

Pantheon Report

Generated at 2019-01-19 02:29:00 (UTC).

Data path: AWS Brazil 2 on **ens5** (*local*) → Colombia on **p4p1** (*remote*).

Repeated the test of 21 congestion control schemes 5 times.

Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

NTP offsets were measured against **gps.ntp.br** and have been applied to correct the timestamps in logs.

System info:

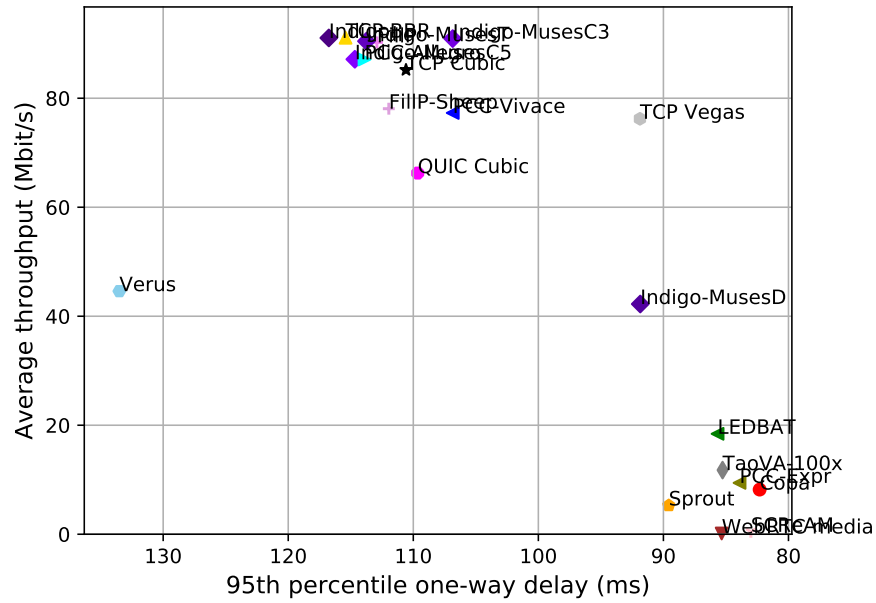
```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

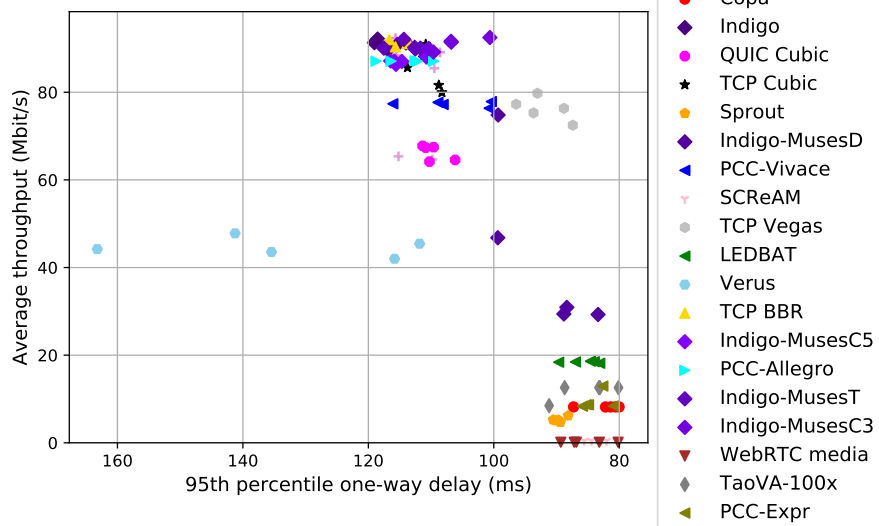
```
branch: muses @ c80a283586bf7b0cc1fe08c69c8f60d56498f81c
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ c3eee875824760ec5b2fd207fefe166e1afe2170
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
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/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
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 @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from AWS Brazil 2 to Colombia, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS Brazil 2 to Colombia, 5 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	5	54.71	39.85	29.57	114.57	115.14	114.23	13.33	20.03	27.90
Copa	5	0.00	9.78	5.07	80.77	82.46	81.83	98.06	74.83	77.77
TCP Cubic	5	57.18	28.36	27.45	108.96	110.59	106.01	0.88	0.69	0.45
FillP	5	43.29	56.03	29.17	109.08	113.12	112.58	13.23	18.45	25.61
FillP-Sheep	5	19.46	75.87	24.56	107.61	111.93	111.50	18.67	6.48	13.05
Indigo	5	64.58	26.11	28.70	116.52	115.14	115.08	8.98	30.77	63.18
Indigo-MusesC3	5	72.95	23.05	9.92	105.54	108.75	109.86	0.15	0.11	0.08
Indigo-MusesC5	5	74.51	17.45	4.18	114.66	115.02	115.08	2.39	7.54	7.20
Indigo-MusesD	5	26.13	17.89	14.69	91.42	90.67	90.74	0.00	0.00	0.01
Indigo-MusesT	5	75.80	20.45	4.38	113.41	113.78	113.14	6.82	8.19	8.28
LEDBAT	5	12.03	7.79	3.70	85.42	85.30	85.55	0.00	0.01	0.04
PCC-Allegro	5	79.15	8.07	7.84	113.86	113.66	114.30	2.74	4.56	6.67
PCC-Expr	5	1.42	9.25	5.63	84.32	83.64	83.64	75.71	59.31	48.42
QUIC Cubic	5	45.96	22.58	16.29	109.92	108.44	107.61	0.75	0.38	0.41
SCReAM	5	0.22	0.22	0.22	81.29	82.70	82.69	0.00	0.00	0.00
Sprout	5	3.02	2.54	1.74	89.26	89.55	89.14	0.01	0.00	0.00
TaoVA-100x	5	5.81	4.96	8.03	89.54	84.72	83.05	51.55	42.98	75.96
TCP Vegas	5	49.34	23.46	33.85	91.21	96.34	93.59	0.93	0.69	1.05
Verus	5	27.58	19.63	12.93	131.13	123.83	124.52	44.72	30.88	30.41
PCC-Vivace	5	64.01	17.24	5.60	107.52	105.10	101.31	0.32	0.58	0.15
WebRTC media	5	0.05	0.04	0.04	84.14	84.93	84.70	0.01	0.01	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-01-19 00:06:42

End at: 2019-01-19 00:07:12

Local clock offset: -7.247 ms

Remote clock offset: 1.879 ms

Below is generated by plot.py at 2019-01-19 02:20:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.13 Mbit/s

95th percentile per-packet one-way delay: 113.845 ms

Loss rate: 17.53%

-- Flow 1:

Average throughput: 53.19 Mbit/s

95th percentile per-packet one-way delay: 113.898 ms

Loss rate: 14.00%

-- Flow 2:

Average throughput: 42.32 Mbit/s

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

Loss rate: 19.37%

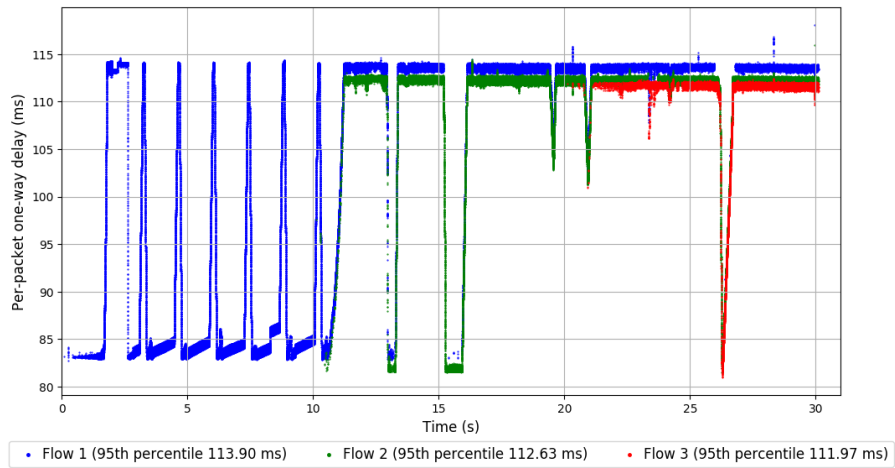
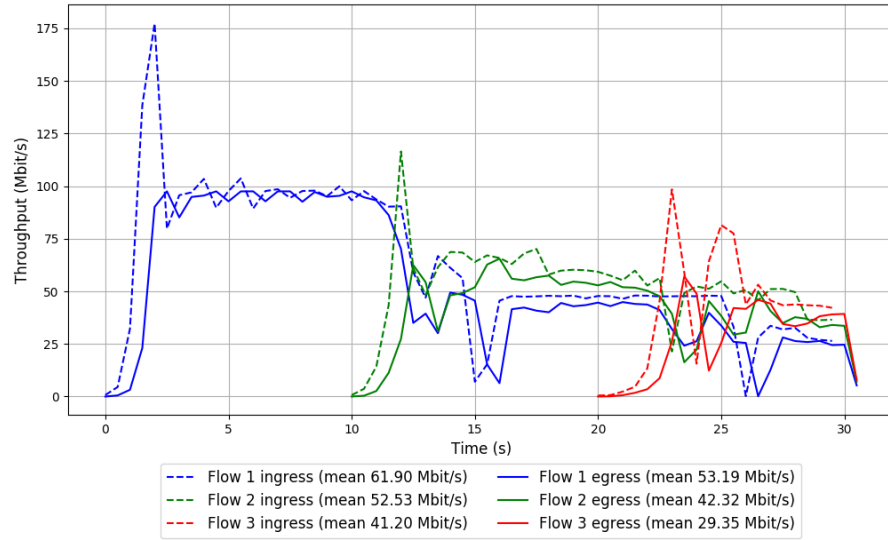
-- Flow 3:

Average throughput: 29.35 Mbit/s

95th percentile per-packet one-way delay: 111.966 ms

Loss rate: 28.76%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-01-19 00:33:31

End at: 2019-01-19 00:34:01

Local clock offset: -2.246 ms

Remote clock offset: 3.856 ms

Below is generated by plot.py at 2019-01-19 02:20:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.15 Mbit/s

95th percentile per-packet one-way delay: 113.512 ms

Loss rate: 16.20%

-- Flow 1:

Average throughput: 55.93 Mbit/s

95th percentile per-packet one-way delay: 112.791 ms

Loss rate: 13.12%

-- Flow 2:

Average throughput: 37.20 Mbit/s

95th percentile per-packet one-way delay: 113.086 ms

Loss rate: 18.23%

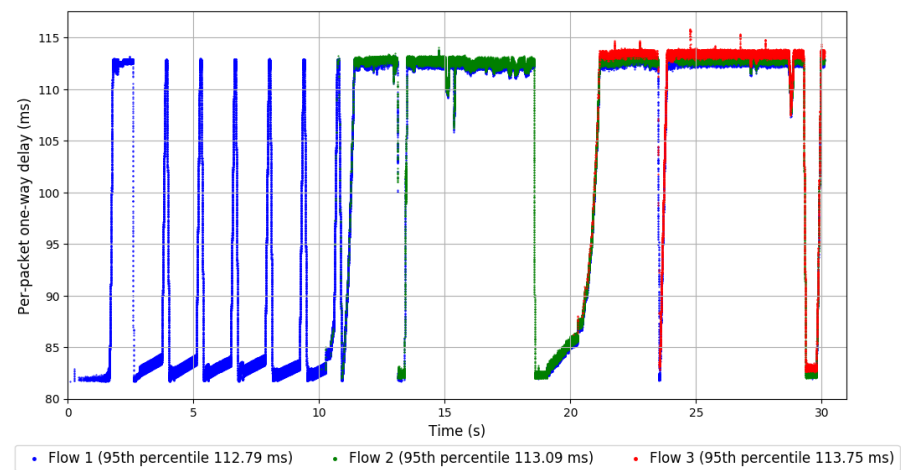
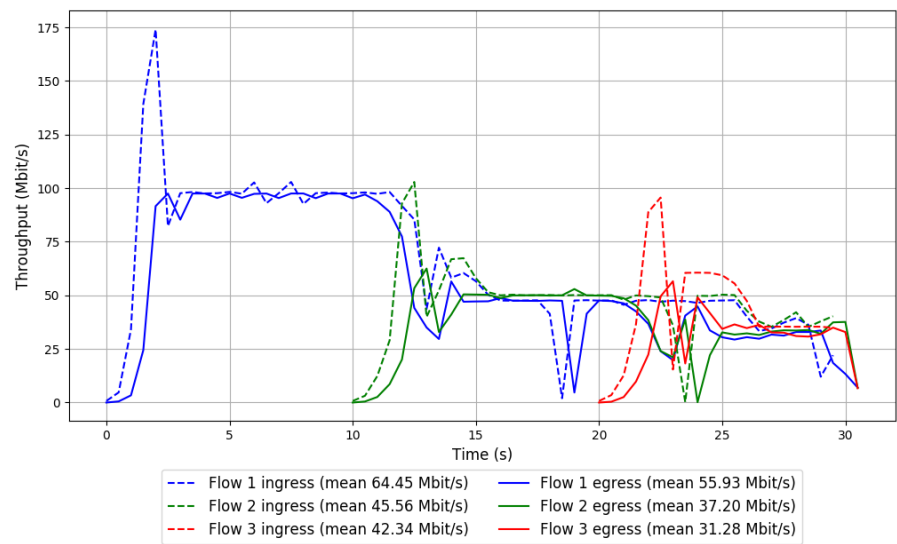
-- Flow 3:

Average throughput: 31.28 Mbit/s

95th percentile per-packet one-way delay: 113.747 ms

Loss rate: 25.92%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-01-19 01:00:06

End at: 2019-01-19 01:00:36

Local clock offset: 1.164 ms

Remote clock offset: 6.396 ms

Below is generated by plot.py at 2019-01-19 02:20:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.85 Mbit/s

95th percentile per-packet one-way delay: 117.390 ms

Loss rate: 15.52%

-- Flow 1:

Average throughput: 55.59 Mbit/s

95th percentile per-packet one-way delay: 115.722 ms

Loss rate: 12.54%

-- Flow 2:

Average throughput: 39.22 Mbit/s

95th percentile per-packet one-way delay: 117.492 ms

Loss rate: 15.97%

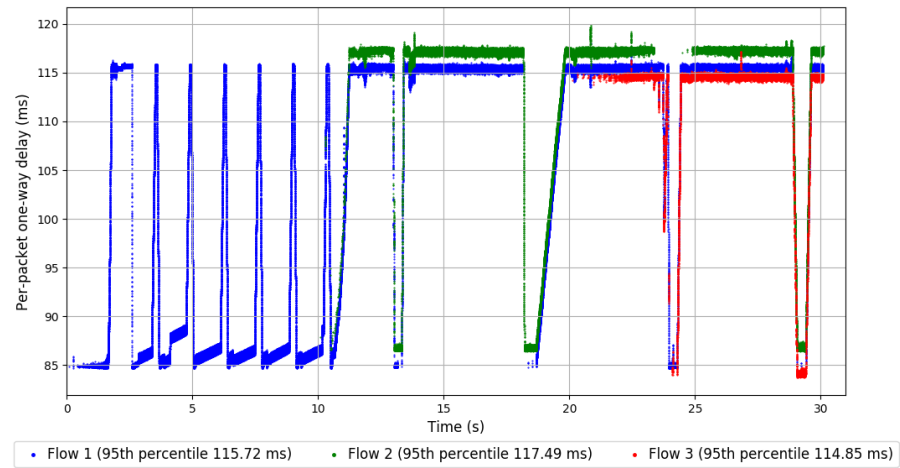
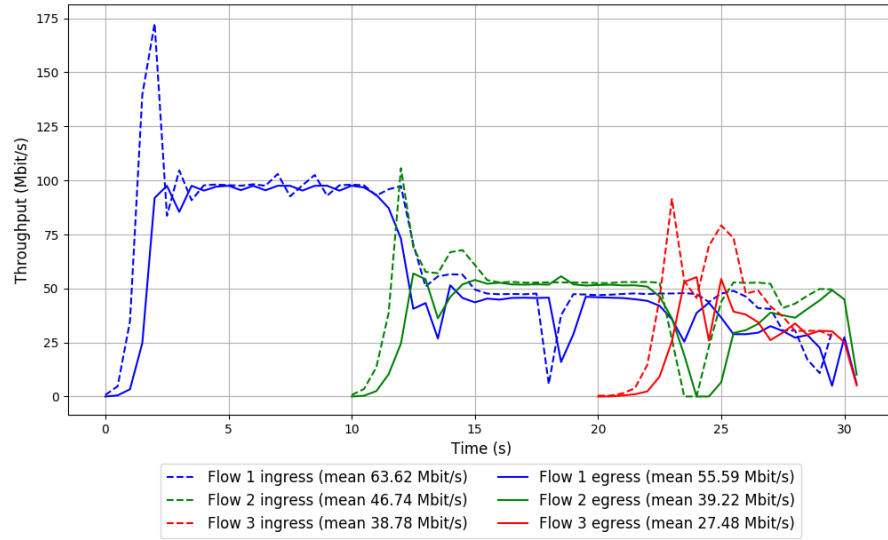
-- Flow 3:

Average throughput: 27.48 Mbit/s

95th percentile per-packet one-way delay: 114.851 ms

Loss rate: 29.13%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-01-19 01:26:39

End at: 2019-01-19 01:27:09

Local clock offset: -4.749 ms

Remote clock offset: 6.906 ms

Below is generated by plot.py at 2019-01-19 02:20:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.37 Mbit/s

95th percentile per-packet one-way delay: 115.682 ms

Loss rate: 15.35%

-- Flow 1:

Average throughput: 48.65 Mbit/s

95th percentile per-packet one-way delay: 114.161 ms

Loss rate: 10.11%

-- Flow 2:

Average throughput: 45.87 Mbit/s

95th percentile per-packet one-way delay: 115.735 ms

Loss rate: 18.69%

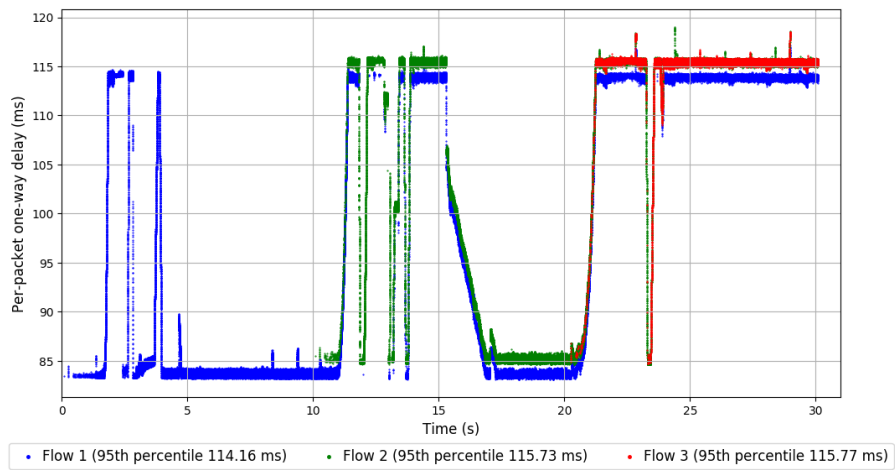
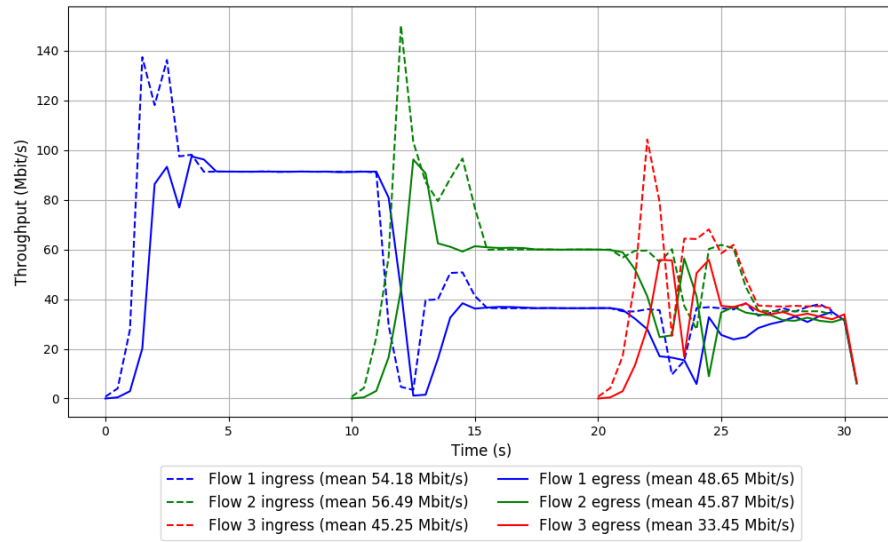
-- Flow 3:

Average throughput: 33.45 Mbit/s

95th percentile per-packet one-way delay: 115.766 ms

Loss rate: 25.86%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2019-01-19 01:53:19

End at: 2019-01-19 01:53:49

Local clock offset: -7.903 ms

Remote clock offset: 7.285 ms

Below is generated by plot.py at 2019-01-19 02:20:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.00 Mbit/s

95th percentile per-packet one-way delay: 116.651 ms

Loss rate: 21.28%

-- Flow 1:

Average throughput: 60.18 Mbit/s

95th percentile per-packet one-way delay: 116.258 ms

Loss rate: 16.89%

-- Flow 2:

Average throughput: 34.64 Mbit/s

95th percentile per-packet one-way delay: 116.765 ms

Loss rate: 27.90%

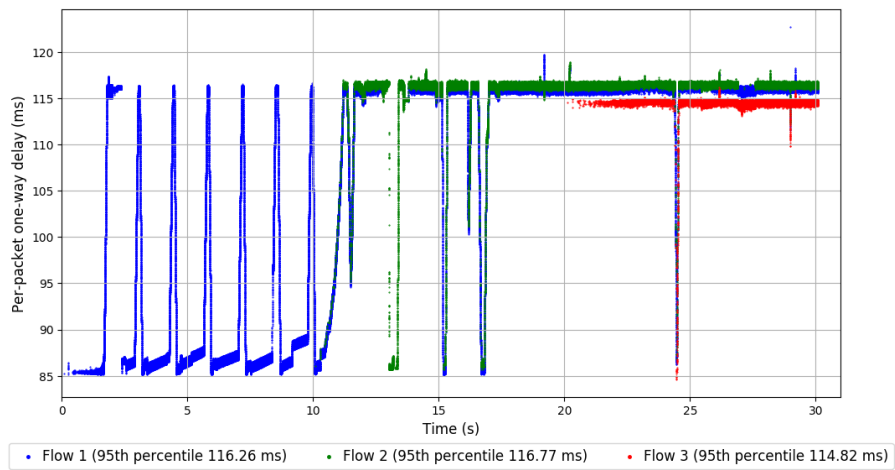
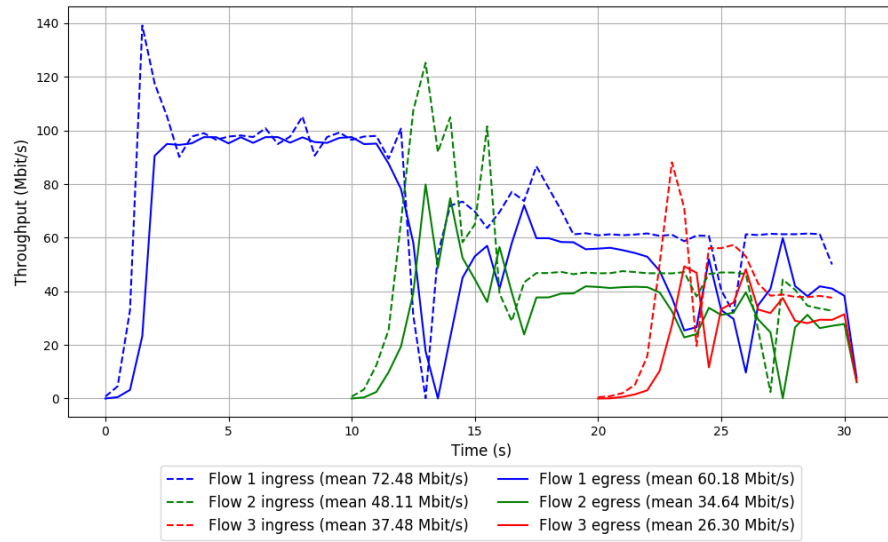
-- Flow 3:

Average throughput: 26.30 Mbit/s

95th percentile per-packet one-way delay: 114.819 ms

Loss rate: 29.82%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-01-19 00:29:42

End at: 2019-01-19 00:30:12

Local clock offset: -2.999 ms

Remote clock offset: 7.449 ms

Below is generated by plot.py at 2019-01-19 02:20:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.19 Mbit/s

95th percentile per-packet one-way delay: 87.287 ms

Loss rate: 74.65%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 84.651 ms

Loss rate: 98.60%

-- Flow 2:

Average throughput: 9.59 Mbit/s

95th percentile per-packet one-way delay: 87.453 ms

Loss rate: 75.20%

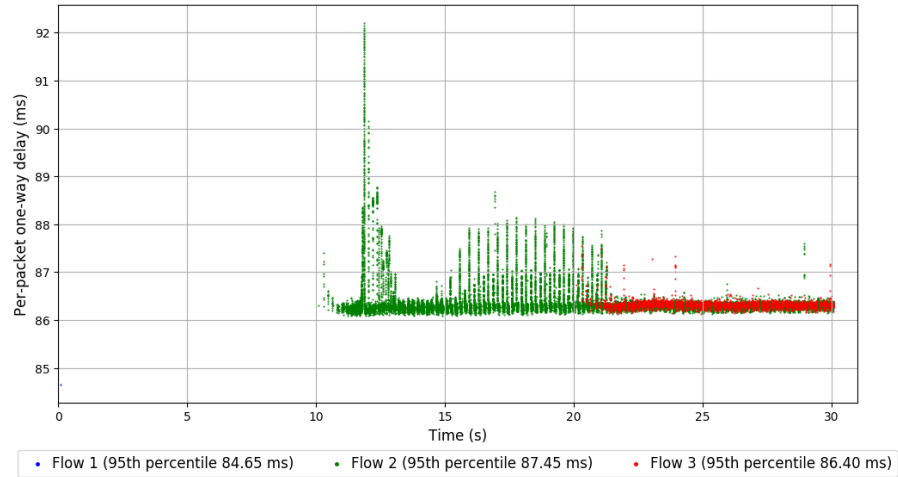
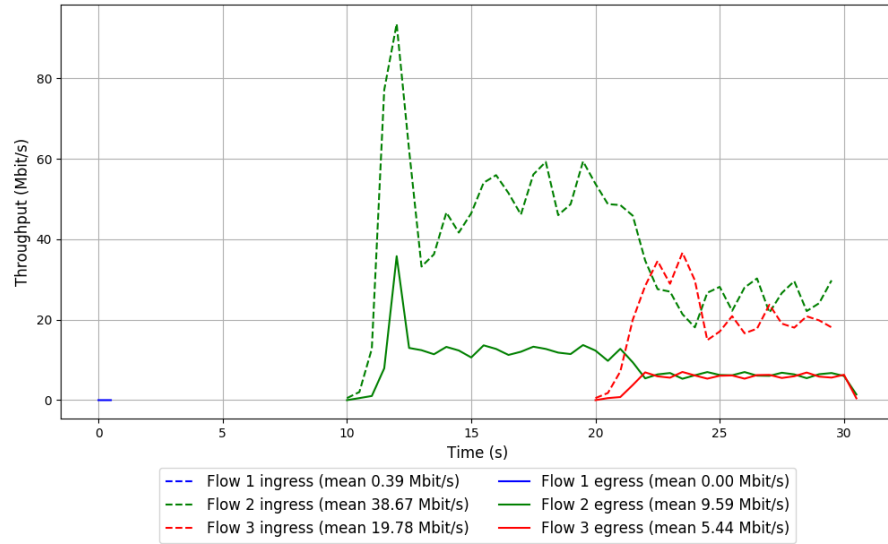
-- Flow 3:

Average throughput: 5.44 Mbit/s

95th percentile per-packet one-way delay: 86.402 ms

Loss rate: 72.49%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-01-19 00:56:17

End at: 2019-01-19 00:56:47

Local clock offset: 0.819 ms

Remote clock offset: 1.632 ms

Below is generated by plot.py at 2019-01-19 02:20:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.18 Mbit/s

95th percentile per-packet one-way delay: 82.196 ms

Loss rate: 76.99%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 79.277 ms

Loss rate: 97.24%

-- Flow 2:

Average throughput: 9.09 Mbit/s

95th percentile per-packet one-way delay: 82.698 ms

Loss rate: 75.86%

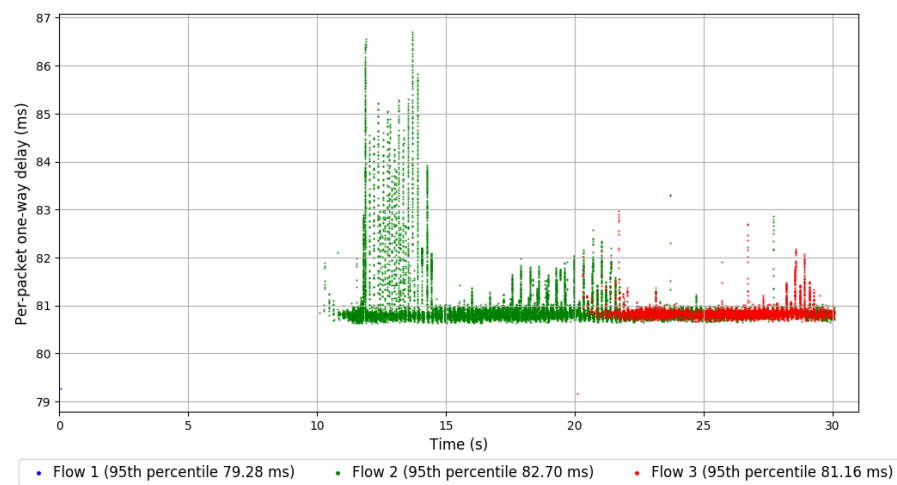
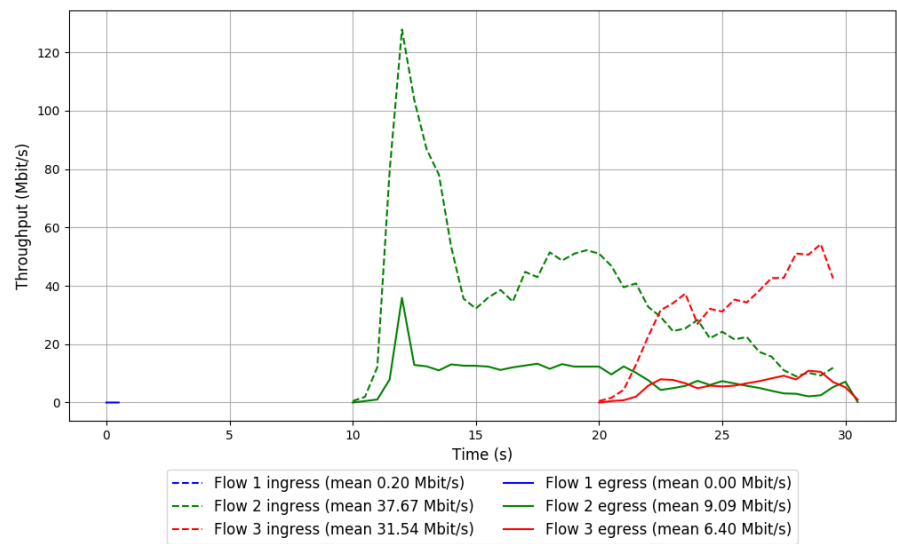
-- Flow 3:

Average throughput: 6.40 Mbit/s

95th percentile per-packet one-way delay: 81.164 ms

Loss rate: 79.69%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-01-19 01:22:50

End at: 2019-01-19 01:23:20

Local clock offset: -2.205 ms

Remote clock offset: 4.045 ms

Below is generated by plot.py at 2019-01-19 02:20:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.20 Mbit/s

95th percentile per-packet one-way delay: 81.383 ms

Loss rate: 77.67%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 79.961 ms

Loss rate: 98.60%

-- Flow 2:

Average throughput: 9.32 Mbit/s

95th percentile per-packet one-way delay: 81.419 ms

Loss rate: 76.30%

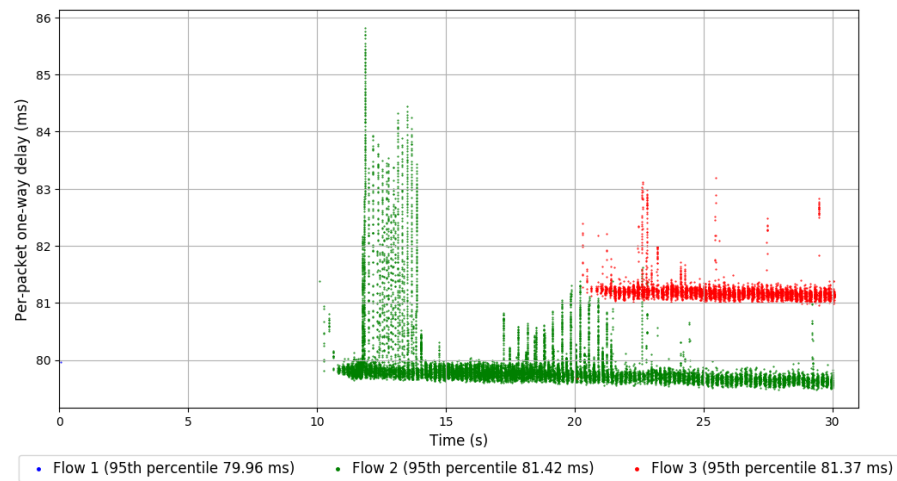
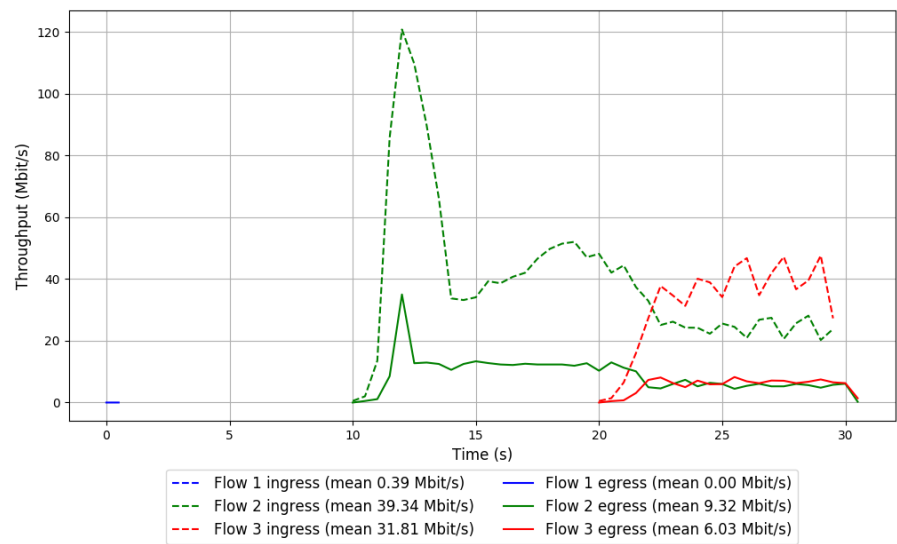
-- Flow 3:

Average throughput: 6.03 Mbit/s

95th percentile per-packet one-way delay: 81.366 ms

Loss rate: 81.05%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-01-19 01:49:29

End at: 2019-01-19 01:49:59

Local clock offset: -7.758 ms

Remote clock offset: 3.475 ms

Below is generated by plot.py at 2019-01-19 02:20:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.19 Mbit/s

95th percentile per-packet one-way delay: 80.032 ms

Loss rate: 75.36%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 79.312 ms

Loss rate: 98.60%

-- Flow 2:

Average throughput: 9.66 Mbit/s

95th percentile per-packet one-way delay: 80.287 ms

Loss rate: 72.81%

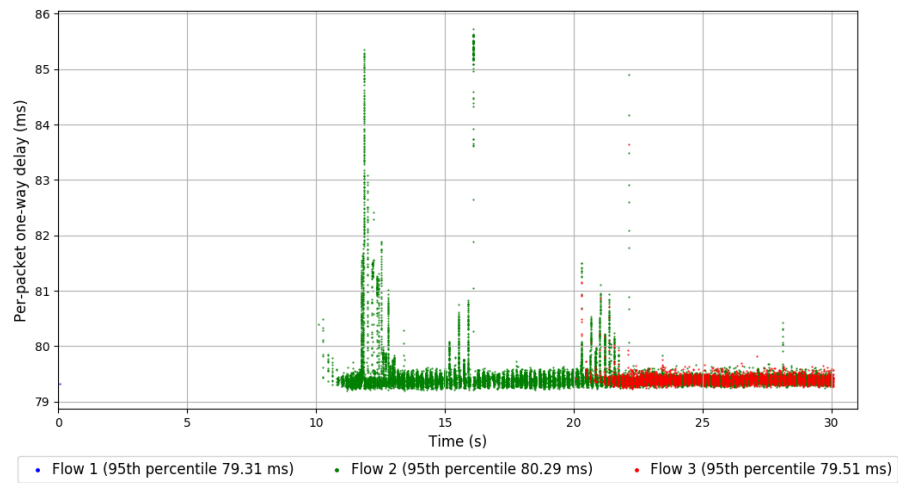
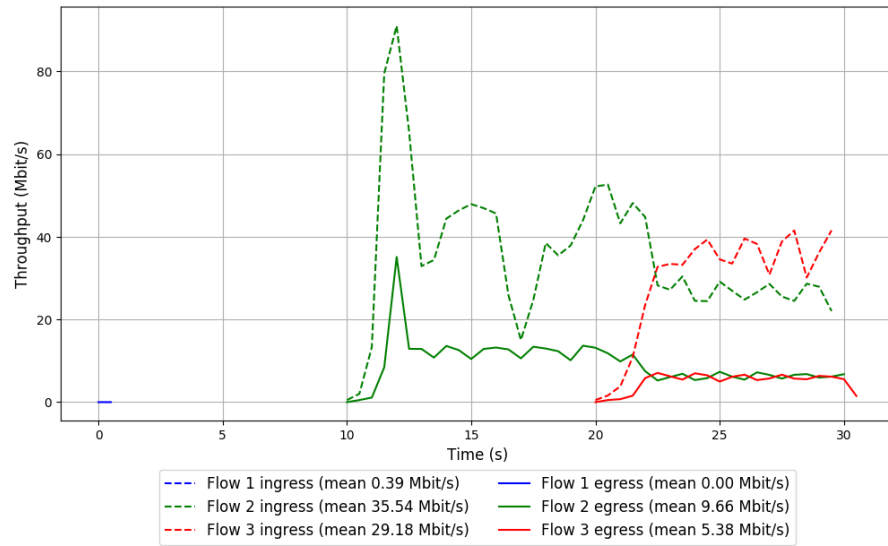
-- Flow 3:

Average throughput: 5.38 Mbit/s

95th percentile per-packet one-way delay: 79.513 ms

Loss rate: 81.56%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-01-19 02:16:05

End at: 2019-01-19 02:16:35

Local clock offset: -7.114 ms

Remote clock offset: 3.207 ms

Below is generated by plot.py at 2019-01-19 02:20:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.20 Mbit/s

95th percentile per-packet one-way delay: 80.630 ms

Loss rate: 73.97%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 80.646 ms

Loss rate: 97.24%

-- Flow 2:

Average throughput: 11.26 Mbit/s

95th percentile per-packet one-way delay: 80.439 ms

Loss rate: 73.97%

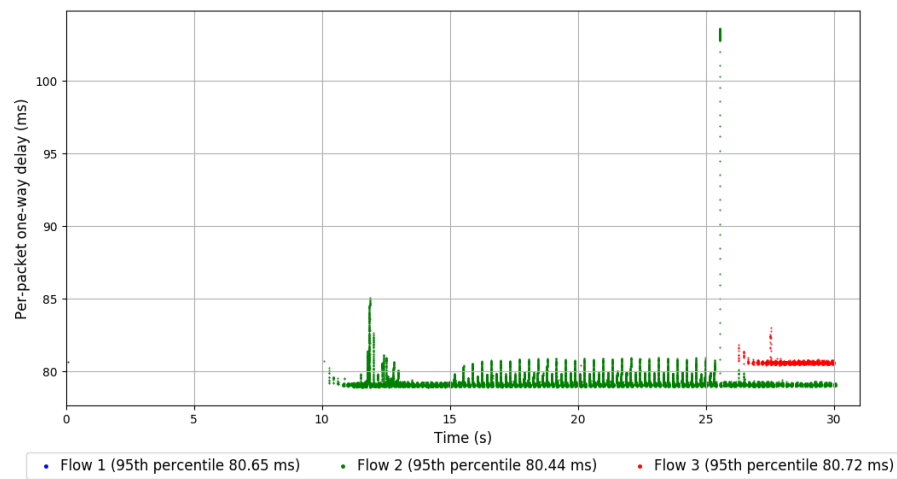
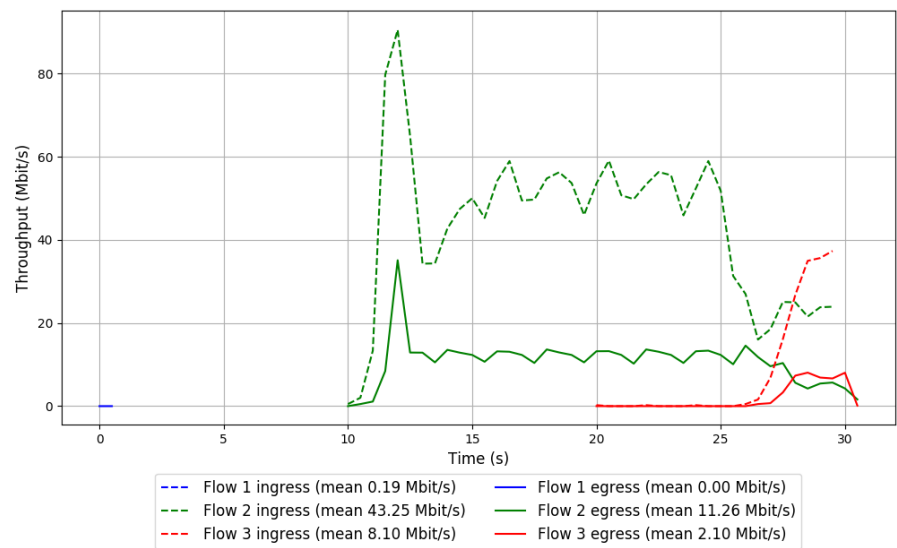
-- Flow 3:

Average throughput: 2.10 Mbit/s

95th percentile per-packet one-way delay: 80.715 ms

Loss rate: 74.05%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-01-19 00:09:14

End at: 2019-01-19 00:09:44

Local clock offset: -7.401 ms

Remote clock offset: 7.538 ms

Below is generated by plot.py at 2019-01-19 02:20:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.65 Mbit/s

95th percentile per-packet one-way delay: 113.770 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 67.85 Mbit/s

95th percentile per-packet one-way delay: 114.605 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 19.14 Mbit/s

95th percentile per-packet one-way delay: 107.297 ms

Loss rate: 0.15%

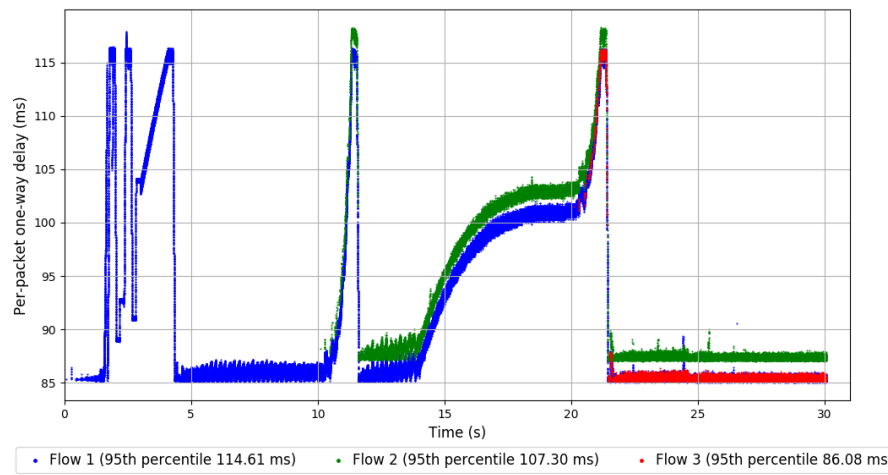
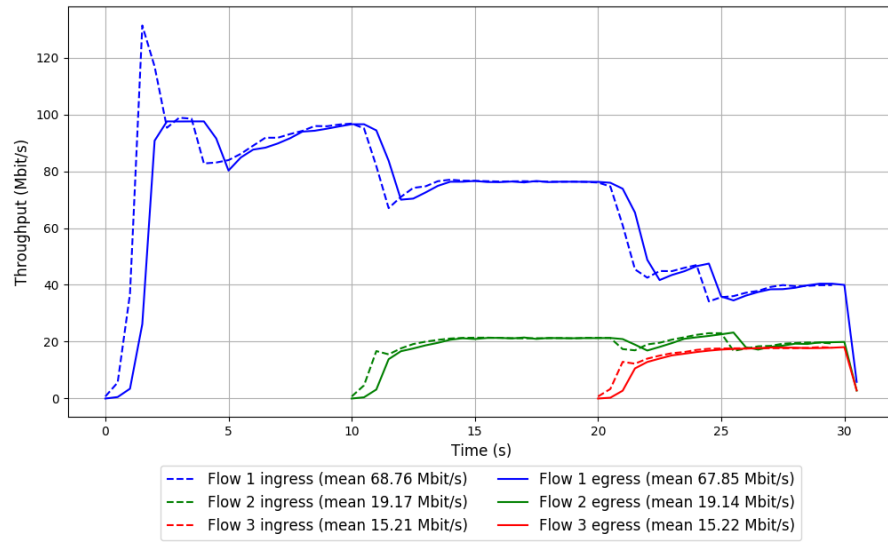
-- Flow 3:

Average throughput: 15.22 Mbit/s

95th percentile per-packet one-way delay: 86.075 ms

Loss rate: 0.09%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-01-19 00:36:04

End at: 2019-01-19 00:36:34

Local clock offset: -1.8 ms

Remote clock offset: 3.744 ms

Below is generated by plot.py at 2019-01-19 02:20:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.87 Mbit/s

95th percentile per-packet one-way delay: 111.245 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 53.83 Mbit/s

95th percentile per-packet one-way delay: 110.159 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 35.25 Mbit/s

95th percentile per-packet one-way delay: 112.497 ms

Loss rate: 0.71%

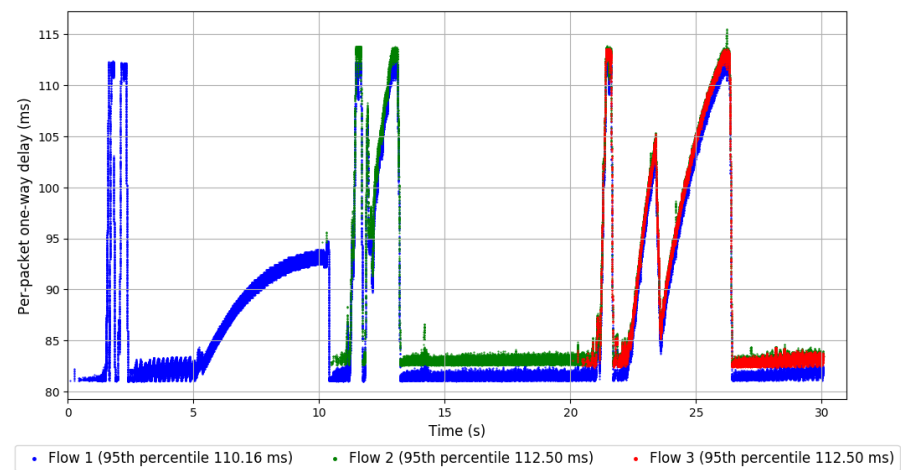
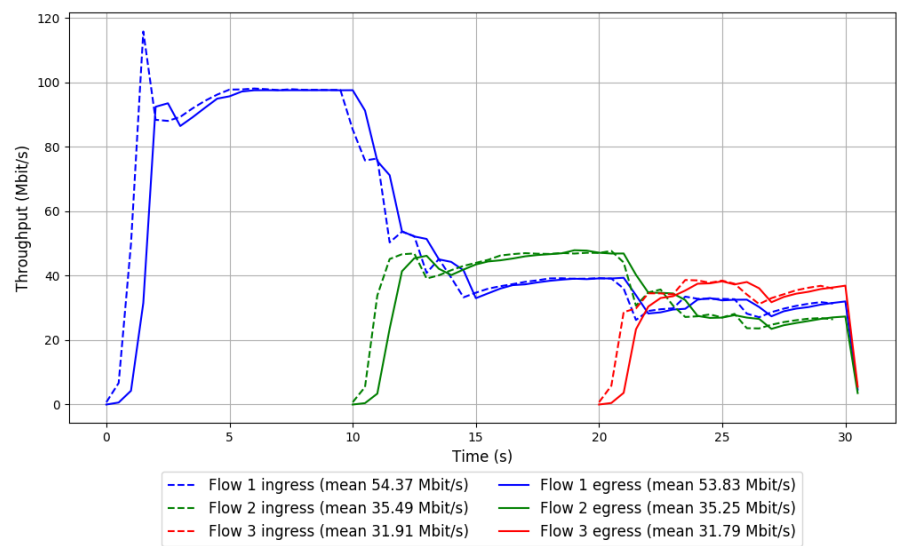
-- Flow 3:

Average throughput: 31.79 Mbit/s

95th percentile per-packet one-way delay: 112.500 ms

Loss rate: 0.39%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-01-19 01:02:39

End at: 2019-01-19 01:03:09

Local clock offset: 1.324 ms

Remote clock offset: 1.384 ms

Below is generated by plot.py at 2019-01-19 02:20:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.61 Mbit/s

95th percentile per-packet one-way delay: 108.777 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 44.33 Mbit/s

95th percentile per-packet one-way delay: 106.463 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 33.50 Mbit/s

95th percentile per-packet one-way delay: 108.026 ms

Loss rate: 1.57%

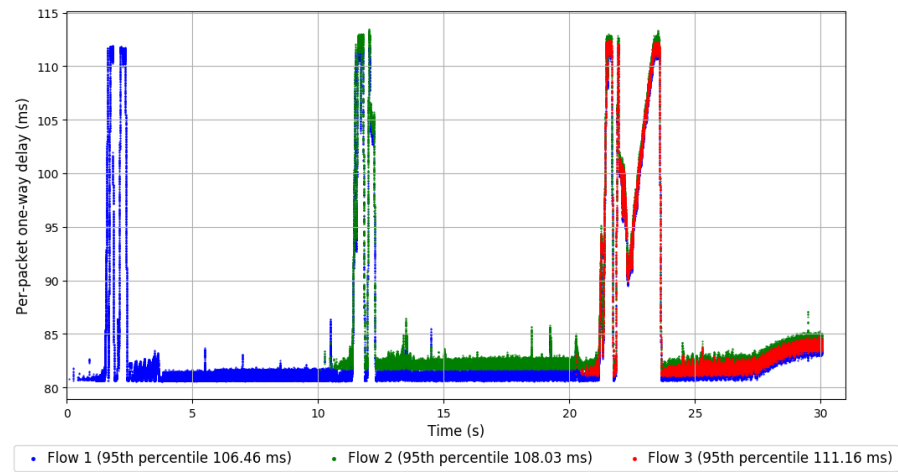
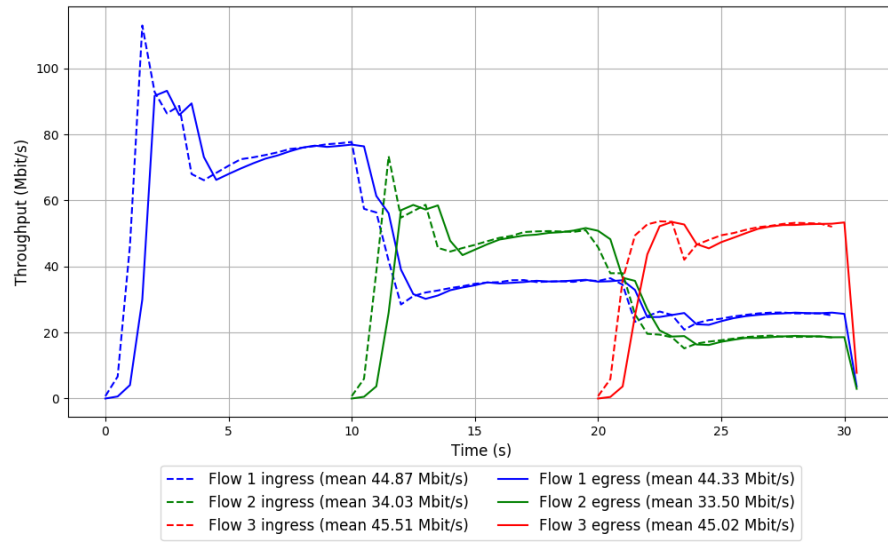
-- Flow 3:

Average throughput: 45.02 Mbit/s

95th percentile per-packet one-way delay: 111.155 ms

Loss rate: 1.07%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-01-19 01:29:12

End at: 2019-01-19 01:29:42

Local clock offset: -4.964 ms

Remote clock offset: 7.095 ms

Below is generated by plot.py at 2019-01-19 02:21:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.93 Mbit/s

95th percentile per-packet one-way delay: 110.856 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 73.66 Mbit/s

95th percentile per-packet one-way delay: 110.634 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 16.52 Mbit/s

95th percentile per-packet one-way delay: 113.704 ms

Loss rate: 0.17%

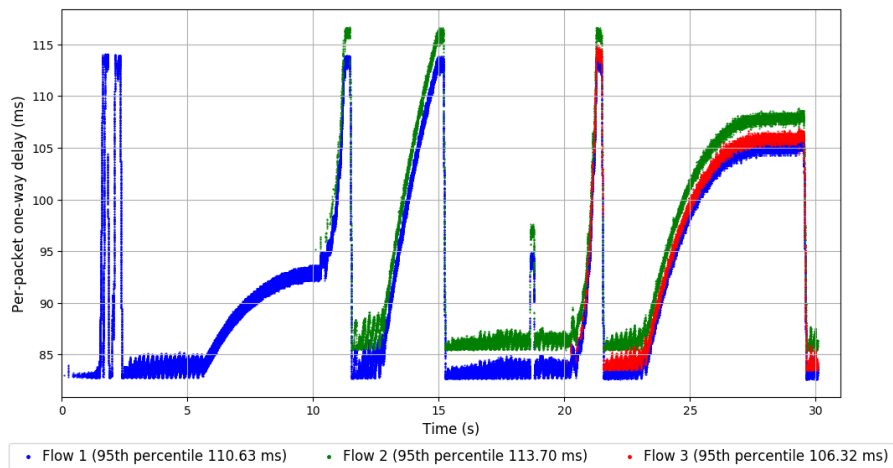
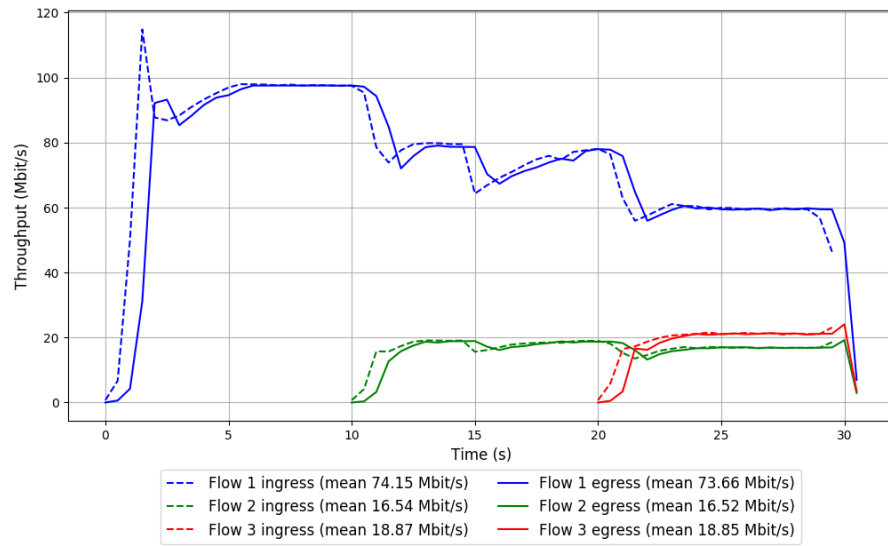
-- Flow 3:

Average throughput: 18.85 Mbit/s

95th percentile per-packet one-way delay: 106.317 ms

Loss rate: 0.12%

Run 4: Report of TCP Cubic — Data Link

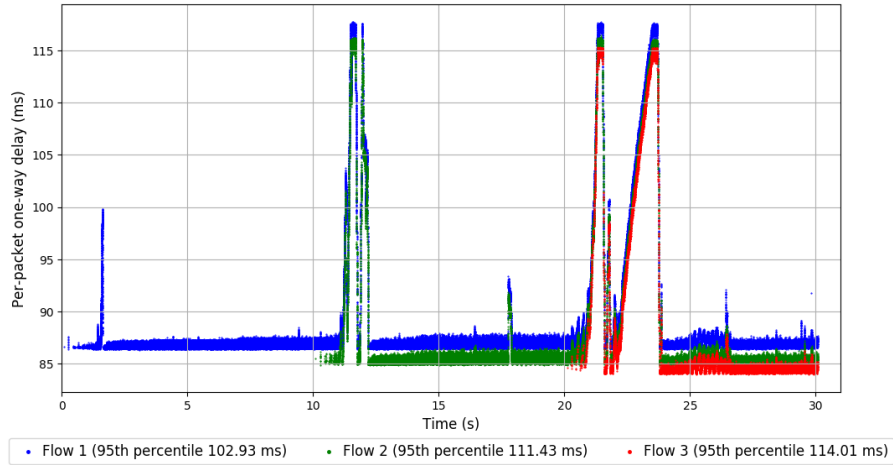
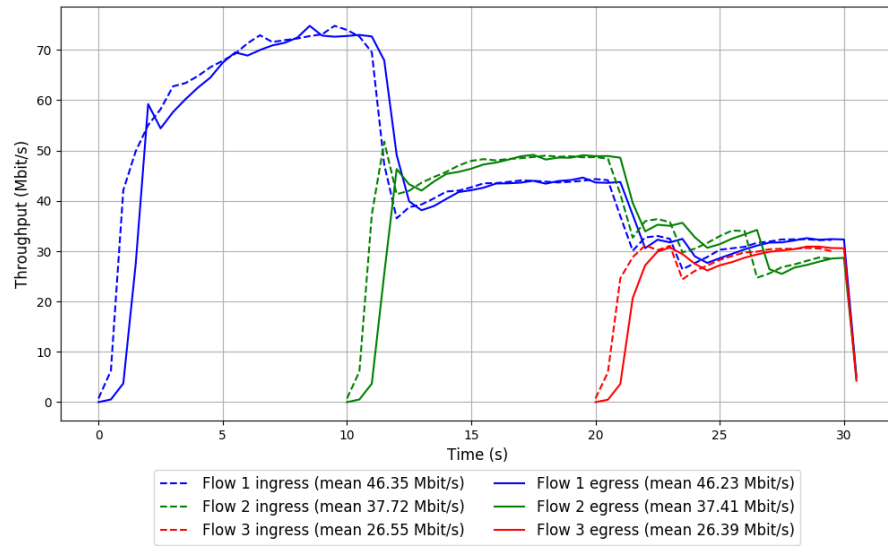


Run 5: Statistics of TCP Cubic

Start at: 2019-01-19 01:55:52
End at: 2019-01-19 01:56:22
Local clock offset: -7.021 ms
Remote clock offset: 7.318 ms

Below is generated by plot.py at 2019-01-19 02:21:31
Datalink statistics
-- Total of 3 flows:
Average throughput: 79.93 Mbit/s
95th percentile per-packet one-way delay: 108.273 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 46.23 Mbit/s
95th percentile per-packet one-way delay: 102.932 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 37.41 Mbit/s
95th percentile per-packet one-way delay: 111.426 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 26.39 Mbit/s
95th percentile per-packet one-way delay: 114.008 ms
Loss rate: 0.59%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-01-19 00:24:30

End at: 2019-01-19 00:25:00

Local clock offset: -3.741 ms

Remote clock offset: 2.729 ms

Below is generated by plot.py at 2019-01-19 02:21:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.10 Mbit/s

95th percentile per-packet one-way delay: 108.579 ms

Loss rate: 15.25%

-- Flow 1:

Average throughput: 34.88 Mbit/s

95th percentile per-packet one-way delay: 107.034 ms

Loss rate: 13.02%

-- Flow 2:

Average throughput: 64.35 Mbit/s

95th percentile per-packet one-way delay: 108.383 ms

Loss rate: 14.41%

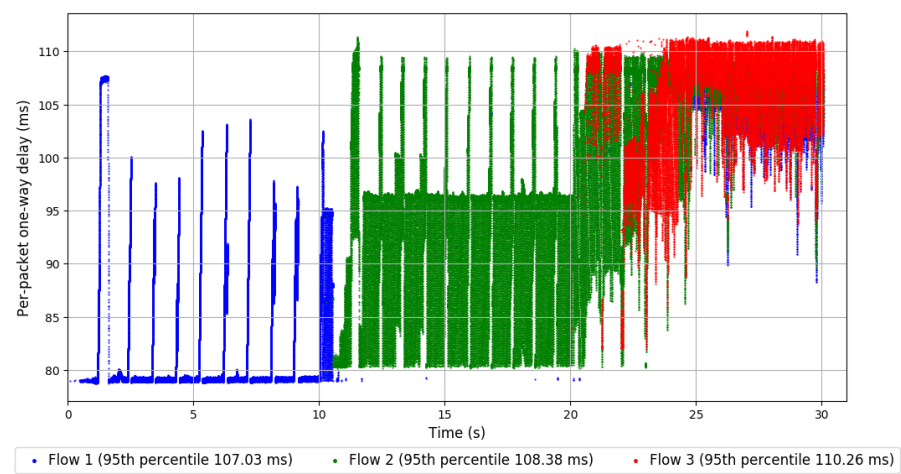
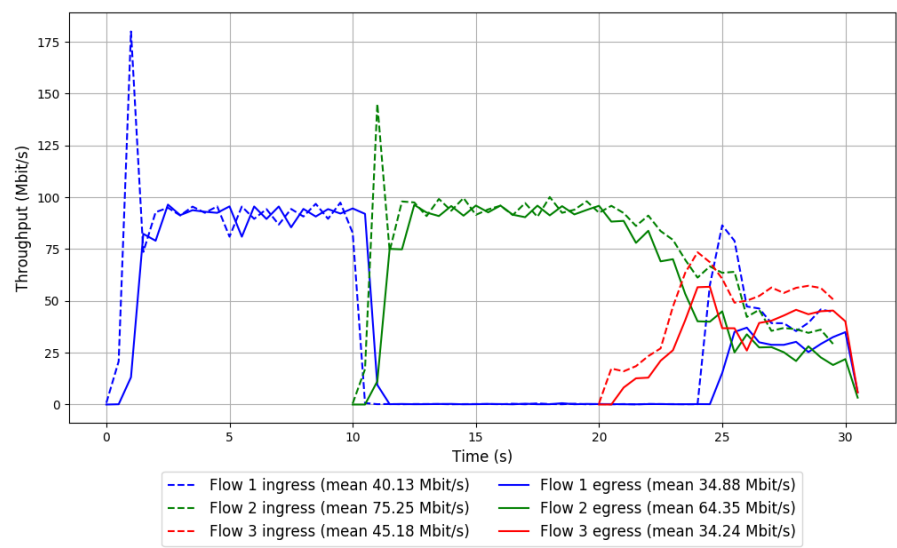
-- Flow 3:

Average throughput: 34.24 Mbit/s

95th percentile per-packet one-way delay: 110.261 ms

Loss rate: 24.01%

Run 1: Report of FillP — Data Link

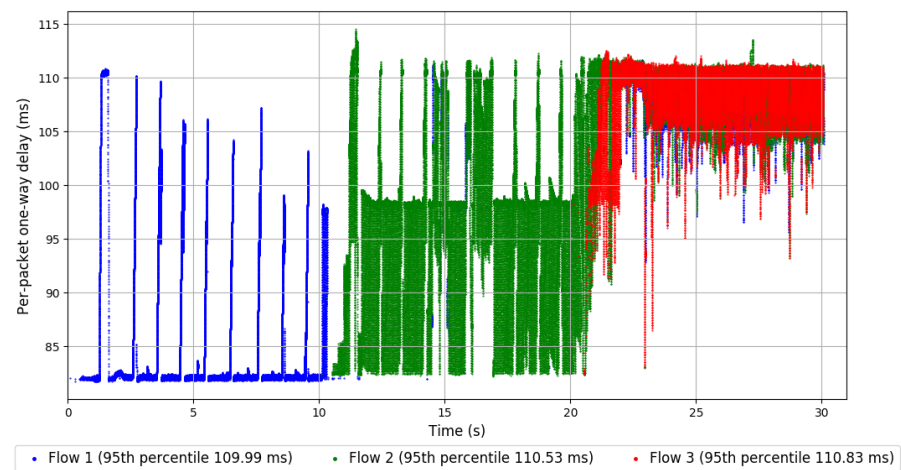
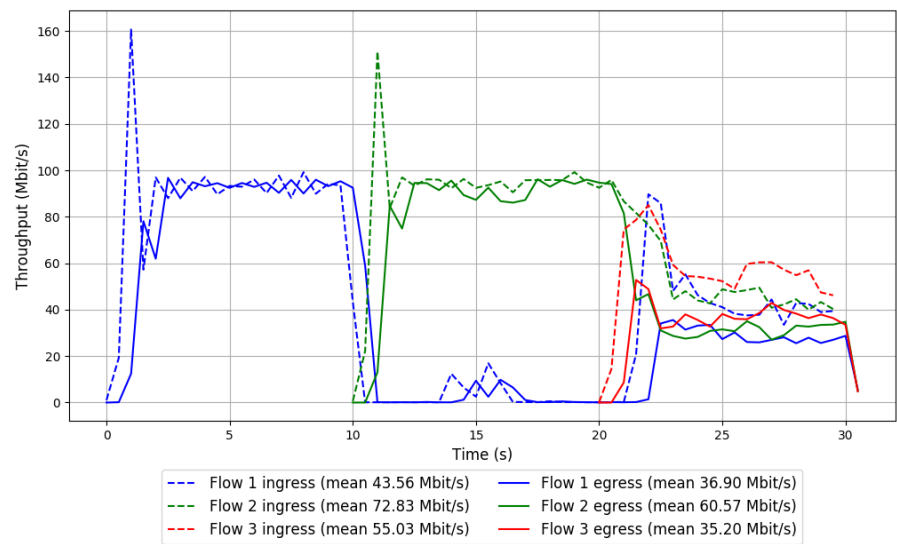


Run 2: Statistics of FillP

Start at: 2019-01-19 00:51:06
End at: 2019-01-19 00:51:36
Local clock offset: -0.251 ms
Remote clock offset: 2.91 ms

Below is generated by plot.py at 2019-01-19 02:21:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 88.88 Mbit/s
95th percentile per-packet one-way delay: 110.450 ms
Loss rate: 19.32%
-- Flow 1:
Average throughput: 36.90 Mbit/s
95th percentile per-packet one-way delay: 109.990 ms
Loss rate: 15.22%
-- Flow 2:
Average throughput: 60.57 Mbit/s
95th percentile per-packet one-way delay: 110.527 ms
Loss rate: 16.73%
-- Flow 3:
Average throughput: 35.20 Mbit/s
95th percentile per-packet one-way delay: 110.835 ms
Loss rate: 35.98%

Run 2: Report of FillP — Data Link

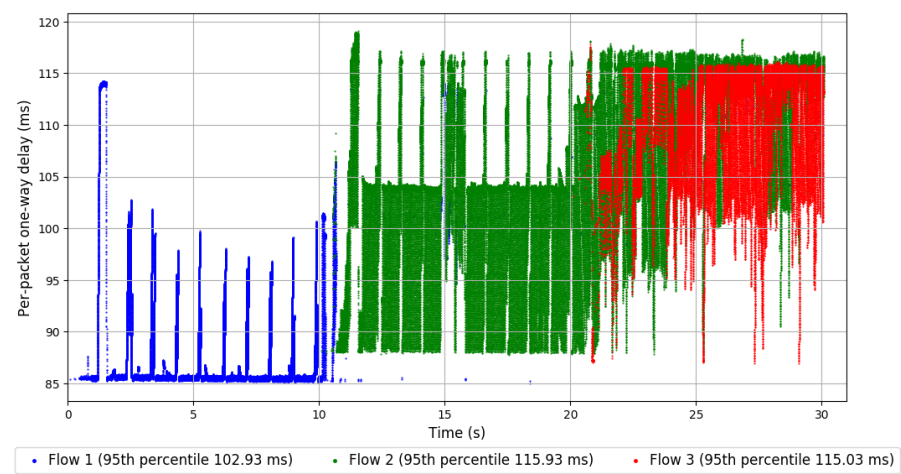
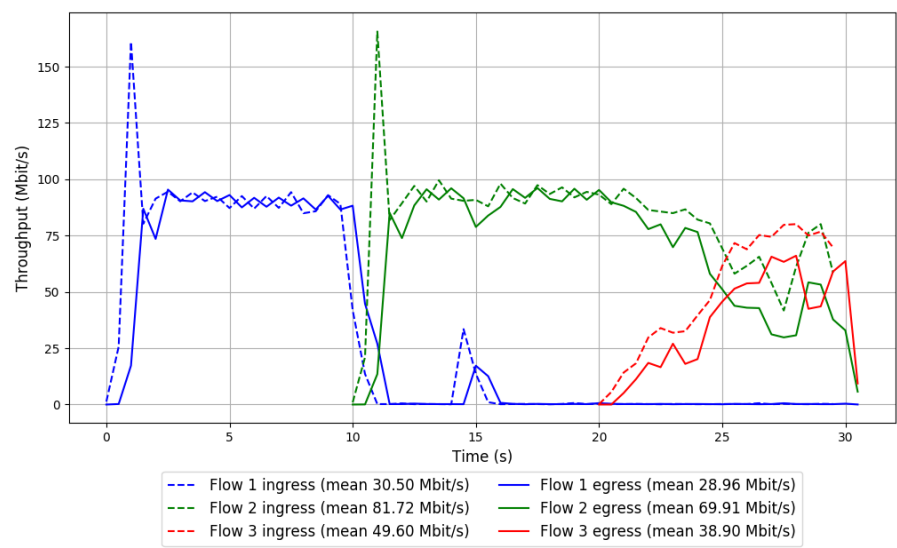


Run 3: Statistics of FillP

Start at: 2019-01-19 01:17:40
End at: 2019-01-19 01:18:10
Local clock offset: 0.964 ms
Remote clock offset: 8.848 ms

Below is generated by plot.py at 2019-01-19 02:21:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 88.38 Mbit/s
95th percentile per-packet one-way delay: 115.582 ms
Loss rate: 12.69%
-- Flow 1:
Average throughput: 28.96 Mbit/s
95th percentile per-packet one-way delay: 102.928 ms
Loss rate: 5.00%
-- Flow 2:
Average throughput: 69.91 Mbit/s
95th percentile per-packet one-way delay: 115.931 ms
Loss rate: 14.34%
-- Flow 3:
Average throughput: 38.90 Mbit/s
95th percentile per-packet one-way delay: 115.031 ms
Loss rate: 21.50%

Run 3: Report of FillP — Data Link

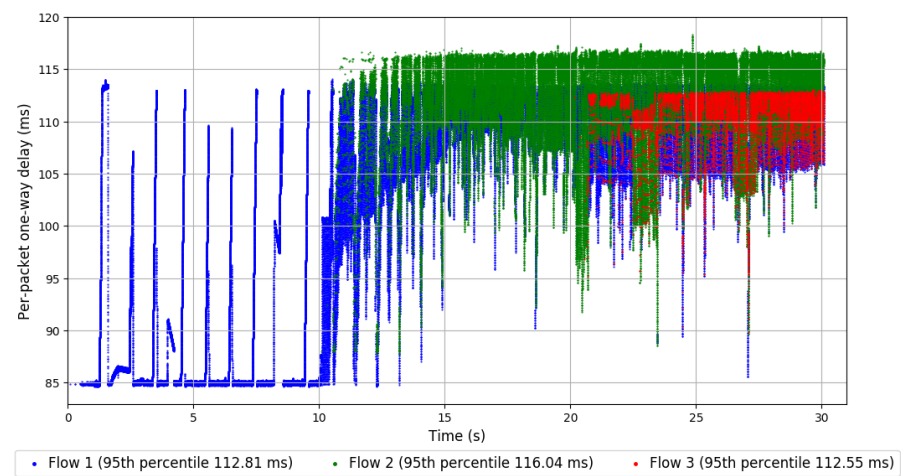
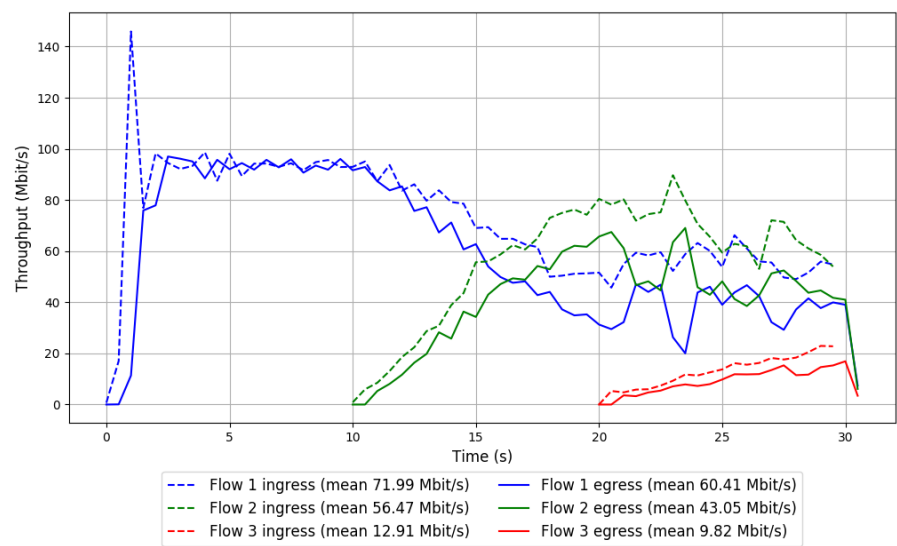


Run 4: Statistics of FillP

Start at: 2019-01-19 01:44:17
End at: 2019-01-19 01:44:47
Local clock offset: -8.687 ms
Remote clock offset: 8.189 ms

Below is generated by plot.py at 2019-01-19 02:21:59
Datalink statistics
-- Total of 3 flows:
Average throughput: 92.32 Mbit/s
95th percentile per-packet one-way delay: 115.674 ms
Loss rate: 18.83%
-- Flow 1:
Average throughput: 60.41 Mbit/s
95th percentile per-packet one-way delay: 112.806 ms
Loss rate: 16.00%
-- Flow 2:
Average throughput: 43.05 Mbit/s
95th percentile per-packet one-way delay: 116.044 ms
Loss rate: 23.66%
-- Flow 3:
Average throughput: 9.82 Mbit/s
95th percentile per-packet one-way delay: 112.549 ms
Loss rate: 23.99%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-01-19 02:10:54

End at: 2019-01-19 02:11:24

Local clock offset: -7.726 ms

Remote clock offset: 8.268 ms

Below is generated by plot.py at 2019-01-19 02:22:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.54 Mbit/s

95th percentile per-packet one-way delay: 114.253 ms

Loss rate: 19.47%

-- Flow 1:

Average throughput: 55.28 Mbit/s

95th percentile per-packet one-way delay: 112.643 ms

Loss rate: 16.89%

-- Flow 2:

Average throughput: 42.27 Mbit/s

95th percentile per-packet one-way delay: 114.708 ms

Loss rate: 23.13%

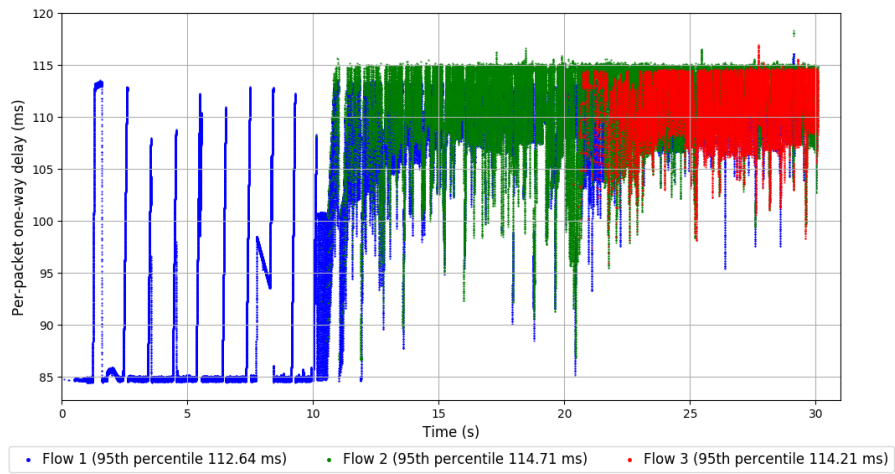
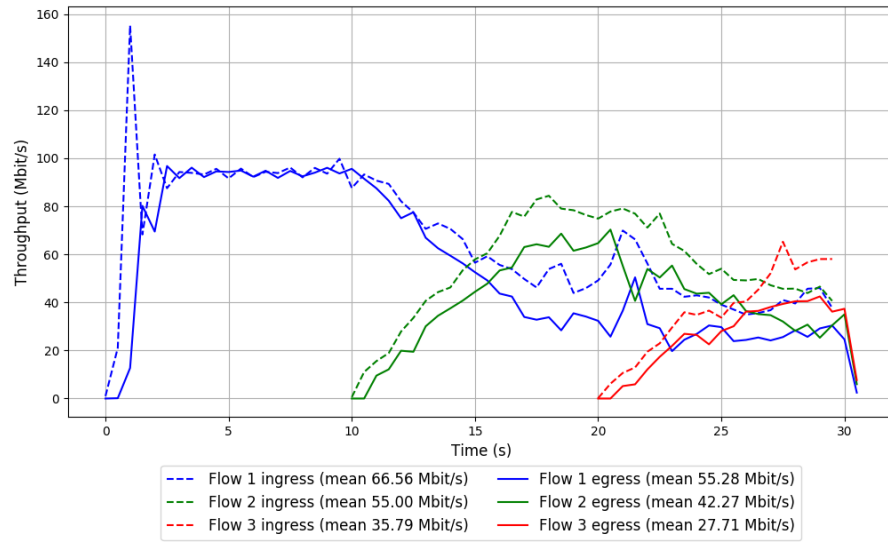
-- Flow 3:

Average throughput: 27.71 Mbit/s

95th percentile per-packet one-way delay: 114.206 ms

Loss rate: 22.59%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-01-19 00:19:27

End at: 2019-01-19 00:19:57

Local clock offset: -6.3 ms

Remote clock offset: 3.706 ms

Below is generated by plot.py at 2019-01-19 02:22:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.68 Mbit/s

95th percentile per-packet one-way delay: 109.784 ms

Loss rate: 15.98%

-- Flow 1:

Average throughput: 5.60 Mbit/s

95th percentile per-packet one-way delay: 113.639 ms

Loss rate: 59.64%

-- Flow 2:

Average throughput: 76.21 Mbit/s

95th percentile per-packet one-way delay: 108.811 ms

Loss rate: 6.24%

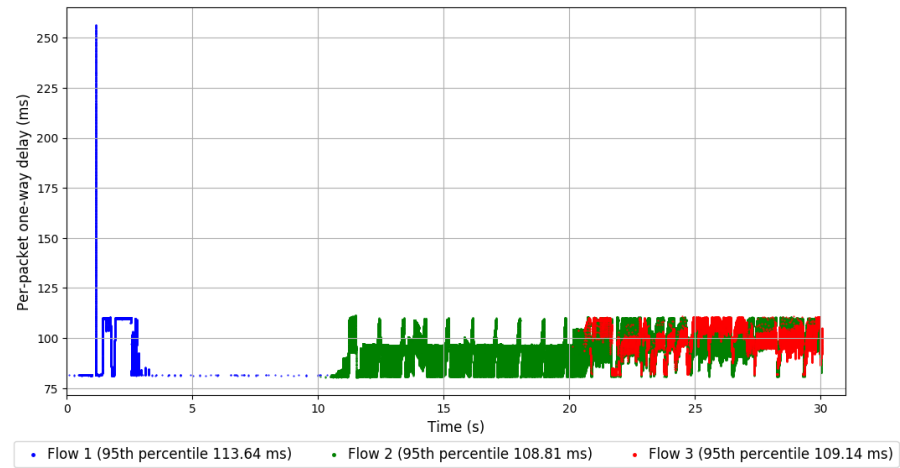
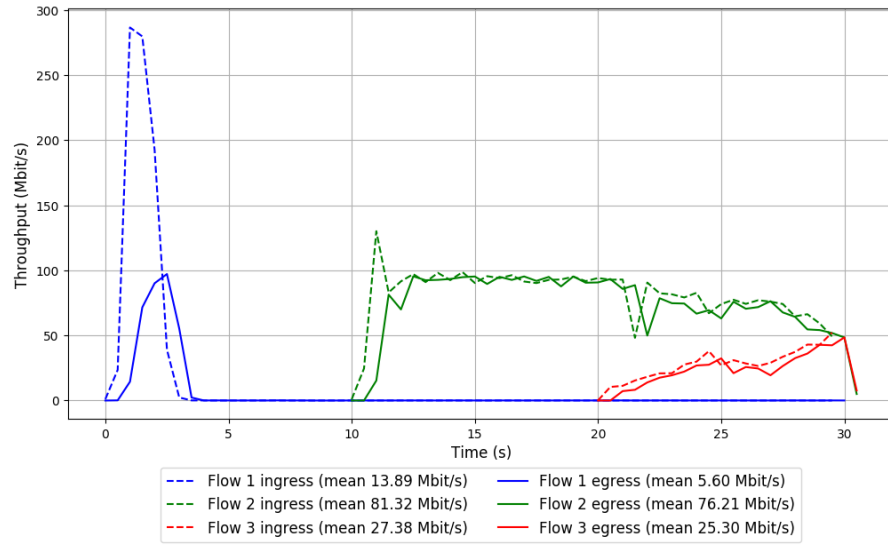
-- Flow 3:

Average throughput: 25.30 Mbit/s

95th percentile per-packet one-way delay: 109.139 ms

Loss rate: 7.57%

Run 1: Report of FillP-Sheep — Data Link

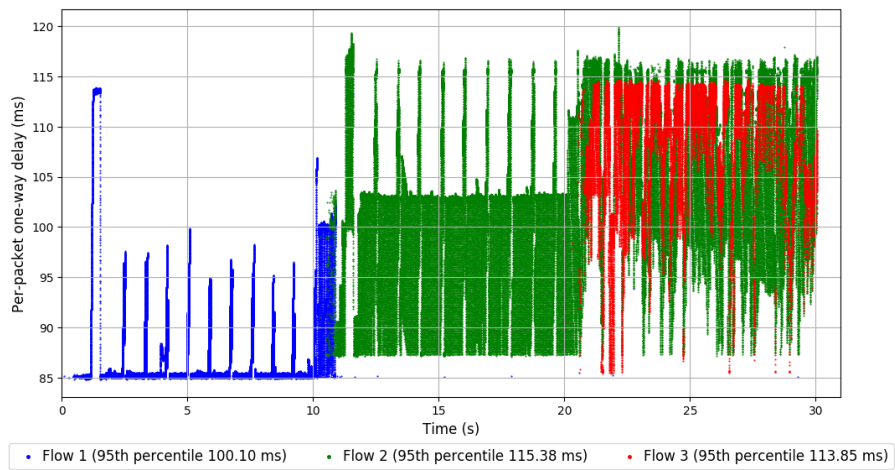
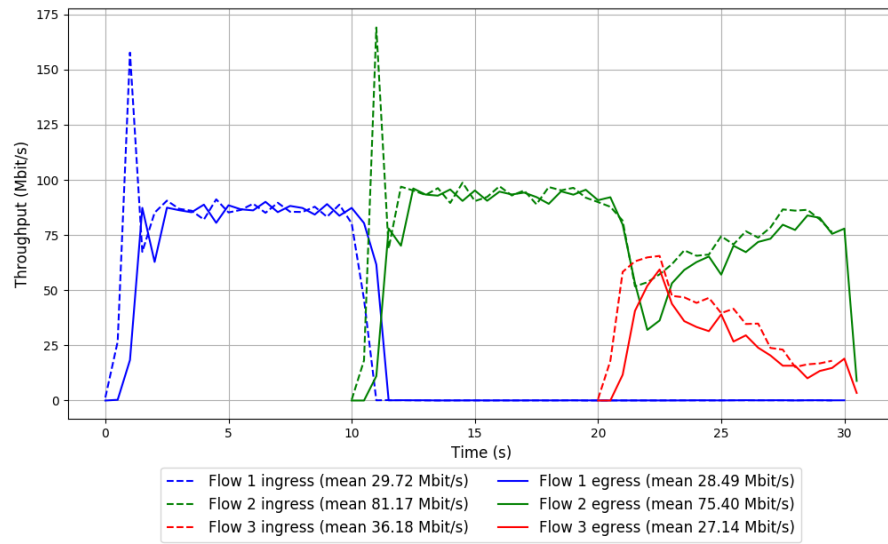


Run 2: Statistics of FillP-Sheep

Start at: 2019-01-19 00:46:05
End at: 2019-01-19 00:46:35
Local clock offset: 0.081 ms
Remote clock offset: 8.187 ms

Below is generated by plot.py at 2019-01-19 02:22:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 87.57 Mbit/s
95th percentile per-packet one-way delay: 114.644 ms
Loss rate: 8.36%
-- Flow 1:
Average throughput: 28.49 Mbit/s
95th percentile per-packet one-way delay: 100.098 ms
Loss rate: 4.05%
-- Flow 2:
Average throughput: 75.40 Mbit/s
95th percentile per-packet one-way delay: 115.378 ms
Loss rate: 7.03%
-- Flow 3:
Average throughput: 27.14 Mbit/s
95th percentile per-packet one-way delay: 113.849 ms
Loss rate: 24.92%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-01-19 01:12:39

End at: 2019-01-19 01:13:09

Local clock offset: 1.212 ms

Remote clock offset: 8.322 ms

Below is generated by plot.py at 2019-01-19 02:22:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.38 Mbit/s

95th percentile per-packet one-way delay: 115.194 ms

Loss rate: 10.60%

-- Flow 1:

Average throughput: 6.22 Mbit/s

95th percentile per-packet one-way delay: 116.896 ms

Loss rate: 20.27%

-- Flow 2:

Average throughput: 71.78 Mbit/s

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

Loss rate: 8.10%

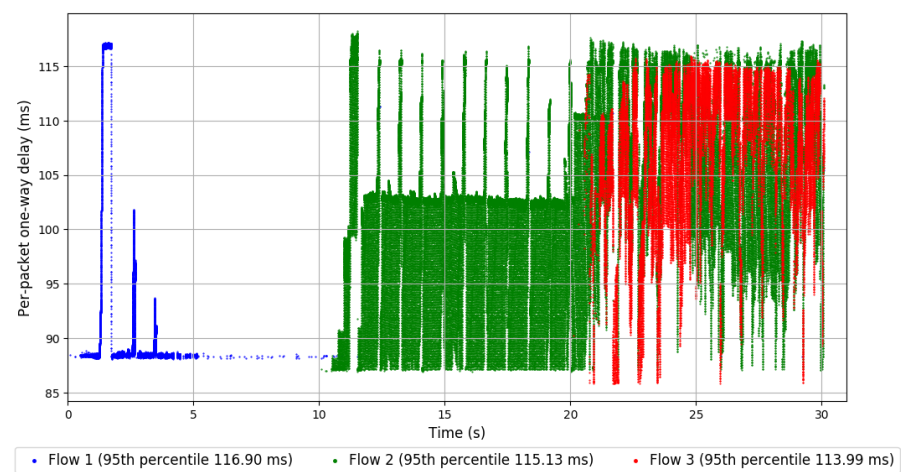
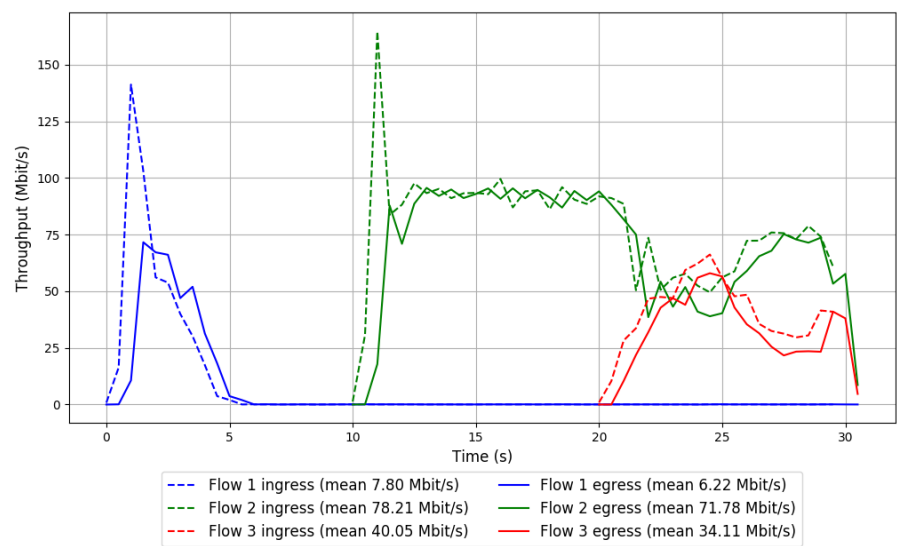
-- Flow 3:

Average throughput: 34.11 Mbit/s

95th percentile per-packet one-way delay: 113.988 ms

Loss rate: 14.70%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-01-19 01:39:15

End at: 2019-01-19 01:39:45

Local clock offset: -7.128 ms

Remote clock offset: 4.571 ms

Below is generated by plot.py at 2019-01-19 02:22:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.47 Mbit/s

95th percentile per-packet one-way delay: 109.474 ms

Loss rate: 5.41%

-- Flow 1:

Average throughput: 28.38 Mbit/s

95th percentile per-packet one-way delay: 108.756 ms

Loss rate: 5.73%

-- Flow 2:

Average throughput: 76.90 Mbit/s

95th percentile per-packet one-way delay: 109.552 ms

Loss rate: 4.92%

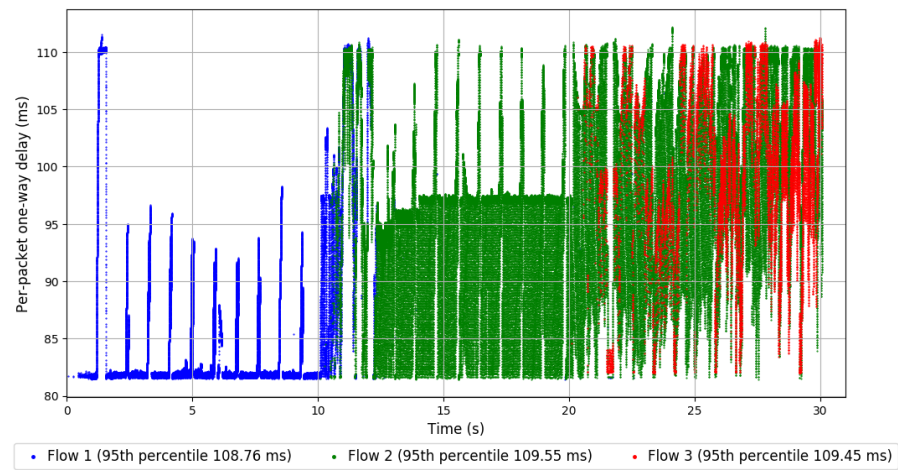
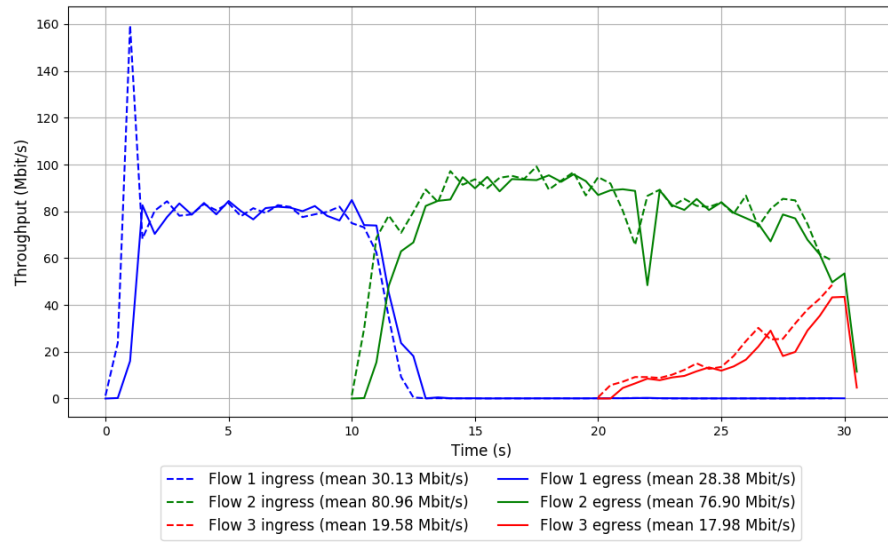
-- Flow 3:

Average throughput: 17.98 Mbit/s

95th percentile per-packet one-way delay: 109.454 ms

Loss rate: 7.97%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-01-19 02:05:53

End at: 2019-01-19 02:06:23

Local clock offset: -6.849 ms

Remote clock offset: 7.151 ms

Below is generated by plot.py at 2019-01-19 02:23:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.30 Mbit/s

95th percentile per-packet one-way delay: 110.687 ms

Loss rate: 5.62%

-- Flow 1:

Average throughput: 28.63 Mbit/s

95th percentile per-packet one-way delay: 98.662 ms

Loss rate: 3.66%

-- Flow 2:

Average throughput: 79.06 Mbit/s

95th percentile per-packet one-way delay: 110.758 ms

Loss rate: 6.12%

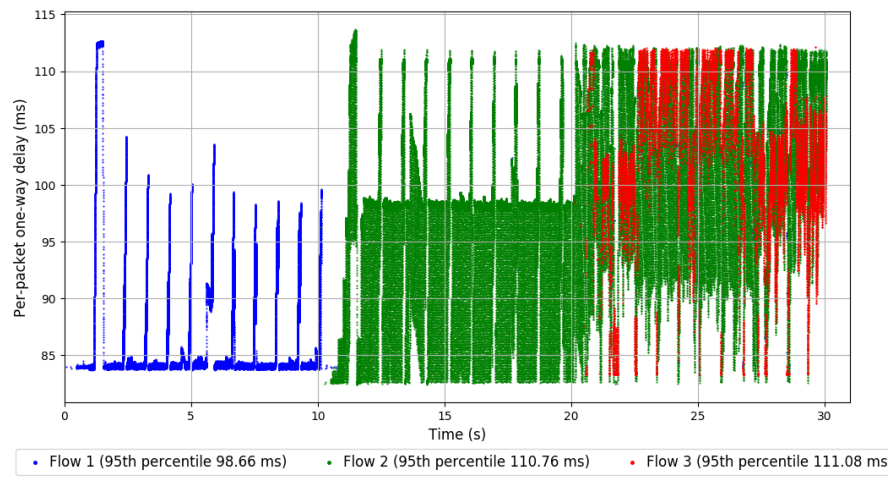
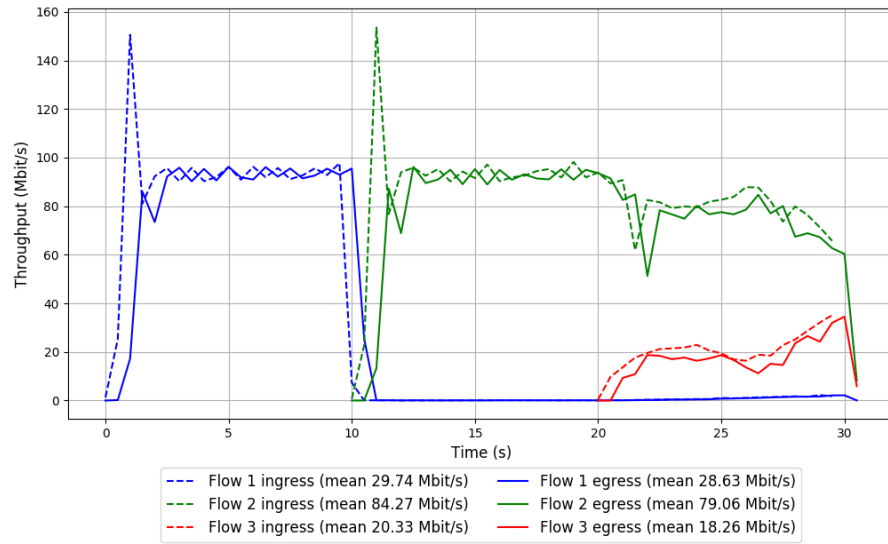
-- Flow 3:

Average throughput: 18.26 Mbit/s

95th percentile per-packet one-way delay: 111.085 ms

Loss rate: 10.07%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-01-19 00:30:55

End at: 2019-01-19 00:31:25

Local clock offset: -2.691 ms

Remote clock offset: 8.875 ms

Below is generated by plot.py at 2019-01-19 02:23:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.14 Mbit/s

95th percentile per-packet one-way delay: 118.523 ms

Loss rate: 29.90%

-- Flow 1:

Average throughput: 68.99 Mbit/s

95th percentile per-packet one-way delay: 118.542 ms

Loss rate: 10.91%

-- Flow 2:

Average throughput: 18.88 Mbit/s

95th percentile per-packet one-way delay: 117.099 ms

Loss rate: 36.57%

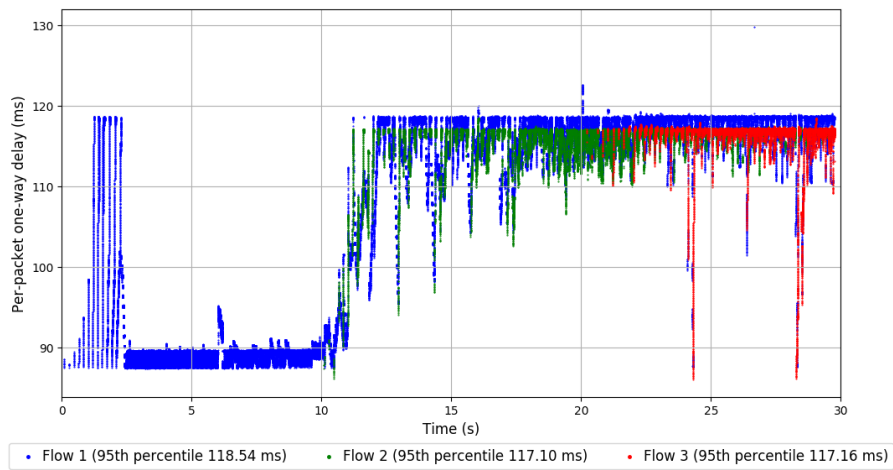
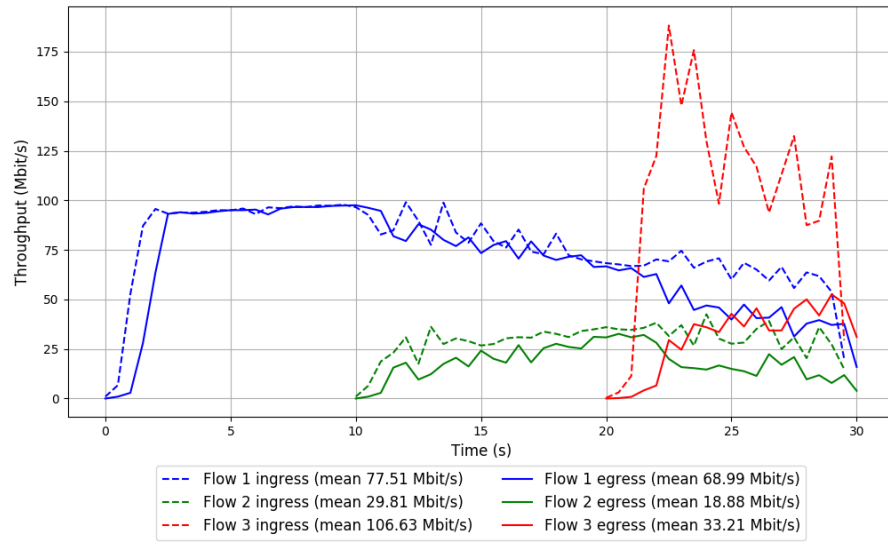
-- Flow 3:

Average throughput: 33.21 Mbit/s

95th percentile per-packet one-way delay: 117.158 ms

Loss rate: 68.86%

Run 1: Report of Indigo — Data Link

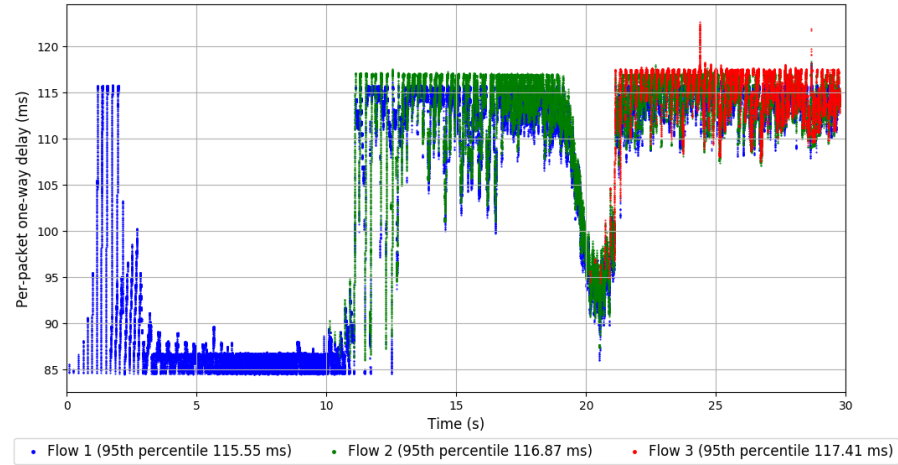
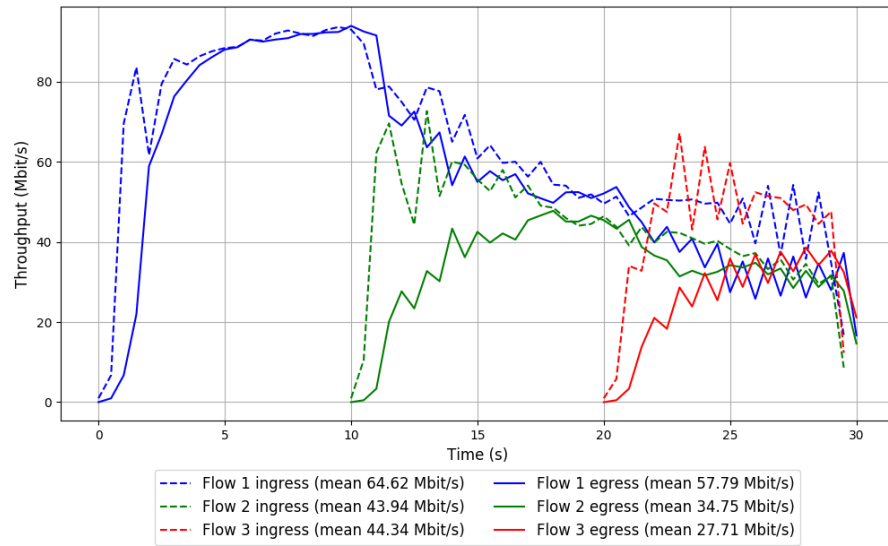


Run 2: Statistics of Indigo

Start at: 2019-01-19 00:57:31
End at: 2019-01-19 00:58:01
Local clock offset: 0.197 ms
Remote clock offset: 6.492 ms

Below is generated by plot.py at 2019-01-19 02:23:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 89.66 Mbit/s
95th percentile per-packet one-way delay: 116.851 ms
Loss rate: 16.83%
-- Flow 1:
Average throughput: 57.79 Mbit/s
95th percentile per-packet one-way delay: 115.546 ms
Loss rate: 10.47%
-- Flow 2:
Average throughput: 34.75 Mbit/s
95th percentile per-packet one-way delay: 116.866 ms
Loss rate: 20.82%
-- Flow 3:
Average throughput: 27.71 Mbit/s
95th percentile per-packet one-way delay: 117.410 ms
Loss rate: 37.37%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-01-19 01:24:04

End at: 2019-01-19 01:24:34

Local clock offset: -2.821 ms

Remote clock offset: 4.125 ms

Below is generated by plot.py at 2019-01-19 02:23:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.26 Mbit/s

95th percentile per-packet one-way delay: 114.011 ms

Loss rate: 22.75%

-- Flow 1:

Average throughput: 63.69 Mbit/s

95th percentile per-packet one-way delay: 114.050 ms

Loss rate: 8.56%

-- Flow 2:

Average throughput: 30.13 Mbit/s

95th percentile per-packet one-way delay: 113.255 ms

Loss rate: 22.64%

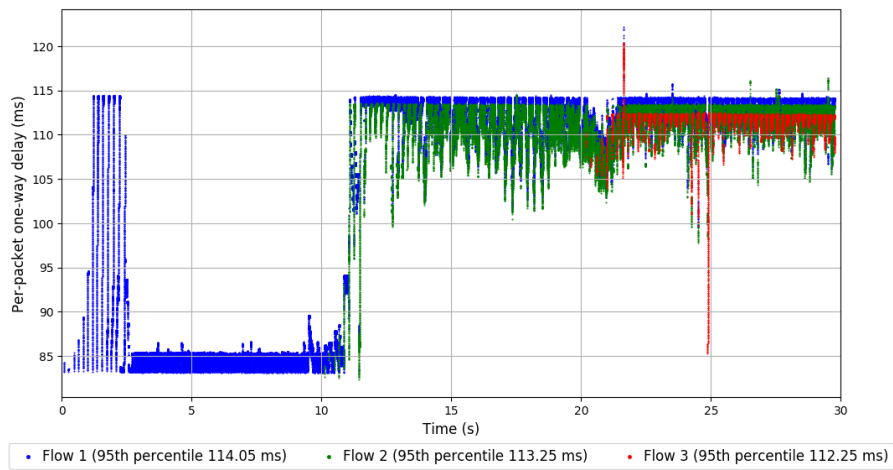
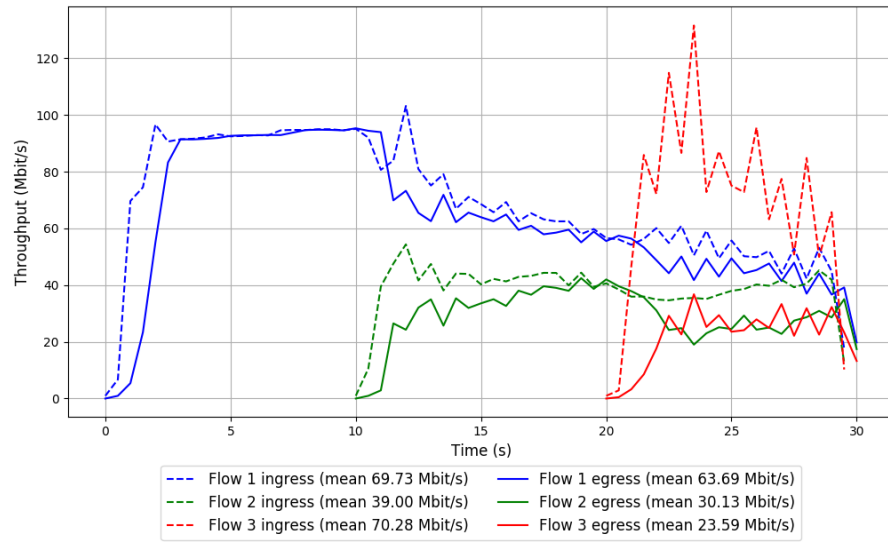
-- Flow 3:

Average throughput: 23.59 Mbit/s

95th percentile per-packet one-way delay: 112.251 ms

Loss rate: 66.43%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-01-19 01:50:43

End at: 2019-01-19 01:51:13

Local clock offset: -7.552 ms

Remote clock offset: 9.595 ms

Below is generated by plot.py at 2019-01-19 02:23:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.32 Mbit/s

95th percentile per-packet one-way delay: 119.041 ms

Loss rate: 32.24%

-- Flow 1:

Average throughput: 66.17 Mbit/s

95th percentile per-packet one-way delay: 119.069 ms

Loss rate: 9.04%

-- Flow 2:

Average throughput: 22.85 Mbit/s

95th percentile per-packet one-way delay: 116.413 ms

Loss rate: 40.13%

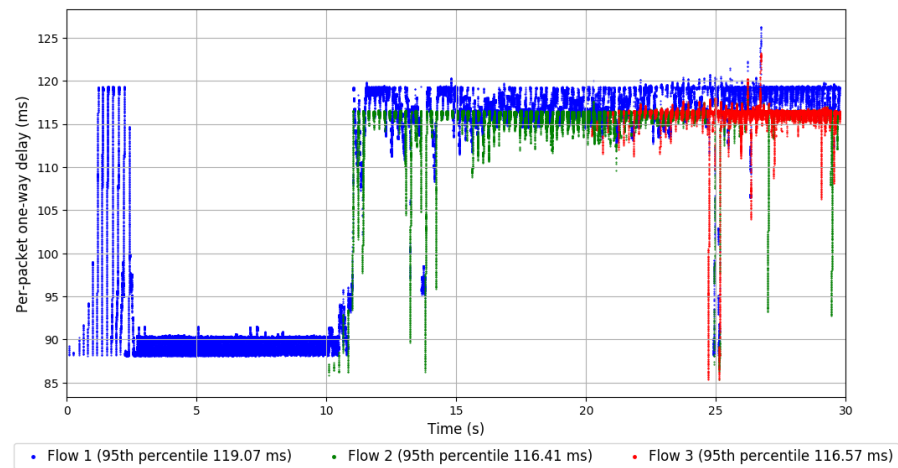
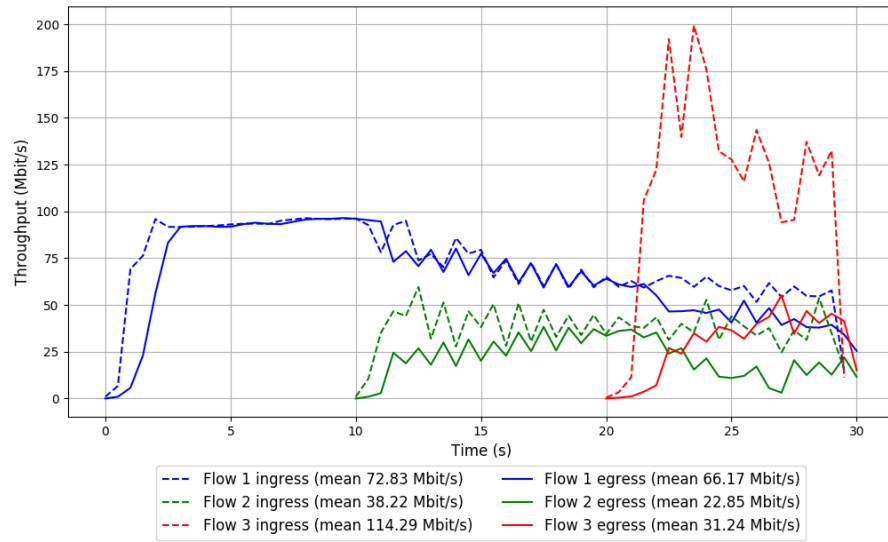
-- Flow 3:

Average throughput: 31.24 Mbit/s

95th percentile per-packet one-way delay: 116.567 ms

Loss rate: 72.67%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-01-19 02:17:19

End at: 2019-01-19 02:17:49

Local clock offset: -7.865 ms

Remote clock offset: 4.359 ms

Below is generated by plot.py at 2019-01-19 02:23:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.94 Mbit/s

95th percentile per-packet one-way delay: 115.343 ms

Loss rate: 26.94%

-- Flow 1:

Average throughput: 66.27 Mbit/s

95th percentile per-packet one-way delay: 115.381 ms

Loss rate: 5.92%

-- Flow 2:

Average throughput: 23.92 Mbit/s

95th percentile per-packet one-way delay: 112.087 ms

Loss rate: 33.69%

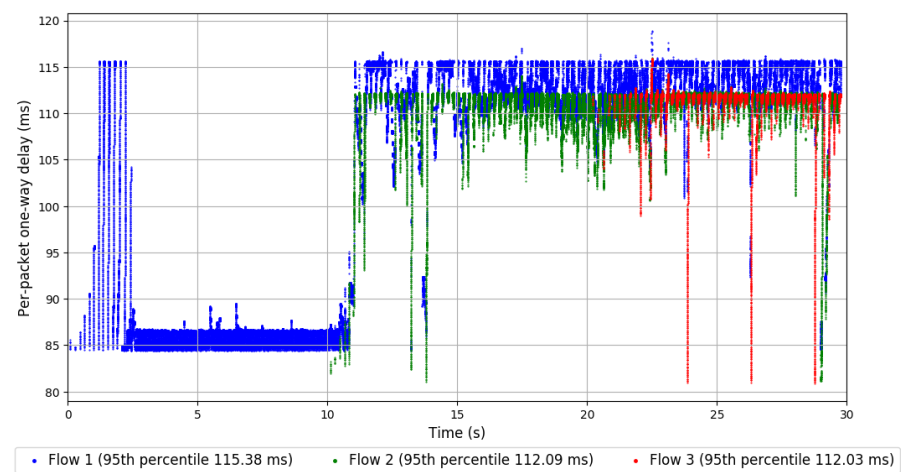
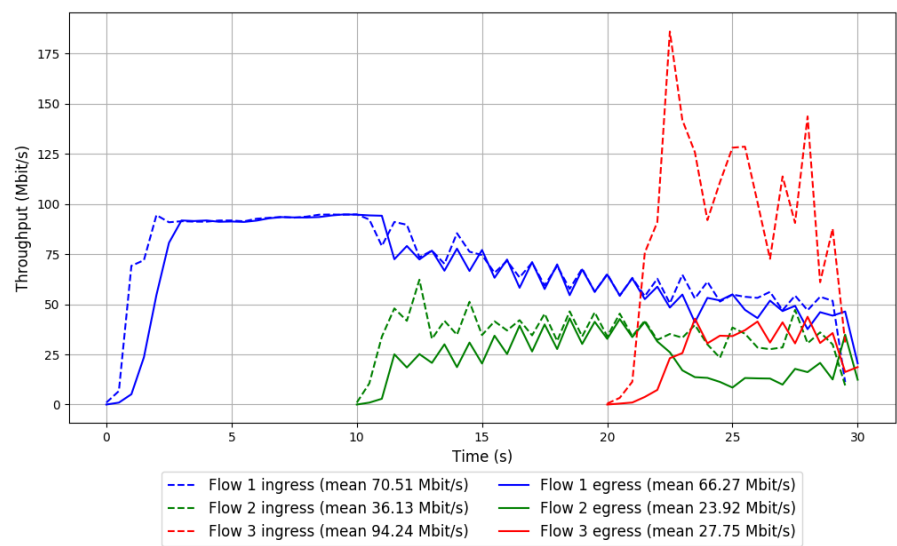
-- Flow 3:

Average throughput: 27.75 Mbit/s

95th percentile per-packet one-way delay: 112.031 ms

Loss rate: 70.55%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-19 00:21:58

End at: 2019-01-19 00:22:28

Local clock offset: -5.624 ms

Remote clock offset: 7.622 ms

Below is generated by plot.py at 2019-01-19 02:23:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.98 Mbit/s

95th percentile per-packet one-way delay: 110.399 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 70.42 Mbit/s

95th percentile per-packet one-way delay: 108.645 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 26.13 Mbit/s

95th percentile per-packet one-way delay: 113.221 ms

Loss rate: 0.02%

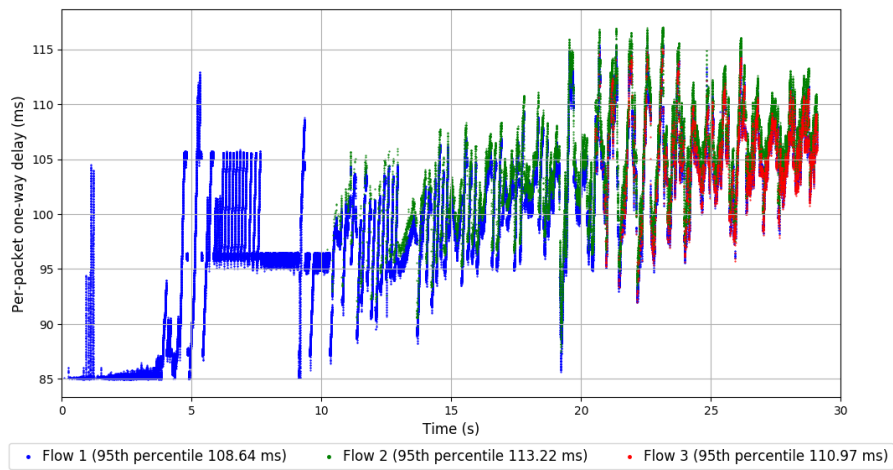
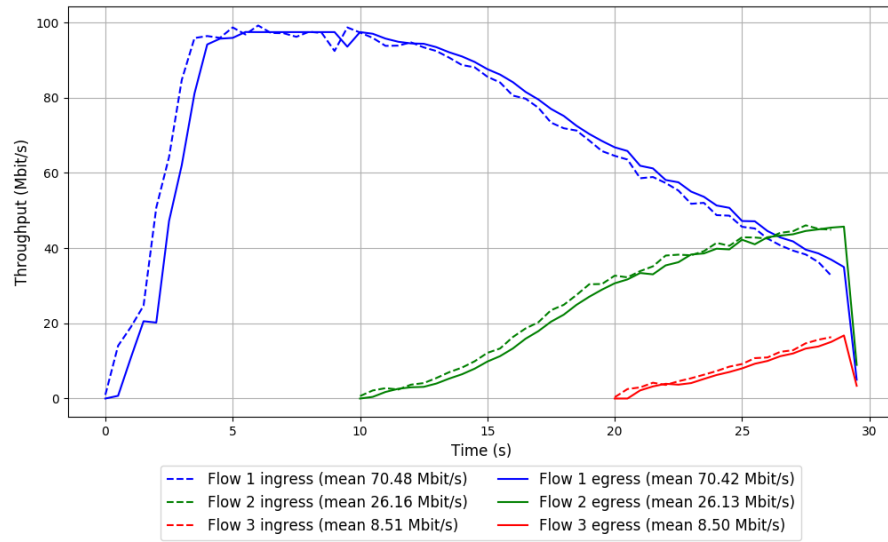
-- Flow 3:

Average throughput: 8.50 Mbit/s

95th percentile per-packet one-way delay: 110.970 ms

Loss rate: 0.05%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-19 00:48:36

End at: 2019-01-19 00:49:06

Local clock offset: 0.305 ms

Remote clock offset: 1.81 ms

Below is generated by plot.py at 2019-01-19 02:23:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.43 Mbit/s

95th percentile per-packet one-way delay: 106.783 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 70.54 Mbit/s

95th percentile per-packet one-way delay: 105.306 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 27.61 Mbit/s

95th percentile per-packet one-way delay: 108.345 ms

Loss rate: 0.18%

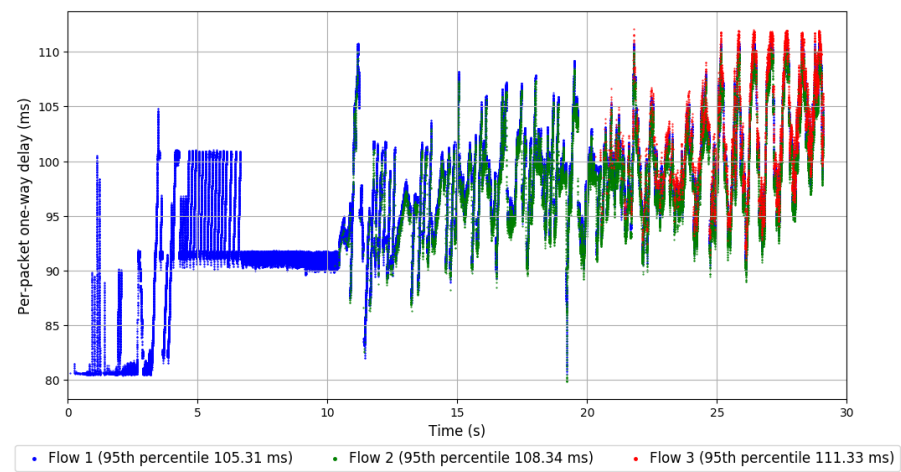
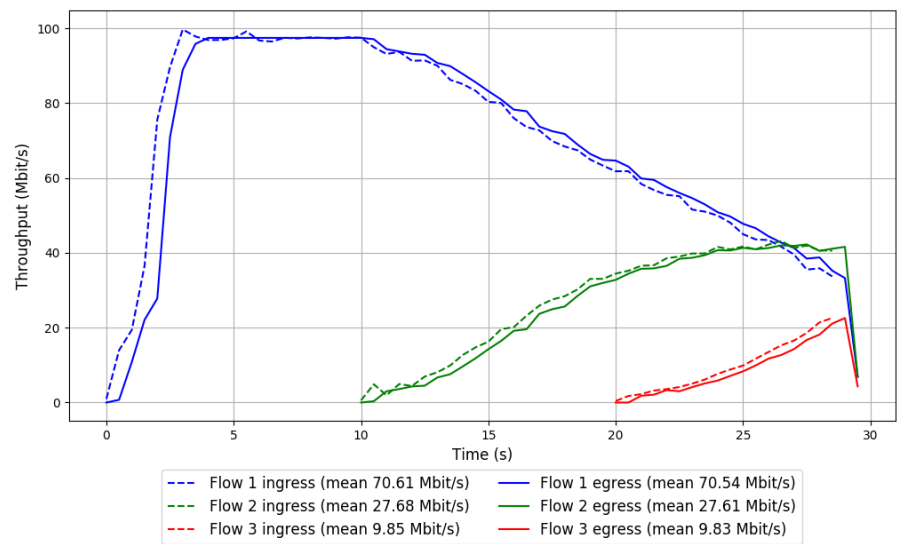
-- Flow 3:

Average throughput: 9.83 Mbit/s

95th percentile per-packet one-way delay: 111.335 ms

Loss rate: 0.14%

Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-19 01:15:09

End at: 2019-01-19 01:15:39

Local clock offset: 2.162 ms

Remote clock offset: 3.804 ms

Below is generated by plot.py at 2019-01-19 02:24:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.63 Mbit/s

95th percentile per-packet one-way delay: 106.823 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 72.47 Mbit/s

95th percentile per-packet one-way delay: 106.127 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 25.94 Mbit/s

95th percentile per-packet one-way delay: 108.295 ms

Loss rate: 0.01%

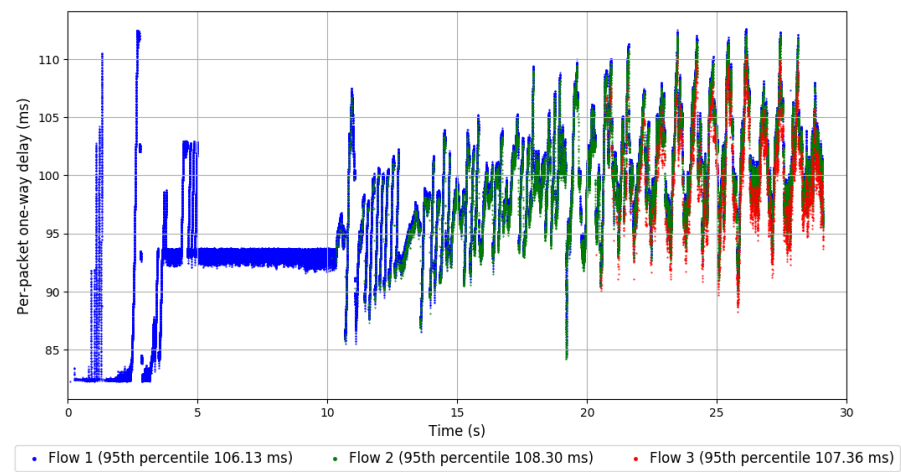
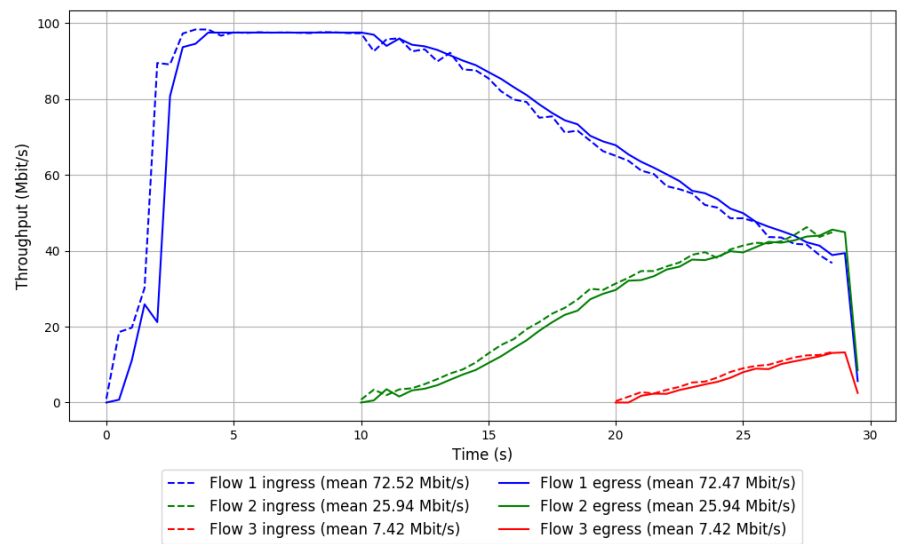
-- Flow 3:

Average throughput: 7.42 Mbit/s

95th percentile per-packet one-way delay: 107.355 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-19 01:41:46

End at: 2019-01-19 01:42:16

Local clock offset: -8.296 ms

Remote clock offset: 4.54 ms

Below is generated by plot.py at 2019-01-19 02:24:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.49 Mbit/s

95th percentile per-packet one-way delay: 100.625 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 81.11 Mbit/s

95th percentile per-packet one-way delay: 99.250 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 10.68 Mbit/s

95th percentile per-packet one-way delay: 102.612 ms

Loss rate: 0.29%

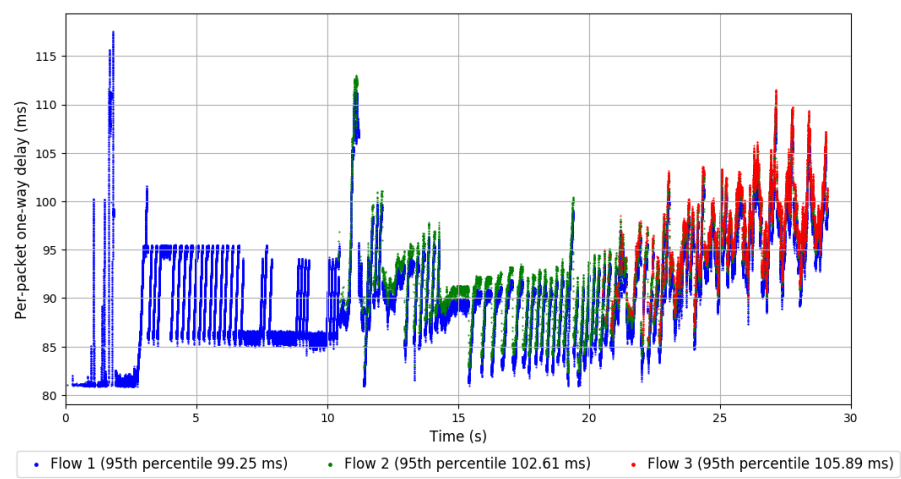
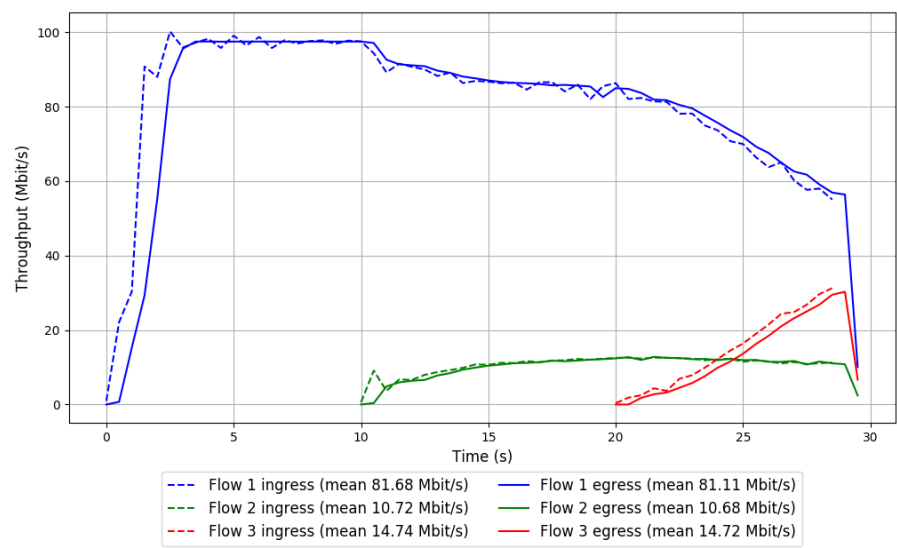
-- Flow 3:

Average throughput: 14.72 Mbit/s

95th percentile per-packet one-way delay: 105.889 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-01-19 02:08:24

End at: 2019-01-19 02:08:54

Local clock offset: -7.675 ms

Remote clock offset: 7.236 ms

Below is generated by plot.py at 2019-01-19 02:24:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.18 Mbit/s

95th percentile per-packet one-way delay: 109.616 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 70.20 Mbit/s

95th percentile per-packet one-way delay: 108.361 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 24.87 Mbit/s

95th percentile per-packet one-way delay: 111.265 ms

Loss rate: 0.04%

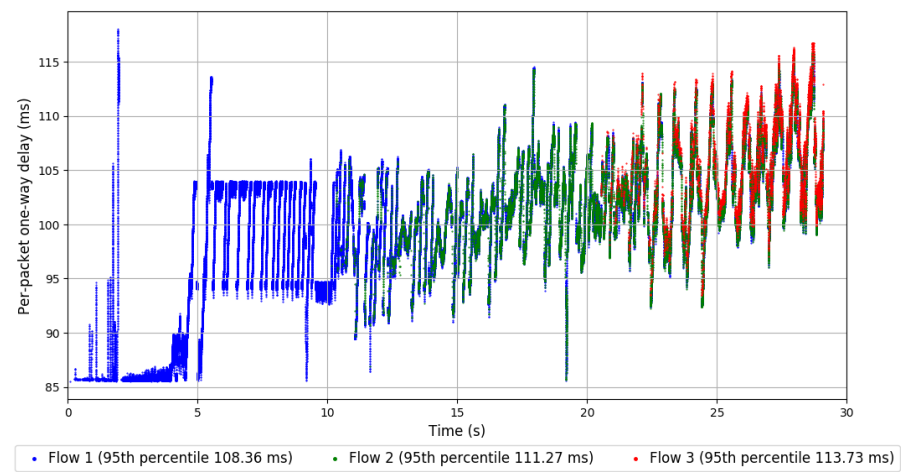
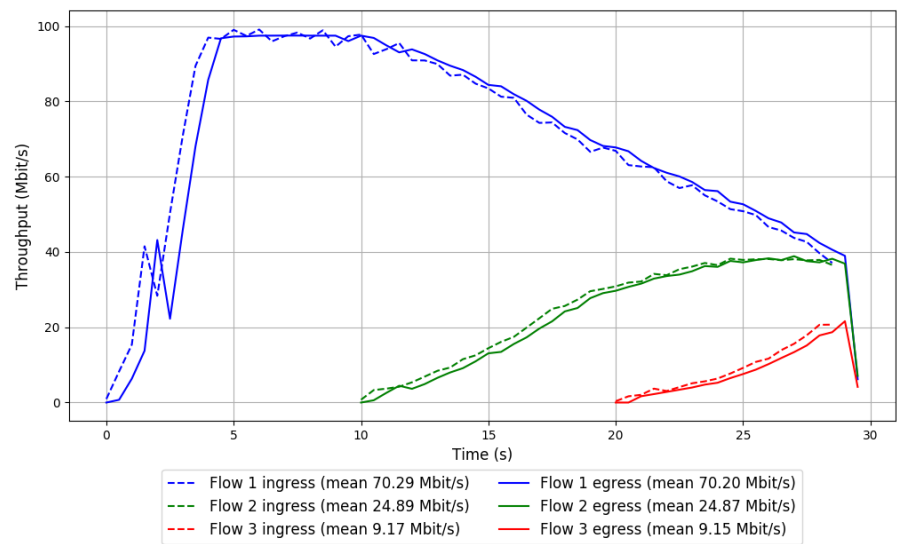
-- Flow 3:

Average throughput: 9.15 Mbit/s

95th percentile per-packet one-way delay: 113.726 ms

Loss rate: 0.20%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-01-19 00:25:47

End at: 2019-01-19 00:26:17

Local clock offset: -3.313 ms

Remote clock offset: 8.827 ms

Below is generated by plot.py at 2019-01-19 02:24:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.11 Mbit/s

95th percentile per-packet one-way delay: 115.871 ms

Loss rate: 2.56%

-- Flow 1:

Average throughput: 76.55 Mbit/s

95th percentile per-packet one-way delay: 115.801 ms

Loss rate: 2.22%

-- Flow 2:

Average throughput: 13.48 Mbit/s

95th percentile per-packet one-way delay: 116.493 ms

Loss rate: 4.48%

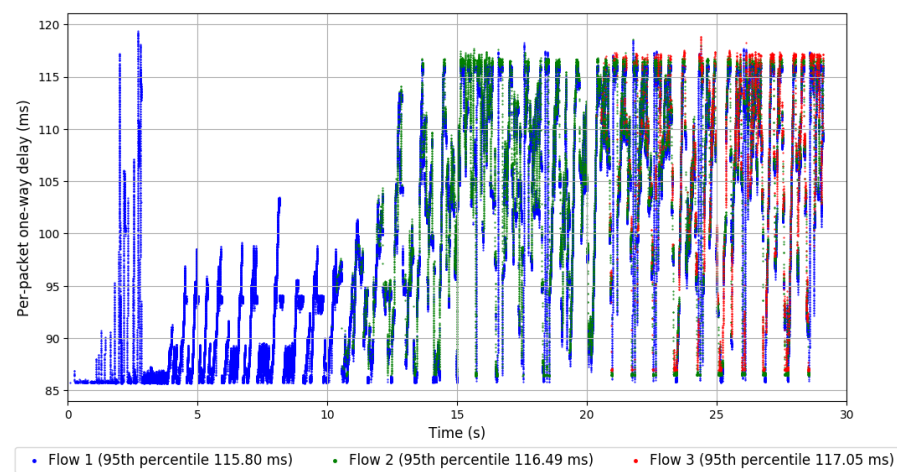
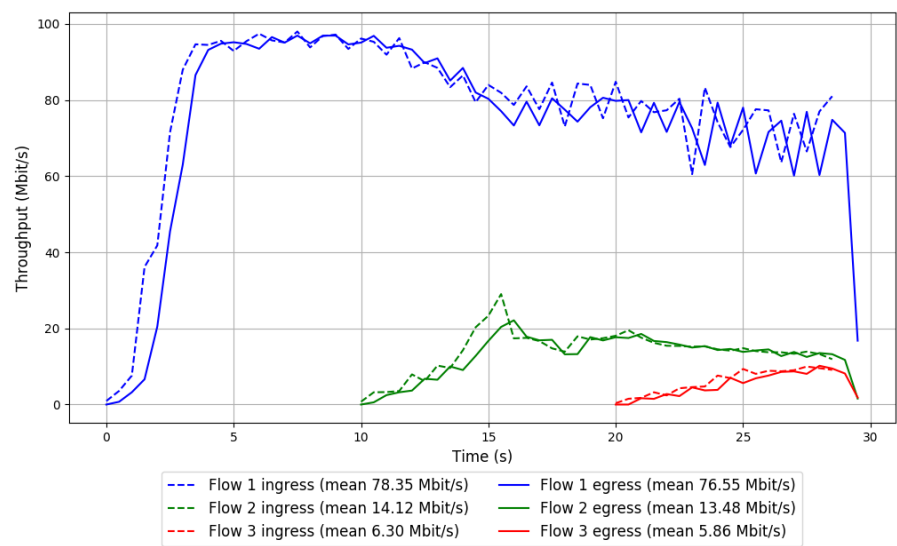
-- Flow 3:

Average throughput: 5.86 Mbit/s

95th percentile per-packet one-way delay: 117.047 ms

Loss rate: 7.00%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-19 00:52:24

End at: 2019-01-19 00:52:54

Local clock offset: 0.577 ms

Remote clock offset: 1.739 ms

Below is generated by plot.py at 2019-01-19 02:24:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.10 Mbit/s

95th percentile per-packet one-way delay: 110.779 ms

Loss rate: 4.95%

-- Flow 1:

Average throughput: 74.97 Mbit/s

95th percentile per-packet one-way delay: 110.757 ms

Loss rate: 3.32%

-- Flow 2:

Average throughput: 19.59 Mbit/s

95th percentile per-packet one-way delay: 110.829 ms

Loss rate: 13.54%

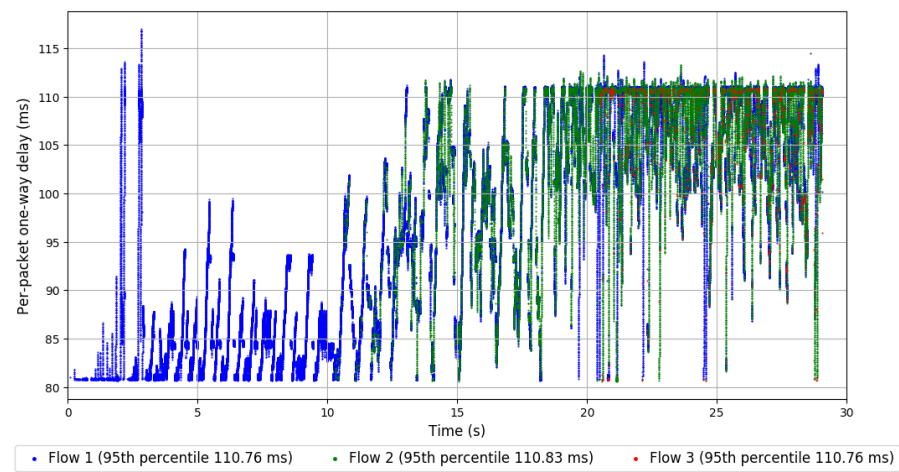
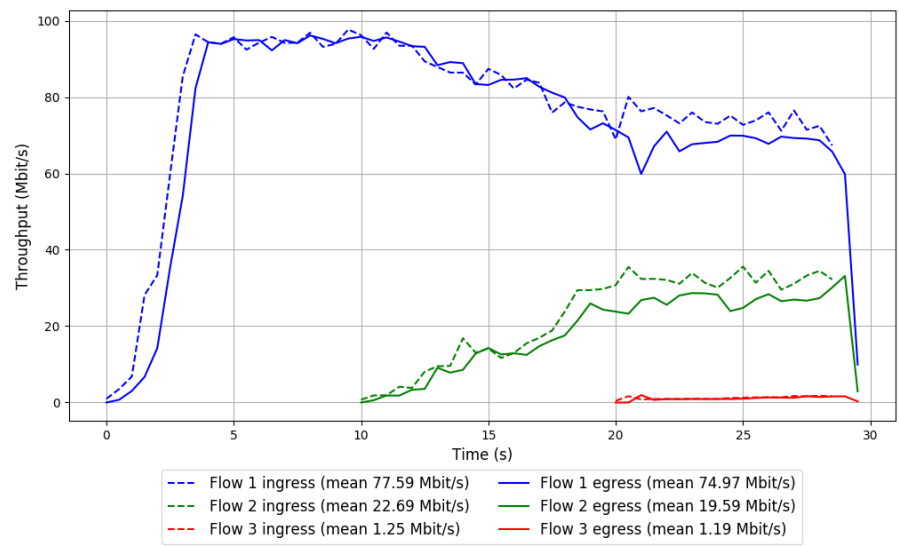
-- Flow 3:

Average throughput: 1.19 Mbit/s

95th percentile per-packet one-way delay: 110.761 ms

Loss rate: 5.32%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-19 01:18:57

End at: 2019-01-19 01:19:27

Local clock offset: 0.508 ms

Remote clock offset: 7.788 ms

Below is generated by plot.py at 2019-01-19 02:24:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.03 Mbit/s

95th percentile per-packet one-way delay: 114.664 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 77.88 Mbit/s

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

Loss rate: 1.14%

-- Flow 2:

Average throughput: 10.15 Mbit/s

95th percentile per-packet one-way delay: 115.862 ms

Loss rate: 1.28%

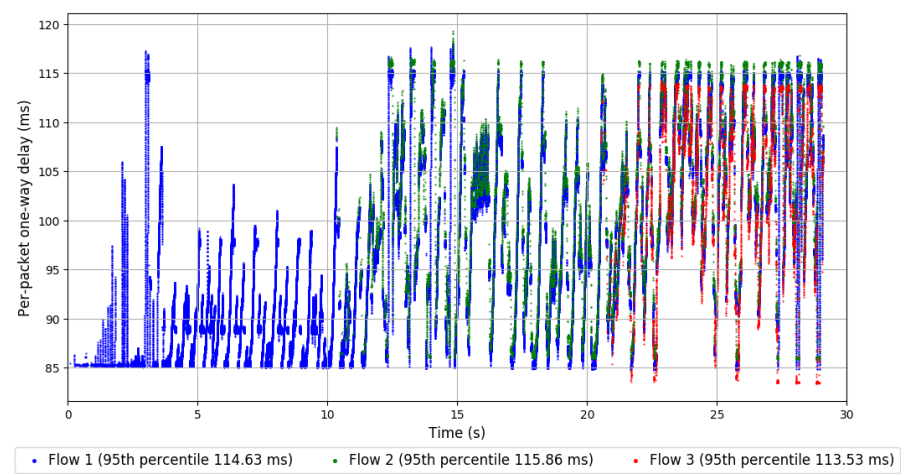
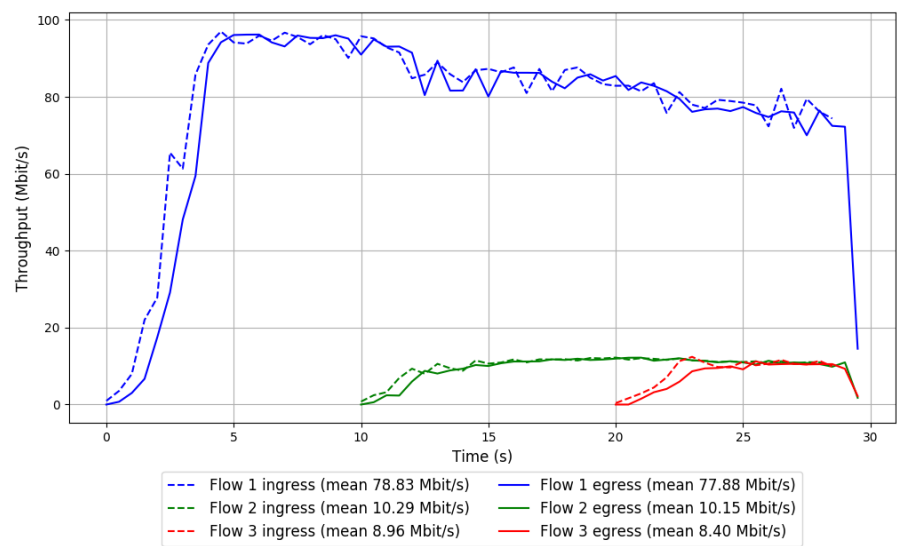
-- Flow 3:

Average throughput: 8.40 Mbit/s

95th percentile per-packet one-way delay: 113.534 ms

Loss rate: 5.95%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-19 01:45:35

End at: 2019-01-19 01:46:05

Local clock offset: -8.076 ms

Remote clock offset: 8.433 ms

Below is generated by plot.py at 2019-01-19 02:24:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.36 Mbit/s

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

Loss rate: 3.78%

-- Flow 1:

Average throughput: 73.46 Mbit/s

95th percentile per-packet one-way delay: 115.588 ms

Loss rate: 2.97%

-- Flow 2:

Average throughput: 17.83 Mbit/s

95th percentile per-packet one-way delay: 115.667 ms

Loss rate: 7.88%

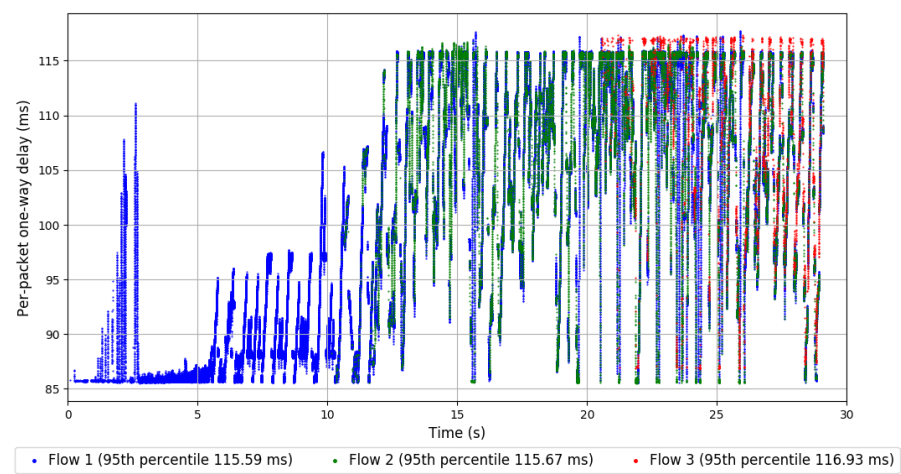
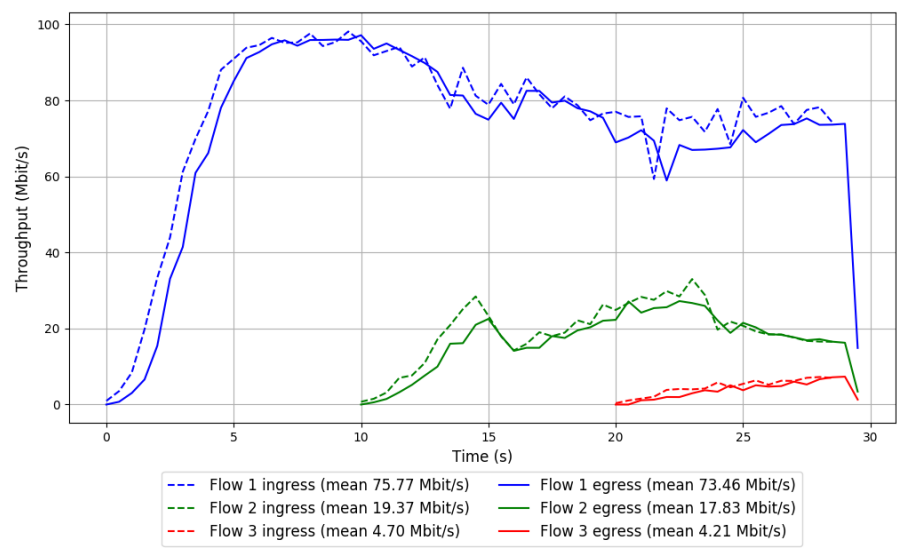
-- Flow 3:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 116.934 ms

Loss rate: 10.42%

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-19 02:12:12

End at: 2019-01-19 02:12:42

Local clock offset: -7.006 ms

Remote clock offset: 9.391 ms

Below is generated by plot.py at 2019-01-19 02:25:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.14 Mbit/s

95th percentile per-packet one-way delay: 116.446 ms

Loss rate: 4.06%

-- Flow 1:

Average throughput: 69.68 Mbit/s

95th percentile per-packet one-way delay: 116.523 ms

Loss rate: 2.32%

-- Flow 2:

Average throughput: 26.20 Mbit/s

95th percentile per-packet one-way delay: 116.232 ms

Loss rate: 10.51%

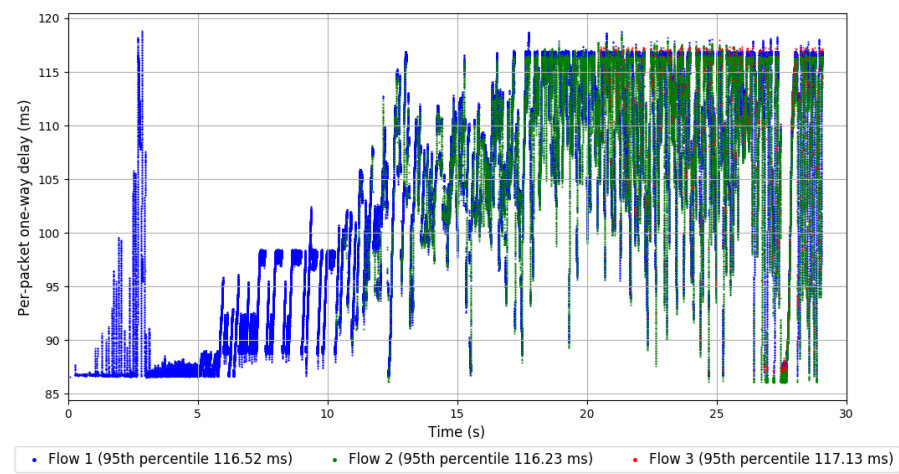
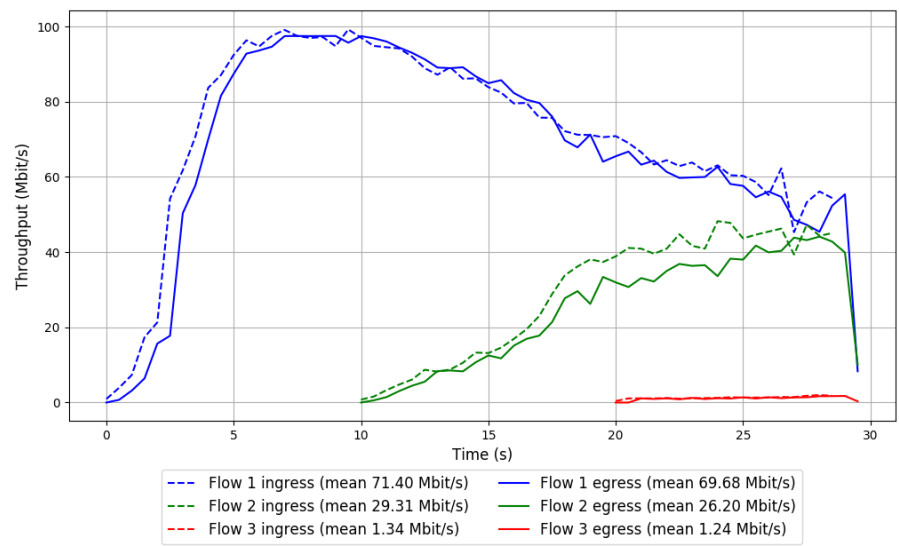
-- Flow 3:

Average throughput: 1.24 Mbit/s

95th percentile per-packet one-way delay: 117.127 ms

Loss rate: 7.29%

Run 5: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-19 00:13:01

End at: 2019-01-19 00:13:31

Local clock offset: -7.62 ms

Remote clock offset: 1.755 ms

Below is generated by plot.py at 2019-01-19 02:25:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.81 Mbit/s

95th percentile per-packet one-way delay: 99.314 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 70.55 Mbit/s

95th percentile per-packet one-way delay: 99.371 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 5.15 Mbit/s

95th percentile per-packet one-way delay: 95.493 ms

Loss rate: 0.00%

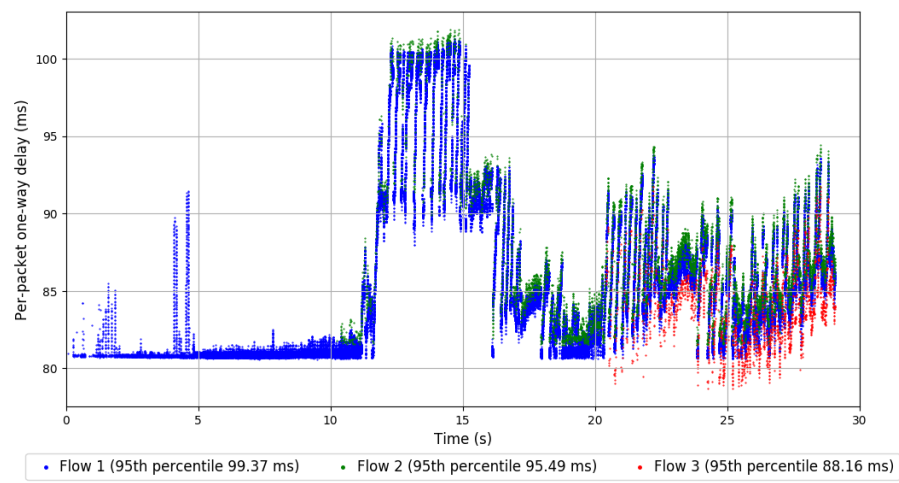
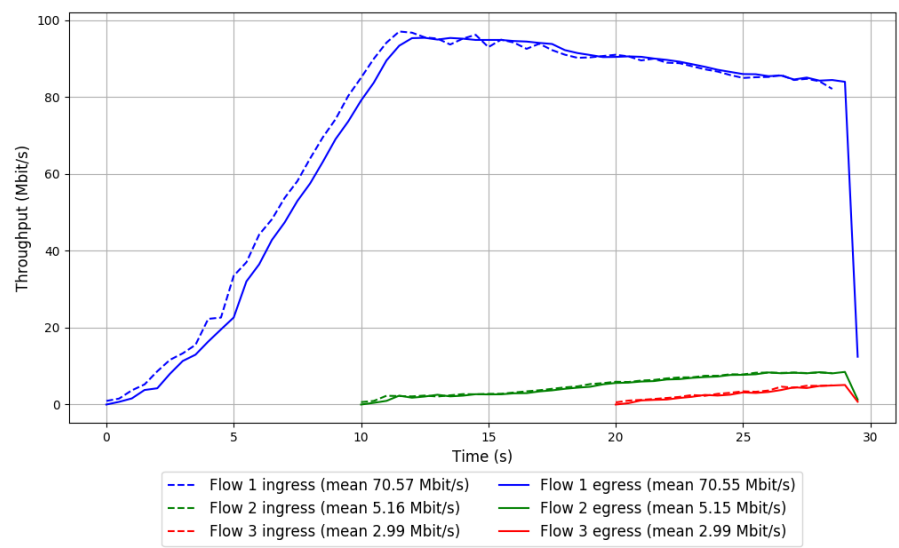
-- Flow 3:

Average throughput: 2.99 Mbit/s

95th percentile per-packet one-way delay: 88.157 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link

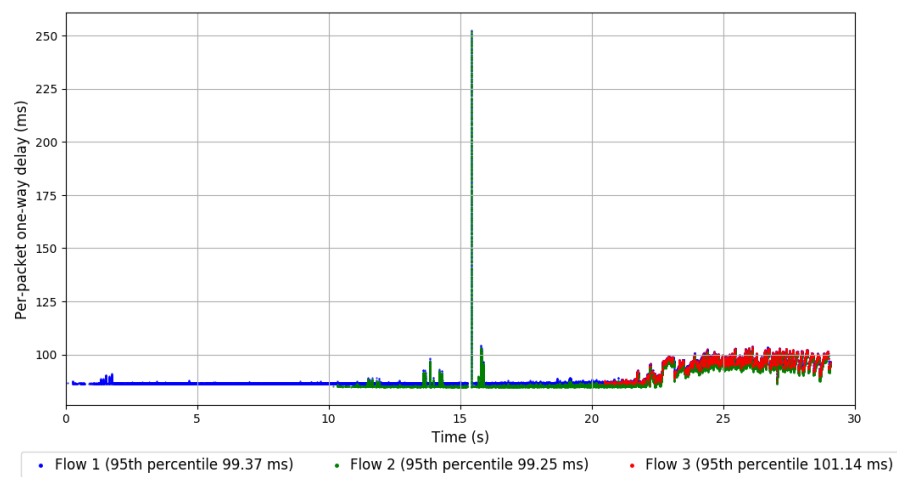
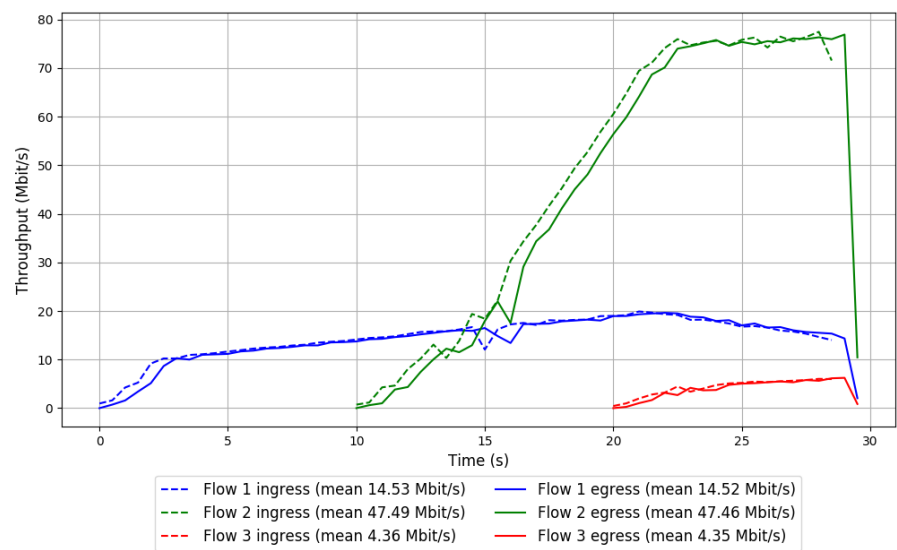


Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-19 00:39:51
End at: 2019-01-19 00:40:21
Local clock offset: -1.306 ms
Remote clock offset: 7.223 ms

Below is generated by plot.py at 2019-01-19 02:25:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 46.80 Mbit/s
95th percentile per-packet one-way delay: 99.366 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 14.52 Mbit/s
95th percentile per-packet one-way delay: 99.368 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 47.46 Mbit/s
95th percentile per-packet one-way delay: 99.253 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 101.135 ms
Loss rate: 0.03%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-19 01:06:25

End at: 2019-01-19 01:06:55

Local clock offset: 0.803 ms

Remote clock offset: 7.309 ms

Below is generated by plot.py at 2019-01-19 02:25:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 29.41 Mbit/s

95th percentile per-packet one-way delay: 88.835 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 16.06 Mbit/s

95th percentile per-packet one-way delay: 88.925 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 11.93 Mbit/s

95th percentile per-packet one-way delay: 87.866 ms

Loss rate: 0.00%

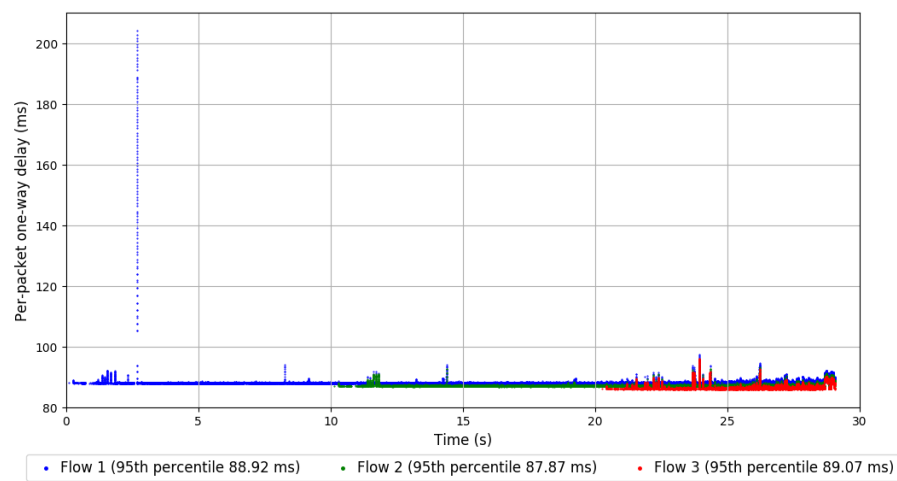
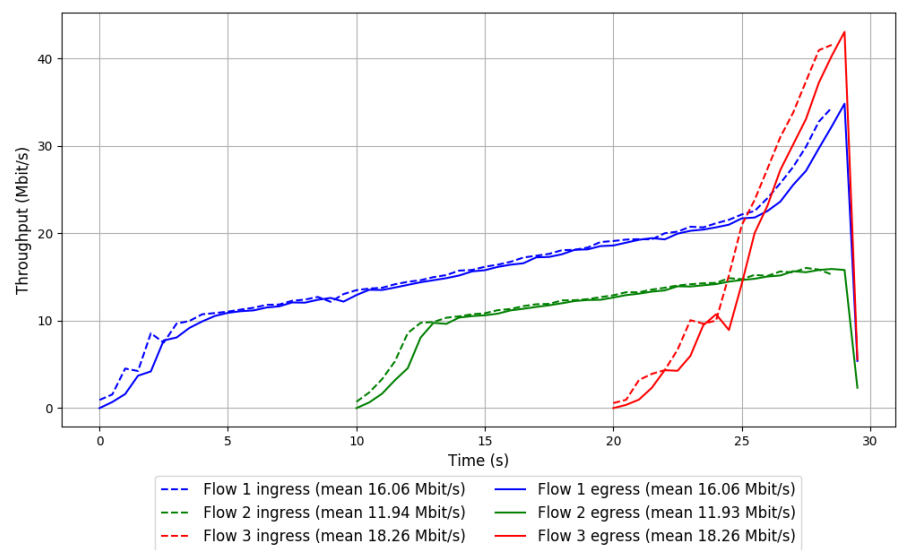
-- Flow 3:

Average throughput: 18.26 Mbit/s

95th percentile per-packet one-way delay: 89.071 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-19 01:32:59

End at: 2019-01-19 01:33:29

Local clock offset: -5.912 ms

Remote clock offset: 7.175 ms

Below is generated by plot.py at 2019-01-19 02:25:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 30.91 Mbit/s

95th percentile per-packet one-way delay: 88.357 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 14.44 Mbit/s

95th percentile per-packet one-way delay: 86.246 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 12.83 Mbit/s

95th percentile per-packet one-way delay: 87.421 ms

Loss rate: 0.00%

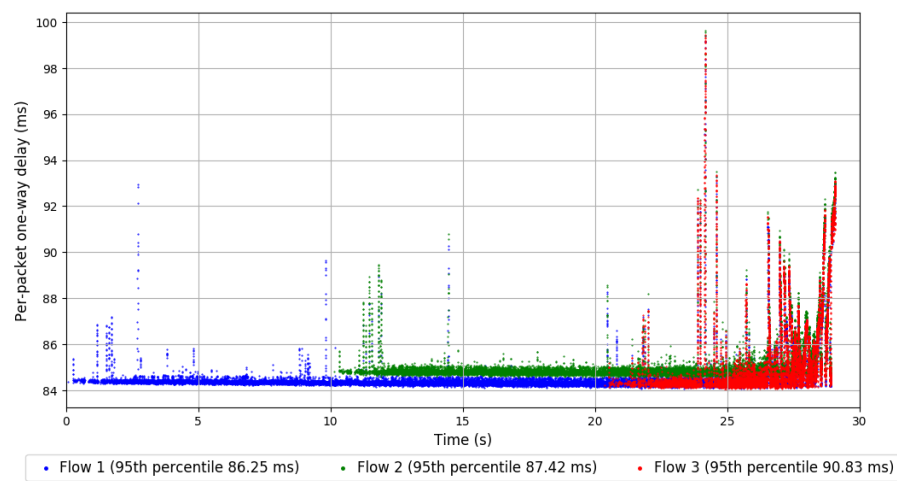
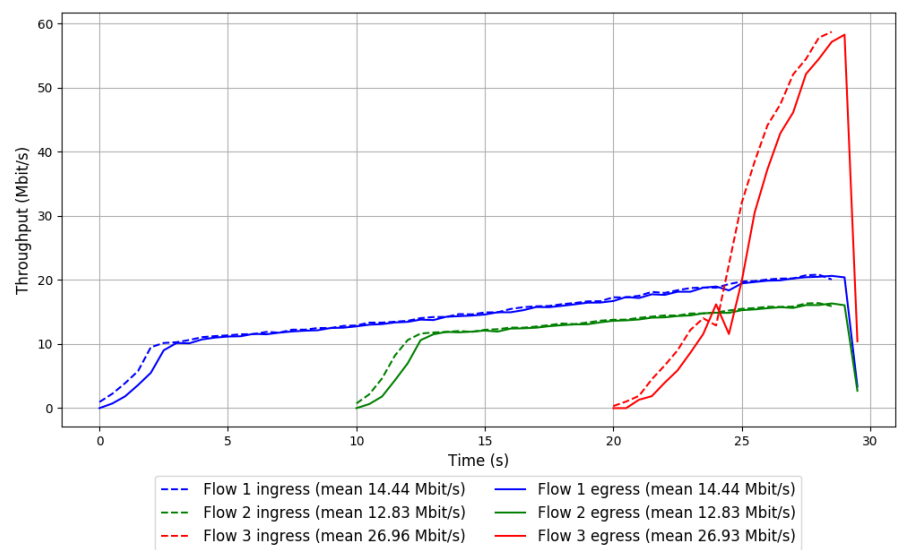
-- Flow 3:

Average throughput: 26.93 Mbit/s

95th percentile per-packet one-way delay: 90.828 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-19 01:59:38

End at: 2019-01-19 02:00:08

Local clock offset: -6.792 ms

Remote clock offset: 7.152 ms

Below is generated by plot.py at 2019-01-19 02:25:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 29.28 Mbit/s

95th percentile per-packet one-way delay: 83.382 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 15.10 Mbit/s

95th percentile per-packet one-way delay: 83.179 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 12.07 Mbit/s

95th percentile per-packet one-way delay: 83.327 ms

Loss rate: 0.00%

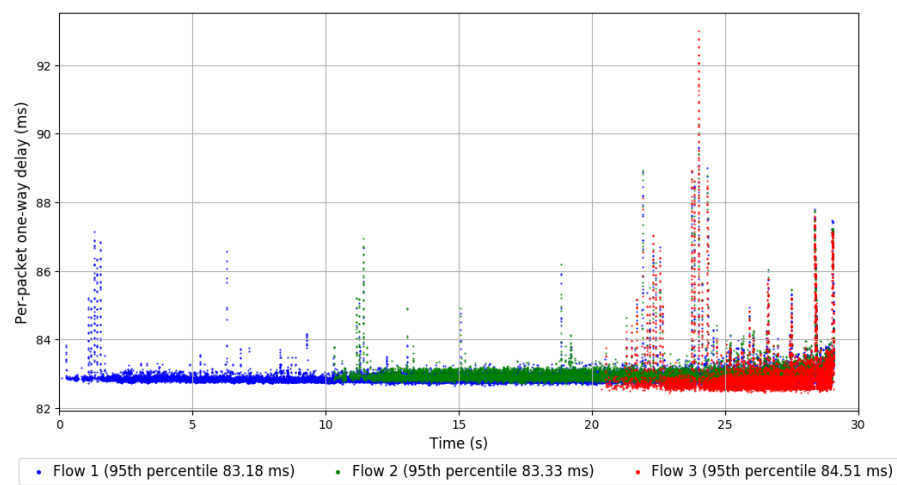
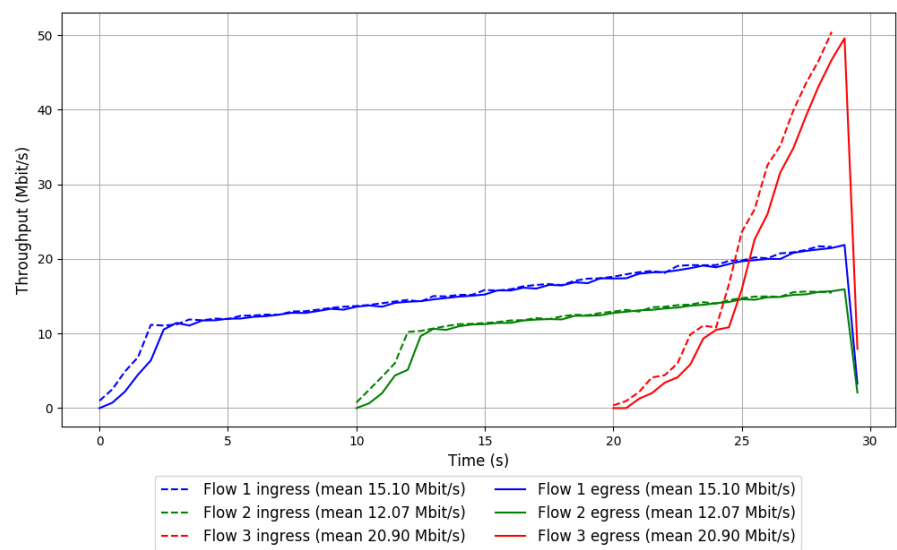
-- Flow 3:

Average throughput: 20.90 Mbit/s

95th percentile per-packet one-way delay: 84.506 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-19 00:28:24

End at: 2019-01-19 00:28:54

Local clock offset: -2.541 ms

Remote clock offset: 2.581 ms

Below is generated by plot.py at 2019-01-19 02:25:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.24 Mbit/s

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

Loss rate: 7.08%

-- Flow 1:

Average throughput: 76.05 Mbit/s

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

Loss rate: 6.83%

-- Flow 2:

Average throughput: 19.80 Mbit/s

95th percentile per-packet one-way delay: 112.065 ms

Loss rate: 8.11%

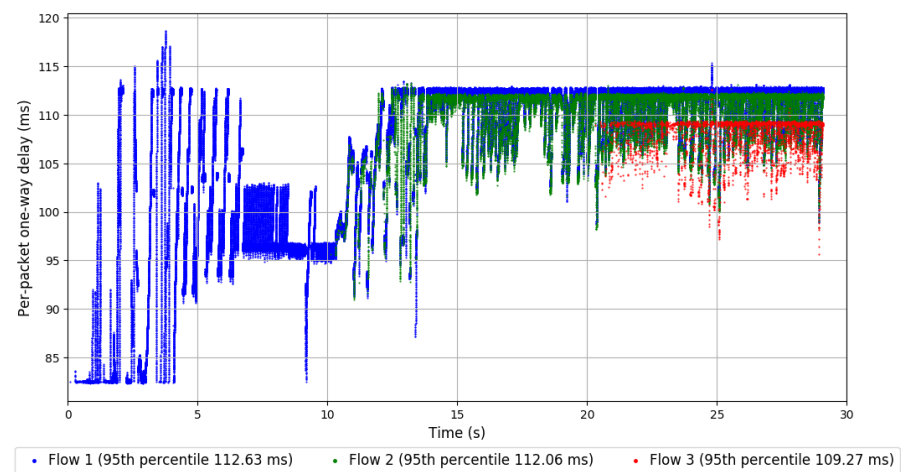
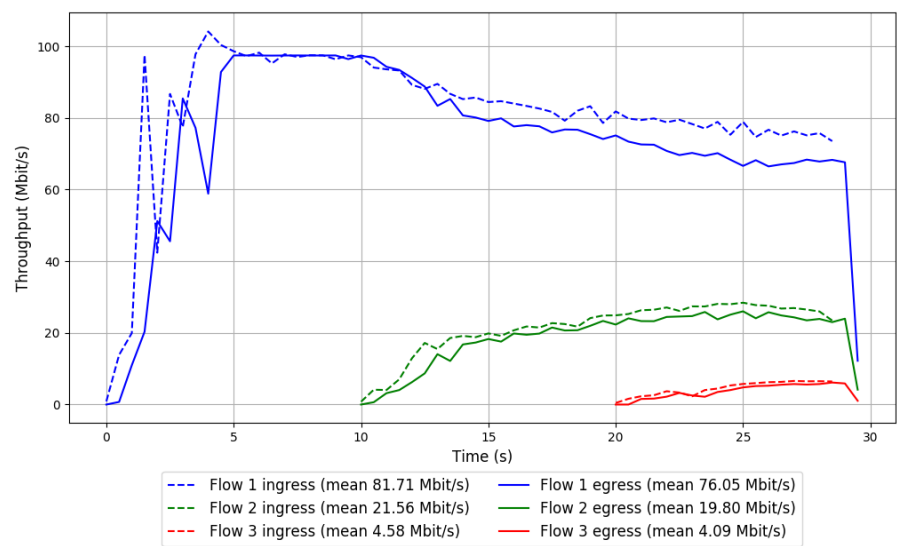
-- Flow 3:

Average throughput: 4.09 Mbit/s

95th percentile per-packet one-way delay: 109.268 ms

Loss rate: 10.83%

Run 1: Report of Indigo-MusesT — Data Link

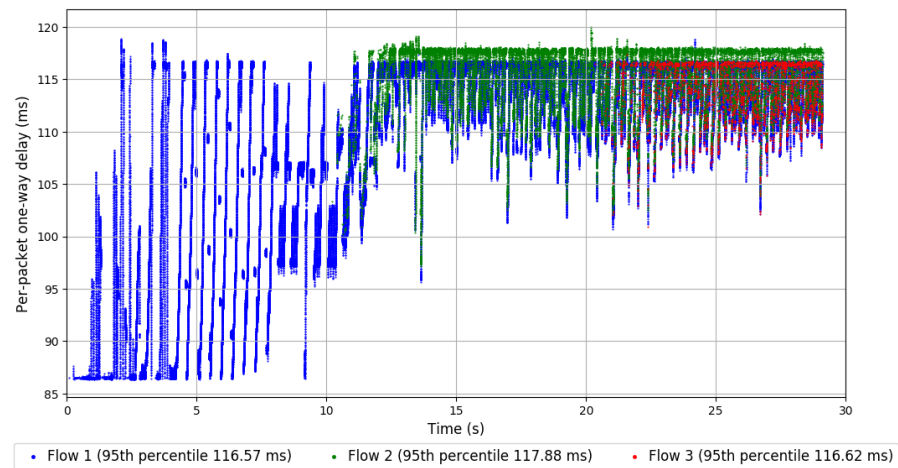
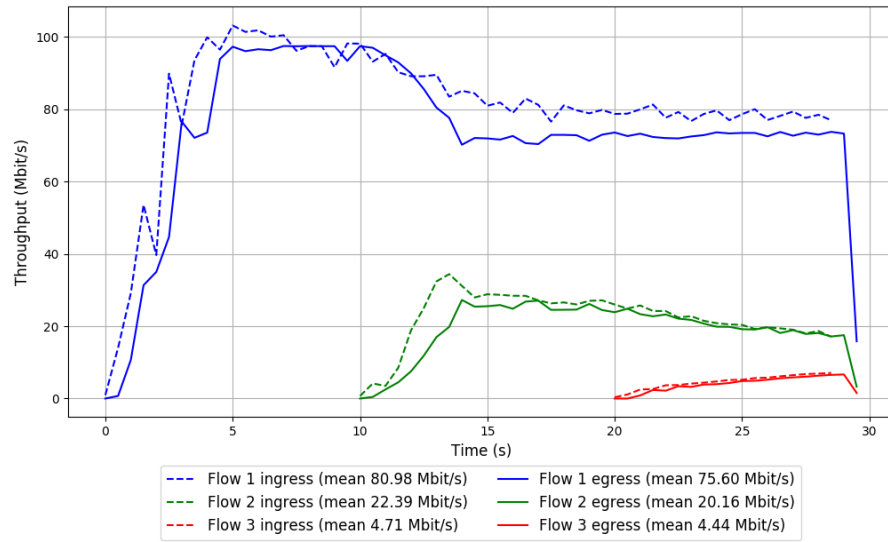


Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-19 00:54:59
End at: 2019-01-19 00:55:29
Local clock offset: 0.029 ms
Remote clock offset: 6.689 ms

Below is generated by plot.py at 2019-01-19 02:25:39
Datalink statistics
-- Total of 3 flows:
Average throughput: 90.07 Mbit/s
95th percentile per-packet one-way delay: 117.532 ms
Loss rate: 7.04%
-- Flow 1:
Average throughput: 75.60 Mbit/s
95th percentile per-packet one-way delay: 116.572 ms
Loss rate: 6.55%
-- Flow 2:
Average throughput: 20.16 Mbit/s
95th percentile per-packet one-way delay: 117.879 ms
Loss rate: 9.92%
-- Flow 3:
Average throughput: 4.44 Mbit/s
95th percentile per-packet one-way delay: 116.617 ms
Loss rate: 5.65%

Run 2: Report of Indigo-MusesT — Data Link

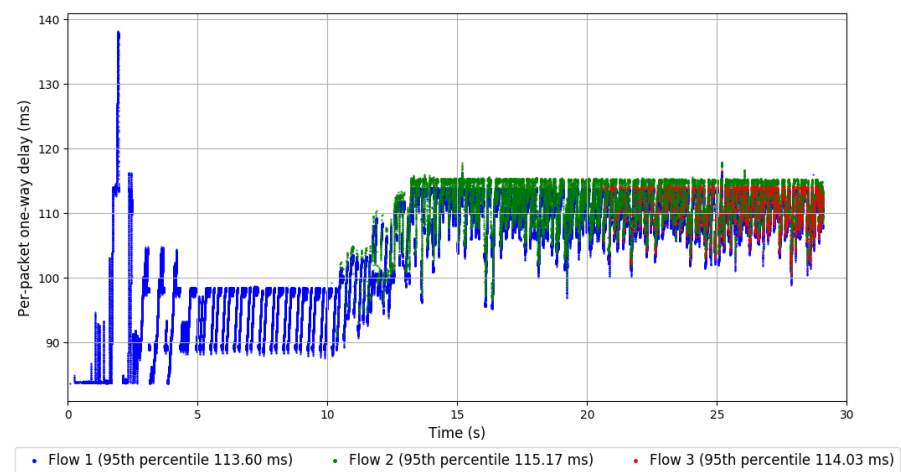
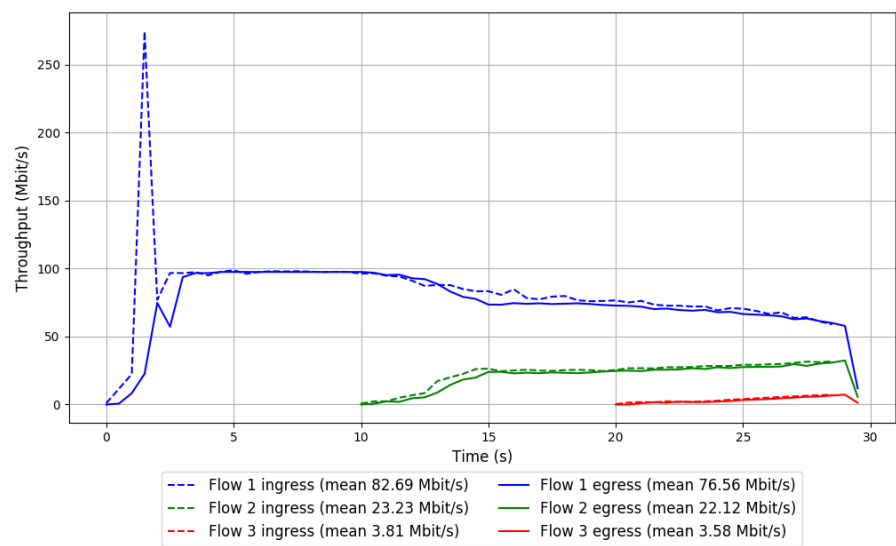


Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-19 01:21:33
End at: 2019-01-19 01:22:03
Local clock offset: -1.403 ms
Remote clock offset: 7.96 ms

Below is generated by plot.py at 2019-01-19 02:25:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 92.07 Mbit/s
95th percentile per-packet one-way delay: 114.344 ms
Loss rate: 6.92%
-- Flow 1:
Average throughput: 76.56 Mbit/s
95th percentile per-packet one-way delay: 113.599 ms
Loss rate: 7.34%
-- Flow 2:
Average throughput: 22.12 Mbit/s
95th percentile per-packet one-way delay: 115.169 ms
Loss rate: 4.73%
-- Flow 3:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 114.028 ms
Loss rate: 5.92%

Run 3: Report of Indigo-MusesT — Data Link

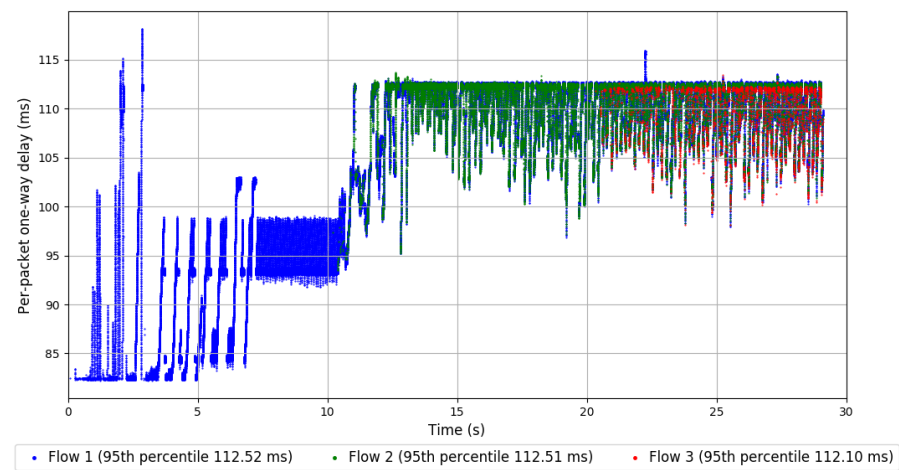
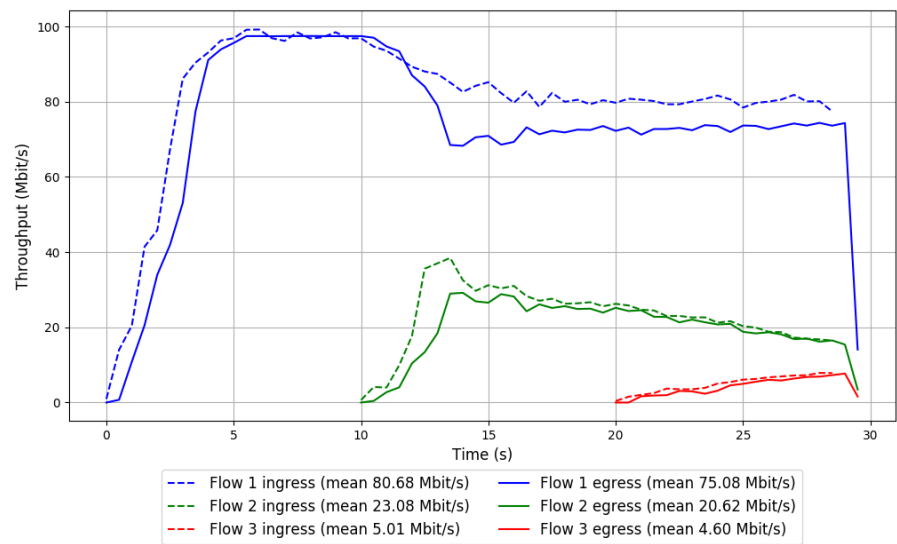


Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-19 01:48:11
End at: 2019-01-19 01:48:41
Local clock offset: -7.957 ms
Remote clock offset: 4.616 ms

Below is generated by plot.py at 2019-01-19 02:25:48
Datalink statistics
-- Total of 3 flows:
Average throughput: 89.89 Mbit/s
95th percentile per-packet one-way delay: 112.518 ms
Loss rate: 7.45%
-- Flow 1:
Average throughput: 75.08 Mbit/s
95th percentile per-packet one-way delay: 112.522 ms
Loss rate: 6.85%
-- Flow 2:
Average throughput: 20.62 Mbit/s
95th percentile per-packet one-way delay: 112.511 ms
Loss rate: 10.61%
-- Flow 3:
Average throughput: 4.60 Mbit/s
95th percentile per-packet one-way delay: 112.102 ms
Loss rate: 8.16%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-19 02:14:48

End at: 2019-01-19 02:15:18

Local clock offset: -7.096 ms

Remote clock offset: 4.362 ms

Below is generated by plot.py at 2019-01-19 02:25:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.07 Mbit/s

95th percentile per-packet one-way delay: 111.712 ms

Loss rate: 6.77%

-- Flow 1:

Average throughput: 75.72 Mbit/s

95th percentile per-packet one-way delay: 111.707 ms

Loss rate: 6.55%

-- Flow 2:

Average throughput: 19.57 Mbit/s

95th percentile per-packet one-way delay: 111.254 ms

Loss rate: 7.57%

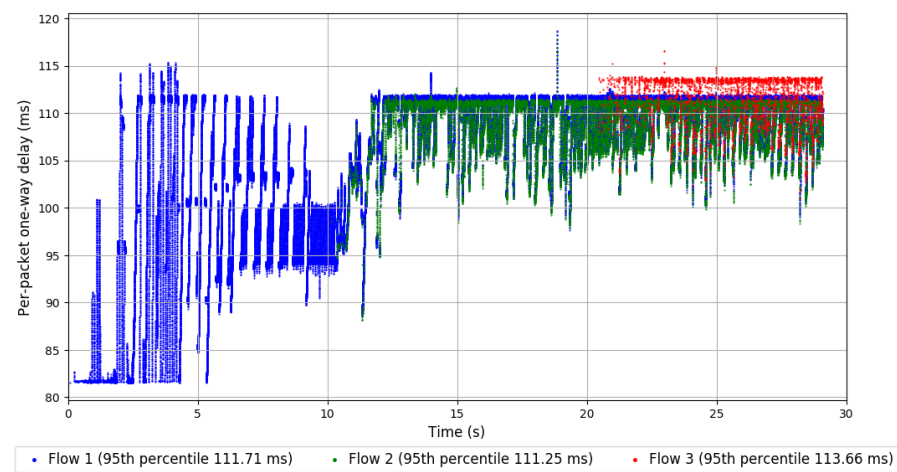
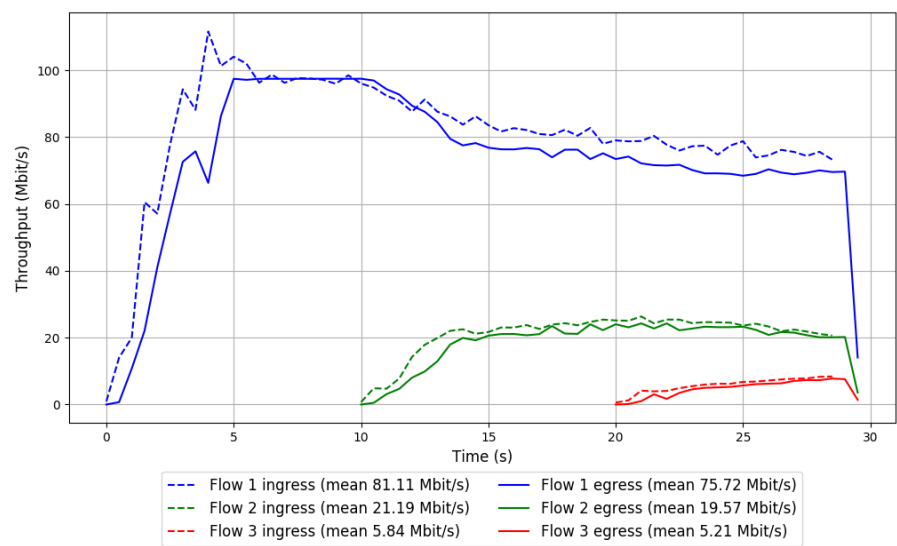
-- Flow 3:

Average throughput: 5.21 Mbit/s

95th percentile per-packet one-way delay: 113.664 ms

Loss rate: 10.82%

Run 5: Report of Indigo-MusesT — Data Link

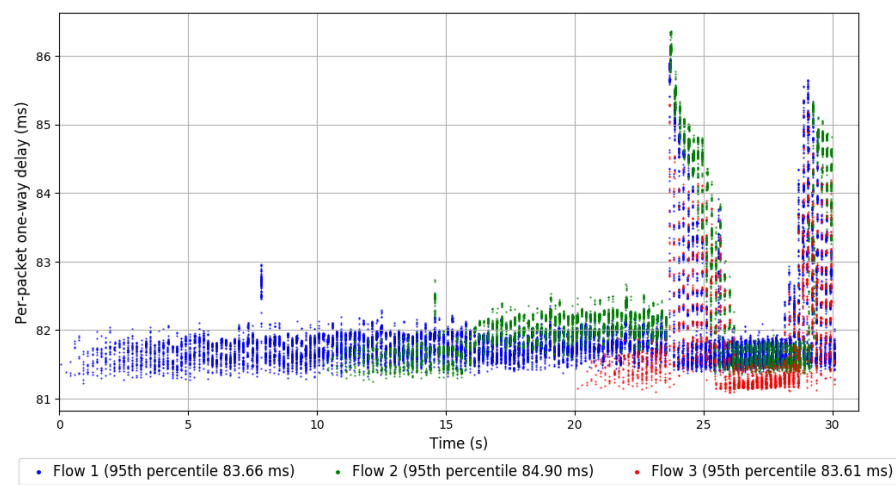
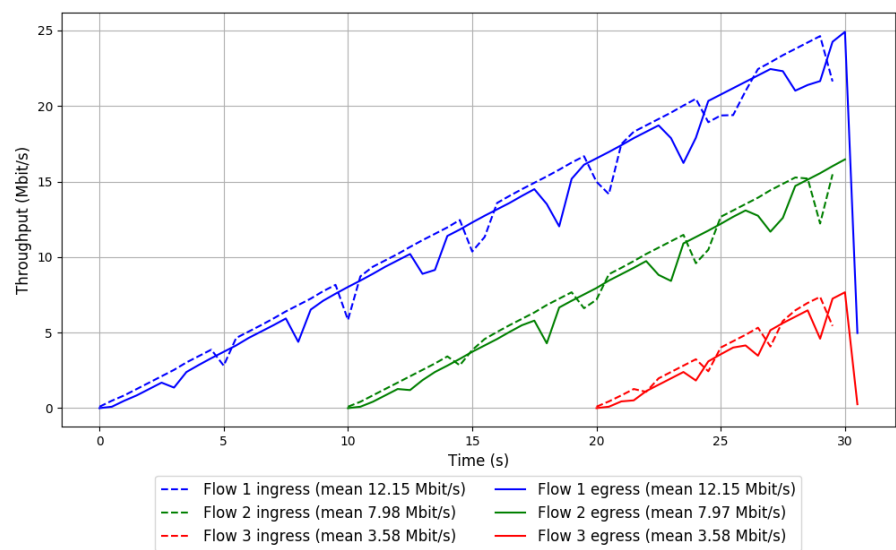


```
Run 1: Statistics of LEDBAT

Start at: 2019-01-19 00:20:44
End at: 2019-01-19 00:21:14
Local clock offset: -6.309 ms
Remote clock offset: 3.728 ms

# Below is generated by plot.py at 2019-01-19 02:25:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.62 Mbit/s
95th percentile per-packet one-way delay: 84.611 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.15 Mbit/s
95th percentile per-packet one-way delay: 83.655 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.97 Mbit/s
95th percentile per-packet one-way delay: 84.898 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 83.605 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-01-19 00:47:22

End at: 2019-01-19 00:47:52

Local clock offset: -0.579 ms

Remote clock offset: 1.71 ms

Below is generated by plot.py at 2019-01-19 02:25:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.50 Mbit/s

95th percentile per-packet one-way delay: 83.985 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 12.07 Mbit/s

95th percentile per-packet one-way delay: 84.024 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.89 Mbit/s

95th percentile per-packet one-way delay: 83.865 ms

Loss rate: 0.01%

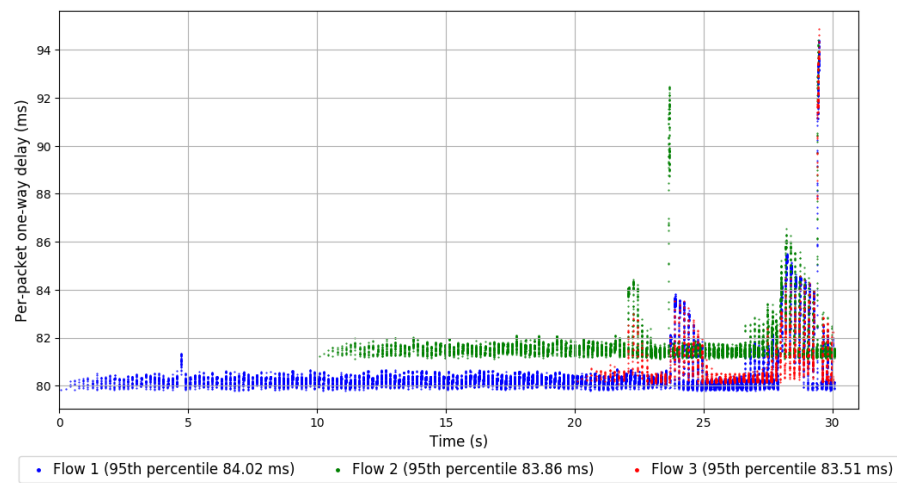
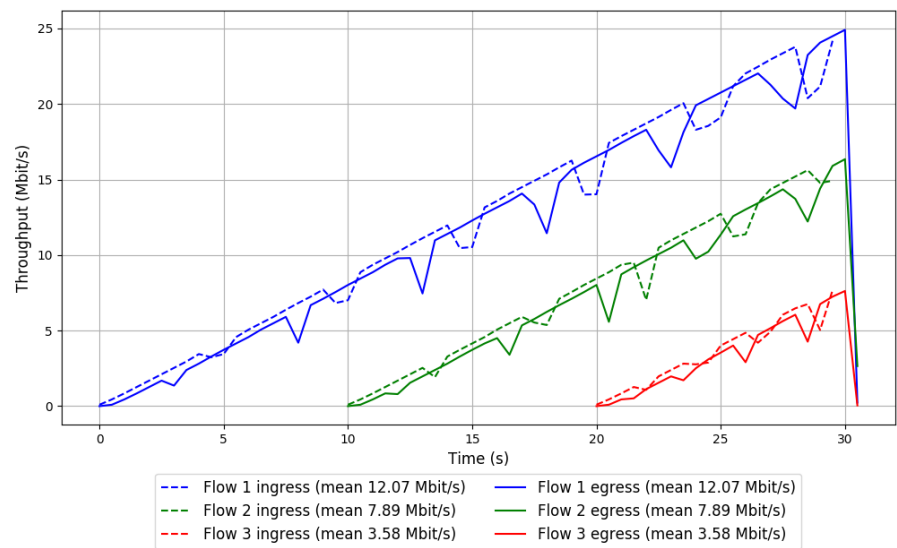
-- Flow 3:

Average throughput: 3.58 Mbit/s

95th percentile per-packet one-way delay: 83.508 ms

Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-01-19 01:13:55

End at: 2019-01-19 01:14:25

Local clock offset: 1.301 ms

Remote clock offset: 8.245 ms

Below is generated by plot.py at 2019-01-19 02:25:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.39 Mbit/s

95th percentile per-packet one-way delay: 89.663 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 11.95 Mbit/s

95th percentile per-packet one-way delay: 89.492 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.87 Mbit/s

95th percentile per-packet one-way delay: 89.231 ms

Loss rate: 0.00%

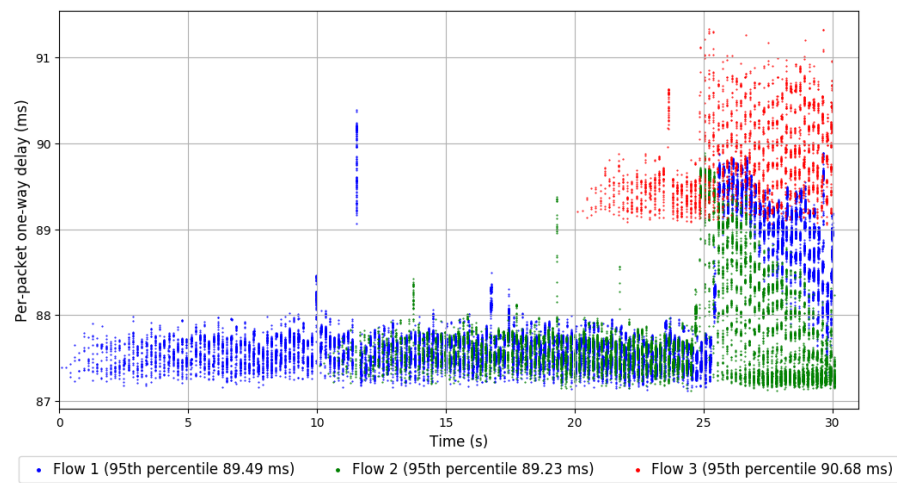
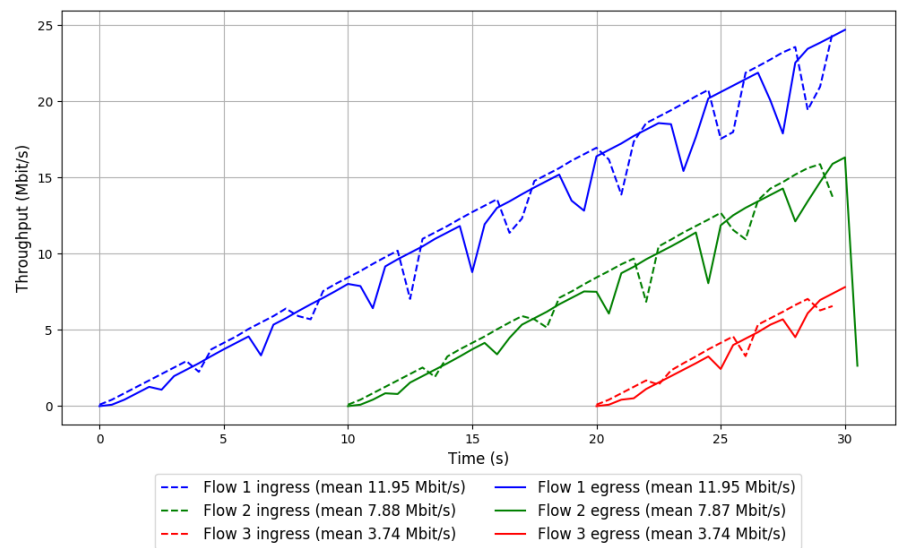
-- Flow 3:

Average throughput: 3.74 Mbit/s

95th percentile per-packet one-way delay: 90.680 ms

Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

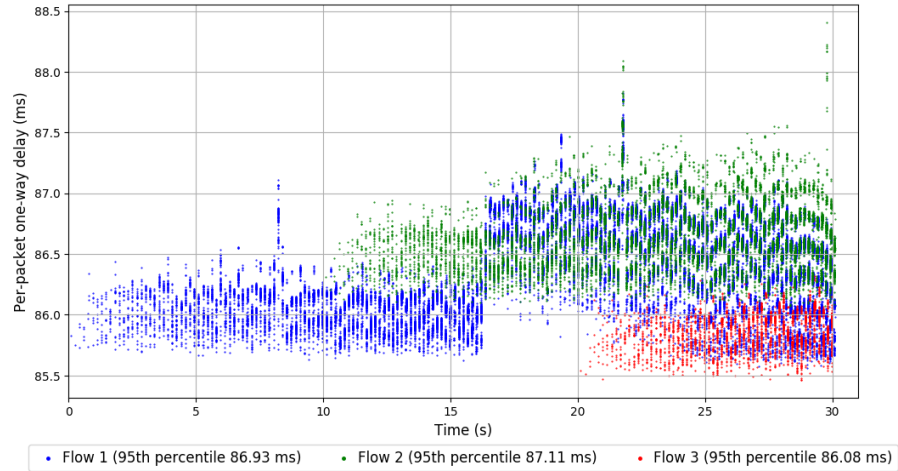
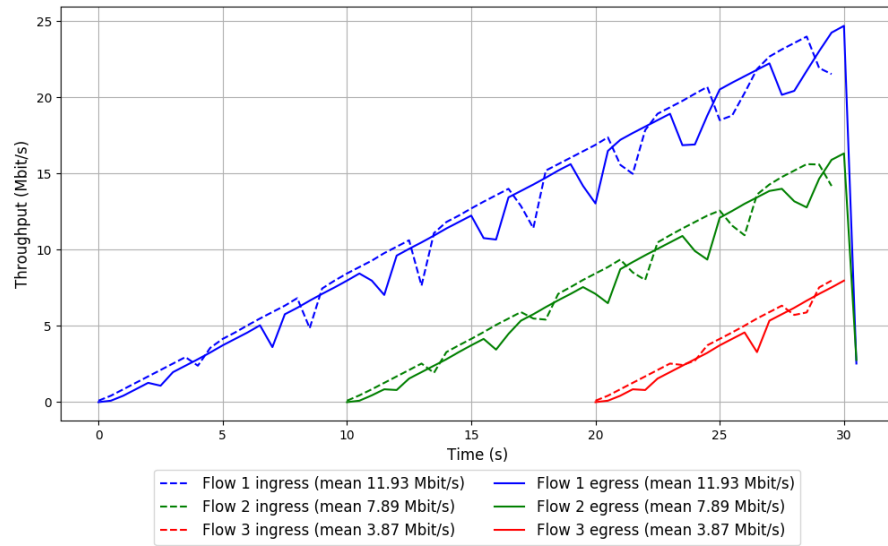


Run 4: Statistics of LEDBAT

Start at: 2019-01-19 01:40:32
End at: 2019-01-19 01:41:02
Local clock offset: -8.109 ms
Remote clock offset: 8.278 ms

Below is generated by plot.py at 2019-01-19 02:25:51
Datalink statistics
-- Total of 3 flows:
Average throughput: 18.46 Mbit/s
95th percentile per-packet one-way delay: 86.986 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.93 Mbit/s
95th percentile per-packet one-way delay: 86.930 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 87.105 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 86.078 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-01-19 02:07:10

End at: 2019-01-19 02:07:40

Local clock offset: -7.629 ms

Remote clock offset: 3.384 ms

Below is generated by plot.py at 2019-01-19 02:25:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.15 Mbit/s

95th percentile per-packet one-way delay: 83.114 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 12.04 Mbit/s

95th percentile per-packet one-way delay: 82.996 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.35 Mbit/s

95th percentile per-packet one-way delay: 81.392 ms

Loss rate: 0.01%

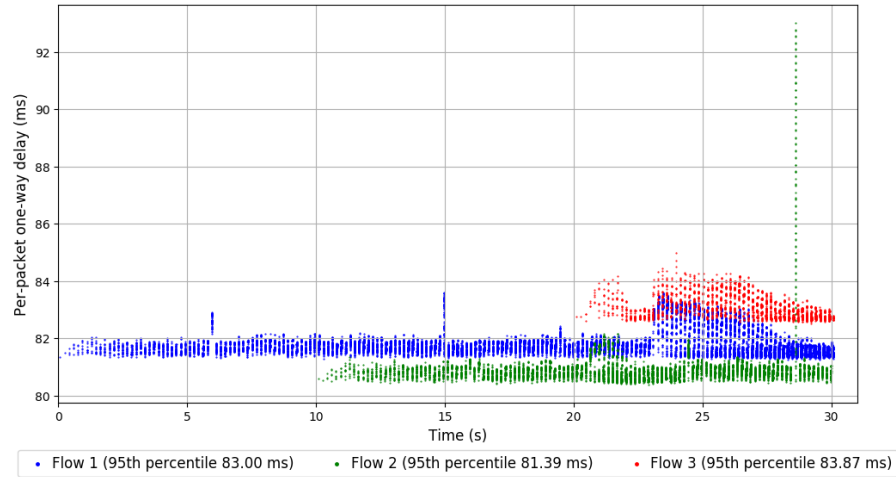
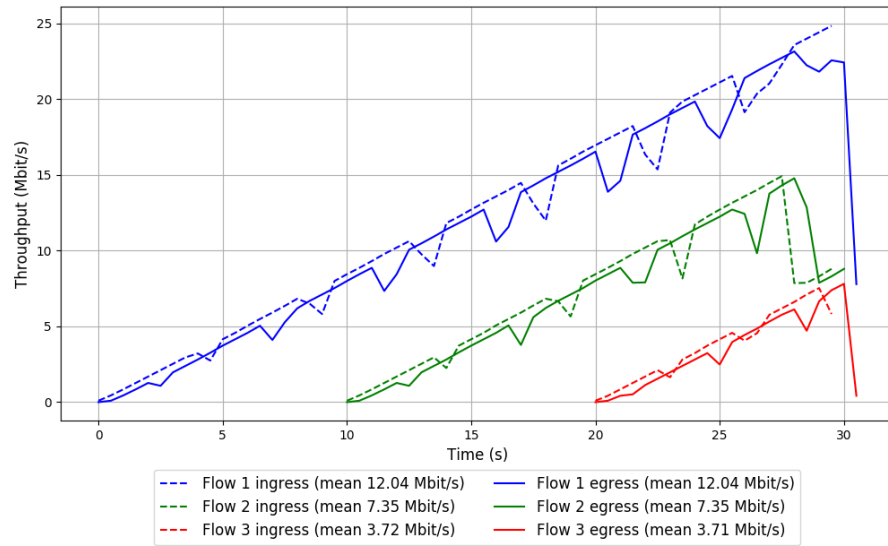
-- Flow 3:

Average throughput: 3.71 Mbit/s

95th percentile per-packet one-way delay: 83.867 ms

Loss rate: 0.19%

Run 5: Report of LEDBAT — Data Link

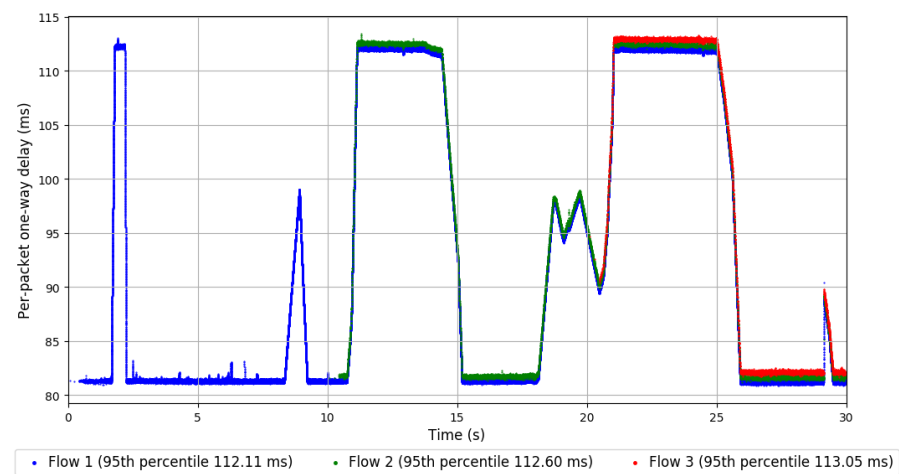
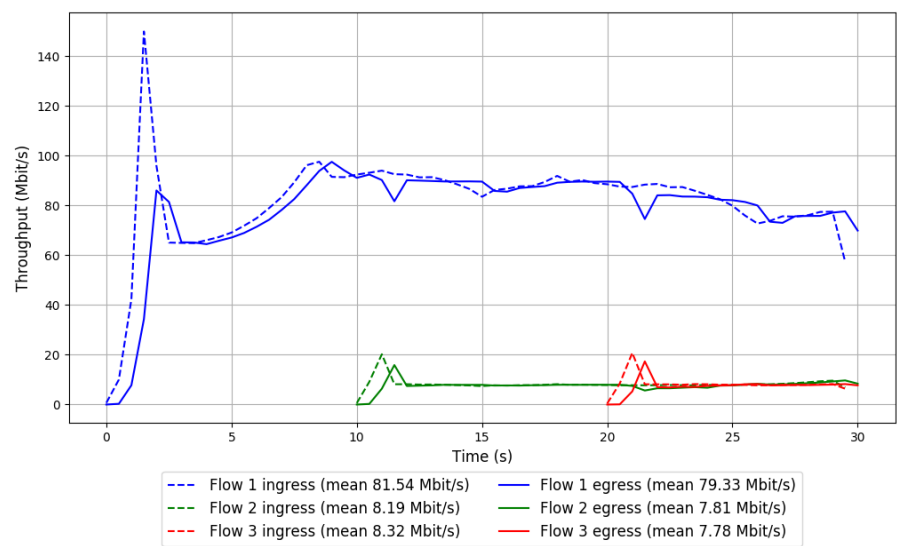


```
Run 1: Statistics of PCC-Allegro

Start at: 2019-01-19 00:05:26
End at: 2019-01-19 00:05:56
Local clock offset: -7.064 ms
Remote clock offset: 1.561 ms

# Below is generated by plot.py at 2019-01-19 02:26:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.09 Mbit/s
95th percentile per-packet one-way delay: 112.184 ms
Loss rate: 2.95%
-- Flow 1:
Average throughput: 79.33 Mbit/s
95th percentile per-packet one-way delay: 112.109 ms
Loss rate: 2.72%
-- Flow 2:
Average throughput: 7.81 Mbit/s
95th percentile per-packet one-way delay: 112.603 ms
Loss rate: 4.62%
-- Flow 3:
Average throughput: 7.78 Mbit/s
95th percentile per-packet one-way delay: 113.046 ms
Loss rate: 6.60%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-01-19 00:32:15

End at: 2019-01-19 00:32:45

Local clock offset: -2.509 ms

Remote clock offset: 2.802 ms

Below is generated by plot.py at 2019-01-19 02:26:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.18 Mbit/s

95th percentile per-packet one-way delay: 112.559 ms

Loss rate: 2.88%

-- Flow 1:

Average throughput: 79.45 Mbit/s

95th percentile per-packet one-way delay: 112.557 ms

Loss rate: 2.67%

-- Flow 2:

Average throughput: 7.86 Mbit/s

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

Loss rate: 4.23%

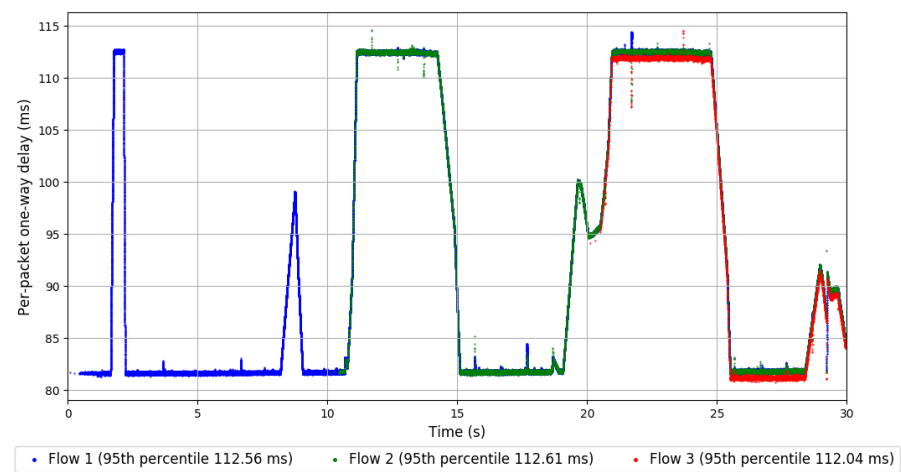
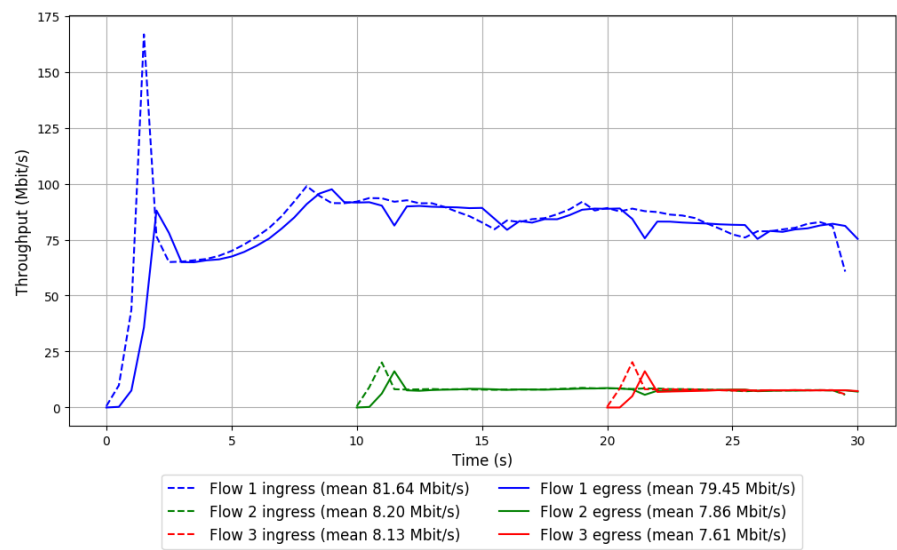
-- Flow 3:

Average throughput: 7.61 Mbit/s

95th percentile per-packet one-way delay: 112.037 ms

Loss rate: 6.56%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-01-19 00:58:50

End at: 2019-01-19 00:59:20

Local clock offset: 1.053 ms

Remote clock offset: 6.494 ms

Below is generated by plot.py at 2019-01-19 02:26:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.09 Mbit/s

95th percentile per-packet one-way delay: 116.387 ms

Loss rate: 3.38%

-- Flow 1:

Average throughput: 79.35 Mbit/s

95th percentile per-packet one-way delay: 116.365 ms

Loss rate: 3.00%

-- Flow 2:

Average throughput: 7.72 Mbit/s

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

Loss rate: 6.21%

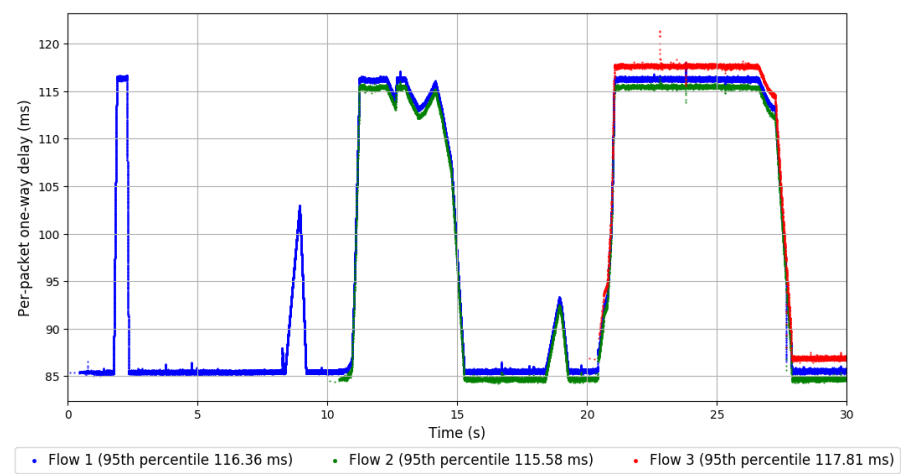
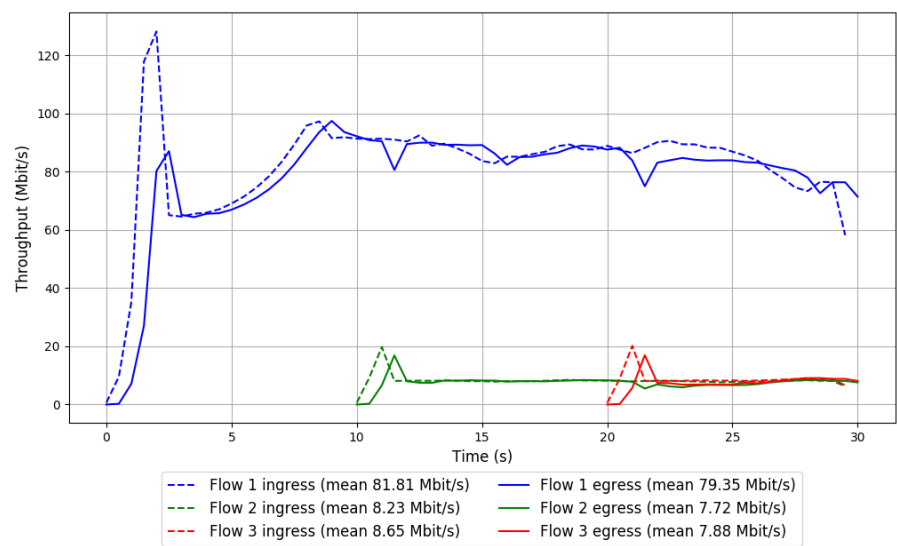
-- Flow 3:

Average throughput: 7.88 Mbit/s

95th percentile per-packet one-way delay: 117.808 ms

Loss rate: 8.97%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-01-19 01:25:23

End at: 2019-01-19 01:25:53

Local clock offset: -3.446 ms

Remote clock offset: 2.952 ms

Below is generated by plot.py at 2019-01-19 02:26:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.08 Mbit/s

95th percentile per-packet one-way delay: 109.581 ms

Loss rate: 2.74%

-- Flow 1:

Average throughput: 78.71 Mbit/s

95th percentile per-packet one-way delay: 109.472 ms

Loss rate: 2.56%

-- Flow 2:

Average throughput: 8.63 Mbit/s

95th percentile per-packet one-way delay: 111.055 ms

Loss rate: 4.08%

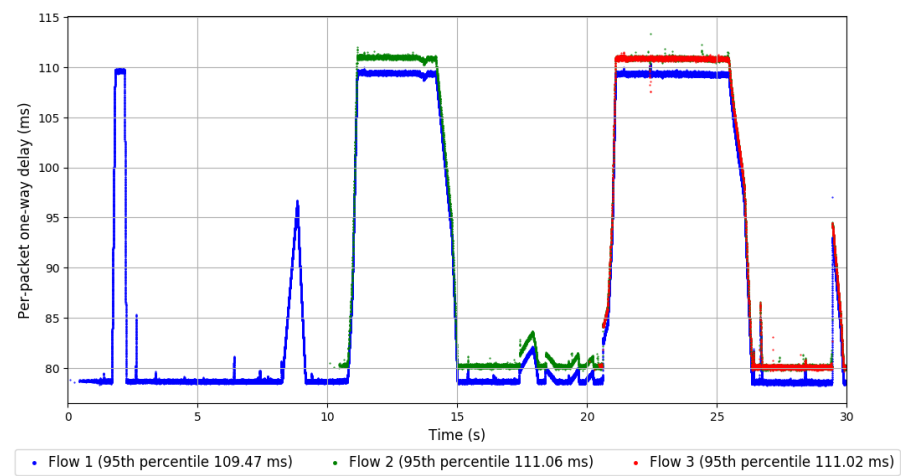
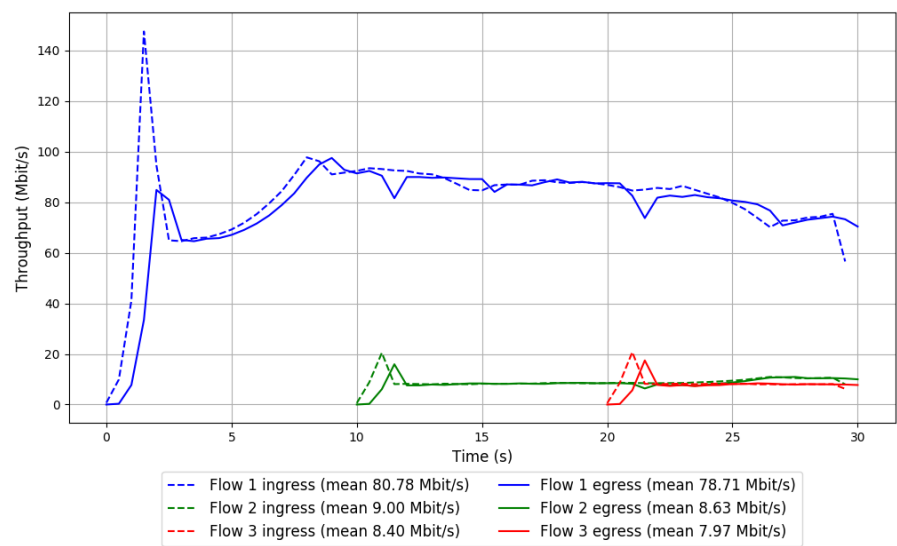
-- Flow 3:

Average throughput: 7.97 Mbit/s

95th percentile per-packet one-way delay: 111.016 ms

Loss rate: 5.09%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-01-19 01:52:03

End at: 2019-01-19 01:52:33

Local clock offset: -8.145 ms

Remote clock offset: 8.456 ms

Below is generated by plot.py at 2019-01-19 02:26:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.09 Mbit/s

95th percentile per-packet one-way delay: 118.772 ms

Loss rate: 2.89%

-- Flow 1:

Average throughput: 78.91 Mbit/s

95th percentile per-packet one-way delay: 118.780 ms

Loss rate: 2.73%

-- Flow 2:

Average throughput: 8.35 Mbit/s

95th percentile per-packet one-way delay: 116.458 ms

Loss rate: 3.67%

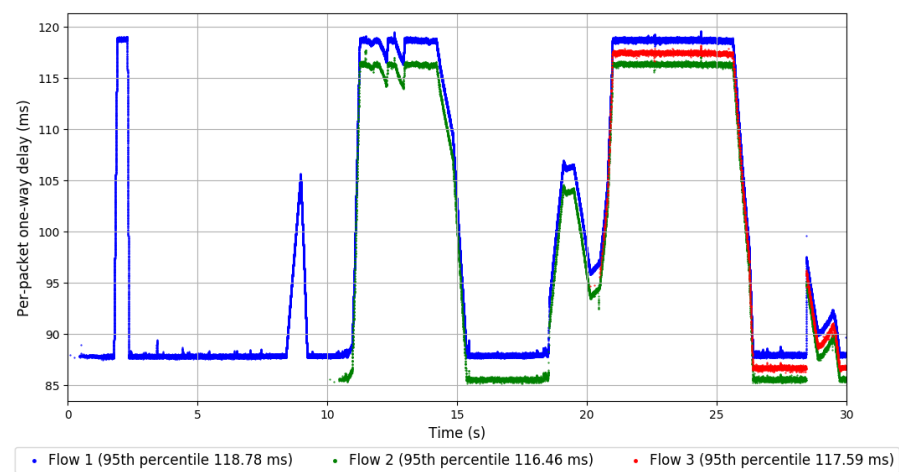
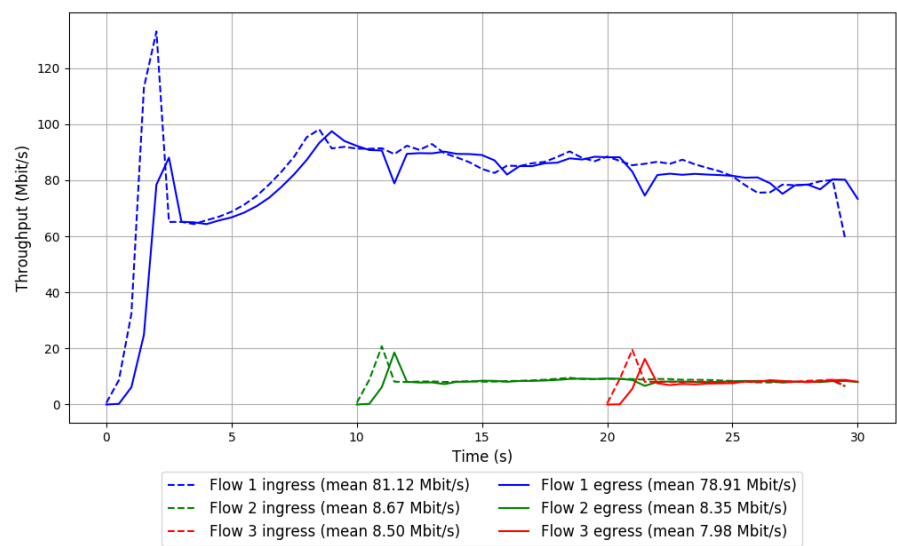
-- Flow 3:

Average throughput: 7.98 Mbit/s

95th percentile per-packet one-way delay: 117.595 ms

Loss rate: 6.12%

Run 5: Report of PCC-Allegro — Data Link

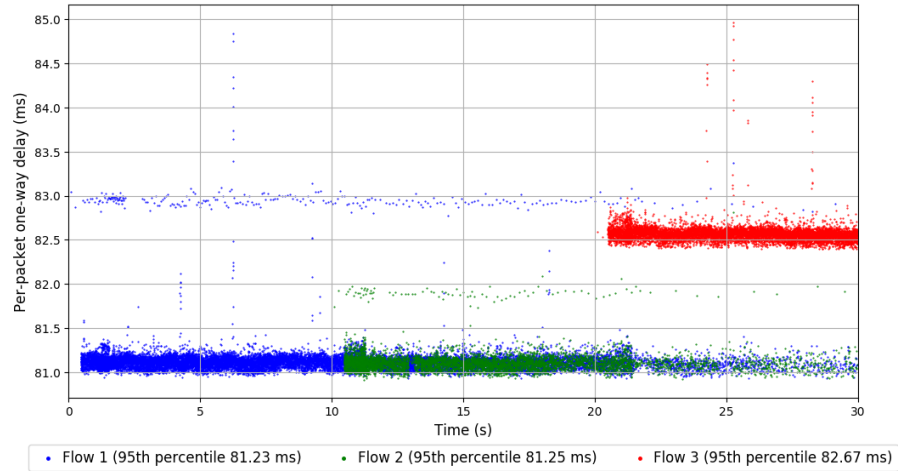
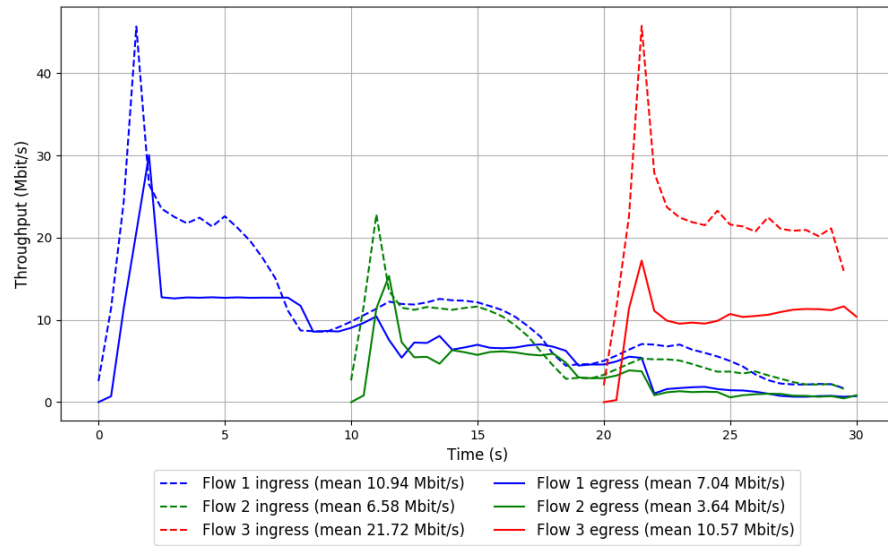



```
Run 1: Statistics of PCC-Expr

Start at: 2019-01-19 00:14:17
End at: 2019-01-19 00:14:47
Local clock offset: -8.527 ms
Remote clock offset: 3.297 ms

# Below is generated by plot.py at 2019-01-19 02:26:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.95 Mbit/s
95th percentile per-packet one-way delay: 82.619 ms
Loss rate: 42.45%
-- Flow 1:
Average throughput: 7.04 Mbit/s
95th percentile per-packet one-way delay: 81.229 ms
Loss rate: 35.71%
-- Flow 2:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 81.248 ms
Loss rate: 44.77%
-- Flow 3:
Average throughput: 10.57 Mbit/s
95th percentile per-packet one-way delay: 82.665 ms
Loss rate: 51.33%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-01-19 00:41:06

End at: 2019-01-19 00:41:36

Local clock offset: -0.422 ms

Remote clock offset: 2.271 ms

Below is generated by plot.py at 2019-01-19 02:26:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.42 Mbit/s

95th percentile per-packet one-way delay: 80.901 ms

Loss rate: 49.03%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 79.202 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 9.03 Mbit/s

95th percentile per-packet one-way delay: 80.918 ms

Loss rate: 56.06%

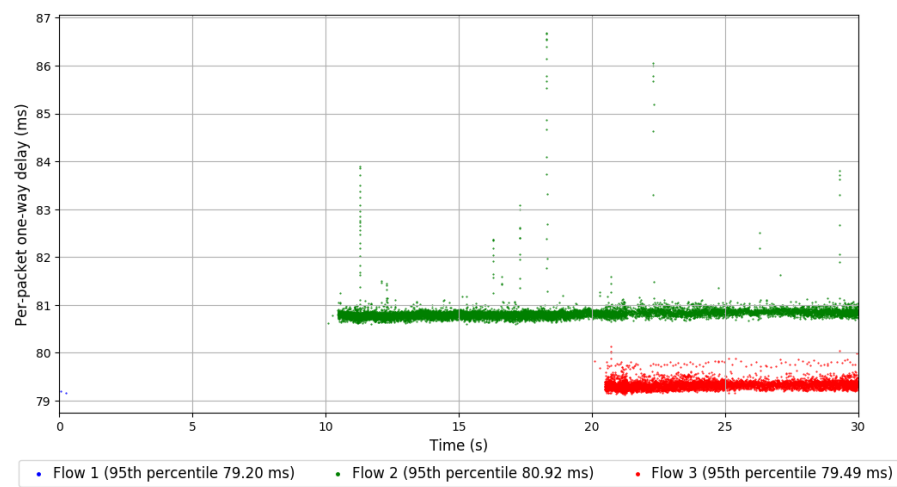
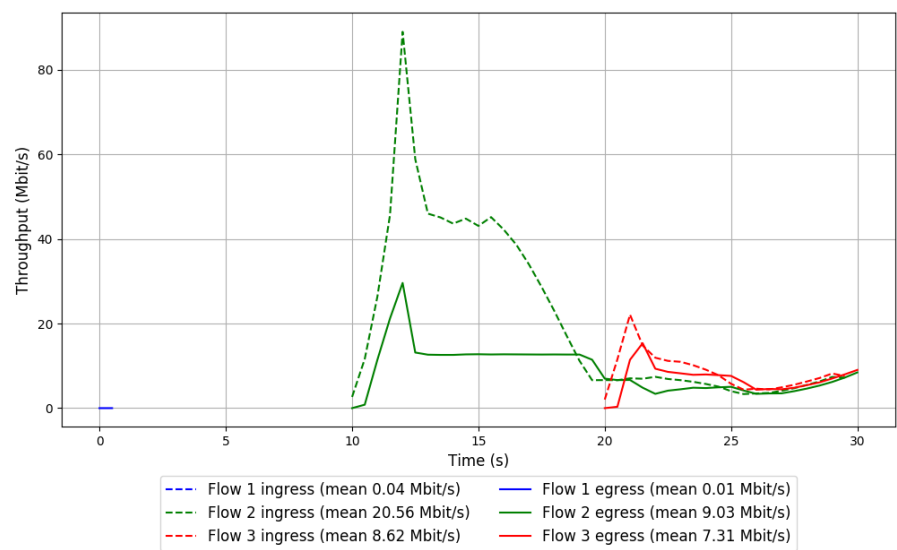
-- Flow 3:

Average throughput: 7.31 Mbit/s

95th percentile per-packet one-way delay: 79.494 ms

Loss rate: 15.26%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-01-19 01:07:40

End at: 2019-01-19 01:08:10

Local clock offset: 0.87 ms

Remote clock offset: 5.019 ms

Below is generated by plot.py at 2019-01-19 02:26:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.70 Mbit/s

95th percentile per-packet one-way delay: 85.281 ms

Loss rate: 68.73%

-- Flow 1:

Average throughput: 0.01 Mbit/s

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

Loss rate: 85.71%

-- Flow 2:

Average throughput: 12.76 Mbit/s

95th percentile per-packet one-way delay: 85.281 ms

Loss rate: 68.04%

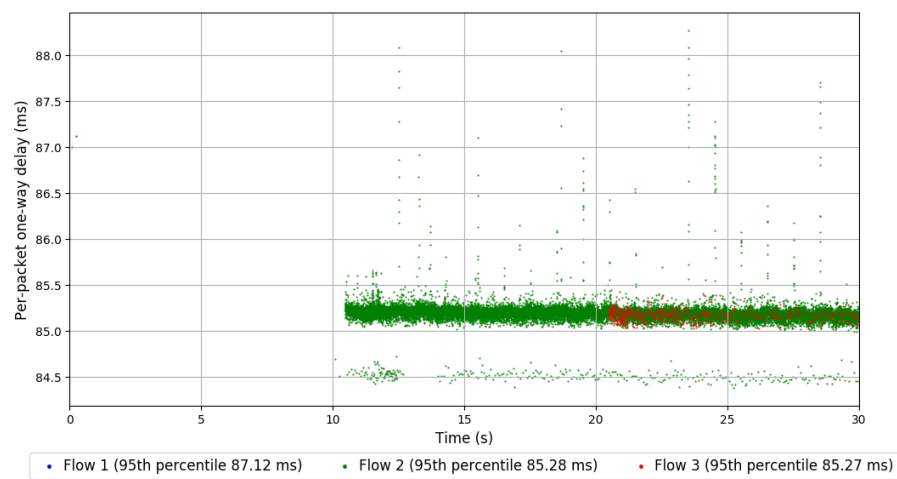
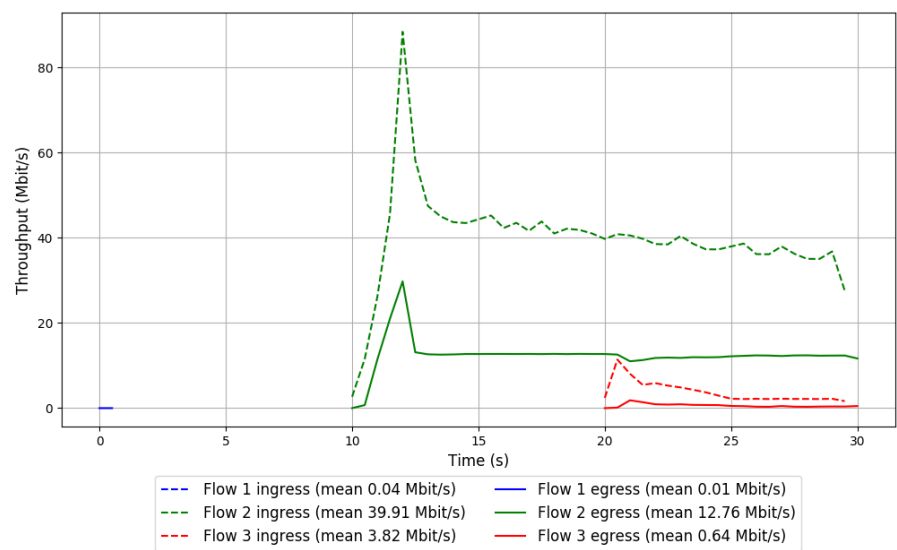
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 85.266 ms

Loss rate: 83.22%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-01-19 01:34:14

End at: 2019-01-19 01:34:44

Local clock offset: -6.97 ms

Remote clock offset: 8.346 ms

Below is generated by plot.py at 2019-01-19 02:26:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.70 Mbit/s

95th percentile per-packet one-way delay: 84.902 ms

Loss rate: 55.52%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 86.310 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 8.93 Mbit/s

95th percentile per-packet one-way delay: 84.910 ms

Loss rate: 62.52%

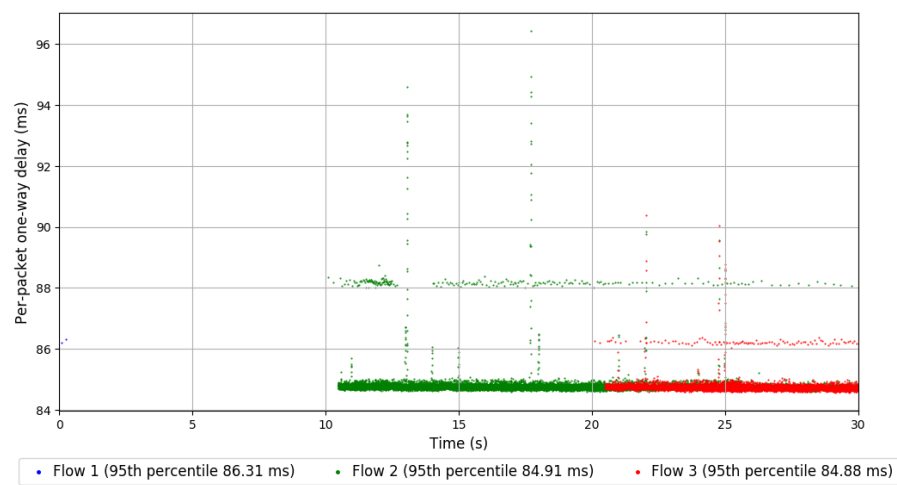
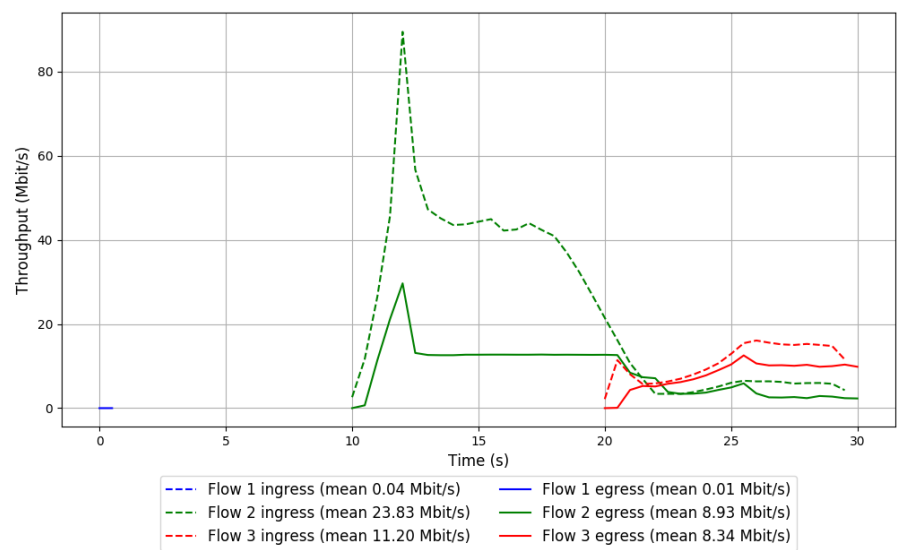
-- Flow 3:

Average throughput: 8.34 Mbit/s

95th percentile per-packet one-way delay: 84.880 ms

Loss rate: 25.52%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-01-19 02:00:53

End at: 2019-01-19 02:01:23

Local clock offset: -6.779 ms

Remote clock offset: 8.495 ms

Below is generated by plot.py at 2019-01-19 02:26:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.34 Mbit/s

95th percentile per-packet one-way delay: 85.870 ms

Loss rate: 65.23%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 87.734 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 11.90 Mbit/s

95th percentile per-packet one-way delay: 85.868 ms

Loss rate: 65.14%

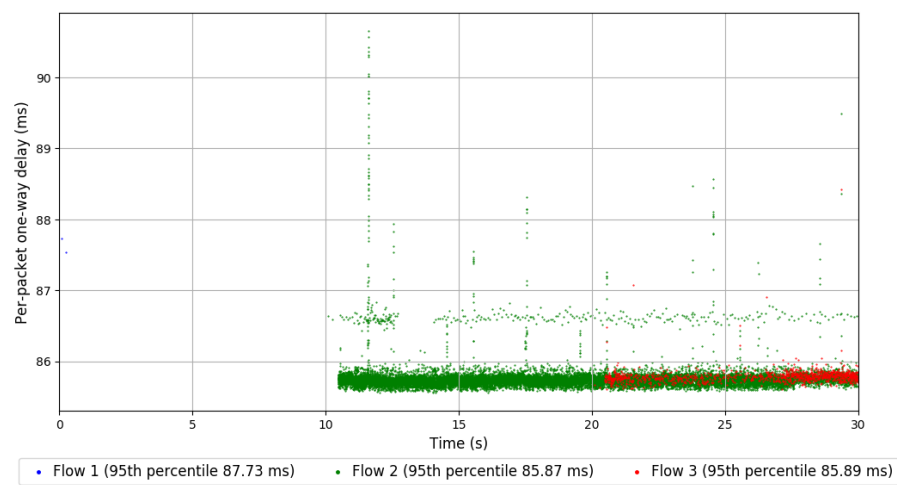
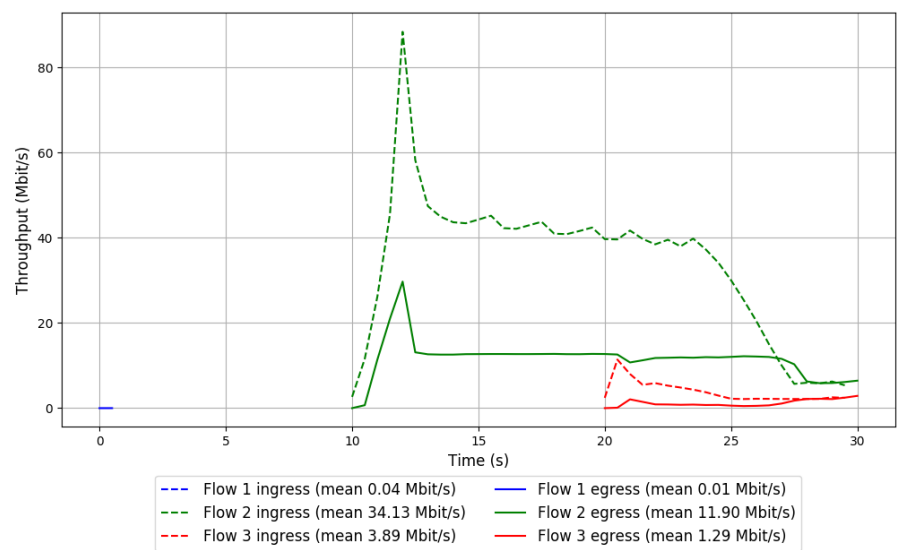
-- Flow 3:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 85.886 ms

Loss rate: 66.79%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-01-19 00:18:09

End at: 2019-01-19 00:18:39

Local clock offset: -7.176 ms

Remote clock offset: 2.458 ms

Below is generated by plot.py at 2019-01-19 02:27:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.48 Mbit/s

95th percentile per-packet one-way delay: 109.602 ms

Loss rate: 0.73%

-- Flow 1:

Average throughput: 42.03 Mbit/s

95th percentile per-packet one-way delay: 109.321 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 36.65 Mbit/s

95th percentile per-packet one-way delay: 110.272 ms

Loss rate: 0.28%

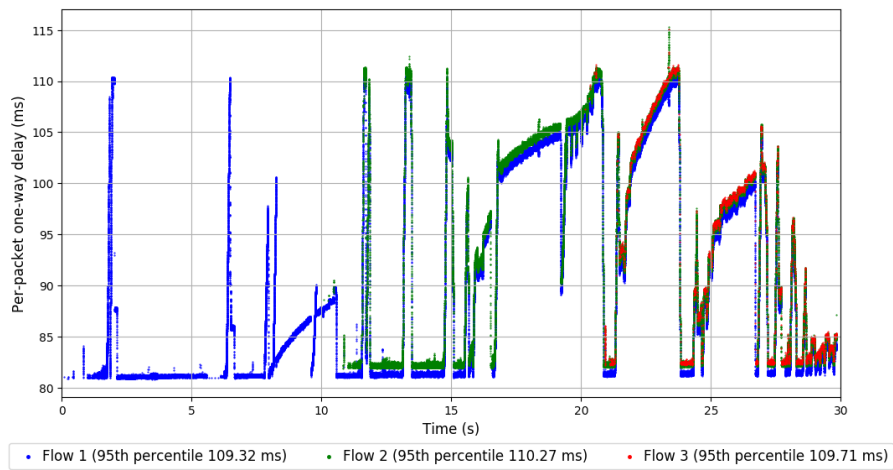
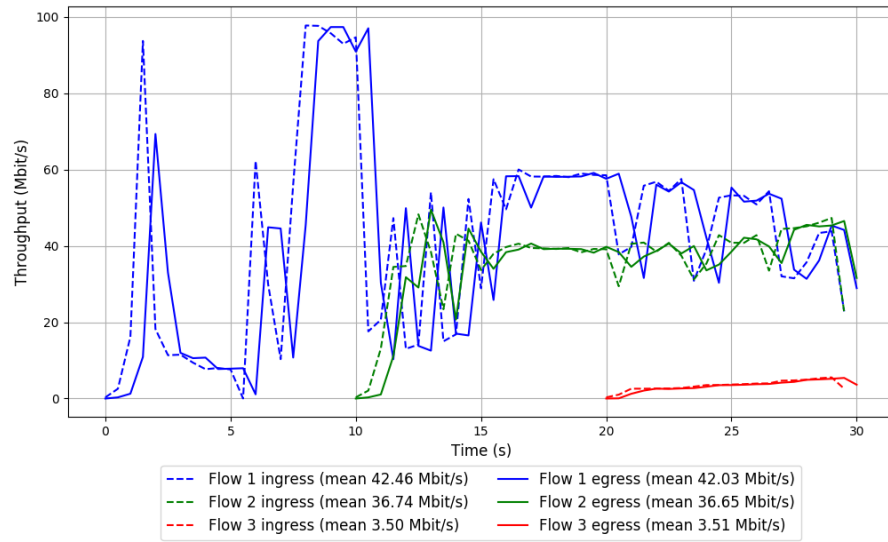
-- Flow 3:

Average throughput: 3.51 Mbit/s

95th percentile per-packet one-way delay: 109.709 ms

Loss rate: 0.03%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-01-19 00:44:49

End at: 2019-01-19 00:45:19

Local clock offset: -0.801 ms

Remote clock offset: 6.907 ms

Below is generated by plot.py at 2019-01-19 02:27:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.76 Mbit/s

95th percentile per-packet one-way delay: 111.350 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 52.56 Mbit/s

95th percentile per-packet one-way delay: 111.151 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 20.60 Mbit/s

95th percentile per-packet one-way delay: 112.037 ms

Loss rate: 0.27%

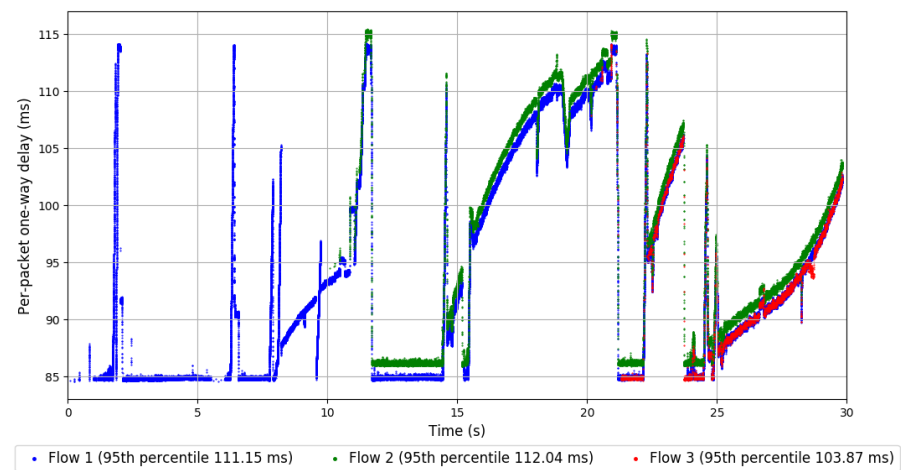
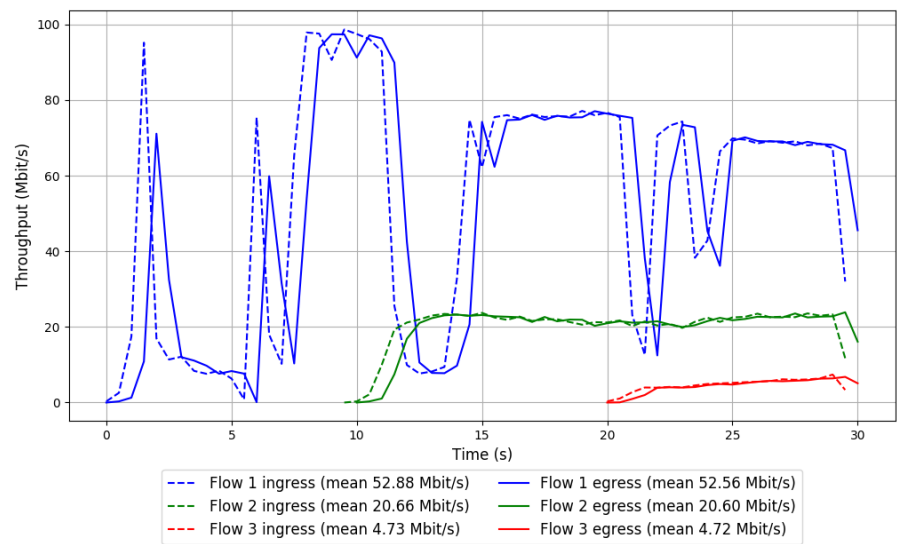
-- Flow 3:

Average throughput: 4.72 Mbit/s

95th percentile per-packet one-way delay: 103.873 ms

Loss rate: 0.39%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-01-19 01:11:22

End at: 2019-01-19 01:11:52

Local clock offset: 1.096 ms

Remote clock offset: 2.082 ms

Below is generated by plot.py at 2019-01-19 02:27:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.56 Mbit/s

95th percentile per-packet one-way delay: 106.170 ms

Loss rate: 0.73%

-- Flow 1:

Average throughput: 43.23 Mbit/s

95th percentile per-packet one-way delay: 107.629 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 17.79 Mbit/s

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

Loss rate: 0.46%

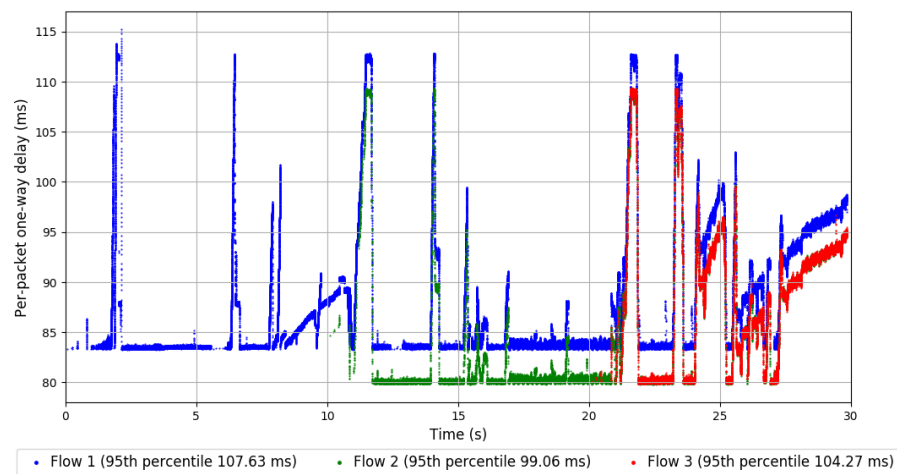
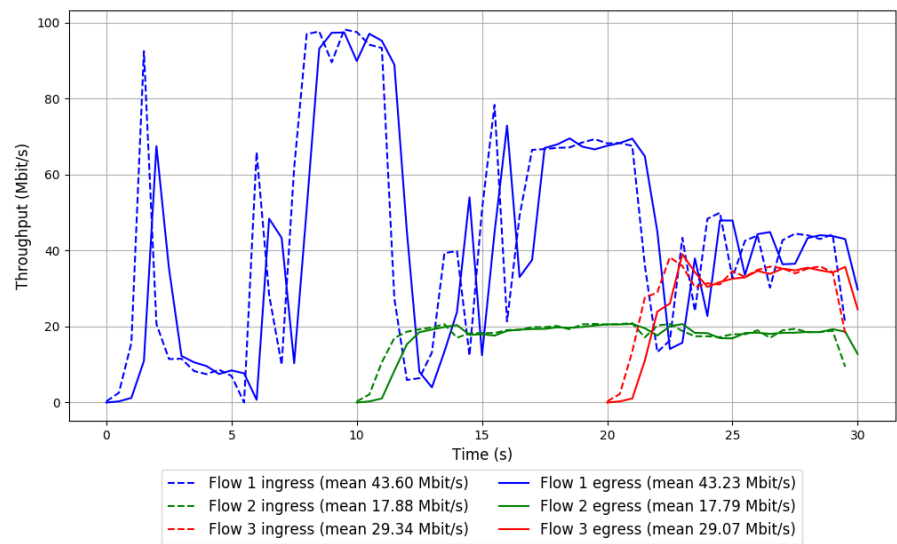
-- Flow 3:

Average throughput: 29.07 Mbit/s

95th percentile per-packet one-way delay: 104.267 ms

Loss rate: 0.76%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-01-19 01:37:56

End at: 2019-01-19 01:38:26

Local clock offset: -7.692 ms

Remote clock offset: 4.572 ms

Below is generated by plot.py at 2019-01-19 02:27:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.17 Mbit/s

95th percentile per-packet one-way delay: 110.255 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 43.90 Mbit/s

95th percentile per-packet one-way delay: 110.505 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 16.34 Mbit/s

95th percentile per-packet one-way delay: 110.493 ms

Loss rate: 0.41%

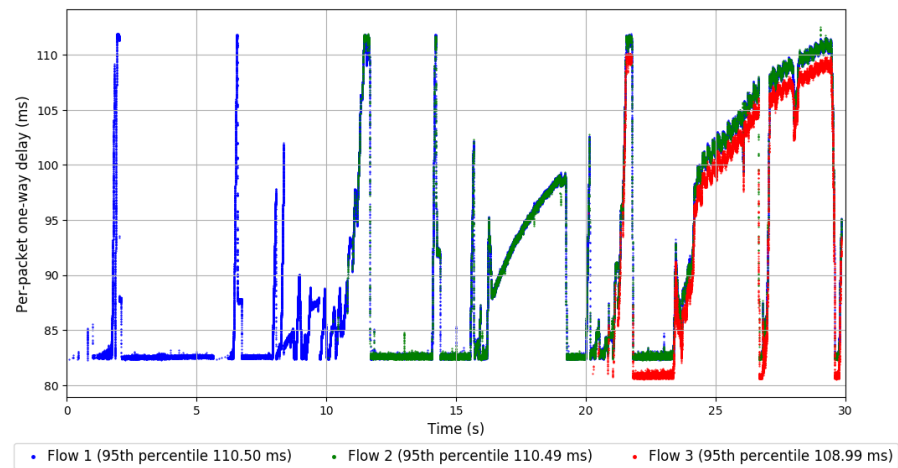
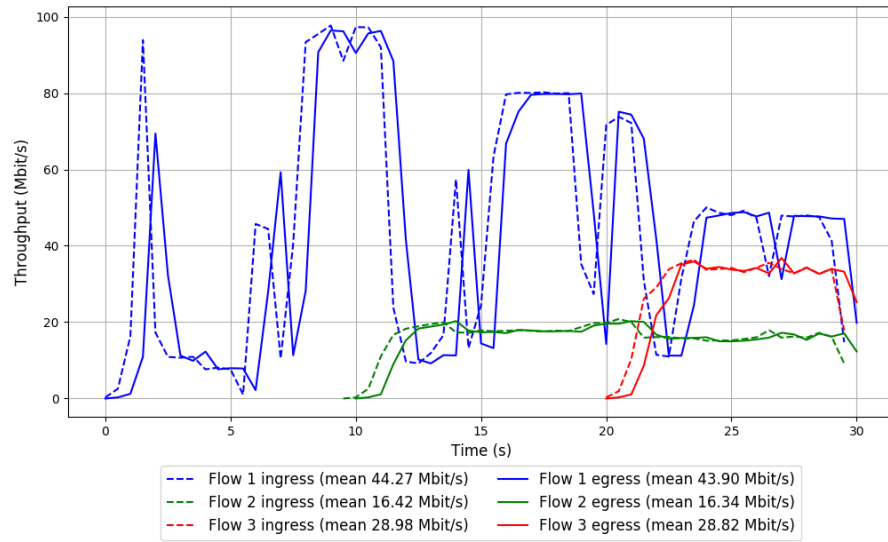
-- Flow 3:

Average throughput: 28.82 Mbit/s

95th percentile per-packet one-way delay: 108.992 ms

Loss rate: 0.58%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-01-19 02:04:36

End at: 2019-01-19 02:05:06

Local clock offset: -6.775 ms

Remote clock offset: 8.232 ms

Below is generated by plot.py at 2019-01-19 02:27:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.36 Mbit/s

95th percentile per-packet one-way delay: 110.854 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 48.06 Mbit/s

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

Loss rate: 0.61%

-- Flow 2:

Average throughput: 21.52 Mbit/s

95th percentile per-packet one-way delay: 110.328 ms

Loss rate: 0.46%

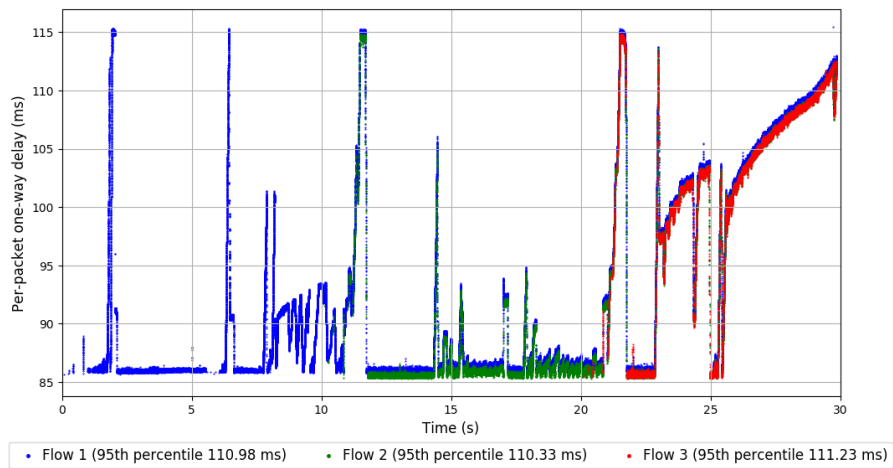
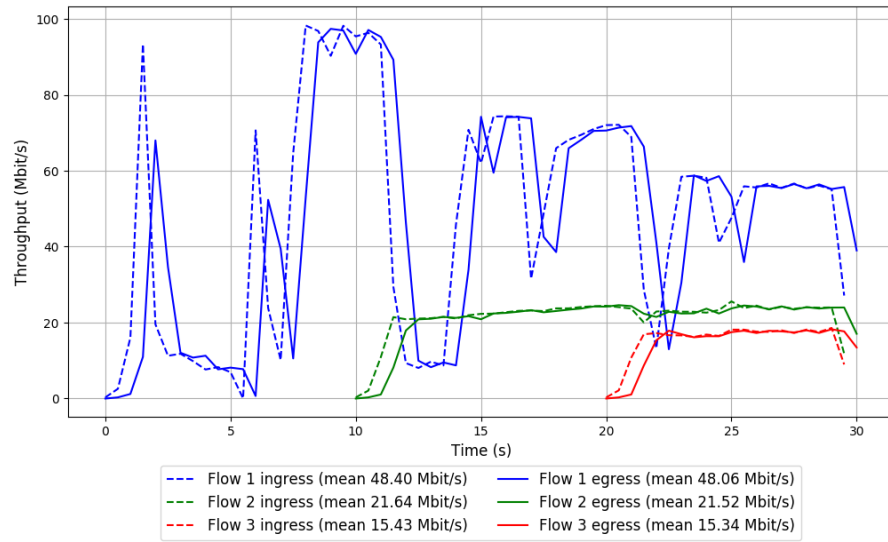
-- Flow 3:

Average throughput: 15.34 Mbit/s

95th percentile per-packet one-way delay: 111.226 ms

Loss rate: 0.29%

Run 5: Report of QUIC Cubic — Data Link

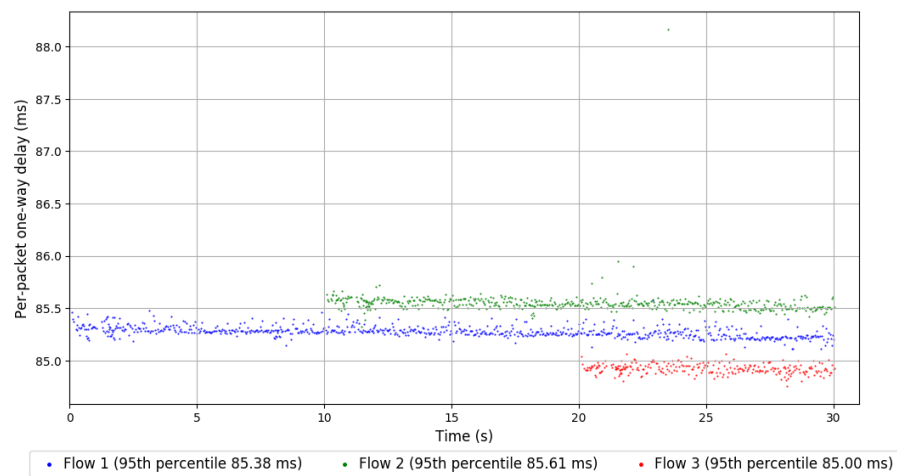
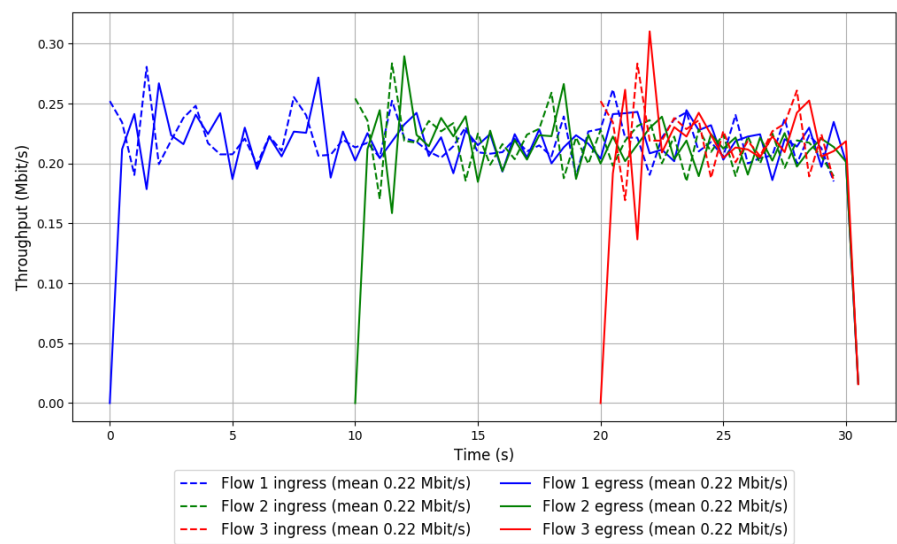


```
Run 1: Statistics of SReAM

Start at: 2019-01-19 00:15:31
End at: 2019-01-19 00:16:01
Local clock offset: -7.821 ms
Remote clock offset: 7.138 ms

# Below is generated by plot.py at 2019-01-19 02:27:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 85.589 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.376 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.612 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.002 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

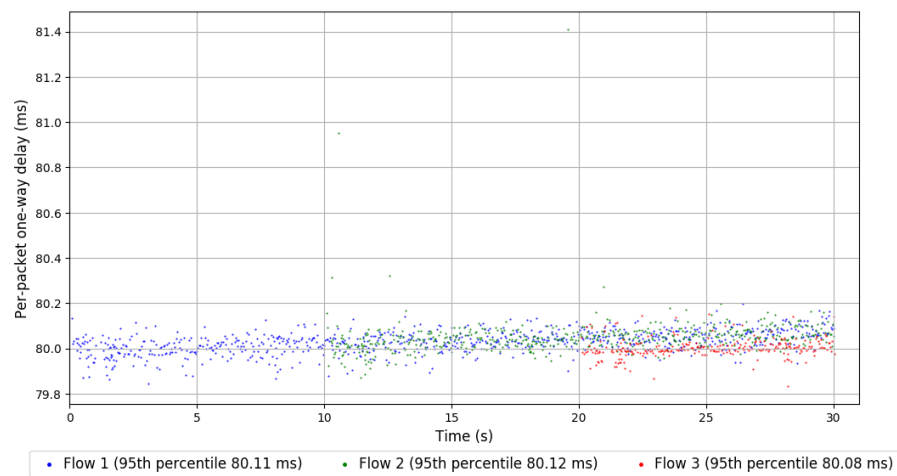
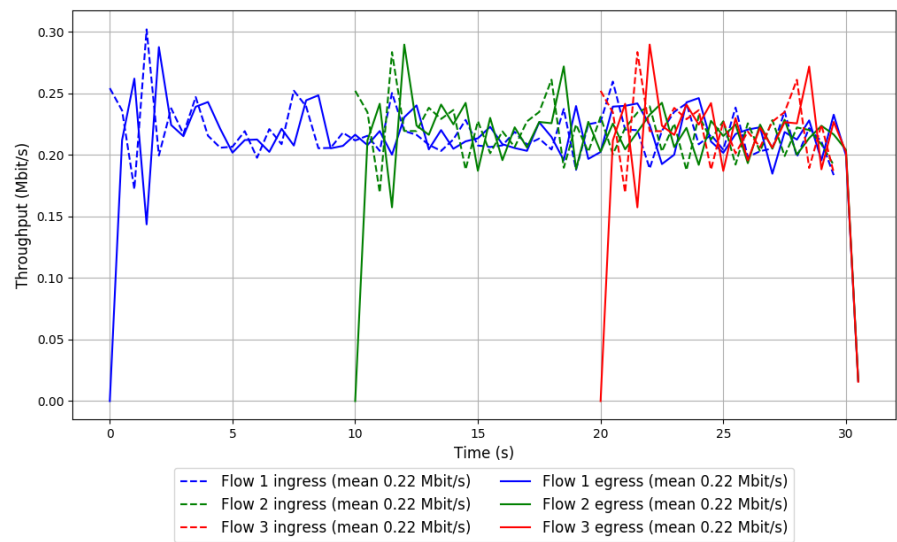


Run 2: Statistics of SReAM

Start at: 2019-01-19 00:42:20
End at: 2019-01-19 00:42:50
Local clock offset: -1.055 ms
Remote clock offset: 2.198 ms

Below is generated by plot.py at 2019-01-19 02:27:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 80.110 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.107 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.119 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.081 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SReAM

Start at: 2019-01-19 01:08:54

End at: 2019-01-19 01:09:24

Local clock offset: 0.927 ms

Remote clock offset: 2.556 ms

Below is generated by plot.py at 2019-01-19 02:27:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 84.424 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 80.976 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.473 ms

Loss rate: 0.00%

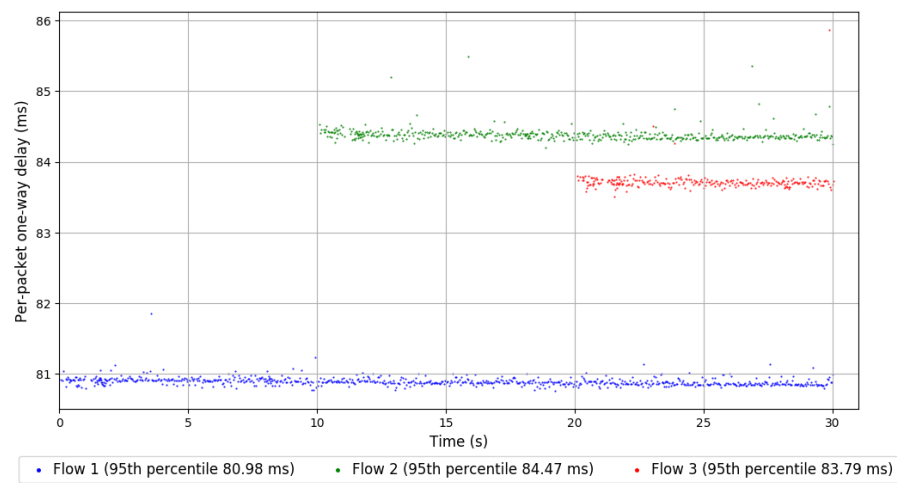
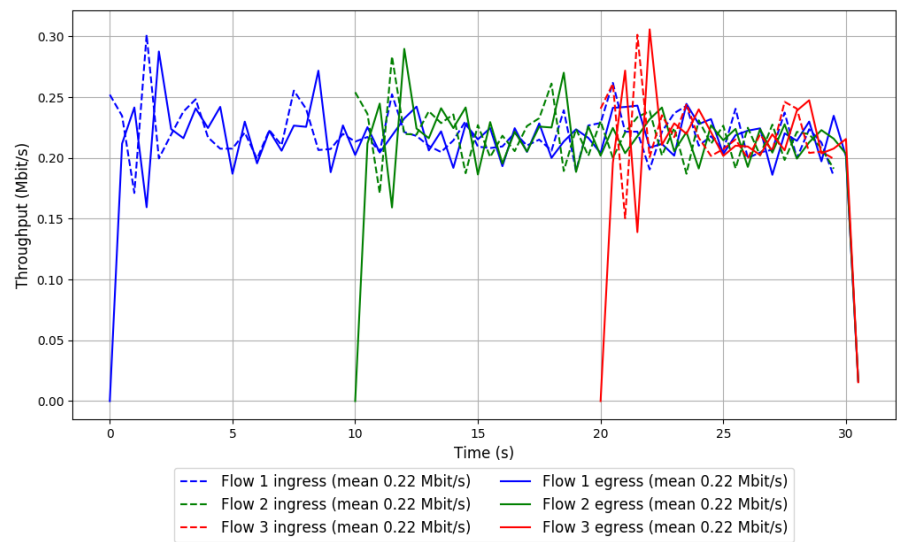
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 83.791 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

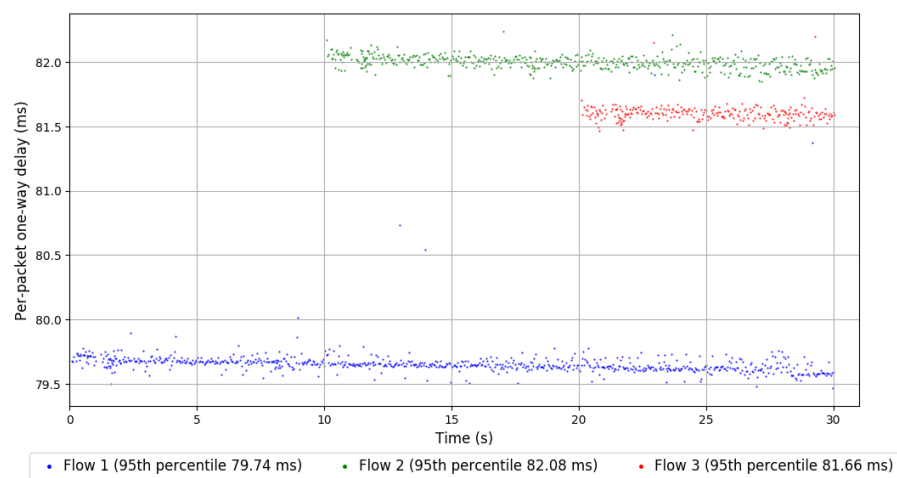
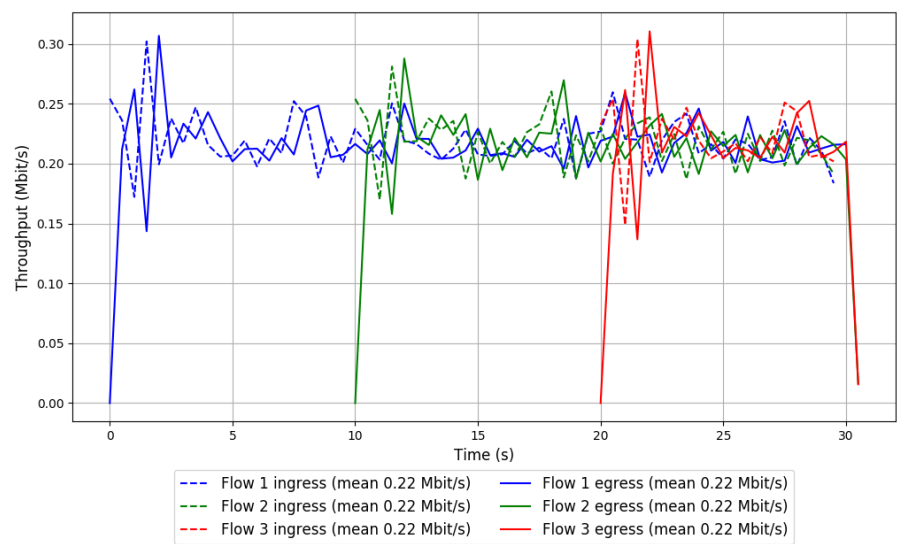


Run 4: Statistics of SReAM

Start at: 2019-01-19 01:35:28
End at: 2019-01-19 01:35:58
Local clock offset: -6.555 ms
Remote clock offset: 3.483 ms

Below is generated by plot.py at 2019-01-19 02:27:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 82.046 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.738 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 82.078 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.664 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2019-01-19 02:02:07

End at: 2019-01-19 02:02:37

Local clock offset: -6.762 ms

Remote clock offset: 4.497 ms

Below is generated by plot.py at 2019-01-19 02:27:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 82.862 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 80.260 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 81.209 ms

Loss rate: 0.00%

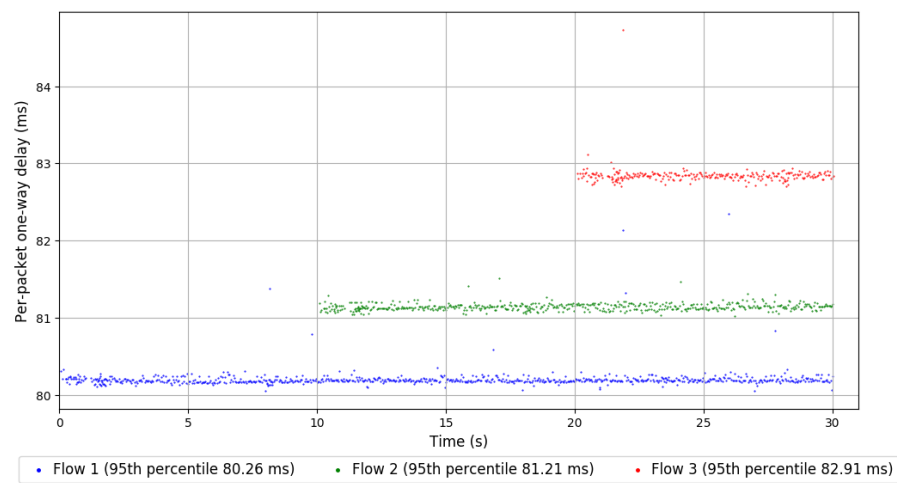
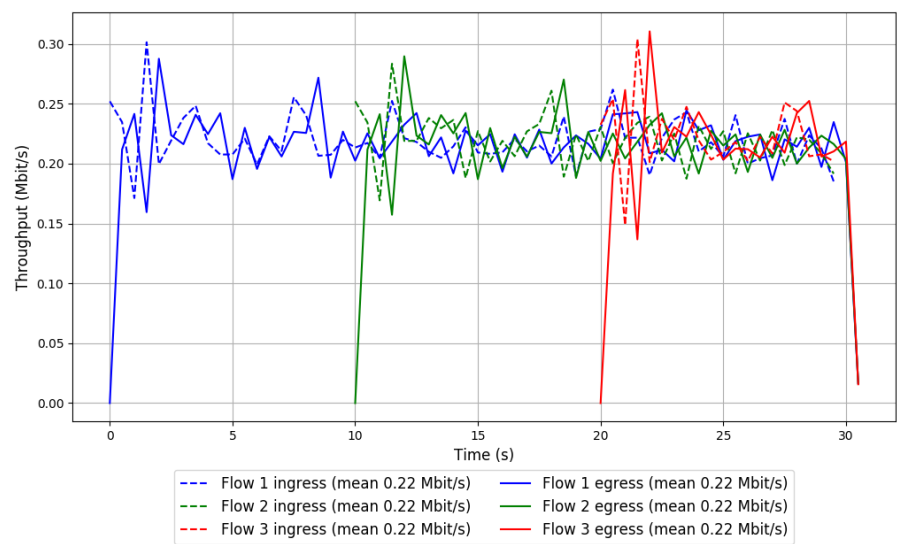
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 82.908 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-01-19 00:23:17

End at: 2019-01-19 00:23:47

Local clock offset: -5.072 ms

Remote clock offset: 7.606 ms

Below is generated by plot.py at 2019-01-19 02:27:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.26 Mbit/s

95th percentile per-packet one-way delay: 90.541 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.93 Mbit/s

95th percentile per-packet one-way delay: 89.817 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.74 Mbit/s

95th percentile per-packet one-way delay: 91.466 ms

Loss rate: 0.00%

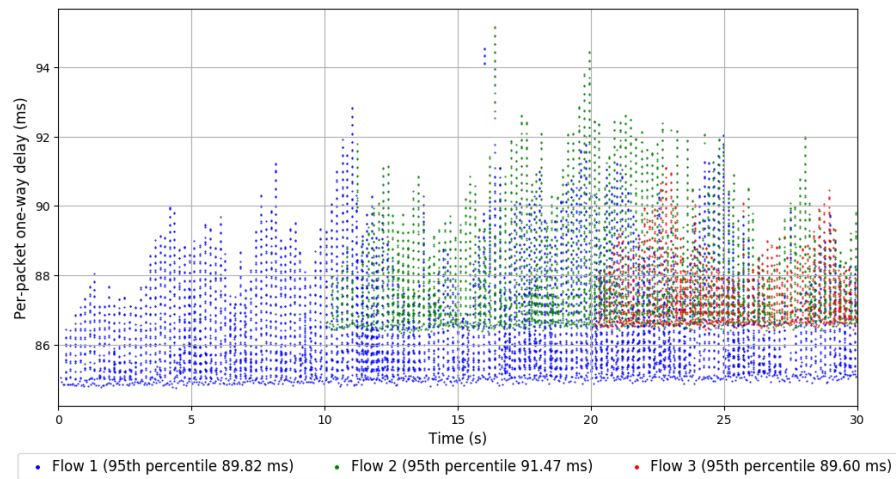
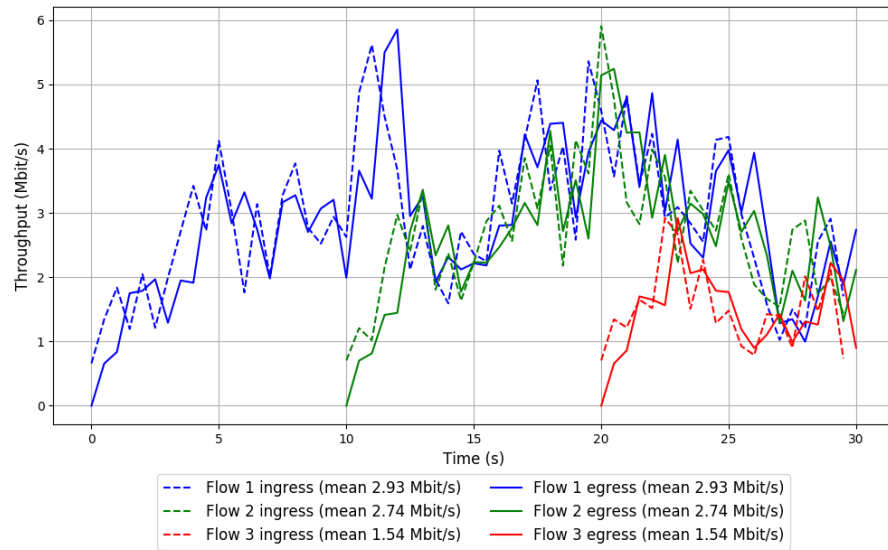
-- Flow 3:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 89.600 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-01-19 00:49:54

End at: 2019-01-19 00:50:24

Local clock offset: 0.385 ms

Remote clock offset: 1.927 ms

Below is generated by plot.py at 2019-01-19 02:27:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.20 Mbit/s

95th percentile per-packet one-way delay: 88.154 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 4.04 Mbit/s

95th percentile per-packet one-way delay: 88.248 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.63 Mbit/s

95th percentile per-packet one-way delay: 87.506 ms

Loss rate: 0.00%

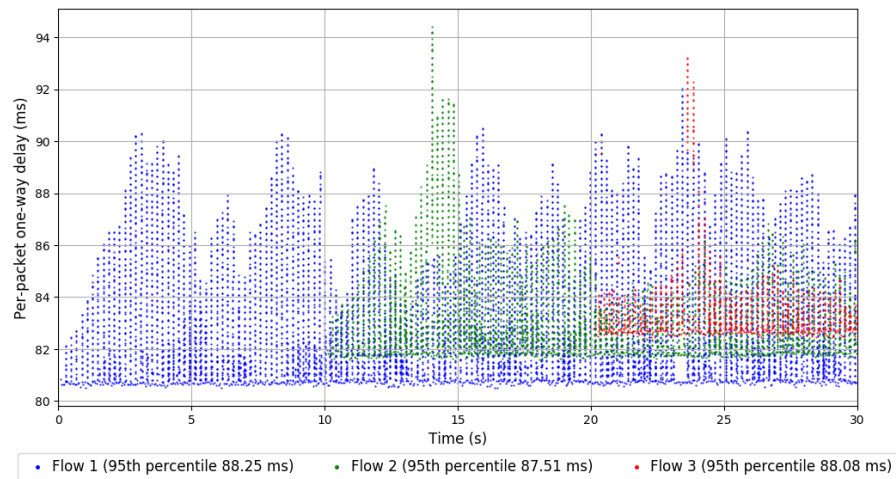
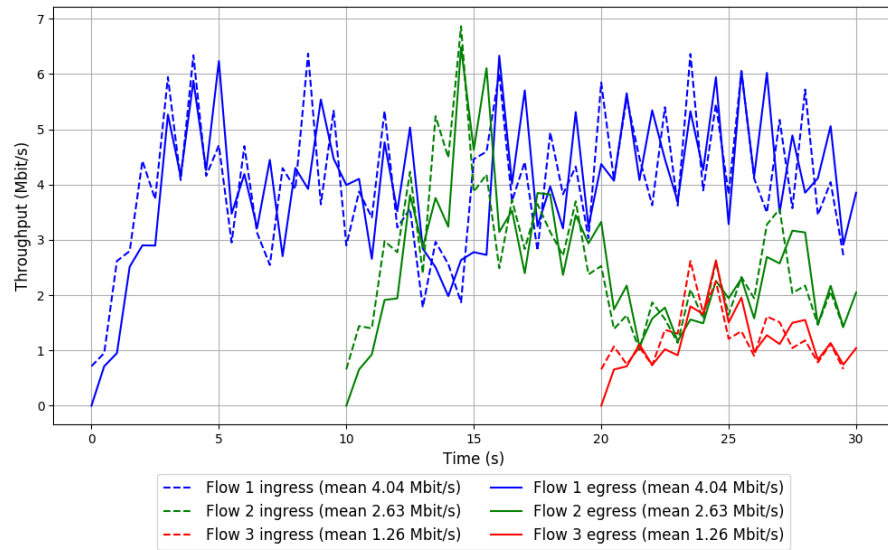
-- Flow 3:

Average throughput: 1.26 Mbit/s

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

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-01-19 01:16:27

End at: 2019-01-19 01:16:57

Local clock offset: 1.48 ms

Remote clock offset: 7.845 ms

Below is generated by plot.py at 2019-01-19 02:27:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.23 Mbit/s

95th percentile per-packet one-way delay: 89.705 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 3.12 Mbit/s

95th percentile per-packet one-way delay: 90.059 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 2.21 Mbit/s

95th percentile per-packet one-way delay: 89.029 ms

Loss rate: 0.00%

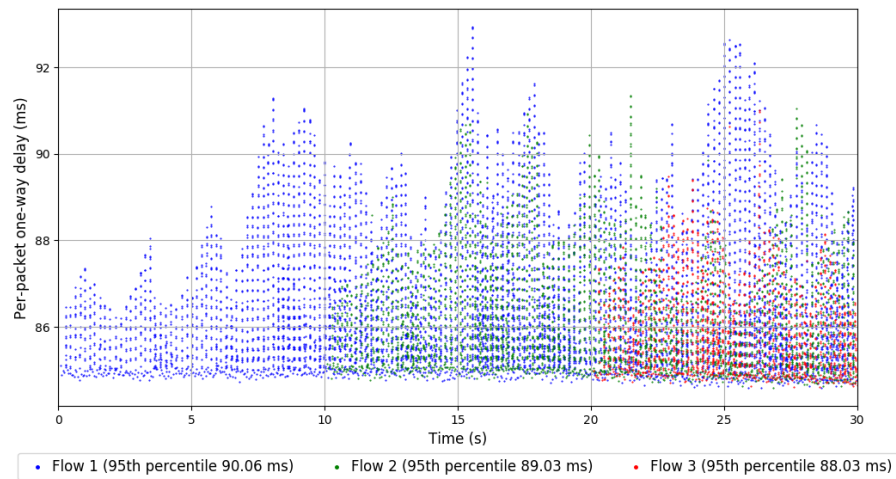
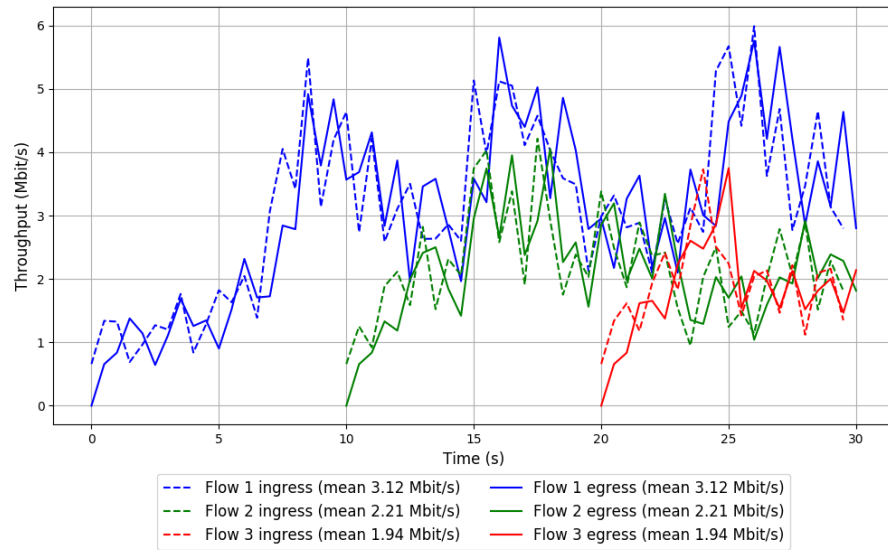
-- Flow 3:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 88.030 ms

Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

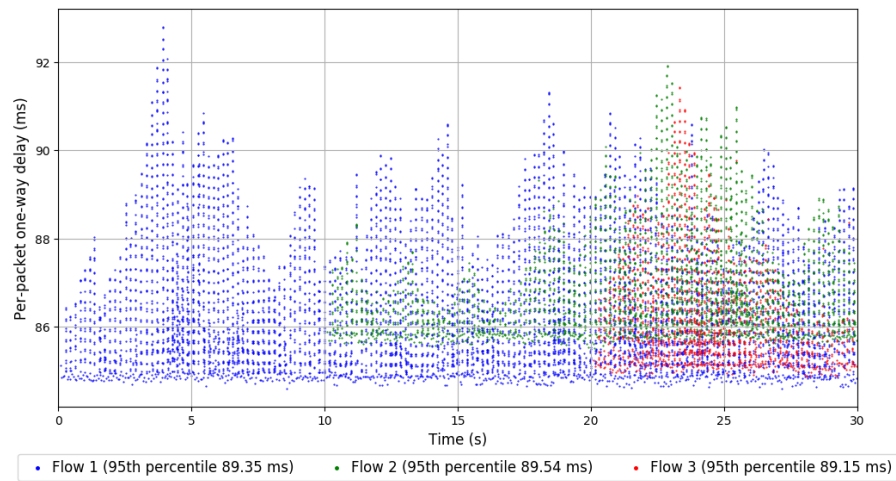
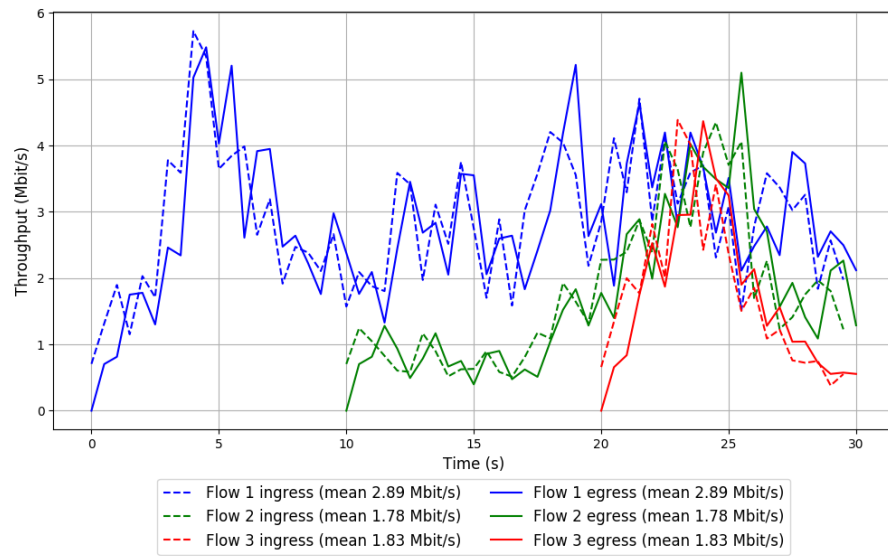


Run 4: Statistics of Sprout

Start at: 2019-01-19 01:43:04
End at: 2019-01-19 01:43:34
Local clock offset: -8.485 ms
Remote clock offset: 8.548 ms

```
# Below is generated by plot.py at 2019-01-19 02:27:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.68 Mbit/s
95th percentile per-packet one-way delay: 89.384 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 89.351 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 89.544 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 89.152 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

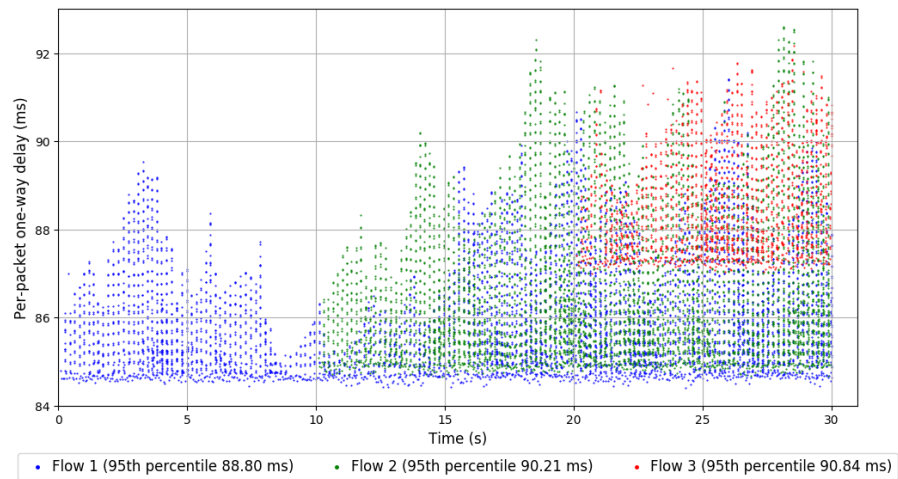
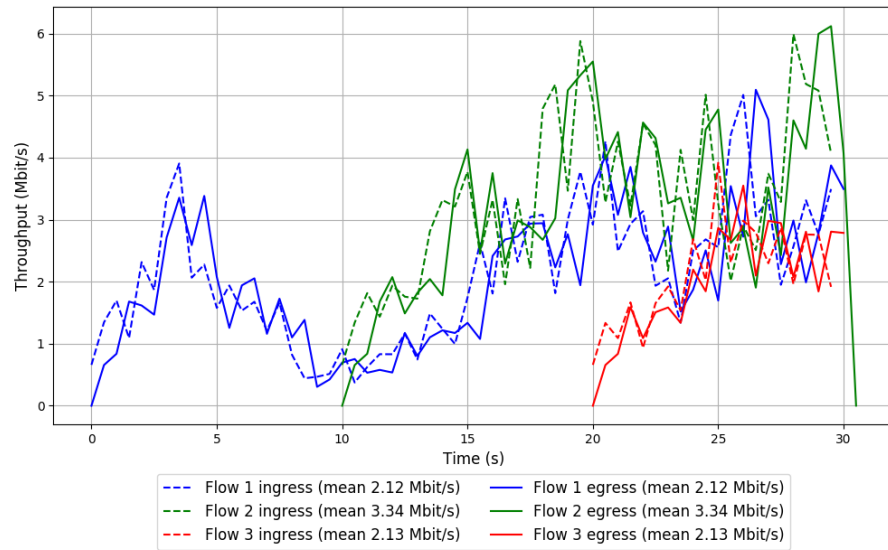


Run 5: Statistics of Sprout

Start at: 2019-01-19 02:09:41
End at: 2019-01-19 02:10:11
Local clock offset: -6.938 ms
Remote clock offset: 9.185 ms

```
# Below is generated by plot.py at 2019-01-19 02:27:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.05 Mbit/s
95th percentile per-packet one-way delay: 90.089 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 88.800 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.34 Mbit/s
95th percentile per-packet one-way delay: 90.207 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 90.844 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-01-19 00:08:01

End at: 2019-01-19 00:08:31

Local clock offset: -8.121 ms

Remote clock offset: 5.049 ms

Below is generated by plot.py at 2019-01-19 02:27:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.48 Mbit/s

95th percentile per-packet one-way delay: 91.182 ms

Loss rate: 29.37%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 83.690 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.80 Mbit/s

95th percentile per-packet one-way delay: 94.977 ms

Loss rate: 32.67%

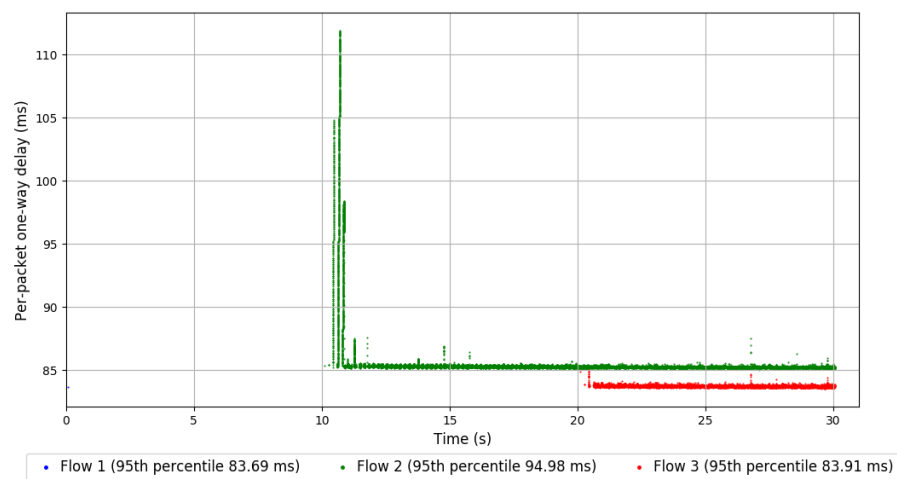
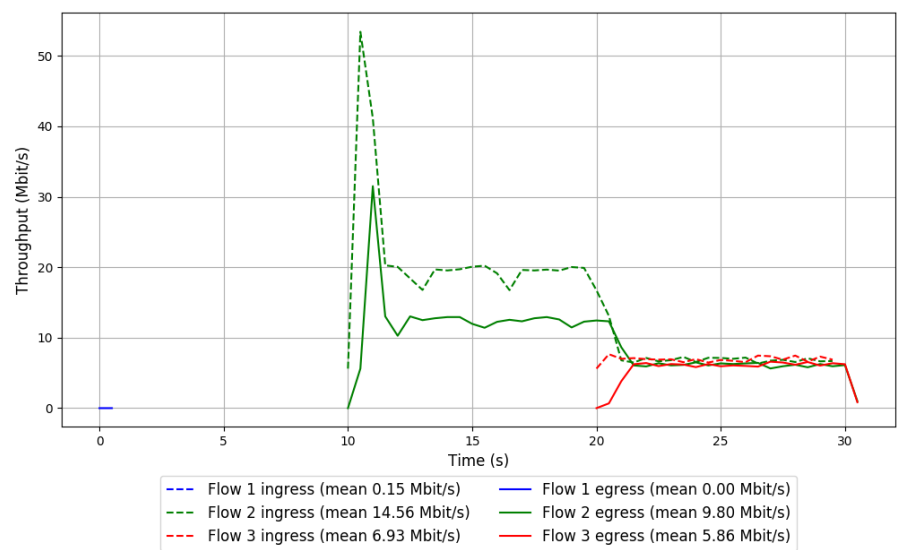
-- Flow 3:

Average throughput: 5.86 Mbit/s

95th percentile per-packet one-way delay: 83.907 ms

Loss rate: 15.44%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-01-19 00:34:50

End at: 2019-01-19 00:35:20

Local clock offset: -1.221 ms

Remote clock offset: 6.2 ms

Below is generated by plot.py at 2019-01-19 02:27:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.59 Mbit/s

95th percentile per-packet one-way delay: 83.232 ms

Loss rate: 87.41%

-- Flow 1:

Average throughput: 6.77 Mbit/s

95th percentile per-packet one-way delay: 92.018 ms

Loss rate: 43.64%

-- Flow 2:

Average throughput: 3.16 Mbit/s

95th percentile per-packet one-way delay: 83.008 ms

Loss rate: 53.64%

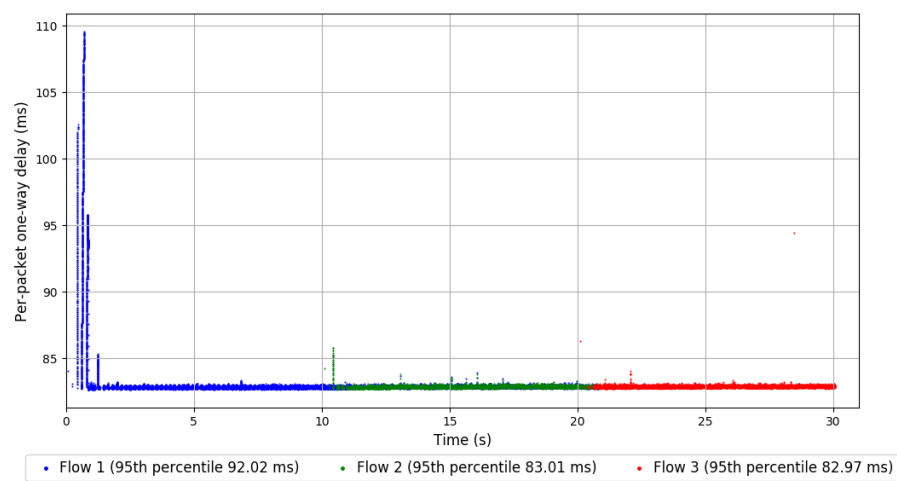
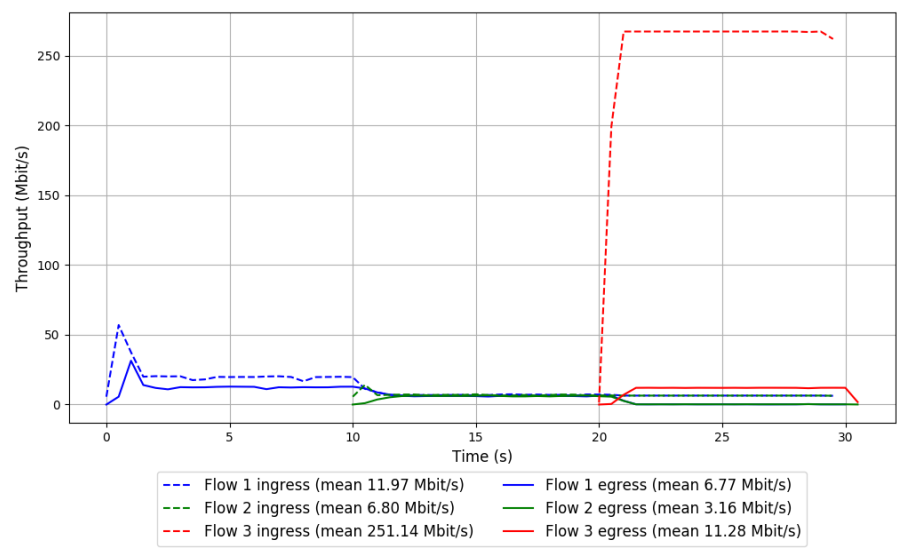
-- Flow 3:

Average throughput: 11.28 Mbit/s

95th percentile per-packet one-way delay: 82.975 ms

Loss rate: 95.51%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-01-19 01:01:24

End at: 2019-01-19 01:01:54

Local clock offset: 0.473 ms

Remote clock offset: 1.423 ms

Below is generated by plot.py at 2019-01-19 02:27:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.59 Mbit/s

95th percentile per-packet one-way delay: 83.103 ms

Loss rate: 84.89%

-- Flow 1:

Average throughput: 7.49 Mbit/s

95th percentile per-packet one-way delay: 89.293 ms

Loss rate: 41.61%

-- Flow 2:

Average throughput: 3.25 Mbit/s

95th percentile per-packet one-way delay: 80.263 ms

Loss rate: 57.21%

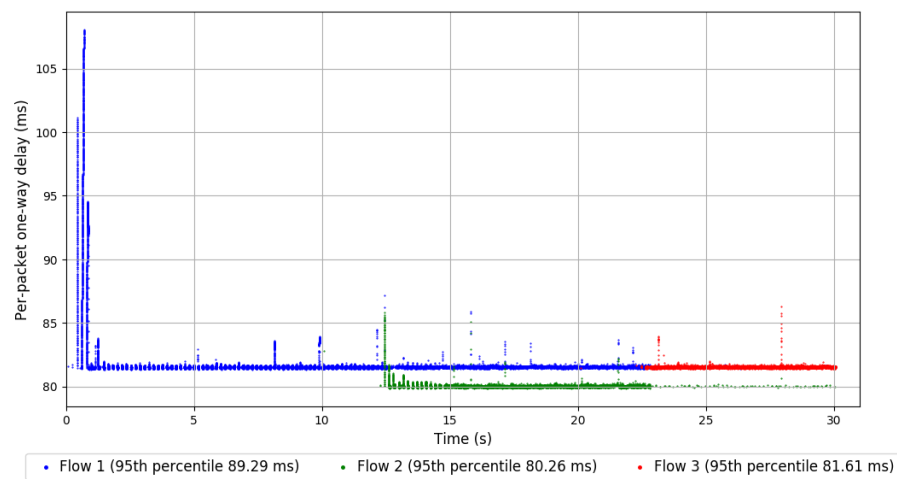
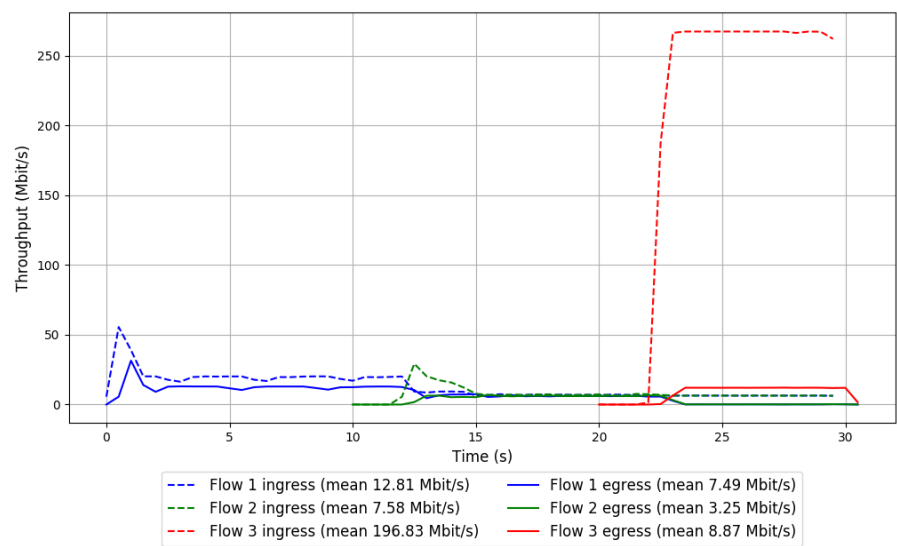
-- Flow 3:

Average throughput: 8.87 Mbit/s

95th percentile per-packet one-way delay: 81.612 ms

Loss rate: 95.49%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-01-19 01:27:57

End at: 2019-01-19 01:28:27

Local clock offset: -5.237 ms

Remote clock offset: 9.351 ms

Below is generated by plot.py at 2019-01-19 02:27:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.59 Mbit/s

95th percentile per-packet one-way delay: 88.704 ms

Loss rate: 87.40%

-- Flow 1:

Average throughput: 6.72 Mbit/s

95th percentile per-packet one-way delay: 96.682 ms

Loss rate: 43.69%

-- Flow 2:

Average throughput: 3.20 Mbit/s

95th percentile per-packet one-way delay: 85.932 ms

Loss rate: 52.06%

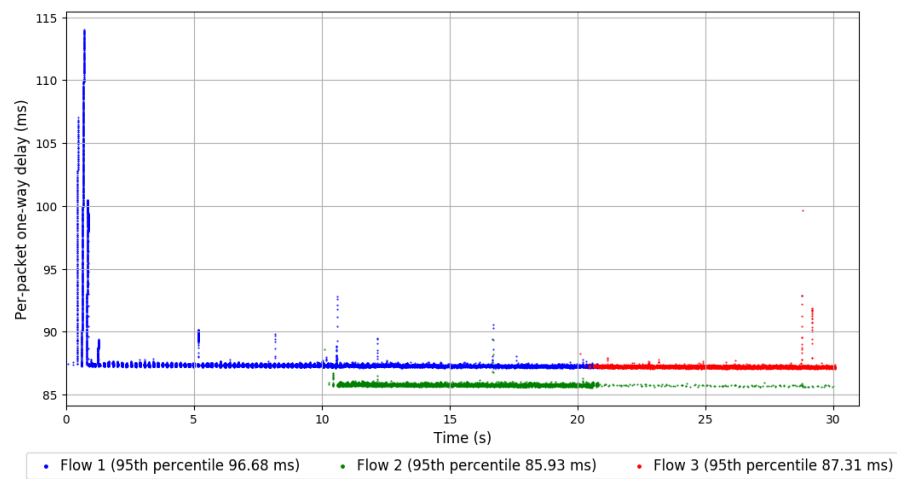
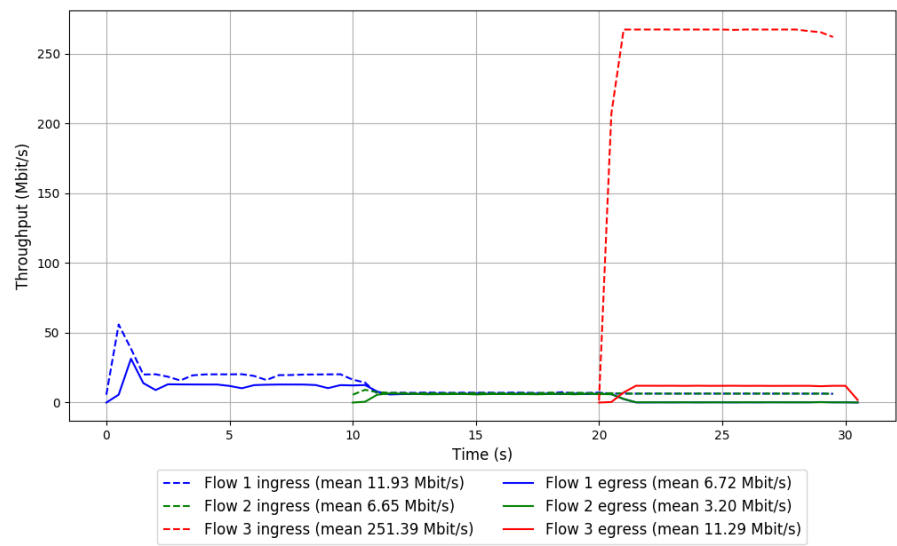
-- Flow 3:

Average throughput: 11.29 Mbit/s

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

Loss rate: 95.51%

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-01-19 01:54:39

End at: 2019-01-19 01:55:09

Local clock offset: -7.048 ms

Remote clock offset: 3.507 ms

Below is generated by plot.py at 2019-01-19 02:27:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.59 Mbit/s

95th percentile per-packet one-way delay: 80.125 ms

Loss rate: 39.29%

-- Flow 1:

Average throughput: 8.05 Mbit/s

95th percentile per-packet one-way delay: 86.006 ms

Loss rate: 32.91%

-- Flow 2:

Average throughput: 5.39 Mbit/s

95th percentile per-packet one-way delay: 79.436 ms

Loss rate: 19.34%

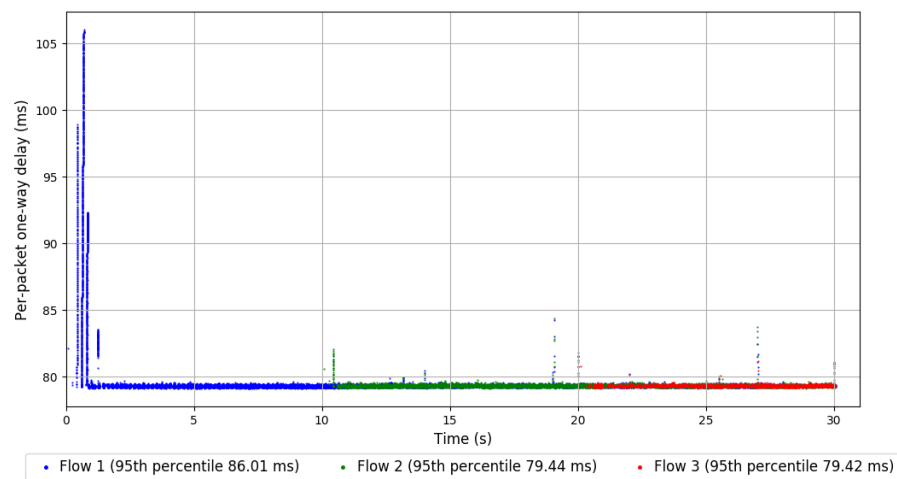
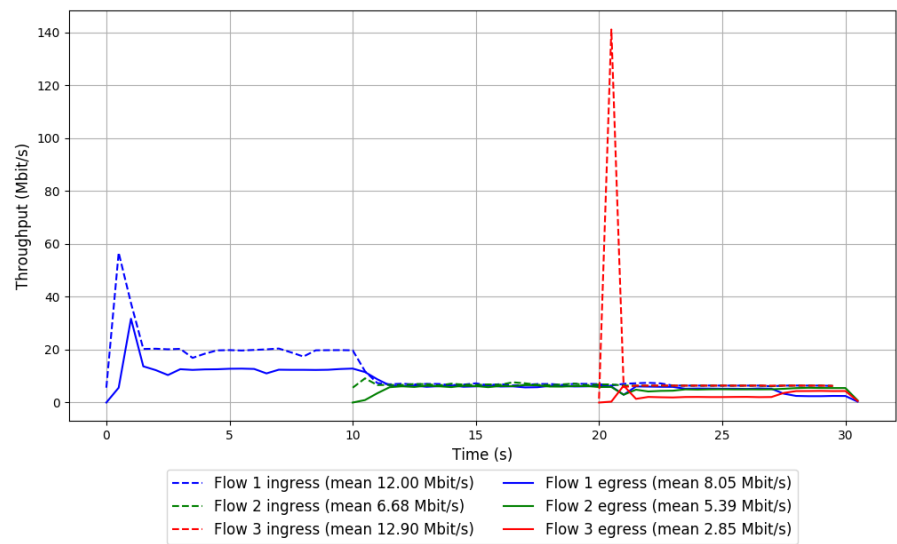
-- Flow 3:

Average throughput: 2.85 Mbit/s

95th percentile per-packet one-way delay: 79.420 ms

Loss rate: 77.87%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-01-19 00:11:44

End at: 2019-01-19 00:12:14

Local clock offset: -7.574 ms

Remote clock offset: 5.319 ms

Below is generated by plot.py at 2019-01-19 02:27:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.29 Mbit/s

95th percentile per-packet one-way delay: 93.668 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 52.65 Mbit/s

95th percentile per-packet one-way delay: 92.330 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 10.77 Mbit/s

95th percentile per-packet one-way delay: 104.917 ms

Loss rate: 0.72%

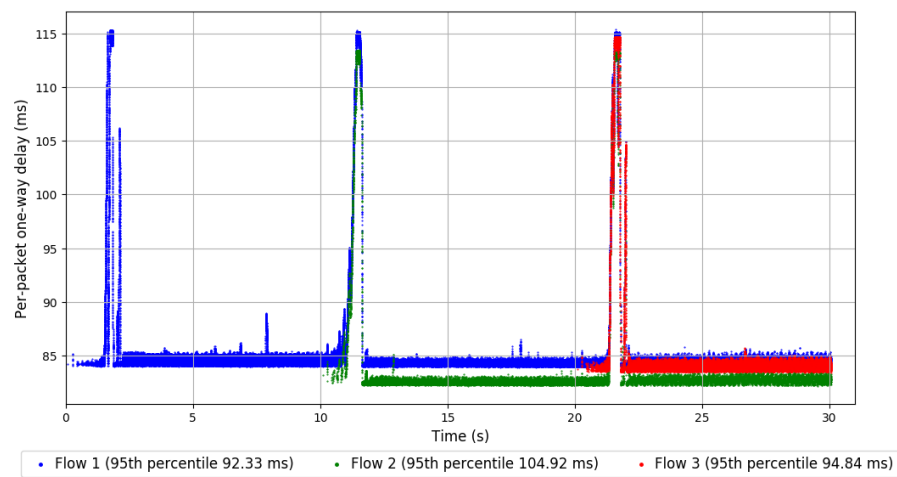
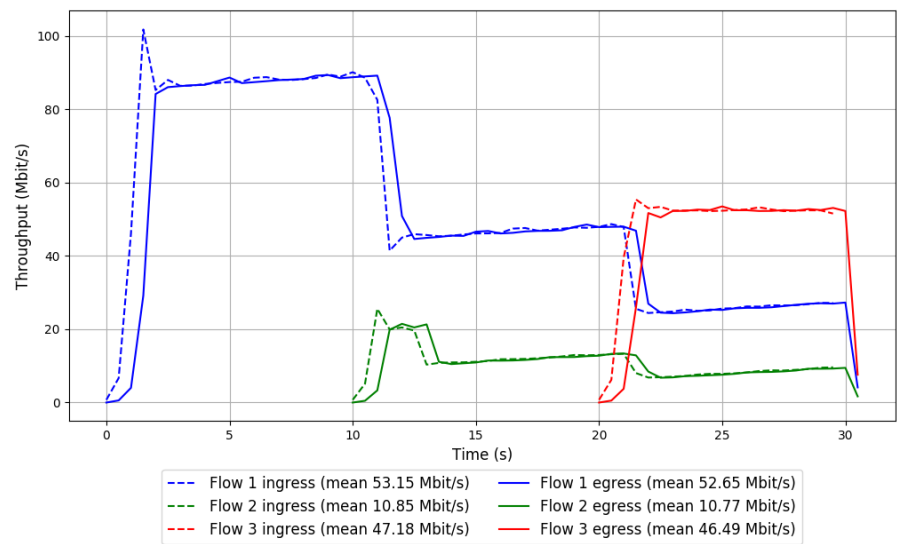
-- Flow 3:

Average throughput: 46.49 Mbit/s

95th percentile per-packet one-way delay: 94.839 ms

Loss rate: 1.48%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-01-19 00:38:34

End at: 2019-01-19 00:39:04

Local clock offset: -1.481 ms

Remote clock offset: 8.374 ms

Below is generated by plot.py at 2019-01-19 02:28:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.27 Mbit/s

95th percentile per-packet one-way delay: 96.434 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 50.28 Mbit/s

95th percentile per-packet one-way delay: 96.280 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 23.21 Mbit/s

95th percentile per-packet one-way delay: 98.017 ms

Loss rate: 0.80%

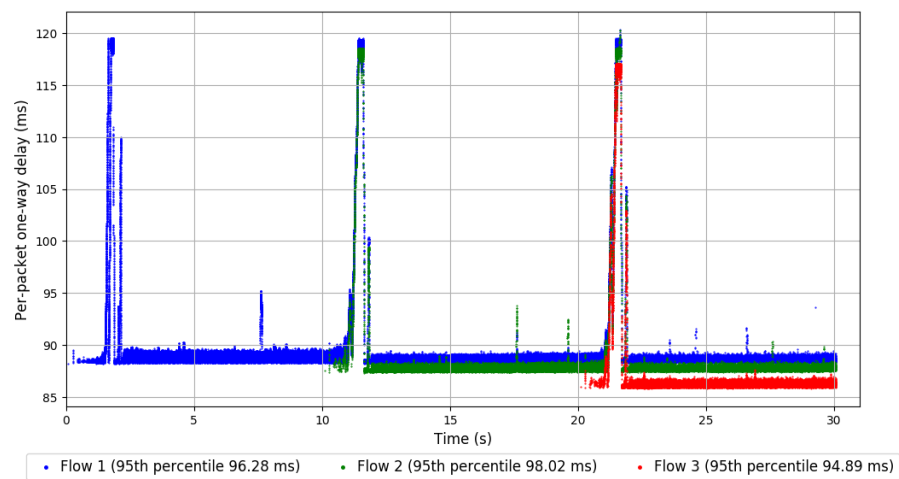
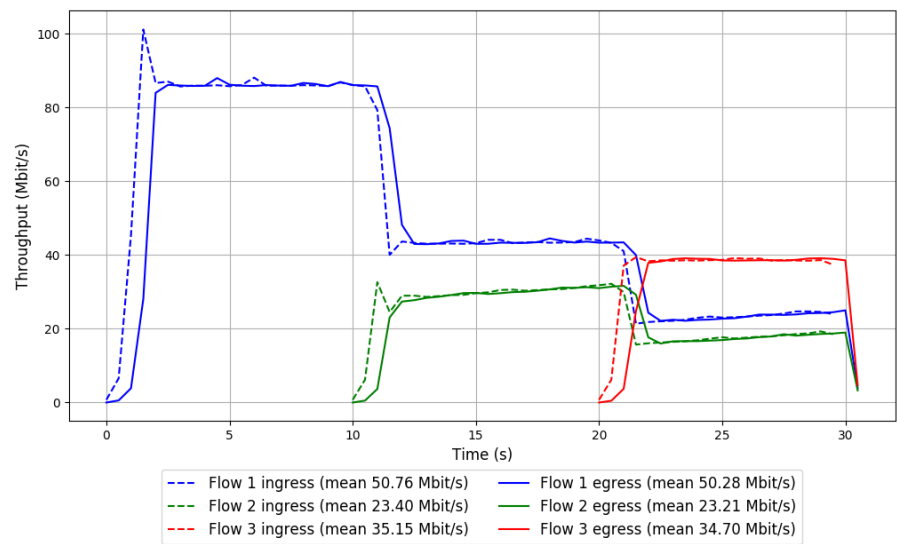
-- Flow 3:

Average throughput: 34.70 Mbit/s

95th percentile per-packet one-way delay: 94.893 ms

Loss rate: 1.28%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-01-19 01:05:08

End at: 2019-01-19 01:05:38

Local clock offset: 0.729 ms

Remote clock offset: 1.326 ms

Below is generated by plot.py at 2019-01-19 02:28:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.33 Mbit/s

95th percentile per-packet one-way delay: 88.825 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 50.96 Mbit/s

95th percentile per-packet one-way delay: 88.969 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 18.32 Mbit/s

95th percentile per-packet one-way delay: 90.306 ms

Loss rate: 0.53%

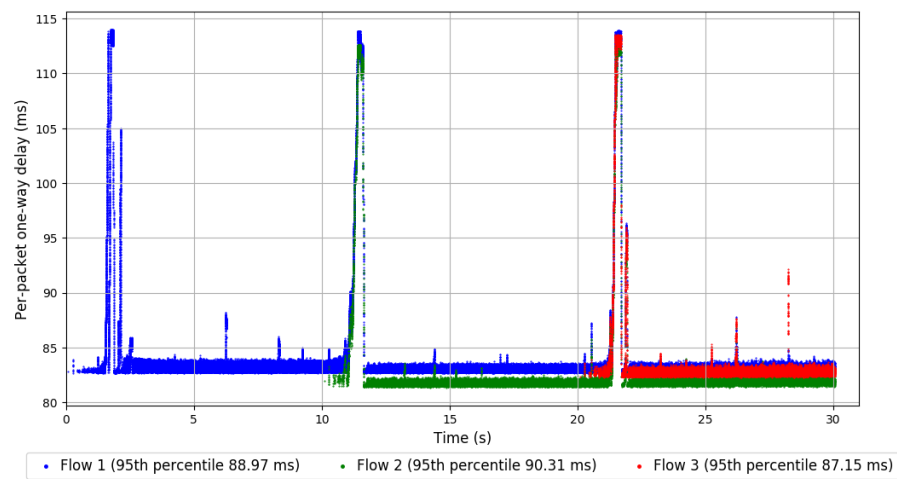
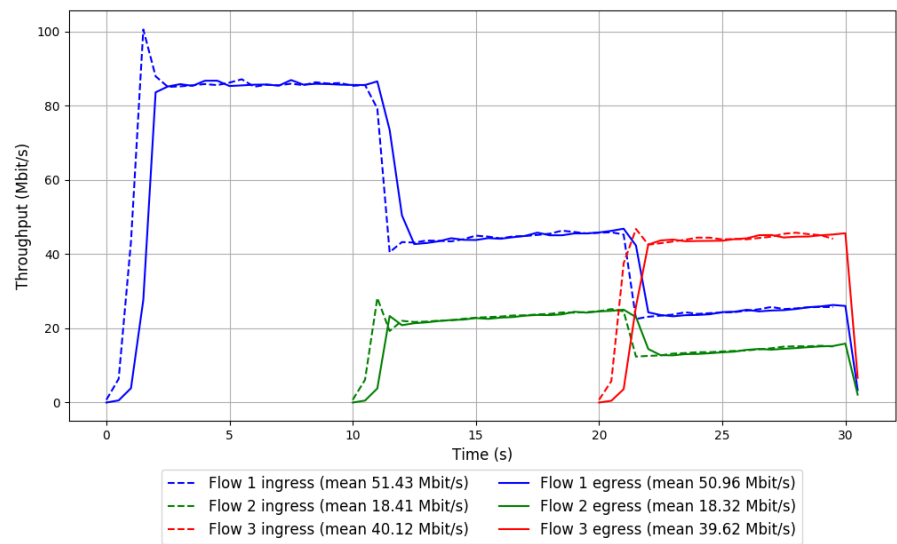
-- Flow 3:

Average throughput: 39.62 Mbit/s

95th percentile per-packet one-way delay: 87.153 ms

Loss rate: 1.25%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-01-19 01:31:42

End at: 2019-01-19 01:32:12

Local clock offset: -5.621 ms

Remote clock offset: 9.385 ms

Below is generated by plot.py at 2019-01-19 02:28:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.76 Mbit/s

95th percentile per-packet one-way delay: 93.044 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 44.55 Mbit/s

95th percentile per-packet one-way delay: 90.918 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 47.26 Mbit/s

95th percentile per-packet one-way delay: 97.809 ms

Loss rate: 1.00%

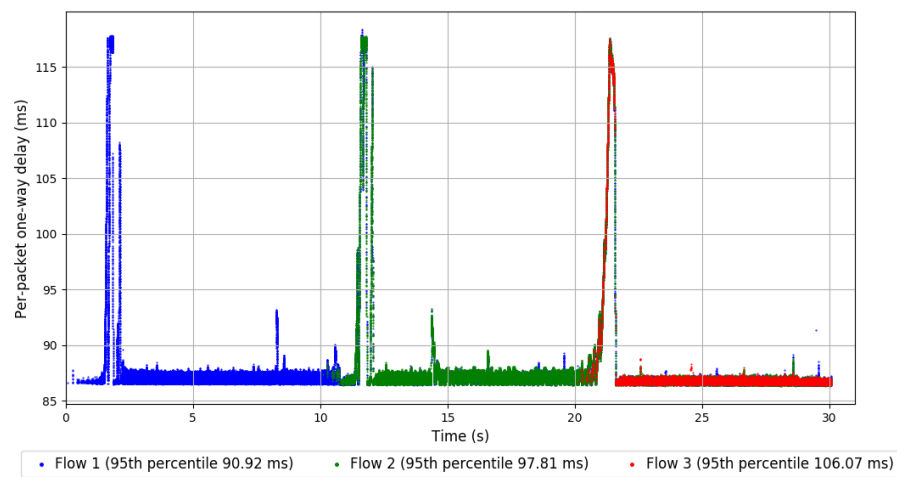
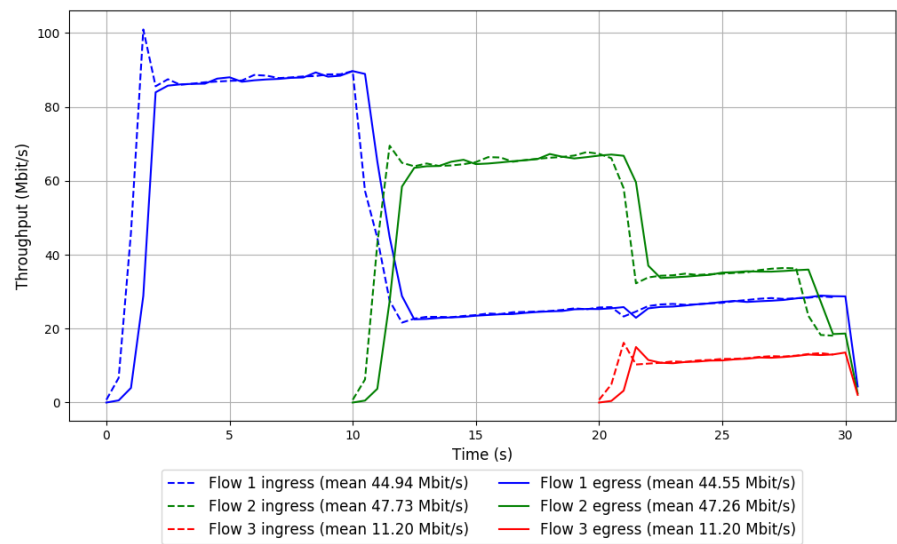
-- Flow 3:

Average throughput: 11.20 Mbit/s

95th percentile per-packet one-way delay: 106.069 ms

Loss rate: 0.01%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-01-19 01:58:21

End at: 2019-01-19 01:58:51

Local clock offset: -7.598 ms

Remote clock offset: 3.522 ms

Below is generated by plot.py at 2019-01-19 02:28:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 72.48 Mbit/s

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

Loss rate: 0.89%

-- Flow 1:

Average throughput: 48.27 Mbit/s

95th percentile per-packet one-way delay: 87.557 ms

Loss rate: 0.92%

-- Flow 2:

Average throughput: 17.76 Mbit/s

95th percentile per-packet one-way delay: 90.676 ms

Loss rate: 0.41%

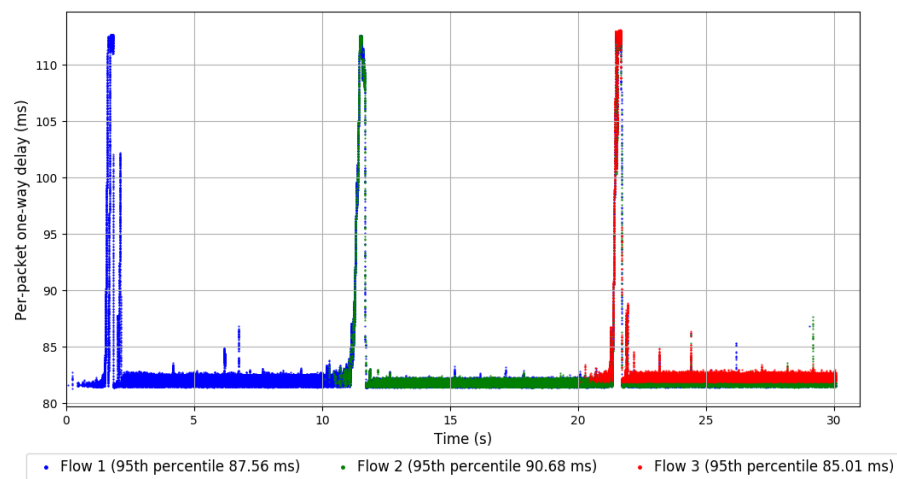
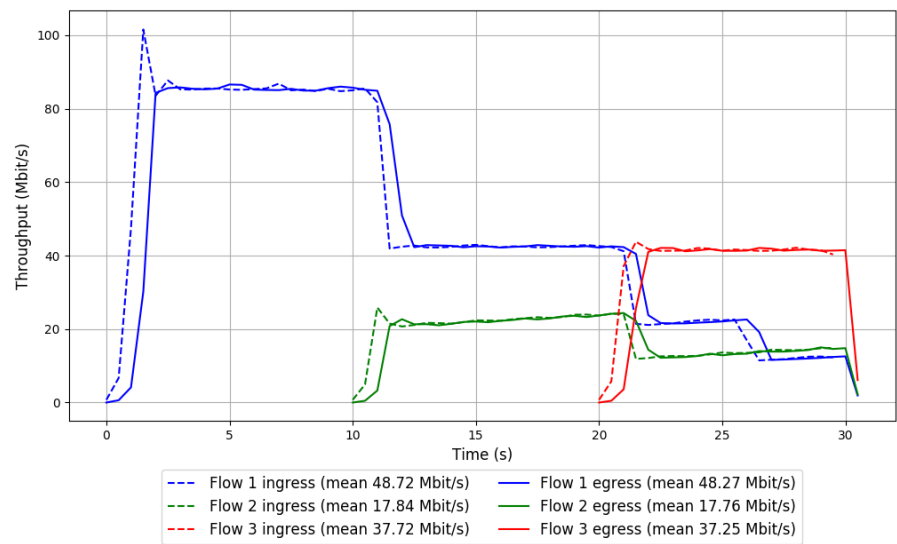
-- Flow 3:

Average throughput: 37.25 Mbit/s

95th percentile per-packet one-way delay: 85.011 ms

Loss rate: 1.24%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-01-19 00:16:43

End at: 2019-01-19 00:17:13

Local clock offset: -7.826 ms

Remote clock offset: 7.404 ms

Below is generated by plot.py at 2019-01-19 02:28:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 44.20 Mbit/s

95th percentile per-packet one-way delay: 163.218 ms

Loss rate: 80.66%

-- Flow 1:

Average throughput: 37.41 Mbit/s

95th percentile per-packet one-way delay: 163.825 ms

Loss rate: 83.02%

-- Flow 2:

Average throughput: 11.77 Mbit/s

95th percentile per-packet one-way delay: 115.893 ms

Loss rate: 16.84%

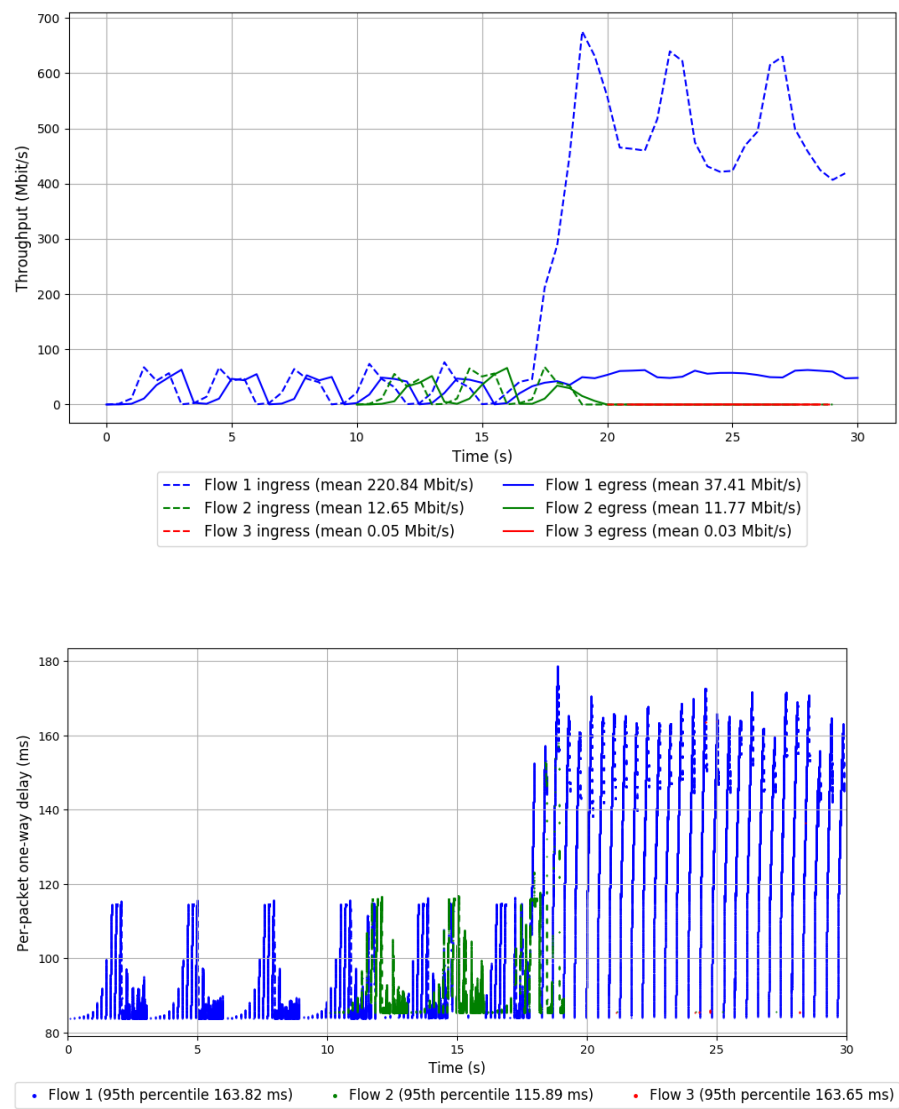
-- Flow 3:

Average throughput: 0.03 Mbit/s

95th percentile per-packet one-way delay: 163.653 ms

Loss rate: 55.26%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-01-19 00:43:32

End at: 2019-01-19 00:44:02

Local clock offset: -0.928 ms

Remote clock offset: 2.221 ms

Below is generated by plot.py at 2019-01-19 02:28:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 45.44 Mbit/s

95th percentile per-packet one-way delay: 111.826 ms

Loss rate: 17.25%

-- Flow 1:

Average throughput: 29.20 Mbit/s

95th percentile per-packet one-way delay: 112.027 ms

Loss rate: 18.59%

-- Flow 2:

Average throughput: 14.64 Mbit/s

95th percentile per-packet one-way delay: 110.540 ms

Loss rate: 16.43%

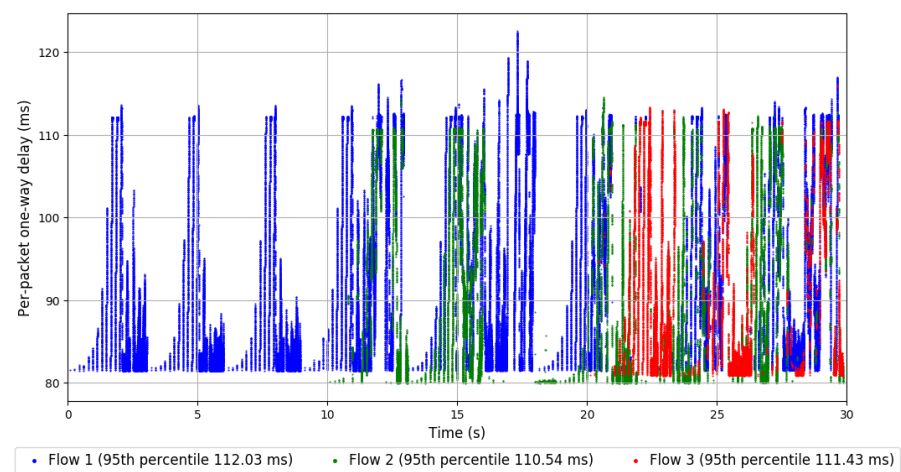
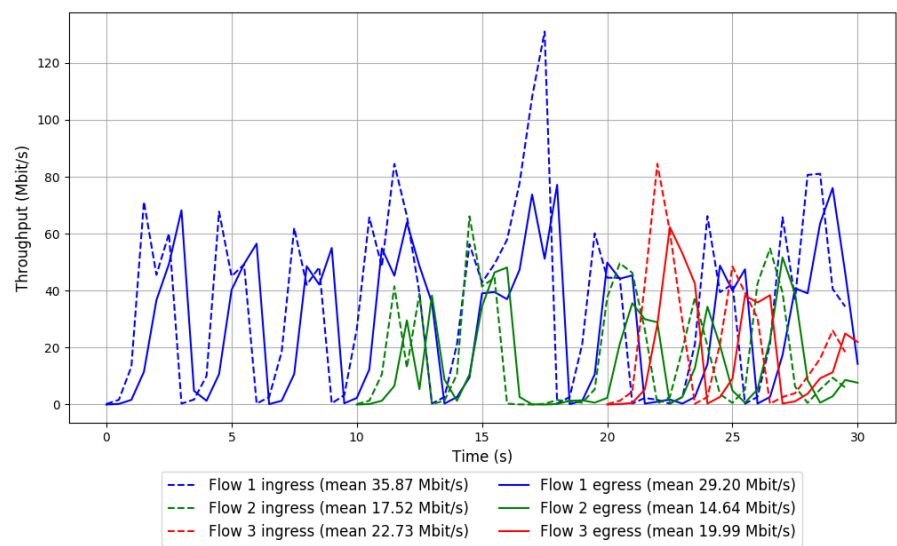
-- Flow 3:

Average throughput: 19.99 Mbit/s

95th percentile per-packet one-way delay: 111.429 ms

Loss rate: 12.03%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-01-19 01:10:06

End at: 2019-01-19 01:10:36

Local clock offset: 1.81 ms

Remote clock offset: 6.791 ms

Below is generated by plot.py at 2019-01-19 02:28:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 42.00 Mbit/s

95th percentile per-packet one-way delay: 115.812 ms

Loss rate: 26.92%

-- Flow 1:

Average throughput: 25.16 Mbit/s

95th percentile per-packet one-way delay: 115.573 ms

Loss rate: 29.99%

-- Flow 2:

Average throughput: 15.49 Mbit/s

95th percentile per-packet one-way delay: 115.841 ms

Loss rate: 20.10%

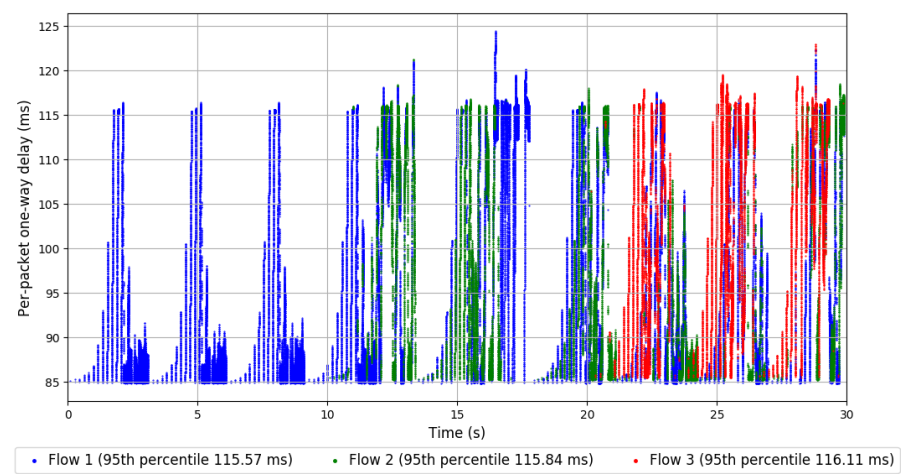
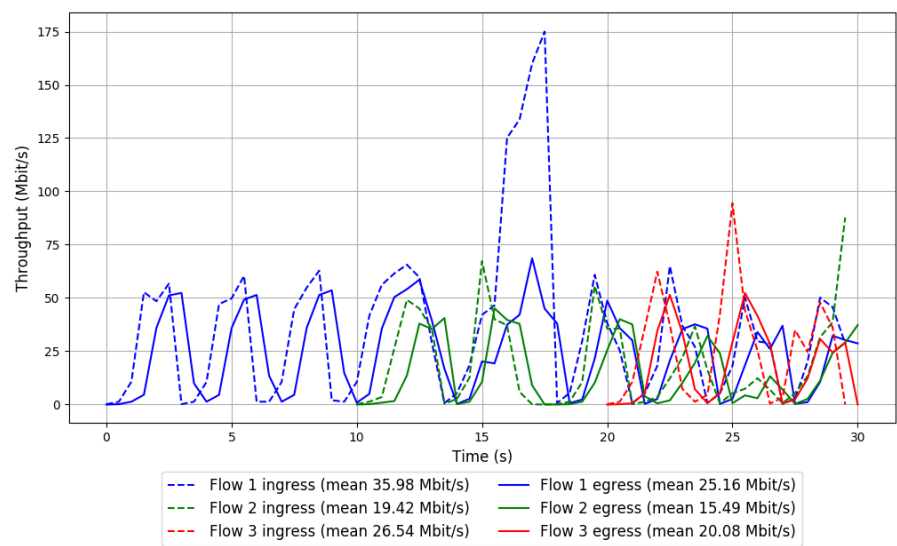
-- Flow 3:

Average throughput: 20.08 Mbit/s

95th percentile per-packet one-way delay: 116.109 ms

Loss rate: 24.27%

Run 3: Report of Verus — Data Link

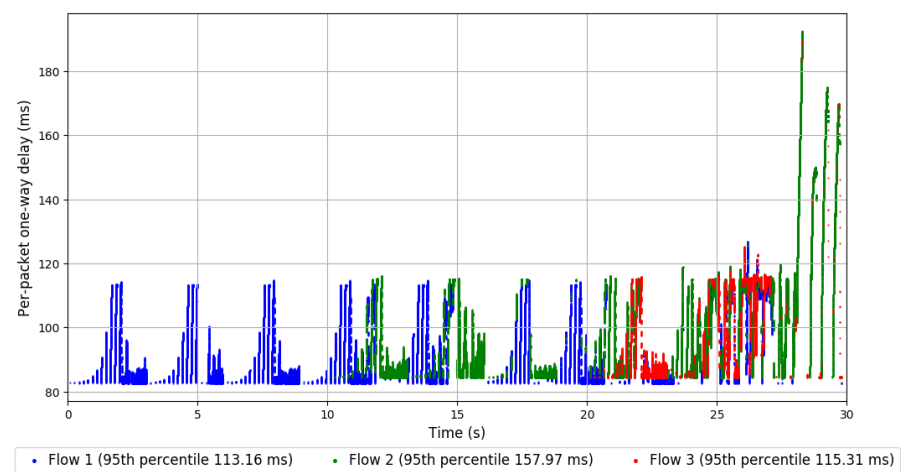
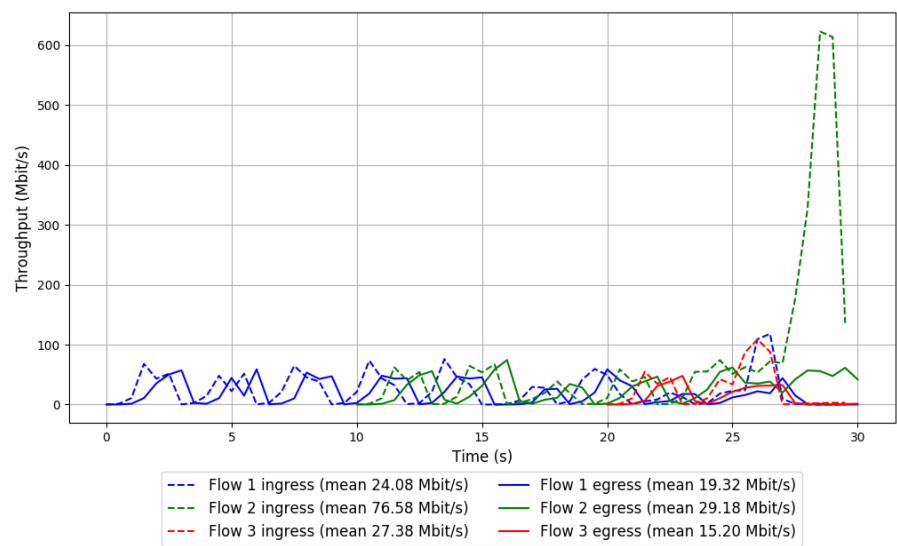


Run 4: Statistics of Verus

Start at: 2019-01-19 01:36:40
End at: 2019-01-19 01:37:10
Local clock offset: -6.799 ms
Remote clock offset: 7.181 ms

Below is generated by plot.py at 2019-01-19 02:28:31
Datalink statistics
-- Total of 3 flows:
Average throughput: 43.55 Mbit/s
95th percentile per-packet one-way delay: 135.433 ms
Loss rate: 47.78%
-- Flow 1:
Average throughput: 19.32 Mbit/s
95th percentile per-packet one-way delay: 113.159 ms
Loss rate: 19.75%
-- Flow 2:
Average throughput: 29.18 Mbit/s
95th percentile per-packet one-way delay: 157.969 ms
Loss rate: 61.76%
-- Flow 3:
Average throughput: 15.20 Mbit/s
95th percentile per-packet one-way delay: 115.315 ms
Loss rate: 44.49%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2019-01-19 02:03:19

End at: 2019-01-19 02:03:49

Local clock offset: -6.85 ms

Remote clock offset: 8.279 ms

Below is generated by plot.py at 2019-01-19 02:28:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 47.81 Mbit/s

95th percentile per-packet one-way delay: 141.240 ms

Loss rate: 63.18%

-- Flow 1:

Average throughput: 26.82 Mbit/s

95th percentile per-packet one-way delay: 151.075 ms

Loss rate: 72.26%

-- Flow 2:

Average throughput: 27.07 Mbit/s

95th percentile per-packet one-way delay: 118.908 ms

Loss rate: 39.28%

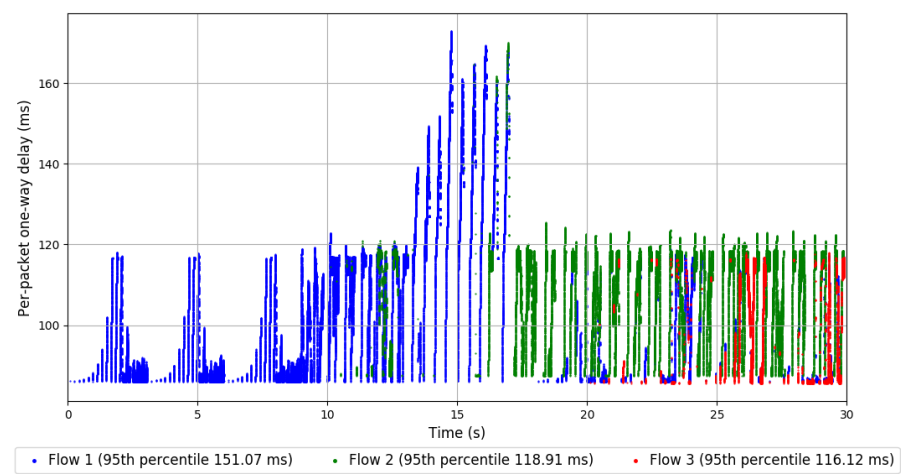
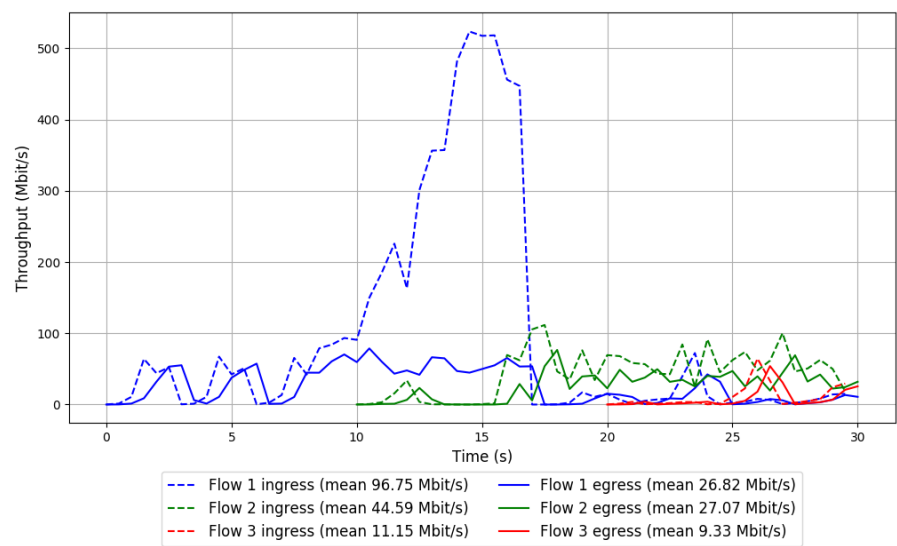
-- Flow 3:

Average throughput: 9.33 Mbit/s

95th percentile per-packet one-way delay: 116.116 ms

Loss rate: 16.01%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-01-19 00:27:05

End at: 2019-01-19 00:27:35

Local clock offset: -2.899 ms

Remote clock offset: 2.777 ms

Below is generated by plot.py at 2019-01-19 02:28:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.70 Mbit/s

95th percentile per-packet one-way delay: 108.913 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 65.32 Mbit/s

95th percentile per-packet one-way delay: 108.898 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 15.79 Mbit/s

95th percentile per-packet one-way delay: 110.368 ms

Loss rate: 0.84%

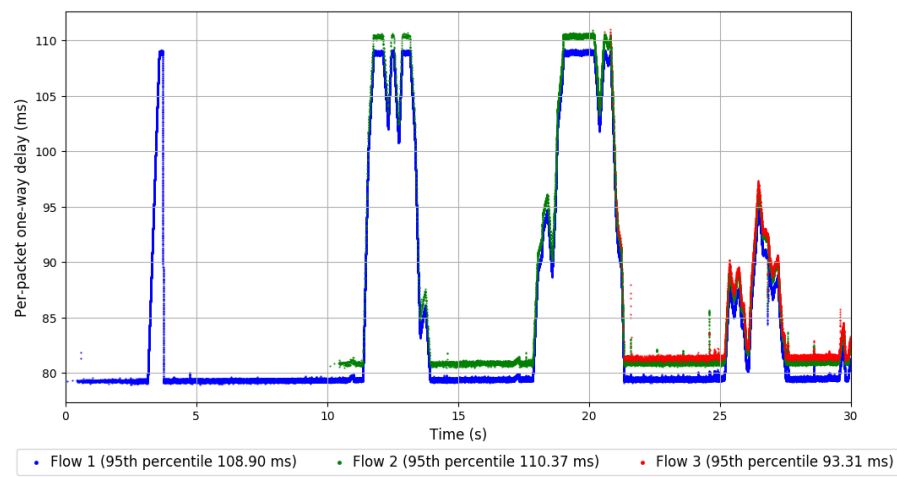
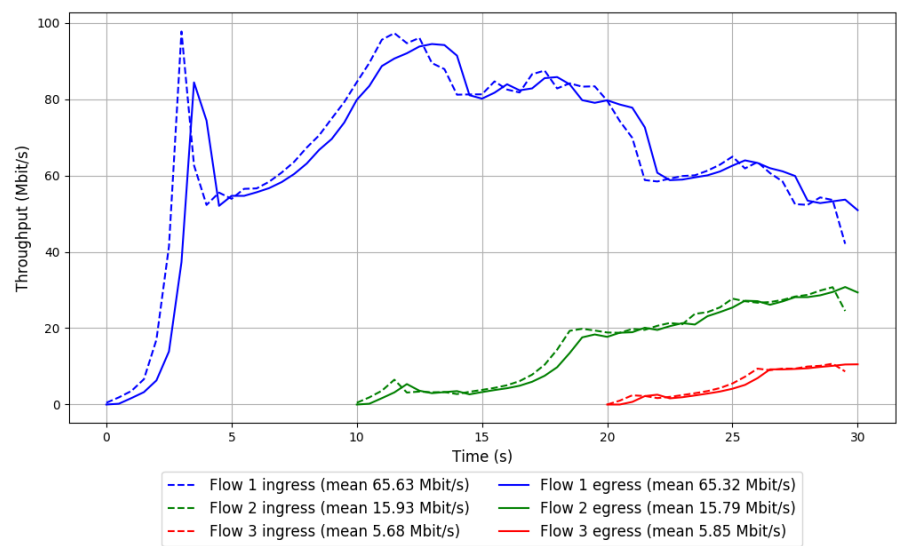
-- Flow 3:

Average throughput: 5.85 Mbit/s

95th percentile per-packet one-way delay: 93.306 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-01-19 00:53:41

End at: 2019-01-19 00:54:11

Local clock offset: 0.685 ms

Remote clock offset: 1.818 ms

Below is generated by plot.py at 2019-01-19 02:28:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.35 Mbit/s

95th percentile per-packet one-way delay: 100.754 ms

Loss rate: 0.36%

-- Flow 1:

Average throughput: 59.35 Mbit/s

95th percentile per-packet one-way delay: 103.688 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 23.44 Mbit/s

95th percentile per-packet one-way delay: 92.929 ms

Loss rate: 0.58%

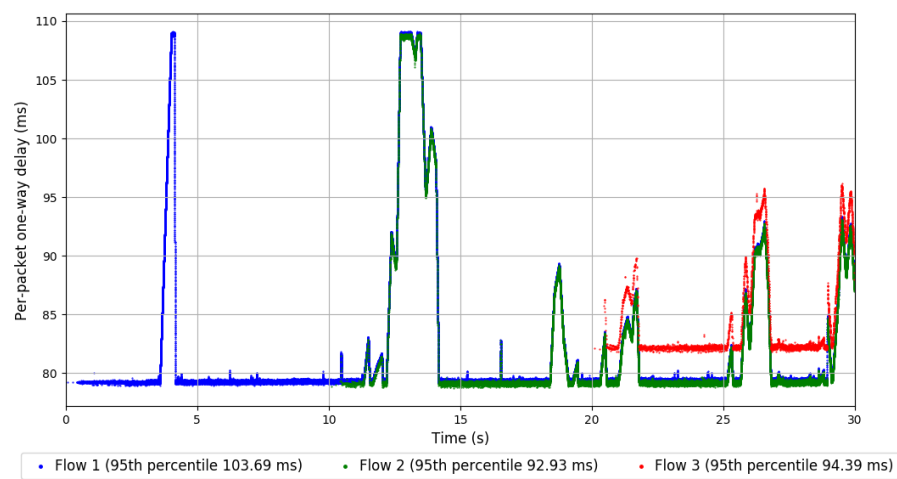
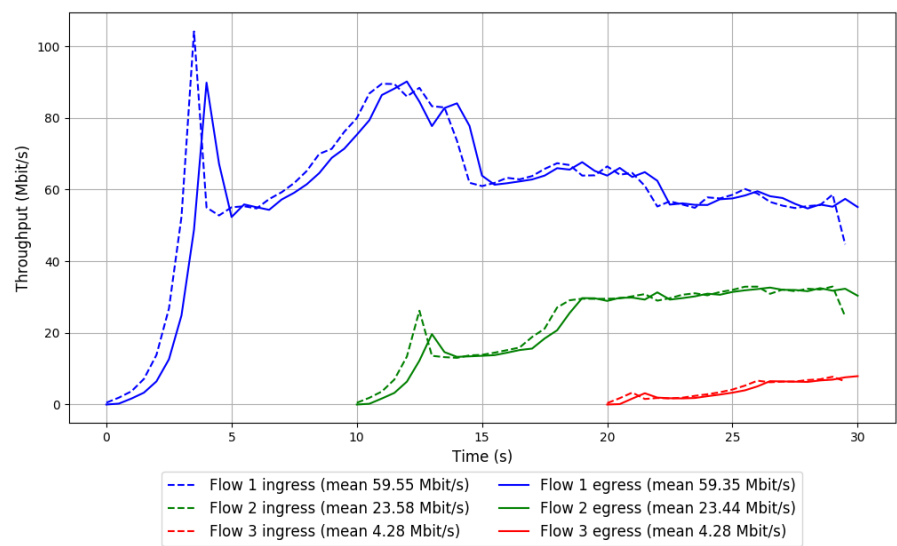
-- Flow 3:

Average throughput: 4.28 Mbit/s

95th percentile per-packet one-way delay: 94.390 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-01-19 01:20:14

End at: 2019-01-19 01:20:44

Local clock offset: -1.073 ms

Remote clock offset: 4.104 ms

Below is generated by plot.py at 2019-01-19 02:28:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.87 Mbit/s

95th percentile per-packet one-way delay: 100.396 ms

Loss rate: 0.22%

-- Flow 1:

Average throughput: 65.55 Mbit/s

95th percentile per-packet one-way delay: 101.550 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 16.86 Mbit/s

95th percentile per-packet one-way delay: 97.001 ms

Loss rate: 0.36%

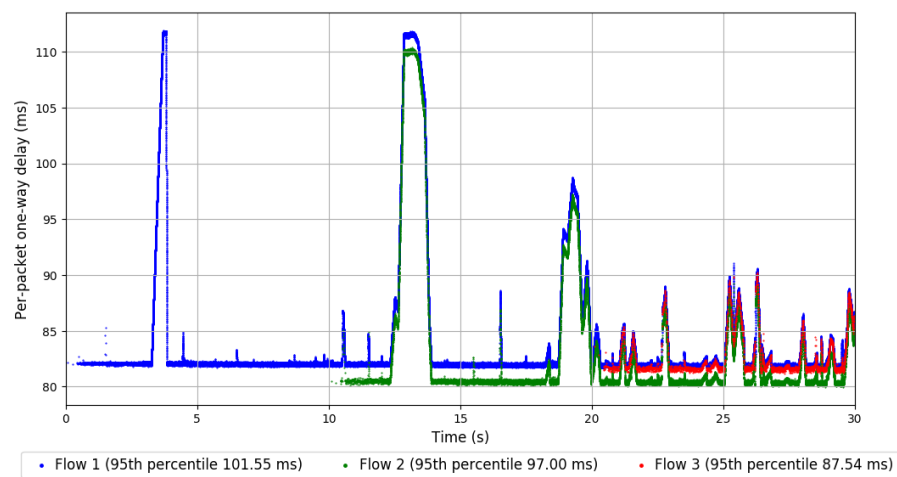
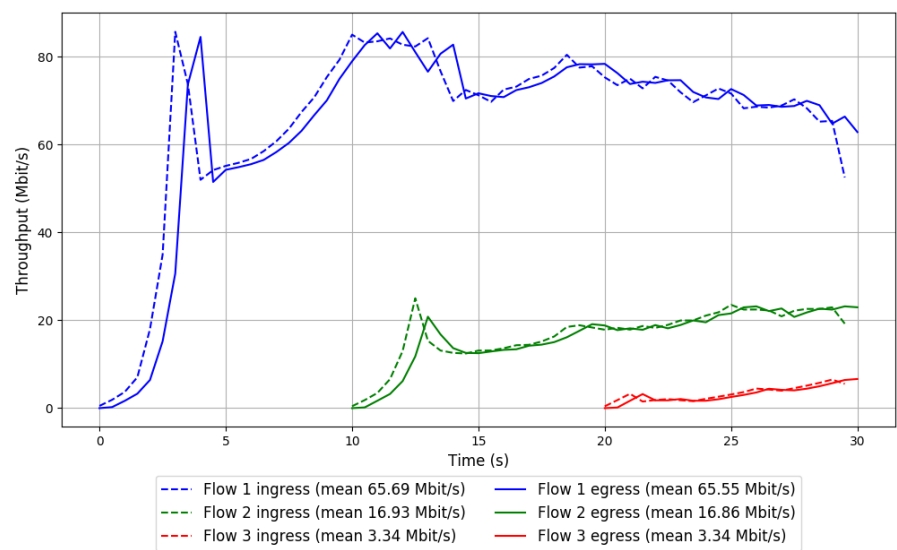
-- Flow 3:

Average throughput: 3.34 Mbit/s

95th percentile per-packet one-way delay: 87.538 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-01-19 01:46:53

End at: 2019-01-19 01:47:23

Local clock offset: -8.176 ms

Remote clock offset: 8.189 ms

Below is generated by plot.py at 2019-01-19 02:28:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.21 Mbit/s

95th percentile per-packet one-way delay: 108.078 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 65.27 Mbit/s

95th percentile per-packet one-way delay: 107.388 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 14.08 Mbit/s

95th percentile per-packet one-way delay: 108.243 ms

Loss rate: 0.09%

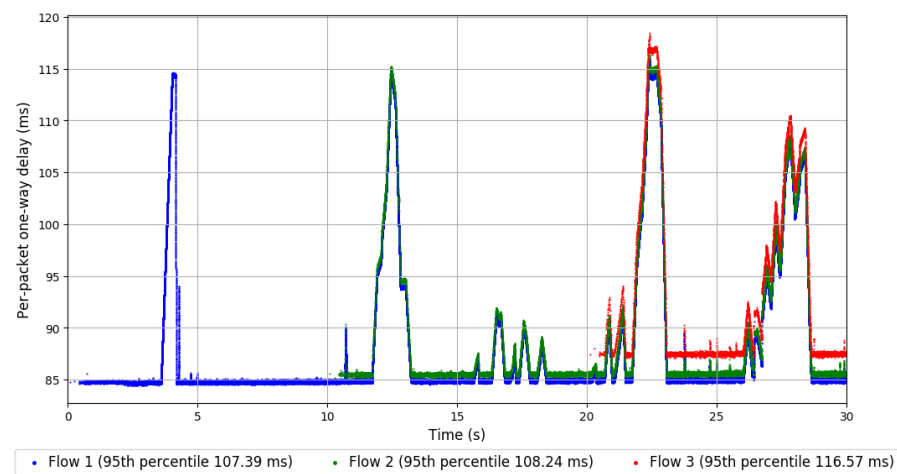
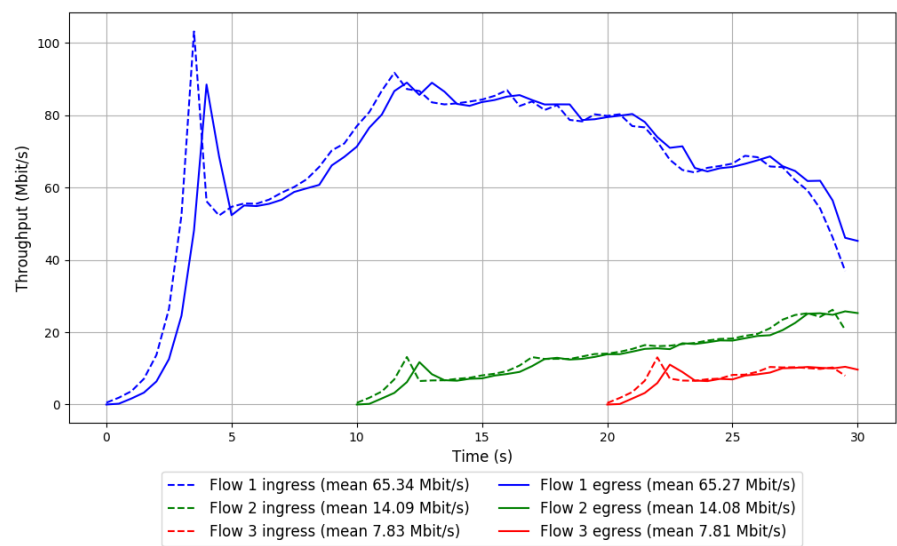
-- Flow 3:

Average throughput: 7.81 Mbit/s

95th percentile per-packet one-way delay: 116.568 ms

Loss rate: 0.26%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-01-19 02:13:29

End at: 2019-01-19 02:13:59

Local clock offset: -7.768 ms

Remote clock offset: 8.532 ms

Below is generated by plot.py at 2019-01-19 02:28:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.37 Mbit/s

95th percentile per-packet one-way delay: 116.098 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 64.54 Mbit/s

95th percentile per-packet one-way delay: 116.069 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 16.03 Mbit/s

95th percentile per-packet one-way delay: 116.978 ms

Loss rate: 1.01%

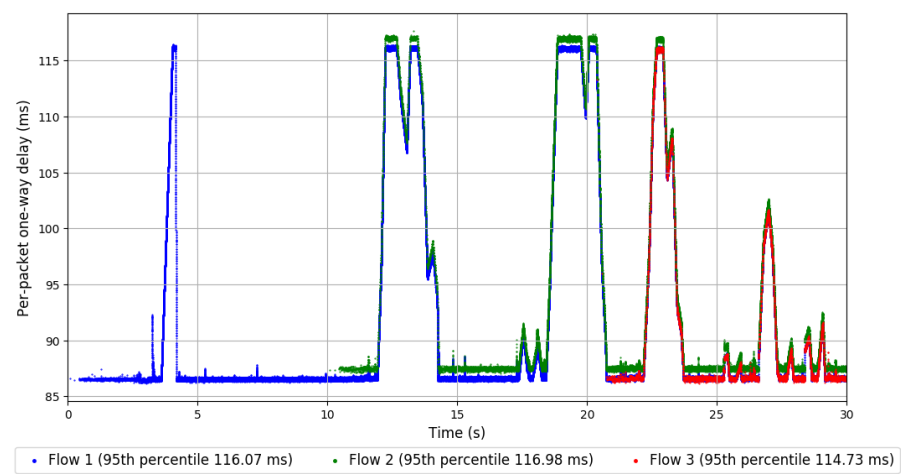
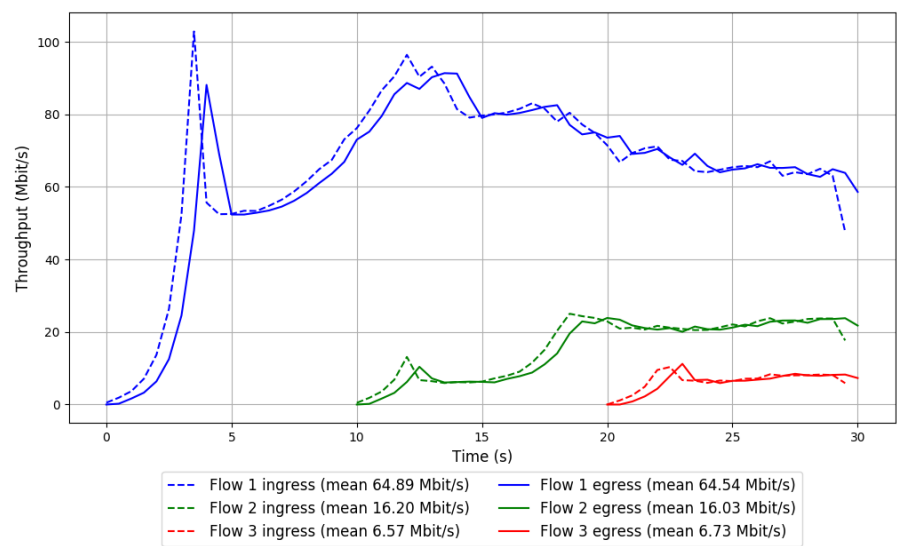
-- Flow 3:

Average throughput: 6.73 Mbit/s

95th percentile per-packet one-way delay: 114.726 ms

Loss rate: 0.50%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2019-01-19 00:10:32

End at: 2019-01-19 00:11:02

Local clock offset: -8.292 ms

Remote clock offset: 1.284 ms

Below is generated by plot.py at 2019-01-19 02:28:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 83.182 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 81.557 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 83.524 ms

Loss rate: 0.05%

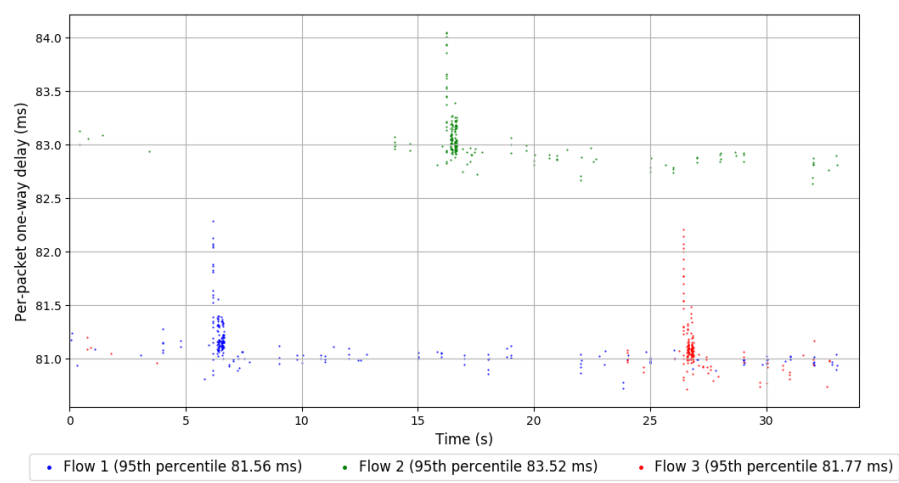
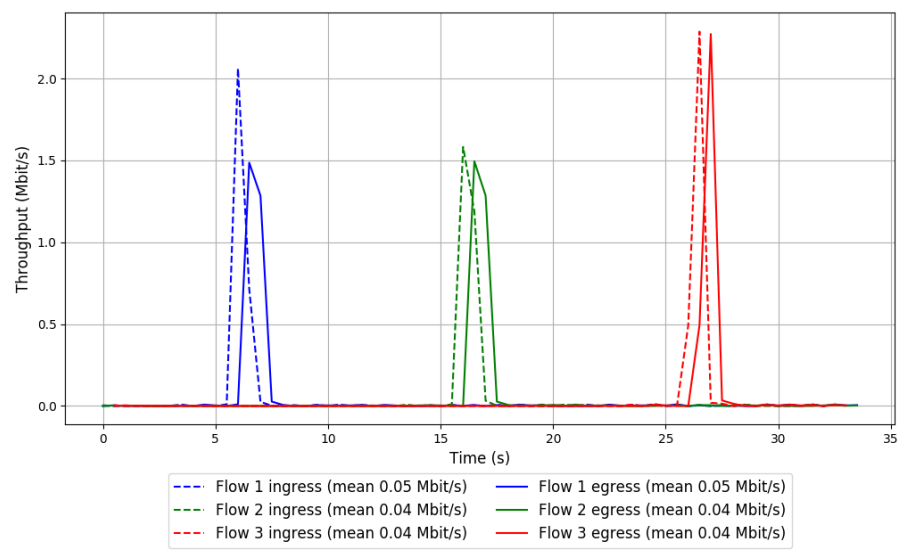
-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 81.769 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-01-19 00:37:22

End at: 2019-01-19 00:37:52

Local clock offset: -0.924 ms

Remote clock offset: 8.537 ms

Below is generated by plot.py at 2019-01-19 02:28:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 87.174 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 85.546 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 86.928 ms

Loss rate: 0.00%

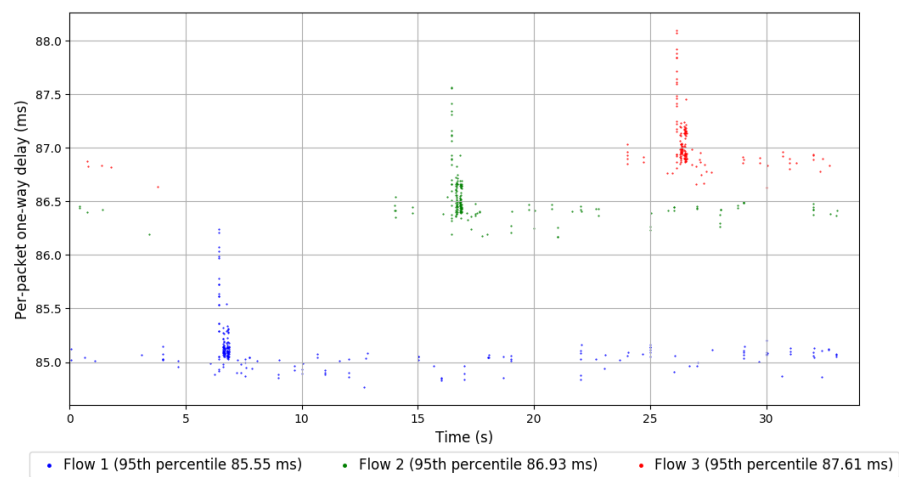
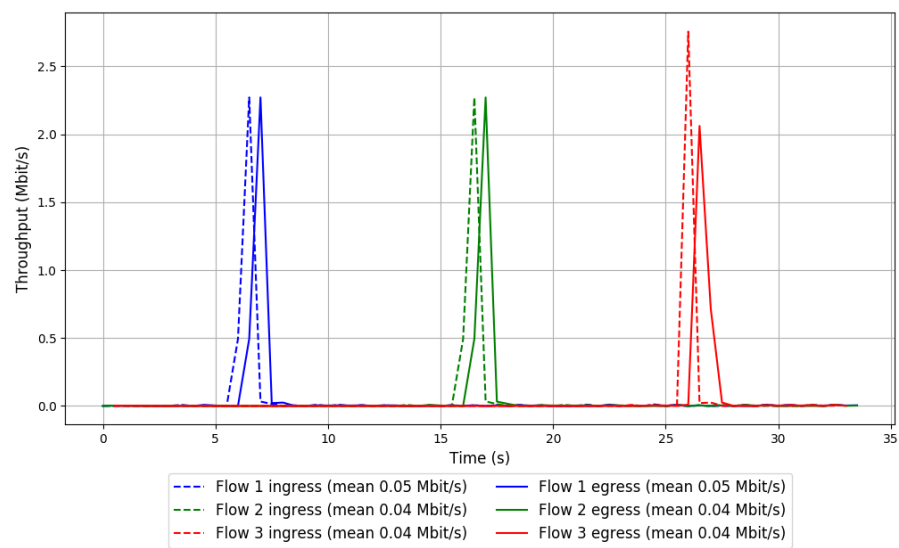
-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 87.609 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-01-19 01:03:56

End at: 2019-01-19 01:04:26

Local clock offset: 1.326 ms

Remote clock offset: 6.251 ms

Below is generated by plot.py at 2019-01-19 02:28:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 84.703 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 87.134 ms

Loss rate: 0.00%

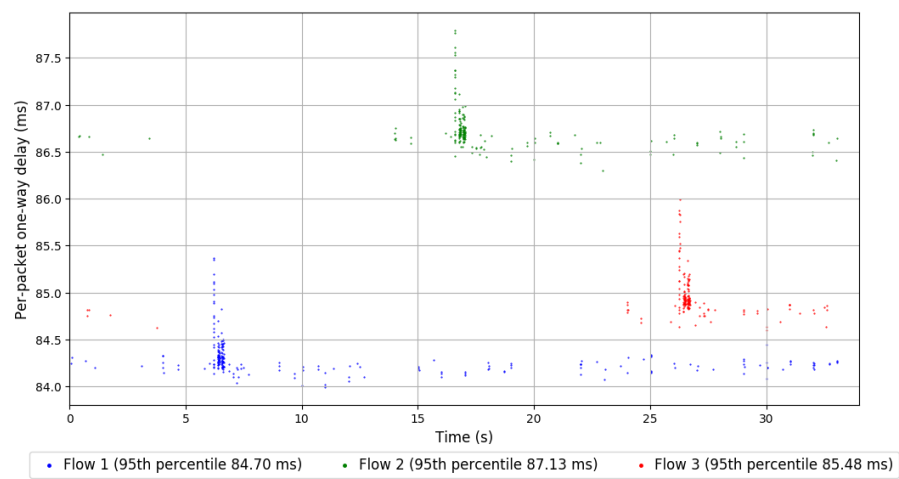
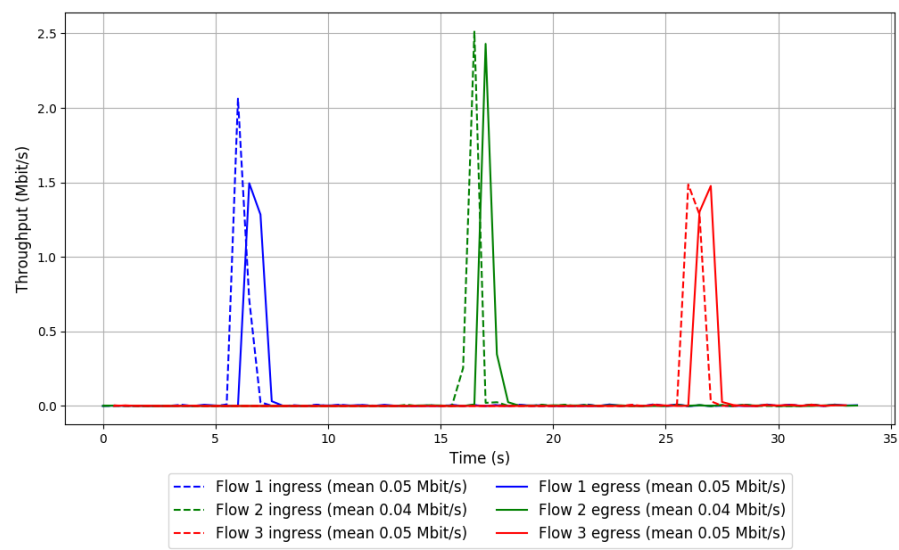
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 85.479 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

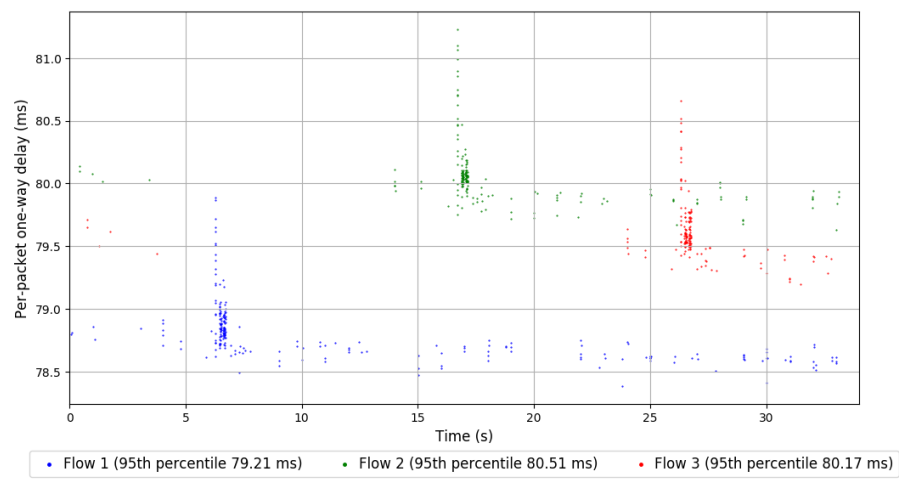
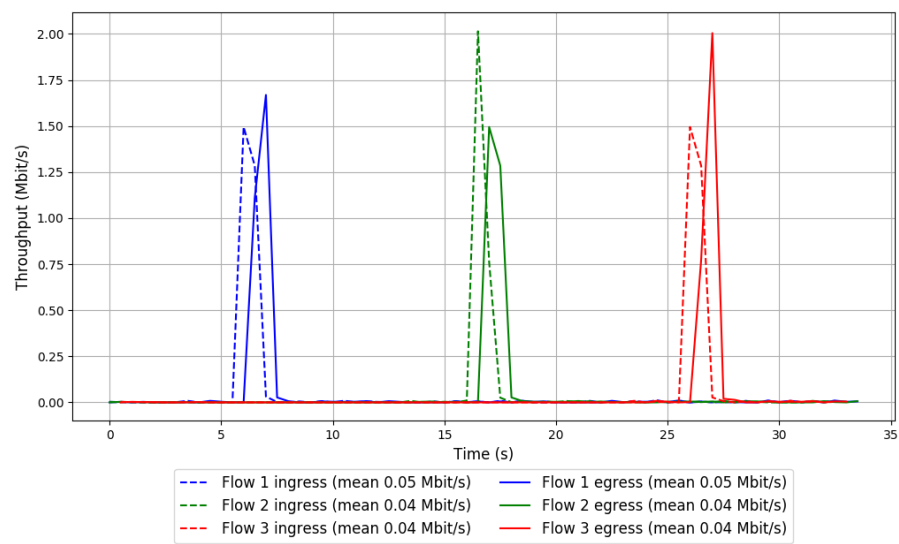


Run 4: Statistics of WebRTC media

Start at: 2019-01-19 01:30:30
End at: 2019-01-19 01:31:00
Local clock offset: -5.265 ms
Remote clock offset: 3.107 ms

Below is generated by plot.py at 2019-01-19 02:28:59
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 80.185 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 79.207 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 80.514 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 80.172 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-01-19 01:57:09

End at: 2019-01-19 01:57:39

Local clock offset: -7.64 ms

Remote clock offset: 9.82 ms

Below is generated by plot.py at 2019-01-19 02:28:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 89.319 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 89.667 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 86.547 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 88.477 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

