

Pantheon Report

Generated at 2019-05-30 03:50:49 (UTC).

Data path: AWS California 1 on ens5 (*local*) →Stanford on eno1 (*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 `time.stanford.edu` and have been applied to correct the timestamps in logs.

System info:

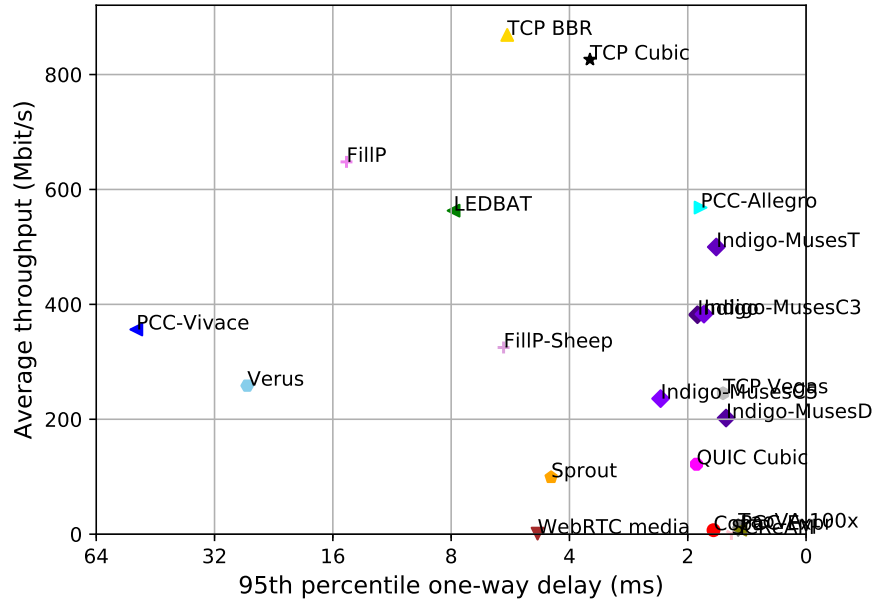
```
Linux 4.15.0-1035-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

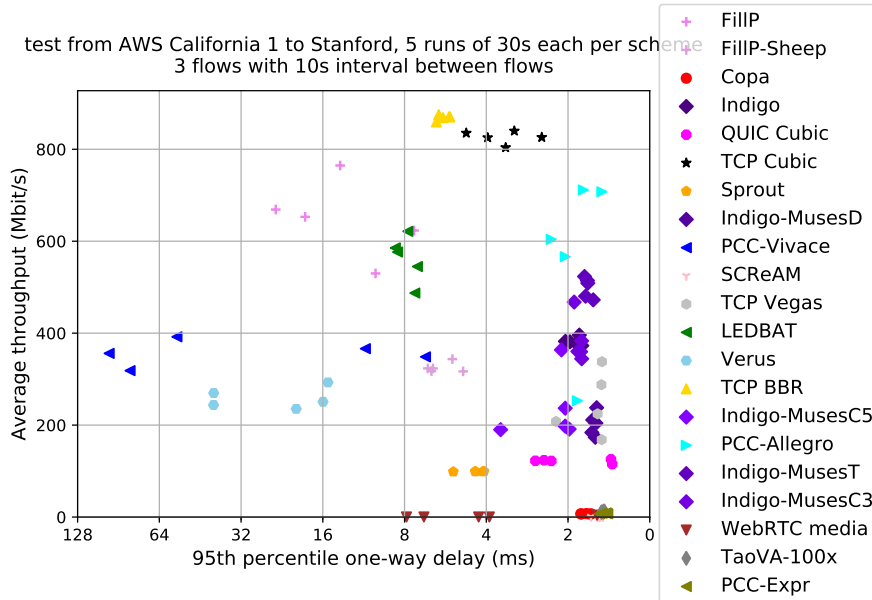
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
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-quic @ 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 California 1 to Stanford, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS California 1 to Stanford, 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	488.44	390.22	372.11	5.57	6.03	5.01	5.48	9.39	10.58
Copa	5	0.00	7.36	7.26	1.17	1.49	1.82	98.17	51.60	49.58
TCP Cubic	5	478.53	378.51	286.96	3.79	2.32	3.03	0.15	0.15	0.16
FillP	5	428.00	211.25	239.65	15.67	4.66	8.29	10.27	13.05	16.46
FillP-Sheep	5	291.42	37.08	27.31	6.35	2.10	2.49	3.11	4.35	8.42
Indigo	5	199.08	187.24	181.53	1.64	1.89	2.13	0.03	0.05	0.07
Indigo-MusesC3	5	171.99	211.02	248.15	1.56	1.88	1.81	0.08	0.09	0.18
Indigo-MusesC5	5	102.04	104.05	212.38	1.61	2.69	2.08	0.14	0.25	0.18
Indigo-MusesD	5	108.11	103.05	88.78	1.32	1.38	1.42	0.04	0.04	0.04
Indigo-MusesT	5	288.13	234.29	203.89	1.46	1.52	1.74	0.07	0.09	0.15
LEDBAT	5	315.24	253.37	262.62	8.21	7.03	6.94	0.18	0.33	0.28
PCC-Allegro	5	397.51	220.54	73.69	1.70	1.72	1.74	0.27	0.35	0.43
PCC-Expr	5	0.77	8.65	6.45	1.13	1.12	1.09	85.71	25.29	26.87
QUIC Cubic	5	66.57	57.83	51.07	1.23	1.12	3.96	0.01	0.01	0.02
SCReAM	5	0.21	0.22	0.22	1.27	1.26	1.25	0.03	0.00	0.00
Sprout	5	49.72	49.60	49.48	4.44	4.38	4.60	0.31	0.37	0.26
TaoVA-100x	5	5.53	7.36	3.99	1.19	1.12	1.12	60.27	62.47	74.58
TCP Vegas	5	57.07	155.34	254.84	1.23	1.77	1.23	0.03	0.03	0.03
Verus	5	141.80	118.21	116.95	14.65	26.61	45.35	2.96	4.16	7.00
PCC-Vivace	5	183.19	174.79	172.07	44.75	25.98	25.08	0.54	0.69	0.29
WebRTC media	5	0.46	0.32	0.16	2.55	6.13	3.39	0.00	0.00	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-05-30 00:50:24

End at: 2019-05-30 00:50:54

Local clock offset: 5.097 ms

Remote clock offset: 0.449 ms

Below is generated by plot.py at 2019-05-30 03:11:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 868.81 Mbit/s

95th percentile per-packet one-way delay: 5.771 ms

Loss rate: 7.71%

-- Flow 1:

Average throughput: 492.47 Mbit/s

95th percentile per-packet one-way delay: 5.841 ms

Loss rate: 5.39%

-- Flow 2:

Average throughput: 334.86 Mbit/s

95th percentile per-packet one-way delay: 5.167 ms

Loss rate: 11.88%

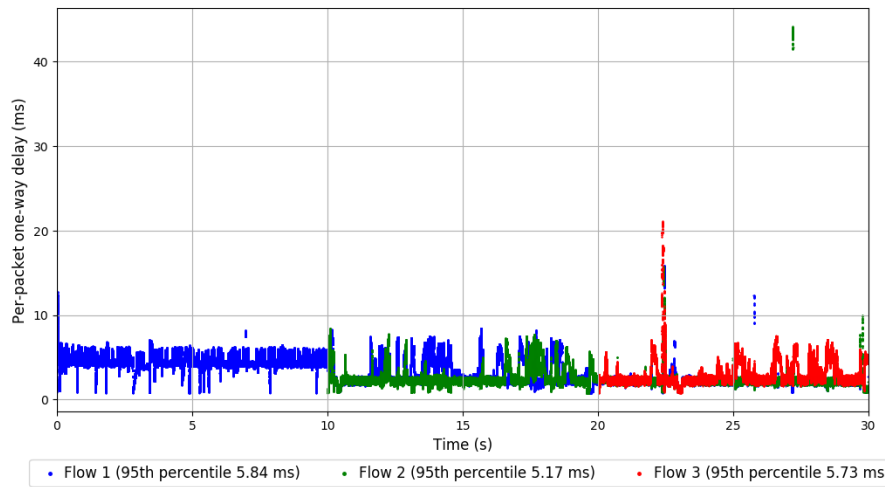
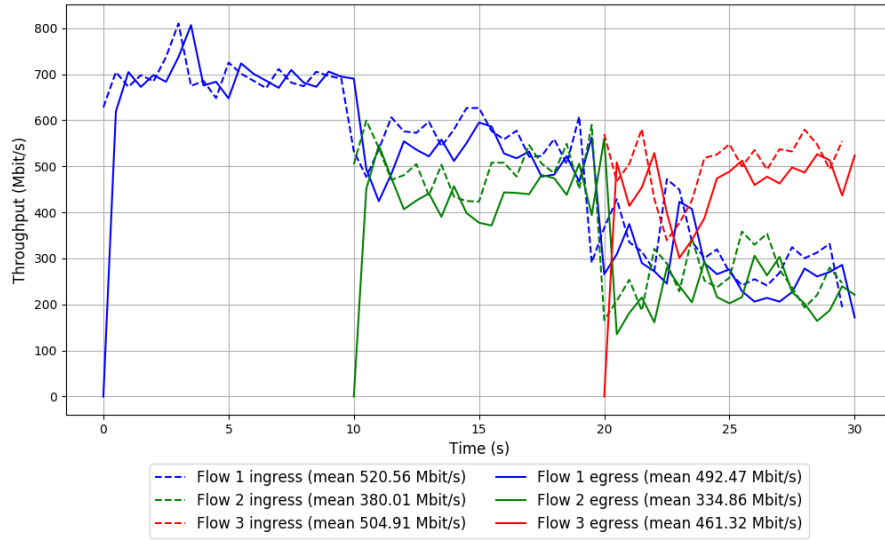
-- Flow 3:

Average throughput: 461.32 Mbit/s

95th percentile per-packet one-way delay: 5.728 ms

Loss rate: 8.63%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-05-30 01:20:10

End at: 2019-05-30 01:20:40

Local clock offset: 5.513 ms

Remote clock offset: 0.603 ms

Below is generated by plot.py at 2019-05-30 03:11:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 870.81 Mbit/s

95th percentile per-packet one-way delay: 5.481 ms

Loss rate: 7.62%

-- Flow 1:

Average throughput: 494.57 Mbit/s

95th percentile per-packet one-way delay: 5.373 ms

Loss rate: 5.29%

-- Flow 2:

Average throughput: 355.49 Mbit/s

95th percentile per-packet one-way delay: 5.884 ms

Loss rate: 10.27%

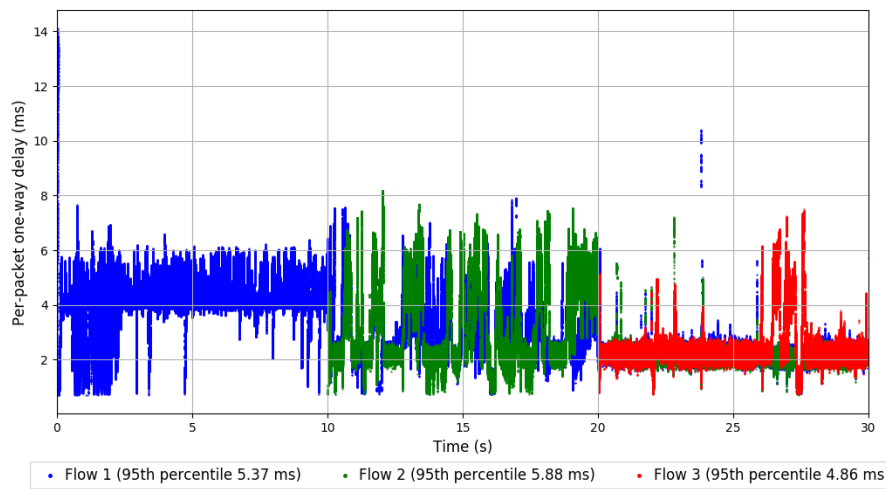
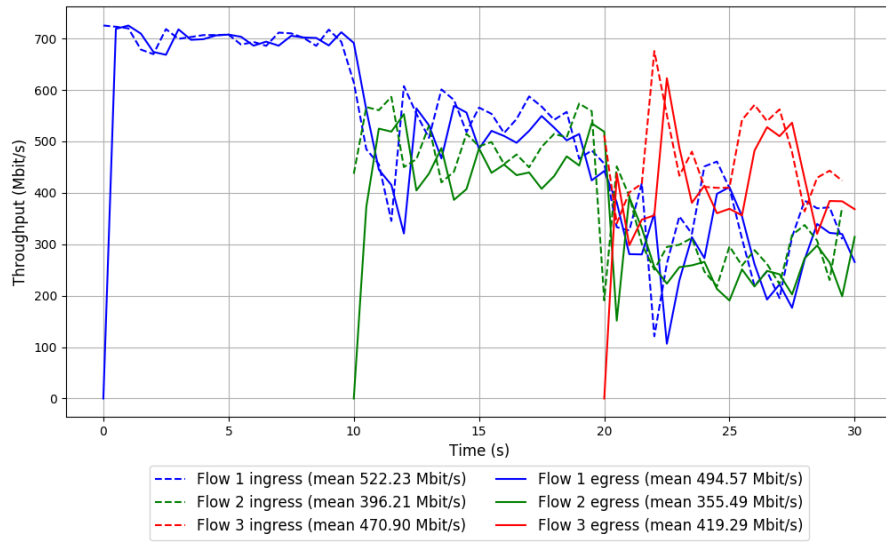
-- Flow 3:

Average throughput: 419.29 Mbit/s

95th percentile per-packet one-way delay: 4.856 ms

Loss rate: 10.93%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-05-30 01:50:10

End at: 2019-05-30 01:50:40

Local clock offset: 5.692 ms

Remote clock offset: 0.305 ms

Below is generated by plot.py at 2019-05-30 03:11:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 870.63 Mbit/s

95th percentile per-packet one-way delay: 5.451 ms

Loss rate: 6.98%

-- Flow 1:

Average throughput: 460.36 Mbit/s

95th percentile per-packet one-way delay: 5.161 ms

Loss rate: 6.22%

-- Flow 2:

Average throughput: 496.02 Mbit/s

95th percentile per-packet one-way delay: 6.022 ms

Loss rate: 6.21%

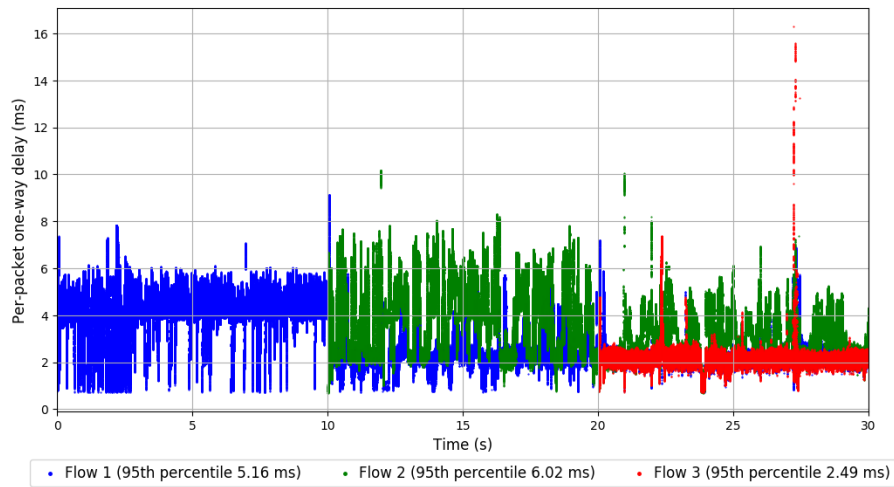
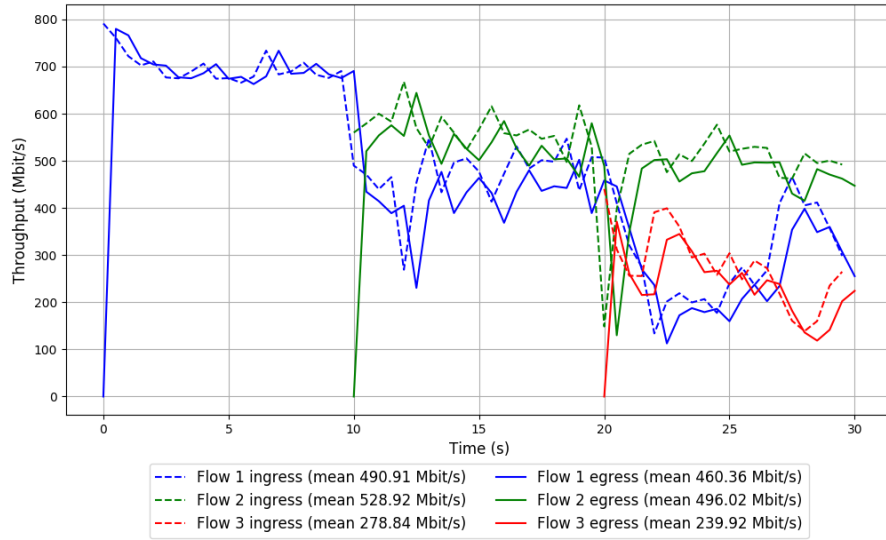
-- Flow 3:

Average throughput: 239.92 Mbit/s

95th percentile per-packet one-way delay: 2.488 ms

Loss rate: 13.95%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-05-30 02:19:56
End at: 2019-05-30 02:20:26
Local clock offset: 6.04 ms
Remote clock offset: -0.001 ms

Below is generated by plot.py at 2019-05-30 03:11:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 875.25 Mbit/s
95th percentile per-packet one-way delay: 5.986 ms
Loss rate: 6.57%

-- Flow 1:

Average throughput: 500.70 Mbit/s
95th percentile per-packet one-way delay: 5.461 ms
Loss rate: 5.19%

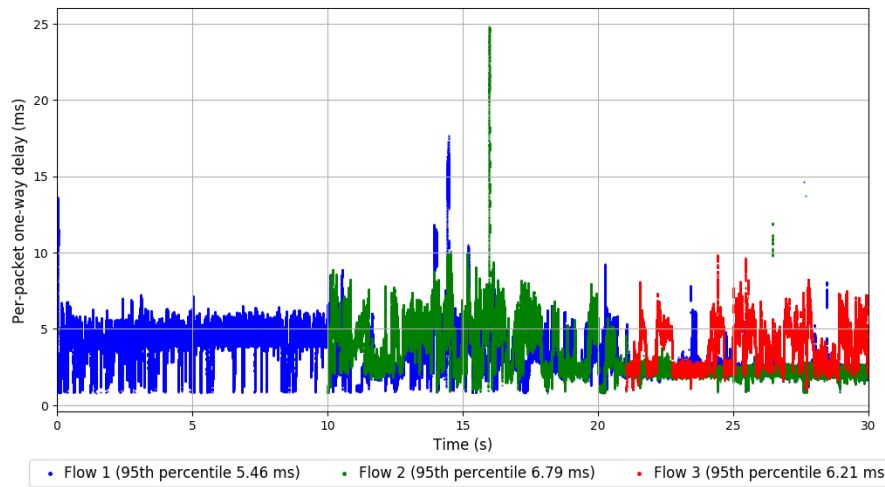
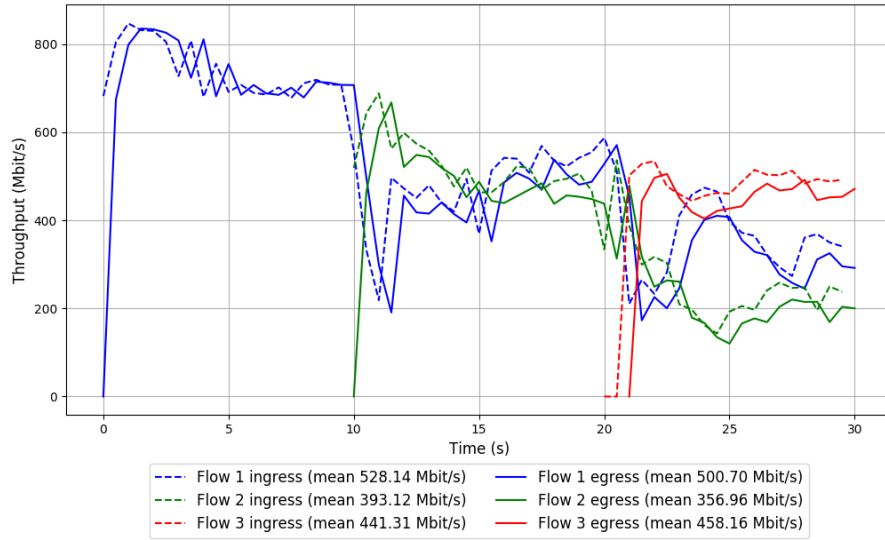
-- Flow 2:

Average throughput: 356.96 Mbit/s
95th percentile per-packet one-way delay: 6.790 ms
Loss rate: 9.20%

-- Flow 3:

Average throughput: 458.16 Mbit/s
95th percentile per-packet one-way delay: 6.208 ms
Loss rate: 6.84%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2019-05-30 02:49:47

End at: 2019-05-30 02:50:17

Local clock offset: 5.743 ms

Remote clock offset: 0.335 ms

Below is generated by plot.py at 2019-05-30 03:11:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 859.42 Mbit/s

95th percentile per-packet one-way delay: 6.108 ms

Loss rate: 7.46%

-- Flow 1:

Average throughput: 494.12 Mbit/s

95th percentile per-packet one-way delay: 6.015 ms

Loss rate: 5.30%

-- Flow 2:

Average throughput: 407.78 Mbit/s

95th percentile per-packet one-way delay: 6.278 ms

Loss rate: 9.41%

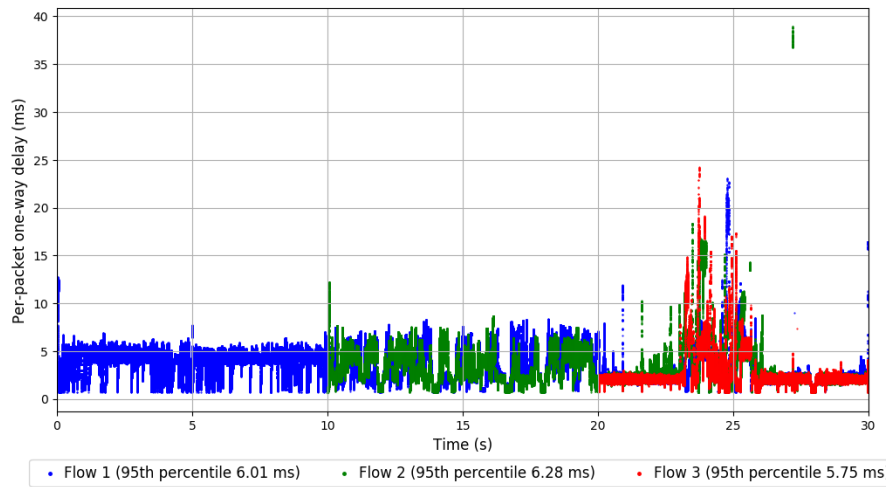
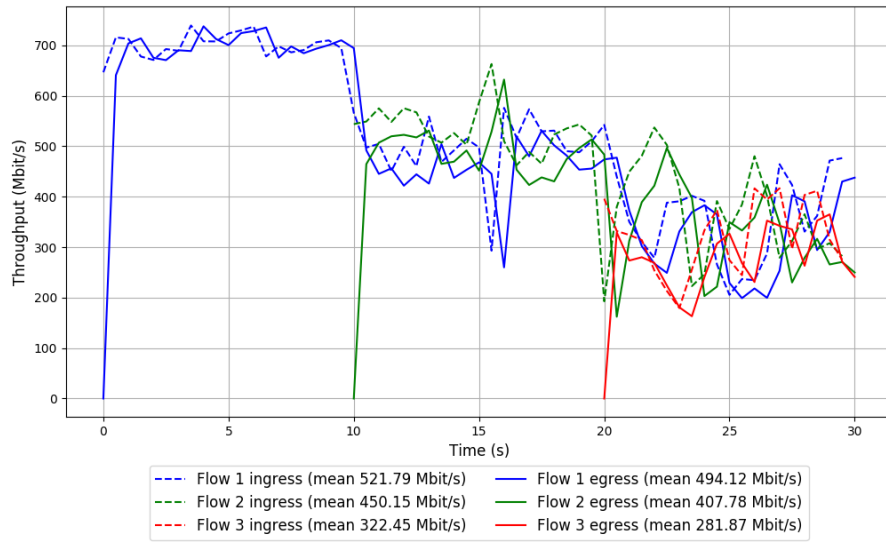
-- Flow 3:

Average throughput: 281.87 Mbit/s

95th percentile per-packet one-way delay: 5.749 ms

Loss rate: 12.57%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-05-30 00:45:12

End at: 2019-05-30 00:45:42

Local clock offset: 5.044 ms

Remote clock offset: 0.548 ms

Below is generated by plot.py at 2019-05-30 03:11:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.86 Mbit/s

95th percentile per-packet one-way delay: 1.433 ms

Loss rate: 52.69%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.066 ms

Loss rate: 98.60%

-- Flow 2:

Average throughput: 5.79 Mbit/s

95th percentile per-packet one-way delay: 1.426 ms

Loss rate: 49.47%

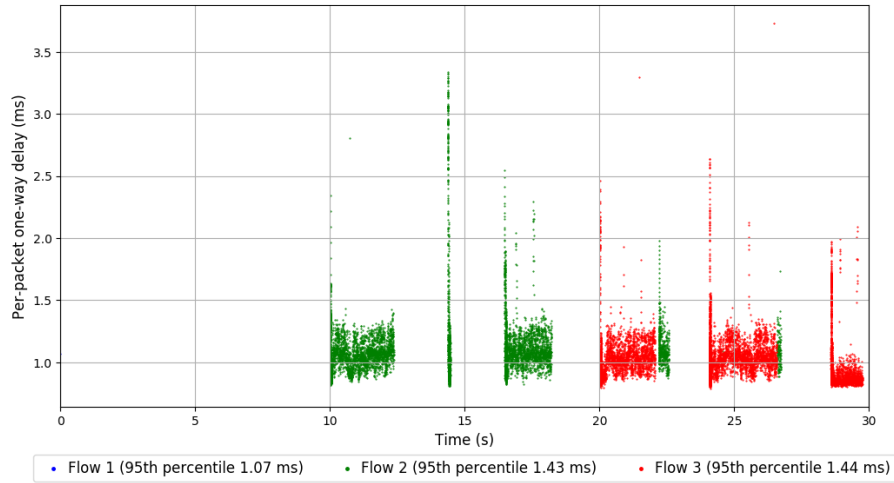
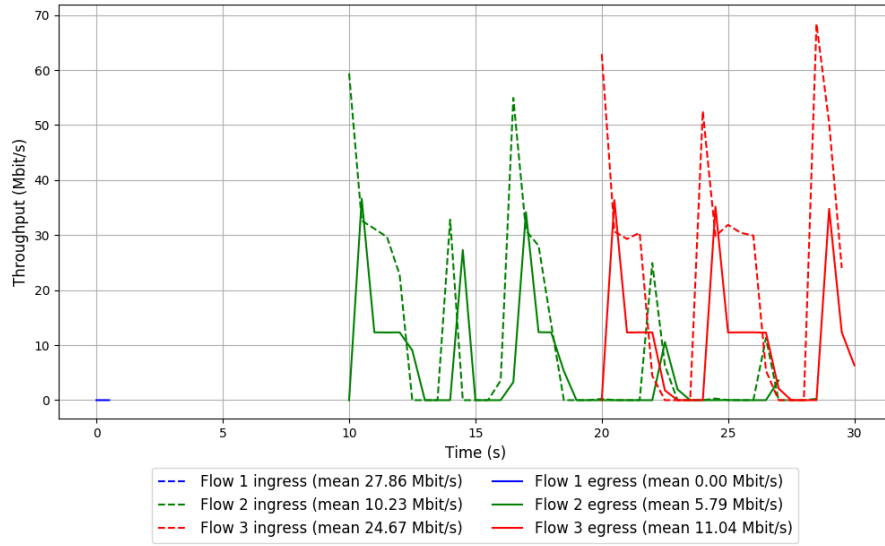
-- Flow 3:

Average throughput: 11.04 Mbit/s

95th percentile per-packet one-way delay: 1.441 ms

Loss rate: 55.24%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-05-30 01:14:55

End at: 2019-05-30 01:15:25

Local clock offset: 5.383 ms

Remote clock offset: 0.76 ms

Below is generated by plot.py at 2019-05-30 03:11:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.02 Mbit/s

95th percentile per-packet one-way delay: 1.689 ms

Loss rate: 51.66%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.270 ms

Loss rate: 97.24%

-- Flow 2:

Average throughput: 7.56 Mbit/s

95th percentile per-packet one-way delay: 1.509 ms

Loss rate: 50.49%

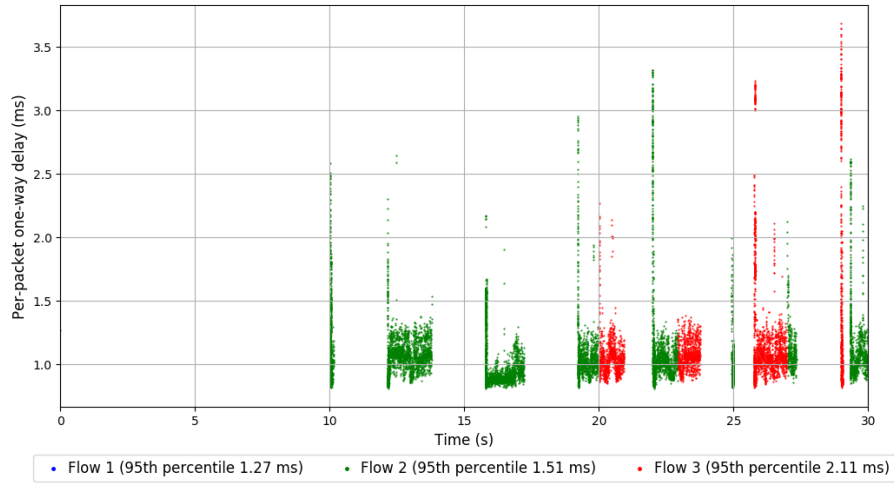
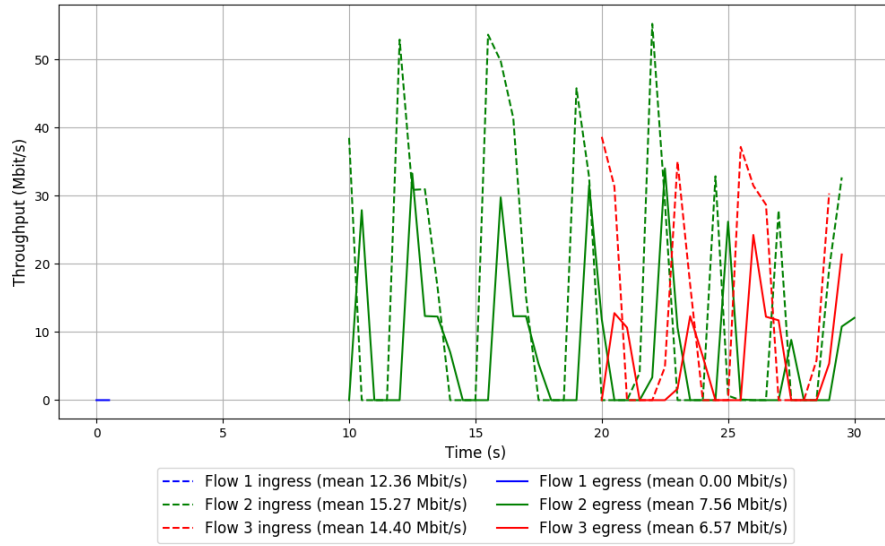
-- Flow 3:

Average throughput: 6.57 Mbit/s

95th percentile per-packet one-way delay: 2.112 ms

Loss rate: 54.38%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-05-30 01:44:57

End at: 2019-05-30 01:45:27

Local clock offset: 5.666 ms

Remote clock offset: 0.368 ms

Below is generated by plot.py at 2019-05-30 03:11:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.62 Mbit/s

95th percentile per-packet one-way delay: 1.476 ms

Loss rate: 49.99%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 0.887 ms

Loss rate: 98.33%

-- Flow 2:

Average throughput: 6.42 Mbit/s

95th percentile per-packet one-way delay: 1.359 ms

Loss rate: 51.45%

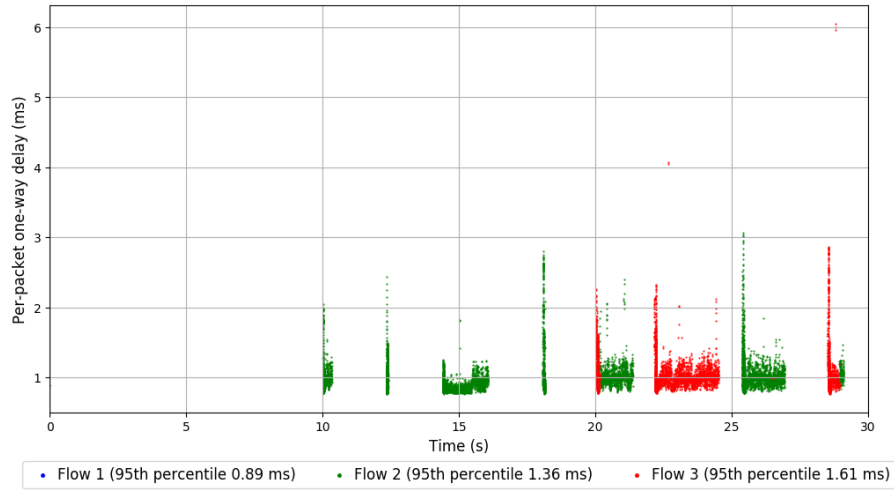
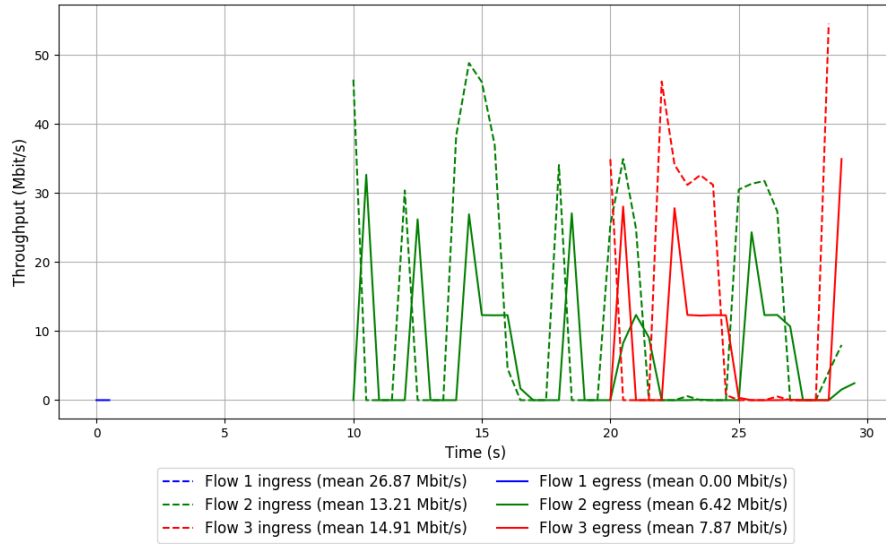
-- Flow 3:

Average throughput: 7.87 Mbit/s

95th percentile per-packet one-way delay: 1.610 ms

Loss rate: 47.21%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-05-30 02:14:43

End at: 2019-05-30 02:15:13

Local clock offset: 5.967 ms

Remote clock offset: 0.045 ms

Below is generated by plot.py at 2019-05-30 03:11:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.71 Mbit/s

95th percentile per-packet one-way delay: 1.672 ms

Loss rate: 50.41%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.100 ms

Loss rate: 98.33%

-- Flow 2:

Average throughput: 7.83 Mbit/s

95th percentile per-packet one-way delay: 1.663 ms

Loss rate: 52.48%

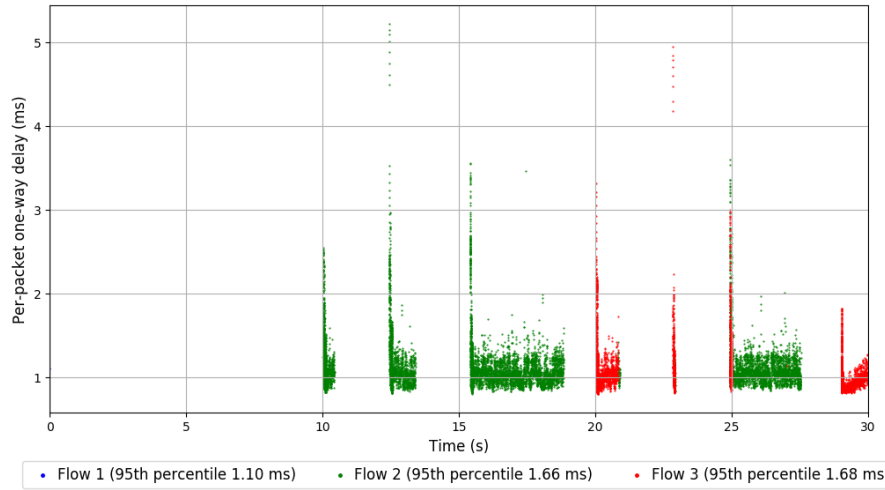
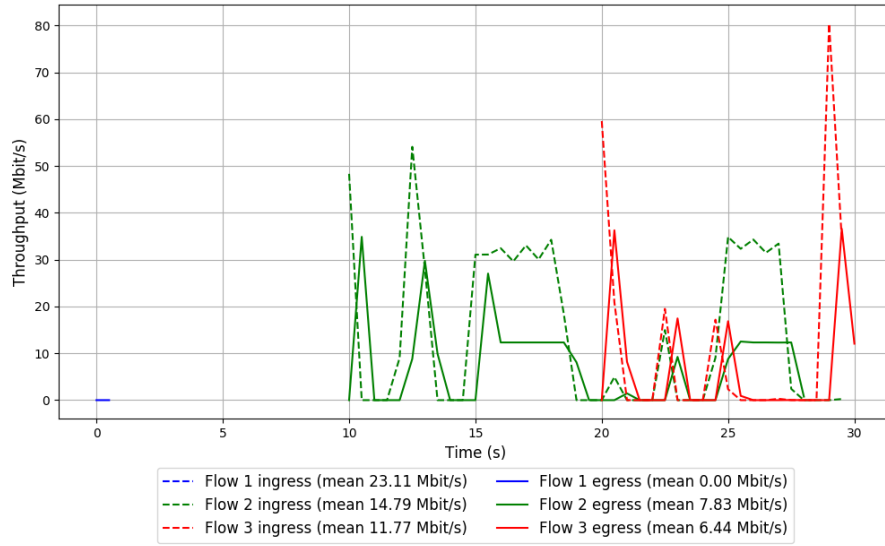
-- Flow 3:

Average throughput: 6.44 Mbit/s

95th percentile per-packet one-way delay: 1.678 ms

Loss rate: 45.30%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-05-30 02:44:34

End at: 2019-05-30 02:45:04

Local clock offset: 5.863 ms

Remote clock offset: 0.307 ms

Below is generated by plot.py at 2019-05-30 03:11:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.54 Mbit/s

95th percentile per-packet one-way delay: 1.554 ms

Loss rate: 52.79%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.547 ms

Loss rate: 98.33%

-- Flow 2:

Average throughput: 9.22 Mbit/s

95th percentile per-packet one-way delay: 1.491 ms

Loss rate: 54.13%

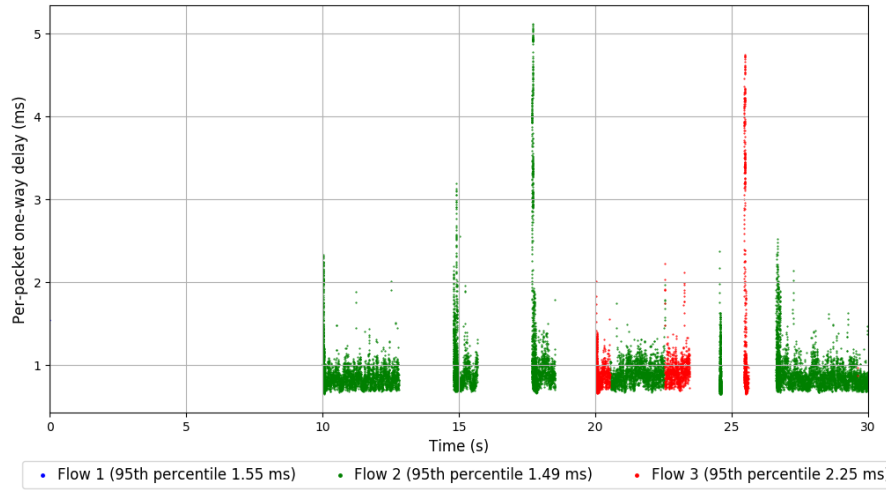
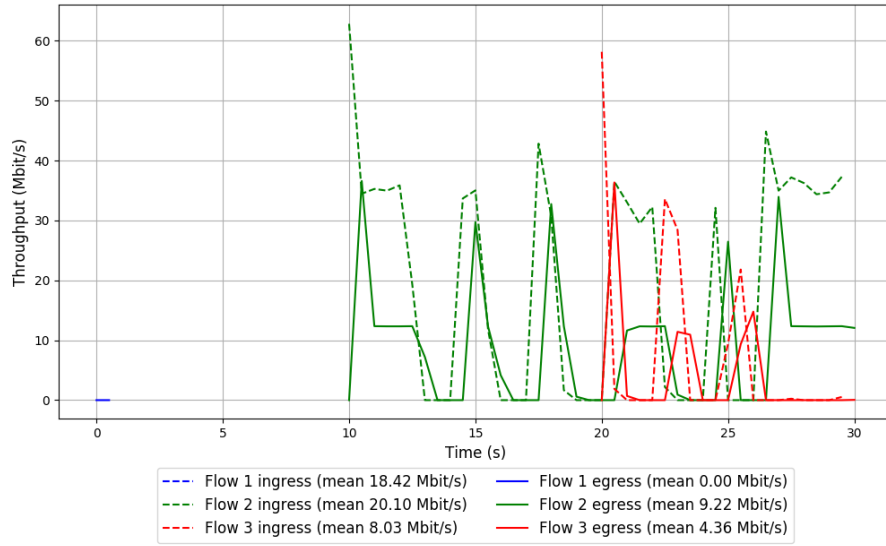
-- Flow 3:

Average throughput: 4.36 Mbit/s

95th percentile per-packet one-way delay: 2.247 ms

Loss rate: 45.77%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-05-30 00:26:47

End at: 2019-05-30 00:27:17

Local clock offset: 5.002 ms

Remote clock offset: 0.103 ms

Below is generated by plot.py at 2019-05-30 03:11:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 803.84 Mbit/s

95th percentile per-packet one-way delay: 3.394 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 460.12 Mbit/s

95th percentile per-packet one-way delay: 3.624 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 374.68 Mbit/s

95th percentile per-packet one-way delay: 2.081 ms

Loss rate: 0.17%

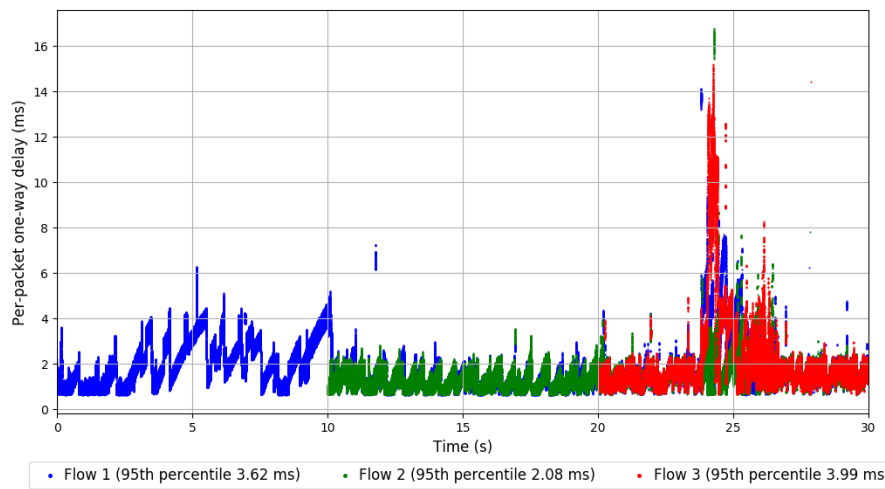
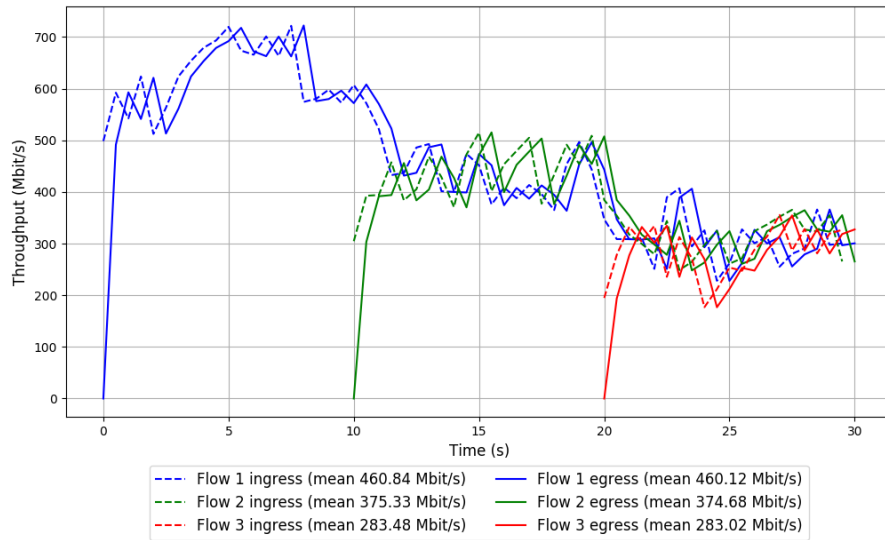
-- Flow 3:

Average throughput: 283.02 Mbit/s

95th percentile per-packet one-way delay: 3.994 ms

Loss rate: 0.16%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-05-30 00:56:38

End at: 2019-05-30 00:57:08

Local clock offset: 5.121 ms

Remote clock offset: 0.428 ms

Below is generated by plot.py at 2019-05-30 03:11:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 839.85 Mbit/s

95th percentile per-packet one-way delay: 3.153 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 480.56 Mbit/s

95th percentile per-packet one-way delay: 3.509 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 387.65 Mbit/s

95th percentile per-packet one-way delay: 2.185 ms

Loss rate: 0.16%

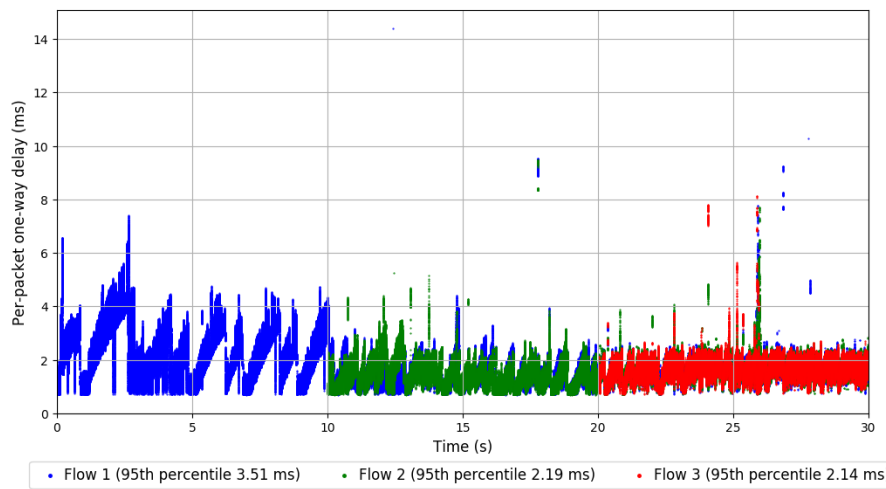
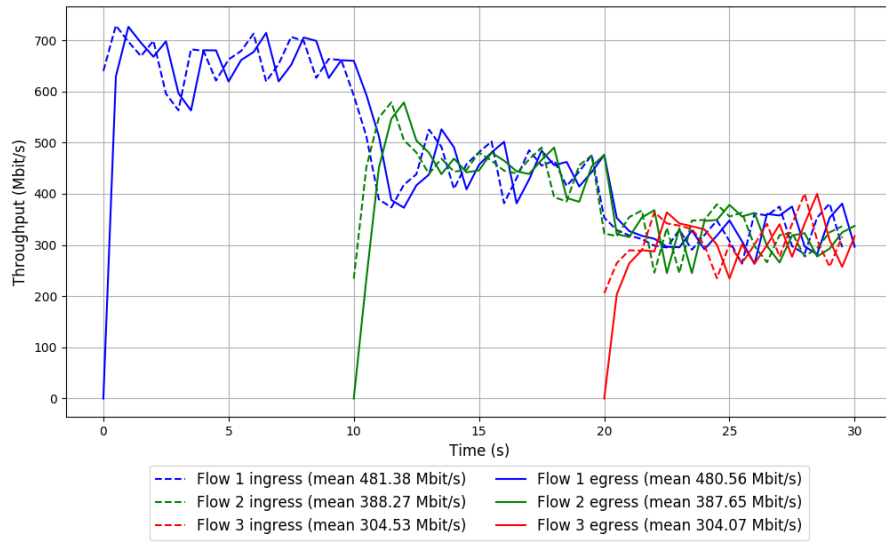
-- Flow 3:

Average throughput: 304.07 Mbit/s

95th percentile per-packet one-way delay: 2.138 ms

Loss rate: 0.14%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-05-30 01:26:27

End at: 2019-05-30 01:26:57

Local clock offset: 5.517 ms

Remote clock offset: 0.42 ms

Below is generated by plot.py at 2019-05-30 03:11:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 835.27 Mbit/s

95th percentile per-packet one-way delay: 4.740 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 498.04 Mbit/s

95th percentile per-packet one-way delay: 5.080 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 366.02 Mbit/s

95th percentile per-packet one-way delay: 2.263 ms

Loss rate: 0.14%

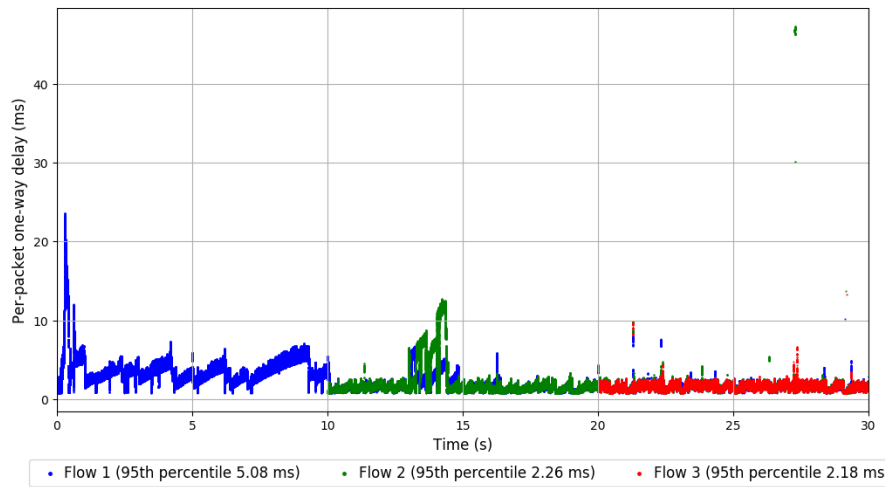
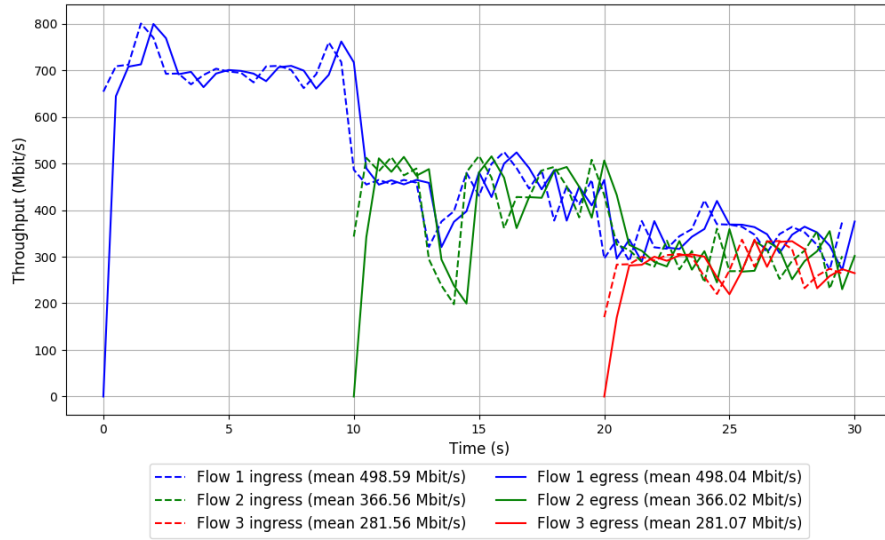
-- Flow 3:

Average throughput: 281.07 Mbit/s

95th percentile per-packet one-way delay: 2.180 ms

Loss rate: 0.17%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-05-30 01:56:20

End at: 2019-05-30 01:56:50

Local clock offset: 5.755 ms

Remote clock offset: 0.26 ms

Below is generated by plot.py at 2019-05-30 03:19:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 825.32 Mbit/s

95th percentile per-packet one-way delay: 3.953 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 473.55 Mbit/s

95th percentile per-packet one-way delay: 3.994 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 388.85 Mbit/s

95th percentile per-packet one-way delay: 2.998 ms

Loss rate: 0.14%

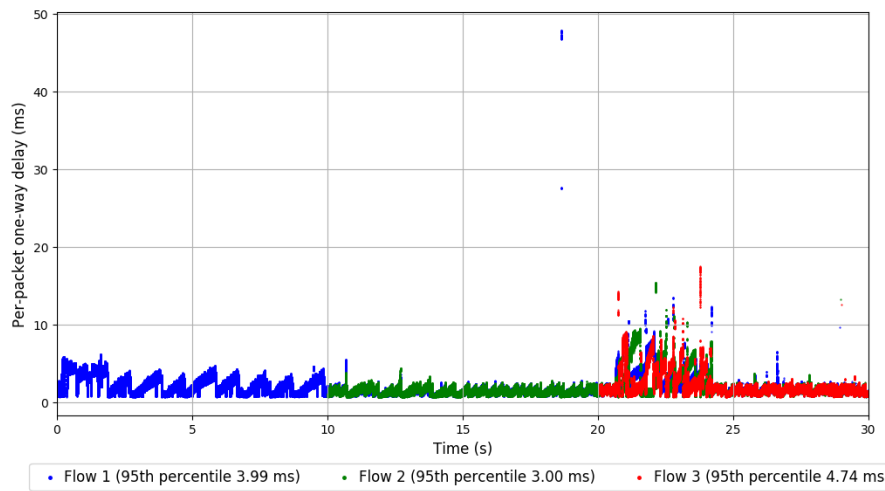
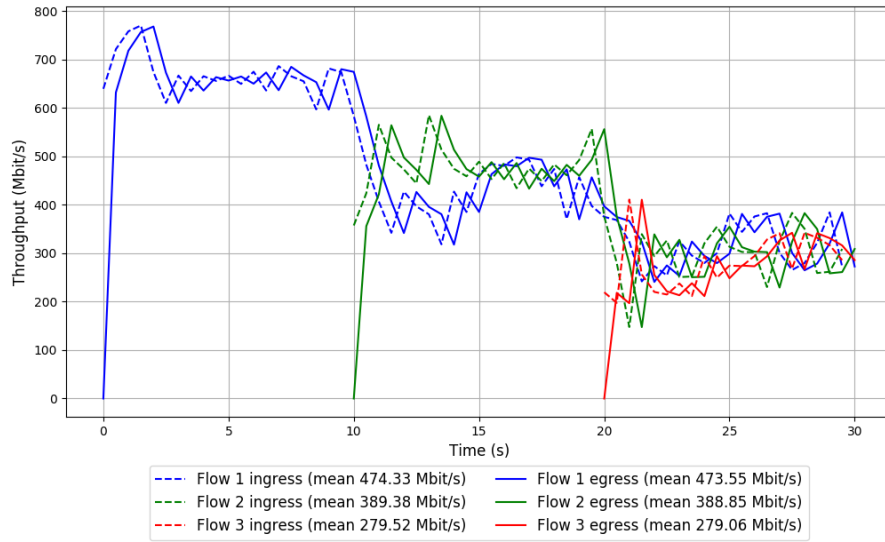
-- Flow 3:

Average throughput: 279.06 Mbit/s

95th percentile per-packet one-way delay: 4.744 ms

Loss rate: 0.16%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-05-30 02:26:07
End at: 2019-05-30 02:26:37
Local clock offset: 6.137 ms
Remote clock offset: -0.139 ms

Below is generated by plot.py at 2019-05-30 03:19:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 825.99 Mbit/s
95th percentile per-packet one-way delay: 2.499 ms
Loss rate: 0.15%

-- Flow 1:

Average throughput: 480.36 Mbit/s
95th percentile per-packet one-way delay: 2.735 ms
Loss rate: 0.15%

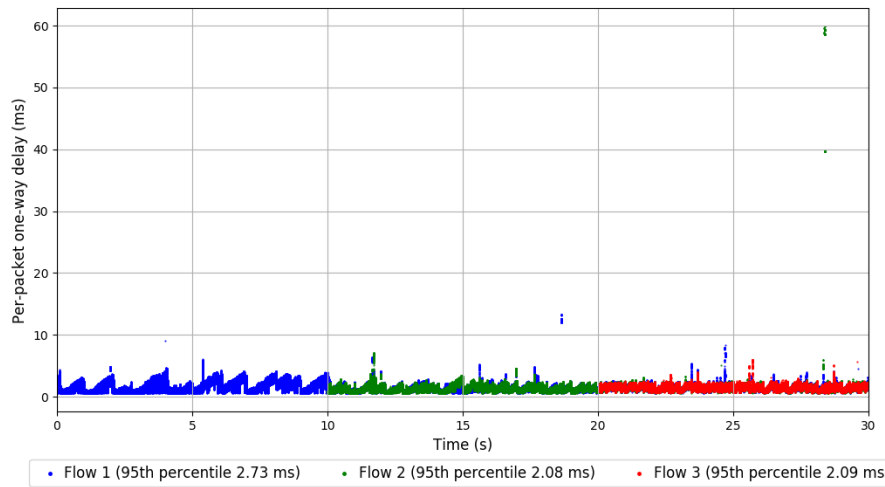
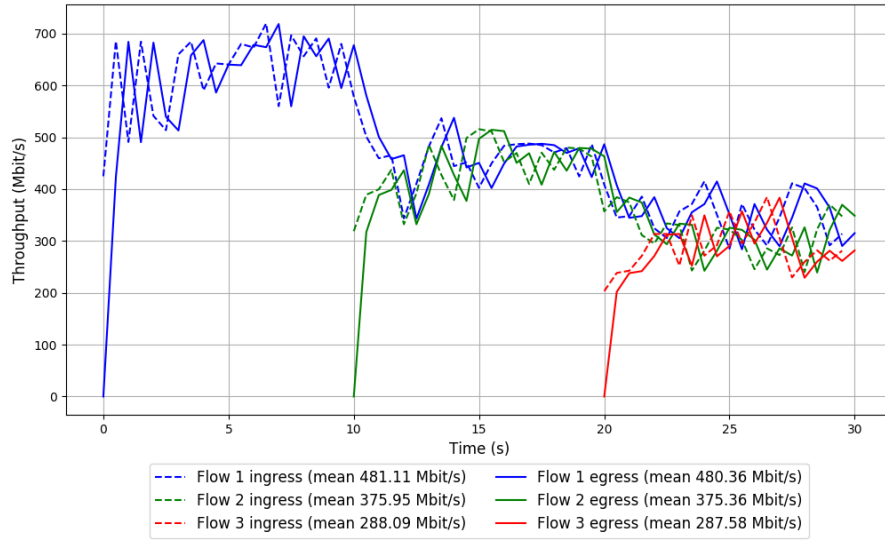
-- Flow 2:

Average throughput: 375.36 Mbit/s
95th percentile per-packet one-way delay: 2.084 ms
Loss rate: 0.15%

-- Flow 3:

Average throughput: 287.58 Mbit/s
95th percentile per-packet one-way delay: 2.089 ms
Loss rate: 0.16%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-05-30 00:38:21

End at: 2019-05-30 00:38:51

Local clock offset: 4.931 ms

Remote clock offset: 0.432 ms

Below is generated by plot.py at 2019-05-30 03:20:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 653.02 Mbit/s

95th percentile per-packet one-way delay: 18.583 ms

Loss rate: 14.19%

-- Flow 1:

Average throughput: 494.47 Mbit/s

95th percentile per-packet one-way delay: 19.574 ms

Loss rate: 11.66%

-- Flow 2:

Average throughput: 120.95 Mbit/s

95th percentile per-packet one-way delay: 4.644 ms

Loss rate: 19.60%

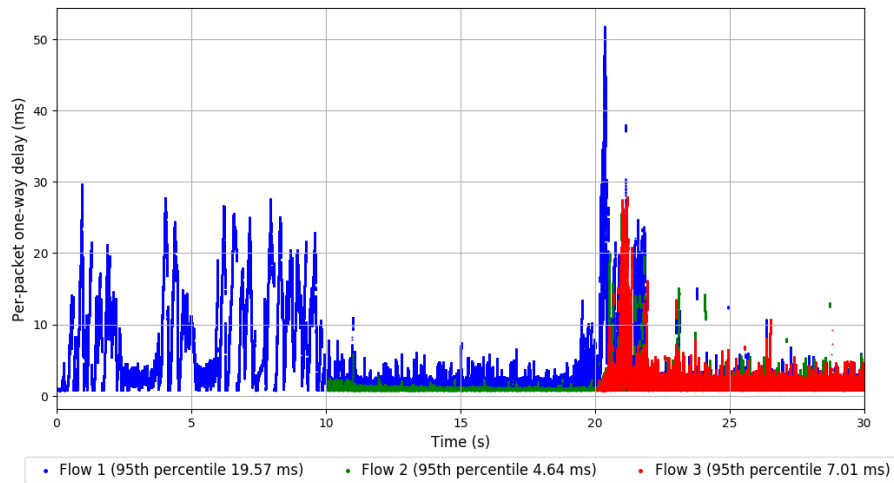
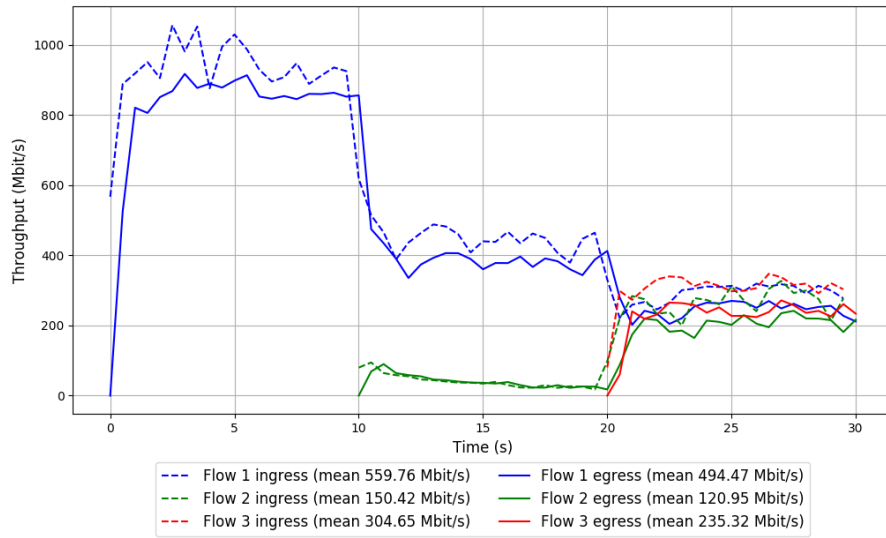
-- Flow 3:

Average throughput: 235.32 Mbit/s

95th percentile per-packet one-way delay: 7.011 ms

Loss rate: 22.85%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-05-30 01:08:03

End at: 2019-05-30 01:08:33

Local clock offset: 5.181 ms

Remote clock offset: 0.659 ms

Below is generated by plot.py at 2019-05-30 03:20:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 668.95 Mbit/s

95th percentile per-packet one-way delay: 23.843 ms

Loss rate: 13.94%

-- Flow 1:

Average throughput: 471.20 Mbit/s

95th percentile per-packet one-way delay: 25.343 ms

Loss rate: 13.02%

-- Flow 2:

Average throughput: 195.72 Mbit/s

95th percentile per-packet one-way delay: 3.720 ms

Loss rate: 11.60%

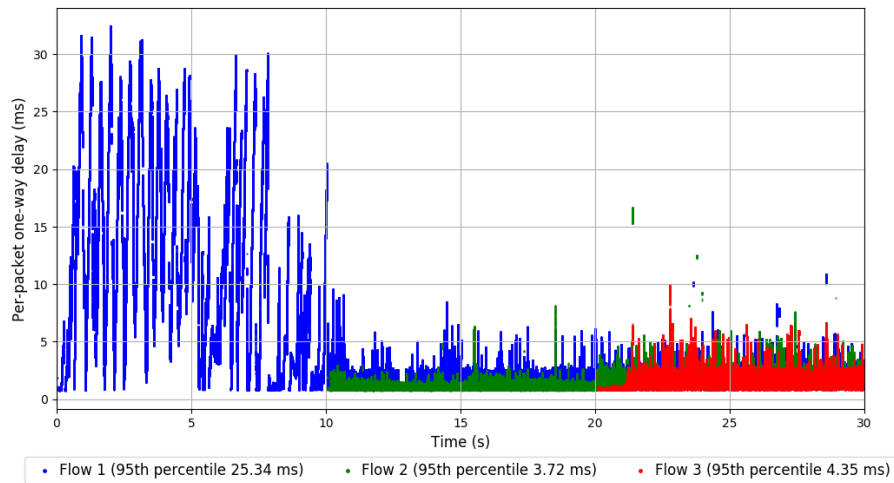
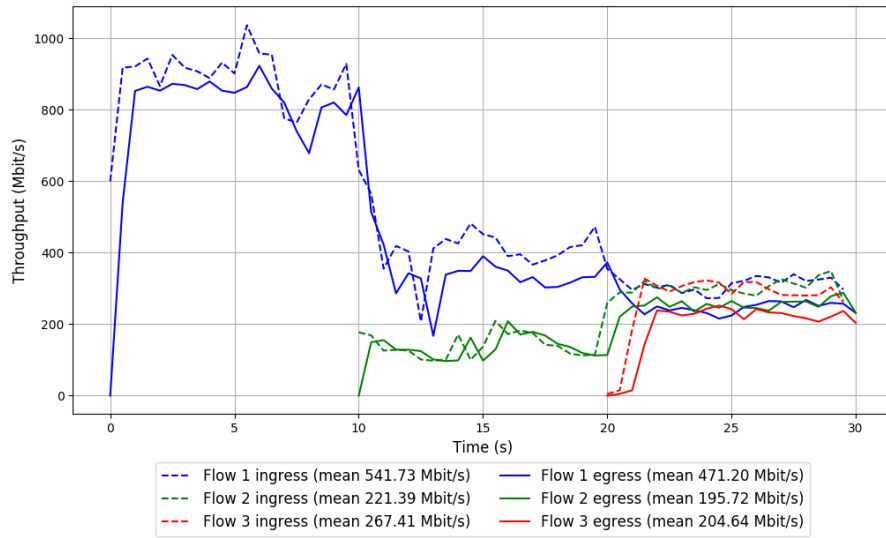
-- Flow 3:

Average throughput: 204.64 Mbit/s

95th percentile per-packet one-way delay: 4.351 ms

Loss rate: 23.48%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-05-30 01:38:02

End at: 2019-05-30 01:38:32

Local clock offset: 5.609 ms

Remote clock offset: 0.339 ms

Below is generated by plot.py at 2019-05-30 03:20:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 623.29 Mbit/s

95th percentile per-packet one-way delay: 7.381 ms

Loss rate: 11.36%

-- Flow 1:

Average throughput: 409.32 Mbit/s

95th percentile per-packet one-way delay: 8.228 ms

Loss rate: 11.56%

-- Flow 2:

Average throughput: 207.27 Mbit/s

95th percentile per-packet one-way delay: 3.843 ms

Loss rate: 3.06%

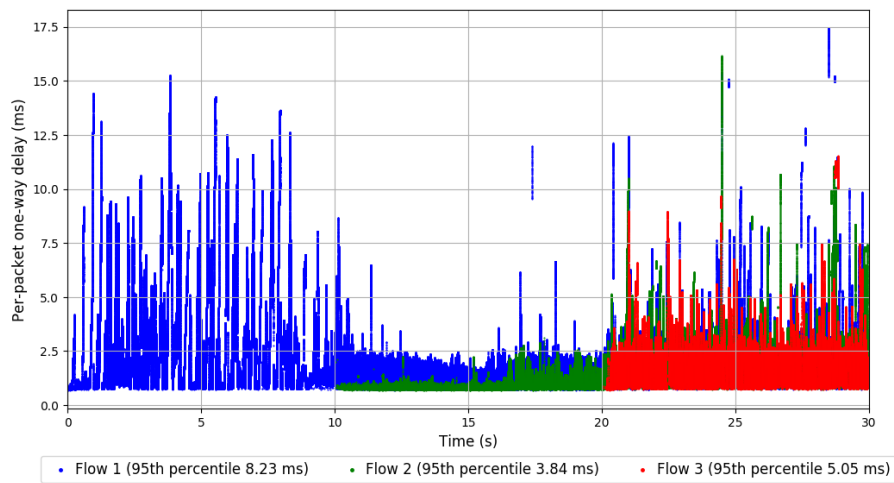
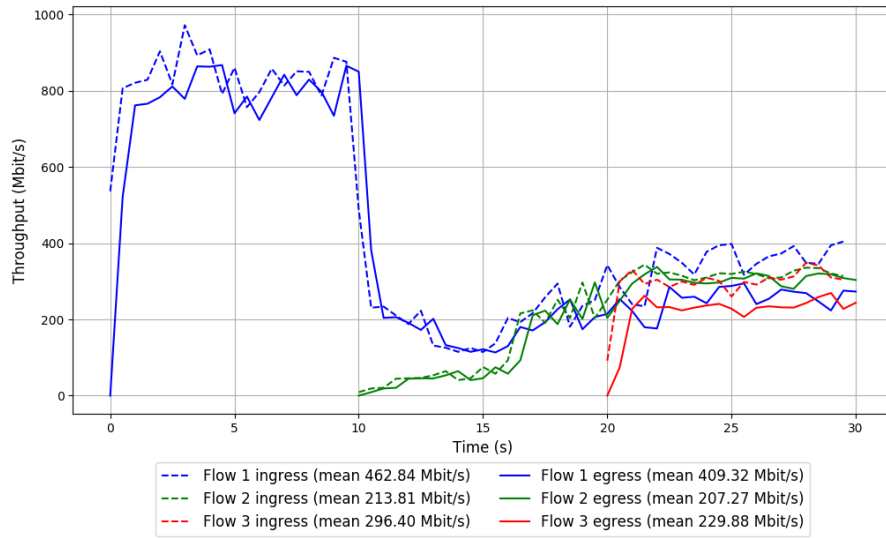
-- Flow 3:

Average throughput: 229.88 Mbit/s

95th percentile per-packet one-way delay: 5.048 ms

Loss rate: 22.44%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2019-05-30 02:07:49

End at: 2019-05-30 02:08:19

Local clock offset: 5.731 ms

Remote clock offset: 0.008 ms

Below is generated by plot.py at 2019-05-30 03:21:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 764.71 Mbit/s

95th percentile per-packet one-way delay: 13.812 ms

Loss rate: 9.48%

-- Flow 1:

Average throughput: 509.74 Mbit/s

95th percentile per-packet one-way delay: 14.468 ms

Loss rate: 6.94%

-- Flow 2:

Average throughput: 264.62 Mbit/s

95th percentile per-packet one-way delay: 6.169 ms

Loss rate: 15.69%

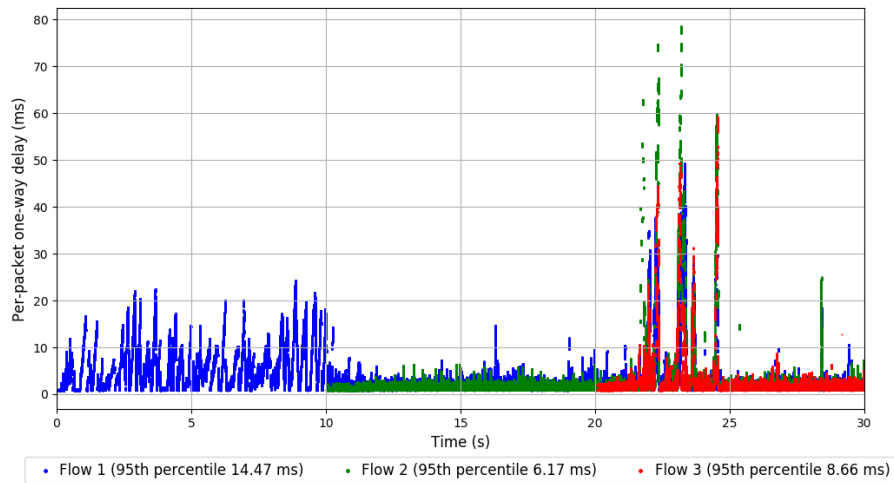
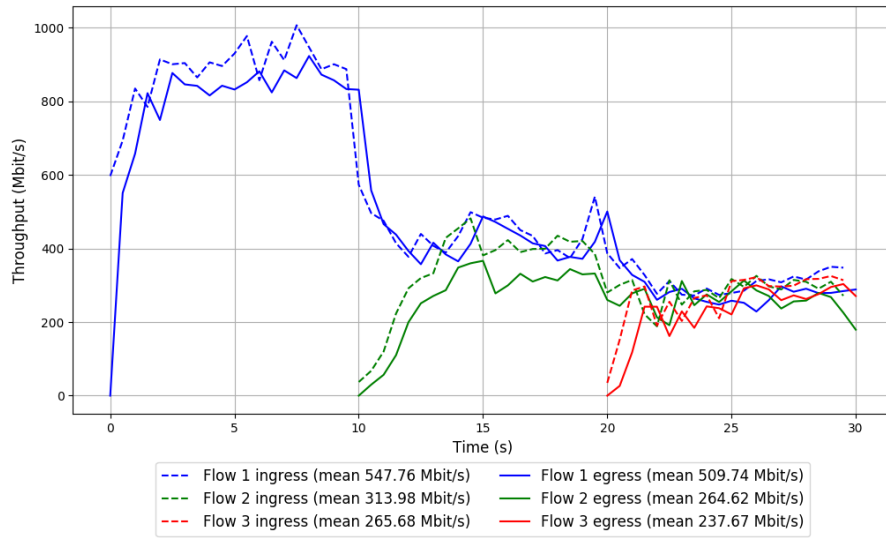
-- Flow 3:

Average throughput: 237.67 Mbit/s

95th percentile per-packet one-way delay: 8.658 ms

Loss rate: 10.53%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-05-30 02:37:44

End at: 2019-05-30 02:38:14

Local clock offset: 6.24 ms

Remote clock offset: 0.314 ms

Below is generated by plot.py at 2019-05-30 03:21:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 529.92 Mbit/s

95th percentile per-packet one-way delay: 10.231 ms

Loss rate: 9.86%

-- Flow 1:

Average throughput: 255.25 Mbit/s

95th percentile per-packet one-way delay: 10.760 ms

Loss rate: 8.18%

-- Flow 2:

Average throughput: 267.67 Mbit/s

95th percentile per-packet one-way delay: 4.926 ms

Loss rate: 15.31%

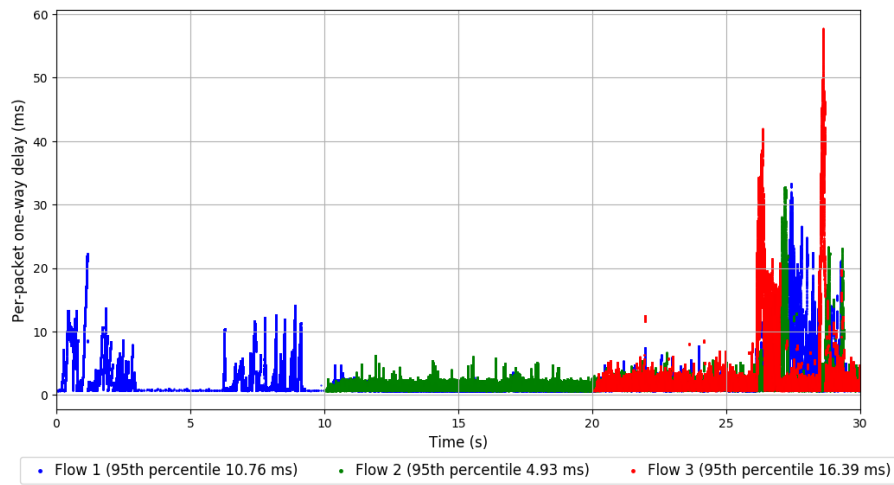
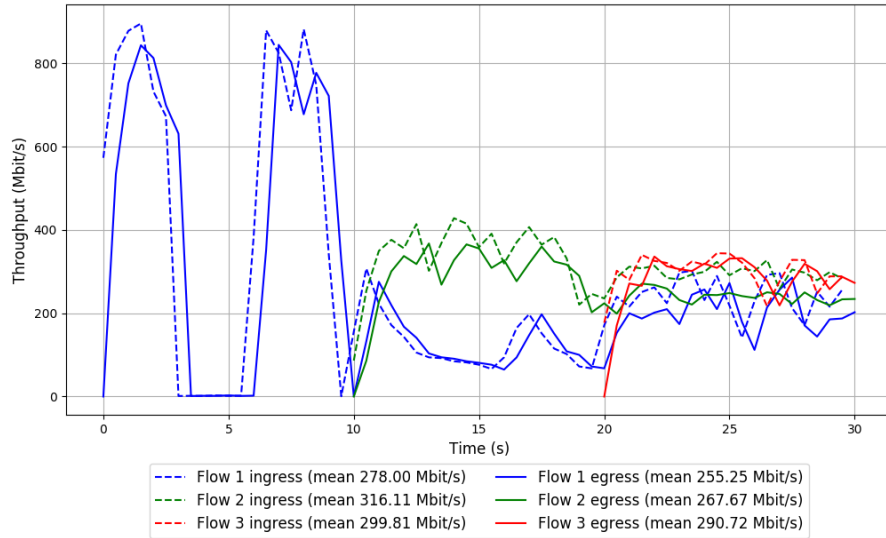
-- Flow 3:

Average throughput: 290.72 Mbit/s

95th percentile per-packet one-way delay: 16.394 ms

Loss rate: 3.01%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-05-30 00:34:03

End at: 2019-05-30 00:34:33

Local clock offset: 4.93 ms

Remote clock offset: 0.353 ms

Below is generated by plot.py at 2019-05-30 03:21:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 323.40 Mbit/s

95th percentile per-packet one-way delay: 6.565 ms

Loss rate: 4.06%

-- Flow 1:

Average throughput: 285.10 Mbit/s

95th percentile per-packet one-way delay: 6.810 ms

Loss rate: 3.77%

-- Flow 2:

Average throughput: 42.39 Mbit/s

95th percentile per-packet one-way delay: 2.156 ms

Loss rate: 2.84%

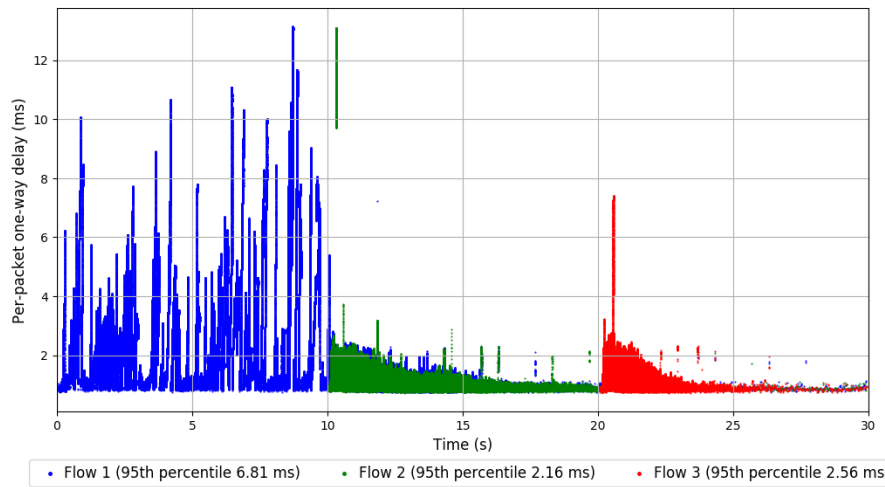
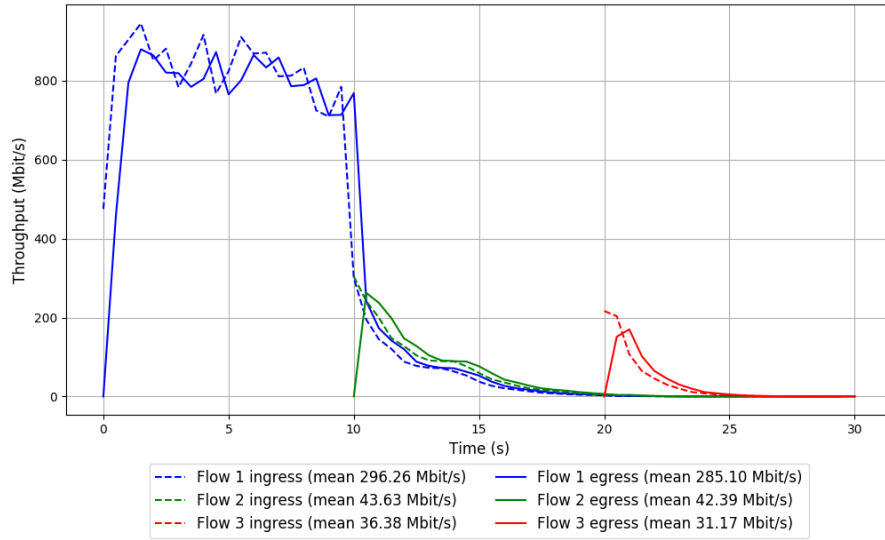
-- Flow 3:

Average throughput: 31.17 Mbit/s

95th percentile per-packet one-way delay: 2.561 ms

Loss rate: 14.32%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-05-30 01:03:46

End at: 2019-05-30 01:04:16

Local clock offset: 5.14 ms

Remote clock offset: 0.472 ms

Below is generated by plot.py at 2019-05-30 03:21:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 323.22 Mbit/s

95th percentile per-packet one-way delay: 6.285 ms

Loss rate: 3.32%

-- Flow 1:

Average throughput: 294.65 Mbit/s

95th percentile per-packet one-way delay: 6.582 ms

Loss rate: 3.08%

-- Flow 2:

Average throughput: 32.49 Mbit/s

95th percentile per-packet one-way delay: 2.139 ms

Loss rate: 5.71%

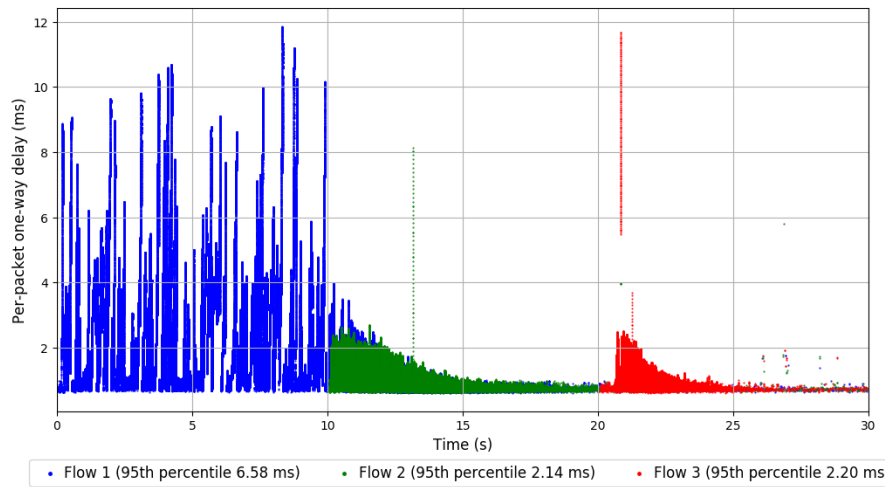
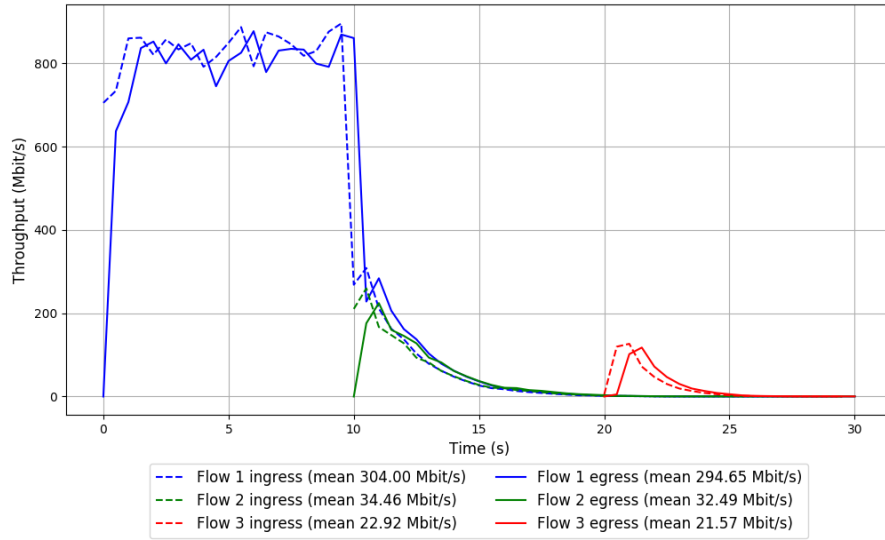
-- Flow 3:

Average throughput: 21.57 Mbit/s

95th percentile per-packet one-way delay: 2.202 ms

Loss rate: 5.89%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-05-30 01:33:44

End at: 2019-05-30 01:34:14

Local clock offset: 5.605 ms

Remote clock offset: 0.383 ms

Below is generated by plot.py at 2019-05-30 03:22:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 316.87 Mbit/s

95th percentile per-packet one-way delay: 4.867 ms

Loss rate: 3.34%

-- Flow 1:

Average throughput: 291.84 Mbit/s

95th percentile per-packet one-way delay: 5.044 ms

Loss rate: 3.20%

-- Flow 2:

Average throughput: 23.70 Mbit/s

95th percentile per-packet one-way delay: 2.288 ms

Loss rate: 5.17%

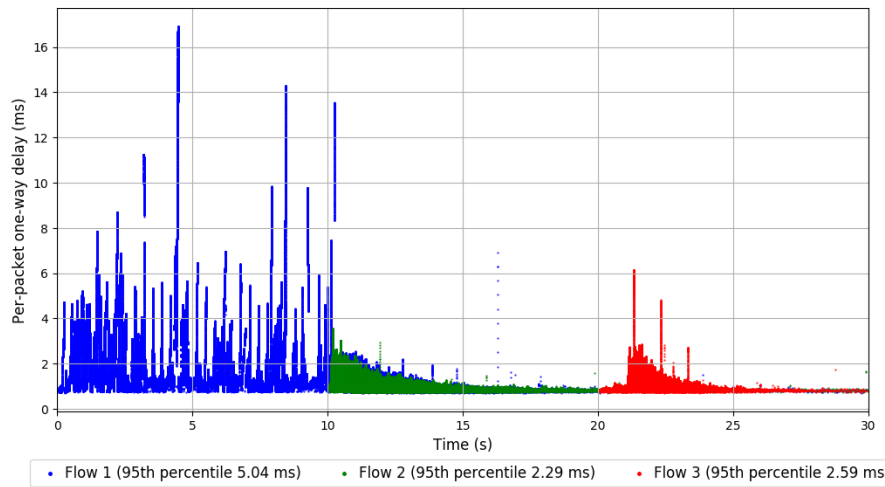
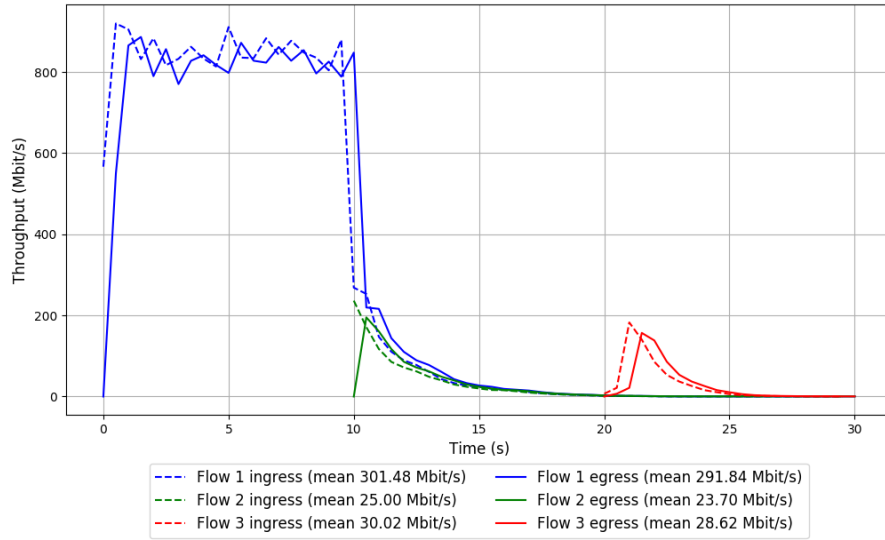
-- Flow 3:

Average throughput: 28.62 Mbit/s

95th percentile per-packet one-way delay: 2.592 ms

Loss rate: 4.67%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-05-30 02:03:34

End at: 2019-05-30 02:04:04

Local clock offset: 5.728 ms

Remote clock offset: 0.069 ms

Below is generated by plot.py at 2019-05-30 03:23:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 317.59 Mbit/s

95th percentile per-packet one-way delay: 6.370 ms

Loss rate: 3.65%

-- Flow 1:

Average throughput: 272.08 Mbit/s

95th percentile per-packet one-way delay: 7.847 ms

Loss rate: 3.03%

-- Flow 2:

Average throughput: 55.60 Mbit/s

95th percentile per-packet one-way delay: 2.329 ms

Loss rate: 7.29%

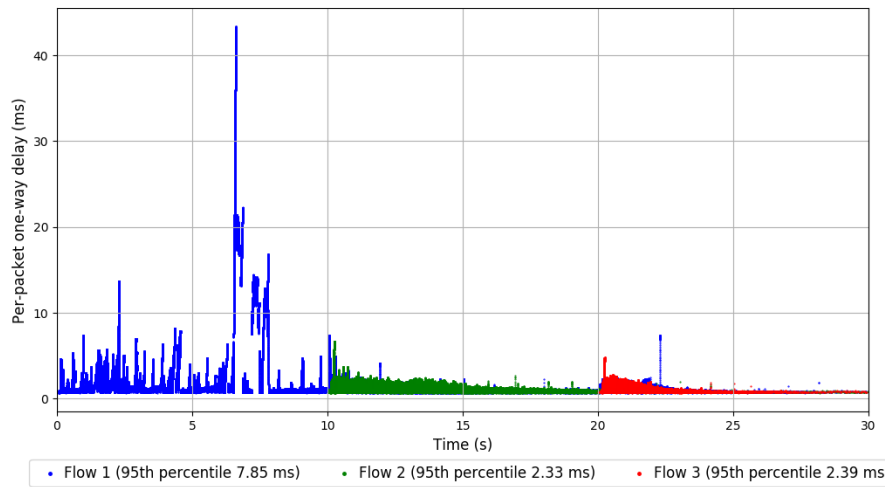
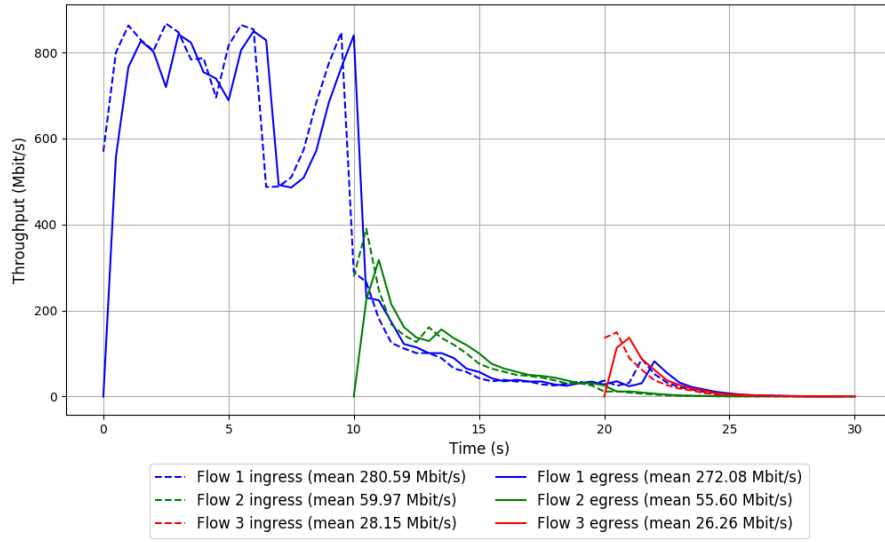
-- Flow 3:

Average throughput: 26.26 Mbit/s

95th percentile per-packet one-way delay: 2.388 ms

Loss rate: 6.71%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-05-30 02:33:31

End at: 2019-05-30 02:34:01

Local clock offset: 6.165 ms

Remote clock offset: 0.193 ms

Below is generated by plot.py at 2019-05-30 03:24:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 343.59 Mbit/s

95th percentile per-packet one-way delay: 5.333 ms

Loss rate: 2.62%

-- Flow 1:

Average throughput: 313.45 Mbit/s

95th percentile per-packet one-way delay: 5.453 ms

Loss rate: 2.48%

-- Flow 2:

Average throughput: 31.23 Mbit/s

95th percentile per-packet one-way delay: 1.594 ms

Loss rate: 0.74%

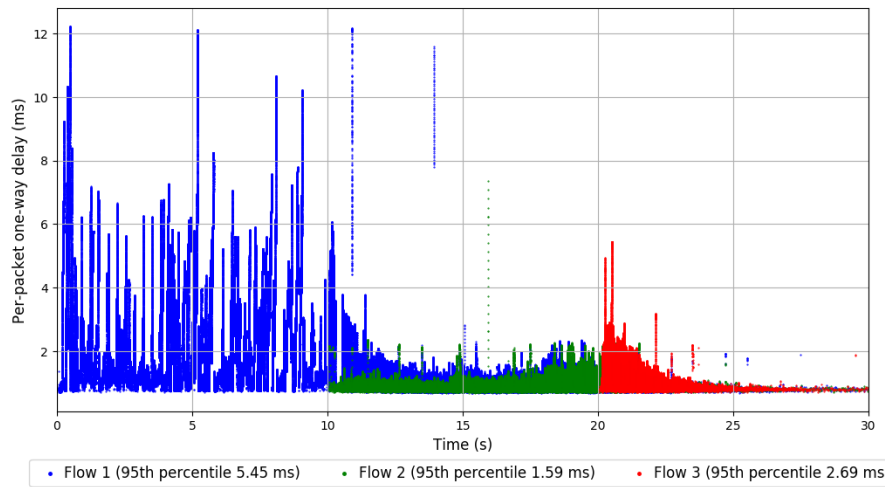
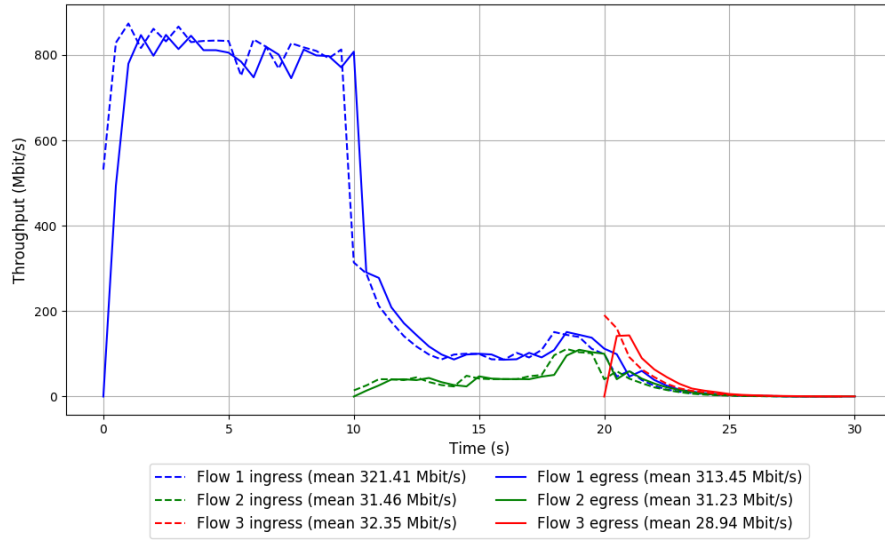
-- Flow 3:

Average throughput: 28.94 Mbit/s

95th percentile per-packet one-way delay: 2.688 ms

Loss rate: 10.53%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-05-30 00:52:14

End at: 2019-05-30 00:52:44

Local clock offset: 5.115 ms

Remote clock offset: 0.501 ms

Below is generated by plot.py at 2019-05-30 03:24:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 381.22 Mbit/s

95th percentile per-packet one-way delay: 1.953 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 202.11 Mbit/s

95th percentile per-packet one-way delay: 1.859 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 183.96 Mbit/s

95th percentile per-packet one-way delay: 1.903 ms

Loss rate: 0.02%

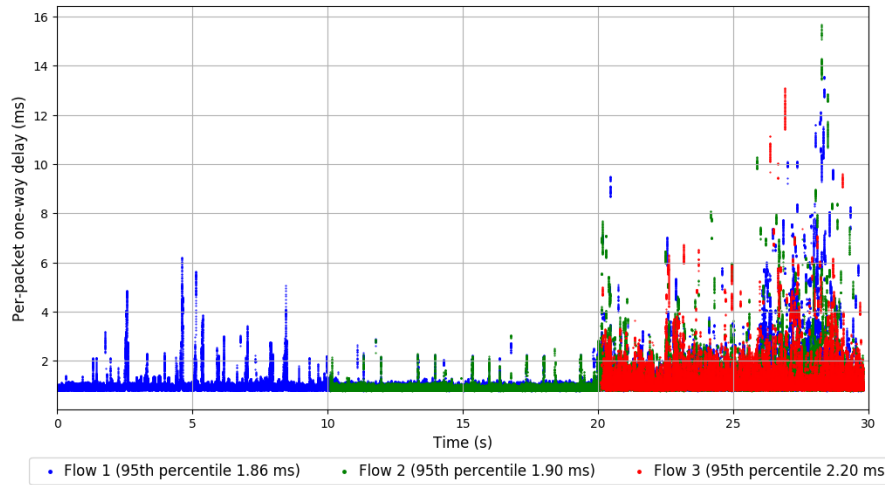
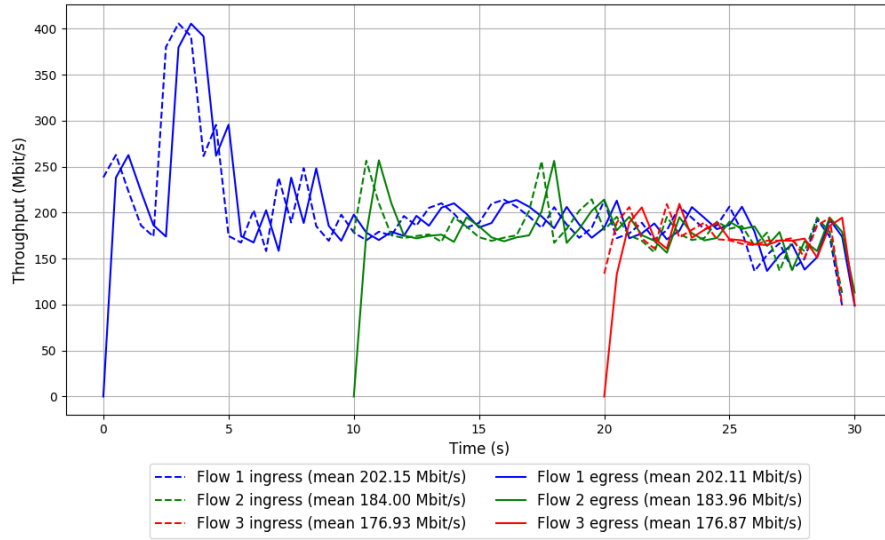
-- Flow 3:

Average throughput: 176.87 Mbit/s

95th percentile per-packet one-way delay: 2.198 ms

Loss rate: 0.04%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-05-30 01:22:00

End at: 2019-05-30 01:22:30

Local clock offset: 5.503 ms

Remote clock offset: 0.597 ms

Below is generated by plot.py at 2019-05-30 03:24:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 395.83 Mbit/s

95th percentile per-packet one-way delay: 1.723 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 206.85 Mbit/s

95th percentile per-packet one-way delay: 1.529 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 193.63 Mbit/s

95th percentile per-packet one-way delay: 1.745 ms

Loss rate: 0.04%

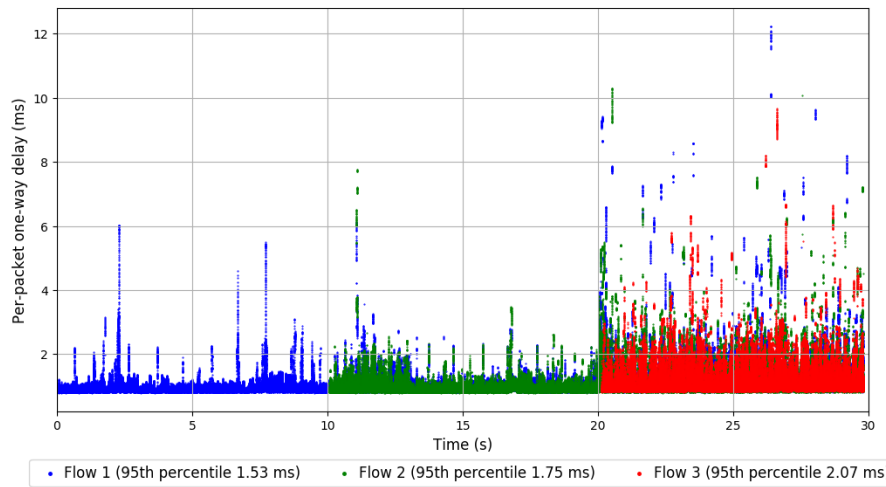
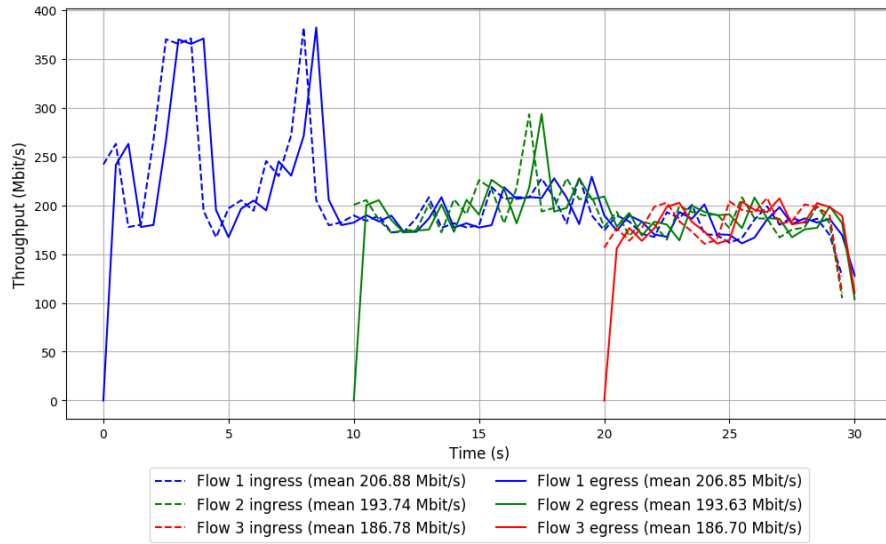
-- Flow 3:

Average throughput: 186.70 Mbit/s

95th percentile per-packet one-way delay: 2.069 ms

Loss rate: 0.04%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-05-30 01:51:59

End at: 2019-05-30 01:52:29

Local clock offset: 5.726 ms

Remote clock offset: 0.416 ms

Below is generated by plot.py at 2019-05-30 03:24:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 377.94 Mbit/s

95th percentile per-packet one-way delay: 1.800 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 190.46 Mbit/s

95th percentile per-packet one-way delay: 1.636 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 193.86 Mbit/s

95th percentile per-packet one-way delay: 1.846 ms

Loss rate: 0.07%

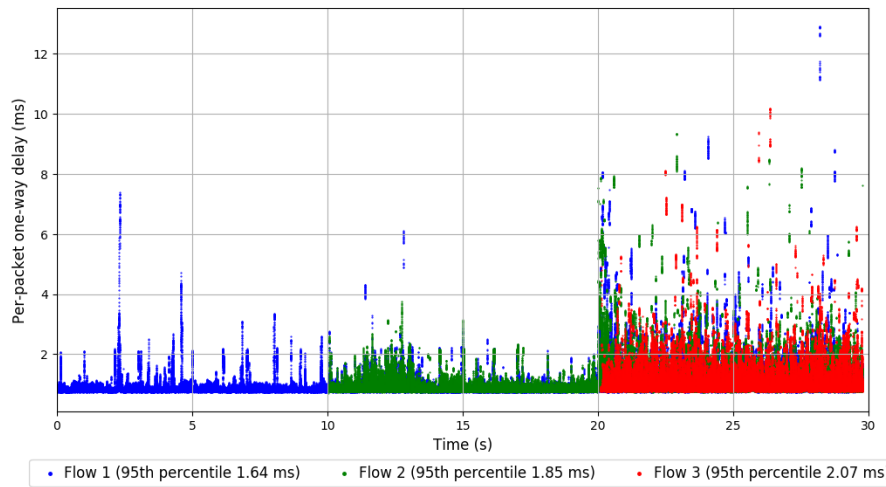
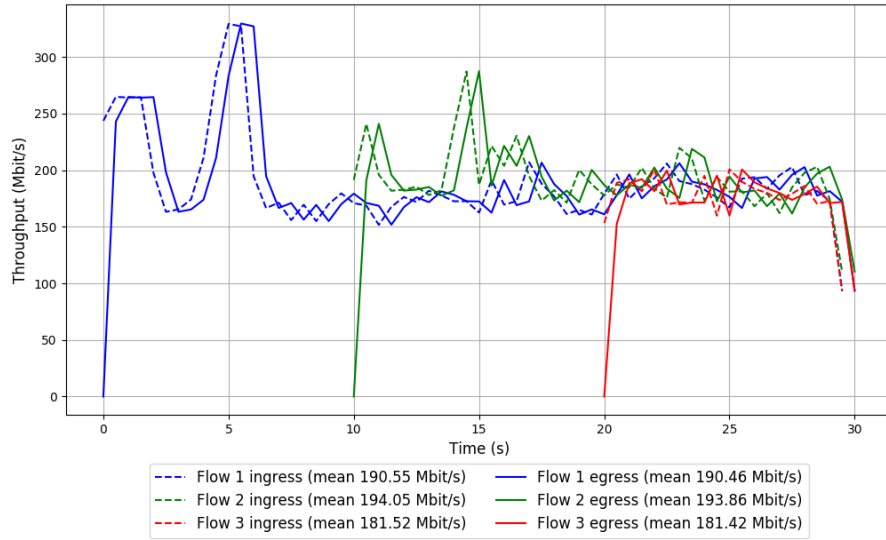
-- Flow 3:

Average throughput: 181.42 Mbit/s

95th percentile per-packet one-way delay: 2.066 ms

Loss rate: 0.06%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-05-30 02:21:45
End at: 2019-05-30 02:22:15
Local clock offset: 6.047 ms
Remote clock offset: -0.069 ms

Below is generated by plot.py at 2019-05-30 03:24:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 382.18 Mbit/s
95th percentile per-packet one-way delay: 2.045 ms
Loss rate: 0.06%

-- Flow 1:

Average throughput: 198.04 Mbit/s
95th percentile per-packet one-way delay: 1.685 ms
Loss rate: 0.04%

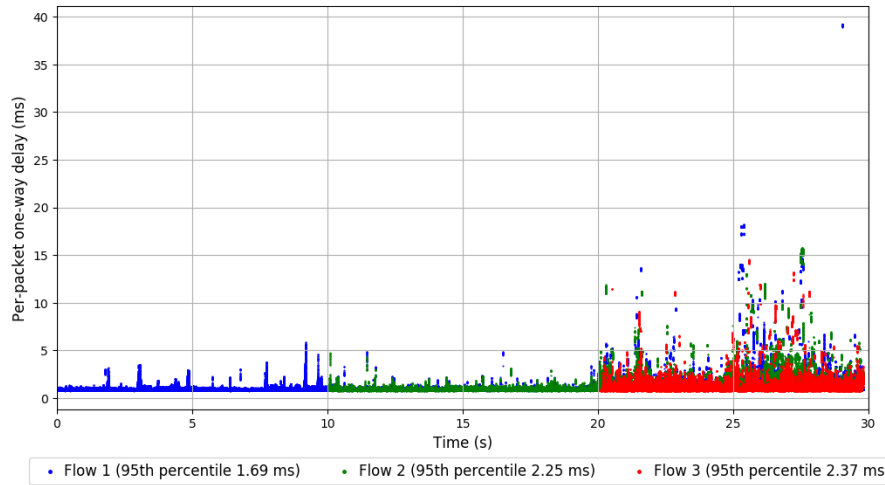
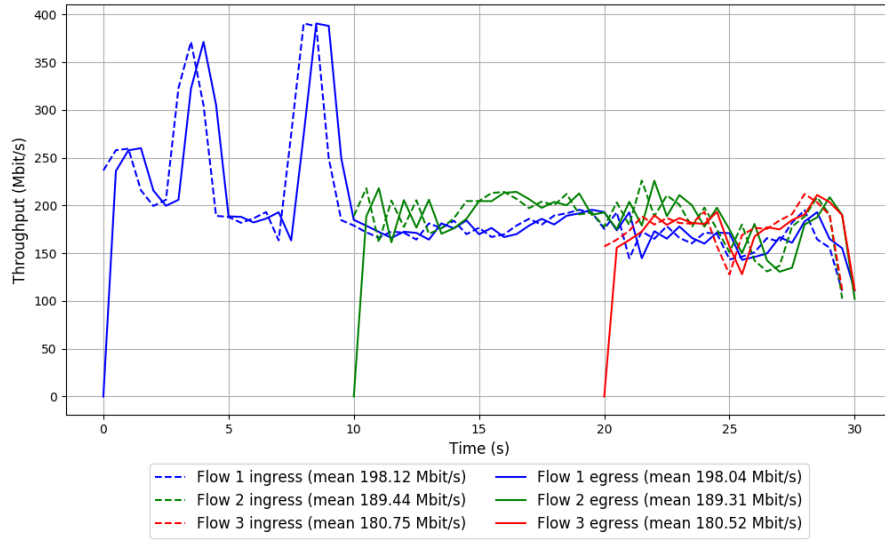
-- Flow 2:

Average throughput: 189.31 Mbit/s
95th percentile per-packet one-way delay: 2.253 ms
Loss rate: 0.06%

-- Flow 3:

Average throughput: 180.52 Mbit/s
95th percentile per-packet one-way delay: 2.371 ms
Loss rate: 0.12%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-05-30 02:51:36

End at: 2019-05-30 02:52:06

Local clock offset: 5.682 ms

Remote clock offset: 0.271 ms

Below is generated by plot.py at 2019-05-30 03:26:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 372.80 Mbit/s

95th percentile per-packet one-way delay: 1.663 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 197.92 Mbit/s

95th percentile per-packet one-way delay: 1.467 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 175.42 Mbit/s

95th percentile per-packet one-way delay: 1.709 ms

Loss rate: 0.07%

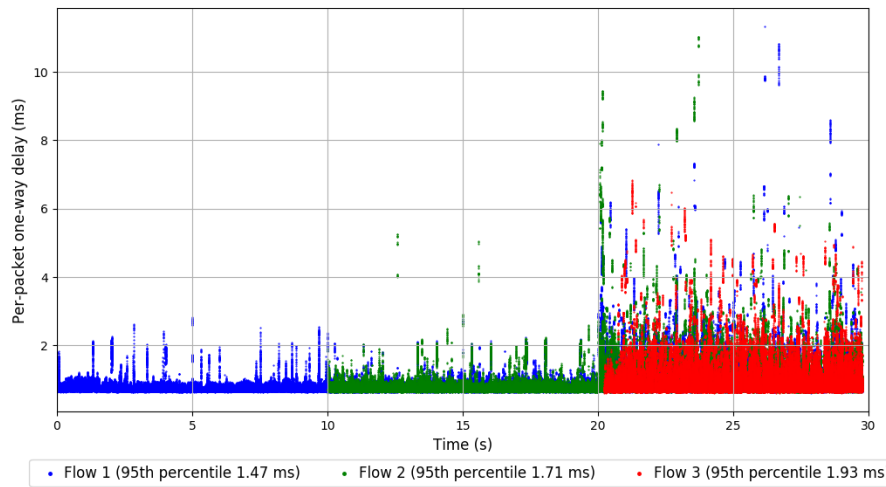
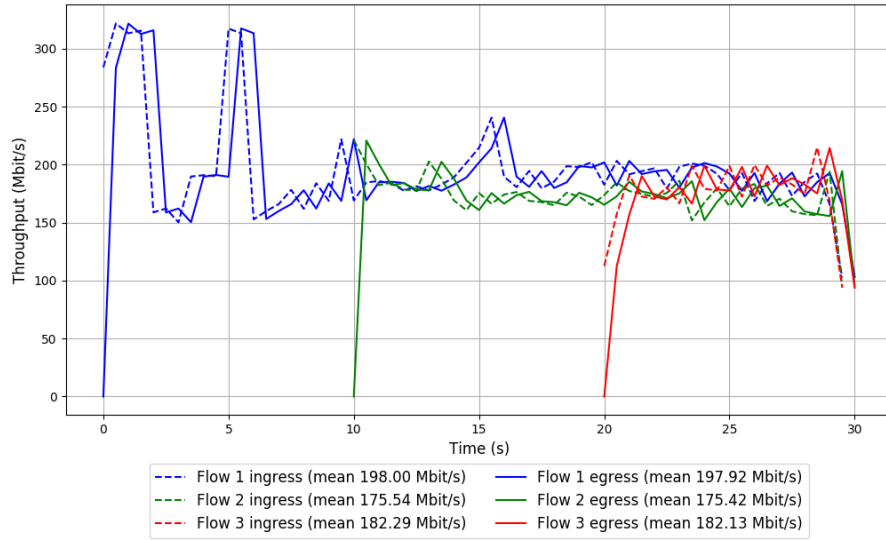
-- Flow 3:

Average throughput: 182.13 Mbit/s

95th percentile per-packet one-way delay: 1.933 ms

Loss rate: 0.09%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-05-30 00:32:38

End at: 2019-05-30 00:33:08

Local clock offset: 4.937 ms

Remote clock offset: 0.321 ms

Below is generated by plot.py at 2019-05-30 03:26:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 344.28 Mbit/s

95th percentile per-packet one-way delay: 1.666 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 153.91 Mbit/s

95th percentile per-packet one-way delay: 1.571 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 191.80 Mbit/s

95th percentile per-packet one-way delay: 1.795 ms

Loss rate: 0.08%

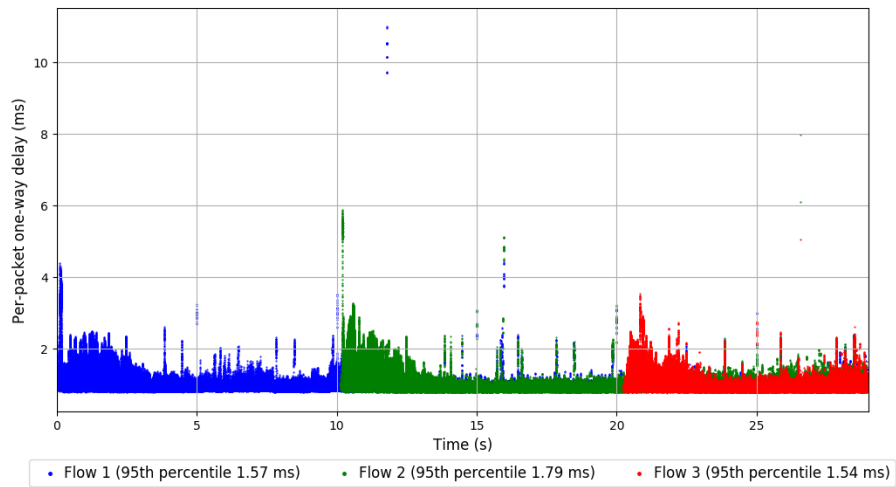
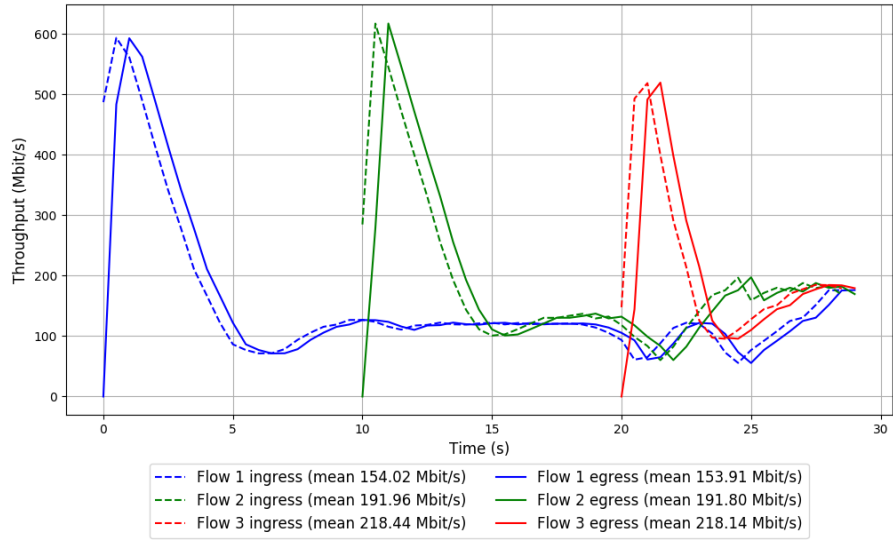
-- Flow 3:

Average throughput: 218.14 Mbit/s

95th percentile per-packet one-way delay: 1.545 ms

Loss rate: 0.13%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-05-30 01:02:20

End at: 2019-05-30 01:02:50

Local clock offset: 5.128 ms

Remote clock offset: 0.54 ms

Below is generated by plot.py at 2019-05-30 03:27:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 360.30 Mbit/s

95th percentile per-packet one-way delay: 1.760 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 158.95 Mbit/s

95th percentile per-packet one-way delay: 1.554 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 191.27 Mbit/s

95th percentile per-packet one-way delay: 2.084 ms

Loss rate: 0.09%

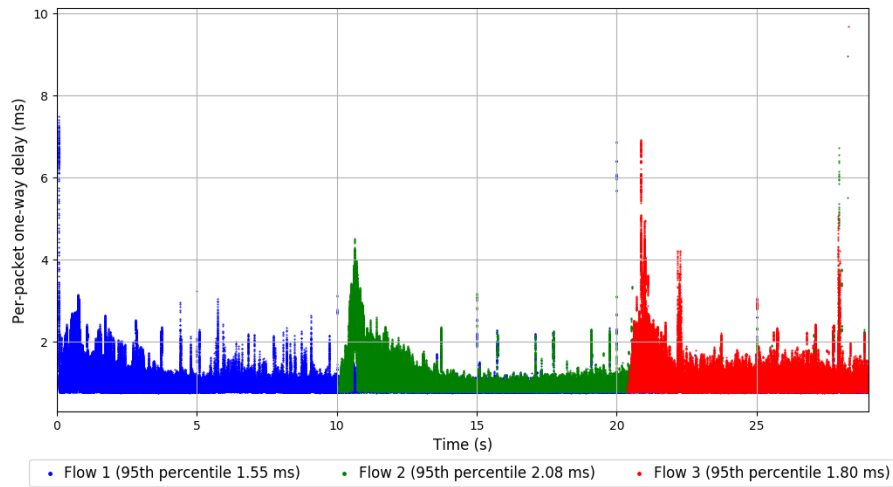
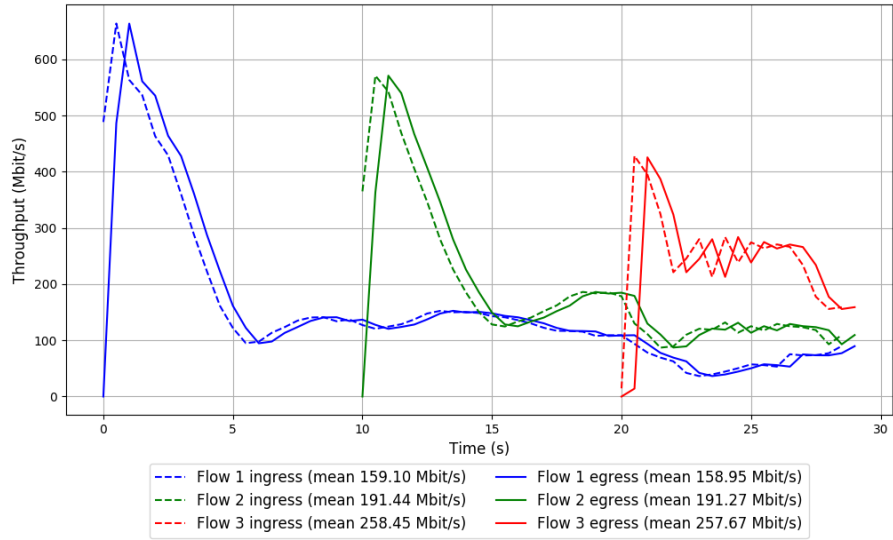
-- Flow 3:

Average throughput: 257.67 Mbit/s

95th percentile per-packet one-way delay: 1.799 ms

Loss rate: 0.30%

Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2019-05-30 01:32:18

End at: 2019-05-30 01:32:48

Local clock offset: 5.608 ms

Remote clock offset: 0.388 ms

Below is generated by plot.py at 2019-05-30 03:28:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 383.23 Mbit/s

95th percentile per-packet one-way delay: 1.667 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 161.58 Mbit/s

95th percentile per-packet one-way delay: 1.315 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 222.88 Mbit/s

95th percentile per-packet one-way delay: 1.986 ms

Loss rate: 0.05%

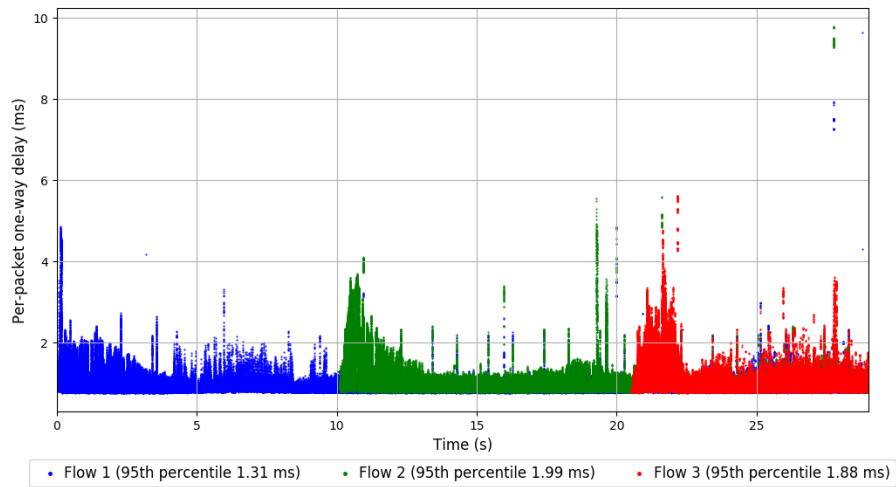
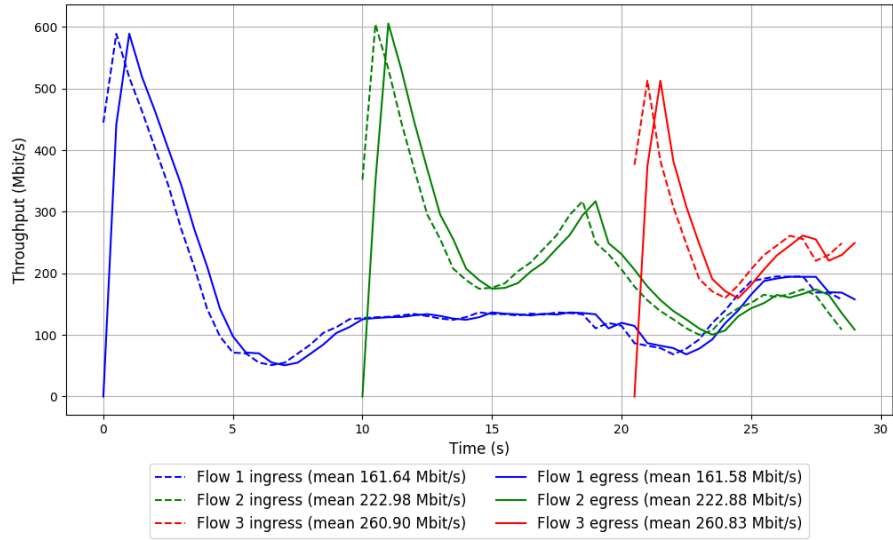
-- Flow 3:

Average throughput: 260.83 Mbit/s

95th percentile per-packet one-way delay: 1.876 ms

Loss rate: 0.03%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-05-30 02:02:08

End at: 2019-05-30 02:02:38

Local clock offset: 5.72 ms

Remote clock offset: 0.046 ms

Below is generated by plot.py at 2019-05-30 03:28:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 359.60 Mbit/s

95th percentile per-packet one-way delay: 1.692 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 161.21 Mbit/s

95th percentile per-packet one-way delay: 1.531 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 173.96 Mbit/s

95th percentile per-packet one-way delay: 1.665 ms

Loss rate: 0.06%

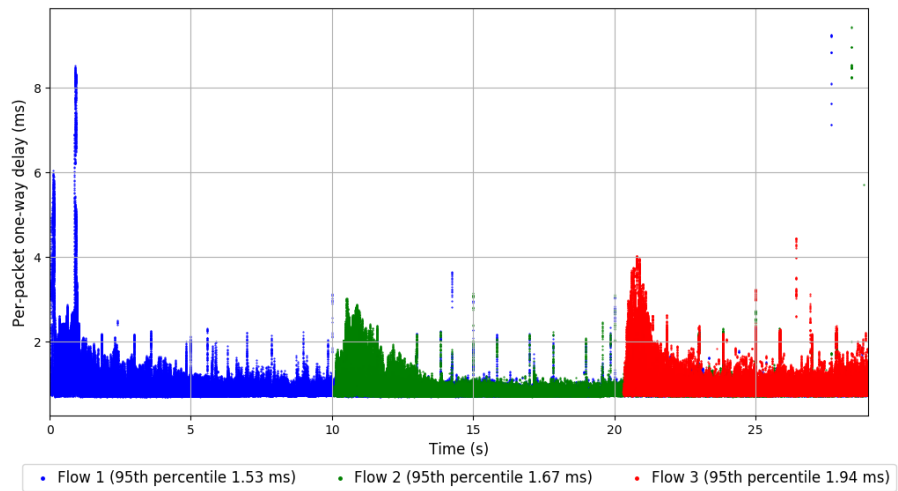
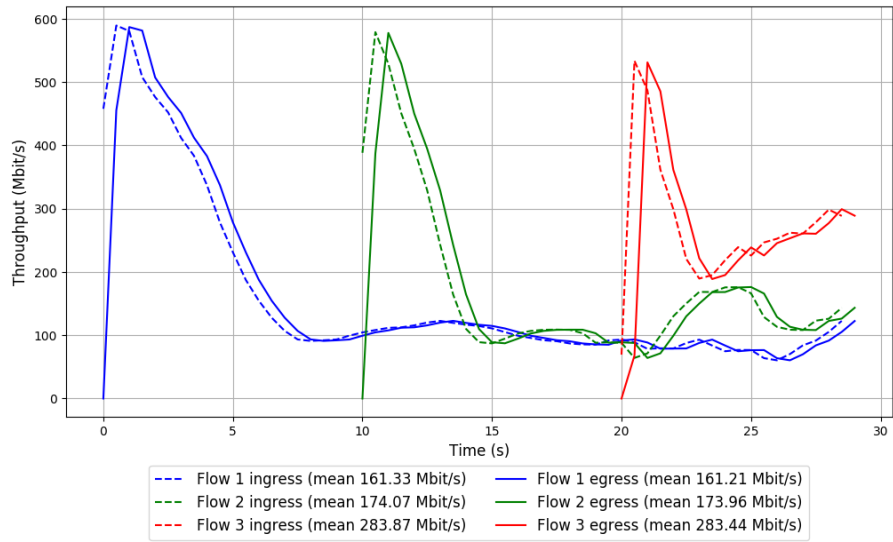
-- Flow 3:

Average throughput: 283.44 Mbit/s

95th percentile per-packet one-way delay: 1.940 ms

Loss rate: 0.17%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-05-30 02:32:02

End at: 2019-05-30 02:32:32

Local clock offset: 6.175 ms

Remote clock offset: 0.061 ms

Below is generated by plot.py at 2019-05-30 03:29:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 467.61 Mbit/s

95th percentile per-packet one-way delay: 1.849 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 224.28 Mbit/s

95th percentile per-packet one-way delay: 1.812 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 275.21 Mbit/s

95th percentile per-packet one-way delay: 1.873 ms

Loss rate: 0.19%

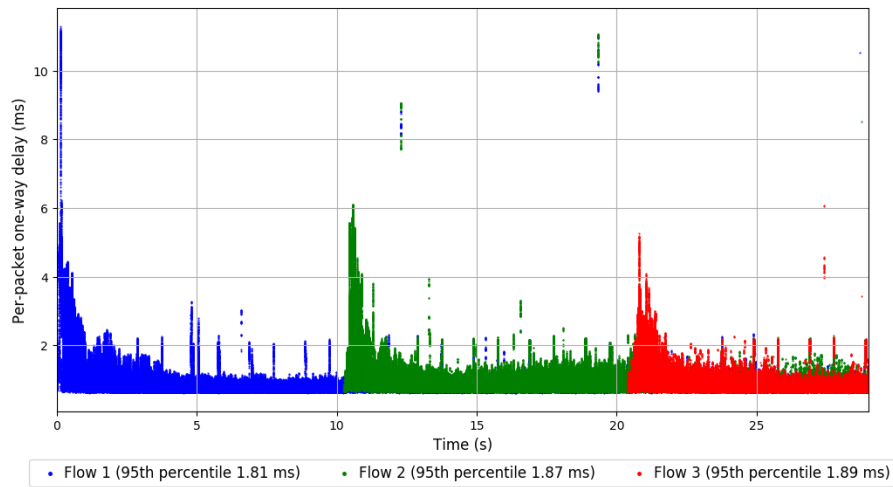
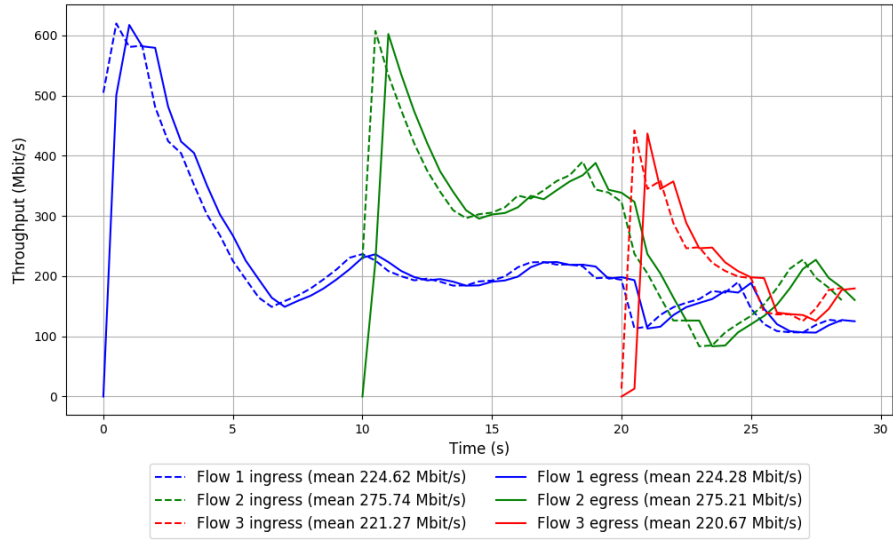
-- Flow 3:

Average throughput: 220.67 Mbit/s

95th percentile per-packet one-way delay: 1.892 ms

Loss rate: 0.27%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-05-30 00:25:27

End at: 2019-05-30 00:25:57

Local clock offset: 5.049 ms

Remote clock offset: 0.115 ms

Below is generated by plot.py at 2019-05-30 03:29:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 190.09 Mbit/s

95th percentile per-packet one-way delay: 3.542 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 72.10 Mbit/s

95th percentile per-packet one-way delay: 1.409 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 90.16 Mbit/s

95th percentile per-packet one-way delay: 3.967 ms

Loss rate: 0.36%

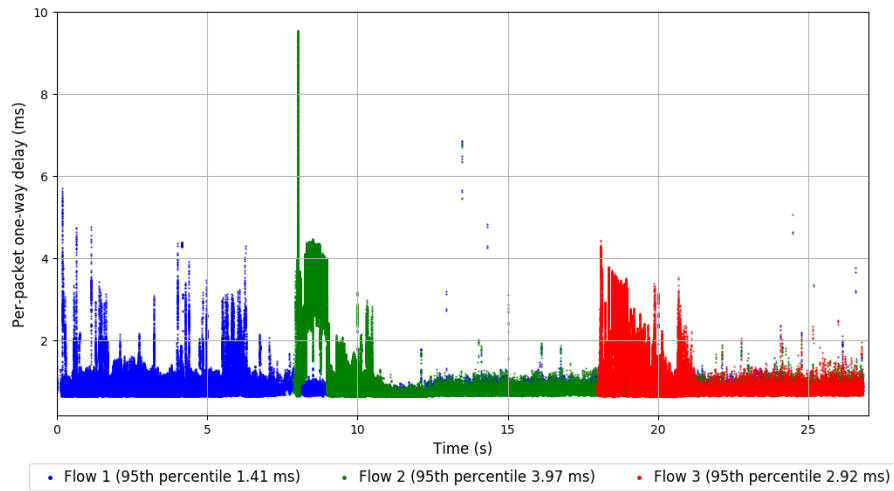
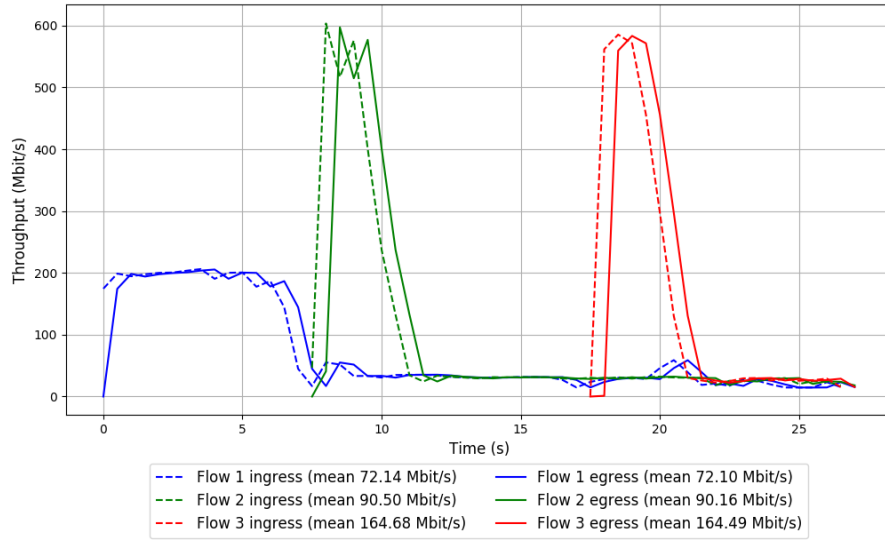
-- Flow 3:

Average throughput: 164.49 Mbit/s

95th percentile per-packet one-way delay: 2.921 ms

Loss rate: 0.12%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-05-30 00:55:16

End at: 2019-05-30 00:55:46

Local clock offset: 5.1 ms

Remote clock offset: 0.492 ms

Below is generated by plot.py at 2019-05-30 03:29:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 236.78 Mbit/s

95th percentile per-packet one-way delay: 2.048 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 100.34 Mbit/s

95th percentile per-packet one-way delay: 1.376 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 95.07 Mbit/s

95th percentile per-packet one-way delay: 2.558 ms

Loss rate: 0.28%

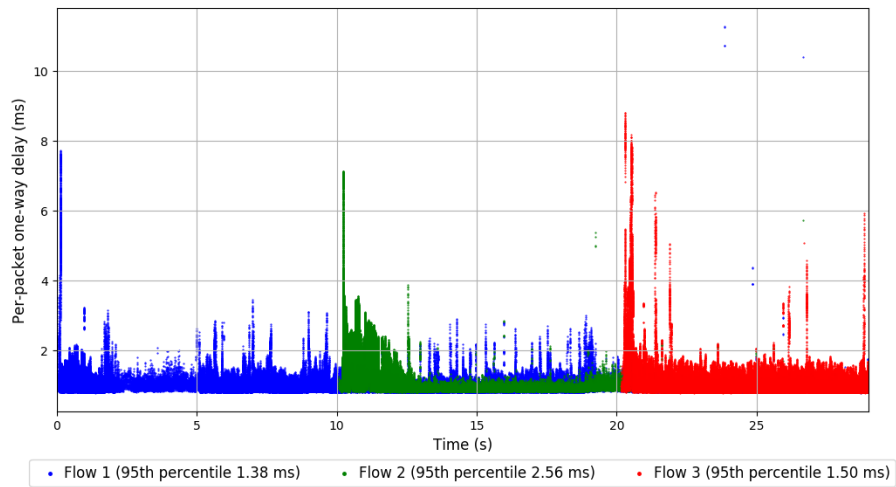
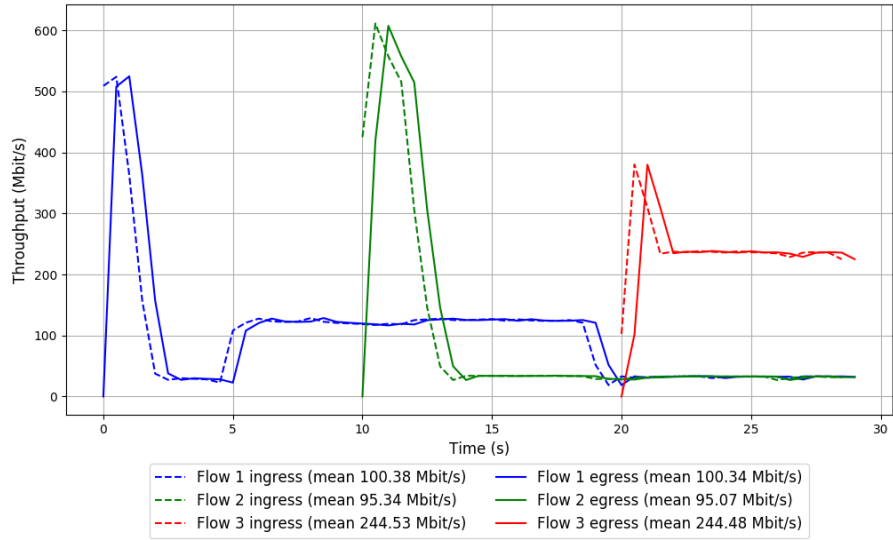
-- Flow 3:

Average throughput: 244.48 Mbit/s

95th percentile per-packet one-way delay: 1.501 ms

Loss rate: 0.02%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-05-30 01:25:02

End at: 2019-05-30 01:25:32

Local clock offset: 5.536 ms

Remote clock offset: 0.366 ms

Below is generated by plot.py at 2019-05-30 03:30:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 363.66 Mbit/s

95th percentile per-packet one-way delay: 2.115 ms

Loss rate: 0.29%

-- Flow 1:

Average throughput: 199.96 Mbit/s

95th percentile per-packet one-way delay: 1.260 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 164.49 Mbit/s

95th percentile per-packet one-way delay: 2.369 ms

Loss rate: 0.50%

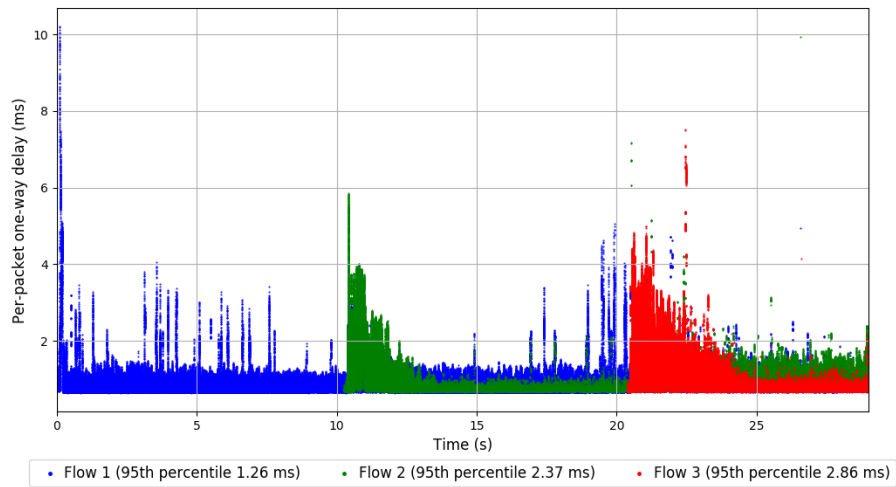
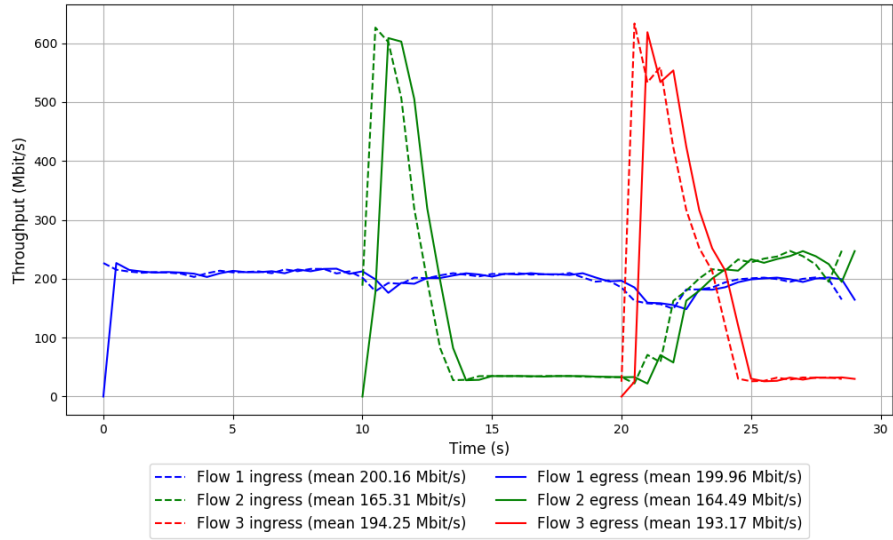
-- Flow 3:

Average throughput: 193.17 Mbit/s

95th percentile per-packet one-way delay: 2.859 ms

Loss rate: 0.55%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-05-30 01:54:59

End at: 2019-05-30 01:55:29

Local clock offset: 5.727 ms

Remote clock offset: 0.326 ms

Below is generated by plot.py at 2019-05-30 03:30:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 197.81 Mbit/s

95th percentile per-packet one-way delay: 2.049 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 68.50 Mbit/s

95th percentile per-packet one-way delay: 2.529 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 81.53 Mbit/s

95th percentile per-packet one-way delay: 1.908 ms

Loss rate: 0.08%

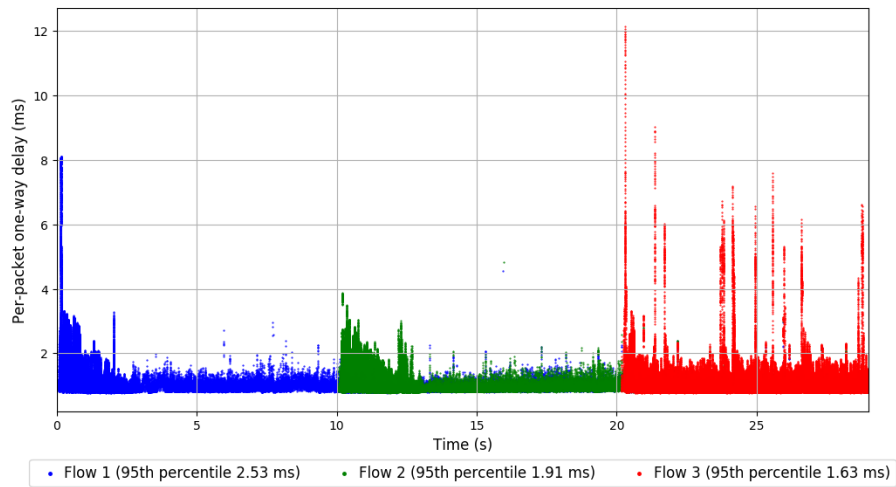
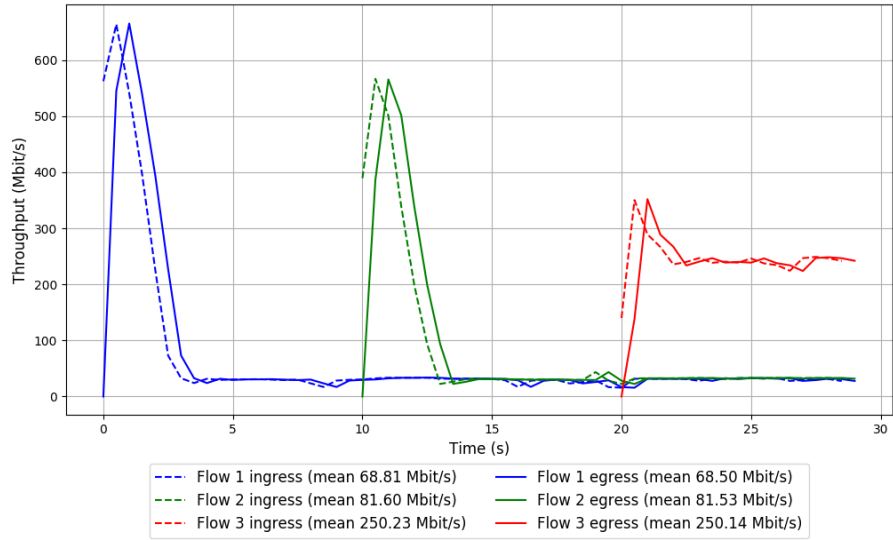
-- Flow 3:

Average throughput: 250.14 Mbit/s

95th percentile per-packet one-way delay: 1.632 ms

Loss rate: 0.04%

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-05-30 02:24:47
End at: 2019-05-30 02:25:17
Local clock offset: 6.116 ms
Remote clock offset: -0.087 ms

Below is generated by plot.py at 2019-05-30 03:30:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 191.24 Mbit/s
95th percentile per-packet one-way delay: 1.972 ms
Loss rate: 0.09%

-- Flow 1:

Average throughput: 69.30 Mbit/s
95th percentile per-packet one-way delay: 1.500 ms
Loss rate: 0.04%

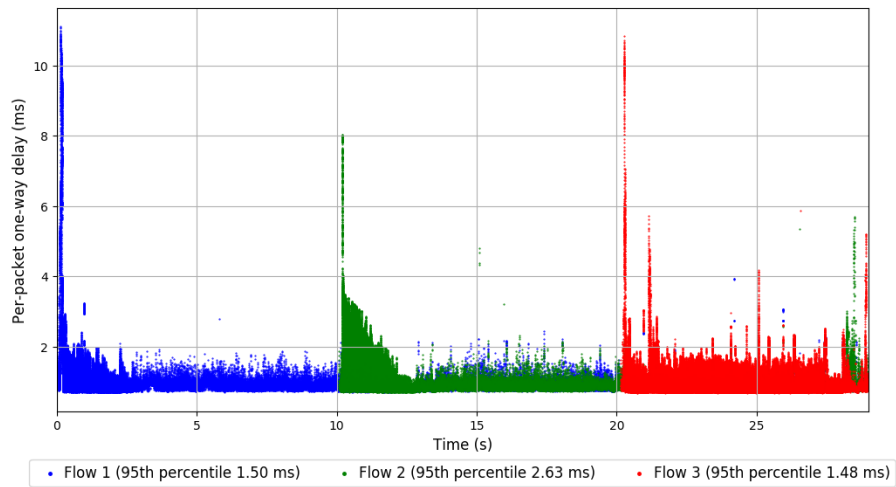
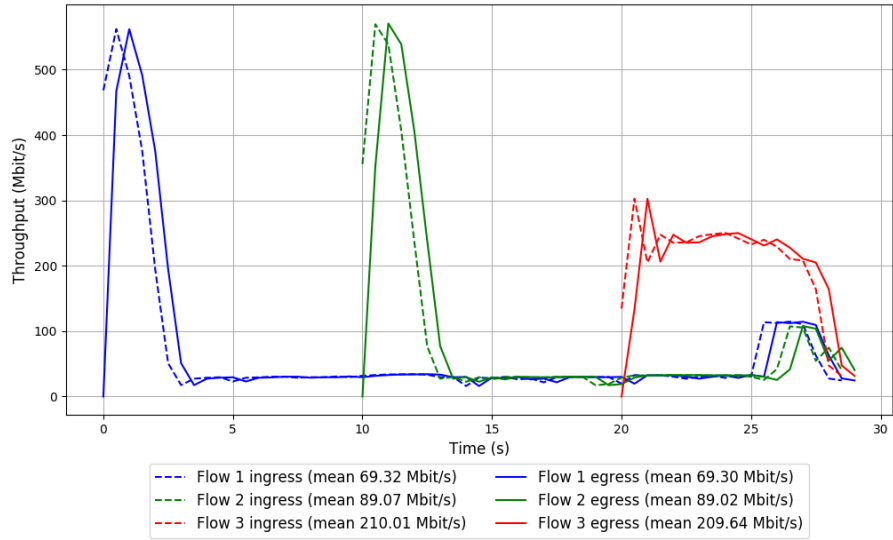
-- Flow 2:

Average throughput: 89.02 Mbit/s
95th percentile per-packet one-way delay: 2.626 ms
Loss rate: 0.05%

-- Flow 3:

Average throughput: 209.64 Mbit/s
95th percentile per-packet one-way delay: 1.484 ms
Loss rate: 0.18%

Run 5: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2019-05-30 00:43:51

End at: 2019-05-30 00:44:21

Local clock offset: 5.024 ms

Remote clock offset: 0.522 ms

Below is generated by plot.py at 2019-05-30 03:30:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 237.85 Mbit/s

95th percentile per-packet one-way delay: 1.300 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 121.70 Mbit/s

95th percentile per-packet one-way delay: 1.225 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 132.12 Mbit/s

95th percentile per-packet one-way delay: 1.363 ms

Loss rate: 0.04%

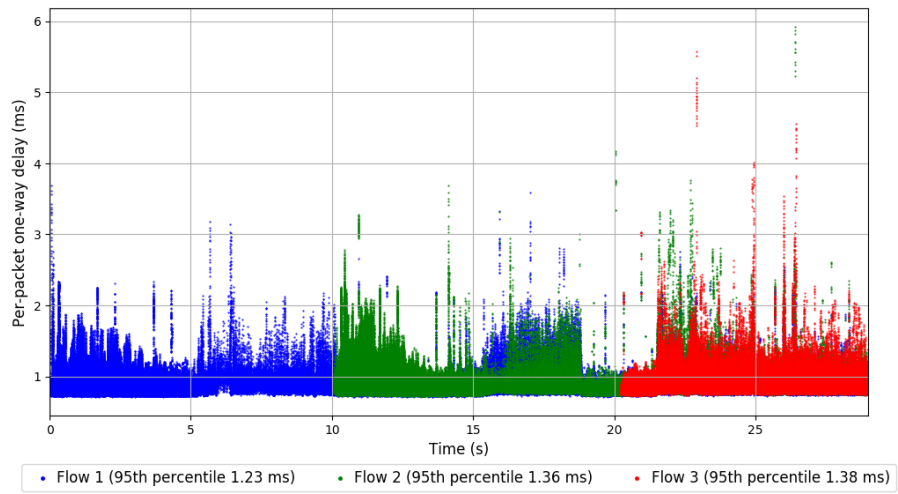
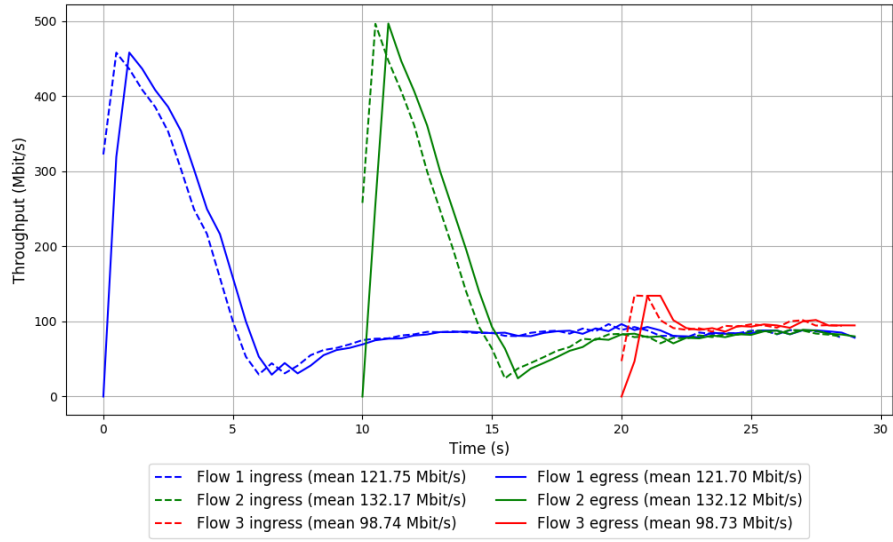
-- Flow 3:

Average throughput: 98.73 Mbit/s

95th percentile per-packet one-way delay: 1.384 ms

Loss rate: 0.01%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-05-30 01:13:36

End at: 2019-05-30 01:14:06

Local clock offset: 5.343 ms

Remote clock offset: 0.708 ms

Below is generated by plot.py at 2019-05-30 03:30:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 173.52 Mbit/s

95th percentile per-packet one-way delay: 1.333 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 99.37 Mbit/s

95th percentile per-packet one-way delay: 1.271 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 80.80 Mbit/s

95th percentile per-packet one-way delay: 1.411 ms

Loss rate: 0.01%

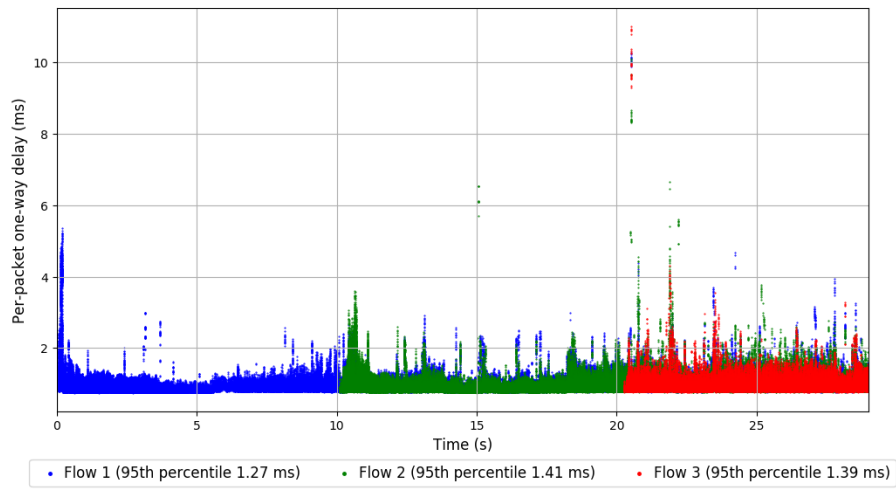
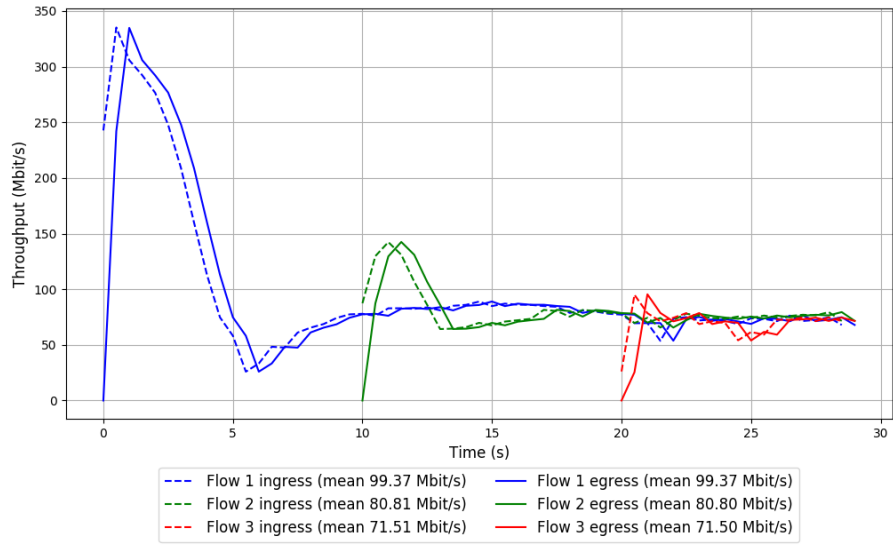
-- Flow 3:

Average throughput: 71.50 Mbit/s

95th percentile per-packet one-way delay: 1.385 ms

Loss rate: 0.01%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-05-30 01:43:36

End at: 2019-05-30 01:44:06

Local clock offset: 5.667 ms

Remote clock offset: 0.394 ms

Below is generated by plot.py at 2019-05-30 03:30:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 211.29 Mbit/s

95th percentile per-packet one-way delay: 1.395 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 127.74 Mbit/s

95th percentile per-packet one-way delay: 1.394 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 83.32 Mbit/s

95th percentile per-packet one-way delay: 1.368 ms

Loss rate: 0.05%

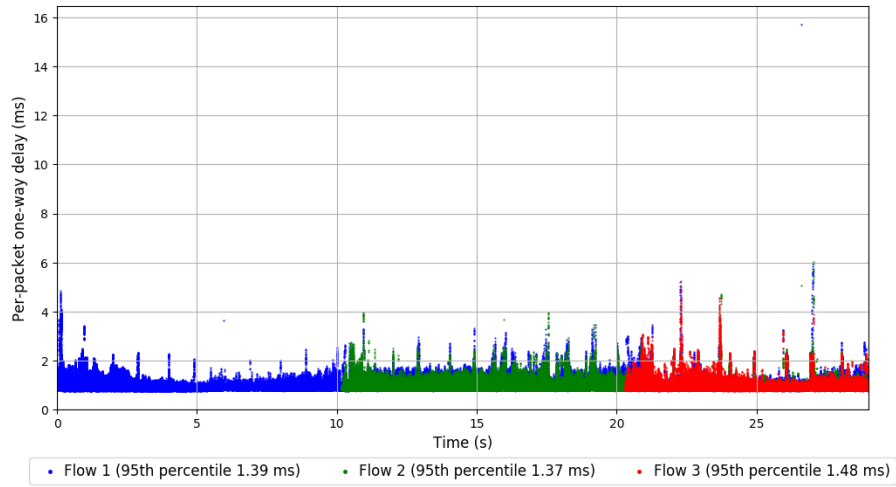
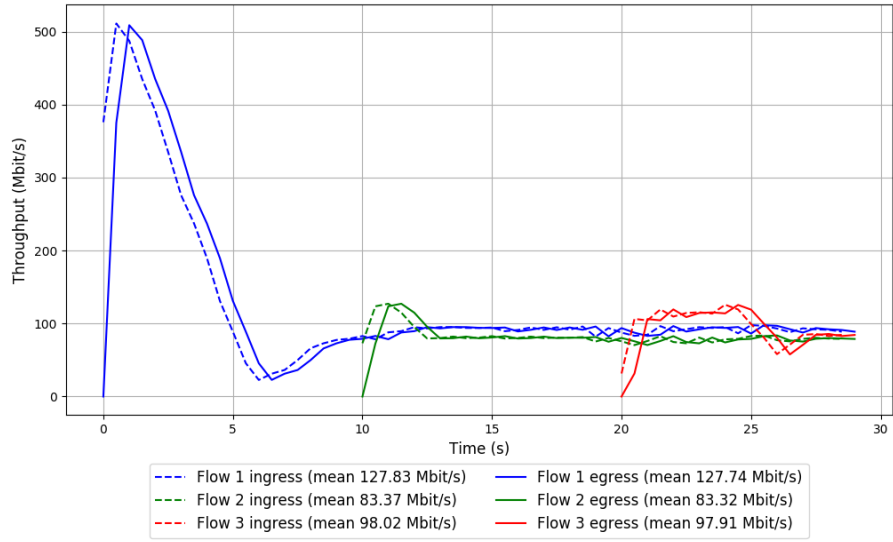
-- Flow 3:

Average throughput: 97.91 Mbit/s

95th percentile per-packet one-way delay: 1.482 ms

Loss rate: 0.11%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-05-30 02:13:22

End at: 2019-05-30 02:13:52

Local clock offset: 5.896 ms

Remote clock offset: 0.041 ms

Below is generated by plot.py at 2019-05-30 03:30:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 183.94 Mbit/s

95th percentile per-packet one-way delay: 1.417 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 87.06 Mbit/s

95th percentile per-packet one-way delay: 1.459 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 111.94 Mbit/s

95th percentile per-packet one-way delay: 1.364 ms

Loss rate: 0.04%

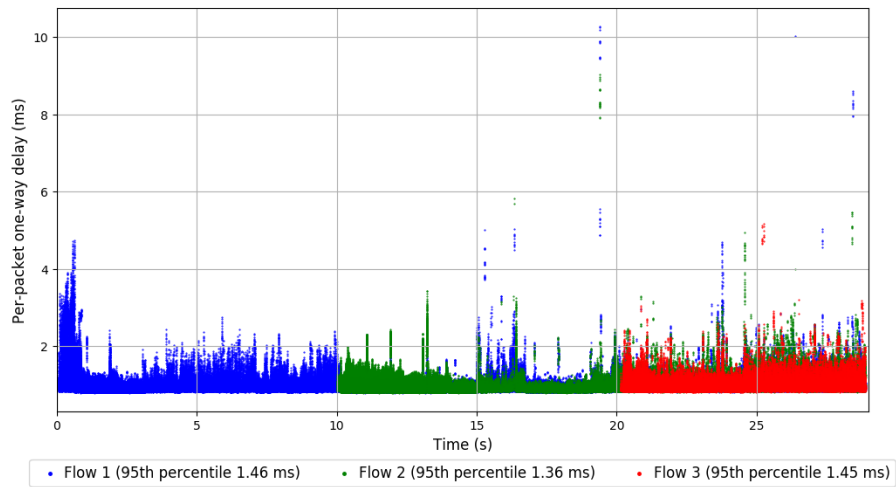
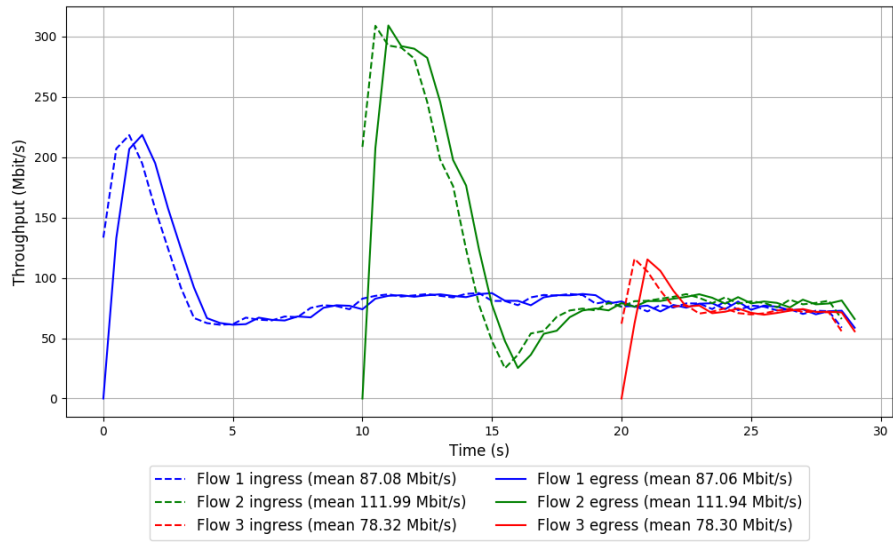
-- Flow 3:

Average throughput: 78.30 Mbit/s

95th percentile per-packet one-way delay: 1.446 ms

Loss rate: 0.02%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-05-30 02:43:13

End at: 2019-05-30 02:43:43

Local clock offset: 5.936 ms

Remote clock offset: 0.377 ms

Below is generated by plot.py at 2019-05-30 03:31:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 204.09 Mbit/s

95th percentile per-packet one-way delay: 1.318 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 104.68 Mbit/s

95th percentile per-packet one-way delay: 1.242 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 107.09 Mbit/s

95th percentile per-packet one-way delay: 1.412 ms

Loss rate: 0.05%

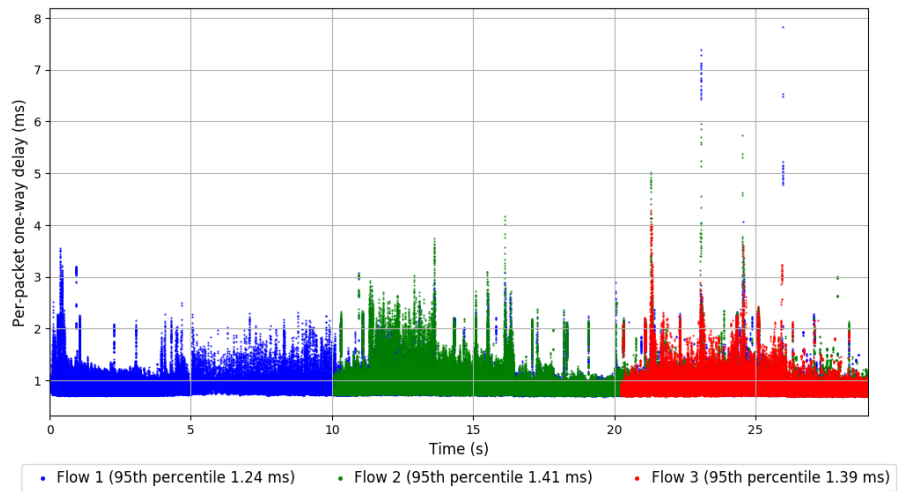
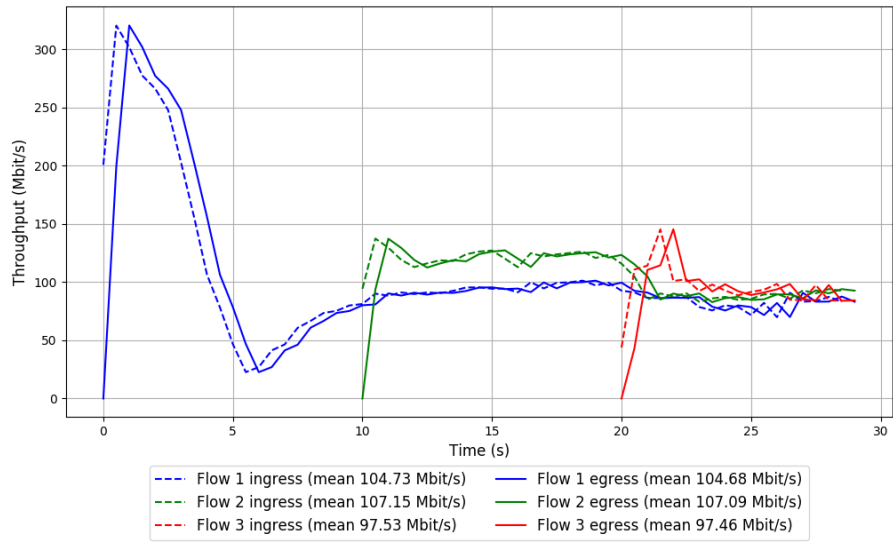
-- Flow 3:

Average throughput: 97.46 Mbit/s

95th percentile per-packet one-way delay: 1.390 ms

Loss rate: 0.07%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MuseST

Start at: 2019-05-30 00:53:45

End at: 2019-05-30 00:54:15

Local clock offset: 5.128 ms

Remote clock offset: 0.467 ms

Below is generated by plot.py at 2019-05-30 03:34:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 523.25 Mbit/s

95th percentile per-packet one-way delay: 1.596 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 291.93 Mbit/s

95th percentile per-packet one-way delay: 1.492 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 256.57 Mbit/s

95th percentile per-packet one-way delay: 1.619 ms

Loss rate: 0.11%

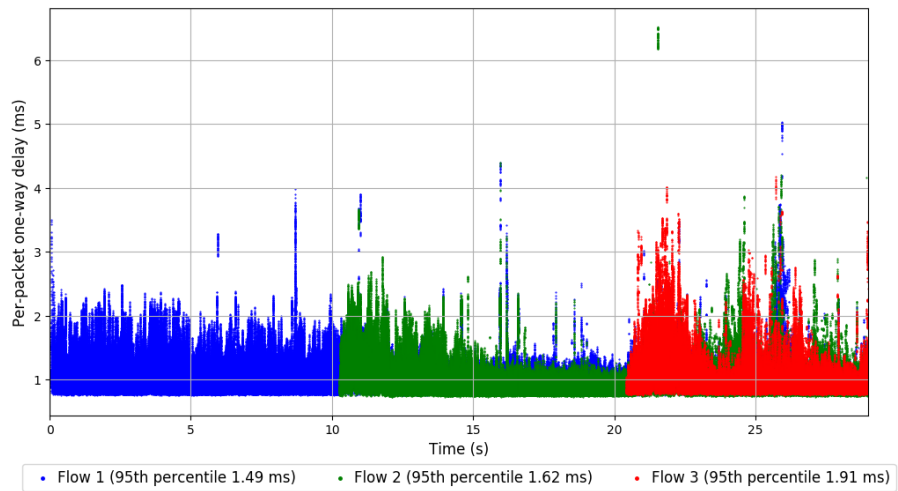
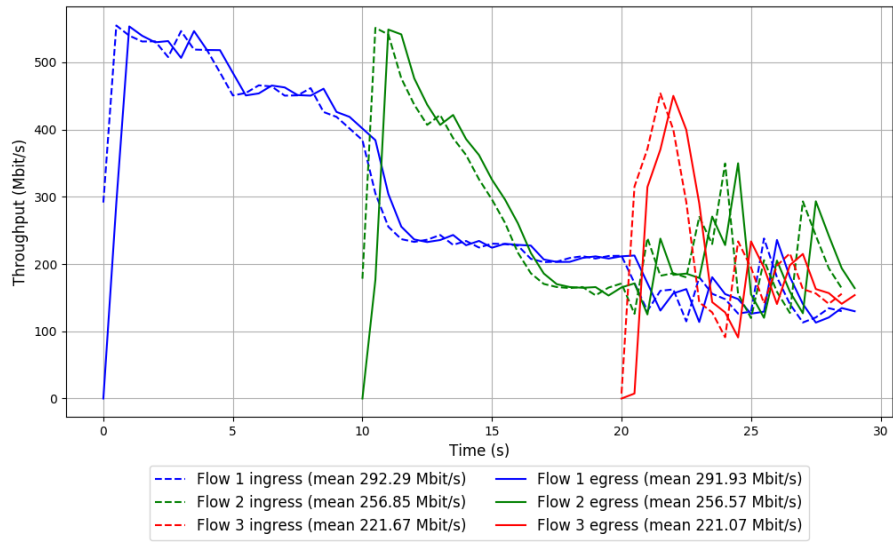
-- Flow 3:

Average throughput: 221.07 Mbit/s

95th percentile per-packet one-way delay: 1.905 ms

Loss rate: 0.26%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MuseST

Start at: 2019-05-30 01:23:31

End at: 2019-05-30 01:24:01

Local clock offset: 5.512 ms

Remote clock offset: 0.516 ms

Below is generated by plot.py at 2019-05-30 03:35:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 514.31 Mbit/s

95th percentile per-packet one-way delay: 1.524 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 282.68 Mbit/s

95th percentile per-packet one-way delay: 1.493 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 258.37 Mbit/s

95th percentile per-packet one-way delay: 1.469 ms

Loss rate: 0.05%

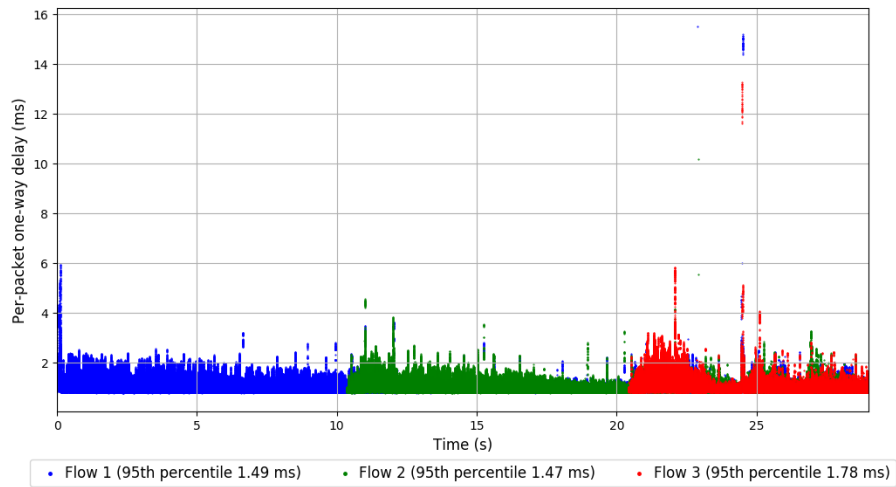
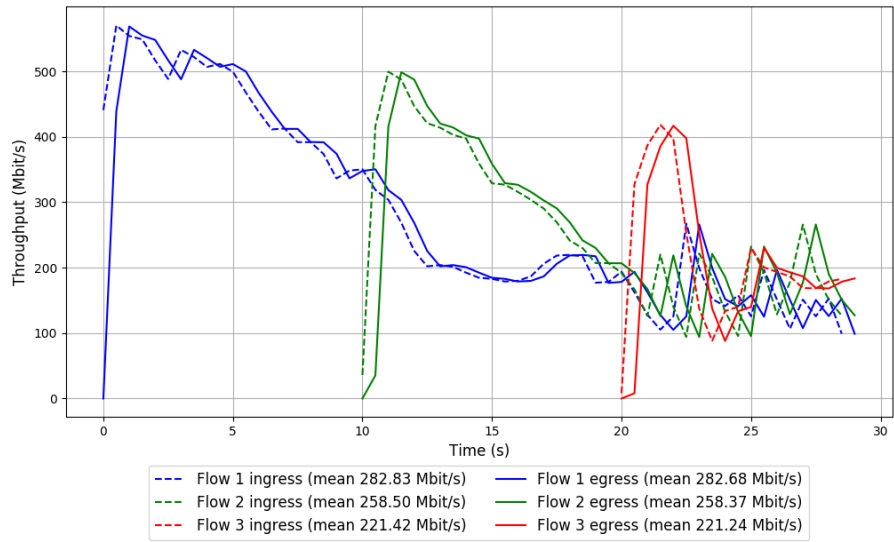
-- Flow 3:

Average throughput: 221.24 Mbit/s

95th percentile per-packet one-way delay: 1.782 ms

Loss rate: 0.08%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MuseST

Start at: 2019-05-30 01:53:29

End at: 2019-05-30 01:53:59

Local clock offset: 5.7 ms

Remote clock offset: 0.402 ms

Below is generated by plot.py at 2019-05-30 03:35:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 480.39 Mbit/s

95th percentile per-packet one-way delay: 1.571 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 283.93 Mbit/s

95th percentile per-packet one-way delay: 1.478 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 203.35 Mbit/s

95th percentile per-packet one-way delay: 1.611 ms

Loss rate: 0.08%

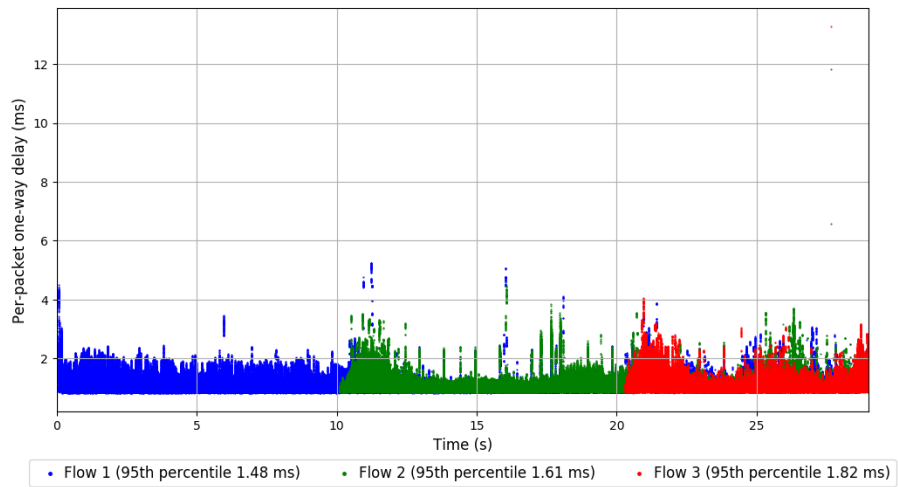
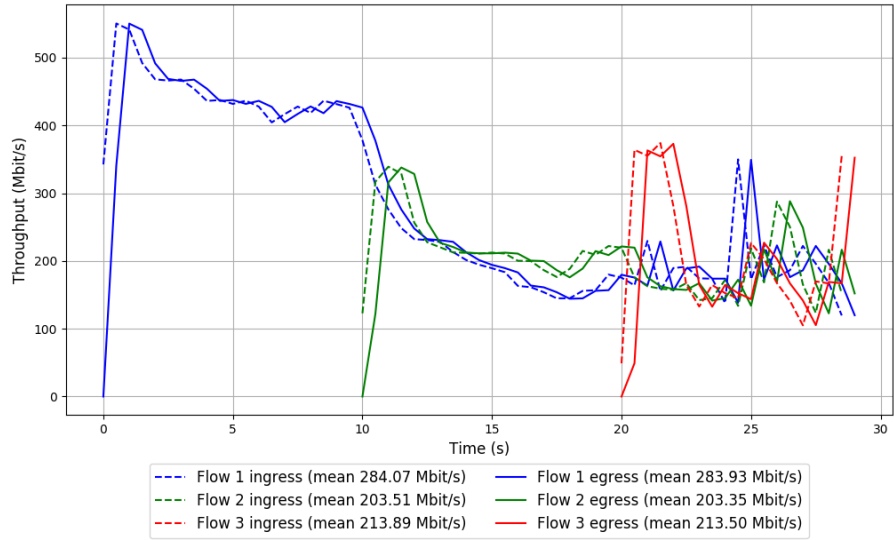
-- Flow 3:

Average throughput: 213.50 Mbit/s

95th percentile per-packet one-way delay: 1.825 ms

Loss rate: 0.18%

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MuseST

Start at: 2019-05-30 02:23:16
End at: 2019-05-30 02:23:46
Local clock offset: 6.082 ms
Remote clock offset: -0.035 ms

Below is generated by plot.py at 2019-05-30 03:35:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 508.75 Mbit/s
95th percentile per-packet one-way delay: 1.517 ms
Loss rate: 0.06%

-- Flow 1:

Average throughput: 302.67 Mbit/s
95th percentile per-packet one-way delay: 1.433 ms
Loss rate: 0.05%

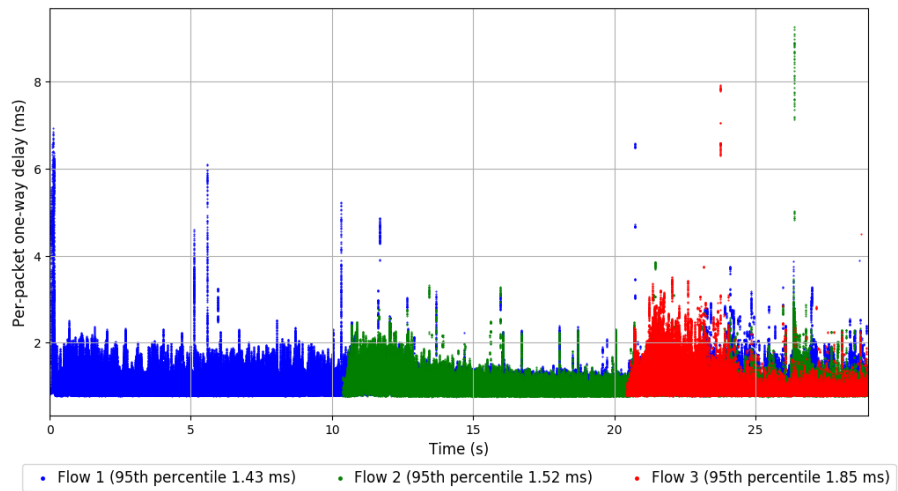
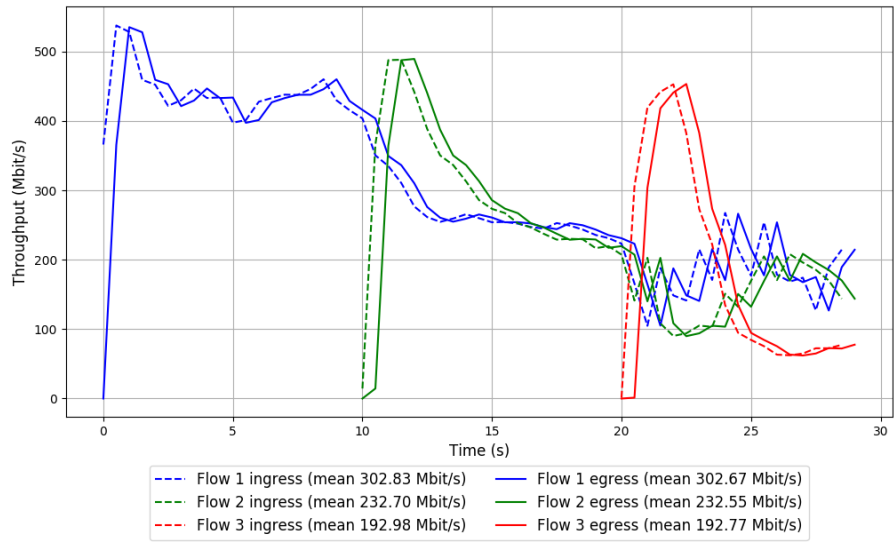
-- Flow 2:

Average throughput: 232.55 Mbit/s
95th percentile per-packet one-way delay: 1.516 ms
Loss rate: 0.06%

-- Flow 3:

Average throughput: 192.77 Mbit/s
95th percentile per-packet one-way delay: 1.851 ms
Loss rate: 0.11%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MuseST

Start at: 2019-05-30 02:53:06

End at: 2019-05-30 02:53:36

Local clock offset: 5.652 ms

Remote clock offset: 0.321 ms

Below is generated by plot.py at 2019-05-30 03:35:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 472.44 Mbit/s

95th percentile per-packet one-way delay: 1.383 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 279.42 Mbit/s

95th percentile per-packet one-way delay: 1.389 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 220.60 Mbit/s

95th percentile per-packet one-way delay: 1.380 ms

Loss rate: 0.15%

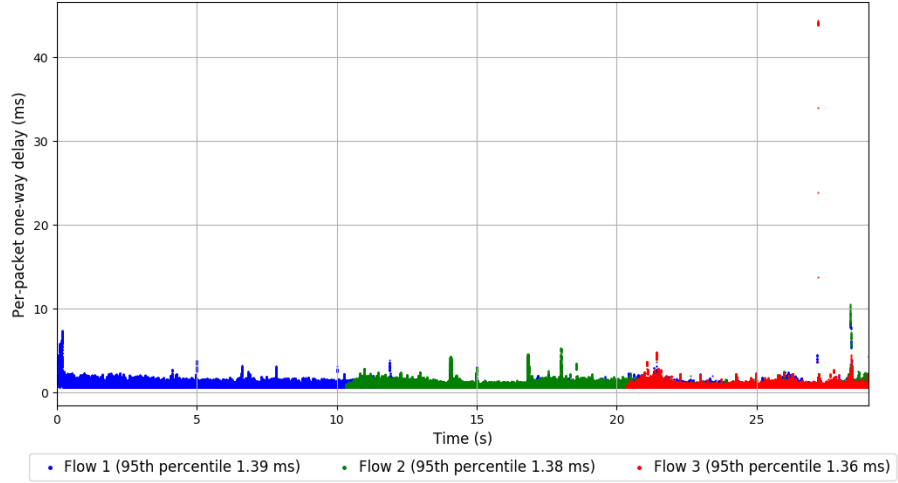
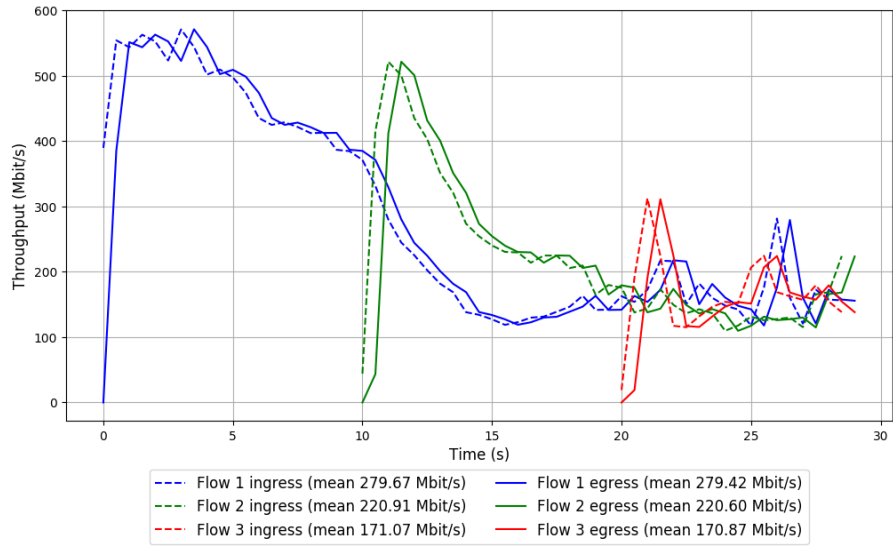
-- Flow 3:

Average throughput: 170.87 Mbit/s

95th percentile per-packet one-way delay: 1.360 ms

Loss rate: 0.11%

Run 5: Report of Indigo-MusesT — Data Link



Run 1: Statistics of LEDBAT

Start at: 2019-05-30 00:36:41

End at: 2019-05-30 00:37:11

Local clock offset: 4.928 ms

Remote clock offset: 0.323 ms

Below is generated by plot.py at 2019-05-30 03:37:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 585.40 Mbit/s

95th percentile per-packet one-way delay: 8.654 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 287.58 Mbit/s

95th percentile per-packet one-way delay: 8.861 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 289.74 Mbit/s

95th percentile per-packet one-way delay: 8.319 ms

Loss rate: 0.24%

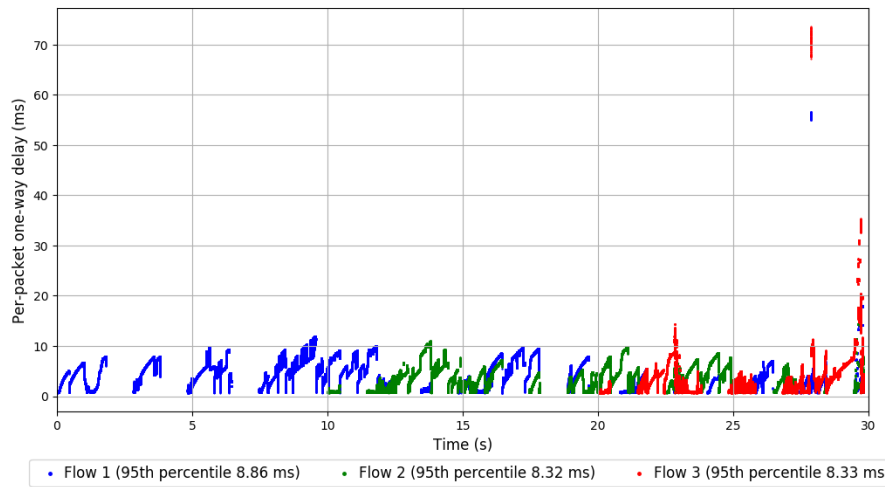
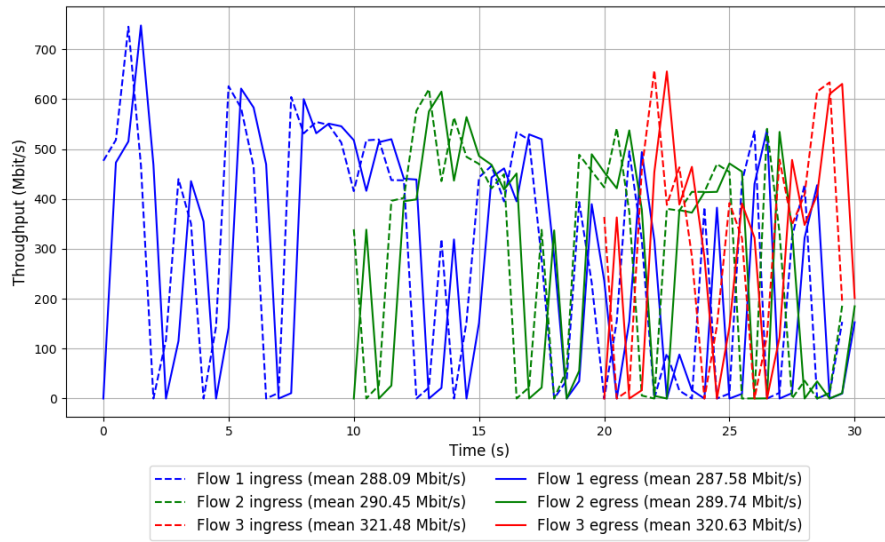
-- Flow 3:

Average throughput: 320.63 Mbit/s

95th percentile per-packet one-way delay: 8.334 ms

Loss rate: 0.25%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-05-30 01:06:24

End at: 2019-05-30 01:06:54

Local clock offset: 5.13 ms

Remote clock offset: 0.585 ms

Below is generated by plot.py at 2019-05-30 03:37:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 576.48 Mbit/s

95th percentile per-packet one-way delay: 8.491 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 373.02 Mbit/s

95th percentile per-packet one-way delay: 8.958 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 211.98 Mbit/s

95th percentile per-packet one-way delay: 7.597 ms

Loss rate: 0.46%

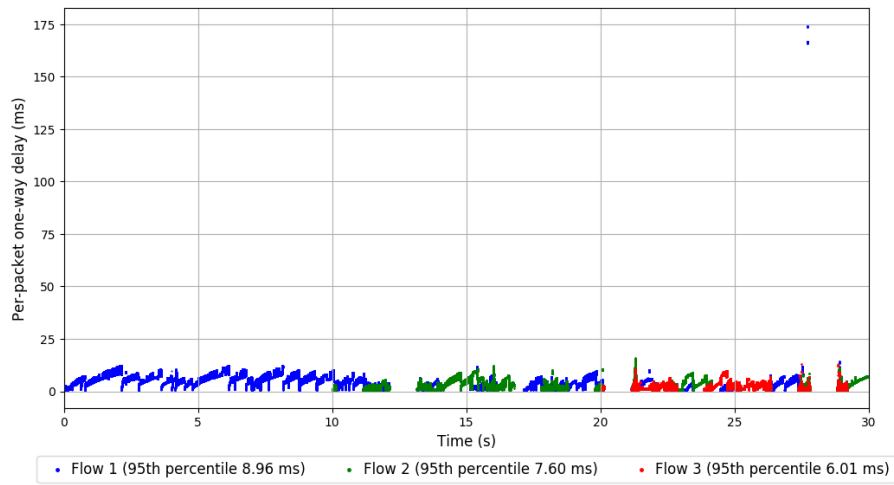
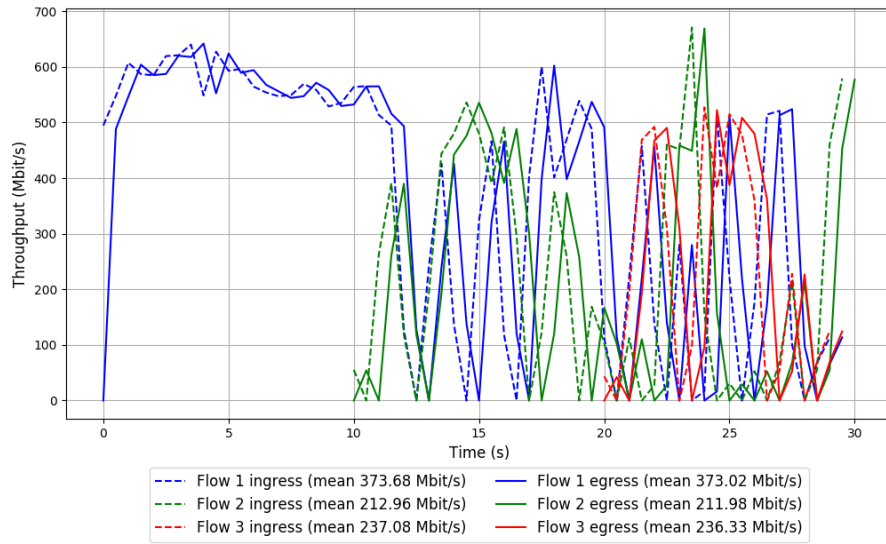
-- Flow 3:

Average throughput: 236.33 Mbit/s

95th percentile per-packet one-way delay: 6.010 ms

Loss rate: 0.32%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-05-30 01:36:22

End at: 2019-05-30 01:36:52

Local clock offset: 5.582 ms

Remote clock offset: 0.229 ms

Below is generated by plot.py at 2019-05-30 03:38:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 621.46 Mbit/s

95th percentile per-packet one-way delay: 7.783 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 388.67 Mbit/s

95th percentile per-packet one-way delay: 7.972 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 250.12 Mbit/s

95th percentile per-packet one-way delay: 6.511 ms

Loss rate: 0.30%

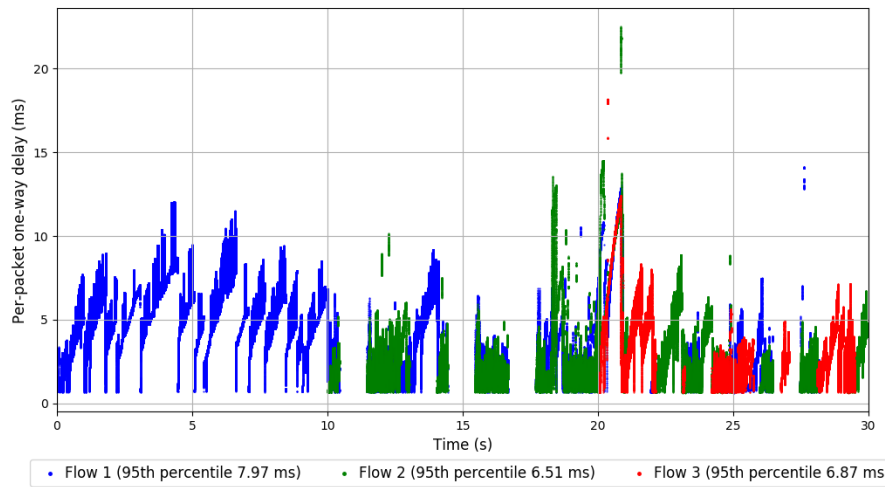
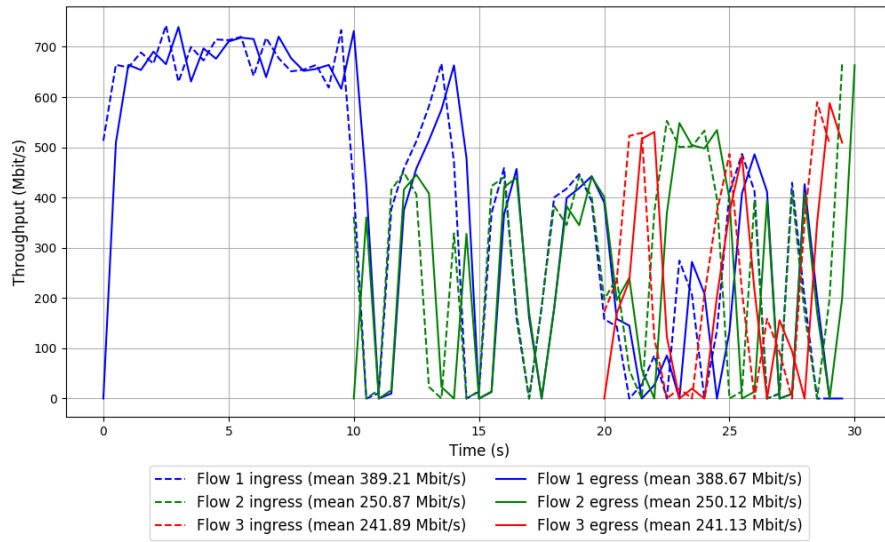
-- Flow 3:

Average throughput: 241.13 Mbit/s

95th percentile per-packet one-way delay: 6.869 ms

Loss rate: 0.31%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-05-30 02:06:12

End at: 2019-05-30 02:06:42

Local clock offset: 5.744 ms

Remote clock offset: 0.09 ms

Below is generated by plot.py at 2019-05-30 03:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 544.93 Mbit/s

95th percentile per-packet one-way delay: 7.177 ms

Loss rate: 0.22%

-- Flow 1:

Average throughput: 292.47 Mbit/s

95th percentile per-packet one-way delay: 7.693 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 229.00 Mbit/s

95th percentile per-packet one-way delay: 5.864 ms

Loss rate: 0.34%

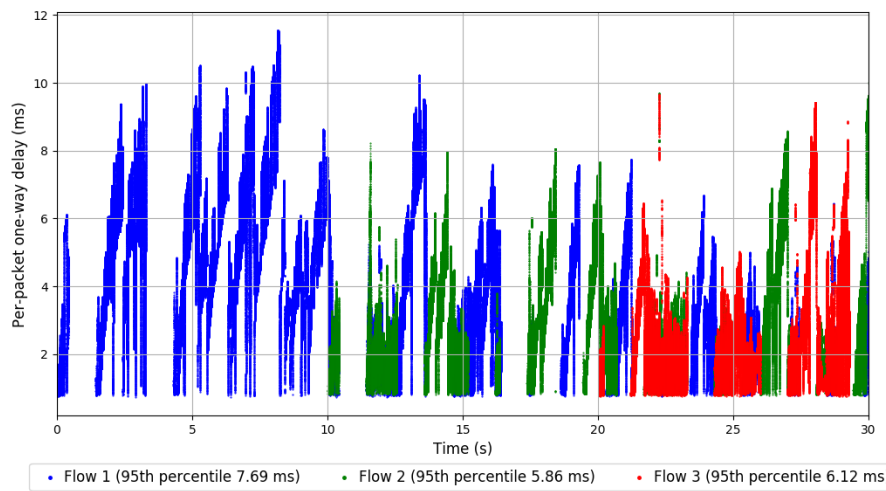
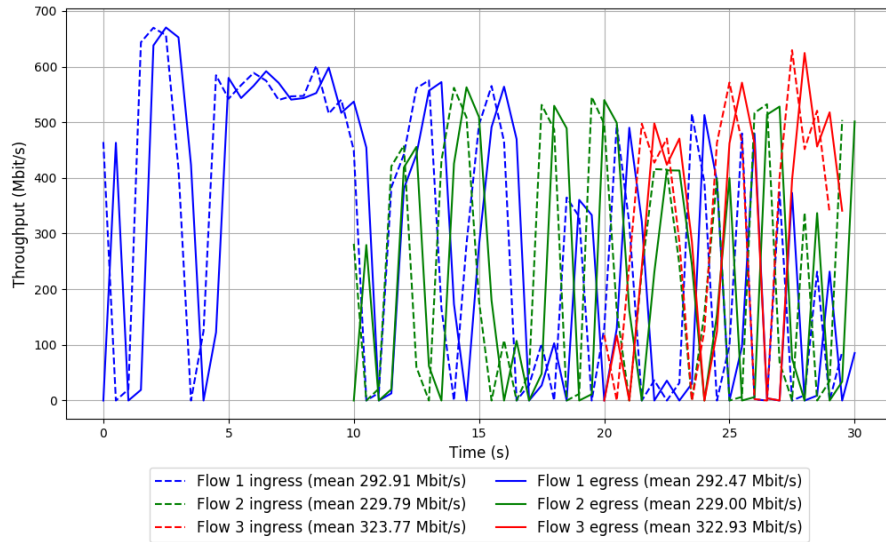
-- Flow 3:

Average throughput: 322.93 Mbit/s

95th percentile per-packet one-way delay: 6.124 ms

Loss rate: 0.24%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-05-30 02:36:10

End at: 2019-05-30 02:36:40

Local clock offset: 6.218 ms

Remote clock offset: 0.251 ms

Below is generated by plot.py at 2019-05-30 03:41:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 487.24 Mbit/s

95th percentile per-packet one-way delay: 7.334 ms

Loss rate: 0.30%

-- Flow 1:

Average throughput: 234.47 Mbit/s

95th percentile per-packet one-way delay: 7.587 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 286.01 Mbit/s

95th percentile per-packet one-way delay: 6.859 ms

Loss rate: 0.33%

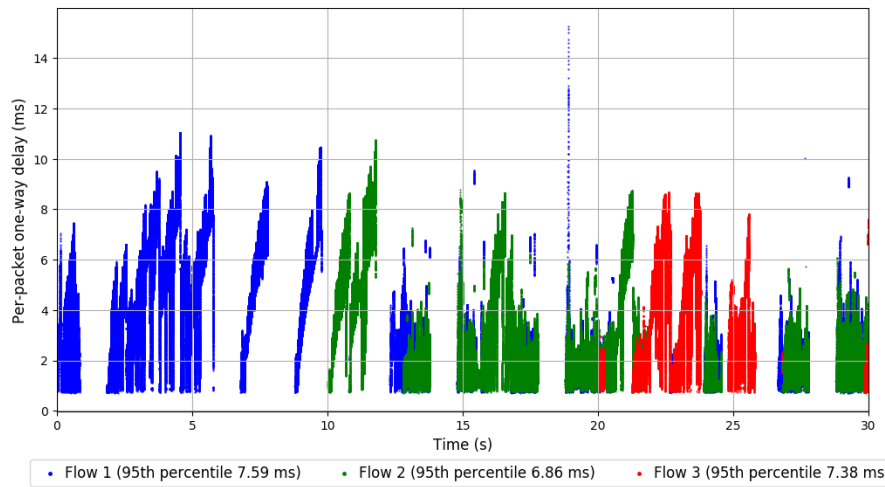
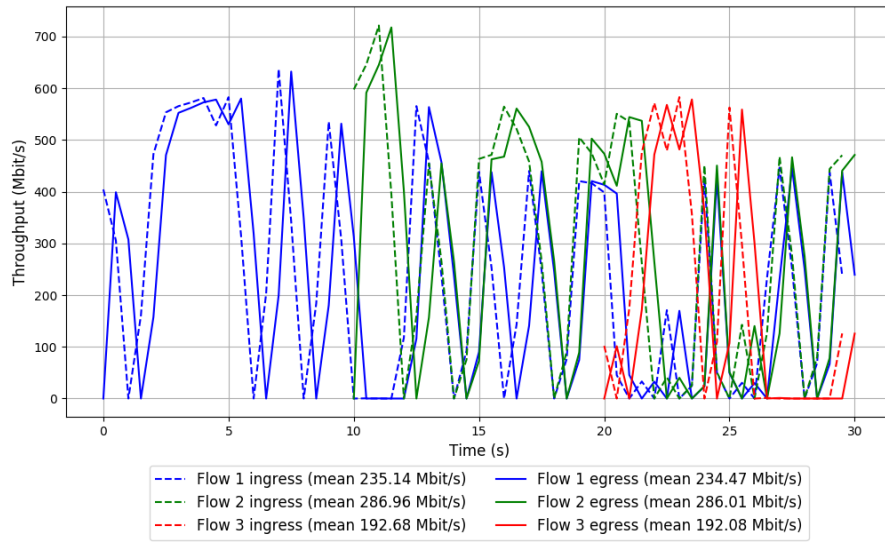
-- Flow 3:

Average throughput: 192.08 Mbit/s

95th percentile per-packet one-way delay: 7.380 ms

Loss rate: 0.30%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-05-30 00:28:27

End at: 2019-05-30 00:28:57

Local clock offset: 4.992 ms

Remote clock offset: 0.151 ms

Below is generated by plot.py at 2019-05-30 03:44:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 707.53 Mbit/s

95th percentile per-packet one-way delay: 1.171 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 659.60 Mbit/s

95th percentile per-packet one-way delay: 1.179 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 60.43 Mbit/s

95th percentile per-packet one-way delay: 1.083 ms

Loss rate: 0.13%

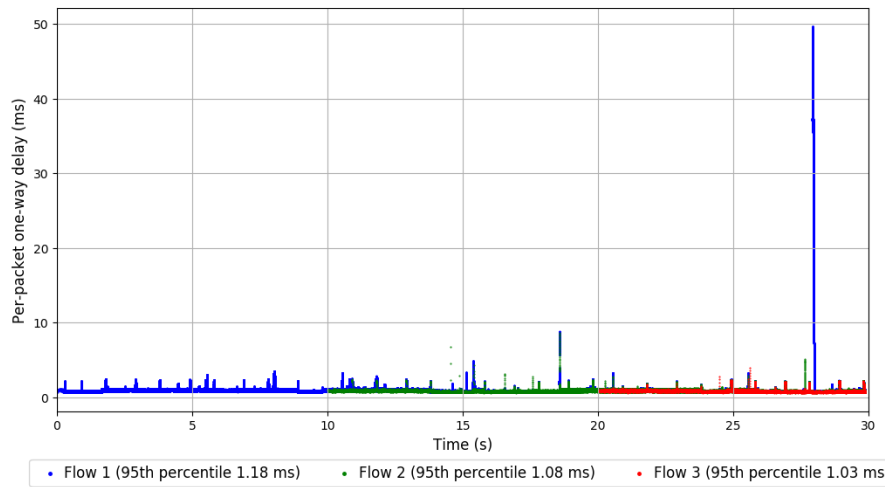
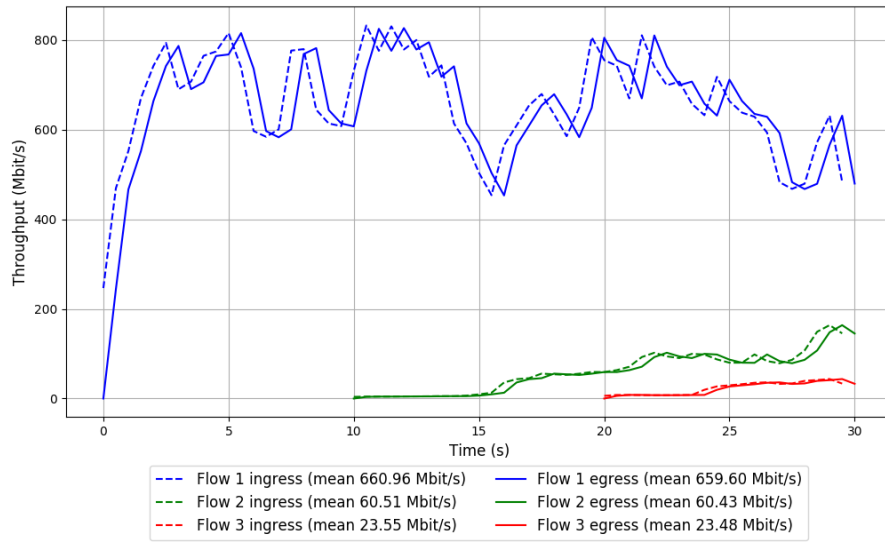
-- Flow 3:

Average throughput: 23.48 Mbit/s

95th percentile per-packet one-way delay: 1.028 ms

Loss rate: 0.29%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-05-30 00:58:20

End at: 2019-05-30 00:58:50

Local clock offset: 5.125 ms

Remote clock offset: 0.504 ms

Below is generated by plot.py at 2019-05-30 03:44:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 253.00 Mbit/s

95th percentile per-packet one-way delay: 1.771 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 105.33 Mbit/s

95th percentile per-packet one-way delay: 1.417 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 176.33 Mbit/s

95th percentile per-packet one-way delay: 1.829 ms

Loss rate: 0.16%

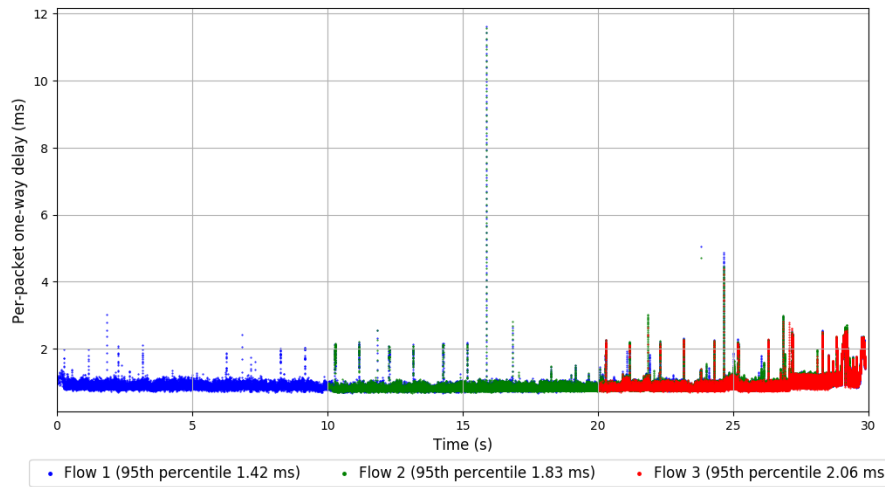
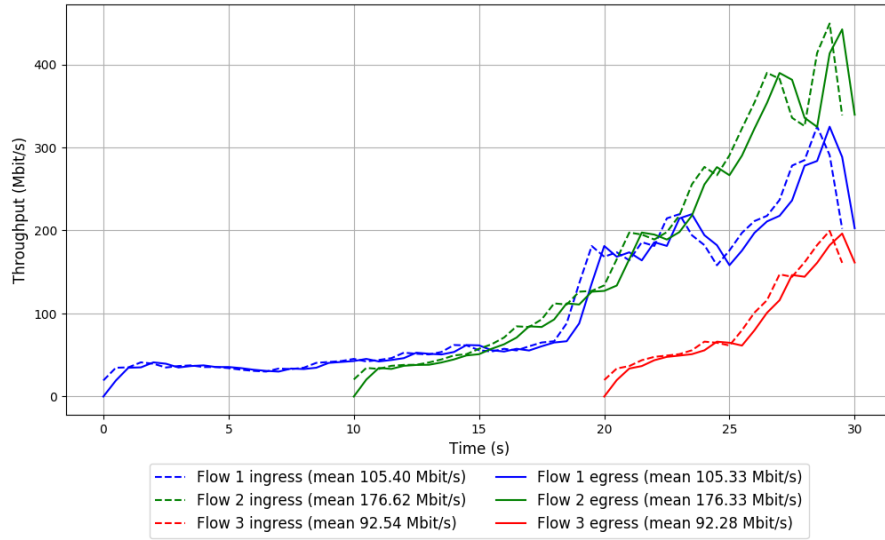
-- Flow 3:

Average throughput: 92.28 Mbit/s

95th percentile per-packet one-way delay: 2.055 ms

Loss rate: 0.28%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-05-30 01:28:10

End at: 2019-05-30 01:28:40

Local clock offset: 5.584 ms

Remote clock offset: 0.452 ms

Below is generated by plot.py at 2019-05-30 03:44:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 604.00 Mbit/s

95th percentile per-packet one-way delay: 2.305 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 227.67 Mbit/s

95th percentile per-packet one-way delay: 2.283 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 556.94 Mbit/s

95th percentile per-packet one-way delay: 2.317 ms

Loss rate: 0.66%

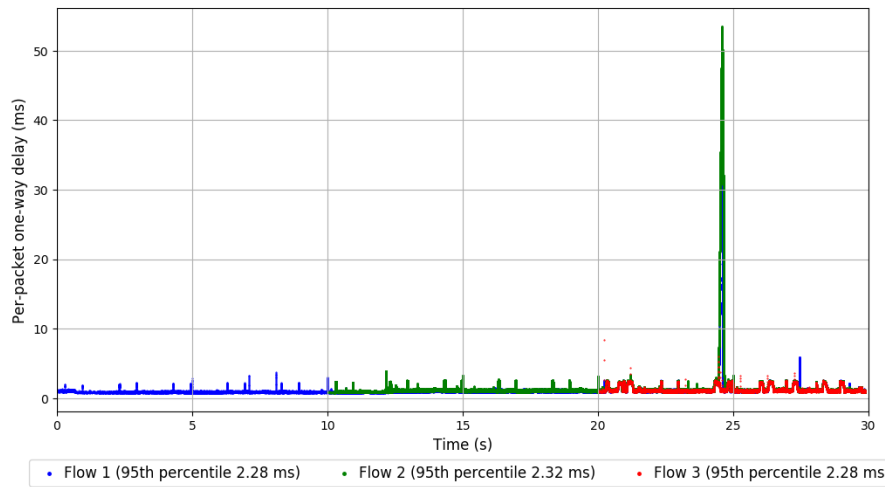
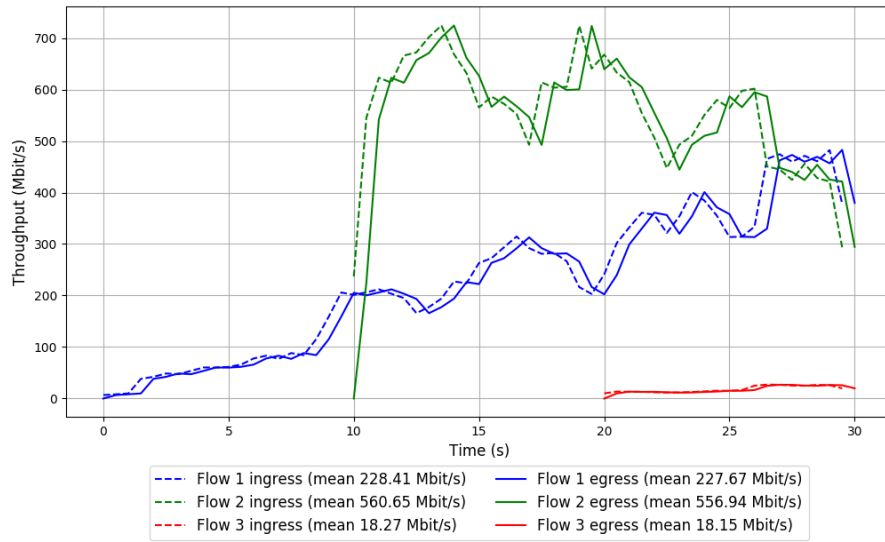
-- Flow 3:

Average throughput: 18.15 Mbit/s

95th percentile per-packet one-way delay: 2.283 ms

Loss rate: 0.65%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-05-30 01:58:01

End at: 2019-05-30 01:58:31

Local clock offset: 5.725 ms

Remote clock offset: 0.138 ms

Below is generated by plot.py at 2019-05-30 03:44:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 566.31 Mbit/s

95th percentile per-packet one-way delay: 2.047 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 319.95 Mbit/s

95th percentile per-packet one-way delay: 1.991 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 271.33 Mbit/s

95th percentile per-packet one-way delay: 2.036 ms

Loss rate: 0.65%

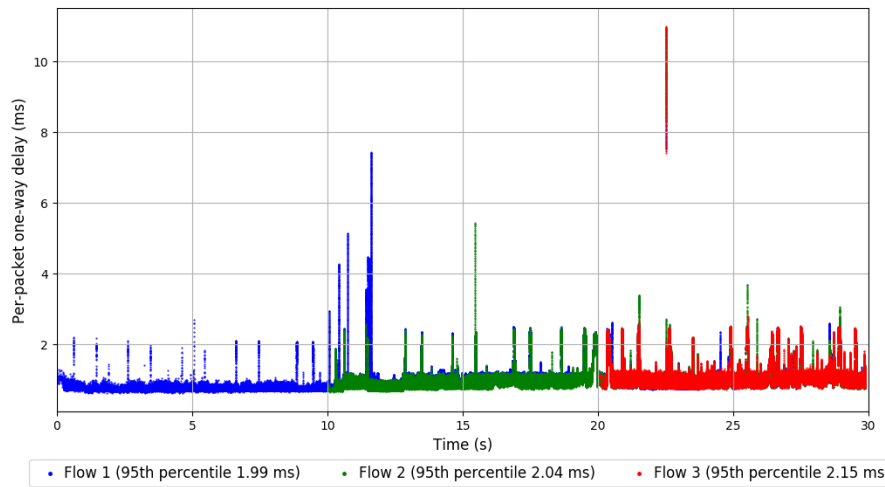
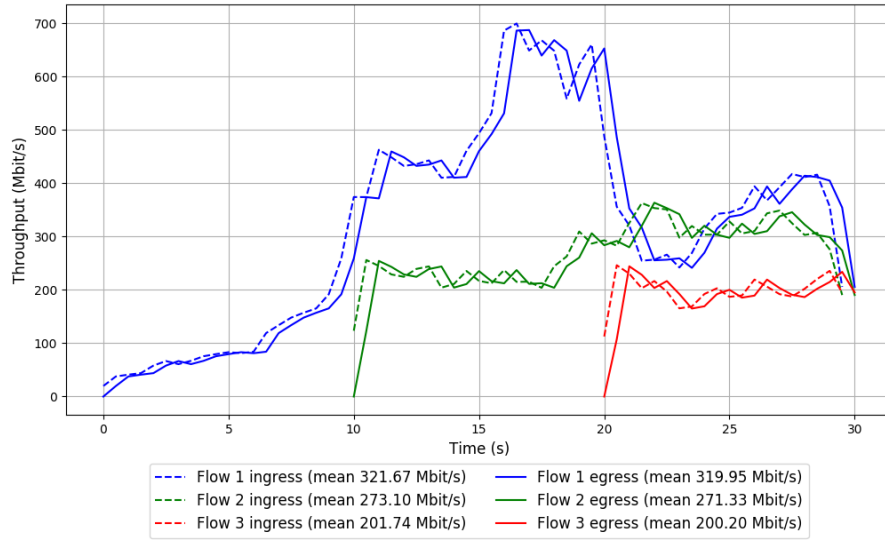
-- Flow 3:

Average throughput: 200.20 Mbit/s

95th percentile per-packet one-way delay: 2.151 ms

Loss rate: 0.77%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-05-30 02:27:49
End at: 2019-05-30 02:28:19
Local clock offset: 6.127 ms
Remote clock offset: -0.014 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 711.40 Mbit/s
95th percentile per-packet one-way delay: 1.623 ms
Loss rate: 0.20%

-- Flow 1:

Average throughput: 675.02 Mbit/s
95th percentile per-packet one-way delay: 1.636 ms
Loss rate: 0.21%

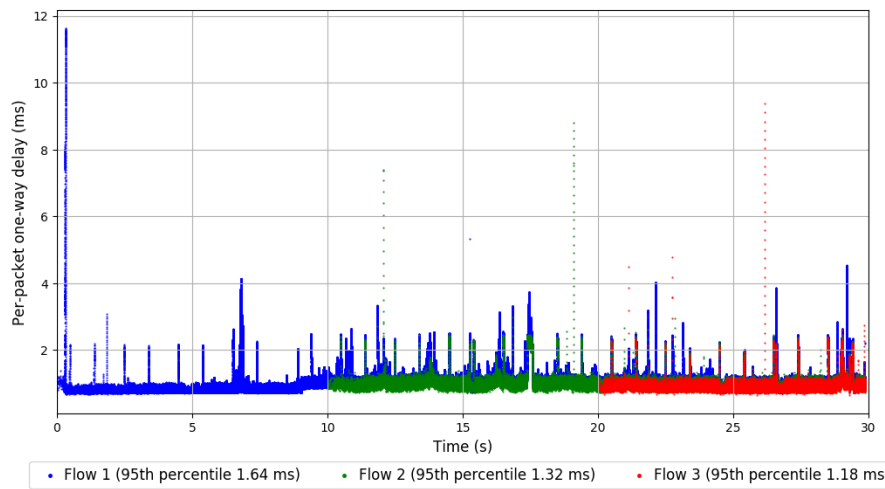
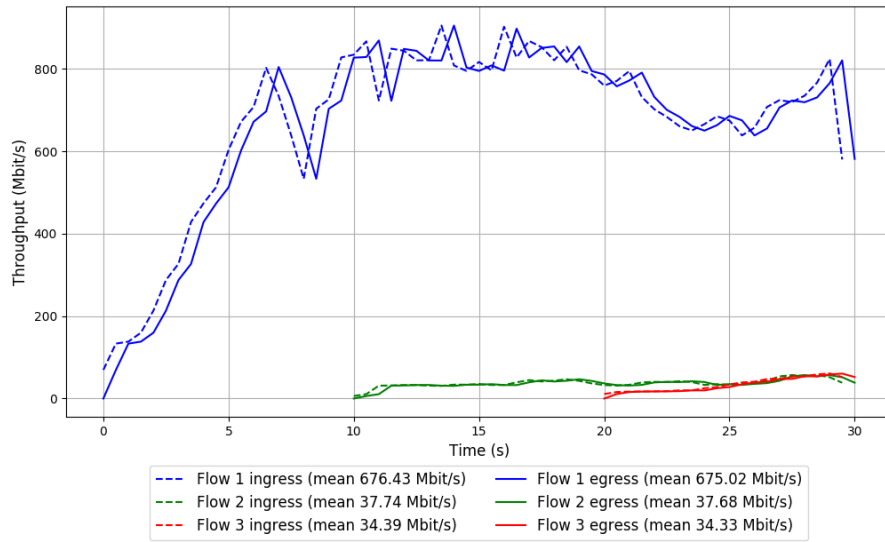
-- Flow 2:

Average throughput: 37.68 Mbit/s
95th percentile per-packet one-way delay: 1.325 ms
Loss rate: 0.16%

-- Flow 3:

Average throughput: 34.33 Mbit/s
95th percentile per-packet one-way delay: 1.179 ms
Loss rate: 0.17%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2019-05-30 00:31:23

End at: 2019-05-30 00:31:53

Local clock offset: 4.988 ms

Remote clock offset: 0.189 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.18 Mbit/s

95th percentile per-packet one-way delay: 1.028 ms

Loss rate: 37.85%

-- Flow 1:

Average throughput: 0.77 Mbit/s

95th percentile per-packet one-way delay: 1.068 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 7.63 Mbit/s

95th percentile per-packet one-way delay: 1.051 ms

Loss rate: 30.85%

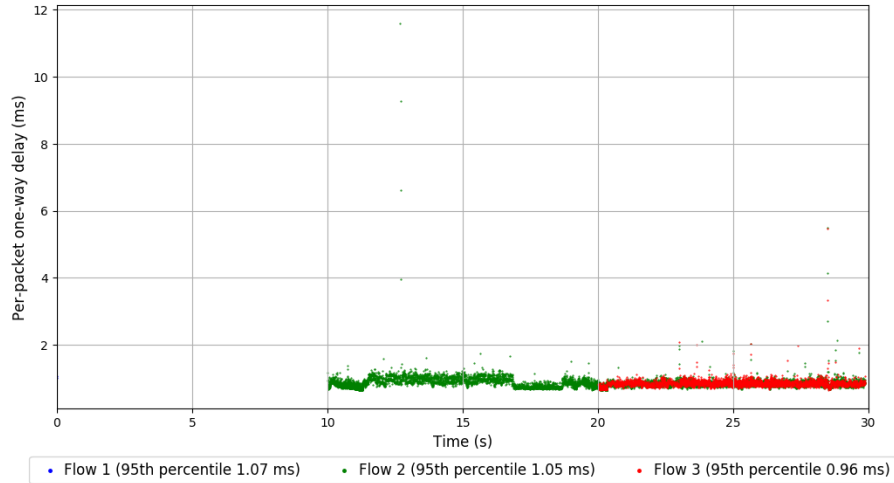
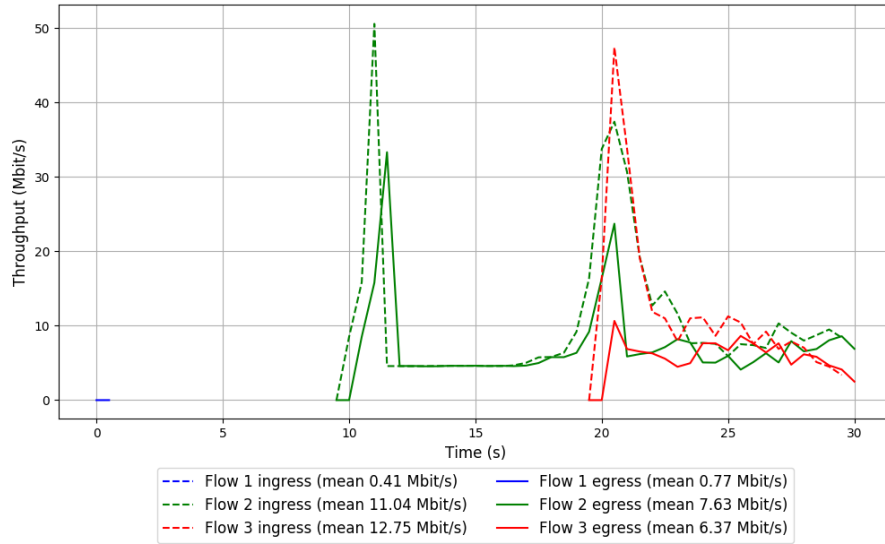
-- Flow 3:

Average throughput: 6.37 Mbit/s

95th percentile per-packet one-way delay: 0.962 ms

Loss rate: 50.05%

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-05-30 01:01:06

End at: 2019-05-30 01:01:36

Local clock offset: 5.138 ms

Remote clock offset: 0.476 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.34 Mbit/s

95th percentile per-packet one-way delay: 1.071 ms

Loss rate: 24.57%

-- Flow 1:

Average throughput: 0.79 Mbit/s

95th percentile per-packet one-way delay: 1.079 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 9.72 Mbit/s

95th percentile per-packet one-way delay: 1.070 ms

Loss rate: 25.24%

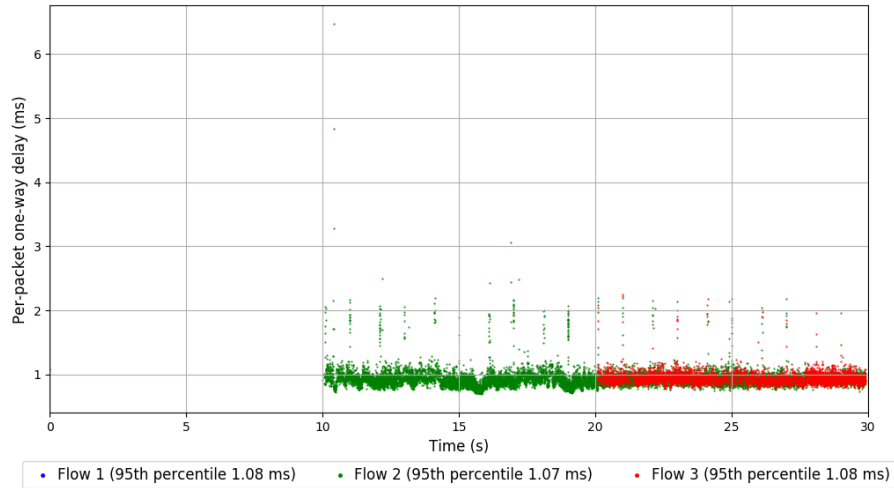
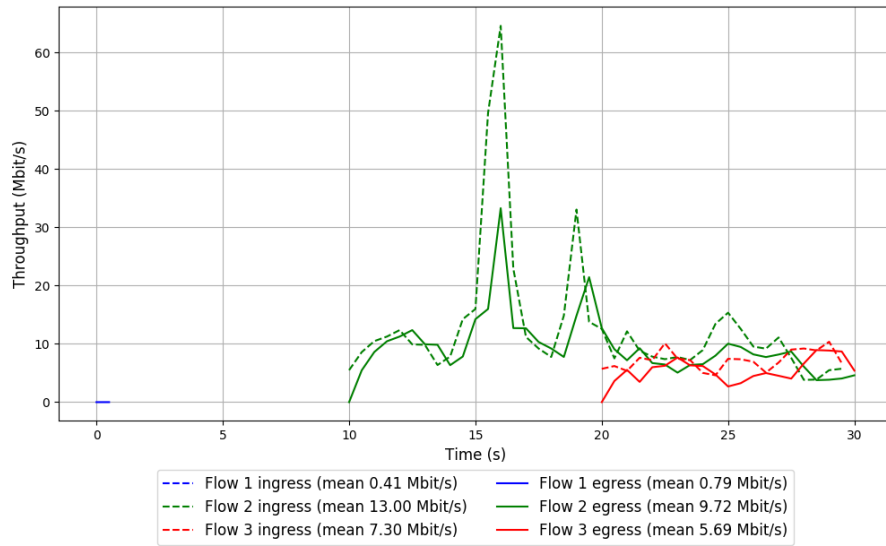
-- Flow 3:

Average throughput: 5.69 Mbit/s

95th percentile per-packet one-way delay: 1.078 ms

Loss rate: 22.14%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-05-30 01:31:03

End at: 2019-05-30 01:31:33

Local clock offset: 5.585 ms

Remote clock offset: 0.399 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.00 Mbit/s

95th percentile per-packet one-way delay: 1.230 ms

Loss rate: 19.76%

-- Flow 1:

Average throughput: 0.74 Mbit/s

95th percentile per-packet one-way delay: 1.223 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 7.51 Mbit/s

95th percentile per-packet one-way delay: 1.243 ms

Loss rate: 23.12%

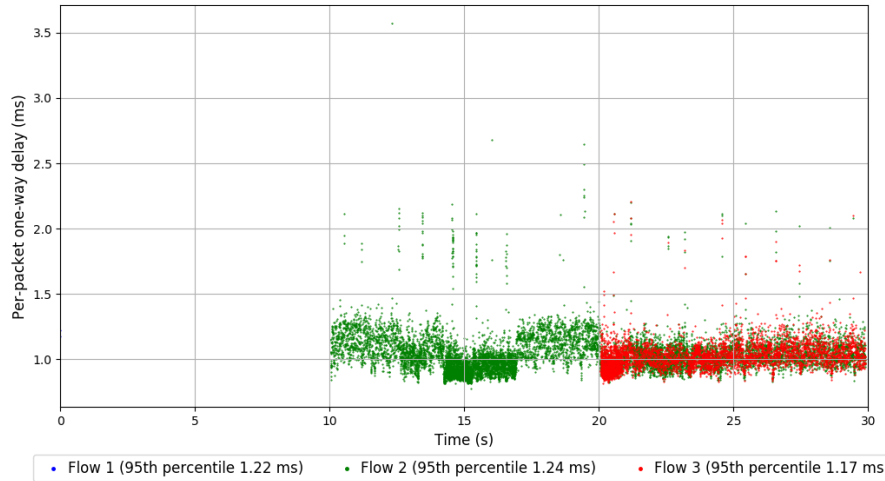
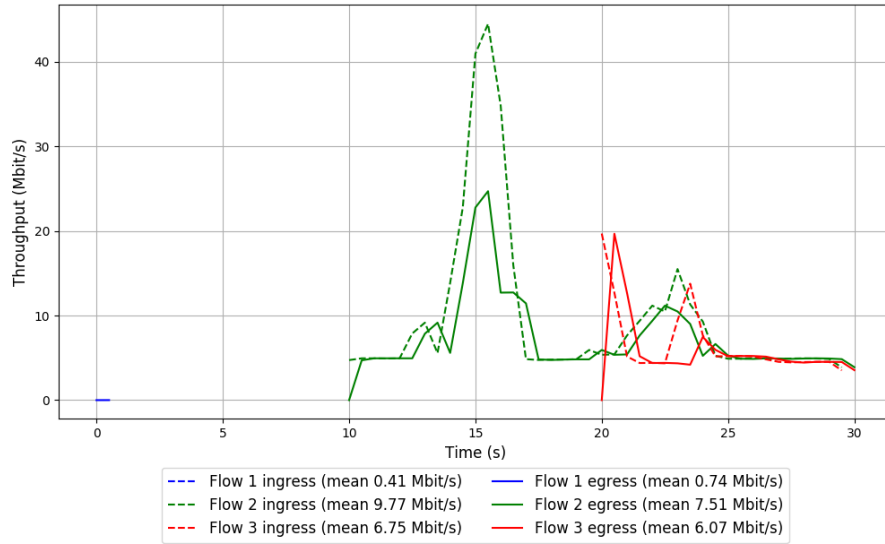
-- Flow 3:

Average throughput: 6.07 Mbit/s

95th percentile per-packet one-way delay: 1.174 ms

Loss rate: 9.95%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-05-30 02:00:54

End at: 2019-05-30 02:01:24

Local clock offset: 5.734 ms

Remote clock offset: 0.179 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.16 Mbit/s

95th percentile per-packet one-way delay: 1.169 ms

Loss rate: 26.13%

-- Flow 1:

Average throughput: 0.81 Mbit/s

95th percentile per-packet one-way delay: 1.199 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 9.03 Mbit/s

95th percentile per-packet one-way delay: 1.166 ms

Loss rate: 25.78%

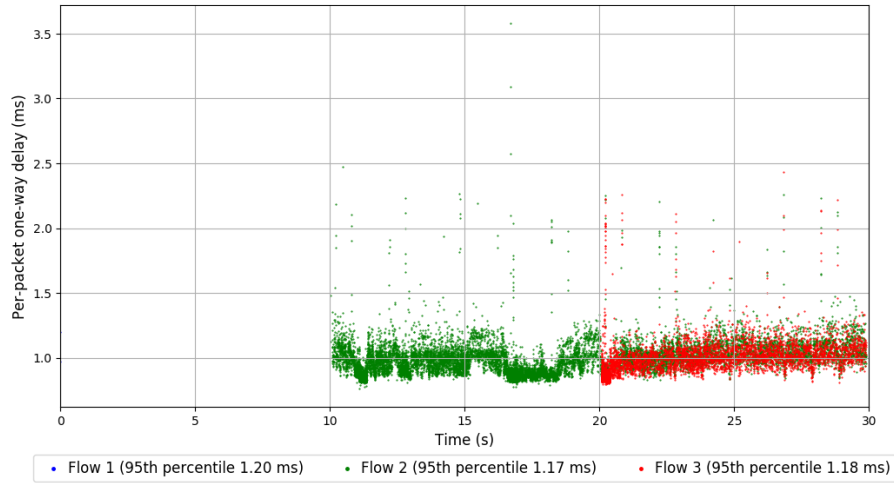
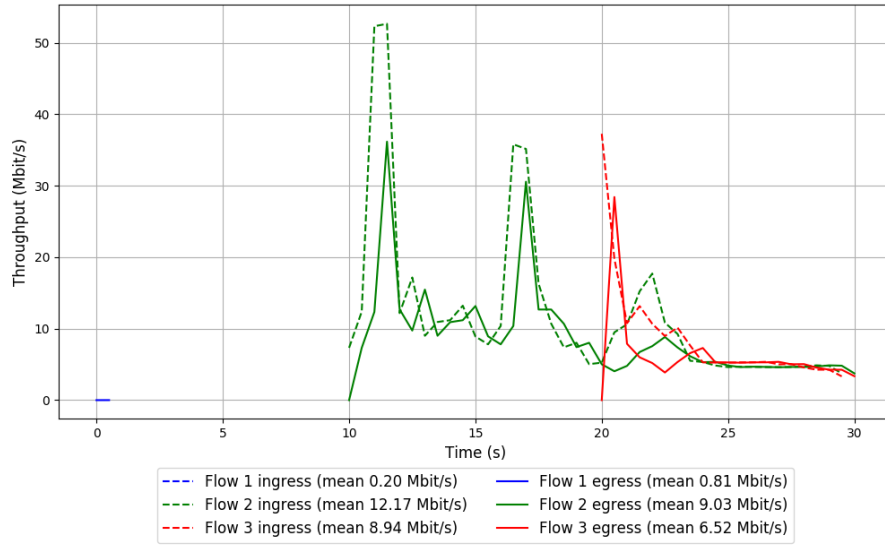
-- Flow 3:

Average throughput: 6.52 Mbit/s

95th percentile per-packet one-way delay: 1.177 ms

Loss rate: 27.07%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-05-30 02:30:47

End at: 2019-05-30 02:31:17

Local clock offset: 6.15 ms

Remote clock offset: 0.08 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.74 Mbit/s

95th percentile per-packet one-way delay: 1.065 ms

Loss rate: 22.57%

-- Flow 1:

Average throughput: 0.75 Mbit/s

95th percentile per-packet one-way delay: 1.060 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 9.35 Mbit/s

95th percentile per-packet one-way delay: 1.071 ms

Loss rate: 21.48%

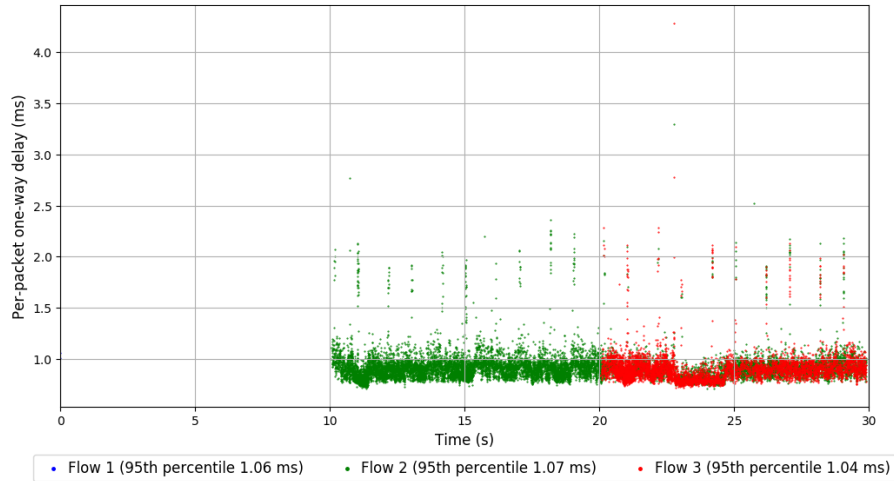
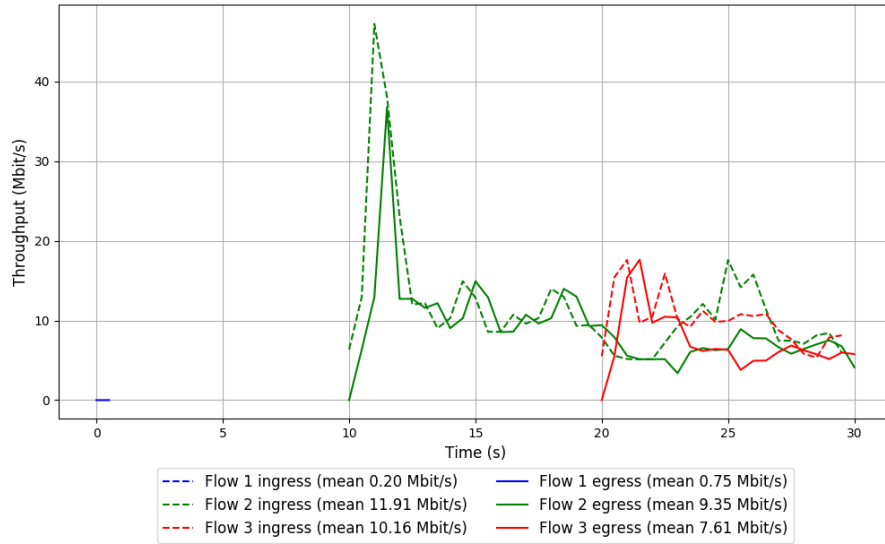
-- Flow 3:

Average throughput: 7.61 Mbit/s

95th percentile per-packet one-way delay: 1.043 ms

Loss rate: 25.15%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-05-30 00:39:56

End at: 2019-05-30 00:40:26

Local clock offset: 5.023 ms

Remote clock offset: 0.443 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 122.38 Mbit/s

95th percentile per-packet one-way delay: 2.638 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 65.51 Mbit/s

95th percentile per-packet one-way delay: 0.917 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 58.31 Mbit/s

95th percentile per-packet one-way delay: 0.995 ms

Loss rate: 0.02%

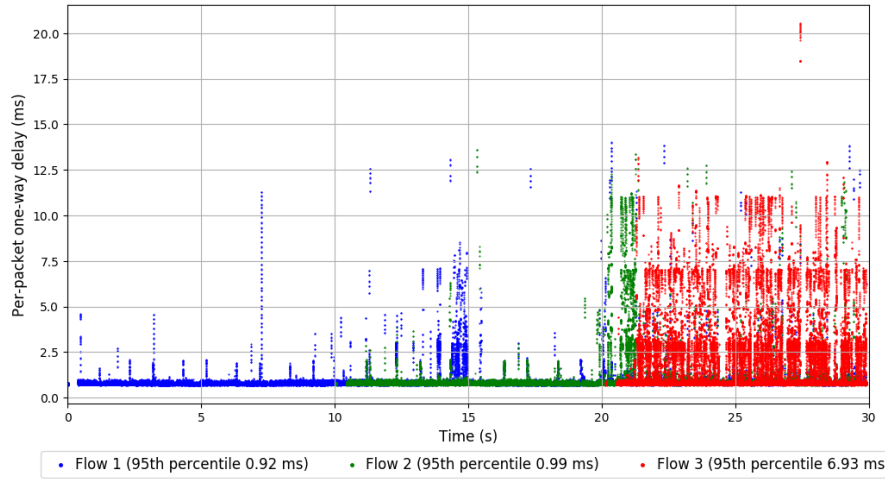
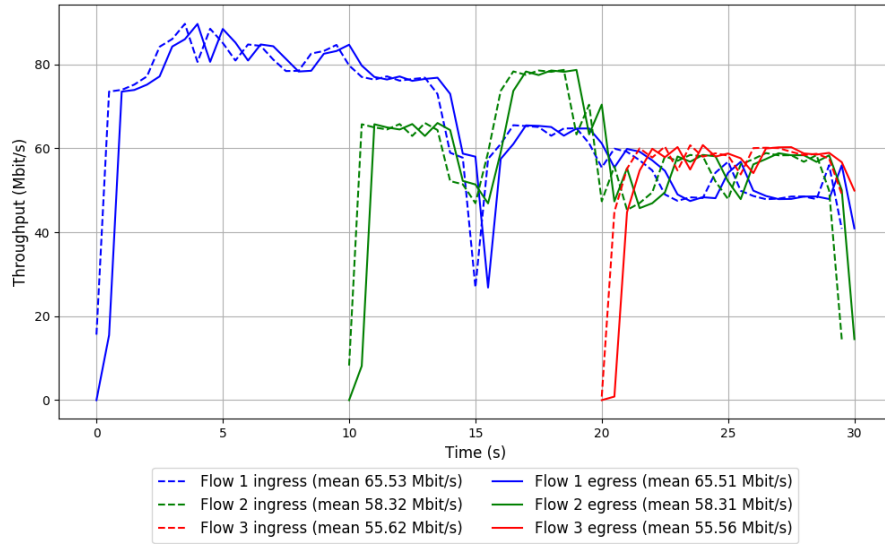
-- Flow 3:

Average throughput: 55.56 Mbit/s

95th percentile per-packet one-way delay: 6.929 ms

Loss rate: 0.05%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-05-30 01:09:39

End at: 2019-05-30 01:10:09

Local clock offset: 5.23 ms

Remote clock offset: 0.605 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.63 Mbit/s

95th percentile per-packet one-way delay: 0.949 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 67.57 Mbit/s

95th percentile per-packet one-way delay: 1.024 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 64.53 Mbit/s

95th percentile per-packet one-way delay: 0.921 ms

Loss rate: 0.01%

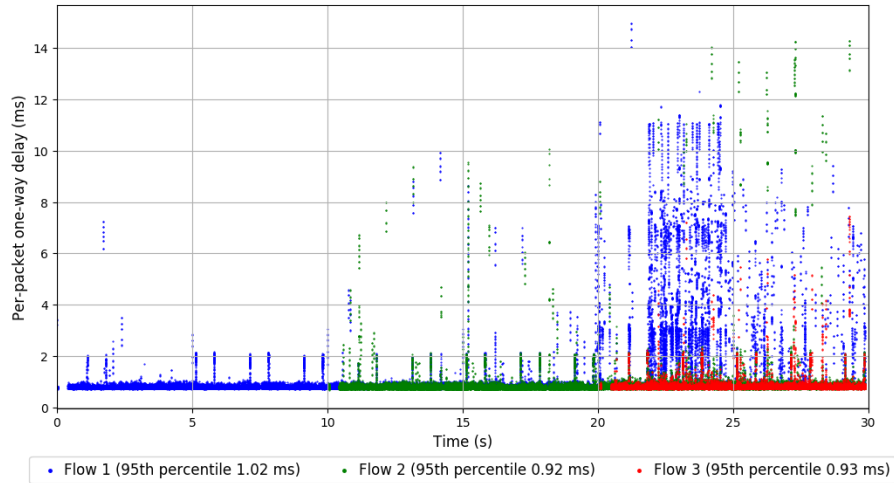
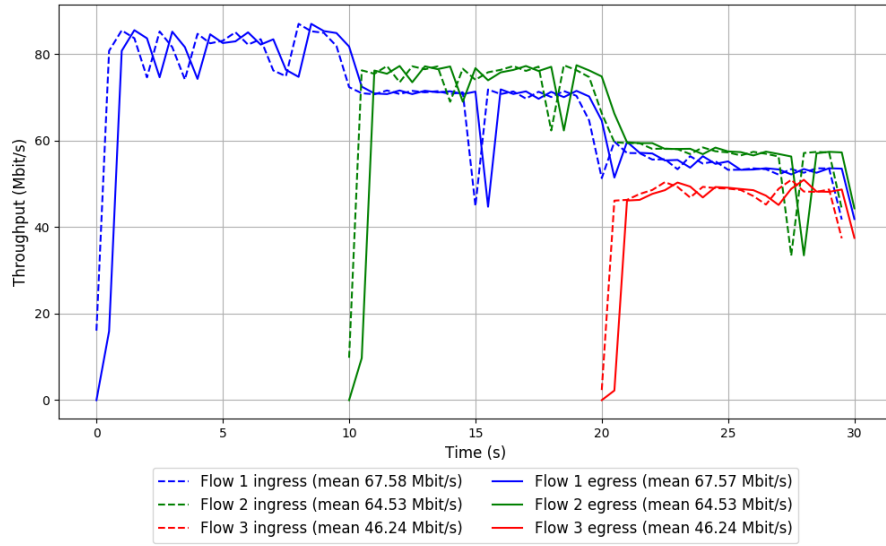
-- Flow 3:

Average throughput: 46.24 Mbit/s

95th percentile per-packet one-way delay: 0.927 ms

Loss rate: 0.01%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-05-30 01:39:36

End at: 2019-05-30 01:40:06

Local clock offset: 5.635 ms

Remote clock offset: 0.26 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 122.07 Mbit/s

95th percentile per-packet one-way delay: 2.304 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 68.73 Mbit/s

95th percentile per-packet one-way delay: 2.061 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 55.80 Mbit/s

95th percentile per-packet one-way delay: 0.869 ms

Loss rate: 0.00%

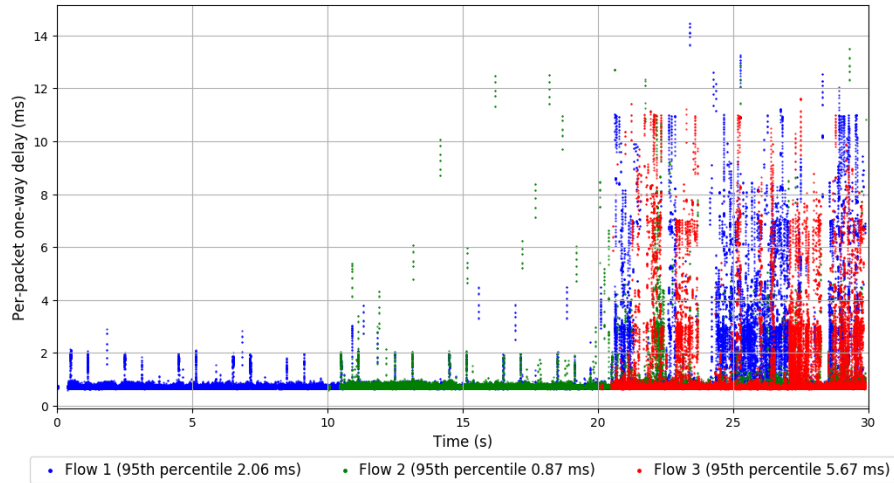
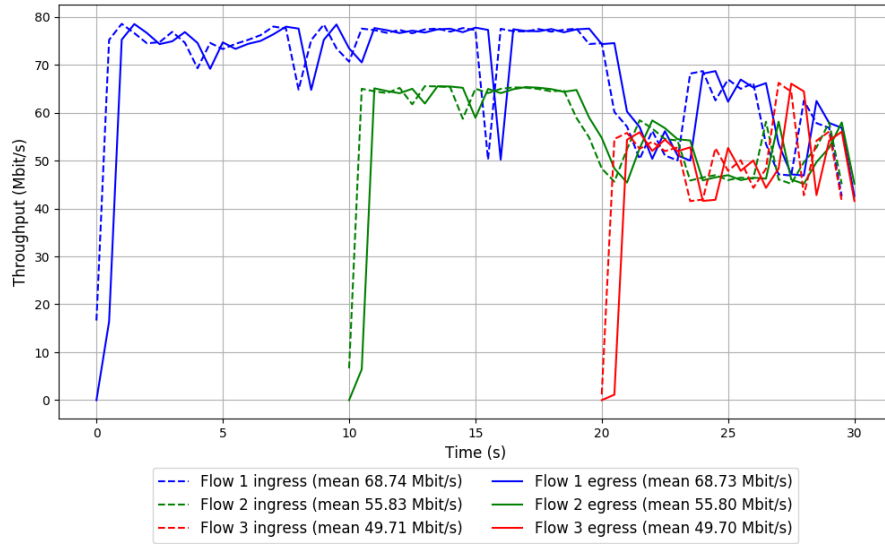
-- Flow 3:

Average throughput: 49.70 Mbit/s

95th percentile per-packet one-way delay: 5.668 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-05-30 02:09:26

End at: 2019-05-30 02:09:56

Local clock offset: 5.804 ms

Remote clock offset: 0.006 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 123.59 Mbit/s

95th percentile per-packet one-way delay: 2.451 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 68.07 Mbit/s

95th percentile per-packet one-way delay: 1.230 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 55.50 Mbit/s

95th percentile per-packet one-way delay: 1.937 ms

Loss rate: 0.01%

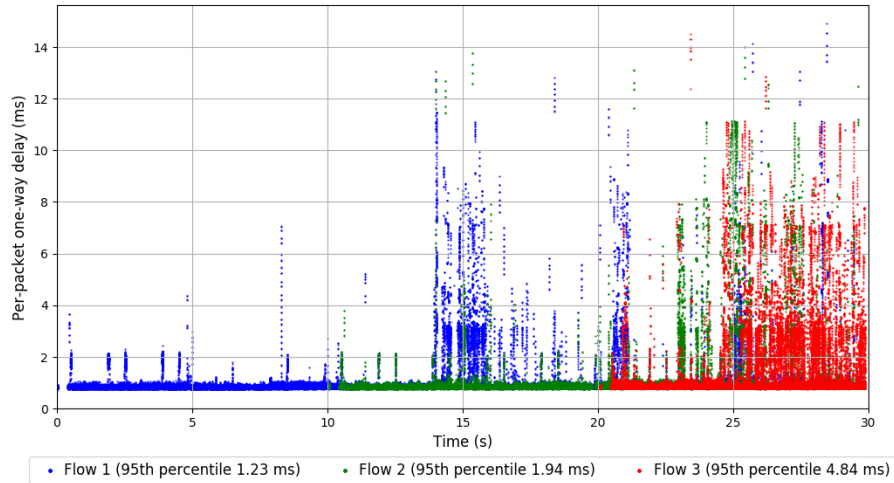
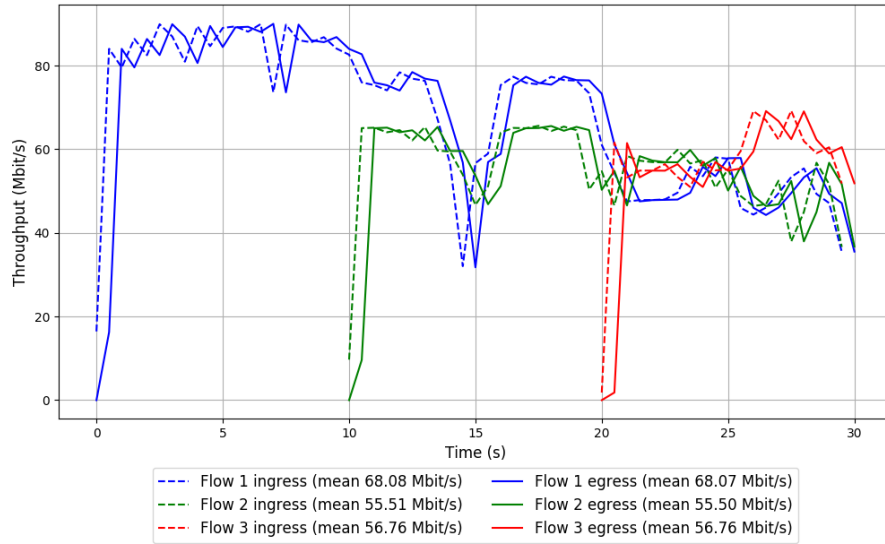
-- Flow 3:

Average throughput: 56.76 Mbit/s

95th percentile per-packet one-way delay: 4.838 ms

Loss rate: 0.01%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-05-30 02:39:15

End at: 2019-05-30 02:39:45

Local clock offset: 6.108 ms

Remote clock offset: 0.318 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 115.04 Mbit/s

95th percentile per-packet one-way delay: 0.918 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 62.98 Mbit/s

95th percentile per-packet one-way delay: 0.902 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 55.00 Mbit/s

95th percentile per-packet one-way delay: 0.900 ms

Loss rate: 0.01%

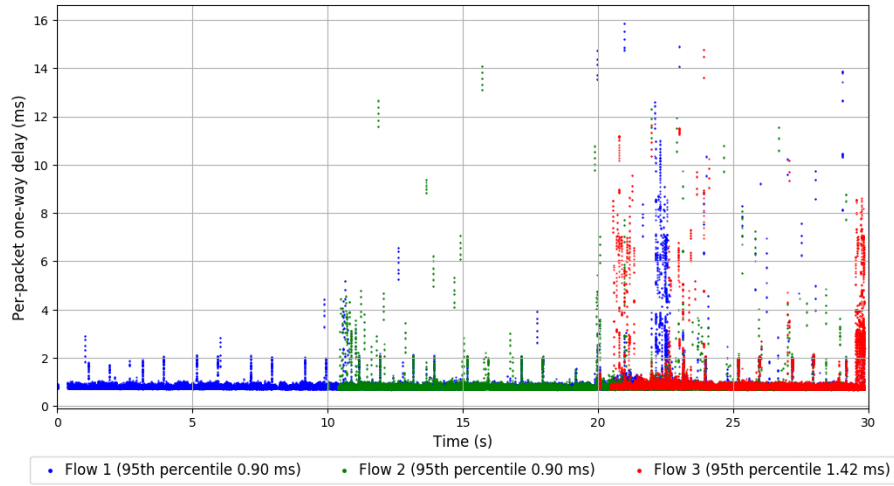
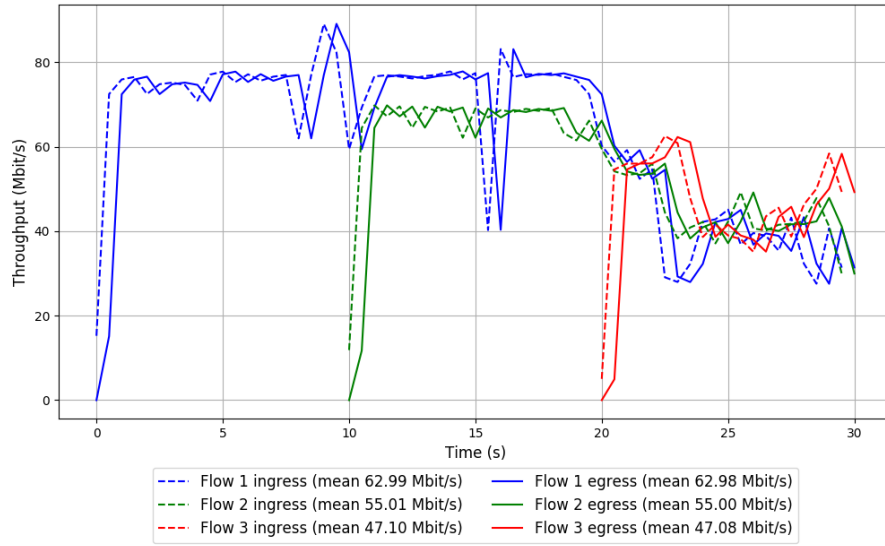
-- Flow 3:

Average throughput: 47.08 Mbit/s

95th percentile per-packet one-way delay: 1.417 ms

Loss rate: 0.04%

Run 5: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2019-05-30 00:46:27

End at: 2019-05-30 00:46:57

Local clock offset: 5.052 ms

Remote clock offset: 0.432 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 1.235 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.228 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.245 ms

Loss rate: 0.00%

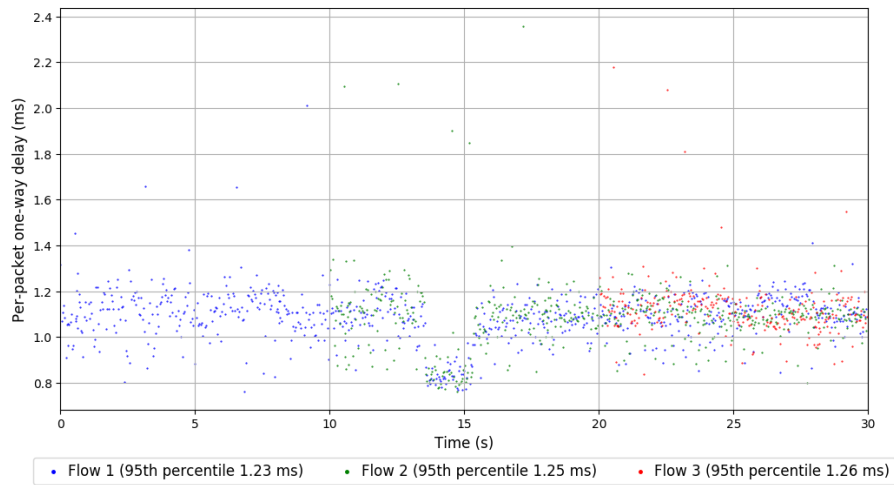
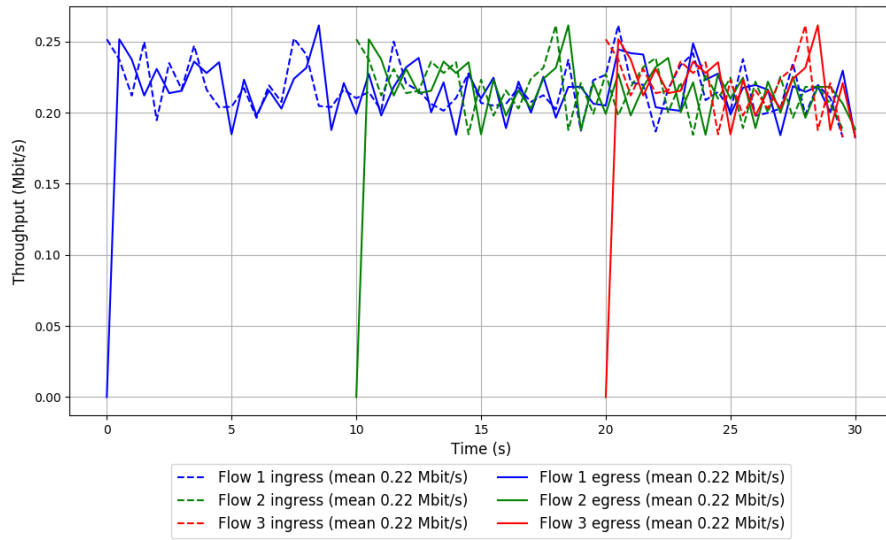
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.263 ms

Loss rate: 0.00%

Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-05-30 01:16:10

End at: 2019-05-30 01:16:40

Local clock offset: 5.433 ms

Remote clock offset: 0.637 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 1.147 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.183 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.117 ms

Loss rate: 0.00%

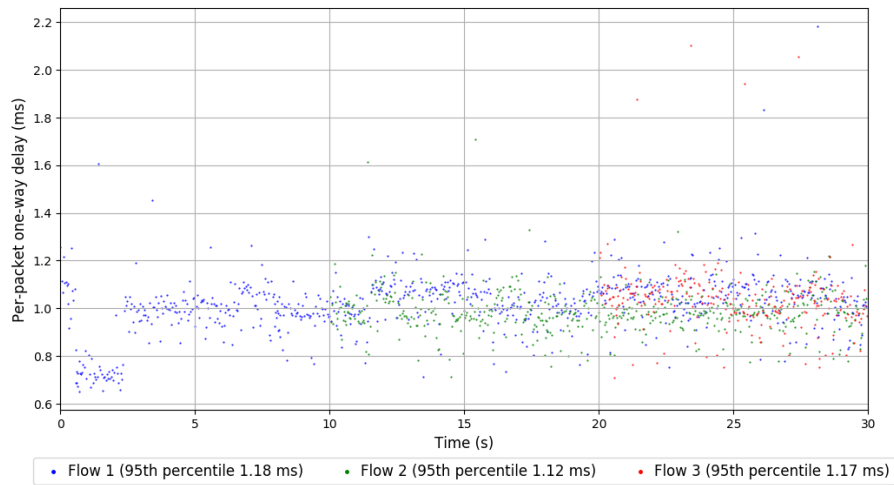
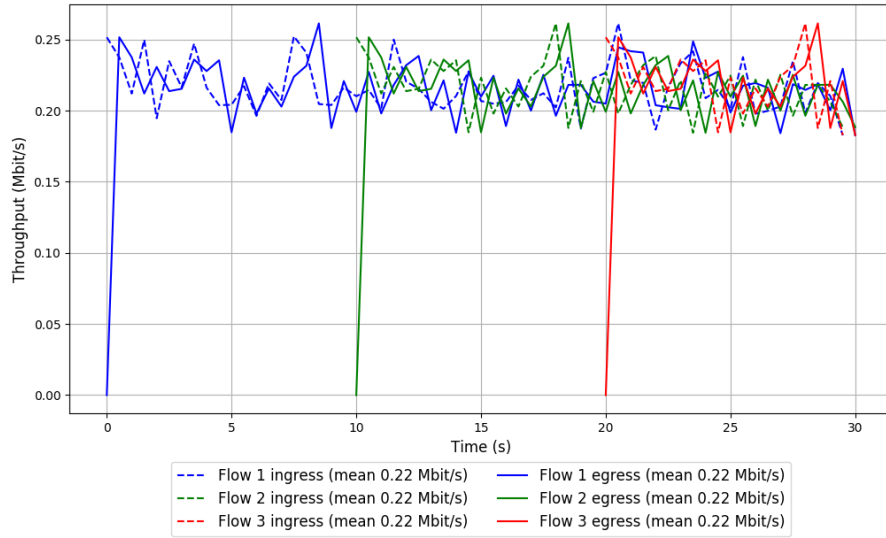
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.170 ms

Loss rate: 0.00%

Run 2: Report of SCReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2019-05-30 01:46:11

End at: 2019-05-30 01:46:41

Local clock offset: 5.673 ms

Remote clock offset: 0.302 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 1.208 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 1.189 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.232 ms

Loss rate: 0.00%

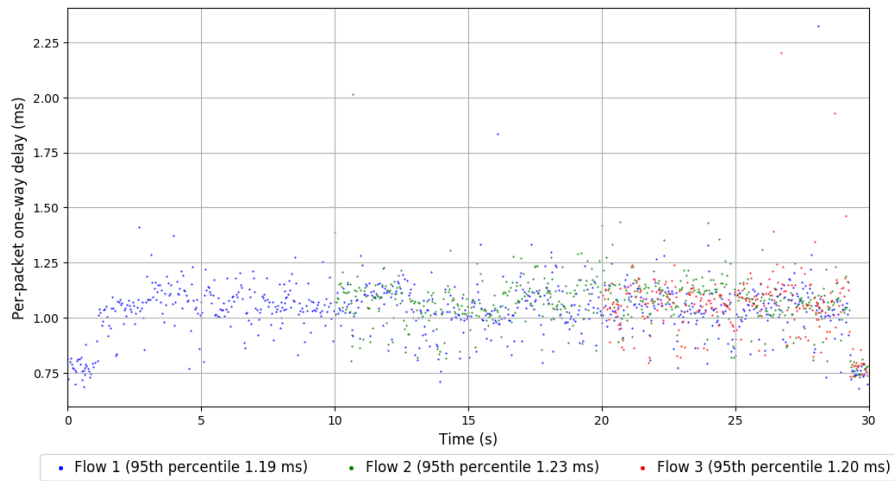
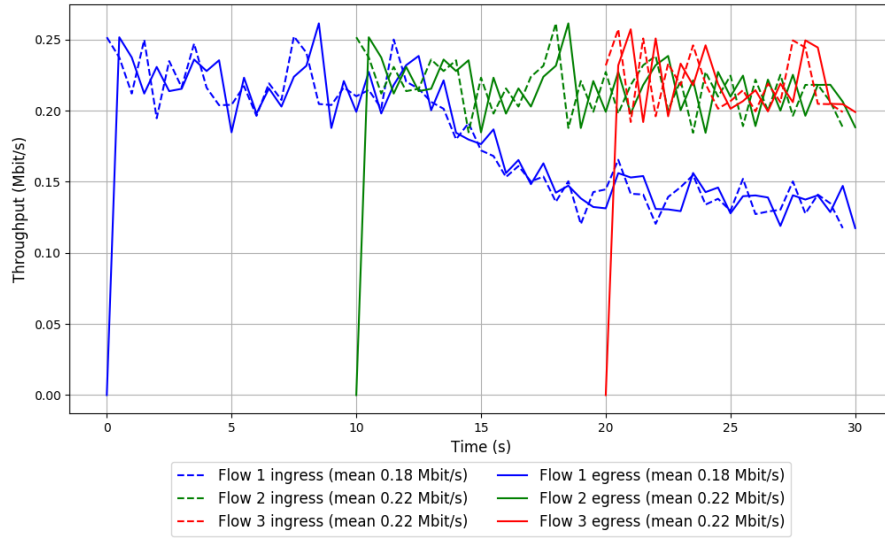
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.199 ms

Loss rate: 0.00%

Run 3: Report of SCReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2019-05-30 02:15:57

End at: 2019-05-30 02:16:27

Local clock offset: 5.999 ms

Remote clock offset: 0.03 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 1.284 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.273 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.286 ms

Loss rate: 0.00%

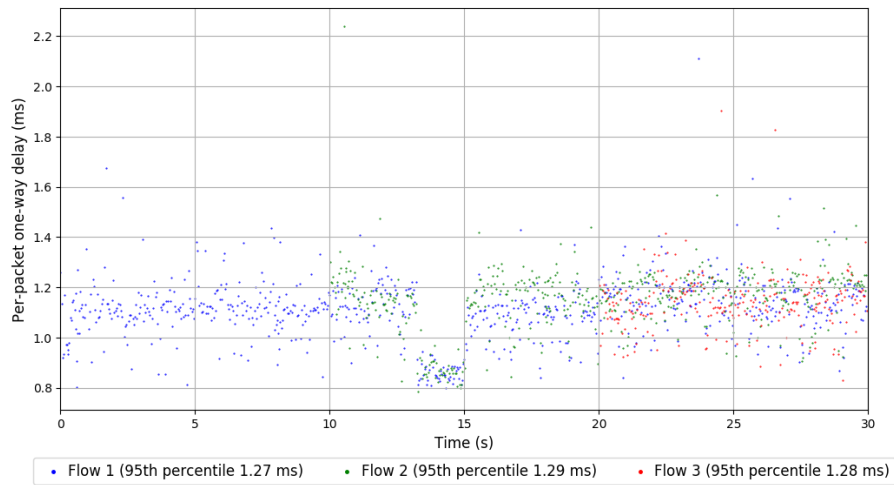
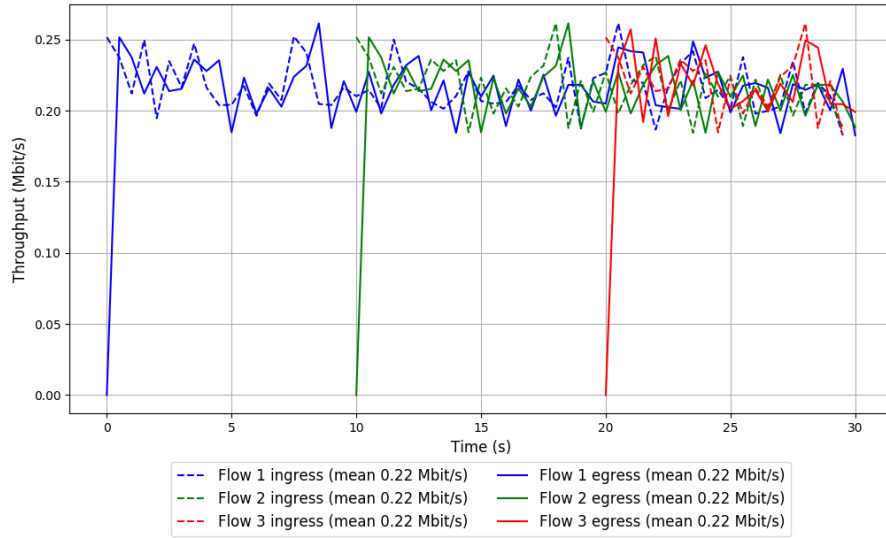
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.281 ms

Loss rate: 0.00%

Run 4: Report of SCReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2019-05-30 02:45:49

End at: 2019-05-30 02:46:19

Local clock offset: 5.811 ms

Remote clock offset: 0.444 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 1.439 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.491 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.425 ms

Loss rate: 0.00%

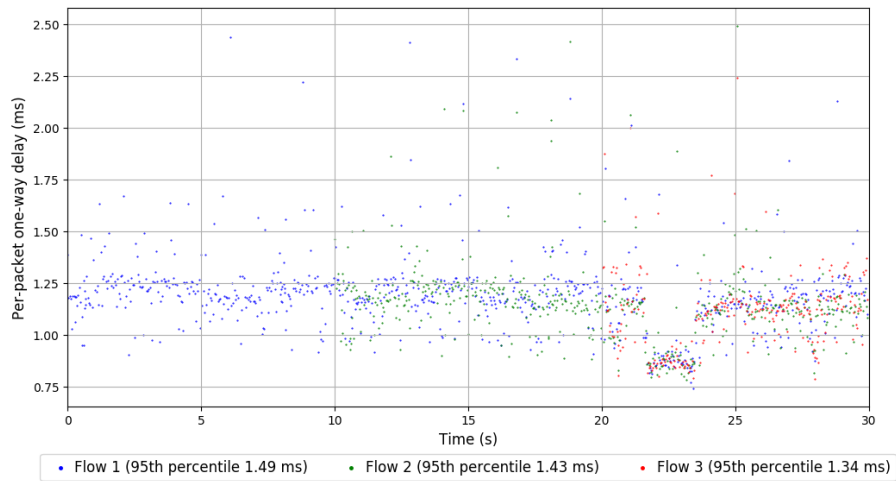
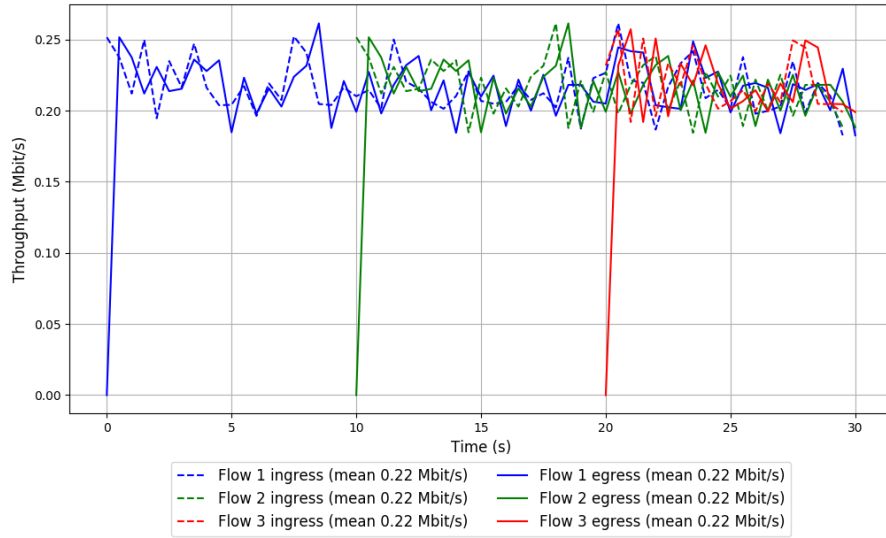
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.337 ms

Loss rate: 0.00%

Run 5: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-05-30 00:41:15

End at: 2019-05-30 00:41:45

Local clock offset: 5.008 ms

Remote clock offset: 0.543 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.42 Mbit/s

95th percentile per-packet one-way delay: 4.395 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 49.87 Mbit/s

95th percentile per-packet one-way delay: 4.339 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 49.72 Mbit/s

95th percentile per-packet one-way delay: 4.354 ms

Loss rate: 0.28%

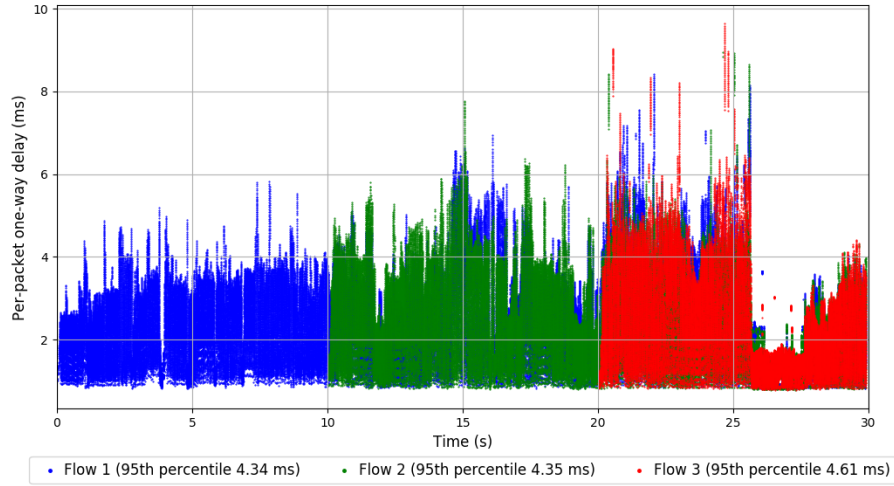
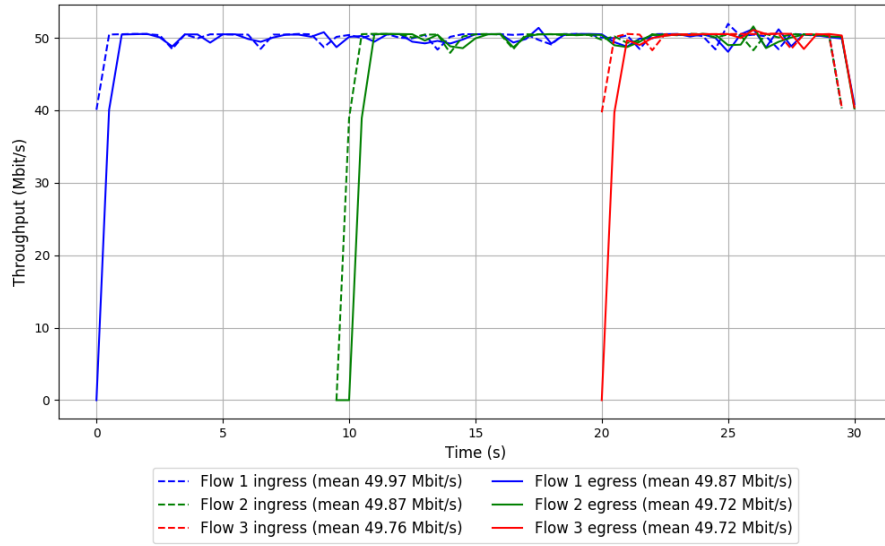
-- Flow 3:

Average throughput: 49.72 Mbit/s

95th percentile per-packet one-way delay: 4.614 ms

Loss rate: 0.06%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-05-30 01:10:58

End at: 2019-05-30 01:11:28

Local clock offset: 5.302 ms

Remote clock offset: 0.605 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.98 Mbit/s

95th percentile per-packet one-way delay: 4.122 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 49.63 Mbit/s

95th percentile per-packet one-way delay: 4.204 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 49.57 Mbit/s

95th percentile per-packet one-way delay: 3.977 ms

Loss rate: 0.47%

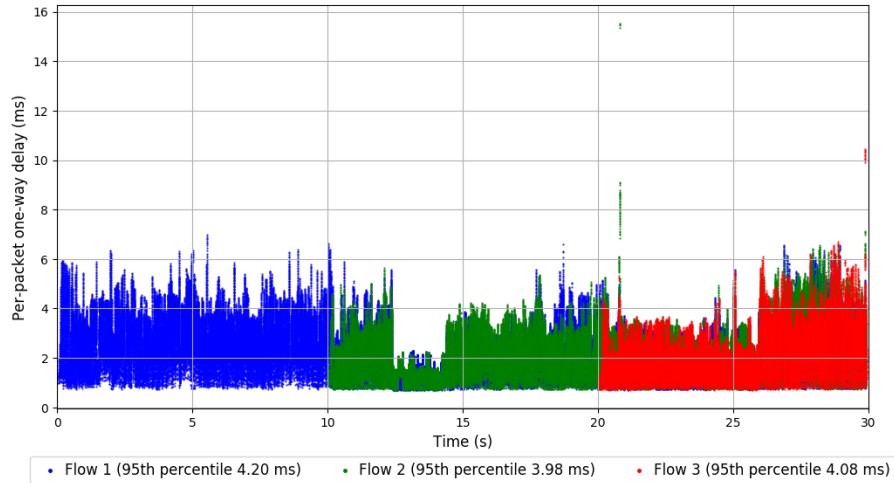
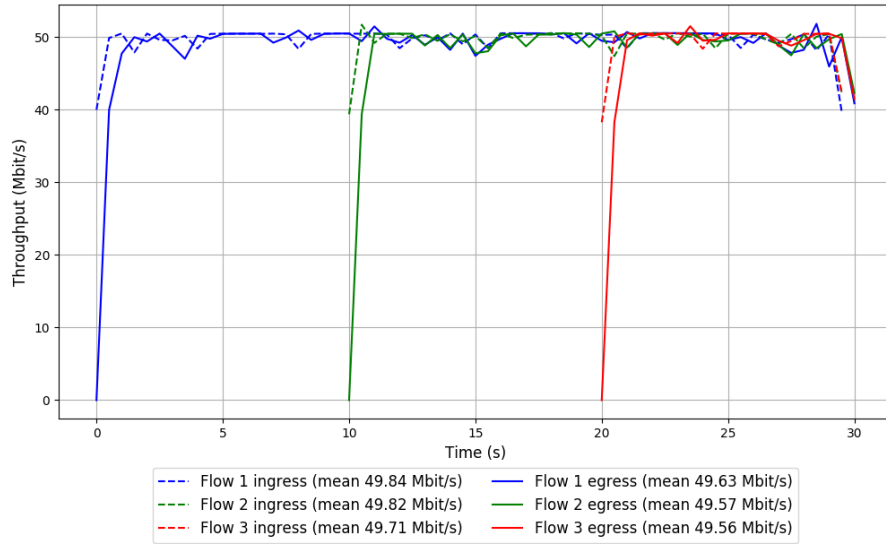
-- Flow 3:

Average throughput: 49.56 Mbit/s

95th percentile per-packet one-way delay: 4.076 ms

Loss rate: 0.29%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-05-30 01:40:54

End at: 2019-05-30 01:41:24

Local clock offset: 5.643 ms

Remote clock offset: 0.374 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.44 Mbit/s

95th percentile per-packet one-way delay: 4.076 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 49.88 Mbit/s

95th percentile per-packet one-way delay: 4.266 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 49.82 Mbit/s

95th percentile per-packet one-way delay: 3.805 ms

Loss rate: 0.13%

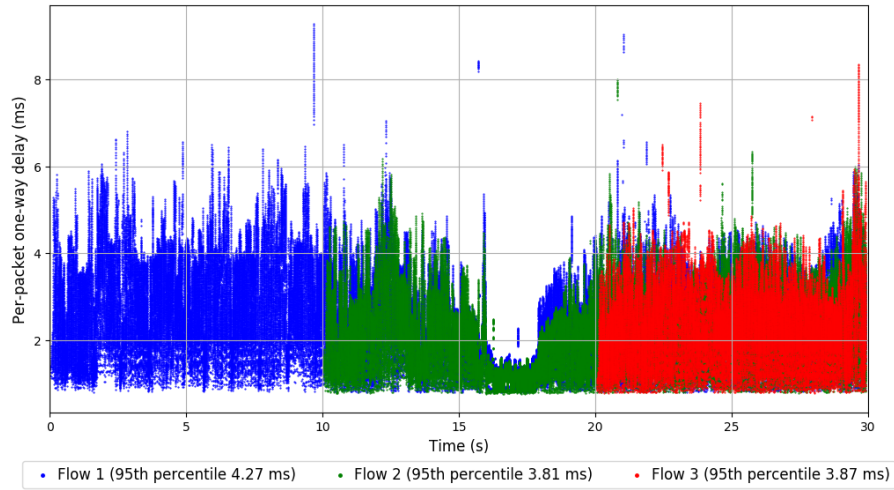
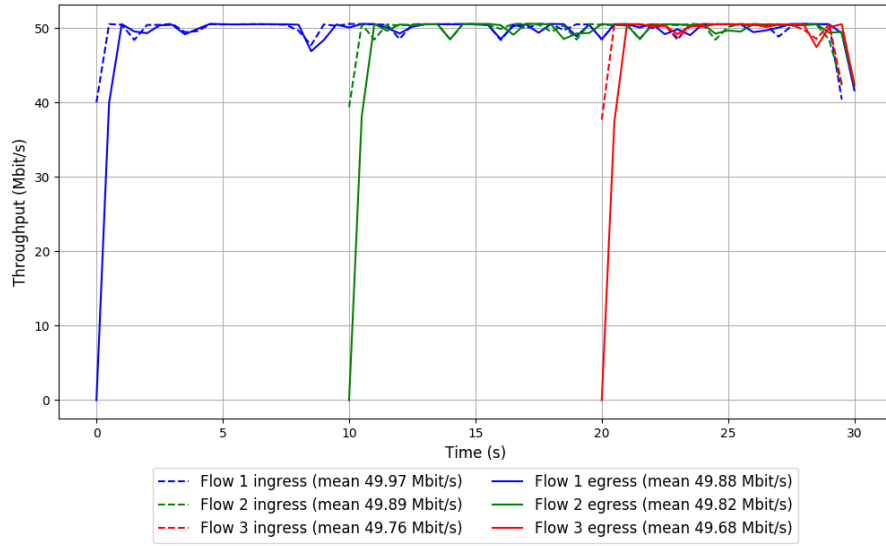
-- Flow 3:

Average throughput: 49.68 Mbit/s

95th percentile per-packet one-way delay: 3.865 ms

Loss rate: 0.13%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2019-05-30 02:10:45

End at: 2019-05-30 02:11:15

Local clock offset: 5.822 ms

Remote clock offset: 0.06 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.62 Mbit/s

95th percentile per-packet one-way delay: 5.291 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 49.53 Mbit/s

95th percentile per-packet one-way delay: 5.011 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 49.30 Mbit/s

95th percentile per-packet one-way delay: 5.507 ms

Loss rate: 0.59%

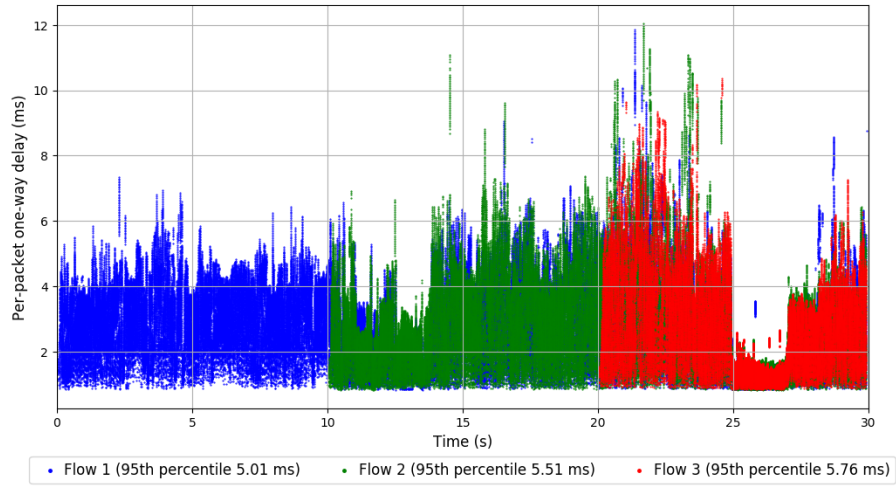
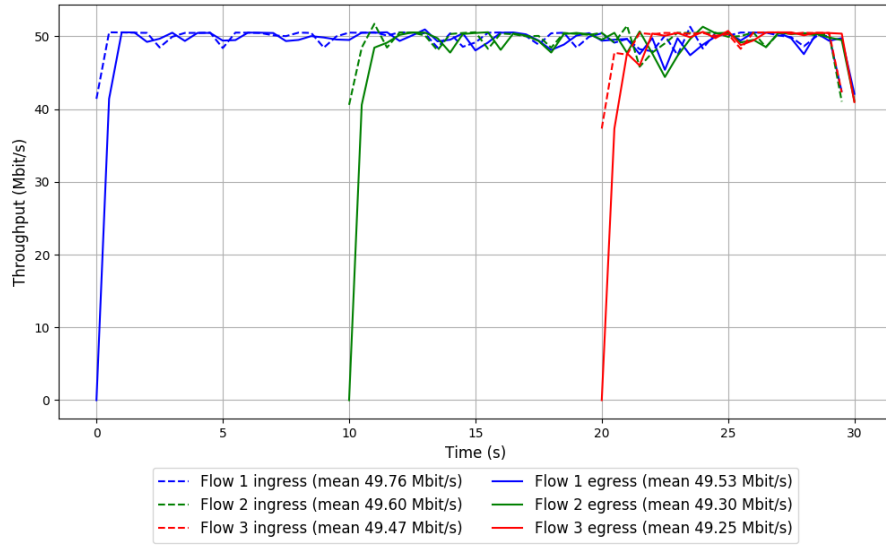
-- Flow 3:

Average throughput: 49.25 Mbit/s

95th percentile per-packet one-way delay: 5.756 ms

Loss rate: 0.43%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2019-05-30 02:40:33

End at: 2019-05-30 02:41:03

Local clock offset: 6.036 ms

Remote clock offset: 0.3 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.96 Mbit/s

95th percentile per-packet one-way delay: 4.383 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 49.70 Mbit/s

95th percentile per-packet one-way delay: 4.358 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 49.57 Mbit/s

95th percentile per-packet one-way delay: 4.238 ms

Loss rate: 0.37%

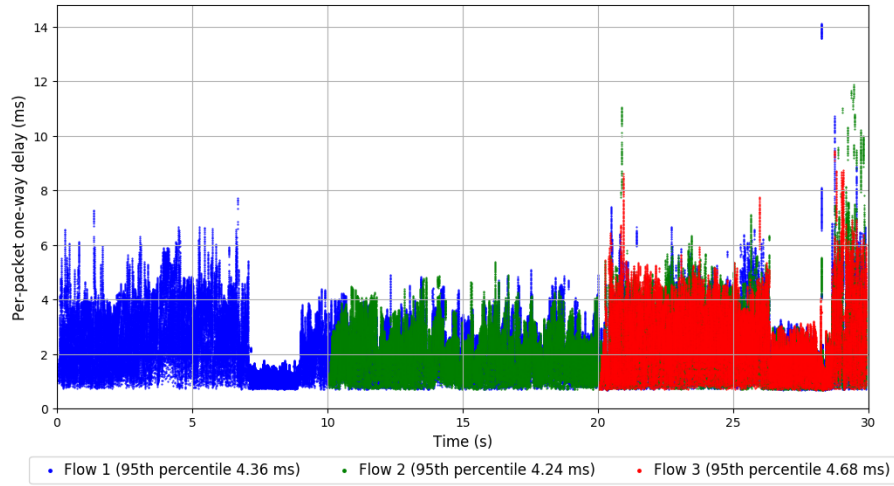
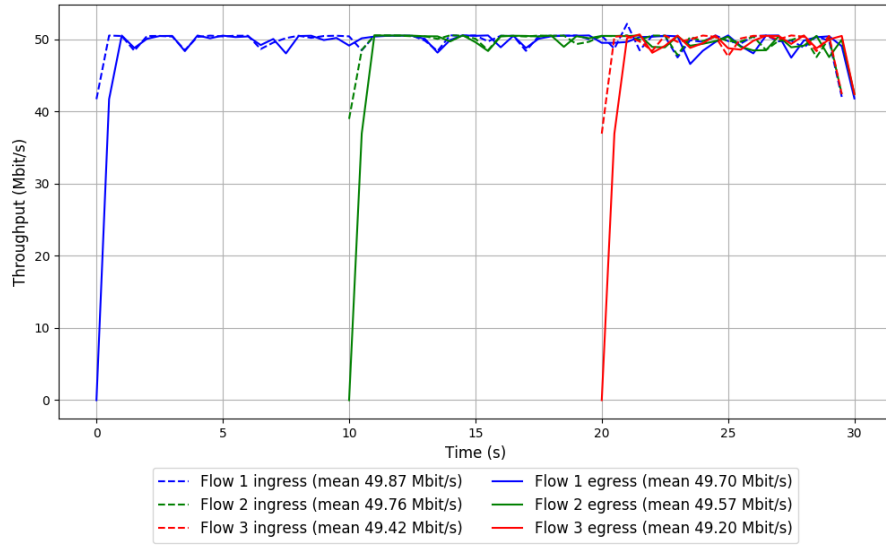
-- Flow 3:

Average throughput: 49.20 Mbit/s

95th percentile per-packet one-way delay: 4.676 ms

Loss rate: 0.40%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-05-30 00:35:26

End at: 2019-05-30 00:35:56

Local clock offset: 4.943 ms

Remote clock offset: 0.357 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.52 Mbit/s

95th percentile per-packet one-way delay: 1.183 ms

Loss rate: 76.19%

-- Flow 1:

Average throughput: 2.65 Mbit/s

95th percentile per-packet one-way delay: 1.270 ms

Loss rate: 70.65%

-- Flow 2:

Average throughput: 10.80 Mbit/s

95th percentile per-packet one-way delay: 1.127 ms

Loss rate: 71.78%

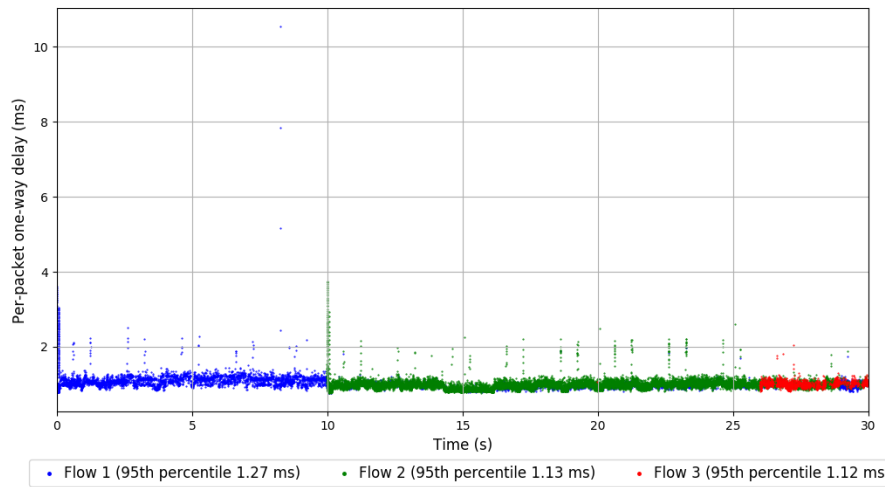
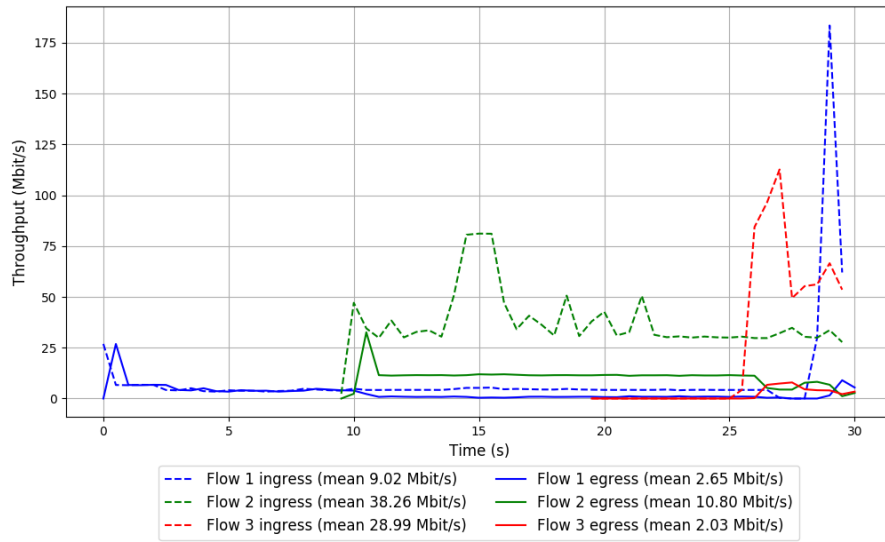
-- Flow 3:

Average throughput: 2.03 Mbit/s

95th percentile per-packet one-way delay: 1.124 ms

Loss rate: 93.01%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-05-30 01:05:10

End at: 2019-05-30 01:05:40

Local clock offset: 5.133 ms

Remote clock offset: 0.553 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.73 Mbit/s

95th percentile per-packet one-way delay: 1.175 ms

Loss rate: 76.42%

-- Flow 1:

Average throughput: 3.29 Mbit/s

95th percentile per-packet one-way delay: 1.251 ms

Loss rate: 36.80%

-- Flow 2:

Average throughput: 9.89 Mbit/s

95th percentile per-packet one-way delay: 1.116 ms

Loss rate: 71.43%

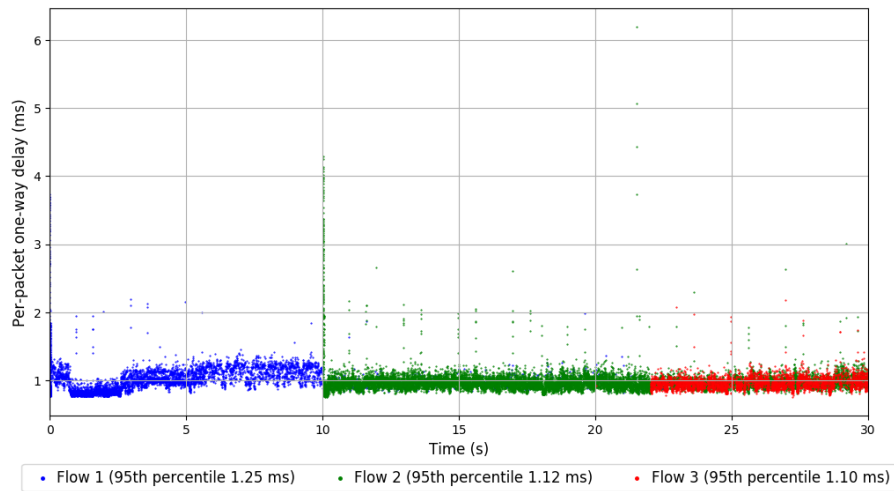
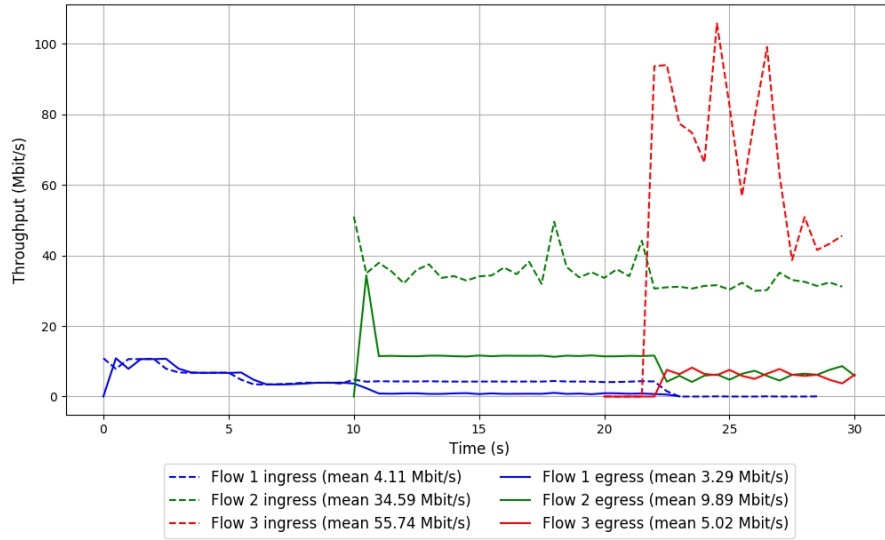
-- Flow 3:

Average throughput: 5.02 Mbit/s

95th percentile per-packet one-way delay: 1.102 ms

Loss rate: 91.00%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-05-30 01:35:07

End at: 2019-05-30 01:35:37

Local clock offset: 5.58 ms

Remote clock offset: 0.357 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.16 Mbit/s

95th percentile per-packet one-way delay: 1.141 ms

Loss rate: 76.67%

-- Flow 1:

Average throughput: 3.06 Mbit/s

95th percentile per-packet one-way delay: 1.210 ms

Loss rate: 43.65%

-- Flow 2:

Average throughput: 9.73 Mbit/s

95th percentile per-packet one-way delay: 1.096 ms

Loss rate: 73.83%

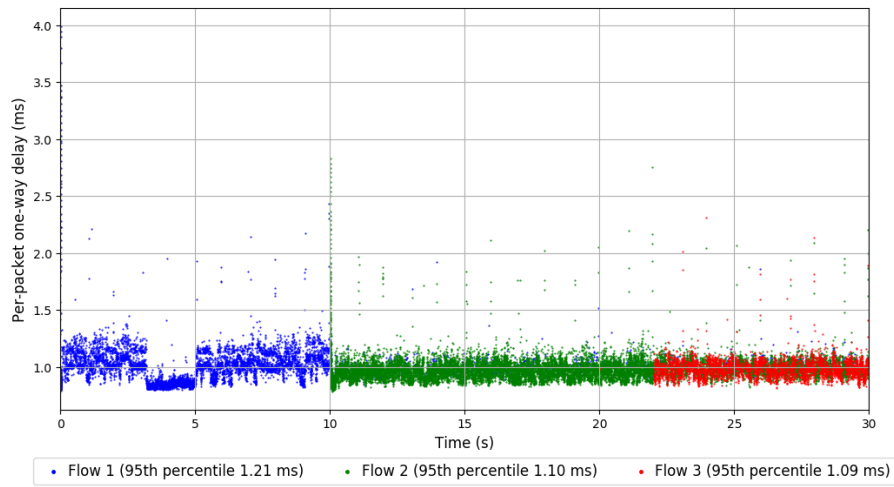
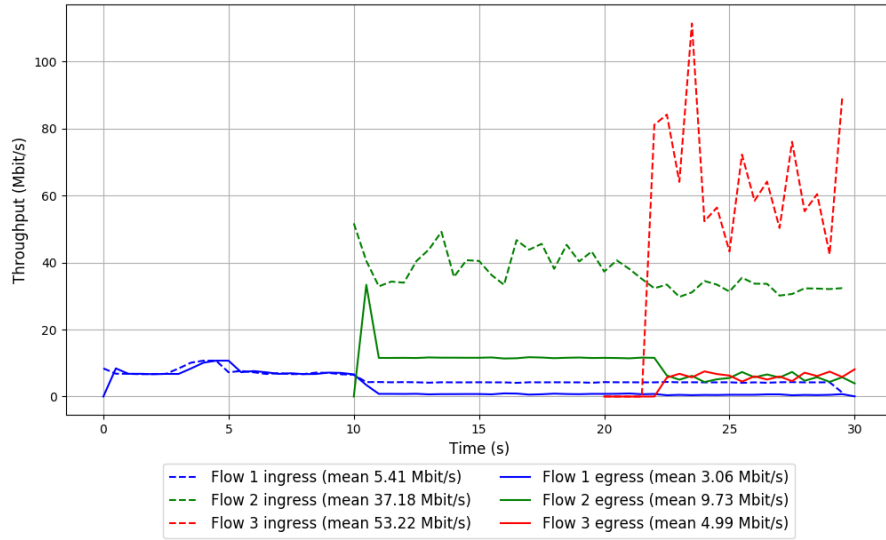
-- Flow 3:

Average throughput: 4.99 Mbit/s

95th percentile per-packet one-way delay: 1.088 ms

Loss rate: 90.62%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-05-30 02:04:57

End at: 2019-05-30 02:05:27

Local clock offset: 5.716 ms

Remote clock offset: 0.041 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 1.109 ms

Loss rate: 62.91%

-- Flow 1:

Average throughput: 8.93 Mbit/s

95th percentile per-packet one-way delay: 1.073 ms

Loss rate: 70.60%

-- Flow 2:

Average throughput: 3.58 Mbit/s

95th percentile per-packet one-way delay: 1.155 ms

Loss rate: 3.08%

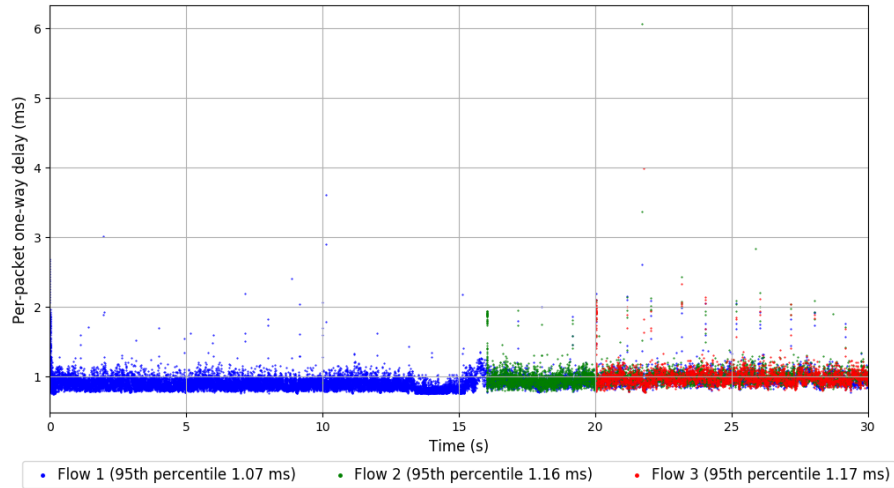
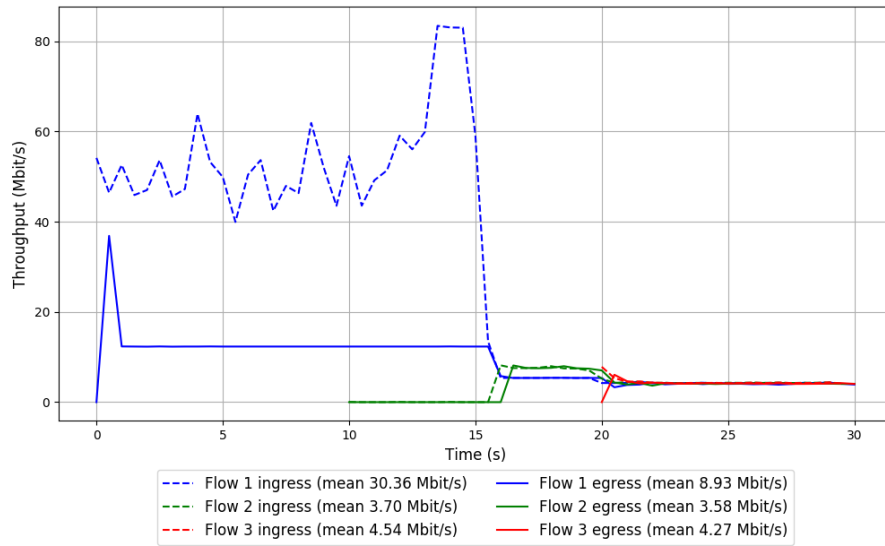
-- Flow 3:

Average throughput: 4.27 Mbit/s

95th percentile per-packet one-way delay: 1.166 ms

Loss rate: 5.88%

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-05-30 02:34:55

End at: 2019-05-30 02:35:25

Local clock offset: 6.18 ms

Remote clock offset: 0.241 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 1.130 ms

Loss rate: 85.36%

-- Flow 1:

Average throughput: 9.71 Mbit/s

95th percentile per-packet one-way delay: 1.134 ms

Loss rate: 79.66%

-- Flow 2:

Average throughput: 2.80 Mbit/s

95th percentile per-packet one-way delay: 1.117 ms

Loss rate: 92.24%

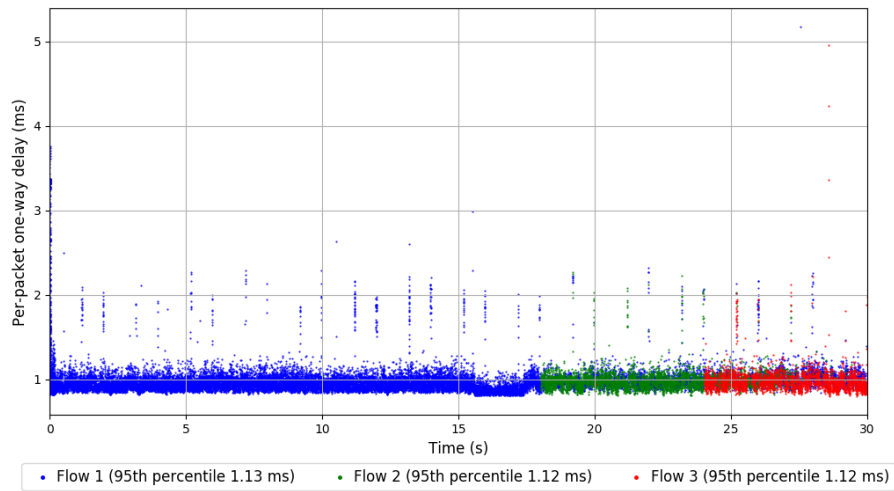
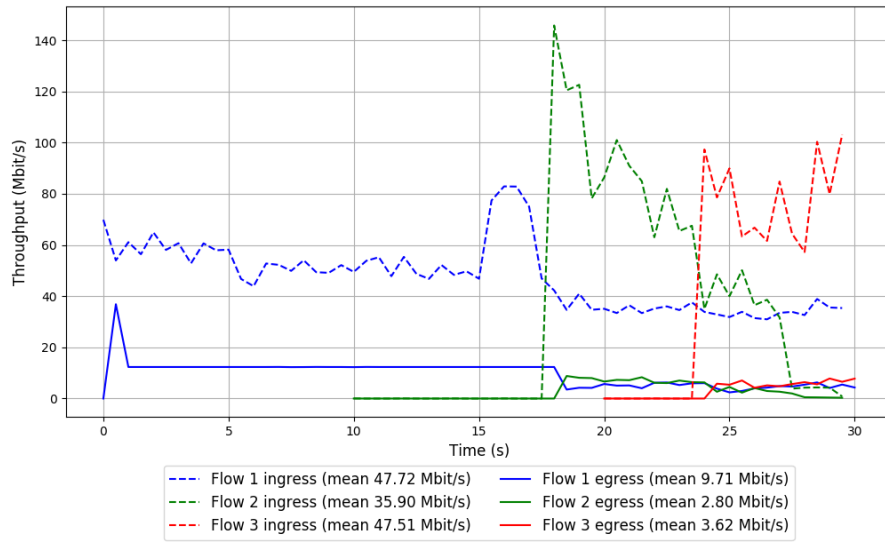
-- Flow 3:

Average throughput: 3.62 Mbit/s

95th percentile per-packet one-way delay: 1.124 ms

Loss rate: 92.38%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-05-30 00:42:31

End at: 2019-05-30 00:43:01

Local clock offset: 5.002 ms

Remote clock offset: 0.528 ms

Below is generated by plot.py at 2019-05-30 03:46:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 168.35 Mbit/s

95th percentile per-packet one-way delay: 1.176 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 41.01 Mbit/s

95th percentile per-packet one-way delay: 1.164 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 56.52 Mbit/s

95th percentile per-packet one-way delay: 1.233 ms

Loss rate: 0.02%

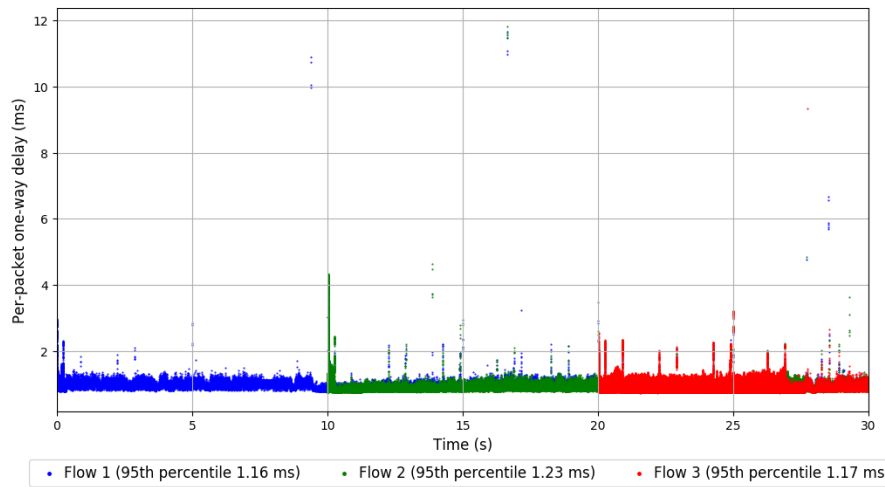
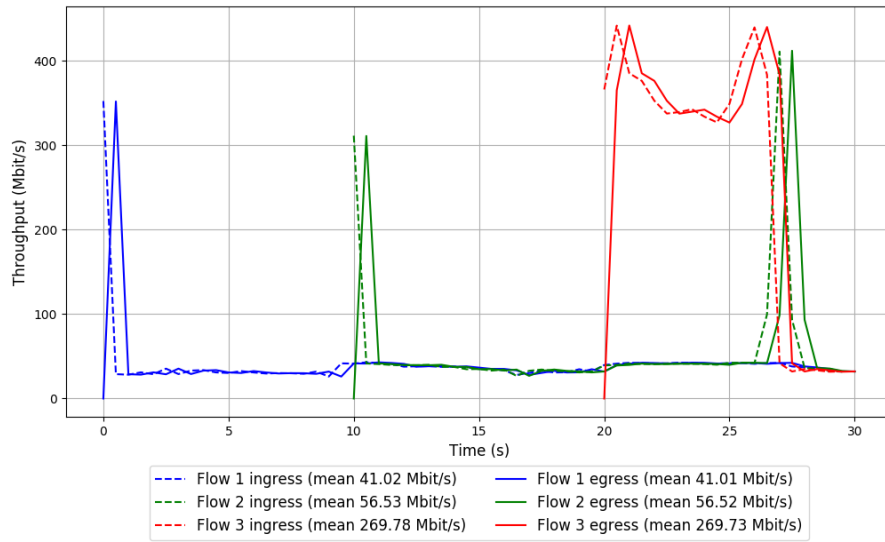
-- Flow 3:

Average throughput: 269.73 Mbit/s

95th percentile per-packet one-way delay: 1.170 ms

Loss rate: 0.02%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-05-30 01:12:14

End at: 2019-05-30 01:12:44

Local clock offset: 5.319 ms

Remote clock offset: 0.71 ms

Below is generated by plot.py at 2019-05-30 03:46:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 224.50 Mbit/s

95th percentile per-packet one-way delay: 1.276 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 56.81 Mbit/s

95th percentile per-packet one-way delay: 1.276 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 136.84 Mbit/s

95th percentile per-packet one-way delay: 1.240 ms

Loss rate: 0.05%

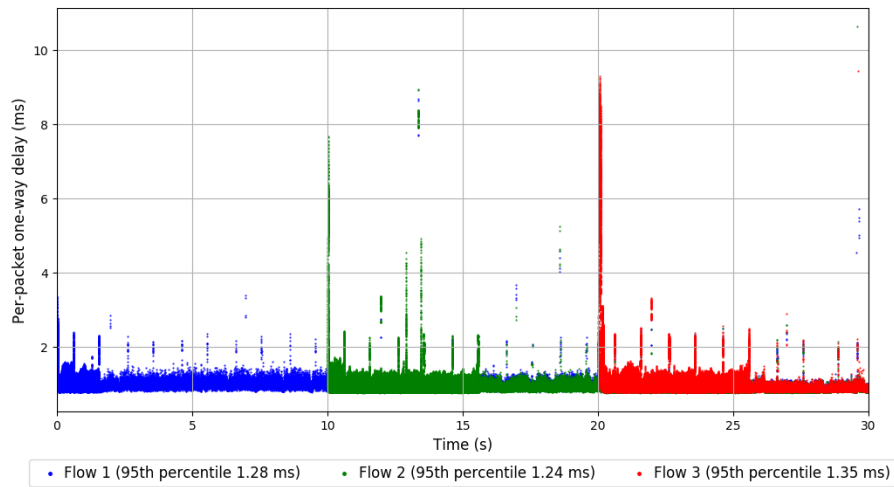
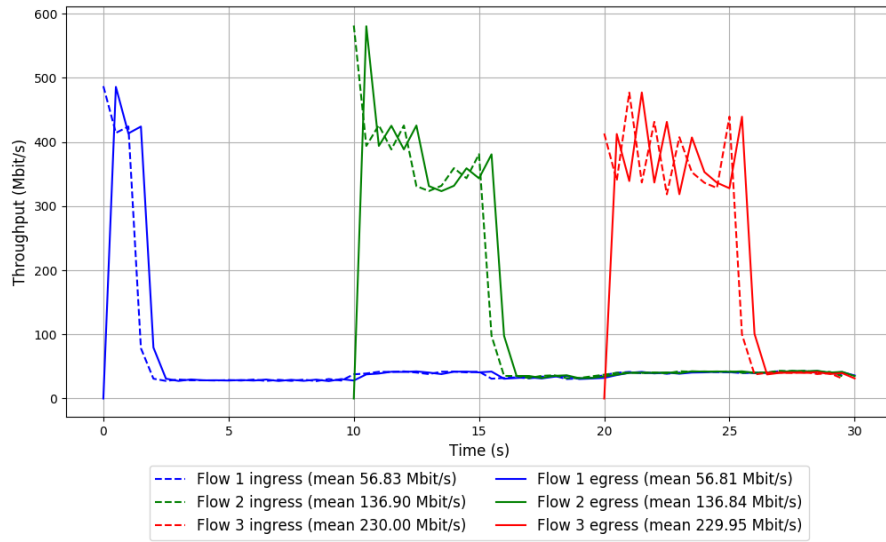
-- Flow 3:

Average throughput: 229.95 Mbit/s

95th percentile per-packet one-way delay: 1.347 ms

Loss rate: 0.02%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-05-30 01:42:11

End at: 2019-05-30 01:42:41

Local clock offset: 5.64 ms

Remote clock offset: 0.31 ms

Below is generated by plot.py at 2019-05-30 03:47:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 337.92 Mbit/s

95th percentile per-packet one-way delay: 1.170 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 55.16 Mbit/s

95th percentile per-packet one-way delay: 1.307 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 251.19 Mbit/s

95th percentile per-packet one-way delay: 1.116 ms

Loss rate: 0.03%

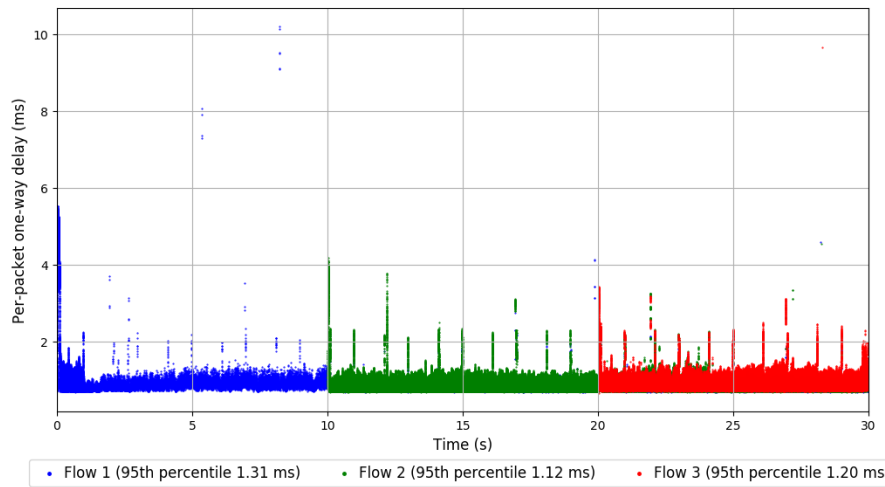
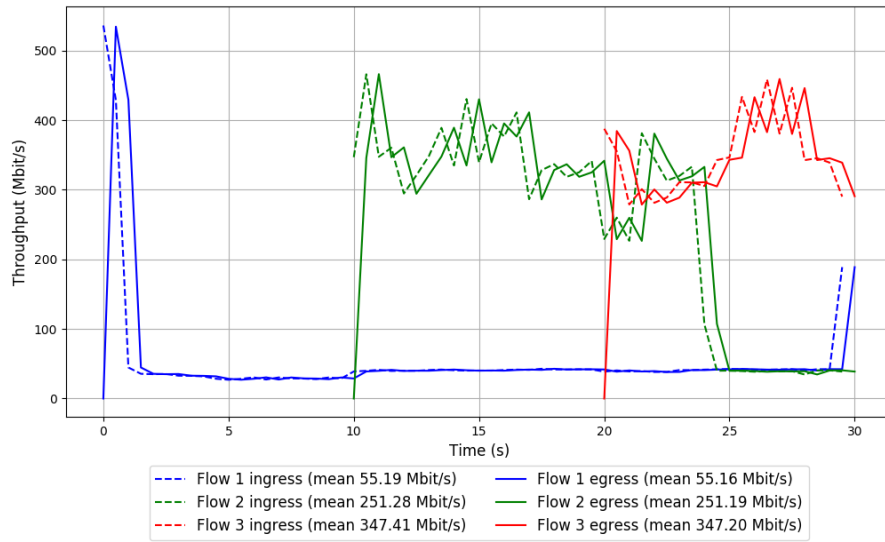
-- Flow 3:

Average throughput: 347.20 Mbit/s

95th percentile per-packet one-way delay: 1.200 ms

Loss rate: 0.06%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-05-30 02:12:02
End at: 2019-05-30 02:12:32
Local clock offset: 5.856 ms
Remote clock offset: -0.023 ms

Below is generated by plot.py at 2019-05-30 03:47:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 207.90 Mbit/s
95th percentile per-packet one-way delay: 2.214 ms
Loss rate: 0.03%

-- Flow 1:

Average throughput: 64.07 Mbit/s
95th percentile per-packet one-way delay: 1.194 ms
Loss rate: 0.03%

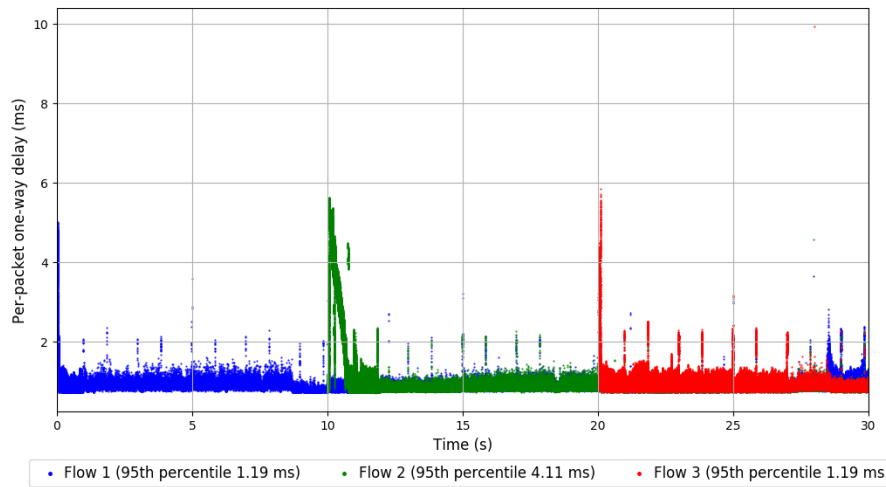
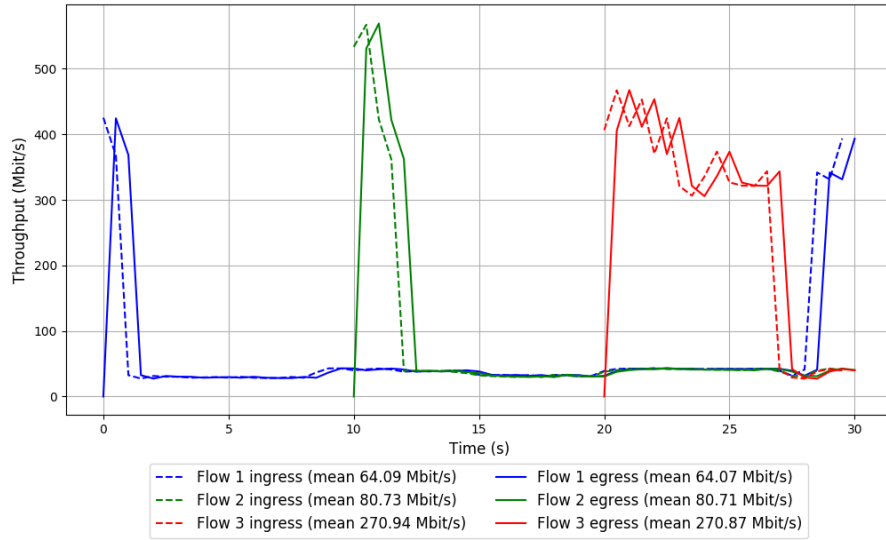
-- Flow 2:

Average throughput: 80.71 Mbit/s
95th percentile per-packet one-way delay: 4.105 ms
Loss rate: 0.03%

-- Flow 3:

Average throughput: 270.87 Mbit/s
95th percentile per-packet one-way delay: 1.191 ms
Loss rate: 0.02%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-05-30 02:41:49

End at: 2019-05-30 02:42:19

Local clock offset: 5.985 ms

Remote clock offset: 0.372 ms

Below is generated by plot.py at 2019-05-30 03:47:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 287.83 Mbit/s

95th percentile per-packet one-way delay: 1.183 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 68.30 Mbit/s

95th percentile per-packet one-way delay: 1.225 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 251.42 Mbit/s

95th percentile per-packet one-way delay: 1.153 ms

Loss rate: 0.03%

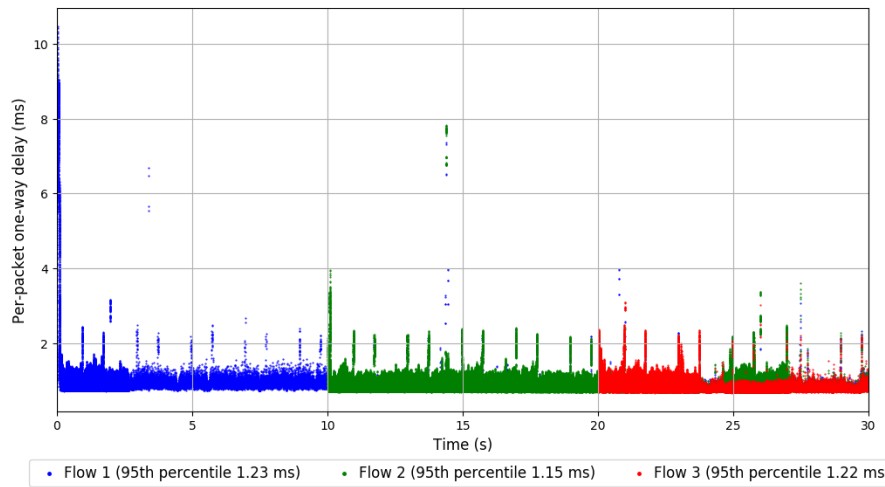
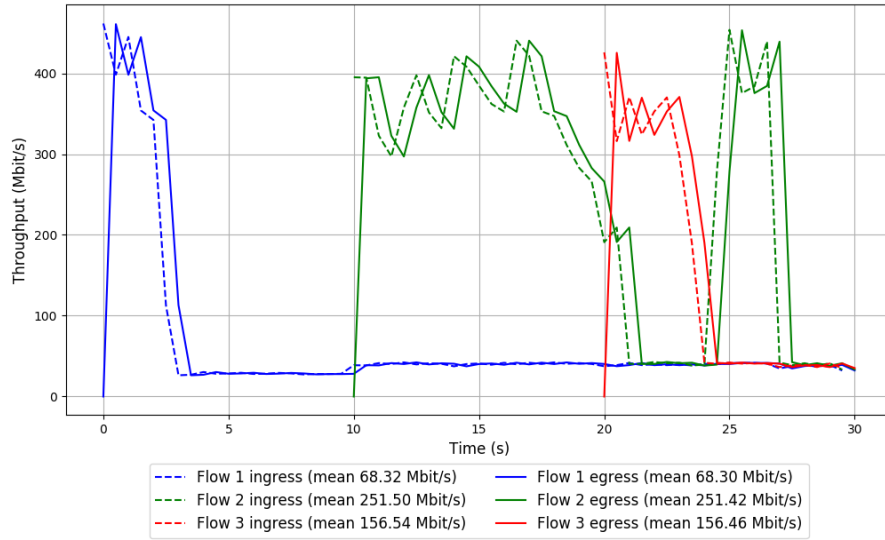
-- Flow 3:

Average throughput: 156.46 Mbit/s

95th percentile per-packet one-way delay: 1.219 ms

Loss rate: 0.05%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-05-30 00:29:58

End at: 2019-05-30 00:30:28

Local clock offset: 4.99 ms

Remote clock offset: 0.257 ms

Below is generated by plot.py at 2019-05-30 03:47:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 243.82 Mbit/s

95th percentile per-packet one-way delay: 40.414 ms

Loss rate: 4.81%

-- Flow 1:

Average throughput: 140.85 Mbit/s

95th percentile per-packet one-way delay: 11.683 ms

Loss rate: 2.85%

-- Flow 2:

Average throughput: 112.95 Mbit/s

95th percentile per-packet one-way delay: 15.551 ms

Loss rate: 3.25%

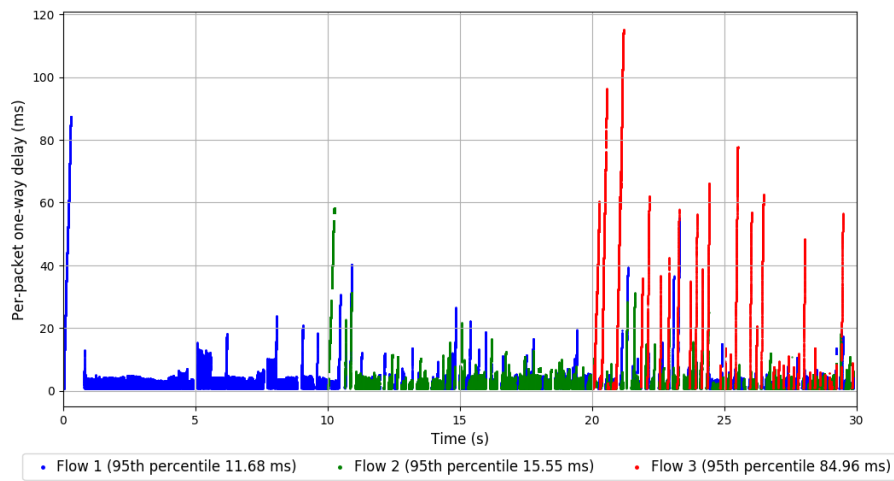
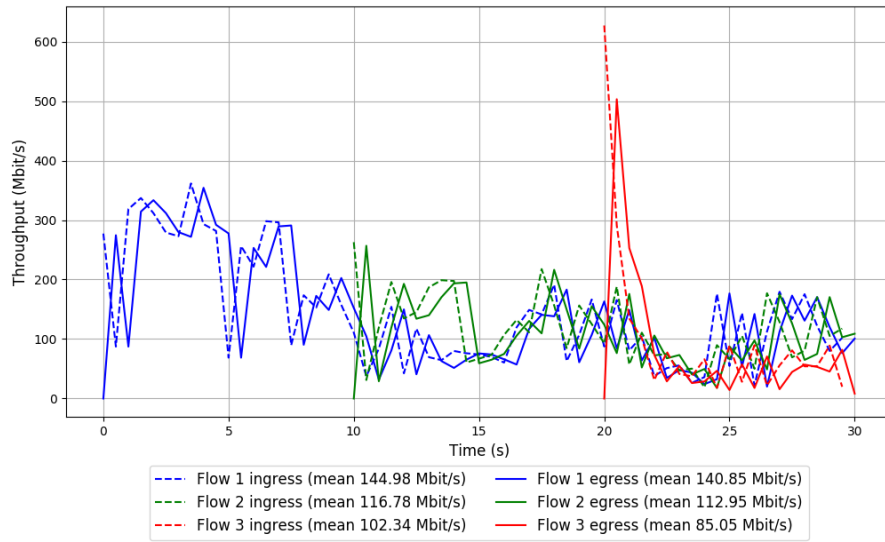
-- Flow 3:

Average throughput: 85.05 Mbit/s

95th percentile per-packet one-way delay: 84.964 ms

Loss rate: 16.86%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-05-30 00:59:40

End at: 2019-05-30 01:00:10

Local clock offset: 5.137 ms

Remote clock offset: 0.389 ms

Below is generated by plot.py at 2019-05-30 03:47:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 269.76 Mbit/s

95th percentile per-packet one-way delay: 40.358 ms

Loss rate: 3.85%

-- Flow 1:

Average throughput: 141.07 Mbit/s

95th percentile per-packet one-way delay: 16.241 ms

Loss rate: 3.09%

-- Flow 2:

Average throughput: 139.90 Mbit/s

95th percentile per-packet one-way delay: 77.620 ms

Loss rate: 4.14%

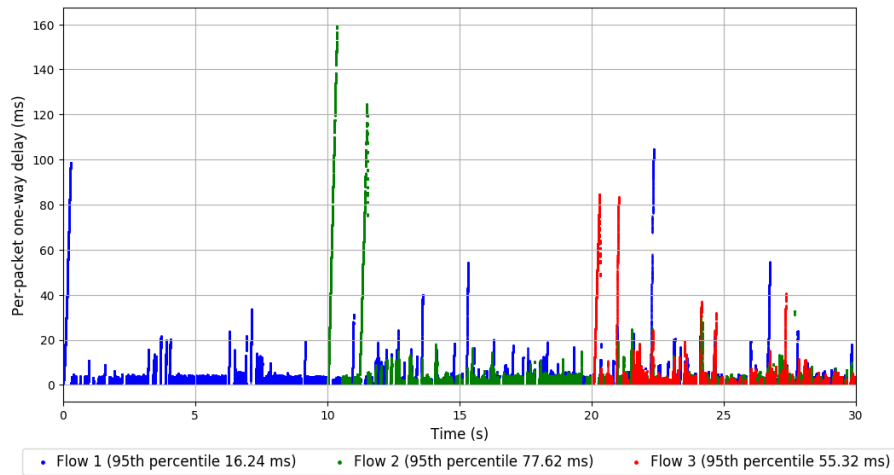
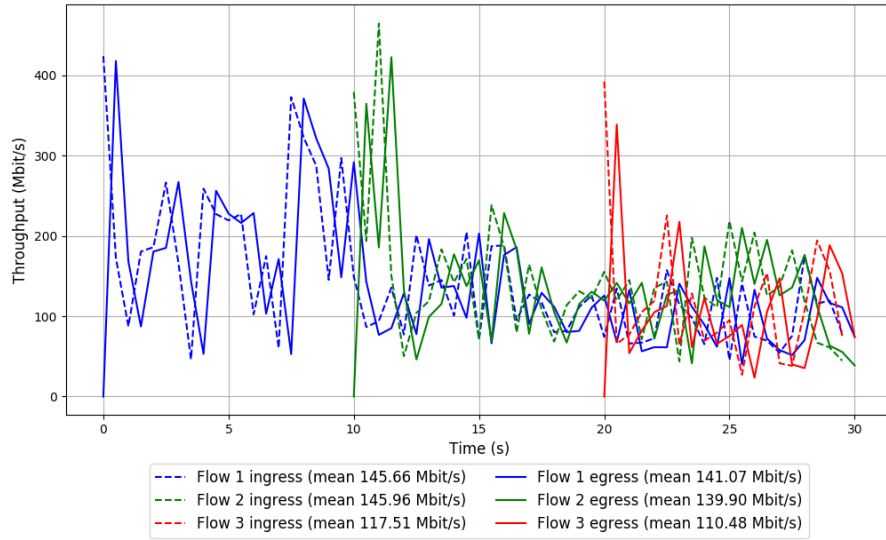
-- Flow 3:

Average throughput: 110.48 Mbit/s

95th percentile per-packet one-way delay: 55.320 ms

Loss rate: 5.95%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-05-30 01:29:38

End at: 2019-05-30 01:30:08

Local clock offset: 5.572 ms

Remote clock offset: 0.395 ms

Below is generated by plot.py at 2019-05-30 03:48:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 250.78 Mbit/s

95th percentile per-packet one-way delay: 15.971 ms

Loss rate: 3.05%

-- Flow 1:

Average throughput: 138.10 Mbit/s

95th percentile per-packet one-way delay: 15.860 ms

Loss rate: 2.48%

-- Flow 2:

Average throughput: 111.88 Mbit/s

95th percentile per-packet one-way delay: 17.630 ms

Loss rate: 4.09%

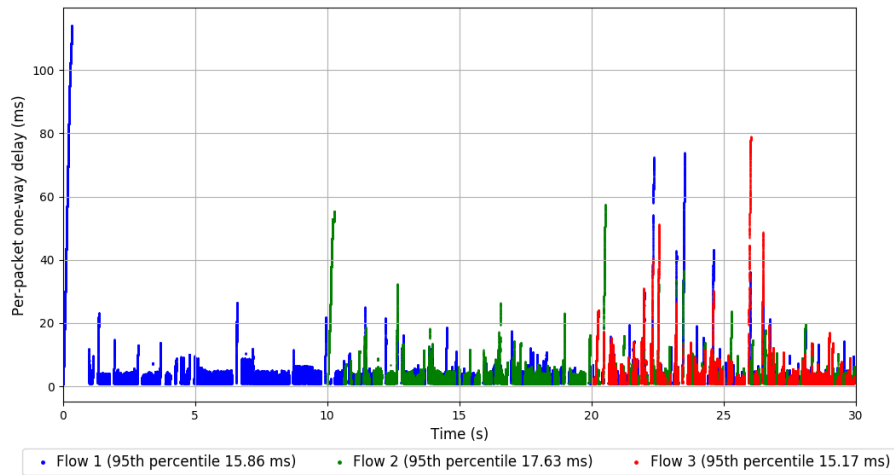
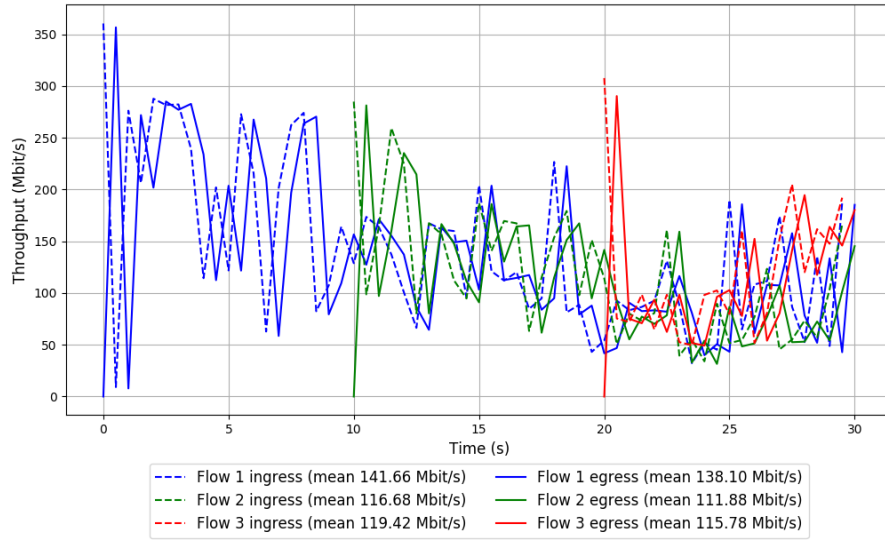
-- Flow 3:

Average throughput: 115.78 Mbit/s

95th percentile per-packet one-way delay: 15.174 ms

Loss rate: 3.05%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2019-05-30 01:59:29

End at: 2019-05-30 01:59:59

Local clock offset: 5.703 ms

Remote clock offset: 0.222 ms

Below is generated by plot.py at 2019-05-30 03:48:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 235.34 Mbit/s

95th percentile per-packet one-way delay: 20.045 ms

Loss rate: 3.60%

-- Flow 1:

Average throughput: 126.30 Mbit/s

95th percentile per-packet one-way delay: 17.041 ms

Loss rate: 2.77%

-- Flow 2:

Average throughput: 100.27 Mbit/s

95th percentile per-packet one-way delay: 12.717 ms

Loss rate: 4.22%

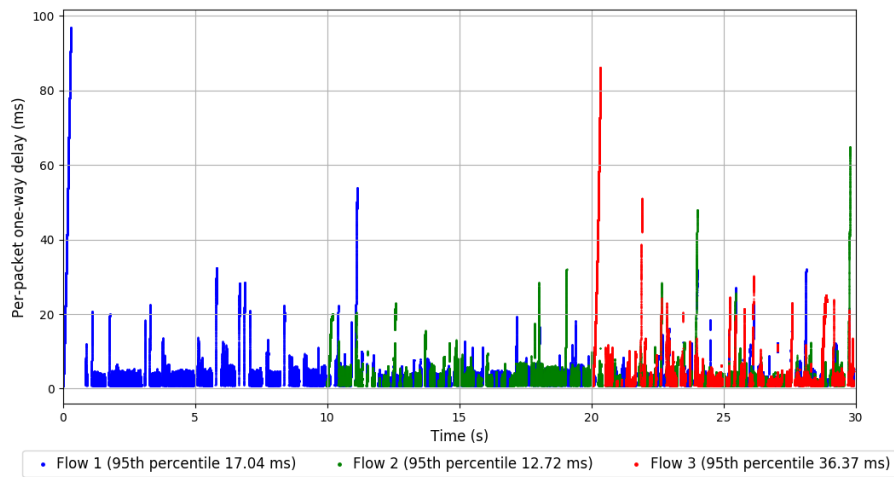
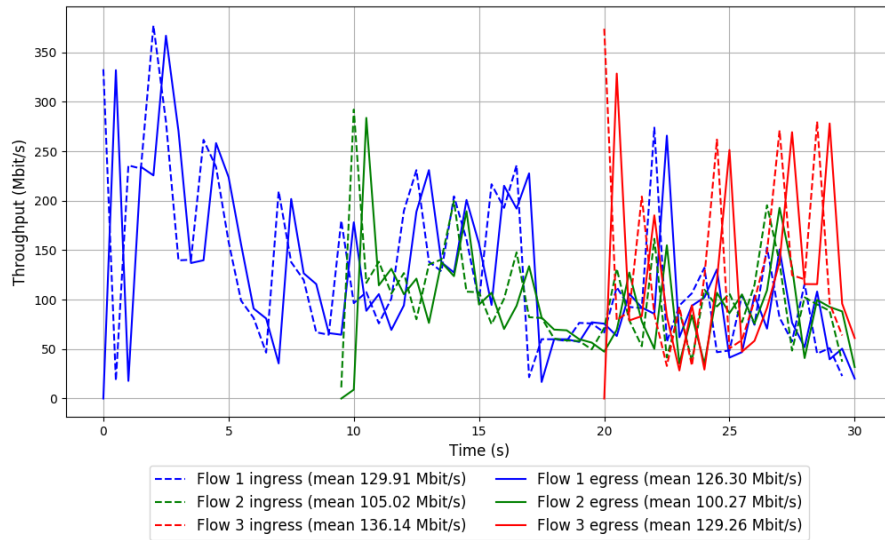
-- Flow 3:

Average throughput: 129.26 Mbit/s

95th percentile per-packet one-way delay: 36.365 ms

Loss rate: 5.02%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2019-05-30 02:29:20

End at: 2019-05-30 02:29:50

Local clock offset: 6.134 ms

Remote clock offset: 0.069 ms

Below is generated by plot.py at 2019-05-30 03:49:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 292.86 Mbit/s

95th percentile per-packet one-way delay: 15.315 ms

Loss rate: 4.11%

-- Flow 1:

Average throughput: 162.68 Mbit/s

95th percentile per-packet one-way delay: 12.413 ms

Loss rate: 3.60%

-- Flow 2:

Average throughput: 126.05 Mbit/s

95th percentile per-packet one-way delay: 9.513 ms

Loss rate: 5.09%

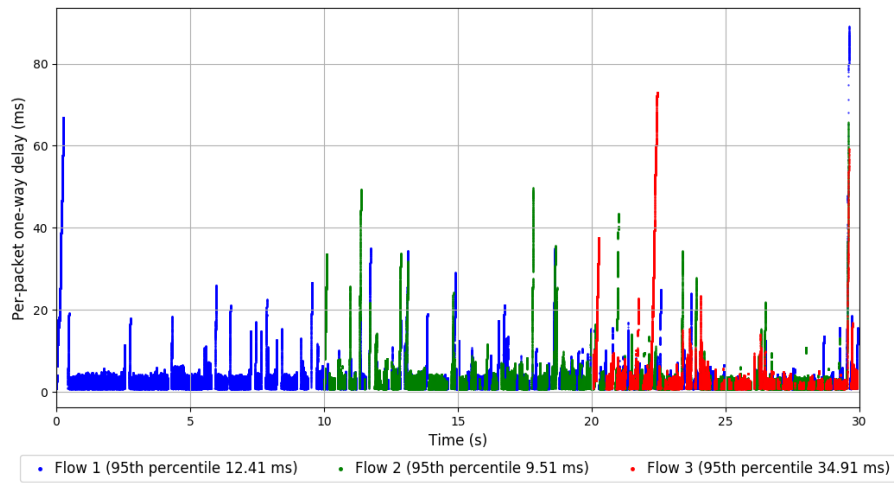
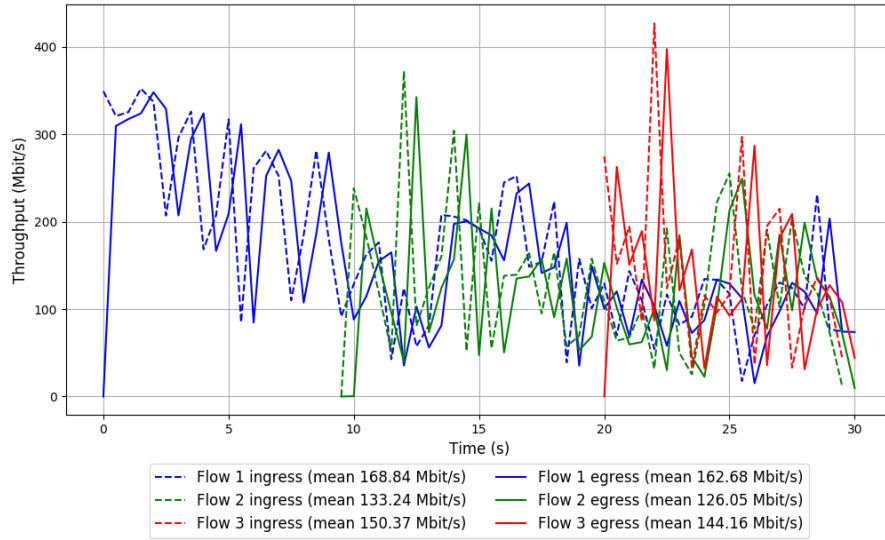
-- Flow 3:

Average throughput: 144.16 Mbit/s

95th percentile per-packet one-way delay: 34.911 ms

Loss rate: 4.12%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-05-30 00:47:41

End at: 2019-05-30 00:48:11

Local clock offset: 5.091 ms

Remote clock offset: 0.428 ms

Below is generated by plot.py at 2019-05-30 03:49:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 318.50 Mbit/s

95th percentile per-packet one-way delay: 82.059 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 141.69 Mbit/s

95th percentile per-packet one-way delay: 1.225 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 195.78 Mbit/s

95th percentile per-packet one-way delay: 123.098 ms

Loss rate: 3.06%

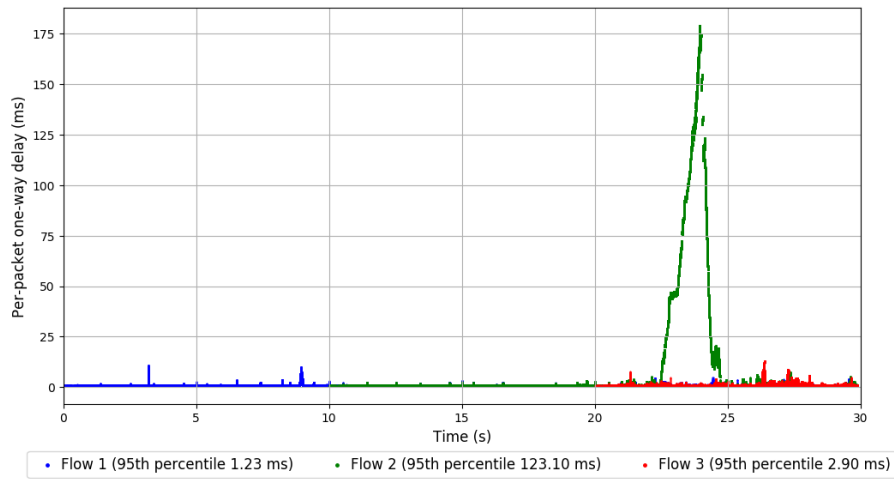
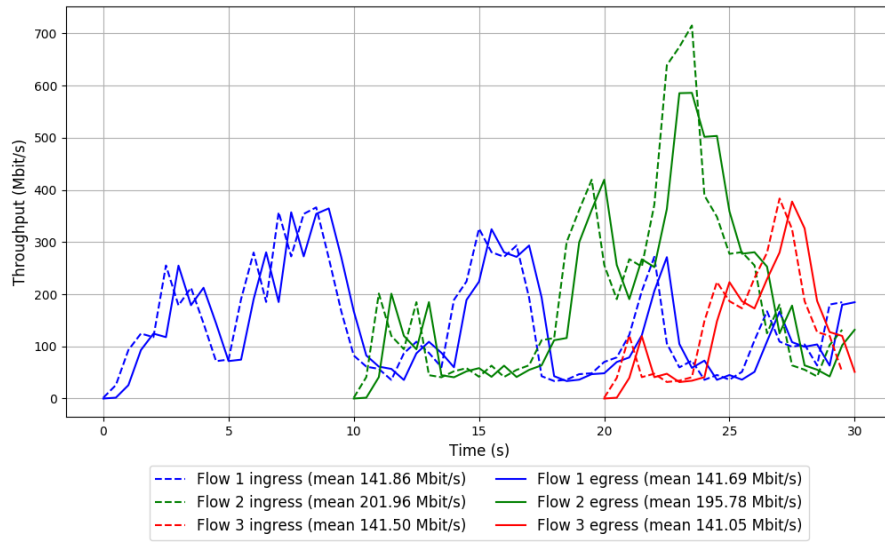
-- Flow 3:

Average throughput: 141.05 Mbit/s

95th percentile per-packet one-way delay: 2.899 ms

Loss rate: 0.32%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-05-30 01:17:24

End at: 2019-05-30 01:17:54

Local clock offset: 5.445 ms

Remote clock offset: 0.746 ms

Below is generated by plot.py at 2019-05-30 03:50:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 392.08 Mbit/s

95th percentile per-packet one-way delay: 55.148 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 245.62 Mbit/s

95th percentile per-packet one-way delay: 91.499 ms

Loss rate: 1.37%

-- Flow 2:

Average throughput: 124.98 Mbit/s

95th percentile per-packet one-way delay: 1.361 ms

Loss rate: 0.09%

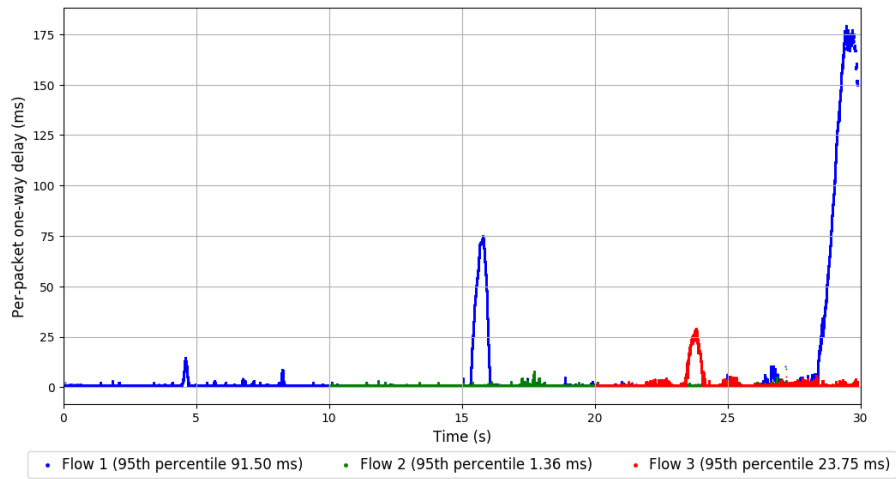
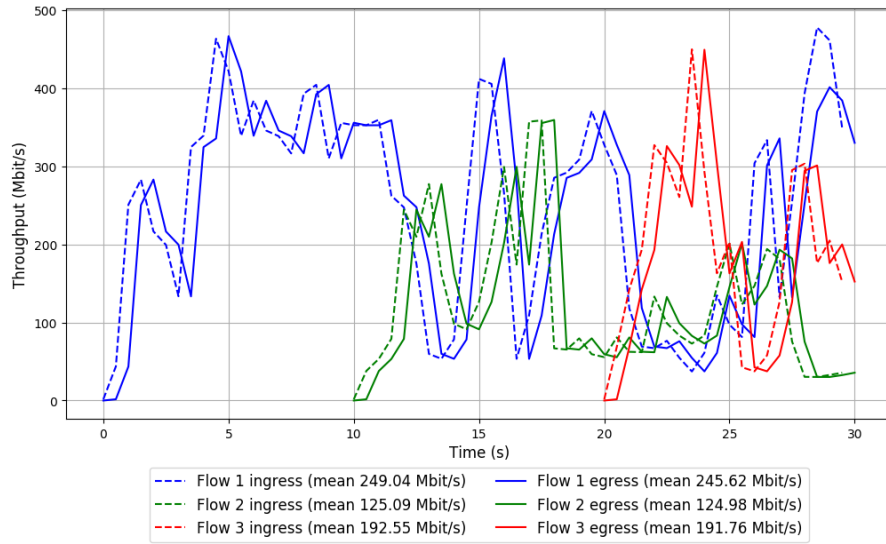
-- Flow 3:

Average throughput: 191.76 Mbit/s

95th percentile per-packet one-way delay: 23.755 ms

Loss rate: 0.41%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-05-30 01:47:25

End at: 2019-05-30 01:47:55

Local clock offset: 5.674 ms

Remote clock offset: 0.433 ms

Below is generated by plot.py at 2019-05-30 03:50:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 348.45 Mbit/s

95th percentile per-packet one-way delay: 6.702 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 141.71 Mbit/s

95th percentile per-packet one-way delay: 1.748 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 211.58 Mbit/s

95th percentile per-packet one-way delay: 1.928 ms

Loss rate: 0.10%

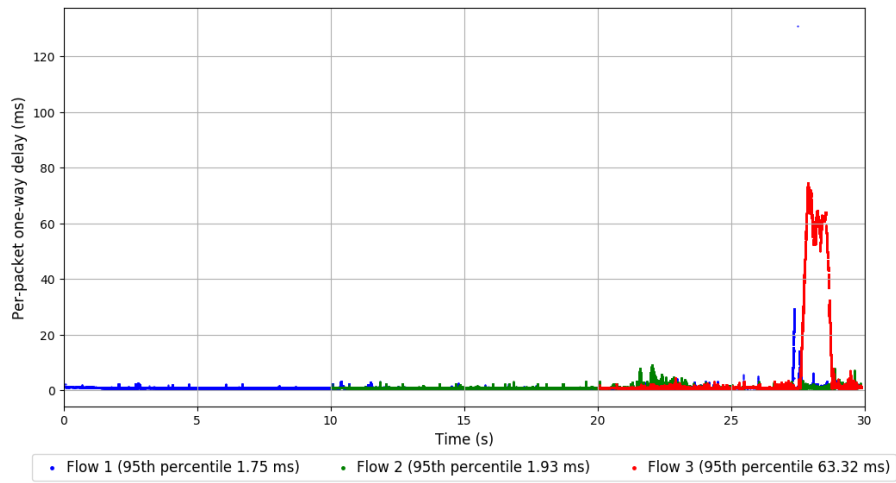
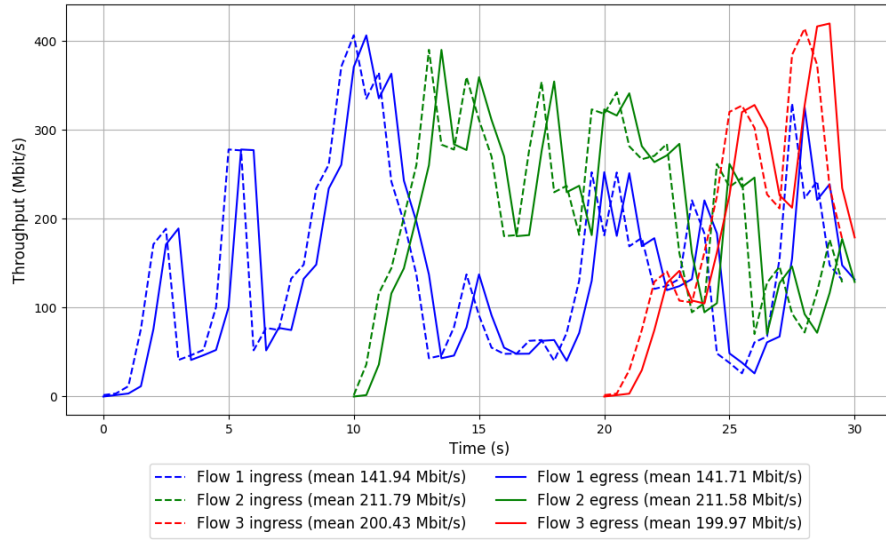
-- Flow 3:

Average throughput: 199.97 Mbit/s

95th percentile per-packet one-way delay: 63.323 ms

Loss rate: 0.23%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-05-30 02:17:11
End at: 2019-05-30 02:17:41
Local clock offset: 5.974 ms
Remote clock offset: -0.079 ms

Below is generated by plot.py at 2019-05-30 03:50:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 366.29 Mbit/s
95th percentile per-packet one-way delay: 11.155 ms
Loss rate: 0.06%

-- Flow 1:

Average throughput: 183.84 Mbit/s
95th percentile per-packet one-way delay: 2.235 ms
Loss rate: 0.06%

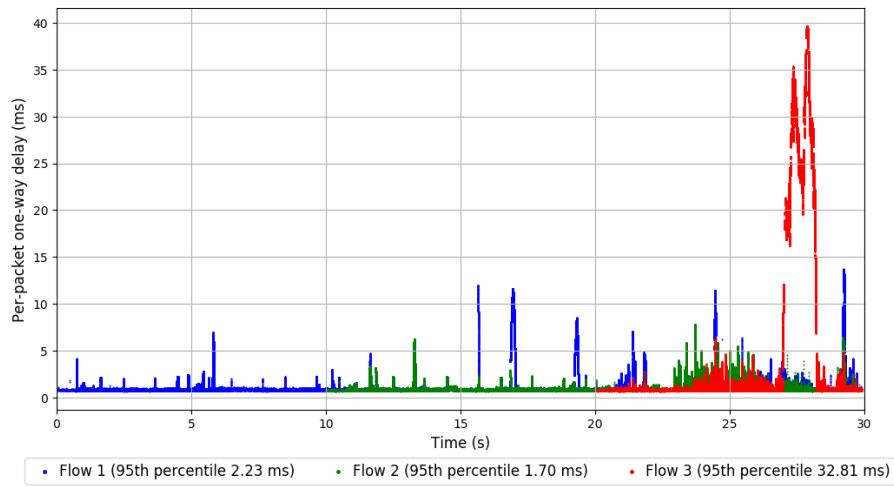
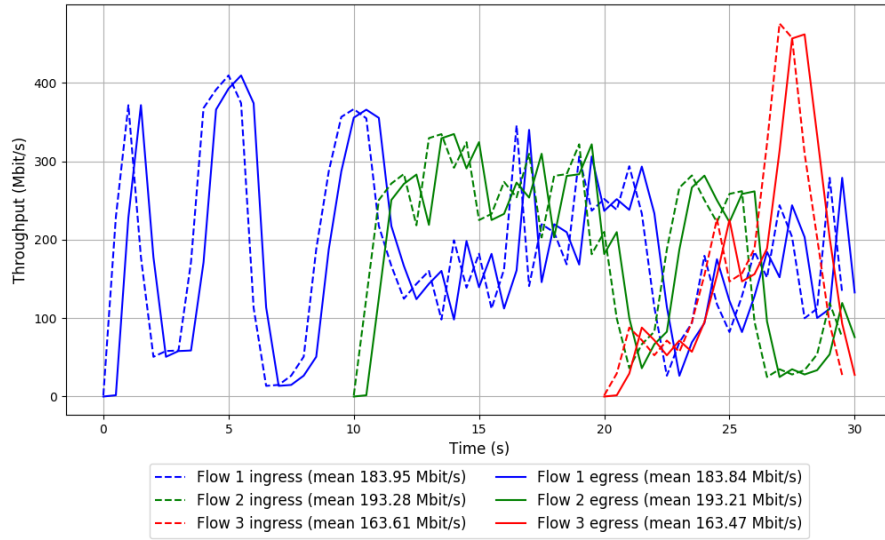
-- Flow 2:

Average throughput: 193.21 Mbit/s
95th percentile per-packet one-way delay: 1.703 ms
Loss rate: 0.04%

-- Flow 3:

Average throughput: 163.47 Mbit/s
95th percentile per-packet one-way delay: 32.809 ms
Loss rate: 0.09%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-05-30 02:47:03

End at: 2019-05-30 02:47:33

Local clock offset: 5.787 ms

Remote clock offset: 0.363 ms

Below is generated by plot.py at 2019-05-30 03:50:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 356.01 Mbit/s

95th percentile per-packet one-way delay: 97.988 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 203.10 Mbit/s

95th percentile per-packet one-way delay: 127.028 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 148.39 Mbit/s

95th percentile per-packet one-way delay: 1.801 ms

Loss rate: 0.16%

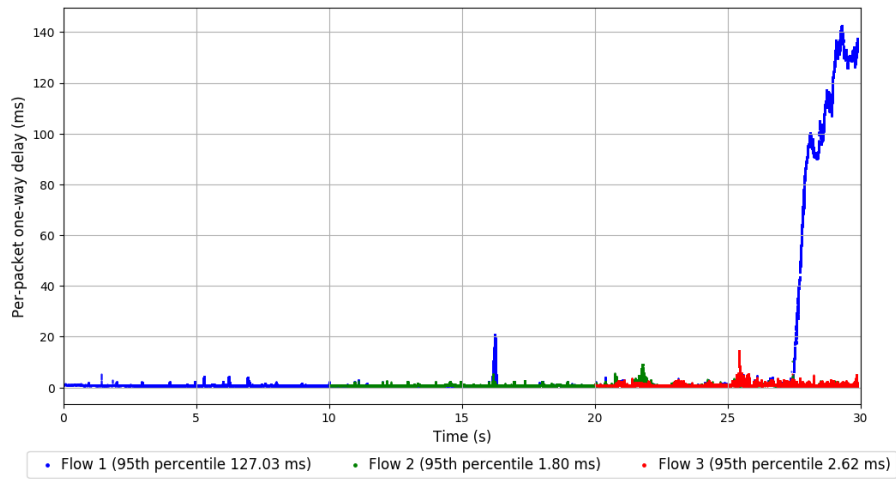
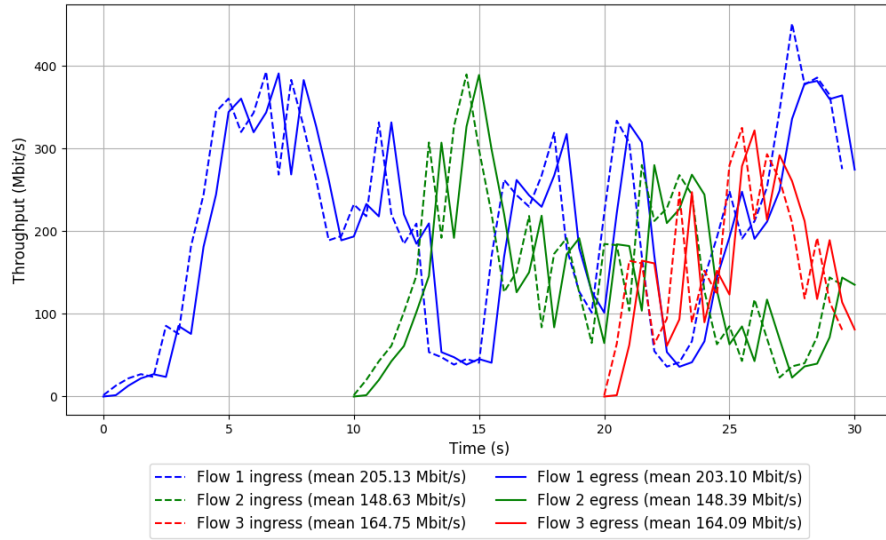
-- Flow 3:

Average throughput: 164.09 Mbit/s

95th percentile per-packet one-way delay: 2.624 ms

Loss rate: 0.40%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2019-05-30 00:49:10

End at: 2019-05-30 00:49:40

Local clock offset: 5.106 ms

Remote clock offset: 0.43 ms

Below is generated by plot.py at 2019-05-30 03:50:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.10 Mbit/s

95th percentile per-packet one-way delay: 1.288 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 1.279 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 1.270 ms

Loss rate: 0.00%

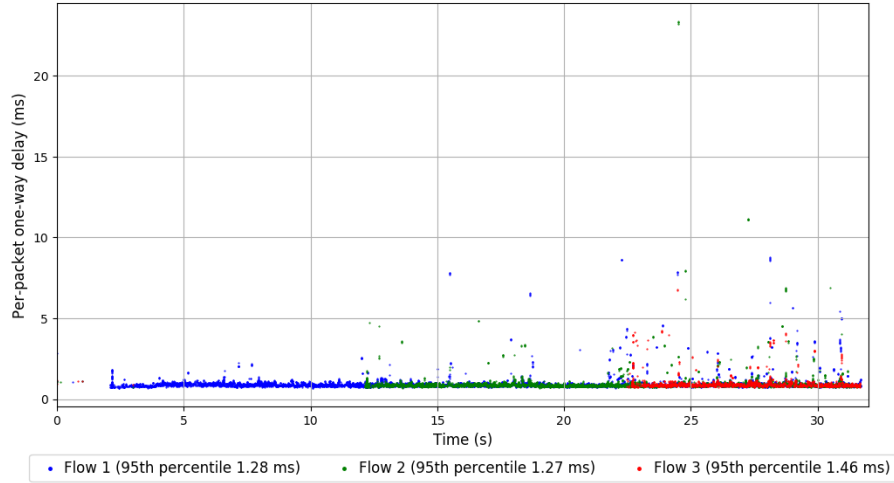
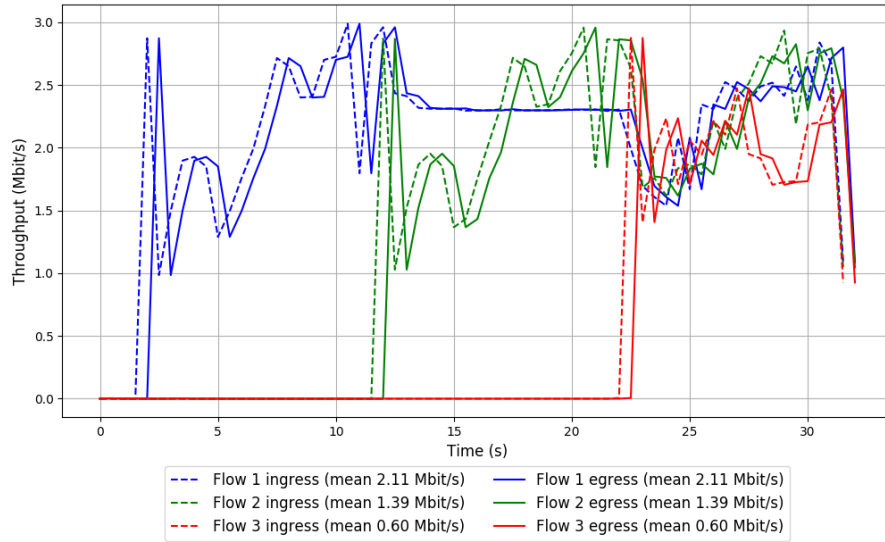
-- Flow 3:

Average throughput: 0.60 Mbit/s

95th percentile per-packet one-way delay: 1.462 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-05-30 01:18:56

End at: 2019-05-30 01:19:26

Local clock offset: 5.481 ms

Remote clock offset: 0.779 ms

Below is generated by plot.py at 2019-05-30 03:50:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 7.871 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 2.723 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 13.165 ms

Loss rate: 0.00%

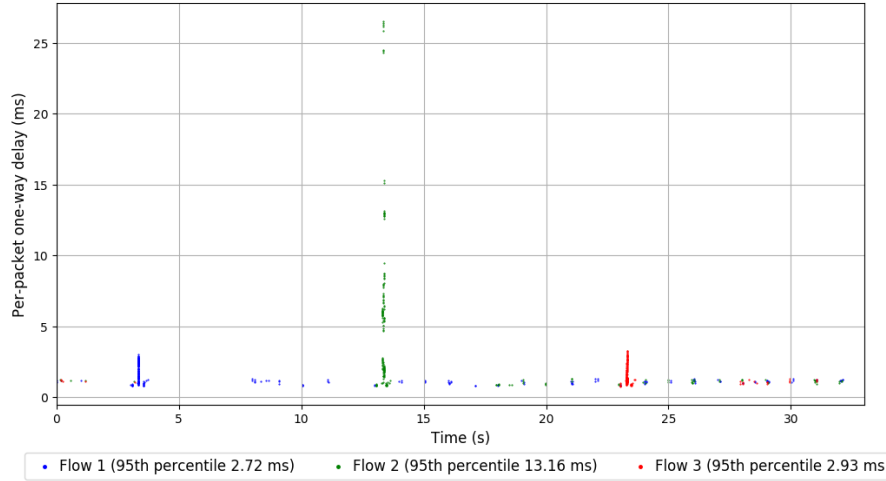
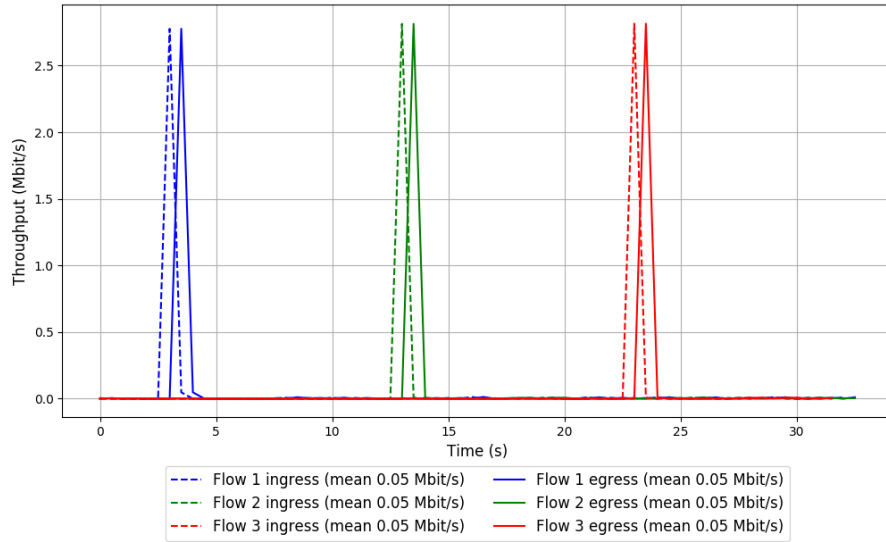
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 2.933 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-05-30 01:48:56

End at: 2019-05-30 01:49:26

Local clock offset: 5.688 ms

Remote clock offset: 0.39 ms

Below is generated by plot.py at 2019-05-30 03:50:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 6.788 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 2.212 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 7.855 ms

Loss rate: 0.00%

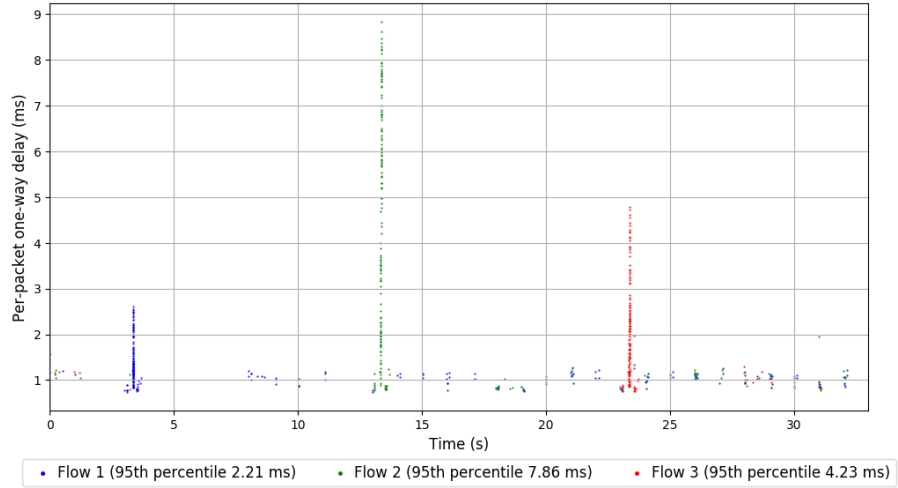
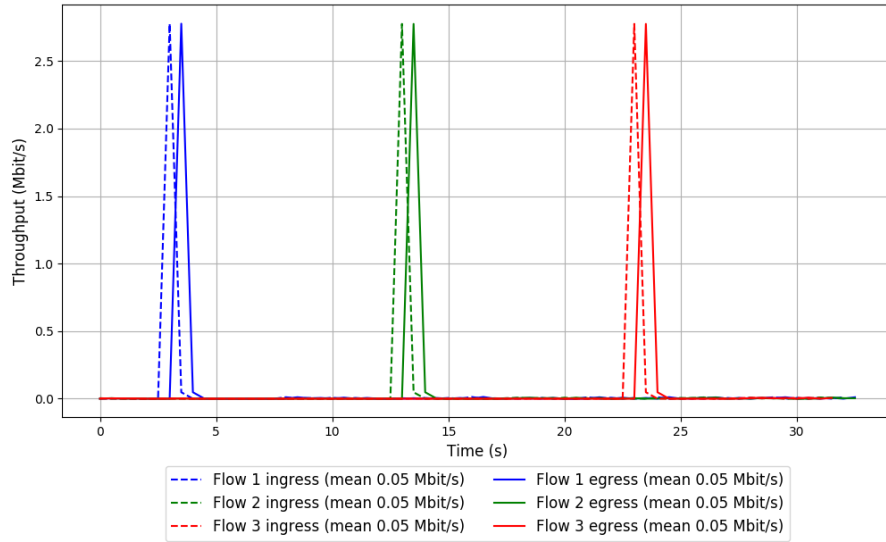
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.227 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-05-30 02:18:42
End at: 2019-05-30 02:19:12
Local clock offset: 6.031 ms
Remote clock offset: -0.014 ms

Below is generated by plot.py at 2019-05-30 03:50:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 3.897 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.697 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.307 ms

Loss rate: 0.00%

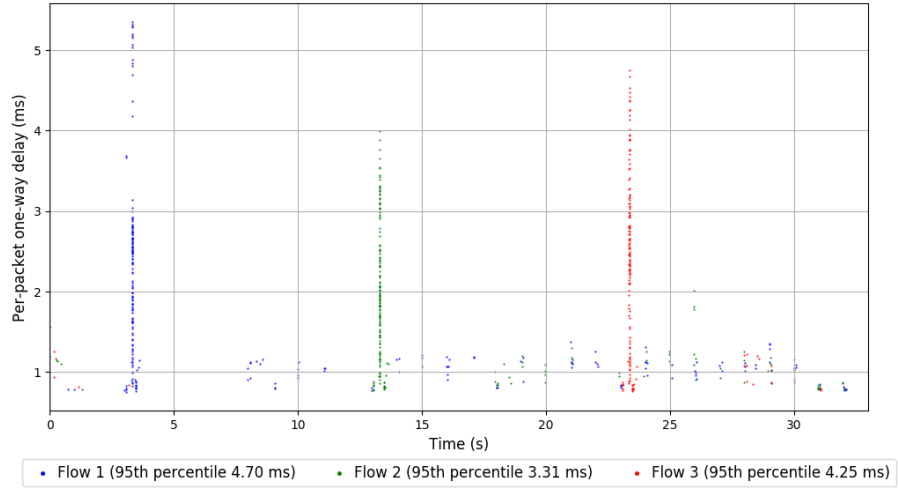
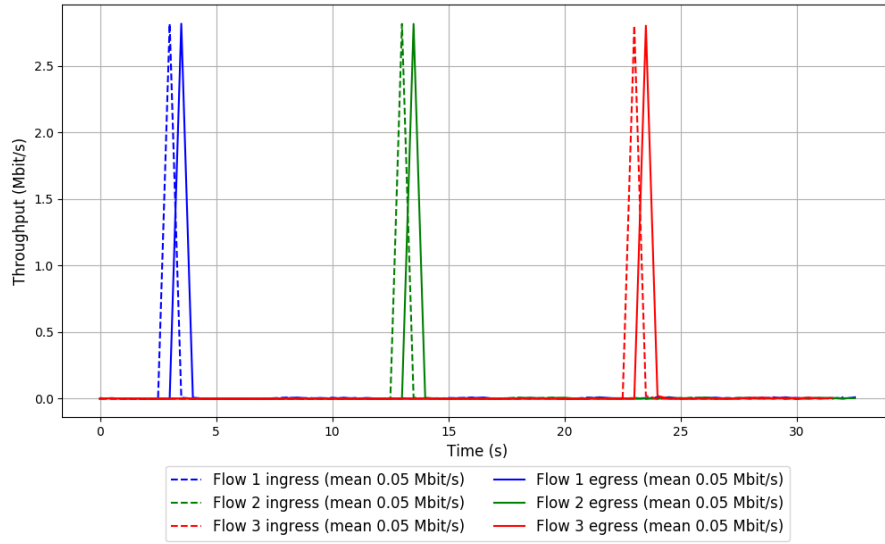
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.250 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-05-30 02:48:33

End at: 2019-05-30 02:49:03

Local clock offset: 5.742 ms

Remote clock offset: 0.364 ms

Below is generated by plot.py at 2019-05-30 03:50:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 4.268 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 1.816 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 5.032 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.081 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

