

Pantheon Report

Generated at 2019-06-28 13:51:59 (UTC).

Data path: Brazil on **p4p1** (*remote*) → AWS Brazil 1 on **ens5** (*local*).

Repeated the test of 22 congestion control schemes 5 times.

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

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

System info:

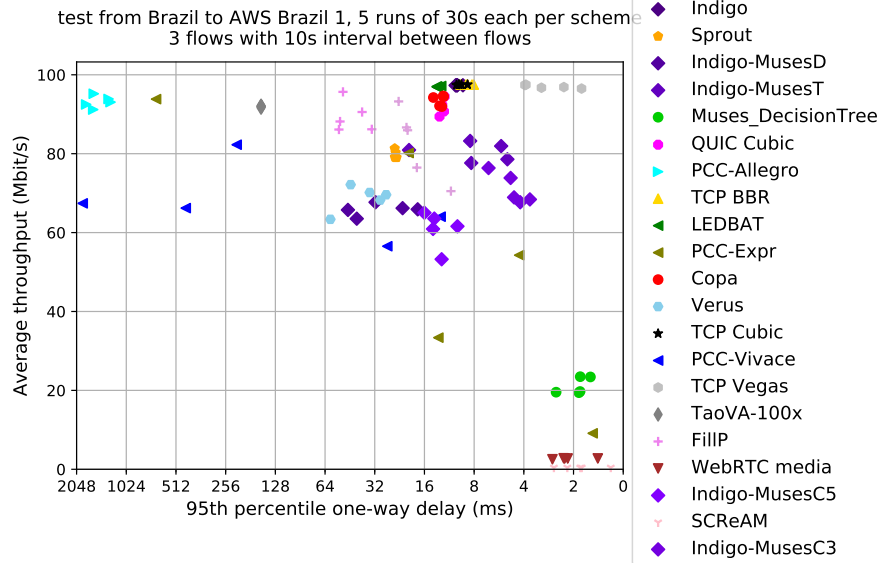
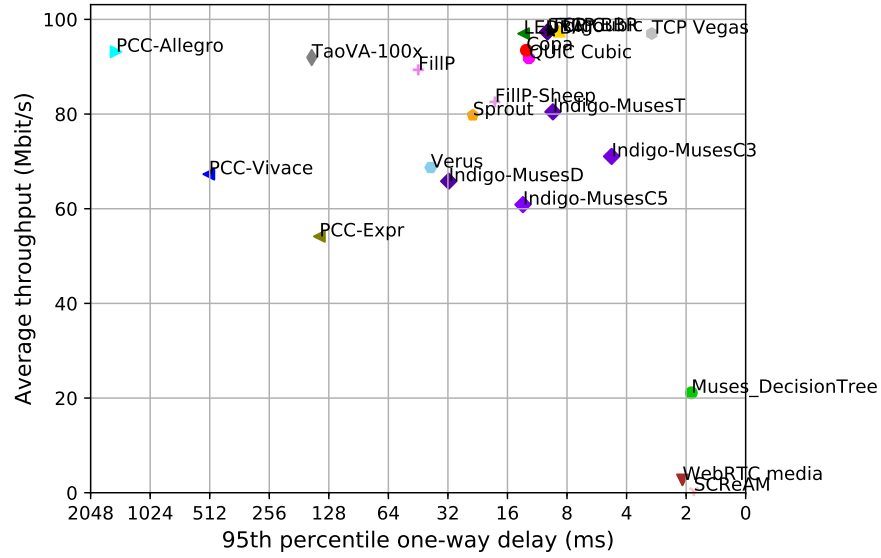
```
Linux 4.15.0-1039-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ c3953d08f32ec7ebbdede2d2f0cbdeed262571ef
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/muses_dtree @ 11c9498ecb1596b02ccd896791a02d03172af7ed
M helpers/__init__.pyc
M helpers/context.pyc
M helpers/utils.pyc
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
```

```
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from Brazil to AWS Brazil 1, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



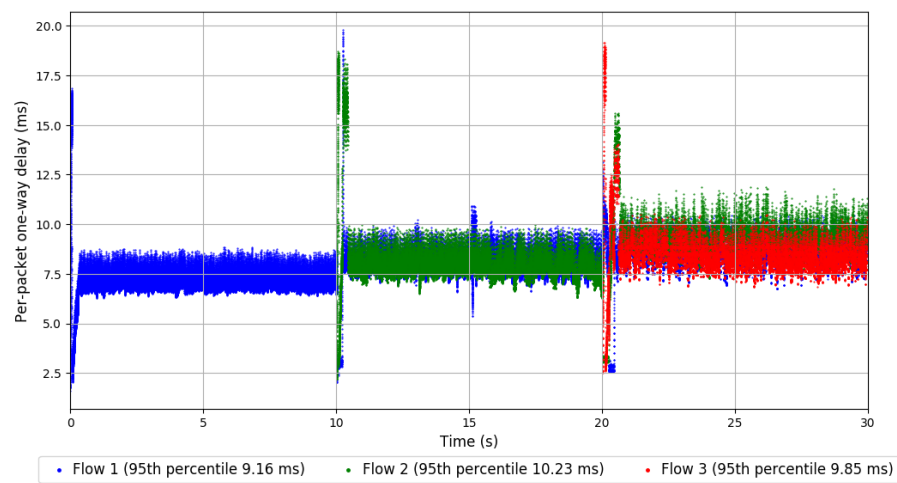
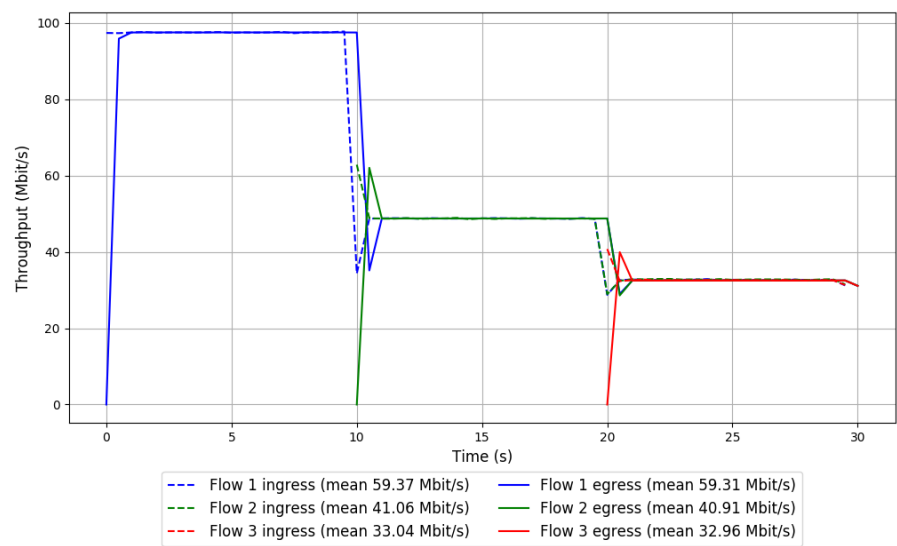
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	59.35	40.88	32.92	7.26	8.99	8.29	0.04	0.17	0.15
Copa	5	56.69	39.73	31.10	12.19	13.20	14.40	0.05	0.09	0.14
TCP Cubic	5	59.62	40.65	32.50	9.49	9.56	9.71	0.10	0.16	0.26
FillP	5	52.23	41.22	29.12	26.30	39.60	46.17	0.08	0.56	2.09
FillP-Sheep	5	57.12	28.55	19.47	17.06	17.98	63.48	0.00	0.02	0.10
Indigo	5	59.72	40.64	32.33	10.04	10.10	9.27	0.09	0.79	0.12
Indigo-MusesC3	5	51.55	23.62	18.29	4.93	3.89	4.32	0.00	0.01	0.05
Indigo-MusesC5	5	35.11	28.18	31.76	10.14	13.99	15.92	0.02	0.08	0.18
Indigo-MusesD	5	42.60	21.04	39.19	11.52	13.63	46.81	0.06	0.15	1.65
Indigo-MusesT	5	53.12	35.18	22.00	7.82	10.93	10.01	0.05	0.06	0.09
LEDBAT	5	59.06	40.78	32.43	12.96	13.14	13.64	0.15	0.26	0.36
Muses_DecisionTree	5	10.36	11.73	9.40	1.40	0.96	1.57	0.01	0.01	0.02
PCC-Allegro	5	60.74	35.27	27.25	1526.33	1060.91	35.63	15.24	14.20	0.20
PCC-Expr	5	31.38	24.38	19.85	140.44	135.47	4.69	6.74	2.04	0.06
QUIC Cubic	5	54.82	40.10	31.17	12.12	12.46	12.92	0.19	0.36	0.53
SCReAM	5	0.22	0.22	0.22	1.25	0.98	1.74	0.00	0.00	0.07
Sprout	5	42.88	39.46	32.19	22.43	23.92	25.54	0.22	0.54	0.95
TaoVA-100x	5	55.23	39.24	31.80	155.46	156.06	156.84	0.53	1.12	2.53
TCP Vegas	5	53.49	43.58	43.62	2.48	2.66	3.39	0.01	0.01	0.02
Verus	5	37.93	29.53	33.43	29.85	39.78	115.83	0.04	0.04	0.28
PCC-Vivace	5	36.40	32.87	27.35	390.43	119.05	125.19	1.07	1.84	1.92
WebRTC media	5	1.51	0.83	0.38	1.92	2.00	1.84	0.02	0.07	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-06-28 11:30:17
End at: 2019-06-28 11:30:47
Local clock offset: -5.958 ms
Remote clock offset: -0.374 ms

Below is generated by plot.py at 2019-06-28 13:39:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 9.659 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 59.31 Mbit/s
95th percentile per-packet one-way delay: 9.163 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 40.91 Mbit/s
95th percentile per-packet one-way delay: 10.235 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 32.96 Mbit/s
95th percentile per-packet one-way delay: 9.854 ms
Loss rate: 0.30%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-06-28 11:55:29

End at: 2019-06-28 11:55:59

Local clock offset: -6.818 ms

Remote clock offset: 0.059 ms

Below is generated by plot.py at 2019-06-28 13:39:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.50 Mbit/s

95th percentile per-packet one-way delay: 8.959 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 59.38 Mbit/s

95th percentile per-packet one-way delay: 6.026 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 40.83 Mbit/s

95th percentile per-packet one-way delay: 9.582 ms

Loss rate: 0.35%

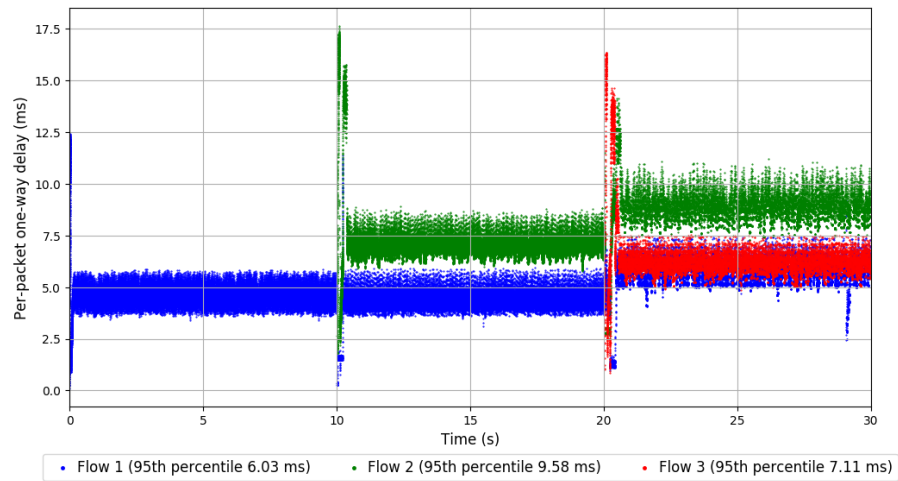
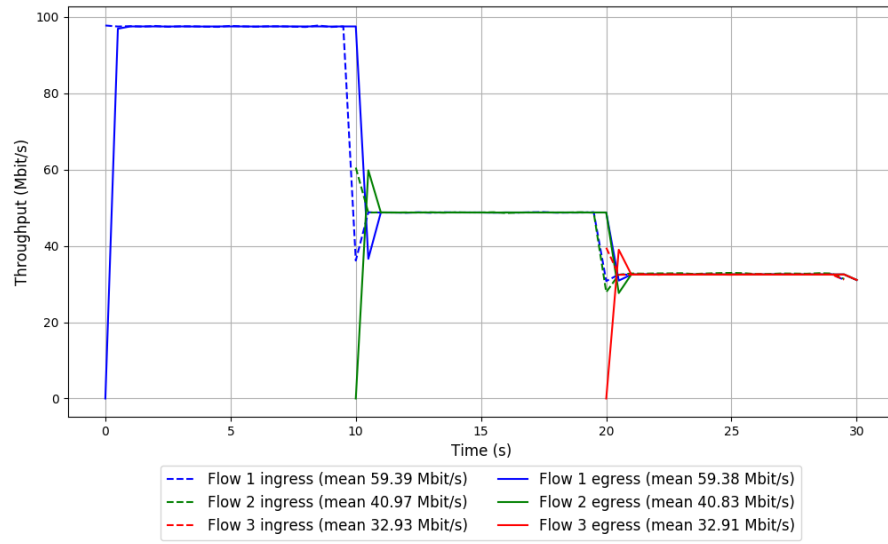
-- Flow 3:

Average throughput: 32.91 Mbit/s

95th percentile per-packet one-way delay: 7.107 ms

Loss rate: 0.08%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-06-28 12:20:43

End at: 2019-06-28 12:21:13

Local clock offset: -7.322 ms

Remote clock offset: 0.546 ms

Below is generated by plot.py at 2019-06-28 13:39:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 8.246 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 59.39 Mbit/s

95th percentile per-packet one-way delay: 6.229 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 40.83 Mbit/s

95th percentile per-packet one-way delay: 8.817 ms

Loss rate: 0.04%

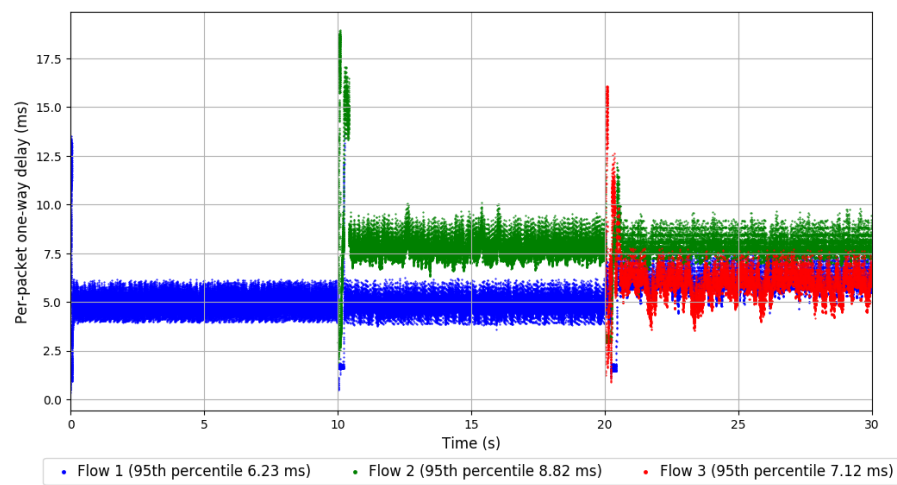
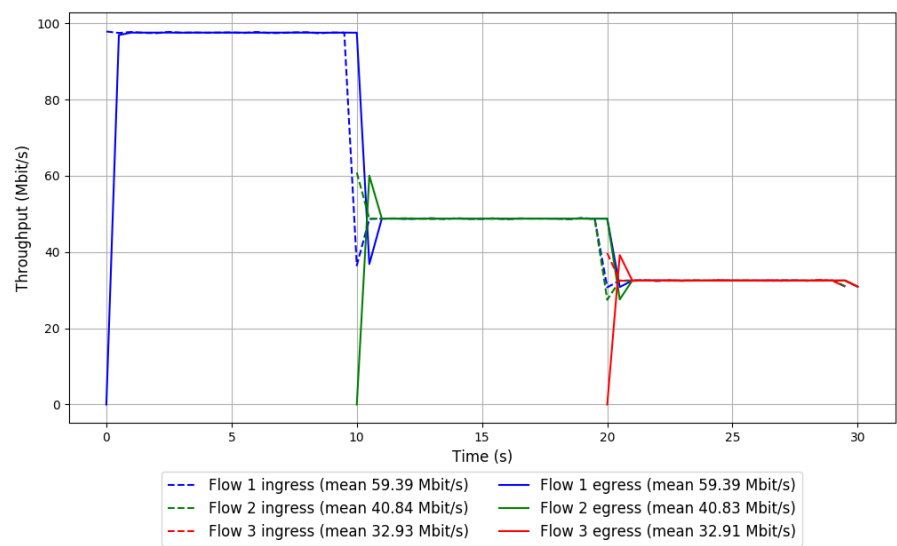
-- Flow 3:

Average throughput: 32.91 Mbit/s

95th percentile per-packet one-way delay: 7.116 ms

Loss rate: 0.08%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-06-28 12:45:55

End at: 2019-06-28 12:46:25

Local clock offset: -7.28 ms

Remote clock offset: 0.701 ms

Below is generated by plot.py at 2019-06-28 13:39:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 8.764 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 59.34 Mbit/s

95th percentile per-packet one-way delay: 6.794 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 40.88 Mbit/s

95th percentile per-packet one-way delay: 9.211 ms

Loss rate: 0.07%

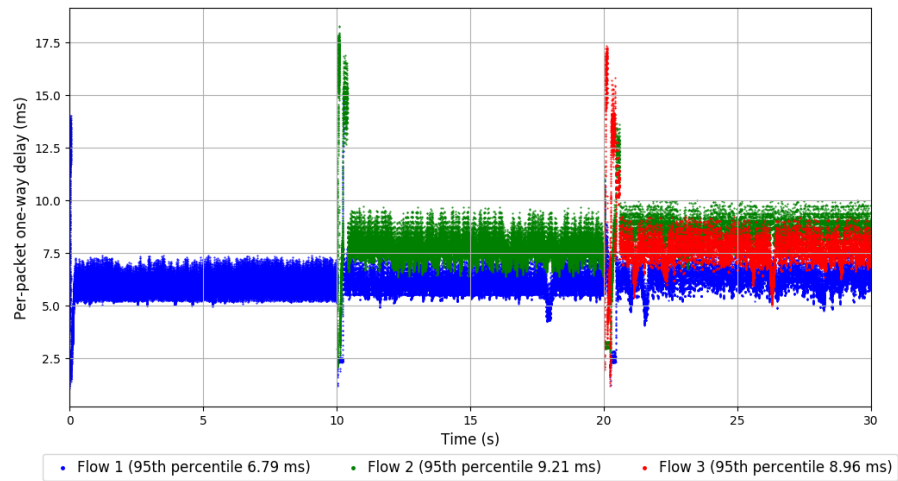
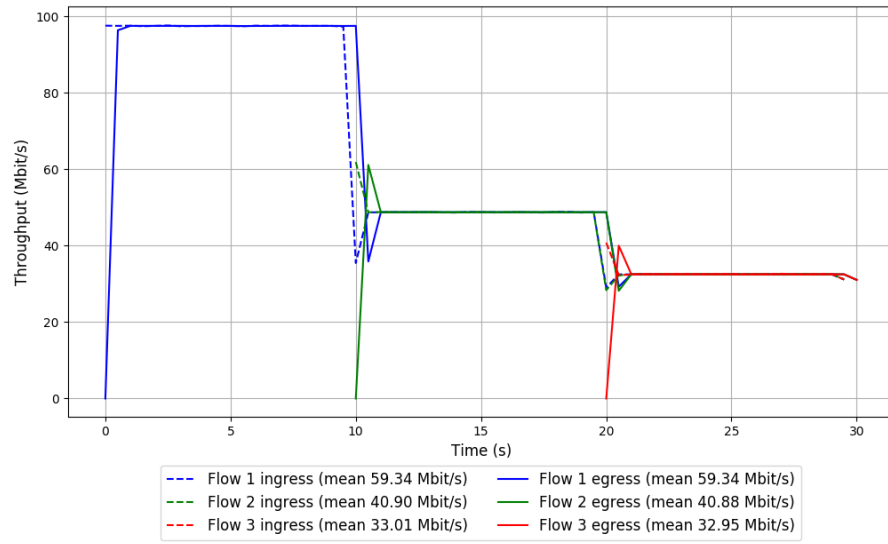
-- Flow 3:

Average throughput: 32.95 Mbit/s

95th percentile per-packet one-way delay: 8.962 ms

Loss rate: 0.22%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2019-06-28 13:11:13

End at: 2019-06-28 13:11:43

Local clock offset: -6.688 ms

Remote clock offset: 0.611 ms

Below is generated by plot.py at 2019-06-28 13:39:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.50 Mbit/s

95th percentile per-packet one-way delay: 8.041 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 59.33 Mbit/s

95th percentile per-packet one-way delay: 8.105 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 40.94 Mbit/s

95th percentile per-packet one-way delay: 7.084 ms

Loss rate: 0.03%

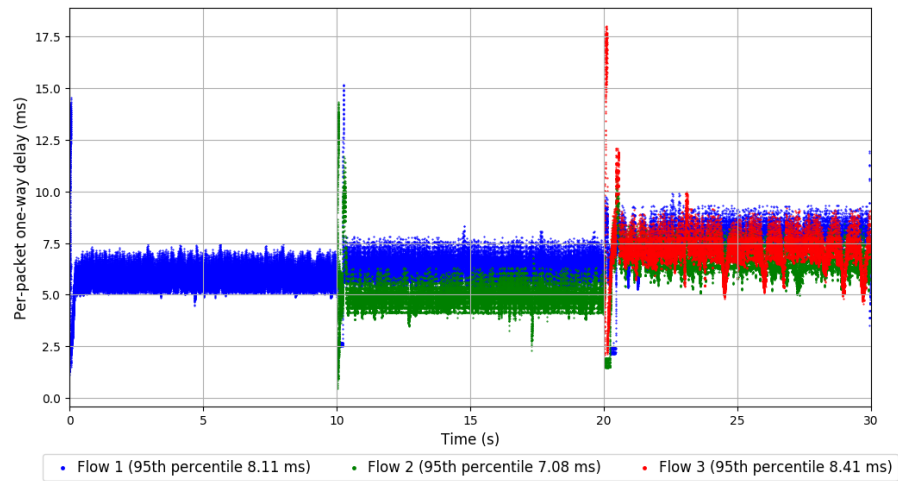
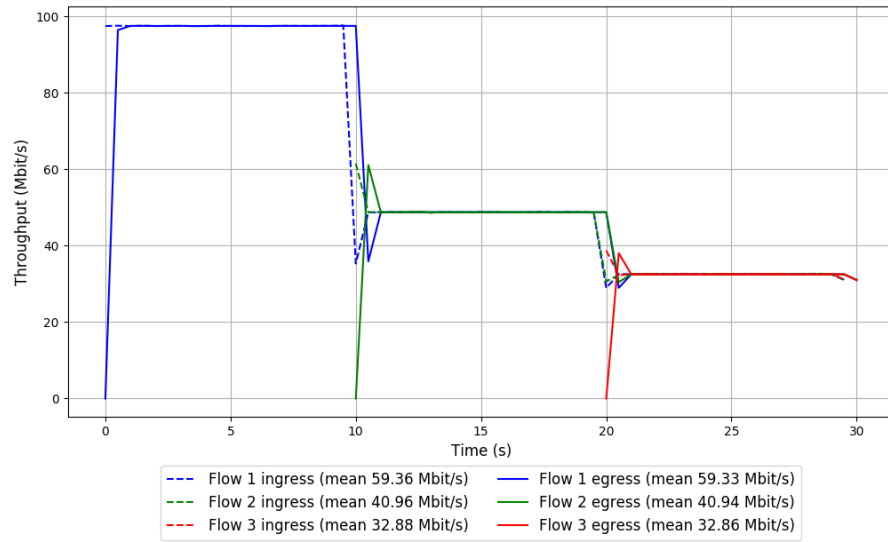
-- Flow 3:

Average throughput: 32.86 Mbit/s

95th percentile per-packet one-way delay: 8.412 ms

Loss rate: 0.09%

Run 5: Report of TCP BBR — Data Link

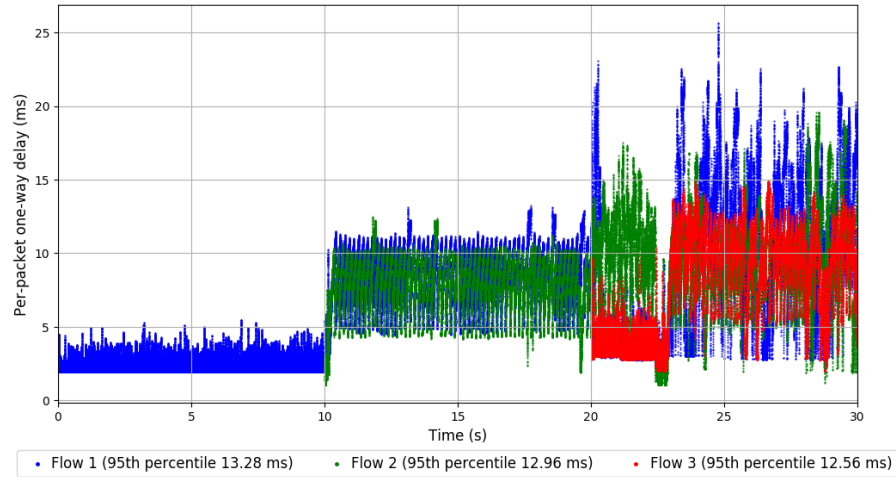
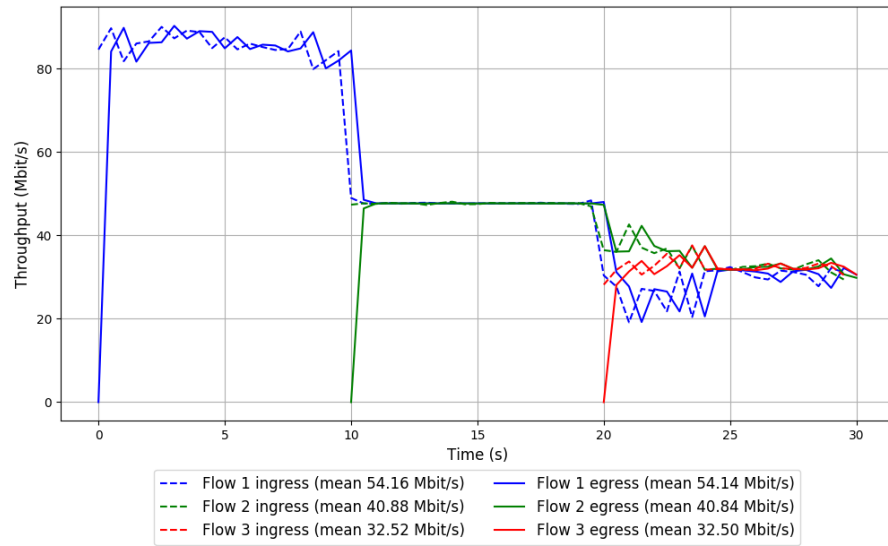


Run 1: Statistics of Copa

Start at: 2019-06-28 11:41:43
End at: 2019-06-28 11:42:13
Local clock offset: -5.467 ms
Remote clock offset: -0.073 ms

Below is generated by plot.py at 2019-06-28 13:40:01
Datalink statistics
-- Total of 3 flows:
Average throughput: 92.13 Mbit/s
95th percentile per-packet one-way delay: 12.964 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 54.14 Mbit/s
95th percentile per-packet one-way delay: 13.282 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 40.84 Mbit/s
95th percentile per-packet one-way delay: 12.955 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 32.50 Mbit/s
95th percentile per-packet one-way delay: 12.556 ms
Loss rate: 0.13%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-06-28 12:06:57

End at: 2019-06-28 12:07:27

Local clock offset: -7.078 ms

Remote clock offset: 0.343 ms

Below is generated by plot.py at 2019-06-28 13:40:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.62 Mbit/s

95th percentile per-packet one-way delay: 12.323 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 57.78 Mbit/s

95th percentile per-packet one-way delay: 11.160 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 39.61 Mbit/s

95th percentile per-packet one-way delay: 12.664 ms

Loss rate: 0.11%

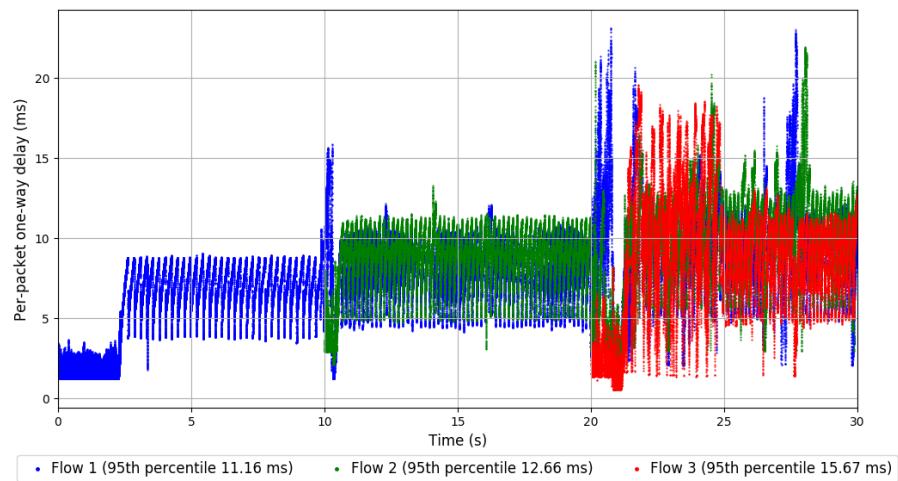
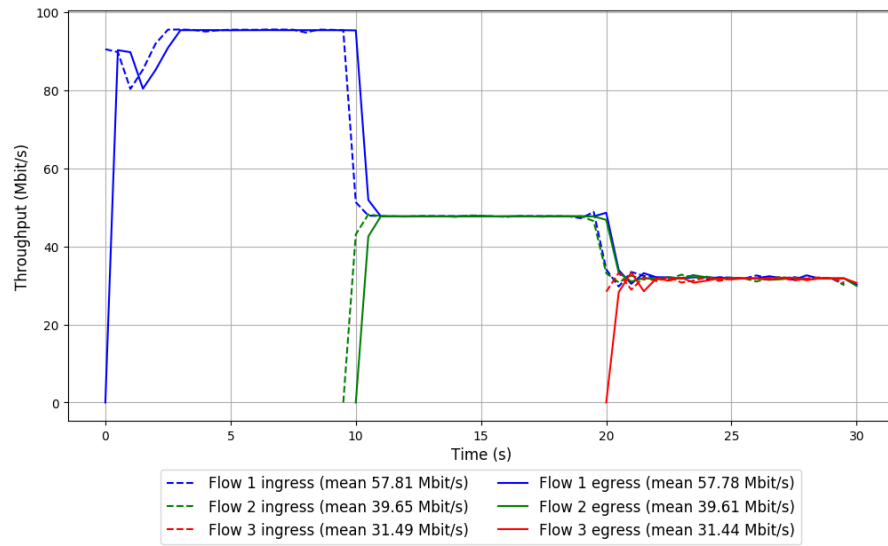
-- Flow 3:

Average throughput: 31.44 Mbit/s

95th percentile per-packet one-way delay: 15.666 ms

Loss rate: 0.17%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-06-28 12:32:08

End at: 2019-06-28 12:32:38

Local clock offset: -6.881 ms

Remote clock offset: 0.722 ms

Below is generated by plot.py at 2019-06-28 13:40:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.24 Mbit/s

95th percentile per-packet one-way delay: 14.127 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 58.53 Mbit/s

95th percentile per-packet one-way delay: 12.673 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 37.68 Mbit/s

95th percentile per-packet one-way delay: 17.199 ms

Loss rate: 0.06%

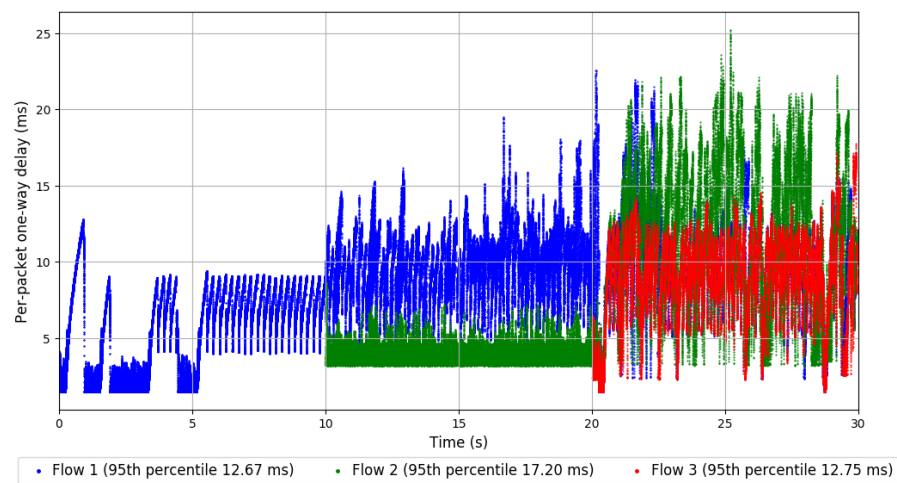
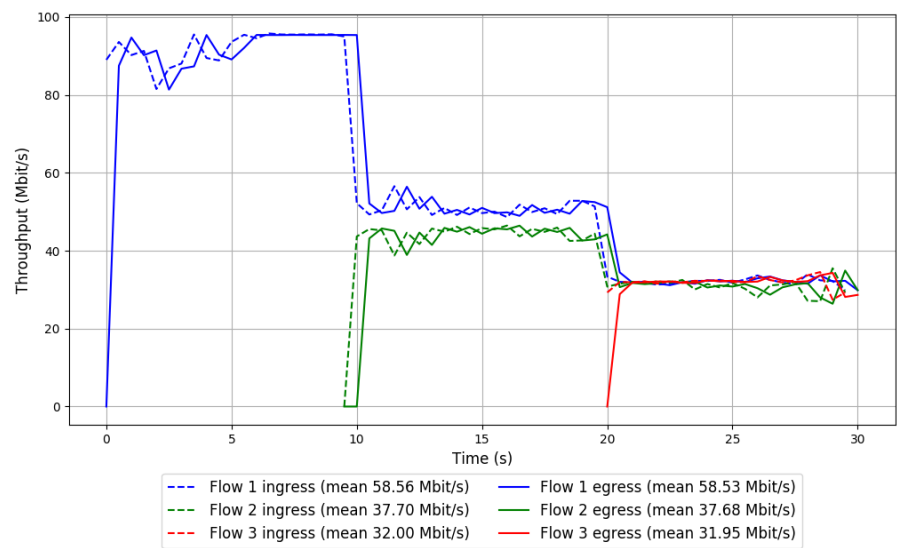
-- Flow 3:

Average throughput: 31.95 Mbit/s

95th percentile per-packet one-way delay: 12.748 ms

Loss rate: 0.18%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-06-28 12:57:26

End at: 2019-06-28 12:57:56

Local clock offset: -6.899 ms

Remote clock offset: 0.603 ms

Below is generated by plot.py at 2019-06-28 13:41:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.94 Mbit/s

95th percentile per-packet one-way delay: 12.550 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 55.69 Mbit/s

95th percentile per-packet one-way delay: 12.419 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 40.55 Mbit/s

95th percentile per-packet one-way delay: 12.273 ms

Loss rate: 0.09%

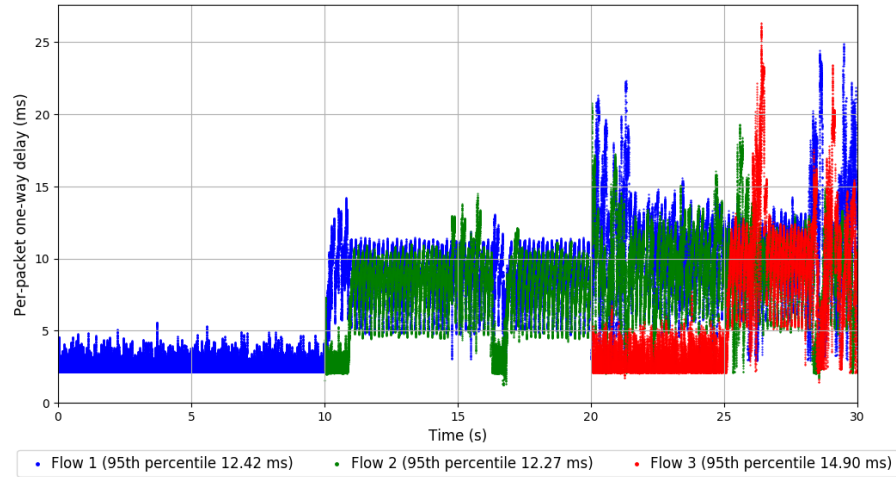
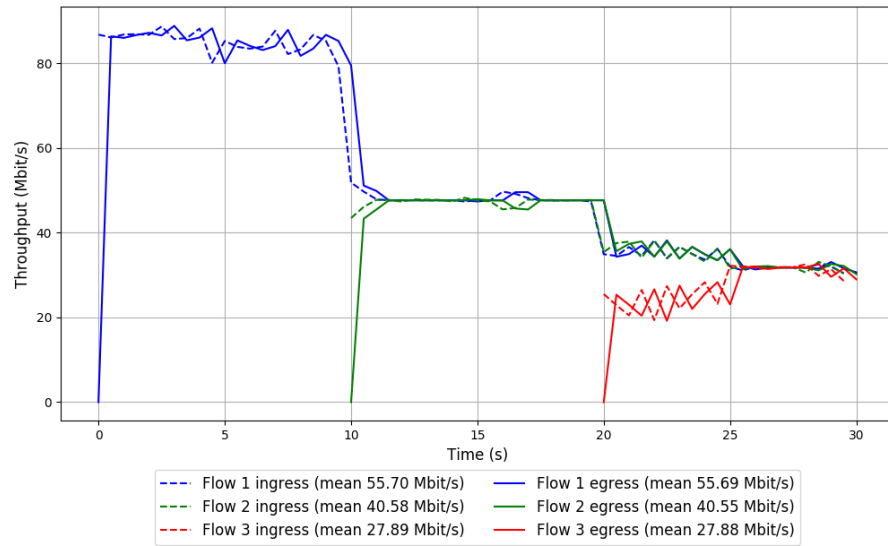
-- Flow 3:

Average throughput: 27.88 Mbit/s

95th percentile per-packet one-way delay: 14.905 ms

Loss rate: 0.04%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-06-28 13:22:46

End at: 2019-06-28 13:23:16

Local clock offset: -6.359 ms

Remote clock offset: 0.542 ms

Below is generated by plot.py at 2019-06-28 13:41:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.46 Mbit/s

95th percentile per-packet one-way delay: 12.247 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 57.29 Mbit/s

95th percentile per-packet one-way delay: 11.400 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 39.98 Mbit/s

95th percentile per-packet one-way delay: 10.902 ms

Loss rate: 0.08%

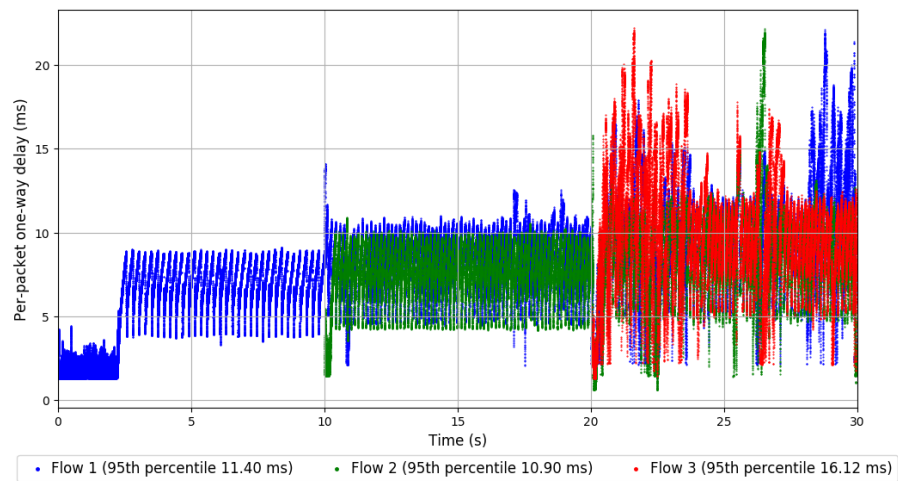
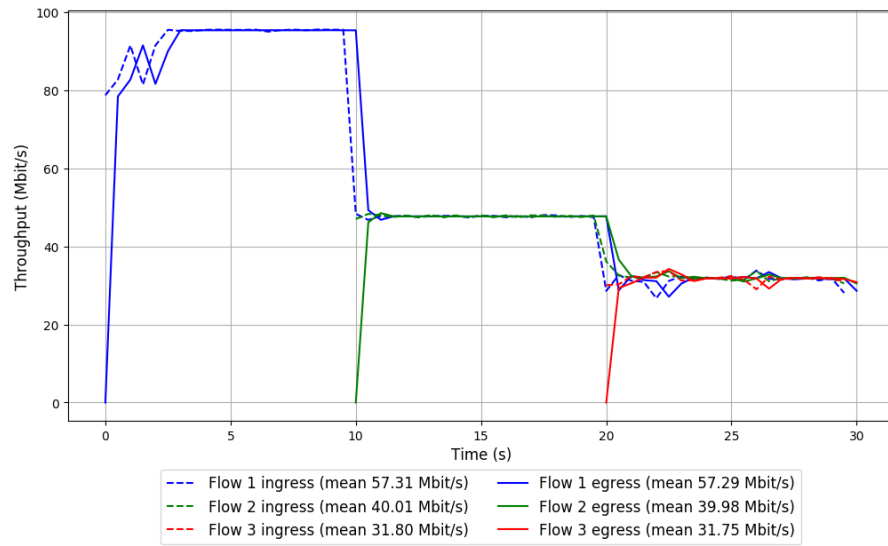
-- Flow 3:

Average throughput: 31.75 Mbit/s

95th percentile per-packet one-way delay: 16.124 ms

Loss rate: 0.20%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-06-28 11:47:25

End at: 2019-06-28 11:47:55

Local clock offset: -5.002 ms

Remote clock offset: -0.03 ms

Below is generated by plot.py at 2019-06-28 13:41:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.49 Mbit/s

95th percentile per-packet one-way delay: 9.827 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 59.62 Mbit/s

95th percentile per-packet one-way delay: 9.946 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 40.64 Mbit/s

95th percentile per-packet one-way delay: 9.804 ms

Loss rate: 0.16%

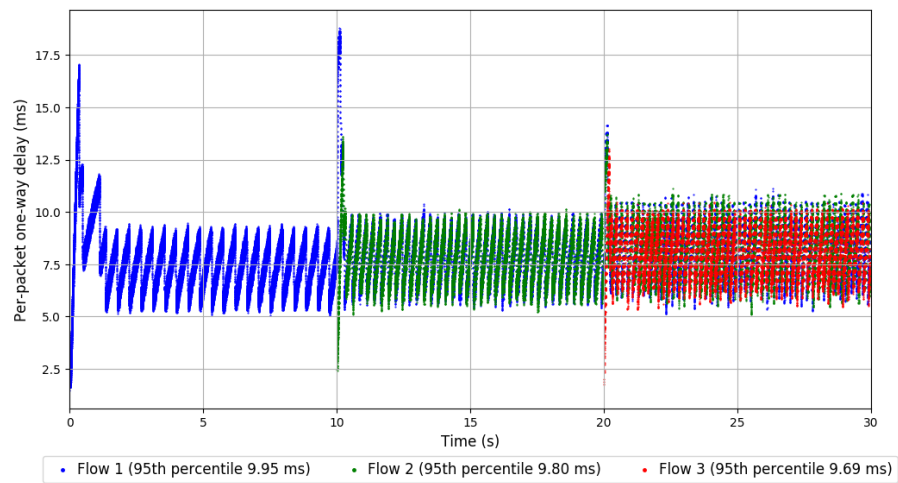
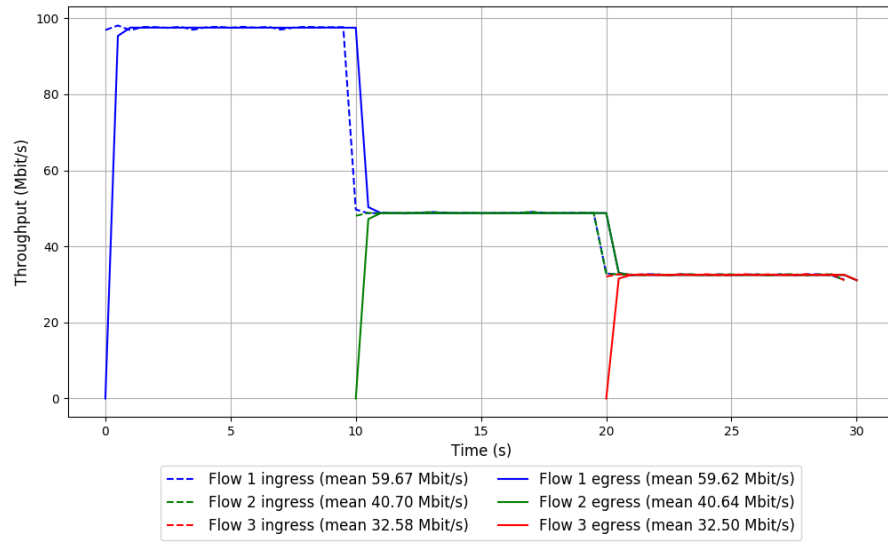
-- Flow 3:

Average throughput: 32.50 Mbit/s

95th percentile per-packet one-way delay: 9.687 ms

Loss rate: 0.27%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-06-28 12:12:39

End at: 2019-06-28 12:13:09

Local clock offset: -7.726 ms

Remote clock offset: 0.255 ms

Below is generated by plot.py at 2019-06-28 13:41:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 9.916 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 59.63 Mbit/s

95th percentile per-packet one-way delay: 9.301 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 40.64 Mbit/s

95th percentile per-packet one-way delay: 9.951 ms

Loss rate: 0.15%

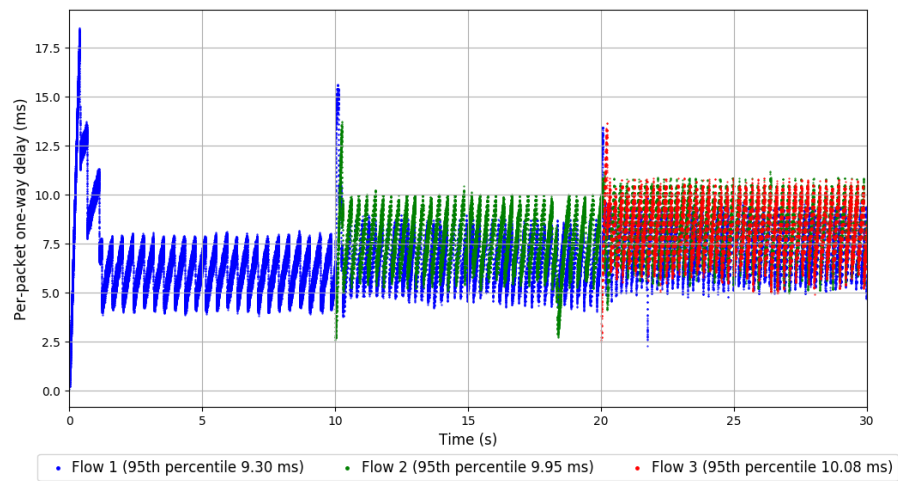
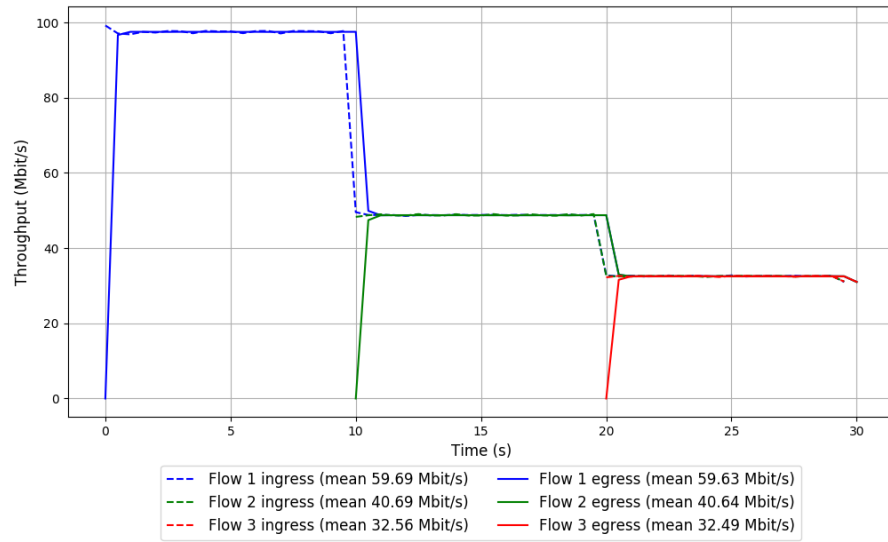
-- Flow 3:

Average throughput: 32.49 Mbit/s

95th percentile per-packet one-way delay: 10.082 ms

Loss rate: 0.25%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-06-28 12:37:51

End at: 2019-06-28 12:38:21

Local clock offset: -7.294 ms

Remote clock offset: 0.548 ms

Below is generated by plot.py at 2019-06-28 13:41:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.43 Mbit/s

95th percentile per-packet one-way delay: 10.232 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 59.57 Mbit/s

95th percentile per-packet one-way delay: 9.344 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 40.65 Mbit/s

95th percentile per-packet one-way delay: 10.310 ms

Loss rate: 0.15%

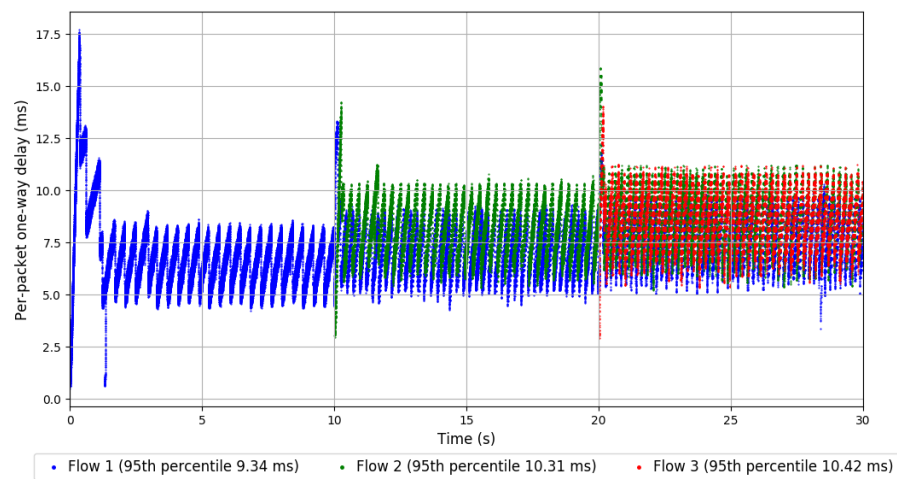
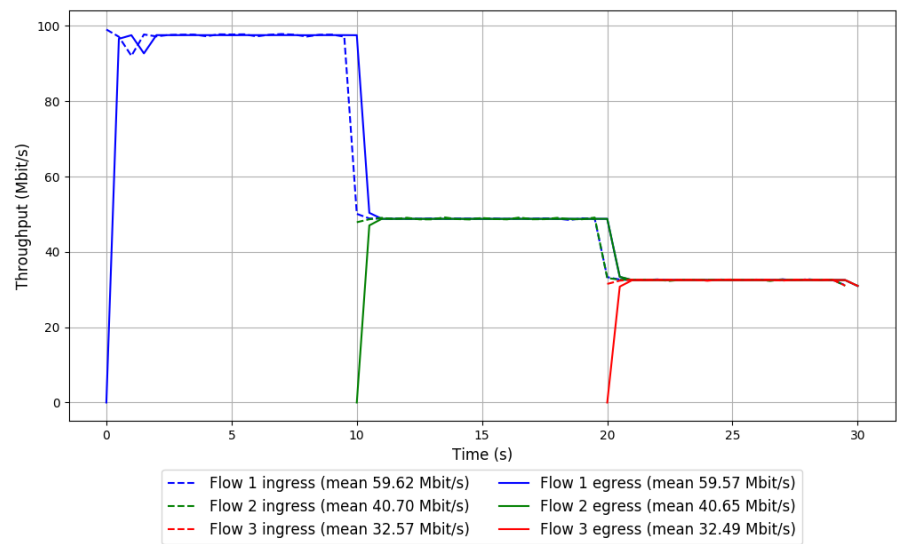
-- Flow 3:

Average throughput: 32.49 Mbit/s

95th percentile per-packet one-way delay: 10.420 ms

Loss rate: 0.26%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-06-28 13:03:08

End at: 2019-06-28 13:03:38

Local clock offset: -7.294 ms

Remote clock offset: 0.608 ms

Below is generated by plot.py at 2019-06-28 13:41:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.52 Mbit/s

95th percentile per-packet one-way delay: 8.769 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 59.64 Mbit/s

95th percentile per-packet one-way delay: 9.154 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 40.65 Mbit/s

95th percentile per-packet one-way delay: 8.464 ms

Loss rate: 0.17%

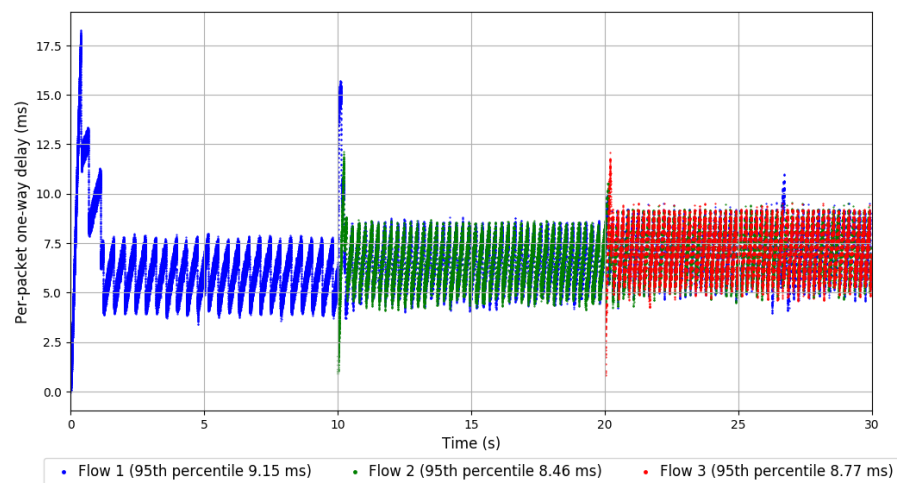
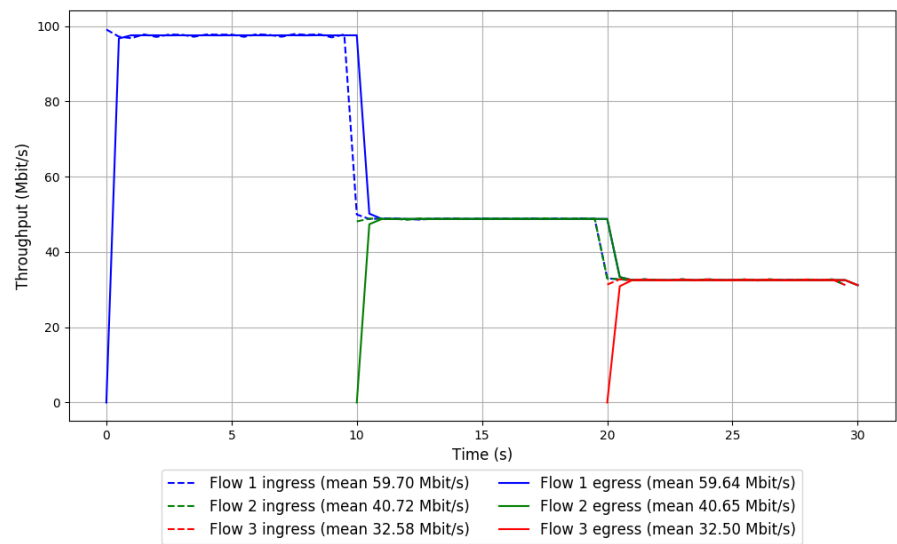
-- Flow 3:

Average throughput: 32.50 Mbit/s

95th percentile per-packet one-way delay: 8.774 ms

Loss rate: 0.27%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-06-28 13:28:29

End at: 2019-06-28 13:28:59

Local clock offset: -5.892 ms

Remote clock offset: 0.562 ms

Below is generated by plot.py at 2019-06-28 13:41:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.52 Mbit/s

95th percentile per-packet one-way delay: 9.549 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 59.64 Mbit/s

95th percentile per-packet one-way delay: 9.725 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 40.65 Mbit/s

95th percentile per-packet one-way delay: 9.263 ms

Loss rate: 0.17%

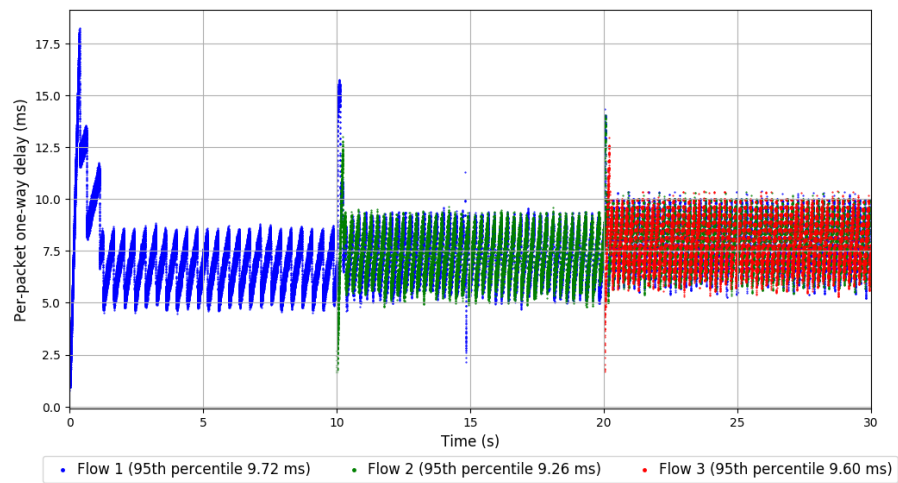
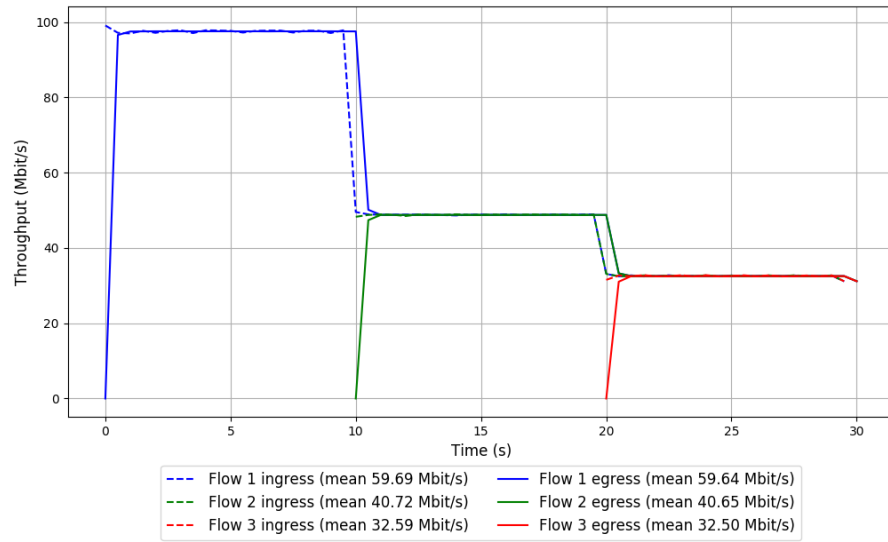
-- Flow 3:

Average throughput: 32.50 Mbit/s

95th percentile per-packet one-way delay: 9.595 ms

Loss rate: 0.27%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-06-28 11:48:34

End at: 2019-06-28 11:49:04

Local clock offset: -5.161 ms

Remote clock offset: 0.003 ms

Below is generated by plot.py at 2019-06-28 13:41:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.12 Mbit/s

95th percentile per-packet one-way delay: 52.737 ms

Loss rate: 0.73%

-- Flow 1:

Average throughput: 56.65 Mbit/s

95th percentile per-packet one-way delay: 32.875 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 27.94 Mbit/s

95th percentile per-packet one-way delay: 26.876 ms

Loss rate: 0.10%

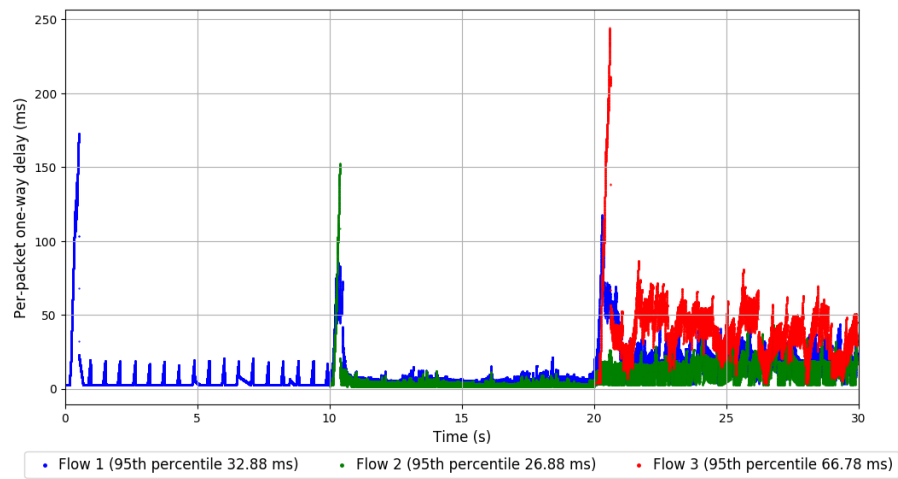
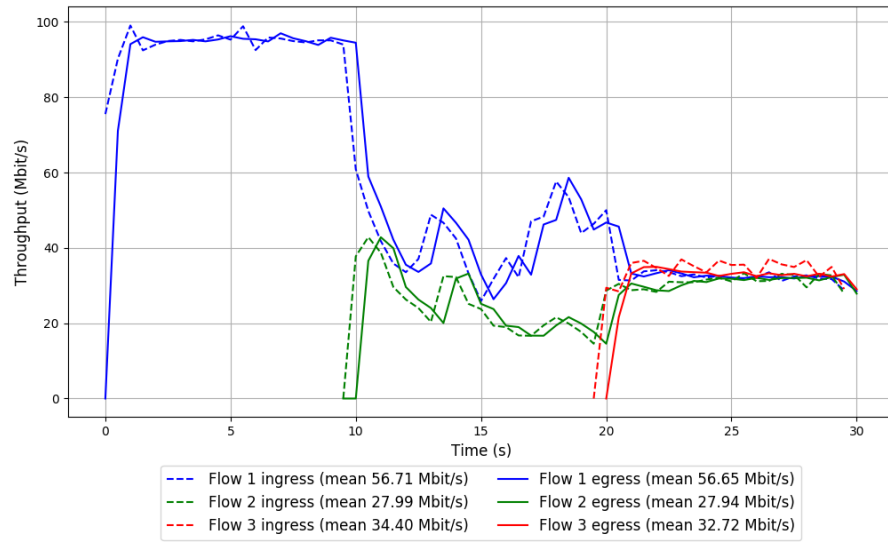
-- Flow 3:

Average throughput: 32.72 Mbit/s

95th percentile per-packet one-way delay: 66.778 ms

Loss rate: 4.84%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-06-28 12:13:49

End at: 2019-06-28 12:14:19

Local clock offset: -7.362 ms

Remote clock offset: 0.415 ms

Below is generated by plot.py at 2019-06-28 13:41:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.16 Mbit/s

95th percentile per-packet one-way delay: 51.926 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 50.35 Mbit/s

95th percentile per-packet one-way delay: 22.106 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 39.75 Mbit/s

95th percentile per-packet one-way delay: 33.050 ms

Loss rate: 0.13%

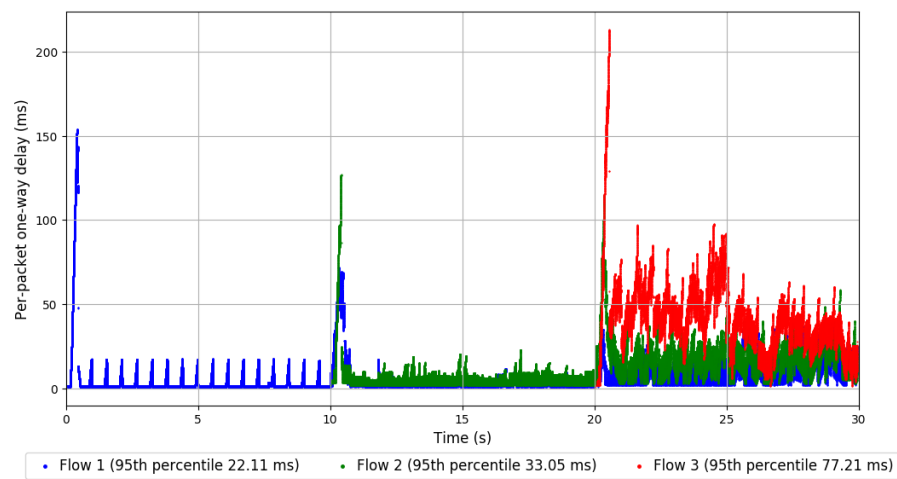
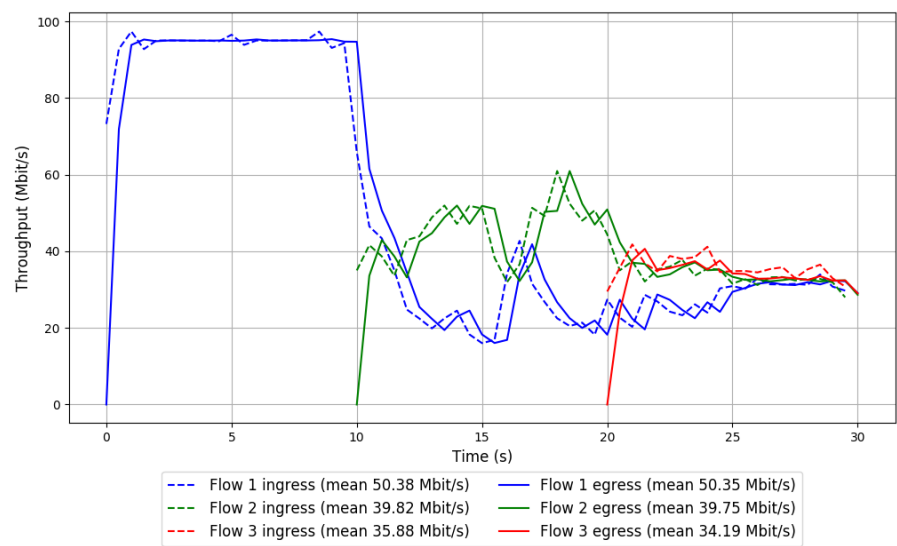
-- Flow 3:

Average throughput: 34.19 Mbit/s

95th percentile per-packet one-way delay: 77.211 ms

Loss rate: 4.70%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-06-28 12:39:00

End at: 2019-06-28 12:39:30

Local clock offset: -7.661 ms

Remote clock offset: 0.659 ms

Below is generated by plot.py at 2019-06-28 13:41:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.57 Mbit/s

95th percentile per-packet one-way delay: 38.170 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 48.93 Mbit/s

95th percentile per-packet one-way delay: 24.624 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 50.93 Mbit/s

95th percentile per-packet one-way delay: 46.407 ms

Loss rate: 0.33%

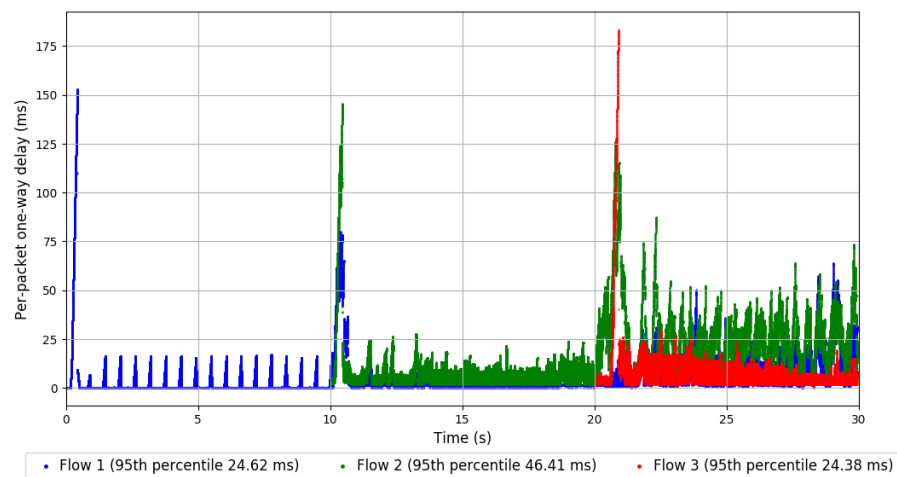
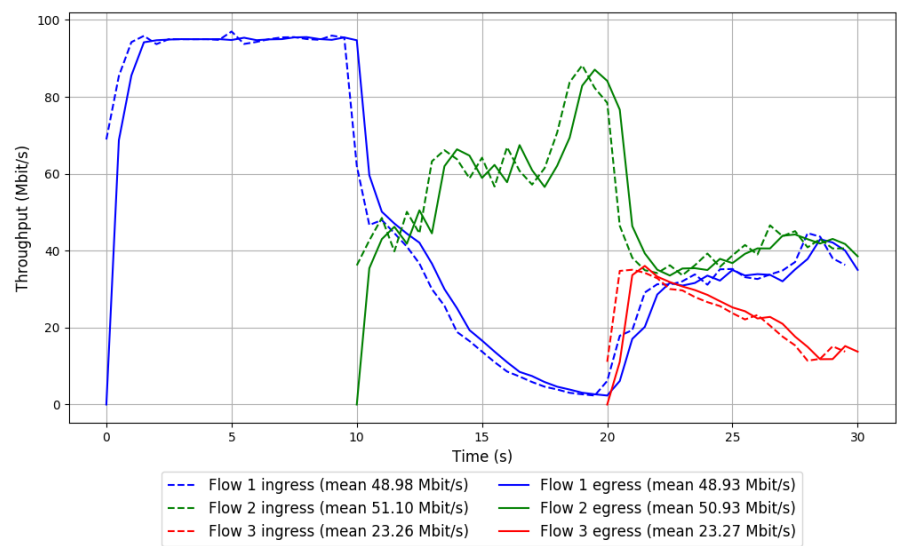
-- Flow 3:

Average throughput: 23.27 Mbit/s

95th percentile per-packet one-way delay: 24.382 ms

Loss rate: 0.02%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2019-06-28 13:04:18

End at: 2019-06-28 13:04:48

Local clock offset: -6.754 ms

Remote clock offset: 0.732 ms

Below is generated by plot.py at 2019-06-28 13:41:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.67 Mbit/s

95th percentile per-packet one-way delay: 49.839 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 52.43 Mbit/s

95th percentile per-packet one-way delay: 22.459 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 53.07 Mbit/s

95th percentile per-packet one-way delay: 58.478 ms

Loss rate: 1.98%

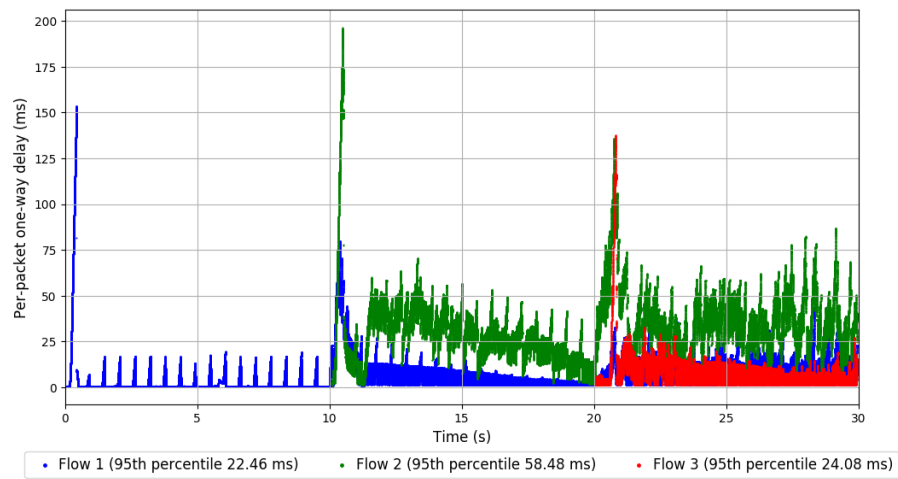
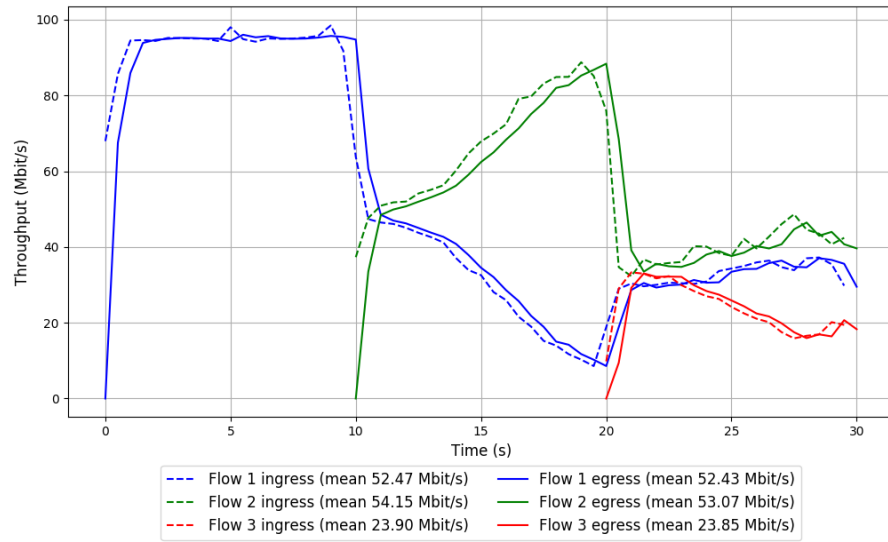
-- Flow 3:

Average throughput: 23.85 Mbit/s

95th percentile per-packet one-way delay: 24.084 ms

Loss rate: 0.27%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-06-28 13:29:38

End at: 2019-06-28 13:30:08

Local clock offset: -6.577 ms

Remote clock offset: 0.636 ms

Below is generated by plot.py at 2019-06-28 13:42:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.19 Mbit/s

95th percentile per-packet one-way delay: 33.343 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 52.79 Mbit/s

95th percentile per-packet one-way delay: 29.436 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 34.43 Mbit/s

95th percentile per-packet one-way delay: 33.211 ms

Loss rate: 0.28%

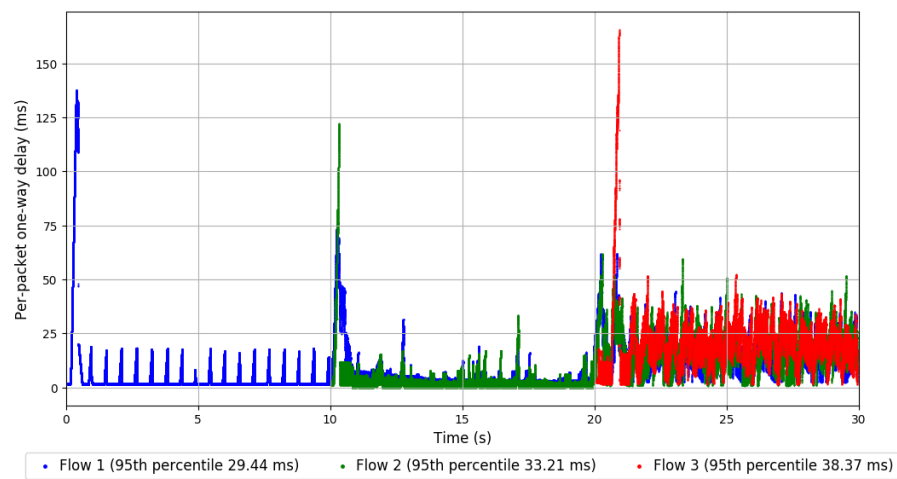
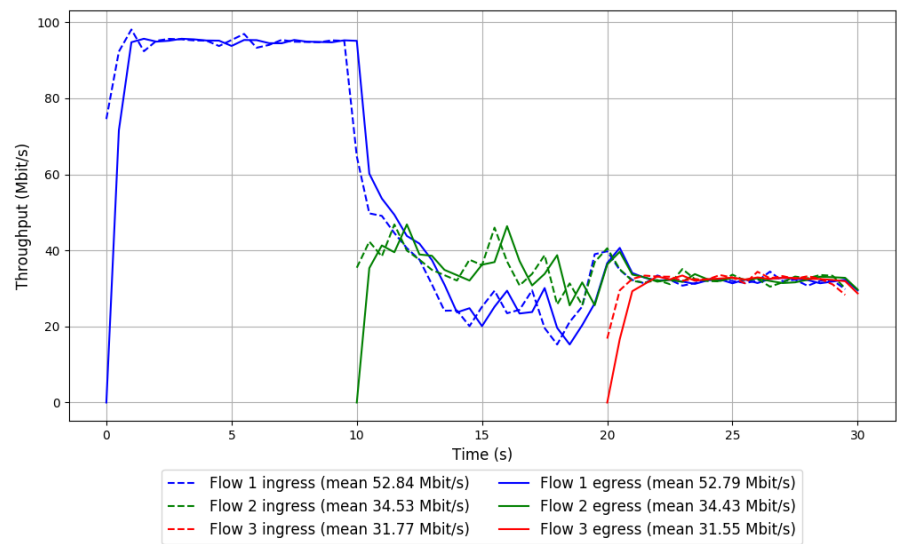
-- Flow 3:

Average throughput: 31.55 Mbit/s

95th percentile per-packet one-way delay: 38.370 ms

Loss rate: 0.61%

Run 5: Report of FillP — Data Link

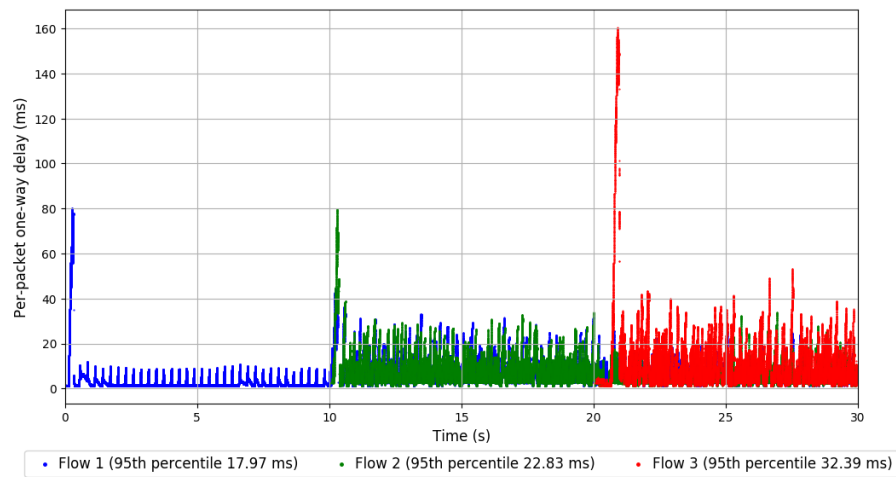
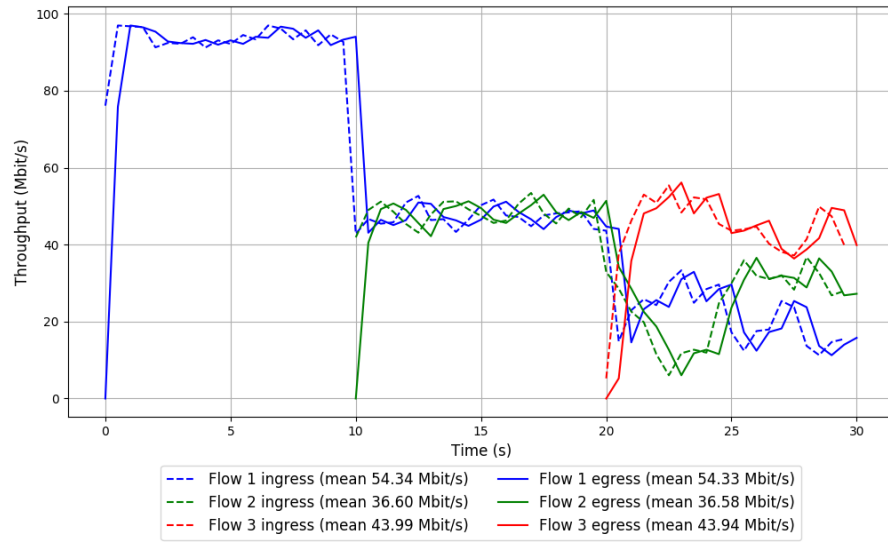


Run 1: Statistics of FillP-Sheep

Start at: 2019-06-28 11:31:27
End at: 2019-06-28 11:31:57
Local clock offset: -6.161 ms
Remote clock offset: -0.257 ms

Below is generated by plot.py at 2019-06-28 13:42:31
Datalink statistics
-- Total of 3 flows:
Average throughput: 93.25 Mbit/s
95th percentile per-packet one-way delay: 22.934 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 54.33 Mbit/s
95th percentile per-packet one-way delay: 17.971 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 36.58 Mbit/s
95th percentile per-packet one-way delay: 22.833 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 43.94 Mbit/s
95th percentile per-packet one-way delay: 32.394 ms
Loss rate: 0.02%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-06-28 11:56:38

End at: 2019-06-28 11:57:08

Local clock offset: -6.918 ms

Remote clock offset: 0.127 ms

Below is generated by plot.py at 2019-06-28 13:42:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.47 Mbit/s

95th percentile per-packet one-way delay: 17.787 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 58.96 Mbit/s

95th percentile per-packet one-way delay: 17.431 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.71 Mbit/s

95th percentile per-packet one-way delay: 16.519 ms

Loss rate: 0.00%

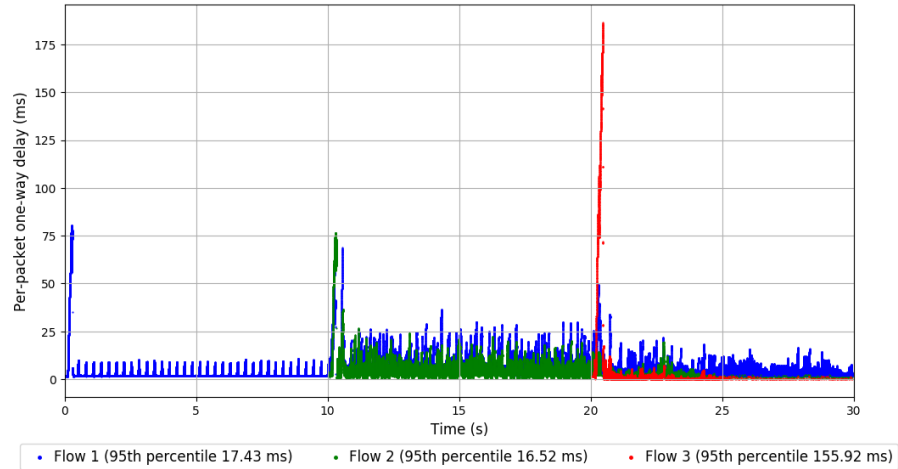
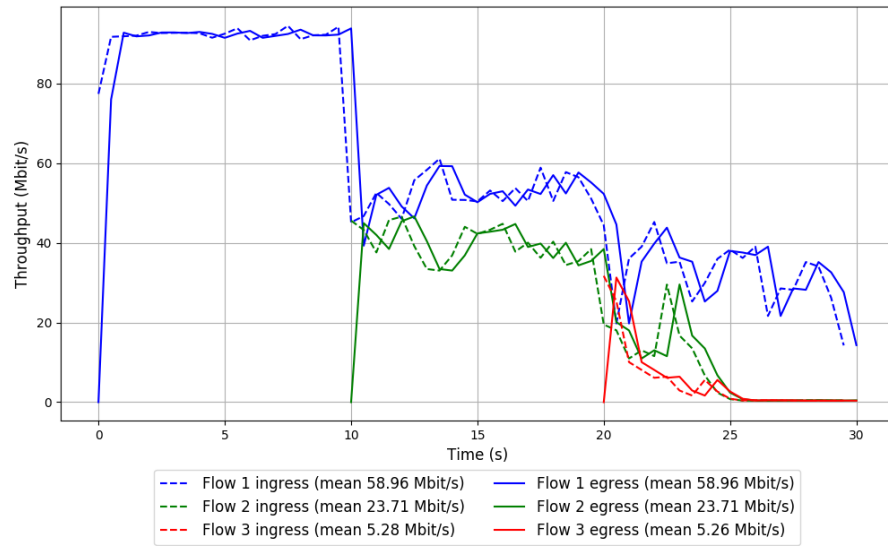
-- Flow 3:

Average throughput: 5.26 Mbit/s

95th percentile per-packet one-way delay: 155.920 ms

Loss rate: 0.40%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-06-28 12:21:53

End at: 2019-06-28 12:22:23

Local clock offset: -7.342 ms

Remote clock offset: 0.501 ms

Below is generated by plot.py at 2019-06-28 13:42:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.51 Mbit/s

95th percentile per-packet one-way delay: 11.059 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 54.34 Mbit/s

95th percentile per-packet one-way delay: 10.261 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 10.65 Mbit/s

95th percentile per-packet one-way delay: 10.092 ms

Loss rate: 0.01%

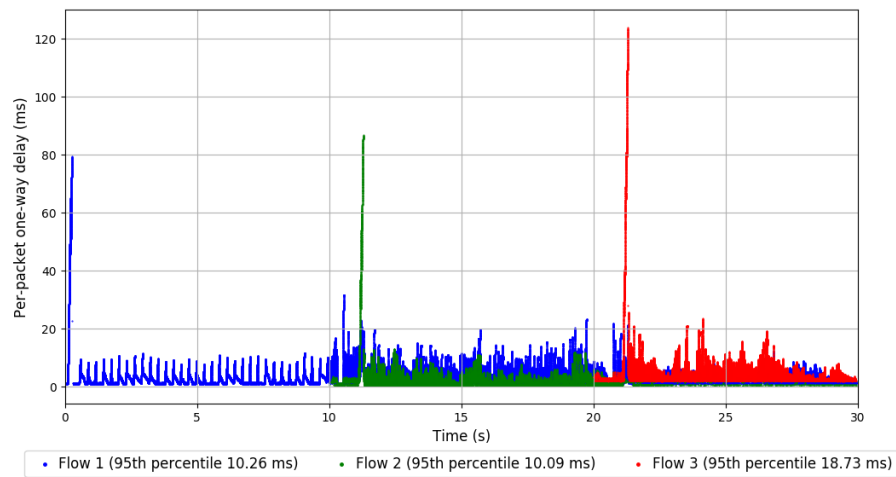
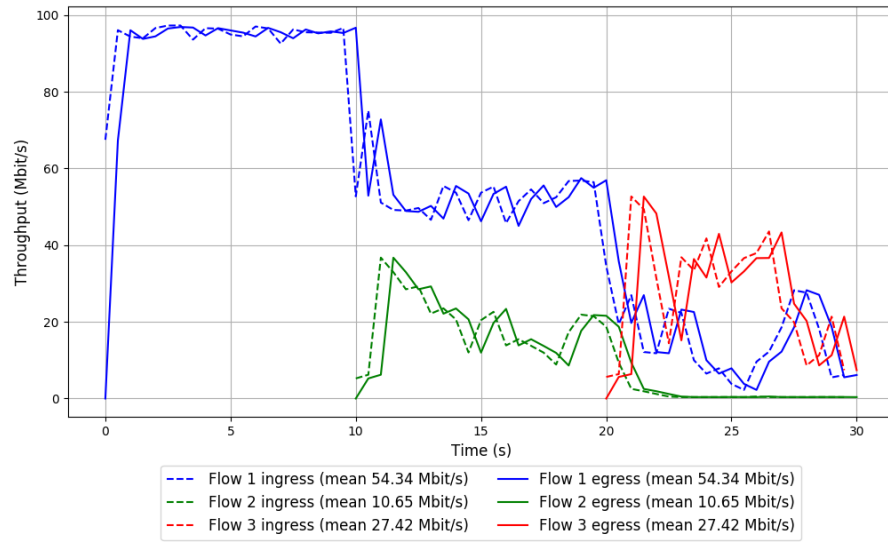
-- Flow 3:

Average throughput: 27.42 Mbit/s

95th percentile per-packet one-way delay: 18.726 ms

Loss rate: 0.00%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-06-28 12:47:05

End at: 2019-06-28 12:47:35

Local clock offset: -7.783 ms

Remote clock offset: 0.696 ms

Below is generated by plot.py at 2019-06-28 13:42:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.65 Mbit/s

95th percentile per-packet one-way delay: 20.552 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 58.30 Mbit/s

95th percentile per-packet one-way delay: 17.916 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.69 Mbit/s

95th percentile per-packet one-way delay: 23.119 ms

Loss rate: 0.04%

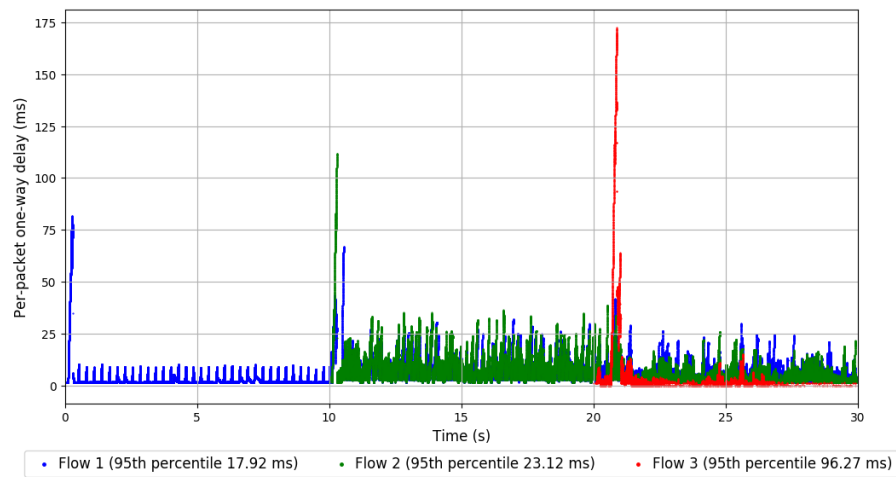
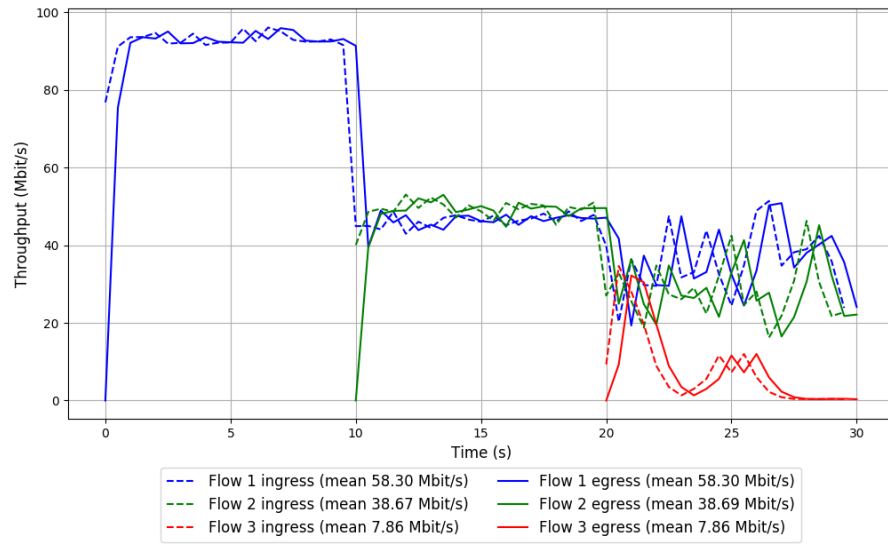
-- Flow 3:

Average throughput: 7.86 Mbit/s

95th percentile per-packet one-way delay: 96.270 ms

Loss rate: 0.05%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-06-28 13:12:22

End at: 2019-06-28 13:12:52

Local clock offset: -6.387 ms

Remote clock offset: 0.607 ms

Below is generated by plot.py at 2019-06-28 13:42:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.94 Mbit/s

95th percentile per-packet one-way delay: 20.243 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 59.66 Mbit/s

95th percentile per-packet one-way delay: 21.715 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 33.11 Mbit/s

95th percentile per-packet one-way delay: 17.350 ms

Loss rate: 0.00%

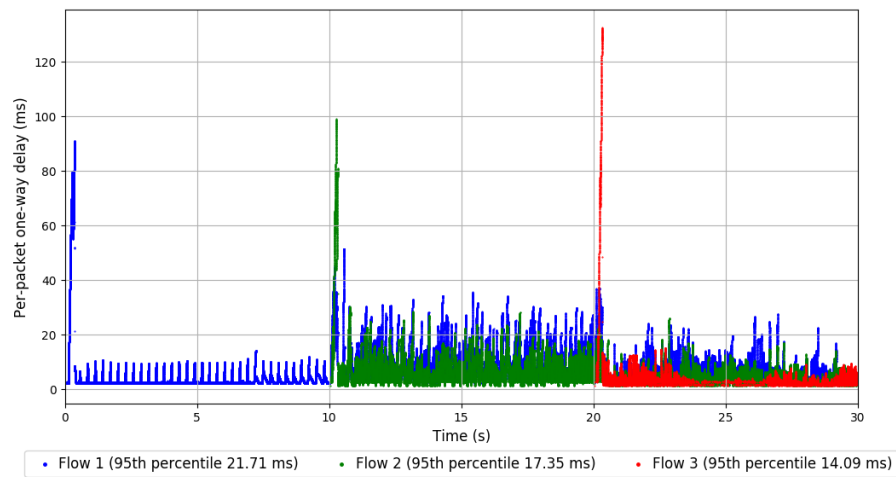
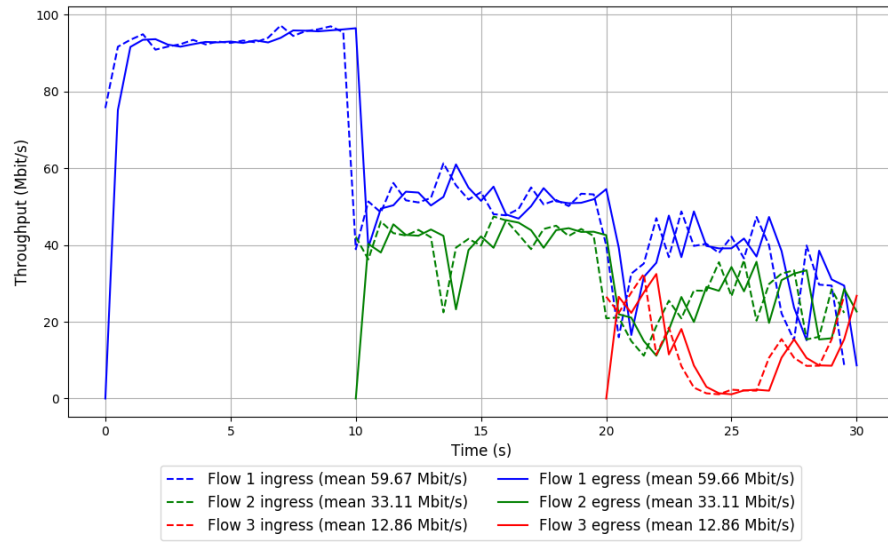
-- Flow 3:

Average throughput: 12.86 Mbit/s

95th percentile per-packet one-way delay: 14.090 ms

Loss rate: 0.01%

Run 5: Report of FillP-Sheep — Data Link

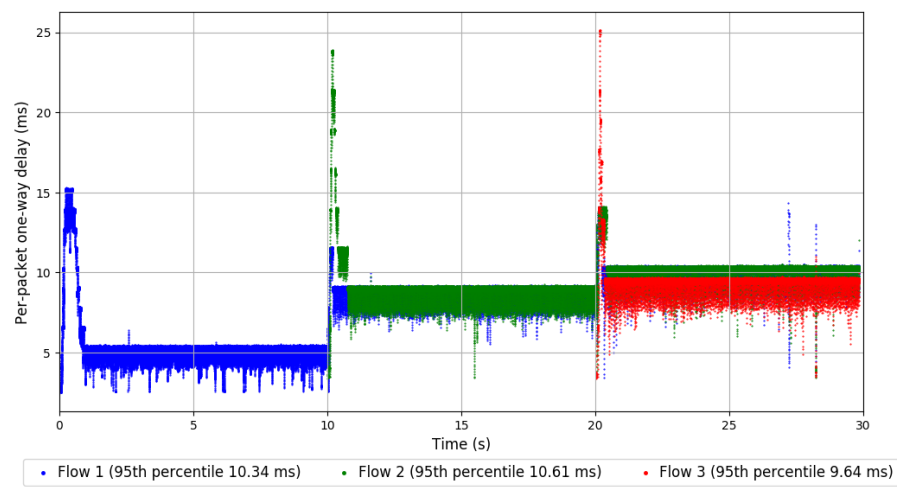
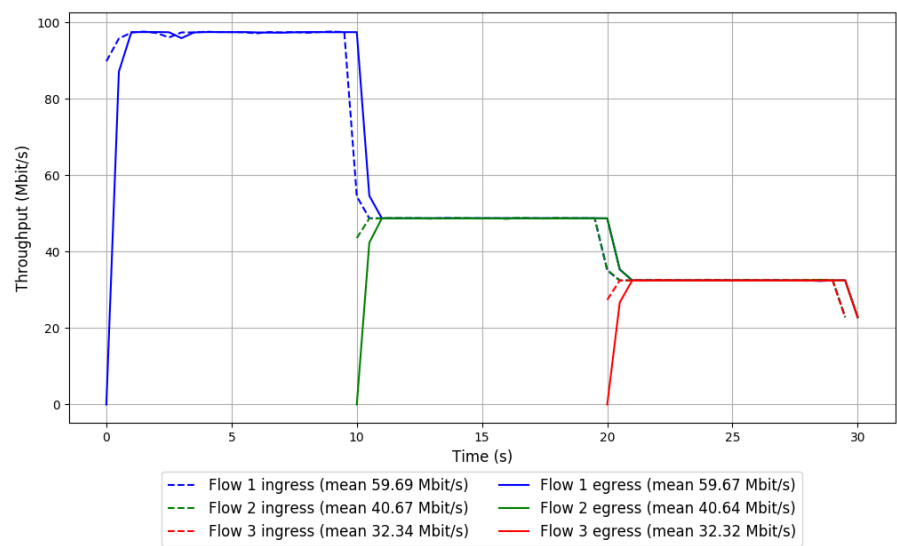


Run 1: Statistics of Indigo

Start at: 2019-06-28 11:49:43
End at: 2019-06-28 11:50:13
Local clock offset: -5.395 ms
Remote clock offset: -0.027 ms

Below is generated by plot.py at 2019-06-28 13:42:44
Datalink statistics
-- Total of 3 flows:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 10.361 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 59.67 Mbit/s
95th percentile per-packet one-way delay: 10.341 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 40.64 Mbit/s
95th percentile per-packet one-way delay: 10.606 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 32.32 Mbit/s
95th percentile per-packet one-way delay: 9.640 ms
Loss rate: 0.09%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-06-28 12:14:57

End at: 2019-06-28 12:15:27

Local clock offset: -7.002 ms

Remote clock offset: 0.399 ms

Below is generated by plot.py at 2019-06-28 13:42:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.36 Mbit/s

95th percentile per-packet one-way delay: 10.259 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 59.70 Mbit/s

95th percentile per-packet one-way delay: 10.205 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 40.64 Mbit/s

95th percentile per-packet one-way delay: 10.428 ms

Loss rate: 0.08%

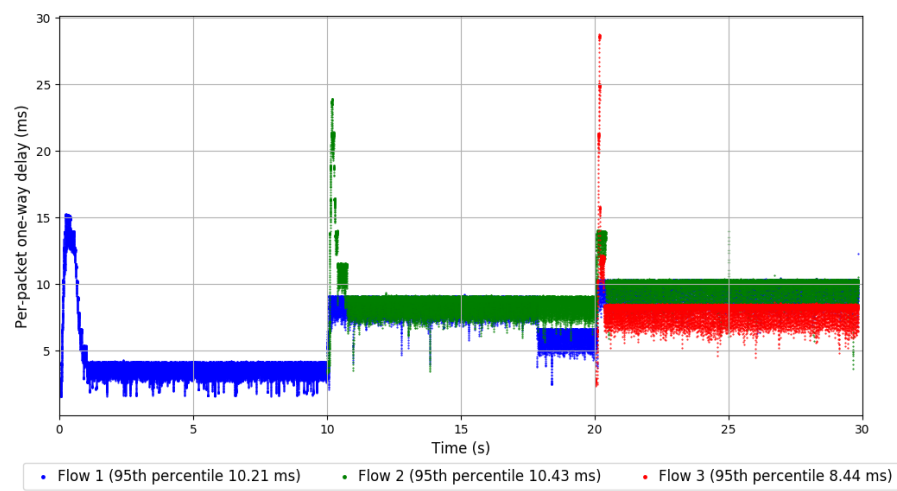
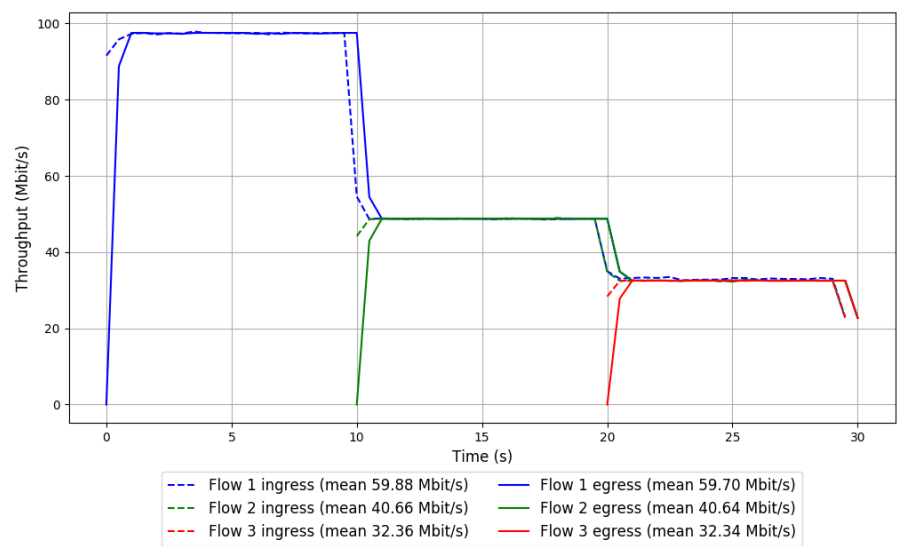
-- Flow 3:

Average throughput: 32.34 Mbit/s

95th percentile per-packet one-way delay: 8.440 ms

Loss rate: 0.10%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-06-28 12:40:09

End at: 2019-06-28 12:40:39

Local clock offset: -6.96 ms

Remote clock offset: 0.694 ms

Below is generated by plot.py at 2019-06-28 13:43:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.36 Mbit/s

95th percentile per-packet one-way delay: 10.111 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 59.71 Mbit/s

95th percentile per-packet one-way delay: 10.101 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 40.63 Mbit/s

95th percentile per-packet one-way delay: 10.009 ms

Loss rate: 1.57%

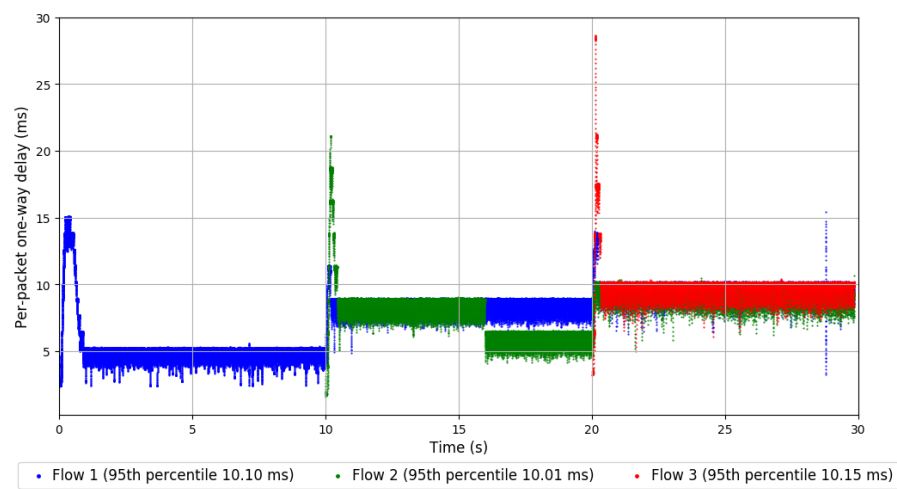
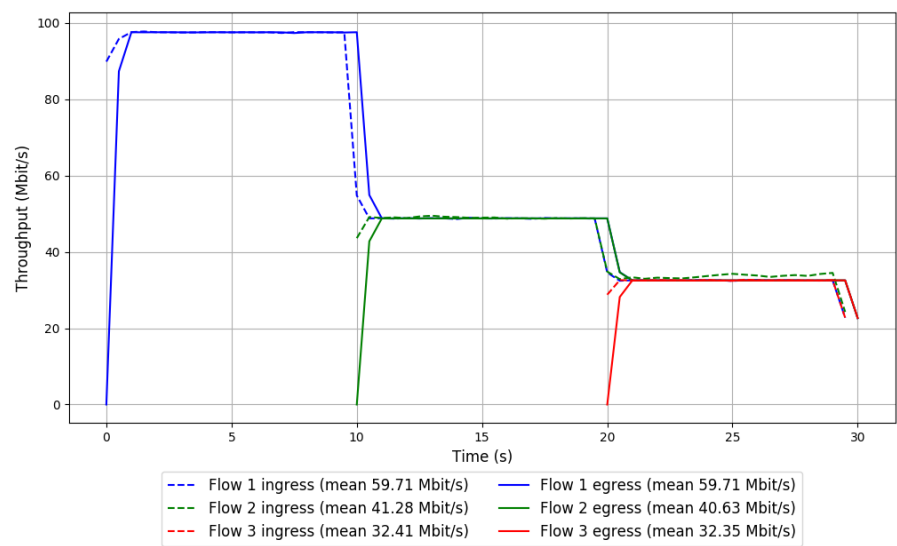
-- Flow 3:

Average throughput: 32.35 Mbit/s

95th percentile per-packet one-way delay: 10.147 ms

Loss rate: 0.20%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-06-28 13:05:26

End at: 2019-06-28 13:05:56

Local clock offset: -7.176 ms

Remote clock offset: 0.734 ms

Below is generated by plot.py at 2019-06-28 13:43:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.34 Mbit/s

95th percentile per-packet one-way delay: 9.357 ms

Loss rate: 0.34%

-- Flow 1:

Average throughput: 59.75 Mbit/s

95th percentile per-packet one-way delay: 9.379 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 40.66 Mbit/s

95th percentile per-packet one-way delay: 9.330 ms

Loss rate: 1.11%

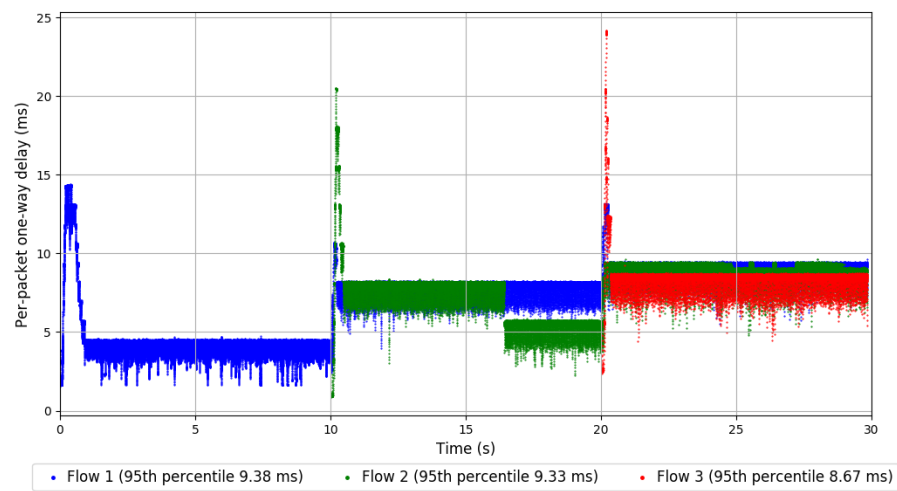
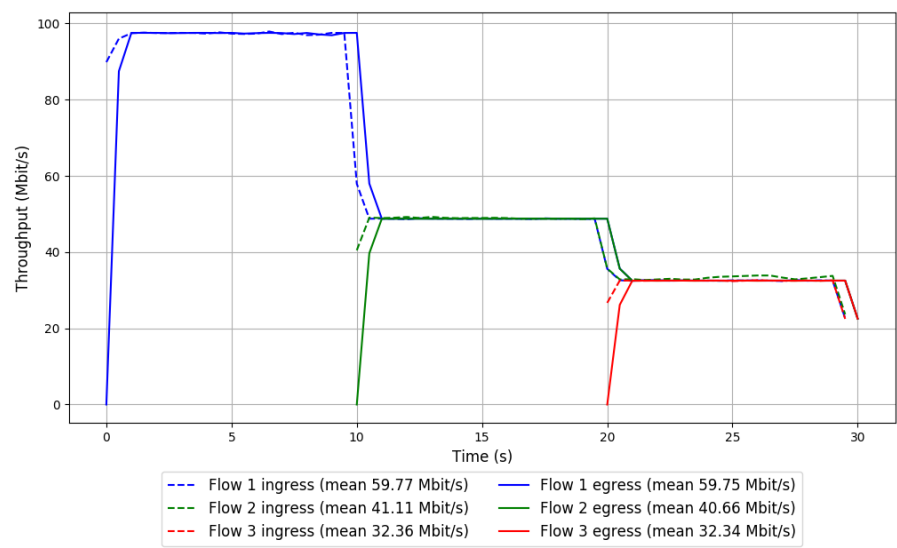
-- Flow 3:

Average throughput: 32.34 Mbit/s

95th percentile per-packet one-way delay: 8.669 ms

Loss rate: 0.08%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-06-28 13:30:46

End at: 2019-06-28 13:31:16

Local clock offset: -5.788 ms

Remote clock offset: 0.665 ms

Below is generated by plot.py at 2019-06-28 13:43:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.34 Mbit/s

95th percentile per-packet one-way delay: 10.153 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 59.75 Mbit/s

95th percentile per-packet one-way delay: 10.174 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 40.64 Mbit/s

95th percentile per-packet one-way delay: 10.127 ms

Loss rate: 1.12%

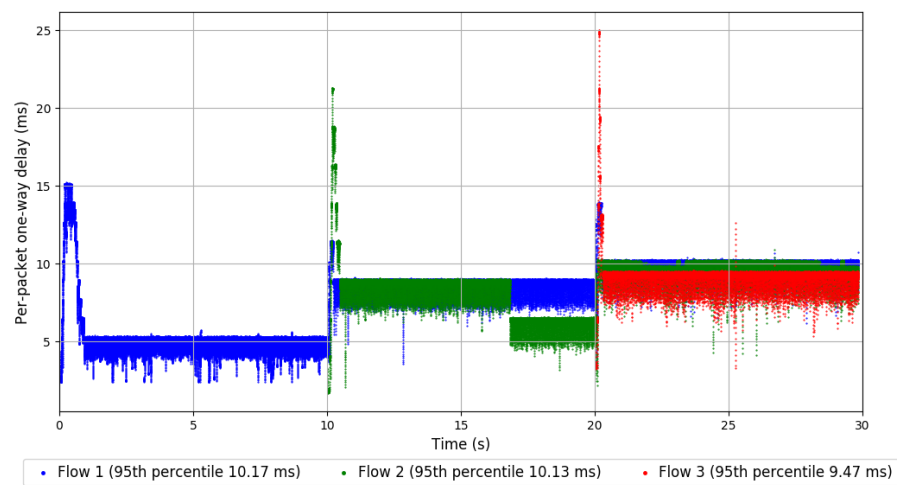
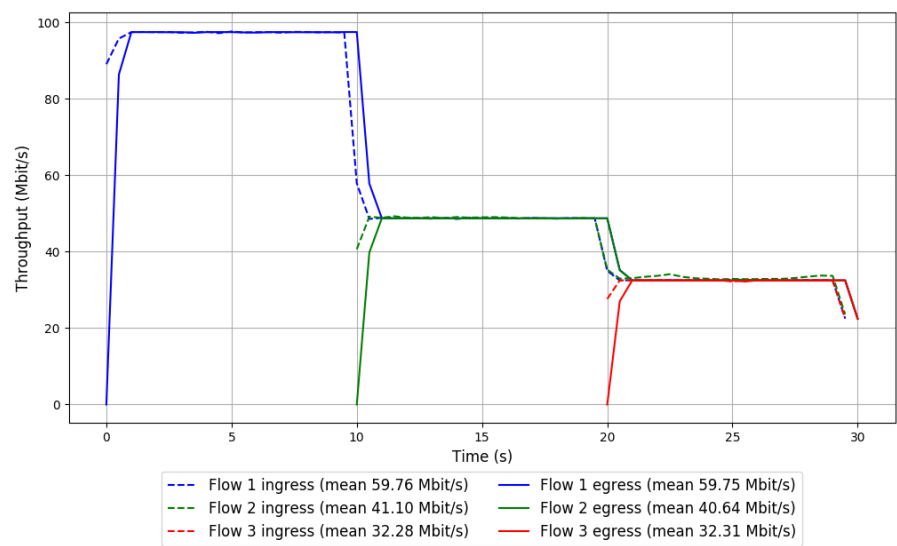
-- Flow 3:

Average throughput: 32.31 Mbit/s

95th percentile per-packet one-way delay: 9.468 ms

Loss rate: 0.11%

Run 5: Report of Indigo — Data Link

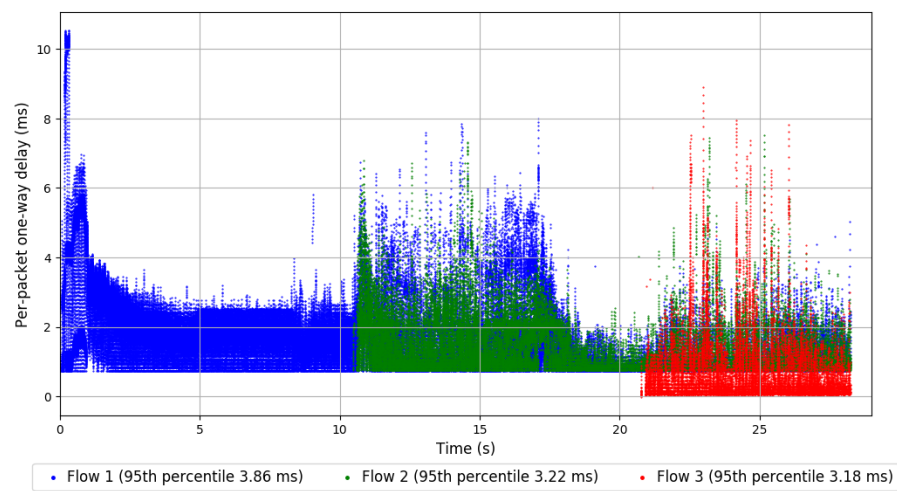
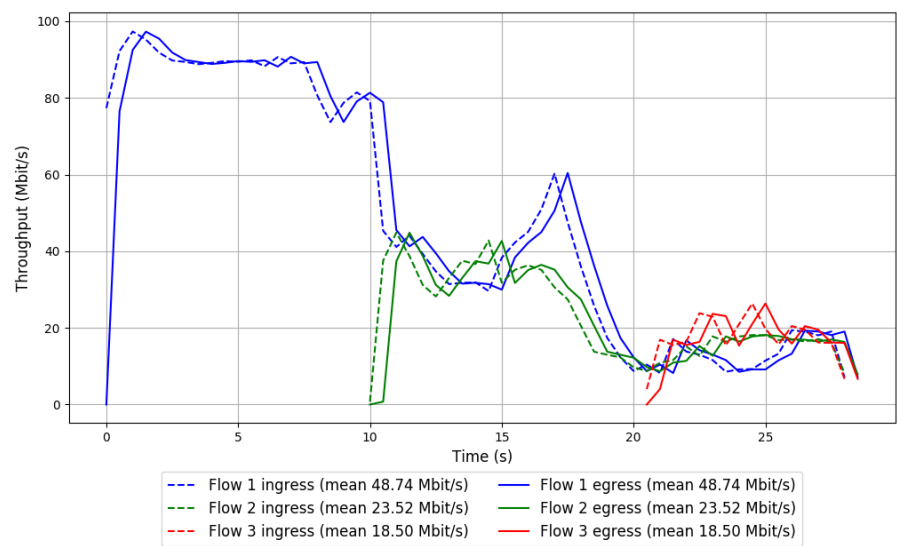


Run 1: Statistics of Indigo-MusesC3

Start at: 2019-06-28 11:34:55
End at: 2019-06-28 11:35:25
Local clock offset: -5.931 ms
Remote clock offset: -0.173 ms

Below is generated by plot.py at 2019-06-28 13:43:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 68.41 Mbit/s
95th percentile per-packet one-way delay: 3.676 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 48.74 Mbit/s
95th percentile per-packet one-way delay: 3.859 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.52 Mbit/s
95th percentile per-packet one-way delay: 3.220 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 18.50 Mbit/s
95th percentile per-packet one-way delay: 3.178 ms
Loss rate: 0.00%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-06-28 12:00:04

End at: 2019-06-28 12:00:34

Local clock offset: -6.734 ms

Remote clock offset: 0.101 ms

Below is generated by plot.py at 2019-06-28 13:43:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.37 Mbit/s

95th percentile per-packet one-way delay: 6.544 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 61.67 Mbit/s

95th percentile per-packet one-way delay: 7.033 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 17.02 Mbit/s

95th percentile per-packet one-way delay: 4.307 ms

Loss rate: 0.00%

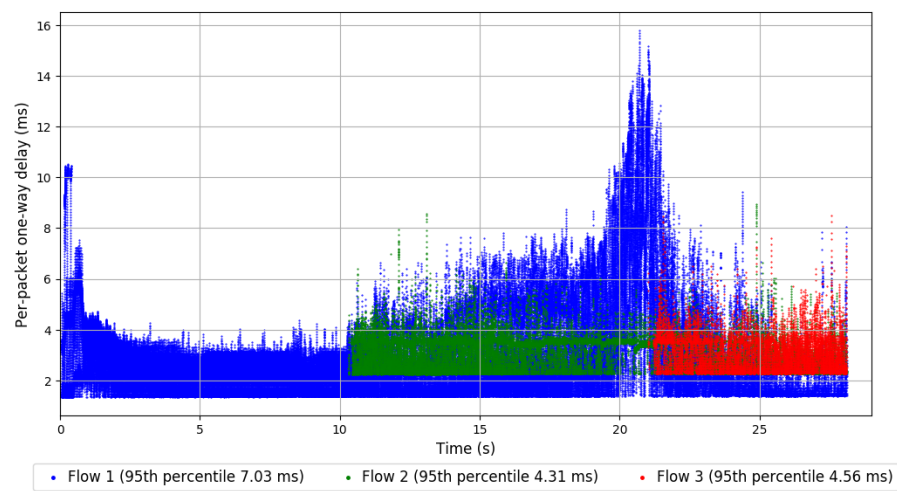
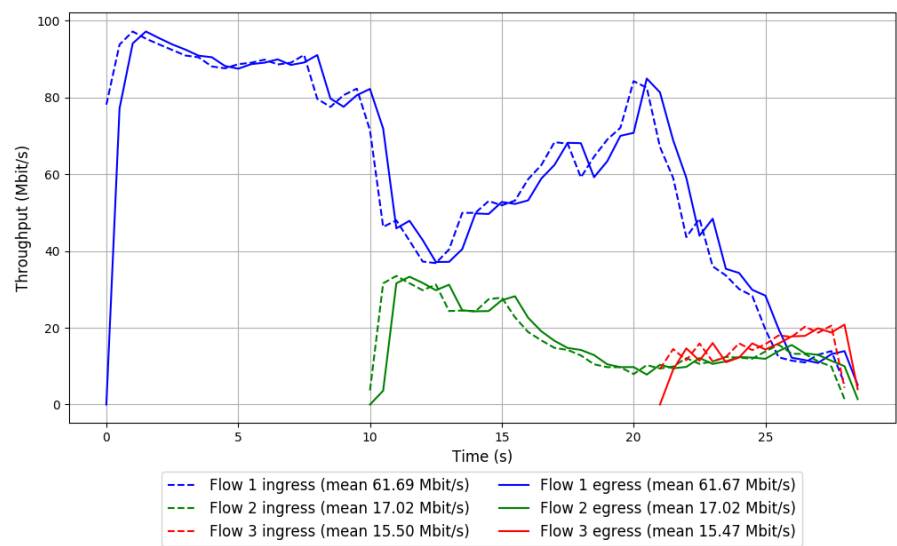
-- Flow 3:

Average throughput: 15.47 Mbit/s

95th percentile per-packet one-way delay: 4.559 ms

Loss rate: 0.21%

Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2019-06-28 12:25:18

End at: 2019-06-28 12:25:48

Local clock offset: -7.251 ms

Remote clock offset: 0.601 ms

Below is generated by plot.py at 2019-06-28 13:43:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.93 Mbit/s

95th percentile per-packet one-way delay: 4.584 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 47.13 Mbit/s

95th percentile per-packet one-way delay: 4.758 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 27.14 Mbit/s

95th percentile per-packet one-way delay: 3.759 ms

Loss rate: 0.00%

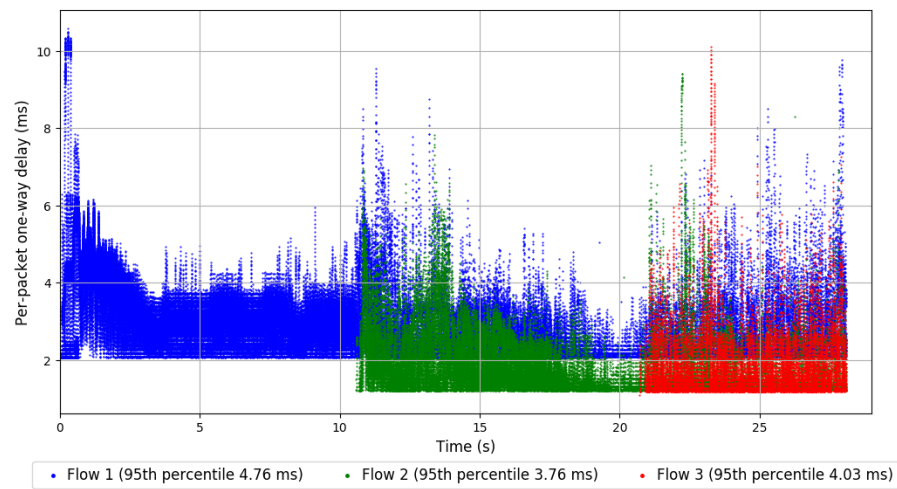
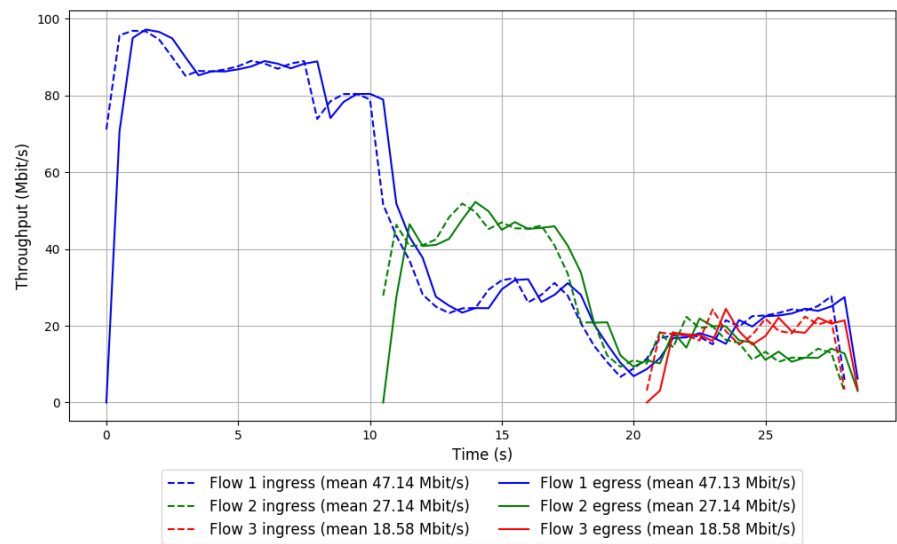
-- Flow 3:

Average throughput: 18.58 Mbit/s

95th percentile per-packet one-way delay: 4.026 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-06-28 12:50:31

End at: 2019-06-28 12:51:01

Local clock offset: -6.787 ms

Remote clock offset: 0.679 ms

Below is generated by plot.py at 2019-06-28 13:43:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.85 Mbit/s

95th percentile per-packet one-way delay: 4.809 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 52.49 Mbit/s

95th percentile per-packet one-way delay: 4.831 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 26.02 Mbit/s

95th percentile per-packet one-way delay: 3.835 ms

Loss rate: 0.00%

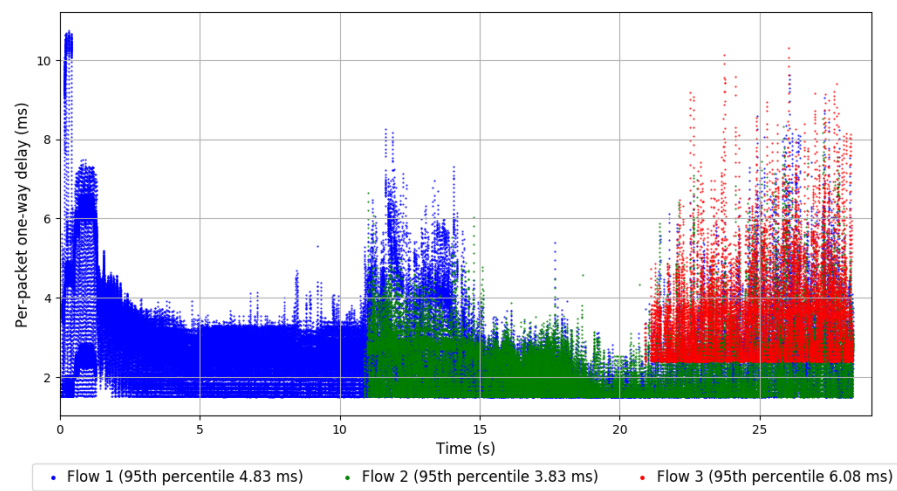
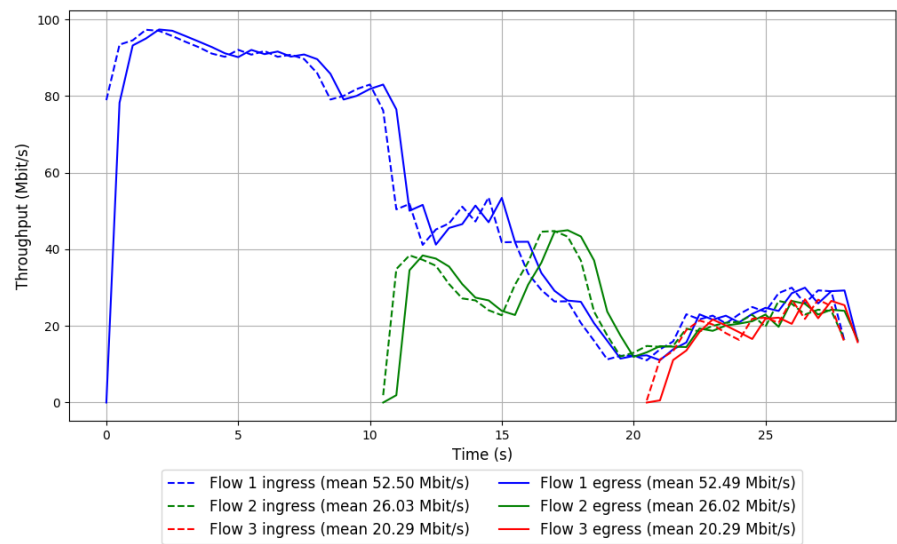
-- Flow 3:

Average throughput: 20.29 Mbit/s

95th percentile per-packet one-way delay: 6.075 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-06-28 13:15:48

End at: 2019-06-28 13:16:18

Local clock offset: -6.665 ms

Remote clock offset: 0.603 ms

Below is generated by plot.py at 2019-06-28 13:43:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.69 Mbit/s

95th percentile per-packet one-way delay: 4.207 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 47.70 Mbit/s

95th percentile per-packet one-way delay: 4.171 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 24.40 Mbit/s

95th percentile per-packet one-way delay: 4.353 ms

Loss rate: 0.03%

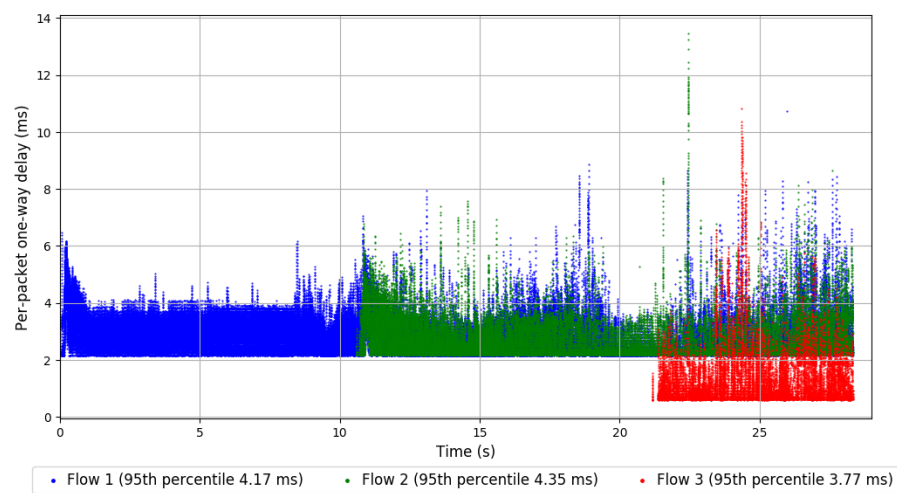
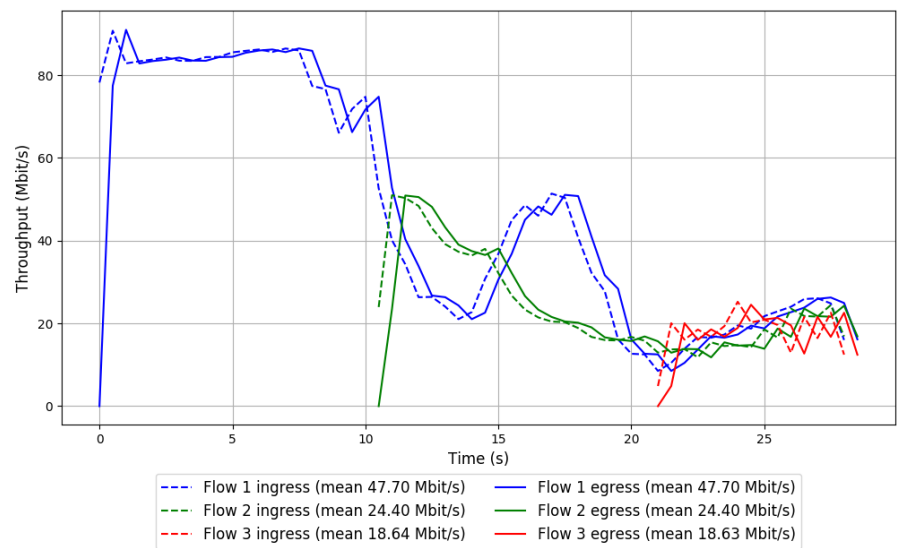
-- Flow 3:

Average throughput: 18.63 Mbit/s

95th percentile per-packet one-way delay: 3.770 ms

Loss rate: 0.02%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-06-28 11:52:01

End at: 2019-06-28 11:52:31

Local clock offset: -6.027 ms

Remote clock offset: 0.075 ms

Below is generated by plot.py at 2019-06-28 13:44:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 61.59 Mbit/s

95th percentile per-packet one-way delay: 10.096 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 37.71 Mbit/s

95th percentile per-packet one-way delay: 9.917 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 25.40 Mbit/s

95th percentile per-packet one-way delay: 8.073 ms

Loss rate: 0.05%

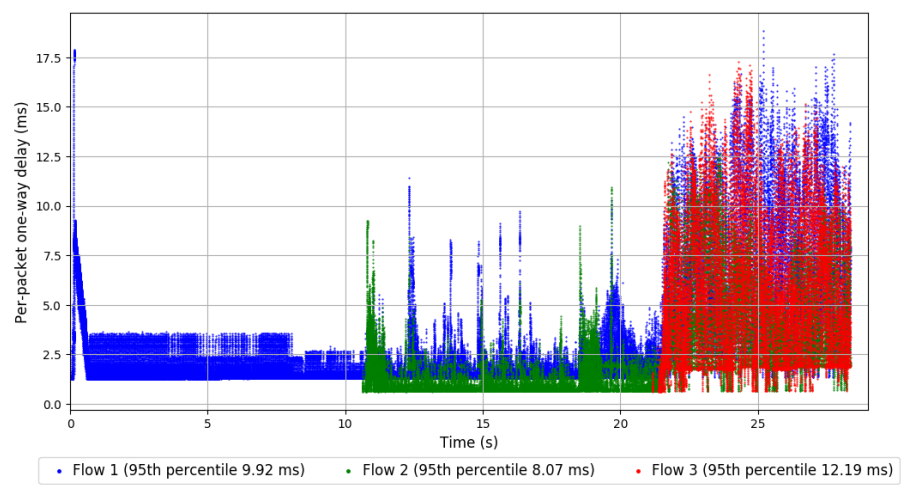
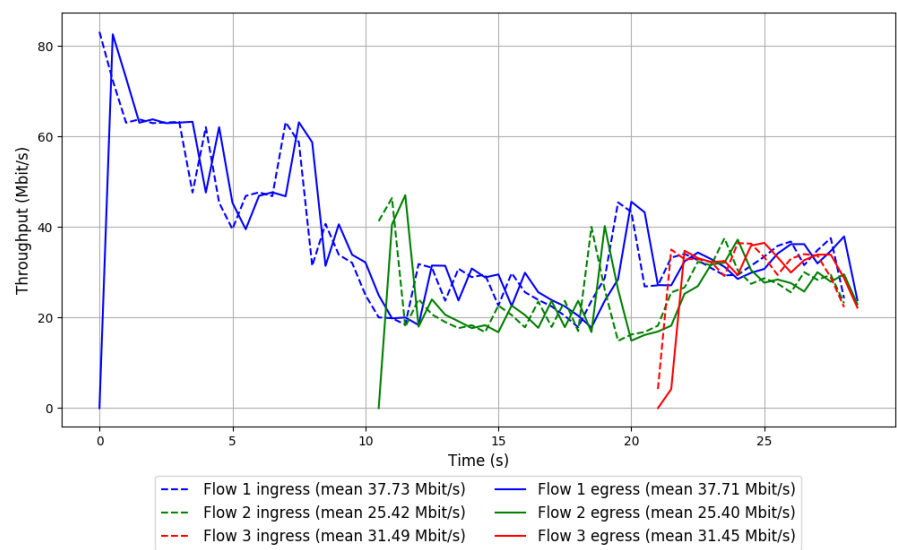
-- Flow 3:

Average throughput: 31.45 Mbit/s

95th percentile per-packet one-way delay: 12.186 ms

Loss rate: 0.13%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-06-28 12:17:15

End at: 2019-06-28 12:17:45

Local clock offset: -7.847 ms

Remote clock offset: 0.436 ms

Below is generated by plot.py at 2019-06-28 13:44:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 63.55 Mbit/s

95th percentile per-packet one-way delay: 13.939 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 37.81 Mbit/s

95th percentile per-packet one-way delay: 12.208 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 28.89 Mbit/s

95th percentile per-packet one-way delay: 16.438 ms

Loss rate: 0.12%

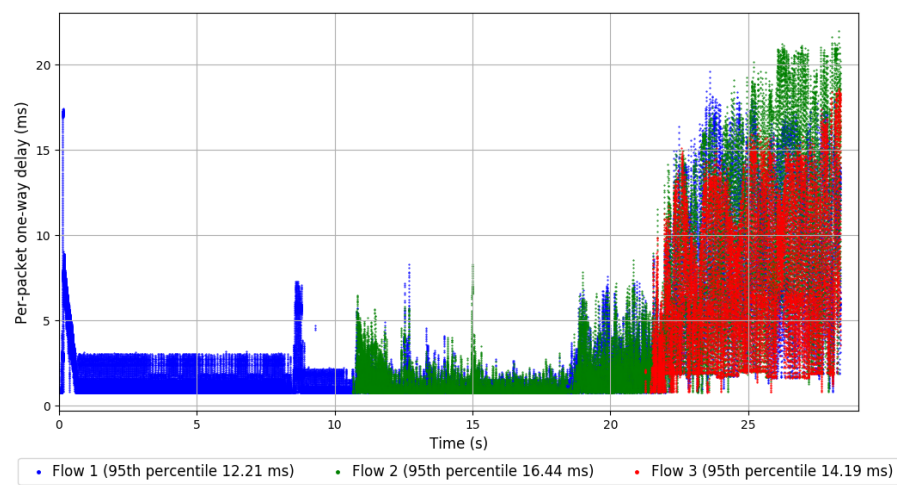
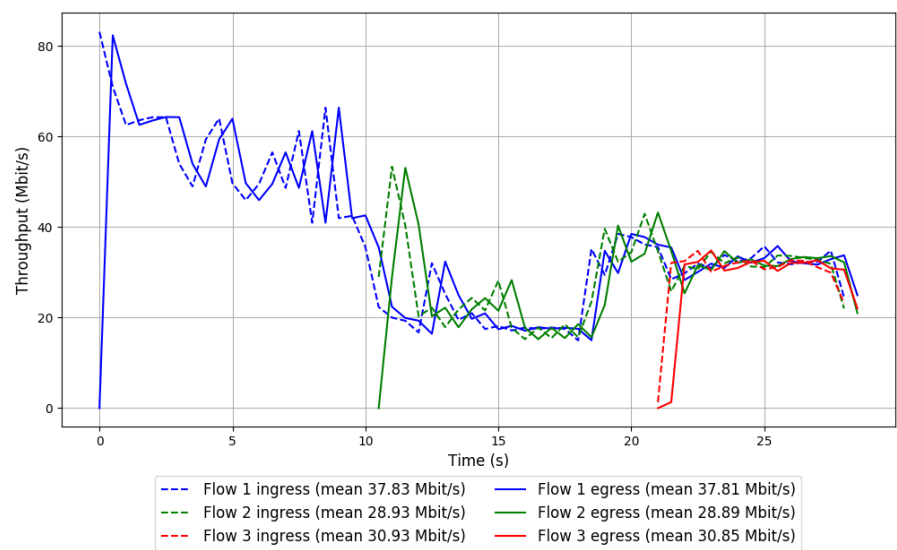
-- Flow 3:

Average throughput: 30.85 Mbit/s

95th percentile per-packet one-way delay: 14.190 ms

Loss rate: 0.27%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-06-28 12:42:27

End at: 2019-06-28 12:42:57

Local clock offset: -7.257 ms

Remote clock offset: 0.708 ms

Below is generated by plot.py at 2019-06-28 13:44:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.03 Mbit/s

95th percentile per-packet one-way delay: 16.001 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 36.87 Mbit/s

95th percentile per-packet one-way delay: 11.703 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 31.55 Mbit/s

95th percentile per-packet one-way delay: 17.177 ms

Loss rate: 0.10%

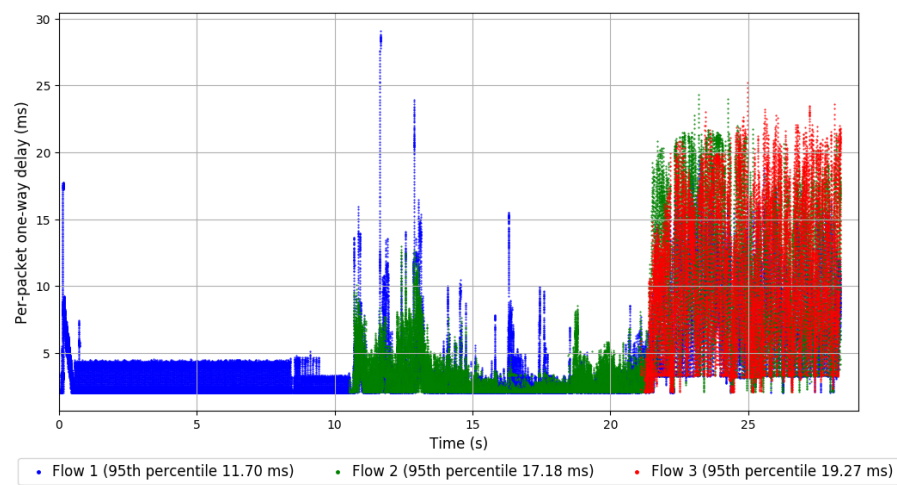
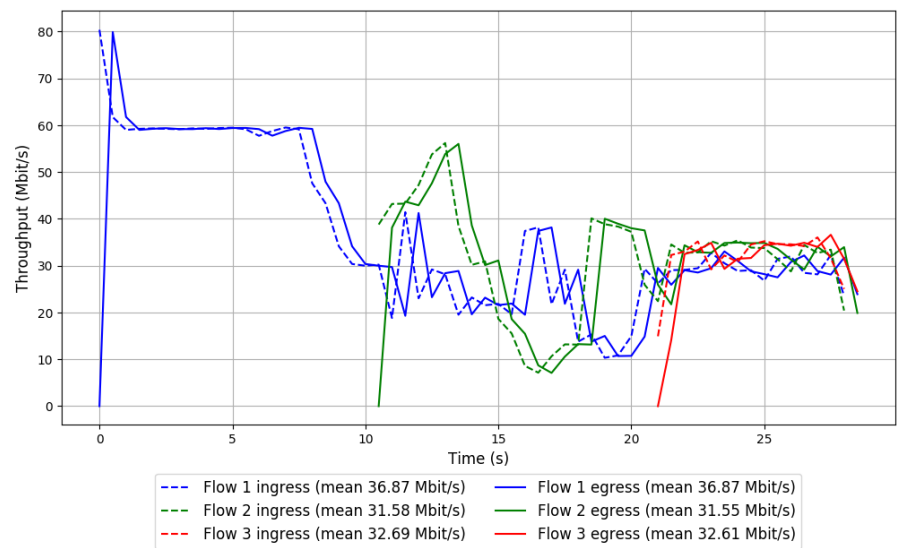
-- Flow 3:

Average throughput: 32.61 Mbit/s

95th percentile per-packet one-way delay: 19.274 ms

Loss rate: 0.28%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-06-28 13:07:45

End at: 2019-06-28 13:08:15

Local clock offset: -6.714 ms

Remote clock offset: 0.63 ms

Below is generated by plot.py at 2019-06-28 13:44:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 53.24 Mbit/s

95th percentile per-packet one-way delay: 12.588 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 27.44 Mbit/s

95th percentile per-packet one-way delay: 6.579 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 27.64 Mbit/s

95th percentile per-packet one-way delay: 13.489 ms

Loss rate: 0.03%

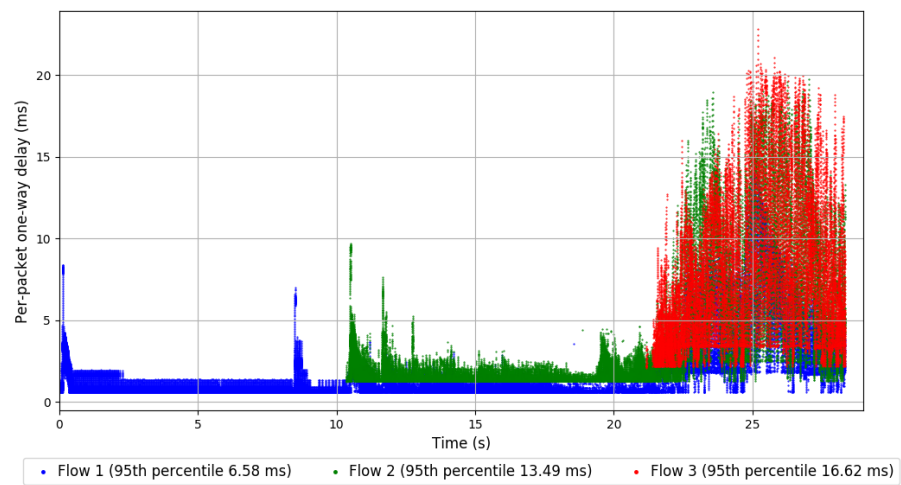
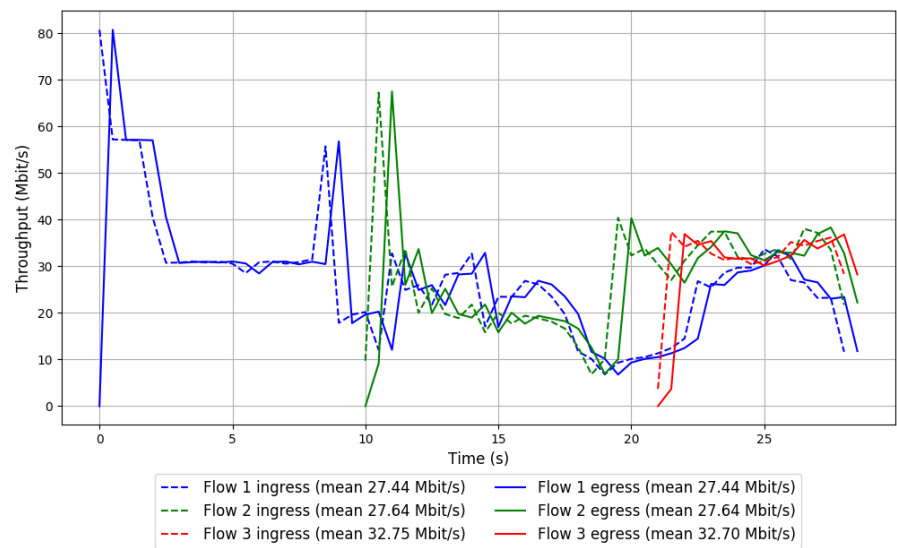
-- Flow 3:

Average throughput: 32.70 Mbit/s

95th percentile per-packet one-way delay: 16.621 ms

Loss rate: 0.14%

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-06-28 13:33:05

End at: 2019-06-28 13:33:35

Local clock offset: -5.744 ms

Remote clock offset: 0.617 ms

Below is generated by plot.py at 2019-06-28 13:44:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 60.93 Mbit/s

95th percentile per-packet one-way delay: 14.195 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 35.73 Mbit/s

95th percentile per-packet one-way delay: 10.314 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 27.42 Mbit/s

95th percentile per-packet one-way delay: 14.775 ms

Loss rate: 0.11%

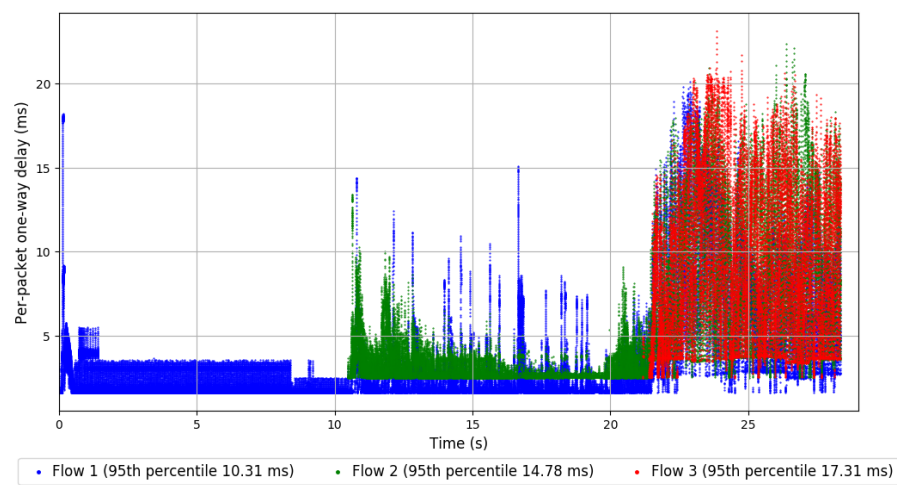
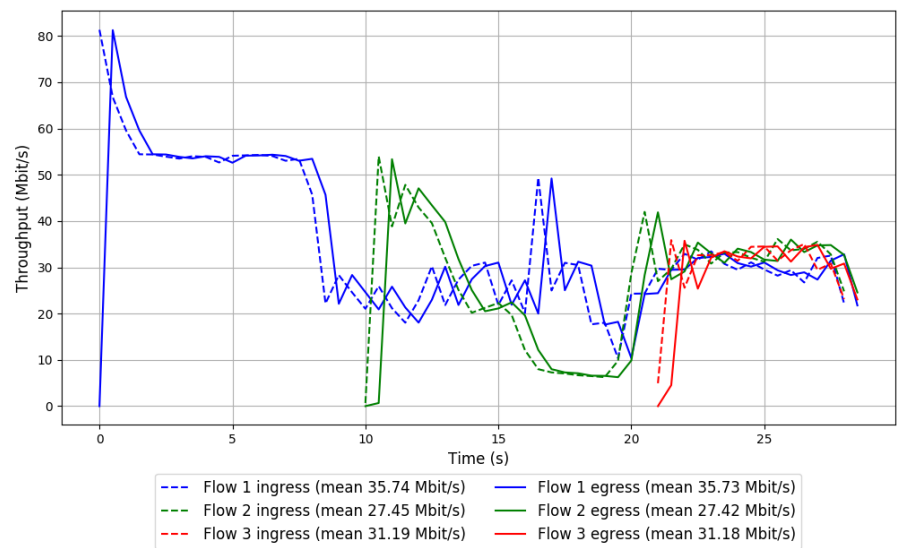
-- Flow 3:

Average throughput: 31.18 Mbit/s

95th percentile per-packet one-way delay: 17.306 ms

Loss rate: 0.09%

Run 5: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2019-06-28 11:54:21

End at: 2019-06-28 11:54:51

Local clock offset: -5.997 ms

Remote clock offset: 0.123 ms

Below is generated by plot.py at 2019-06-28 13:44:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 66.19 Mbit/s

95th percentile per-packet one-way delay: 21.697 ms

Loss rate: 0.24%

-- Flow 1:

Average throughput: 43.53 Mbit/s

95th percentile per-packet one-way delay: 12.075 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 22.08 Mbit/s

95th percentile per-packet one-way delay: 21.669 ms

Loss rate: 0.29%

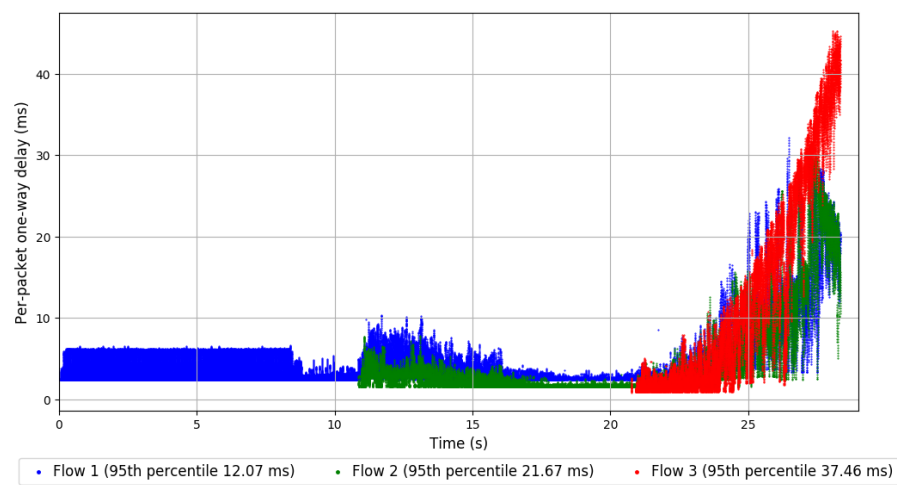
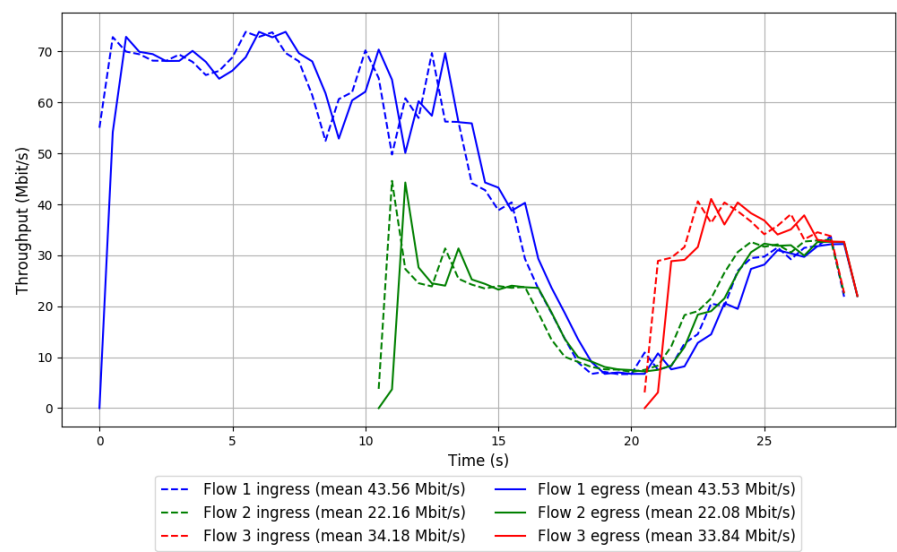
-- Flow 3:

Average throughput: 33.84 Mbit/s

95th percentile per-packet one-way delay: 37.457 ms

Loss rate: 1.00%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-06-28 12:19:35

End at: 2019-06-28 12:20:05

Local clock offset: -7.336 ms

Remote clock offset: 0.522 ms

Below is generated by plot.py at 2019-06-28 13:44:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.75 Mbit/s

95th percentile per-packet one-way delay: 46.520 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 40.27 Mbit/s

95th percentile per-packet one-way delay: 4.235 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 23.11 Mbit/s

95th percentile per-packet one-way delay: 24.928 ms

Loss rate: 0.35%

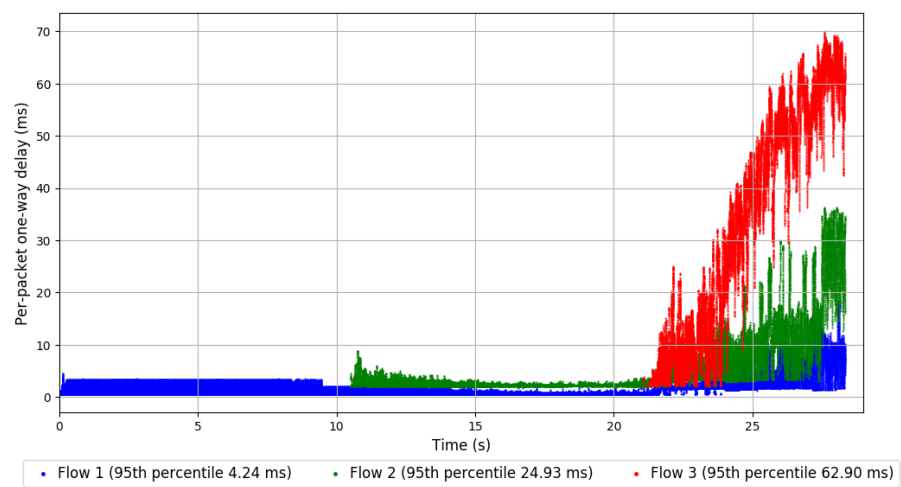
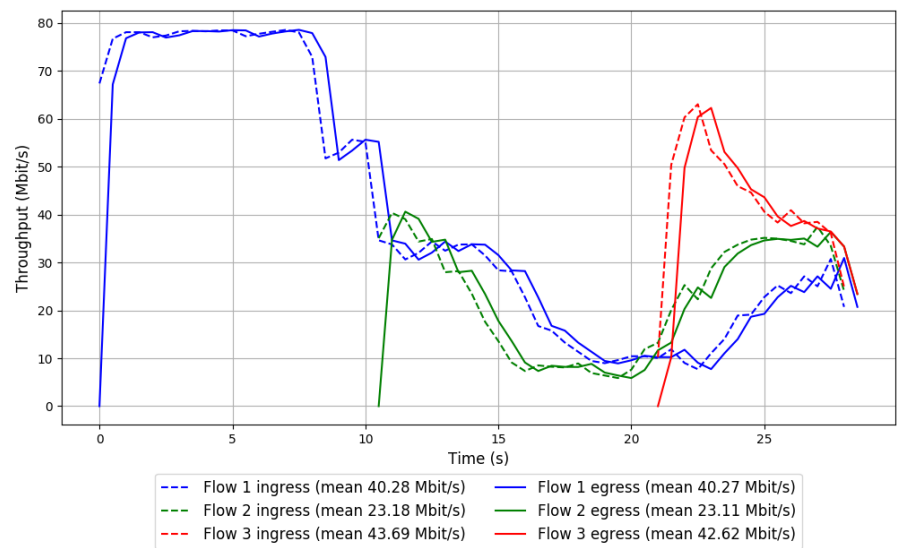
-- Flow 3:

Average throughput: 42.62 Mbit/s

95th percentile per-packet one-way delay: 62.902 ms

Loss rate: 2.42%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-06-28 12:44:47

End at: 2019-06-28 12:45:17

Local clock offset: -7.324 ms

Remote clock offset: 0.53 ms

Below is generated by plot.py at 2019-06-28 13:44:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.69 Mbit/s

95th percentile per-packet one-way delay: 31.651 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 44.16 Mbit/s

95th percentile per-packet one-way delay: 9.292 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 17.47 Mbit/s

95th percentile per-packet one-way delay: 3.443 ms

Loss rate: 0.03%

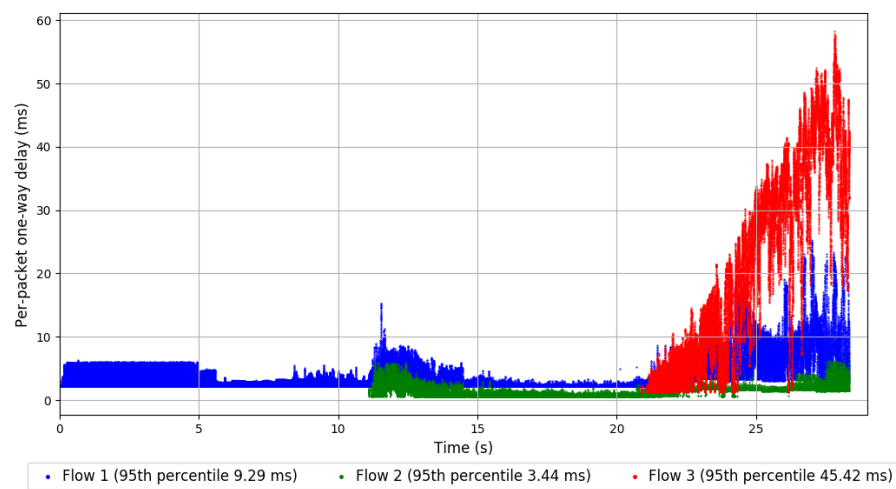
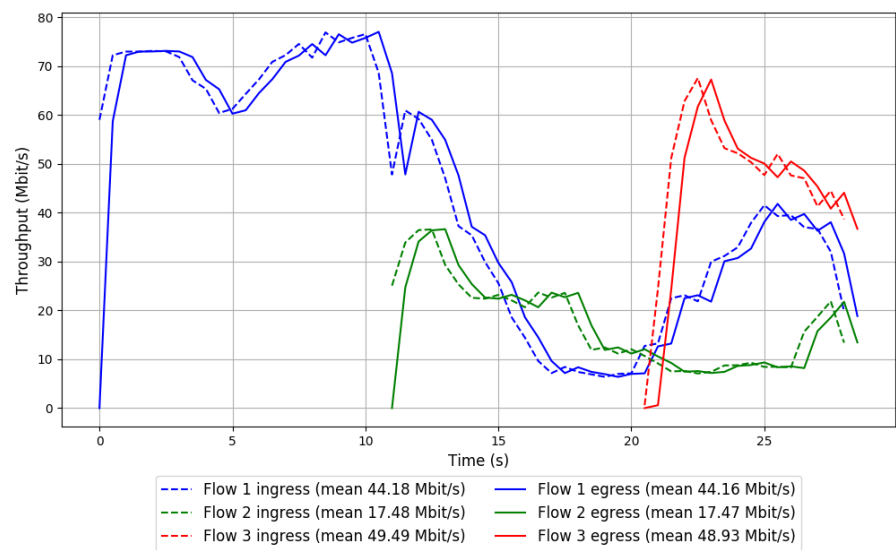
-- Flow 3:

Average throughput: 48.93 Mbit/s

95th percentile per-packet one-way delay: 45.419 ms

Loss rate: 1.13%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-06-28 13:10:05

End at: 2019-06-28 13:10:35

Local clock offset: -6.679 ms

Remote clock offset: 0.697 ms

Below is generated by plot.py at 2019-06-28 13:44:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.90 Mbit/s

95th percentile per-packet one-way delay: 17.581 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 43.41 Mbit/s

95th percentile per-packet one-way delay: 13.329 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 21.73 Mbit/s

95th percentile per-packet one-way delay: 6.070 ms

Loss rate: 0.03%

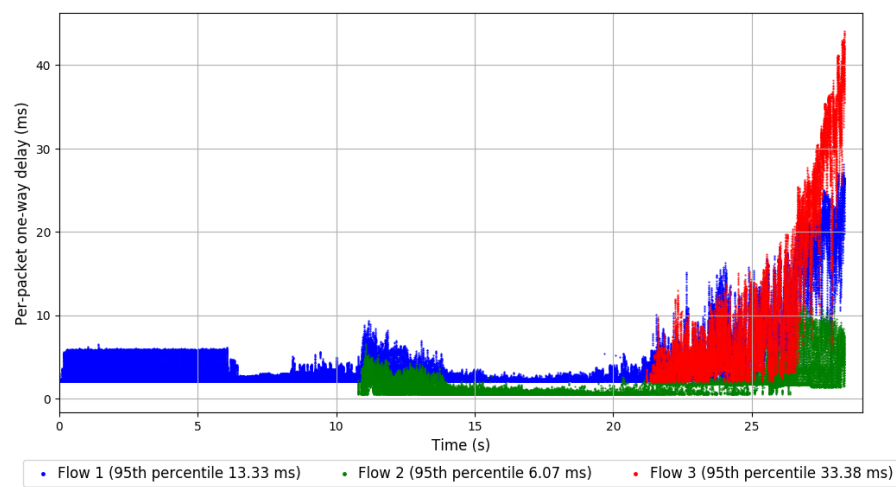
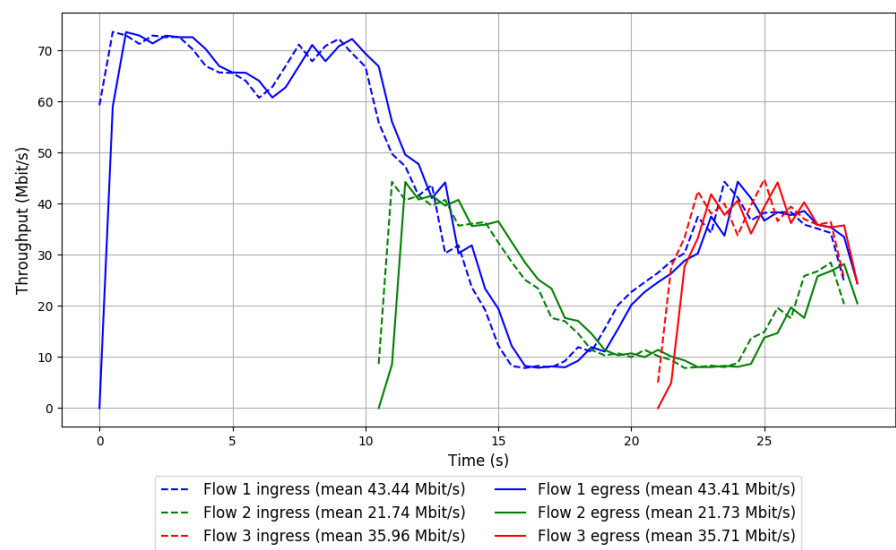
-- Flow 3:

Average throughput: 35.71 Mbit/s

95th percentile per-packet one-way delay: 33.377 ms

Loss rate: 0.71%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-06-28 13:35:25

End at: 2019-06-28 13:35:55

Local clock offset: -6.125 ms

Remote clock offset: 0.603 ms

Below is generated by plot.py at 2019-06-28 13:44:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 63.52 Mbit/s

95th percentile per-packet one-way delay: 41.130 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 41.65 Mbit/s

95th percentile per-packet one-way delay: 18.689 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 20.82 Mbit/s

95th percentile per-packet one-way delay: 12.021 ms

Loss rate: 0.07%

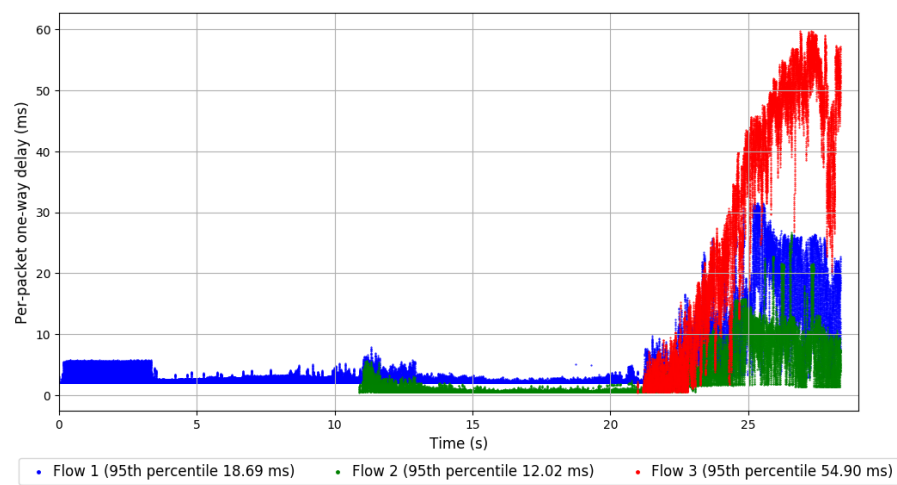
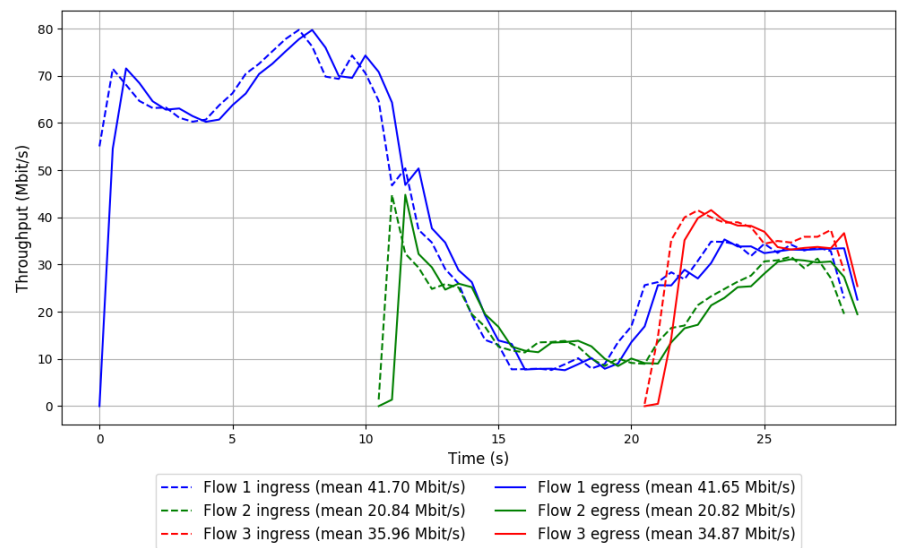
-- Flow 3:

Average throughput: 34.87 Mbit/s

95th percentile per-packet one-way delay: 54.899 ms

Loss rate: 2.97%

Run 5: Report of Indigo-MusesD — Data Link

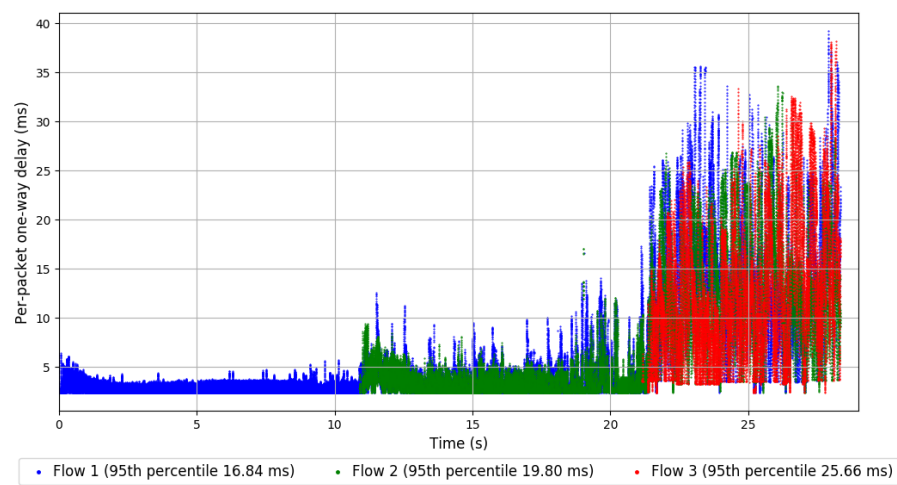
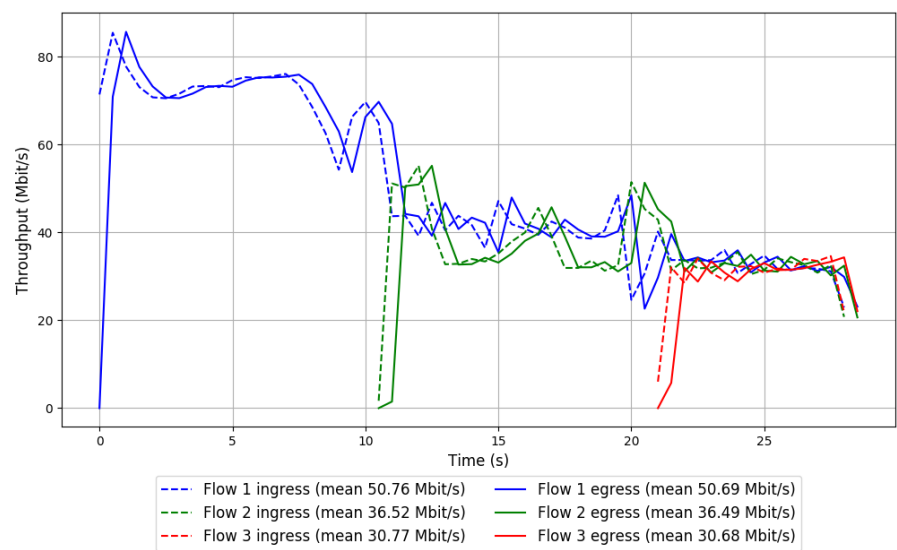


Run 1: Statistics of Indigo-MusesT

Start at: 2019-06-28 11:32:35
End at: 2019-06-28 11:33:05
Local clock offset: -5.193 ms
Remote clock offset: -0.324 ms

Below is generated by plot.py at 2019-06-28 13:45:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 80.93 Mbit/s
95th percentile per-packet one-way delay: 19.836 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 50.69 Mbit/s
95th percentile per-packet one-way delay: 16.842 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 36.49 Mbit/s
95th percentile per-packet one-way delay: 19.797 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 30.68 Mbit/s
95th percentile per-packet one-way delay: 25.655 ms
Loss rate: 0.35%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

Start at: 2019-06-28 11:57:46

End at: 2019-06-28 11:58:16

Local clock offset: -6.604 ms

Remote clock offset: 0.088 ms

Below is generated by plot.py at 2019-06-28 13:45:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.58 Mbit/s

95th percentile per-packet one-way delay: 5.031 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 52.00 Mbit/s

95th percentile per-packet one-way delay: 4.632 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 34.18 Mbit/s

95th percentile per-packet one-way delay: 5.918 ms

Loss rate: 0.05%

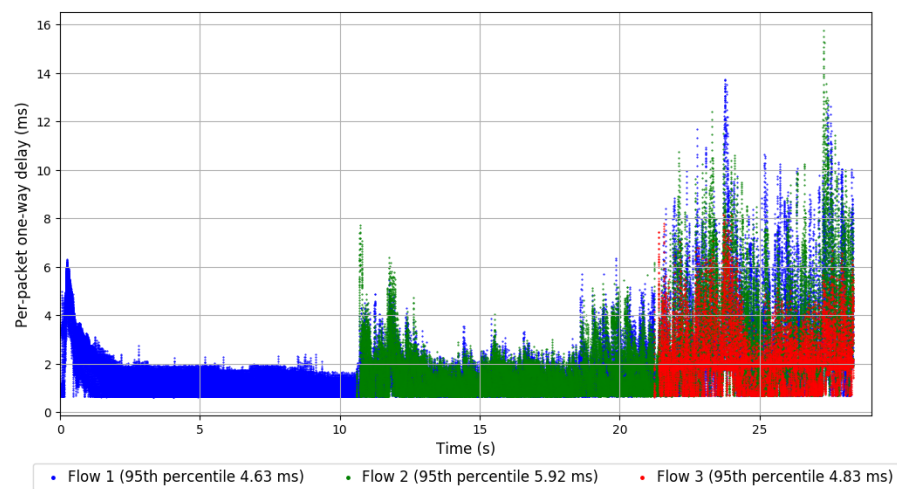
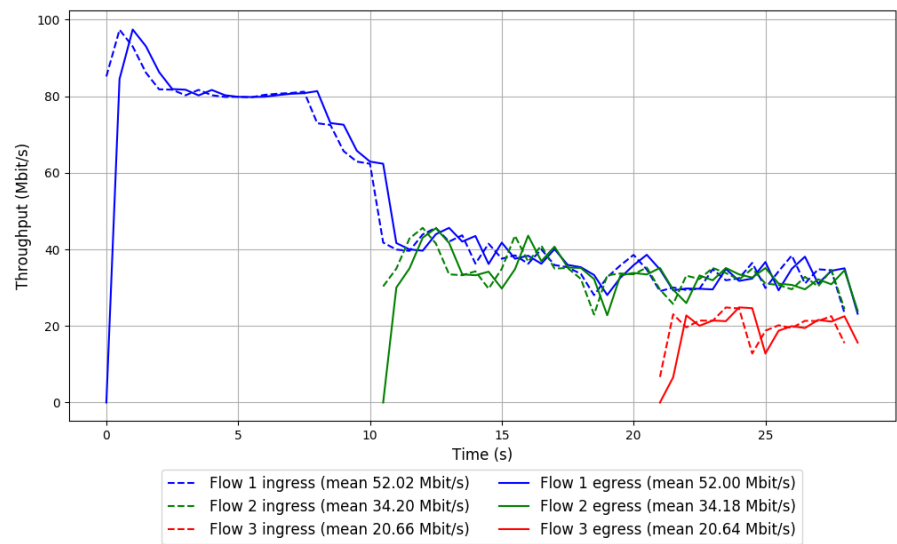
-- Flow 3:

Average throughput: 20.64 Mbit/s

95th percentile per-packet one-way delay: 4.825 ms

Loss rate: 0.02%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2019-06-28 12:23:00

End at: 2019-06-28 12:23:30

Local clock offset: -7.266 ms

Remote clock offset: 0.463 ms

Below is generated by plot.py at 2019-06-28 13:45:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.65 Mbit/s

95th percentile per-packet one-way delay: 8.331 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 51.69 Mbit/s

95th percentile per-packet one-way delay: 5.494 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 31.61 Mbit/s

95th percentile per-packet one-way delay: 12.049 ms

Loss rate: 0.00%

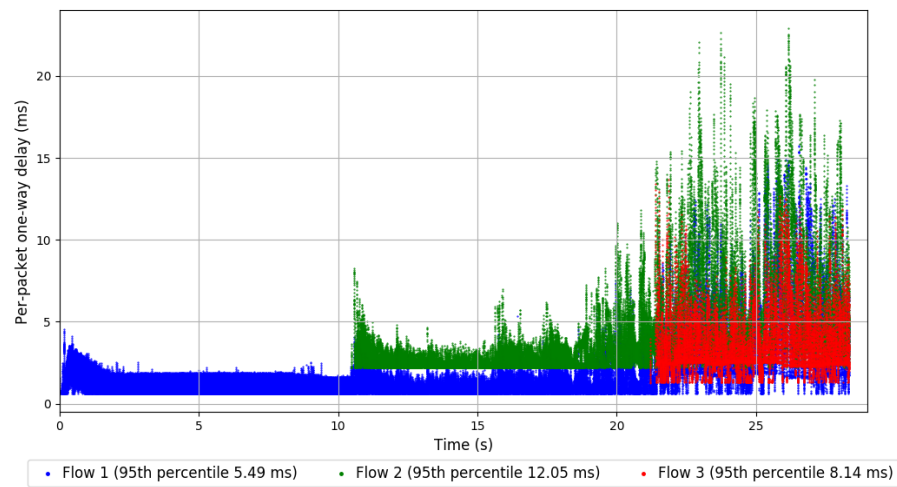
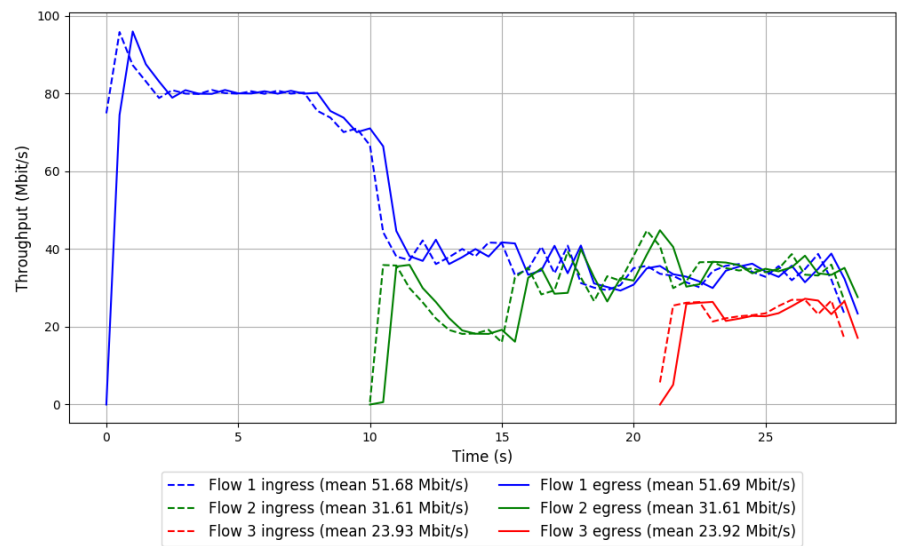
-- Flow 3:

Average throughput: 23.92 Mbit/s

95th percentile per-packet one-way delay: 8.140 ms

Loss rate: 0.02%

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MusesT

Start at: 2019-06-28 12:48:13

End at: 2019-06-28 12:48:43

Local clock offset: -7.686 ms

Remote clock offset: 0.687 ms

Below is generated by plot.py at 2019-06-28 13:45:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.93 Mbit/s

95th percentile per-packet one-way delay: 5.489 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 55.63 Mbit/s

95th percentile per-packet one-way delay: 5.315 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 35.43 Mbit/s

95th percentile per-packet one-way delay: 5.942 ms

Loss rate: 0.02%

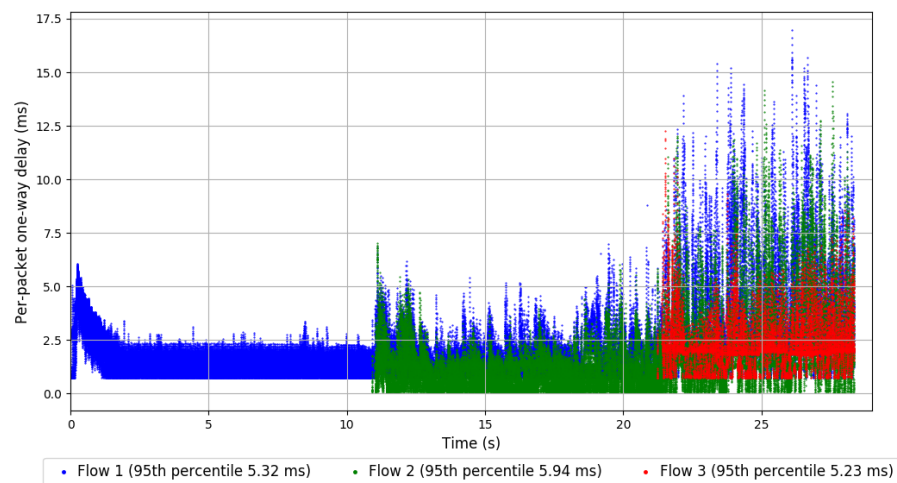
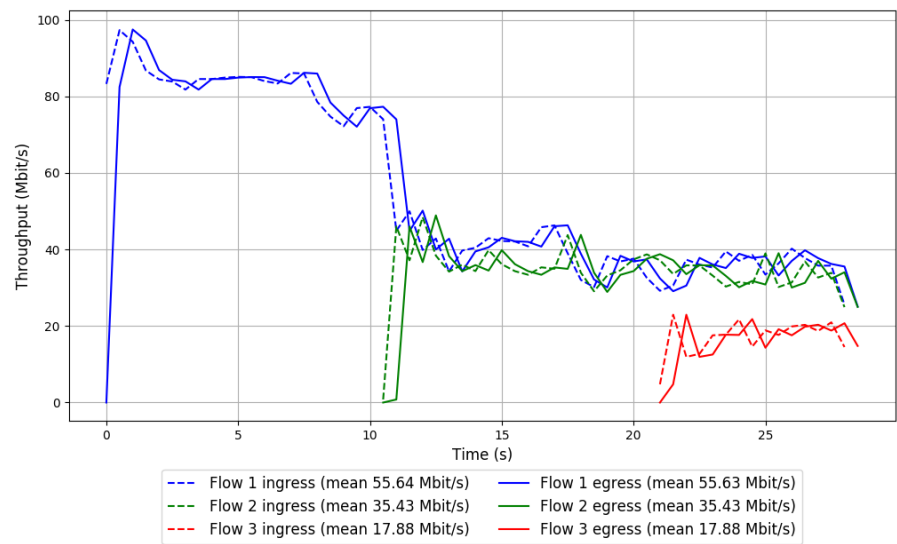
-- Flow 3:

Average throughput: 17.88 Mbit/s

95th percentile per-packet one-way delay: 5.226 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-06-28 13:13:30

End at: 2019-06-28 13:14:00

Local clock offset: -6.645 ms

Remote clock offset: 0.688 ms

Below is generated by plot.py at 2019-06-28 13:45:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.23 Mbit/s

95th percentile per-packet one-way delay: 8.456 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 55.60 Mbit/s

95th percentile per-packet one-way delay: 6.824 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 38.20 Mbit/s

95th percentile per-packet one-way delay: 10.948 ms

Loss rate: 0.10%

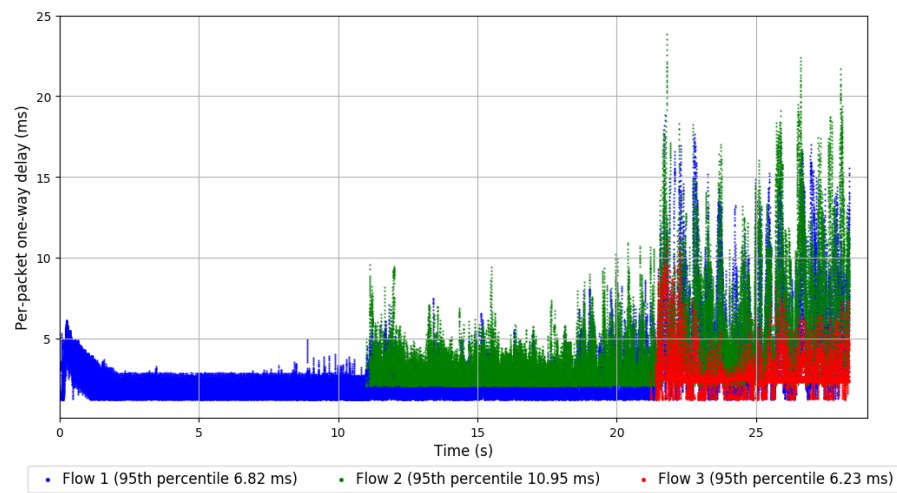
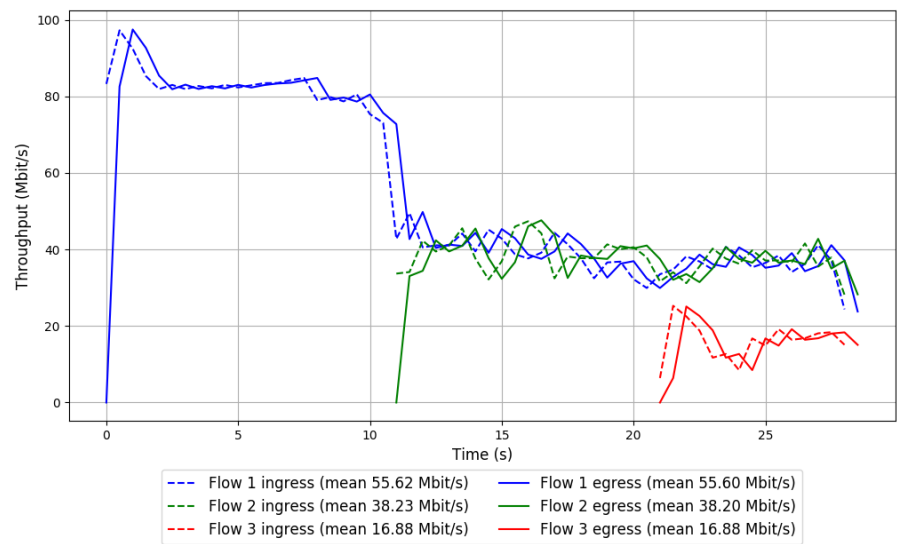
-- Flow 3:

Average throughput: 16.88 Mbit/s

95th percentile per-packet one-way delay: 6.226 ms

Loss rate: 0.06%

Run 5: Report of Indigo-MusesT — Data Link

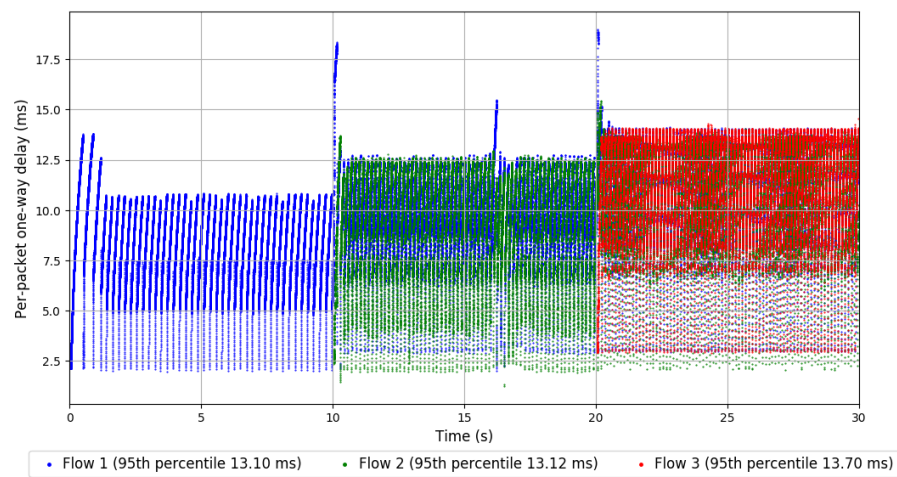
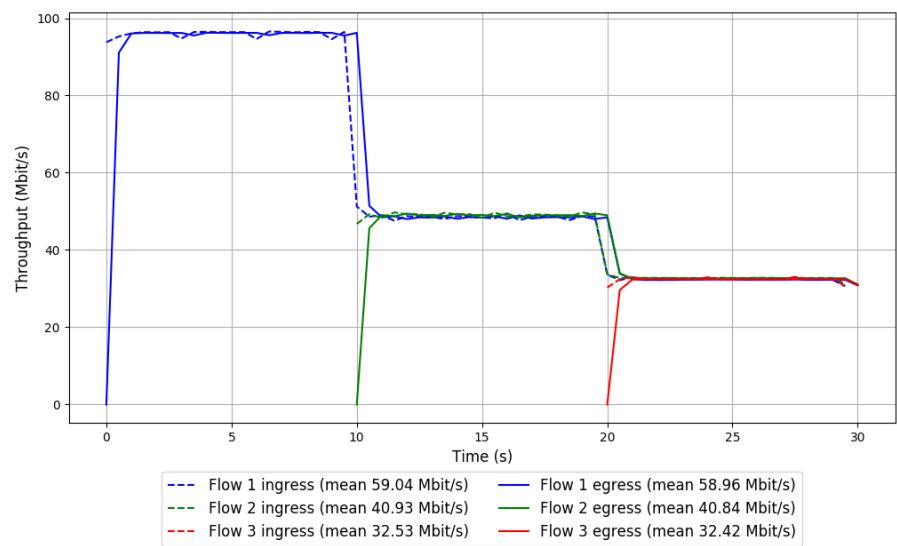


Run 1: Statistics of LEDBAT

Start at: 2019-06-28 11:37:12
End at: 2019-06-28 11:37:42
Local clock offset: -5.511 ms
Remote clock offset: -0.243 ms

Below is generated by plot.py at 2019-06-28 13:45:39
Datalink statistics
-- Total of 3 flows:
Average throughput: 96.92 Mbit/s
95th percentile per-packet one-way delay: 13.286 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 58.96 Mbit/s
95th percentile per-packet one-way delay: 13.102 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 40.84 Mbit/s
95th percentile per-packet one-way delay: 13.123 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 32.42 Mbit/s
95th percentile per-packet one-way delay: 13.697 ms
Loss rate: 0.33%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-06-28 12:02:21

End at: 2019-06-28 12:02:52

Local clock offset: -7.365 ms

Remote clock offset: 0.181 ms

Below is generated by plot.py at 2019-06-28 13:46:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.15 Mbit/s

95th percentile per-packet one-way delay: 12.668 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 59.35 Mbit/s

95th percentile per-packet one-way delay: 12.092 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 40.63 Mbit/s

95th percentile per-packet one-way delay: 12.557 ms

Loss rate: 0.26%

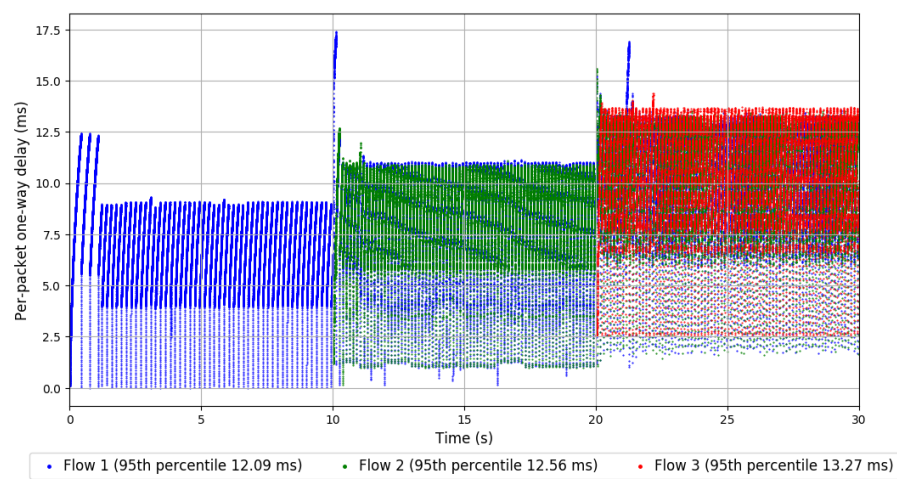
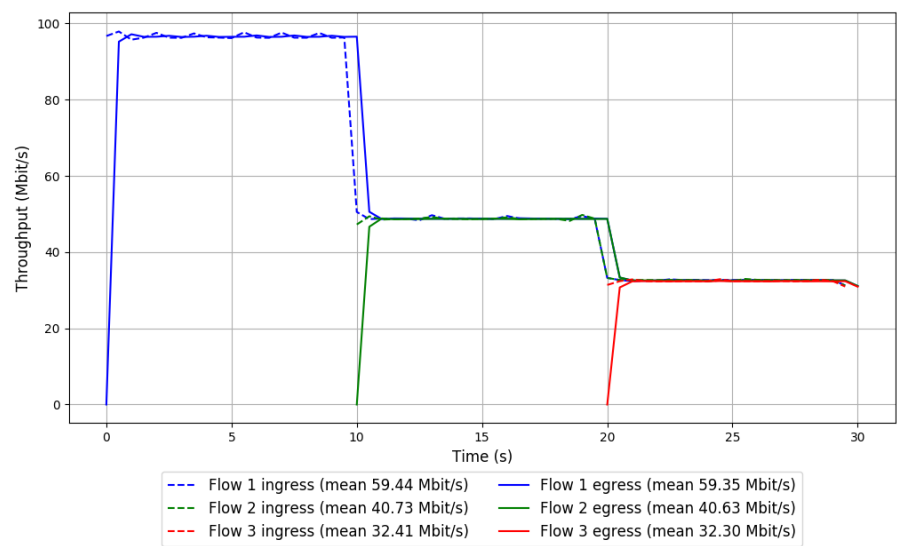
-- Flow 3:

Average throughput: 32.30 Mbit/s

95th percentile per-packet one-way delay: 13.272 ms

Loss rate: 0.40%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-06-28 12:27:35

End at: 2019-06-28 12:28:05

Local clock offset: -6.904 ms

Remote clock offset: 0.627 ms

Below is generated by plot.py at 2019-06-28 13:46:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.94 Mbit/s

95th percentile per-packet one-way delay: 13.416 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 58.88 Mbit/s

95th percentile per-packet one-way delay: 13.304 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 40.90 Mbit/s

95th percentile per-packet one-way delay: 13.252 ms

Loss rate: 0.26%

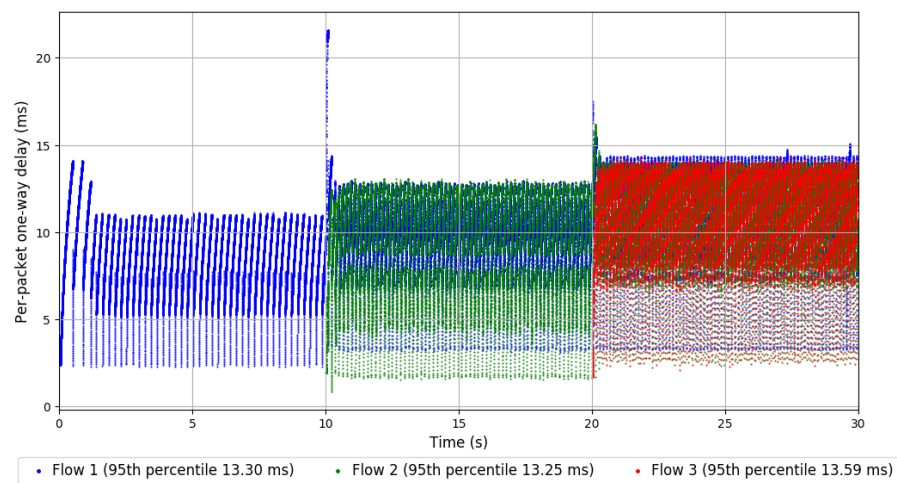
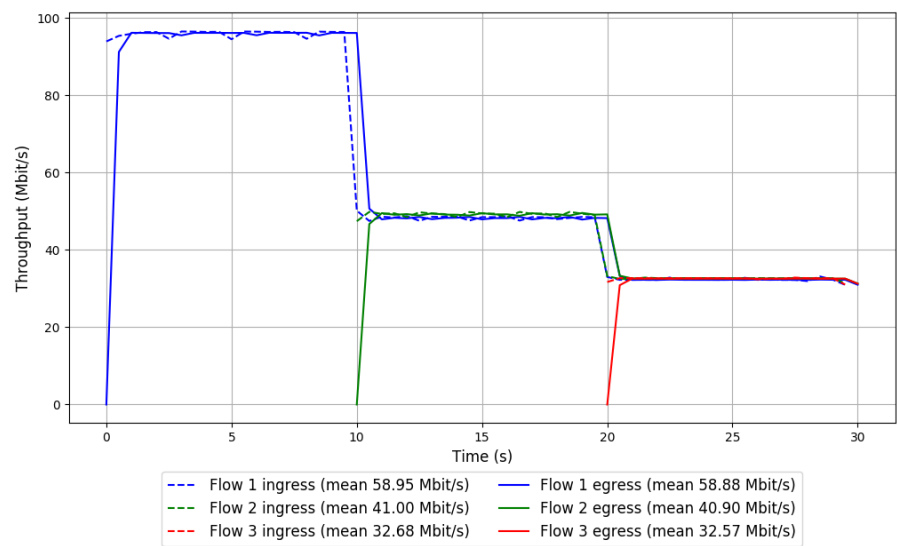
-- Flow 3:

Average throughput: 32.57 Mbit/s

95th percentile per-packet one-way delay: 13.591 ms

Loss rate: 0.32%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-06-28 12:52:49

End at: 2019-06-28 12:53:19

Local clock offset: -6.7 ms

Remote clock offset: 0.699 ms

Below is generated by plot.py at 2019-06-28 13:46:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.91 Mbit/s

95th percentile per-packet one-way delay: 13.463 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 58.90 Mbit/s

95th percentile per-packet one-way delay: 13.103 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 40.94 Mbit/s

95th percentile per-packet one-way delay: 13.242 ms

Loss rate: 0.25%

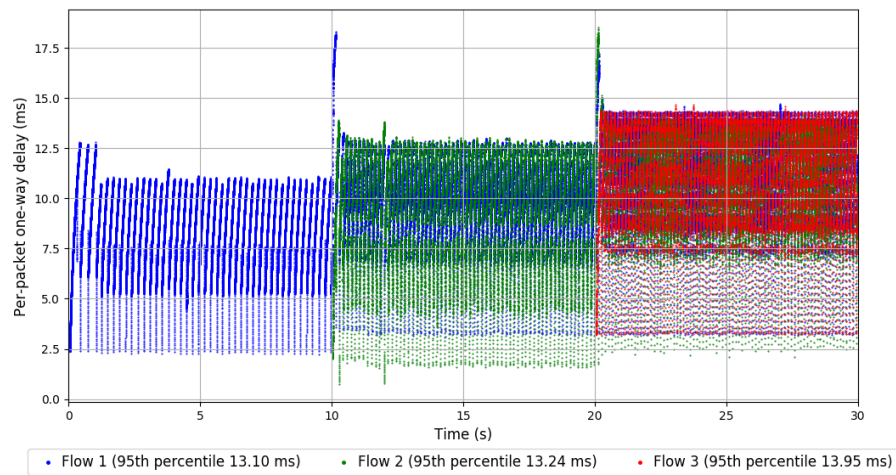
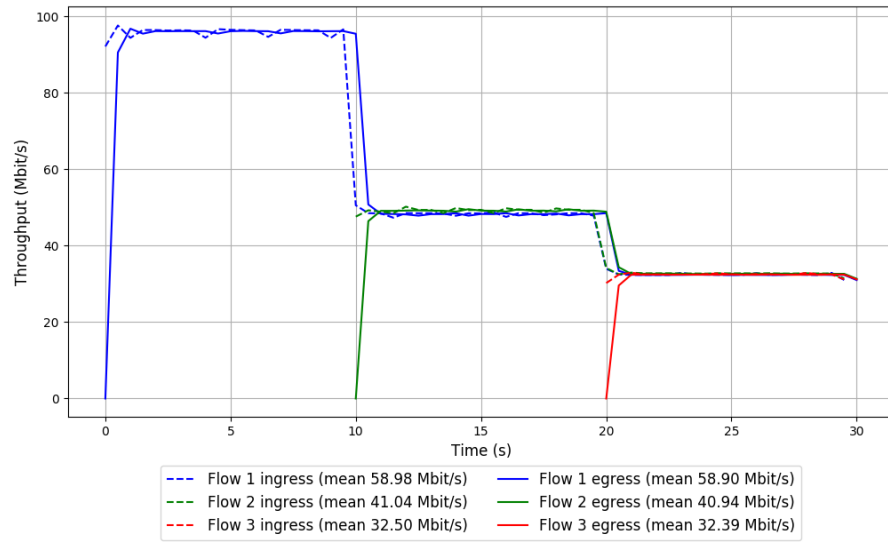
-- Flow 3:

Average throughput: 32.39 Mbit/s

95th percentile per-packet one-way delay: 13.950 ms

Loss rate: 0.39%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-06-28 13:18:05

End at: 2019-06-28 13:18:35

Local clock offset: -6.289 ms

Remote clock offset: 0.553 ms

Below is generated by plot.py at 2019-06-28 13:46:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.03 Mbit/s

95th percentile per-packet one-way delay: 13.488 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 59.23 Mbit/s

95th percentile per-packet one-way delay: 13.188 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 40.58 Mbit/s

95th percentile per-packet one-way delay: 13.546 ms

Loss rate: 0.27%

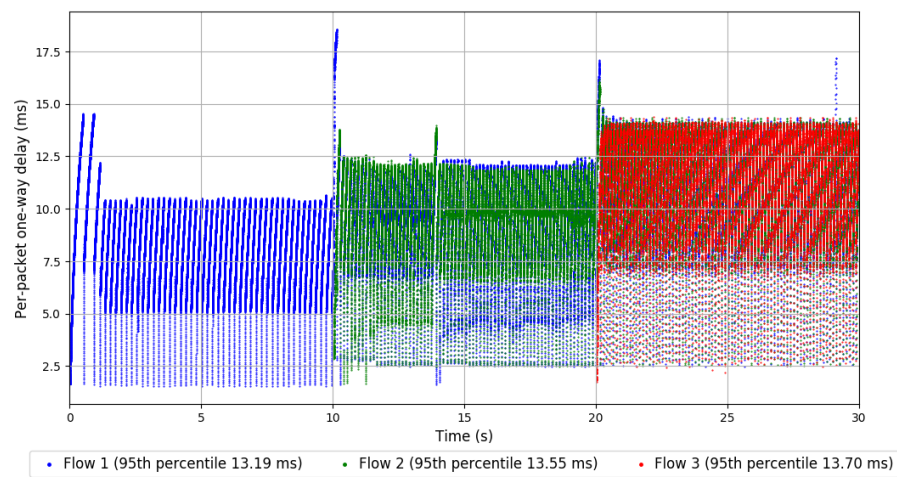
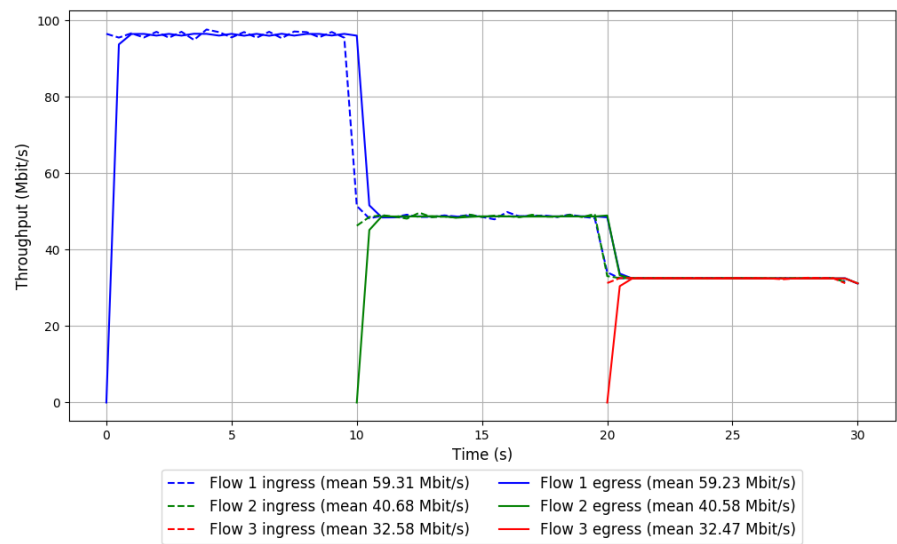
-- Flow 3:

Average throughput: 32.47 Mbit/s

95th percentile per-packet one-way delay: 13.700 ms

Loss rate: 0.37%

Run 5: Report of LEDBAT — Data Link

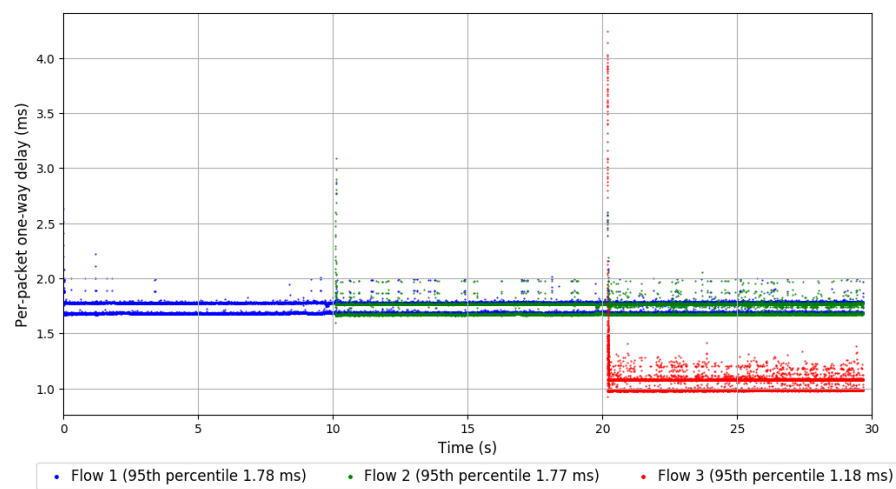
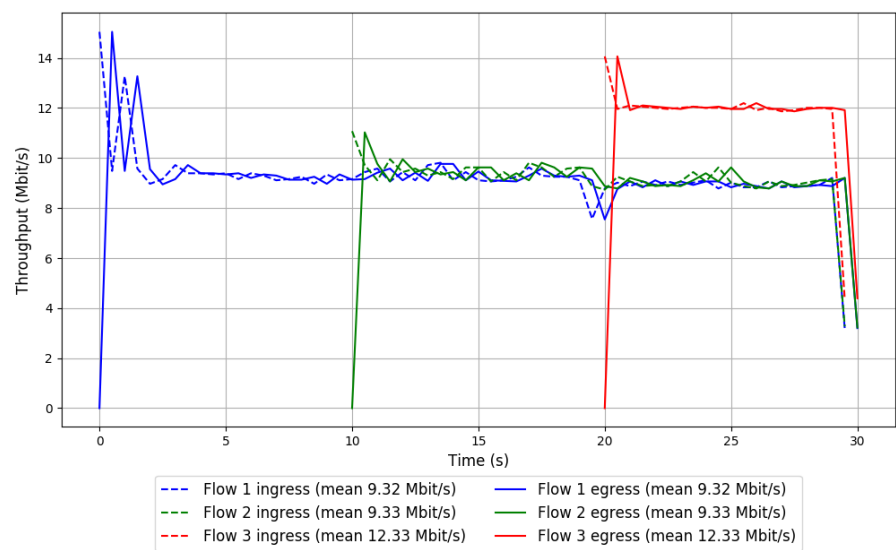


Run 1: Statistics of Muses_DecisionTree

Start at: 2019-06-28 11:44:01
End at: 2019-06-28 11:44:31
Local clock offset: -5.018 ms
Remote clock offset: -0.156 ms

Below is generated by plot.py at 2019-06-28 13:46:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 19.42 Mbit/s
95th percentile per-packet one-way delay: 1.783 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 9.32 Mbit/s
95th percentile per-packet one-way delay: 1.785 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 1.772 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 12.33 Mbit/s
95th percentile per-packet one-way delay: 1.182 ms
Loss rate: 0.00%

Run 1: Report of Muses_DecisionTree — Data Link



Run 2: Statistics of Muses_DecisionTree

Start at: 2019-06-28 12:09:15

End at: 2019-06-28 12:09:45

Local clock offset: -6.827 ms

Remote clock offset: 0.307 ms

Below is generated by plot.py at 2019-06-28 13:46:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 23.47 Mbit/s

95th percentile per-packet one-way delay: 1.730 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 12.46 Mbit/s

95th percentile per-packet one-way delay: 1.056 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 12.49 Mbit/s

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

Loss rate: 0.00%

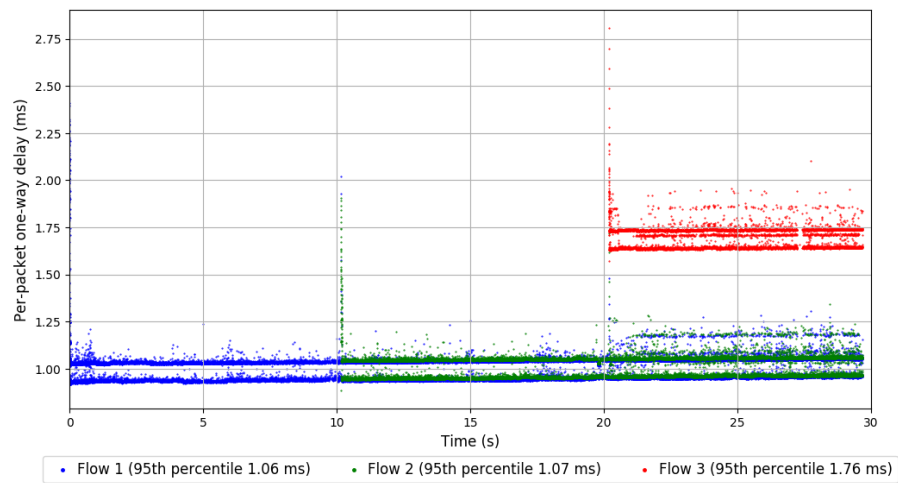
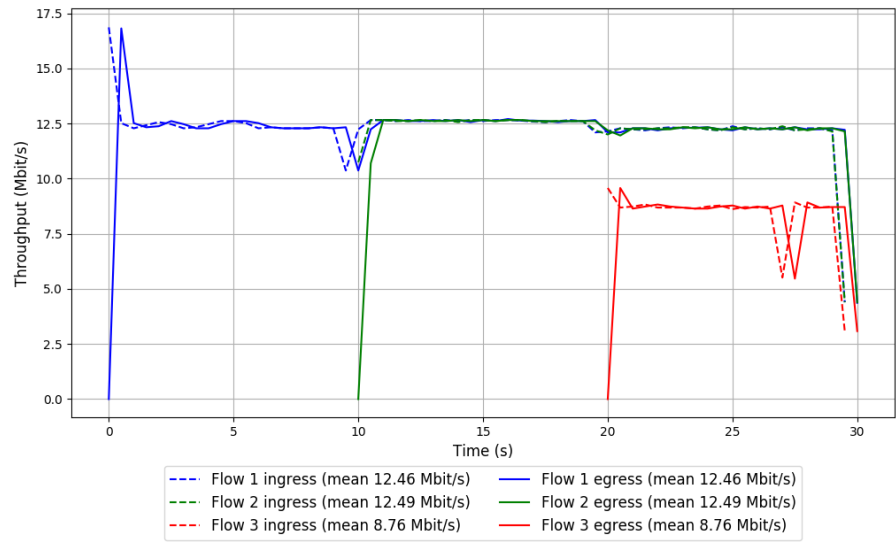
-- Flow 3:

Average throughput: 8.76 Mbit/s

95th percentile per-packet one-way delay: 1.758 ms

Loss rate: 0.03%

Run 2: Report of Muses_DecisionTree — Data Link



Run 3: Statistics of Muses_DecisionTree

Start at: 2019-06-28 12:34:26

End at: 2019-06-28 12:34:56

Local clock offset: -6.864 ms

Remote clock offset: 0.718 ms

Below is generated by plot.py at 2019-06-28 13:46:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 19.54 Mbit/s

95th percentile per-packet one-way delay: 2.550 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 8.57 Mbit/s

95th percentile per-packet one-way delay: 2.606 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 12.14 Mbit/s

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

Loss rate: 0.01%

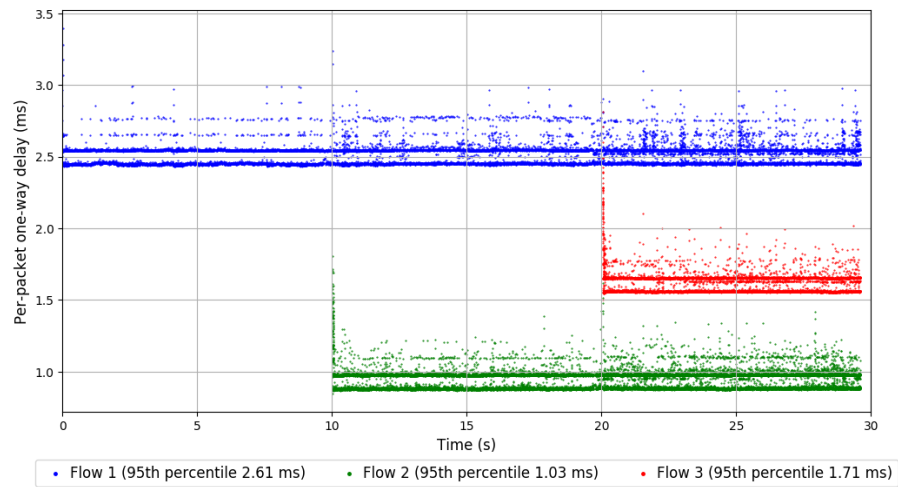
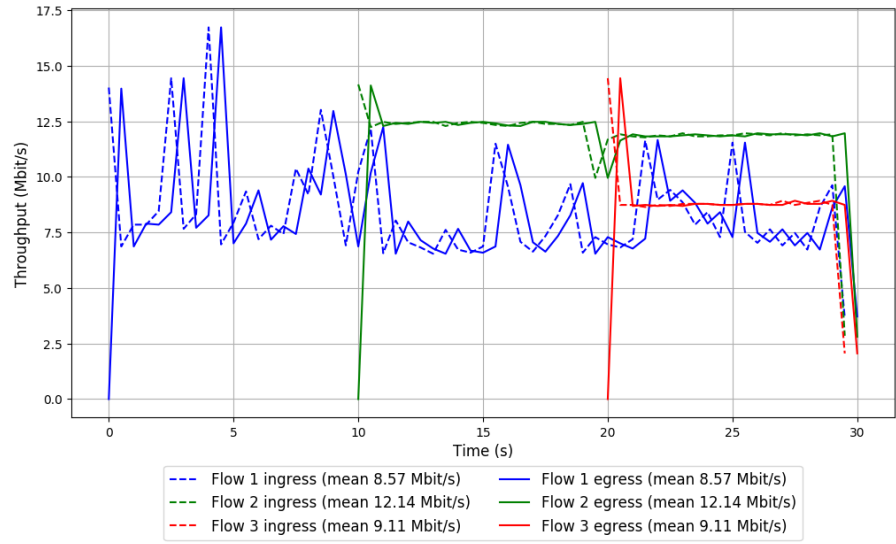
-- Flow 3:

Average throughput: 9.11 Mbit/s

95th percentile per-packet one-way delay: 1.713 ms

Loss rate: 0.03%

Run 3: Report of Muses_DecisionTree — Data Link



Run 4: Statistics of Muses_DecisionTree

Start at: 2019-06-28 12:59:44

End at: 2019-06-28 13:00:14

Local clock offset: -7.287 ms

Remote clock offset: 0.705 ms

Below is generated by plot.py at 2019-06-28 13:46:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 19.71 Mbit/s

95th percentile per-packet one-way delay: 1.737 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 9.09 Mbit/s

95th percentile per-packet one-way delay: 0.862 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 12.23 Mbit/s

95th percentile per-packet one-way delay: 0.225 ms

Loss rate: 0.01%

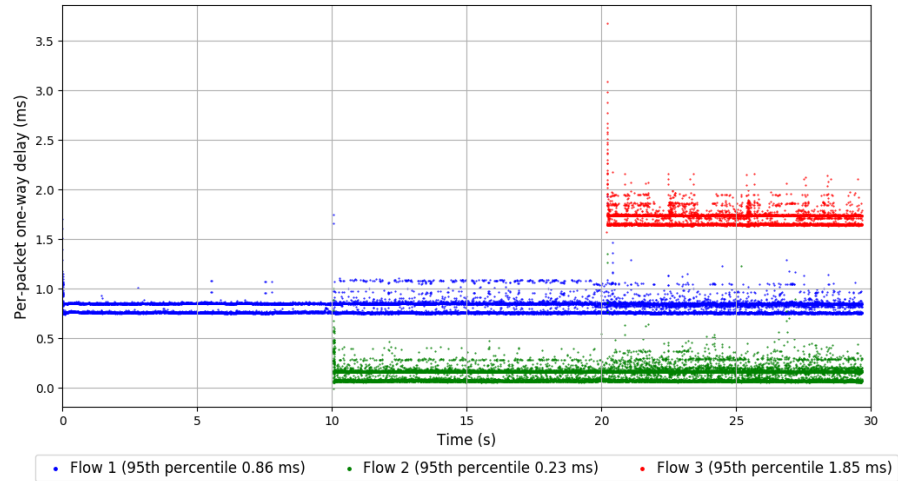
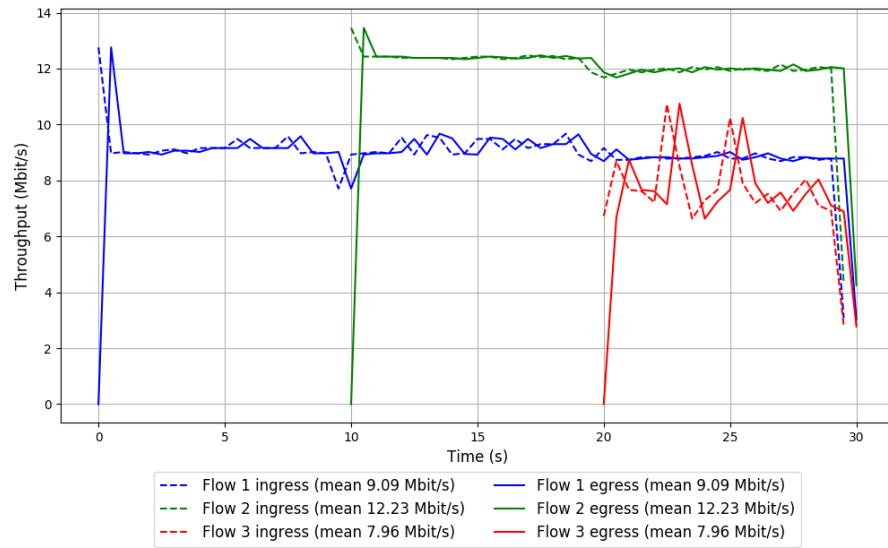
-- Flow 3:

Average throughput: 7.96 Mbit/s

95th percentile per-packet one-way delay: 1.852 ms

Loss rate: 0.03%

Run 4: Report of Muses_DecisionTree — Data Link



Run 5: Statistics of Muses_DecisionTree

Start at: 2019-06-28 13:25:04

End at: 2019-06-28 13:25:34

Local clock offset: -6.342 ms

Remote clock offset: 0.557 ms

Below is generated by plot.py at 2019-06-28 13:46:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 23.41 Mbit/s

95th percentile per-packet one-way delay: 1.320 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 12.35 Mbit/s

95th percentile per-packet one-way delay: 0.675 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 12.45 Mbit/s

95th percentile per-packet one-way delay: 0.699 ms

Loss rate: 0.00%

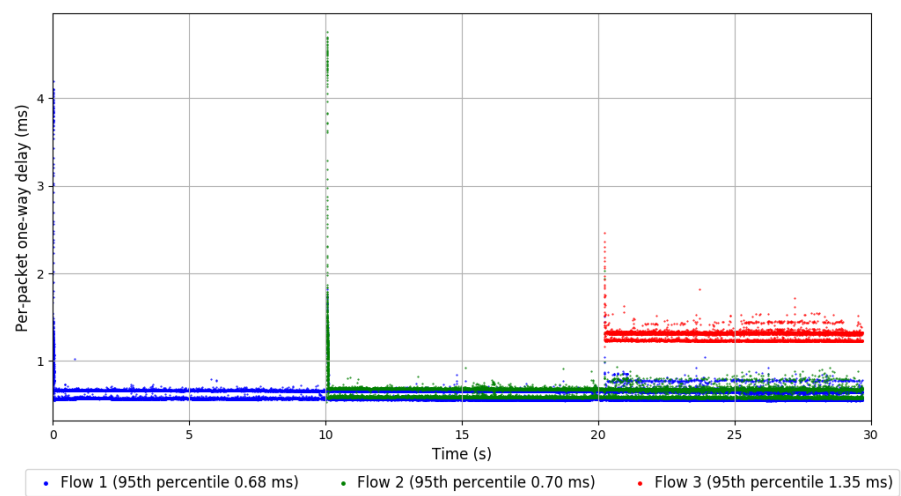
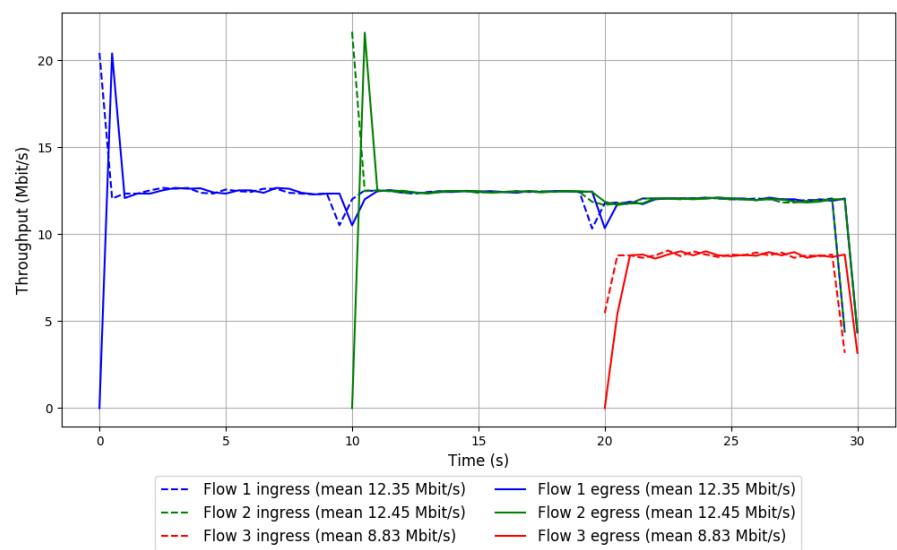
-- Flow 3:

Average throughput: 8.83 Mbit/s

95th percentile per-packet one-way delay: 1.350 ms

Loss rate: 0.03%

Run 5: Report of Muses_DecisionTree — Data Link

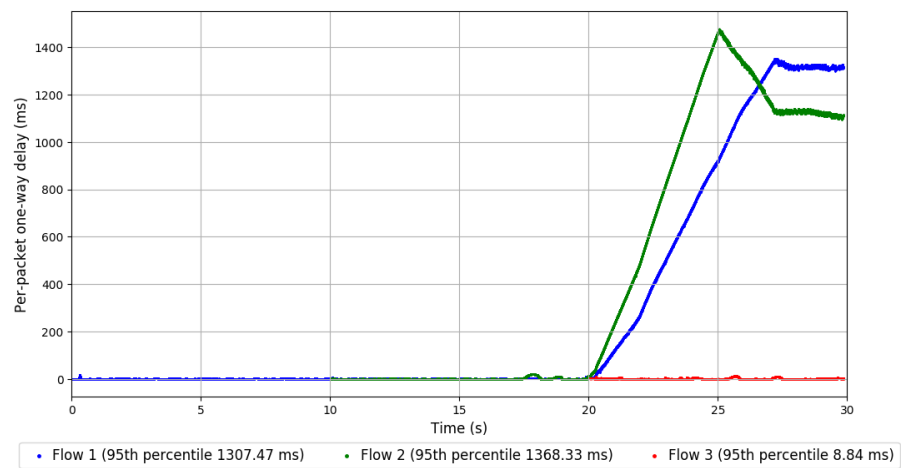
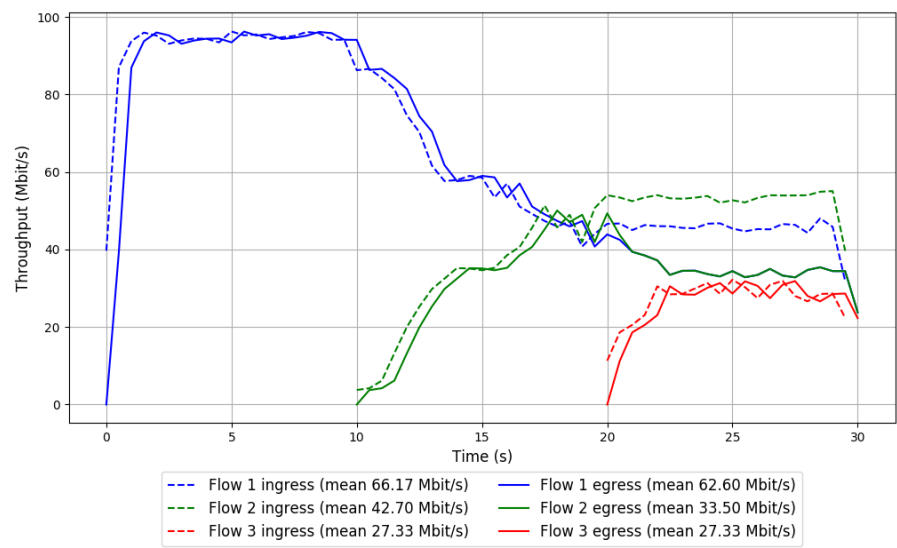


Run 1: Statistics of PCC-Allegro

Start at: 2019-06-28 11:36:03
End at: 2019-06-28 11:36:33
Local clock offset: -5.901 ms
Remote clock offset: -0.172 ms

Below is generated by plot.py at 2019-06-28 13:46:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 93.87 Mbit/s
95th percentile per-packet one-way delay: 1310.425 ms
Loss rate: 9.37%
-- Flow 1:
Average throughput: 62.60 Mbit/s
95th percentile per-packet one-way delay: 1307.475 ms
Loss rate: 5.41%
-- Flow 2:
Average throughput: 33.50 Mbit/s
95th percentile per-packet one-way delay: 1368.327 ms
Loss rate: 21.58%
-- Flow 3:
Average throughput: 27.33 Mbit/s
95th percentile per-packet one-way delay: 8.840 ms
Loss rate: 0.06%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-06-28 12:01:12

End at: 2019-06-28 12:01:42

Local clock offset: -7.26 ms

Remote clock offset: 0.171 ms

Below is generated by plot.py at 2019-06-28 13:46:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.07 Mbit/s

95th percentile per-packet one-way delay: 1274.902 ms

Loss rate: 12.94%

-- Flow 1:

Average throughput: 64.14 Mbit/s

95th percentile per-packet one-way delay: 1089.487 ms

Loss rate: 12.87%

-- Flow 2:

Average throughput: 29.23 Mbit/s

95th percentile per-packet one-way delay: 1298.332 ms

Loss rate: 18.05%

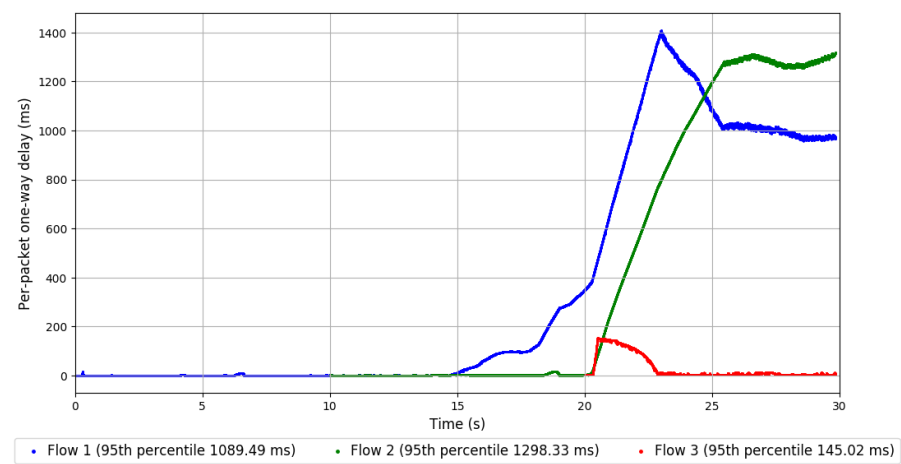
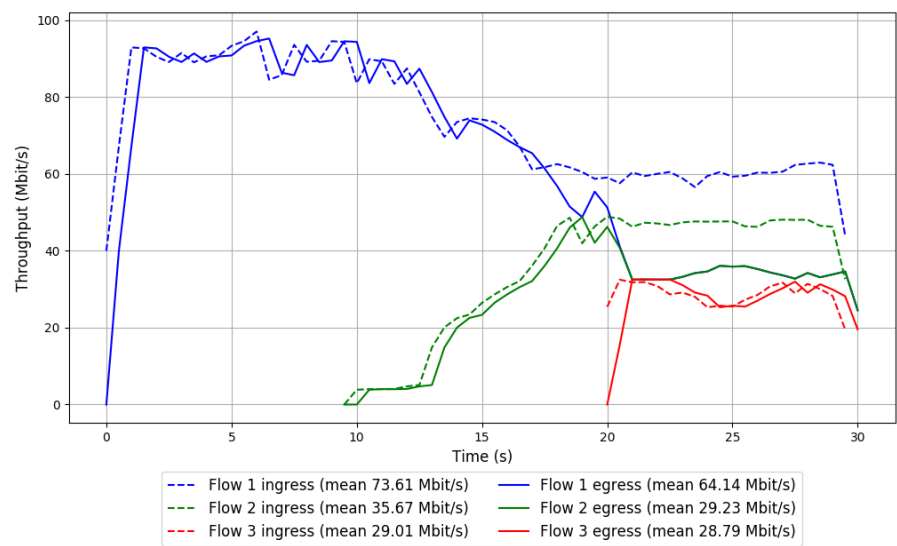
-- Flow 3:

Average throughput: 28.79 Mbit/s

95th percentile per-packet one-way delay: 145.021 ms

Loss rate: 0.78%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-06-28 12:26:26

End at: 2019-06-28 12:26:56

Local clock offset: -7.231 ms

Remote clock offset: 0.525 ms

Below is generated by plot.py at 2019-06-28 13:46:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.20 Mbit/s

95th percentile per-packet one-way delay: 1611.465 ms

Loss rate: 18.28%

-- Flow 1:

Average throughput: 59.80 Mbit/s

95th percentile per-packet one-way delay: 1752.732 ms

Loss rate: 22.63%

-- Flow 2:

Average throughput: 38.88 Mbit/s

95th percentile per-packet one-way delay: 1342.809 ms

Loss rate: 12.80%

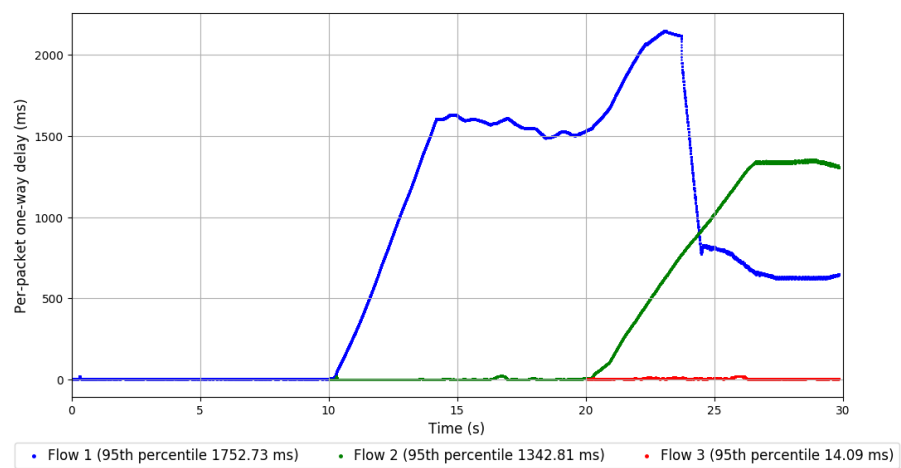
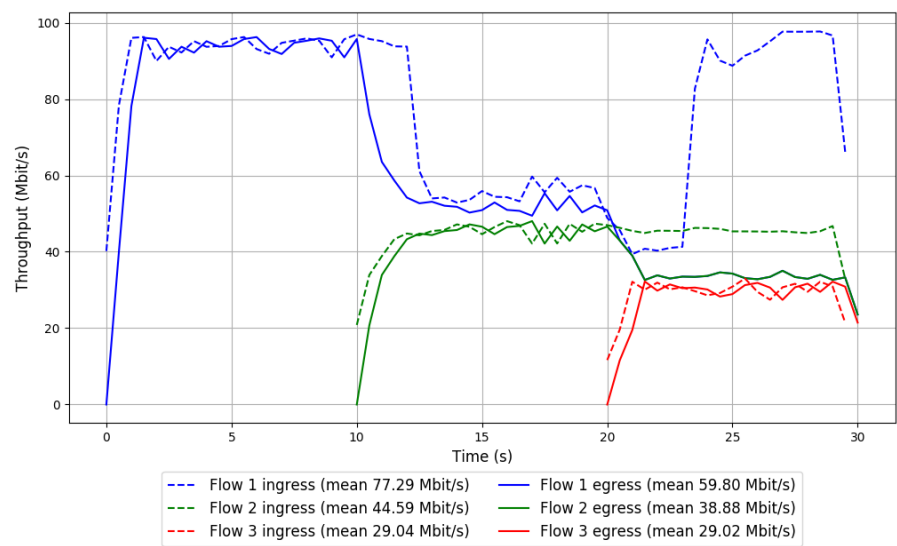
-- Flow 3:

Average throughput: 29.02 Mbit/s

95th percentile per-packet one-way delay: 14.092 ms

Loss rate: 0.08%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-06-28 12:51:39

End at: 2019-06-28 12:52:09

Local clock offset: -6.793 ms

Remote clock offset: 0.637 ms

Below is generated by plot.py at 2019-06-28 13:47:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.19 Mbit/s

95th percentile per-packet one-way delay: 1623.785 ms

Loss rate: 21.30%

-- Flow 1:

Average throughput: 57.40 Mbit/s

95th percentile per-packet one-way delay: 1651.959 ms

Loss rate: 25.12%

-- Flow 2:

Average throughput: 36.58 Mbit/s

95th percentile per-packet one-way delay: 1205.997 ms

Loss rate: 18.21%

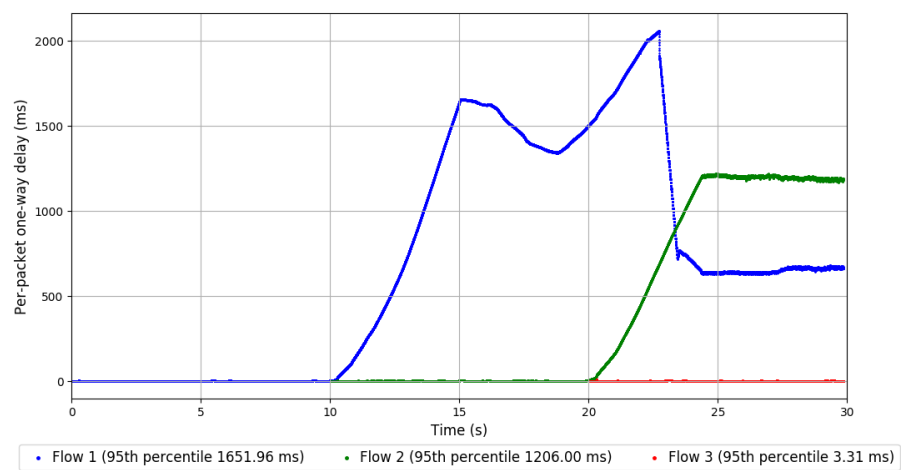
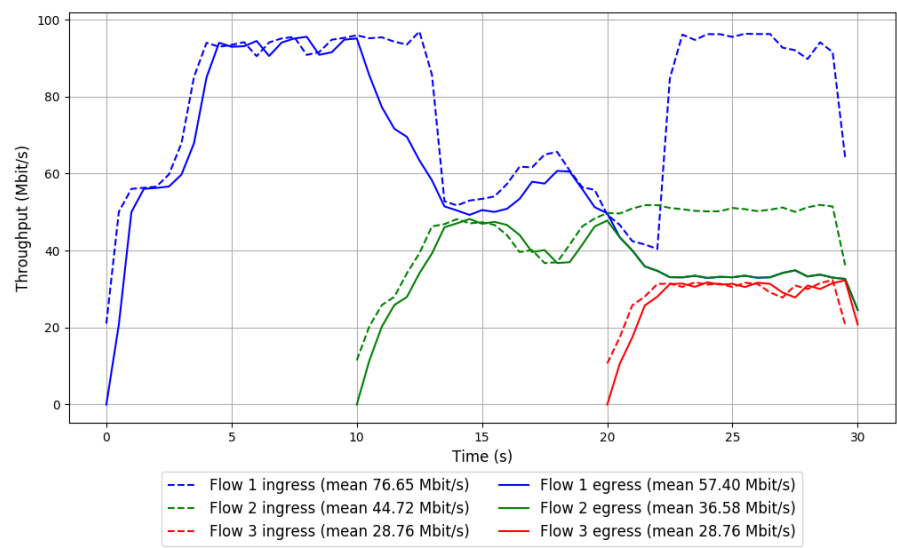
-- Flow 3:

Average throughput: 28.76 Mbit/s

95th percentile per-packet one-way delay: 3.308 ms

Loss rate: 0.03%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-06-28 13:16:56

End at: 2019-06-28 13:17:26

Local clock offset: -6.709 ms

Remote clock offset: 0.644 ms

Below is generated by plot.py at 2019-06-28 13:47:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.48 Mbit/s

95th percentile per-packet one-way delay: 1791.941 ms

Loss rate: 6.92%

-- Flow 1:

Average throughput: 59.77 Mbit/s

95th percentile per-packet one-way delay: 1830.006 ms

Loss rate: 10.19%

-- Flow 2:

Average throughput: 38.14 Mbit/s

95th percentile per-packet one-way delay: 89.091 ms

Loss rate: 0.37%

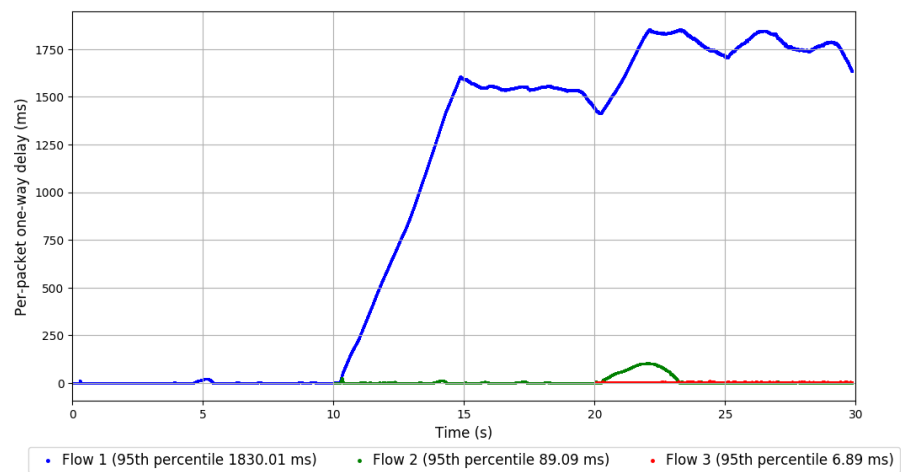
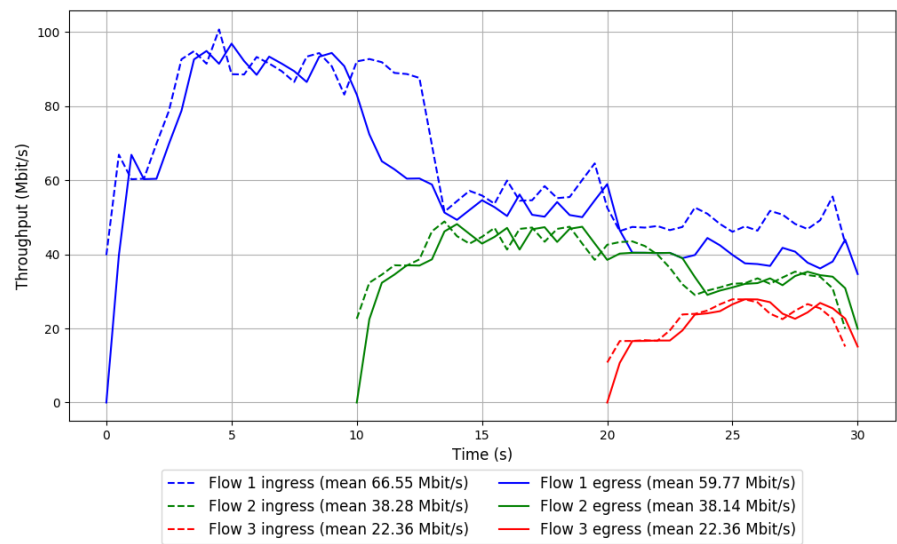
-- Flow 3:

Average throughput: 22.36 Mbit/s

95th percentile per-packet one-way delay: 6.895 ms

Loss rate: 0.04%

Run 5: Report of PCC-Allegro — Data Link

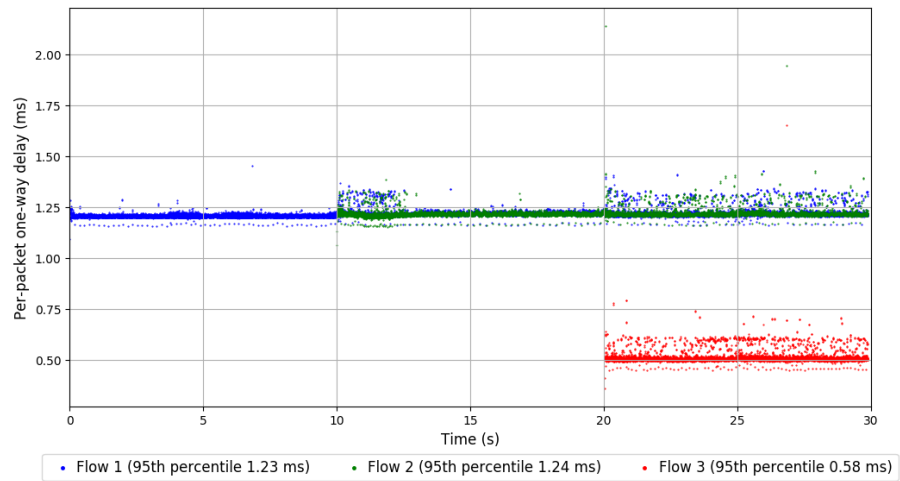
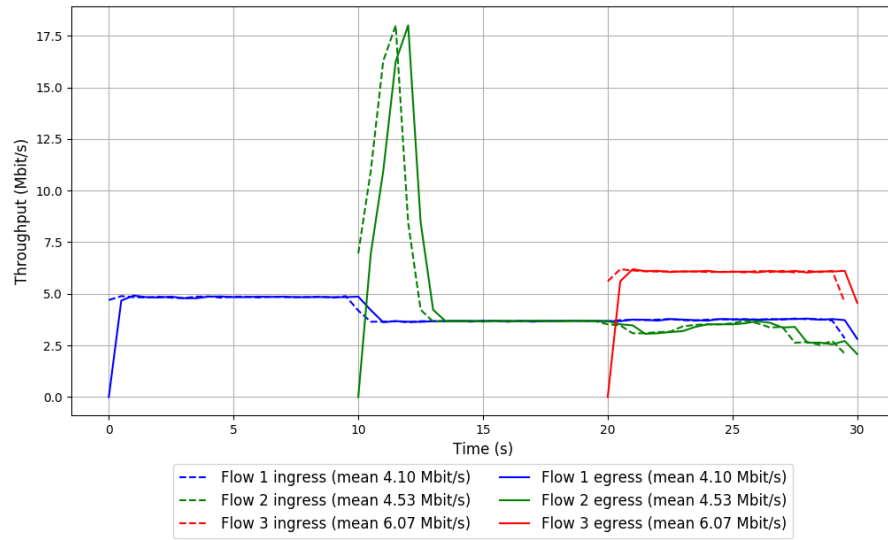


```
Run 1: Statistics of PCC-Expr

Start at: 2019-06-28 11:40:37
End at: 2019-06-28 11:41:07
Local clock offset: -5.401 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2019-06-28 13:47:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.12 Mbit/s
95th percentile per-packet one-way delay: 1.230 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 1.232 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 4.53 Mbit/s
95th percentile per-packet one-way delay: 1.235 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 6.07 Mbit/s
95th percentile per-packet one-way delay: 0.576 ms
Loss rate: 0.02%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-06-28 12:05:47

End at: 2019-06-28 12:06:17

Local clock offset: -6.687 ms

Remote clock offset: 0.214 ms

Below is generated by plot.py at 2019-06-28 13:47:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 54.27 Mbit/s

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

Loss rate: 0.01%

-- Flow 1:

Average throughput: 8.09 Mbit/s

95th percentile per-packet one-way delay: 1.373 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 65.05 Mbit/s

95th percentile per-packet one-way delay: 4.917 ms

Loss rate: 0.01%

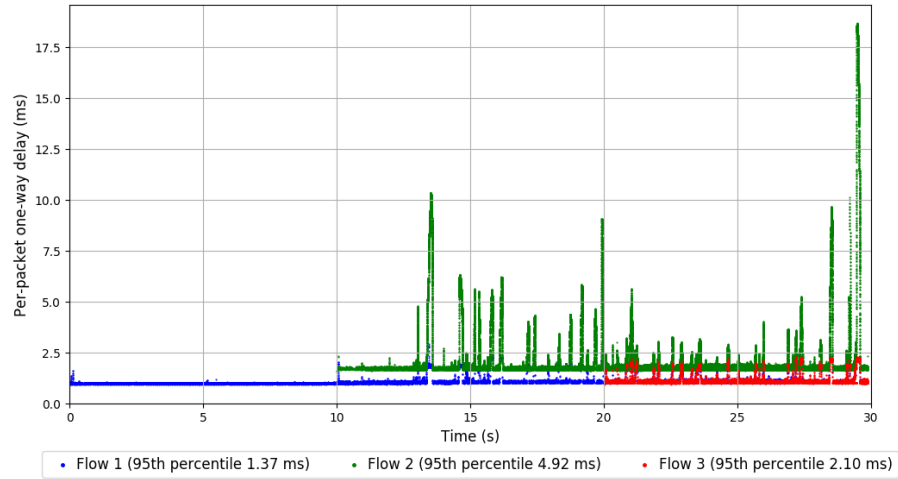
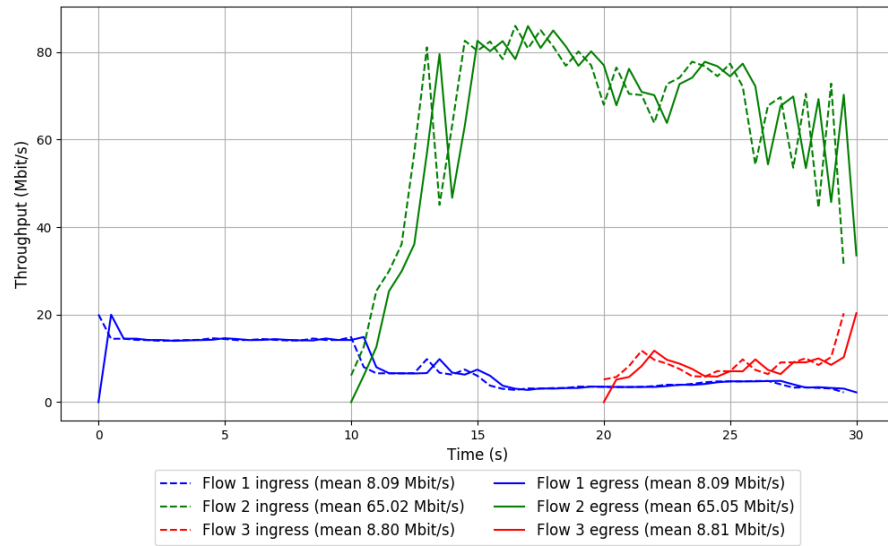
-- Flow 3:

Average throughput: 8.81 Mbit/s

95th percentile per-packet one-way delay: 2.099 ms

Loss rate: 0.01%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-06-28 12:31:01

End at: 2019-06-28 12:31:31

Local clock offset: -7.274 ms

Remote clock offset: 0.62 ms

Below is generated by plot.py at 2019-06-28 13:47:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.37 Mbit/s

95th percentile per-packet one-way delay: 13.182 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 5.13 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 8.46 Mbit/s

95th percentile per-packet one-way delay: 1.677 ms

Loss rate: 0.01%

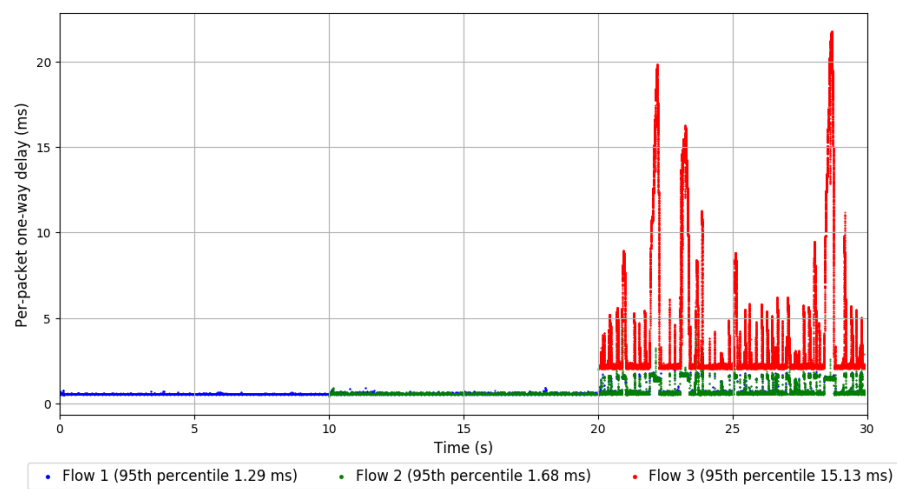
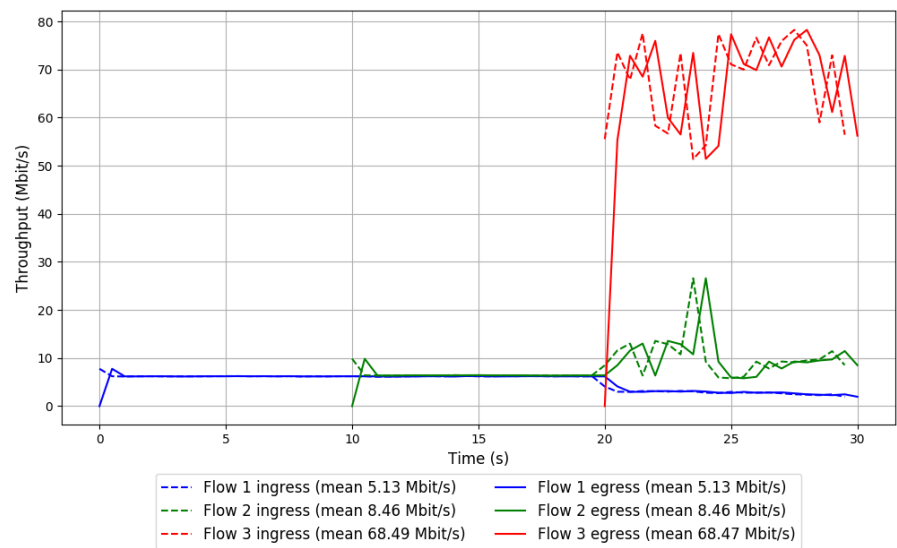
-- Flow 3:

Average throughput: 68.47 Mbit/s

95th percentile per-packet one-way delay: 15.135 ms

Loss rate: 0.05%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-06-28 12:56:14

End at: 2019-06-28 12:56:44

Local clock offset: -7.373 ms

Remote clock offset: 0.557 ms

Below is generated by plot.py at 2019-06-28 13:48:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.16 Mbit/s

95th percentile per-packet one-way delay: 19.943 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 75.54 Mbit/s

95th percentile per-packet one-way delay: 21.231 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 2.63 Mbit/s

95th percentile per-packet one-way delay: 1.941 ms

Loss rate: 0.02%

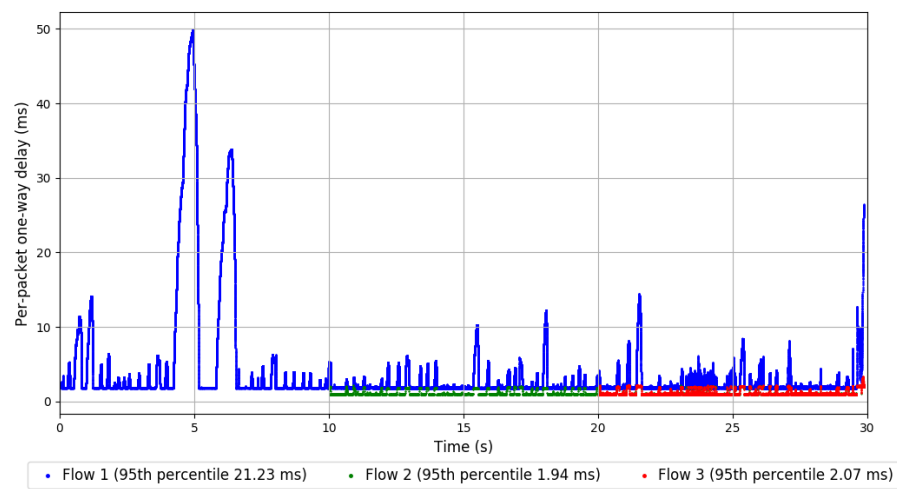
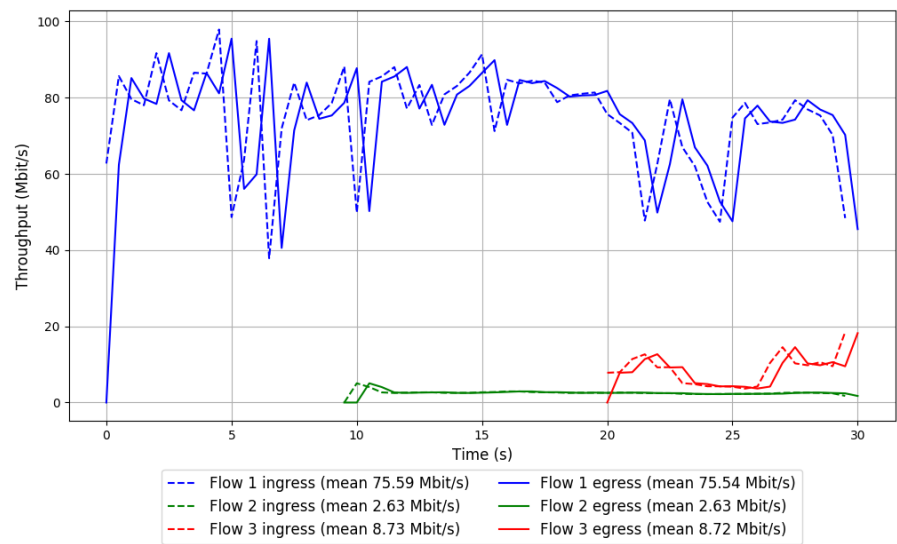
-- Flow 3:

Average throughput: 8.72 Mbit/s

95th percentile per-packet one-way delay: 2.068 ms

Loss rate: 0.18%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-06-28 13:21:32

End at: 2019-06-28 13:22:02

Local clock offset: -6.075 ms

Remote clock offset: 0.713 ms

Below is generated by plot.py at 2019-06-28 13:49:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.83 Mbit/s

95th percentile per-packet one-way delay: 675.982 ms

Loss rate: 27.47%

-- Flow 1:

Average throughput: 64.06 Mbit/s

95th percentile per-packet one-way delay: 677.094 ms

Loss rate: 33.61%

-- Flow 2:

Average throughput: 41.21 Mbit/s

95th percentile per-packet one-way delay: 667.598 ms

Loss rate: 10.15%

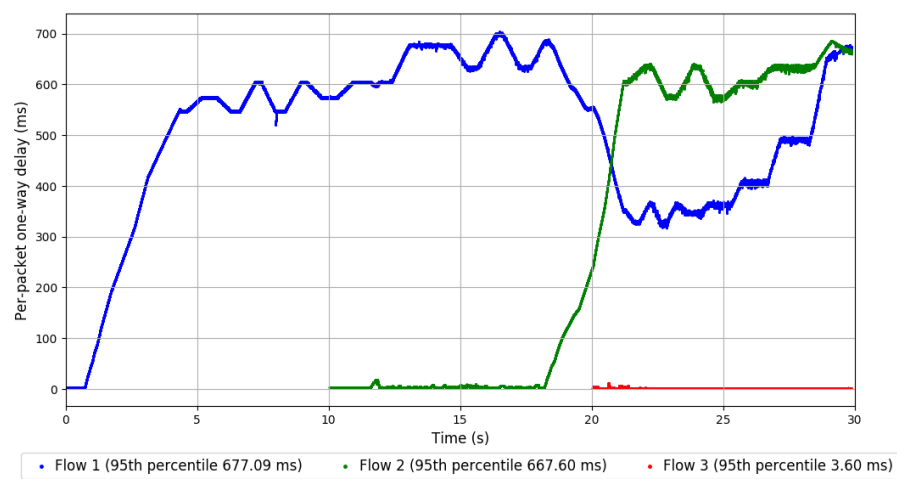
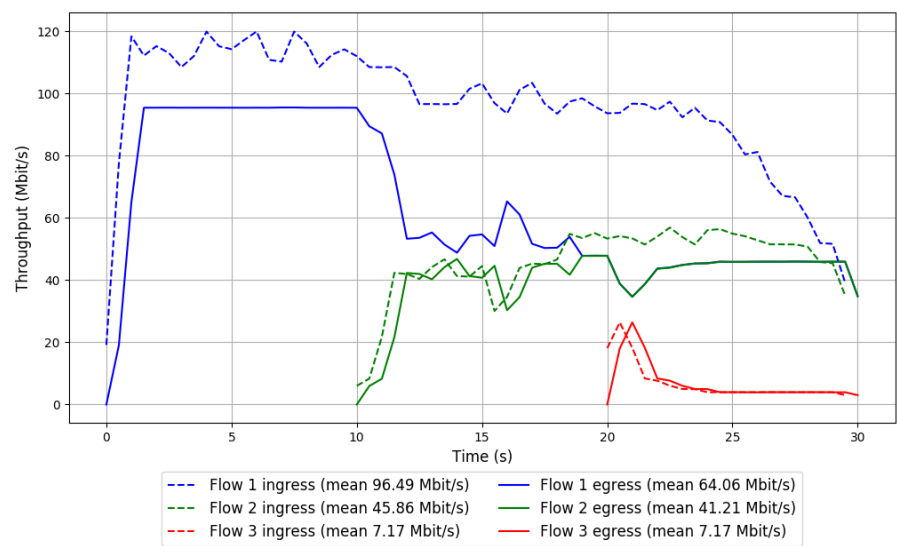
-- Flow 3:

Average throughput: 7.17 Mbit/s

95th percentile per-packet one-way delay: 3.595 ms

Loss rate: 0.02%

Run 5: Report of PCC-Expr — Data Link

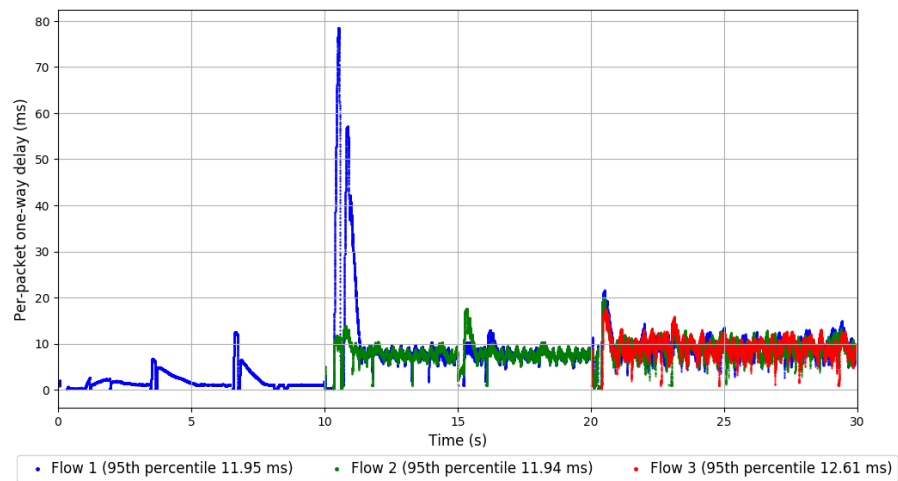
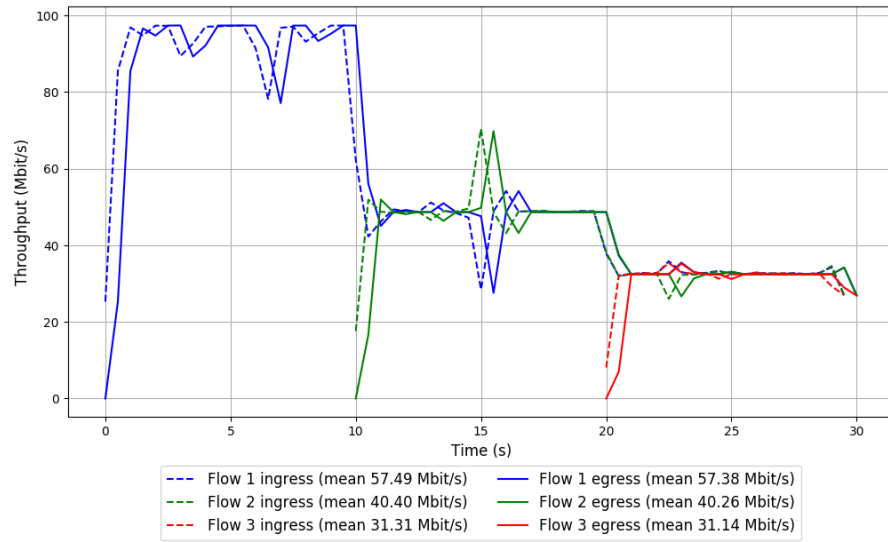


Run 1: Statistics of QUIC Cubic

Start at: 2019-06-28 11:33:46
End at: 2019-06-28 11:34:16
Local clock offset: -5.885 ms
Remote clock offset: -0.273 ms

Below is generated by plot.py at 2019-06-28 13:49:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 94.49 Mbit/s
95th percentile per-packet one-way delay: 12.073 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 57.38 Mbit/s
95th percentile per-packet one-way delay: 11.953 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 40.26 Mbit/s
95th percentile per-packet one-way delay: 11.937 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 31.14 Mbit/s
95th percentile per-packet one-way delay: 12.613 ms
Loss rate: 0.55%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-06-28 11:58:55

End at: 2019-06-28 11:59:25

Local clock offset: -6.65 ms

Remote clock offset: 0.219 ms

Below is generated by plot.py at 2019-06-28 13:49:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.32 Mbit/s

95th percentile per-packet one-way delay: 12.475 ms

Loss rate: 0.28%

-- Flow 1:

Average throughput: 55.49 Mbit/s

95th percentile per-packet one-way delay: 11.511 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 39.84 Mbit/s

95th percentile per-packet one-way delay: 12.984 ms

Loss rate: 0.35%

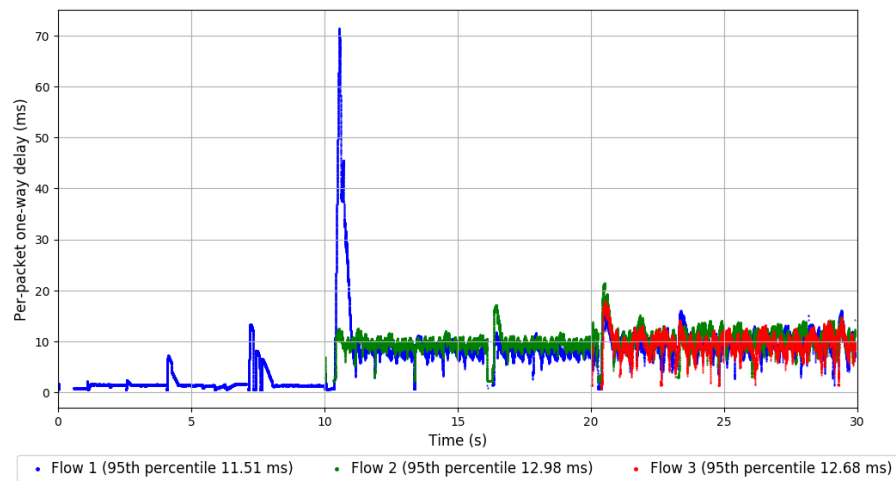
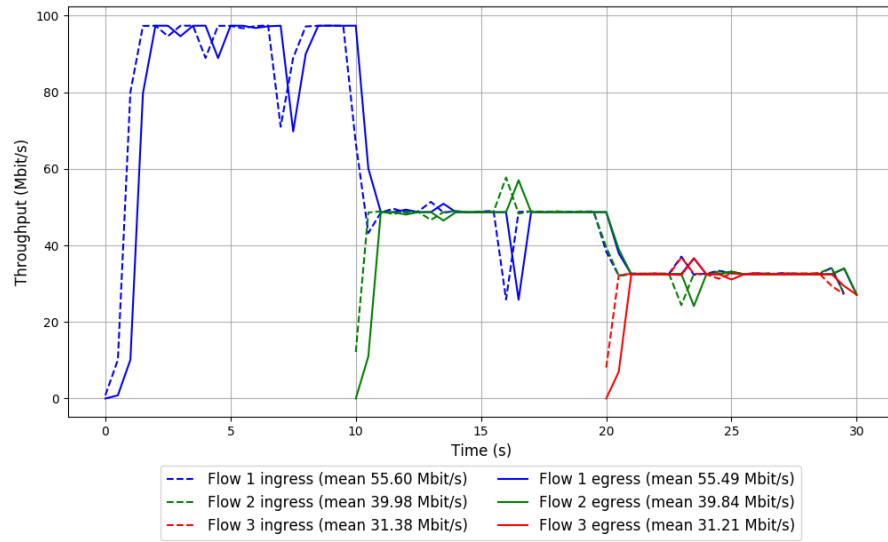
-- Flow 3:

Average throughput: 31.21 Mbit/s

95th percentile per-packet one-way delay: 12.677 ms

Loss rate: 0.56%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-06-28 12:24:09

End at: 2019-06-28 12:24:39

Local clock offset: -7.71 ms

Remote clock offset: 0.572 ms

Below is generated by plot.py at 2019-06-28 13:49:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.41 Mbit/s

95th percentile per-packet one-way delay: 12.963 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 52.37 Mbit/s

95th percentile per-packet one-way delay: 12.644 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 40.26 Mbit/s

95th percentile per-packet one-way delay: 12.988 ms

Loss rate: 0.33%

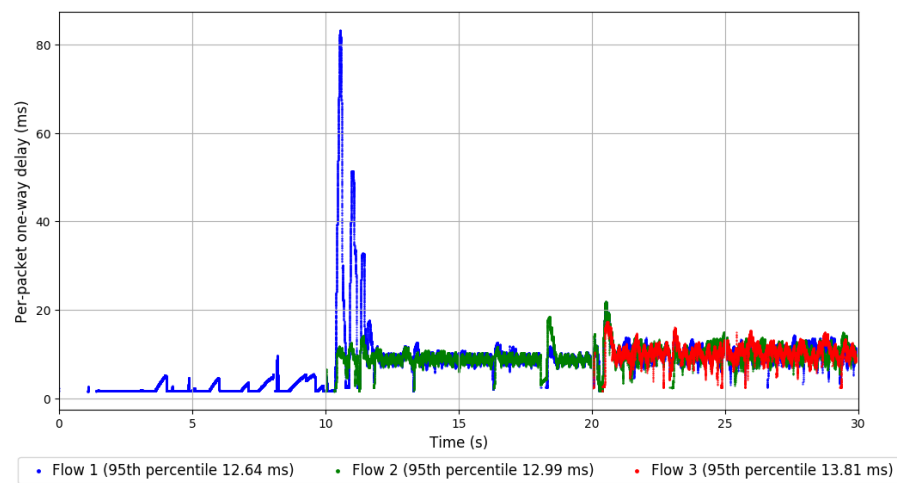
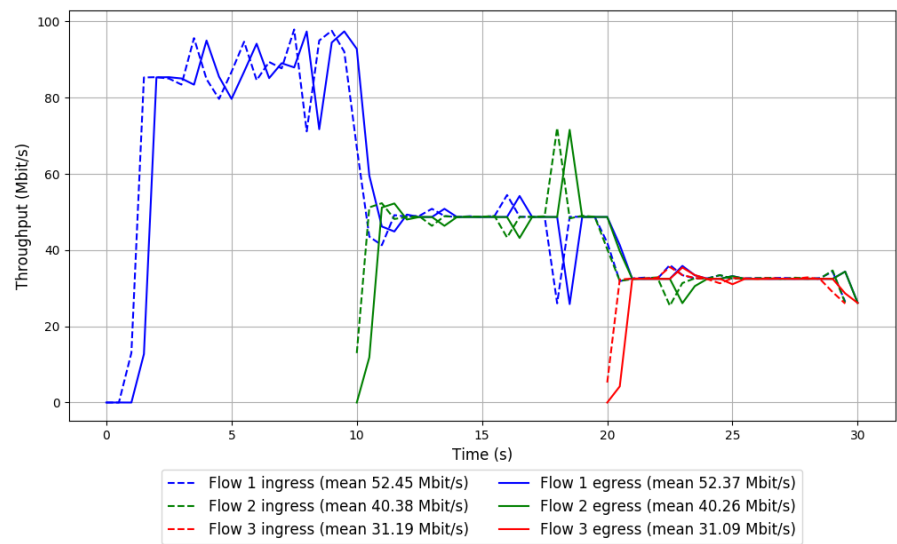
-- Flow 3:

Average throughput: 31.09 Mbit/s

95th percentile per-packet one-way delay: 13.814 ms

Loss rate: 0.48%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-06-28 12:49:22

End at: 2019-06-28 12:49:52

Local clock offset: -7.648 ms

Remote clock offset: 0.693 ms

Below is generated by plot.py at 2019-06-28 13:49:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.72 Mbit/s

95th percentile per-packet one-way delay: 12.179 ms

Loss rate: 0.29%

-- Flow 1:

Average throughput: 53.68 Mbit/s

95th percentile per-packet one-way delay: 11.450 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 40.17 Mbit/s

95th percentile per-packet one-way delay: 12.175 ms

Loss rate: 0.37%

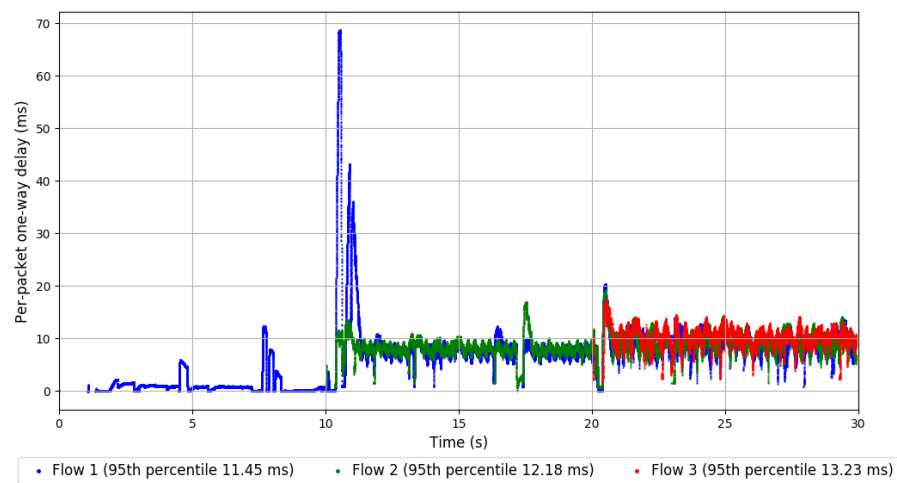
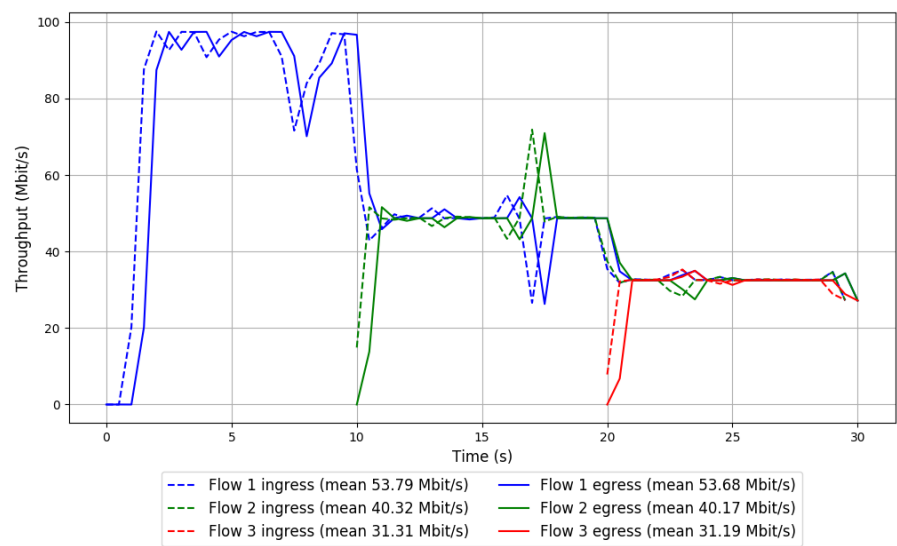
-- Flow 3:

Average throughput: 31.19 Mbit/s

95th percentile per-packet one-way delay: 13.230 ms

Loss rate: 0.51%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-06-28 13:14:39

End at: 2019-06-28 13:15:09

Local clock offset: -6.658 ms

Remote clock offset: 0.591 ms

Below is generated by plot.py at 2019-06-28 13:49:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.09 Mbit/s

95th percentile per-packet one-way delay: 12.654 ms

Loss rate: 0.27%

-- Flow 1:

Average throughput: 55.17 Mbit/s

95th percentile per-packet one-way delay: 13.026 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 39.98 Mbit/s

95th percentile per-packet one-way delay: 12.236 ms

Loss rate: 0.38%

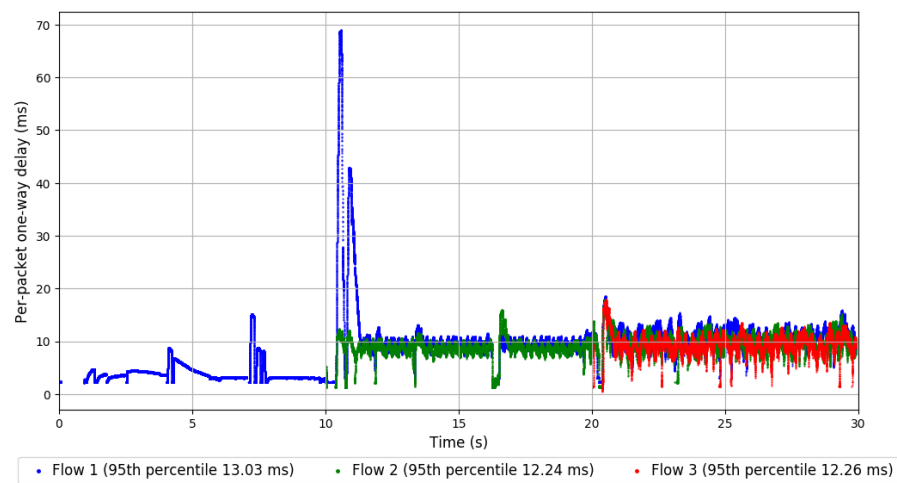
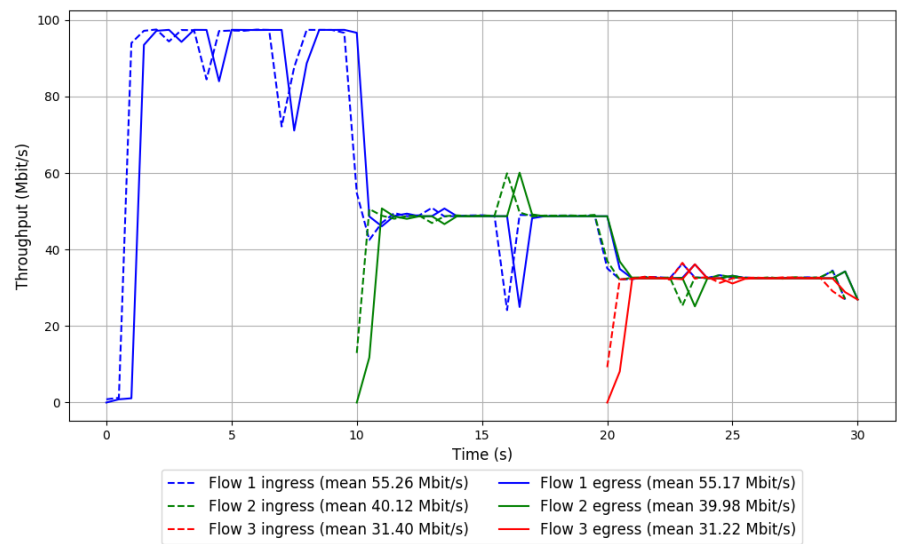
-- Flow 3:

Average throughput: 31.22 Mbit/s

95th percentile per-packet one-way delay: 12.258 ms

Loss rate: 0.57%

Run 5: Report of QUIC Cubic — Data Link

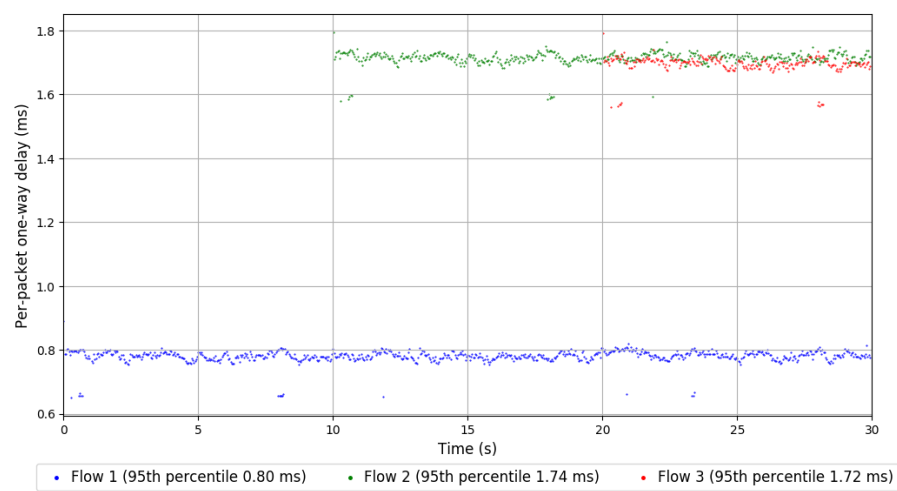
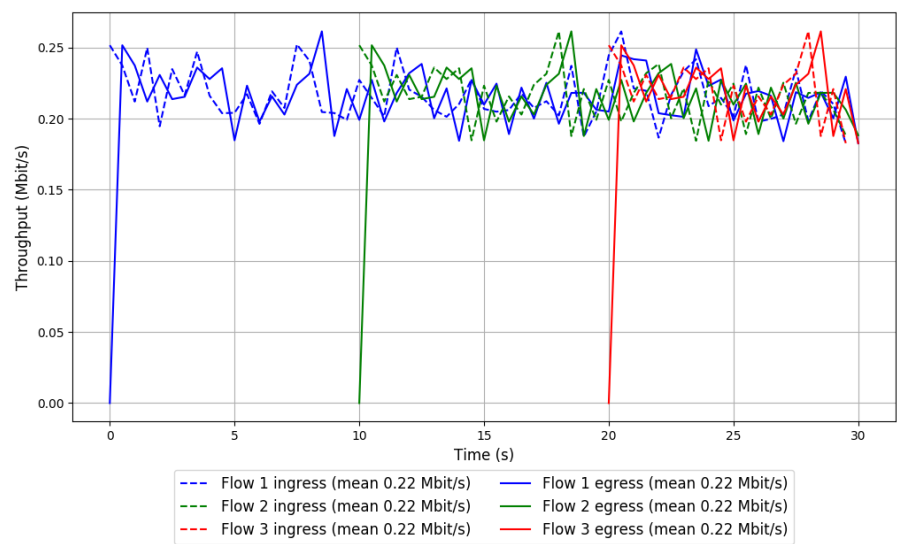


```
Run 1: Statistics of SReAM

Start at: 2019-06-28 11:42:55
End at: 2019-06-28 11:43:25
Local clock offset: -5.827 ms
Remote clock offset: -0.11 ms

# Below is generated by plot.py at 2019-06-28 13:49:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.730 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.801 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.736 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.718 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SReAM

Start at: 2019-06-28 12:08:09

End at: 2019-06-28 12:08:39

Local clock offset: -7.171 ms

Remote clock offset: 0.248 ms

Below is generated by plot.py at 2019-06-28 13:49:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 2.181 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.636 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.644 ms

Loss rate: 0.00%

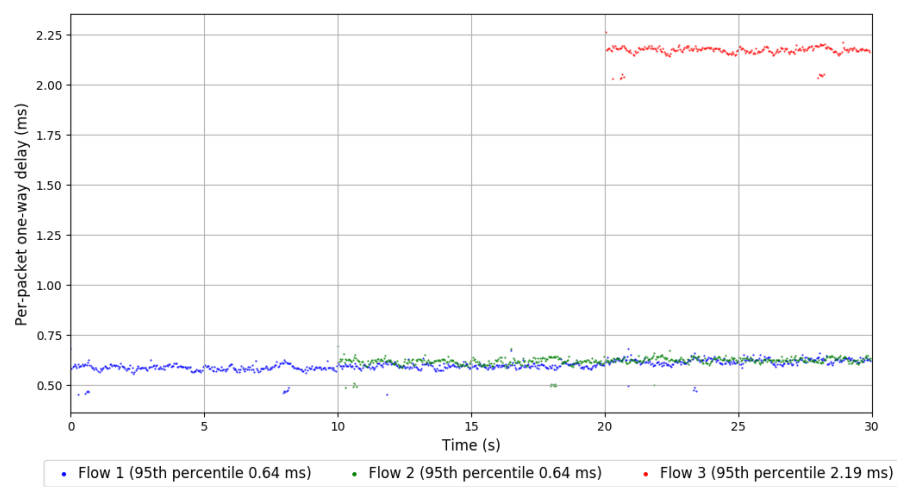
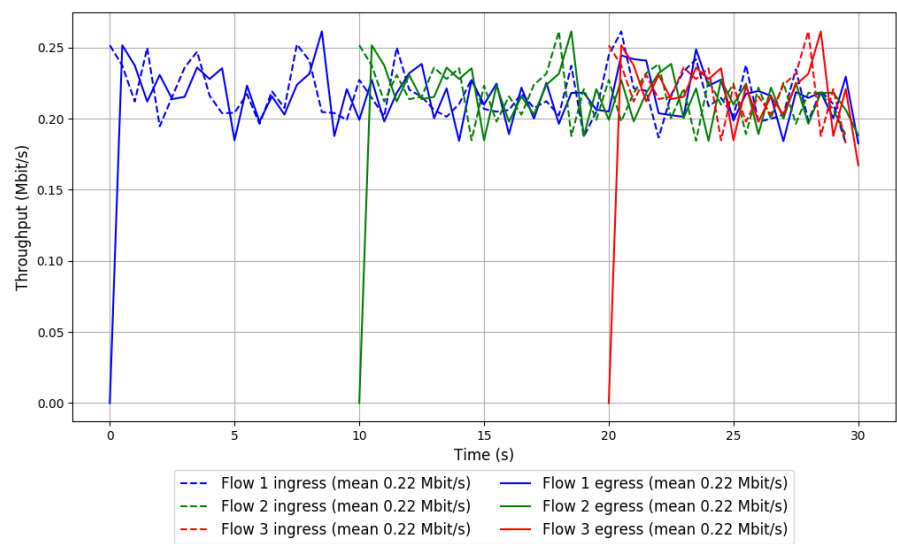
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.194 ms

Loss rate: 0.35%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SReAM

Start at: 2019-06-28 12:33:21

End at: 2019-06-28 12:33:51

Local clock offset: -6.875 ms

Remote clock offset: 0.549 ms

Below is generated by plot.py at 2019-06-28 13:49:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 2.629 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.628 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.056 ms

Loss rate: 0.00%

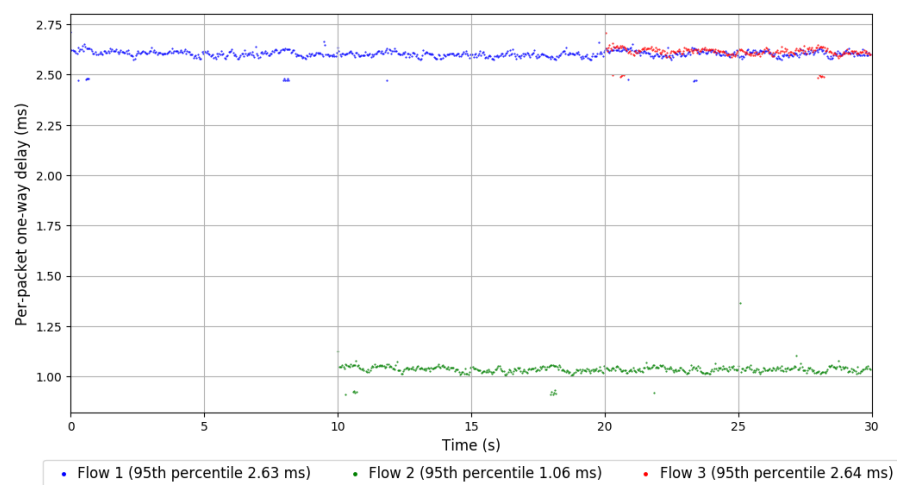
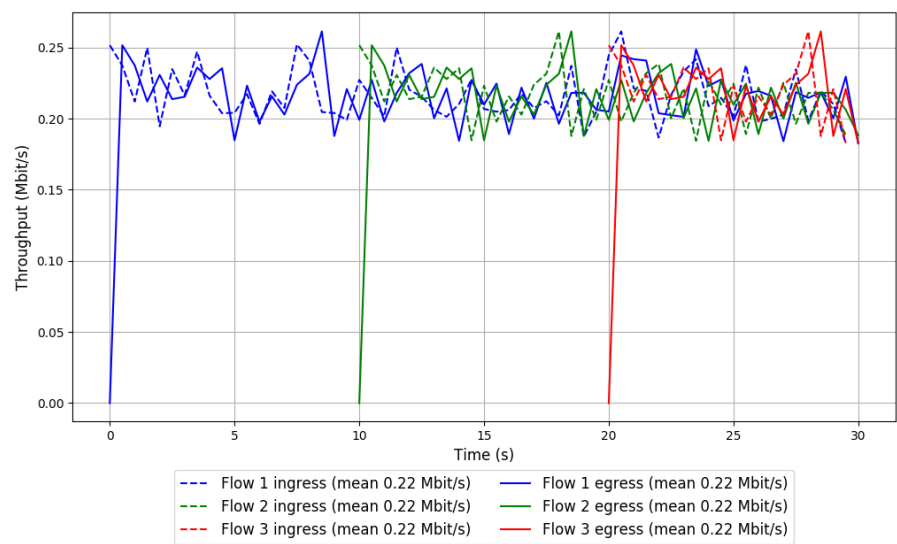
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.639 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SReAM

Start at: 2019-06-28 12:58:38

End at: 2019-06-28 12:59:08

Local clock offset: -6.522 ms

Remote clock offset: 0.612 ms

Below is generated by plot.py at 2019-06-28 13:49:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 1.669 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.673 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.969 ms

Loss rate: 0.00%

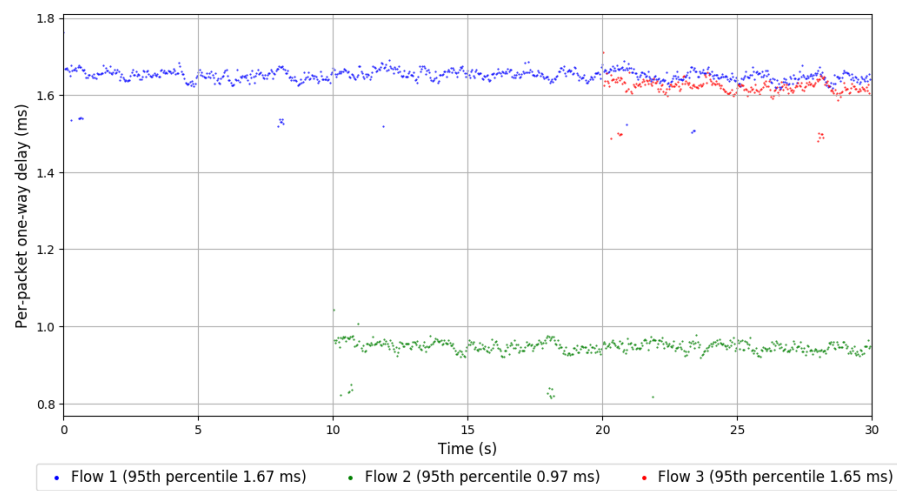
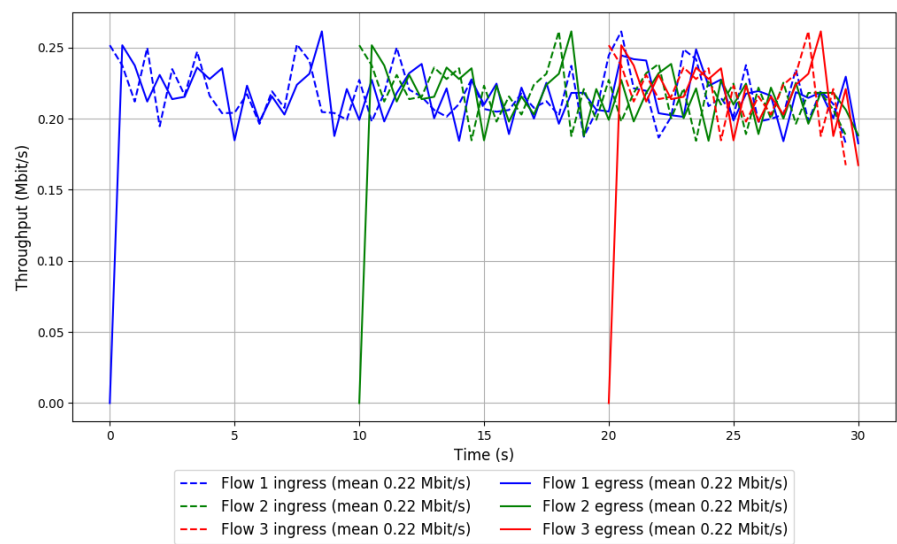
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.645 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2019-06-28 13:23:59

End at: 2019-06-28 13:24:29

Local clock offset: -6.309 ms

Remote clock offset: 0.718 ms

Below is generated by plot.py at 2019-06-28 13:49:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 0.500 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.490 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.493 ms

Loss rate: 0.00%

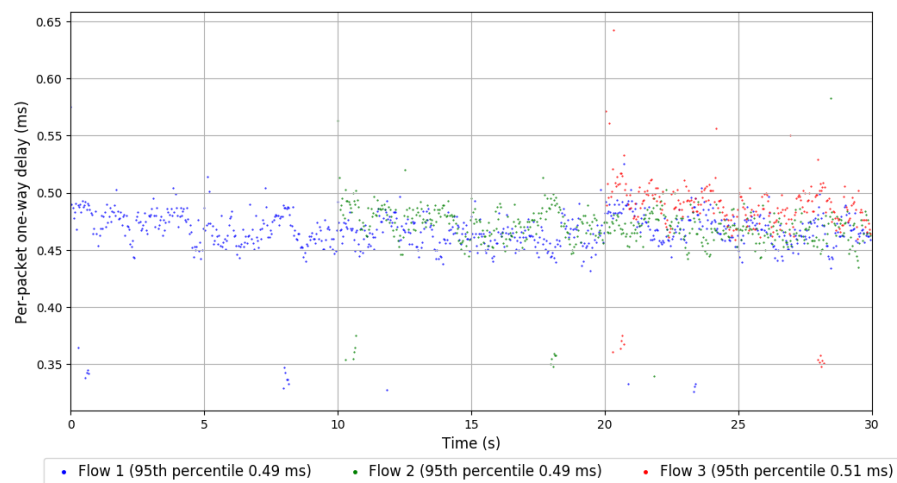
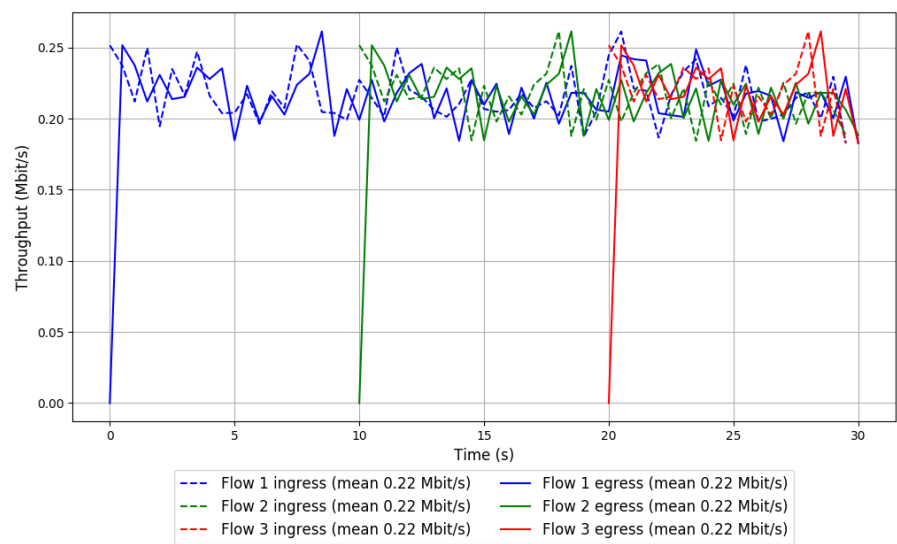
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.512 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-06-28 11:50:53

End at: 2019-06-28 11:51:23

Local clock offset: -6.292 ms

Remote clock offset: 0.019 ms

Below is generated by plot.py at 2019-06-28 13:49:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.01 Mbit/s

95th percentile per-packet one-way delay: 23.874 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 42.10 Mbit/s

95th percentile per-packet one-way delay: 22.550 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 39.48 Mbit/s

95th percentile per-packet one-way delay: 23.538 ms

Loss rate: 0.96%

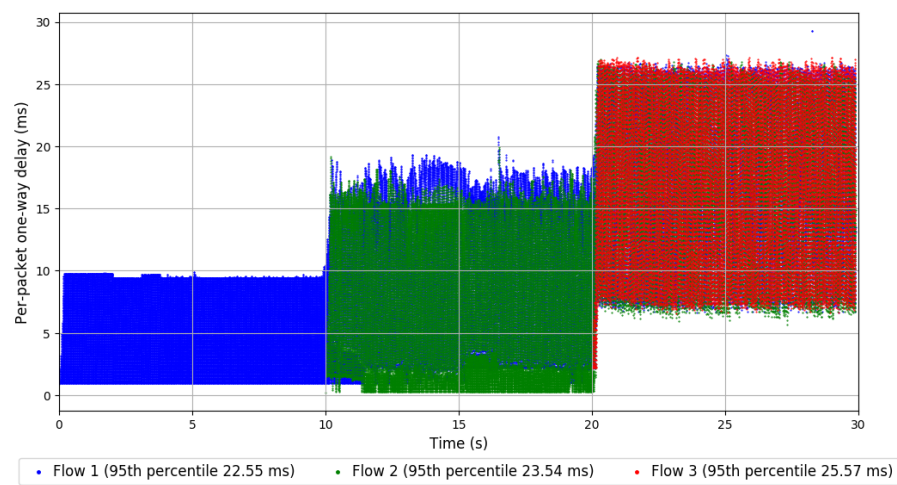
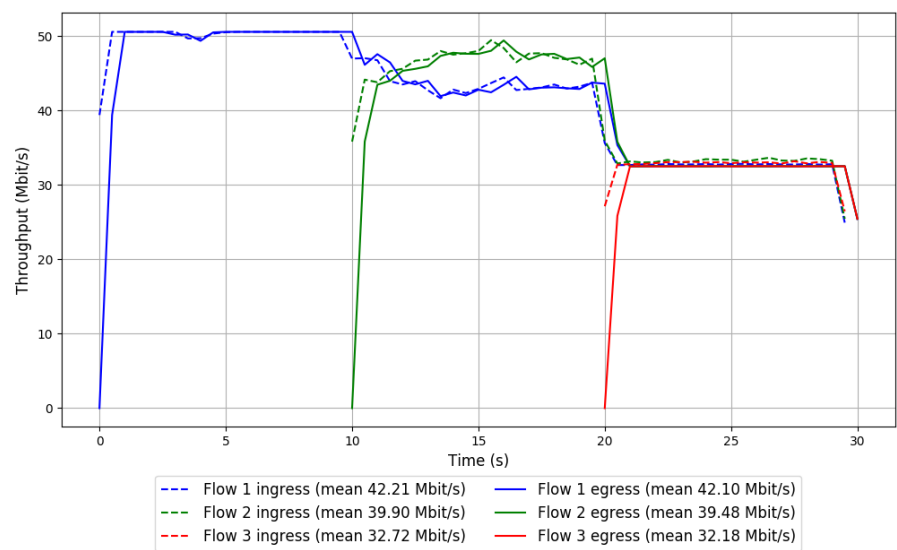
-- Flow 3:

Average throughput: 32.18 Mbit/s

95th percentile per-packet one-way delay: 25.567 ms

Loss rate: 1.66%

Run 1: Report of Sprout — Data Link

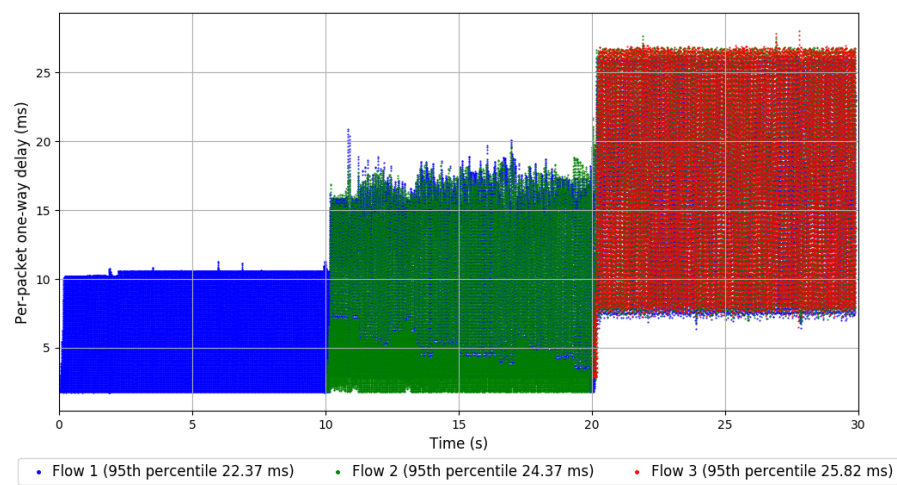
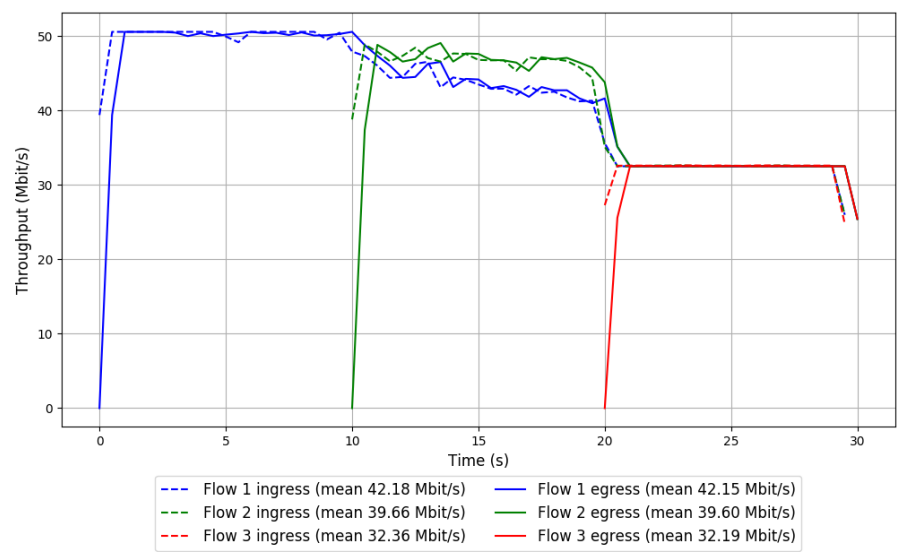


Run 2: Statistics of Sprout

Start at: 2019-06-28 12:16:08
End at: 2019-06-28 12:16:38
Local clock offset: -7.816 ms
Remote clock offset: 0.394 ms

Below is generated by plot.py at 2019-06-28 13:49:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 79.13 Mbit/s
95th percentile per-packet one-way delay: 24.171 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 42.15 Mbit/s
95th percentile per-packet one-way delay: 22.374 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 39.60 Mbit/s
95th percentile per-packet one-way delay: 24.373 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 32.19 Mbit/s
95th percentile per-packet one-way delay: 25.817 ms
Loss rate: 0.41%

Run 2: Report of Sprout — Data Link

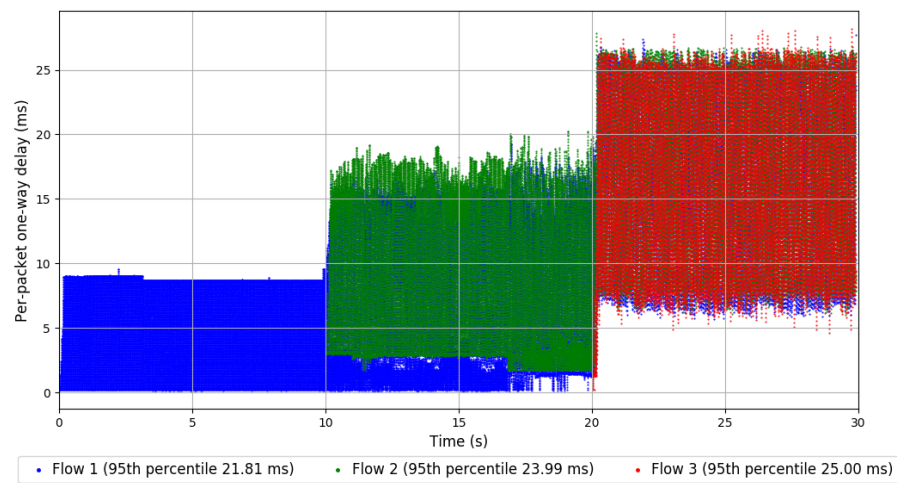
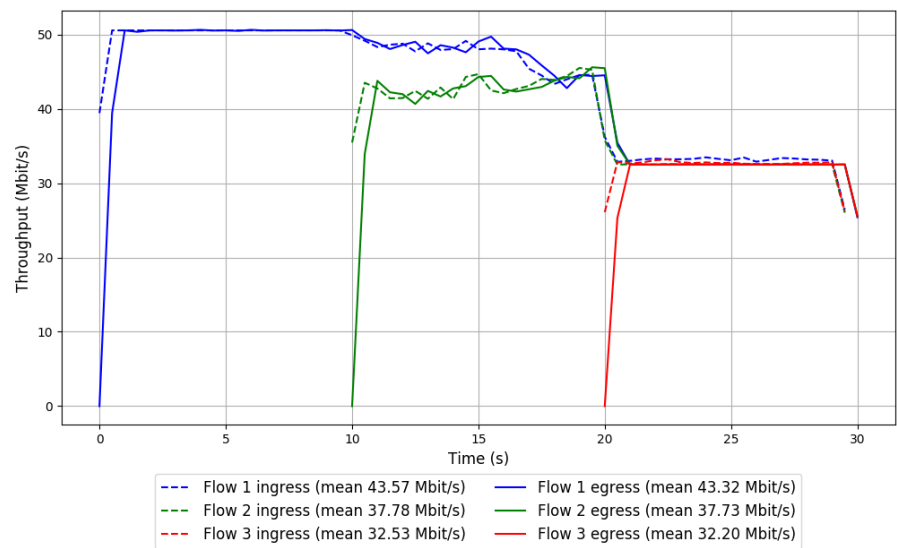


Run 3: Statistics of Sprout

Start at: 2019-06-28 12:41:19
End at: 2019-06-28 12:41:49
Local clock offset: -7.681 ms
Remote clock offset: 0.609 ms

```
# Below is generated by plot.py at 2019-06-28 13:49:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.04 Mbit/s
95th percentile per-packet one-way delay: 23.604 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 43.32 Mbit/s
95th percentile per-packet one-way delay: 21.811 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 37.73 Mbit/s
95th percentile per-packet one-way delay: 23.991 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 32.20 Mbit/s
95th percentile per-packet one-way delay: 25.004 ms
Loss rate: 0.95%
```

Run 3: Report of Sprout — Data Link

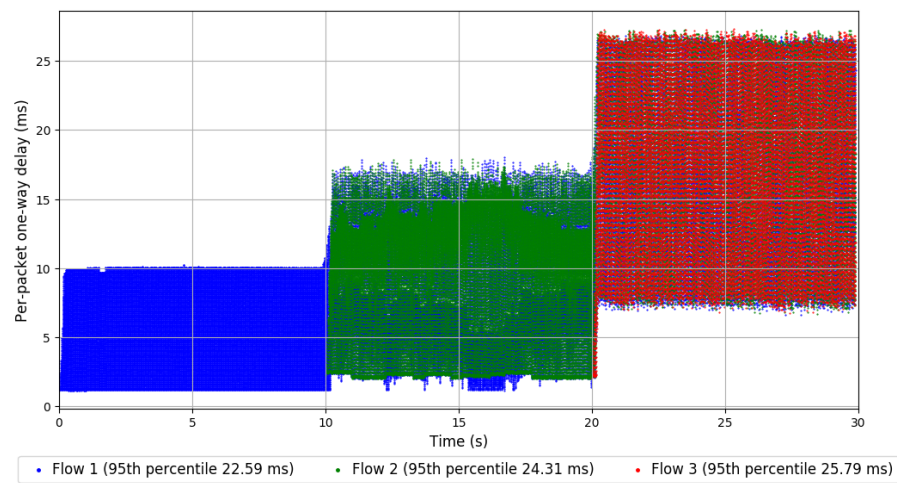
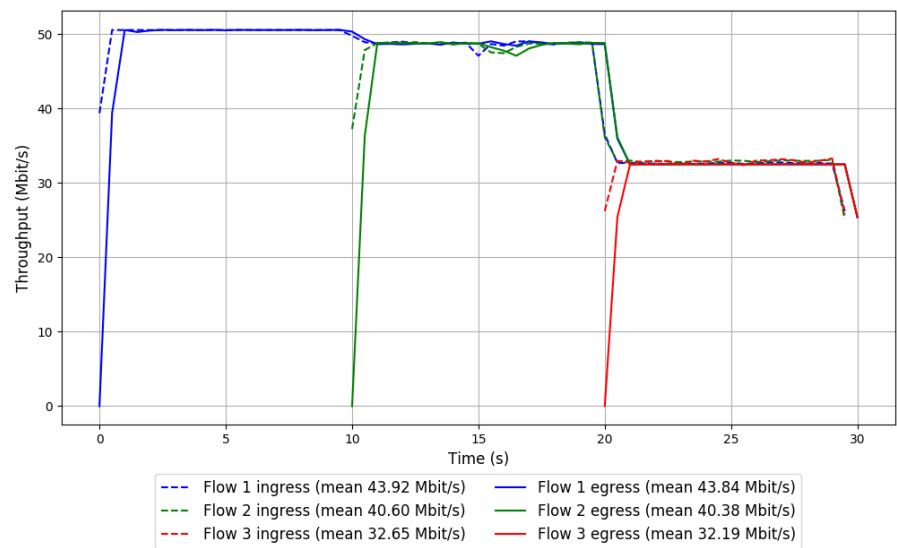


Run 4: Statistics of Sprout

Start at: 2019-06-28 13:06:37
End at: 2019-06-28 13:07:07
Local clock offset: -6.785 ms
Remote clock offset: 0.703 ms

```
# Below is generated by plot.py at 2019-06-28 13:49:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.32 Mbit/s
95th percentile per-packet one-way delay: 24.220 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 43.84 Mbit/s
95th percentile per-packet one-way delay: 22.591 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 40.38 Mbit/s
95th percentile per-packet one-way delay: 24.310 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 32.19 Mbit/s
95th percentile per-packet one-way delay: 25.786 ms
Loss rate: 1.33%
```

Run 4: Report of Sprout — Data Link

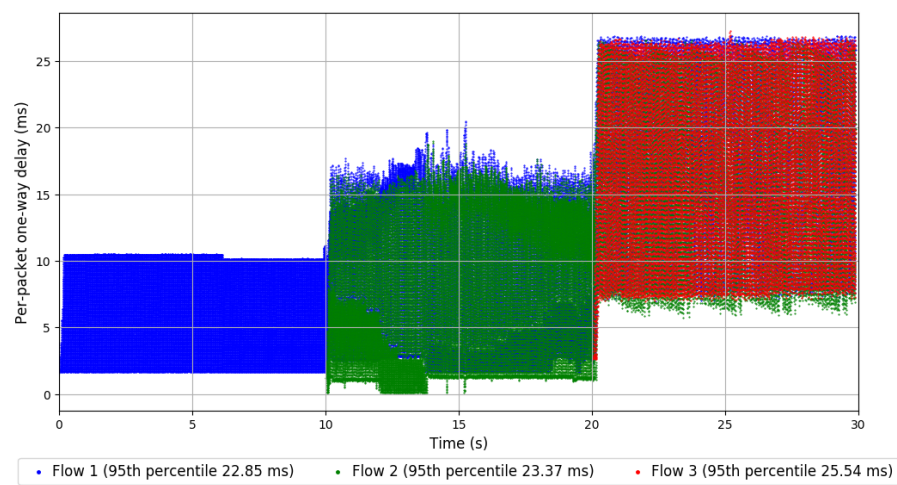
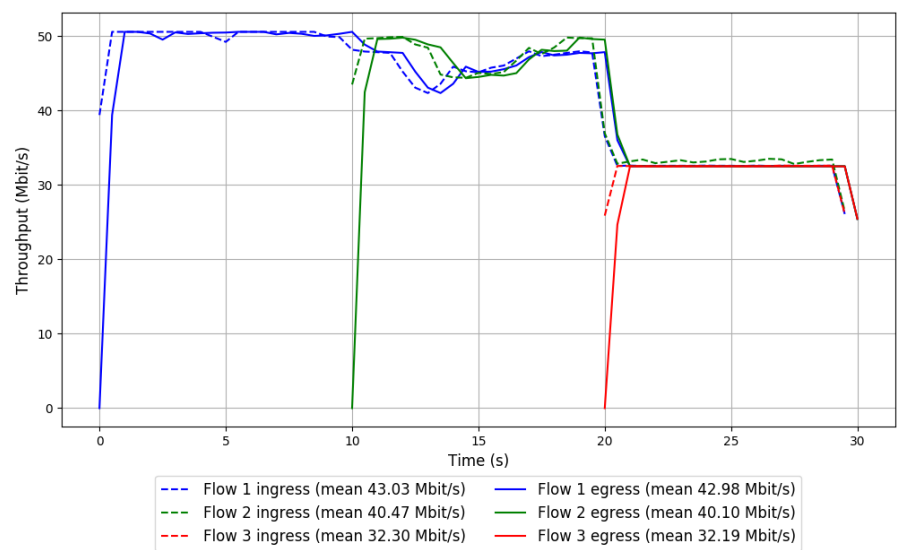


Run 5: Statistics of Sprout

Start at: 2019-06-28 13:31:57
End at: 2019-06-28 13:32:27
Local clock offset: -6.549 ms
Remote clock offset: 0.659 ms

```
# Below is generated by plot.py at 2019-06-28 13:49:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.28 Mbit/s
95th percentile per-packet one-way delay: 23.906 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 42.98 Mbit/s
95th percentile per-packet one-way delay: 22.847 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 40.10 Mbit/s
95th percentile per-packet one-way delay: 23.369 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 32.19 Mbit/s
95th percentile per-packet one-way delay: 25.540 ms
Loss rate: 0.38%
```

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-06-28 11:53:09

End at: 2019-06-28 11:53:39

Local clock offset: -6.145 ms

Remote clock offset: 0.106 ms

Below is generated by plot.py at 2019-06-28 13:50:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.17 Mbit/s

95th percentile per-packet one-way delay: 156.229 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 55.19 Mbit/s

95th percentile per-packet one-way delay: 155.209 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 39.64 Mbit/s

95th percentile per-packet one-way delay: 156.644 ms

Loss rate: 1.13%

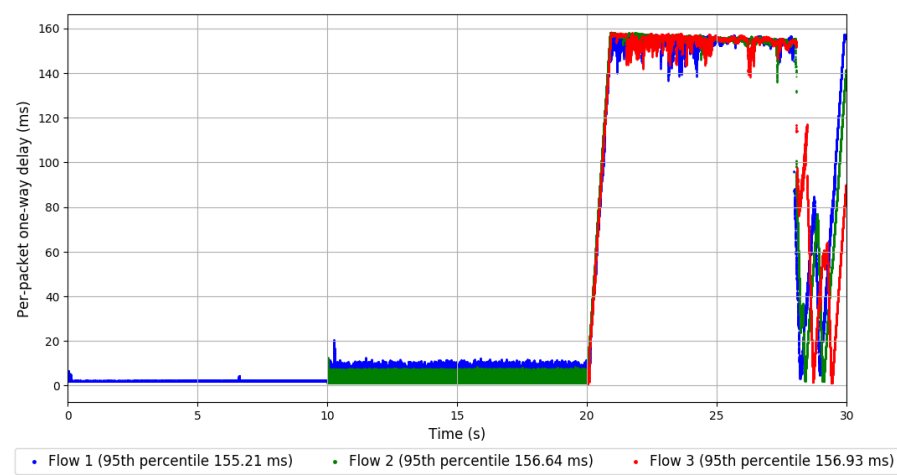
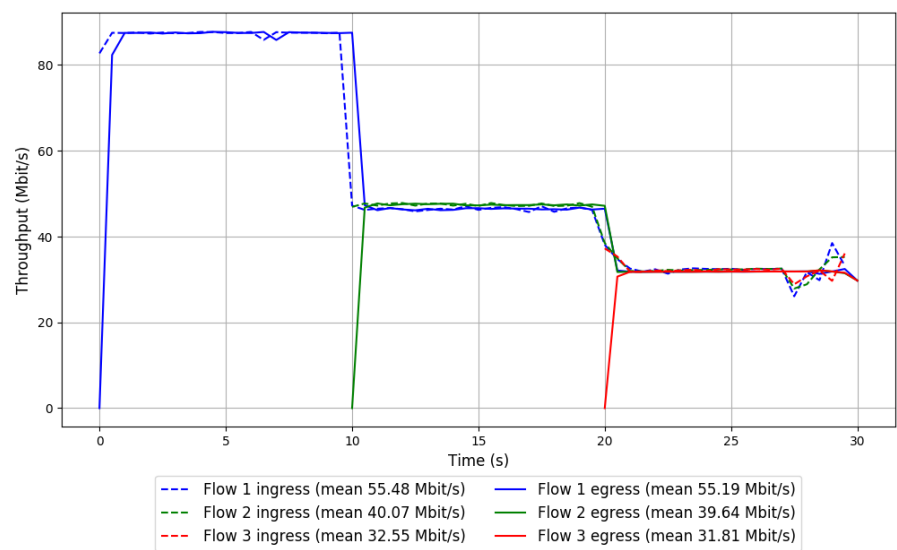
-- Flow 3:

Average throughput: 31.81 Mbit/s

95th percentile per-packet one-way delay: 156.927 ms

Loss rate: 2.29%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-06-28 12:18:23

End at: 2019-06-28 12:18:53

Local clock offset: -7.386 ms

Remote clock offset: 0.335 ms

Below is generated by plot.py at 2019-06-28 13:50:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.02 Mbit/s

95th percentile per-packet one-way delay: 156.311 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 55.53 Mbit/s

95th percentile per-packet one-way delay: 155.365 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 38.91 Mbit/s

95th percentile per-packet one-way delay: 156.869 ms

Loss rate: 1.11%

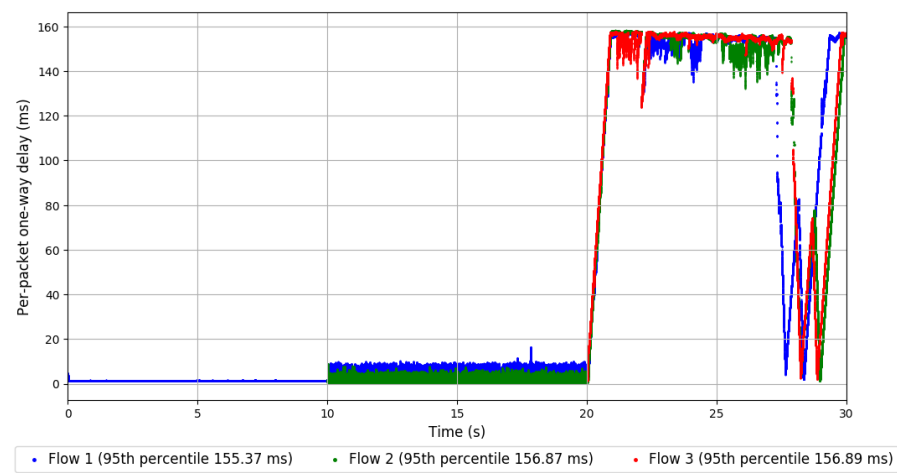
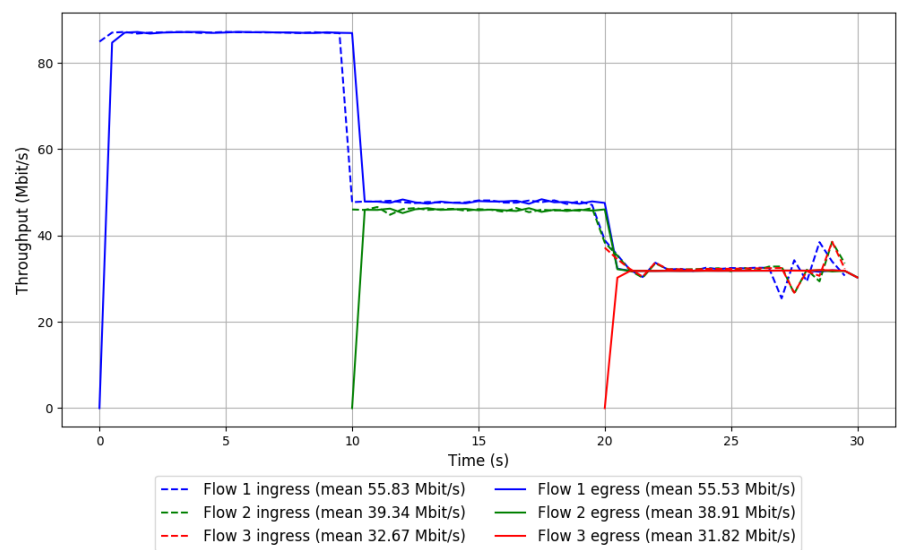
-- Flow 3:

Average throughput: 31.82 Mbit/s

95th percentile per-packet one-way delay: 156.886 ms

Loss rate: 2.65%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-06-28 12:43:35

End at: 2019-06-28 12:44:05

Local clock offset: -7.682 ms

Remote clock offset: 0.654 ms

Below is generated by plot.py at 2019-06-28 13:50:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.94 Mbit/s

95th percentile per-packet one-way delay: 155.932 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 55.15 Mbit/s

95th percentile per-packet one-way delay: 155.079 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 39.38 Mbit/s

95th percentile per-packet one-way delay: 156.007 ms

Loss rate: 1.11%

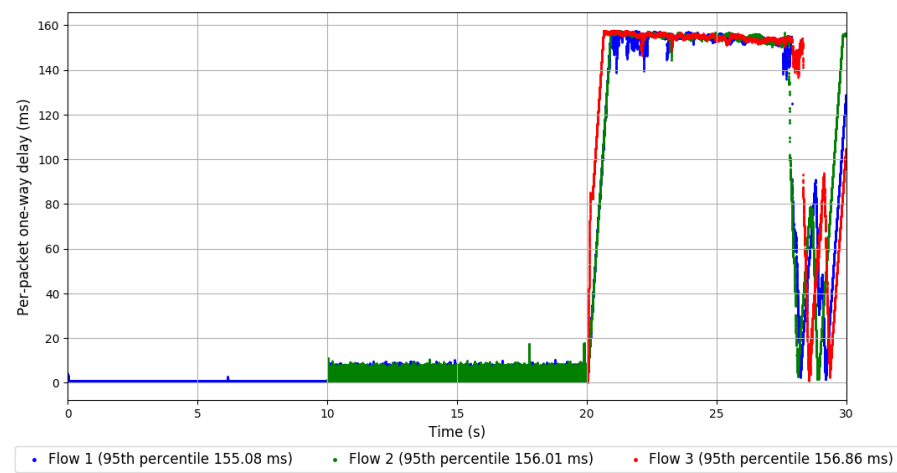
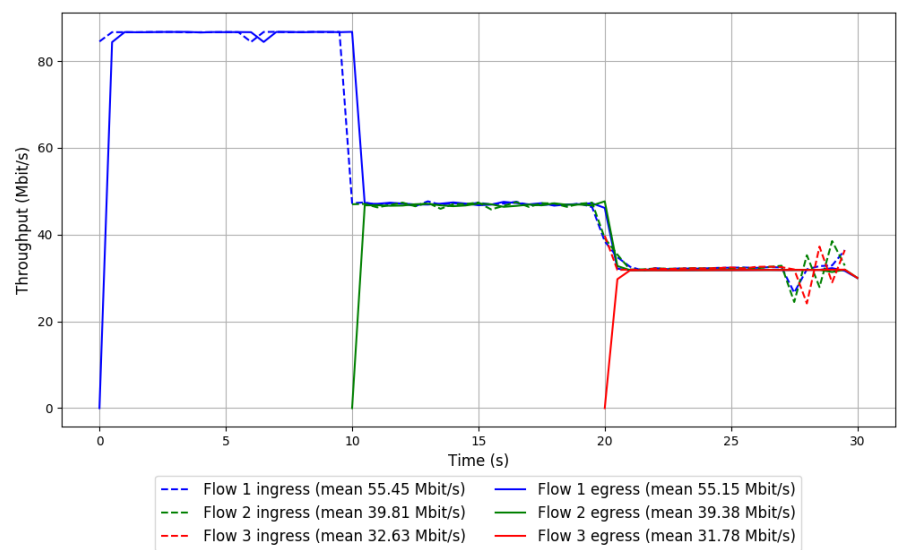
-- Flow 3:

Average throughput: 31.78 Mbit/s

95th percentile per-packet one-way delay: 156.863 ms

Loss rate: 2.60%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-06-28 13:08:52

End at: 2019-06-28 13:09:22

Local clock offset: -6.711 ms

Remote clock offset: 0.615 ms

Below is generated by plot.py at 2019-06-28 13:51:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.67 Mbit/s

95th percentile per-packet one-way delay: 156.312 ms

Loss rate: 0.94%

-- Flow 1:

Average throughput: 54.89 Mbit/s

95th percentile per-packet one-way delay: 156.059 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 39.33 Mbit/s

95th percentile per-packet one-way delay: 154.782 ms

Loss rate: 1.13%

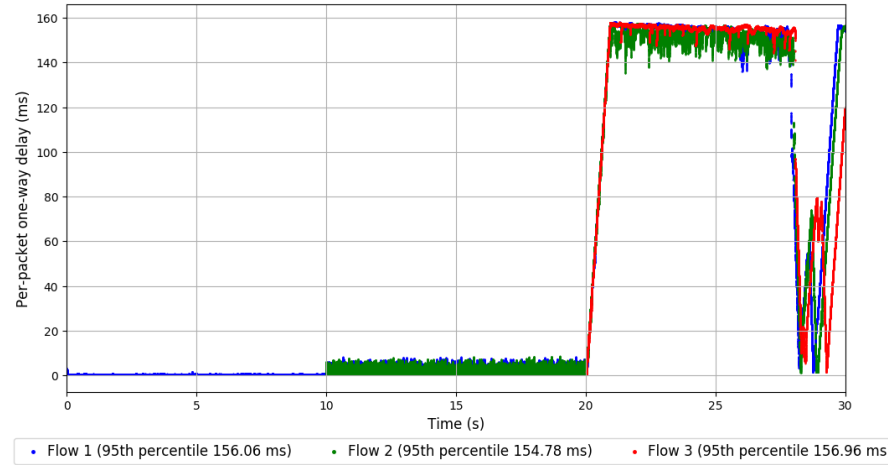
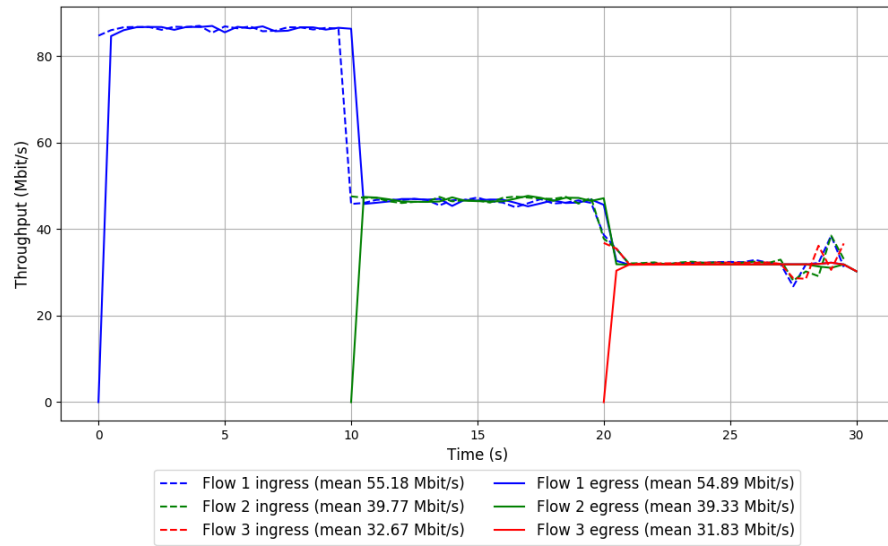
-- Flow 3:

Average throughput: 31.83 Mbit/s

95th percentile per-packet one-way delay: 156.956 ms

Loss rate: 2.59%

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-06-28 13:34:12

End at: 2019-06-28 13:34:42

Local clock offset: -6.524 ms

Remote clock offset: 0.643 ms

Below is generated by plot.py at 2019-06-28 13:51:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.92 Mbit/s

95th percentile per-packet one-way delay: 156.029 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 55.41 Mbit/s

95th percentile per-packet one-way delay: 155.603 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 38.95 Mbit/s

95th percentile per-packet one-way delay: 156.007 ms

Loss rate: 1.11%

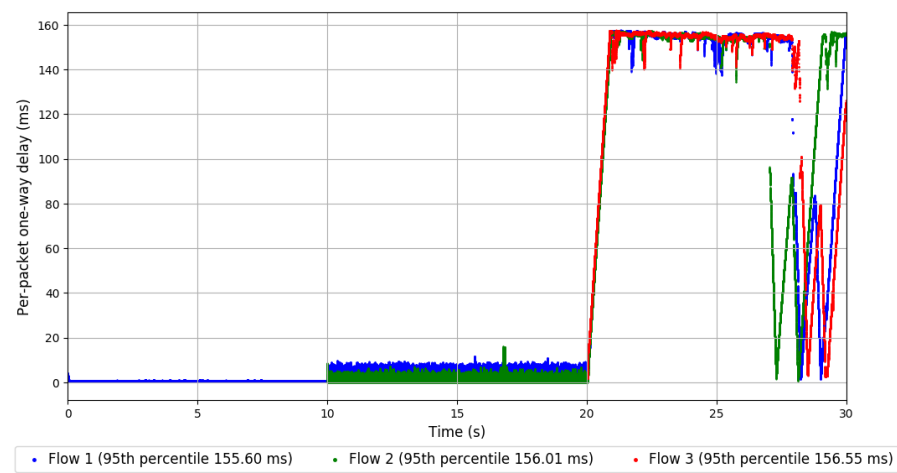
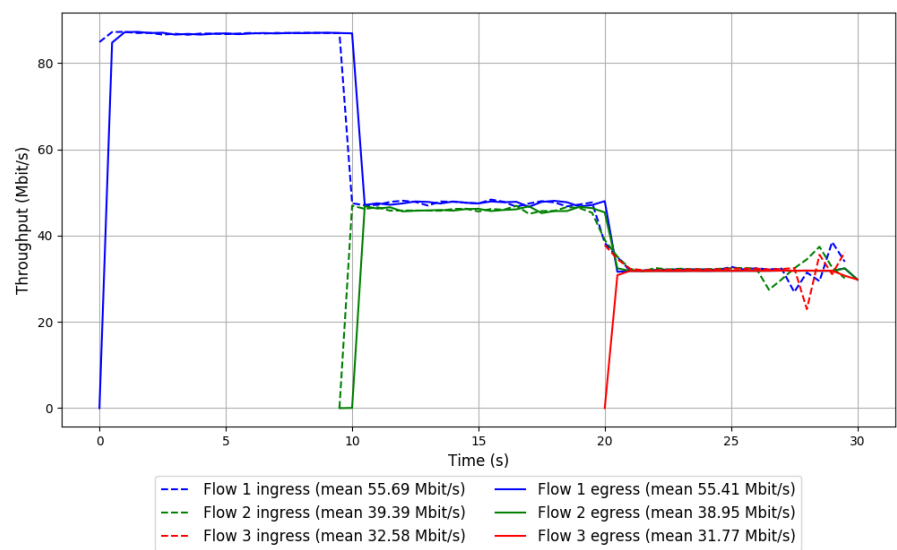
-- Flow 3:

Average throughput: 31.77 Mbit/s

95th percentile per-packet one-way delay: 156.554 ms

Loss rate: 2.53%

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

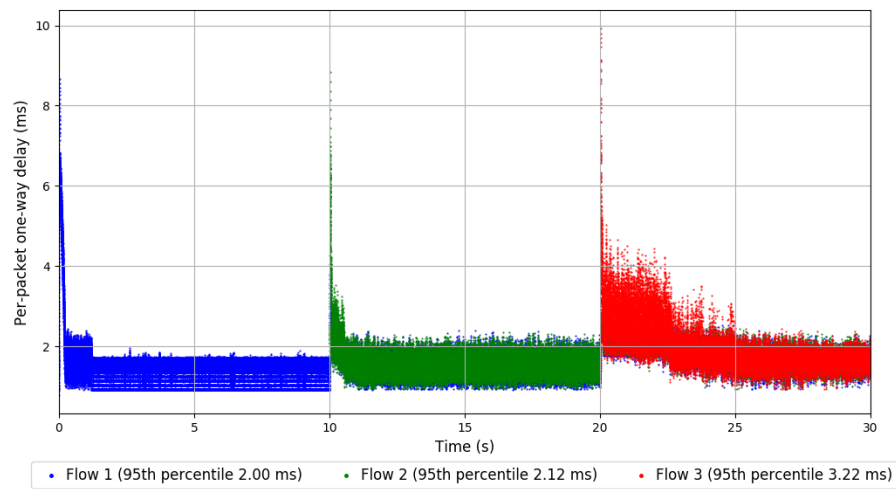
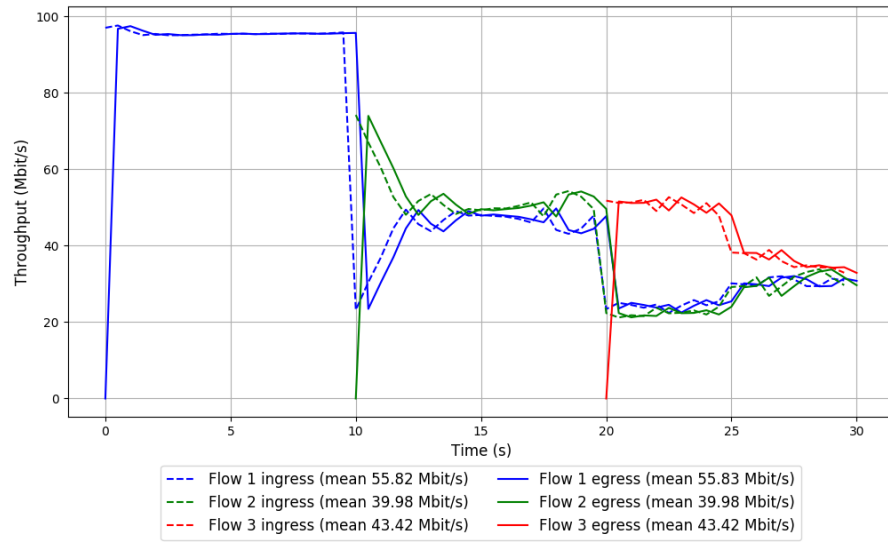


Run 1: Statistics of TCP Vegas

Start at: 2019-06-28 11:45:07
End at: 2019-06-28 11:45:37
Local clock offset: -5.031 ms
Remote clock offset: -0.089 ms

Below is generated by plot.py at 2019-06-28 13:51:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 96.88 Mbit/s
95th percentile per-packet one-way delay: 2.288 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 55.83 Mbit/s
95th percentile per-packet one-way delay: 1.999 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 39.98 Mbit/s
95th percentile per-packet one-way delay: 2.123 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 43.42 Mbit/s
95th percentile per-packet one-way delay: 3.223 ms
Loss rate: 0.01%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-06-28 12:10:21

End at: 2019-06-28 12:10:51

Local clock offset: -6.91 ms

Remote clock offset: 0.31 ms

Below is generated by plot.py at 2019-06-28 13:51:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.49 Mbit/s

95th percentile per-packet one-way delay: 3.886 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 49.53 Mbit/s

95th percentile per-packet one-way delay: 4.175 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 54.40 Mbit/s

95th percentile per-packet one-way delay: 3.837 ms

Loss rate: 0.01%

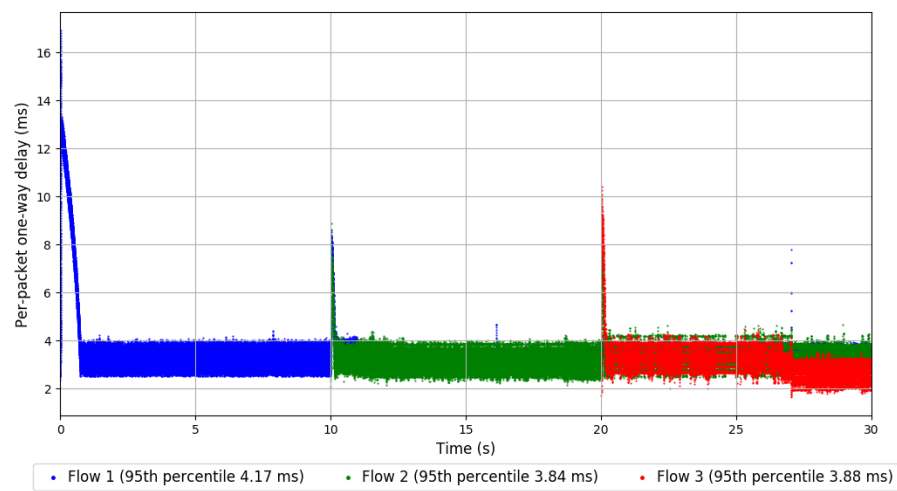
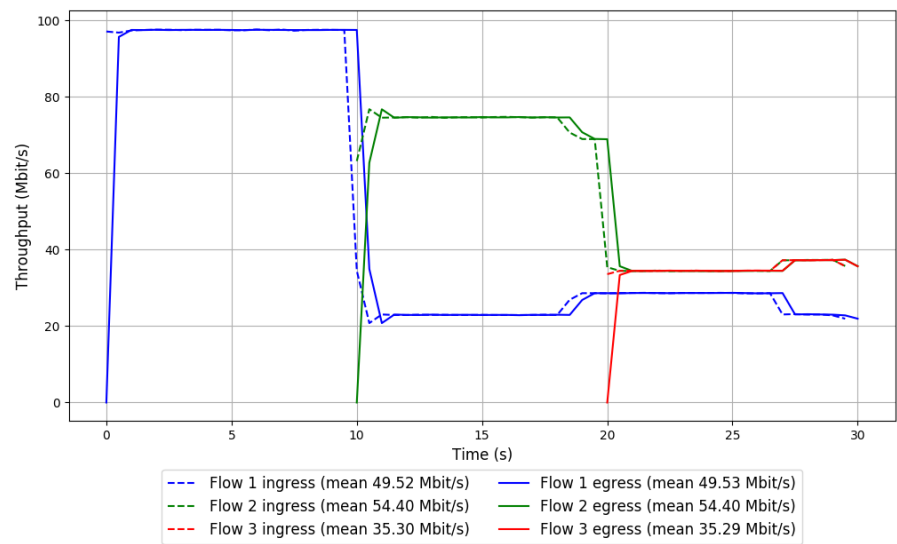
-- Flow 3:

Average throughput: 35.29 Mbit/s

95th percentile per-packet one-way delay: 3.879 ms

Loss rate: 0.03%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-06-28 12:35:32

End at: 2019-06-28 12:36:02

Local clock offset: -6.94 ms

Remote clock offset: 0.72 ms

Below is generated by plot.py at 2019-06-28 13:51:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.40 Mbit/s

95th percentile per-packet one-way delay: 3.939 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 54.23 Mbit/s

95th percentile per-packet one-way delay: 3.818 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 42.95 Mbit/s

95th percentile per-packet one-way delay: 4.107 ms

Loss rate: 0.01%

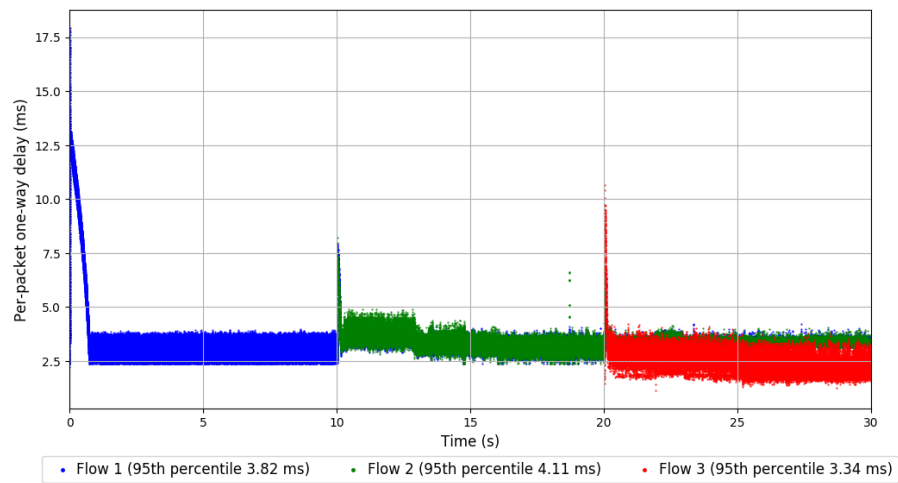
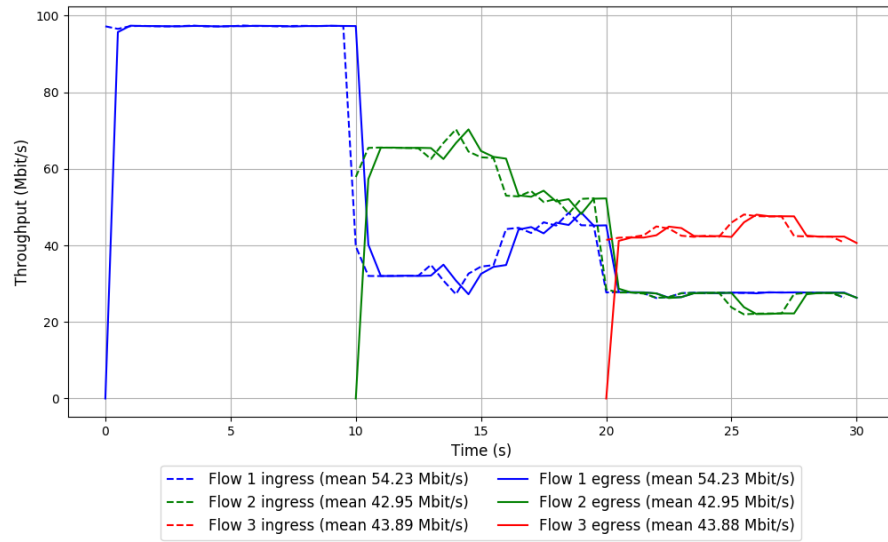
-- Flow 3:

Average throughput: 43.88 Mbit/s

95th percentile per-packet one-way delay: 3.339 ms

Loss rate: 0.03%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-06-28 13:00:50

End at: 2019-06-28 13:01:20

Local clock offset: -7.27 ms

Remote clock offset: 0.657 ms

Below is generated by plot.py at 2019-06-28 13:51:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.72 Mbit/s

95th percentile per-packet one-way delay: 3.129 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 55.12 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.45 Mbit/s

95th percentile per-packet one-way delay: 1.265 ms

Loss rate: 0.01%

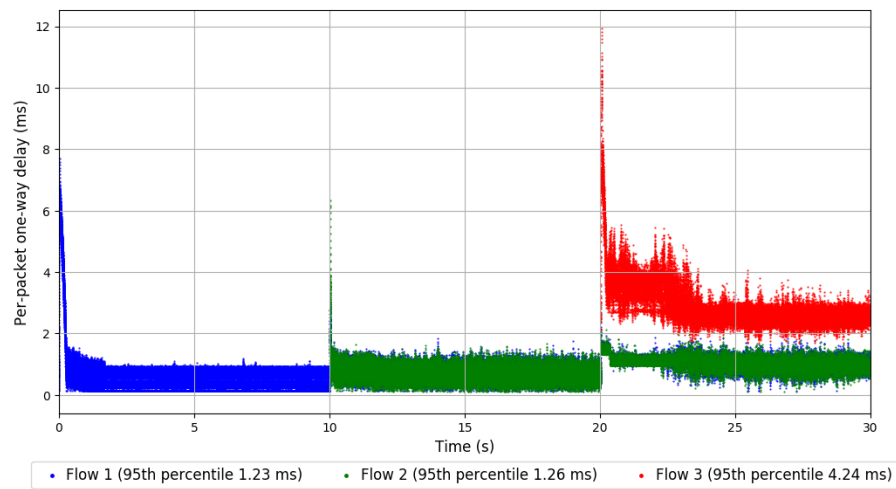
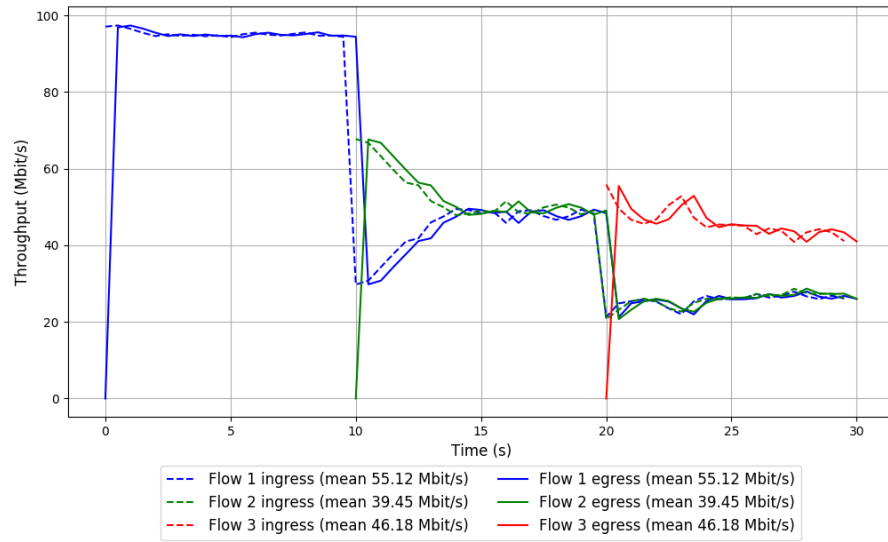
-- Flow 3:

Average throughput: 46.18 Mbit/s

95th percentile per-packet one-way delay: 4.240 ms

Loss rate: 0.04%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-06-28 13:26:10

End at: 2019-06-28 13:26:40

Local clock offset: -6.662 ms

Remote clock offset: 0.625 ms

Below is generated by plot.py at 2019-06-28 13:51:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.51 Mbit/s

95th percentile per-packet one-way delay: 1.677 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 52.73 Mbit/s

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

Loss rate: 0.01%

-- Flow 2:

Average throughput: 41.12 Mbit/s

95th percentile per-packet one-way delay: 1.955 ms

Loss rate: 0.01%

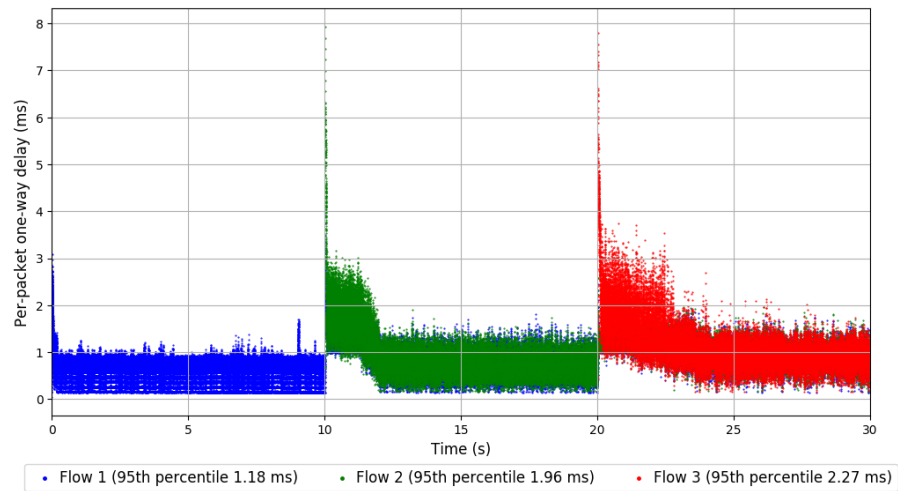
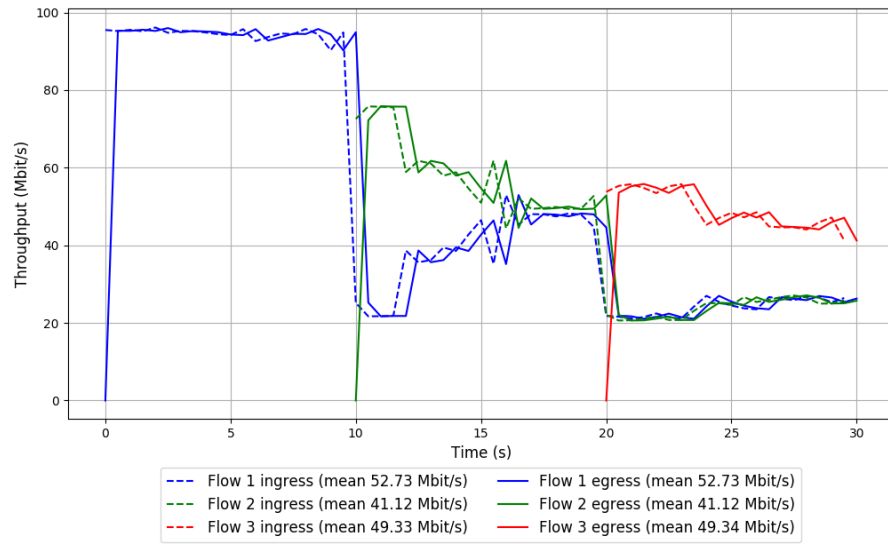
-- Flow 3:

Average throughput: 49.34 Mbit/s

95th percentile per-packet one-way delay: 2.272 ms

Loss rate: 0.01%

Run 5: Report of TCP Vegas — Data Link

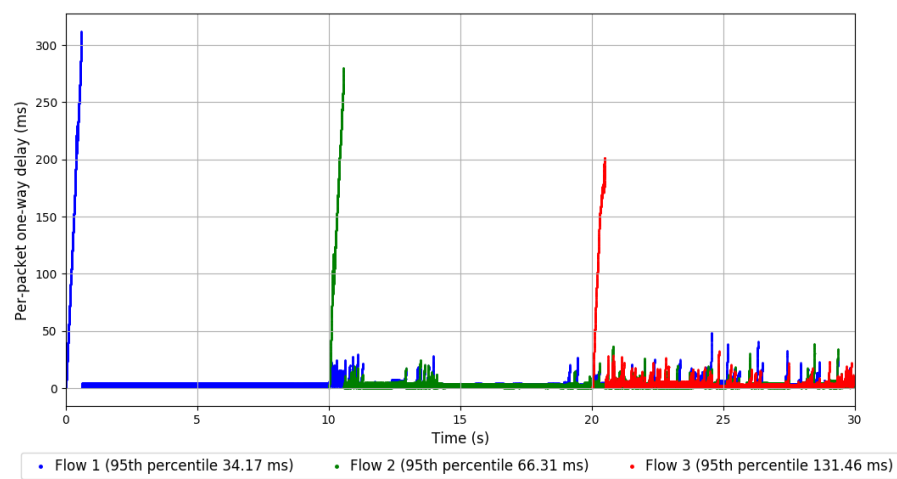
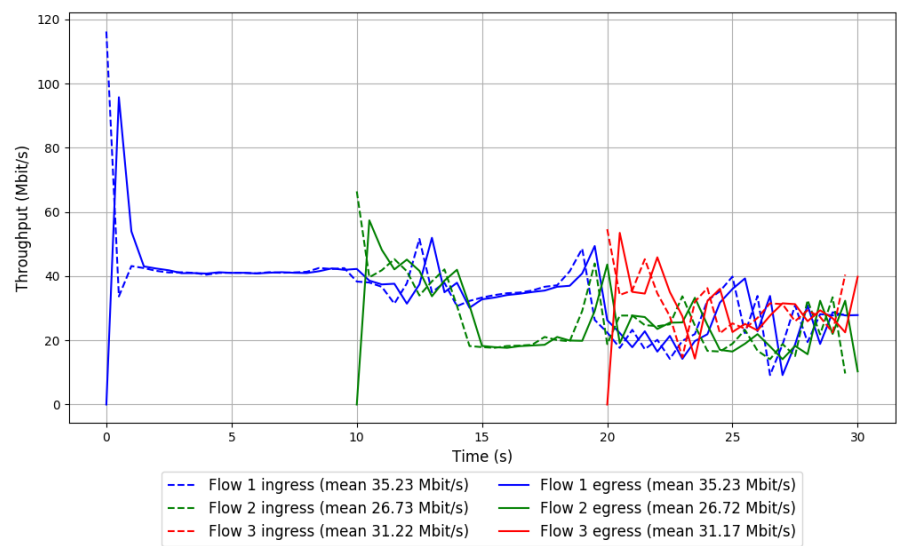


Run 1: Statistics of Verus

Start at: 2019-06-28 11:46:16
End at: 2019-06-28 11:46:46
Local clock offset: -5.808 ms
Remote clock offset: -0.035 ms

Below is generated by plot.py at 2019-06-28 13:51:19
Datalink statistics
-- Total of 3 flows:
Average throughput: 63.36 Mbit/s
95th percentile per-packet one-way delay: 59.420 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 35.23 Mbit/s
95th percentile per-packet one-way delay: 34.170 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 26.72 Mbit/s
95th percentile per-packet one-way delay: 66.315 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 31.17 Mbit/s
95th percentile per-packet one-way delay: 131.459 ms
Loss rate: 0.19%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-06-28 12:11:30

End at: 2019-06-28 12:12:00

Local clock offset: -7.229 ms

Remote clock offset: 0.313 ms

Below is generated by plot.py at 2019-06-28 13:51:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.16 Mbit/s

95th percentile per-packet one-way delay: 34.341 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 41.24 Mbit/s

95th percentile per-packet one-way delay: 25.993 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 28.16 Mbit/s

95th percentile per-packet one-way delay: 67.377 ms

Loss rate: 0.03%

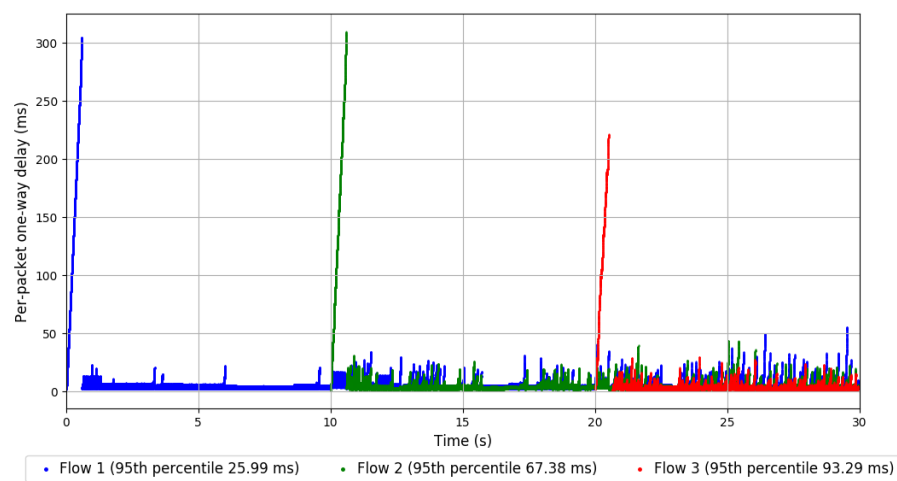
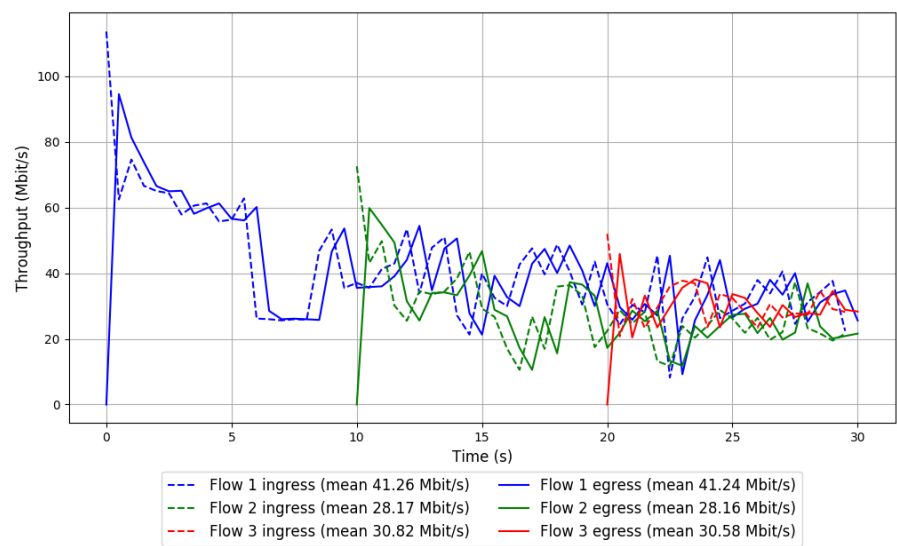
-- Flow 3:

Average throughput: 30.58 Mbit/s

95th percentile per-packet one-way delay: 93.289 ms

Loss rate: 0.84%

Run 2: Report of Verus — Data Link

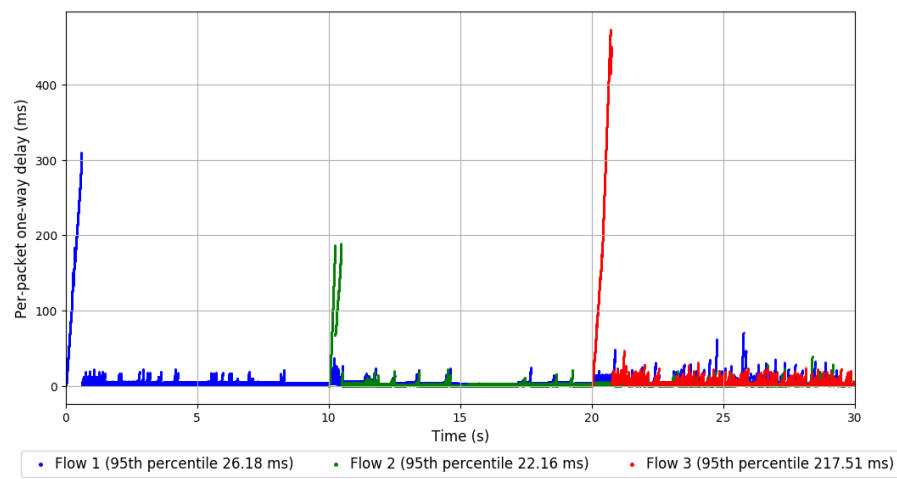
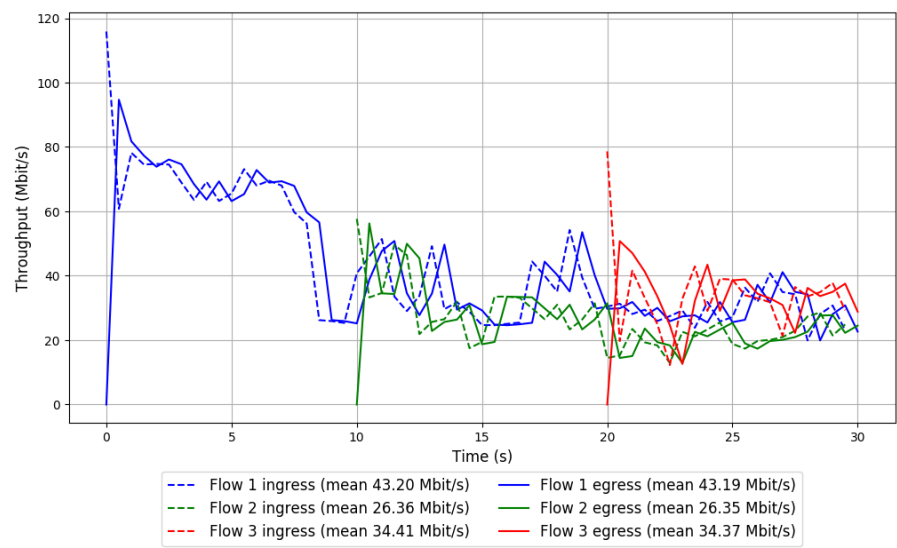


Run 3: Statistics of Verus

Start at: 2019-06-28 12:36:42
End at: 2019-06-28 12:37:12
Local clock offset: -7.744 ms
Remote clock offset: 0.715 ms

Below is generated by plot.py at 2019-06-28 13:51:19
Datalink statistics
-- Total of 3 flows:
Average throughput: 72.15 Mbit/s
95th percentile per-packet one-way delay: 44.783 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 43.19 Mbit/s
95th percentile per-packet one-way delay: 26.177 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 26.35 Mbit/s
95th percentile per-packet one-way delay: 22.162 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 34.37 Mbit/s
95th percentile per-packet one-way delay: 217.506 ms
Loss rate: 0.17%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2019-06-28 13:01:59

End at: 2019-06-28 13:02:29

Local clock offset: -7.293 ms

Remote clock offset: 0.693 ms

Below is generated by plot.py at 2019-06-28 13:51:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 69.59 Mbit/s

95th percentile per-packet one-way delay: 27.289 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 35.85 Mbit/s

95th percentile per-packet one-way delay: 23.057 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 32.64 Mbit/s

95th percentile per-packet one-way delay: 23.506 ms

Loss rate: 0.01%

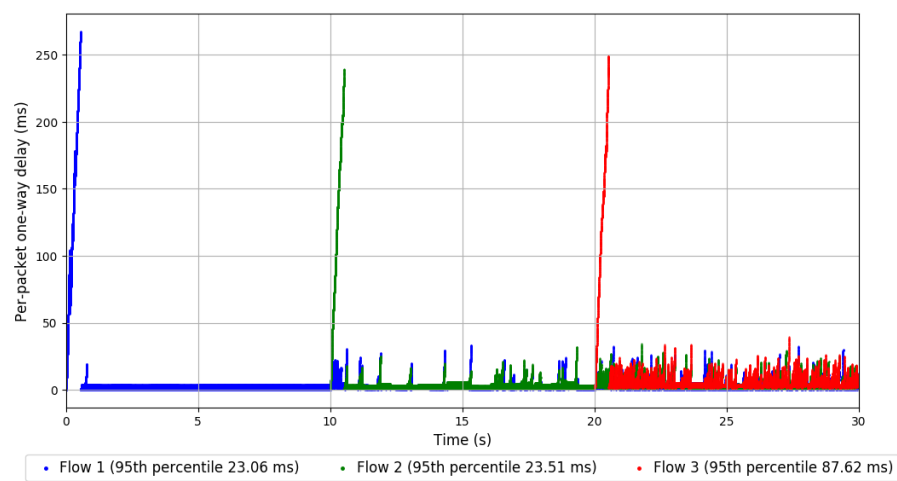
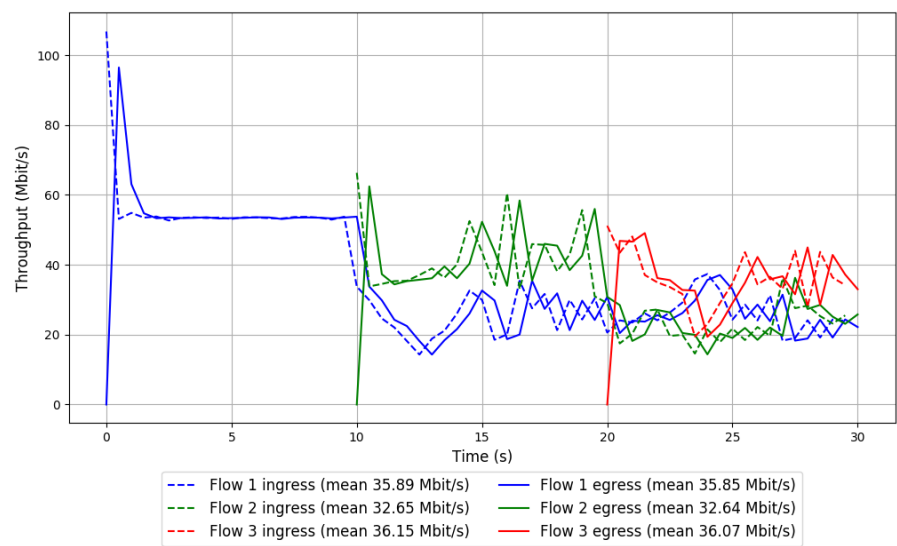
-- Flow 3:

Average throughput: 36.07 Mbit/s

95th percentile per-packet one-way delay: 87.621 ms

Loss rate: 0.19%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2019-06-28 13:27:20

End at: 2019-06-28 13:27:50

Local clock offset: -5.906 ms

Remote clock offset: 0.683 ms

Below is generated by plot.py at 2019-06-28 13:51:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.25 Mbit/s

95th percentile per-packet one-way delay: 29.659 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 34.16 Mbit/s

95th percentile per-packet one-way delay: 39.876 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 33.76 Mbit/s

95th percentile per-packet one-way delay: 19.528 ms

Loss rate: 0.03%

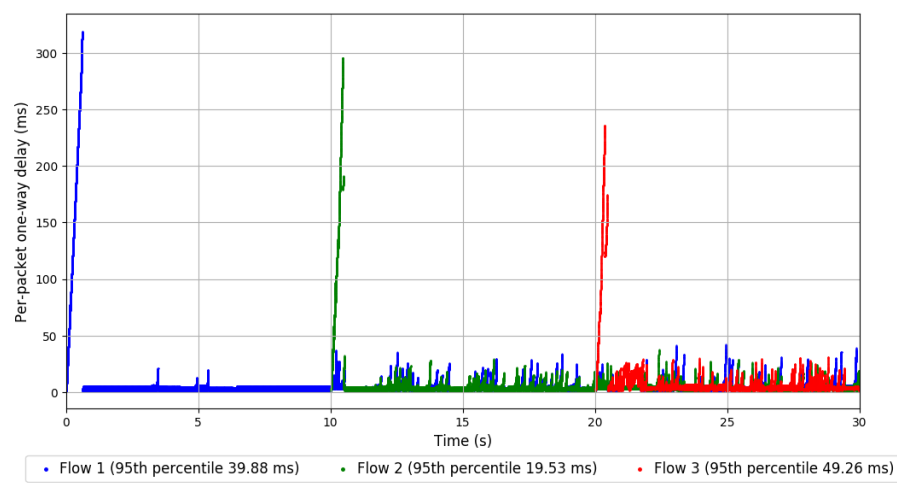
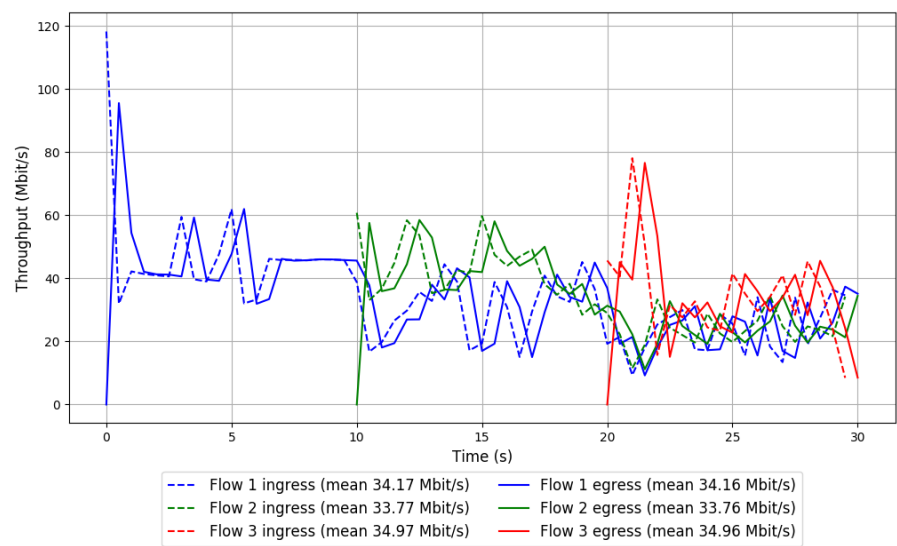
-- Flow 3:

Average throughput: 34.96 Mbit/s

95th percentile per-packet one-way delay: 49.264 ms

Loss rate: 0.03%

Run 5: Report of Verus — Data Link

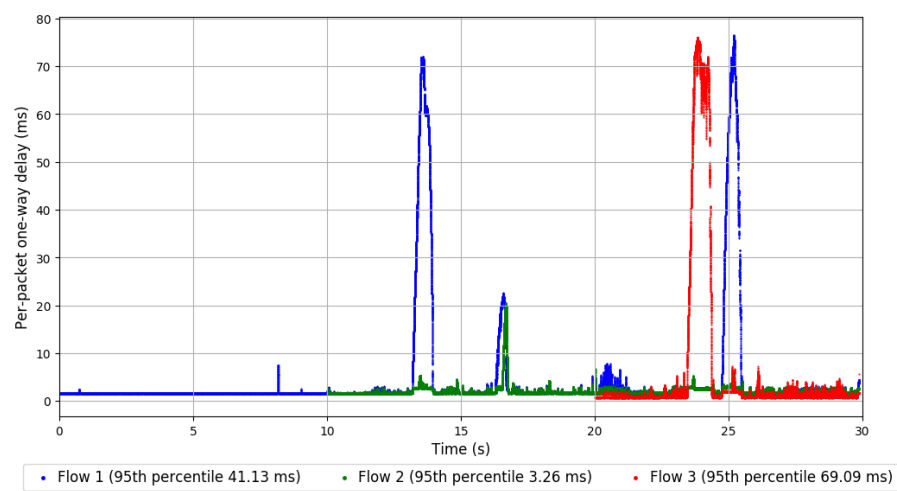
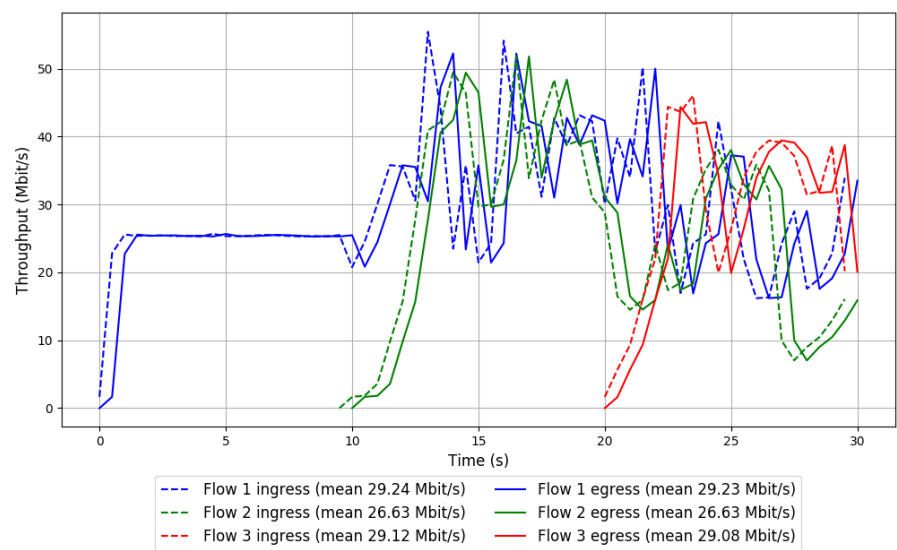


Run 1: Statistics of PCC-Vivace

Start at: 2019-06-28 11:38:23
End at: 2019-06-28 11:38:53
Local clock offset: -5.87 ms
Remote clock offset: -0.138 ms

Below is generated by plot.py at 2019-06-28 13:51:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 56.54 Mbit/s
95th percentile per-packet one-way delay: 26.870 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 29.23 Mbit/s
95th percentile per-packet one-way delay: 41.135 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 26.63 Mbit/s
95th percentile per-packet one-way delay: 3.264 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 29.08 Mbit/s
95th percentile per-packet one-way delay: 69.094 ms
Loss rate: 0.12%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-06-28 12:03:32

End at: 2019-06-28 12:04:02

Local clock offset: -7.431 ms

Remote clock offset: 0.204 ms

Below is generated by plot.py at 2019-06-28 13:51:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.41 Mbit/s

95th percentile per-packet one-way delay: 1880.722 ms

Loss rate: 3.03%

-- Flow 1:

Average throughput: 37.66 Mbit/s

95th percentile per-packet one-way delay: 1902.066 ms

Loss rate: 5.23%

-- Flow 2:

Average throughput: 32.17 Mbit/s

95th percentile per-packet one-way delay: 48.369 ms

Loss rate: 0.12%

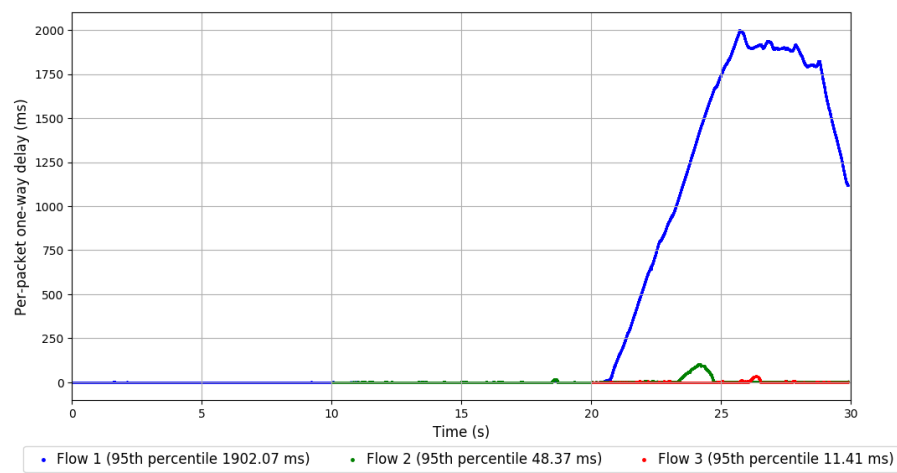
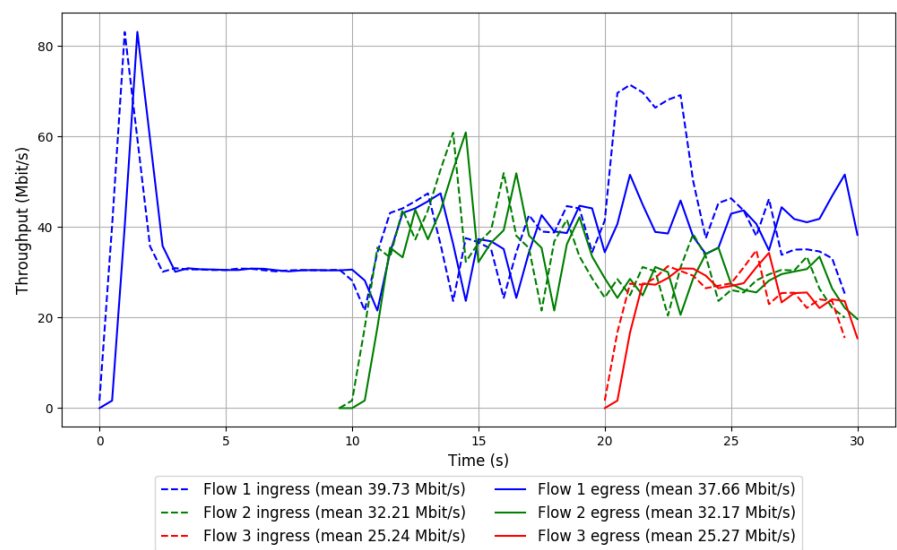
-- Flow 3:

Average throughput: 25.27 Mbit/s

95th percentile per-packet one-way delay: 11.410 ms

Loss rate: 0.05%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-06-28 12:28:46

End at: 2019-06-28 12:29:16

Local clock offset: -6.891 ms

Remote clock offset: 0.493 ms

Below is generated by plot.py at 2019-06-28 13:51:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.03 Mbit/s

95th percentile per-packet one-way delay: 12.770 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 36.01 Mbit/s

95th percentile per-packet one-way delay: 3.438 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 30.39 Mbit/s

95th percentile per-packet one-way delay: 8.308 ms

Loss rate: 0.03%

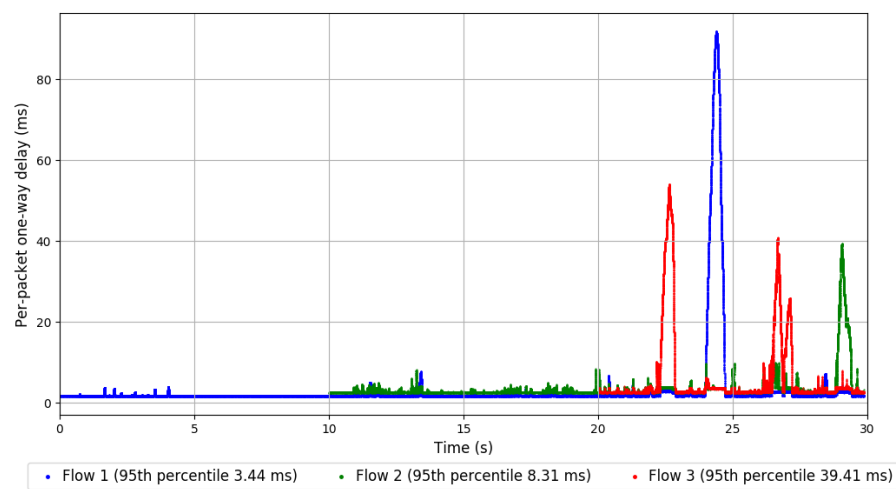
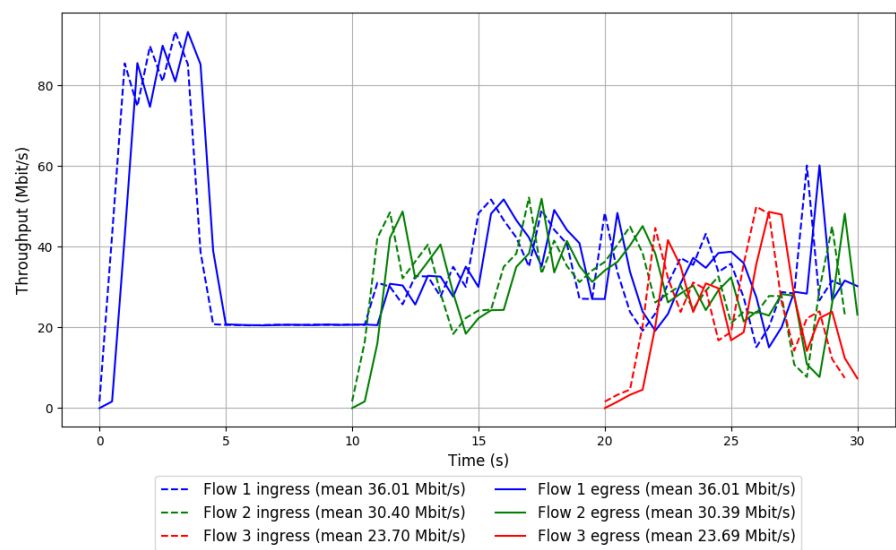
-- Flow 3:

Average throughput: 23.69 Mbit/s

95th percentile per-packet one-way delay: 39.411 ms

Loss rate: 0.11%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-06-28 12:53:59

End at: 2019-06-28 12:54:29

Local clock offset: -7.433 ms

Remote clock offset: 0.573 ms

Below is generated by plot.py at 2019-06-28 13:51:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 66.20 Mbit/s

95th percentile per-packet one-way delay: 446.879 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 27.88 Mbit/s

95th percentile per-packet one-way delay: 1.969 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 39.26 Mbit/s

95th percentile per-packet one-way delay: 94.419 ms

Loss rate: 0.14%

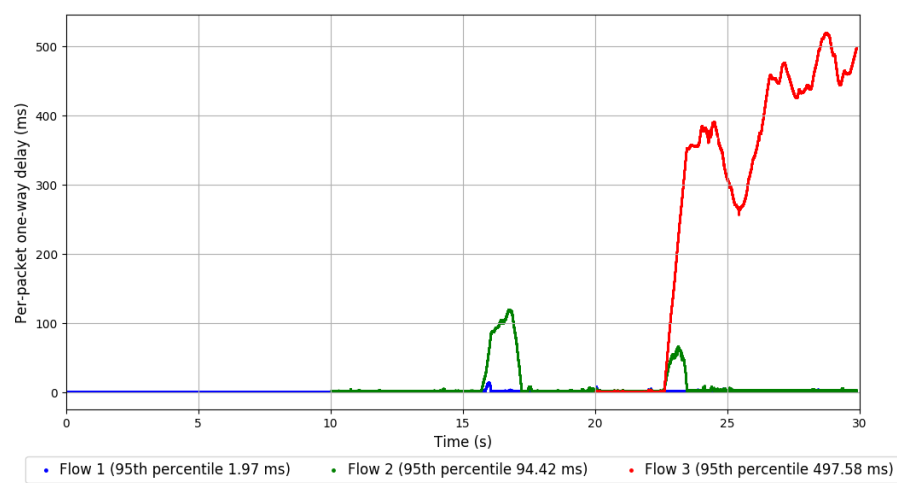
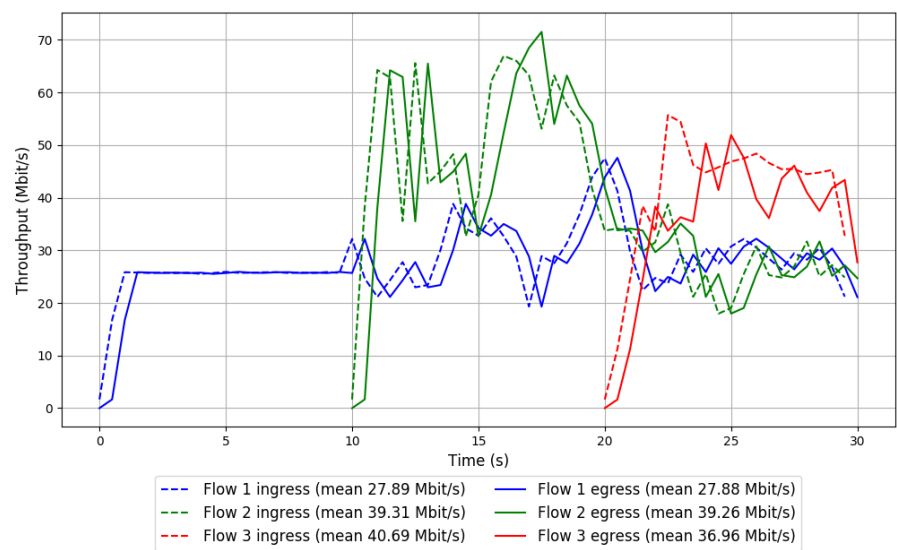
-- Flow 3:

Average throughput: 36.96 Mbit/s

95th percentile per-packet one-way delay: 497.582 ms

Loss rate: 9.27%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-06-28 13:19:16

End at: 2019-06-28 13:19:46

Local clock offset: -6.206 ms

Remote clock offset: 0.69 ms

Below is generated by plot.py at 2019-06-28 13:51:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.28 Mbit/s

95th percentile per-packet one-way delay: 219.595 ms

Loss rate: 2.76%

-- Flow 1:

Average throughput: 51.24 Mbit/s

95th percentile per-packet one-way delay: 3.519 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 35.88 Mbit/s

95th percentile per-packet one-way delay: 440.896 ms

Loss rate: 8.89%

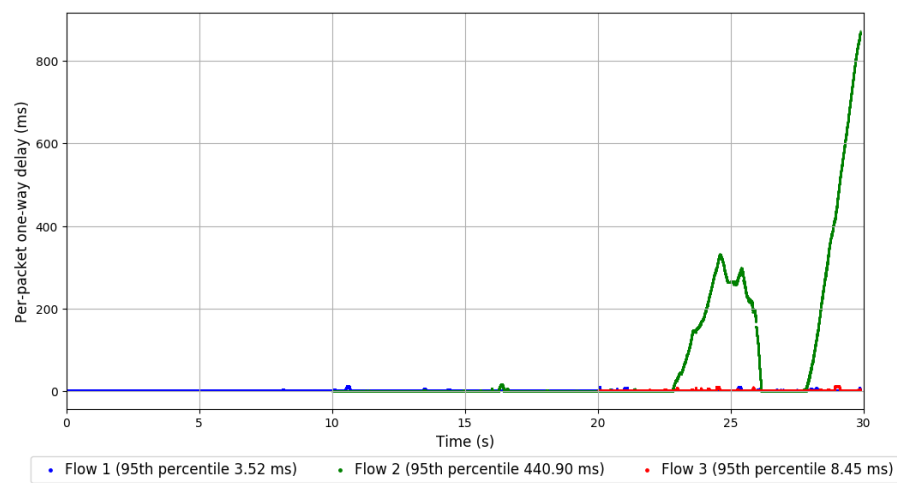
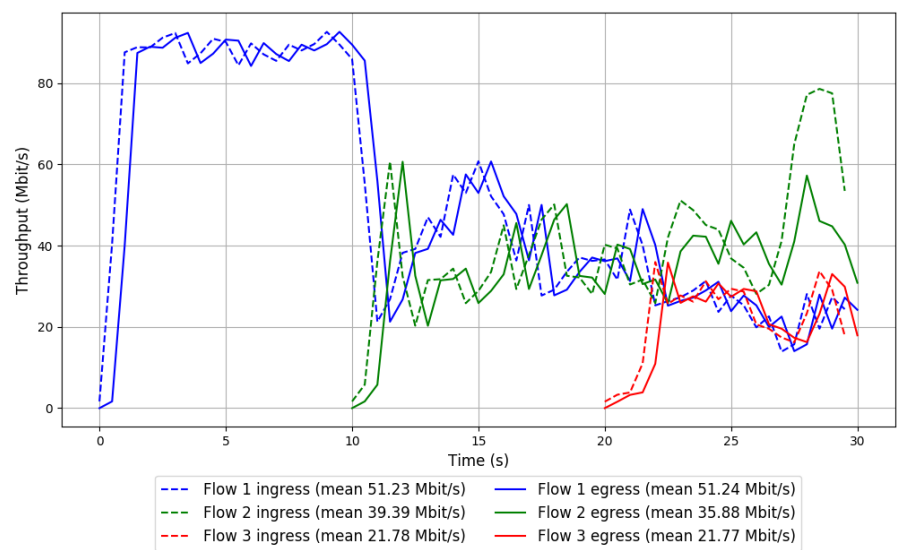
-- Flow 3:

Average throughput: 21.77 Mbit/s

95th percentile per-packet one-way delay: 8.452 ms

Loss rate: 0.03%

Run 5: Report of PCC-Vivace — Data Link

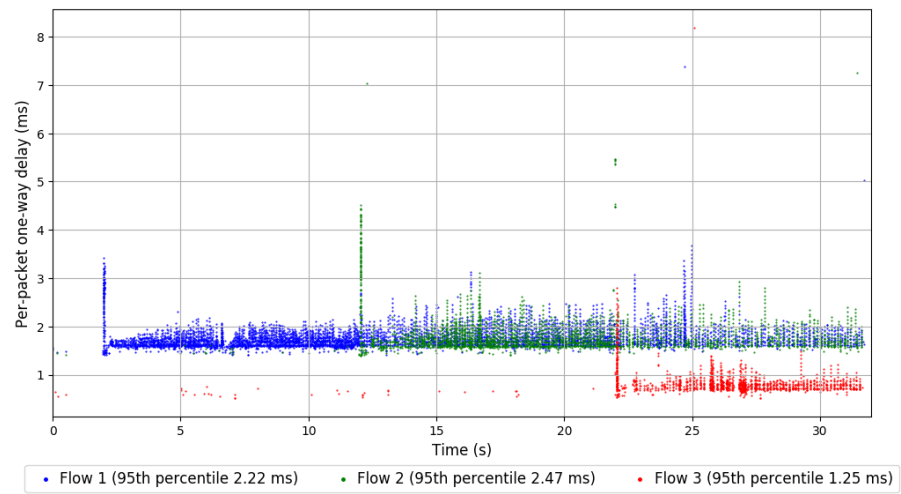
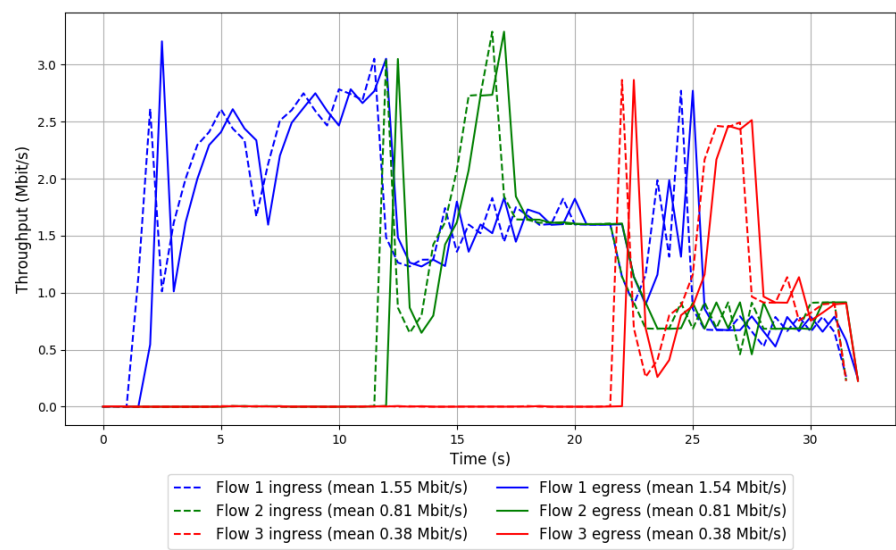


Run 1: Statistics of WebRTC media

Start at: 2019-06-28 11:39:31
End at: 2019-06-28 11:40:01
Local clock offset: -5.933 ms
Remote clock offset: -0.113 ms

Below is generated by plot.py at 2019-06-28 13:51:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.73 Mbit/s
95th percentile per-packet one-way delay: 2.265 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 2.224 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 2.470 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 1.254 ms
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-06-28 12:04:42

End at: 2019-06-28 12:05:12

Local clock offset: -7.384 ms

Remote clock offset: 0.222 ms

Below is generated by plot.py at 2019-06-28 13:51:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 1.023 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 0.924 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.88 Mbit/s

95th percentile per-packet one-way delay: 0.964 ms

Loss rate: 0.00%

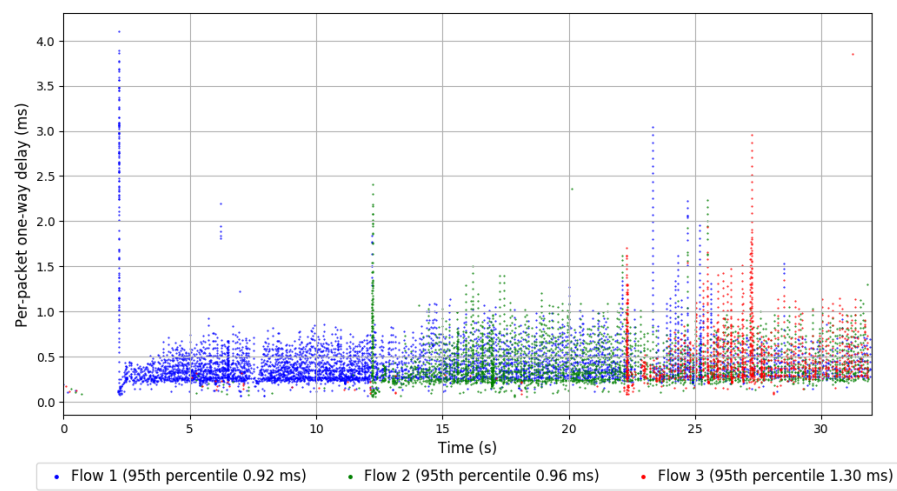
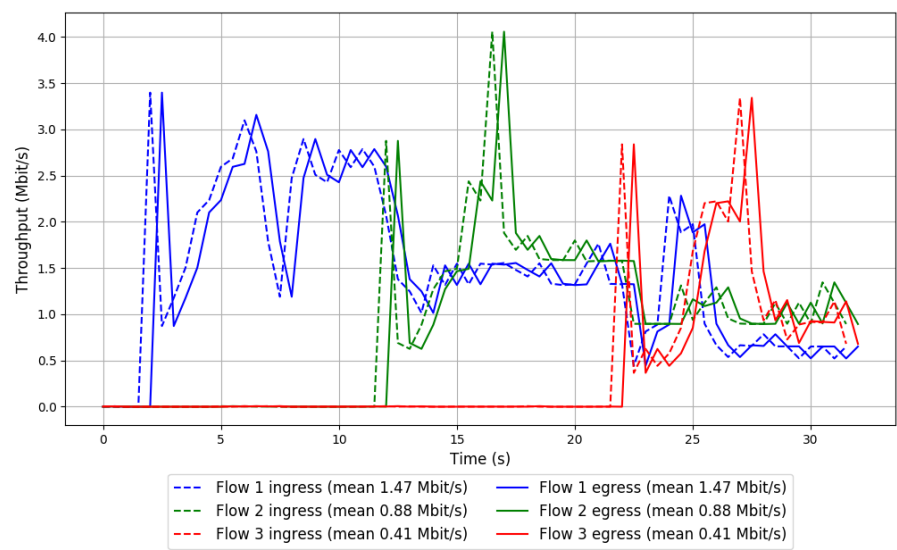
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 1.302 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-06-28 12:29:55

End at: 2019-06-28 12:30:25

Local clock offset: -7.657 ms

Remote clock offset: 0.563 ms

Below is generated by plot.py at 2019-06-28 13:51:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.79 Mbit/s

95th percentile per-packet one-way delay: 2.294 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 1.445 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 2.583 ms

Loss rate: 0.27%

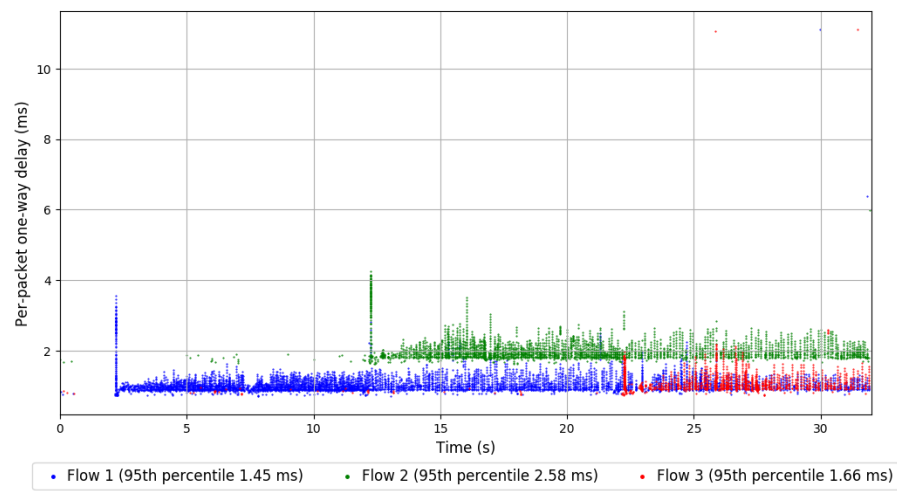
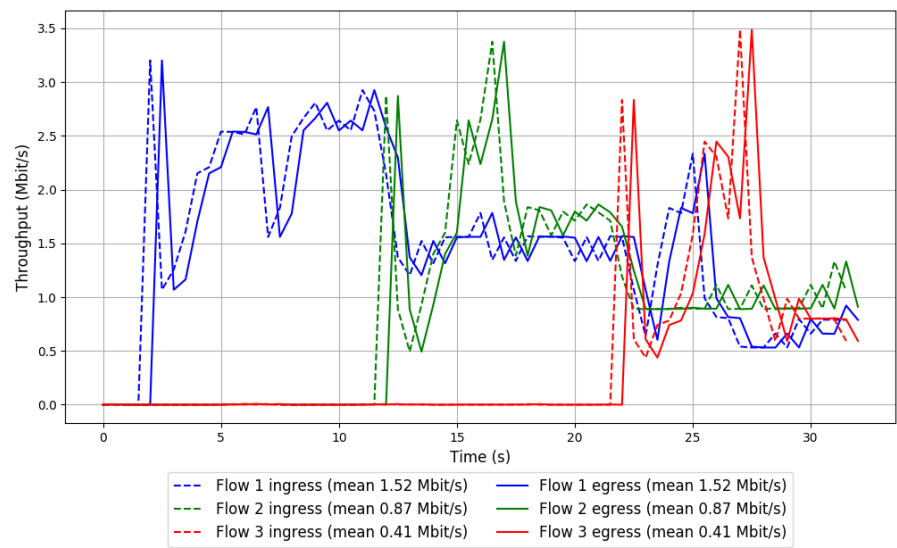
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 1.656 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-06-28 12:55:09

End at: 2019-06-28 12:55:39

Local clock offset: -6.958 ms

Remote clock offset: 0.659 ms

Below is generated by plot.py at 2019-06-28 13:51:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.54 Mbit/s

95th percentile per-packet one-way delay: 2.684 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 2.765 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.75 Mbit/s

95th percentile per-packet one-way delay: 2.500 ms

Loss rate: 0.08%

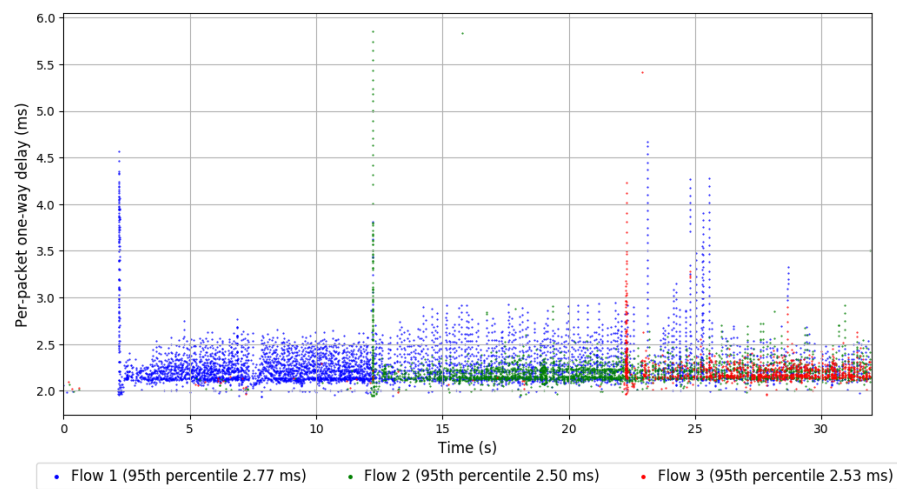
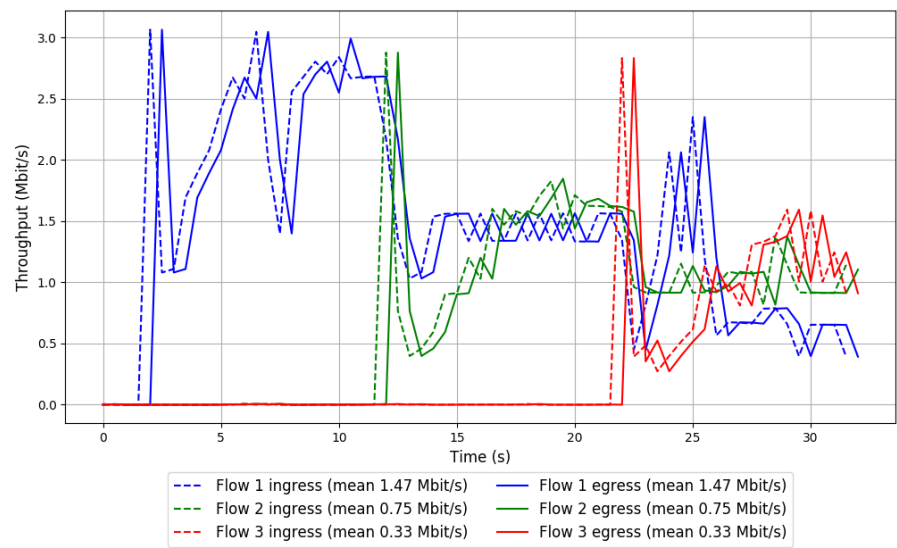
-- Flow 3:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 2.528 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-06-28 13:20:27

End at: 2019-06-28 13:20:57

Local clock offset: -6.136 ms

Remote clock offset: 0.604 ms

Below is generated by plot.py at 2019-06-28 13:51:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.73 Mbit/s

95th percentile per-packet one-way delay: 2.170 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 1.53 Mbit/s

95th percentile per-packet one-way delay: 2.218 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.84 Mbit/s

95th percentile per-packet one-way delay: 1.475 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 2.458 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

