

Pantheon Report

Generated at 2019-02-11 20:45:14 (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:

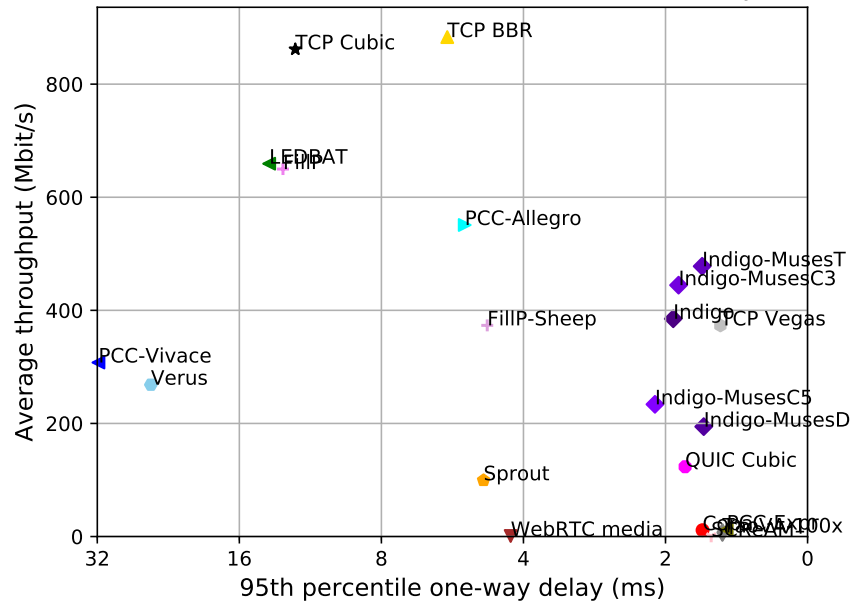
```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

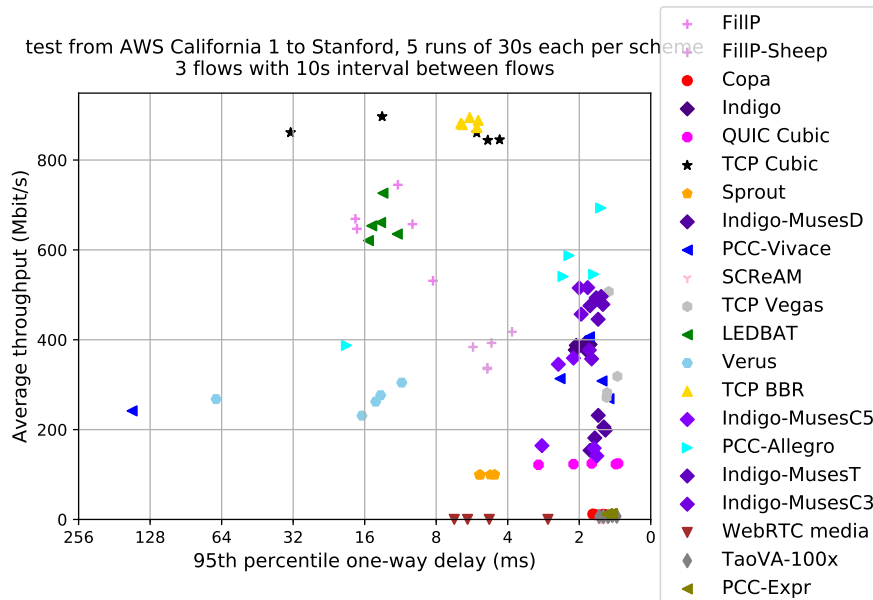
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
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	525.64	369.75	334.54	5.92	5.30	4.38	4.74	10.63	12.21
Copa	5	6.86	5.73	5.54	1.48	1.48	1.52	51.49	57.76	55.75
TCP Cubic	5	500.44	389.11	306.68	19.07	2.35	3.05	0.07	0.07	0.10
FillP	5	453.11	220.59	151.01	13.90	5.61	7.10	12.00	15.02	10.39
FillP-Sheep	5	321.67	63.84	28.61	5.06	2.05	2.55	3.22	2.76	8.23
Indigo	5	201.97	187.13	182.23	1.66	1.90	2.37	0.05	0.07	0.12
Indigo-MusesC3	5	251.39	200.20	212.76	1.68	1.91	1.94	0.04	0.24	0.03
Indigo-MusesC5	5	98.96	141.65	137.40	1.94	2.16	2.03	0.31	0.42	0.39
Indigo-MusesD	5	105.19	96.62	87.22	1.42	1.47	1.47	0.00	0.01	0.00
Indigo-MusesT	5	266.87	234.76	199.18	1.40	1.49	1.72	0.00	0.01	0.01
LEDBAT	5	400.71	260.87	295.89	14.60	8.85	7.53	0.11	0.24	0.30
PCC-Allegro	5	287.55	328.15	136.98	4.22	10.00	2.00	0.30	0.51	0.49
PCC-Expr	5	7.35	5.47	4.14	1.14	1.13	1.13	54.04	49.21	45.88
QUIC Cubic	5	66.84	60.49	49.91	1.02	1.81	4.16	0.01	0.01	0.01
SCReAM	5	0.21	0.22	0.22	1.33	1.35	1.37	0.03	0.00	0.00
Sprout	5	49.96	49.85	49.59	4.85	4.86	4.86	0.04	0.04	0.03
TaoVA-100x	5	0.00	6.92	7.73	1.13	1.22	1.12	95.92	28.08	49.41
TCP Vegas	5	126.57	250.31	240.50	1.21	1.21	1.24	0.01	0.01	0.01
Verus	5	143.74	127.64	120.47	31.47	26.32	33.10	4.14	4.40	6.27
PCC-Vivace	5	166.40	161.98	101.83	33.35	7.41	3.12	1.11	0.03	0.06
WebRTC media	5	0.47	0.32	0.15	4.23	3.05	2.94	0.01	0.00	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-02-11 17:33:14

End at: 2019-02-11 17:33:44

Local clock offset: -3.275 ms

Remote clock offset: 1.77 ms

Below is generated by plot.py at 2019-02-11 20:04:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 872.30 Mbit/s

95th percentile per-packet one-way delay: 5.392 ms

Loss rate: 7.48%

-- Flow 1:

Average throughput: 492.95 Mbit/s

95th percentile per-packet one-way delay: 5.615 ms

Loss rate: 4.85%

-- Flow 2:

Average throughput: 328.70 Mbit/s

95th percentile per-packet one-way delay: 4.310 ms

Loss rate: 11.56%

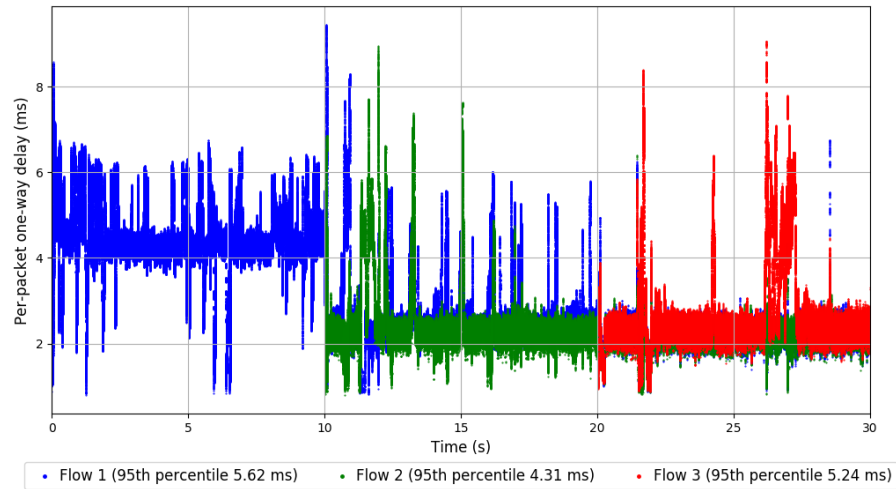
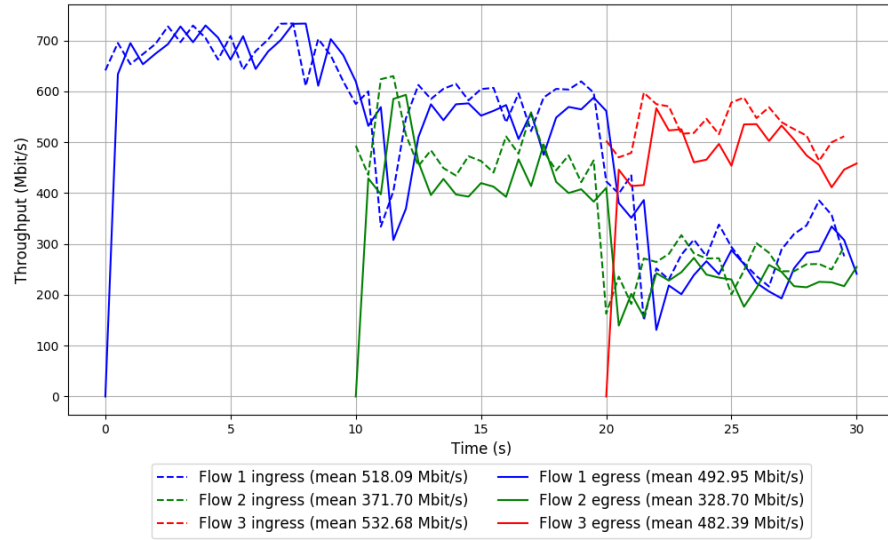
-- Flow 3:

Average throughput: 482.39 Mbit/s

95th percentile per-packet one-way delay: 5.242 ms

Loss rate: 9.44%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-02-11 18:03:16

End at: 2019-02-11 18:03:46

Local clock offset: 0.923 ms

Remote clock offset: 0.249 ms

Below is generated by plot.py at 2019-02-11 20:04:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 888.43 Mbit/s

95th percentile per-packet one-way delay: 5.321 ms

Loss rate: 7.69%

-- Flow 1:

Average throughput: 539.59 Mbit/s

95th percentile per-packet one-way delay: 5.543 ms

Loss rate: 5.07%

-- Flow 2:

Average throughput: 386.81 Mbit/s

95th percentile per-packet one-way delay: 3.676 ms

Loss rate: 10.62%

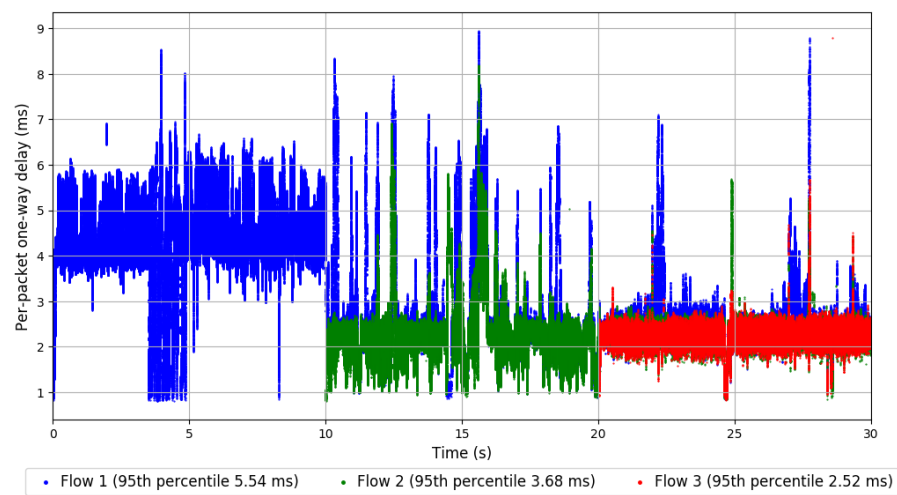
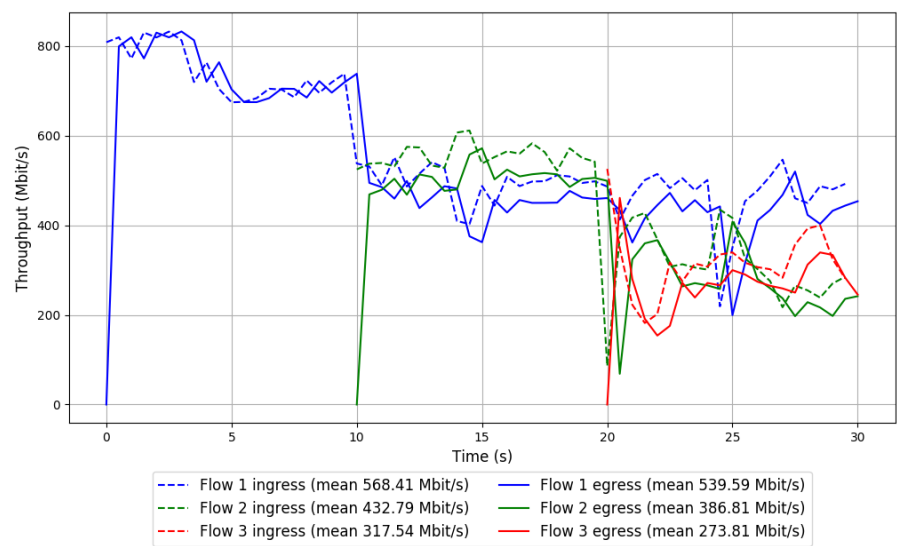
-- Flow 3:

Average throughput: 273.81 Mbit/s

95th percentile per-packet one-way delay: 2.518 ms

Loss rate: 13.77%

Run 2: Report of TCP BBR — Data Link

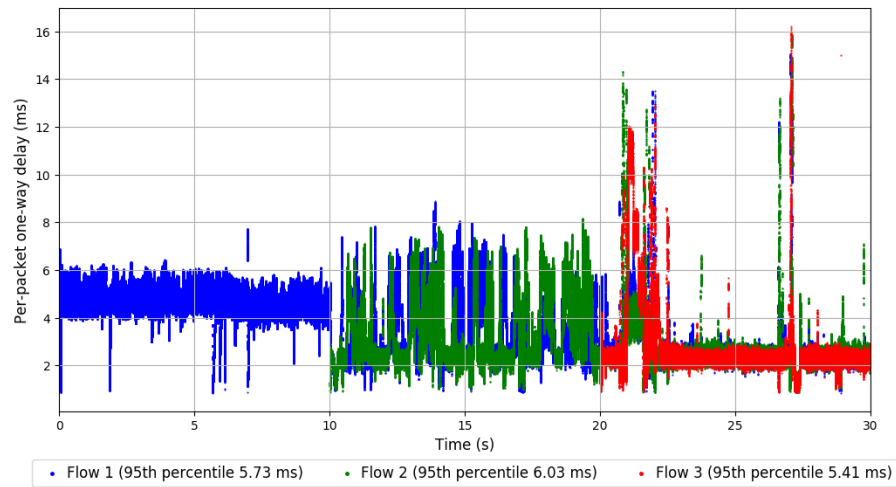
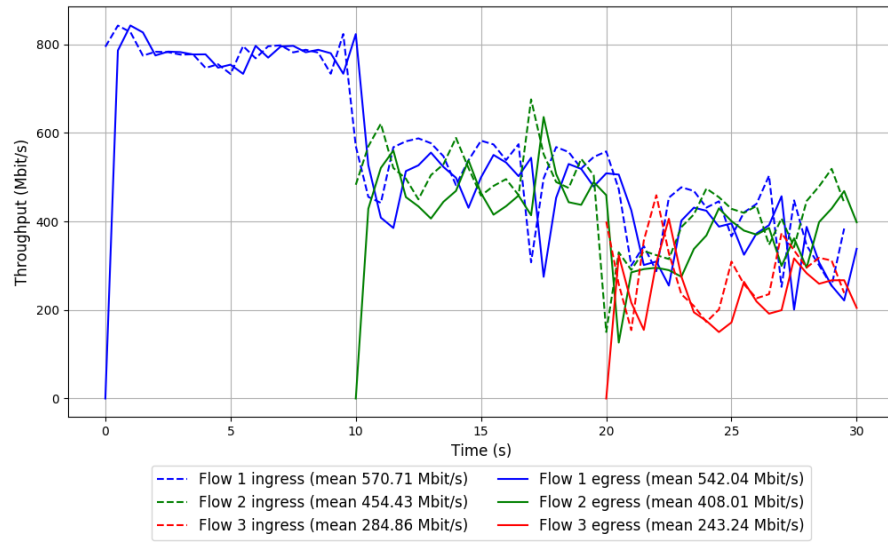


Run 3: Statistics of TCP BBR

Start at: 2019-02-11 18:33:29
End at: 2019-02-11 18:33:59
Local clock offset: 0.899 ms
Remote clock offset: -2.699 ms

Below is generated by plot.py at 2019-02-11 20:04:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 894.68 Mbit/s
95th percentile per-packet one-way delay: 5.784 ms
Loss rate: 7.58%
-- Flow 1:
Average throughput: 542.04 Mbit/s
95th percentile per-packet one-way delay: 5.734 ms
Loss rate: 5.02%
-- Flow 2:
Average throughput: 408.01 Mbit/s
95th percentile per-packet one-way delay: 6.031 ms
Loss rate: 10.21%
-- Flow 3:
Average throughput: 243.24 Mbit/s
95th percentile per-packet one-way delay: 5.409 ms
Loss rate: 14.60%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-02-11 19:03:29

End at: 2019-02-11 19:03:59

Local clock offset: -3.556 ms

Remote clock offset: -1.99 ms

Below is generated by plot.py at 2019-02-11 20:04:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 878.89 Mbit/s

95th percentile per-packet one-way delay: 6.210 ms

Loss rate: 7.38%

-- Flow 1:

Average throughput: 502.64 Mbit/s

95th percentile per-packet one-way delay: 6.243 ms

Loss rate: 4.80%

-- Flow 2:

Average throughput: 363.59 Mbit/s

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

Loss rate: 10.66%

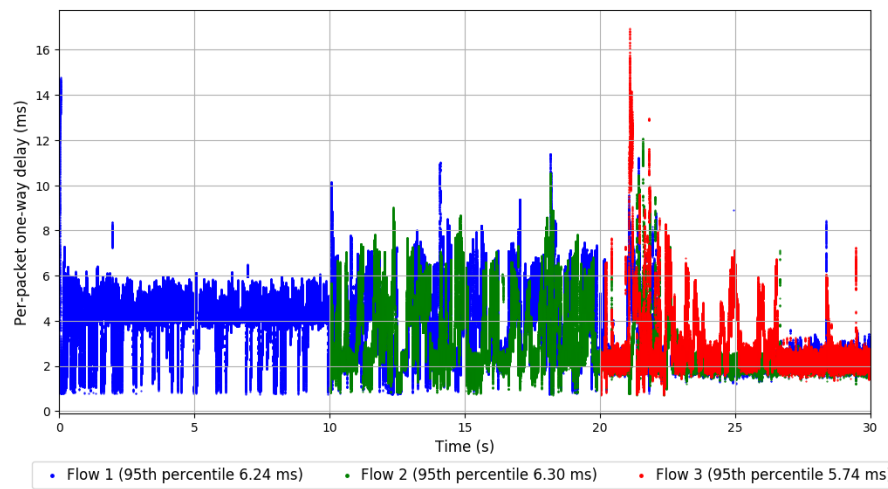
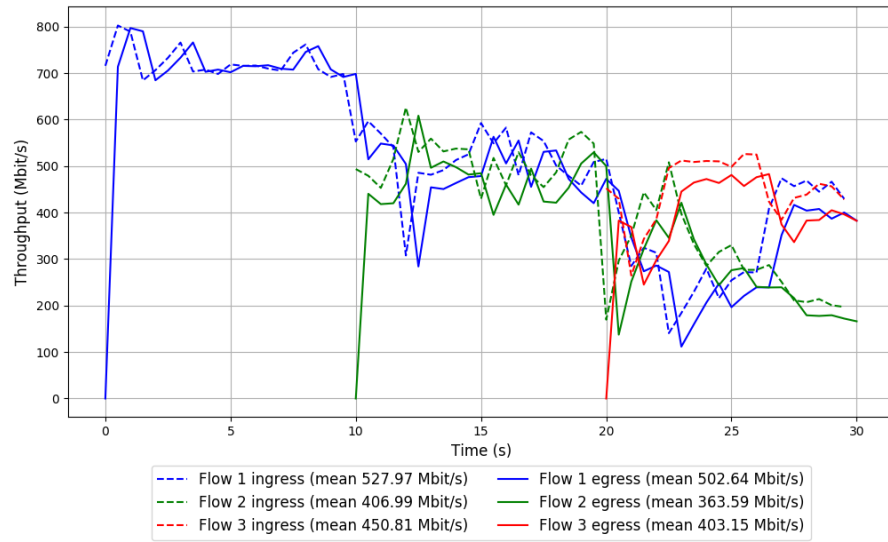
-- Flow 3:

Average throughput: 403.15 Mbit/s

95th percentile per-packet one-way delay: 5.736 ms

Loss rate: 10.57%

Run 4: Report of TCP BBR — Data Link

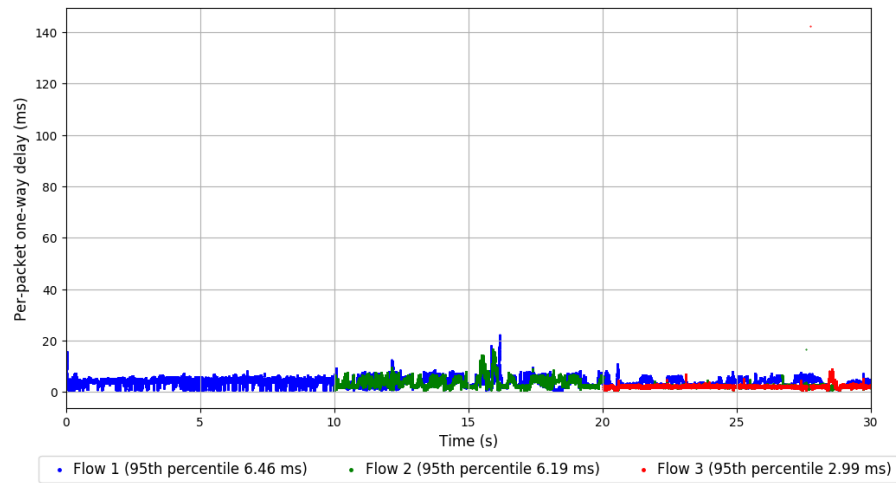
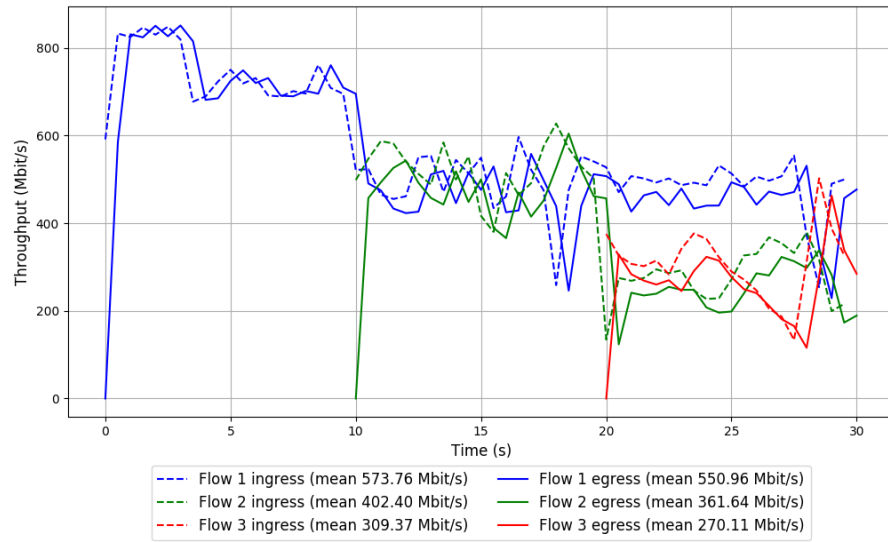


Run 5: Statistics of TCP BBR

Start at: 2019-02-11 19:33:35
End at: 2019-02-11 19:34:05
Local clock offset: 0.551 ms
Remote clock offset: -0.373 ms

Below is generated by plot.py at 2019-02-11 20:04:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 881.73 Mbit/s
95th percentile per-packet one-way delay: 6.299 ms
Loss rate: 6.66%
-- Flow 1:
Average throughput: 550.96 Mbit/s
95th percentile per-packet one-way delay: 6.459 ms
Loss rate: 3.97%
-- Flow 2:
Average throughput: 361.64 Mbit/s
95th percentile per-packet one-way delay: 6.192 ms
Loss rate: 10.12%
-- Flow 3:
Average throughput: 270.11 Mbit/s
95th percentile per-packet one-way delay: 2.994 ms
Loss rate: 12.69%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-02-11 17:39:33

End at: 2019-02-11 17:40:03

Local clock offset: -1.594 ms

Remote clock offset: 1.628 ms

Below is generated by plot.py at 2019-02-11 20:04:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.25 Mbit/s

95th percentile per-packet one-way delay: 1.591 ms

Loss rate: 54.12%

-- Flow 1:

Average throughput: 6.87 Mbit/s

95th percentile per-packet one-way delay: 1.559 ms

Loss rate: 49.79%

-- Flow 2:

Average throughput: 6.37 Mbit/s

95th percentile per-packet one-way delay: 1.541 ms

Loss rate: 58.68%

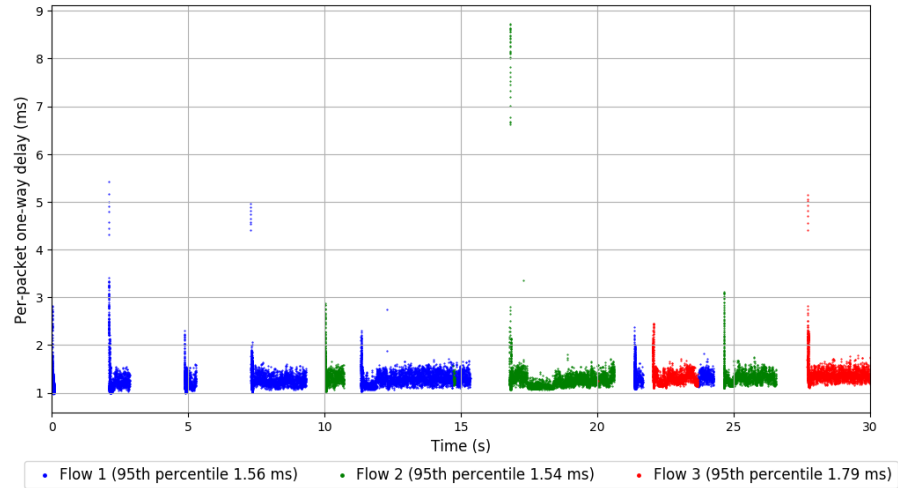
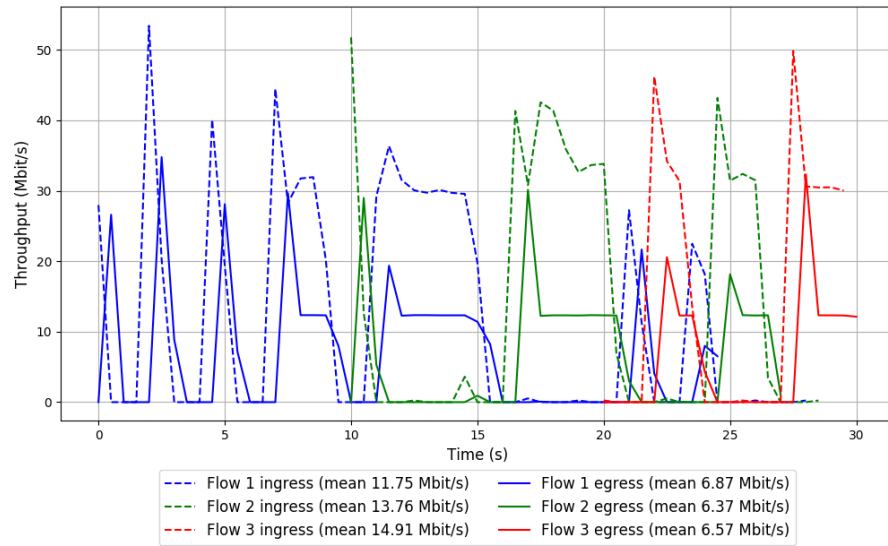
-- Flow 3:

Average throughput: 6.57 Mbit/s

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

Loss rate: 55.97%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-02-11 18:09:38

End at: 2019-02-11 18:10:08

Local clock offset: 0.807 ms

Remote clock offset: 0.079 ms

Below is generated by plot.py at 2019-02-11 20:04:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.03 Mbit/s

95th percentile per-packet one-way delay: 1.289 ms

Loss rate: 50.50%

-- Flow 1:

Average throughput: 5.85 Mbit/s

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

Loss rate: 41.11%

-- Flow 2:

Average throughput: 7.38 Mbit/s

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

Loss rate: 58.73%

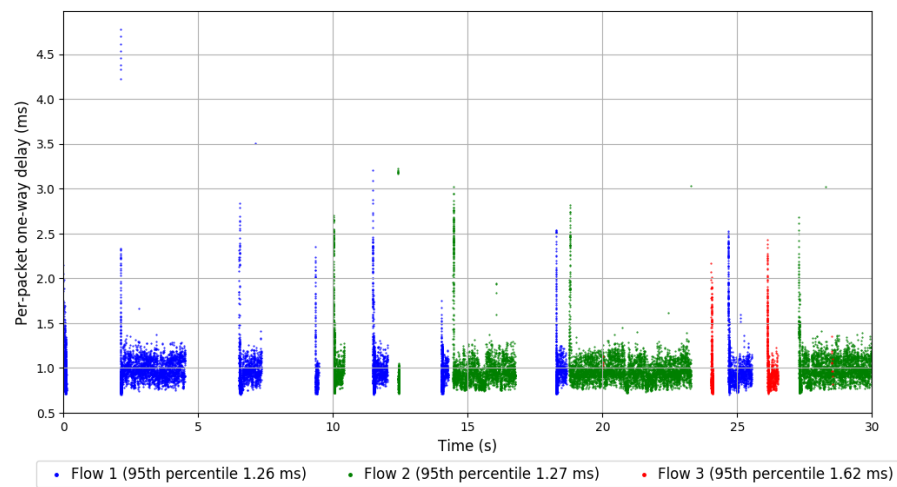
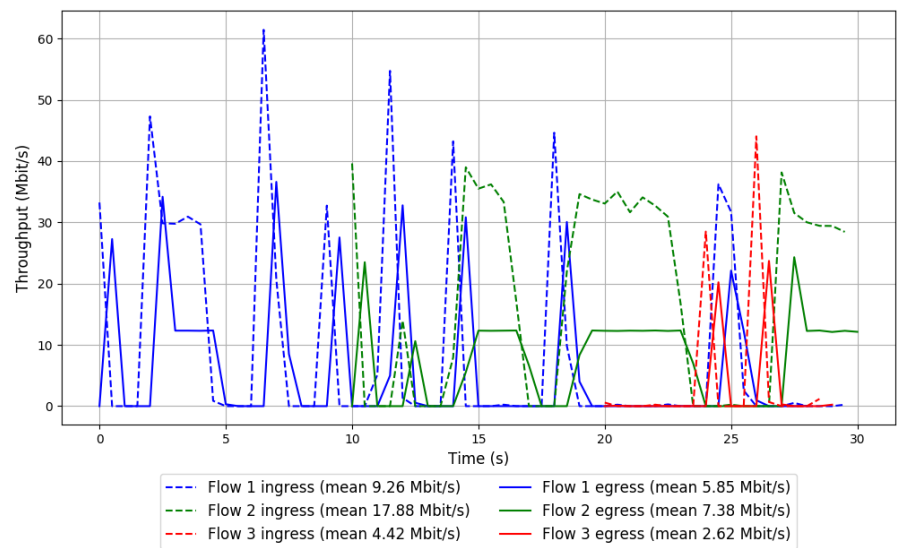
-- Flow 3:

Average throughput: 2.62 Mbit/s

95th percentile per-packet one-way delay: 1.617 ms

Loss rate: 40.80%

Run 2: Report of Copa — Data Link

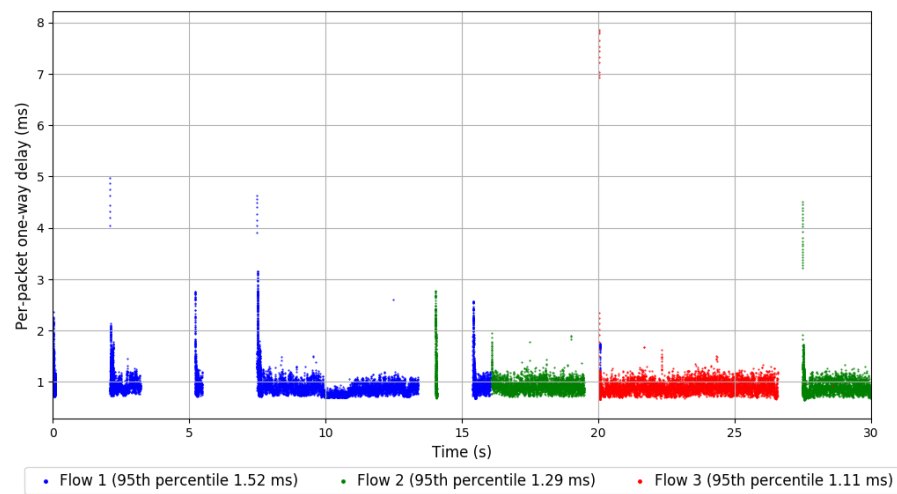
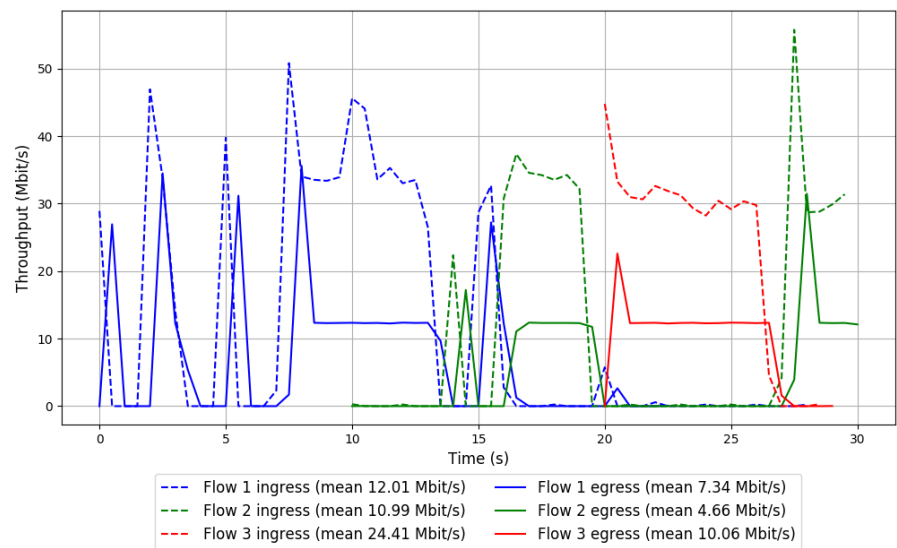


Run 3: Statistics of Copa

Start at: 2019-02-11 18:39:40
End at: 2019-02-11 18:40:10
Local clock offset: -0.942 ms
Remote clock offset: -3.469 ms

Below is generated by plot.py at 2019-02-11 20:04:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 11.37 Mbit/s
95th percentile per-packet one-way delay: 1.338 ms
Loss rate: 55.45%
-- Flow 1:
Average throughput: 7.34 Mbit/s
95th percentile per-packet one-way delay: 1.521 ms
Loss rate: 51.97%
-- Flow 2:
Average throughput: 4.66 Mbit/s
95th percentile per-packet one-way delay: 1.289 ms
Loss rate: 57.61%
-- Flow 3:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 1.108 ms
Loss rate: 58.79%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-02-11 19:09:38

End at: 2019-02-11 19:10:08

Local clock offset: -1.839 ms

Remote clock offset: -0.92 ms

Below is generated by plot.py at 2019-02-11 20:04:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.90 Mbit/s

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

Loss rate: 58.66%

-- Flow 1:

Average throughput: 7.88 Mbit/s

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

Loss rate: 57.97%

-- Flow 2:

Average throughput: 3.90 Mbit/s

95th percentile per-packet one-way delay: 1.696 ms

Loss rate: 60.13%

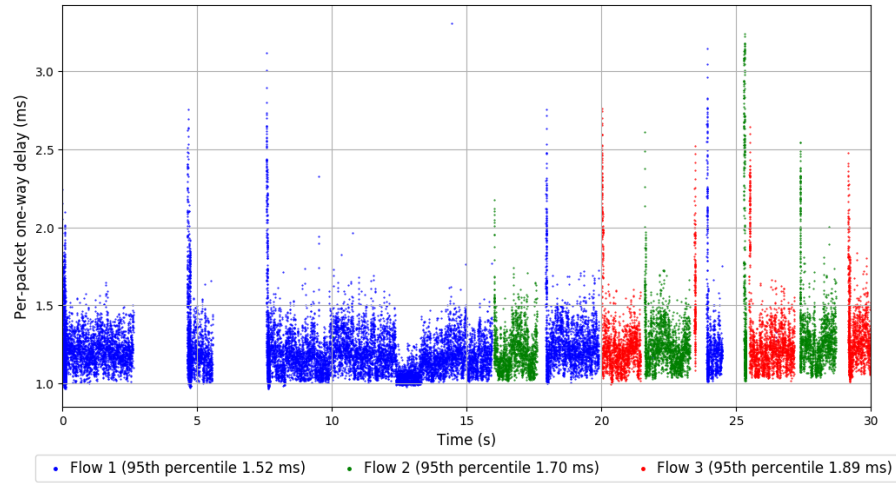
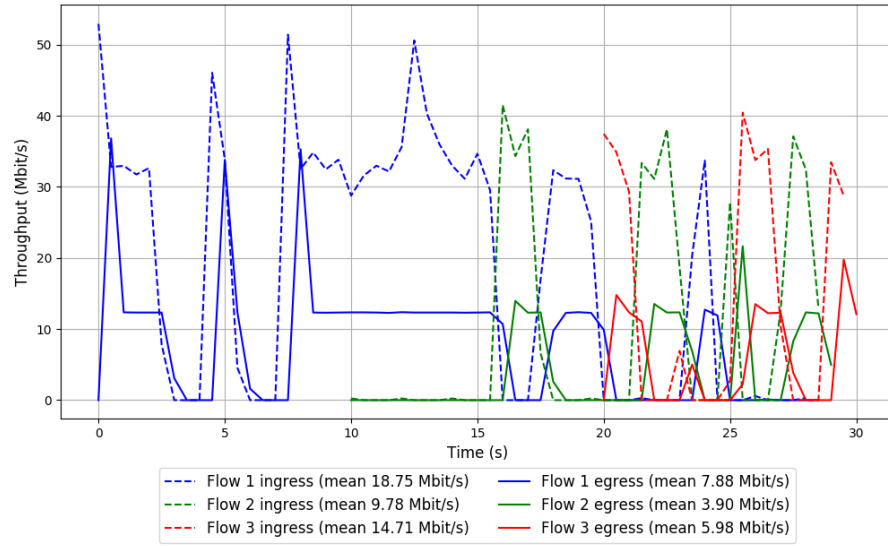
-- Flow 3:

Average throughput: 5.98 Mbit/s

95th percentile per-packet one-way delay: 1.890 ms

Loss rate: 59.38%

Run 4: Report of Copa — Data Link

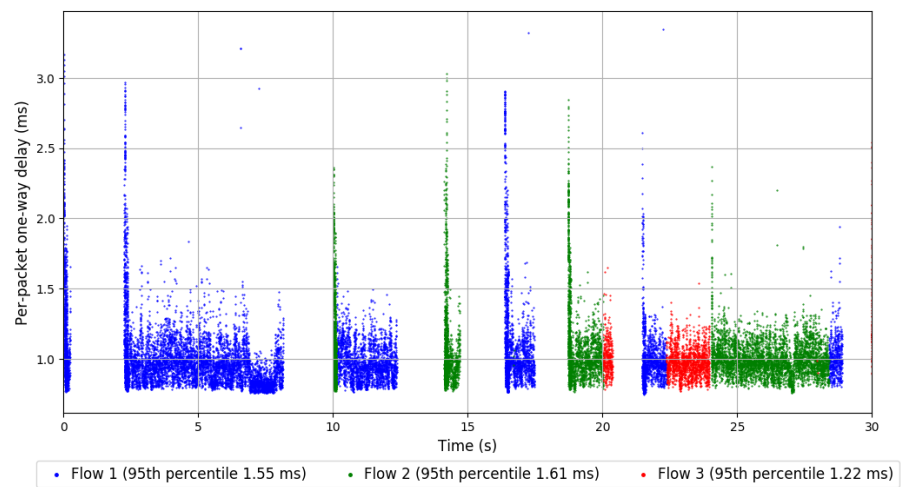
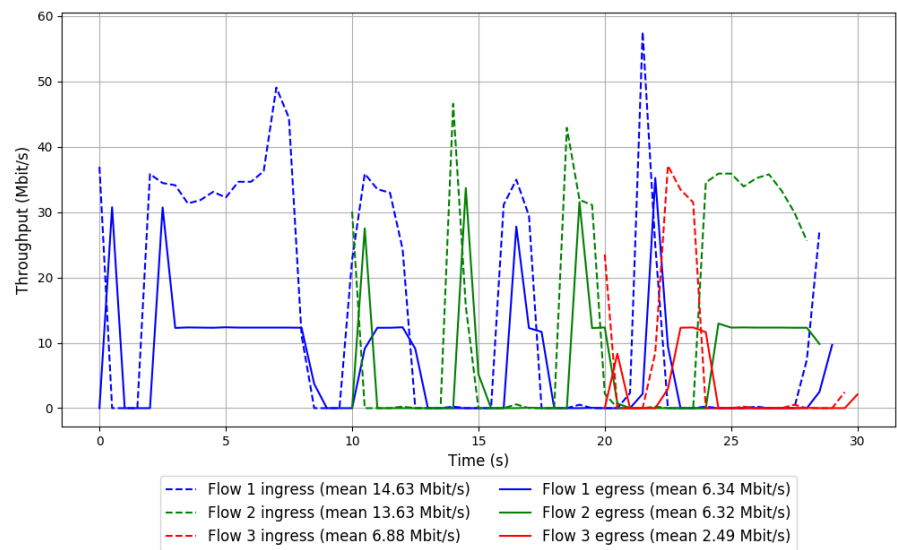


Run 5: Statistics of Copa

Start at: 2019-02-11 19:39:43
End at: 2019-02-11 19:40:13
Local clock offset: 0.068 ms
Remote clock offset: -0.853 ms

Below is generated by plot.py at 2019-02-11 20:04:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 10.81 Mbit/s
95th percentile per-packet one-way delay: 1.556 ms
Loss rate: 56.29%
-- Flow 1:
Average throughput: 6.34 Mbit/s
95th percentile per-packet one-way delay: 1.555 ms
Loss rate: 56.63%
-- Flow 2:
Average throughput: 6.32 Mbit/s
95th percentile per-packet one-way delay: 1.608 ms
Loss rate: 53.66%
-- Flow 3:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 1.215 ms
Loss rate: 63.79%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-02-11 17:24:22

End at: 2019-02-11 17:24:52

Local clock offset: -2.852 ms

Remote clock offset: 2.81 ms

Below is generated by plot.py at 2019-02-11 20:04:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 861.22 Mbit/s

95th percentile per-packet one-way delay: 32.797 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 520.08 Mbit/s

95th percentile per-packet one-way delay: 63.947 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 351.89 Mbit/s

95th percentile per-packet one-way delay: 2.714 ms

Loss rate: 0.10%

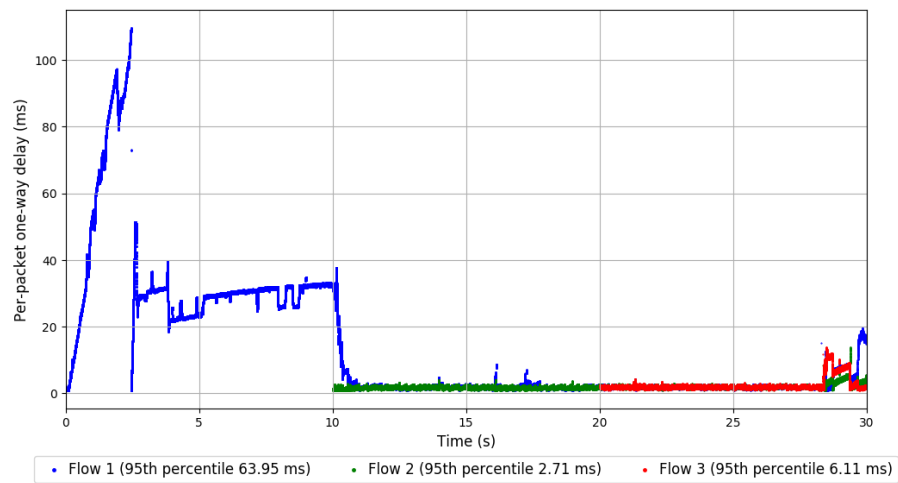
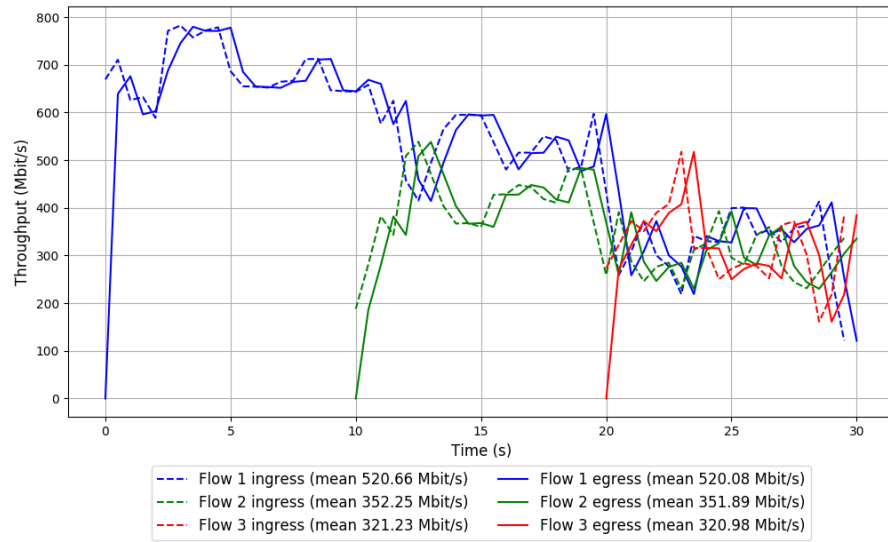
-- Flow 3:

Average throughput: 320.98 Mbit/s

95th percentile per-packet one-way delay: 6.114 ms

Loss rate: 0.07%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-02-11 17:54:39

End at: 2019-02-11 17:55:09

Local clock offset: 0.468 ms

Remote clock offset: 0.751 ms

Below is generated by plot.py at 2019-02-11 20:04:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 896.81 Mbit/s

95th percentile per-packet one-way delay: 13.509 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 538.90 Mbit/s

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

Loss rate: 0.08%

-- Flow 2:

Average throughput: 374.72 Mbit/s

95th percentile per-packet one-way delay: 2.340 ms

Loss rate: 0.07%

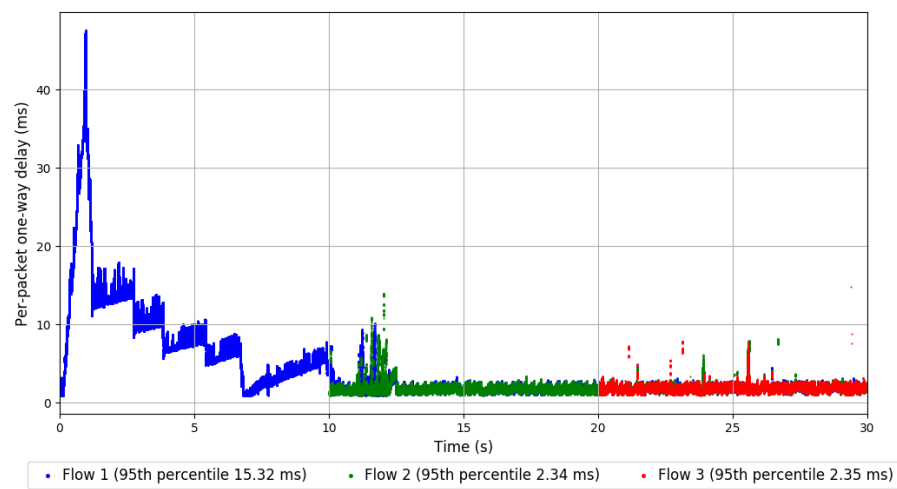
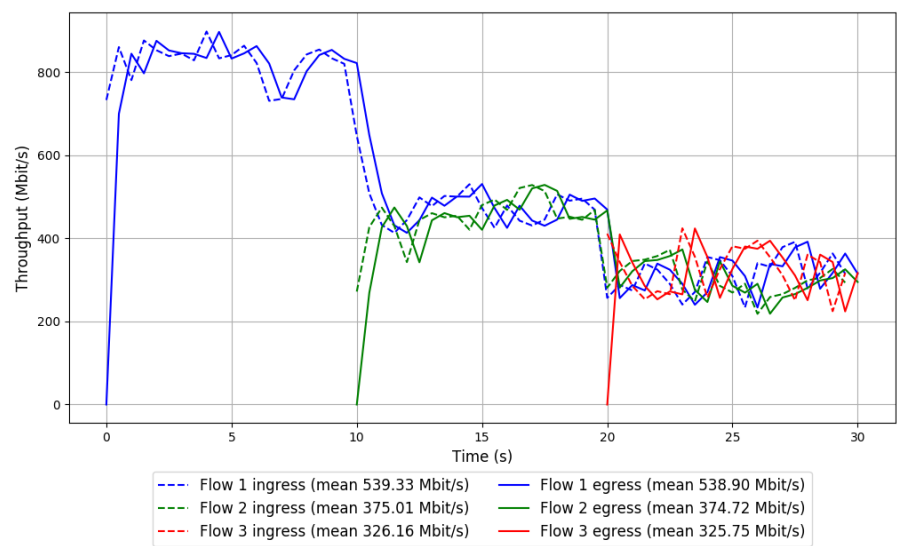
-- Flow 3:

Average throughput: 325.75 Mbit/s

95th percentile per-packet one-way delay: 2.353 ms

Loss rate: 0.12%

Run 2: Report of TCP Cubic — Data Link

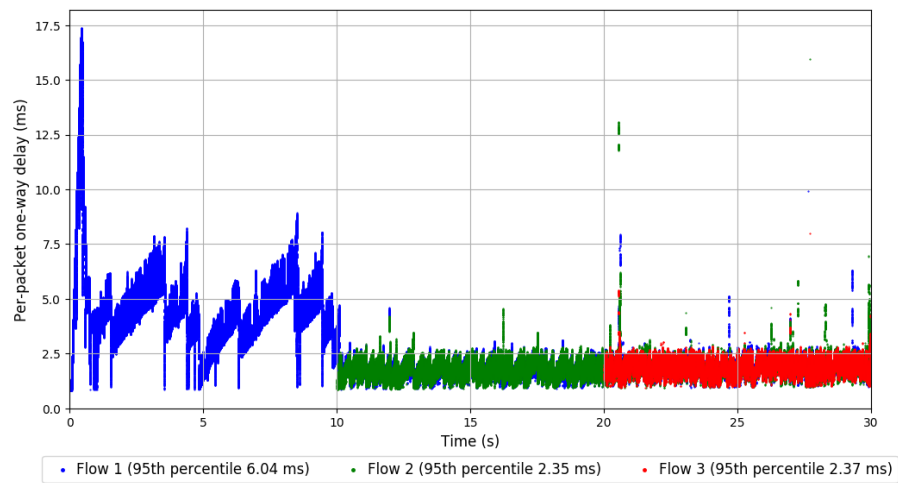
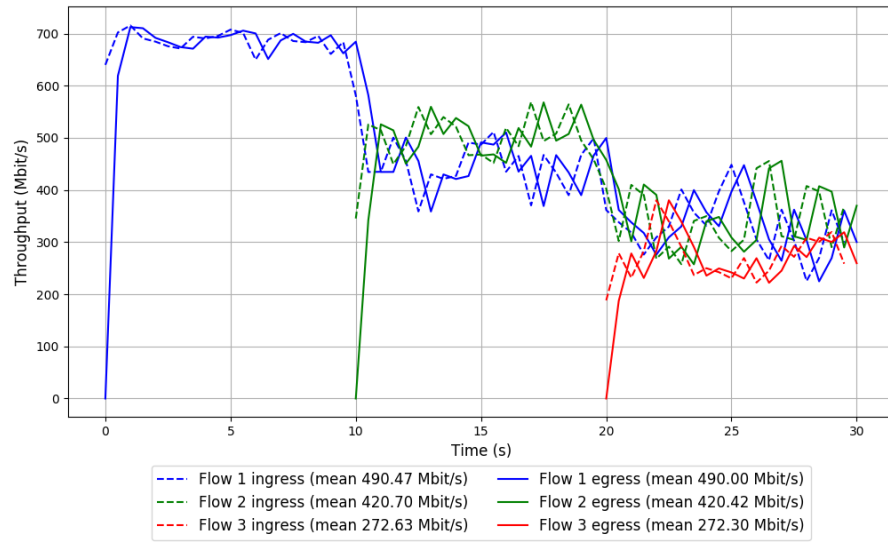


Run 3: Statistics of TCP Cubic

Start at: 2019-02-11 18:24:50
End at: 2019-02-11 18:25:20
Local clock offset: 0.798 ms
Remote clock offset: -0.876 ms

Below is generated by plot.py at 2019-02-11 20:04:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 860.70 Mbit/s
95th percentile per-packet one-way delay: 5.399 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 490.00 Mbit/s
95th percentile per-packet one-way delay: 6.037 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 420.42 Mbit/s
95th percentile per-packet one-way delay: 2.350 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 272.30 Mbit/s
95th percentile per-packet one-way delay: 2.367 ms
Loss rate: 0.12%

Run 3: Report of TCP Cubic — Data Link

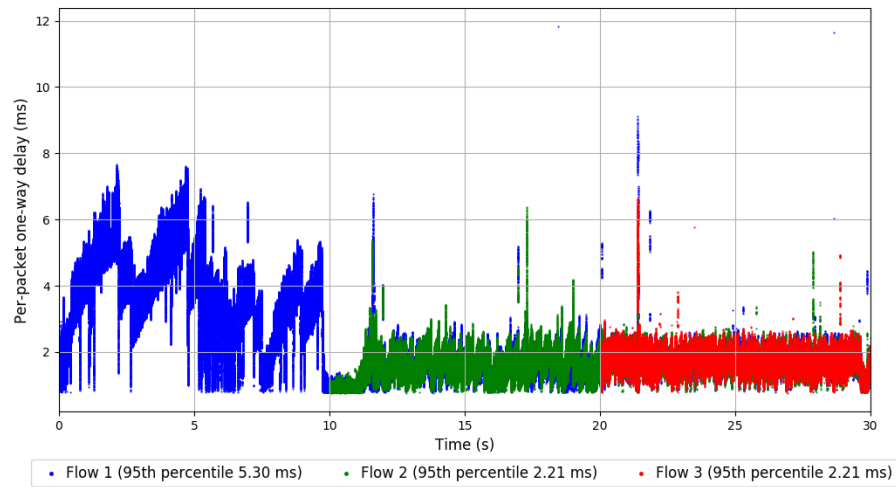
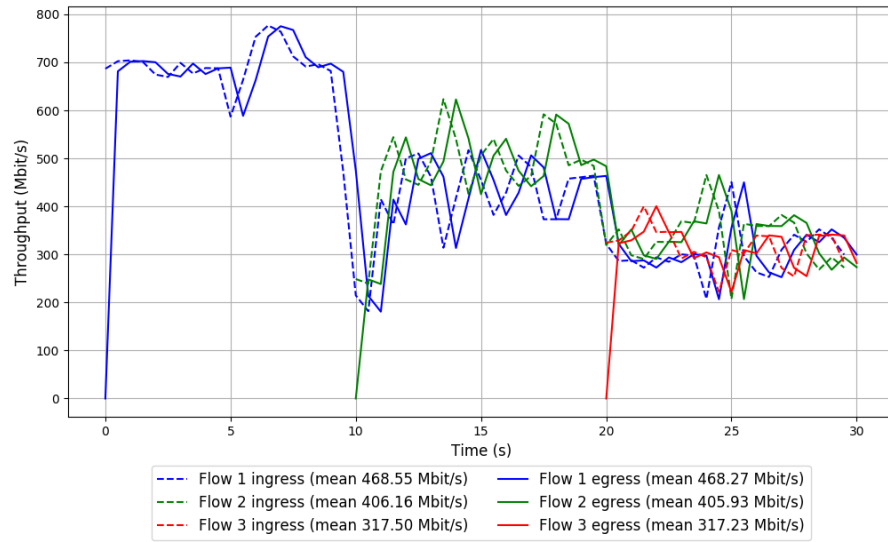


Run 4: Statistics of TCP Cubic

Start at: 2019-02-11 18:54:45
End at: 2019-02-11 18:55:15
Local clock offset: -3.056 ms
Remote clock offset: -4.767 ms

Below is generated by plot.py at 2019-02-11 20:12:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 844.11 Mbit/s
95th percentile per-packet one-way delay: 4.852 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 468.27 Mbit/s
95th percentile per-packet one-way delay: 5.296 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 405.93 Mbit/s
95th percentile per-packet one-way delay: 2.214 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 317.23 Mbit/s
95th percentile per-packet one-way delay: 2.214 ms
Loss rate: 0.08%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-02-11 19:24:46

End at: 2019-02-11 19:25:16

Local clock offset: 0.185 ms

Remote clock offset: 0.015 ms

Below is generated by plot.py at 2019-02-11 20:13:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 845.29 Mbit/s

95th percentile per-packet one-way delay: 4.327 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 484.96 Mbit/s

95th percentile per-packet one-way delay: 4.741 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 392.58 Mbit/s

95th percentile per-packet one-way delay: 2.152 ms

Loss rate: 0.07%

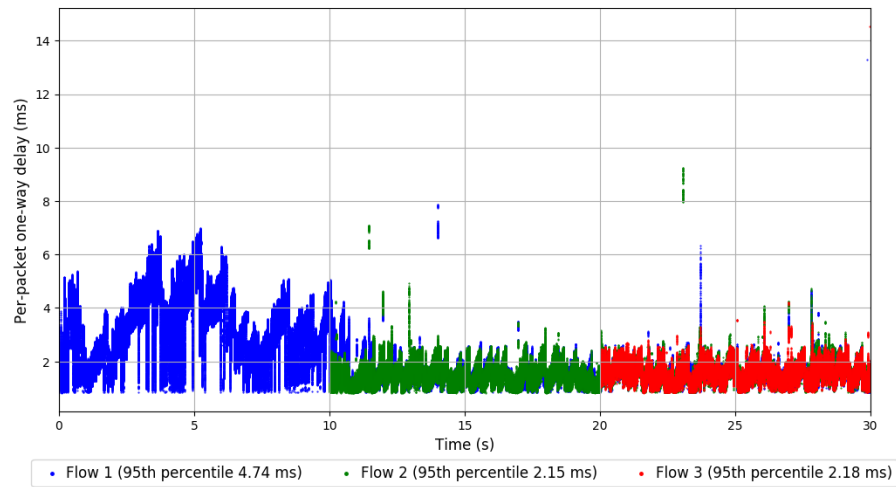
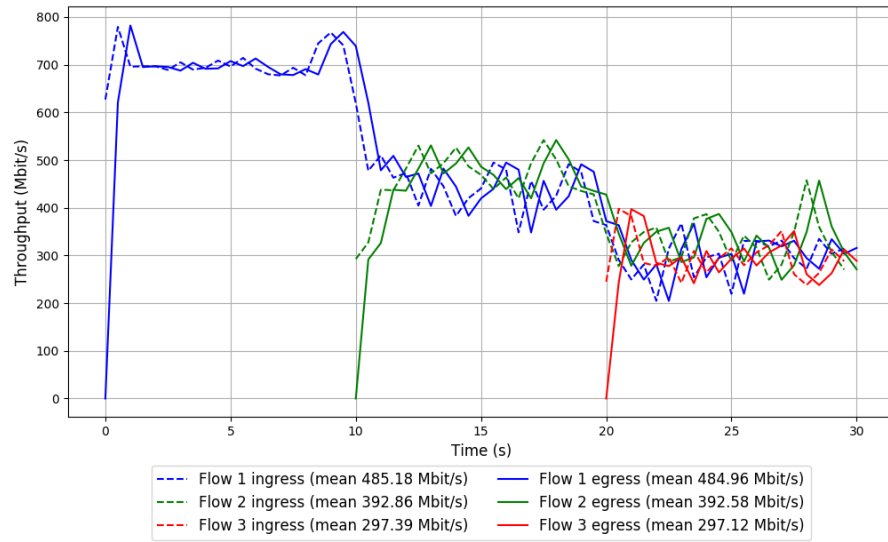
-- Flow 3:

Average throughput: 297.12 Mbit/s

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

Loss rate: 0.09%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-02-11 17:40:47

End at: 2019-02-11 17:41:17

Local clock offset: -1.267 ms

Remote clock offset: 1.531 ms

Below is generated by plot.py at 2019-02-11 20:13:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 657.29 Mbit/s

95th percentile per-packet one-way delay: 10.070 ms

Loss rate: 12.42%

-- Flow 1:

Average throughput: 476.16 Mbit/s

95th percentile per-packet one-way delay: 10.893 ms

Loss rate: 11.55%

-- Flow 2:

Average throughput: 225.71 Mbit/s

95th percentile per-packet one-way delay: 4.135 ms

Loss rate: 16.02%

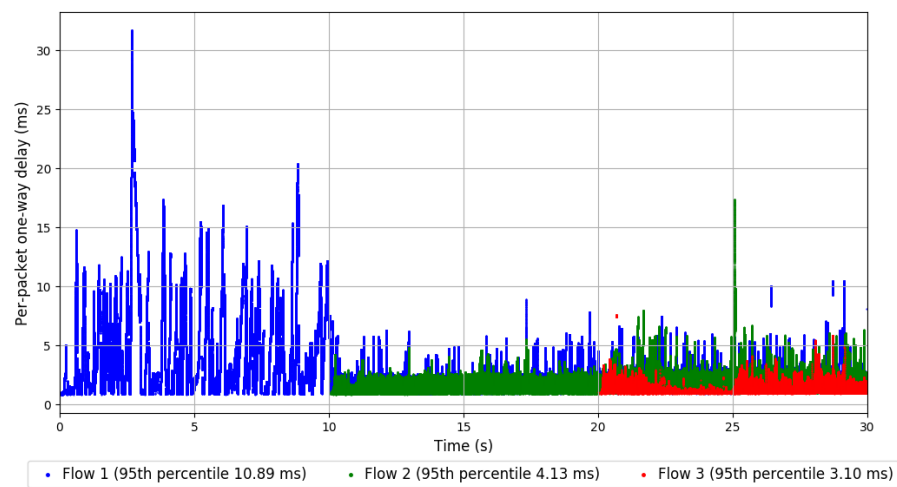
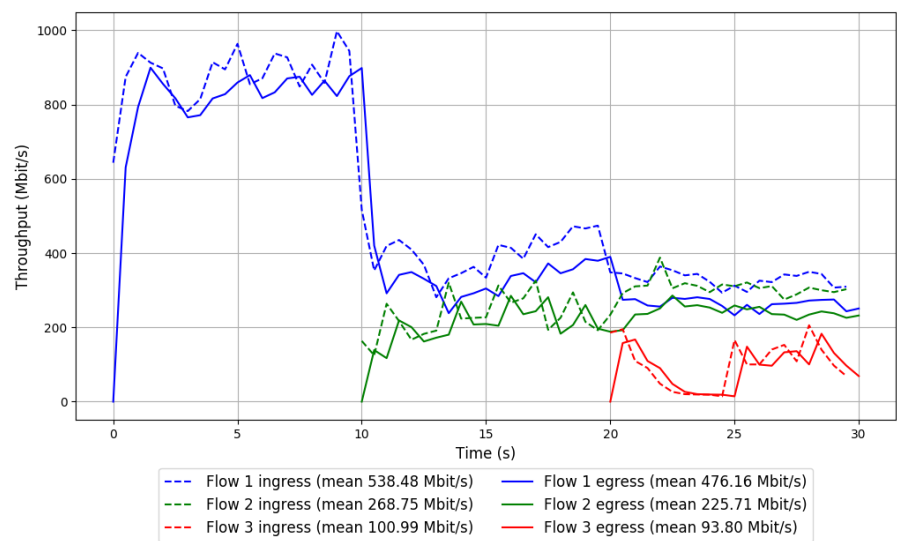
-- Flow 3:

Average throughput: 93.80 Mbit/s

95th percentile per-packet one-way delay: 3.101 ms

Loss rate: 7.12%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-02-11 18:10:53

End at: 2019-02-11 18:11:23

Local clock offset: 0.795 ms

Remote clock offset: 0.161 ms

Below is generated by plot.py at 2019-02-11 20:13:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 646.86 Mbit/s

95th percentile per-packet one-way delay: 17.241 ms

Loss rate: 13.71%

-- Flow 1:

Average throughput: 488.55 Mbit/s

95th percentile per-packet one-way delay: 18.449 ms

Loss rate: 13.31%

-- Flow 2:

Average throughput: 211.97 Mbit/s

95th percentile per-packet one-way delay: 5.345 ms

Loss rate: 15.94%

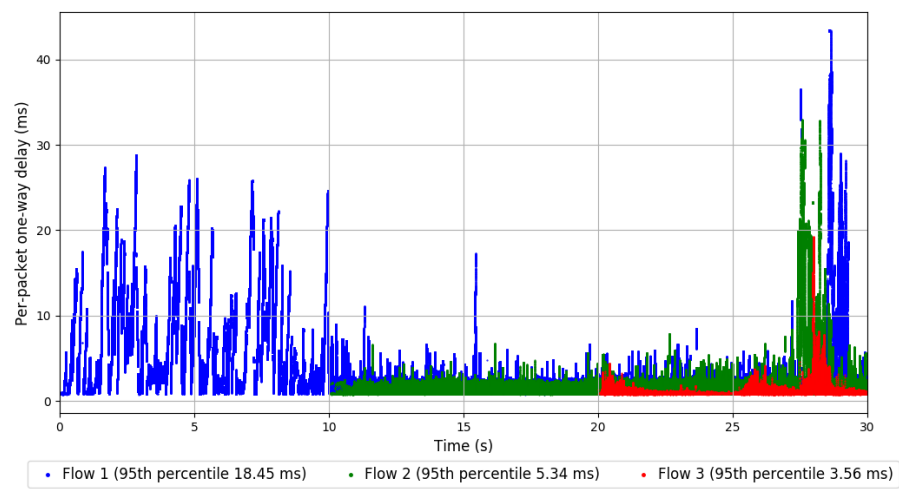
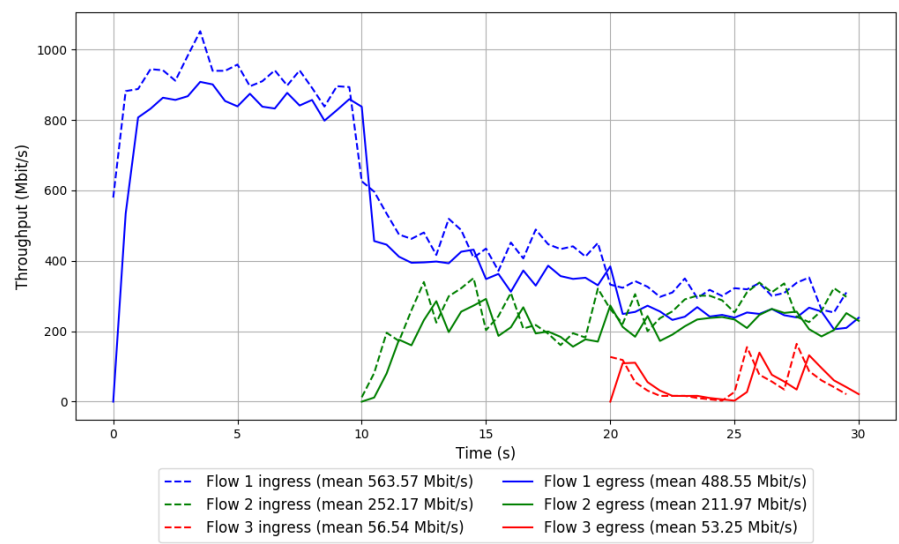
-- Flow 3:

Average throughput: 53.25 Mbit/s

95th percentile per-packet one-way delay: 3.558 ms

Loss rate: 5.82%

Run 2: Report of FillP — Data Link

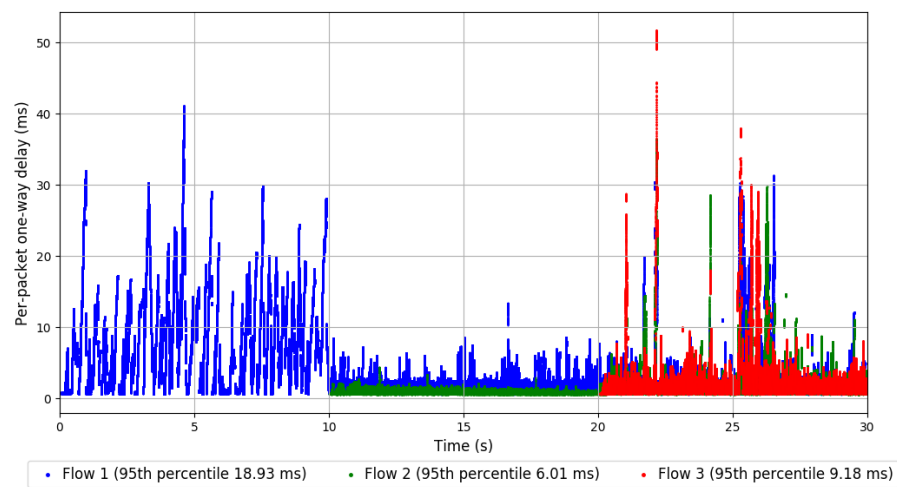
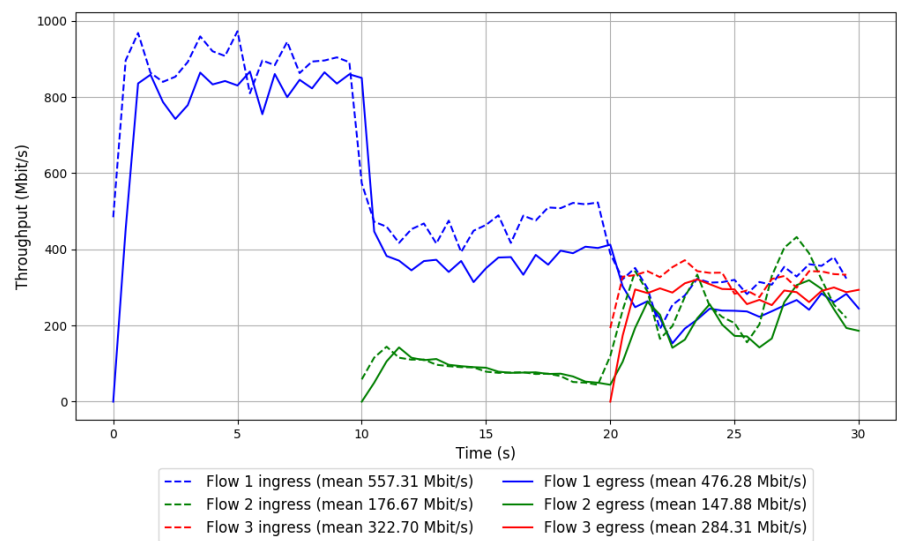


Run 3: Statistics of FillP

Start at: 2019-02-11 18:40:55
End at: 2019-02-11 18:41:25
Local clock offset: -1.205 ms
Remote clock offset: -3.596 ms

Below is generated by plot.py at 2019-02-11 20:13:43
Datalink statistics
-- Total of 3 flows:
Average throughput: 669.14 Mbit/s
95th percentile per-packet one-way delay: 17.500 ms
Loss rate: 14.43%
-- Flow 1:
Average throughput: 476.28 Mbit/s
95th percentile per-packet one-way delay: 18.935 ms
Loss rate: 14.53%
-- Flow 2:
Average throughput: 147.88 Mbit/s
95th percentile per-packet one-way delay: 6.012 ms
Loss rate: 16.30%
-- Flow 3:
Average throughput: 284.31 Mbit/s
95th percentile per-packet one-way delay: 9.180 ms
Loss rate: 11.88%

Run 3: Report of FillP — Data Link

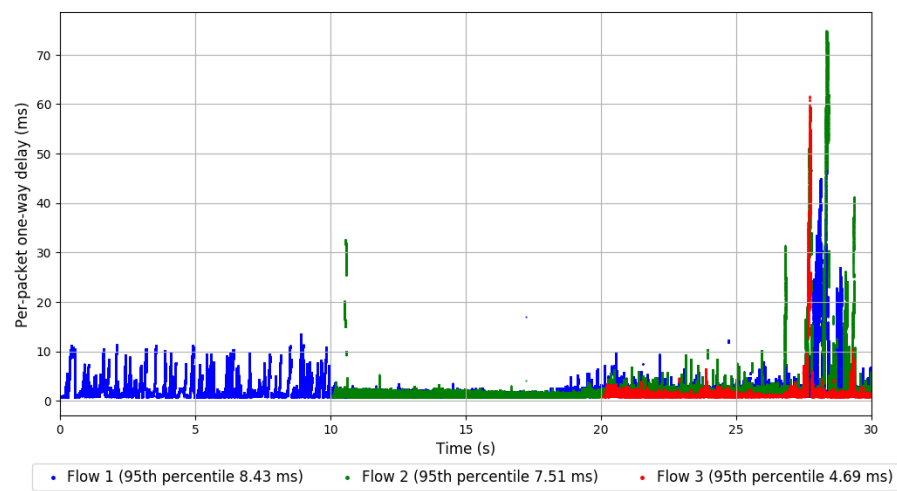
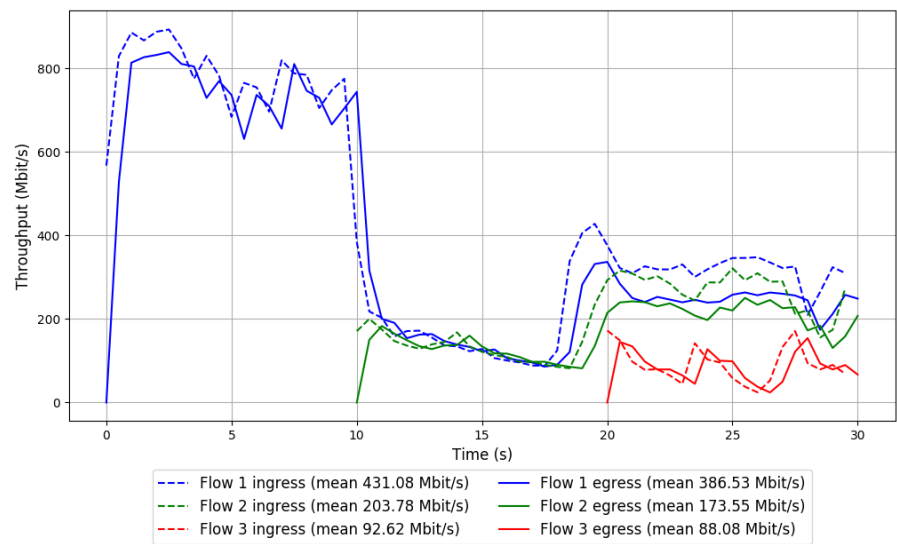


Run 4: Statistics of FillP

Start at: 2019-02-11 19:10:52
End at: 2019-02-11 19:11:22
Local clock offset: -1.522 ms
Remote clock offset: -0.869 ms

Below is generated by plot.py at 2019-02-11 20:13:43
Datalink statistics
-- Total of 3 flows:
Average throughput: 531.24 Mbit/s
95th percentile per-packet one-way delay: 8.253 ms
Loss rate: 11.07%
-- Flow 1:
Average throughput: 386.53 Mbit/s
95th percentile per-packet one-way delay: 8.426 ms
Loss rate: 10.32%
-- Flow 2:
Average throughput: 173.55 Mbit/s
95th percentile per-packet one-way delay: 7.510 ms
Loss rate: 14.83%
-- Flow 3:
Average throughput: 88.08 Mbit/s
95th percentile per-packet one-way delay: 4.686 ms
Loss rate: 4.90%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-02-11 19:40:58

End at: 2019-02-11 19:41:28

Local clock offset: -0.019 ms

Remote clock offset: -0.93 ms

Below is generated by plot.py at 2019-02-11 20:15:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 744.79 Mbit/s

95th percentile per-packet one-way delay: 11.598 ms

Loss rate: 12.23%

-- Flow 1:

Average throughput: 438.04 Mbit/s

95th percentile per-packet one-way delay: 12.792 ms

Loss rate: 10.30%

-- Flow 2:

Average throughput: 343.82 Mbit/s

95th percentile per-packet one-way delay: 5.071 ms

Loss rate: 12.00%

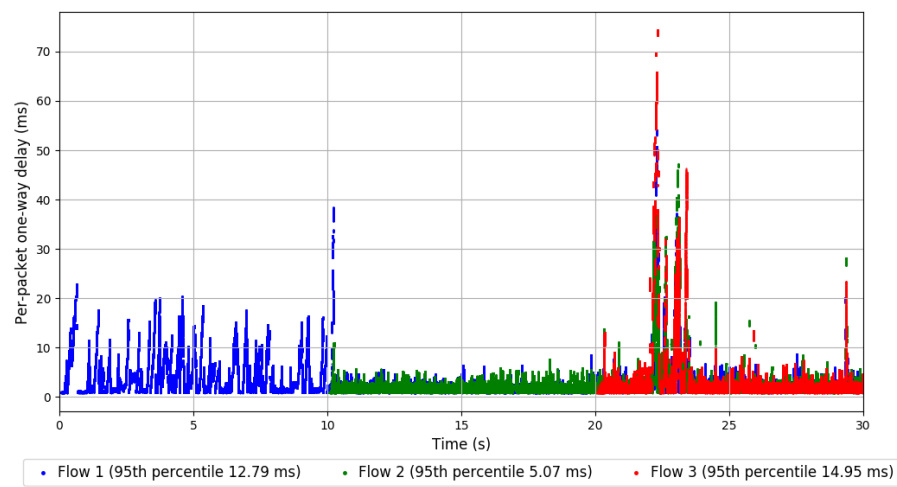
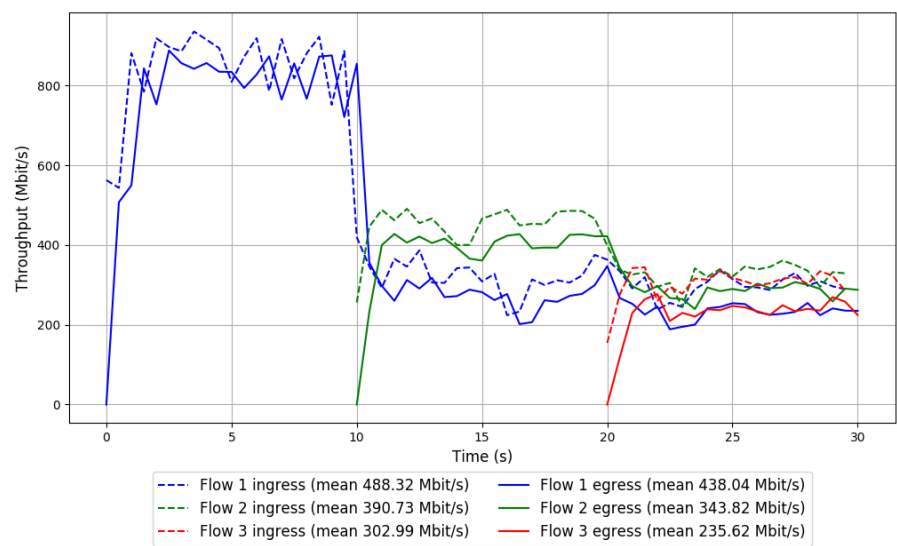
-- Flow 3:

Average throughput: 235.62 Mbit/s

95th percentile per-packet one-way delay: 14.953 ms

Loss rate: 22.24%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-02-11 17:42:22

End at: 2019-02-11 17:42:52

Local clock offset: -0.957 ms

Remote clock offset: 1.479 ms

Below is generated by plot.py at 2019-02-11 20:15:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 392.88 Mbit/s

95th percentile per-packet one-way delay: 4.681 ms

Loss rate: 4.56%

-- Flow 1:

Average throughput: 329.83 Mbit/s

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

Loss rate: 4.57%

-- Flow 2:

Average throughput: 80.53 Mbit/s

95th percentile per-packet one-way delay: 2.292 ms

Loss rate: 3.04%

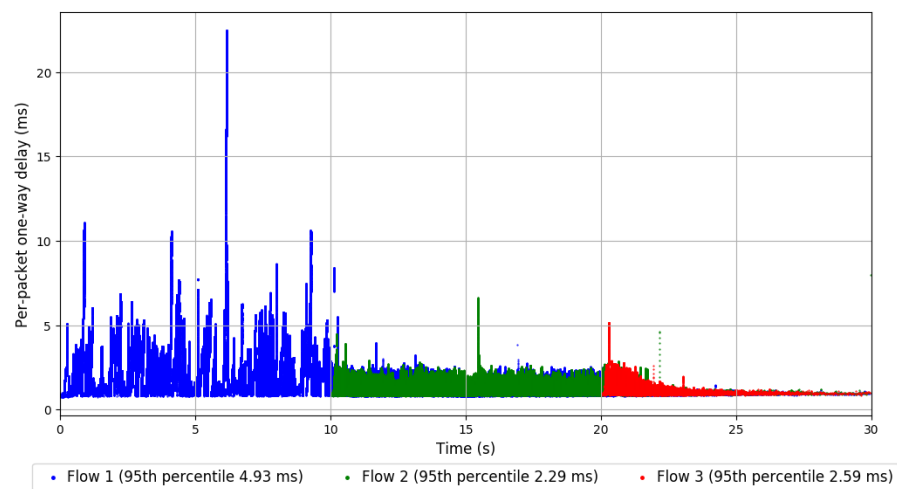
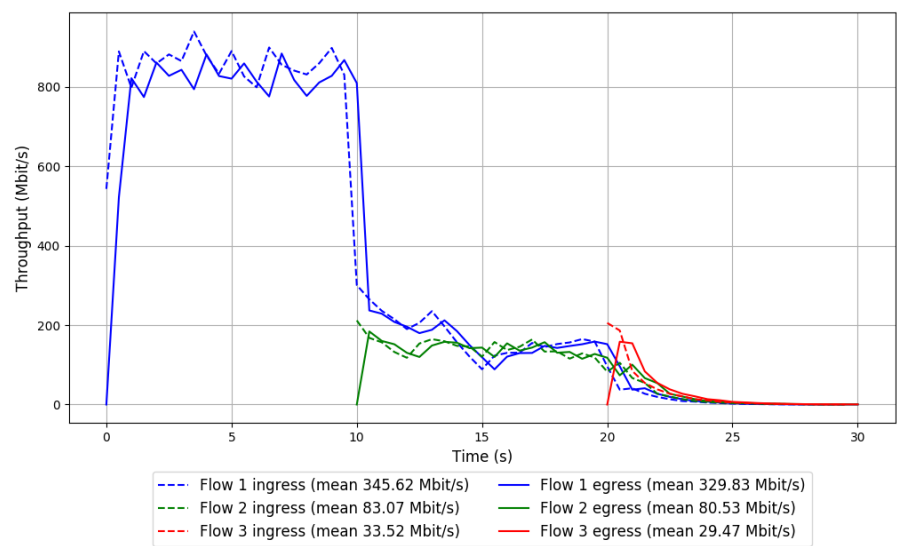
-- Flow 3:

Average throughput: 29.47 Mbit/s

95th percentile per-packet one-way delay: 2.588 ms

Loss rate: 12.08%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-02-11 18:12:28

End at: 2019-02-11 18:12:58

Local clock offset: 0.794 ms

Remote clock offset: 0.102 ms

Below is generated by plot.py at 2019-02-11 20:15:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 383.96 Mbit/s

95th percentile per-packet one-way delay: 5.600 ms

Loss rate: 3.58%

-- Flow 1:

Average throughput: 319.99 Mbit/s

95th percentile per-packet one-way delay: 5.972 ms

Loss rate: 3.13%

-- Flow 2:

Average throughput: 81.51 Mbit/s

95th percentile per-packet one-way delay: 2.209 ms

Loss rate: 5.31%

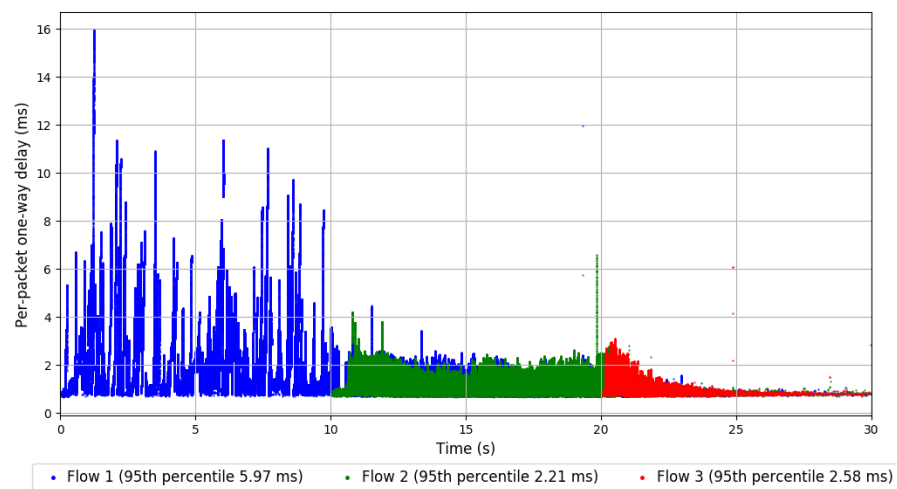
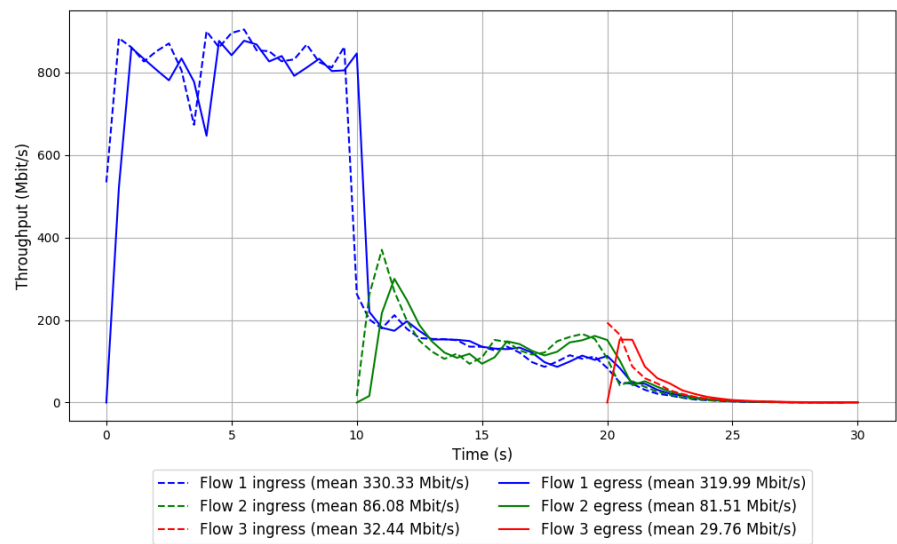
-- Flow 3:

Average throughput: 29.76 Mbit/s

95th percentile per-packet one-way delay: 2.584 ms

Loss rate: 8.25%

Run 2: Report of FillP-Sheep — Data Link

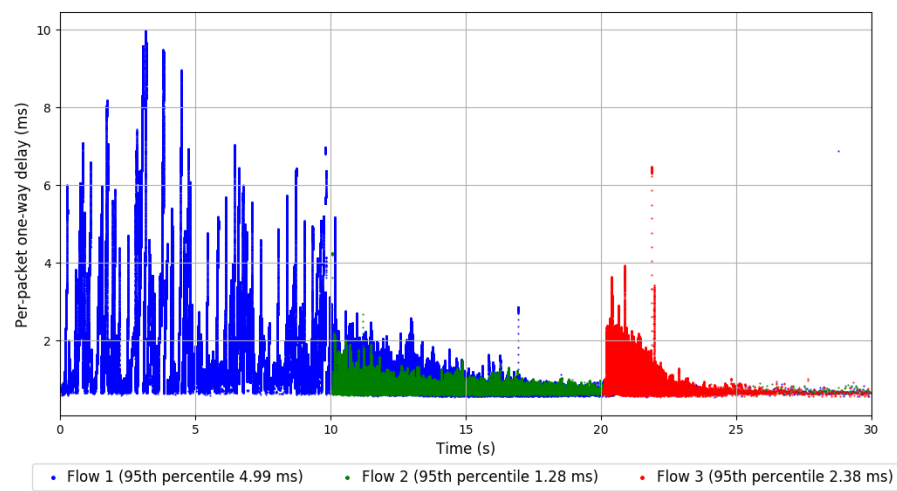
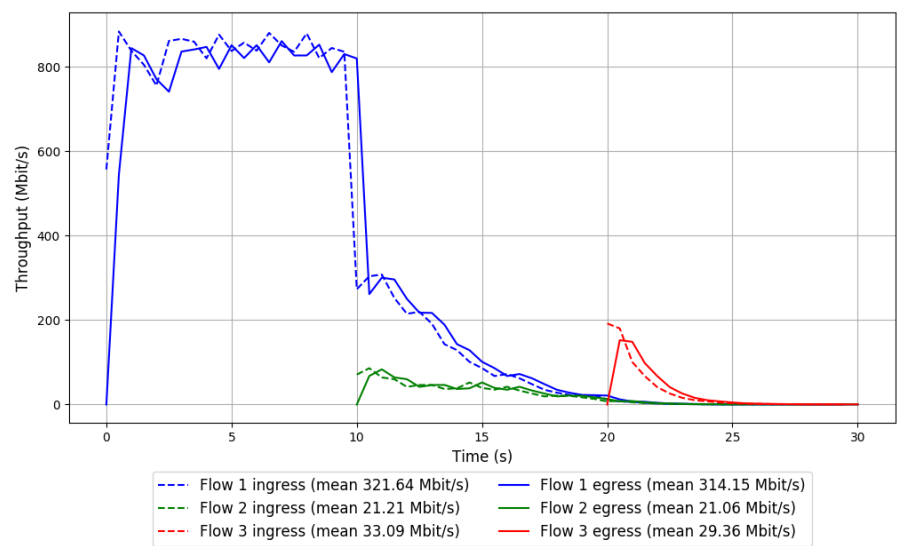


Run 3: Statistics of FillP-Sheep

Start at: 2019-02-11 18:42:31
End at: 2019-02-11 18:43:01
Local clock offset: -1.554 ms
Remote clock offset: -3.793 ms

Below is generated by plot.py at 2019-02-11 20:16:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 337.64 Mbit/s
95th percentile per-packet one-way delay: 4.874 ms
Loss rate: 2.54%
-- Flow 1:
Average throughput: 314.15 Mbit/s
95th percentile per-packet one-way delay: 4.988 ms
Loss rate: 2.33%
-- Flow 2:
Average throughput: 21.06 Mbit/s
95th percentile per-packet one-way delay: 1.278 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 29.36 Mbit/s
95th percentile per-packet one-way delay: 2.375 ms
Loss rate: 11.25%

Run 3: Report of FillP-Sheep — Data Link

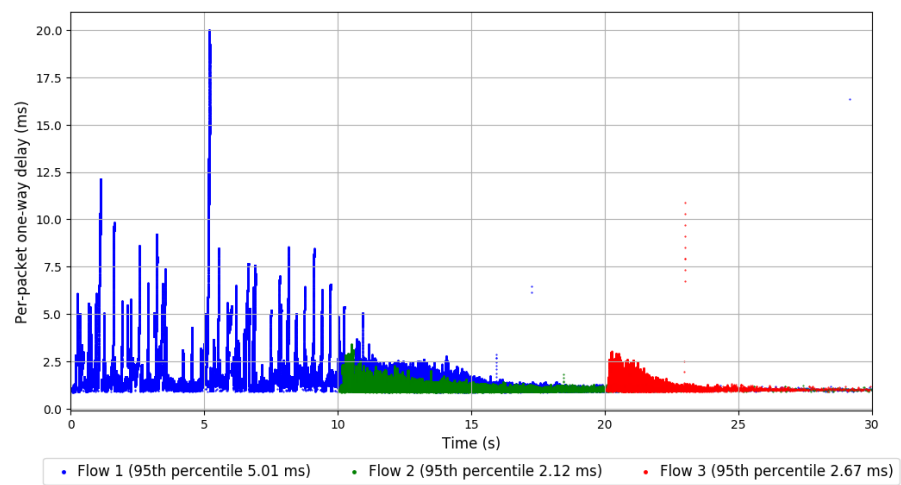
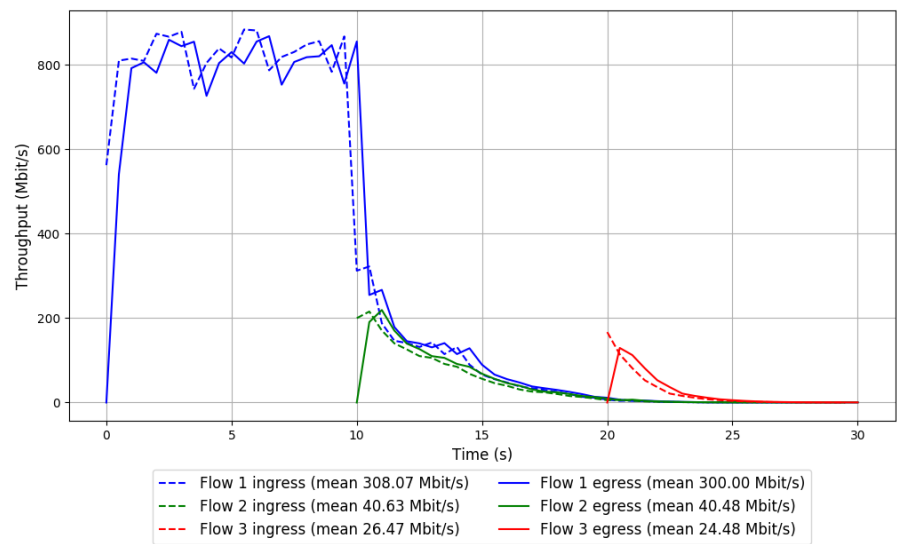


Run 4: Statistics of FillP-Sheep

Start at: 2019-02-11 19:12:23
End at: 2019-02-11 19:12:53
Local clock offset: -1.193 ms
Remote clock offset: -0.579 ms

Below is generated by plot.py at 2019-02-11 20:17:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 334.94 Mbit/s
95th percentile per-packet one-way delay: 4.874 ms
Loss rate: 2.57%
-- Flow 1:
Average throughput: 300.00 Mbit/s
95th percentile per-packet one-way delay: 5.008 ms
Loss rate: 2.62%
-- Flow 2:
Average throughput: 40.48 Mbit/s
95th percentile per-packet one-way delay: 2.119 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 24.48 Mbit/s
95th percentile per-packet one-way delay: 2.665 ms
Loss rate: 7.51%

Run 4: Report of FillP-Sheep — Data Link

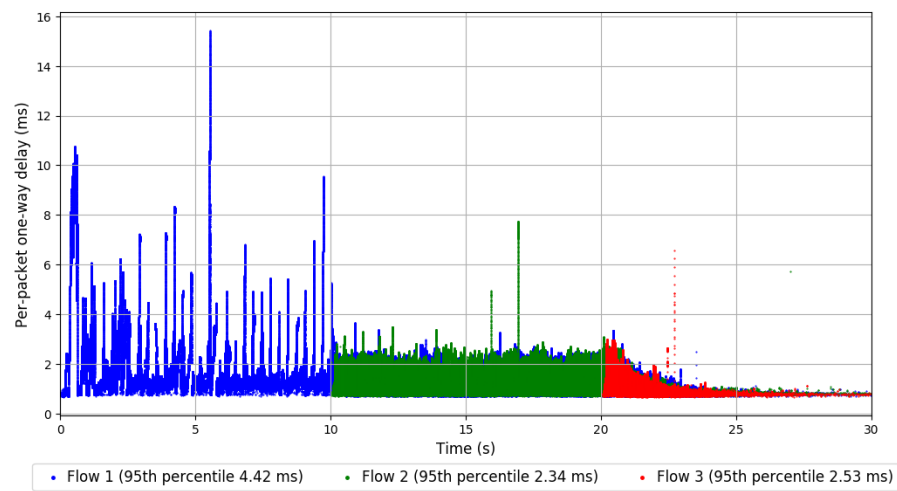
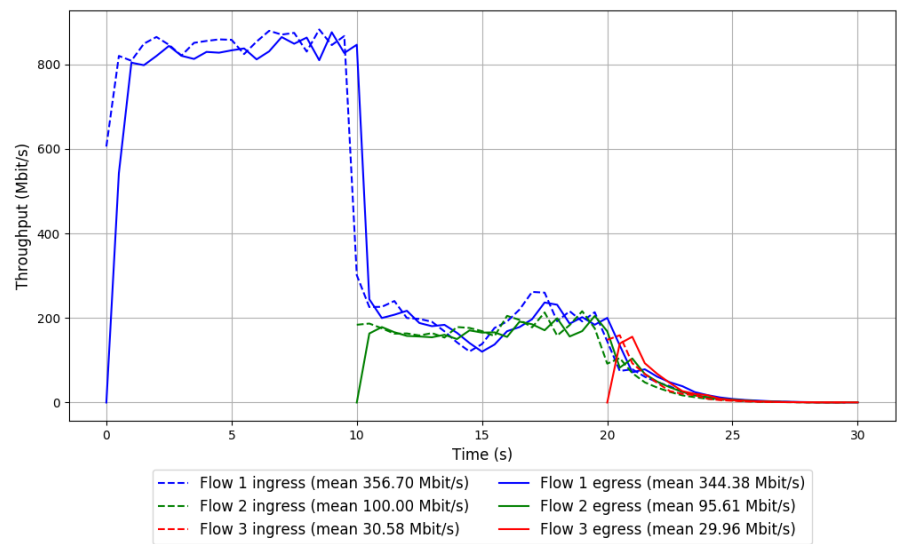


Run 5: Statistics of FillP-Sheep

Start at: 2019-02-11 19:42:37
End at: 2019-02-11 19:43:07
Local clock offset: -0.095 ms
Remote clock offset: -1.007 ms

Below is generated by plot.py at 2019-02-11 20:18:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 417.71 Mbit/s
95th percentile per-packet one-way delay: 3.836 ms
Loss rate: 3.57%
-- Flow 1:
Average throughput: 344.38 Mbit/s
95th percentile per-packet one-way delay: 4.424 ms
Loss rate: 3.45%
-- Flow 2:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 2.340 ms
Loss rate: 4.40%
-- Flow 3:
Average throughput: 29.96 Mbit/s
95th percentile per-packet one-way delay: 2.531 ms
Loss rate: 2.04%

Run 5: Report of FillP-Sheep — Data Link

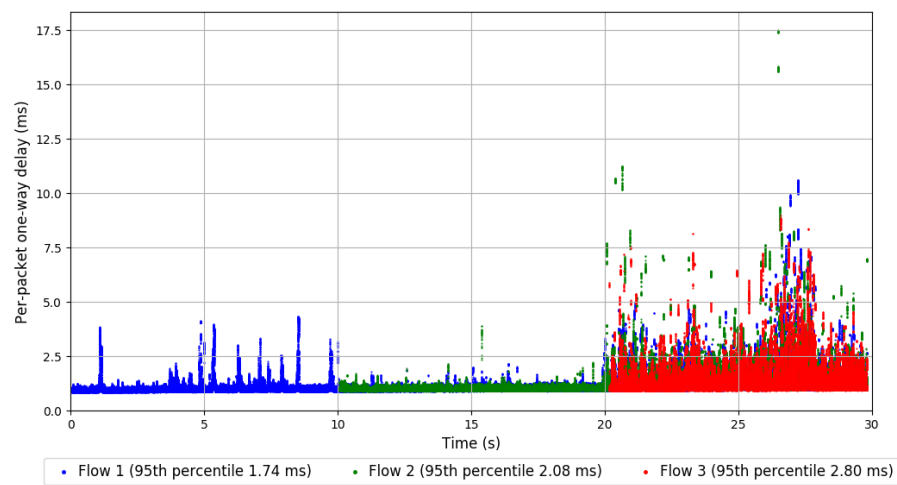
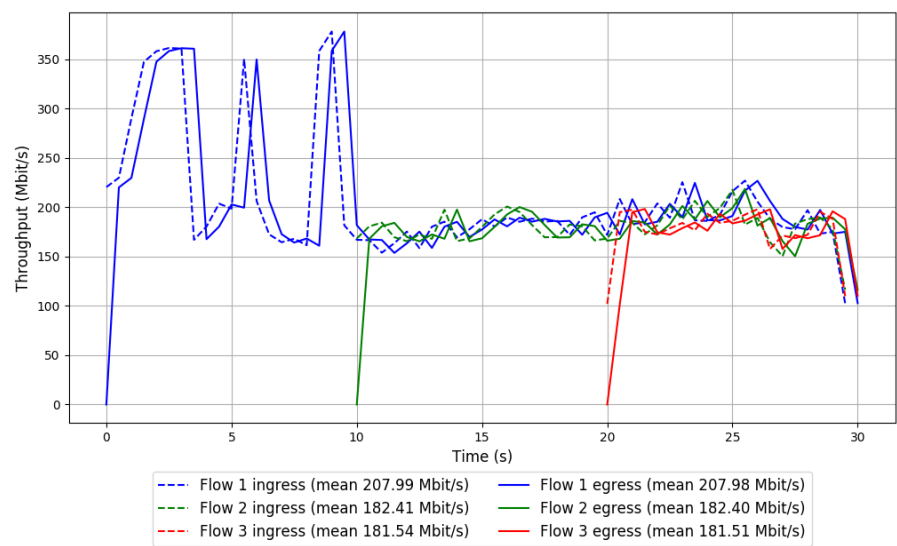


```
Run 1: Statistics of Indigo

Start at: 2019-02-11 17:21:23
End at: 2019-02-11 17:21:53
Local clock offset: -2.621 ms
Remote clock offset: 3.608 ms

# Below is generated by plot.py at 2019-02-11 20:18:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 387.50 Mbit/s
95th percentile per-packet one-way delay: 2.058 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 207.98 Mbit/s
95th percentile per-packet one-way delay: 1.742 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 182.40 Mbit/s
95th percentile per-packet one-way delay: 2.083 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 181.51 Mbit/s
95th percentile per-packet one-way delay: 2.804 ms
Loss rate: 0.01%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-02-11 17:51:37

End at: 2019-02-11 17:52:07

Local clock offset: 0.245 ms

Remote clock offset: 0.986 ms

Below is generated by plot.py at 2019-02-11 20:18:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 393.36 Mbit/s

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

Loss rate: 0.30%

-- Flow 1:

Average throughput: 209.99 Mbit/s

95th percentile per-packet one-way delay: 1.569 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 187.41 Mbit/s

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

Loss rate: 0.33%

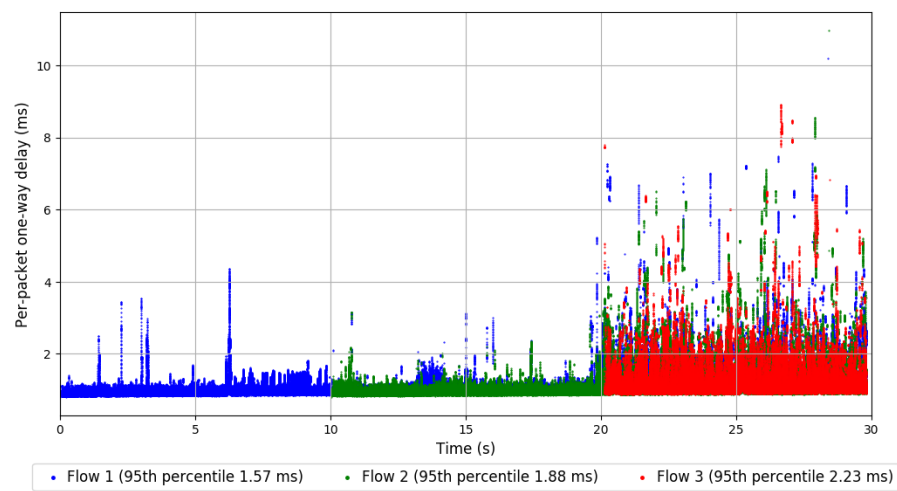
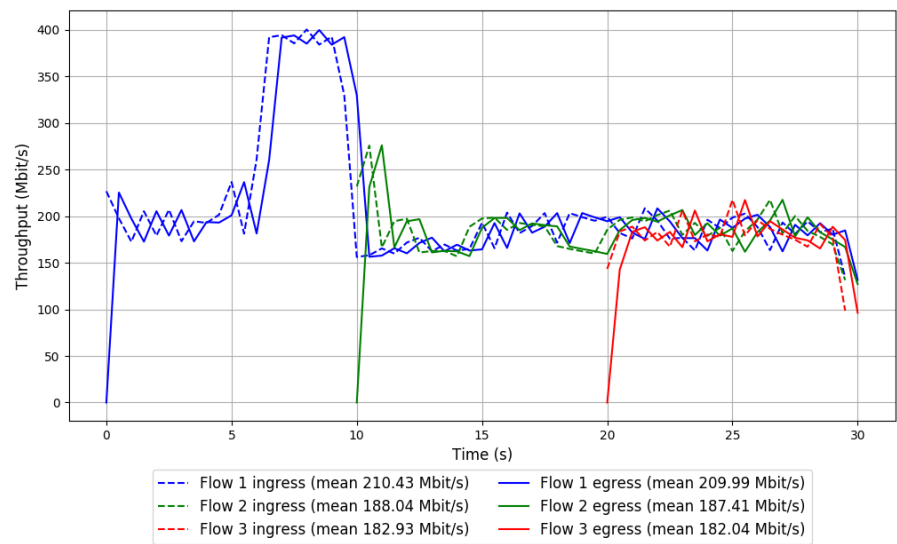
-- Flow 3:

Average throughput: 182.04 Mbit/s

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

Loss rate: 0.54%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-02-11 18:21:56

End at: 2019-02-11 18:22:26

Local clock offset: 0.804 ms

Remote clock offset: 0.094 ms

Below is generated by plot.py at 2019-02-11 20:18:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 377.32 Mbit/s

95th percentile per-packet one-way delay: 2.078 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 194.47 Mbit/s

95th percentile per-packet one-way delay: 1.887 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 186.06 Mbit/s

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

Loss rate: 0.01%

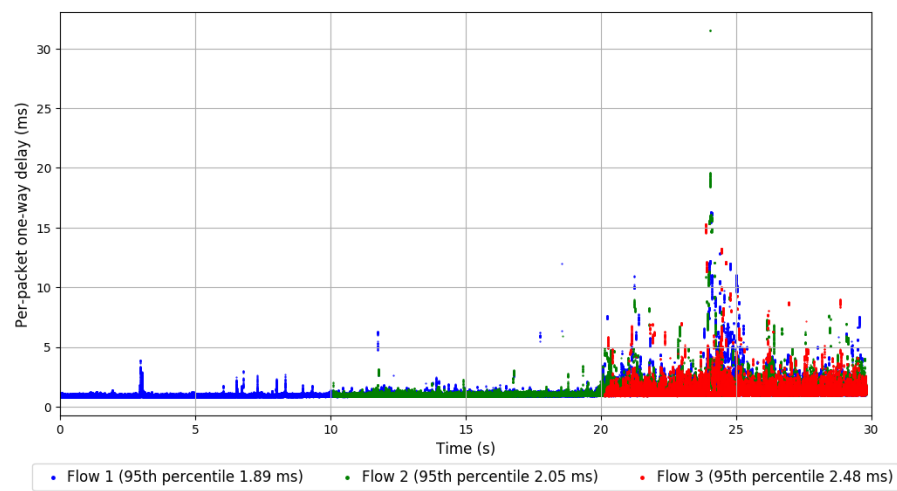
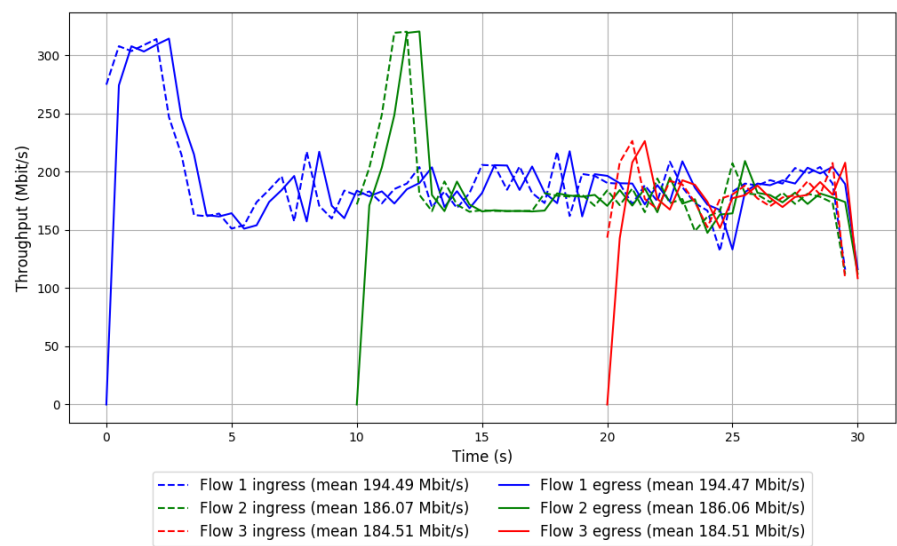
-- Flow 3:

Average throughput: 184.51 Mbit/s

95th percentile per-packet one-way delay: 2.475 ms

Loss rate: 0.01%

Run 3: Report of Indigo — Data Link

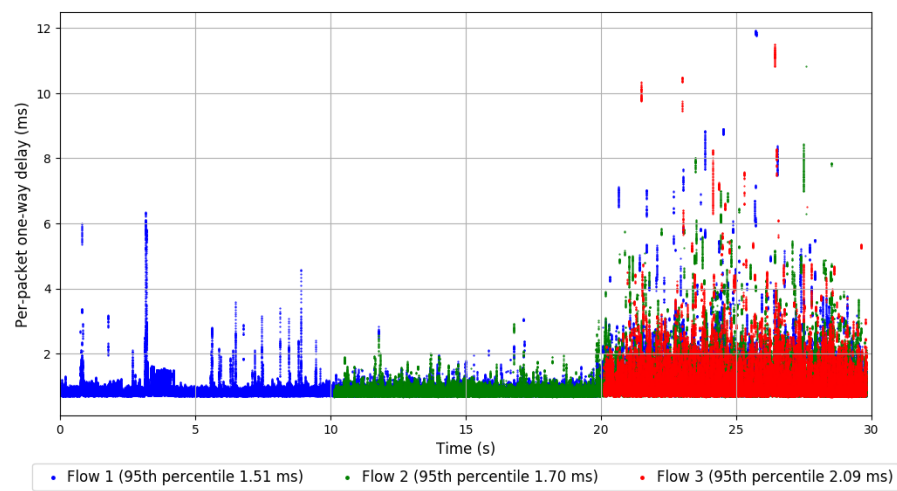
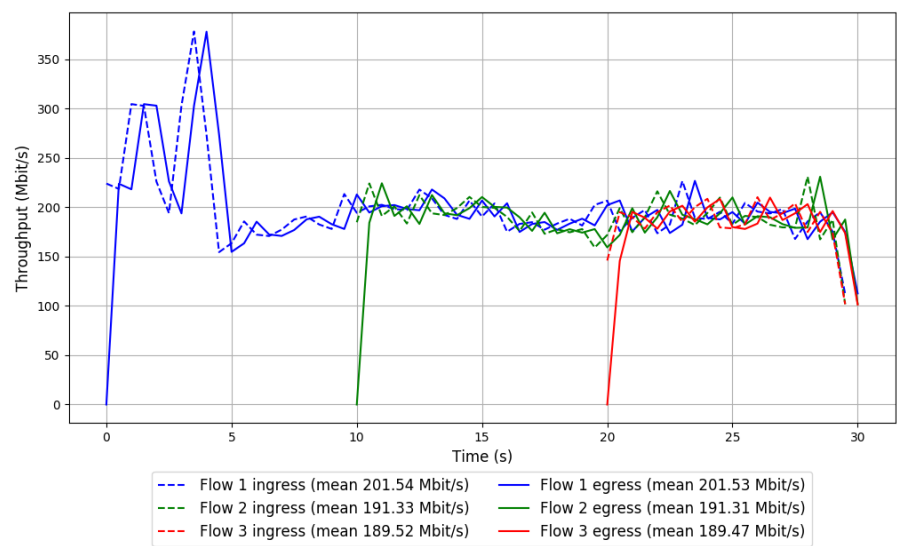


Run 4: Statistics of Indigo

Start at: 2019-02-11 18:51:46
End at: 2019-02-11 18:52:16
Local clock offset: -2.796 ms
Remote clock offset: -4.605 ms

```
# Below is generated by plot.py at 2019-02-11 20:19:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 389.53 Mbit/s
95th percentile per-packet one-way delay: 1.698 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 201.53 Mbit/s
95th percentile per-packet one-way delay: 1.514 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 191.31 Mbit/s
95th percentile per-packet one-way delay: 1.698 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 189.47 Mbit/s
95th percentile per-packet one-way delay: 2.087 ms
Loss rate: 0.02%
```

Run 4: Report of Indigo — Data Link

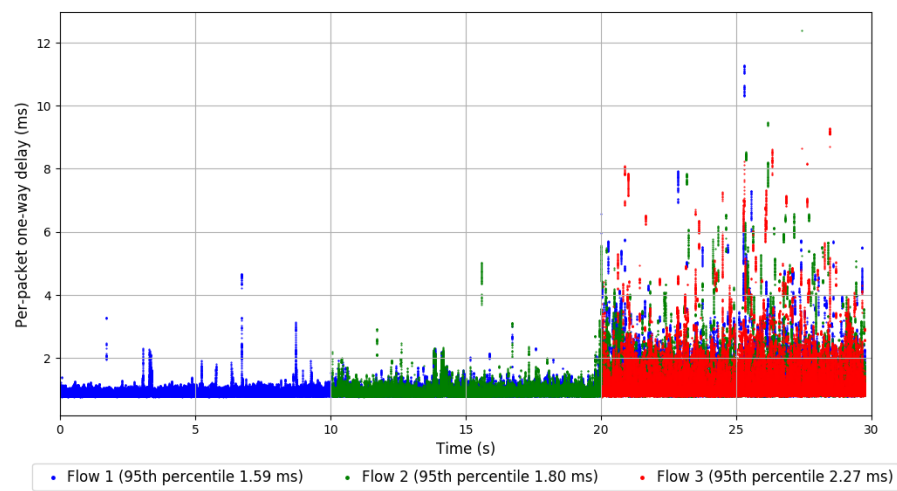
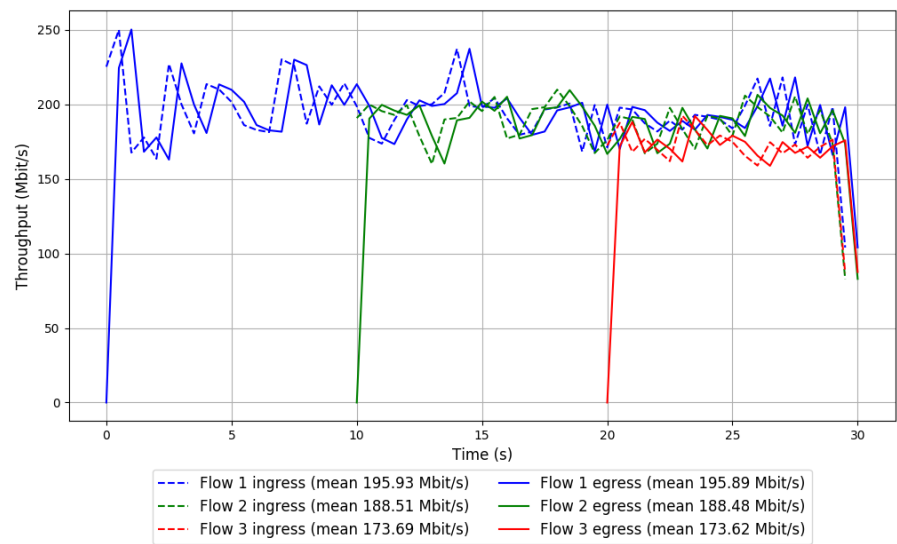


Run 5: Statistics of Indigo

Start at: 2019-02-11 19:21:48
End at: 2019-02-11 19:22:18
Local clock offset: -0.029 ms
Remote clock offset: -0.147 ms

Below is generated by plot.py at 2019-02-11 20:19:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 377.54 Mbit/s
95th percentile per-packet one-way delay: 1.807 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 195.89 Mbit/s
95th percentile per-packet one-way delay: 1.593 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 188.48 Mbit/s
95th percentile per-packet one-way delay: 1.798 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 173.62 Mbit/s
95th percentile per-packet one-way delay: 2.269 ms
Loss rate: 0.04%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-02-11 17:26:05

End at: 2019-02-11 17:26:35

Local clock offset: -2.953 ms

Remote clock offset: 2.456 ms

Below is generated by plot.py at 2019-02-11 20:22:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 515.30 Mbit/s

95th percentile per-packet one-way delay: 2.000 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 271.60 Mbit/s

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

Loss rate: 0.04%

-- Flow 2:

Average throughput: 269.96 Mbit/s

95th percentile per-packet one-way delay: 1.895 ms

Loss rate: 0.06%

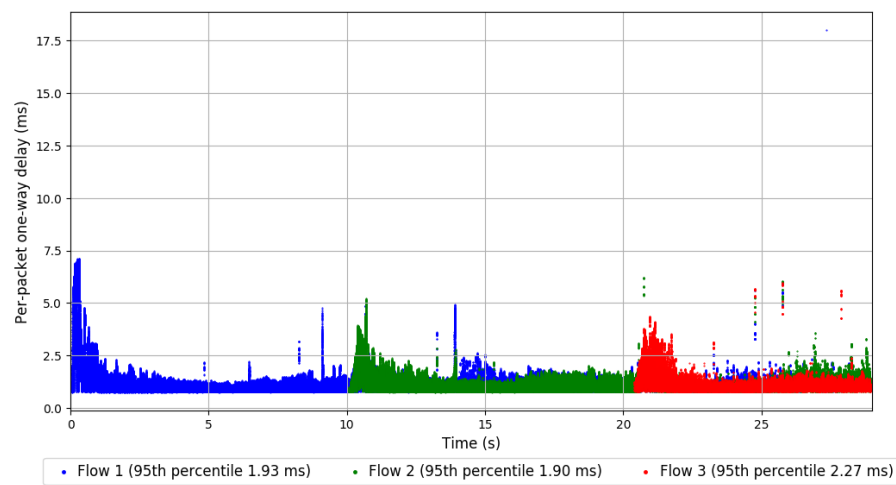
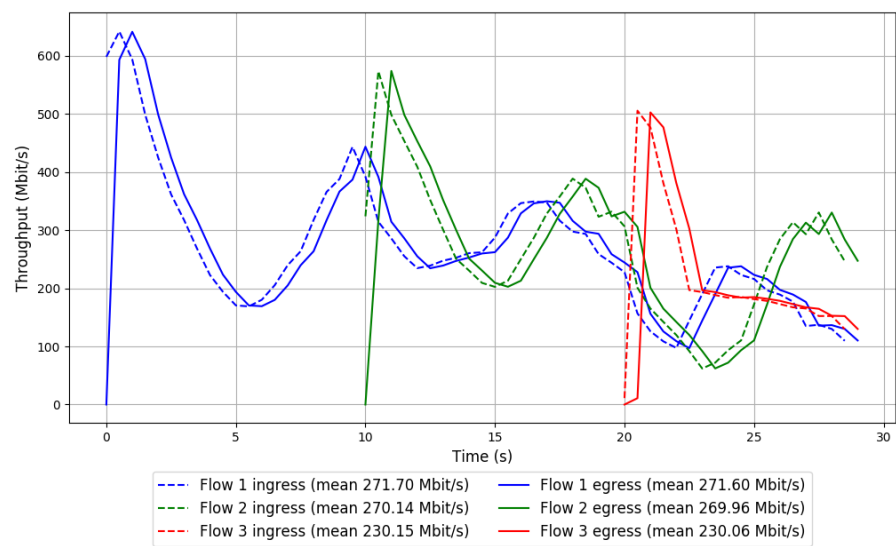
-- Flow 3:

Average throughput: 230.06 Mbit/s

95th percentile per-packet one-way delay: 2.268 ms

Loss rate: 0.04%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-11 17:56:23

End at: 2019-02-11 17:56:53

Local clock offset: 0.579 ms

Remote clock offset: 0.568 ms

Below is generated by plot.py at 2019-02-11 20:22:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 357.48 Mbit/s

95th percentile per-packet one-way delay: 1.654 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 182.35 Mbit/s

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

Loss rate: 0.01%

-- Flow 2:

Average throughput: 181.71 Mbit/s

95th percentile per-packet one-way delay: 1.662 ms

Loss rate: 0.10%

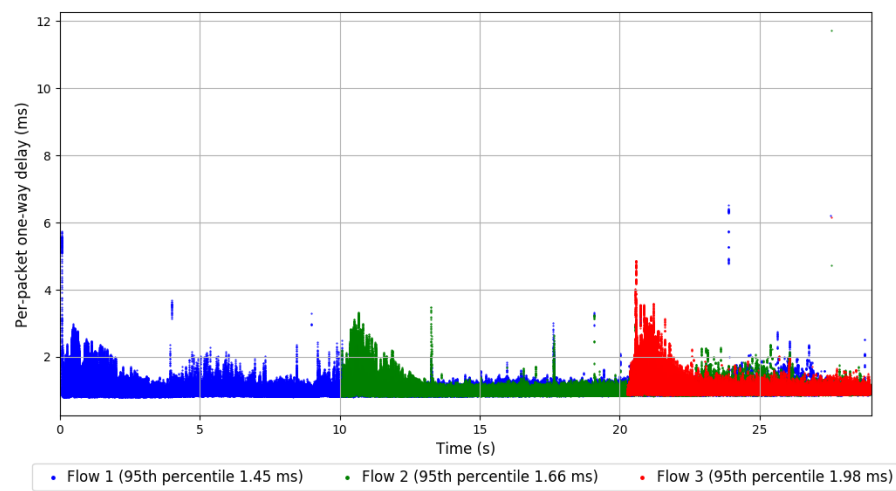
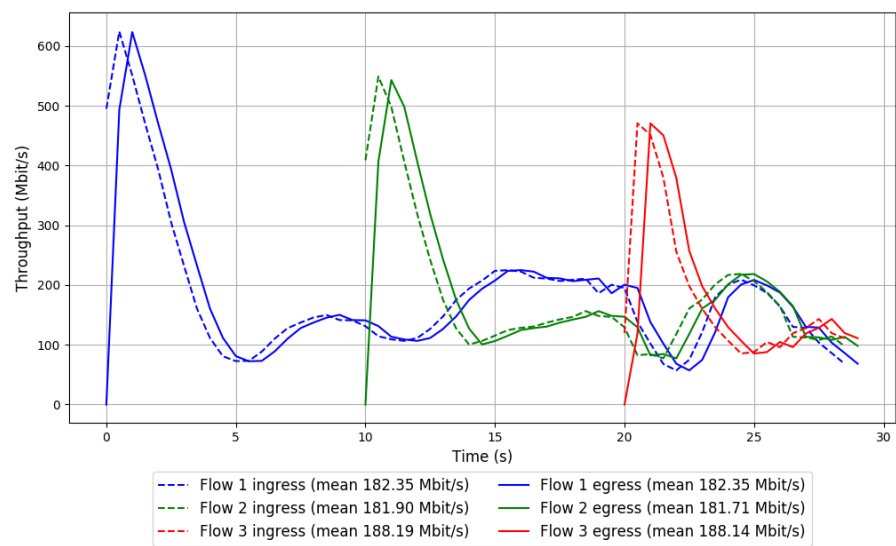
-- Flow 3:

Average throughput: 188.14 Mbit/s

95th percentile per-packet one-way delay: 1.978 ms

Loss rate: 0.03%

Run 2: Report of Indigo-MusesC3 — Data Link

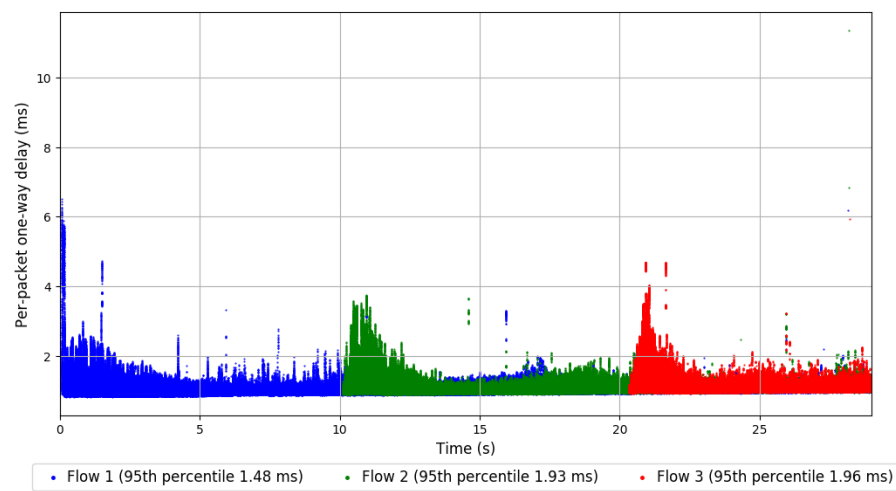
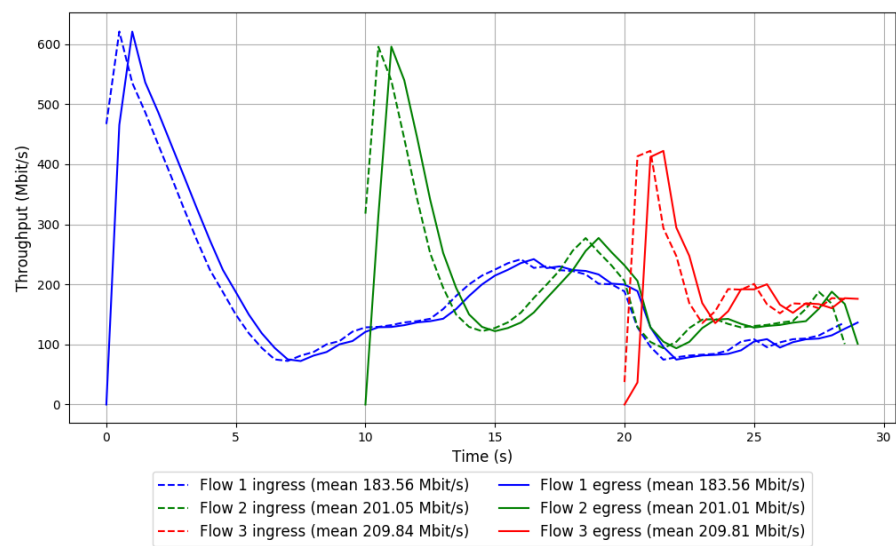


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-11 18:26:32
End at: 2019-02-11 18:27:02
Local clock offset: 0.813 ms
Remote clock offset: -1.339 ms

Below is generated by plot.py at 2019-02-11 20:22:01
Datalink statistics
-- Total of 3 flows:
Average throughput: 376.96 Mbit/s
95th percentile per-packet one-way delay: 1.718 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 183.56 Mbit/s
95th percentile per-packet one-way delay: 1.481 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 201.01 Mbit/s
95th percentile per-packet one-way delay: 1.933 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 209.81 Mbit/s
95th percentile per-packet one-way delay: 1.956 ms
Loss rate: 0.02%

Run 3: Report of Indigo-MusesC3 — Data Link

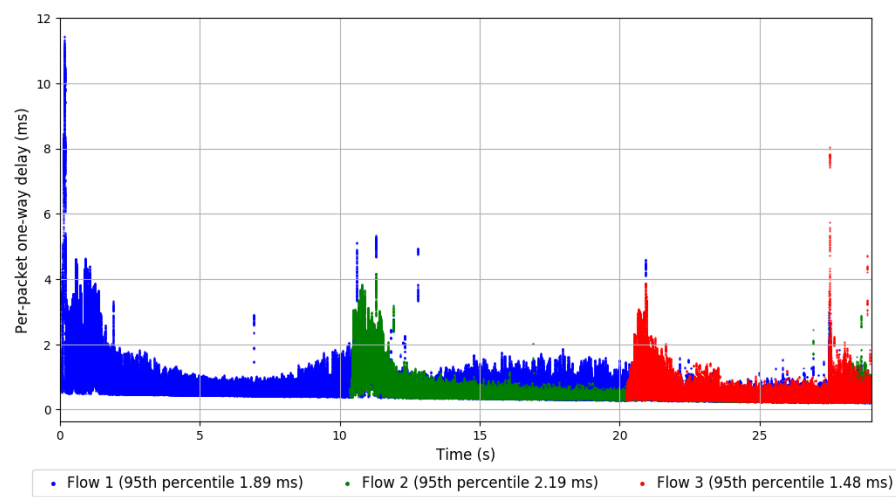
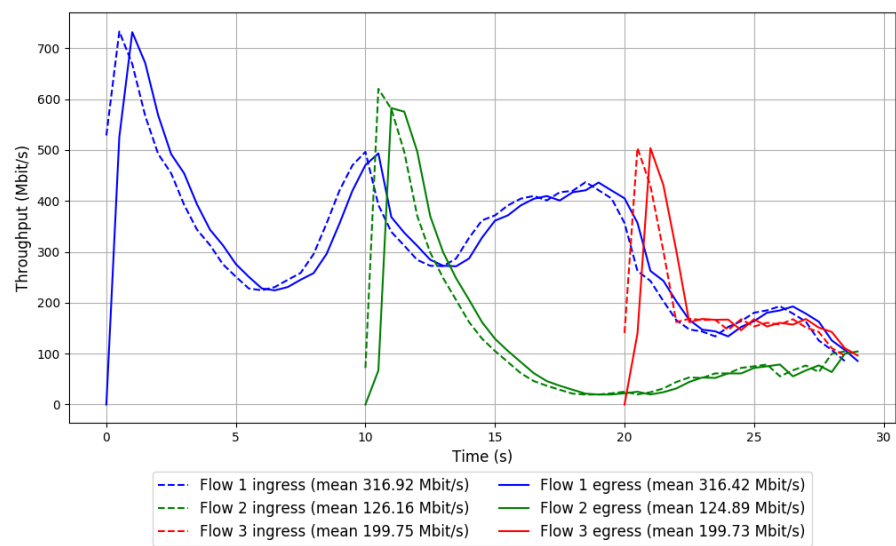


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-11 18:56:27
End at: 2019-02-11 18:56:57
Local clock offset: -3.166 ms
Remote clock offset: -4.966 ms

Below is generated by plot.py at 2019-02-11 20:22:39
Datalink statistics
-- Total of 3 flows:
Average throughput: 456.90 Mbit/s
95th percentile per-packet one-way delay: 1.945 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 316.42 Mbit/s
95th percentile per-packet one-way delay: 1.893 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 124.89 Mbit/s
95th percentile per-packet one-way delay: 2.188 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 199.73 Mbit/s
95th percentile per-packet one-way delay: 1.476 ms
Loss rate: 0.01%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-11 19:26:28

End at: 2019-02-11 19:26:58

Local clock offset: 0.264 ms

Remote clock offset: 0.097 ms

Below is generated by plot.py at 2019-02-11 20:23:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 516.07 Mbit/s

95th percentile per-packet one-way delay: 1.764 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 303.02 Mbit/s

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

Loss rate: 0.01%

-- Flow 2:

Average throughput: 223.44 Mbit/s

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

Loss rate: 0.04%

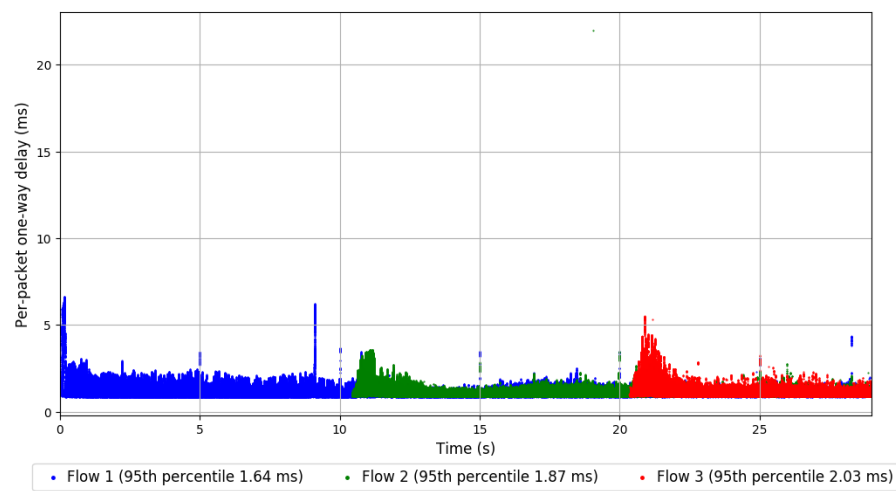
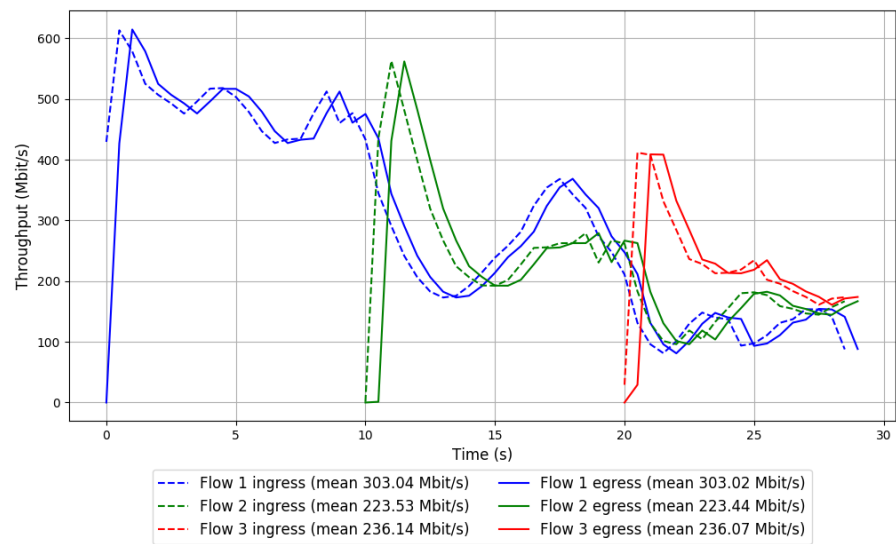
-- Flow 3:

Average throughput: 236.07 Mbit/s

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

Loss rate: 0.03%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-11 17:20:05

End at: 2019-02-11 17:20:35

Local clock offset: -2.554 ms

Remote clock offset: 3.901 ms

Below is generated by plot.py at 2019-02-11 20:23:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.35 Mbit/s

95th percentile per-packet one-way delay: 1.510 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 49.70 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 86.78 Mbit/s

95th percentile per-packet one-way delay: 1.540 ms

Loss rate: 0.03%

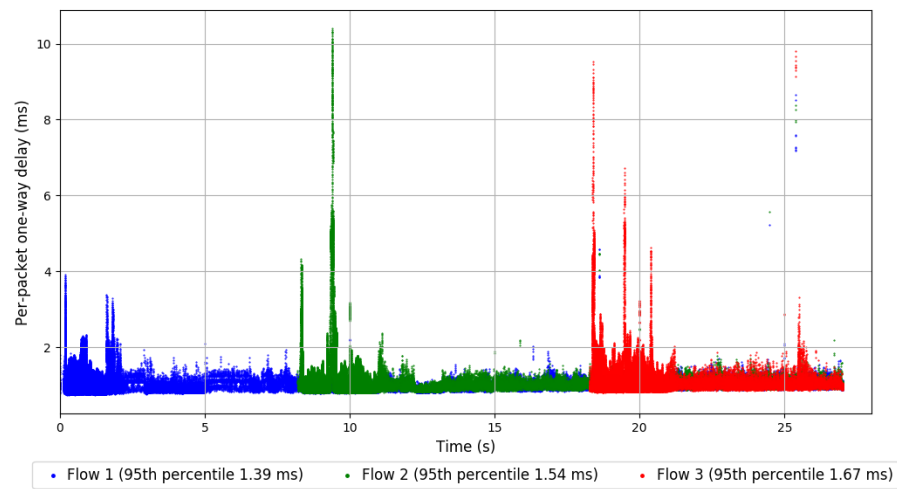
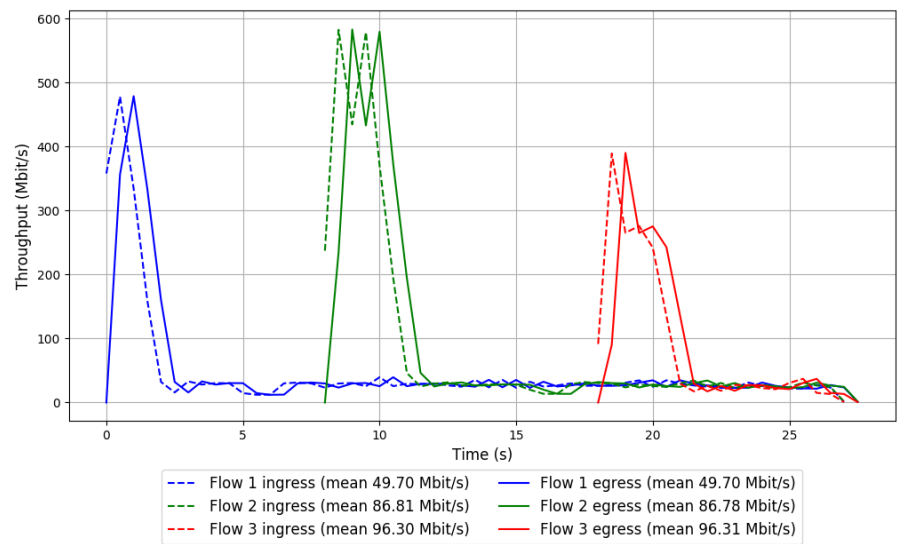
-- Flow 3:

Average throughput: 96.31 Mbit/s

95th percentile per-packet one-way delay: 1.671 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-11 17:50:17

End at: 2019-02-11 17:50:47

Local clock offset: 0.123 ms

Remote clock offset: 1.144 ms

Below is generated by plot.py at 2019-02-11 20:23:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 158.65 Mbit/s

95th percentile per-packet one-way delay: 1.584 ms

Loss rate: 1.69%

-- Flow 1:

Average throughput: 59.35 Mbit/s

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

Loss rate: 1.41%

-- Flow 2:

Average throughput: 101.69 Mbit/s

95th percentile per-packet one-way delay: 1.707 ms

Loss rate: 1.87%

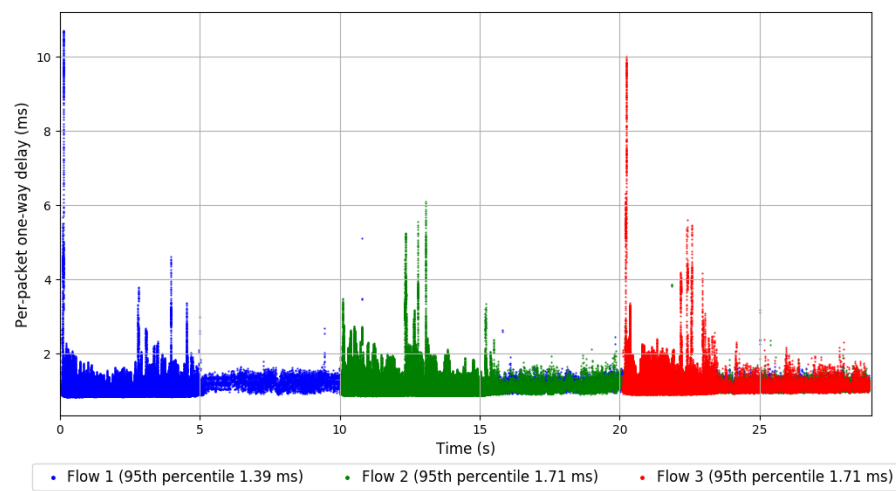
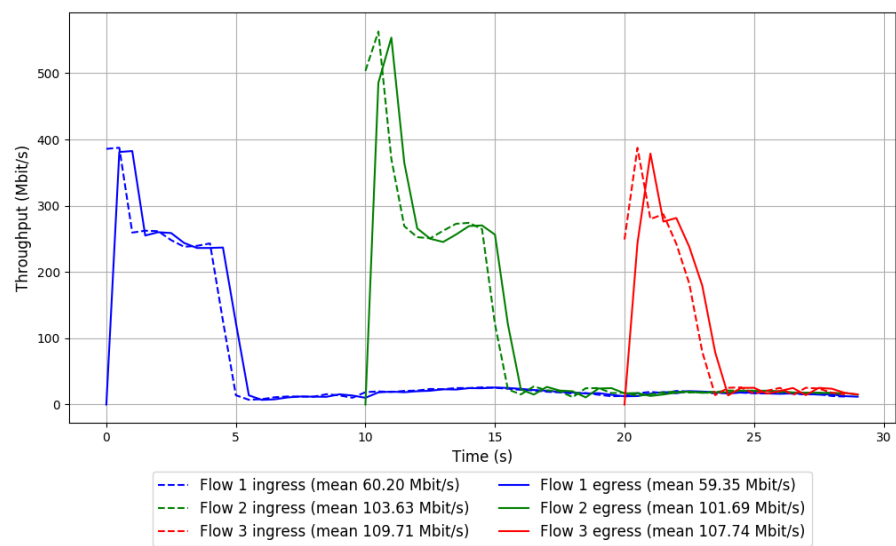
-- Flow 3:

Average throughput: 107.74 Mbit/s

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

Loss rate: 1.80%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-11 18:20:30

End at: 2019-02-11 18:21:00

Local clock offset: 0.771 ms

Remote clock offset: 0.024 ms

Below is generated by plot.py at 2019-02-11 20:23:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 359.25 Mbit/s

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

Loss rate: 0.03%

-- Flow 1:

Average throughput: 192.82 Mbit/s

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

Loss rate: 0.03%

-- Flow 2:

Average throughput: 173.36 Mbit/s

95th percentile per-packet one-way delay: 2.146 ms

Loss rate: 0.01%

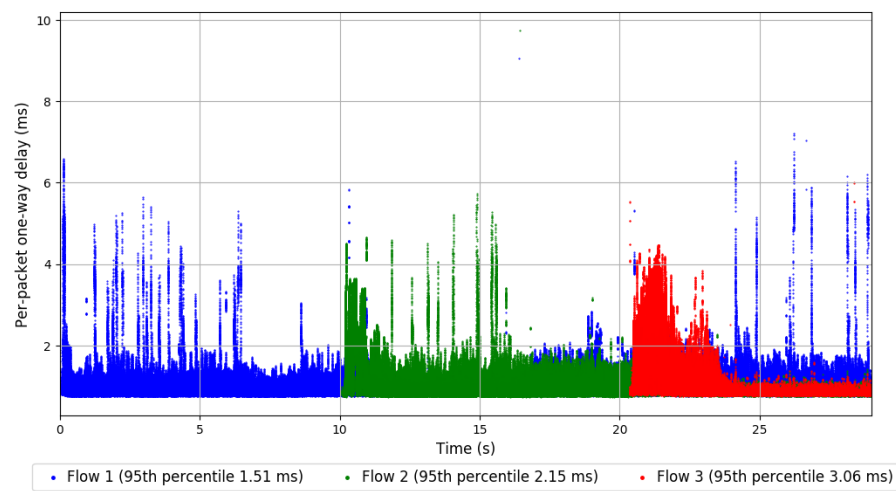
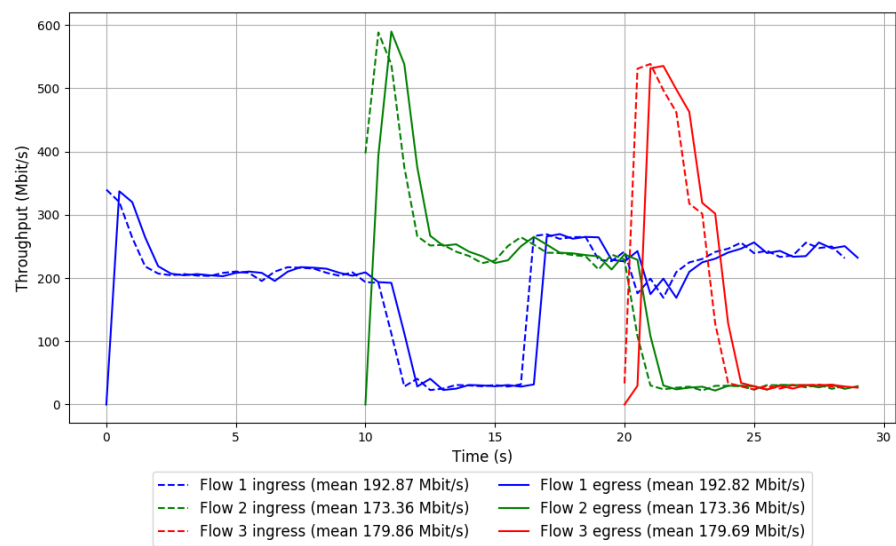
-- Flow 3:

Average throughput: 179.69 Mbit/s

95th percentile per-packet one-way delay: 3.061 ms

Loss rate: 0.10%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-11 18:50:26

End at: 2019-02-11 18:50:56

Local clock offset: -2.683 ms

Remote clock offset: -4.44 ms

Below is generated by plot.py at 2019-02-11 20:23:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 164.35 Mbit/s

95th percentile per-packet one-way delay: 2.871 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 74.46 Mbit/s

95th percentile per-packet one-way delay: 3.376 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 84.47 Mbit/s

95th percentile per-packet one-way delay: 2.532 ms

Loss rate: 0.06%

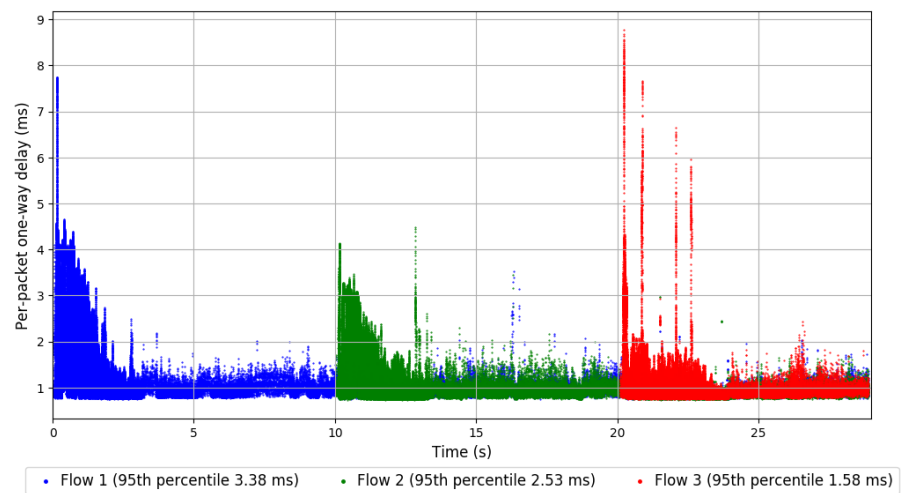
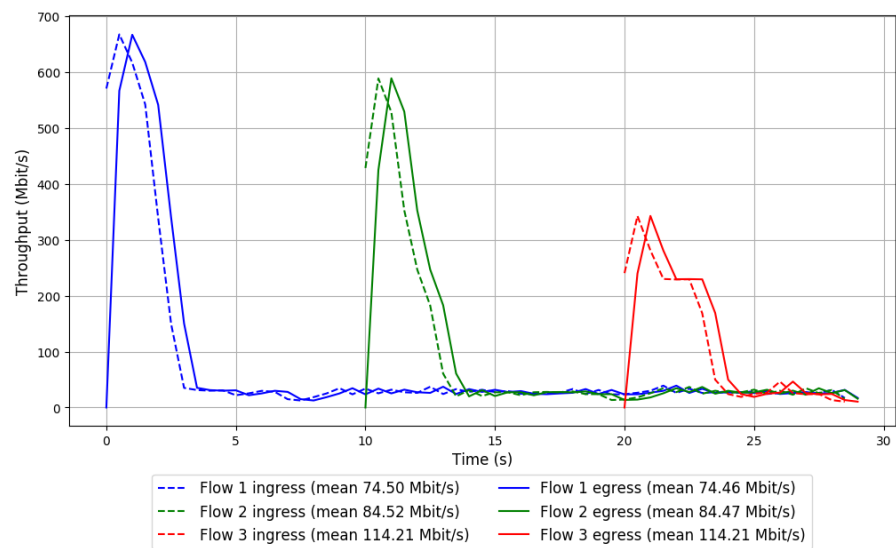
-- Flow 3:

Average throughput: 114.21 Mbit/s

95th percentile per-packet one-way delay: 1.583 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesC5 — Data Link

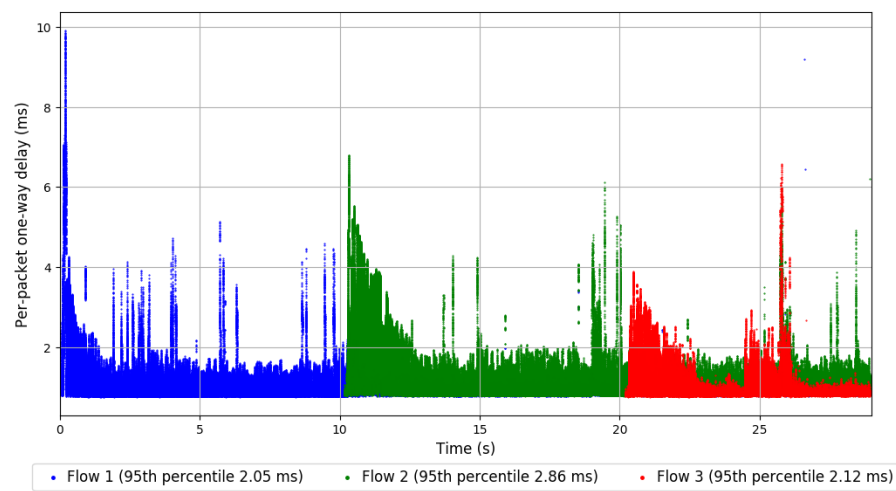
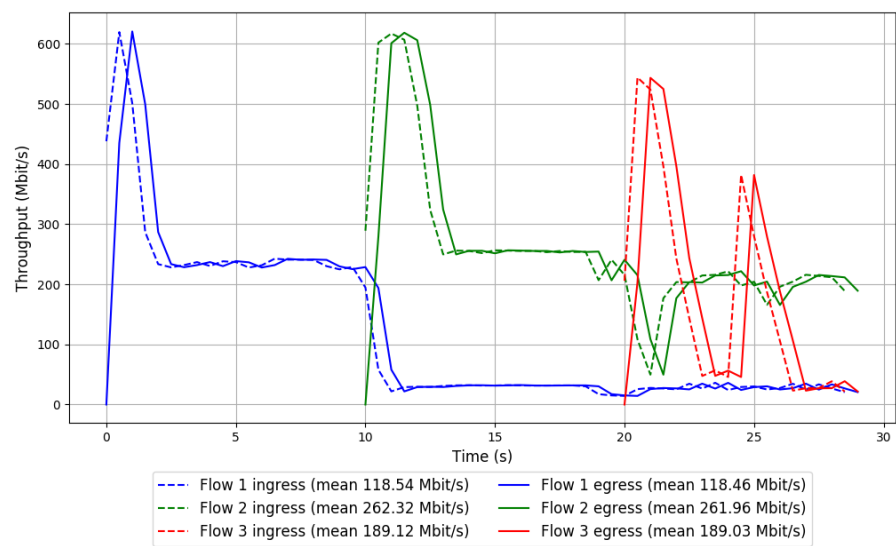


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-02-11 19:20:23
End at: 2019-02-11 19:20:53
Local clock offset: -0.118 ms
Remote clock offset: -0.176 ms

Below is generated by plot.py at 2019-02-11 20:24:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 345.38 Mbit/s
95th percentile per-packet one-way delay: 2.449 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 118.46 Mbit/s
95th percentile per-packet one-way delay: 2.052 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 261.96 Mbit/s
95th percentile per-packet one-way delay: 2.861 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 189.03 Mbit/s
95th percentile per-packet one-way delay: 2.124 ms
Loss rate: 0.05%

Run 5: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-11 17:28:50

End at: 2019-02-11 17:29:20

Local clock offset: -3.091 ms

Remote clock offset: 2.05 ms

Below is generated by plot.py at 2019-02-11 20:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 205.93 Mbit/s

95th percentile per-packet one-way delay: 1.313 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 121.24 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 84.10 Mbit/s

95th percentile per-packet one-way delay: 1.324 ms

Loss rate: 0.00%

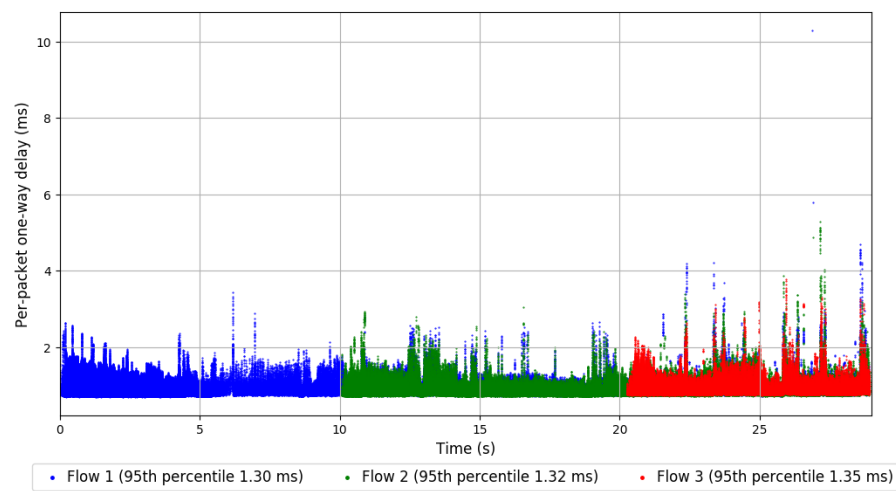
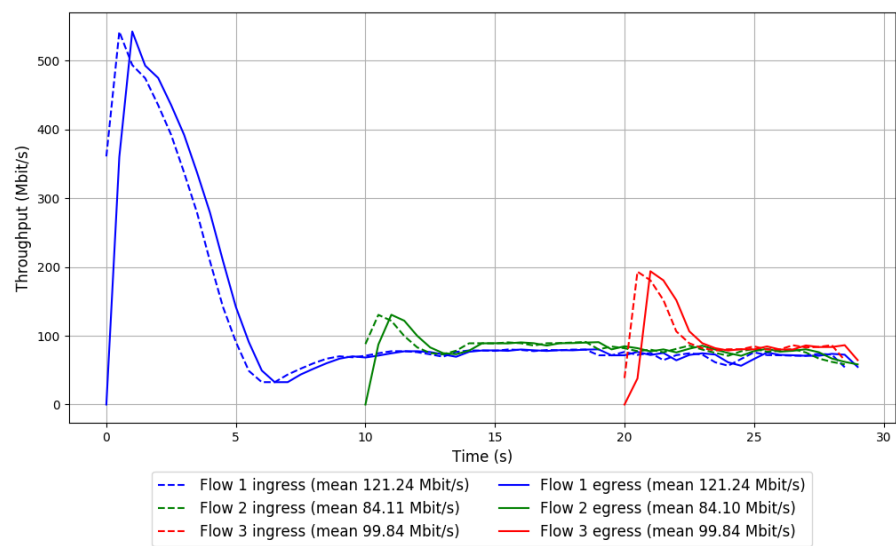
-- Flow 3:

Average throughput: 99.84 Mbit/s

95th percentile per-packet one-way delay: 1.354 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-11 17:59:03

End at: 2019-02-11 17:59:33

Local clock offset: 0.72 ms

Remote clock offset: 0.459 ms

Below is generated by plot.py at 2019-02-11 20:24:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 153.78 Mbit/s

95th percentile per-packet one-way delay: 1.696 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 83.94 Mbit/s

95th percentile per-packet one-way delay: 1.659 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 72.16 Mbit/s

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

Loss rate: 0.02%

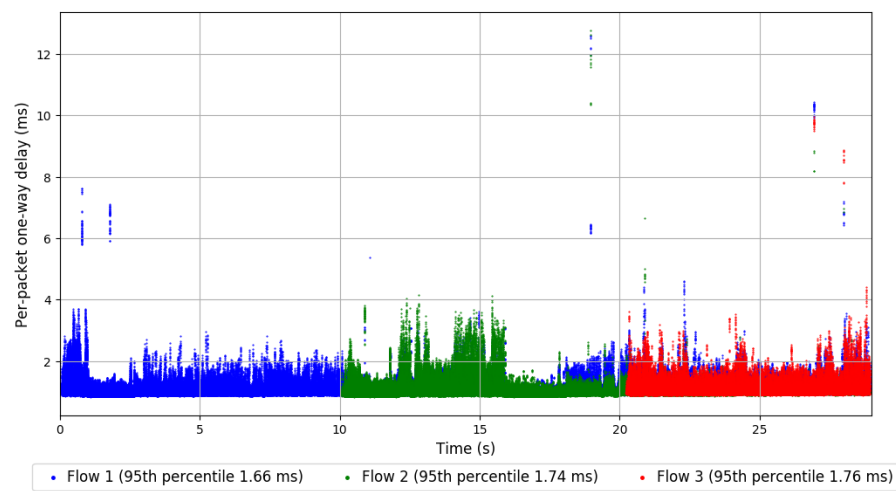
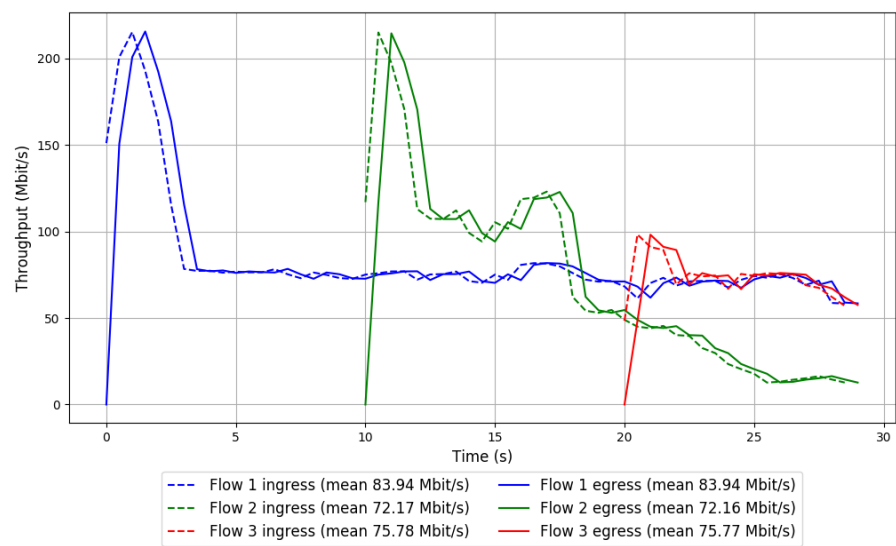
-- Flow 3:

Average throughput: 75.77 Mbit/s

95th percentile per-packet one-way delay: 1.756 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesD — Data Link

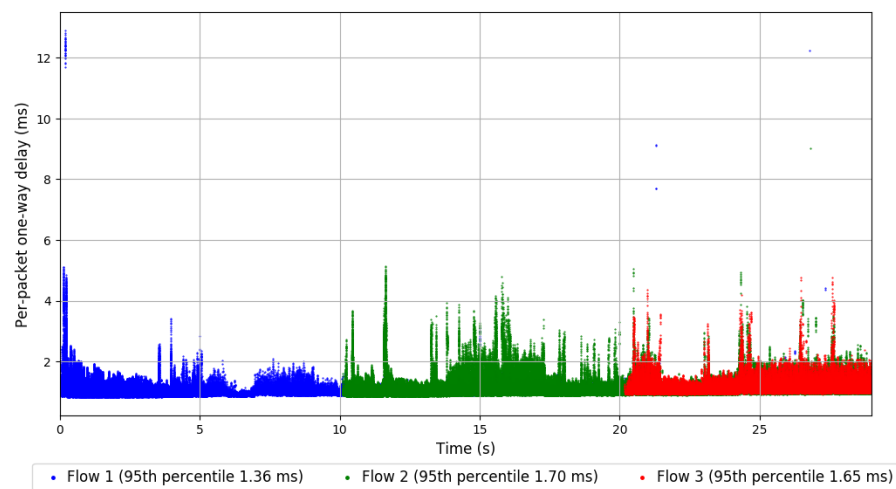
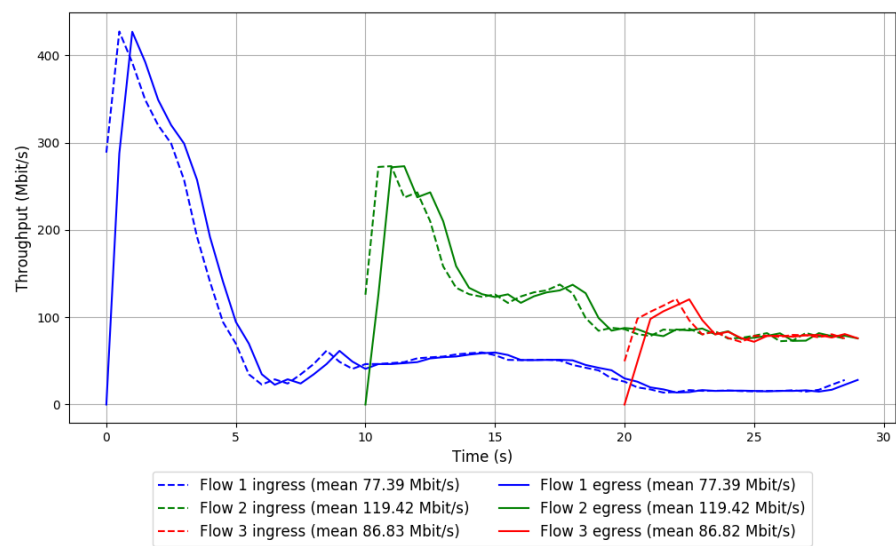


Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-11 18:29:13
End at: 2019-02-11 18:29:43
Local clock offset: 0.847 ms
Remote clock offset: -1.941 ms

Below is generated by plot.py at 2019-02-11 20:24:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 181.47 Mbit/s
95th percentile per-packet one-way delay: 1.565 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 77.39 Mbit/s
95th percentile per-packet one-way delay: 1.362 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 119.42 Mbit/s
95th percentile per-packet one-way delay: 1.701 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 86.82 Mbit/s
95th percentile per-packet one-way delay: 1.645 ms
Loss rate: 0.01%

Run 3: Report of Indigo-MusesD — Data Link

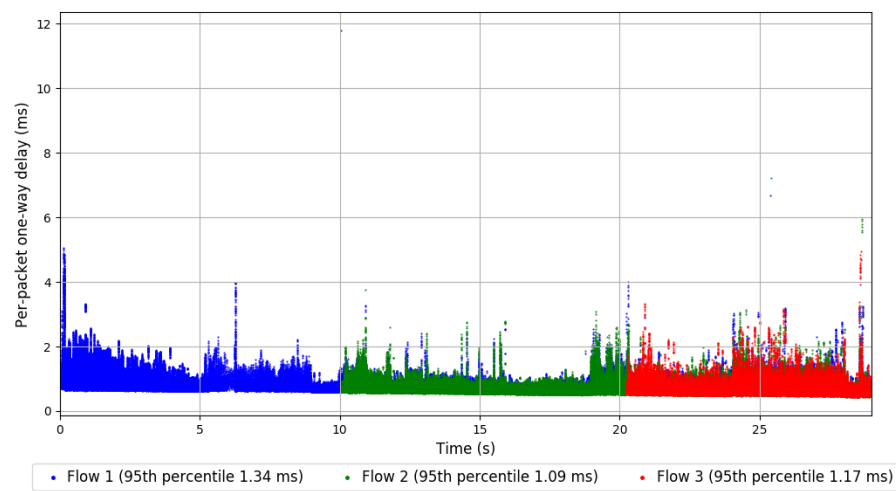
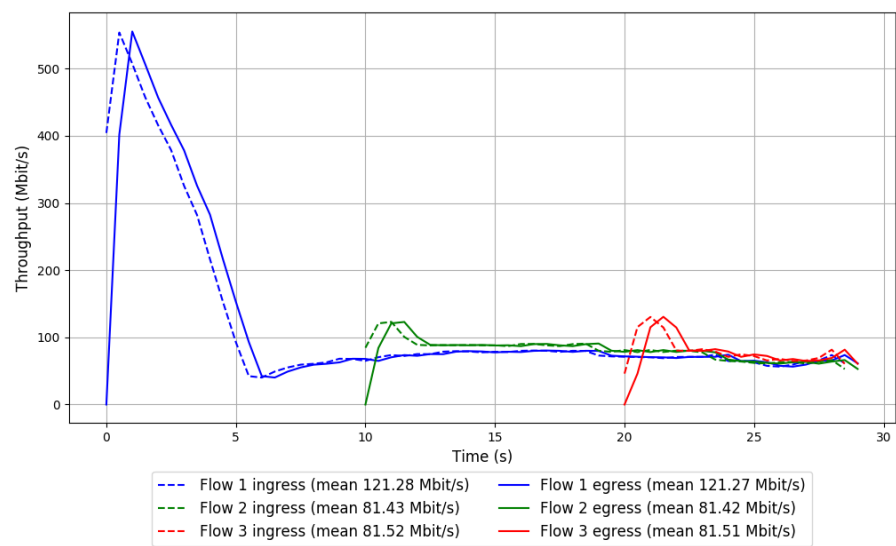


Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-11 18:59:10
End at: 2019-02-11 18:59:40
Local clock offset: -3.327 ms
Remote clock offset: -3.505 ms

Below is generated by plot.py at 2019-02-11 20:24:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 198.94 Mbit/s
95th percentile per-packet one-way delay: 1.268 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 121.27 Mbit/s
95th percentile per-packet one-way delay: 1.336 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 81.42 Mbit/s
95th percentile per-packet one-way delay: 1.087 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 81.51 Mbit/s
95th percentile per-packet one-way delay: 1.167 ms
Loss rate: 0.01%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-11 19:29:14

End at: 2019-02-11 19:29:44

Local clock offset: 0.402 ms

Remote clock offset: 0.132 ms

Below is generated by plot.py at 2019-02-11 20:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 231.69 Mbit/s

95th percentile per-packet one-way delay: 1.468 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 122.12 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 126.00 Mbit/s

95th percentile per-packet one-way delay: 1.495 ms

Loss rate: 0.00%

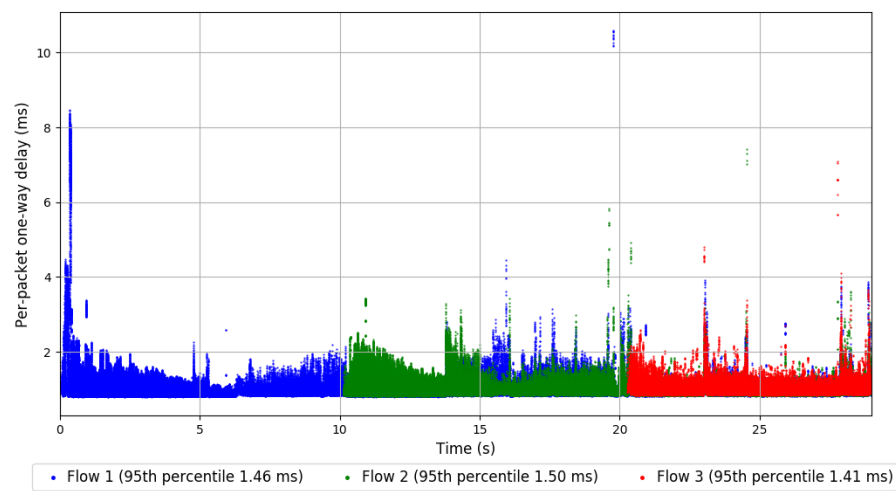
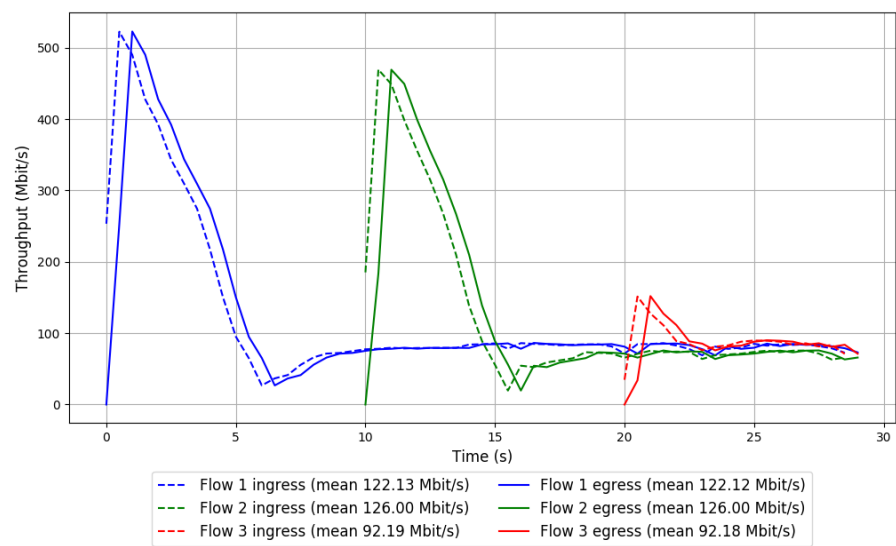
-- Flow 3:

Average throughput: 92.18 Mbit/s

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

Loss rate: 0.00%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-11 17:31:44

End at: 2019-02-11 17:32:14

Local clock offset: -3.217 ms

Remote clock offset: 1.77 ms

Below is generated by plot.py at 2019-02-11 20:28:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 496.38 Mbit/s

95th percentile per-packet one-way delay: 1.386 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 278.61 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 246.41 Mbit/s

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

Loss rate: 0.00%

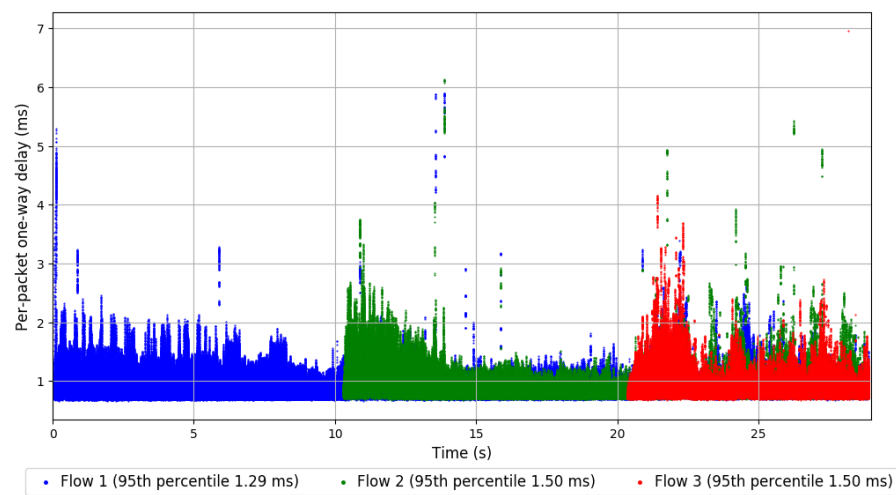
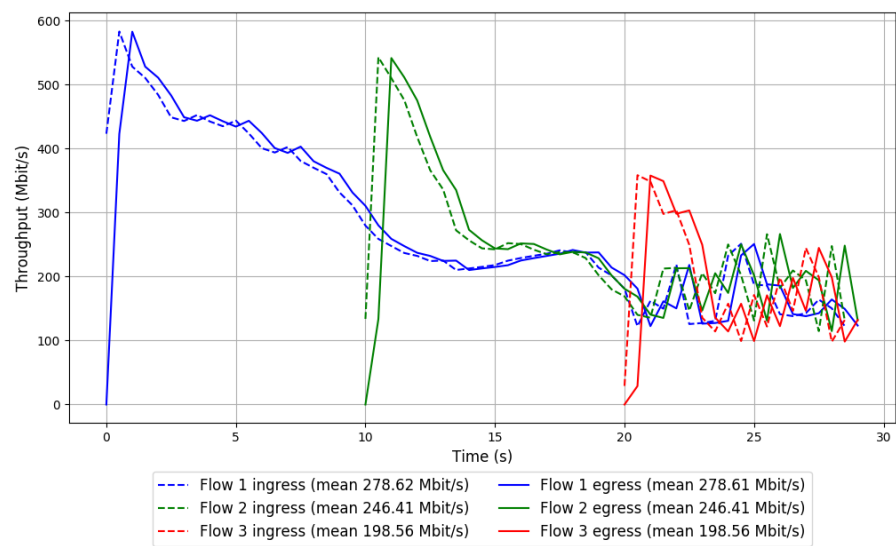
-- Flow 3:

Average throughput: 198.56 Mbit/s

95th percentile per-packet one-way delay: 1.495 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-11 18:01:48

End at: 2019-02-11 18:02:18

Local clock offset: 0.876 ms

Remote clock offset: 0.341 ms

Below is generated by plot.py at 2019-02-11 20:28:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 445.57 Mbit/s

95th percentile per-packet one-way delay: 1.472 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 253.16 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 203.54 Mbit/s

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

Loss rate: 0.00%

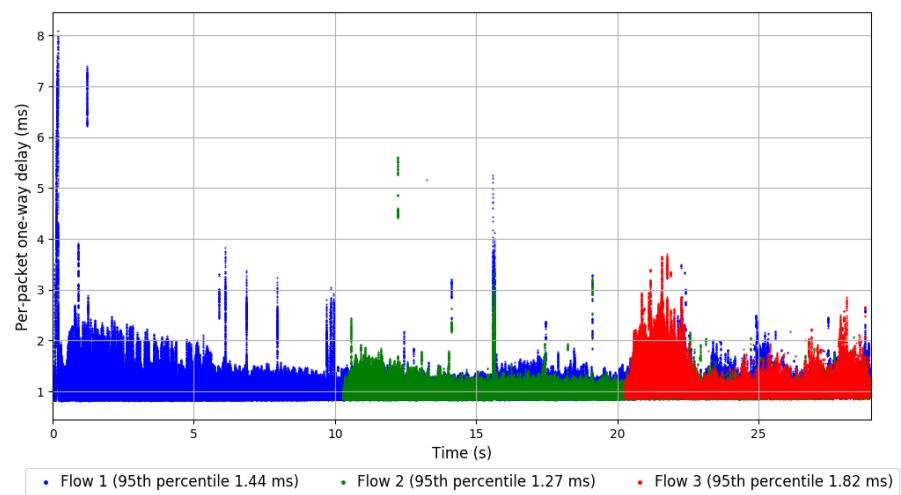
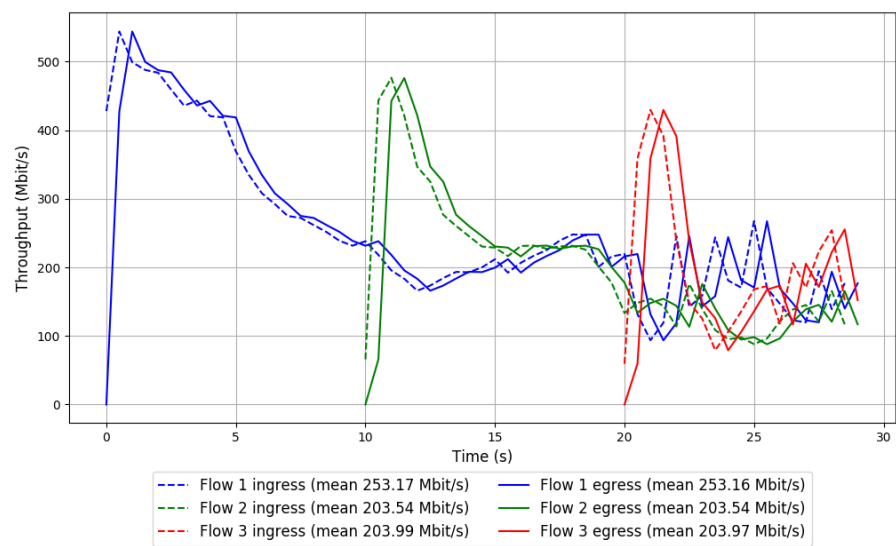
-- Flow 3:

Average throughput: 203.97 Mbit/s

95th percentile per-packet one-way delay: 1.820 ms

Loss rate: 0.01%

Run 2: Report of Indigo-MusesT — Data Link

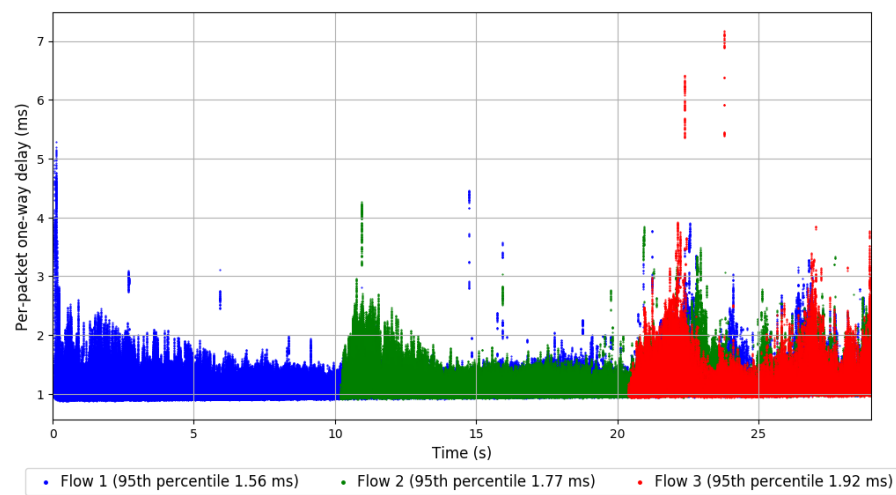
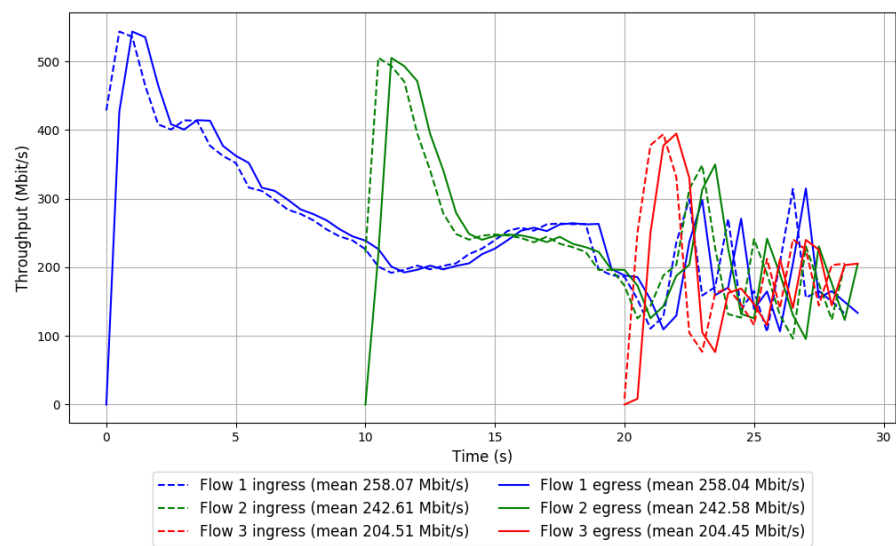


Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-11 18:32:00
End at: 2019-02-11 18:32:30
Local clock offset: 0.879 ms
Remote clock offset: -2.408 ms

Below is generated by plot.py at 2019-02-11 20:28:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 475.76 Mbit/s
95th percentile per-packet one-way delay: 1.698 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 258.04 Mbit/s
95th percentile per-packet one-way delay: 1.560 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 242.58 Mbit/s
95th percentile per-packet one-way delay: 1.767 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 204.45 Mbit/s
95th percentile per-packet one-way delay: 1.924 ms
Loss rate: 0.05%

Run 3: Report of Indigo-MusesT — Data Link

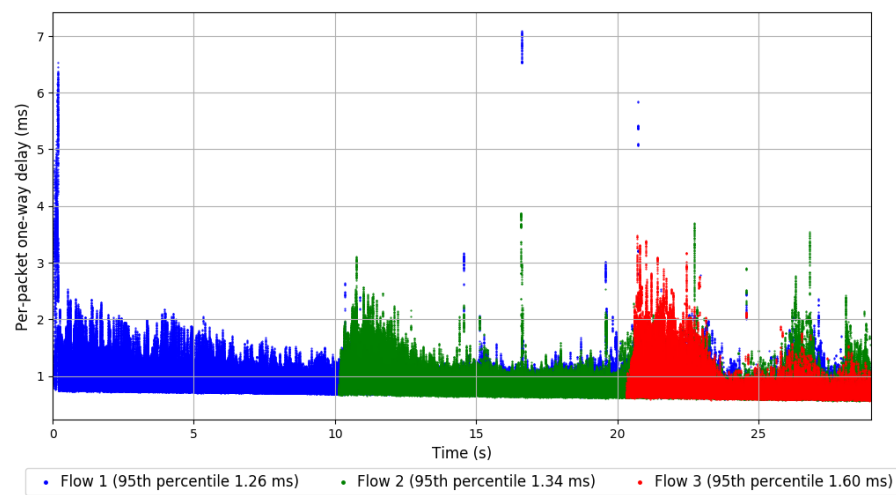
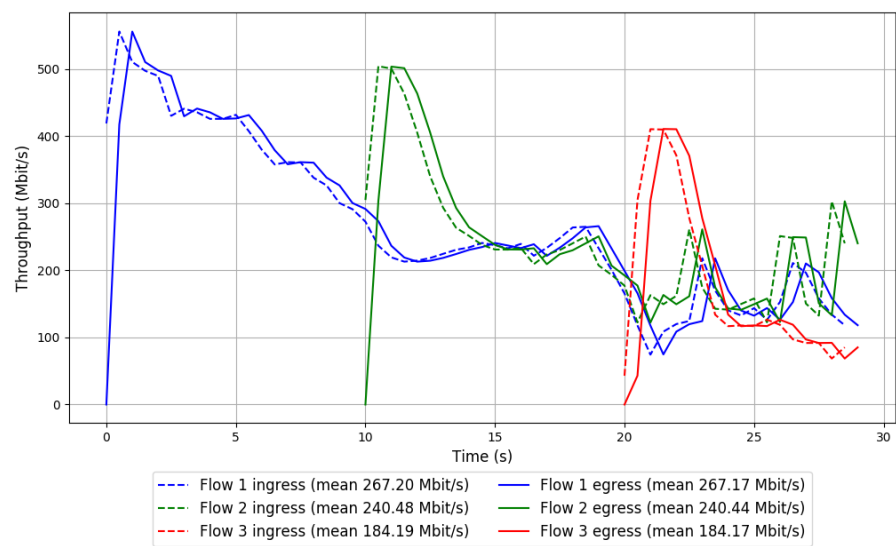


Run 4: Statistics of Indigo-MusesT

Start at: 2019-02-11 19:01:59
End at: 2019-02-11 19:02:29
Local clock offset: -3.488 ms
Remote clock offset: -2.446 ms

Below is generated by plot.py at 2019-02-11 20:28:43
Datalink statistics
-- Total of 3 flows:
Average throughput: 478.64 Mbit/s
95th percentile per-packet one-way delay: 1.339 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 267.17 Mbit/s
95th percentile per-packet one-way delay: 1.263 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 240.44 Mbit/s
95th percentile per-packet one-way delay: 1.343 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 184.17 Mbit/s
95th percentile per-packet one-way delay: 1.604 ms
Loss rate: 0.01%

Run 4: Report of Indigo-MusesT — Data Link

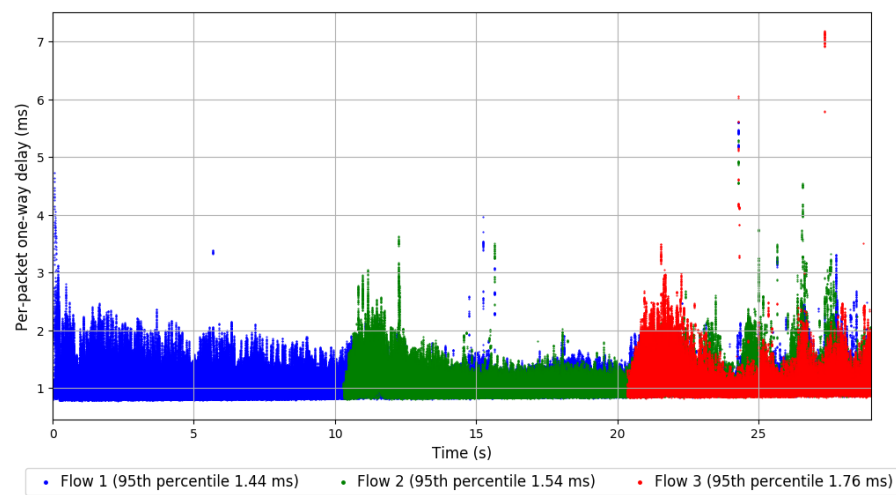
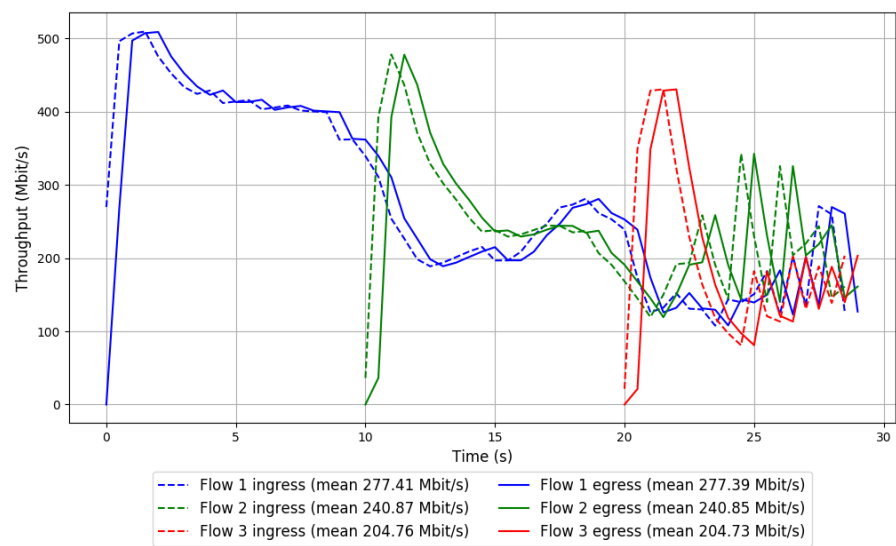


Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-11 19:32:04
End at: 2019-02-11 19:32:34
Local clock offset: 0.488 ms
Remote clock offset: -0.168 ms

Below is generated by plot.py at 2019-02-11 20:29:04
Datalink statistics
-- Total of 3 flows:
Average throughput: 493.43 Mbit/s
95th percentile per-packet one-way delay: 1.525 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 277.39 Mbit/s
95th percentile per-packet one-way delay: 1.436 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 240.85 Mbit/s
95th percentile per-packet one-way delay: 1.544 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 204.73 Mbit/s
95th percentile per-packet one-way delay: 1.762 ms
Loss rate: 0.00%

Run 5: Report of Indigo-MusesT — Data Link

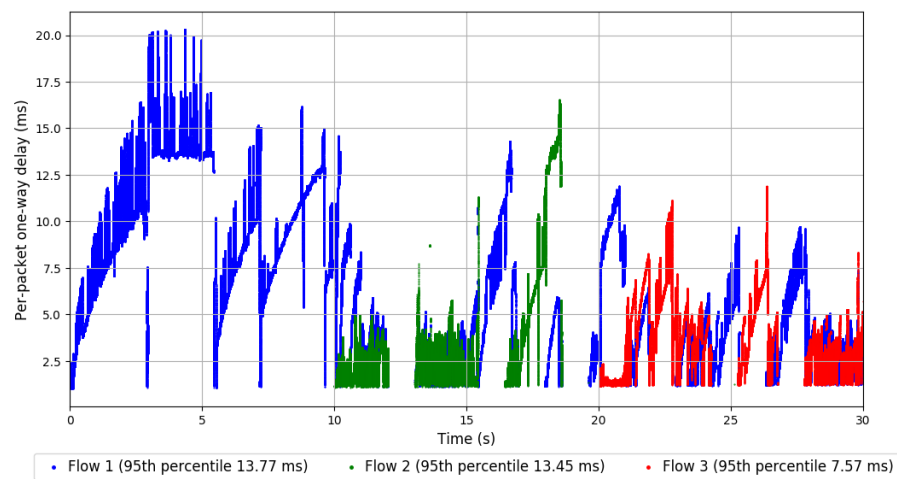
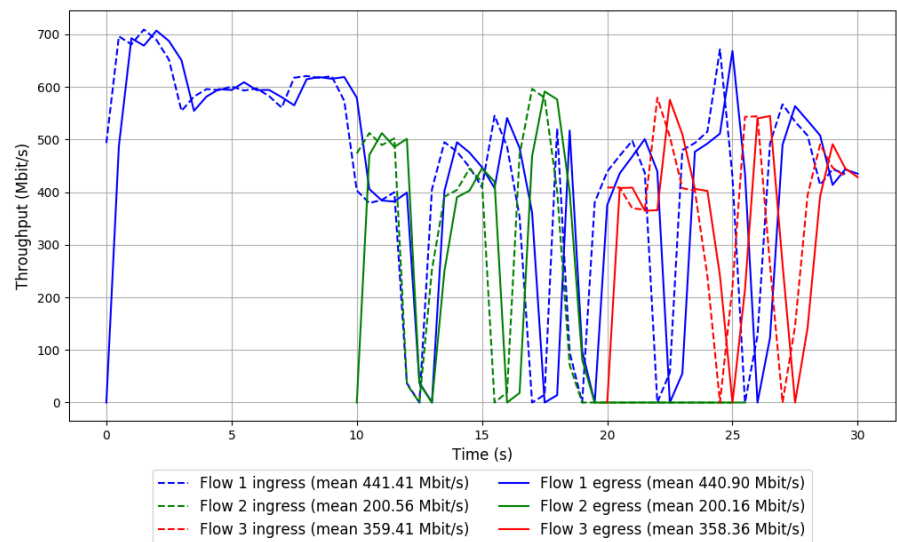


```
Run 1: Statistics of LEDBAT

Start at: 2019-02-11 17:35:05
End at: 2019-02-11 17:35:35
Local clock offset: -3.1 ms
Remote clock offset: 1.645 ms

# Below is generated by plot.py at 2019-02-11 20:31:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 660.87 Mbit/s
95th percentile per-packet one-way delay: 13.718 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 440.90 Mbit/s
95th percentile per-packet one-way delay: 13.773 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 200.16 Mbit/s
95th percentile per-packet one-way delay: 13.451 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 358.36 Mbit/s
95th percentile per-packet one-way delay: 7.569 ms
Loss rate: 0.27%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-02-11 18:05:07

End at: 2019-02-11 18:05:37

Local clock offset: 0.923 ms

Remote clock offset: 0.265 ms

Below is generated by plot.py at 2019-02-11 20:32:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 726.29 Mbit/s

95th percentile per-packet one-way delay: 13.407 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 485.60 Mbit/s

95th percentile per-packet one-way delay: 14.100 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 290.88 Mbit/s

95th percentile per-packet one-way delay: 9.224 ms

Loss rate: 0.20%

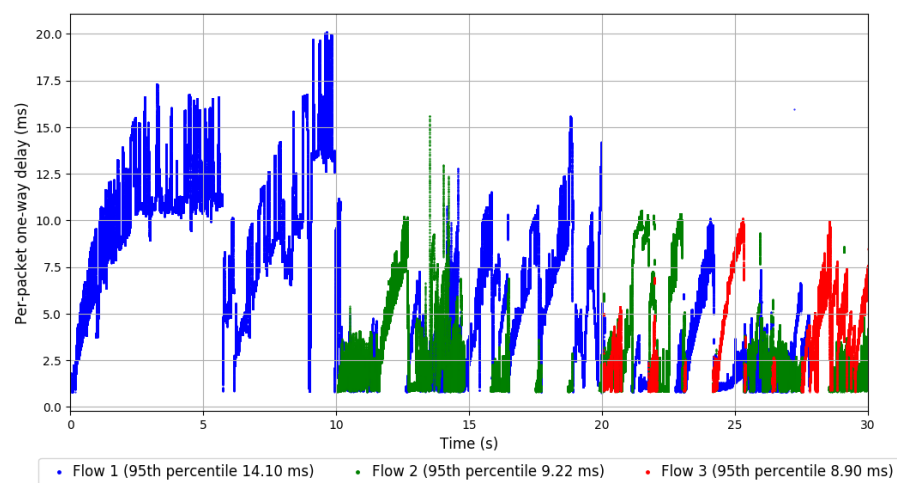
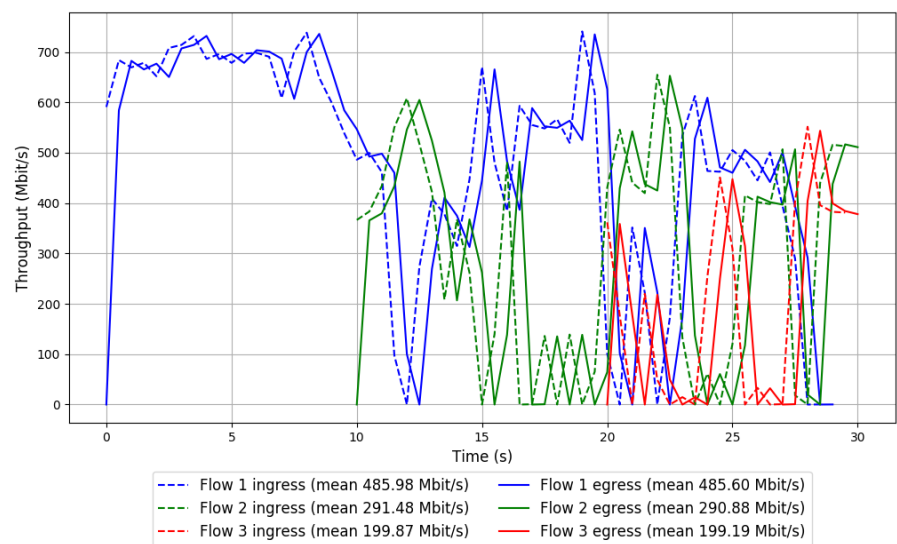
-- Flow 3:

Average throughput: 199.19 Mbit/s

95th percentile per-packet one-way delay: 8.905 ms

Loss rate: 0.33%

Run 2: Report of LEDBAT — Data Link

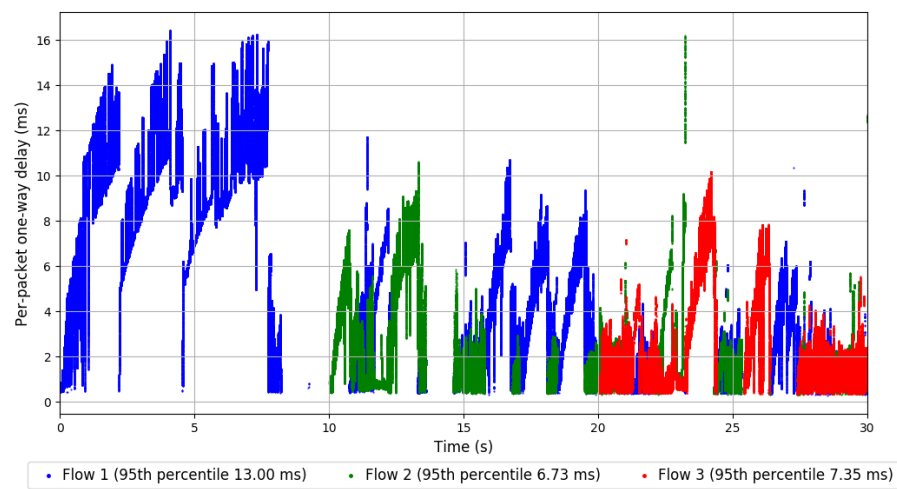
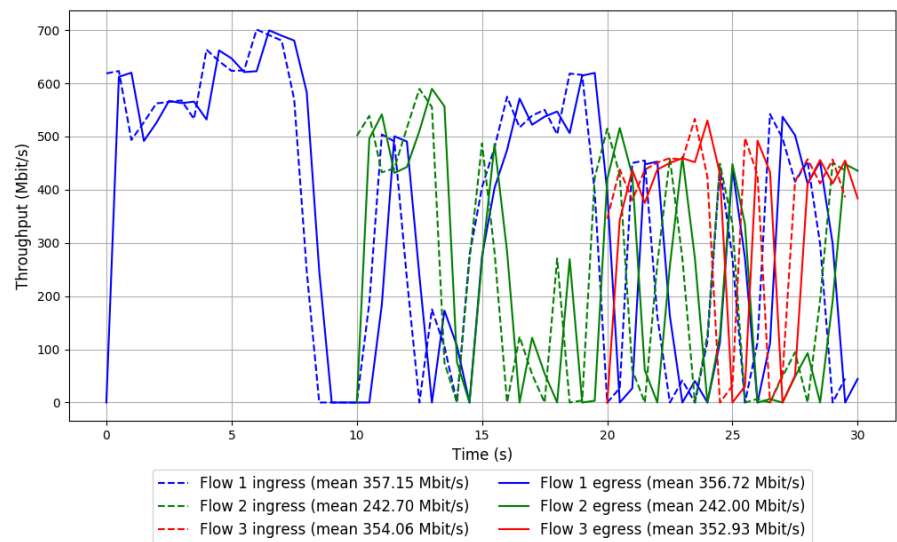


Run 3: Statistics of LEDBAT

Start at: 2019-02-11 18:35:20
End at: 2019-02-11 18:35:50
Local clock offset: 0.545 ms
Remote clock offset: -3.069 ms

Below is generated by plot.py at 2019-02-11 20:32:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 635.27 Mbit/s
95th percentile per-packet one-way delay: 11.668 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 356.72 Mbit/s
95th percentile per-packet one-way delay: 13.003 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 242.00 Mbit/s
95th percentile per-packet one-way delay: 6.730 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 352.93 Mbit/s
95th percentile per-packet one-way delay: 7.349 ms
Loss rate: 0.32%

Run 3: Report of LEDBAT — Data Link

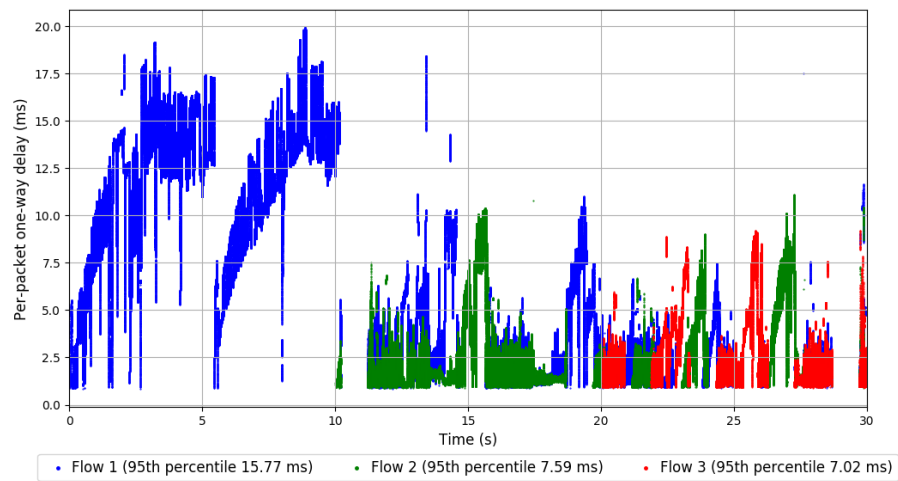
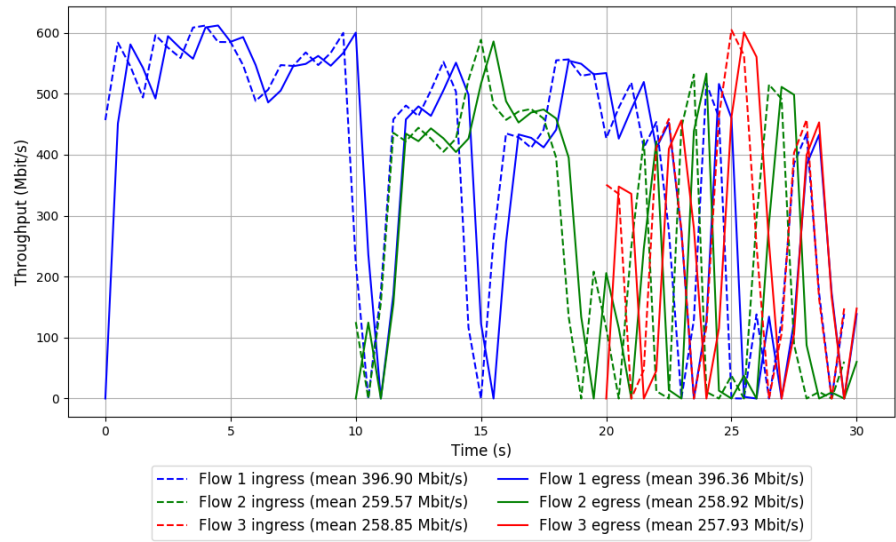


Run 4: Statistics of LEDBAT

Start at: 2019-02-11 19:05:18
End at: 2019-02-11 19:05:48
Local clock offset: -3.199 ms
Remote clock offset: -1.725 ms

Below is generated by plot.py at 2019-02-11 20:35:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 653.61 Mbit/s
95th percentile per-packet one-way delay: 14.940 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 396.36 Mbit/s
95th percentile per-packet one-way delay: 15.769 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 258.92 Mbit/s
95th percentile per-packet one-way delay: 7.591 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 257.93 Mbit/s
95th percentile per-packet one-way delay: 7.018 ms
Loss rate: 0.35%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-02-11 19:35:25

End at: 2019-02-11 19:35:55

Local clock offset: 0.486 ms

Remote clock offset: -0.56 ms

Below is generated by plot.py at 2019-02-11 20:35:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 620.74 Mbit/s

95th percentile per-packet one-way delay: 15.436 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 323.96 Mbit/s

95th percentile per-packet one-way delay: 16.347 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 312.41 Mbit/s

95th percentile per-packet one-way delay: 7.255 ms

Loss rate: 0.32%

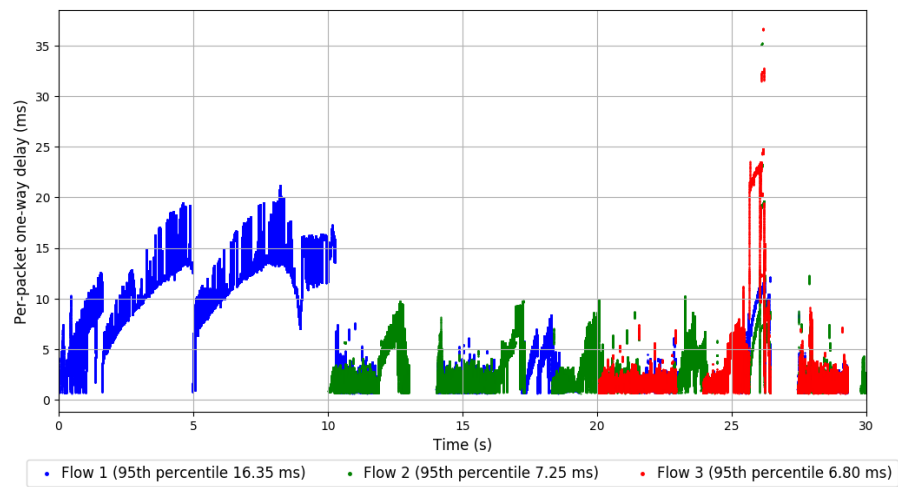
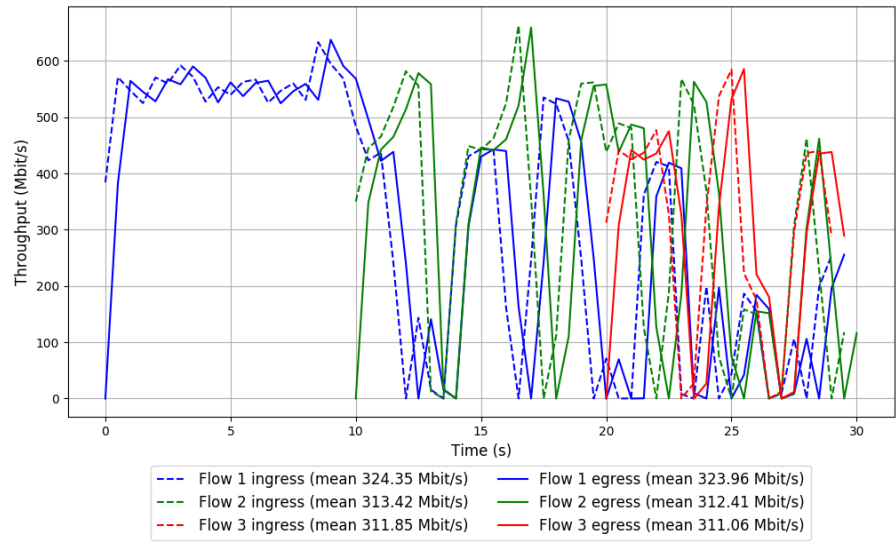
-- Flow 3:

Average throughput: 311.06 Mbit/s

95th percentile per-packet one-way delay: 6.798 ms

Loss rate: 0.25%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-02-11 17:22:54

End at: 2019-02-11 17:23:24

Local clock offset: -2.745 ms

Remote clock offset: 3.112 ms

Below is generated by plot.py at 2019-02-11 20:35:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 540.78 Mbit/s

95th percentile per-packet one-way delay: 2.340 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 181.04 Mbit/s

95th percentile per-packet one-way delay: 13.461 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 485.67 Mbit/s

95th percentile per-packet one-way delay: 2.281 ms

Loss rate: 0.08%

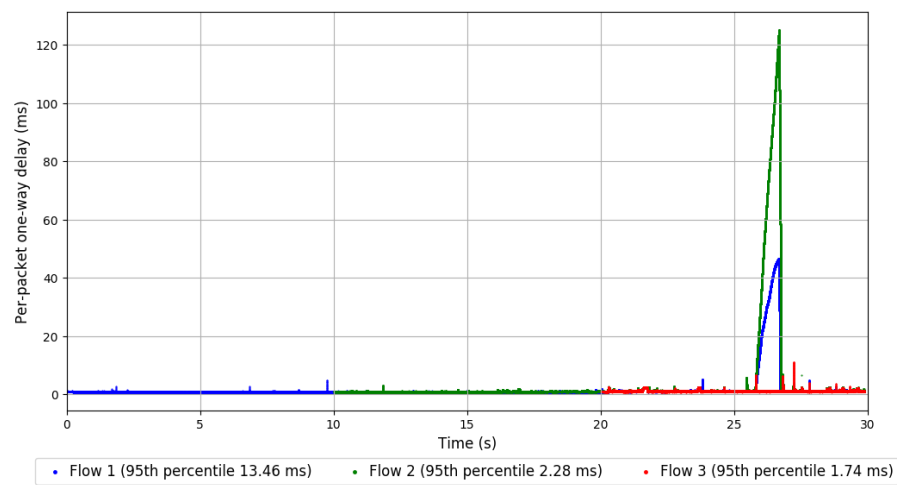
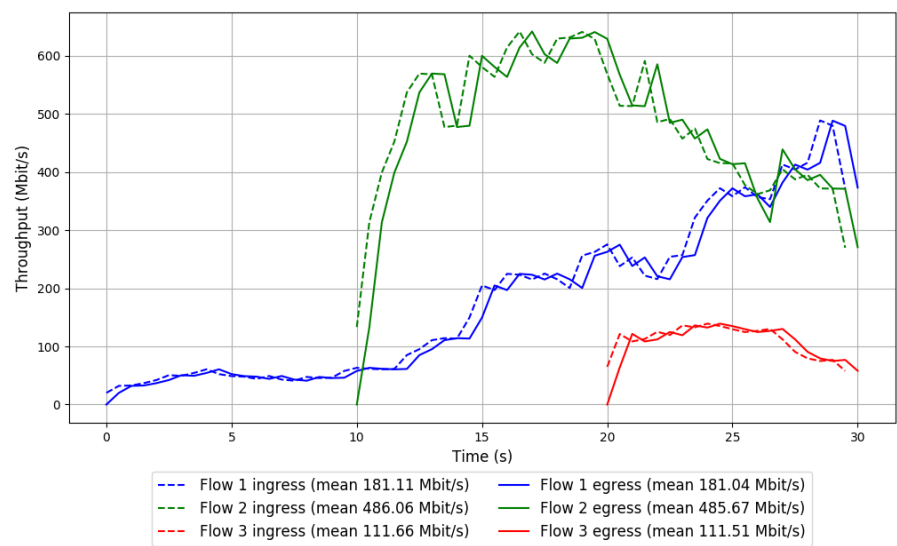
-- Flow 3:

Average throughput: 111.51 Mbit/s

95th percentile per-packet one-way delay: 1.742 ms

Loss rate: 0.14%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-02-11 17:53:08

End at: 2019-02-11 17:53:38

Local clock offset: 0.365 ms

Remote clock offset: 0.819 ms

Below is generated by plot.py at 2019-02-11 20:36:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 693.30 Mbit/s

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

Loss rate: 0.69%

-- Flow 1:

Average throughput: 609.76 Mbit/s

95th percentile per-packet one-way delay: 1.406 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 123.42 Mbit/s

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

Loss rate: 1.01%

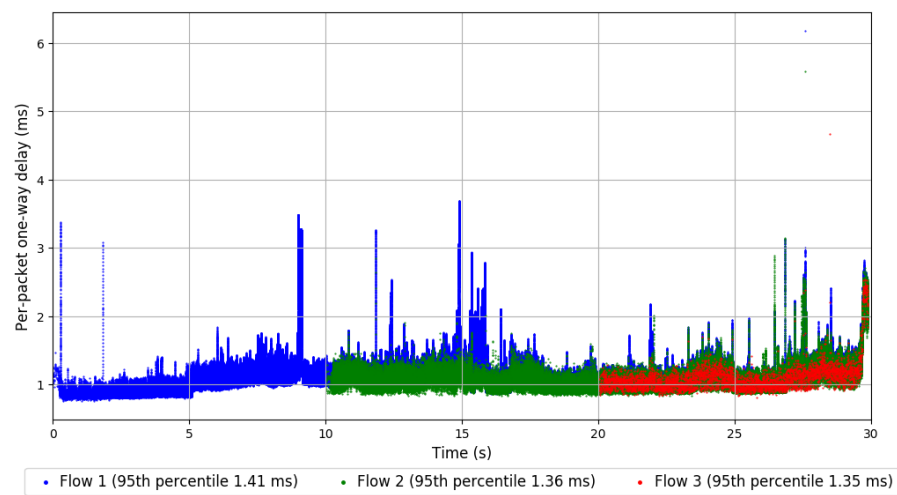
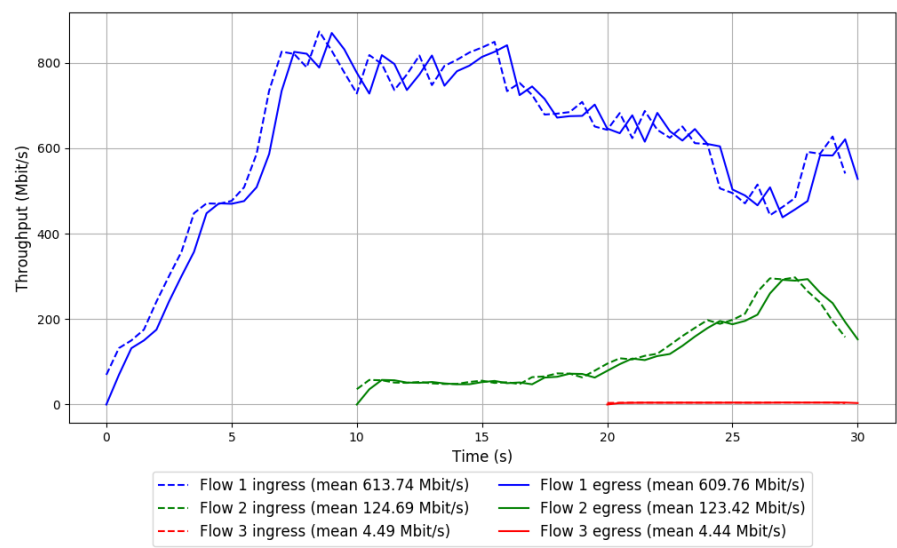
-- Flow 3:

Average throughput: 4.44 Mbit/s

95th percentile per-packet one-way delay: 1.349 ms

Loss rate: 1.01%

Run 2: Report of PCC-Allegro — Data Link

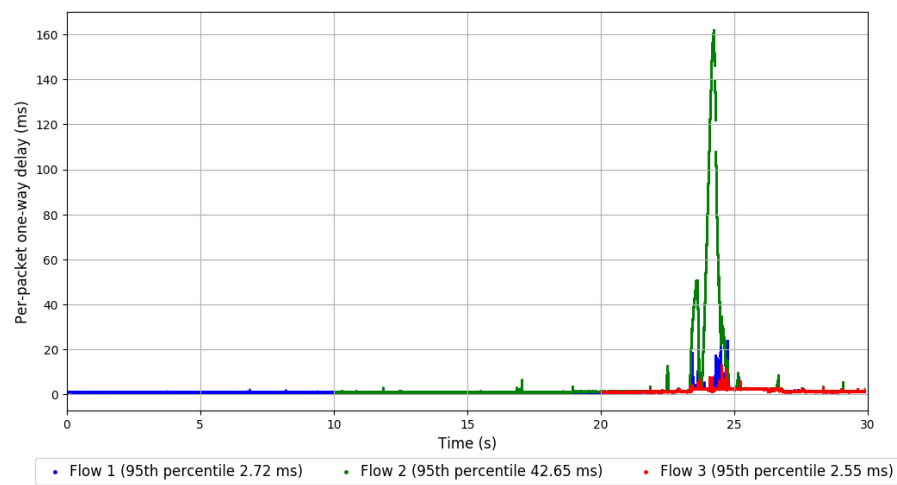
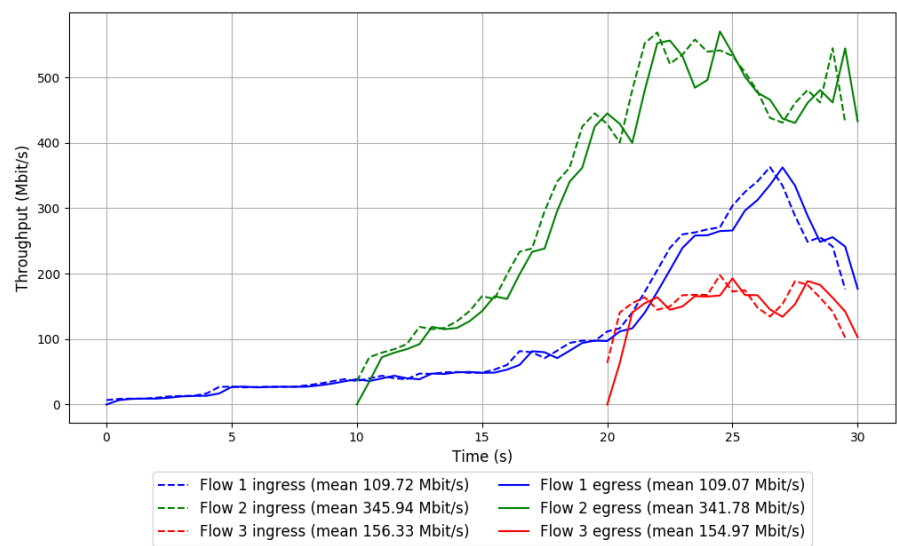


Run 3: Statistics of PCC-Allegro

Start at: 2019-02-11 18:23:27
End at: 2019-02-11 18:23:57
Local clock offset: 0.789 ms
Remote clock offset: -0.425 ms

Below is generated by plot.py at 2019-02-11 20:36:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 387.45 Mbit/s
95th percentile per-packet one-way delay: 19.092 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 109.07 Mbit/s
95th percentile per-packet one-way delay: 2.723 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 341.78 Mbit/s
95th percentile per-packet one-way delay: 42.645 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 154.97 Mbit/s
95th percentile per-packet one-way delay: 2.549 ms
Loss rate: 0.86%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-02-11 18:53:17

End at: 2019-02-11 18:53:47

Local clock offset: -2.932 ms

Remote clock offset: -4.64 ms

Below is generated by plot.py at 2019-02-11 20:38:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 587.44 Mbit/s

95th percentile per-packet one-way delay: 2.209 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 470.60 Mbit/s

95th percentile per-packet one-way delay: 2.195 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 94.99 Mbit/s

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

Loss rate: 0.16%

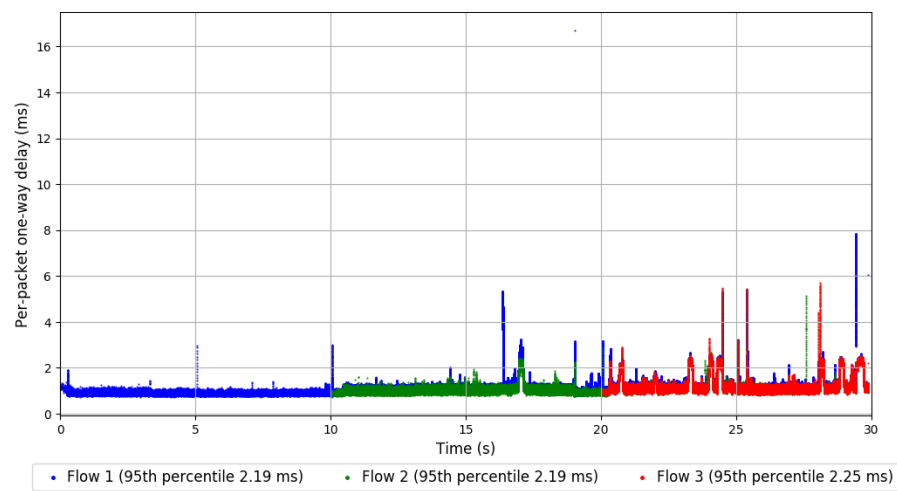
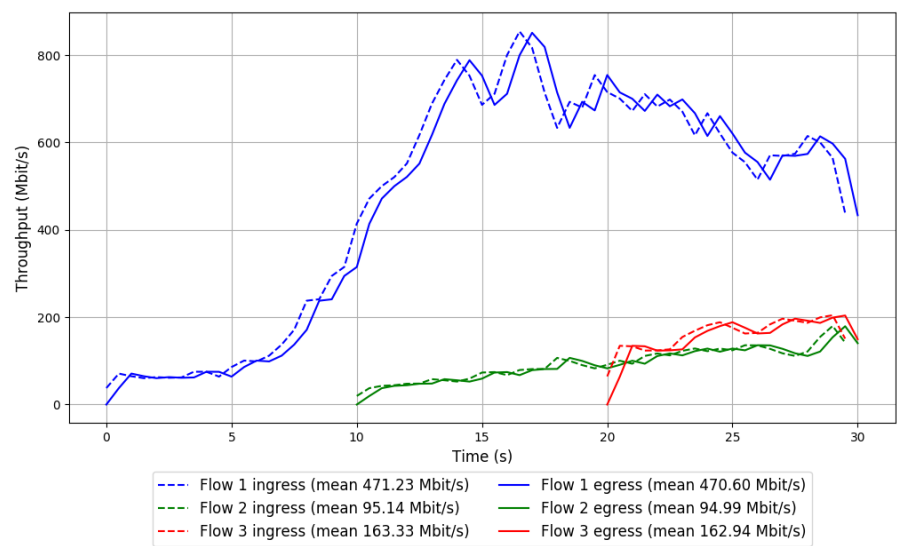
-- Flow 3:

Average throughput: 162.94 Mbit/s

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

Loss rate: 0.22%

Run 4: Report of PCC-Allegro — Data Link

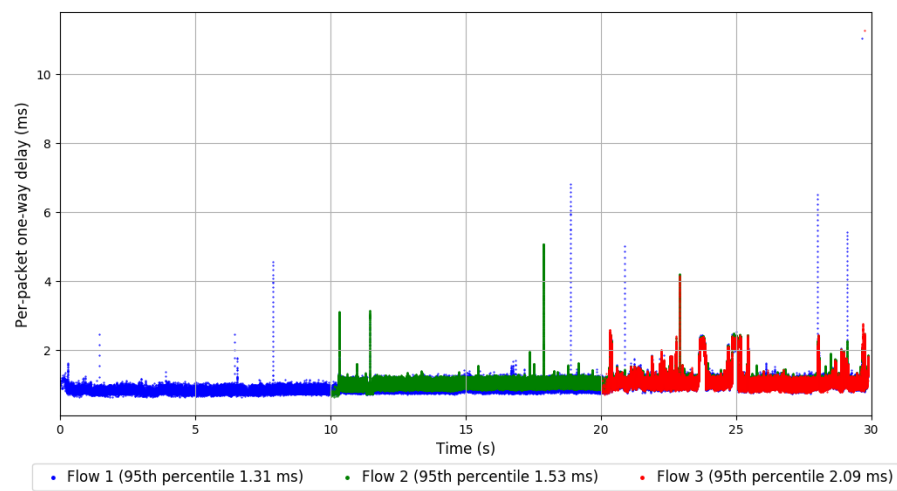
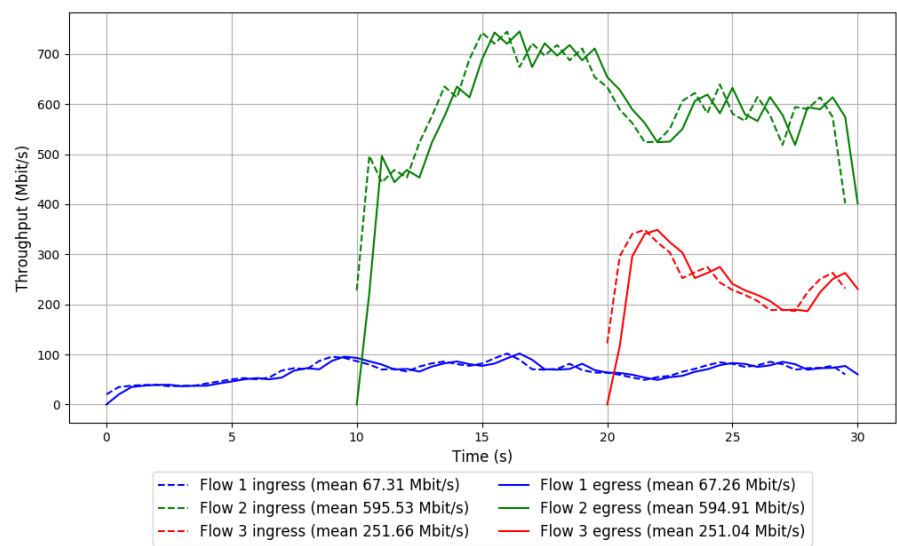


Run 5: Statistics of PCC-Allegro

Start at: 2019-02-11 19:23:19
End at: 2019-02-11 19:23:49
Local clock offset: 0.074 ms
Remote clock offset: -0.144 ms

Below is generated by plot.py at 2019-02-11 20:38:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 545.62 Mbit/s
95th percentile per-packet one-way delay: 1.595 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 67.26 Mbit/s
95th percentile per-packet one-way delay: 1.314 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 594.91 Mbit/s
95th percentile per-packet one-way delay: 1.535 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 251.04 Mbit/s
95th percentile per-packet one-way delay: 2.091 ms
Loss rate: 0.24%

Run 5: Report of PCC-Allegro — Data Link

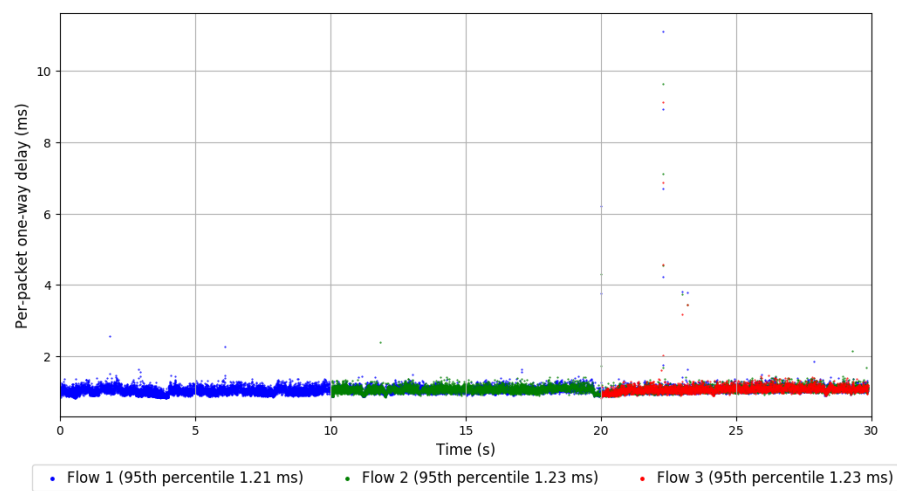
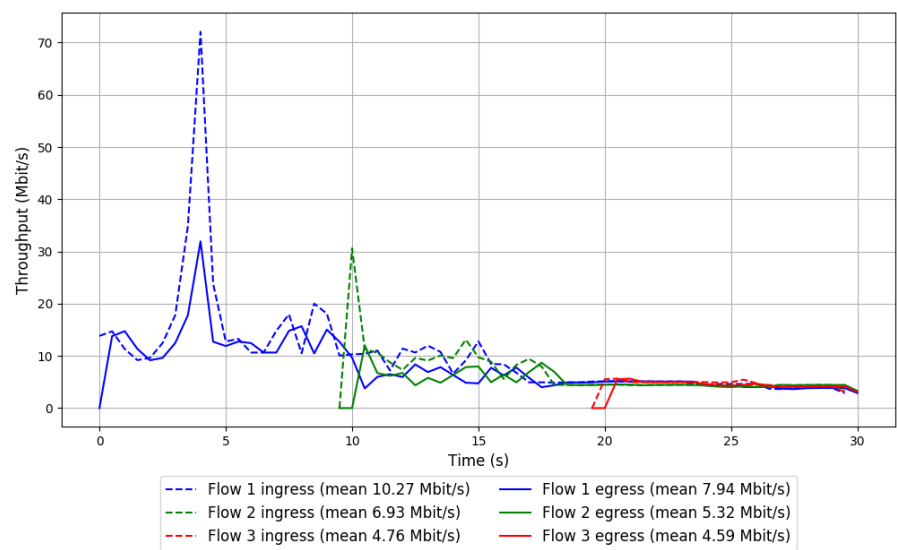



```
Run 1: Statistics of PCC-Expr

Start at: 2019-02-11 17:46:30
End at: 2019-02-11 17:47:00
Local clock offset: -0.301 ms
Remote clock offset: 1.518 ms

# Below is generated by plot.py at 2019-02-11 20:38:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.99 Mbit/s
95th percentile per-packet one-way delay: 1.219 ms
Loss rate: 21.03%
-- Flow 1:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 1.209 ms
Loss rate: 22.70%
-- Flow 2:
Average throughput: 5.32 Mbit/s
95th percentile per-packet one-way delay: 1.229 ms
Loss rate: 23.28%
-- Flow 3:
Average throughput: 4.59 Mbit/s
95th percentile per-packet one-way delay: 1.234 ms
Loss rate: 3.59%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-02-11 18:16:36

End at: 2019-02-11 18:17:06

Local clock offset: 0.765 ms

Remote clock offset: 0.034 ms

Below is generated by plot.py at 2019-02-11 20:38:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.14 Mbit/s

95th percentile per-packet one-way delay: 1.076 ms

Loss rate: 97.85%

-- Flow 1:

Average throughput: 7.98 Mbit/s

95th percentile per-packet one-way delay: 1.081 ms

Loss rate: 96.41%

-- Flow 2:

Average throughput: 5.05 Mbit/s

95th percentile per-packet one-way delay: 1.077 ms

Loss rate: 98.22%

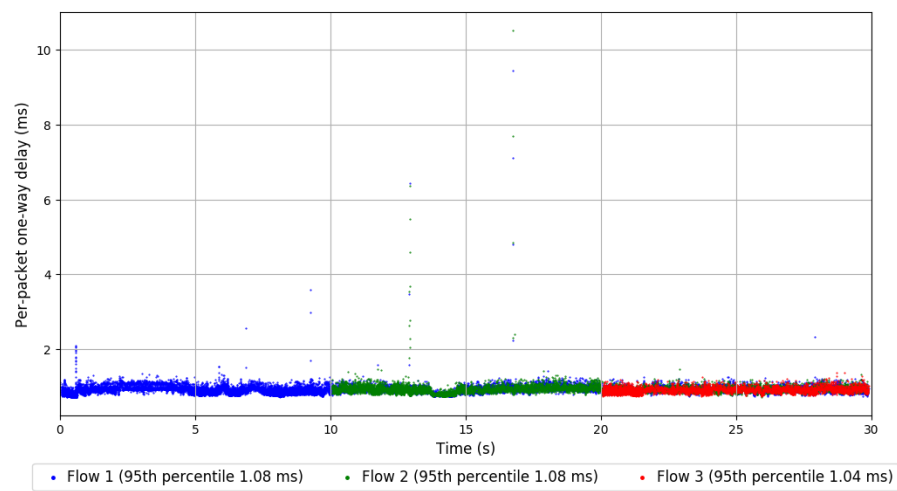
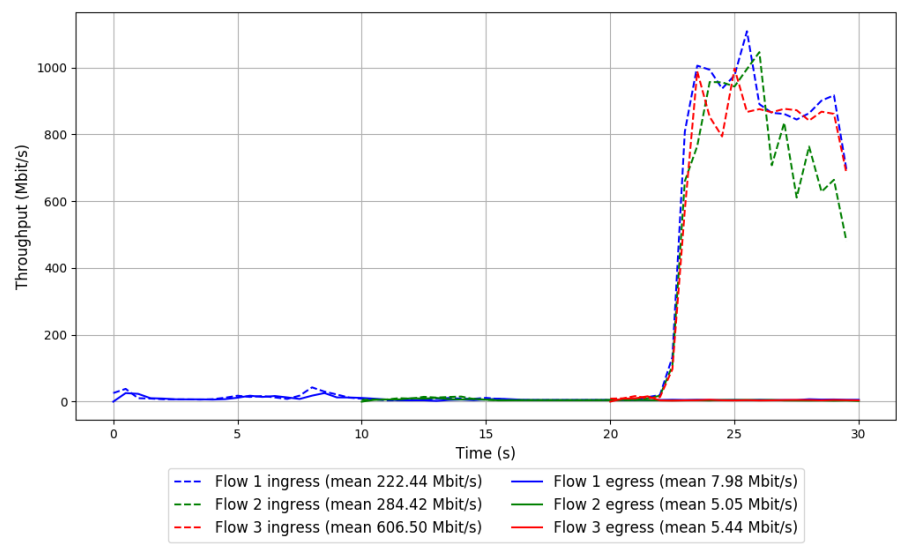
-- Flow 3:

Average throughput: 5.44 Mbit/s

95th percentile per-packet one-way delay: 1.045 ms

Loss rate: 99.10%

Run 2: Report of PCC-Expr — Data Link

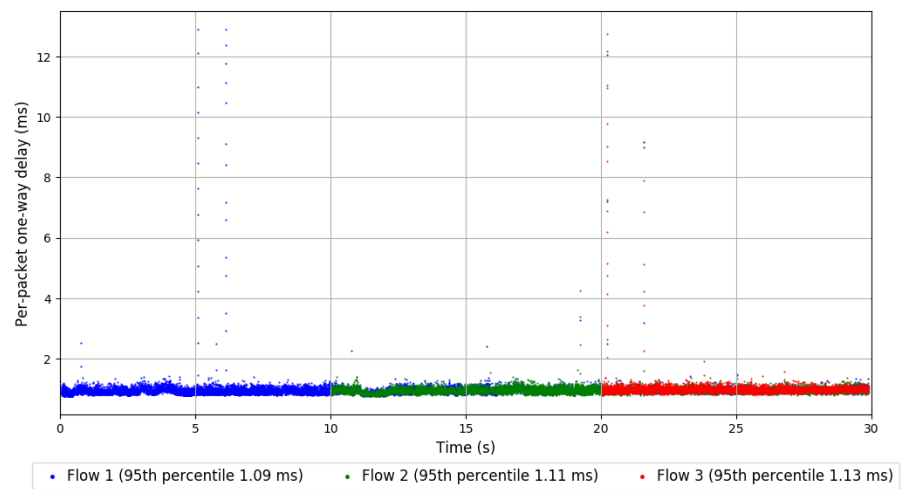
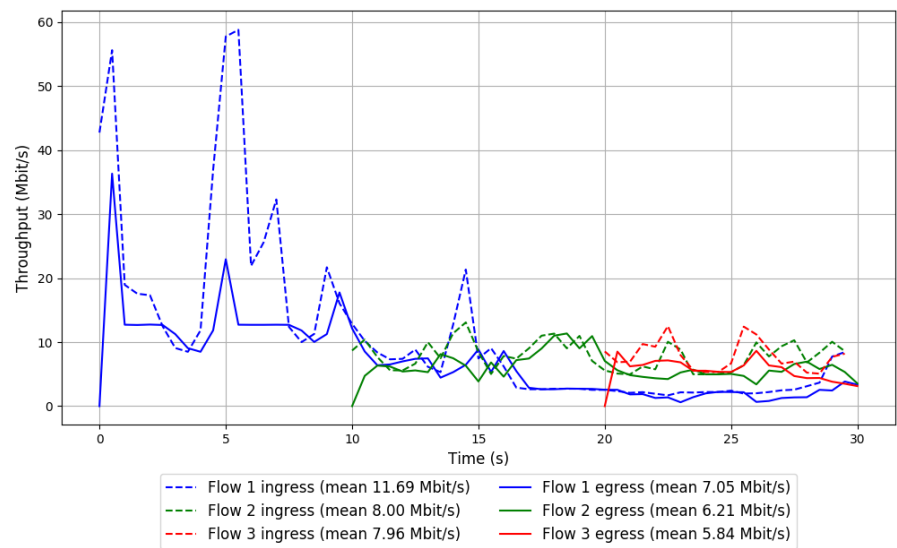


Run 3: Statistics of PCC-Expr

Start at: 2019-02-11 18:46:39
End at: 2019-02-11 18:47:09
Local clock offset: -2.241 ms
Remote clock offset: -4.088 ms

Below is generated by plot.py at 2019-02-11 20:38:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 13.11 Mbit/s
95th percentile per-packet one-way delay: 1.102 ms
Loss rate: 33.26%
-- Flow 1:
Average throughput: 7.05 Mbit/s
95th percentile per-packet one-way delay: 1.090 ms
Loss rate: 39.75%
-- Flow 2:
Average throughput: 6.21 Mbit/s
95th percentile per-packet one-way delay: 1.106 ms
Loss rate: 22.32%
-- Flow 3:
Average throughput: 5.84 Mbit/s
95th percentile per-packet one-way delay: 1.128 ms
Loss rate: 26.55%

Run 3: Report of PCC-Expr — Data Link

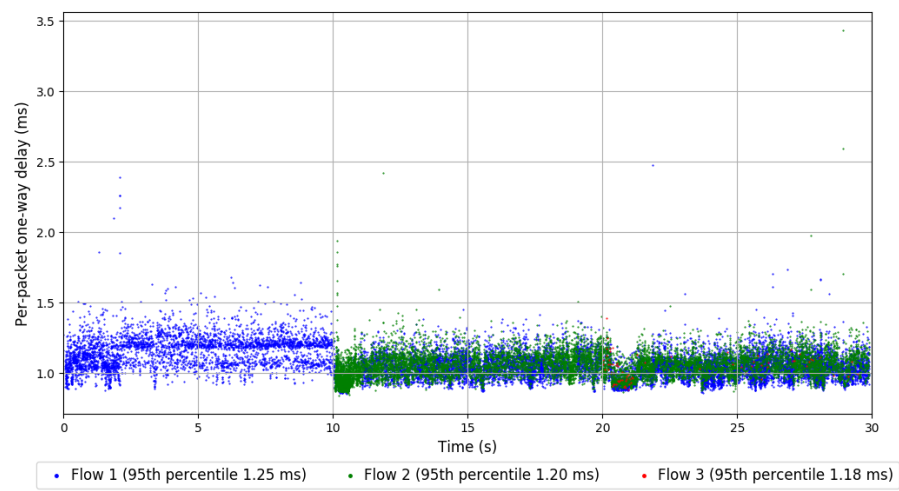
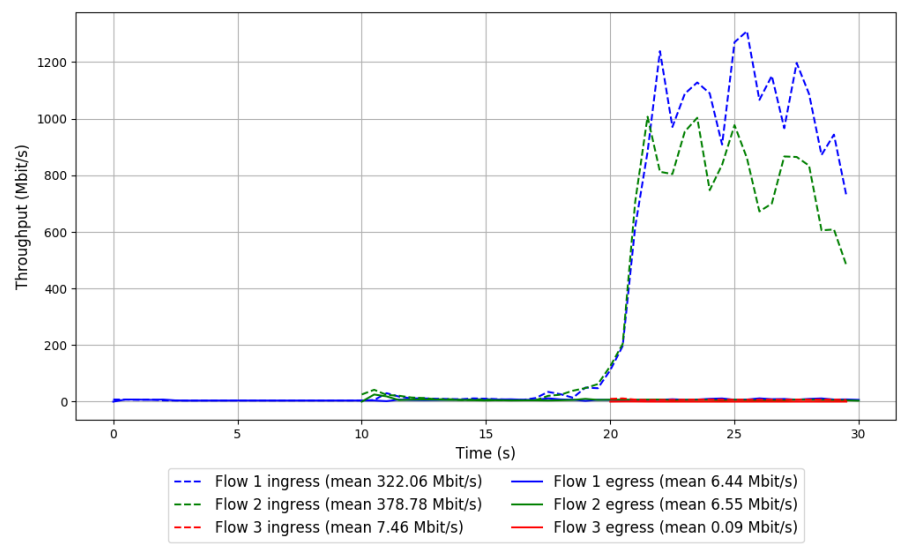


Run 4: Statistics of PCC-Expr

Start at: 2019-02-11 19:16:29
End at: 2019-02-11 19:16:59
Local clock offset: -0.537 ms
Remote clock offset: -0.304 ms

Below is generated by plot.py at 2019-02-11 20:38:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 10.82 Mbit/s
95th percentile per-packet one-way delay: 1.235 ms
Loss rate: 98.12%
-- Flow 1:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 1.252 ms
Loss rate: 98.00%
-- Flow 2:
Average throughput: 6.55 Mbit/s
95th percentile per-packet one-way delay: 1.201 ms
Loss rate: 98.27%
-- Flow 3:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 1.175 ms
Loss rate: 98.90%

Run 4: Report of PCC-Expr — Data Link

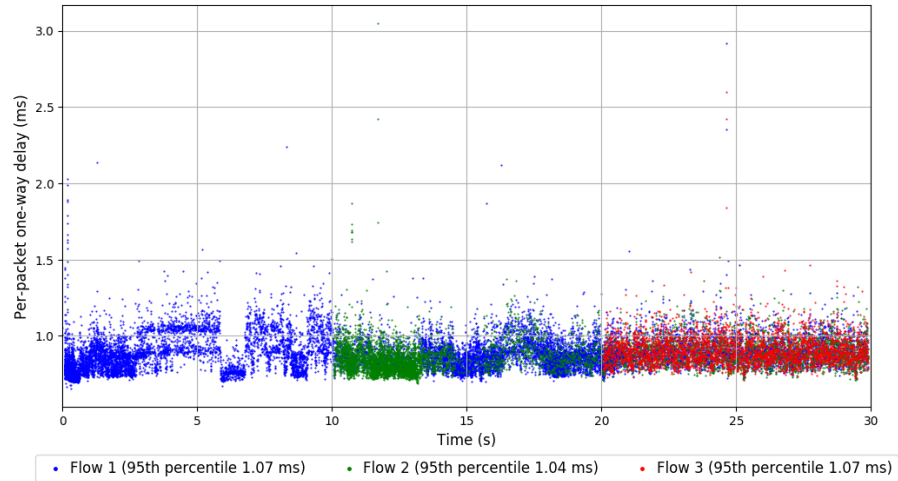
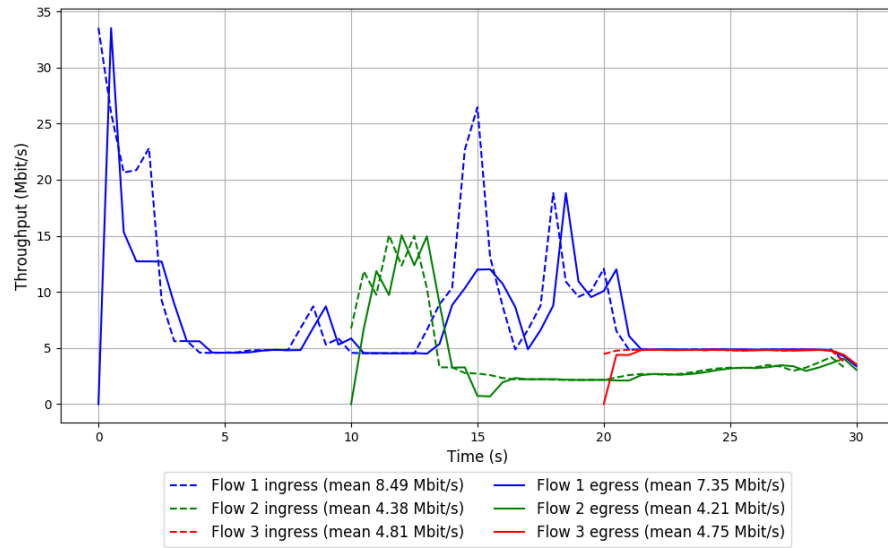


Run 5: Statistics of PCC-Expr

Start at: 2019-02-11 19:46:44
End at: 2019-02-11 19:47:14
Local clock offset: -0.207 ms
Remote clock offset: -1.231 ms

Below is generated by plot.py at 2019-02-11 20:38:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 1.065 ms
Loss rate: 9.76%
-- Flow 1:
Average throughput: 7.35 Mbit/s
95th percentile per-packet one-way delay: 1.069 ms
Loss rate: 13.35%
-- Flow 2:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 3.95%
-- Flow 3:
Average throughput: 4.75 Mbit/s
95th percentile per-packet one-way delay: 1.071 ms
Loss rate: 1.24%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-02-11 17:18:46

End at: 2019-02-11 17:19:16

Local clock offset: -2.415 ms

Remote clock offset: 4.405 ms

Below is generated by plot.py at 2019-02-11 20:38:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 124.63 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 69.16 Mbit/s

95th percentile per-packet one-way delay: 1.049 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 58.57 Mbit/s

95th percentile per-packet one-way delay: 2.824 ms

Loss rate: 0.00%

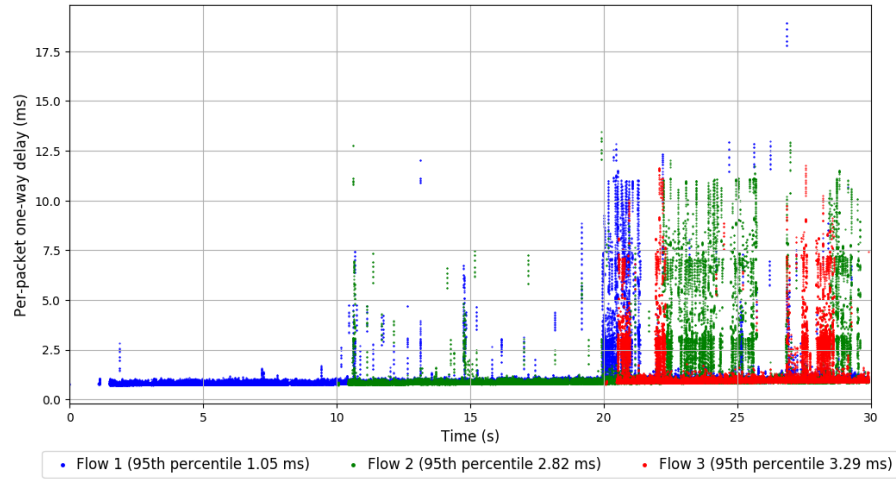
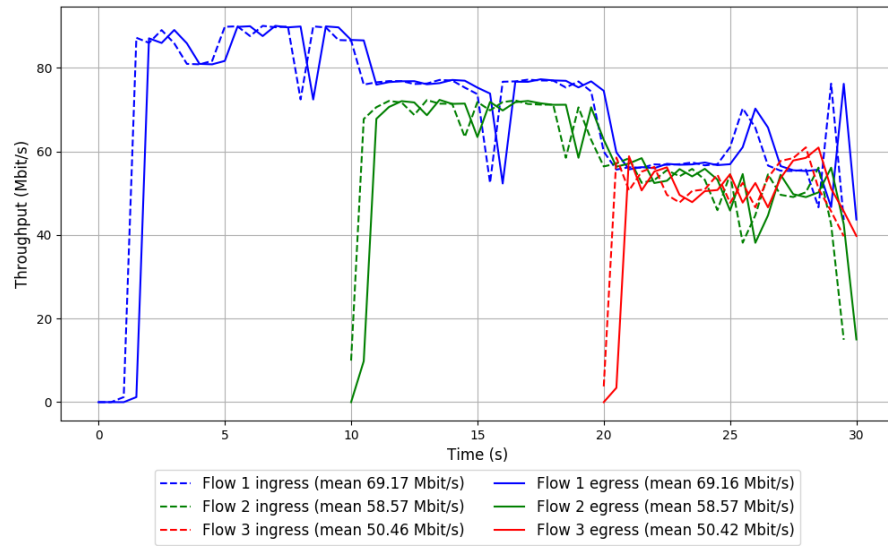
-- Flow 3:

Average throughput: 50.42 Mbit/s

95th percentile per-packet one-way delay: 3.286 ms

Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-02-11 17:48:59

End at: 2019-02-11 17:49:29

Local clock offset: -0.025 ms

Remote clock offset: 1.403 ms

Below is generated by plot.py at 2019-02-11 20:38:47

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: 66.55 Mbit/s

95th percentile per-packet one-way delay: 1.157 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 58.91 Mbit/s

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

Loss rate: 0.01%

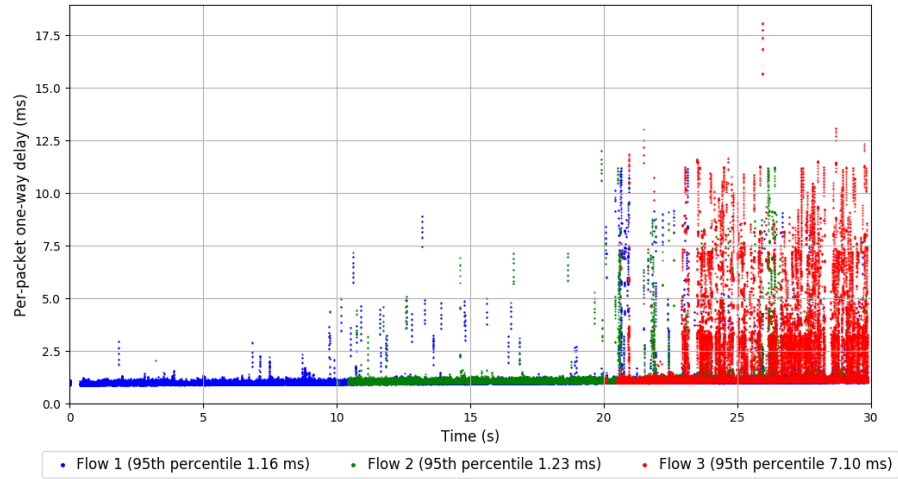
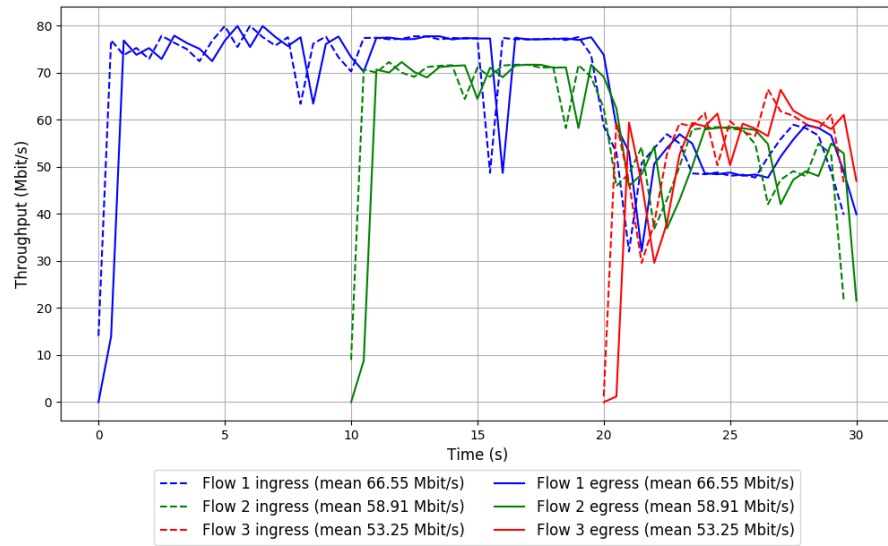
-- Flow 3:

Average throughput: 53.25 Mbit/s

95th percentile per-packet one-way delay: 7.096 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link

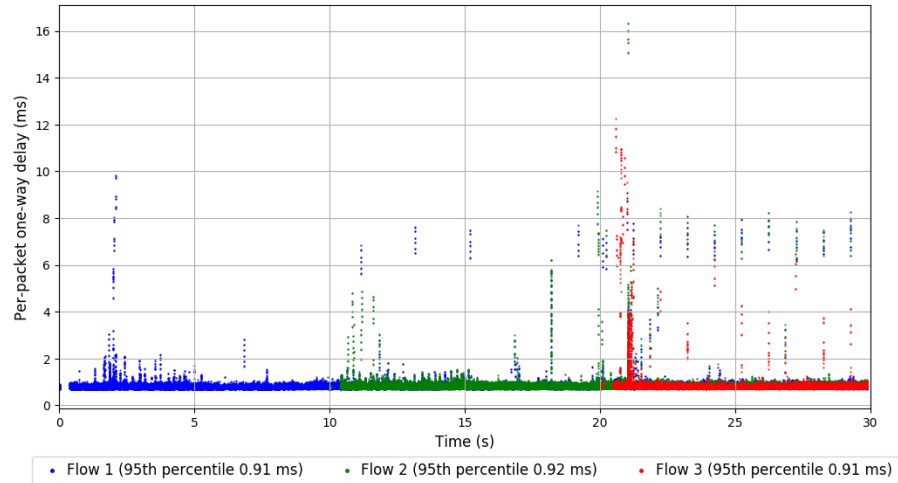
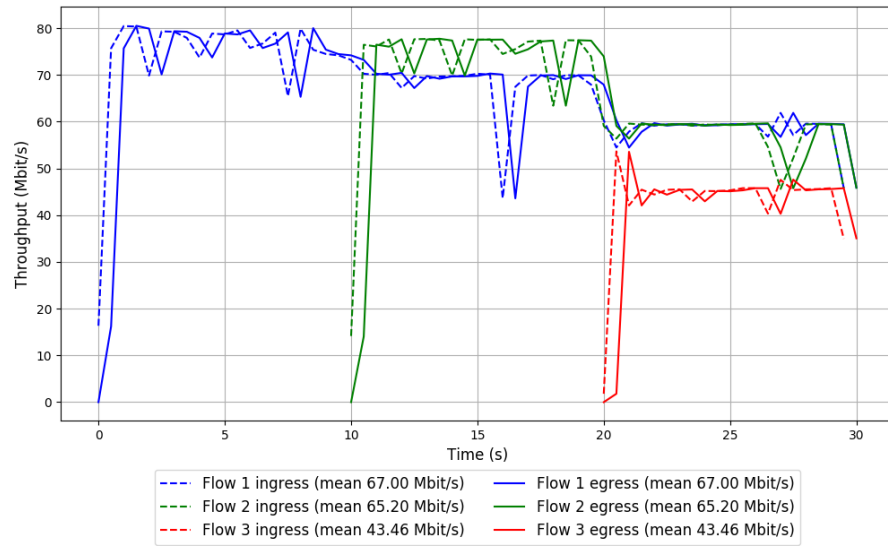


Run 3: Statistics of QUIC Cubic

Start at: 2019-02-11 18:19:12
End at: 2019-02-11 18:19:42
Local clock offset: 0.761 ms
Remote clock offset: -0.019 ms

Below is generated by plot.py at 2019-02-11 20:38:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 124.64 Mbit/s
95th percentile per-packet one-way delay: 0.914 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 67.00 Mbit/s
95th percentile per-packet one-way delay: 0.909 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 65.20 Mbit/s
95th percentile per-packet one-way delay: 0.921 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 43.46 Mbit/s
95th percentile per-packet one-way delay: 0.910 ms
Loss rate: 0.01%

Run 3: Report of QUIC Cubic — Data Link

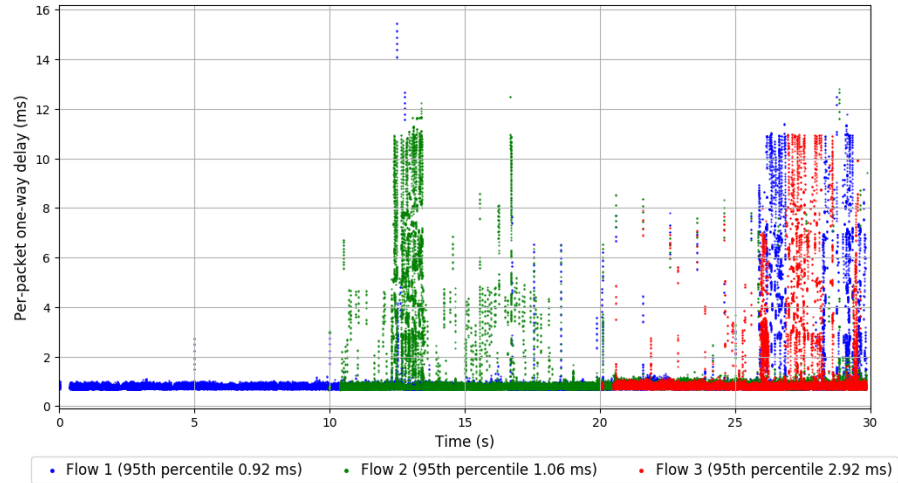
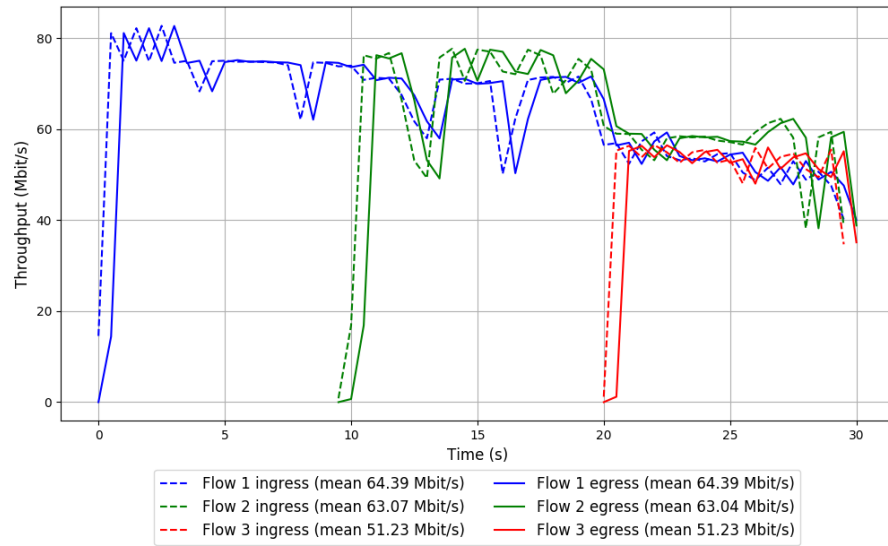


Run 4: Statistics of QUIC Cubic

Start at: 2019-02-11 18:49:08
End at: 2019-02-11 18:49:38
Local clock offset: -2.527 ms
Remote clock offset: -4.369 ms

Below is generated by plot.py at 2019-02-11 20:38:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 123.13 Mbit/s
95th percentile per-packet one-way delay: 0.975 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 64.39 Mbit/s
95th percentile per-packet one-way delay: 0.915 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 63.04 Mbit/s
95th percentile per-packet one-way delay: 1.059 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 51.23 Mbit/s
95th percentile per-packet one-way delay: 2.920 ms
Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link

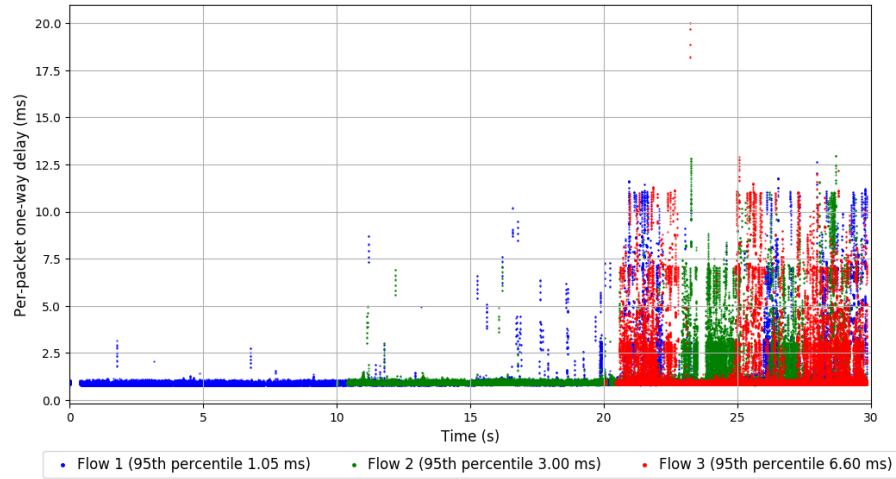
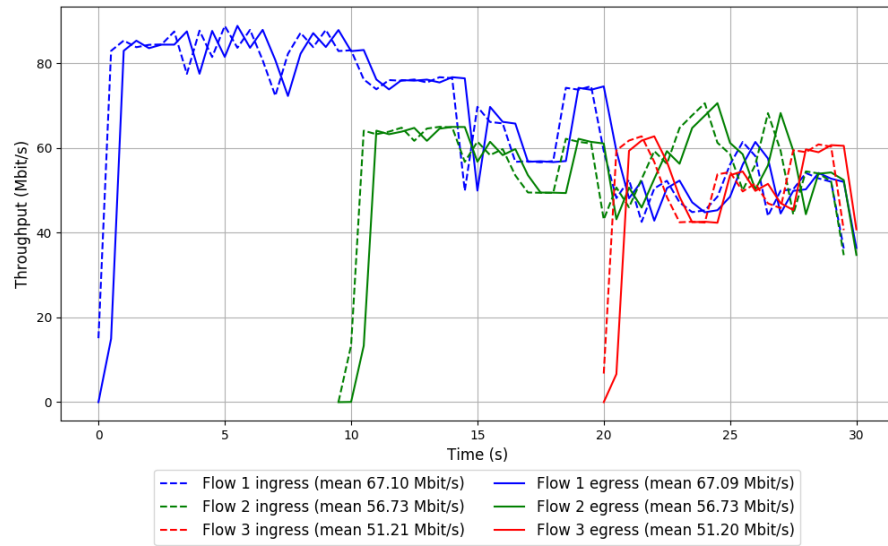


Run 5: Statistics of QUIC Cubic

Start at: 2019-02-11 19:19:04
End at: 2019-02-11 19:19:34
Local clock offset: -0.261 ms
Remote clock offset: -0.242 ms

Below is generated by plot.py at 2019-02-11 20:38:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 121.68 Mbit/s
95th percentile per-packet one-way delay: 2.968 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 67.09 Mbit/s
95th percentile per-packet one-way delay: 1.049 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 56.73 Mbit/s
95th percentile per-packet one-way delay: 3.000 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 51.20 Mbit/s
95th percentile per-packet one-way delay: 6.603 ms
Loss rate: 0.02%

Run 5: Report of QUIC Cubic — Data Link

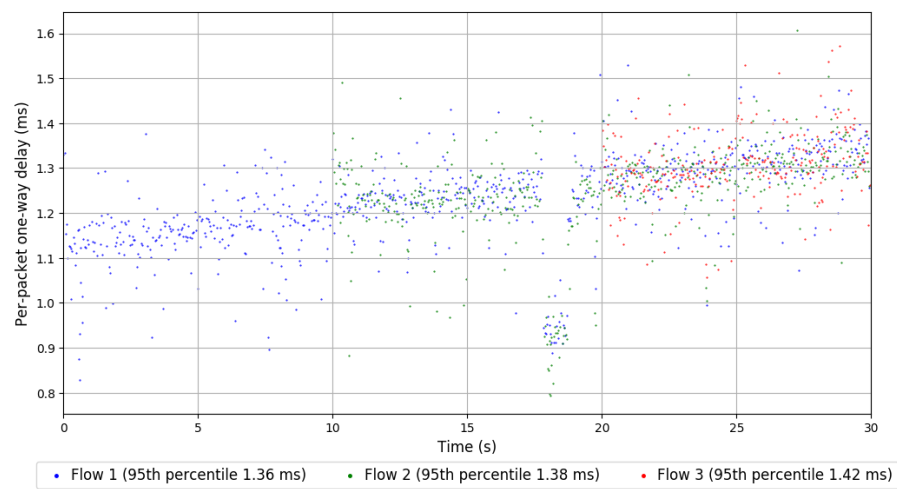
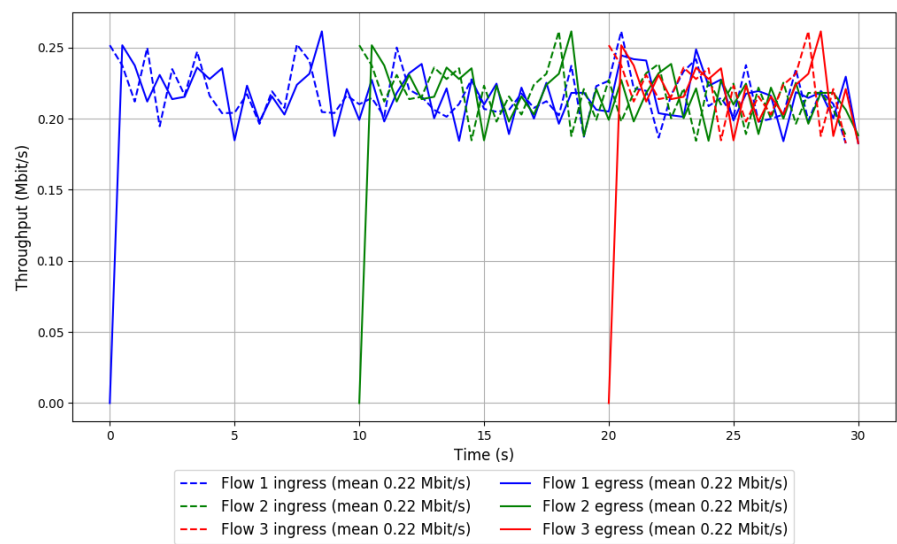


```
Run 1: Statistics of SReAM

Start at: 2019-02-11 17:17:32
End at: 2019-02-11 17:18:02
Local clock offset: -2.303 ms
Remote clock offset: 5.014 ms

# Below is generated by plot.py at 2019-02-11 20:38:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.384 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.361 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.380 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.421 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SReAM

Start at: 2019-02-11 17:47:45

End at: 2019-02-11 17:48:15

Local clock offset: -0.152 ms

Remote clock offset: 1.533 ms

Below is generated by plot.py at 2019-02-11 20:38:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 1.442 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 0.16 Mbit/s

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

Loss rate: 0.16%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.414 ms

Loss rate: 0.00%

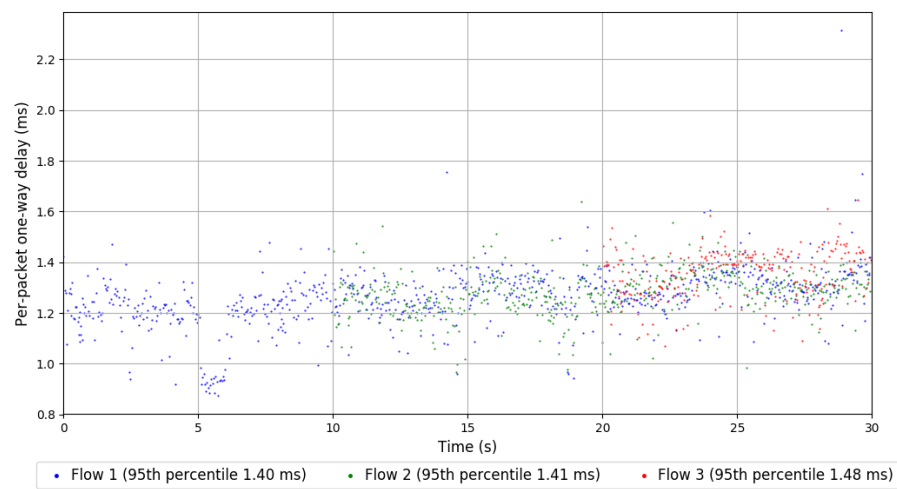
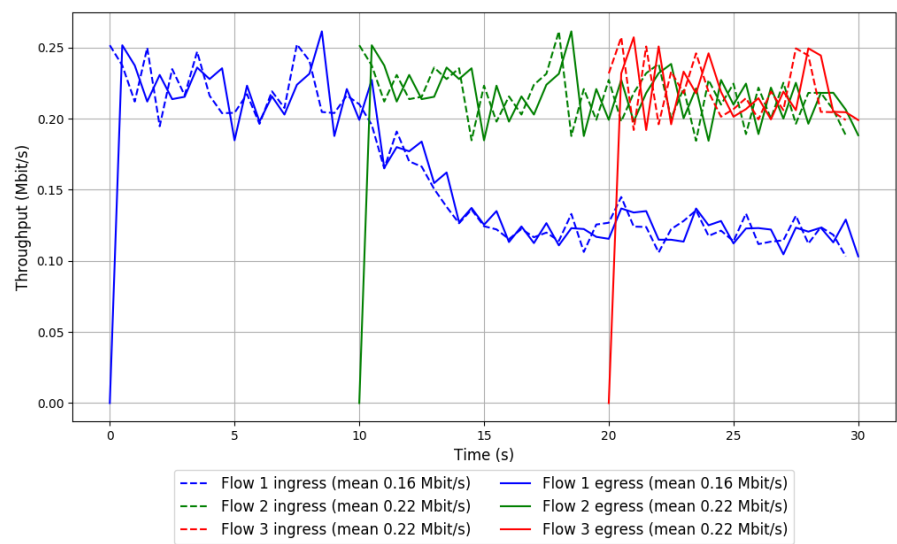
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SReAM

Start at: 2019-02-11 18:17:58

End at: 2019-02-11 18:18:28

Local clock offset: 0.762 ms

Remote clock offset: 0.058 ms

Below is generated by plot.py at 2019-02-11 20:38:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.292 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.312 ms

Loss rate: 0.00%

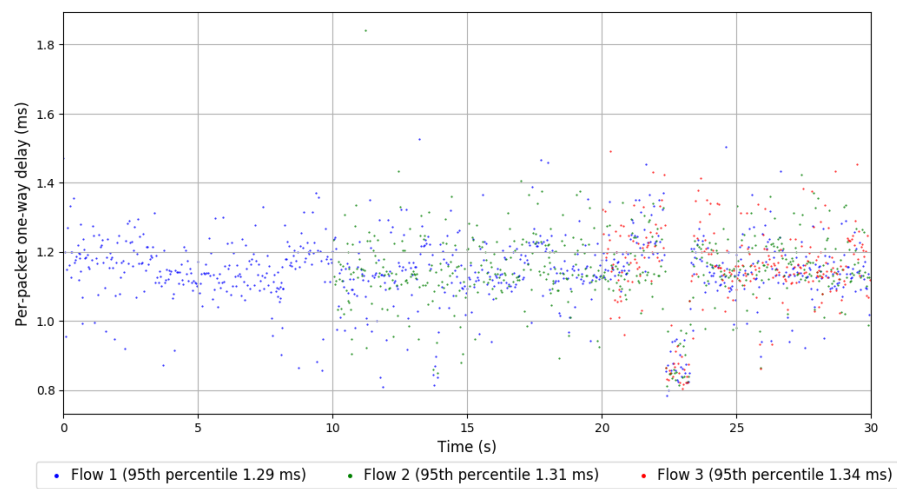
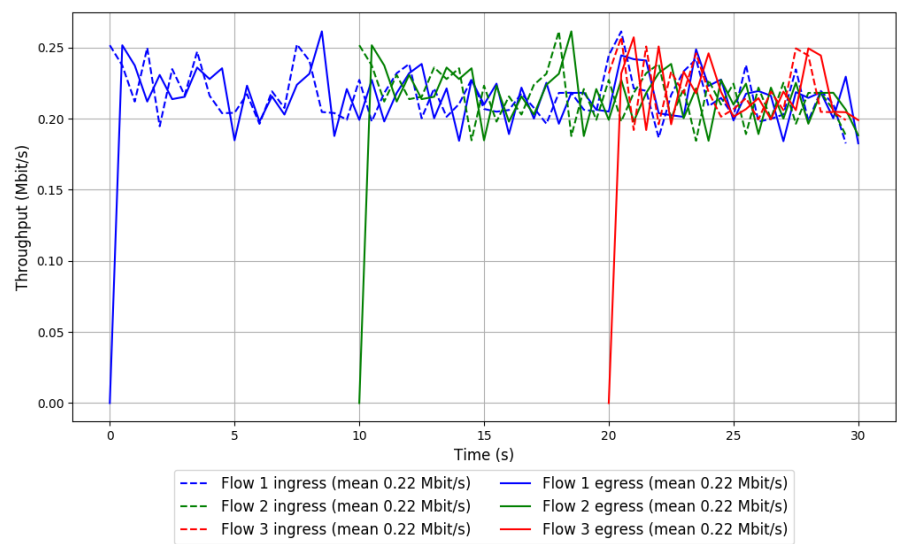
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.340 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

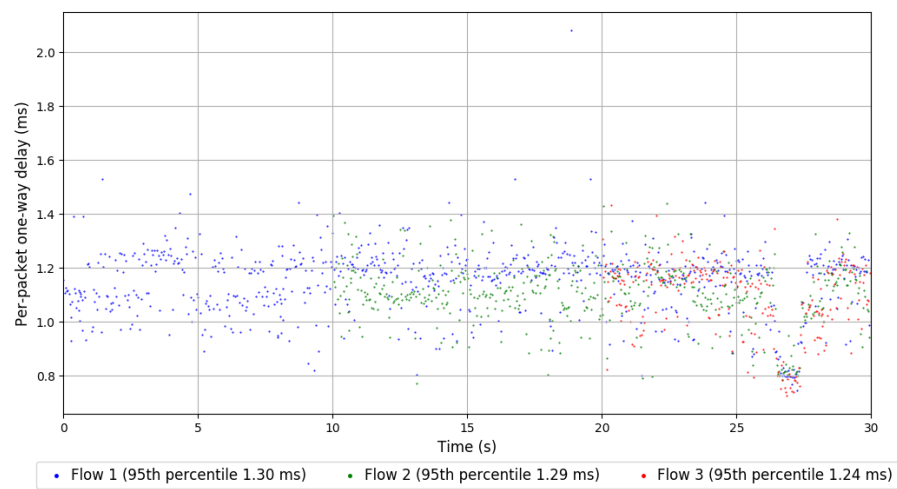
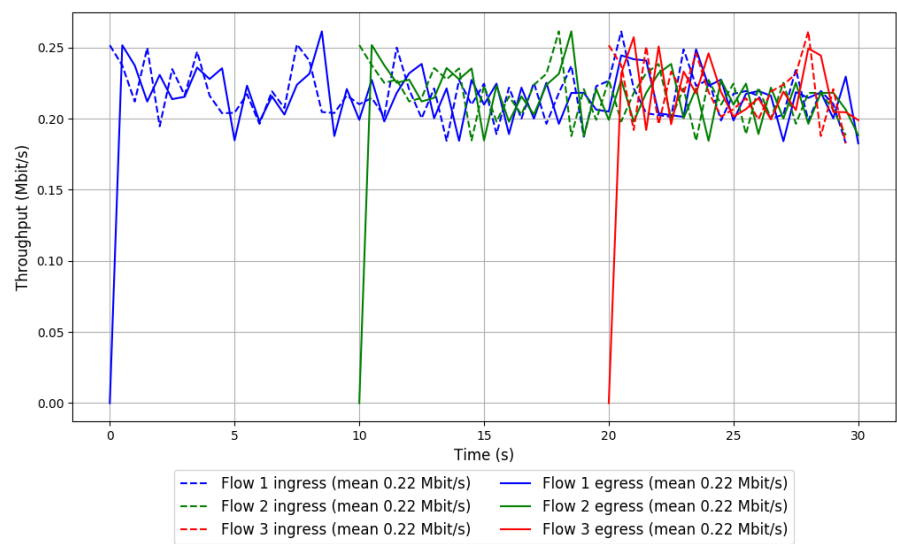


Run 4: Statistics of SReAM

Start at: 2019-02-11 18:47:53
End at: 2019-02-11 18:48:23
Local clock offset: -2.387 ms
Remote clock offset: -4.241 ms

Below is generated by plot.py at 2019-02-11 20:38:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.295 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.304 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.289 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.239 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

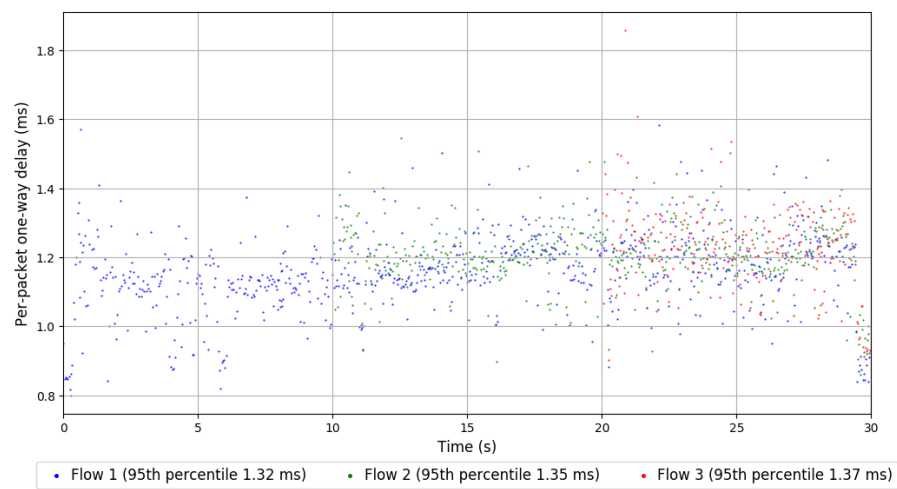
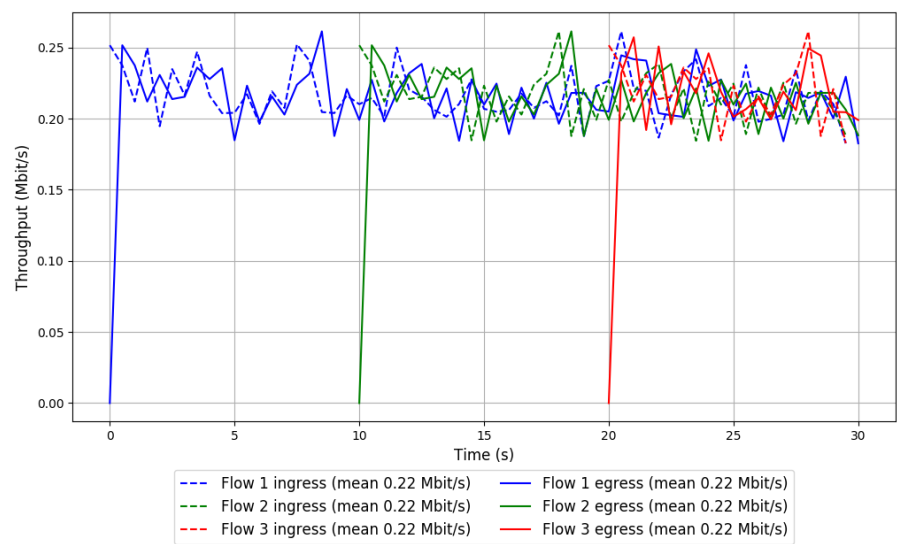


Run 5: Statistics of SReAM

Start at: 2019-02-11 19:17:50
End at: 2019-02-11 19:18:20
Local clock offset: -0.385 ms
Remote clock offset: -0.264 ms

Below is generated by plot.py at 2019-02-11 20:38:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.349 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: 1.351 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.373 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-02-11 17:43:48

End at: 2019-02-11 17:44:18

Local clock offset: -0.703 ms

Remote clock offset: 1.496 ms

Below is generated by plot.py at 2019-02-11 20:38:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.70 Mbit/s

95th percentile per-packet one-way delay: 4.540 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 50.09 Mbit/s

95th percentile per-packet one-way delay: 4.417 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 49.92 Mbit/s

95th percentile per-packet one-way delay: 4.593 ms

Loss rate: 0.02%

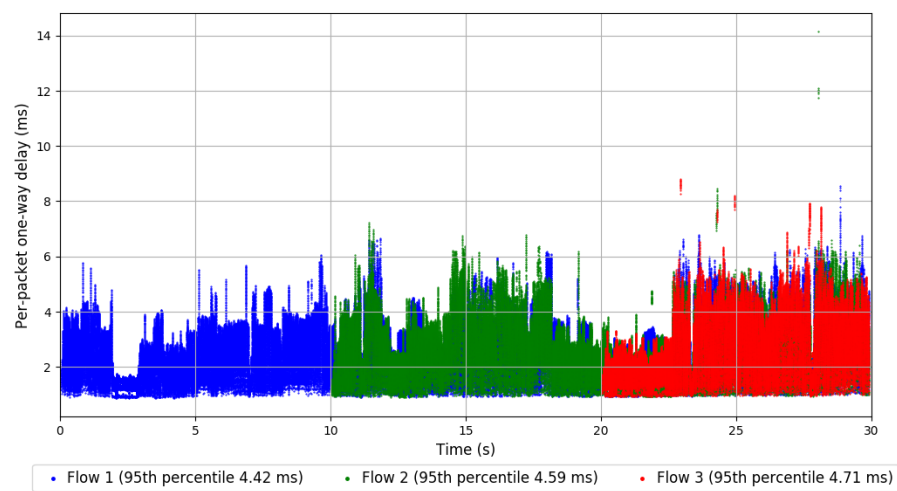
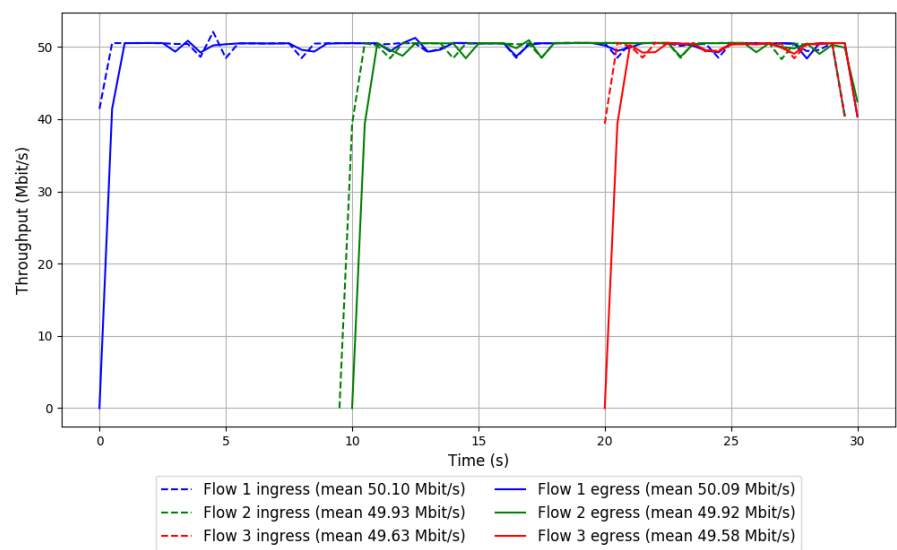
-- Flow 3:

Average throughput: 49.58 Mbit/s

95th percentile per-packet one-way delay: 4.713 ms

Loss rate: 0.07%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-02-11 18:13:53

End at: 2019-02-11 18:14:23

Local clock offset: 0.759 ms

Remote clock offset: 0.091 ms

Below is generated by plot.py at 2019-02-11 20:38:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.52 Mbit/s

95th percentile per-packet one-way delay: 4.542 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 50.01 Mbit/s

95th percentile per-packet one-way delay: 4.666 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 49.78 Mbit/s

95th percentile per-packet one-way delay: 4.440 ms

Loss rate: 0.01%

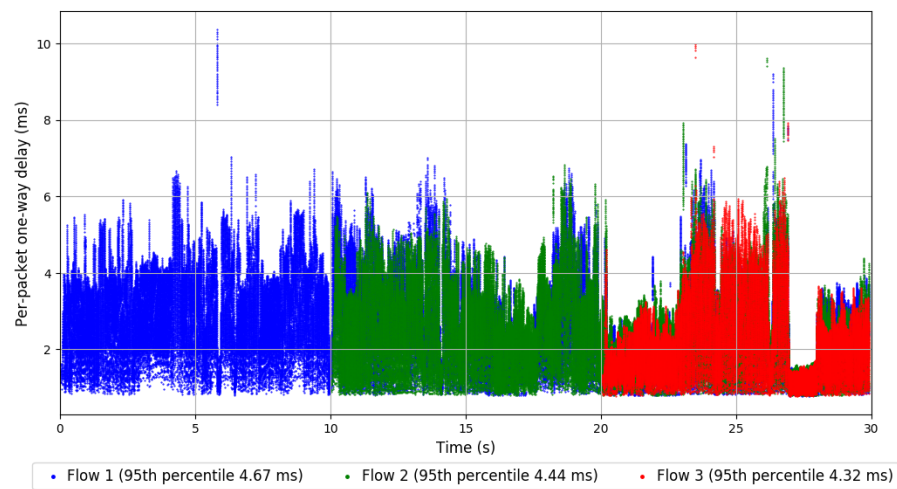
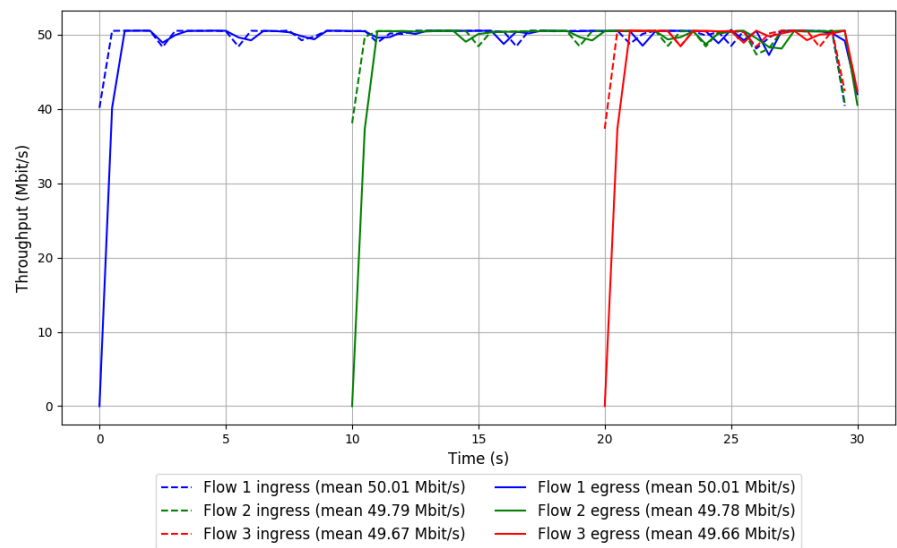
-- Flow 3:

Average throughput: 49.66 Mbit/s

95th percentile per-packet one-way delay: 4.322 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

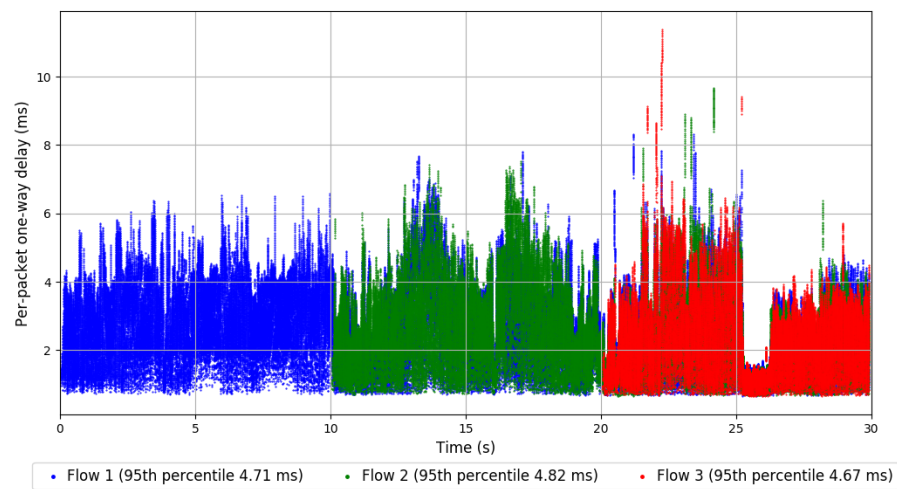
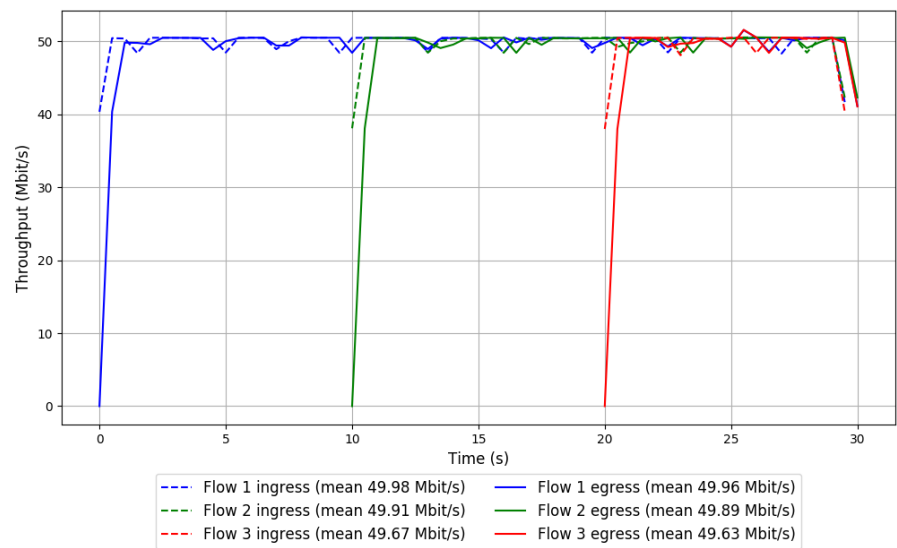


Run 3: Statistics of Sprout

Start at: 2019-02-11 18:43:55
End at: 2019-02-11 18:44:25
Local clock offset: -1.823 ms
Remote clock offset: -3.935 ms

```
# Below is generated by plot.py at 2019-02-11 20:38:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.56 Mbit/s
95th percentile per-packet one-way delay: 4.741 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 49.96 Mbit/s
95th percentile per-packet one-way delay: 4.710 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 49.89 Mbit/s
95th percentile per-packet one-way delay: 4.818 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 49.63 Mbit/s
95th percentile per-packet one-way delay: 4.667 ms
Loss rate: 0.04%
```

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2019-02-11 19:13:47

End at: 2019-02-11 19:14:17

Local clock offset: -0.922 ms

Remote clock offset: -0.52 ms

Below is generated by plot.py at 2019-02-11 20:38:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.45 Mbit/s

95th percentile per-packet one-way delay: 5.208 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 49.94 Mbit/s

95th percentile per-packet one-way delay: 5.186 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 49.82 Mbit/s

95th percentile per-packet one-way delay: 5.199 ms

Loss rate: 0.06%

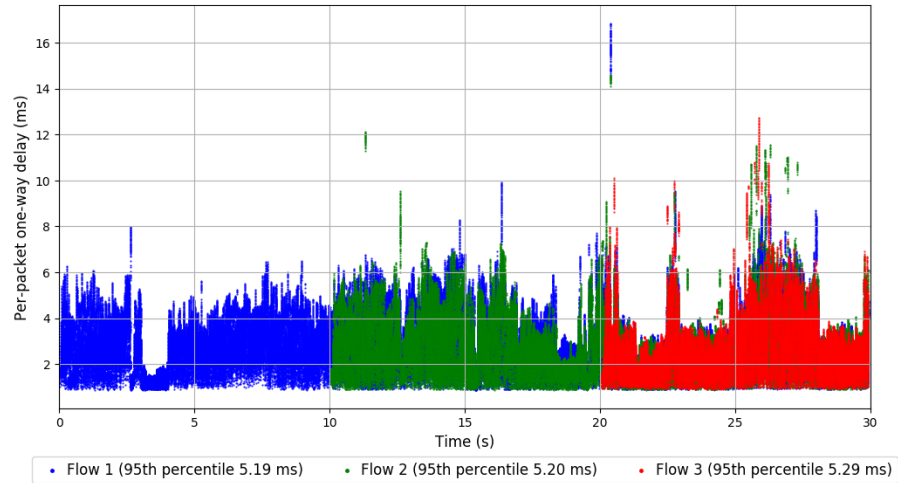
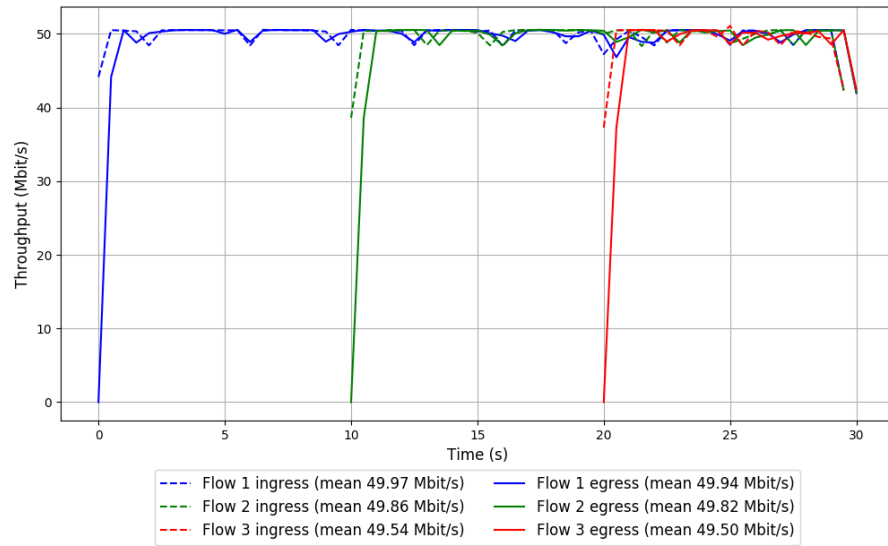
-- Flow 3:

Average throughput: 49.50 Mbit/s

95th percentile per-packet one-way delay: 5.294 ms

Loss rate: 0.03%

Run 4: Report of Sprout — Data Link

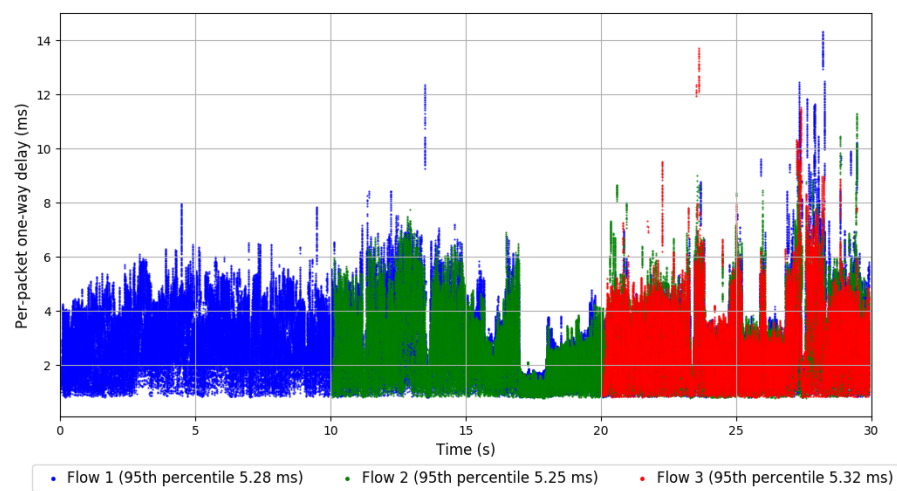
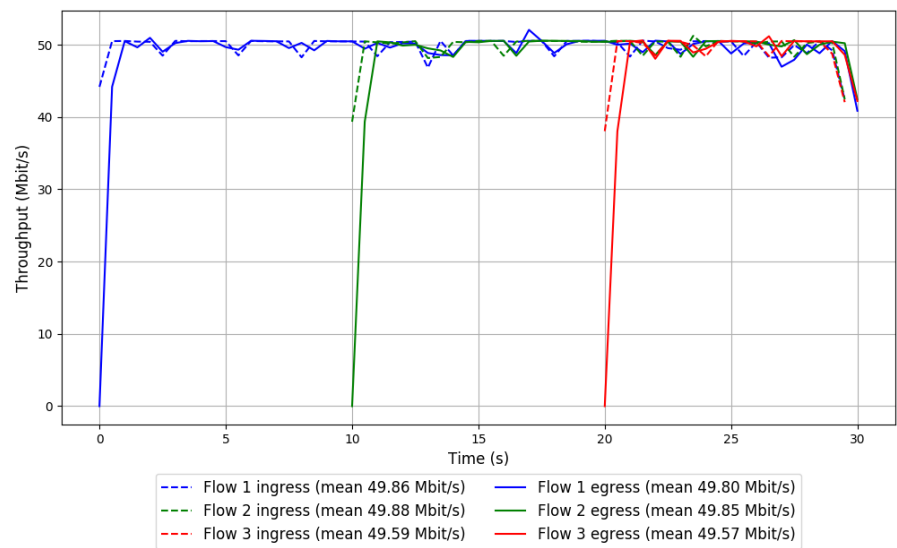


Run 5: Statistics of Sprout

Start at: 2019-02-11 19:44:03
End at: 2019-02-11 19:44:33
Local clock offset: -0.147 ms
Remote clock offset: -1.064 ms

```
# Below is generated by plot.py at 2019-02-11 20:38:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.33 Mbit/s
95th percentile per-packet one-way delay: 5.271 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 49.80 Mbit/s
95th percentile per-packet one-way delay: 5.277 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 49.85 Mbit/s
95th percentile per-packet one-way delay: 5.246 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 49.57 Mbit/s
95th percentile per-packet one-way delay: 5.318 ms
Loss rate: 0.02%
```

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-02-11 17:38:18

End at: 2019-02-11 17:38:48

Local clock offset: -1.944 ms

Remote clock offset: 1.55 ms

Below is generated by plot.py at 2019-02-11 20:38:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.73 Mbit/s

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

Loss rate: 0.07%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.456 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 6.36 Mbit/s

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

Loss rate: 0.06%

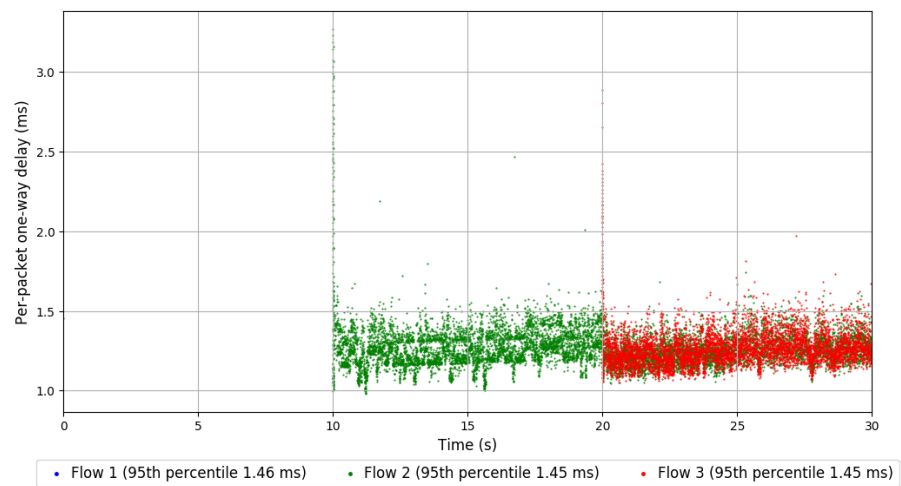
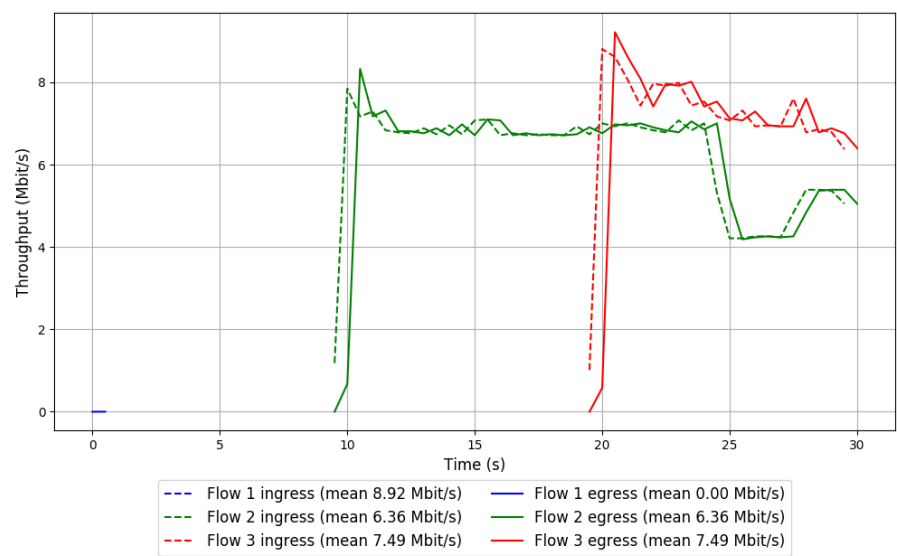
-- Flow 3:

Average throughput: 7.49 Mbit/s

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

Loss rate: 0.05%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-02-11 18:08:23

End at: 2019-02-11 18:08:53

Local clock offset: 0.842 ms

Remote clock offset: 0.174 ms

Below is generated by plot.py at 2019-02-11 20:38:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.63 Mbit/s

95th percentile per-packet one-way delay: 1.196 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.193 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 6.20 Mbit/s

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

Loss rate: 0.01%

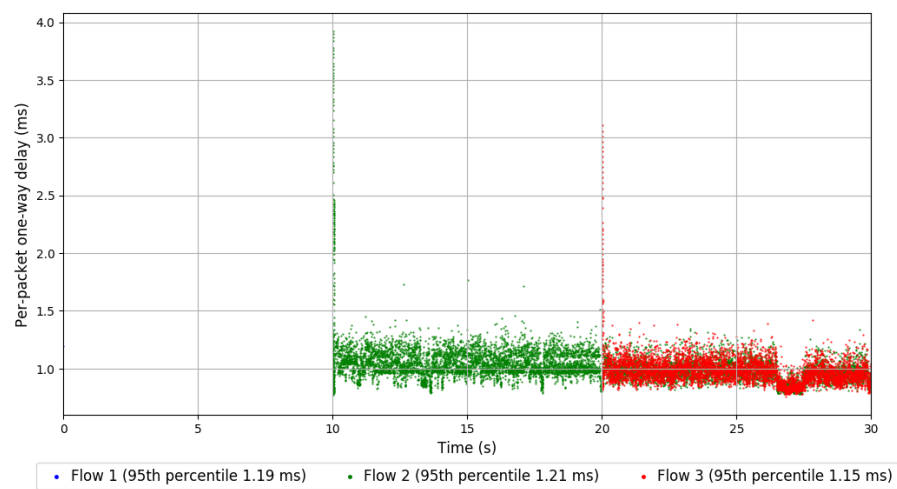
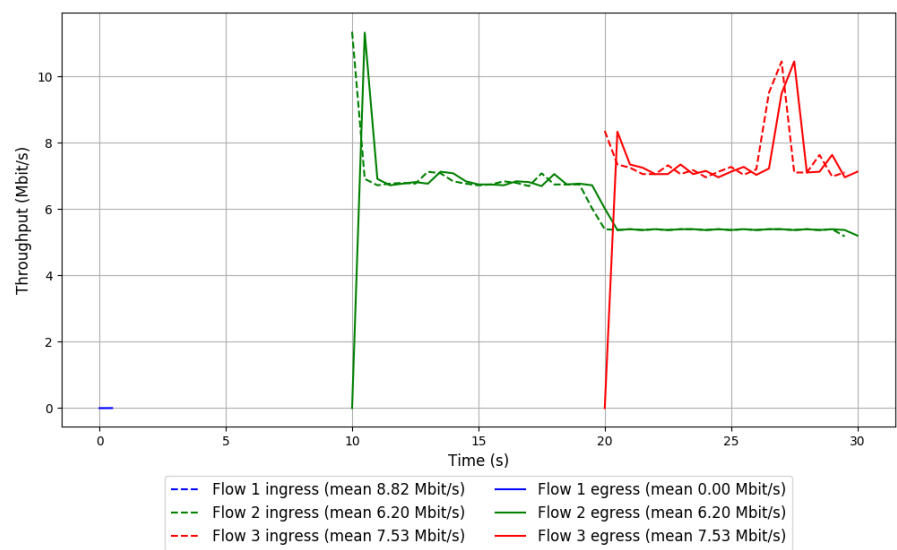
-- Flow 3:

Average throughput: 7.53 Mbit/s

95th percentile per-packet one-way delay: 1.146 ms

Loss rate: 0.00%

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

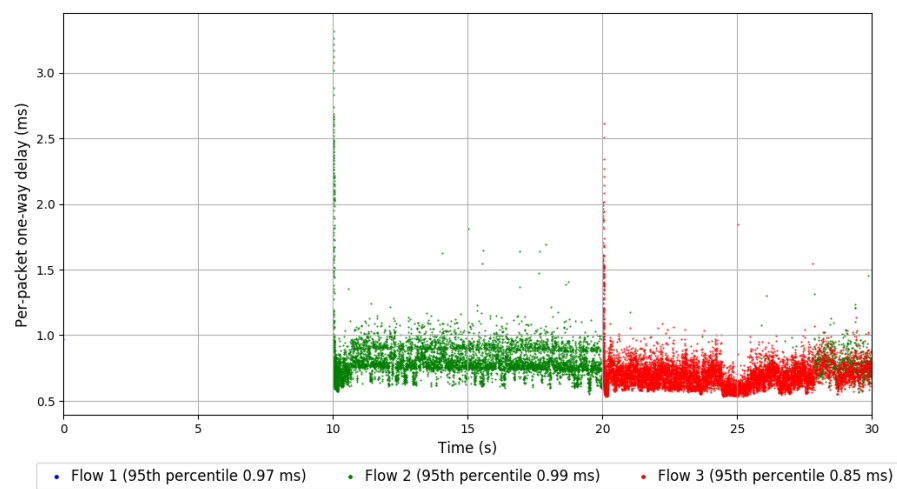
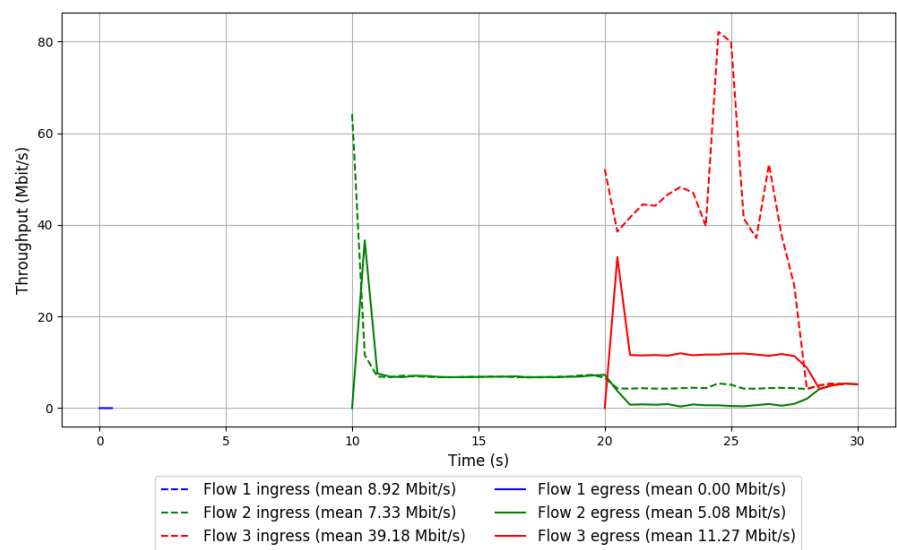


Run 3: Statistics of TaoVA-100x

Start at: 2019-02-11 18:38:26
End at: 2019-02-11 18:38:56
Local clock offset: -0.539 ms
Remote clock offset: -3.366 ms

Below is generated by plot.py at 2019-02-11 20:38:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 7.13 Mbit/s
95th percentile per-packet one-way delay: 0.951 ms
Loss rate: 60.16%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 0.973 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 5.08 Mbit/s
95th percentile per-packet one-way delay: 0.995 ms
Loss rate: 30.62%
-- Flow 3:
Average throughput: 11.27 Mbit/s
95th percentile per-packet one-way delay: 0.855 ms
Loss rate: 71.23%

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

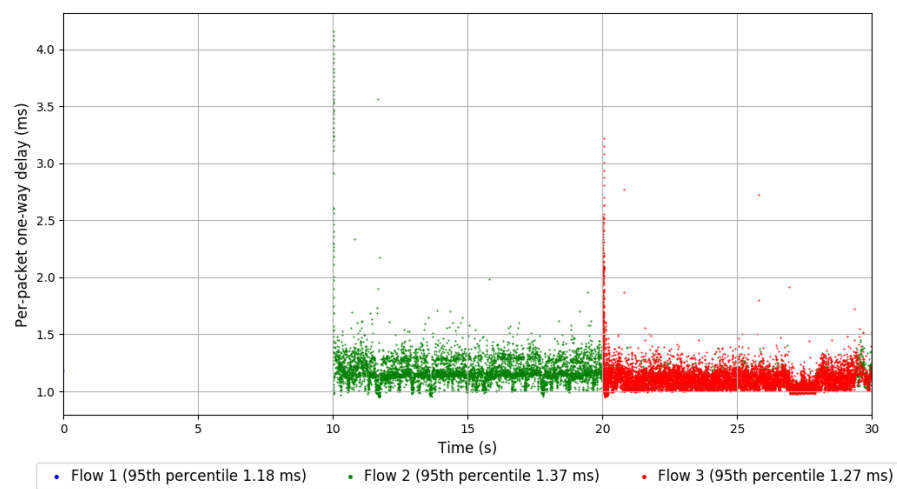
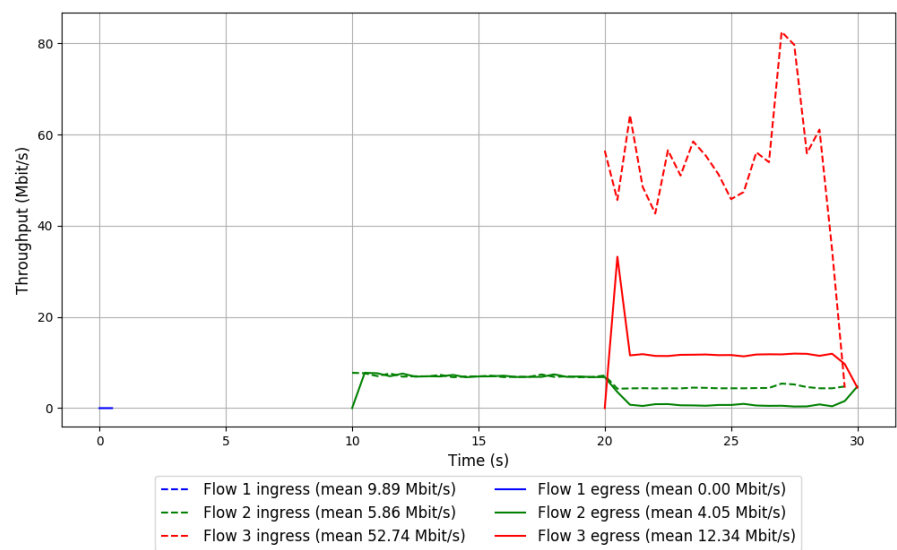


Run 4: Statistics of TaoVA-100x

Start at: 2019-02-11 19:08:23
End at: 2019-02-11 19:08:53
Local clock offset: -2.114 ms
Remote clock offset: -1.083 ms

Below is generated by plot.py at 2019-02-11 20:38:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.80 Mbit/s
95th percentile per-packet one-way delay: 1.327 ms
Loss rate: 68.28%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.179 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 1.366 ms
Loss rate: 30.84%
-- Flow 3:
Average throughput: 12.34 Mbit/s
95th percentile per-packet one-way delay: 1.273 ms
Loss rate: 76.60%

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

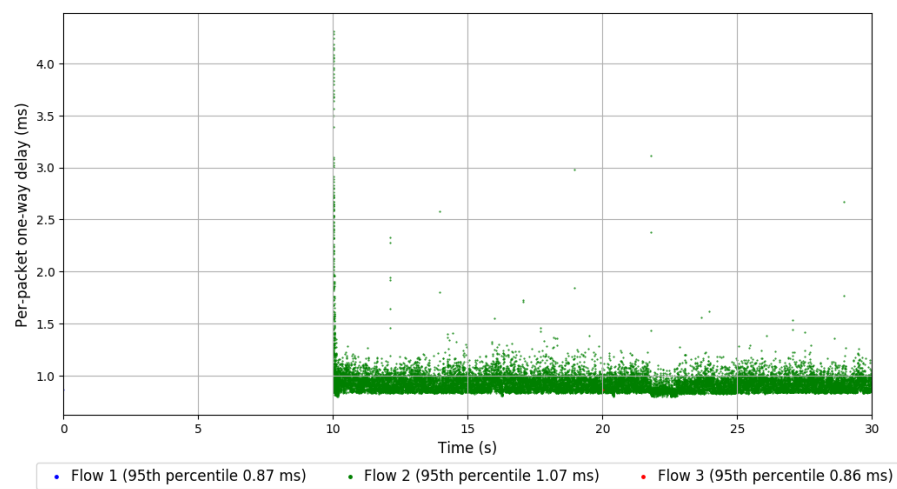
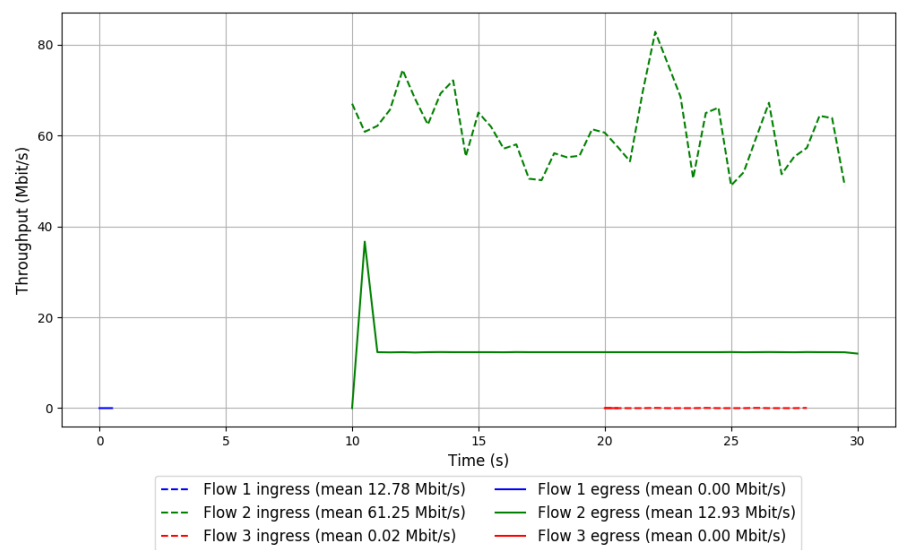


Run 5: Statistics of TaoVA-100x

Start at: 2019-02-11 19:38:28
End at: 2019-02-11 19:38:58
Local clock offset: 0.17 ms
Remote clock offset: -0.706 ms

Below is generated by plot.py at 2019-02-11 20:38:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 1.074 ms
Loss rate: 78.89%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 0.867 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 12.93 Mbit/s
95th percentile per-packet one-way delay: 1.074 ms
Loss rate: 78.89%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 0.864 ms
Loss rate: 99.16%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-02-11 17:36:48

End at: 2019-02-11 17:37:18

Local clock offset: -2.393 ms

Remote clock offset: 1.638 ms

Below is generated by plot.py at 2019-02-11 20:43:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 487.03 Mbit/s

95th percentile per-packet one-way delay: 1.572 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 138.31 Mbit/s

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

Loss rate: 0.01%

-- Flow 2:

Average throughput: 361.66 Mbit/s

95th percentile per-packet one-way delay: 1.589 ms

Loss rate: 0.01%

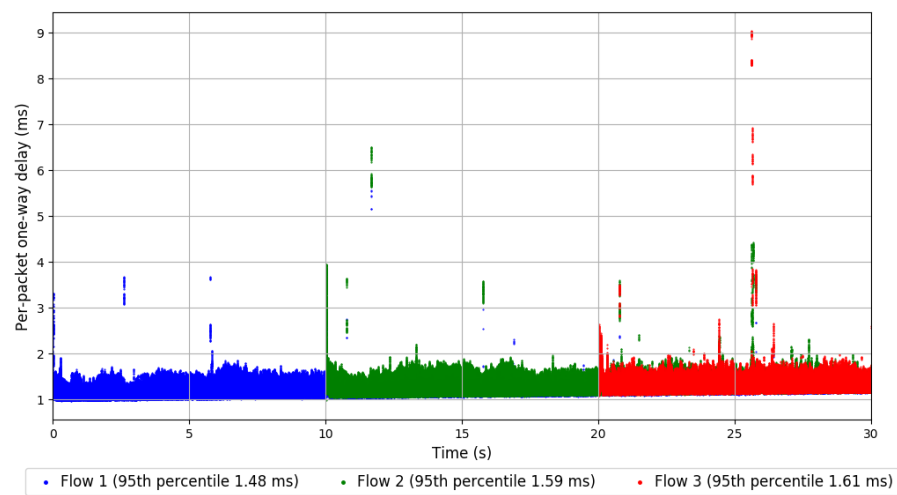
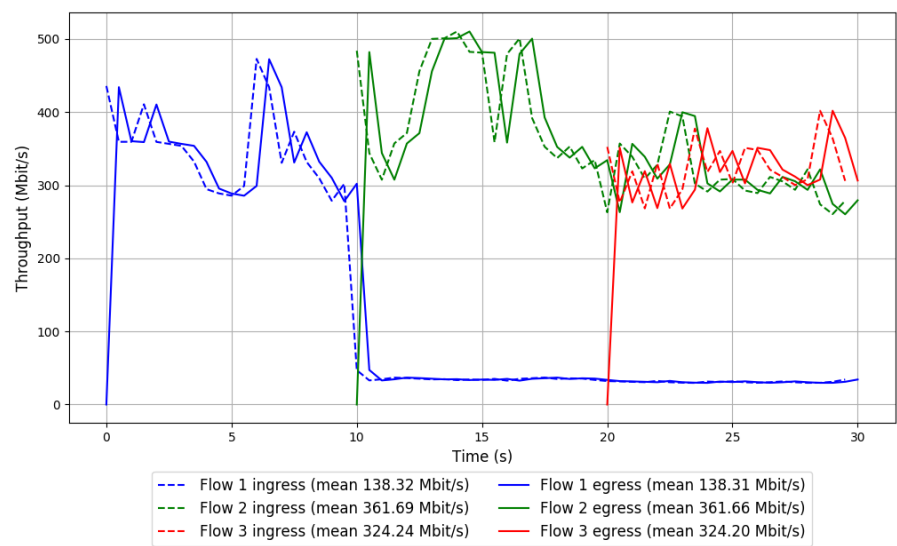
-- Flow 3:

Average throughput: 324.20 Mbit/s

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

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-02-11 18:06:53

End at: 2019-02-11 18:07:23

Local clock offset: 0.87 ms

Remote clock offset: 0.134 ms

Below is generated by plot.py at 2019-02-11 20:43:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 507.13 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 250.89 Mbit/s

95th percentile per-packet one-way delay: 1.181 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 266.02 Mbit/s

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

Loss rate: 0.00%

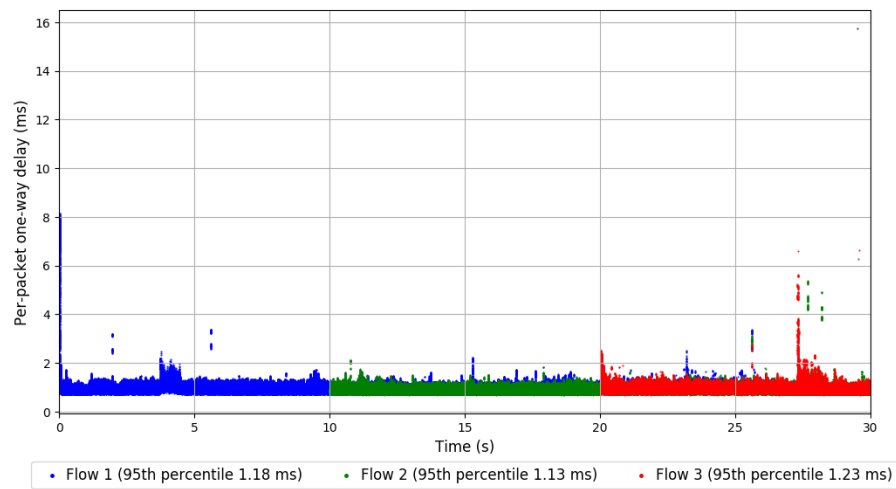
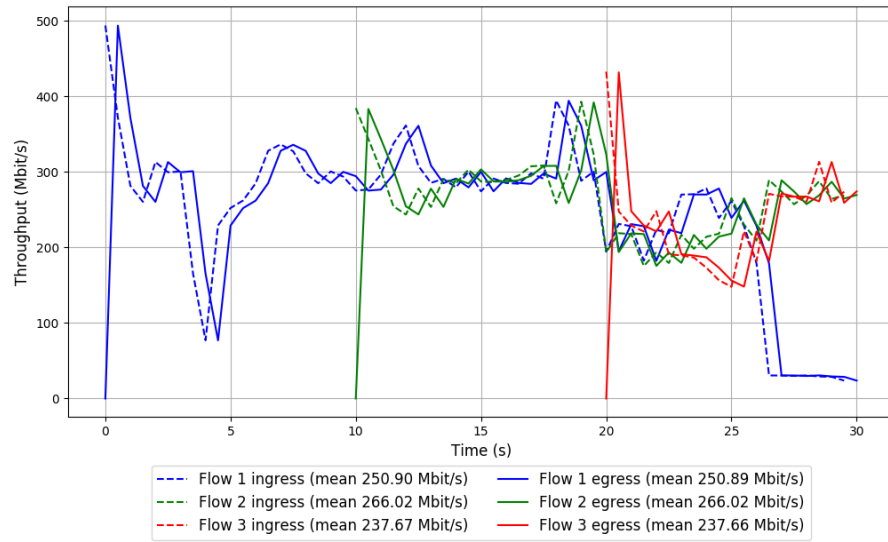
-- Flow 3:

Average throughput: 237.66 Mbit/s

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

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link

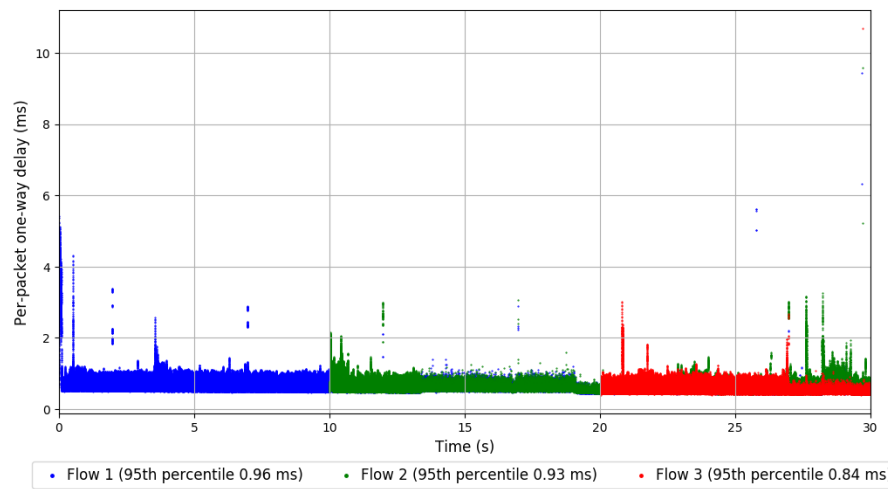
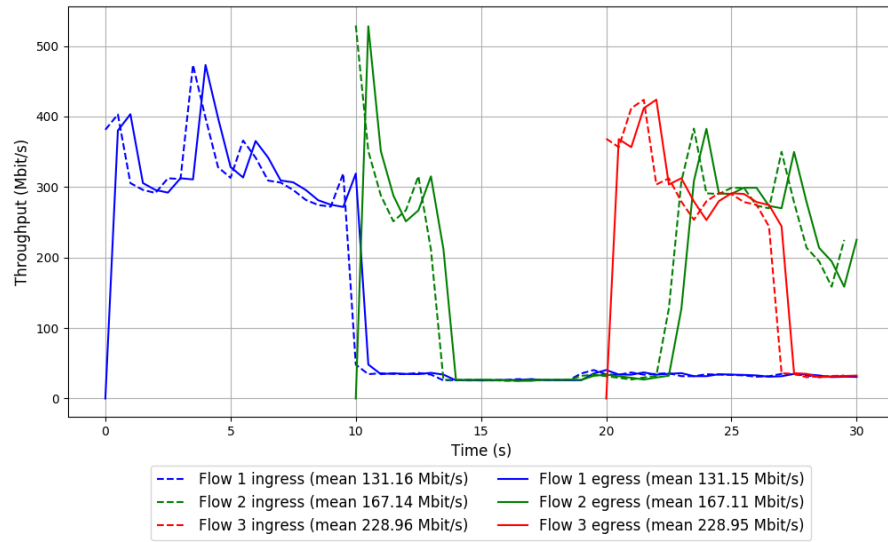


Run 3: Statistics of TCP Vegas

Start at: 2019-02-11 18:37:01
End at: 2019-02-11 18:37:31
Local clock offset: -0.113 ms
Remote clock offset: -3.278 ms

Below is generated by plot.py at 2019-02-11 20:43:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 318.60 Mbit/s
95th percentile per-packet one-way delay: 0.934 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 131.15 Mbit/s
95th percentile per-packet one-way delay: 0.962 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 167.11 Mbit/s
95th percentile per-packet one-way delay: 0.927 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 228.95 Mbit/s
95th percentile per-packet one-way delay: 0.845 ms
Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link

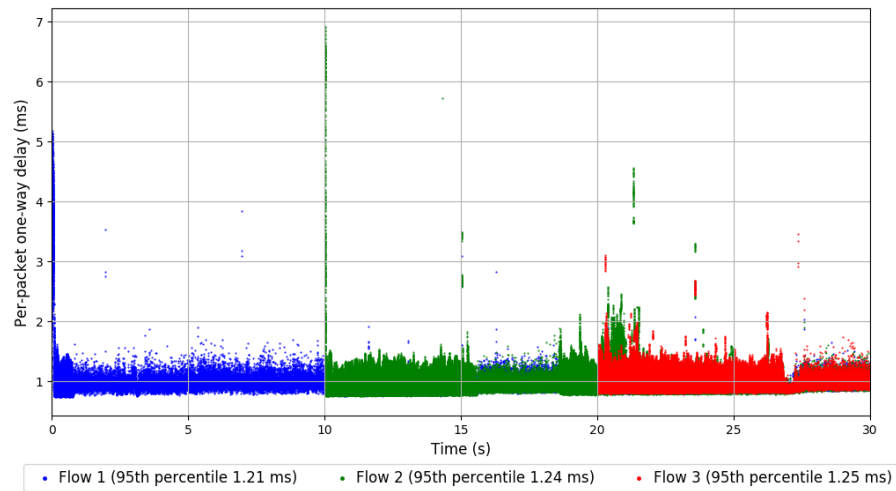
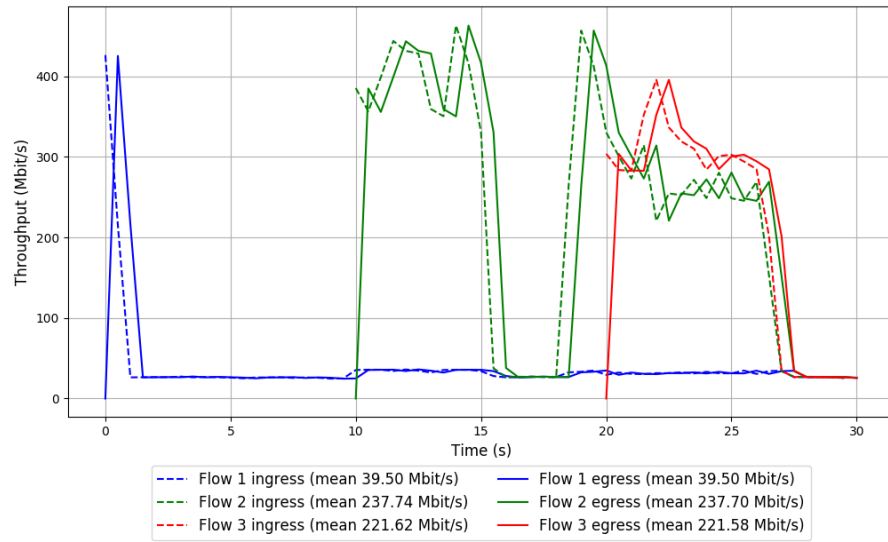


Run 4: Statistics of TCP Vegas

Start at: 2019-02-11 19:07:00
End at: 2019-02-11 19:07:30
Local clock offset: -2.539 ms
Remote clock offset: -1.462 ms

Below is generated by plot.py at 2019-02-11 20:43:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 271.53 Mbit/s
95th percentile per-packet one-way delay: 1.235 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 39.50 Mbit/s
95th percentile per-packet one-way delay: 1.207 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 237.70 Mbit/s
95th percentile per-packet one-way delay: 1.235 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 221.58 Mbit/s
95th percentile per-packet one-way delay: 1.245 ms
Loss rate: 0.02%

Run 4: Report of TCP Vegas — Data Link

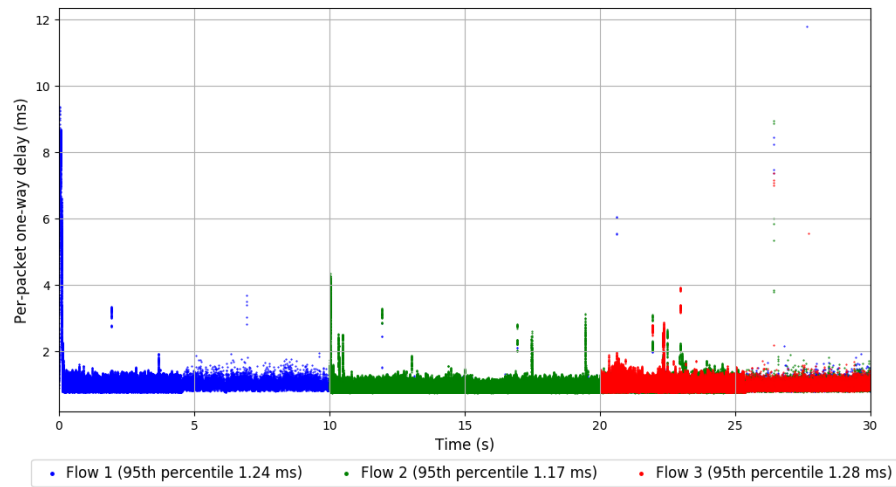
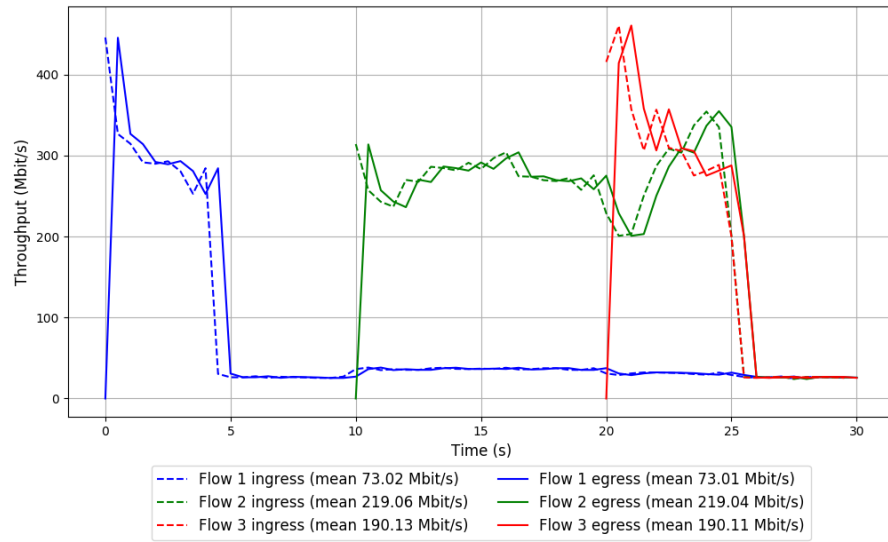


Run 5: Statistics of TCP Vegas

Start at: 2019-02-11 19:37:05
End at: 2019-02-11 19:37:35
Local clock offset: 0.298 ms
Remote clock offset: -0.596 ms

Below is generated by plot.py at 2019-02-11 20:43:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 282.15 Mbit/s
95th percentile per-packet one-way delay: 1.222 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 73.01 Mbit/s
95th percentile per-packet one-way delay: 1.237 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 219.04 Mbit/s
95th percentile per-packet one-way delay: 1.174 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 190.11 Mbit/s
95th percentile per-packet one-way delay: 1.277 ms
Loss rate: 0.01%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-02-11 17:45:04

End at: 2019-02-11 17:45:34

Local clock offset: -0.504 ms

Remote clock offset: 1.532 ms

Below is generated by plot.py at 2019-02-11 20:43:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 262.17 Mbit/s

95th percentile per-packet one-way delay: 14.378 ms

Loss rate: 2.38%

-- Flow 1:

Average throughput: 139.28 Mbit/s

95th percentile per-packet one-way delay: 10.487 ms

Loss rate: 1.79%

-- Flow 2:

Average throughput: 121.57 Mbit/s

95th percentile per-packet one-way delay: 49.543 ms

Loss rate: 2.38%

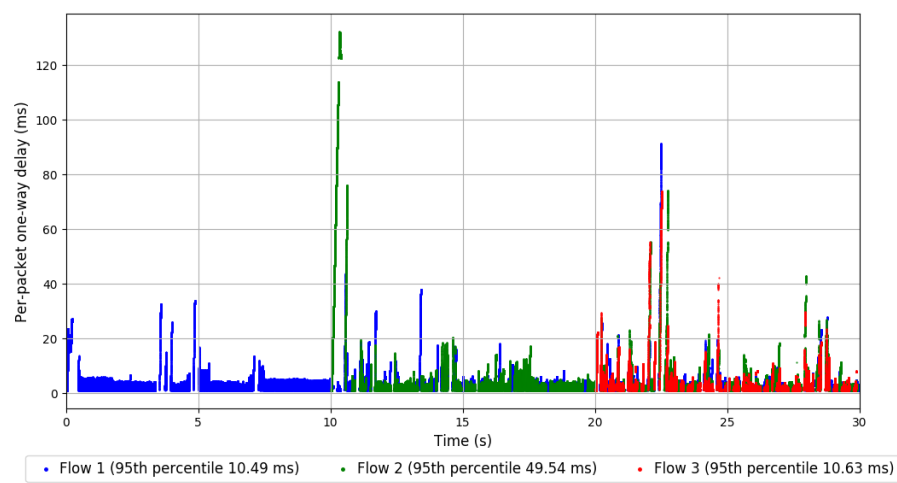
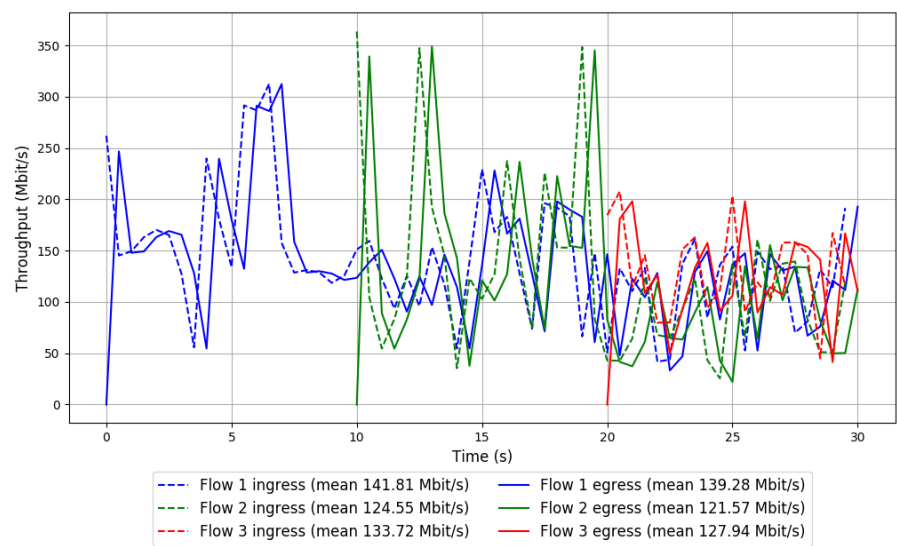
-- Flow 3:

Average throughput: 127.94 Mbit/s

95th percentile per-packet one-way delay: 10.630 ms

Loss rate: 4.30%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-02-11 18:15:09

End at: 2019-02-11 18:15:39

Local clock offset: 0.764 ms

Remote clock offset: 0.15 ms

Below is generated by plot.py at 2019-02-11 20:43:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 276.57 Mbit/s

95th percentile per-packet one-way delay: 13.703 ms

Loss rate: 4.39%

-- Flow 1:

Average throughput: 142.85 Mbit/s

95th percentile per-packet one-way delay: 12.873 ms

Loss rate: 3.63%

-- Flow 2:

Average throughput: 125.86 Mbit/s

95th percentile per-packet one-way delay: 11.453 ms

Loss rate: 5.83%

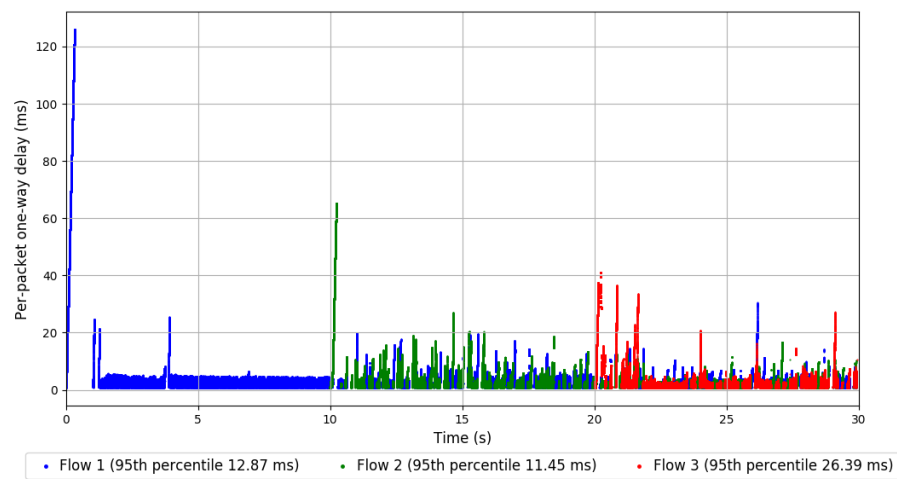
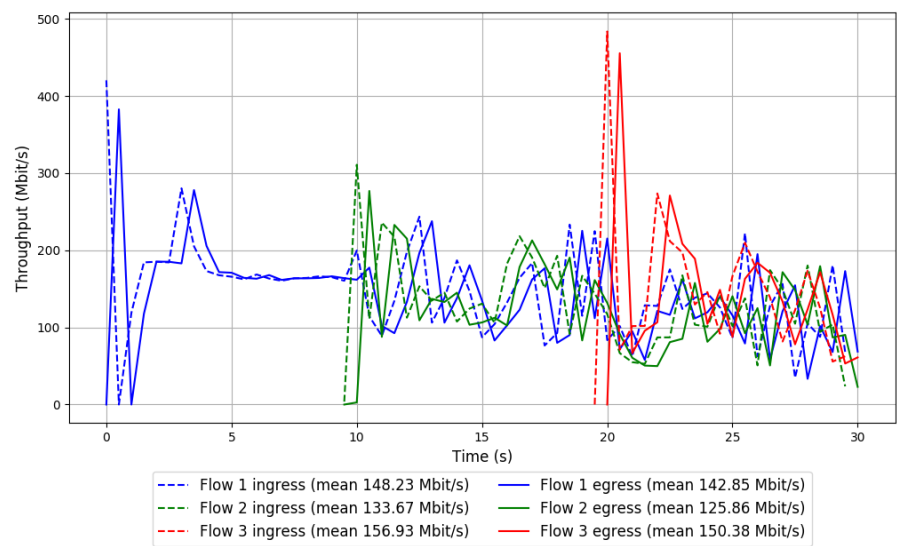
-- Flow 3:

Average throughput: 150.38 Mbit/s

95th percentile per-packet one-way delay: 26.390 ms

Loss rate: 4.09%

Run 2: Report of Verus — Data Link

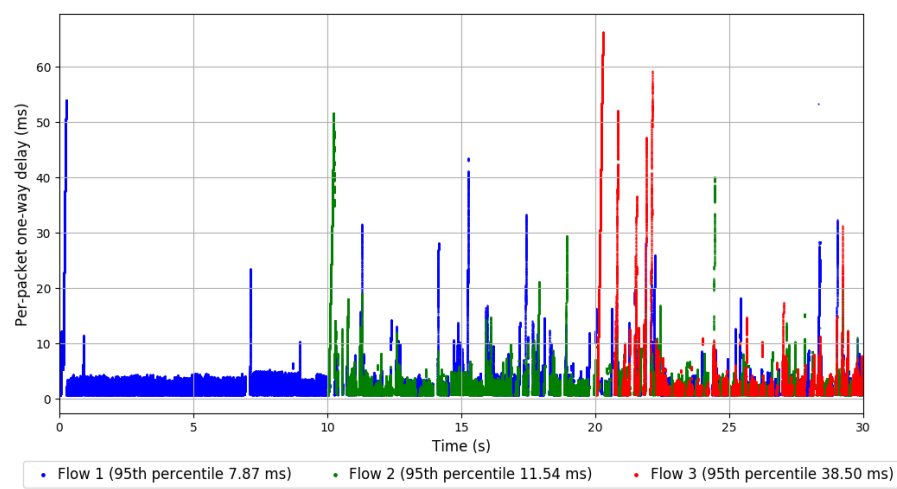
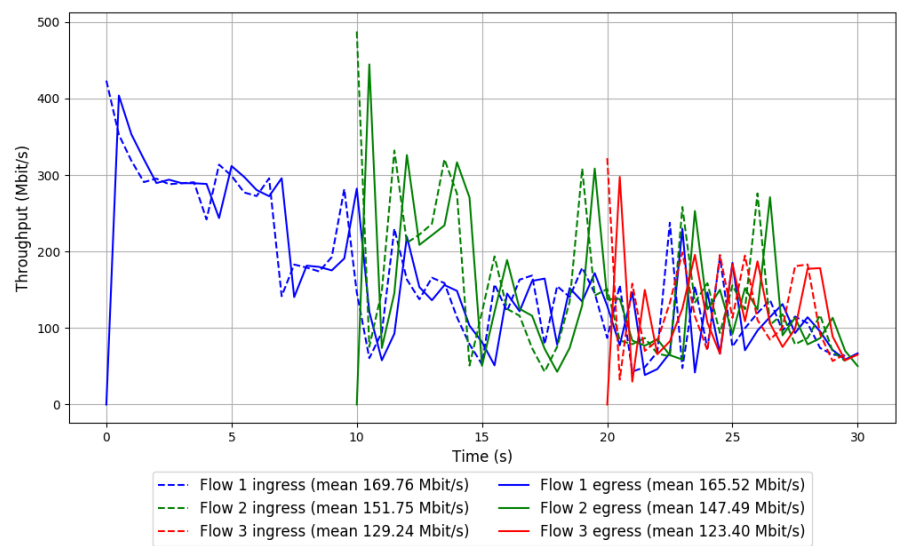


Run 3: Statistics of Verus

Start at: 2019-02-11 18:45:11
End at: 2019-02-11 18:45:41
Local clock offset: -2.007 ms
Remote clock offset: -4.007 ms

Below is generated by plot.py at 2019-02-11 20:43:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 304.56 Mbit/s
95th percentile per-packet one-way delay: 11.167 ms
Loss rate: 2.85%
-- Flow 1:
Average throughput: 165.52 Mbit/s
95th percentile per-packet one-way delay: 7.868 ms
Loss rate: 2.49%
-- Flow 2:
Average throughput: 147.49 Mbit/s
95th percentile per-packet one-way delay: 11.540 ms
Loss rate: 2.78%
-- Flow 3:
Average throughput: 123.40 Mbit/s
95th percentile per-packet one-way delay: 38.504 ms
Loss rate: 4.47%

Run 3: Report of Verus — Data Link

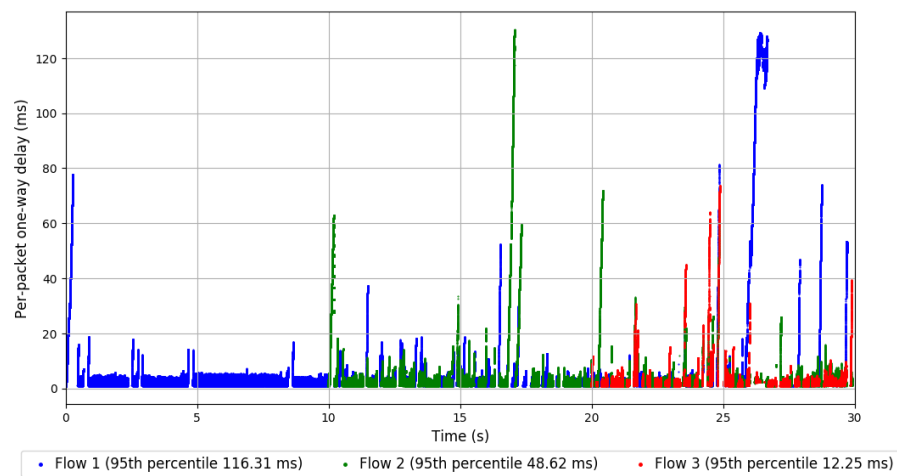
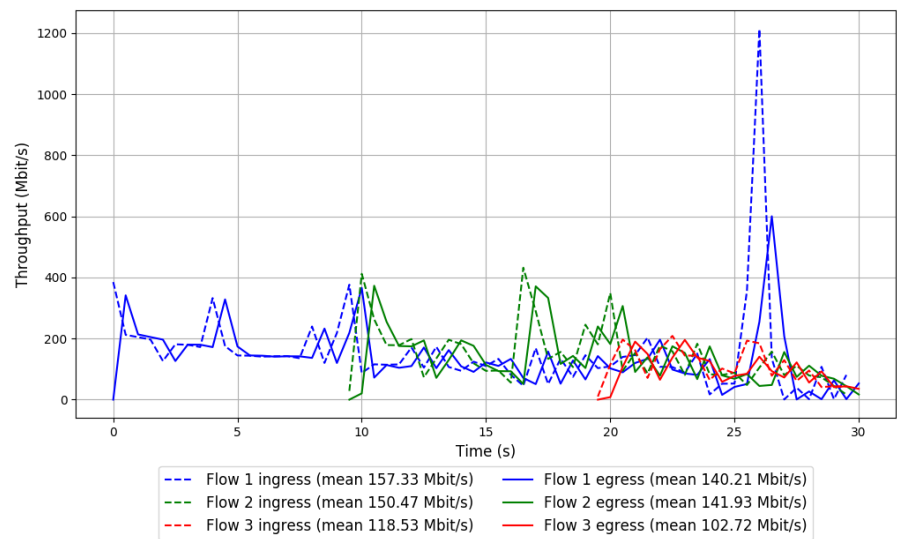


Run 4: Statistics of Verus

Start at: 2019-02-11 19:15:03
End at: 2019-02-11 19:15:33
Local clock offset: -0.74 ms
Remote clock offset: -0.395 ms

Below is generated by plot.py at 2019-02-11 20:44:11
Datalink statistics
-- Total of 3 flows:
Average throughput: 268.00 Mbit/s
95th percentile per-packet one-way delay: 67.510 ms
Loss rate: 9.31%
-- Flow 1:
Average throughput: 140.21 Mbit/s
95th percentile per-packet one-way delay: 116.310 ms
Loss rate: 10.73%
-- Flow 2:
Average throughput: 141.93 Mbit/s
95th percentile per-packet one-way delay: 48.617 ms
Loss rate: 5.68%
-- Flow 3:
Average throughput: 102.72 Mbit/s
95th percentile per-packet one-way delay: 12.249 ms
Loss rate: 13.00%

Run 4: Report of Verus — Data Link

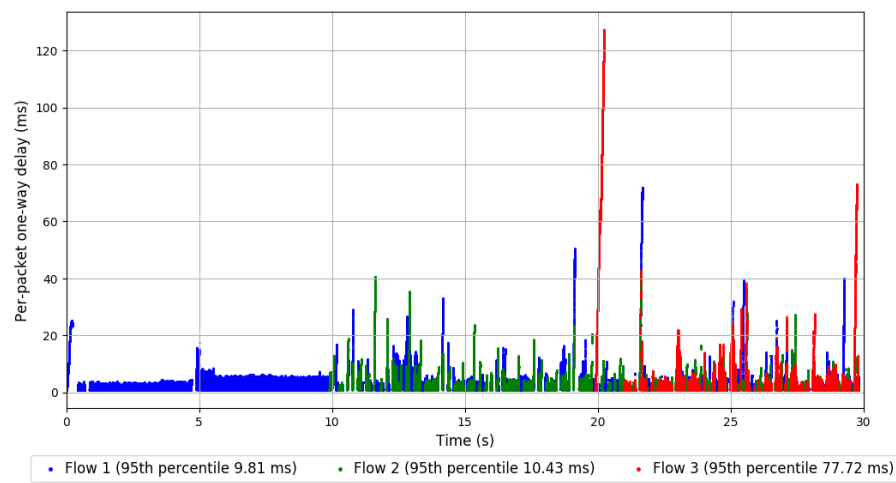
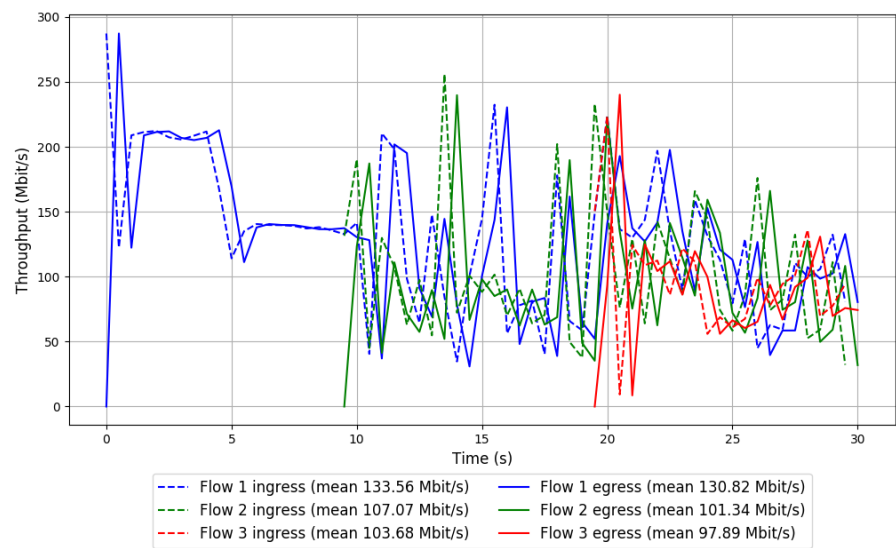


Run 5: Statistics of Verus

Start at: 2019-02-11 19:45:19
End at: 2019-02-11 19:45:49
Local clock offset: -0.202 ms
Remote clock offset: -1.126 ms

Below is generated by plot.py at 2019-02-11 20:44:11
Datalink statistics
-- Total of 3 flows:
Average throughput: 231.07 Mbit/s
95th percentile per-packet one-way delay: 16.426 ms
Loss rate: 3.53%
-- Flow 1:
Average throughput: 130.82 Mbit/s
95th percentile per-packet one-way delay: 9.810 ms
Loss rate: 2.05%
-- Flow 2:
Average throughput: 101.34 Mbit/s
95th percentile per-packet one-way delay: 10.428 ms
Loss rate: 5.35%
-- Flow 3:
Average throughput: 97.89 Mbit/s
95th percentile per-packet one-way delay: 77.723 ms
Loss rate: 5.47%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-02-11 17:30:11

End at: 2019-02-11 17:30:41

Local clock offset: -3.162 ms

Remote clock offset: 1.996 ms

Below is generated by plot.py at 2019-02-11 20:45:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 406.47 Mbit/s

95th percentile per-packet one-way delay: 1.716 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 208.19 Mbit/s

95th percentile per-packet one-way delay: 1.381 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 242.99 Mbit/s

95th percentile per-packet one-way delay: 3.068 ms

Loss rate: 0.02%

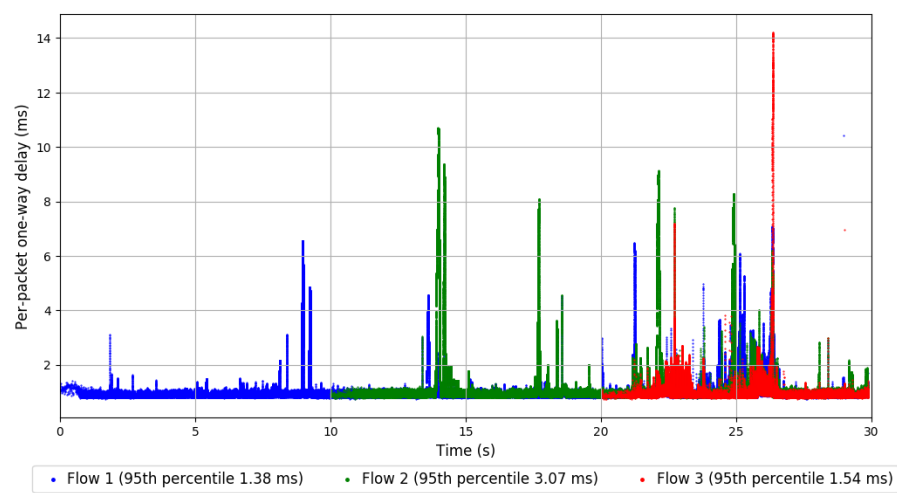
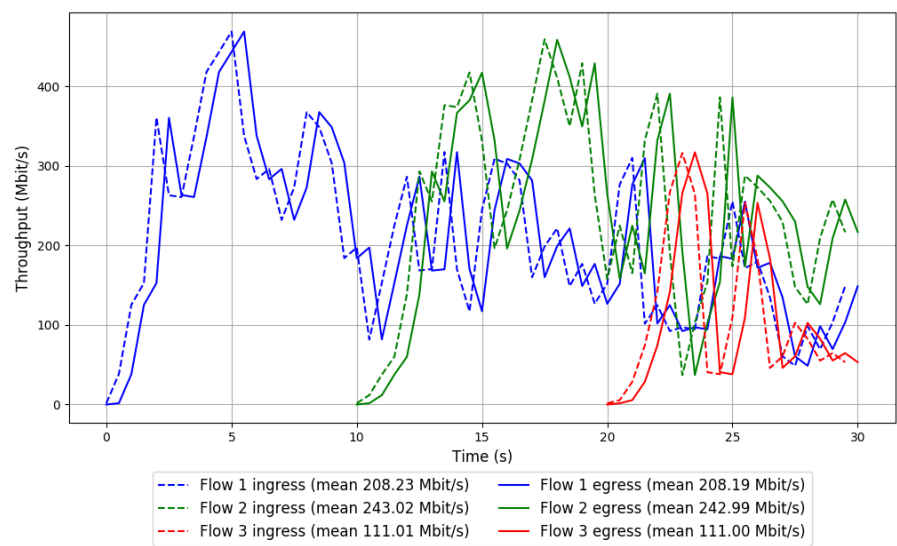
-- Flow 3:

Average throughput: 111.00 Mbit/s

95th percentile per-packet one-way delay: 1.537 ms

Loss rate: 0.01%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-02-11 18:00:22

End at: 2019-02-11 18:00:52

Local clock offset: 0.796 ms

Remote clock offset: 0.276 ms

Below is generated by plot.py at 2019-02-11 20:45:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 241.73 Mbit/s

95th percentile per-packet one-way delay: 152.458 ms

Loss rate: 3.38%

-- Flow 1:

Average throughput: 146.00 Mbit/s

95th percentile per-packet one-way delay: 161.541 ms

Loss rate: 5.47%

-- Flow 2:

Average throughput: 118.61 Mbit/s

95th percentile per-packet one-way delay: 24.964 ms

Loss rate: 0.00%

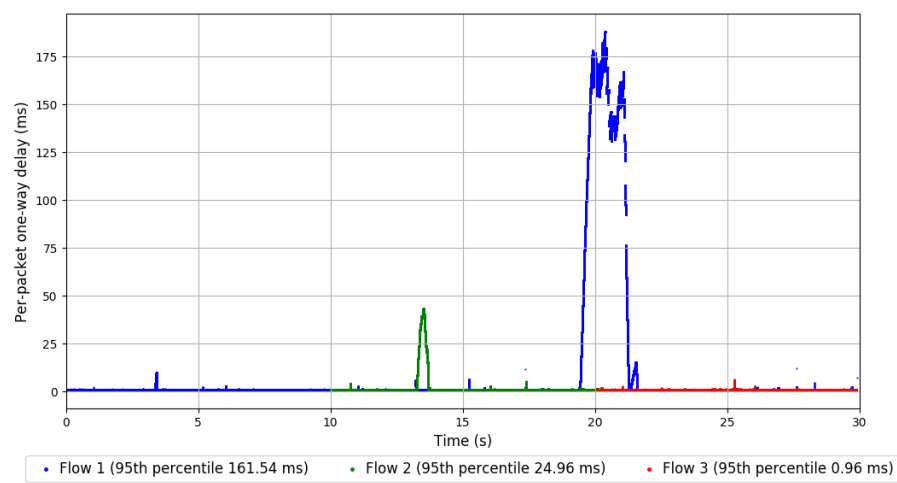
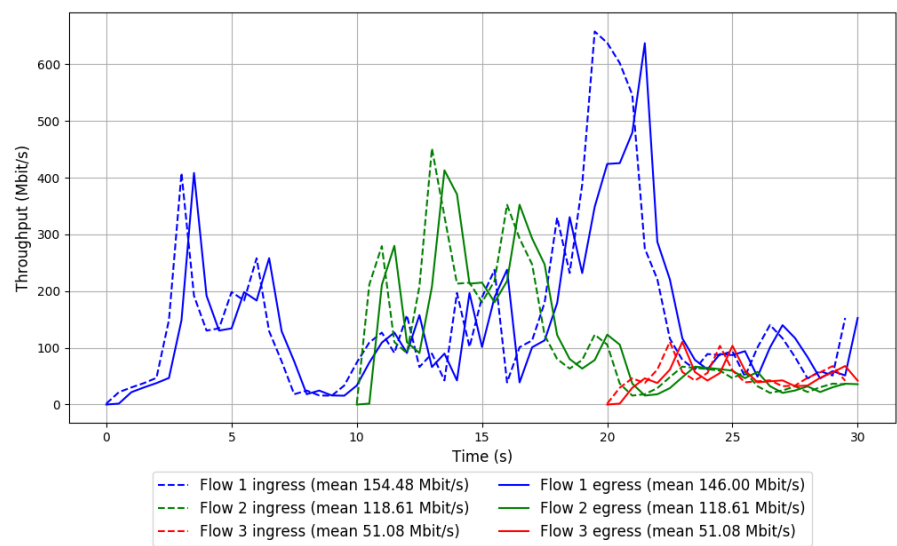
-- Flow 3:

Average throughput: 51.08 Mbit/s

95th percentile per-packet one-way delay: 0.957 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link

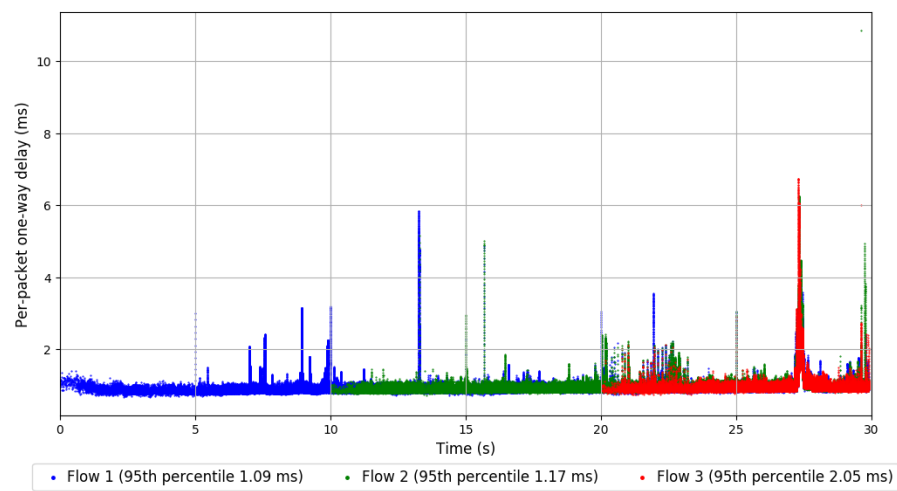
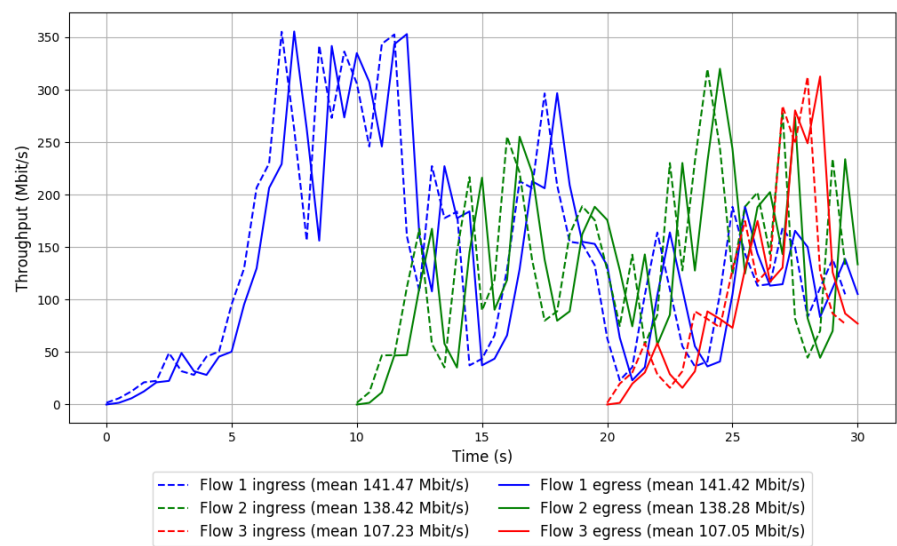


Run 3: Statistics of PCC-Vivace

Start at: 2019-02-11 18:30:33
End at: 2019-02-11 18:31:03
Local clock offset: 0.862 ms
Remote clock offset: -2.275 ms

Below is generated by plot.py at 2019-02-11 20:45:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 268.73 Mbit/s
95th percentile per-packet one-way delay: 1.170 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 141.42 Mbit/s
95th percentile per-packet one-way delay: 1.091 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 138.28 Mbit/s
95th percentile per-packet one-way delay: 1.174 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 107.05 Mbit/s
95th percentile per-packet one-way delay: 2.046 ms
Loss rate: 0.17%

Run 3: Report of PCC-Vivace — Data Link

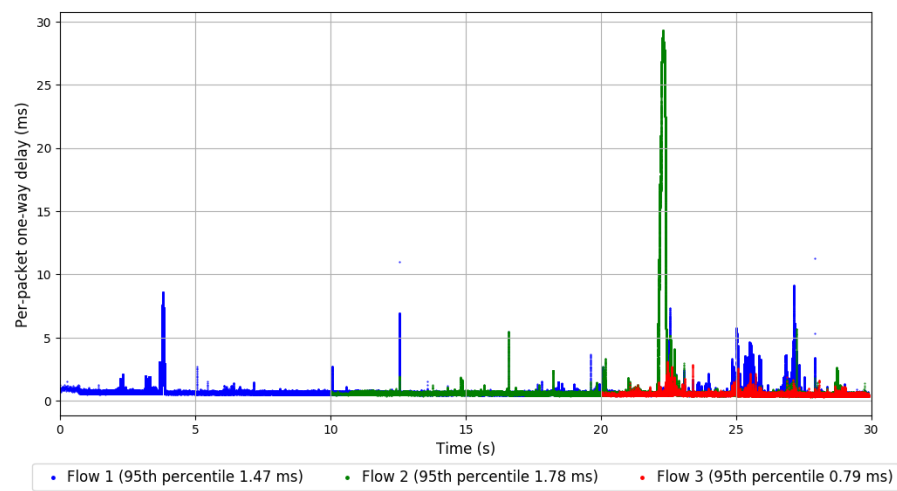
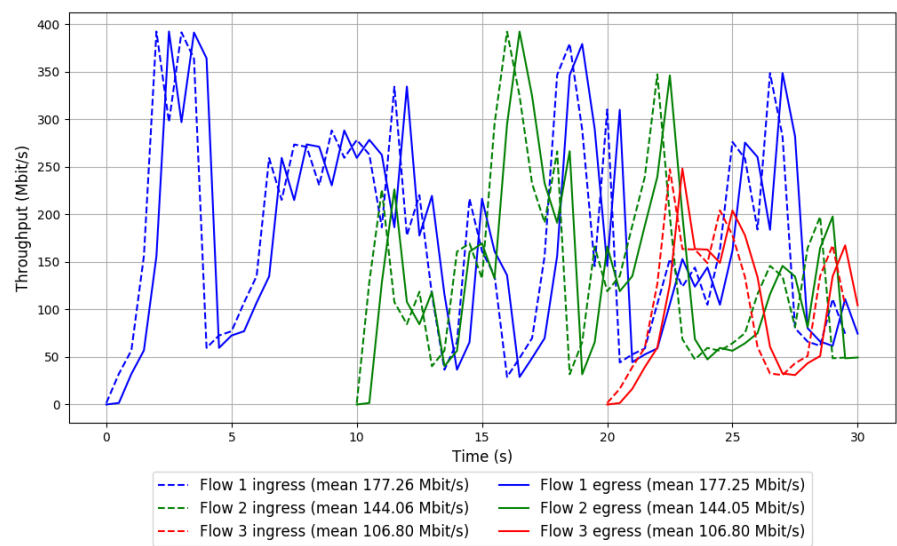


Run 4: Statistics of PCC-Vivace

Start at: 2019-02-11 19:00:31
End at: 2019-02-11 19:01:01
Local clock offset: -3.384 ms
Remote clock offset: -3.057 ms

Below is generated by plot.py at 2019-02-11 20:45:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 308.32 Mbit/s
95th percentile per-packet one-way delay: 1.364 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 177.25 Mbit/s
95th percentile per-packet one-way delay: 1.470 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 144.05 Mbit/s
95th percentile per-packet one-way delay: 1.776 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 106.80 Mbit/s
95th percentile per-packet one-way delay: 0.791 ms
Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-02-11 19:30:35

End at: 2019-02-11 19:31:05

Local clock offset: 0.455 ms

Remote clock offset: 0.089 ms

Below is generated by plot.py at 2019-02-11 20:45:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 313.46 Mbit/s

95th percentile per-packet one-way delay: 2.409 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 159.12 Mbit/s

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

Loss rate: 0.02%

-- Flow 2:

Average throughput: 165.98 Mbit/s

95th percentile per-packet one-way delay: 6.058 ms

Loss rate: 0.04%

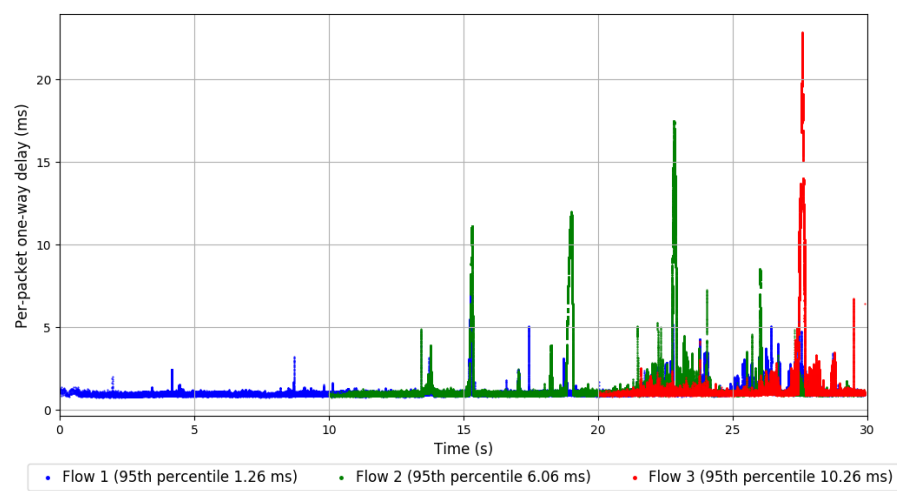
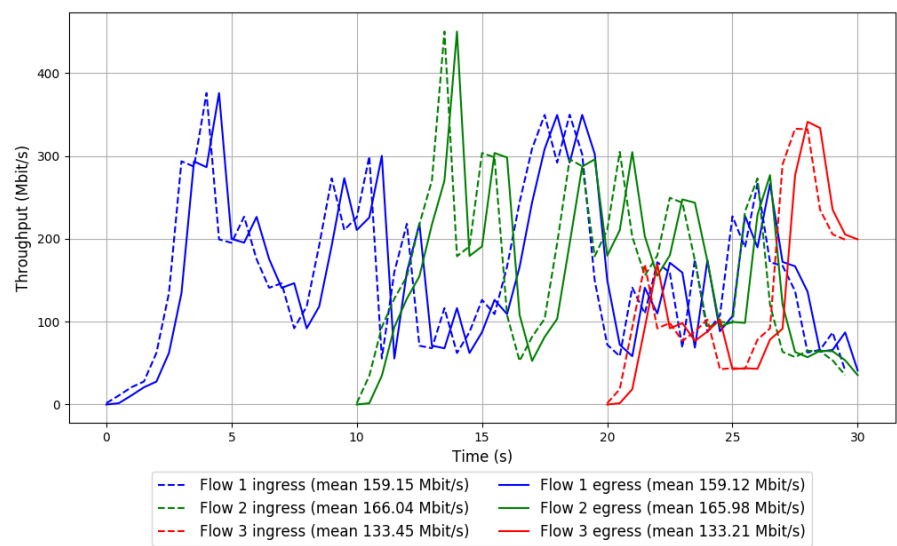
-- Flow 3:

Average throughput: 133.21 Mbit/s

95th percentile per-packet one-way delay: 10.260 ms

Loss rate: 0.13%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2019-02-11 17:27:36

End at: 2019-02-11 17:28:06

Local clock offset: -3.02 ms

Remote clock offset: 2.162 ms

Below is generated by plot.py at 2019-02-11 20:45:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.07 Mbit/s

95th percentile per-packet one-way delay: 1.181 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.14 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 1.086 ms

Loss rate: 0.00%

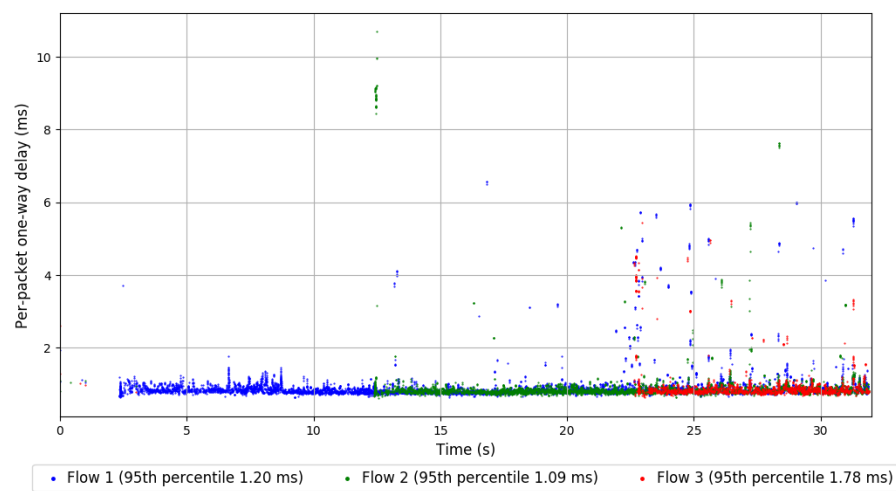
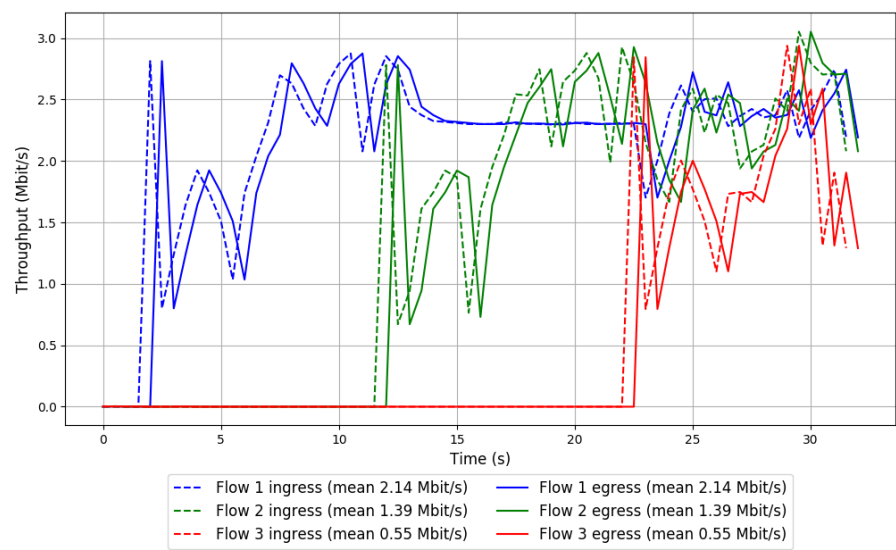
-- Flow 3:

Average throughput: 0.55 Mbit/s

95th percentile per-packet one-way delay: 1.783 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-02-11 17:57:49

End at: 2019-02-11 17:58:19

Local clock offset: 0.654 ms

Remote clock offset: 0.528 ms

Below is generated by plot.py at 2019-02-11 20:45:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 5.904 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.296 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.969 ms

Loss rate: 0.00%

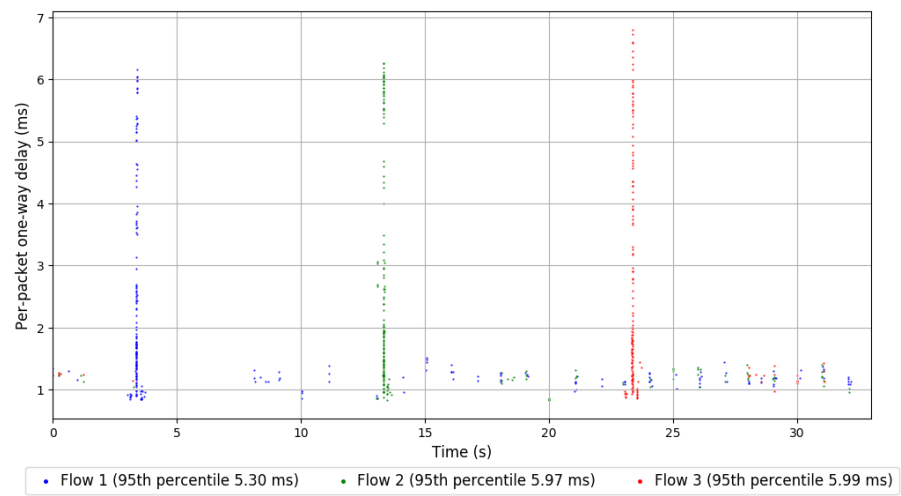
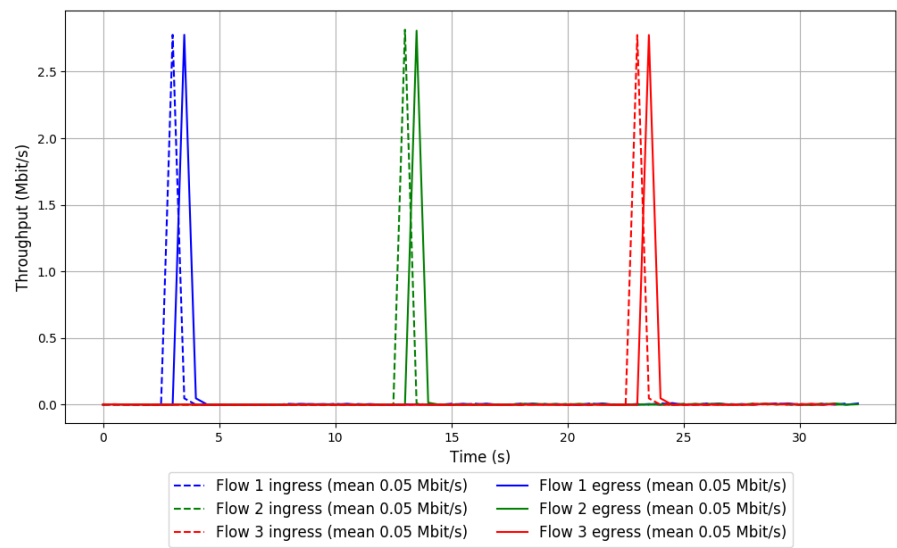
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.990 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

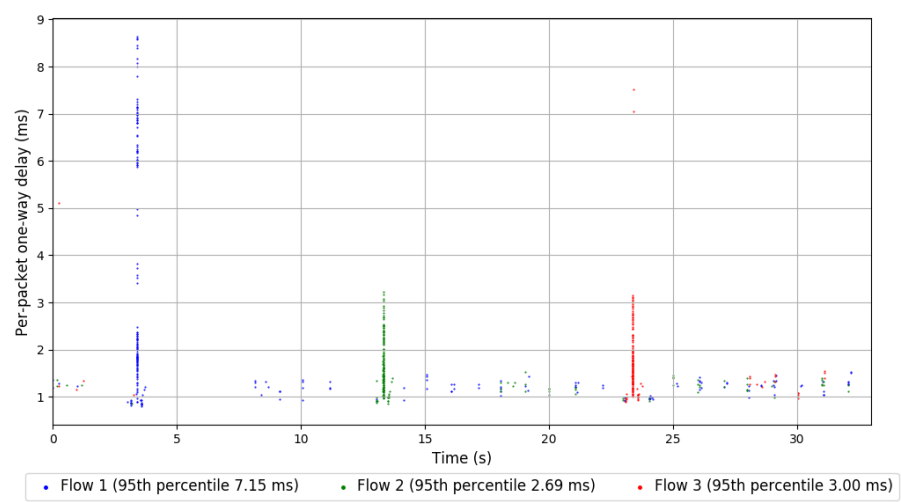
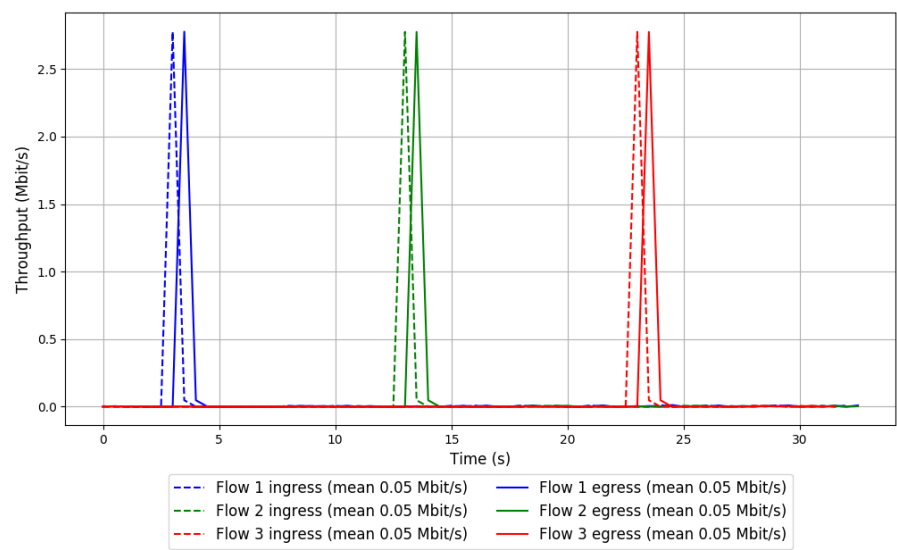


Run 3: Statistics of WebRTC media

Start at: 2019-02-11 18:27:59
End at: 2019-02-11 18:28:29
Local clock offset: 0.83 ms
Remote clock offset: -1.639 ms

Below is generated by plot.py at 2019-02-11 20:45:12
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 6.715 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.148 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.687 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.995 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

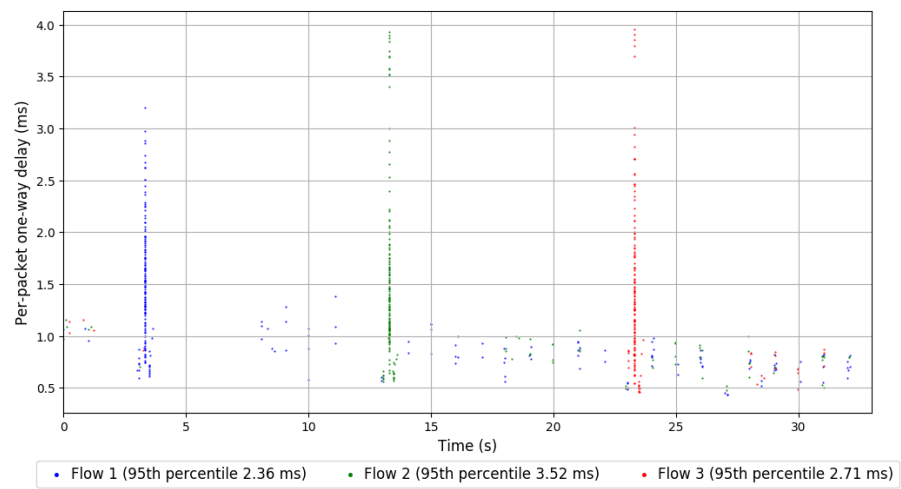
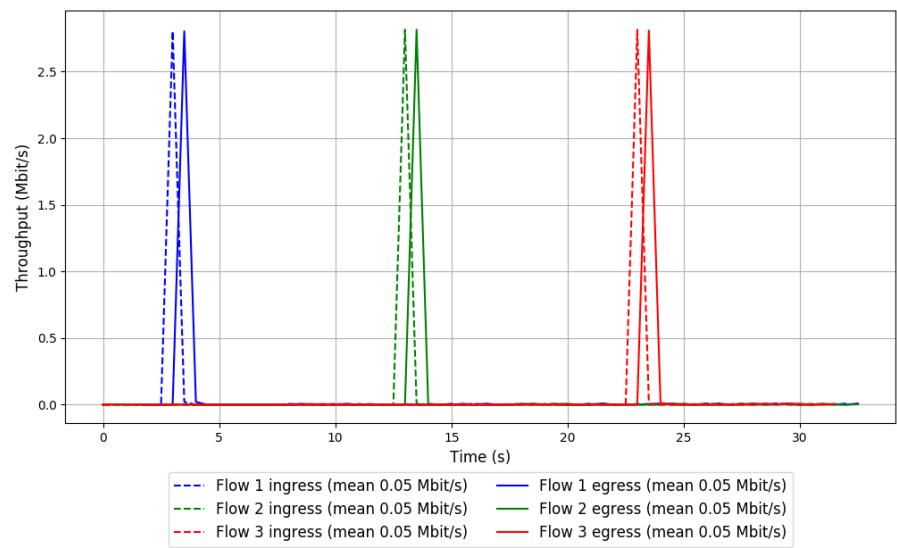


Run 4: Statistics of WebRTC media

Start at: 2019-02-11 18:57:56
End at: 2019-02-11 18:58:26
Local clock offset: -3.249 ms
Remote clock offset: -4.023 ms

Below is generated by plot.py at 2019-02-11 20:45:12
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 2.708 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.363 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.518 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 2.708 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-02-11 19:27:59

End at: 2019-02-11 19:28:29

Local clock offset: 0.348 ms

Remote clock offset: 0.048 ms

Below is generated by plot.py at 2019-02-11 20:45:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 4.782 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

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

Loss rate: 0.05%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 2.008 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.05 Mbit/s

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

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

