

Pantheon Report

Generated at 2019-04-24 02:23:22 (UTC).

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

Repeated the test of 21 congestion control schemes 5 times.

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

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

System info:

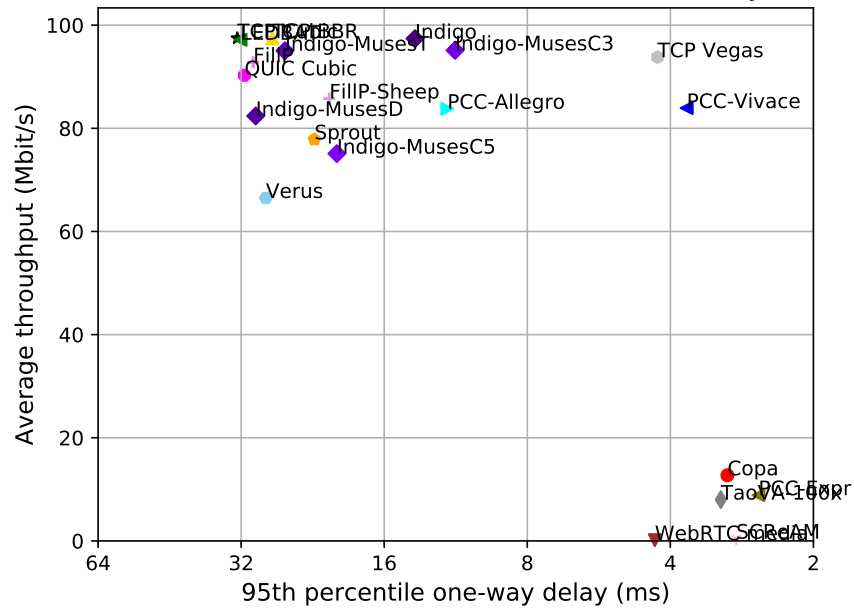
```
Linux 4.15.0-1034-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

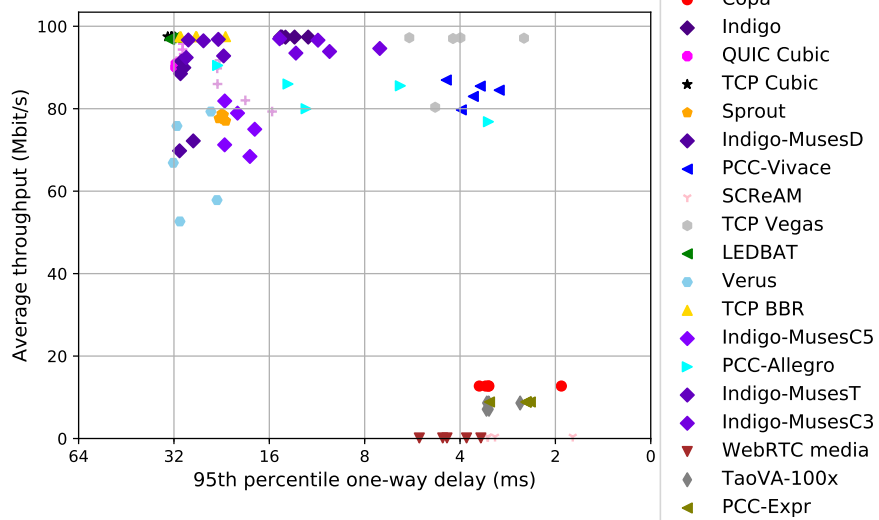
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d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

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

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



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



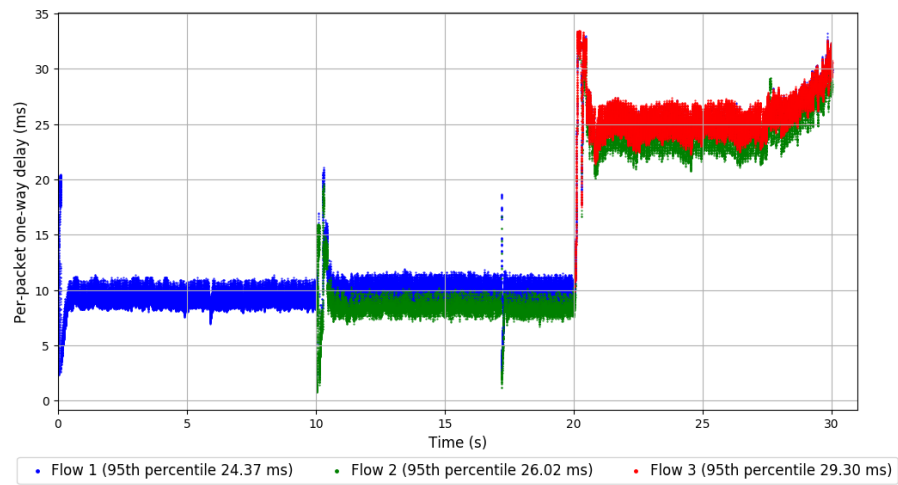
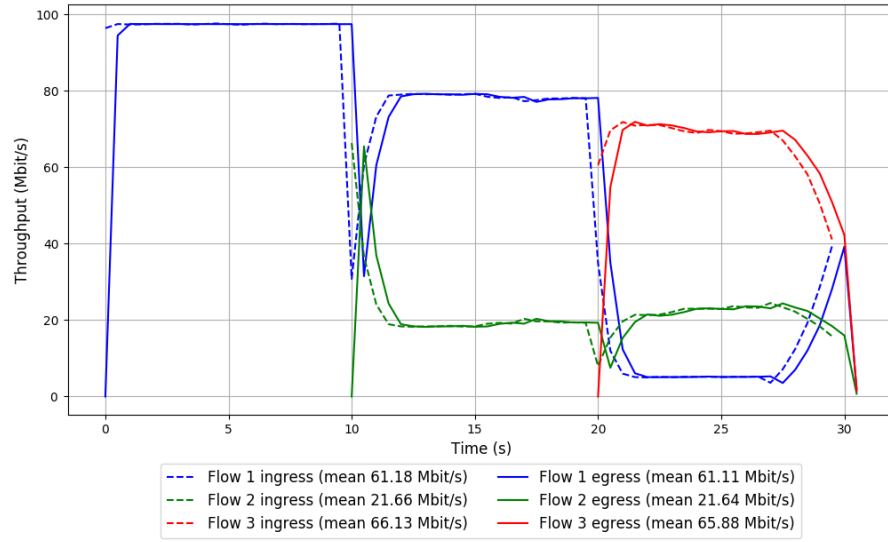
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	71.00	27.78	23.90	26.98	25.67	30.22	0.01	0.00	0.11
Copa	5	11.61	1.30	1.62	2.84	3.05	3.28	65.73	79.98	82.00
TCP Cubic	5	64.03	38.09	24.29	32.57	32.35	32.70	0.04	0.04	0.06
FillP	5	48.09	46.98	40.51	28.50	30.28	30.13	9.21	18.58	40.57
FillP-Sheep	5	51.07	30.38	43.68	17.06	21.69	23.92	0.91	1.35	2.78
Indigo	5	46.31	43.38	68.56	11.54	13.35	13.97	0.00	0.00	0.01
Indigo-MusesC3	5	58.06	37.92	41.17	9.75	10.59	13.12	0.00	0.00	0.01
Indigo-MusesC5	5	41.36	35.71	34.74	18.77	20.18	21.56	0.00	0.00	0.03
Indigo-MusesD	5	46.65	42.84	25.92	28.04	29.77	30.72	0.16	0.56	1.91
Indigo-MusesT	5	59.61	41.94	26.99	23.49	26.29	28.92	0.20	0.37	0.67
LEDBAT	5	62.86	37.89	28.46	32.02	32.14	32.47	0.03	0.07	0.12
PCC-Allegro	5	66.89	18.73	13.44	9.52	14.65	17.82	0.03	0.07	0.10
PCC-Expr	5	0.51	10.51	5.67	1.71	2.61	2.36	85.71	24.71	26.04
QUIC Cubic	5	57.25	36.29	27.06	30.78	31.55	31.04	0.15	0.18	0.19
SCReAM	5	0.22	0.22	0.22	2.61	2.30	2.60	0.00	0.00	0.00
Sprout	5	42.30	37.09	32.91	20.86	23.00	23.91	0.01	0.00	0.04
TaoVA-100x	5	0.00	8.01	8.43	2.48	3.19	2.83	95.92	78.42	90.74
TCP Vegas	5	47.63	43.97	50.72	4.78	4.10	3.52	0.01	0.01	0.00
Verus	5	37.20	29.48	29.21	24.99	29.30	32.77	4.83	8.87	10.65
PCC-Vivace	5	54.40	31.44	26.11	3.51	3.46	4.34	0.01	0.00	0.01
WebRTC media	5	0.05	0.05	0.05	3.73	4.55	4.17	0.00	0.00	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-04-24 00:23:30
End at: 2019-04-24 00:24:00
Local clock offset: -1.583 ms
Remote clock offset: -0.063 ms

Below is generated by plot.py at 2019-04-24 02:12:42
Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 27.153 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 61.11 Mbit/s
95th percentile per-packet one-way delay: 24.367 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 21.64 Mbit/s
95th percentile per-packet one-way delay: 26.017 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 65.88 Mbit/s
95th percentile per-packet one-way delay: 29.299 ms
Loss rate: 0.17%

Run 1: Report of TCP BBR — Data Link

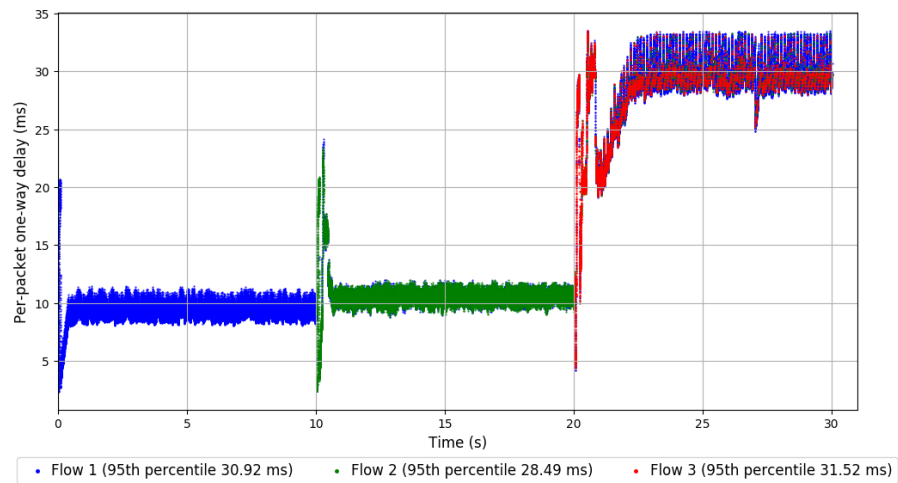
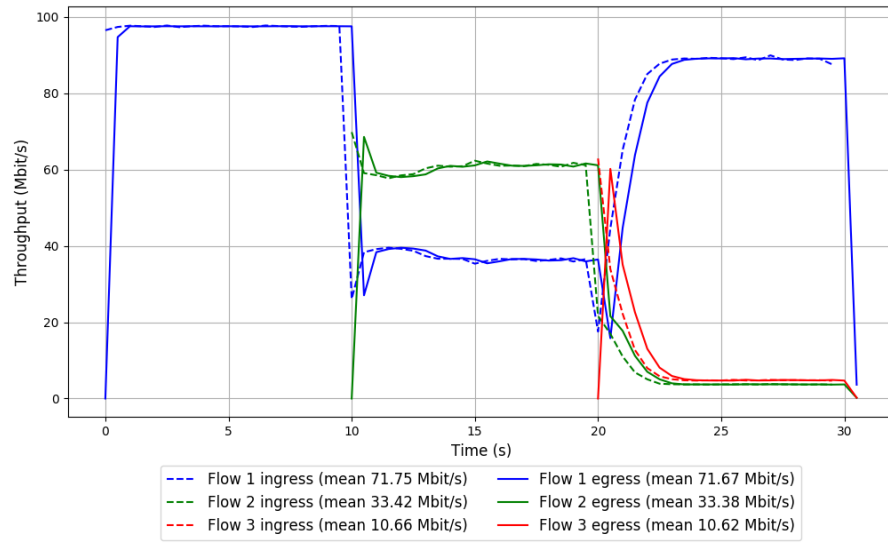


Run 2: Statistics of TCP BBR

Start at: 2019-04-24 00:47:23
End at: 2019-04-24 00:47:53
Local clock offset: -1.829 ms
Remote clock offset: -0.039 ms

Below is generated by plot.py at 2019-04-24 02:12:42
Datalink statistics
-- Total of 3 flows:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 30.654 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 71.67 Mbit/s
95th percentile per-packet one-way delay: 30.922 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 33.38 Mbit/s
95th percentile per-packet one-way delay: 28.486 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.62 Mbit/s
95th percentile per-packet one-way delay: 31.515 ms
Loss rate: 0.17%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-04-24 01:11:17

End at: 2019-04-24 01:11:47

Local clock offset: -1.467 ms

Remote clock offset: 0.027 ms

Below is generated by plot.py at 2019-04-24 02:12:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.44 Mbit/s

95th percentile per-packet one-way delay: 30.445 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 73.78 Mbit/s

95th percentile per-packet one-way delay: 30.728 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 31.29 Mbit/s

95th percentile per-packet one-way delay: 26.366 ms

Loss rate: 0.00%

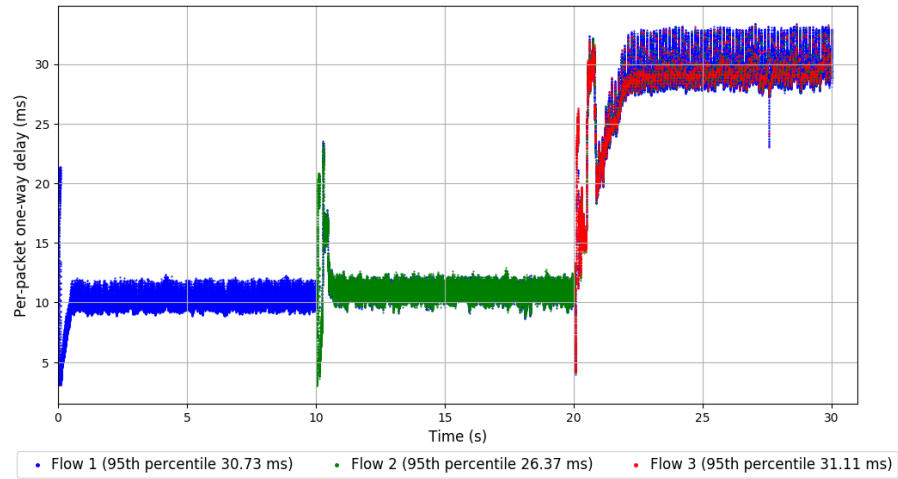
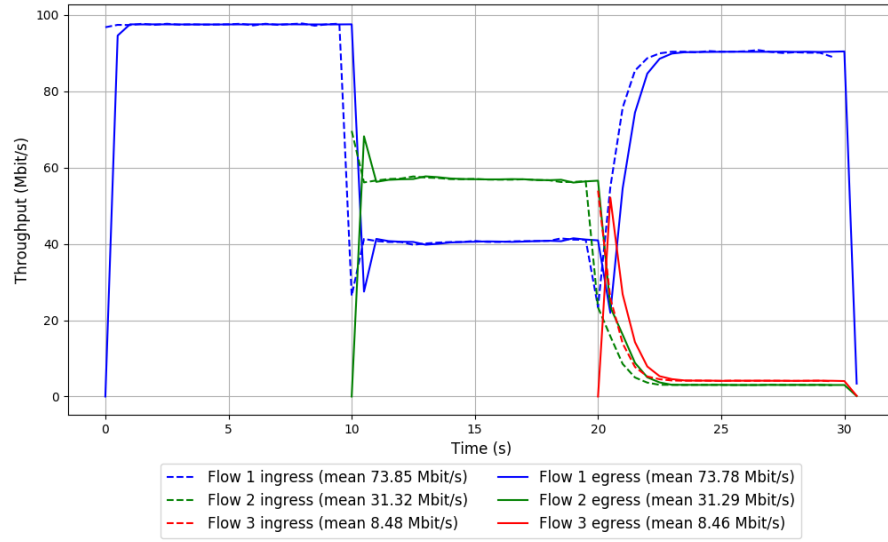
-- Flow 3:

Average throughput: 8.46 Mbit/s

95th percentile per-packet one-way delay: 31.108 ms

Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-04-24 01:35:08

End at: 2019-04-24 01:35:38

Local clock offset: -2.595 ms

Remote clock offset: 0.103 ms

Below is generated by plot.py at 2019-04-24 02:12:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.49 Mbit/s

95th percentile per-packet one-way delay: 27.293 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 74.08 Mbit/s

95th percentile per-packet one-way delay: 27.123 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 29.80 Mbit/s

95th percentile per-packet one-way delay: 25.724 ms

Loss rate: 0.00%

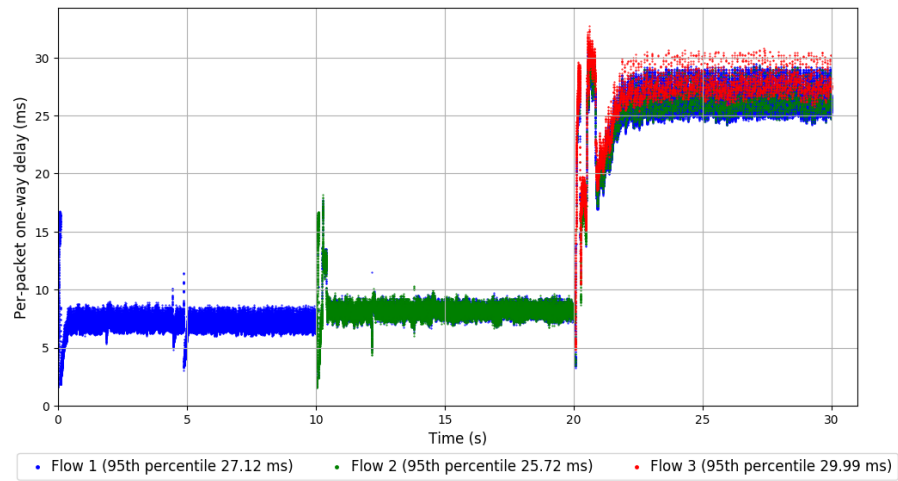
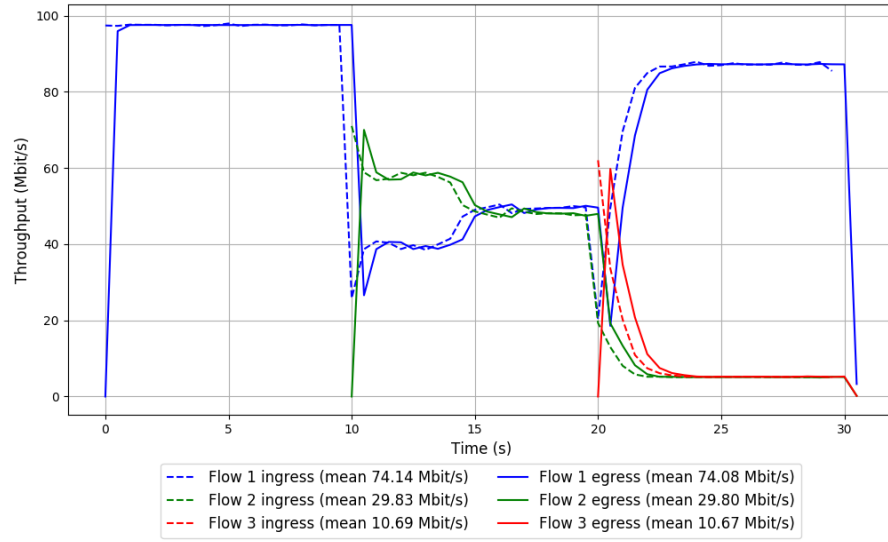
-- Flow 3:

Average throughput: 10.67 Mbit/s

95th percentile per-packet one-way delay: 29.991 ms

Loss rate: 0.01%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2019-04-24 01:59:01

End at: 2019-04-24 01:59:31

Local clock offset: -1.126 ms

Remote clock offset: 0.052 ms

Below is generated by plot.py at 2019-04-24 02:12:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.49 Mbit/s

95th percentile per-packet one-way delay: 21.996 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 74.37 Mbit/s

95th percentile per-packet one-way delay: 21.766 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 22.78 Mbit/s

95th percentile per-packet one-way delay: 21.746 ms

Loss rate: 0.01%

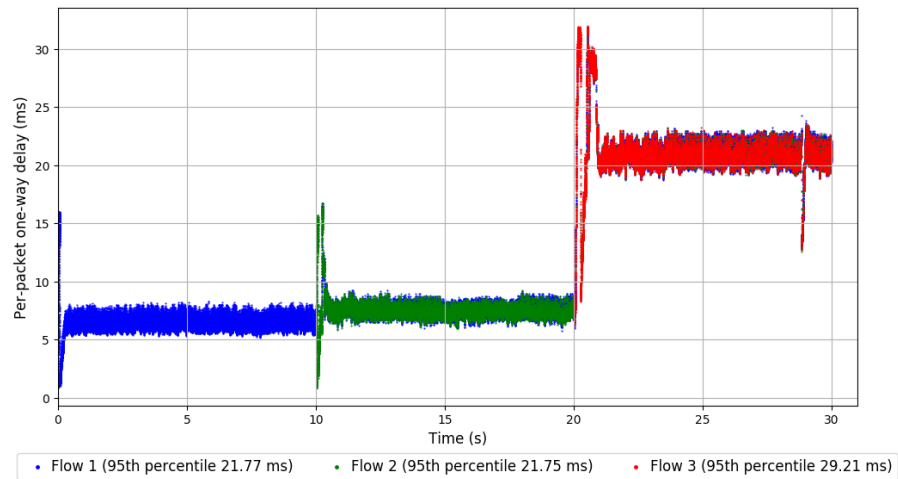
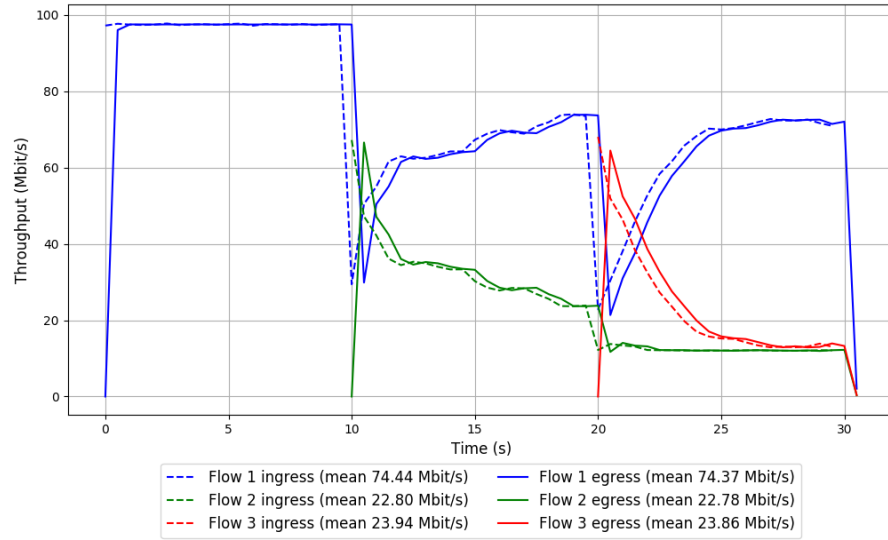
-- Flow 3:

Average throughput: 23.86 Mbit/s

95th percentile per-packet one-way delay: 29.208 ms

Loss rate: 0.22%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-04-24 00:25:50

End at: 2019-04-24 00:26:20

Local clock offset: -2.469 ms

Remote clock offset: 0.014 ms

Below is generated by plot.py at 2019-04-24 02:12:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 3.321 ms

Loss rate: 66.19%

-- Flow 1:

Average throughput: 10.99 Mbit/s

95th percentile per-packet one-way delay: 2.337 ms

Loss rate: 65.72%

-- Flow 2:

Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 3.359 ms

Loss rate: 67.43%

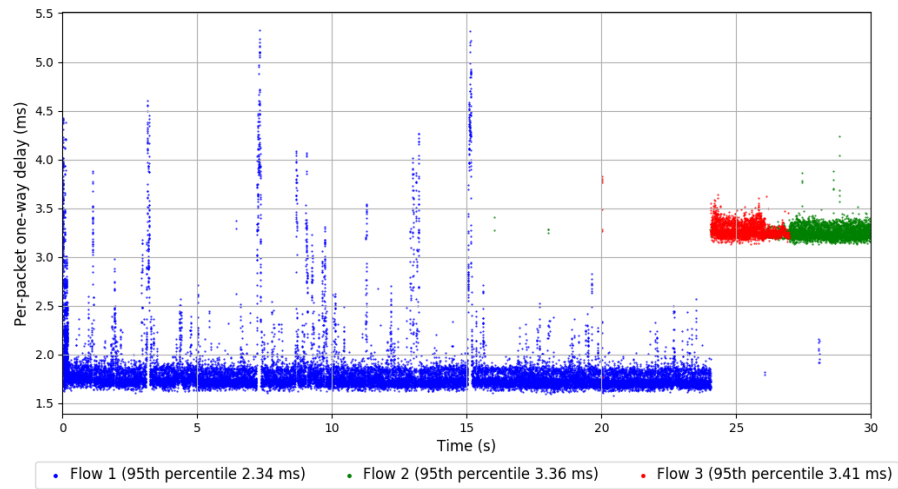
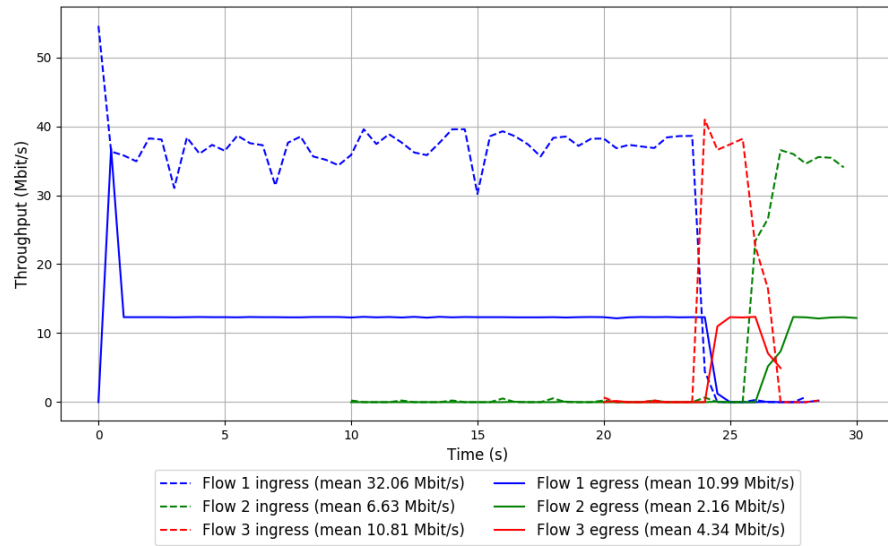
-- Flow 3:

Average throughput: 4.34 Mbit/s

95th percentile per-packet one-way delay: 3.410 ms

Loss rate: 68.88%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-04-24 00:49:43

End at: 2019-04-24 00:50:13

Local clock offset: -2.363 ms

Remote clock offset: 0.055 ms

Below is generated by plot.py at 2019-04-24 02:12:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 3.477 ms

Loss rate: 65.51%

-- Flow 1:

Average throughput: 11.88 Mbit/s

95th percentile per-packet one-way delay: 3.482 ms

Loss rate: 64.68%

-- Flow 2:

Average throughput: 0.01 Mbit/s

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

Loss rate: 89.78%

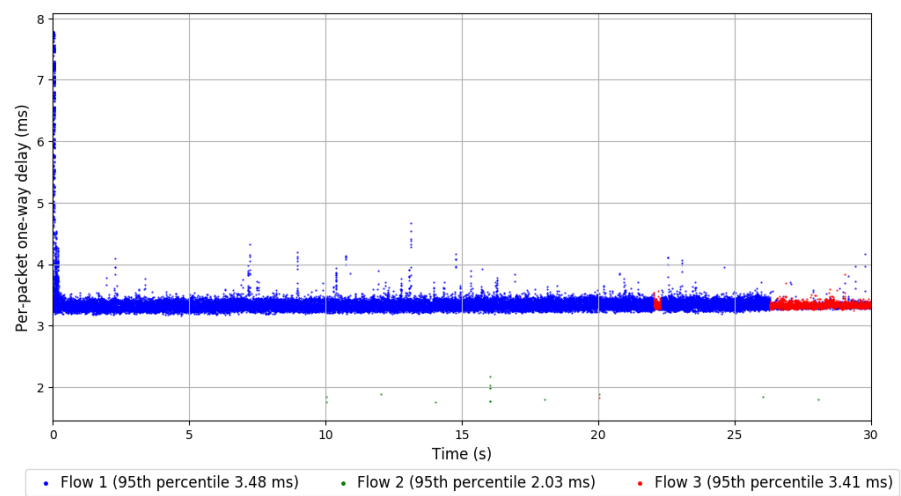
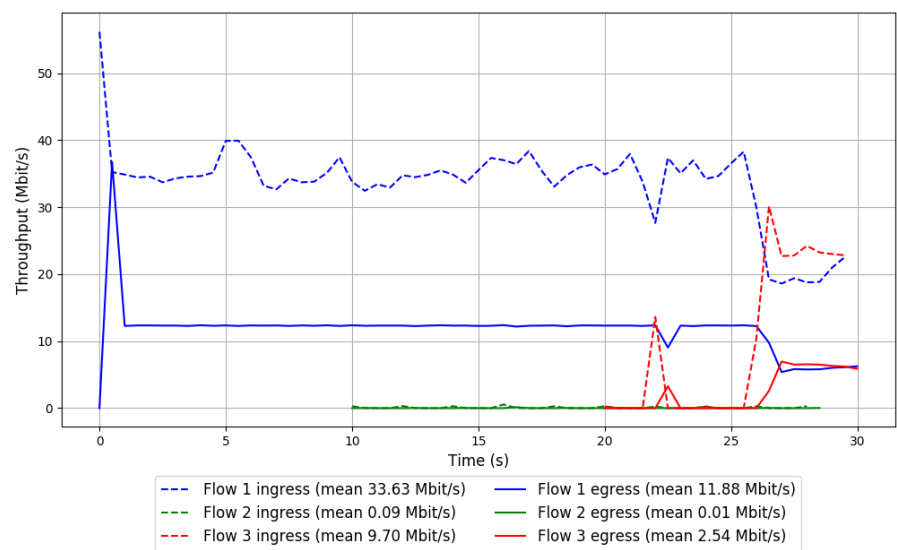
-- Flow 3:

Average throughput: 2.54 Mbit/s

95th percentile per-packet one-way delay: 3.406 ms

Loss rate: 73.76%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-04-24 01:13:36

End at: 2019-04-24 01:14:06

Local clock offset: -1.421 ms

Remote clock offset: 0.04 ms

Below is generated by plot.py at 2019-04-24 02:12:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 3.244 ms

Loss rate: 67.60%

-- Flow 1:

Average throughput: 10.30 Mbit/s

95th percentile per-packet one-way delay: 3.258 ms

Loss rate: 65.87%

-- Flow 2:

Average throughput: 4.08 Mbit/s

95th percentile per-packet one-way delay: 3.166 ms

Loss rate: 73.29%

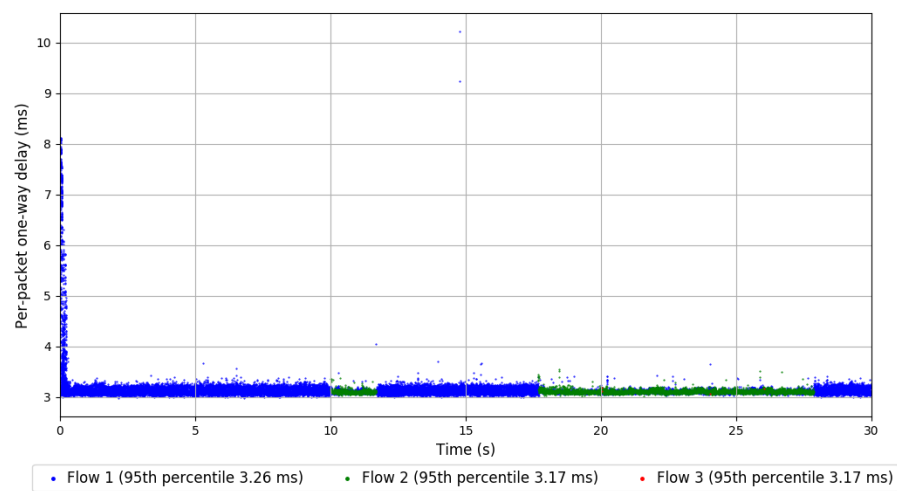
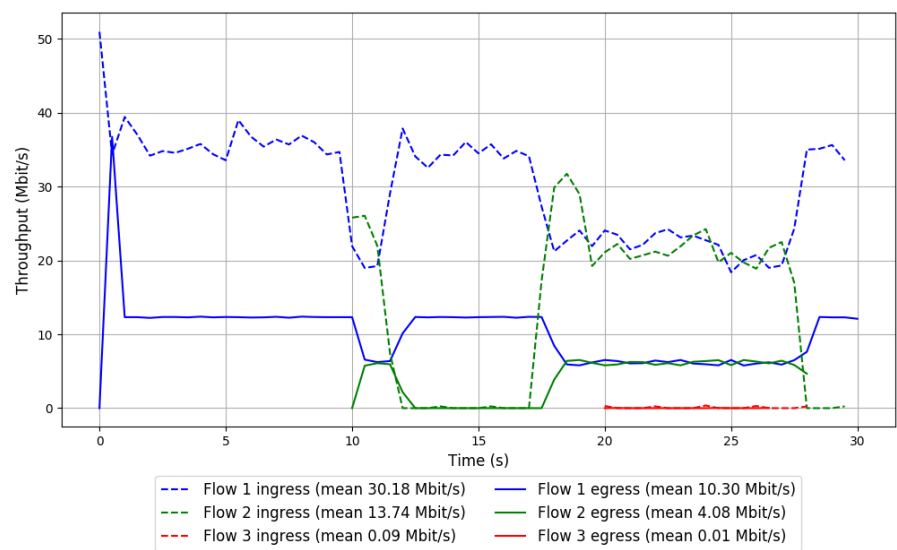
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 3.174 ms

Loss rate: 94.78%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-04-24 01:37:28

End at: 2019-04-24 01:37:58

Local clock offset: -2.588 ms

Remote clock offset: 0.076 ms

Below is generated by plot.py at 2019-04-24 02:12:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 3.254 ms

Loss rate: 65.58%

-- Flow 1:

Average throughput: 12.17 Mbit/s

95th percentile per-packet one-way delay: 3.256 ms

Loss rate: 64.59%

-- Flow 2:

Average throughput: 0.25 Mbit/s

95th percentile per-packet one-way delay: 3.179 ms

Loss rate: 77.95%

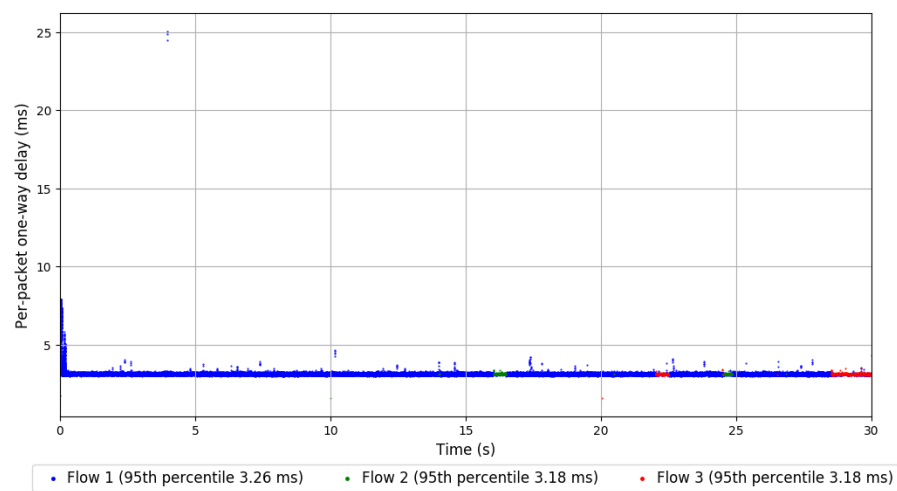
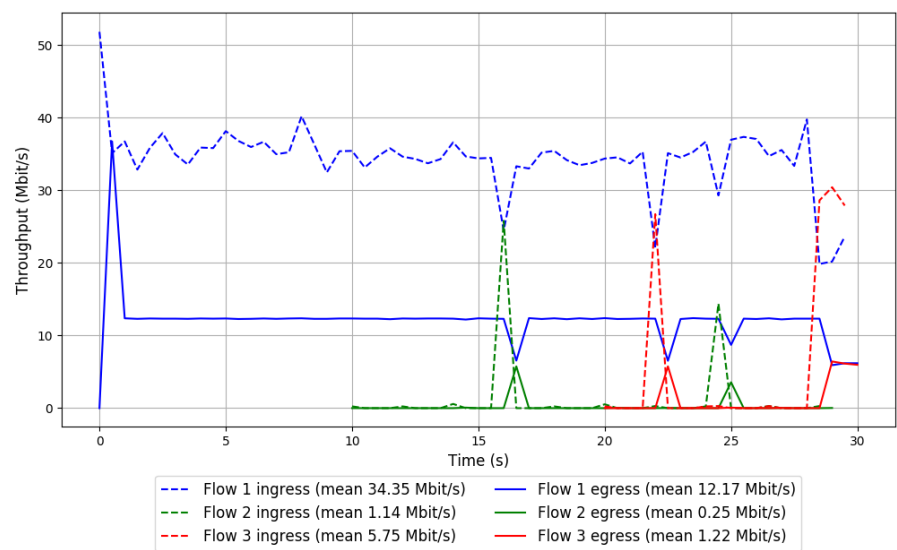
-- Flow 3:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 3.179 ms

Loss rate: 78.74%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-04-24 02:01:21

End at: 2019-04-24 02:01:51

Local clock offset: -1.83 ms

Remote clock offset: 0.079 ms

Below is generated by plot.py at 2019-04-24 02:12:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 1.875 ms

Loss rate: 67.85%

-- Flow 1:

Average throughput: 12.72 Mbit/s

95th percentile per-packet one-way delay: 1.874 ms

Loss rate: 67.80%

-- Flow 2:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 3.498 ms

Loss rate: 91.43%

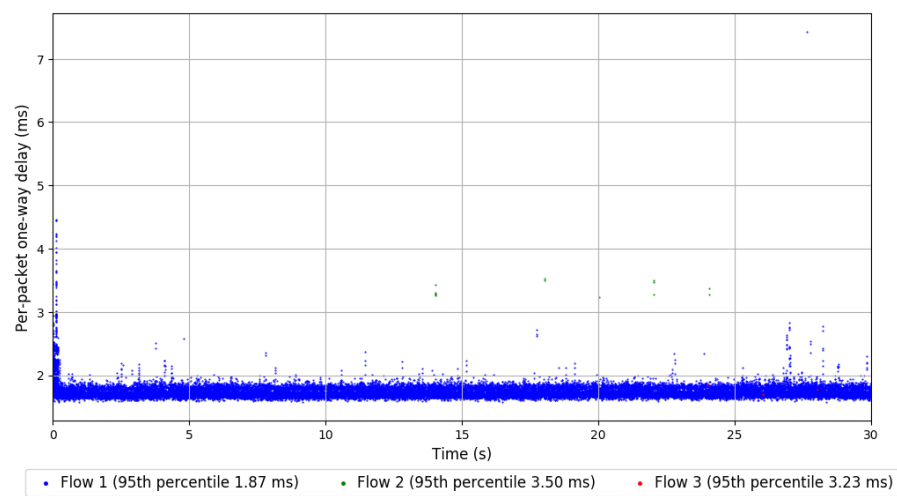
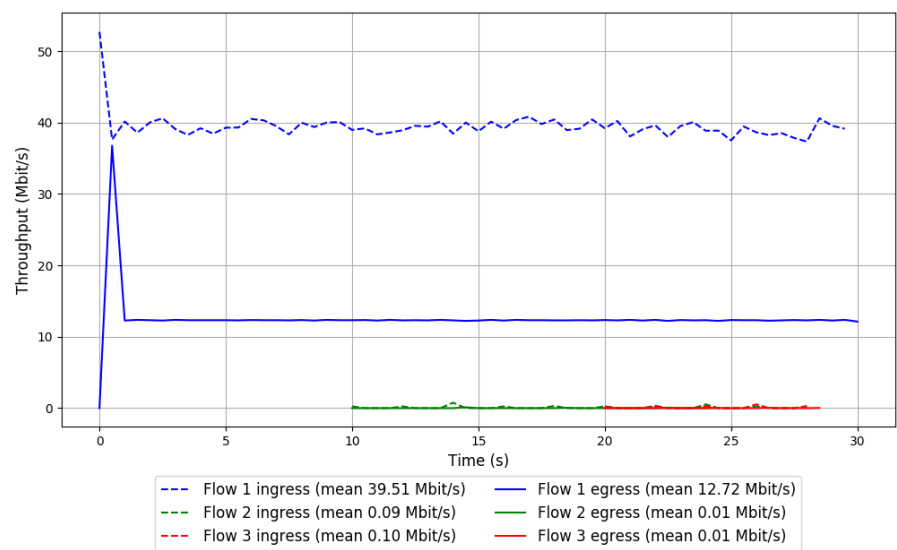
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 3.227 ms

Loss rate: 93.82%

Run 5: Report of Copa — Data Link

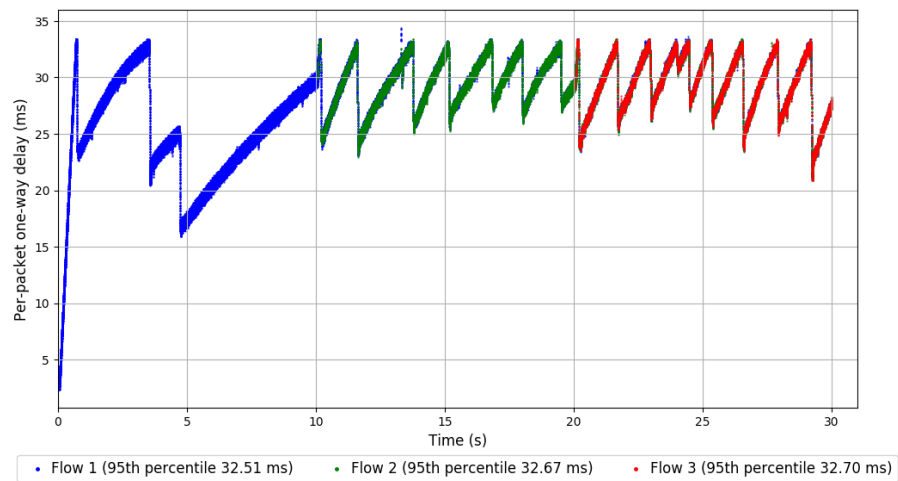
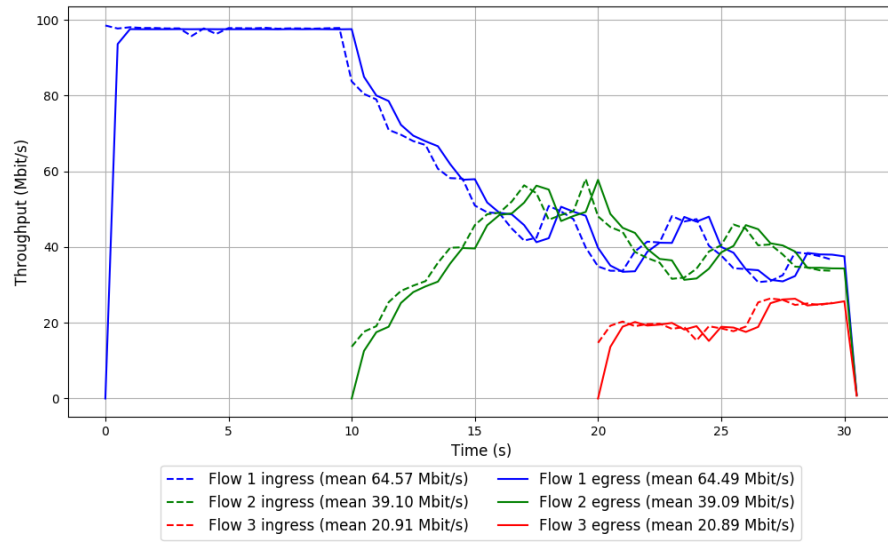


Run 1: Statistics of TCP Cubic

Start at: 2019-04-24 00:10:57
End at: 2019-04-24 00:11:27
Local clock offset: -0.902 ms
Remote clock offset: -0.044 ms

Below is generated by plot.py at 2019-04-24 02:12:58
Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 32.626 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 64.49 Mbit/s
95th percentile per-packet one-way delay: 32.514 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 39.09 Mbit/s
95th percentile per-packet one-way delay: 32.672 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 20.89 Mbit/s
95th percentile per-packet one-way delay: 32.703 ms
Loss rate: 0.10%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-04-24 00:34:51

End at: 2019-04-24 00:35:21

Local clock offset: -1.896 ms

Remote clock offset: 0.004 ms

Below is generated by plot.py at 2019-04-24 02:13:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.45 Mbit/s

95th percentile per-packet one-way delay: 32.626 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 67.00 Mbit/s

95th percentile per-packet one-way delay: 32.604 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 33.65 Mbit/s

95th percentile per-packet one-way delay: 32.654 ms

Loss rate: 0.03%

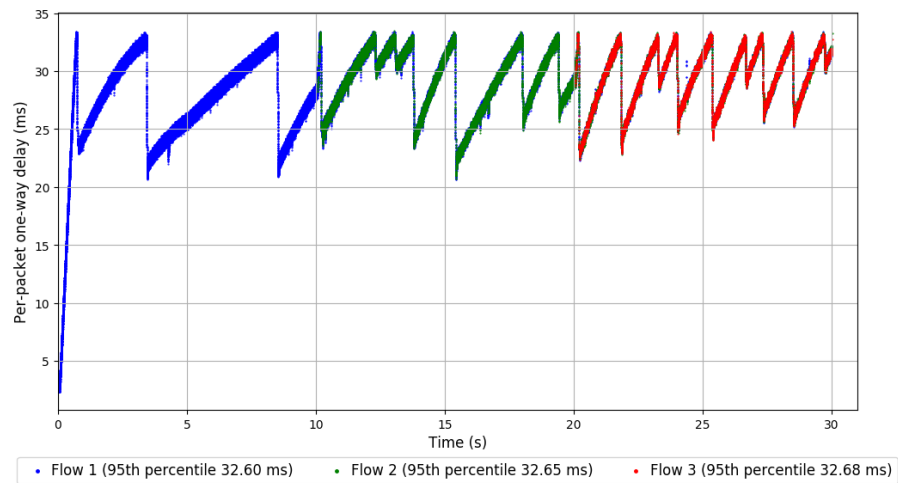
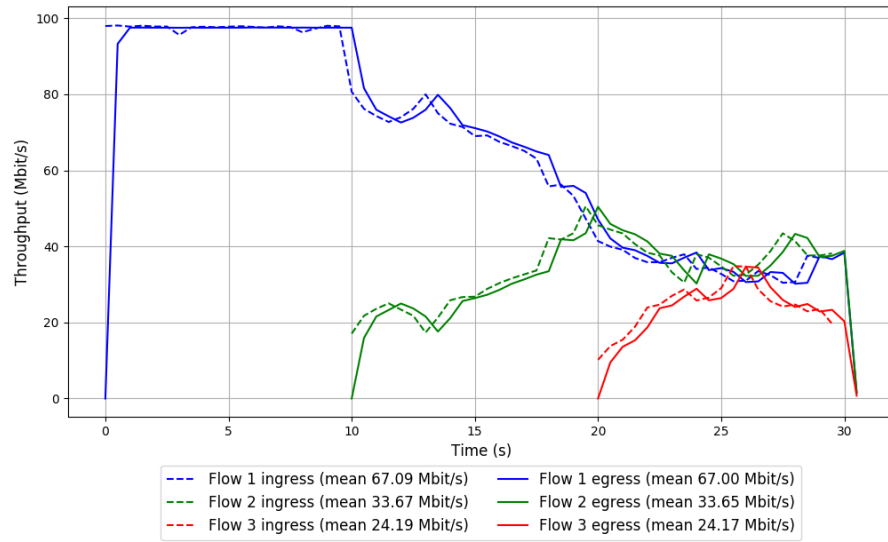
-- Flow 3:

Average throughput: 24.17 Mbit/s

95th percentile per-packet one-way delay: 32.676 ms

Loss rate: 0.05%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-04-24 00:58:44

End at: 2019-04-24 00:59:14

Local clock offset: -1.746 ms

Remote clock offset: 0.11 ms

Below is generated by plot.py at 2019-04-24 02:13:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 33.487 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 61.57 Mbit/s

95th percentile per-packet one-way delay: 33.459 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 43.03 Mbit/s

95th percentile per-packet one-way delay: 33.504 ms

Loss rate: 0.03%

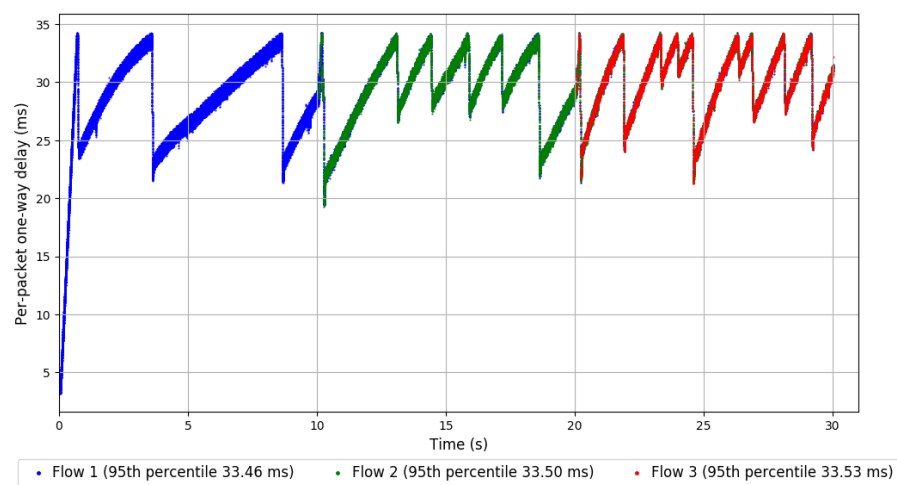
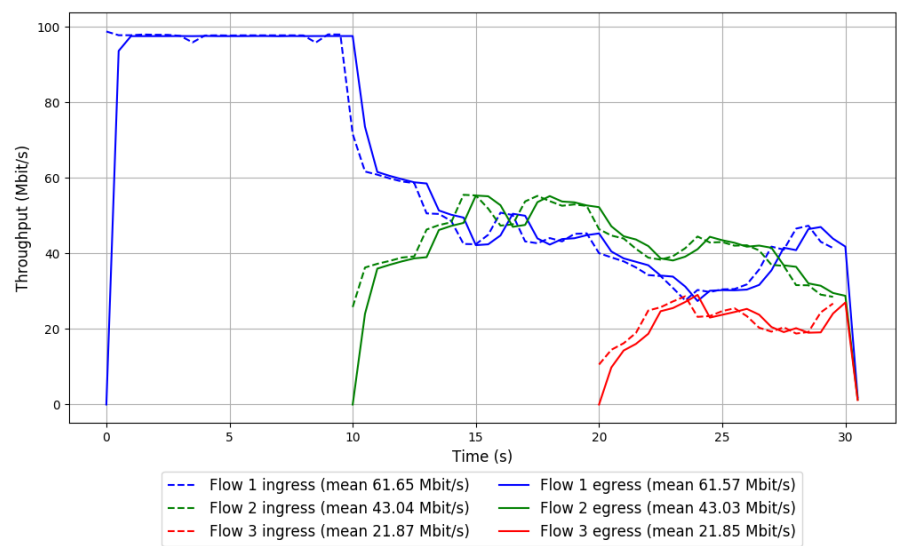
-- Flow 3:

Average throughput: 21.85 Mbit/s

95th percentile per-packet one-way delay: 33.530 ms

Loss rate: 0.07%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-04-24 01:22:38

End at: 2019-04-24 01:23:08

Local clock offset: -2.104 ms

Remote clock offset: 0.064 ms

Below is generated by plot.py at 2019-04-24 02:13:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.46 Mbit/s

95th percentile per-packet one-way delay: 31.836 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 62.92 Mbit/s

95th percentile per-packet one-way delay: 31.768 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 37.76 Mbit/s

95th percentile per-packet one-way delay: 31.866 ms

Loss rate: 0.04%

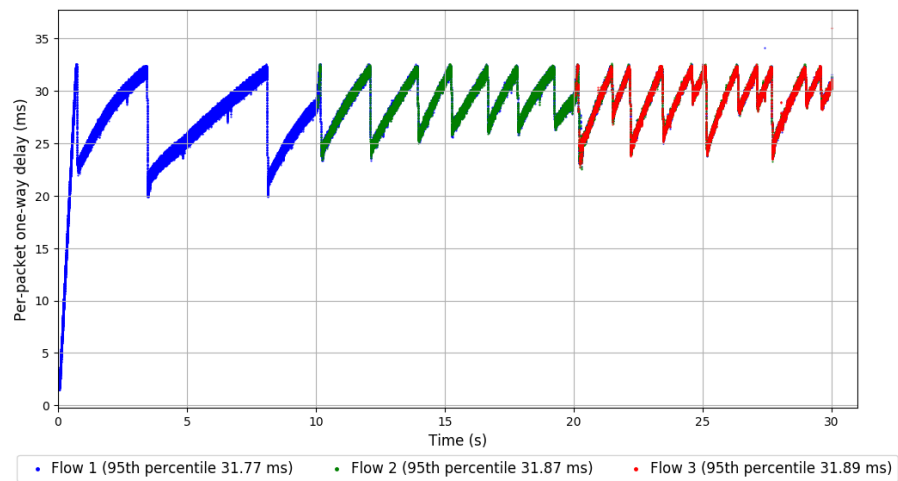
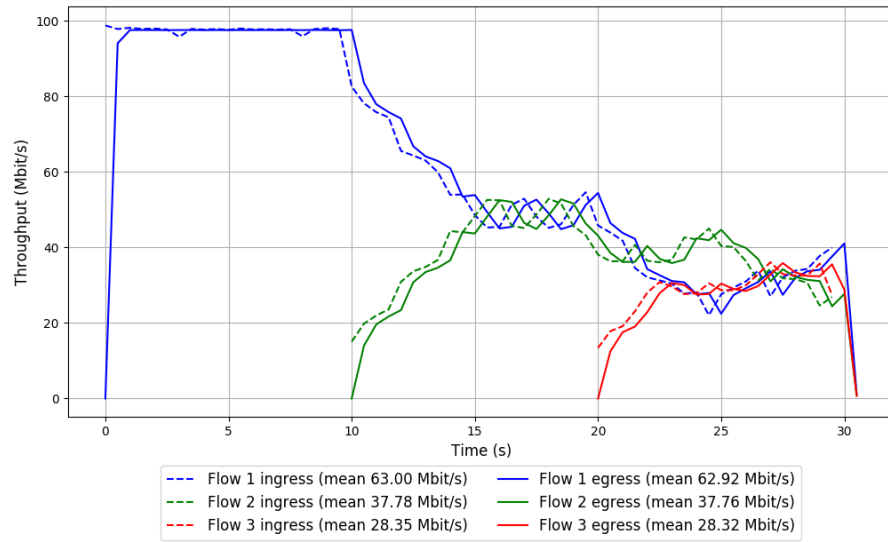
-- Flow 3:

Average throughput: 28.32 Mbit/s

95th percentile per-packet one-way delay: 31.893 ms

Loss rate: 0.04%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-04-24 01:46:29

End at: 2019-04-24 01:46:59

Local clock offset: -1.743 ms

Remote clock offset: 0.12 ms

Below is generated by plot.py at 2019-04-24 02:13:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.46 Mbit/s

95th percentile per-packet one-way delay: 32.433 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 64.16 Mbit/s

95th percentile per-packet one-way delay: 32.494 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 36.91 Mbit/s

95th percentile per-packet one-way delay: 31.044 ms

Loss rate: 0.04%

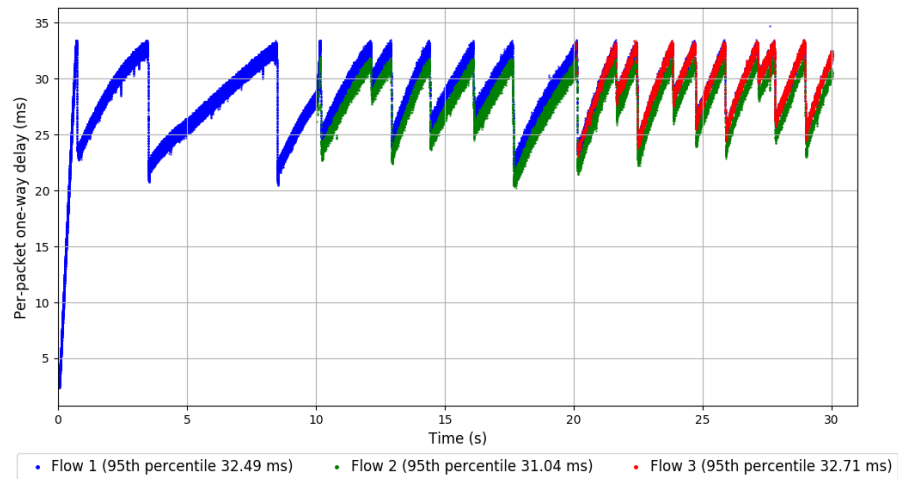
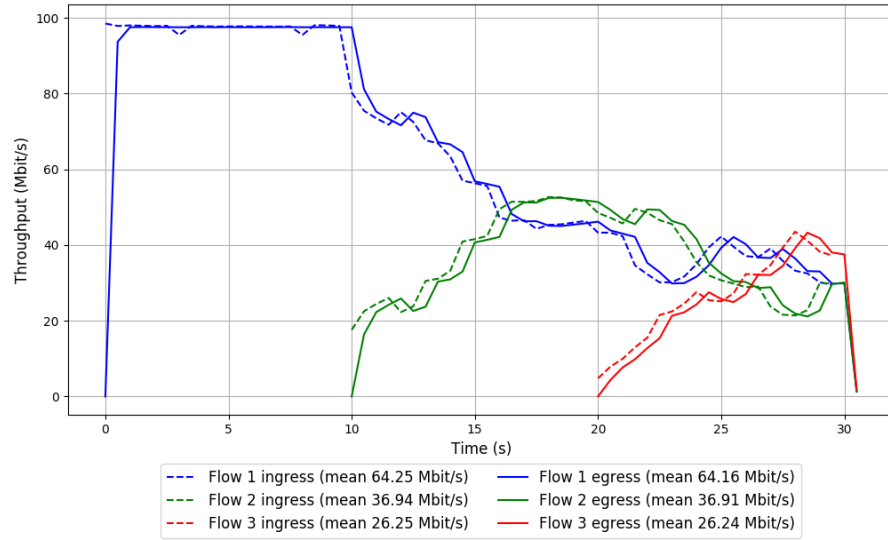
-- Flow 3:

Average throughput: 26.24 Mbit/s

95th percentile per-packet one-way delay: 32.712 ms

Loss rate: 0.04%

Run 5: Report of TCP Cubic — Data Link

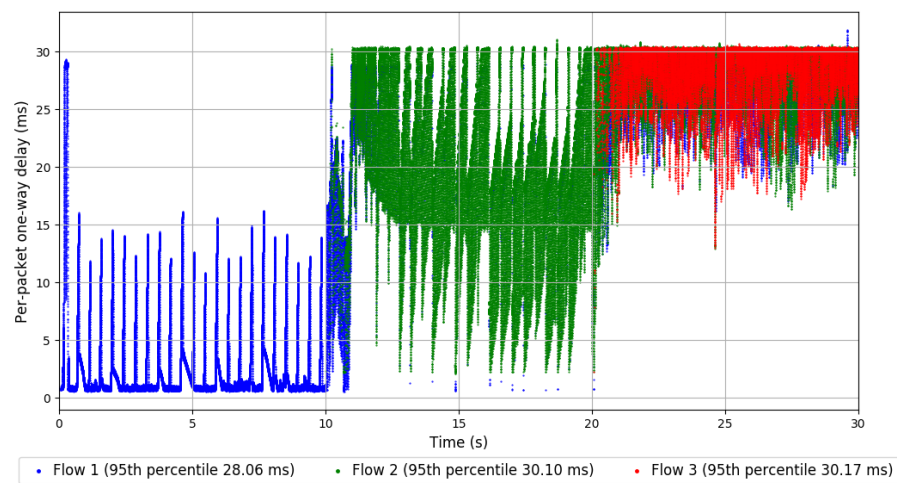
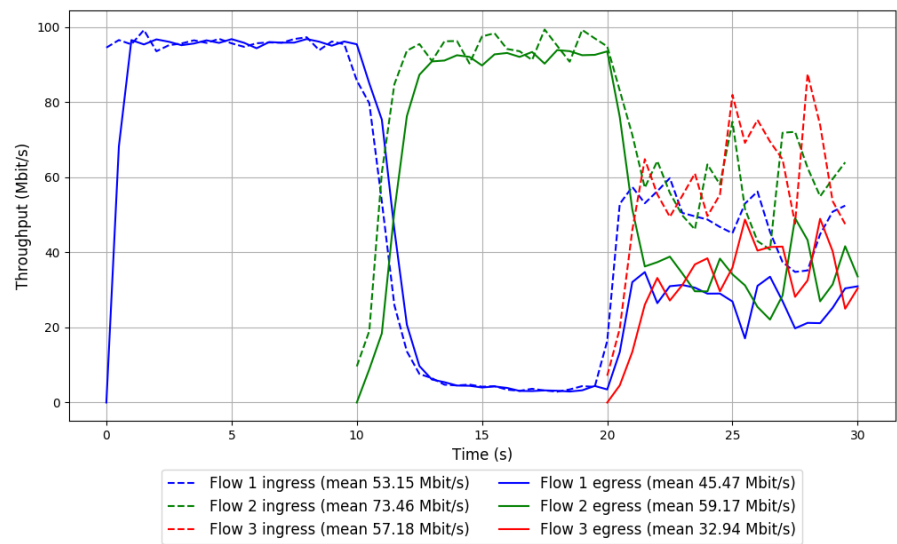


Run 1: Statistics of FillP

Start at: 2019-04-24 00:26:56
End at: 2019-04-24 00:27:26
Local clock offset: -1.665 ms
Remote clock offset: -0.133 ms

Below is generated by plot.py at 2019-04-24 02:14:10
Datalink statistics
-- Total of 3 flows:
Average throughput: 95.78 Mbit/s
95th percentile per-packet one-way delay: 30.006 ms
Loss rate: 20.77%
-- Flow 1:
Average throughput: 45.47 Mbit/s
95th percentile per-packet one-way delay: 28.056 ms
Loss rate: 14.39%
-- Flow 2:
Average throughput: 59.17 Mbit/s
95th percentile per-packet one-way delay: 30.104 ms
Loss rate: 19.36%
-- Flow 3:
Average throughput: 32.94 Mbit/s
95th percentile per-packet one-way delay: 30.172 ms
Loss rate: 42.35%

Run 1: Report of FillP — Data Link

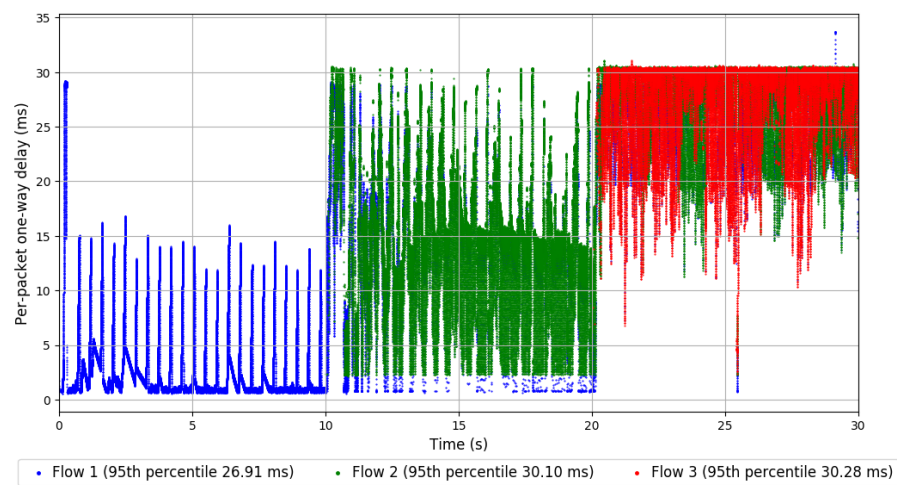
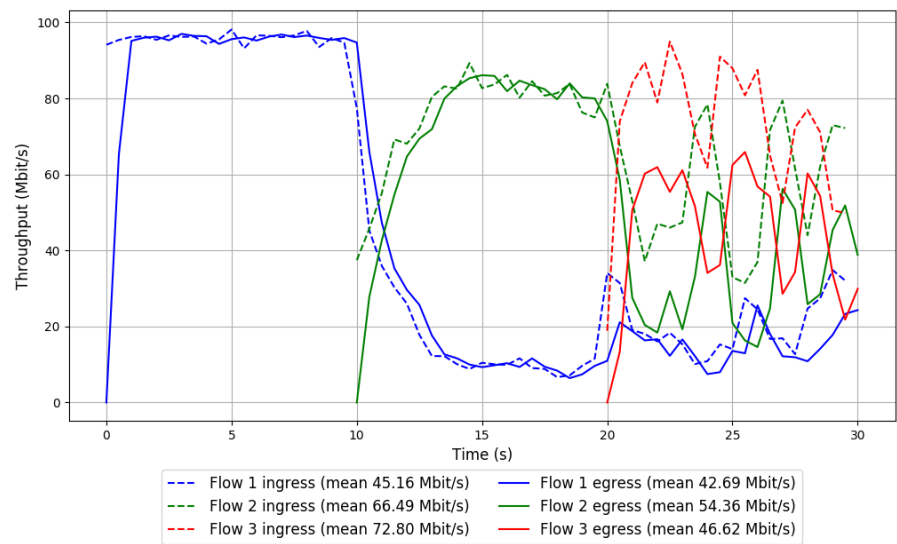


Run 2: Statistics of FillP

Start at: 2019-04-24 00:50:49
End at: 2019-04-24 00:51:19
Local clock offset: -1.485 ms
Remote clock offset: -0.103 ms

Below is generated by plot.py at 2019-04-24 02:14:10
Datalink statistics
-- Total of 3 flows:
Average throughput: 94.35 Mbit/s
95th percentile per-packet one-way delay: 30.059 ms
Loss rate: 16.87%
-- Flow 1:
Average throughput: 42.69 Mbit/s
95th percentile per-packet one-way delay: 26.912 ms
Loss rate: 5.44%
-- Flow 2:
Average throughput: 54.36 Mbit/s
95th percentile per-packet one-way delay: 30.103 ms
Loss rate: 18.19%
-- Flow 3:
Average throughput: 46.62 Mbit/s
95th percentile per-packet one-way delay: 30.276 ms
Loss rate: 35.83%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-04-24 01:14:43

End at: 2019-04-24 01:15:13

Local clock offset: -0.68 ms

Remote clock offset: 0.129 ms

Below is generated by plot.py at 2019-04-24 02:14:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.68 Mbit/s

95th percentile per-packet one-way delay: 30.048 ms

Loss rate: 19.91%

-- Flow 1:

Average throughput: 53.89 Mbit/s

95th percentile per-packet one-way delay: 29.567 ms

Loss rate: 11.40%

-- Flow 2:

Average throughput: 36.75 Mbit/s

95th percentile per-packet one-way delay: 30.108 ms

Loss rate: 21.12%

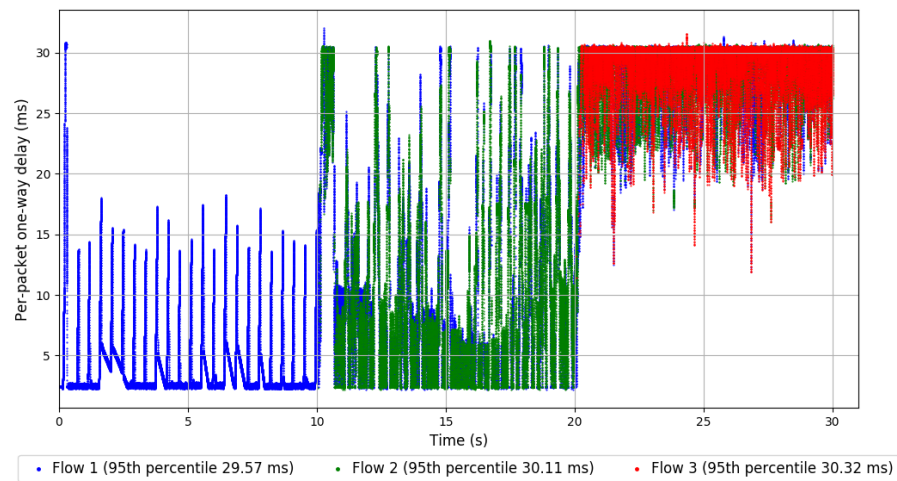
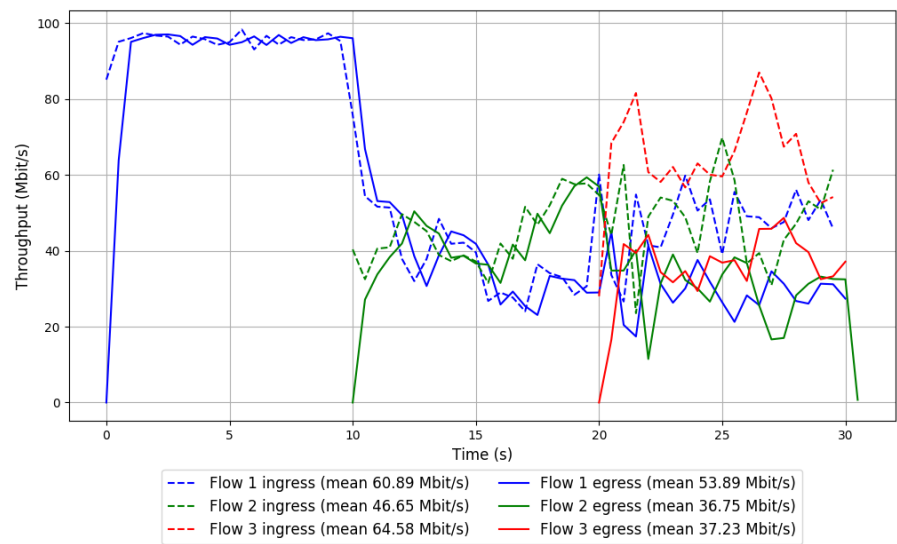
-- Flow 3:

Average throughput: 37.23 Mbit/s

95th percentile per-packet one-way delay: 30.316 ms

Loss rate: 42.28%

Run 3: Report of FillP — Data Link

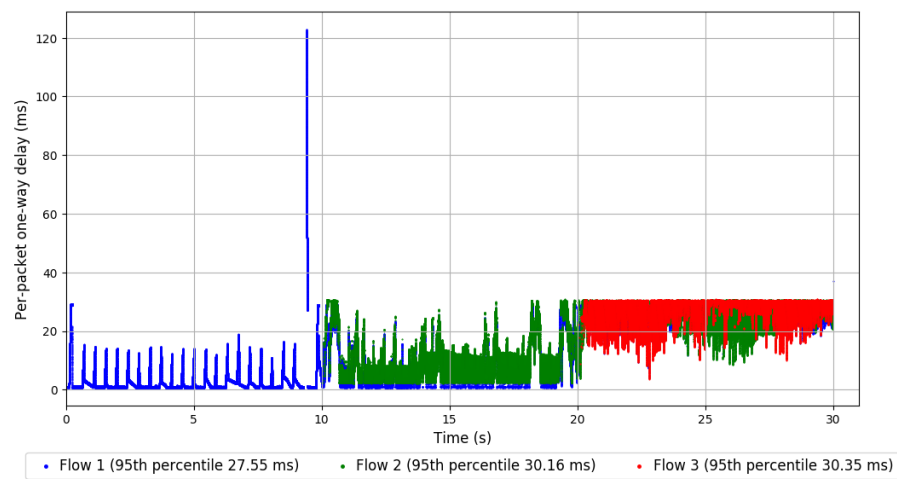
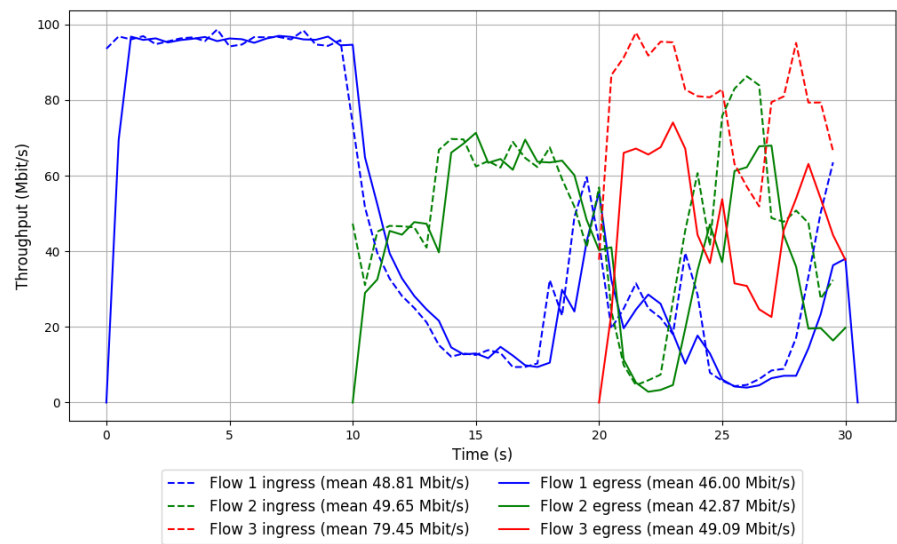


Run 4: Statistics of FillP

Start at: 2019-04-24 01:38:34
End at: 2019-04-24 01:39:04
Local clock offset: -1.835 ms
Remote clock offset: 0.149 ms

Below is generated by plot.py at 2019-04-24 02:14:20
Datalink statistics
-- Total of 3 flows:
Average throughput: 90.77 Mbit/s
95th percentile per-packet one-way delay: 30.182 ms
Loss rate: 15.97%
-- Flow 1:
Average throughput: 46.00 Mbit/s
95th percentile per-packet one-way delay: 27.555 ms
Loss rate: 5.65%
-- Flow 2:
Average throughput: 42.87 Mbit/s
95th percentile per-packet one-way delay: 30.162 ms
Loss rate: 13.55%
-- Flow 3:
Average throughput: 49.09 Mbit/s
95th percentile per-packet one-way delay: 30.347 ms
Loss rate: 38.18%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-04-24 02:02:27

End at: 2019-04-24 02:02:57

Local clock offset: -1.746 ms

Remote clock offset: 0.051 ms

Below is generated by plot.py at 2019-04-24 02:14:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.39 Mbit/s

95th percentile per-packet one-way delay: 30.614 ms

Loss rate: 19.37%

-- Flow 1:

Average throughput: 52.41 Mbit/s

95th percentile per-packet one-way delay: 30.387 ms

Loss rate: 9.18%

-- Flow 2:

Average throughput: 41.76 Mbit/s

95th percentile per-packet one-way delay: 30.919 ms

Loss rate: 20.68%

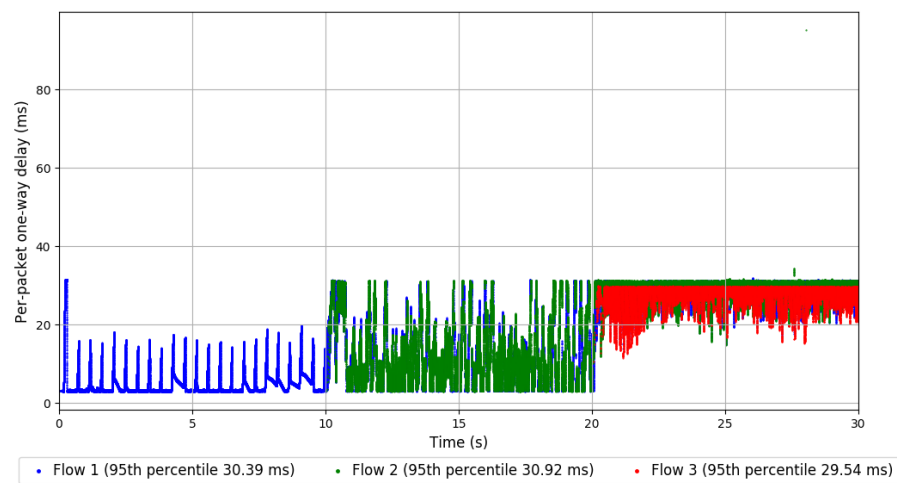
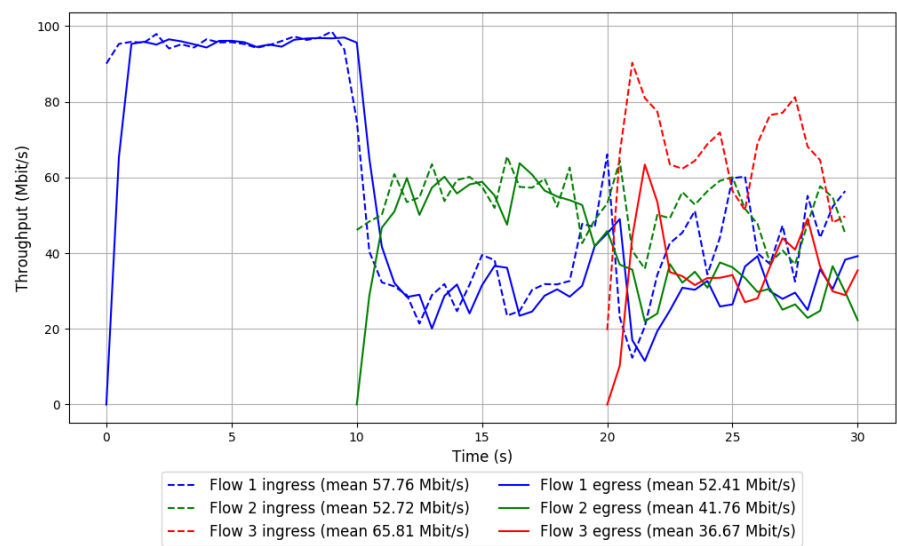
-- Flow 3:

Average throughput: 36.67 Mbit/s

95th percentile per-packet one-way delay: 29.537 ms

Loss rate: 44.22%

Run 5: Report of FillP — Data Link

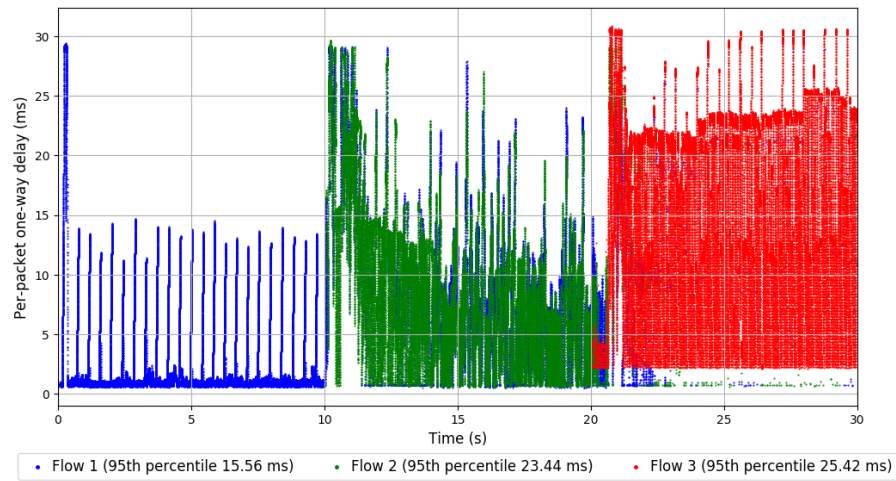
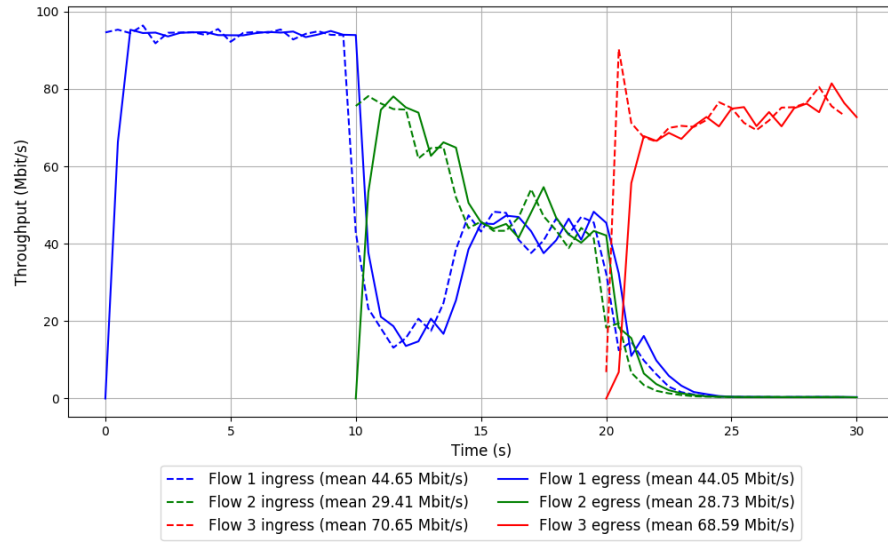


Run 1: Statistics of FillP-Sheep

Start at: 2019-04-24 00:18:59
End at: 2019-04-24 00:19:29
Local clock offset: -1.252 ms
Remote clock offset: -0.086 ms

Below is generated by plot.py at 2019-04-24 02:14:35
Datalink statistics
-- Total of 3 flows:
Average throughput: 85.99 Mbit/s
95th percentile per-packet one-way delay: 23.317 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 44.05 Mbit/s
95th percentile per-packet one-way delay: 15.562 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 28.73 Mbit/s
95th percentile per-packet one-way delay: 23.436 ms
Loss rate: 2.21%
-- Flow 3:
Average throughput: 68.59 Mbit/s
95th percentile per-packet one-way delay: 25.419 ms
Loss rate: 2.72%

Run 1: Report of FillP-Sheep — Data Link

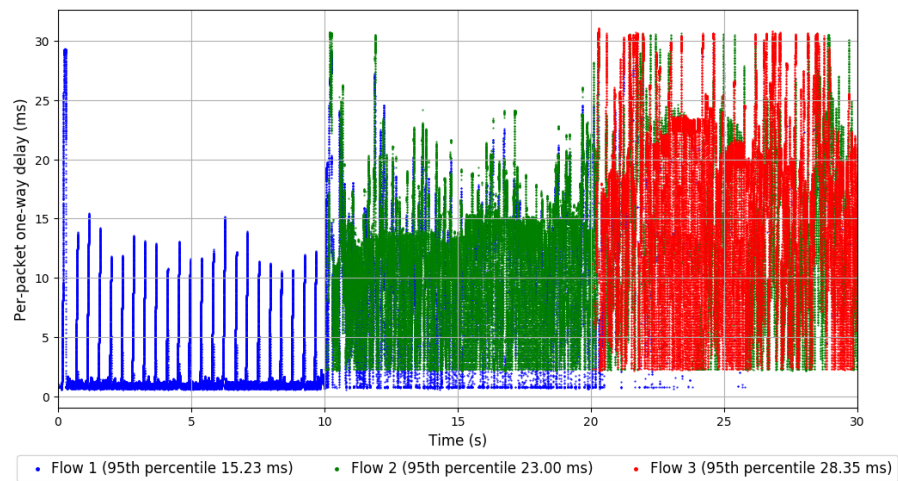
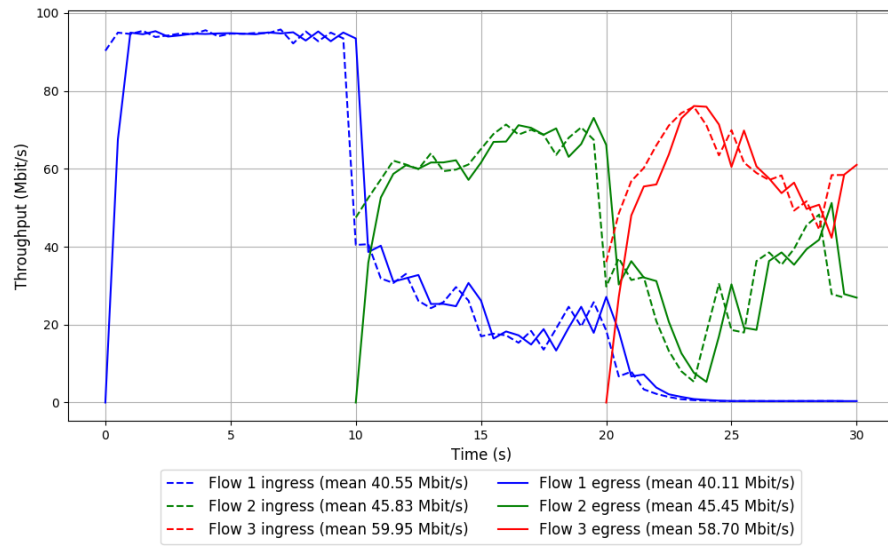


Run 2: Statistics of FillP-Sheep

Start at: 2019-04-24 00:42:51
End at: 2019-04-24 00:43:21
Local clock offset: -2.034 ms
Remote clock offset: -0.007 ms

Below is generated by plot.py at 2019-04-24 02:15:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 89.79 Mbit/s
95th percentile per-packet one-way delay: 23.363 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 40.11 Mbit/s
95th percentile per-packet one-way delay: 15.227 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 45.45 Mbit/s
95th percentile per-packet one-way delay: 22.996 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 58.70 Mbit/s
95th percentile per-packet one-way delay: 28.347 ms
Loss rate: 2.02%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-04-24 01:06:46

End at: 2019-04-24 01:07:16

Local clock offset: -0.769 ms

Remote clock offset: 0.081 ms

Below is generated by plot.py at 2019-04-24 02:15:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.76 Mbit/s

95th percentile per-packet one-way delay: 22.981 ms

Loss rate: 0.83%

-- Flow 1:

Average throughput: 54.81 Mbit/s

95th percentile per-packet one-way delay: 21.906 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 31.65 Mbit/s

95th percentile per-packet one-way delay: 24.396 ms

Loss rate: 1.08%

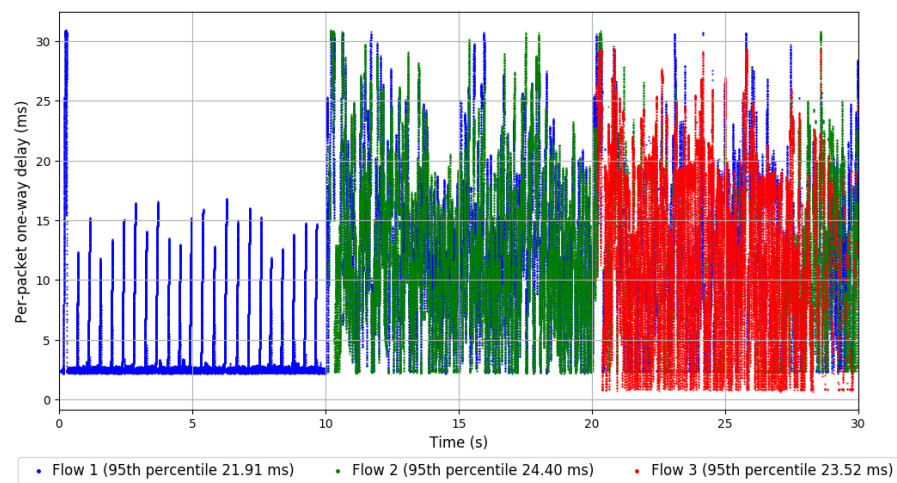
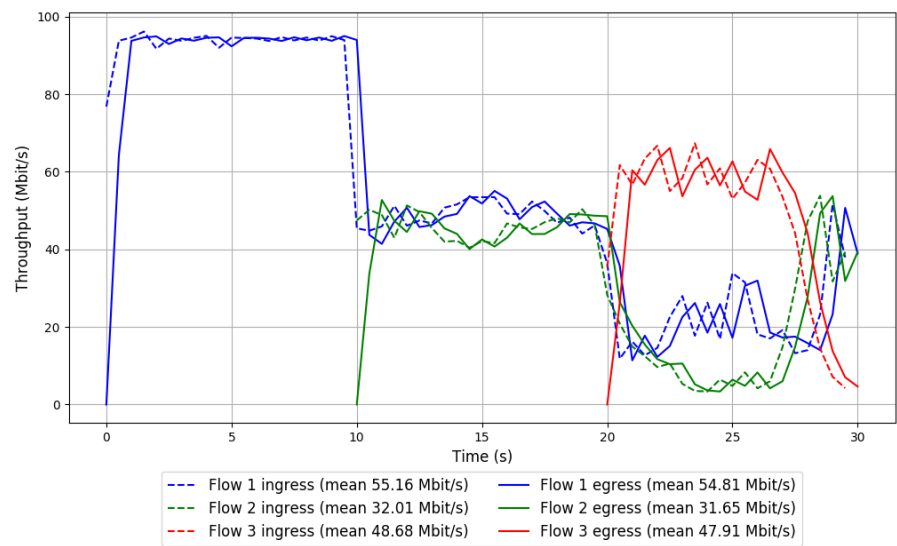
-- Flow 3:

Average throughput: 47.91 Mbit/s

95th percentile per-packet one-way delay: 23.523 ms

Loss rate: 1.43%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-04-24 01:30:37

End at: 2019-04-24 01:31:07

Local clock offset: -2.423 ms

Remote clock offset: 0.088 ms

Below is generated by plot.py at 2019-04-24 02:15:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.31 Mbit/s

95th percentile per-packet one-way delay: 15.679 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 49.44 Mbit/s

95th percentile per-packet one-way delay: 14.035 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 33.22 Mbit/s

95th percentile per-packet one-way delay: 17.567 ms

Loss rate: 1.82%

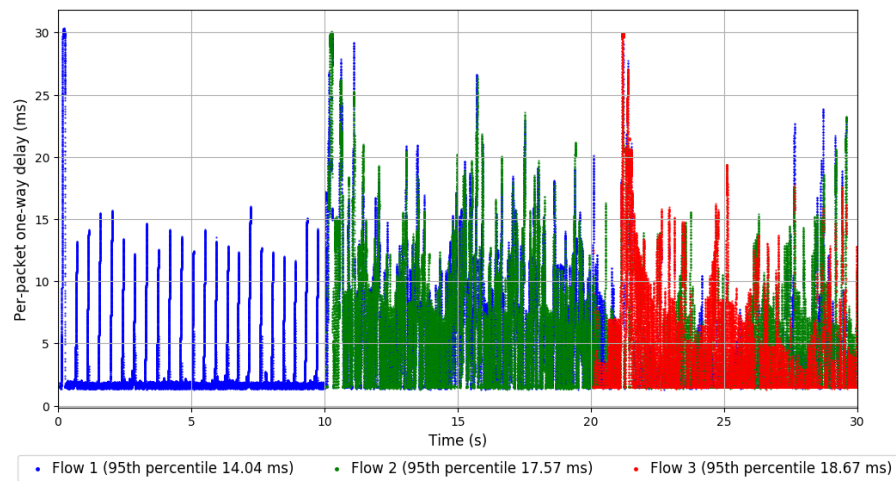
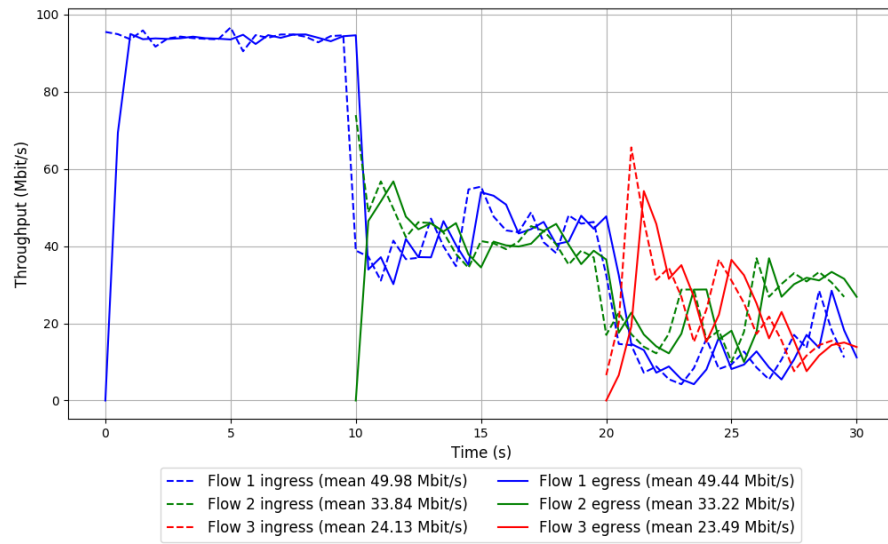
-- Flow 3:

Average throughput: 23.49 Mbit/s

95th percentile per-packet one-way delay: 18.669 ms

Loss rate: 2.57%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-04-24 01:54:29

End at: 2019-04-24 01:54:59

Local clock offset: -2.012 ms

Remote clock offset: 0.144 ms

Below is generated by plot.py at 2019-04-24 02:15:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.02 Mbit/s

95th percentile per-packet one-way delay: 19.045 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 66.95 Mbit/s

95th percentile per-packet one-way delay: 18.569 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 12.85 Mbit/s

95th percentile per-packet one-way delay: 20.069 ms

Loss rate: 0.89%

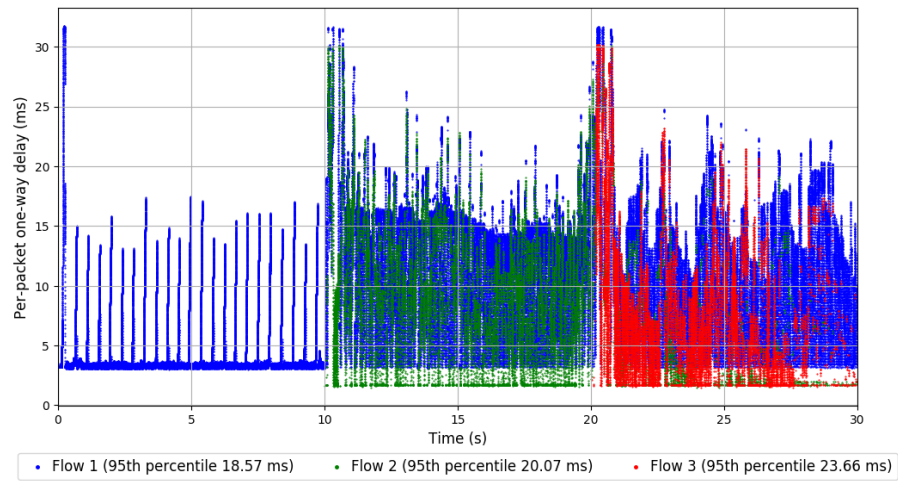
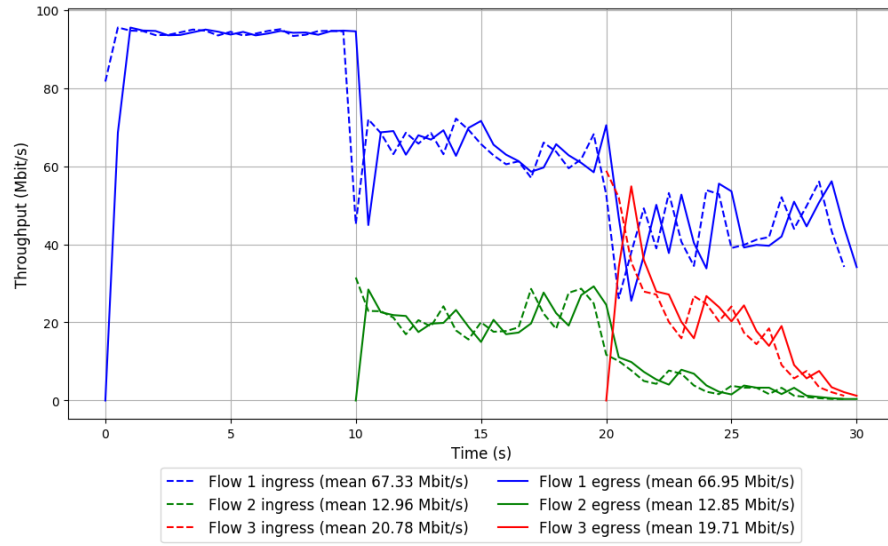
-- Flow 3:

Average throughput: 19.71 Mbit/s

95th percentile per-packet one-way delay: 23.659 ms

Loss rate: 5.17%

Run 5: Report of FillP-Sheep — Data Link

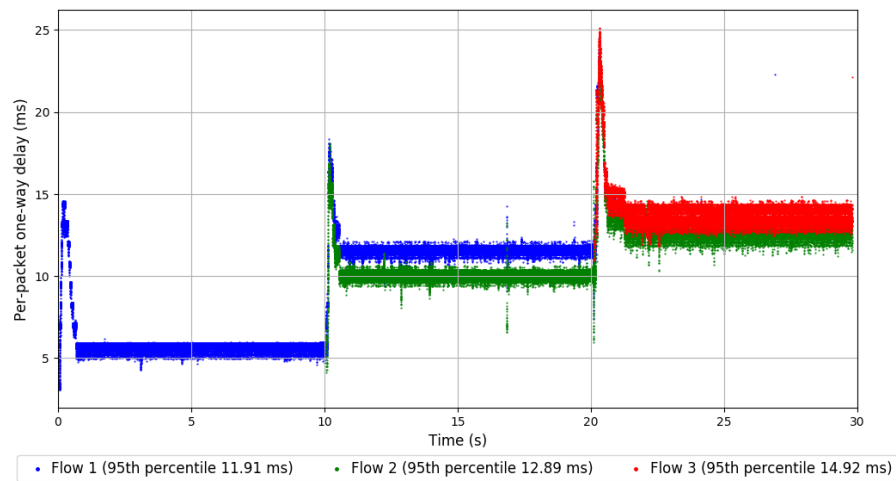
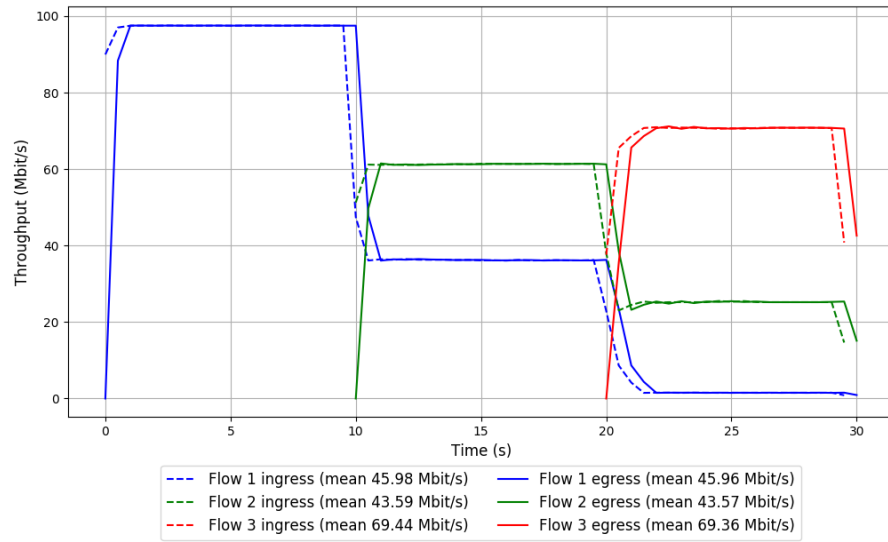


Run 1: Statistics of Indigo

Start at: 2019-04-24 00:14:21
End at: 2019-04-24 00:14:51
Local clock offset: -1.647 ms
Remote clock offset: -0.024 ms

Below is generated by plot.py at 2019-04-24 02:15:20
Datalink statistics
-- Total of 3 flows:
Average throughput: 97.36 Mbit/s
95th percentile per-packet one-way delay: 14.228 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.96 Mbit/s
95th percentile per-packet one-way delay: 11.910 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.57 Mbit/s
95th percentile per-packet one-way delay: 12.894 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 69.36 Mbit/s
95th percentile per-packet one-way delay: 14.916 ms
Loss rate: 0.01%

Run 1: Report of Indigo — Data Link

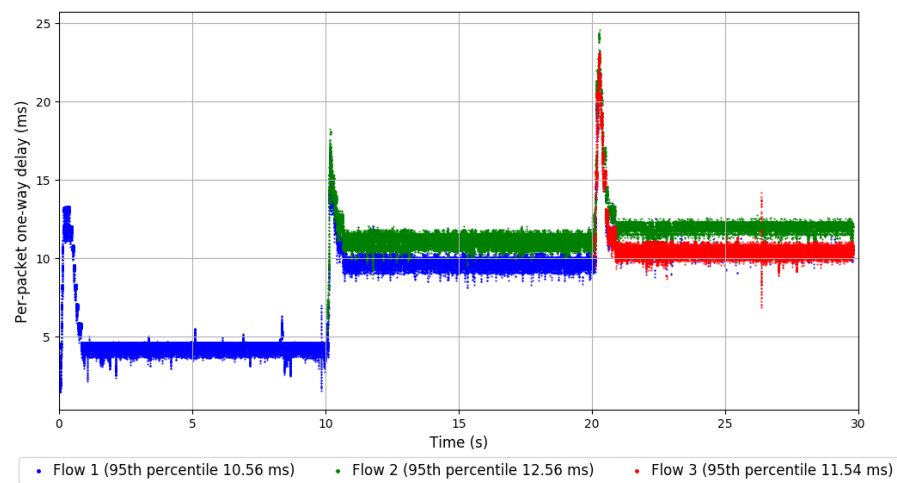
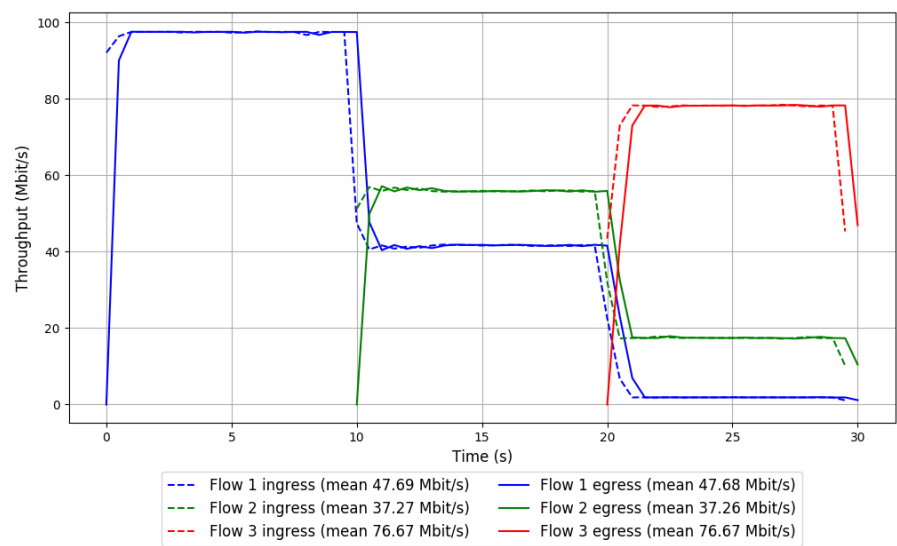


Run 2: Statistics of Indigo

Start at: 2019-04-24 00:38:15
End at: 2019-04-24 00:38:45
Local clock offset: -2.736 ms
Remote clock offset: -0.021 ms

Below is generated by plot.py at 2019-04-24 02:15:32
Datalink statistics
-- Total of 3 flows:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 12.058 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.68 Mbit/s
95th percentile per-packet one-way delay: 10.560 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.26 Mbit/s
95th percentile per-packet one-way delay: 12.564 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 76.67 Mbit/s
95th percentile per-packet one-way delay: 11.538 ms
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-04-24 01:02:08

End at: 2019-04-24 01:02:38

Local clock offset: -0.94 ms

Remote clock offset: 0.07 ms

Below is generated by plot.py at 2019-04-24 02:15:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 14.728 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 45.18 Mbit/s

95th percentile per-packet one-way delay: 11.434 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 47.15 Mbit/s

95th percentile per-packet one-way delay: 13.598 ms

Loss rate: 0.00%

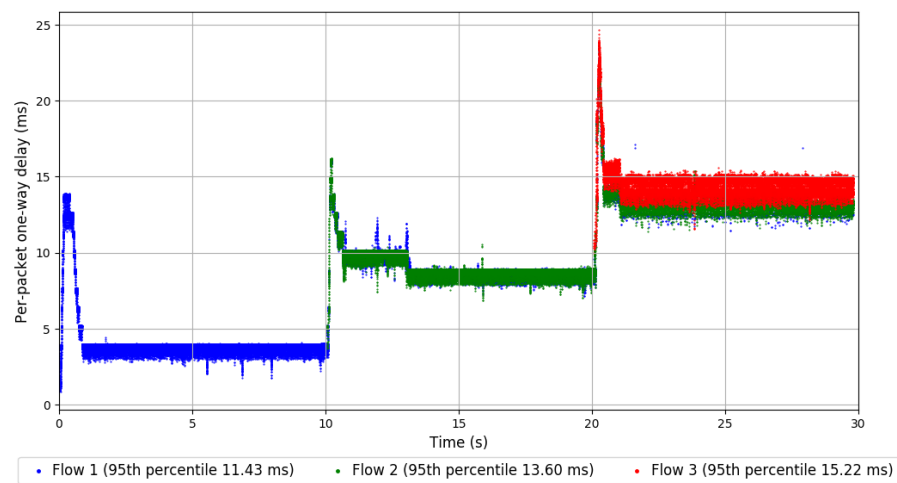
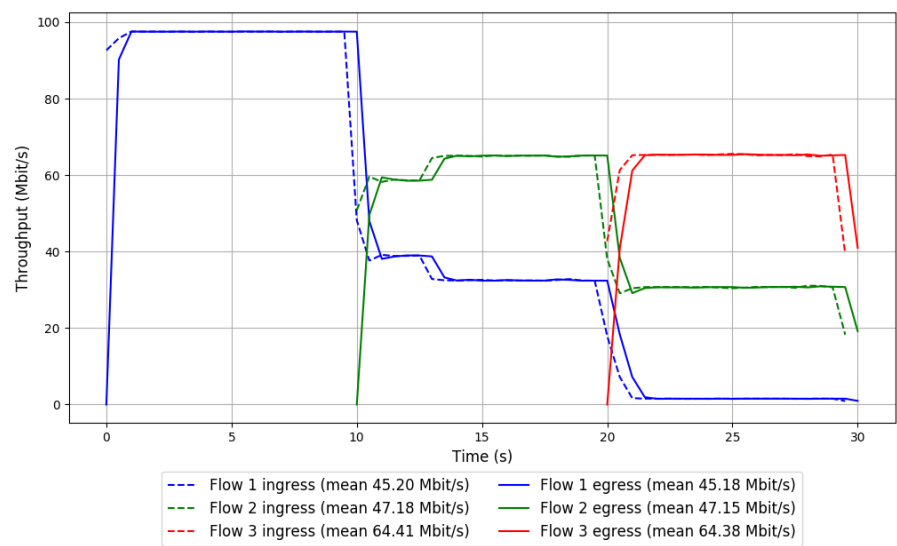
-- Flow 3:

Average throughput: 64.38 Mbit/s

95th percentile per-packet one-way delay: 15.218 ms

Loss rate: 0.02%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-04-24 01:26:01

End at: 2019-04-24 01:26:31

Local clock offset: -2.265 ms

Remote clock offset: 0.148 ms

Below is generated by plot.py at 2019-04-24 02:15:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.38 Mbit/s

95th percentile per-packet one-way delay: 14.593 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 45.86 Mbit/s

95th percentile per-packet one-way delay: 11.880 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 43.23 Mbit/s

95th percentile per-packet one-way delay: 13.833 ms

Loss rate: 0.00%

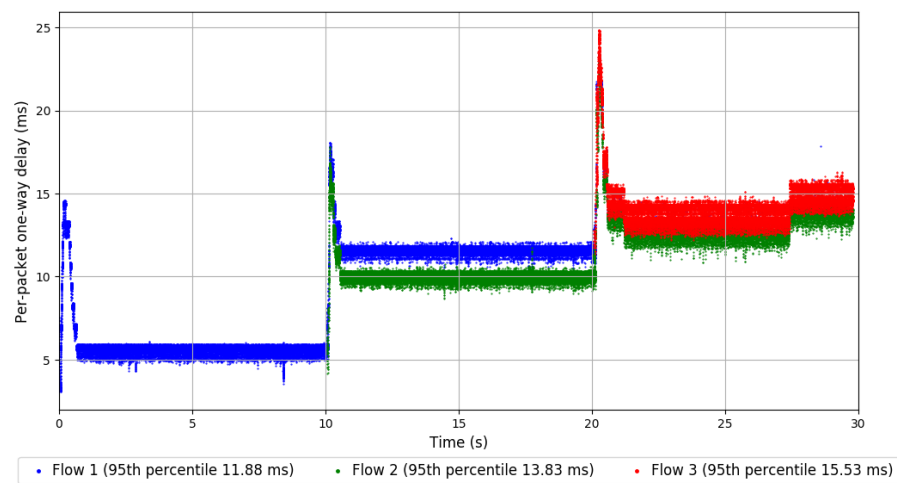
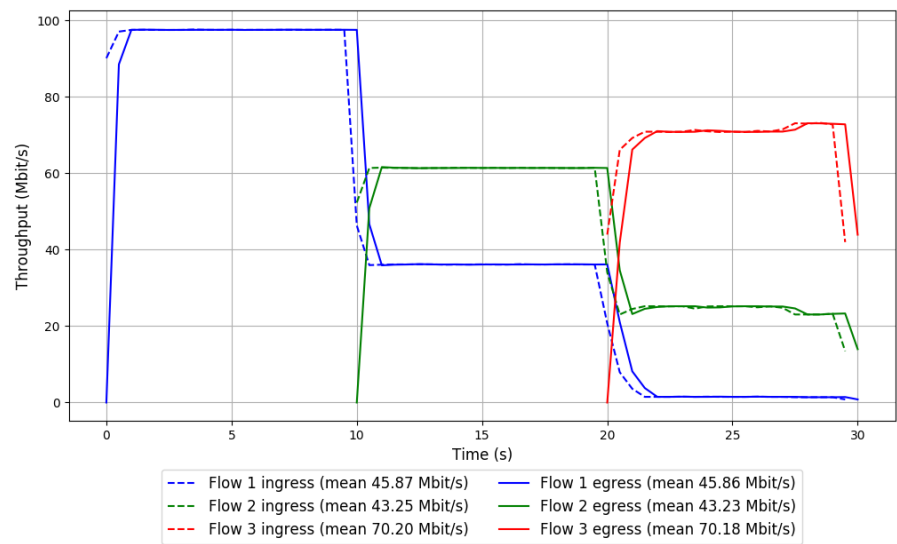
-- Flow 3:

Average throughput: 70.18 Mbit/s

95th percentile per-packet one-way delay: 15.529 ms

Loss rate: 0.02%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-04-24 01:49:53

End at: 2019-04-24 01:50:23

Local clock offset: -2.242 ms

Remote clock offset: 0.133 ms

Below is generated by plot.py at 2019-04-24 02:16:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.38 Mbit/s

95th percentile per-packet one-way delay: 13.318 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 46.85 Mbit/s

95th percentile per-packet one-way delay: 11.898 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 45.67 Mbit/s

95th percentile per-packet one-way delay: 13.878 ms

Loss rate: 0.00%

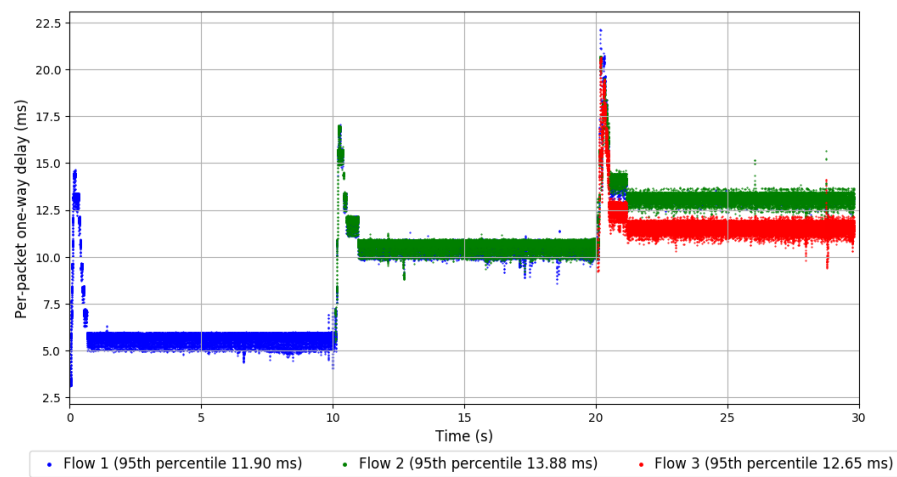
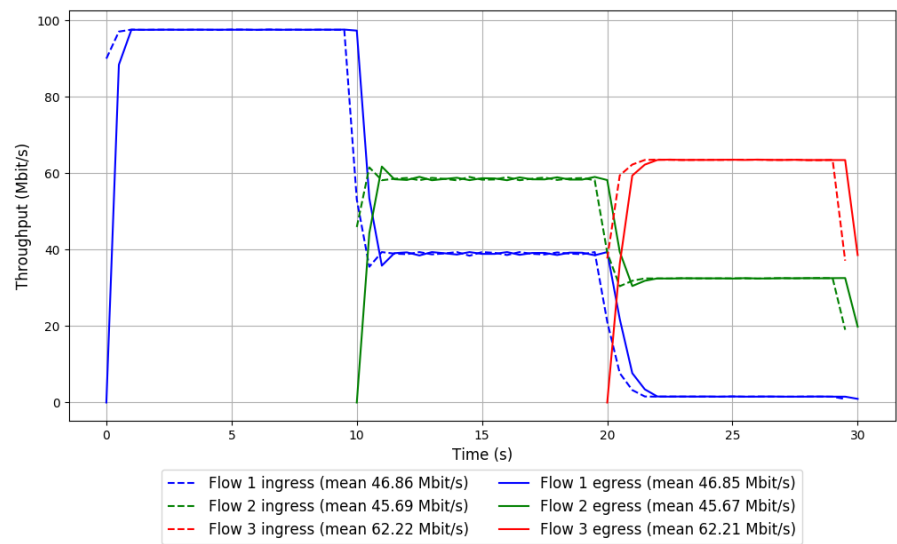
-- Flow 3:

Average throughput: 62.21 Mbit/s

95th percentile per-packet one-way delay: 12.646 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link

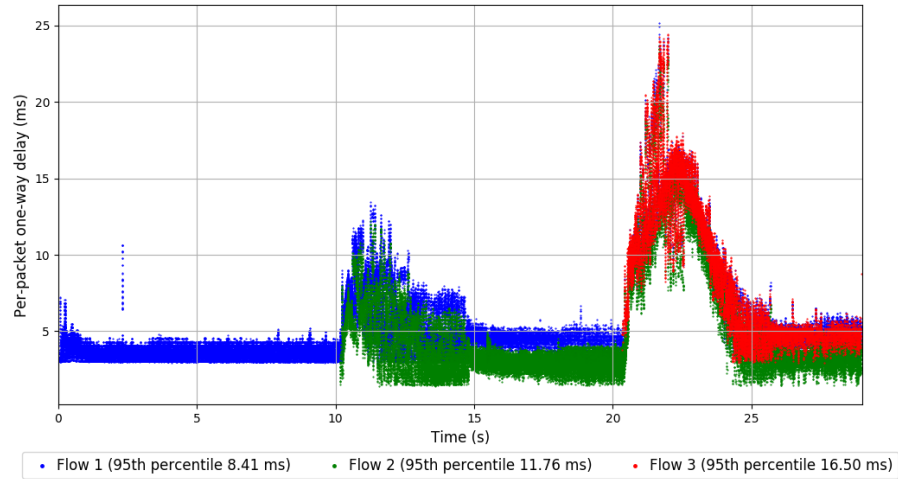
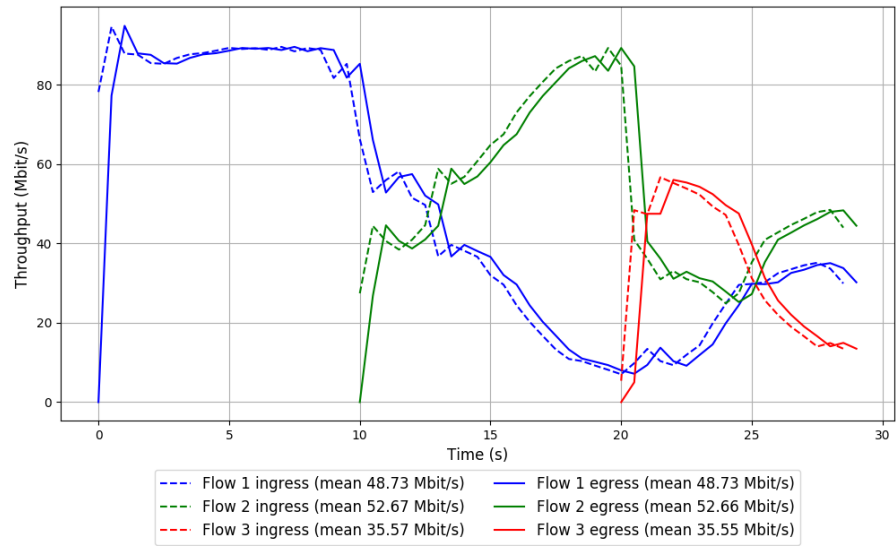


Run 1: Statistics of Indigo-MusesC3

Start at: 2019-04-24 00:16:41
End at: 2019-04-24 00:17:11
Local clock offset: -1.82 ms
Remote clock offset: -0.087 ms

Below is generated by plot.py at 2019-04-24 02:16:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 93.49 Mbit/s
95th percentile per-packet one-way delay: 13.192 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.73 Mbit/s
95th percentile per-packet one-way delay: 8.410 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 52.66 Mbit/s
95th percentile per-packet one-way delay: 11.761 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 35.55 Mbit/s
95th percentile per-packet one-way delay: 16.503 ms
Loss rate: 0.01%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-04-24 00:40:34

End at: 2019-04-24 00:41:04

Local clock offset: -2.831 ms

Remote clock offset: 0.061 ms

Below is generated by plot.py at 2019-04-24 02:16:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.88 Mbit/s

95th percentile per-packet one-way delay: 10.326 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 60.67 Mbit/s

95th percentile per-packet one-way delay: 9.950 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 30.24 Mbit/s

95th percentile per-packet one-way delay: 8.674 ms

Loss rate: 0.01%

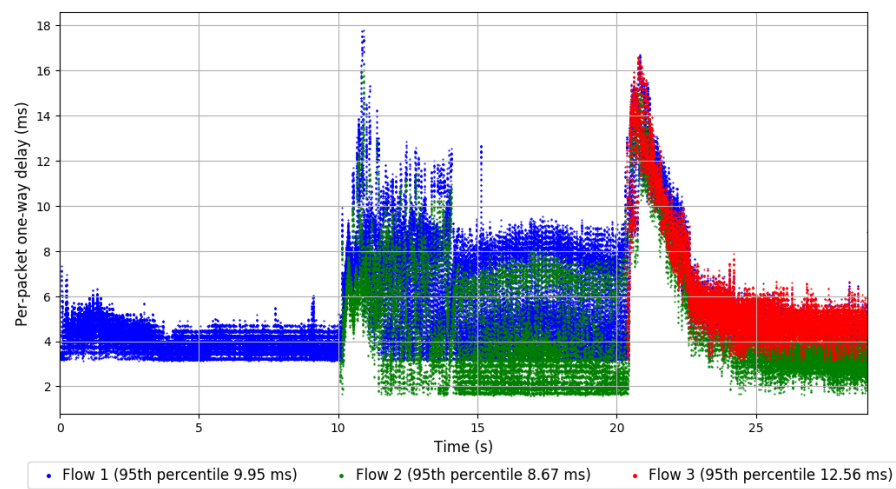
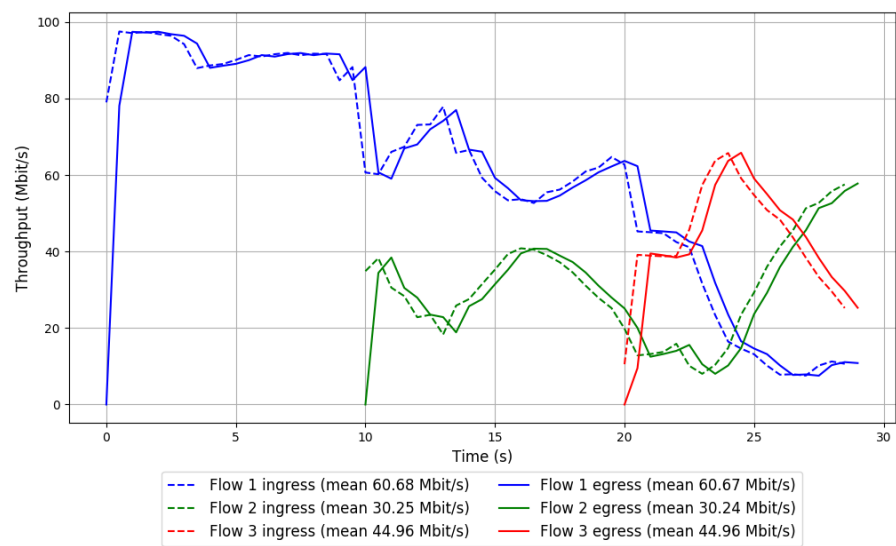
-- Flow 3:

Average throughput: 44.96 Mbit/s

95th percentile per-packet one-way delay: 12.562 ms

Loss rate: 0.01%

Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2019-04-24 01:04:27

End at: 2019-04-24 01:04:58

Local clock offset: -1.589 ms

Remote clock offset: 0.054 ms

Below is generated by plot.py at 2019-04-24 02:16:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.62 Mbit/s

95th percentile per-packet one-way delay: 11.234 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 69.31 Mbit/s

95th percentile per-packet one-way delay: 9.472 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.13 Mbit/s

95th percentile per-packet one-way delay: 11.913 ms

Loss rate: 0.01%

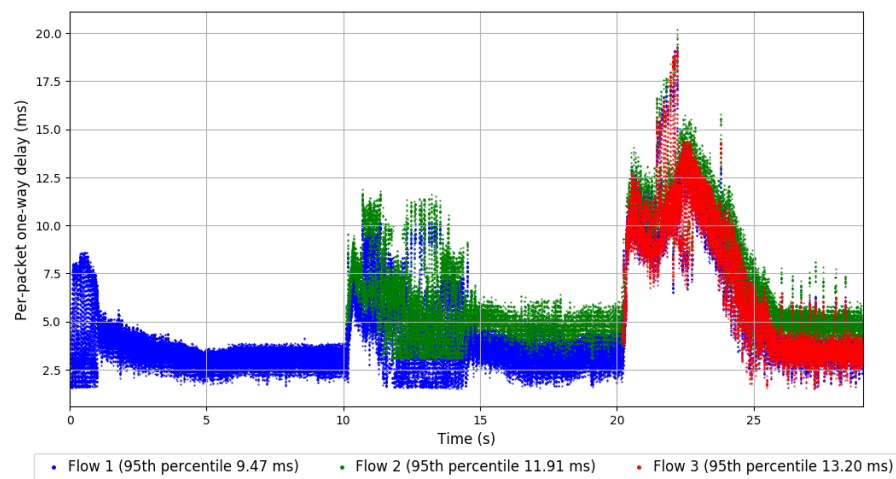
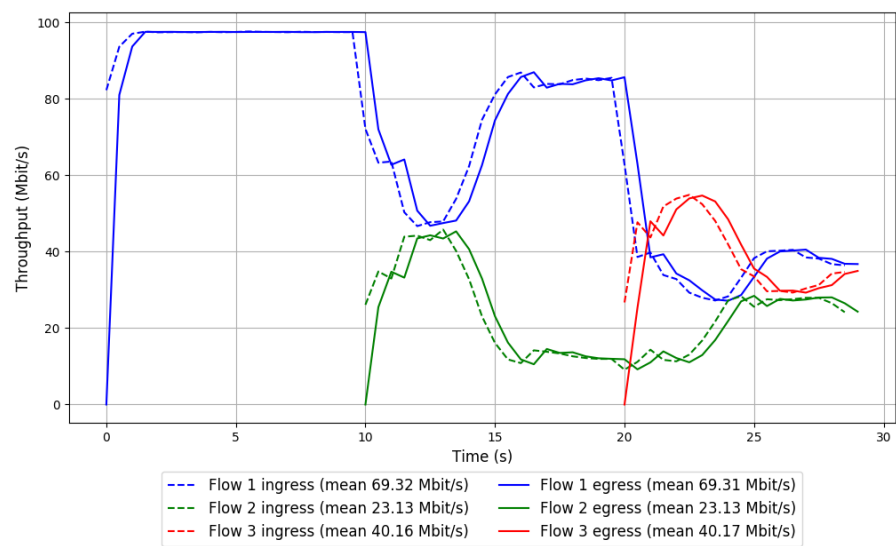
-- Flow 3:

Average throughput: 40.17 Mbit/s

95th percentile per-packet one-way delay: 13.196 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-04-24 01:28:20

End at: 2019-04-24 01:28:50

Local clock offset: -1.59 ms

Remote clock offset: 0.129 ms

Below is generated by plot.py at 2019-04-24 02:16:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.61 Mbit/s

95th percentile per-packet one-way delay: 7.169 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 62.32 Mbit/s

95th percentile per-packet one-way delay: 7.401 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 32.93 Mbit/s

95th percentile per-packet one-way delay: 6.237 ms

Loss rate: 0.00%

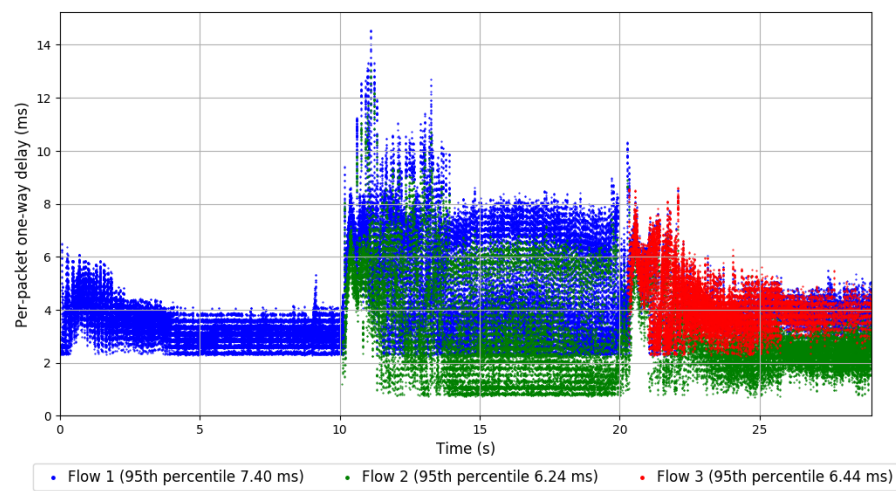
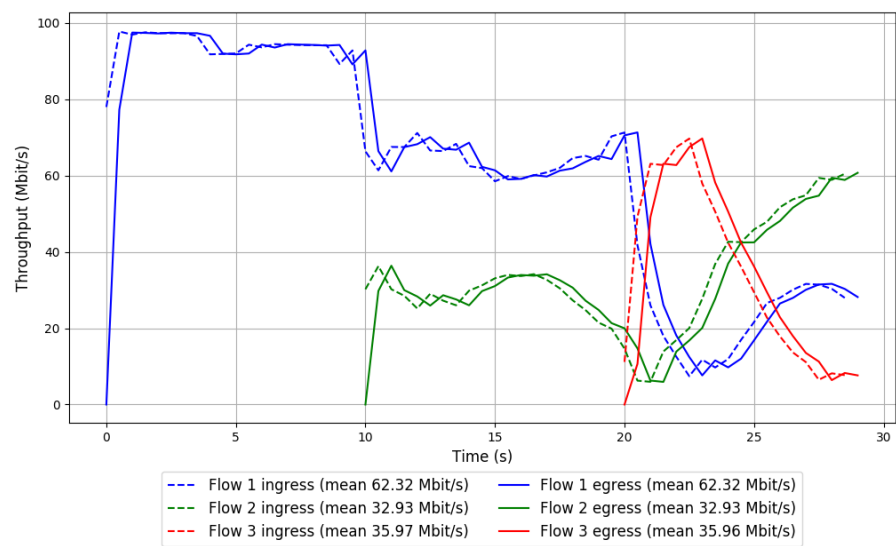
-- Flow 3:

Average throughput: 35.96 Mbit/s

95th percentile per-packet one-way delay: 6.443 ms

Loss rate: 0.02%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-04-24 01:52:11

End at: 2019-04-24 01:52:41

Local clock offset: -2.084 ms

Remote clock offset: 0.159 ms

Below is generated by plot.py at 2019-04-24 02:16:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.97 Mbit/s

95th percentile per-packet one-way delay: 14.845 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 49.27 Mbit/s

95th percentile per-packet one-way delay: 13.516 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 50.63 Mbit/s

95th percentile per-packet one-way delay: 14.386 ms

Loss rate: 0.00%

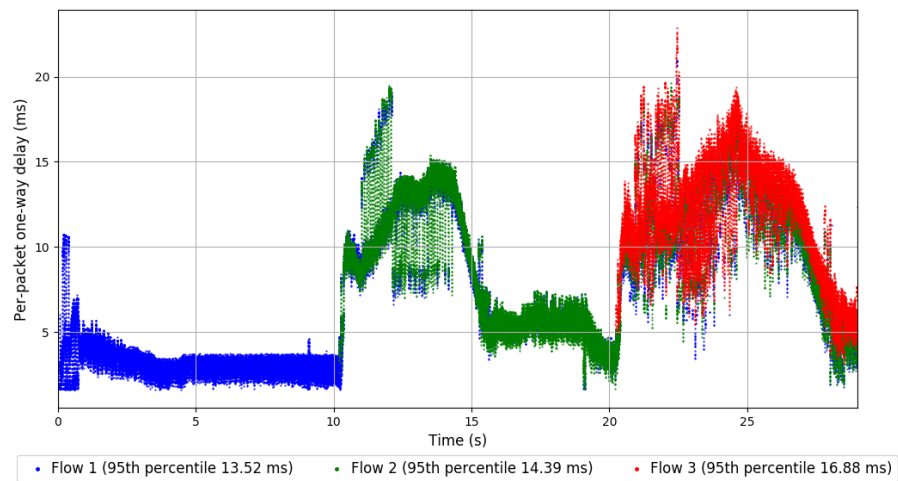
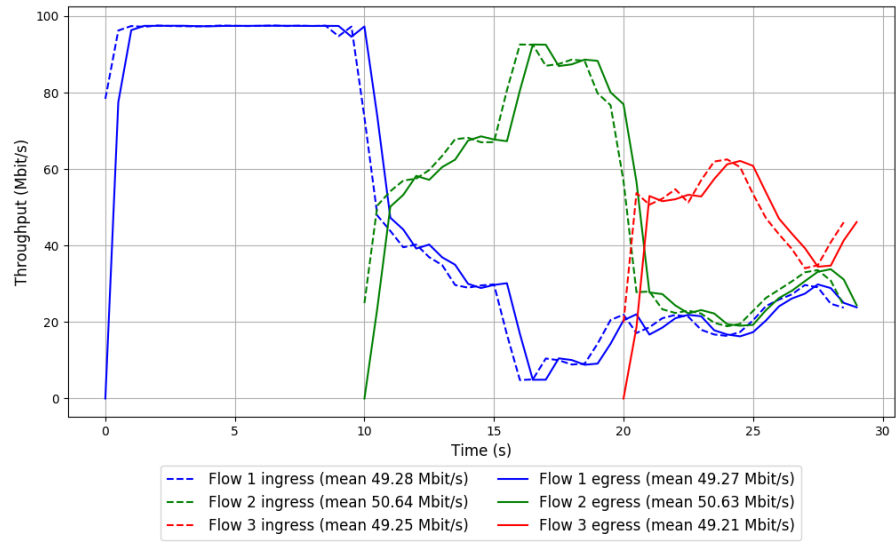
-- Flow 3:

Average throughput: 49.21 Mbit/s

95th percentile per-packet one-way delay: 16.878 ms

Loss rate: 0.01%

Run 5: Report of Indigo-MusesC3 — Data Link

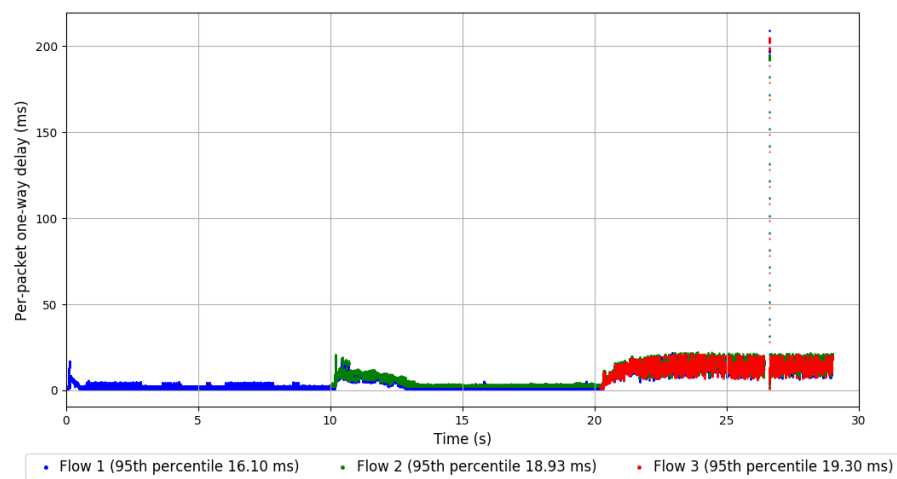
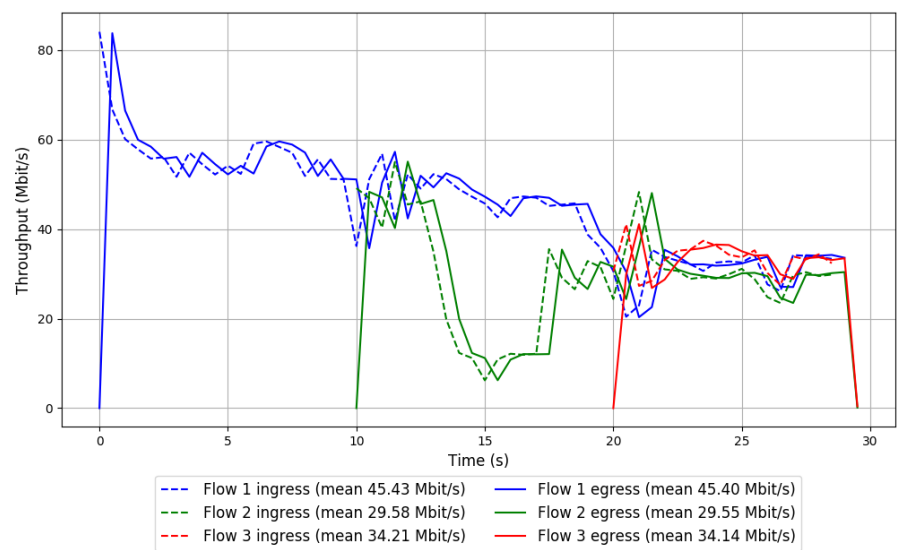


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-04-24 00:13:12
End at: 2019-04-24 00:13:42
Local clock offset: -0.937 ms
Remote clock offset: -0.054 ms

Below is generated by plot.py at 2019-04-24 02:16:43
Datalink statistics
-- Total of 3 flows:
Average throughput: 75.02 Mbit/s
95th percentile per-packet one-way delay: 17.789 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.40 Mbit/s
95th percentile per-packet one-way delay: 16.100 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 29.55 Mbit/s
95th percentile per-packet one-way delay: 18.927 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.14 Mbit/s
95th percentile per-packet one-way delay: 19.296 ms
Loss rate: 0.00%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-04-24 00:37:06

End at: 2019-04-24 00:37:36

Local clock offset: -2.719 ms

Remote clock offset: 0.01 ms

Below is generated by plot.py at 2019-04-24 02:16:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.42 Mbit/s

95th percentile per-packet one-way delay: 18.422 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 31.97 Mbit/s

95th percentile per-packet one-way delay: 18.407 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.31 Mbit/s

95th percentile per-packet one-way delay: 17.670 ms

Loss rate: 0.00%

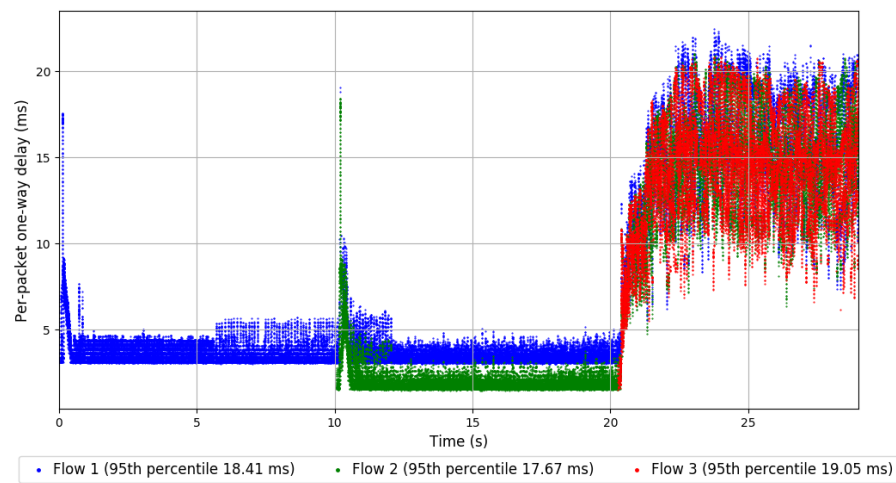
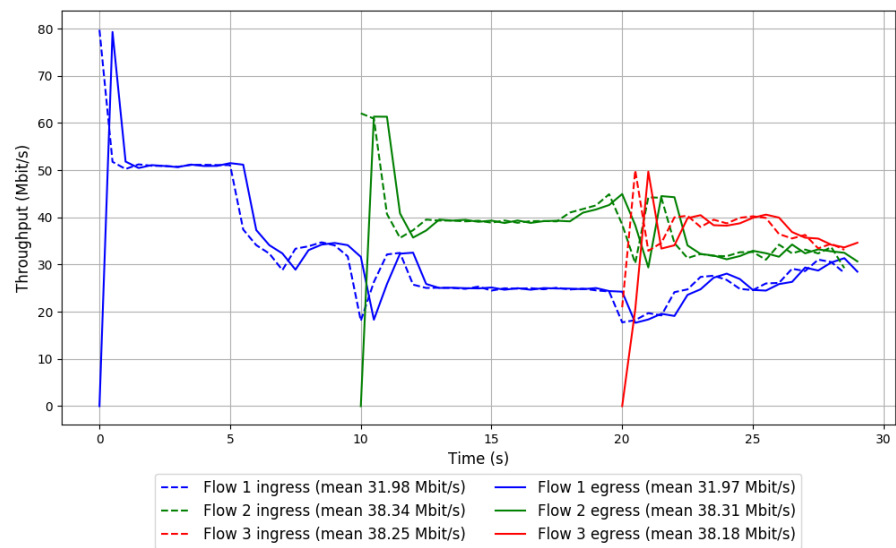
-- Flow 3:

Average throughput: 38.18 Mbit/s

95th percentile per-packet one-way delay: 19.046 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-04-24 01:00:59

End at: 2019-04-24 01:01:29

Local clock offset: -1.655 ms

Remote clock offset: 0.103 ms

Below is generated by plot.py at 2019-04-24 02:17:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.87 Mbit/s

95th percentile per-packet one-way delay: 22.124 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 48.01 Mbit/s

95th percentile per-packet one-way delay: 19.493 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 36.07 Mbit/s

95th percentile per-packet one-way delay: 22.511 ms

Loss rate: 0.02%

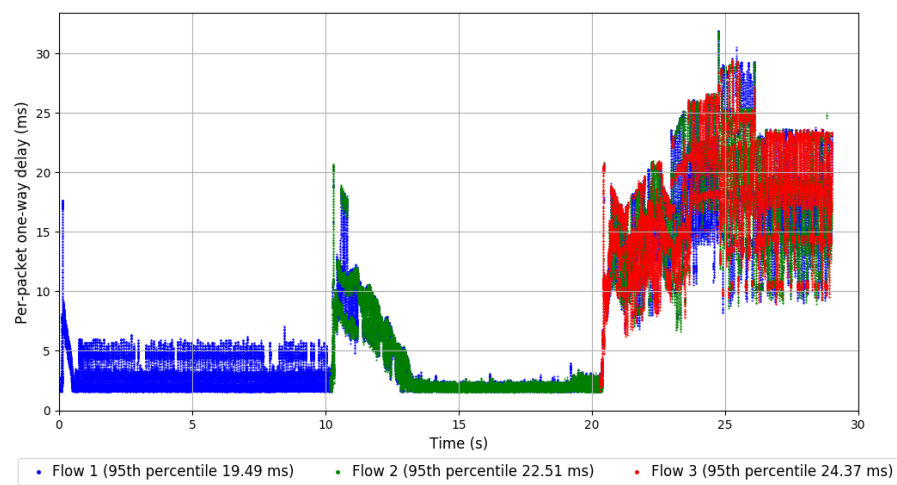
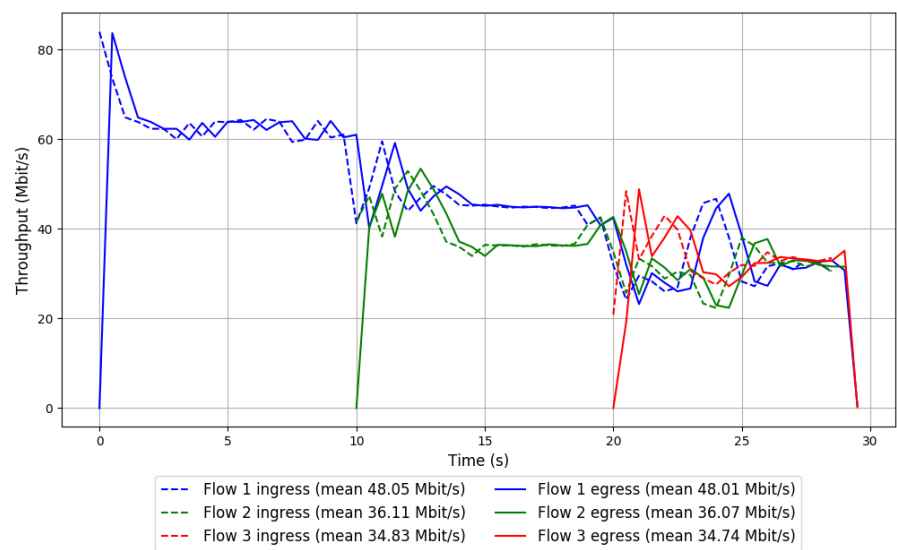
-- Flow 3:

Average throughput: 34.74 Mbit/s

95th percentile per-packet one-way delay: 24.370 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-04-24 01:24:53

End at: 2019-04-24 01:25:23

Local clock offset: -1.454 ms

Remote clock offset: 0.037 ms

Below is generated by plot.py at 2019-04-24 02:17:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.93 Mbit/s

95th percentile per-packet one-way delay: 20.161 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 48.82 Mbit/s

95th percentile per-packet one-way delay: 17.743 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 32.79 Mbit/s

95th percentile per-packet one-way delay: 20.889 ms

Loss rate: 0.00%

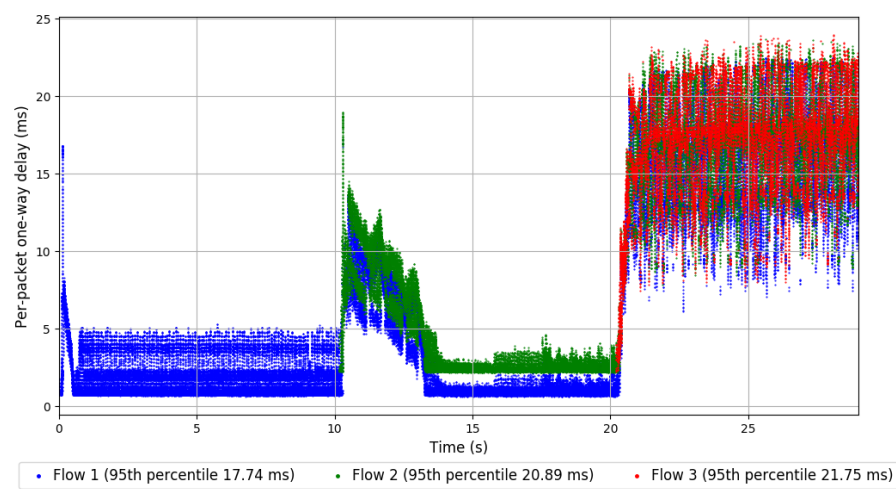
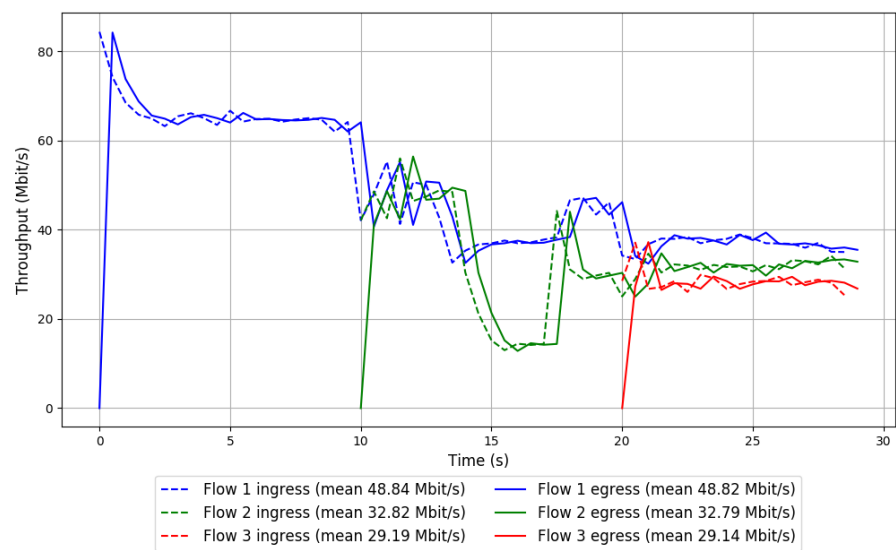
-- Flow 3:

Average throughput: 29.14 Mbit/s

95th percentile per-packet one-way delay: 21.747 ms

Loss rate: 0.02%

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-04-24 01:48:44

End at: 2019-04-24 01:49:14

Local clock offset: -2.321 ms

Remote clock offset: 0.163 ms

Below is generated by plot.py at 2019-04-24 02:17:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 71.24 Mbit/s

95th percentile per-packet one-way delay: 22.138 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 32.60 Mbit/s

95th percentile per-packet one-way delay: 22.118 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 41.82 Mbit/s

95th percentile per-packet one-way delay: 20.886 ms

Loss rate: 0.00%

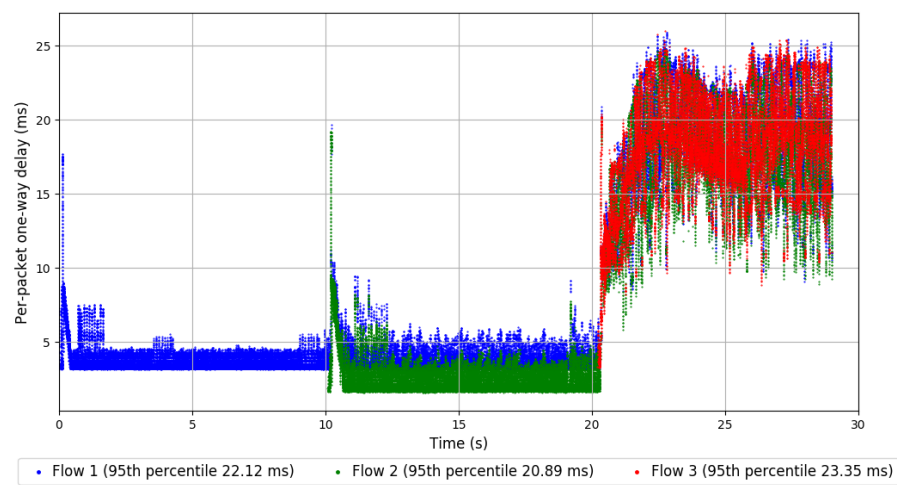
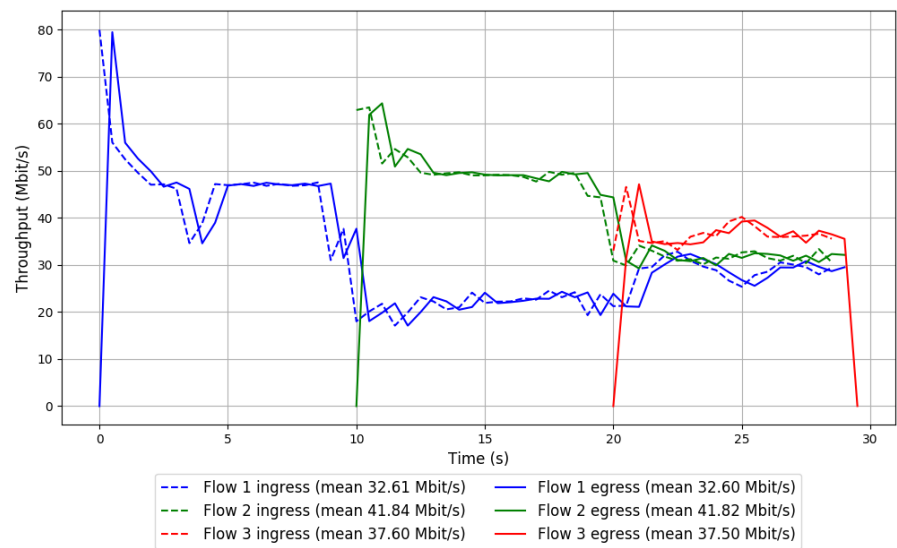
-- Flow 3:

Average throughput: 37.50 Mbit/s

95th percentile per-packet one-way delay: 23.351 ms

Loss rate: 0.14%

Run 5: Report of Indigo-MusesC5 — Data Link

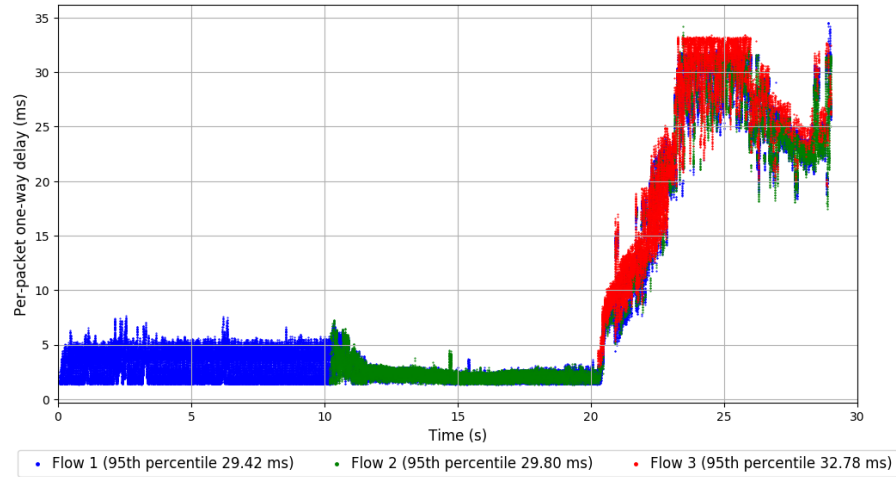
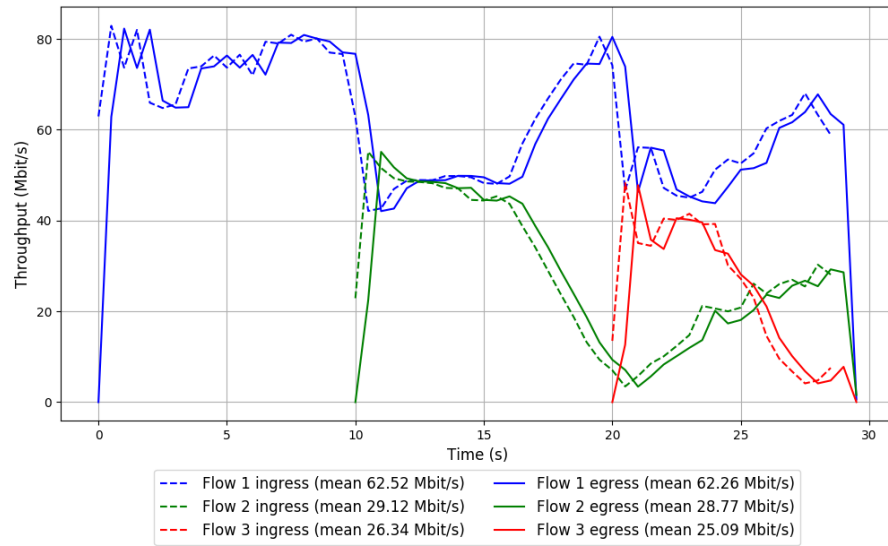


Run 1: Statistics of Indigo-MusesD

Start at: 2019-04-24 00:17:50
End at: 2019-04-24 00:18:20
Local clock offset: -1.918 ms
Remote clock offset: -0.154 ms

Below is generated by plot.py at 2019-04-24 02:17:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 88.50 Mbit/s
95th percentile per-packet one-way delay: 30.523 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 62.26 Mbit/s
95th percentile per-packet one-way delay: 29.421 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 28.77 Mbit/s
95th percentile per-packet one-way delay: 29.795 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 25.09 Mbit/s
95th percentile per-packet one-way delay: 32.785 ms
Loss rate: 4.42%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-04-24 00:41:43

End at: 2019-04-24 00:42:13

Local clock offset: -2.019 ms

Remote clock offset: 0.046 ms

Below is generated by plot.py at 2019-04-24 02:17:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 69.79 Mbit/s

95th percentile per-packet one-way delay: 30.724 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 43.10 Mbit/s

95th percentile per-packet one-way delay: 30.611 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 29.78 Mbit/s

95th percentile per-packet one-way delay: 30.478 ms

Loss rate: 0.46%

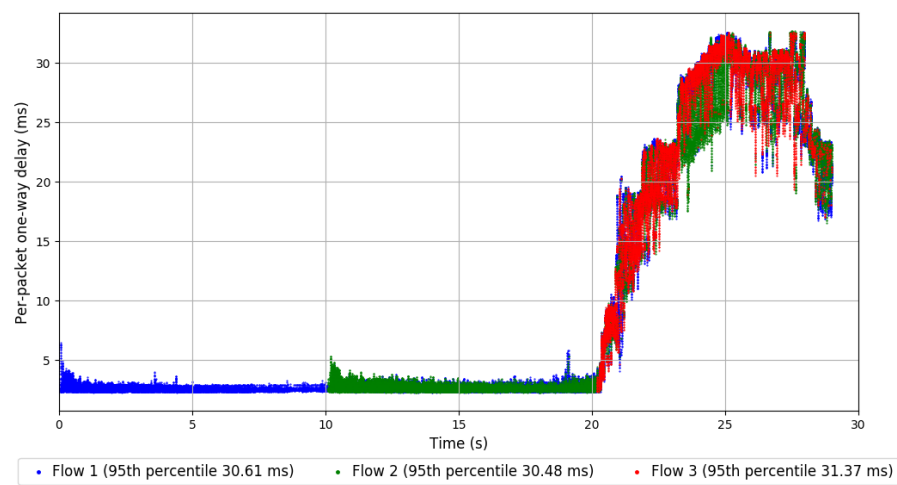
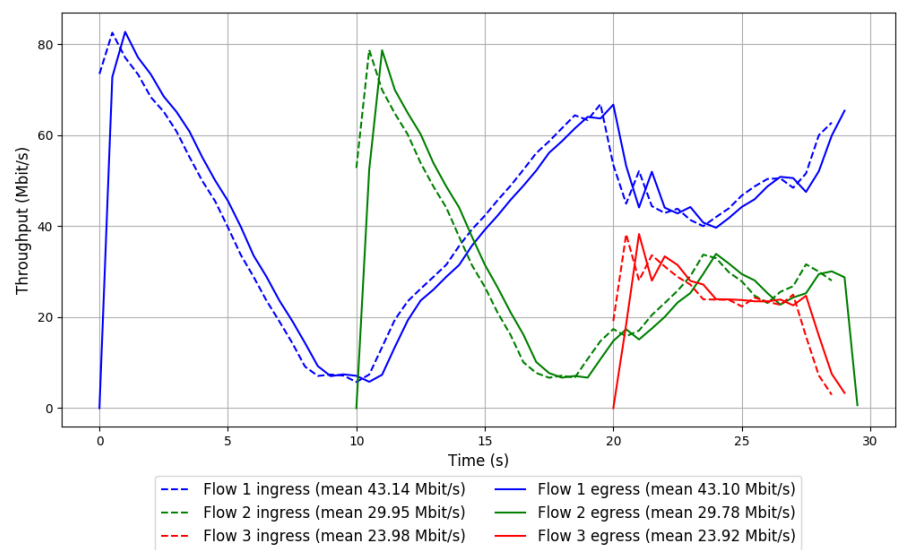
-- Flow 3:

Average throughput: 23.92 Mbit/s

95th percentile per-packet one-way delay: 31.367 ms

Loss rate: 0.06%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-04-24 01:05:37

End at: 2019-04-24 01:06:07

Local clock offset: -1.555 ms

Remote clock offset: 0.082 ms

Below is generated by plot.py at 2019-04-24 02:17:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.96 Mbit/s

95th percentile per-packet one-way delay: 29.797 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 42.25 Mbit/s

95th percentile per-packet one-way delay: 27.066 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 61.16 Mbit/s

95th percentile per-packet one-way delay: 30.500 ms

Loss rate: 0.22%

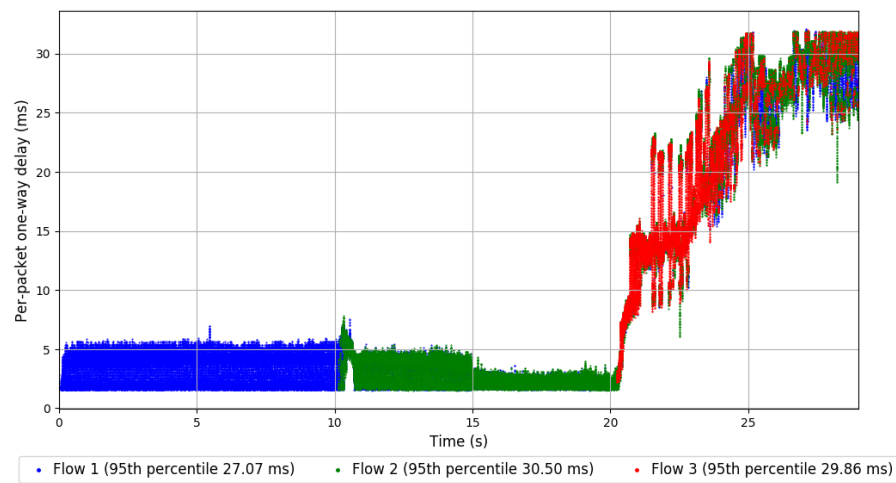
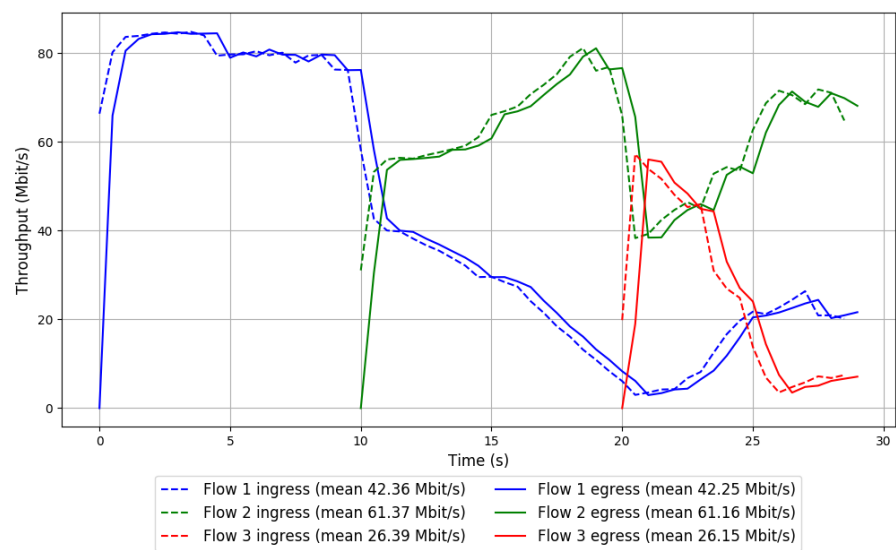
-- Flow 3:

Average throughput: 26.15 Mbit/s

95th percentile per-packet one-way delay: 29.855 ms

Loss rate: 0.60%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-04-24 01:29:29

End at: 2019-04-24 01:29:59

Local clock offset: -2.377 ms

Remote clock offset: 0.127 ms

Below is generated by plot.py at 2019-04-24 02:17:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 72.19 Mbit/s

95th percentile per-packet one-way delay: 27.808 ms

Loss rate: 0.23%

-- Flow 1:

Average throughput: 41.61 Mbit/s

95th percentile per-packet one-way delay: 28.275 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 34.29 Mbit/s

95th percentile per-packet one-way delay: 27.554 ms

Loss rate: 0.47%

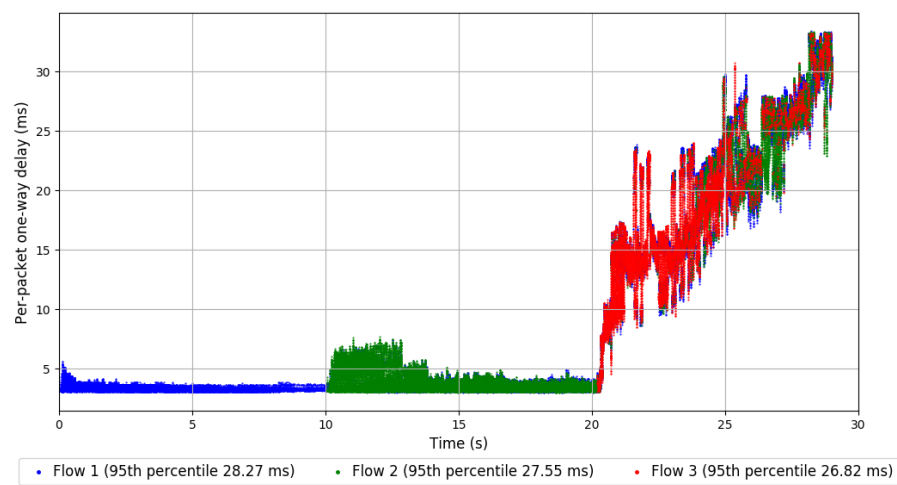
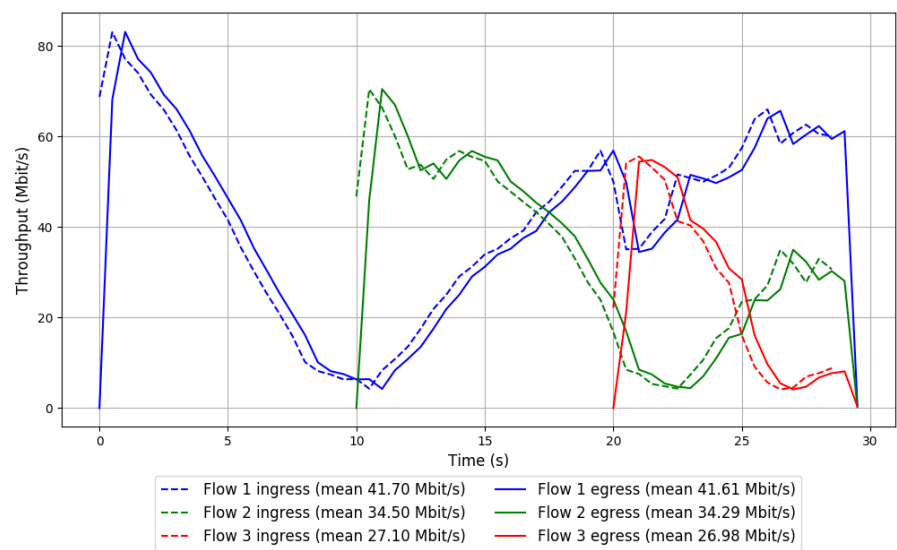
-- Flow 3:

Average throughput: 26.98 Mbit/s

95th percentile per-packet one-way delay: 26.815 ms

Loss rate: 0.14%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-04-24 01:53:20

End at: 2019-04-24 01:53:50

Local clock offset: -2.028 ms

Remote clock offset: 0.126 ms

Below is generated by plot.py at 2019-04-24 02:17:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.53 Mbit/s

95th percentile per-packet one-way delay: 30.258 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 44.02 Mbit/s

95th percentile per-packet one-way delay: 24.836 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 60.21 Mbit/s

95th percentile per-packet one-way delay: 30.544 ms

Loss rate: 0.59%

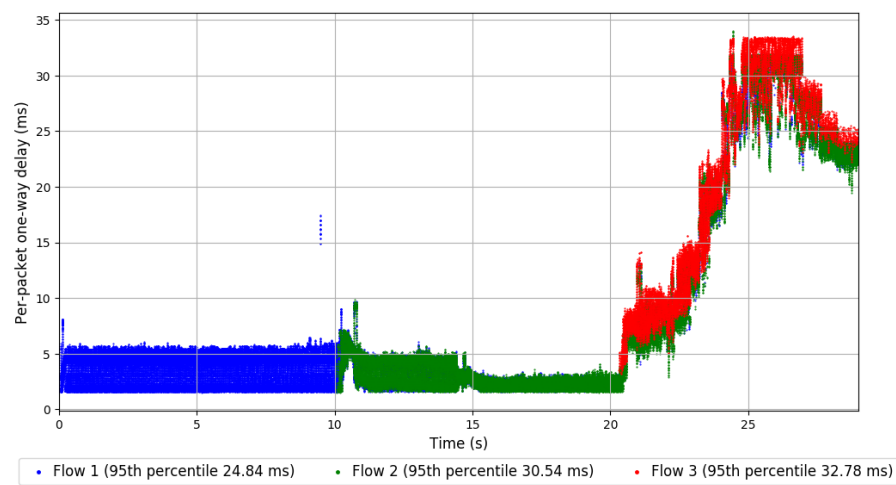
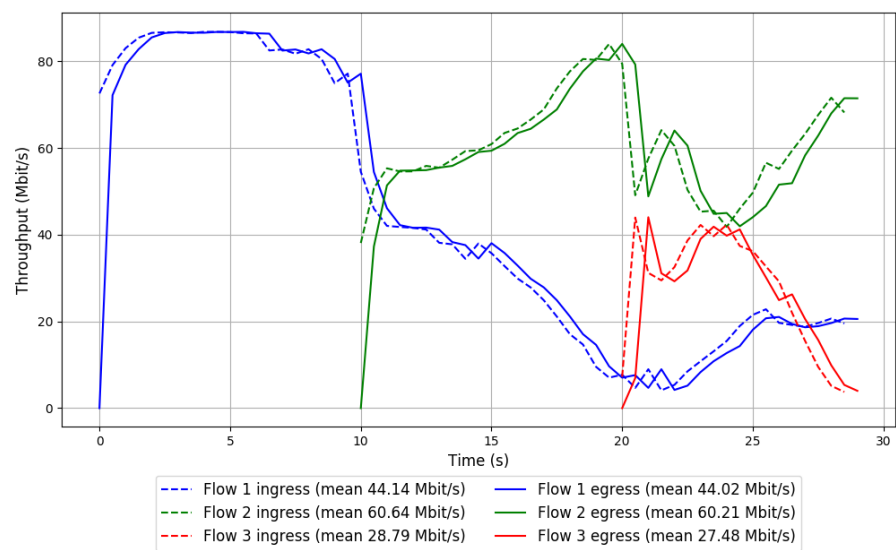
-- Flow 3:

Average throughput: 27.48 Mbit/s

95th percentile per-packet one-way delay: 32.783 ms

Loss rate: 4.33%

Run 5: Report of Indigo-MusesD — Data Link

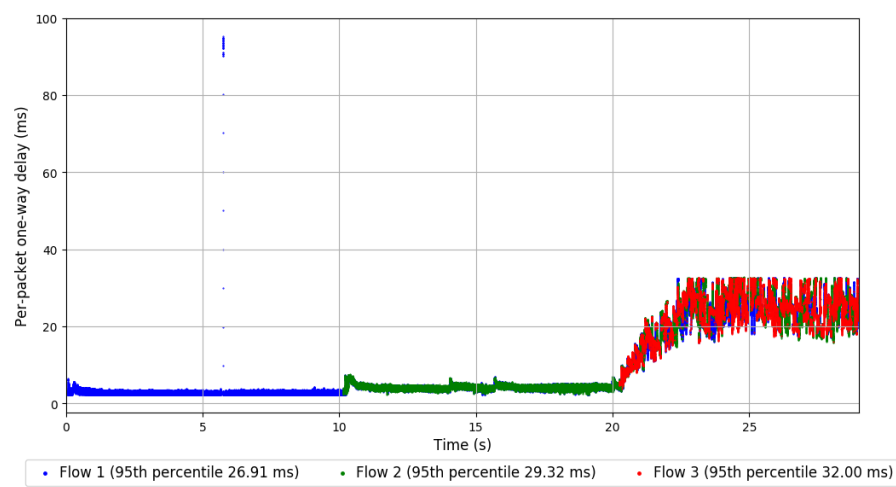
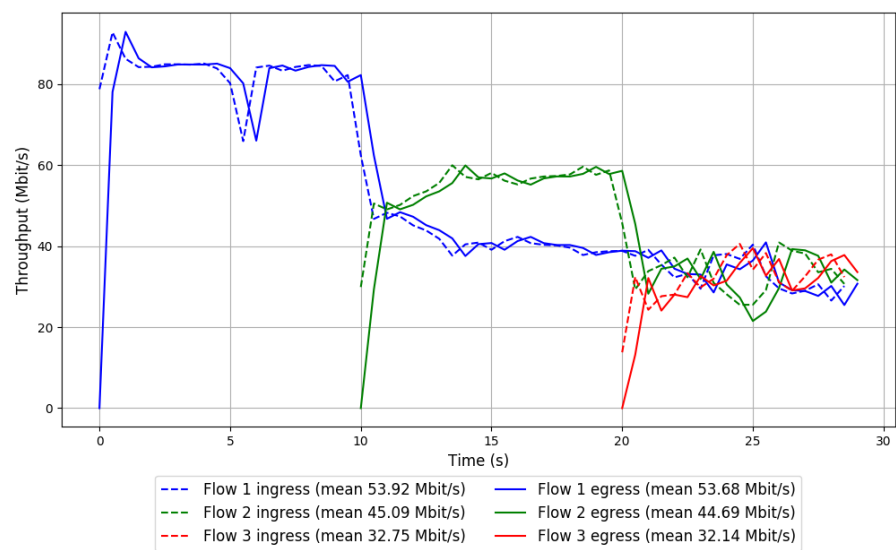


Run 1: Statistics of Indigo-MusesT

Start at: 2019-04-24 00:32:32
End at: 2019-04-24 00:33:03
Local clock offset: -1.858 ms
Remote clock offset: -0.032 ms

Below is generated by plot.py at 2019-04-24 02:18:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 92.41 Mbit/s
95th percentile per-packet one-way delay: 29.280 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 53.68 Mbit/s
95th percentile per-packet one-way delay: 26.905 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 44.69 Mbit/s
95th percentile per-packet one-way delay: 29.320 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 32.14 Mbit/s
95th percentile per-packet one-way delay: 32.004 ms
Loss rate: 1.59%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

Start at: 2019-04-24 00:56:25

End at: 2019-04-24 00:56:55

Local clock offset: -1.063 ms

Remote clock offset: 0.001 ms

Below is generated by plot.py at 2019-04-24 02:18:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.47 Mbit/s

95th percentile per-packet one-way delay: 25.828 ms

Loss rate: 0.23%

-- Flow 1:

Average throughput: 66.30 Mbit/s

95th percentile per-packet one-way delay: 21.915 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 32.86 Mbit/s

95th percentile per-packet one-way delay: 26.850 ms

Loss rate: 0.40%

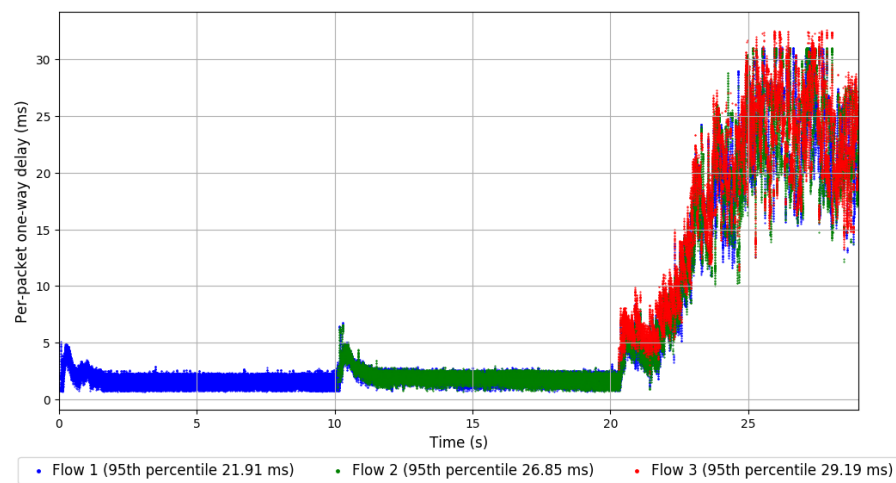
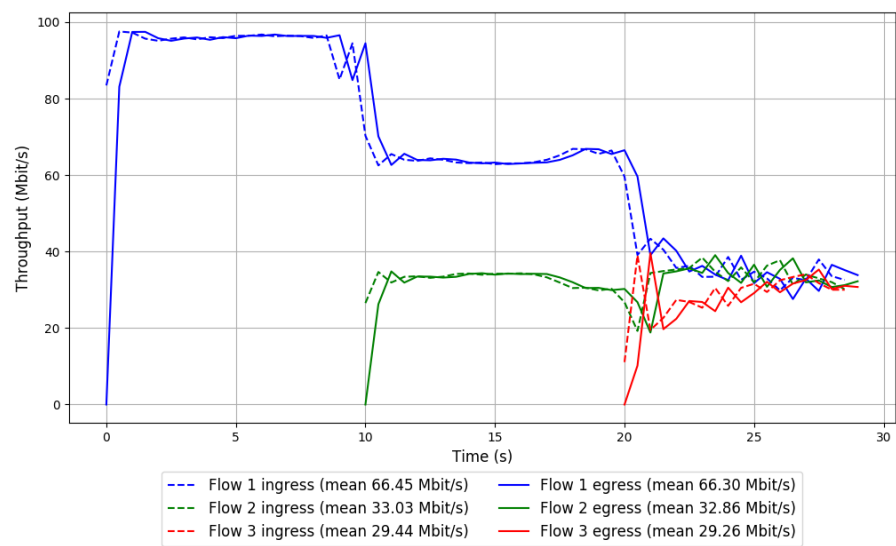
-- Flow 3:

Average throughput: 29.26 Mbit/s

95th percentile per-packet one-way delay: 29.188 ms

Loss rate: 0.34%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2019-04-24 01:20:19

End at: 2019-04-24 01:20:49

Local clock offset: -1.208 ms

Remote clock offset: 0.14 ms

Below is generated by plot.py at 2019-04-24 02:18:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.81 Mbit/s

95th percentile per-packet one-way delay: 22.306 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 55.73 Mbit/s

95th percentile per-packet one-way delay: 21.931 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 47.24 Mbit/s

95th percentile per-packet one-way delay: 22.069 ms

Loss rate: 0.00%

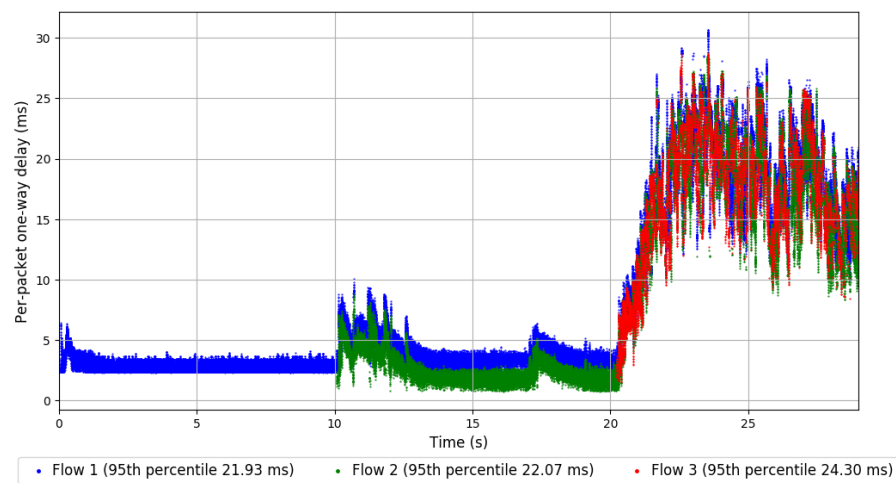
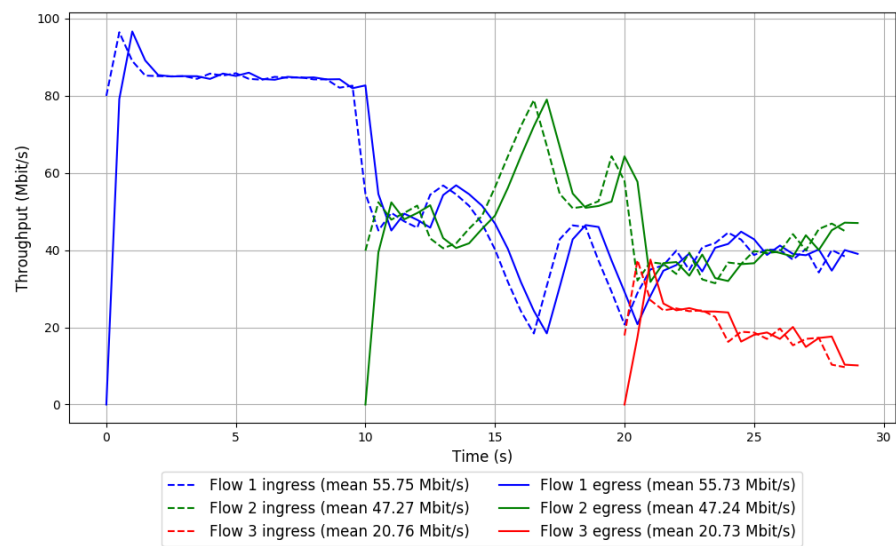
-- Flow 3:

Average throughput: 20.73 Mbit/s

95th percentile per-packet one-way delay: 24.297 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MusesT

Start at: 2019-04-24 01:44:10

End at: 2019-04-24 01:44:40

Local clock offset: -2.733 ms

Remote clock offset: 0.148 ms

Below is generated by plot.py at 2019-04-24 02:18:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.82 Mbit/s

95th percentile per-packet one-way delay: 23.178 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 62.08 Mbit/s

95th percentile per-packet one-way delay: 21.394 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 45.09 Mbit/s

95th percentile per-packet one-way delay: 23.679 ms

Loss rate: 0.00%

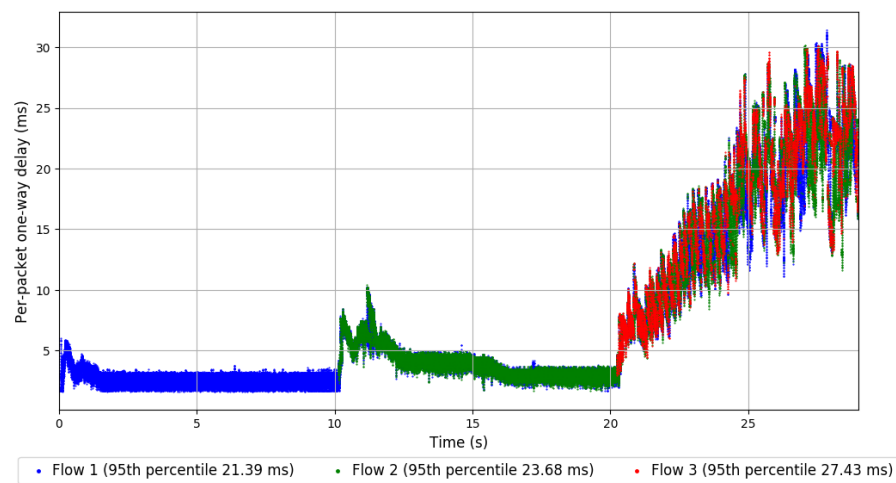
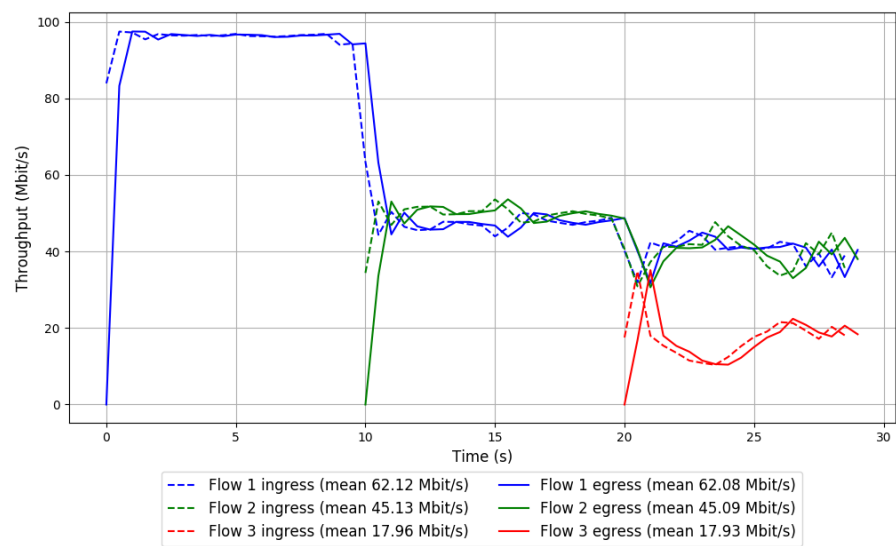
-- Flow 3:

Average throughput: 17.93 Mbit/s

95th percentile per-packet one-way delay: 27.428 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-04-24 02:08:03

End at: 2019-04-24 02:08:33

Local clock offset: -0.856 ms

Remote clock offset: 0.124 ms

Below is generated by plot.py at 2019-04-24 02:18:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.67 Mbit/s

95th percentile per-packet one-way delay: 28.822 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 60.28 Mbit/s

95th percentile per-packet one-way delay: 25.315 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 39.80 Mbit/s

95th percentile per-packet one-way delay: 29.512 ms

Loss rate: 0.70%

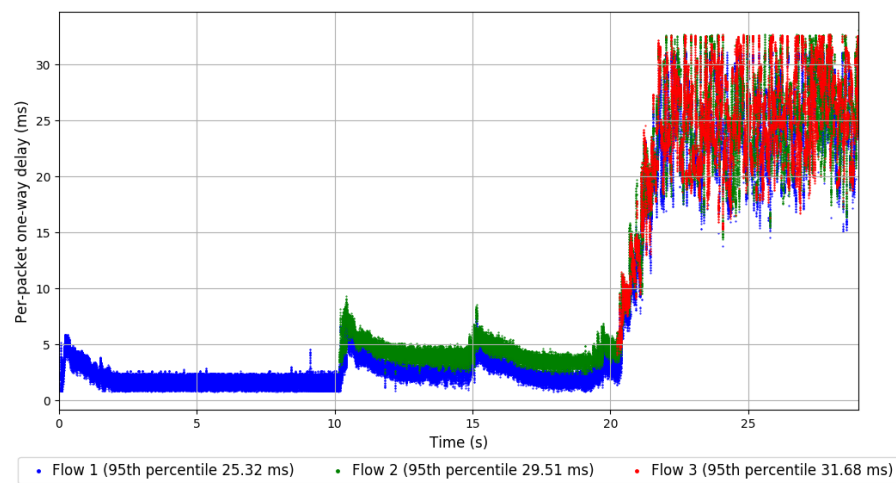
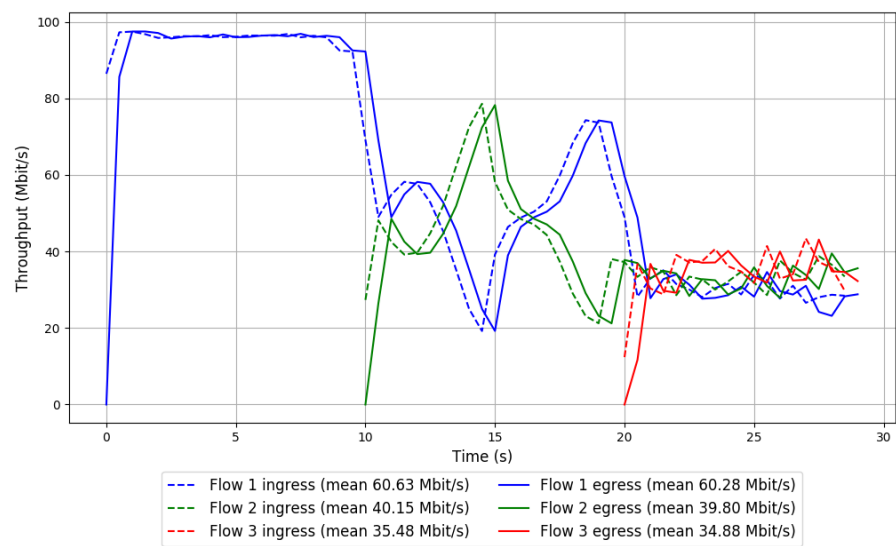
-- Flow 3:

Average throughput: 34.88 Mbit/s

95th percentile per-packet one-way delay: 31.679 ms

Loss rate: 1.40%

Run 5: Report of Indigo-MusesT — Data Link



Run 1: Statistics of LEDBAT

Start at: 2019-04-24 00:24:39

End at: 2019-04-24 00:25:09

Local clock offset: -2.35 ms

Remote clock offset: 0.026 ms

Below is generated by plot.py at 2019-04-24 02:18:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.19 Mbit/s

95th percentile per-packet one-way delay: 32.642 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 61.45 Mbit/s

95th percentile per-packet one-way delay: 32.819 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 40.34 Mbit/s

95th percentile per-packet one-way delay: 31.441 ms

Loss rate: 0.05%

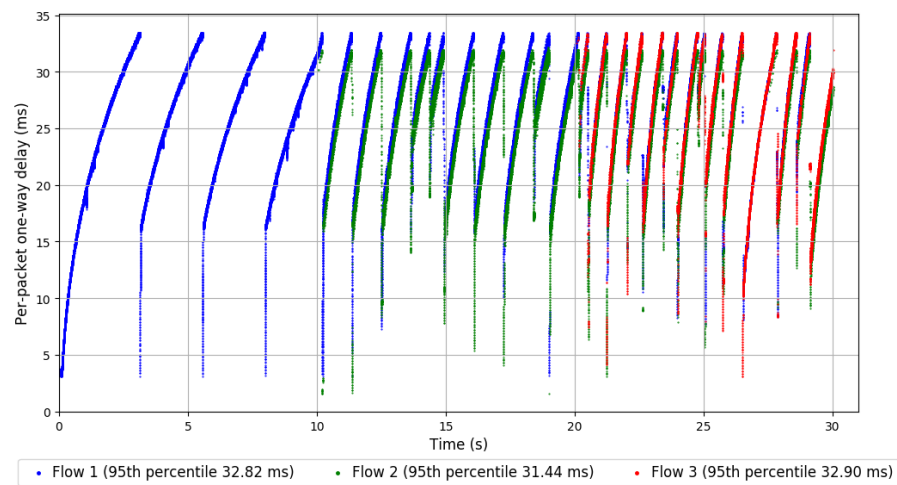
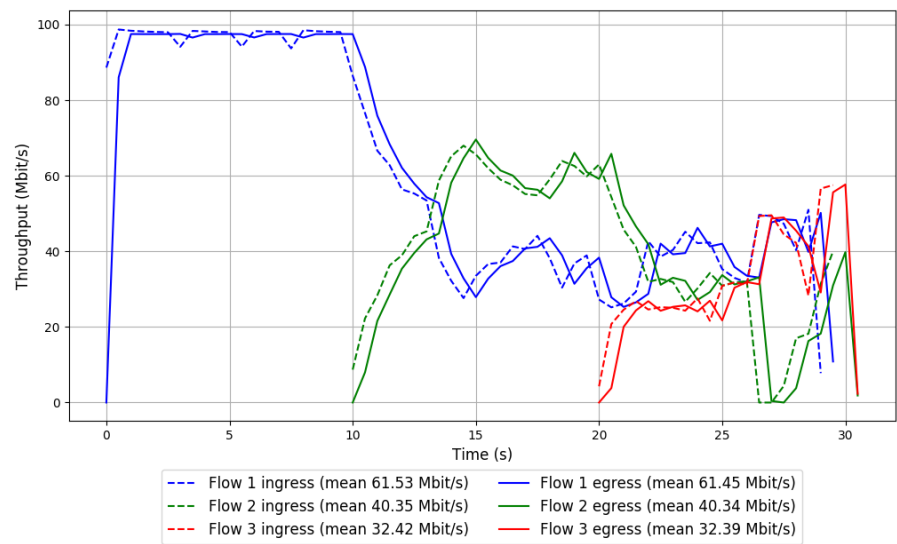
-- Flow 3:

Average throughput: 32.39 Mbit/s

95th percentile per-packet one-way delay: 32.903 ms

Loss rate: 0.13%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-04-24 00:48:32

End at: 2019-04-24 00:49:02

Local clock offset: -2.462 ms

Remote clock offset: 0.016 ms

Below is generated by plot.py at 2019-04-24 02:18:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.27 Mbit/s

95th percentile per-packet one-way delay: 31.787 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 65.93 Mbit/s

95th percentile per-packet one-way delay: 31.508 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 34.14 Mbit/s

95th percentile per-packet one-way delay: 33.011 ms

Loss rate: 0.10%

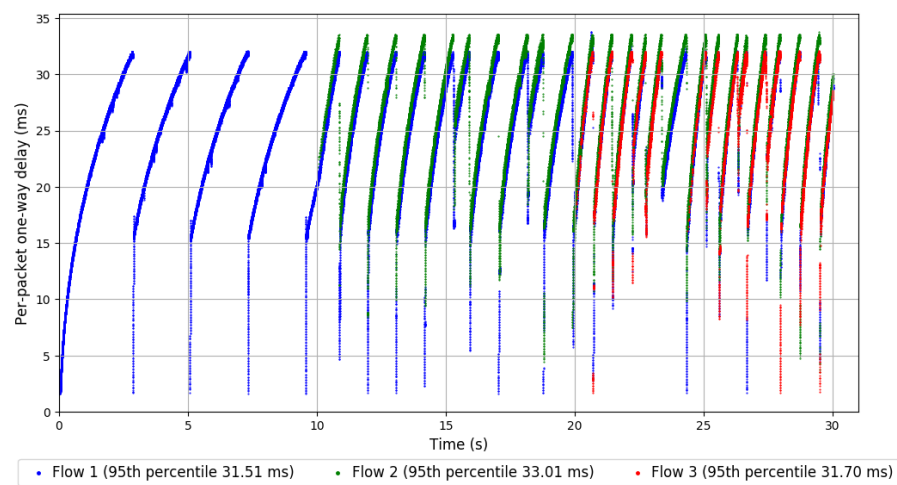
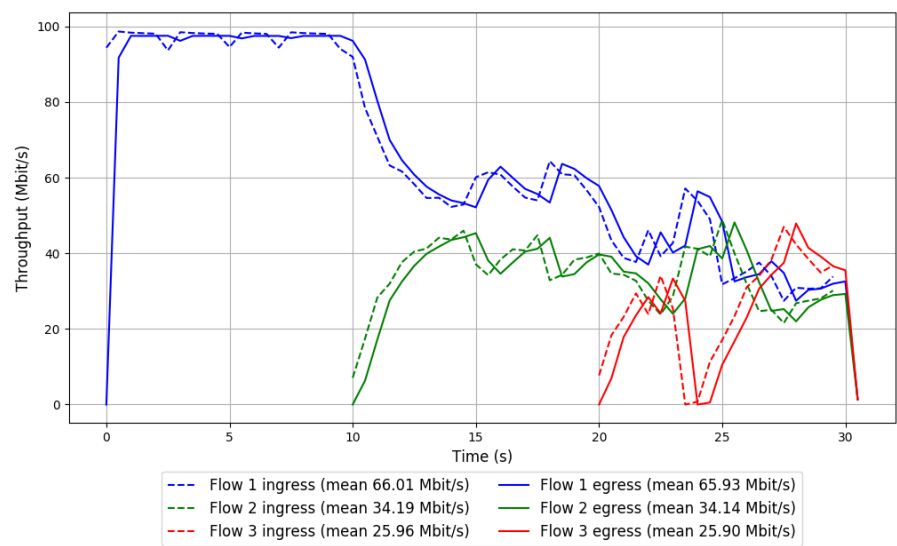
-- Flow 3:

Average throughput: 25.90 Mbit/s

95th percentile per-packet one-way delay: 31.701 ms

Loss rate: 0.10%

Run 2: Report of LEDBAT — Data Link

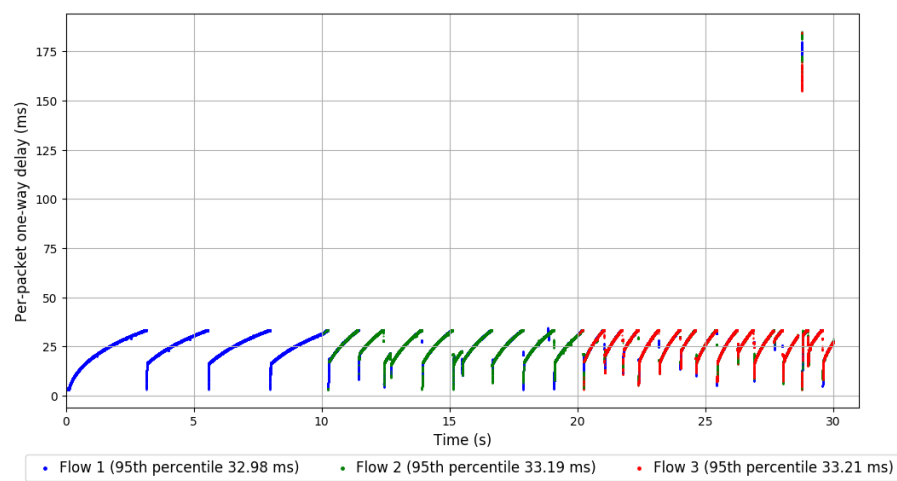
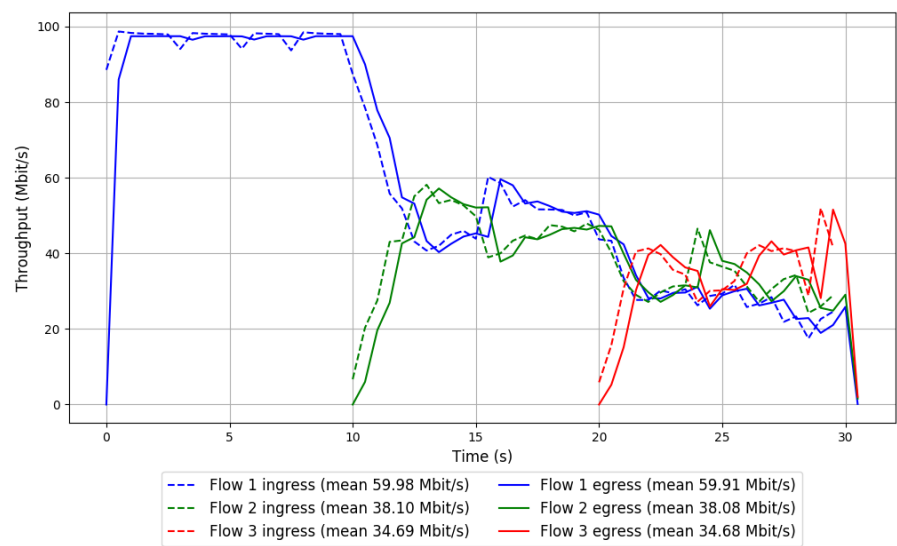


Run 3: Statistics of LEDBAT

Start at: 2019-04-24 01:12:26
End at: 2019-04-24 01:12:56
Local clock offset: -1.494 ms
Remote clock offset: 0.093 ms

Below is generated by plot.py at 2019-04-24 02:18:58
Datalink statistics
-- Total of 3 flows:
Average throughput: 96.76 Mbit/s
95th percentile per-packet one-way delay: 33.034 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 59.91 Mbit/s
95th percentile per-packet one-way delay: 32.976 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 38.08 Mbit/s
95th percentile per-packet one-way delay: 33.188 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 34.68 Mbit/s
95th percentile per-packet one-way delay: 33.206 ms
Loss rate: 0.06%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-04-24 01:36:17

End at: 2019-04-24 01:36:48

Local clock offset: -2.546 ms

Remote clock offset: 0.114 ms

Below is generated by plot.py at 2019-04-24 02:19:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.29 Mbit/s

95th percentile per-packet one-way delay: 31.453 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 64.62 Mbit/s

95th percentile per-packet one-way delay: 31.415 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 34.70 Mbit/s

95th percentile per-packet one-way delay: 31.604 ms

Loss rate: 0.08%

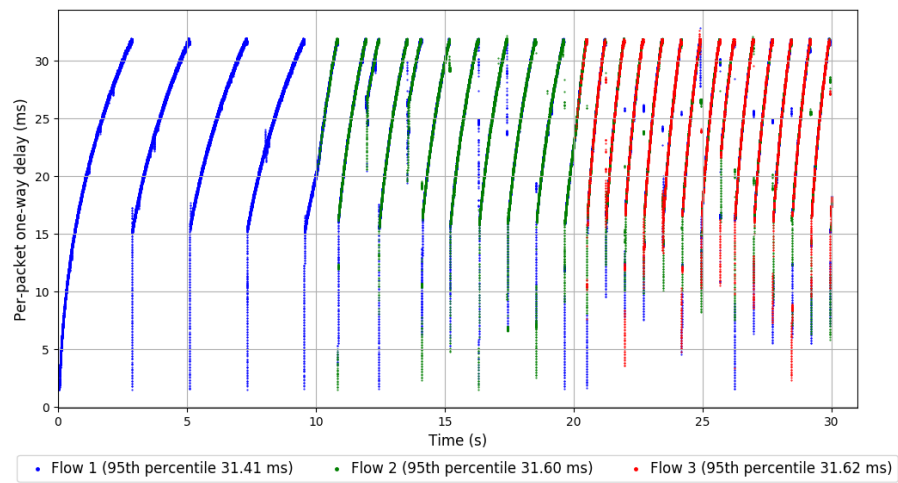
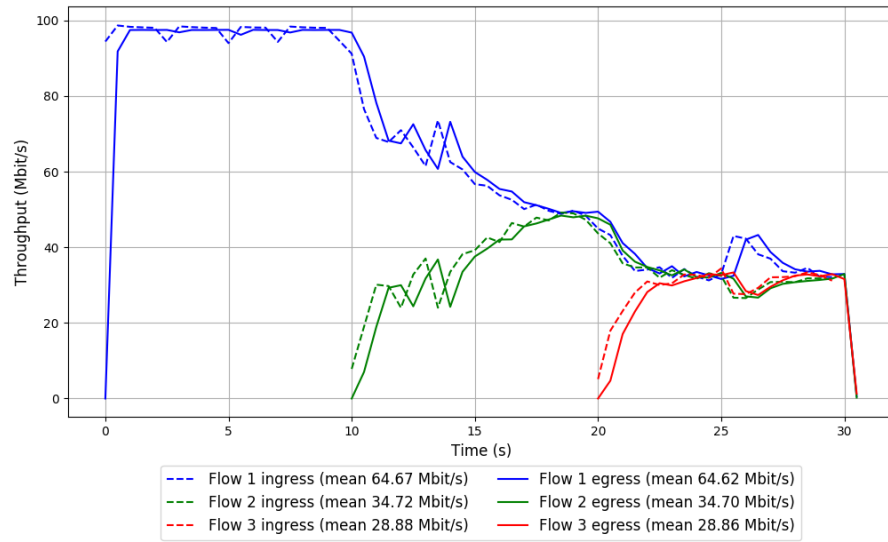
-- Flow 3:

Average throughput: 28.86 Mbit/s

95th percentile per-packet one-way delay: 31.622 ms

Loss rate: 0.12%

Run 4: Report of LEDBAT — Data Link

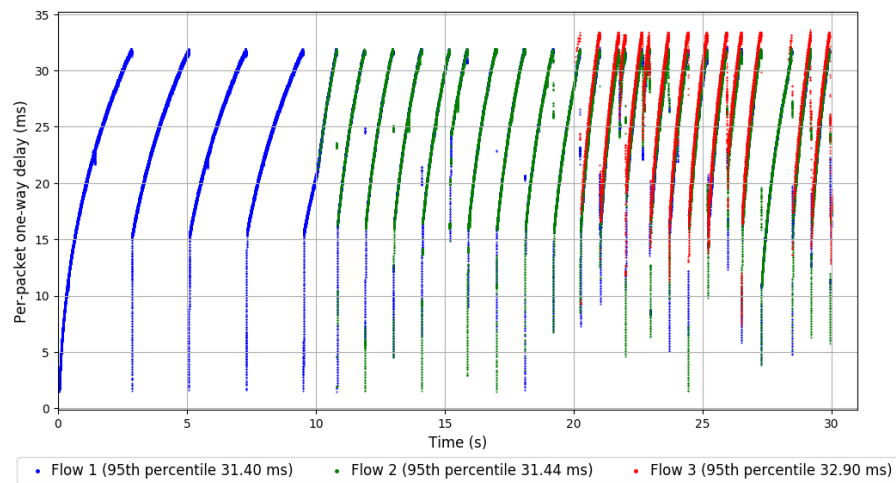
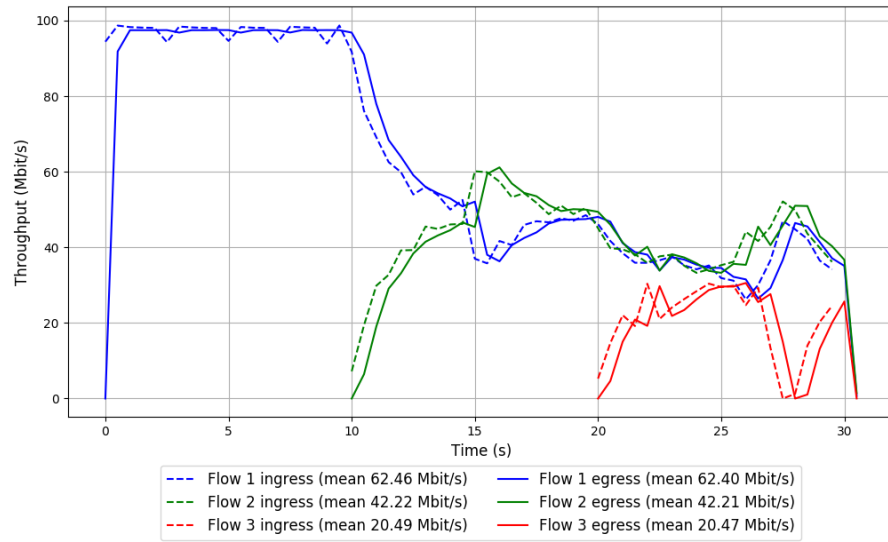


Run 5: Statistics of LEDBAT

Start at: 2019-04-24 02:00:10
End at: 2019-04-24 02:00:40
Local clock offset: -1.861 ms
Remote clock offset: -0.025 ms

Below is generated by plot.py at 2019-04-24 02:19:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 97.30 Mbit/s
95th percentile per-packet one-way delay: 31.567 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 62.40 Mbit/s
95th percentile per-packet one-way delay: 31.398 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 42.21 Mbit/s
95th percentile per-packet one-way delay: 31.437 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 20.47 Mbit/s
95th percentile per-packet one-way delay: 32.900 ms
Loss rate: 0.21%

Run 5: Report of LEDBAT — Data Link

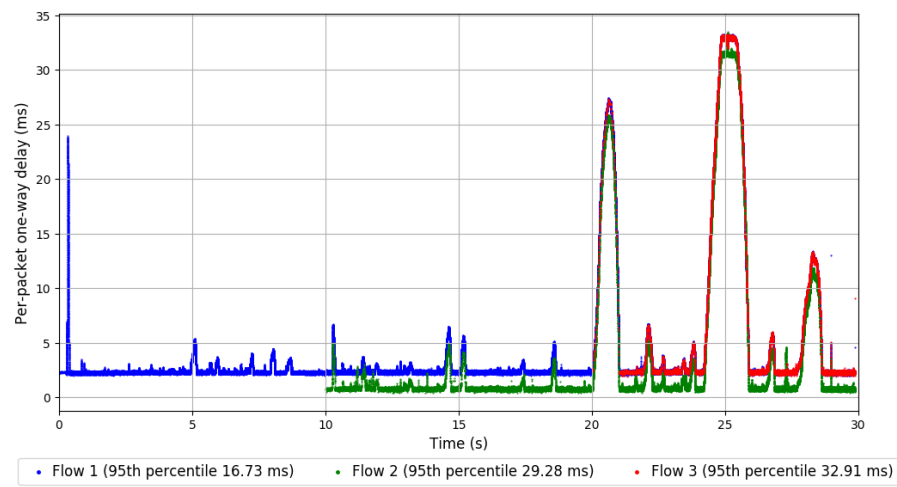
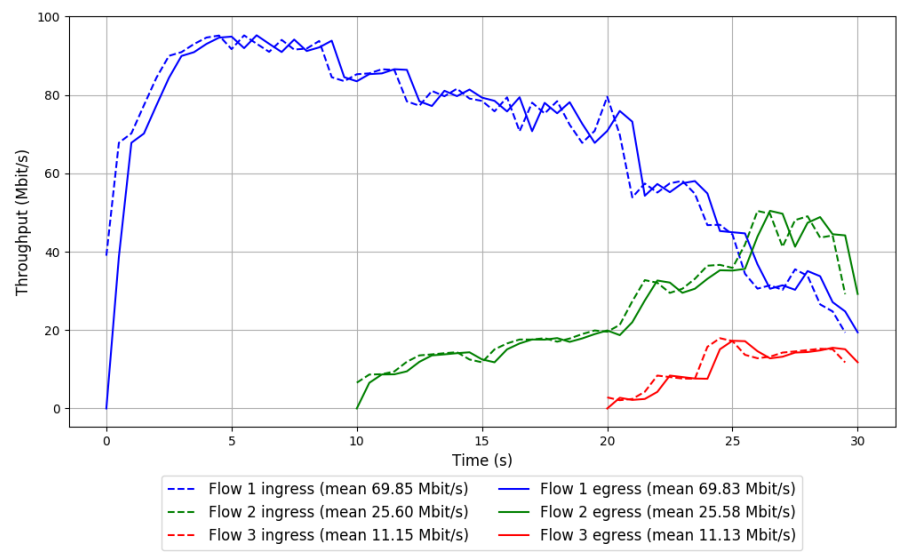


Run 1: Statistics of PCC-Allegro

Start at: 2019-04-24 00:20:07
End at: 2019-04-24 00:20:37
Local clock offset: -1.323 ms
Remote clock offset: -0.159 ms

Below is generated by plot.py at 2019-04-24 02:19:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 90.50 Mbit/s
95th percentile per-packet one-way delay: 23.293 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 69.83 Mbit/s
95th percentile per-packet one-way delay: 16.735 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 25.58 Mbit/s
95th percentile per-packet one-way delay: 29.284 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 11.13 Mbit/s
95th percentile per-packet one-way delay: 32.909 ms
Loss rate: 0.20%

Run 1: Report of PCC-Allegro — Data Link

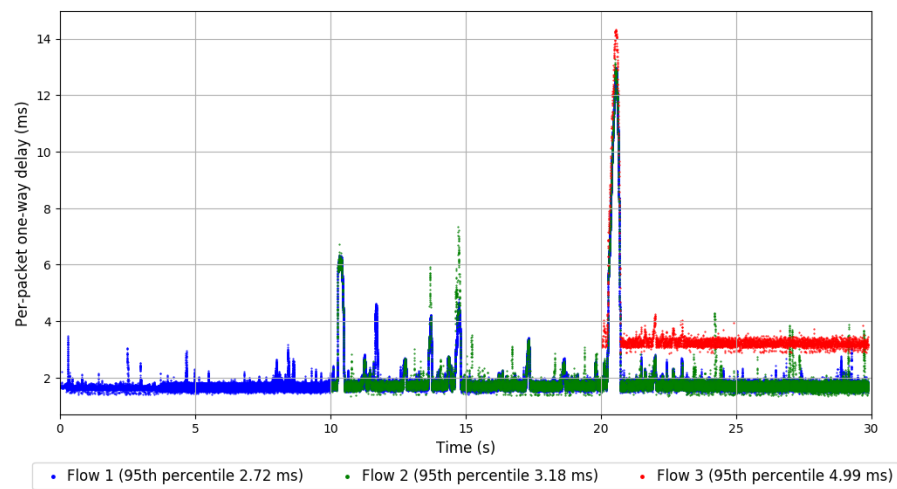
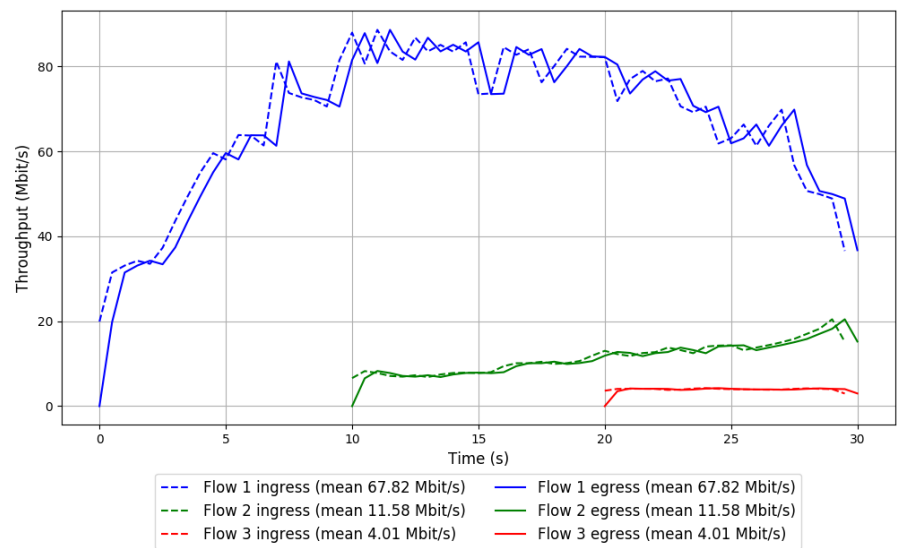


Run 2: Statistics of PCC-Allegro

Start at: 2019-04-24 00:43:59
End at: 2019-04-24 00:44:29
Local clock offset: -2.862 ms
Remote clock offset: -0.008 ms

Below is generated by plot.py at 2019-04-24 02:19:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 76.84 Mbit/s
95th percentile per-packet one-way delay: 3.254 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 67.82 Mbit/s
95th percentile per-packet one-way delay: 2.719 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.58 Mbit/s
95th percentile per-packet one-way delay: 3.179 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.01 Mbit/s
95th percentile per-packet one-way delay: 4.994 ms
Loss rate: 0.00%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-04-24 01:07:54

End at: 2019-04-24 01:08:24

Local clock offset: -0.753 ms

Remote clock offset: 0.137 ms

Below is generated by plot.py at 2019-04-24 02:19:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.00 Mbit/s

95th percentile per-packet one-way delay: 12.246 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 67.94 Mbit/s

95th percentile per-packet one-way delay: 9.709 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 9.72 Mbit/s

95th percentile per-packet one-way delay: 17.821 ms

Loss rate: 0.10%

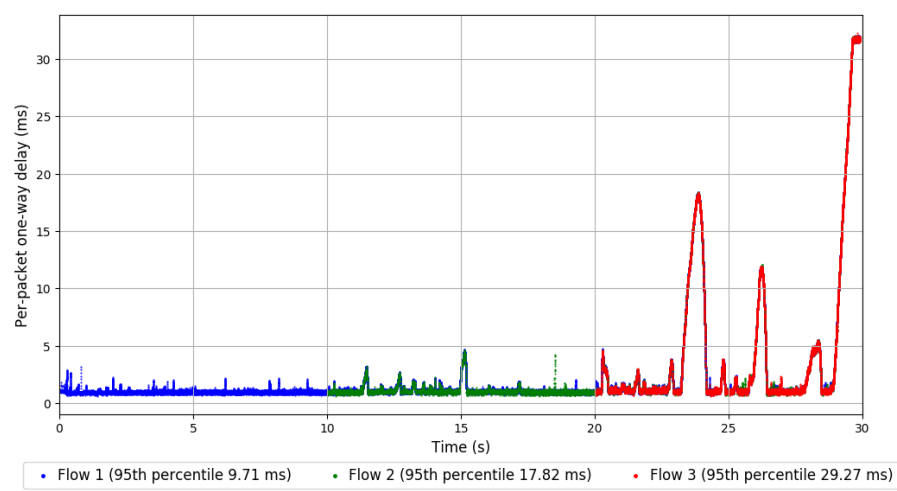
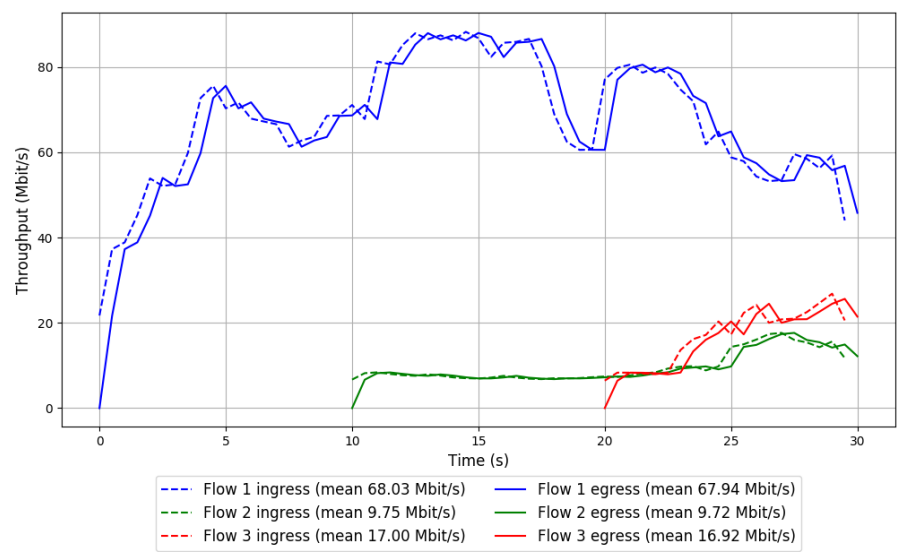
-- Flow 3:

Average throughput: 16.92 Mbit/s

95th percentile per-packet one-way delay: 29.267 ms

Loss rate: 0.17%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-04-24 01:31:45

End at: 2019-04-24 01:32:15

Local clock offset: -2.537 ms

Remote clock offset: 0.154 ms

Below is generated by plot.py at 2019-04-24 02:19:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.99 Mbit/s

95th percentile per-packet one-way delay: 13.968 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 73.31 Mbit/s

95th percentile per-packet one-way delay: 13.859 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 10.30 Mbit/s

95th percentile per-packet one-way delay: 15.031 ms

Loss rate: 0.18%

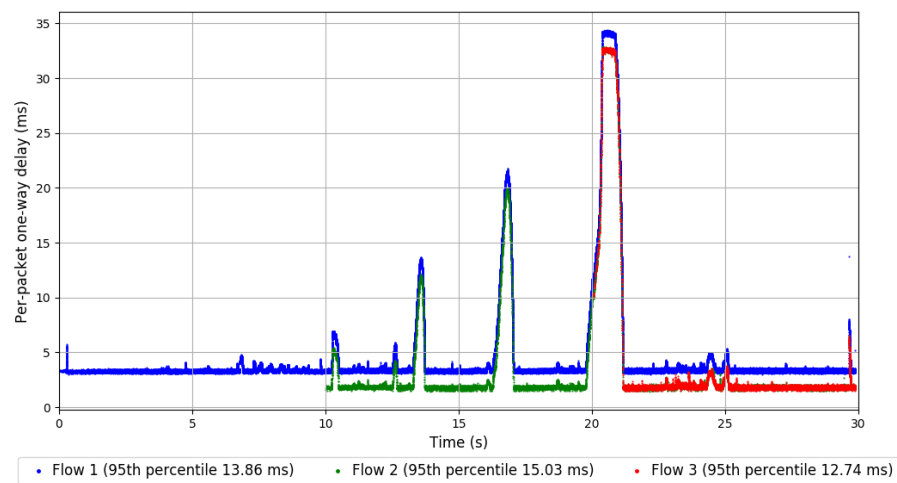
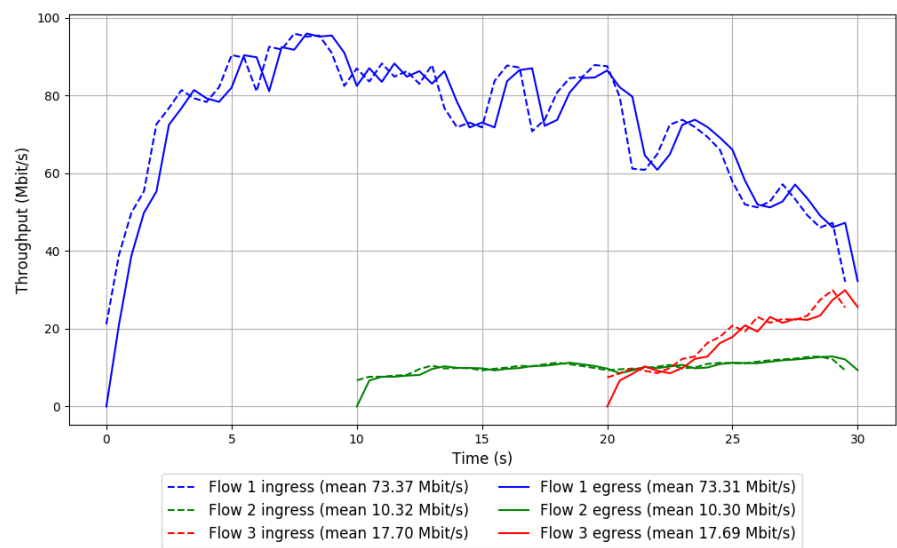
-- Flow 3:

Average throughput: 17.69 Mbit/s

95th percentile per-packet one-way delay: 12.737 ms

Loss rate: 0.12%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-04-24 01:55:37

End at: 2019-04-24 01:56:07

Local clock offset: -1.223 ms

Remote clock offset: 0.079 ms

Below is generated by plot.py at 2019-04-24 02:20:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.56 Mbit/s

95th percentile per-packet one-way delay: 6.174 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 55.57 Mbit/s

95th percentile per-packet one-way delay: 4.572 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 36.46 Mbit/s

95th percentile per-packet one-way delay: 7.931 ms

Loss rate: 0.00%

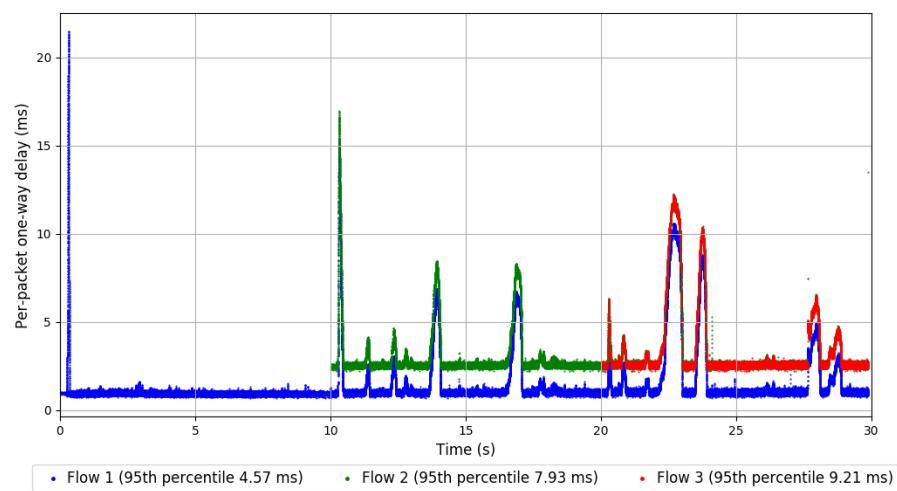
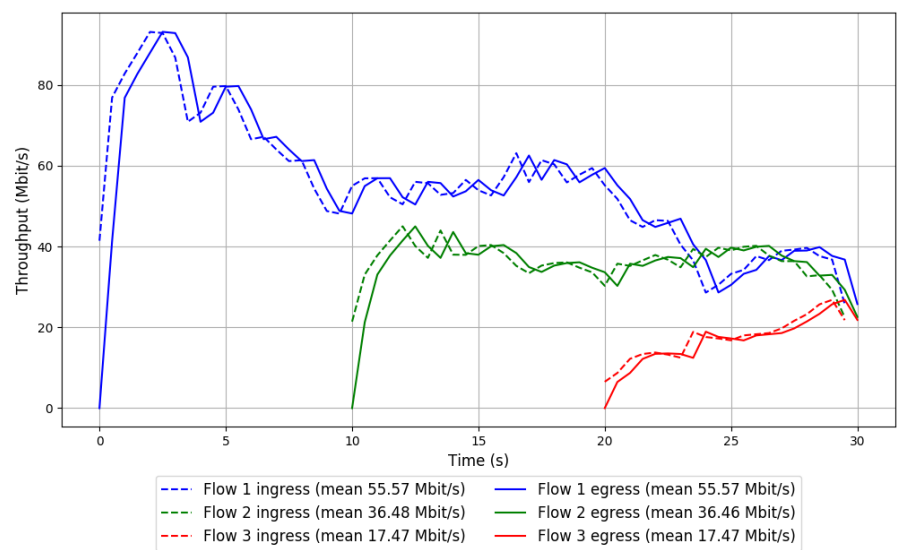
-- Flow 3:

Average throughput: 17.47 Mbit/s

95th percentile per-packet one-way delay: 9.210 ms

Loss rate: 0.03%

Run 5: Report of PCC-Allegro — Data Link

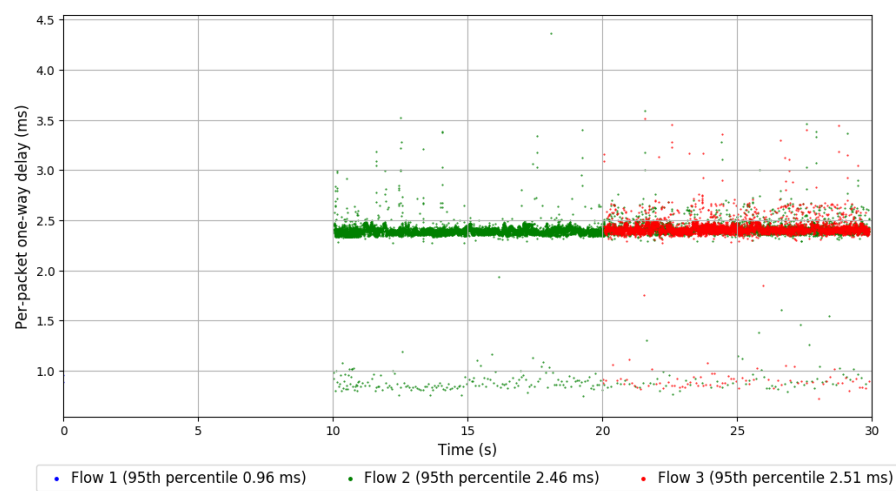
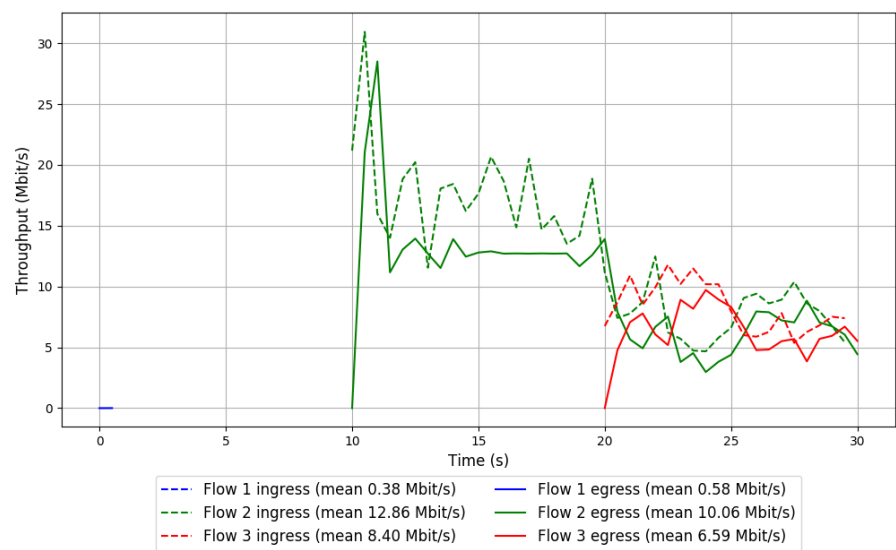



```
Run 1: Statistics of PCC-Expr

Start at: 2019-04-24 00:12:07
End at: 2019-04-24 00:12:37
Local clock offset: -0.929 ms
Remote clock offset: -0.073 ms

# Below is generated by plot.py at 2019-04-24 02:20:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.86 Mbit/s
95th percentile per-packet one-way delay: 2.469 ms
Loss rate: 21.74%
-- Flow 1:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 0.958 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 2.461 ms
Loss rate: 21.79%
-- Flow 3:
Average throughput: 6.59 Mbit/s
95th percentile per-packet one-way delay: 2.509 ms
Loss rate: 21.60%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-04-24 00:36:01

End at: 2019-04-24 00:36:31

Local clock offset: -1.924 ms

Remote clock offset: 0.025 ms

Below is generated by plot.py at 2019-04-24 02:20:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.86 Mbit/s

95th percentile per-packet one-way delay: 2.477 ms

Loss rate: 31.02%

-- Flow 1:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 2.435 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 11.03 Mbit/s

95th percentile per-packet one-way delay: 2.472 ms

Loss rate: 31.97%

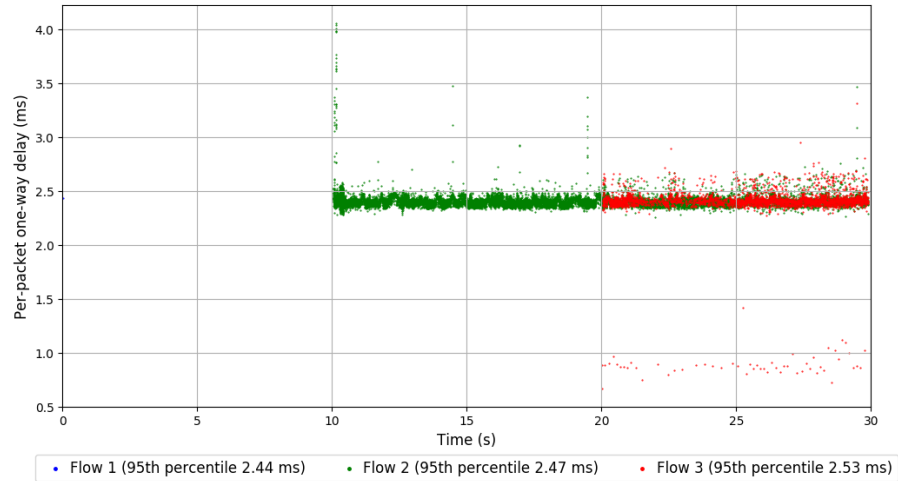
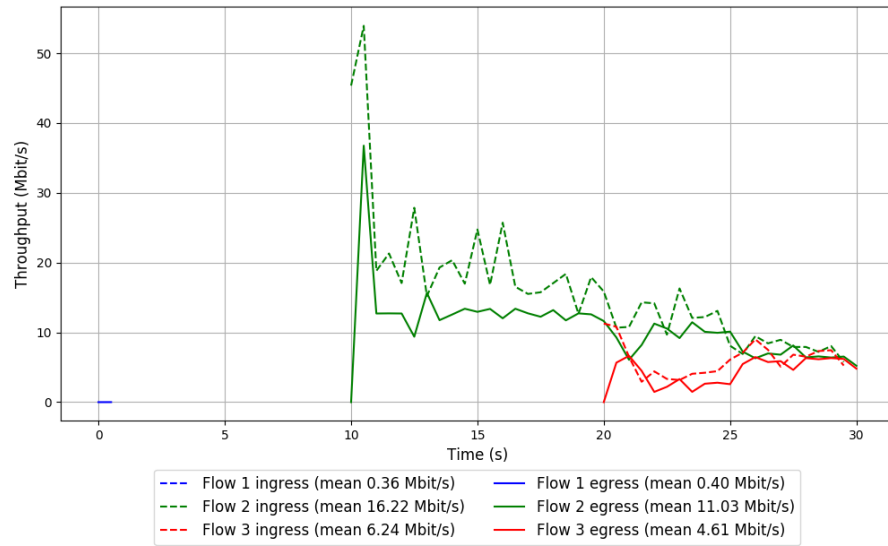
-- Flow 3:

Average throughput: 4.61 Mbit/s

95th percentile per-packet one-way delay: 2.534 ms

Loss rate: 26.03%

Run 2: Report of PCC-Expr — Data Link

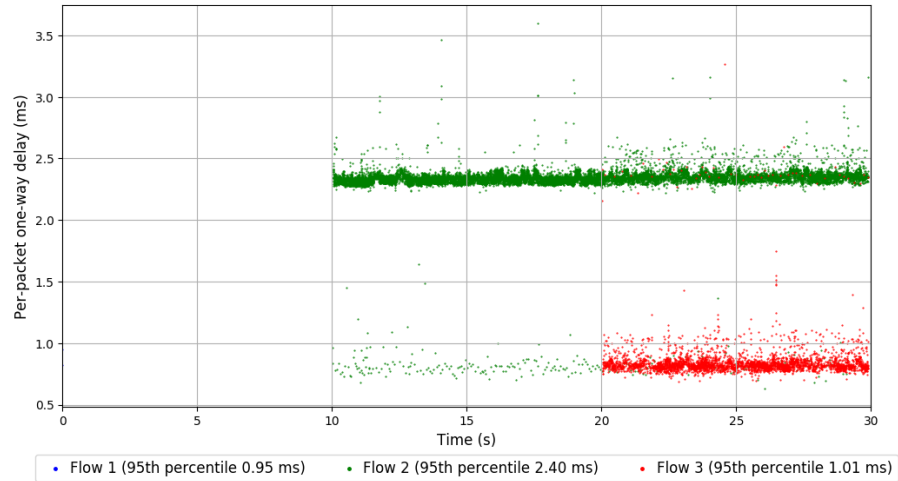
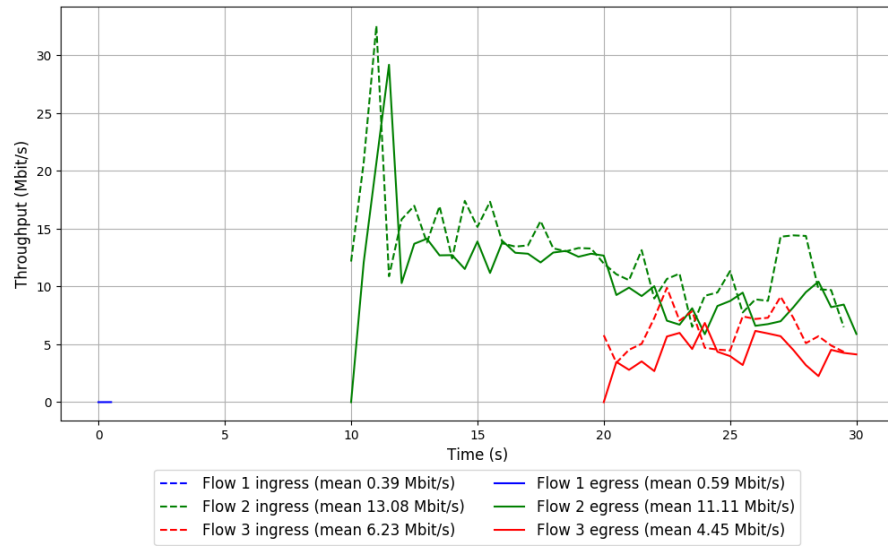


```
Run 3: Statistics of PCC-Expr

Start at: 2019-04-24 00:59:53
End at: 2019-04-24 01:00:23
Local clock offset: -0.929 ms
Remote clock offset: 0.0 ms

# Below is generated by plot.py at 2019-04-24 02:20:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.86 Mbit/s
95th percentile per-packet one-way delay: 2.400 ms
Loss rate: 17.66%
-- Flow 1:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 0.949 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 11.11 Mbit/s
95th percentile per-packet one-way delay: 2.404 ms
Loss rate: 15.08%
-- Flow 3:
Average throughput: 4.45 Mbit/s
95th percentile per-packet one-way delay: 1.009 ms
Loss rate: 28.55%
```

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-04-24 01:23:47

End at: 2019-04-24 01:24:17

Local clock offset: -2.157 ms

Remote clock offset: 0.15 ms

Below is generated by plot.py at 2019-04-24 02:20:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.86 Mbit/s

95th percentile per-packet one-way delay: 3.229 ms

Loss rate: 29.31%

-- Flow 1:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 3.284 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 9.54 Mbit/s

95th percentile per-packet one-way delay: 3.230 ms

Loss rate: 30.19%

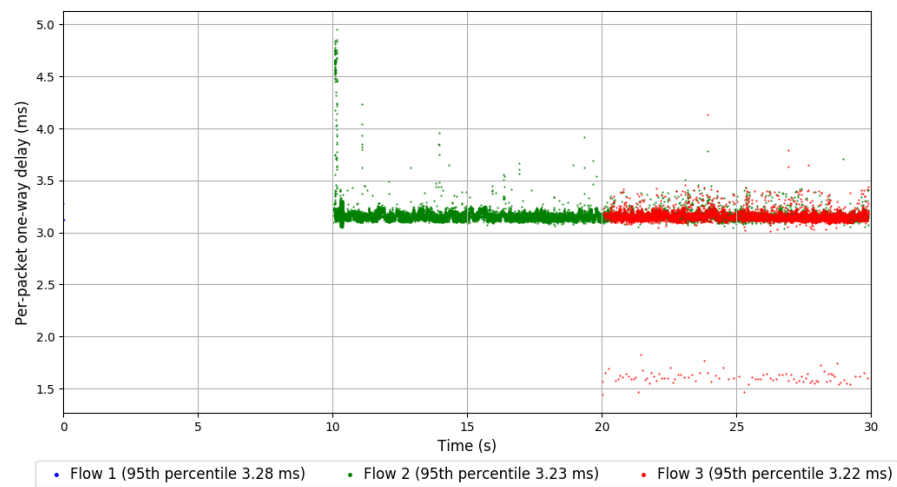
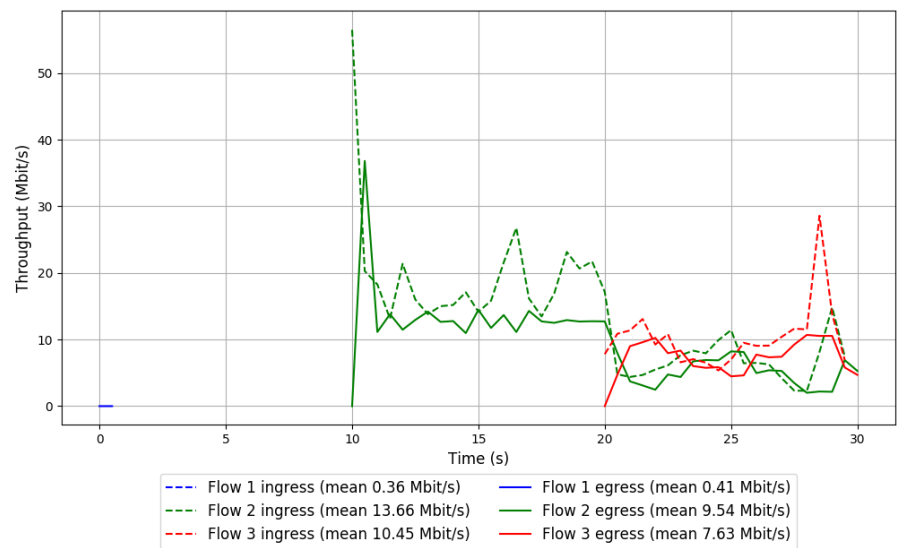
-- Flow 3:

Average throughput: 7.63 Mbit/s

95th percentile per-packet one-way delay: 3.223 ms

Loss rate: 26.99%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-04-24 01:47:39

End at: 2019-04-24 01:48:09

Local clock offset: -1.648 ms

Remote clock offset: 0.03 ms

Below is generated by plot.py at 2019-04-24 02:20:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.86 Mbit/s

95th percentile per-packet one-way delay: 2.478 ms

Loss rate: 25.00%

-- Flow 1:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 0.905 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 10.81 Mbit/s

95th percentile per-packet one-way delay: 2.470 ms

Loss rate: 24.51%

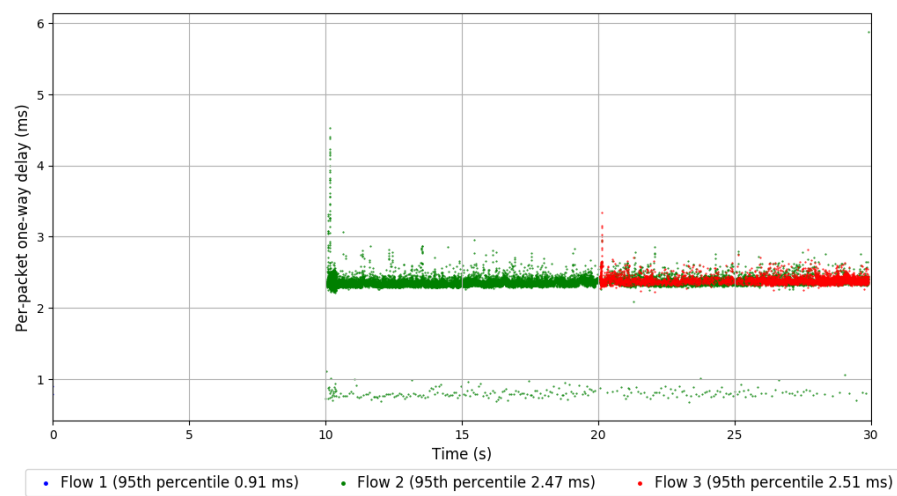
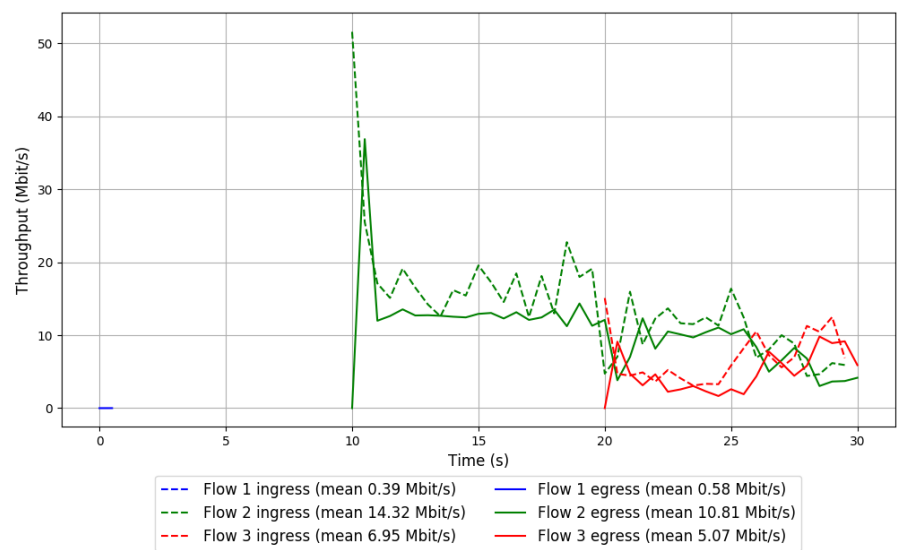
-- Flow 3:

Average throughput: 5.07 Mbit/s

95th percentile per-packet one-way delay: 2.507 ms

Loss rate: 27.02%

Run 5: Report of PCC-Expr — Data Link

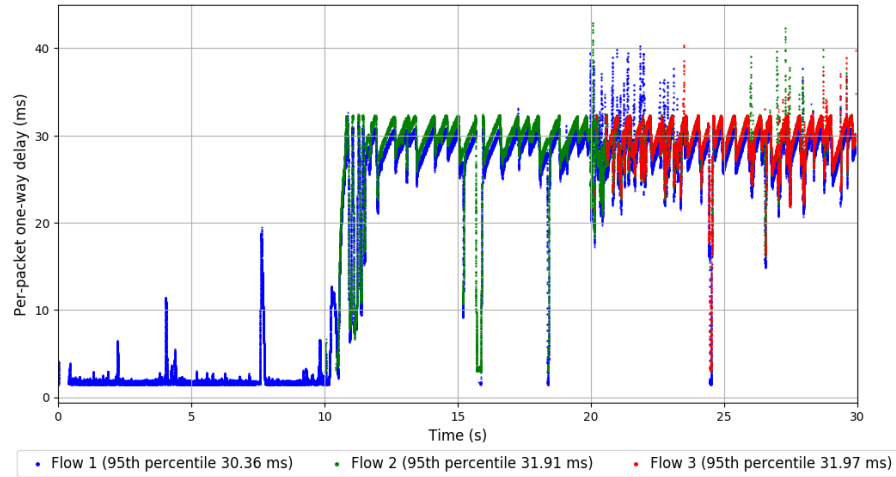
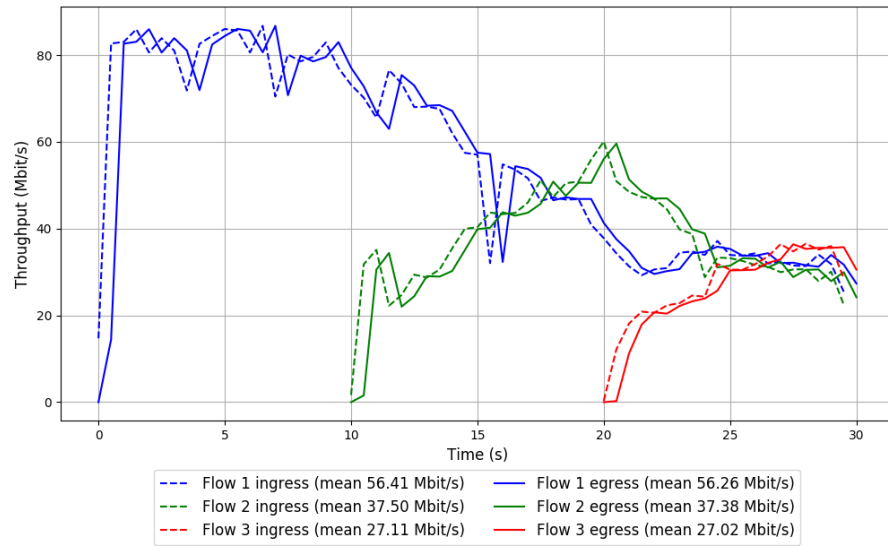


```
Run 1: Statistics of QUIC Cubic

Start at: 2019-04-24 00:31:23
End at: 2019-04-24 00:31:53
Local clock offset: -2.579 ms
Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2019-04-24 02:20:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.98 Mbit/s
95th percentile per-packet one-way delay: 31.625 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 56.26 Mbit/s
95th percentile per-packet one-way delay: 30.355 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 37.38 Mbit/s
95th percentile per-packet one-way delay: 31.907 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 27.02 Mbit/s
95th percentile per-packet one-way delay: 31.972 ms
Loss rate: 0.16%
```

Run 1: Report of QUIC Cubic — Data Link

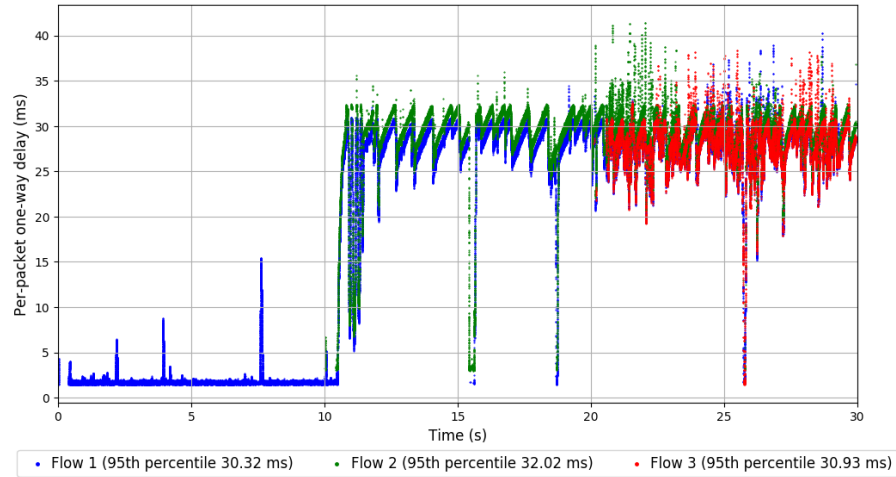
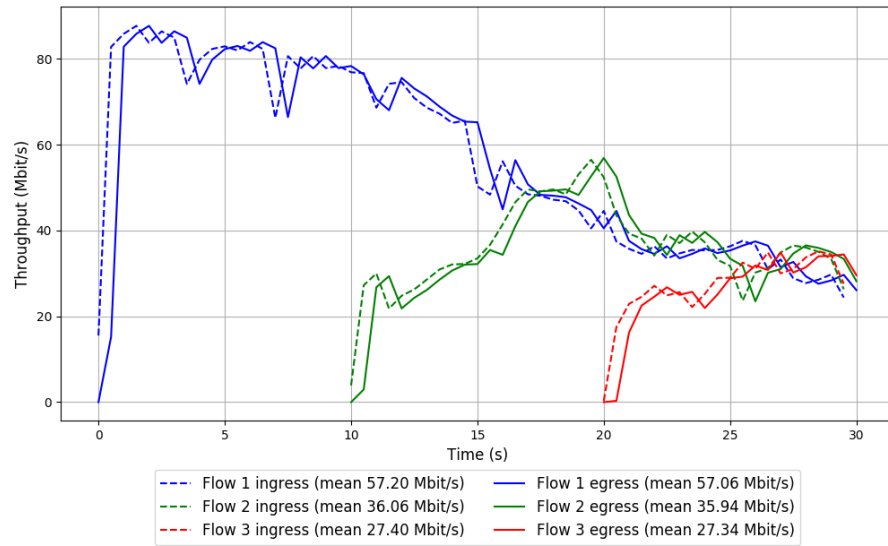


Run 2: Statistics of QUIC Cubic

Start at: 2019-04-24 00:55:16
End at: 2019-04-24 00:55:46
Local clock offset: -1.914 ms
Remote clock offset: -0.017 ms

Below is generated by plot.py at 2019-04-24 02:20:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 89.95 Mbit/s
95th percentile per-packet one-way delay: 31.519 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 57.06 Mbit/s
95th percentile per-packet one-way delay: 30.319 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 35.94 Mbit/s
95th percentile per-packet one-way delay: 32.015 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 27.34 Mbit/s
95th percentile per-packet one-way delay: 30.930 ms
Loss rate: 0.21%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-04-24 01:19:09

End at: 2019-04-24 01:19:39

Local clock offset: -1.852 ms

Remote clock offset: 0.083 ms

Below is generated by plot.py at 2019-04-24 02:20:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.13 Mbit/s

95th percentile per-packet one-way delay: 31.530 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 57.99 Mbit/s

95th percentile per-packet one-way delay: 31.725 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 34.36 Mbit/s

95th percentile per-packet one-way delay: 30.405 ms

Loss rate: 0.21%

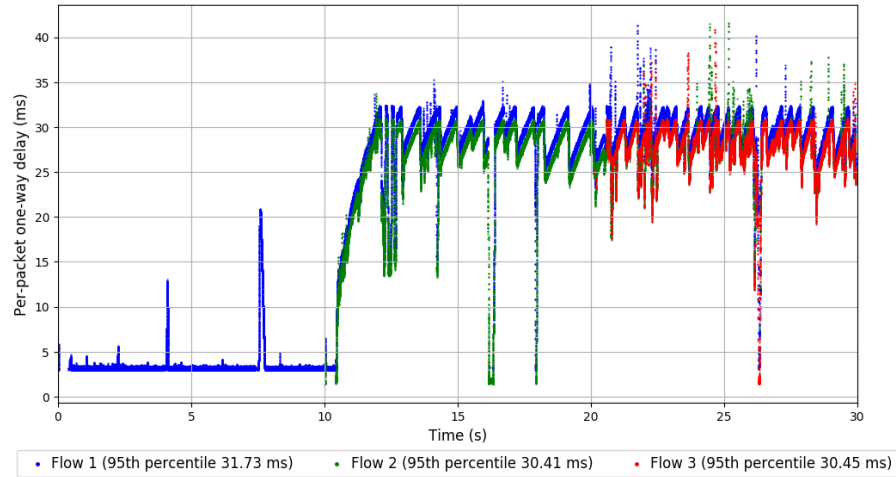
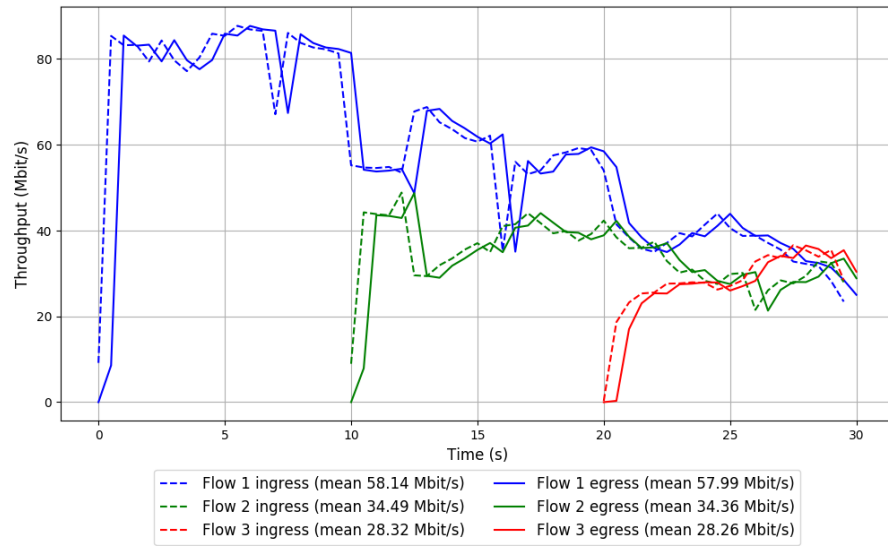
-- Flow 3:

Average throughput: 28.26 Mbit/s

95th percentile per-packet one-way delay: 30.451 ms

Loss rate: 0.20%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-04-24 01:43:01

End at: 2019-04-24 01:43:31

Local clock offset: -1.872 ms

Remote clock offset: 0.056 ms

Below is generated by plot.py at 2019-04-24 02:20:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.36 Mbit/s

95th percentile per-packet one-way delay: 31.183 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 56.35 Mbit/s

95th percentile per-packet one-way delay: 31.069 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 38.18 Mbit/s

95th percentile per-packet one-way delay: 31.305 ms

Loss rate: 0.15%

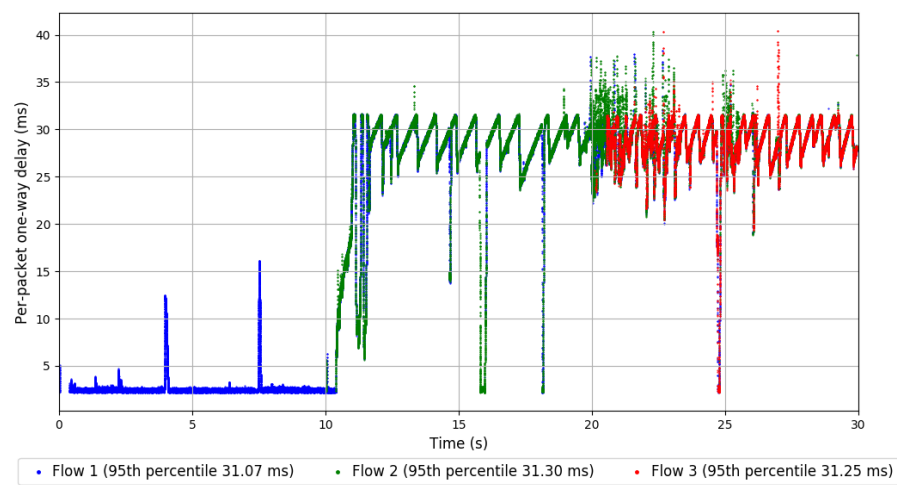
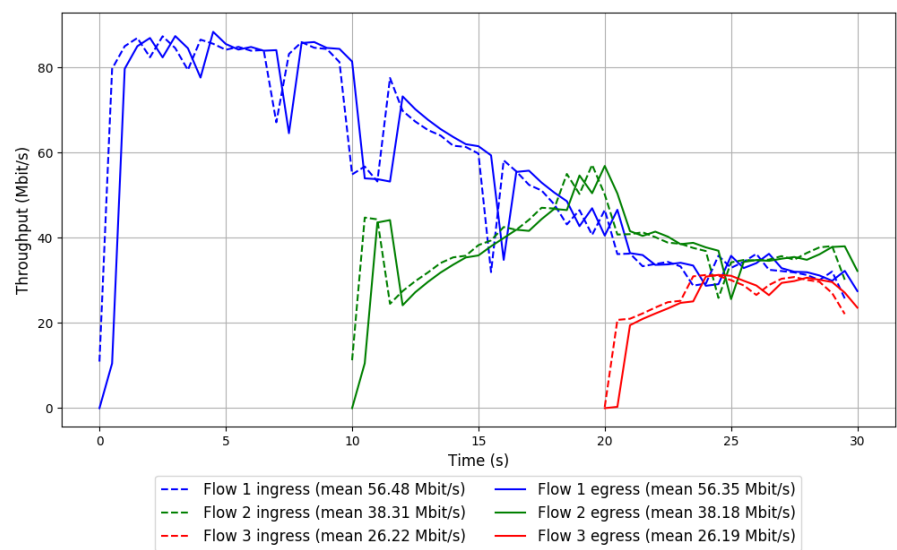
-- Flow 3:

Average throughput: 26.19 Mbit/s

95th percentile per-packet one-way delay: 31.252 ms

Loss rate: 0.13%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-04-24 02:06:54

End at: 2019-04-24 02:07:24

Local clock offset: -1.716 ms

Remote clock offset: 0.059 ms

Below is generated by plot.py at 2019-04-24 02:20:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.95 Mbit/s

95th percentile per-packet one-way delay: 31.576 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 58.59 Mbit/s

95th percentile per-packet one-way delay: 30.416 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 35.58 Mbit/s

95th percentile per-packet one-way delay: 32.111 ms

Loss rate: 0.19%

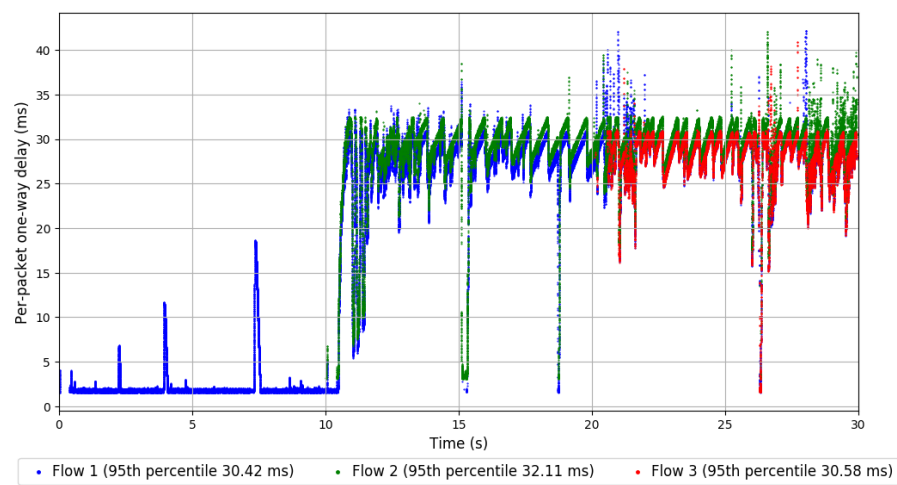
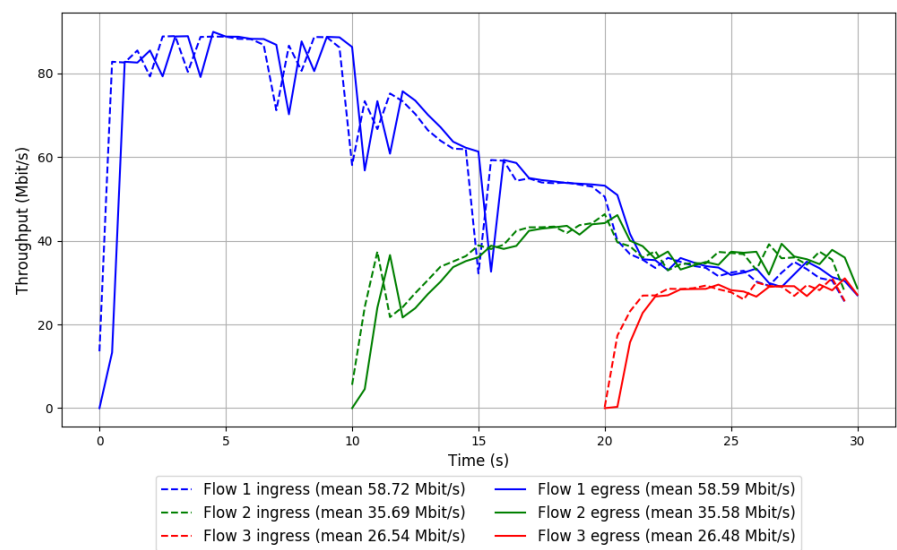
-- Flow 3:

Average throughput: 26.48 Mbit/s

95th percentile per-packet one-way delay: 30.578 ms

Loss rate: 0.23%

Run 5: Report of QUIC Cubic — Data Link

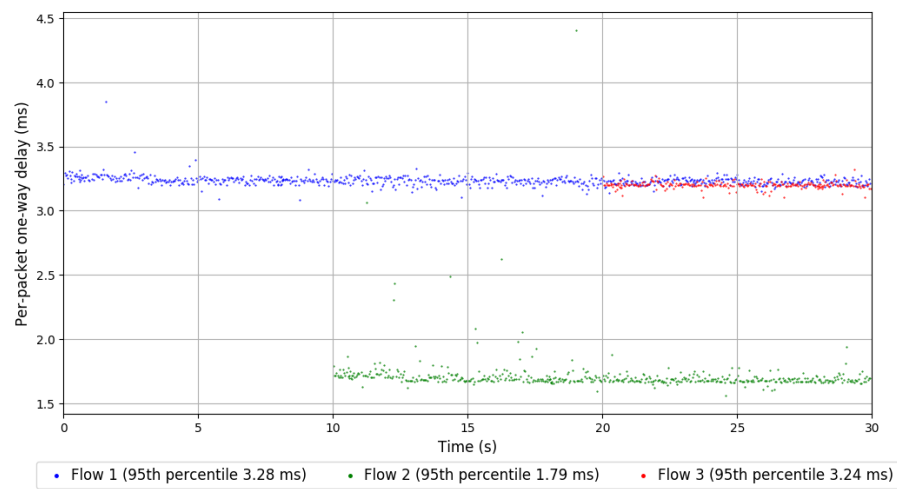
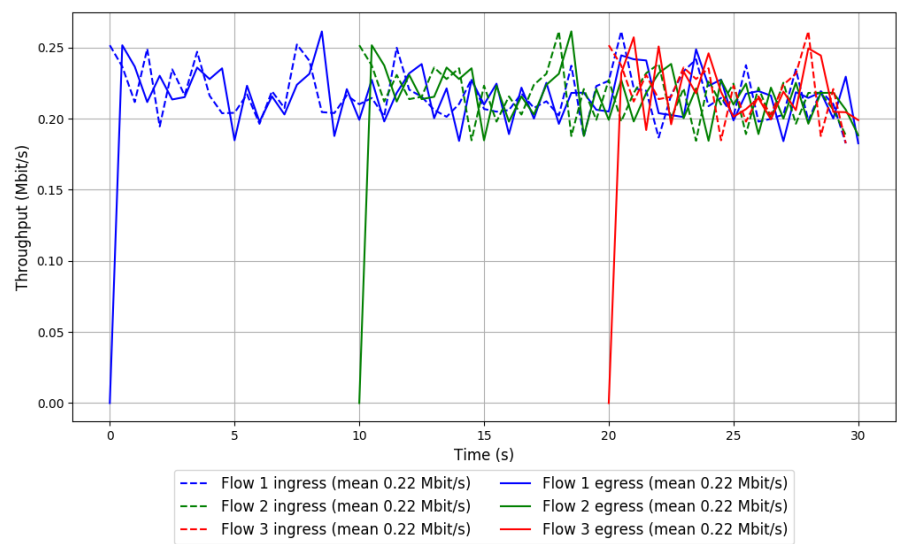


```
Run 1: Statistics of SReAM

Start at: 2019-04-24 00:30:18
End at: 2019-04-24 00:30:48
Local clock offset: -2.564 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2019-04-24 02:20:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 3.270 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.279 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.787 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.237 ms
Loss rate: 0.00%
```

Run 1: Report of SCRaM — Data Link

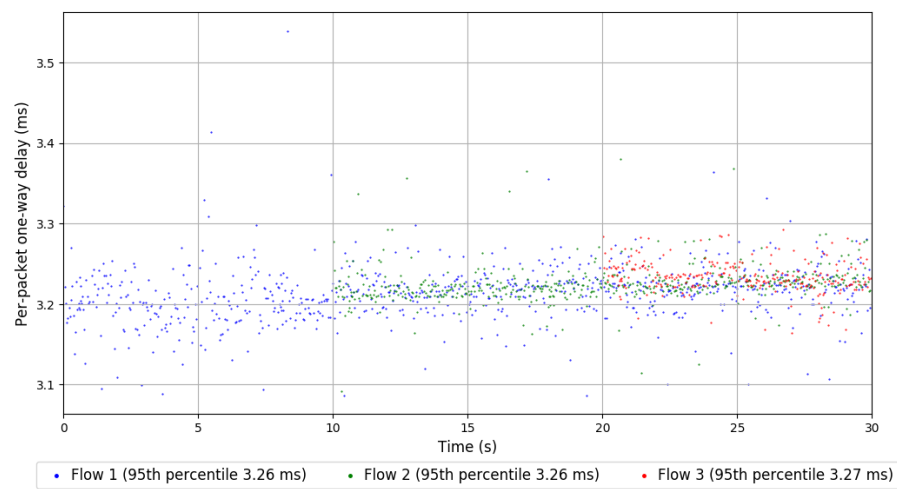
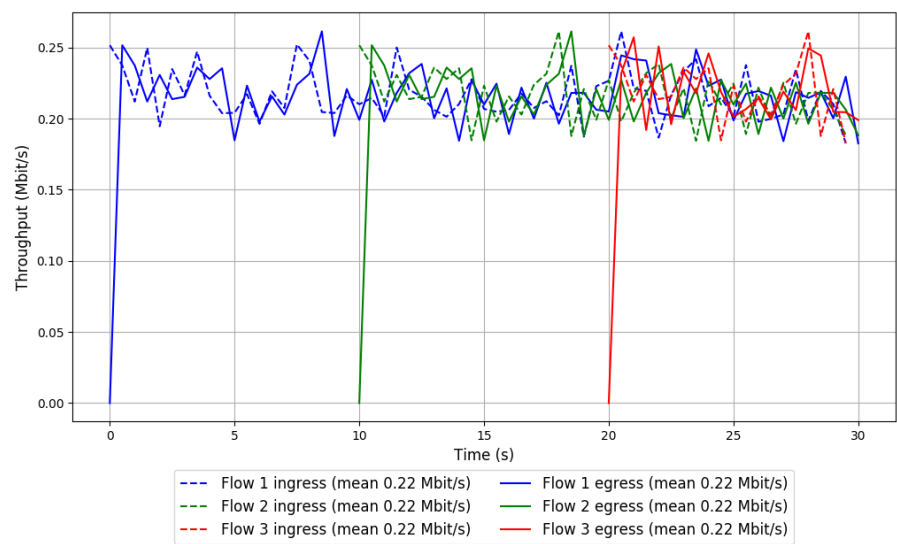


Run 2: Statistics of SReAM

Start at: 2019-04-24 00:54:10
End at: 2019-04-24 00:54:40
Local clock offset: -1.967 ms
Remote clock offset: 0.039 ms

Below is generated by plot.py at 2019-04-24 02:20:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 3.266 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.264 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.264 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.269 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

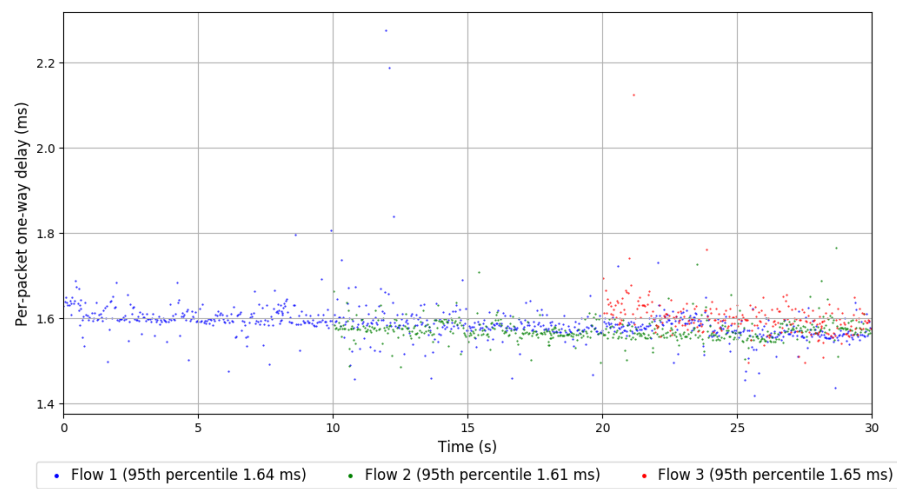
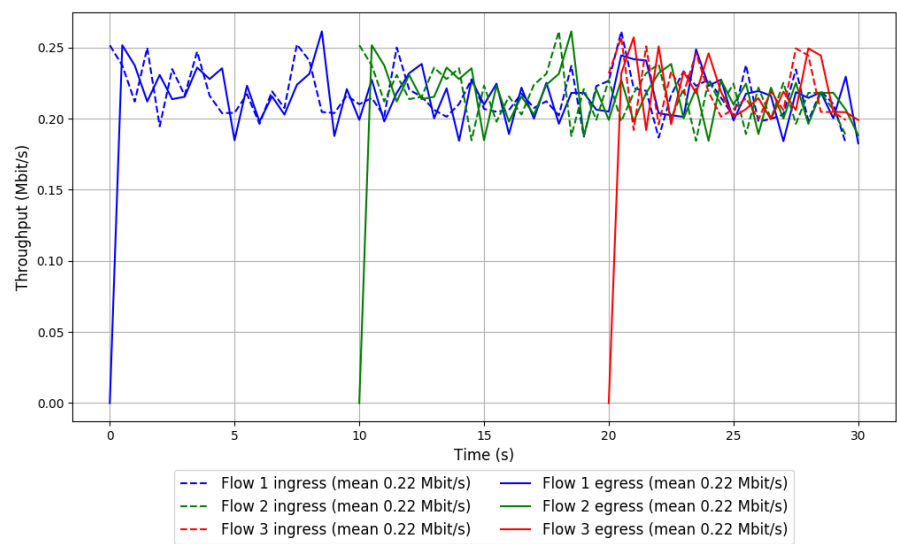


Run 3: Statistics of SReAM

Start at: 2019-04-24 01:18:04
End at: 2019-04-24 01:18:34
Local clock offset: -1.727 ms
Remote clock offset: 0.119 ms

Below is generated by plot.py at 2019-04-24 02:20:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.636 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.638 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.610 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.650 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

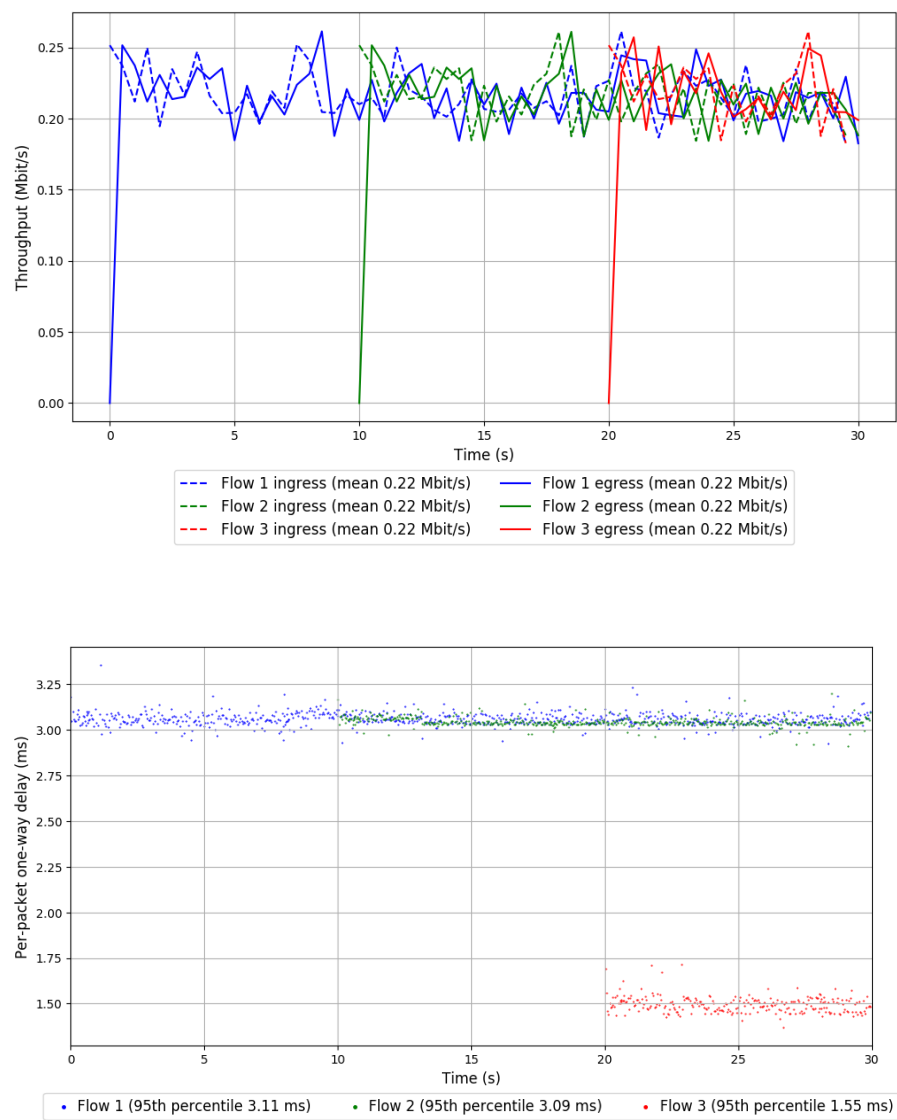


Run 4: Statistics of SReAM

Start at: 2019-04-24 01:41:56
End at: 2019-04-24 01:42:26
Local clock offset: -2.643 ms
Remote clock offset: -0.009 ms

Below is generated by plot.py at 2019-04-24 02:20:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 3.102 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.111 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.089 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.555 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2019-04-24 02:05:49

End at: 2019-04-24 02:06:19

Local clock offset: -1.692 ms

Remote clock offset: 0.117 ms

Below is generated by plot.py at 2019-04-24 02:20:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 3.269 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.776 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.754 ms

Loss rate: 0.00%

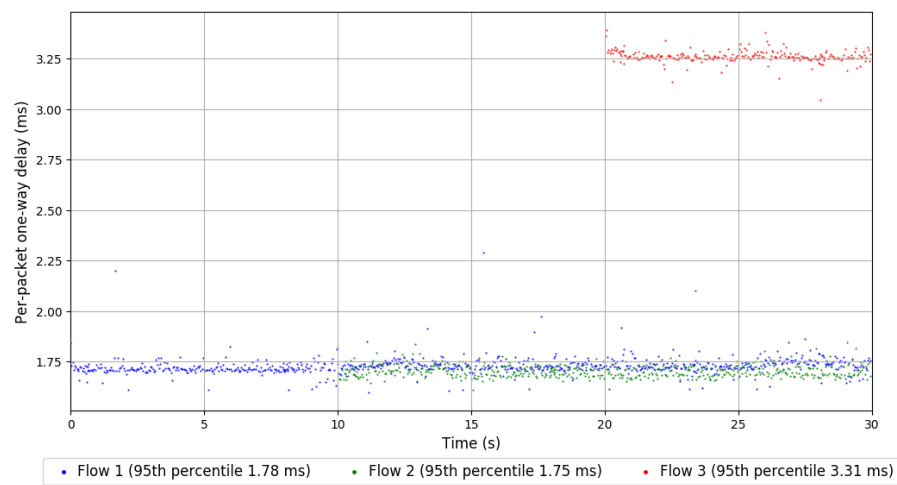
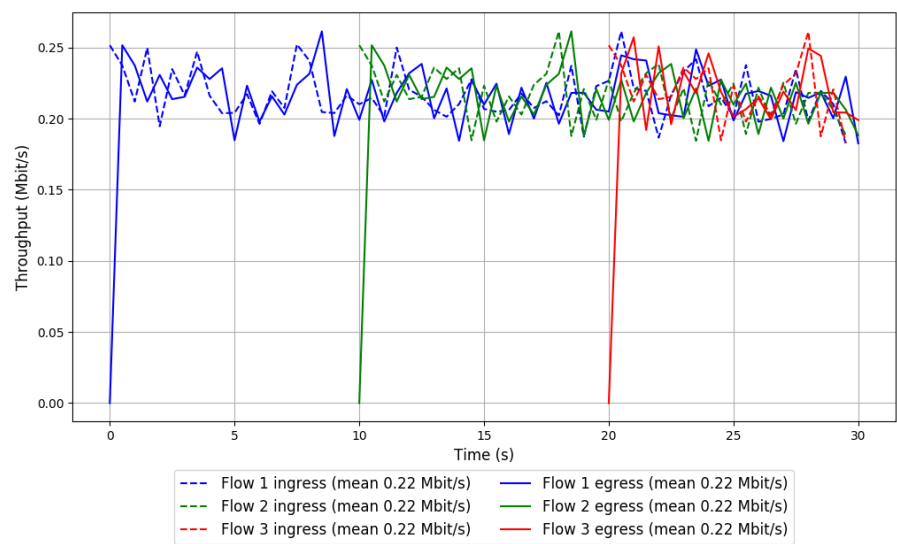
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 3.306 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-04-24 00:28:05

End at: 2019-04-24 00:28:35

Local clock offset: -1.711 ms

Remote clock offset: 0.008 ms

Below is generated by plot.py at 2019-04-24 02:20:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.77 Mbit/s

95th percentile per-packet one-way delay: 22.615 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 43.61 Mbit/s

95th percentile per-packet one-way delay: 20.229 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 37.78 Mbit/s

95th percentile per-packet one-way delay: 22.149 ms

Loss rate: 0.00%

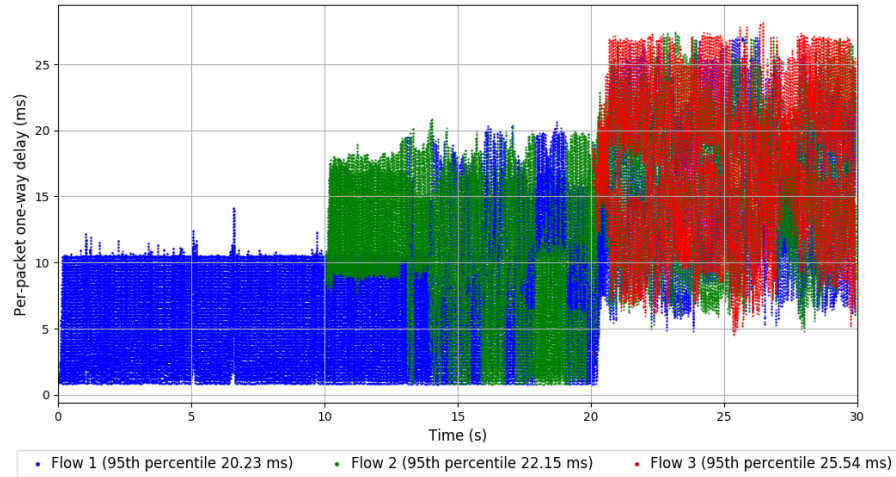
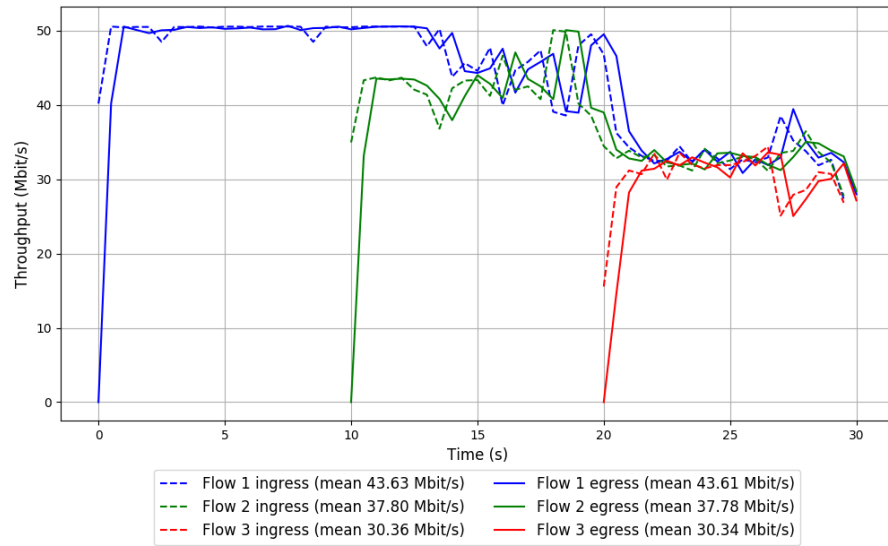
-- Flow 3:

Average throughput: 30.34 Mbit/s

95th percentile per-packet one-way delay: 25.540 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-04-24 00:51:58

End at: 2019-04-24 00:52:28

Local clock offset: -1.4 ms

Remote clock offset: 0.074 ms

Below is generated by plot.py at 2019-04-24 02:21:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 78.50 Mbit/s

95th percentile per-packet one-way delay: 22.307 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 43.35 Mbit/s

95th percentile per-packet one-way delay: 20.424 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 37.85 Mbit/s

95th percentile per-packet one-way delay: 22.187 ms

Loss rate: 0.00%

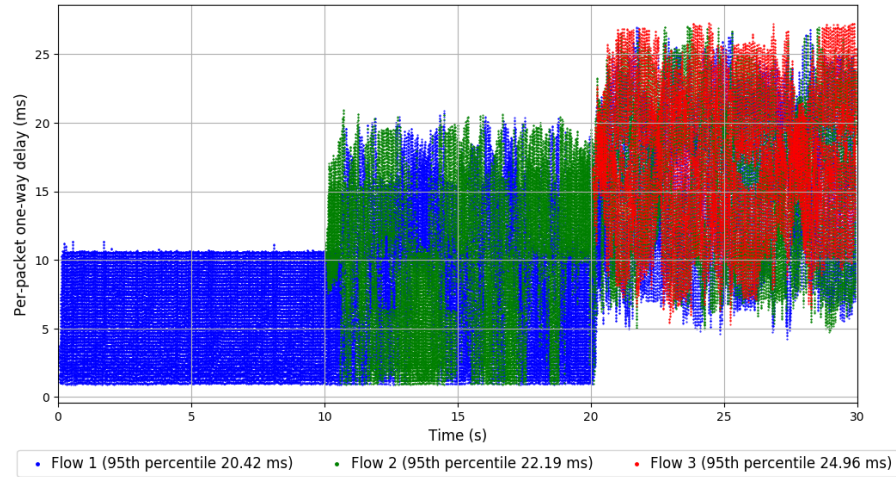
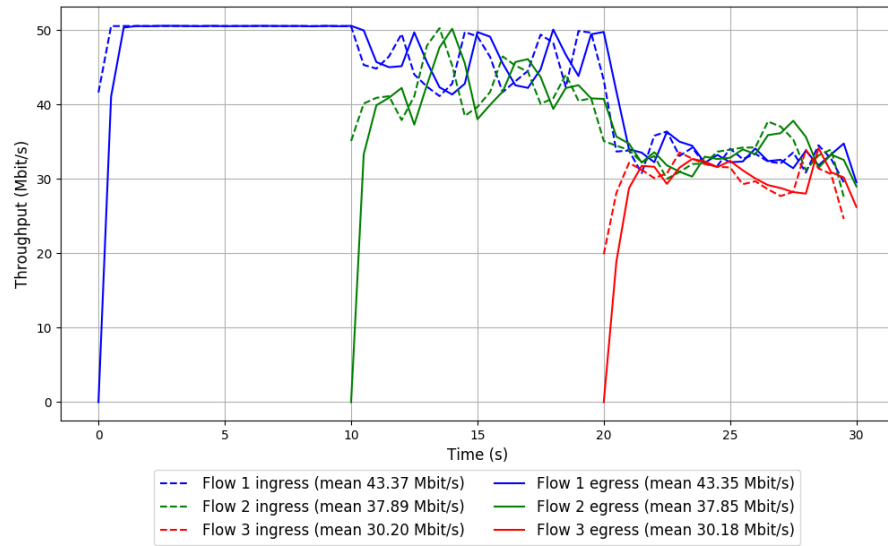
-- Flow 3:

Average throughput: 30.18 Mbit/s

95th percentile per-packet one-way delay: 24.962 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

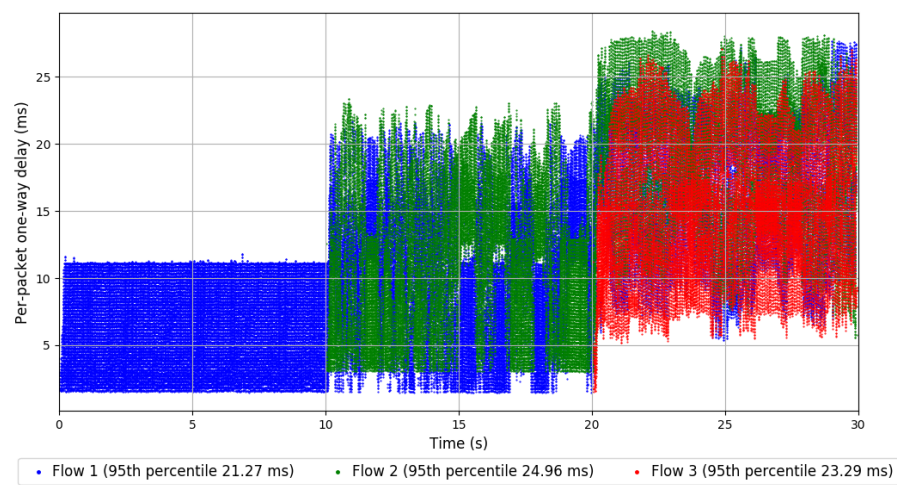
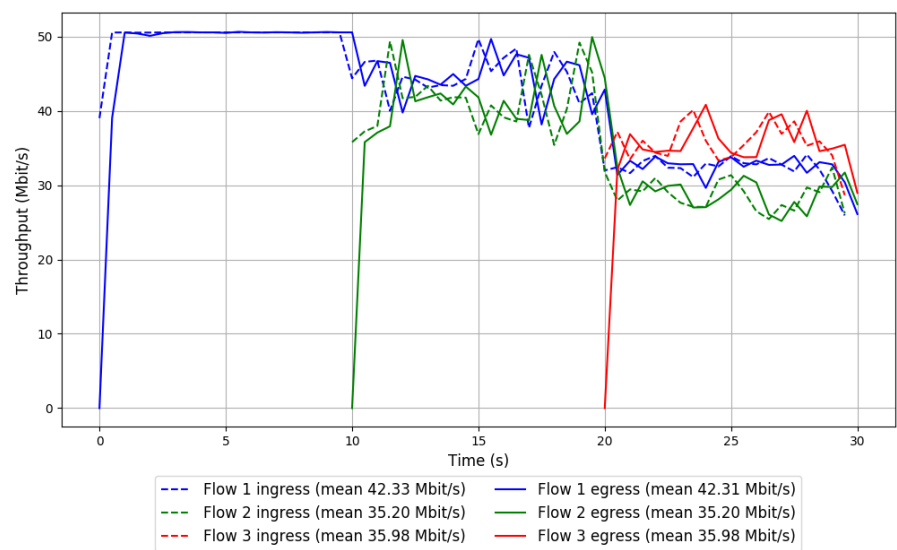


Run 3: Statistics of Sprout

Start at: 2019-04-24 01:15:52
End at: 2019-04-24 01:16:22
Local clock offset: -1.492 ms
Remote clock offset: 0.103 ms

```
# Below is generated by plot.py at 2019-04-24 02:21:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.61 Mbit/s
95th percentile per-packet one-way delay: 23.063 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 42.31 Mbit/s
95th percentile per-packet one-way delay: 21.275 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.20 Mbit/s
95th percentile per-packet one-way delay: 24.962 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 35.98 Mbit/s
95th percentile per-packet one-way delay: 23.293 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2019-04-24 01:39:43

End at: 2019-04-24 01:40:13

Local clock offset: -1.822 ms

Remote clock offset: 0.091 ms

Below is generated by plot.py at 2019-04-24 02:21:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.01 Mbit/s

95th percentile per-packet one-way delay: 21.953 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 42.06 Mbit/s

95th percentile per-packet one-way delay: 21.032 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 36.23 Mbit/s

95th percentile per-packet one-way delay: 22.151 ms

Loss rate: 0.00%

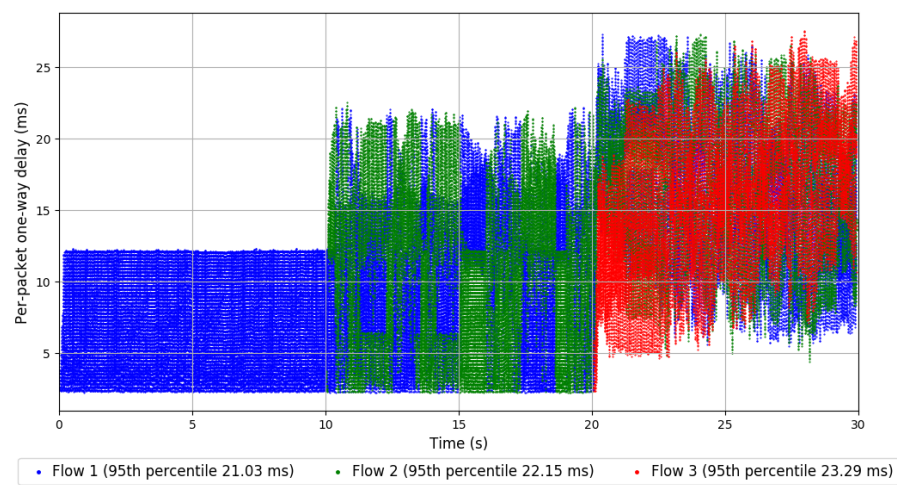
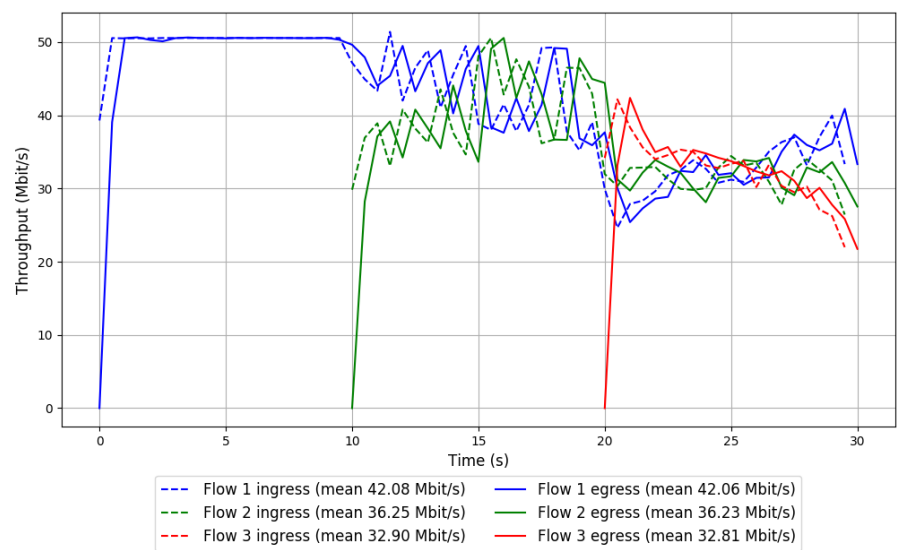
-- Flow 3:

Average throughput: 32.81 Mbit/s

95th percentile per-packet one-way delay: 23.293 ms

Loss rate: 0.20%

Run 4: Report of Sprout — Data Link

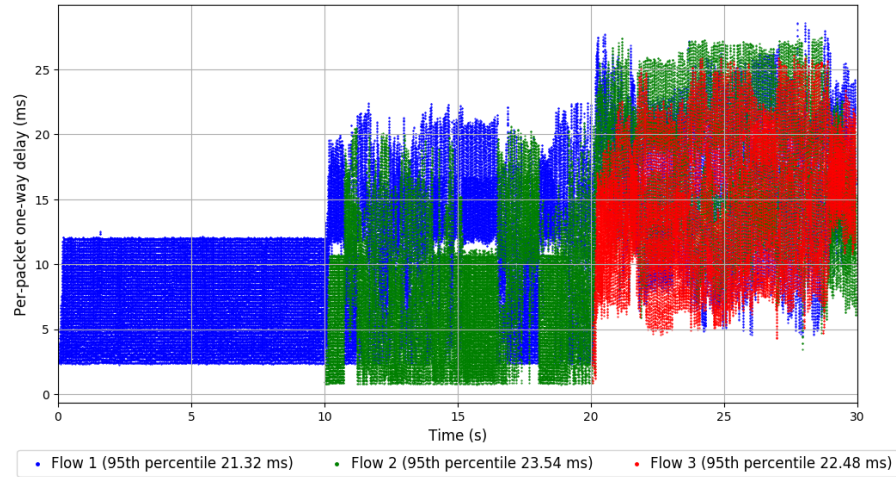
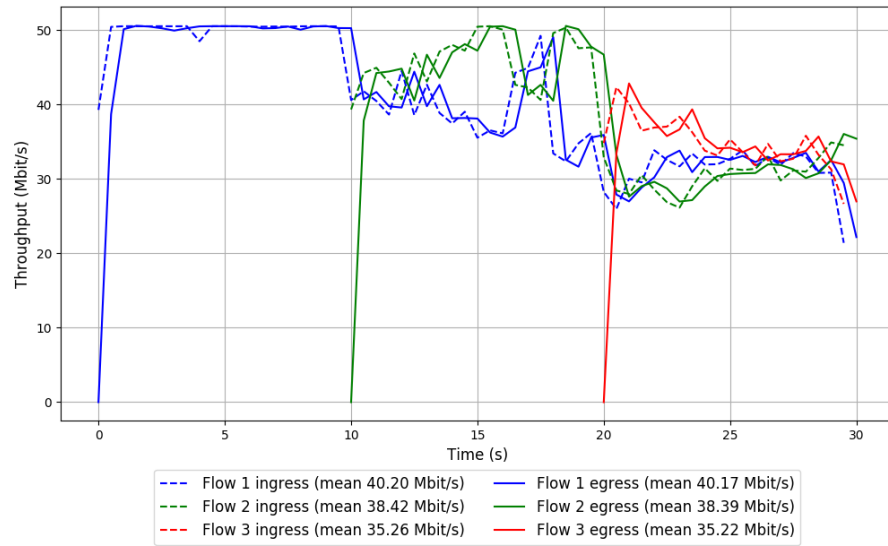


Run 5: Statistics of Sprout

Start at: 2019-04-24 02:03:36
End at: 2019-04-24 02:04:06
Local clock offset: -0.939 ms
Remote clock offset: 0.091 ms

```
# Below is generated by plot.py at 2019-04-24 02:21:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.37 Mbit/s
95th percentile per-packet one-way delay: 22.265 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 40.17 Mbit/s
95th percentile per-packet one-way delay: 21.323 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 38.39 Mbit/s
95th percentile per-packet one-way delay: 23.543 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 35.22 Mbit/s
95th percentile per-packet one-way delay: 22.477 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

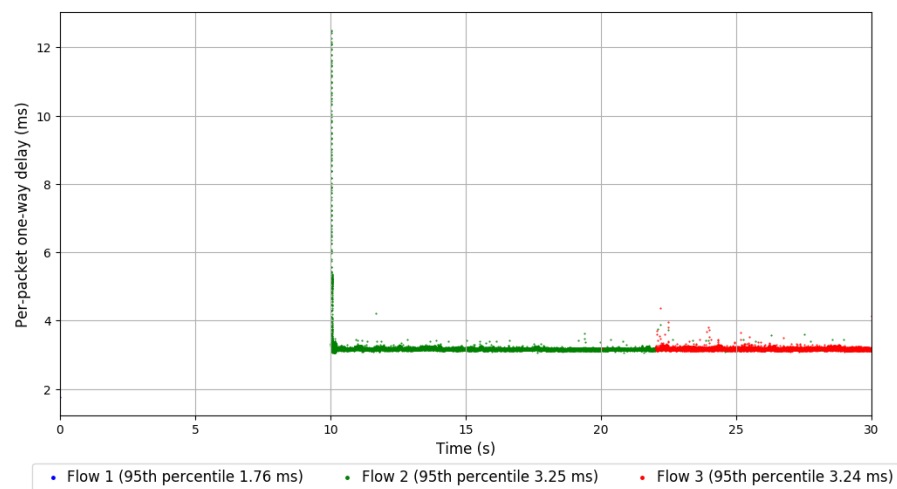
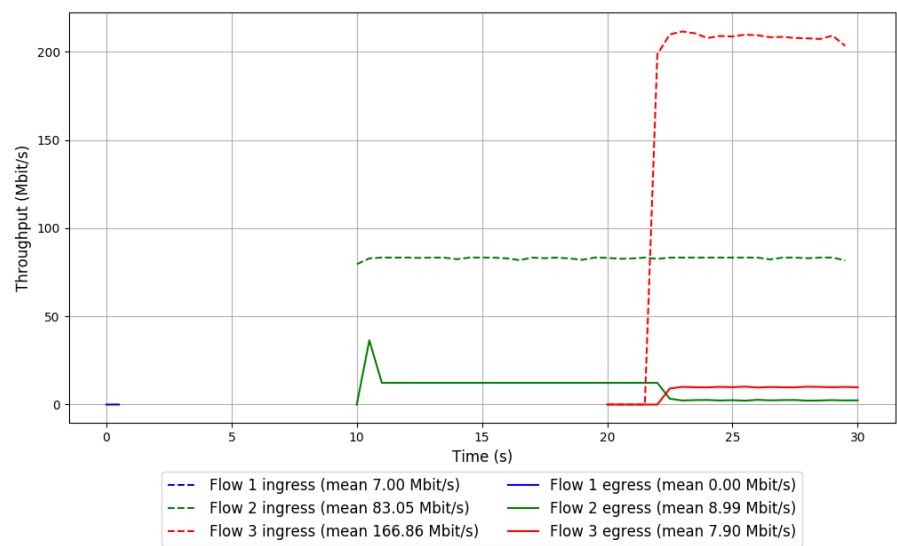



```
Run 1: Statistics of TaoVA-100x

Start at: 2019-04-24 00:22:23
End at: 2019-04-24 00:22:53
Local clock offset: -2.238 ms
Remote clock offset: 0.016 ms

# Below is generated by plot.py at 2019-04-24 02:21:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 3.247 ms
Loss rate: 92.22%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.761 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 8.99 Mbit/s
95th percentile per-packet one-way delay: 3.249 ms
Loss rate: 89.17%
-- Flow 3:
Average throughput: 7.90 Mbit/s
95th percentile per-packet one-way delay: 3.242 ms
Loss rate: 95.27%
```

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

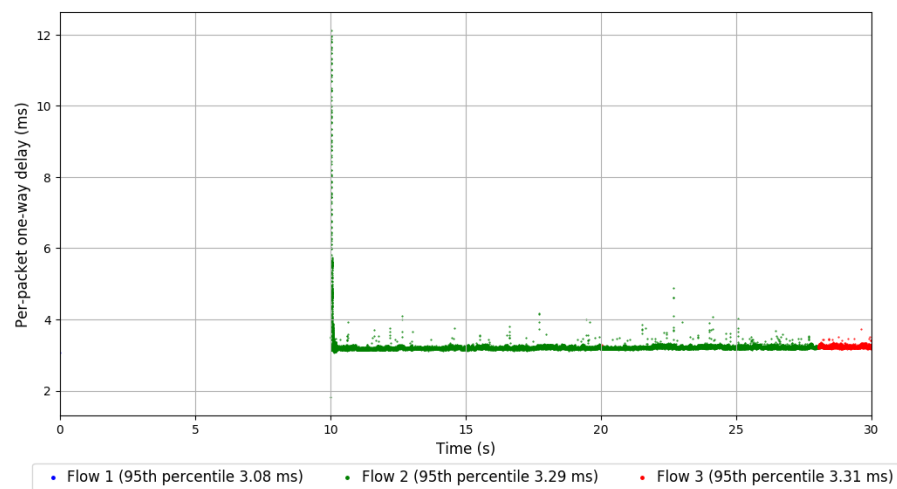
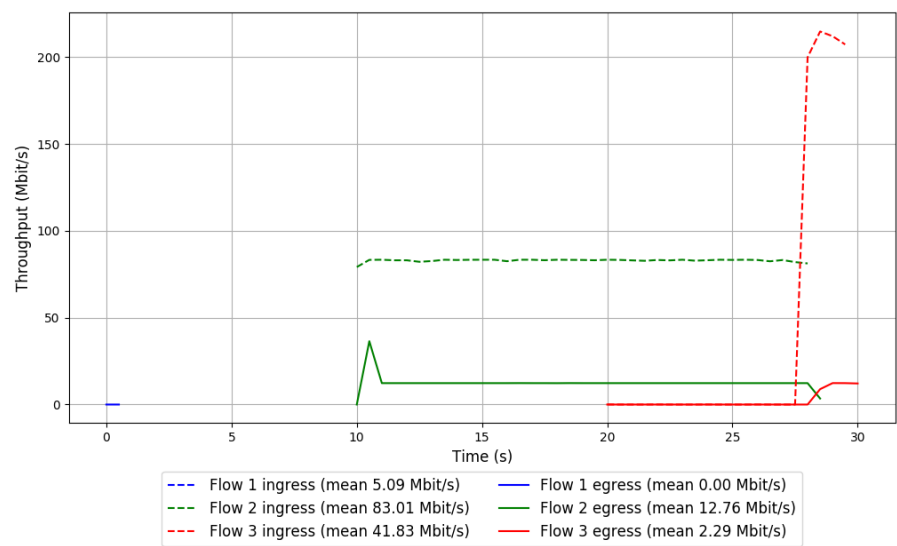


Run 2: Statistics of TaoVA-100x

Start at: 2019-04-24 00:46:16
End at: 2019-04-24 00:46:46
Local clock offset: -2.682 ms
Remote clock offset: -0.022 ms

Below is generated by plot.py at 2019-04-24 02:21:40
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 3.292 ms
Loss rate: 86.75%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 3.077 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 12.76 Mbit/s
95th percentile per-packet one-way delay: 3.289 ms
Loss rate: 84.64%
-- Flow 3:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 3.307 ms
Loss rate: 94.53%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-04-24 01:10:11

End at: 2019-04-24 01:10:41

Local clock offset: -1.473 ms

Remote clock offset: 0.128 ms

Below is generated by plot.py at 2019-04-24 02:21:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.10 Mbit/s

95th percentile per-packet one-way delay: 3.300 ms

Loss rate: 80.02%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 3.328 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 4.15 Mbit/s

95th percentile per-packet one-way delay: 3.446 ms

Loss rate: 65.05%

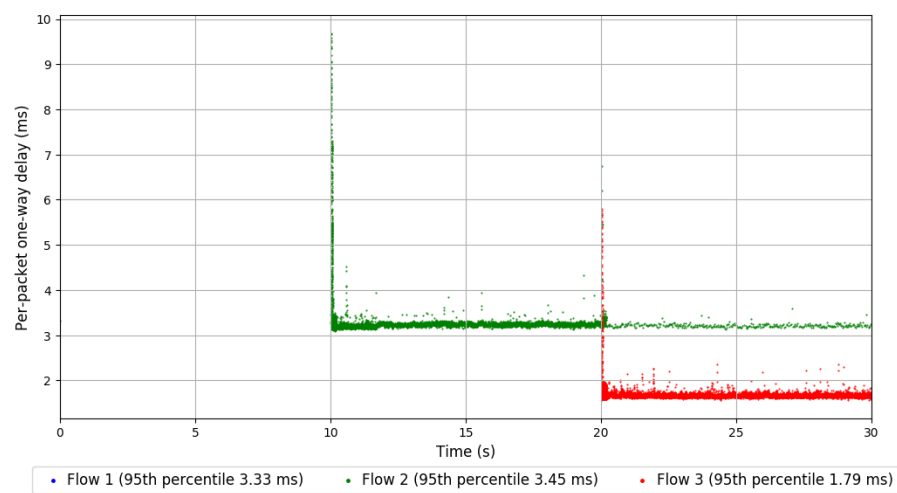
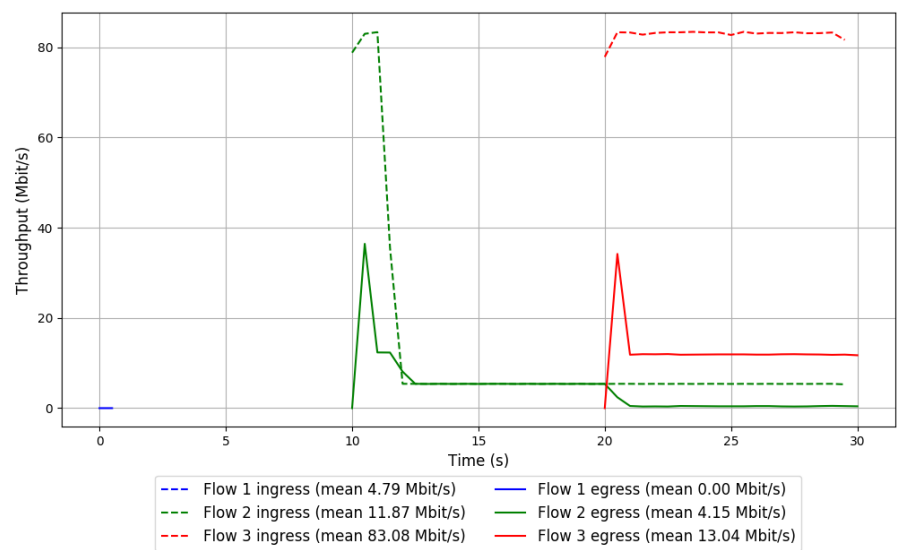
-- Flow 3:

Average throughput: 13.04 Mbit/s

95th percentile per-packet one-way delay: 1.792 ms

Loss rate: 84.30%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-04-24 01:34:02

End at: 2019-04-24 01:34:32

Local clock offset: -2.509 ms

Remote clock offset: 0.04 ms

Below is generated by plot.py at 2019-04-24 02:21:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.10 Mbit/s

95th percentile per-packet one-way delay: 3.241 ms

Loss rate: 80.04%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 3.230 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 4.14 Mbit/s

95th percentile per-packet one-way delay: 3.374 ms

Loss rate: 65.26%

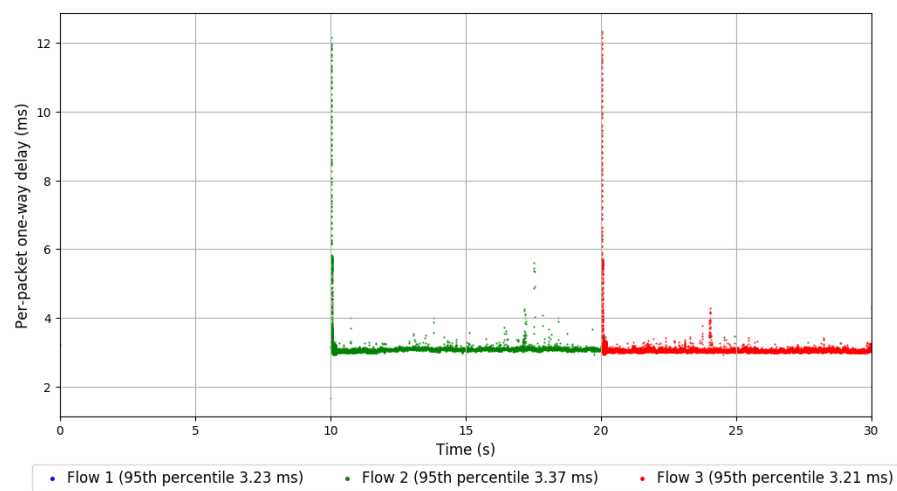
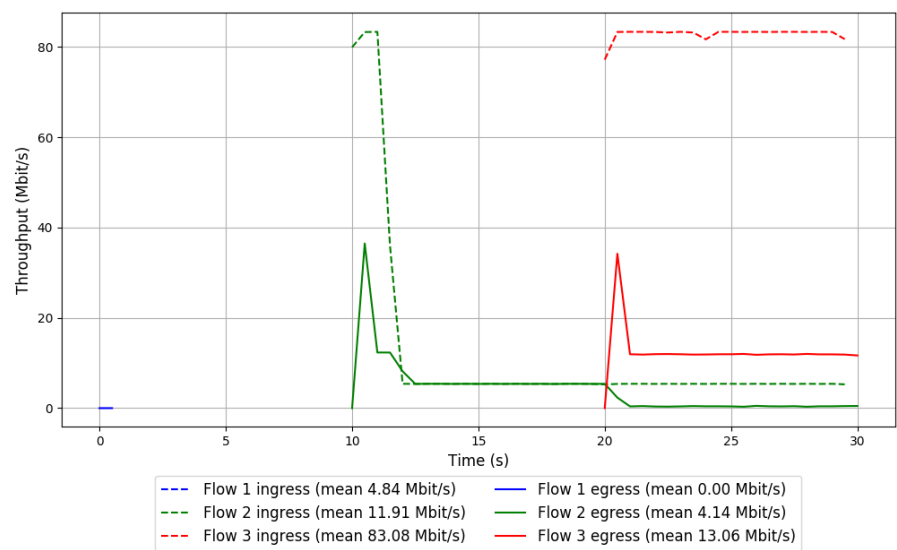
-- Flow 3:

Average throughput: 13.06 Mbit/s

95th percentile per-packet one-way delay: 3.207 ms

Loss rate: 84.28%

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-04-24 01:57:54

End at: 2019-04-24 01:58:24

Local clock offset: -1.143 ms

Remote clock offset: 0.136 ms

Below is generated by plot.py at 2019-04-24 02:21:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.62 Mbit/s

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

Loss rate: 91.12%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.018 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 10.00 Mbit/s

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

Loss rate: 87.97%

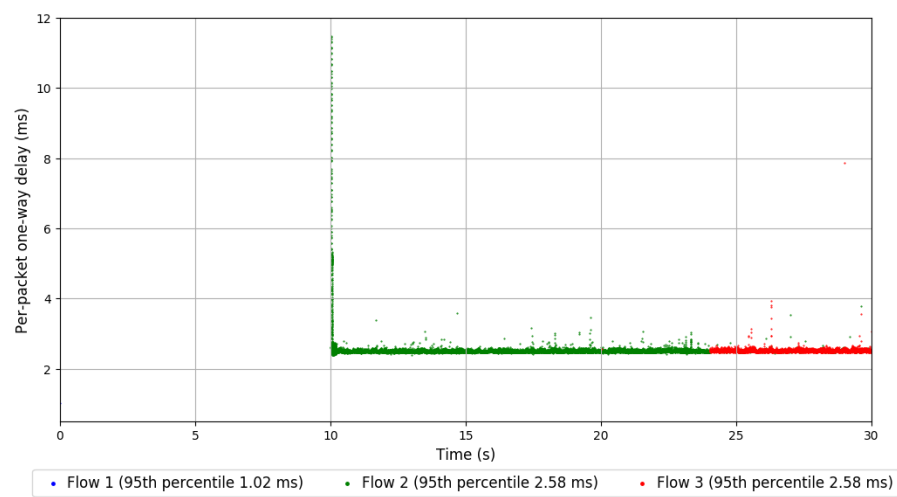
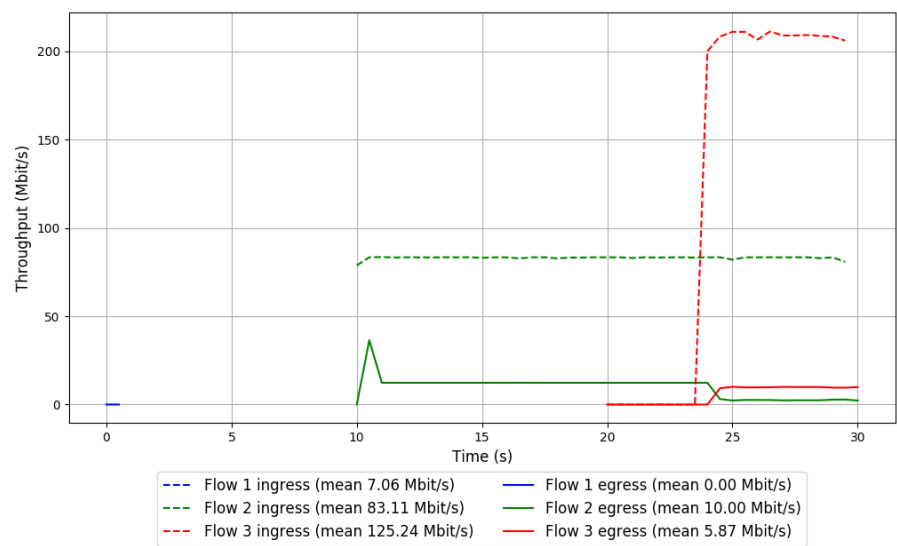
-- Flow 3:

Average throughput: 5.87 Mbit/s

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

Loss rate: 95.31%

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

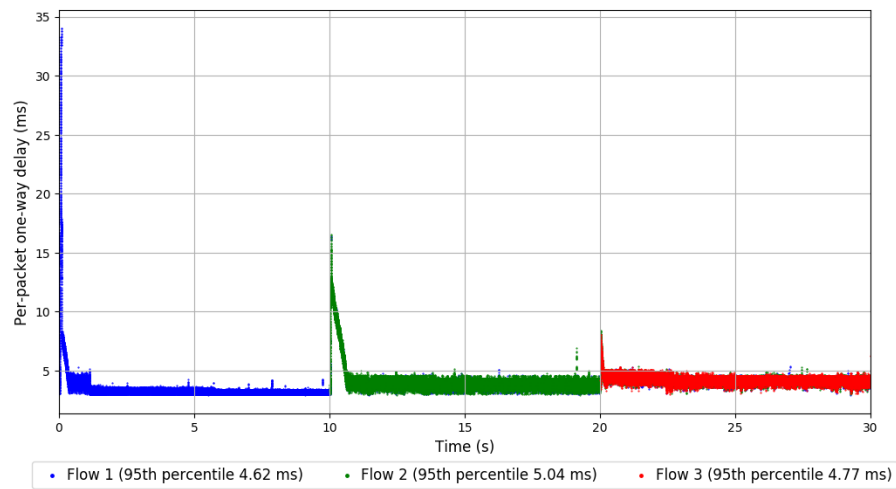
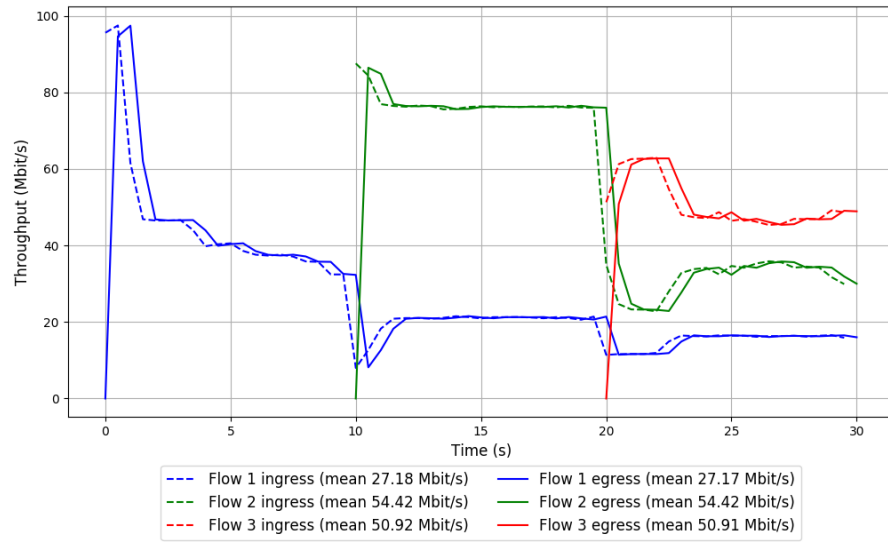


Run 1: Statistics of TCP Vegas

Start at: 2019-04-24 00:21:15
End at: 2019-04-24 00:21:45
Local clock offset: -2.18 ms
Remote clock offset: -0.118 ms

Below is generated by plot.py at 2019-04-24 02:21:59
Datalink statistics
-- Total of 3 flows:
Average throughput: 80.35 Mbit/s
95th percentile per-packet one-way delay: 4.792 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 27.17 Mbit/s
95th percentile per-packet one-way delay: 4.616 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 54.42 Mbit/s
95th percentile per-packet one-way delay: 5.045 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 50.91 Mbit/s
95th percentile per-packet one-way delay: 4.770 ms
Loss rate: 0.02%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-04-24 00:45:07

End at: 2019-04-24 00:45:37

Local clock offset: -2.093 ms

Remote clock offset: 0.009 ms

Below is generated by plot.py at 2019-04-24 02:22:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.11 Mbit/s

95th percentile per-packet one-way delay: 2.513 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 53.89 Mbit/s

95th percentile per-packet one-way delay: 2.445 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 42.18 Mbit/s

95th percentile per-packet one-way delay: 2.524 ms

Loss rate: 0.00%

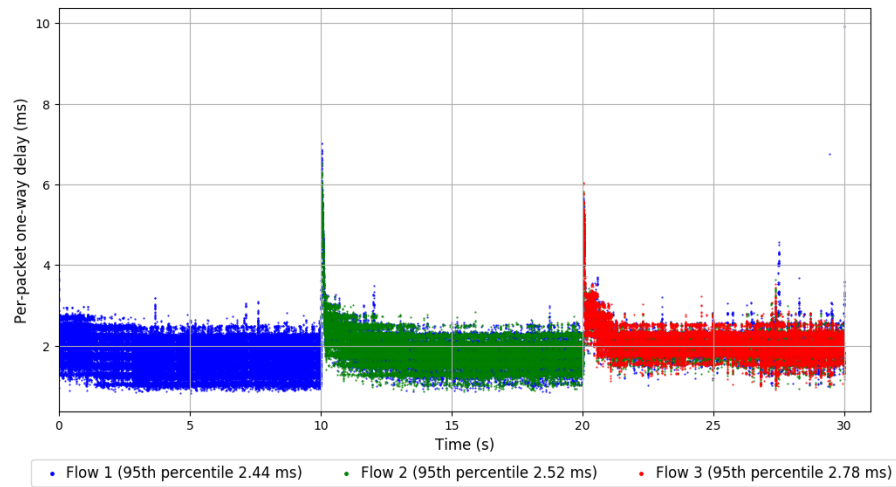
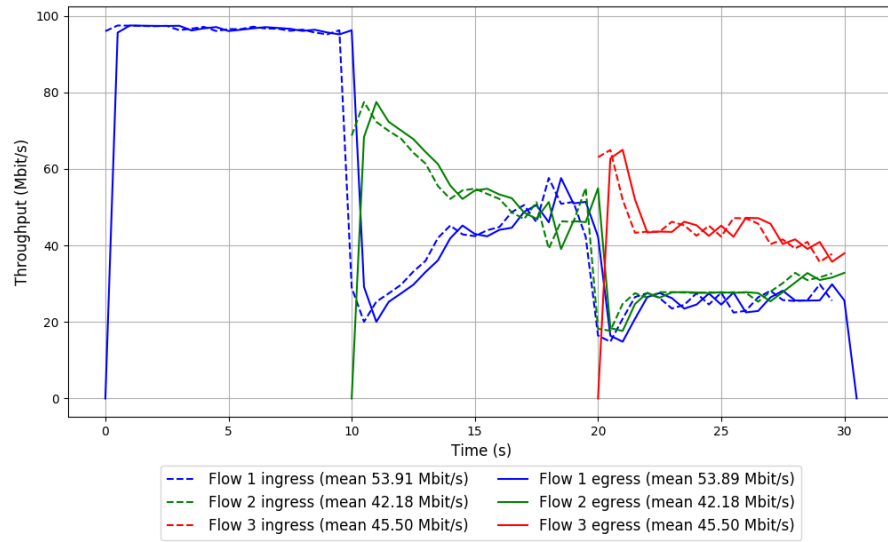
-- Flow 3:

Average throughput: 45.50 Mbit/s

95th percentile per-packet one-way delay: 2.784 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-04-24 01:09:02

End at: 2019-04-24 01:09:32

Local clock offset: -0.706 ms

Remote clock offset: 0.129 ms

Below is generated by plot.py at 2019-04-24 02:22:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.03 Mbit/s

95th percentile per-packet one-way delay: 4.209 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 52.98 Mbit/s

95th percentile per-packet one-way delay: 3.189 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 35.81 Mbit/s

95th percentile per-packet one-way delay: 4.485 ms

Loss rate: 0.01%

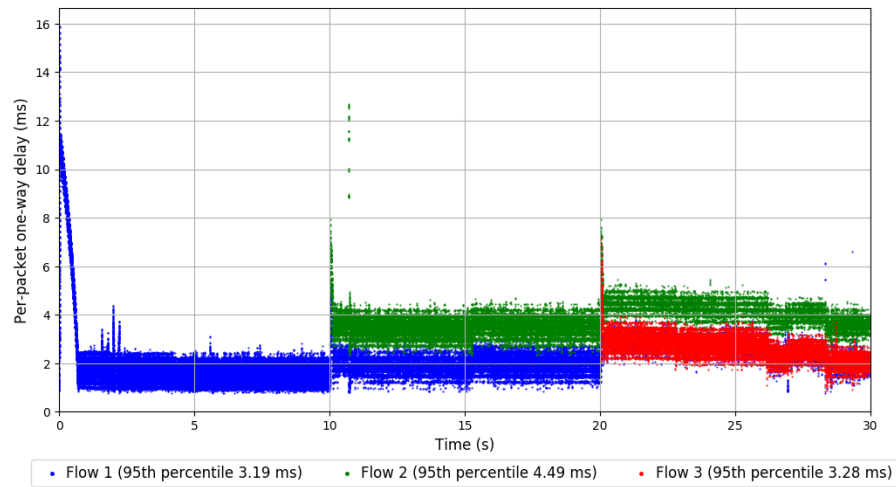
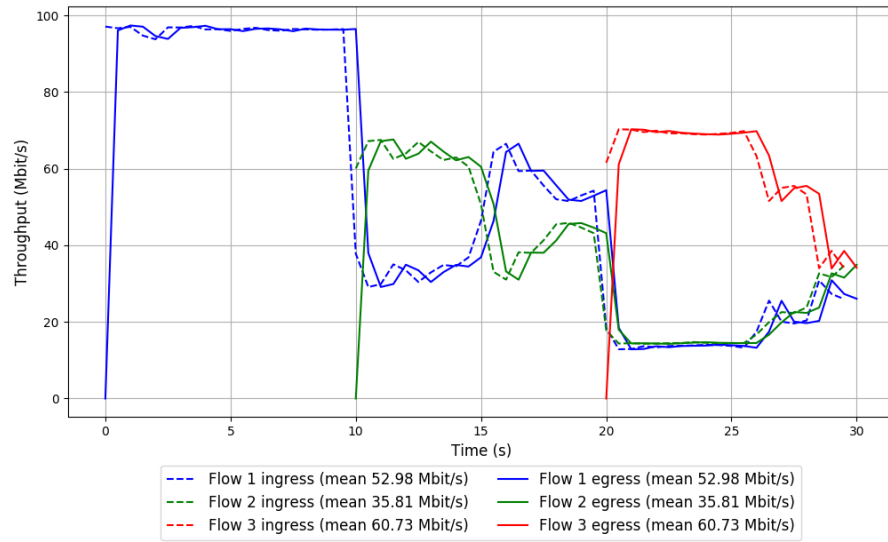
-- Flow 3:

Average throughput: 60.73 Mbit/s

95th percentile per-packet one-way delay: 3.279 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-04-24 01:32:53

End at: 2019-04-24 01:33:23

Local clock offset: -1.707 ms

Remote clock offset: 0.156 ms

Below is generated by plot.py at 2019-04-24 02:22:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.21 Mbit/s

95th percentile per-packet one-way delay: 3.989 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 47.22 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 52.40 Mbit/s

95th percentile per-packet one-way delay: 4.172 ms

Loss rate: 0.00%

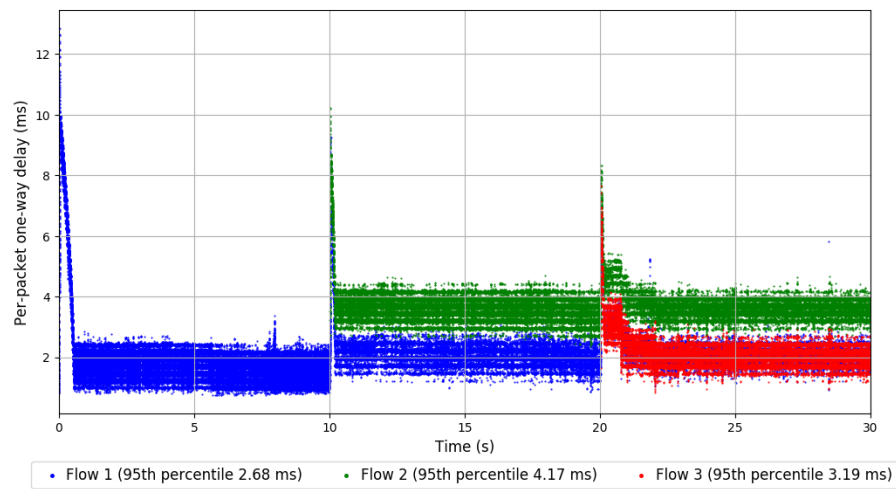
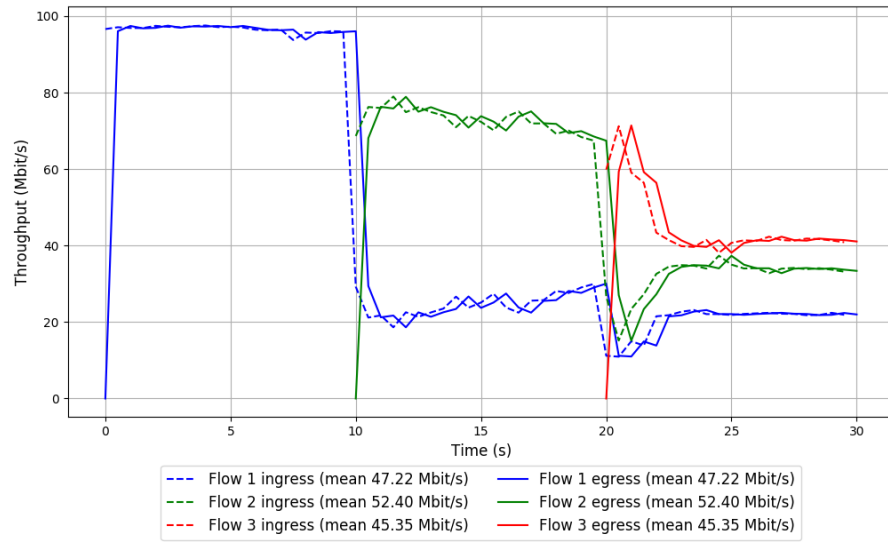
-- Flow 3:

Average throughput: 45.35 Mbit/s

95th percentile per-packet one-way delay: 3.194 ms

Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-04-24 01:56:45

End at: 2019-04-24 01:57:15

Local clock offset: -1.944 ms

Remote clock offset: 0.12 ms

Below is generated by plot.py at 2019-04-24 02:22:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.22 Mbit/s

95th percentile per-packet one-way delay: 5.784 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 56.87 Mbit/s

95th percentile per-packet one-way delay: 10.984 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 35.05 Mbit/s

95th percentile per-packet one-way delay: 4.290 ms

Loss rate: 0.01%

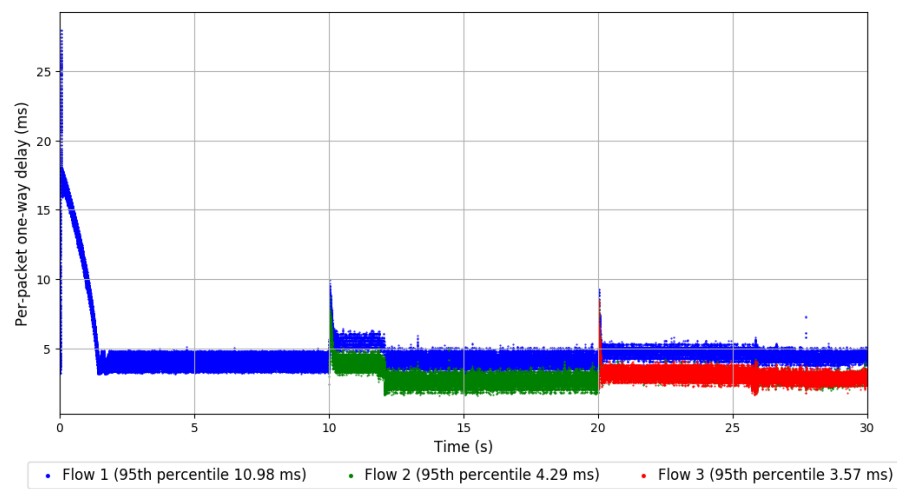
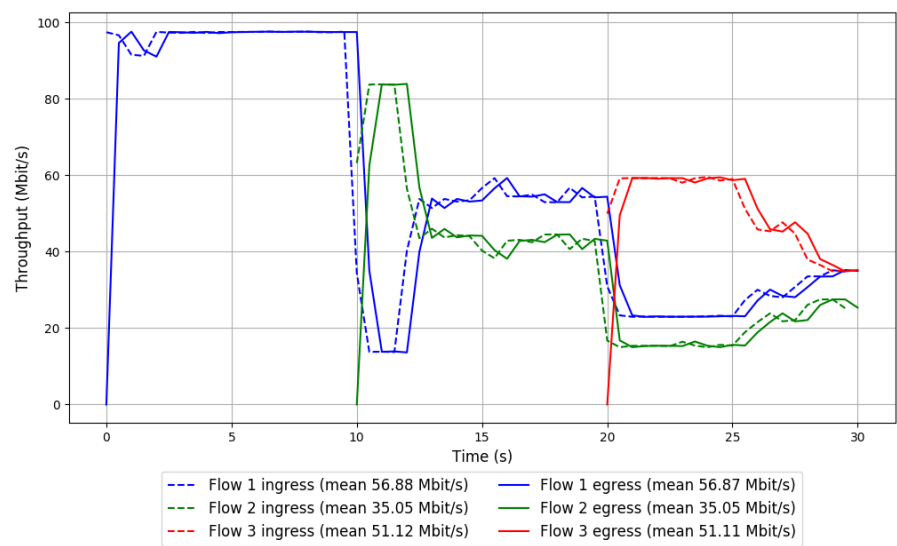
-- Flow 3:

Average throughput: 51.11 Mbit/s

95th percentile per-packet one-way delay: 3.567 ms

Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link

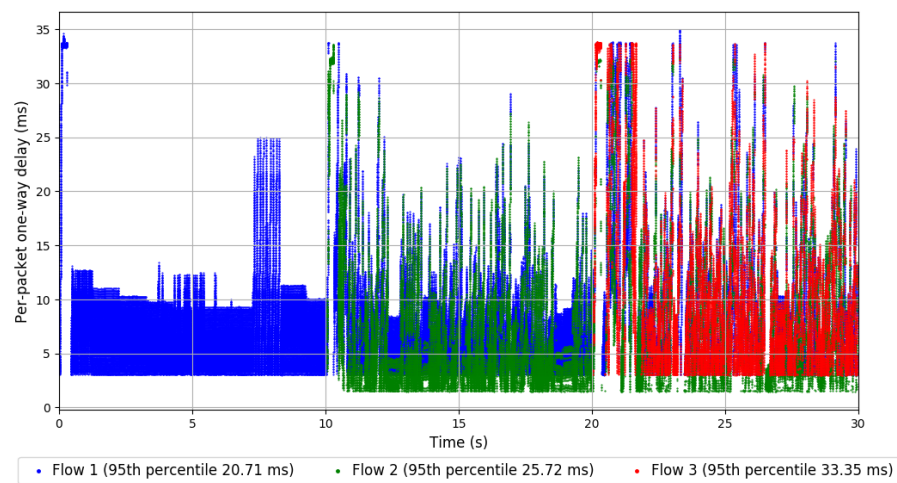
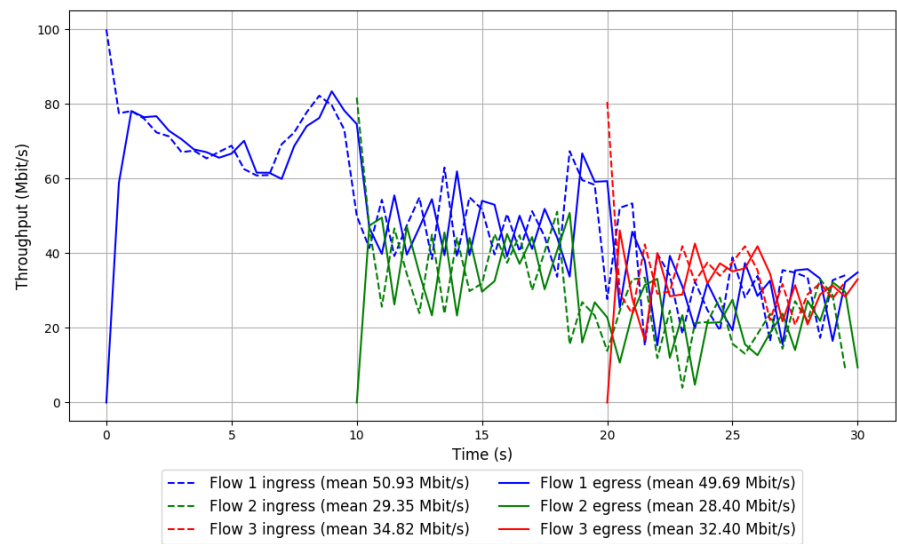


Run 1: Statistics of Verus

Start at: 2019-04-24 00:15:31
End at: 2019-04-24 00:16:01
Local clock offset: -1.757 ms
Remote clock offset: -0.074 ms

Below is generated by plot.py at 2019-04-24 02:22:28
Datalink statistics
-- Total of 3 flows:
Average throughput: 79.31 Mbit/s
95th percentile per-packet one-way delay: 24.464 ms
Loss rate: 3.24%
-- Flow 1:
Average throughput: 49.69 Mbit/s
95th percentile per-packet one-way delay: 20.715 ms
Loss rate: 2.41%
-- Flow 2:
Average throughput: 28.40 Mbit/s
95th percentile per-packet one-way delay: 25.724 ms
Loss rate: 3.25%
-- Flow 3:
Average throughput: 32.40 Mbit/s
95th percentile per-packet one-way delay: 33.352 ms
Loss rate: 6.93%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-04-24 00:39:25

End at: 2019-04-24 00:39:55

Local clock offset: -2.76 ms

Remote clock offset: 0.001 ms

Below is generated by plot.py at 2019-04-24 02:22:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 66.88 Mbit/s

95th percentile per-packet one-way delay: 32.152 ms

Loss rate: 14.71%

-- Flow 1:

Average throughput: 28.36 Mbit/s

95th percentile per-packet one-way delay: 31.906 ms

Loss rate: 10.22%

-- Flow 2:

Average throughput: 41.11 Mbit/s

95th percentile per-packet one-way delay: 32.646 ms

Loss rate: 19.03%

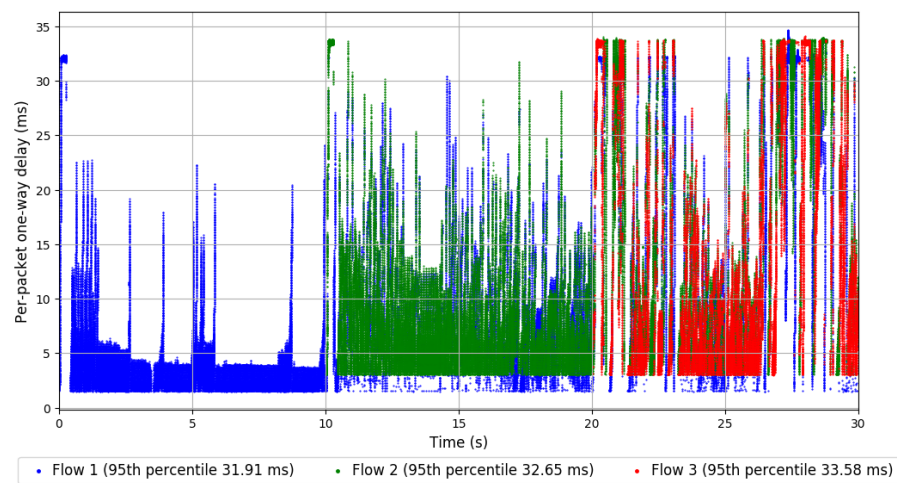
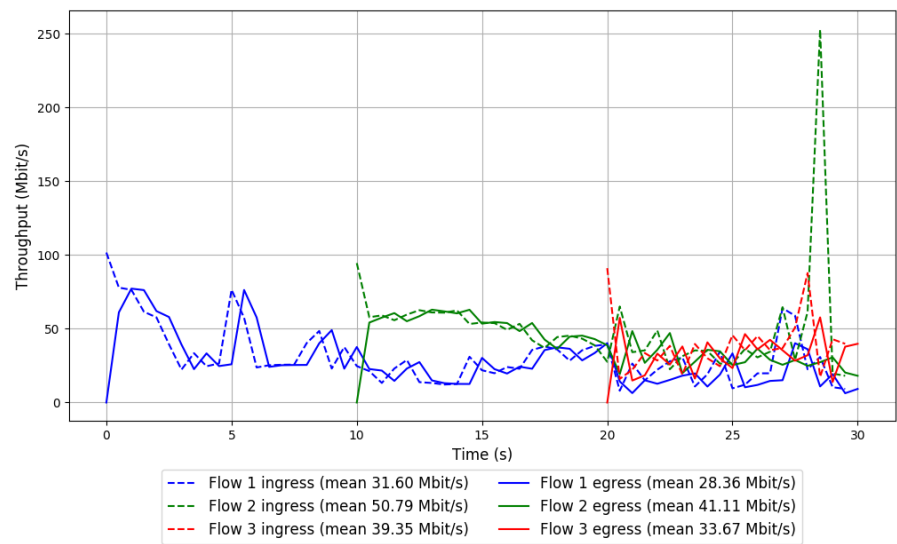
-- Flow 3:

Average throughput: 33.67 Mbit/s

95th percentile per-packet one-way delay: 33.580 ms

Loss rate: 14.39%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-04-24 01:03:18

End at: 2019-04-24 01:03:48

Local clock offset: -1.654 ms

Remote clock offset: 0.107 ms

Below is generated by plot.py at 2019-04-24 02:22:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 75.81 Mbit/s

95th percentile per-packet one-way delay: 31.318 ms

Loss rate: 6.73%

-- Flow 1:

Average throughput: 49.51 Mbit/s

95th percentile per-packet one-way delay: 27.689 ms

Loss rate: 3.92%

-- Flow 2:

Average throughput: 24.85 Mbit/s

95th percentile per-packet one-way delay: 31.626 ms

Loss rate: 10.30%

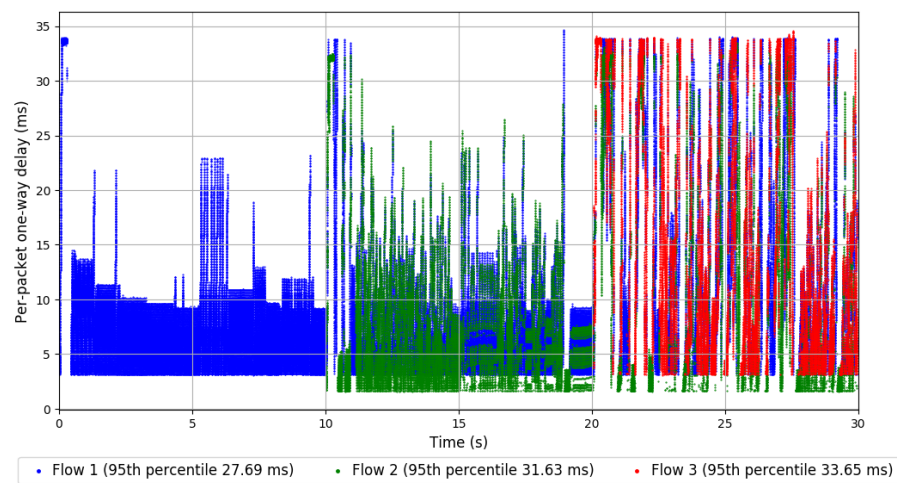
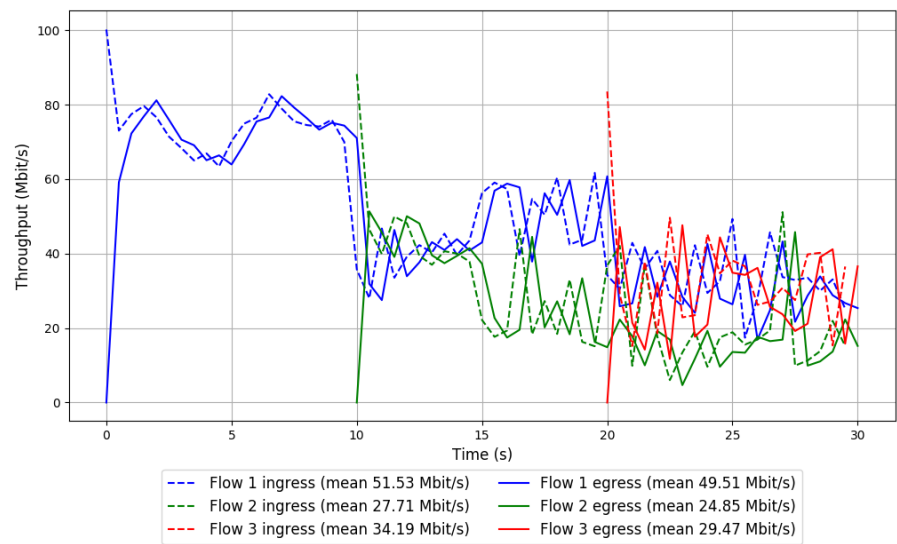
-- Flow 3:

Average throughput: 29.47 Mbit/s

95th percentile per-packet one-way delay: 33.650 ms

Loss rate: 13.74%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2019-04-24 01:27:12

End at: 2019-04-24 01:27:42

Local clock offset: -1.554 ms

Remote clock offset: 0.109 ms

Below is generated by plot.py at 2019-04-24 02:22:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 57.83 Mbit/s

95th percentile per-packet one-way delay: 23.402 ms

Loss rate: 4.36%

-- Flow 1:

Average throughput: 29.24 Mbit/s

95th percentile per-packet one-way delay: 19.152 ms

Loss rate: 3.58%

-- Flow 2:

Average throughput: 29.37 Mbit/s

95th percentile per-packet one-way delay: 25.136 ms

Loss rate: 4.71%

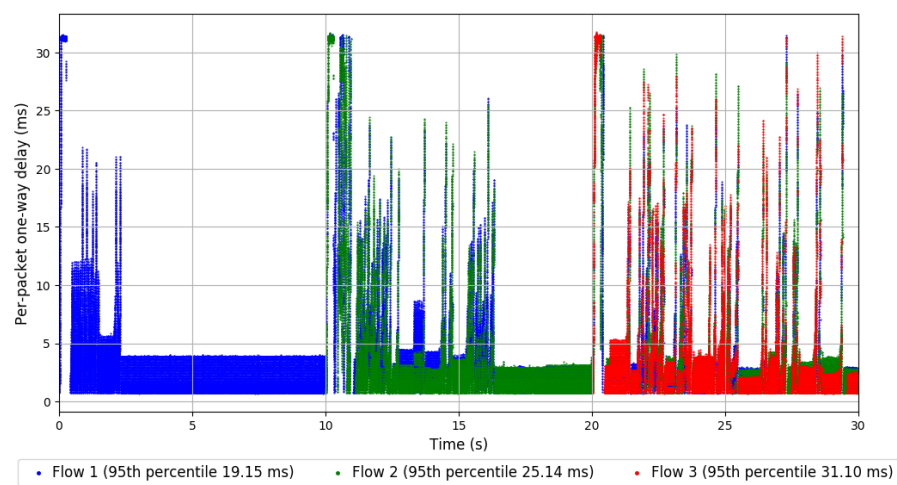
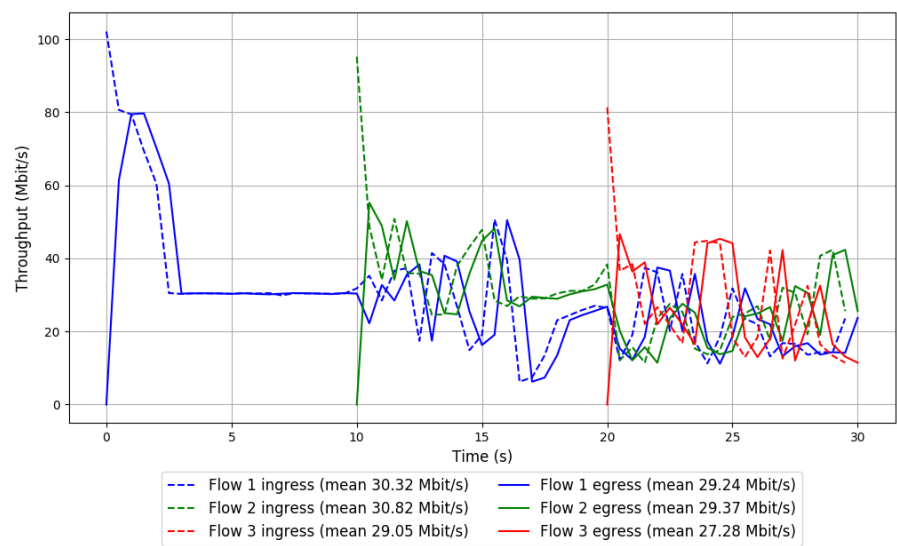
-- Flow 3:

Average throughput: 27.28 Mbit/s

95th percentile per-packet one-way delay: 31.098 ms

Loss rate: 6.08%

Run 4: Report of Verus — Data Link

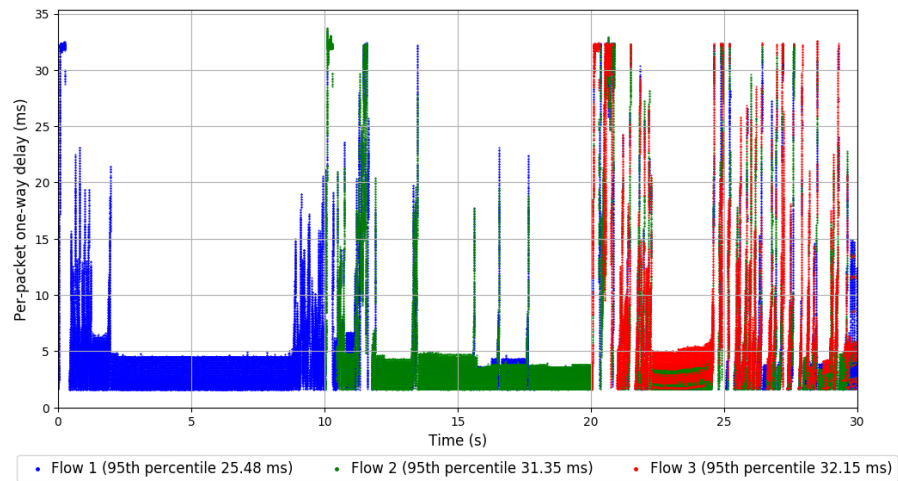
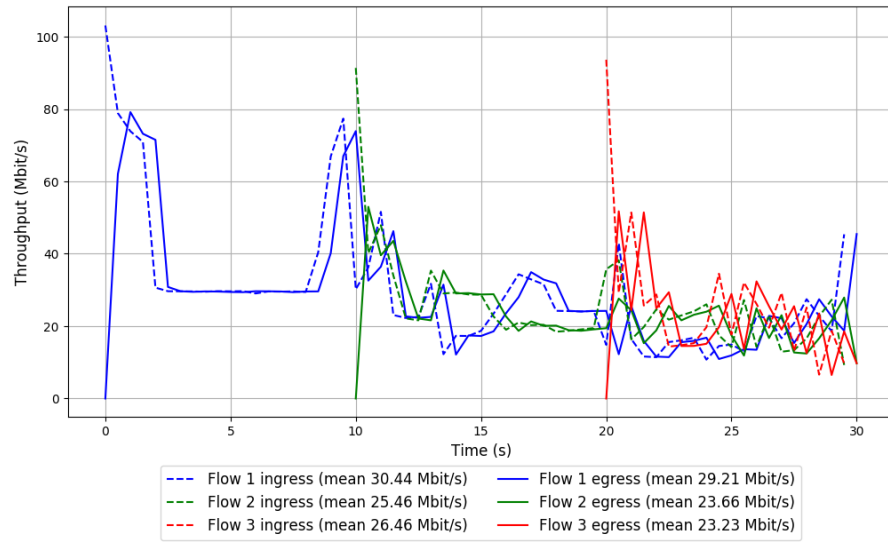


Run 5: Statistics of Verus

Start at: 2019-04-24 01:51:03
End at: 2019-04-24 01:51:33
Local clock offset: -2.167 ms
Remote clock offset: 0.167 ms

Below is generated by plot.py at 2019-04-24 02:22:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 52.66 Mbit/s
95th percentile per-packet one-way delay: 30.646 ms
Loss rate: 6.20%
-- Flow 1:
Average throughput: 29.21 Mbit/s
95th percentile per-packet one-way delay: 25.483 ms
Loss rate: 4.01%
-- Flow 2:
Average throughput: 23.66 Mbit/s
95th percentile per-packet one-way delay: 31.351 ms
Loss rate: 7.06%
-- Flow 3:
Average throughput: 23.23 Mbit/s
95th percentile per-packet one-way delay: 32.151 ms
Loss rate: 12.11%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-04-24 00:33:42

End at: 2019-04-24 00:34:12

Local clock offset: -2.716 ms

Remote clock offset: 0.019 ms

Below is generated by plot.py at 2019-04-24 02:23:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.72 Mbit/s

95th percentile per-packet one-way delay: 3.964 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 41.01 Mbit/s

95th percentile per-packet one-way delay: 2.605 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 45.00 Mbit/s

95th percentile per-packet one-way delay: 4.426 ms

Loss rate: 0.01%

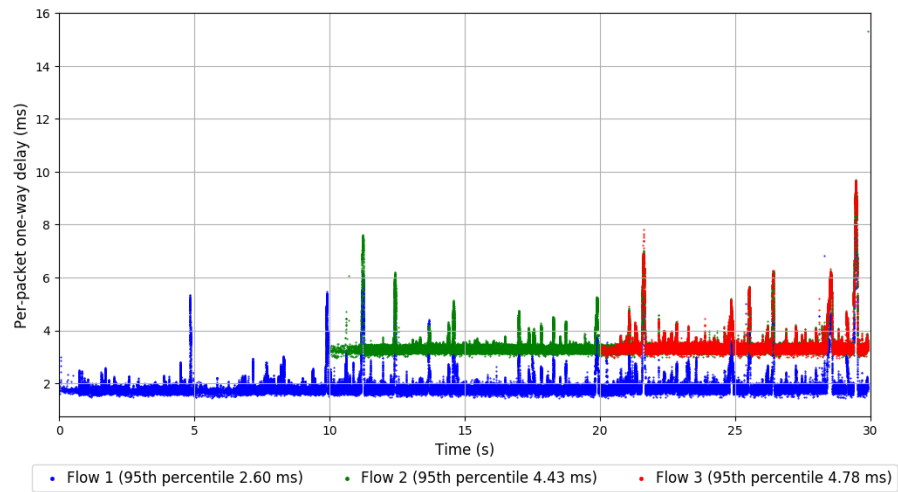
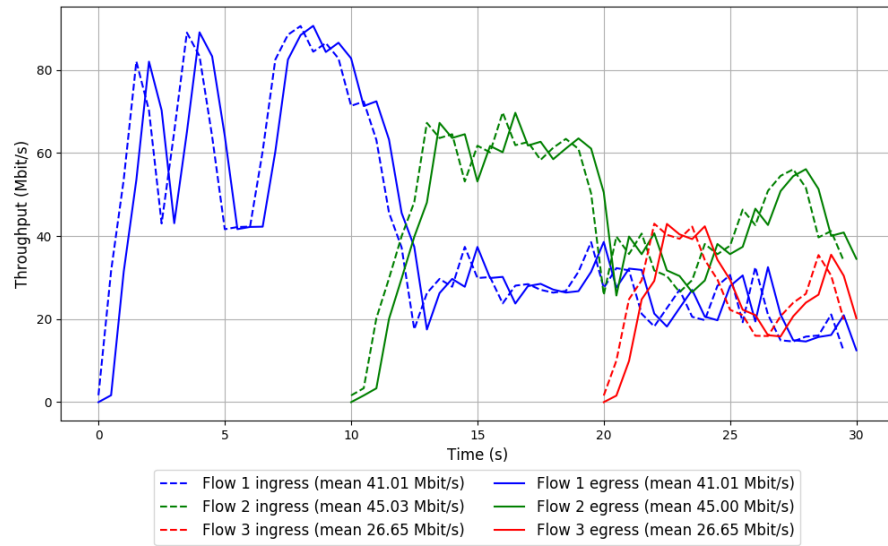
-- Flow 3:

Average throughput: 26.65 Mbit/s

95th percentile per-packet one-way delay: 4.784 ms

Loss rate: 0.01%

Run 1: Report of PCC-Vivace — Data Link

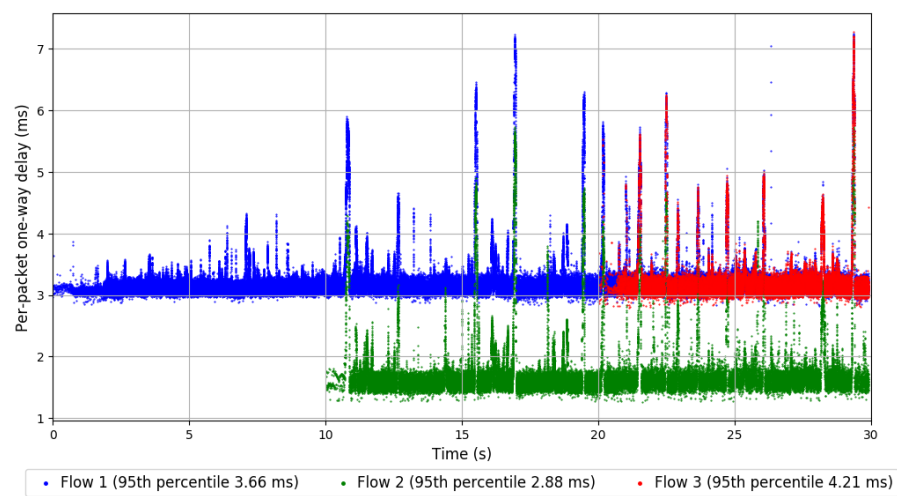
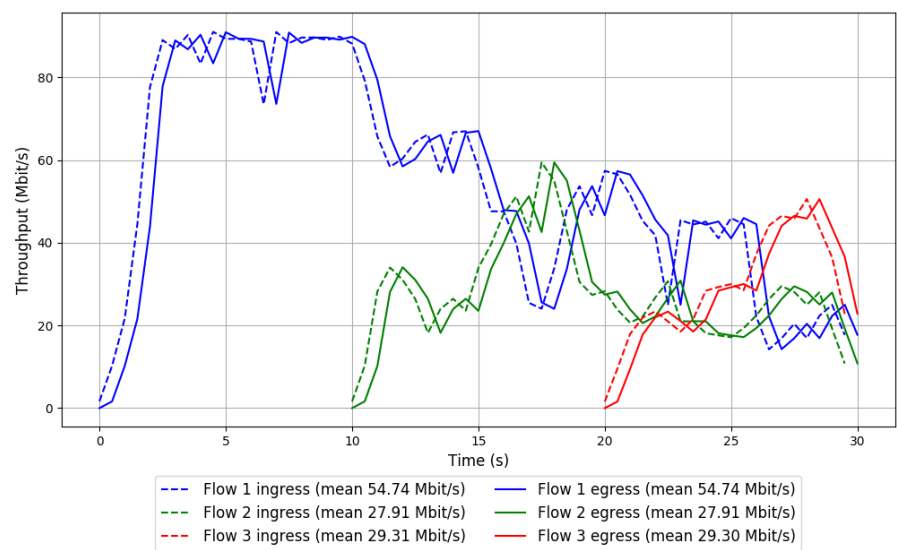


Run 2: Statistics of PCC-Vivace

Start at: 2019-04-24 00:57:34
End at: 2019-04-24 00:58:04
Local clock offset: -1.8 ms
Remote clock offset: -0.066 ms

Below is generated by plot.py at 2019-04-24 02:23:13
Datalink statistics
-- Total of 3 flows:
Average throughput: 82.98 Mbit/s
95th percentile per-packet one-way delay: 3.632 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 54.74 Mbit/s
95th percentile per-packet one-way delay: 3.656 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.91 Mbit/s
95th percentile per-packet one-way delay: 2.881 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.30 Mbit/s
95th percentile per-packet one-way delay: 4.207 ms
Loss rate: 0.02%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-04-24 01:21:28

End at: 2019-04-24 01:21:58

Local clock offset: -2.087 ms

Remote clock offset: 0.028 ms

Below is generated by plot.py at 2019-04-24 02:23:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.96 Mbit/s

95th percentile per-packet one-way delay: 4.421 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 58.48 Mbit/s

95th percentile per-packet one-way delay: 4.110 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 31.64 Mbit/s

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

Loss rate: 0.00%

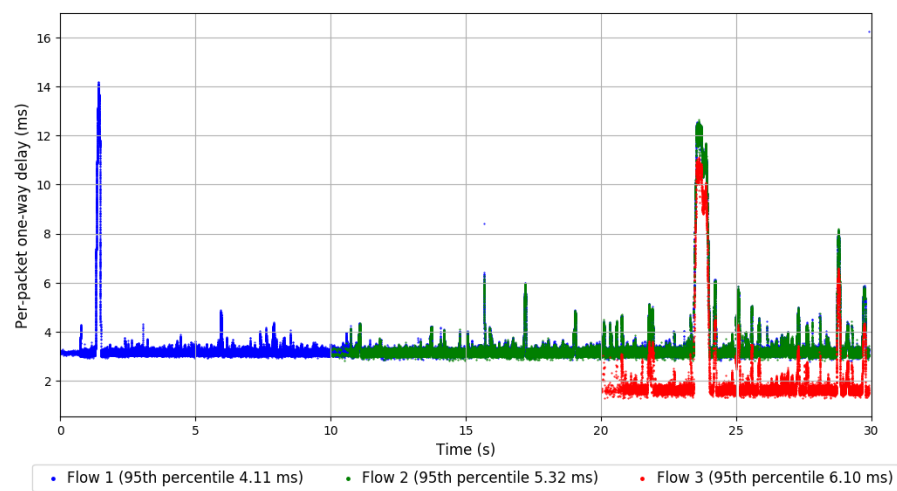
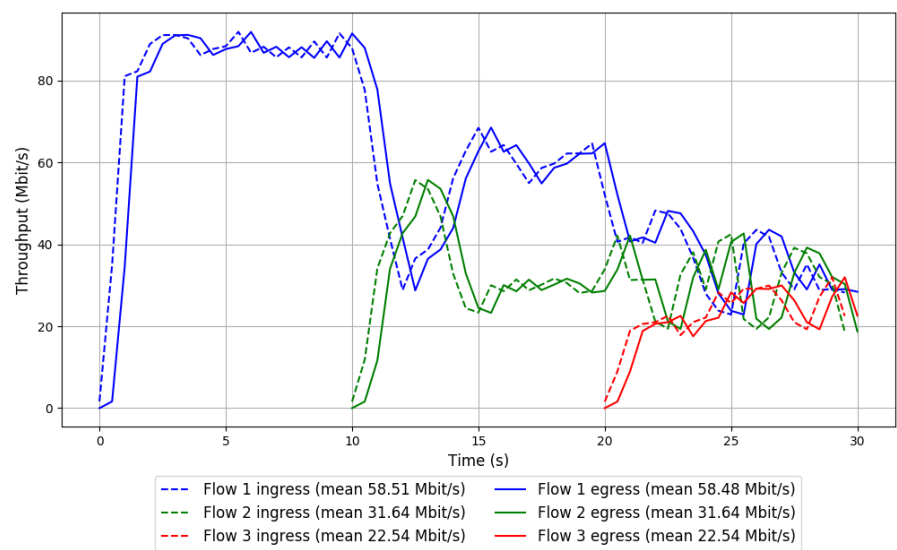
-- Flow 3:

Average throughput: 22.54 Mbit/s

95th percentile per-packet one-way delay: 6.097 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-04-24 01:45:19

End at: 2019-04-24 01:45:49

Local clock offset: -1.901 ms

Remote clock offset: 0.099 ms

Below is generated by plot.py at 2019-04-24 02:23:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.48 Mbit/s

95th percentile per-packet one-way delay: 3.454 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 58.16 Mbit/s

95th percentile per-packet one-way delay: 4.149 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 26.99 Mbit/s

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

Loss rate: 0.00%

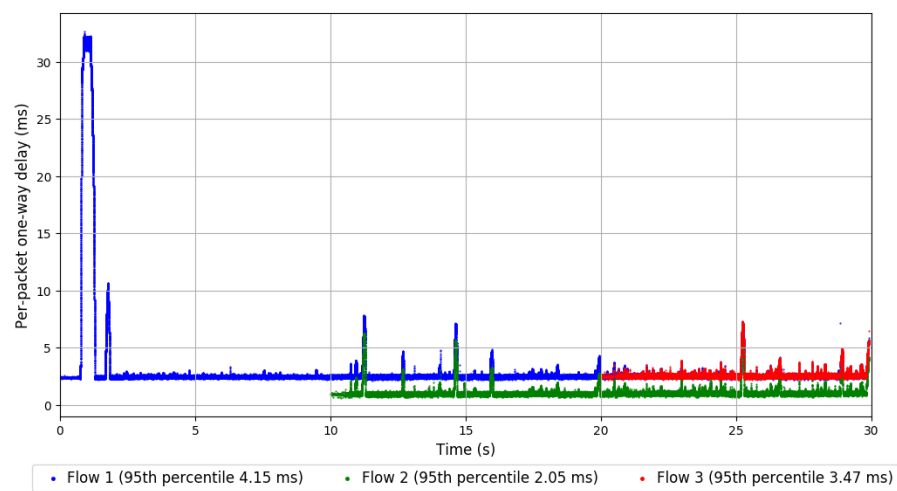
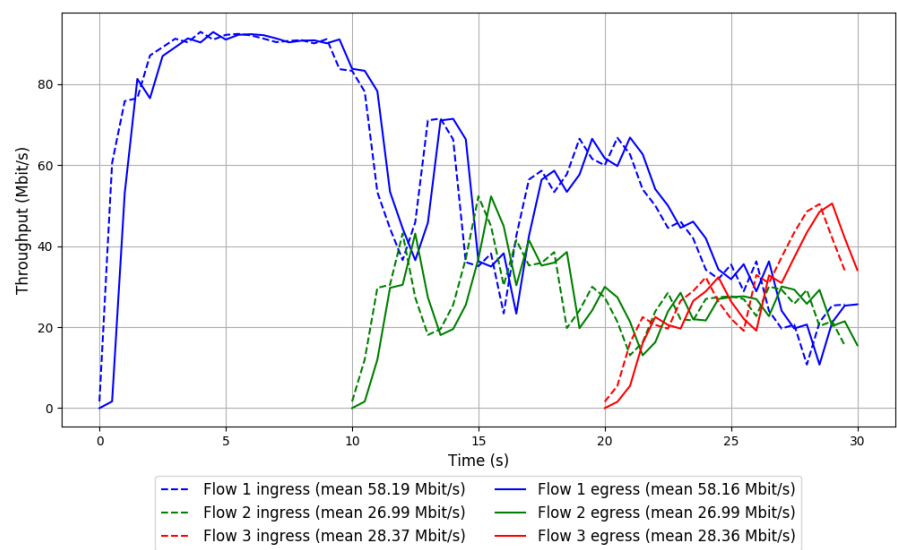
-- Flow 3:

Average throughput: 28.36 Mbit/s

95th percentile per-packet one-way delay: 3.467 ms

Loss rate: 0.02%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-04-24 02:09:12

End at: 2019-04-24 02:09:42

Local clock offset: -0.921 ms

Remote clock offset: 0.042 ms

Below is generated by plot.py at 2019-04-24 02:23:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.49 Mbit/s

95th percentile per-packet one-way delay: 3.009 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 59.61 Mbit/s

95th percentile per-packet one-way delay: 3.027 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 25.64 Mbit/s

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

Loss rate: 0.00%

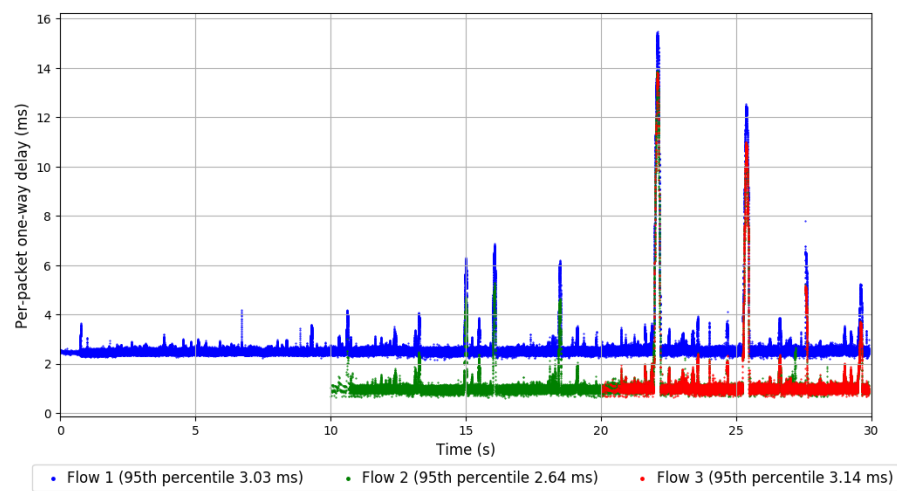
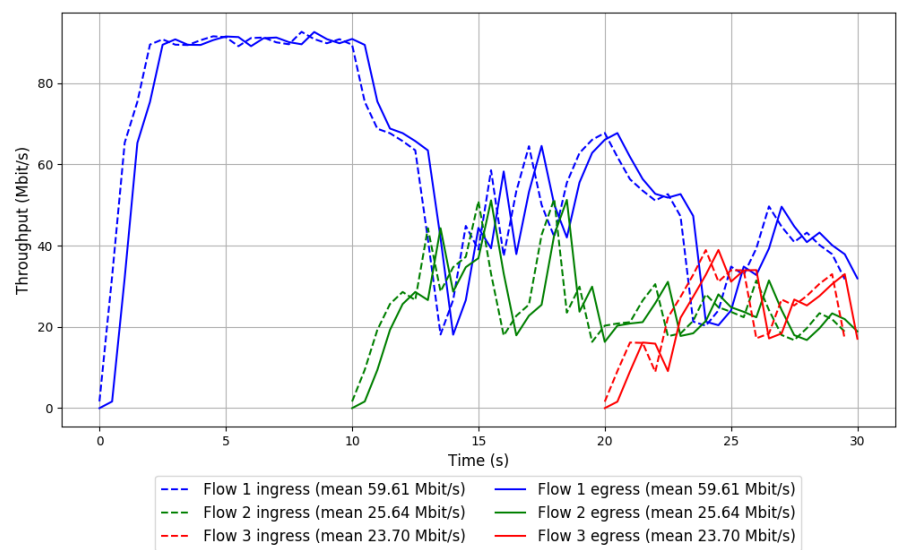
-- Flow 3:

Average throughput: 23.70 Mbit/s

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

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link

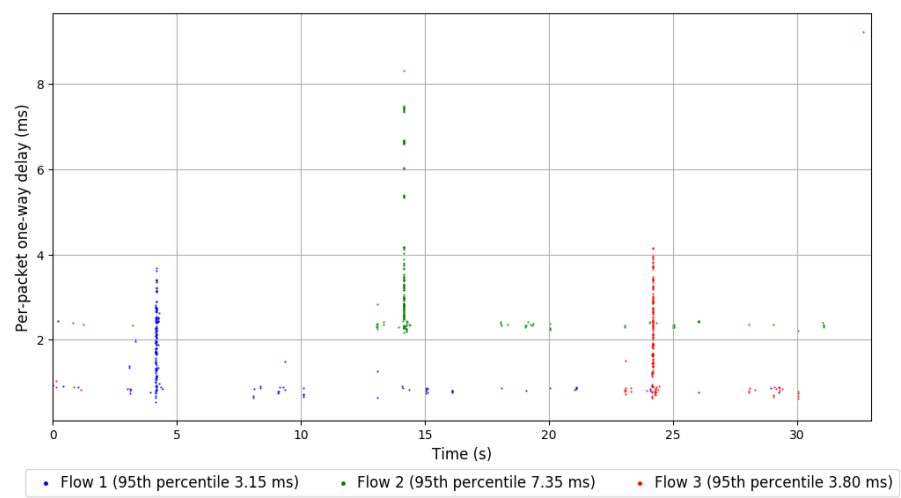
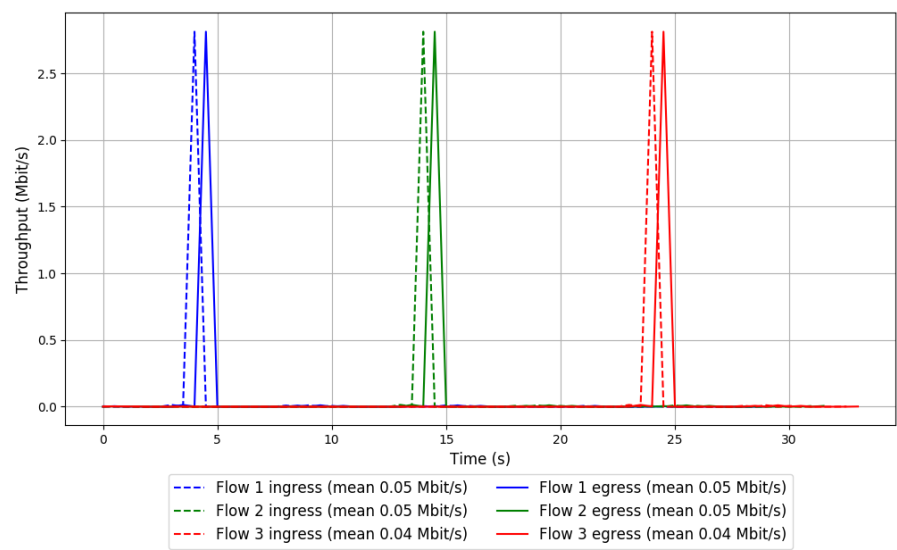


Run 1: Statistics of WebRTC media

Start at: 2019-04-24 00:29:13
End at: 2019-04-24 00:29:43
Local clock offset: -1.729 ms
Remote clock offset: -0.003 ms

Below is generated by plot.py at 2019-04-24 02:23:20
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 5.377 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.149 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.348 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 3.804 ms
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

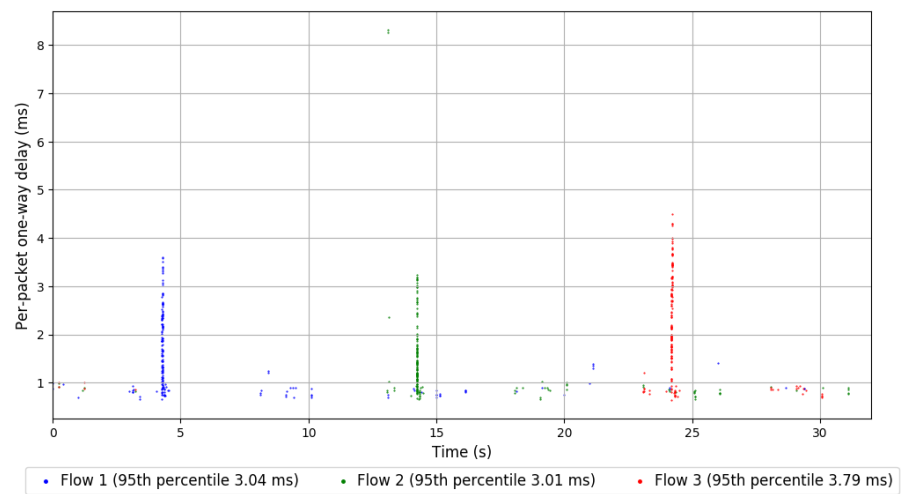
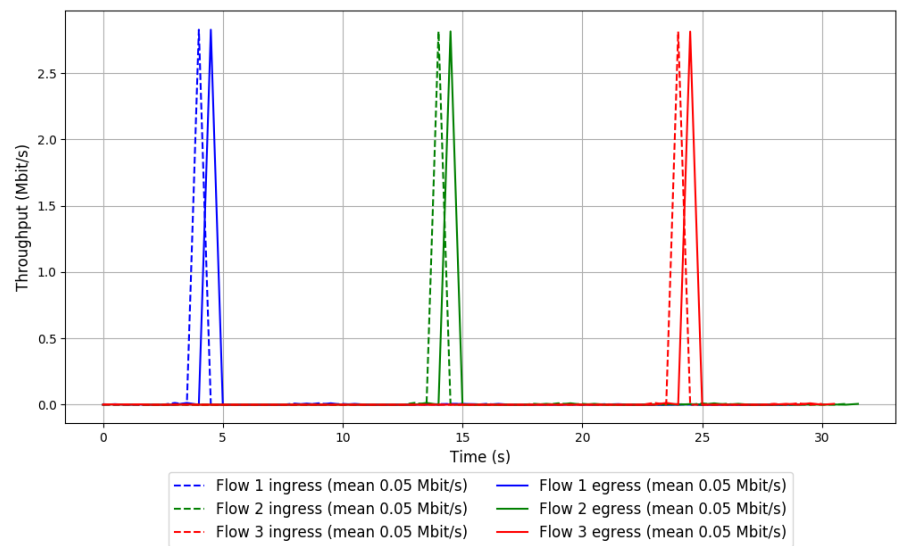


Run 2: Statistics of WebRTC media

Start at: 2019-04-24 00:53:05
End at: 2019-04-24 00:53:35
Local clock offset: -1.258 ms
Remote clock offset: -0.001 ms

Below is generated by plot.py at 2019-04-24 02:23:20
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 3.438 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.042 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.009 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.793 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-04-24 01:16:59

End at: 2019-04-24 01:17:29

Local clock offset: -1.644 ms

Remote clock offset: 0.04 ms

Below is generated by plot.py at 2019-04-24 02:23:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 4.398 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.415 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.063 ms

Loss rate: 0.00%

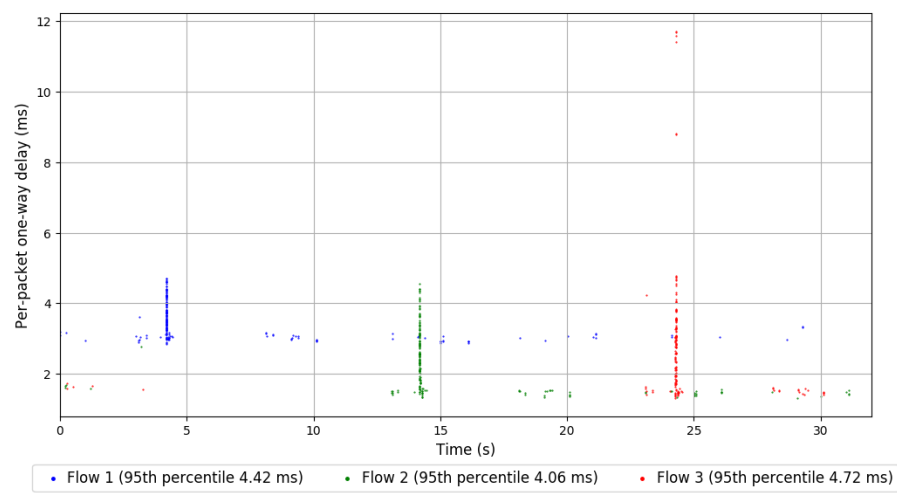
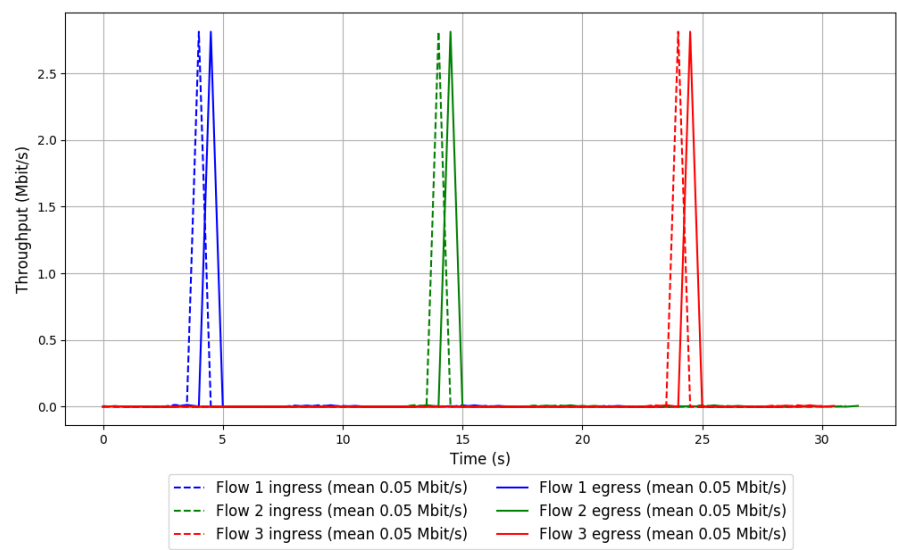
-- Flow 3:

Average throughput: 0.05 Mbit/s

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

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-04-24 01:40:50

End at: 2019-04-24 01:41:20

Local clock offset: -1.829 ms

Remote clock offset: 0.044 ms

Below is generated by plot.py at 2019-04-24 02:23:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 3.815 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.644 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.697 ms

Loss rate: 0.00%

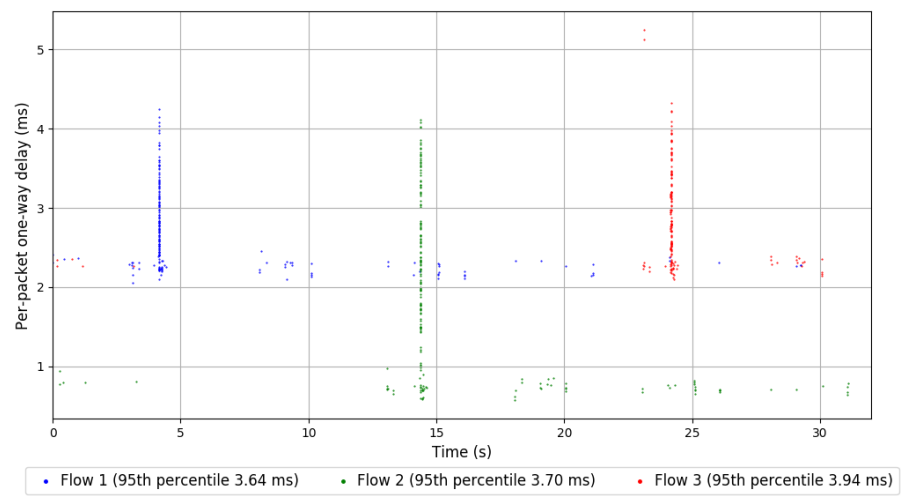
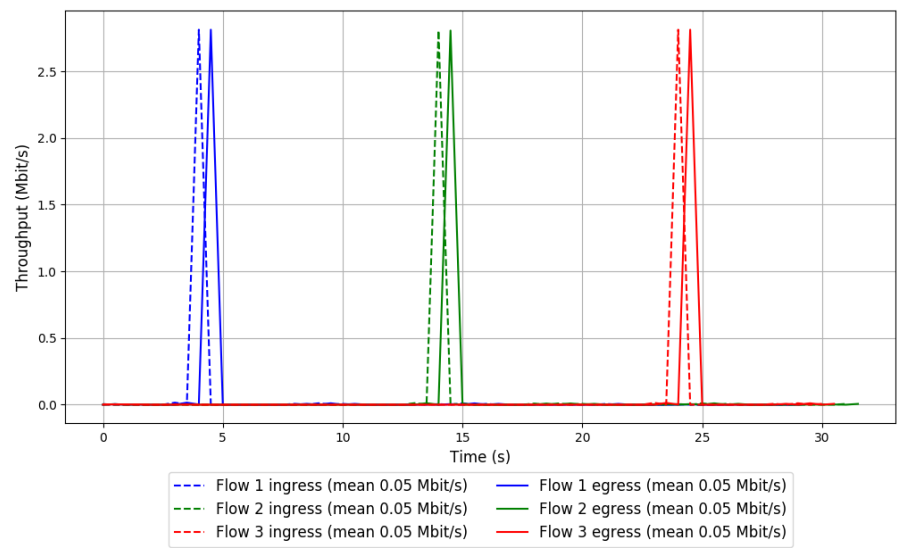
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.938 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-04-24 02:04:43

End at: 2019-04-24 02:05:13

Local clock offset: -1.704 ms

Remote clock offset: 0.039 ms

Below is generated by plot.py at 2019-04-24 02:23:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 4.537 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.424 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.620 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.602 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

