

Pantheon Report

Generated at 2019-05-30 14:31:03 (UTC).

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

Repeated the test of 21 congestion control schemes 5 times.

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

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

System info:

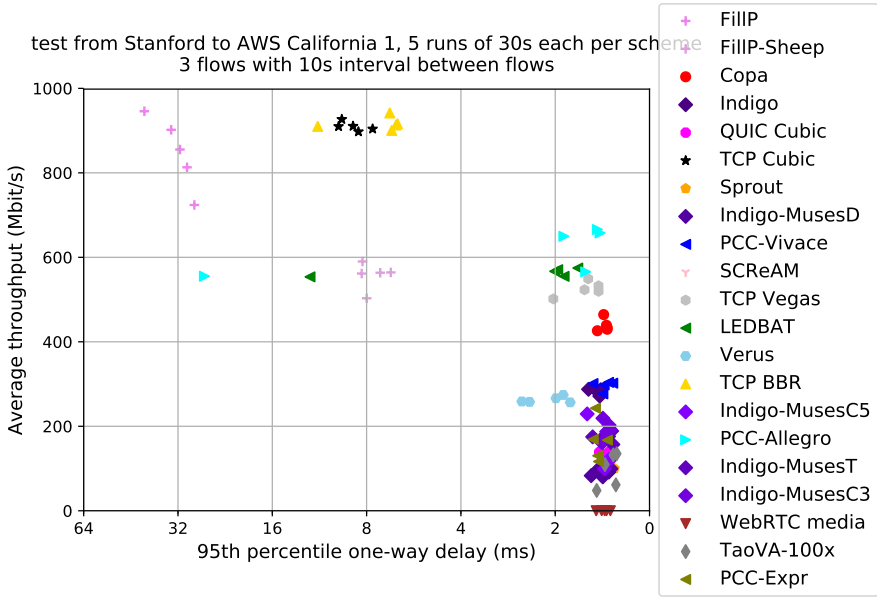
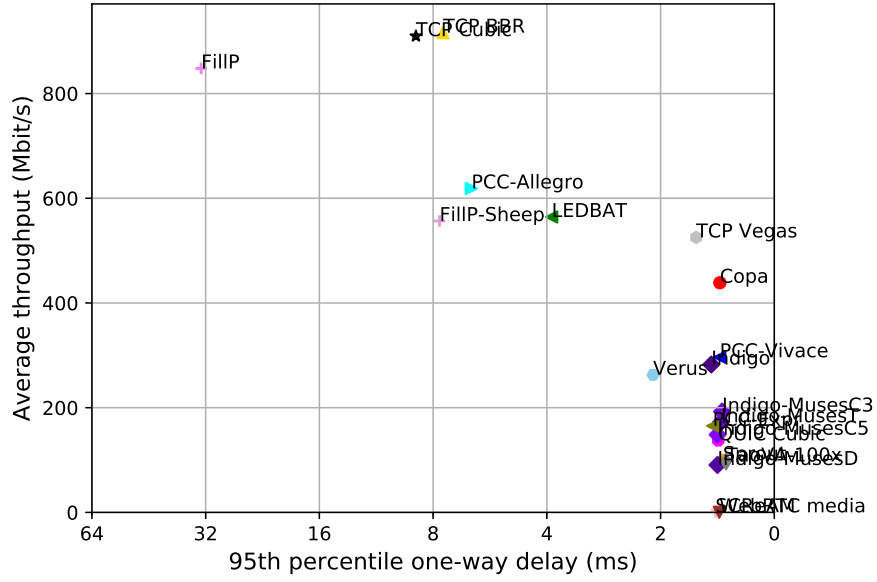
```
Linux 4.15.0-1035-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-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 Stanford to AWS California 1, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	547.10	419.46	270.13	7.70	5.85	7.66	0.03	0.02	0.07
Copa	5	257.53	214.46	115.21	0.95	0.97	0.96	0.00	0.01	0.02
TCP Cubic	5	534.83	402.29	321.39	9.24	7.46	7.58	0.02	0.04	0.09
FillP	5	526.35	320.96	326.91	30.54	25.52	37.26	0.08	0.11	0.31
FillP-Sheep	5	414.44	188.81	50.31	8.14	5.19	3.47	0.00	0.00	0.00
Indigo	5	154.98	137.85	109.02	1.03	1.16	1.24	0.00	0.01	0.06
Indigo-MusesC3	5	145.61	60.67	33.29	0.92	0.93	0.87	0.00	0.00	0.02
Indigo-MusesC5	5	102.87	57.56	34.49	1.00	1.00	0.89	0.00	0.00	0.05
Indigo-MusesD	5	58.96	30.54	44.92	0.99	0.99	1.01	0.01	0.00	0.02
Indigo-MusesT	5	131.00	50.62	34.94	0.94	0.91	0.88	0.00	0.00	0.05
LEDBAT	5	342.59	244.02	177.92	3.98	1.95	1.59	0.00	0.01	0.02
PCC-Allegro	5	472.91	175.98	88.16	7.08	1.27	1.17	0.01	0.01	0.03
PCC-Expr	5	77.18	117.47	30.10	1.00	1.11	1.11	0.01	0.01	0.01
QUIC Cubic	5	73.68	67.79	56.77	0.98	0.98	1.00	0.00	0.01	0.02
SCReAM	5	0.22	0.22	0.22	1.03	1.03	1.04	0.00	0.00	0.14
Sprout	5	50.23	50.13	49.87	0.89	0.92	0.92	0.01	0.01	0.04
TaoVA-100x	5	59.52	23.65	66.34	0.85	0.81	0.78	0.00	0.01	0.03
TCP Vegas	5	258.40	270.65	260.19	1.25	1.41	1.64	0.00	0.01	0.02
Verus	5	168.38	103.89	76.36	2.23	1.62	1.13	0.00	0.01	0.01
PCC-Vivace	5	203.49	101.98	76.03	0.95	1.00	1.05	0.00	0.01	0.03
WebRTC media	5	0.05	0.05	0.05	0.96	0.97	0.96	0.00	0.02	0.01

Run 1: Statistics of TCP BBR

Start at: 2019-05-30 11:03:33
End at: 2019-05-30 11:04:03
Local clock offset: -1.956 ms
Remote clock offset: -2.204 ms

Below is generated by plot.py at 2019-05-30 13:42:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 909.98 Mbit/s
95th percentile per-packet one-way delay: 11.456 ms
Loss rate: 0.06%

-- Flow 1:

Average throughput: 576.96 Mbit/s
95th percentile per-packet one-way delay: 11.743 ms
Loss rate: 0.08%

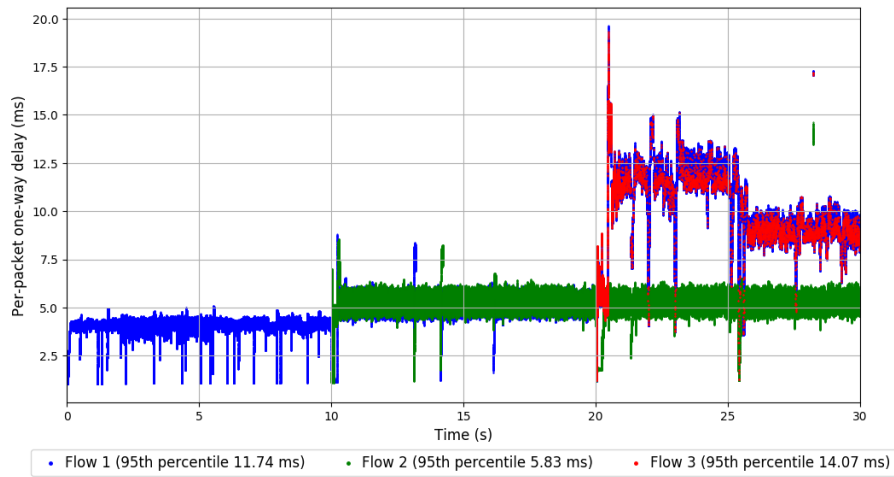
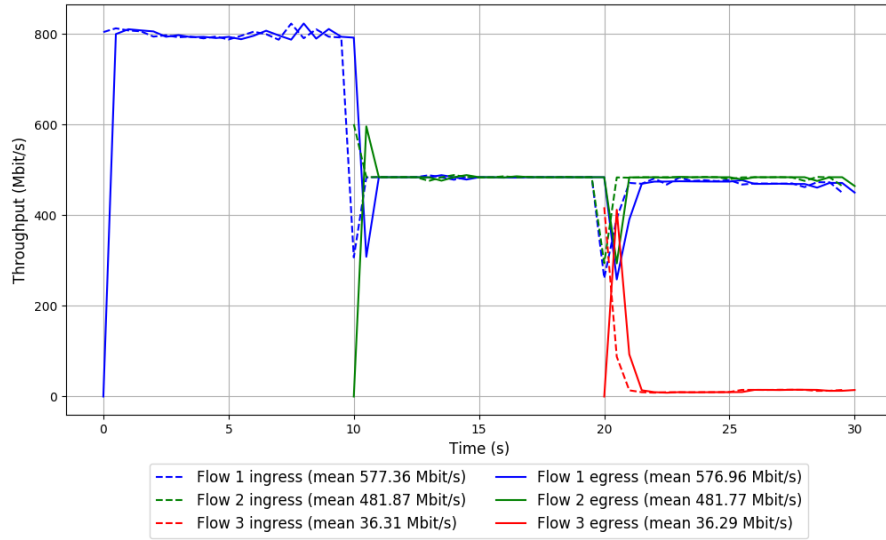
-- Flow 2:

Average throughput: 481.77 Mbit/s
95th percentile per-packet one-way delay: 5.832 ms
Loss rate: 0.03%

-- Flow 3:

Average throughput: 36.29 Mbit/s
95th percentile per-packet one-way delay: 14.073 ms
Loss rate: 0.10%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-05-30 11:33:57

End at: 2019-05-30 11:34:27

Local clock offset: -4.069 ms

Remote clock offset: 2.284 ms

Below is generated by plot.py at 2019-05-30 13:42:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 900.49 Mbit/s

95th percentile per-packet one-way delay: 6.652 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 521.13 Mbit/s

95th percentile per-packet one-way delay: 6.803 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 405.05 Mbit/s

95th percentile per-packet one-way delay: 5.772 ms

Loss rate: 0.02%

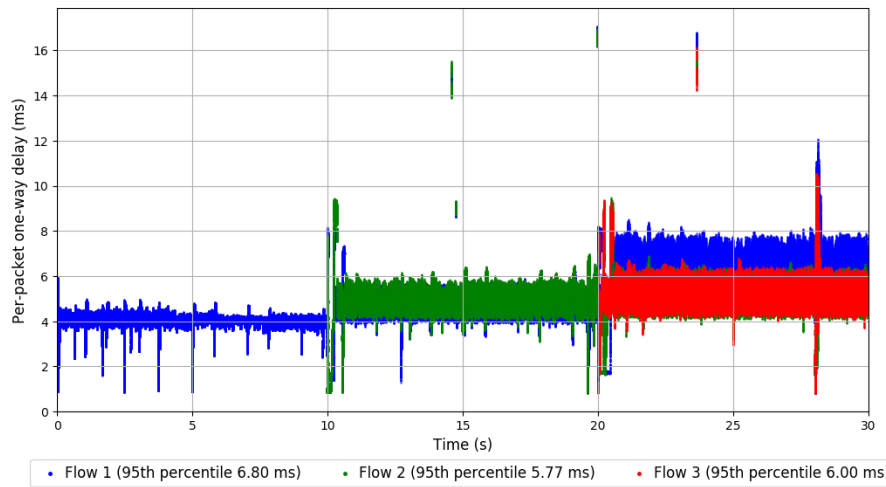
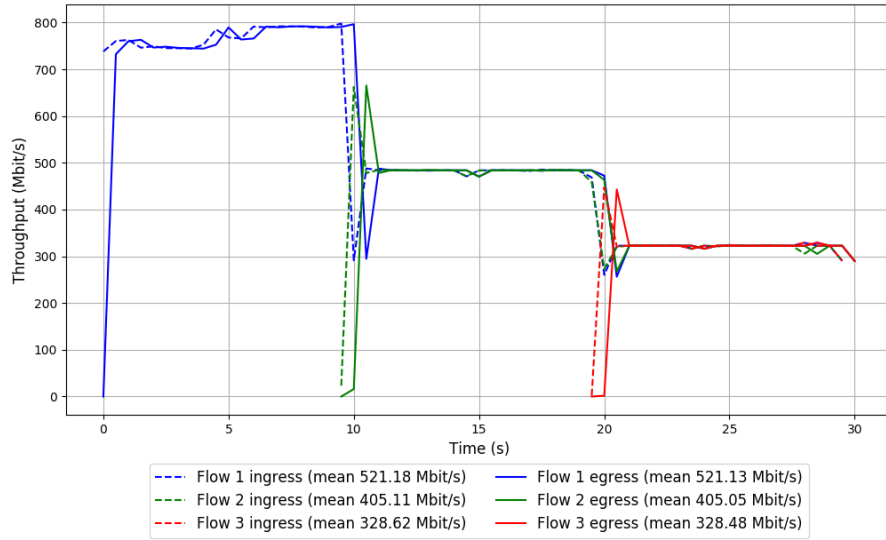
-- Flow 3:

Average throughput: 328.48 Mbit/s

95th percentile per-packet one-way delay: 5.995 ms

Loss rate: 0.06%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-05-30 12:04:21

End at: 2019-05-30 12:04:51

Local clock offset: -0.007 ms

Remote clock offset: 1.239 ms

Below is generated by plot.py at 2019-05-30 13:42:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 916.06 Mbit/s

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

Loss rate: 0.02%

-- Flow 1:

Average throughput: 537.25 Mbit/s

95th percentile per-packet one-way delay: 6.493 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 404.66 Mbit/s

95th percentile per-packet one-way delay: 5.782 ms

Loss rate: 0.02%

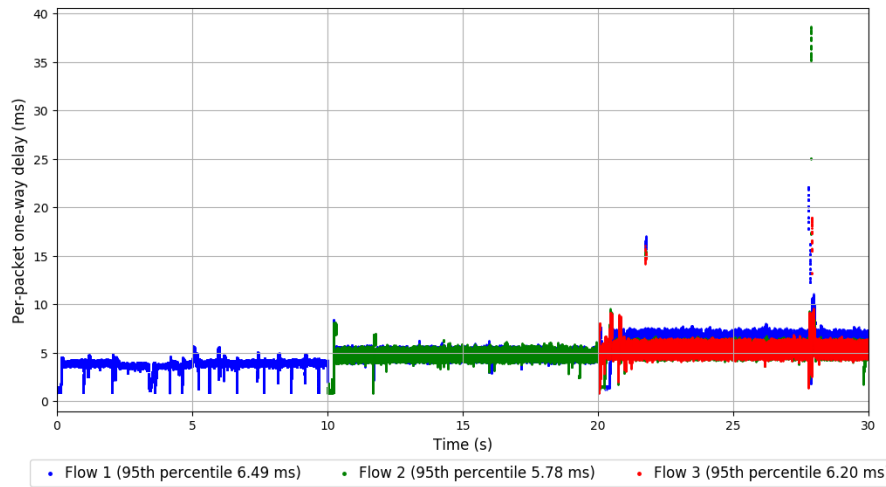
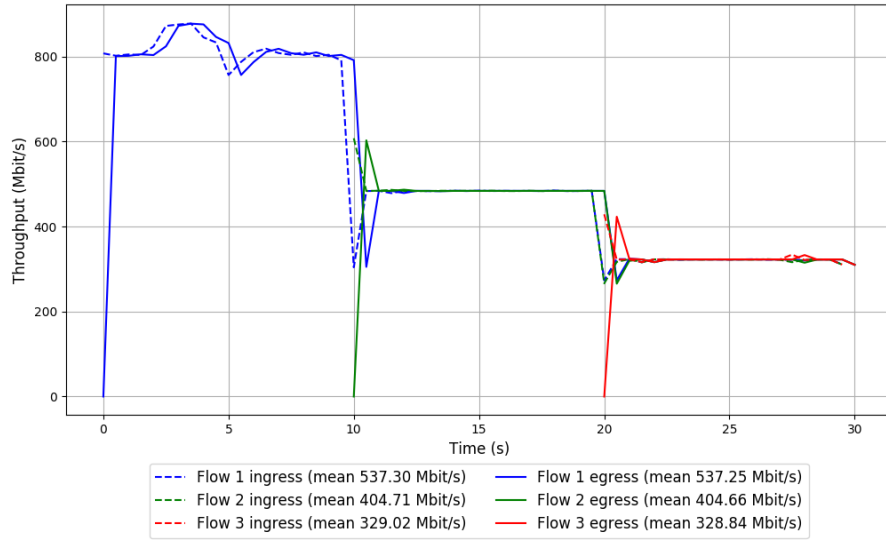
-- Flow 3:

Average throughput: 328.84 Mbit/s

95th percentile per-packet one-way delay: 6.195 ms

Loss rate: 0.06%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-05-30 12:34:43
End at: 2019-05-30 12:35:13
Local clock offset: 0.548 ms
Remote clock offset: -3.189 ms

Below is generated by plot.py at 2019-05-30 13:42:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 913.38 Mbit/s
95th percentile per-packet one-way delay: 6.439 ms
Loss rate: 0.02%

-- Flow 1:

Average throughput: 536.58 Mbit/s
95th percentile per-packet one-way delay: 6.549 ms
Loss rate: 0.02%

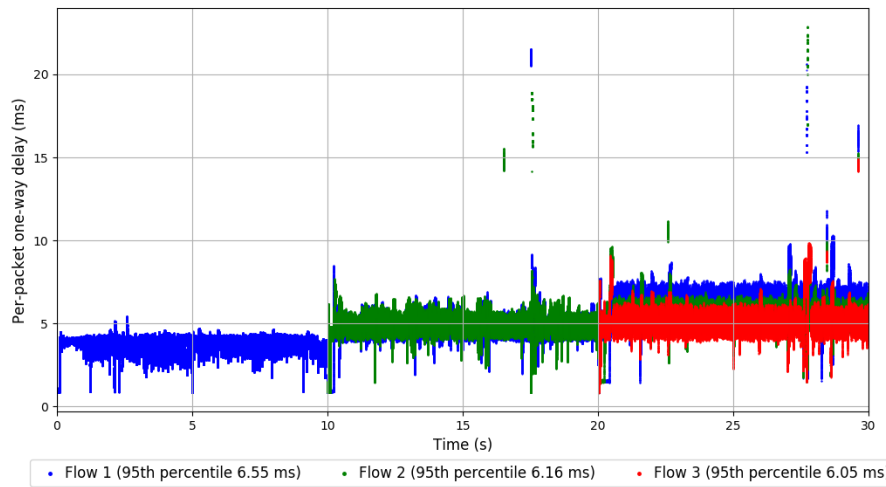
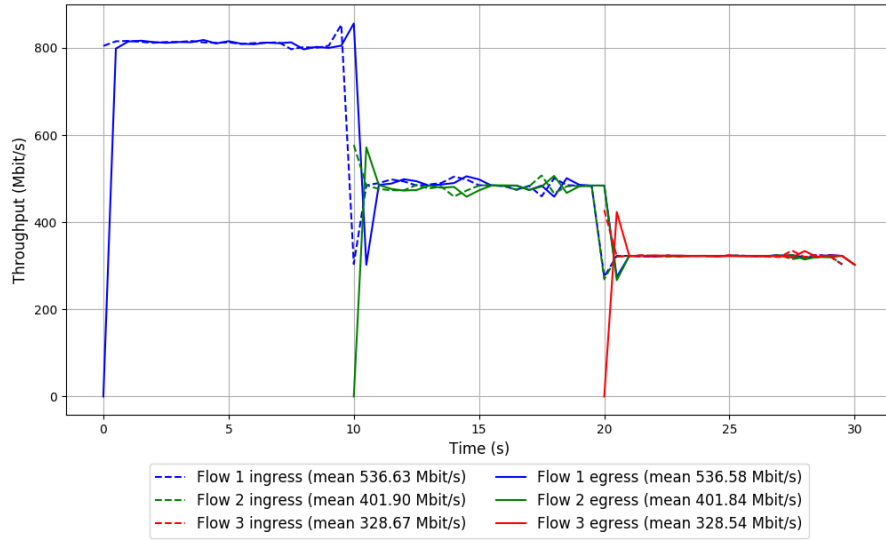
-- Flow 2:

Average throughput: 401.84 Mbit/s
95th percentile per-packet one-way delay: 6.161 ms
Loss rate: 0.03%

-- Flow 3:

Average throughput: 328.54 Mbit/s
95th percentile per-packet one-way delay: 6.052 ms
Loss rate: 0.06%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2019-05-30 13:04:54

End at: 2019-05-30 13:05:24

Local clock offset: 0.761 ms

Remote clock offset: 0.54 ms

Below is generated by plot.py at 2019-05-30 13:43:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 941.75 Mbit/s

95th percentile per-packet one-way delay: 6.747 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 563.58 Mbit/s

95th percentile per-packet one-way delay: 6.918 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 403.96 Mbit/s

95th percentile per-packet one-way delay: 5.686 ms

Loss rate: 0.02%

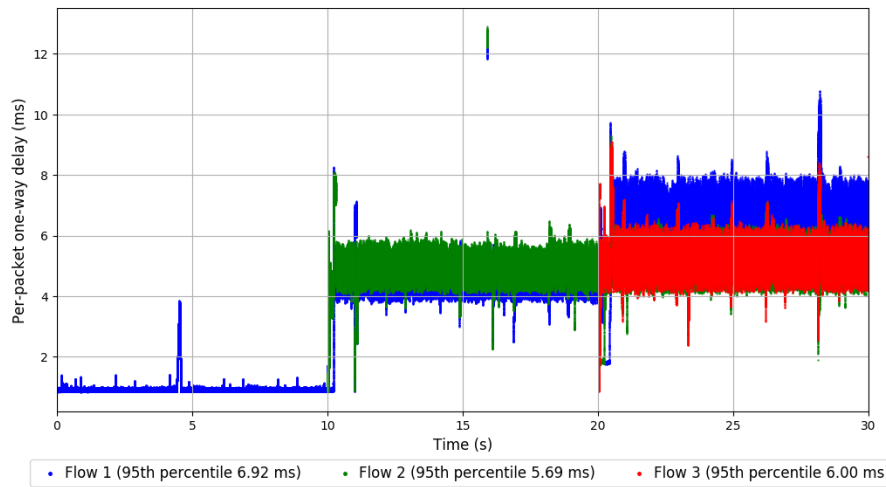
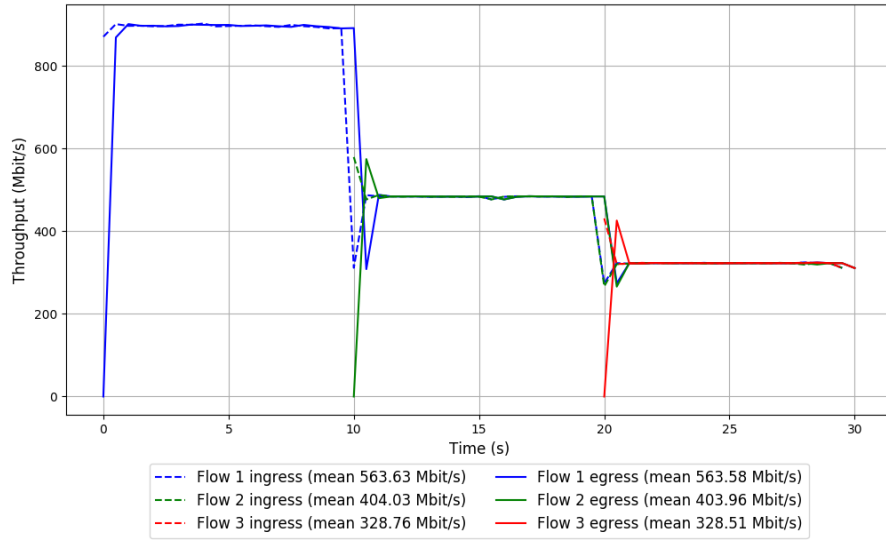
-- Flow 3:

Average throughput: 328.51 Mbit/s

95th percentile per-packet one-way delay: 6.005 ms

Loss rate: 0.06%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-05-30 11:05:18
End at: 2019-05-30 11:05:48
Local clock offset: -2.102 ms
Remote clock offset: -1.476 ms

Below is generated by plot.py at 2019-05-30 13:43:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 426.18 Mbit/s
95th percentile per-packet one-way delay: 1.106 ms
Loss rate: 0.01%

-- Flow 1:

Average throughput: 243.99 Mbit/s
95th percentile per-packet one-way delay: 1.086 ms
Loss rate: 0.00%

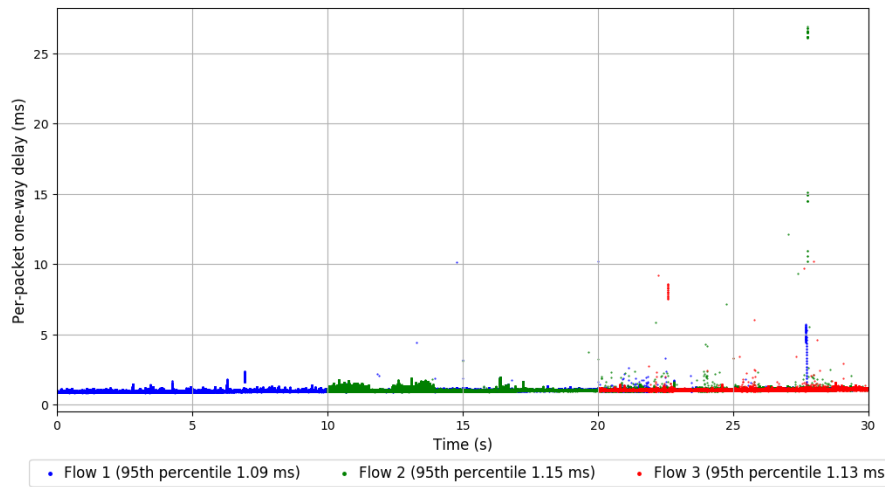
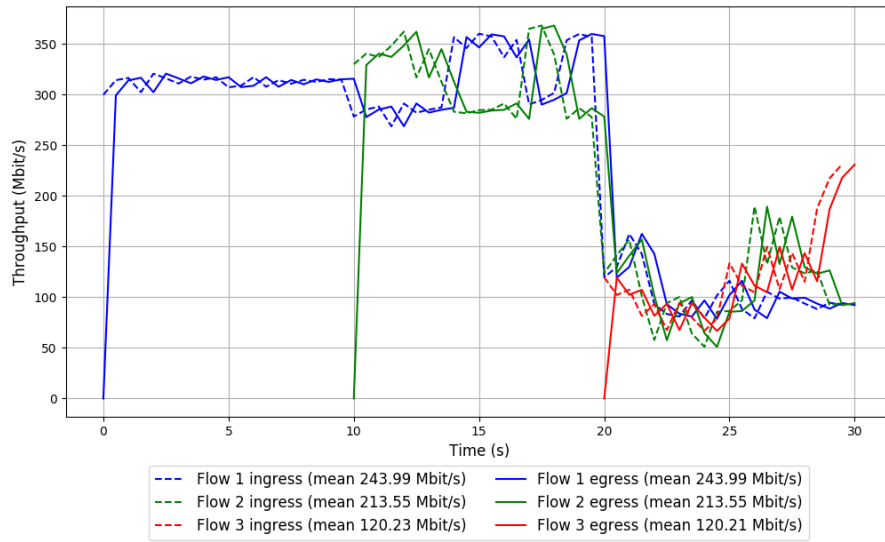
-- Flow 2:

Average throughput: 213.55 Mbit/s
95th percentile per-packet one-way delay: 1.146 ms
Loss rate: 0.01%

-- Flow 3:

Average throughput: 120.21 Mbit/s
95th percentile per-packet one-way delay: 1.133 ms
Loss rate: 0.03%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-05-30 11:35:41

End at: 2019-05-30 11:36:11

Local clock offset: -4.189 ms

Remote clock offset: 1.94 ms

Below is generated by plot.py at 2019-05-30 13:43:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 439.09 Mbit/s

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

Loss rate: 0.01%

-- Flow 1:

Average throughput: 253.78 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 222.52 Mbit/s

95th percentile per-packet one-way delay: 0.897 ms

Loss rate: 0.01%

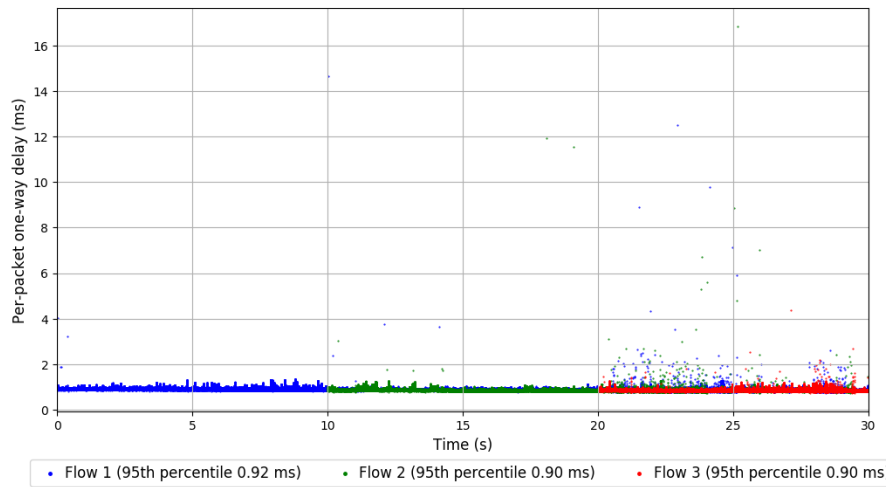
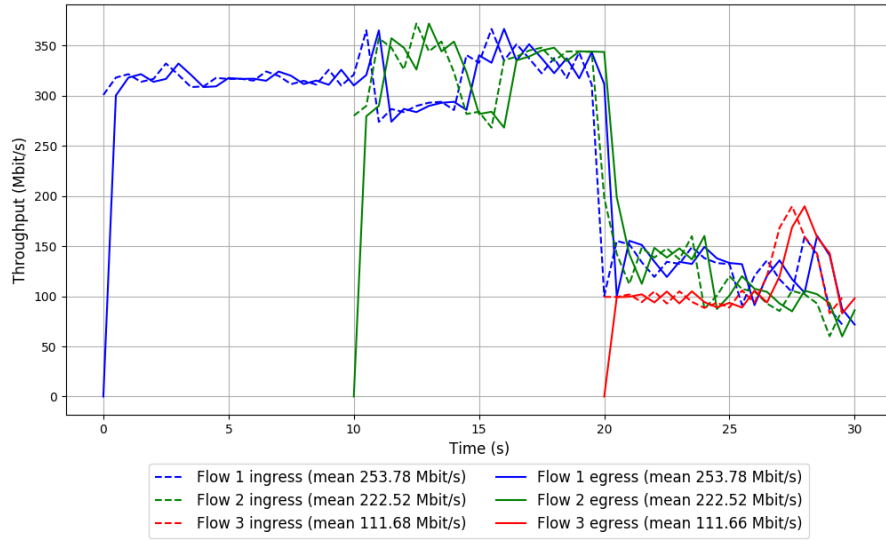
-- Flow 3:

Average throughput: 111.66 Mbit/s

95th percentile per-packet one-way delay: 0.898 ms

Loss rate: 0.03%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

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

End at: 2019-05-30 12:06:35

Local clock offset: 0.057 ms

Remote clock offset: 1.382 ms

Below is generated by plot.py at 2019-05-30 13:43:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 429.71 Mbit/s

95th percentile per-packet one-way delay: 0.898 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 255.27 Mbit/s

95th percentile per-packet one-way delay: 0.866 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 215.51 Mbit/s

95th percentile per-packet one-way delay: 0.942 ms

Loss rate: 0.00%

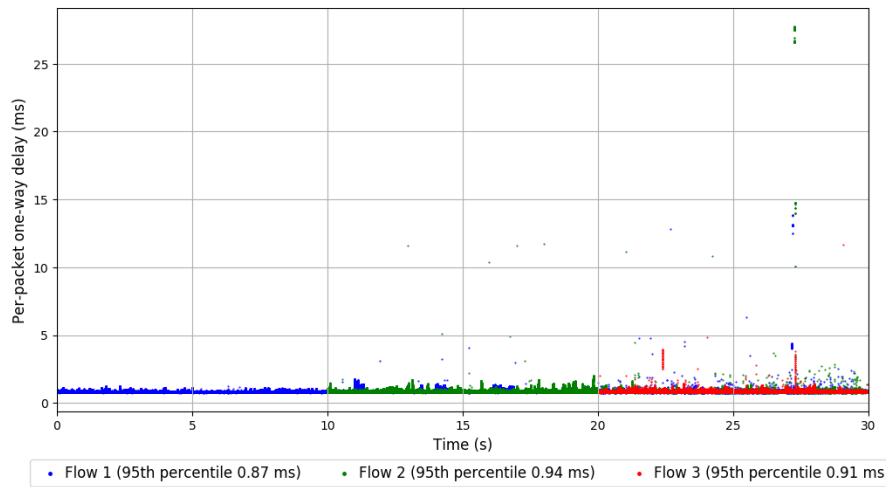
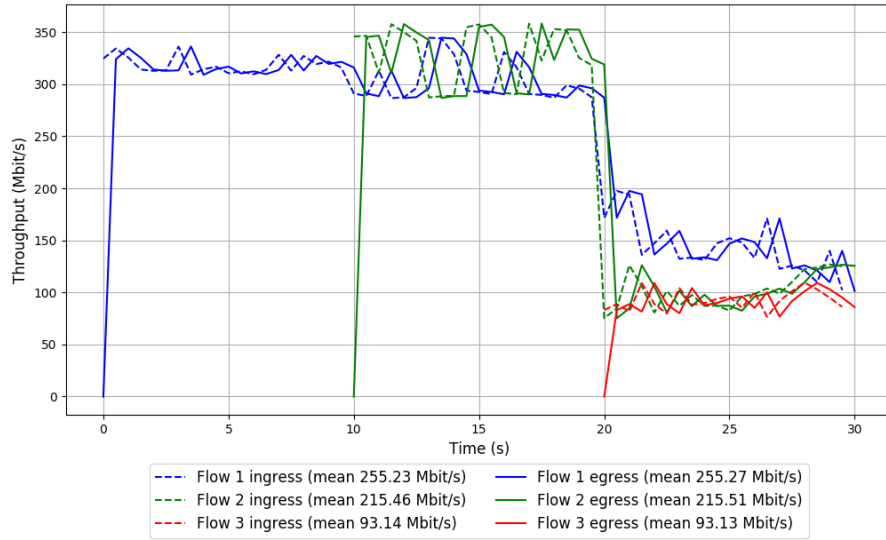
-- Flow 3:

Average throughput: 93.13 Mbit/s

95th percentile per-packet one-way delay: 0.913 ms

Loss rate: 0.02%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-05-30 12:36:27
End at: 2019-05-30 12:36:57
Local clock offset: 0.572 ms
Remote clock offset: -3.225 ms

Below is generated by plot.py at 2019-05-30 13:50:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 433.70 Mbit/s
95th percentile per-packet one-way delay: 0.898 ms
Loss rate: 0.00%

-- Flow 1:

Average throughput: 261.97 Mbit/s
95th percentile per-packet one-way delay: 0.903 ms
Loss rate: 0.00%

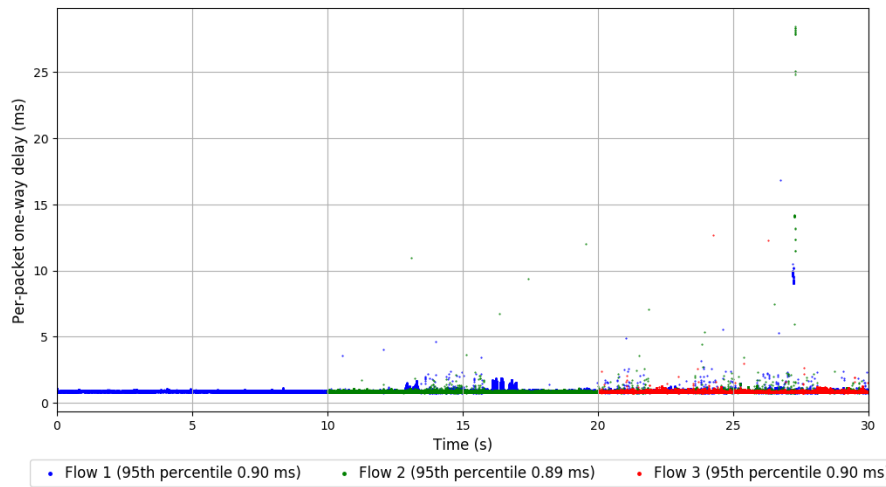
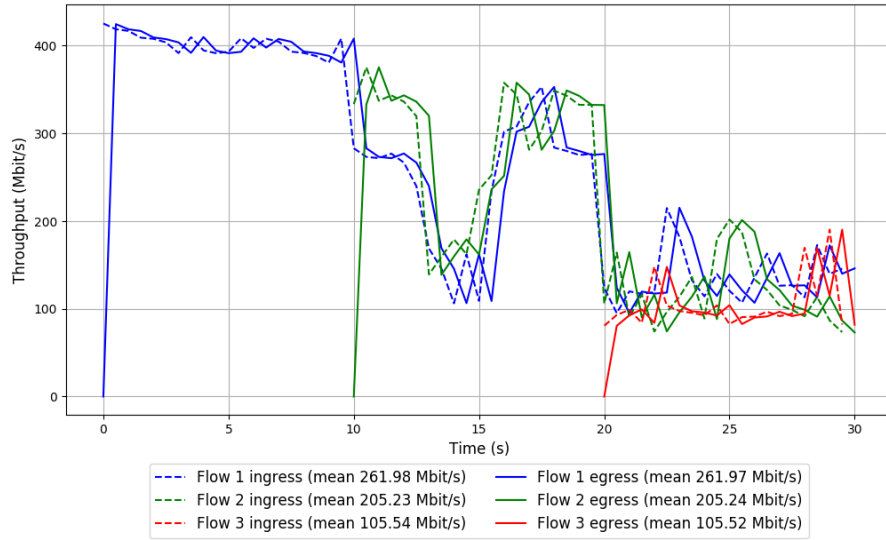
-- Flow 2:

Average throughput: 205.24 Mbit/s
95th percentile per-packet one-way delay: 0.890 ms
Loss rate: 0.01%

-- Flow 3:

Average throughput: 105.52 Mbit/s
95th percentile per-packet one-way delay: 0.902 ms
Loss rate: 0.01%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-05-30 13:06:39

End at: 2019-05-30 13:07:09

Local clock offset: 0.79 ms

Remote clock offset: 0.599 ms

Below is generated by plot.py at 2019-05-30 13:51:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 464.44 Mbit/s

95th percentile per-packet one-way delay: 0.972 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 272.66 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 215.48 Mbit/s

95th percentile per-packet one-way delay: 0.987 ms

Loss rate: 0.01%

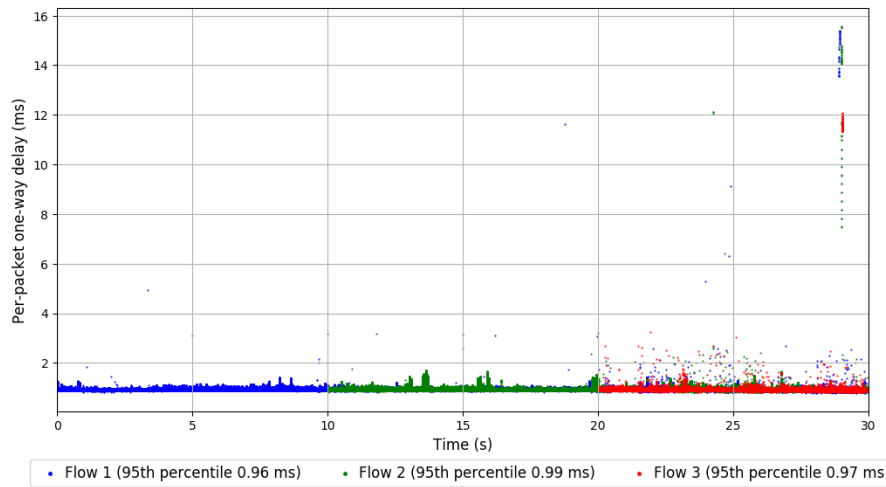
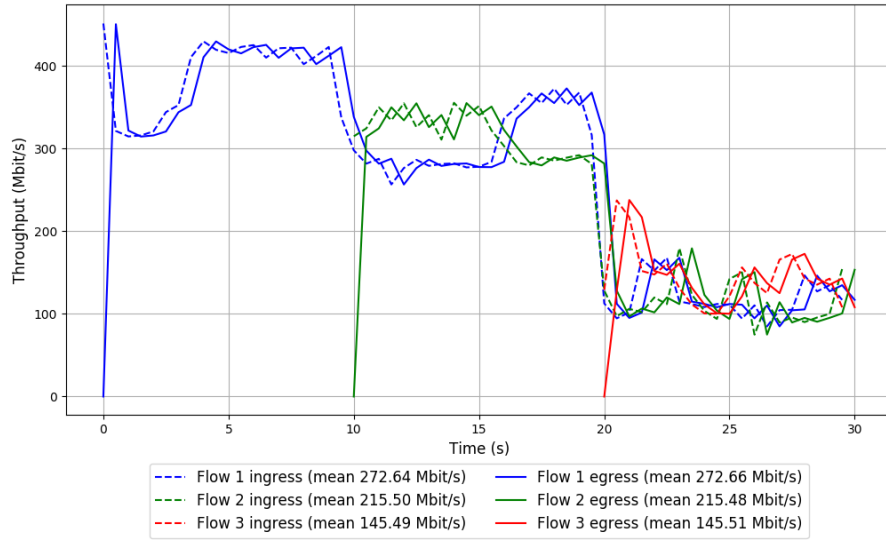
-- Flow 3:

Average throughput: 145.51 Mbit/s

95th percentile per-packet one-way delay: 0.971 ms

Loss rate: 0.00%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-05-30 11:08:16
End at: 2019-05-30 11:08:46
Local clock offset: -2.295 ms
Remote clock offset: -0.697 ms

Below is generated by plot.py at 2019-05-30 13:51:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 909.79 Mbit/s
95th percentile per-packet one-way delay: 9.830 ms
Loss rate: 0.03%

-- Flow 1:

Average throughput: 536.12 Mbit/s
95th percentile per-packet one-way delay: 10.303 ms
Loss rate: 0.01%

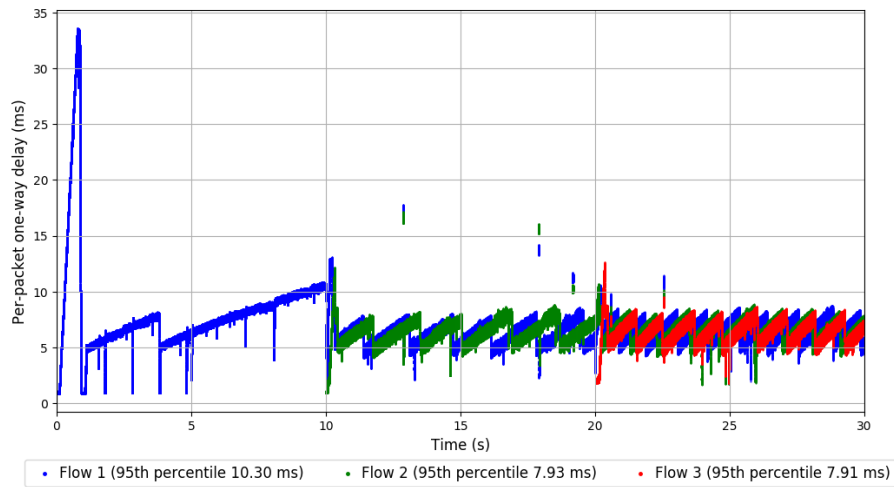
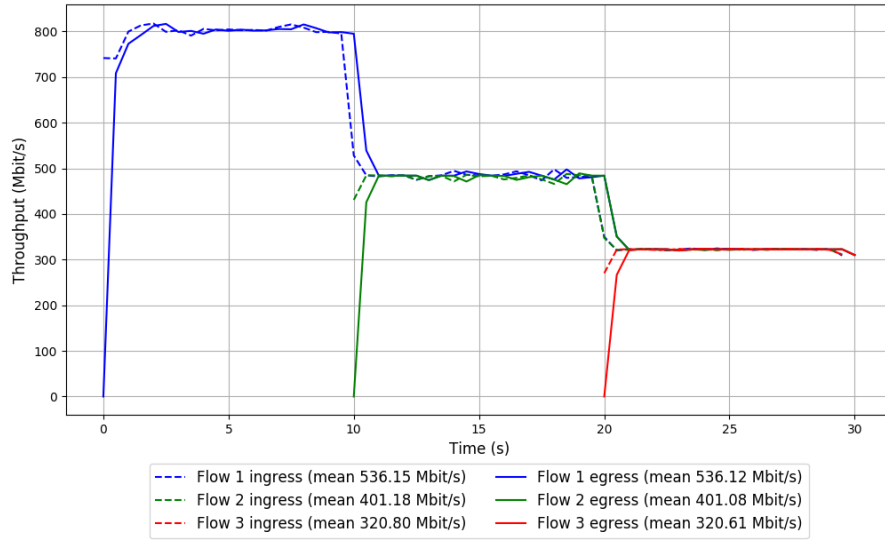
-- Flow 2:

Average throughput: 401.08 Mbit/s
95th percentile per-packet one-way delay: 7.931 ms
Loss rate: 0.04%

-- Flow 3:

Average throughput: 320.61 Mbit/s
95th percentile per-packet one-way delay: 7.914 ms
Loss rate: 0.08%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-05-30 11:38:45

End at: 2019-05-30 11:39:15

Local clock offset: -3.776 ms

Remote clock offset: 1.559 ms

Below is generated by plot.py at 2019-05-30 13:52:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 926.72 Mbit/s

95th percentile per-packet one-way delay: 9.600 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 551.58 Mbit/s

95th percentile per-packet one-way delay: 10.005 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 402.40 Mbit/s

95th percentile per-packet one-way delay: 7.149 ms

Loss rate: 0.04%

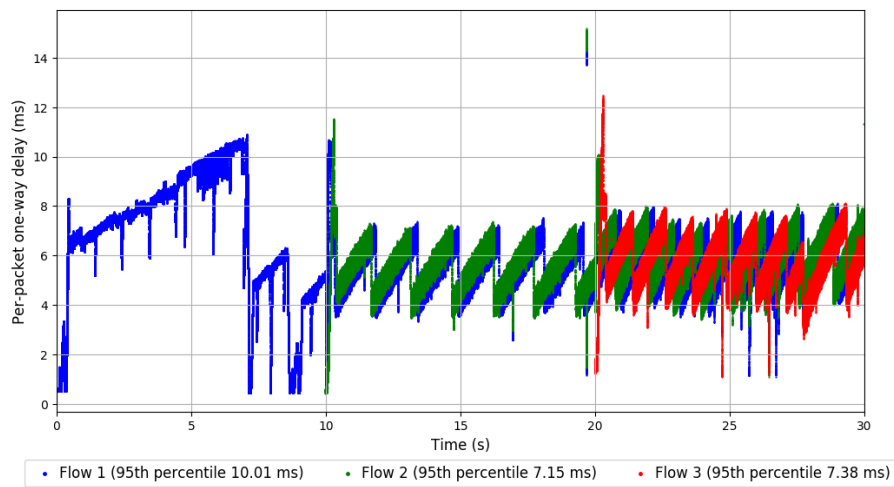
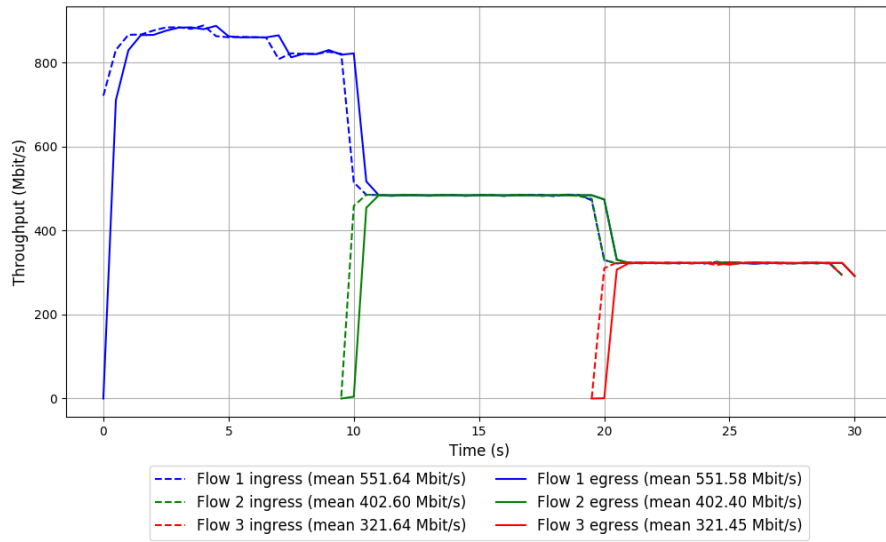
-- Flow 3:

Average throughput: 321.45 Mbit/s

95th percentile per-packet one-way delay: 7.376 ms

Loss rate: 0.09%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-05-30 12:09:08

End at: 2019-05-30 12:09:38

Local clock offset: 0.151 ms

Remote clock offset: 0.413 ms

Below is generated by plot.py at 2019-05-30 13:52:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 897.39 Mbit/s

95th percentile per-packet one-way delay: 8.495 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 522.64 Mbit/s

95th percentile per-packet one-way delay: 9.063 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 402.19 Mbit/s

95th percentile per-packet one-way delay: 7.277 ms

Loss rate: 0.03%

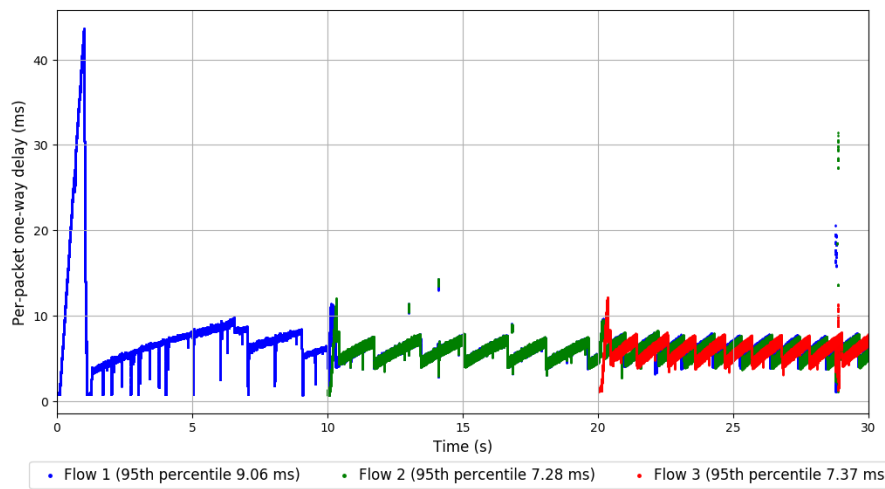
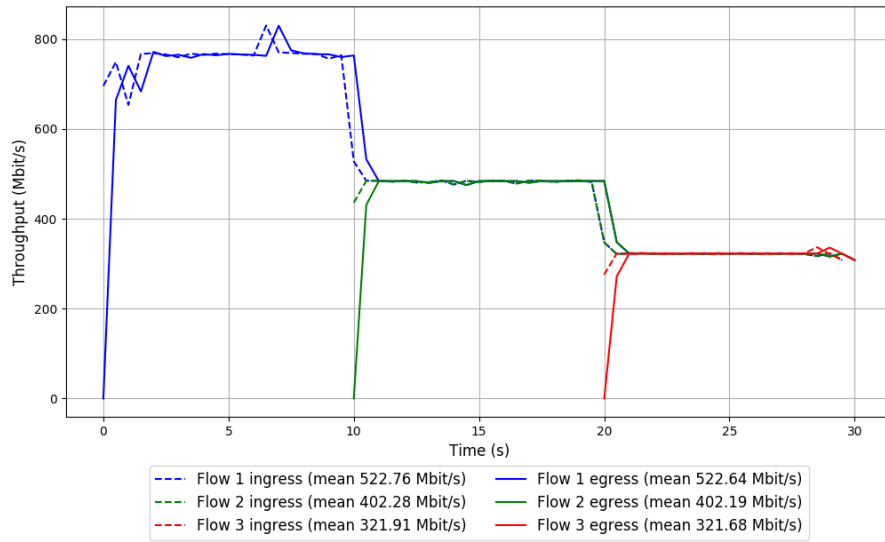
-- Flow 3:

Average throughput: 321.68 Mbit/s

95th percentile per-packet one-way delay: 7.372 ms

Loss rate: 0.09%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-05-30 12:39:29
End at: 2019-05-30 12:39:59
Local clock offset: 0.554 ms
Remote clock offset: -3.262 ms

Below is generated by plot.py at 2019-05-30 13:52:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 903.99 Mbit/s
95th percentile per-packet one-way delay: 7.655 ms
Loss rate: 0.03%

-- Flow 1:

Average throughput: 528.02 Mbit/s
95th percentile per-packet one-way delay: 7.693 ms
Loss rate: 0.01%

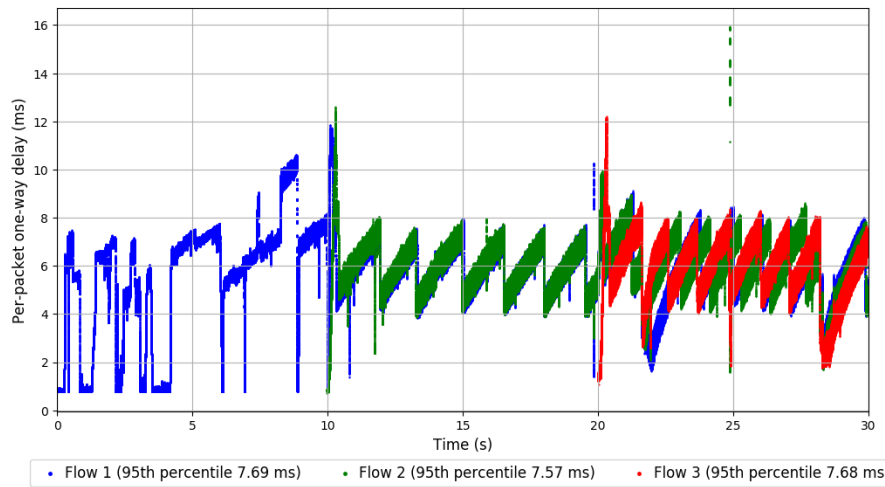
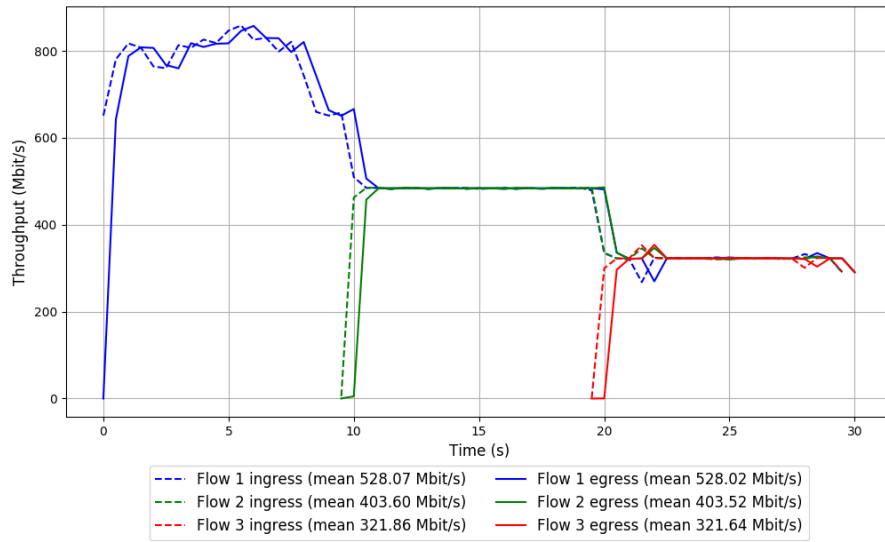
-- Flow 2:

Average throughput: 403.52 Mbit/s
95th percentile per-packet one-way delay: 7.574 ms
Loss rate: 0.03%

-- Flow 3:

Average throughput: 321.64 Mbit/s
95th percentile per-packet one-way delay: 7.684 ms
Loss rate: 0.09%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-05-30 13:09:41

End at: 2019-05-30 13:10:11

Local clock offset: 1.396 ms

Remote clock offset: 0.724 ms

Below is generated by plot.py at 2019-05-30 13:52:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 910.52 Mbit/s

95th percentile per-packet one-way delay: 8.838 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 535.77 Mbit/s

95th percentile per-packet one-way delay: 9.116 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 402.24 Mbit/s

95th percentile per-packet one-way delay: 7.350 ms

Loss rate: 0.04%

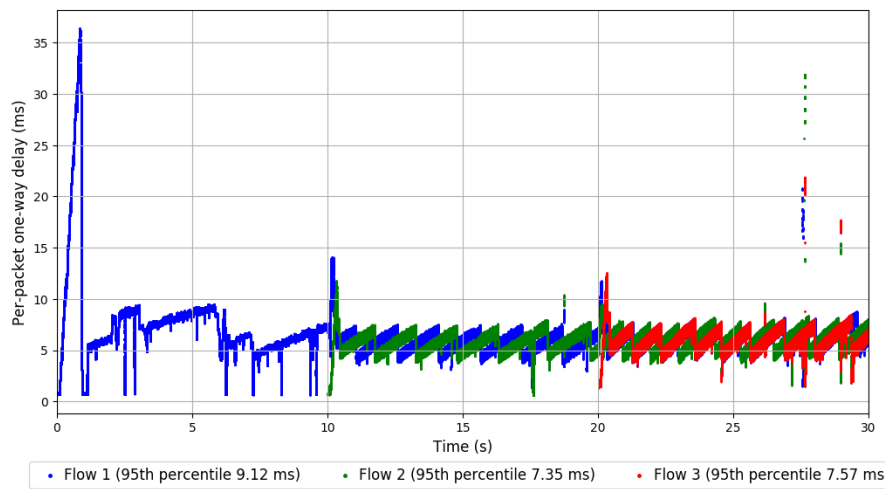
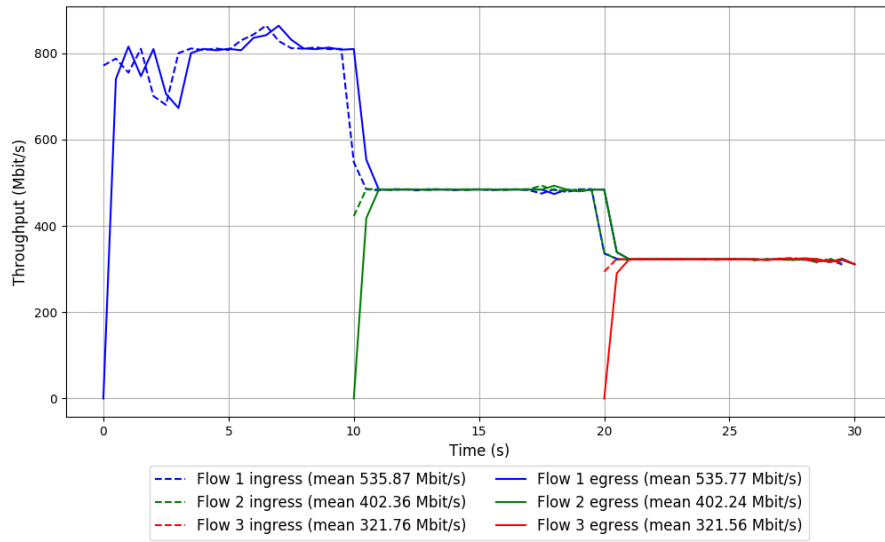
-- Flow 3:

Average throughput: 321.56 Mbit/s

95th percentile per-packet one-way delay: 7.567 ms

Loss rate: 0.08%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-05-30 11:15:41

End at: 2019-05-30 11:16:11

Local clock offset: -2.787 ms

Remote clock offset: 0.691 ms

Below is generated by plot.py at 2019-05-30 13:55:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 901.88 Mbit/s

95th percentile per-packet one-way delay: 33.642 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 609.50 Mbit/s

95th percentile per-packet one-way delay: 33.315 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 280.17 Mbit/s

95th percentile per-packet one-way delay: 20.912 ms

Loss rate: 0.09%

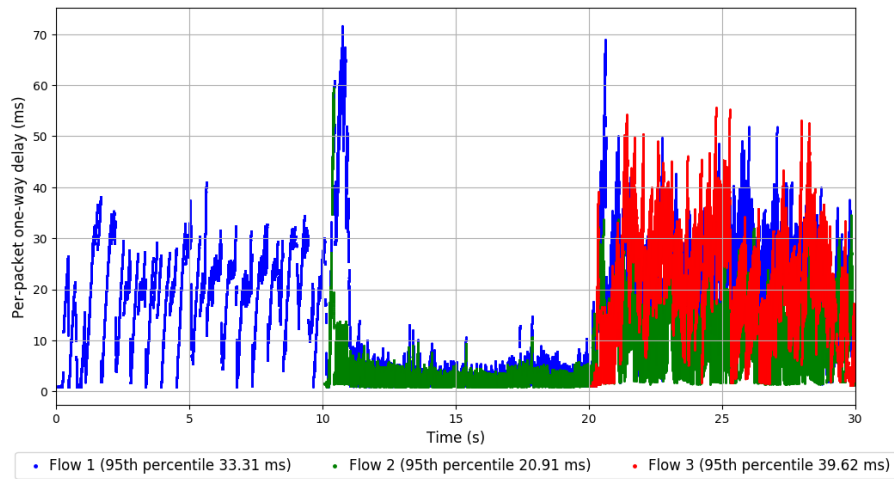
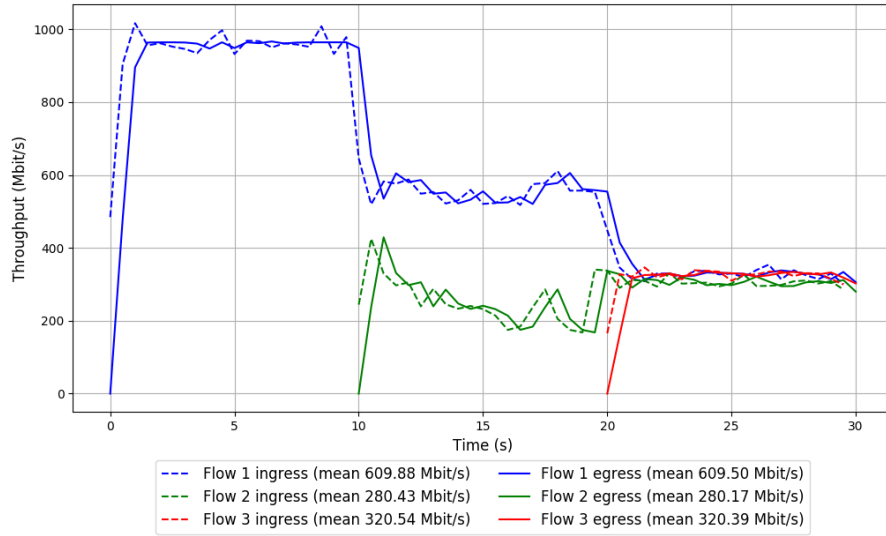
-- Flow 3:

Average throughput: 320.39 Mbit/s

95th percentile per-packet one-way delay: 39.616 ms

Loss rate: 0.14%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-05-30 11:46:13

End at: 2019-05-30 11:46:43

Local clock offset: -1.539 ms

Remote clock offset: 1.069 ms

Below is generated by plot.py at 2019-05-30 14:03:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 945.83 Mbit/s

95th percentile per-packet one-way delay: 40.972 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 578.54 Mbit/s

95th percentile per-packet one-way delay: 41.421 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 395.69 Mbit/s

95th percentile per-packet one-way delay: 41.733 ms

Loss rate: 0.22%

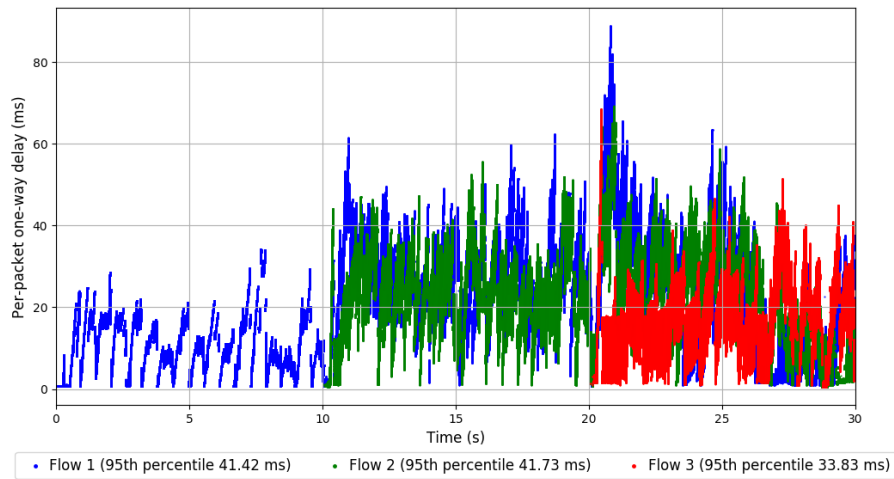
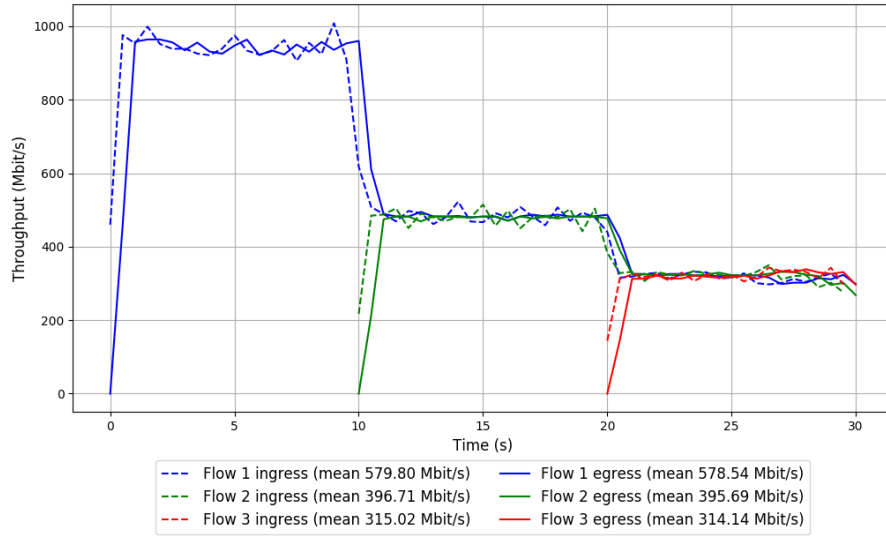
-- Flow 3:

Average throughput: 314.14 Mbit/s

95th percentile per-packet one-way delay: 33.830 ms

Loss rate: 0.30%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-05-30 12:16:37
End at: 2019-05-30 12:17:07
Local clock offset: 0.275 ms
Remote clock offset: -1.614 ms

Below is generated by plot.py at 2019-05-30 14:03:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 723.99 Mbit/s
95th percentile per-packet one-way delay: 28.374 ms
Loss rate: 0.12%

-- Flow 1:

Average throughput: 443.62 Mbit/s
95th percentile per-packet one-way delay: 22.796 ms
Loss rate: 0.04%

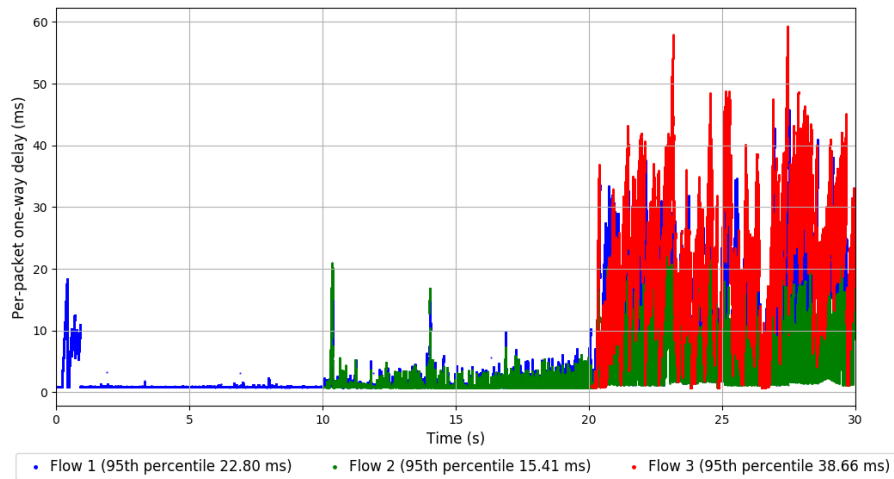
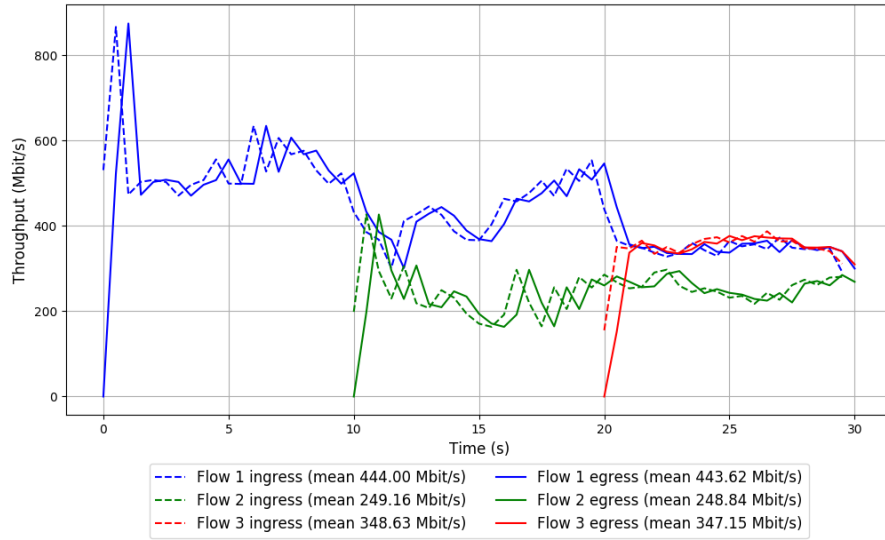
-- Flow 2:

Average throughput: 248.84 Mbit/s
95th percentile per-packet one-way delay: 15.408 ms
Loss rate: 0.13%

-- Flow 3:

Average throughput: 347.15 Mbit/s
95th percentile per-packet one-way delay: 38.663 ms
Loss rate: 0.38%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2019-05-30 12:46:54

End at: 2019-05-30 12:47:24

Local clock offset: 0.644 ms

Remote clock offset: -1.48 ms

Below is generated by plot.py at 2019-05-30 14:03:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 855.25 Mbit/s

95th percentile per-packet one-way delay: 31.543 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 562.39 Mbit/s

95th percentile per-packet one-way delay: 31.359 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 271.34 Mbit/s

95th percentile per-packet one-way delay: 16.929 ms

Loss rate: 0.07%

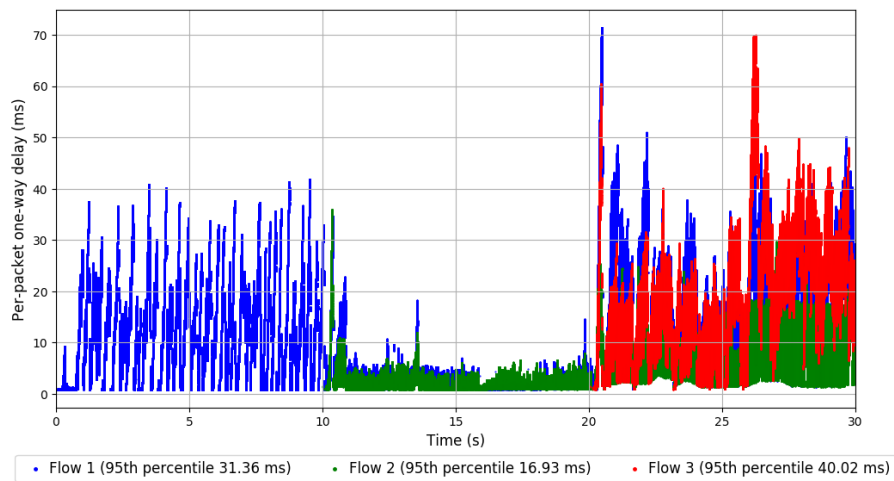
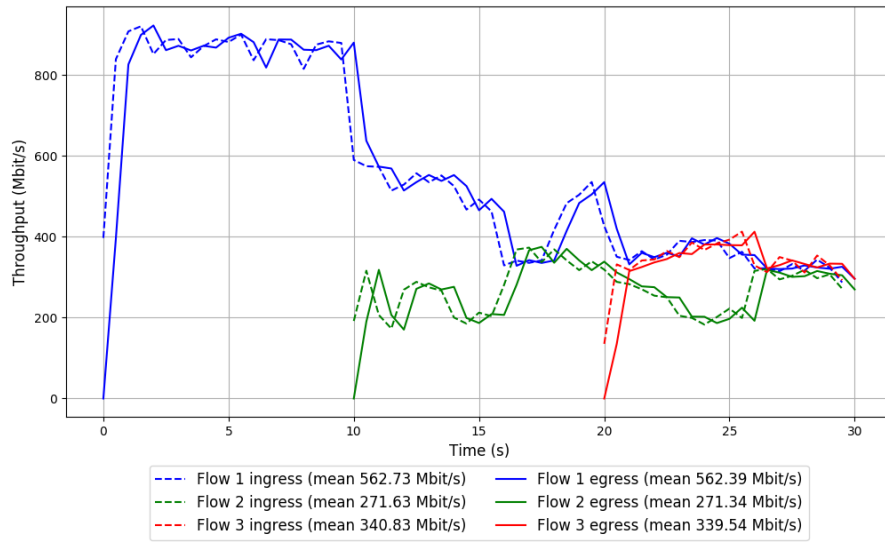
-- Flow 3:

Average throughput: 339.54 Mbit/s

95th percentile per-packet one-way delay: 40.023 ms

Loss rate: 0.40%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-05-30 13:17:09

End at: 2019-05-30 13:17:39

Local clock offset: 2.937 ms

Remote clock offset: 0.734 ms

Below is generated by plot.py at 2019-05-30 14:03:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 813.04 Mbit/s

95th percentile per-packet one-way delay: 29.942 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 437.71 Mbit/s

95th percentile per-packet one-way delay: 23.832 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 408.77 Mbit/s

95th percentile per-packet one-way delay: 32.612 ms

Loss rate: 0.05%

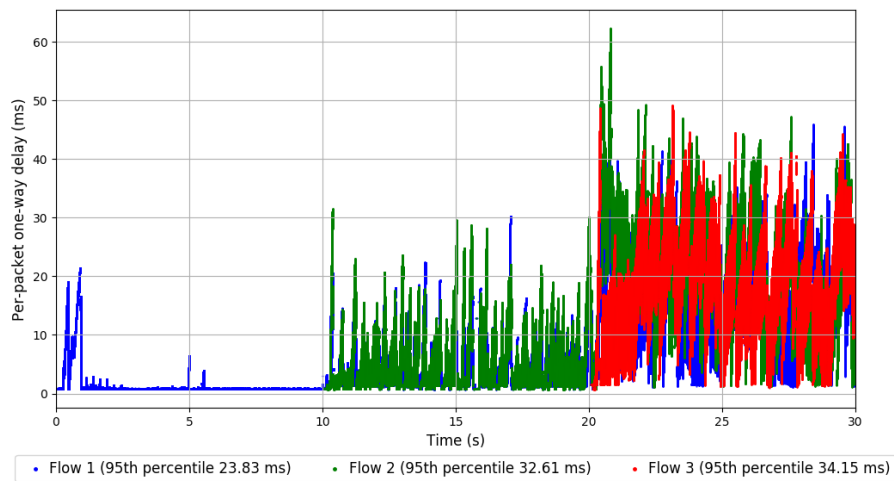
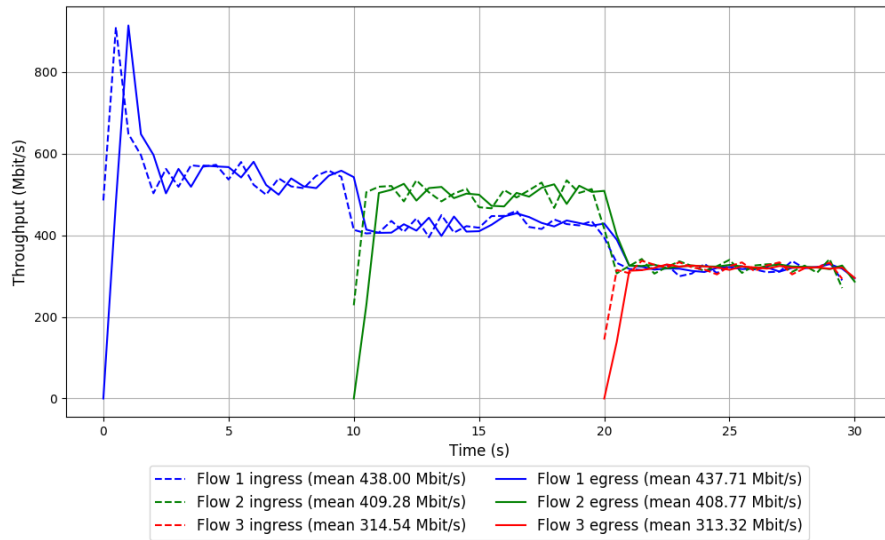
-- Flow 3:

Average throughput: 313.32 Mbit/s

95th percentile per-packet one-way delay: 34.149 ms

Loss rate: 0.32%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-05-30 11:02:04

End at: 2019-05-30 11:02:34

Local clock offset: -1.779 ms

Remote clock offset: -2.8 ms

Below is generated by plot.py at 2019-05-30 14:03:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 561.62 Mbit/s

95th percentile per-packet one-way delay: 8.293 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 404.74 Mbit/s

95th percentile per-packet one-way delay: 8.517 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 216.14 Mbit/s

95th percentile per-packet one-way delay: 7.889 ms

Loss rate: 0.00%

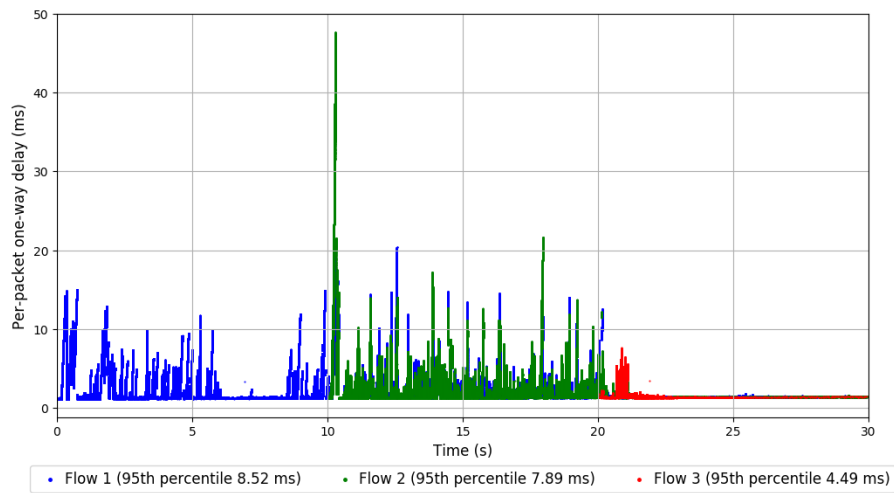
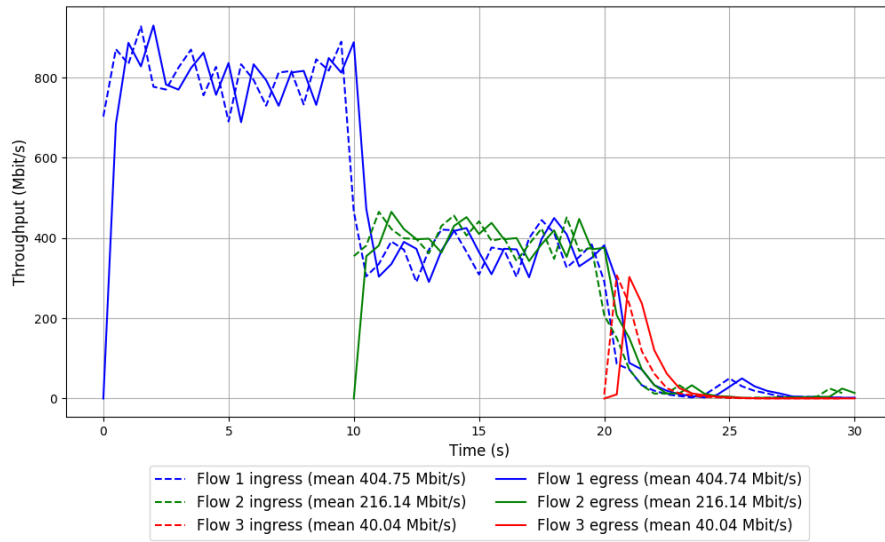
-- Flow 3:

Average throughput: 40.04 Mbit/s

95th percentile per-packet one-way delay: 4.489 ms

Loss rate: 0.00%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-05-30 11:32:27

End at: 2019-05-30 11:32:57

Local clock offset: -3.98 ms

Remote clock offset: 2.602 ms

Below is generated by plot.py at 2019-05-30 14:03:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 590.19 Mbit/s

95th percentile per-packet one-way delay: 8.245 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 441.19 Mbit/s

95th percentile per-packet one-way delay: 8.846 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 204.86 Mbit/s

95th percentile per-packet one-way delay: 5.854 ms

Loss rate: 0.00%

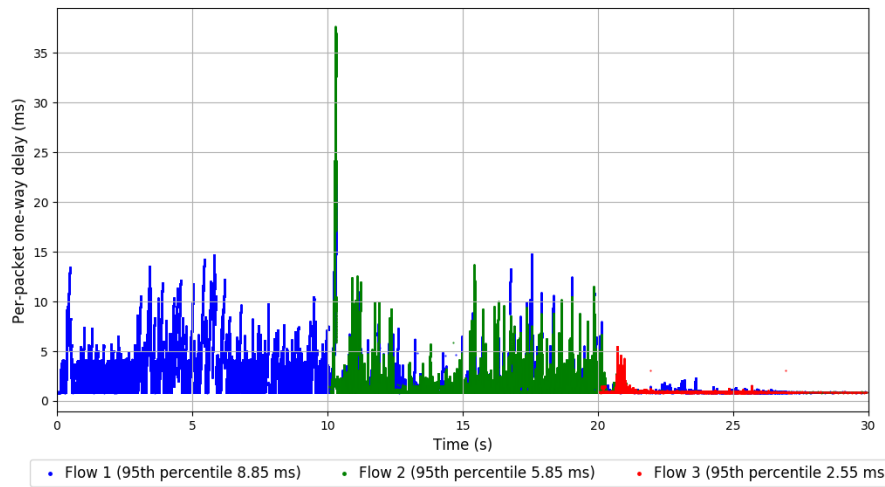
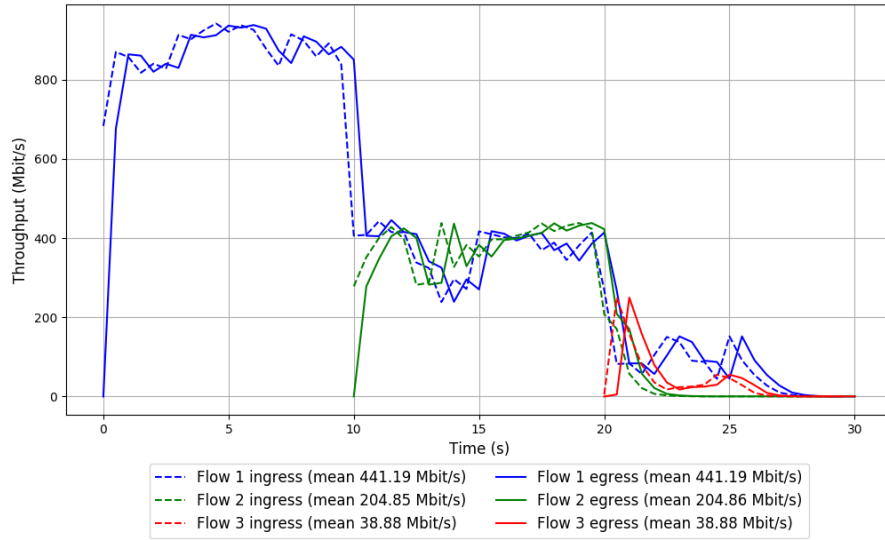
-- Flow 3:

Average throughput: 38.88 Mbit/s

95th percentile per-packet one-way delay: 2.553 ms

Loss rate: 0.00%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-05-30 12:02:53

End at: 2019-05-30 12:03:23

Local clock offset: -0.05 ms

Remote clock offset: 1.31 ms

Below is generated by plot.py at 2019-05-30 14:03:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 503.06 Mbit/s

95th percentile per-packet one-way delay: 7.994 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 397.47 Mbit/s

95th percentile per-packet one-way delay: 8.481 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 148.18 Mbit/s

95th percentile per-packet one-way delay: 4.003 ms

Loss rate: 0.00%

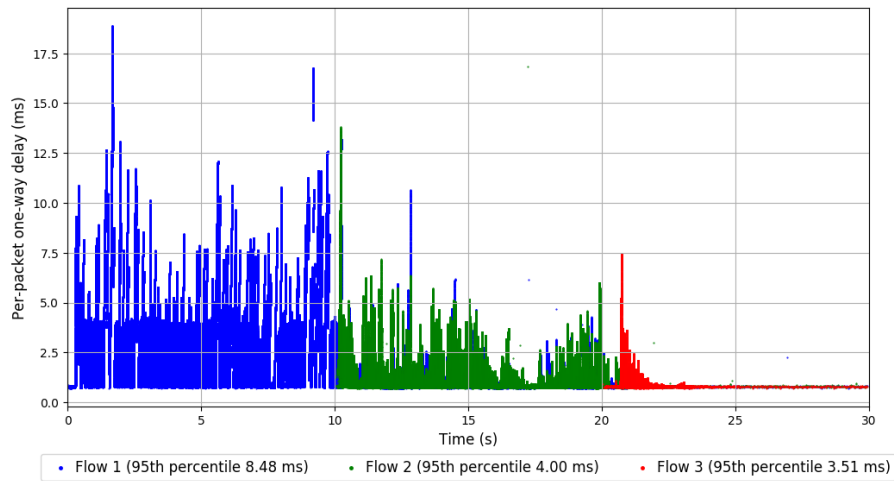
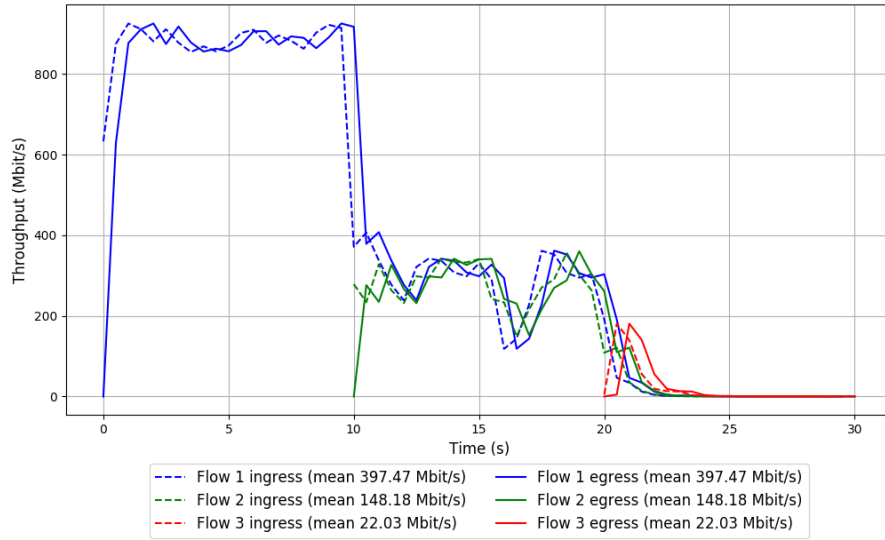
-- Flow 3:

Average throughput: 22.03 Mbit/s

95th percentile per-packet one-way delay: 3.511 ms

Loss rate: 0.00%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-05-30 12:33:14
End at: 2019-05-30 12:33:44
Local clock offset: 0.52 ms
Remote clock offset: -3.033 ms

Below is generated by plot.py at 2019-05-30 14:03:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 563.51 Mbit/s
95th percentile per-packet one-way delay: 7.239 ms
Loss rate: 0.00%

-- Flow 1:

Average throughput: 413.25 Mbit/s
95th percentile per-packet one-way delay: 7.801 ms
Loss rate: 0.00%

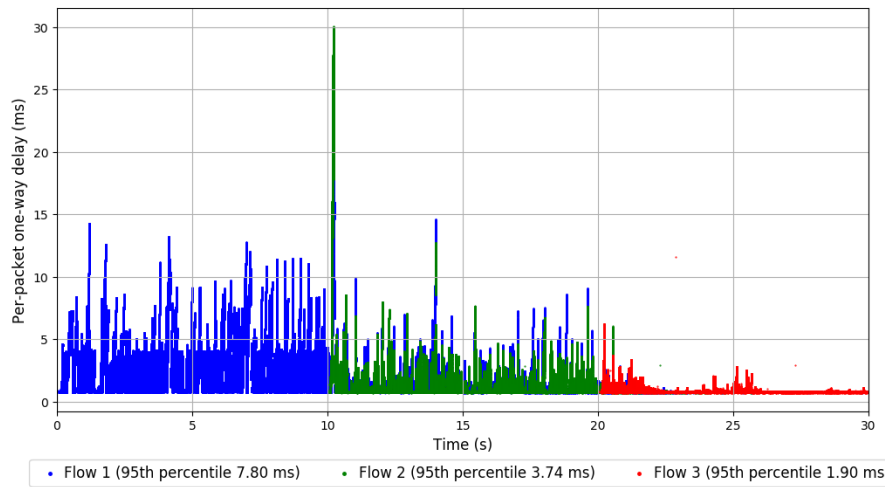
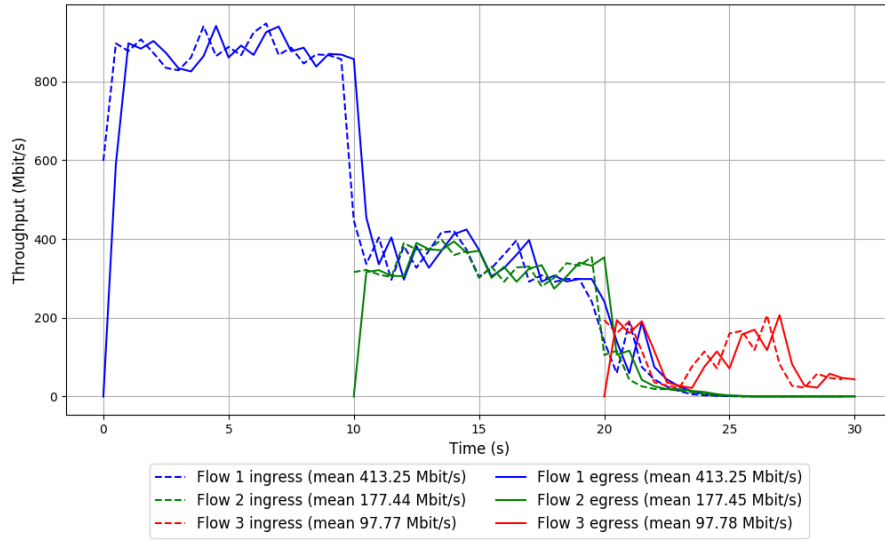
-- Flow 2:

Average throughput: 177.45 Mbit/s
95th percentile per-packet one-way delay: 3.741 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 97.78 Mbit/s
95th percentile per-packet one-way delay: 1.897 ms
Loss rate: 0.01%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-05-30 13:03:24

End at: 2019-05-30 13:03:54

Local clock offset: 0.773 ms

Remote clock offset: 0.498 ms

Below is generated by plot.py at 2019-05-30 14:07:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 564.28 Mbit/s

95th percentile per-packet one-way delay: 6.696 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 415.53 Mbit/s

95th percentile per-packet one-way delay: 7.079 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 197.40 Mbit/s

95th percentile per-packet one-way delay: 4.484 ms

Loss rate: 0.00%

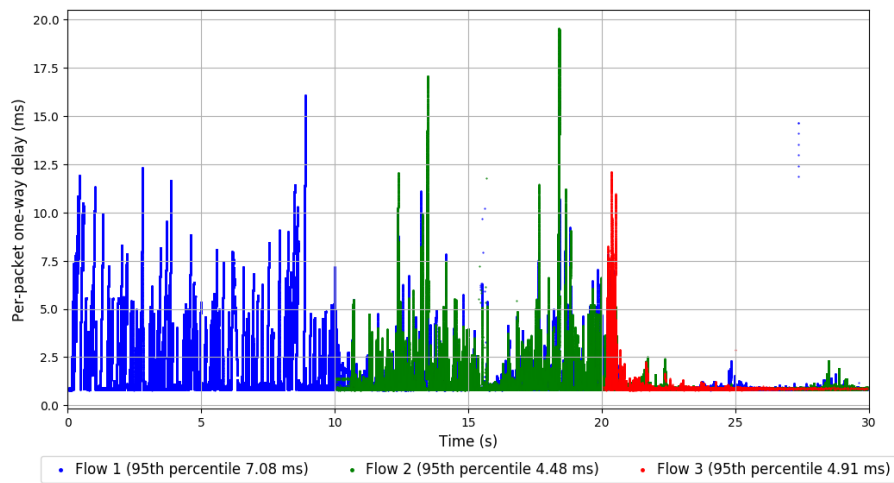
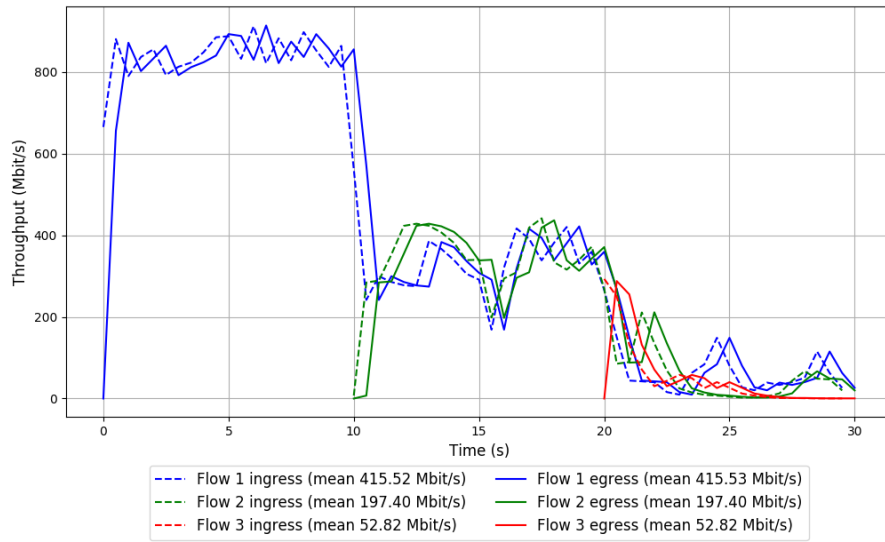
-- Flow 3:

Average throughput: 52.82 Mbit/s

95th percentile per-packet one-way delay: 4.906 ms

Loss rate: 0.00%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-05-30 10:55:15
End at: 2019-05-30 10:55:45
Local clock offset: -1.253 ms
Remote clock offset: -4.122 ms

Below is generated by plot.py at 2019-05-30 14:07:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 271.39 Mbit/s
95th percentile per-packet one-way delay: 1.056 ms
Loss rate: 0.01%

-- Flow 1:

Average throughput: 148.35 Mbit/s
95th percentile per-packet one-way delay: 0.957 ms
Loss rate: 0.00%

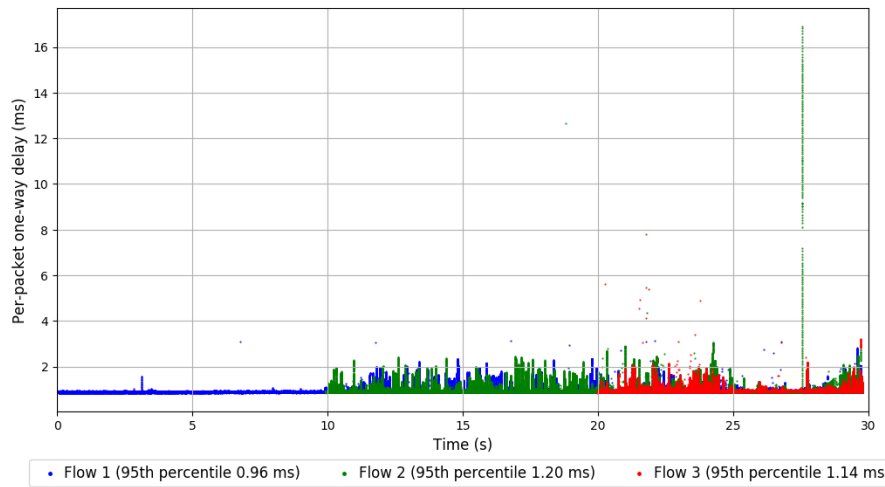
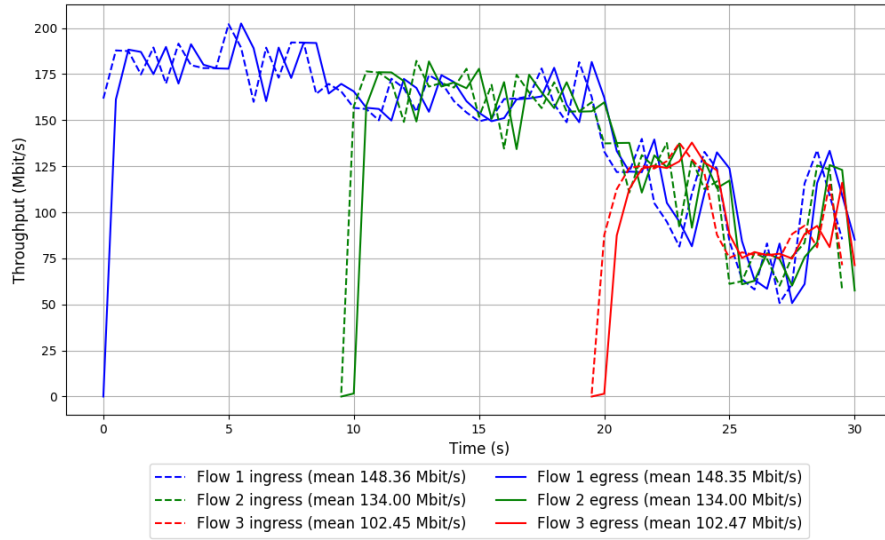
-- Flow 2:

Average throughput: 134.00 Mbit/s
95th percentile per-packet one-way delay: 1.198 ms
Loss rate: 0.01%

-- Flow 3:

Average throughput: 102.47 Mbit/s
95th percentile per-packet one-way delay: 1.138 ms
Loss rate: 0.00%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-05-30 11:25:28

End at: 2019-05-30 11:25:58

Local clock offset: -3.457 ms

Remote clock offset: 1.912 ms

Below is generated by plot.py at 2019-05-30 14:07:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 287.54 Mbit/s

95th percentile per-packet one-way delay: 1.294 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 156.69 Mbit/s

95th percentile per-packet one-way delay: 1.184 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 138.41 Mbit/s

95th percentile per-packet one-way delay: 1.336 ms

Loss rate: 0.03%

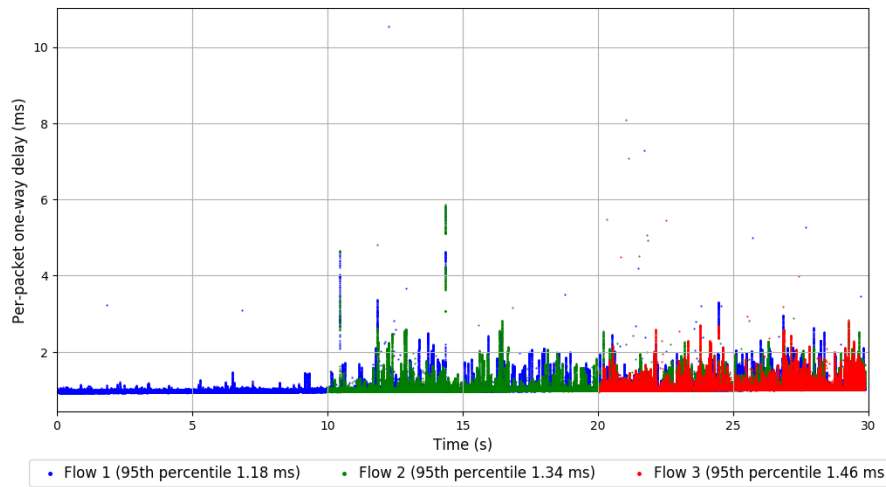
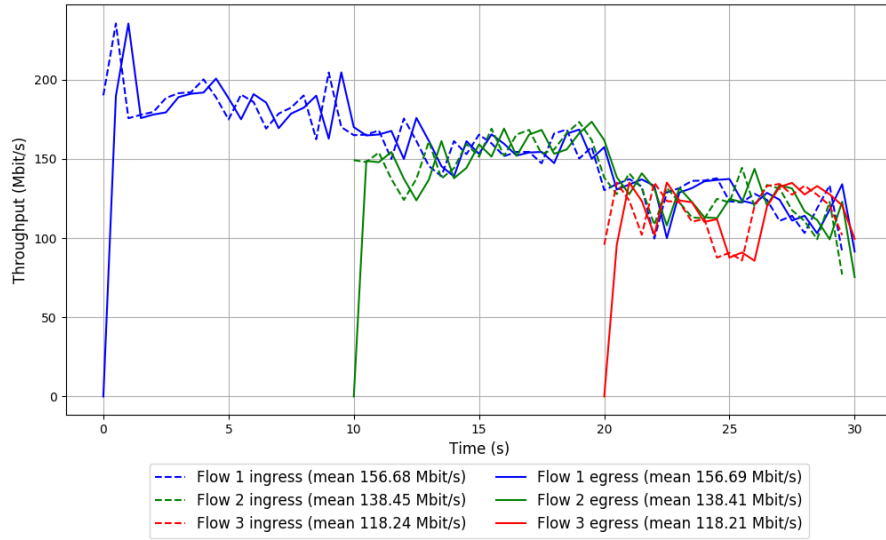
-- Flow 3:

Average throughput: 118.21 Mbit/s

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

Loss rate: 0.11%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-05-30 11:56:00

End at: 2019-05-30 11:56:30

Local clock offset: -0.373 ms

Remote clock offset: 1.01 ms

Below is generated by plot.py at 2019-05-30 14:07:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 286.59 Mbit/s

95th percentile per-packet one-way delay: 1.034 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 156.23 Mbit/s

95th percentile per-packet one-way delay: 0.974 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 139.04 Mbit/s

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

Loss rate: 0.00%

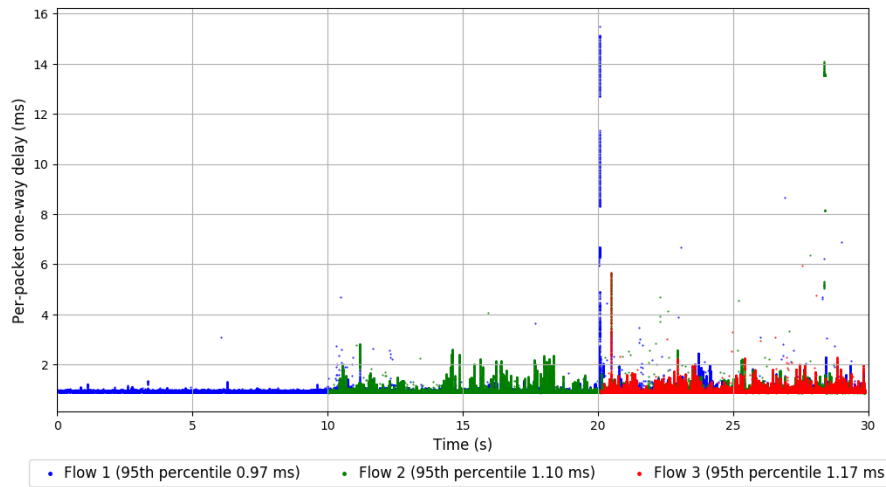
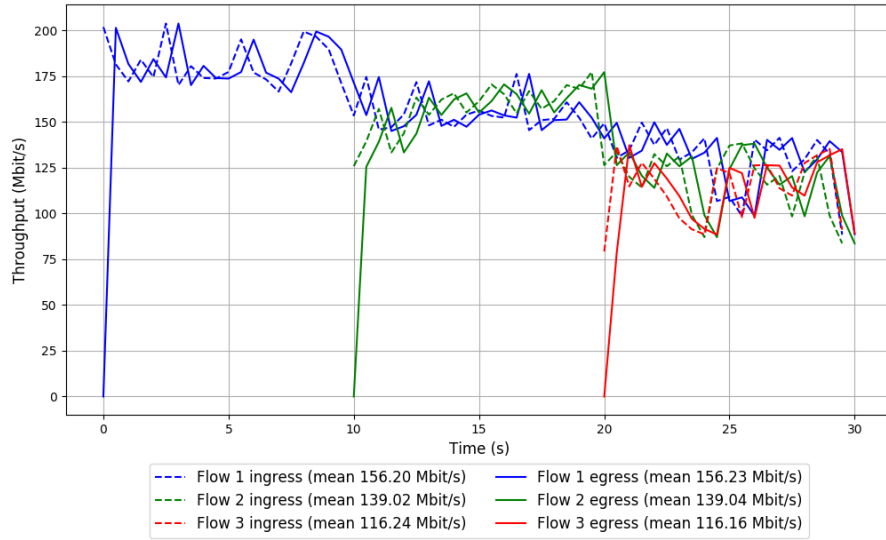
-- Flow 3:

Average throughput: 116.16 Mbit/s

95th percentile per-packet one-way delay: 1.165 ms

Loss rate: 0.10%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-05-30 12:26:20
End at: 2019-05-30 12:26:50
Local clock offset: 0.427 ms
Remote clock offset: -2.736 ms

Below is generated by plot.py at 2019-05-30 14:07:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 282.99 Mbit/s
95th percentile per-packet one-way delay: 1.114 ms
Loss rate: 0.02%

-- Flow 1:

Average throughput: 153.60 Mbit/s
95th percentile per-packet one-way delay: 1.041 ms
Loss rate: 0.02%

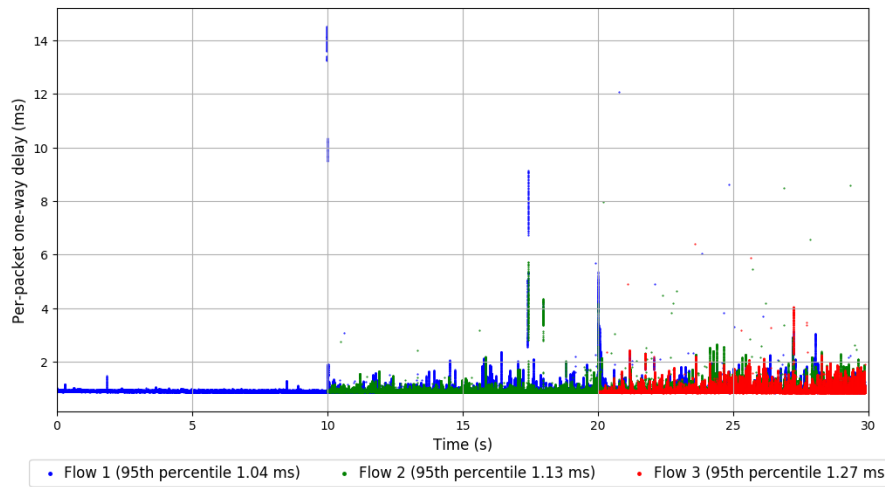
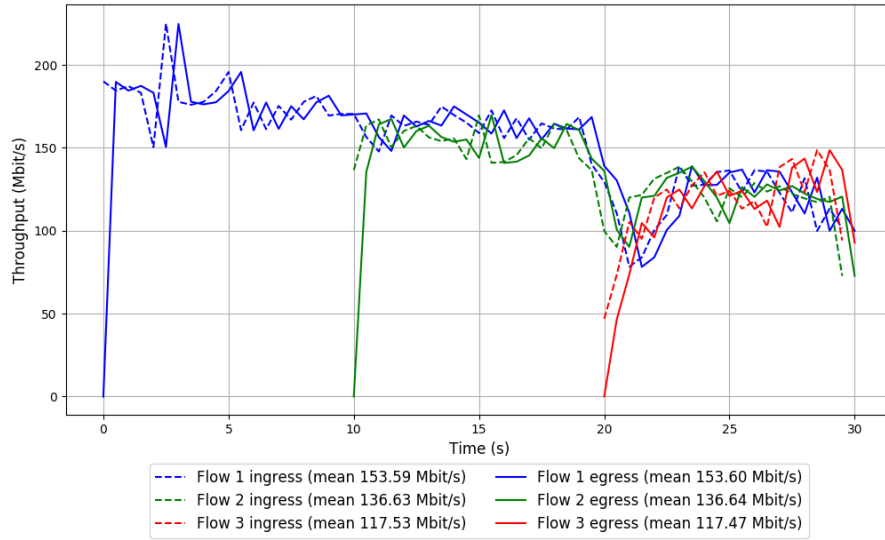
-- Flow 2:

Average throughput: 136.64 Mbit/s
95th percentile per-packet one-way delay: 1.127 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 117.47 Mbit/s
95th percentile per-packet one-way delay: 1.274 ms
Loss rate: 0.06%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-05-30 12:56:35
End at: 2019-05-30 12:57:05
Local clock offset: 0.696 ms
Remote clock offset: -0.041 ms

Below is generated by plot.py at 2019-05-30 14:07:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 283.74 Mbit/s
95th percentile per-packet one-way delay: 1.042 ms
Loss rate: 0.01%

-- Flow 1:

Average throughput: 160.04 Mbit/s
95th percentile per-packet one-way delay: 1.002 ms
Loss rate: 0.00%

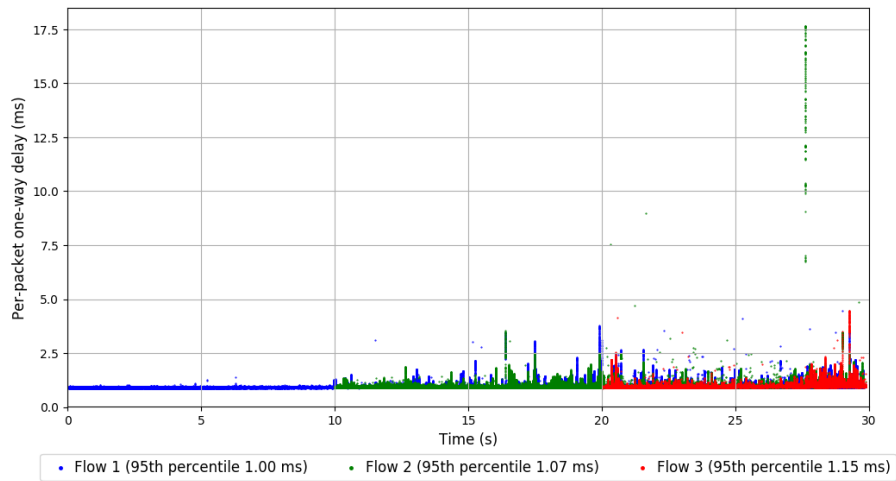
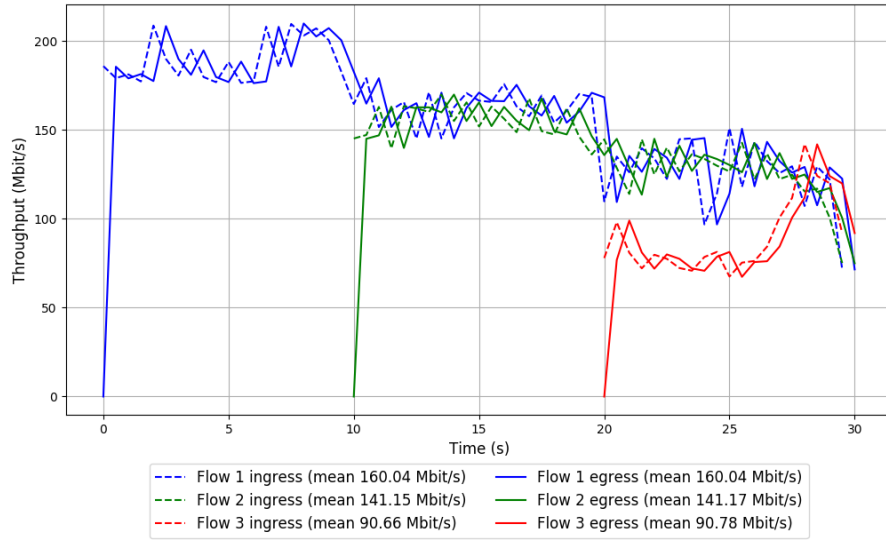
-- Flow 2:

Average throughput: 141.17 Mbit/s
95th percentile per-packet one-way delay: 1.066 ms
Loss rate: 0.01%

-- Flow 3:

Average throughput: 90.78 Mbit/s
95th percentile per-packet one-way delay: 1.145 ms
Loss rate: 0.03%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-05-30 11:20:14

End at: 2019-05-30 11:20:44

Local clock offset: -3.138 ms

Remote clock offset: 1.367 ms

Below is generated by plot.py at 2019-05-30 14:07:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 219.02 Mbit/s

95th percentile per-packet one-way delay: 0.989 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 161.90 Mbit/s

95th percentile per-packet one-way delay: 0.986 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 80.01 Mbit/s

95th percentile per-packet one-way delay: 1.019 ms

Loss rate: 0.00%

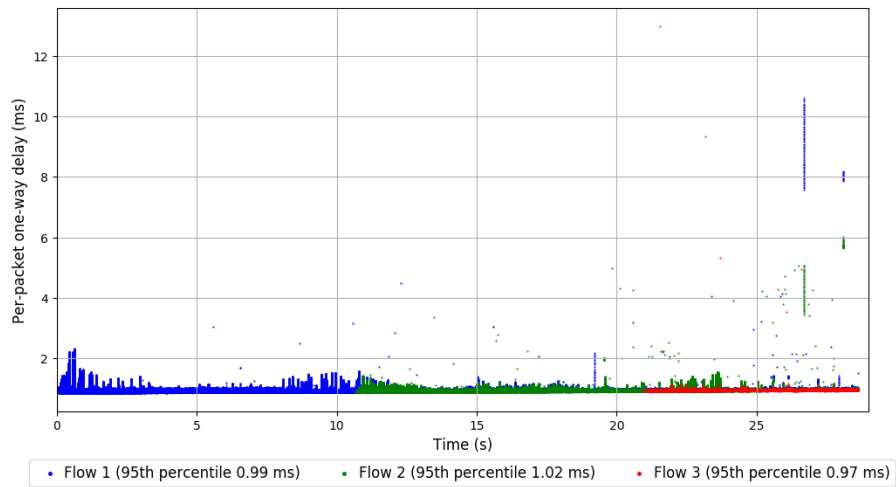
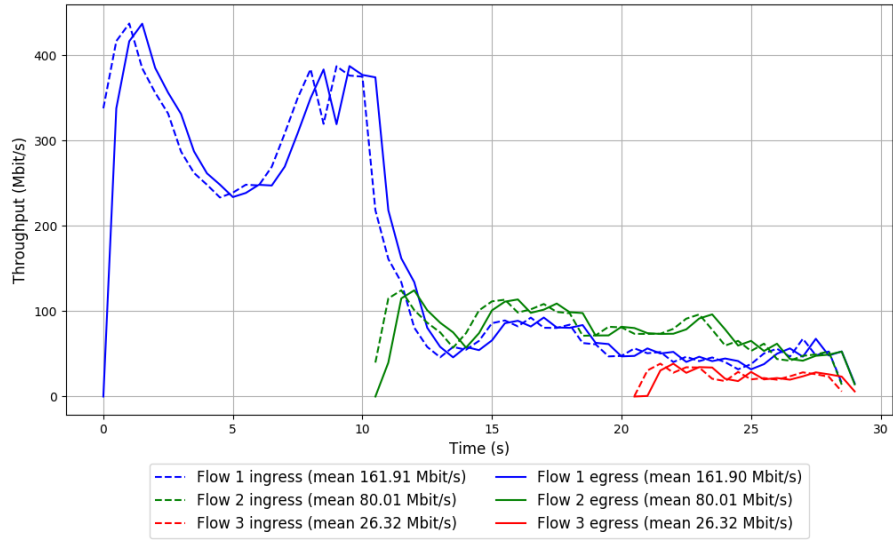
-- Flow 3:

Average throughput: 26.32 Mbit/s

95th percentile per-packet one-way delay: 0.971 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-05-30 11:50:48

End at: 2019-05-30 11:51:18

Local clock offset: -0.844 ms

Remote clock offset: 1.037 ms

Below is generated by plot.py at 2019-05-30 14:07:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 202.56 Mbit/s

95th percentile per-packet one-way delay: 0.858 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 164.74 Mbit/s

95th percentile per-packet one-way delay: 0.864 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 47.03 Mbit/s

95th percentile per-packet one-way delay: 0.827 ms

Loss rate: 0.00%

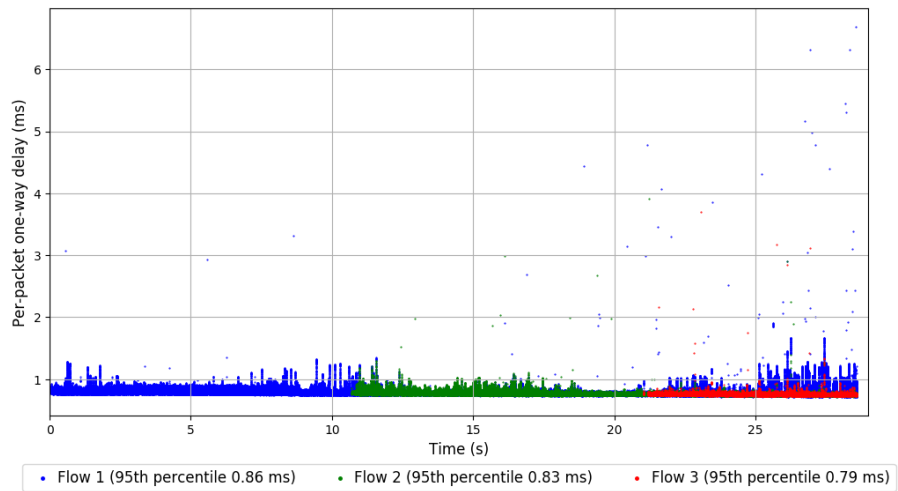
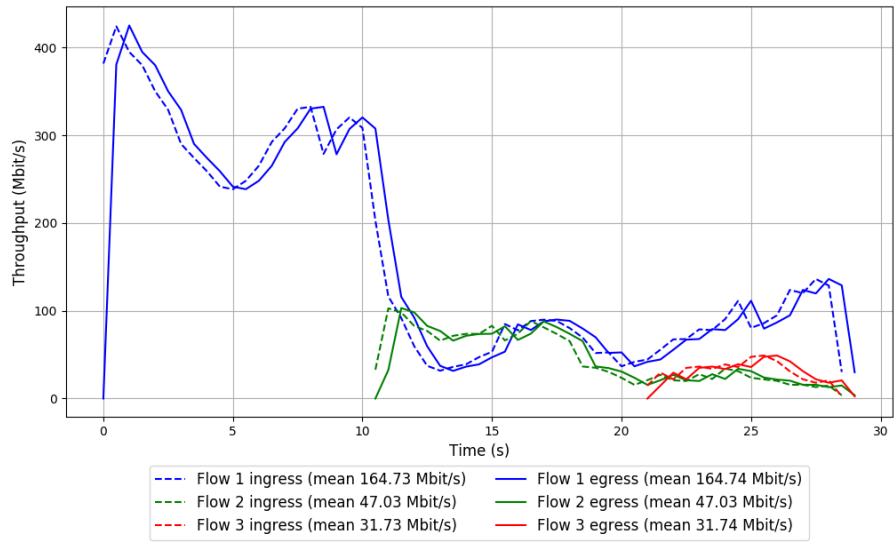
-- Flow 3:

Average throughput: 31.74 Mbit/s

95th percentile per-packet one-way delay: 0.791 ms

Loss rate: 0.01%

Run 2: Report of Indigo-MusesC3 — Data Link

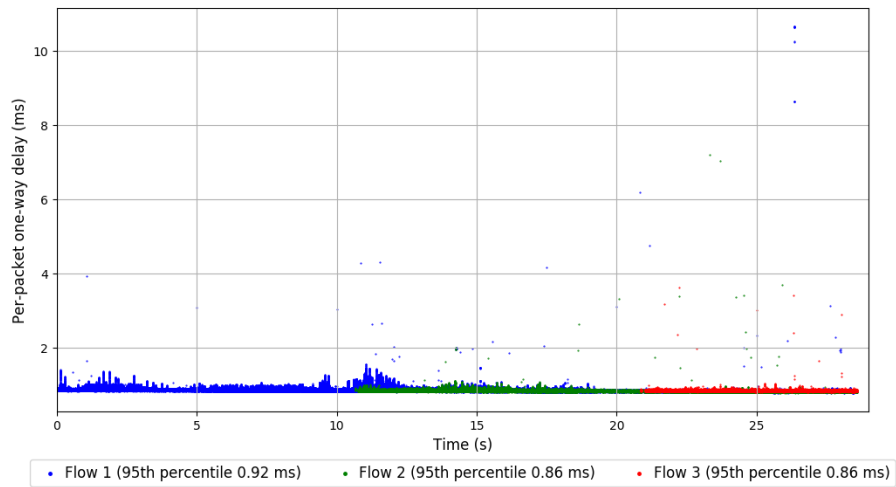
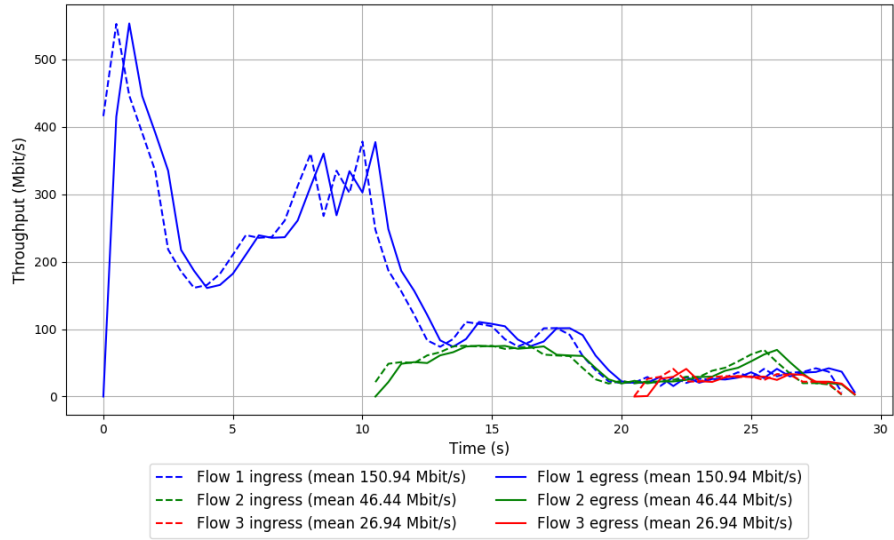


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-05-30 12:21:06
End at: 2019-05-30 12:21:36
Local clock offset: 0.351 ms
Remote clock offset: -2.237 ms

```
# Below is generated by plot.py at 2019-05-30 14:07:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 187.31 Mbit/s
95th percentile per-packet one-way delay: 0.909 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 150.94 Mbit/s
95th percentile per-packet one-way delay: 0.916 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.44 Mbit/s
95th percentile per-packet one-way delay: 0.863 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.94 Mbit/s
95th percentile per-packet one-way delay: 0.865 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-05-30 12:51:25
End at: 2019-05-30 12:51:55
Local clock offset: 0.649 ms
Remote clock offset: -0.639 ms

Below is generated by plot.py at 2019-05-30 14:07:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 161.22 Mbit/s
95th percentile per-packet one-way delay: 1.000 ms
Loss rate: 0.01%

-- Flow 1:

Average throughput: 118.59 Mbit/s
95th percentile per-packet one-way delay: 1.003 ms
Loss rate: 0.01%

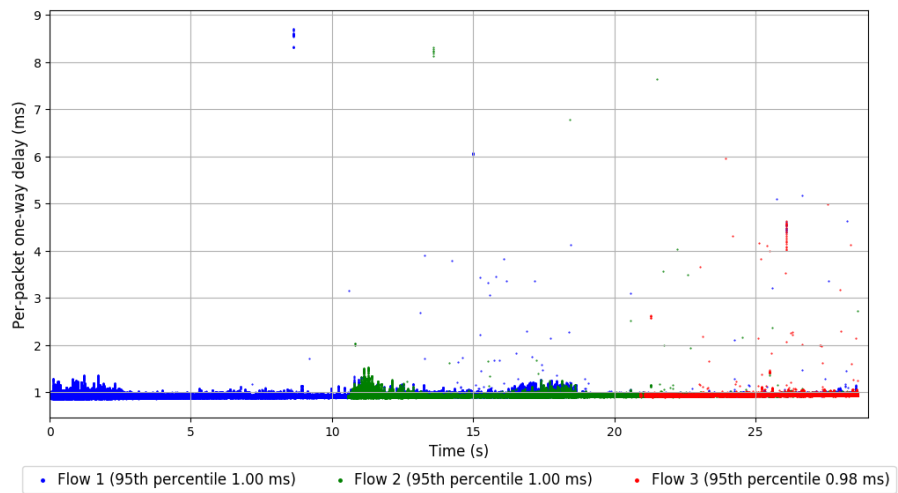
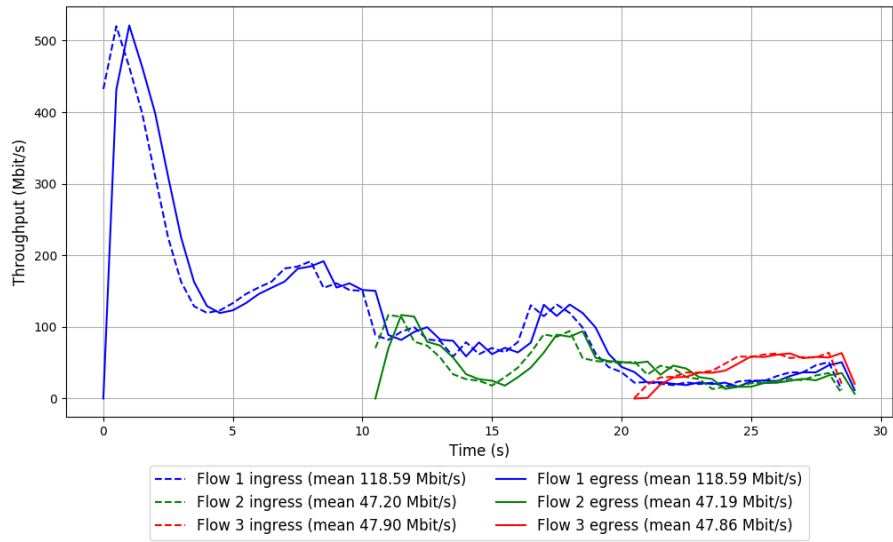
-- Flow 2:

Average throughput: 47.19 Mbit/s
95th percentile per-packet one-way delay: 0.998 ms
Loss rate: 0.01%

-- Flow 3:

Average throughput: 47.86 Mbit/s
95th percentile per-packet one-way delay: 0.979 ms
Loss rate: 0.10%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-05-30 13:21:40

End at: 2019-05-30 13:22:10

Local clock offset: 3.491 ms

Remote clock offset: 0.558 ms

Below is generated by plot.py at 2019-05-30 14:07:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 192.94 Mbit/s

95th percentile per-packet one-way delay: 0.838 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 131.86 Mbit/s

95th percentile per-packet one-way delay: 0.816 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 82.66 Mbit/s

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

Loss rate: 0.00%

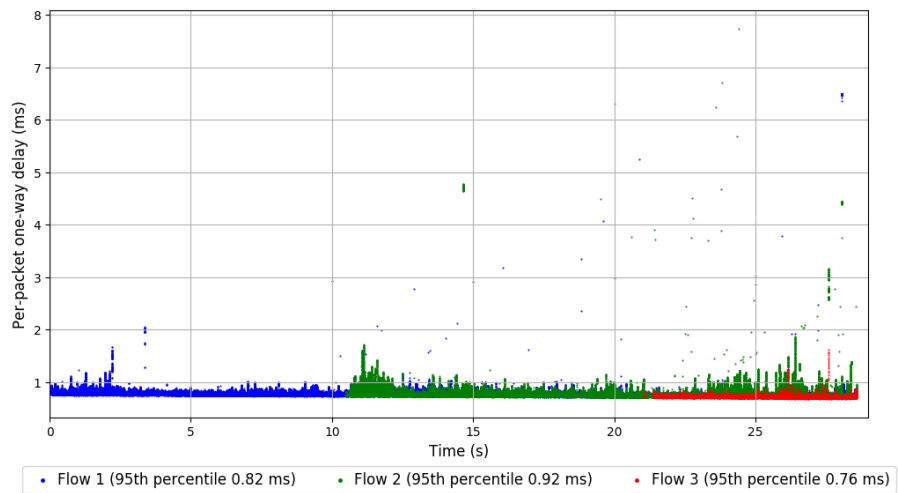
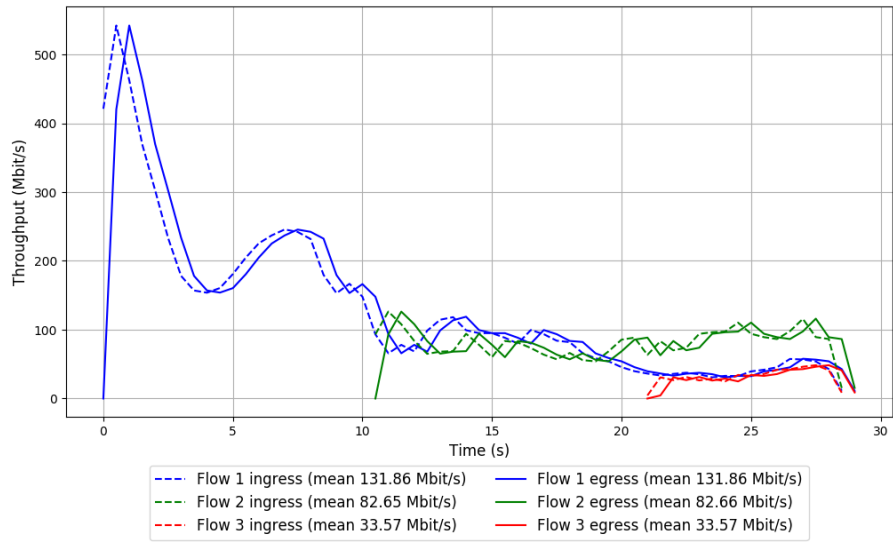
-- Flow 3:

Average throughput: 33.57 Mbit/s

95th percentile per-packet one-way delay: 0.759 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-05-30 11:22:50

End at: 2019-05-30 11:23:20

Local clock offset: -3.285 ms

Remote clock offset: 1.699 ms

Below is generated by plot.py at 2019-05-30 14:07:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 170.47 Mbit/s

95th percentile per-packet one-way delay: 1.020 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 138.68 Mbit/s

95th percentile per-packet one-way delay: 1.033 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 36.13 Mbit/s

95th percentile per-packet one-way delay: 0.989 ms

Loss rate: 0.01%

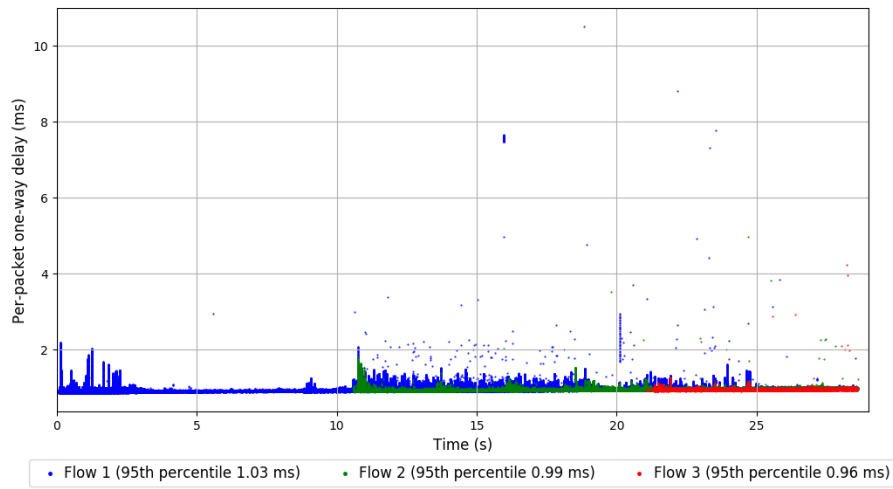
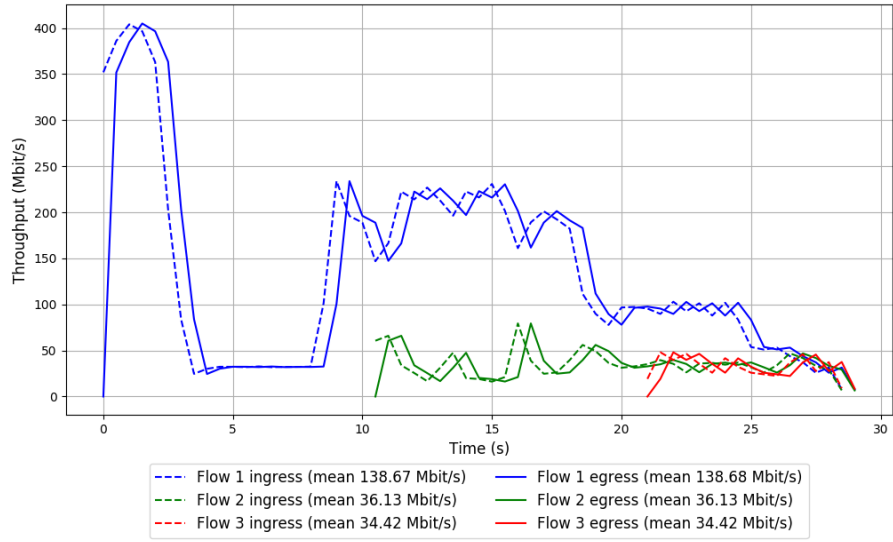
-- Flow 3:

Average throughput: 34.42 Mbit/s

95th percentile per-packet one-way delay: 0.963 ms

Loss rate: 0.10%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-05-30 11:53:23

End at: 2019-05-30 11:53:53

Local clock offset: -0.586 ms

Remote clock offset: 1.07 ms

Below is generated by plot.py at 2019-05-30 14:07:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 122.32 Mbit/s

95th percentile per-packet one-way delay: 0.824 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 82.65 Mbit/s

95th percentile per-packet one-way delay: 0.828 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 49.95 Mbit/s

95th percentile per-packet one-way delay: 0.818 ms

Loss rate: 0.00%

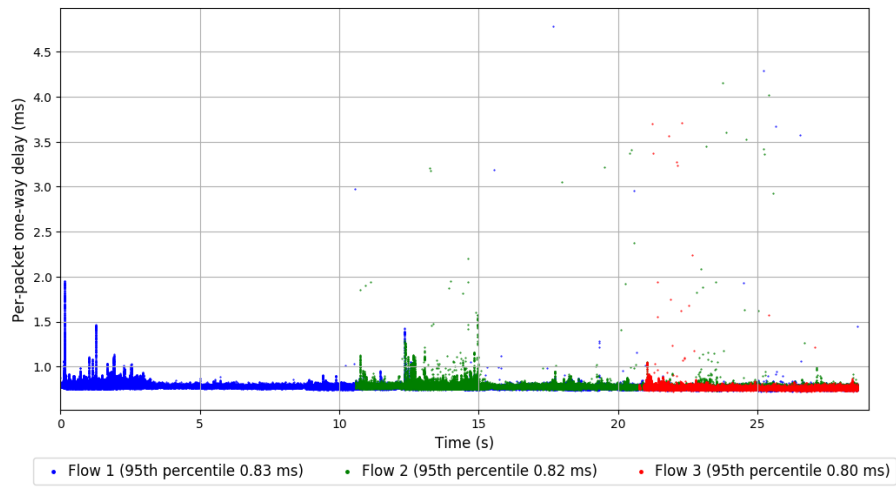
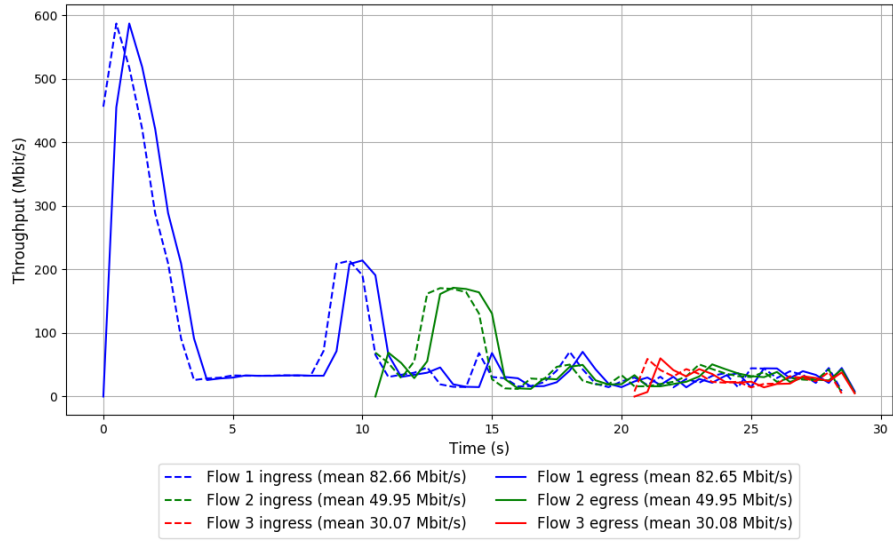
-- Flow 3:

Average throughput: 30.08 Mbit/s

95th percentile per-packet one-way delay: 0.803 ms

Loss rate: 0.05%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-05-30 12:23:40
End at: 2019-05-30 12:24:10
Local clock offset: 0.422 ms
Remote clock offset: -2.545 ms

Below is generated by plot.py at 2019-05-30 14:08:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 229.24 Mbit/s
95th percentile per-packet one-way delay: 1.322 ms
Loss rate: 0.00%

-- Flow 1:

Average throughput: 134.60 Mbit/s
95th percentile per-packet one-way delay: 1.268 ms
Loss rate: 0.00%

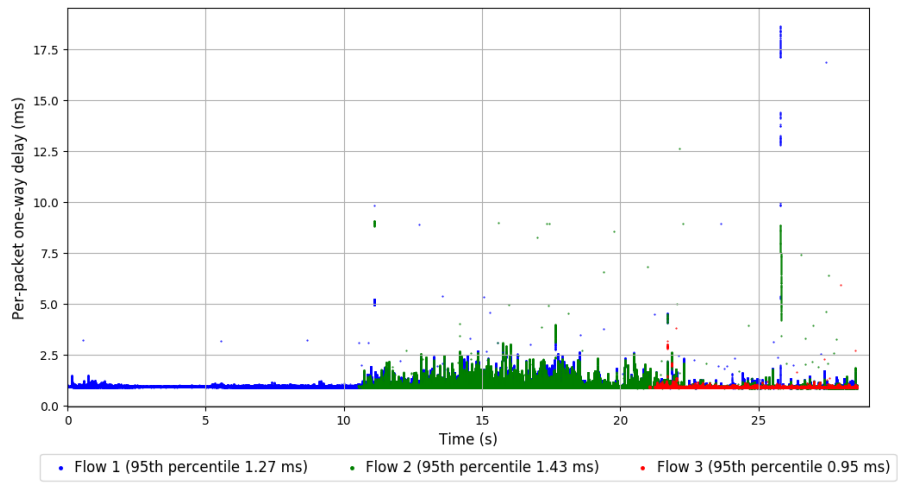
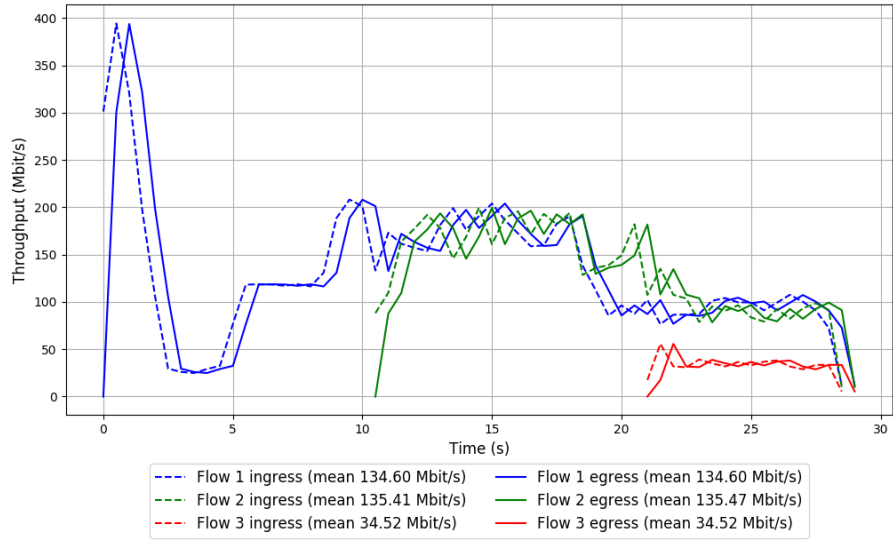
-- Flow 2:

Average throughput: 135.47 Mbit/s
95th percentile per-packet one-way delay: 1.425 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 34.52 Mbit/s
95th percentile per-packet one-way delay: 0.955 ms
Loss rate: 0.00%

Run 3: Report of Indigo-MusesC5 — Data Link

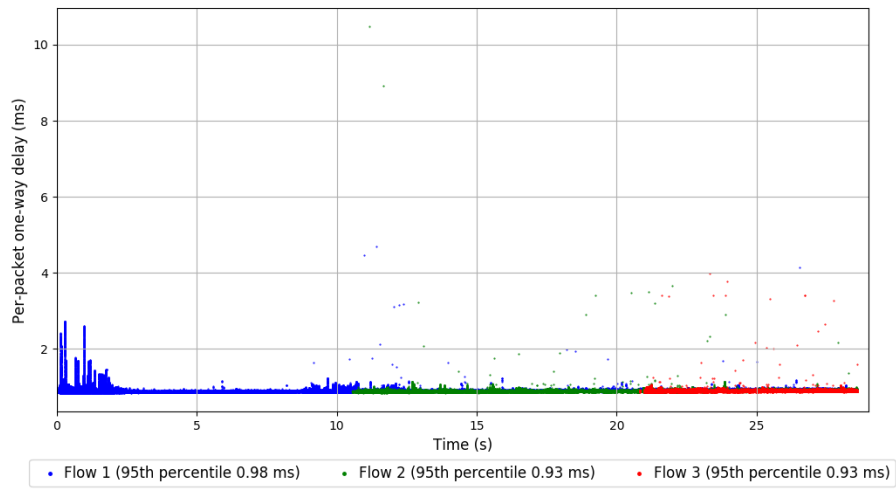
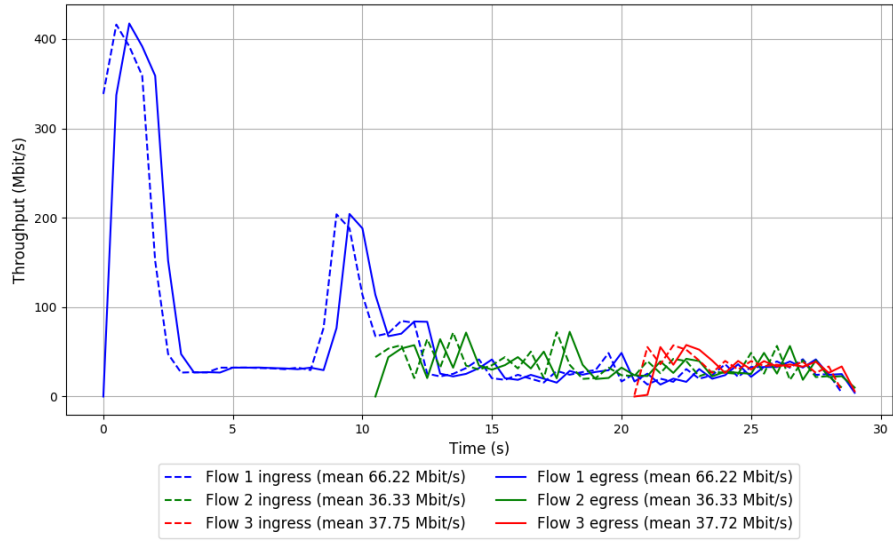


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-05-30 12:53:58
End at: 2019-05-30 12:54:28
Local clock offset: 0.675 ms
Remote clock offset: -0.274 ms

```
# Below is generated by plot.py at 2019-05-30 14:08:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.40 Mbit/s
95th percentile per-packet one-way delay: 0.955 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 66.22 Mbit/s
95th percentile per-packet one-way delay: 0.976 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.33 Mbit/s
95th percentile per-packet one-way delay: 0.930 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 37.72 Mbit/s
95th percentile per-packet one-way delay: 0.933 ms
Loss rate: 0.10%
```

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-05-30 13:24:15

End at: 2019-05-30 13:24:45

Local clock offset: 3.762 ms

Remote clock offset: 0.465 ms

Below is generated by plot.py at 2019-05-30 14:08:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 120.81 Mbit/s

95th percentile per-packet one-way delay: 0.866 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 92.19 Mbit/s

95th percentile per-packet one-way delay: 0.876 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 29.91 Mbit/s

95th percentile per-packet one-way delay: 0.818 ms

Loss rate: 0.00%

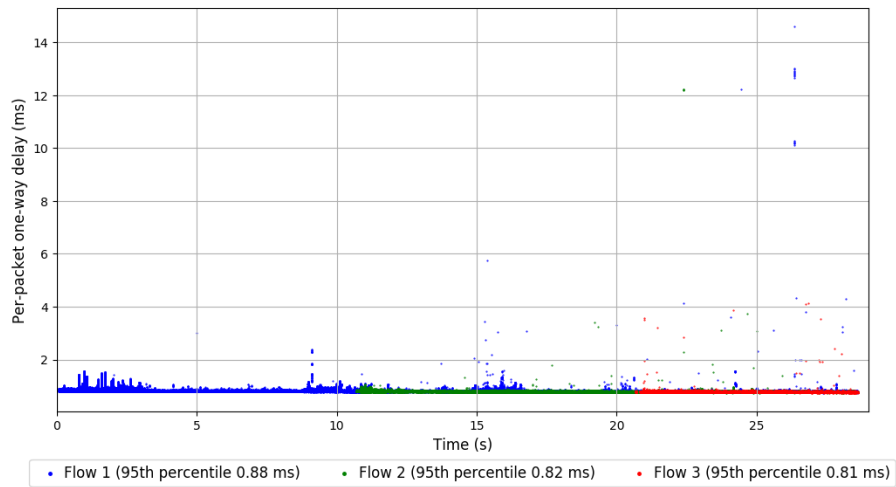
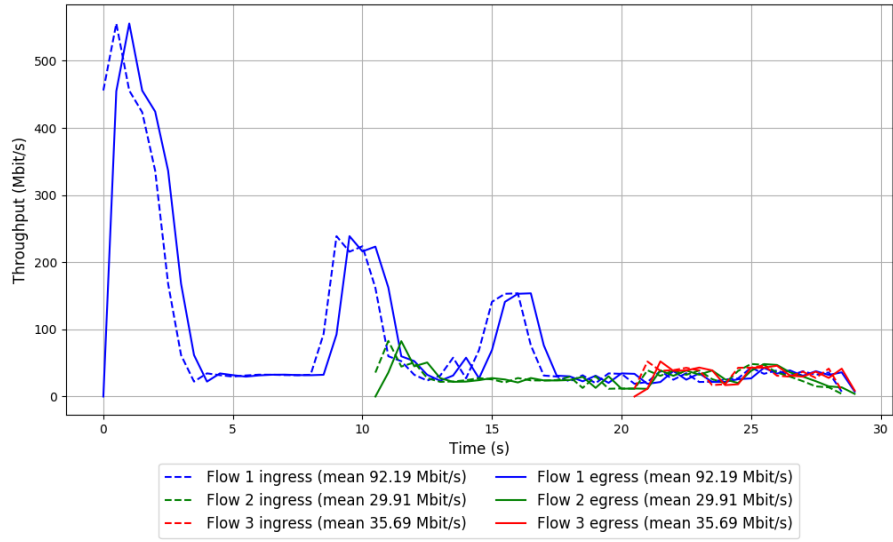
-- Flow 3:

Average throughput: 35.69 Mbit/s

95th percentile per-packet one-way delay: 0.808 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2019-05-30 11:00:47
End at: 2019-05-30 11:01:17
Local clock offset: -1.719 ms
Remote clock offset: -3.194 ms

Below is generated by plot.py at 2019-05-30 14:08:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.09 Mbit/s
95th percentile per-packet one-way delay: 1.237 ms
Loss rate: 0.02%

-- Flow 1:

Average throughput: 51.63 Mbit/s
95th percentile per-packet one-way delay: 1.221 ms
Loss rate: 0.02%

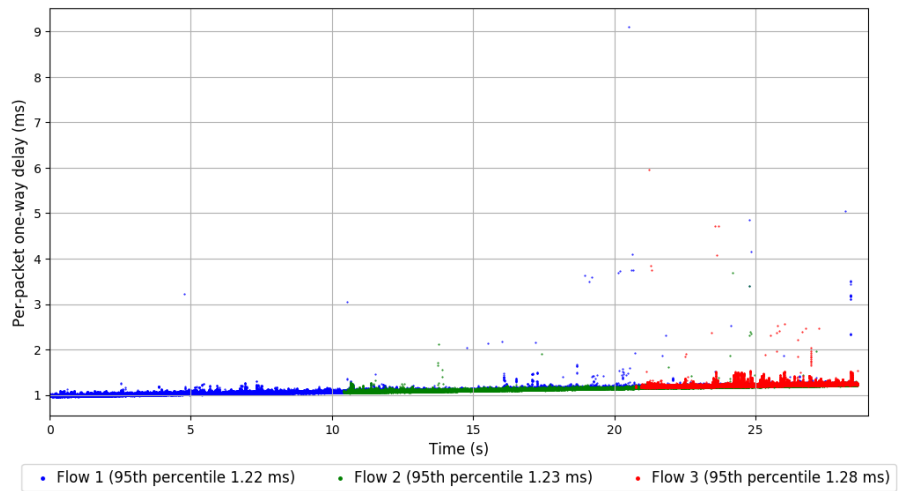
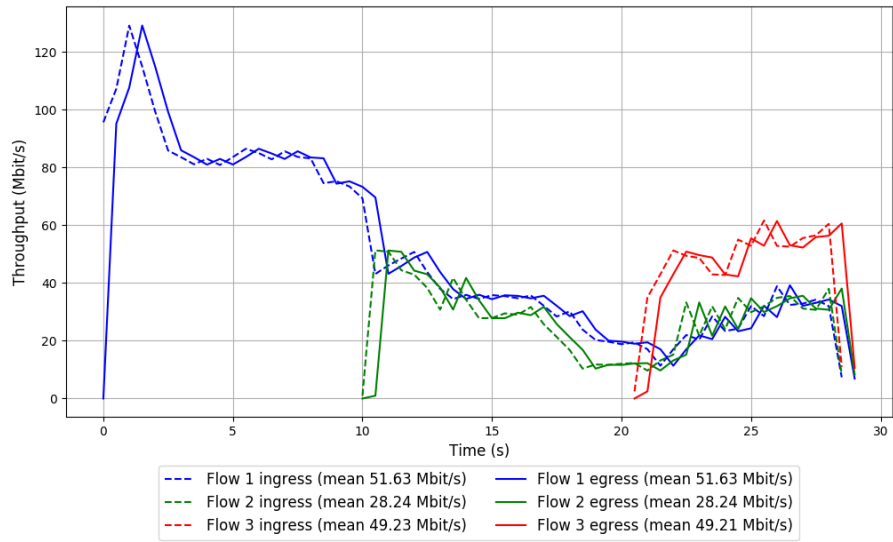
-- Flow 2:

Average throughput: 28.24 Mbit/s
95th percentile per-packet one-way delay: 1.225 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 49.21 Mbit/s
95th percentile per-packet one-way delay: 1.280 ms
Loss rate: 0.05%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-05-30 11:31:10

End at: 2019-05-30 11:31:40

Local clock offset: -3.897 ms

Remote clock offset: 2.347 ms

Below is generated by plot.py at 2019-05-30 14:08:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.49 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 69.77 Mbit/s

95th percentile per-packet one-way delay: 1.074 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 24.63 Mbit/s

95th percentile per-packet one-way delay: 1.101 ms

Loss rate: 0.00%

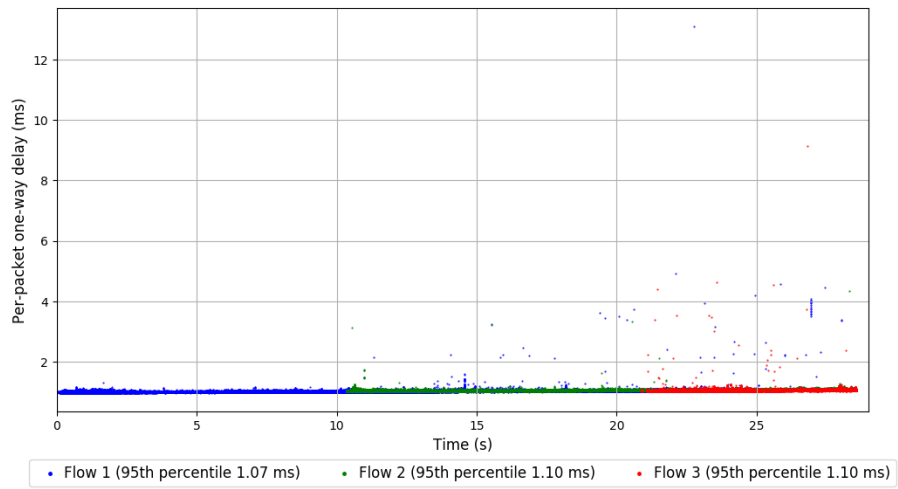
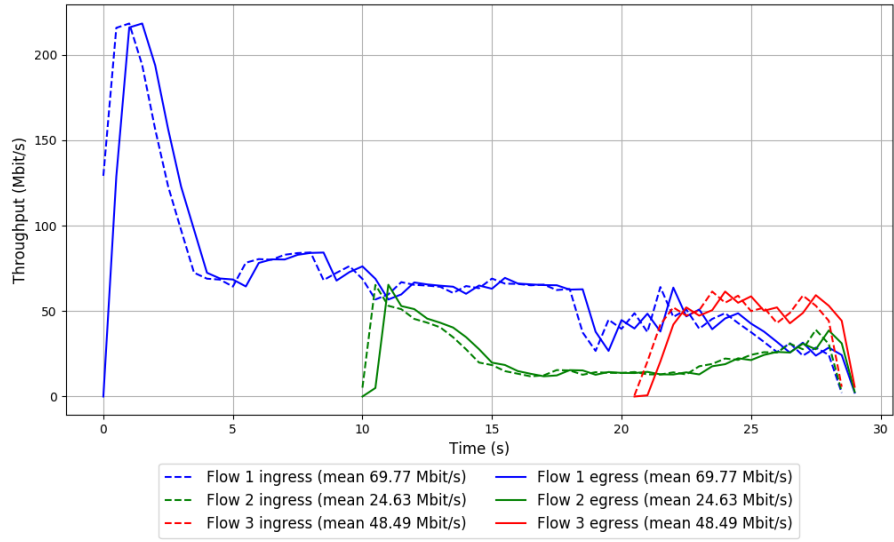
-- Flow 3:

Average throughput: 48.49 Mbit/s

95th percentile per-packet one-way delay: 1.099 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-05-30 12:01:36

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

Local clock offset: -0.12 ms

Remote clock offset: 1.249 ms

Below is generated by plot.py at 2019-05-30 14:08:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.43 Mbit/s

95th percentile per-packet one-way delay: 0.819 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 64.25 Mbit/s

95th percentile per-packet one-way delay: 0.813 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 37.10 Mbit/s

95th percentile per-packet one-way delay: 0.827 ms

Loss rate: 0.00%

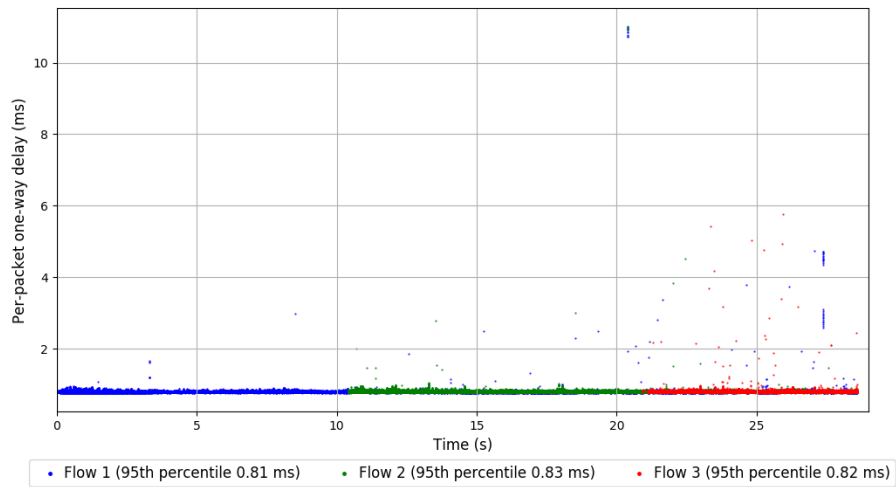
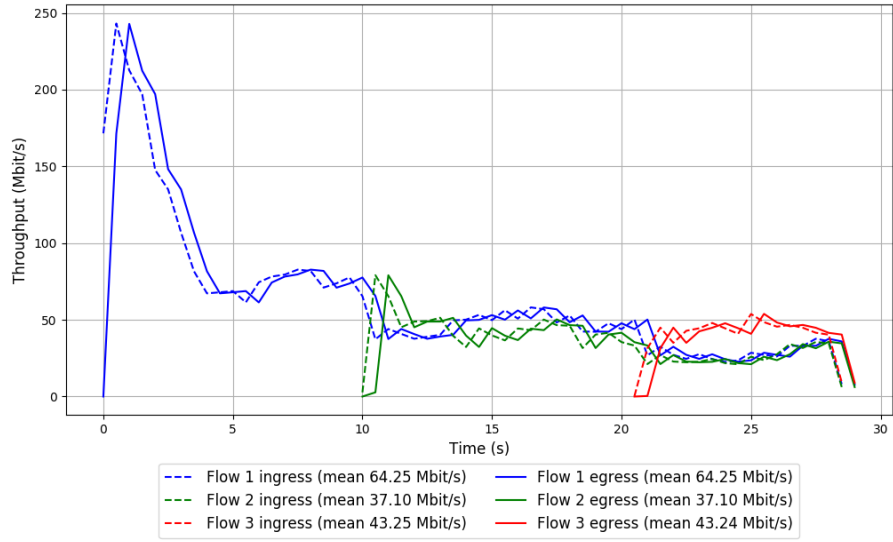
-- Flow 3:

Average throughput: 43.24 Mbit/s

95th percentile per-packet one-way delay: 0.825 ms

Loss rate: 0.04%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-05-30 12:31:57

End at: 2019-05-30 12:32:27

Local clock offset: 0.48 ms

Remote clock offset: -3.0 ms

Below is generated by plot.py at 2019-05-30 14:08:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.63 Mbit/s

95th percentile per-packet one-way delay: 0.864 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 62.89 Mbit/s

95th percentile per-packet one-way delay: 0.874 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 21.32 Mbit/s

95th percentile per-packet one-way delay: 0.822 ms

Loss rate: 0.02%

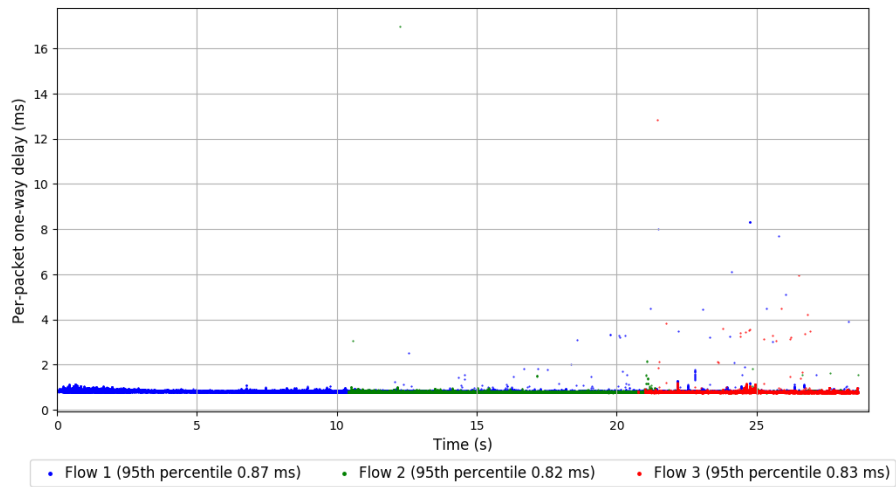
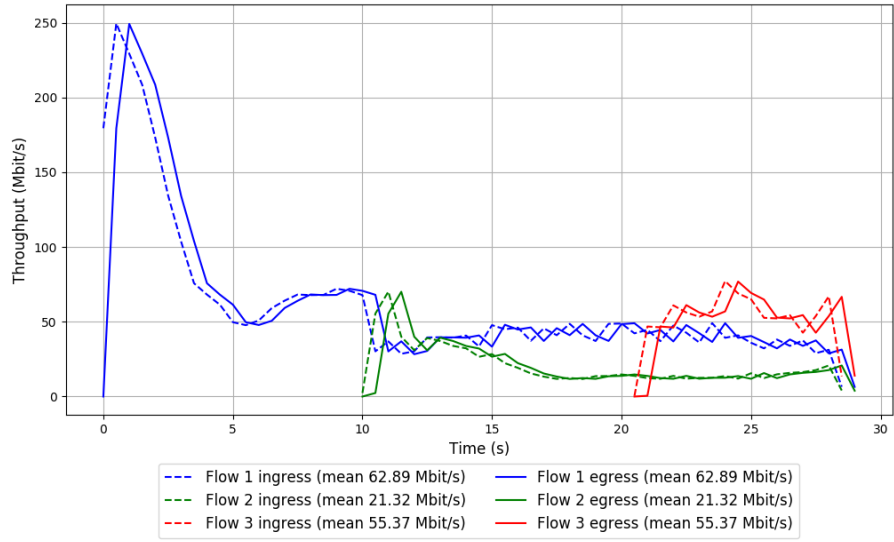
-- Flow 3:

Average throughput: 55.37 Mbit/s

95th percentile per-packet one-way delay: 0.826 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-05-30 13:02:08

End at: 2019-05-30 13:02:38

Local clock offset: 0.762 ms

Remote clock offset: 0.341 ms

Below is generated by plot.py at 2019-05-30 14:08:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.27 Mbit/s

95th percentile per-packet one-way delay: 0.991 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 46.25 Mbit/s

95th percentile per-packet one-way delay: 0.986 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 41.43 Mbit/s

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

Loss rate: 0.00%

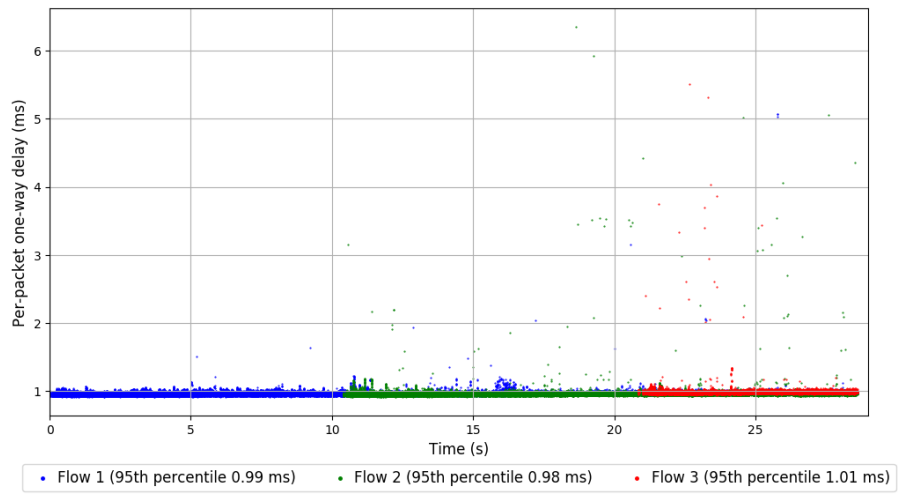
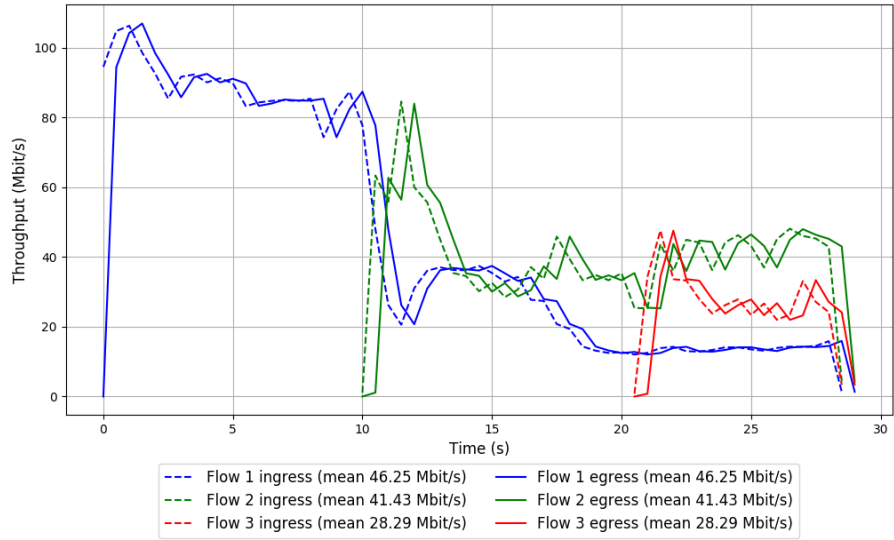
-- Flow 3:

Average throughput: 28.29 Mbit/s

95th percentile per-packet one-way delay: 1.009 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MuseST

Start at: 2019-05-30 11:11:26

End at: 2019-05-30 11:11:56

Local clock offset: -2.506 ms

Remote clock offset: 0.015 ms

Below is generated by plot.py at 2019-05-30 14:09:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 164.51 Mbit/s

95th percentile per-packet one-way delay: 1.037 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 126.95 Mbit/s

95th percentile per-packet one-way delay: 1.025 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 44.91 Mbit/s

95th percentile per-packet one-way delay: 1.046 ms

Loss rate: 0.00%

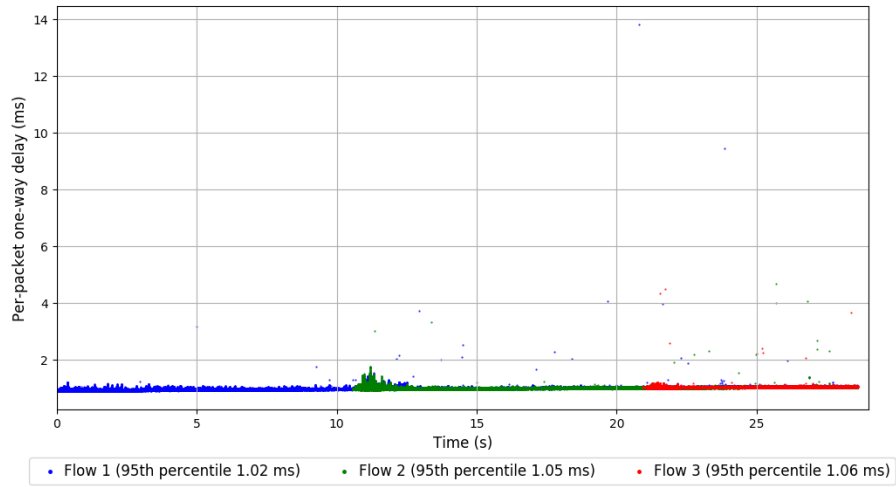
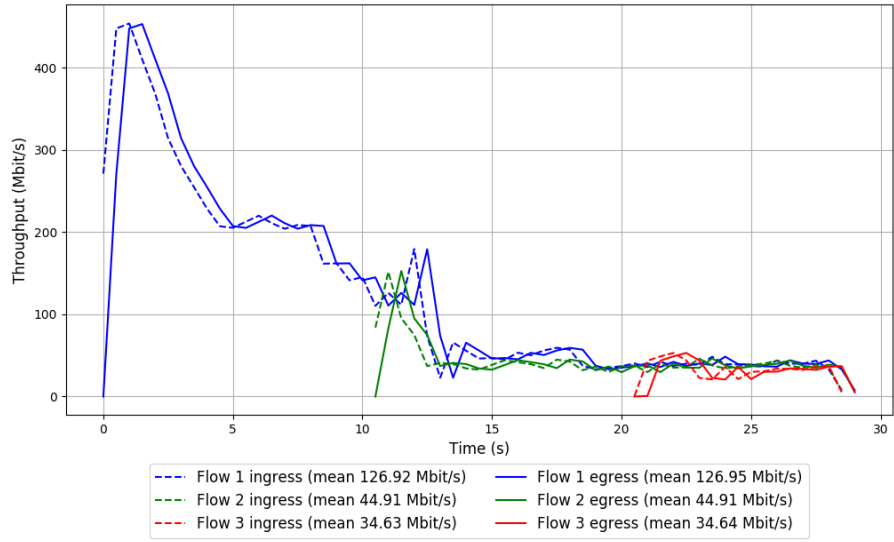
-- Flow 3:

Average throughput: 34.64 Mbit/s

95th percentile per-packet one-way delay: 1.063 ms

Loss rate: 0.06%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MuseST

Start at: 2019-05-30 11:41:56

End at: 2019-05-30 11:42:26

Local clock offset: -2.593 ms

Remote clock offset: 1.169 ms

Below is generated by plot.py at 2019-05-30 14:09:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 157.04 Mbit/s

95th percentile per-packet one-way delay: 0.777 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 119.57 Mbit/s

95th percentile per-packet one-way delay: 0.785 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 43.25 Mbit/s

95th percentile per-packet one-way delay: 0.694 ms

Loss rate: 0.00%

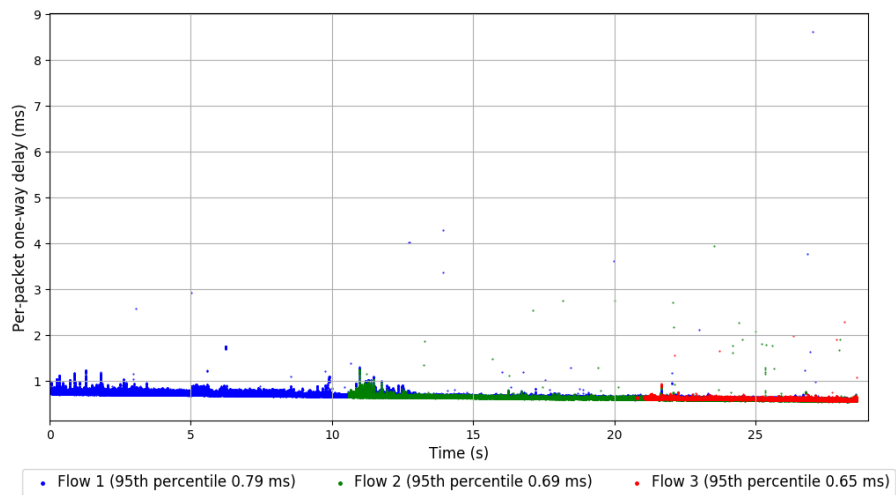
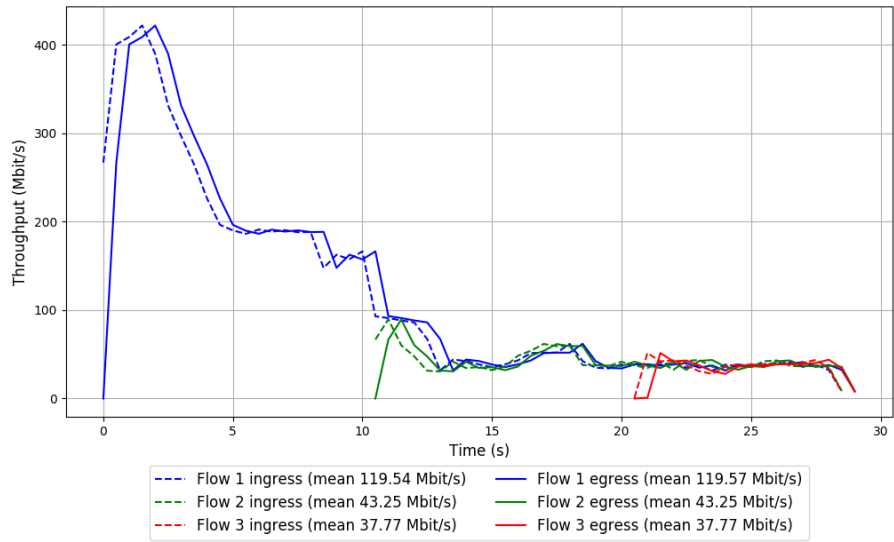
-- Flow 3:

Average throughput: 37.77 Mbit/s

95th percentile per-packet one-way delay: 0.650 ms

Loss rate: 0.01%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MuseST

Start at: 2019-05-30 12:12:19
End at: 2019-05-30 12:12:49
Local clock offset: 0.187 ms
Remote clock offset: -0.573 ms

Below is generated by plot.py at 2019-05-30 14:09:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 188.75 Mbit/s
95th percentile per-packet one-way delay: 0.803 ms
Loss rate: 0.00%

-- Flow 1:

Average throughput: 139.86 Mbit/s
95th percentile per-packet one-way delay: 0.809 ms
Loss rate: 0.00%

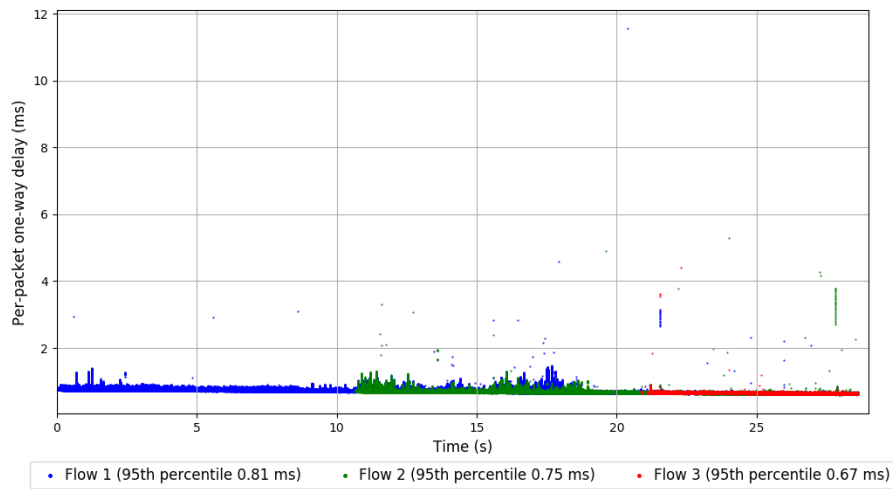
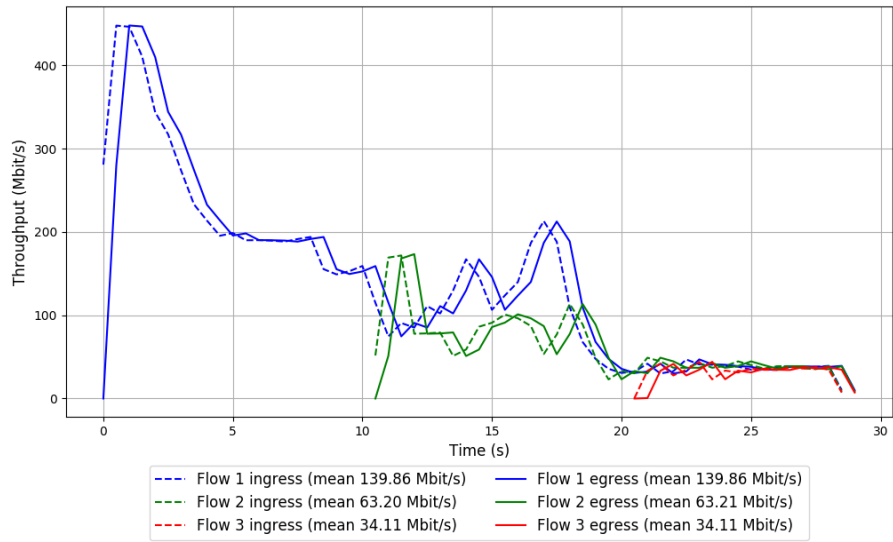
-- Flow 2:

Average throughput: 63.21 Mbit/s
95th percentile per-packet one-way delay: 0.751 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 34.11 Mbit/s
95th percentile per-packet one-way delay: 0.672 ms
Loss rate: 0.00%

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MuseST

Start at: 2019-05-30 12:42:39

End at: 2019-05-30 12:43:09

Local clock offset: 0.606 ms

Remote clock offset: -2.84 ms

Below is generated by plot.py at 2019-05-30 14:10:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 174.96 Mbit/s

95th percentile per-packet one-way delay: 1.206 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 141.21 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.30 Mbit/s

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

Loss rate: 0.00%

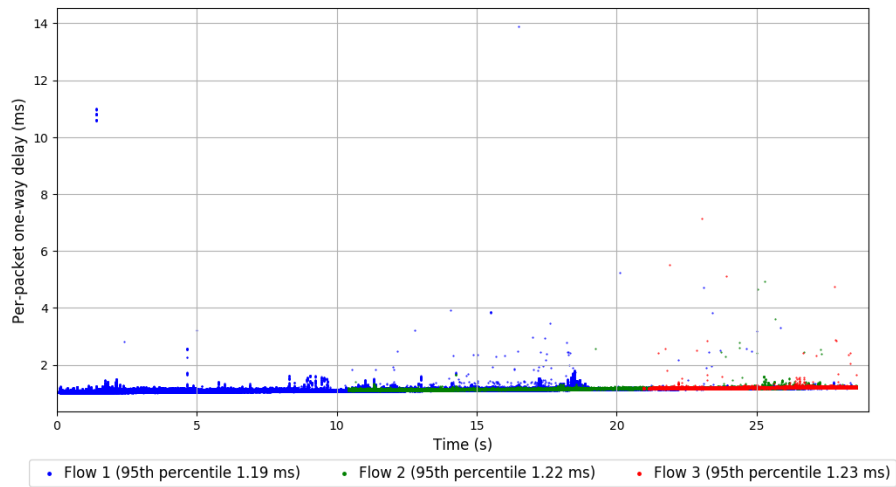
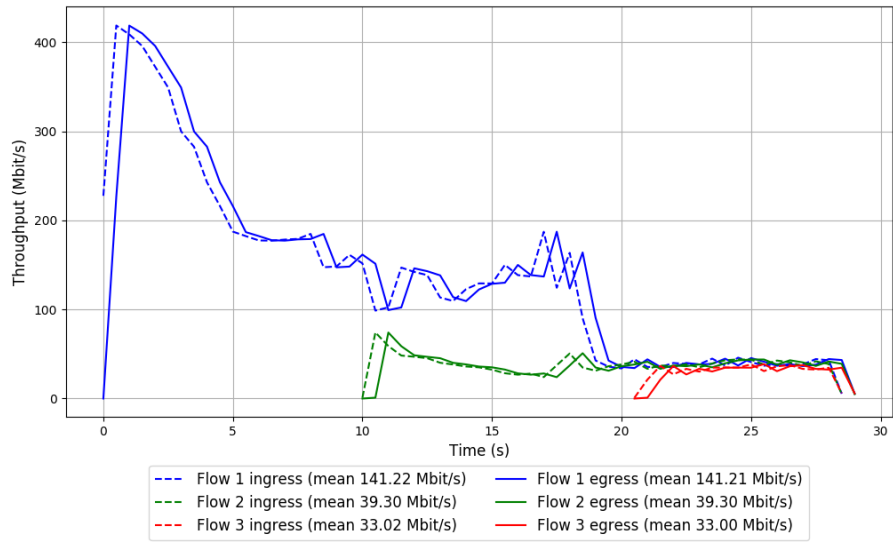
-- Flow 3:

Average throughput: 33.00 Mbit/s

95th percentile per-packet one-way delay: 1.231 ms

Loss rate: 0.07%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MuseST

Start at: 2019-05-30 13:12:51

End at: 2019-05-30 13:13:21

Local clock offset: 2.211 ms

Remote clock offset: 0.829 ms

Below is generated by plot.py at 2019-05-30 14:10:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 175.93 Mbit/s

95th percentile per-packet one-way delay: 0.868 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 127.42 Mbit/s

95th percentile per-packet one-way delay: 0.875 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 62.42 Mbit/s

95th percentile per-packet one-way delay: 0.849 ms

Loss rate: 0.01%

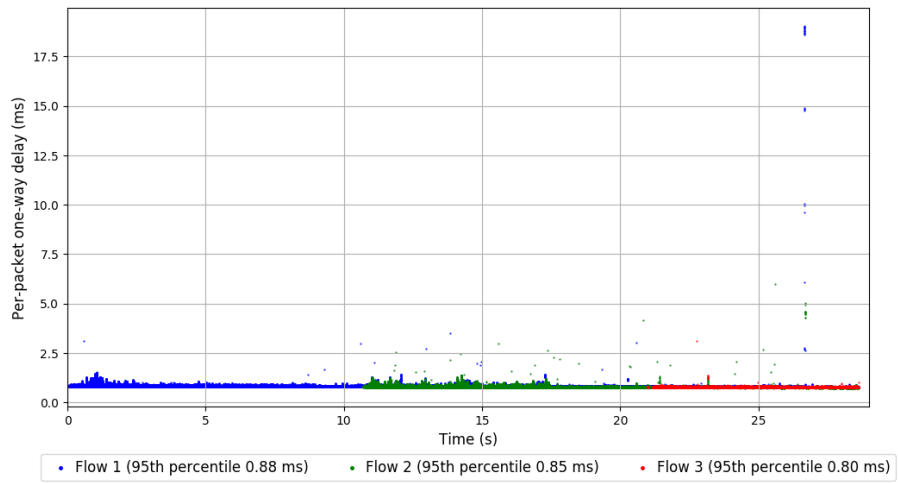
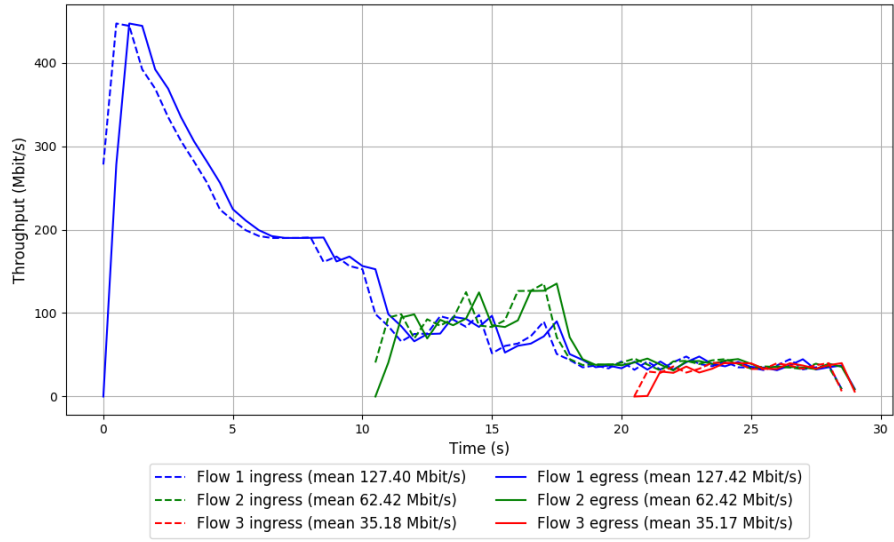
-- Flow 3:

Average throughput: 35.17 Mbit/s

95th percentile per-packet one-way delay: 0.801 ms

Loss rate: 0.10%

Run 5: Report of Indigo-MusesT — Data Link



Run 1: Statistics of LEDBAT

Start at: 2019-05-30 11:18:37

End at: 2019-05-30 11:19:07

Local clock offset: -3.012 ms

Remote clock offset: 1.002 ms

Below is generated by plot.py at 2019-05-30 14:14:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 566.88 Mbit/s

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

Loss rate: 0.01%

-- Flow 1:

Average throughput: 342.71 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 246.30 Mbit/s

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

Loss rate: 0.01%

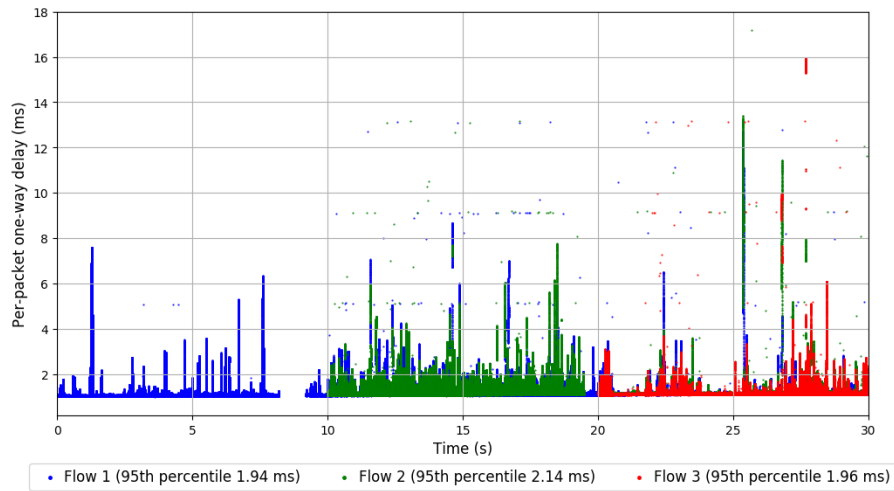
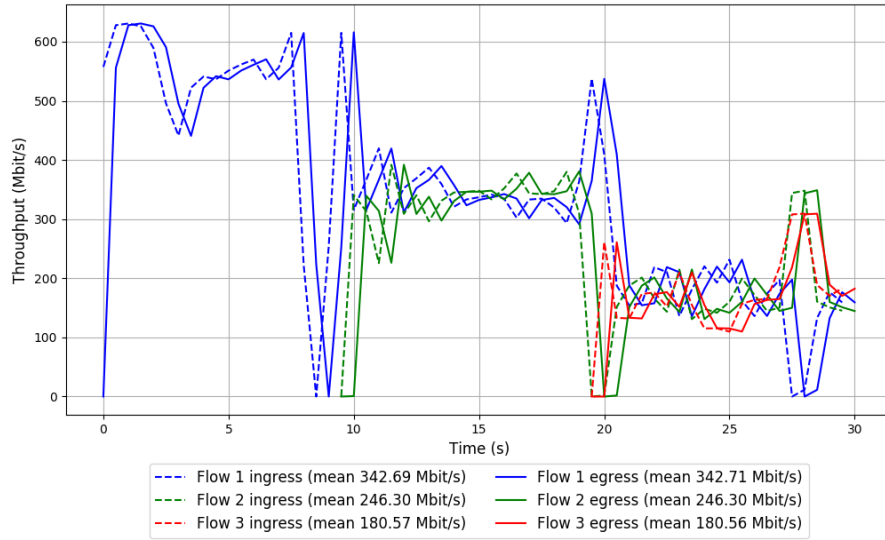
-- Flow 3:

Average throughput: 180.56 Mbit/s

95th percentile per-packet one-way delay: 1.957 ms

Loss rate: 0.03%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-05-30 11:49:10

End at: 2019-05-30 11:49:40

Local clock offset: -1.097 ms

Remote clock offset: 1.064 ms

Below is generated by plot.py at 2019-05-30 14:14:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 574.65 Mbit/s

95th percentile per-packet one-way delay: 1.522 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 361.10 Mbit/s

95th percentile per-packet one-way delay: 1.457 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 234.97 Mbit/s

95th percentile per-packet one-way delay: 1.703 ms

Loss rate: 0.00%

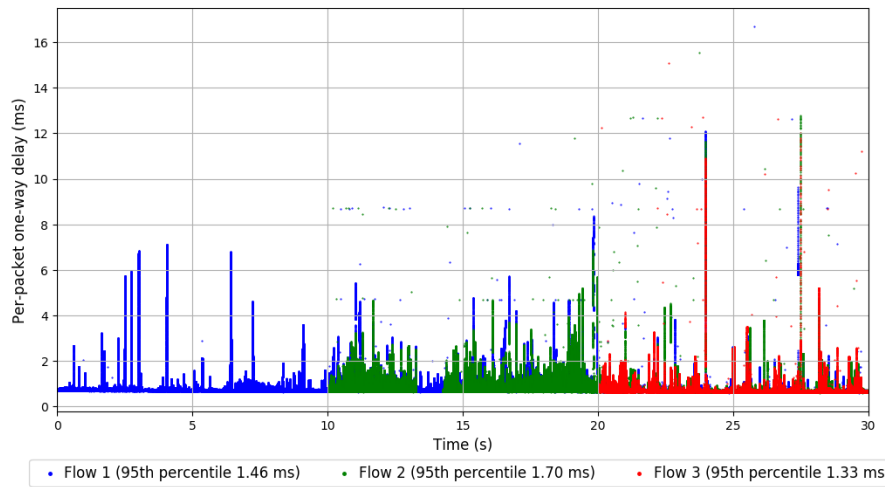
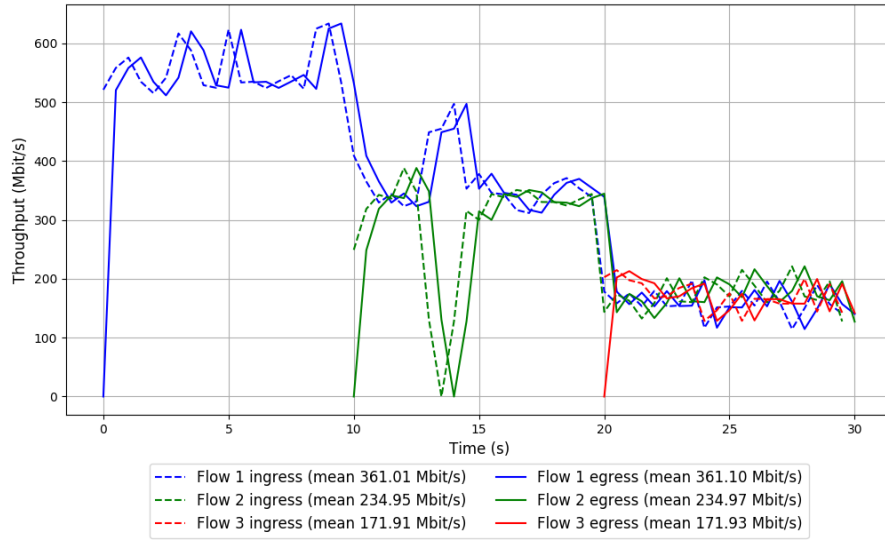
-- Flow 3:

Average throughput: 171.93 Mbit/s

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

Loss rate: 0.01%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-05-30 12:19:27
End at: 2019-05-30 12:19:57
Local clock offset: 0.351 ms
Remote clock offset: -1.959 ms

Below is generated by plot.py at 2019-05-30 14:14:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 553.74 Mbit/s
95th percentile per-packet one-way delay: 12.129 ms
Loss rate: 0.01%

-- Flow 1:

Average throughput: 332.37 Mbit/s
95th percentile per-packet one-way delay: 13.194 ms
Loss rate: 0.00%

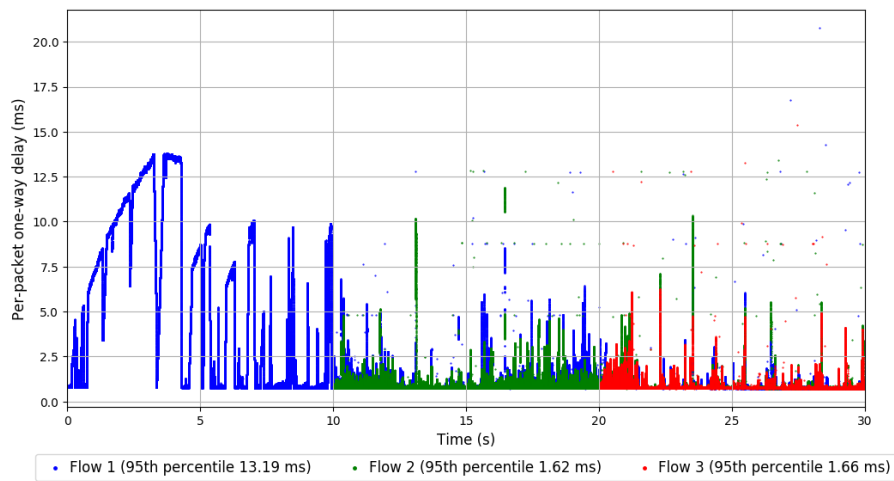
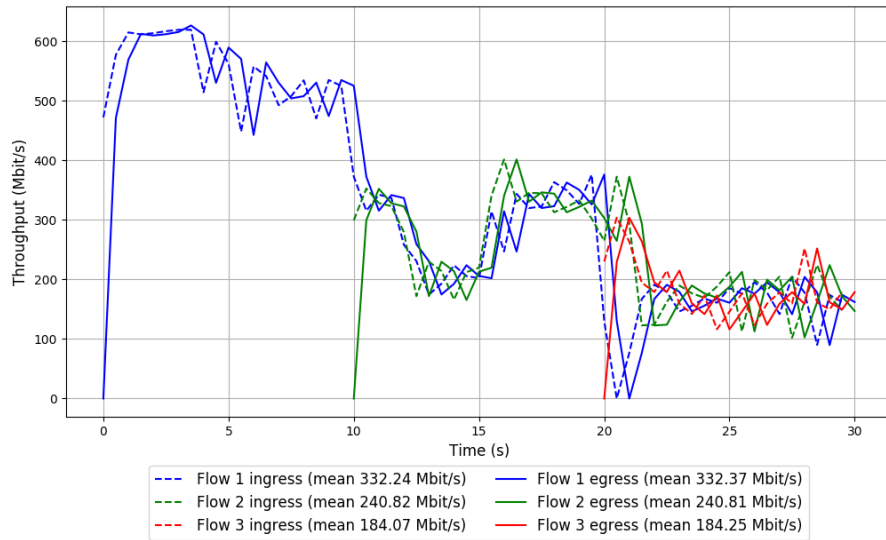
-- Flow 2:

Average throughput: 240.81 Mbit/s
95th percentile per-packet one-way delay: 1.617 ms
Loss rate: 0.01%

-- Flow 3:

Average throughput: 184.25 Mbit/s
95th percentile per-packet one-way delay: 1.656 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-05-30 12:49:47
End at: 2019-05-30 12:50:17
Local clock offset: 0.615 ms
Remote clock offset: -0.895 ms

Below is generated by plot.py at 2019-05-30 14:15:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 554.95 Mbit/s
95th percentile per-packet one-way delay: 1.812 ms
Loss rate: 0.00%

-- Flow 1:

Average throughput: 336.62 Mbit/s
95th percentile per-packet one-way delay: 1.433 ms
Loss rate: 0.00%

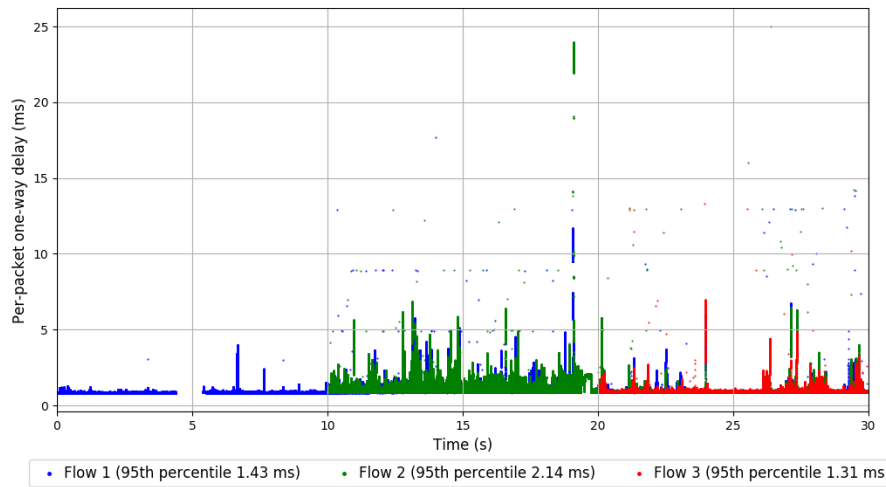
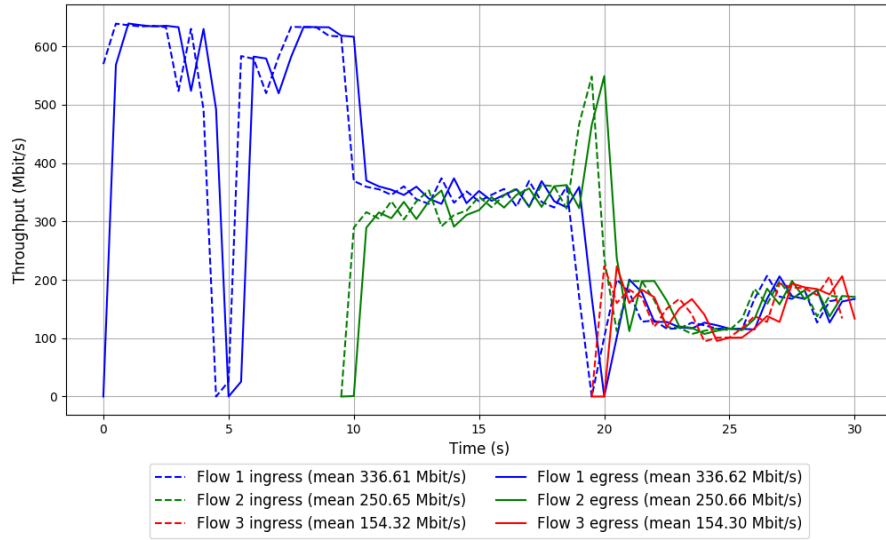
-- Flow 2:

Average throughput: 250.66 Mbit/s
95th percentile per-packet one-way delay: 2.138 ms
Loss rate: 0.01%

-- Flow 3:

Average throughput: 154.30 Mbit/s
95th percentile per-packet one-way delay: 1.313 ms
Loss rate: 0.01%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-05-30 13:20:01

End at: 2019-05-30 13:20:31

Local clock offset: 3.337 ms

Remote clock offset: 0.559 ms

Below is generated by plot.py at 2019-05-30 14:15:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 570.79 Mbit/s

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

Loss rate: 0.01%

-- Flow 1:

Average throughput: 340.17 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 247.35 Mbit/s

95th percentile per-packet one-way delay: 2.132 ms

Loss rate: 0.00%

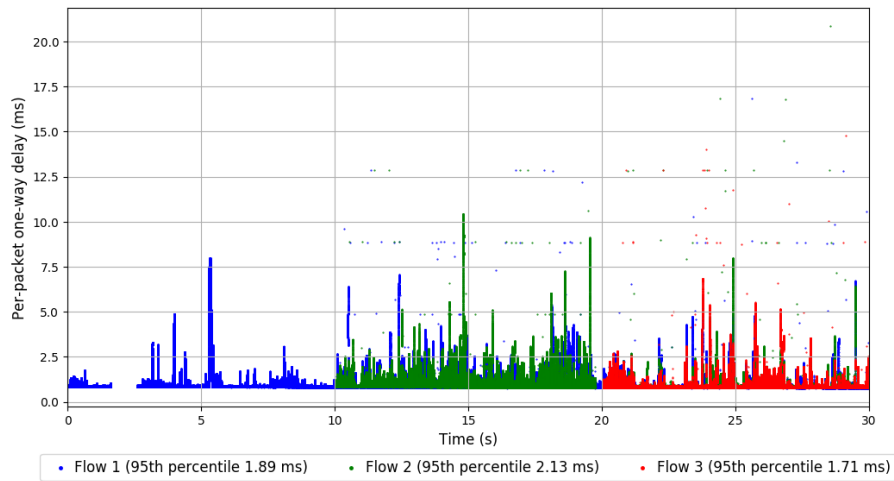
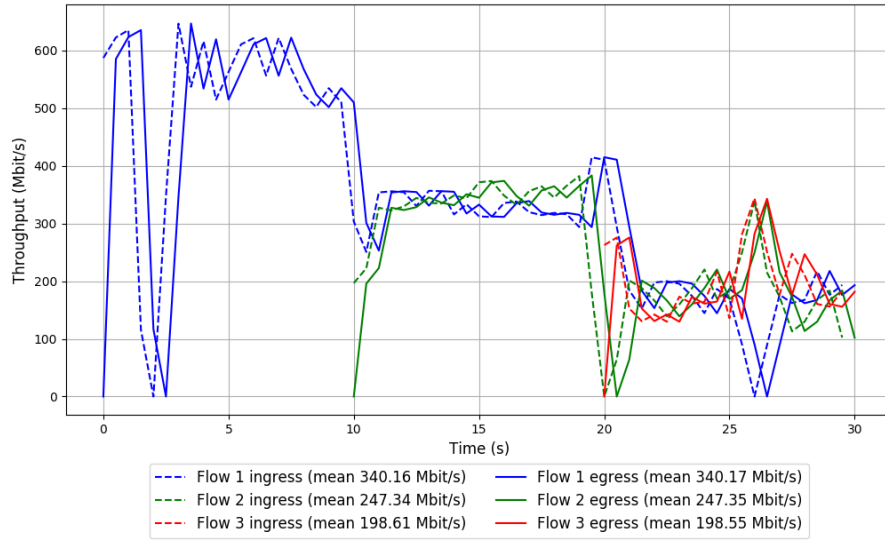
-- Flow 3:

Average throughput: 198.55 Mbit/s

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

Loss rate: 0.05%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-05-30 11:12:45

End at: 2019-05-30 11:13:15

Local clock offset: -2.614 ms

Remote clock offset: 0.313 ms

Below is generated by plot.py at 2019-05-30 14:16:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 565.49 Mbit/s

95th percentile per-packet one-way delay: 1.353 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 408.91 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 224.73 Mbit/s

95th percentile per-packet one-way delay: 1.393 ms

Loss rate: 0.01%

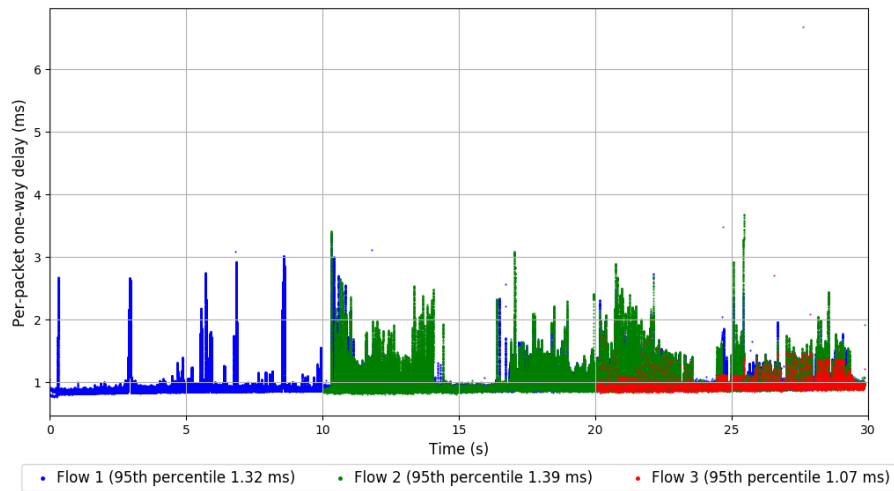
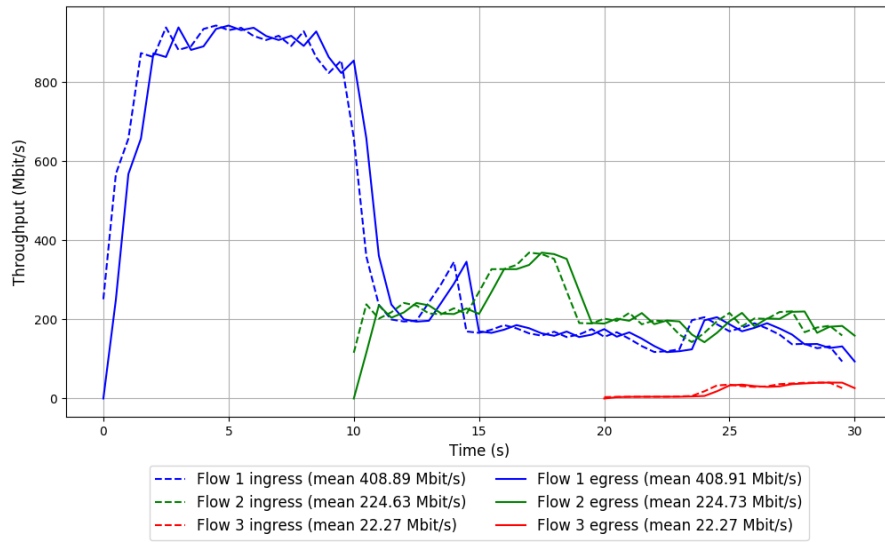
-- Flow 3:

Average throughput: 22.27 Mbit/s

95th percentile per-packet one-way delay: 1.075 ms

Loss rate: 0.03%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-05-30 11:43:15

End at: 2019-05-30 11:43:45

Local clock offset: -2.237 ms

Remote clock offset: 1.179 ms

Below is generated by plot.py at 2019-05-30 14:17:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 665.83 Mbit/s

95th percentile per-packet one-way delay: 1.104 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 471.78 Mbit/s

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

Loss rate: 0.01%

-- Flow 2:

Average throughput: 259.48 Mbit/s

95th percentile per-packet one-way delay: 1.126 ms

Loss rate: 0.00%

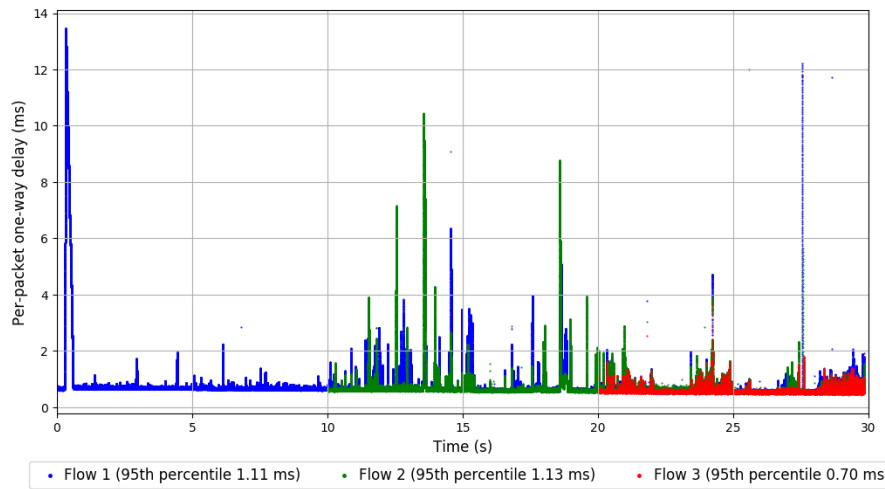
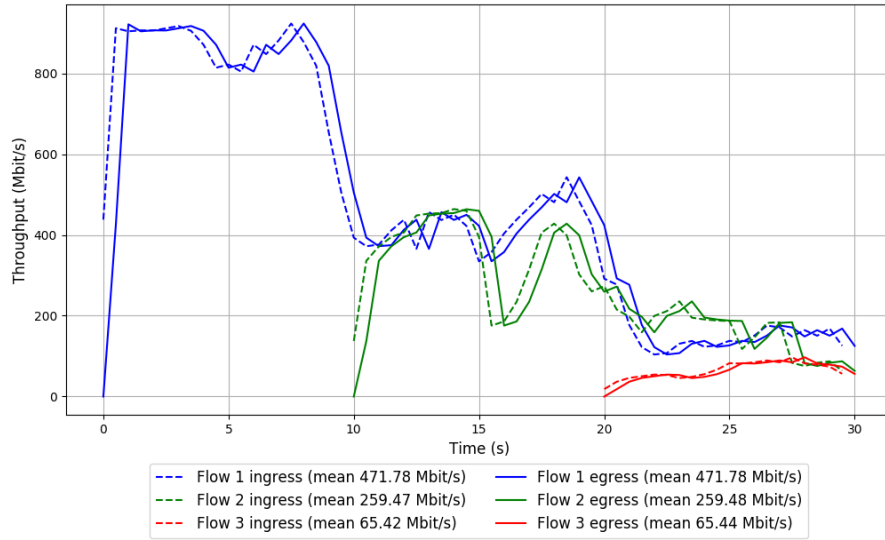
-- Flow 3:

Average throughput: 65.44 Mbit/s

95th percentile per-packet one-way delay: 0.698 ms

Loss rate: 0.02%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-05-30 12:13:39
End at: 2019-05-30 12:14:09
Local clock offset: 0.234 ms
Remote clock offset: -1.012 ms

Below is generated by plot.py at 2019-05-30 14:17:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 649.73 Mbit/s
95th percentile per-packet one-way delay: 1.816 ms
Loss rate: 0.01%

-- Flow 1:

Average throughput: 483.02 Mbit/s
95th percentile per-packet one-way delay: 1.929 ms
Loss rate: 0.00%

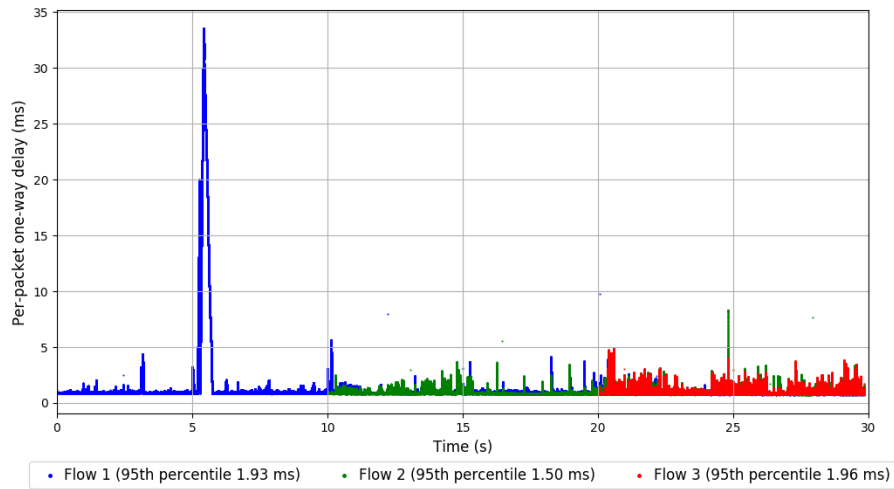
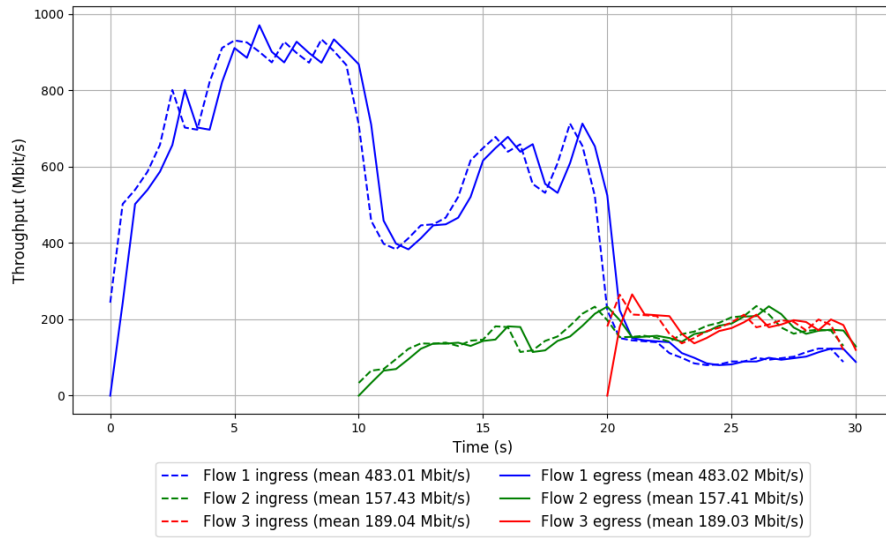
-- Flow 2:

Average throughput: 157.41 Mbit/s
95th percentile per-packet one-way delay: 1.502 ms
Loss rate: 0.02%

-- Flow 3:

Average throughput: 189.03 Mbit/s
95th percentile per-packet one-way delay: 1.956 ms
Loss rate: 0.01%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-05-30 12:43:59

End at: 2019-05-30 12:44:29

Local clock offset: 0.6 ms

Remote clock offset: -2.321 ms

Below is generated by plot.py at 2019-05-30 14:21:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 555.18 Mbit/s

95th percentile per-packet one-way delay: 26.351 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 412.10 Mbit/s

95th percentile per-packet one-way delay: 29.986 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 154.02 Mbit/s

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

Loss rate: 0.01%

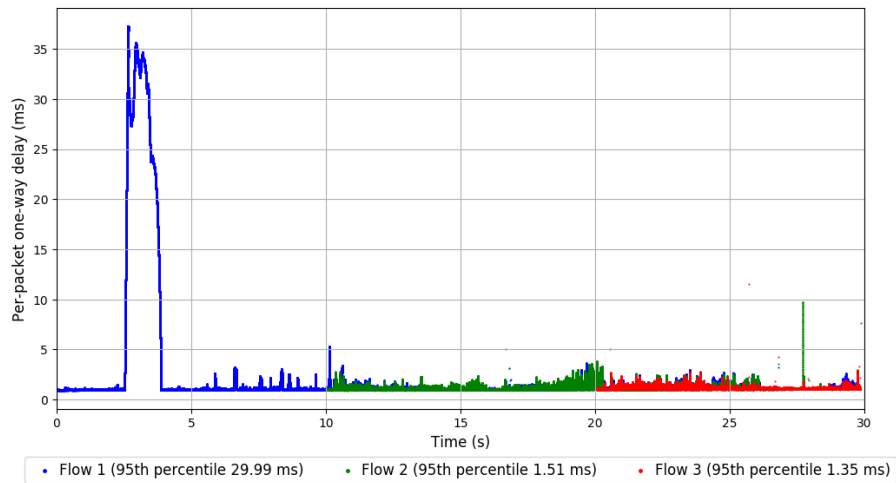
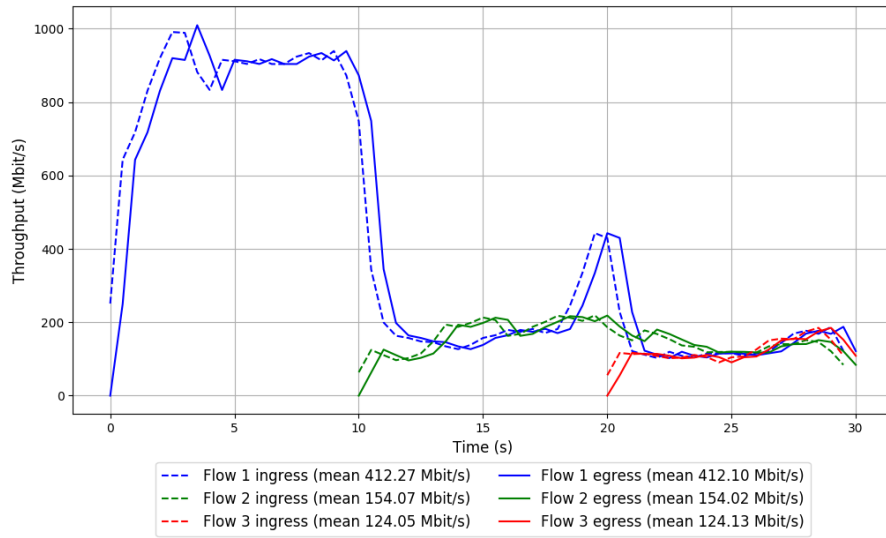
-- Flow 3:

Average throughput: 124.13 Mbit/s

95th percentile per-packet one-way delay: 1.351 ms

Loss rate: 0.02%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-05-30 13:14:11

End at: 2019-05-30 13:14:41

Local clock offset: 2.436 ms

Remote clock offset: 0.955 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 657.49 Mbit/s

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

Loss rate: 0.01%

-- Flow 1:

Average throughput: 588.75 Mbit/s

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

Loss rate: 0.01%

-- Flow 2:

Average throughput: 84.25 Mbit/s

95th percentile per-packet one-way delay: 0.828 ms

Loss rate: 0.02%

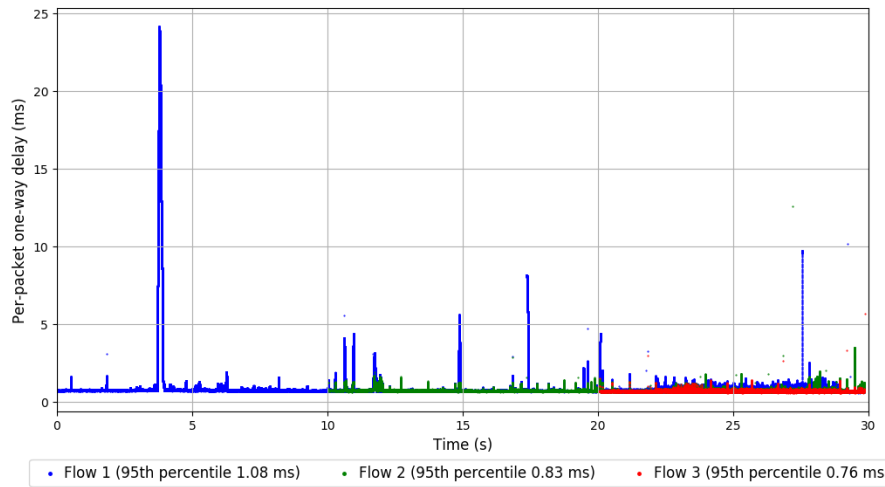
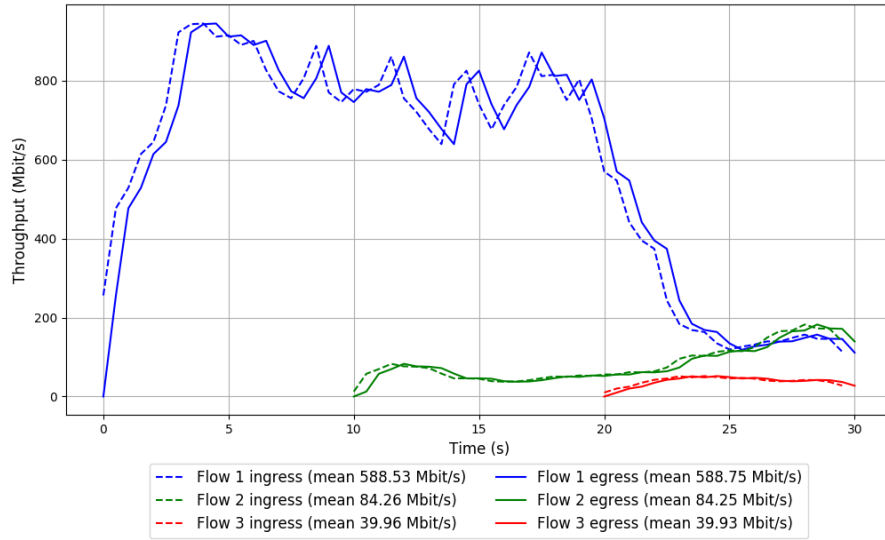
-- Flow 3:

Average throughput: 39.93 Mbit/s

95th percentile per-packet one-way delay: 0.763 ms

Loss rate: 0.05%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2019-05-30 10:56:40
End at: 2019-05-30 10:57:11
Local clock offset: -1.368 ms
Remote clock offset: -4.205 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 130.30 Mbit/s
95th percentile per-packet one-way delay: 1.100 ms
Loss rate: 0.00%

-- Flow 1:

Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 0.985 ms
Loss rate: 0.01%

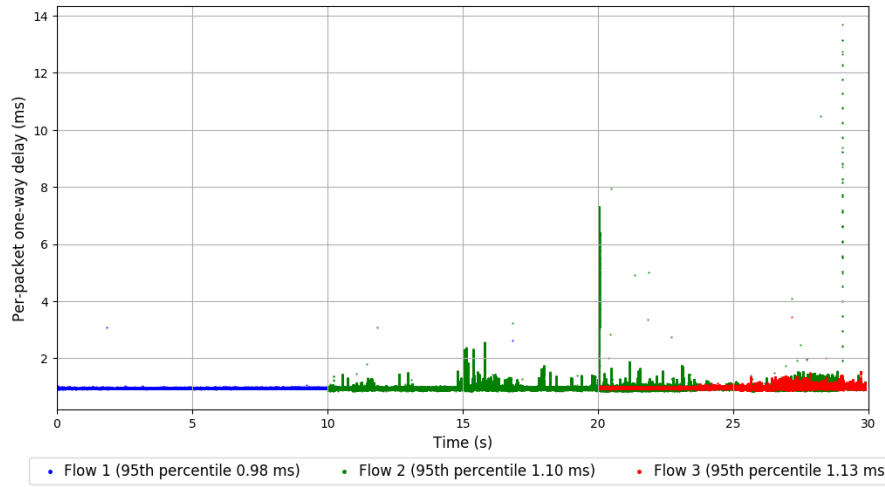
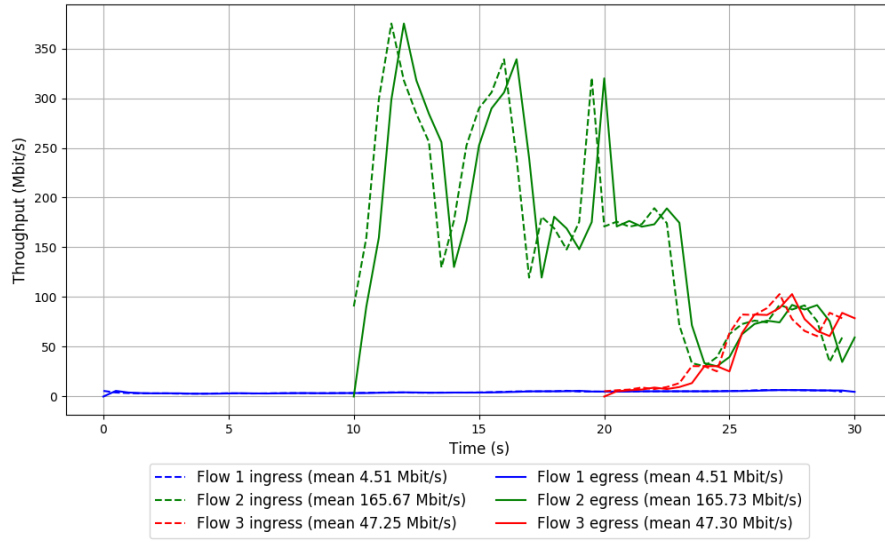
-- Flow 2:

Average throughput: 165.73 Mbit/s
95th percentile per-packet one-way delay: 1.099 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 47.30 Mbit/s
95th percentile per-packet one-way delay: 1.132 ms
Loss rate: 0.00%

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-05-30 11:26:55

End at: 2019-05-30 11:27:25

Local clock offset: -3.569 ms

Remote clock offset: 2.059 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 242.84 Mbit/s

95th percentile per-packet one-way delay: 1.148 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 176.85 Mbit/s

95th percentile per-packet one-way delay: 1.057 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 56.29 Mbit/s

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

Loss rate: 0.01%

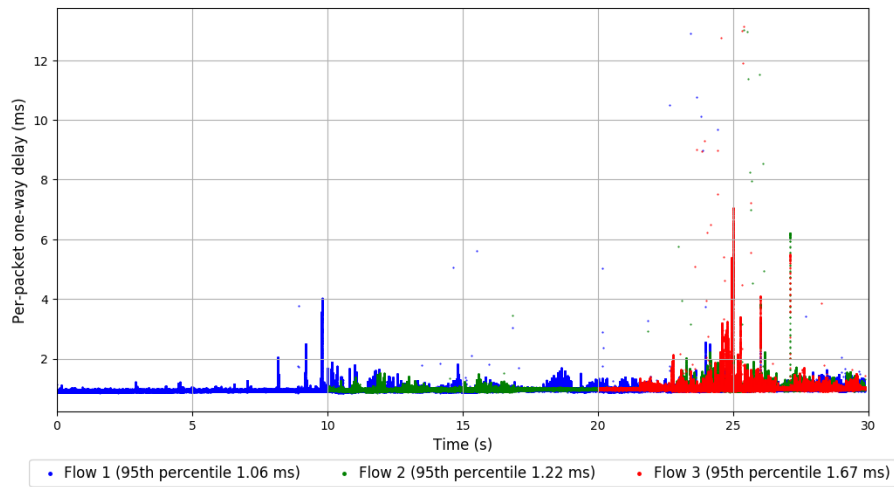
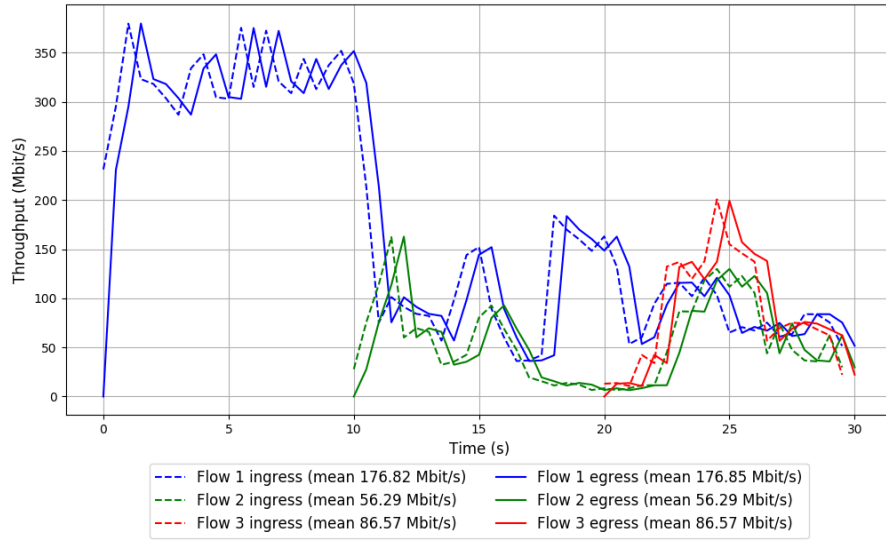
-- Flow 3:

Average throughput: 86.57 Mbit/s

95th percentile per-packet one-way delay: 1.670 ms

Loss rate: 0.00%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-05-30 11:57:26

End at: 2019-05-30 11:57:56

Local clock offset: -0.285 ms

Remote clock offset: 1.124 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 167.30 Mbit/s

95th percentile per-packet one-way delay: 0.894 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 161.65 Mbit/s

95th percentile per-packet one-way delay: 0.896 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 5.46 Mbit/s

95th percentile per-packet one-way delay: 0.881 ms

Loss rate: 0.01%

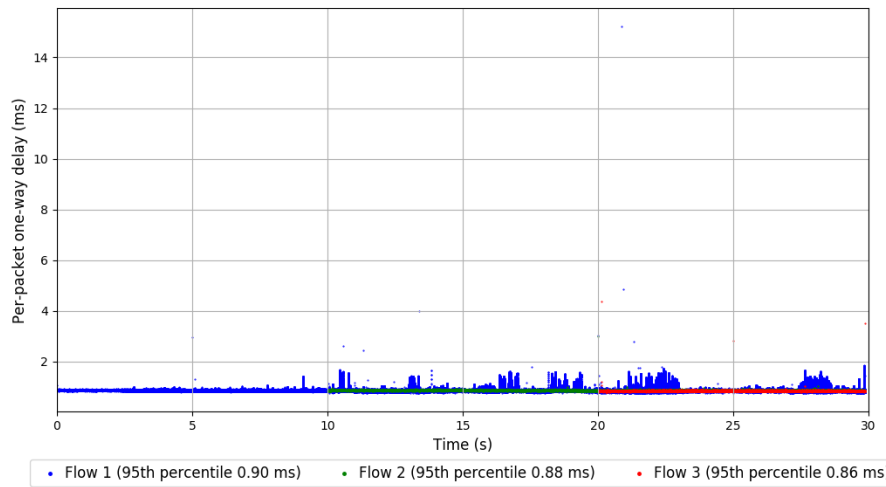
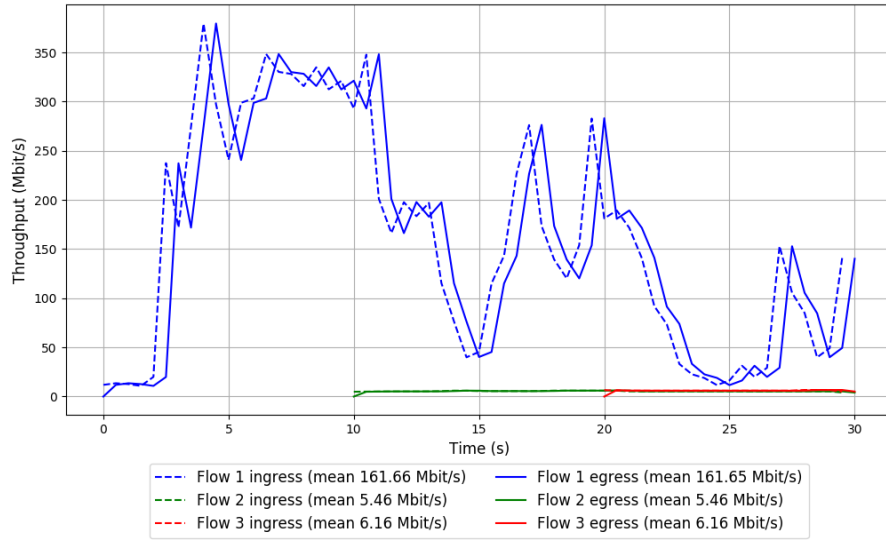
-- Flow 3:

Average throughput: 6.16 Mbit/s

95th percentile per-packet one-way delay: 0.861 ms

Loss rate: 0.00%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-05-30 12:27:47
End at: 2019-05-30 12:28:17
Local clock offset: 0.466 ms
Remote clock offset: -2.799 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 168.99 Mbit/s
95th percentile per-packet one-way delay: 1.194 ms
Loss rate: 0.00%

-- Flow 1:

Average throughput: 37.24 Mbit/s
95th percentile per-packet one-way delay: 1.055 ms
Loss rate: 0.01%

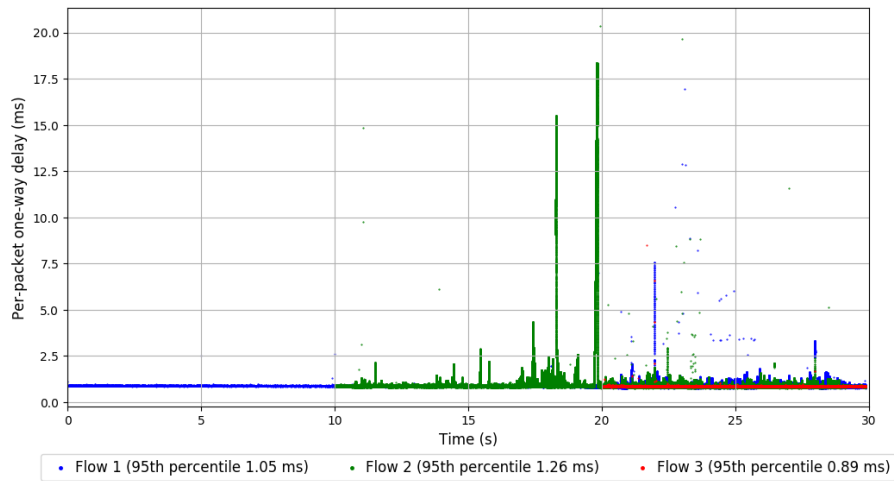
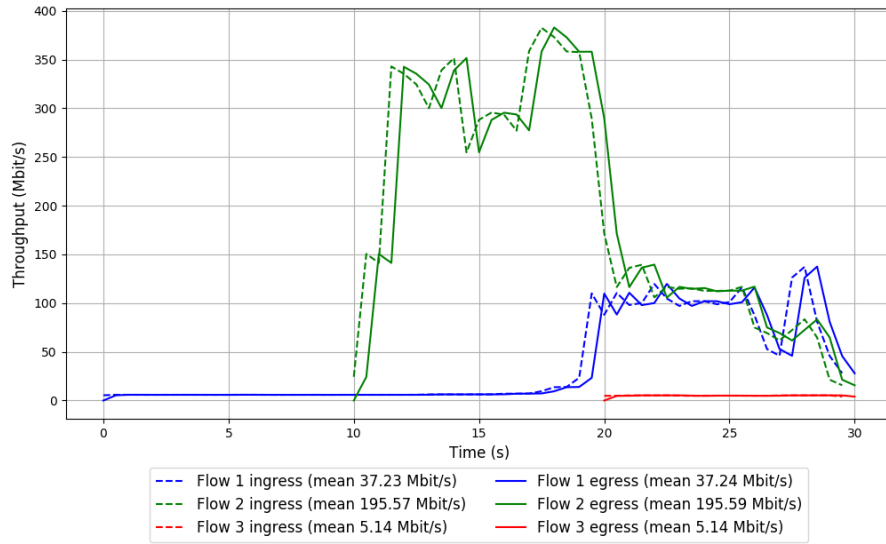
-- Flow 2:

Average throughput: 195.59 Mbit/s
95th percentile per-packet one-way delay: 1.259 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 0.891 ms
Loss rate: 0.03%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-05-30 12:58:01

End at: 2019-05-30 12:58:31

Local clock offset: 0.734 ms

Remote clock offset: 0.09 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.61 Mbit/s

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

Loss rate: 0.01%

-- Flow 1:

Average throughput: 5.64 Mbit/s

95th percentile per-packet one-way delay: 0.987 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 164.27 Mbit/s

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

Loss rate: 0.01%

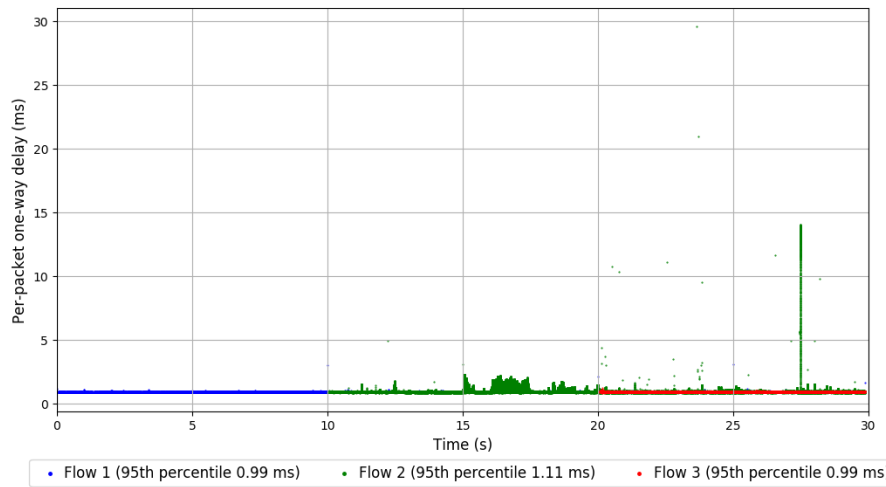
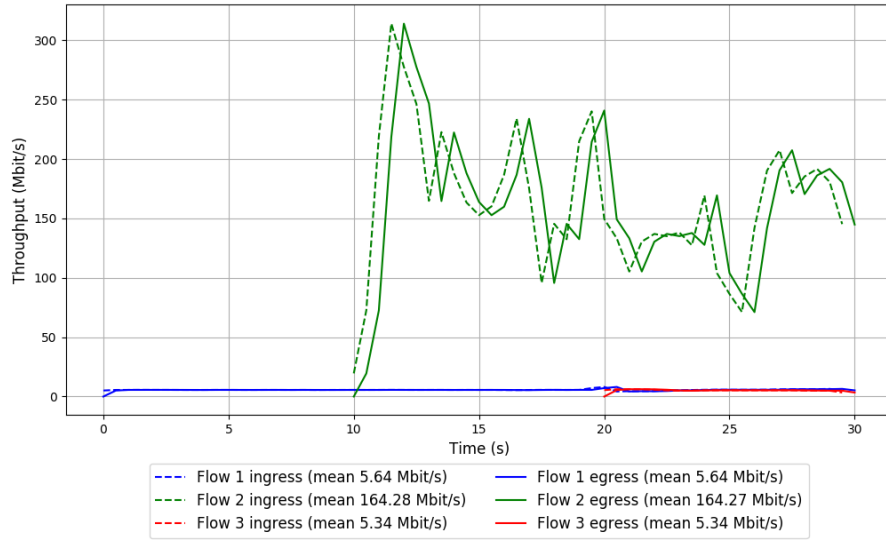
-- Flow 3:

Average throughput: 5.34 Mbit/s

95th percentile per-packet one-way delay: 0.989 ms

Loss rate: 0.00%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-05-30 10:53:56
End at: 2019-05-30 10:54:26
Local clock offset: -1.098 ms
Remote clock offset: -4.158 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.72 Mbit/s
95th percentile per-packet one-way delay: 1.068 ms
Loss rate: 0.01%

-- Flow 1:

Average throughput: 72.29 Mbit/s
95th percentile per-packet one-way delay: 1.060 ms
Loss rate: 0.00%

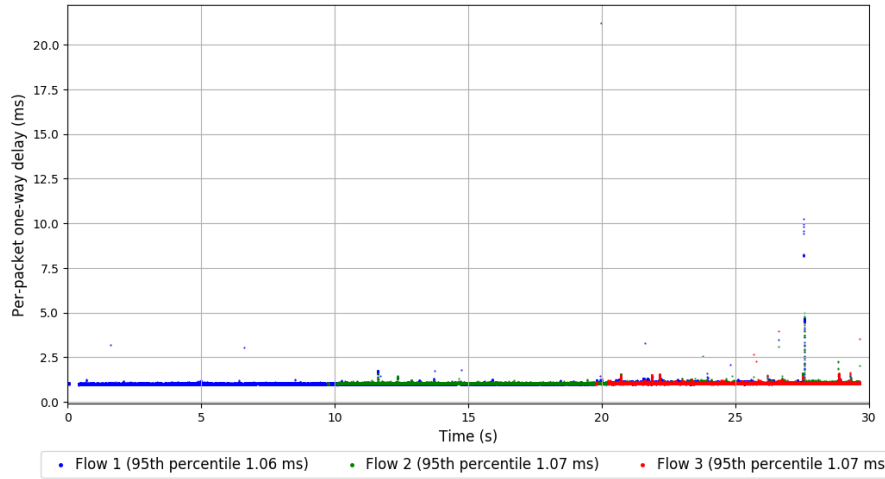
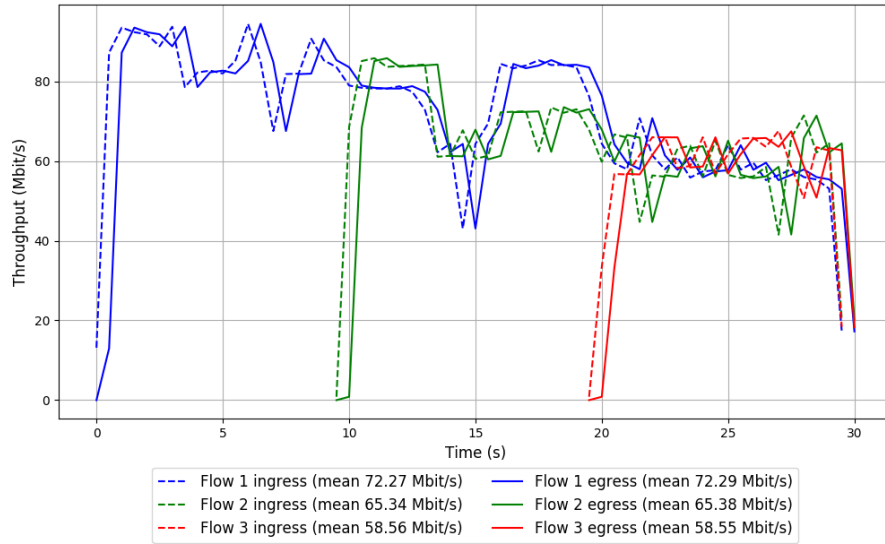
-- Flow 2:

Average throughput: 65.38 Mbit/s
95th percentile per-packet one-way delay: 1.070 ms
Loss rate: 0.01%

-- Flow 3:

Average throughput: 58.55 Mbit/s
95th percentile per-packet one-way delay: 1.074 ms
Loss rate: 0.02%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-05-30 11:24:09

End at: 2019-05-30 11:24:39

Local clock offset: -3.394 ms

Remote clock offset: 1.728 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.63 Mbit/s

95th percentile per-packet one-way delay: 1.061 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 73.44 Mbit/s

95th percentile per-packet one-way delay: 1.054 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 70.45 Mbit/s

95th percentile per-packet one-way delay: 1.057 ms

Loss rate: 0.01%

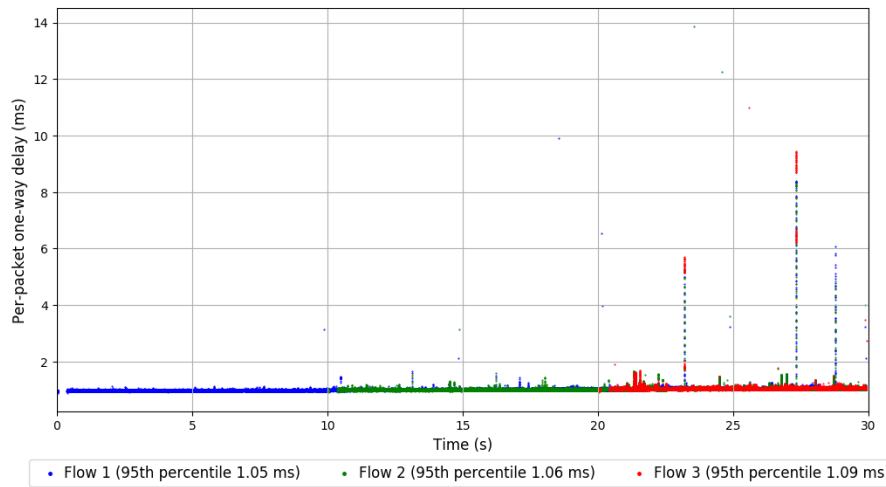
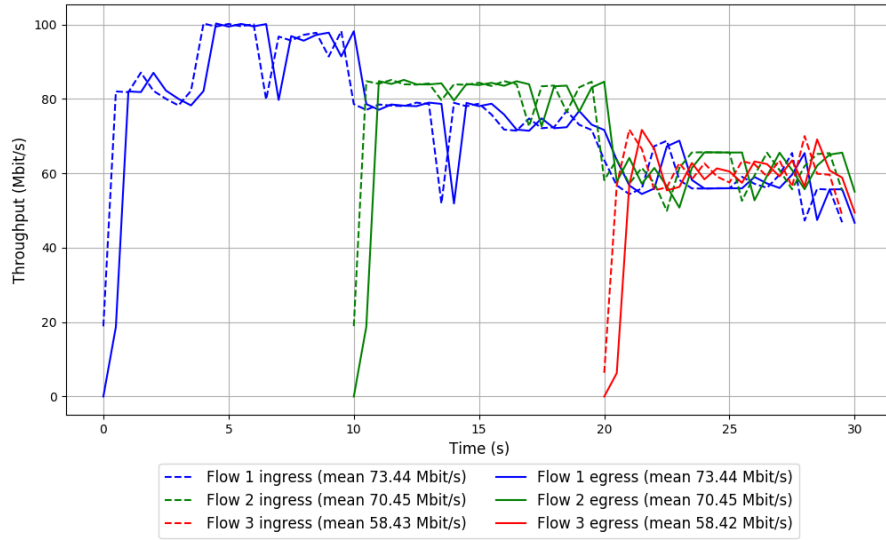
-- Flow 3:

Average throughput: 58.42 Mbit/s

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

Loss rate: 0.02%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-05-30 11:54:41

End at: 2019-05-30 11:55:11

Local clock offset: -0.501 ms

Remote clock offset: 1.007 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 136.54 Mbit/s

95th percentile per-packet one-way delay: 0.882 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 72.99 Mbit/s

95th percentile per-packet one-way delay: 0.885 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 68.46 Mbit/s

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

Loss rate: 0.01%

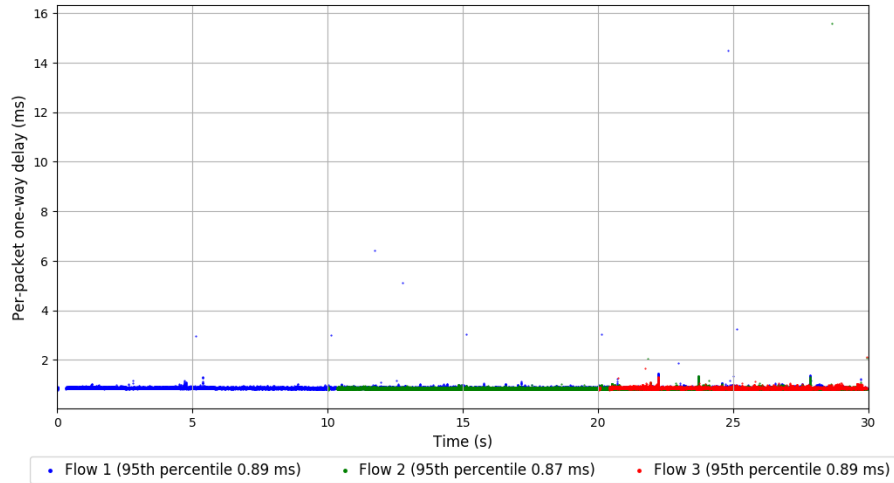
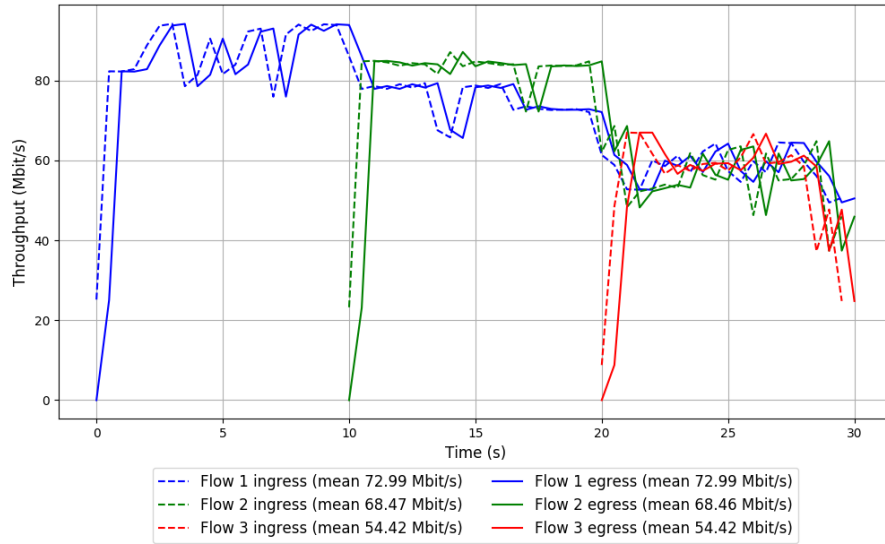
-- Flow 3:

Average throughput: 54.42 Mbit/s

95th percentile per-packet one-way delay: 0.889 ms

Loss rate: 0.01%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-05-30 12:25:01

End at: 2019-05-30 12:25:31

Local clock offset: 0.408 ms

Remote clock offset: -2.591 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.23 Mbit/s

95th percentile per-packet one-way delay: 0.863 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 72.69 Mbit/s

95th percentile per-packet one-way delay: 0.861 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 70.48 Mbit/s

95th percentile per-packet one-way delay: 0.863 ms

Loss rate: 0.01%

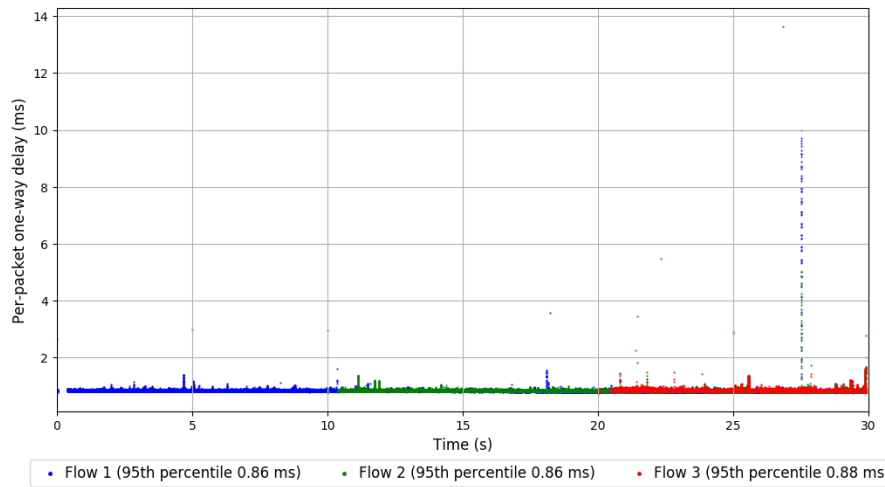
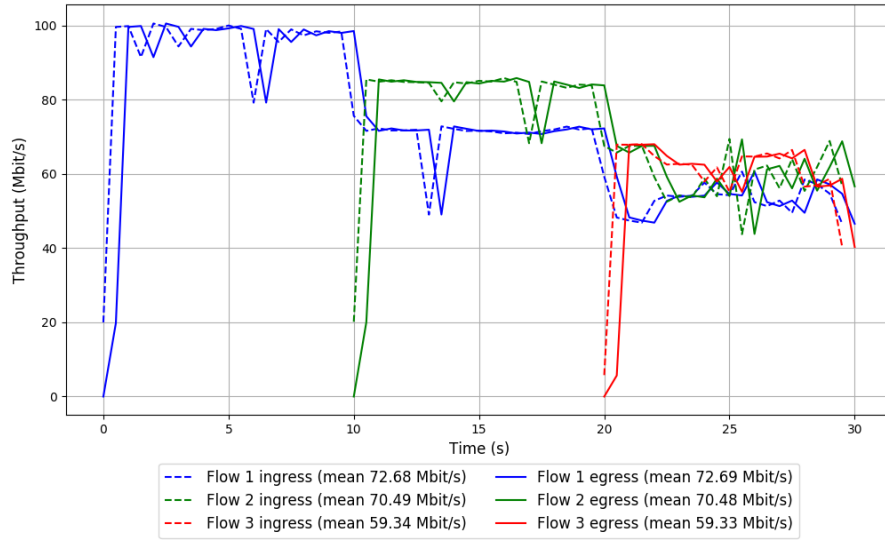
-- Flow 3:

Average throughput: 59.33 Mbit/s

95th percentile per-packet one-way delay: 0.875 ms

Loss rate: 0.01%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-05-30 12:55:16
End at: 2019-05-30 12:55:46
Local clock offset: 0.712 ms
Remote clock offset: -0.234 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.35 Mbit/s
95th percentile per-packet one-way delay: 1.060 ms
Loss rate: 0.01%

-- Flow 1:

Average throughput: 77.00 Mbit/s
95th percentile per-packet one-way delay: 1.059 ms
Loss rate: 0.00%

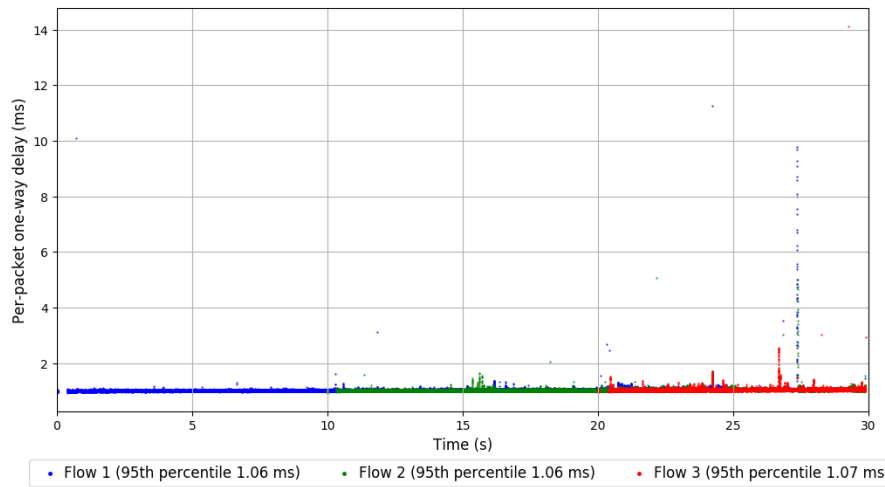
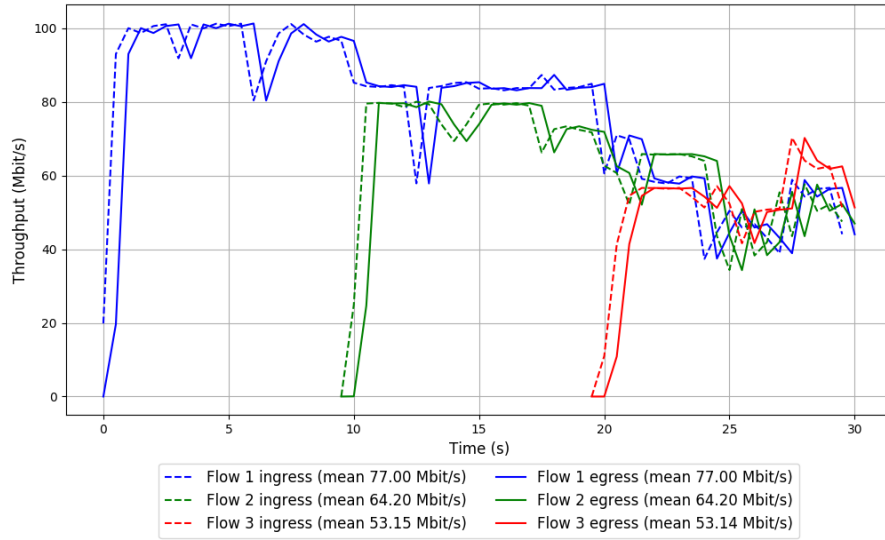
-- Flow 2:

Average throughput: 64.20 Mbit/s
95th percentile per-packet one-way delay: 1.057 ms
Loss rate: 0.02%

-- Flow 3:

Average throughput: 53.14 Mbit/s
95th percentile per-packet one-way delay: 1.072 ms
Loss rate: 0.02%

Run 5: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2019-05-30 10:58:02
End at: 2019-05-30 10:58:32
Local clock offset: -1.503 ms
Remote clock offset: -4.303 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 1.111 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.108 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.104 ms

Loss rate: 0.00%

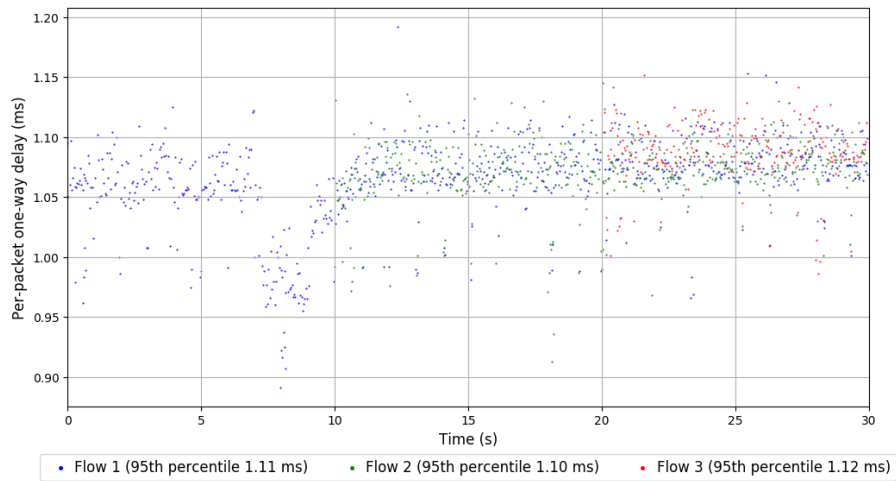
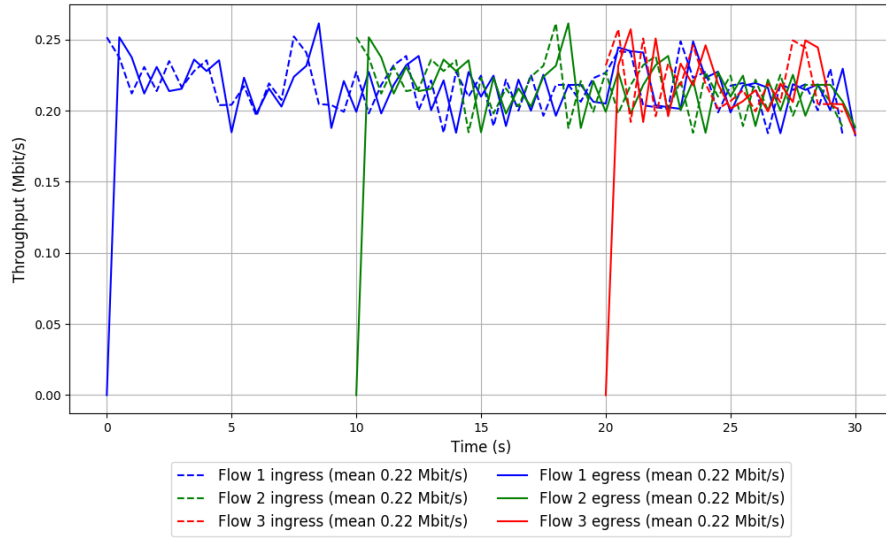
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.122 ms

Loss rate: 0.35%

Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-05-30 11:28:24

End at: 2019-05-30 11:28:54

Local clock offset: -3.681 ms

Remote clock offset: 2.2 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 1.115 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.120 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

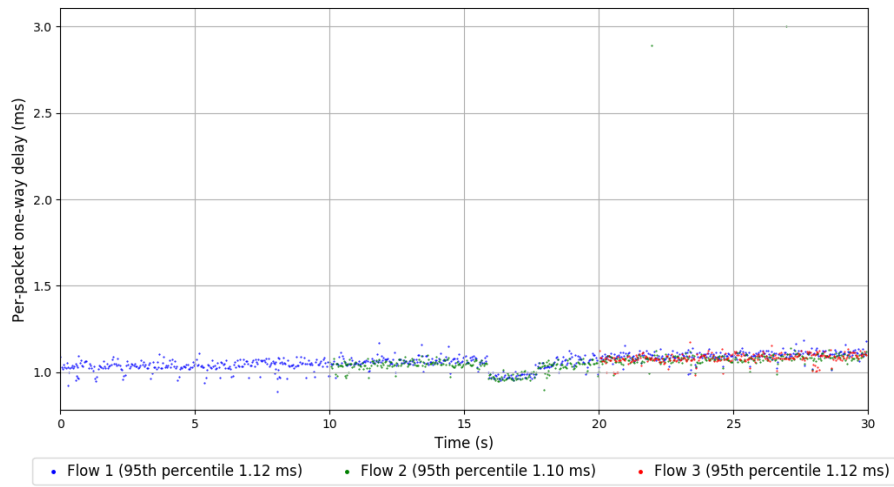
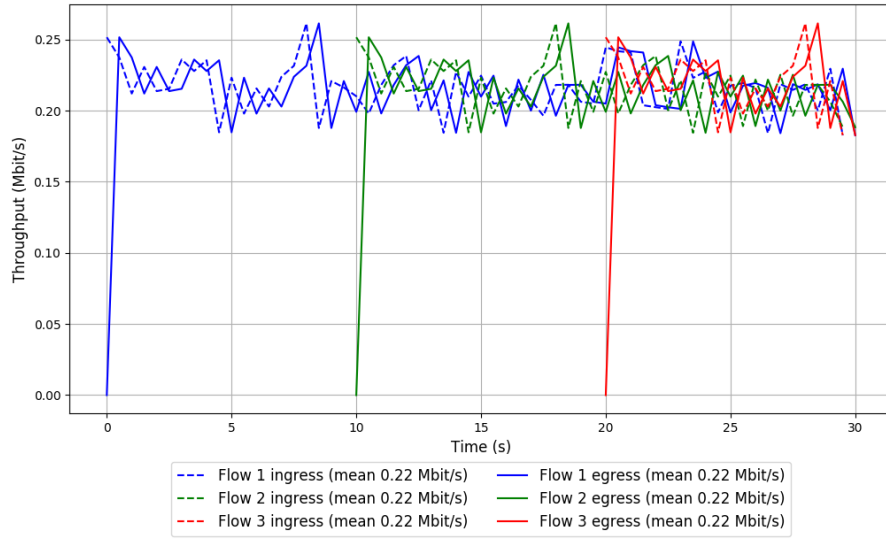
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.120 ms

Loss rate: 0.00%

Run 2: Report of SCReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2019-05-30 11:58:51

End at: 2019-05-30 11:59:21

Local clock offset: -0.231 ms

Remote clock offset: 1.153 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.958 ms

Loss rate: 0.00%

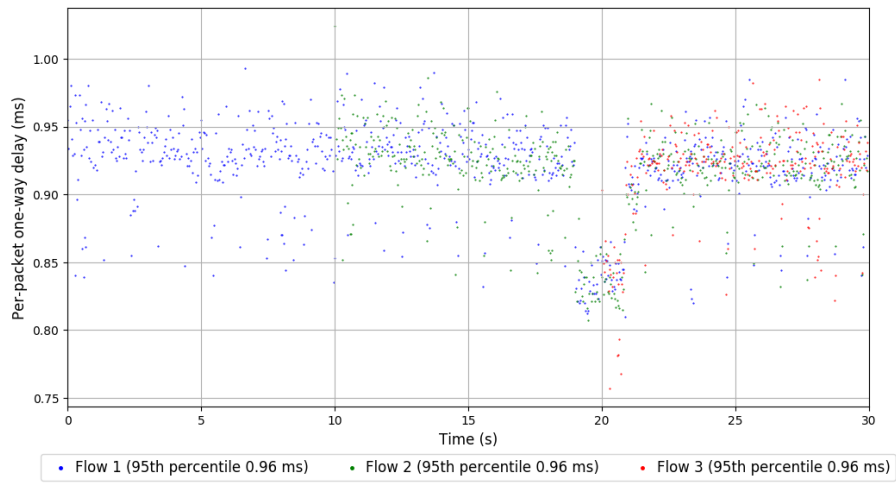
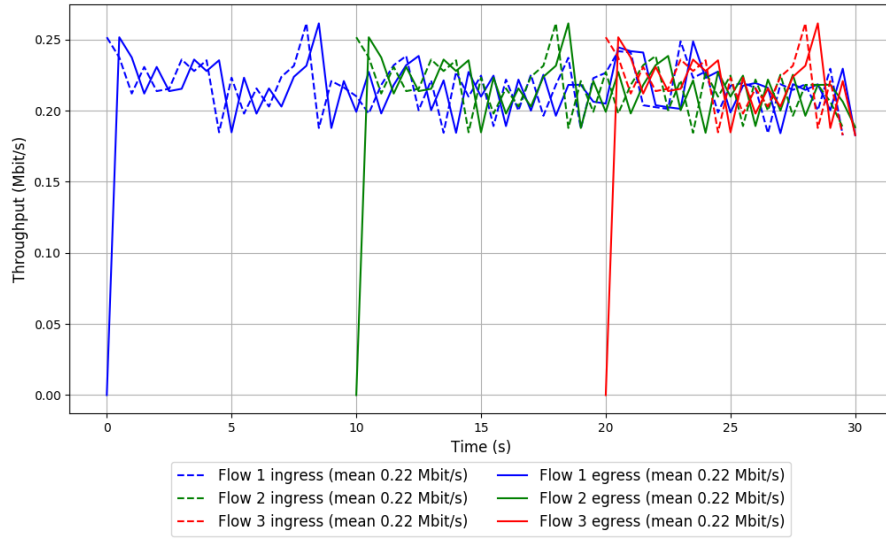
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.958 ms

Loss rate: 0.00%

Run 3: Report of SCReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2019-05-30 12:29:11
End at: 2019-05-30 12:29:41
Local clock offset: 0.48 ms
Remote clock offset: -2.882 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 0.990 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.996 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.988 ms

Loss rate: 0.00%

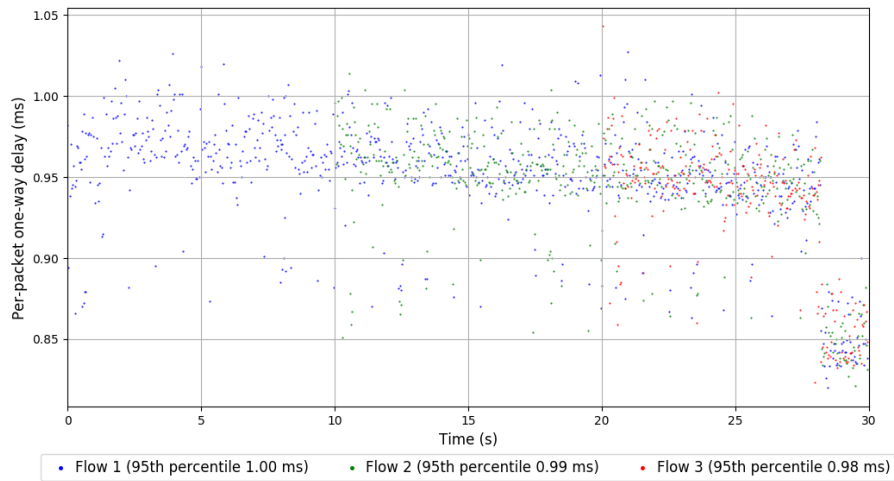
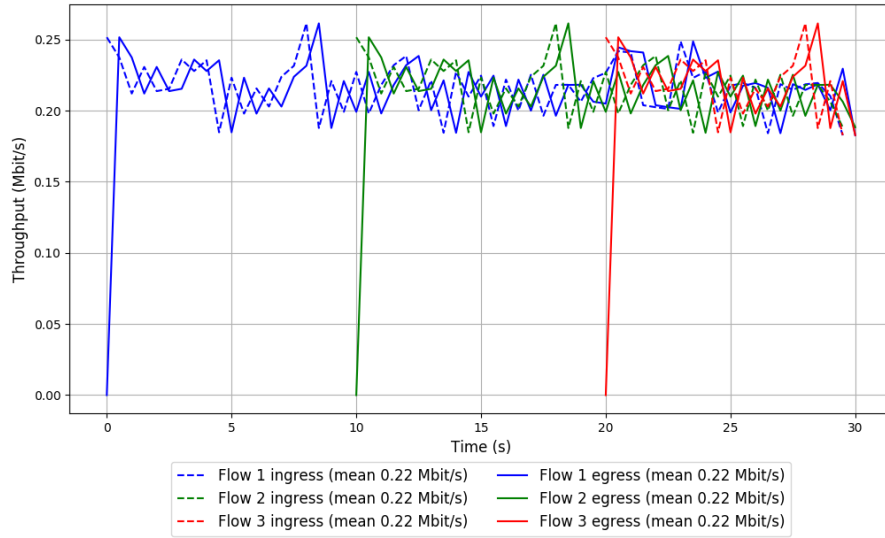
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.982 ms

Loss rate: 0.00%

Run 4: Report of SCReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2019-05-30 12:59:22

End at: 2019-05-30 12:59:52

Local clock offset: 0.73 ms

Remote clock offset: 0.253 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 1.004 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 0.999 ms

Loss rate: 0.00%

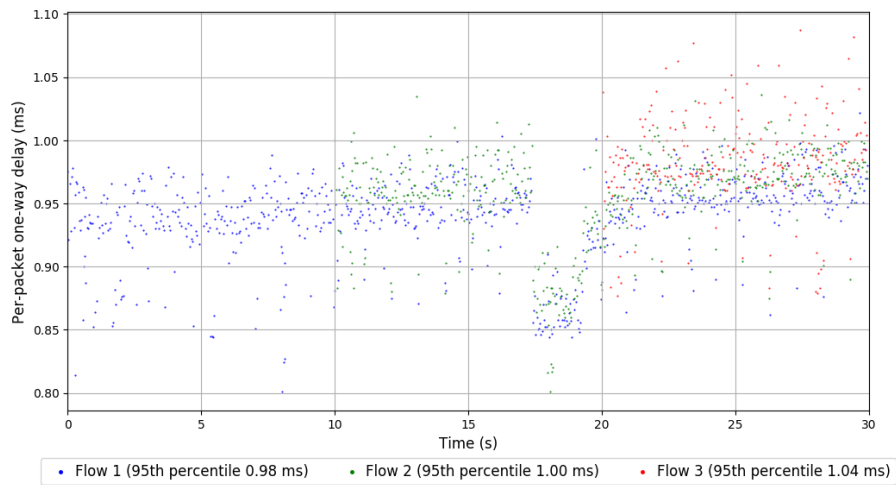
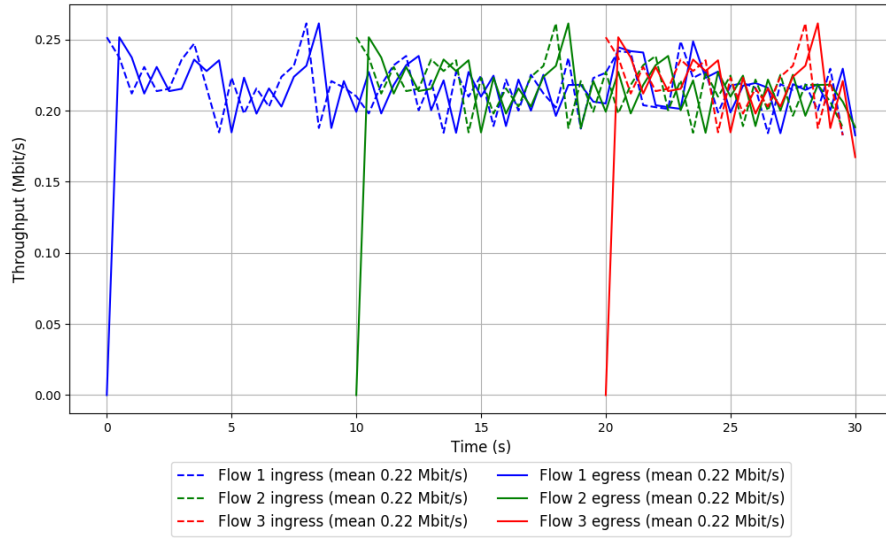
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.039 ms

Loss rate: 0.35%

Run 5: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-05-30 11:17:20

End at: 2019-05-30 11:17:50

Local clock offset: -2.955 ms

Remote clock offset: 0.996 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.95 Mbit/s

95th percentile per-packet one-way delay: 1.030 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 50.21 Mbit/s

95th percentile per-packet one-way delay: 0.998 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 50.09 Mbit/s

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

Loss rate: 0.00%

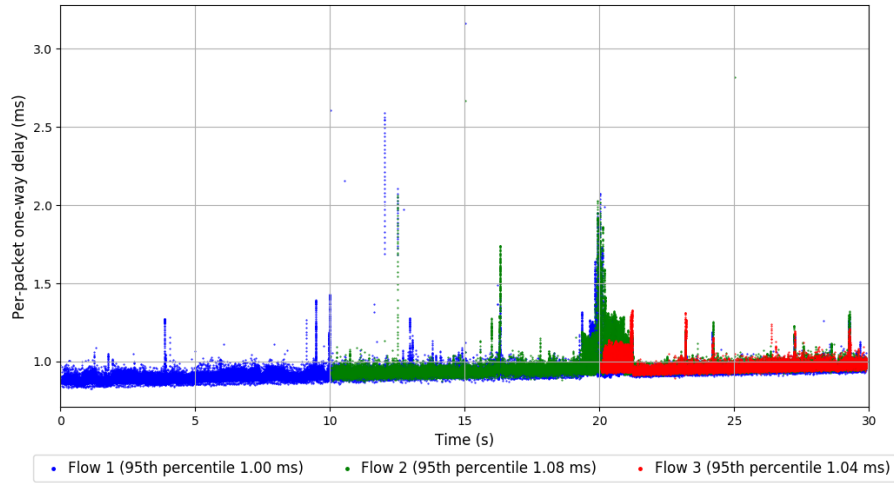
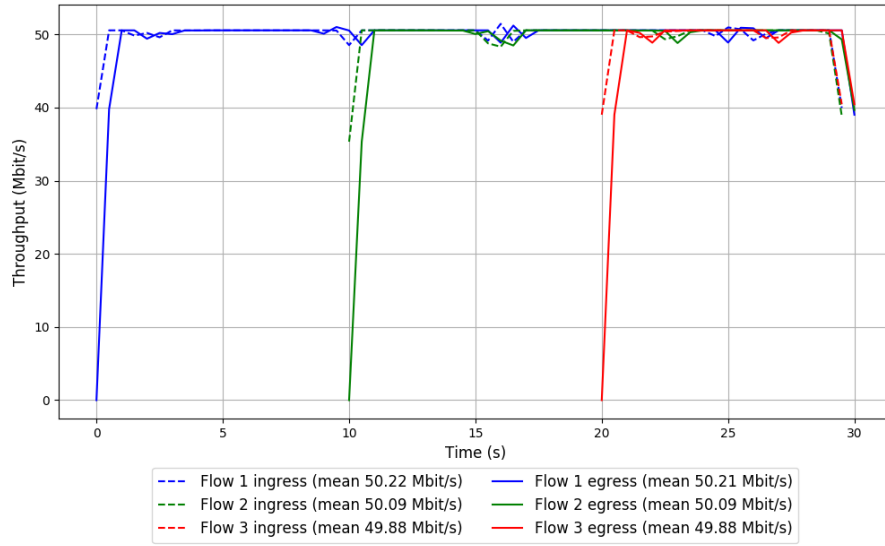
-- Flow 3:

Average throughput: 49.88 Mbit/s

95th percentile per-packet one-way delay: 1.044 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-05-30 11:47:54

End at: 2019-05-30 11:48:24

Local clock offset: -1.296 ms

Remote clock offset: 1.063 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.97 Mbit/s

95th percentile per-packet one-way delay: 0.744 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 50.24 Mbit/s

95th percentile per-packet one-way delay: 0.750 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 50.12 Mbit/s

95th percentile per-packet one-way delay: 0.767 ms

Loss rate: 0.05%

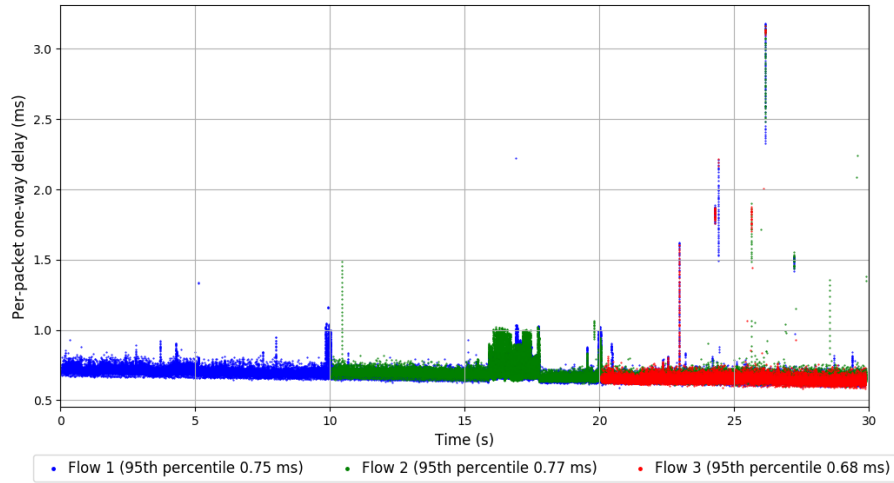
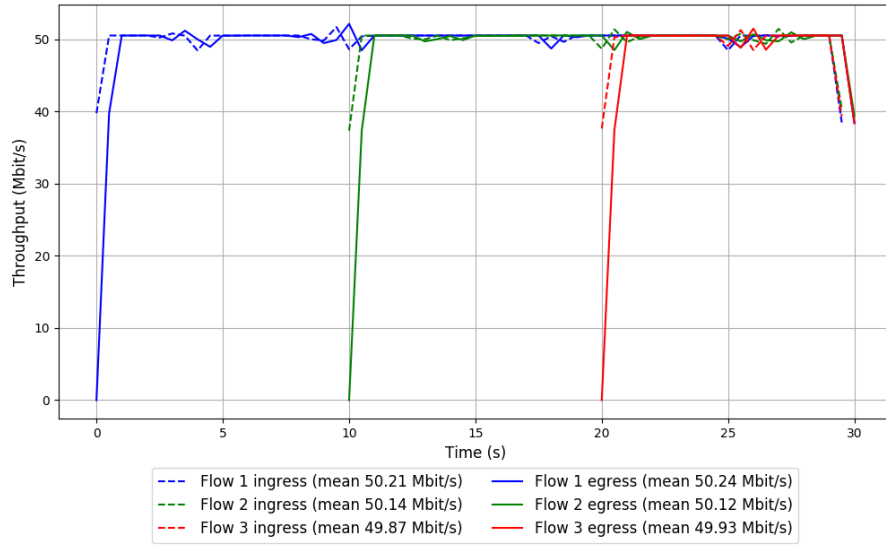
-- Flow 3:

Average throughput: 49.93 Mbit/s

95th percentile per-packet one-way delay: 0.681 ms

Loss rate: 0.10%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-05-30 12:18:11
End at: 2019-05-30 12:18:41
Local clock offset: 0.32 ms
Remote clock offset: -1.862 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.98 Mbit/s
95th percentile per-packet one-way delay: 0.940 ms
Loss rate: 0.00%

-- Flow 1:

Average throughput: 50.24 Mbit/s
95th percentile per-packet one-way delay: 0.941 ms
Loss rate: 0.00%

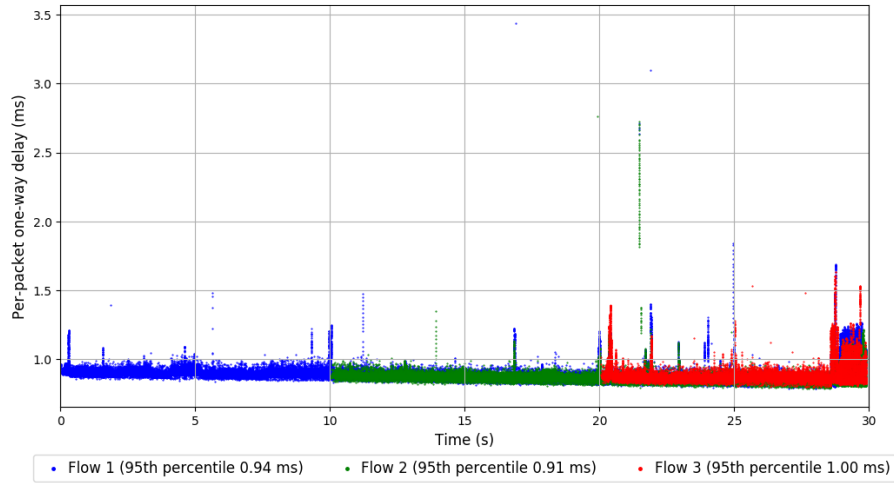
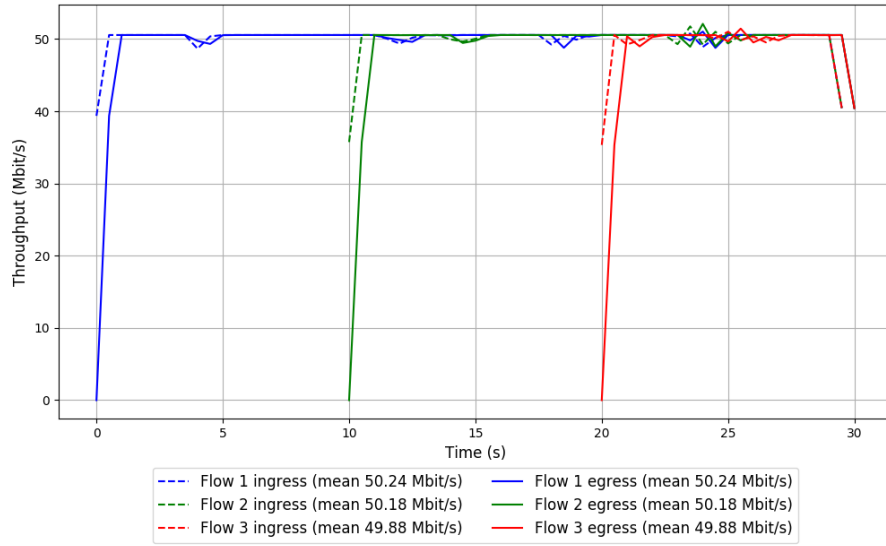
-- Flow 2:

Average throughput: 50.18 Mbit/s
95th percentile per-packet one-way delay: 0.912 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 49.88 Mbit/s
95th percentile per-packet one-way delay: 1.003 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2019-05-30 12:48:31
End at: 2019-05-30 12:49:01
Local clock offset: 0.615 ms
Remote clock offset: -1.109 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.82 Mbit/s
95th percentile per-packet one-way delay: 0.980 ms
Loss rate: 0.00%

-- Flow 1:

Average throughput: 50.21 Mbit/s
95th percentile per-packet one-way delay: 0.975 ms
Loss rate: 0.00%

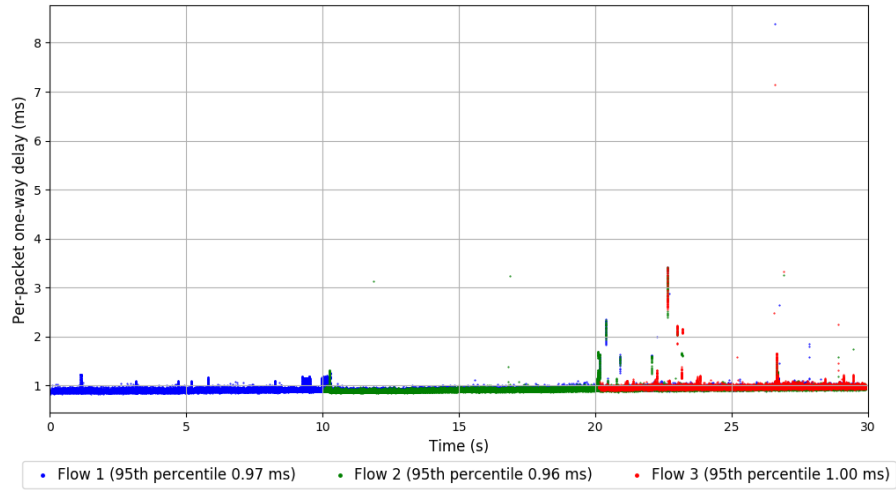
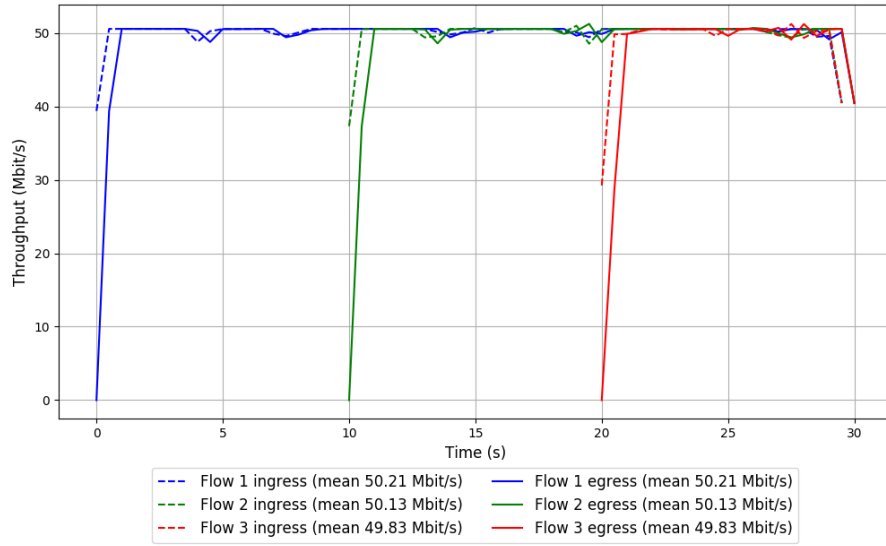
-- Flow 2:

Average throughput: 50.13 Mbit/s
95th percentile per-packet one-way delay: 0.962 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 49.83 Mbit/s
95th percentile per-packet one-way delay: 1.002 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2019-05-30 13:18:45

End at: 2019-05-30 13:19:15

Local clock offset: 3.155 ms

Remote clock offset: 0.714 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.91 Mbit/s

95th percentile per-packet one-way delay: 0.822 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 50.23 Mbit/s

95th percentile per-packet one-way delay: 0.808 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 50.13 Mbit/s

95th percentile per-packet one-way delay: 0.857 ms

Loss rate: 0.00%

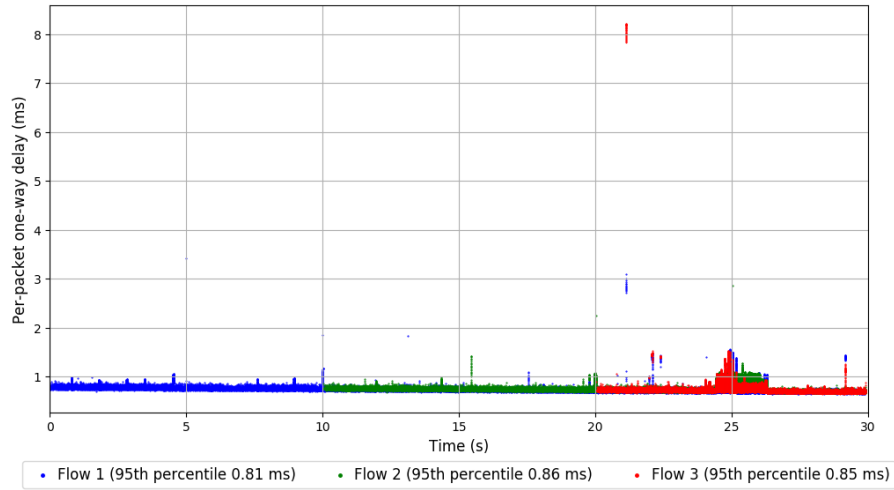
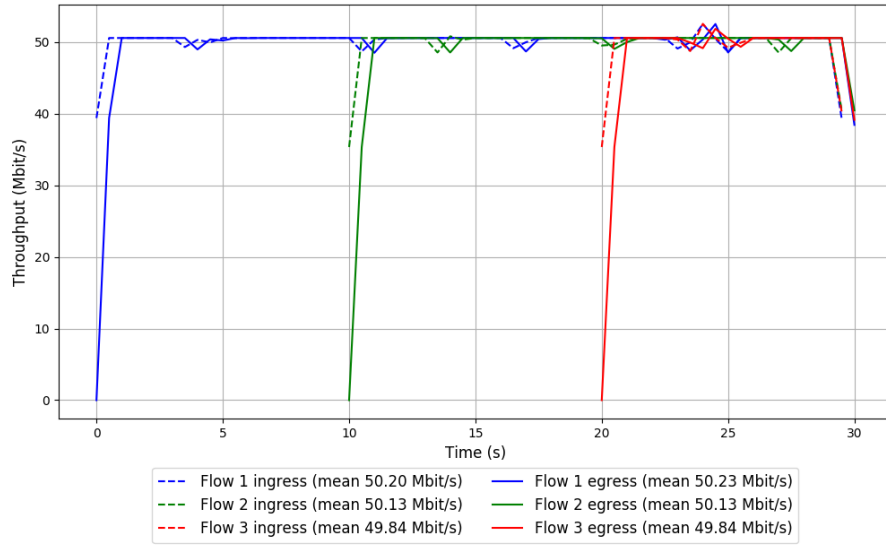
-- Flow 3:

Average throughput: 49.84 Mbit/s

95th percentile per-packet one-way delay: 0.846 ms

Loss rate: 0.11%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-05-30 11:06:59
End at: 2019-05-30 11:07:29
Local clock offset: -2.187 ms
Remote clock offset: -0.994 ms

Below is generated by plot.py at 2019-05-30 14:22:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.09 Mbit/s
95th percentile per-packet one-way delay: 1.120 ms
Loss rate: 0.01%

-- Flow 1:

Average throughput: 13.56 Mbit/s
95th percentile per-packet one-way delay: 1.093 ms
Loss rate: 0.00%

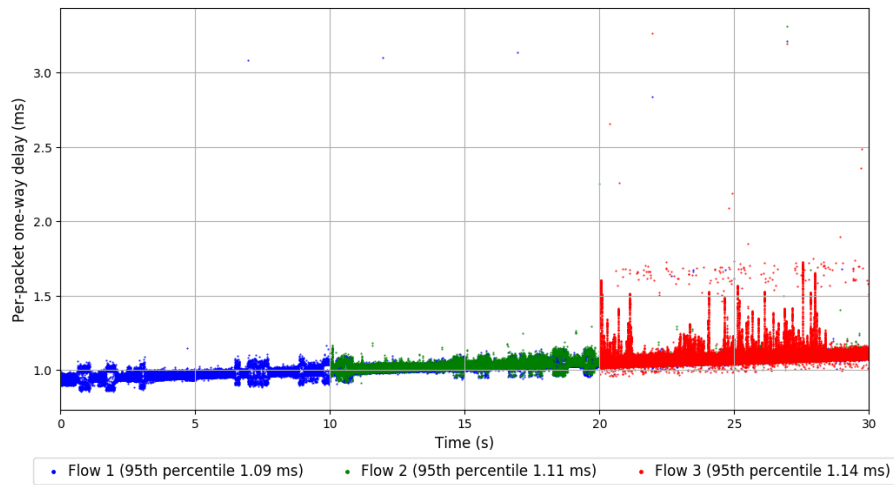
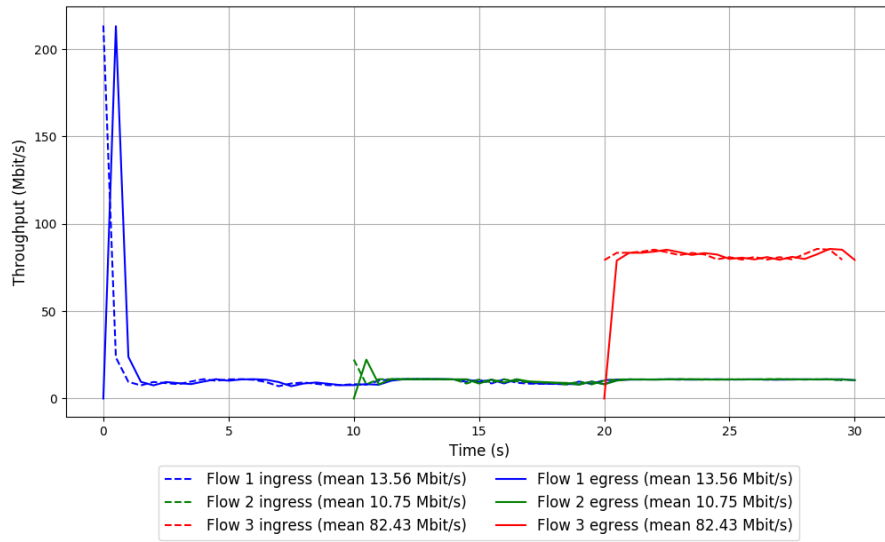
-- Flow 2:

Average throughput: 10.75 Mbit/s
95th percentile per-packet one-way delay: 1.110 ms
Loss rate: 0.01%

-- Flow 3:

Average throughput: 82.43 Mbit/s
95th percentile per-packet one-way delay: 1.142 ms
Loss rate: 0.02%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-05-30 11:37:23

End at: 2019-05-30 11:37:53

Local clock offset: -4.302 ms

Remote clock offset: 1.616 ms

Below is generated by plot.py at 2019-05-30 14:23:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 132.34 Mbit/s

95th percentile per-packet one-way delay: 0.769 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 87.05 Mbit/s

95th percentile per-packet one-way delay: 0.775 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 29.20 Mbit/s

95th percentile per-packet one-way delay: 0.673 ms

Loss rate: 0.00%

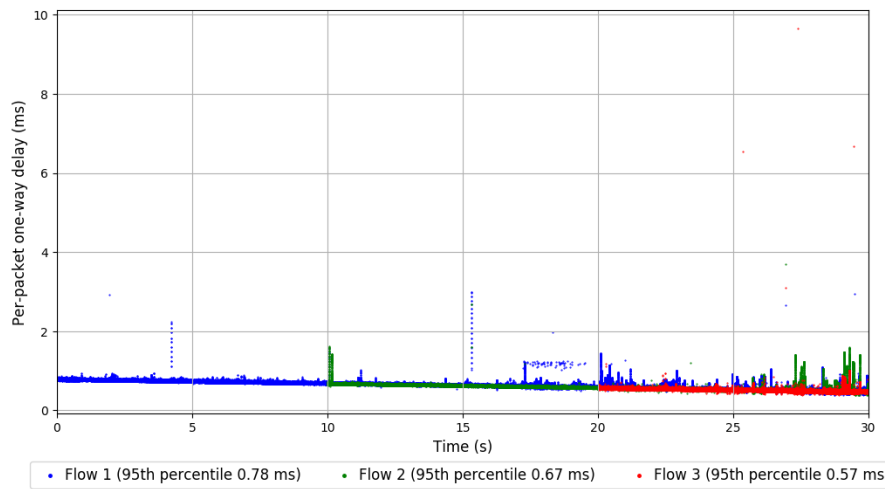
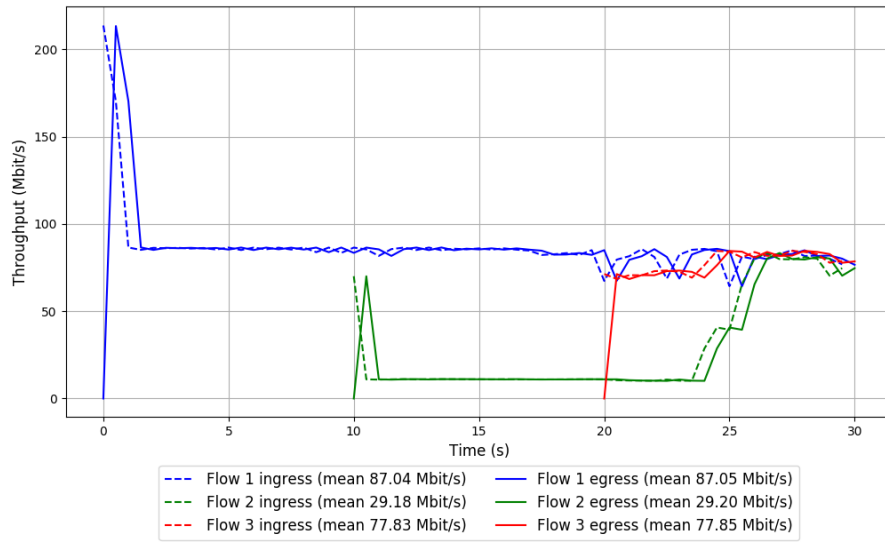
-- Flow 3:

Average throughput: 77.85 Mbit/s

95th percentile per-packet one-way delay: 0.570 ms

Loss rate: 0.02%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-05-30 12:07:46

End at: 2019-05-30 12:08:16

Local clock offset: 0.126 ms

Remote clock offset: 1.115 ms

Below is generated by plot.py at 2019-05-30 14:24:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.12 Mbit/s

95th percentile per-packet one-way delay: 0.695 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 86.20 Mbit/s

95th percentile per-packet one-way delay: 0.700 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 35.29 Mbit/s

95th percentile per-packet one-way delay: 0.633 ms

Loss rate: 0.02%

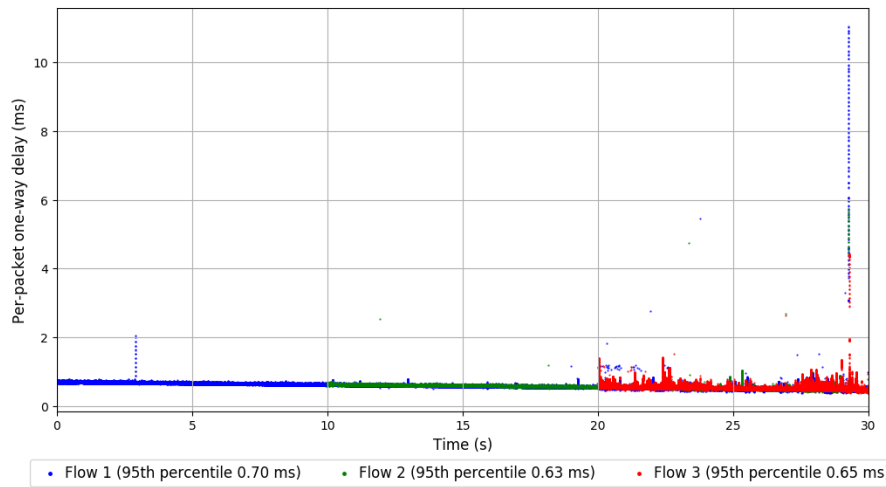
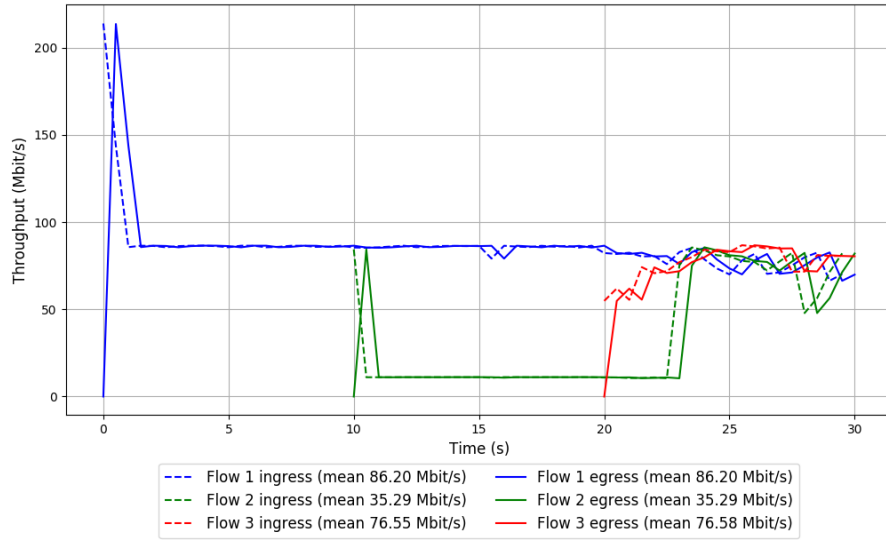
-- Flow 3:

Average throughput: 76.58 Mbit/s

95th percentile per-packet one-way delay: 0.646 ms

Loss rate: 0.02%

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

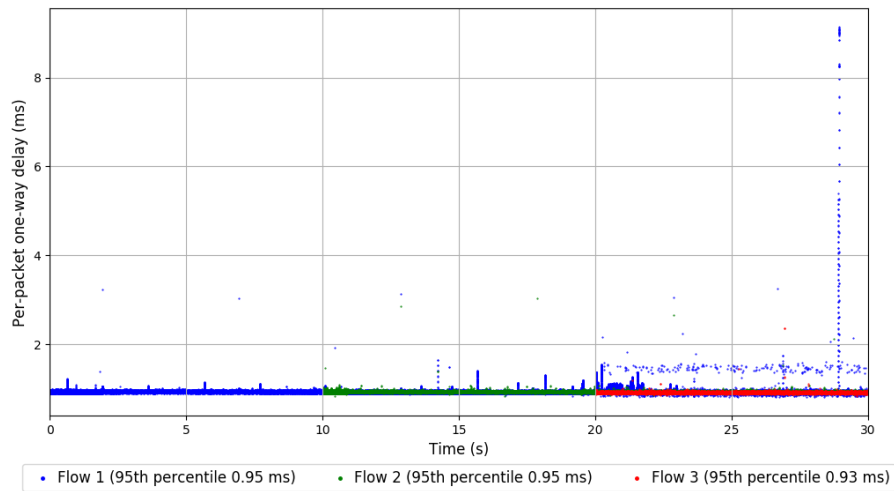
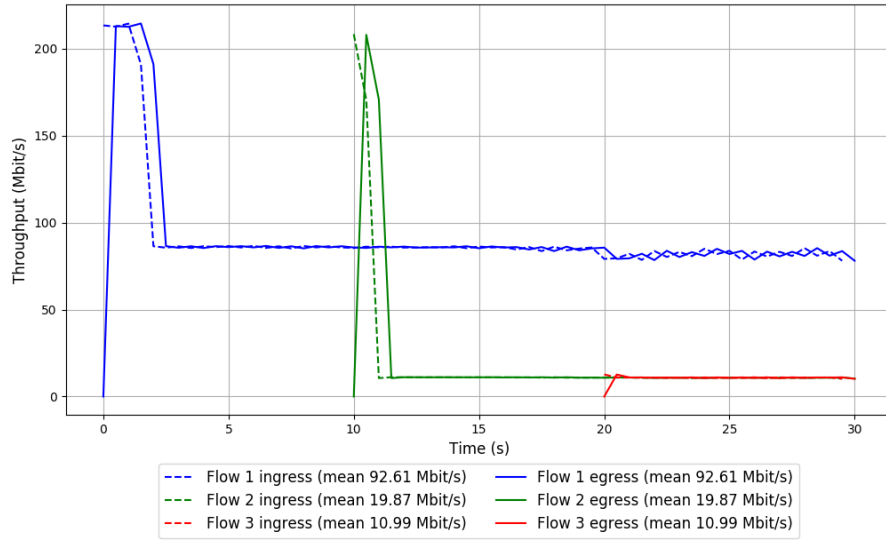


Run 4: Statistics of TaoVA-100x

Start at: 2019-05-30 12:38:08
End at: 2019-05-30 12:38:38
Local clock offset: 0.578 ms
Remote clock offset: -3.319 ms

```
# Below is generated by plot.py at 2019-05-30 14:24:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 109.49 Mbit/s
95th percentile per-packet one-way delay: 0.946 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.61 Mbit/s
95th percentile per-packet one-way delay: 0.946 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 19.87 Mbit/s
95th percentile per-packet one-way delay: 0.947 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.99 Mbit/s
95th percentile per-packet one-way delay: 0.934 ms
Loss rate: 0.01%
```

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-05-30 13:08:23

End at: 2019-05-30 13:08:53

Local clock offset: 1.015 ms

Remote clock offset: 0.676 ms

Below is generated by plot.py at 2019-05-30 14:24:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 61.41 Mbit/s

95th percentile per-packet one-way delay: 0.714 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 18.16 Mbit/s

95th percentile per-packet one-way delay: 0.732 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.13 Mbit/s

95th percentile per-packet one-way delay: 0.692 ms

Loss rate: 0.00%

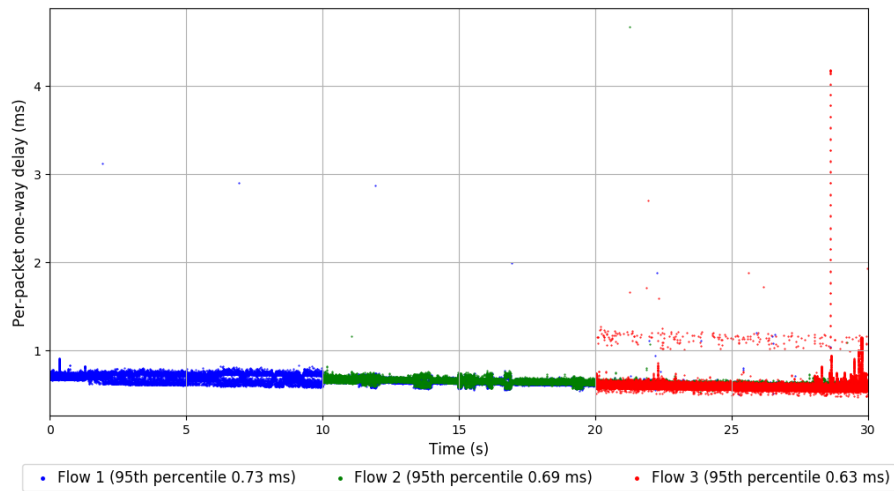
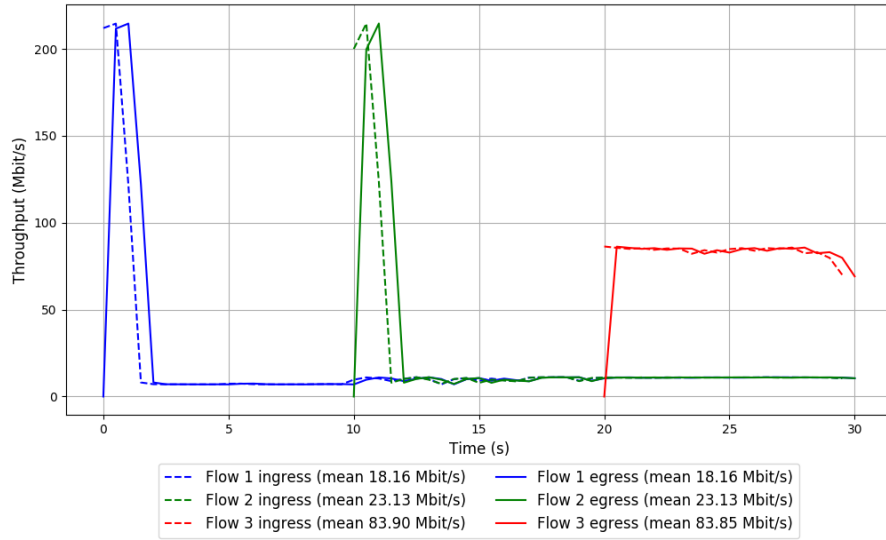
-- Flow 3:

Average throughput: 83.85 Mbit/s

95th percentile per-packet one-way delay: 0.629 ms

Loss rate: 0.06%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-05-30 10:59:16
End at: 2019-05-30 10:59:46
Local clock offset: -1.562 ms
Remote clock offset: -3.999 ms

Below is generated by plot.py at 2019-05-30 14:27:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 501.56 Mbit/s
95th percentile per-packet one-way delay: 2.028 ms
Loss rate: 0.01%

-- Flow 1:

Average throughput: 214.65 Mbit/s
95th percentile per-packet one-way delay: 1.603 ms
Loss rate: 0.00%

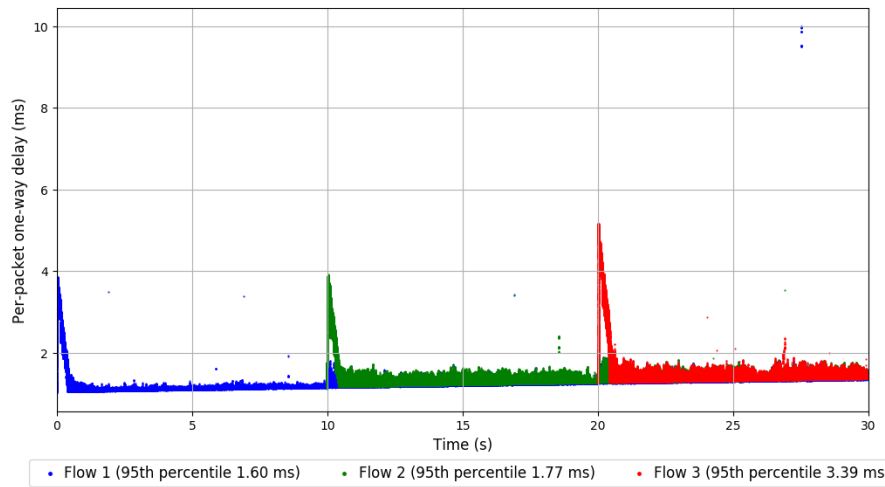
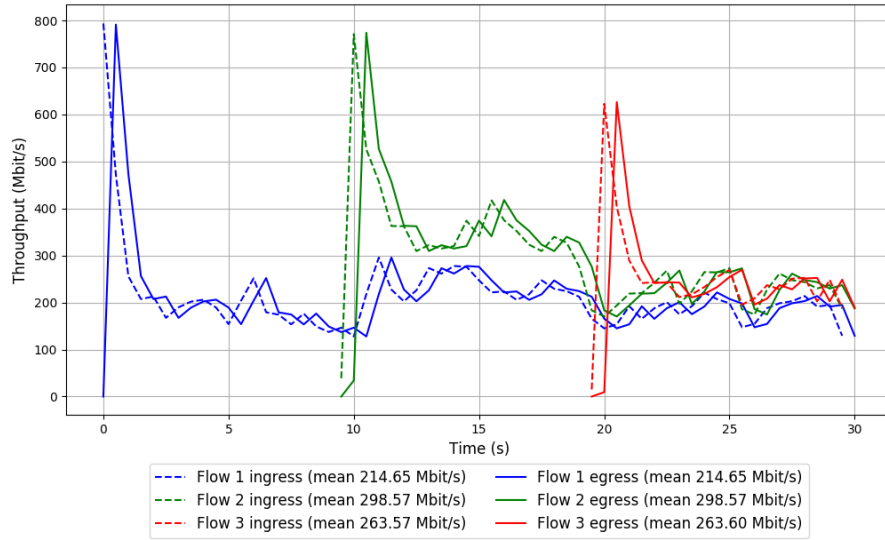
-- Flow 2:

Average throughput: 298.57 Mbit/s
95th percentile per-packet one-way delay: 1.772 ms
Loss rate: 0.01%

-- Flow 3:

Average throughput: 263.60 Mbit/s
95th percentile per-packet one-way delay: 3.387 ms
Loss rate: 0.01%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-05-30 11:29:38

End at: 2019-05-30 11:30:08

Local clock offset: -3.777 ms

Remote clock offset: 2.201 ms

Below is generated by plot.py at 2019-05-30 14:28:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 549.08 Mbit/s

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

Loss rate: 0.01%

-- Flow 1:

Average throughput: 283.73 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 281.73 Mbit/s

95th percentile per-packet one-way delay: 1.283 ms

Loss rate: 0.01%

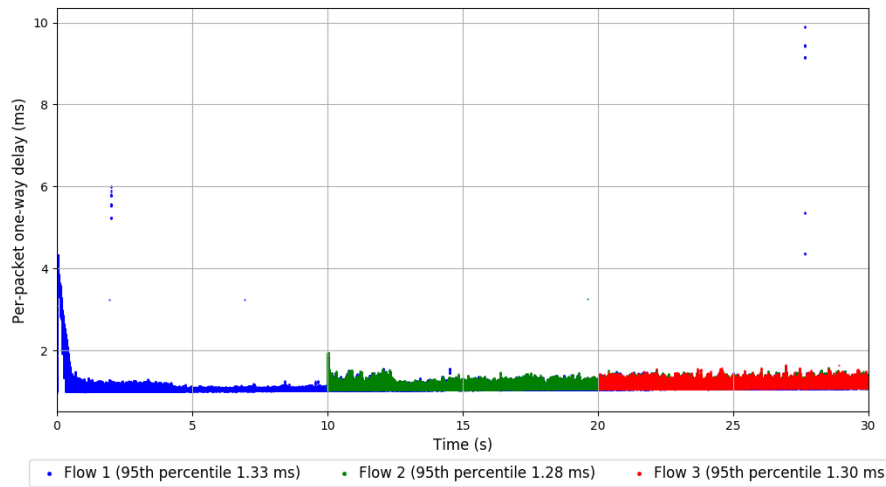
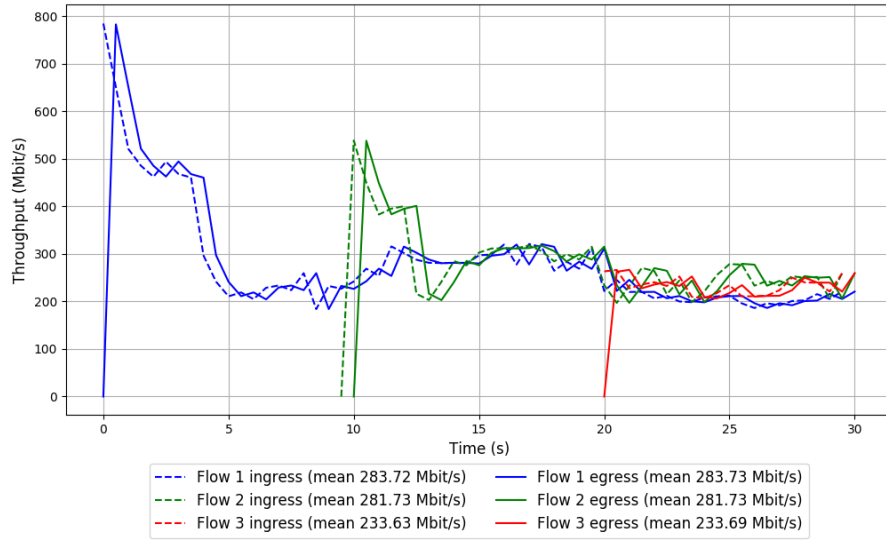
-- Flow 3:

Average throughput: 233.69 Mbit/s

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

Loss rate: 0.01%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

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

End at: 2019-05-30 12:00:35

Local clock offset: -0.181 ms

Remote clock offset: 1.145 ms

Below is generated by plot.py at 2019-05-30 14:28:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 532.54 Mbit/s

95th percentile per-packet one-way delay: 1.082 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 262.31 Mbit/s

95th percentile per-packet one-way delay: 1.059 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 268.66 Mbit/s

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

Loss rate: 0.01%

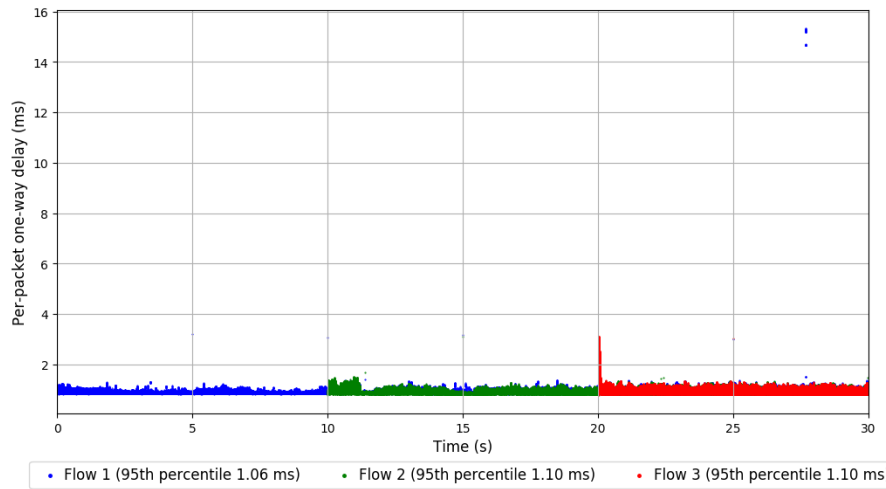
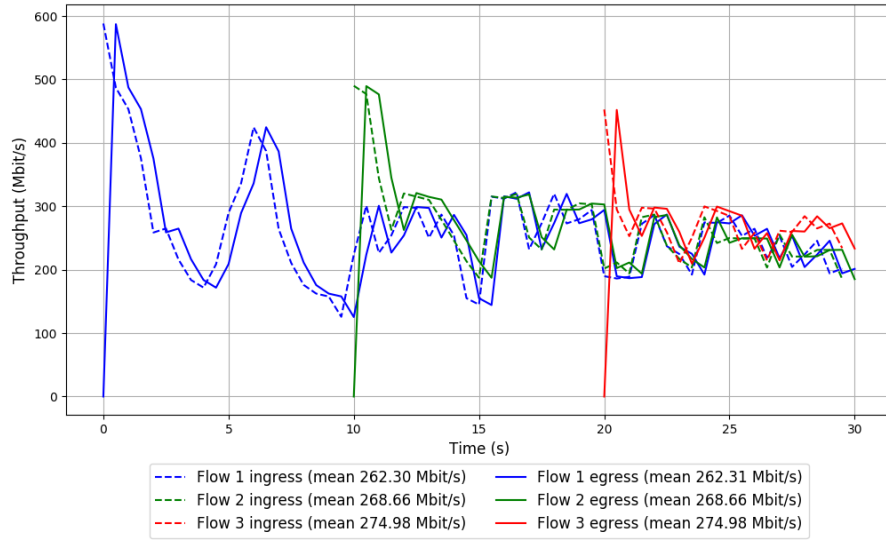
-- Flow 3:

Average throughput: 274.98 Mbit/s

95th percentile per-packet one-way delay: 1.104 ms

Loss rate: 0.02%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-05-30 12:30:25
End at: 2019-05-30 12:30:55
Local clock offset: 0.494 ms
Remote clock offset: -2.964 ms

Below is generated by plot.py at 2019-05-30 14:28:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 523.23 Mbit/s
95th percentile per-packet one-way delay: 1.378 ms
Loss rate: 0.01%

-- Flow 1:

Average throughput: 246.89 Mbit/s
95th percentile per-packet one-way delay: 1.213 ms
Loss rate: 0.01%

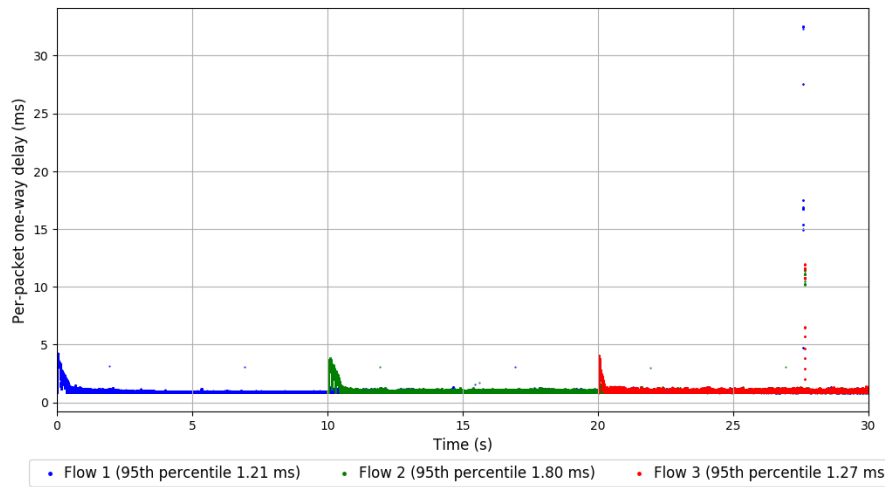
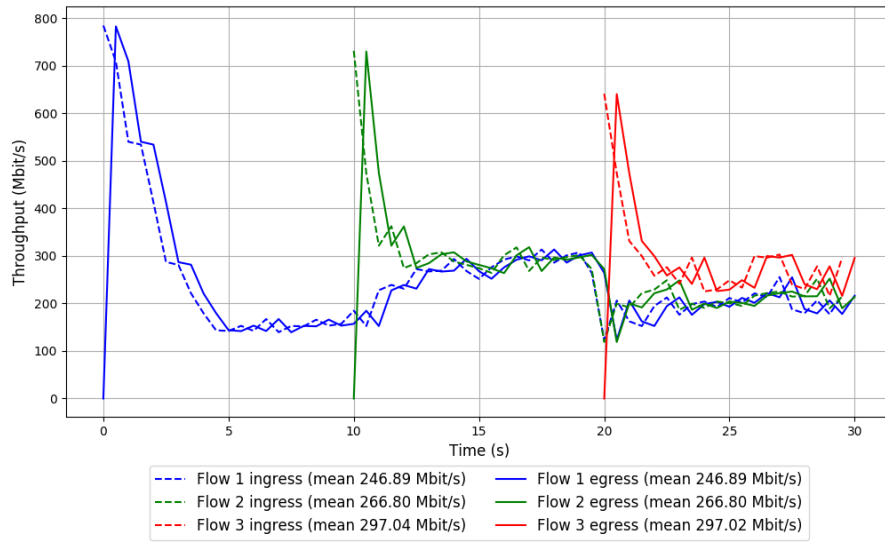
-- Flow 2:

Average throughput: 266.80 Mbit/s
95th percentile per-packet one-way delay: 1.802 ms
Loss rate: 0.01%

-- Flow 3:

Average throughput: 297.02 Mbit/s
95th percentile per-packet one-way delay: 1.271 ms
Loss rate: 0.02%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-05-30 13:00:36

End at: 2019-05-30 13:01:06

Local clock offset: 0.752 ms

Remote clock offset: 0.334 ms

Below is generated by plot.py at 2019-05-30 14:29:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 519.55 Mbit/s

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

Loss rate: 0.01%

-- Flow 1:

Average throughput: 284.40 Mbit/s

95th percentile per-packet one-way delay: 1.059 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 237.47 Mbit/s

95th percentile per-packet one-way delay: 1.084 ms

Loss rate: 0.01%

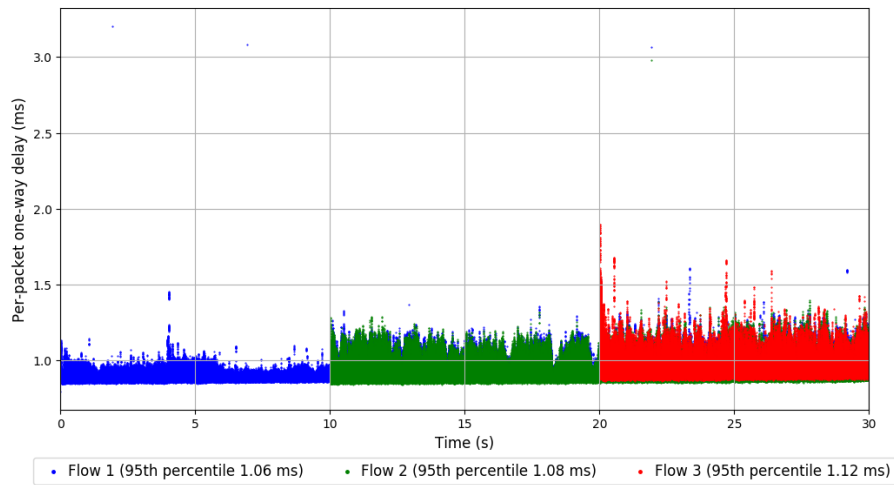
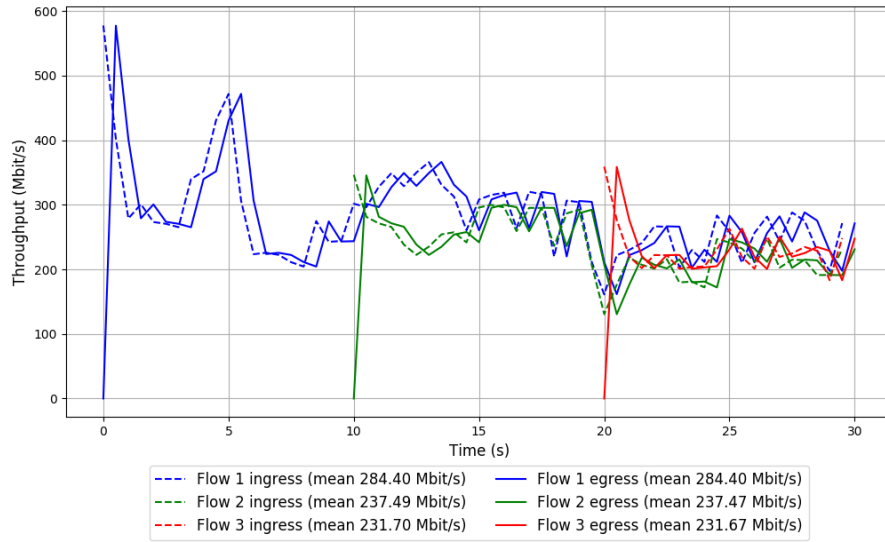
-- Flow 3:

Average throughput: 231.67 Mbit/s

95th percentile per-packet one-way delay: 1.125 ms

Loss rate: 0.02%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-05-30 11:10:00
End at: 2019-05-30 11:10:30
Local clock offset: -2.425 ms
Remote clock offset: -0.379 ms

Below is generated by plot.py at 2019-05-30 14:29:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 258.76 Mbit/s
95th percentile per-packet one-way delay: 2.556 ms
Loss rate: 0.01%

-- Flow 1:

Average throughput: 170.99 Mbit/s
95th percentile per-packet one-way delay: 2.647 ms
Loss rate: 0.00%

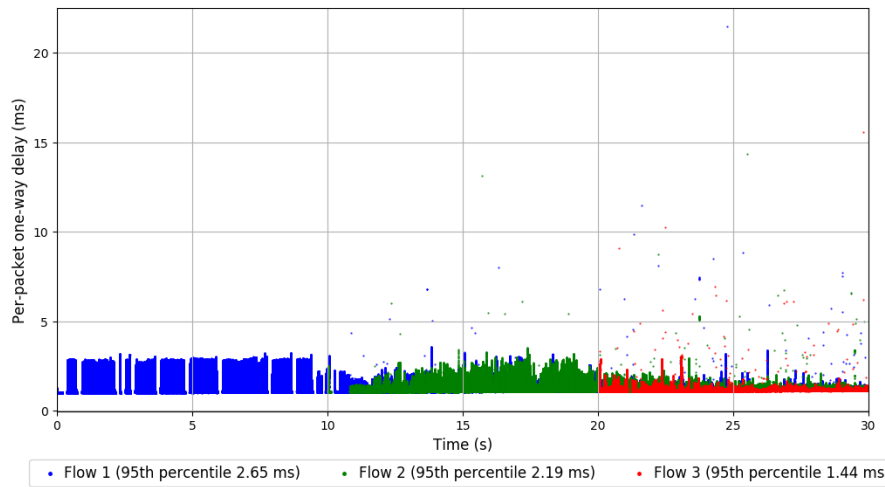
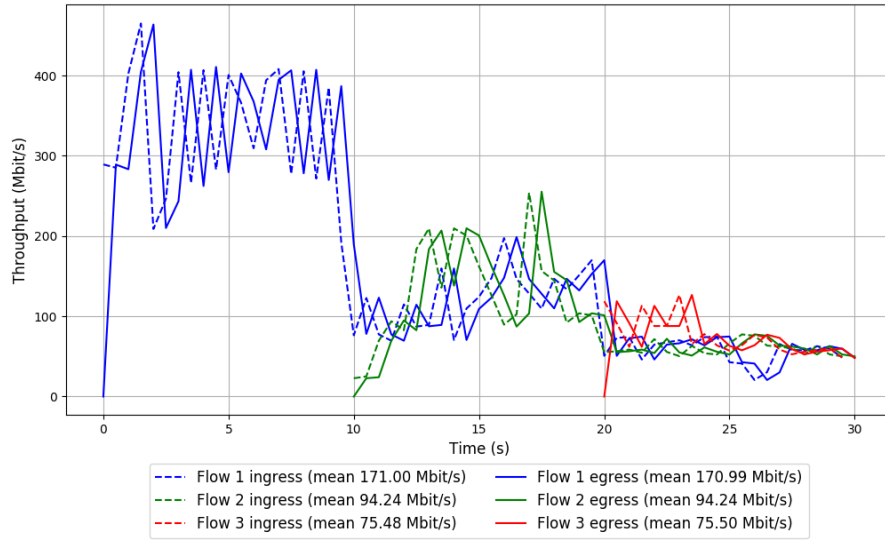
-- Flow 2:

Average throughput: 94.24 Mbit/s
95th percentile per-packet one-way delay: 2.189 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 75.50 Mbit/s
95th percentile per-packet one-way delay: 1.435 ms
Loss rate: 0.05%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-05-30 11:40:30

End at: 2019-05-30 11:41:00

Local clock offset: -3.118 ms

Remote clock offset: 1.36 ms

Below is generated by plot.py at 2019-05-30 14:29:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 266.38 Mbit/s

95th percentile per-packet one-way delay: 1.985 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 171.58 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 103.78 Mbit/s

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

Loss rate: 0.04%

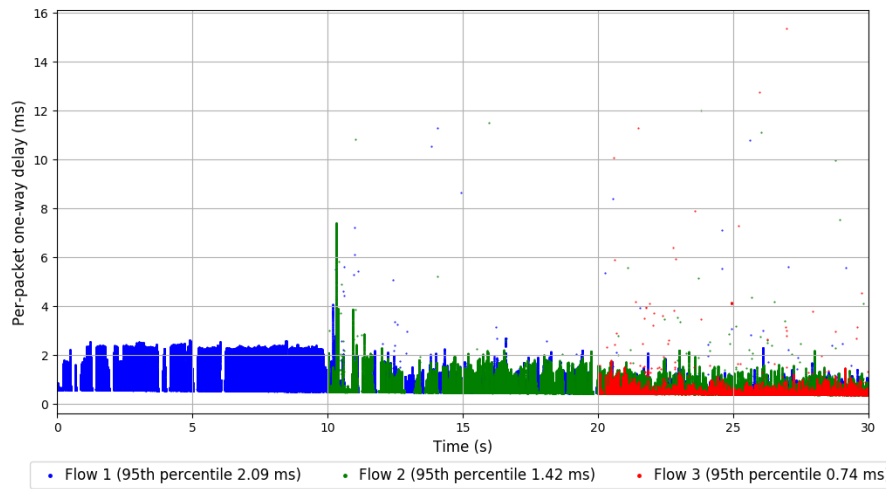
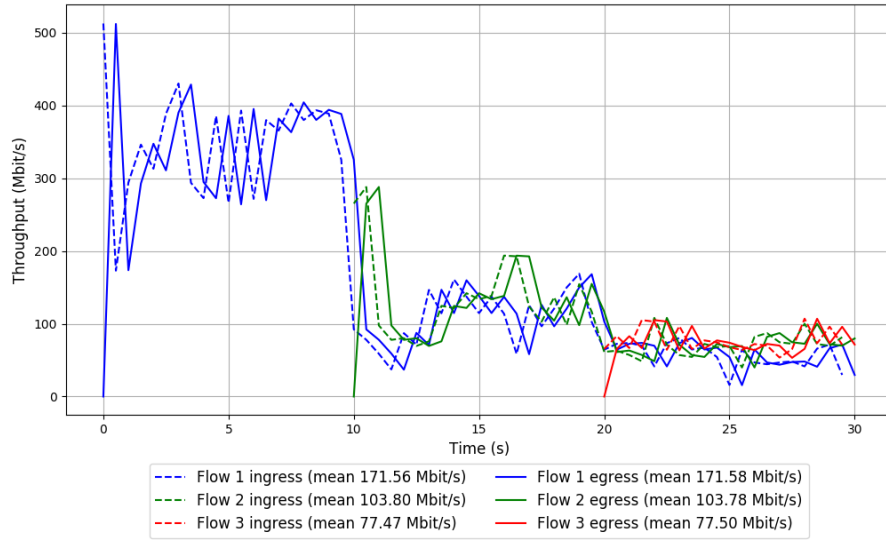
-- Flow 3:

Average throughput: 77.50 Mbit/s

95th percentile per-packet one-way delay: 0.740 ms

Loss rate: 0.01%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-05-30 12:10:52
End at: 2019-05-30 12:11:22
Local clock offset: 0.217 ms
Remote clock offset: -0.183 ms

Below is generated by plot.py at 2019-05-30 14:29:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 274.15 Mbit/s
95th percentile per-packet one-way delay: 1.830 ms
Loss rate: 0.00%

-- Flow 1:

Average throughput: 161.74 Mbit/s
95th percentile per-packet one-way delay: 2.051 ms
Loss rate: 0.00%

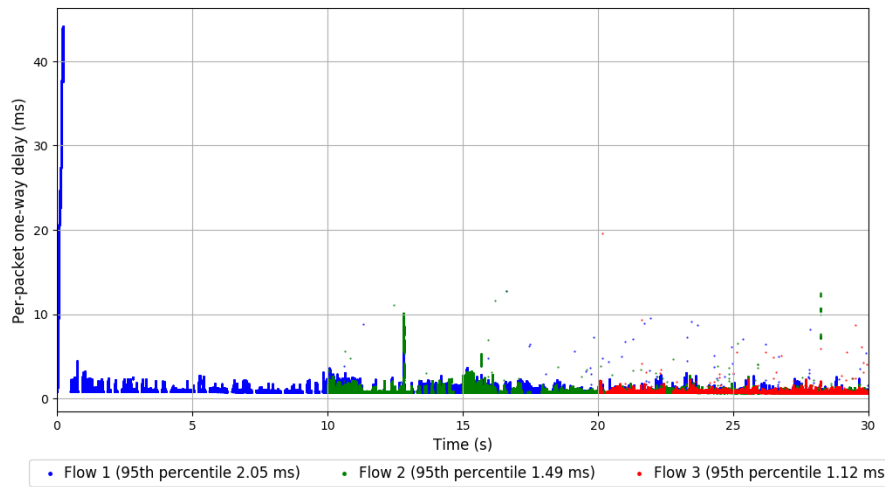
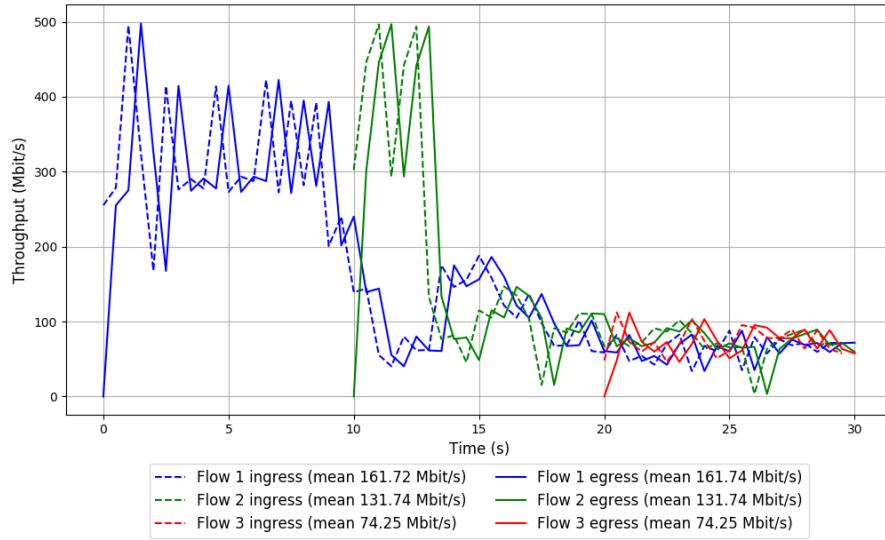
-- Flow 2:

Average throughput: 131.74 Mbit/s
95th percentile per-packet one-way delay: 1.489 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 74.25 Mbit/s
95th percentile per-packet one-way delay: 1.119 ms
Loss rate: 0.00%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2019-05-30 12:41:13
End at: 2019-05-30 12:41:43
Local clock offset: 0.602 ms
Remote clock offset: -3.219 ms

Below is generated by plot.py at 2019-05-30 14:29:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 257.69 Mbit/s
95th percentile per-packet one-way delay: 2.415 ms
Loss rate: 0.00%

-- Flow 1:

Average throughput: 169.58 Mbit/s
95th percentile per-packet one-way delay: 2.520 ms
Loss rate: 0.00%

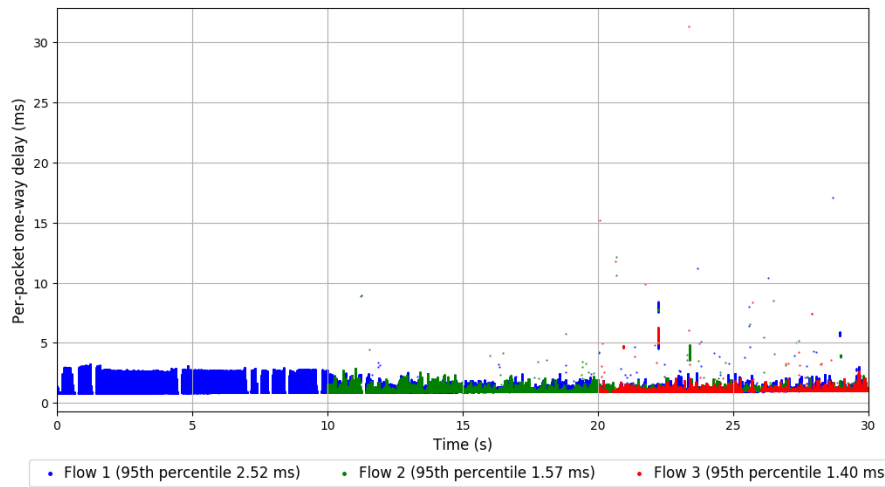
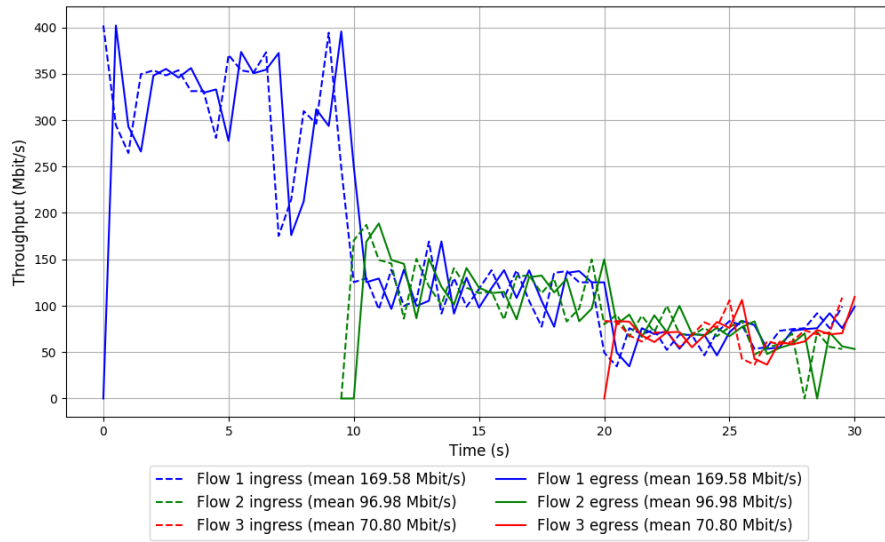
-- Flow 2:

Average throughput: 96.98 Mbit/s
95th percentile per-packet one-way delay: 1.572 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 70.80 Mbit/s
95th percentile per-packet one-way delay: 1.397 ms
Loss rate: 0.00%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2019-05-30 13:11:25

End at: 2019-05-30 13:11:55

Local clock offset: 1.834 ms

Remote clock offset: 0.887 ms

Below is generated by plot.py at 2019-05-30 14:29:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 256.66 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 168.03 Mbit/s

95th percentile per-packet one-way delay: 1.834 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 92.71 Mbit/s

95th percentile per-packet one-way delay: 1.449 ms

Loss rate: 0.00%

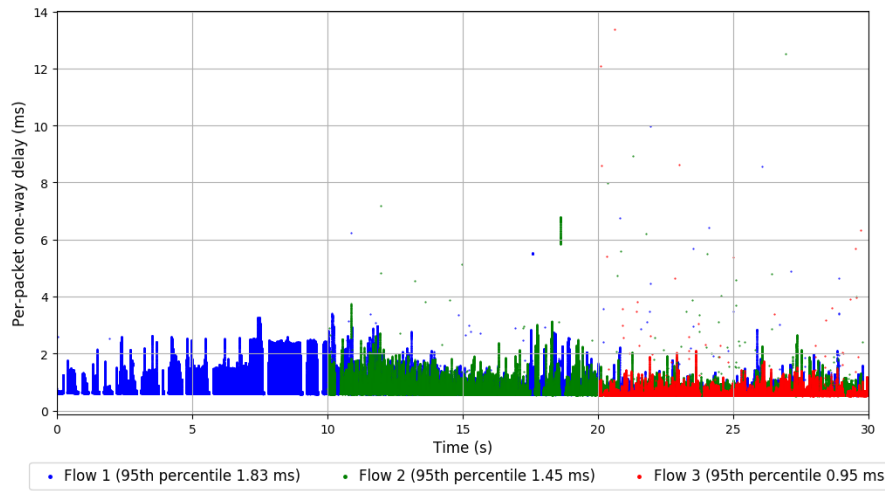
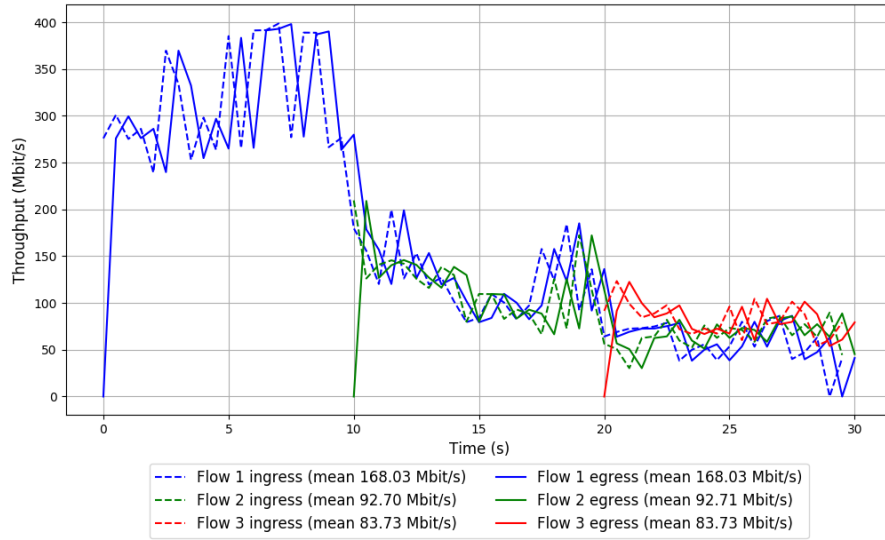
-- Flow 3:

Average throughput: 83.73 Mbit/s

95th percentile per-packet one-way delay: 0.951 ms

Loss rate: 0.00%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-05-30 11:14:13

End at: 2019-05-30 11:14:43

Local clock offset: -2.669 ms

Remote clock offset: 0.415 ms

Below is generated by plot.py at 2019-05-30 14:30:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 301.18 Mbit/s

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

Loss rate: 0.00%

-- Flow 1:

Average throughput: 183.98 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 136.26 Mbit/s

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

Loss rate: 0.00%

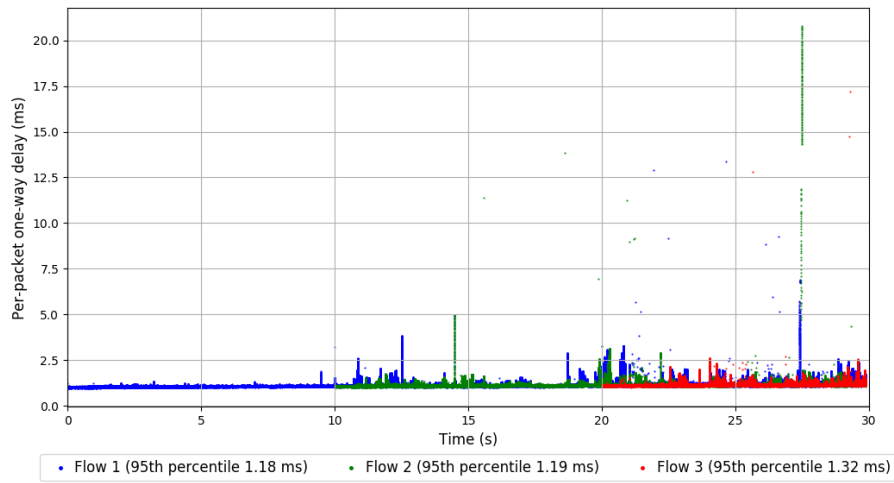
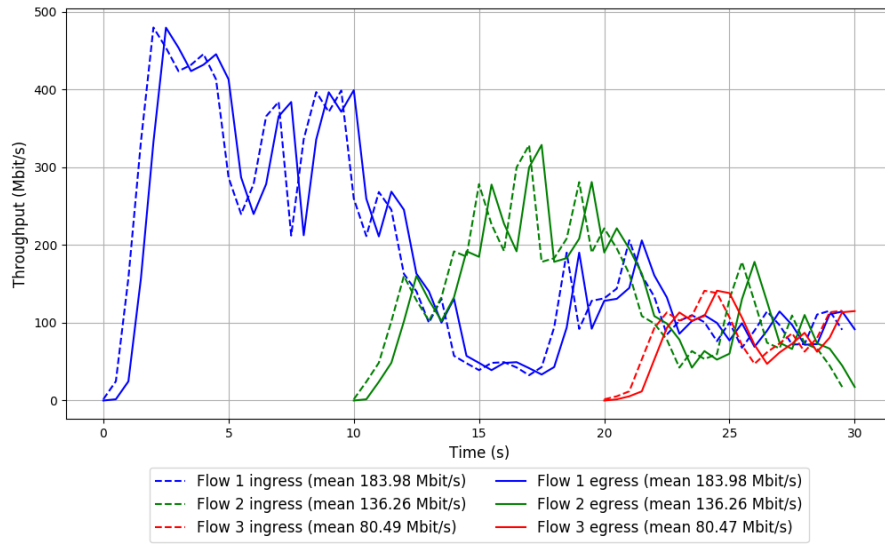
-- Flow 3:

Average throughput: 80.47 Mbit/s

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

Loss rate: 0.03%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-05-30 11:44:45

End at: 2019-05-30 11:45:15

Local clock offset: -1.841 ms

Remote clock offset: 1.007 ms

Below is generated by plot.py at 2019-05-30 14:30:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 303.95 Mbit/s

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

Loss rate: 0.01%

-- Flow 1:

Average throughput: 227.11 Mbit/s

95th percentile per-packet one-way delay: 0.863 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 78.08 Mbit/s

95th percentile per-packet one-way delay: 0.935 ms

Loss rate: 0.01%

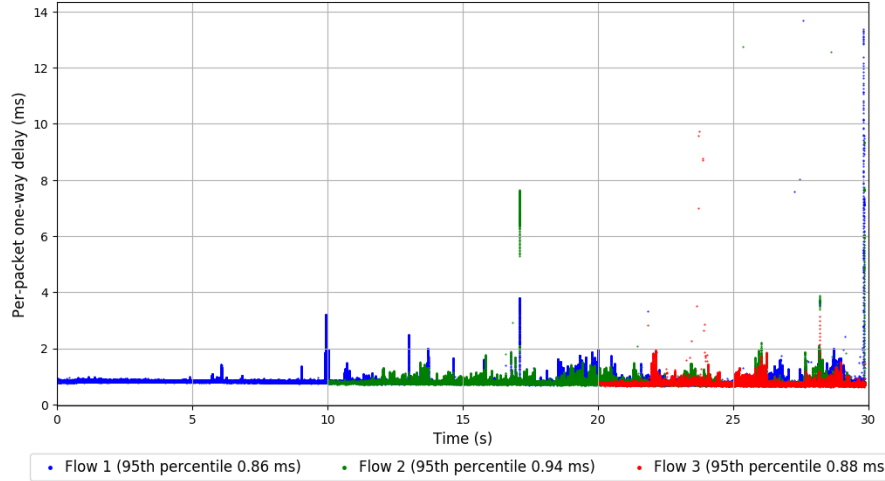
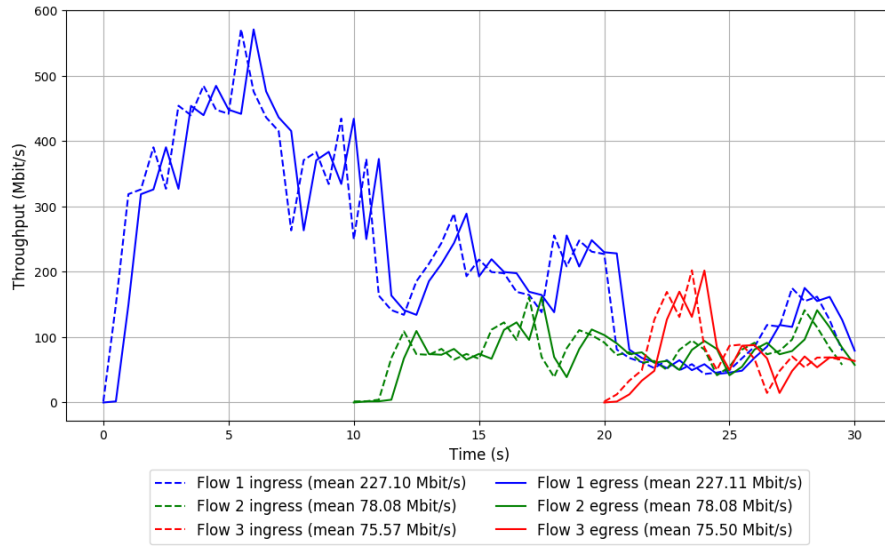
-- Flow 3:

Average throughput: 75.50 Mbit/s

95th percentile per-packet one-way delay: 0.881 ms

Loss rate: 0.11%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-05-30 12:15:09
End at: 2019-05-30 12:15:39
Local clock offset: 0.285 ms
Remote clock offset: -1.353 ms

Below is generated by plot.py at 2019-05-30 14:30:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 297.97 Mbit/s
95th percentile per-packet one-way delay: 0.963 ms
Loss rate: 0.00%

-- Flow 1:

Average throughput: 200.81 Mbit/s
95th percentile per-packet one-way delay: 0.955 ms
Loss rate: 0.00%

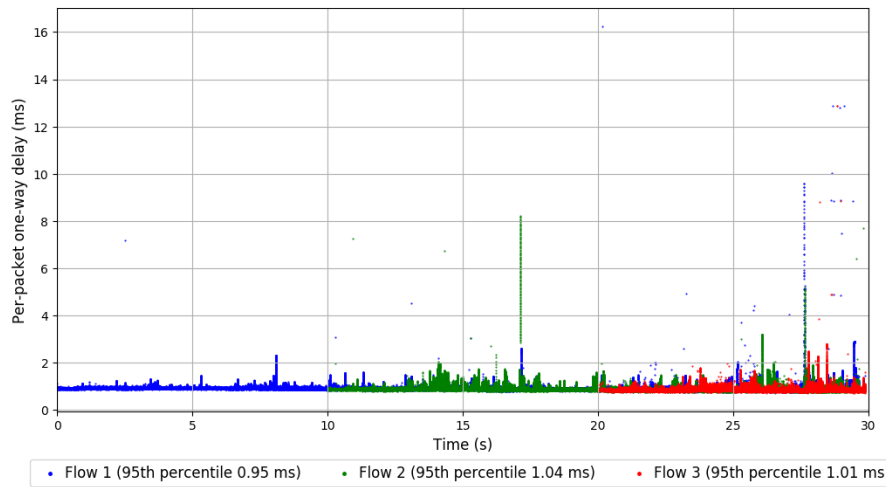
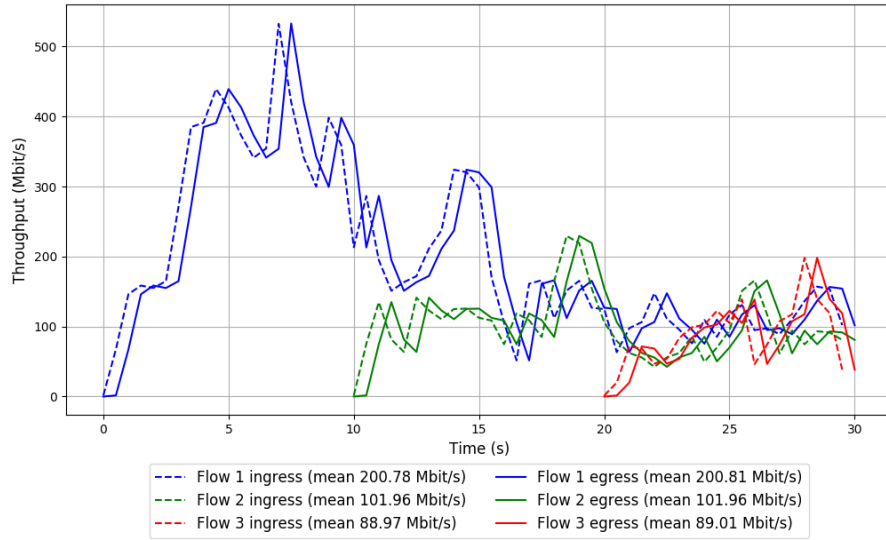
-- Flow 2:

Average throughput: 101.96 Mbit/s
95th percentile per-packet one-way delay: 1.044 ms
Loss rate: 0.01%

-- Flow 3:

Average throughput: 89.01 Mbit/s
95th percentile per-packet one-way delay: 1.012 ms
Loss rate: 0.01%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-05-30 12:45:27
End at: 2019-05-30 12:45:57
Local clock offset: 0.618 ms
Remote clock offset: -1.794 ms

Below is generated by plot.py at 2019-05-30 14:30:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 276.76 Mbit/s
95th percentile per-packet one-way delay: 0.990 ms
Loss rate: 0.00%

-- Flow 1:

Average throughput: 190.35 Mbit/s
95th percentile per-packet one-way delay: 0.964 ms
Loss rate: 0.00%

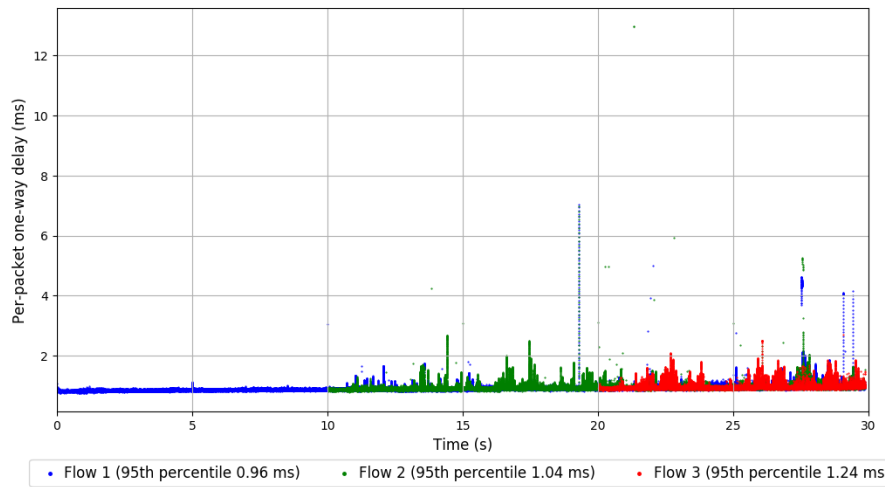
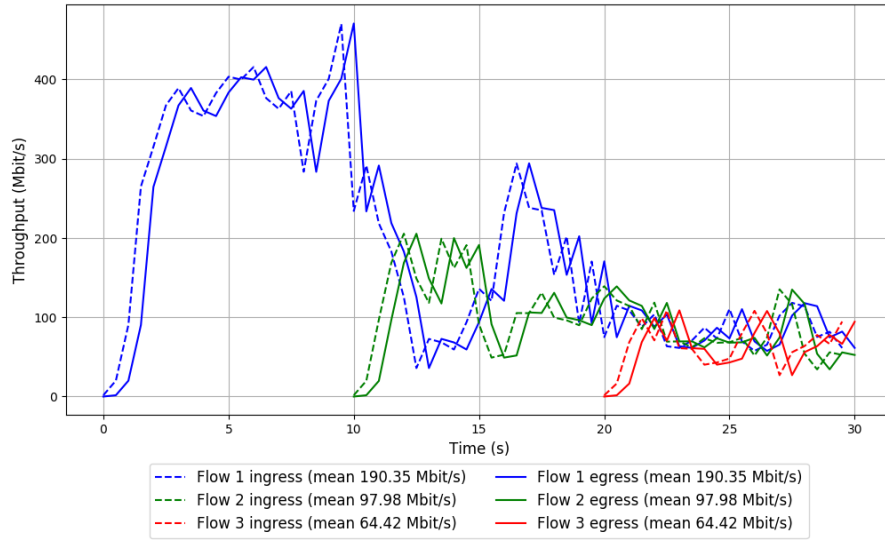
-- Flow 2:

Average throughput: 97.98 Mbit/s
95th percentile per-packet one-way delay: 1.040 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 64.42 Mbit/s
95th percentile per-packet one-way delay: 1.239 ms
Loss rate: 0.01%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-05-30 13:15:40

End at: 2019-05-30 13:16:10

Local clock offset: 2.736 ms

Remote clock offset: 0.95 ms

Below is generated by plot.py at 2019-05-30 14:31:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 301.98 Mbit/s

95th percentile per-packet one-way delay: 0.780 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 215.18 Mbit/s

95th percentile per-packet one-way delay: 0.779 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 95.63 Mbit/s

95th percentile per-packet one-way delay: 0.793 ms

Loss rate: 0.01%

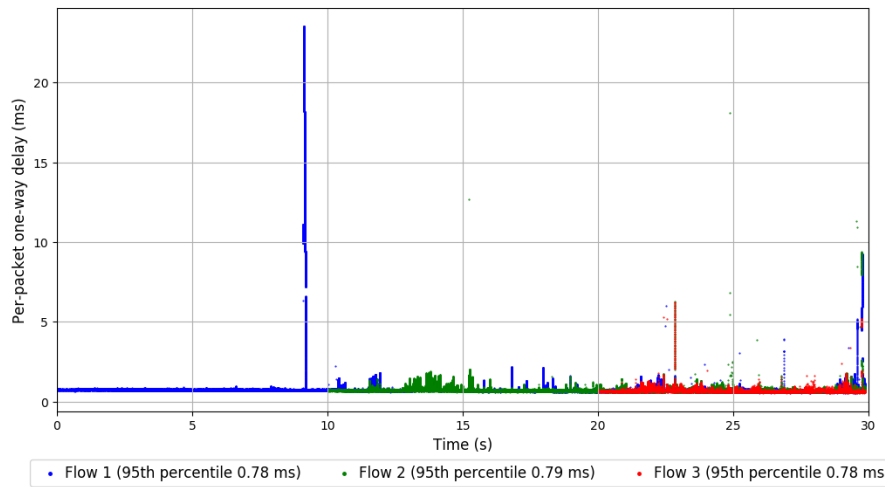
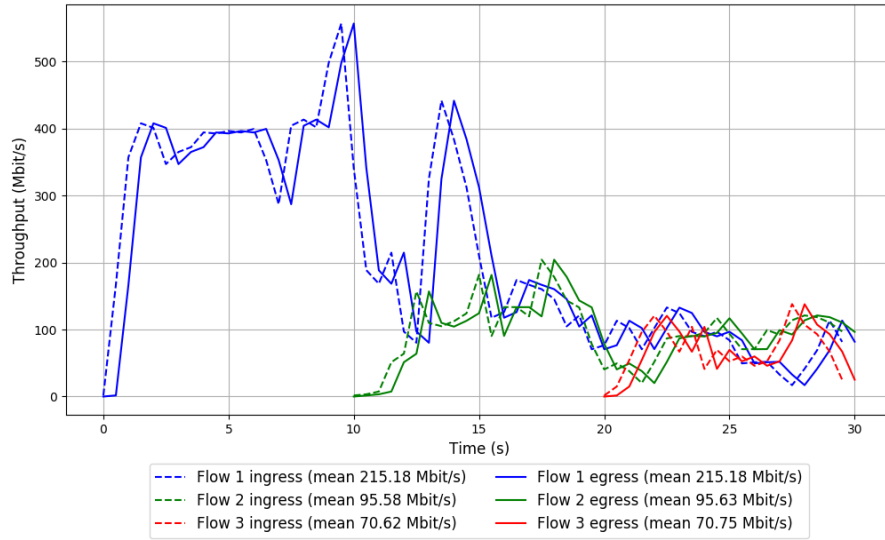
-- Flow 3:

Average throughput: 70.75 Mbit/s

95th percentile per-packet one-way delay: 0.783 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2019-05-30 11:21:36

End at: 2019-05-30 11:22:06

Local clock offset: -3.226 ms

Remote clock offset: 1.418 ms

Below is generated by plot.py at 2019-05-30 14:31:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 1.132 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 1.122 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

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

Loss rate: 0.05%

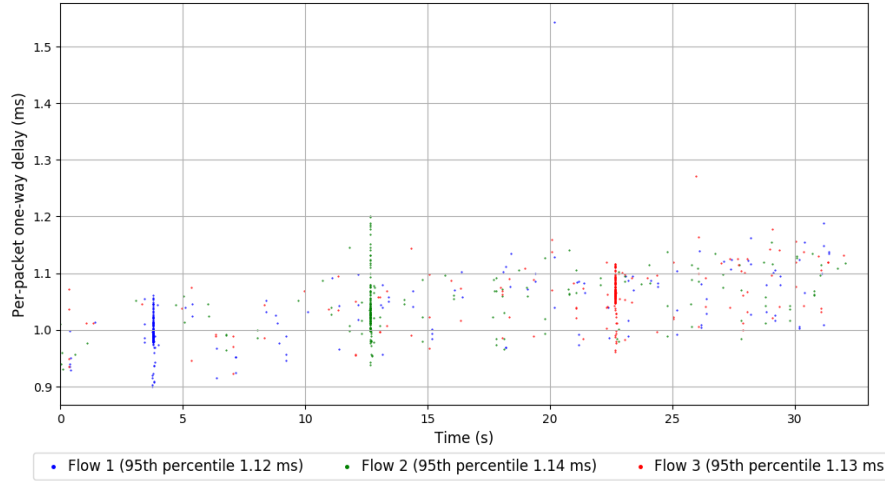
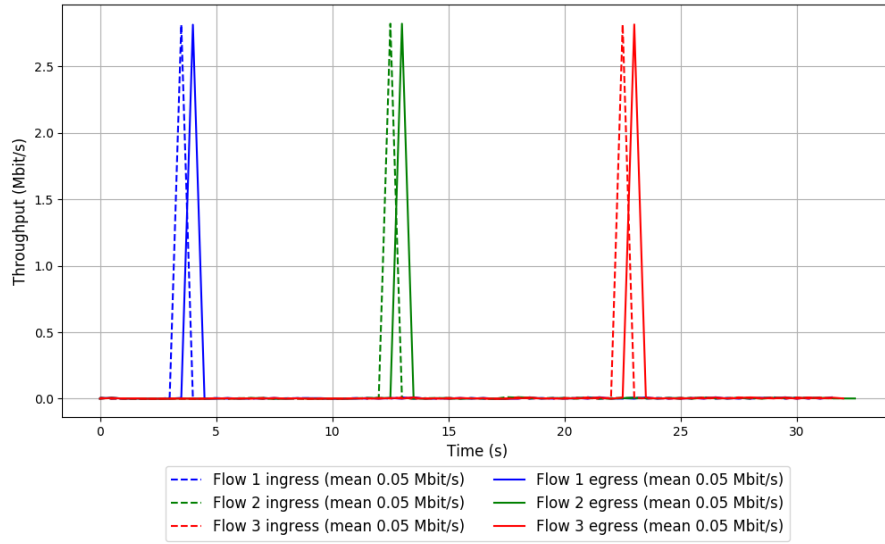
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 1.126 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-05-30 11:52:09

End at: 2019-05-30 11:52:39

Local clock offset: -0.702 ms

Remote clock offset: 1.016 ms

Below is generated by plot.py at 2019-05-30 14:31:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 0.912 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 0.903 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

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

Loss rate: 0.00%

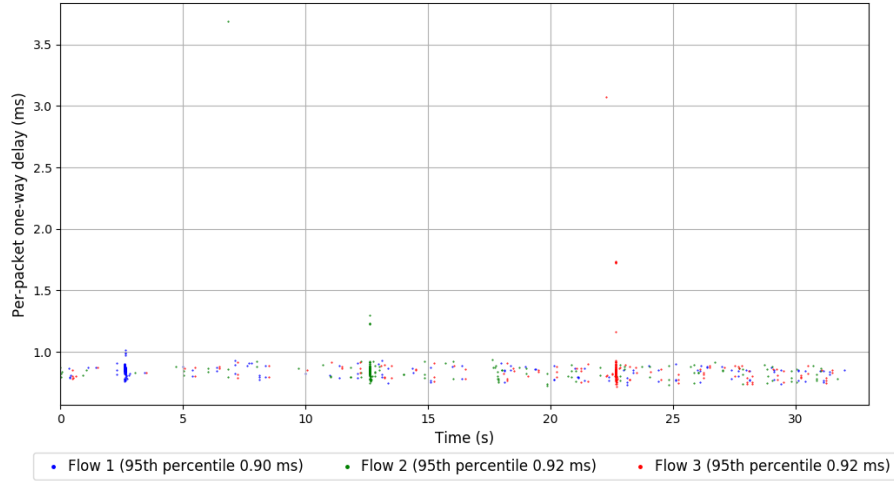
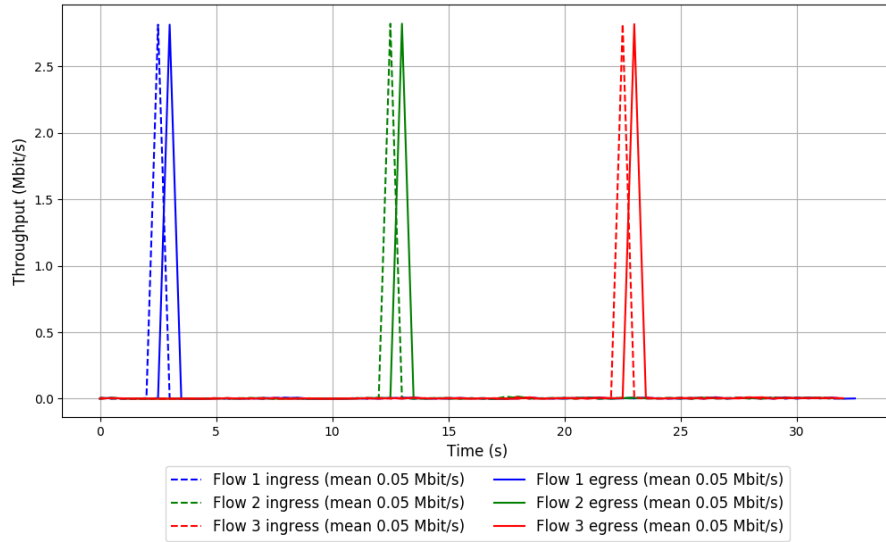
-- Flow 3:

Average throughput: 0.05 Mbit/s

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

Loss rate: 0.06%

Run 2: Report of WebRTC media — Data Link

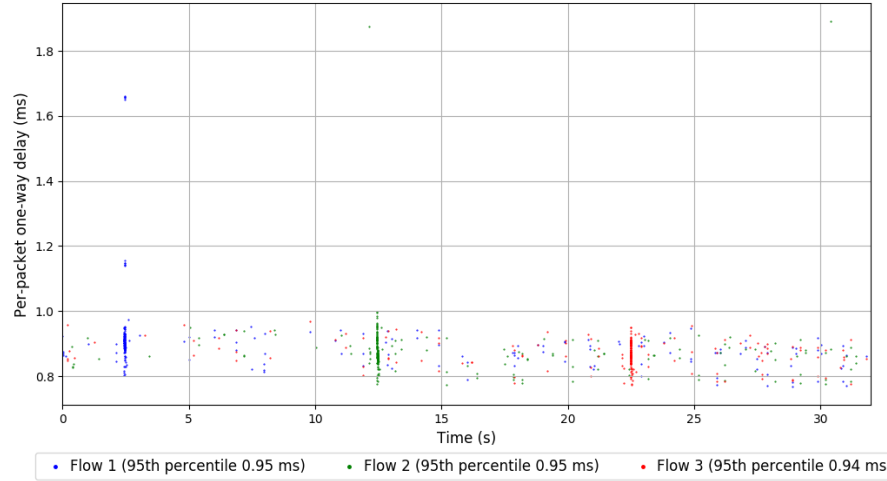
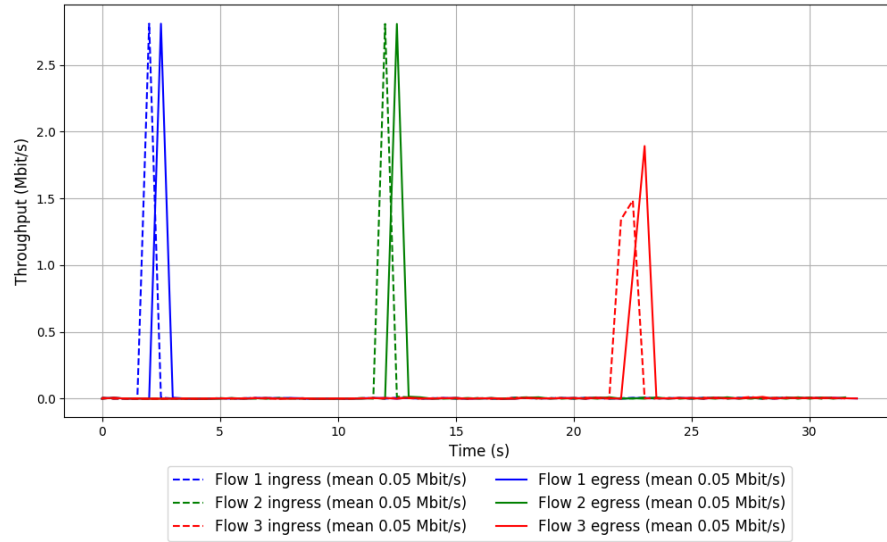


Run 3: Statistics of WebRTC media

Start at: 2019-05-30 12:22:26
End at: 2019-05-30 12:22:56
Local clock offset: 0.377 ms
Remote clock offset: -2.379 ms

```
# Below is generated by plot.py at 2019-05-30 14:31:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 0.949 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.953 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.951 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.936 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-05-30 12:52:44
End at: 2019-05-30 12:53:14
Local clock offset: 0.698 ms
Remote clock offset: -0.405 ms

Below is generated by plot.py at 2019-05-30 14:31:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 1.015 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 0.983 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 1.000 ms

Loss rate: 0.00%

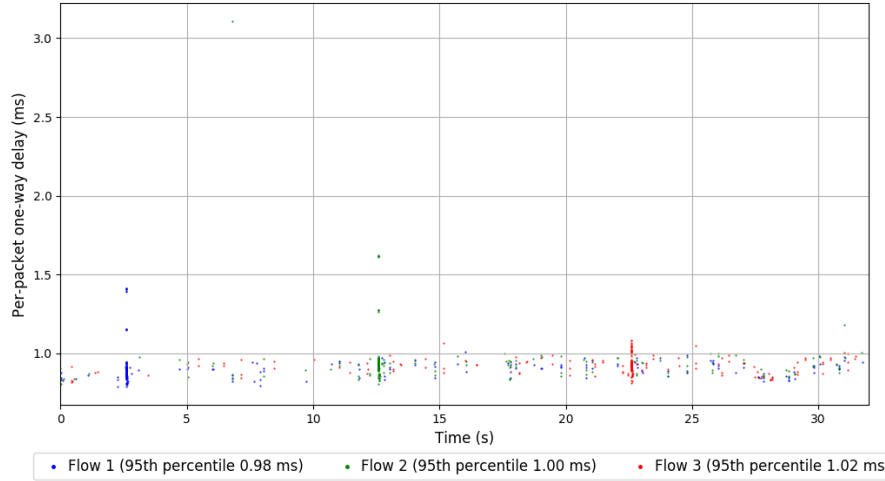
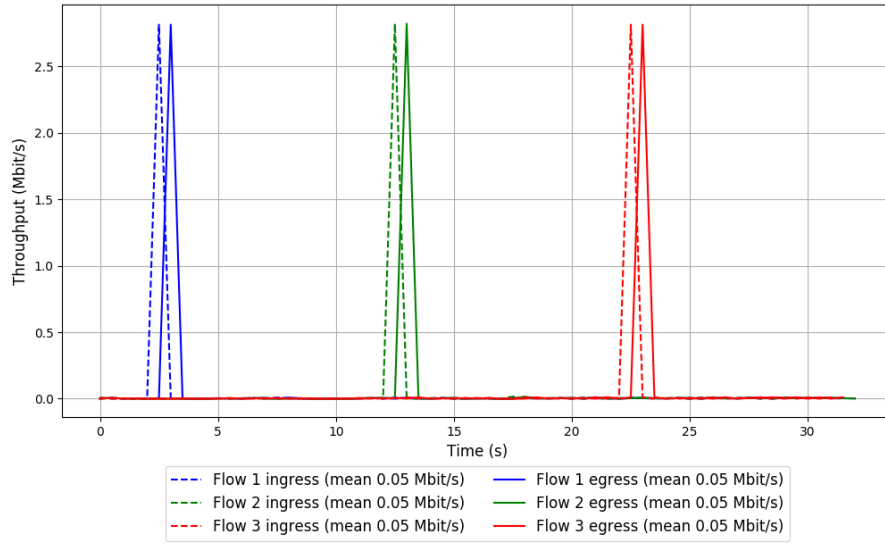
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 1.019 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-05-30 13:23:01

End at: 2019-05-30 13:23:31

Local clock offset: 3.607 ms

Remote clock offset: 0.512 ms

Below is generated by plot.py at 2019-05-30 14:31:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 0.830 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 0.839 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 0.841 ms

Loss rate: 0.05%

-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 0.810 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

