

Pantheon Report

Generated at 2019-03-27 04:36:11 (UTC).

Data path: AWS California 1 on `ens5` (*local*) → Stanford on `eno1` (*remote*).

Repeated the test of 21 congestion control schemes 5 times.

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

NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.

System info:

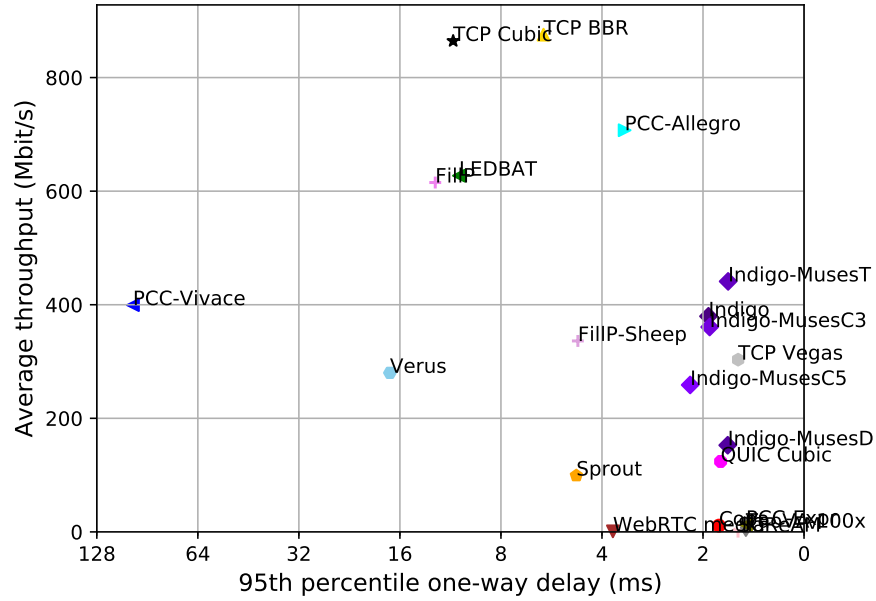
```
Linux 4.15.0-1034-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

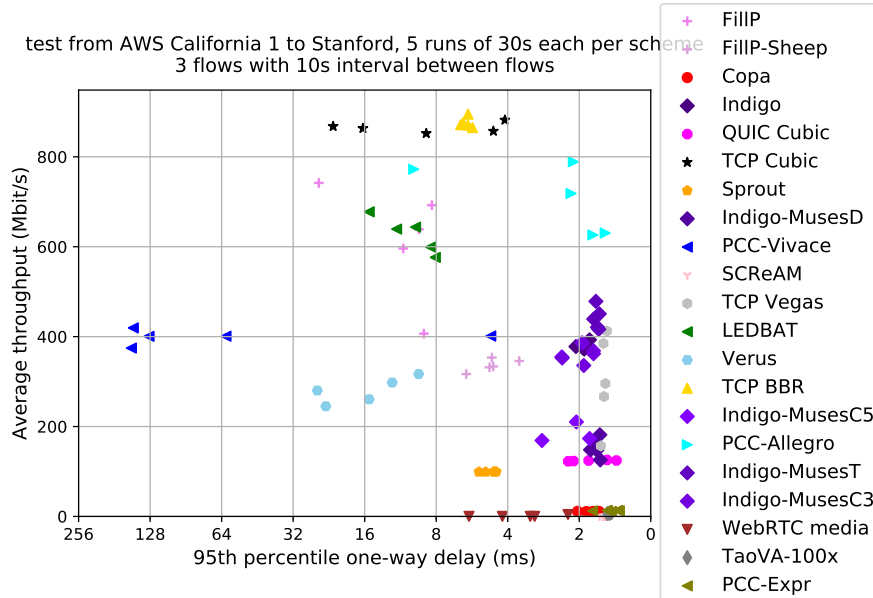
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

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



test from AWS California 1 to Stanford, 5 runs of 30s each per scheme
3 flows with 10s interval between flows



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	518.93	374.91	321.44	5.82	6.07	4.25	4.87	9.41	11.77
Copa	5	6.63	4.84	4.88	1.69	1.69	1.67	49.71	54.53	53.25
TCP Cubic	5	507.90	380.71	309.61	14.43	2.29	2.48	0.09	0.08	0.12
FillP	5	412.41	224.93	160.26	14.11	4.97	4.63	10.09	15.34	13.64
FillP-Sheep	5	298.06	45.61	23.83	4.91	2.18	2.30	3.21	2.72	4.57
Indigo	5	198.44	185.12	180.76	1.73	1.89	2.26	0.02	0.03	0.04
Indigo-MusesC3	5	183.08	187.80	188.73	1.74	1.97	2.01	0.04	0.04	0.10
Indigo-MusesC5	5	111.61	136.98	186.13	1.57	2.29	2.58	0.06	0.11	0.18
Indigo-MusesD	5	83.85	66.56	84.98	1.46	1.42	1.76	0.01	0.02	0.01
Indigo-MusesT	5	245.44	215.32	188.71	1.44	1.52	1.66	0.02	0.02	0.04
LEDBAT	5	358.23	289.31	259.29	11.60	6.81	5.12	0.16	0.26	0.30
PCC-Allegro	5	575.21	168.58	60.70	3.78	1.96	1.78	0.15	0.16	0.17
PCC-Expr	5	7.01	5.72	5.43	1.16	1.12	1.10	96.48	98.11	99.02
QUIC Cubic	5	67.64	59.89	50.62	1.01	1.19	4.85	0.01	0.00	0.01
SCReAM	5	0.22	0.22	0.22	1.30	1.32	1.30	0.00	0.00	0.00
Sprout	5	49.88	49.66	49.32	4.74	4.79	4.78	0.08	0.16	0.25
TaoVA-100x	5	0.00	8.20	6.18	1.15	1.17	1.05	95.92	41.66	52.35
TCP Vegas	5	117.52	154.44	249.14	1.40	1.28	1.33	0.02	0.02	0.04
Verus	5	143.50	134.97	142.57	23.56	12.26	14.12	3.23	3.31	3.33
PCC-Vivace	5	232.16	187.97	127.83	81.59	14.51	70.91	0.84	0.51	3.42
WebRTC media	5	0.48	0.32	0.16	3.23	2.75	3.54	0.01	0.00	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-03-27 01:13:12

End at: 2019-03-27 01:13:42

Local clock offset: -5.243 ms

Remote clock offset: 0.252 ms

Below is generated by plot.py at 2019-03-27 03:52:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 865.17 Mbit/s

95th percentile per-packet one-way delay: 5.628 ms

Loss rate: 7.65%

-- Flow 1:

Average throughput: 562.56 Mbit/s

95th percentile per-packet one-way delay: 5.860 ms

Loss rate: 4.69%

-- Flow 2:

Average throughput: 314.03 Mbit/s

95th percentile per-packet one-way delay: 4.178 ms

Loss rate: 12.14%

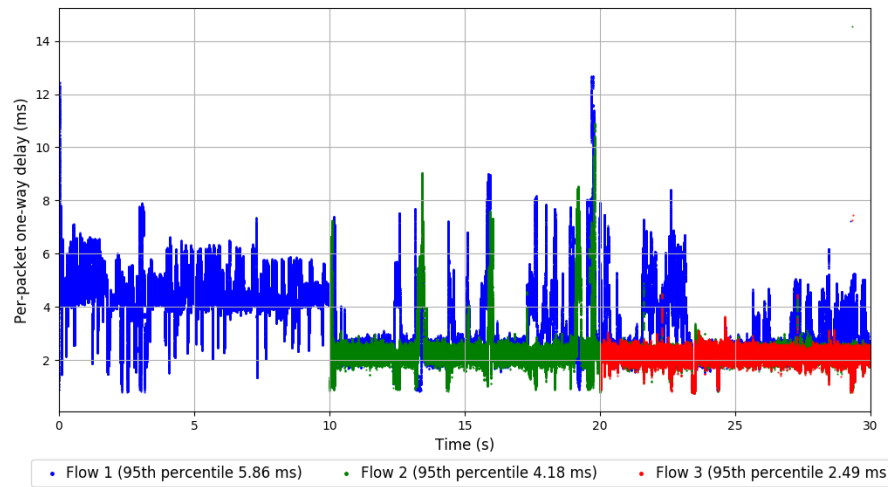
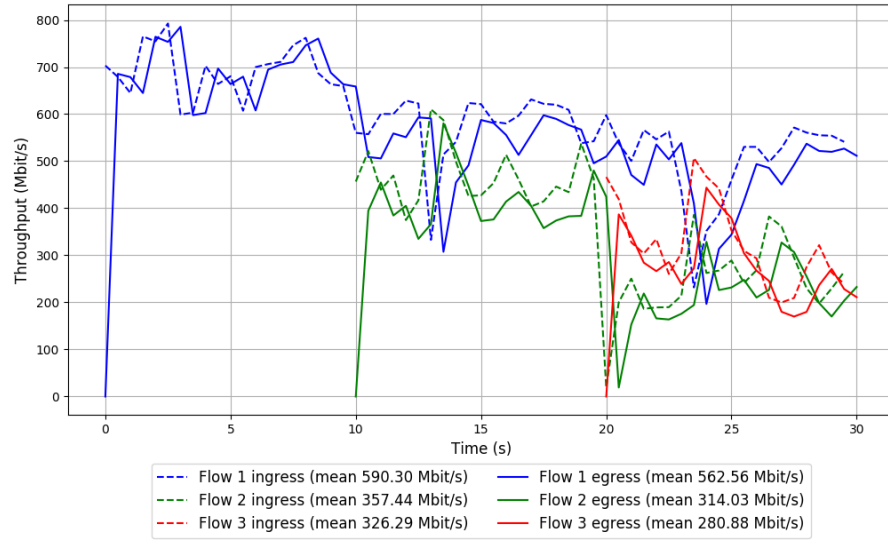
-- Flow 3:

Average throughput: 280.88 Mbit/s

95th percentile per-packet one-way delay: 2.492 ms

Loss rate: 13.92%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-03-27 01:43:22

End at: 2019-03-27 01:43:52

Local clock offset: 1.868 ms

Remote clock offset: 0.709 ms

Below is generated by plot.py at 2019-03-27 03:52:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 875.65 Mbit/s

95th percentile per-packet one-way delay: 6.167 ms

Loss rate: 6.91%

-- Flow 1:

Average throughput: 485.17 Mbit/s

95th percentile per-packet one-way delay: 5.931 ms

Loss rate: 4.98%

-- Flow 2:

Average throughput: 426.12 Mbit/s

95th percentile per-packet one-way delay: 6.516 ms

Loss rate: 8.22%

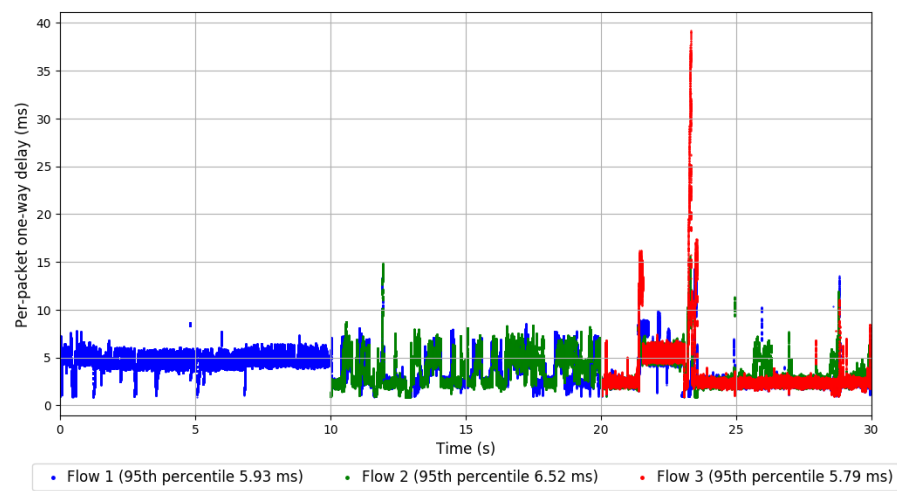
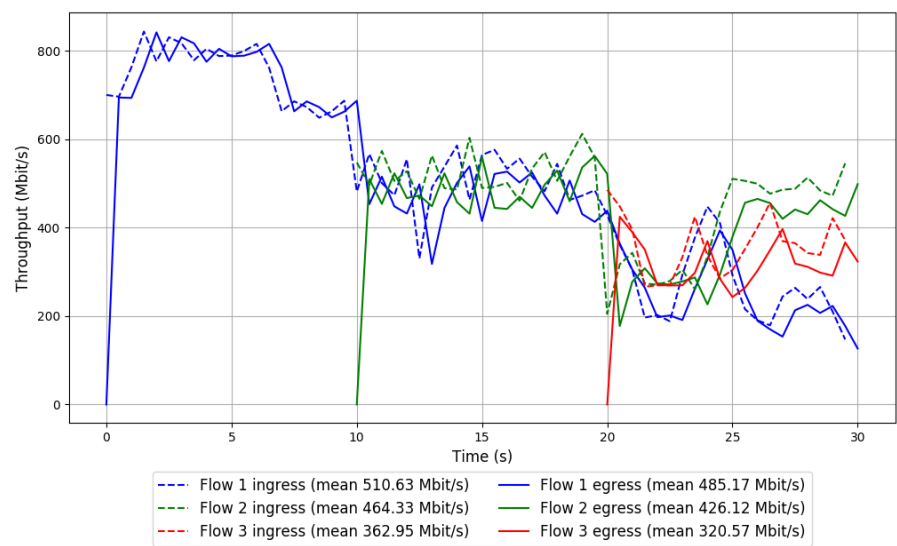
-- Flow 3:

Average throughput: 320.57 Mbit/s

95th percentile per-packet one-way delay: 5.792 ms

Loss rate: 11.68%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-03-27 02:13:29

End at: 2019-03-27 02:13:59

Local clock offset: 1.467 ms

Remote clock offset: 1.25 ms

Below is generated by plot.py at 2019-03-27 03:52:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 871.49 Mbit/s

95th percentile per-packet one-way delay: 6.313 ms

Loss rate: 7.20%

-- Flow 1:

Average throughput: 507.06 Mbit/s

95th percentile per-packet one-way delay: 6.317 ms

Loss rate: 4.82%

-- Flow 2:

Average throughput: 351.46 Mbit/s

95th percentile per-packet one-way delay: 6.609 ms

Loss rate: 9.91%

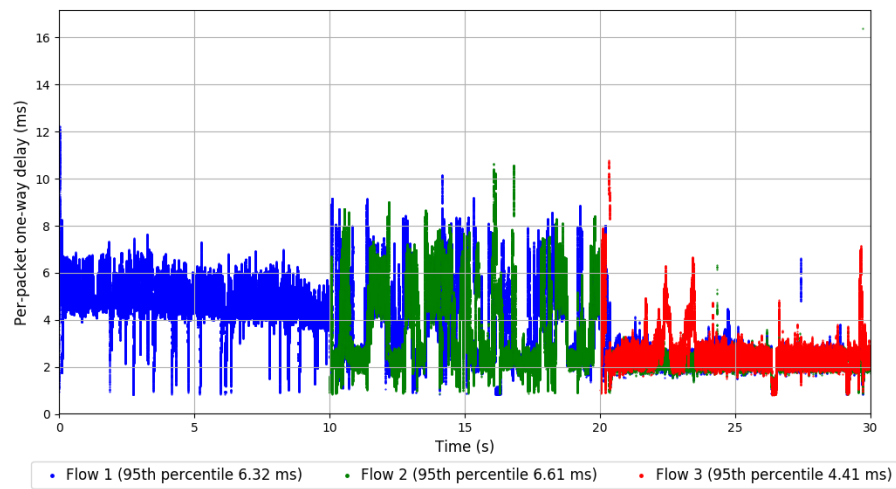
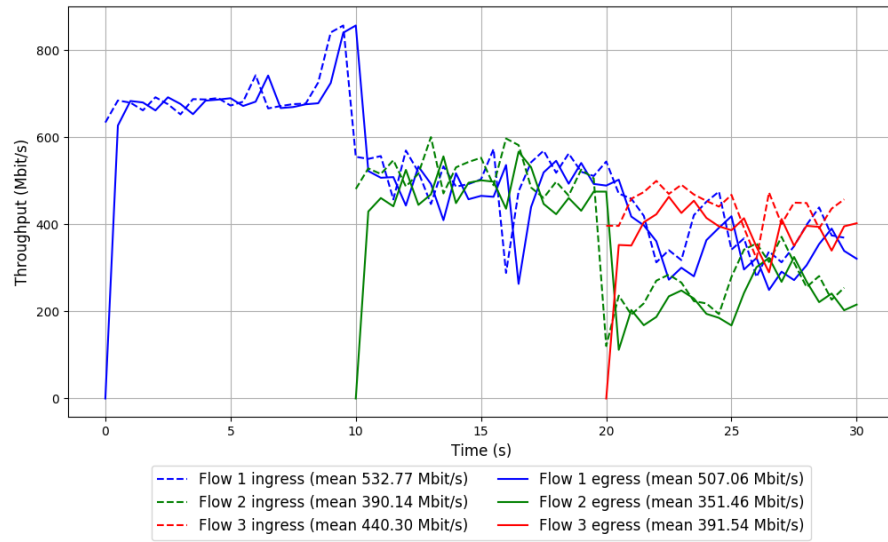
-- Flow 3:

Average throughput: 391.54 Mbit/s

95th percentile per-packet one-way delay: 4.406 ms

Loss rate: 11.06%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-03-27 02:43:38

End at: 2019-03-27 02:44:08

Local clock offset: 4.681 ms

Remote clock offset: 3.47 ms

Below is generated by plot.py at 2019-03-27 03:52:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 894.93 Mbit/s

95th percentile per-packet one-way delay: 5.873 ms

Loss rate: 6.63%

-- Flow 1:

Average throughput: 539.65 Mbit/s

95th percentile per-packet one-way delay: 5.420 ms

Loss rate: 4.60%

-- Flow 2:

Average throughput: 422.50 Mbit/s

95th percentile per-packet one-way delay: 6.612 ms

Loss rate: 8.30%

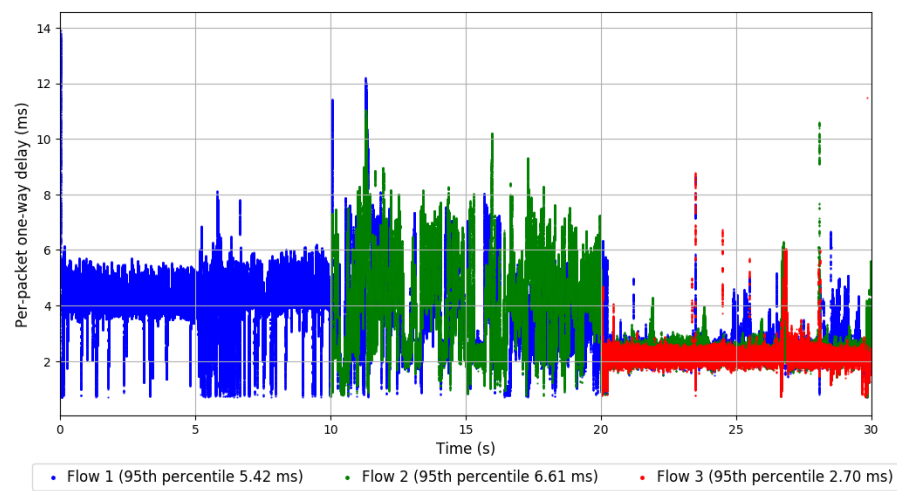
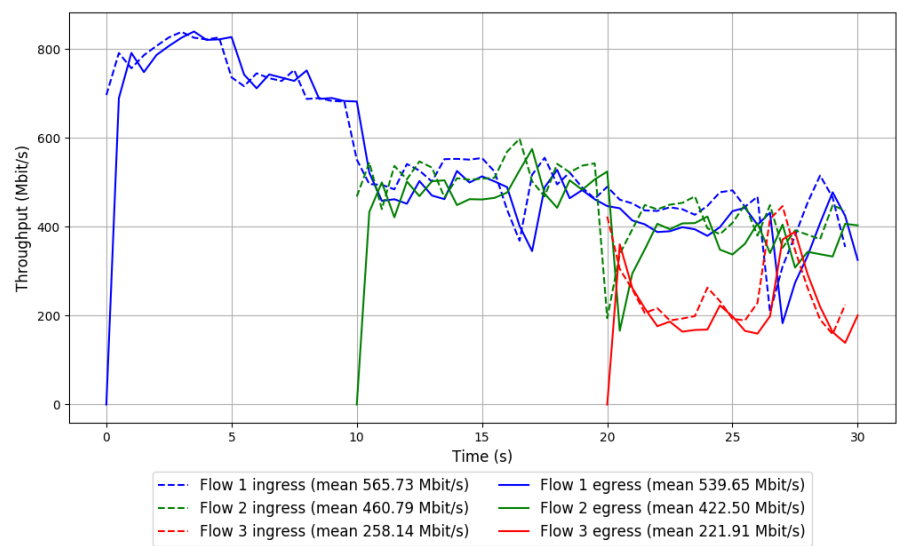
-- Flow 3:

Average throughput: 221.91 Mbit/s

95th percentile per-packet one-way delay: 2.696 ms

Loss rate: 14.04%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2019-03-27 03:13:49

End at: 2019-03-27 03:14:19

Local clock offset: 0.136 ms

Remote clock offset: 5.092 ms

Below is generated by plot.py at 2019-03-27 03:52:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 870.66 Mbit/s

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

Loss rate: 6.61%

-- Flow 1:

Average throughput: 500.19 Mbit/s

95th percentile per-packet one-way delay: 5.589 ms

Loss rate: 5.27%

-- Flow 2:

Average throughput: 360.45 Mbit/s

95th percentile per-packet one-way delay: 6.431 ms

Loss rate: 8.48%

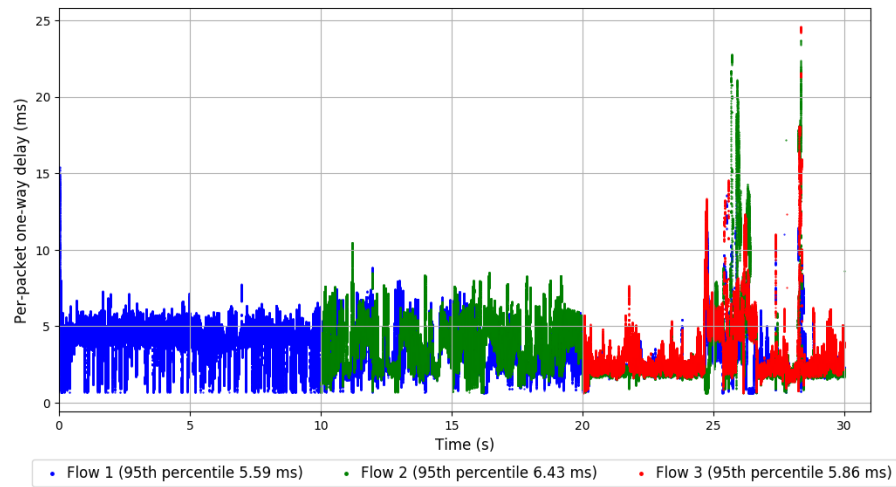
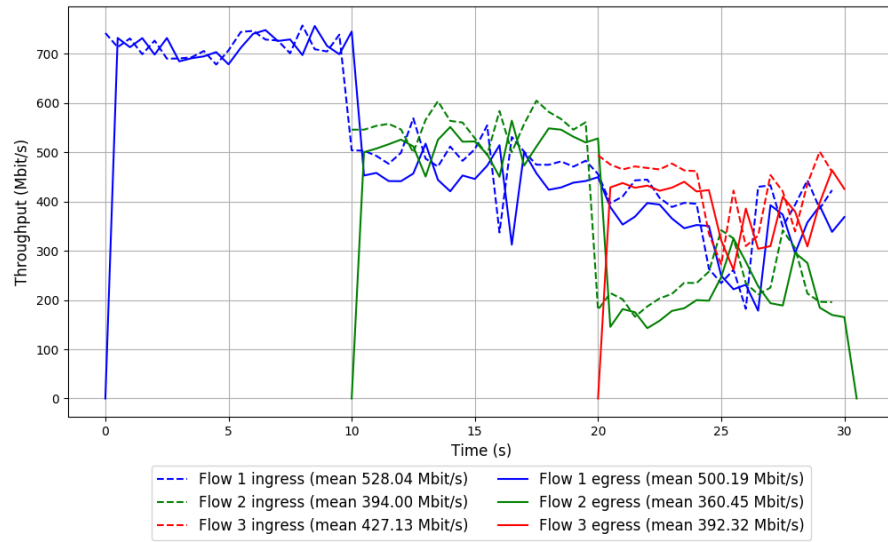
-- Flow 3:

Average throughput: 392.32 Mbit/s

95th percentile per-packet one-way delay: 5.857 ms

Loss rate: 8.15%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-03-27 01:20:22

End at: 2019-03-27 01:20:52

Local clock offset: -2.94 ms

Remote clock offset: 0.354 ms

Below is generated by plot.py at 2019-03-27 03:52:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 10.90 Mbit/s

95th percentile per-packet one-way delay: 1.804 ms

Loss rate: 55.62%

-- Flow 1:

Average throughput: 6.21 Mbit/s

95th percentile per-packet one-way delay: 1.788 ms

Loss rate: 49.13%

-- Flow 2:

Average throughput: 4.54 Mbit/s

95th percentile per-packet one-way delay: 2.005 ms

Loss rate: 59.57%

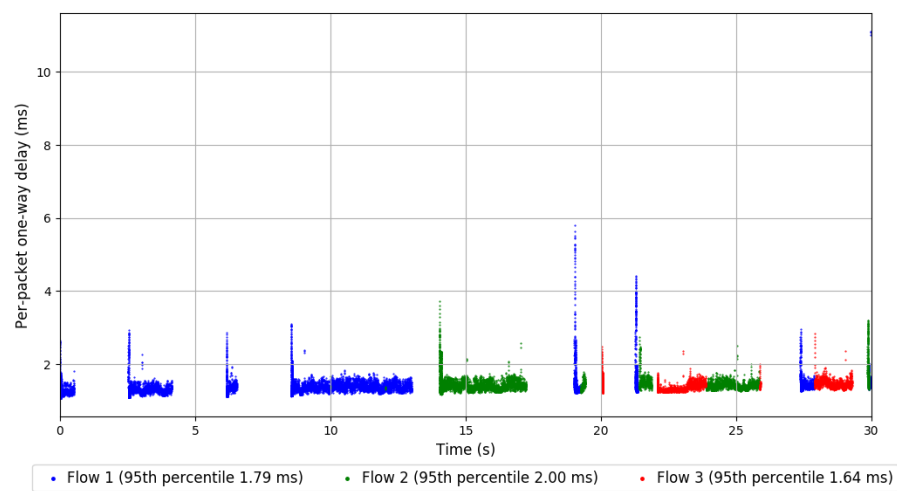
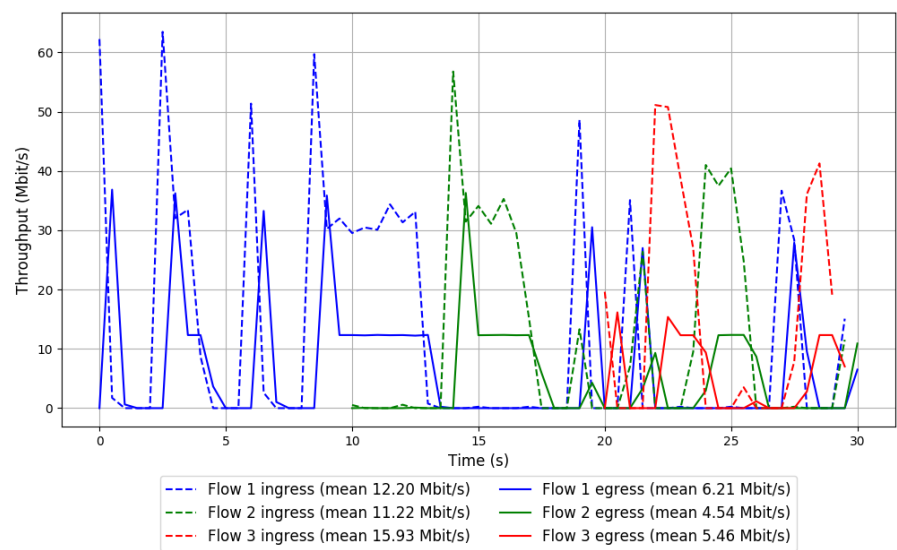
-- Flow 3:

Average throughput: 5.46 Mbit/s

95th percentile per-packet one-way delay: 1.642 ms

Loss rate: 65.73%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-03-27 01:50:30

End at: 2019-03-27 01:51:00

Local clock offset: 1.537 ms

Remote clock offset: 0.71 ms

Below is generated by plot.py at 2019-03-27 03:52:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.16 Mbit/s

95th percentile per-packet one-way delay: 1.523 ms

Loss rate: 51.66%

-- Flow 1:

Average throughput: 6.13 Mbit/s

95th percentile per-packet one-way delay: 1.506 ms

Loss rate: 48.44%

-- Flow 2:

Average throughput: 6.22 Mbit/s

95th percentile per-packet one-way delay: 1.447 ms

Loss rate: 55.60%

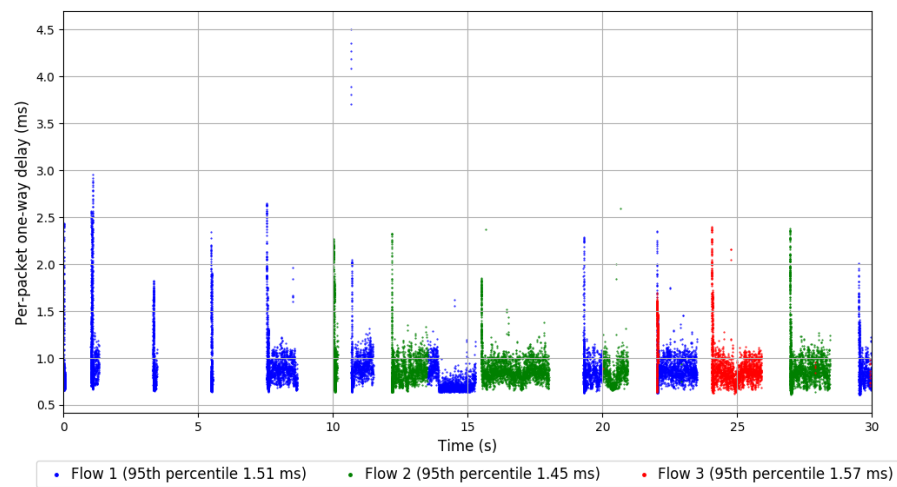
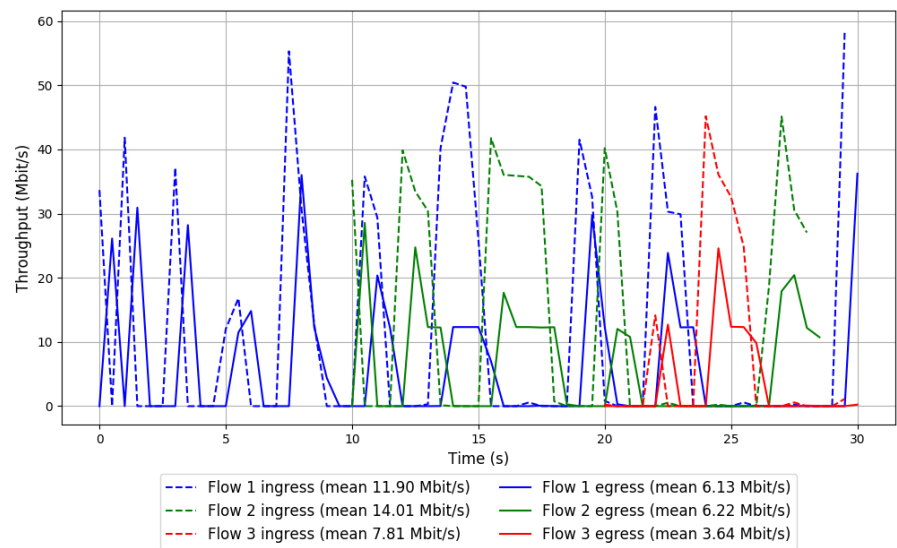
-- Flow 3:

Average throughput: 3.64 Mbit/s

95th percentile per-packet one-way delay: 1.574 ms

Loss rate: 53.37%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-03-27 02:20:36

End at: 2019-03-27 02:21:06

Local clock offset: 2.407 ms

Remote clock offset: 1.386 ms

Below is generated by plot.py at 2019-03-27 03:52:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.29 Mbit/s

95th percentile per-packet one-way delay: 2.033 ms

Loss rate: 47.93%

-- Flow 1:

Average throughput: 6.66 Mbit/s

95th percentile per-packet one-way delay: 2.100 ms

Loss rate: 46.48%

-- Flow 2:

Average throughput: 4.96 Mbit/s

95th percentile per-packet one-way delay: 2.113 ms

Loss rate: 45.54%

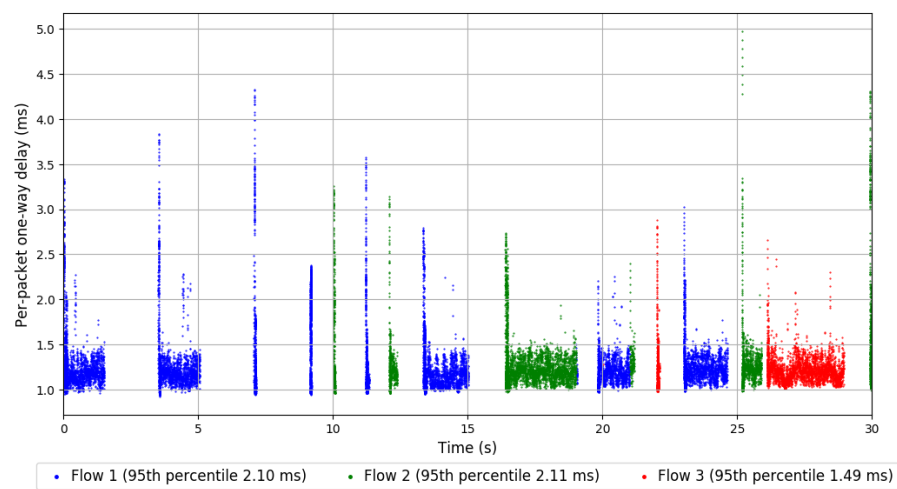
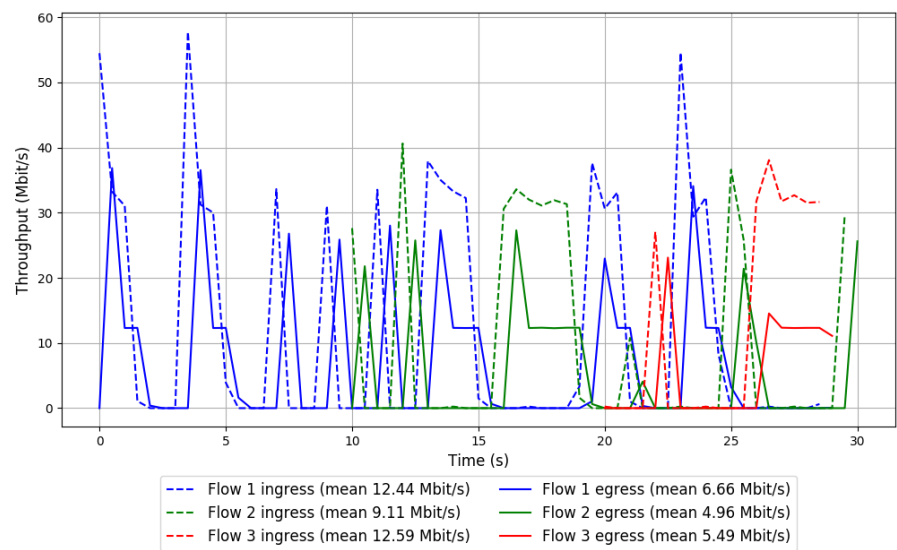
-- Flow 3:

Average throughput: 5.49 Mbit/s

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

Loss rate: 56.42%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-03-27 02:50:44

End at: 2019-03-27 02:51:14

Local clock offset: 2.859 ms

Remote clock offset: 4.039 ms

Below is generated by plot.py at 2019-03-27 03:52:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.07 Mbit/s

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

Loss rate: 53.46%

-- Flow 1:

Average throughput: 7.74 Mbit/s

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

Loss rate: 52.78%

-- Flow 2:

Average throughput: 4.58 Mbit/s

95th percentile per-packet one-way delay: 1.192 ms

Loss rate: 57.87%

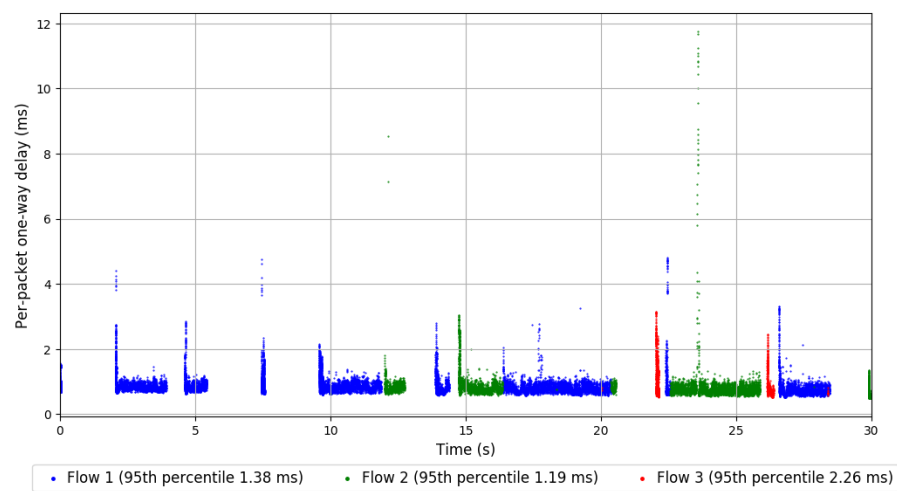
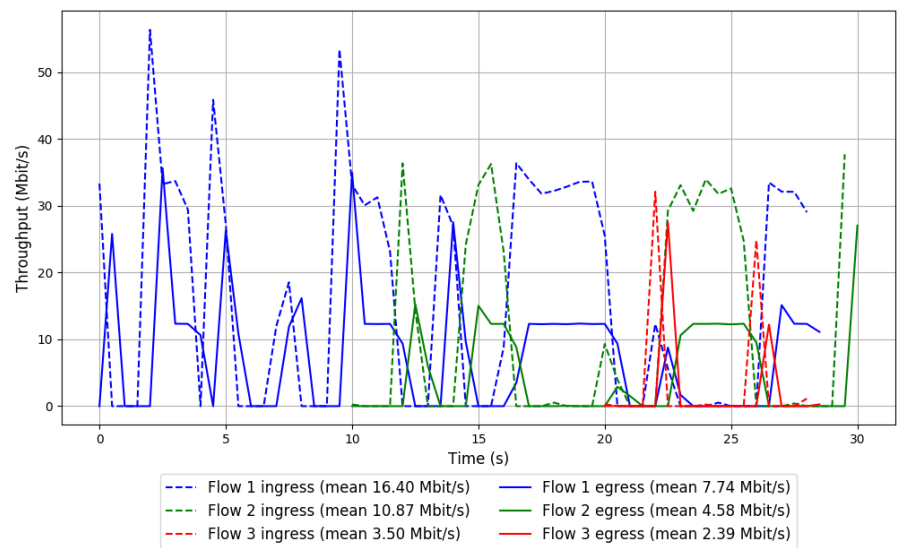
-- Flow 3:

Average throughput: 2.39 Mbit/s

95th percentile per-packet one-way delay: 2.257 ms

Loss rate: 31.69%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-03-27 03:20:55

End at: 2019-03-27 03:21:25

Local clock offset: 0.033 ms

Remote clock offset: 5.581 ms

Below is generated by plot.py at 2019-03-27 03:52:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.03 Mbit/s

95th percentile per-packet one-way delay: 1.620 ms

Loss rate: 53.79%

-- Flow 1:

Average throughput: 6.43 Mbit/s

95th percentile per-packet one-way delay: 1.705 ms

Loss rate: 51.70%

-- Flow 2:

Average throughput: 3.90 Mbit/s

95th percentile per-packet one-way delay: 1.682 ms

Loss rate: 54.07%

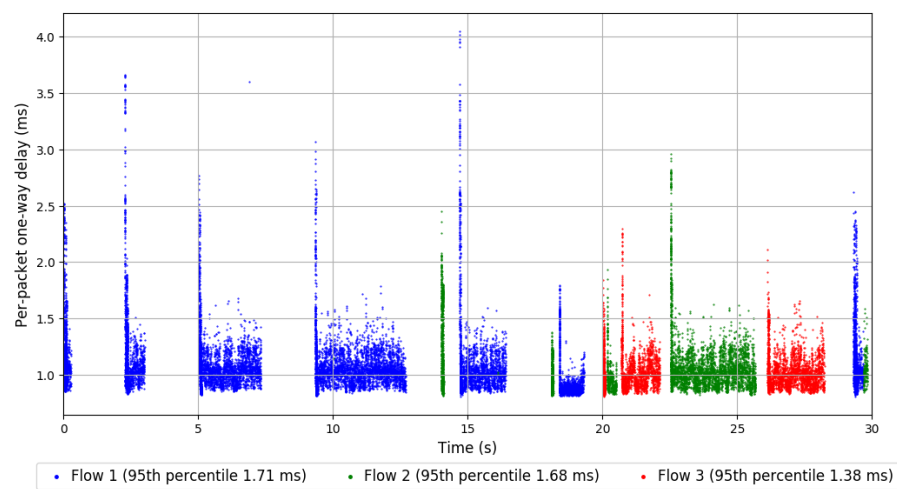
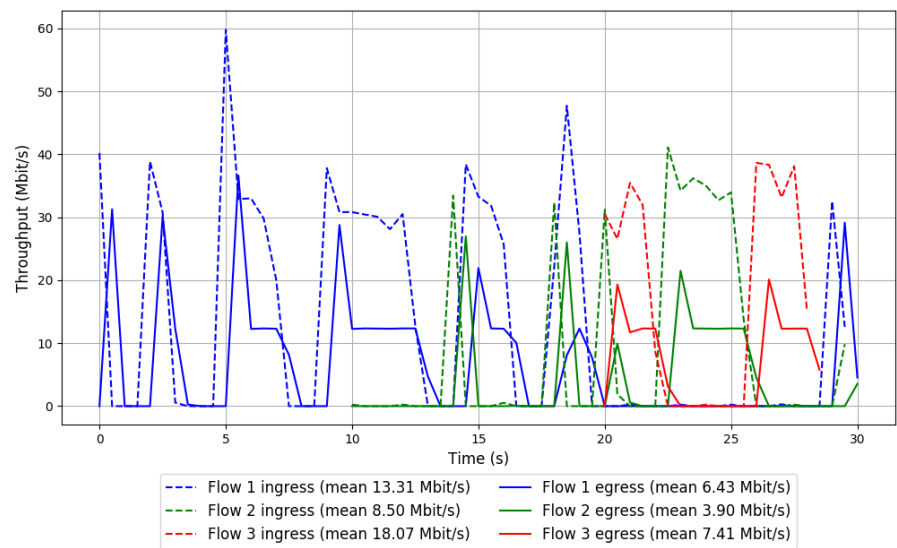
-- Flow 3:

Average throughput: 7.41 Mbit/s

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

Loss rate: 59.02%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-03-27 01:23:02

End at: 2019-03-27 01:23:32

Local clock offset: -1.823 ms

Remote clock offset: 0.339 ms

Below is generated by plot.py at 2019-03-27 03:52:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 852.14 Mbit/s

95th percentile per-packet one-way delay: 8.810 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 497.63 Mbit/s

95th percentile per-packet one-way delay: 16.305 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 383.91 Mbit/s

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

Loss rate: 0.11%

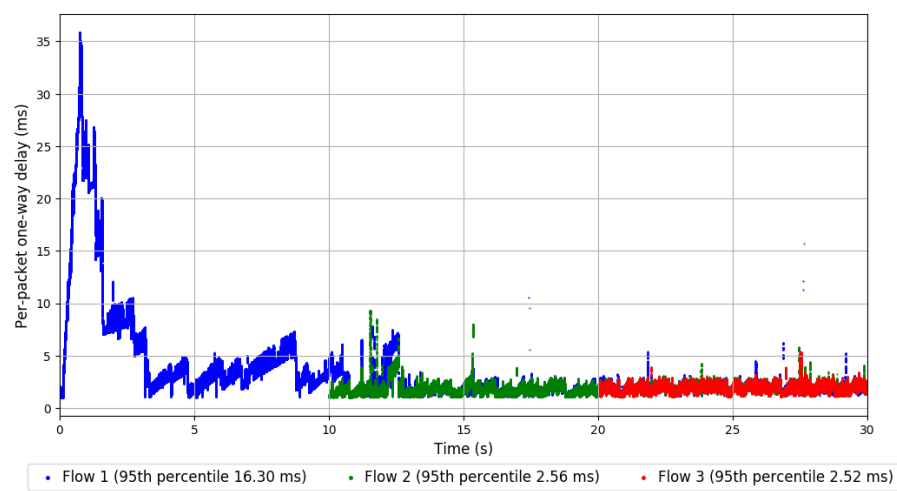
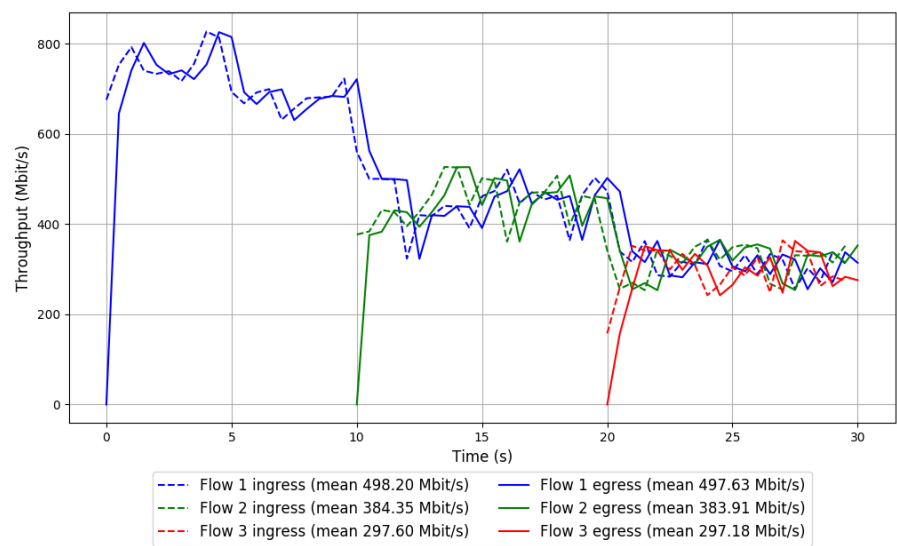
-- Flow 3:

Average throughput: 297.18 Mbit/s

95th percentile per-packet one-way delay: 2.517 ms

Loss rate: 0.14%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-03-27 01:53:11

End at: 2019-03-27 01:53:41

Local clock offset: 1.332 ms

Remote clock offset: 0.869 ms

Below is generated by plot.py at 2019-03-27 03:52:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 867.75 Mbit/s

95th percentile per-packet one-way delay: 21.724 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 498.47 Mbit/s

95th percentile per-packet one-way delay: 25.761 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 405.63 Mbit/s

95th percentile per-packet one-way delay: 2.160 ms

Loss rate: 0.08%

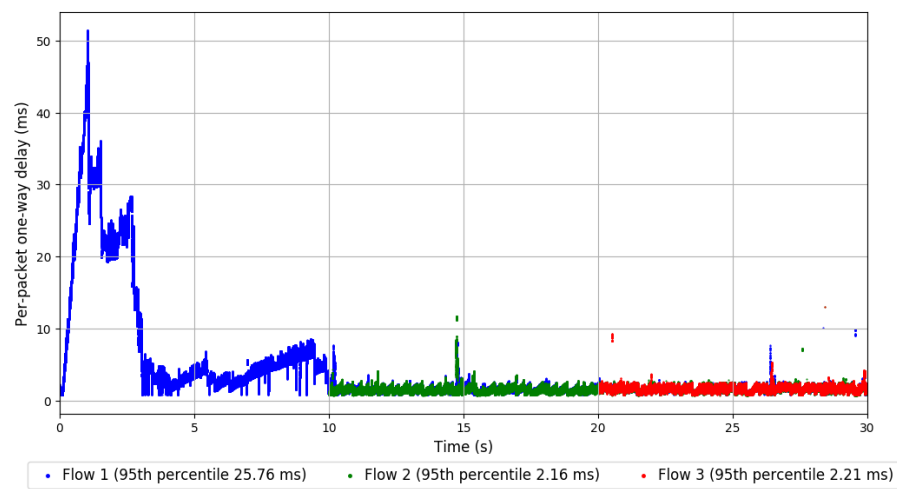
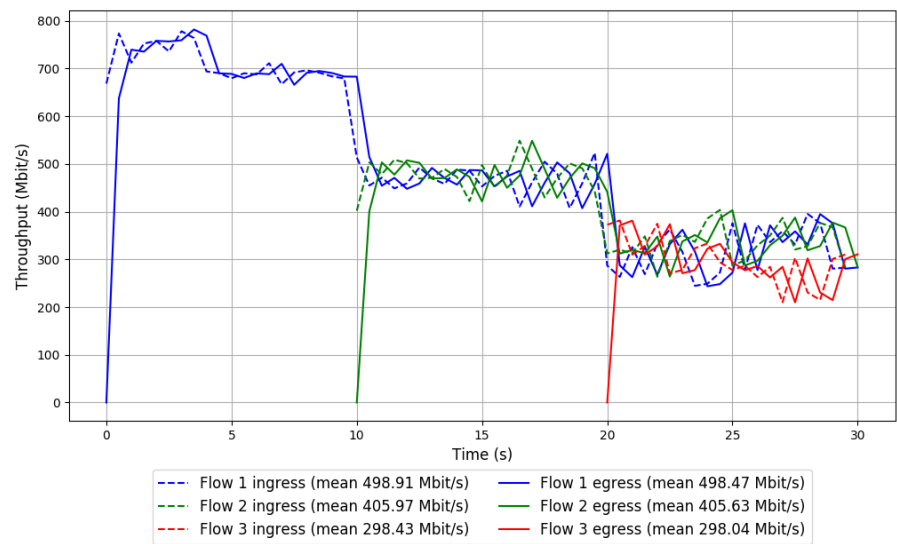
-- Flow 3:

Average throughput: 298.04 Mbit/s

95th percentile per-packet one-way delay: 2.208 ms

Loss rate: 0.14%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-03-27 02:23:15

End at: 2019-03-27 02:23:45

Local clock offset: 2.801 ms

Remote clock offset: 1.315 ms

Below is generated by plot.py at 2019-03-27 03:52:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 863.32 Mbit/s

95th percentile per-packet one-way delay: 16.276 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 516.72 Mbit/s

95th percentile per-packet one-way delay: 20.659 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 356.39 Mbit/s

95th percentile per-packet one-way delay: 2.444 ms

Loss rate: 0.13%

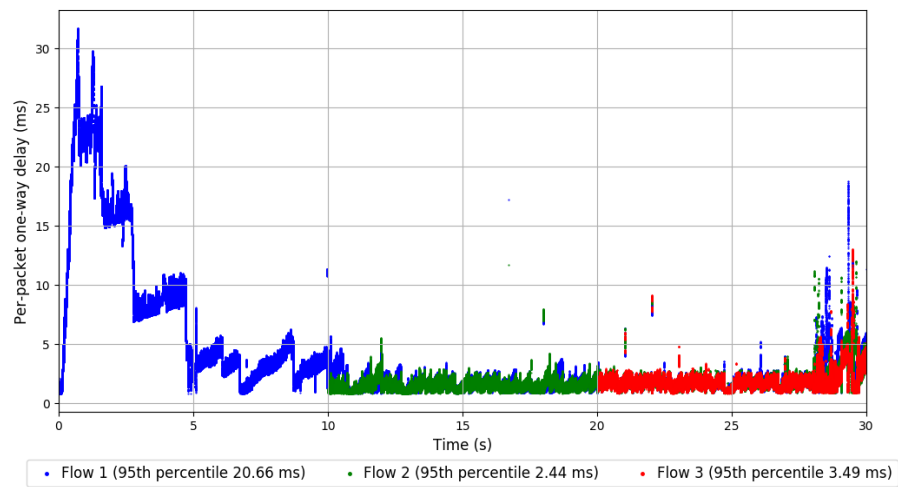
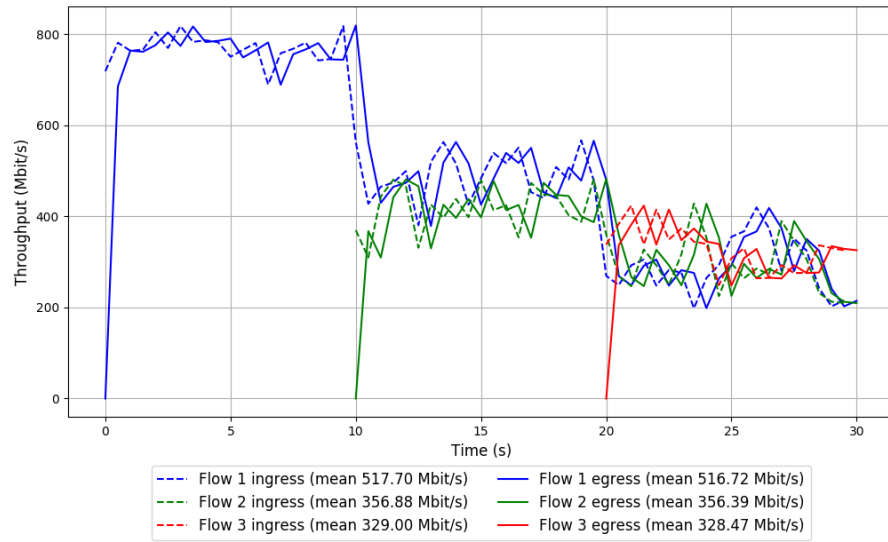
-- Flow 3:

Average throughput: 328.47 Mbit/s

95th percentile per-packet one-way delay: 3.493 ms

Loss rate: 0.15%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-03-27 02:53:25

End at: 2019-03-27 02:53:55

Local clock offset: 2.08 ms

Remote clock offset: 4.142 ms

Below is generated by plot.py at 2019-03-27 04:01:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 857.13 Mbit/s

95th percentile per-packet one-way delay: 4.596 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 501.19 Mbit/s

95th percentile per-packet one-way delay: 4.963 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 383.42 Mbit/s

95th percentile per-packet one-way delay: 2.127 ms

Loss rate: 0.04%

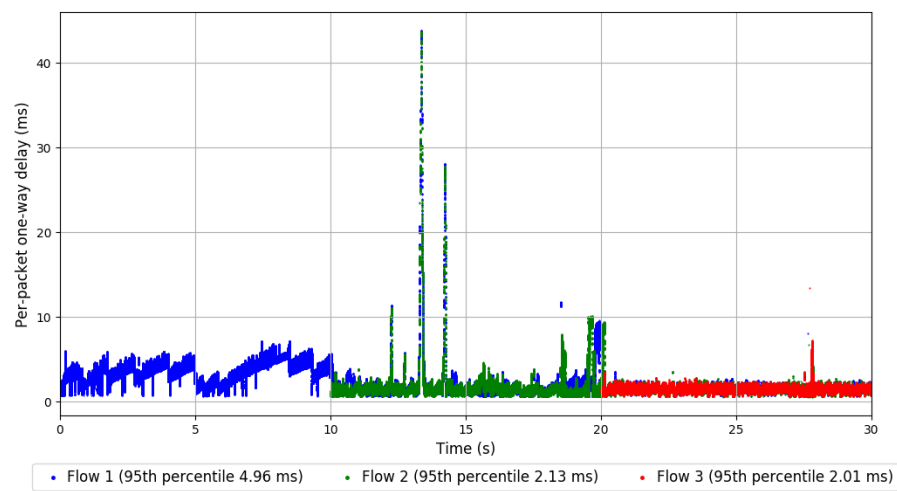
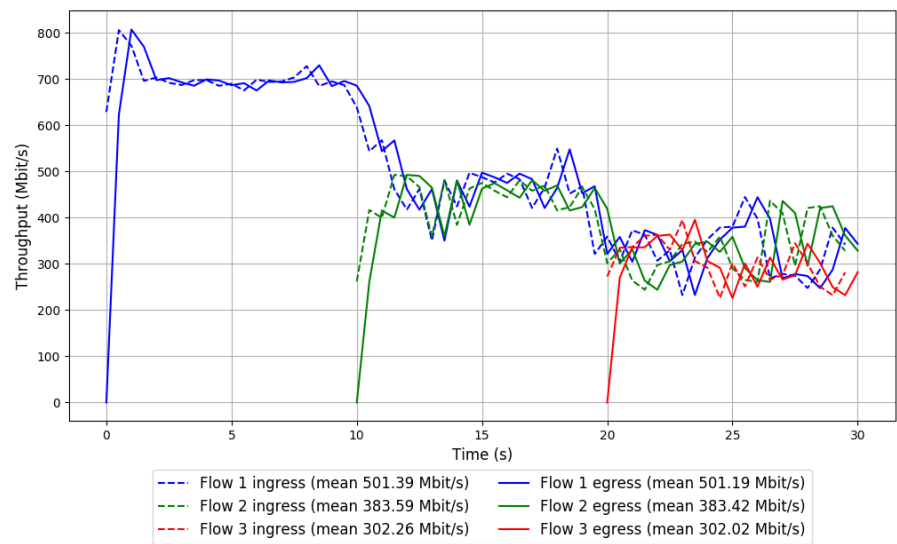
-- Flow 3:

Average throughput: 302.02 Mbit/s

95th percentile per-packet one-way delay: 2.009 ms

Loss rate: 0.08%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-03-27 03:23:36

End at: 2019-03-27 03:24:06

Local clock offset: 0.045 ms

Remote clock offset: 5.649 ms

Below is generated by plot.py at 2019-03-27 04:02:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 881.94 Mbit/s

95th percentile per-packet one-way delay: 4.111 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 525.48 Mbit/s

95th percentile per-packet one-way delay: 4.444 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 374.19 Mbit/s

95th percentile per-packet one-way delay: 2.173 ms

Loss rate: 0.06%

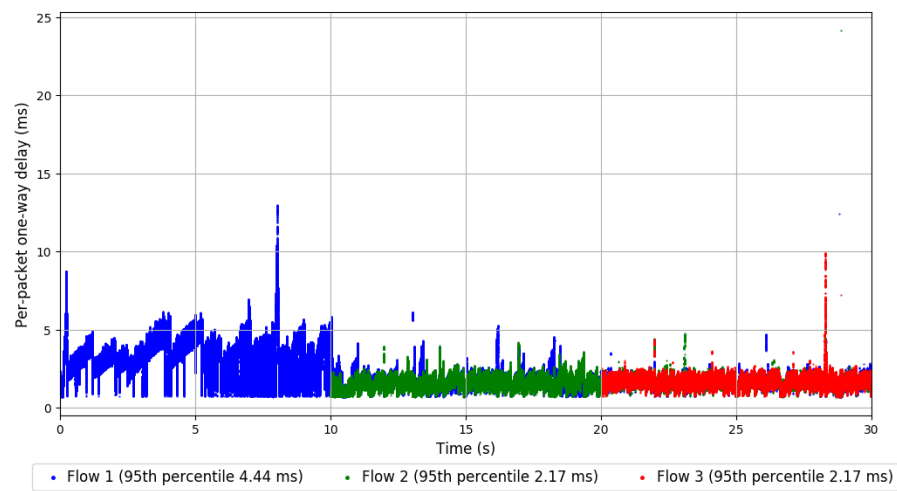
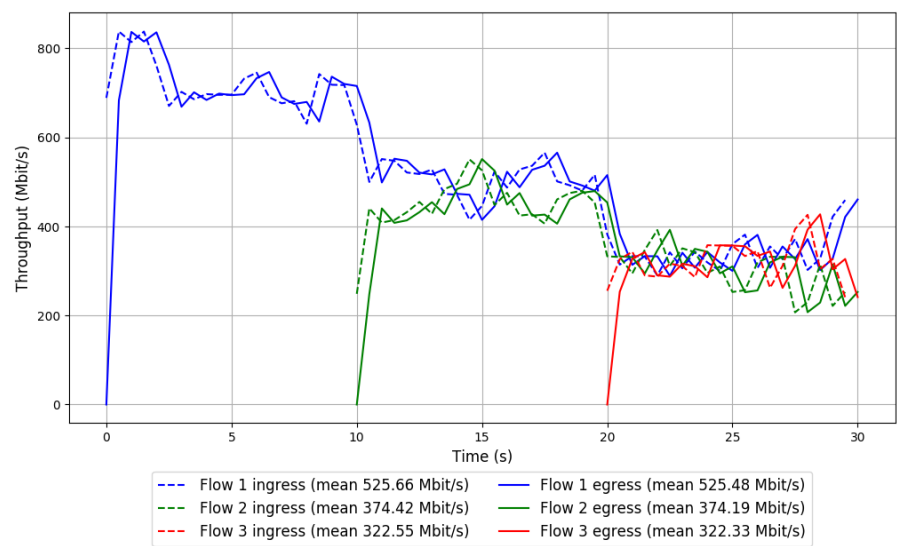
-- Flow 3:

Average throughput: 322.33 Mbit/s

95th percentile per-packet one-way delay: 2.172 ms

Loss rate: 0.07%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-03-27 01:06:04

End at: 2019-03-27 01:06:34

Local clock offset: -4.927 ms

Remote clock offset: 0.067 ms

Below is generated by plot.py at 2019-03-27 04:02:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 692.43 Mbit/s

95th percentile per-packet one-way delay: 8.343 ms

Loss rate: 11.29%

-- Flow 1:

Average throughput: 446.45 Mbit/s

95th percentile per-packet one-way delay: 9.545 ms

Loss rate: 10.53%

-- Flow 2:

Average throughput: 322.97 Mbit/s

95th percentile per-packet one-way delay: 4.765 ms

Loss rate: 13.47%

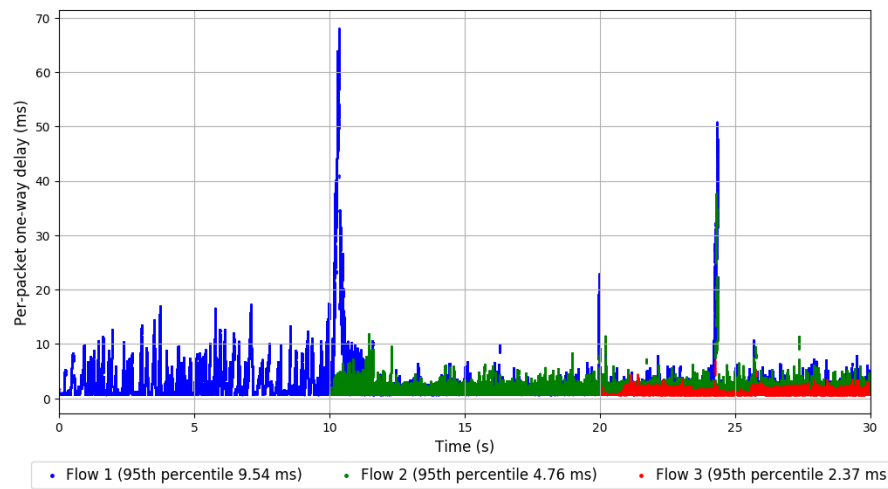
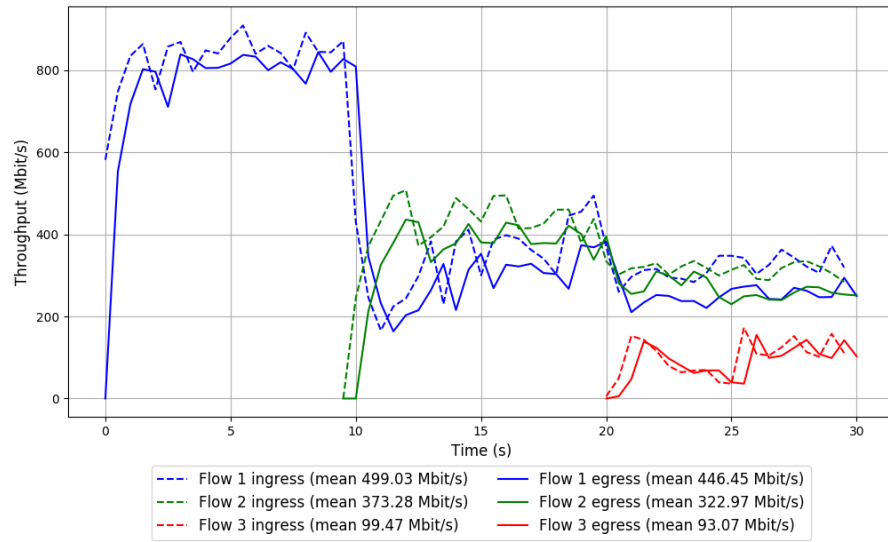
-- Flow 3:

Average throughput: 93.07 Mbit/s

95th percentile per-packet one-way delay: 2.374 ms

Loss rate: 6.44%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-03-27 01:36:13

End at: 2019-03-27 01:36:43

Local clock offset: 1.076 ms

Remote clock offset: 0.484 ms

Below is generated by plot.py at 2019-03-27 04:03:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 741.94 Mbit/s

95th percentile per-packet one-way delay: 24.955 ms

Loss rate: 16.17%

-- Flow 1:

Average throughput: 470.56 Mbit/s

95th percentile per-packet one-way delay: 27.813 ms

Loss rate: 13.22%

-- Flow 2:

Average throughput: 282.49 Mbit/s

95th percentile per-packet one-way delay: 5.246 ms

Loss rate: 21.10%

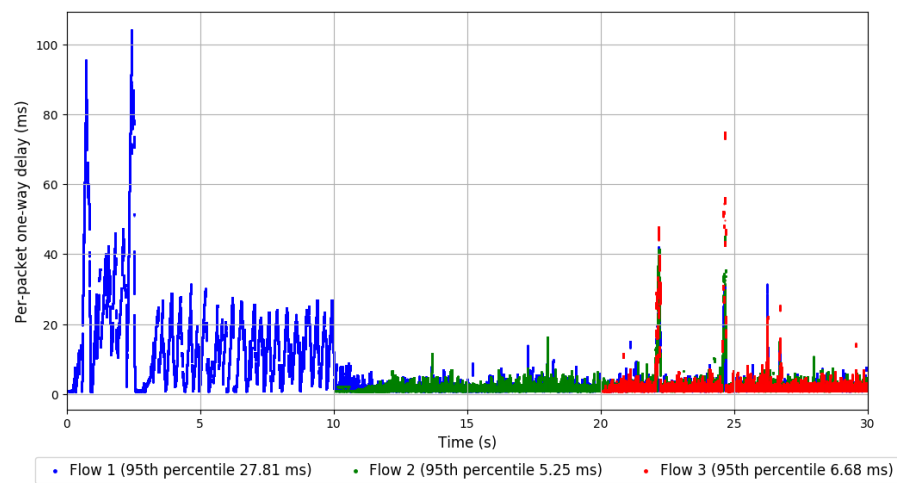
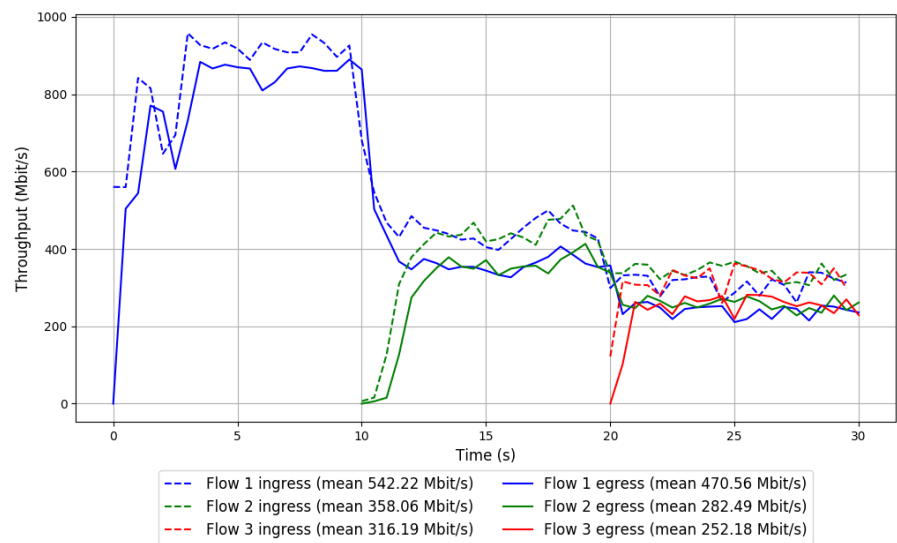
-- Flow 3:

Average throughput: 252.18 Mbit/s

95th percentile per-packet one-way delay: 6.685 ms

Loss rate: 20.24%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-03-27 02:06:25

End at: 2019-03-27 02:06:55

Local clock offset: 1.226 ms

Remote clock offset: 1.072 ms

Below is generated by plot.py at 2019-03-27 04:03:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 406.66 Mbit/s

95th percentile per-packet one-way delay: 9.014 ms

Loss rate: 10.50%

-- Flow 1:

Average throughput: 289.38 Mbit/s

95th percentile per-packet one-way delay: 10.700 ms

Loss rate: 9.15%

-- Flow 2:

Average throughput: 128.86 Mbit/s

95th percentile per-packet one-way delay: 3.563 ms

Loss rate: 15.28%

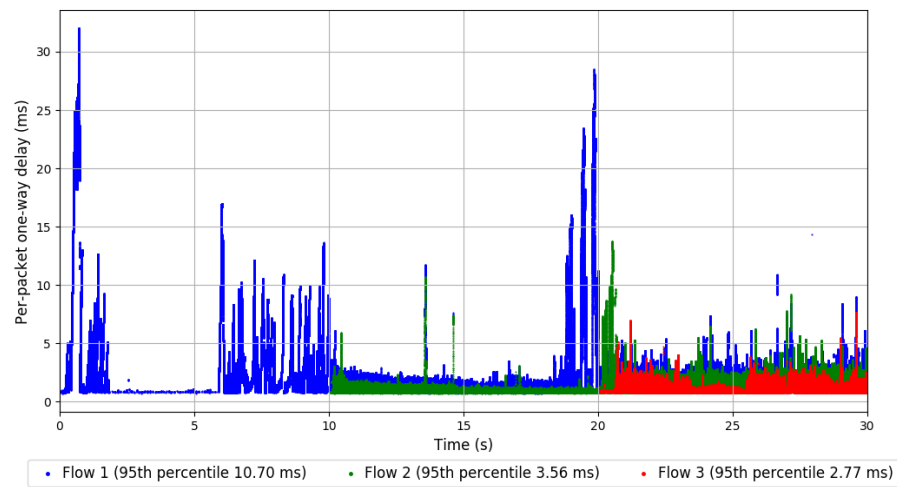
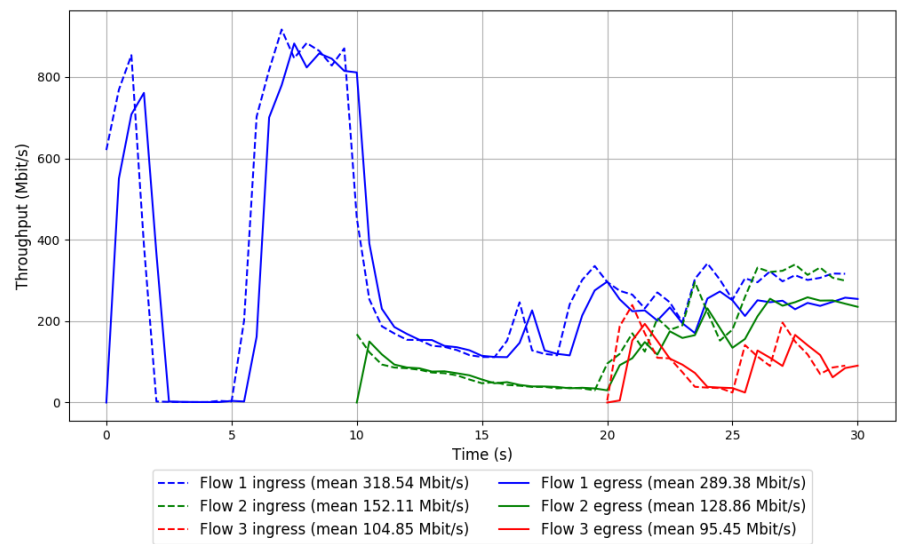
-- Flow 3:

Average throughput: 95.45 Mbit/s

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

Loss rate: 8.96%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2019-03-27 02:36:23

End at: 2019-03-27 02:36:53

Local clock offset: 4.142 ms

Remote clock offset: 2.892 ms

Below is generated by plot.py at 2019-03-27 04:03:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 596.10 Mbit/s

95th percentile per-packet one-way delay: 11.005 ms

Loss rate: 9.30%

-- Flow 1:

Average throughput: 406.08 Mbit/s

95th percentile per-packet one-way delay: 12.328 ms

Loss rate: 8.81%

-- Flow 2:

Average throughput: 244.81 Mbit/s

95th percentile per-packet one-way delay: 3.928 ms

Loss rate: 10.60%

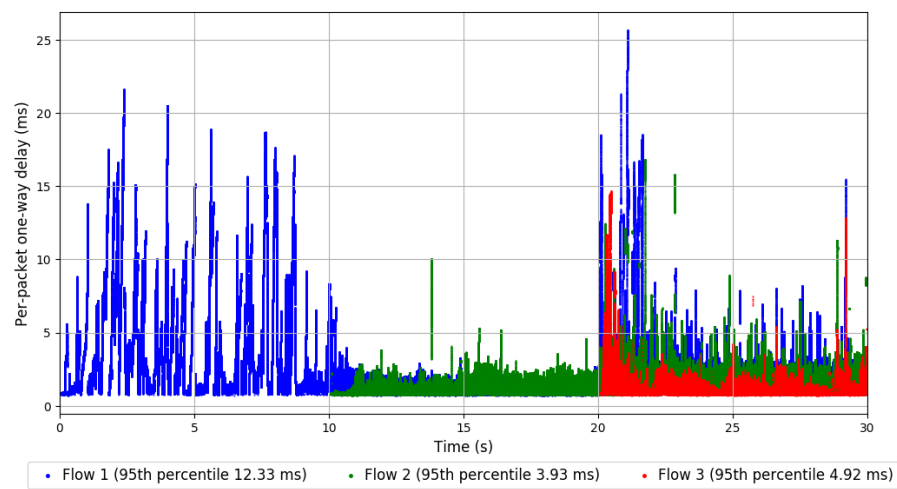
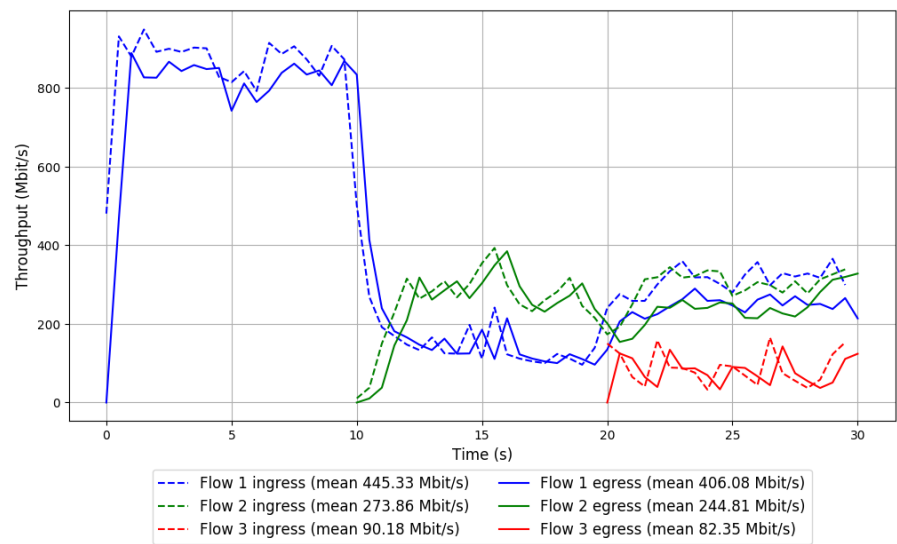
-- Flow 3:

Average throughput: 82.35 Mbit/s

95th percentile per-packet one-way delay: 4.923 ms

Loss rate: 8.65%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-03-27 03:06:34

End at: 2019-03-27 03:07:04

Local clock offset: 0.416 ms

Remote clock offset: 4.791 ms

Below is generated by plot.py at 2019-03-27 04:03:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 638.69 Mbit/s

95th percentile per-packet one-way delay: 9.461 ms

Loss rate: 12.44%

-- Flow 1:

Average throughput: 449.57 Mbit/s

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

Loss rate: 8.73%

-- Flow 2:

Average throughput: 145.53 Mbit/s

95th percentile per-packet one-way delay: 7.341 ms

Loss rate: 16.26%

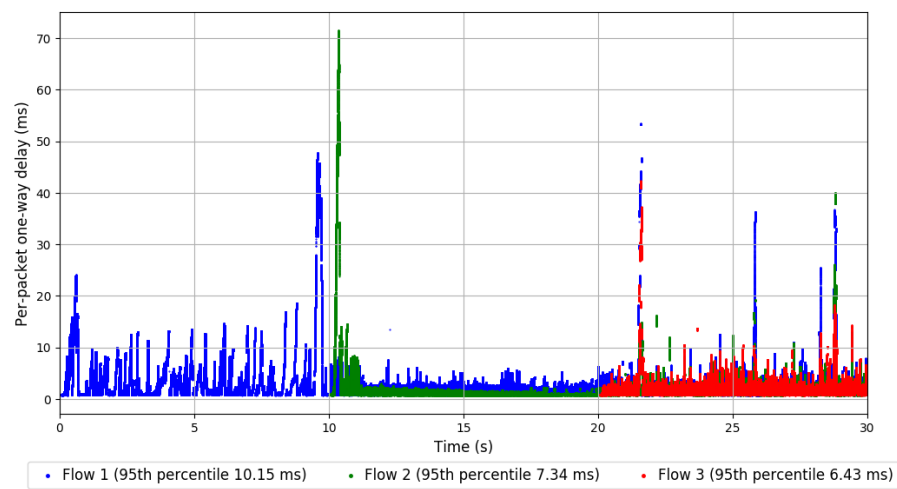
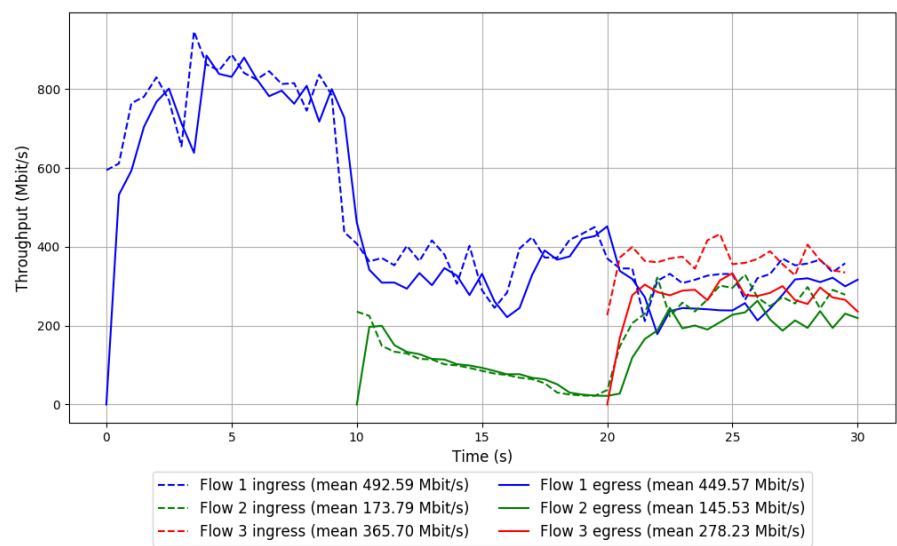
-- Flow 3:

Average throughput: 278.23 Mbit/s

95th percentile per-packet one-way delay: 6.426 ms

Loss rate: 23.89%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-03-27 01:04:39

End at: 2019-03-27 01:05:09

Local clock offset: -4.87 ms

Remote clock offset: 0.034 ms

Below is generated by plot.py at 2019-03-27 04:03:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 353.39 Mbit/s

95th percentile per-packet one-way delay: 4.665 ms

Loss rate: 3.86%

-- Flow 1:

Average throughput: 311.26 Mbit/s

95th percentile per-packet one-way delay: 4.930 ms

Loss rate: 4.09%

-- Flow 2:

Average throughput: 60.33 Mbit/s

95th percentile per-packet one-way delay: 2.004 ms

Loss rate: 2.23%

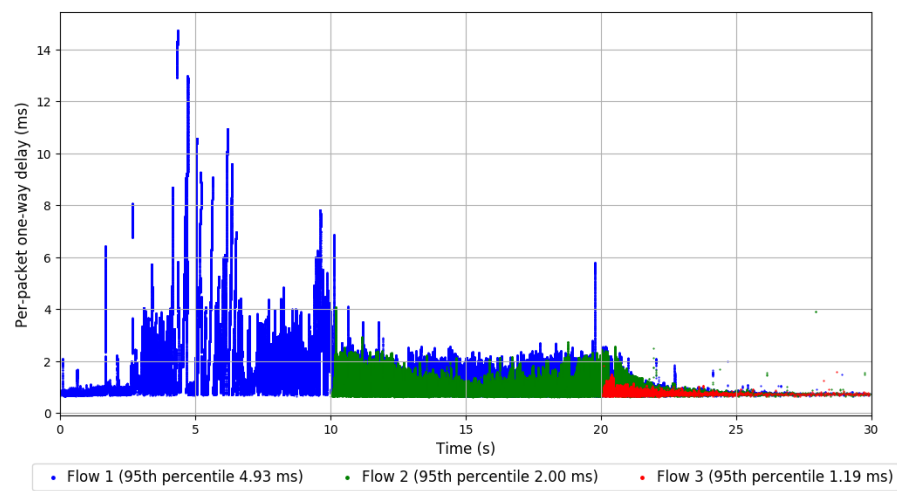
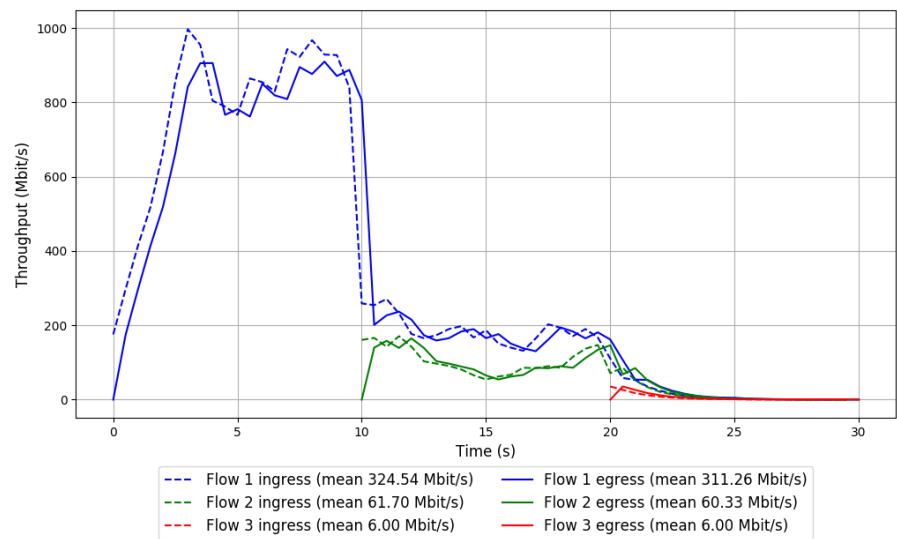
-- Flow 3:

Average throughput: 6.00 Mbit/s

95th percentile per-packet one-way delay: 1.186 ms

Loss rate: 0.00%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-03-27 01:34:49

End at: 2019-03-27 01:35:19

Local clock offset: 0.868 ms

Remote clock offset: 0.527 ms

Below is generated by plot.py at 2019-03-27 04:03:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 333.65 Mbit/s

95th percentile per-packet one-way delay: 4.601 ms

Loss rate: 4.55%

-- Flow 1:

Average throughput: 294.81 Mbit/s

95th percentile per-packet one-way delay: 4.722 ms

Loss rate: 4.55%

-- Flow 2:

Average throughput: 42.91 Mbit/s

95th percentile per-packet one-way delay: 2.485 ms

Loss rate: 4.99%

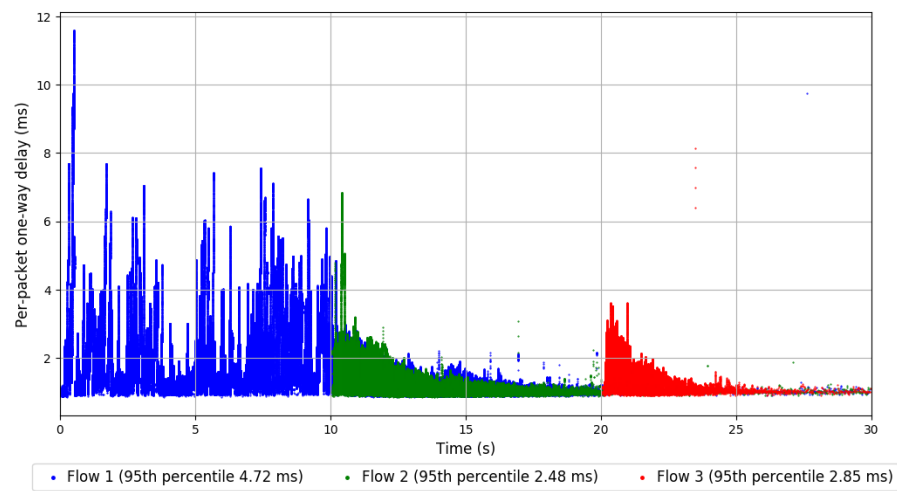
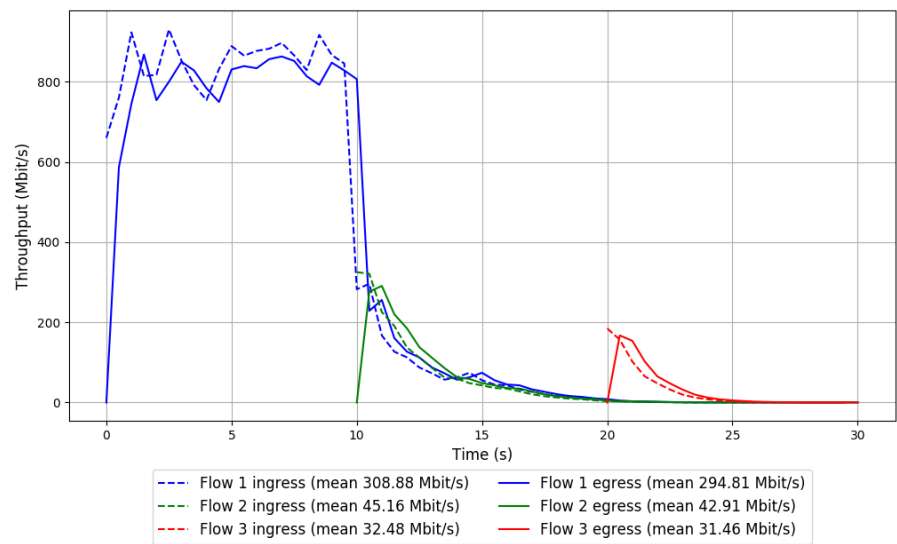
-- Flow 3:

Average throughput: 31.46 Mbit/s

95th percentile per-packet one-way delay: 2.845 ms

Loss rate: 3.16%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-03-27 02:05:01

End at: 2019-03-27 02:05:31

Local clock offset: 1.193 ms

Remote clock offset: 1.037 ms

Below is generated by plot.py at 2019-03-27 04:03:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 331.69 Mbit/s

95th percentile per-packet one-way delay: 4.774 ms

Loss rate: 3.34%

-- Flow 1:

Average throughput: 299.38 Mbit/s

95th percentile per-packet one-way delay: 4.869 ms

Loss rate: 3.28%

-- Flow 2:

Average throughput: 36.63 Mbit/s

95th percentile per-packet one-way delay: 2.177 ms

Loss rate: 2.92%

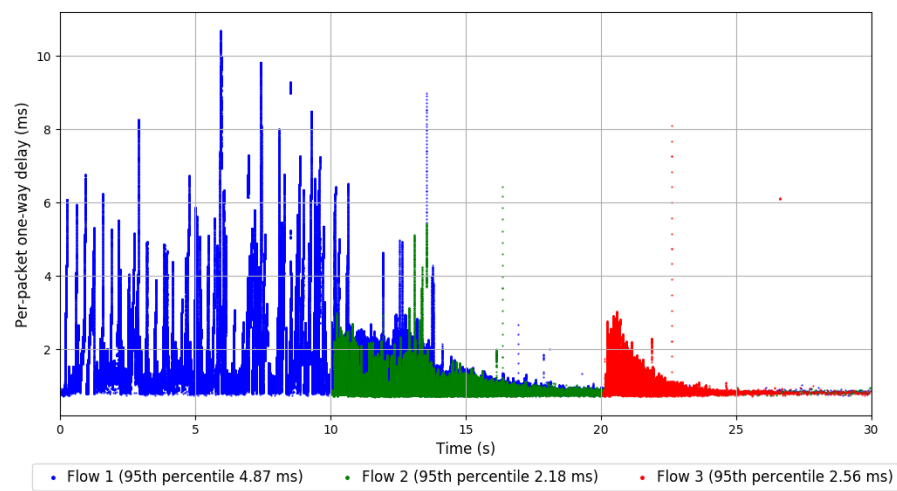
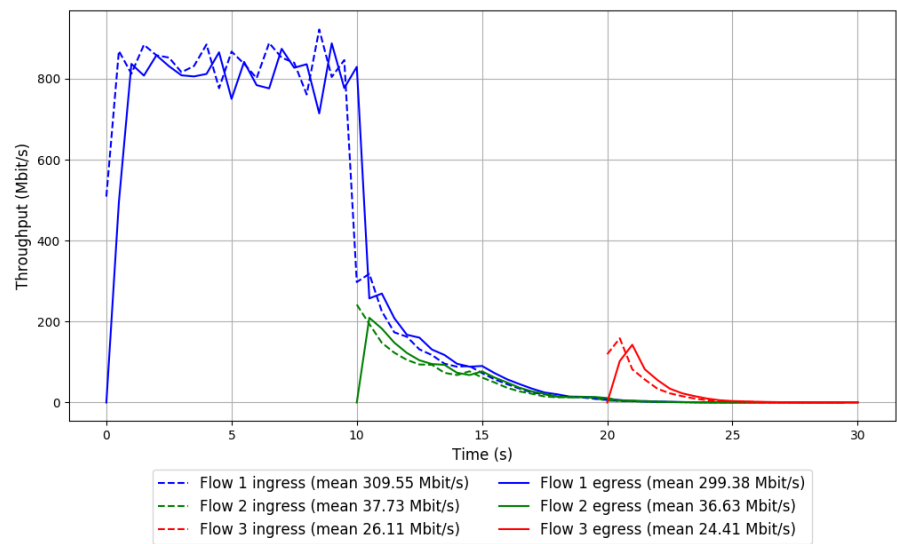
-- Flow 3:

Average throughput: 24.41 Mbit/s

95th percentile per-packet one-way delay: 2.562 ms

Loss rate: 6.53%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-03-27 02:34:59

End at: 2019-03-27 02:35:29

Local clock offset: 4.037 ms

Remote clock offset: 2.731 ms

Below is generated by plot.py at 2019-03-27 04:06:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 345.71 Mbit/s

95th percentile per-packet one-way delay: 3.578 ms

Loss rate: 2.22%

-- Flow 1:

Average throughput: 293.93 Mbit/s

95th percentile per-packet one-way delay: 3.711 ms

Loss rate: 2.04%

-- Flow 2:

Average throughput: 60.90 Mbit/s

95th percentile per-packet one-way delay: 2.141 ms

Loss rate: 2.14%

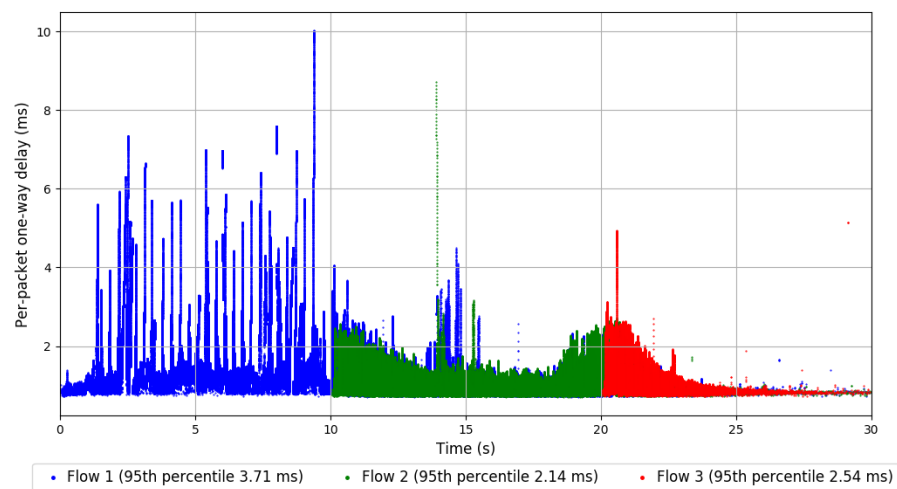
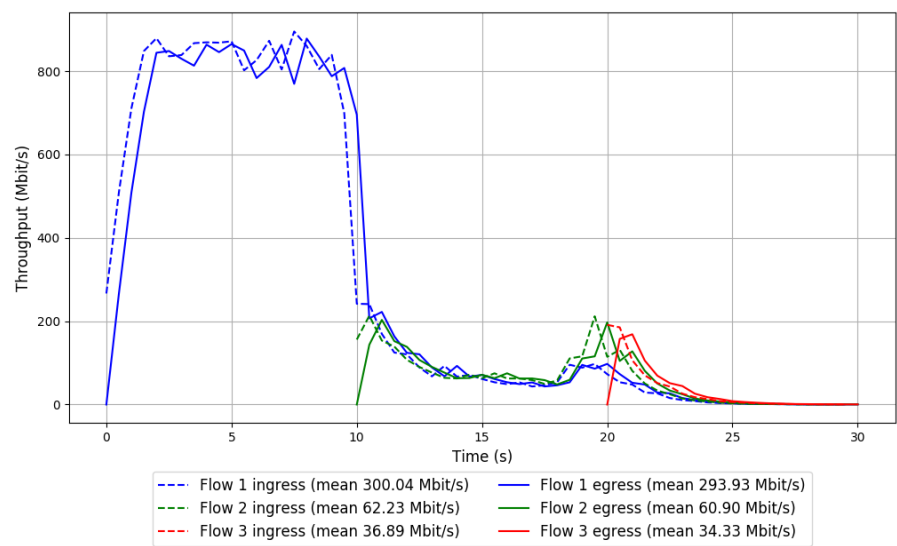
-- Flow 3:

Average throughput: 34.33 Mbit/s

95th percentile per-packet one-way delay: 2.545 ms

Loss rate: 6.93%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-03-27 03:05:11

End at: 2019-03-27 03:05:41

Local clock offset: 0.498 ms

Remote clock offset: 4.717 ms

Below is generated by plot.py at 2019-03-27 04:06:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 316.69 Mbit/s

95th percentile per-packet one-way delay: 5.978 ms

Loss rate: 2.16%

-- Flow 1:

Average throughput: 290.94 Mbit/s

95th percentile per-packet one-way delay: 6.303 ms

Loss rate: 2.11%

-- Flow 2:

Average throughput: 27.30 Mbit/s

95th percentile per-packet one-way delay: 2.114 ms

Loss rate: 1.30%

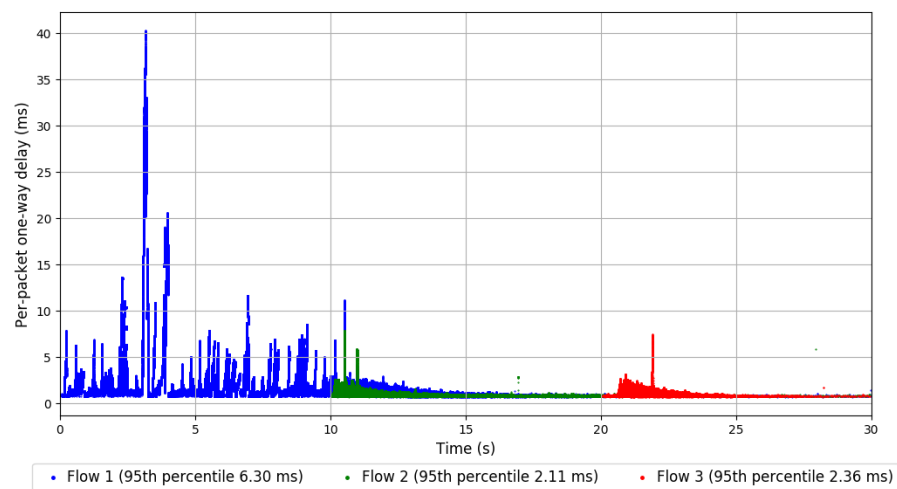
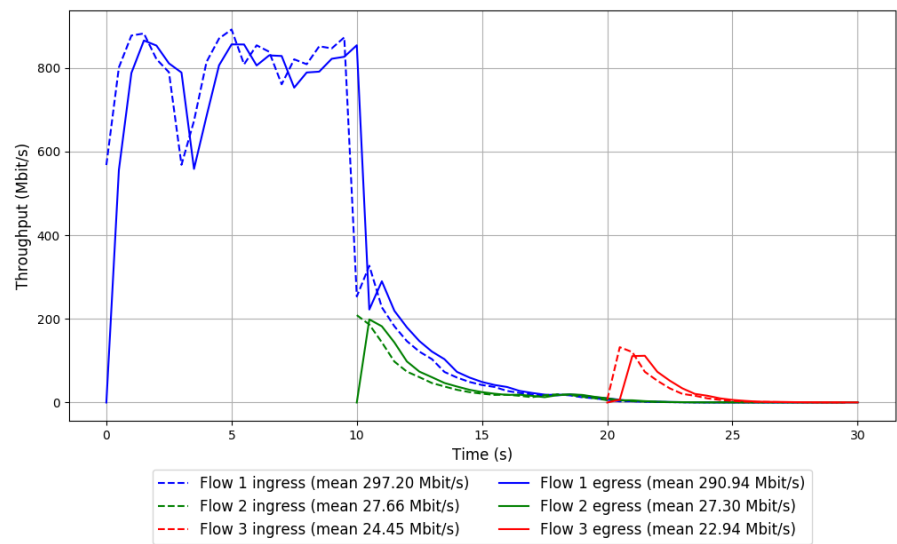
-- Flow 3:

Average throughput: 22.94 Mbit/s

95th percentile per-packet one-way delay: 2.357 ms

Loss rate: 6.21%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-03-27 01:11:41

End at: 2019-03-27 01:12:11

Local clock offset: -5.176 ms

Remote clock offset: 0.137 ms

Below is generated by plot.py at 2019-03-27 04:06:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 392.88 Mbit/s

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

Loss rate: 0.02%

-- Flow 1:

Average throughput: 210.75 Mbit/s

95th percentile per-packet one-way delay: 1.605 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 185.46 Mbit/s

95th percentile per-packet one-way delay: 1.767 ms

Loss rate: 0.02%

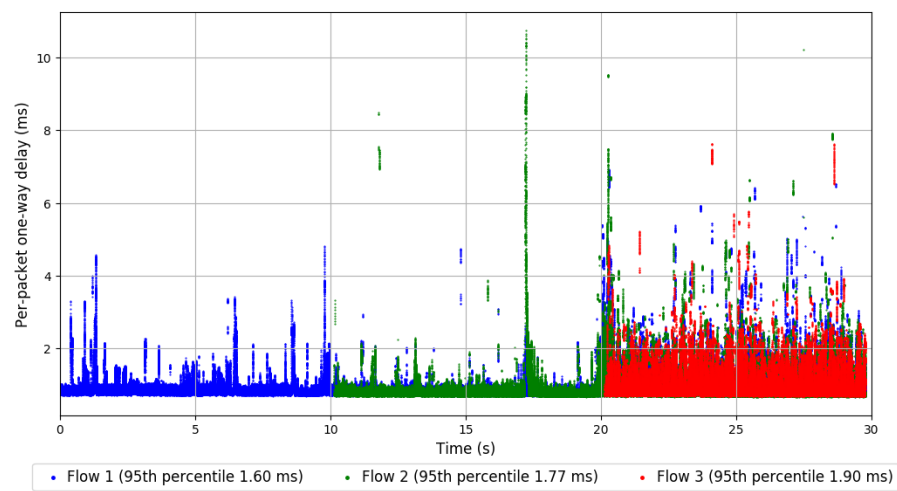
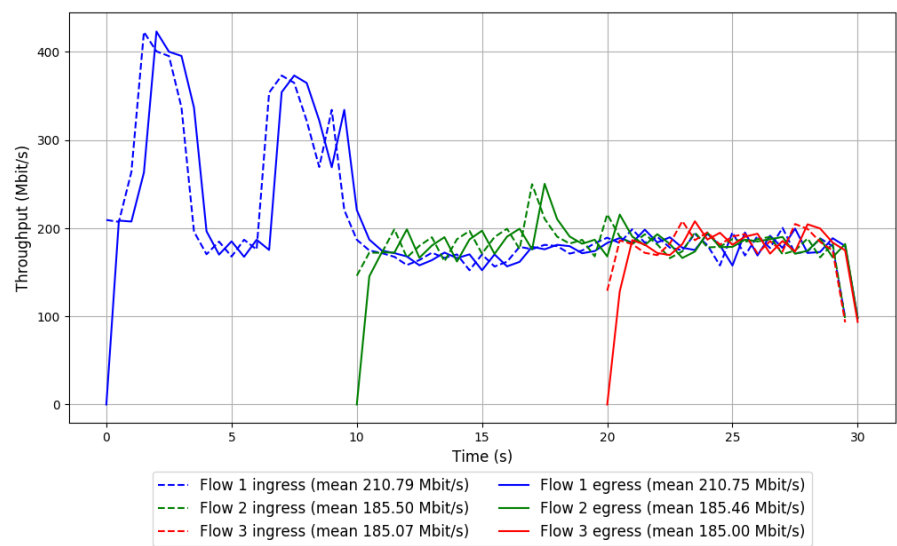
-- Flow 3:

Average throughput: 185.00 Mbit/s

95th percentile per-packet one-way delay: 1.896 ms

Loss rate: 0.04%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-03-27 01:41:52

End at: 2019-03-27 01:42:22

Local clock offset: 1.693 ms

Remote clock offset: 0.631 ms

Below is generated by plot.py at 2019-03-27 04:06:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 377.95 Mbit/s

95th percentile per-packet one-way delay: 2.065 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 197.53 Mbit/s

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

Loss rate: 0.04%

-- Flow 2:

Average throughput: 185.85 Mbit/s

95th percentile per-packet one-way delay: 2.052 ms

Loss rate: 0.06%

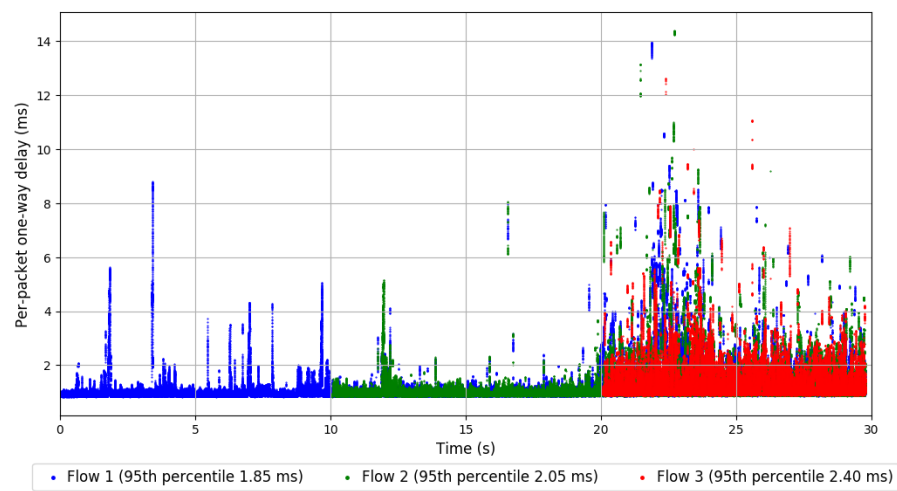
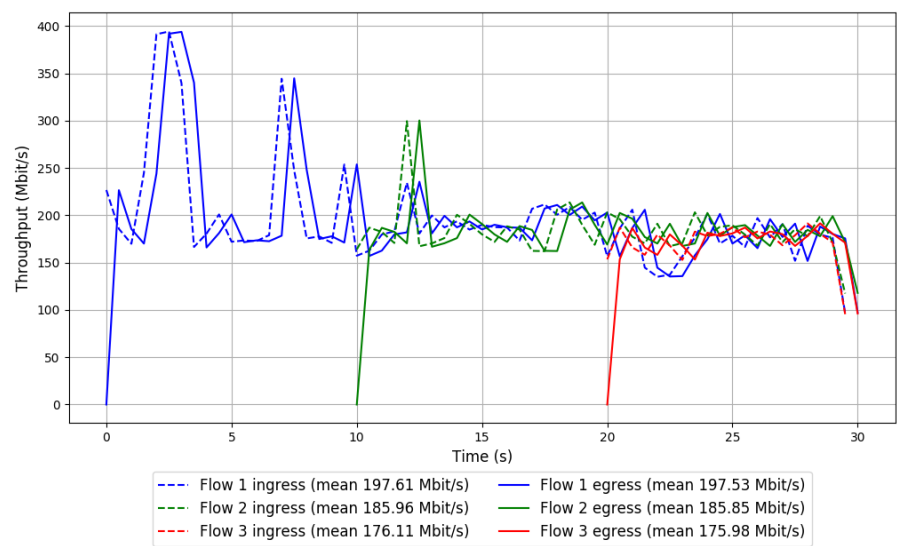
-- Flow 3:

Average throughput: 175.98 Mbit/s

95th percentile per-packet one-way delay: 2.397 ms

Loss rate: 0.07%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-03-27 02:11:58

End at: 2019-03-27 02:12:28

Local clock offset: 1.393 ms

Remote clock offset: 1.241 ms

Below is generated by plot.py at 2019-03-27 04:07:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 379.80 Mbit/s

95th percentile per-packet one-way delay: 1.918 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 195.95 Mbit/s

95th percentile per-packet one-way delay: 1.746 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 188.77 Mbit/s

95th percentile per-packet one-way delay: 1.889 ms

Loss rate: 0.03%

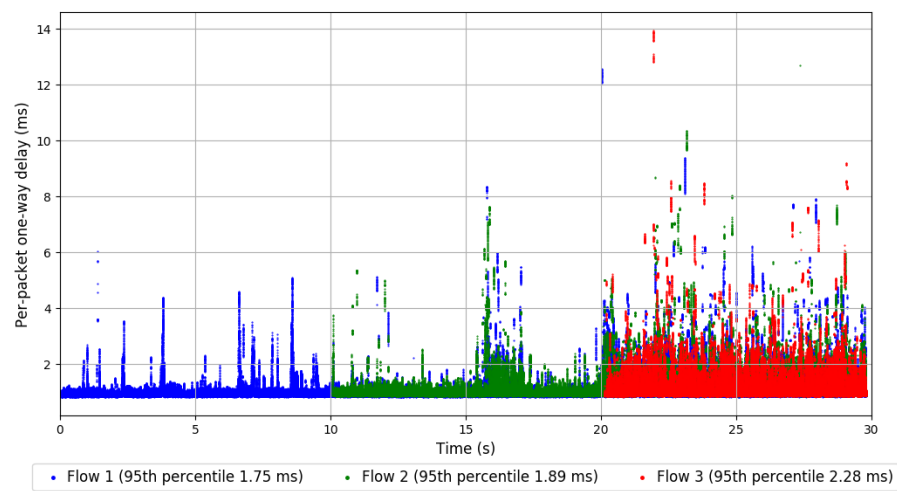
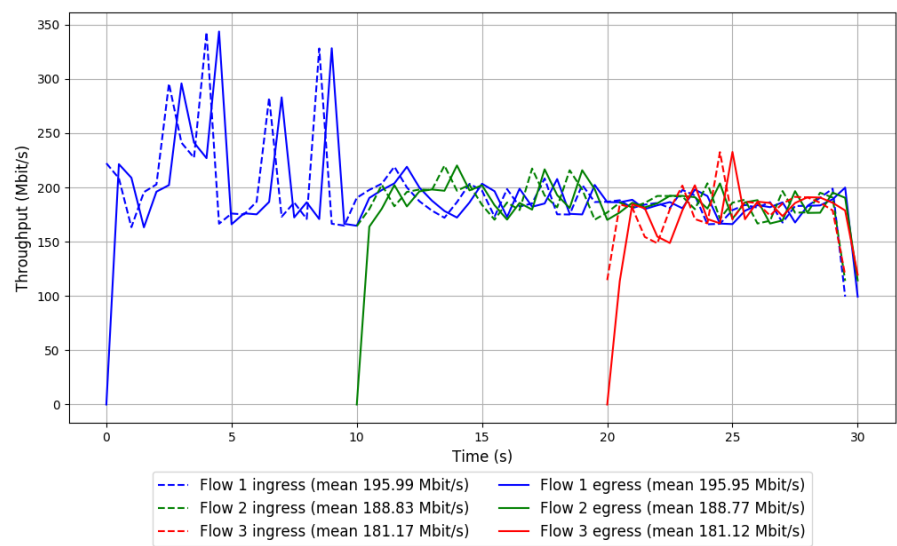
-- Flow 3:

Average throughput: 181.12 Mbit/s

95th percentile per-packet one-way delay: 2.279 ms

Loss rate: 0.03%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-03-27 02:42:08

End at: 2019-03-27 02:42:38

Local clock offset: 4.554 ms

Remote clock offset: 3.369 ms

Below is generated by plot.py at 2019-03-27 04:07:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 375.56 Mbit/s

95th percentile per-packet one-way delay: 1.904 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 193.25 Mbit/s

95th percentile per-packet one-way delay: 1.698 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 184.42 Mbit/s

95th percentile per-packet one-way delay: 1.945 ms

Loss rate: 0.05%

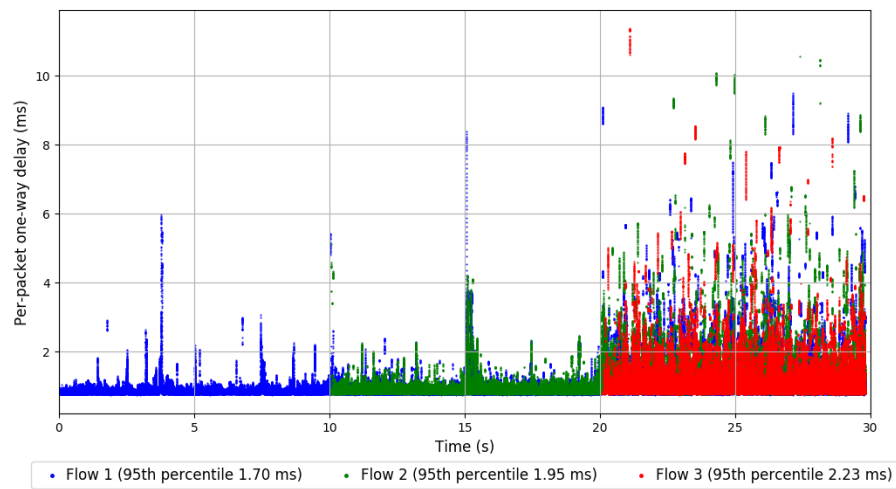
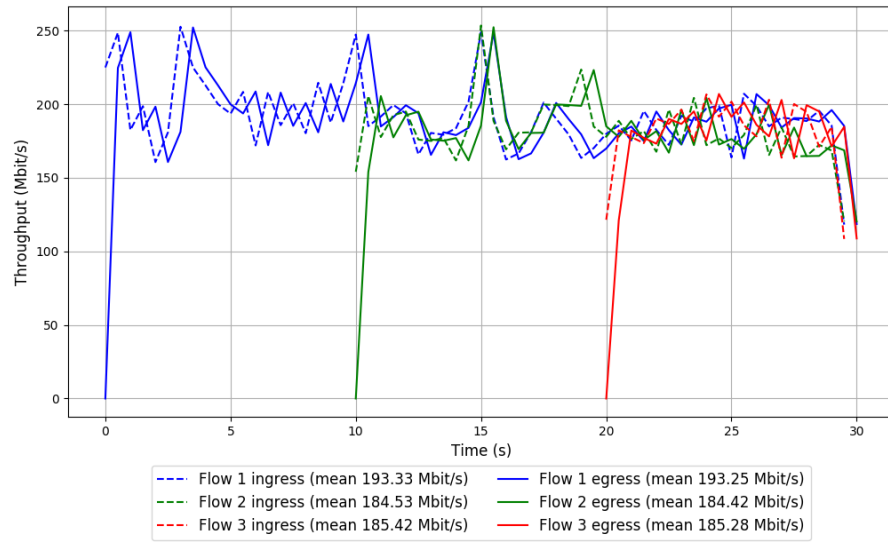
-- Flow 3:

Average throughput: 185.28 Mbit/s

95th percentile per-packet one-way delay: 2.227 ms

Loss rate: 0.08%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-03-27 03:12:18

End at: 2019-03-27 03:12:48

Local clock offset: 0.162 ms

Remote clock offset: 5.06 ms

Below is generated by plot.py at 2019-03-27 04:07:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 372.17 Mbit/s

95th percentile per-packet one-way delay: 1.860 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 194.71 Mbit/s

95th percentile per-packet one-way delay: 1.751 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 181.08 Mbit/s

95th percentile per-packet one-way delay: 1.791 ms

Loss rate: 0.00%

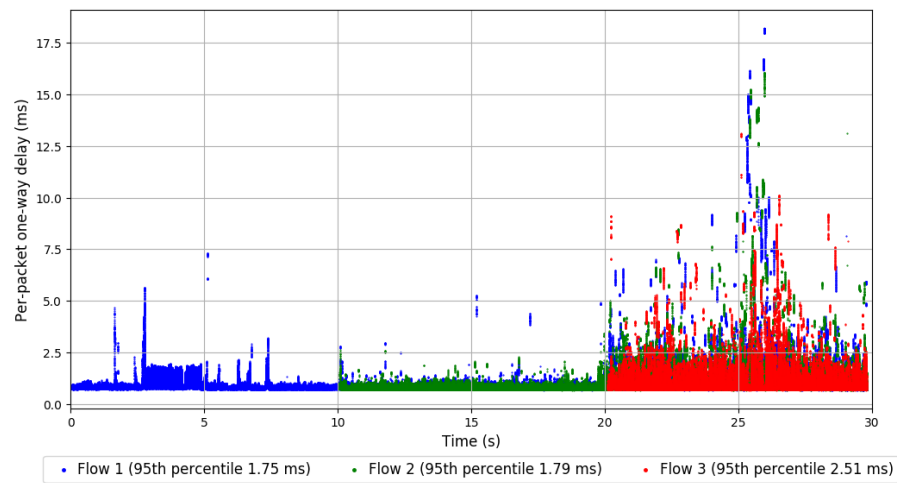
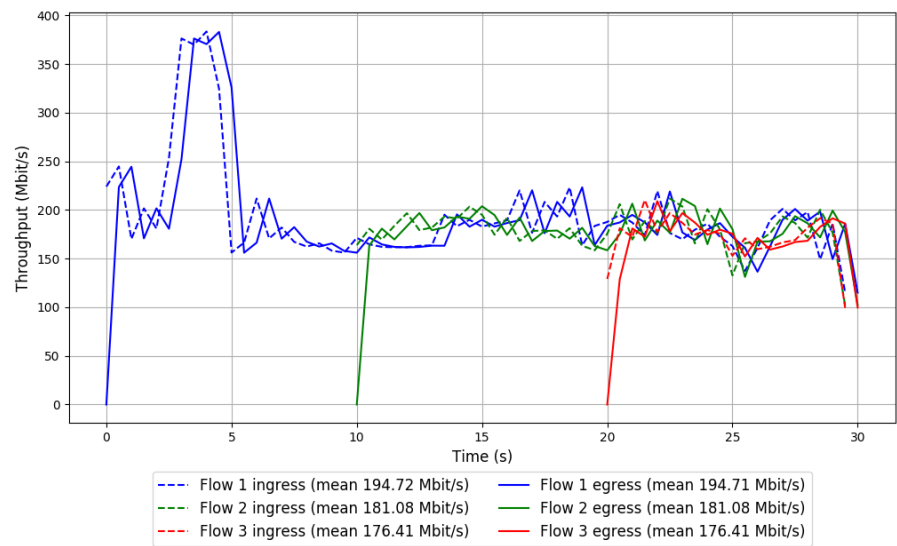
-- Flow 3:

Average throughput: 176.41 Mbit/s

95th percentile per-packet one-way delay: 2.514 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-03-27 01:21:36

End at: 2019-03-27 01:22:06

Local clock offset: -2.431 ms

Remote clock offset: 0.365 ms

Below is generated by plot.py at 2019-03-27 04:07:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 352.56 Mbit/s

95th percentile per-packet one-way delay: 2.359 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 188.07 Mbit/s

95th percentile per-packet one-way delay: 2.197 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 183.95 Mbit/s

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

Loss rate: 0.03%

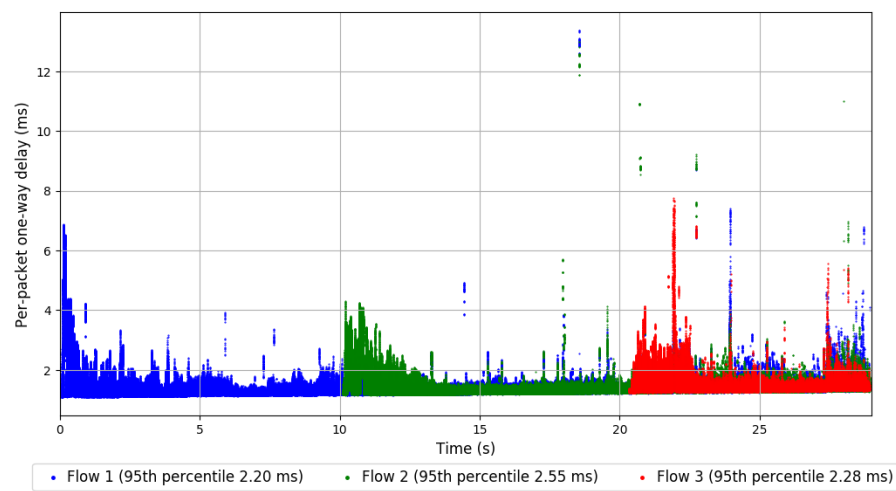
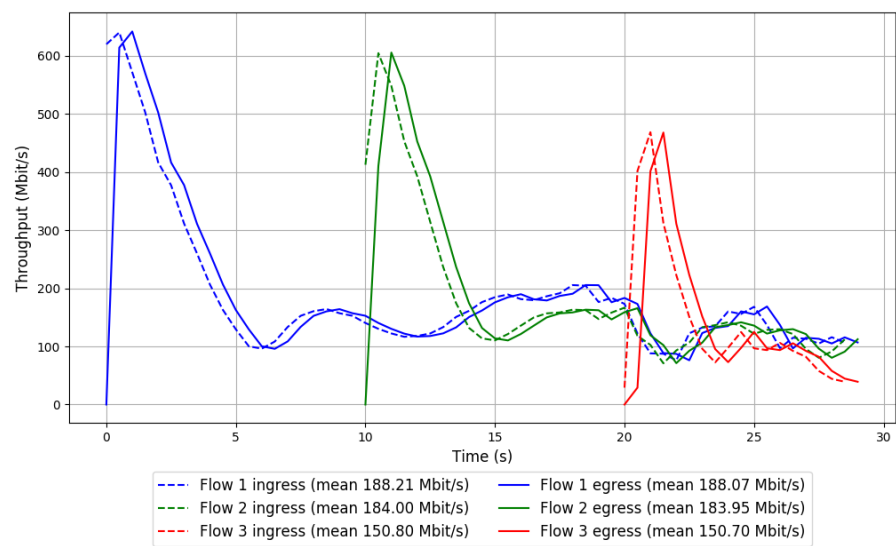
-- Flow 3:

Average throughput: 150.70 Mbit/s

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

Loss rate: 0.06%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-03-27 01:51:44

End at: 2019-03-27 01:52:14

Local clock offset: 1.431 ms

Remote clock offset: 0.86 ms

Below is generated by plot.py at 2019-03-27 04:10:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 384.86 Mbit/s

95th percentile per-packet one-way delay: 1.906 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 219.08 Mbit/s

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

Loss rate: 0.03%

-- Flow 2:

Average throughput: 166.38 Mbit/s

95th percentile per-packet one-way delay: 1.938 ms

Loss rate: 0.02%

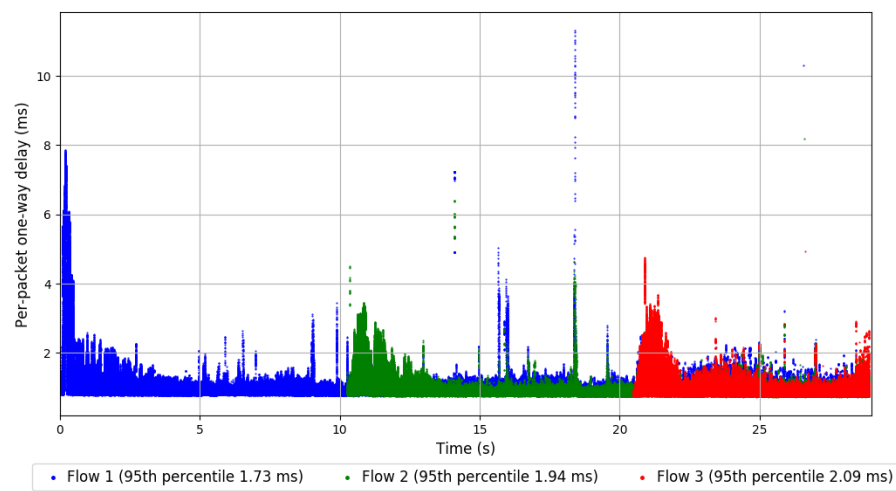
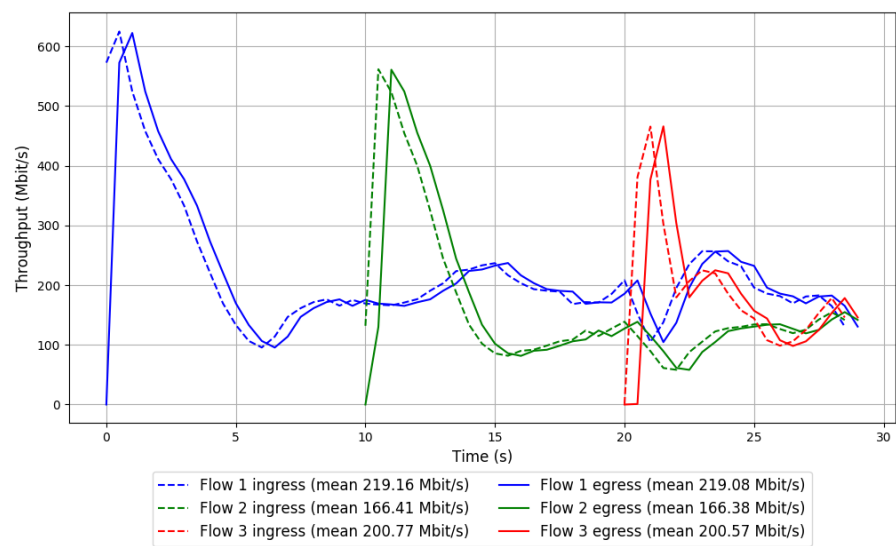
-- Flow 3:

Average throughput: 200.57 Mbit/s

95th percentile per-packet one-way delay: 2.091 ms

Loss rate: 0.09%

Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2019-03-27 02:21:50

End at: 2019-03-27 02:22:20

Local clock offset: 2.638 ms

Remote clock offset: 1.352 ms

Below is generated by plot.py at 2019-03-27 04:10:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 335.83 Mbit/s

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

Loss rate: 0.15%

-- Flow 1:

Average throughput: 152.42 Mbit/s

95th percentile per-packet one-way delay: 1.638 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 190.82 Mbit/s

95th percentile per-packet one-way delay: 2.162 ms

Loss rate: 0.14%

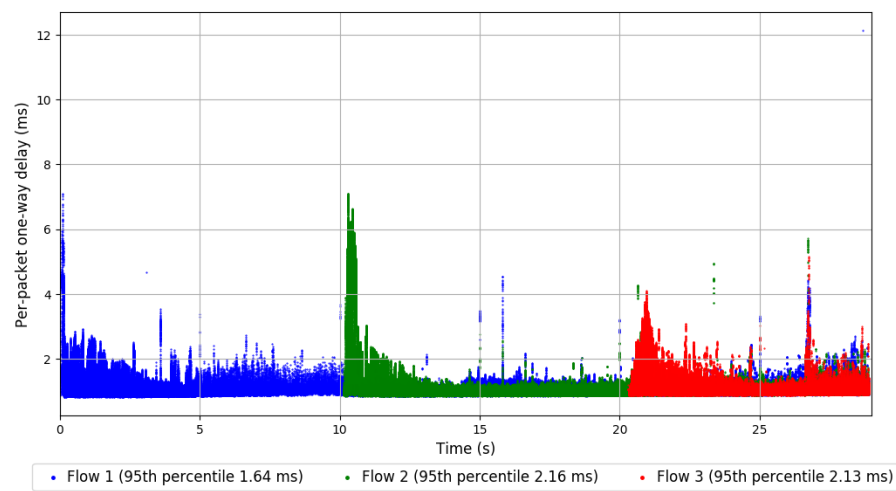
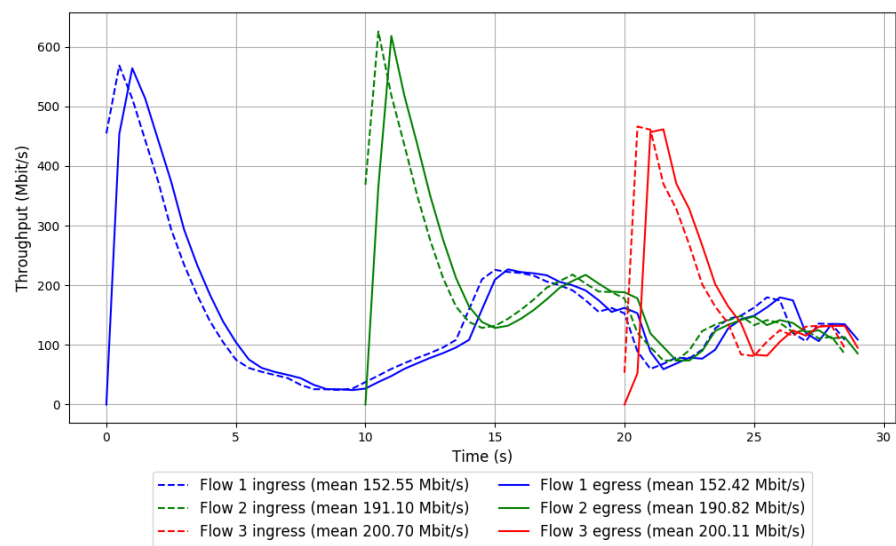
-- Flow 3:

Average throughput: 200.11 Mbit/s

95th percentile per-packet one-way delay: 2.130 ms

Loss rate: 0.30%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-03-27 02:51:59

End at: 2019-03-27 02:52:29

Local clock offset: 2.495 ms

Remote clock offset: 4.016 ms

Below is generated by plot.py at 2019-03-27 04:10:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 368.59 Mbit/s

95th percentile per-packet one-way delay: 1.603 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 181.63 Mbit/s

95th percentile per-packet one-way delay: 1.693 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 196.25 Mbit/s

95th percentile per-packet one-way delay: 1.423 ms

Loss rate: 0.00%

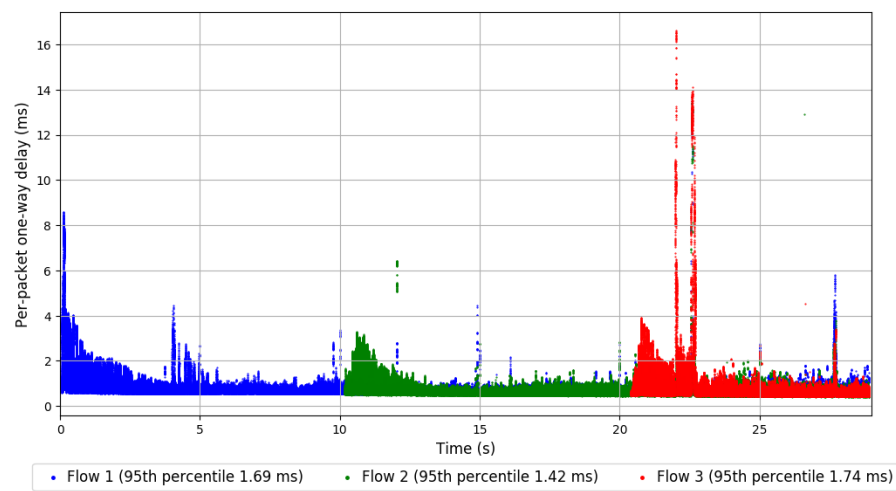
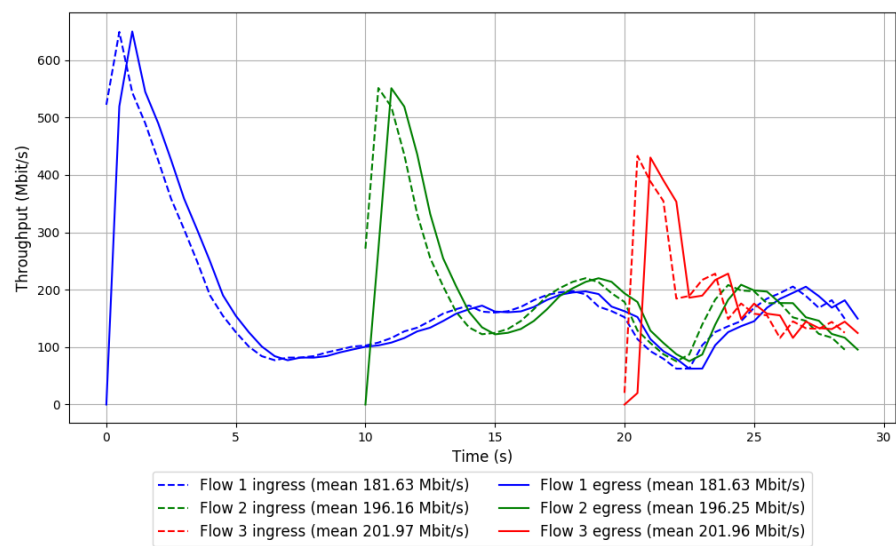
-- Flow 3:

Average throughput: 201.96 Mbit/s

95th percentile per-packet one-way delay: 1.738 ms

Loss rate: 0.01%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-03-27 03:22:10

End at: 2019-03-27 03:22:40

Local clock offset: 0.037 ms

Remote clock offset: 5.601 ms

Below is generated by plot.py at 2019-03-27 04:11:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 362.00 Mbit/s

95th percentile per-packet one-way delay: 1.601 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 174.21 Mbit/s

95th percentile per-packet one-way delay: 1.419 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 201.61 Mbit/s

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

Loss rate: 0.00%

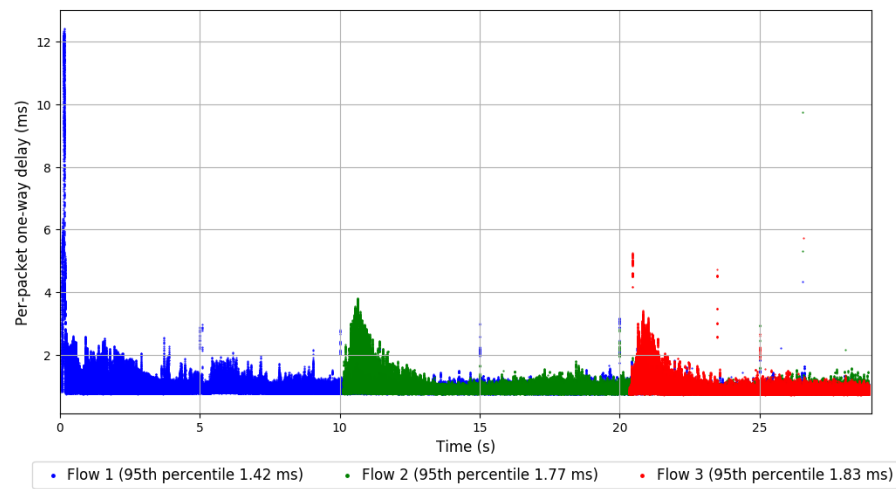
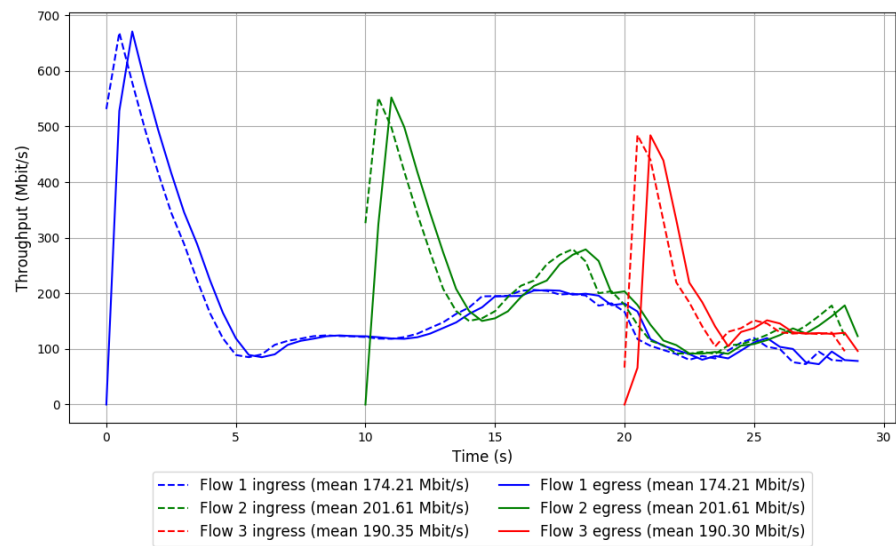
-- Flow 3:

Average throughput: 190.30 Mbit/s

95th percentile per-packet one-way delay: 1.827 ms

Loss rate: 0.02%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-03-27 01:07:40

End at: 2019-03-27 01:08:10

Local clock offset: -5.016 ms

Remote clock offset: 0.058 ms

Below is generated by plot.py at 2019-03-27 04:11:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 173.34 Mbit/s

95th percentile per-packet one-way delay: 1.711 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 58.60 Mbit/s

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

Loss rate: 0.02%

-- Flow 2:

Average throughput: 85.03 Mbit/s

95th percentile per-packet one-way delay: 1.607 ms

Loss rate: 0.07%

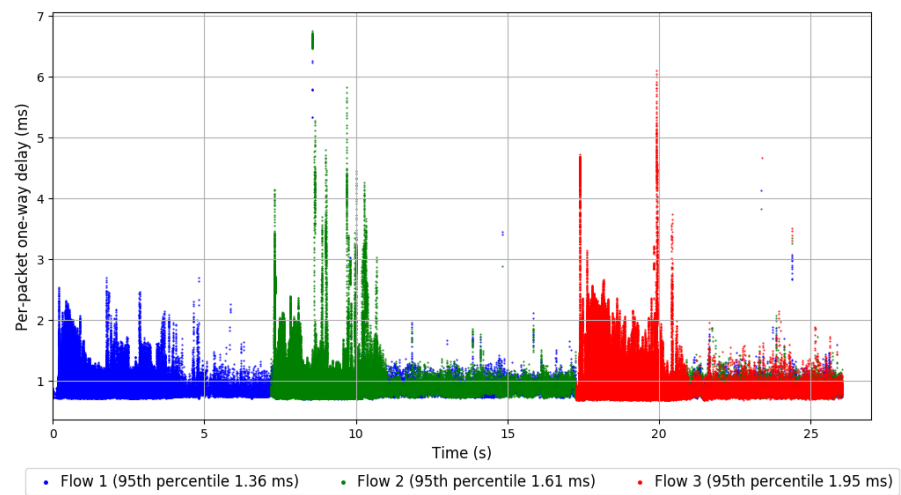
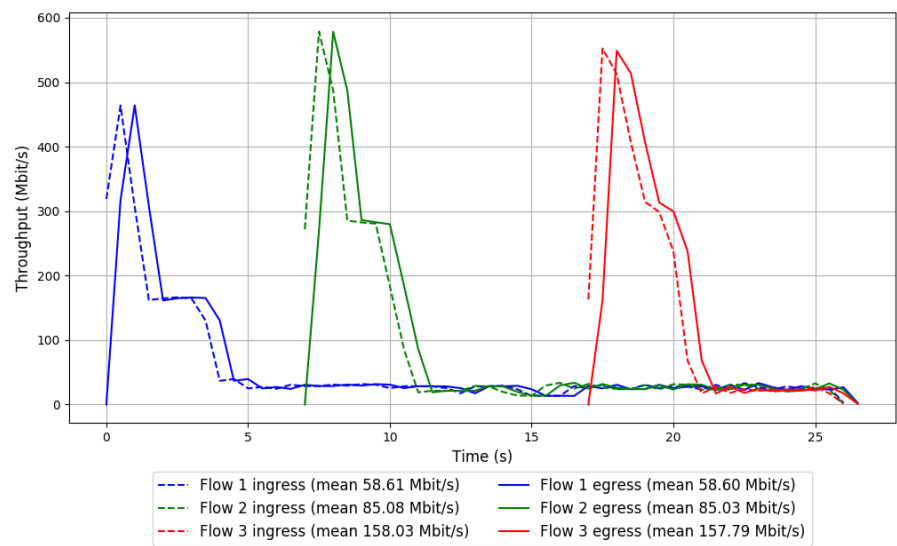
-- Flow 3:

Average throughput: 157.79 Mbit/s

95th percentile per-packet one-way delay: 1.947 ms

Loss rate: 0.15%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-03-27 01:37:53

End at: 2019-03-27 01:38:23

Local clock offset: 1.262 ms

Remote clock offset: 0.58 ms

Below is generated by plot.py at 2019-03-27 04:11:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 210.21 Mbit/s

95th percentile per-packet one-way delay: 2.056 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 52.35 Mbit/s

95th percentile per-packet one-way delay: 1.598 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 164.83 Mbit/s

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

Loss rate: 0.02%

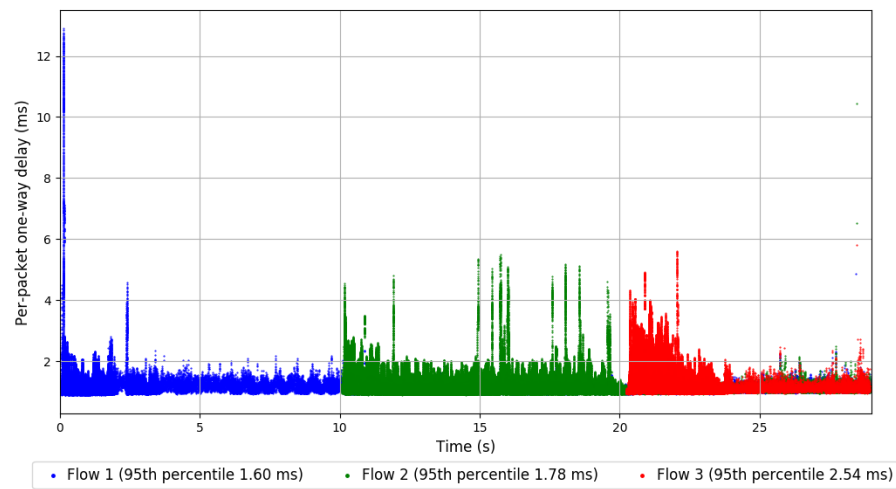
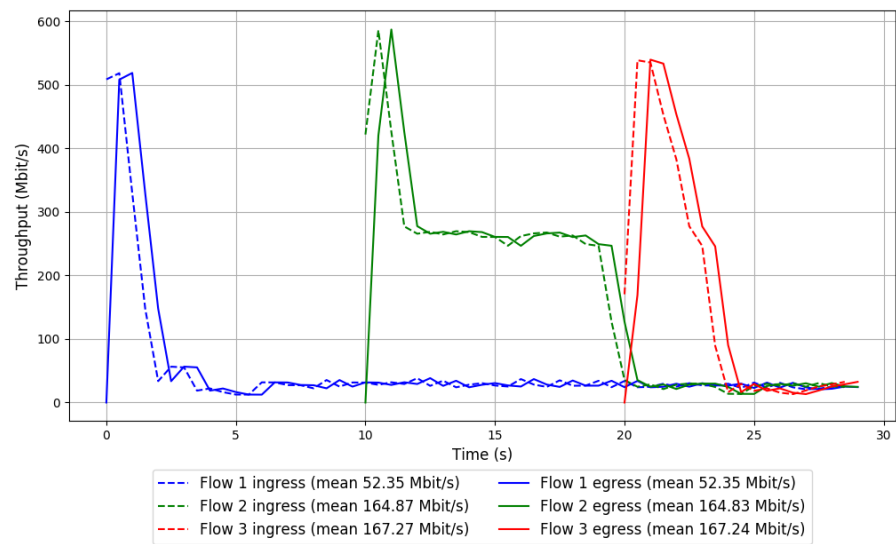
-- Flow 3:

Average throughput: 167.24 Mbit/s

95th percentile per-packet one-way delay: 2.535 ms

Loss rate: 0.01%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-03-27 02:07:52

End at: 2019-03-27 02:08:22

Local clock offset: 1.255 ms

Remote clock offset: 1.14 ms

Below is generated by plot.py at 2019-03-27 04:11:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 168.96 Mbit/s

95th percentile per-packet one-way delay: 2.869 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 48.49 Mbit/s

95th percentile per-packet one-way delay: 1.930 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 112.55 Mbit/s

95th percentile per-packet one-way delay: 2.992 ms

Loss rate: 0.09%

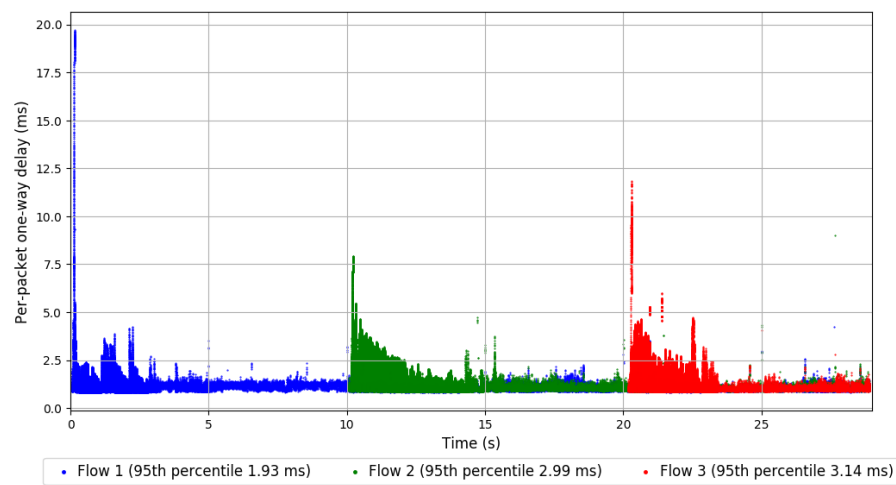
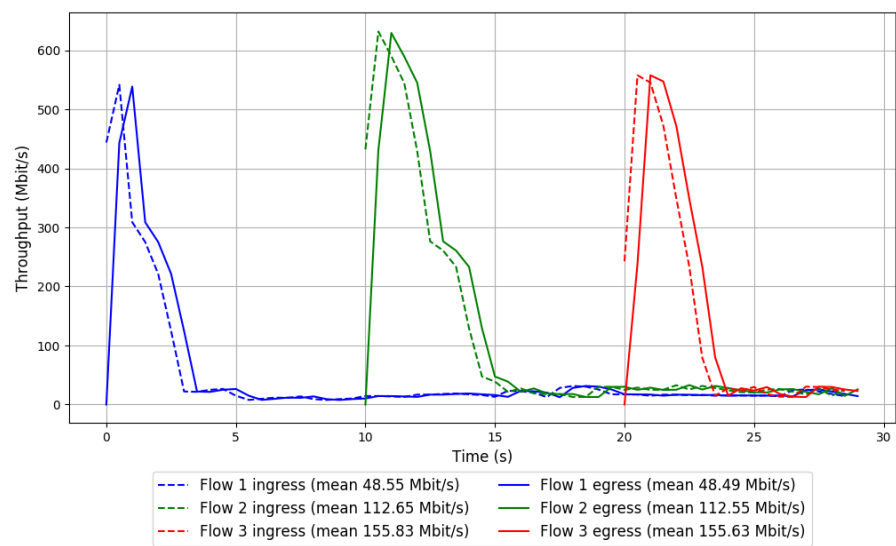
-- Flow 3:

Average throughput: 155.63 Mbit/s

95th percentile per-packet one-way delay: 3.144 ms

Loss rate: 0.13%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-03-27 02:37:56

End at: 2019-03-27 02:38:26

Local clock offset: 4.266 ms

Remote clock offset: 3.037 ms

Below is generated by plot.py at 2019-03-27 04:12:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 354.91 Mbit/s

95th percentile per-packet one-way delay: 2.367 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 221.63 Mbit/s

95th percentile per-packet one-way delay: 1.486 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 125.29 Mbit/s

95th percentile per-packet one-way delay: 3.040 ms

Loss rate: 0.20%

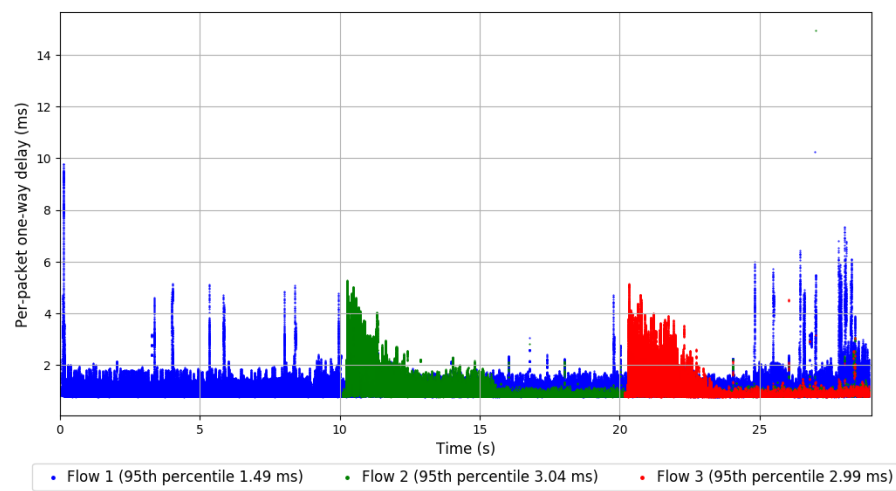
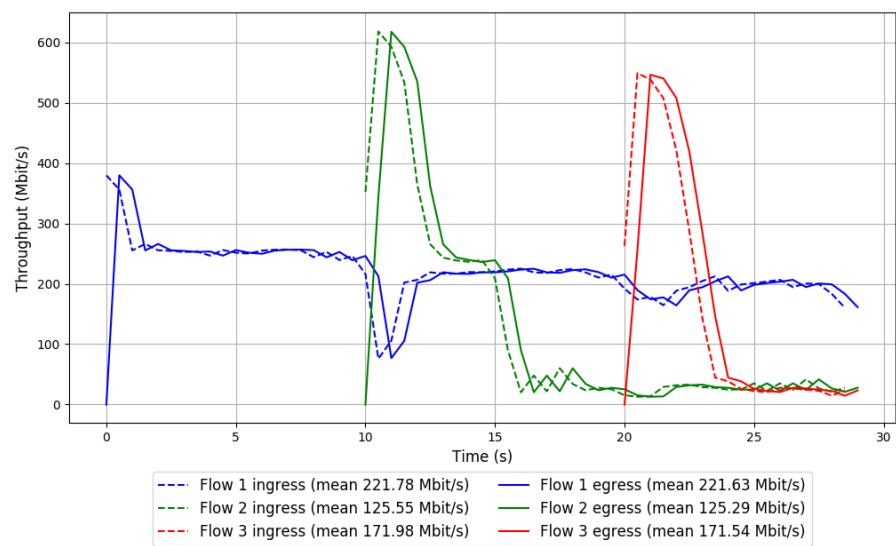
-- Flow 3:

Average throughput: 171.54 Mbit/s

95th percentile per-packet one-way delay: 2.990 ms

Loss rate: 0.25%

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-03-27 03:08:09

End at: 2019-03-27 03:08:39

Local clock offset: 0.345 ms

Remote clock offset: 4.868 ms

Below is generated by plot.py at 2019-03-27 04:13:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 386.41 Mbit/s

95th percentile per-packet one-way delay: 1.918 ms

Loss rate: 0.17%

-- Flow 1:

Average throughput: 176.96 Mbit/s

95th percentile per-packet one-way delay: 1.458 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 197.18 Mbit/s

95th percentile per-packet one-way delay: 2.027 ms

Loss rate: 0.17%

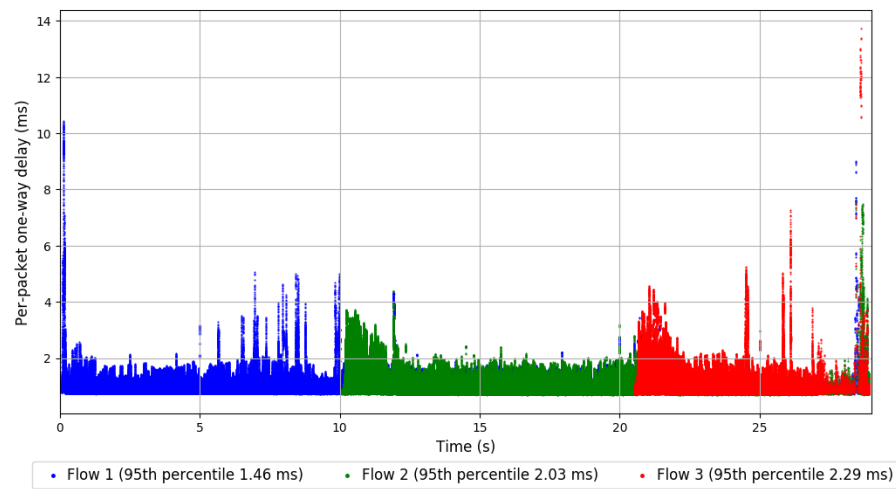
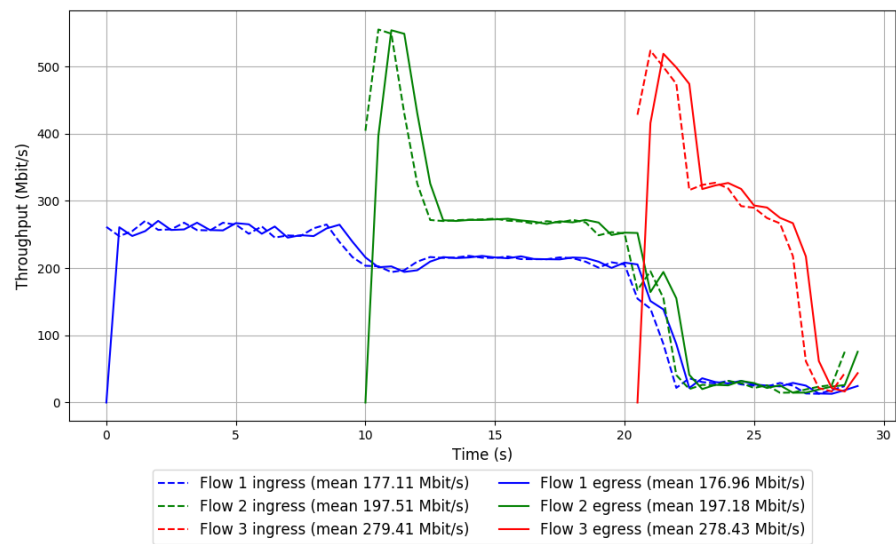
-- Flow 3:

Average throughput: 278.43 Mbit/s

95th percentile per-packet one-way delay: 2.290 ms

Loss rate: 0.35%

Run 5: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2019-03-27 01:29:14

End at: 2019-03-27 01:29:44

Local clock offset: -0.106 ms

Remote clock offset: 0.366 ms

Below is generated by plot.py at 2019-03-27 04:13:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 148.15 Mbit/s

95th percentile per-packet one-way delay: 1.685 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 70.82 Mbit/s

95th percentile per-packet one-way delay: 1.650 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 74.74 Mbit/s

95th percentile per-packet one-way delay: 1.608 ms

Loss rate: 0.04%

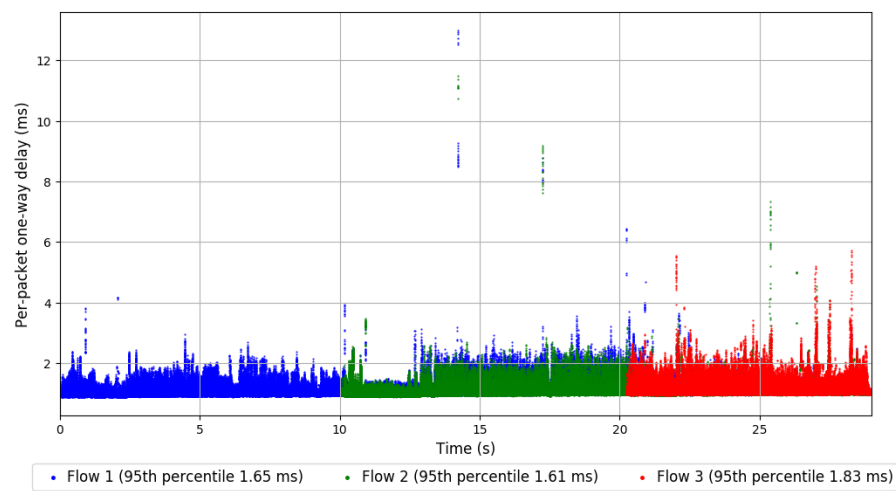
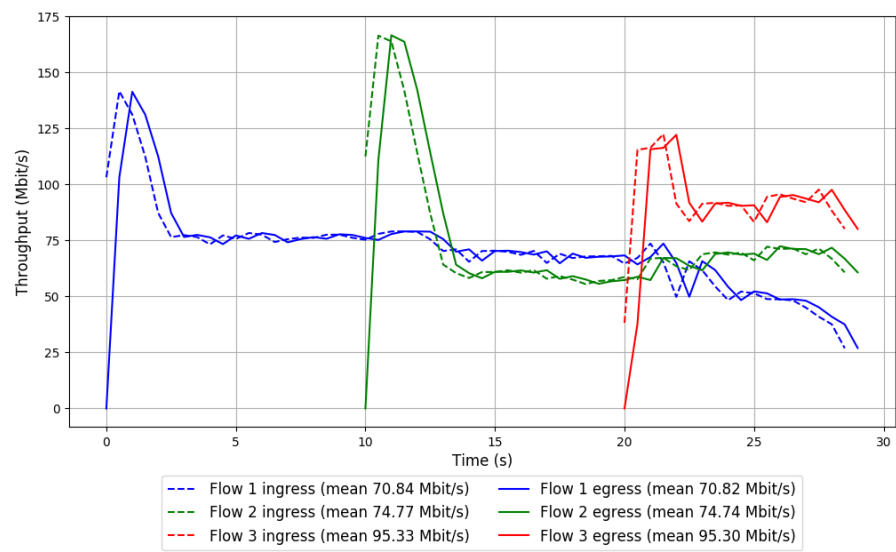
-- Flow 3:

Average throughput: 95.30 Mbit/s

95th percentile per-packet one-way delay: 1.833 ms

Loss rate: 0.03%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-03-27 01:59:26

End at: 2019-03-27 01:59:56

Local clock offset: 1.148 ms

Remote clock offset: 0.948 ms

Below is generated by plot.py at 2019-03-27 04:13:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 160.41 Mbit/s

95th percentile per-packet one-way delay: 1.527 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 80.38 Mbit/s

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

Loss rate: 0.02%

-- Flow 2:

Average throughput: 79.36 Mbit/s

95th percentile per-packet one-way delay: 1.588 ms

Loss rate: 0.02%

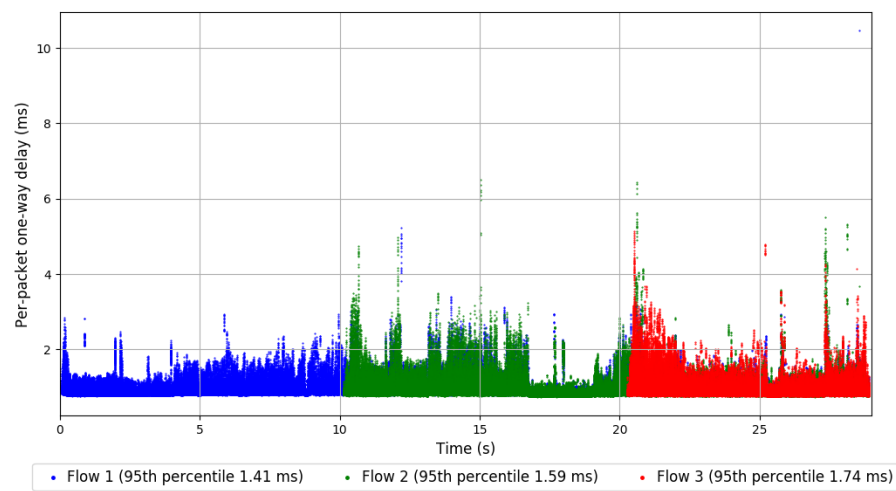
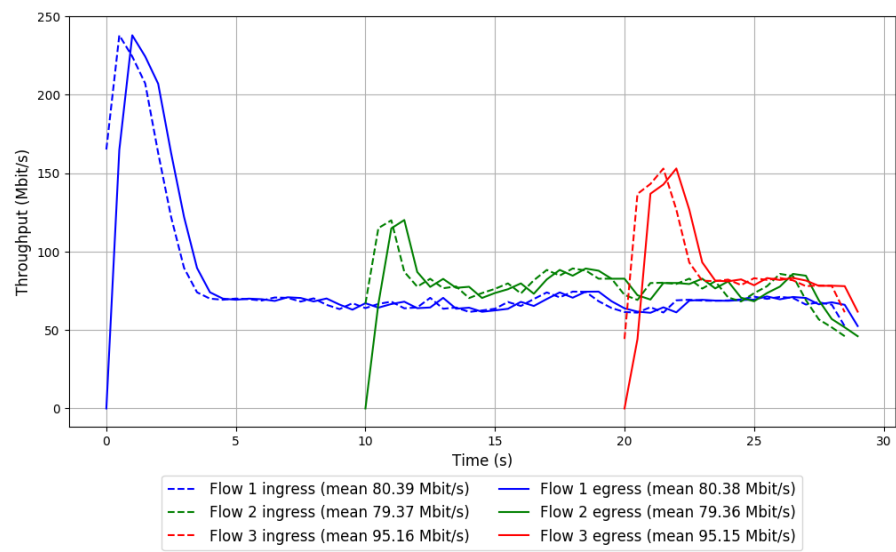
-- Flow 3:

Average throughput: 95.15 Mbit/s

95th percentile per-packet one-way delay: 1.735 ms

Loss rate: 0.01%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-03-27 02:29:23

End at: 2019-03-27 02:29:53

Local clock offset: 3.547 ms

Remote clock offset: 1.896 ms

Below is generated by plot.py at 2019-03-27 04:13:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 181.62 Mbit/s

95th percentile per-packet one-way delay: 1.424 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 104.86 Mbit/s

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

Loss rate: 0.03%

-- Flow 2:

Average throughput: 77.82 Mbit/s

95th percentile per-packet one-way delay: 1.391 ms

Loss rate: 0.02%

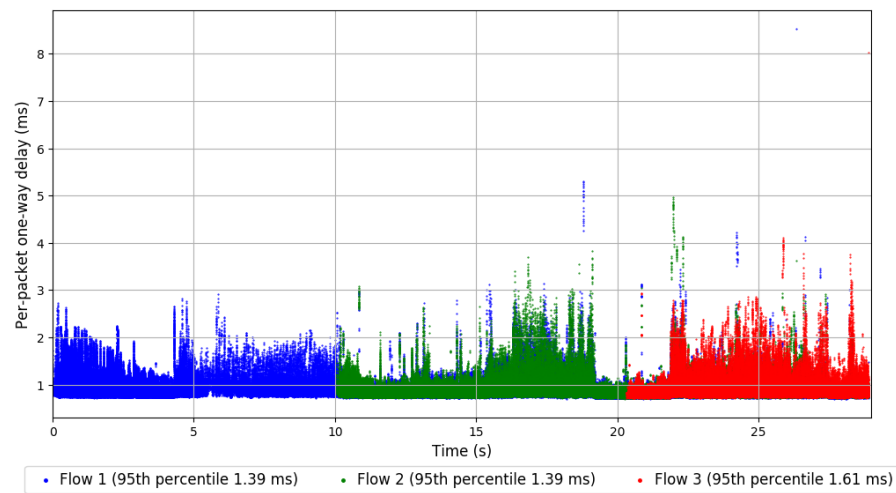
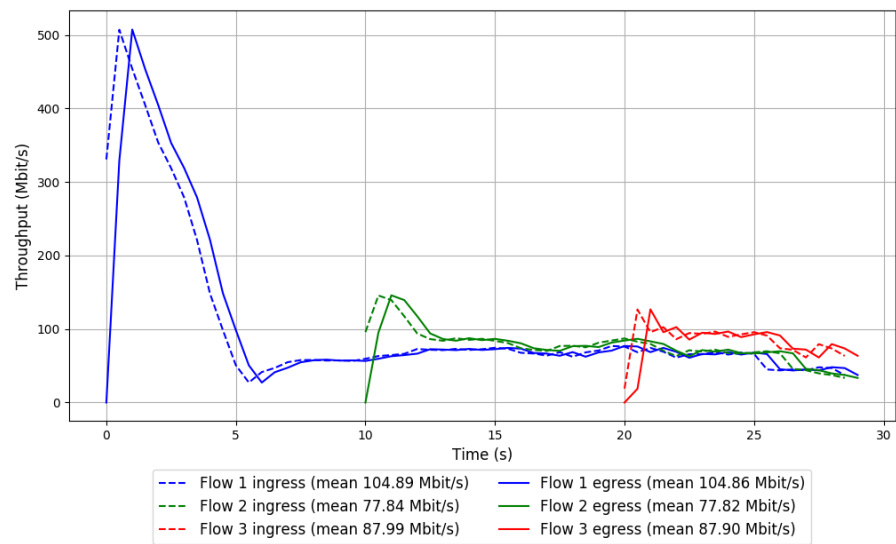
-- Flow 3:

Average throughput: 87.90 Mbit/s

95th percentile per-packet one-way delay: 1.606 ms

Loss rate: 0.02%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-03-27 02:59:36

End at: 2019-03-27 03:00:06

Local clock offset: 0.998 ms

Remote clock offset: 4.466 ms

Below is generated by plot.py at 2019-03-27 04:13:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.72 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 79.74 Mbit/s

95th percentile per-packet one-way delay: 1.327 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 44.52 Mbit/s

95th percentile per-packet one-way delay: 1.305 ms

Loss rate: 0.00%

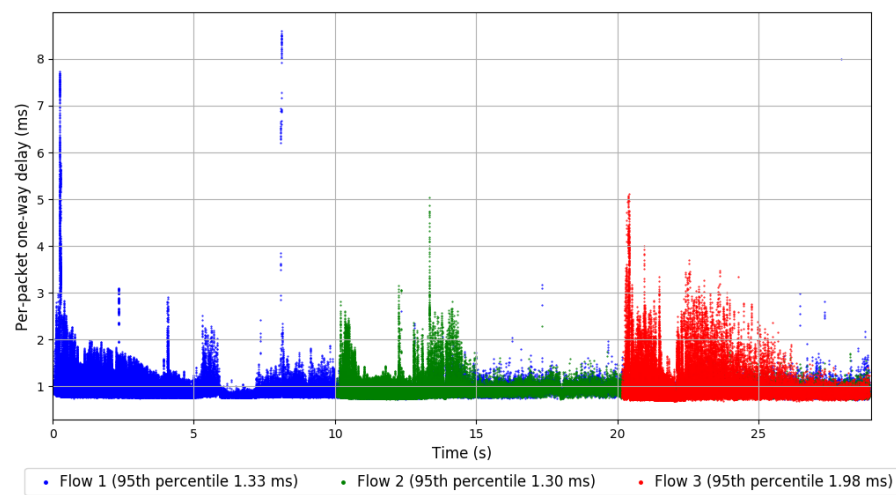
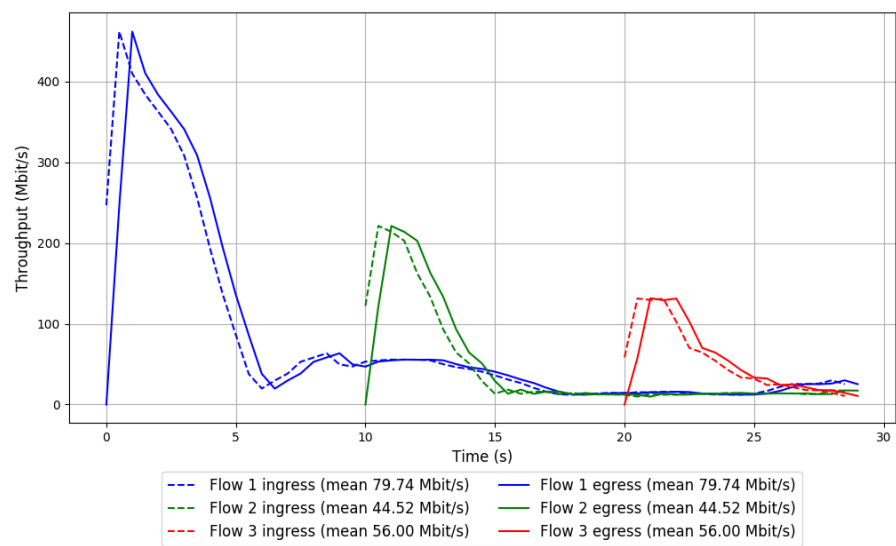
-- Flow 3:

Average throughput: 56.00 Mbit/s

95th percentile per-packet one-way delay: 1.980 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-03-27 03:29:49

End at: 2019-03-27 03:30:19

Local clock offset: 0.018 ms

Remote clock offset: 6.083 ms

Below is generated by plot.py at 2019-03-27 04:13:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.14 Mbit/s

95th percentile per-packet one-way delay: 1.507 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 83.45 Mbit/s

95th percentile per-packet one-way delay: 1.543 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 56.35 Mbit/s

95th percentile per-packet one-way delay: 1.217 ms

Loss rate: 0.00%

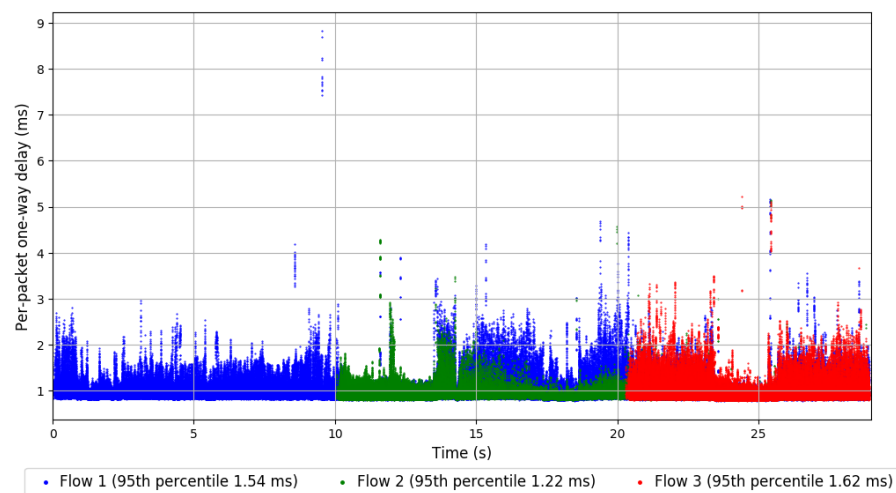
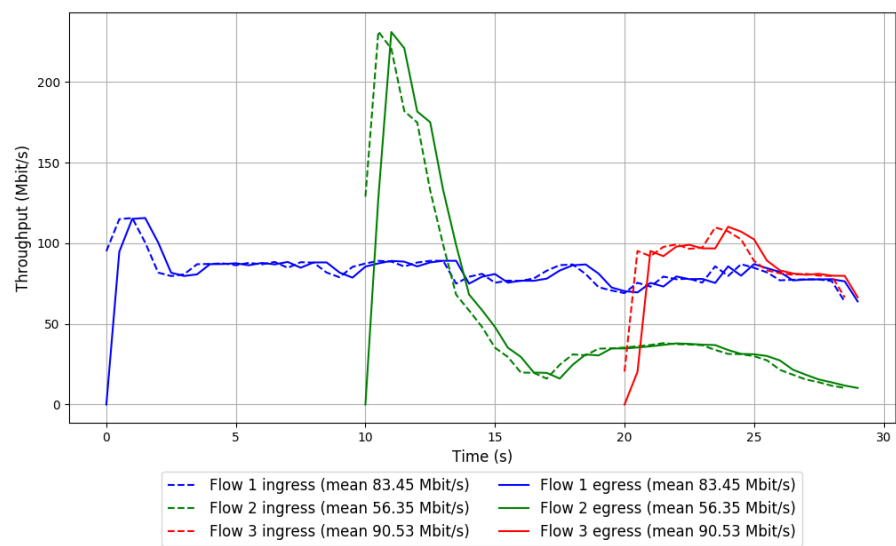
-- Flow 3:

Average throughput: 90.53 Mbit/s

95th percentile per-packet one-way delay: 1.625 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-03-27 01:33:20

End at: 2019-03-27 01:33:50

Local clock offset: 0.677 ms

Remote clock offset: 0.432 ms

Below is generated by plot.py at 2019-03-27 04:16:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 478.46 Mbit/s

95th percentile per-packet one-way delay: 1.534 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 277.78 Mbit/s

95th percentile per-packet one-way delay: 1.504 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 223.59 Mbit/s

95th percentile per-packet one-way delay: 1.535 ms

Loss rate: 0.02%

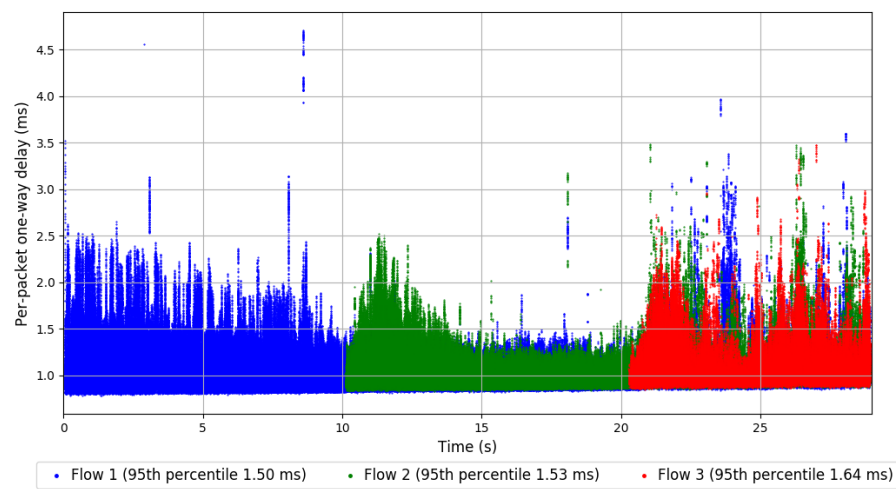
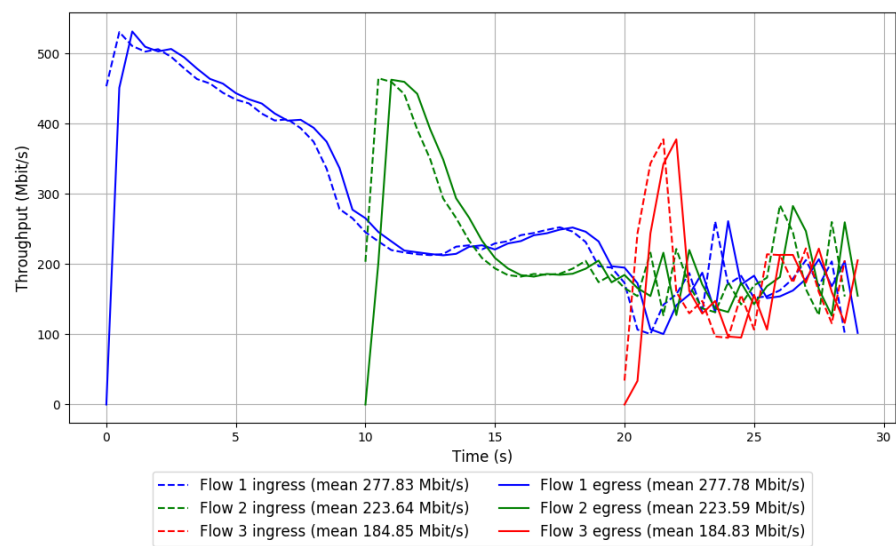
-- Flow 3:

Average throughput: 184.83 Mbit/s

95th percentile per-packet one-way delay: 1.644 ms

Loss rate: 0.01%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

Start at: 2019-03-27 02:03:33

End at: 2019-03-27 02:04:03

Local clock offset: 1.172 ms

Remote clock offset: 1.011 ms

Below is generated by plot.py at 2019-03-27 04:16:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 420.92 Mbit/s

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

Loss rate: 0.05%

-- Flow 1:

Average throughput: 224.75 Mbit/s

95th percentile per-packet one-way delay: 1.291 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 214.02 Mbit/s

95th percentile per-packet one-way delay: 1.637 ms

Loss rate: 0.05%

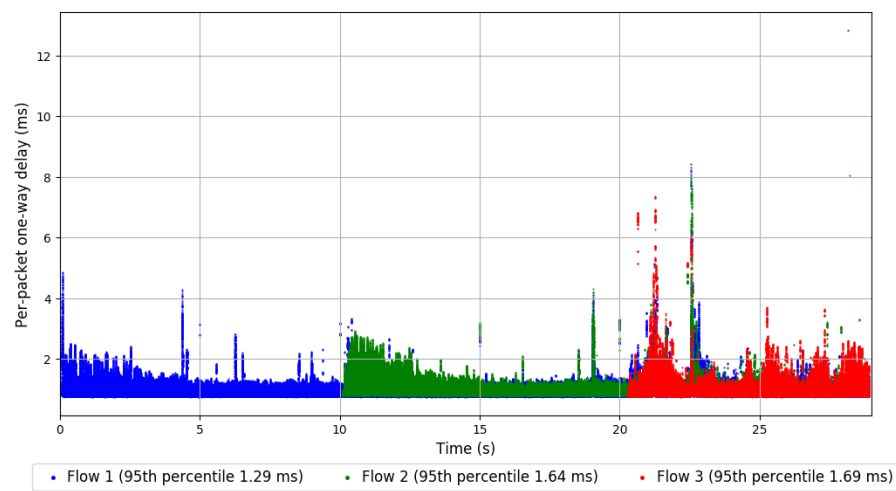
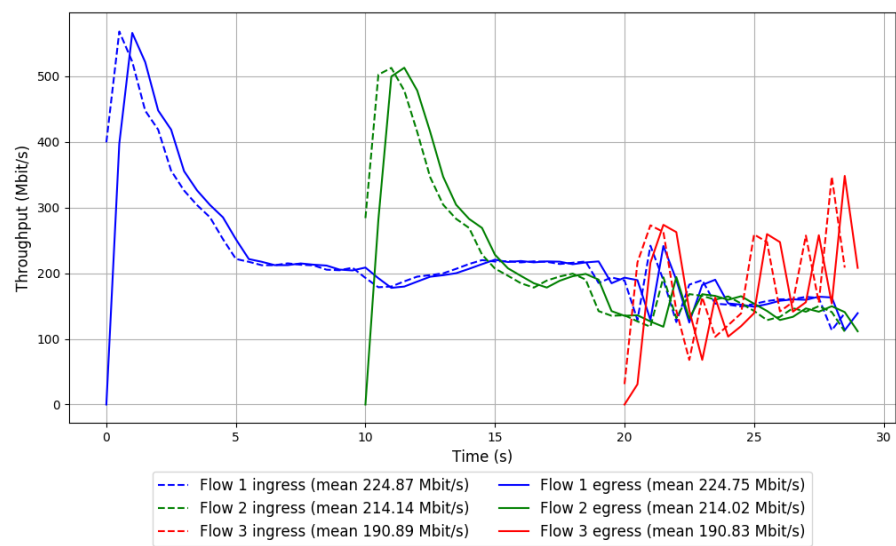
-- Flow 3:

Average throughput: 190.83 Mbit/s

95th percentile per-packet one-way delay: 1.693 ms

Loss rate: 0.03%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2019-03-27 02:33:31

End at: 2019-03-27 02:34:01

Local clock offset: 3.908 ms

Remote clock offset: 2.584 ms

Below is generated by plot.py at 2019-03-27 04:16:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 439.05 Mbit/s

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

Loss rate: 0.05%

-- Flow 1:

Average throughput: 239.32 Mbit/s

95th percentile per-packet one-way delay: 1.563 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 217.85 Mbit/s

95th percentile per-packet one-way delay: 1.567 ms

Loss rate: 0.04%

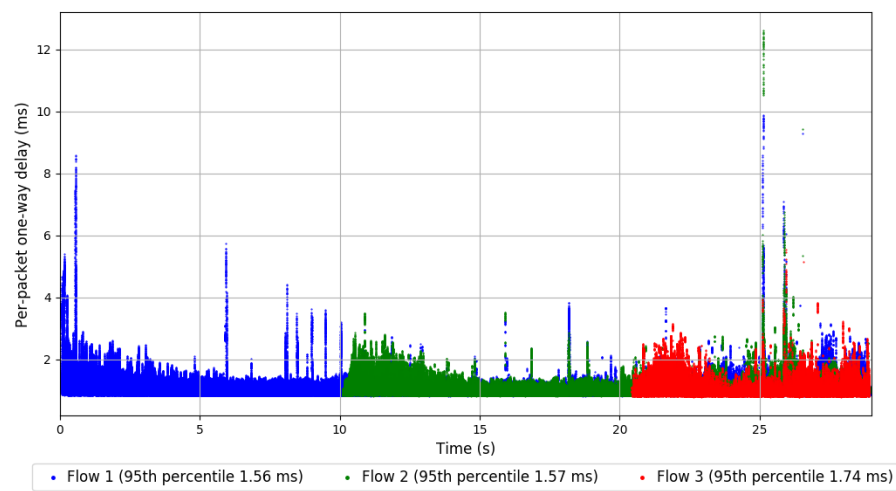
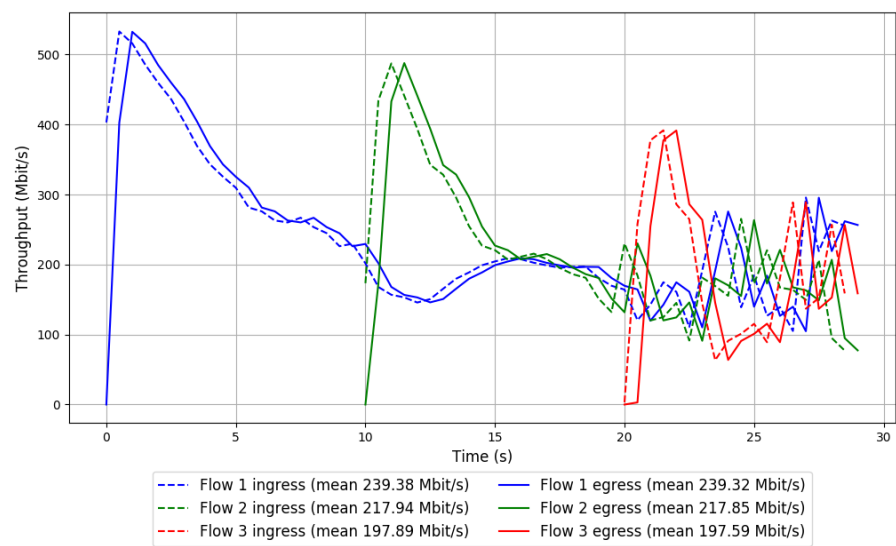
-- Flow 3:

Average throughput: 197.59 Mbit/s

95th percentile per-packet one-way delay: 1.738 ms

Loss rate: 0.15%

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MusesT

Start at: 2019-03-27 03:03:42

End at: 2019-03-27 03:04:12

Local clock offset: 0.589 ms

Remote clock offset: 4.594 ms

Below is generated by plot.py at 2019-03-27 04:17:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 450.64 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 236.47 Mbit/s

95th percentile per-packet one-way delay: 1.413 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 234.04 Mbit/s

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

Loss rate: 0.00%

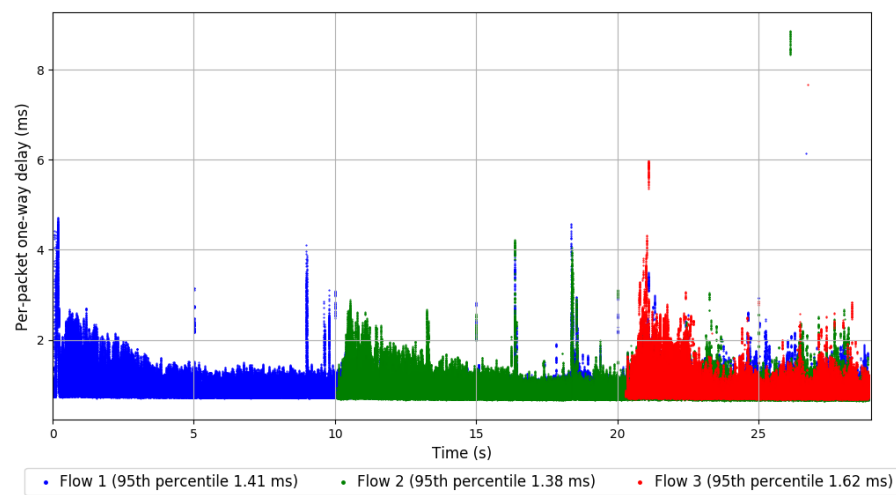
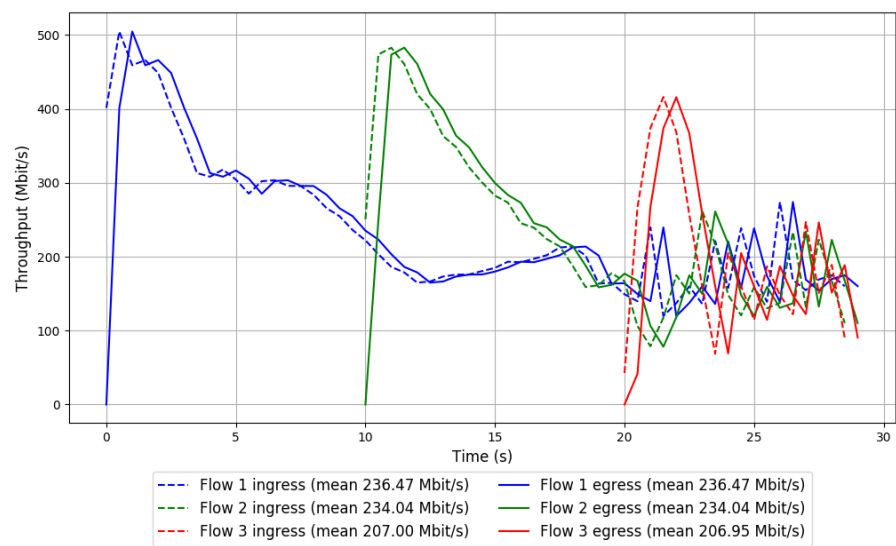
-- Flow 3:

Average throughput: 206.95 Mbit/s

95th percentile per-packet one-way delay: 1.625 ms

Loss rate: 0.02%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-03-27 03:33:54

End at: 2019-03-27 03:34:24

Local clock offset: -0.003 ms

Remote clock offset: 6.272 ms

Below is generated by plot.py at 2019-03-27 04:17:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 416.34 Mbit/s

95th percentile per-packet one-way delay: 1.454 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 248.86 Mbit/s

95th percentile per-packet one-way delay: 1.408 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 187.11 Mbit/s

95th percentile per-packet one-way delay: 1.489 ms

Loss rate: 0.01%

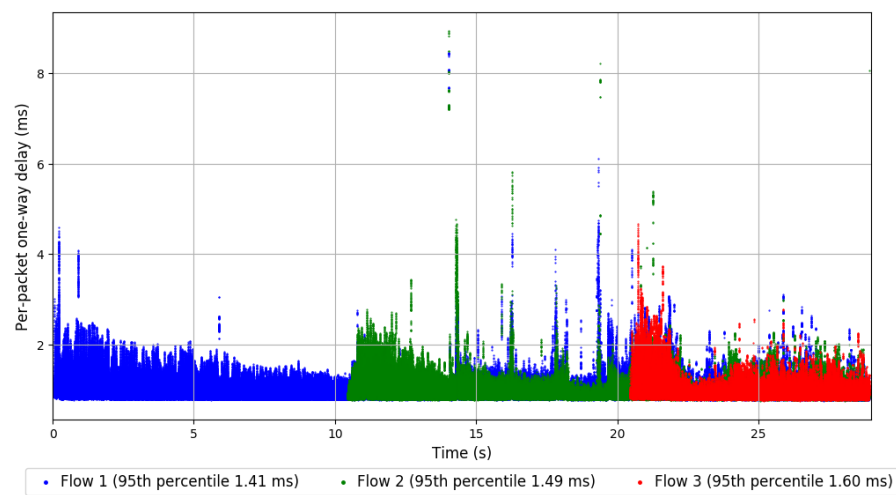
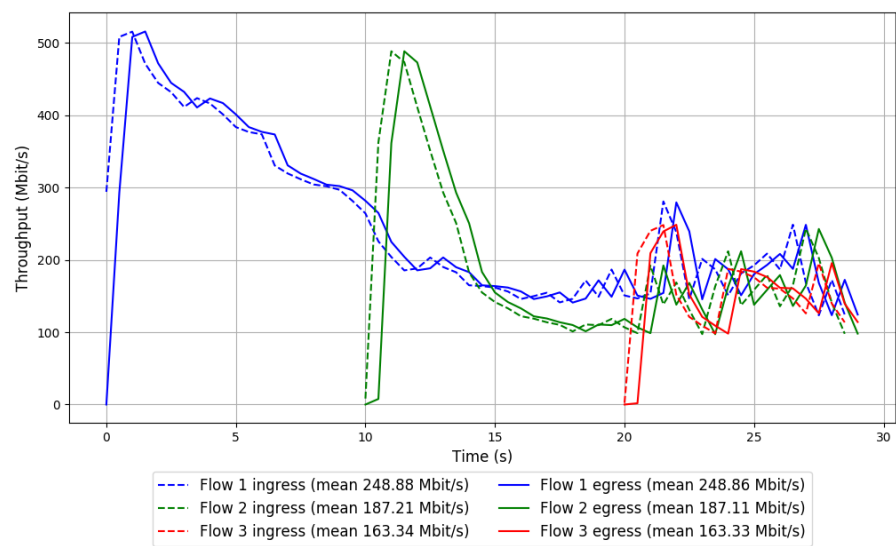
-- Flow 3:

Average throughput: 163.33 Mbit/s

95th percentile per-packet one-way delay: 1.598 ms

Loss rate: 0.01%

Run 5: Report of Indigo-MusesT — Data Link

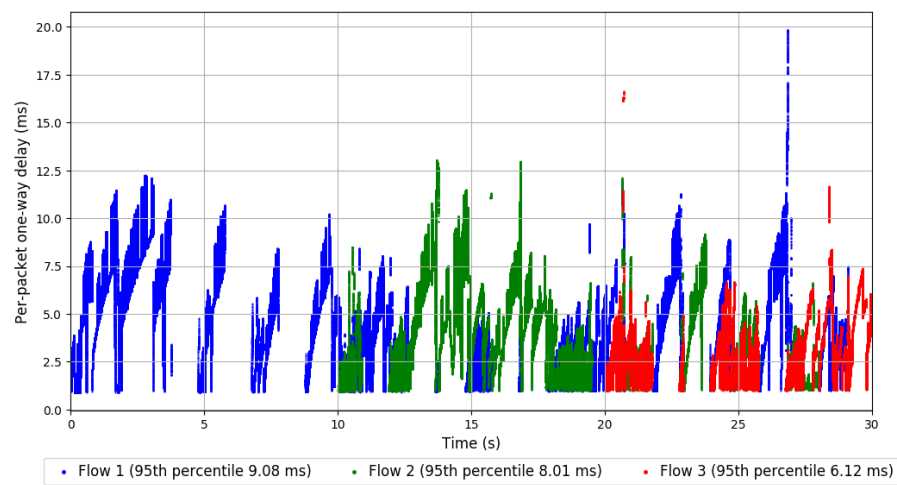
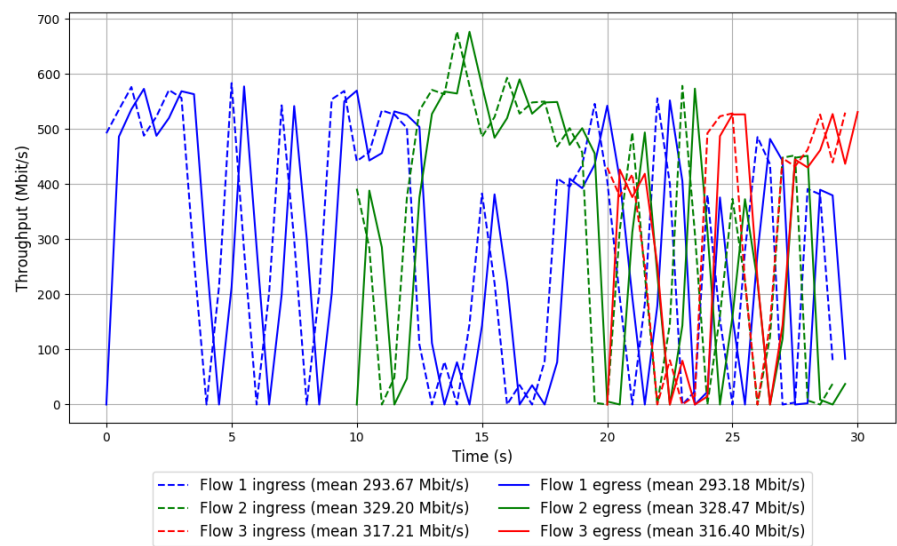


```
Run 1: Statistics of LEDBAT

Start at: 2019-03-27 01:27:33
End at: 2019-03-27 01:28:03
Local clock offset: -0.454 ms
Remote clock offset: 0.39 ms

# Below is generated by plot.py at 2019-03-27 04:19:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 599.30 Mbit/s
95th percentile per-packet one-way delay: 8.457 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 293.18 Mbit/s
95th percentile per-packet one-way delay: 9.083 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 328.47 Mbit/s
95th percentile per-packet one-way delay: 8.009 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 316.40 Mbit/s
95th percentile per-packet one-way delay: 6.123 ms
Loss rate: 0.25%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-03-27 01:57:44

End at: 2019-03-27 01:58:14

Local clock offset: 1.175 ms

Remote clock offset: 0.939 ms

Below is generated by plot.py at 2019-03-27 04:20:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 643.63 Mbit/s

95th percentile per-packet one-way delay: 9.774 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 353.55 Mbit/s

95th percentile per-packet one-way delay: 10.791 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 328.14 Mbit/s

95th percentile per-packet one-way delay: 6.377 ms

Loss rate: 0.33%

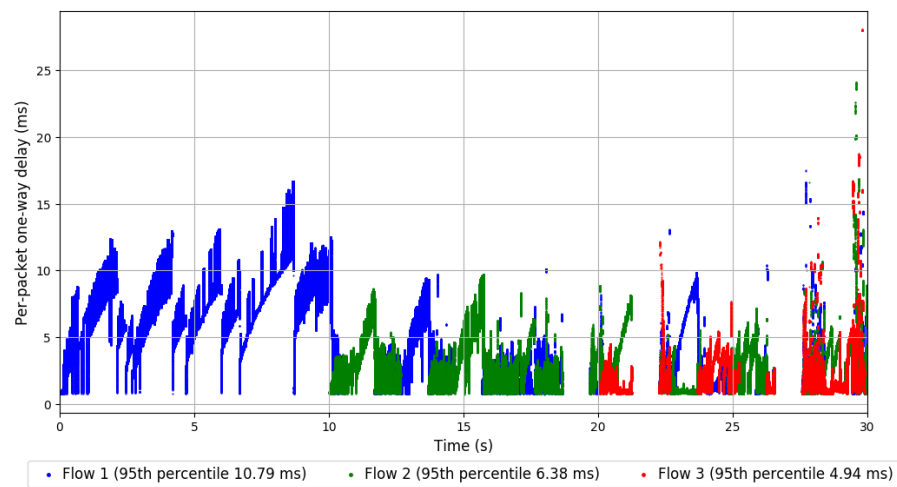
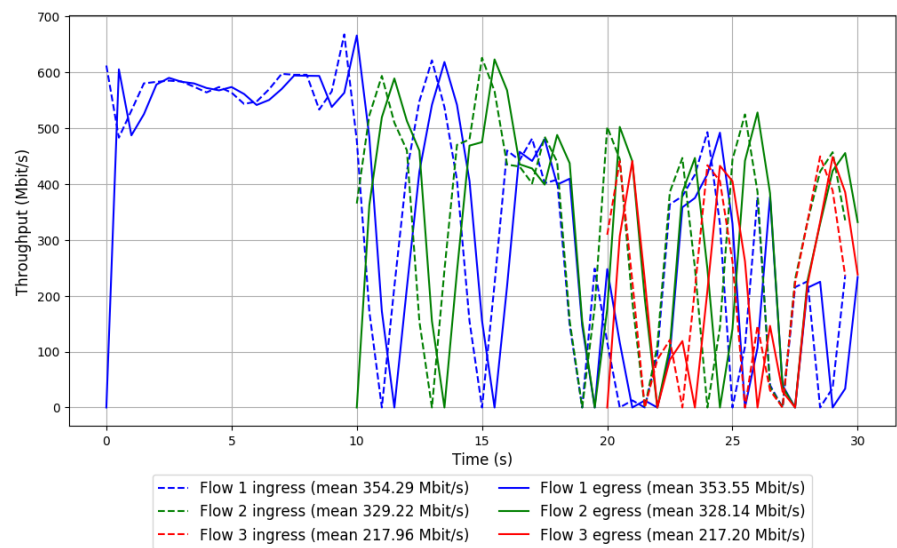
-- Flow 3:

Average throughput: 217.20 Mbit/s

95th percentile per-packet one-way delay: 4.942 ms

Loss rate: 0.35%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-03-27 02:27:45

End at: 2019-03-27 02:28:15

Local clock offset: 3.367 ms

Remote clock offset: 1.668 ms

Below is generated by plot.py at 2019-03-27 04:20:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 576.25 Mbit/s

95th percentile per-packet one-way delay: 8.072 ms

Loss rate: 0.22%

-- Flow 1:

Average throughput: 334.25 Mbit/s

95th percentile per-packet one-way delay: 9.504 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 244.35 Mbit/s

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

Loss rate: 0.22%

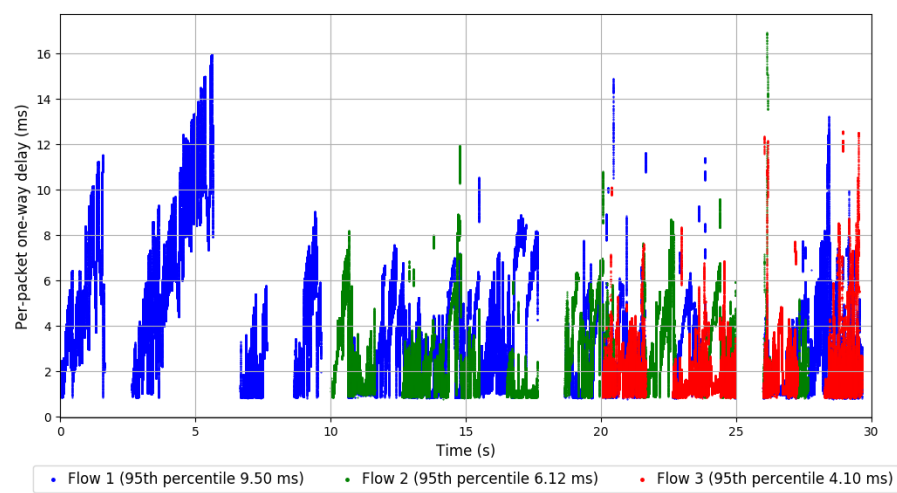
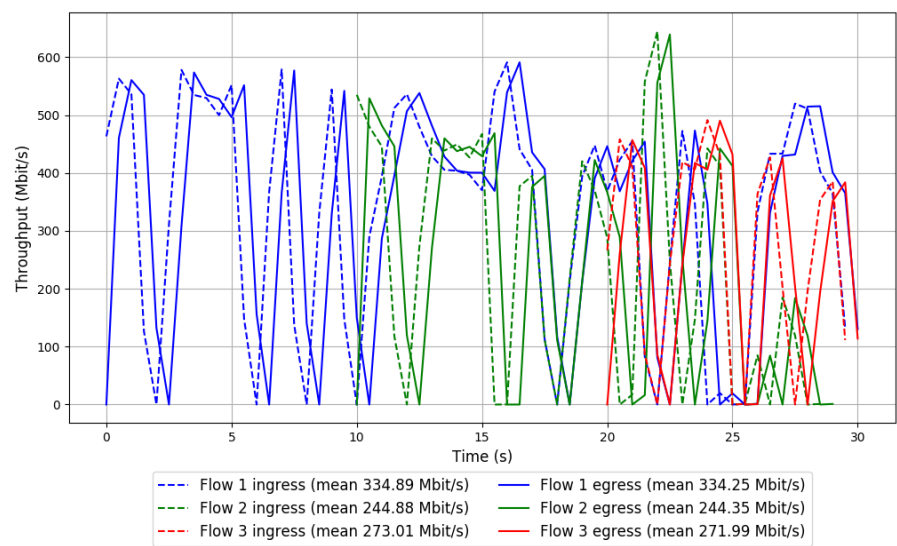
-- Flow 3:

Average throughput: 271.99 Mbit/s

95th percentile per-packet one-way delay: 4.096 ms

Loss rate: 0.36%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-03-27 02:57:54

End at: 2019-03-27 02:58:24

Local clock offset: 1.226 ms

Remote clock offset: 4.288 ms

Below is generated by plot.py at 2019-03-27 04:24:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 677.66 Mbit/s

95th percentile per-packet one-way delay: 15.312 ms

Loss rate: 0.23%

-- Flow 1:

Average throughput: 420.49 Mbit/s

95th percentile per-packet one-way delay: 16.098 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 309.79 Mbit/s

95th percentile per-packet one-way delay: 7.700 ms

Loss rate: 0.32%

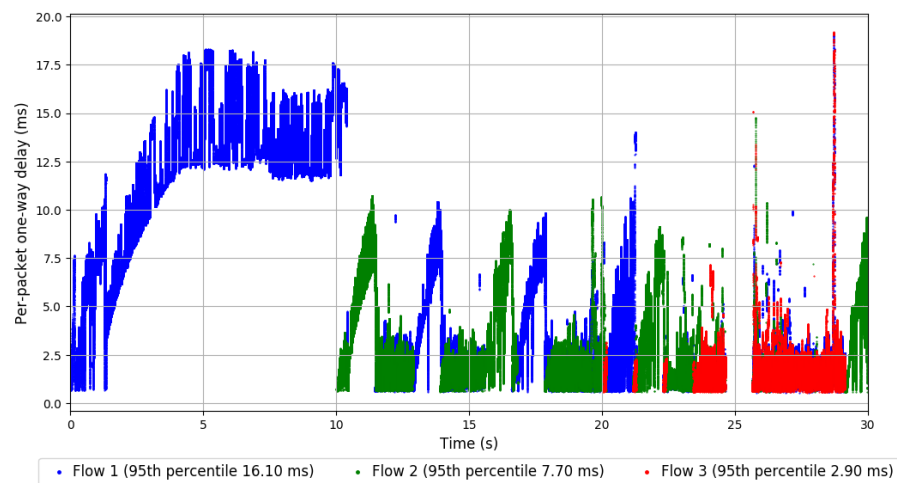
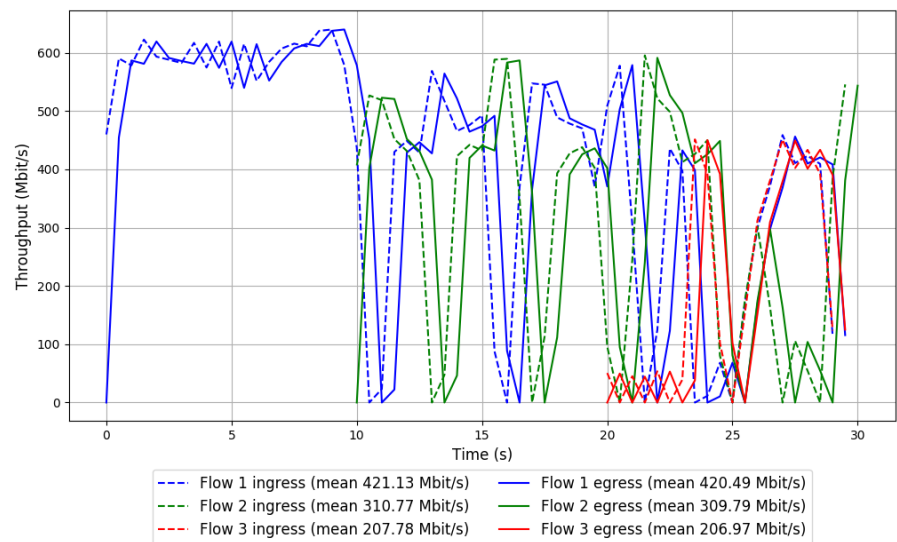
-- Flow 3:

Average throughput: 206.97 Mbit/s

95th percentile per-packet one-way delay: 2.895 ms

Loss rate: 0.39%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-03-27 03:28:08

End at: 2019-03-27 03:28:38

Local clock offset: 0.037 ms

Remote clock offset: 5.927 ms

Below is generated by plot.py at 2019-03-27 04:24:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 639.28 Mbit/s

95th percentile per-packet one-way delay: 11.745 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 389.70 Mbit/s

95th percentile per-packet one-way delay: 12.522 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 235.80 Mbit/s

95th percentile per-packet one-way delay: 5.820 ms

Loss rate: 0.23%

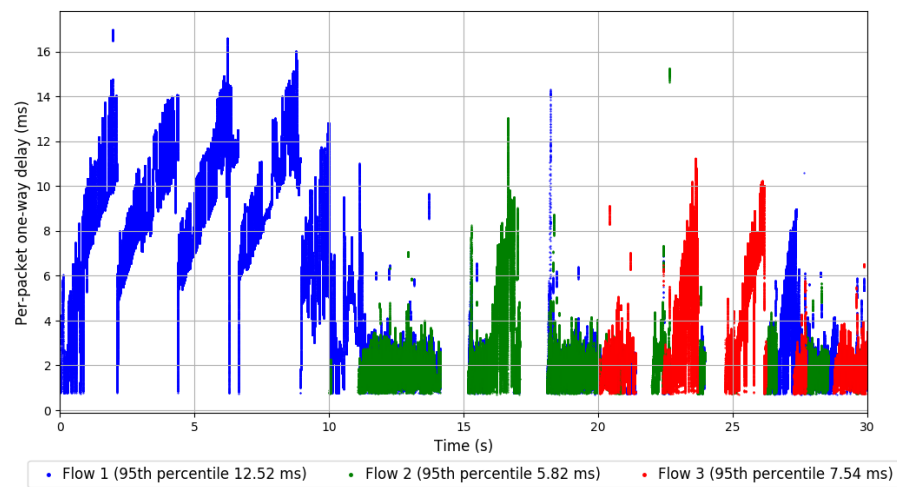
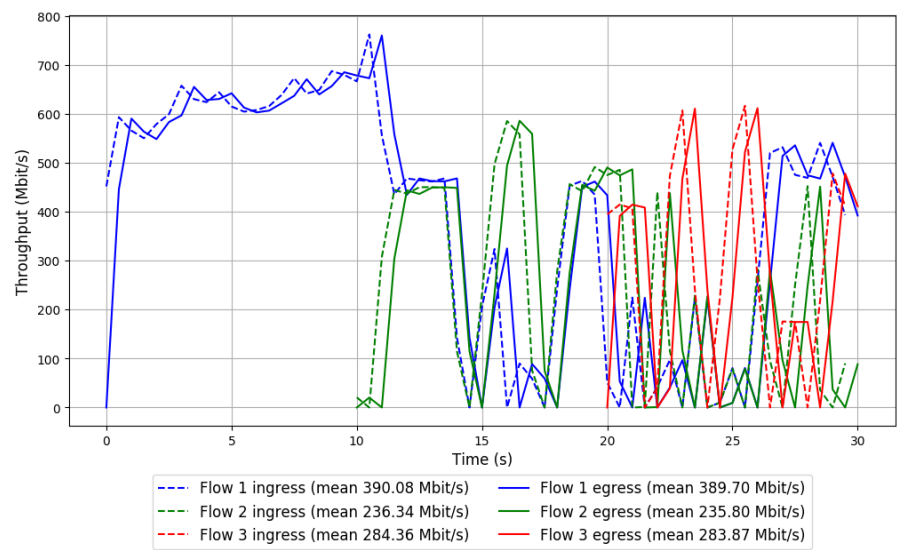
-- Flow 3:

Average throughput: 283.87 Mbit/s

95th percentile per-packet one-way delay: 7.541 ms

Loss rate: 0.17%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-03-27 01:24:44

End at: 2019-03-27 01:25:14

Local clock offset: -1.289 ms

Remote clock offset: 0.358 ms

Below is generated by plot.py at 2019-03-27 04:25:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 772.28 Mbit/s

95th percentile per-packet one-way delay: 9.945 ms

Loss rate: 0.28%

-- Flow 1:

Average throughput: 706.33 Mbit/s

95th percentile per-packet one-way delay: 11.998 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 24.95 Mbit/s

95th percentile per-packet one-way delay: 2.106 ms

Loss rate: 0.16%

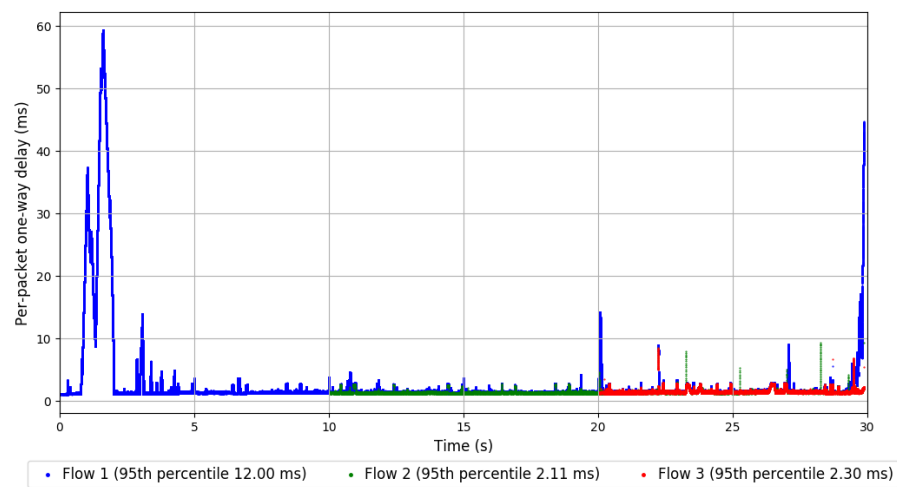
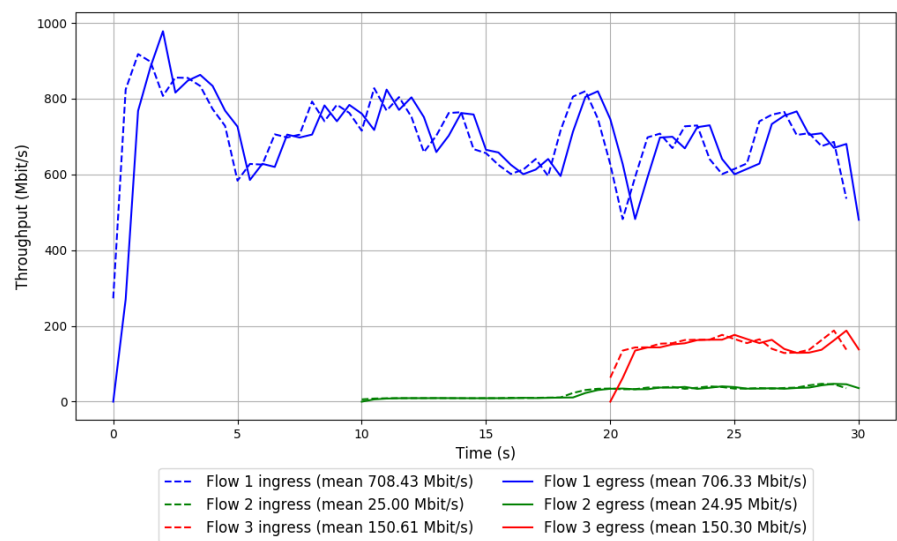
-- Flow 3:

Average throughput: 150.30 Mbit/s

95th percentile per-packet one-way delay: 2.297 ms

Loss rate: 0.17%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-03-27 01:54:54

End at: 2019-03-27 01:55:24

Local clock offset: 1.257 ms

Remote clock offset: 0.824 ms

Below is generated by plot.py at 2019-03-27 04:26:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 788.98 Mbit/s

95th percentile per-packet one-way delay: 2.117 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 561.01 Mbit/s

95th percentile per-packet one-way delay: 2.037 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 331.89 Mbit/s

95th percentile per-packet one-way delay: 2.203 ms

Loss rate: 0.30%

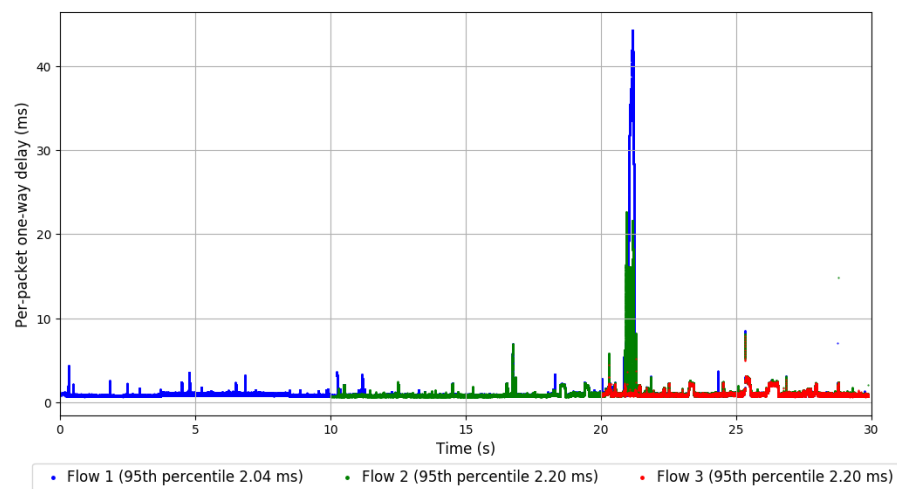
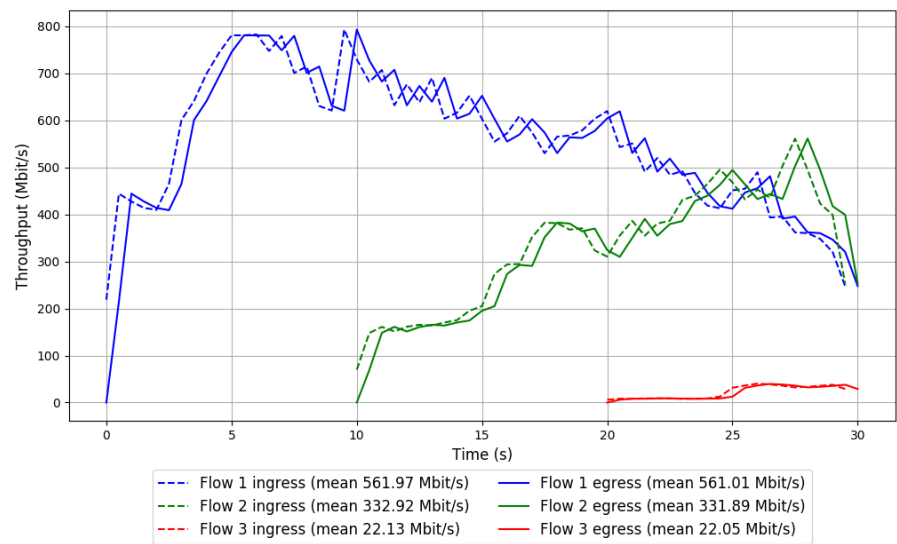
-- Flow 3:

Average throughput: 22.05 Mbit/s

95th percentile per-packet one-way delay: 2.201 ms

Loss rate: 0.39%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-03-27 02:24:59

End at: 2019-03-27 02:25:29

Local clock offset: 3.053 ms

Remote clock offset: 1.389 ms

Below is generated by plot.py at 2019-03-27 04:26:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 630.46 Mbit/s

95th percentile per-packet one-way delay: 1.274 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 548.67 Mbit/s

95th percentile per-packet one-way delay: 1.274 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 102.86 Mbit/s

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

Loss rate: 0.13%

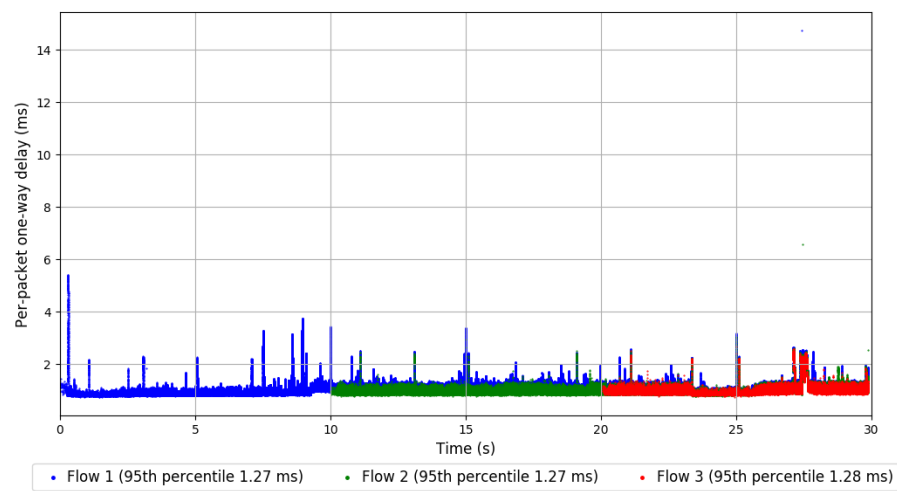
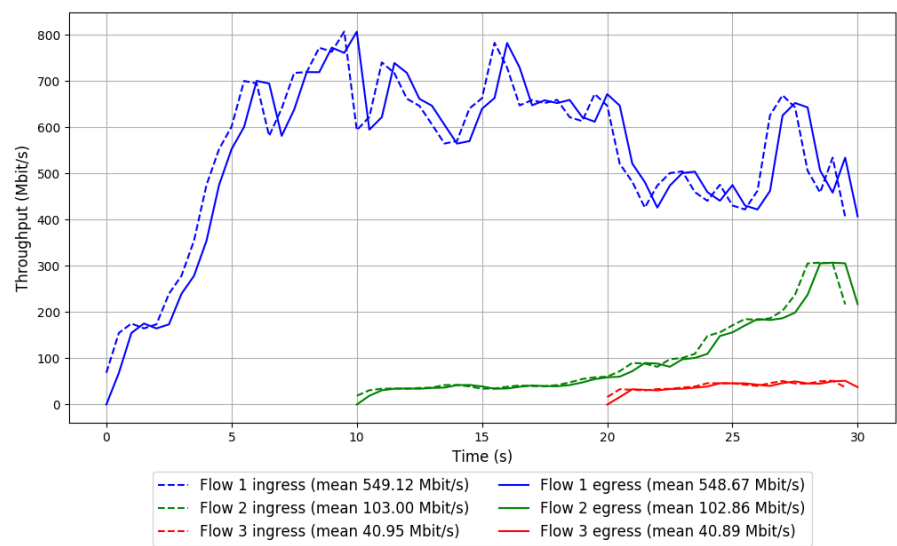
-- Flow 3:

Average throughput: 40.89 Mbit/s

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

Loss rate: 0.15%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-03-27 02:55:08

End at: 2019-03-27 02:55:38

Local clock offset: 1.7 ms

Remote clock offset: 4.211 ms

Below is generated by plot.py at 2019-03-27 04:27:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 626.16 Mbit/s

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

Loss rate: 0.05%

-- Flow 1:

Average throughput: 567.97 Mbit/s

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

Loss rate: 0.05%

-- Flow 2:

Average throughput: 77.44 Mbit/s

95th percentile per-packet one-way delay: 1.154 ms

Loss rate: 0.04%

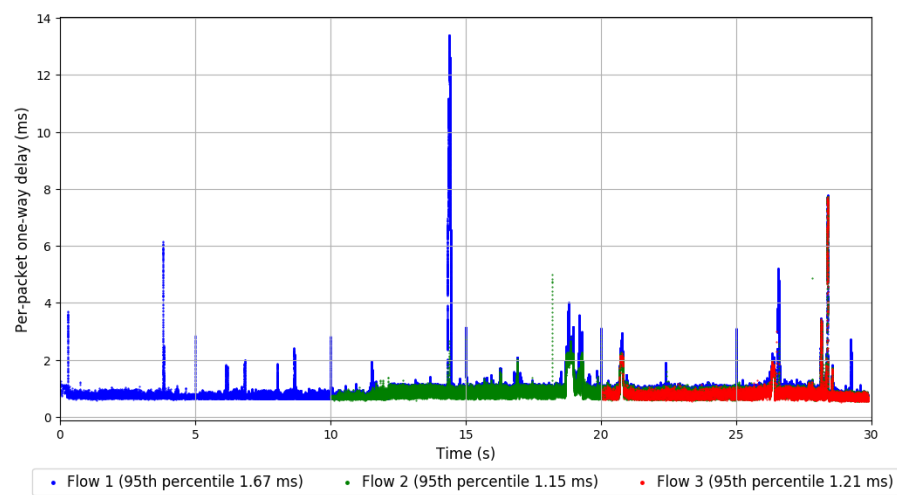
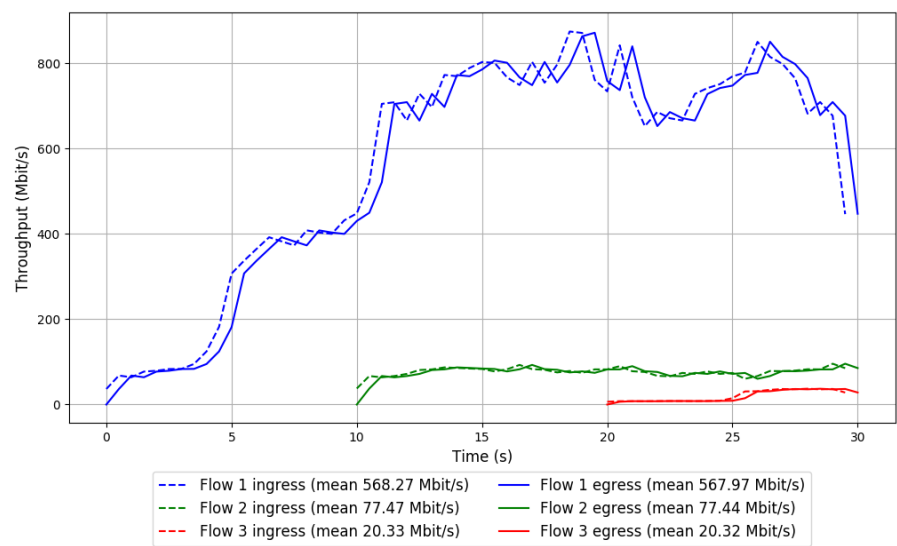
-- Flow 3:

Average throughput: 20.32 Mbit/s

95th percentile per-packet one-way delay: 1.209 ms

Loss rate: 0.04%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-03-27 03:25:20

End at: 2019-03-27 03:25:50

Local clock offset: 0.04 ms

Remote clock offset: 5.772 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 718.37 Mbit/s

95th percentile per-packet one-way delay: 2.165 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 492.08 Mbit/s

95th percentile per-packet one-way delay: 1.939 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 305.77 Mbit/s

95th percentile per-packet one-way delay: 3.063 ms

Loss rate: 0.18%

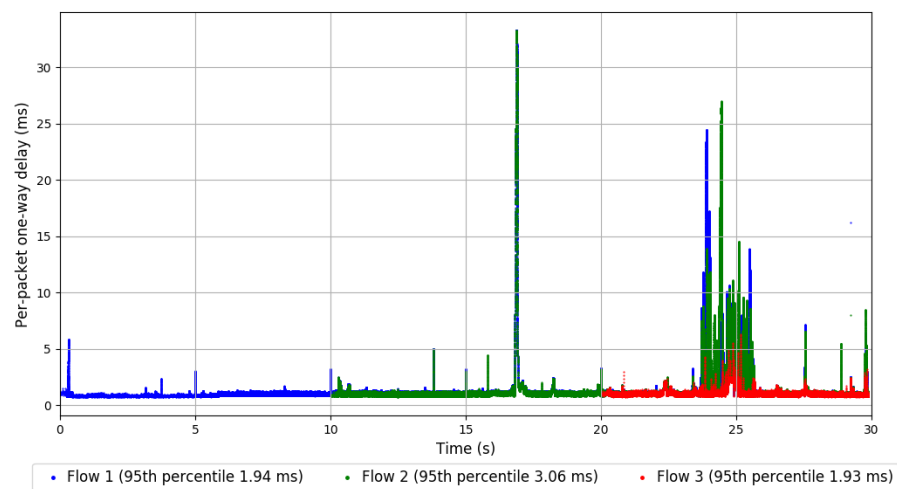
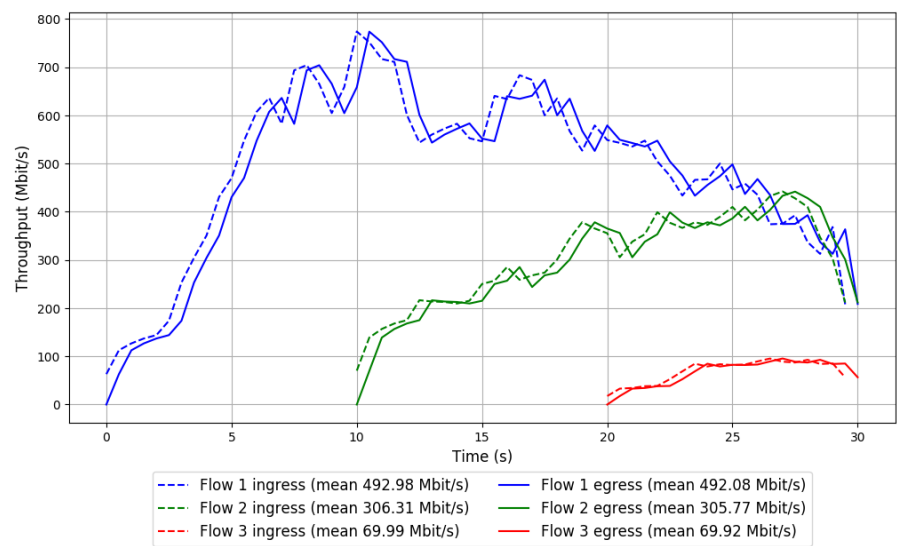
-- Flow 3:

Average throughput: 69.92 Mbit/s

95th percentile per-packet one-way delay: 1.932 ms

Loss rate: 0.11%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2019-03-27 01:18:59

End at: 2019-03-27 01:19:29

Local clock offset: -3.644 ms

Remote clock offset: 0.343 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.28 Mbit/s

95th percentile per-packet one-way delay: 1.629 ms

Loss rate: 98.33%

-- Flow 1:

Average throughput: 6.75 Mbit/s

95th percentile per-packet one-way delay: 1.624 ms

Loss rate: 97.35%

-- Flow 2:

Average throughput: 5.33 Mbit/s

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

Loss rate: 98.74%

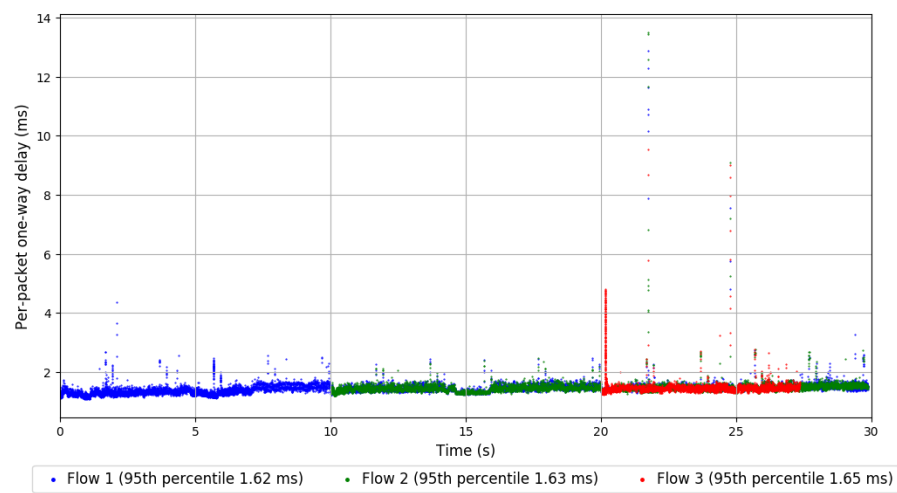
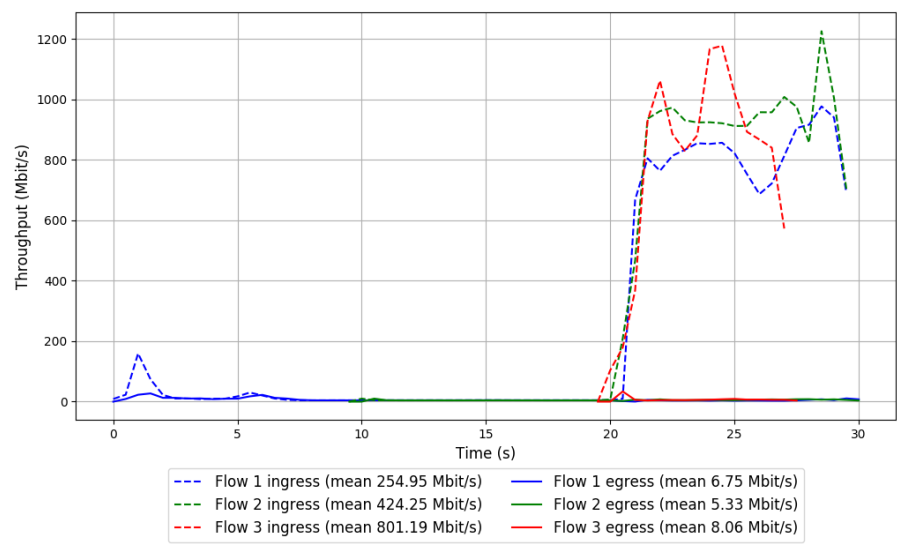
-- Flow 3:

Average throughput: 8.06 Mbit/s

95th percentile per-packet one-way delay: 1.648 ms

Loss rate: 98.99%

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-03-27 01:49:09

End at: 2019-03-27 01:49:39

Local clock offset: 1.703 ms

Remote clock offset: 0.716 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.53 Mbit/s

95th percentile per-packet one-way delay: 0.925 ms

Loss rate: 97.57%

-- Flow 1:

Average throughput: 8.21 Mbit/s

95th percentile per-packet one-way delay: 0.936 ms

Loss rate: 95.50%

-- Flow 2:

Average throughput: 5.36 Mbit/s

95th percentile per-packet one-way delay: 0.914 ms

Loss rate: 98.07%

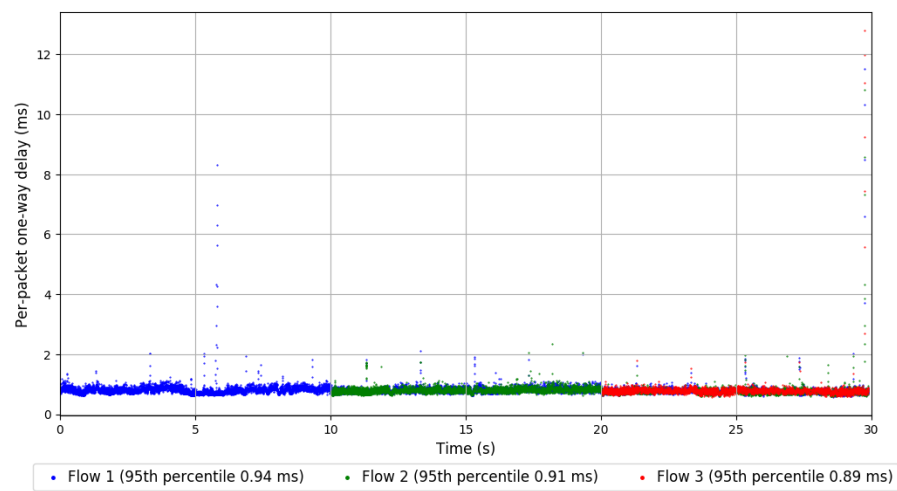
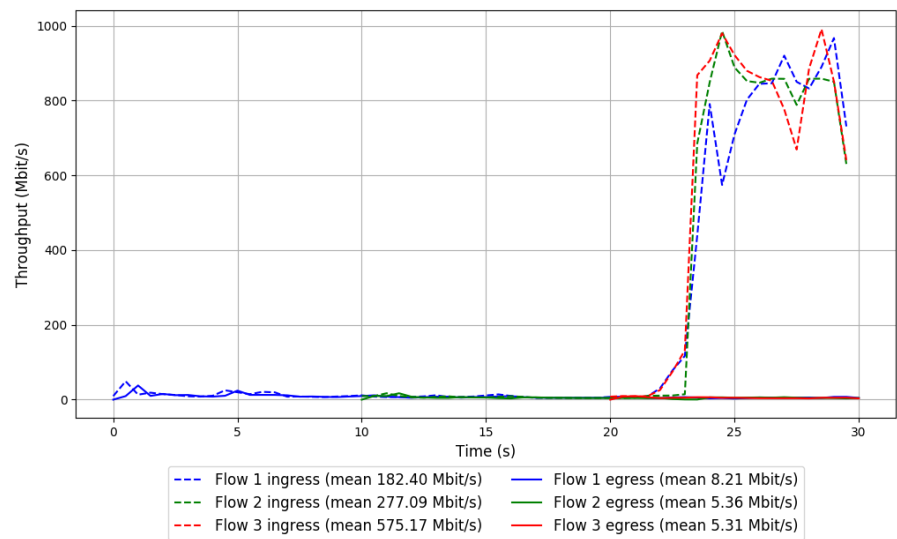
-- Flow 3:

Average throughput: 5.31 Mbit/s

95th percentile per-packet one-way delay: 0.886 ms

Loss rate: 99.08%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-03-27 02:19:14

End at: 2019-03-27 02:19:44

Local clock offset: 2.191 ms

Remote clock offset: 1.296 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.42 Mbit/s

95th percentile per-packet one-way delay: 1.213 ms

Loss rate: 97.93%

-- Flow 1:

Average throughput: 8.16 Mbit/s

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

Loss rate: 95.94%

-- Flow 2:

Average throughput: 5.19 Mbit/s

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

Loss rate: 98.45%

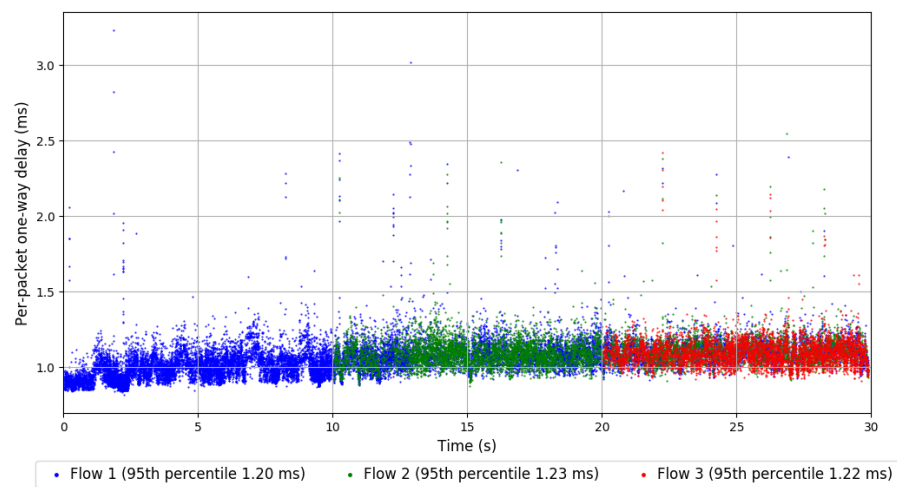
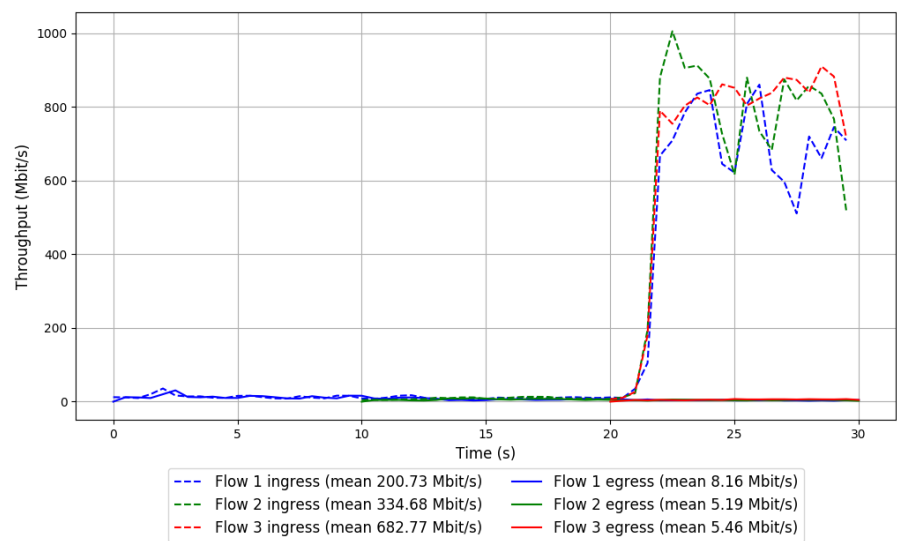
-- Flow 3:

Average throughput: 5.46 Mbit/s

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

Loss rate: 99.20%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-03-27 02:49:25

End at: 2019-03-27 02:49:55

Local clock offset: 3.33 ms

Remote clock offset: 3.951 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.10 Mbit/s

95th percentile per-packet one-way delay: 0.879 ms

Loss rate: 96.69%

-- Flow 1:

Average throughput: 6.37 Mbit/s

95th percentile per-packet one-way delay: 0.916 ms

Loss rate: 95.43%

-- Flow 2:

Average throughput: 5.93 Mbit/s

95th percentile per-packet one-way delay: 0.802 ms

Loss rate: 96.75%

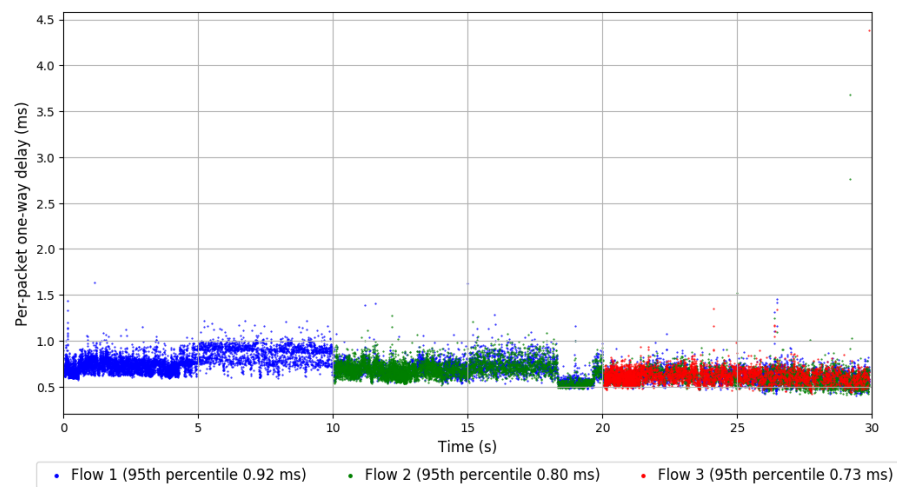
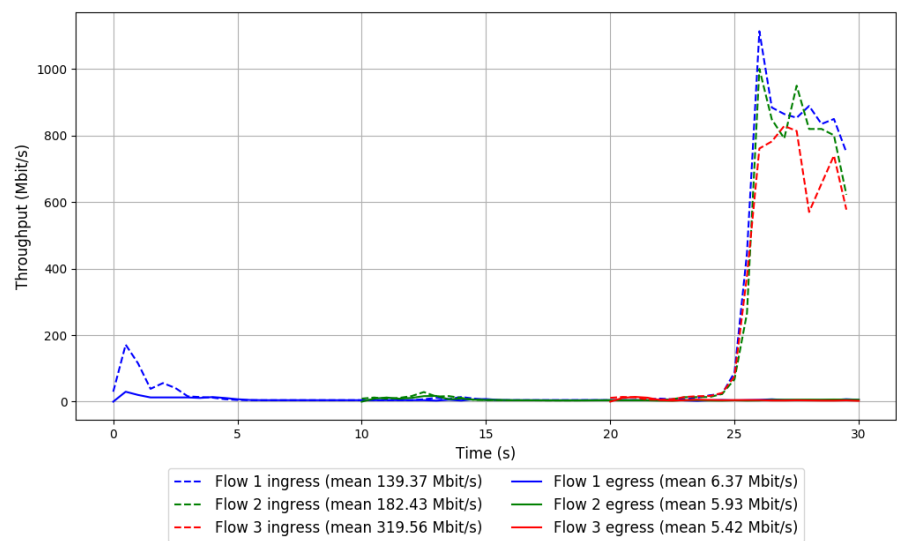
-- Flow 3:

Average throughput: 5.42 Mbit/s

95th percentile per-packet one-way delay: 0.728 ms

Loss rate: 98.30%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-03-27 03:19:32

End at: 2019-03-27 03:20:02

Local clock offset: 0.052 ms

Remote clock offset: 5.434 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.02 Mbit/s

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

Loss rate: 98.63%

-- Flow 1:

Average throughput: 5.55 Mbit/s

95th percentile per-packet one-way delay: 1.142 ms

Loss rate: 98.16%

-- Flow 2:

Average throughput: 6.78 Mbit/s

95th percentile per-packet one-way delay: 1.021 ms

Loss rate: 98.52%

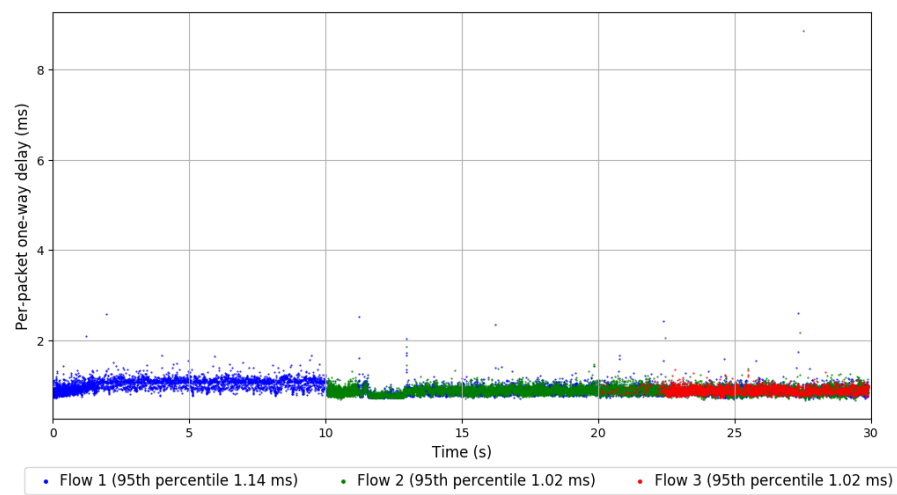
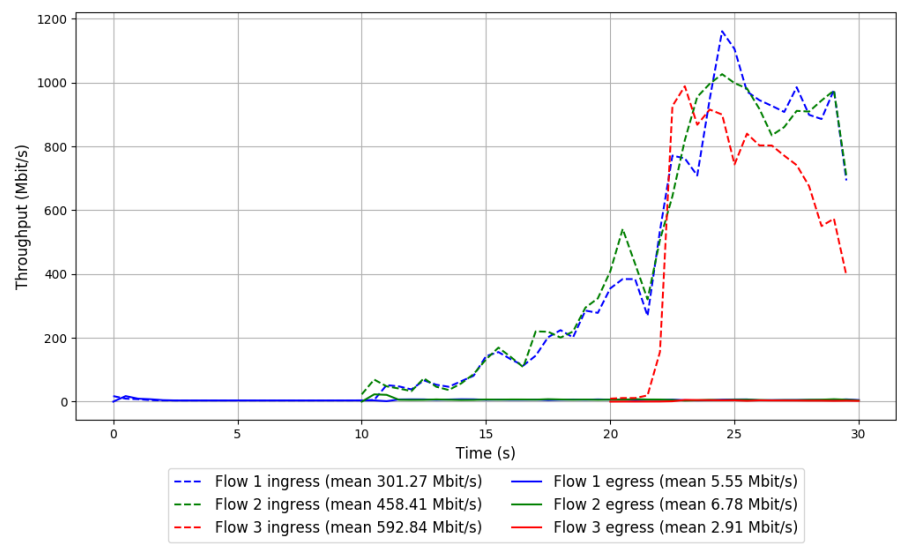
-- Flow 3:

Average throughput: 2.91 Mbit/s

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

Loss rate: 99.51%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-03-27 01:08:59

End at: 2019-03-27 01:09:29

Local clock offset: -5.067 ms

Remote clock offset: 0.139 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.68 Mbit/s

95th percentile per-packet one-way delay: 1.222 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 68.95 Mbit/s

95th percentile per-packet one-way delay: 1.094 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 60.49 Mbit/s

95th percentile per-packet one-way delay: 1.048 ms

Loss rate: 0.01%

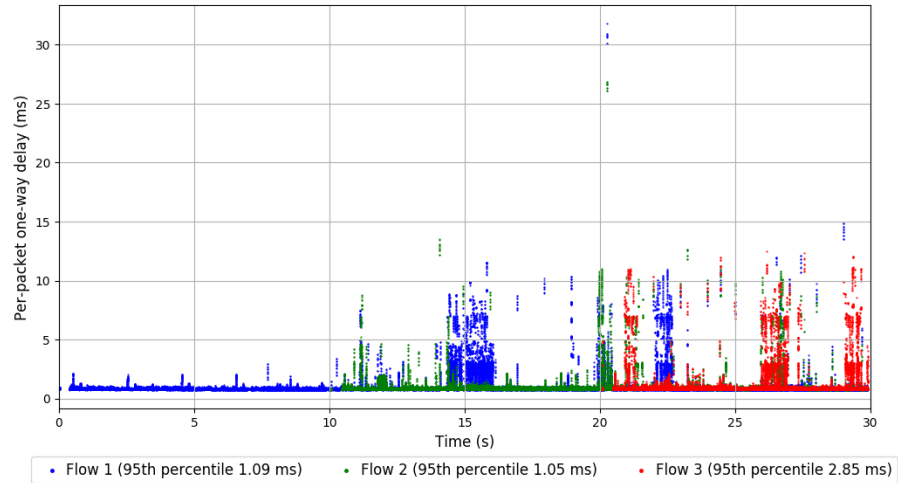
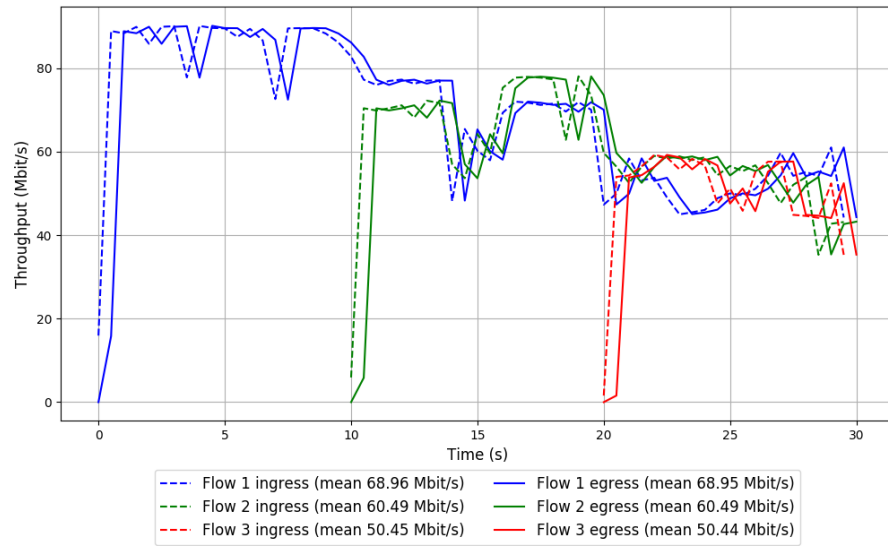
-- Flow 3:

Average throughput: 50.44 Mbit/s

95th percentile per-packet one-way delay: 2.848 ms

Loss rate: 0.01%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-03-27 01:39:14

End at: 2019-03-27 01:39:44

Local clock offset: 1.445 ms

Remote clock offset: 0.616 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.28 Mbit/s

95th percentile per-packet one-way delay: 1.738 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 64.54 Mbit/s

95th percentile per-packet one-way delay: 1.058 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 63.89 Mbit/s

95th percentile per-packet one-way delay: 1.143 ms

Loss rate: 0.00%

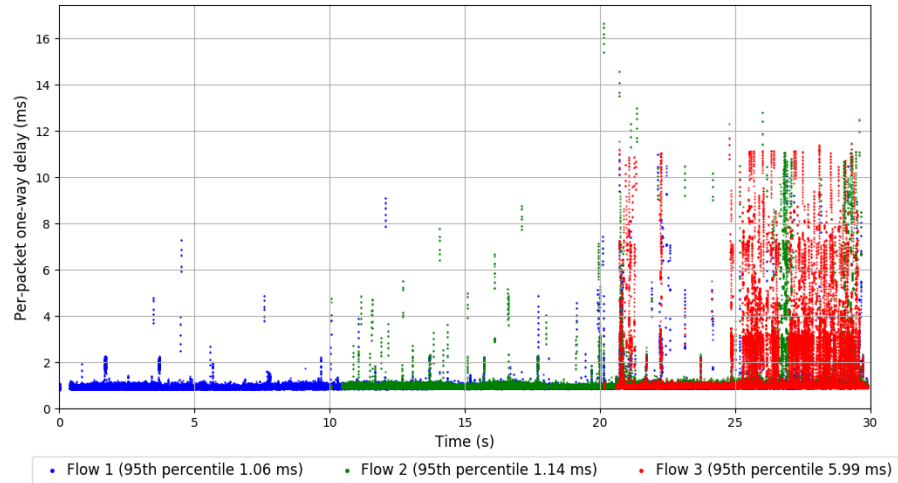
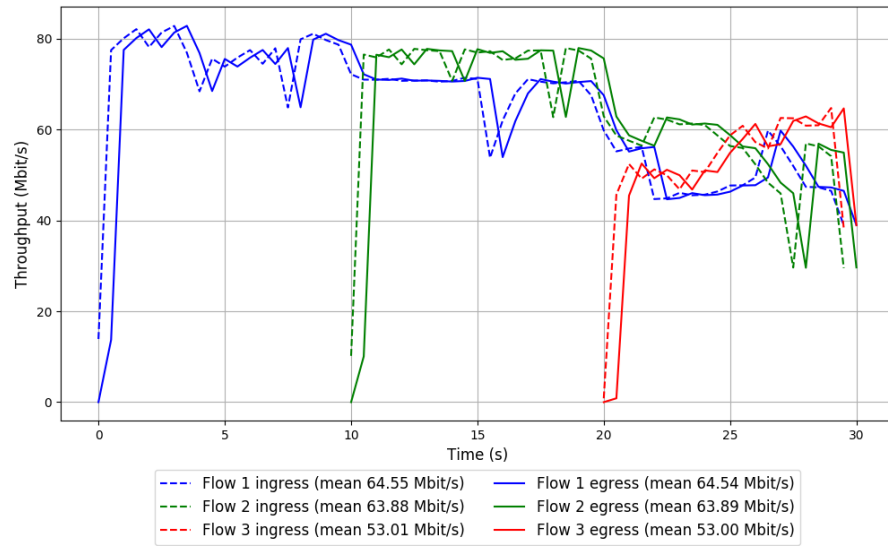
-- Flow 3:

Average throughput: 53.00 Mbit/s

95th percentile per-packet one-way delay: 5.992 ms

Loss rate: 0.01%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-03-27 02:09:11

End at: 2019-03-27 02:09:41

Local clock offset: 1.316 ms

Remote clock offset: 1.107 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.41 Mbit/s

95th percentile per-packet one-way delay: 0.959 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 71.34 Mbit/s

95th percentile per-packet one-way delay: 0.936 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 56.97 Mbit/s

95th percentile per-packet one-way delay: 0.977 ms

Loss rate: 0.01%

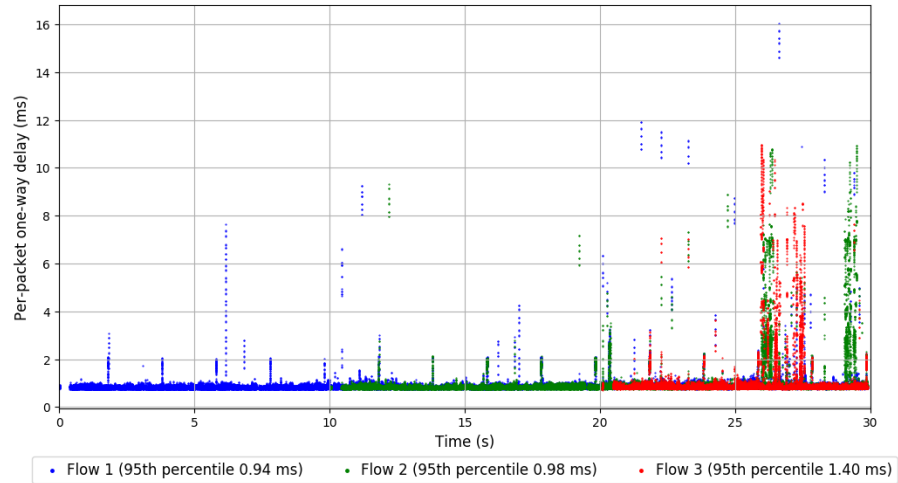
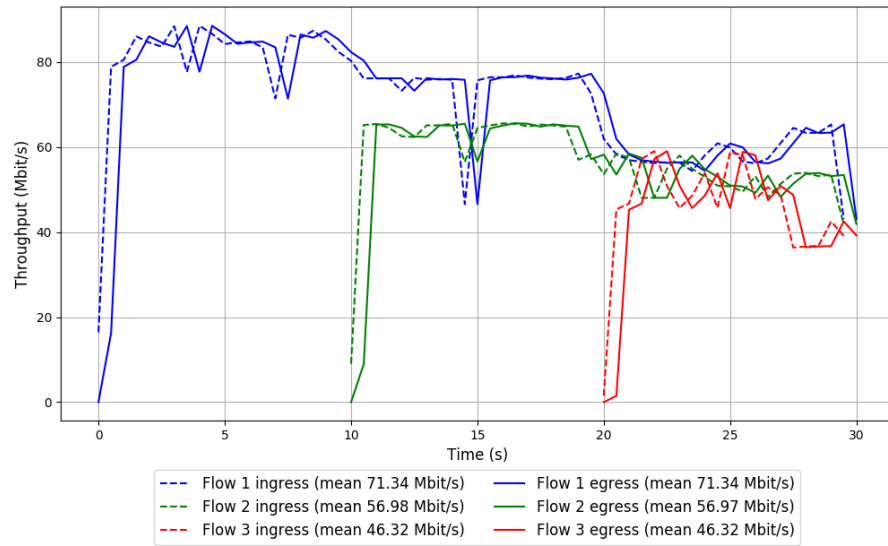
-- Flow 3:

Average throughput: 46.32 Mbit/s

95th percentile per-packet one-way delay: 1.400 ms

Loss rate: 0.01%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-03-27 02:39:22

End at: 2019-03-27 02:39:52

Local clock offset: 4.352 ms

Remote clock offset: 3.222 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 122.62 Mbit/s

95th percentile per-packet one-way delay: 2.225 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 66.91 Mbit/s

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

Loss rate: 0.02%

-- Flow 2:

Average throughput: 57.63 Mbit/s

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

Loss rate: 0.00%

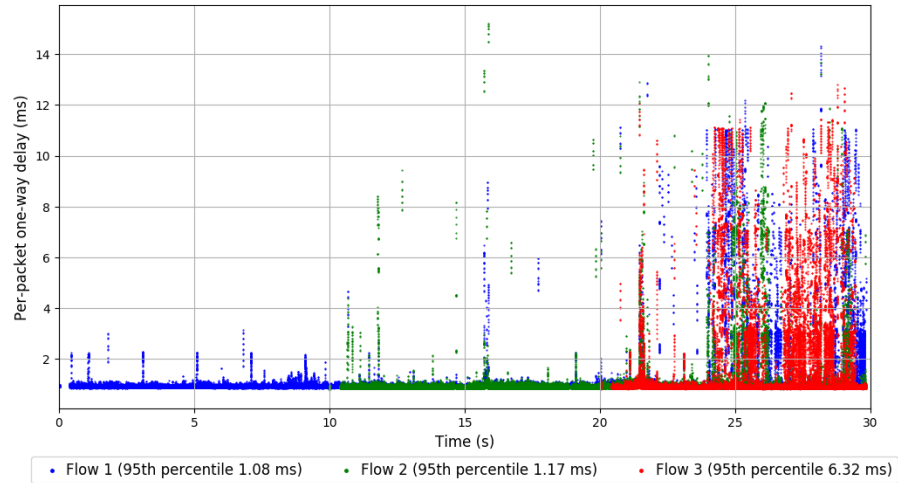
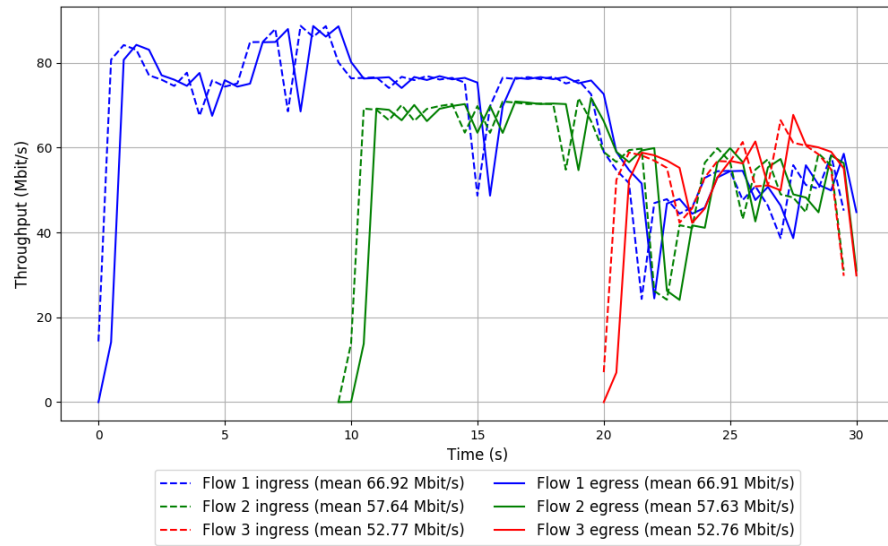
-- Flow 3:

Average throughput: 52.76 Mbit/s

95th percentile per-packet one-way delay: 6.323 ms

Loss rate: 0.01%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-03-27 03:09:36

End at: 2019-03-27 03:10:06

Local clock offset: 0.273 ms

Remote clock offset: 4.878 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 123.18 Mbit/s

95th percentile per-packet one-way delay: 2.113 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 66.46 Mbit/s

95th percentile per-packet one-way delay: 0.871 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 60.46 Mbit/s

95th percentile per-packet one-way delay: 1.612 ms

Loss rate: 0.00%

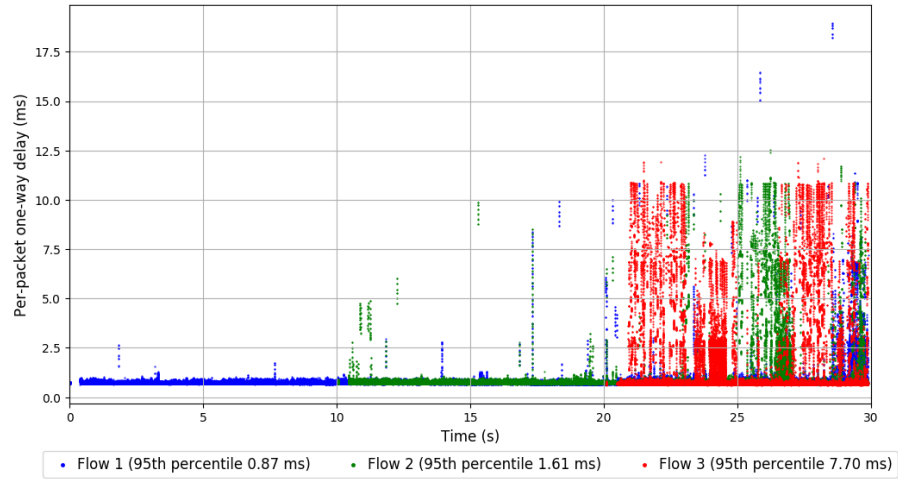
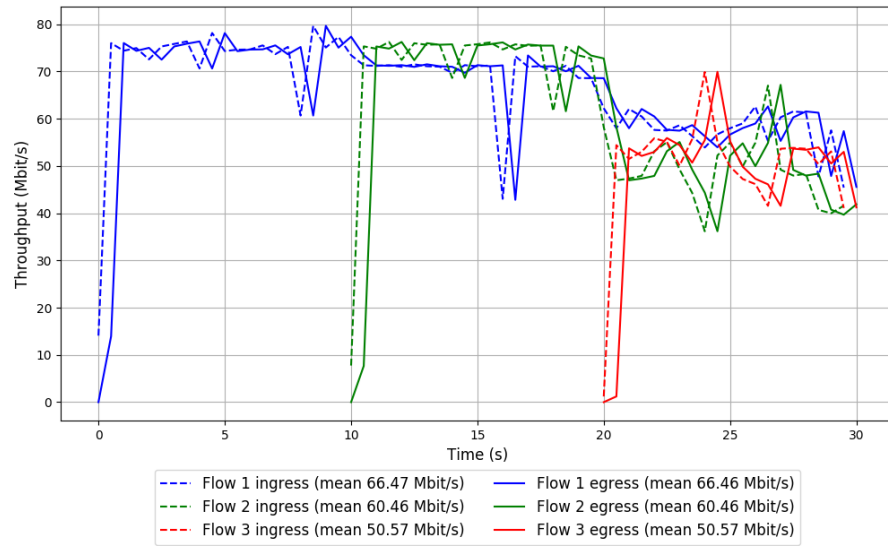
-- Flow 3:

Average throughput: 50.57 Mbit/s

95th percentile per-packet one-way delay: 7.696 ms

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

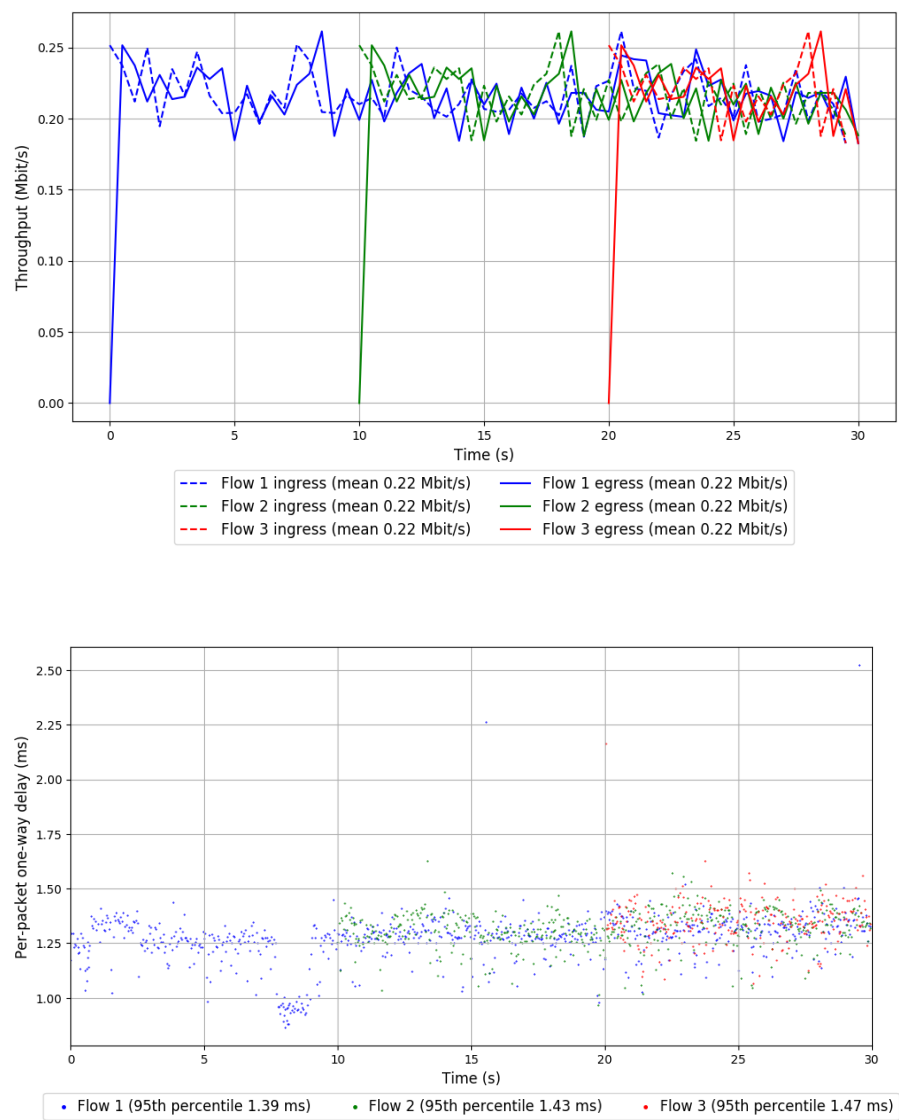


```
Run 1: Statistics of SReAM

Start at: 2019-03-27 01:32:06
End at: 2019-03-27 01:32:36
Local clock offset: 0.448 ms
Remote clock offset: 0.463 ms

# Below is generated by plot.py at 2019-03-27 04:28:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.431 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.391 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.426 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.474 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SReAM

Start at: 2019-03-27 02:02:19

End at: 2019-03-27 02:02:49

Local clock offset: 1.15 ms

Remote clock offset: 0.938 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.207 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

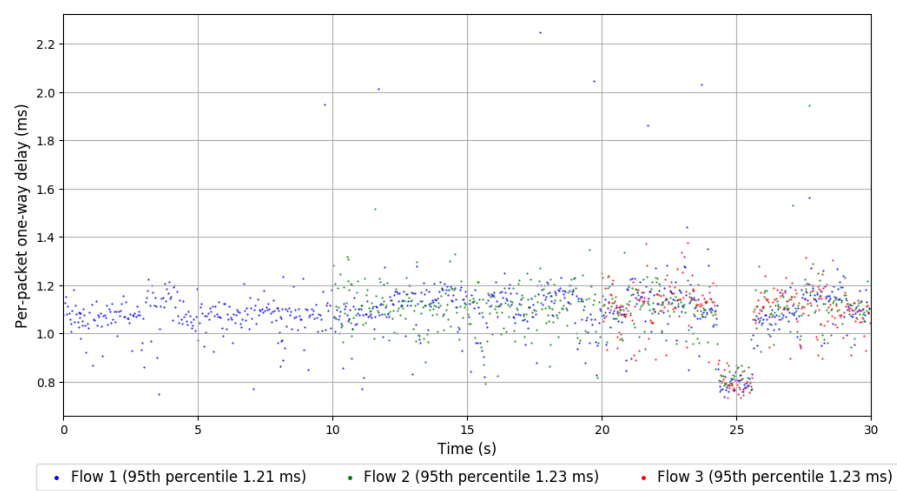
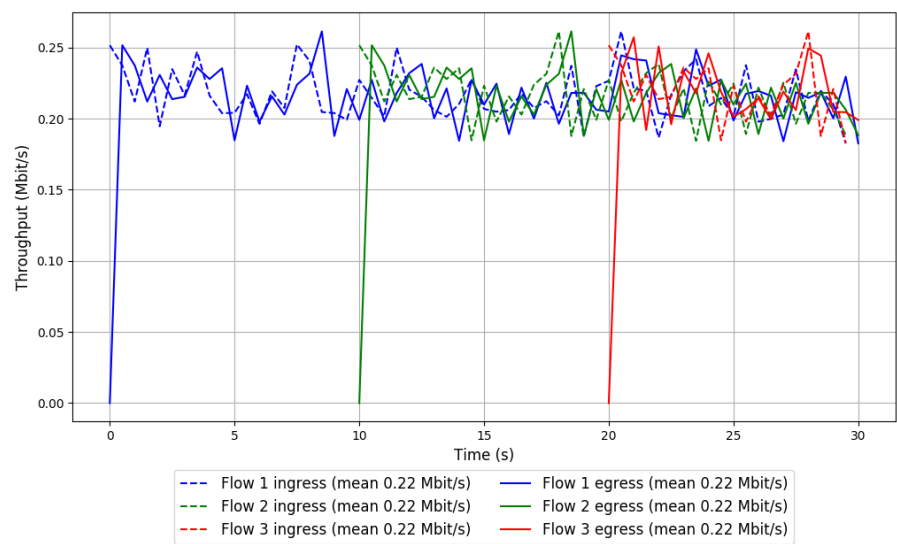
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SReAM

Start at: 2019-03-27 02:32:17

End at: 2019-03-27 02:32:47

Local clock offset: 3.798 ms

Remote clock offset: 2.439 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 1.335 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.375 ms

Loss rate: 0.00%

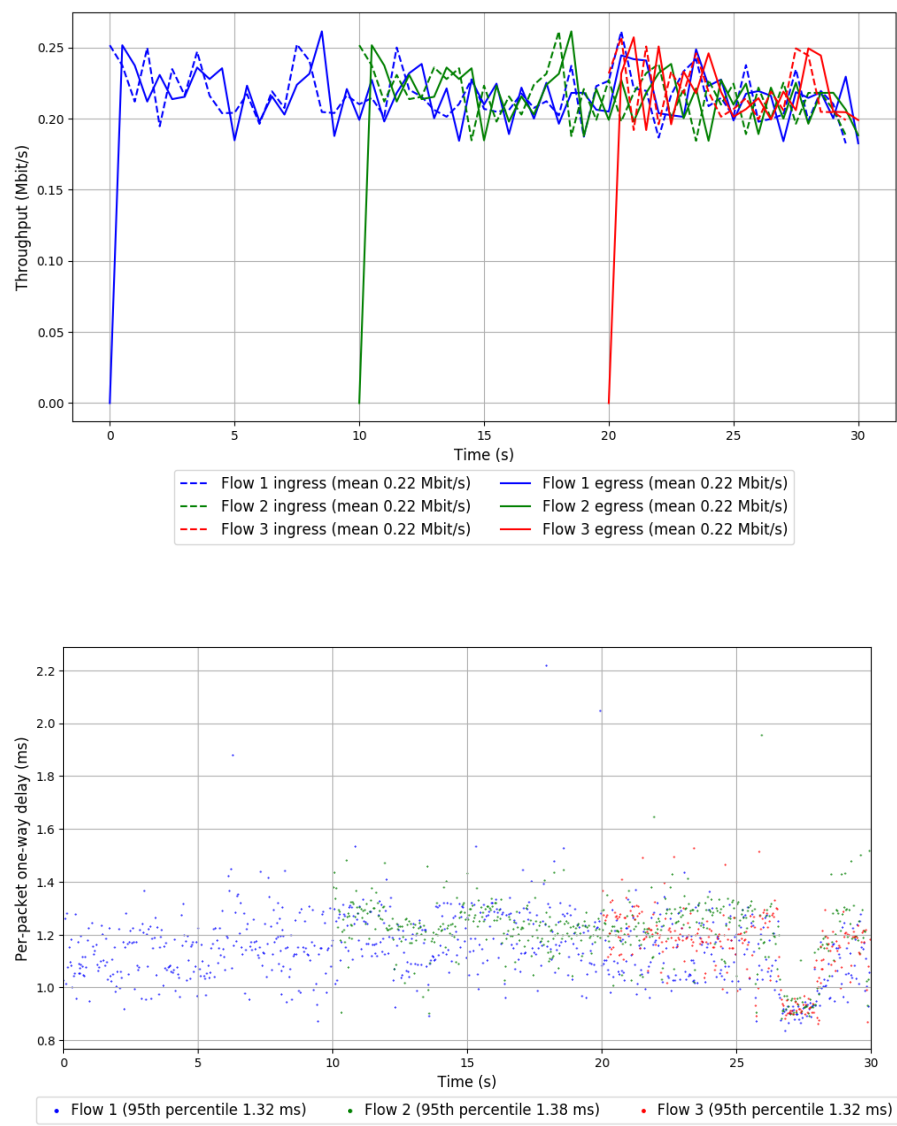
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.325 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SReAM

Start at: 2019-03-27 03:02:28

End at: 2019-03-27 03:02:58

Local clock offset: 0.712 ms

Remote clock offset: 4.586 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 1.278 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.262 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.332 ms

Loss rate: 0.00%

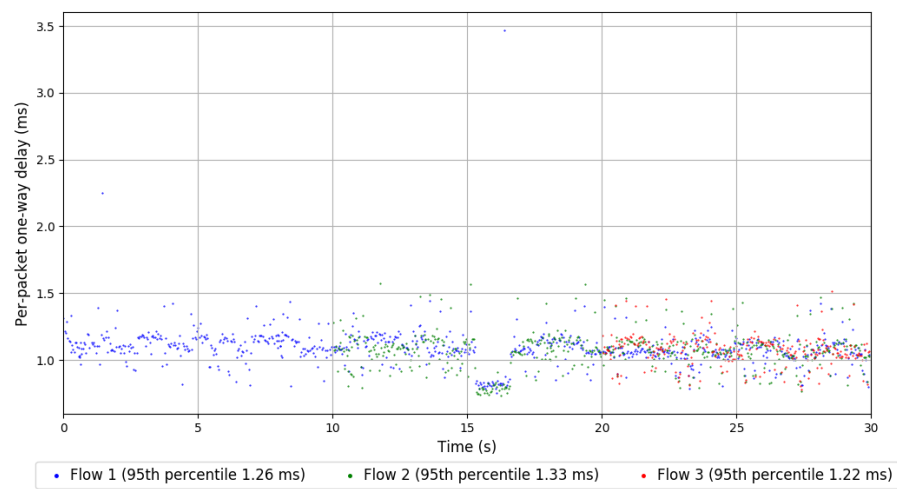
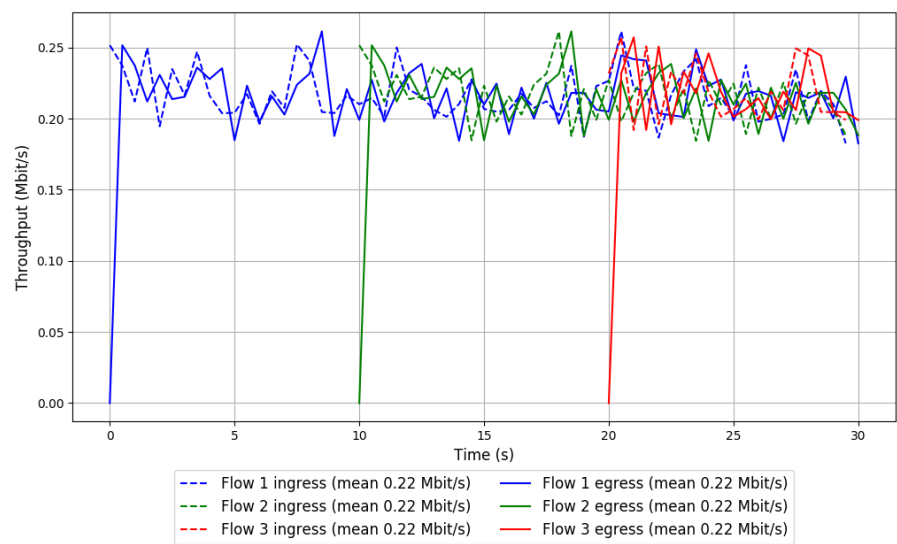
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2019-03-27 03:32:40

End at: 2019-03-27 03:33:10

Local clock offset: -0.007 ms

Remote clock offset: 6.159 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 1.268 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.298 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.248 ms

Loss rate: 0.00%

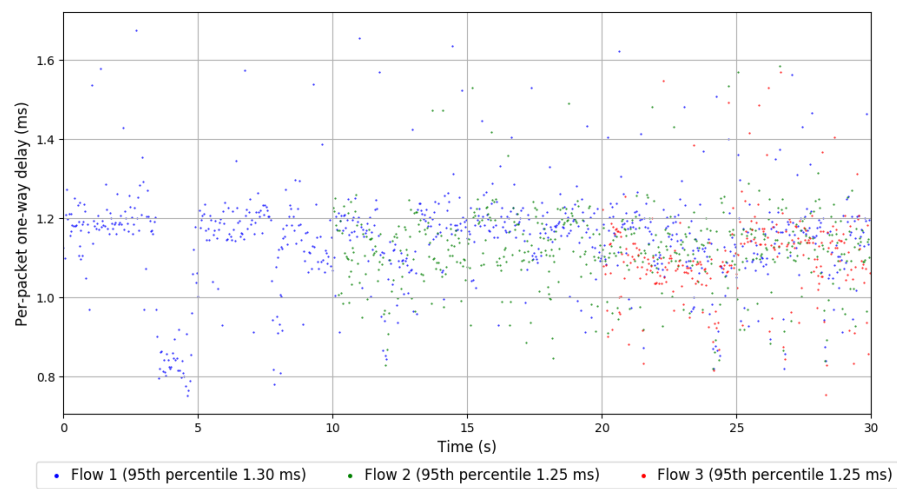
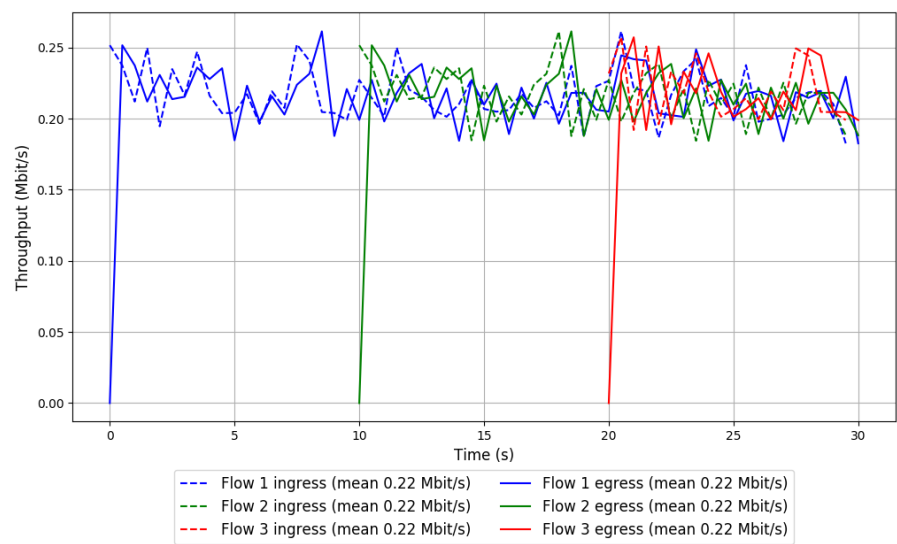
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-03-27 01:26:17

End at: 2019-03-27 01:26:47

Local clock offset: -0.85 ms

Remote clock offset: 0.418 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.44 Mbit/s

95th percentile per-packet one-way delay: 4.470 ms

Loss rate: 0.17%

-- Flow 1:

Average throughput: 49.97 Mbit/s

95th percentile per-packet one-way delay: 4.396 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 49.70 Mbit/s

95th percentile per-packet one-way delay: 4.458 ms

Loss rate: 0.23%

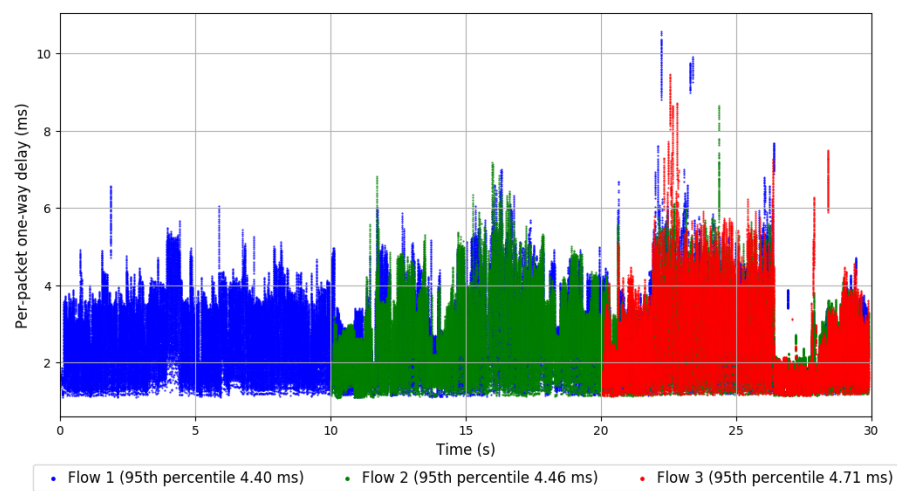
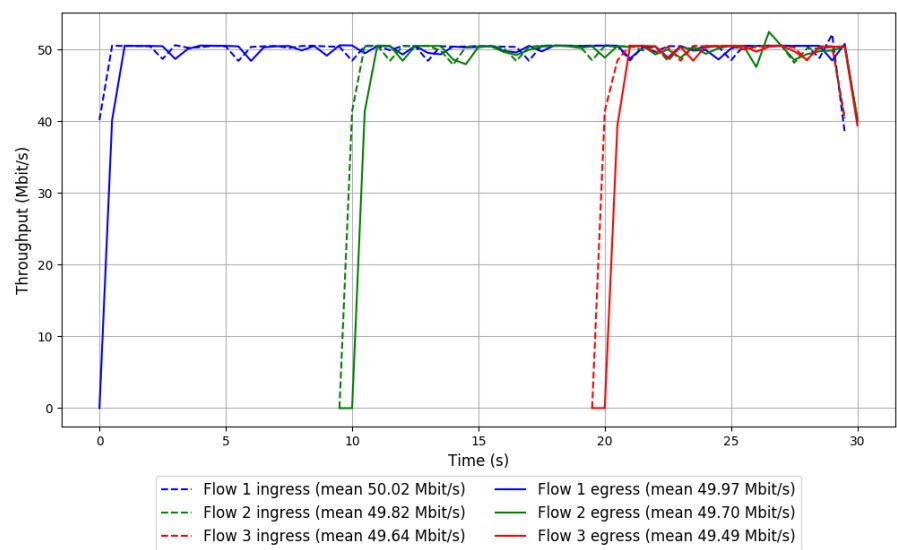
-- Flow 3:

Average throughput: 49.49 Mbit/s

95th percentile per-packet one-way delay: 4.705 ms

Loss rate: 0.28%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-03-27 01:56:28

End at: 2019-03-27 01:56:58

Local clock offset: 1.194 ms

Remote clock offset: 0.929 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.30 Mbit/s

95th percentile per-packet one-way delay: 4.580 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 49.86 Mbit/s

95th percentile per-packet one-way delay: 4.656 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 49.76 Mbit/s

95th percentile per-packet one-way delay: 4.505 ms

Loss rate: 0.23%

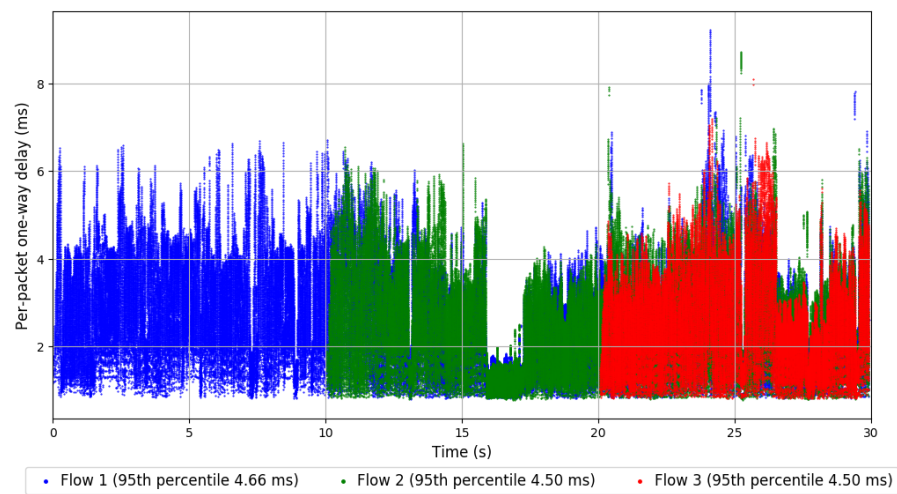
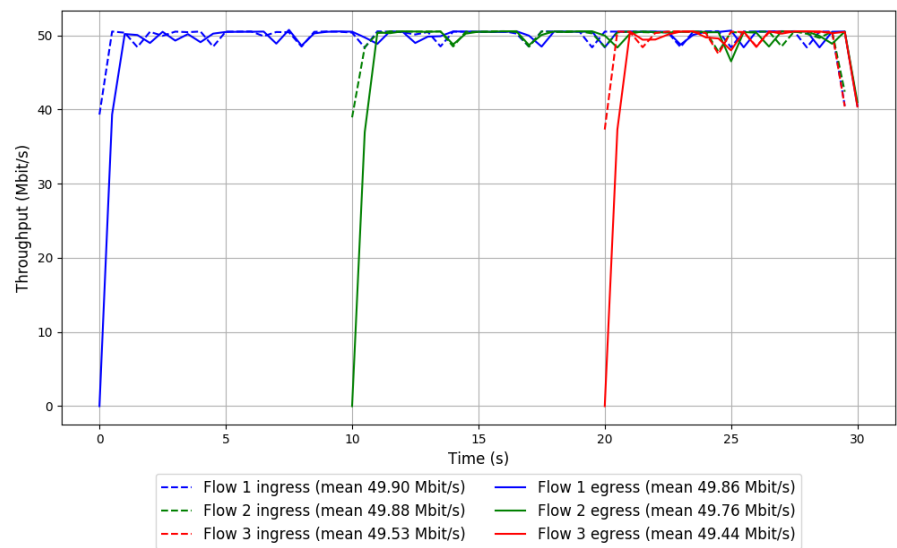
-- Flow 3:

Average throughput: 49.44 Mbit/s

95th percentile per-packet one-way delay: 4.505 ms

Loss rate: 0.15%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-03-27 02:26:28

End at: 2019-03-27 02:26:58

Local clock offset: 3.23 ms

Remote clock offset: 1.471 ms

Below is generated by plot.py at 2019-03-27 04:28:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.36 Mbit/s

95th percentile per-packet one-way delay: 4.555 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 49.94 Mbit/s

95th percentile per-packet one-way delay: 4.591 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 49.75 Mbit/s

95th percentile per-packet one-way delay: 4.456 ms

Loss rate: 0.20%

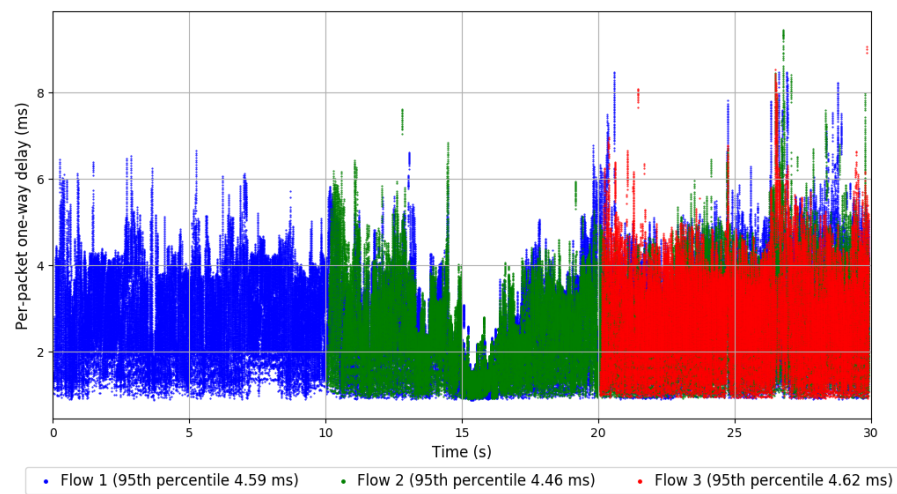
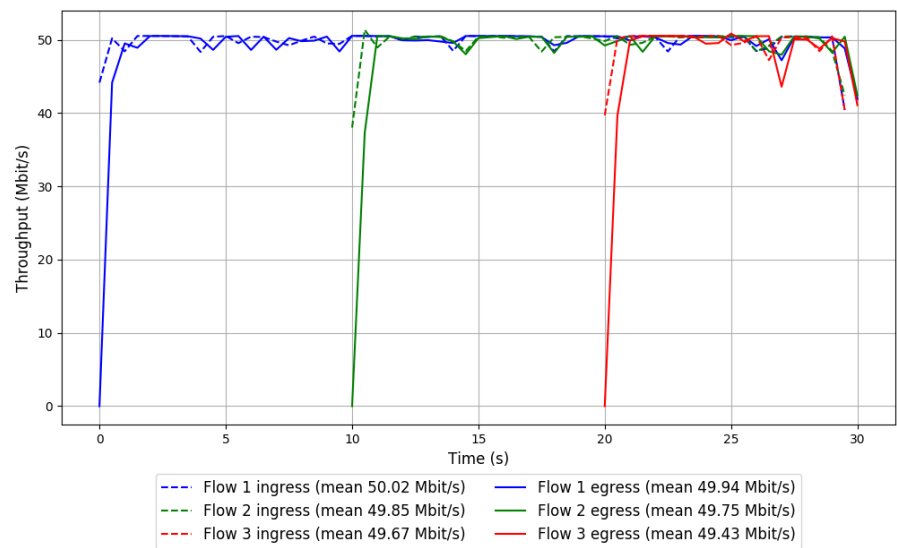
-- Flow 3:

Average throughput: 49.43 Mbit/s

95th percentile per-packet one-way delay: 4.621 ms

Loss rate: 0.44%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2019-03-27 02:56:37

End at: 2019-03-27 02:57:07

Local clock offset: 1.437 ms

Remote clock offset: 4.234 ms

Below is generated by plot.py at 2019-03-27 04:28:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.96 Mbit/s

95th percentile per-packet one-way delay: 4.954 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 49.78 Mbit/s

95th percentile per-packet one-way delay: 4.685 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 49.46 Mbit/s

95th percentile per-packet one-way delay: 5.286 ms

Loss rate: 0.01%

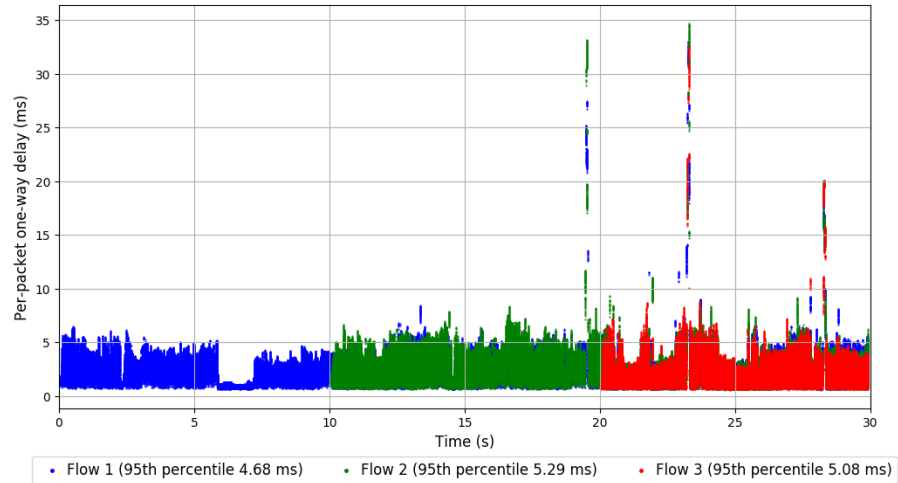
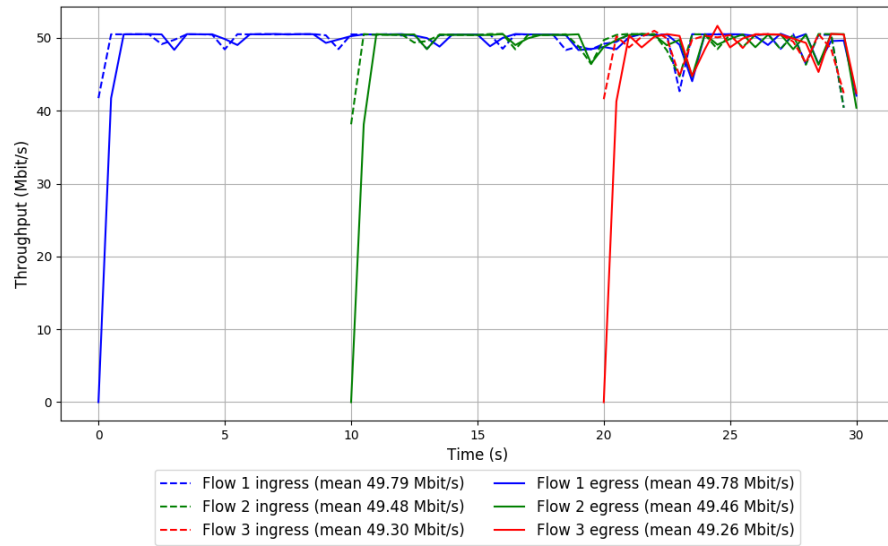
-- Flow 3:

Average throughput: 49.26 Mbit/s

95th percentile per-packet one-way delay: 5.078 ms

Loss rate: 0.04%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2019-03-27 03:26:51

End at: 2019-03-27 03:27:21

Local clock offset: 0.03 ms

Remote clock offset: 5.839 ms

Below is generated by plot.py at 2019-03-27 04:29:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.04 Mbit/s

95th percentile per-packet one-way delay: 5.287 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 49.84 Mbit/s

95th percentile per-packet one-way delay: 5.377 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 49.64 Mbit/s

95th percentile per-packet one-way delay: 5.238 ms

Loss rate: 0.12%

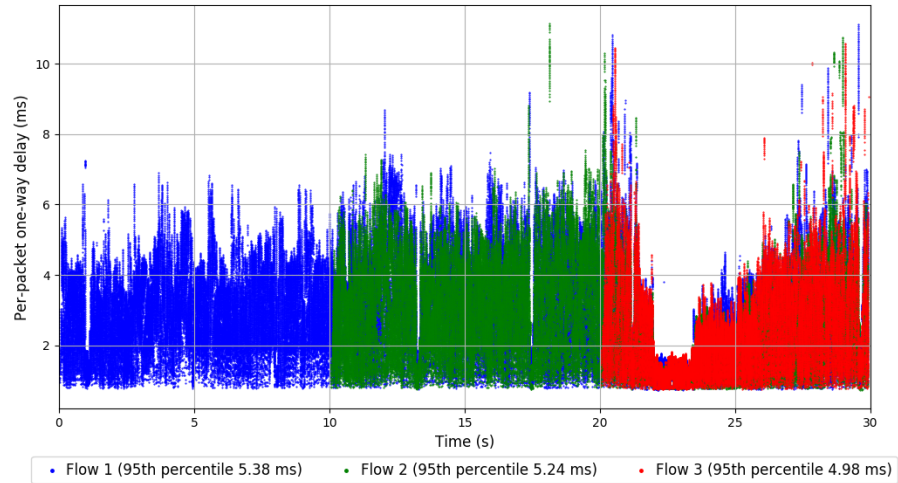
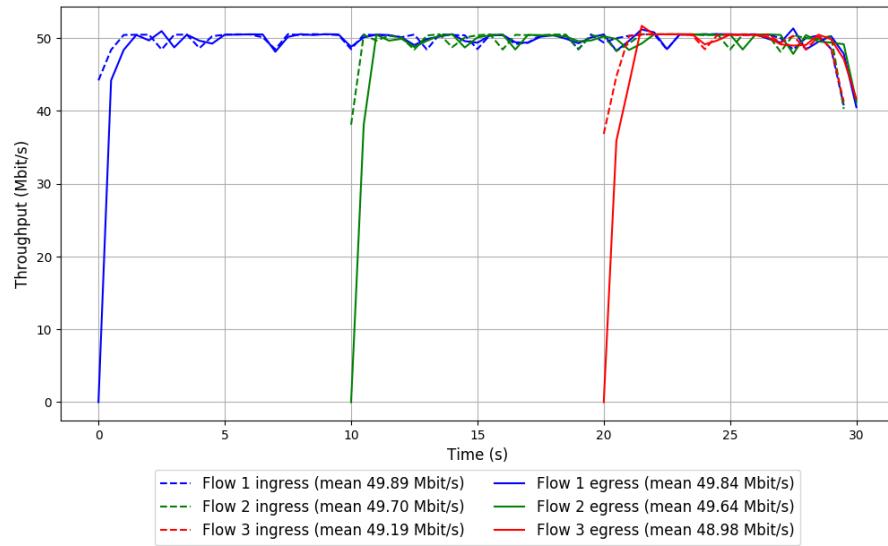
-- Flow 3:

Average throughput: 48.98 Mbit/s

95th percentile per-packet one-way delay: 4.977 ms

Loss rate: 0.34%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-03-27 01:15:02

End at: 2019-03-27 01:15:32

Local clock offset: -5.311 ms

Remote clock offset: 0.305 ms

Below is generated by plot.py at 2019-03-27 04:29:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.62 Mbit/s

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

Loss rate: 79.47%

-- Flow 1:

Average throughput: 0.00 Mbit/s

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

Loss rate: 95.92%

-- Flow 2:

Average throughput: 11.19 Mbit/s

95th percentile per-packet one-way delay: 1.097 ms

Loss rate: 72.97%

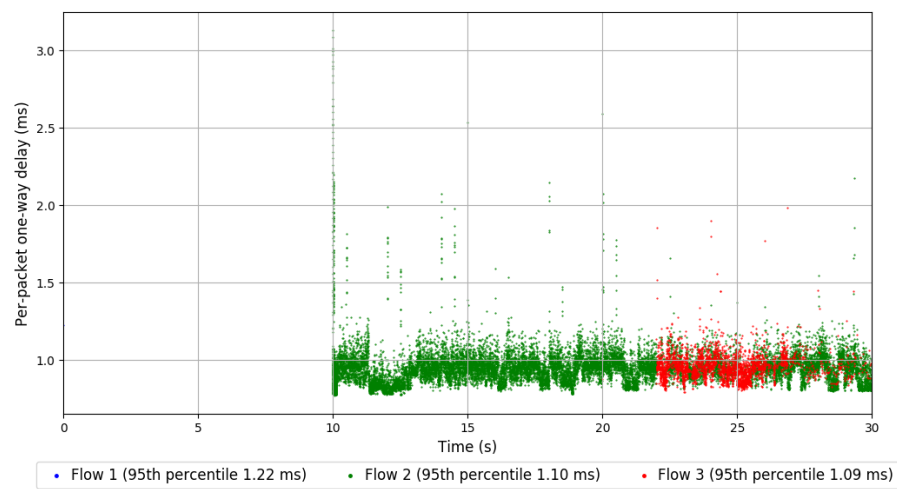
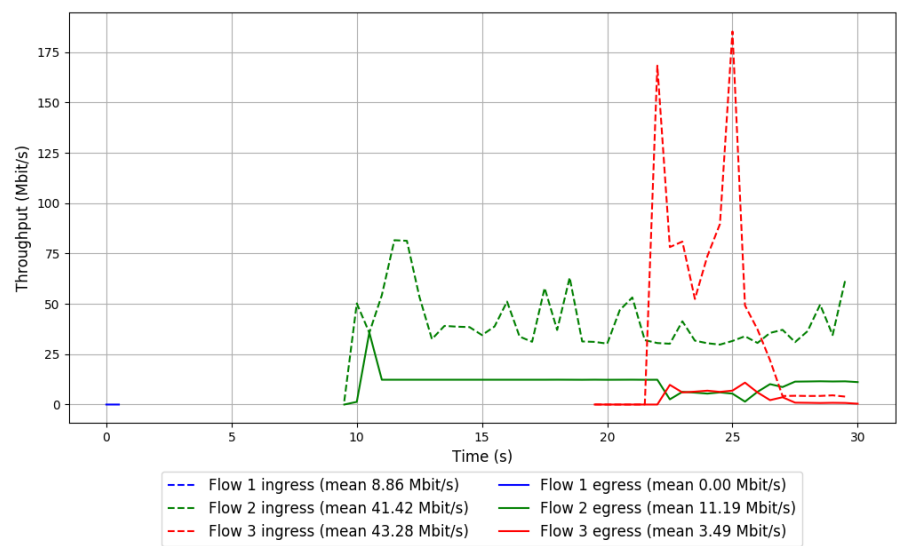
-- Flow 3:

Average throughput: 3.49 Mbit/s

95th percentile per-packet one-way delay: 1.087 ms

Loss rate: 91.93%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-03-27 01:45:11

End at: 2019-03-27 01:45:41

Local clock offset: 2.033 ms

Remote clock offset: 0.668 ms

Below is generated by plot.py at 2019-03-27 04:29:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.28 Mbit/s

95th percentile per-packet one-way delay: 1.133 ms

Loss rate: 68.90%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.136 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 12.43 Mbit/s

95th percentile per-packet one-way delay: 1.133 ms

Loss rate: 68.90%

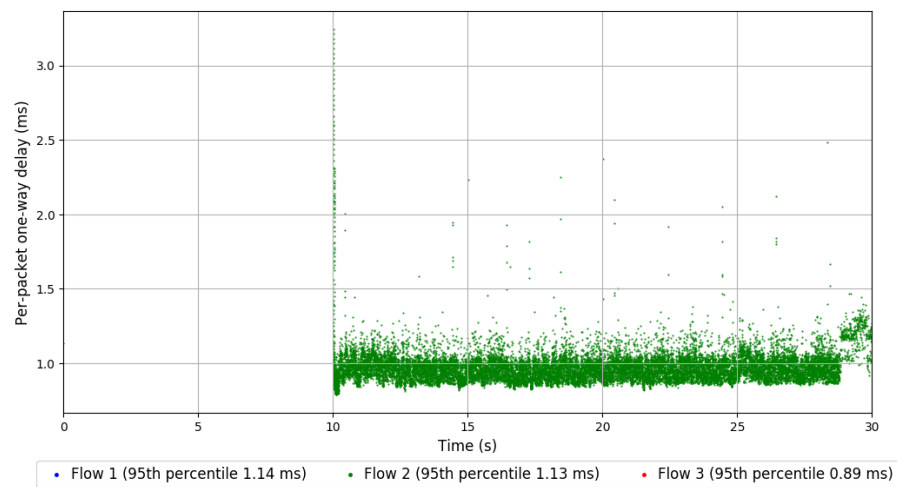
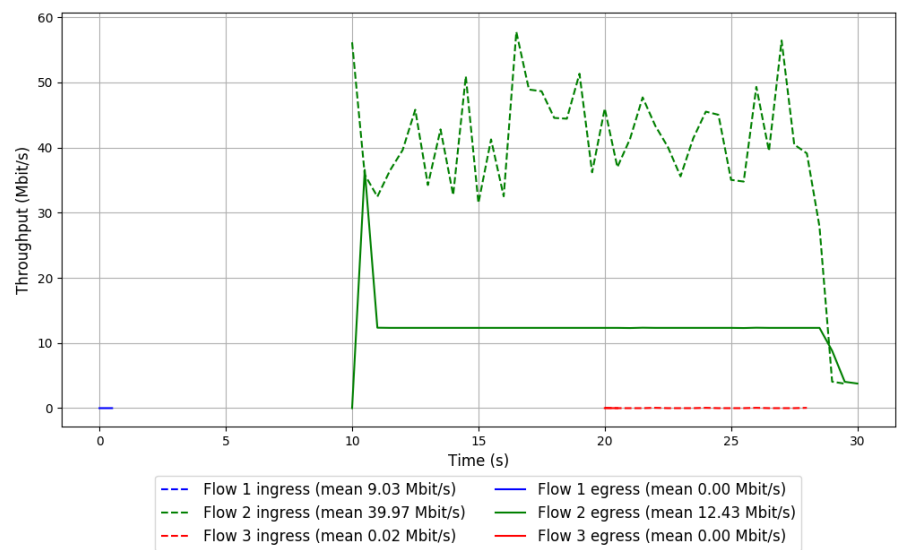
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 0.890 ms

Loss rate: 99.16%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-03-27 02:15:19

End at: 2019-03-27 02:15:49

Local clock offset: 1.523 ms

Remote clock offset: 1.241 ms

Below is generated by plot.py at 2019-03-27 04:29:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.46 Mbit/s

95th percentile per-packet one-way delay: 1.216 ms

Loss rate: 28.26%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.211 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 5.91 Mbit/s

95th percentile per-packet one-way delay: 1.226 ms

Loss rate: 39.26%

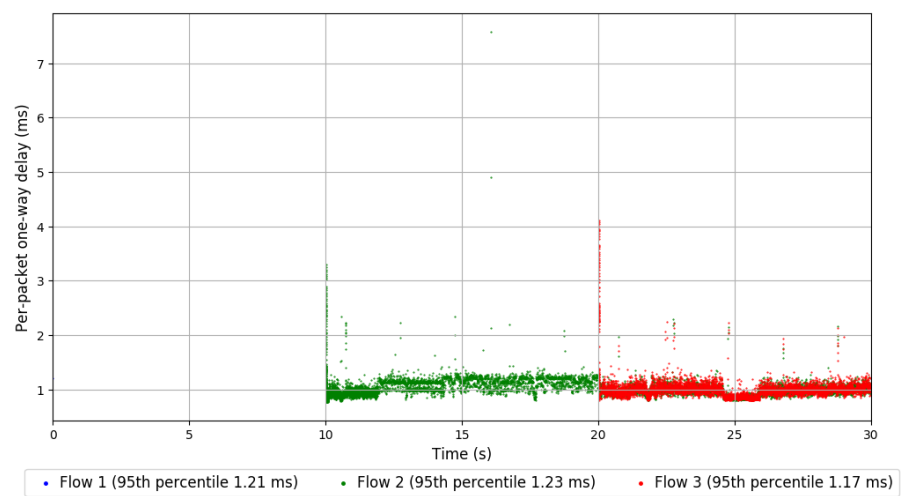
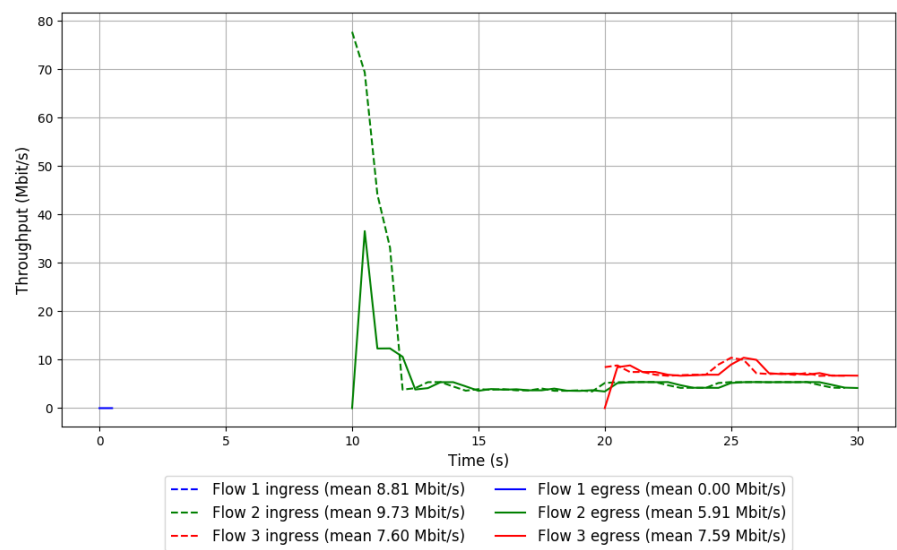
-- Flow 3:

Average throughput: 7.59 Mbit/s

95th percentile per-packet one-way delay: 1.173 ms

Loss rate: 0.02%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-03-27 02:45:29

End at: 2019-03-27 02:45:59

Local clock offset: 4.79 ms

Remote clock offset: 3.717 ms

Below is generated by plot.py at 2019-03-27 04:29:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.30 Mbit/s

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

Loss rate: 60.50%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.213 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 4.65 Mbit/s

95th percentile per-packet one-way delay: 1.209 ms

Loss rate: 27.08%

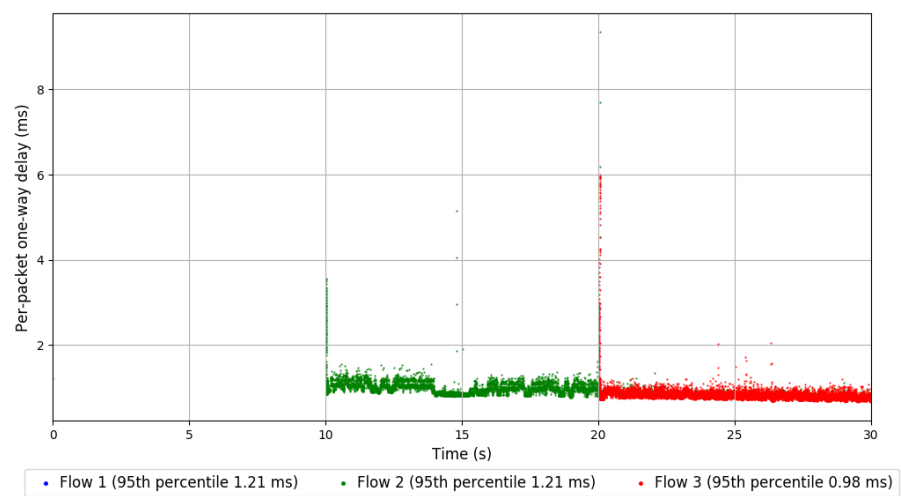
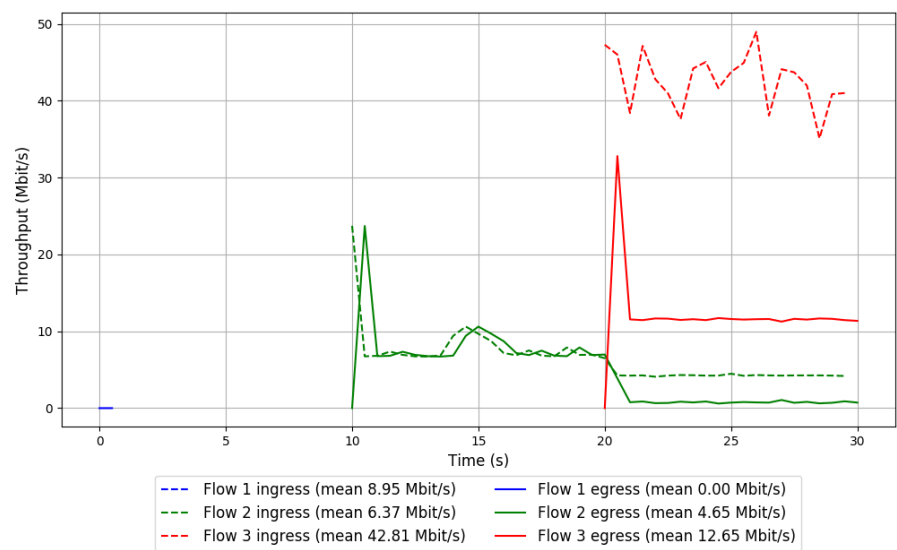
-- Flow 3:

Average throughput: 12.65 Mbit/s

95th percentile per-packet one-way delay: 0.979 ms

Loss rate: 70.46%

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-03-27 03:15:38

End at: 2019-03-27 03:16:08

Local clock offset: 0.077 ms

Remote clock offset: 5.31 ms

Below is generated by plot.py at 2019-03-27 04:29:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.94 Mbit/s

95th percentile per-packet one-way delay: 1.156 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 0.985 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 6.84 Mbit/s

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

Loss rate: 0.11%

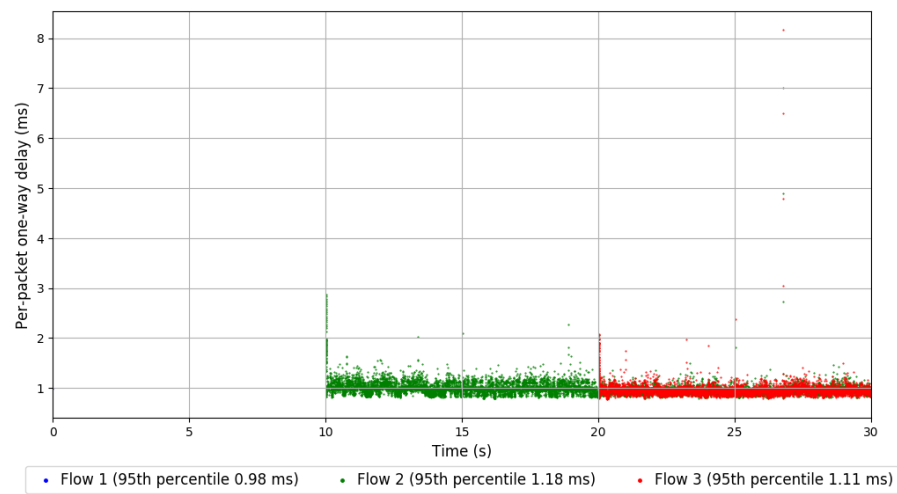
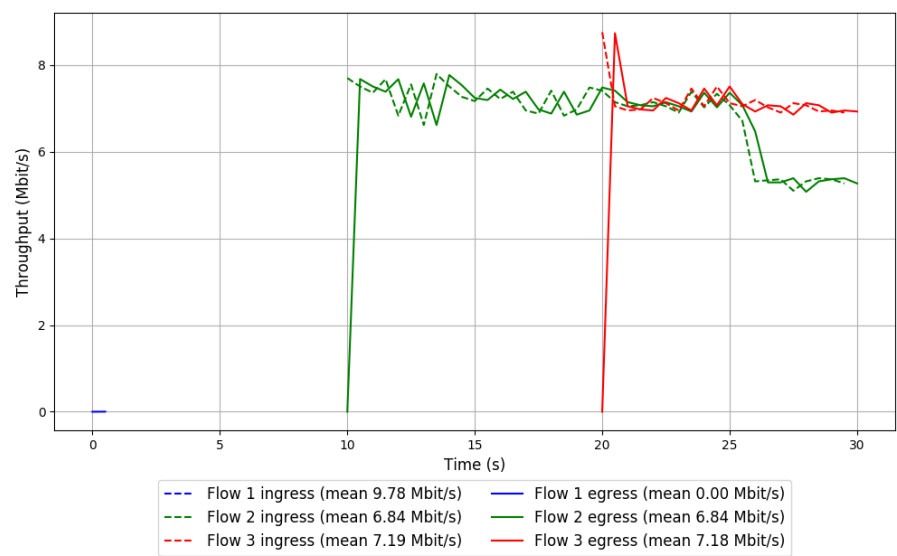
-- Flow 3:

Average throughput: 7.18 Mbit/s

95th percentile per-packet one-way delay: 1.106 ms

Loss rate: 0.20%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-03-27 01:10:18

End at: 2019-03-27 01:10:48

Local clock offset: -5.109 ms

Remote clock offset: 0.193 ms

Below is generated by plot.py at 2019-03-27 04:31:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 266.79 Mbit/s

95th percentile per-packet one-way delay: 1.308 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 71.21 Mbit/s

95th percentile per-packet one-way delay: 1.853 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 122.95 Mbit/s

95th percentile per-packet one-way delay: 1.254 ms

Loss rate: 0.02%

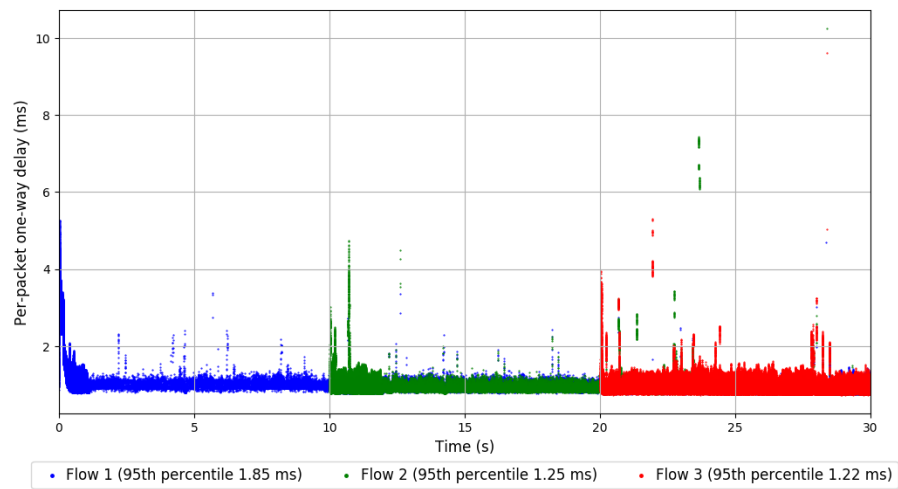
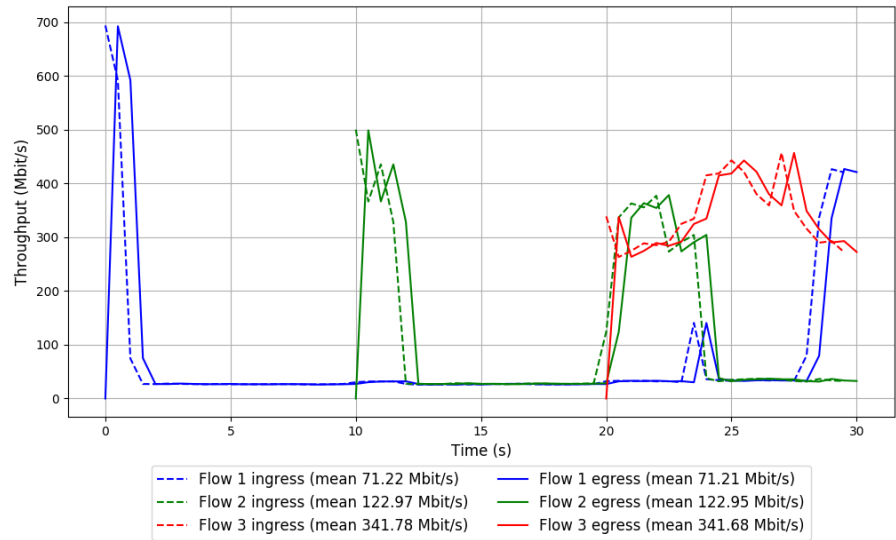
-- Flow 3:

Average throughput: 341.68 Mbit/s

95th percentile per-packet one-way delay: 1.221 ms

Loss rate: 0.03%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-03-27 01:40:32

End at: 2019-03-27 01:41:02

Local clock offset: 1.568 ms

Remote clock offset: 0.684 ms

Below is generated by plot.py at 2019-03-27 04:31:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 156.83 Mbit/s

95th percentile per-packet one-way delay: 1.396 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 91.21 Mbit/s

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

Loss rate: 0.03%

-- Flow 2:

Average throughput: 65.77 Mbit/s

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

Loss rate: 0.02%

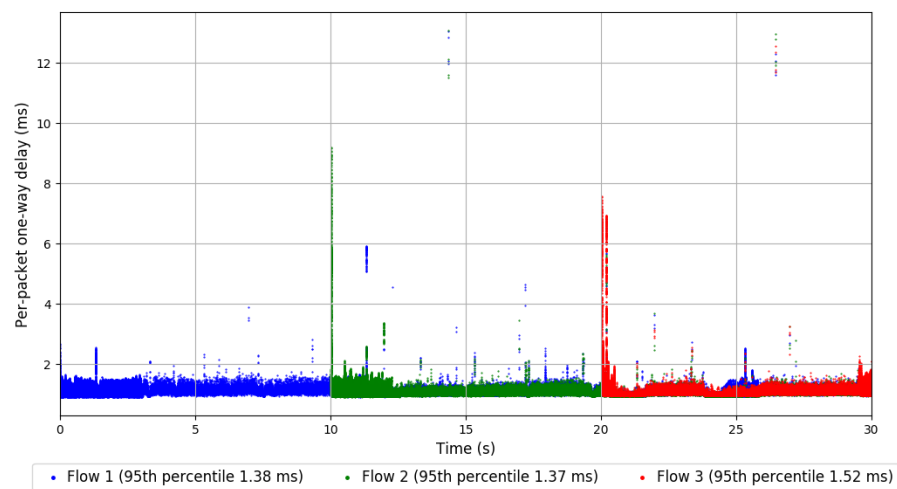
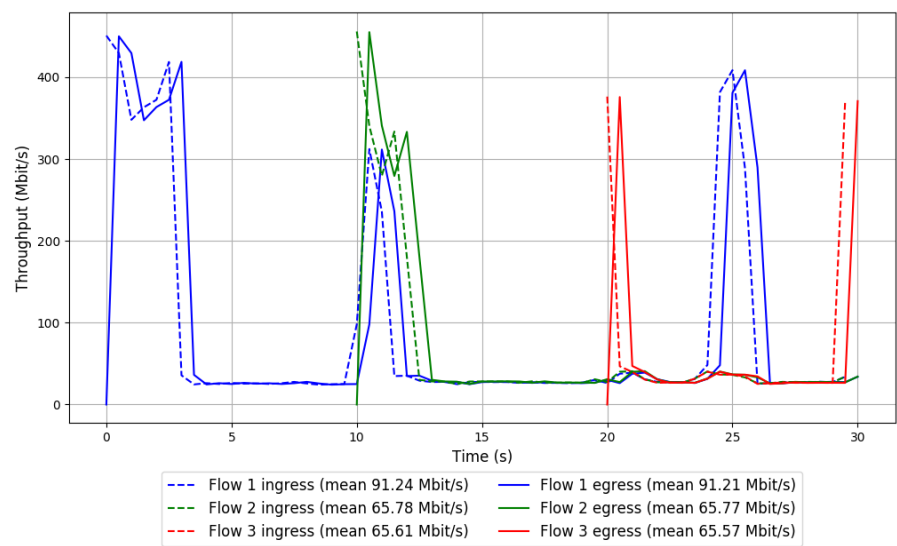
-- Flow 3:

Average throughput: 65.57 Mbit/s

95th percentile per-packet one-way delay: 1.523 ms

Loss rate: 0.06%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-03-27 02:10:30

End at: 2019-03-27 02:11:00

Local clock offset: 1.363 ms

Remote clock offset: 1.149 ms

Below is generated by plot.py at 2019-03-27 04:33:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 412.29 Mbit/s

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

Loss rate: 0.03%

-- Flow 1:

Average throughput: 139.26 Mbit/s

95th percentile per-packet one-way delay: 1.221 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 216.96 Mbit/s

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

Loss rate: 0.03%

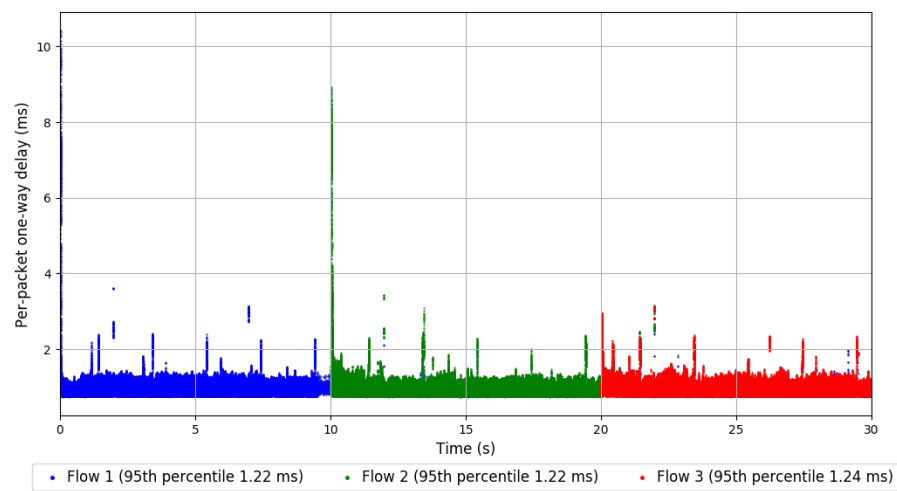
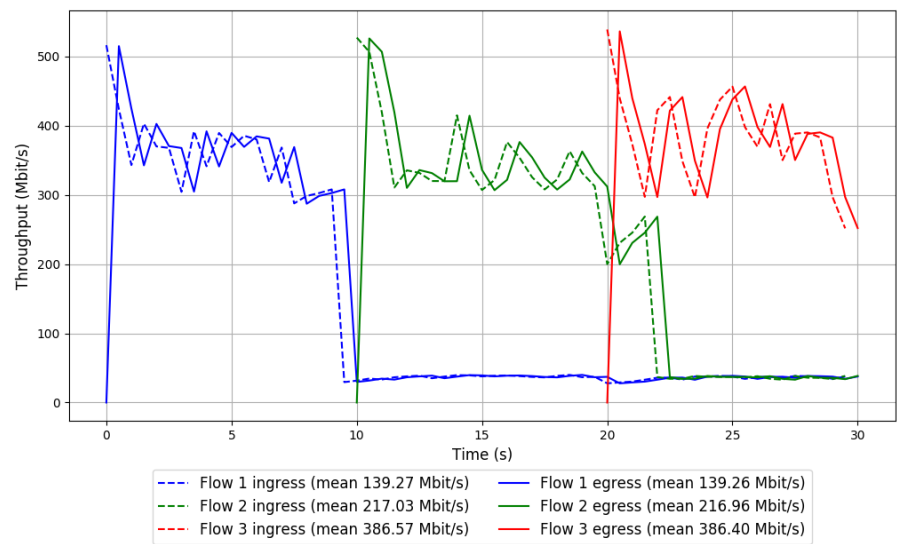
-- Flow 3:

Average throughput: 386.40 Mbit/s

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

Loss rate: 0.04%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-03-27 02:40:41

End at: 2019-03-27 02:41:11

Local clock offset: 4.481 ms

Remote clock offset: 3.316 ms

Below is generated by plot.py at 2019-03-27 04:33:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 384.84 Mbit/s

95th percentile per-packet one-way delay: 1.323 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 210.43 Mbit/s

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

Loss rate: 0.02%

-- Flow 2:

Average throughput: 237.59 Mbit/s

95th percentile per-packet one-way delay: 1.327 ms

Loss rate: 0.04%

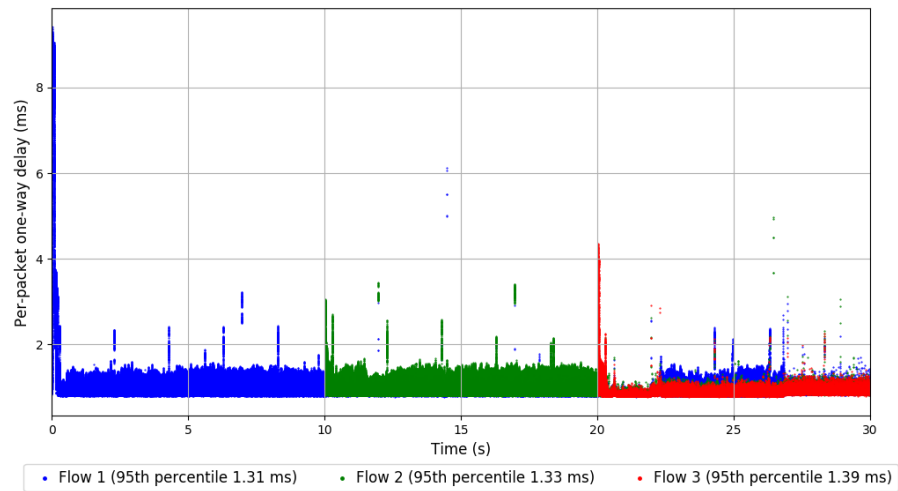
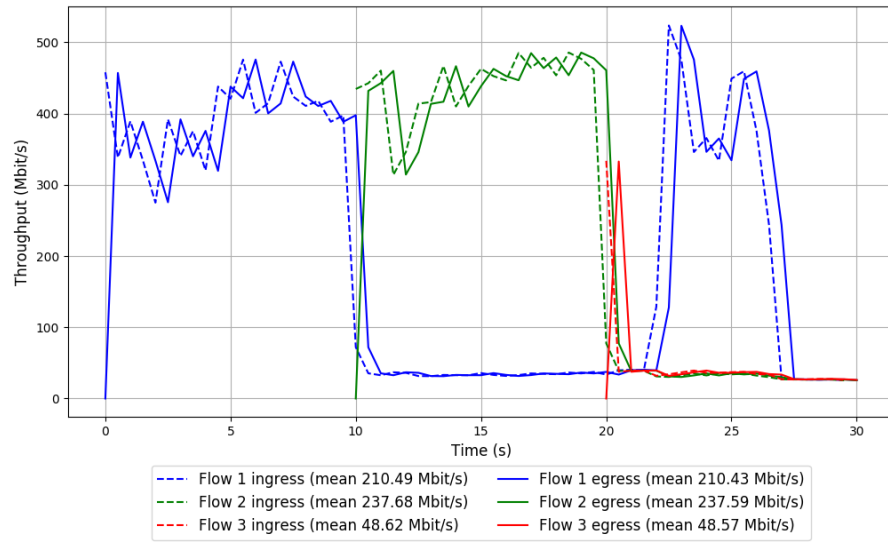
-- Flow 3:

Average throughput: 48.57 Mbit/s

95th percentile per-packet one-way delay: 1.387 ms

Loss rate: 0.09%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-03-27 03:10:54

End at: 2019-03-27 03:11:24

Local clock offset: 0.219 ms

Remote clock offset: 5.038 ms

Below is generated by plot.py at 2019-03-27 04:33:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 295.70 Mbit/s

95th percentile per-packet one-way delay: 1.268 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 75.48 Mbit/s

95th percentile per-packet one-way delay: 1.253 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 128.95 Mbit/s

95th percentile per-packet one-way delay: 1.217 ms

Loss rate: 0.00%

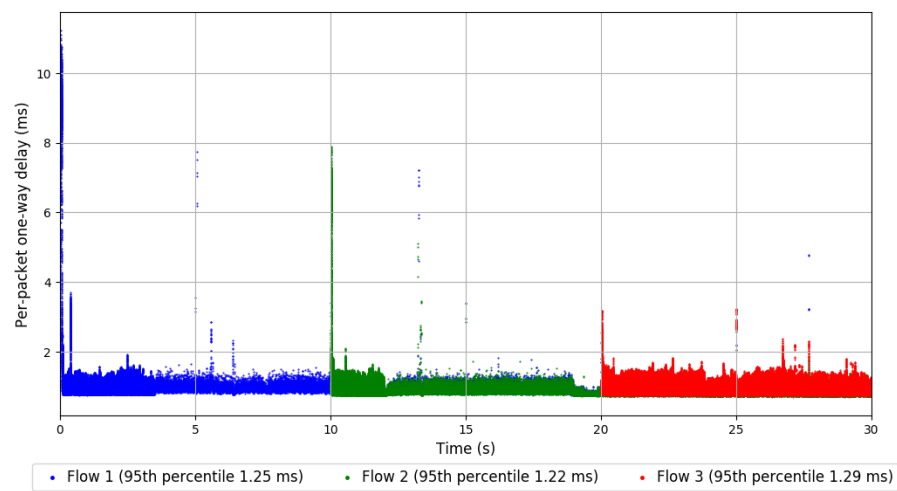
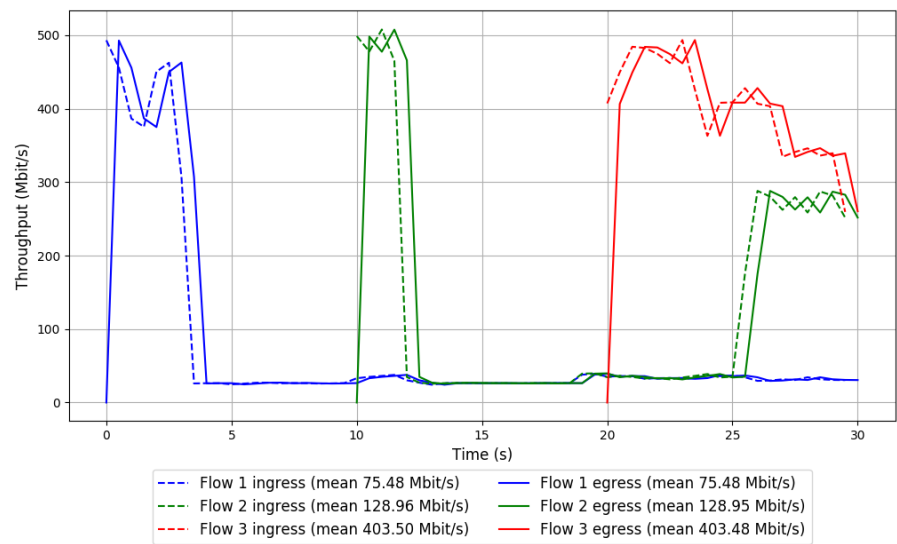
-- Flow 3:

Average throughput: 403.48 Mbit/s

95th percentile per-packet one-way delay: 1.291 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-03-27 01:17:31

End at: 2019-03-27 01:18:01

Local clock offset: -4.456 ms

Remote clock offset: 0.331 ms

Below is generated by plot.py at 2019-03-27 04:33:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 297.75 Mbit/s

95th percentile per-packet one-way delay: 12.251 ms

Loss rate: 1.99%

-- Flow 1:

Average throughput: 152.34 Mbit/s

95th percentile per-packet one-way delay: 13.289 ms

Loss rate: 1.63%

-- Flow 2:

Average throughput: 149.83 Mbit/s

95th percentile per-packet one-way delay: 11.908 ms

Loss rate: 2.60%

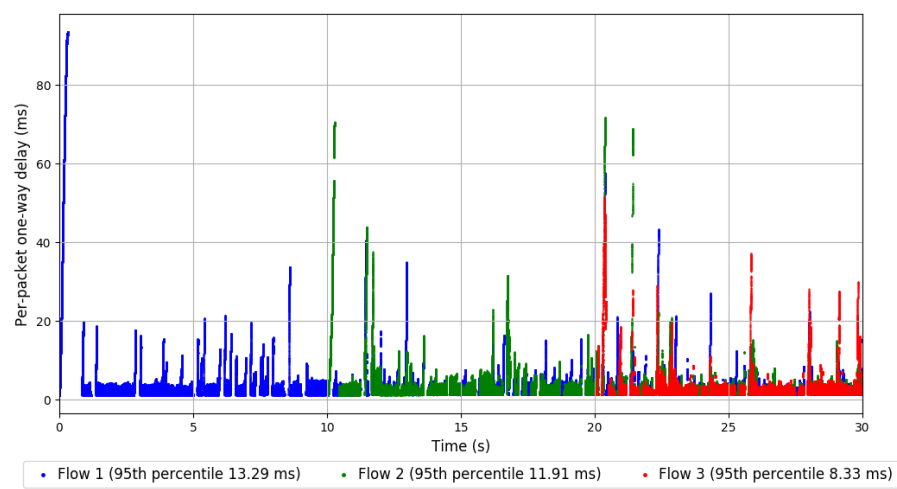
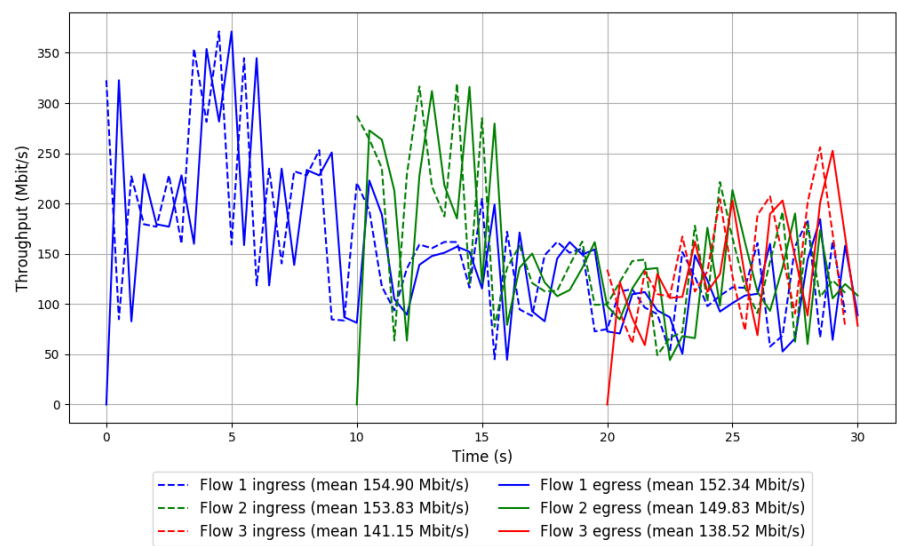
-- Flow 3:

Average throughput: 138.52 Mbit/s

95th percentile per-packet one-way delay: 8.328 ms

Loss rate: 1.86%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-03-27 01:47:40

End at: 2019-03-27 01:48:10

Local clock offset: 1.875 ms

Remote clock offset: 0.781 ms

Below is generated by plot.py at 2019-03-27 04:33:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 316.64 Mbit/s

95th percentile per-packet one-way delay: 9.482 ms

Loss rate: 3.08%

-- Flow 1:

Average throughput: 158.42 Mbit/s

95th percentile per-packet one-way delay: 9.407 ms

Loss rate: 2.13%

-- Flow 2:

Average throughput: 166.03 Mbit/s

95th percentile per-packet one-way delay: 8.508 ms

Loss rate: 3.48%

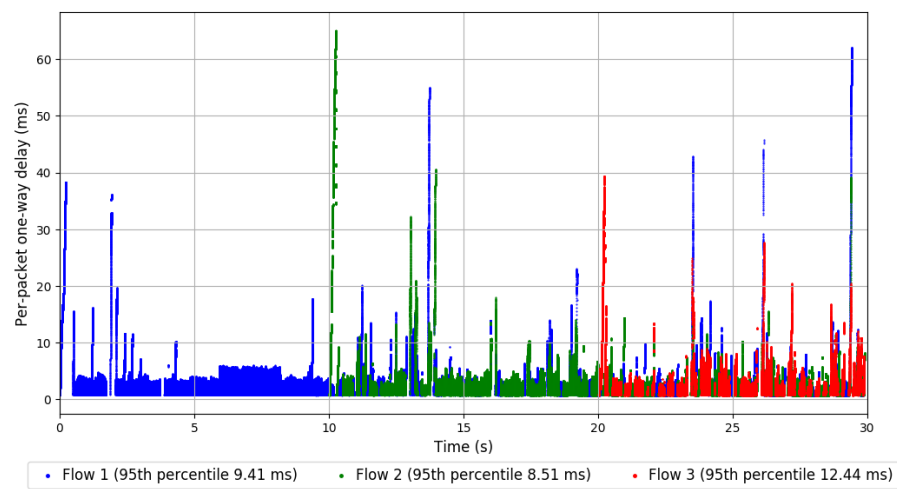
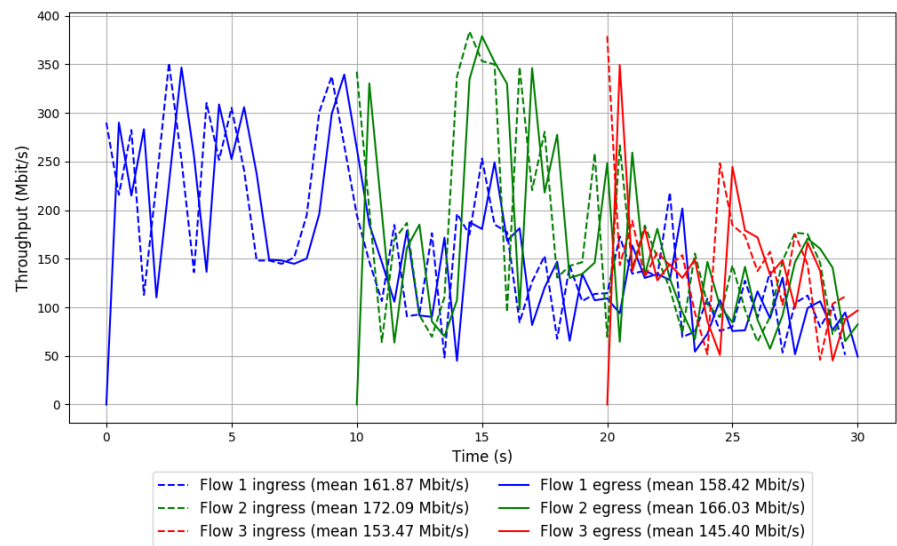
-- Flow 3:

Average throughput: 145.40 Mbit/s

95th percentile per-packet one-way delay: 12.442 ms

Loss rate: 5.24%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-03-27 02:17:48

End at: 2019-03-27 02:18:18

Local clock offset: 1.878 ms

Remote clock offset: 1.337 ms

Below is generated by plot.py at 2019-03-27 04:33:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 260.65 Mbit/s

95th percentile per-packet one-way delay: 15.318 ms

Loss rate: 3.15%

-- Flow 1:

Average throughput: 131.92 Mbit/s

95th percentile per-packet one-way delay: 13.945 ms

Loss rate: 2.79%

-- Flow 2:

Average throughput: 114.54 Mbit/s

95th percentile per-packet one-way delay: 13.495 ms

Loss rate: 3.80%

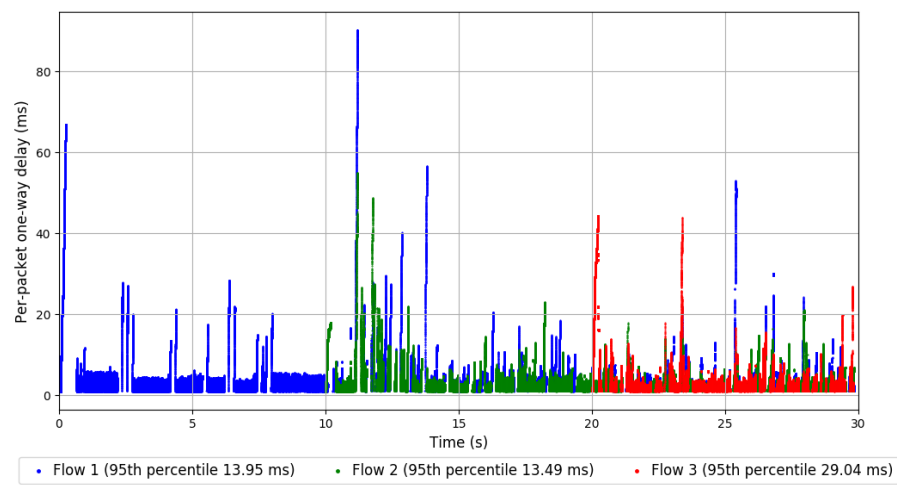
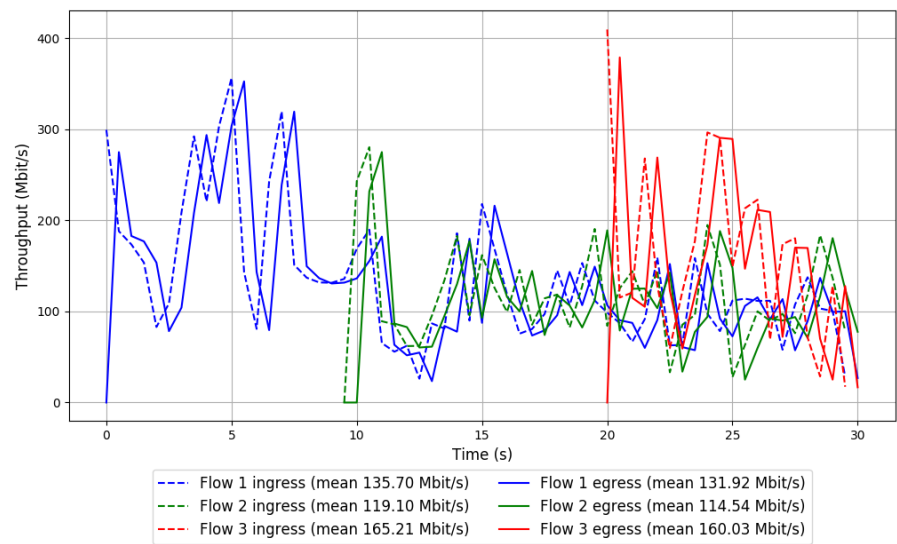
-- Flow 3:

Average throughput: 160.03 Mbit/s

95th percentile per-packet one-way delay: 29.036 ms

Loss rate: 3.12%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2019-03-27 02:47:58

End at: 2019-03-27 02:48:28

Local clock offset: 3.897 ms

Remote clock offset: 3.883 ms

Below is generated by plot.py at 2019-03-27 04:33:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 280.21 Mbit/s

95th percentile per-packet one-way delay: 25.318 ms

Loss rate: 3.85%

-- Flow 1:

Average throughput: 154.65 Mbit/s

95th percentile per-packet one-way delay: 41.398 ms

Loss rate: 3.71%

-- Flow 2:

Average throughput: 123.45 Mbit/s

95th percentile per-packet one-way delay: 18.017 ms

Loss rate: 4.17%

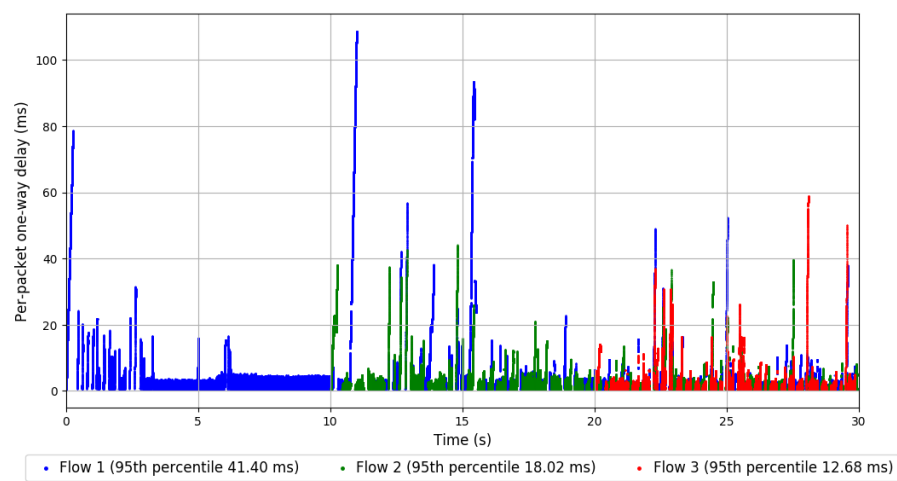
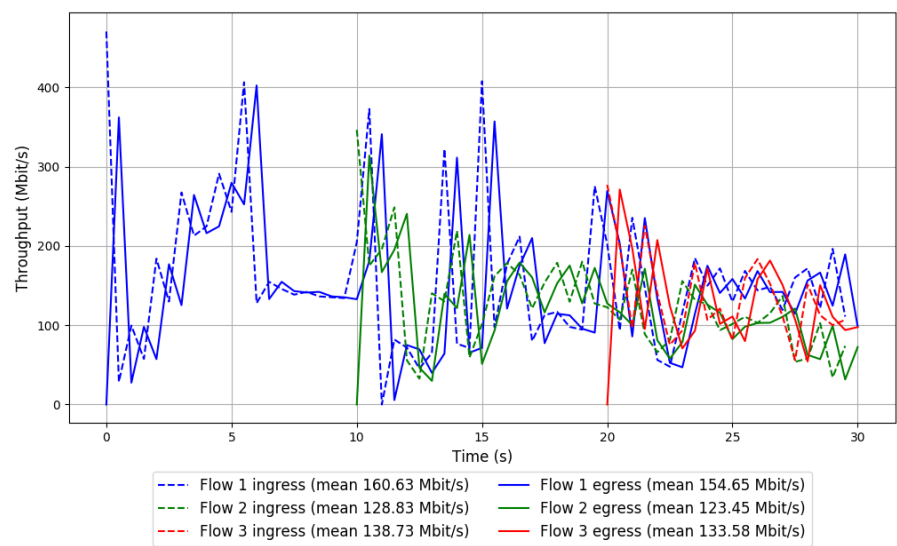
-- Flow 3:

Average throughput: 133.58 Mbit/s

95th percentile per-packet one-way delay: 12.675 ms

Loss rate: 3.71%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2019-03-27 03:18:07

End at: 2019-03-27 03:18:37

Local clock offset: 0.049 ms

Remote clock offset: 5.417 ms

Below is generated by plot.py at 2019-03-27 04:34:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 245.10 Mbit/s

95th percentile per-packet one-way delay: 23.318 ms

Loss rate: 4.22%

-- Flow 1:

Average throughput: 120.17 Mbit/s

95th percentile per-packet one-way delay: 39.780 ms

Loss rate: 5.89%

-- Flow 2:

Average throughput: 121.00 Mbit/s

95th percentile per-packet one-way delay: 9.351 ms

Loss rate: 2.51%

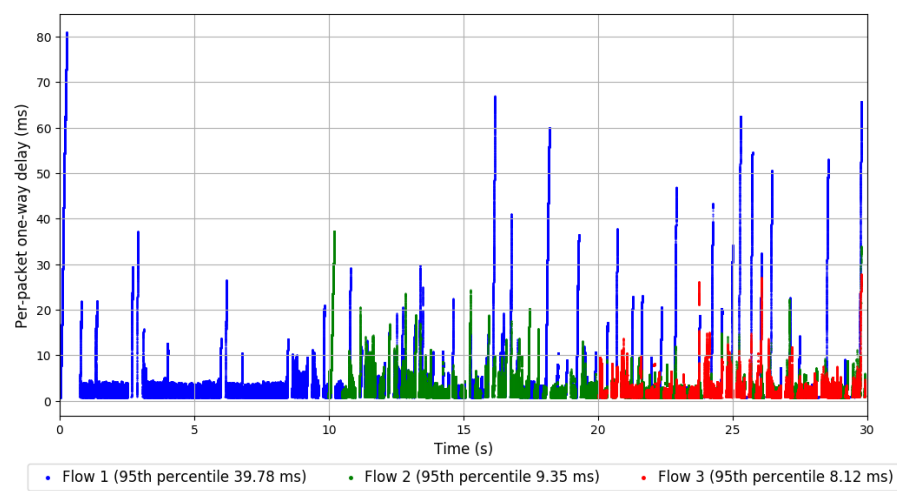
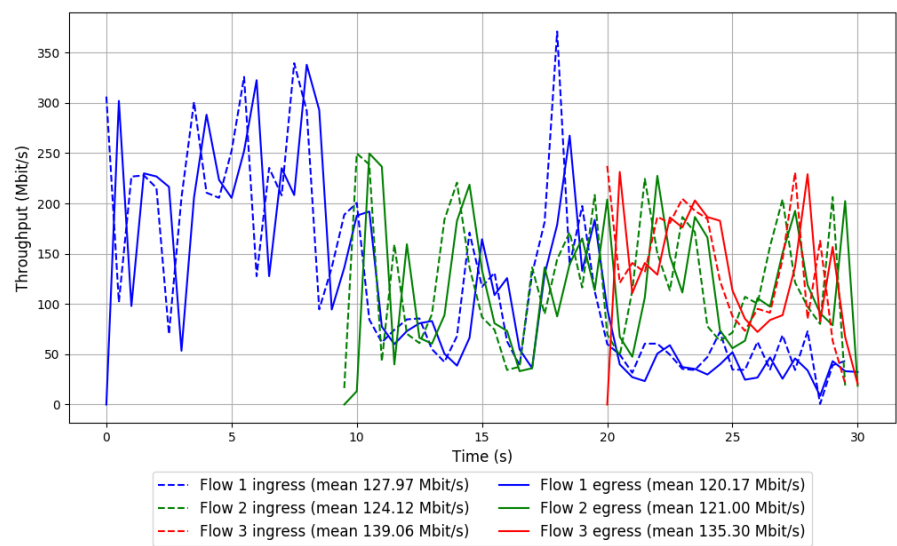
-- Flow 3:

Average throughput: 135.30 Mbit/s

95th percentile per-packet one-way delay: 8.125 ms

Loss rate: 2.70%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-03-27 01:30:33

End at: 2019-03-27 01:31:03

Local clock offset: 0.192 ms

Remote clock offset: 0.496 ms

Below is generated by plot.py at 2019-03-27 04:35:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 401.23 Mbit/s

95th percentile per-packet one-way delay: 4.715 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 201.71 Mbit/s

95th percentile per-packet one-way delay: 3.136 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 244.09 Mbit/s

95th percentile per-packet one-way delay: 8.065 ms

Loss rate: 0.15%

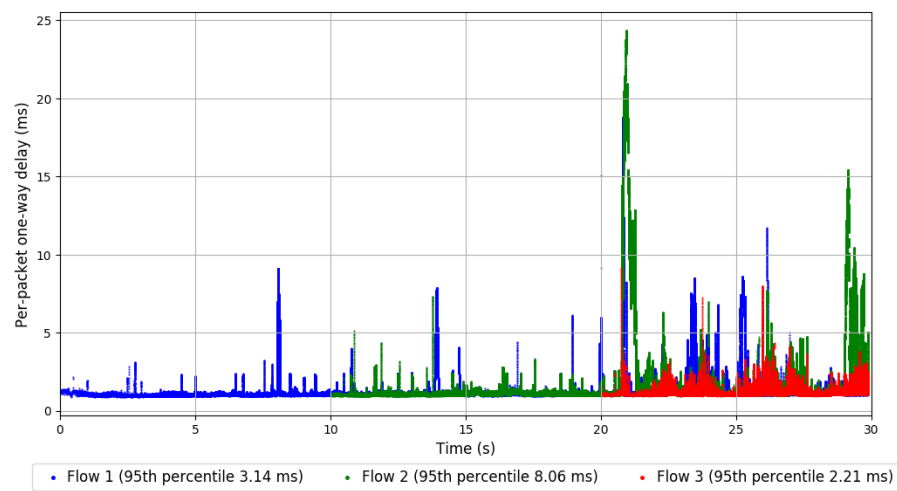
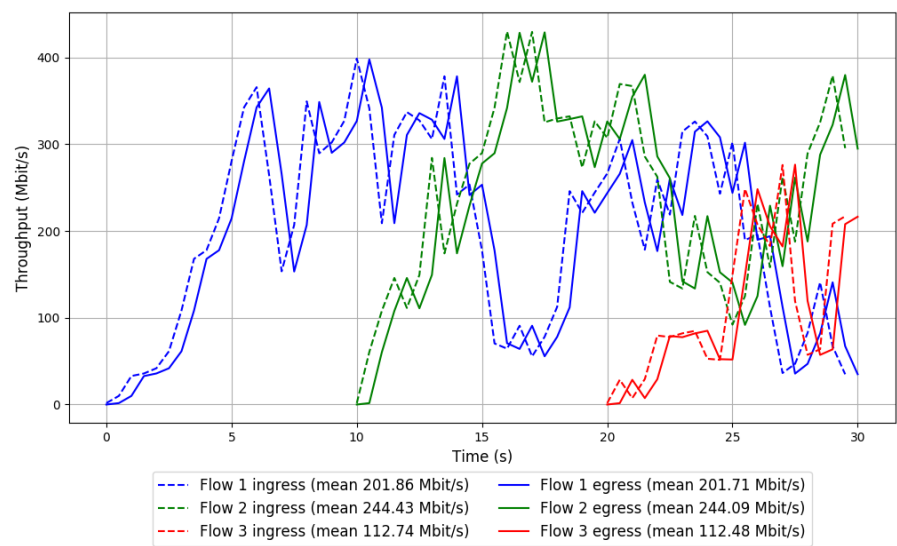
-- Flow 3:

Average throughput: 112.48 Mbit/s

95th percentile per-packet one-way delay: 2.215 ms

Loss rate: 0.22%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-03-27 02:00:45

End at: 2019-03-27 02:01:15

Local clock offset: 1.127 ms

Remote clock offset: 0.965 ms

Below is generated by plot.py at 2019-03-27 04:36:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 419.37 Mbit/s

95th percentile per-packet one-way delay: 150.657 ms

Loss rate: 3.14%

-- Flow 1:

Average throughput: 266.65 Mbit/s

95th percentile per-packet one-way delay: 158.999 ms

Loss rate: 3.69%

-- Flow 2:

Average throughput: 182.82 Mbit/s

95th percentile per-packet one-way delay: 34.035 ms

Loss rate: 2.26%

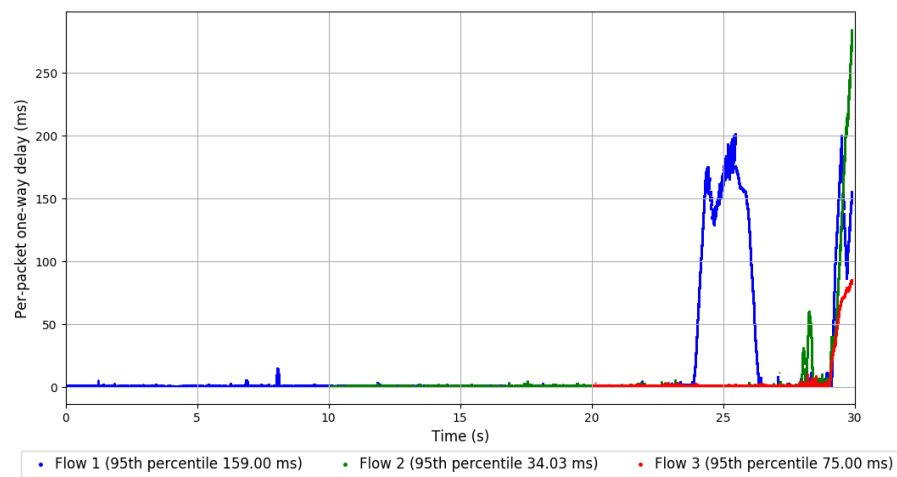
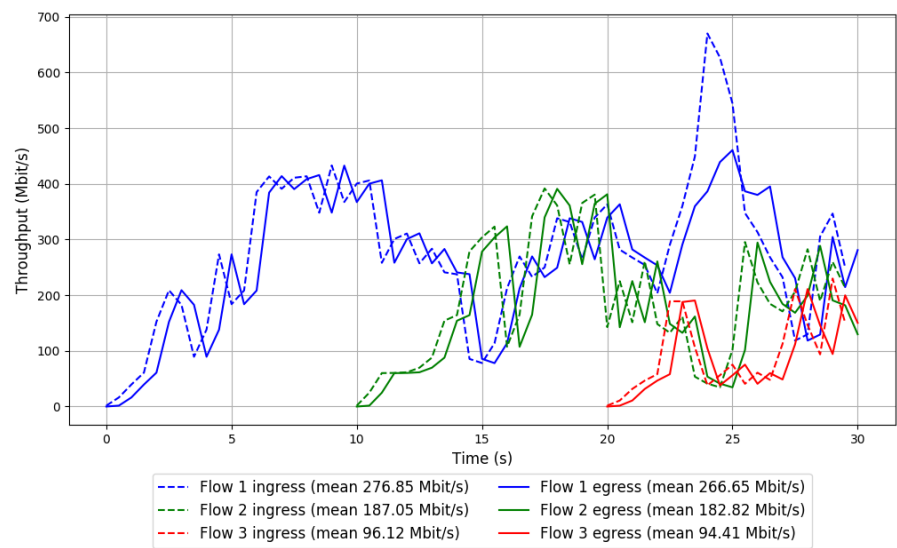
-- Flow 3:

Average throughput: 94.41 Mbit/s

95th percentile per-packet one-way delay: 75.003 ms

Loss rate: 1.76%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-03-27 02:30:43

End at: 2019-03-27 02:31:13

Local clock offset: 3.677 ms

Remote clock offset: 2.185 ms

Below is generated by plot.py at 2019-03-27 04:36:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 400.93 Mbit/s

95th percentile per-packet one-way delay: 61.379 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 229.15 Mbit/s

95th percentile per-packet one-way delay: 82.738 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 177.32 Mbit/s

95th percentile per-packet one-way delay: 22.818 ms

Loss rate: 0.05%

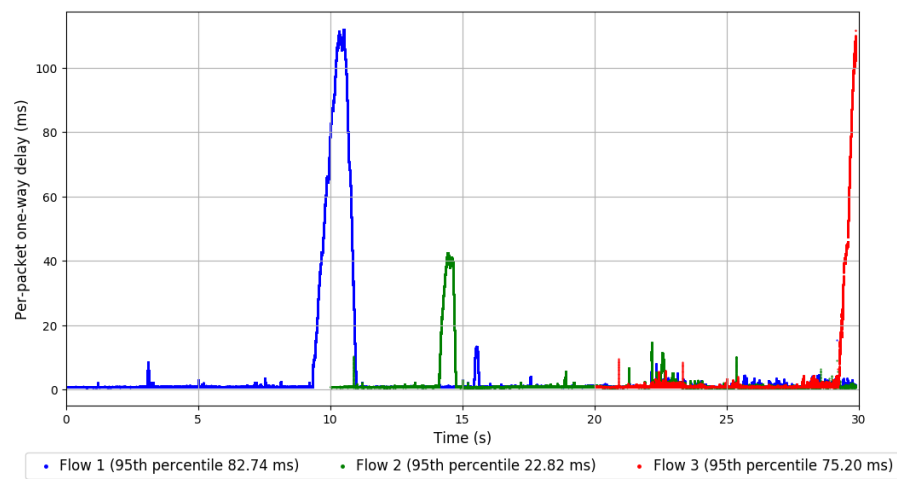
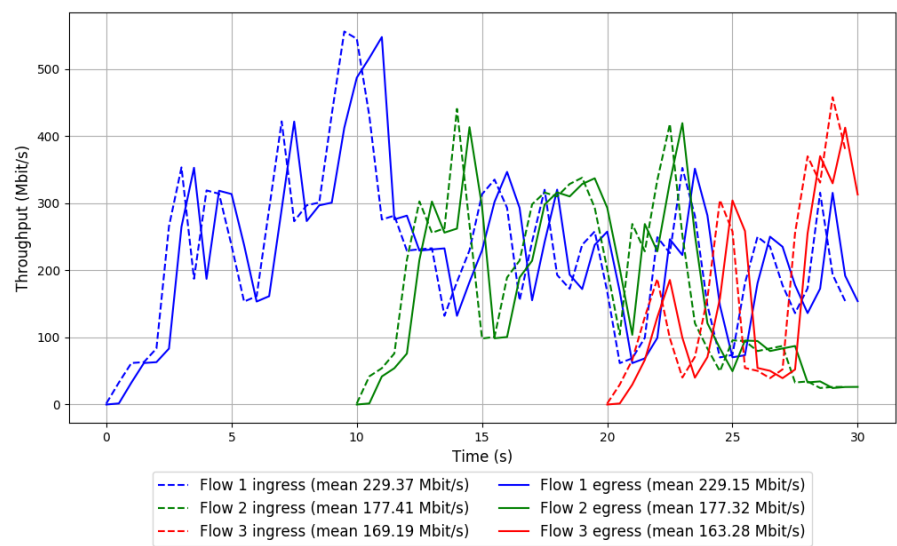
-- Flow 3:

Average throughput: 163.28 Mbit/s

95th percentile per-packet one-way delay: 75.203 ms

Loss rate: 3.48%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-03-27 03:00:55

End at: 2019-03-27 03:01:25

Local clock offset: 0.849 ms

Remote clock offset: 4.433 ms

Below is generated by plot.py at 2019-03-27 04:36:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 400.66 Mbit/s

95th percentile per-packet one-way delay: 129.360 ms

Loss rate: 2.09%

-- Flow 1:

Average throughput: 214.27 Mbit/s

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

Loss rate: 0.01%

-- Flow 2:

Average throughput: 184.50 Mbit/s

95th percentile per-packet one-way delay: 6.130 ms

Loss rate: 0.11%

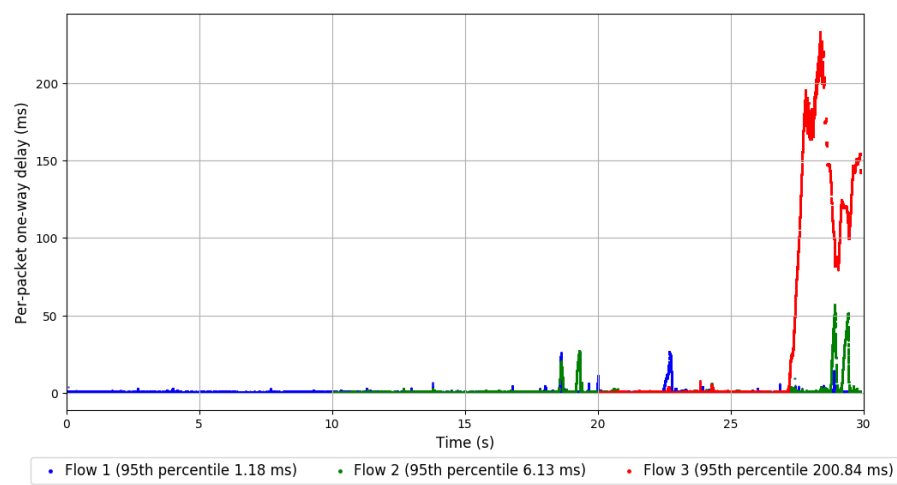
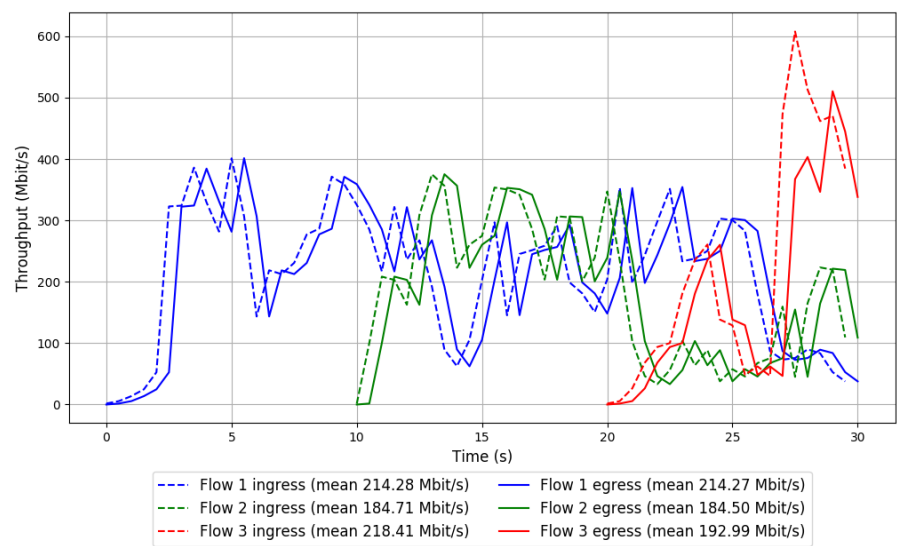
-- Flow 3:

Average throughput: 192.99 Mbit/s

95th percentile per-packet one-way delay: 200.837 ms

Loss rate: 11.63%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-03-27 03:31:08

End at: 2019-03-27 03:31:38

Local clock offset: 0.014 ms

Remote clock offset: 6.159 ms

Below is generated by plot.py at 2019-03-27 04:36:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 374.53 Mbit/s

95th percentile per-packet one-way delay: 153.492 ms

Loss rate: 0.23%

-- Flow 1:

Average throughput: 249.00 Mbit/s

95th percentile per-packet one-way delay: 161.907 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 151.10 Mbit/s

95th percentile per-packet one-way delay: 1.480 ms

Loss rate: 0.00%

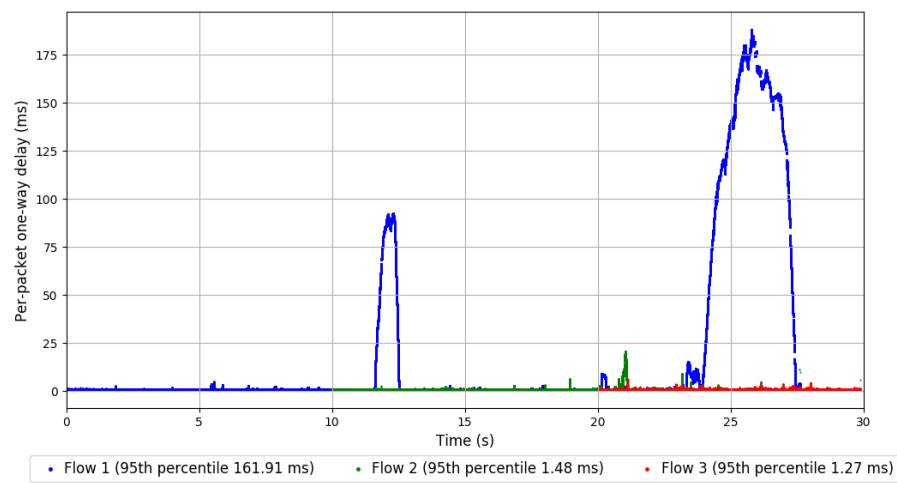
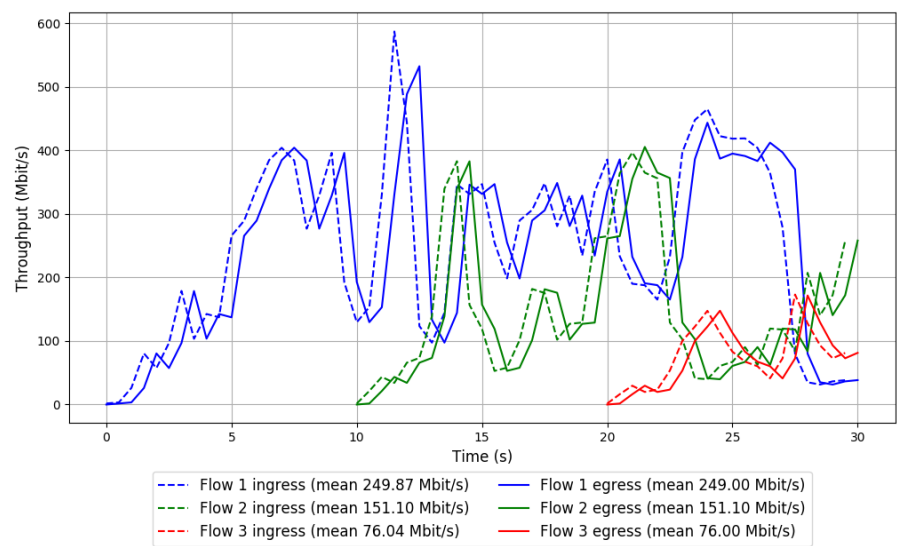
-- Flow 3:

Average throughput: 76.00 Mbit/s

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

Loss rate: 0.01%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2019-03-27 01:16:17

End at: 2019-03-27 01:16:47

Local clock offset: -5.377 ms

Remote clock offset: 0.311 ms

Below is generated by plot.py at 2019-03-27 04:36:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 2.230 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.20 Mbit/s

95th percentile per-packet one-way delay: 2.222 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.41 Mbit/s

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

Loss rate: 0.00%

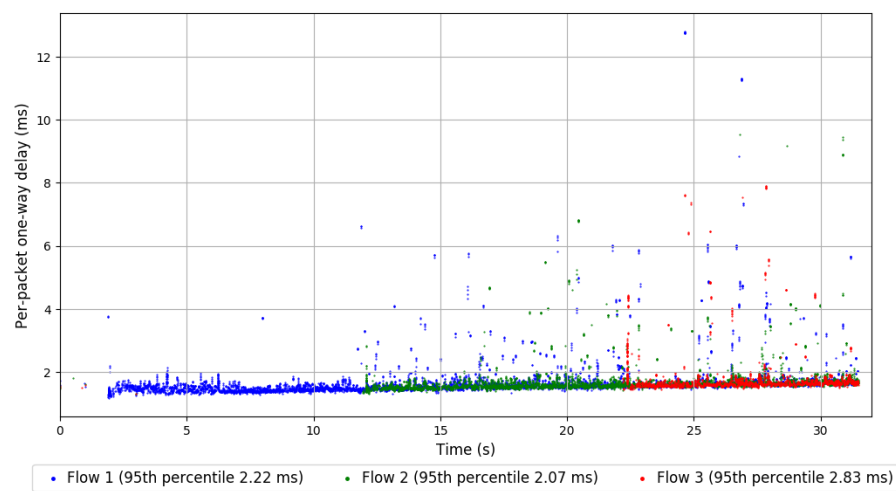
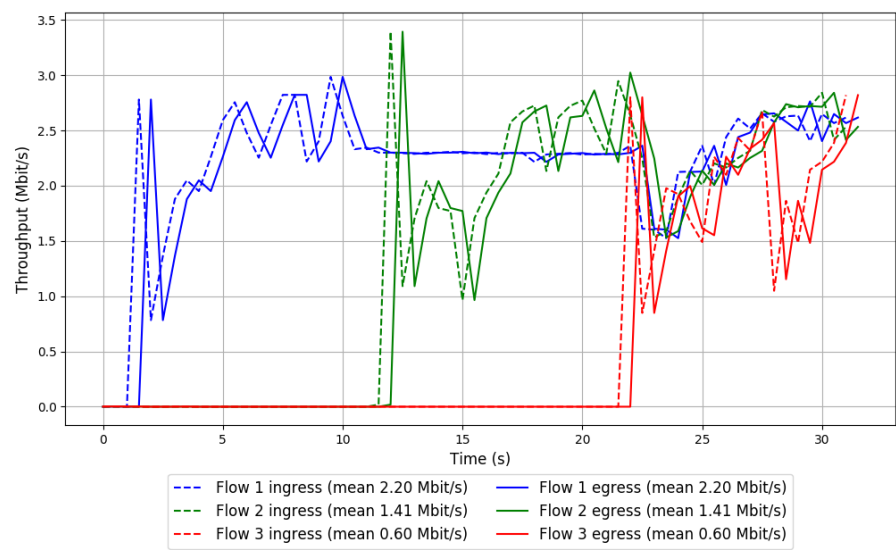
-- Flow 3:

Average throughput: 0.60 Mbit/s

95th percentile per-packet one-way delay: 2.831 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-03-27 01:46:26

End at: 2019-03-27 01:46:56

Local clock offset: 2.082 ms

Remote clock offset: 0.741 ms

Below is generated by plot.py at 2019-03-27 04:36:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 5.821 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 6.677 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 1.704 ms

Loss rate: 0.00%

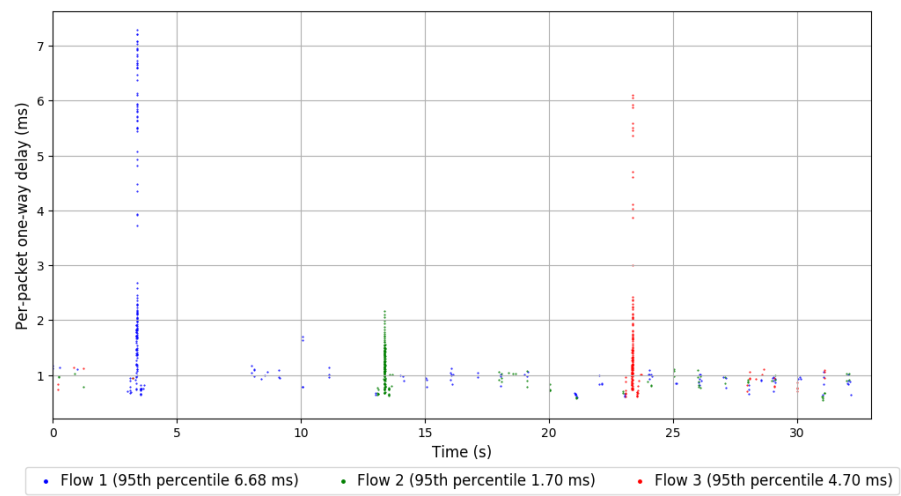
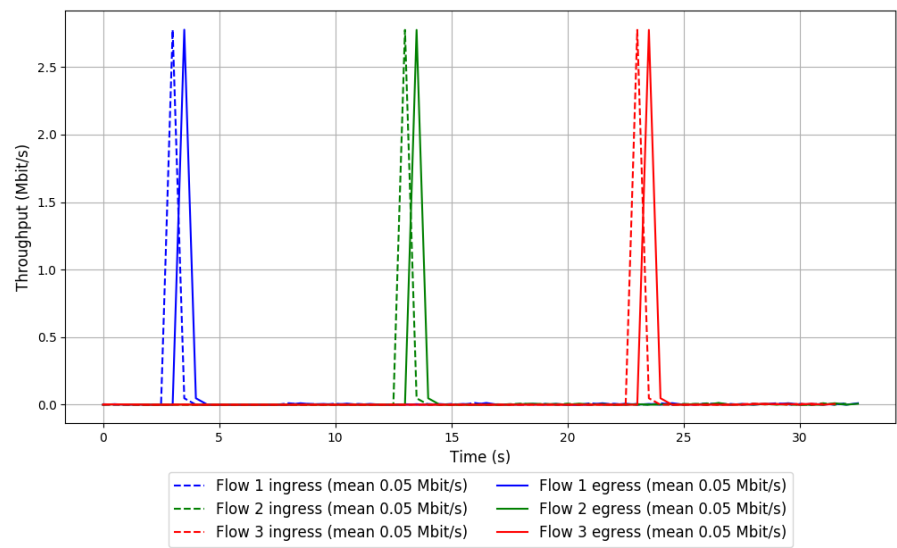
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.702 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-03-27 02:16:33

End at: 2019-03-27 02:17:03

Local clock offset: 1.656 ms

Remote clock offset: 1.261 ms

Below is generated by plot.py at 2019-03-27 04:36:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 4.211 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 1.974 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 1.287 ms

Loss rate: 0.00%

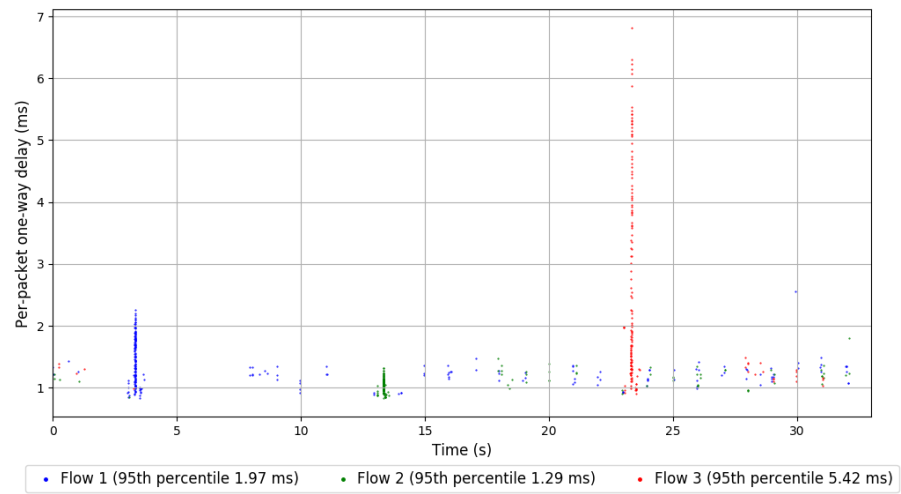
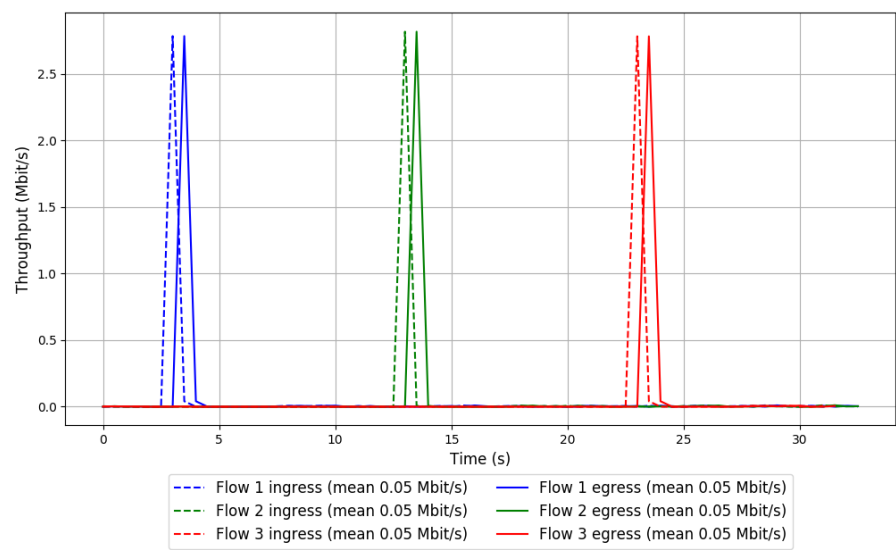
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.421 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-03-27 02:46:44

End at: 2019-03-27 02:47:14

Local clock offset: 4.496 ms

Remote clock offset: 3.785 ms

Below is generated by plot.py at 2019-03-27 04:36:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 3.213 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 2.627 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.453 ms

Loss rate: 0.00%

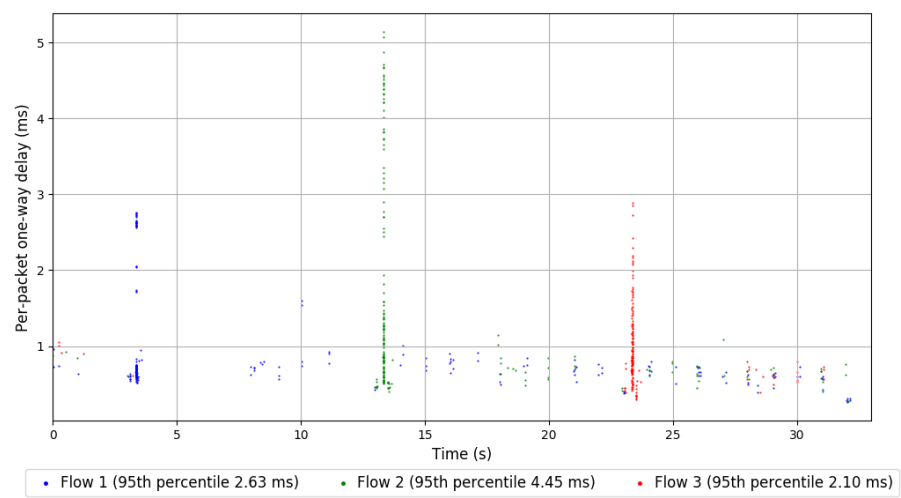
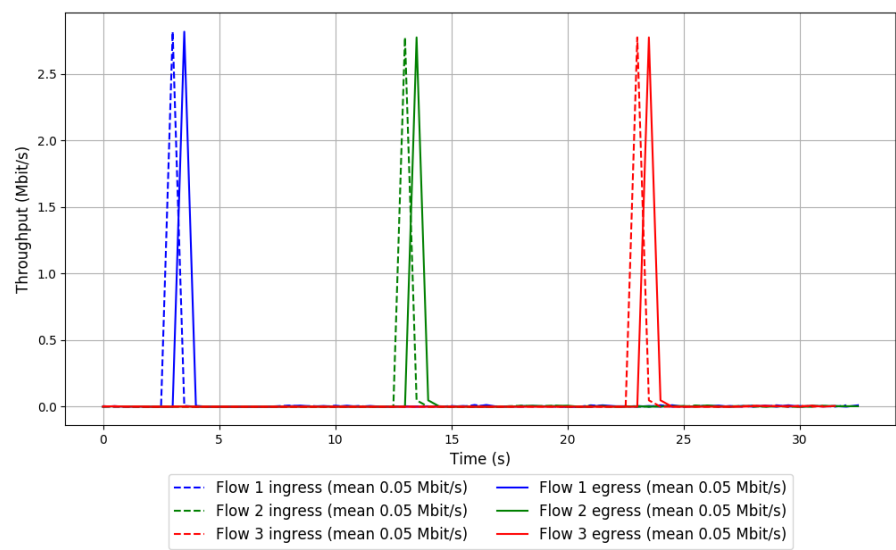
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 2.096 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-03-27 03:16:52

End at: 2019-03-27 03:17:22

Local clock offset: 0.048 ms

Remote clock offset: 5.387 ms

Below is generated by plot.py at 2019-03-27 04:36:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 3.082 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 2.640 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.232 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 2.636 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

