90 Mbit/s
95th percentile per-packet one-way delay: 199.214 ms
Loss rate: 3.34%
-- Flow 2:
Average throughput: 192.16 Mbit/s
95th percentile per-packet one-way delay: 199.296 ms
Loss rate: 5.05%
-- Flow 3:
Average throughput: 64.94 Mbit/s
95th percentile per-packet one-way delay: 173.020 ms
Loss rate: 2.23%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2018-01-17 06:31:46

End at: 2018-01-17 06:32:16

Below is generated by plot.py at 2018-01-17 12:33:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 554.43 Mbit/s

95th percentile per-packet one-way delay: 203.931 ms

Loss rate: 3.09%

-- Flow 1:

Average throughput: 443.29 Mbit/s

95th percentile per-packet one-way delay: 204.696 ms

Loss rate: 2.94%

-- Flow 2:

Average throughput: 137.37 Mbit/s

95th percentile per-packet one-way delay: 201.883 ms

Loss rate: 2.97%

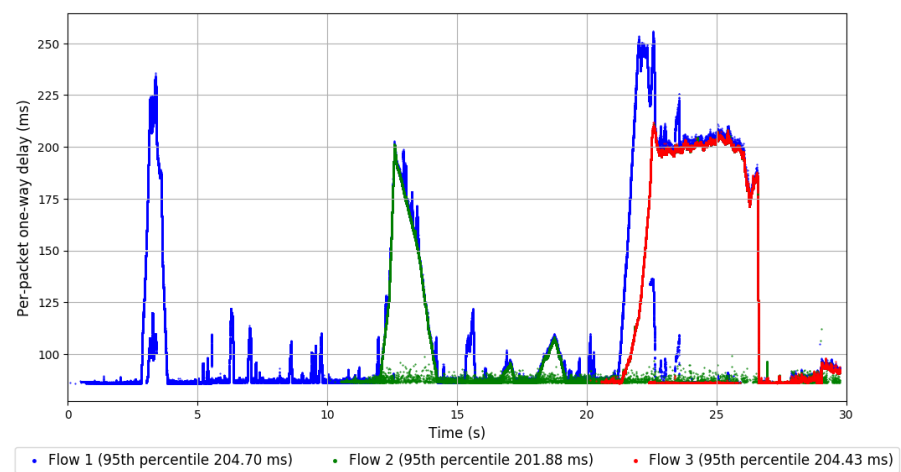
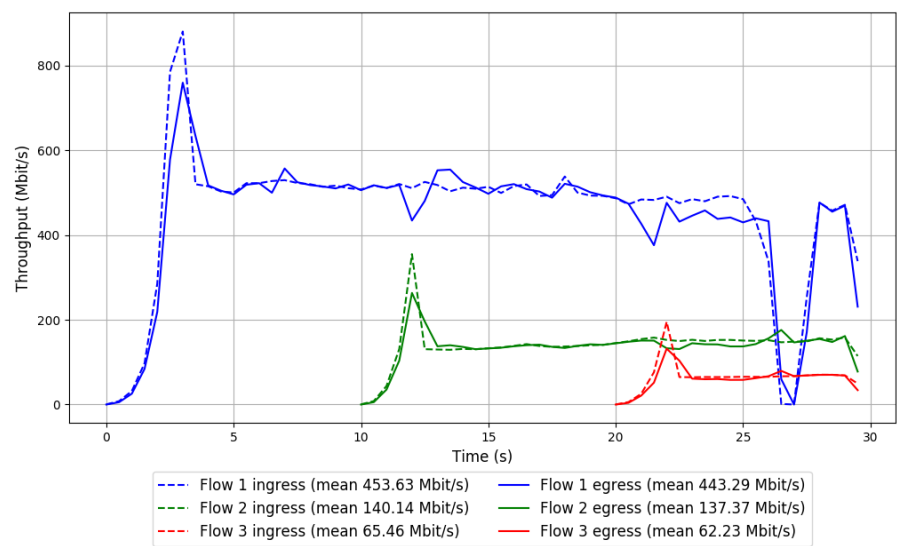
-- Flow 3:

Average throughput: 62.23 Mbit/s

95th percentile per-packet one-way delay: 204.428 ms

Loss rate: 6.86%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-01-17 06:50:51

End at: 2018-01-17 06:51:21

Below is generated by plot.py at 2018-01-17 12:33:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 564.53 Mbit/s

95th percentile per-packet one-way delay: 193.703 ms

Loss rate: 2.54%

-- Flow 1:

Average throughput: 483.41 Mbit/s

95th percentile per-packet one-way delay: 198.510 ms

Loss rate: 2.67%

-- Flow 2:

Average throughput: 118.22 Mbit/s

95th percentile per-packet one-way delay: 165.725 ms

Loss rate: 1.77%

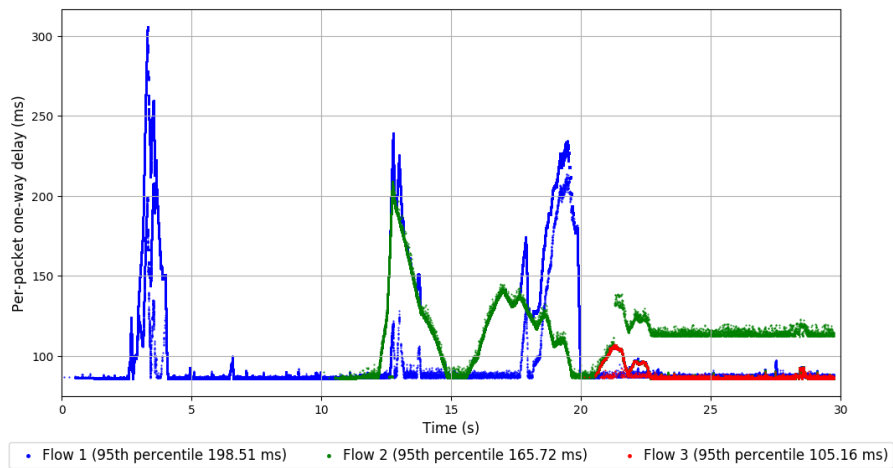
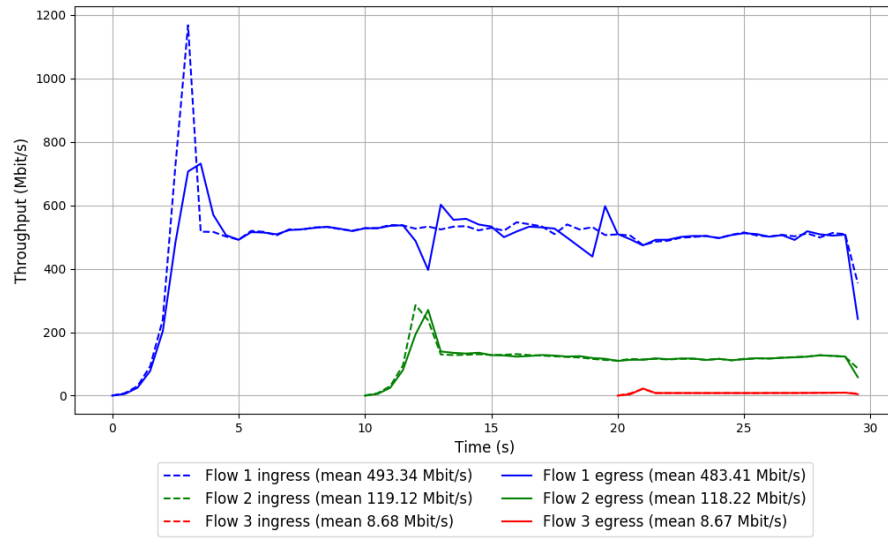
-- Flow 3:

Average throughput: 8.67 Mbit/s

95th percentile per-packet one-way delay: 105.159 ms

Loss rate: 2.16%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-01-17 07:10:13

End at: 2018-01-17 07:10:43

Below is generated by plot.py at 2018-01-17 12:34:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 607.09 Mbit/s

95th percentile per-packet one-way delay: 187.991 ms

Loss rate: 1.96%

-- Flow 1:

Average throughput: 518.38 Mbit/s

95th percentile per-packet one-way delay: 189.530 ms

Loss rate: 1.96%

-- Flow 2:

Average throughput: 118.06 Mbit/s

95th percentile per-packet one-way delay: 186.394 ms

Loss rate: 1.85%

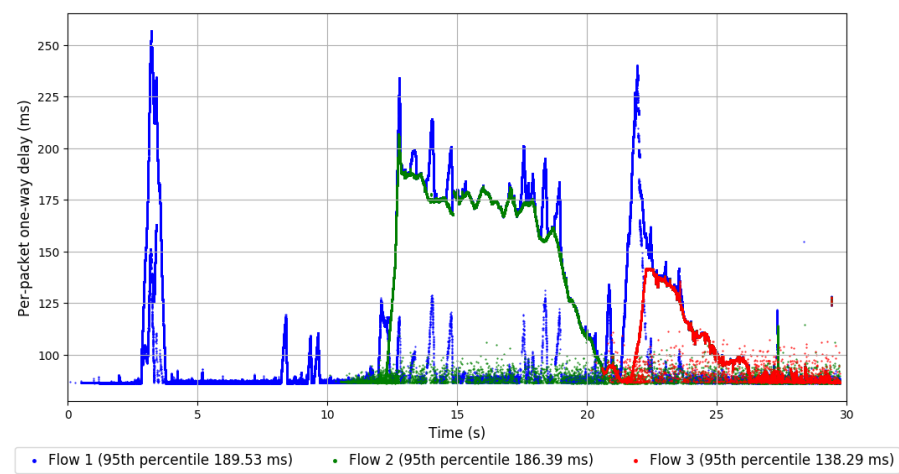
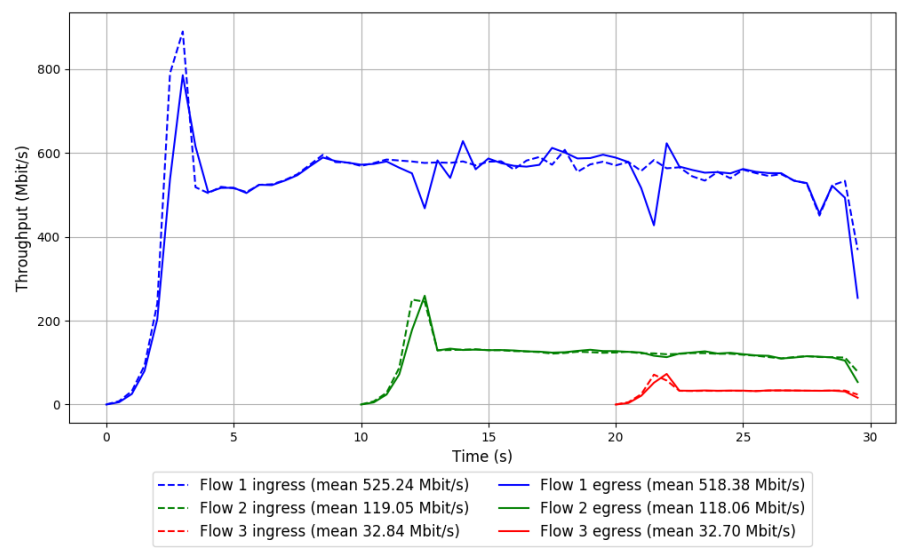
-- Flow 3:

Average throughput: 32.70 Mbit/s

95th percentile per-packet one-way delay: 138.293 ms

Loss rate: 2.46%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-01-17 07:29:09

End at: 2018-01-17 07:29:39

Below is generated by plot.py at 2018-01-17 12:34:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 580.05 Mbit/s

95th percentile per-packet one-way delay: 195.603 ms

Loss rate: 1.96%

-- Flow 1:

Average throughput: 474.72 Mbit/s

95th percentile per-packet one-way delay: 195.963 ms

Loss rate: 1.86%

-- Flow 2:

Average throughput: 127.90 Mbit/s

95th percentile per-packet one-way delay: 195.131 ms

Loss rate: 2.45%

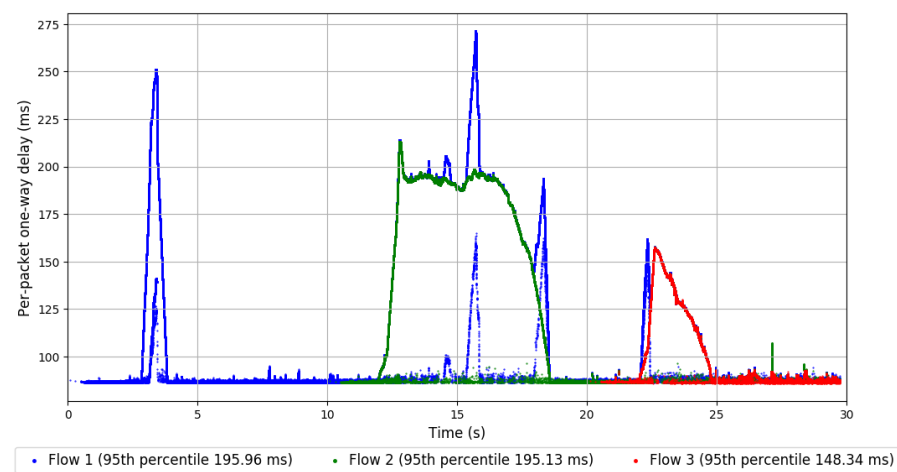
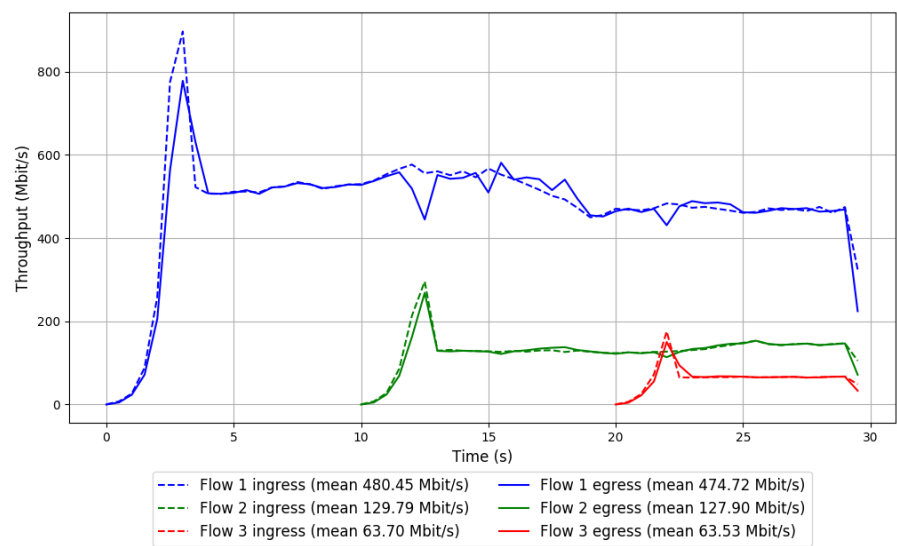
-- Flow 3:

Average throughput: 63.53 Mbit/s

95th percentile per-packet one-way delay: 148.339 ms

Loss rate: 2.31%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-01-17 07:48:06

End at: 2018-01-17 07:48:36

Below is generated by plot.py at 2018-01-17 12:34:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 592.76 Mbit/s

95th percentile per-packet one-way delay: 192.511 ms

Loss rate: 1.78%

-- Flow 1:

Average throughput: 496.74 Mbit/s

95th percentile per-packet one-way delay: 192.448 ms

Loss rate: 1.77%

-- Flow 2:

Average throughput: 143.25 Mbit/s

95th percentile per-packet one-way delay: 192.760 ms

Loss rate: 1.85%

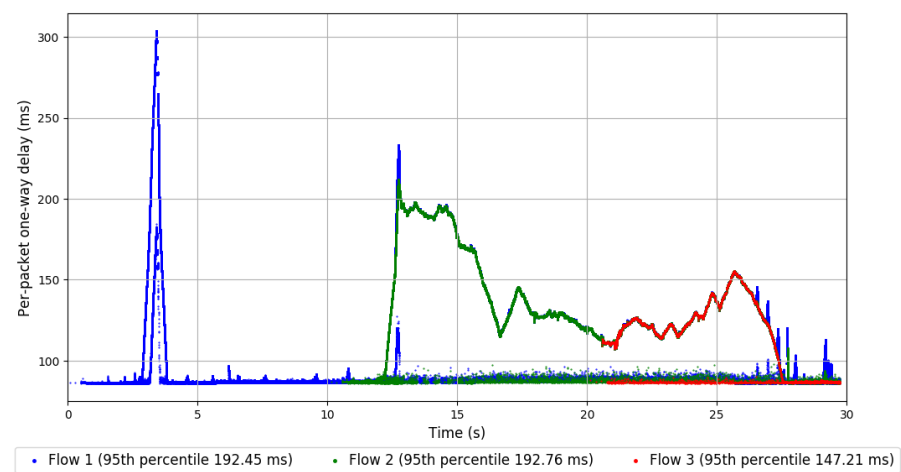
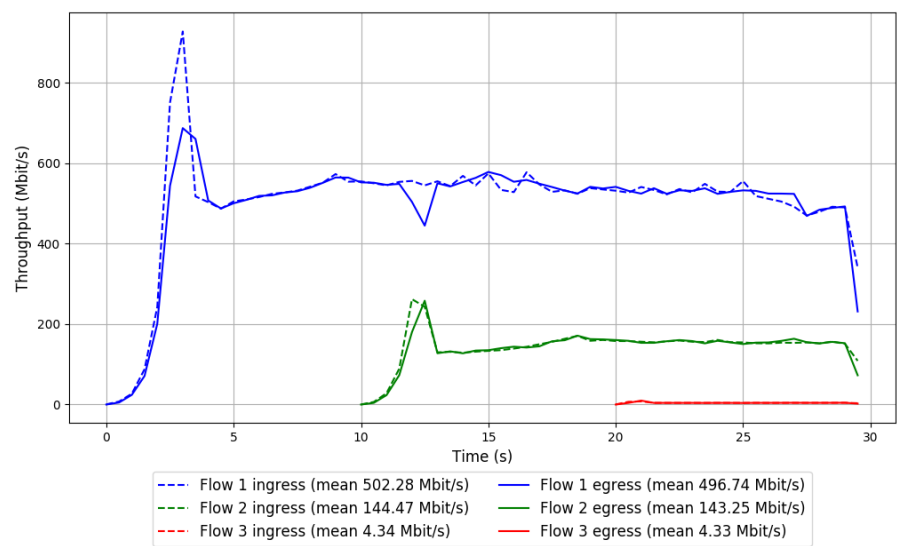
-- Flow 3:

Average throughput: 4.33 Mbit/s

95th percentile per-packet one-way delay: 147.205 ms

Loss rate: 2.19%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-01-17 08:07:24

End at: 2018-01-17 08:07:54

Below is generated by plot.py at 2018-01-17 12:34:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 576.50 Mbit/s

95th percentile per-packet one-way delay: 199.933 ms

Loss rate: 2.84%

-- Flow 1:

Average throughput: 465.17 Mbit/s

95th percentile per-packet one-way delay: 200.063 ms

Loss rate: 2.76%

-- Flow 2:

Average throughput: 152.63 Mbit/s

95th percentile per-packet one-way delay: 199.624 ms

Loss rate: 3.06%

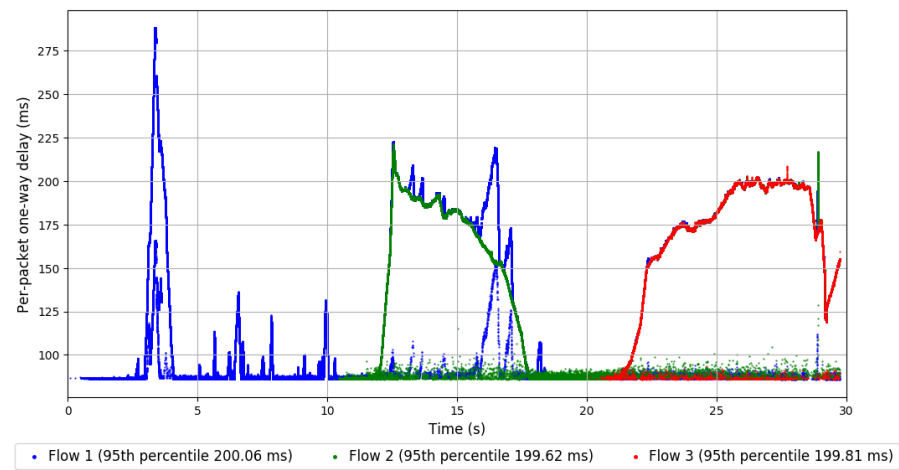
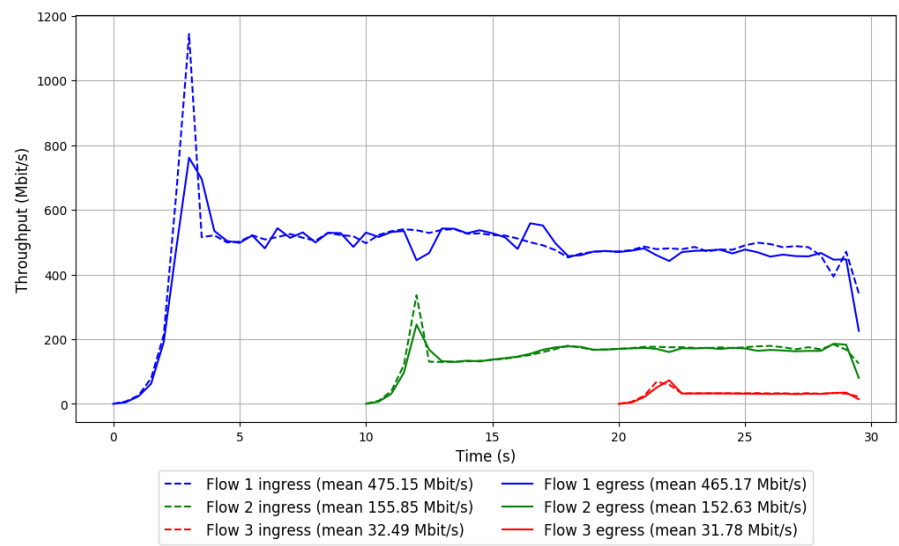
-- Flow 3:

Average throughput: 31.78 Mbit/s

95th percentile per-packet one-way delay: 199.805 ms

Loss rate: 4.15%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-01-17 08:26:10

End at: 2018-01-17 08:26:40

Below is generated by plot.py at 2018-01-17 12:35:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 594.19 Mbit/s

95th percentile per-packet one-way delay: 192.231 ms

Loss rate: 2.93%

-- Flow 1:

Average throughput: 529.66 Mbit/s

95th percentile per-packet one-way delay: 192.185 ms

Loss rate: 2.99%

-- Flow 2:

Average throughput: 67.36 Mbit/s

95th percentile per-packet one-way delay: 191.992 ms

Loss rate: 1.83%

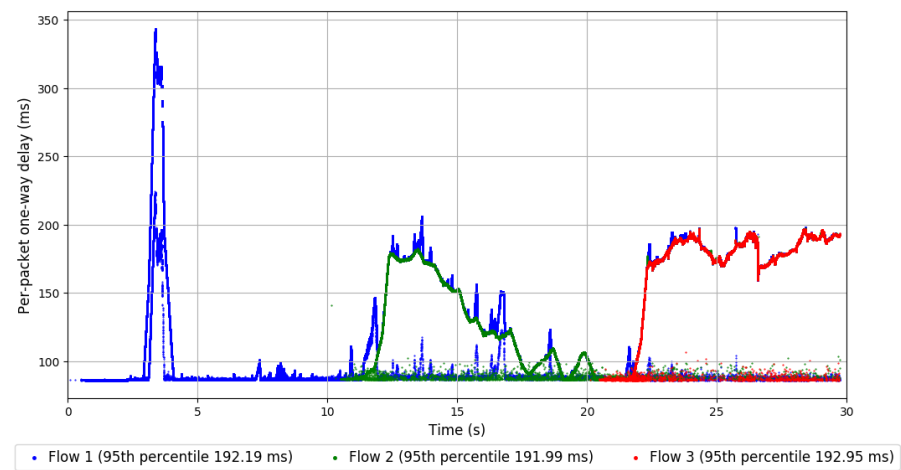
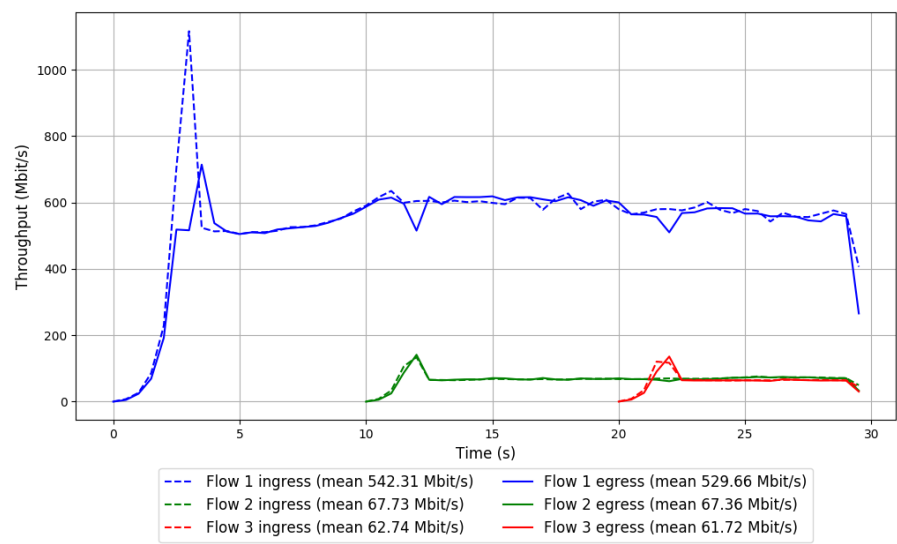
-- Flow 3:

Average throughput: 61.72 Mbit/s

95th percentile per-packet one-way delay: 192.948 ms

Loss rate: 3.63%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-01-17 08:45:23

End at: 2018-01-17 08:45:53

Below is generated by plot.py at 2018-01-17 12:43:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 580.36 Mbit/s

95th percentile per-packet one-way delay: 196.468 ms

Loss rate: 3.33%

-- Flow 1:

Average throughput: 458.35 Mbit/s

95th percentile per-packet one-way delay: 196.330 ms

Loss rate: 2.95%

-- Flow 2:

Average throughput: 130.70 Mbit/s

95th percentile per-packet one-way delay: 196.396 ms

Loss rate: 3.63%

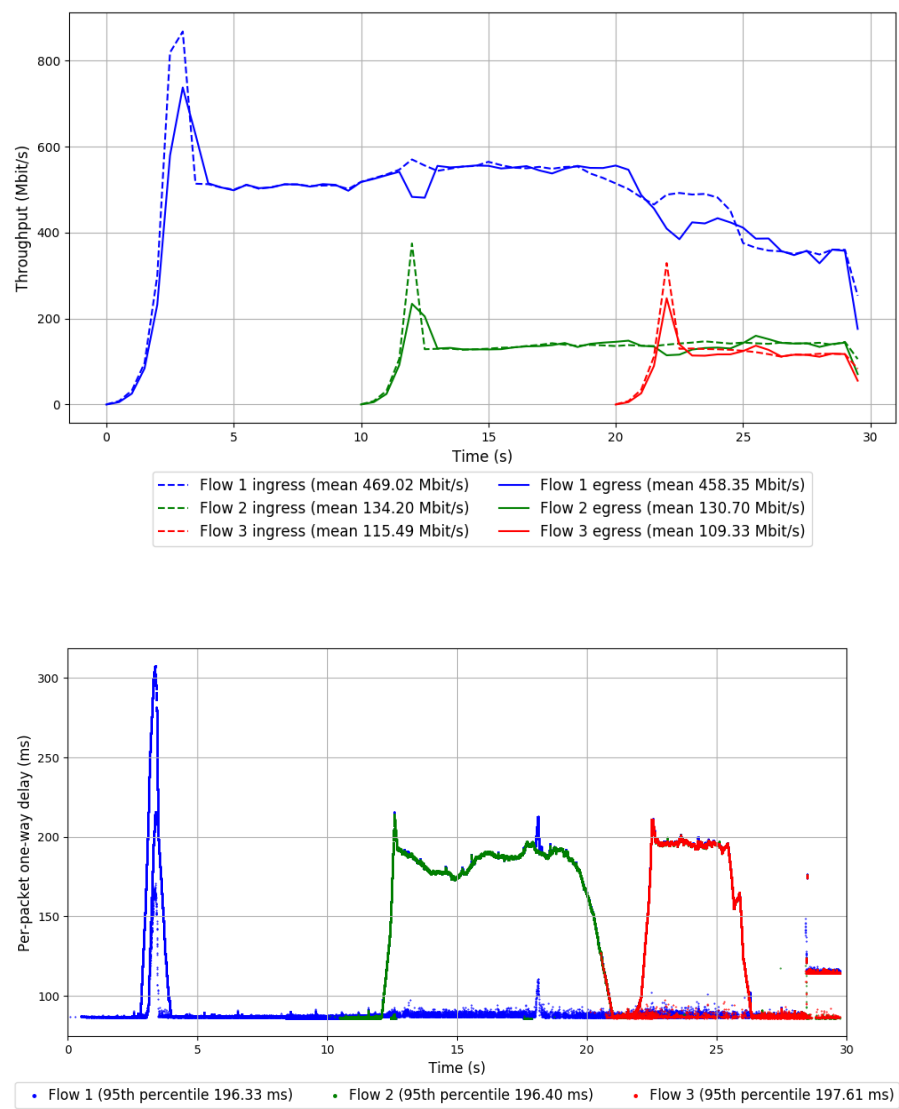
-- Flow 3:

Average throughput: 109.33 Mbit/s

95th percentile per-packet one-way delay: 197.611 ms

Loss rate: 7.43%

Run 9: Report of PCC — Data Link

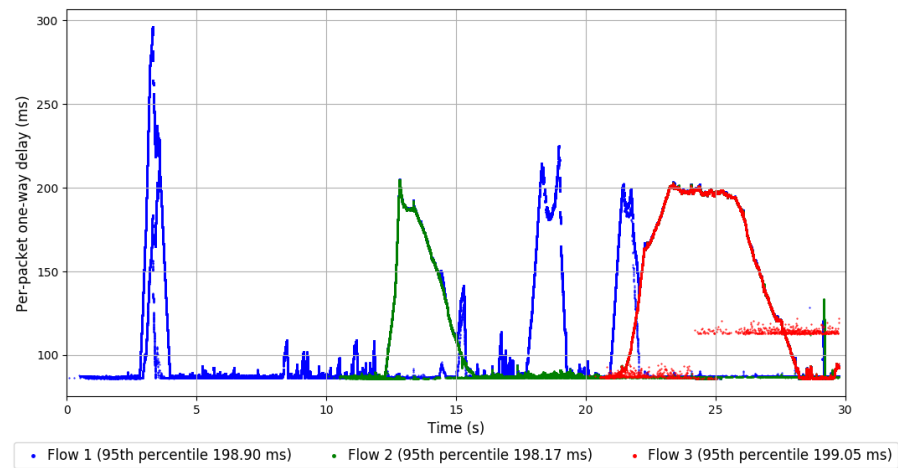
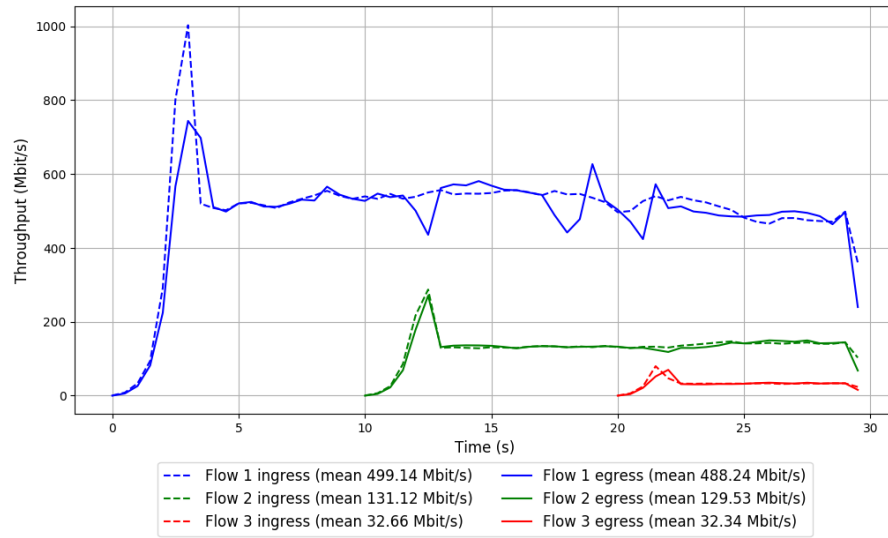


```
Run 10: Statistics of PCC

Start at: 2018-01-17 09:03:58
End at: 2018-01-17 09:04:28

# Below is generated by plot.py at 2018-01-17 12:43:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 584.47 Mbit/s
95th percentile per-packet one-way delay: 198.676 ms
Loss rate: 2.75%
-- Flow 1:
Average throughput: 488.24 Mbit/s
95th percentile per-packet one-way delay: 198.904 ms
Loss rate: 2.84%
-- Flow 2:
Average throughput: 129.53 Mbit/s
95th percentile per-packet one-way delay: 198.173 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 32.34 Mbit/s
95th percentile per-packet one-way delay: 199.049 ms
Loss rate: 2.99%
```


Run 10: Report of PCC — Data Link

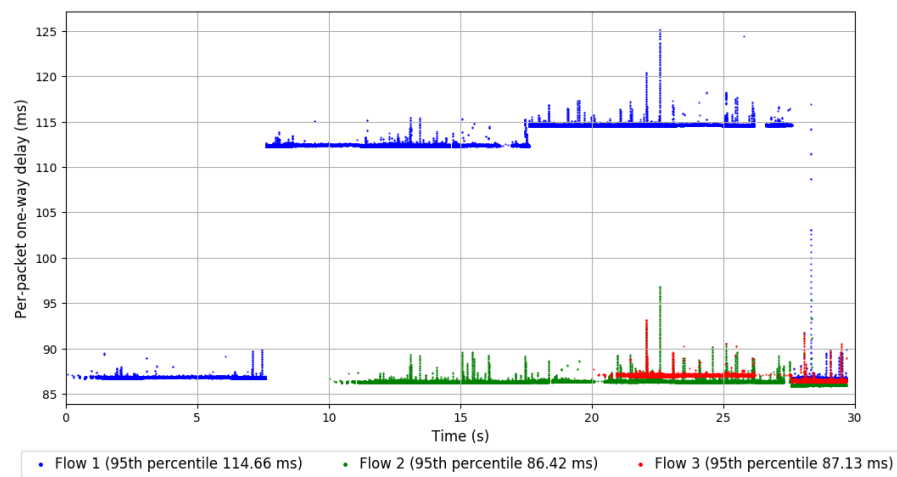
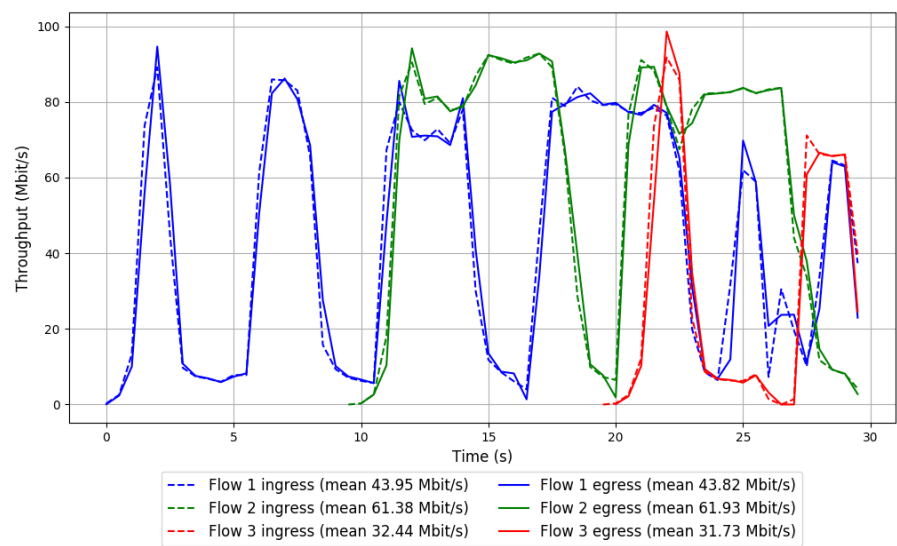


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-01-17 06:08:24
End at: 2018-01-17 06:08:54

# Below is generated by plot.py at 2018-01-17 12:43:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.19 Mbit/s
95th percentile per-packet one-way delay: 114.621 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 43.82 Mbit/s
95th percentile per-packet one-way delay: 114.661 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 61.93 Mbit/s
95th percentile per-packet one-way delay: 86.417 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.73 Mbit/s
95th percentile per-packet one-way delay: 87.127 ms
Loss rate: 4.17%
```

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-01-17 06:27:19

End at: 2018-01-17 06:27:49

Below is generated by plot.py at 2018-01-17 12:43:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 121.89 Mbit/s

95th percentile per-packet one-way delay: 112.428 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 62.13 Mbit/s

95th percentile per-packet one-way delay: 114.458 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 61.26 Mbit/s

95th percentile per-packet one-way delay: 86.484 ms

Loss rate: 0.12%

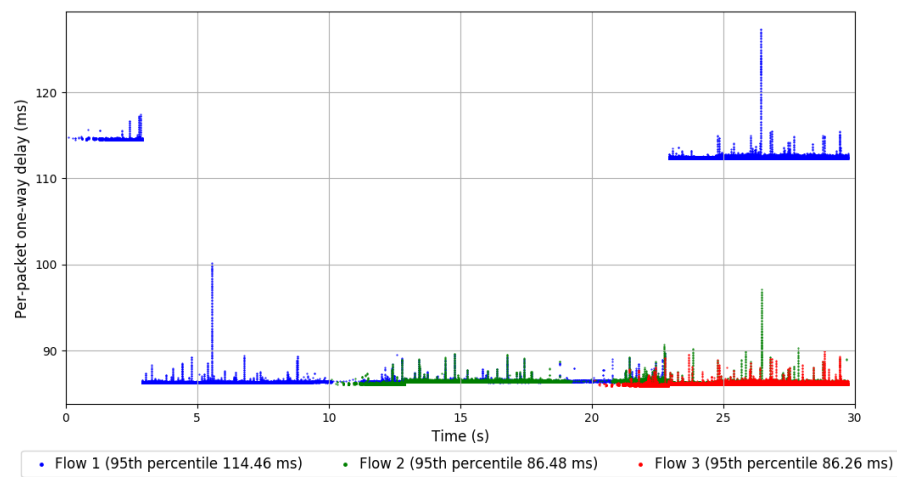
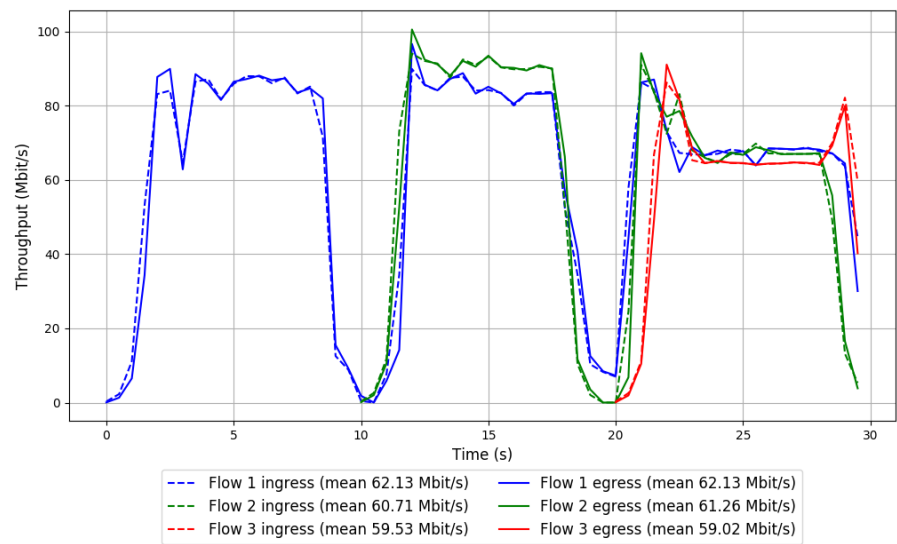
-- Flow 3:

Average throughput: 59.02 Mbit/s

95th percentile per-packet one-way delay: 86.263 ms

Loss rate: 2.90%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-01-17 06:46:24

End at: 2018-01-17 06:46:54

Below is generated by plot.py at 2018-01-17 12:43:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.00 Mbit/s

95th percentile per-packet one-way delay: 86.699 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 48.23 Mbit/s

95th percentile per-packet one-way delay: 86.730 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 44.54 Mbit/s

95th percentile per-packet one-way delay: 86.454 ms

Loss rate: 1.90%

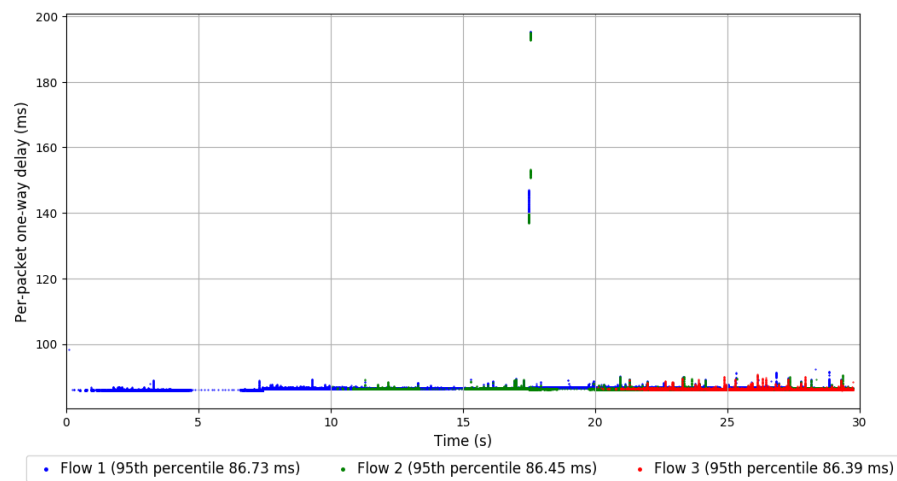
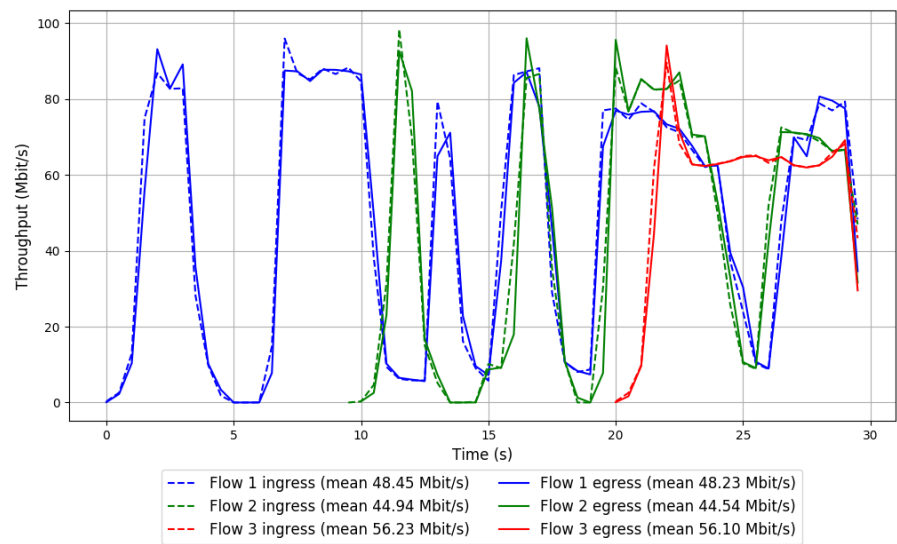
-- Flow 3:

Average throughput: 56.10 Mbit/s

95th percentile per-packet one-way delay: 86.392 ms

Loss rate: 2.23%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-01-17 07:05:47

End at: 2018-01-17 07:06:17

Below is generated by plot.py at 2018-01-17 12:43:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.85 Mbit/s

95th percentile per-packet one-way delay: 114.540 ms

Loss rate: 0.82%

-- Flow 1:

Average throughput: 62.88 Mbit/s

95th percentile per-packet one-way delay: 114.528 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 58.12 Mbit/s

95th percentile per-packet one-way delay: 86.574 ms

Loss rate: 1.12%

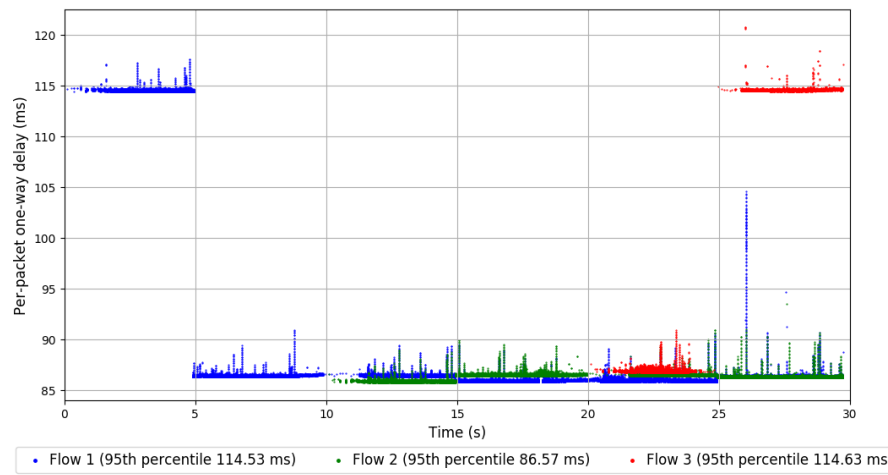
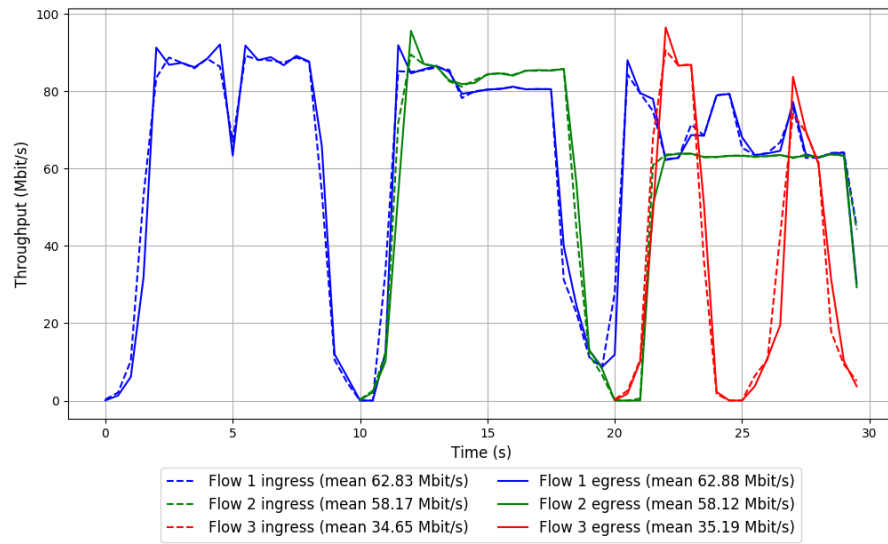
-- Flow 3:

Average throughput: 35.19 Mbit/s

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

Loss rate: 0.49%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-01-17 07:24:44

End at: 2018-01-17 07:25:14

Below is generated by plot.py at 2018-01-17 12:43:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.80 Mbit/s

95th percentile per-packet one-way delay: 114.624 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 66.80 Mbit/s

95th percentile per-packet one-way delay: 86.824 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 42.29 Mbit/s

95th percentile per-packet one-way delay: 114.703 ms

Loss rate: 1.65%

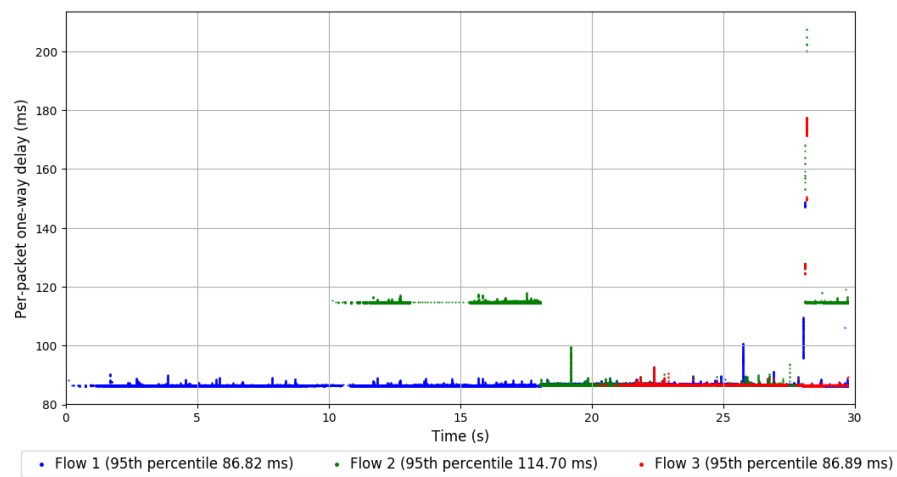
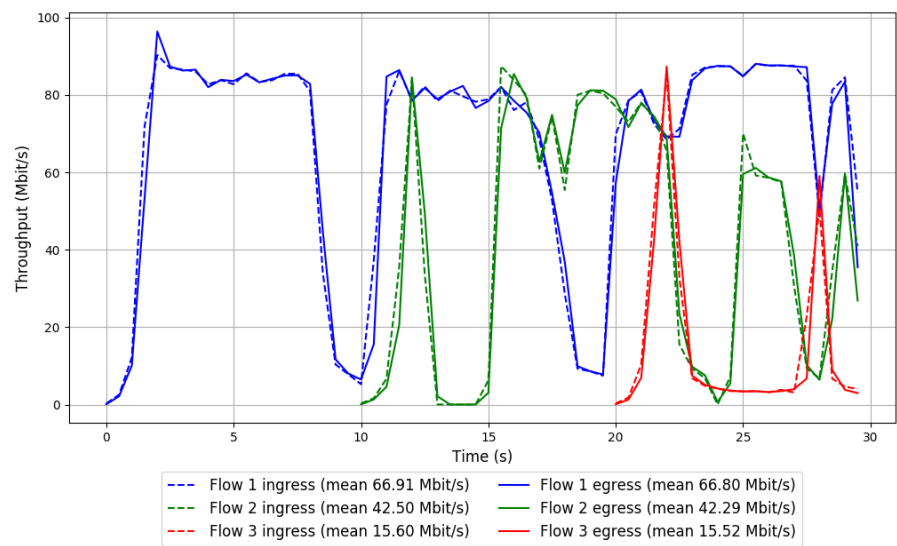
-- Flow 3:

Average throughput: 15.52 Mbit/s

95th percentile per-packet one-way delay: 86.885 ms

Loss rate: 2.45%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-01-17 07:43:39

End at: 2018-01-17 07:44:09

Below is generated by plot.py at 2018-01-17 12:43:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.63 Mbit/s

95th percentile per-packet one-way delay: 86.852 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 74.99 Mbit/s

95th percentile per-packet one-way delay: 86.550 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 60.72 Mbit/s

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

Loss rate: 0.32%

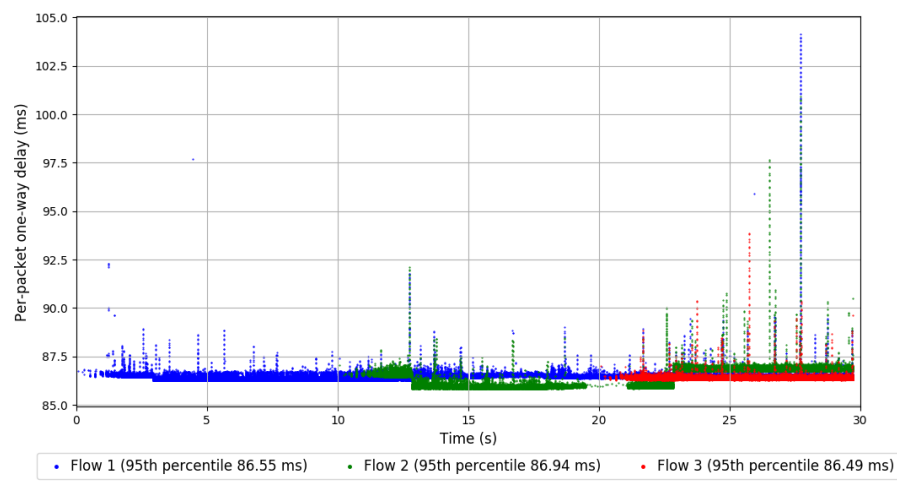
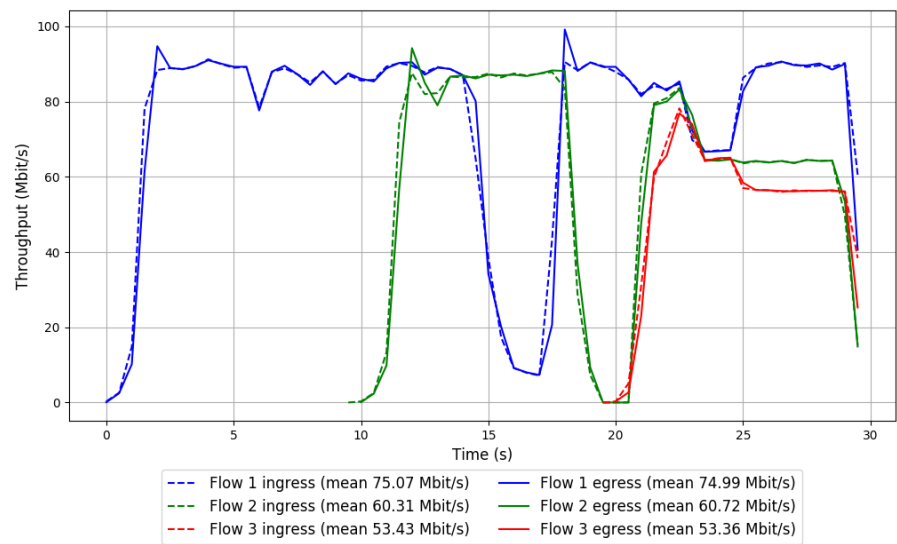
-- Flow 3:

Average throughput: 53.36 Mbit/s

95th percentile per-packet one-way delay: 86.494 ms

Loss rate: 2.16%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-01-17 08:02:59

End at: 2018-01-17 08:03:29

Below is generated by plot.py at 2018-01-17 12:43:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.50 Mbit/s

95th percentile per-packet one-way delay: 114.454 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 47.59 Mbit/s

95th percentile per-packet one-way delay: 86.570 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 56.63 Mbit/s

95th percentile per-packet one-way delay: 114.503 ms

Loss rate: 1.32%

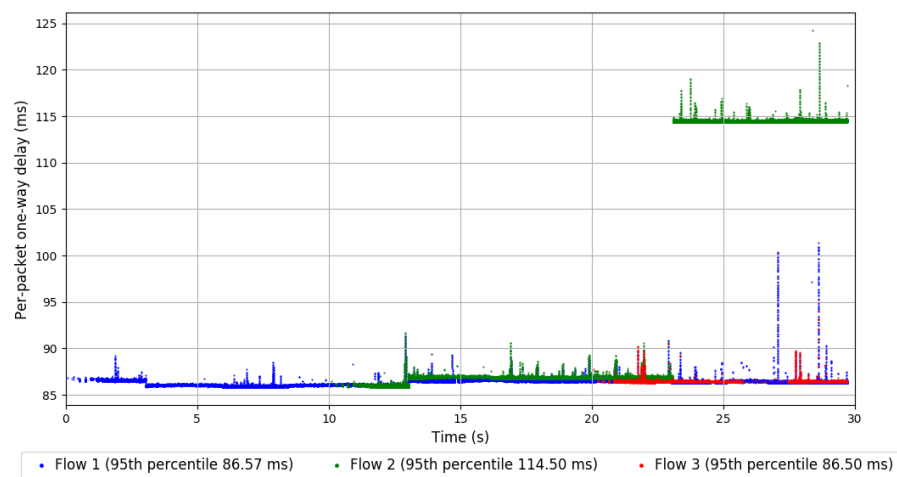
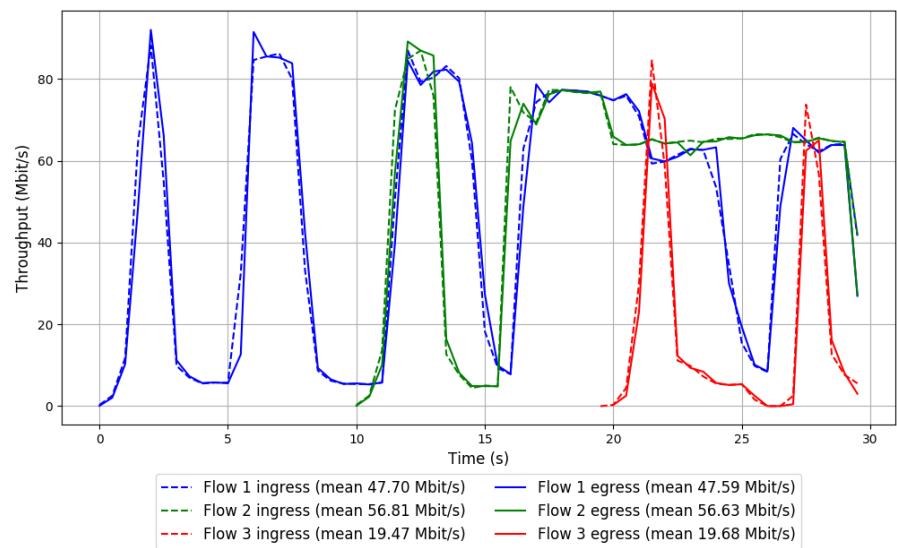
-- Flow 3:

Average throughput: 19.68 Mbit/s

95th percentile per-packet one-way delay: 86.502 ms

Loss rate: 0.98%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-01-17 08:21:48

End at: 2018-01-17 08:22:18

Below is generated by plot.py at 2018-01-17 12:43:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.86 Mbit/s

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

Loss rate: 1.09%

-- Flow 1:

Average throughput: 55.58 Mbit/s

95th percentile per-packet one-way delay: 86.808 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 48.88 Mbit/s

95th percentile per-packet one-way delay: 86.818 ms

Loss rate: 1.61%

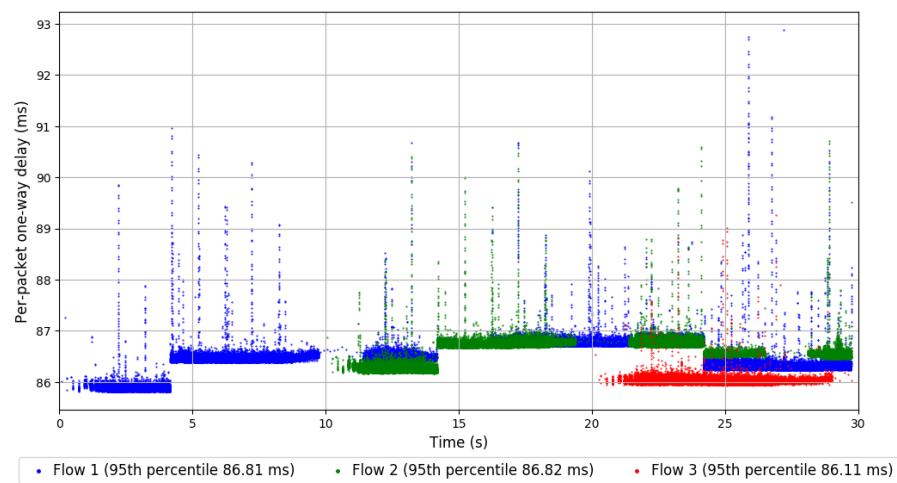
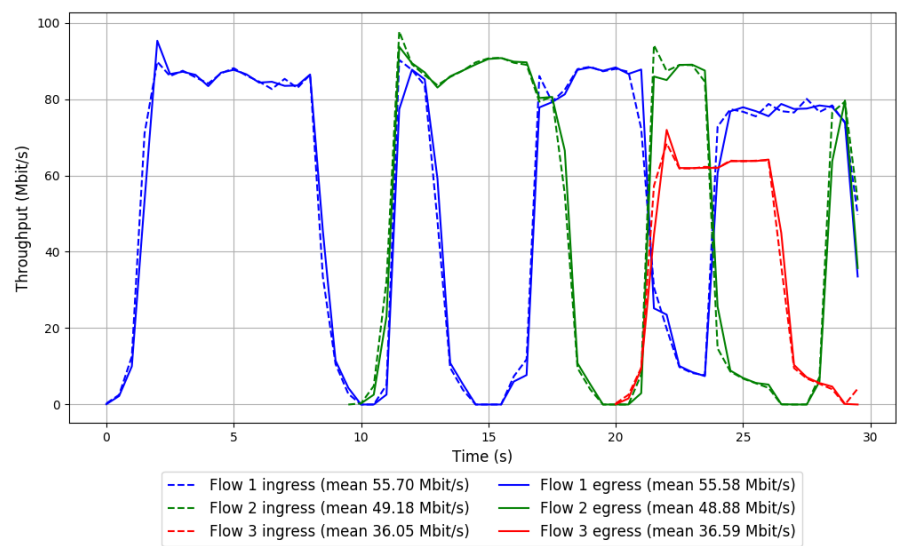
-- Flow 3:

Average throughput: 36.59 Mbit/s

95th percentile per-packet one-way delay: 86.106 ms

Loss rate: 0.59%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-01-17 08:40:55

End at: 2018-01-17 08:41:25

Below is generated by plot.py at 2018-01-17 12:43:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.72 Mbit/s

95th percentile per-packet one-way delay: 114.471 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 52.99 Mbit/s

95th percentile per-packet one-way delay: 114.474 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 62.84 Mbit/s

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

Loss rate: 1.23%

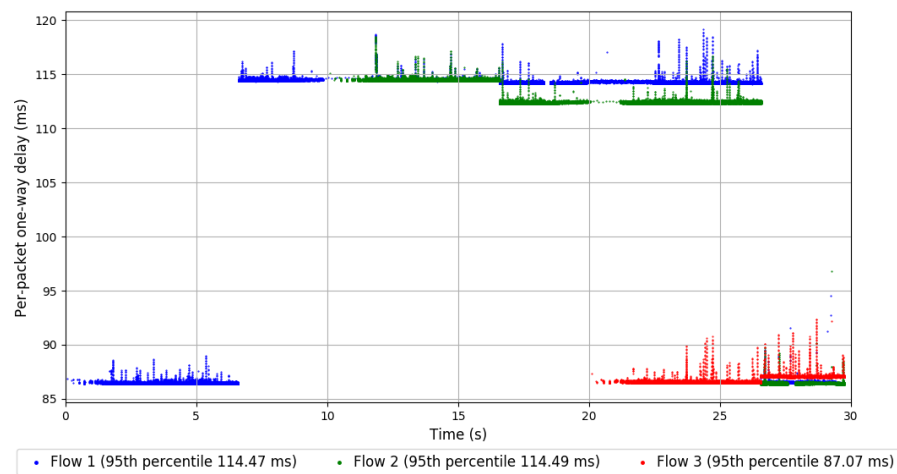
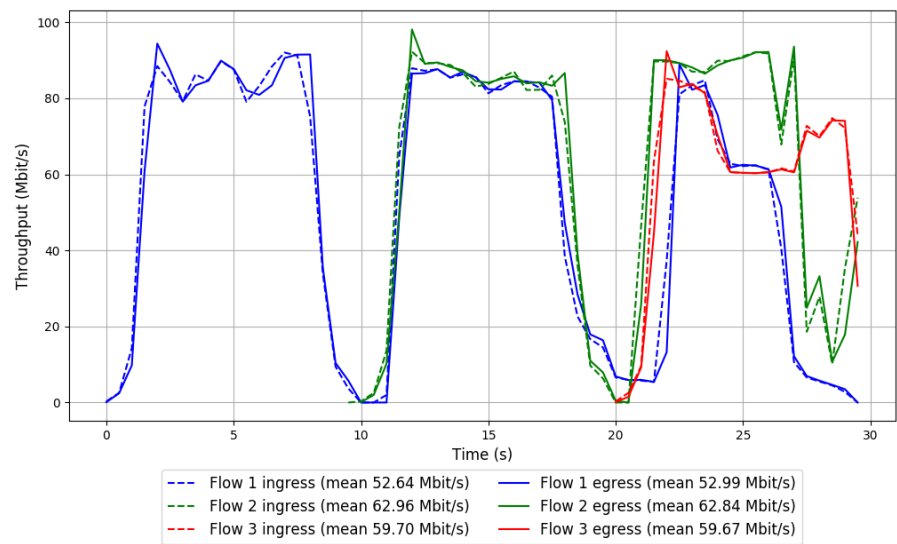
-- Flow 3:

Average throughput: 59.67 Mbit/s

95th percentile per-packet one-way delay: 87.071 ms

Loss rate: 2.10%

Run 9: Report of QUIC Cubic — Data Link

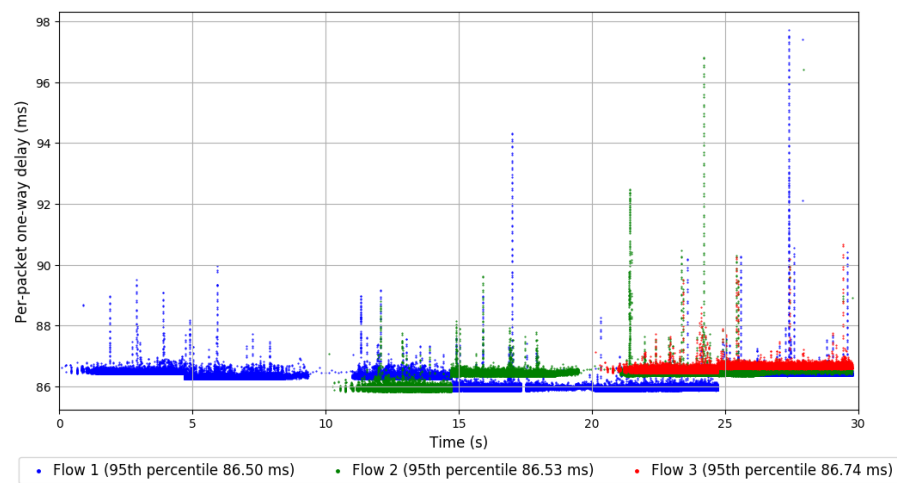
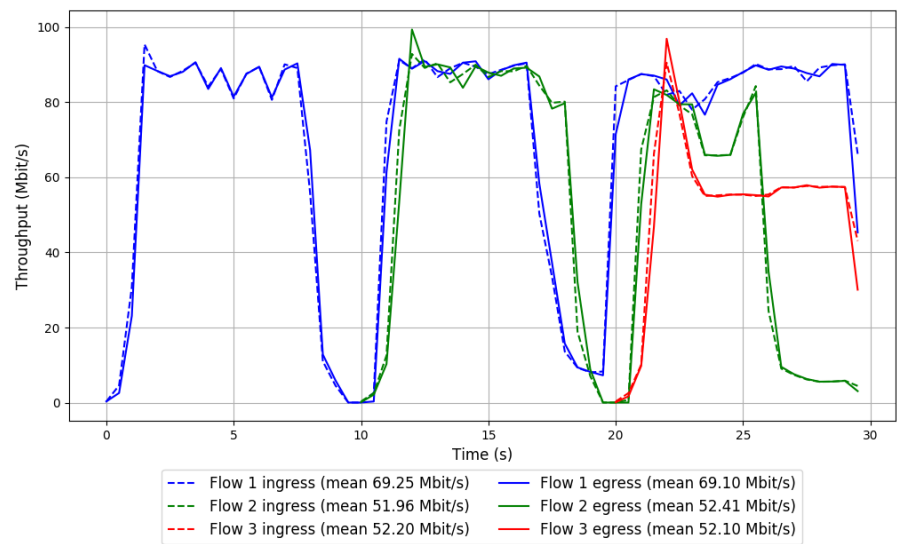


```
Run 10: Statistics of QUIC Cubic

Start at: 2018-01-17 08:59:37
End at: 2018-01-17 09:00:07

# Below is generated by plot.py at 2018-01-17 12:43:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 120.68 Mbit/s
95th percentile per-packet one-way delay: 86.649 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 69.10 Mbit/s
95th percentile per-packet one-way delay: 86.499 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 52.41 Mbit/s
95th percentile per-packet one-way delay: 86.526 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 52.10 Mbit/s
95th percentile per-packet one-way delay: 86.736 ms
Loss rate: 2.24%
```

Run 10: Report of QUIC Cubic — Data Link

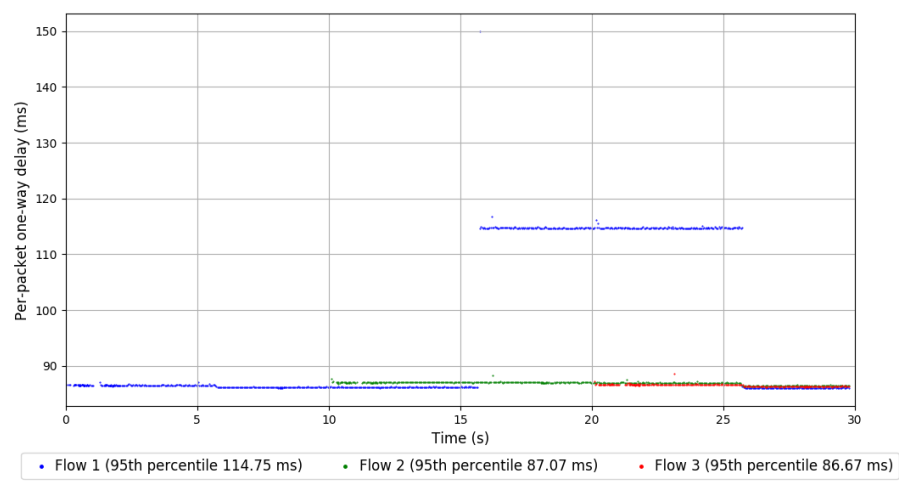
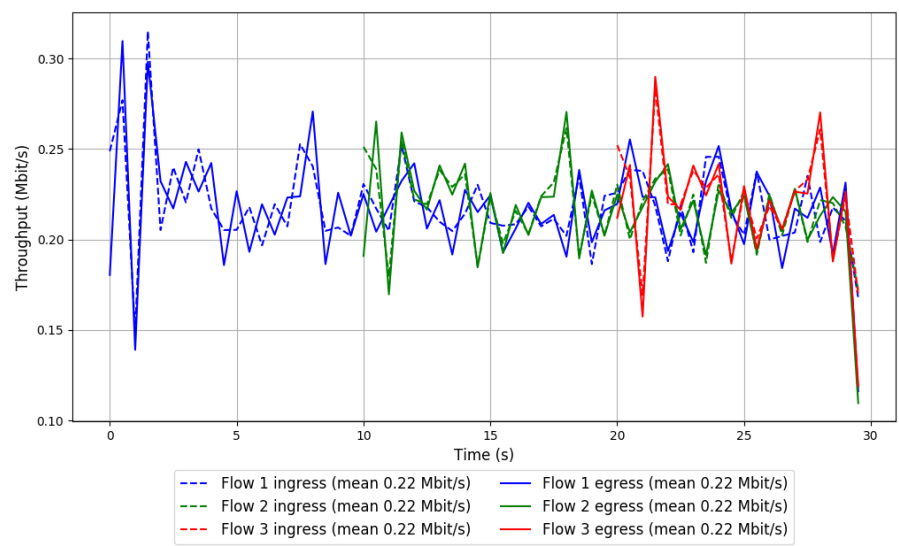


```
Run 1: Statistics of SCReAM

Start at: 2018-01-17 06:16:16
End at: 2018-01-17 06:16:46

# Below is generated by plot.py at 2018-01-17 12:43:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 114.713 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.746 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.072 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.669 ms
Loss rate: 1.88%
```

Run 1: Report of SReAM — Data Link

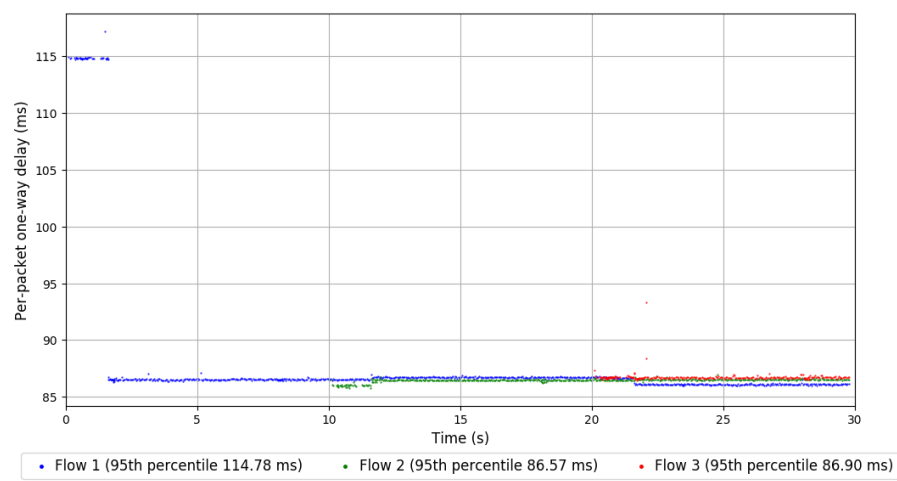
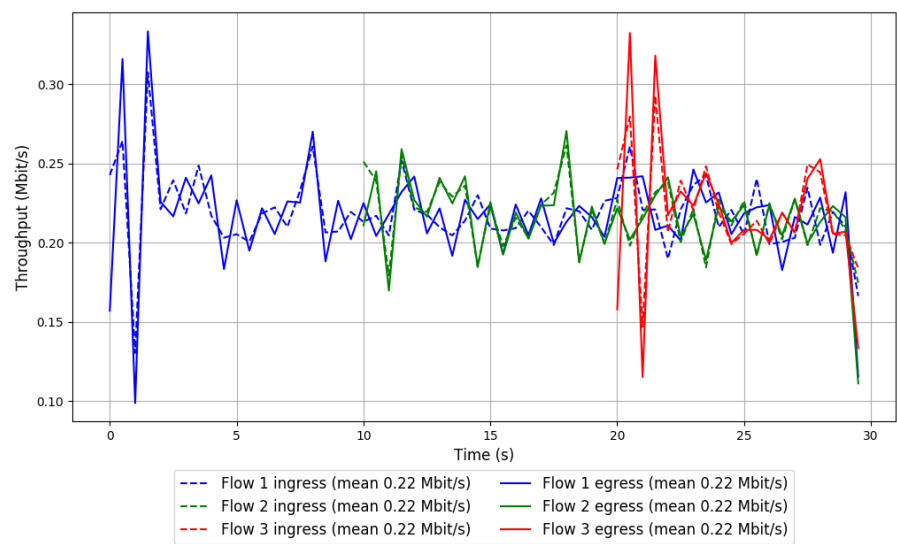


```
Run 2: Statistics of SReAM

Start at: 2018-01-17 06:35:30
End at: 2018-01-17 06:36:00

# Below is generated by plot.py at 2018-01-17 12:43:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.795 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.776 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.572 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.902 ms
Loss rate: 1.85%
```


Run 2: Report of SReAM — Data Link

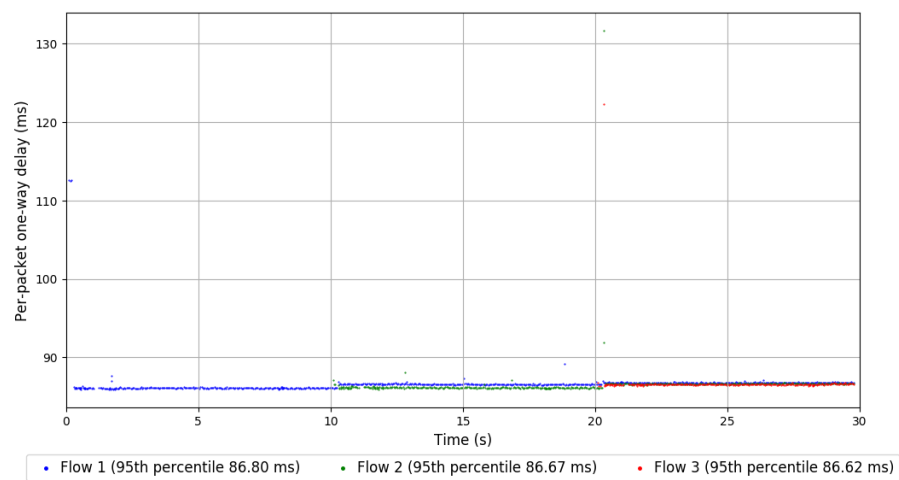
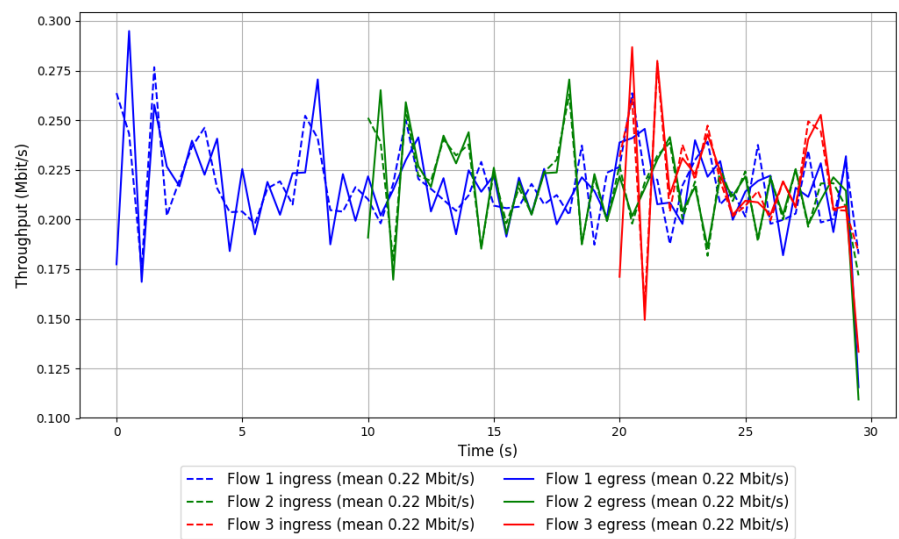


```
Run 3: Statistics of SReAM

Start at: 2018-01-17 06:54:32
End at: 2018-01-17 06:55:02

# Below is generated by plot.py at 2018-01-17 12:43:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 86.772 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.800 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.674 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.616 ms
Loss rate: 1.87%
```

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2018-01-17 07:13:42

End at: 2018-01-17 07:14:12

Below is generated by plot.py at 2018-01-17 12:43:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.27 Mbit/s

95th percentile per-packet one-way delay: 87.129 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 5325.614 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.107 ms

Loss rate: 1.05%

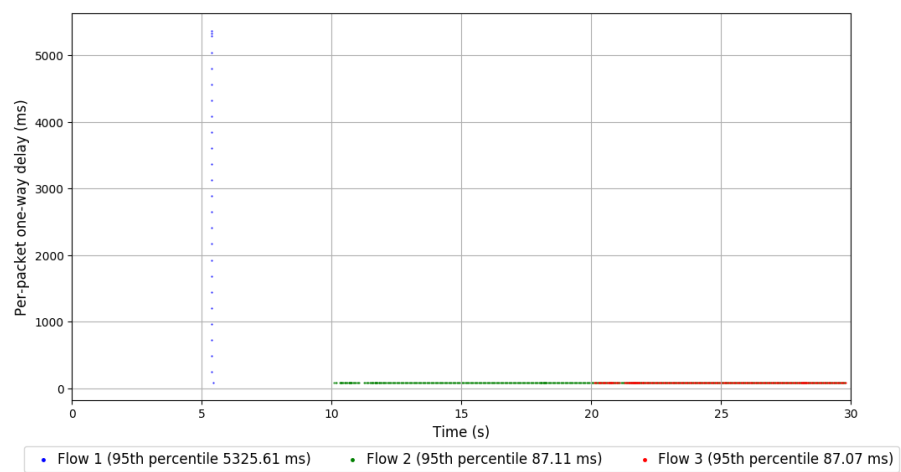
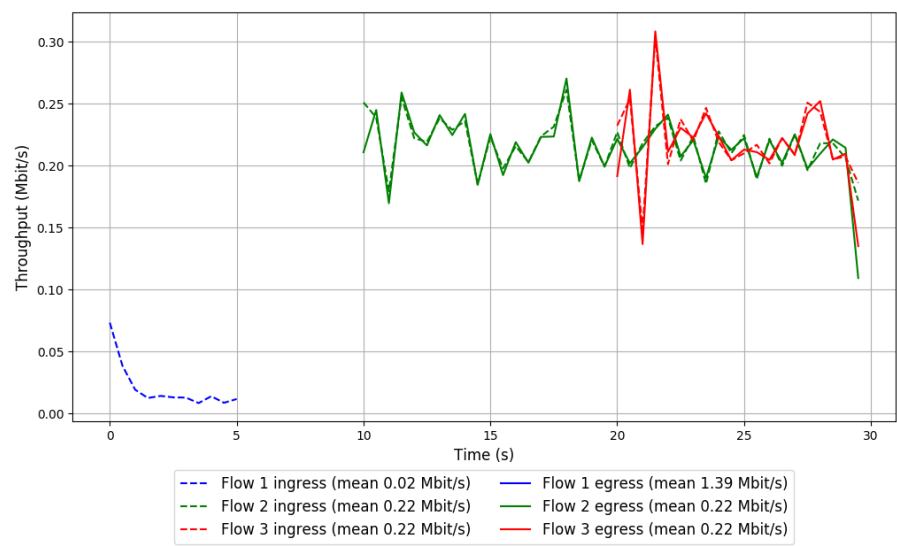
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.069 ms

Loss rate: 1.88%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2018-01-17 07:32:52

End at: 2018-01-17 07:33:22

Below is generated by plot.py at 2018-01-17 12:43:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 86.914 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.757 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.047 ms

Loss rate: 1.06%

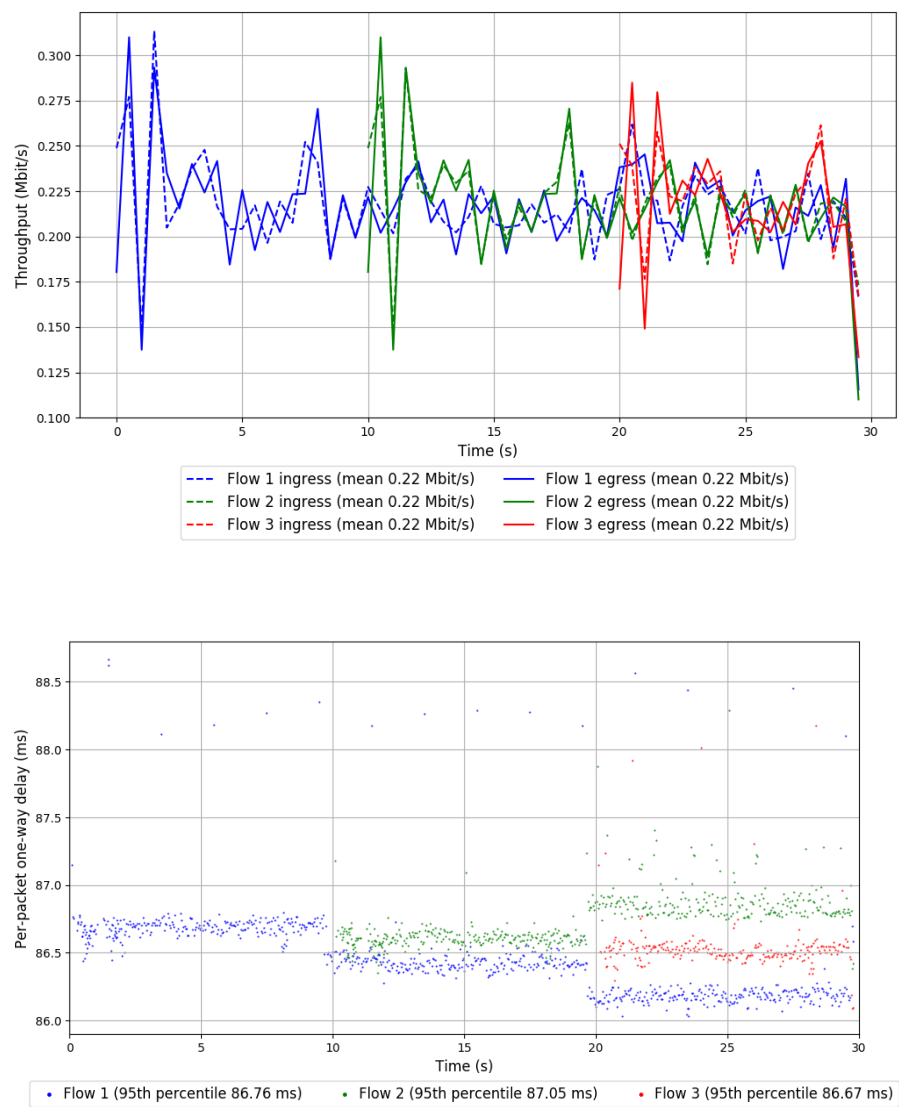
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.668 ms

Loss rate: 1.87%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2018-01-17 07:51:52

End at: 2018-01-17 07:52:22

Below is generated by plot.py at 2018-01-17 12:43:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 86.858 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.754 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.893 ms

Loss rate: 1.06%

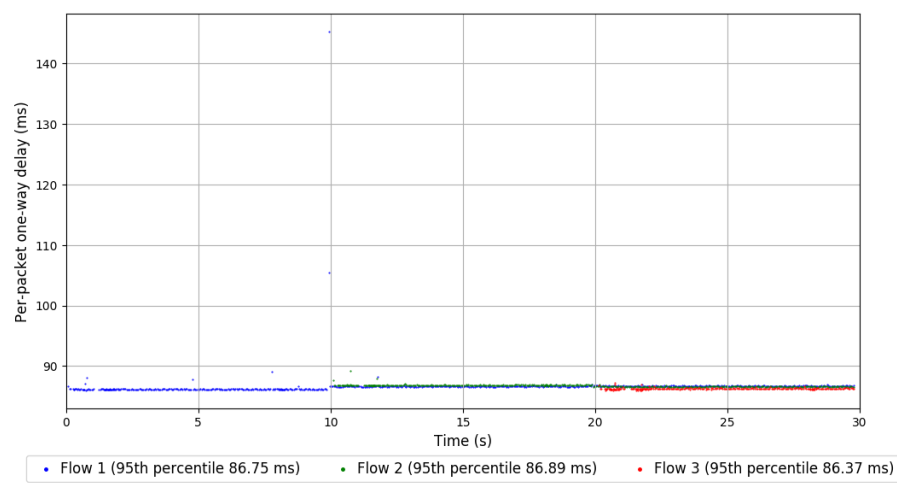
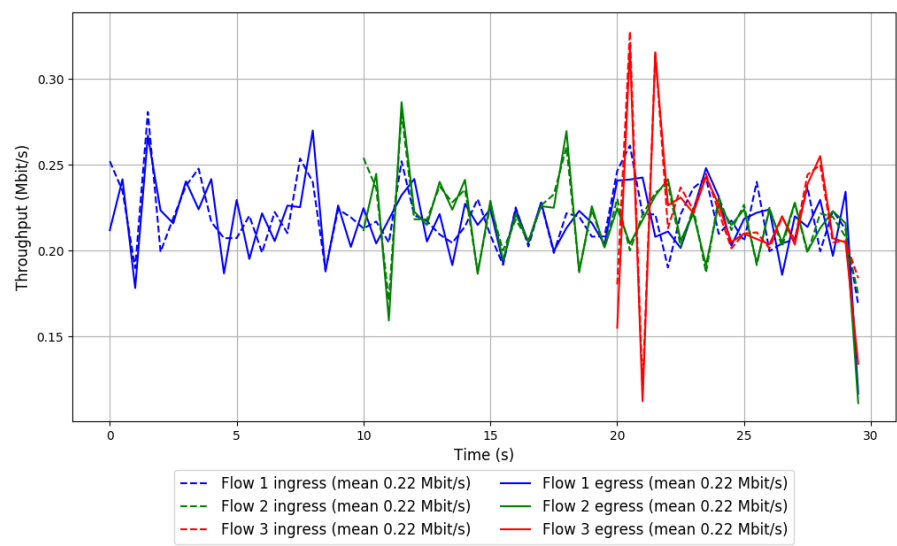
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.372 ms

Loss rate: 1.89%

Run 6: Report of SReAM — Data Link

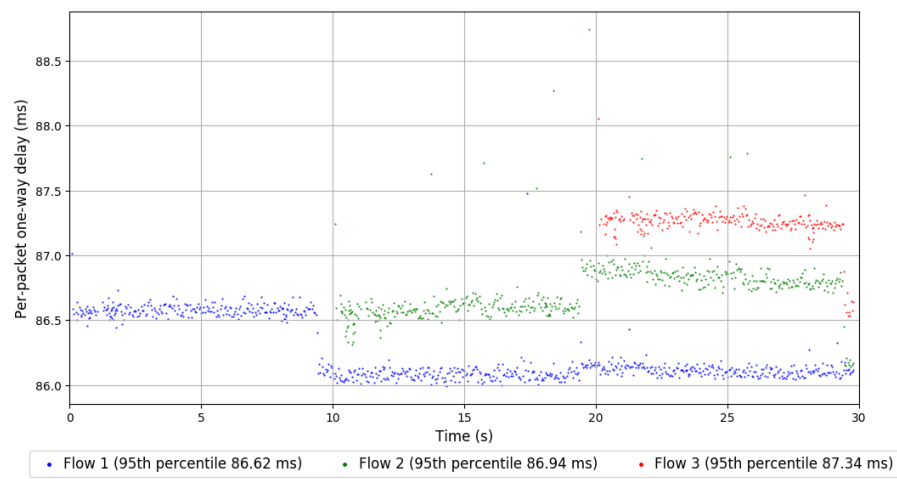
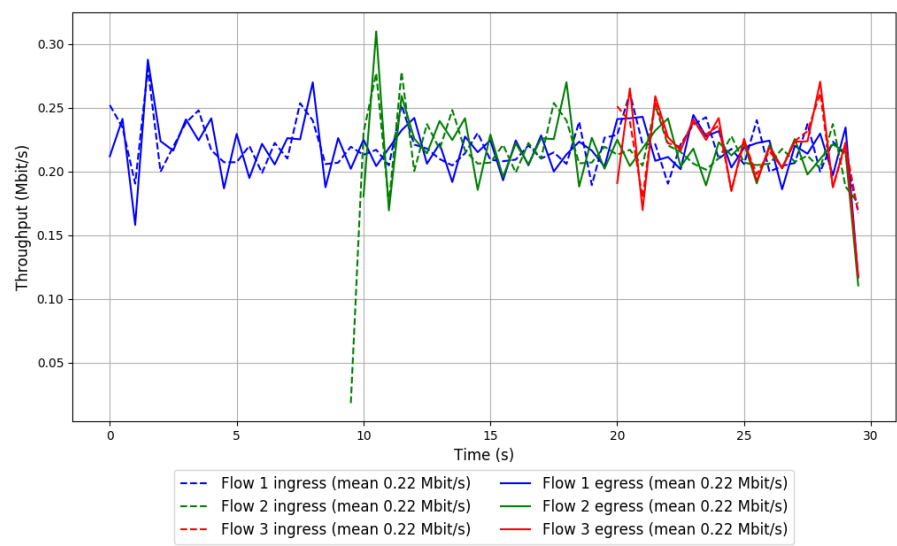


```
Run 7: Statistics of SReAM

Start at: 2018-01-17 08:11:03
End at: 2018-01-17 08:11:33

# Below is generated by plot.py at 2018-01-17 12:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 87.294 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.620 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.941 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.342 ms
Loss rate: 1.87%
```

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2018-01-17 08:29:47

End at: 2018-01-17 08:30:17

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 114.847 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.868 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.11 Mbit/s

95th percentile per-packet one-way delay: 114.901 ms

Loss rate: 1.01%

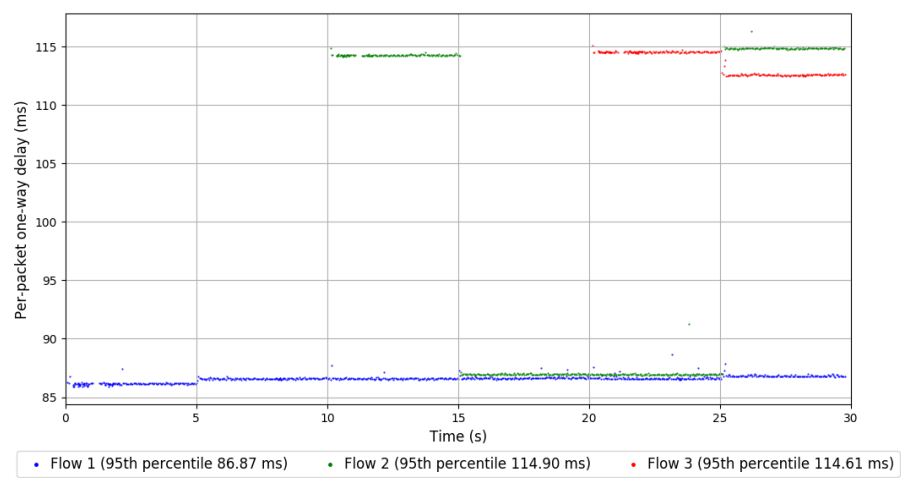
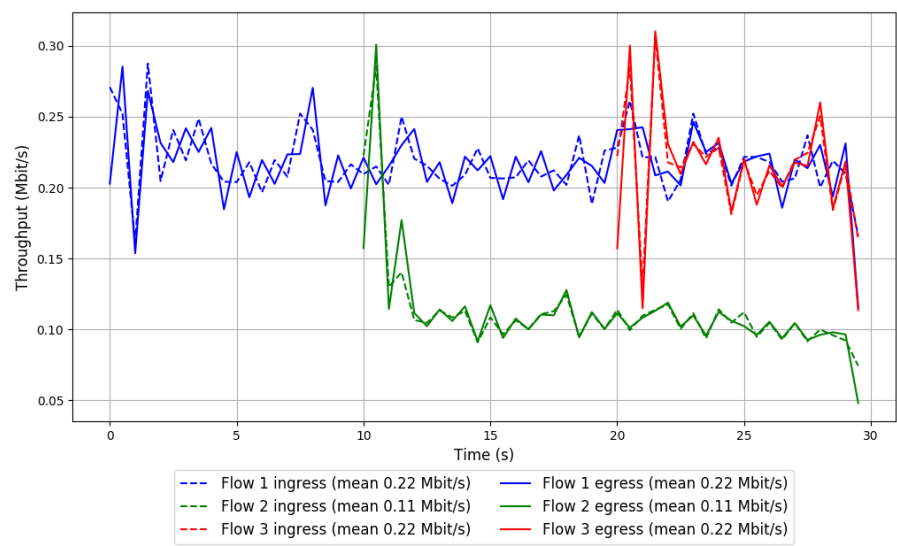
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 114.614 ms

Loss rate: 2.24%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2018-01-17 08:48:53

End at: 2018-01-17 08:49:23

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 86.766 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.768 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.679 ms

Loss rate: 1.06%

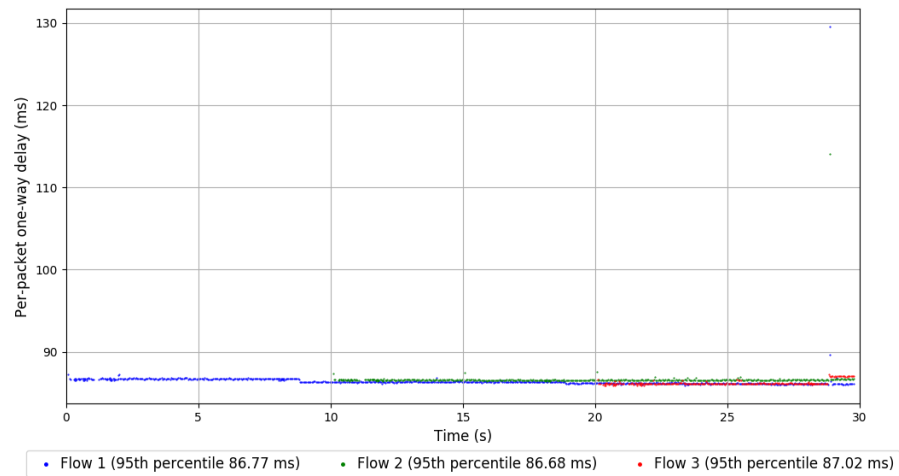
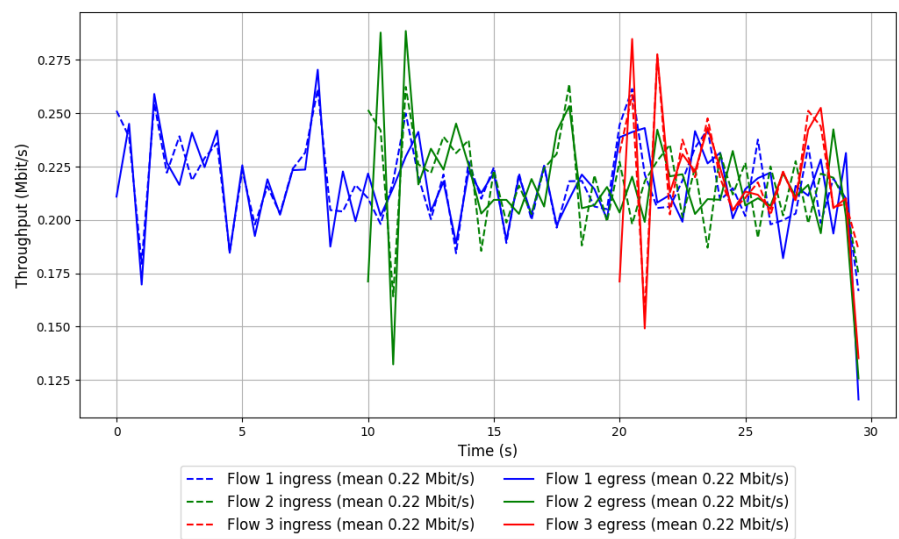
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.024 ms

Loss rate: 1.89%

Run 9: Report of SReAM — Data Link

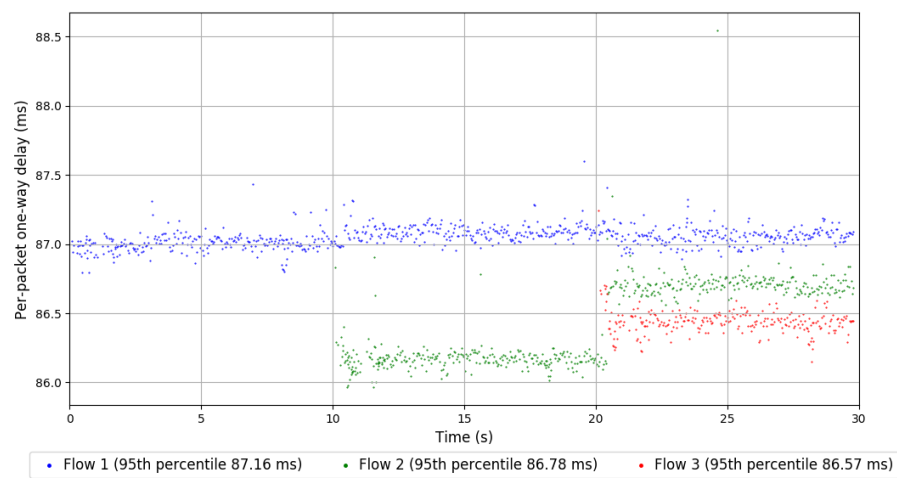
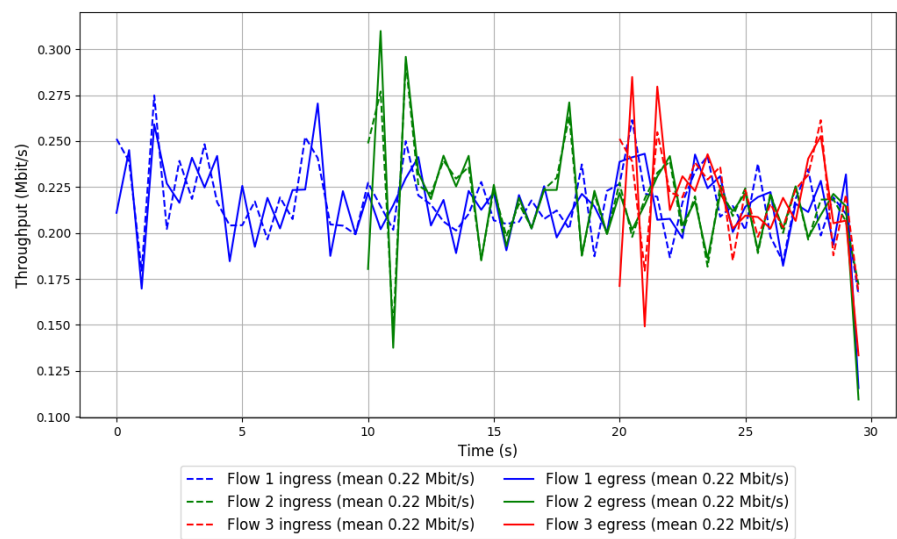


```
Run 10: Statistics of SCReAM

Start at: 2018-01-17 09:07:32
End at: 2018-01-17 09:08:02

# Below is generated by plot.py at 2018-01-17 12:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 87.138 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.163 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.778 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.574 ms
Loss rate: 1.87%
```


Run 10: Report of SReAM — Data Link

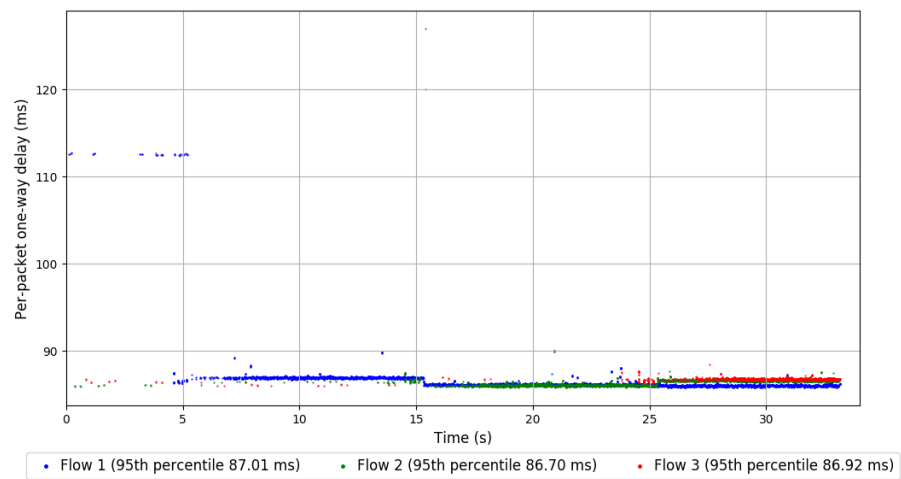
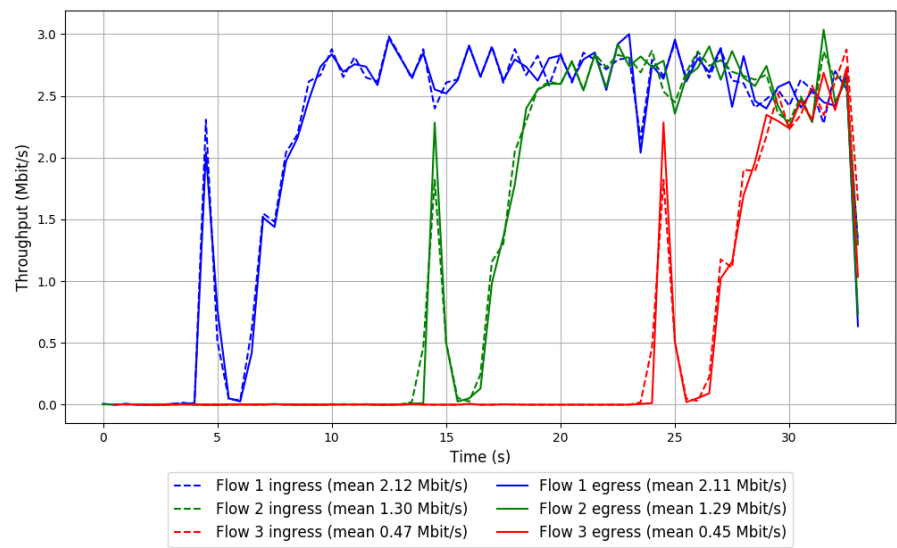


```
Run 1: Statistics of WebRTC media

Start at: 2018-01-17 06:18:40
End at: 2018-01-17 06:19:10

# Below is generated by plot.py at 2018-01-17 12:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 86.979 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 87.008 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 86.699 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 86.924 ms
Loss rate: 4.03%
```

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-01-17 06:37:50

End at: 2018-01-17 06:38:20

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 87.051 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 87.084 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 86.655 ms

Loss rate: 1.48%

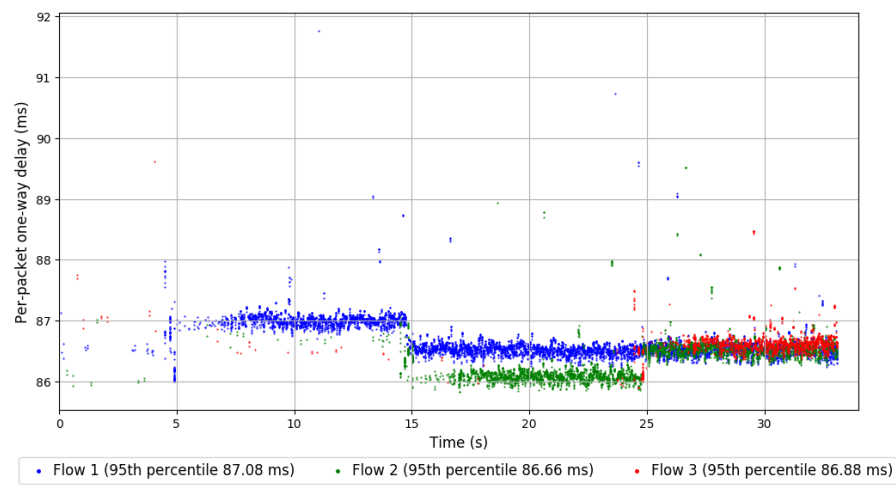
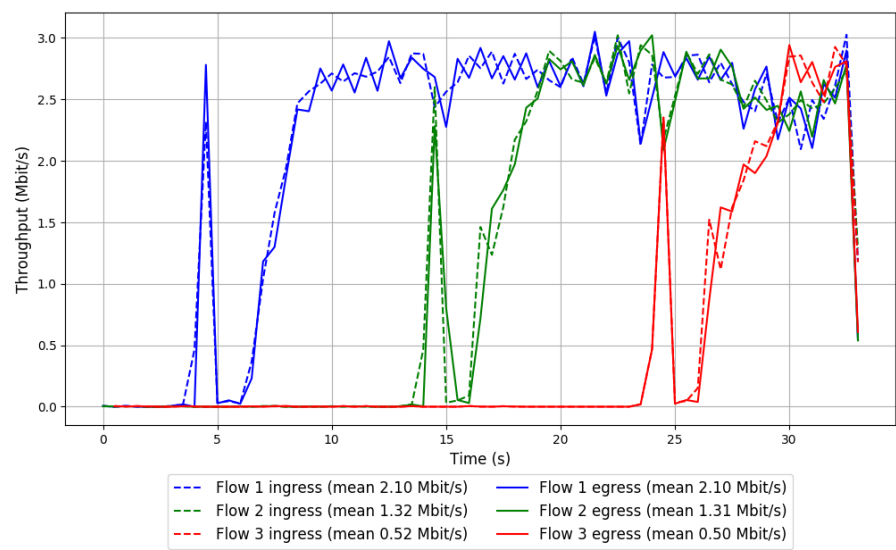
-- Flow 3:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 86.877 ms

Loss rate: 3.34%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-01-17 06:56:55

End at: 2018-01-17 06:57:25

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.81 Mbit/s

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

Loss rate: 1.14%

-- Flow 1:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 86.808 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 1.31 Mbit/s

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

Loss rate: 1.16%

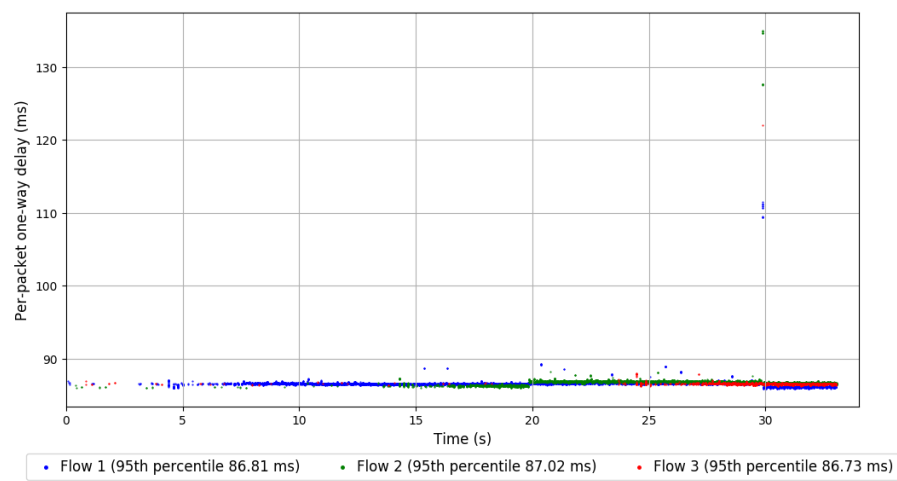
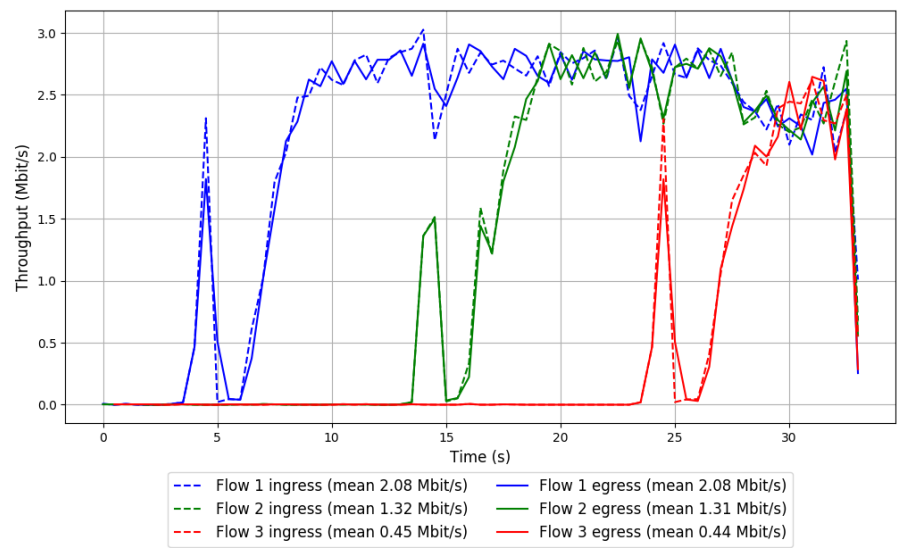
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 86.731 ms

Loss rate: 3.01%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-01-17 07:16:03

End at: 2018-01-17 07:16:33

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.36 Mbit/s

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

Loss rate: 1.79%

-- Flow 1:

Average throughput: 2.56 Mbit/s

95th percentile per-packet one-way delay: 86.773 ms

Loss rate: 1.33%

-- Flow 2:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 87.015 ms

Loss rate: 2.00%

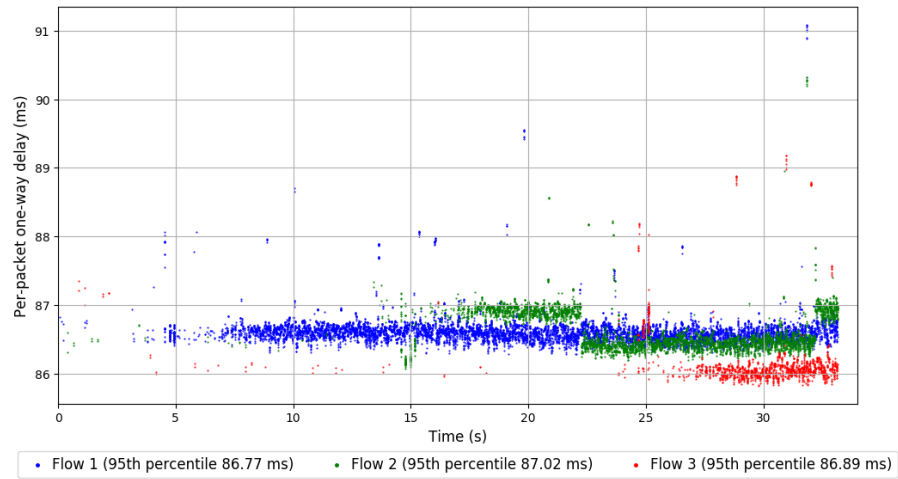
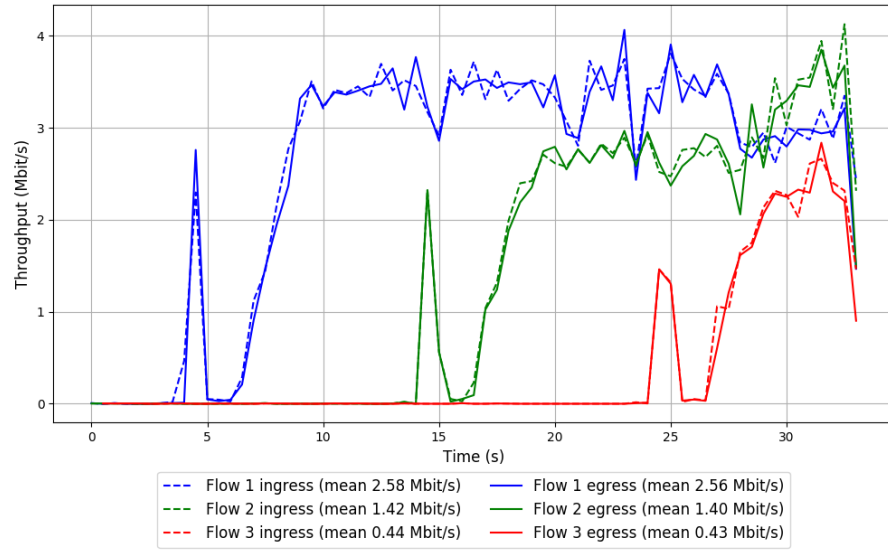
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 86.888 ms

Loss rate: 3.84%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-01-17 07:35:16

End at: 2018-01-17 07:35:46

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.84 Mbit/s

95th percentile per-packet one-way delay: 86.989 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 86.786 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 86.962 ms

Loss rate: 1.51%

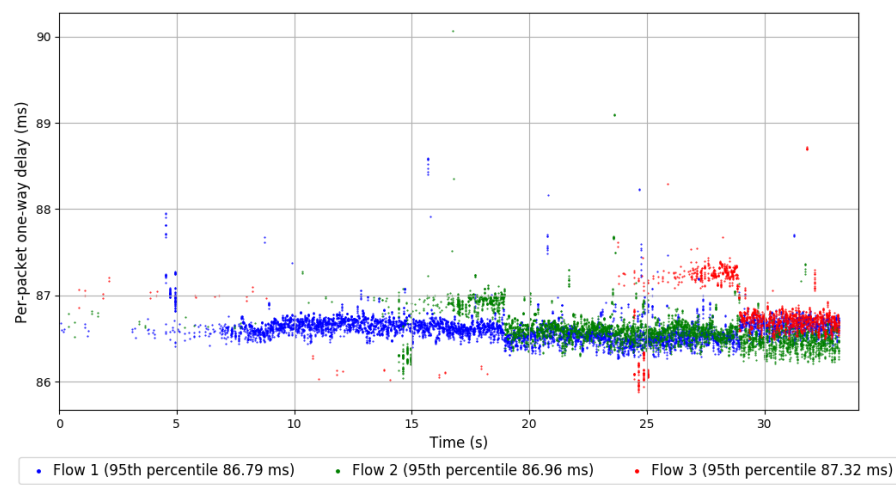
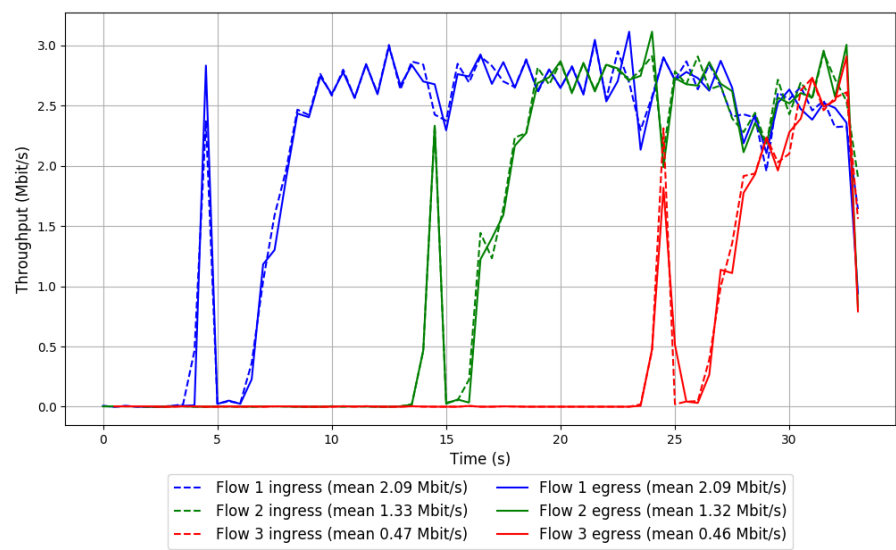
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 87.316 ms

Loss rate: 3.23%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-01-17 07:54:15

End at: 2018-01-17 07:54:45

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.80 Mbit/s

95th percentile per-packet one-way delay: 87.336 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 87.363 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 86.942 ms

Loss rate: 1.37%

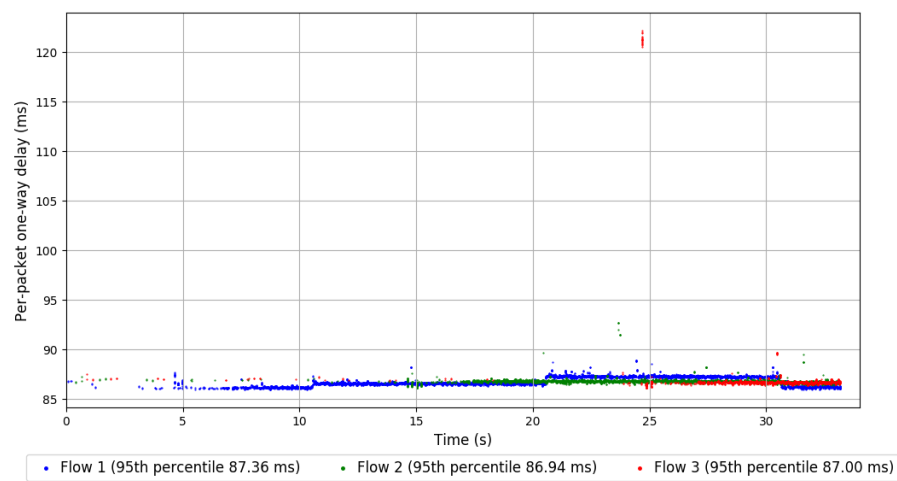
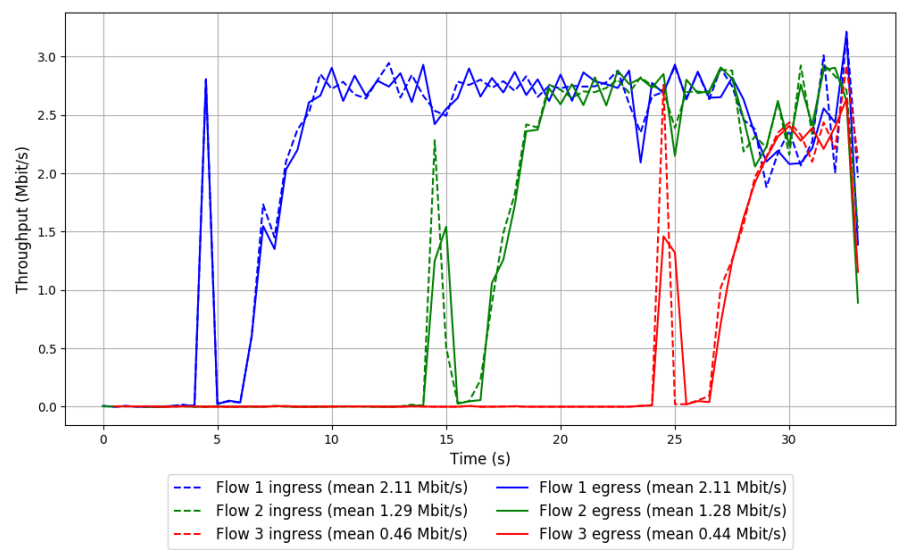
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 87.005 ms

Loss rate: 5.00%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-01-17 08:13:25

End at: 2018-01-17 08:13:55

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.80 Mbit/s

95th percentile per-packet one-way delay: 87.072 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 2.09 Mbit/s

95th percentile per-packet one-way delay: 87.086 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 86.926 ms

Loss rate: 1.27%

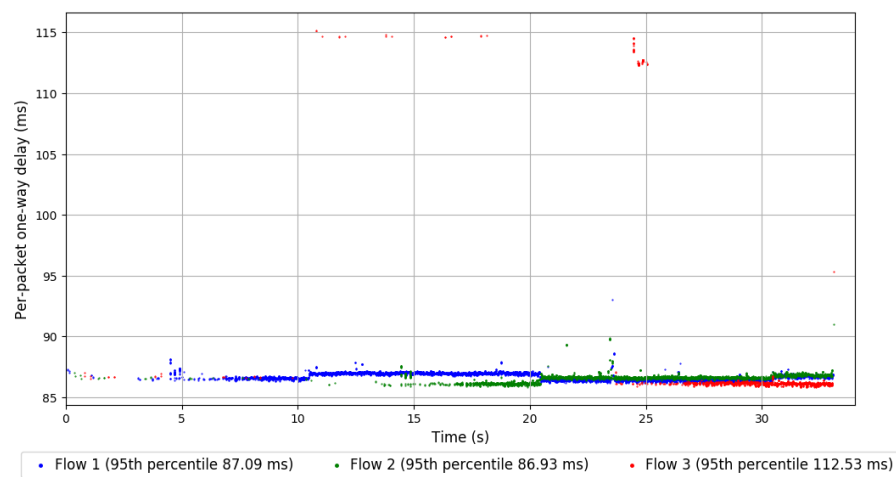
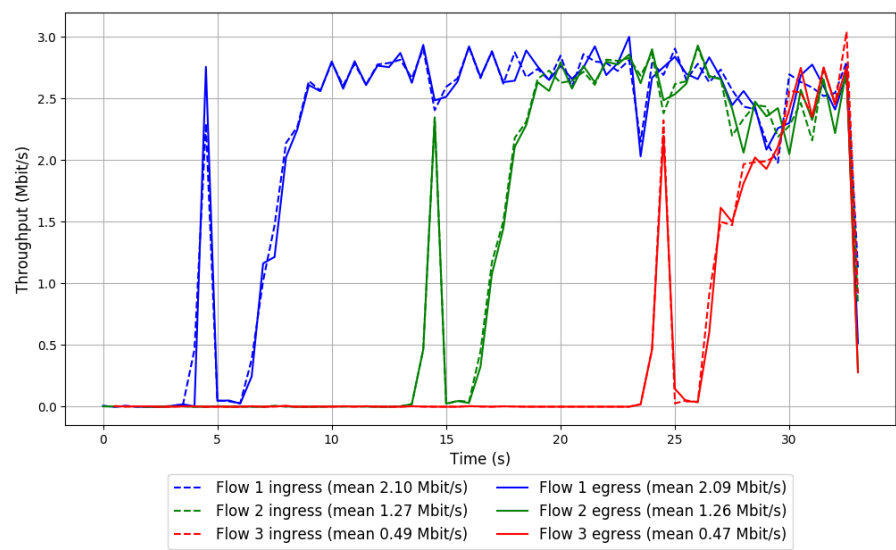
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 112.531 ms

Loss rate: 3.75%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-01-17 08:32:10

End at: 2018-01-17 08:32:40

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.83 Mbit/s

95th percentile per-packet one-way delay: 87.071 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 87.096 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 86.751 ms

Loss rate: 1.82%

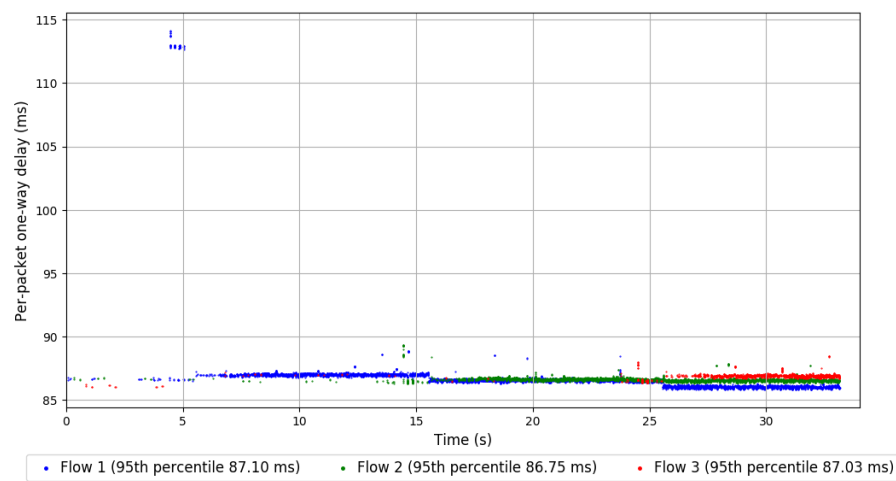
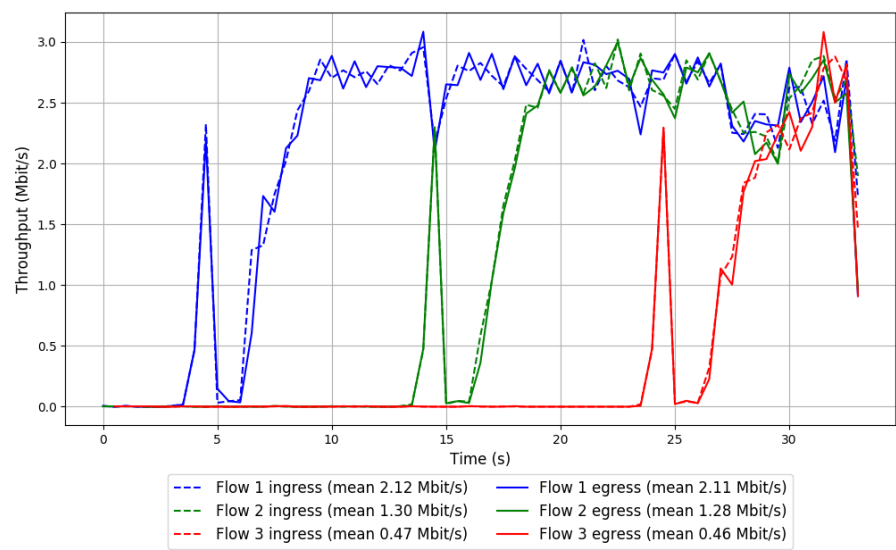
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 87.033 ms

Loss rate: 3.53%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-01-17 08:51:12

End at: 2018-01-17 08:51:42

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.80 Mbit/s

95th percentile per-packet one-way delay: 86.744 ms

Loss rate: 1.70%

-- Flow 1:

Average throughput: 2.12 Mbit/s

95th percentile per-packet one-way delay: 86.698 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 86.844 ms

Loss rate: 1.59%

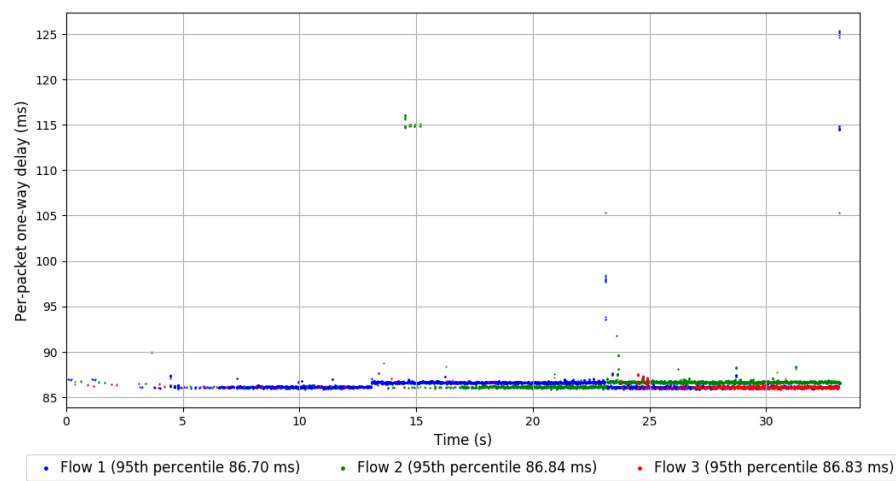
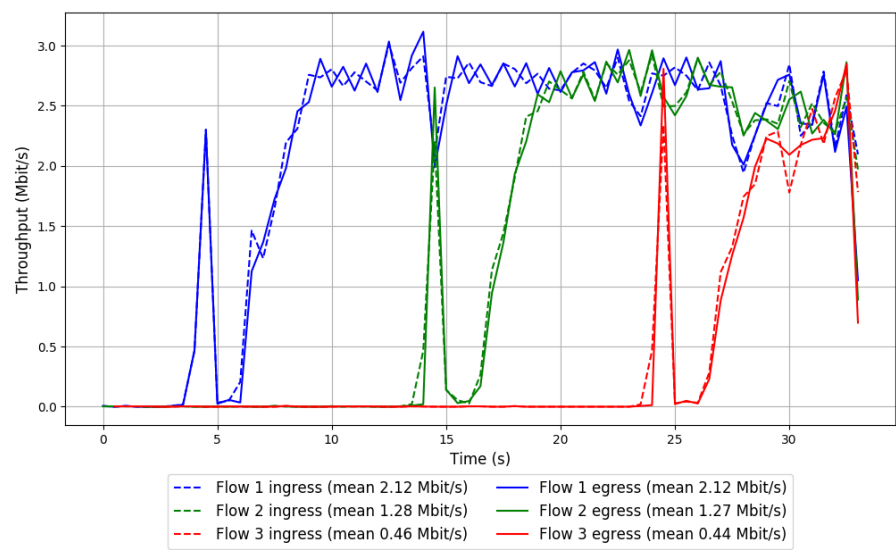
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 86.827 ms

Loss rate: 5.23%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-01-17 09:09:52

End at: 2018-01-17 09:10:22

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.84 Mbit/s

95th percentile per-packet one-way delay: 86.816 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 86.367 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 86.857 ms

Loss rate: 1.54%

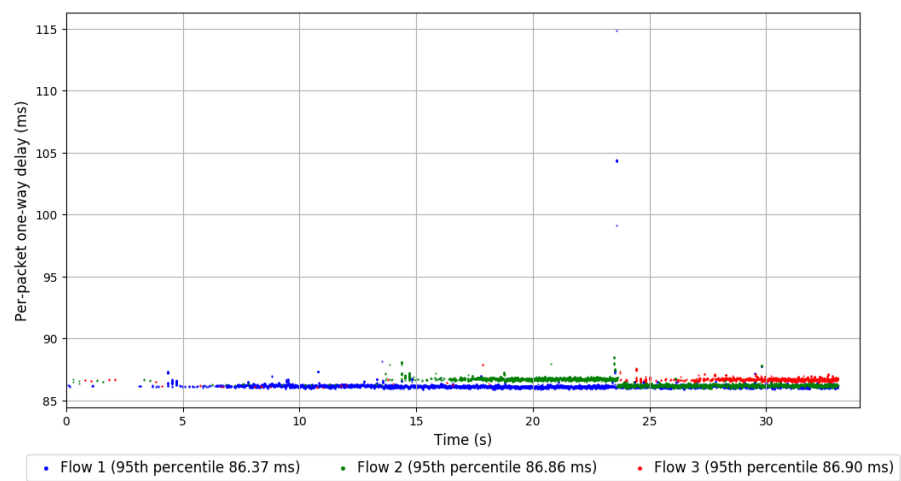
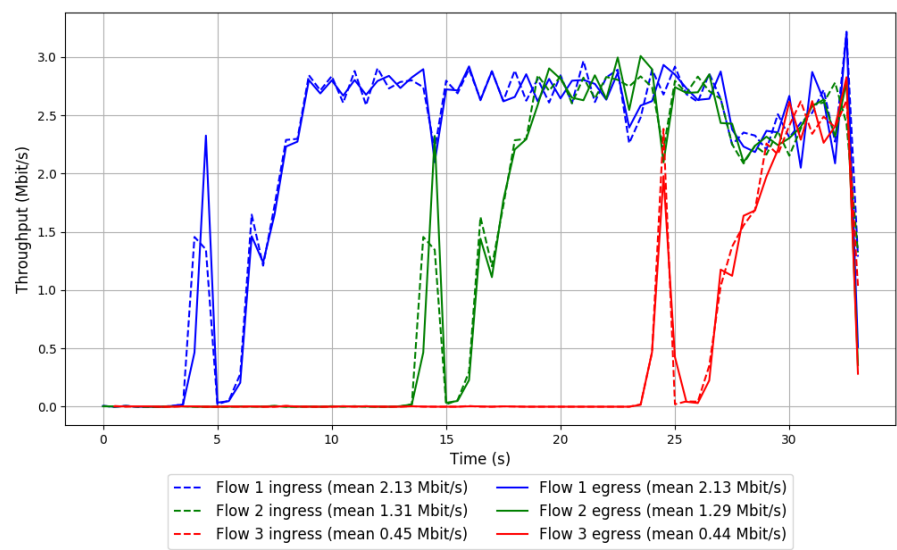
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 86.903 ms

Loss rate: 3.52%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2018-01-17 06:17:54

End at: 2018-01-17 06:18:24

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.86 Mbit/s

95th percentile per-packet one-way delay: 87.429 ms

Loss rate: 3.32%

-- Flow 1:

Average throughput: 2.98 Mbit/s

95th percentile per-packet one-way delay: 87.346 ms

Loss rate: 2.54%

-- Flow 2:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 87.510 ms

Loss rate: 4.40%

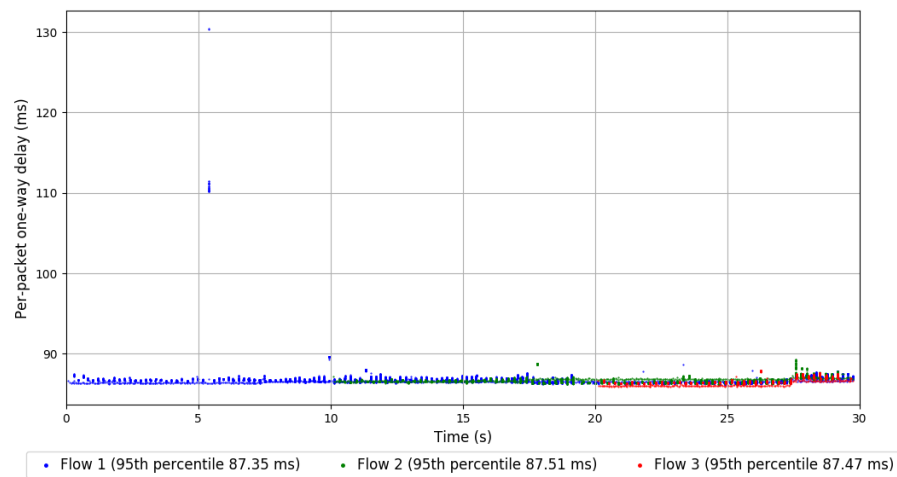
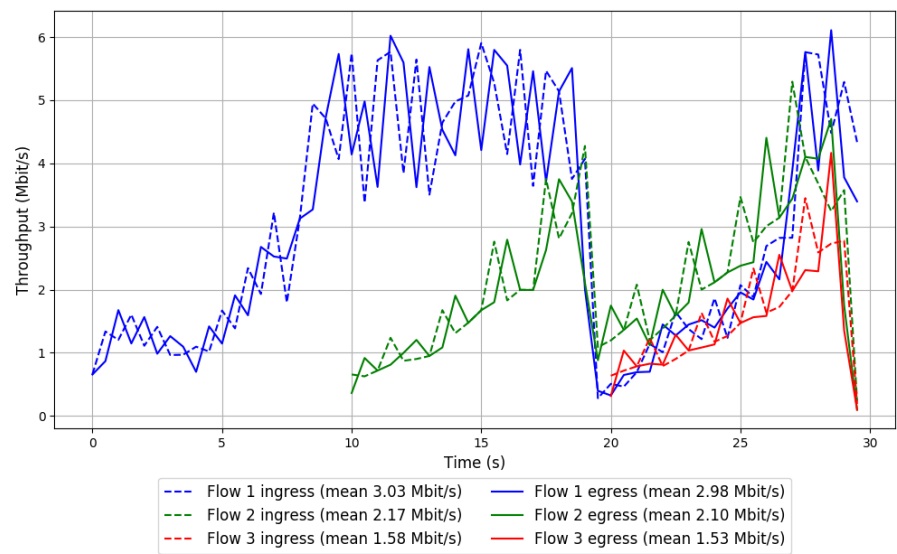
-- Flow 3:

Average throughput: 1.53 Mbit/s

95th percentile per-packet one-way delay: 87.467 ms

Loss rate: 4.89%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-01-17 06:37:05

End at: 2018-01-17 06:37:35

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.17 Mbit/s

95th percentile per-packet one-way delay: 87.559 ms

Loss rate: 2.06%

-- Flow 1:

Average throughput: 3.77 Mbit/s

95th percentile per-packet one-way delay: 87.563 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 2.58 Mbit/s

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

Loss rate: 3.52%

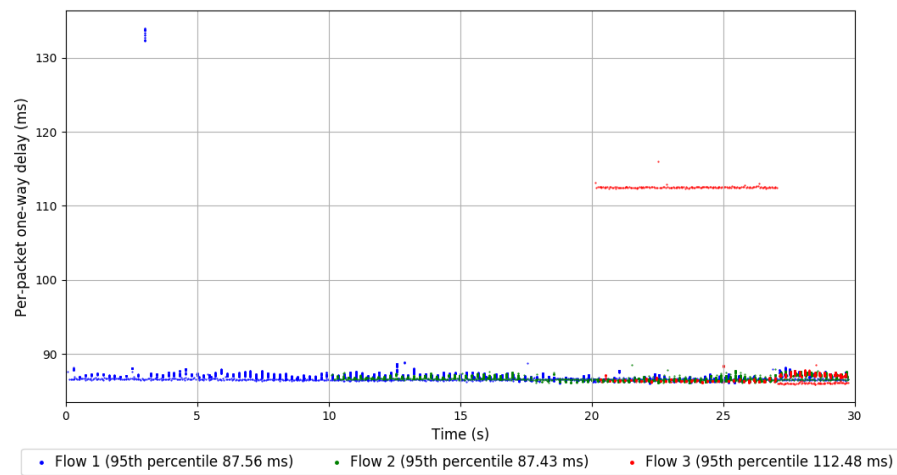
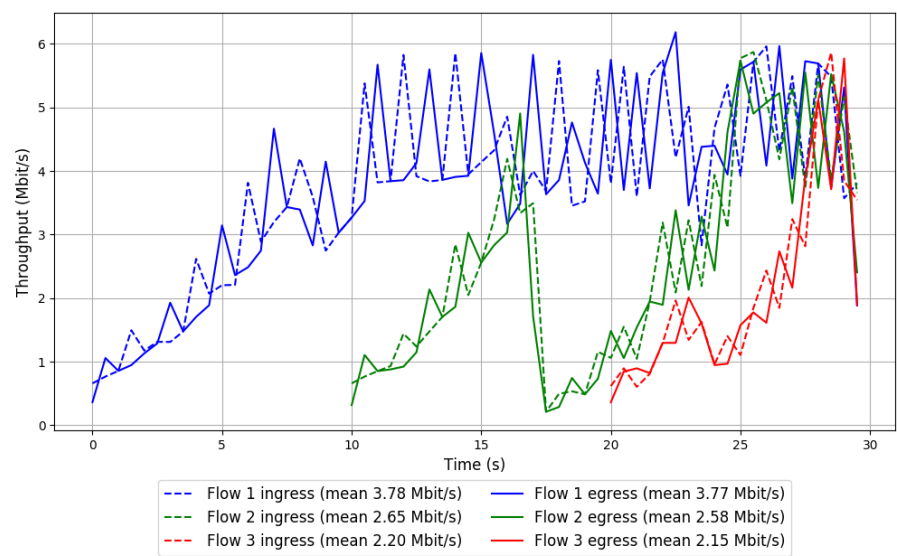
-- Flow 3:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 112.476 ms

Loss rate: 4.35%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-01-17 06:56:10

End at: 2018-01-17 06:56:40

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.49 Mbit/s

95th percentile per-packet one-way delay: 87.720 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 2.53 Mbit/s

95th percentile per-packet one-way delay: 87.989 ms

Loss rate: 1.74%

-- Flow 2:

Average throughput: 2.36 Mbit/s

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

Loss rate: 0.01%

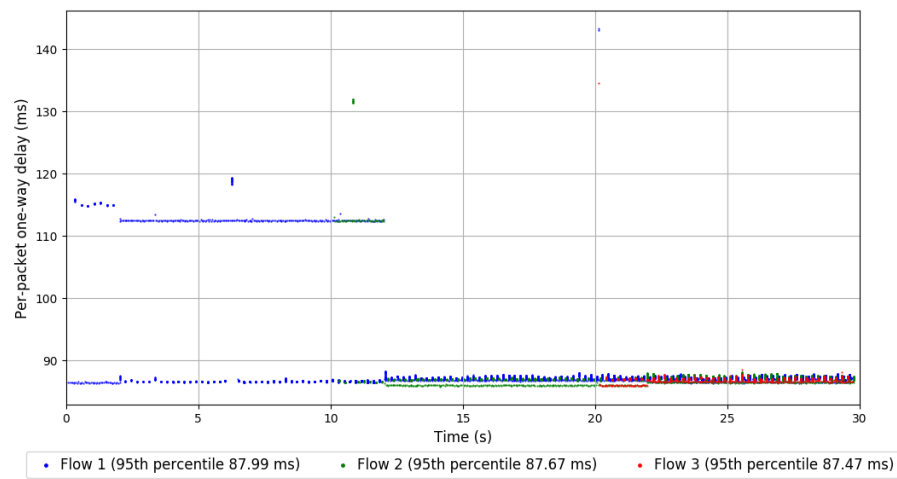
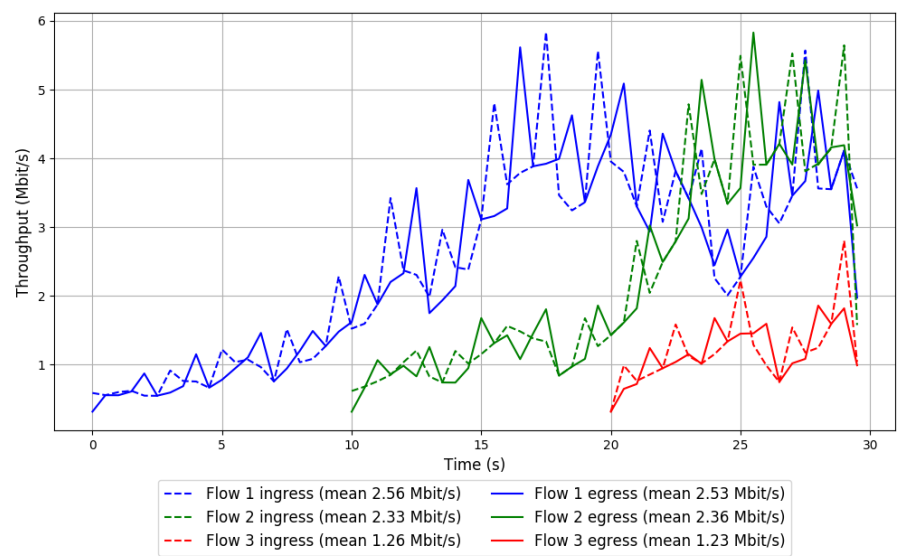
-- Flow 3:

Average throughput: 1.23 Mbit/s

95th percentile per-packet one-way delay: 87.466 ms

Loss rate: 4.18%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-01-17 07:15:18

End at: 2018-01-17 07:15:48

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.40 Mbit/s

95th percentile per-packet one-way delay: 87.294 ms

Loss rate: 2.08%

-- Flow 1:

Average throughput: 3.16 Mbit/s

95th percentile per-packet one-way delay: 87.231 ms

Loss rate: 1.74%

-- Flow 2:

Average throughput: 3.55 Mbit/s

95th percentile per-packet one-way delay: 87.372 ms

Loss rate: 1.70%

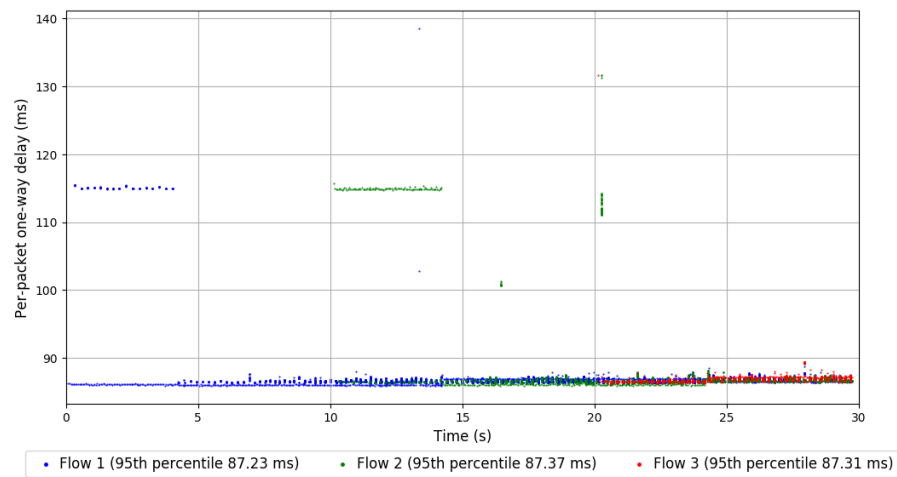
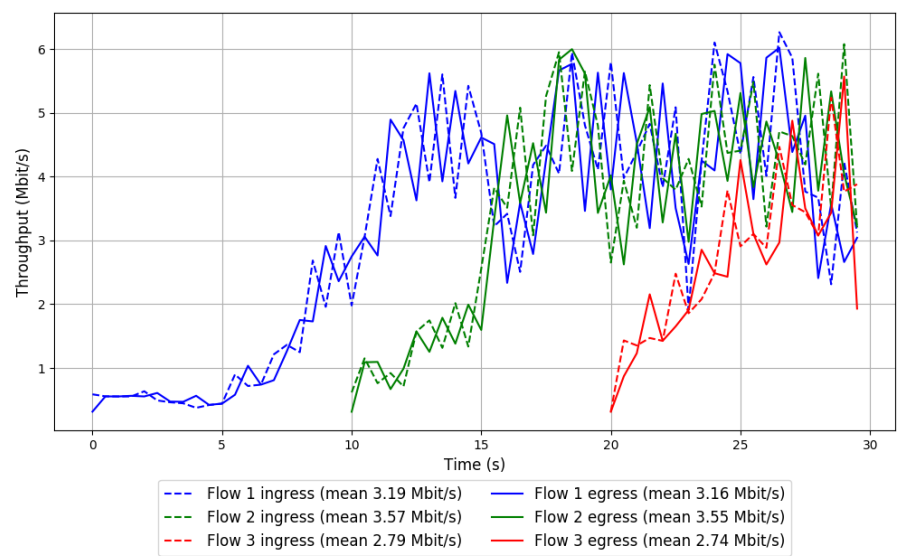
-- Flow 3:

Average throughput: 2.74 Mbit/s

95th percentile per-packet one-way delay: 87.312 ms

Loss rate: 4.24%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

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

End at: 2018-01-17 07:35:01

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.33 Mbit/s

95th percentile per-packet one-way delay: 87.819 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 3.44 Mbit/s

95th percentile per-packet one-way delay: 87.889 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 3.66 Mbit/s

95th percentile per-packet one-way delay: 87.644 ms

Loss rate: 0.92%

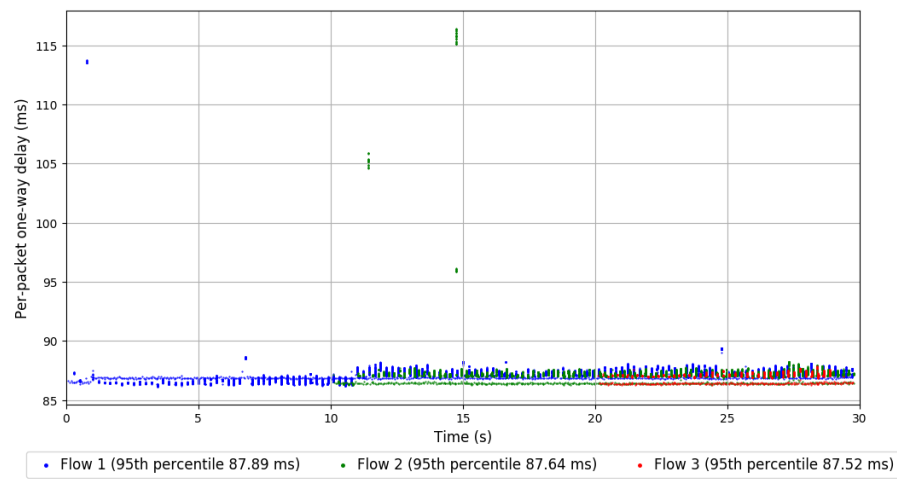
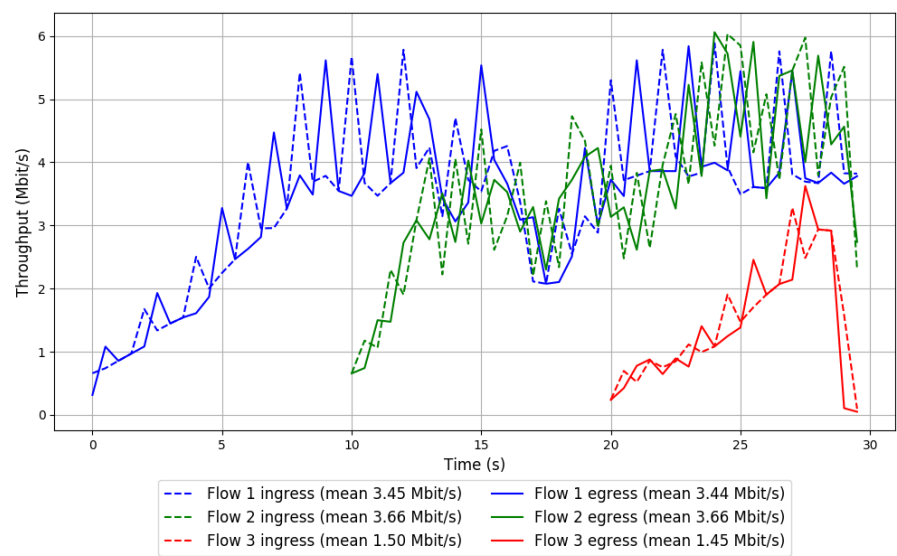
-- Flow 3:

Average throughput: 1.45 Mbit/s

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

Loss rate: 5.15%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-01-17 07:53:29

End at: 2018-01-17 07:53:59

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.13 Mbit/s

95th percentile per-packet one-way delay: 87.352 ms

Loss rate: 2.68%

-- Flow 1:

Average throughput: 2.54 Mbit/s

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

Loss rate: 2.90%

-- Flow 2:

Average throughput: 2.99 Mbit/s

95th percentile per-packet one-way delay: 87.187 ms

Loss rate: 2.02%

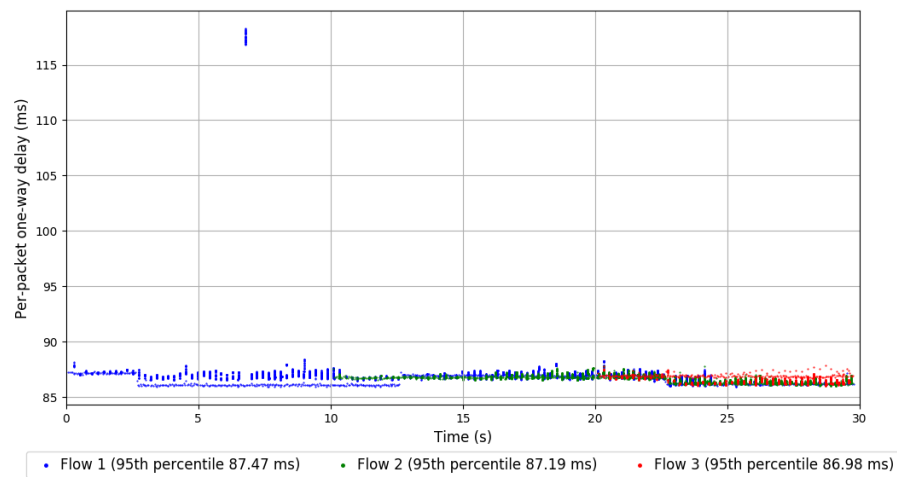
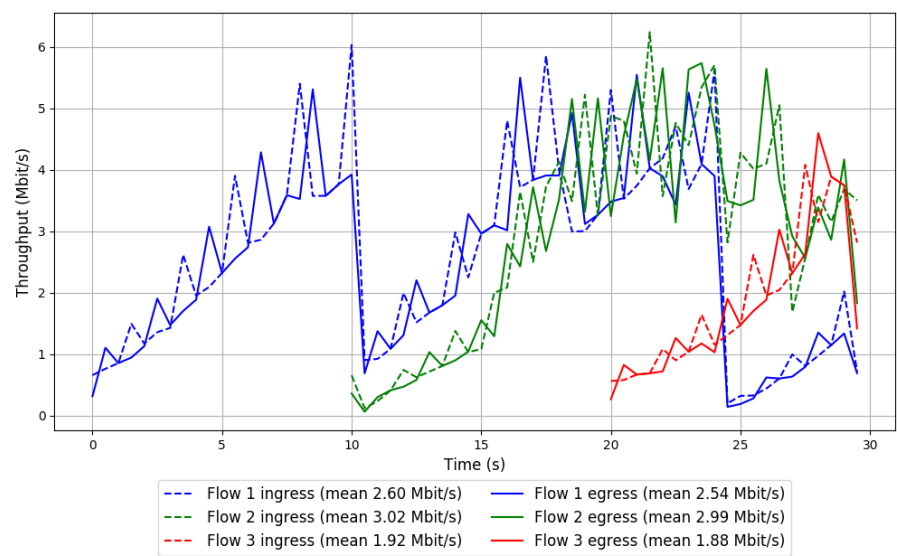
-- Flow 3:

Average throughput: 1.88 Mbit/s

95th percentile per-packet one-way delay: 86.982 ms

Loss rate: 3.83%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-01-17 08:12:39

End at: 2018-01-17 08:13:09

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.88 Mbit/s

95th percentile per-packet one-way delay: 112.817 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 2.78 Mbit/s

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

Loss rate: 1.12%

-- Flow 2:

Average throughput: 2.79 Mbit/s

95th percentile per-packet one-way delay: 112.931 ms

Loss rate: 0.68%

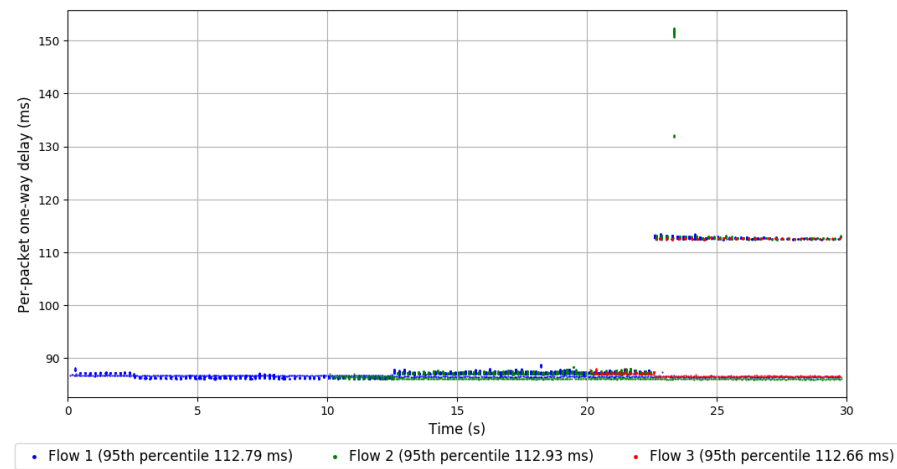
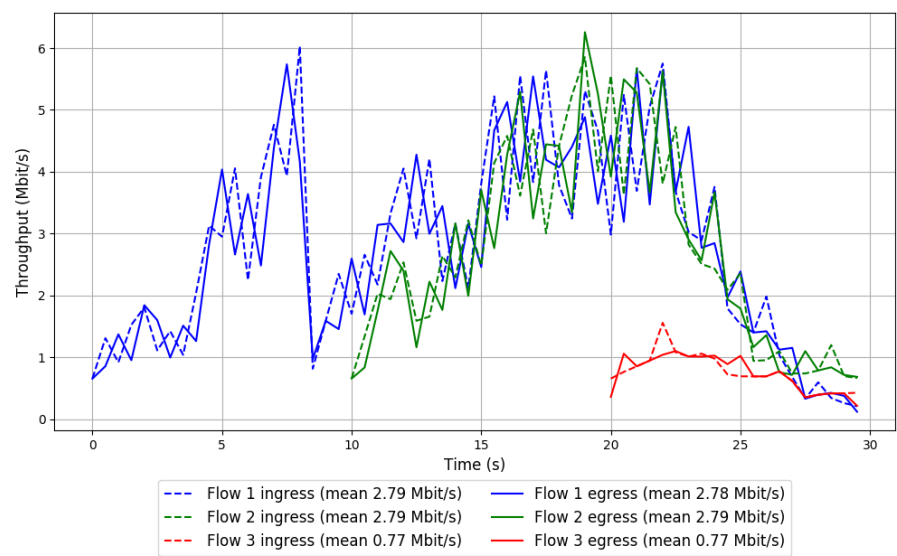
-- Flow 3:

Average throughput: 0.77 Mbit/s

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

Loss rate: 1.42%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-01-17 08:31:24

End at: 2018-01-17 08:31:54

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.23 Mbit/s

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

Loss rate: 2.43%

-- Flow 1:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 113.275 ms

Loss rate: 1.33%

-- Flow 2:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 112.983 ms

Loss rate: 3.36%

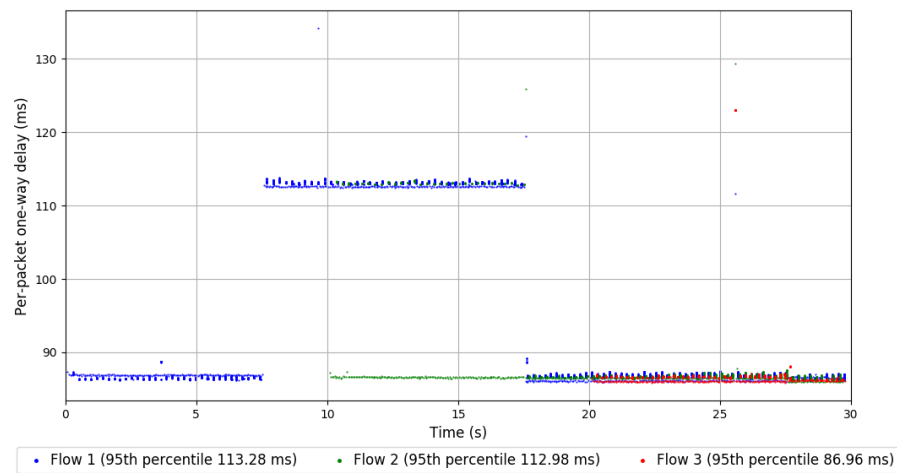
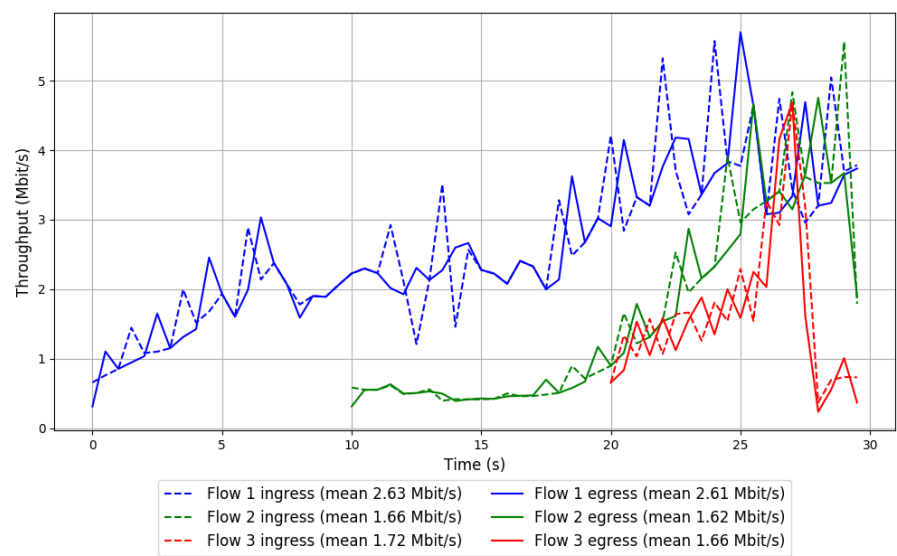
-- Flow 3:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 86.958 ms

Loss rate: 5.68%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-01-17 08:50:27

End at: 2018-01-17 08:50:57

Below is generated by plot.py at 2018-01-17 12:43:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.52 Mbit/s

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

Loss rate: 2.68%

-- Flow 1:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 112.808 ms

Loss rate: 2.14%

-- Flow 2:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 112.751 ms

Loss rate: 2.89%

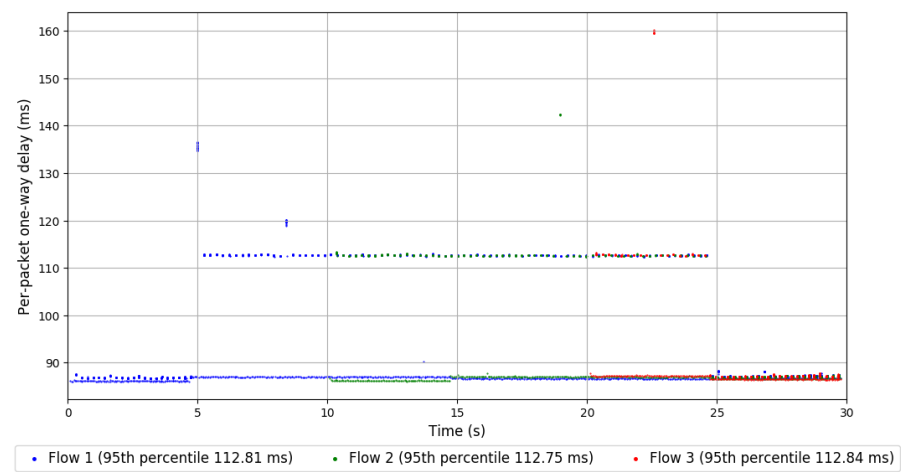
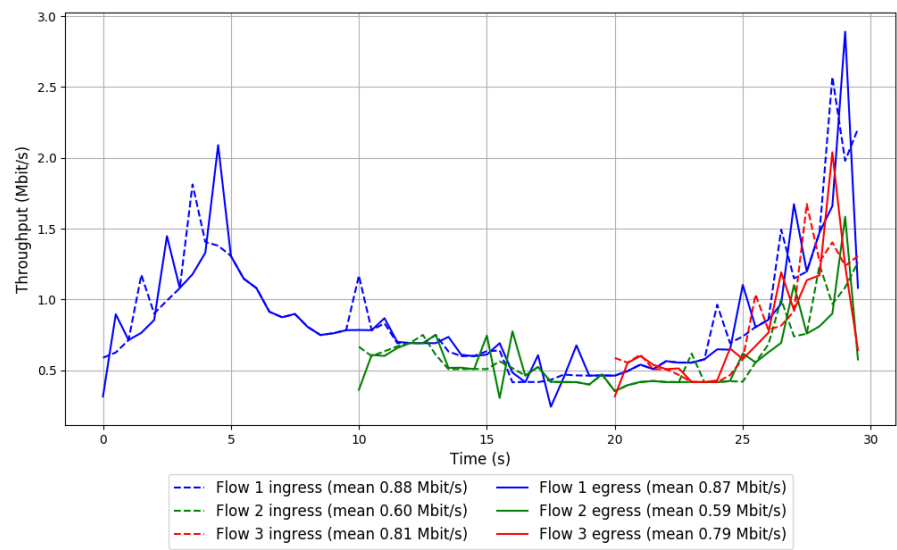
-- Flow 3:

Average throughput: 0.79 Mbit/s

95th percentile per-packet one-way delay: 112.838 ms

Loss rate: 4.17%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-01-17 09:09:06

End at: 2018-01-17 09:09:36

Below is generated by plot.py at 2018-01-17 12:43:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.25 Mbit/s

95th percentile per-packet one-way delay: 87.756 ms

Loss rate: 2.31%

-- Flow 1:

Average throughput: 2.72 Mbit/s

95th percentile per-packet one-way delay: 87.655 ms

Loss rate: 2.20%

-- Flow 2:

Average throughput: 3.32 Mbit/s

95th percentile per-packet one-way delay: 87.985 ms

Loss rate: 1.56%

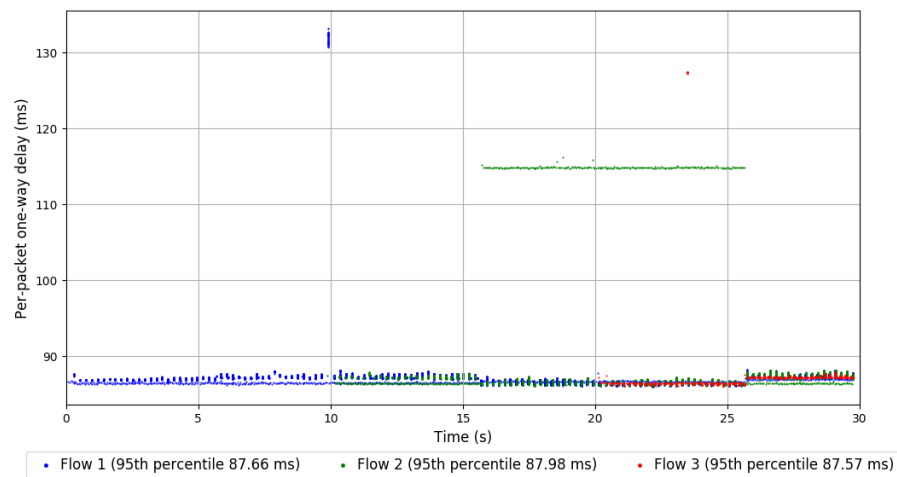
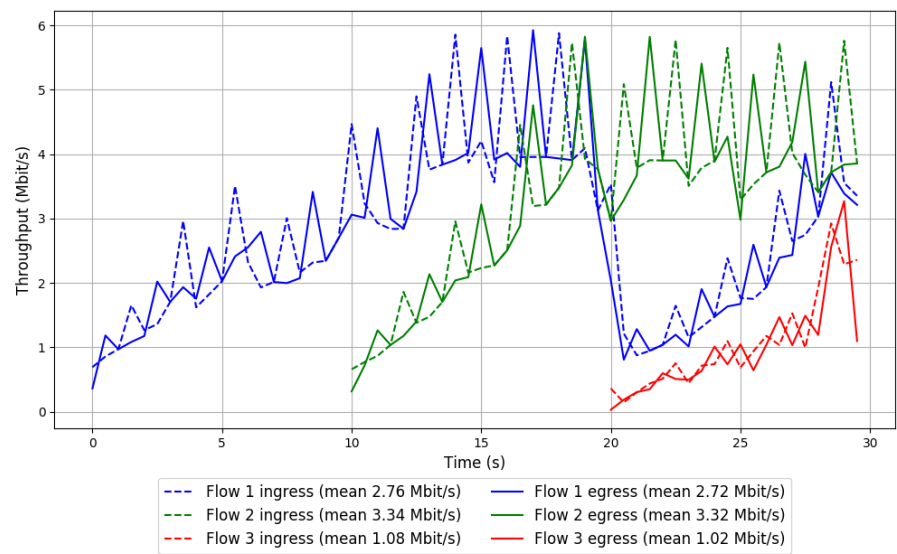
-- Flow 3:

Average throughput: 1.02 Mbit/s

95th percentile per-packet one-way delay: 87.569 ms

Loss rate: 7.81%

Run 10: Report of Sprout — Data Link

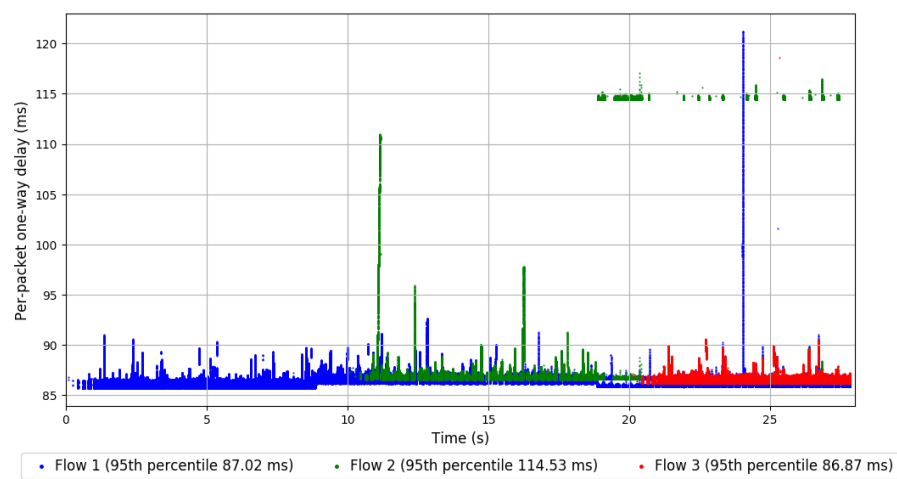
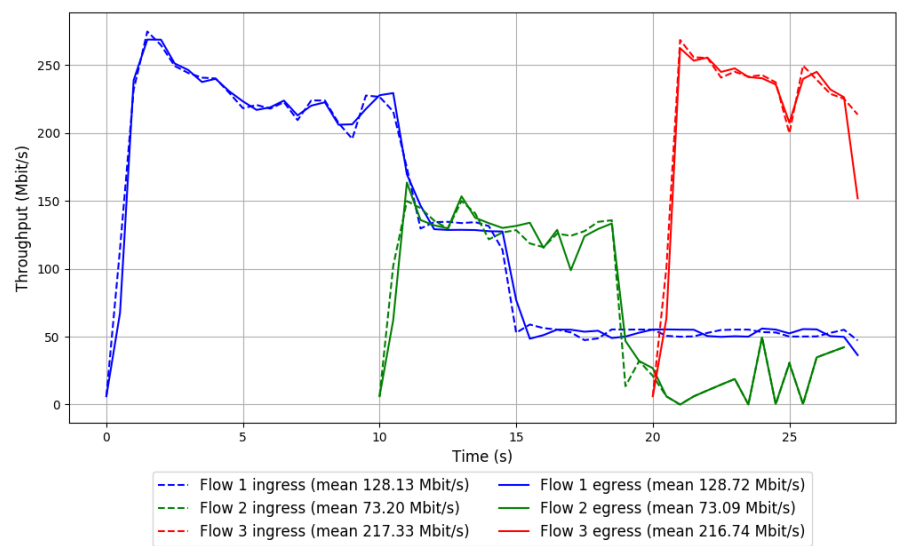


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-01-17 06:14:01
End at: 2018-01-17 06:14:31

# Below is generated by plot.py at 2018-01-17 12:44:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 234.79 Mbit/s
95th percentile per-packet one-way delay: 87.216 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 128.72 Mbit/s
95th percentile per-packet one-way delay: 87.016 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 73.09 Mbit/s
95th percentile per-packet one-way delay: 114.527 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 216.74 Mbit/s
95th percentile per-packet one-way delay: 86.867 ms
Loss rate: 2.81%
```

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

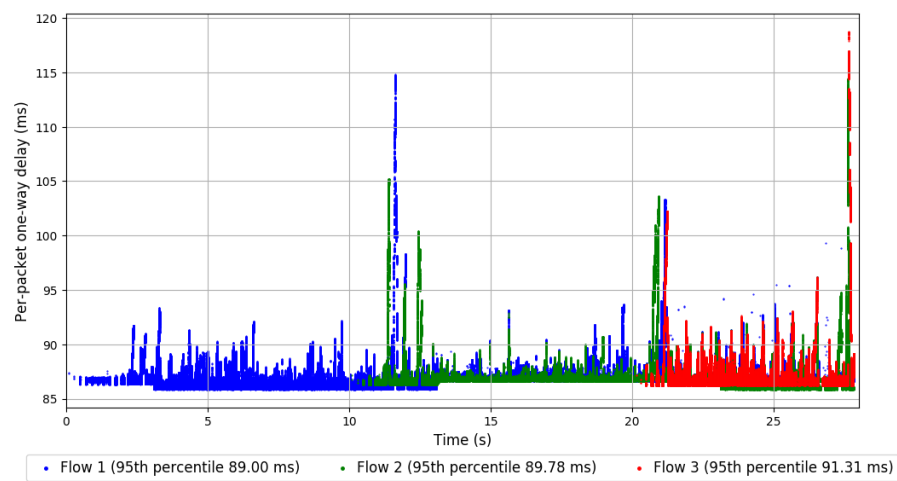
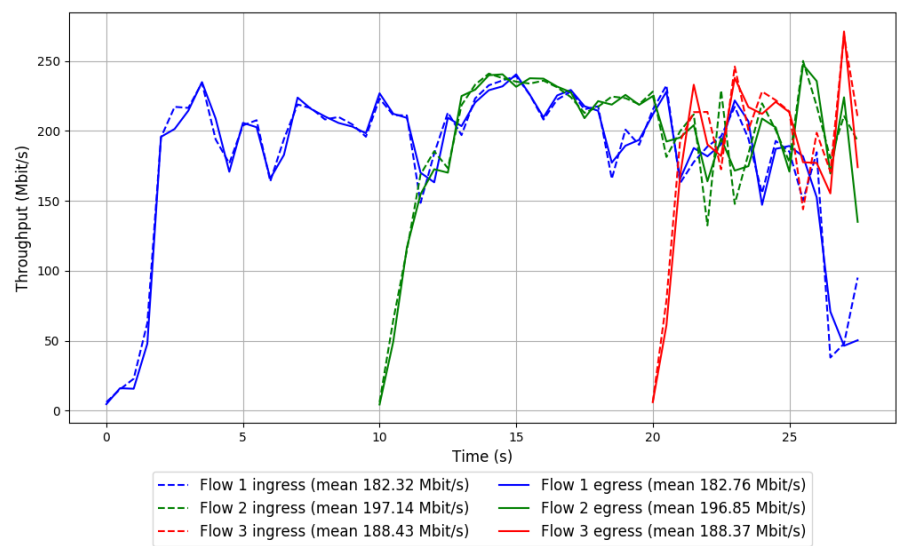


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-01-17 06:32:57
End at: 2018-01-17 06:33:27

# Below is generated by plot.py at 2018-01-17 12:48:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 360.67 Mbit/s
95th percentile per-packet one-way delay: 89.507 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 182.76 Mbit/s
95th percentile per-packet one-way delay: 88.998 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 196.85 Mbit/s
95th percentile per-packet one-way delay: 89.776 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 188.37 Mbit/s
95th percentile per-packet one-way delay: 91.311 ms
Loss rate: 2.78%
```

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

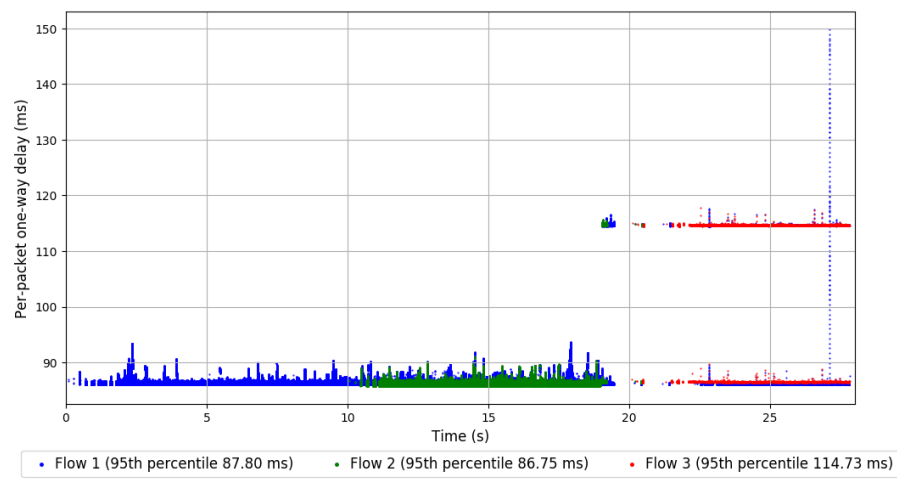
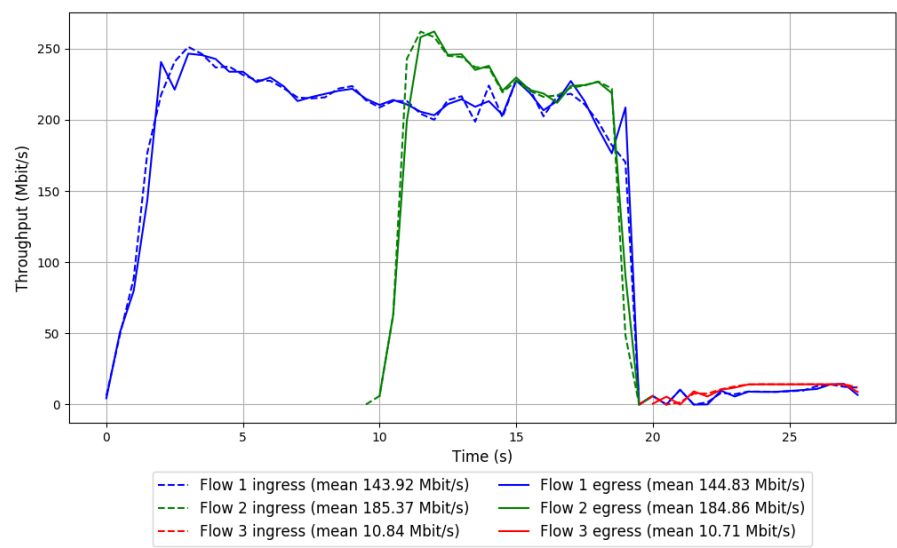


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-01-17 06:52:01
End at: 2018-01-17 06:52:31

# Below is generated by plot.py at 2018-01-17 12:48:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 217.15 Mbit/s
95th percentile per-packet one-way delay: 87.632 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 144.83 Mbit/s
95th percentile per-packet one-way delay: 87.800 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 184.86 Mbit/s
95th percentile per-packet one-way delay: 86.747 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.71 Mbit/s
95th percentile per-packet one-way delay: 114.726 ms
Loss rate: 3.70%
```

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

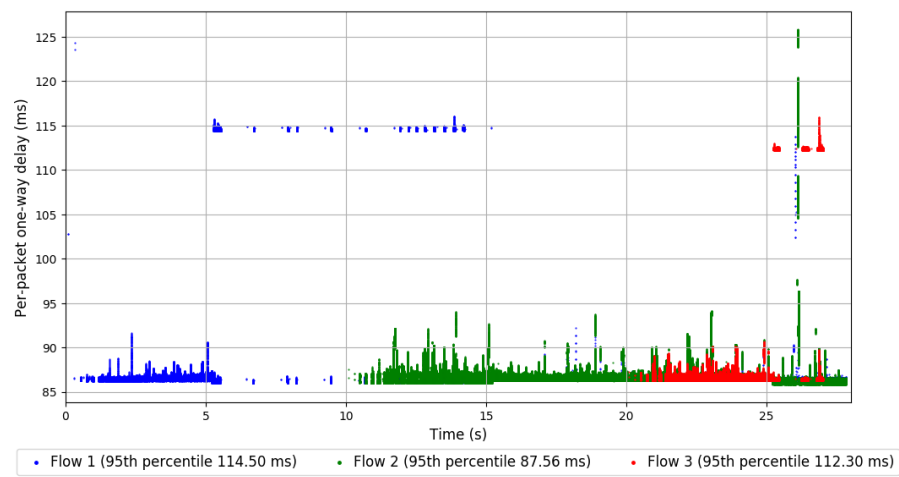
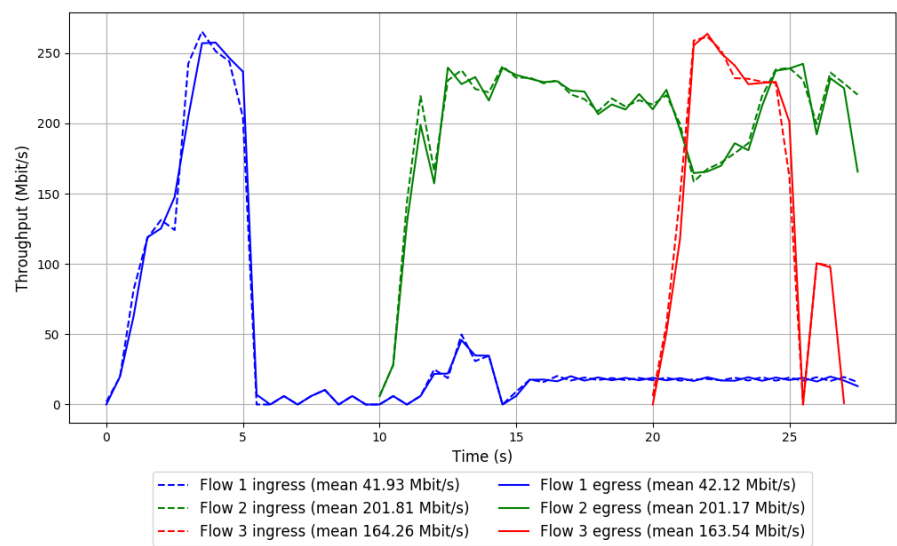


```
Run 4: Statistics of TaoVA-100x

Start at: 2018-01-17 07:11:25
End at: 2018-01-17 07:11:55

# Below is generated by plot.py at 2018-01-17 12:48:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 211.70 Mbit/s
95th percentile per-packet one-way delay: 88.197 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 42.12 Mbit/s
95th percentile per-packet one-way delay: 114.504 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 201.17 Mbit/s
95th percentile per-packet one-way delay: 87.562 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 163.54 Mbit/s
95th percentile per-packet one-way delay: 112.303 ms
Loss rate: 0.07%
```


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



Run 5: Statistics of TaoVA-100x

Start at: 2018-01-17 07:30:20

End at: 2018-01-17 07:30:50

Below is generated by plot.py at 2018-01-17 12:49:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 351.82 Mbit/s

95th percentile per-packet one-way delay: 87.393 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 215.31 Mbit/s

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

Loss rate: 0.93%

-- Flow 2:

Average throughput: 165.83 Mbit/s

95th percentile per-packet one-way delay: 87.789 ms

Loss rate: 0.64%

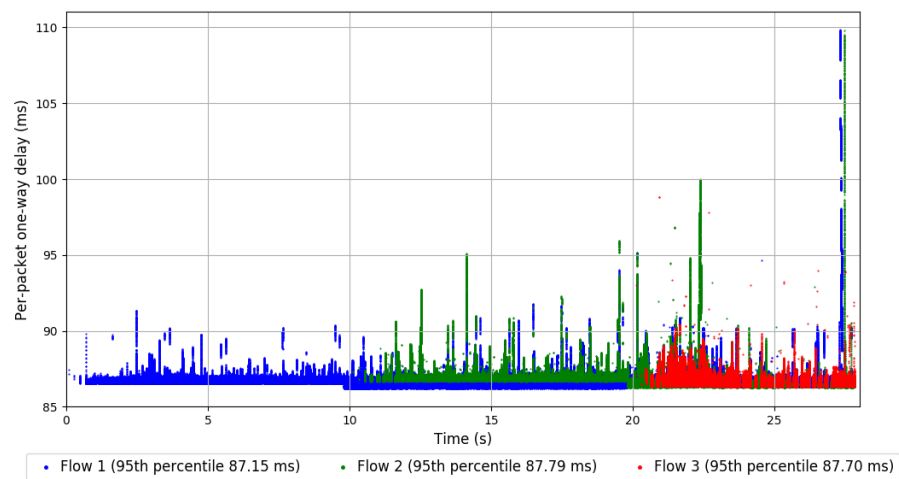
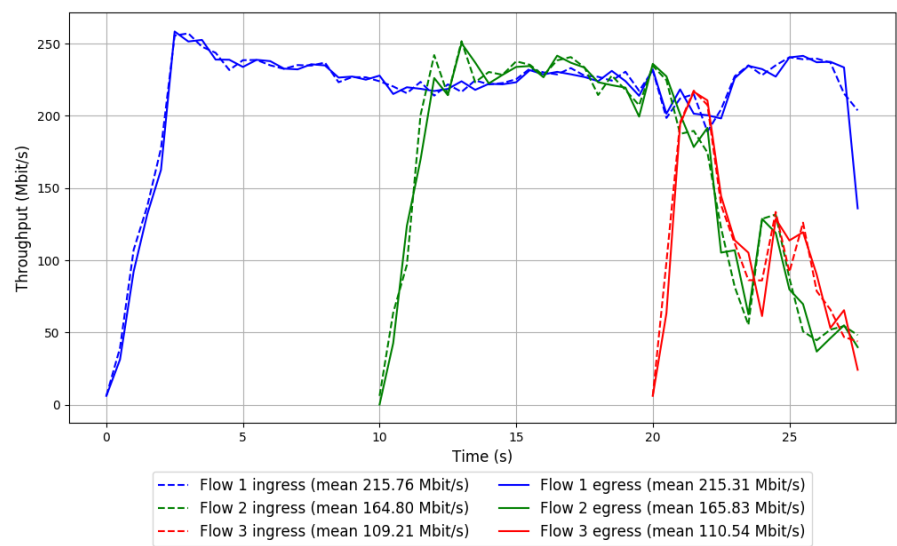
-- Flow 3:

Average throughput: 110.54 Mbit/s

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

Loss rate: 1.35%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-01-17 07:49:17

End at: 2018-01-17 07:49:47

Below is generated by plot.py at 2018-01-17 12:50:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 385.66 Mbit/s

95th percentile per-packet one-way delay: 88.765 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 210.15 Mbit/s

95th percentile per-packet one-way delay: 87.925 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 193.48 Mbit/s

95th percentile per-packet one-way delay: 91.013 ms

Loss rate: 0.94%

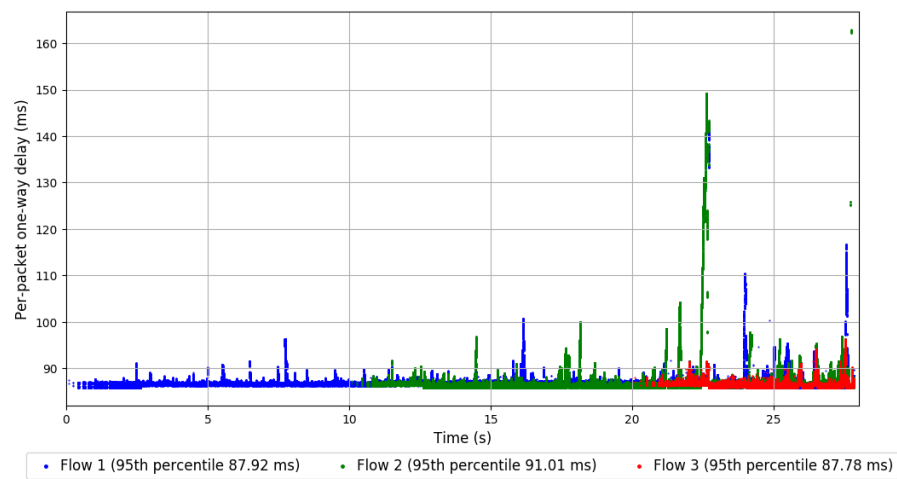
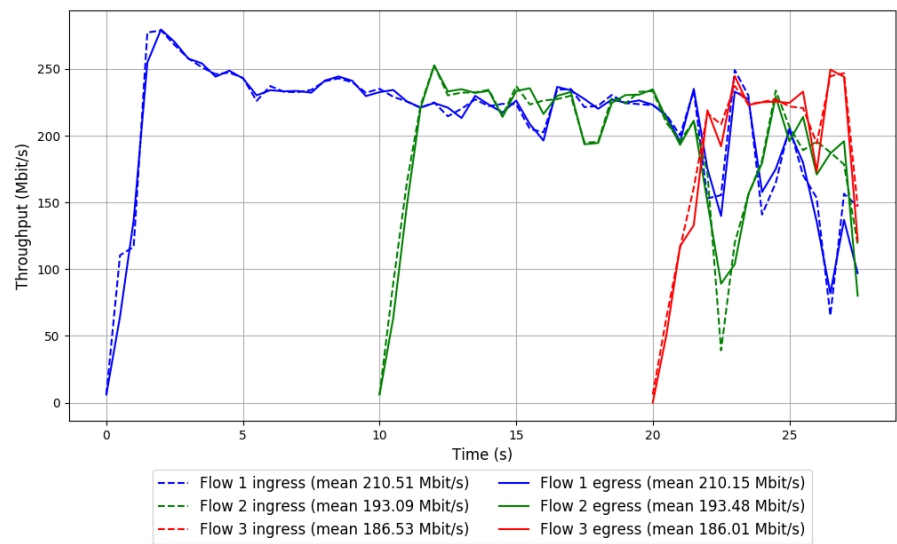
-- Flow 3:

Average throughput: 186.01 Mbit/s

95th percentile per-packet one-way delay: 87.782 ms

Loss rate: 2.84%

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



Run 7: Statistics of TaoVA-100x

Start at: 2018-01-17 08:08:36

End at: 2018-01-17 08:09:06

Below is generated by plot.py at 2018-01-17 12:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 344.72 Mbit/s

95th percentile per-packet one-way delay: 90.187 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 195.64 Mbit/s

95th percentile per-packet one-way delay: 90.385 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 150.01 Mbit/s

95th percentile per-packet one-way delay: 88.955 ms

Loss rate: 0.36%

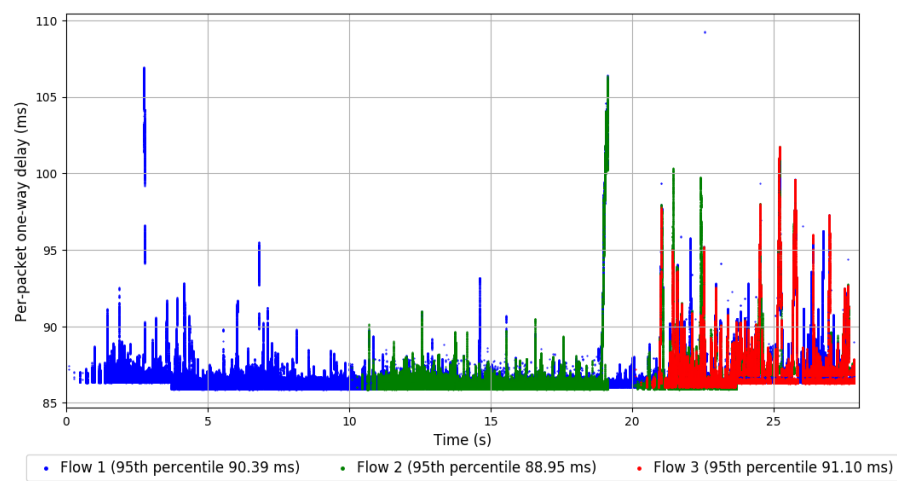
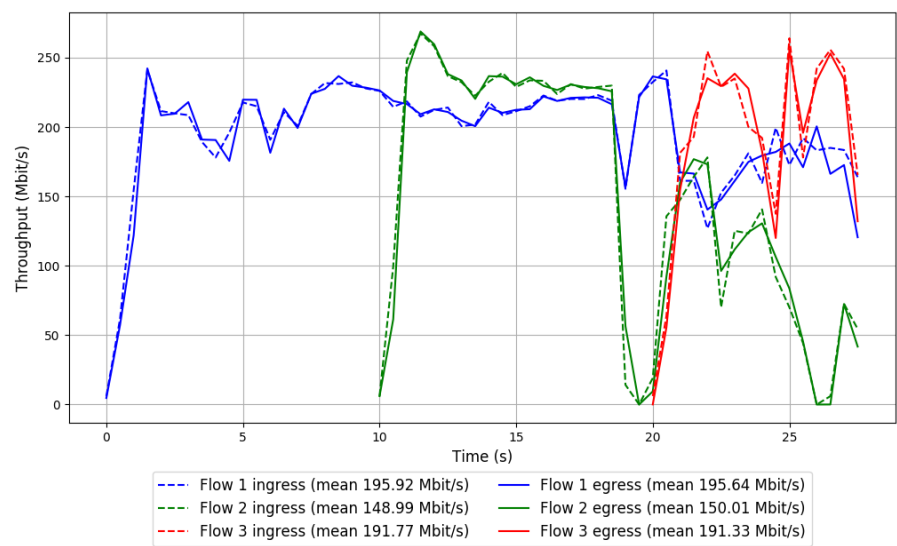
-- Flow 3:

Average throughput: 191.33 Mbit/s

95th percentile per-packet one-way delay: 91.098 ms

Loss rate: 2.77%

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-01-17 08:27:21

End at: 2018-01-17 08:27:51

Below is generated by plot.py at 2018-01-17 12:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 303.21 Mbit/s

95th percentile per-packet one-way delay: 93.021 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 134.00 Mbit/s

95th percentile per-packet one-way delay: 97.224 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 180.42 Mbit/s

95th percentile per-packet one-way delay: 91.434 ms

Loss rate: 0.82%

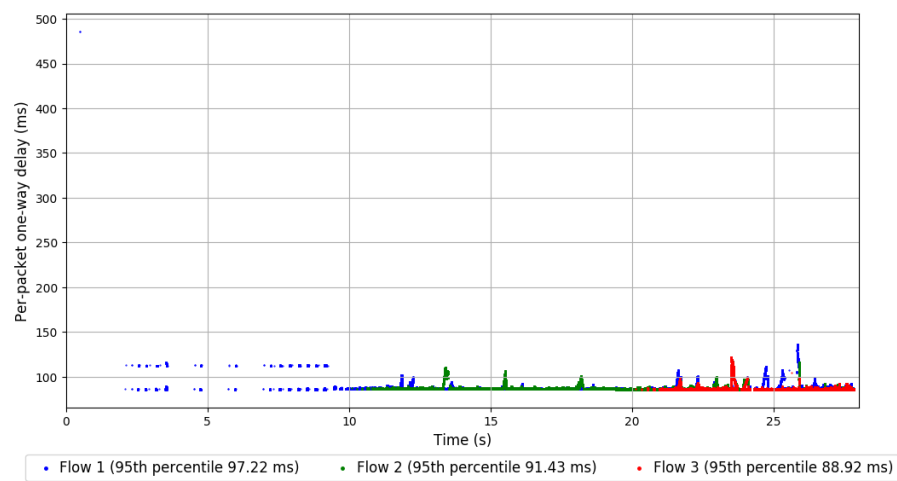
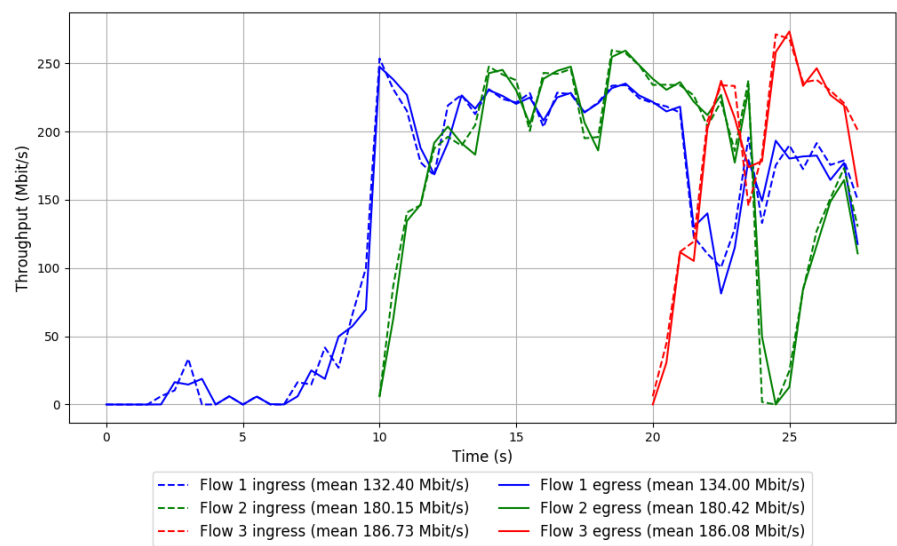
-- Flow 3:

Average throughput: 186.08 Mbit/s

95th percentile per-packet one-way delay: 88.919 ms

Loss rate: 2.86%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-01-17 08:46:35

End at: 2018-01-17 08:47:05

Below is generated by plot.py at 2018-01-17 12:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 226.28 Mbit/s

95th percentile per-packet one-way delay: 86.859 ms

Loss rate: 1.71%

-- Flow 1:

Average throughput: 43.52 Mbit/s

95th percentile per-packet one-way delay: 86.766 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 195.75 Mbit/s

95th percentile per-packet one-way delay: 86.867 ms

Loss rate: 1.39%

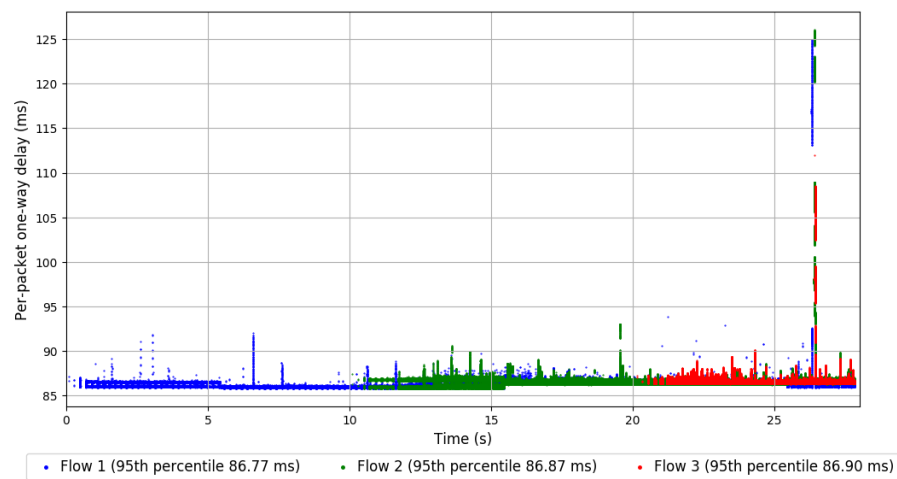
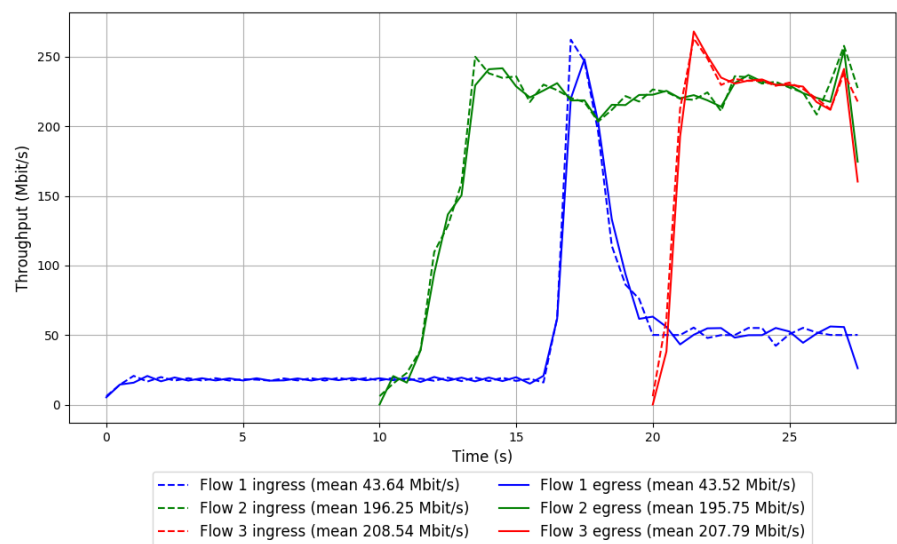
-- Flow 3:

Average throughput: 207.79 Mbit/s

95th percentile per-packet one-way delay: 86.903 ms

Loss rate: 2.91%

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

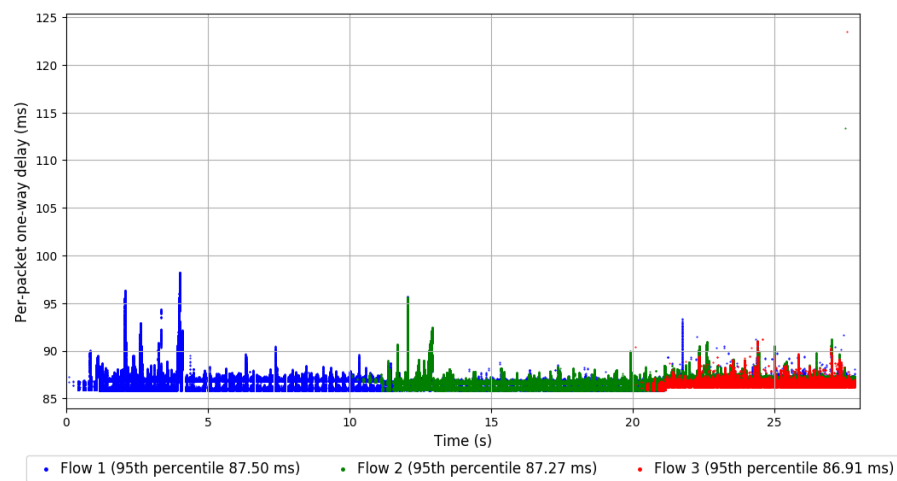
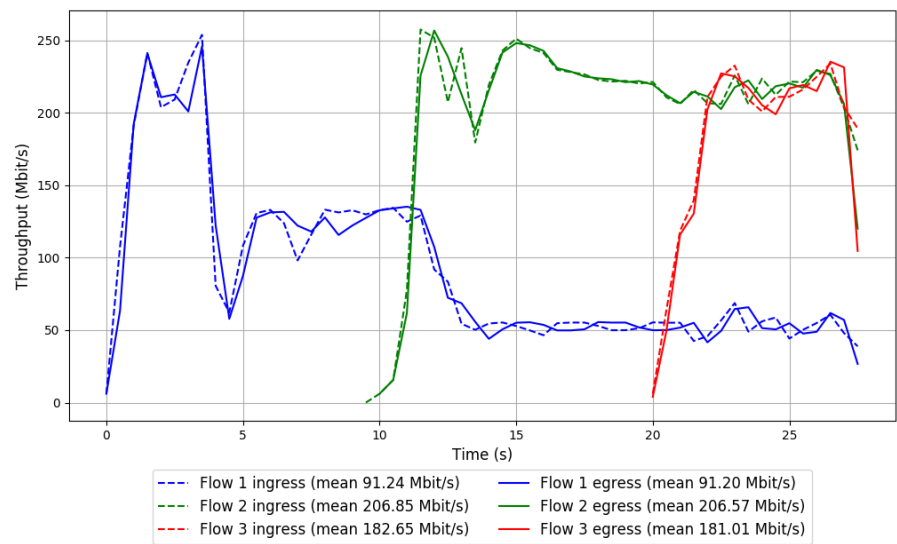


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-01-17 09:05:09
End at: 2018-01-17 09:05:39

# Below is generated by plot.py at 2018-01-17 12:54:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 273.77 Mbit/s
95th percentile per-packet one-way delay: 87.254 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 91.20 Mbit/s
95th percentile per-packet one-way delay: 87.498 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 206.57 Mbit/s
95th percentile per-packet one-way delay: 87.272 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 181.01 Mbit/s
95th percentile per-packet one-way delay: 86.910 ms
Loss rate: 3.40%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-01-17 06:12:01

End at: 2018-01-17 06:12:31

Below is generated by plot.py at 2018-01-17 12:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 41.82 Mbit/s

95th percentile per-packet one-way delay: 88.385 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 20.65 Mbit/s

95th percentile per-packet one-way delay: 87.986 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 16.05 Mbit/s

95th percentile per-packet one-way delay: 87.425 ms

Loss rate: 2.03%

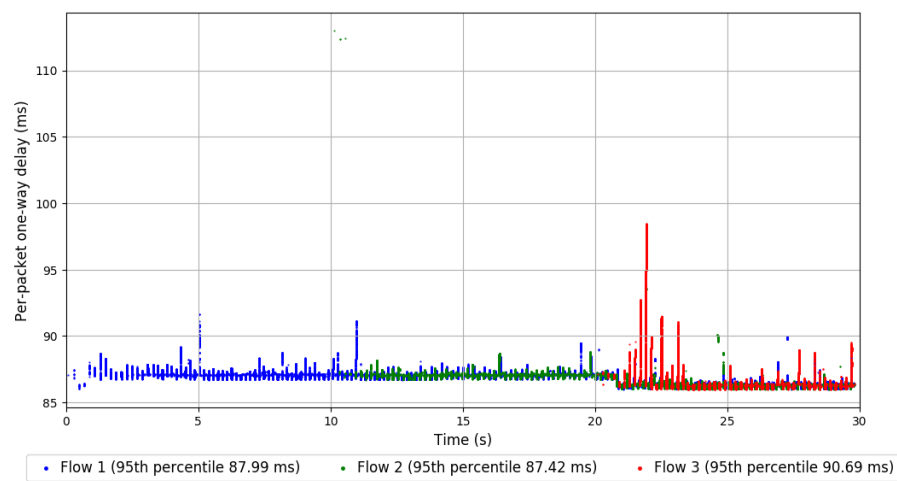
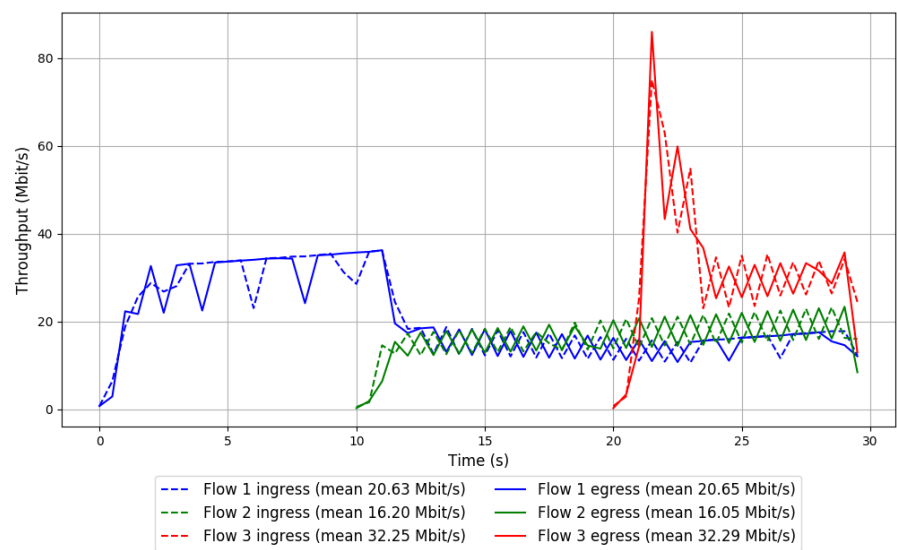
-- Flow 3:

Average throughput: 32.29 Mbit/s

95th percentile per-packet one-way delay: 90.694 ms

Loss rate: 1.90%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-01-17 06:30:57

End at: 2018-01-17 06:31:27

Below is generated by plot.py at 2018-01-17 12:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.56 Mbit/s

95th percentile per-packet one-way delay: 89.386 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 20.88 Mbit/s

95th percentile per-packet one-way delay: 87.694 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 41.52 Mbit/s

95th percentile per-packet one-way delay: 89.315 ms

Loss rate: 0.98%

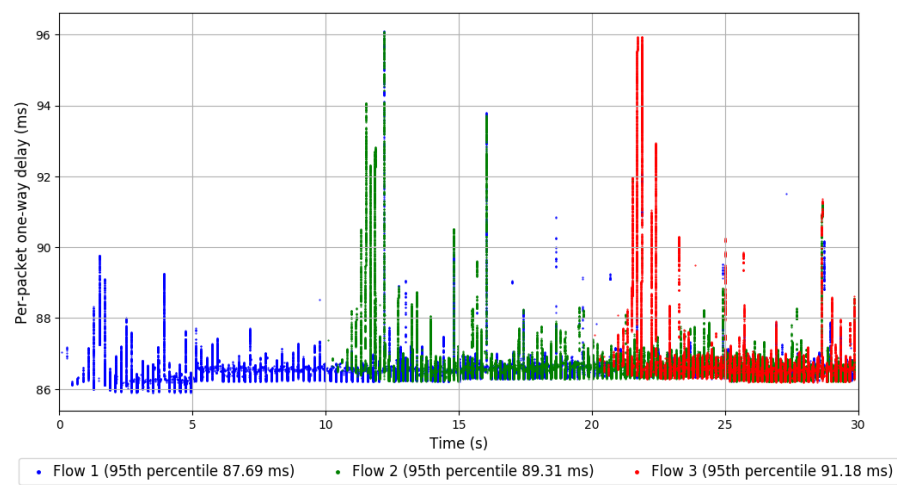
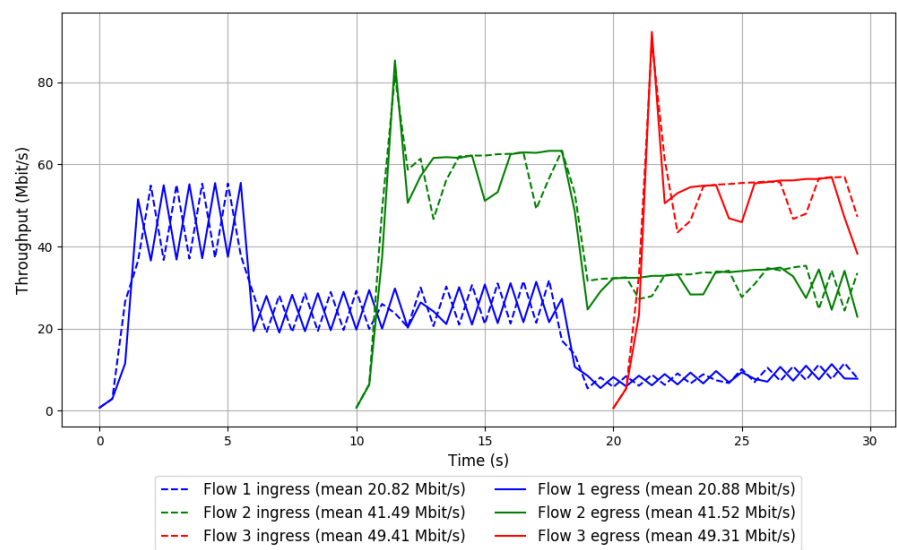
-- Flow 3:

Average throughput: 49.31 Mbit/s

95th percentile per-packet one-way delay: 91.177 ms

Loss rate: 1.95%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-01-17 06:50:01

End at: 2018-01-17 06:50:31

Below is generated by plot.py at 2018-01-17 12:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 62.76 Mbit/s

95th percentile per-packet one-way delay: 88.581 ms

Loss rate: 2.21%

-- Flow 1:

Average throughput: 20.38 Mbit/s

95th percentile per-packet one-way delay: 88.054 ms

Loss rate: 1.69%

-- Flow 2:

Average throughput: 52.58 Mbit/s

95th percentile per-packet one-way delay: 88.554 ms

Loss rate: 1.95%

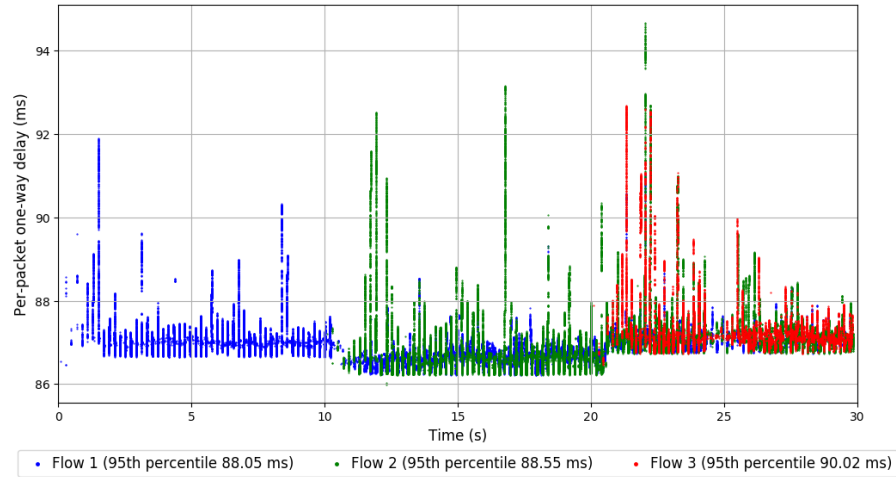
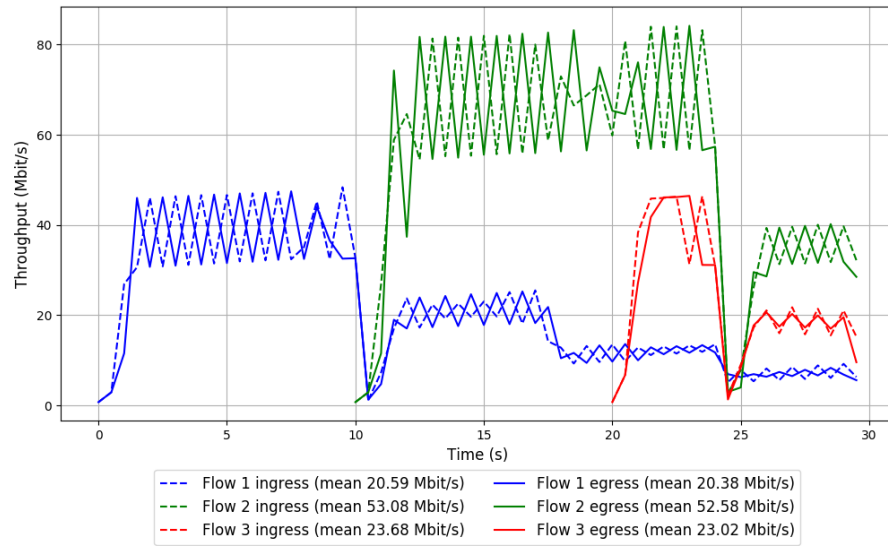
-- Flow 3:

Average throughput: 23.02 Mbit/s

95th percentile per-packet one-way delay: 90.015 ms

Loss rate: 4.75%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-01-17 07:09:23

End at: 2018-01-17 07:09:53

Below is generated by plot.py at 2018-01-17 12:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.68 Mbit/s

95th percentile per-packet one-way delay: 88.353 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 31.69 Mbit/s

95th percentile per-packet one-way delay: 87.755 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 35.43 Mbit/s

95th percentile per-packet one-way delay: 88.287 ms

Loss rate: 0.60%

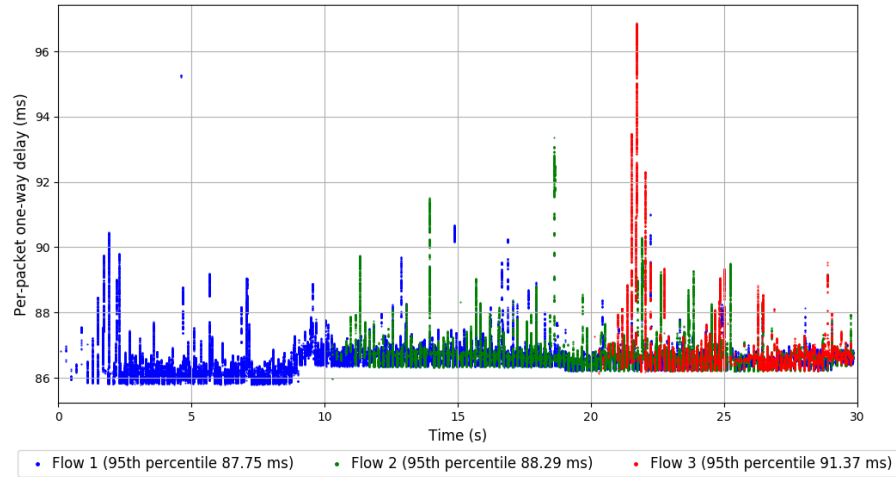
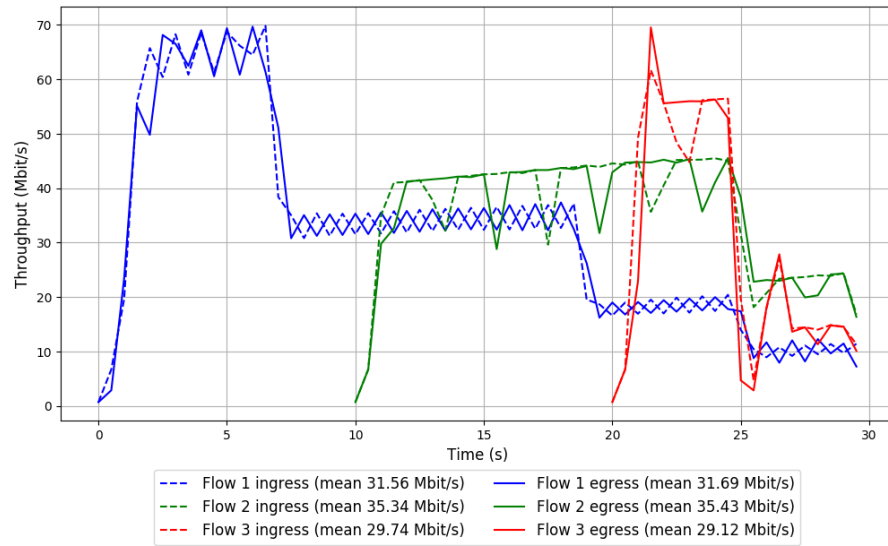
-- Flow 3:

Average throughput: 29.12 Mbit/s

95th percentile per-packet one-way delay: 91.368 ms

Loss rate: 4.10%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-01-17 07:28:22

End at: 2018-01-17 07:28:52

Below is generated by plot.py at 2018-01-17 12:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 20.62 Mbit/s

95th percentile per-packet one-way delay: 115.077 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 9.24 Mbit/s

95th percentile per-packet one-way delay: 114.869 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 16.79 Mbit/s

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

Loss rate: 0.61%

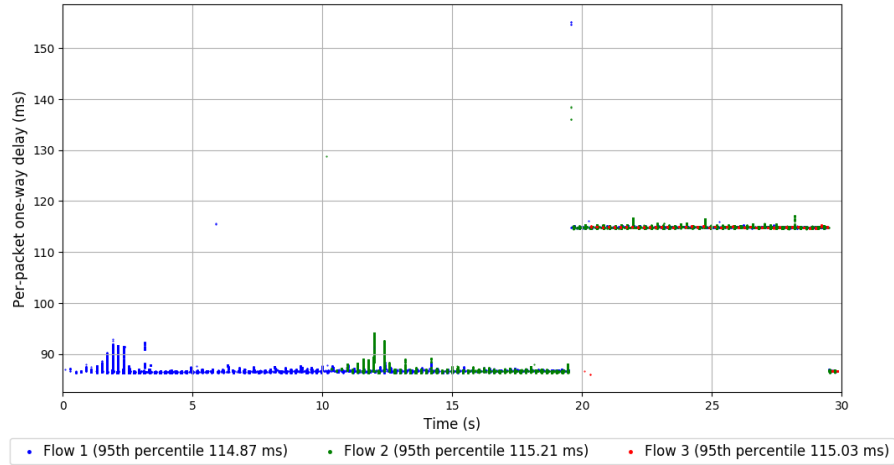
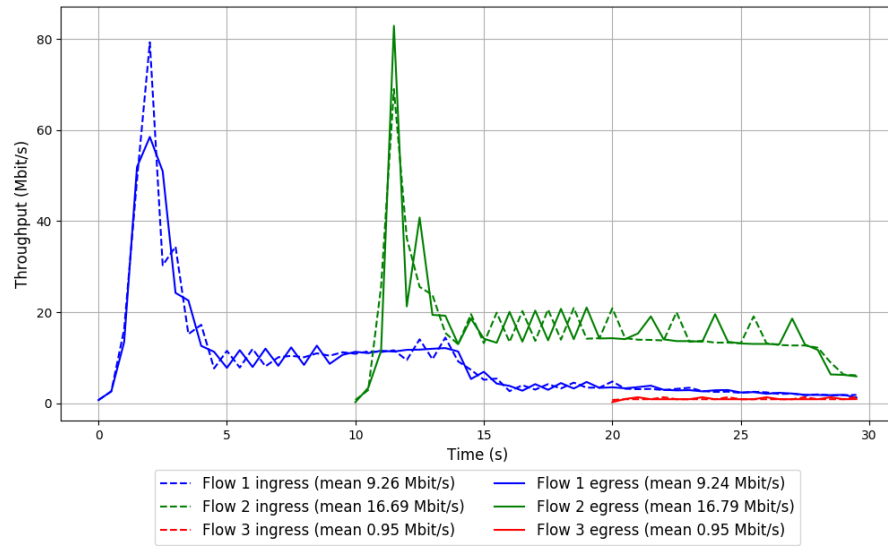
-- Flow 3:

Average throughput: 0.95 Mbit/s

95th percentile per-packet one-way delay: 115.030 ms

Loss rate: 2.54%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-01-17 07:47:16

End at: 2018-01-17 07:47:46

Below is generated by plot.py at 2018-01-17 12:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.04 Mbit/s

95th percentile per-packet one-way delay: 88.191 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 38.91 Mbit/s

95th percentile per-packet one-way delay: 88.222 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 39.97 Mbit/s

95th percentile per-packet one-way delay: 88.219 ms

Loss rate: 0.98%

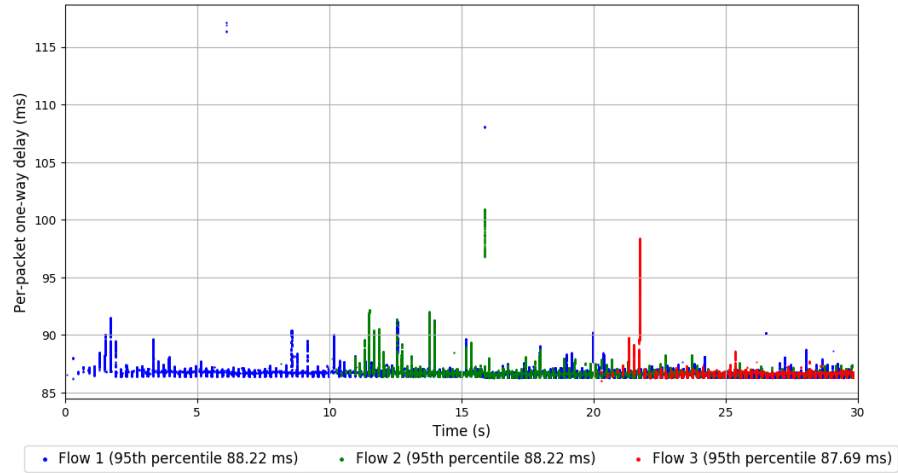
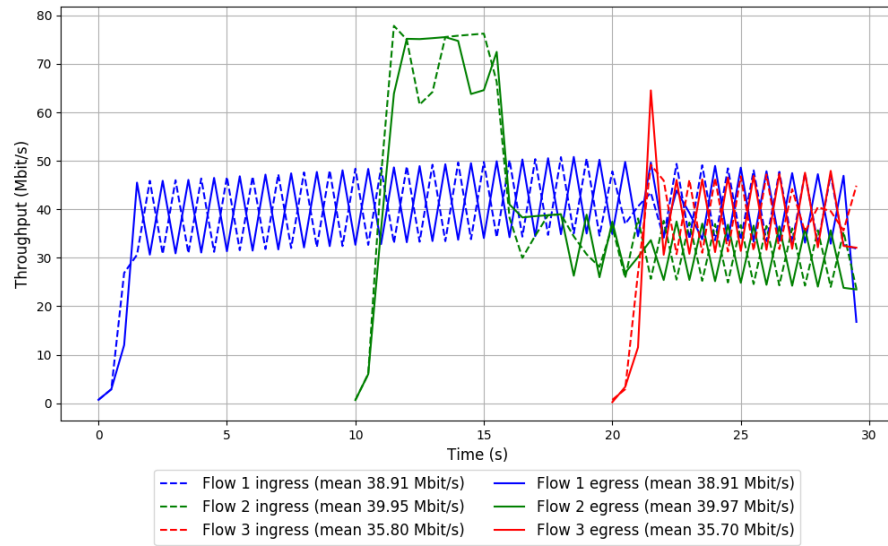
-- Flow 3:

Average throughput: 35.70 Mbit/s

95th percentile per-packet one-way delay: 87.692 ms

Loss rate: 2.29%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-01-17 08:06:36

End at: 2018-01-17 08:07:06

Below is generated by plot.py at 2018-01-17 12:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 52.75 Mbit/s

95th percentile per-packet one-way delay: 91.890 ms

Loss rate: 2.09%

-- Flow 1:

Average throughput: 10.90 Mbit/s

95th percentile per-packet one-way delay: 88.135 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 26.45 Mbit/s

95th percentile per-packet one-way delay: 89.066 ms

Loss rate: 2.32%

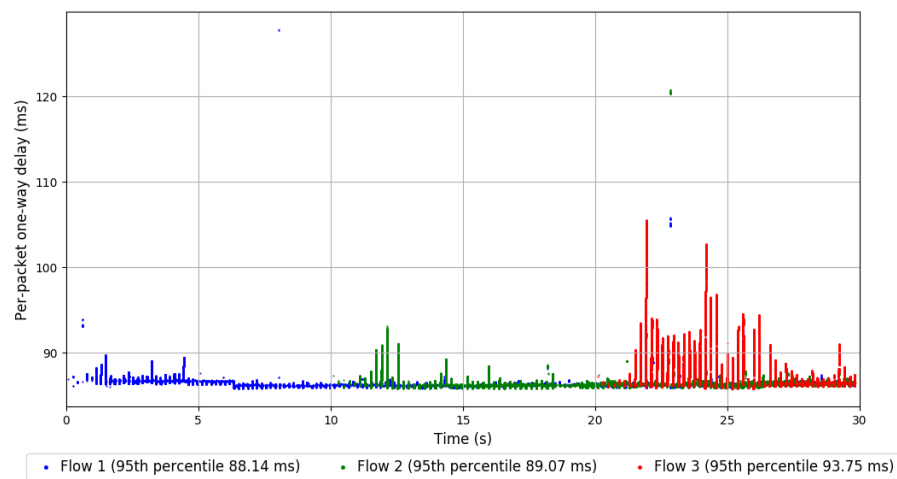
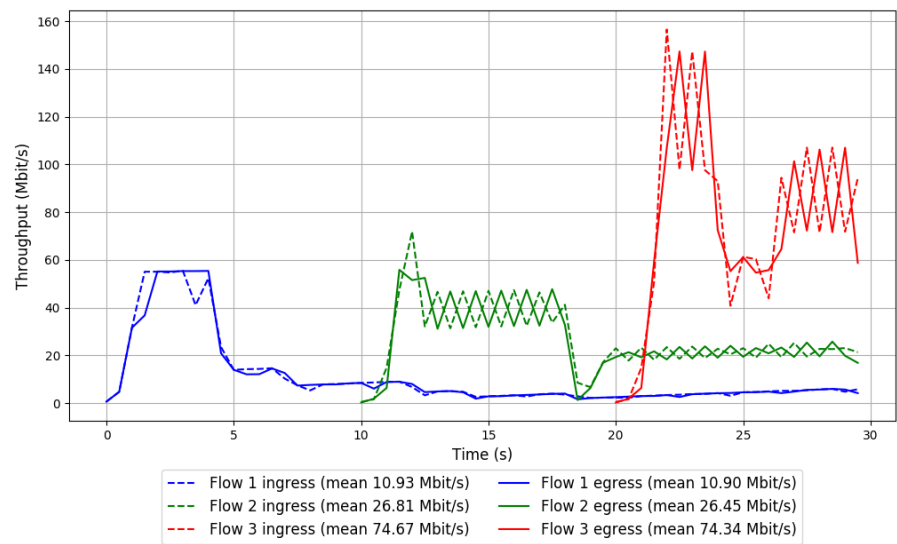
-- Flow 3:

Average throughput: 74.34 Mbit/s

95th percentile per-packet one-way delay: 93.750 ms

Loss rate: 2.42%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-01-17 08:25:24

End at: 2018-01-17 08:25:54

Below is generated by plot.py at 2018-01-17 12:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.09 Mbit/s

95th percentile per-packet one-way delay: 112.703 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 2.36 Mbit/s

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

Loss rate: 1.78%

-- Flow 2:

Average throughput: 8.17 Mbit/s

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

Loss rate: 1.50%

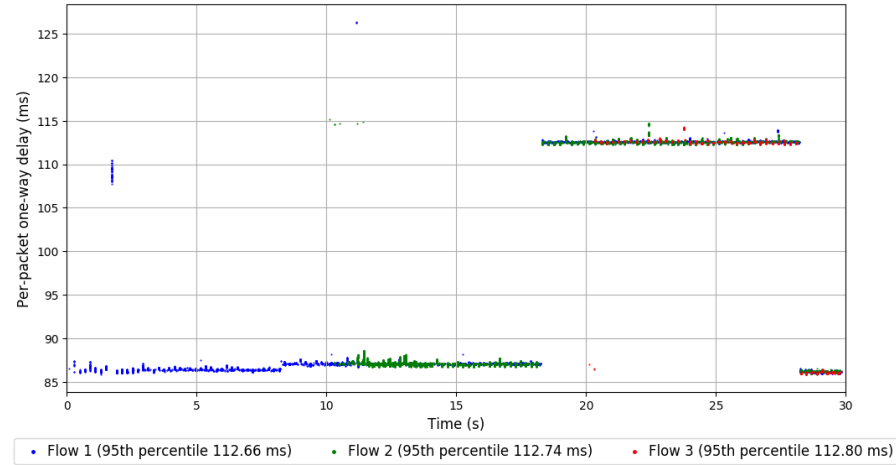
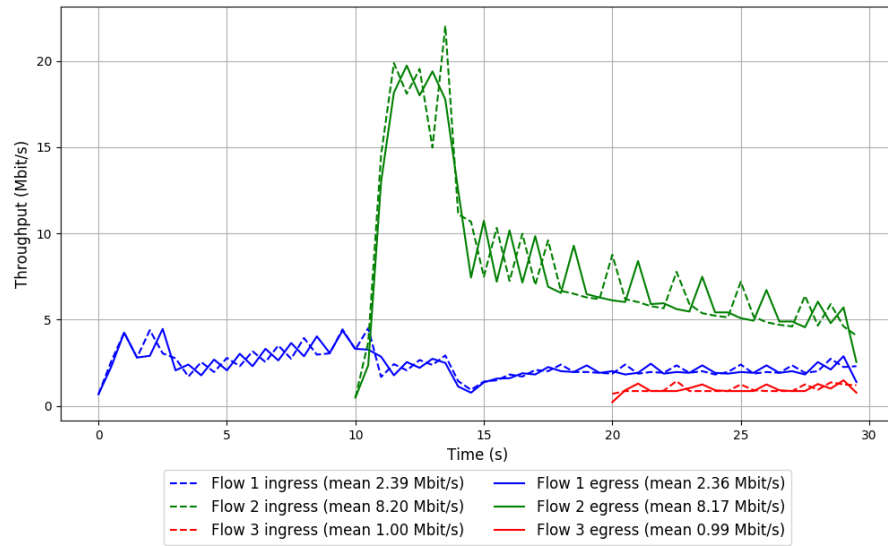
-- Flow 3:

Average throughput: 0.99 Mbit/s

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

Loss rate: 3.03%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-01-17 08:44:33

End at: 2018-01-17 08:45:03

Below is generated by plot.py at 2018-01-17 12:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.77 Mbit/s

95th percentile per-packet one-way delay: 88.513 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 31.09 Mbit/s

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

Loss rate: 0.41%

-- Flow 2:

Average throughput: 47.46 Mbit/s

95th percentile per-packet one-way delay: 88.118 ms

Loss rate: 0.62%

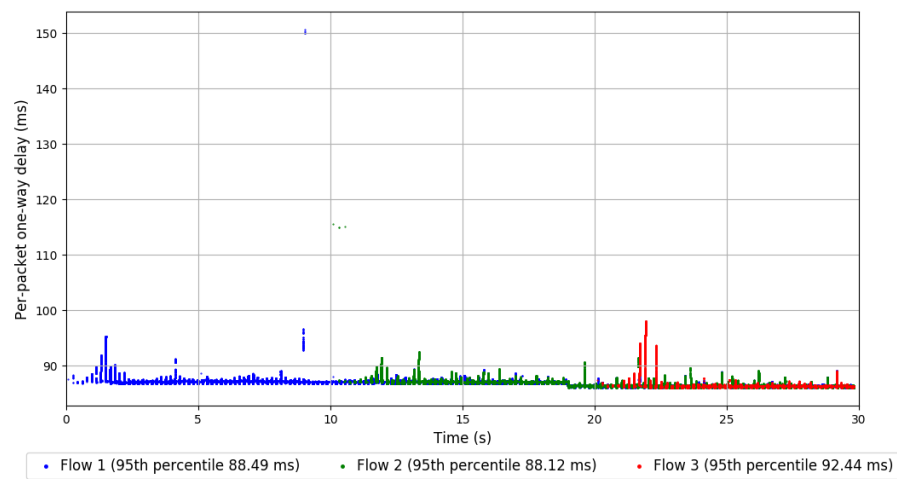
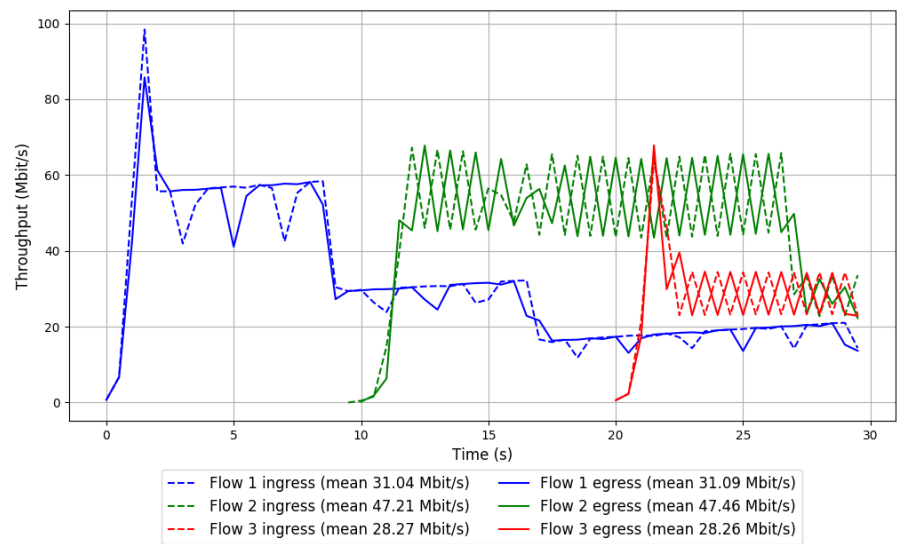
-- Flow 3:

Average throughput: 28.26 Mbit/s

95th percentile per-packet one-way delay: 92.445 ms

Loss rate: 2.06%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-01-17 09:03:10

End at: 2018-01-17 09:03:40

Below is generated by plot.py at 2018-01-17 12:54:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 31.03 Mbit/s

95th percentile per-packet one-way delay: 112.865 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 7.20 Mbit/s

95th percentile per-packet one-way delay: 113.742 ms

Loss rate: 1.24%

-- Flow 2:

Average throughput: 3.45 Mbit/s

95th percentile per-packet one-way delay: 88.122 ms

Loss rate: 1.15%

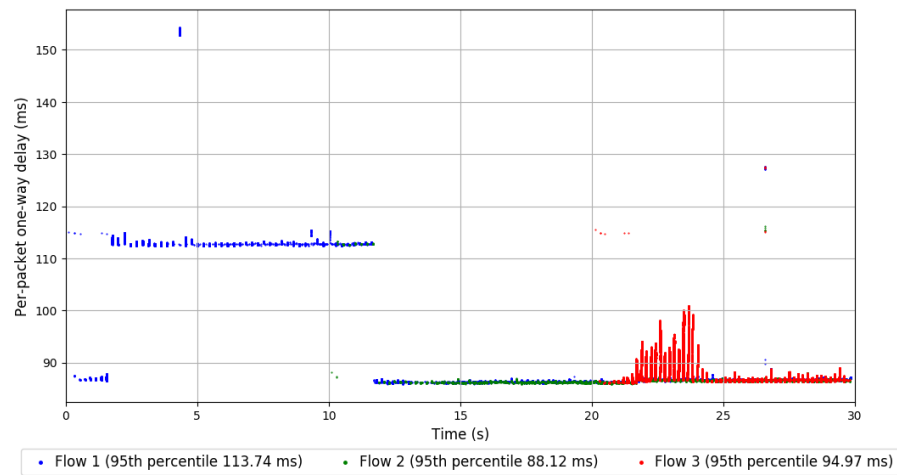
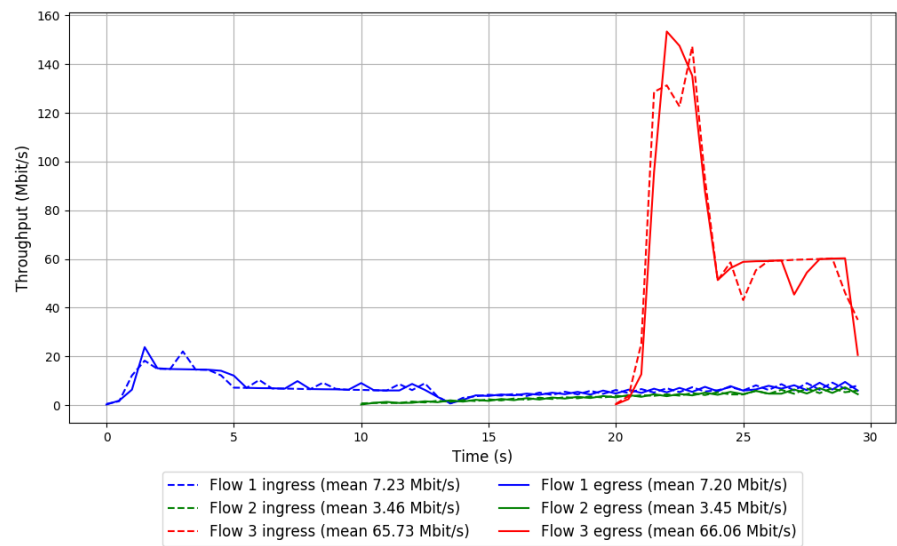
-- Flow 3:

Average throughput: 66.06 Mbit/s

95th percentile per-packet one-way delay: 94.968 ms

Loss rate: 1.56%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-01-17 06:20:45

End at: 2018-01-17 06:21:15

Below is generated by plot.py at 2018-01-17 12:55:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 293.55 Mbit/s

95th percentile per-packet one-way delay: 141.521 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 195.82 Mbit/s

95th percentile per-packet one-way delay: 141.290 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 123.01 Mbit/s

95th percentile per-packet one-way delay: 137.768 ms

Loss rate: 2.82%

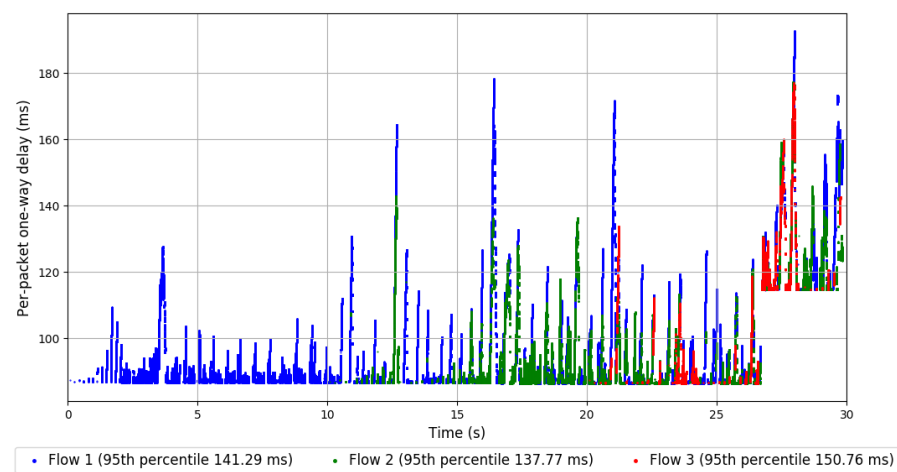
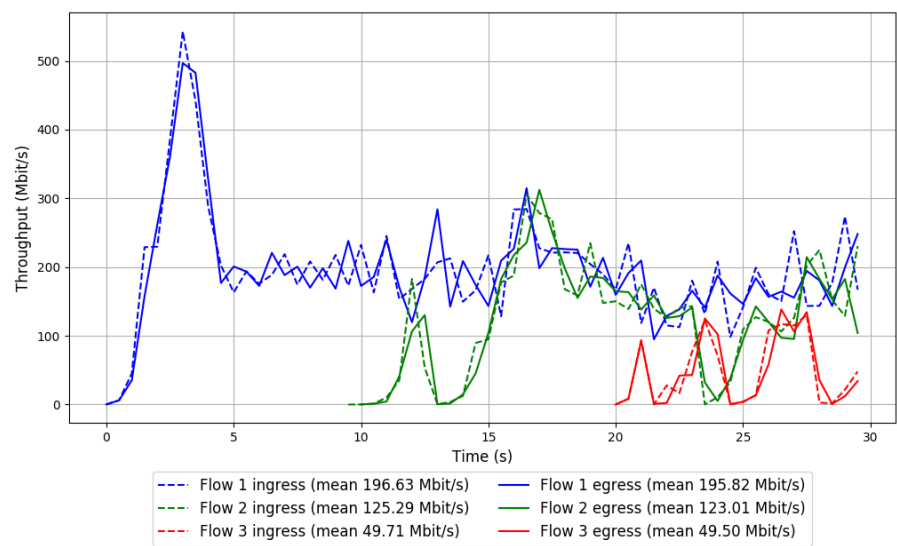
-- Flow 3:

Average throughput: 49.50 Mbit/s

95th percentile per-packet one-way delay: 150.759 ms

Loss rate: 2.50%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-01-17 06:39:54

End at: 2018-01-17 06:40:24

Below is generated by plot.py at 2018-01-17 12:55:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 289.53 Mbit/s

95th percentile per-packet one-way delay: 171.814 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 146.35 Mbit/s

95th percentile per-packet one-way delay: 122.944 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 162.73 Mbit/s

95th percentile per-packet one-way delay: 182.324 ms

Loss rate: 0.34%

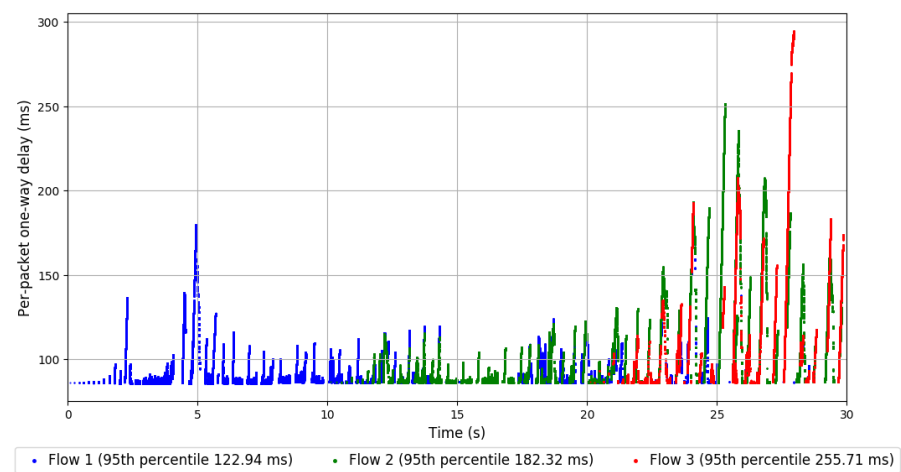
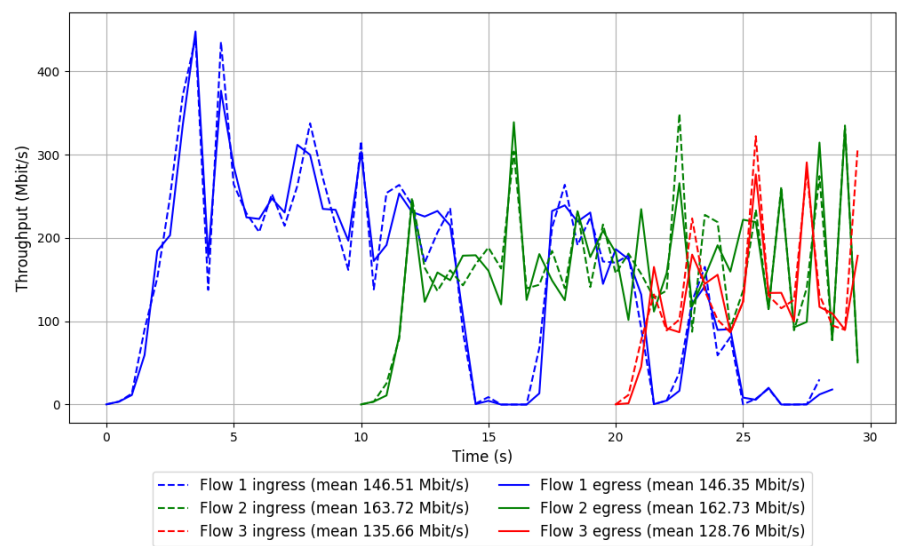
-- Flow 3:

Average throughput: 128.76 Mbit/s

95th percentile per-packet one-way delay: 255.711 ms

Loss rate: 6.38%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-01-17 06:58:56

End at: 2018-01-17 06:59:26

Below is generated by plot.py at 2018-01-17 12:57:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 352.52 Mbit/s

95th percentile per-packet one-way delay: 215.205 ms

Loss rate: 3.21%

-- Flow 1:

Average throughput: 221.91 Mbit/s

95th percentile per-packet one-way delay: 147.027 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 76.13 Mbit/s

95th percentile per-packet one-way delay: 179.130 ms

Loss rate: 1.12%

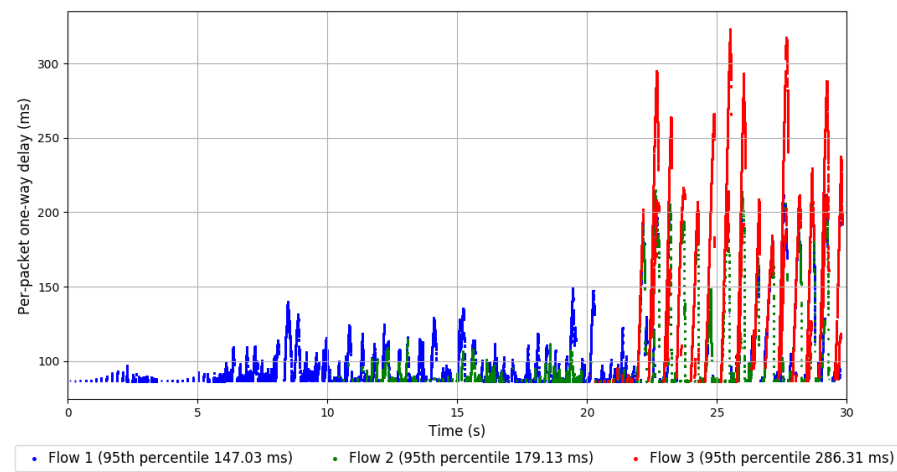
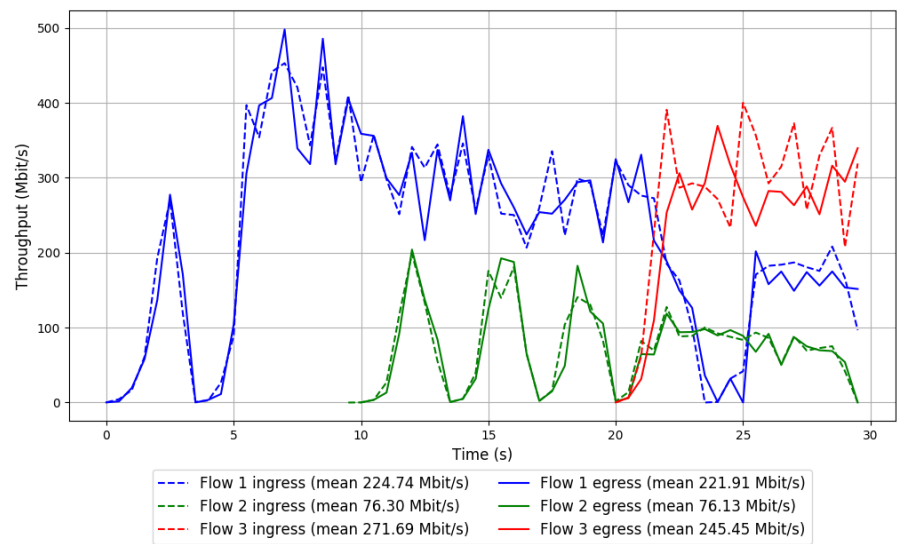
-- Flow 3:

Average throughput: 245.45 Mbit/s

95th percentile per-packet one-way delay: 286.307 ms

Loss rate: 9.56%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-01-17 07:18:13

End at: 2018-01-17 07:18:43

Below is generated by plot.py at 2018-01-17 12:57:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 262.17 Mbit/s

95th percentile per-packet one-way delay: 204.608 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 189.33 Mbit/s

95th percentile per-packet one-way delay: 215.696 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 86.87 Mbit/s

95th percentile per-packet one-way delay: 138.308 ms

Loss rate: 0.07%

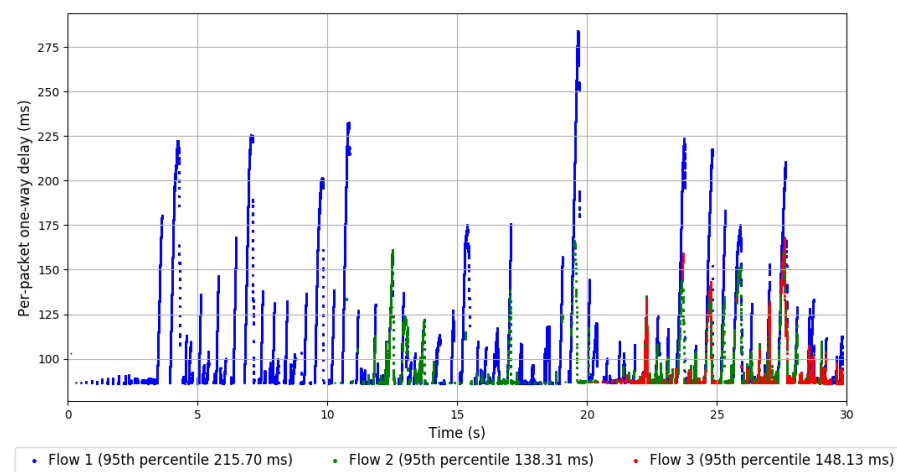
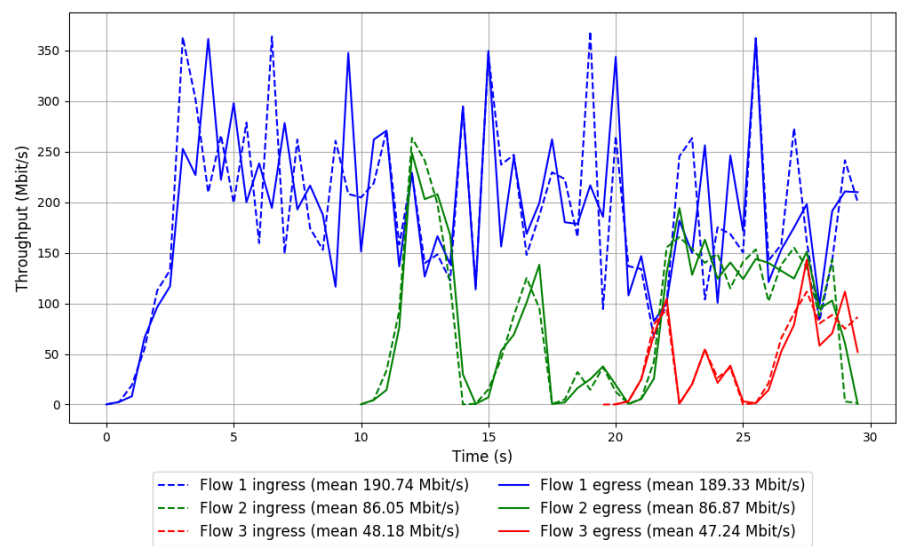
-- Flow 3:

Average throughput: 47.24 Mbit/s

95th percentile per-packet one-way delay: 148.128 ms

Loss rate: 3.95%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-01-17 07:37:20

End at: 2018-01-17 07:37:50

Below is generated by plot.py at 2018-01-17 12:57:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 313.35 Mbit/s

95th percentile per-packet one-way delay: 148.147 ms

Loss rate: 2.44%

-- Flow 1:

Average throughput: 230.42 Mbit/s

95th percentile per-packet one-way delay: 133.309 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 103.54 Mbit/s

95th percentile per-packet one-way delay: 153.331 ms

Loss rate: 0.02%

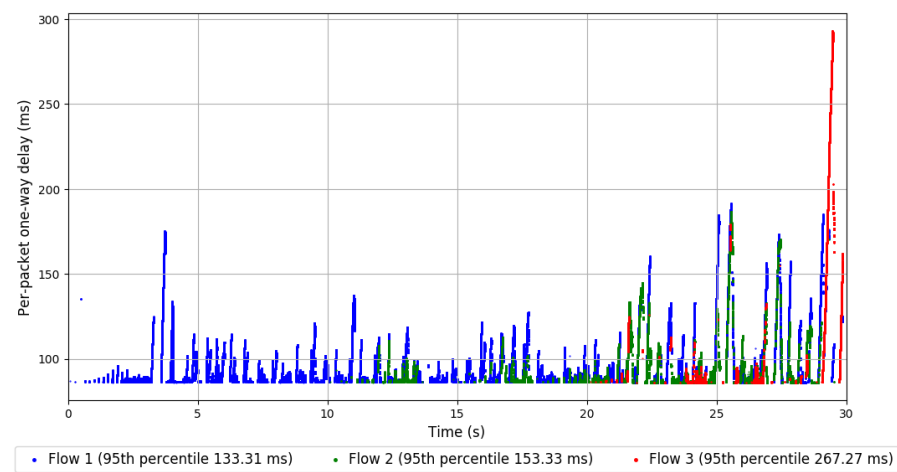
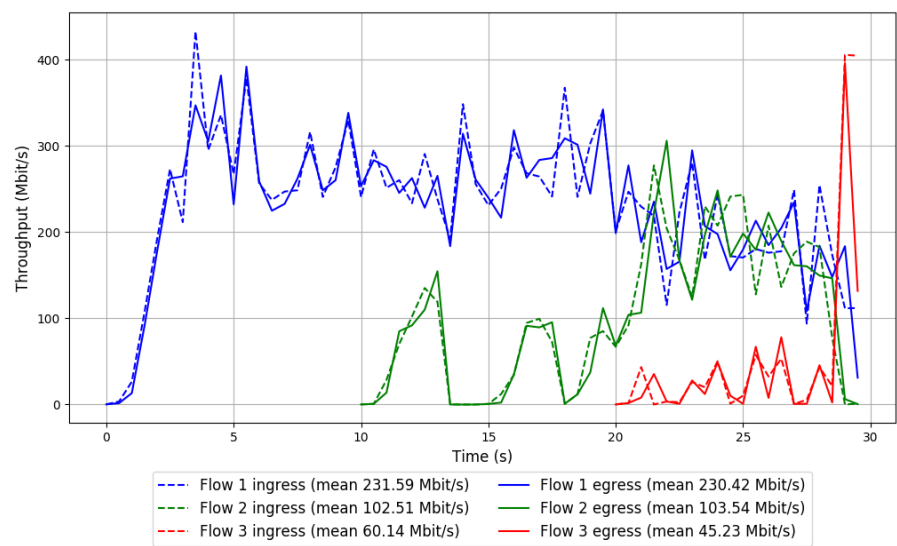
-- Flow 3:

Average throughput: 45.23 Mbit/s

95th percentile per-packet one-way delay: 267.270 ms

Loss rate: 25.66%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-01-17 07:56:24

End at: 2018-01-17 07:56:54

Below is generated by plot.py at 2018-01-17 12:58:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 321.51 Mbit/s

95th percentile per-packet one-way delay: 179.256 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 189.36 Mbit/s

95th percentile per-packet one-way delay: 185.647 ms

Loss rate: 1.45%

-- Flow 2:

Average throughput: 134.22 Mbit/s

95th percentile per-packet one-way delay: 169.889 ms

Loss rate: 2.01%

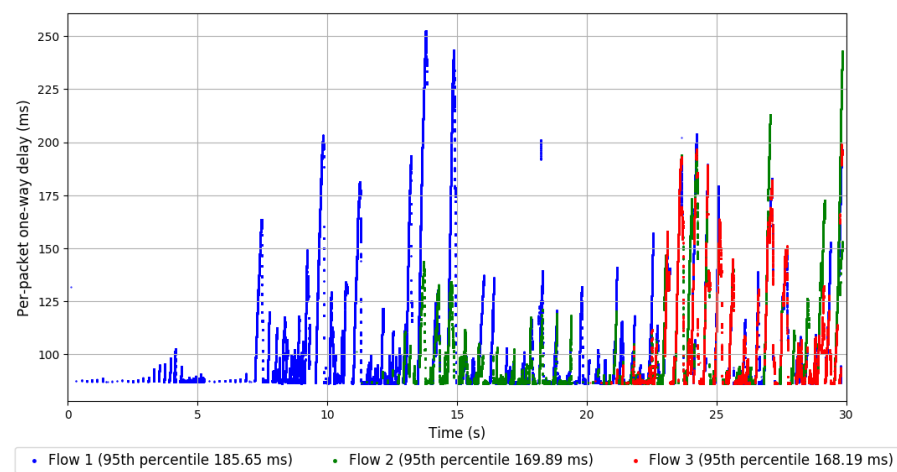
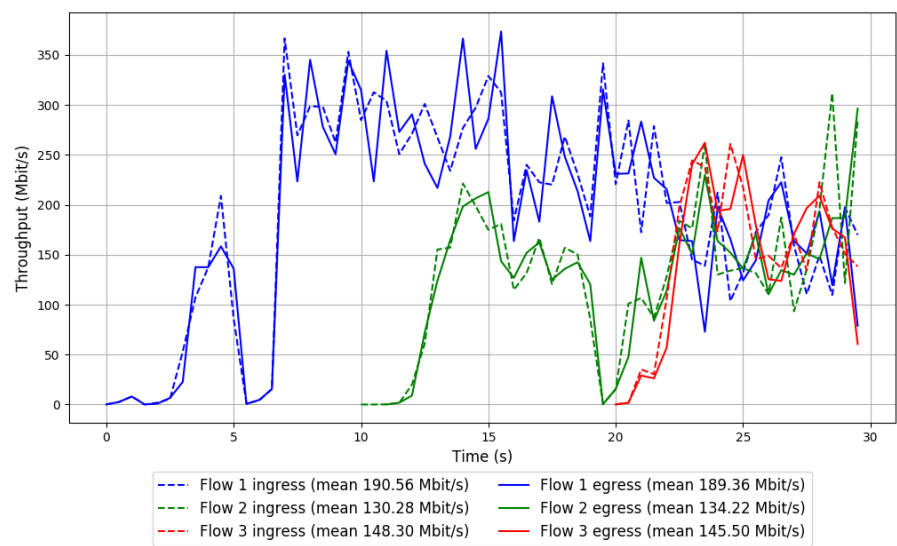
-- Flow 3:

Average throughput: 145.50 Mbit/s

95th percentile per-packet one-way delay: 168.190 ms

Loss rate: 3.57%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-01-17 08:15:22

End at: 2018-01-17 08:15:52

Below is generated by plot.py at 2018-01-17 12:58:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 227.84 Mbit/s

95th percentile per-packet one-way delay: 104.186 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 128.85 Mbit/s

95th percentile per-packet one-way delay: 98.503 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 137.91 Mbit/s

95th percentile per-packet one-way delay: 110.151 ms

Loss rate: 1.52%

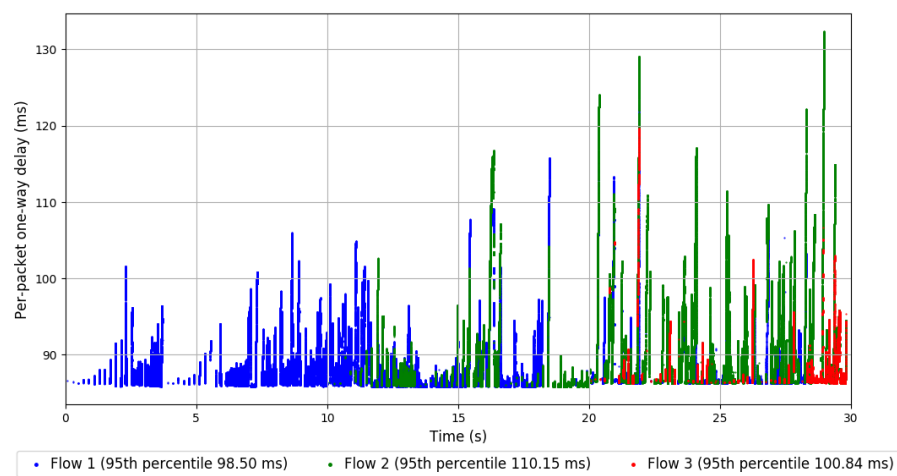
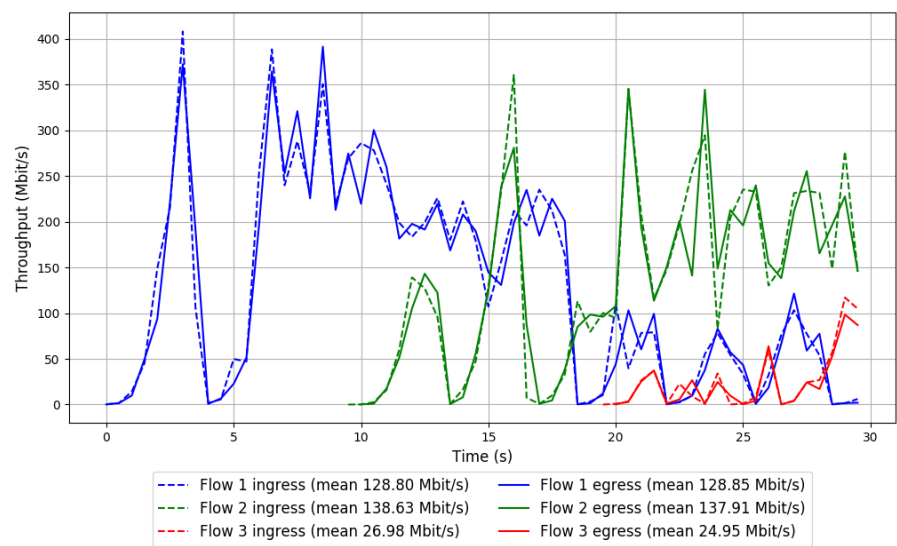
-- Flow 3:

Average throughput: 24.95 Mbit/s

95th percentile per-packet one-way delay: 100.839 ms

Loss rate: 9.40%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-01-17 08:34:06

End at: 2018-01-17 08:34:36

Below is generated by plot.py at 2018-01-17 13:00:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 320.66 Mbit/s

95th percentile per-packet one-way delay: 217.624 ms

Loss rate: 1.81%

-- Flow 1:

Average throughput: 190.14 Mbit/s

95th percentile per-packet one-way delay: 150.613 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 167.94 Mbit/s

95th percentile per-packet one-way delay: 249.592 ms

Loss rate: 2.64%

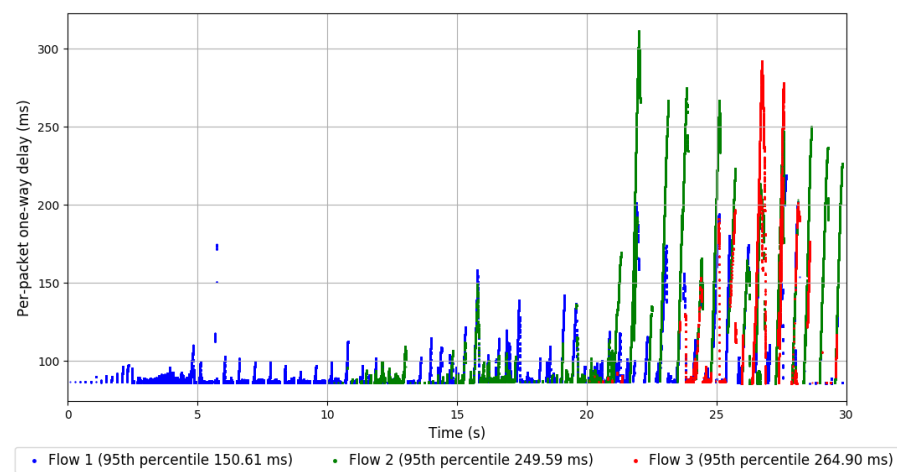
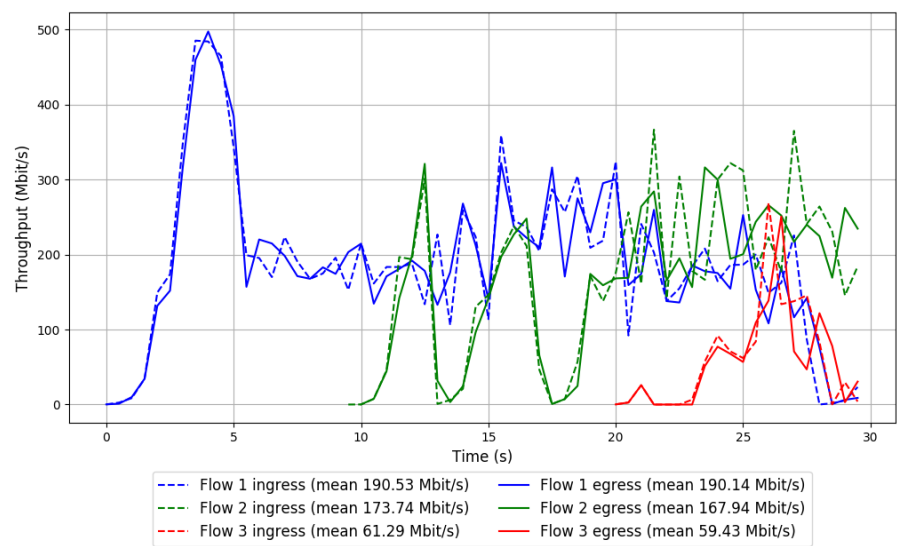
-- Flow 3:

Average throughput: 59.43 Mbit/s

95th percentile per-packet one-way delay: 264.901 ms

Loss rate: 6.07%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-01-17 08:52:49

End at: 2018-01-17 08:53:19

Below is generated by plot.py at 2018-01-17 13:01:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 343.49 Mbit/s

95th percentile per-packet one-way delay: 188.250 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 256.45 Mbit/s

95th percentile per-packet one-way delay: 197.756 ms

Loss rate: 1.95%

-- Flow 2:

Average throughput: 107.52 Mbit/s

95th percentile per-packet one-way delay: 141.550 ms

Loss rate: 0.69%

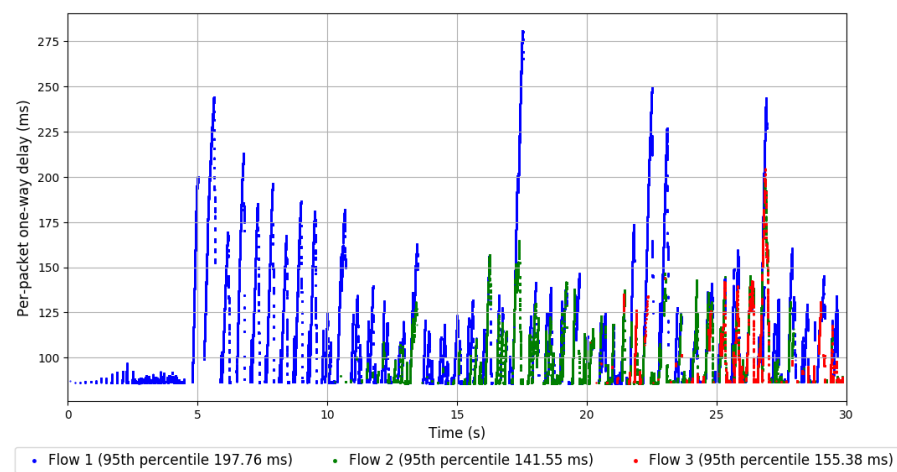
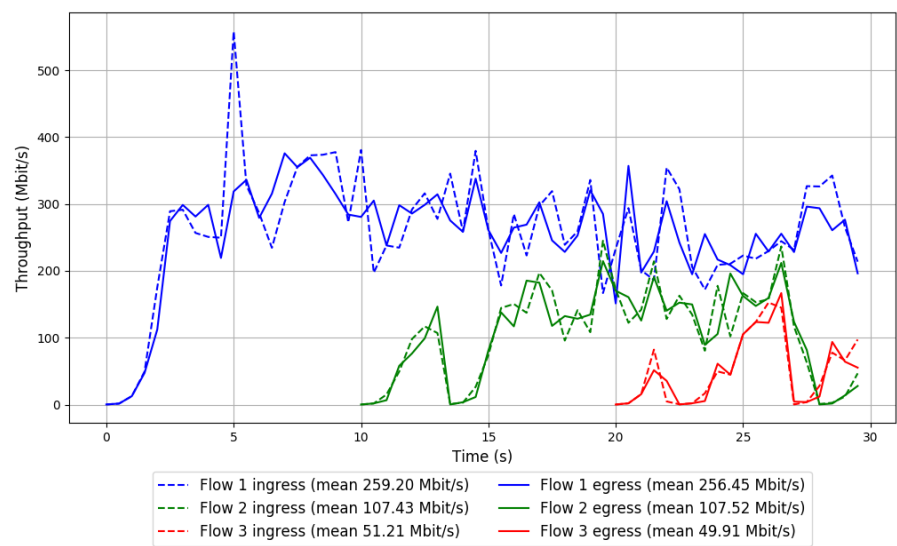
-- Flow 3:

Average throughput: 49.91 Mbit/s

95th percentile per-packet one-way delay: 155.376 ms

Loss rate: 4.75%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-01-17 09:11:53

End at: 2018-01-17 09:12:23

Below is generated by plot.py at 2018-01-17 13:01:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 277.82 Mbit/s

95th percentile per-packet one-way delay: 150.558 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 215.71 Mbit/s

95th percentile per-packet one-way delay: 152.691 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 69.04 Mbit/s

95th percentile per-packet one-way delay: 120.553 ms

Loss rate: 2.37%

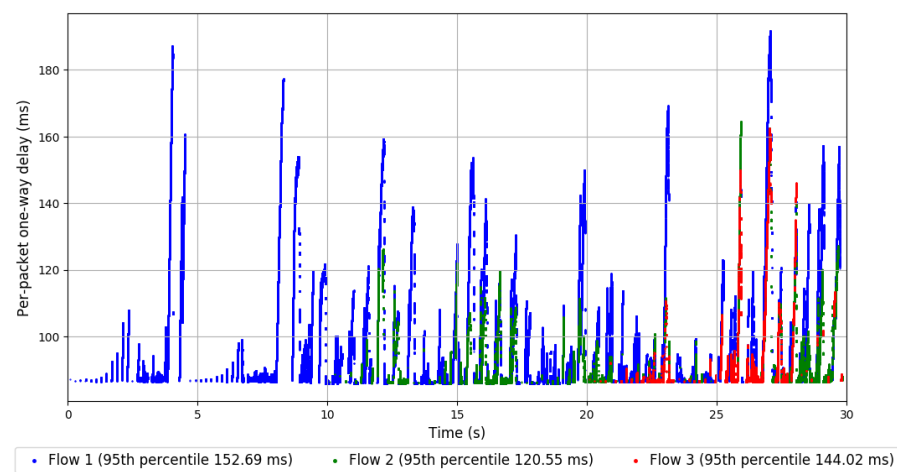
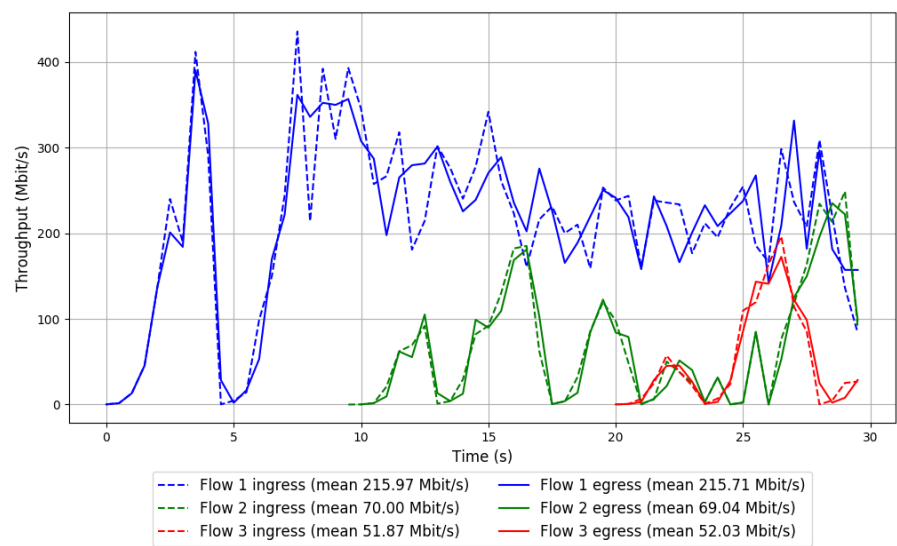
-- Flow 3:

Average throughput: 52.03 Mbit/s

95th percentile per-packet one-way delay: 144.021 ms

Loss rate: 1.75%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-01-17 06:10:01

End at: 2018-01-17 06:10:31

Below is generated by plot.py at 2018-01-17 13:01:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.51 Mbit/s

95th percentile per-packet one-way delay: 86.788 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 76.52 Mbit/s

95th percentile per-packet one-way delay: 86.754 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 72.56 Mbit/s

95th percentile per-packet one-way delay: 86.856 ms

Loss rate: 1.25%

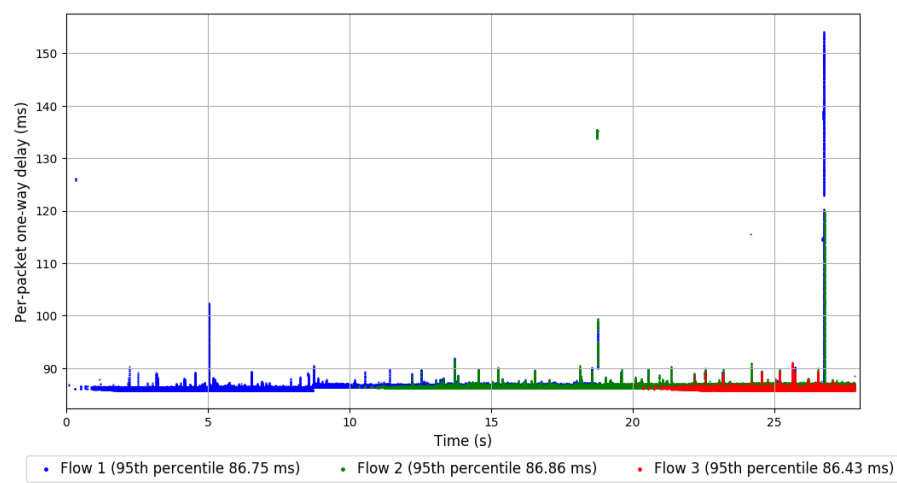
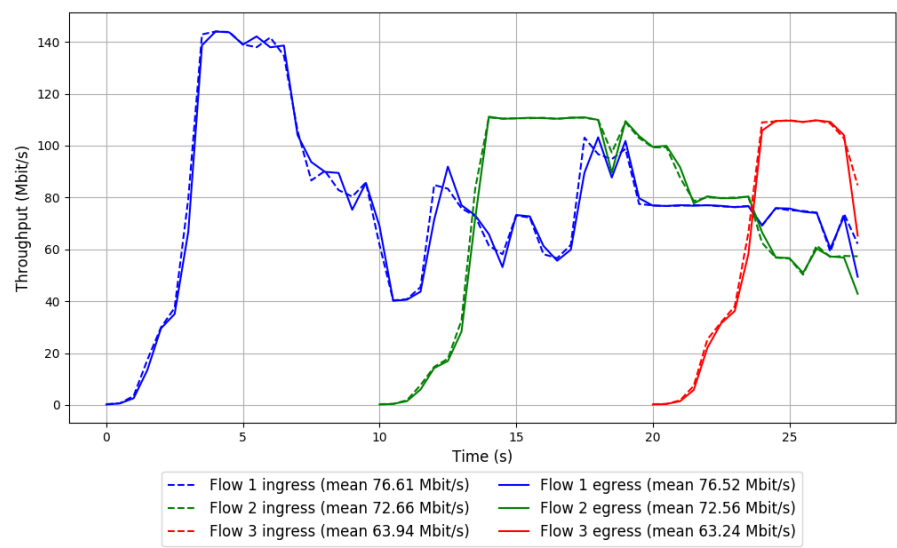
-- Flow 3:

Average throughput: 63.24 Mbit/s

95th percentile per-packet one-way delay: 86.434 ms

Loss rate: 3.60%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-01-17 06:28:57

End at: 2018-01-17 06:29:27

Below is generated by plot.py at 2018-01-17 13:01:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 128.50 Mbit/s

95th percentile per-packet one-way delay: 86.824 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 73.14 Mbit/s

95th percentile per-packet one-way delay: 86.849 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 65.25 Mbit/s

95th percentile per-packet one-way delay: 86.784 ms

Loss rate: 0.65%

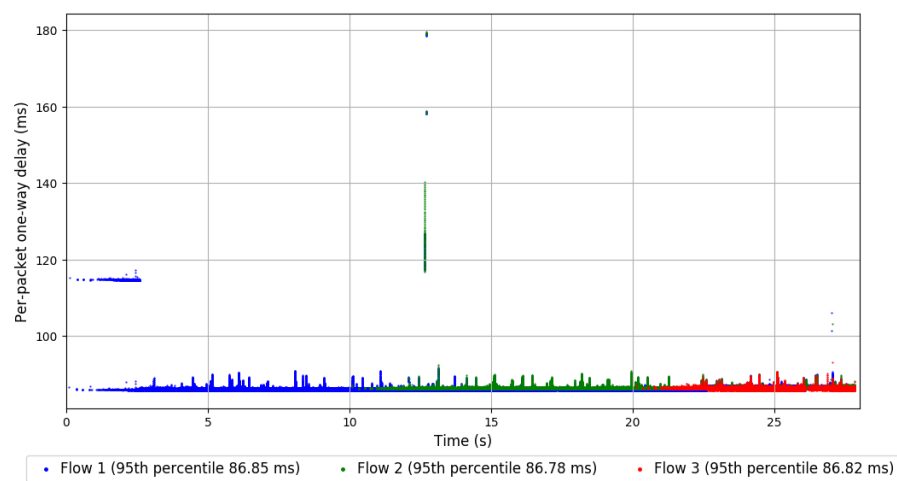
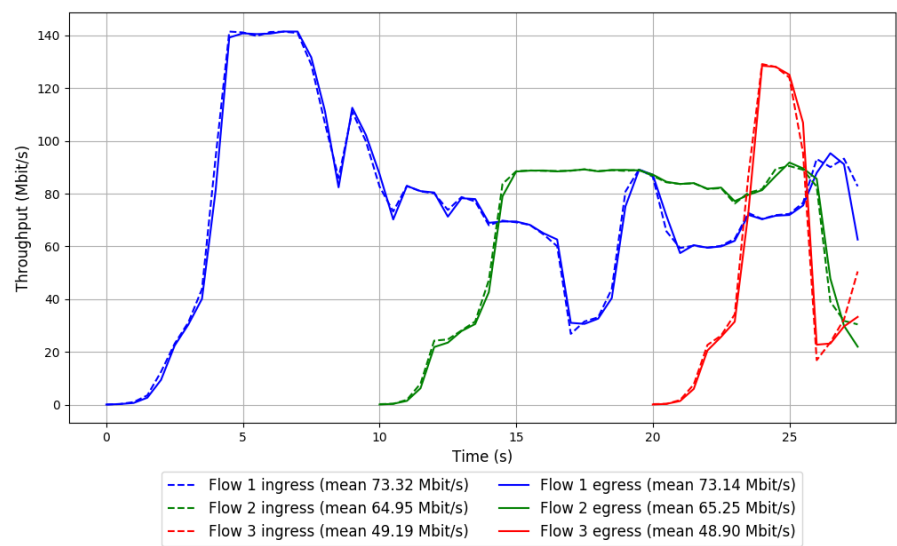
-- Flow 3:

Average throughput: 48.90 Mbit/s

95th percentile per-packet one-way delay: 86.824 ms

Loss rate: 3.11%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-01-17 06:48:01

End at: 2018-01-17 06:48:31

Below is generated by plot.py at 2018-01-17 13:01:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 120.63 Mbit/s

95th percentile per-packet one-way delay: 86.519 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 60.95 Mbit/s

95th percentile per-packet one-way delay: 86.544 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 69.43 Mbit/s

95th percentile per-packet one-way delay: 86.490 ms

Loss rate: 0.97%

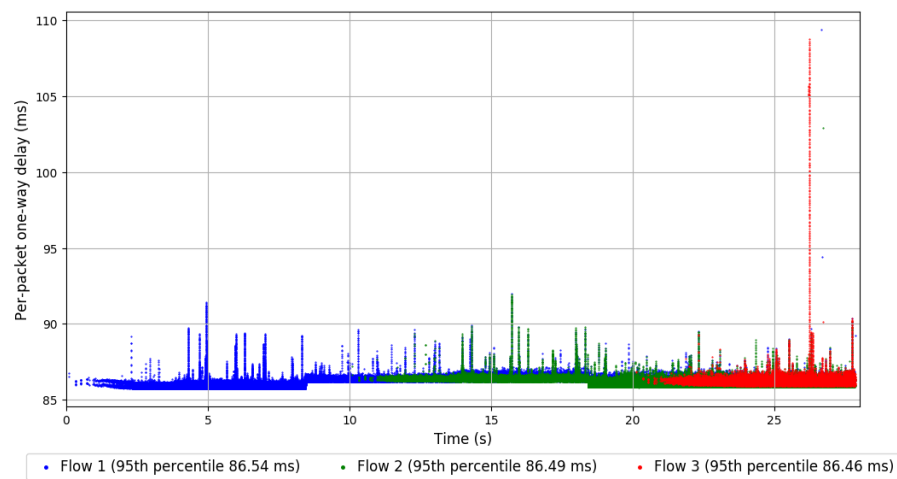
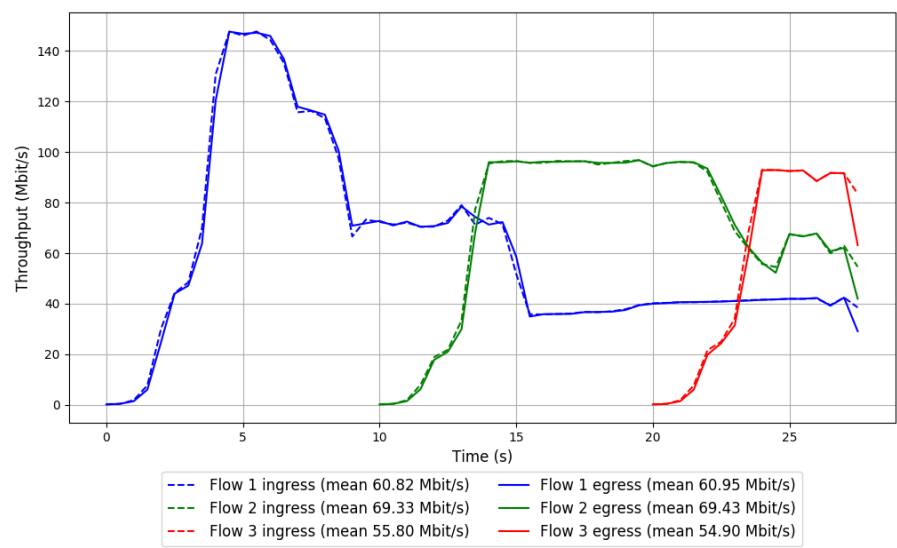
-- Flow 3:

Average throughput: 54.90 Mbit/s

95th percentile per-packet one-way delay: 86.461 ms

Loss rate: 4.10%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-01-17 07:07:26

End at: 2018-01-17 07:07:56

Below is generated by plot.py at 2018-01-17 13:01:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 117.83 Mbit/s

95th percentile per-packet one-way delay: 86.902 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 70.62 Mbit/s

95th percentile per-packet one-way delay: 86.874 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 57.11 Mbit/s

95th percentile per-packet one-way delay: 86.891 ms

Loss rate: 1.04%

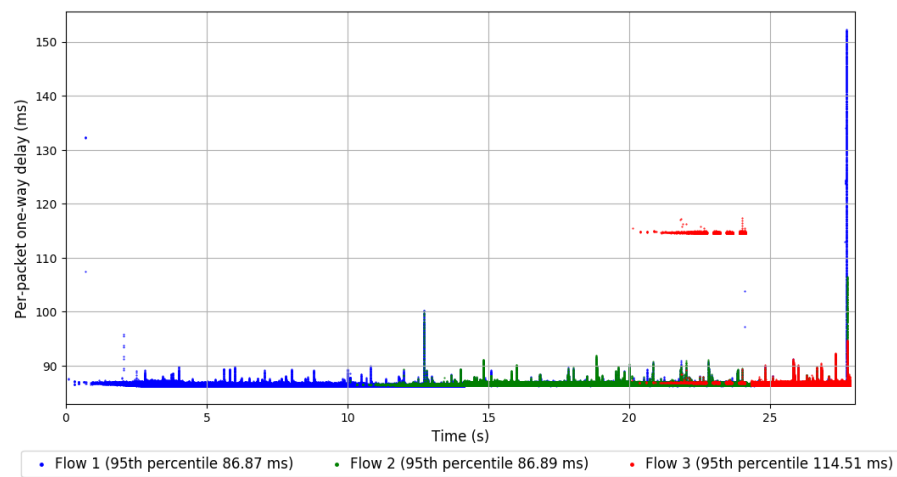
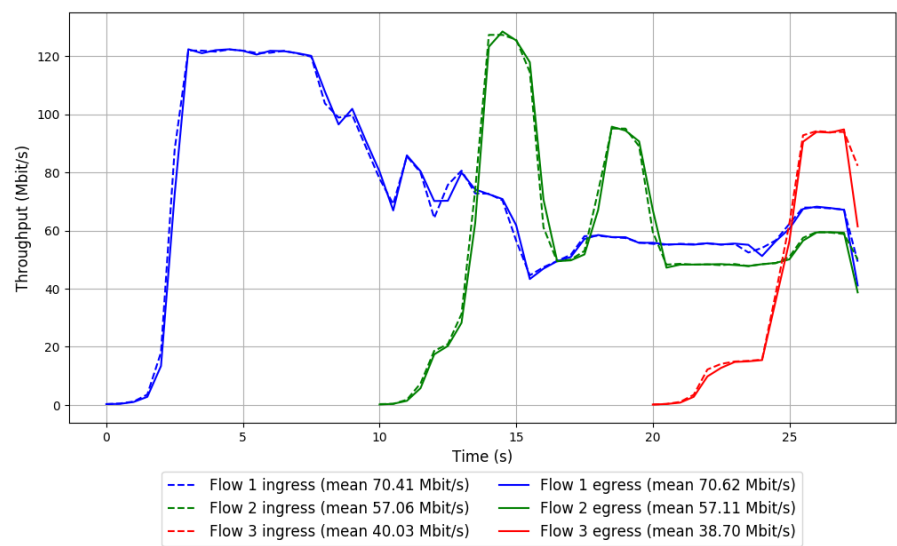
-- Flow 3:

Average throughput: 38.70 Mbit/s

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

Loss rate: 5.75%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-01-17 07:26:24

End at: 2018-01-17 07:26:54

Below is generated by plot.py at 2018-01-17 13:02:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.94 Mbit/s

95th percentile per-packet one-way delay: 86.908 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 58.10 Mbit/s

95th percentile per-packet one-way delay: 86.894 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 52.19 Mbit/s

95th percentile per-packet one-way delay: 86.924 ms

Loss rate: 0.05%

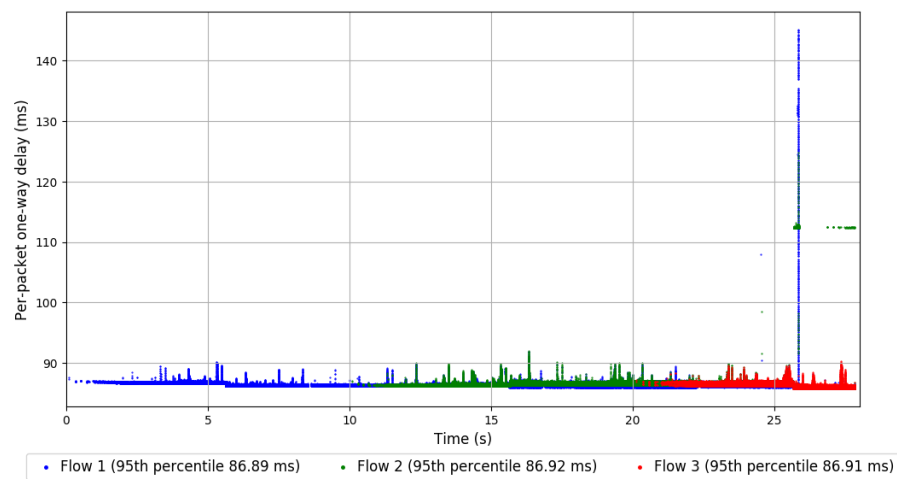
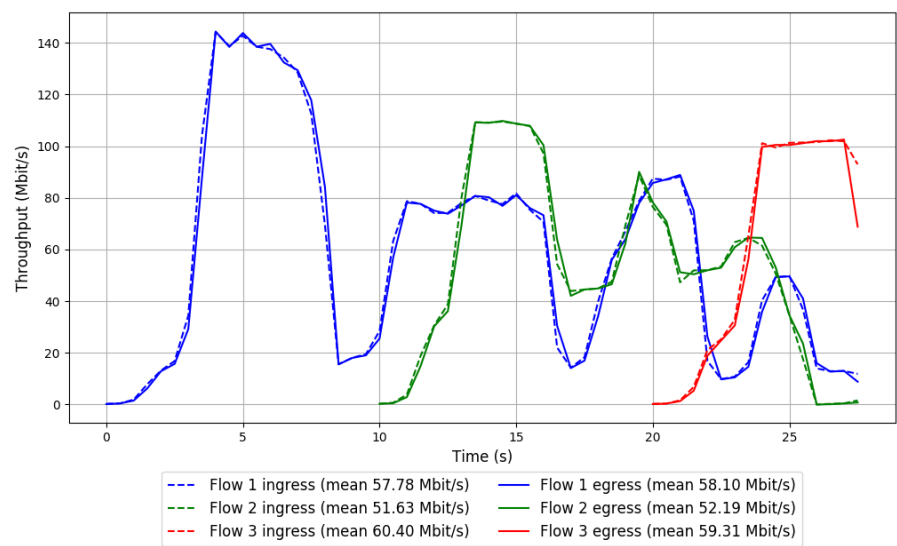
-- Flow 3:

Average throughput: 59.31 Mbit/s

95th percentile per-packet one-way delay: 86.914 ms

Loss rate: 4.30%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-01-17 07:45:19

End at: 2018-01-17 07:45:49

Below is generated by plot.py at 2018-01-17 13:03:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.91 Mbit/s

95th percentile per-packet one-way delay: 86.932 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 65.17 Mbit/s

95th percentile per-packet one-way delay: 86.927 ms

Loss rate: 0.57%

-- Flow 2:

Average throughput: 53.86 Mbit/s

95th percentile per-packet one-way delay: 86.958 ms

Loss rate: 0.19%

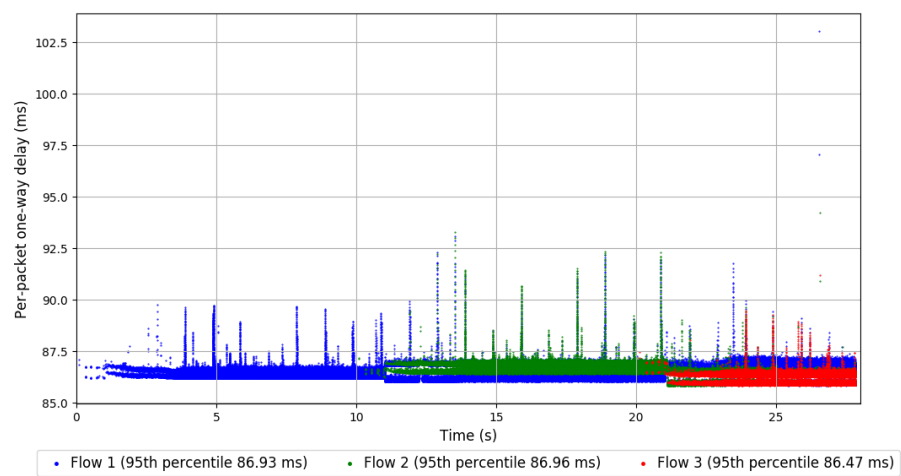
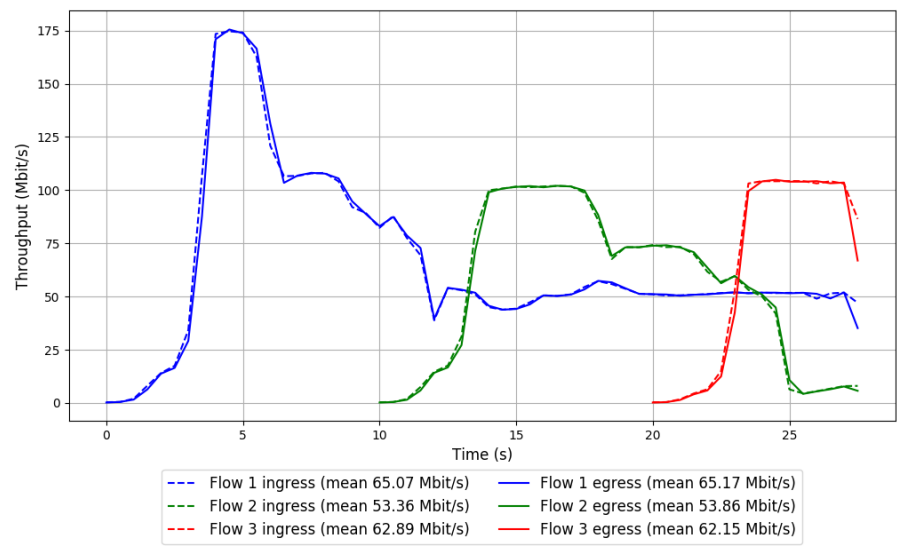
-- Flow 3:

Average throughput: 62.15 Mbit/s

95th percentile per-packet one-way delay: 86.474 ms

Loss rate: 3.70%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-01-17 08:04:36

End at: 2018-01-17 08:05:06

Below is generated by plot.py at 2018-01-17 13:03:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 122.76 Mbit/s

95th percentile per-packet one-way delay: 86.582 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 69.62 Mbit/s

95th percentile per-packet one-way delay: 86.514 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 71.72 Mbit/s

95th percentile per-packet one-way delay: 86.593 ms

Loss rate: 0.72%

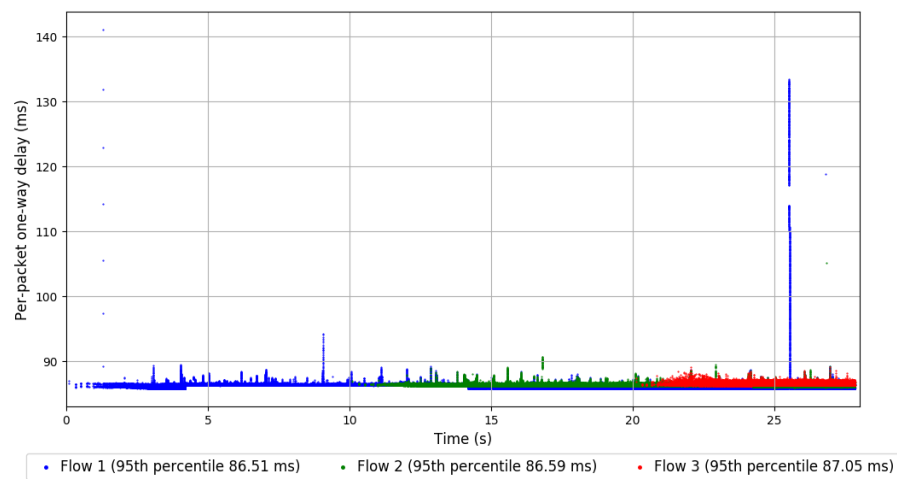
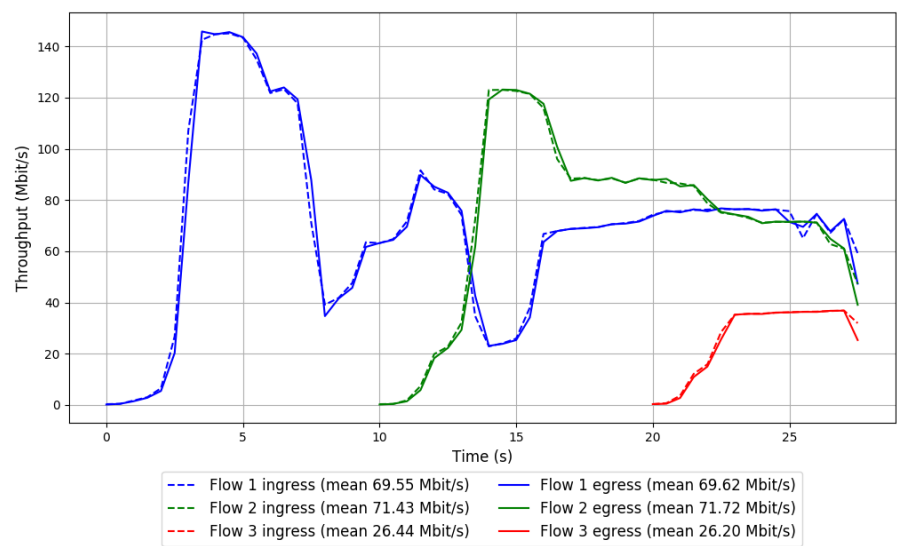
-- Flow 3:

Average throughput: 26.20 Mbit/s

95th percentile per-packet one-way delay: 87.046 ms

Loss rate: 3.11%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-01-17 08:23:25

End at: 2018-01-17 08:23:55

Below is generated by plot.py at 2018-01-17 13:03:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 103.31 Mbit/s

95th percentile per-packet one-way delay: 86.523 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 52.76 Mbit/s

95th percentile per-packet one-way delay: 86.508 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 53.71 Mbit/s

95th percentile per-packet one-way delay: 86.543 ms

Loss rate: 0.14%

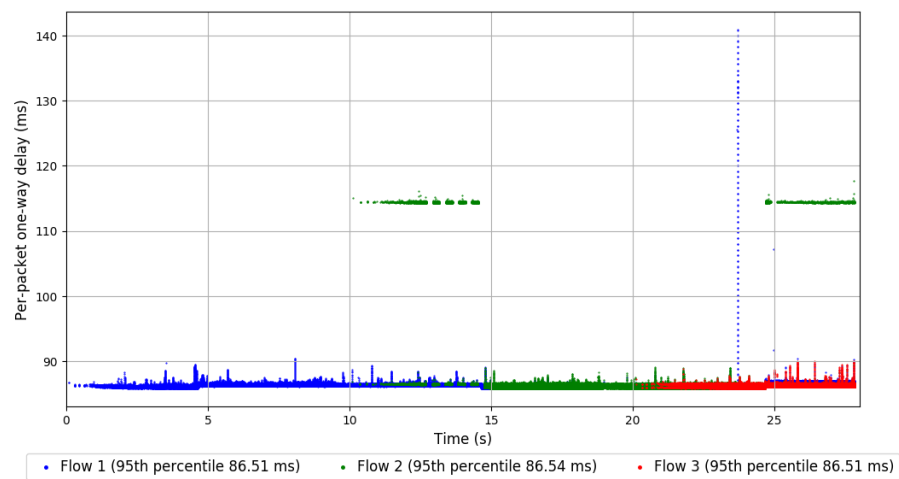
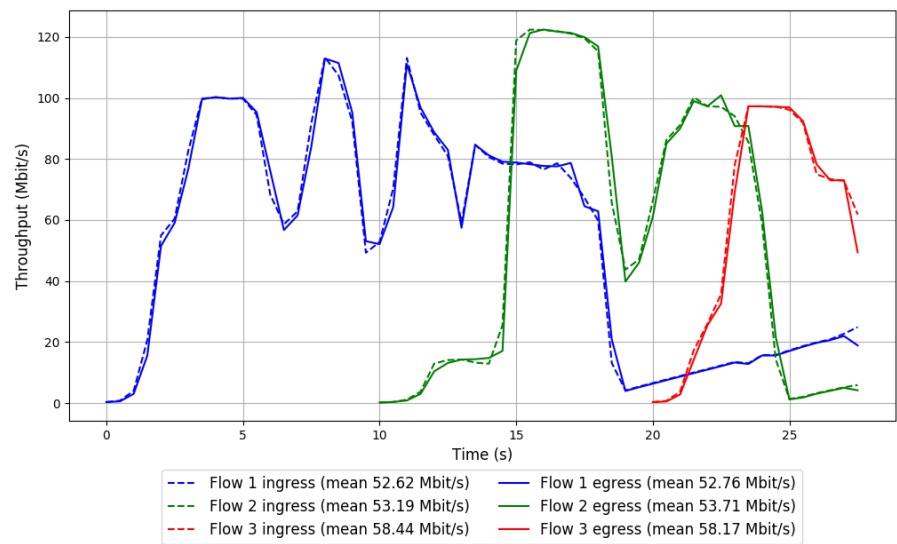
-- Flow 3:

Average throughput: 58.17 Mbit/s

95th percentile per-packet one-way delay: 86.514 ms

Loss rate: 2.70%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-01-17 08:42:34

End at: 2018-01-17 08:43:04

Below is generated by plot.py at 2018-01-17 13:04:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.19 Mbit/s

95th percentile per-packet one-way delay: 86.570 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 71.52 Mbit/s

95th percentile per-packet one-way delay: 86.537 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 61.42 Mbit/s

95th percentile per-packet one-way delay: 86.654 ms

Loss rate: 0.87%

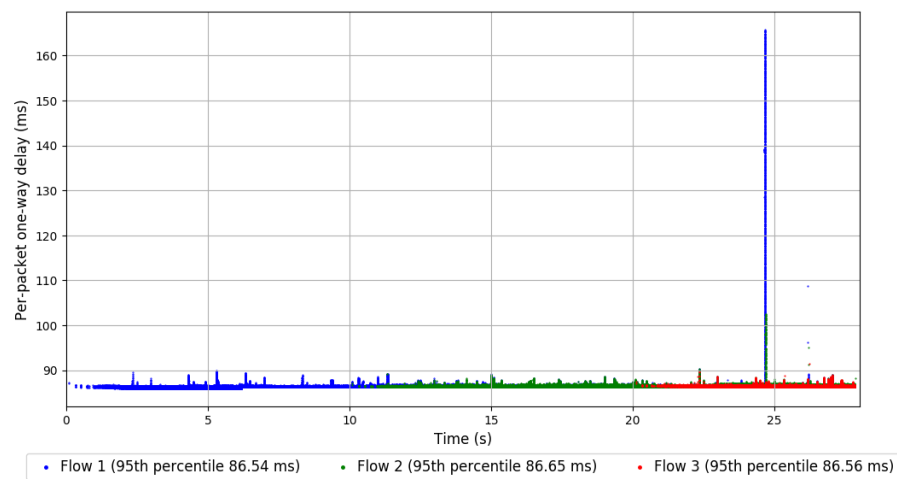
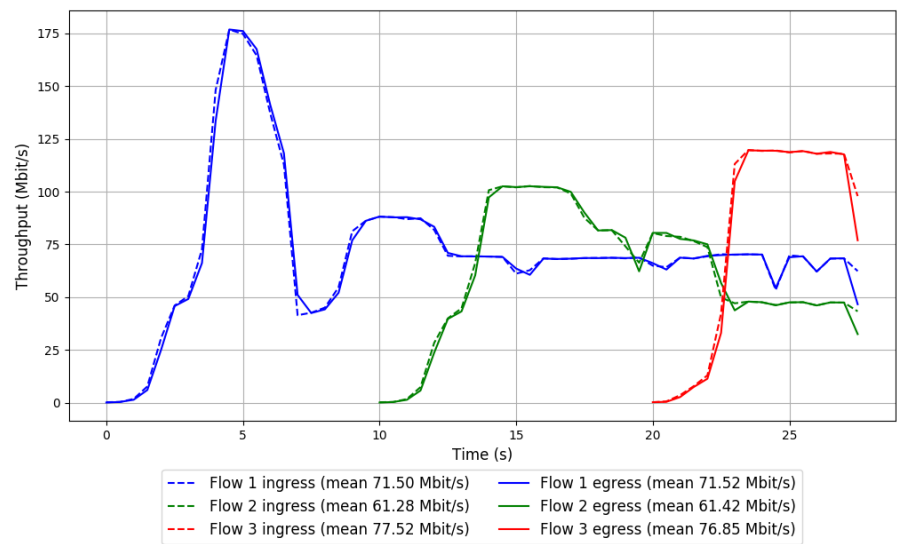
-- Flow 3:

Average throughput: 76.85 Mbit/s

95th percentile per-packet one-way delay: 86.555 ms

Loss rate: 3.34%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-01-17 09:01:16

End at: 2018-01-17 09:01:46

Below is generated by plot.py at 2018-01-17 13:04:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.32 Mbit/s

95th percentile per-packet one-way delay: 86.878 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 55.55 Mbit/s

95th percentile per-packet one-way delay: 86.463 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 32.99 Mbit/s

95th percentile per-packet one-way delay: 86.991 ms

Loss rate: 0.78%

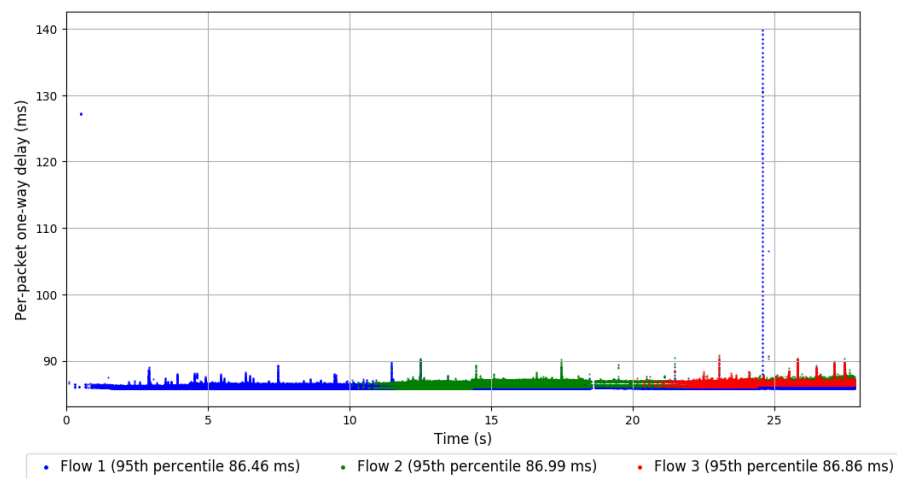
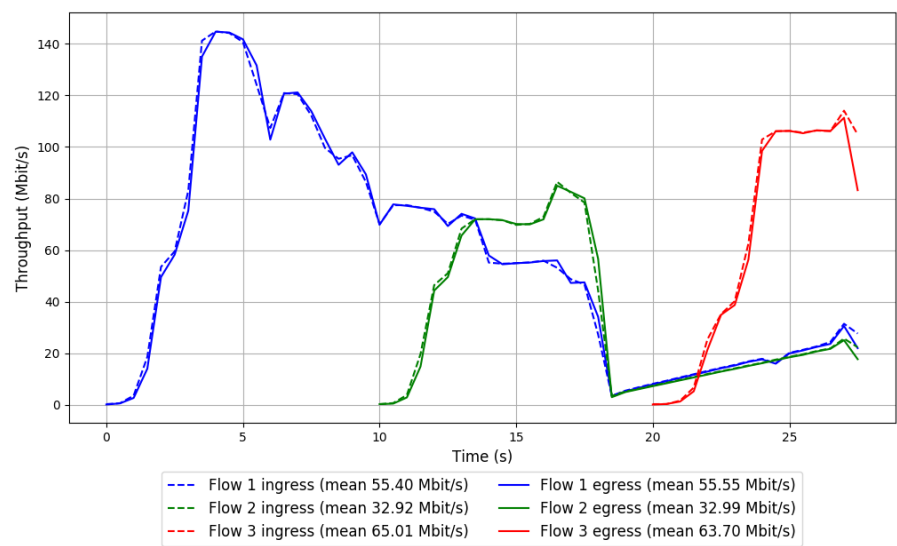
-- Flow 3:

Average throughput: 63.70 Mbit/s

95th percentile per-packet one-way delay: 86.860 ms

Loss rate: 4.18%

Run 10: Report of Copa — Data Link

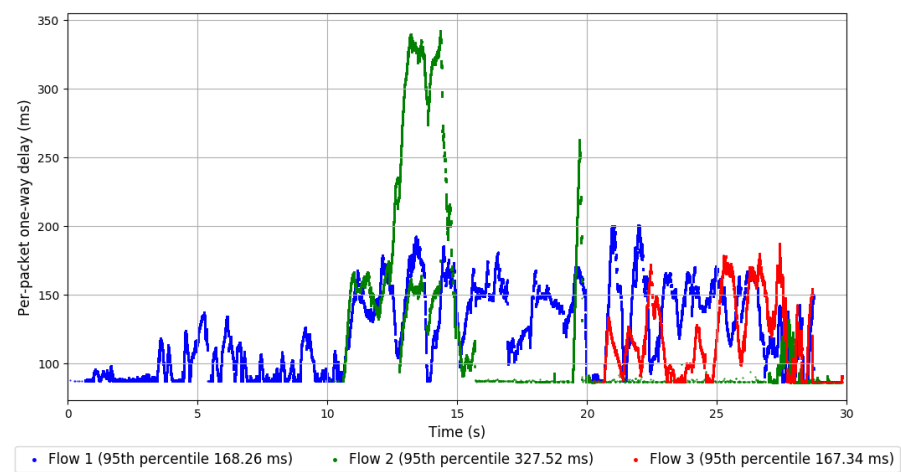
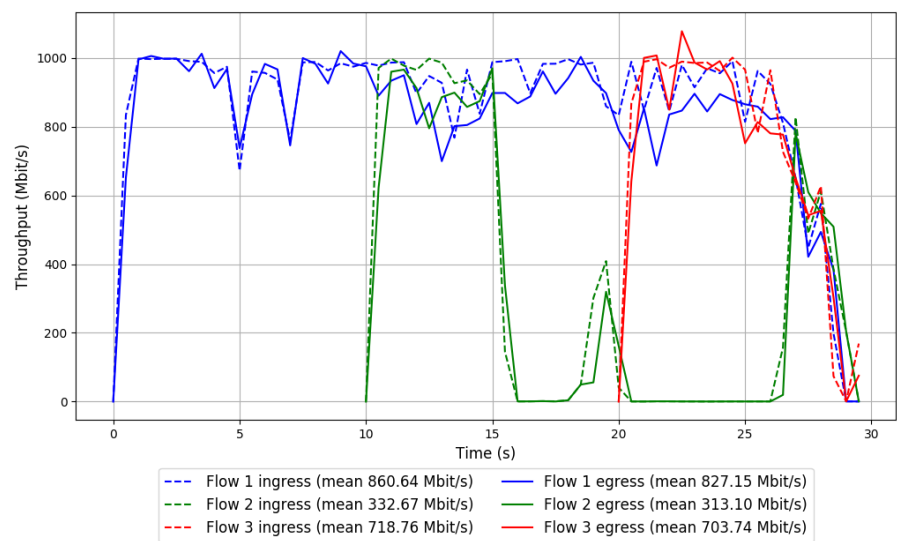


```
Run 1: Statistics of FillP

Start at: 2018-01-17 06:21:55
End at: 2018-01-17 06:22:25

# Below is generated by plot.py at 2018-01-17 13:23:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1264.55 Mbit/s
95th percentile per-packet one-way delay: 188.223 ms
Loss rate: 4.77%
-- Flow 1:
Average throughput: 827.15 Mbit/s
95th percentile per-packet one-way delay: 168.260 ms
Loss rate: 4.56%
-- Flow 2:
Average throughput: 313.10 Mbit/s
95th percentile per-packet one-way delay: 327.525 ms
Loss rate: 6.72%
-- Flow 3:
Average throughput: 703.74 Mbit/s
95th percentile per-packet one-way delay: 167.341 ms
Loss rate: 3.75%
```

Run 1: Report of FillP — Data Link

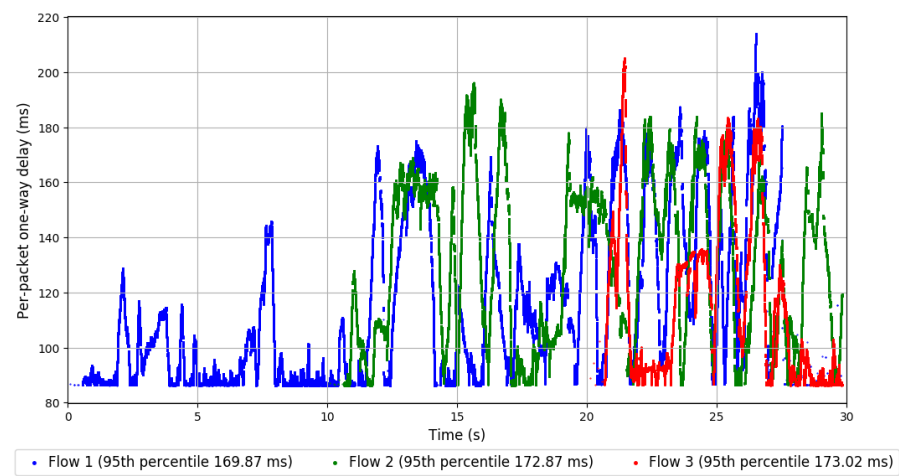
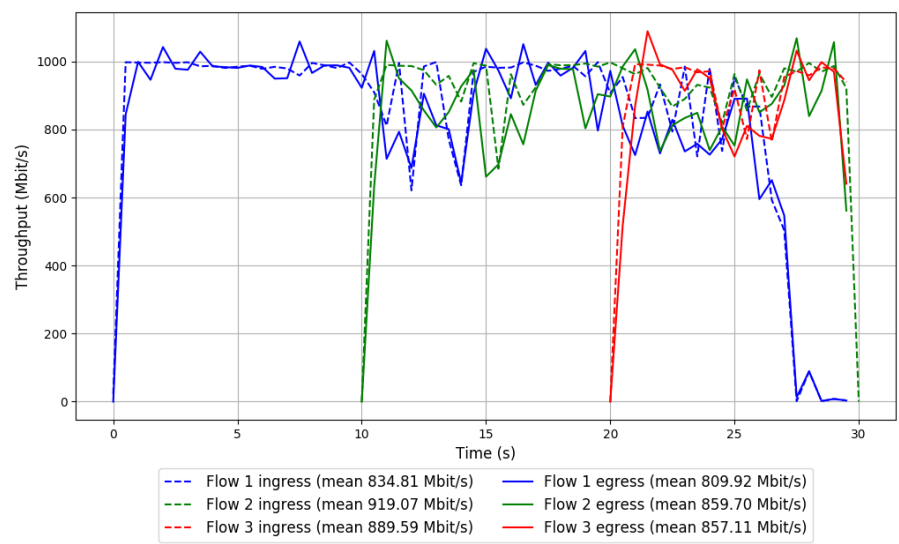


```
Run 2: Statistics of FillP

Start at: 2018-01-17 06:41:05
End at: 2018-01-17 06:41:35

# Below is generated by plot.py at 2018-01-17 13:32:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1658.86 Mbit/s
95th percentile per-packet one-way delay: 171.275 ms
Loss rate: 5.42%
-- Flow 1:
Average throughput: 809.92 Mbit/s
95th percentile per-packet one-way delay: 169.867 ms
Loss rate: 3.54%
-- Flow 2:
Average throughput: 859.70 Mbit/s
95th percentile per-packet one-way delay: 172.874 ms
Loss rate: 7.72%
-- Flow 3:
Average throughput: 857.11 Mbit/s
95th percentile per-packet one-way delay: 173.024 ms
Loss rate: 5.96%
```

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-01-17 07:00:09

End at: 2018-01-17 07:00:39

Below is generated by plot.py at 2018-01-17 13:32:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1611.07 Mbit/s

95th percentile per-packet one-way delay: 194.880 ms

Loss rate: 4.78%

-- Flow 1:

Average throughput: 813.91 Mbit/s

95th percentile per-packet one-way delay: 161.999 ms

Loss rate: 1.96%

-- Flow 2:

Average throughput: 853.58 Mbit/s

95th percentile per-packet one-way delay: 199.265 ms

Loss rate: 6.04%

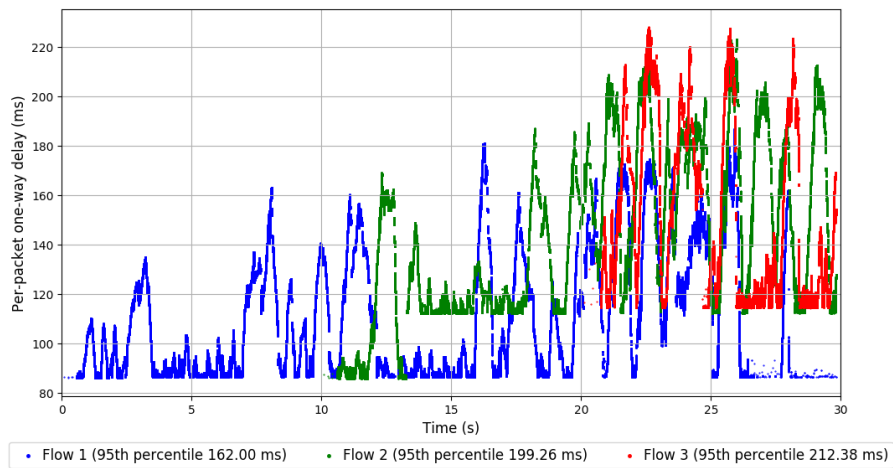
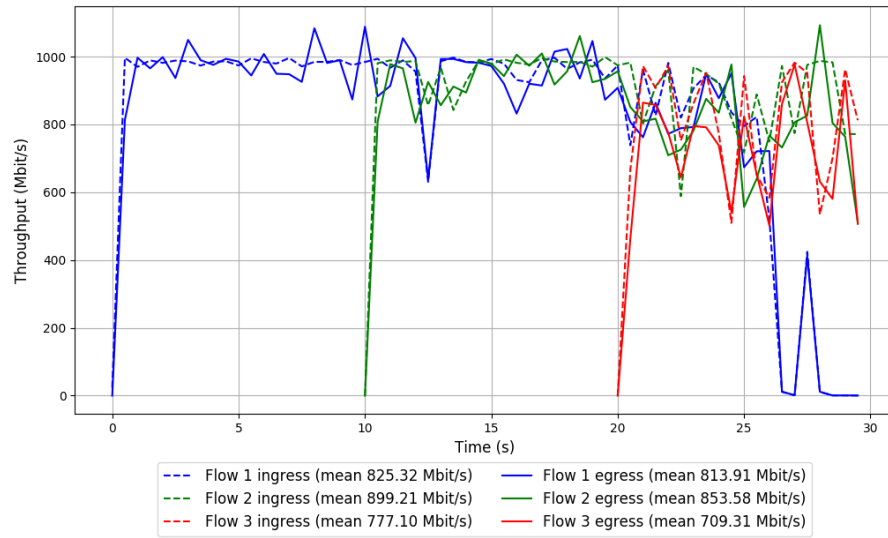
-- Flow 3:

Average throughput: 709.31 Mbit/s

95th percentile per-packet one-way delay: 212.383 ms

Loss rate: 10.86%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-01-17 07:19:22

End at: 2018-01-17 07:19:52

Below is generated by plot.py at 2018-01-17 13:32:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1314.22 Mbit/s

95th percentile per-packet one-way delay: 167.183 ms

Loss rate: 4.06%

-- Flow 1:

Average throughput: 441.57 Mbit/s

95th percentile per-packet one-way delay: 166.377 ms

Loss rate: 1.92%

-- Flow 2:

Average throughput: 890.33 Mbit/s

95th percentile per-packet one-way delay: 167.252 ms

Loss rate: 4.40%

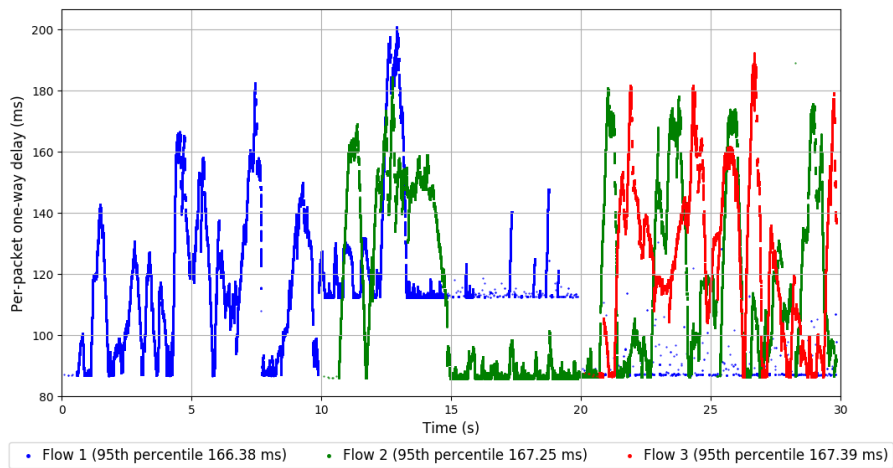
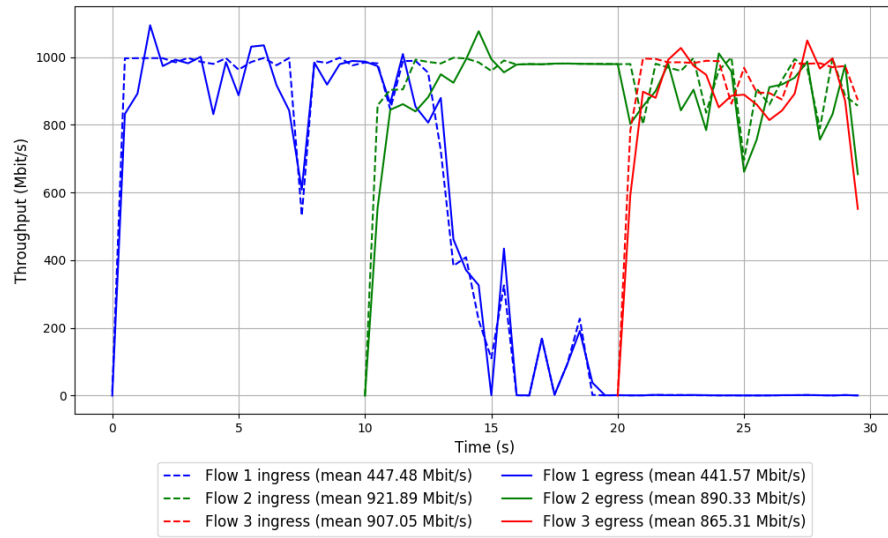
-- Flow 3:

Average throughput: 865.31 Mbit/s

95th percentile per-packet one-way delay: 167.388 ms

Loss rate: 6.56%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-01-17 07:38:32

End at: 2018-01-17 07:39:02

Below is generated by plot.py at 2018-01-17 13:32:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1142.50 Mbit/s

95th percentile per-packet one-way delay: 309.898 ms

Loss rate: 4.57%

-- Flow 1:

Average throughput: 697.58 Mbit/s

95th percentile per-packet one-way delay: 310.216 ms

Loss rate: 4.25%

-- Flow 2:

Average throughput: 565.21 Mbit/s

95th percentile per-packet one-way delay: 298.884 ms

Loss rate: 5.34%

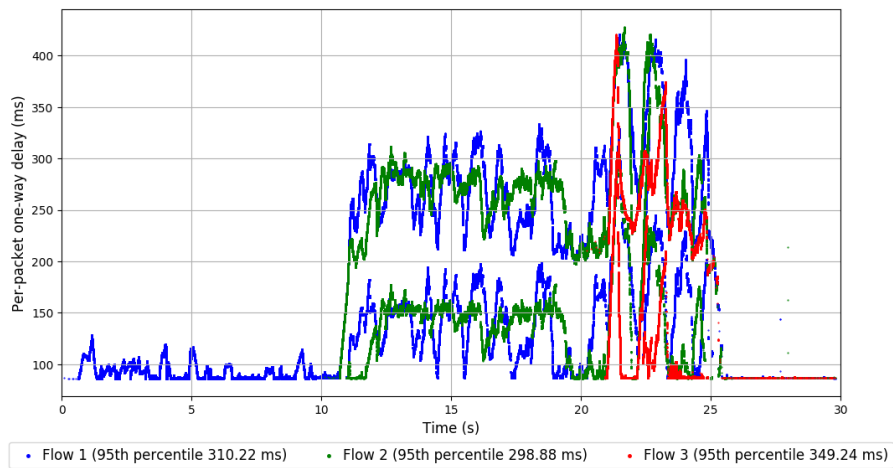
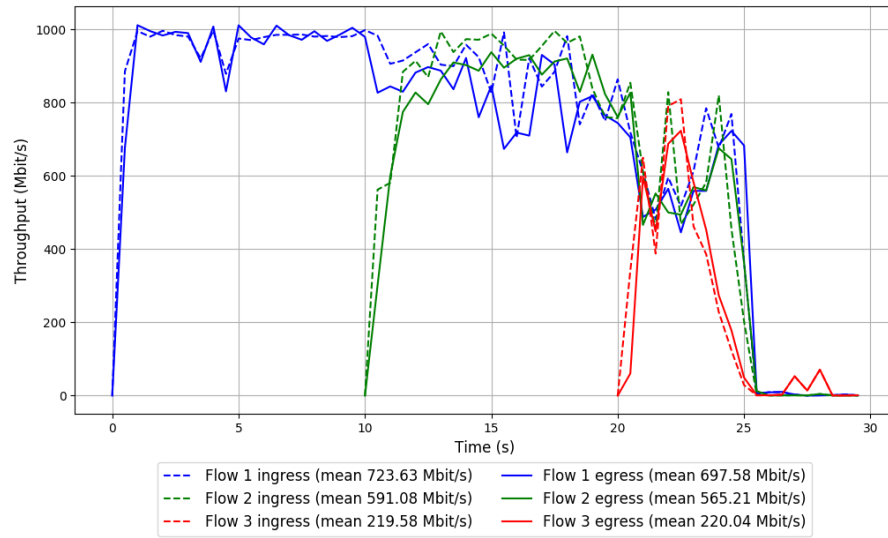
-- Flow 3:

Average throughput: 220.04 Mbit/s

95th percentile per-packet one-way delay: 349.243 ms

Loss rate: 3.53%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-01-17 07:57:38

End at: 2018-01-17 07:58:08

Below is generated by plot.py at 2018-01-17 13:32:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1478.68 Mbit/s

95th percentile per-packet one-way delay: 211.590 ms

Loss rate: 11.32%

-- Flow 1:

Average throughput: 786.14 Mbit/s

95th percentile per-packet one-way delay: 200.742 ms

Loss rate: 8.99%

-- Flow 2:

Average throughput: 732.16 Mbit/s

95th percentile per-packet one-way delay: 206.762 ms

Loss rate: 10.84%

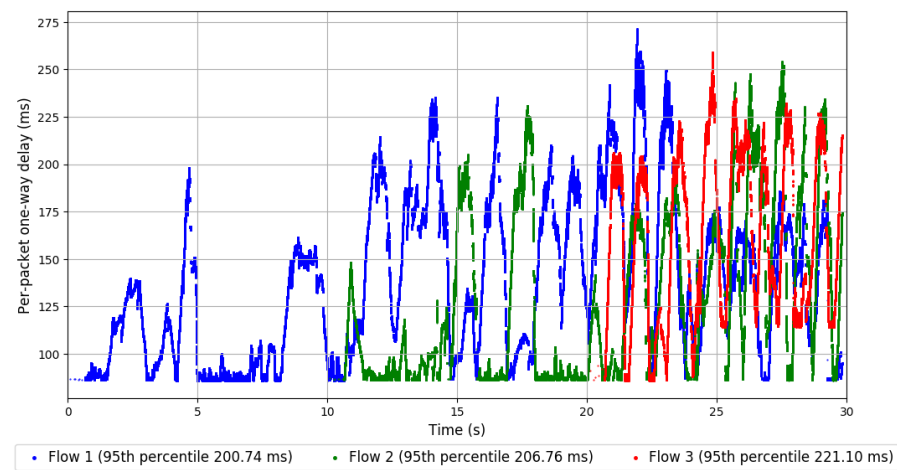
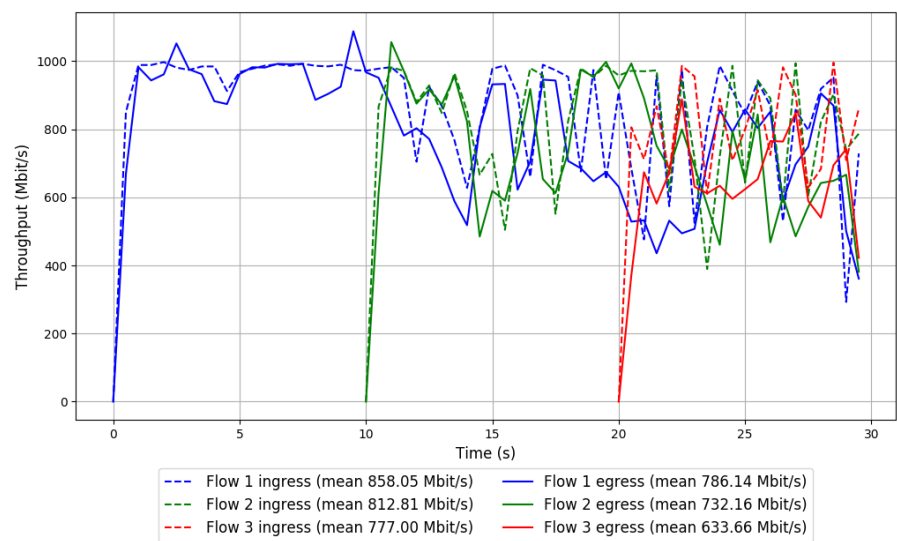
-- Flow 3:

Average throughput: 633.66 Mbit/s

95th percentile per-packet one-way delay: 221.096 ms

Loss rate: 20.13%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-01-17 08:16:27

End at: 2018-01-17 08:16:57

Below is generated by plot.py at 2018-01-17 13:32:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1191.71 Mbit/s

95th percentile per-packet one-way delay: 278.577 ms

Loss rate: 3.02%

-- Flow 1:

Average throughput: 671.61 Mbit/s

95th percentile per-packet one-way delay: 284.835 ms

Loss rate: 4.55%

-- Flow 2:

Average throughput: 717.98 Mbit/s

95th percentile per-packet one-way delay: 272.198 ms

Loss rate: 1.07%

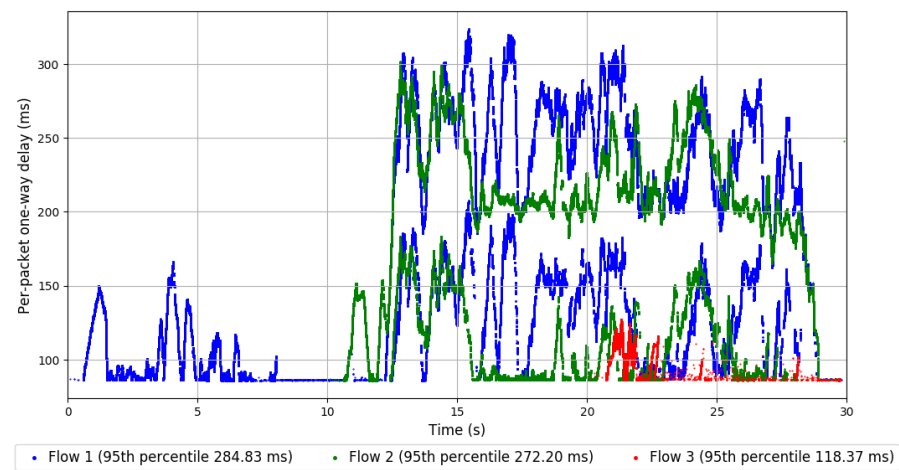
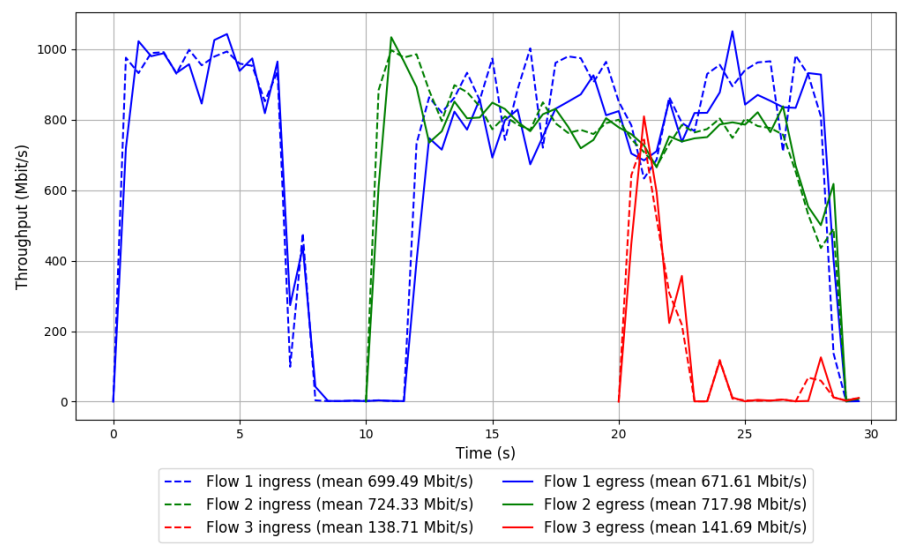
-- Flow 3:

Average throughput: 141.69 Mbit/s

95th percentile per-packet one-way delay: 118.366 ms

Loss rate: 0.01%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-01-17 08:35:17

End at: 2018-01-17 08:35:47

Below is generated by plot.py at 2018-01-17 13:32:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1356.63 Mbit/s

95th percentile per-packet one-way delay: 299.815 ms

Loss rate: 7.98%

-- Flow 1:

Average throughput: 834.25 Mbit/s

95th percentile per-packet one-way delay: 293.132 ms

Loss rate: 5.15%

-- Flow 2:

Average throughput: 714.21 Mbit/s

95th percentile per-packet one-way delay: 308.269 ms

Loss rate: 12.48%

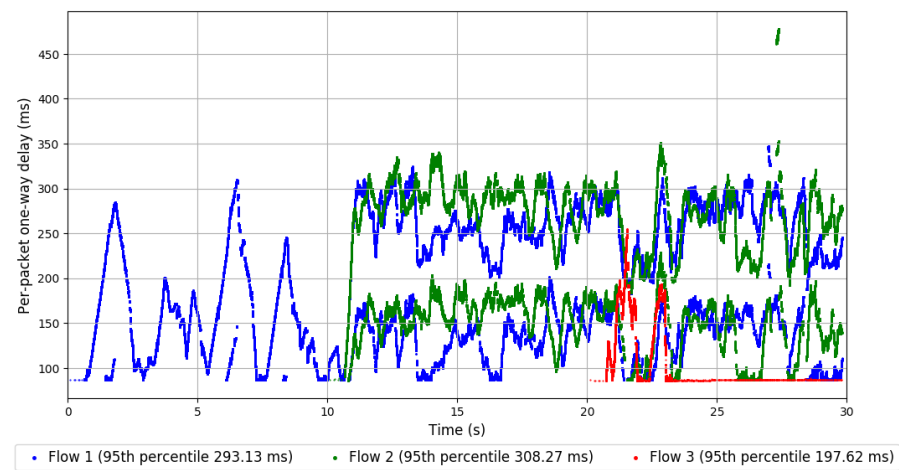
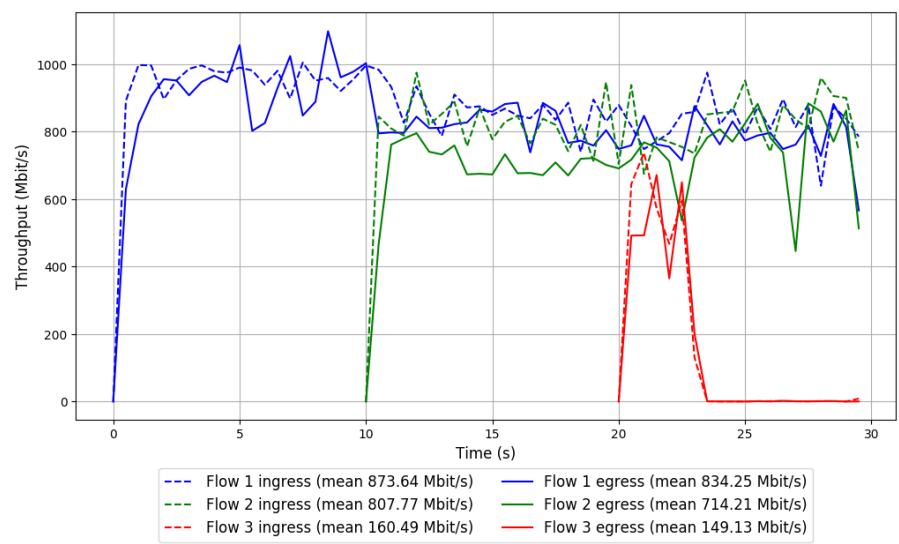
-- Flow 3:

Average throughput: 149.13 Mbit/s

95th percentile per-packet one-way delay: 197.615 ms

Loss rate: 8.97%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-01-17 08:54:03

End at: 2018-01-17 08:54:33

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 1629.70 Mbit/s

95th percentile per-packet one-way delay: 291.087 ms

Loss rate: 6.74%

-- Flow 1:

Average throughput: 855.02 Mbit/s

95th percentile per-packet one-way delay: 287.487 ms

Loss rate: 5.19%

-- Flow 2:

Average throughput: 823.42 Mbit/s

95th percentile per-packet one-way delay: 189.122 ms

Loss rate: 7.07%

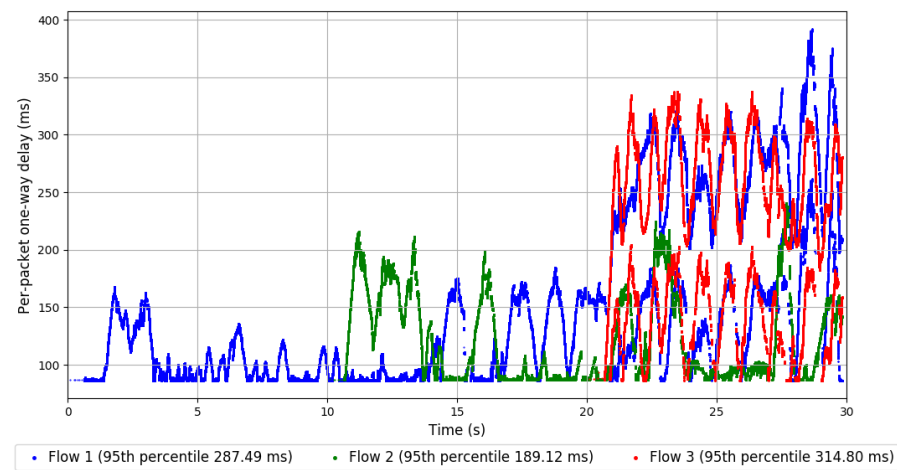
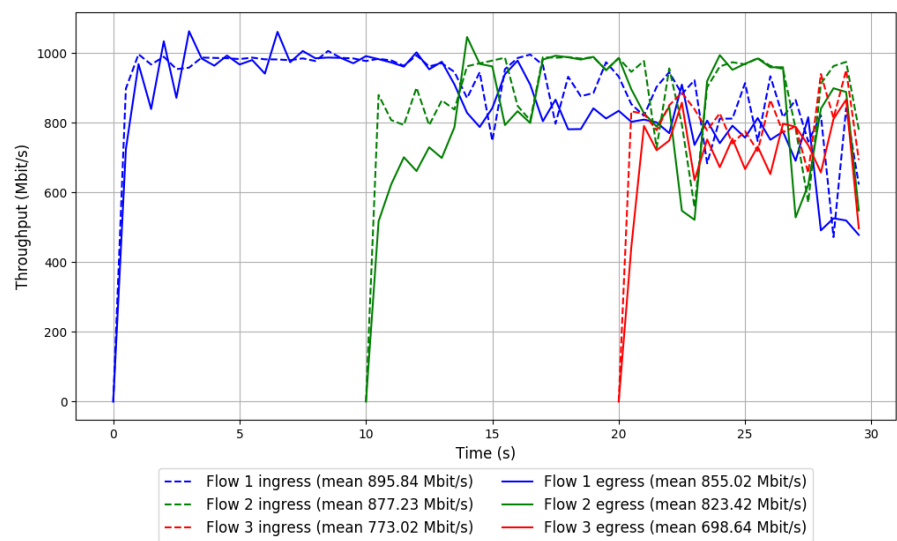
-- Flow 3:

Average throughput: 698.64 Mbit/s

95th percentile per-packet one-way delay: 314.797 ms

Loss rate: 11.43%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-01-17 09:13:00

End at: 2018-01-17 09:13:30

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 1251.61 Mbit/s

95th percentile per-packet one-way delay: 168.620 ms

Loss rate: 3.87%

-- Flow 1:

Average throughput: 371.43 Mbit/s

95th percentile per-packet one-way delay: 152.421 ms

Loss rate: 1.13%

-- Flow 2:

Average throughput: 921.05 Mbit/s

95th percentile per-packet one-way delay: 174.875 ms

Loss rate: 3.41%

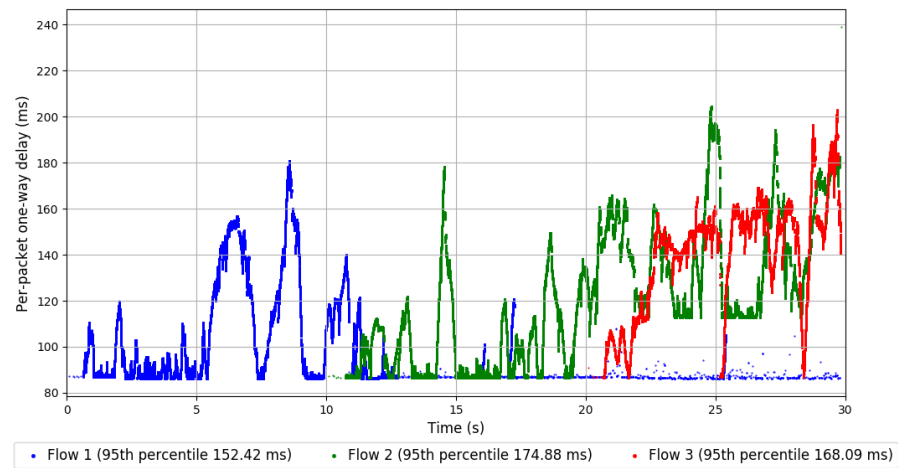
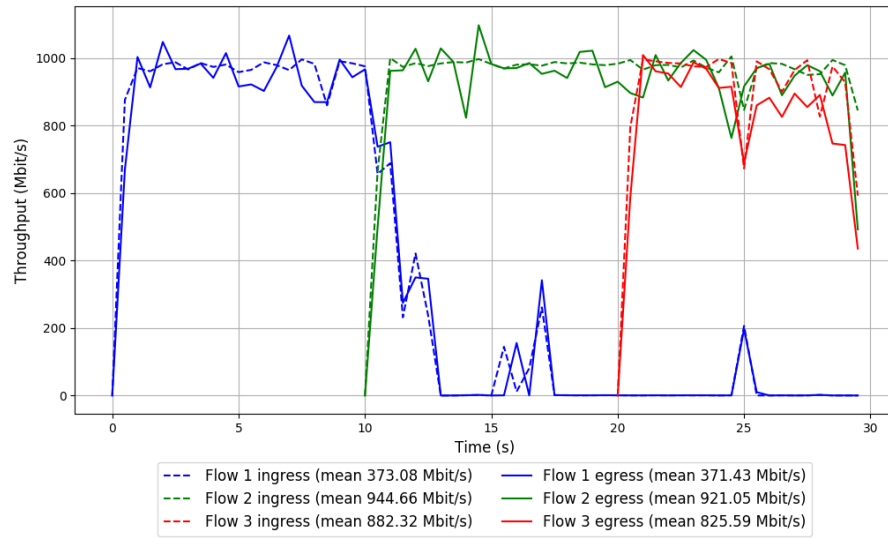
-- Flow 3:

Average throughput: 825.59 Mbit/s

95th percentile per-packet one-way delay: 168.091 ms

Loss rate: 8.36%

Run 10: Report of FillP — Data Link

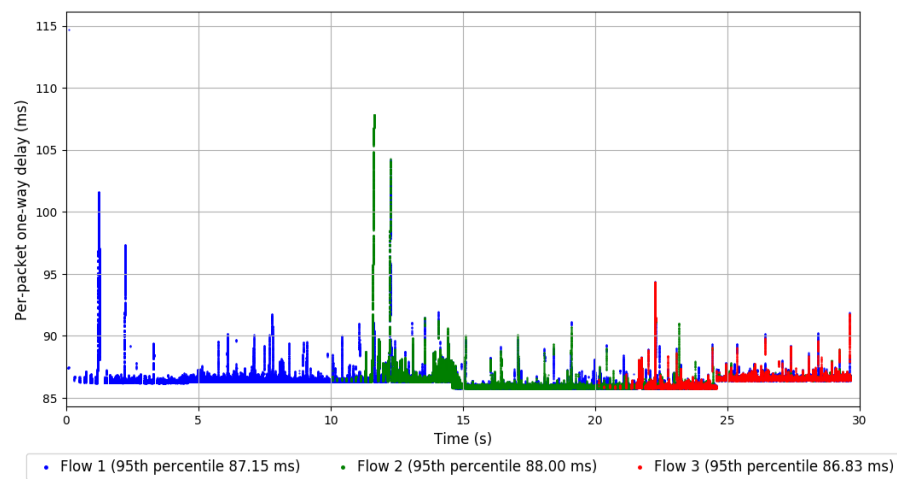
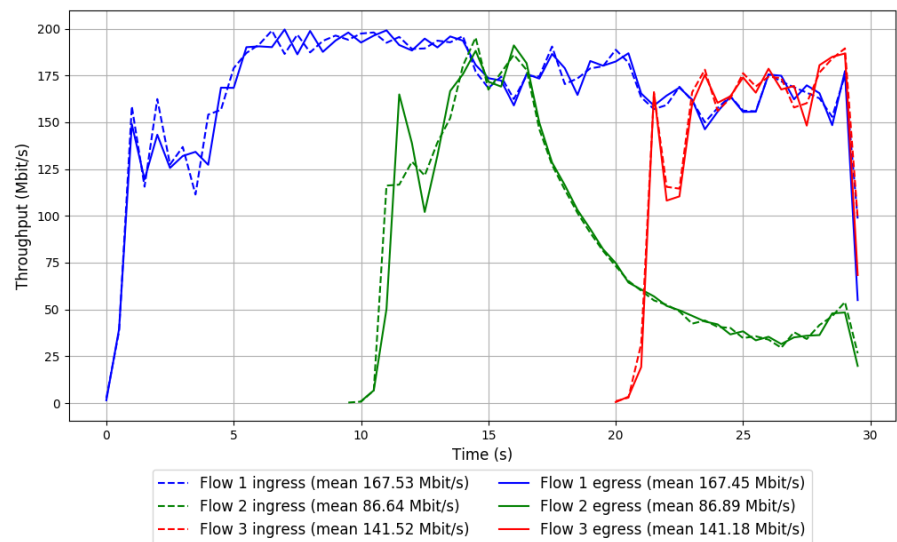


```
Run 1: Statistics of Indigo

Start at: 2018-01-17 06:23:37
End at: 2018-01-17 06:24:07

# Below is generated by plot.py at 2018-01-17 13:55:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.43 Mbit/s
95th percentile per-packet one-way delay: 87.329 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 167.45 Mbit/s
95th percentile per-packet one-way delay: 87.146 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 86.89 Mbit/s
95th percentile per-packet one-way delay: 88.000 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 141.18 Mbit/s
95th percentile per-packet one-way delay: 86.829 ms
Loss rate: 2.29%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-01-17 06:43:07

End at: 2018-01-17 06:43:37

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 306.69 Mbit/s

95th percentile per-packet one-way delay: 87.133 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 170.36 Mbit/s

95th percentile per-packet one-way delay: 86.952 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 145.36 Mbit/s

95th percentile per-packet one-way delay: 87.446 ms

Loss rate: 1.03%

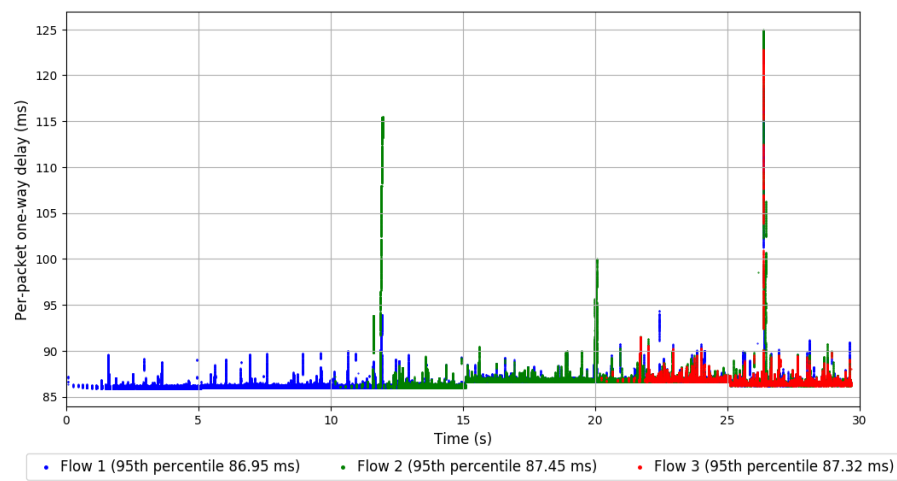
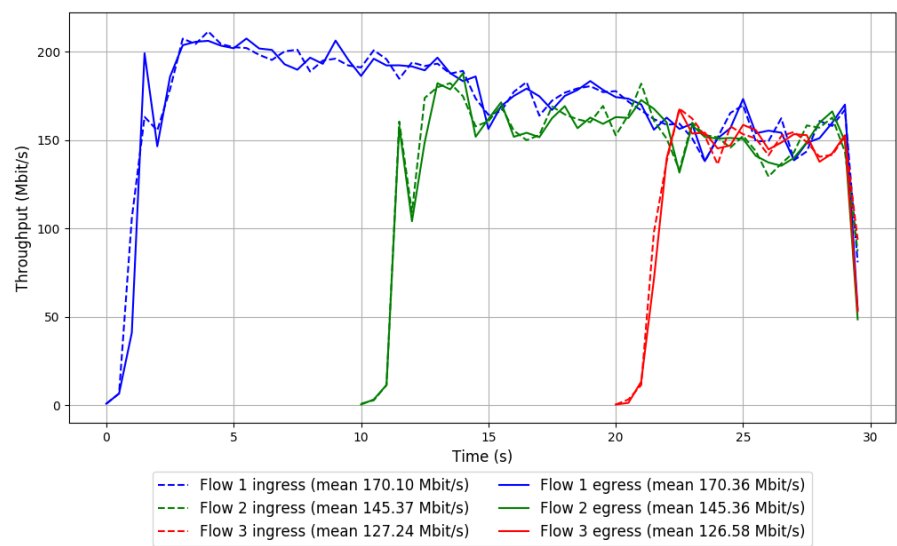
-- Flow 3:

Average throughput: 126.58 Mbit/s

95th percentile per-packet one-way delay: 87.324 ms

Loss rate: 2.58%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-01-17 07:02:07

End at: 2018-01-17 07:02:37

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 205.06 Mbit/s

95th percentile per-packet one-way delay: 114.680 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 110.45 Mbit/s

95th percentile per-packet one-way delay: 114.644 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 70.62 Mbit/s

95th percentile per-packet one-way delay: 114.734 ms

Loss rate: 1.22%

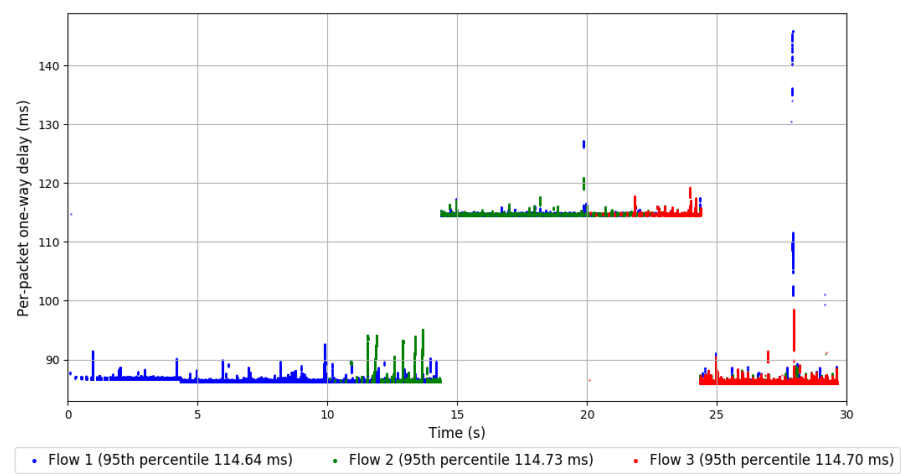
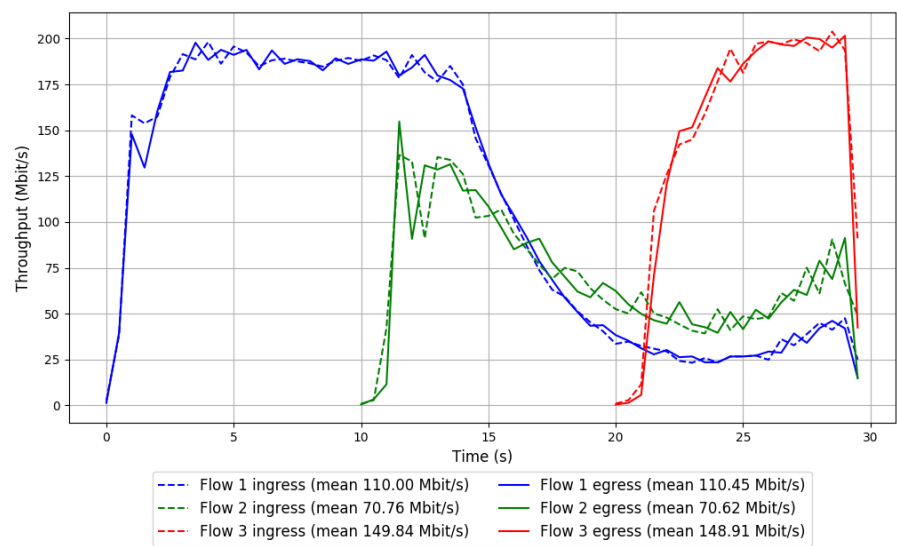
-- Flow 3:

Average throughput: 148.91 Mbit/s

95th percentile per-packet one-way delay: 114.698 ms

Loss rate: 2.66%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-01-17 07:21:07

End at: 2018-01-17 07:21:37

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 315.64 Mbit/s

95th percentile per-packet one-way delay: 87.151 ms

Loss rate: 0.96%

-- Flow 1:

Average throughput: 171.68 Mbit/s

95th percentile per-packet one-way delay: 86.991 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 154.47 Mbit/s

95th percentile per-packet one-way delay: 87.338 ms

Loss rate: 0.96%

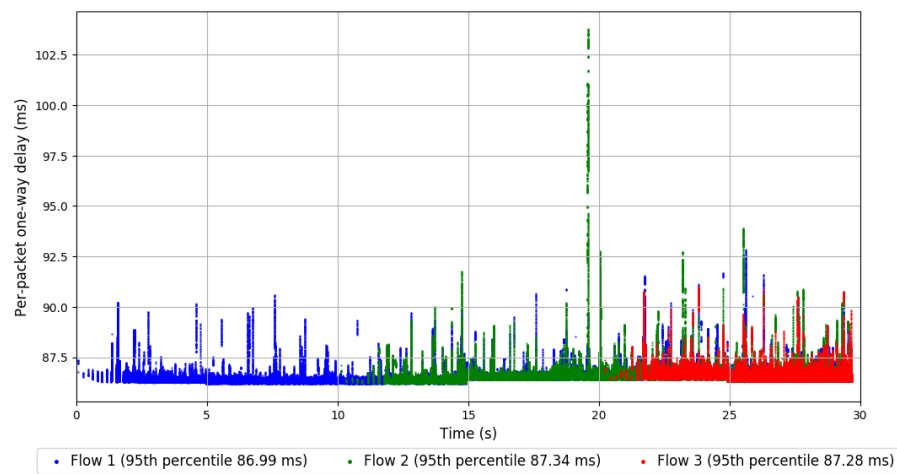
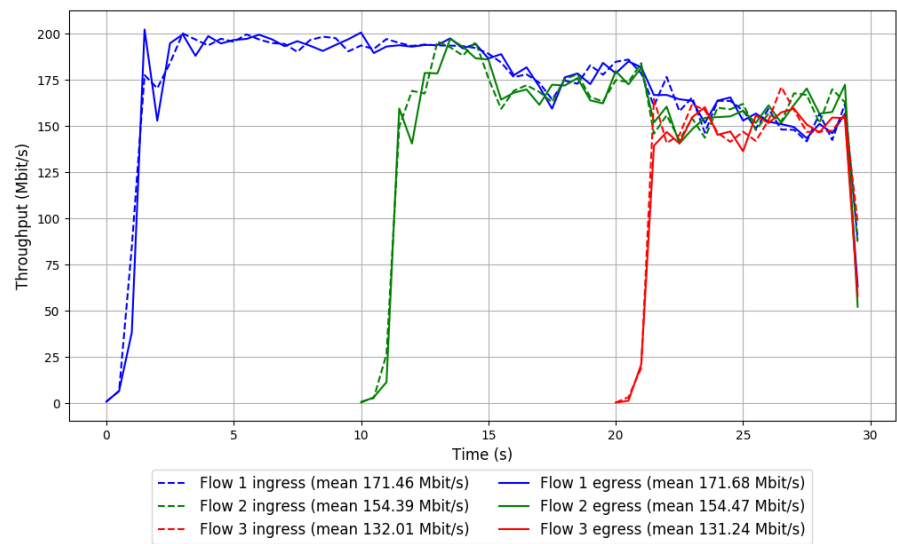
-- Flow 3:

Average throughput: 131.24 Mbit/s

95th percentile per-packet one-way delay: 87.278 ms

Loss rate: 2.65%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2018-01-17 07:40:18

End at: 2018-01-17 07:40:48

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 306.78 Mbit/s

95th percentile per-packet one-way delay: 87.131 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 163.87 Mbit/s

95th percentile per-packet one-way delay: 87.072 ms

Loss rate: 0.69%

-- Flow 2:

Average throughput: 149.97 Mbit/s

95th percentile per-packet one-way delay: 87.137 ms

Loss rate: 1.01%

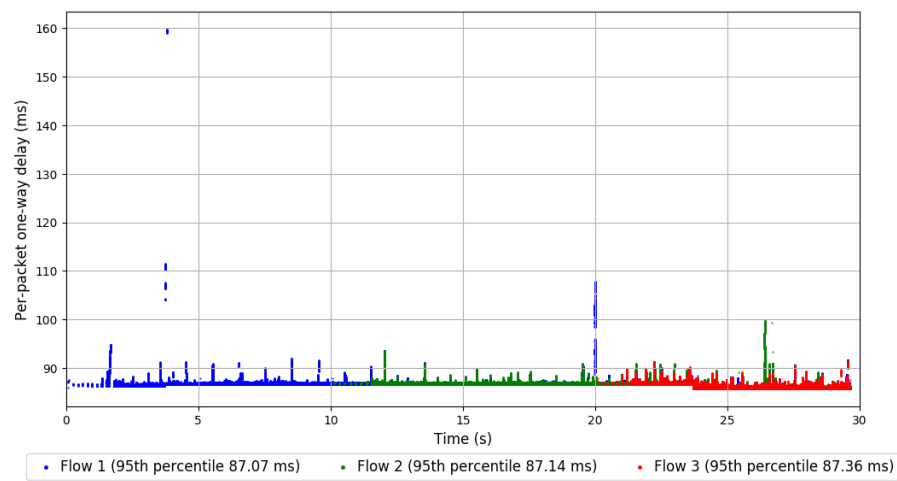
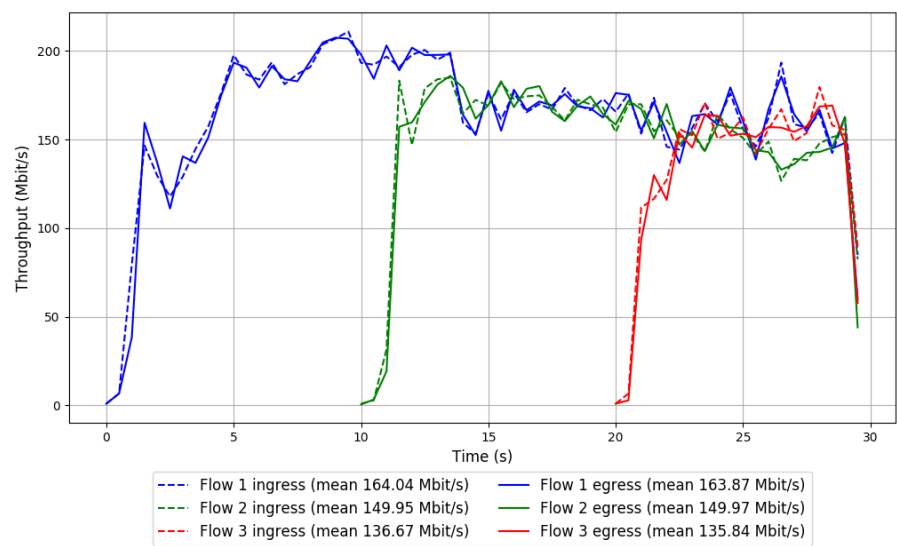
-- Flow 3:

Average throughput: 135.84 Mbit/s

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

Loss rate: 2.43%

Run 5: Report of Indigo — Data Link



Run 6: Statistics of Indigo

Start at: 2018-01-17 07:59:35

End at: 2018-01-17 08:00:05

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 216.77 Mbit/s

95th percentile per-packet one-way delay: 114.244 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 79.38 Mbit/s

95th percentile per-packet one-way delay: 114.260 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 152.82 Mbit/s

95th percentile per-packet one-way delay: 114.264 ms

Loss rate: 0.63%

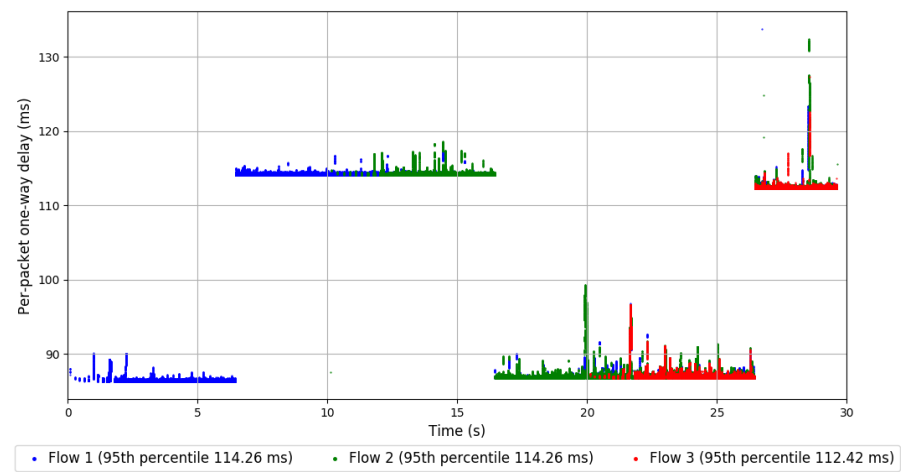
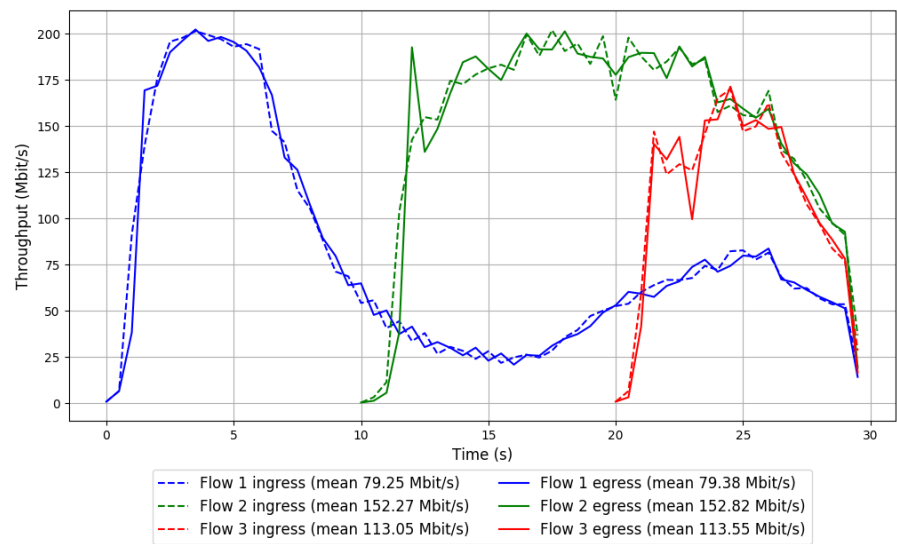
-- Flow 3:

Average throughput: 113.55 Mbit/s

95th percentile per-packet one-way delay: 112.415 ms

Loss rate: 1.37%

Run 6: Report of Indigo — Data Link



Run 7: Statistics of Indigo

Start at: 2018-01-17 08:18:14

End at: 2018-01-17 08:18:44

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 275.09 Mbit/s

95th percentile per-packet one-way delay: 86.862 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 130.09 Mbit/s

95th percentile per-packet one-way delay: 86.613 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 151.14 Mbit/s

95th percentile per-packet one-way delay: 86.913 ms

Loss rate: 1.15%

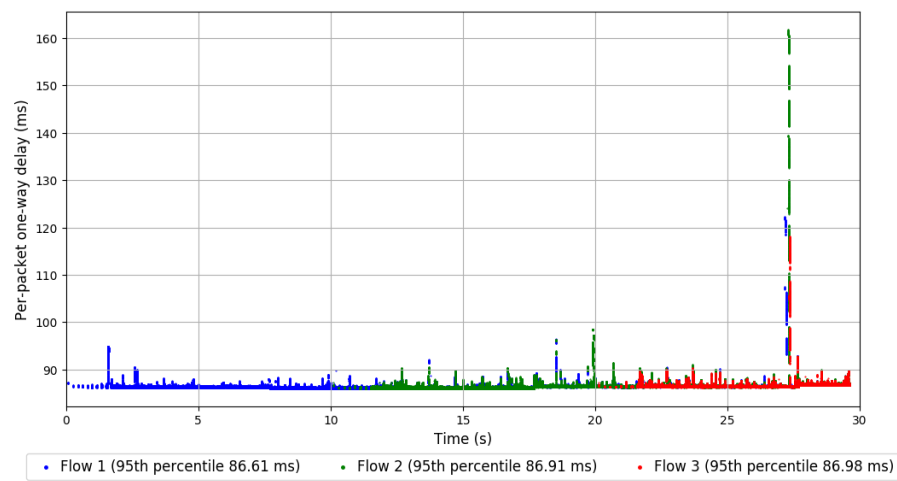
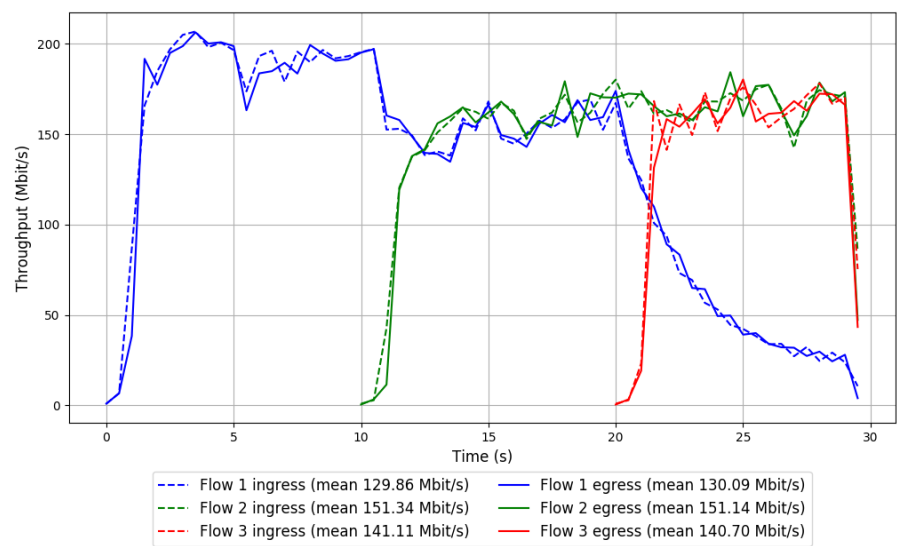
-- Flow 3:

Average throughput: 140.70 Mbit/s

95th percentile per-packet one-way delay: 86.980 ms

Loss rate: 2.36%

Run 7: Report of Indigo — Data Link



Run 8: Statistics of Indigo

Start at: 2018-01-17 08:37:13

End at: 2018-01-17 08:37:43

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 302.96 Mbit/s

95th percentile per-packet one-way delay: 92.662 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 163.25 Mbit/s

95th percentile per-packet one-way delay: 87.579 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 147.80 Mbit/s

95th percentile per-packet one-way delay: 105.217 ms

Loss rate: 0.85%

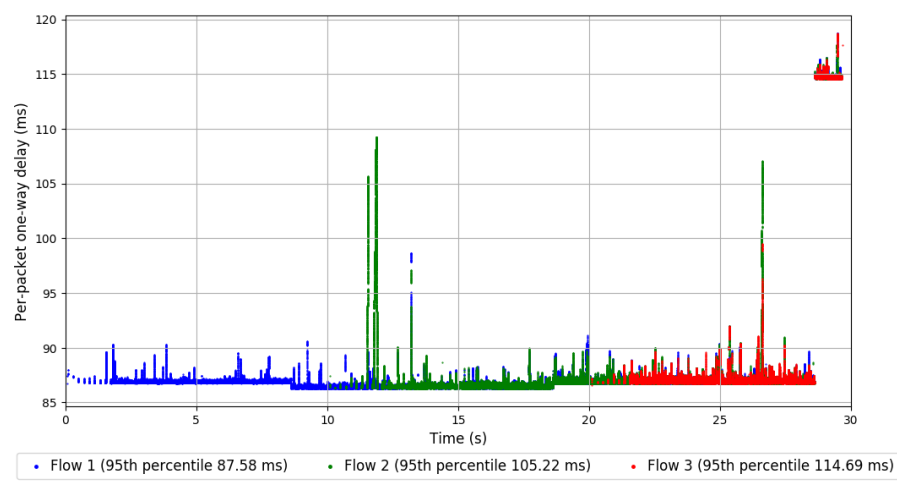
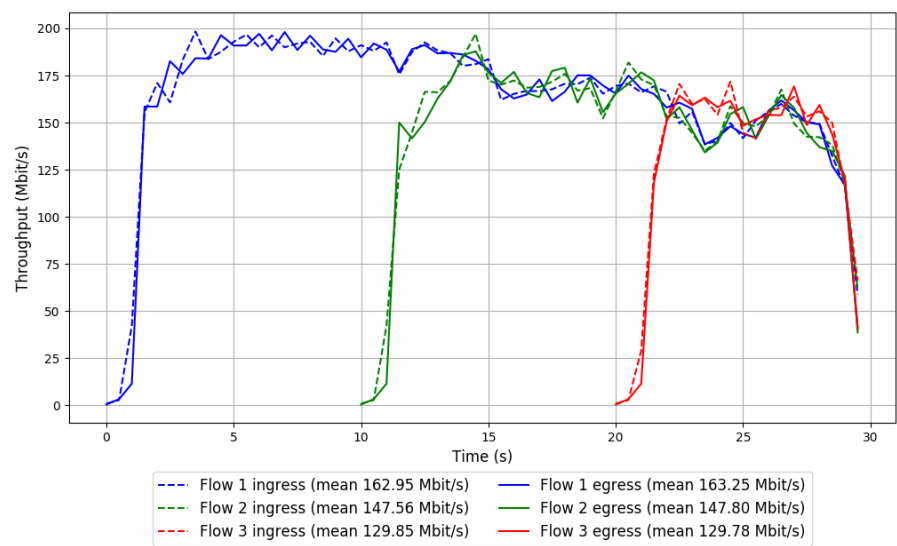
-- Flow 3:

Average throughput: 129.78 Mbit/s

95th percentile per-packet one-way delay: 114.695 ms

Loss rate: 2.06%

Run 8: Report of Indigo — Data Link



Run 9: Statistics of Indigo

Start at: 2018-01-17 08:56:06

End at: 2018-01-17 08:56:36

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 229.92 Mbit/s

95th percentile per-packet one-way delay: 86.686 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 85.86 Mbit/s

95th percentile per-packet one-way delay: 86.670 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 152.31 Mbit/s

95th percentile per-packet one-way delay: 86.640 ms

Loss rate: 1.21%

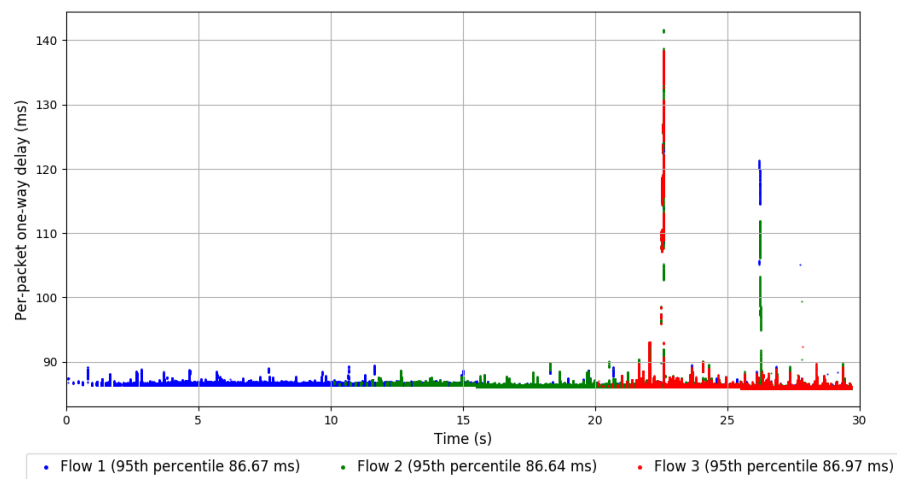
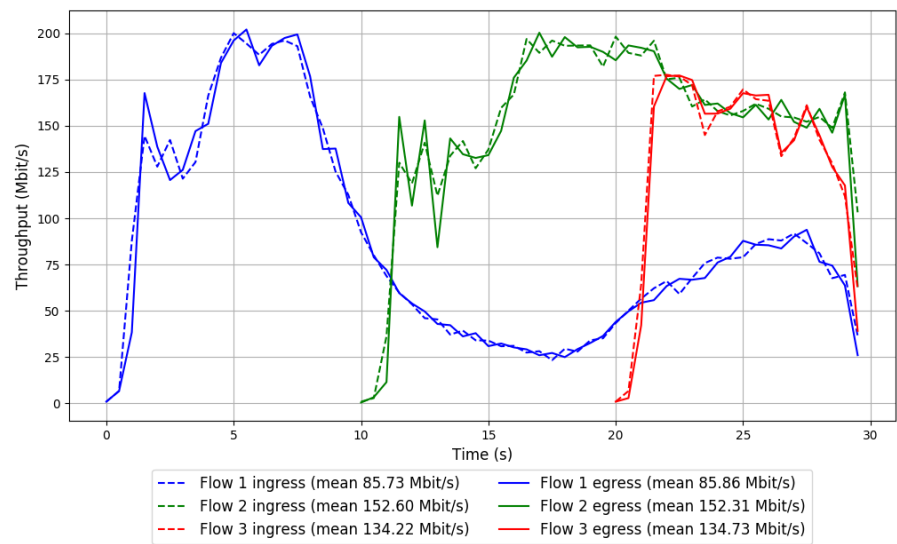
-- Flow 3:

Average throughput: 134.73 Mbit/s

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

Loss rate: 1.69%

Run 9: Report of Indigo — Data Link



Run 10: Statistics of Indigo

Start at: 2018-01-17 09:14:43

End at: 2018-01-17 09:15:13

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 299.32 Mbit/s

95th percentile per-packet one-way delay: 86.834 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 171.84 Mbit/s

95th percentile per-packet one-way delay: 86.694 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 134.67 Mbit/s

95th percentile per-packet one-way delay: 87.551 ms

Loss rate: 1.24%

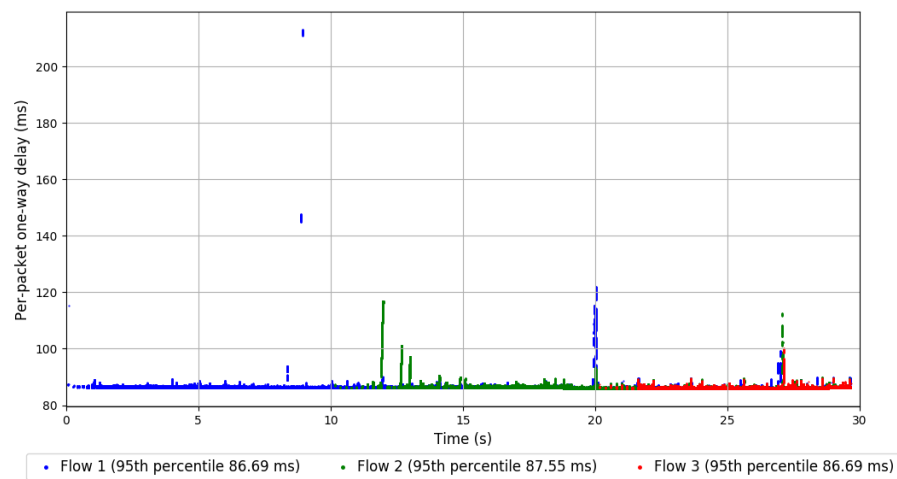
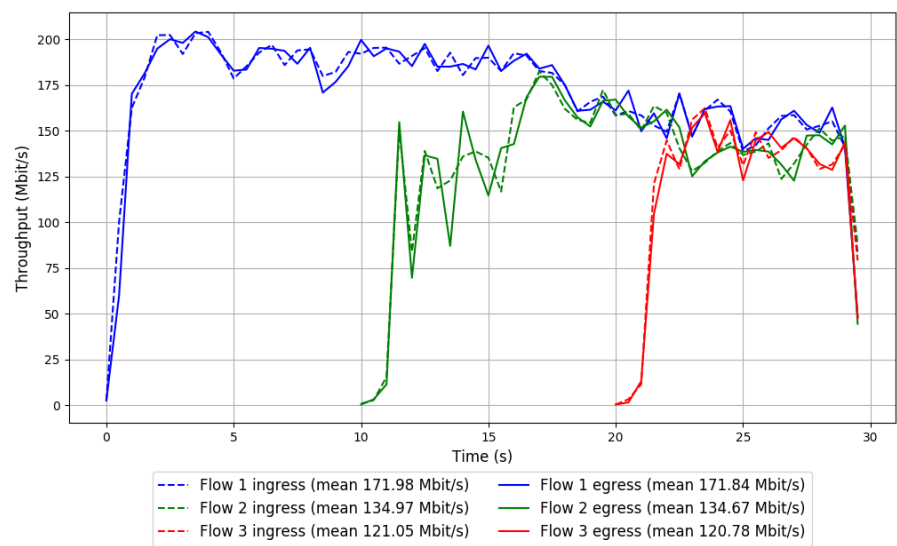
-- Flow 3:

Average throughput: 120.78 Mbit/s

95th percentile per-packet one-way delay: 86.685 ms

Loss rate: 2.25%

Run 10: Report of Indigo — Data Link



Run 1: Statistics of Vivace-latency

Start at: 2018-01-17 06:19:25

End at: 2018-01-17 06:19:55

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 315.88 Mbit/s

95th percentile per-packet one-way delay: 88.497 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 231.90 Mbit/s

95th percentile per-packet one-way delay: 88.750 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 121.90 Mbit/s

95th percentile per-packet one-way delay: 87.057 ms

Loss rate: 1.43%

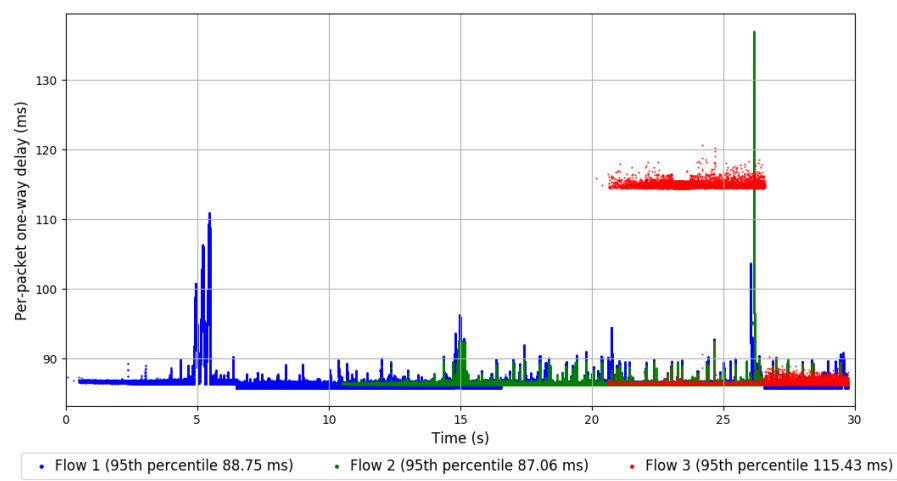
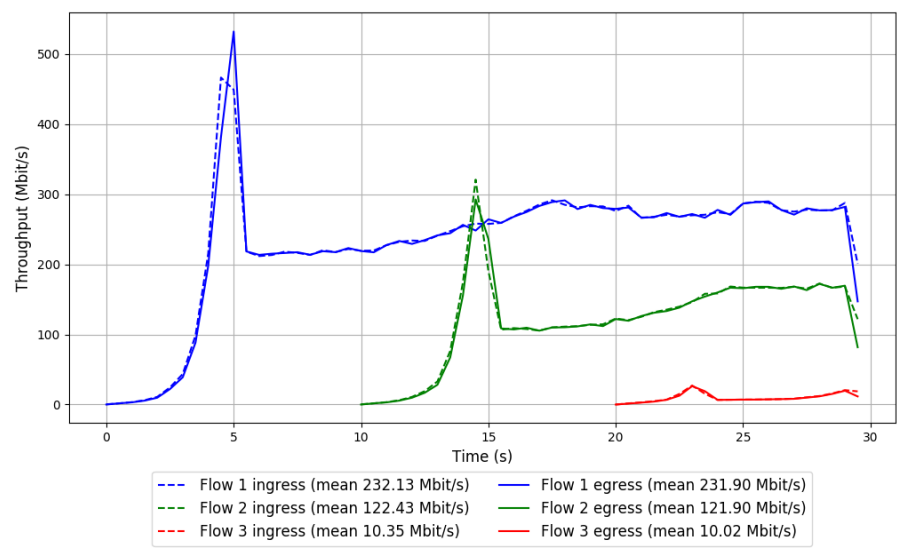
-- Flow 3:

Average throughput: 10.02 Mbit/s

95th percentile per-packet one-way delay: 115.429 ms

Loss rate: 5.49%

Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-01-17 06:38:36

End at: 2018-01-17 06:39:06

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 296.51 Mbit/s

95th percentile per-packet one-way delay: 88.480 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 200.89 Mbit/s

95th percentile per-packet one-way delay: 88.476 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 98.34 Mbit/s

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

Loss rate: 1.60%

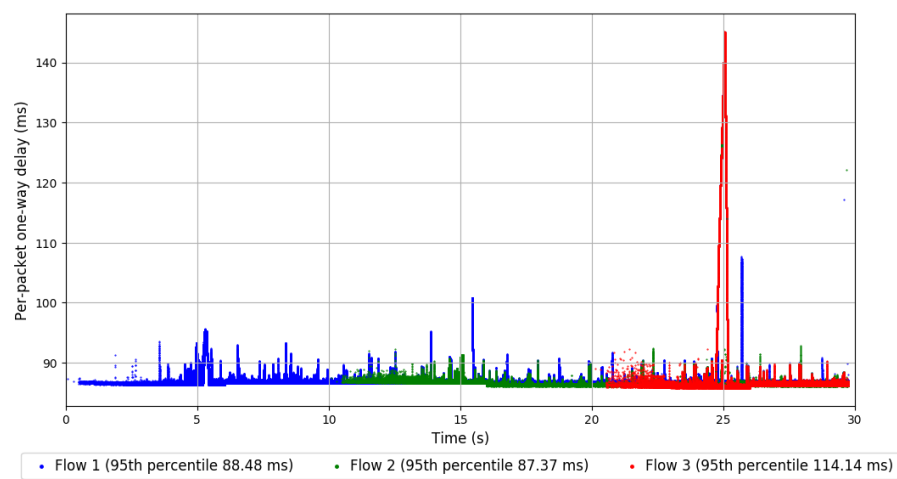
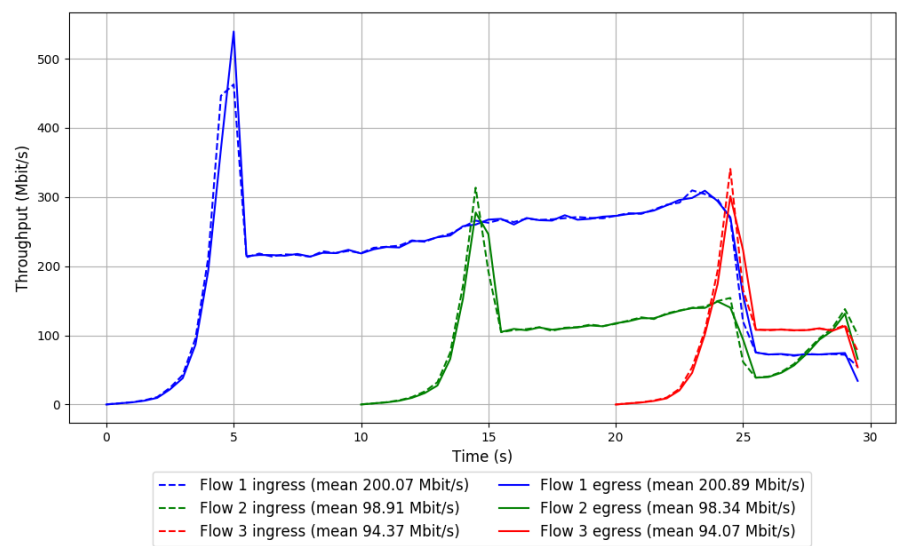
-- Flow 3:

Average throughput: 94.07 Mbit/s

95th percentile per-packet one-way delay: 114.141 ms

Loss rate: 2.42%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-01-17 06:57:41

End at: 2018-01-17 06:58:11

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 256.28 Mbit/s

95th percentile per-packet one-way delay: 114.635 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 141.16 Mbit/s

95th percentile per-packet one-way delay: 114.848 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 134.32 Mbit/s

95th percentile per-packet one-way delay: 88.740 ms

Loss rate: 1.79%

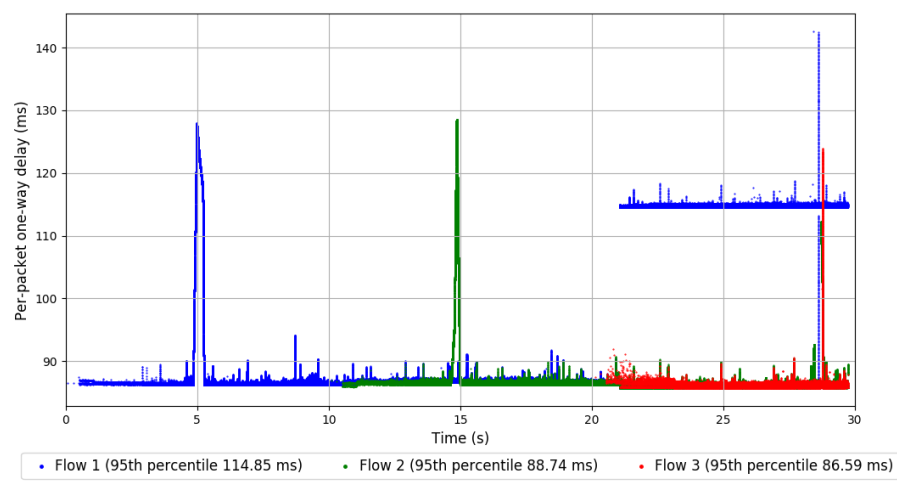
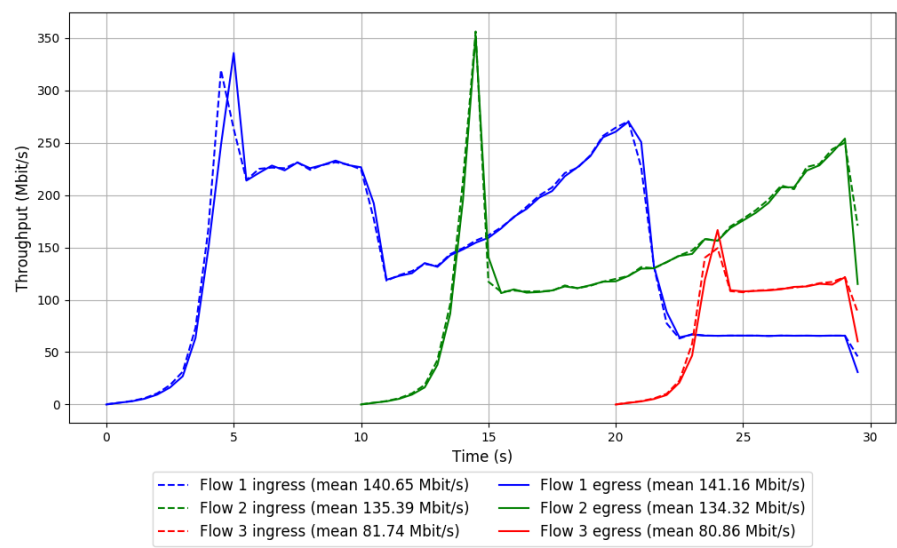
-- Flow 3:

Average throughput: 80.86 Mbit/s

95th percentile per-packet one-way delay: 86.586 ms

Loss rate: 3.10%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-01-17 07:16:50

End at: 2018-01-17 07:17:20

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 324.45 Mbit/s

95th percentile per-packet one-way delay: 114.900 ms

Loss rate: 1.16%

-- Flow 1:

Average throughput: 229.37 Mbit/s

95th percentile per-packet one-way delay: 114.965 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 139.72 Mbit/s

95th percentile per-packet one-way delay: 114.807 ms

Loss rate: 2.08%

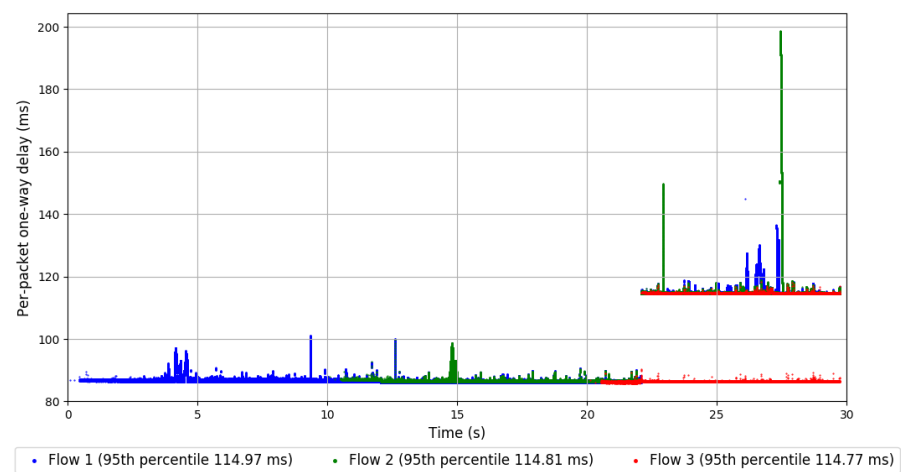
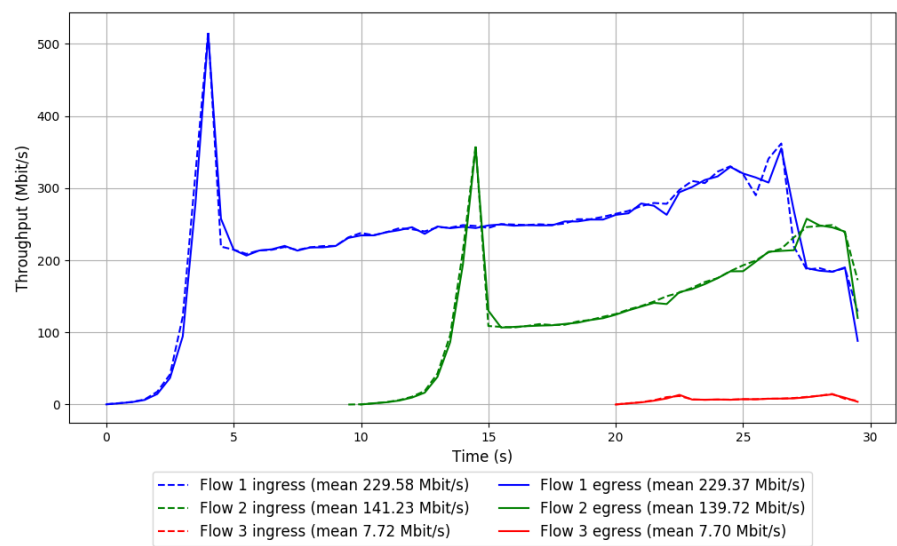
-- Flow 3:

Average throughput: 7.70 Mbit/s

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

Loss rate: 2.19%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-01-17 07:36:02

End at: 2018-01-17 07:36:32

Below is generated by plot.py at 2018-01-17 13:55:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 278.61 Mbit/s

95th percentile per-packet one-way delay: 87.557 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 149.26 Mbit/s

95th percentile per-packet one-way delay: 87.290 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 150.96 Mbit/s

95th percentile per-packet one-way delay: 87.404 ms

Loss rate: 0.45%

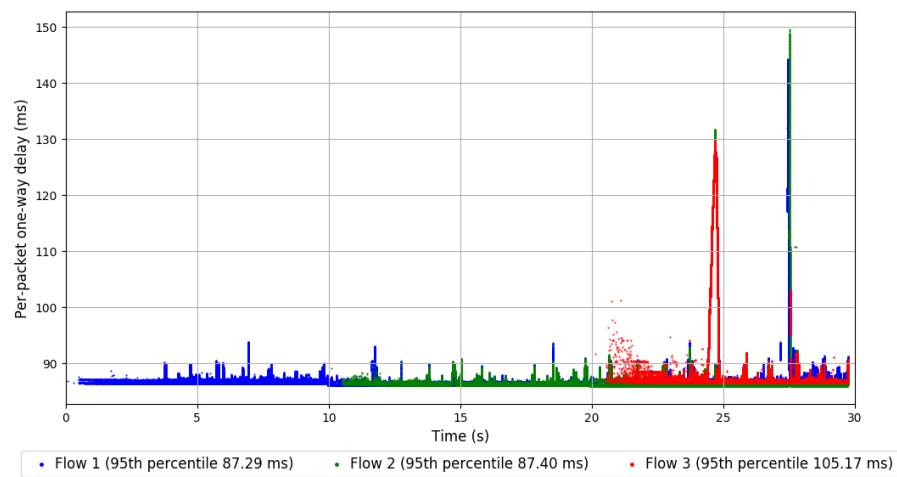
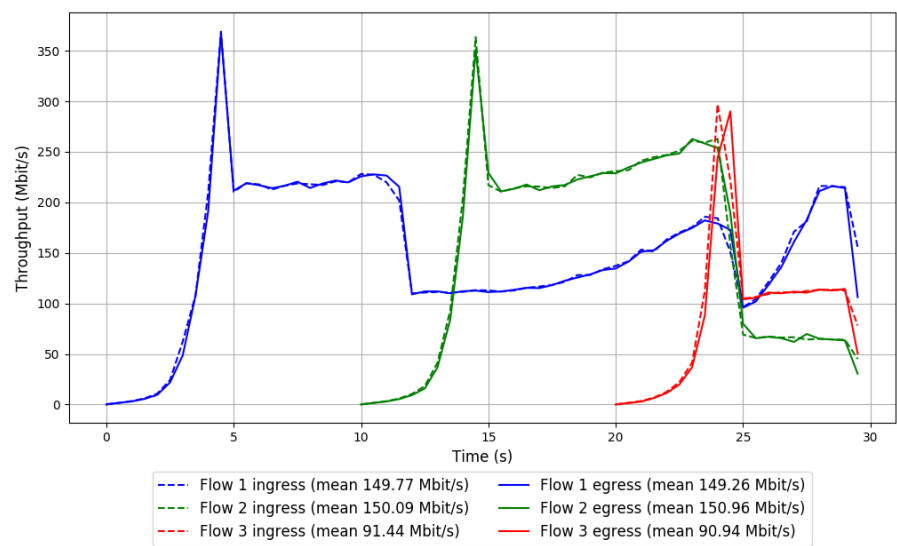
-- Flow 3:

Average throughput: 90.94 Mbit/s

95th percentile per-packet one-way delay: 105.166 ms

Loss rate: 2.63%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-01-17 07:55:00

End at: 2018-01-17 07:55:30

Below is generated by plot.py at 2018-01-17 13:55:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 348.73 Mbit/s

95th percentile per-packet one-way delay: 88.283 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 185.56 Mbit/s

95th percentile per-packet one-way delay: 88.005 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 207.53 Mbit/s

95th percentile per-packet one-way delay: 88.929 ms

Loss rate: 1.15%

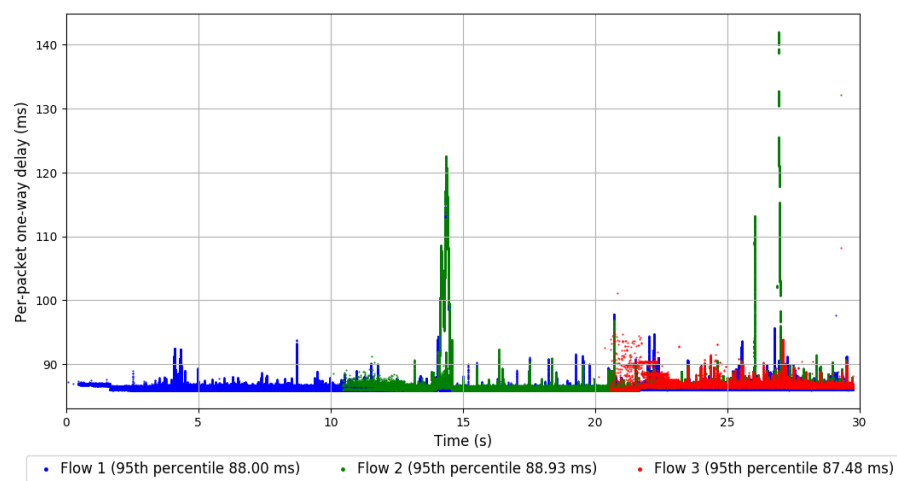
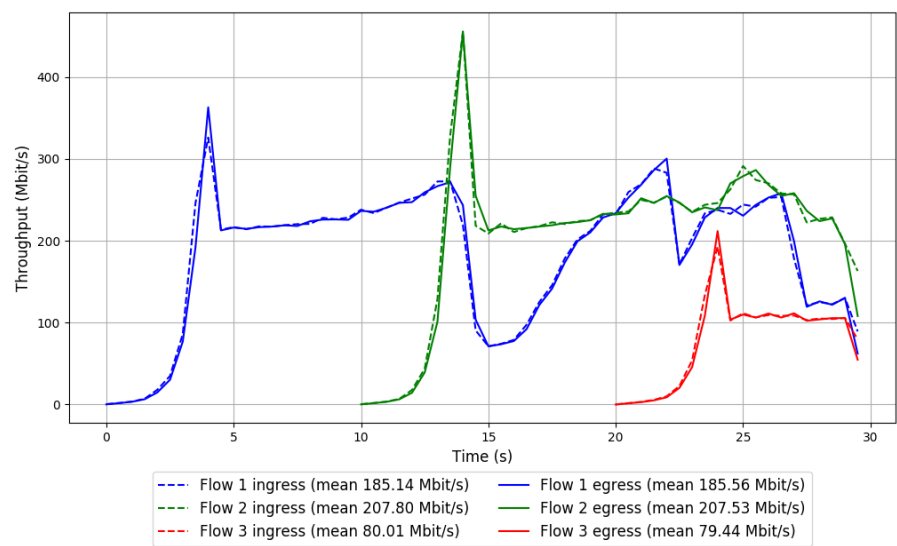
-- Flow 3:

Average throughput: 79.44 Mbit/s

95th percentile per-packet one-way delay: 87.478 ms

Loss rate: 2.75%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-01-17 08:14:10

End at: 2018-01-17 08:14:40

Below is generated by plot.py at 2018-01-17 13:55:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 240.81 Mbit/s

95th percentile per-packet one-way delay: 113.713 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 188.85 Mbit/s

95th percentile per-packet one-way delay: 114.053 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 73.14 Mbit/s

95th percentile per-packet one-way delay: 112.386 ms

Loss rate: 0.52%

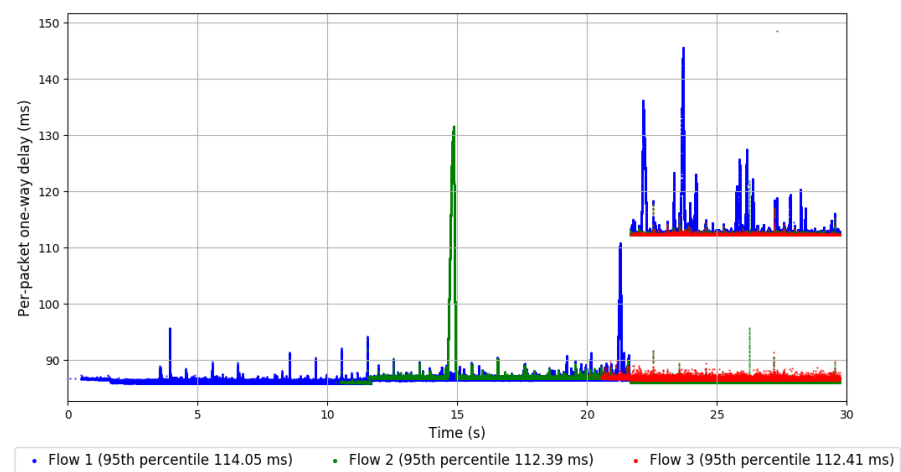
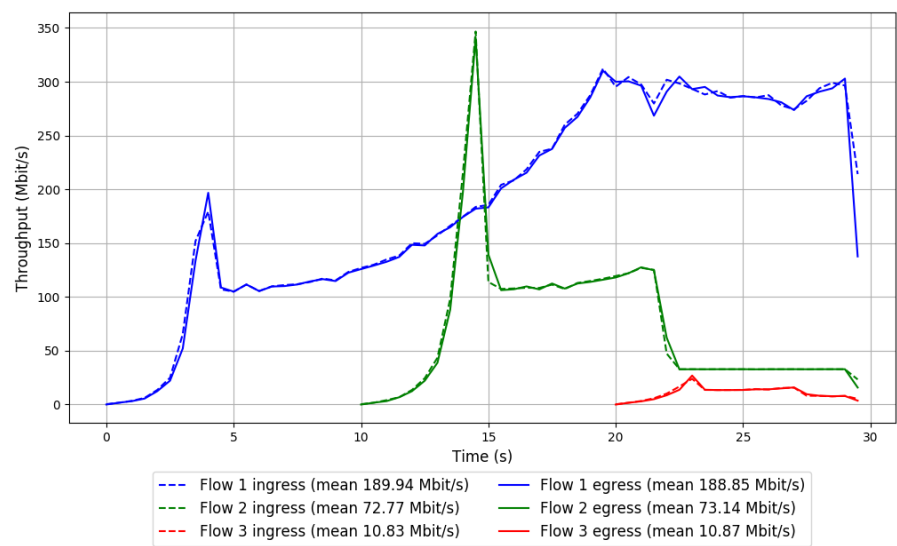
-- Flow 3:

Average throughput: 10.87 Mbit/s

95th percentile per-packet one-way delay: 112.411 ms

Loss rate: 1.63%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-01-17 08:32:55

End at: 2018-01-17 08:33:25

Below is generated by plot.py at 2018-01-17 13:55:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 228.09 Mbit/s

95th percentile per-packet one-way delay: 87.199 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 117.16 Mbit/s

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

Loss rate: 1.52%

-- Flow 2:

Average throughput: 161.40 Mbit/s

95th percentile per-packet one-way delay: 87.771 ms

Loss rate: 0.22%

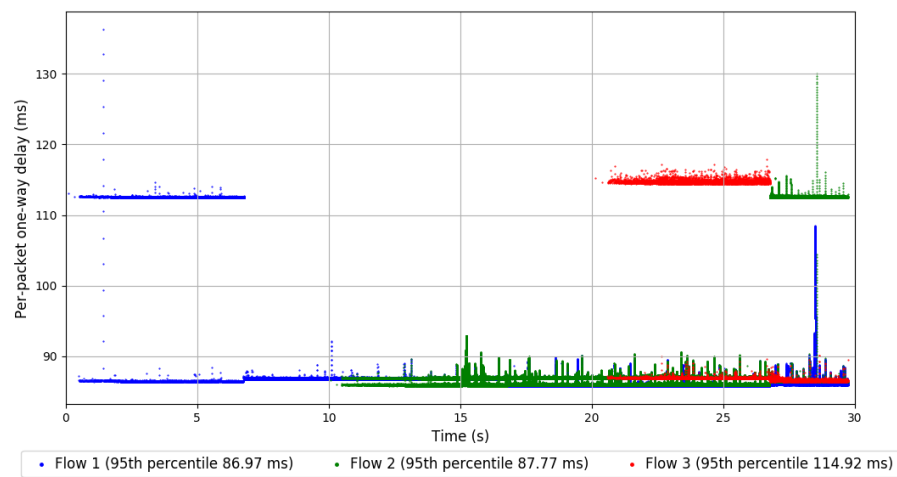
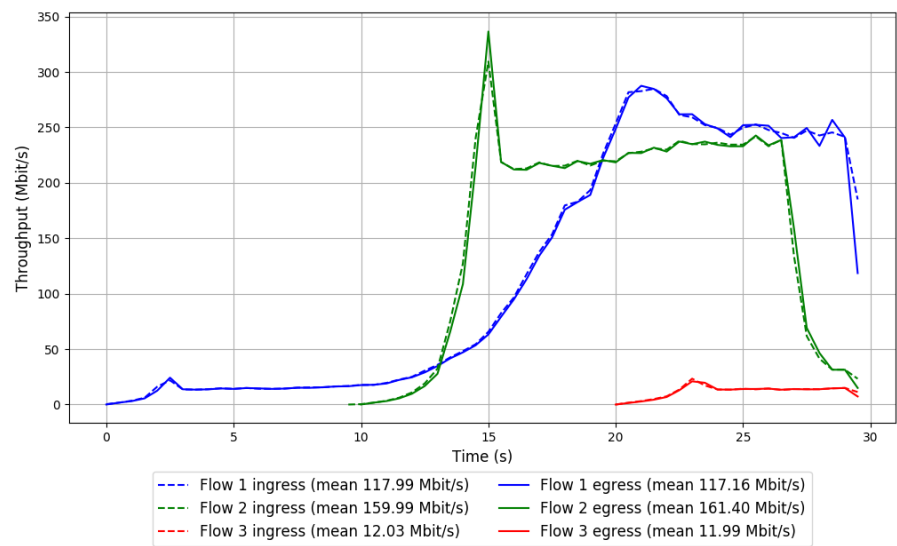
-- Flow 3:

Average throughput: 11.99 Mbit/s

95th percentile per-packet one-way delay: 114.920 ms

Loss rate: 2.79%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-01-17 08:51:58

End at: 2018-01-17 08:52:28

Below is generated by plot.py at 2018-01-17 13:55:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 57.05 Mbit/s

95th percentile per-packet one-way delay: 114.732 ms

Loss rate: 2.61%

-- Flow 1:

Average throughput: 23.57 Mbit/s

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

Loss rate: 2.96%

-- Flow 2:

Average throughput: 45.13 Mbit/s

95th percentile per-packet one-way delay: 114.743 ms

Loss rate: 1.29%

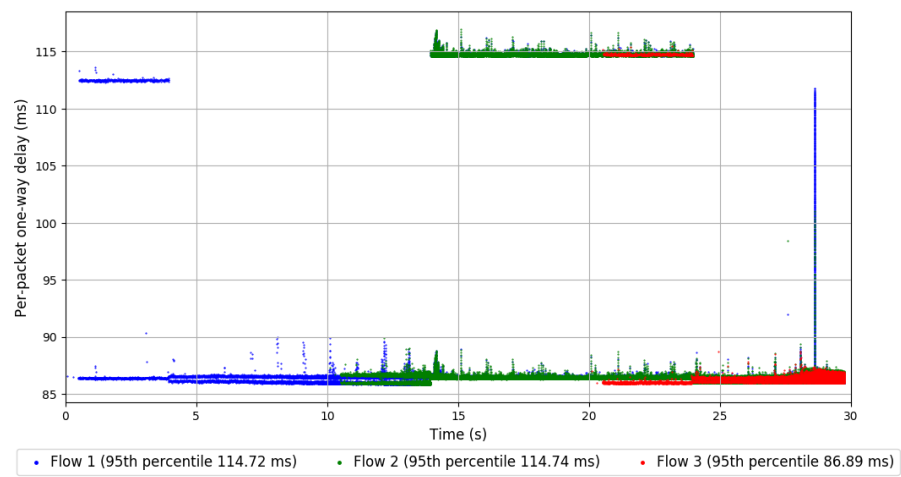
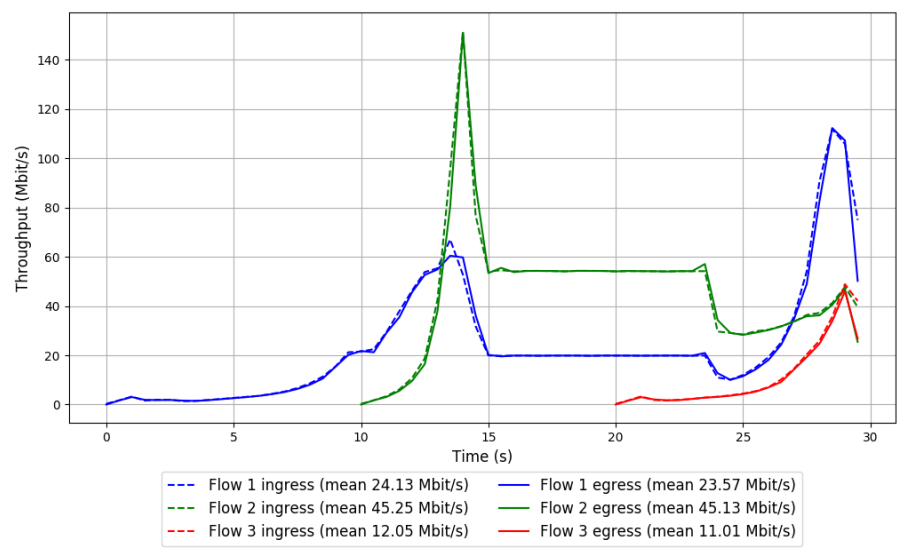
-- Flow 3:

Average throughput: 11.01 Mbit/s

95th percentile per-packet one-way delay: 86.893 ms

Loss rate: 10.44%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-01-17 09:10:37

End at: 2018-01-17 09:11:07

Below is generated by plot.py at 2018-01-17 13:55:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 276.81 Mbit/s

95th percentile per-packet one-way delay: 87.706 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 177.93 Mbit/s

95th percentile per-packet one-way delay: 87.374 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 104.16 Mbit/s

95th percentile per-packet one-way delay: 87.466 ms

Loss rate: 0.86%

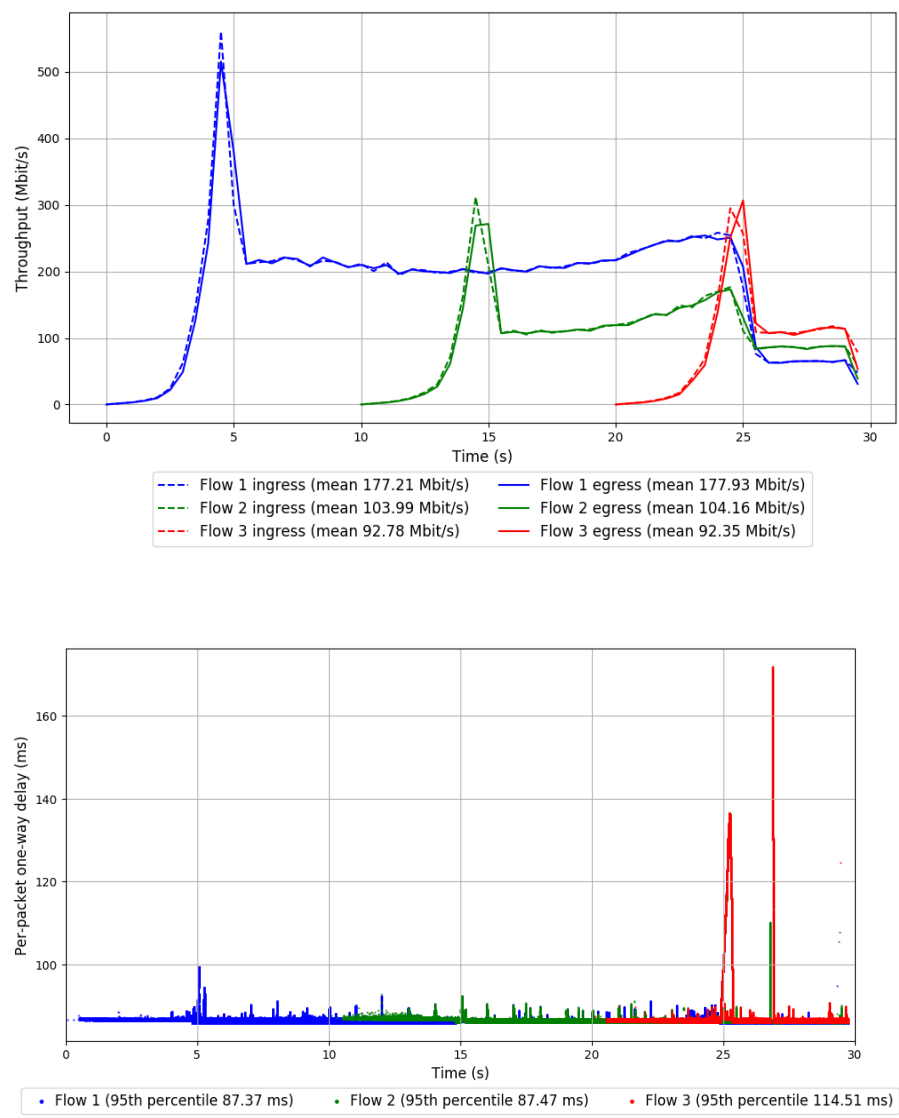
-- Flow 3:

Average throughput: 92.35 Mbit/s

95th percentile per-packet one-way delay: 114.508 ms

Loss rate: 2.53%

Run 10: Report of Vivace-latency — Data Link

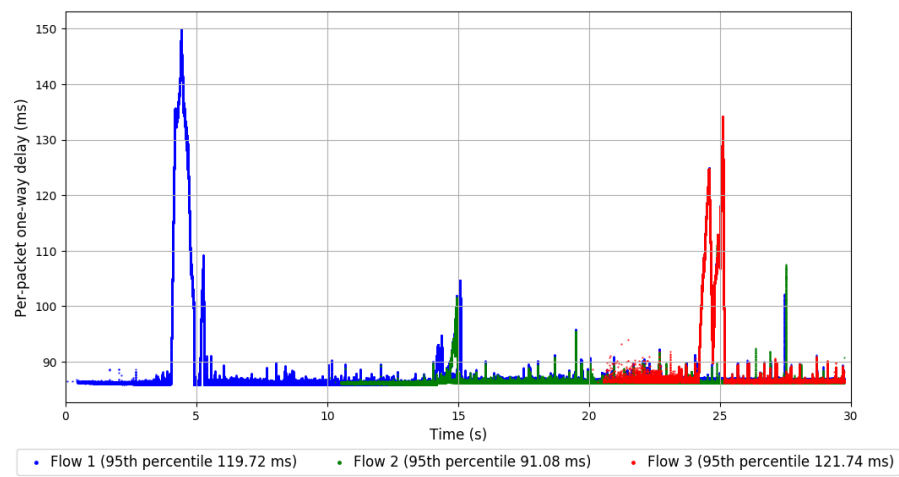
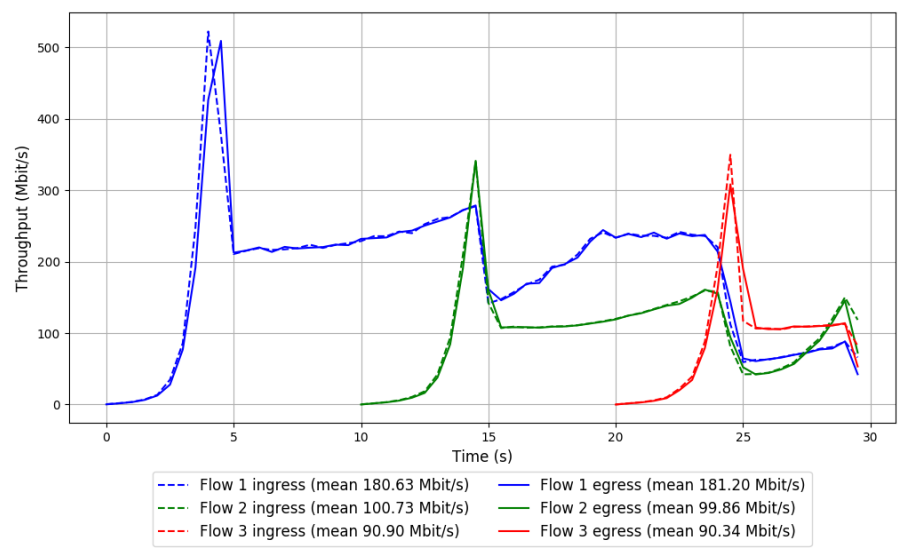


```
Run 1: Statistics of Vivace-loss

Start at: 2018-01-17 06:07:08
End at: 2018-01-17 06:07:38

# Below is generated by plot.py at 2018-01-17 13:55:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 276.60 Mbit/s
95th percentile per-packet one-way delay: 112.744 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 181.20 Mbit/s
95th percentile per-packet one-way delay: 119.718 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 99.86 Mbit/s
95th percentile per-packet one-way delay: 91.081 ms
Loss rate: 1.86%
-- Flow 3:
Average throughput: 90.34 Mbit/s
95th percentile per-packet one-way delay: 121.739 ms
Loss rate: 2.67%
```

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-01-17 06:25:56

End at: 2018-01-17 06:26:26

Below is generated by plot.py at 2018-01-17 13:58:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 352.18 Mbit/s

95th percentile per-packet one-way delay: 100.349 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 205.74 Mbit/s

95th percentile per-packet one-way delay: 104.710 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 183.47 Mbit/s

95th percentile per-packet one-way delay: 89.130 ms

Loss rate: 1.31%

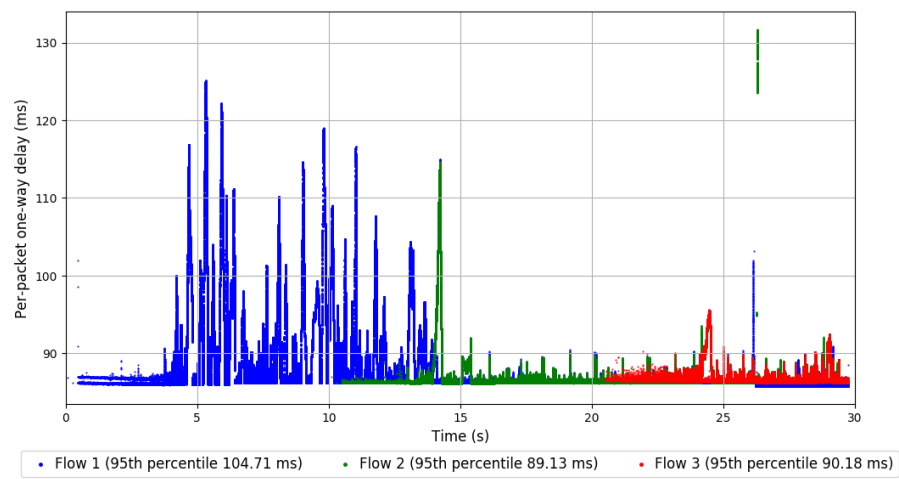
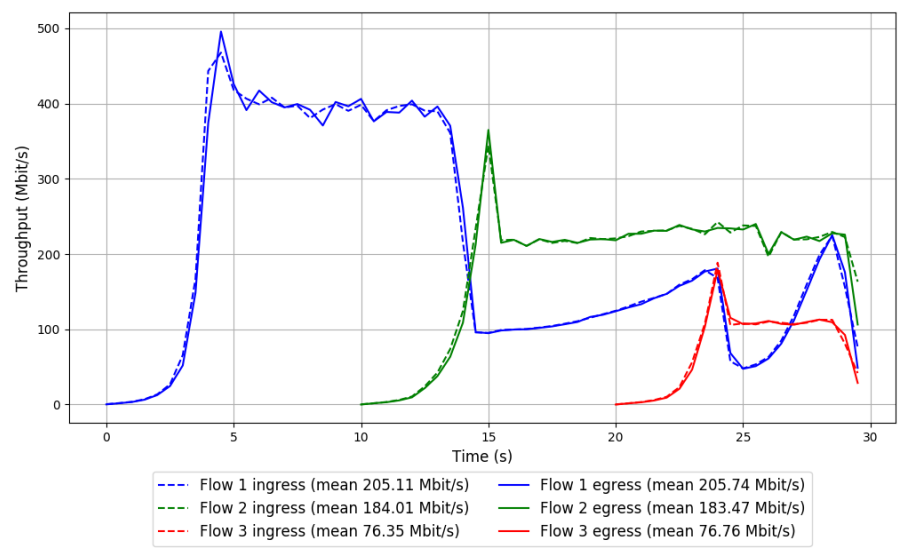
-- Flow 3:

Average throughput: 76.76 Mbit/s

95th percentile per-packet one-way delay: 90.178 ms

Loss rate: 1.55%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-01-17 06:45:14

End at: 2018-01-17 06:45:44

Below is generated by plot.py at 2018-01-17 13:58:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 220.52 Mbit/s

95th percentile per-packet one-way delay: 114.435 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 88.31 Mbit/s

95th percentile per-packet one-way delay: 114.568 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 195.23 Mbit/s

95th percentile per-packet one-way delay: 96.822 ms

Loss rate: 1.28%

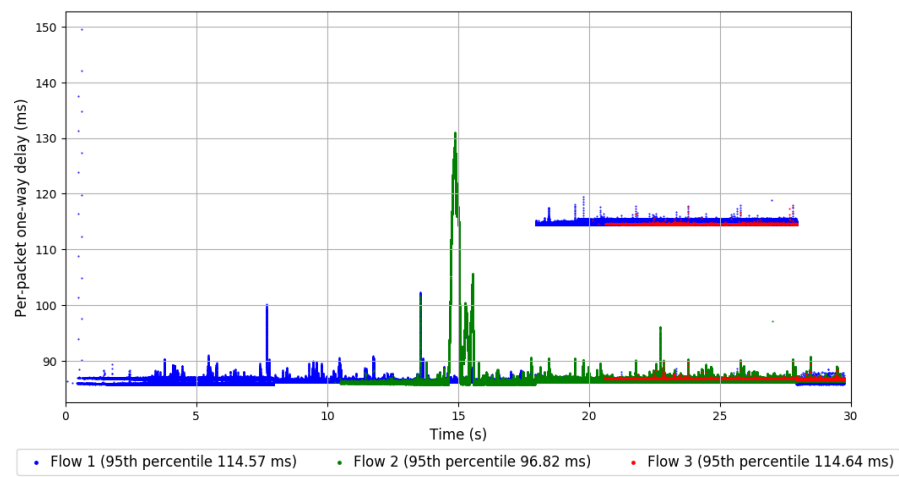
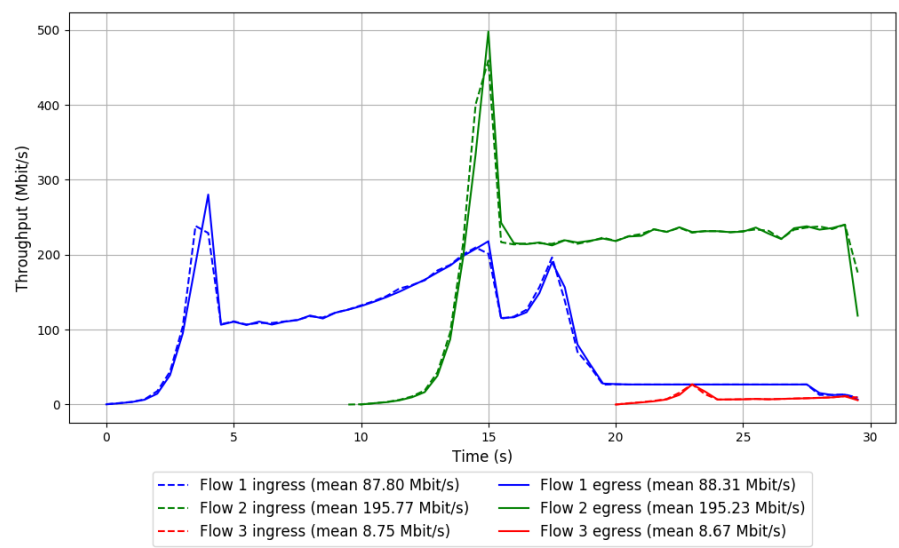
-- Flow 3:

Average throughput: 8.67 Mbit/s

95th percentile per-packet one-way delay: 114.637 ms

Loss rate: 3.20%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-01-17 07:04:23

End at: 2018-01-17 07:04:53

Below is generated by plot.py at 2018-01-17 14:03:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 342.39 Mbit/s

95th percentile per-packet one-way delay: 97.355 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 225.59 Mbit/s

95th percentile per-packet one-way delay: 108.422 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 132.01 Mbit/s

95th percentile per-packet one-way delay: 87.213 ms

Loss rate: 1.95%

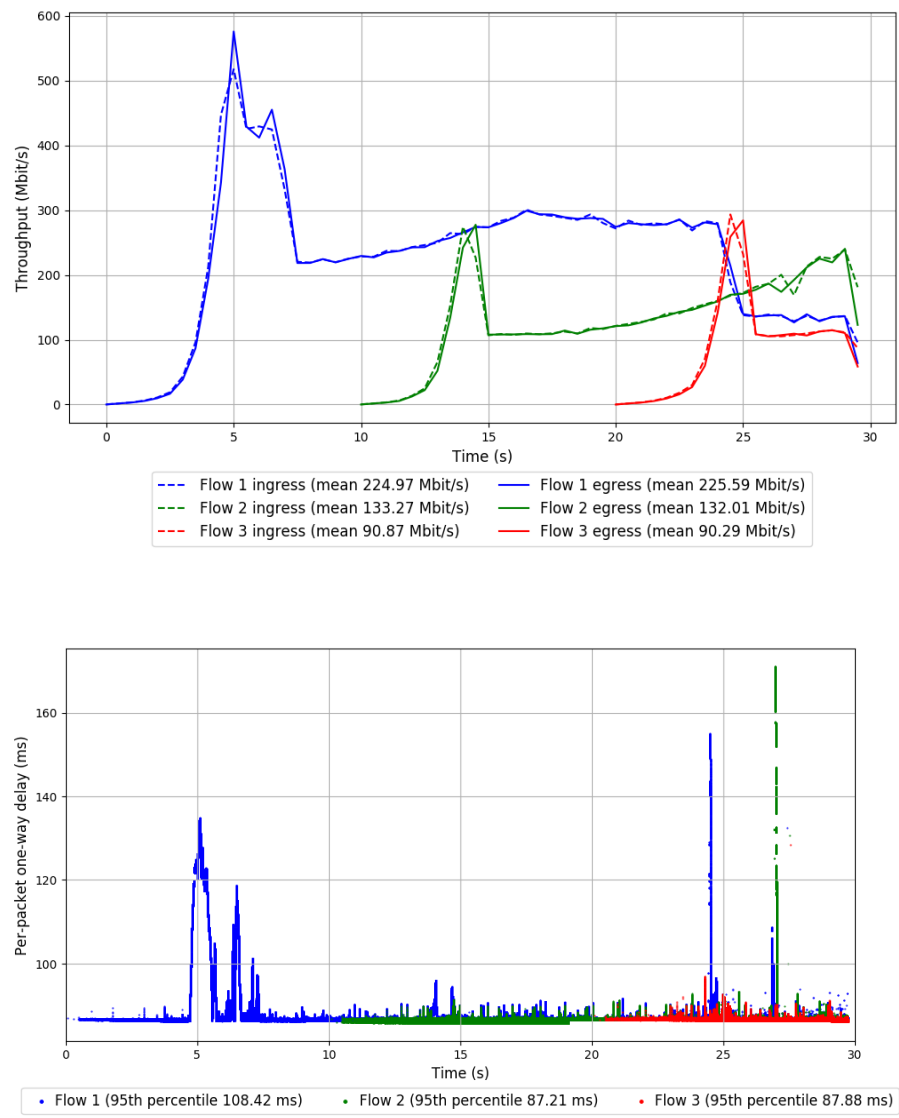
-- Flow 3:

Average throughput: 90.29 Mbit/s

95th percentile per-packet one-way delay: 87.883 ms

Loss rate: 2.71%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-01-17 07:23:34

End at: 2018-01-17 07:24:04

Below is generated by plot.py at 2018-01-17 14:03:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 212.87 Mbit/s

95th percentile per-packet one-way delay: 87.802 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 80.49 Mbit/s

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

Loss rate: 0.82%

-- Flow 2:

Average throughput: 161.49 Mbit/s

95th percentile per-packet one-way delay: 87.594 ms

Loss rate: 0.83%

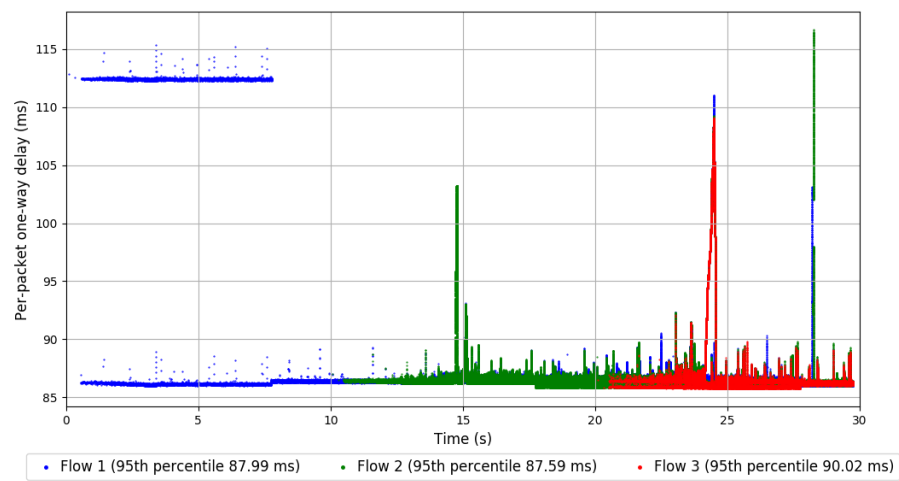
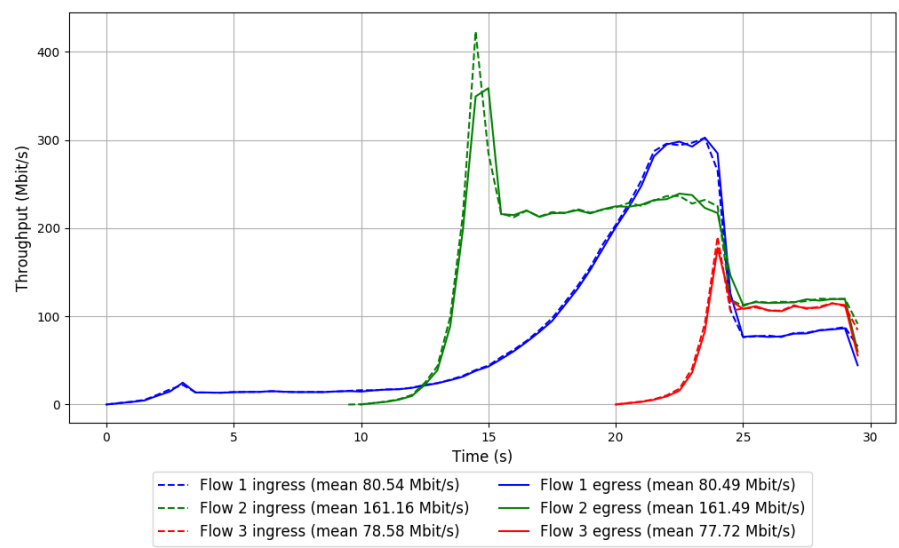
-- Flow 3:

Average throughput: 77.72 Mbit/s

95th percentile per-packet one-way delay: 90.020 ms

Loss rate: 3.11%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-01-17 07:42:25

End at: 2018-01-17 07:42:55

Below is generated by plot.py at 2018-01-17 14:03:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 264.99 Mbit/s

95th percentile per-packet one-way delay: 99.861 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 173.64 Mbit/s

95th percentile per-packet one-way delay: 103.400 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 98.99 Mbit/s

95th percentile per-packet one-way delay: 87.460 ms

Loss rate: 1.83%

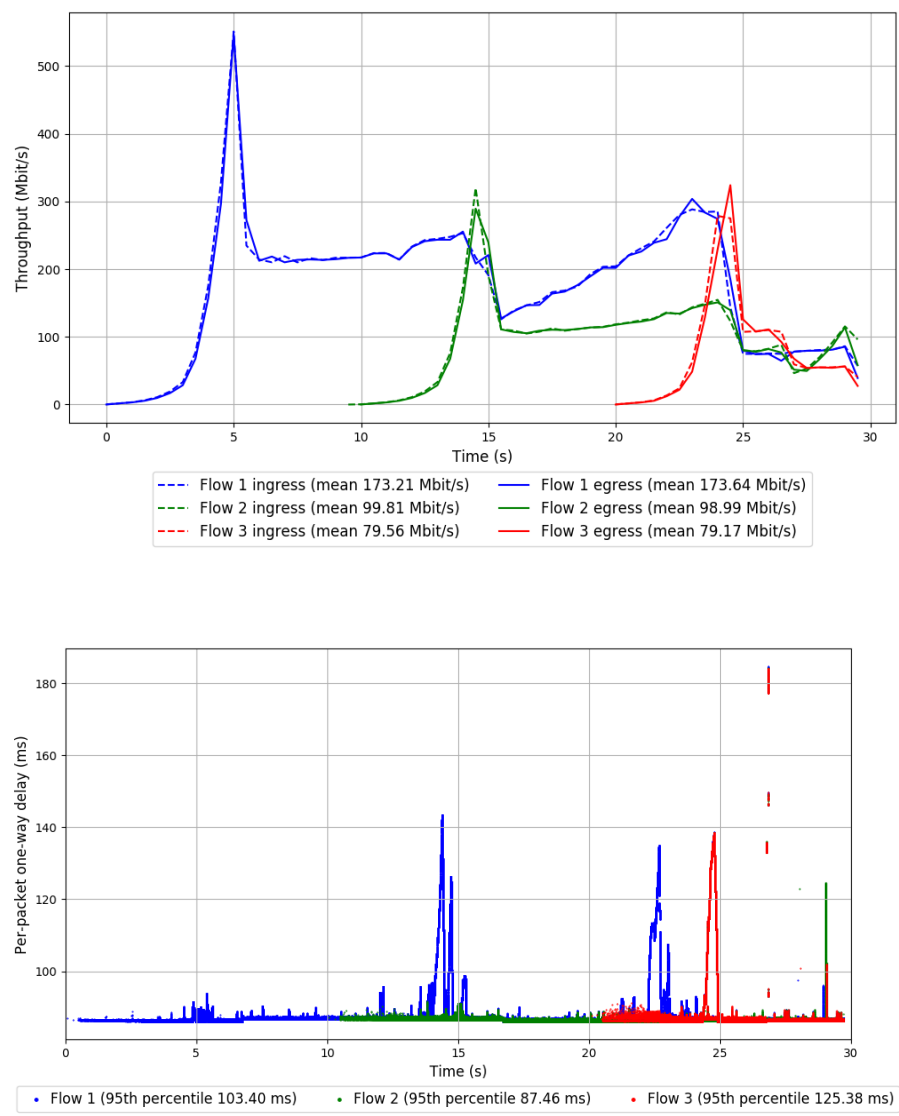
-- Flow 3:

Average throughput: 79.17 Mbit/s

95th percentile per-packet one-way delay: 125.377 ms

Loss rate: 2.54%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-01-17 08:01:41

End at: 2018-01-17 08:02:11

Below is generated by plot.py at 2018-01-17 14:04:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 284.11 Mbit/s

95th percentile per-packet one-way delay: 116.649 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 196.91 Mbit/s

95th percentile per-packet one-way delay: 123.598 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 88.21 Mbit/s

95th percentile per-packet one-way delay: 89.338 ms

Loss rate: 0.50%

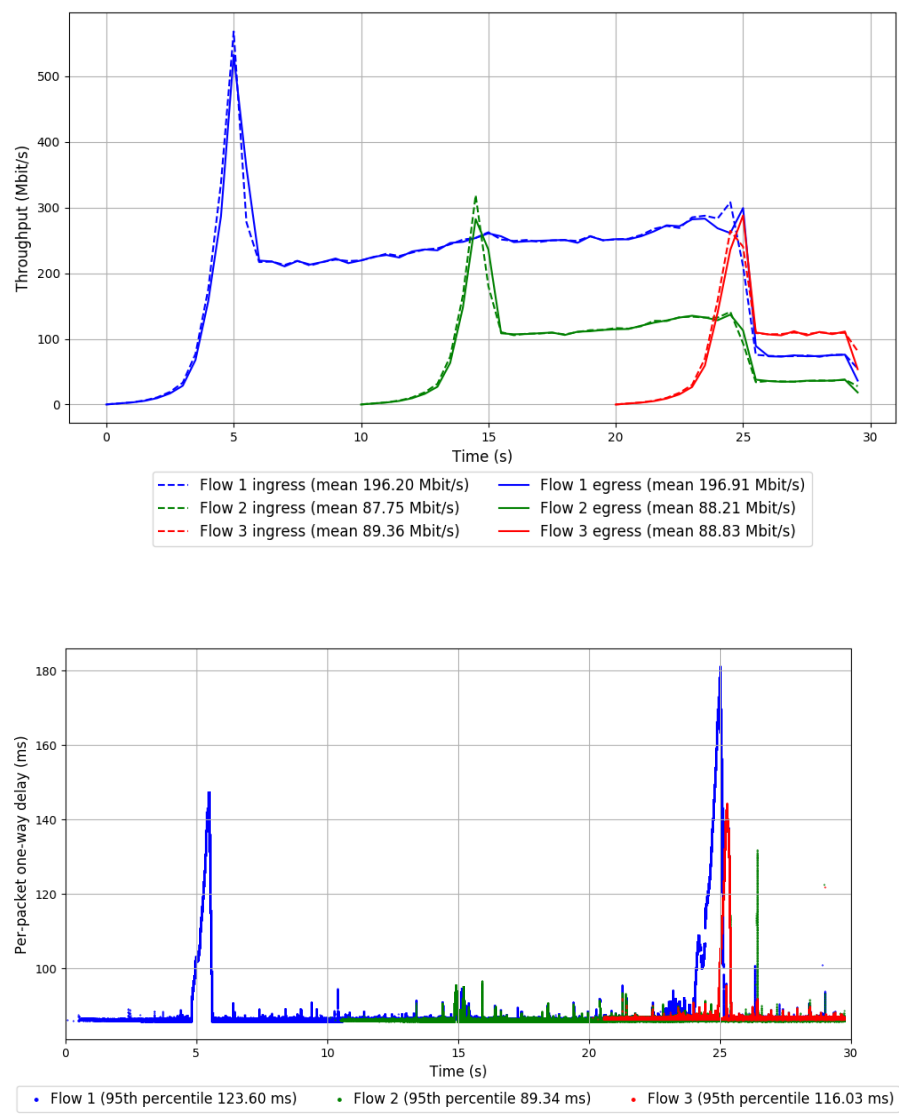
-- Flow 3:

Average throughput: 88.83 Mbit/s

95th percentile per-packet one-way delay: 116.027 ms

Loss rate: 2.64%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-01-17 08:20:28

End at: 2018-01-17 08:20:58

Below is generated by plot.py at 2018-01-17 14:04:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 278.40 Mbit/s

95th percentile per-packet one-way delay: 87.892 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 237.67 Mbit/s

95th percentile per-packet one-way delay: 87.229 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 22.61 Mbit/s

95th percentile per-packet one-way delay: 114.711 ms

Loss rate: 3.97%

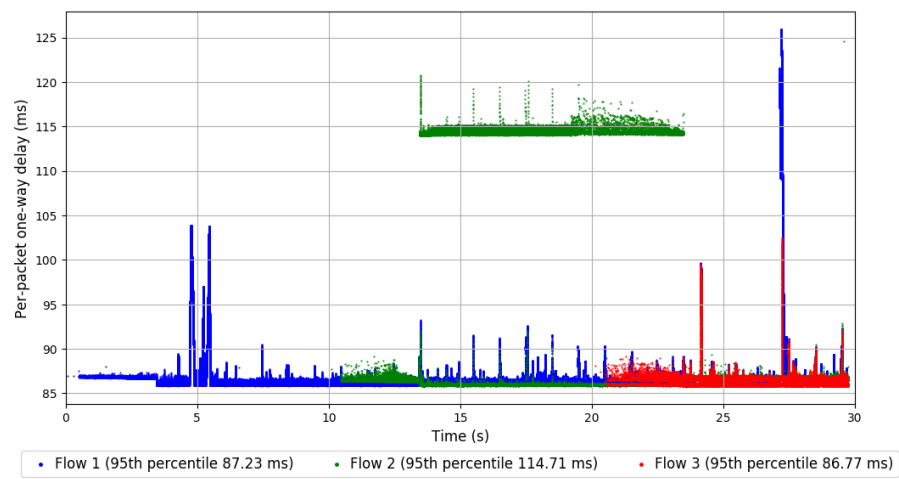
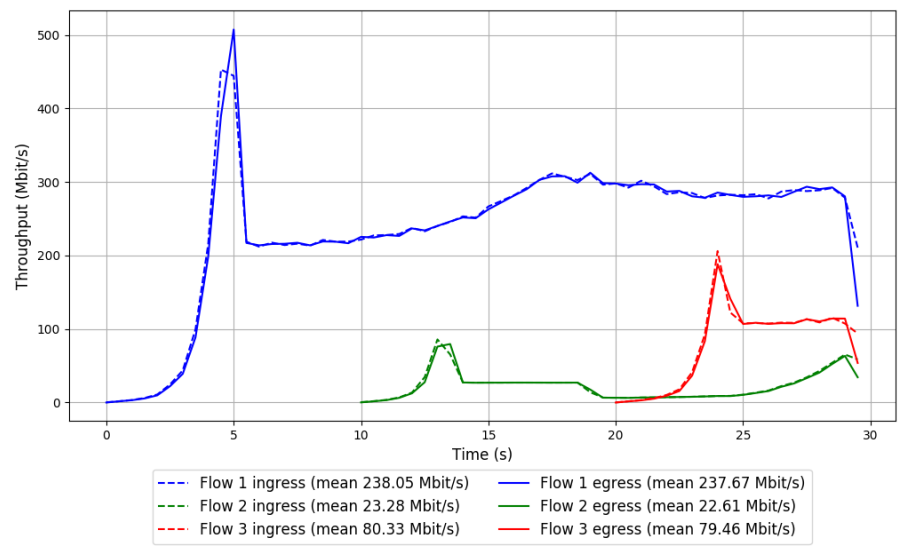
-- Flow 3:

Average throughput: 79.46 Mbit/s

95th percentile per-packet one-way delay: 86.766 ms

Loss rate: 3.35%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-01-17 08:39:40

End at: 2018-01-17 08:40:10

Below is generated by plot.py at 2018-01-17 14:05:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 287.89 Mbit/s

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

Loss rate: 0.61%

-- Flow 1:

Average throughput: 188.93 Mbit/s

95th percentile per-packet one-way delay: 87.730 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 67.56 Mbit/s

95th percentile per-packet one-way delay: 114.461 ms

Loss rate: 0.16%

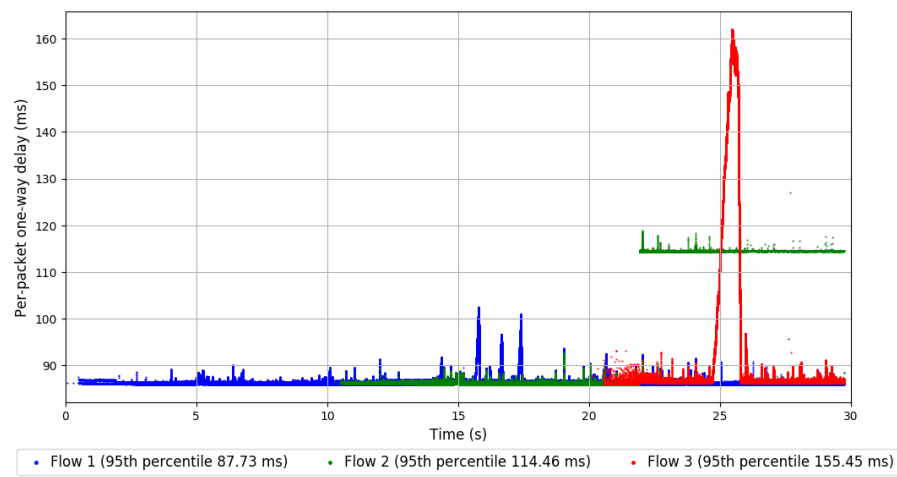
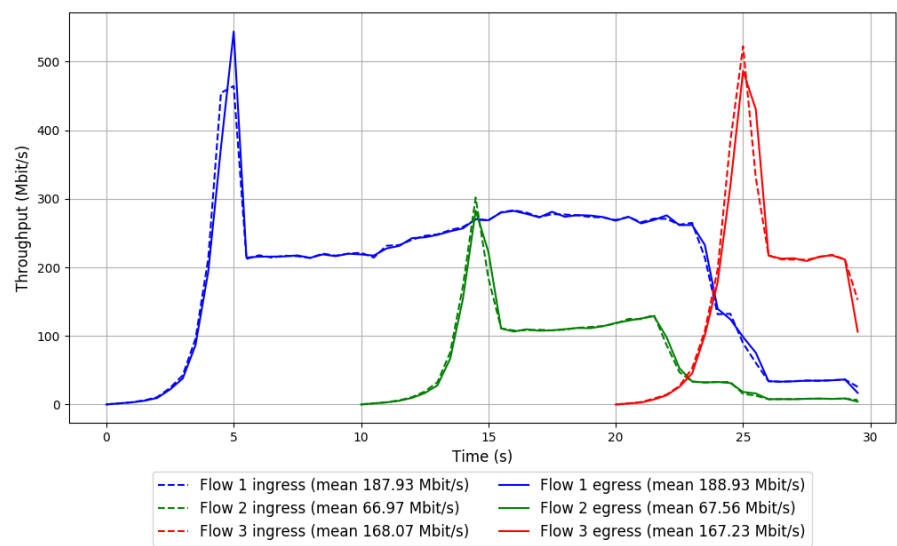
-- Flow 3:

Average throughput: 167.23 Mbit/s

95th percentile per-packet one-way delay: 155.446 ms

Loss rate: 2.56%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-01-17 08:58:23

End at: 2018-01-17 08:58:53

Below is generated by plot.py at 2018-01-17 14:05:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 270.31 Mbit/s

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

Loss rate: 0.57%

-- Flow 1:

Average throughput: 111.79 Mbit/s

95th percentile per-packet one-way delay: 88.289 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 203.47 Mbit/s

95th percentile per-packet one-way delay: 153.237 ms

Loss rate: 0.66%

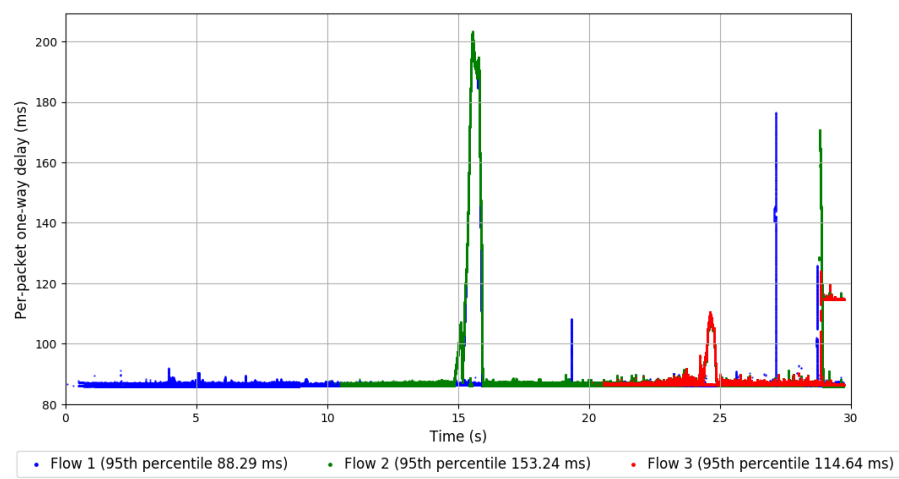
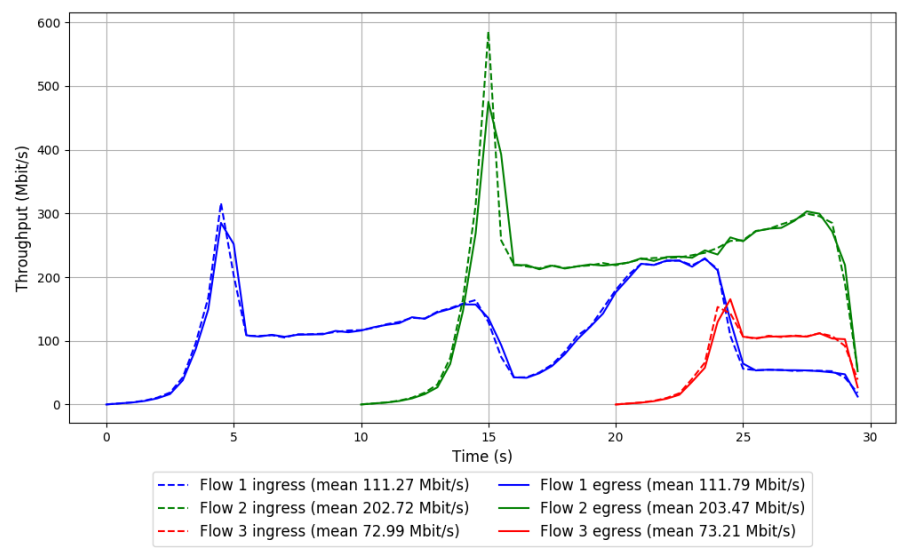
-- Flow 3:

Average throughput: 73.21 Mbit/s

95th percentile per-packet one-way delay: 114.644 ms

Loss rate: 1.76%

Run 10: Report of Vivace-loss — Data Link

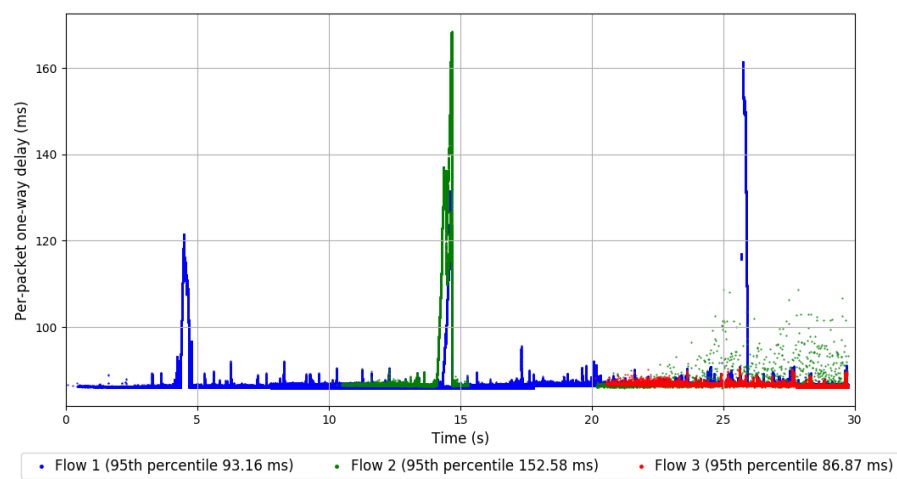
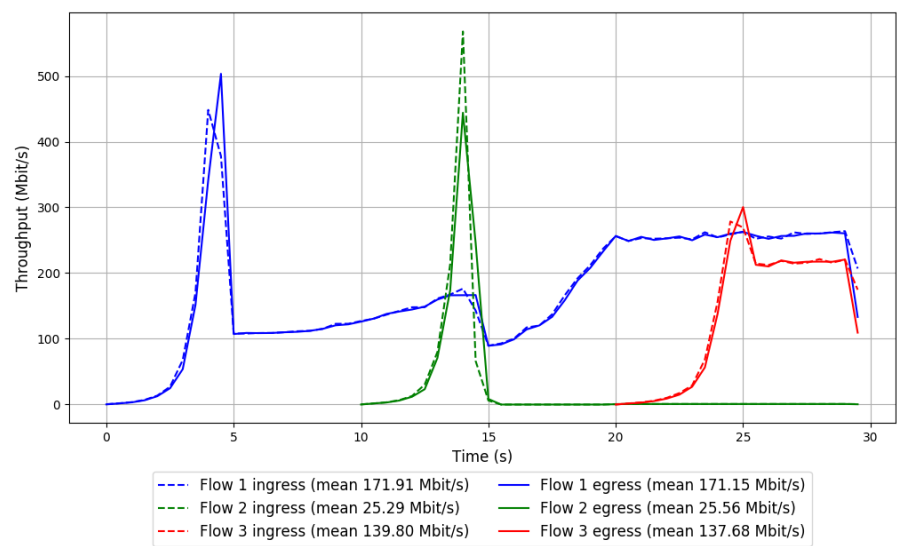


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-01-17 06:24:44
End at: 2018-01-17 06:25:14

# Below is generated by plot.py at 2018-01-17 14:06:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 232.68 Mbit/s
95th percentile per-packet one-way delay: 109.880 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 171.15 Mbit/s
95th percentile per-packet one-way delay: 93.157 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 25.56 Mbit/s
95th percentile per-packet one-way delay: 152.583 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 137.68 Mbit/s
95th percentile per-packet one-way delay: 86.869 ms
Loss rate: 3.77%
```

Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-01-17 06:44:17

End at: 2018-01-17 06:44:47

Below is generated by plot.py at 2018-01-17 14:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.19 Mbit/s

95th percentile per-packet one-way delay: 91.046 ms

Loss rate: 2.18%

-- Flow 1:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 114.703 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 133.56 Mbit/s

95th percentile per-packet one-way delay: 89.017 ms

Loss rate: 2.24%

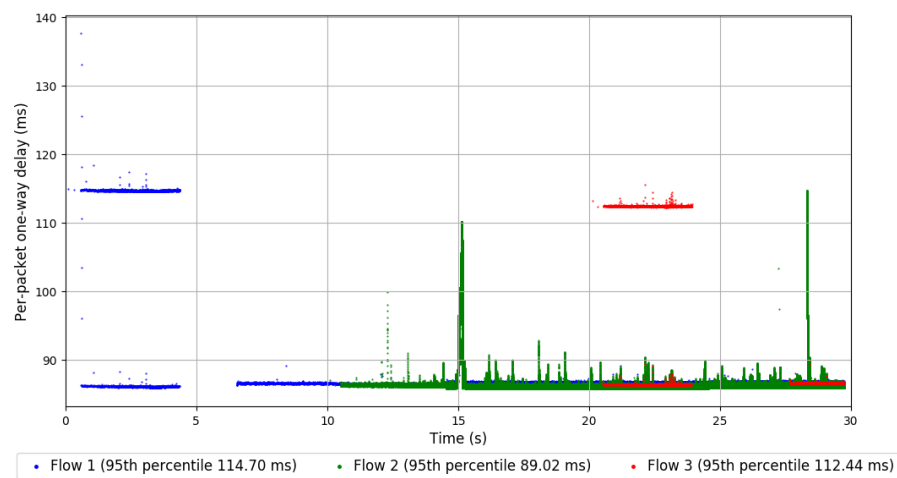
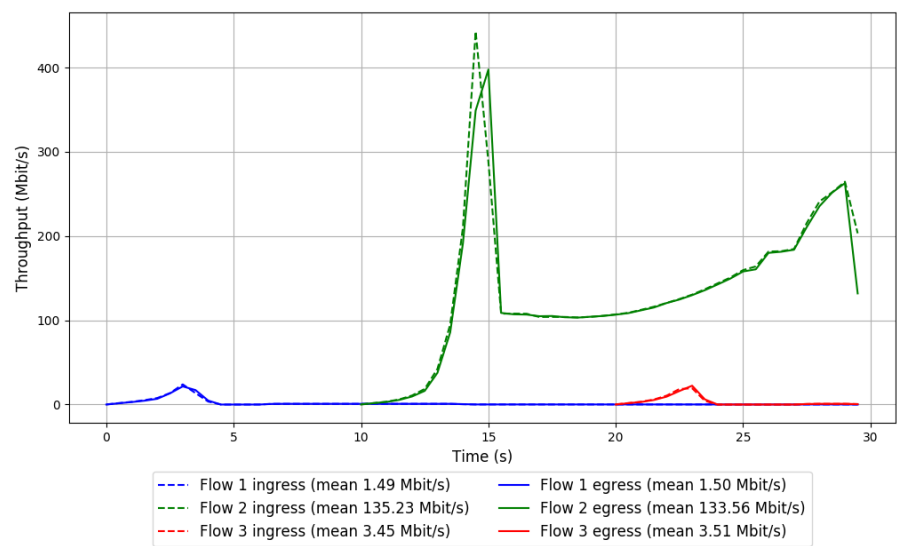
-- Flow 3:

Average throughput: 3.51 Mbit/s

95th percentile per-packet one-way delay: 112.440 ms

Loss rate: 0.47%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-01-17 07:03:10

End at: 2018-01-17 07:03:40

Below is generated by plot.py at 2018-01-17 14:08:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 236.44 Mbit/s

95th percentile per-packet one-way delay: 114.220 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 126.01 Mbit/s

95th percentile per-packet one-way delay: 120.269 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 147.05 Mbit/s

95th percentile per-packet one-way delay: 88.672 ms

Loss rate: 0.42%

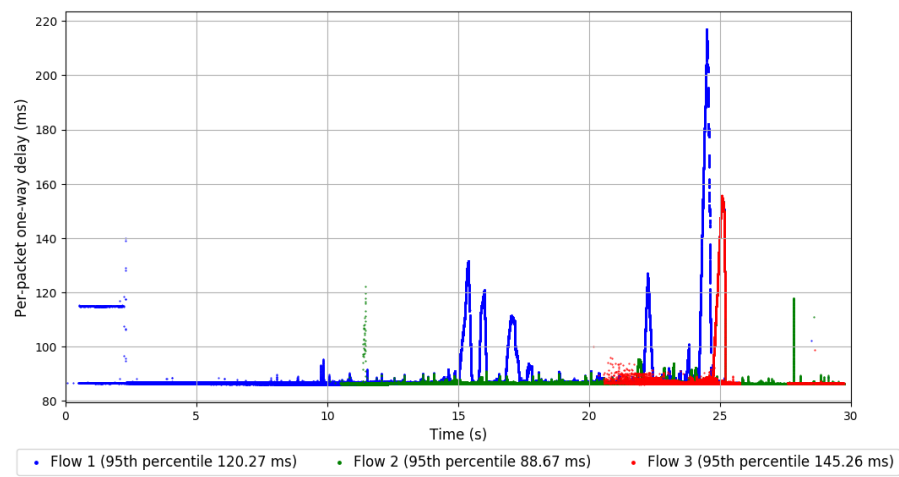
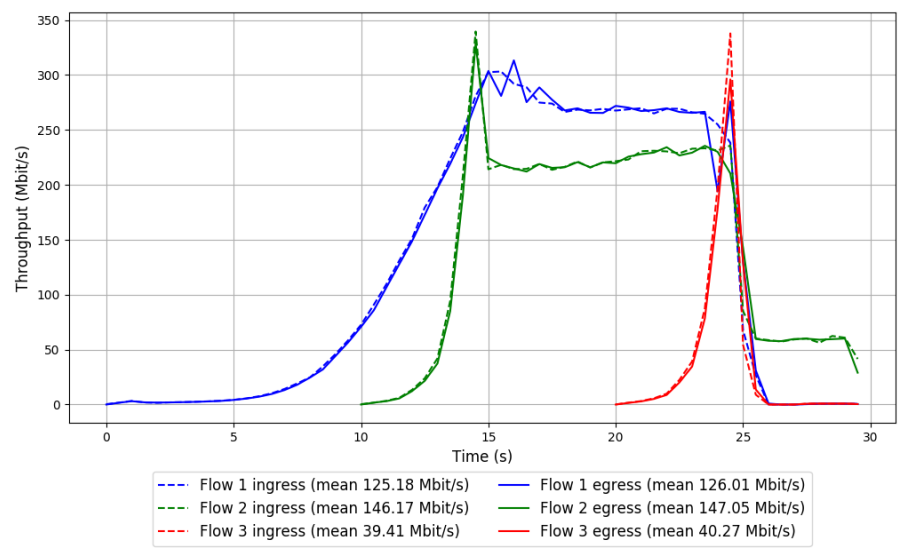
-- Flow 3:

Average throughput: 40.27 Mbit/s

95th percentile per-packet one-way delay: 145.261 ms

Loss rate: 0.05%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-01-17 07:22:19

End at: 2018-01-17 07:22:49

Below is generated by plot.py at 2018-01-17 14:09:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 249.16 Mbit/s

95th percentile per-packet one-way delay: 96.230 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 221.62 Mbit/s

95th percentile per-packet one-way delay: 96.719 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 115.225 ms

Loss rate: 0.05%

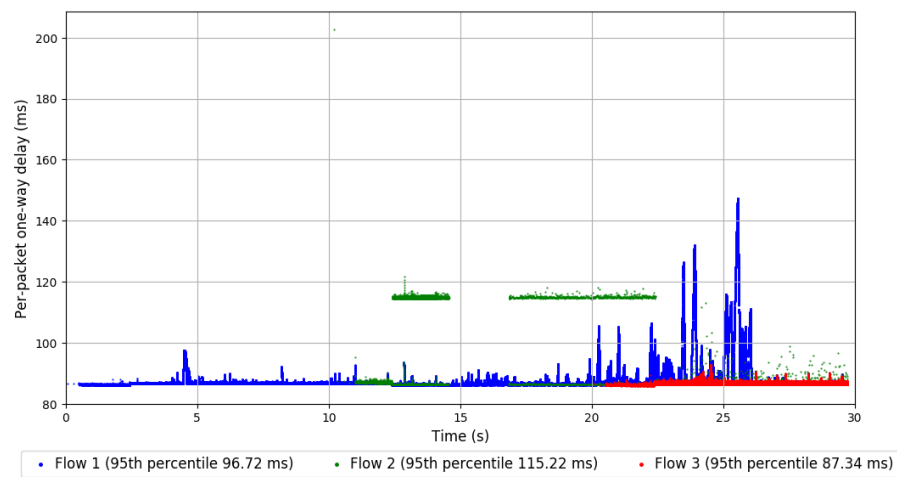
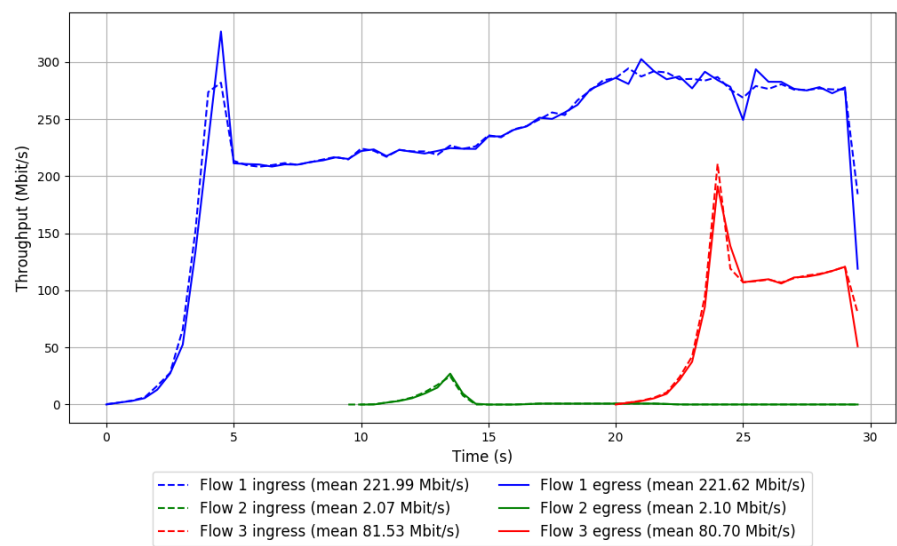
-- Flow 3:

Average throughput: 80.70 Mbit/s

95th percentile per-packet one-way delay: 87.343 ms

Loss rate: 3.06%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-01-17 07:41:28

End at: 2018-01-17 07:41:58

Below is generated by plot.py at 2018-01-17 14:09:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.62 Mbit/s

95th percentile per-packet one-way delay: 101.876 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 66.88 Mbit/s

95th percentile per-packet one-way delay: 93.660 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 31.69 Mbit/s

95th percentile per-packet one-way delay: 121.445 ms

Loss rate: 0.05%

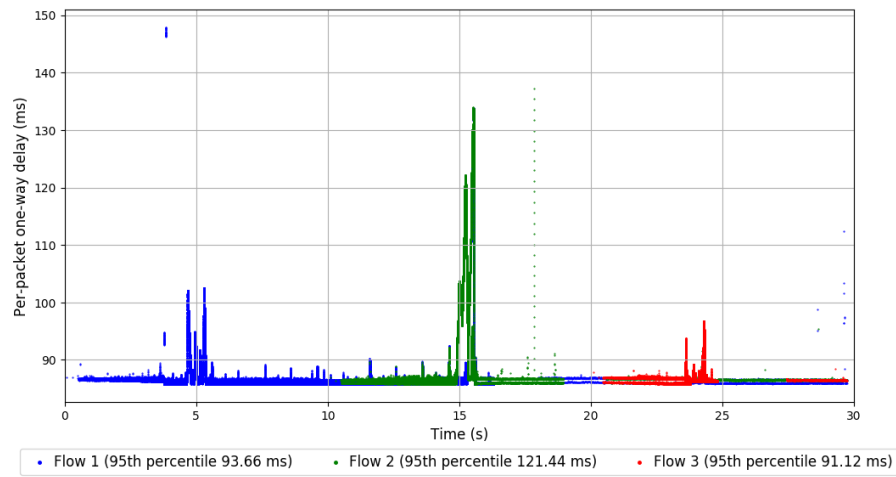
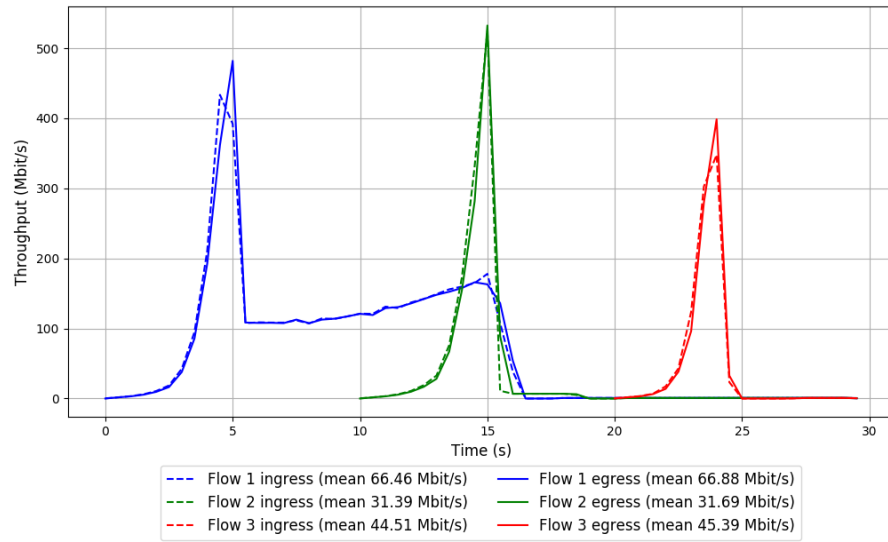
-- Flow 3:

Average throughput: 45.39 Mbit/s

95th percentile per-packet one-way delay: 91.116 ms

Loss rate: 0.04%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-01-17 08:00:40

End at: 2018-01-17 08:01:10

Below is generated by plot.py at 2018-01-17 14:09:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.19 Mbit/s

95th percentile per-packet one-way delay: 137.016 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 19.90 Mbit/s

95th percentile per-packet one-way delay: 104.236 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 148.71 Mbit/s

95th percentile per-packet one-way delay: 144.409 ms

Loss rate: 0.07%

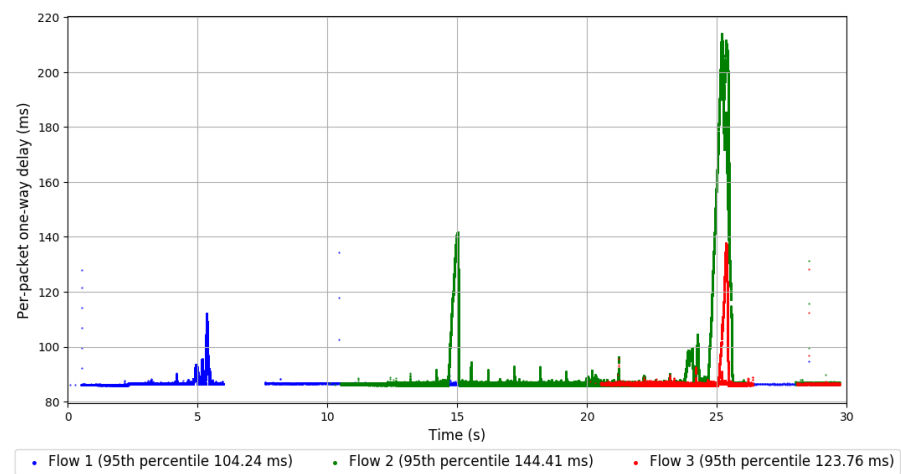
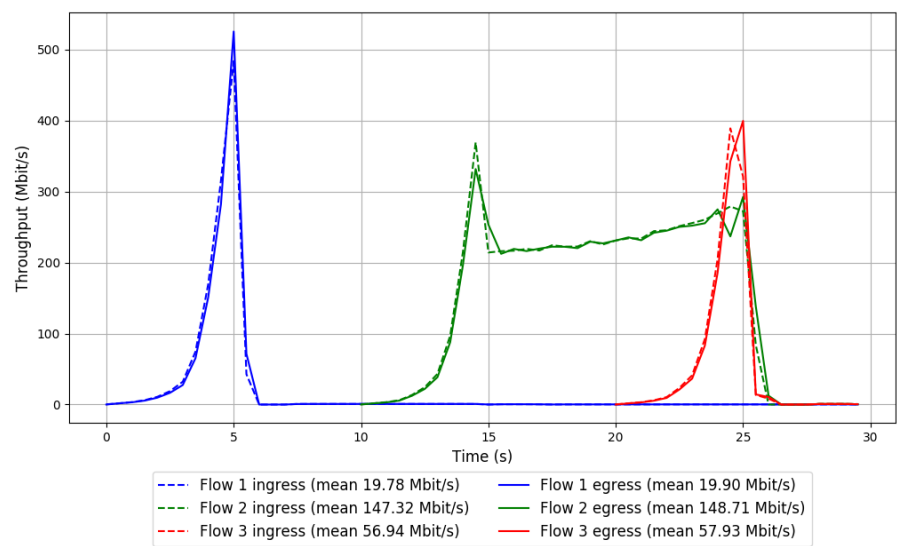
-- Flow 3:

Average throughput: 57.93 Mbit/s

95th percentile per-packet one-way delay: 123.762 ms

Loss rate: 0.26%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-01-17 08:19:22

End at: 2018-01-17 08:19:52

Below is generated by plot.py at 2018-01-17 14:09:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 171.83 Mbit/s

95th percentile per-packet one-way delay: 88.068 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 100.22 Mbit/s

95th percentile per-packet one-way delay: 86.616 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 88.63 Mbit/s

95th percentile per-packet one-way delay: 89.350 ms

Loss rate: 0.02%

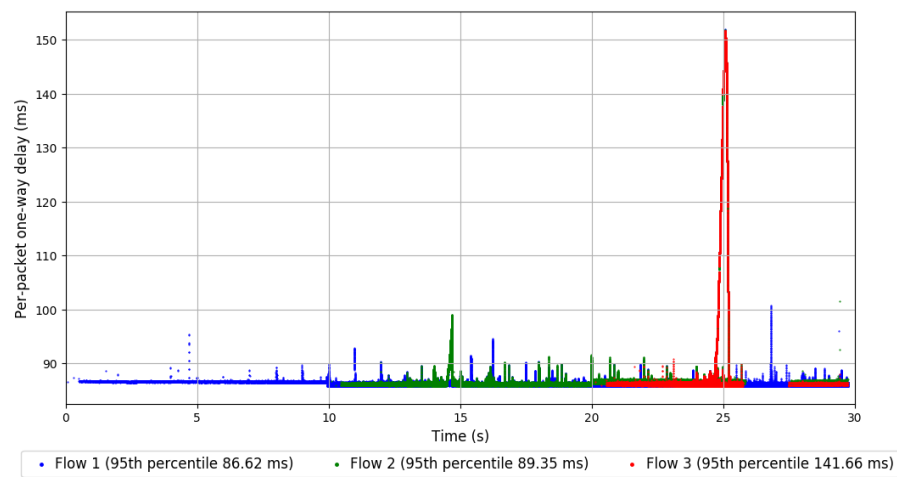
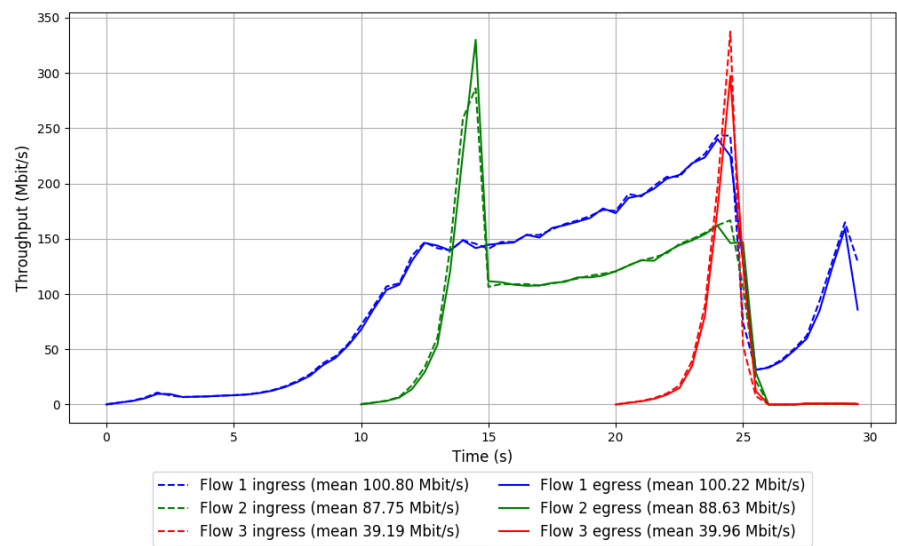
-- Flow 3:

Average throughput: 39.96 Mbit/s

95th percentile per-packet one-way delay: 141.664 ms

Loss rate: 0.11%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-01-17 08:38:23

End at: 2018-01-17 08:38:53

Below is generated by plot.py at 2018-01-17 14:10:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 288.11 Mbit/s

95th percentile per-packet one-way delay: 88.006 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 175.84 Mbit/s

95th percentile per-packet one-way delay: 87.751 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 150.04 Mbit/s

95th percentile per-packet one-way delay: 87.069 ms

Loss rate: 0.56%

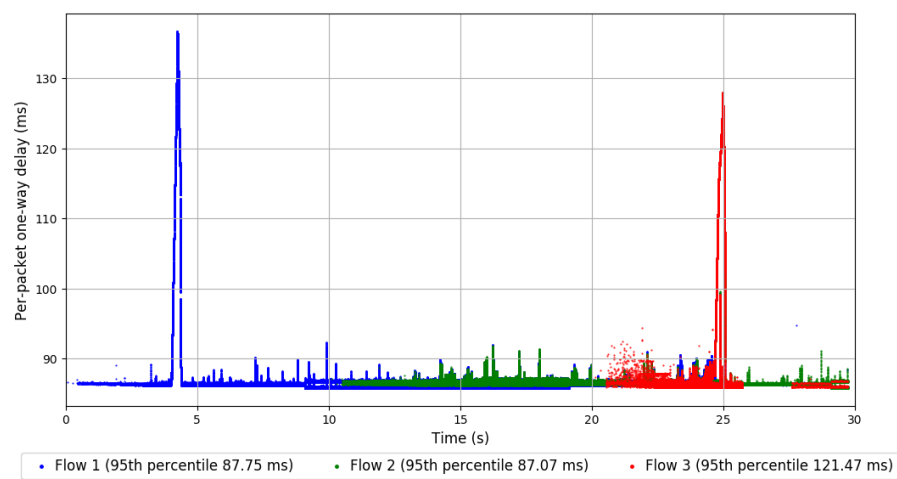
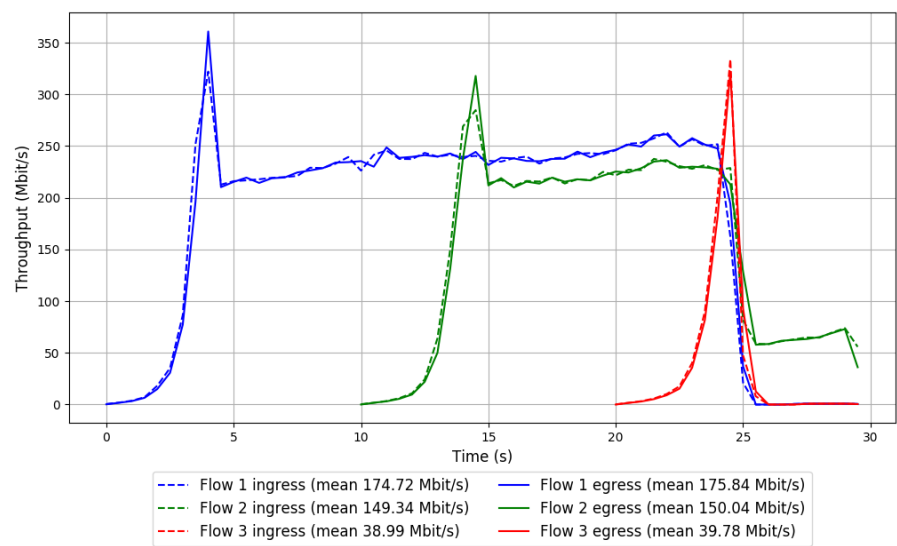
-- Flow 3:

Average throughput: 39.78 Mbit/s

95th percentile per-packet one-way delay: 121.468 ms

Loss rate: 0.04%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-01-17 08:57:10

End at: 2018-01-17 08:57:40

Below is generated by plot.py at 2018-01-17 14:10:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 236.63 Mbit/s

95th percentile per-packet one-way delay: 88.494 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 125.62 Mbit/s

95th percentile per-packet one-way delay: 87.523 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 148.06 Mbit/s

95th percentile per-packet one-way delay: 88.586 ms

Loss rate: 0.01%

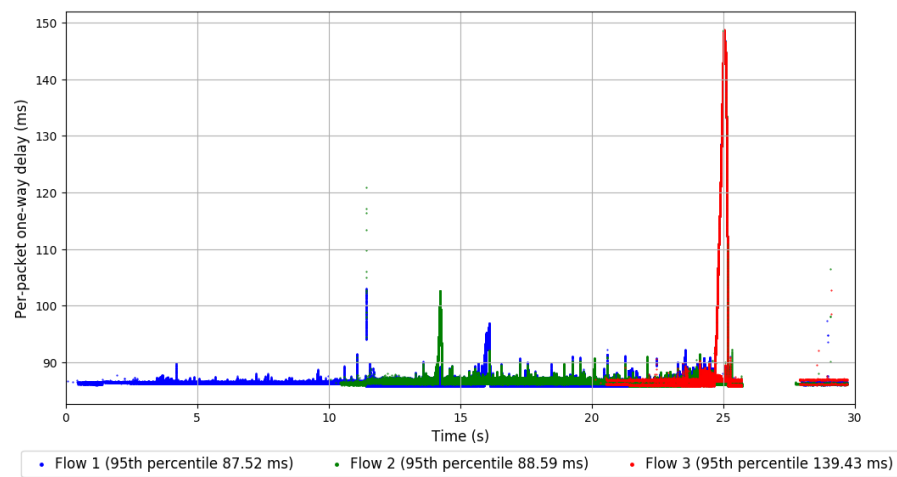
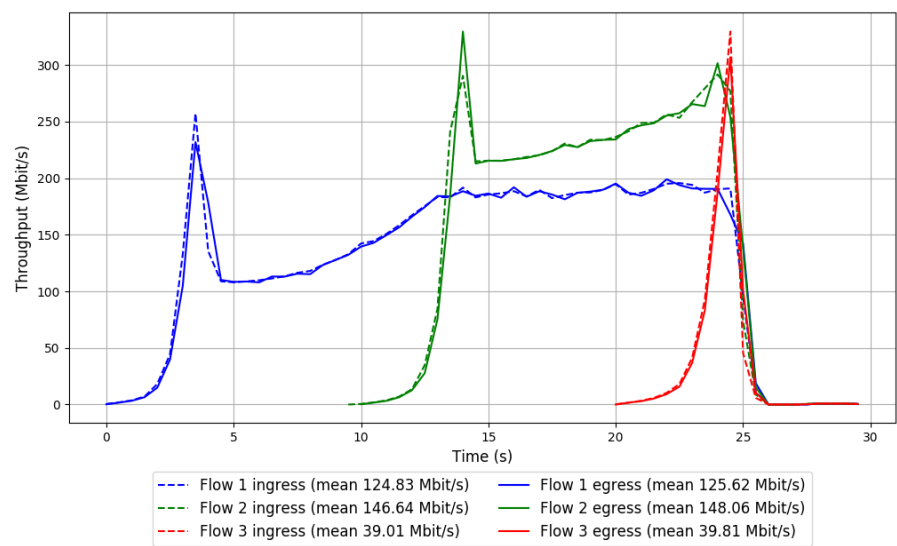
-- Flow 3:

Average throughput: 39.81 Mbit/s

95th percentile per-packet one-way delay: 139.426 ms

Loss rate: 0.04%

Run 9: Report of Vivace-LTE — Data Link



Run 10: Statistics of Vivace-LTE

Start at: 2018-01-17 09:15:54

End at: 2018-01-17 09:16:24

Below is generated by plot.py at 2018-01-17 14:10:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 72.27 Mbit/s

95th percentile per-packet one-way delay: 134.801 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 23.84 Mbit/s

95th percentile per-packet one-way delay: 142.823 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 30.40 Mbit/s

95th percentile per-packet one-way delay: 94.114 ms

Loss rate: 0.03%

-- Flow 3:

Average throughput: 87.08 Mbit/s

95th percentile per-packet one-way delay: 86.928 ms

Loss rate: 2.76%

Run 10: Report of Vivace-LTE — Data Link

