

Pantheon Report

Generated at 2019-05-30 02:51:24 (UTC).

Data path: AWS Brazil 2 on `ens5` (*local*) → Colombia 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:

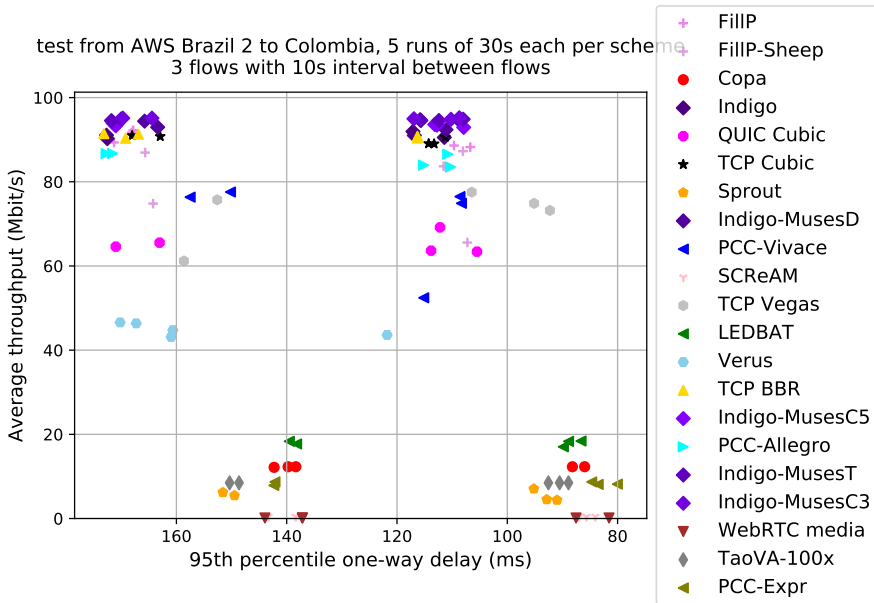
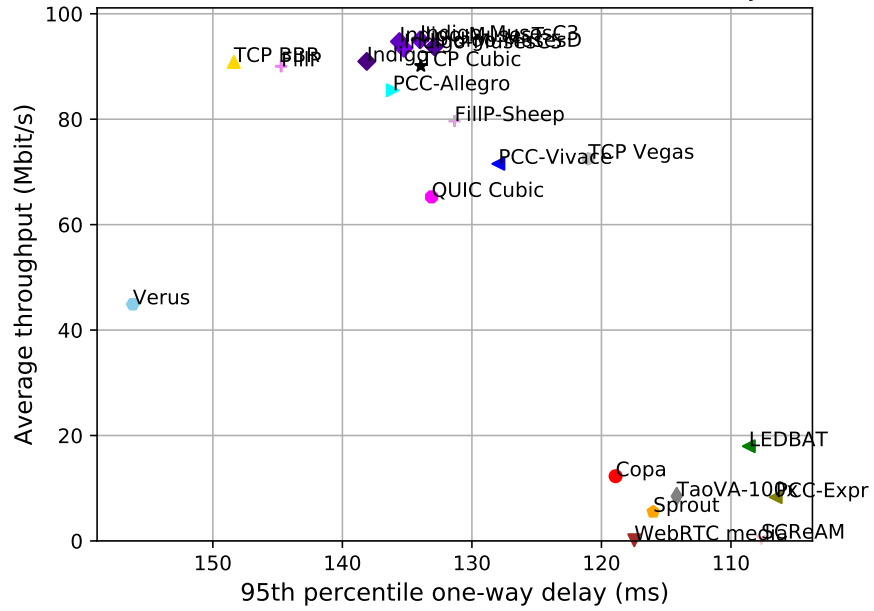
```
Linux 4.15.0-1035-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

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

test from AWS Brazil 2 to Colombia, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	55.71	38.63	28.93	146.97	148.28	148.15	12.18	18.10	28.22
Copa	5	8.49	5.69	0.06	119.37	118.02	121.41	71.92	75.26	91.24
TCP Cubic	5	72.67	16.60	19.16	134.00	133.97	133.11	0.76	0.17	0.29
FillP	5	46.19	50.21	31.47	142.55	144.22	144.77	12.12	22.52	21.27
FillP-Sheep	5	24.19	68.75	29.38	127.15	131.52	131.33	7.59	6.12	14.17
Indigo	5	60.36	31.18	31.19	136.74	137.76	138.15	14.00	25.15	58.57
Indigo-MusesC3	5	50.34	46.88	47.65	133.32	133.60	134.33	1.21	1.90	5.37
Indigo-MusesC5	5	62.44	42.65	10.82	133.85	135.54	136.64	1.96	2.97	7.36
Indigo-MusesD	5	55.09	49.22	22.02	129.41	131.26	133.00	0.24	0.25	1.12
Indigo-MusesT	5	56.07	46.46	28.40	134.47	135.15	134.58	4.57	4.42	7.66
LEDBAT	5	11.55	7.78	3.79	108.26	109.93	108.70	0.00	0.00	0.00
PCC-Allegro	5	76.46	9.96	7.31	136.05	136.37	136.26	2.78	3.72	5.35
PCC-Expr	5	0.01	10.73	3.53	105.16	106.77	106.47	85.71	52.65	43.13
QUIC Cubic	5	48.05	19.68	12.74	133.27	131.25	129.04	0.74	0.46	2.81
SCReAM	5	0.22	0.22	0.22	107.40	106.74	107.28	0.00	0.00	0.00
Sprout	5	2.62	2.60	3.57	115.24	114.59	117.27	0.00	0.00	0.00
TaoVA-100x	5	0.00	9.29	6.88	105.46	116.12	106.27	95.92	32.06	35.11
TCP Vegas	5	43.97	25.26	35.20	120.72	122.83	123.44	1.39	0.82	0.85
Verus	5	25.74	23.37	13.35	155.82	154.36	143.63	47.86	45.38	33.29
PCC-Vivace	5	55.26	21.25	6.62	127.69	128.22	128.46	0.44	0.74	0.47
WebRTC media	5	0.05	0.05	0.04	116.79	119.33	119.34	0.01	0.00	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-05-30 00:50:56

End at: 2019-05-30 00:51:26

Local clock offset: -1.556 ms

Remote clock offset: 7.5 ms

Below is generated by plot.py at 2019-05-30 02:42:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.82 Mbit/s

95th percentile per-packet one-way delay: 116.288 ms

Loss rate: 12.88%

-- Flow 1:

Average throughput: 55.14 Mbit/s

95th percentile per-packet one-way delay: 115.576 ms

Loss rate: 9.53%

-- Flow 2:

Average throughput: 39.42 Mbit/s

95th percentile per-packet one-way delay: 116.430 ms

Loss rate: 14.38%

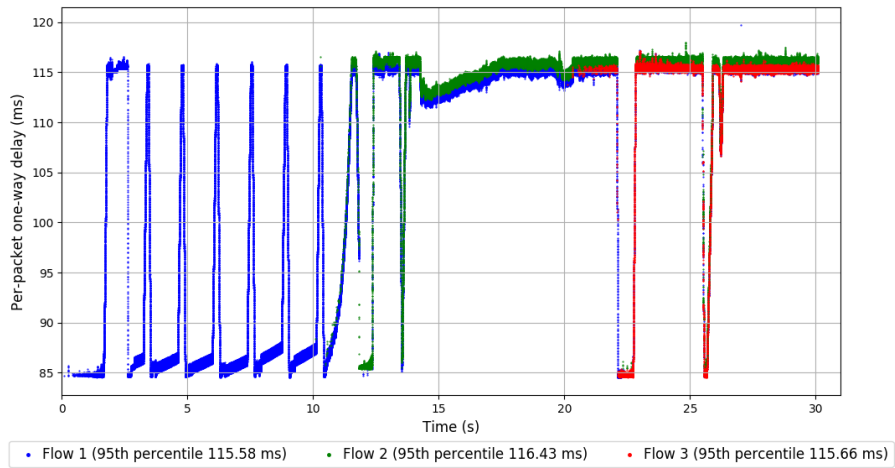
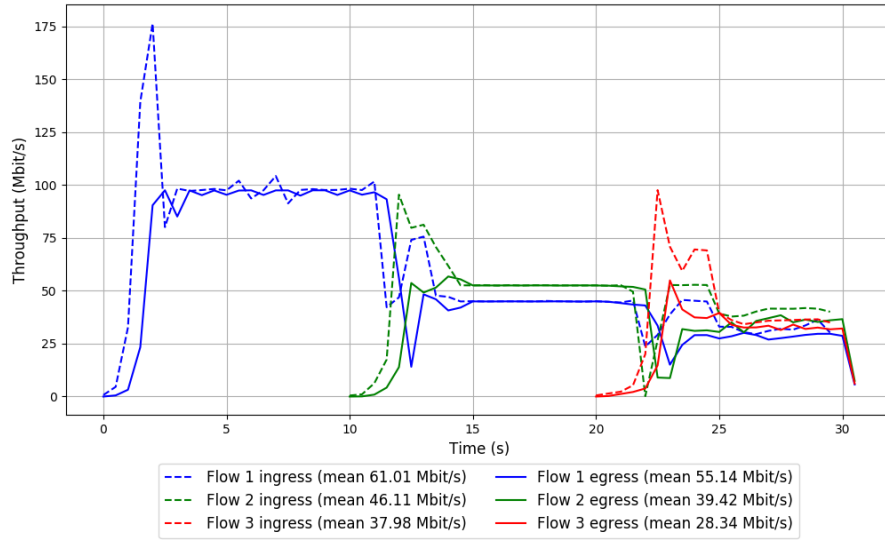
-- Flow 3:

Average throughput: 28.34 Mbit/s

95th percentile per-packet one-way delay: 115.664 ms

Loss rate: 25.36%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-05-30 01:18:25

End at: 2019-05-30 01:18:55

Local clock offset: -0.896 ms

Remote clock offset: 6.832 ms

Below is generated by plot.py at 2019-05-30 02:42:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.40 Mbit/s

95th percentile per-packet one-way delay: 116.364 ms

Loss rate: 18.11%

-- Flow 1:

Average throughput: 53.51 Mbit/s

95th percentile per-packet one-way delay: 114.673 ms

Loss rate: 14.11%

-- Flow 2:

Average throughput: 38.37 Mbit/s

95th percentile per-packet one-way delay: 116.417 ms

Loss rate: 19.69%

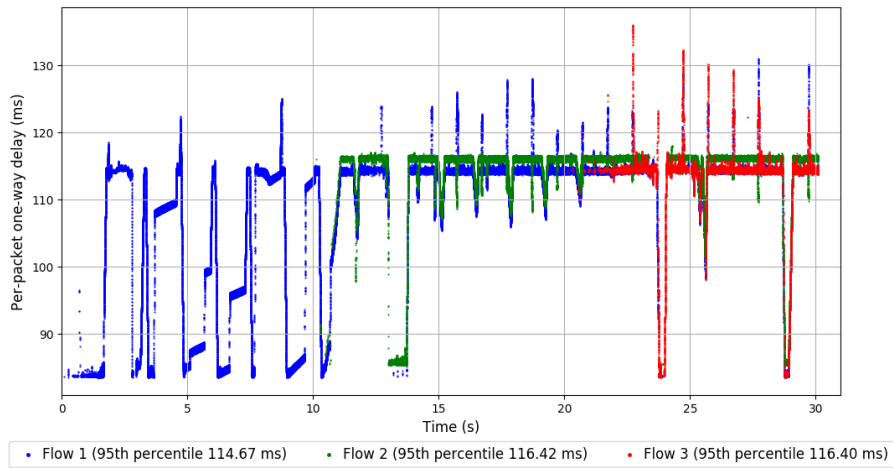
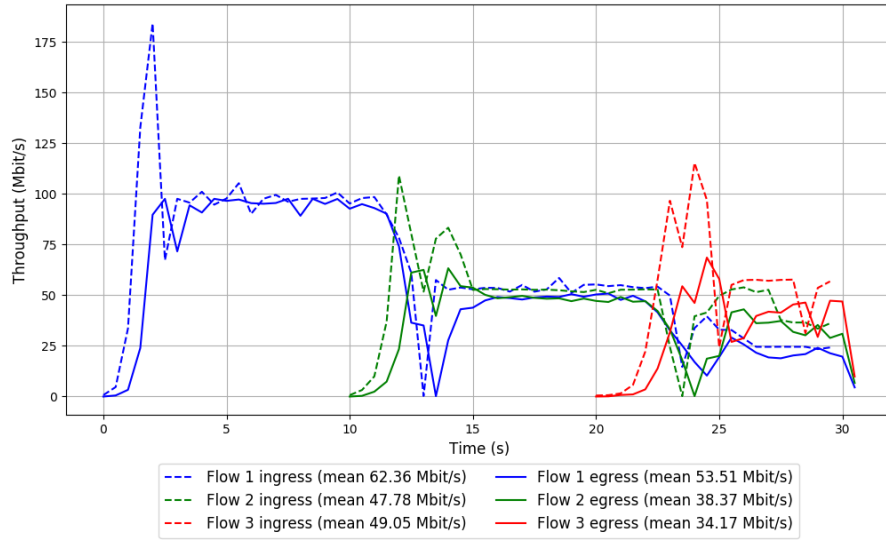
-- Flow 3:

Average throughput: 34.17 Mbit/s

95th percentile per-packet one-way delay: 116.403 ms

Loss rate: 30.34%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-05-30 01:45:39
End at: 2019-05-30 01:46:09
Local clock offset: -57.974 ms
Remote clock offset: 3.135 ms

Below is generated by plot.py at 2019-05-30 02:42:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.34 Mbit/s
95th percentile per-packet one-way delay: 169.206 ms
Loss rate: 13.75%

-- Flow 1:

Average throughput: 56.34 Mbit/s
95th percentile per-packet one-way delay: 168.769 ms
Loss rate: 11.33%

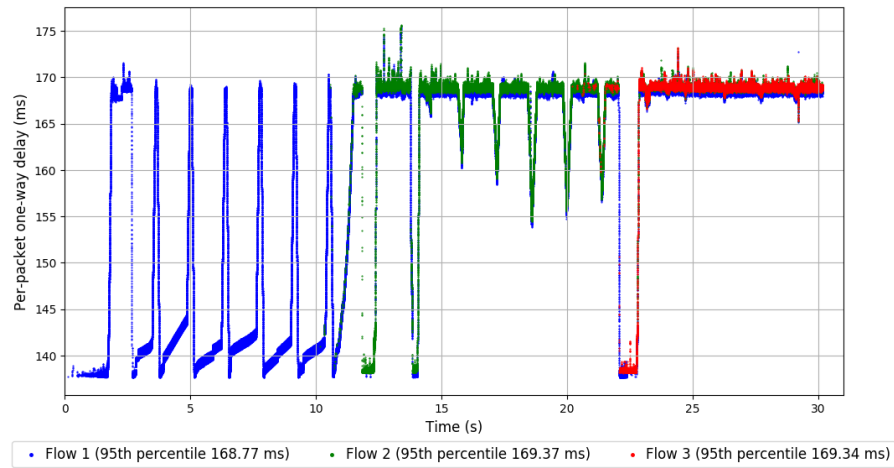
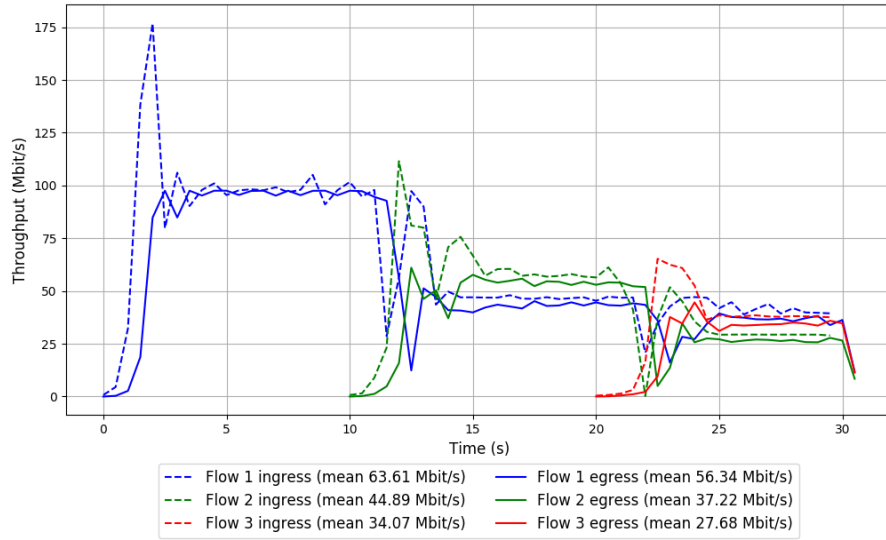
-- Flow 2:

Average throughput: 37.22 Mbit/s
95th percentile per-packet one-way delay: 169.367 ms
Loss rate: 16.98%

-- Flow 3:

Average throughput: 27.68 Mbit/s
95th percentile per-packet one-way delay: 169.342 ms
Loss rate: 18.76%

Run 3: Report of TCP BBR — Data Link

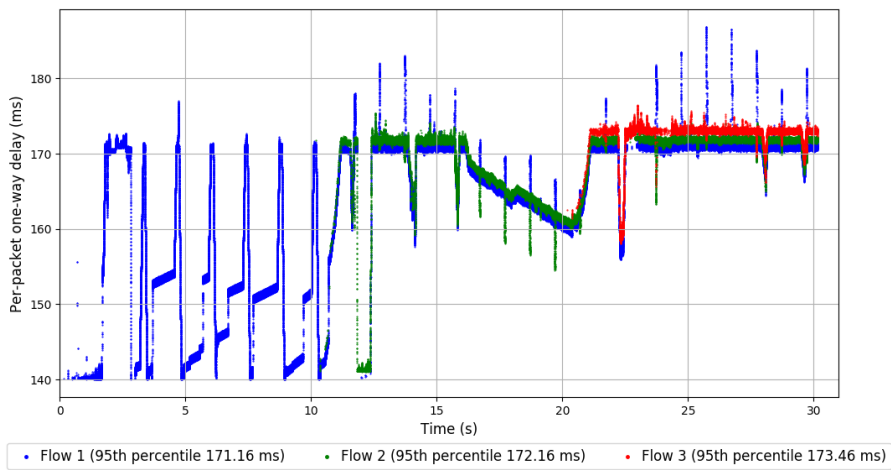
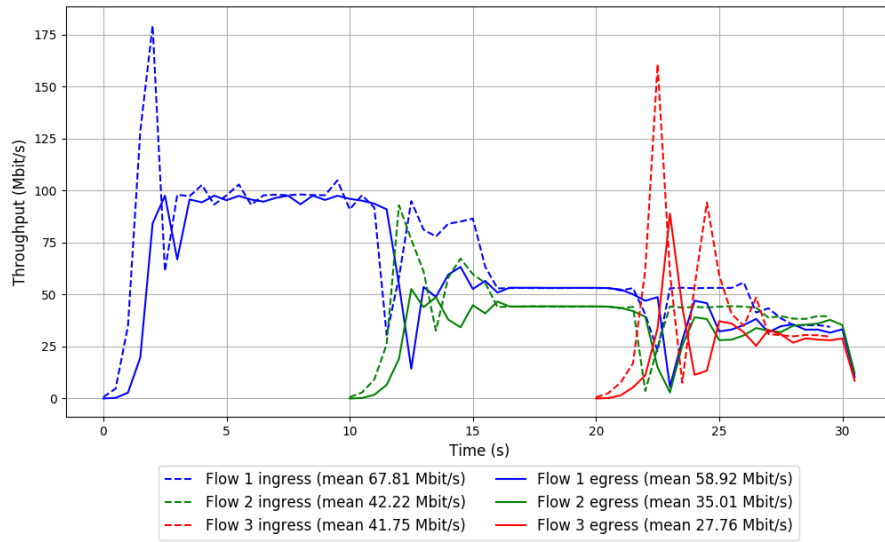


Run 4: Statistics of TCP BBR

Start at: 2019-05-30 02:12:28
End at: 2019-05-30 02:12:58
Local clock offset: -58.741 ms
Remote clock offset: 6.662 ms

```
# Below is generated by plot.py at 2019-05-30 02:42:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.44 Mbit/s
95th percentile per-packet one-way delay: 173.145 ms
Loss rate: 16.64%
-- Flow 1:
Average throughput: 58.92 Mbit/s
95th percentile per-packet one-way delay: 171.156 ms
Loss rate: 13.02%
-- Flow 2:
Average throughput: 35.01 Mbit/s
95th percentile per-packet one-way delay: 172.159 ms
Loss rate: 17.09%
-- Flow 3:
Average throughput: 27.76 Mbit/s
95th percentile per-packet one-way delay: 173.463 ms
Loss rate: 33.44%
```

Run 4: Report of TCP BBR — Data Link

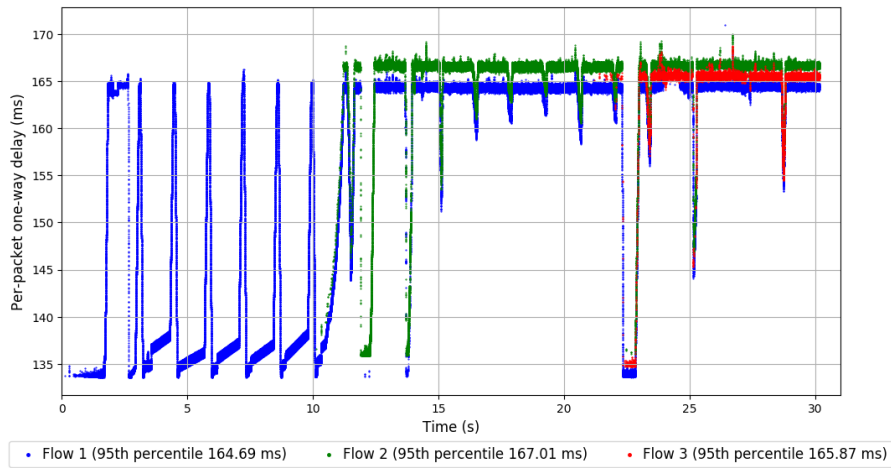
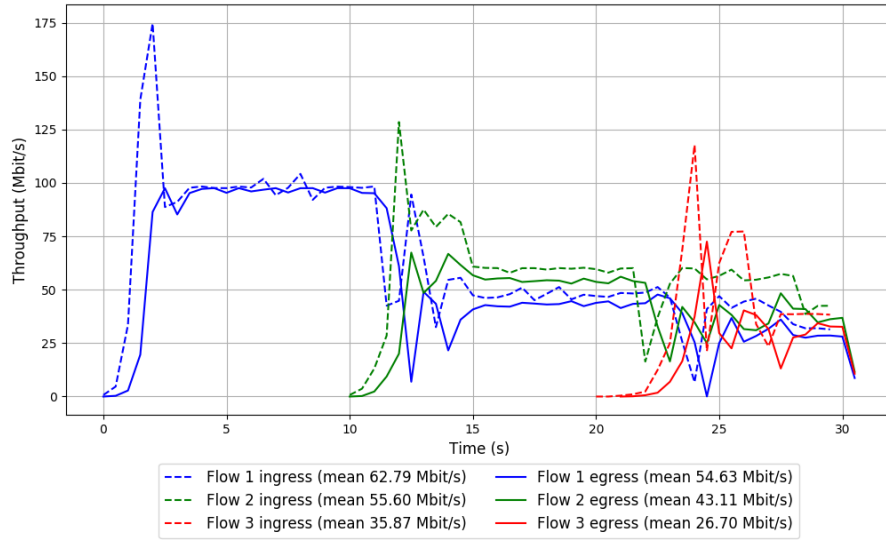


Run 5: Statistics of TCP BBR

Start at: 2019-05-30 02:39:23
End at: 2019-05-30 02:39:53
Local clock offset: -58.247 ms
Remote clock offset: -1.077 ms

```
# Below is generated by plot.py at 2019-05-30 02:42:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.32 Mbit/s
95th percentile per-packet one-way delay: 166.895 ms
Loss rate: 18.20%
-- Flow 1:
Average throughput: 54.63 Mbit/s
95th percentile per-packet one-way delay: 164.688 ms
Loss rate: 12.91%
-- Flow 2:
Average throughput: 43.11 Mbit/s
95th percentile per-packet one-way delay: 167.007 ms
Loss rate: 22.34%
-- Flow 3:
Average throughput: 26.70 Mbit/s
95th percentile per-packet one-way delay: 165.874 ms
Loss rate: 33.19%
```

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-05-30 00:48:29

End at: 2019-05-30 00:48:59

Local clock offset: -1.534 ms

Remote clock offset: 7.441 ms

Below is generated by plot.py at 2019-05-30 02:42:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.31 Mbit/s

95th percentile per-packet one-way delay: 85.974 ms

Loss rate: 72.03%

-- Flow 1:

Average throughput: 8.48 Mbit/s

95th percentile per-packet one-way delay: 86.066 ms

Loss rate: 71.30%

-- Flow 2:

Average throughput: 5.78 Mbit/s

95th percentile per-packet one-way delay: 85.687 ms

Loss rate: 73.46%

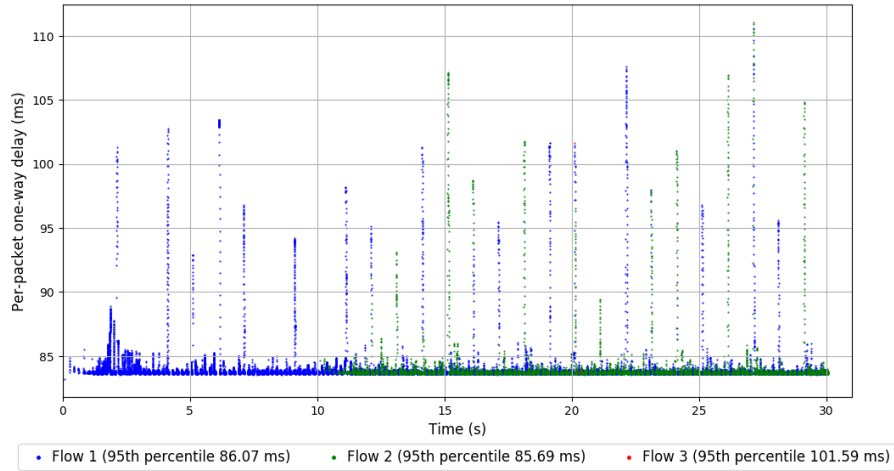
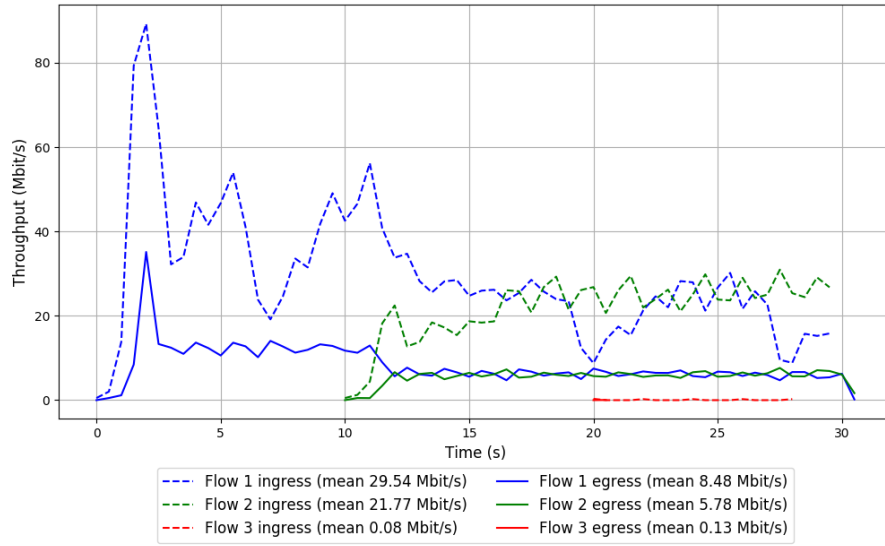
-- Flow 3:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 101.593 ms

Loss rate: 96.07%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-05-30 01:15:58

End at: 2019-05-30 01:16:28

Local clock offset: -1.918 ms

Remote clock offset: 6.06 ms

Below is generated by plot.py at 2019-05-30 02:42:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.30 Mbit/s

95th percentile per-packet one-way delay: 88.195 ms

Loss rate: 72.01%

-- Flow 1:

Average throughput: 8.46 Mbit/s

95th percentile per-packet one-way delay: 89.548 ms

Loss rate: 70.90%

-- Flow 2:

Average throughput: 5.80 Mbit/s

95th percentile per-packet one-way delay: 86.097 ms

Loss rate: 74.12%

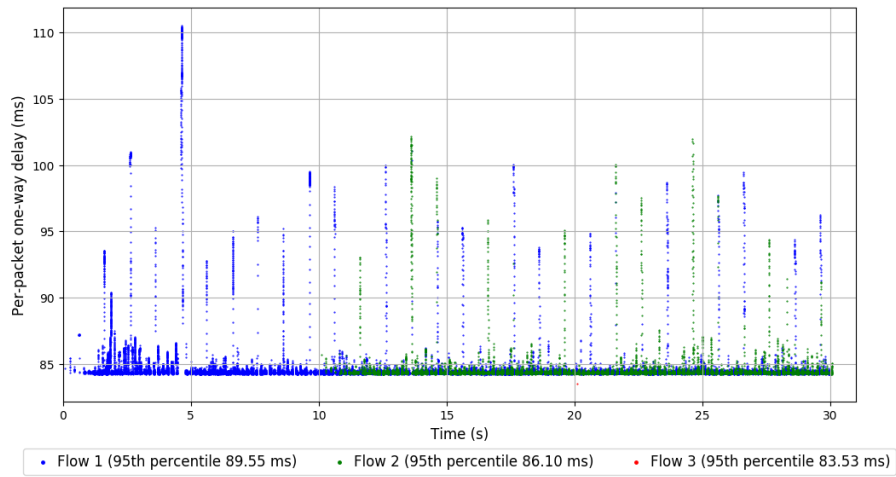
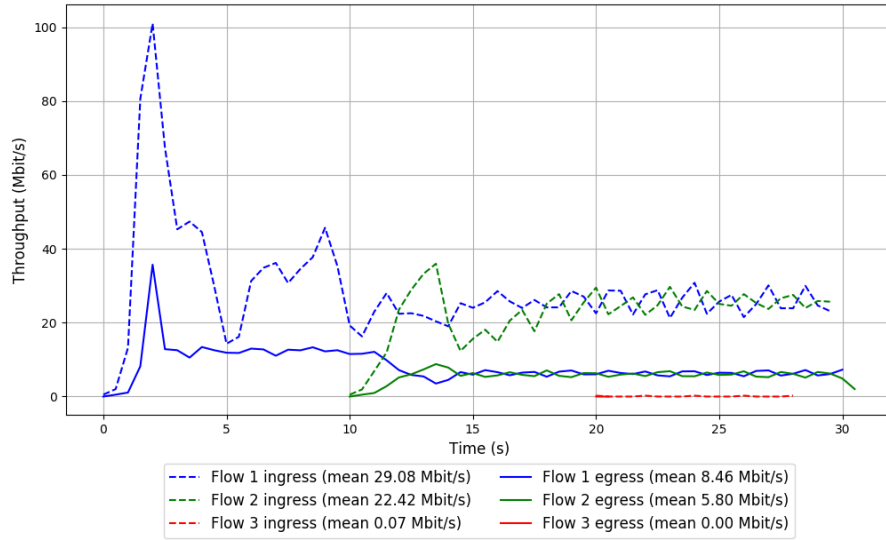
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 83.531 ms

Loss rate: 99.83%

Run 2: Report of Copa — Data Link

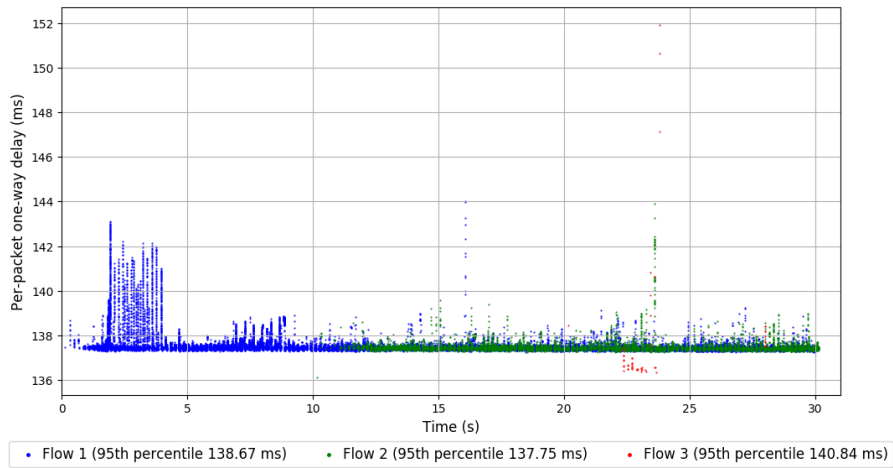
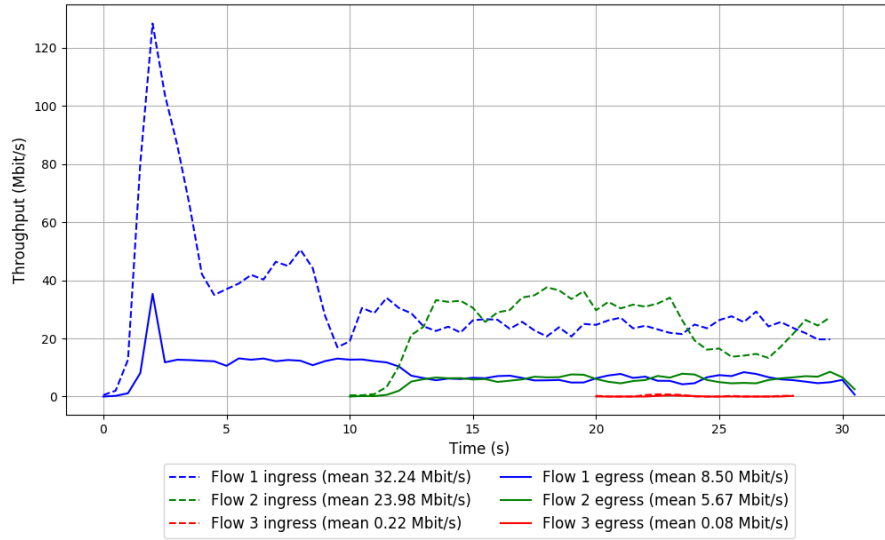


Run 3: Statistics of Copa

Start at: 2019-05-30 01:43:12
End at: 2019-05-30 01:43:42
Local clock offset: -57.807 ms
Remote clock offset: 2.764 ms

```
# Below is generated by plot.py at 2019-05-30 02:42:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.30 Mbit/s
95th percentile per-packet one-way delay: 138.344 ms
Loss rate: 74.52%
-- Flow 1:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 138.667 ms
Loss rate: 73.63%
-- Flow 2:
Average throughput: 5.67 Mbit/s
95th percentile per-packet one-way delay: 137.750 ms
Loss rate: 76.35%
-- Flow 3:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 140.836 ms
Loss rate: 62.55%
```

Run 3: Report of Copa — Data Link

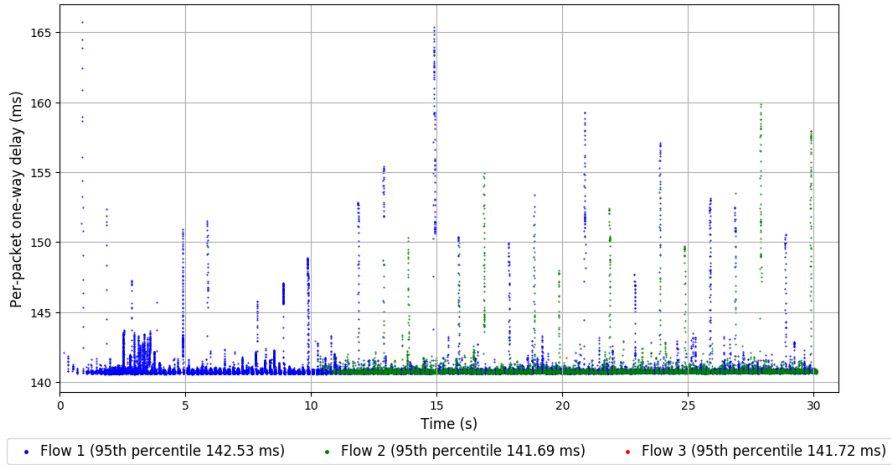
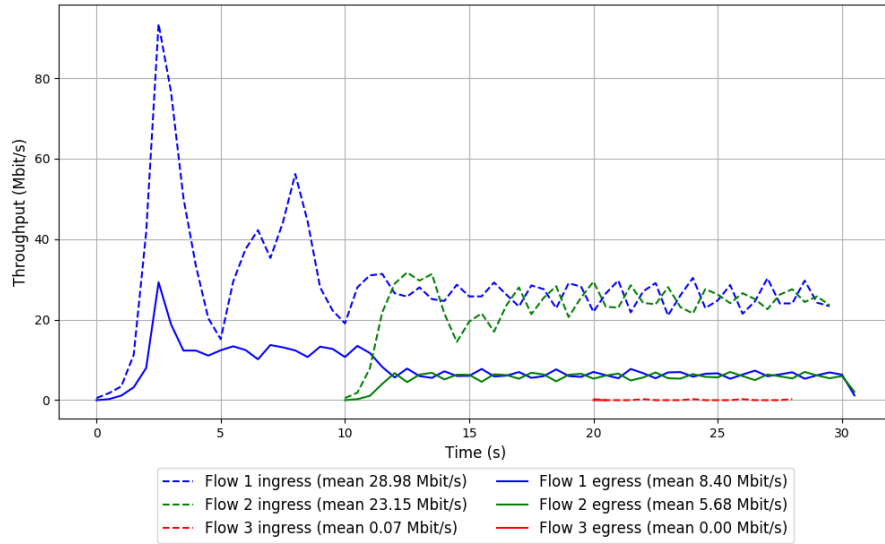


Run 4: Statistics of Copa

Start at: 2019-05-30 02:10:01
End at: 2019-05-30 02:10:31
Local clock offset: -58.644 ms
Remote clock offset: 6.835 ms

```
# Below is generated by plot.py at 2019-05-30 02:42:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.16 Mbit/s
95th percentile per-packet one-way delay: 142.282 ms
Loss rate: 72.58%
-- Flow 1:
Average throughput: 8.40 Mbit/s
95th percentile per-packet one-way delay: 142.533 ms
Loss rate: 71.02%
-- Flow 2:
Average throughput: 5.68 Mbit/s
95th percentile per-packet one-way delay: 141.693 ms
Loss rate: 75.45%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 141.723 ms
Loss rate: 99.83%
```

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-05-30 02:36:56

End at: 2019-05-30 02:37:26

Local clock offset: -57.92 ms

Remote clock offset: 4.201 ms

Below is generated by plot.py at 2019-05-30 02:42:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.30 Mbit/s

95th percentile per-packet one-way delay: 139.747 ms

Loss rate: 74.15%

-- Flow 1:

Average throughput: 8.63 Mbit/s

95th percentile per-packet one-way delay: 140.053 ms

Loss rate: 72.73%

-- Flow 2:

Average throughput: 5.54 Mbit/s

95th percentile per-packet one-way delay: 138.880 ms

Loss rate: 76.94%

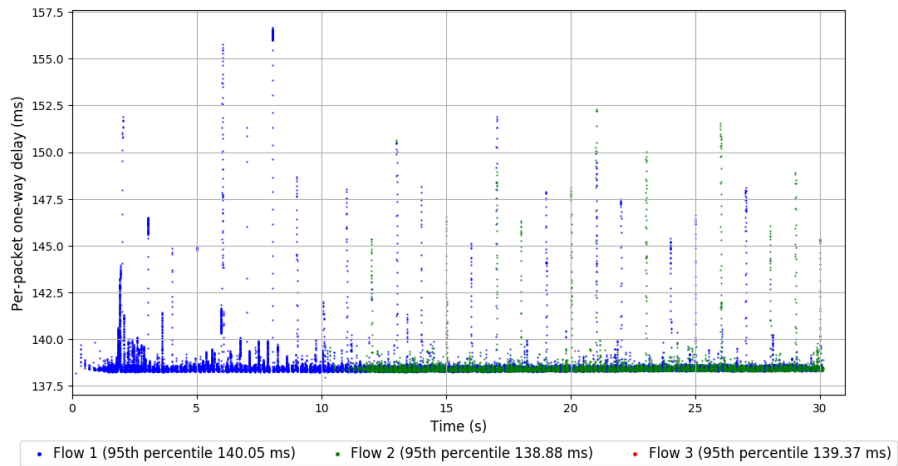
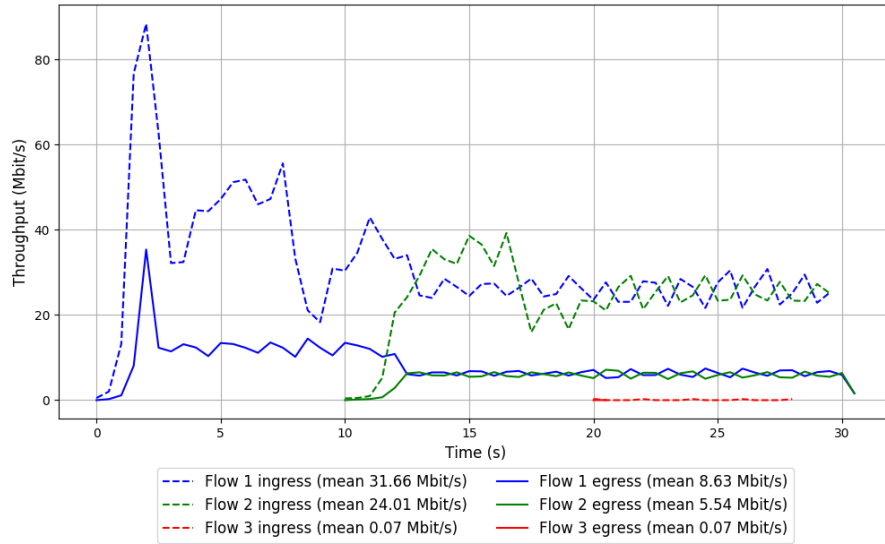
-- Flow 3:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 139.374 ms

Loss rate: 97.92%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-05-30 00:34:23

End at: 2019-05-30 00:34:53

Local clock offset: -1.102 ms

Remote clock offset: 6.785 ms

Below is generated by plot.py at 2019-05-30 02:42:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.02 Mbit/s

95th percentile per-packet one-way delay: 113.269 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 66.25 Mbit/s

95th percentile per-packet one-way delay: 113.555 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 15.17 Mbit/s

95th percentile per-packet one-way delay: 112.561 ms

Loss rate: 0.36%

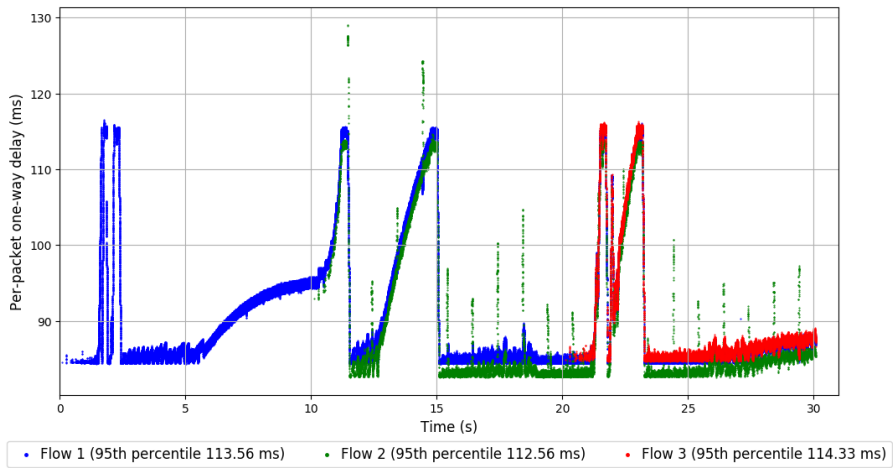
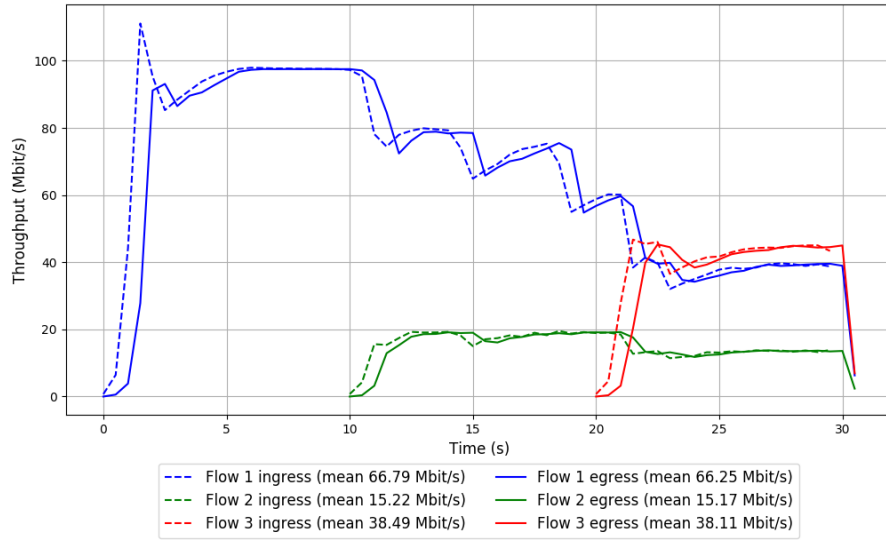
-- Flow 3:

Average throughput: 38.11 Mbit/s

95th percentile per-packet one-way delay: 114.329 ms

Loss rate: 0.98%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-05-30 01:01:07

End at: 2019-05-30 01:01:37

Local clock offset: -1.351 ms

Remote clock offset: 8.662 ms

Below is generated by plot.py at 2019-05-30 02:43:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.07 Mbit/s

95th percentile per-packet one-way delay: 114.260 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 74.07 Mbit/s

95th percentile per-packet one-way delay: 114.378 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 18.09 Mbit/s

95th percentile per-packet one-way delay: 113.962 ms

Loss rate: 0.08%

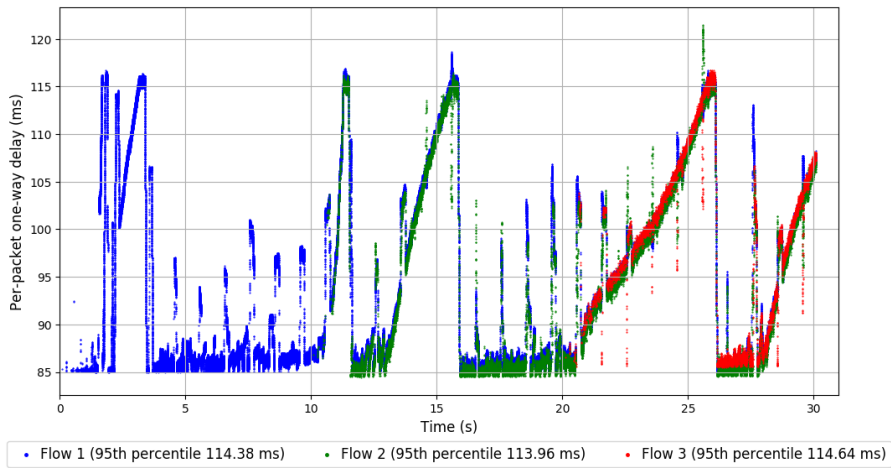
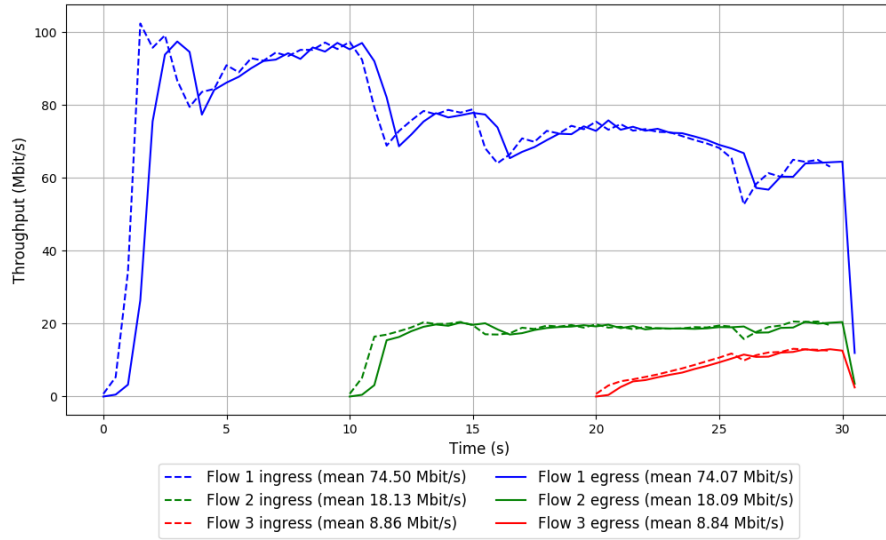
-- Flow 3:

Average throughput: 8.84 Mbit/s

95th percentile per-packet one-way delay: 114.638 ms

Loss rate: 0.04%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-05-30 01:28:59

End at: 2019-05-30 01:29:29

Local clock offset: -1.062 ms

Remote clock offset: 2.87 ms

Below is generated by plot.py at 2019-05-30 02:43:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.64 Mbit/s

95th percentile per-packet one-way delay: 111.233 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 73.18 Mbit/s

95th percentile per-packet one-way delay: 111.260 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 20.43 Mbit/s

95th percentile per-packet one-way delay: 109.754 ms

Loss rate: 0.12%

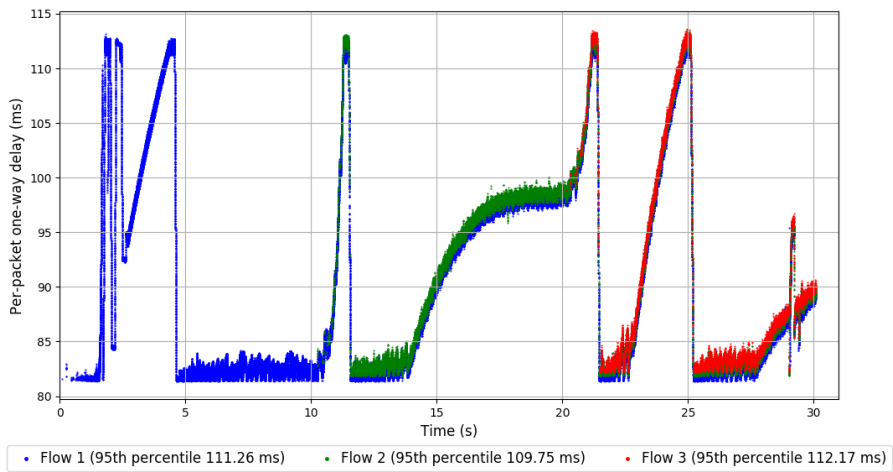
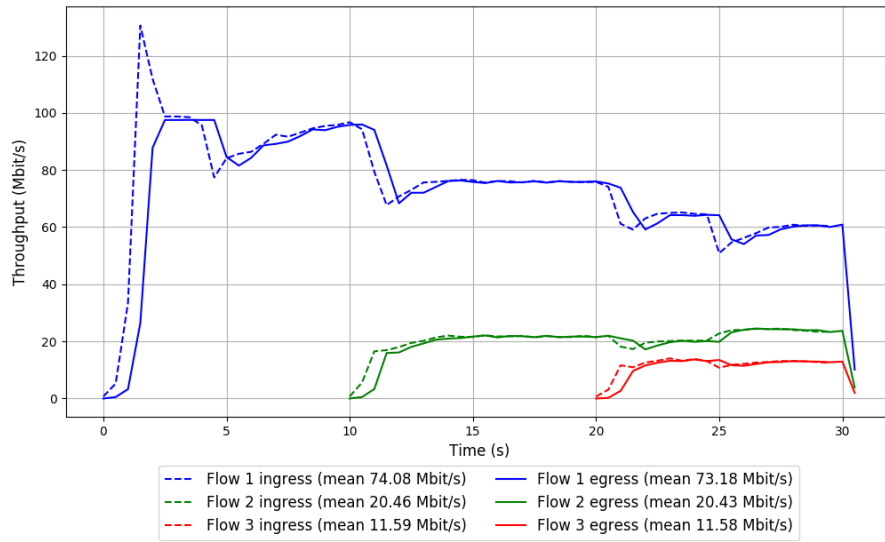
-- Flow 3:

Average throughput: 11.58 Mbit/s

95th percentile per-packet one-way delay: 112.165 ms

Loss rate: 0.19%

Run 3: Report of TCP Cubic — Data Link

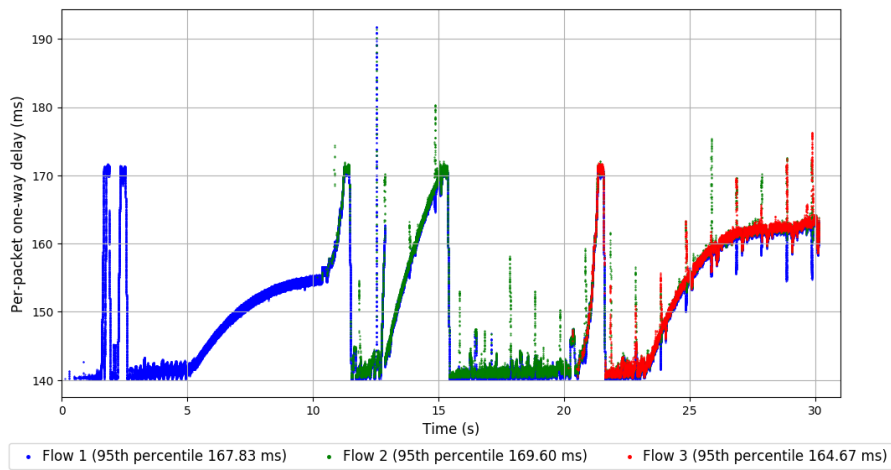
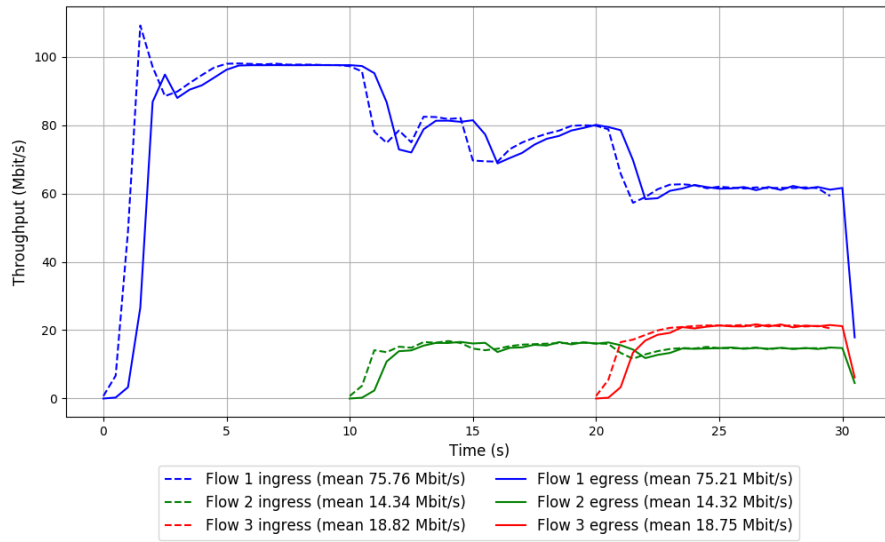


Run 4: Statistics of TCP Cubic

Start at: 2019-05-30 01:55:52
End at: 2019-05-30 01:56:22
Local clock offset: -58.551 ms
Remote clock offset: 7.229 ms

```
# Below is generated by plot.py at 2019-05-30 02:43:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.98 Mbit/s
95th percentile per-packet one-way delay: 168.029 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 75.21 Mbit/s
95th percentile per-packet one-way delay: 167.830 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 14.32 Mbit/s
95th percentile per-packet one-way delay: 169.599 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 18.75 Mbit/s
95th percentile per-packet one-way delay: 164.671 ms
Loss rate: 0.13%
```

Run 4: Report of TCP Cubic — Data Link

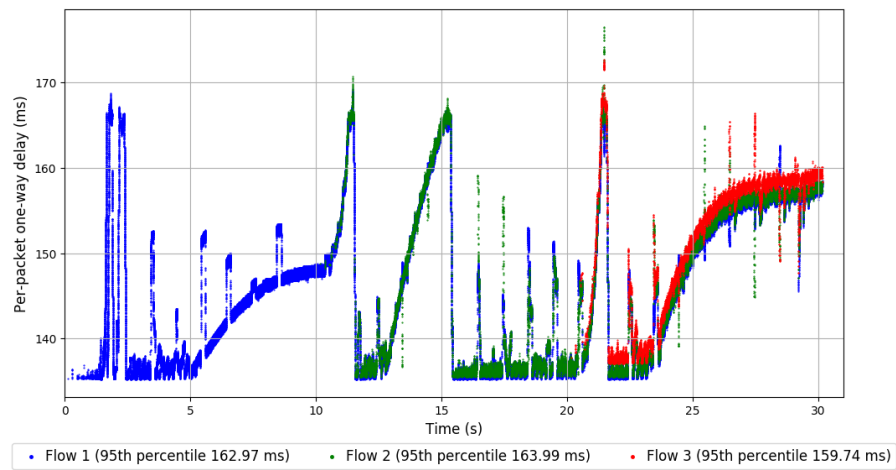
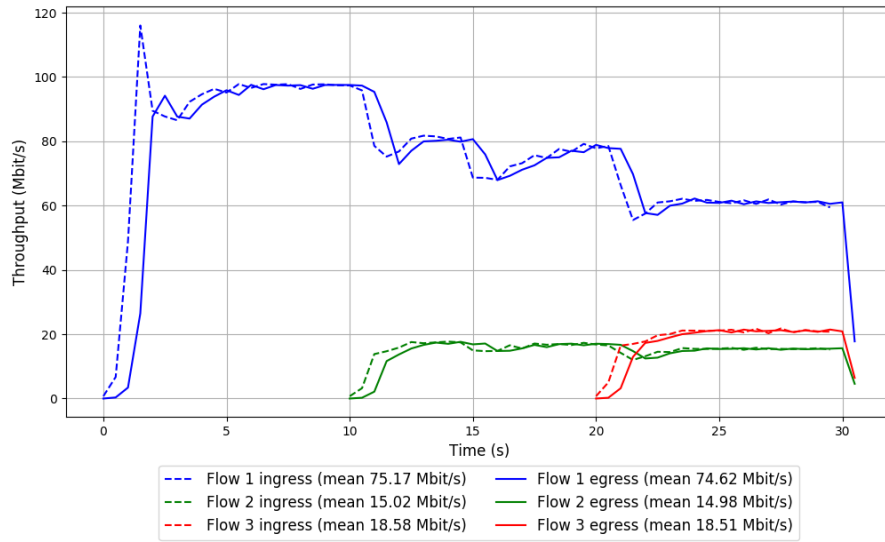


Run 5: Statistics of TCP Cubic

Start at: 2019-05-30 02:22:41
End at: 2019-05-30 02:23:11
Local clock offset: -58.567 ms
Remote clock offset: 1.315 ms

```
# Below is generated by plot.py at 2019-05-30 02:43:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.77 Mbit/s
95th percentile per-packet one-way delay: 162.933 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 74.62 Mbit/s
95th percentile per-packet one-way delay: 162.969 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 14.98 Mbit/s
95th percentile per-packet one-way delay: 163.992 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 18.51 Mbit/s
95th percentile per-packet one-way delay: 159.739 ms
Loss rate: 0.13%
```

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-05-30 00:47:11

End at: 2019-05-30 00:47:41

Local clock offset: -0.824 ms

Remote clock offset: 2.421 ms

Below is generated by plot.py at 2019-05-30 02:43:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.25 Mbit/s

95th percentile per-packet one-way delay: 106.713 ms

Loss rate: 12.76%

-- Flow 1:

Average throughput: 28.95 Mbit/s

95th percentile per-packet one-way delay: 96.442 ms

Loss rate: 4.58%

-- Flow 2:

Average throughput: 67.60 Mbit/s

95th percentile per-packet one-way delay: 106.857 ms

Loss rate: 15.90%

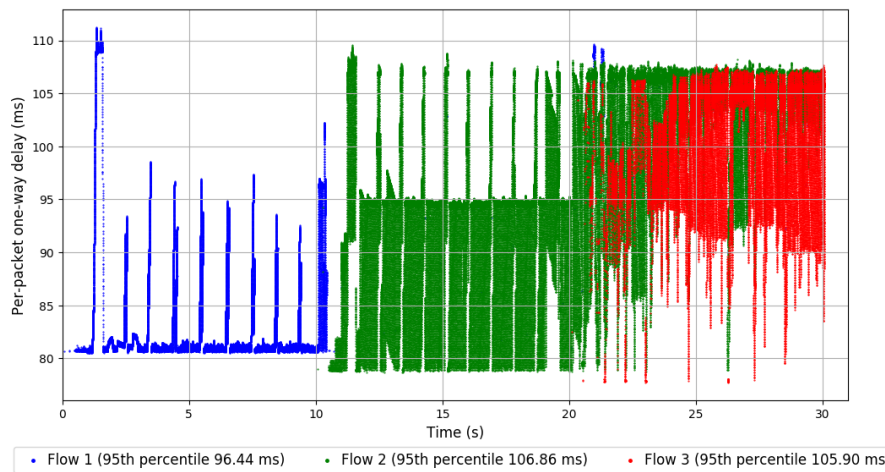
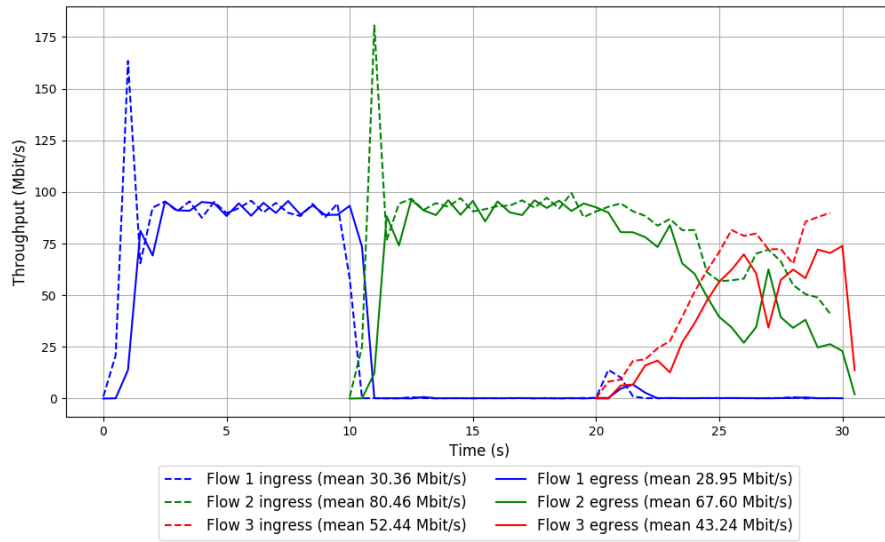
-- Flow 3:

Average throughput: 43.24 Mbit/s

95th percentile per-packet one-way delay: 105.903 ms

Loss rate: 17.34%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-05-30 01:14:40

End at: 2019-05-30 01:15:10

Local clock offset: -1.038 ms

Remote clock offset: 3.303 ms

Below is generated by plot.py at 2019-05-30 02:43:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.62 Mbit/s

95th percentile per-packet one-way delay: 109.661 ms

Loss rate: 15.98%

-- Flow 1:

Average throughput: 30.83 Mbit/s

95th percentile per-packet one-way delay: 109.473 ms

Loss rate: 10.62%

-- Flow 2:

Average throughput: 69.40 Mbit/s

95th percentile per-packet one-way delay: 108.809 ms

Loss rate: 15.71%

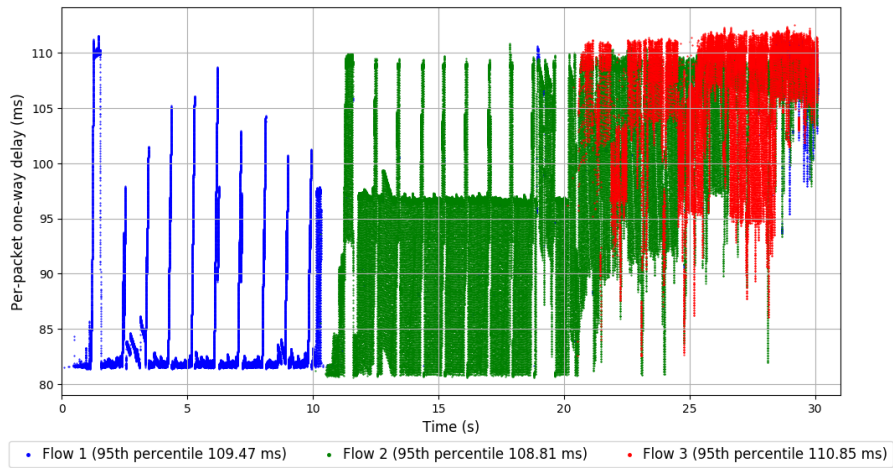
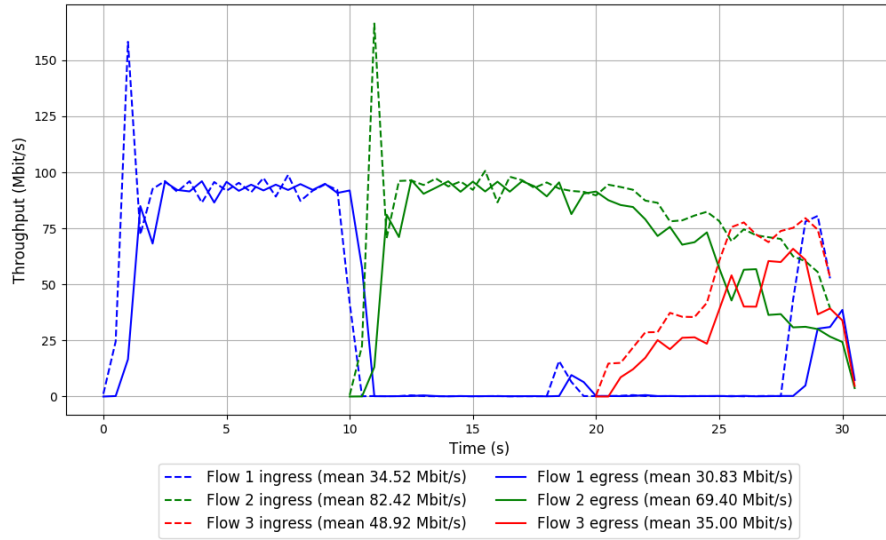
-- Flow 3:

Average throughput: 35.00 Mbit/s

95th percentile per-packet one-way delay: 110.854 ms

Loss rate: 28.36%

Run 2: Report of FillP — Data Link

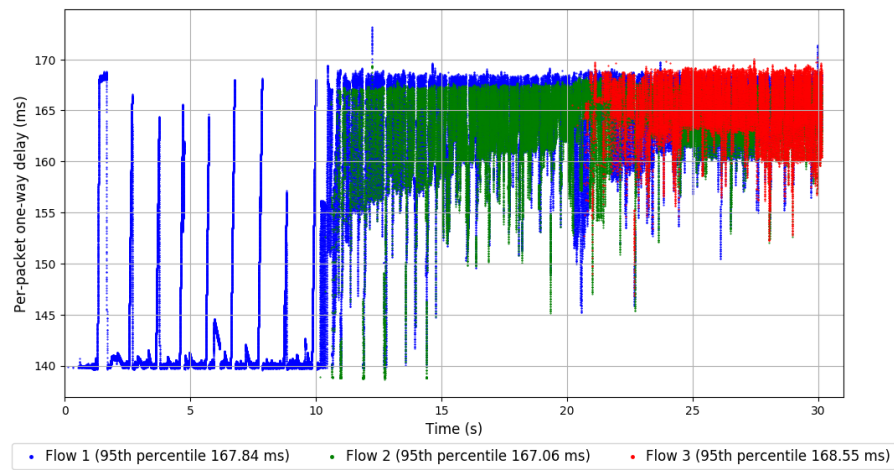
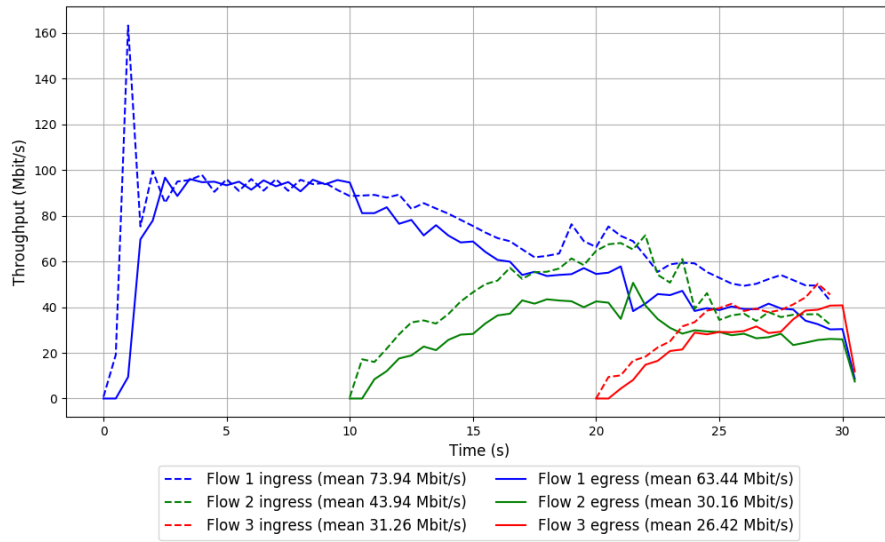


Run 3: Statistics of FillP

Start at: 2019-05-30 01:41:53
End at: 2019-05-30 01:42:23
Local clock offset: -57.619 ms
Remote clock offset: 6.078 ms

```
# Below is generated by plot.py at 2019-05-30 02:44:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.25 Mbit/s
95th percentile per-packet one-way delay: 167.821 ms
Loss rate: 18.67%
-- Flow 1:
Average throughput: 63.44 Mbit/s
95th percentile per-packet one-way delay: 167.837 ms
Loss rate: 14.12%
-- Flow 2:
Average throughput: 30.16 Mbit/s
95th percentile per-packet one-way delay: 167.058 ms
Loss rate: 31.28%
-- Flow 3:
Average throughput: 26.42 Mbit/s
95th percentile per-packet one-way delay: 168.550 ms
Loss rate: 15.49%
```

Run 3: Report of FillP — Data Link

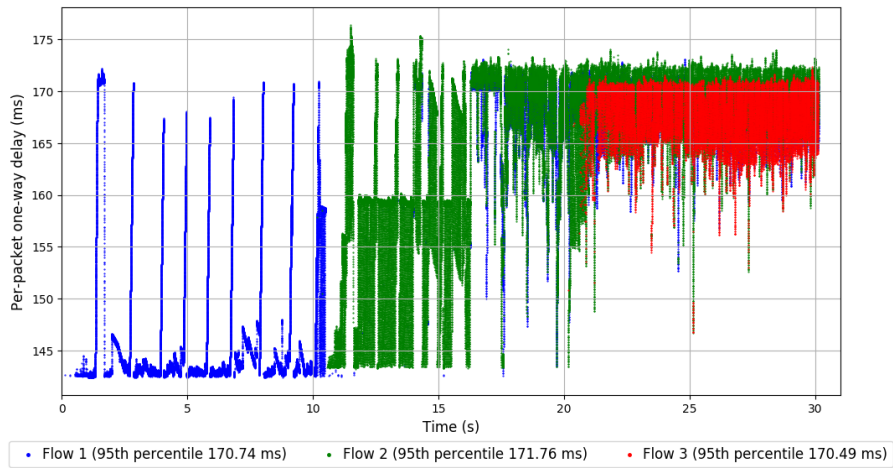
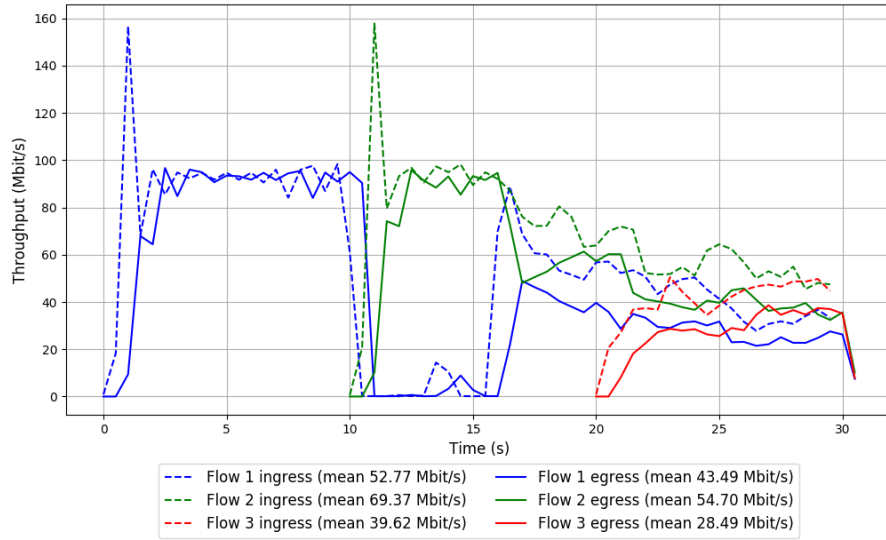


Run 4: Statistics of FillP

Start at: 2019-05-30 02:08:43
End at: 2019-05-30 02:09:13
Local clock offset: -58.812 ms
Remote clock offset: 6.82 ms

```
# Below is generated by plot.py at 2019-05-30 02:44:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.34 Mbit/s
95th percentile per-packet one-way delay: 171.315 ms
Loss rate: 20.21%
-- Flow 1:
Average throughput: 43.49 Mbit/s
95th percentile per-packet one-way delay: 170.740 ms
Loss rate: 17.52%
-- Flow 2:
Average throughput: 54.70 Mbit/s
95th percentile per-packet one-way delay: 171.756 ms
Loss rate: 21.08%
-- Flow 3:
Average throughput: 28.49 Mbit/s
95th percentile per-packet one-way delay: 170.490 ms
Loss rate: 27.98%
```

Run 4: Report of FillP — Data Link

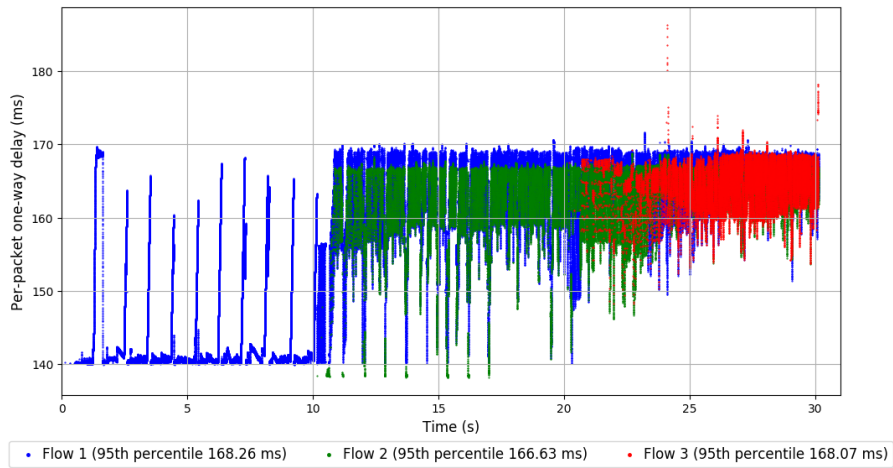
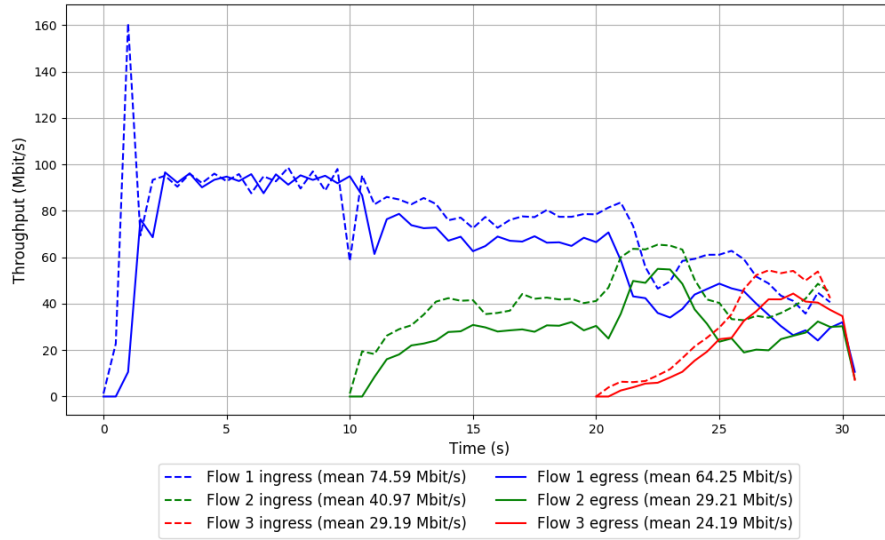


Run 5: Statistics of FillP

Start at: 2019-05-30 02:35:38
End at: 2019-05-30 02:36:08
Local clock offset: -58.735 ms
Remote clock offset: 4.306 ms

```
# Below is generated by plot.py at 2019-05-30 02:44:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.71 Mbit/s
95th percentile per-packet one-way delay: 168.124 ms
Loss rate: 17.70%
-- Flow 1:
Average throughput: 64.25 Mbit/s
95th percentile per-packet one-way delay: 168.259 ms
Loss rate: 13.78%
-- Flow 2:
Average throughput: 29.21 Mbit/s
95th percentile per-packet one-way delay: 166.628 ms
Loss rate: 28.62%
-- Flow 3:
Average throughput: 24.19 Mbit/s
95th percentile per-packet one-way delay: 168.070 ms
Loss rate: 17.16%
```

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-05-30 00:38:16

End at: 2019-05-30 00:38:46

Local clock offset: -1.668 ms

Remote clock offset: 2.855 ms

Below is generated by plot.py at 2019-05-30 02:44:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.57 Mbit/s

95th percentile per-packet one-way delay: 107.240 ms

Loss rate: 8.70%

-- Flow 1:

Average throughput: 6.33 Mbit/s

95th percentile per-packet one-way delay: 109.421 ms

Loss rate: 18.18%

-- Flow 2:

Average throughput: 75.29 Mbit/s

95th percentile per-packet one-way delay: 106.988 ms

Loss rate: 6.09%

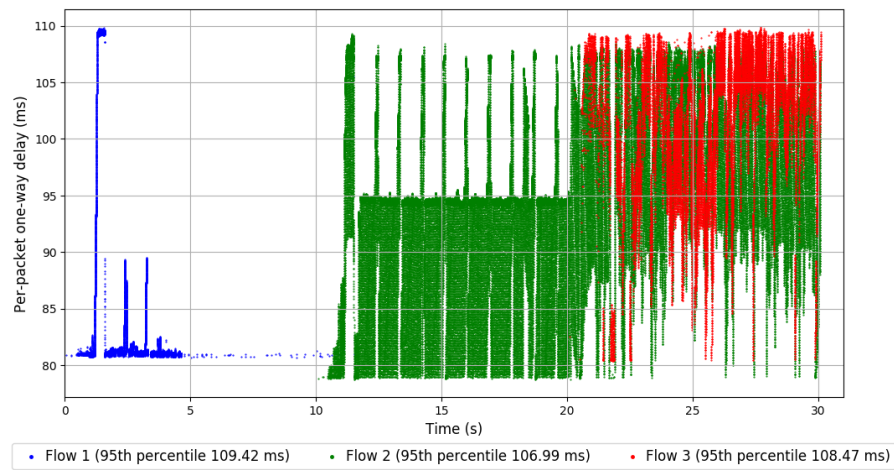
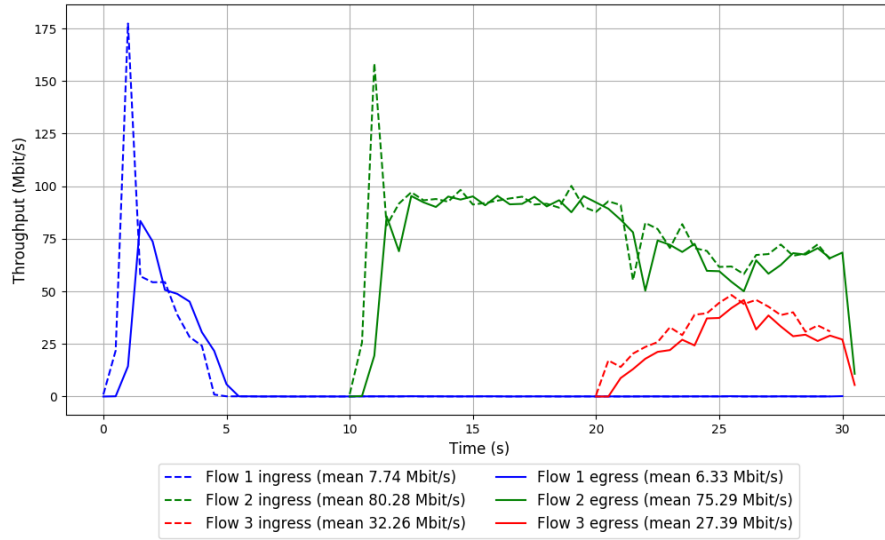
-- Flow 3:

Average throughput: 27.39 Mbit/s

95th percentile per-packet one-way delay: 108.469 ms

Loss rate: 14.86%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

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

End at: 2019-05-30 01:05:31

Local clock offset: -0.723 ms

Remote clock offset: 6.764 ms

Below is generated by plot.py at 2019-05-30 02:44:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.67 Mbit/s

95th percentile per-packet one-way delay: 111.545 ms

Loss rate: 8.64%

-- Flow 1:

Average throughput: 28.27 Mbit/s

95th percentile per-packet one-way delay: 112.119 ms

Loss rate: 5.65%

-- Flow 2:

Average throughput: 60.70 Mbit/s

95th percentile per-packet one-way delay: 111.633 ms

Loss rate: 9.30%

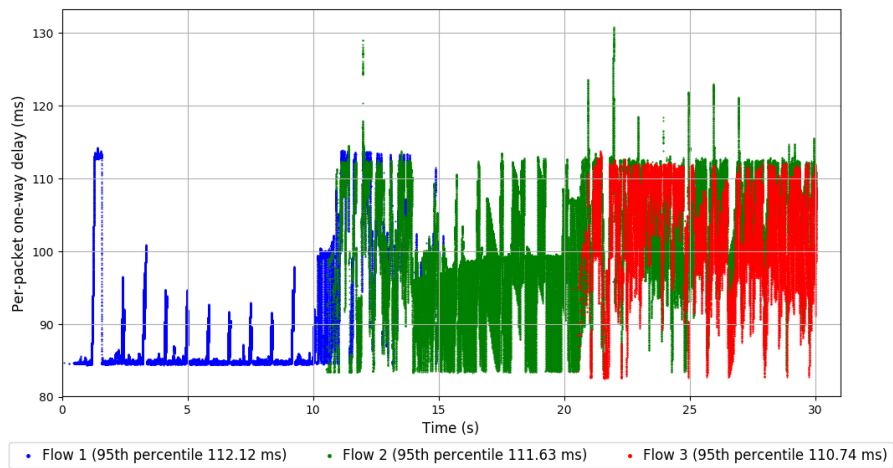
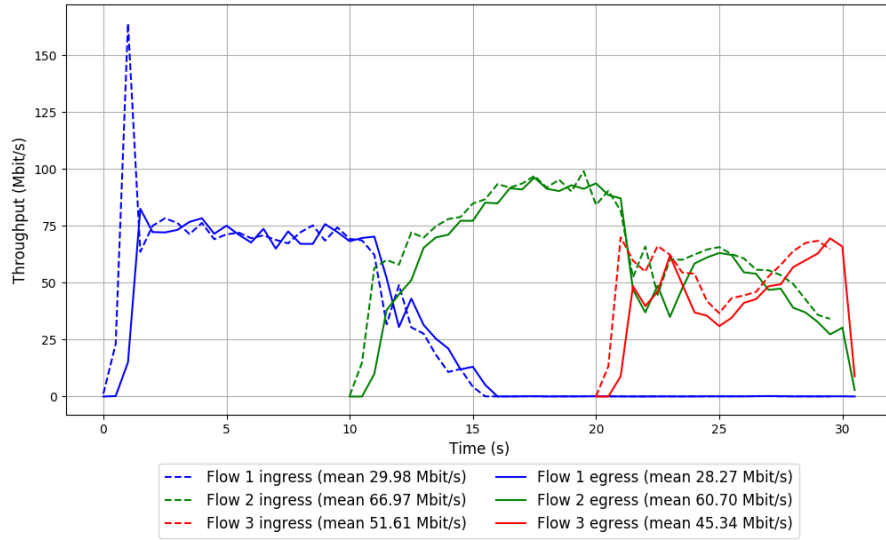
-- Flow 3:

Average throughput: 45.34 Mbit/s

95th percentile per-packet one-way delay: 110.744 ms

Loss rate: 12.16%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-05-30 01:32:55

End at: 2019-05-30 01:33:25

Local clock offset: -1.241 ms

Remote clock offset: 1.485 ms

Below is generated by plot.py at 2019-05-30 02:44:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.28 Mbit/s

95th percentile per-packet one-way delay: 108.039 ms

Loss rate: 5.14%

-- Flow 1:

Average throughput: 28.87 Mbit/s

95th percentile per-packet one-way delay: 95.309 ms

Loss rate: 4.09%

-- Flow 2:

Average throughput: 83.02 Mbit/s

95th percentile per-packet one-way delay: 108.310 ms

Loss rate: 4.81%

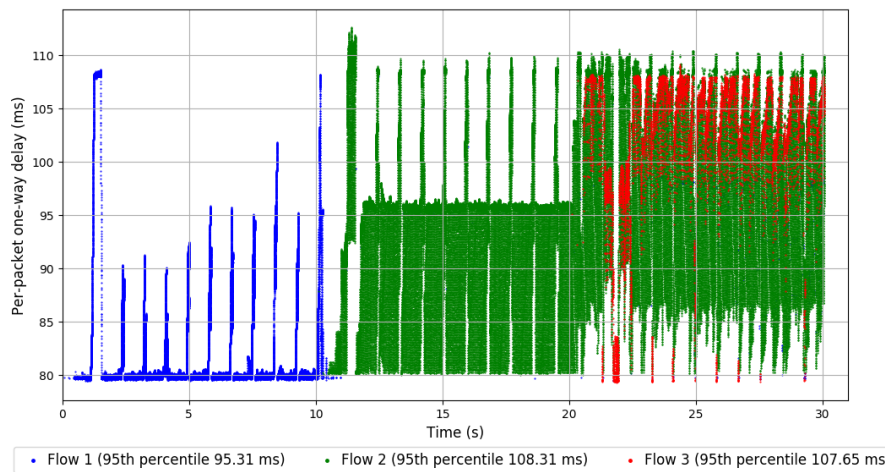
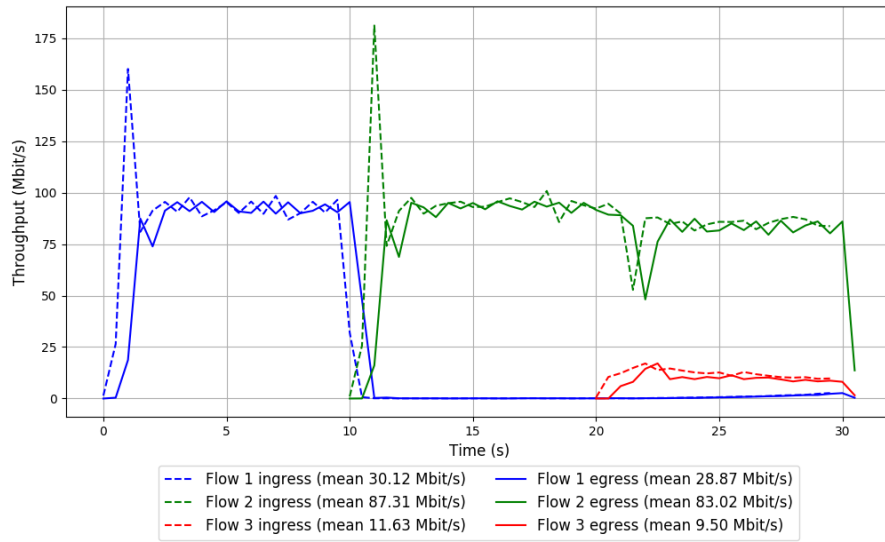
-- Flow 3:

Average throughput: 9.50 Mbit/s

95th percentile per-packet one-way delay: 107.646 ms

Loss rate: 18.19%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-05-30 01:59:45

End at: 2019-05-30 02:00:15

Local clock offset: -57.84 ms

Remote clock offset: 3.174 ms

Below is generated by plot.py at 2019-05-30 02:45:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.94 Mbit/s

95th percentile per-packet one-way delay: 165.665 ms

Loss rate: 6.32%

-- Flow 1:

Average throughput: 29.17 Mbit/s

95th percentile per-packet one-way delay: 162.198 ms

Loss rate: 5.51%

-- Flow 2:

Average throughput: 63.31 Mbit/s

95th percentile per-packet one-way delay: 166.171 ms

Loss rate: 7.49%

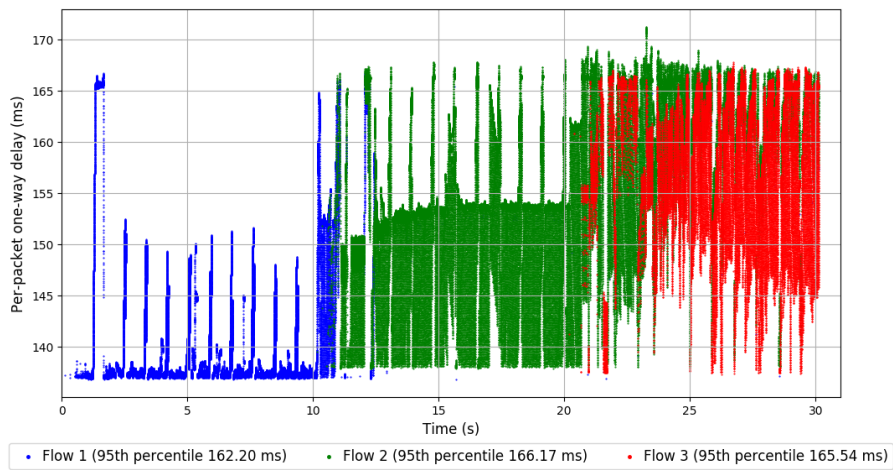
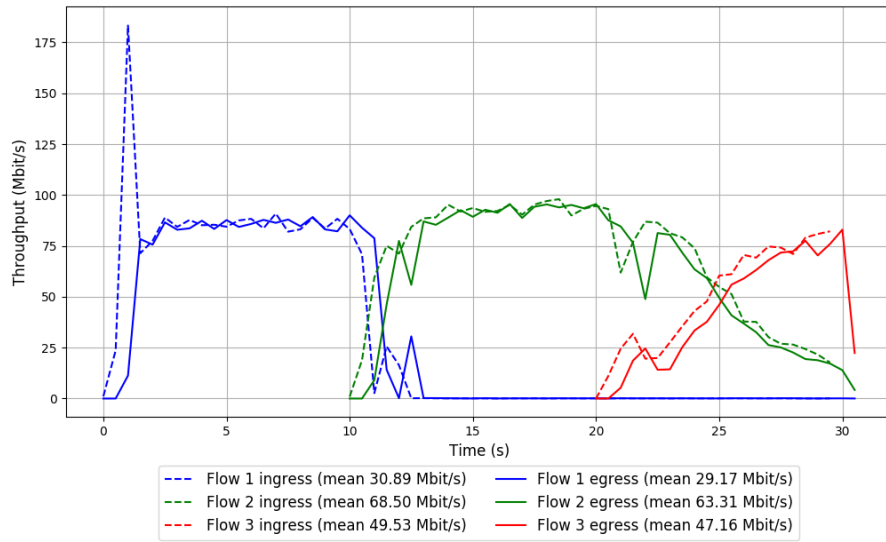
-- Flow 3:

Average throughput: 47.16 Mbit/s

95th percentile per-packet one-way delay: 165.545 ms

Loss rate: 4.60%

Run 4: Report of FillP-Sheep — Data Link

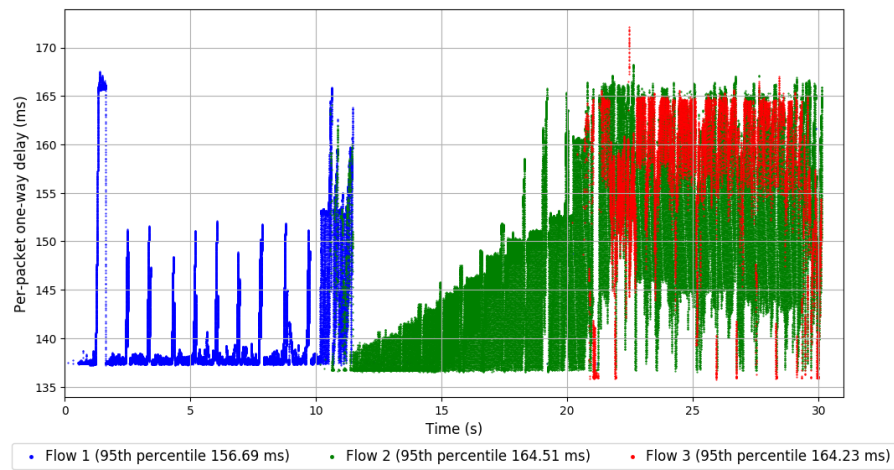
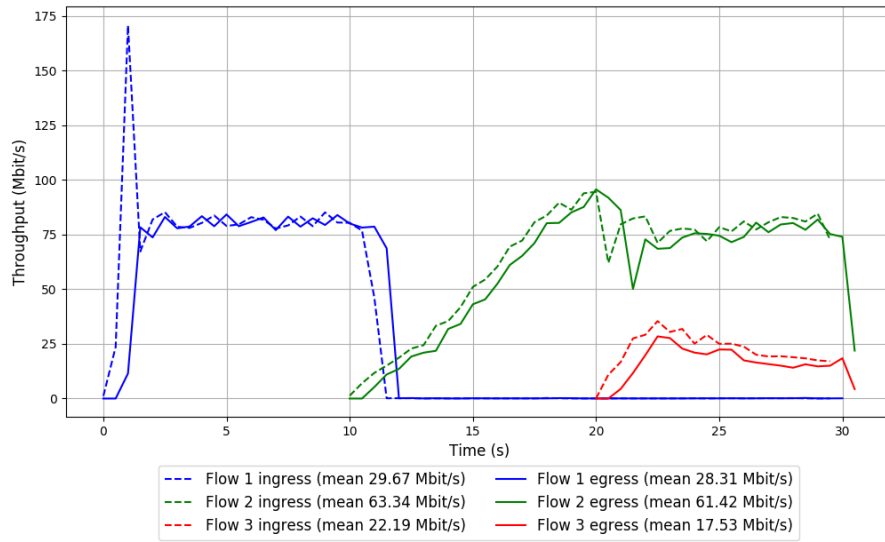


Run 5: Statistics of FillP-Sheep

Start at: 2019-05-30 02:26:39
End at: 2019-05-30 02:27:09
Local clock offset: -58.575 ms
Remote clock offset: 1.847 ms

```
# Below is generated by plot.py at 2019-05-30 02:45:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.81 Mbit/s
95th percentile per-packet one-way delay: 164.223 ms
Loss rate: 5.19%
-- Flow 1:
Average throughput: 28.31 Mbit/s
95th percentile per-packet one-way delay: 156.688 ms
Loss rate: 4.51%
-- Flow 2:
Average throughput: 61.42 Mbit/s
95th percentile per-packet one-way delay: 164.507 ms
Loss rate: 2.90%
-- Flow 3:
Average throughput: 17.53 Mbit/s
95th percentile per-packet one-way delay: 164.233 ms
Loss rate: 21.05%
```

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-05-30 00:30:32

End at: 2019-05-30 00:31:02

Local clock offset: -1.703 ms

Remote clock offset: 2.765 ms

Below is generated by plot.py at 2019-05-30 02:45:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.54 Mbit/s

95th percentile per-packet one-way delay: 111.420 ms

Loss rate: 21.39%

-- Flow 1:

Average throughput: 57.87 Mbit/s

95th percentile per-packet one-way delay: 109.915 ms

Loss rate: 16.21%

-- Flow 2:

Average throughput: 32.52 Mbit/s

95th percentile per-packet one-way delay: 110.651 ms

Loss rate: 12.91%

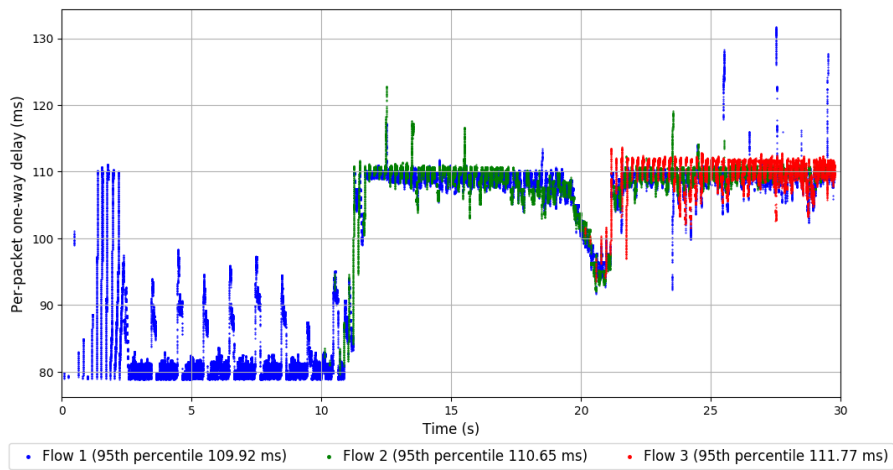
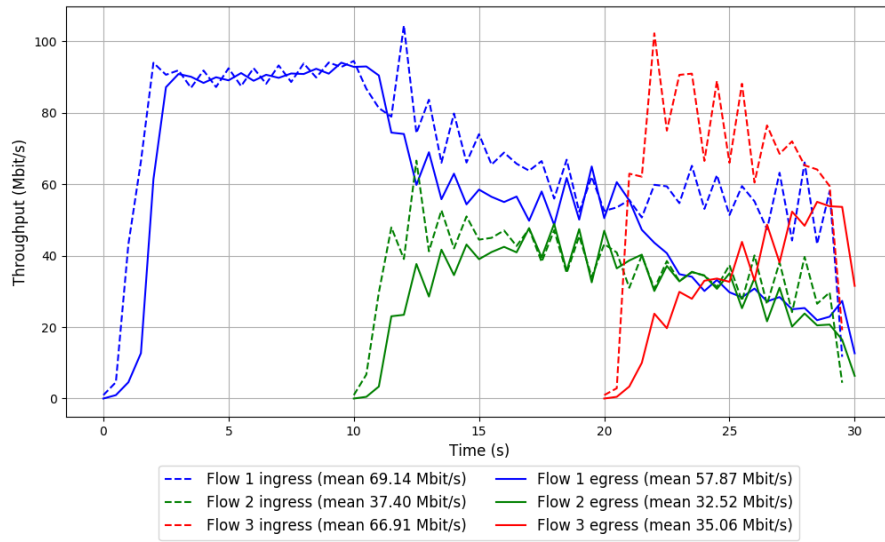
-- Flow 3:

Average throughput: 35.06 Mbit/s

95th percentile per-packet one-way delay: 111.771 ms

Loss rate: 47.55%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-05-30 00:57:16

End at: 2019-05-30 00:57:46

Local clock offset: -1.387 ms

Remote clock offset: 8.676 ms

Below is generated by plot.py at 2019-05-30 02:45:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.02 Mbit/s

95th percentile per-packet one-way delay: 116.858 ms

Loss rate: 31.92%

-- Flow 1:

Average throughput: 66.63 Mbit/s

95th percentile per-packet one-way delay: 116.897 ms

Loss rate: 7.38%

-- Flow 2:

Average throughput: 22.98 Mbit/s

95th percentile per-packet one-way delay: 116.539 ms

Loss rate: 37.20%

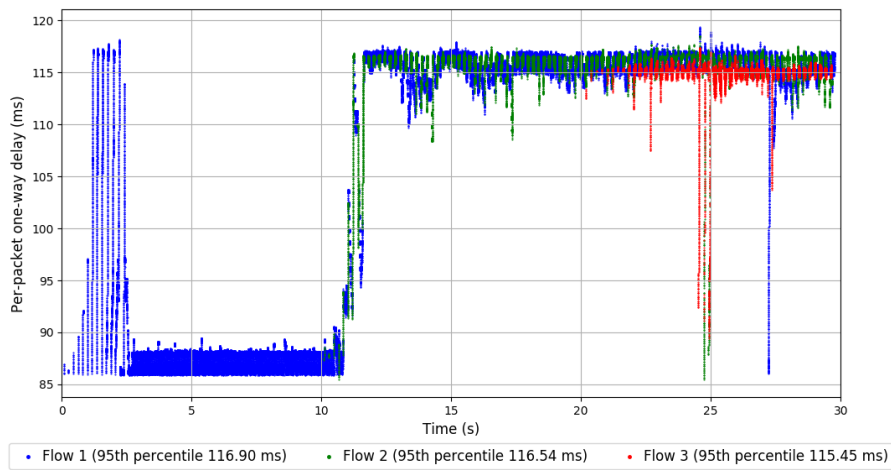
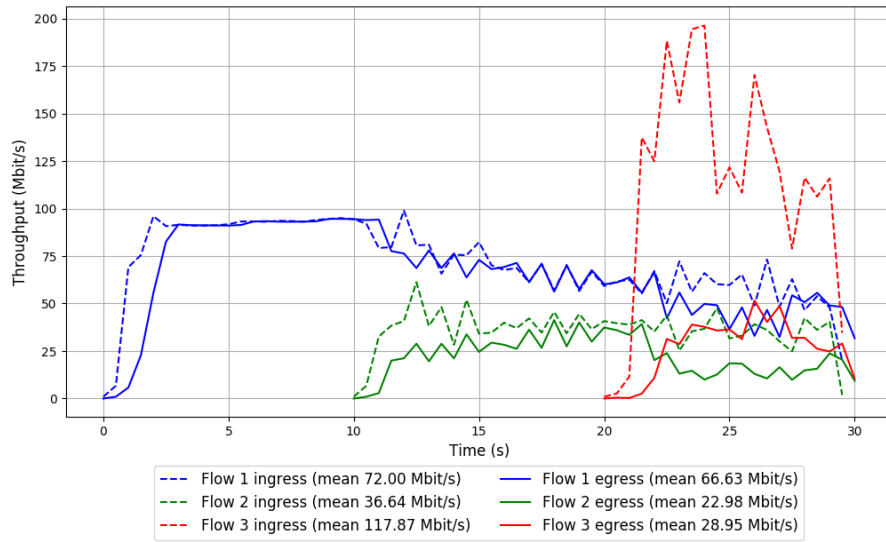
-- Flow 3:

Average throughput: 28.95 Mbit/s

95th percentile per-packet one-way delay: 115.455 ms

Loss rate: 75.43%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-05-30 01:24:45

End at: 2019-05-30 01:25:15

Local clock offset: -0.987 ms

Remote clock offset: 6.707 ms

Below is generated by plot.py at 2019-05-30 02:45:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.95 Mbit/s

95th percentile per-packet one-way delay: 117.105 ms

Loss rate: 34.35%

-- Flow 1:

Average throughput: 61.38 Mbit/s

95th percentile per-packet one-way delay: 116.122 ms

Loss rate: 14.47%

-- Flow 2:

Average throughput: 32.28 Mbit/s

95th percentile per-packet one-way delay: 116.194 ms

Loss rate: 33.61%

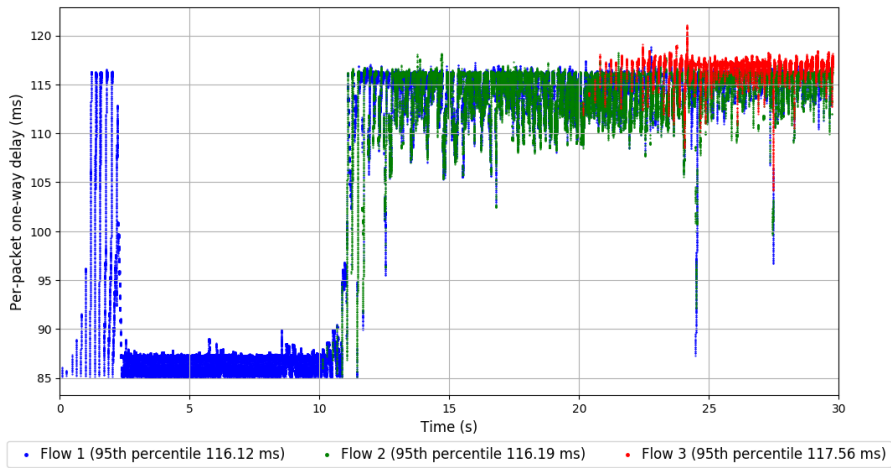
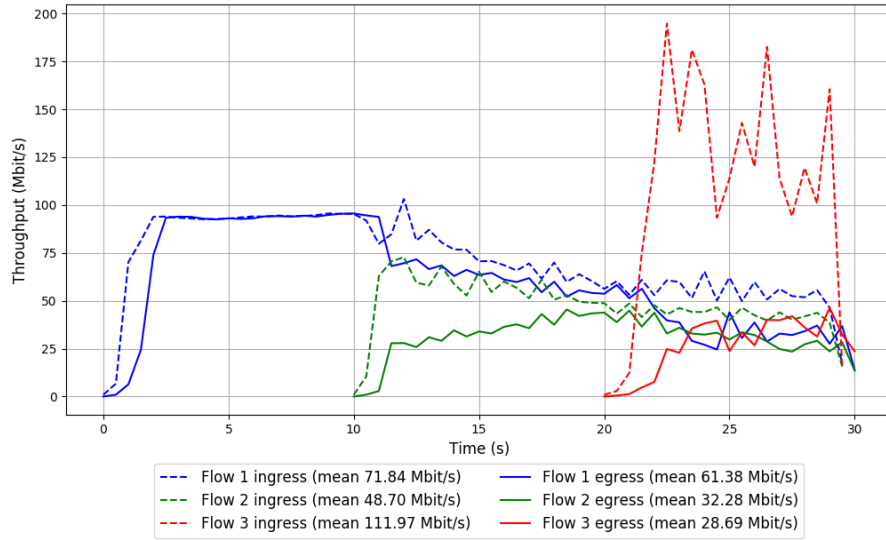
-- Flow 3:

Average throughput: 28.69 Mbit/s

95th percentile per-packet one-way delay: 117.556 ms

Loss rate: 74.36%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-05-30 01:52:00

End at: 2019-05-30 01:52:30

Local clock offset: -58.3 ms

Remote clock offset: 6.71 ms

Below is generated by plot.py at 2019-05-30 02:45:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.06 Mbit/s

95th percentile per-packet one-way delay: 172.674 ms

Loss rate: 16.16%

-- Flow 1:

Average throughput: 60.41 Mbit/s

95th percentile per-packet one-way delay: 170.660 ms

Loss rate: 13.24%

-- Flow 2:

Average throughput: 31.81 Mbit/s

95th percentile per-packet one-way delay: 172.795 ms

Loss rate: 17.08%

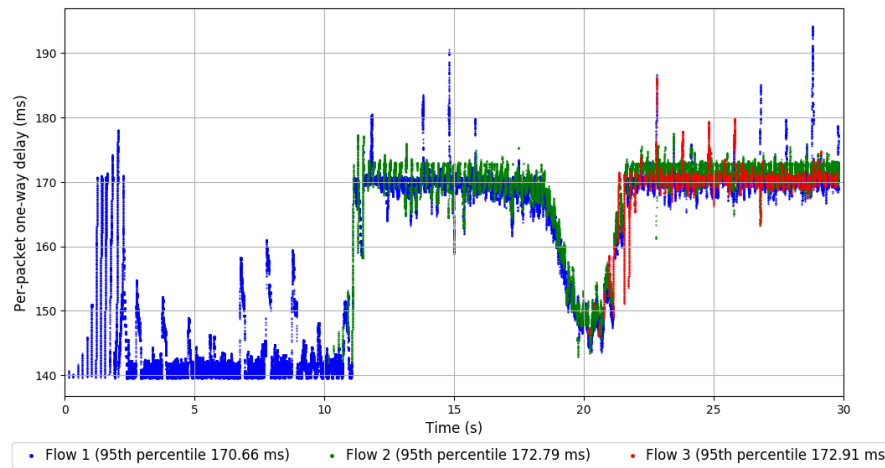
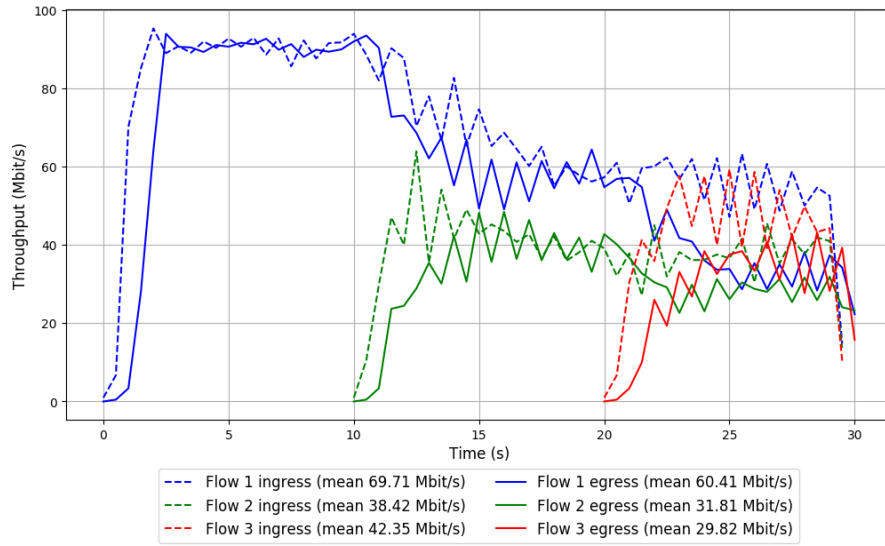
-- Flow 3:

Average throughput: 29.82 Mbit/s

95th percentile per-packet one-way delay: 172.915 ms

Loss rate: 29.41%

Run 4: Report of Indigo — Data Link

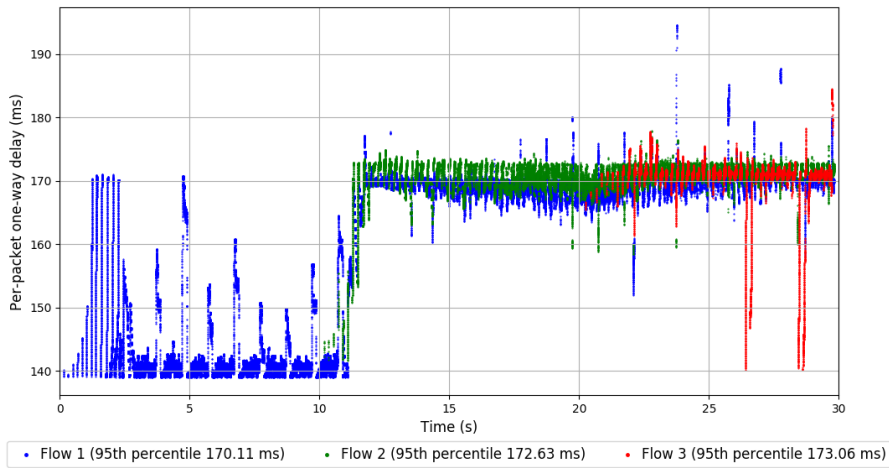
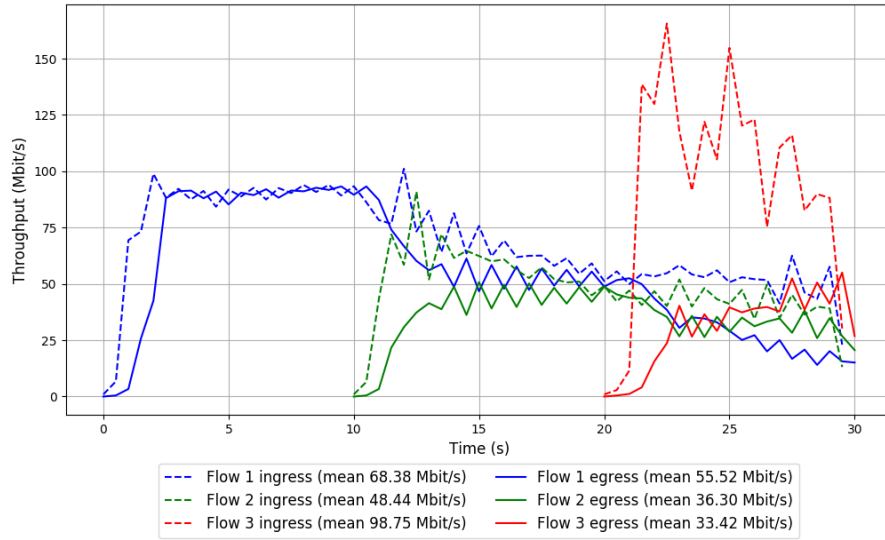


Run 5: Statistics of Indigo

Start at: 2019-05-30 02:18:49
End at: 2019-05-30 02:19:19
Local clock offset: -58.407 ms
Remote clock offset: 5.591 ms

```
# Below is generated by plot.py at 2019-05-30 02:45:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.26 Mbit/s
95th percentile per-packet one-way delay: 172.533 ms
Loss rate: 31.59%
-- Flow 1:
Average throughput: 55.52 Mbit/s
95th percentile per-packet one-way delay: 170.110 ms
Loss rate: 18.72%
-- Flow 2:
Average throughput: 36.30 Mbit/s
95th percentile per-packet one-way delay: 172.628 ms
Loss rate: 24.96%
-- Flow 3:
Average throughput: 33.42 Mbit/s
95th percentile per-packet one-way delay: 173.063 ms
Loss rate: 66.11%
```

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-05-30 00:39:32

End at: 2019-05-30 00:40:02

Local clock offset: -1.653 ms

Remote clock offset: 2.924 ms

Below is generated by plot.py at 2019-05-30 02:45:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.84 Mbit/s

95th percentile per-packet one-way delay: 110.215 ms

Loss rate: 3.49%

-- Flow 1:

Average throughput: 48.97 Mbit/s

95th percentile per-packet one-way delay: 109.389 ms

Loss rate: 1.99%

-- Flow 2:

Average throughput: 44.62 Mbit/s

95th percentile per-packet one-way delay: 110.539 ms

Loss rate: 2.24%

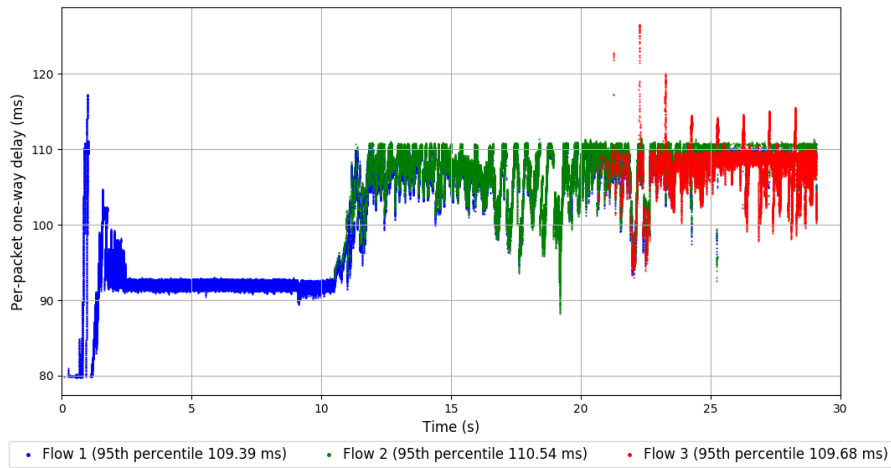
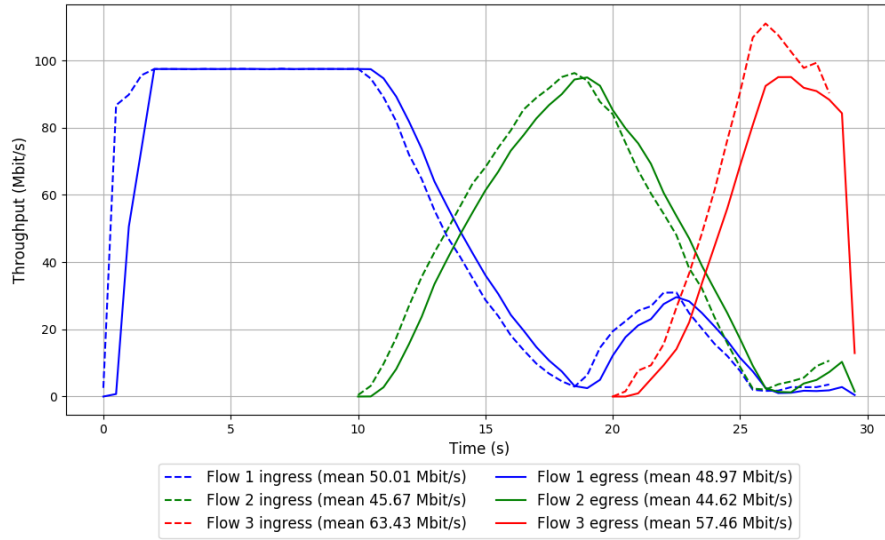
-- Flow 3:

Average throughput: 57.46 Mbit/s

95th percentile per-packet one-way delay: 109.676 ms

Loss rate: 9.45%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-05-30 01:06:18

End at: 2019-05-30 01:06:48

Local clock offset: -1.287 ms

Remote clock offset: 1.412 ms

Below is generated by plot.py at 2019-05-30 02:46:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.21 Mbit/s

95th percentile per-packet one-way delay: 108.703 ms

Loss rate: 0.97%

-- Flow 1:

Average throughput: 48.19 Mbit/s

95th percentile per-packet one-way delay: 108.192 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 56.25 Mbit/s

95th percentile per-packet one-way delay: 107.859 ms

Loss rate: 1.23%

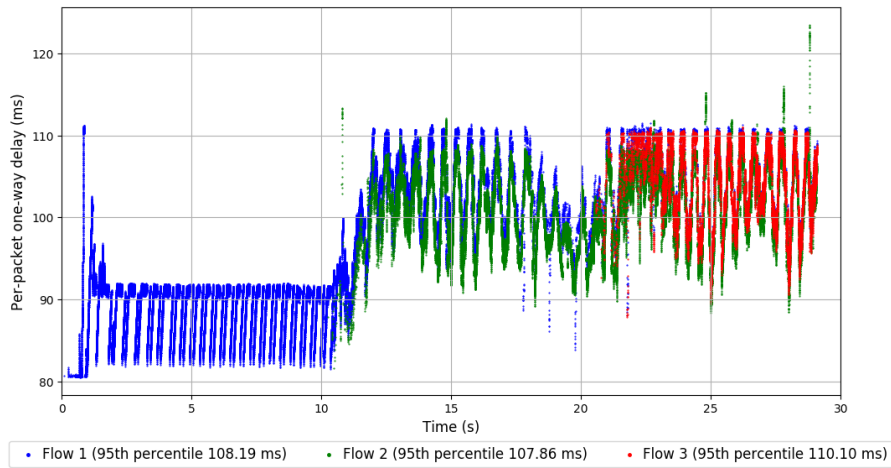
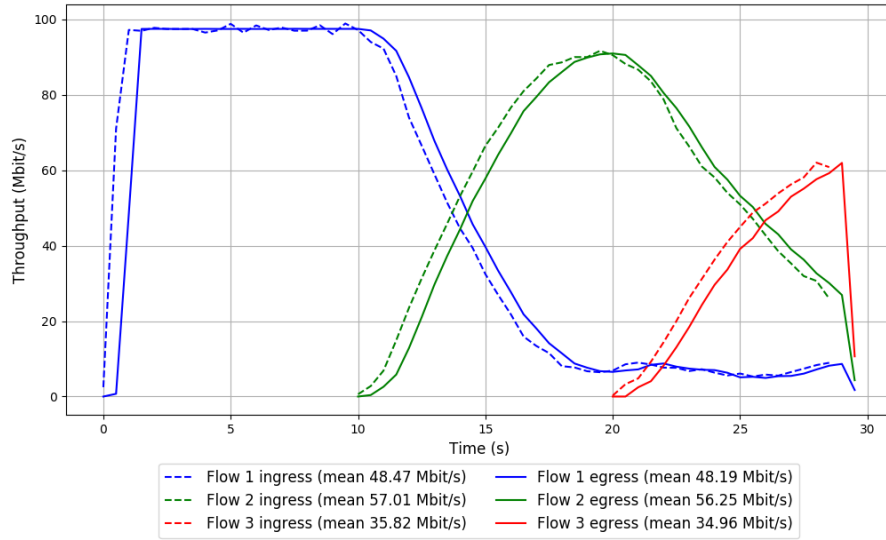
-- Flow 3:

Average throughput: 34.96 Mbit/s

95th percentile per-packet one-way delay: 110.103 ms

Loss rate: 2.27%

Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2019-05-30 01:34:12

End at: 2019-05-30 01:34:42

Local clock offset: -2.021 ms

Remote clock offset: 6.875 ms

Below is generated by plot.py at 2019-05-30 02:46:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.97 Mbit/s

95th percentile per-packet one-way delay: 116.930 ms

Loss rate: 1.62%

-- Flow 1:

Average throughput: 53.48 Mbit/s

95th percentile per-packet one-way delay: 117.424 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 43.10 Mbit/s

95th percentile per-packet one-way delay: 116.501 ms

Loss rate: 2.16%

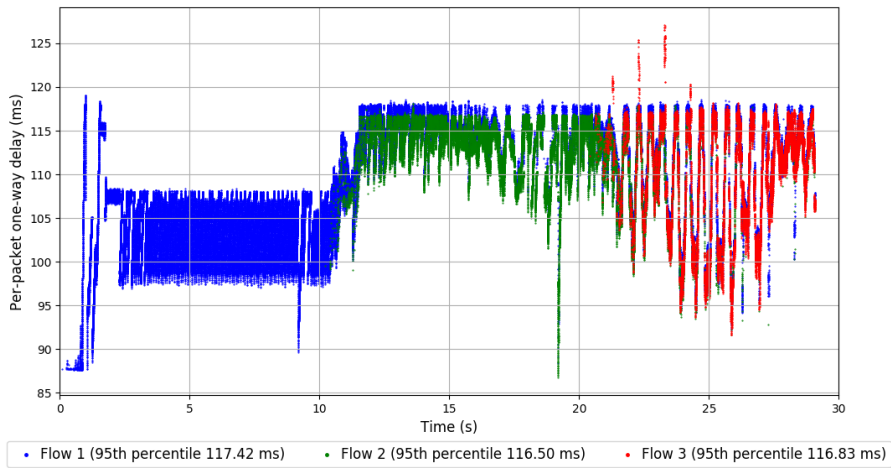
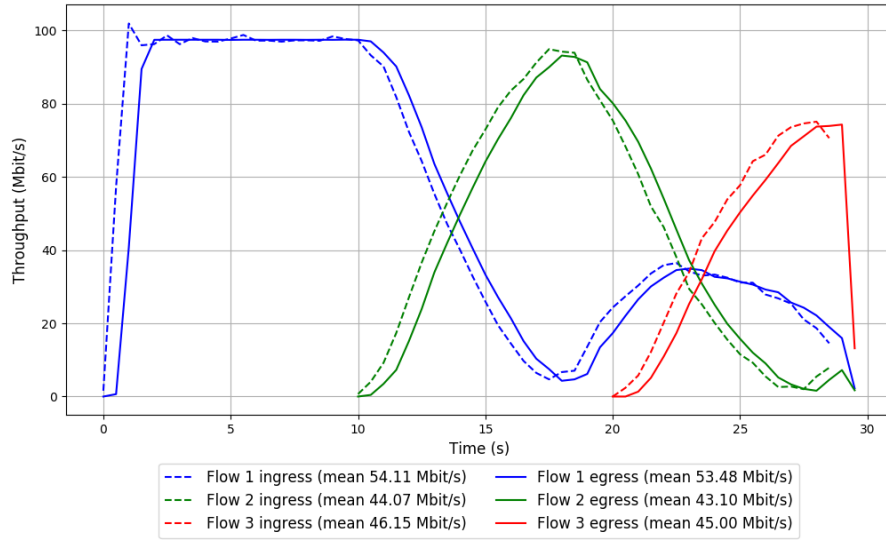
-- Flow 3:

Average throughput: 45.00 Mbit/s

95th percentile per-packet one-way delay: 116.830 ms

Loss rate: 2.57%

Run 3: Report of Indigo-MusesC3 — Data Link

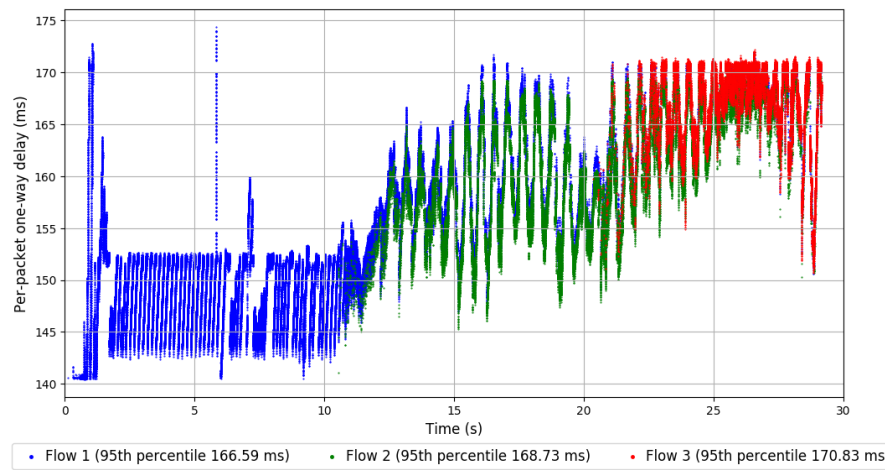
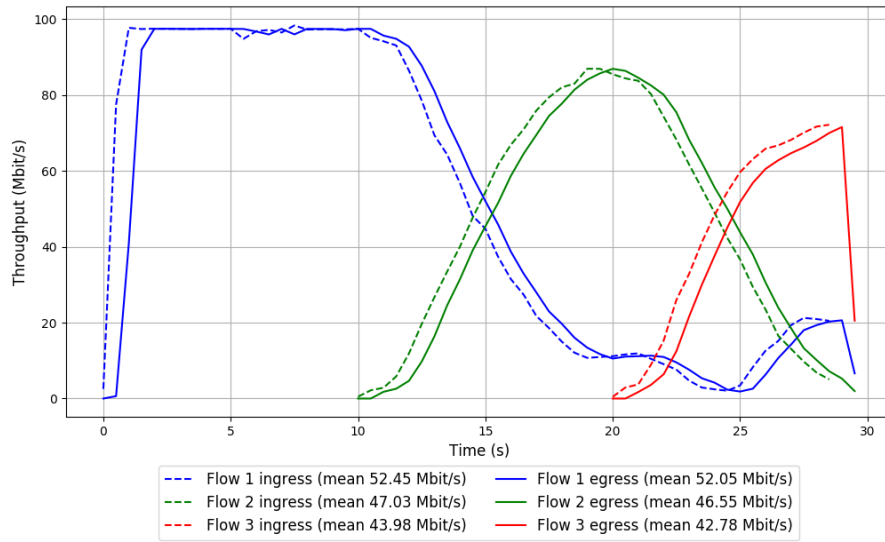


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-05-30 02:01:03
End at: 2019-05-30 02:01:33
Local clock offset: -58.549 ms
Remote clock offset: 5.828 ms

```
# Below is generated by plot.py at 2019-05-30 02:46:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.12 Mbit/s
95th percentile per-packet one-way delay: 169.721 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 52.05 Mbit/s
95th percentile per-packet one-way delay: 166.590 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 46.55 Mbit/s
95th percentile per-packet one-way delay: 168.729 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 42.78 Mbit/s
95th percentile per-packet one-way delay: 170.826 ms
Loss rate: 2.63%
```

Run 4: Report of Indigo-MusesC3 — Data Link

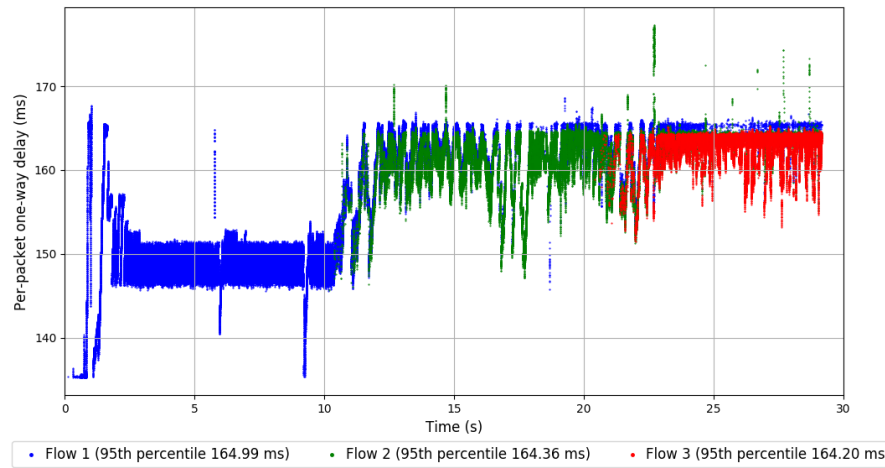
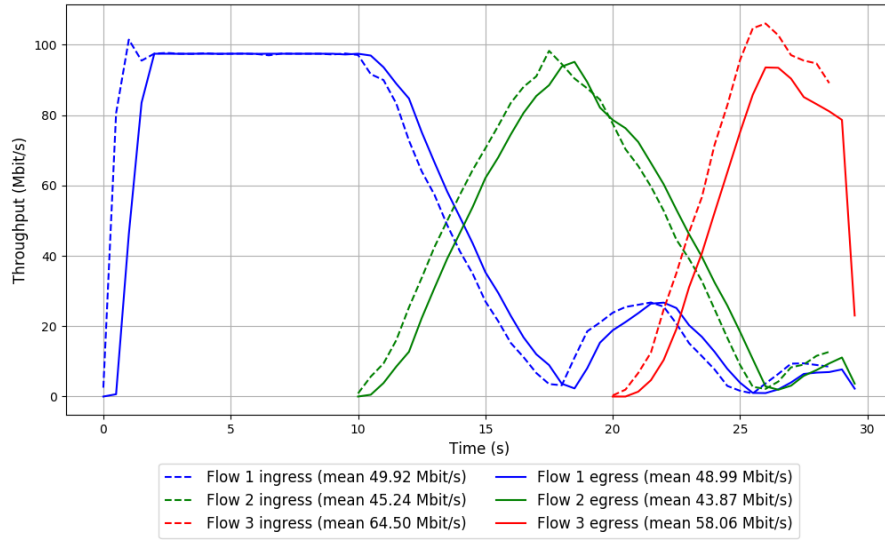


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-05-30 02:27:56
End at: 2019-05-30 02:28:26
Local clock offset: -57.806 ms
Remote clock offset: 0.409 ms

```
# Below is generated by plot.py at 2019-05-30 02:46:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.12 Mbit/s
95th percentile per-packet one-way delay: 164.433 ms
Loss rate: 3.73%
-- Flow 1:
Average throughput: 48.99 Mbit/s
95th percentile per-packet one-way delay: 164.989 ms
Loss rate: 1.78%
-- Flow 2:
Average throughput: 43.87 Mbit/s
95th percentile per-packet one-way delay: 164.359 ms
Loss rate: 2.95%
-- Flow 3:
Average throughput: 58.06 Mbit/s
95th percentile per-packet one-way delay: 164.197 ms
Loss rate: 9.93%
```

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-05-30 00:35:41

End at: 2019-05-30 00:36:11

Local clock offset: -1.656 ms

Remote clock offset: 6.602 ms

Below is generated by plot.py at 2019-05-30 02:46:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.61 Mbit/s

95th percentile per-packet one-way delay: 113.149 ms

Loss rate: 2.17%

-- Flow 1:

Average throughput: 54.28 Mbit/s

95th percentile per-packet one-way delay: 111.951 ms

Loss rate: 1.95%

-- Flow 2:

Average throughput: 56.89 Mbit/s

95th percentile per-packet one-way delay: 113.213 ms

Loss rate: 2.40%

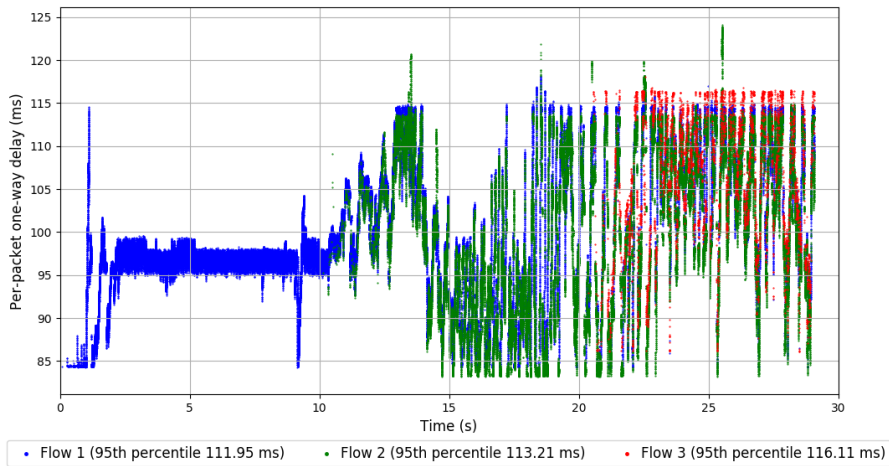
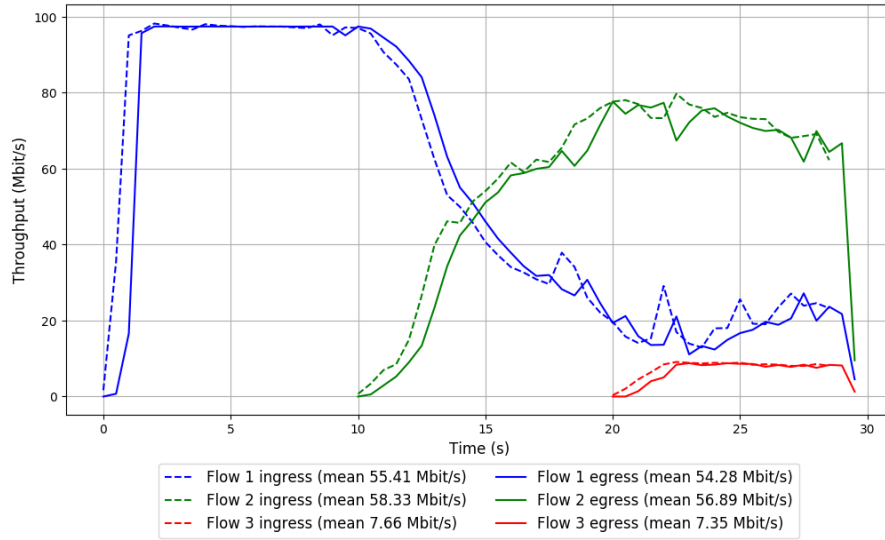
-- Flow 3:

Average throughput: 7.35 Mbit/s

95th percentile per-packet one-way delay: 116.107 ms

Loss rate: 3.84%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-05-30 01:02:25

End at: 2019-05-30 01:02:55

Local clock offset: -0.521 ms

Remote clock offset: 3.387 ms

Below is generated by plot.py at 2019-05-30 02:46:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.92 Mbit/s

95th percentile per-packet one-way delay: 107.909 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 81.41 Mbit/s

95th percentile per-packet one-way delay: 107.571 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 11.66 Mbit/s

95th percentile per-packet one-way delay: 108.990 ms

Loss rate: 0.57%

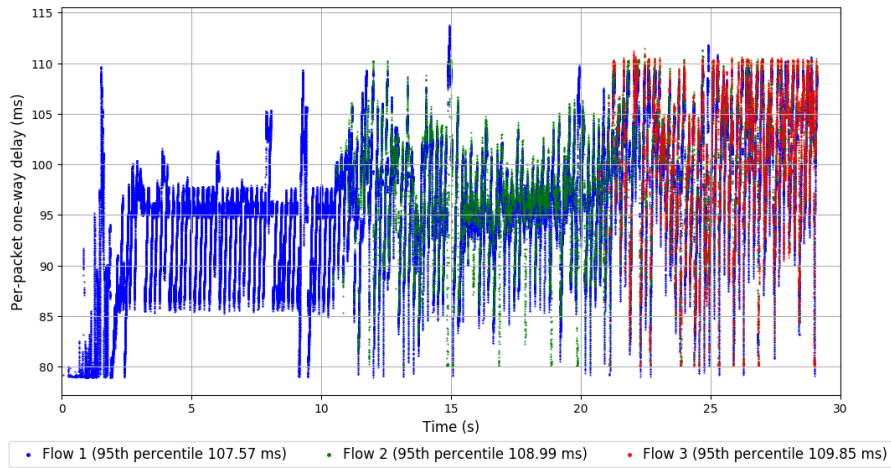
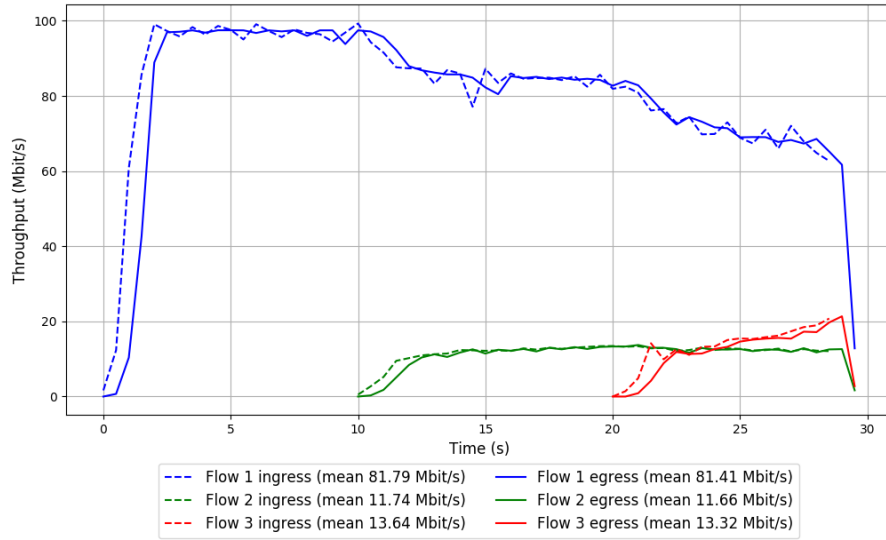
-- Flow 3:

Average throughput: 13.32 Mbit/s

95th percentile per-packet one-way delay: 109.854 ms

Loss rate: 2.20%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-05-30 01:30:18

End at: 2019-05-30 01:30:48

Local clock offset: -2.034 ms

Remote clock offset: 2.608 ms

Below is generated by plot.py at 2019-05-30 02:47:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.47 Mbit/s

95th percentile per-packet one-way delay: 112.744 ms

Loss rate: 4.48%

-- Flow 1:

Average throughput: 71.97 Mbit/s

95th percentile per-packet one-way delay: 112.866 ms

Loss rate: 3.16%

-- Flow 2:

Average throughput: 24.08 Mbit/s

95th percentile per-packet one-way delay: 112.202 ms

Loss rate: 5.74%

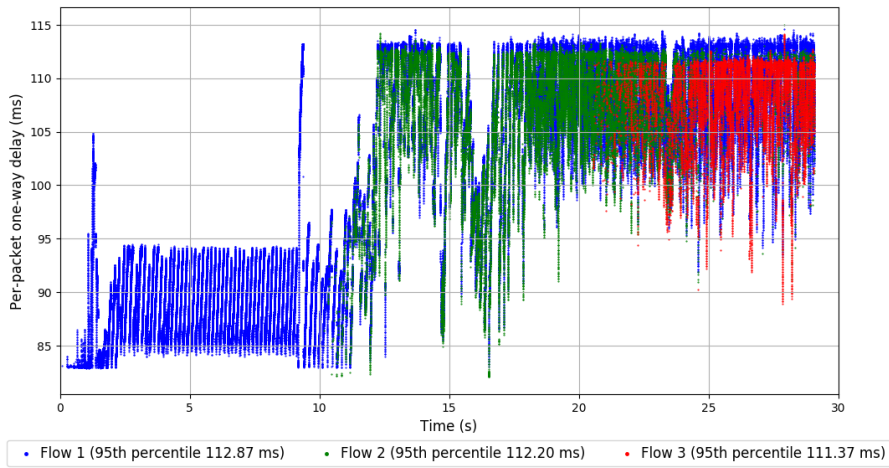
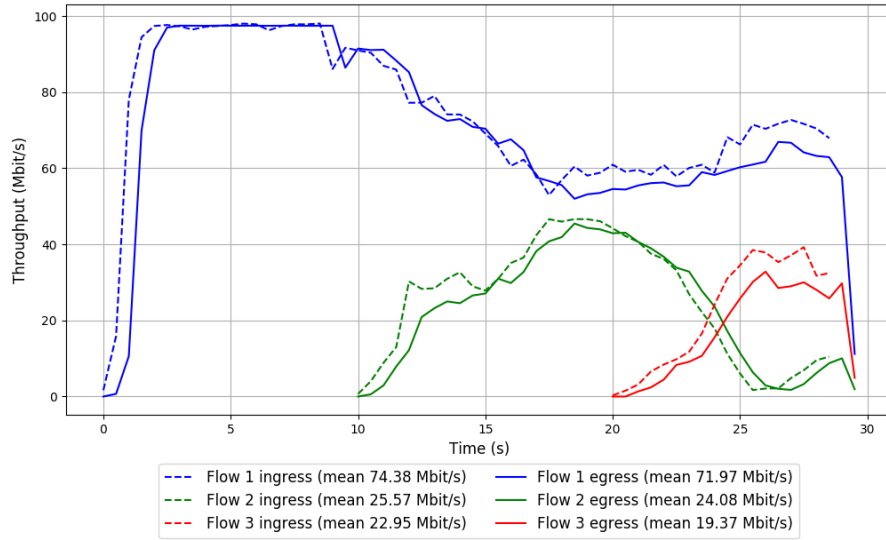
-- Flow 3:

Average throughput: 19.37 Mbit/s

95th percentile per-packet one-way delay: 111.368 ms

Loss rate: 15.62%

Run 3: Report of Indigo-MusesC5 — Data Link

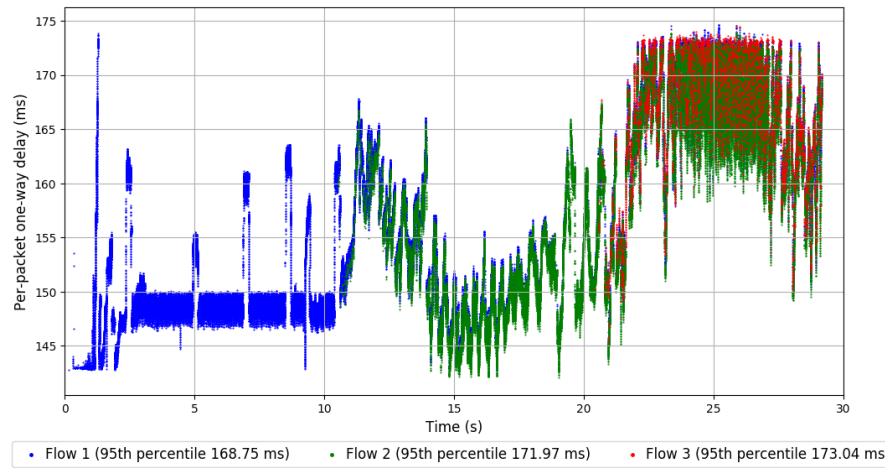
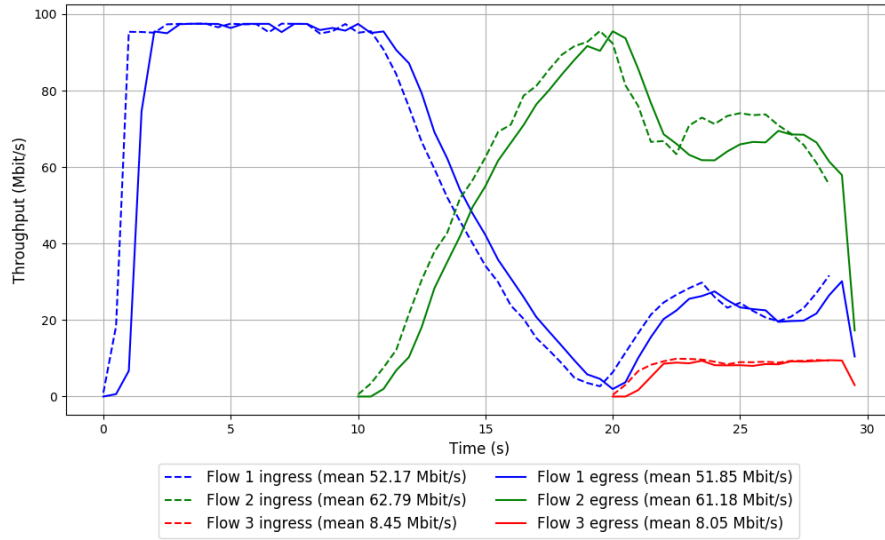


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-05-30 01:57:10
End at: 2019-05-30 01:57:40
Local clock offset: -58.497 ms
Remote clock offset: 7.212 ms

```
# Below is generated by plot.py at 2019-05-30 02:47:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.97 Mbit/s
95th percentile per-packet one-way delay: 171.489 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 51.85 Mbit/s
95th percentile per-packet one-way delay: 168.751 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 61.18 Mbit/s
95th percentile per-packet one-way delay: 171.972 ms
Loss rate: 2.46%
-- Flow 3:
Average throughput: 8.05 Mbit/s
95th percentile per-packet one-way delay: 173.041 ms
Loss rate: 4.57%
```

Run 4: Report of Indigo-MusesC5 — Data Link

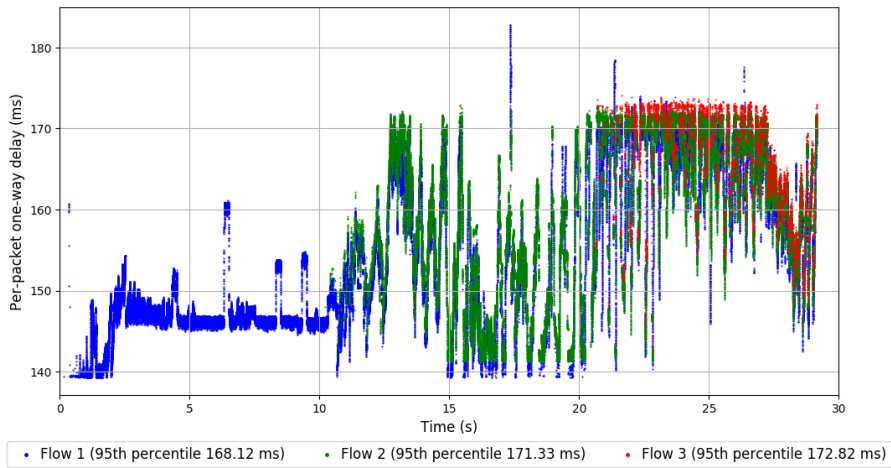
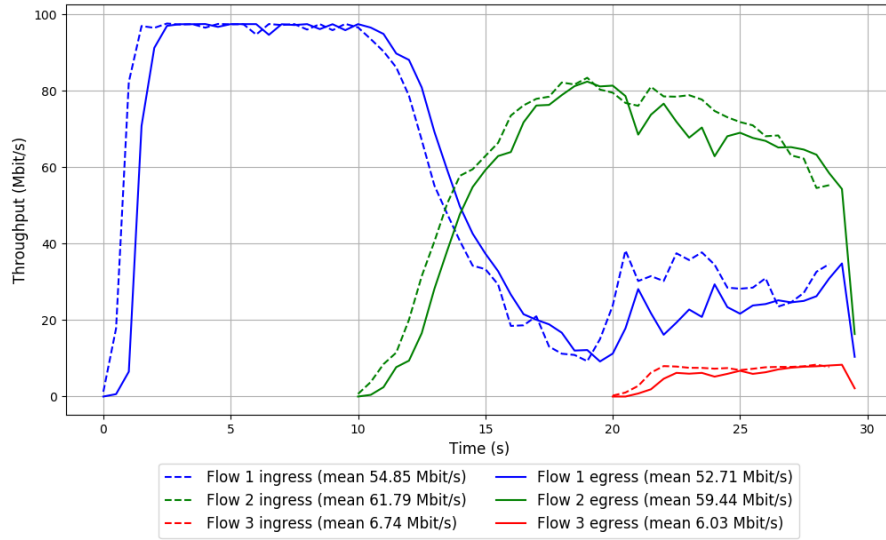


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-05-30 02:23:59
End at: 2019-05-30 02:24:29
Local clock offset: -57.878 ms
Remote clock offset: 6.004 ms

```
# Below is generated by plot.py at 2019-05-30 02:47:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.30 Mbit/s
95th percentile per-packet one-way delay: 170.997 ms
Loss rate: 3.90%
-- Flow 1:
Average throughput: 52.71 Mbit/s
95th percentile per-packet one-way delay: 168.119 ms
Loss rate: 3.80%
-- Flow 2:
Average throughput: 59.44 Mbit/s
95th percentile per-packet one-way delay: 171.334 ms
Loss rate: 3.69%
-- Flow 3:
Average throughput: 6.03 Mbit/s
95th percentile per-packet one-way delay: 172.822 ms
Loss rate: 10.56%
```

Run 5: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2019-05-30 00:33:05

End at: 2019-05-30 00:33:35

Local clock offset: -1.111 ms

Remote clock offset: 6.72 ms

Below is generated by plot.py at 2019-05-30 02:47:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.38 Mbit/s

95th percentile per-packet one-way delay: 111.106 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 57.10 Mbit/s

95th percentile per-packet one-way delay: 112.132 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 51.82 Mbit/s

95th percentile per-packet one-way delay: 105.204 ms

Loss rate: 0.12%

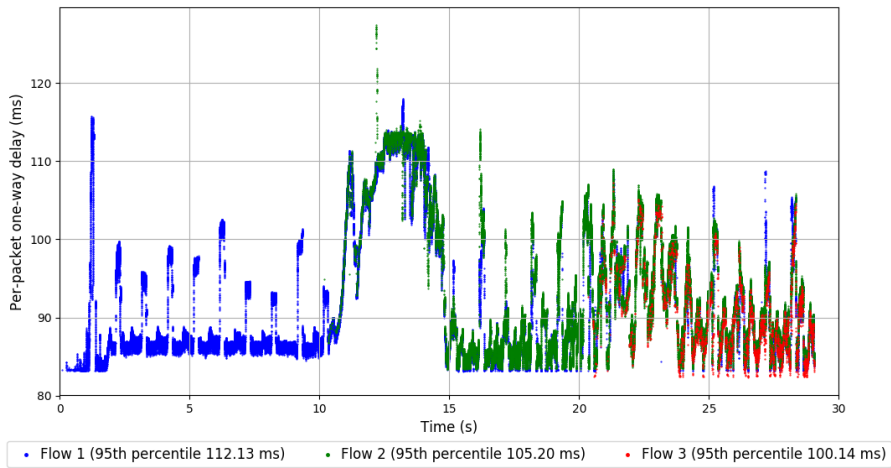
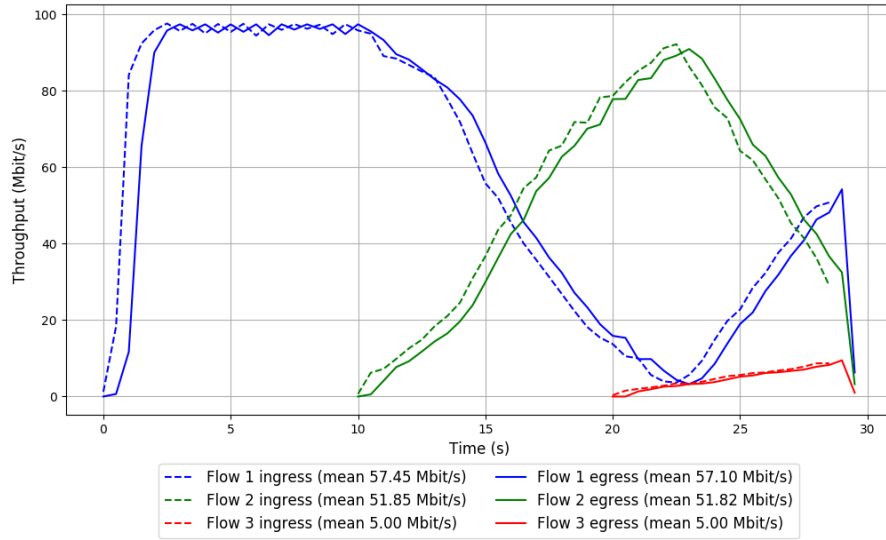
-- Flow 3:

Average throughput: 5.00 Mbit/s

95th percentile per-packet one-way delay: 100.139 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-05-30 00:59:49

End at: 2019-05-30 01:00:19

Local clock offset: -0.543 ms

Remote clock offset: 8.774 ms

Below is generated by plot.py at 2019-05-30 02:47:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.55 Mbit/s

95th percentile per-packet one-way delay: 115.681 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 50.84 Mbit/s

95th percentile per-packet one-way delay: 104.273 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 63.83 Mbit/s

95th percentile per-packet one-way delay: 115.982 ms

Loss rate: 1.05%

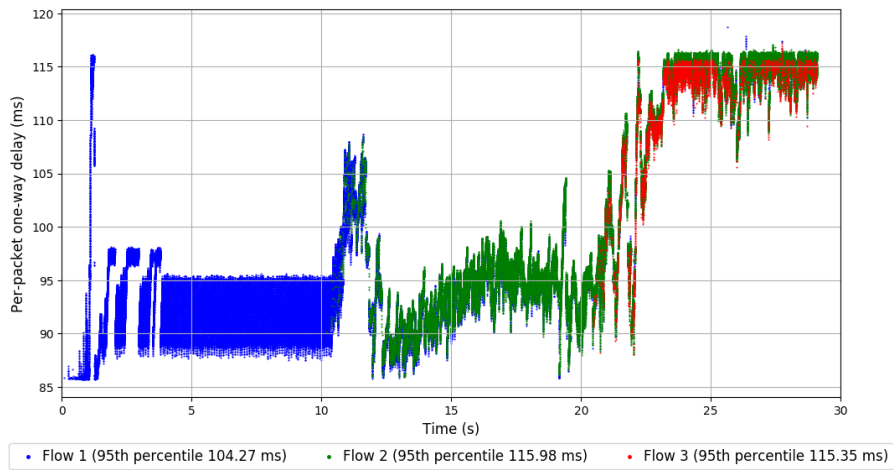
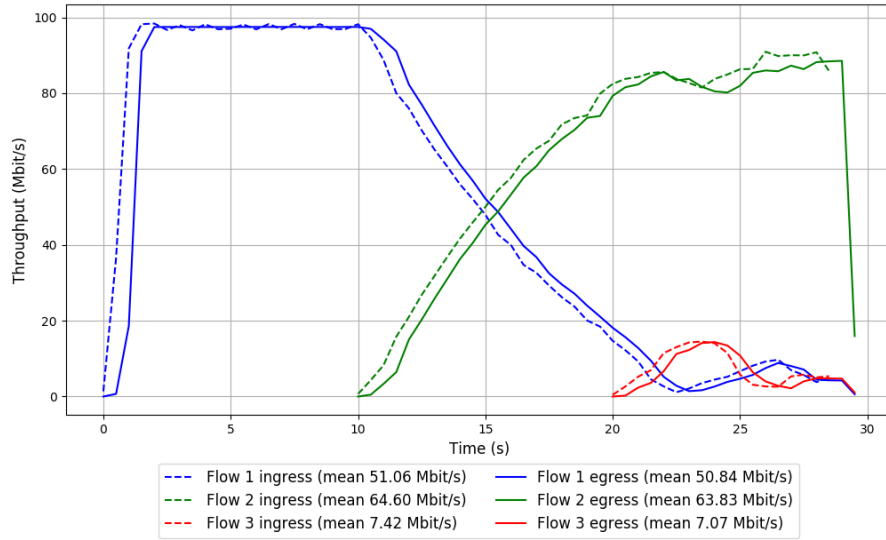
-- Flow 3:

Average throughput: 7.07 Mbit/s

95th percentile per-packet one-way delay: 115.352 ms

Loss rate: 4.50%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-05-30 01:27:40

End at: 2019-05-30 01:28:10

Local clock offset: -1.849 ms

Remote clock offset: 6.894 ms

Below is generated by plot.py at 2019-05-30 02:47:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.39 Mbit/s

95th percentile per-packet one-way delay: 108.567 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 58.30 Mbit/s

95th percentile per-packet one-way delay: 105.127 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 40.62 Mbit/s

95th percentile per-packet one-way delay: 108.949 ms

Loss rate: 0.05%

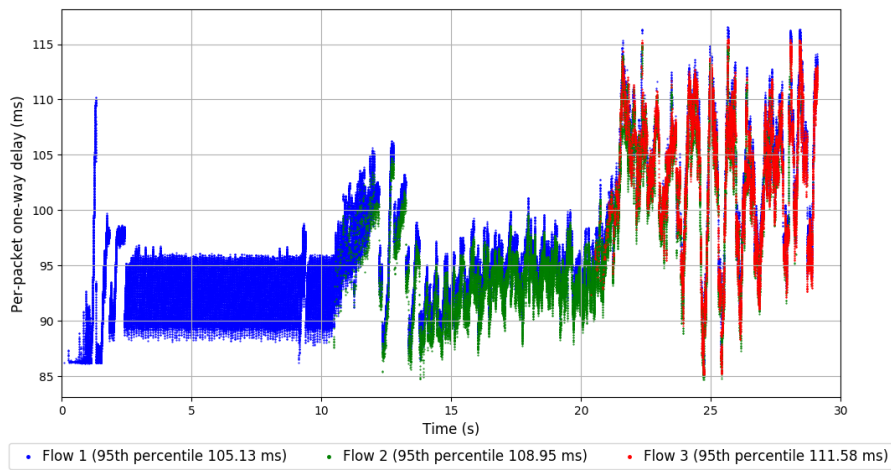
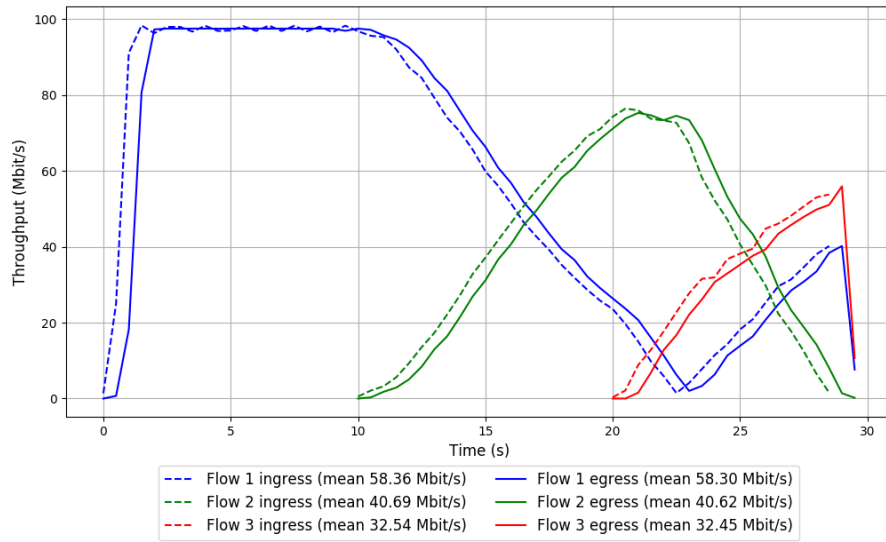
-- Flow 3:

Average throughput: 32.45 Mbit/s

95th percentile per-packet one-way delay: 111.584 ms

Loss rate: 0.06%

Run 3: Report of Indigo-MusesD — Data Link

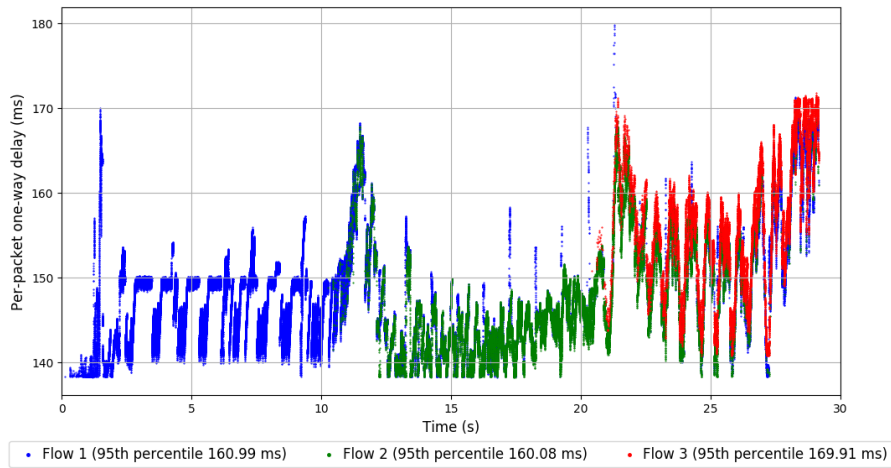
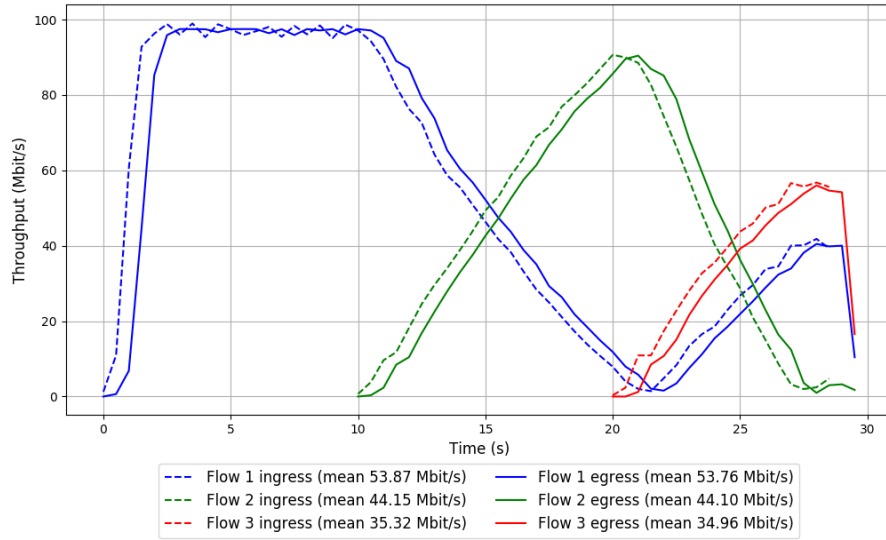


Run 4: Statistics of Indigo-MusesD

Start at: 2019-05-30 01:54:33
End at: 2019-05-30 01:55:03
Local clock offset: -57.801 ms
Remote clock offset: 5.592 ms

```
# Below is generated by plot.py at 2019-05-30 02:47:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.97 Mbit/s
95th percentile per-packet one-way delay: 163.396 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 53.76 Mbit/s
95th percentile per-packet one-way delay: 160.992 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 44.10 Mbit/s
95th percentile per-packet one-way delay: 160.079 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 34.96 Mbit/s
95th percentile per-packet one-way delay: 169.915 ms
Loss rate: 0.86%
```

Run 4: Report of Indigo-MusesD — Data Link

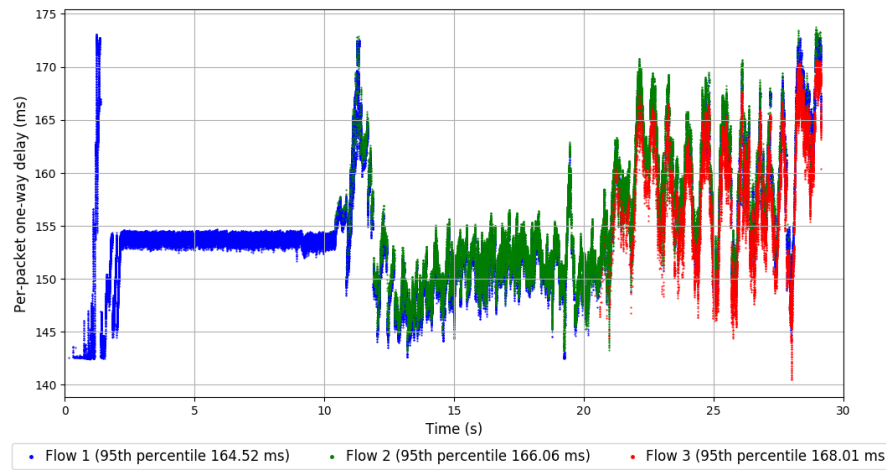
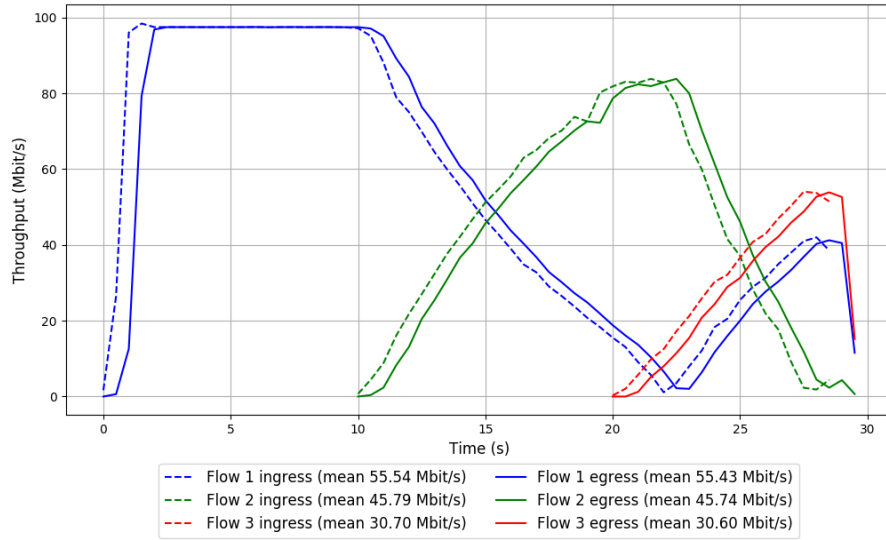


Run 5: Statistics of Indigo-MusesD

Start at: 2019-05-30 02:21:23
End at: 2019-05-30 02:21:53
Local clock offset: -58.681 ms
Remote clock offset: 6.438 ms

```
# Below is generated by plot.py at 2019-05-30 02:47:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.40 Mbit/s
95th percentile per-packet one-way delay: 165.765 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 55.43 Mbit/s
95th percentile per-packet one-way delay: 164.518 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 45.74 Mbit/s
95th percentile per-packet one-way delay: 166.062 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 30.60 Mbit/s
95th percentile per-packet one-way delay: 168.013 ms
Loss rate: 0.17%
```

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MuseST

Start at: 2019-05-30 00:40:51

End at: 2019-05-30 00:41:21

Local clock offset: -1.633 ms

Remote clock offset: 3.301 ms

Below is generated by plot.py at 2019-05-30 02:48:12

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.57 Mbit/s

95th percentile per-packet one-way delay: 112.395 ms

Loss rate: 6.08%

-- Flow 1:

Average throughput: 54.51 Mbit/s

95th percentile per-packet one-way delay: 109.569 ms

Loss rate: 4.43%

-- Flow 2:

Average throughput: 36.50 Mbit/s

95th percentile per-packet one-way delay: 112.756 ms

Loss rate: 4.85%

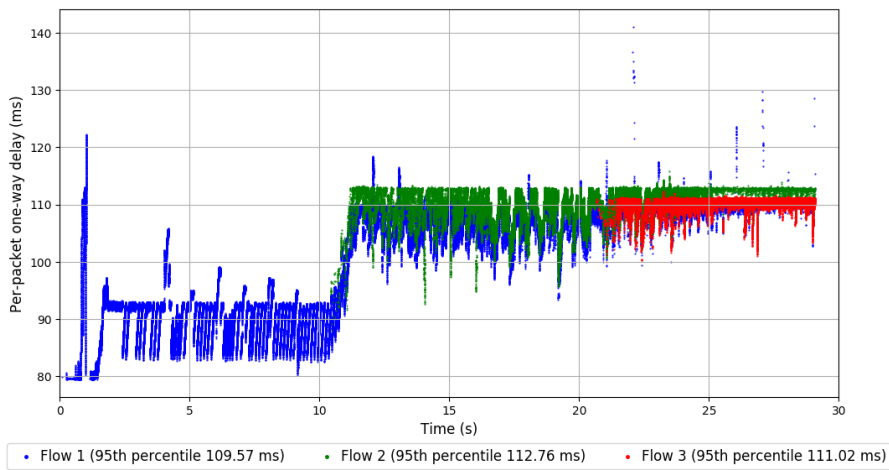
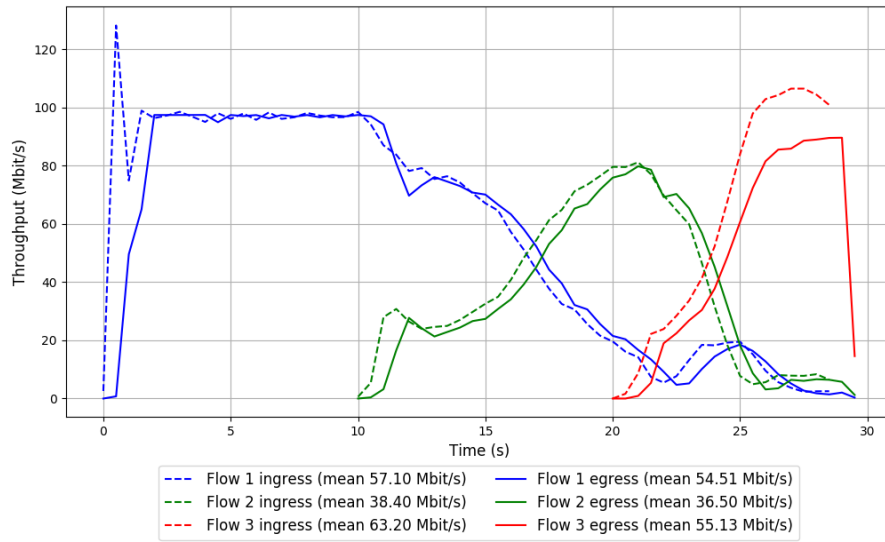
-- Flow 3:

Average throughput: 55.13 Mbit/s

95th percentile per-packet one-way delay: 111.017 ms

Loss rate: 12.75%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MuseST

Start at: 2019-05-30 01:08:22

End at: 2019-05-30 01:08:52

Local clock offset: -1.272 ms

Below is generated by plot.py at 2019-05-30 02:48:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.87 Mbit/s

95th percentile per-packet one-way delay: 107.999 ms

Loss rate: 3.34%

-- Flow 1:

Average throughput: 59.02 Mbit/s

95th percentile per-packet one-way delay: 108.174 ms

Loss rate: 2.71%

-- Flow 2:

Average throughput: 50.00 Mbit/s

95th percentile per-packet one-way delay: 106.230 ms

Loss rate: 4.49%

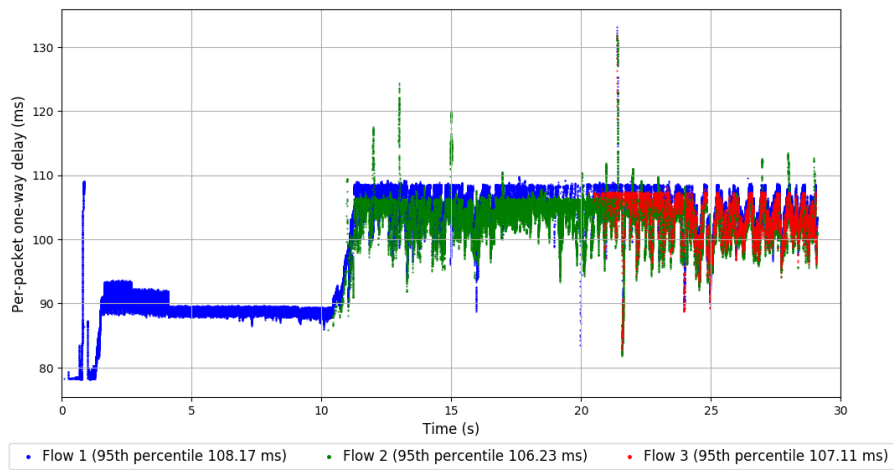
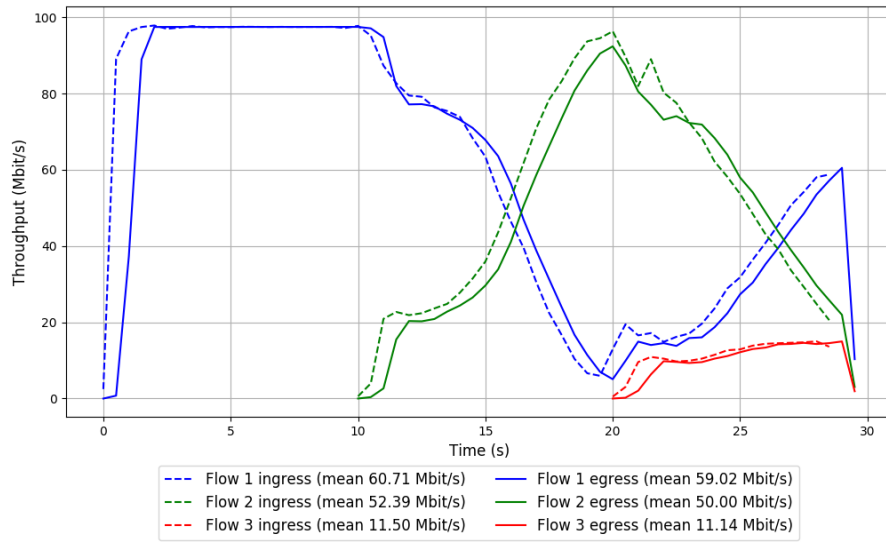
-- Flow 3:

Average throughput: 11.14 Mbit/s

95th percentile per-packet one-way delay: 107.105 ms

Loss rate: 3.20%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MuseST

Start at: 2019-05-30 01:35:31

End at: 2019-05-30 01:36:01

Local clock offset: -1.037 ms

Remote clock offset: 5.419 ms

Below is generated by plot.py at 2019-05-30 02:48:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.75 Mbit/s

95th percentile per-packet one-way delay: 115.795 ms

Loss rate: 5.80%

-- Flow 1:

Average throughput: 58.88 Mbit/s

95th percentile per-packet one-way delay: 113.959 ms

Loss rate: 6.67%

-- Flow 2:

Average throughput: 50.58 Mbit/s

95th percentile per-packet one-way delay: 115.968 ms

Loss rate: 4.29%

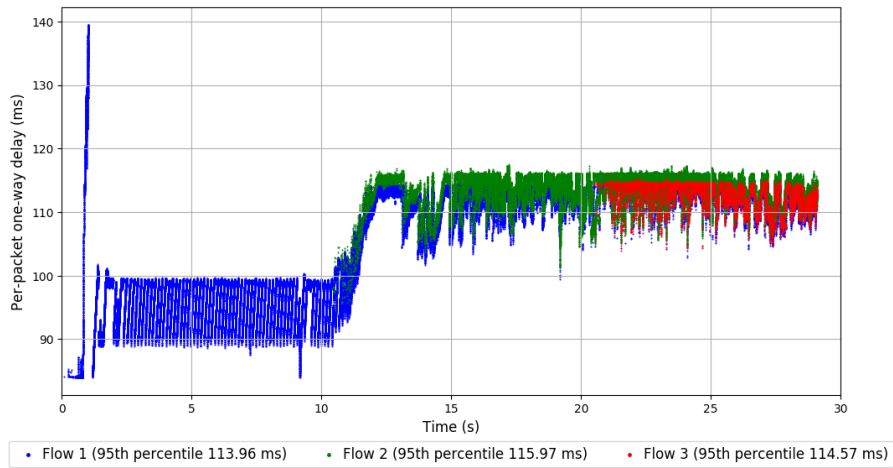
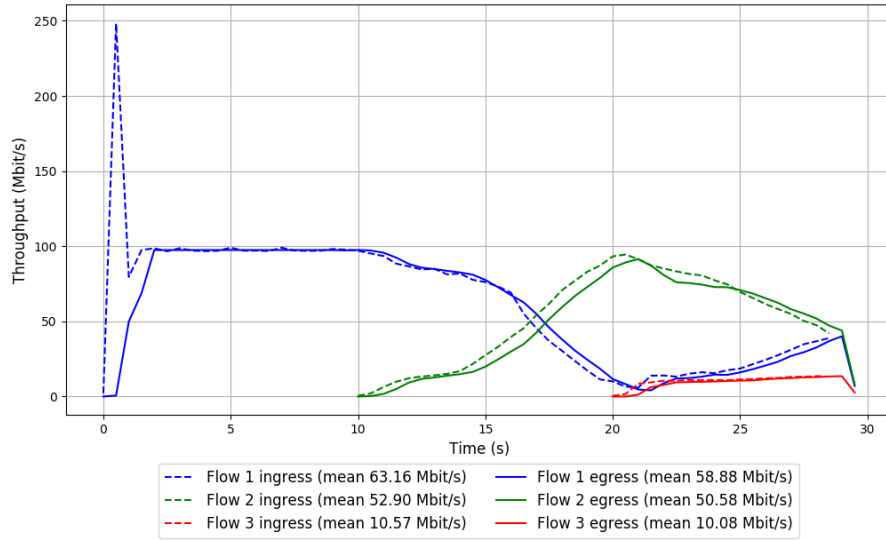
-- Flow 3:

Average throughput: 10.08 Mbit/s

95th percentile per-packet one-way delay: 114.570 ms

Loss rate: 4.65%

Run 3: Report of Indigo-MusesT — Data Link

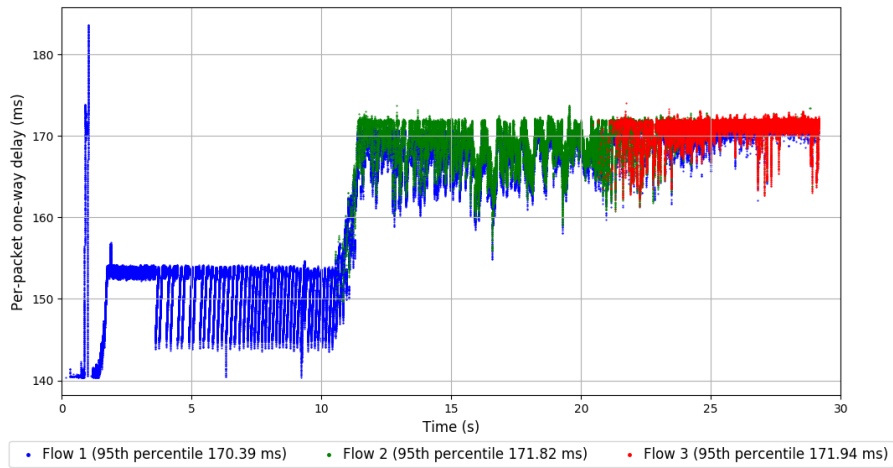
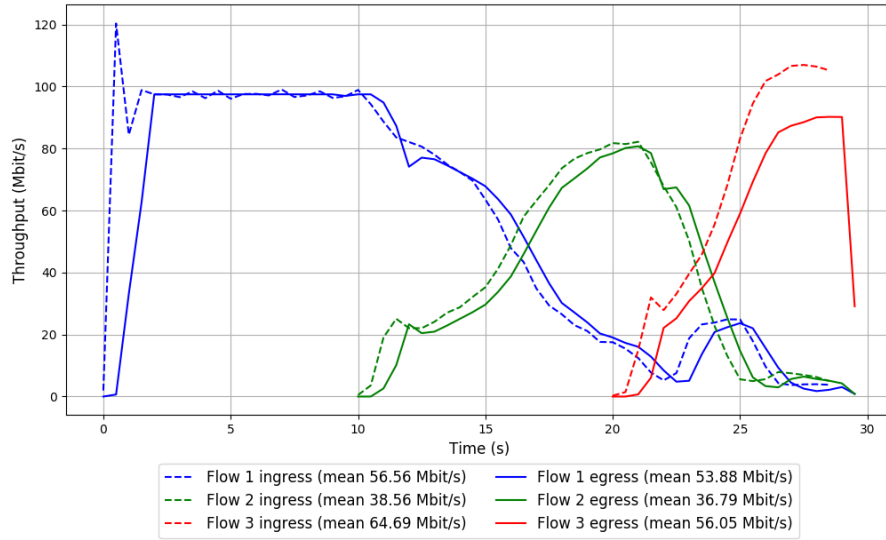


Run 4: Statistics of Indigo-MuseST

Start at: 2019-05-30 02:02:21
End at: 2019-05-30 02:02:51
Local clock offset: -58.779 ms
Remote clock offset: 6.907 ms

```
# Below is generated by plot.py at 2019-05-30 02:48:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.54 Mbit/s
95th percentile per-packet one-way delay: 171.780 ms
Loss rate: 6.28%
-- Flow 1:
Average throughput: 53.88 Mbit/s
95th percentile per-packet one-way delay: 170.392 ms
Loss rate: 4.64%
-- Flow 2:
Average throughput: 36.79 Mbit/s
95th percentile per-packet one-way delay: 171.817 ms
Loss rate: 4.48%
-- Flow 3:
Average throughput: 56.05 Mbit/s
95th percentile per-packet one-way delay: 171.945 ms
Loss rate: 13.36%
```

Run 4: Report of Indigo-MusesT — Data Link

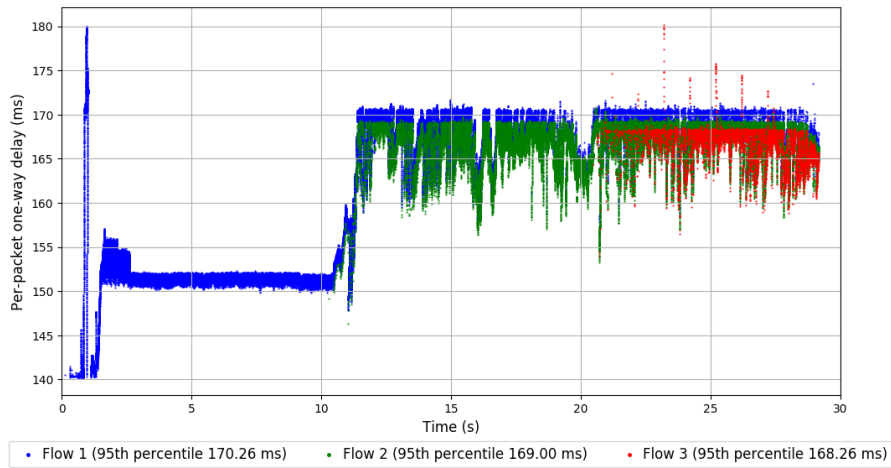
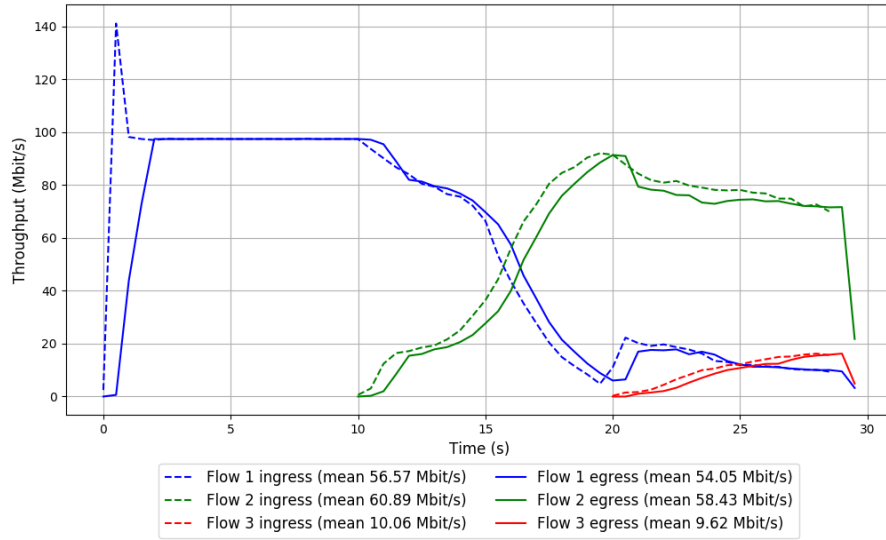


Run 5: Statistics of Indigo-MuseST

Start at: 2019-05-30 02:29:15
End at: 2019-05-30 02:29:45
Local clock offset: -58.434 ms
Remote clock offset: 4.318 ms

```
# Below is generated by plot.py at 2019-05-30 02:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.91 Mbit/s
95th percentile per-packet one-way delay: 170.022 ms
Loss rate: 4.22%
-- Flow 1:
Average throughput: 54.05 Mbit/s
95th percentile per-packet one-way delay: 170.258 ms
Loss rate: 4.38%
-- Flow 2:
Average throughput: 58.43 Mbit/s
95th percentile per-packet one-way delay: 168.996 ms
Loss rate: 3.97%
-- Flow 3:
Average throughput: 9.62 Mbit/s
95th percentile per-packet one-way delay: 168.259 ms
Loss rate: 4.35%
```

Run 5: Report of Indigo-MusesT — Data Link



Run 1: Statistics of LEDBAT

Start at: 2019-05-30 00:28:01

End at: 2019-05-30 00:28:31

Local clock offset: -1.954 ms

Remote clock offset: 6.593 ms

Below is generated by plot.py at 2019-05-30 02:48:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.41 Mbit/s

95th percentile per-packet one-way delay: 86.636 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 11.85 Mbit/s

95th percentile per-packet one-way delay: 86.770 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.97 Mbit/s

95th percentile per-packet one-way delay: 84.967 ms

Loss rate: 0.00%

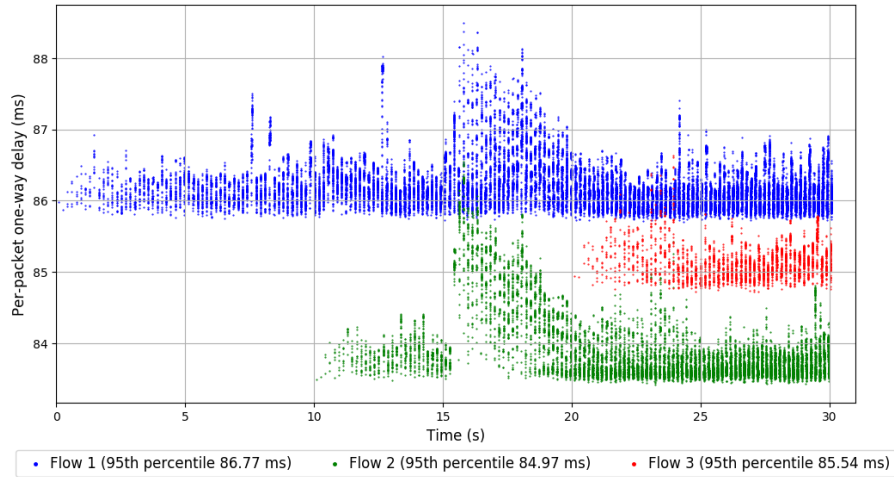
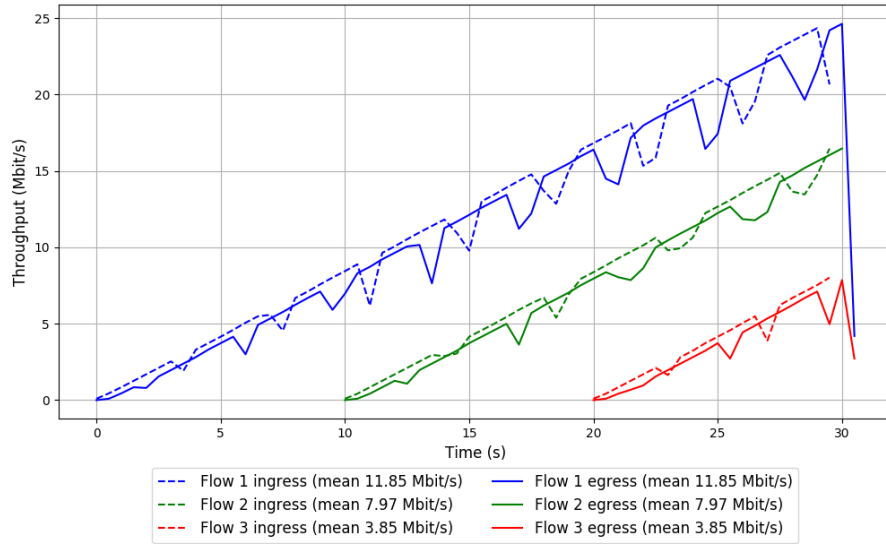
-- Flow 3:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 85.540 ms

Loss rate: 0.00%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-05-30 00:54:45

End at: 2019-05-30 00:55:15

Local clock offset: -0.639 ms

Remote clock offset: 8.742 ms

Below is generated by plot.py at 2019-05-30 02:48:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 18.32 Mbit/s

95th percentile per-packet one-way delay: 88.895 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 11.86 Mbit/s

95th percentile per-packet one-way delay: 88.948 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.93 Mbit/s

95th percentile per-packet one-way delay: 92.350 ms

Loss rate: 0.00%

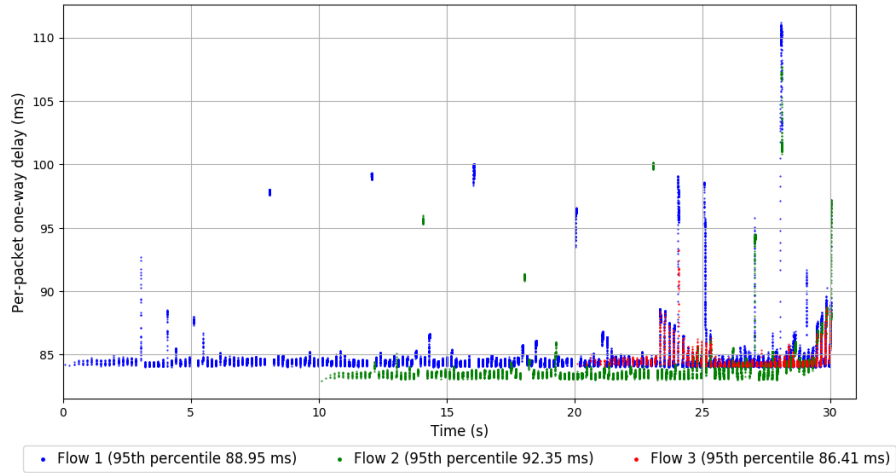
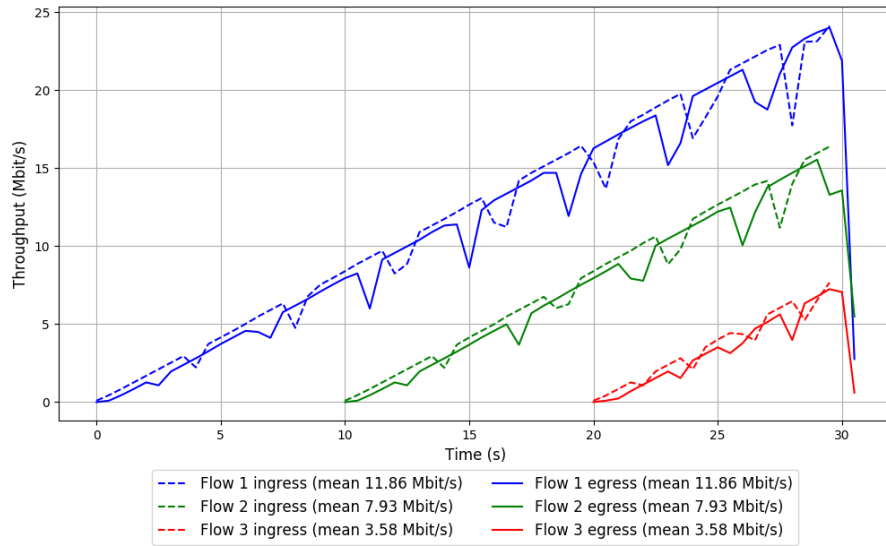
-- Flow 3:

Average throughput: 3.58 Mbit/s

95th percentile per-packet one-way delay: 86.413 ms

Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-05-30 01:22:14

End at: 2019-05-30 01:22:44

Local clock offset: -1.743 ms

Remote clock offset: 6.789 ms

Below is generated by plot.py at 2019-05-30 02:48:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 17.03 Mbit/s

95th percentile per-packet one-way delay: 89.838 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 10.96 Mbit/s

95th percentile per-packet one-way delay: 89.101 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.22 Mbit/s

95th percentile per-packet one-way delay: 94.818 ms

Loss rate: 0.00%

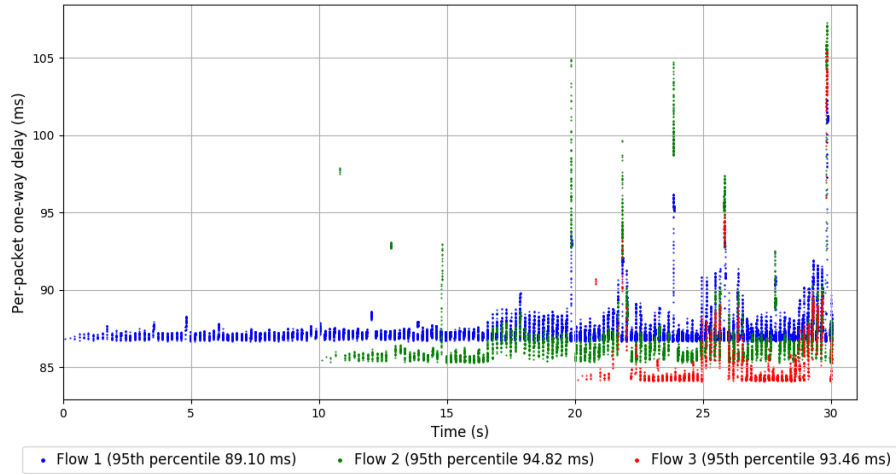
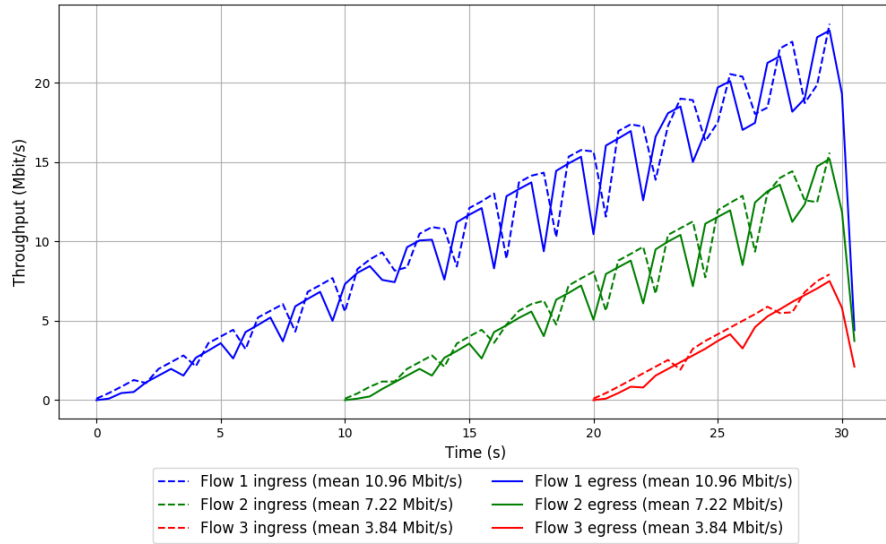
-- Flow 3:

Average throughput: 3.84 Mbit/s

95th percentile per-packet one-way delay: 93.457 ms

Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

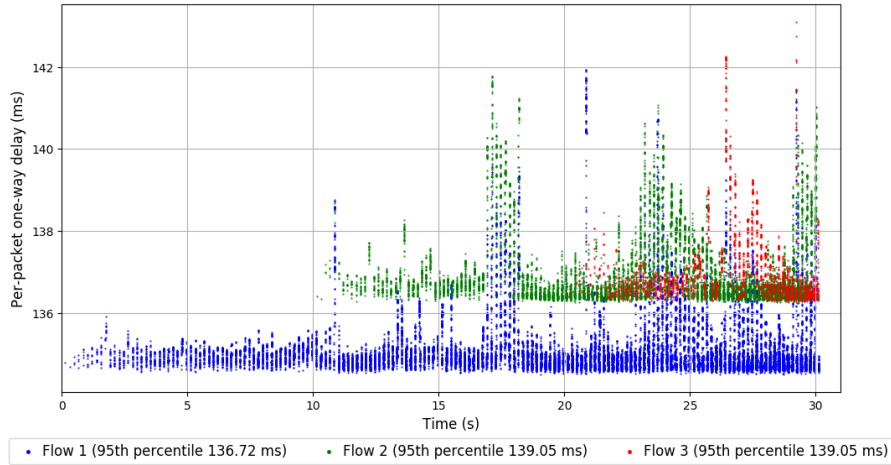
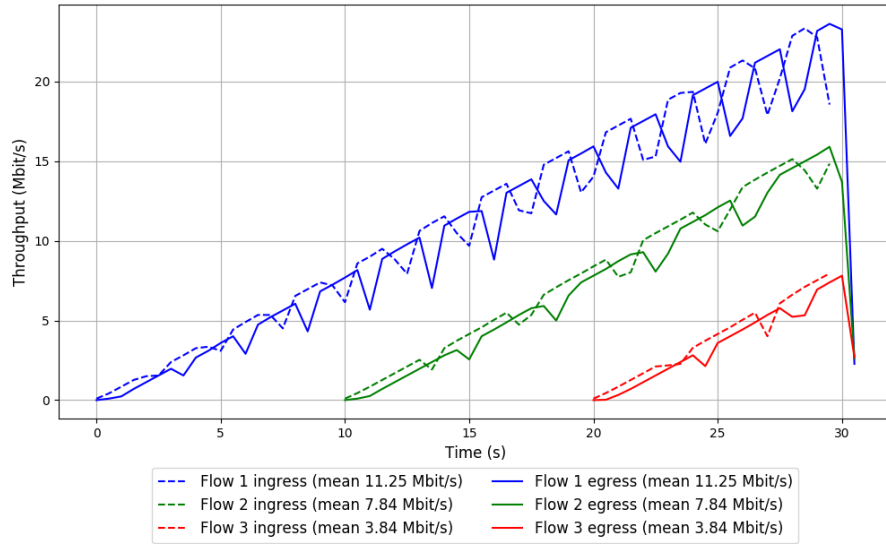


Run 4: Statistics of LEDBAT

Start at: 2019-05-30 01:49:28
End at: 2019-05-30 01:49:58
Local clock offset: -57.916 ms
Remote clock offset: 2.063 ms

```
# Below is generated by plot.py at 2019-05-30 02:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.72 Mbit/s
95th percentile per-packet one-way delay: 138.209 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.25 Mbit/s
95th percentile per-packet one-way delay: 136.724 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 139.054 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 139.052 ms
Loss rate: 0.00%
```

Run 4: Report of LEDBAT — Data Link

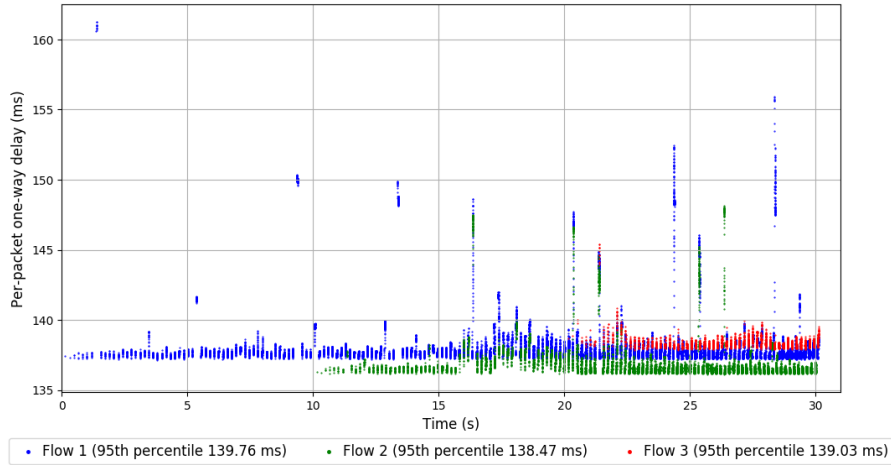
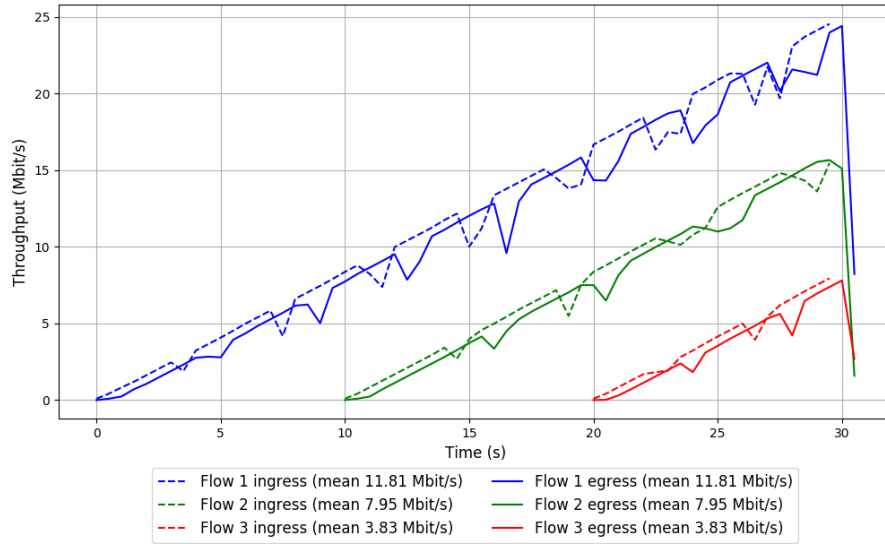


Run 5: Statistics of LEDBAT

Start at: 2019-05-30 02:16:17
End at: 2019-05-30 02:16:47
Local clock offset: -58.566 ms
Remote clock offset: 2.75 ms

```
# Below is generated by plot.py at 2019-05-30 02:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.35 Mbit/s
95th percentile per-packet one-way delay: 139.531 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 139.759 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.95 Mbit/s
95th percentile per-packet one-way delay: 138.469 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 139.027 ms
Loss rate: 0.00%
```

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-05-30 00:29:15

End at: 2019-05-30 00:29:45

Local clock offset: -0.933 ms

Remote clock offset: 2.624 ms

Below is generated by plot.py at 2019-05-30 02:48:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.56 Mbit/s

95th percentile per-packet one-way delay: 110.799 ms

Loss rate: 3.30%

-- Flow 1:

Average throughput: 77.46 Mbit/s

95th percentile per-packet one-way delay: 110.805 ms

Loss rate: 3.07%

-- Flow 2:

Average throughput: 9.85 Mbit/s

95th percentile per-packet one-way delay: 109.760 ms

Loss rate: 4.41%

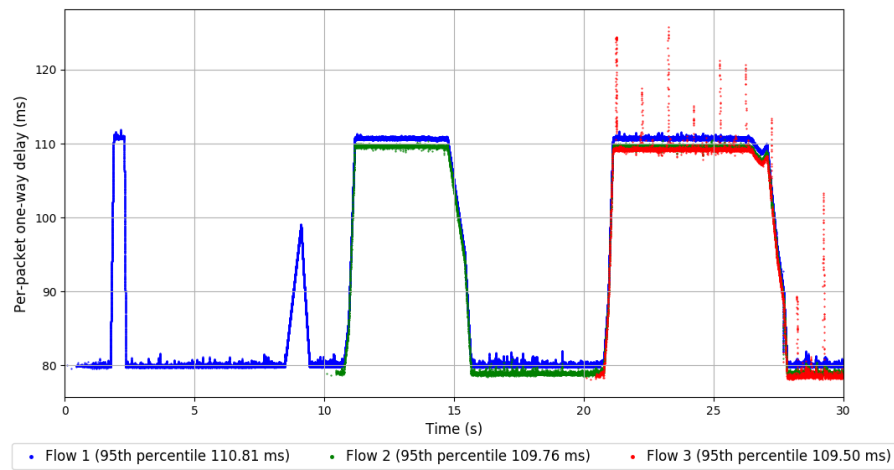
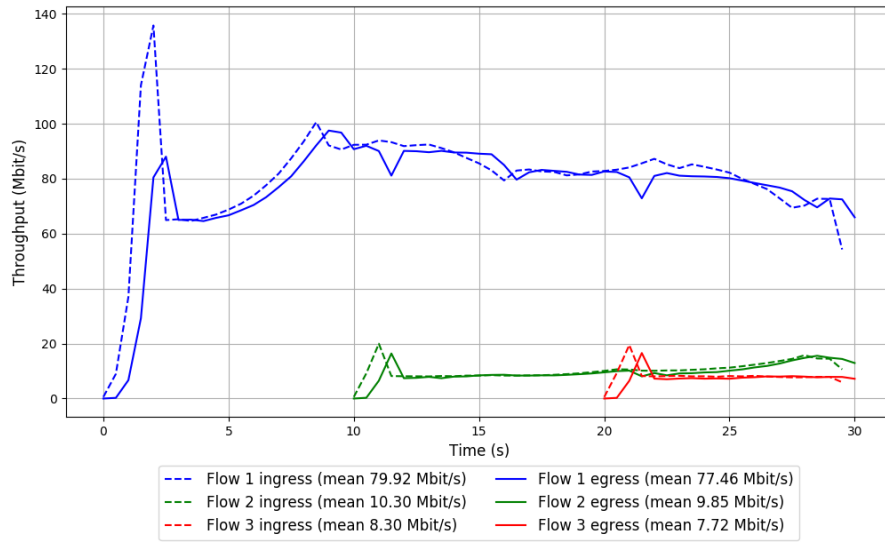
-- Flow 3:

Average throughput: 7.72 Mbit/s

95th percentile per-packet one-way delay: 109.496 ms

Loss rate: 7.04%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2019-05-30 00:55:59

End at: 2019-05-30 00:56:29

Local clock offset: -1.637 ms

Remote clock offset: 3.87 ms

Below is generated by plot.py at 2019-05-30 02:49:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.52 Mbit/s

95th percentile per-packet one-way delay: 110.297 ms

Loss rate: 2.49%

-- Flow 1:

Average throughput: 71.83 Mbit/s

95th percentile per-packet one-way delay: 110.144 ms

Loss rate: 2.44%

-- Flow 2:

Average throughput: 15.61 Mbit/s

95th percentile per-packet one-way delay: 111.392 ms

Loss rate: 2.72%

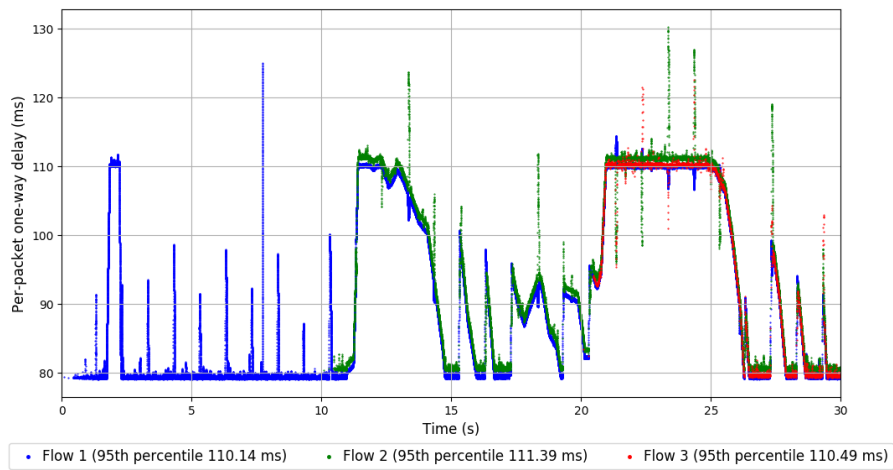
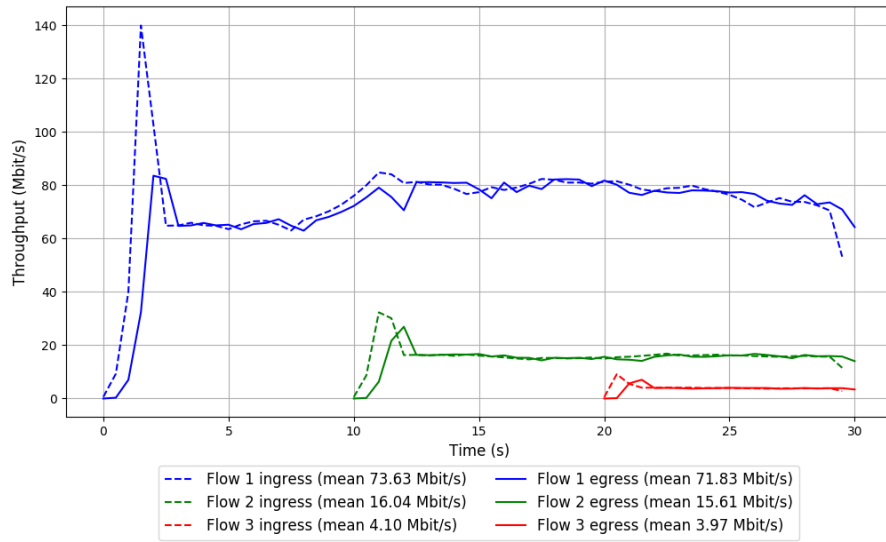
-- Flow 3:

Average throughput: 3.97 Mbit/s

95th percentile per-packet one-way delay: 110.487 ms

Loss rate: 3.09%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-05-30 01:23:28

End at: 2019-05-30 01:23:58

Local clock offset: -0.97 ms

Remote clock offset: 6.693 ms

Below is generated by plot.py at 2019-05-30 02:49:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.95 Mbit/s

95th percentile per-packet one-way delay: 115.178 ms

Loss rate: 2.92%

-- Flow 1:

Average throughput: 75.78 Mbit/s

95th percentile per-packet one-way delay: 115.072 ms

Loss rate: 2.79%

-- Flow 2:

Average throughput: 8.28 Mbit/s

95th percentile per-packet one-way delay: 116.558 ms

Loss rate: 3.46%

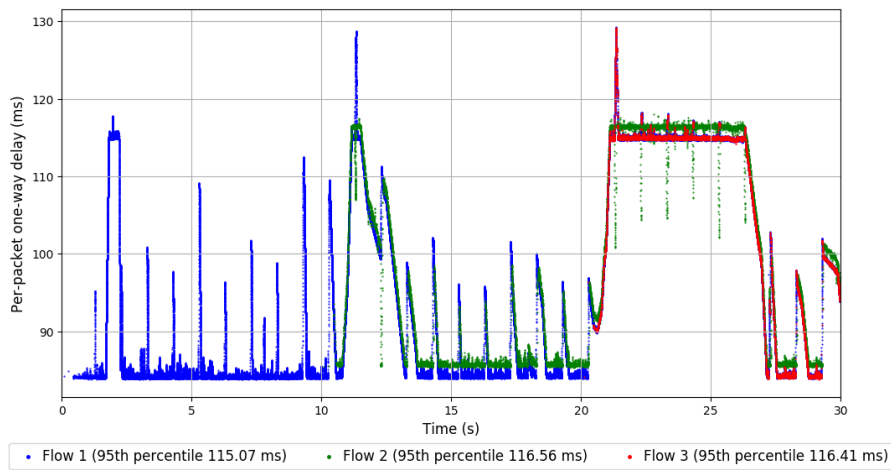
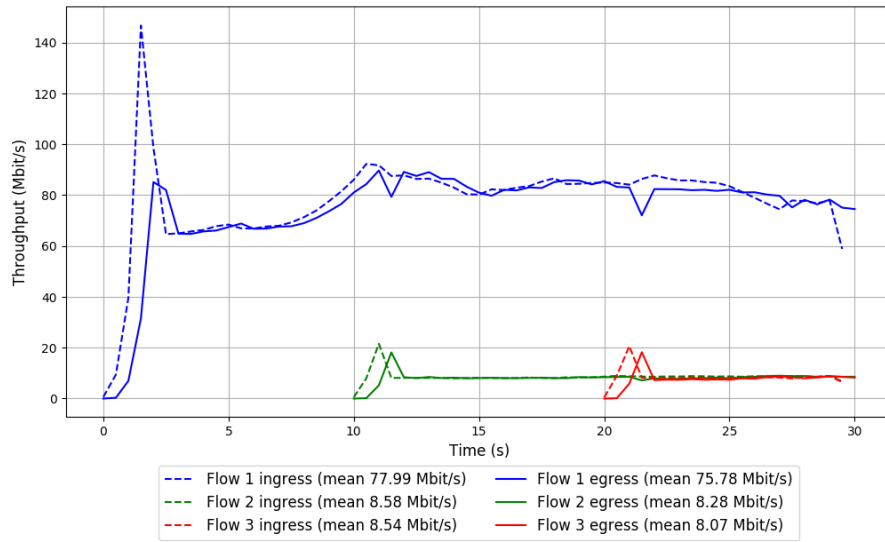
-- Flow 3:

Average throughput: 8.07 Mbit/s

95th percentile per-packet one-way delay: 116.409 ms

Loss rate: 5.47%

Run 3: Report of PCC-Allegro — Data Link

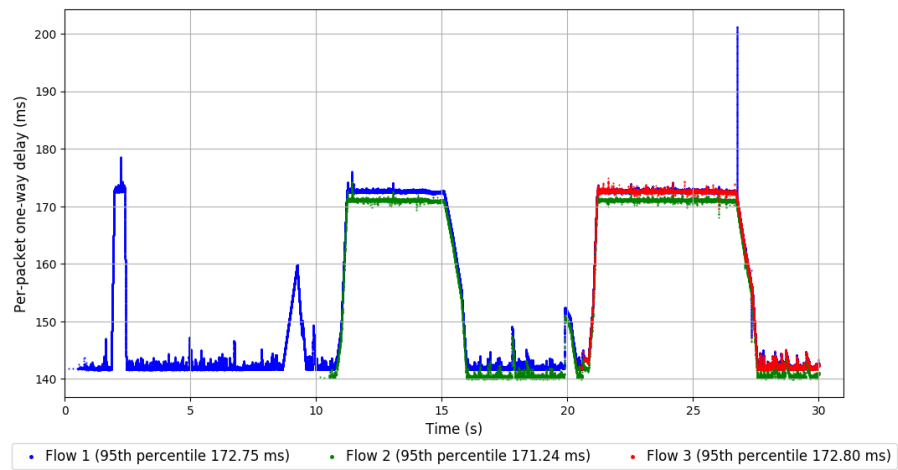
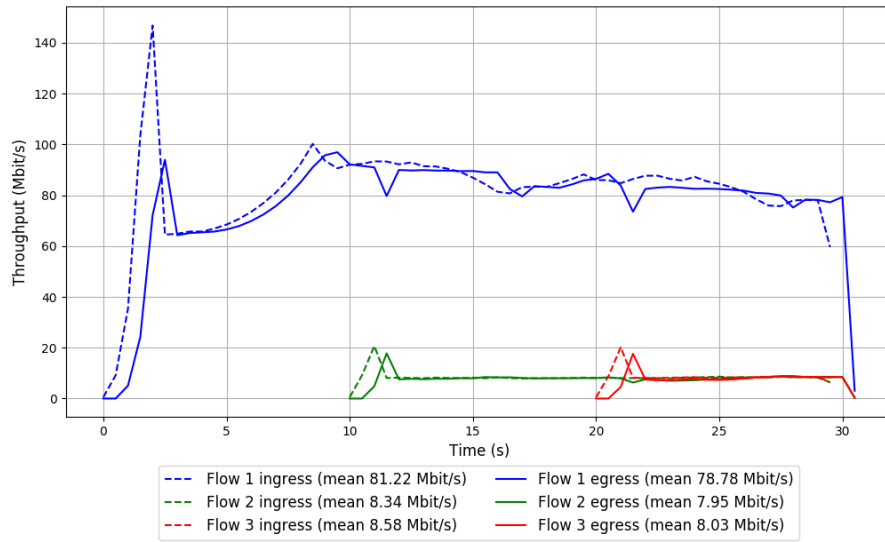


Run 4: Statistics of PCC-Allegro

Start at: 2019-05-30 01:50:43
End at: 2019-05-30 01:51:13
Local clock offset: -58.256 ms
Remote clock offset: 6.625 ms

```
# Below is generated by plot.py at 2019-05-30 02:49:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.71 Mbit/s
95th percentile per-packet one-way delay: 172.743 ms
Loss rate: 3.23%
-- Flow 1:
Average throughput: 78.78 Mbit/s
95th percentile per-packet one-way delay: 172.748 ms
Loss rate: 3.01%
-- Flow 2:
Average throughput: 7.95 Mbit/s
95th percentile per-packet one-way delay: 171.243 ms
Loss rate: 4.71%
-- Flow 3:
Average throughput: 8.03 Mbit/s
95th percentile per-packet one-way delay: 172.802 ms
Loss rate: 6.50%
```

Run 4: Report of PCC-Allegro — Data Link

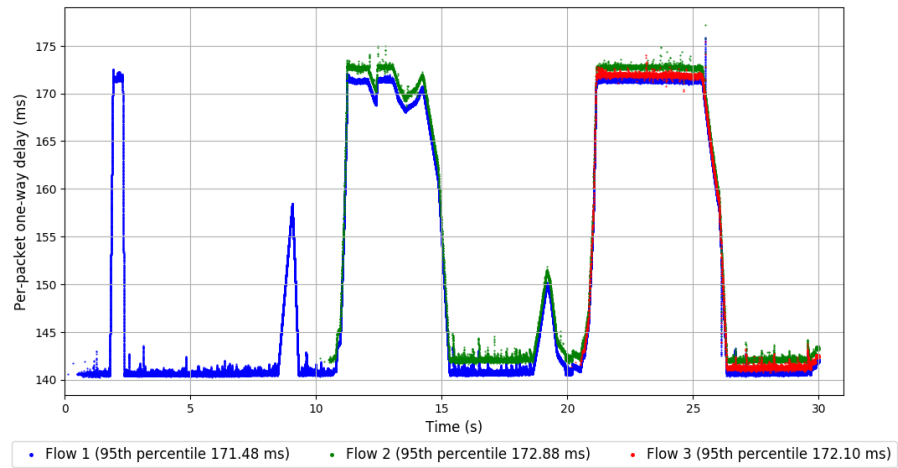
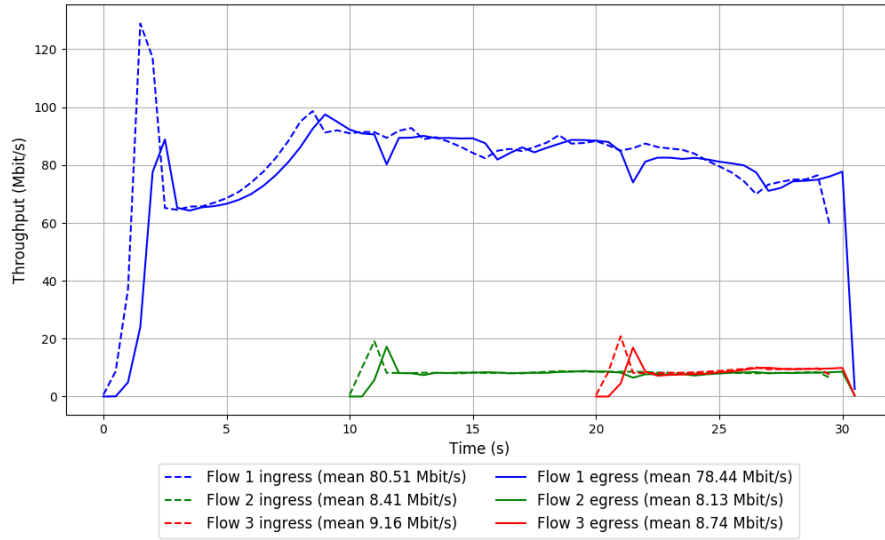


Run 5: Statistics of PCC-Allegro

Start at: 2019-05-30 02:17:32
End at: 2019-05-30 02:18:02
Local clock offset: -58.543 ms
Remote clock offset: 5.783 ms

```
# Below is generated by plot.py at 2019-05-30 02:49:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.73 Mbit/s
95th percentile per-packet one-way delay: 171.554 ms
Loss rate: 2.69%
-- Flow 1:
Average throughput: 78.44 Mbit/s
95th percentile per-packet one-way delay: 171.478 ms
Loss rate: 2.58%
-- Flow 2:
Average throughput: 8.13 Mbit/s
95th percentile per-packet one-way delay: 172.884 ms
Loss rate: 3.28%
-- Flow 3:
Average throughput: 8.74 Mbit/s
95th percentile per-packet one-way delay: 172.100 ms
Loss rate: 4.64%
```

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2019-05-30 00:31:51

End at: 2019-05-30 00:32:21

Local clock offset: -0.896 ms

Remote clock offset: 6.445 ms

Below is generated by plot.py at 2019-05-30 02:49:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.69 Mbit/s

95th percentile per-packet one-way delay: 84.693 ms

Loss rate: 68.26%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 82.338 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 12.75 Mbit/s

95th percentile per-packet one-way delay: 84.698 ms

Loss rate: 67.55%

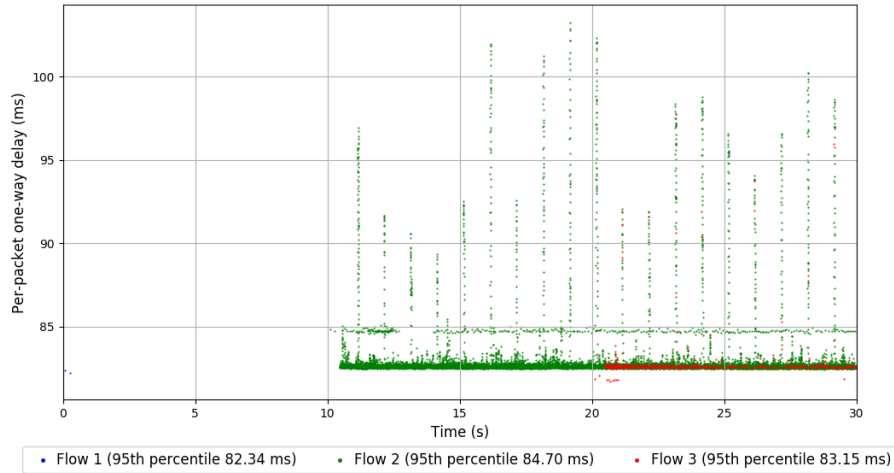
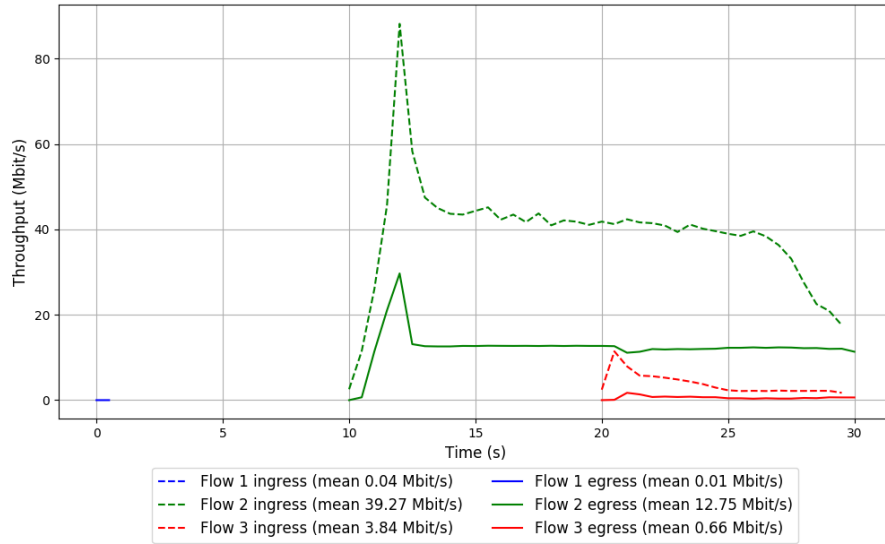
-- Flow 3:

Average throughput: 0.66 Mbit/s

95th percentile per-packet one-way delay: 83.154 ms

Loss rate: 82.87%

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-05-30 00:58:35

End at: 2019-05-30 00:59:05

Local clock offset: -1.363 ms

Remote clock offset: 2.895 ms

Below is generated by plot.py at 2019-05-30 02:49:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.17 Mbit/s

95th percentile per-packet one-way delay: 80.044 ms

Loss rate: 36.83%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 80.772 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 10.92 Mbit/s

95th percentile per-packet one-way delay: 80.005 ms

Loss rate: 36.50%

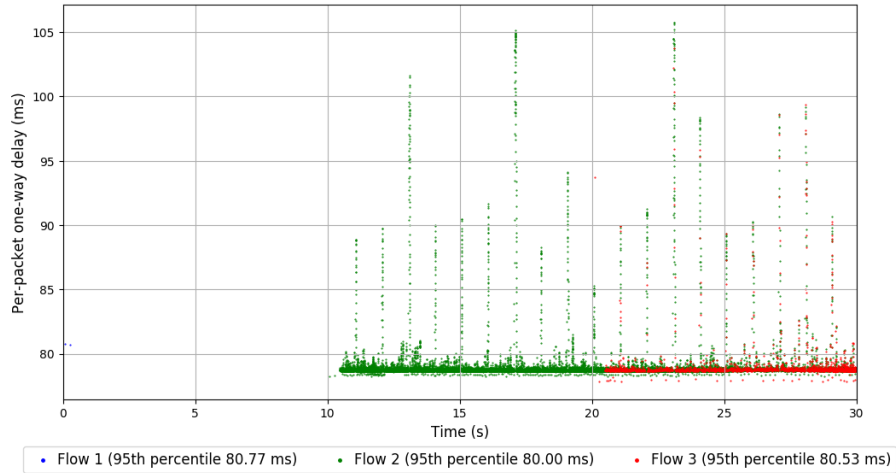
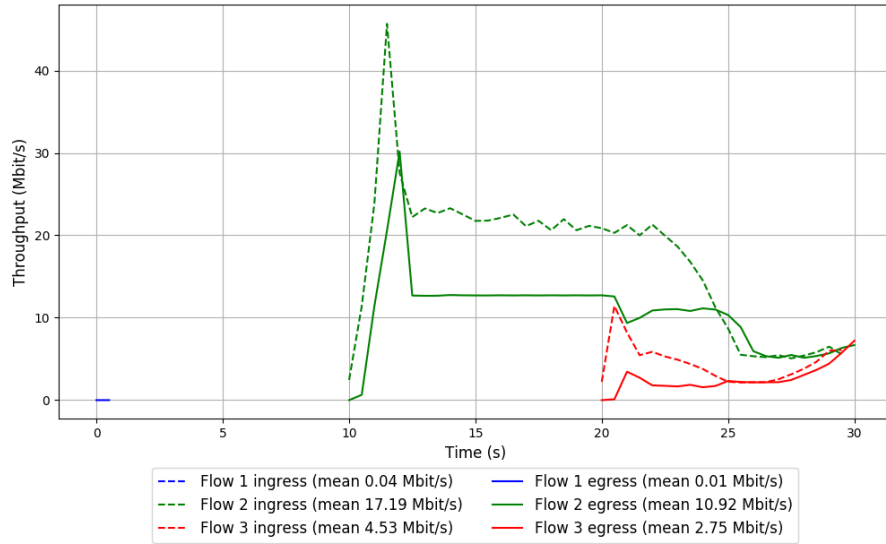
-- Flow 3:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 80.525 ms

Loss rate: 39.39%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-05-30 01:26:26

End at: 2019-05-30 01:26:56

Local clock offset: -2.023 ms

Remote clock offset: 1.839 ms

Below is generated by plot.py at 2019-05-30 02:49:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.10 Mbit/s

95th percentile per-packet one-way delay: 83.523 ms

Loss rate: 34.58%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 80.345 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 10.75 Mbit/s

95th percentile per-packet one-way delay: 83.492 ms

Loss rate: 34.51%

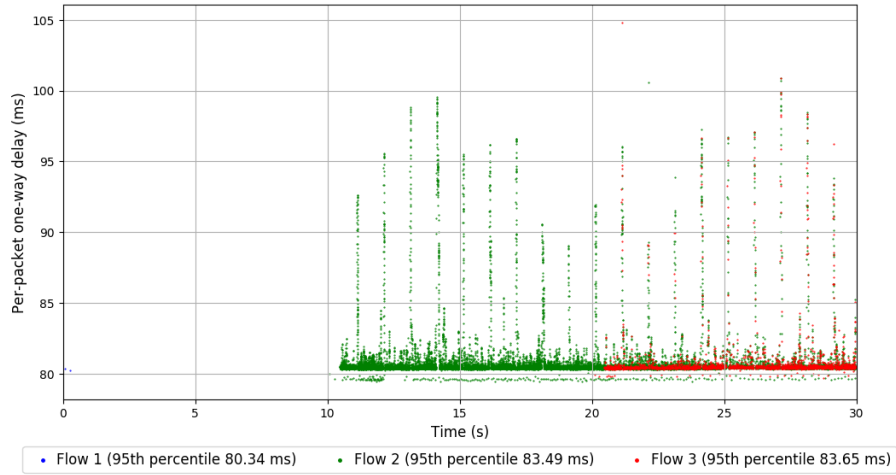
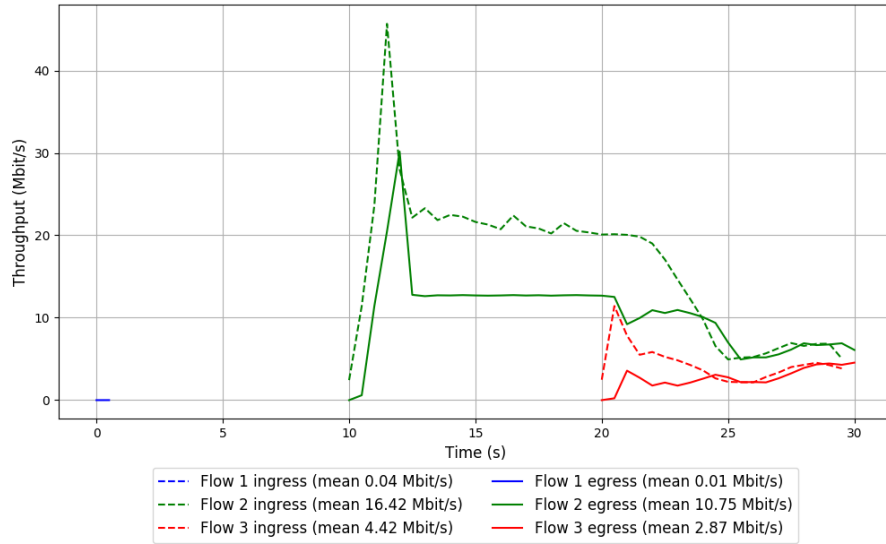
-- Flow 3:

Average throughput: 2.87 Mbit/s

95th percentile per-packet one-way delay: 83.653 ms

Loss rate: 35.06%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-05-30 01:53:20
End at: 2019-05-30 01:53:50
Local clock offset: -58.388 ms
Remote clock offset: 7.319 ms

Below is generated by plot.py at 2019-05-30 02:49:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.86 Mbit/s

95th percentile per-packet one-way delay: 142.338 ms

Loss rate: 60.07%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 141.027 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 10.15 Mbit/s

95th percentile per-packet one-way delay: 142.264 ms

Loss rate: 62.60%

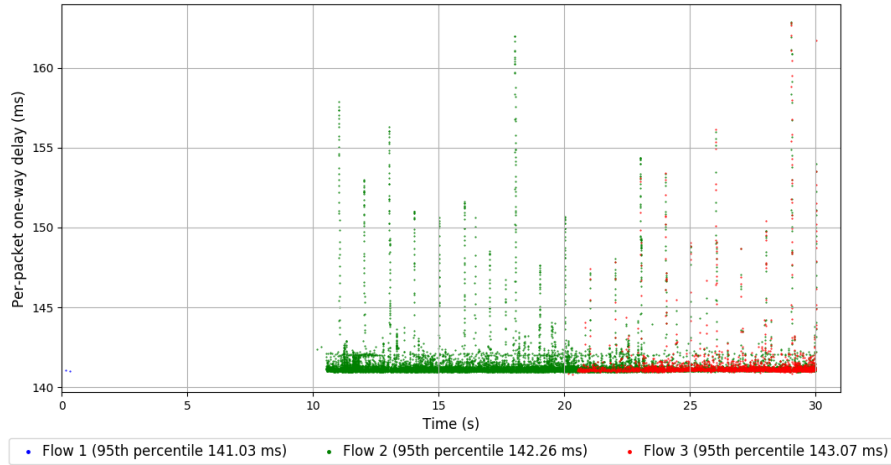
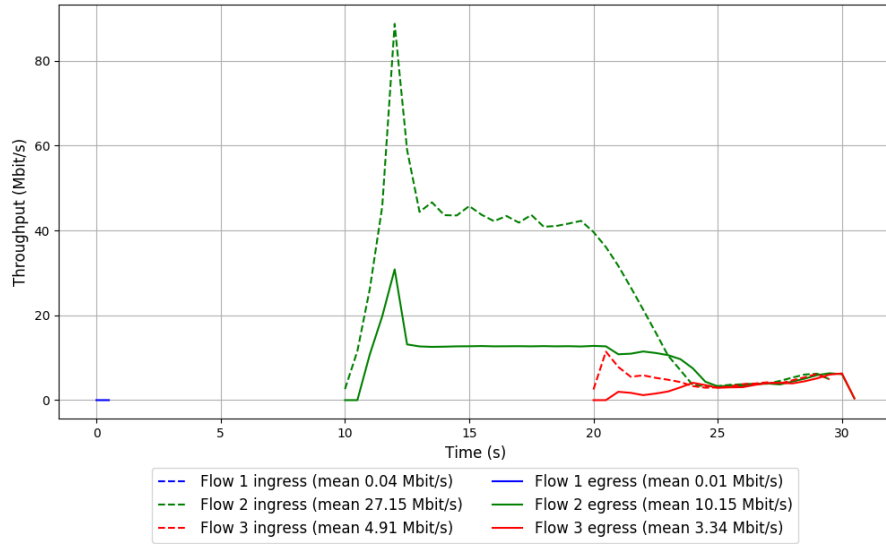
-- Flow 3:

Average throughput: 3.34 Mbit/s

95th percentile per-packet one-way delay: 143.074 ms

Loss rate: 31.82%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-05-30 02:20:09
End at: 2019-05-30 02:20:39
Local clock offset: -58.546 ms
Remote clock offset: 6.264 ms

Below is generated by plot.py at 2019-05-30 02:49:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.70 Mbit/s

95th percentile per-packet one-way delay: 142.134 ms

Loss rate: 55.53%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 141.317 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 9.08 Mbit/s

95th percentile per-packet one-way delay: 143.409 ms

Loss rate: 62.11%

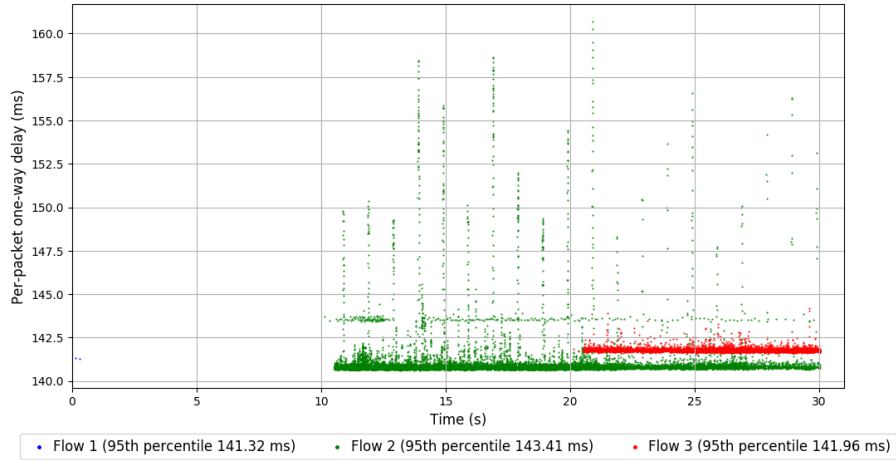
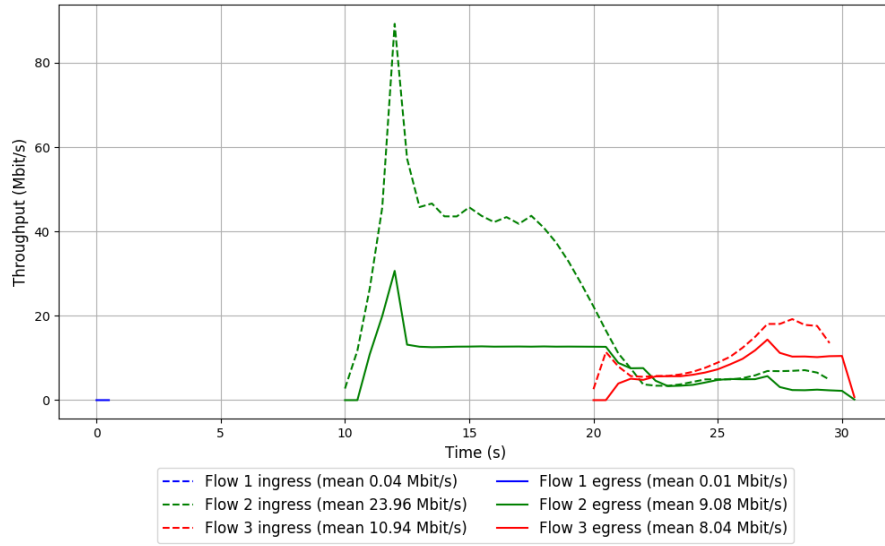
-- Flow 3:

Average throughput: 8.04 Mbit/s

95th percentile per-packet one-way delay: 141.964 ms

Loss rate: 26.50%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-05-30 00:42:09

End at: 2019-05-30 00:42:39

Local clock offset: -1.907 ms

Remote clock offset: 7.297 ms

Below is generated by plot.py at 2019-05-30 02:49:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 63.64 Mbit/s

95th percentile per-packet one-way delay: 113.819 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 43.93 Mbit/s

95th percentile per-packet one-way delay: 114.190 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 24.88 Mbit/s

95th percentile per-packet one-way delay: 111.820 ms

Loss rate: 0.49%

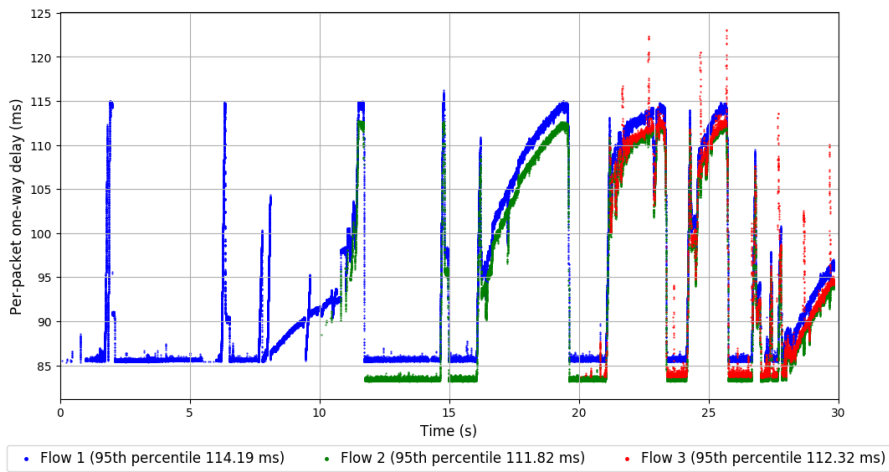
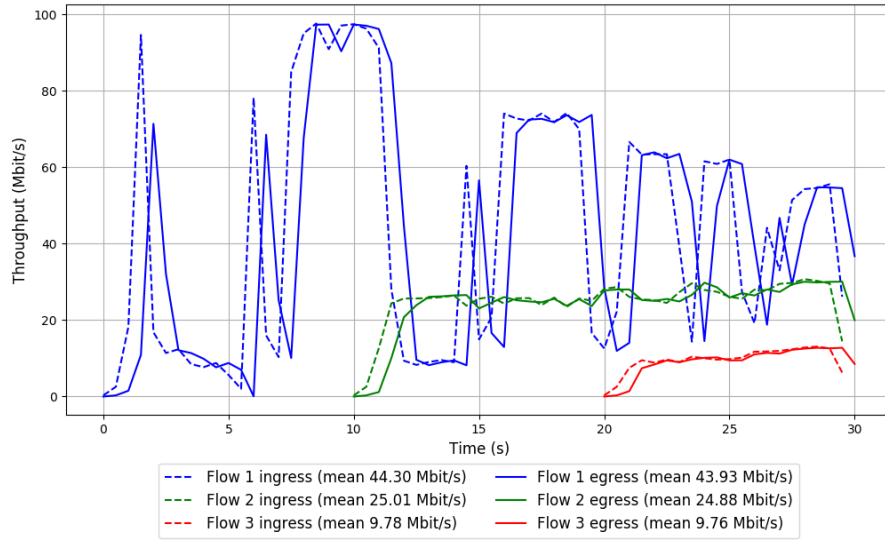
-- Flow 3:

Average throughput: 9.76 Mbit/s

95th percentile per-packet one-way delay: 112.321 ms

Loss rate: 0.01%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-05-30 01:09:40

End at: 2019-05-30 01:10:10

Local clock offset: -1.379 ms

Remote clock offset: 2.062 ms

Below is generated by plot.py at 2019-05-30 02:49:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 63.41 Mbit/s

95th percentile per-packet one-way delay: 105.496 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 47.60 Mbit/s

95th percentile per-packet one-way delay: 105.750 ms

Loss rate: 0.72%

-- Flow 2:

Average throughput: 18.31 Mbit/s

95th percentile per-packet one-way delay: 105.281 ms

Loss rate: 0.26%

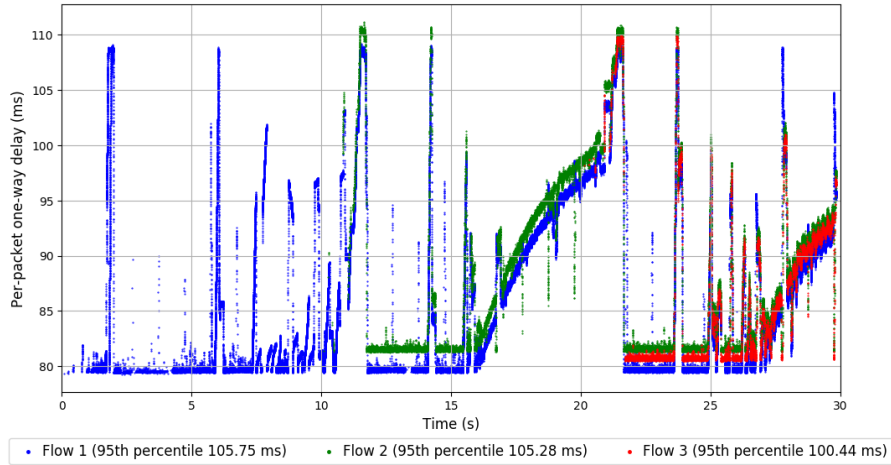
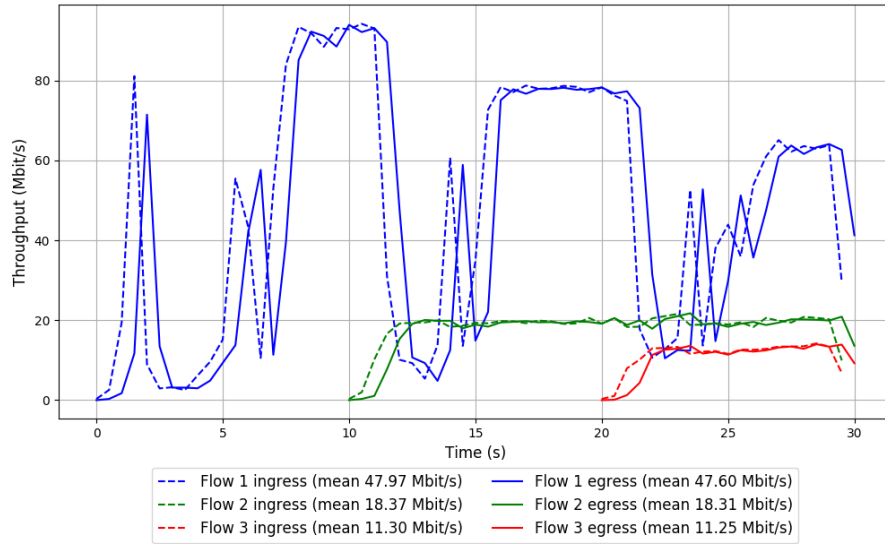
-- Flow 3:

Average throughput: 11.25 Mbit/s

95th percentile per-packet one-way delay: 100.445 ms

Loss rate: 0.40%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-05-30 01:36:50

End at: 2019-05-30 01:37:20

Local clock offset: -2.103 ms

Remote clock offset: 8.23 ms

Below is generated by plot.py at 2019-05-30 02:49:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 69.17 Mbit/s

95th percentile per-packet one-way delay: 112.198 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 52.11 Mbit/s

95th percentile per-packet one-way delay: 112.352 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 19.07 Mbit/s

95th percentile per-packet one-way delay: 110.308 ms

Loss rate: 0.24%

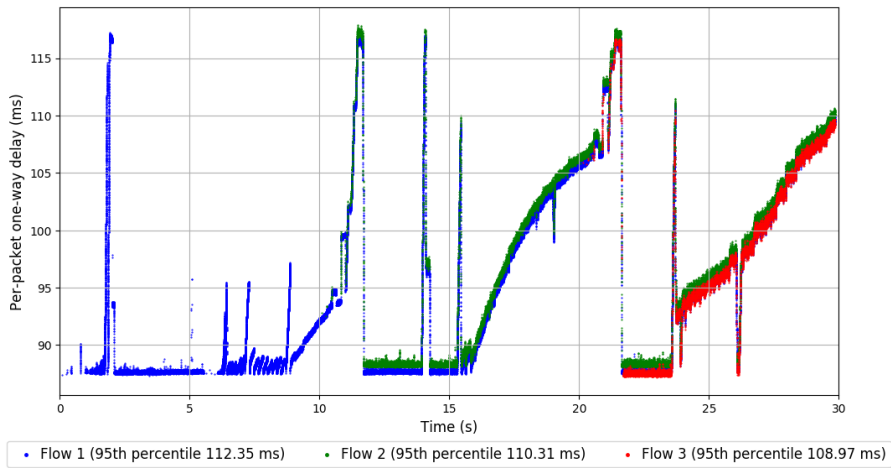
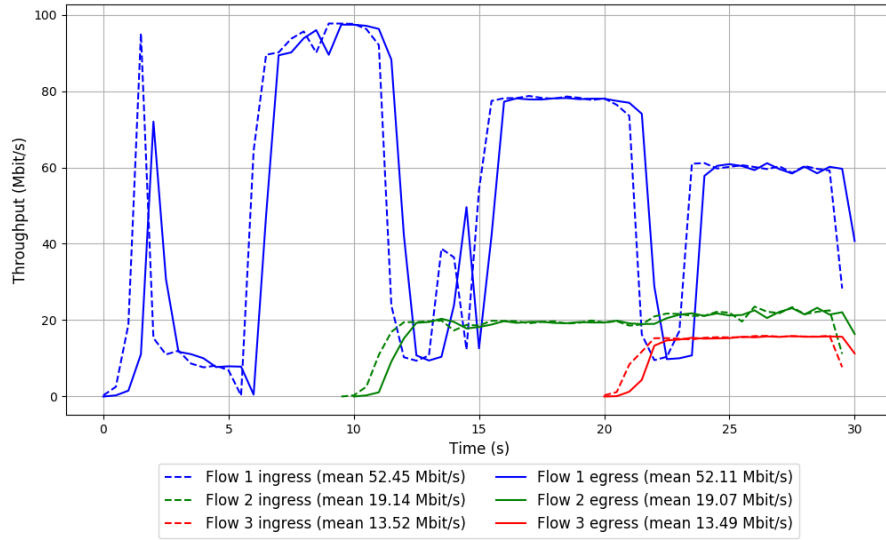
-- Flow 3:

Average throughput: 13.49 Mbit/s

95th percentile per-packet one-way delay: 108.974 ms

Loss rate: 0.15%

Run 3: Report of QUIC Cubic — Data Link

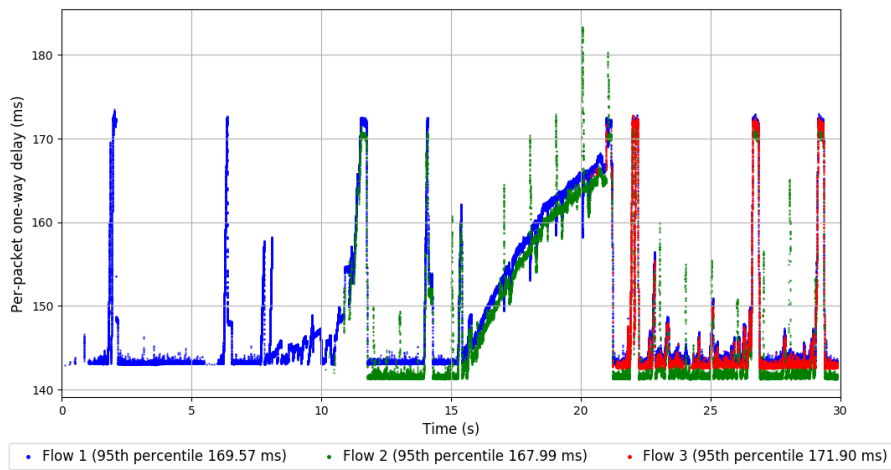
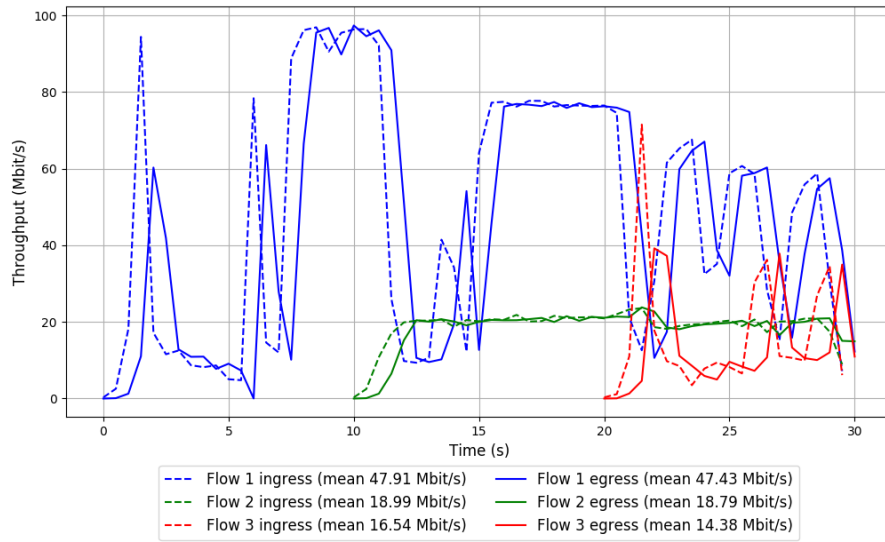


Run 4: Statistics of QUIC Cubic

Start at: 2019-05-30 02:03:39
End at: 2019-05-30 02:04:09
Local clock offset: -58.617 ms
Remote clock offset: 8.073 ms

```
# Below is generated by plot.py at 2019-05-30 02:49:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.59 Mbit/s
95th percentile per-packet one-way delay: 170.992 ms
Loss rate: 2.01%
-- Flow 1:
Average throughput: 47.43 Mbit/s
95th percentile per-packet one-way delay: 169.571 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 18.79 Mbit/s
95th percentile per-packet one-way delay: 167.989 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 14.38 Mbit/s
95th percentile per-packet one-way delay: 171.903 ms
Loss rate: 13.24%
```

Run 4: Report of QUIC Cubic — Data Link

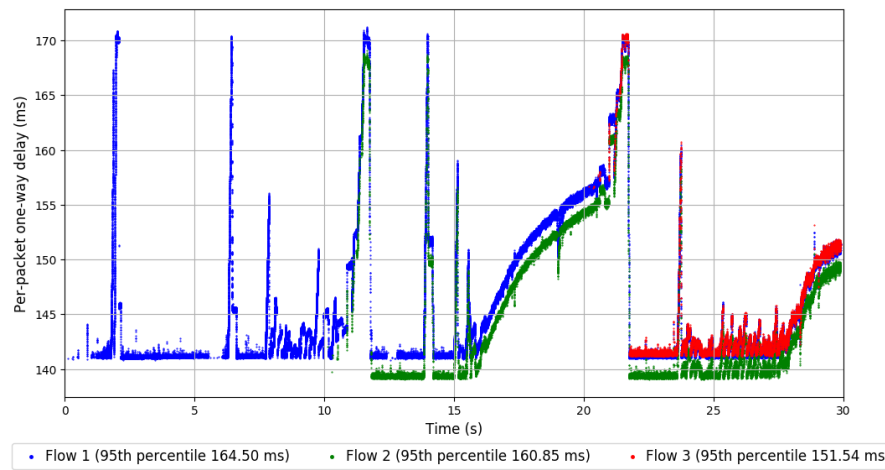
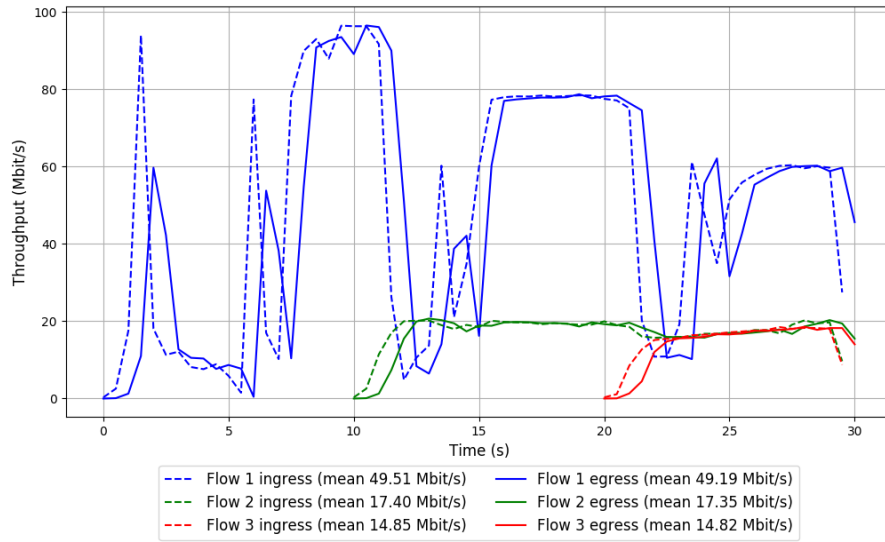


Run 5: Statistics of QUIC Cubic

Start at: 2019-05-30 02:30:33
End at: 2019-05-30 02:31:03
Local clock offset: -58.534 ms
Remote clock offset: 4.63 ms

```
# Below is generated by plot.py at 2019-05-30 02:49:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.54 Mbit/s
95th percentile per-packet one-way delay: 163.051 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 49.19 Mbit/s
95th percentile per-packet one-way delay: 164.499 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 17.35 Mbit/s
95th percentile per-packet one-way delay: 160.853 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 14.82 Mbit/s
95th percentile per-packet one-way delay: 151.542 ms
Loss rate: 0.25%
```

Run 5: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2019-05-30 00:26:48

End at: 2019-05-30 00:27:18

Local clock offset: -1.736 ms

Remote clock offset: 5.384 ms

Below is generated by plot.py at 2019-05-30 02:49:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 84.037 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.102 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 82.519 ms

Loss rate: 0.00%

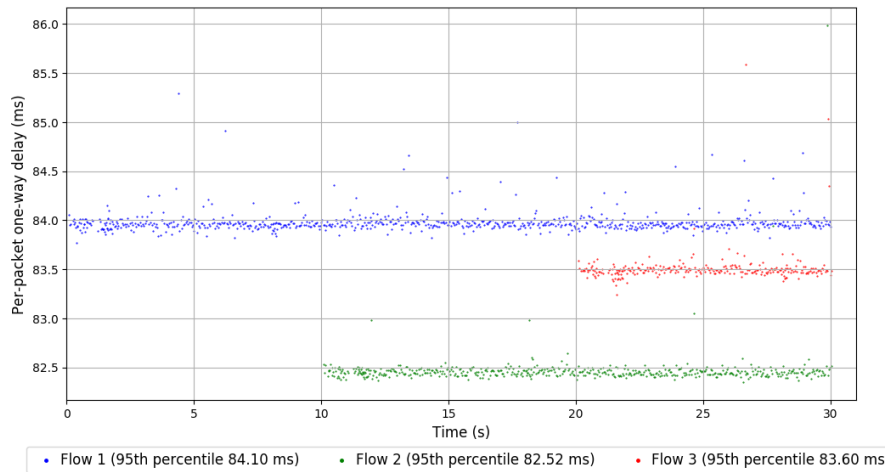
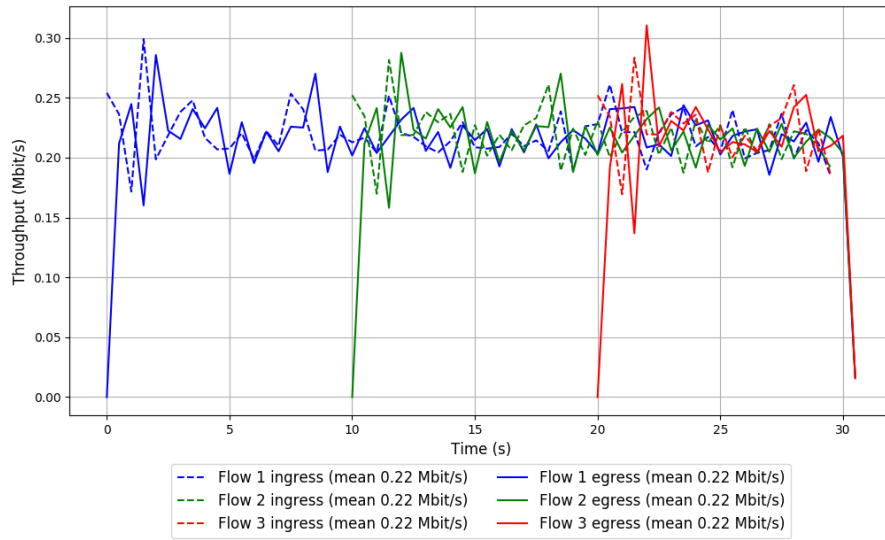
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 83.604 ms

Loss rate: 0.00%

Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-05-30 00:53:32

End at: 2019-05-30 00:54:02

Local clock offset: -1.675 ms

Remote clock offset: 8.484 ms

Below is generated by plot.py at 2019-05-30 02:49:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 86.959 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.615 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 87.020 ms

Loss rate: 0.00%

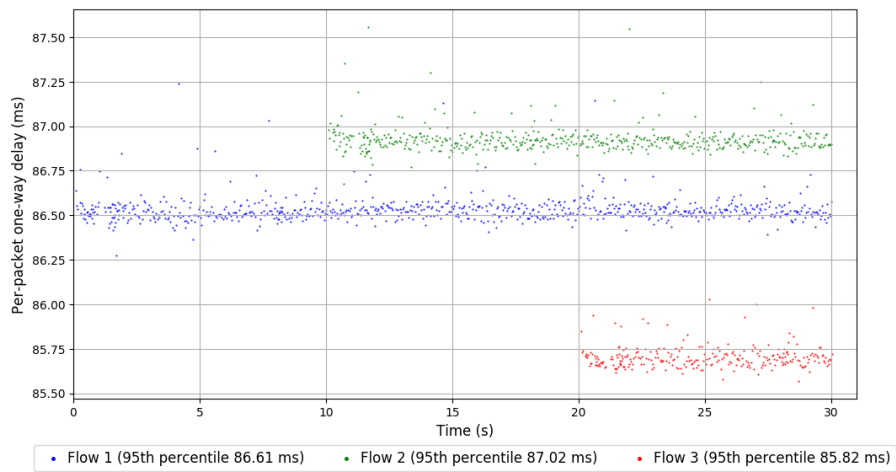
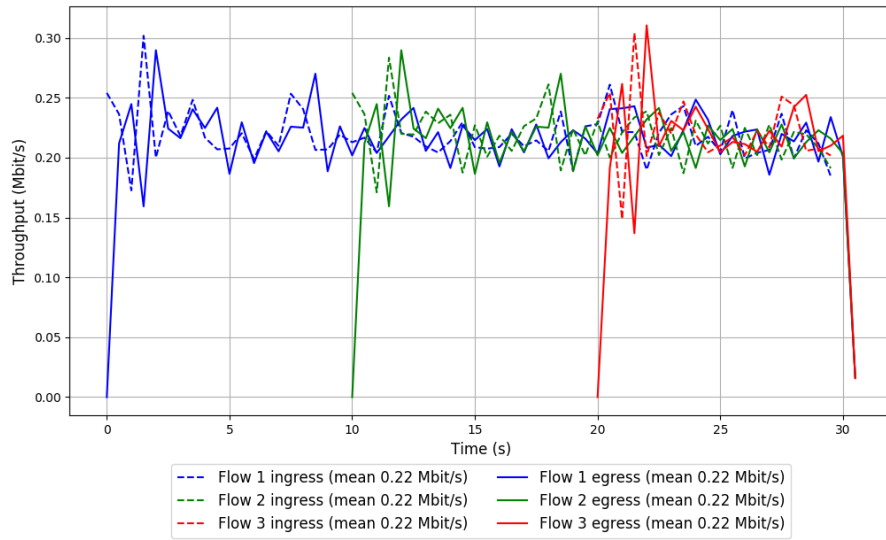
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 85.821 ms

Loss rate: 0.00%

Run 2: Report of SCReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2019-05-30 01:21:01

End at: 2019-05-30 01:21:31

Local clock offset: -1.164 ms

Remote clock offset: 5.808 ms

Below is generated by plot.py at 2019-05-30 02:49:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 85.647 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.604 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 84.575 ms

Loss rate: 0.00%

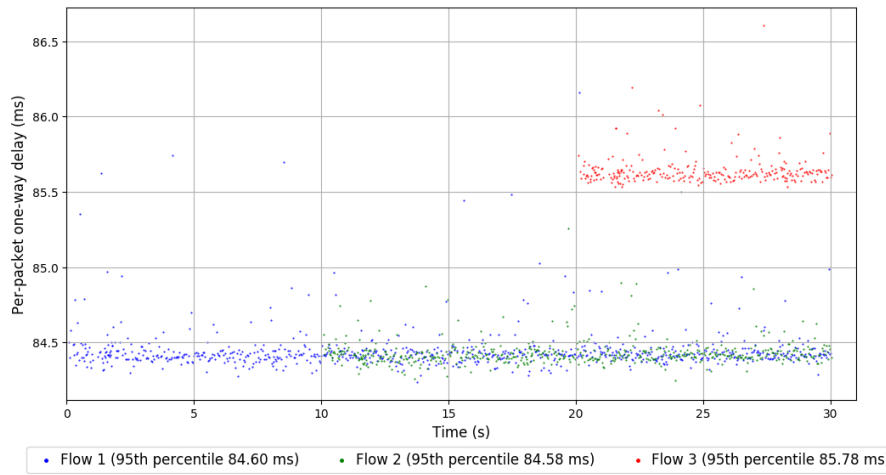
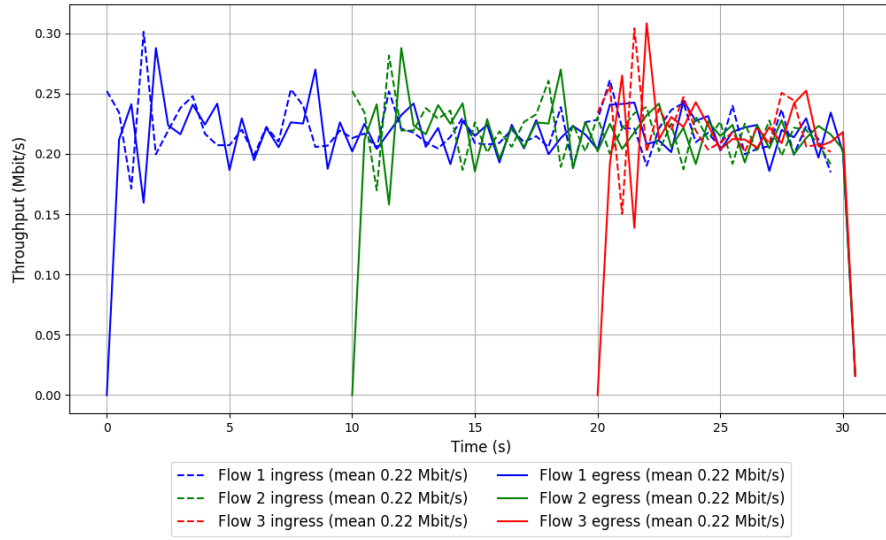
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 85.785 ms

Loss rate: 0.00%

Run 3: Report of SCReAM — Data Link

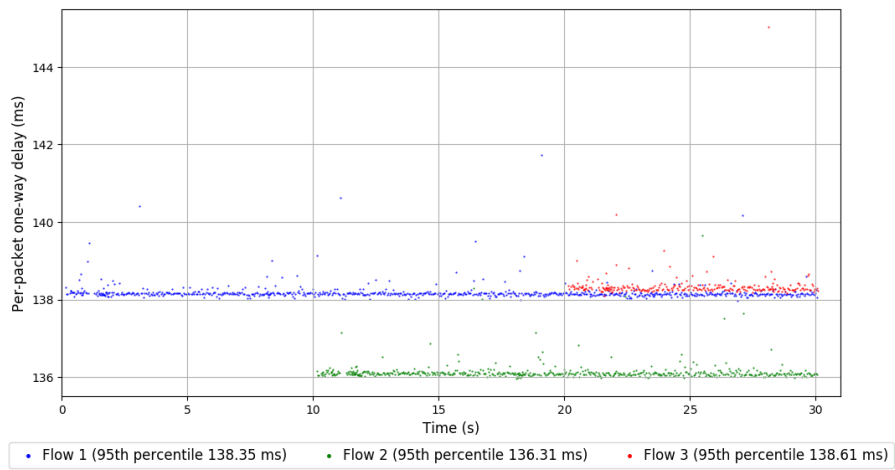
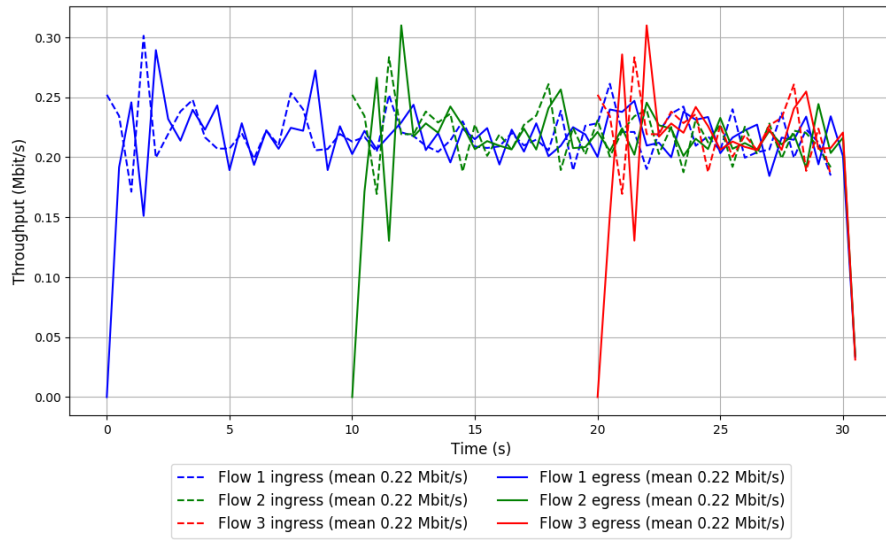


Run 4: Statistics of SCReAM

Start at: 2019-05-30 01:48:15
End at: 2019-05-30 01:48:45
Local clock offset: -58.103 ms
Remote clock offset: 3.216 ms

```
# Below is generated by plot.py at 2019-05-30 02:49:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 138.377 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 138.348 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.311 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 138.608 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

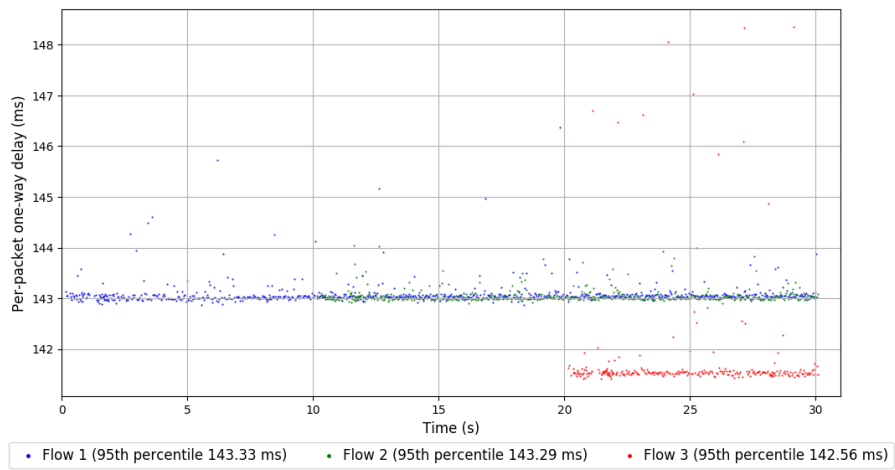
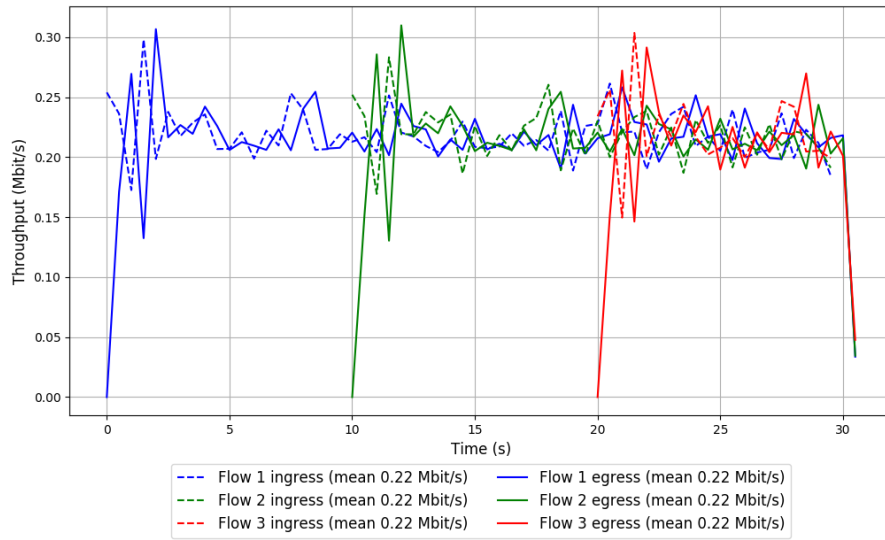


Run 5: Statistics of SCReAM

Start at: 2019-05-30 02:15:05
End at: 2019-05-30 02:15:35
Local clock offset: -58.538 ms
Remote clock offset: 7.371 ms

```
# Below is generated by plot.py at 2019-05-30 02:49:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 143.300 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 143.327 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 143.289 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 142.560 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-05-30 00:44:44

End at: 2019-05-30 00:45:14

Local clock offset: -0.862 ms

Remote clock offset: 7.406 ms

Below is generated by plot.py at 2019-05-30 02:49:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.51 Mbit/s

95th percentile per-packet one-way delay: 92.837 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.42 Mbit/s

95th percentile per-packet one-way delay: 92.779 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 89.555 ms

Loss rate: 0.00%

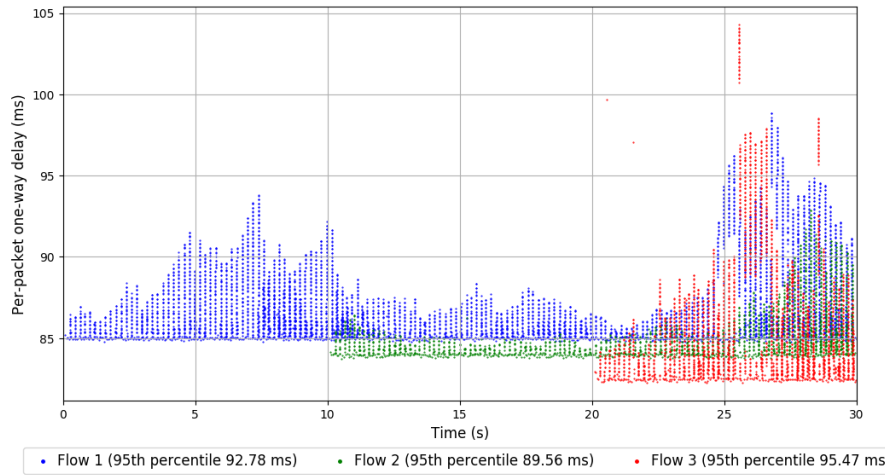
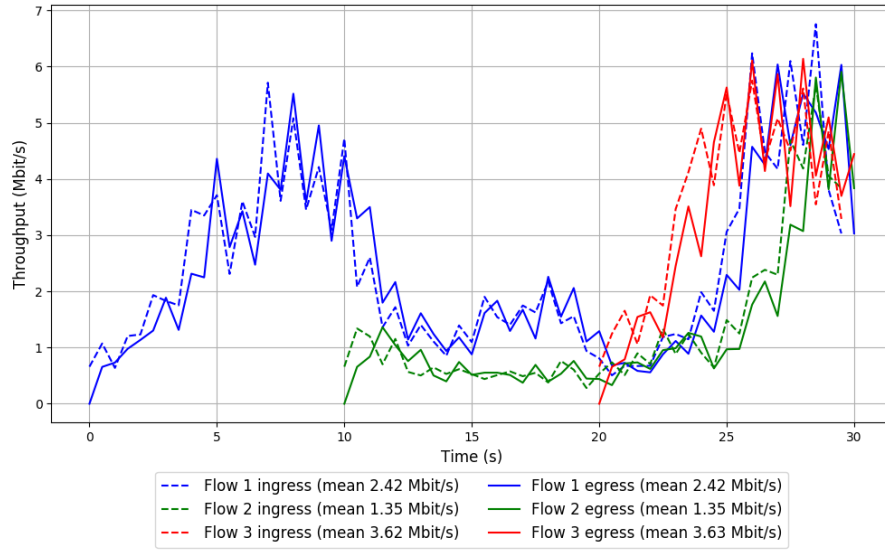
-- Flow 3:

Average throughput: 3.63 Mbit/s

95th percentile per-packet one-way delay: 95.474 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-05-30 01:12:13
End at: 2019-05-30 01:12:43
Local clock offset: -1.044 ms
Remote clock offset: 8.603 ms

Below is generated by plot.py at 2019-05-30 02:49:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.05 Mbit/s

95th percentile per-packet one-way delay: 95.180 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 4.00 Mbit/s

95th percentile per-packet one-way delay: 95.193 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.63 Mbit/s

95th percentile per-packet one-way delay: 93.301 ms

Loss rate: 0.00%

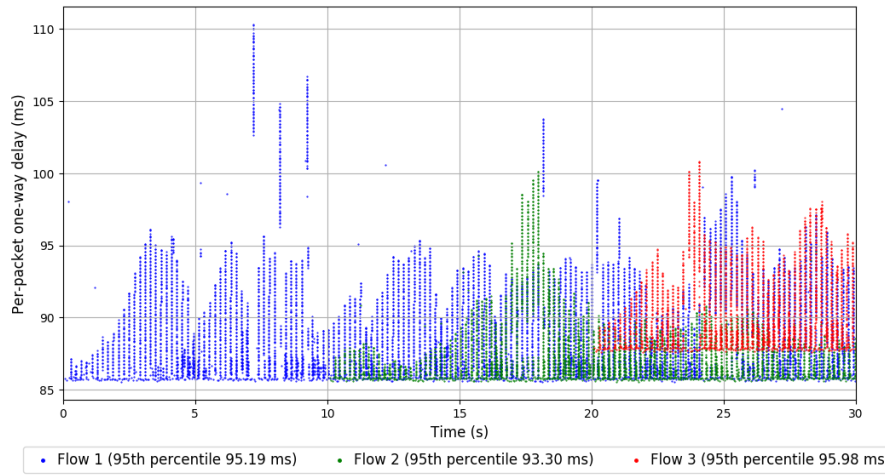
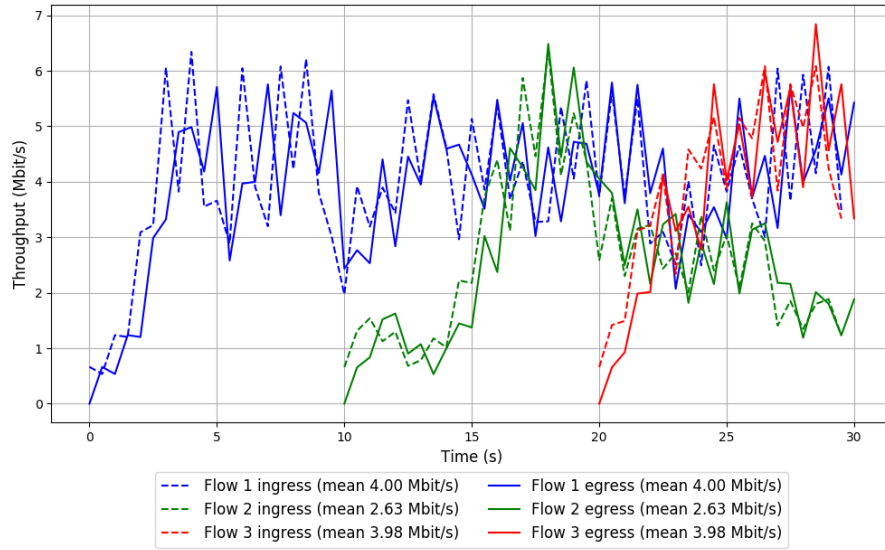
-- Flow 3:

Average throughput: 3.98 Mbit/s

95th percentile per-packet one-way delay: 95.982 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-05-30 01:39:26

End at: 2019-05-30 01:39:56

Local clock offset: -1.298 ms

Remote clock offset: 6.737 ms

Below is generated by plot.py at 2019-05-30 02:49:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.38 Mbit/s

95th percentile per-packet one-way delay: 90.971 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 1.82 Mbit/s

95th percentile per-packet one-way delay: 89.712 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.54 Mbit/s

95th percentile per-packet one-way delay: 92.292 ms

Loss rate: 0.00%

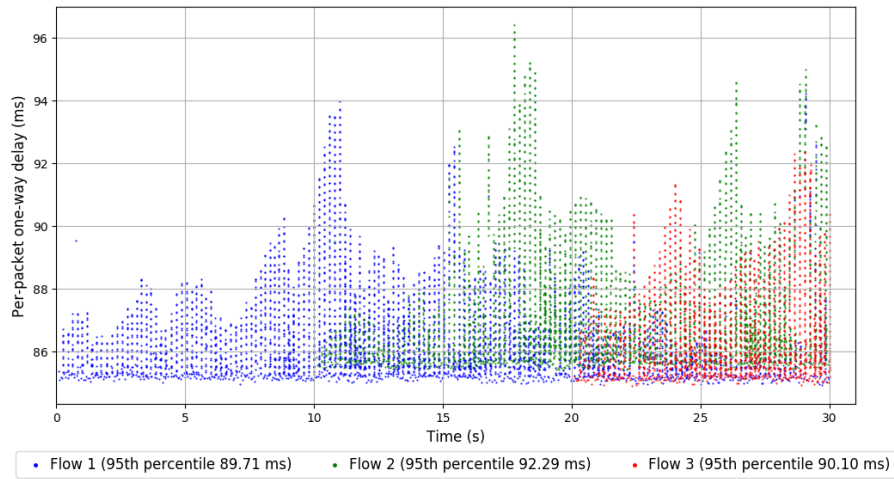
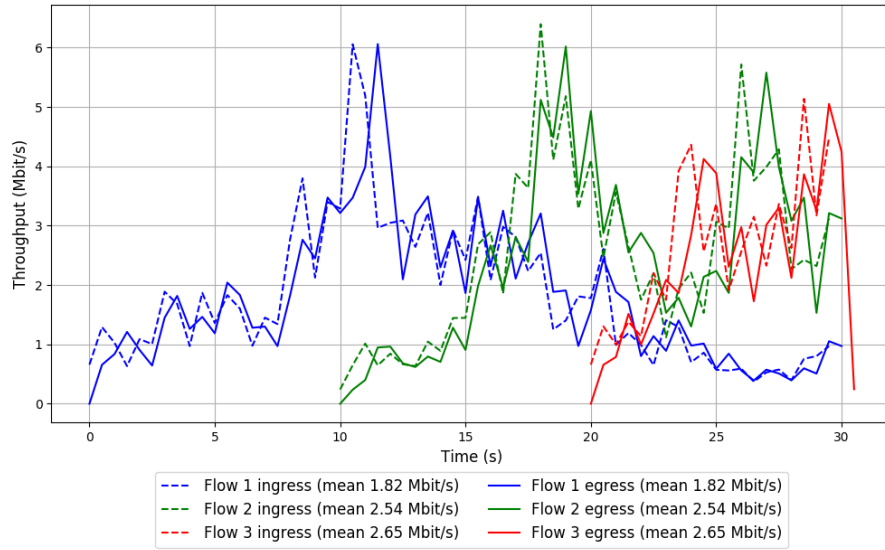
-- Flow 3:

Average throughput: 2.65 Mbit/s

95th percentile per-packet one-way delay: 90.099 ms

Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

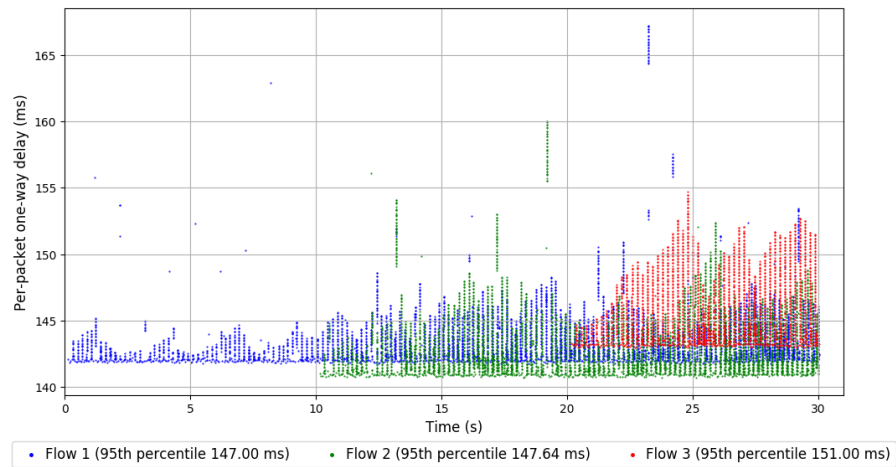
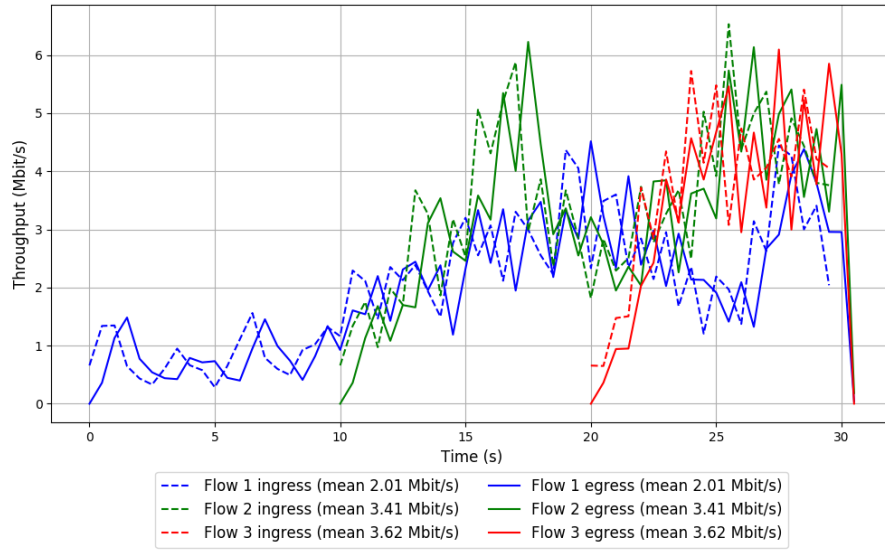


Run 4: Statistics of Sprout

Start at: 2019-05-30 02:06:15
End at: 2019-05-30 02:06:45
Local clock offset: -58.682 ms
Remote clock offset: 8.148 ms

```
# Below is generated by plot.py at 2019-05-30 02:49:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.47 Mbit/s
95th percentile per-packet one-way delay: 149.466 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 147.000 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 147.643 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 150.998 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

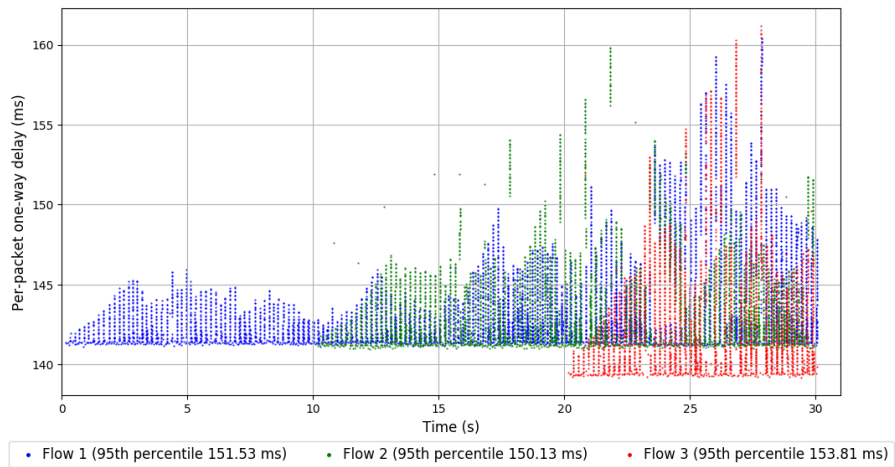
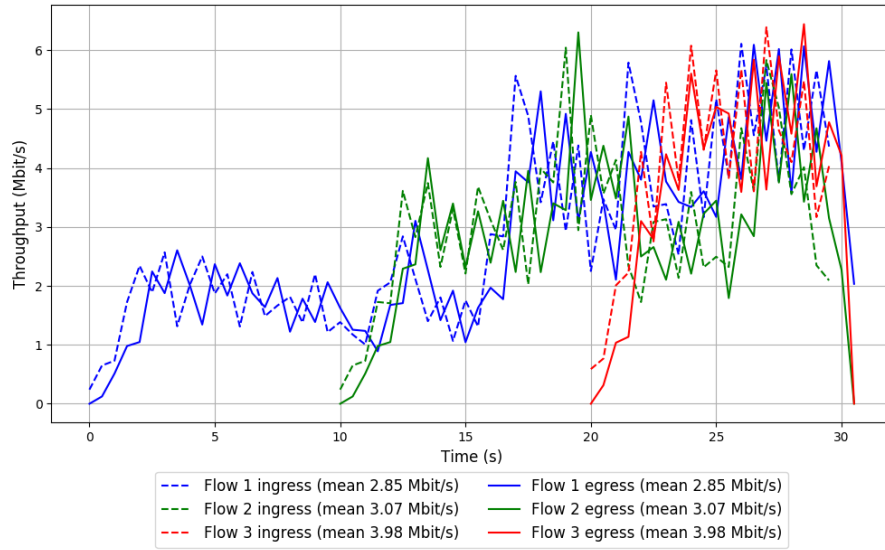


Run 5: Statistics of Sprout

Start at: 2019-05-30 02:33:09
End at: 2019-05-30 02:33:39
Local clock offset: -58.459 ms
Remote clock offset: 5.339 ms

```
# Below is generated by plot.py at 2019-05-30 02:49:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.20 Mbit/s
95th percentile per-packet one-way delay: 151.573 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.85 Mbit/s
95th percentile per-packet one-way delay: 151.533 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.07 Mbit/s
95th percentile per-packet one-way delay: 150.135 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 153.812 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-05-30 00:45:57

End at: 2019-05-30 00:46:27

Local clock offset: -0.844 ms

Remote clock offset: 3.528 ms

Below is generated by plot.py at 2019-05-30 02:49:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.48 Mbit/s

95th percentile per-packet one-way delay: 90.516 ms

Loss rate: 30.37%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 80.185 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.57 Mbit/s

95th percentile per-packet one-way delay: 92.236 ms

Loss rate: 34.12%

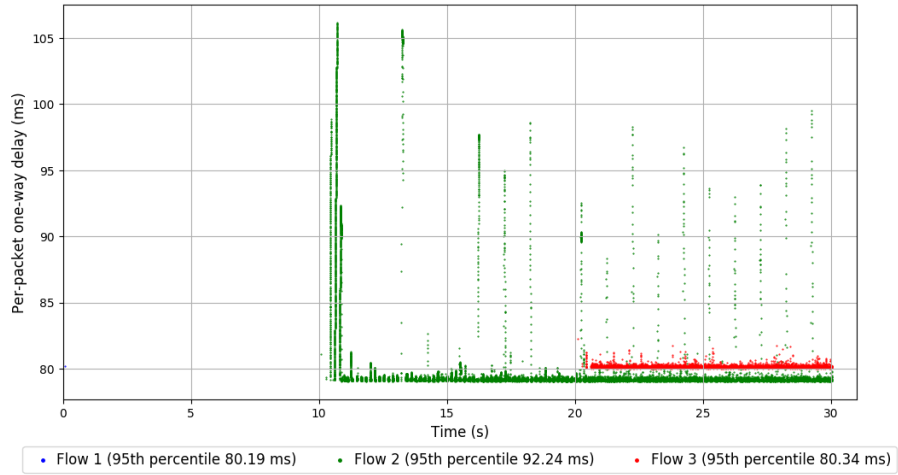
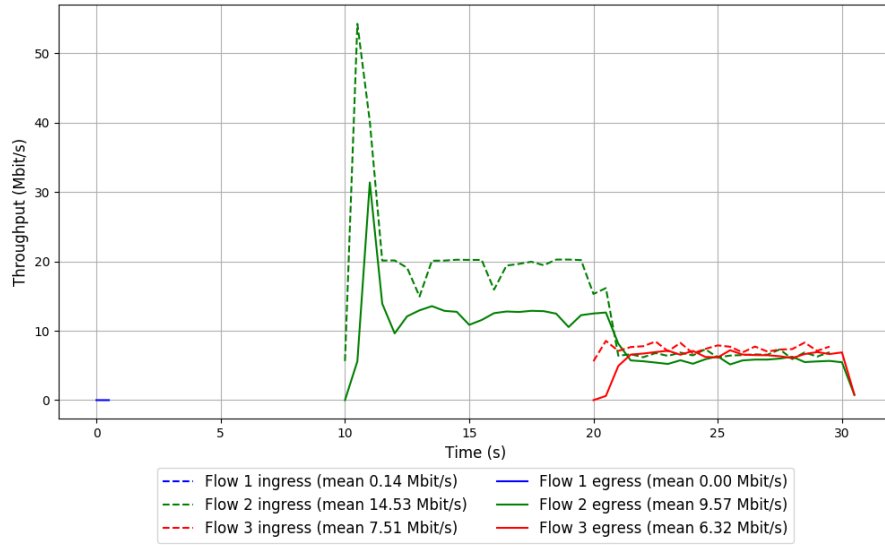
-- Flow 3:

Average throughput: 6.32 Mbit/s

95th percentile per-packet one-way delay: 80.342 ms

Loss rate: 15.79%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-05-30 01:13:27

End at: 2019-05-30 01:13:57

Local clock offset: -0.997 ms

Remote clock offset: 2.023 ms

Below is generated by plot.py at 2019-05-30 02:49:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.48 Mbit/s

95th percentile per-packet one-way delay: 88.905 ms

Loss rate: 17.76%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 82.197 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.83 Mbit/s

95th percentile per-packet one-way delay: 90.575 ms

Loss rate: 18.62%

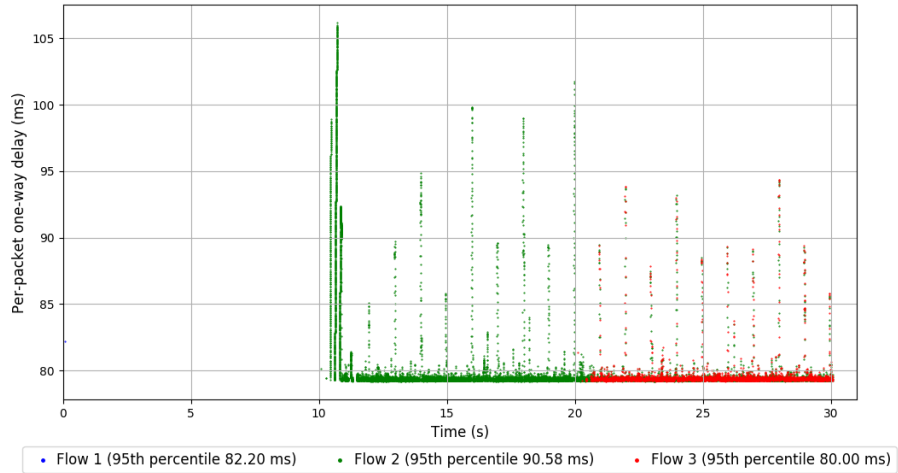
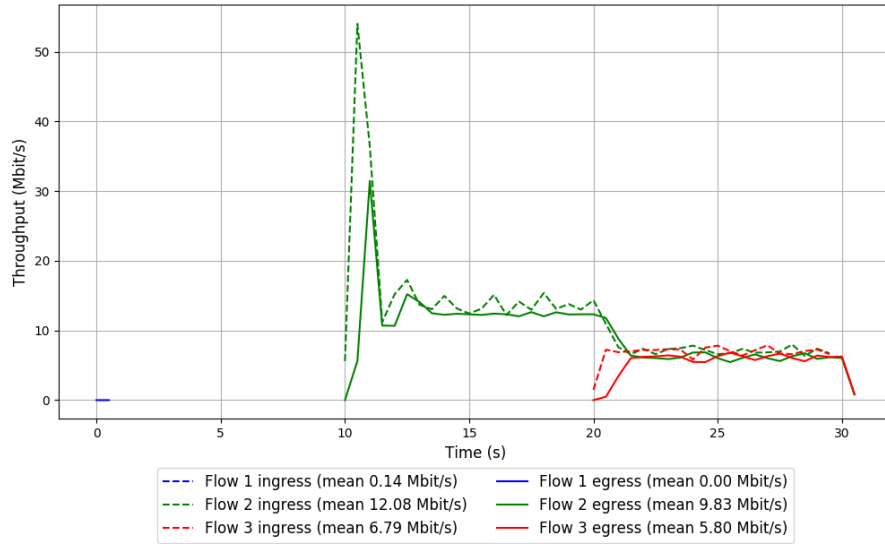
-- Flow 3:

Average throughput: 5.80 Mbit/s

95th percentile per-packet one-way delay: 80.003 ms

Loss rate: 14.66%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-05-30 01:40:40

End at: 2019-05-30 01:41:10

Local clock offset: -2.249 ms

Remote clock offset: 3.139 ms

Below is generated by plot.py at 2019-05-30 02:49:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.48 Mbit/s

95th percentile per-packet one-way delay: 92.548 ms

Loss rate: 24.94%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 83.297 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.82 Mbit/s

95th percentile per-packet one-way delay: 93.486 ms

Loss rate: 25.66%

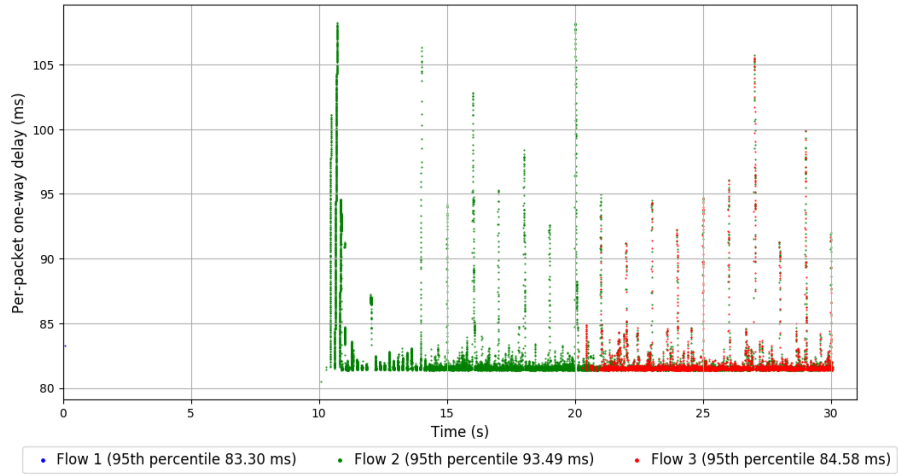
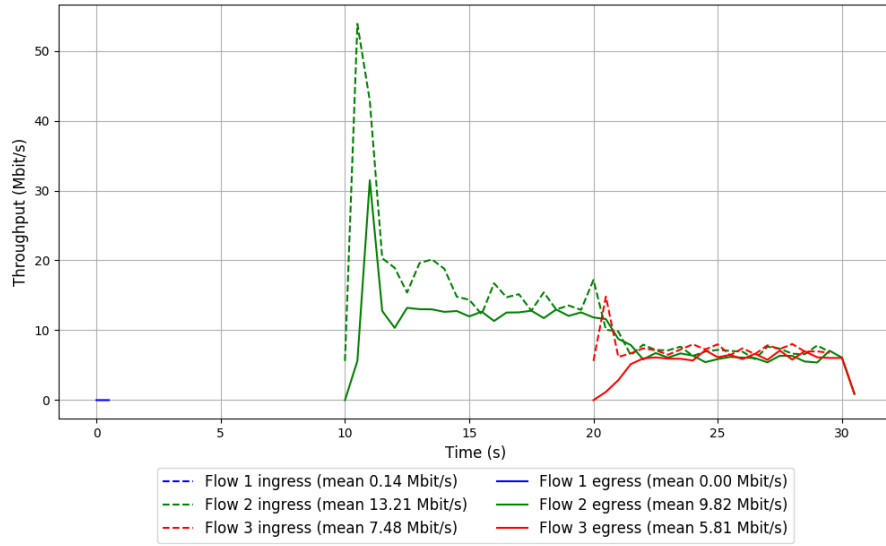
-- Flow 3:

Average throughput: 5.81 Mbit/s

95th percentile per-packet one-way delay: 84.583 ms

Loss rate: 22.33%

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

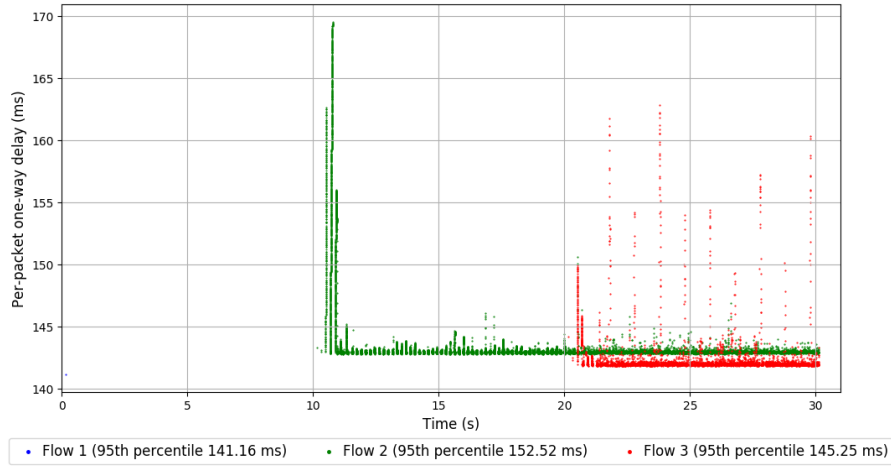
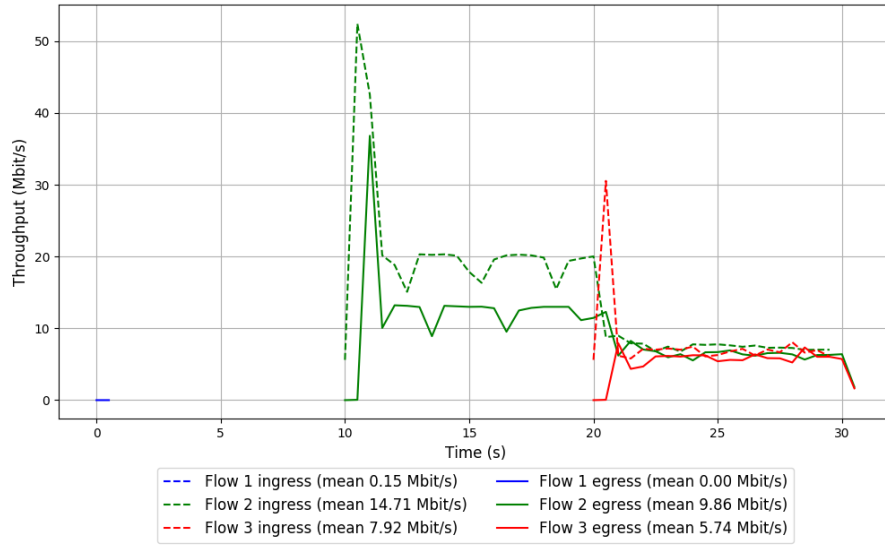


Run 4: Statistics of TaoVA-100x

Start at: 2019-05-30 02:07:29
End at: 2019-05-30 02:07:59
Local clock offset: -58.852 ms
Remote clock offset: 8.097 ms

```
# Below is generated by plot.py at 2019-05-30 02:49:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 150.351 ms
Loss rate: 31.83%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 141.160 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.86 Mbit/s
95th percentile per-packet one-way delay: 152.520 ms
Loss rate: 32.99%
-- Flow 3:
Average throughput: 5.74 Mbit/s
95th percentile per-packet one-way delay: 145.250 ms
Loss rate: 27.52%
```

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

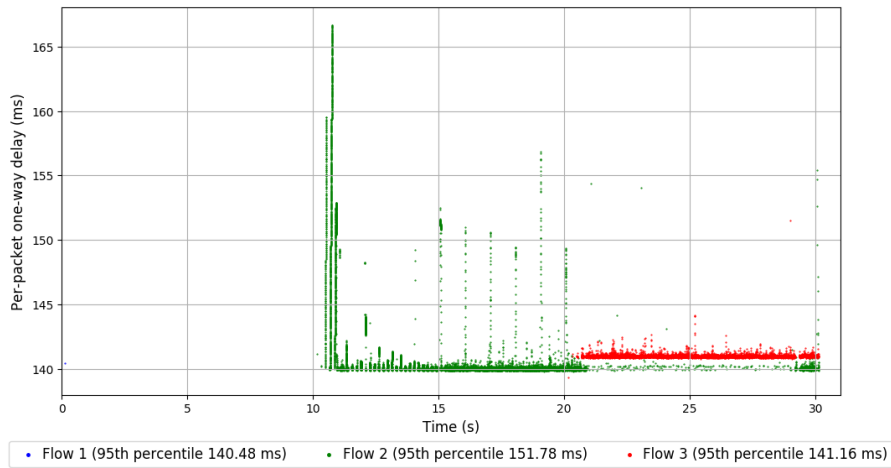
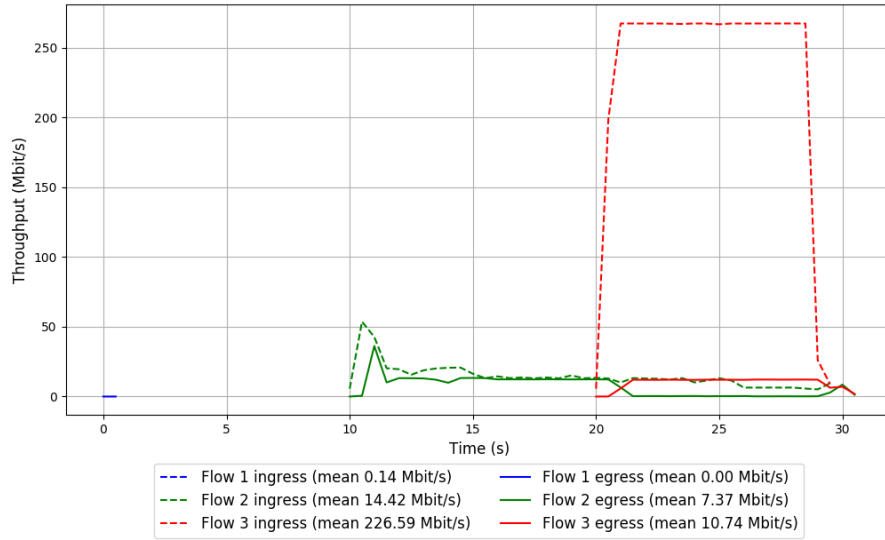


Run 5: Statistics of TaoVA-100x

Start at: 2019-05-30 02:34:23
End at: 2019-05-30 02:34:53
Local clock offset: -58.502 ms
Remote clock offset: 5.28 ms

```
# Below is generated by plot.py at 2019-05-30 02:49:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 148.638 ms
Loss rate: 90.02%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 140.479 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 7.37 Mbit/s
95th percentile per-packet one-way delay: 151.778 ms
Loss rate: 48.91%
-- Flow 3:
Average throughput: 10.74 Mbit/s
95th percentile per-packet one-way delay: 141.164 ms
Loss rate: 95.26%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2019-05-30 00:25:31

End at: 2019-05-30 00:26:01

Local clock offset: -1.826 ms

Remote clock offset: 5.331 ms

Below is generated by plot.py at 2019-05-30 02:50:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.19 Mbit/s

95th percentile per-packet one-way delay: 92.273 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 48.87 Mbit/s

95th percentile per-packet one-way delay: 91.192 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 25.74 Mbit/s

95th percentile per-packet one-way delay: 92.161 ms

Loss rate: 0.60%

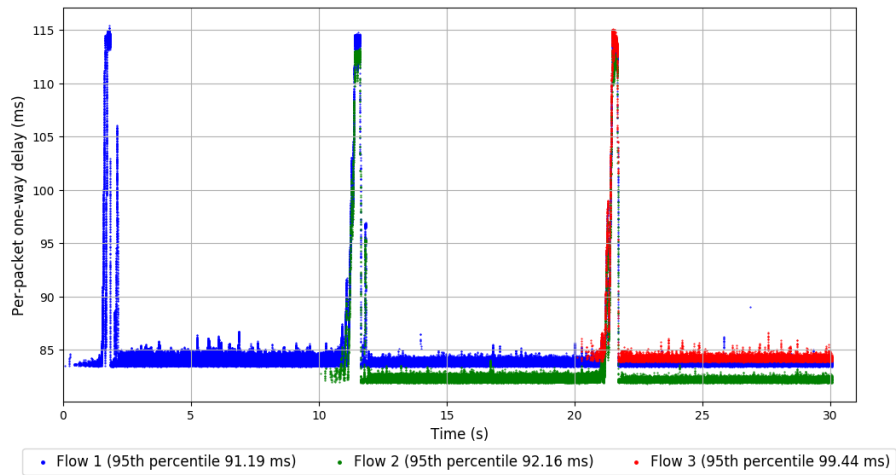
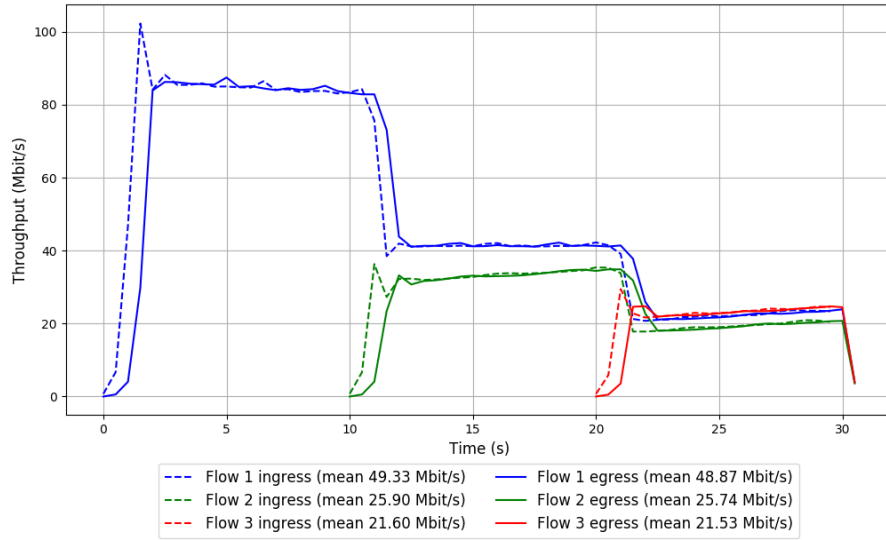
-- Flow 3:

Average throughput: 21.53 Mbit/s

95th percentile per-packet one-way delay: 99.435 ms

Loss rate: 0.30%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-05-30 00:52:15

End at: 2019-05-30 00:52:45

Local clock offset: -1.743 ms

Remote clock offset: 3.688 ms

Below is generated by plot.py at 2019-05-30 02:50:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.53 Mbit/s

95th percentile per-packet one-way delay: 106.451 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 36.08 Mbit/s

95th percentile per-packet one-way delay: 106.932 ms

Loss rate: 2.05%

-- Flow 2:

Average throughput: 53.97 Mbit/s

95th percentile per-packet one-way delay: 105.241 ms

Loss rate: 0.78%

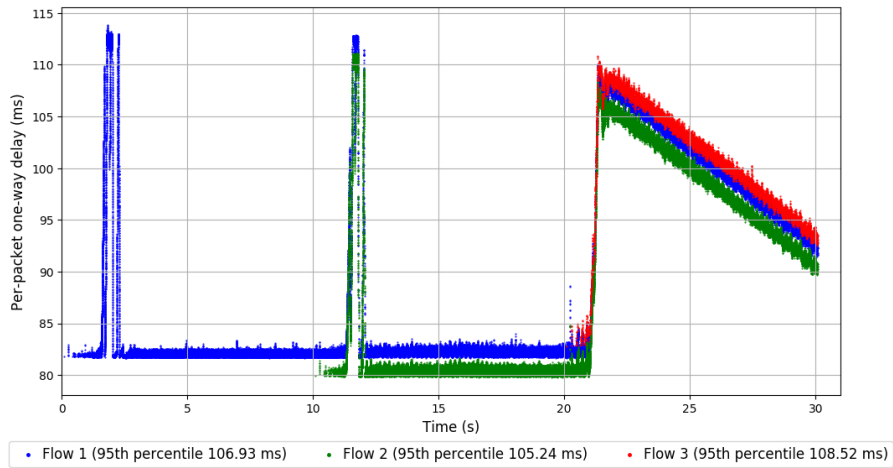
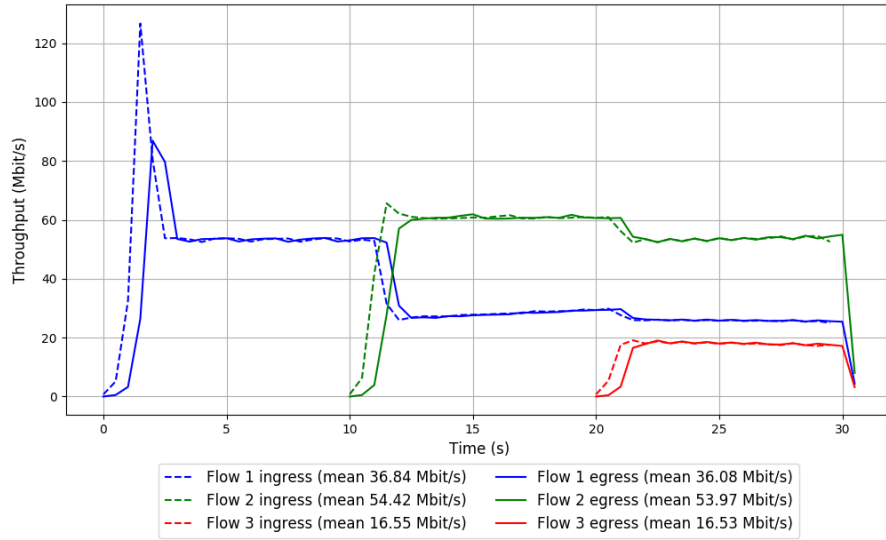
-- Flow 3:

Average throughput: 16.53 Mbit/s

95th percentile per-packet one-way delay: 108.516 ms

Loss rate: 0.01%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-05-30 01:19:44

End at: 2019-05-30 01:20:14

Local clock offset: -1.705 ms

Remote clock offset: 5.521 ms

Below is generated by plot.py at 2019-05-30 02:50:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.87 Mbit/s

95th percentile per-packet one-way delay: 95.138 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 52.10 Mbit/s

95th percentile per-packet one-way delay: 91.770 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 15.53 Mbit/s

95th percentile per-packet one-way delay: 100.373 ms

Loss rate: 0.53%

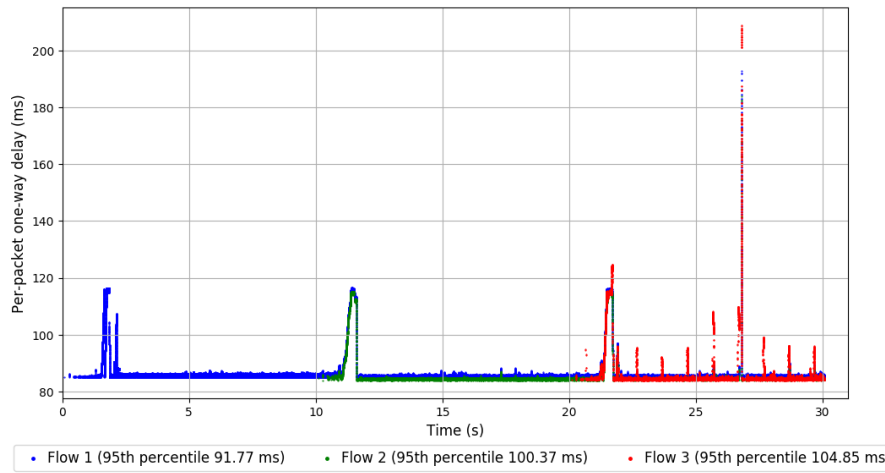
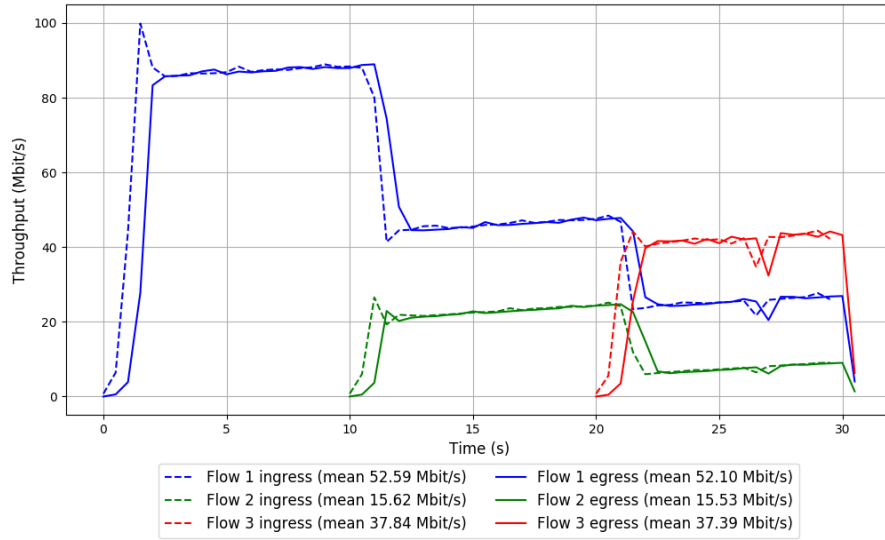
-- Flow 3:

Average throughput: 37.39 Mbit/s

95th percentile per-packet one-way delay: 104.852 ms

Loss rate: 1.17%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-05-30 01:46:58

End at: 2019-05-30 01:47:28

Local clock offset: -58.17 ms

Remote clock offset: 5.928 ms

Below is generated by plot.py at 2019-05-30 02:50:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 61.18 Mbit/s

95th percentile per-packet one-way delay: 158.639 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 32.22 Mbit/s

95th percentile per-packet one-way delay: 160.659 ms

Loss rate: 2.21%

-- Flow 2:

Average throughput: 12.77 Mbit/s

95th percentile per-packet one-way delay: 165.731 ms

Loss rate: 1.71%

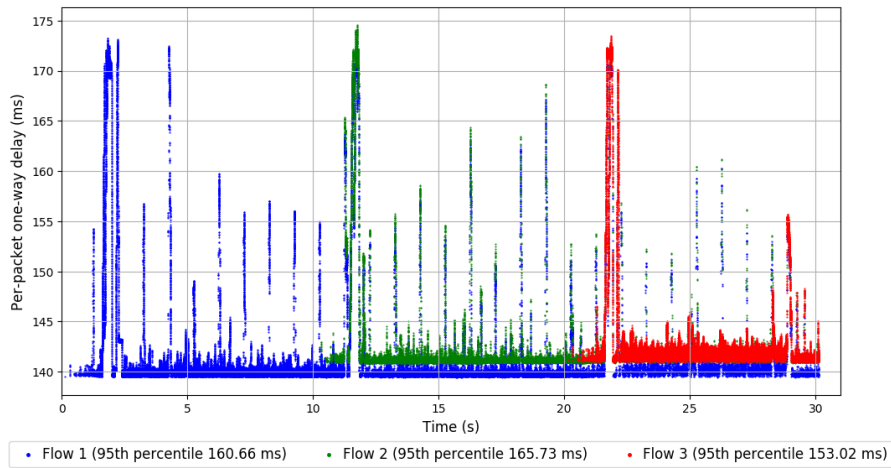
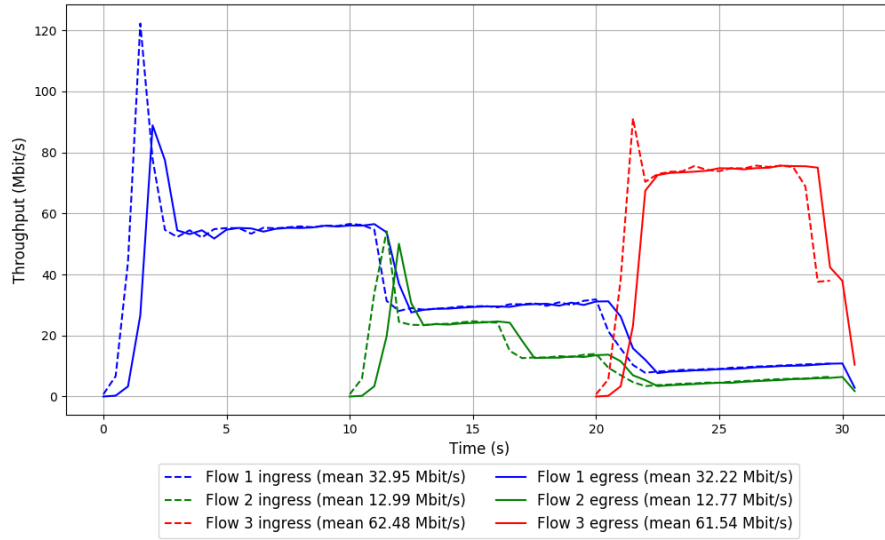
-- Flow 3:

Average throughput: 61.54 Mbit/s

95th percentile per-packet one-way delay: 153.023 ms

Loss rate: 1.50%

Run 4: Report of TCP Vegas — Data Link

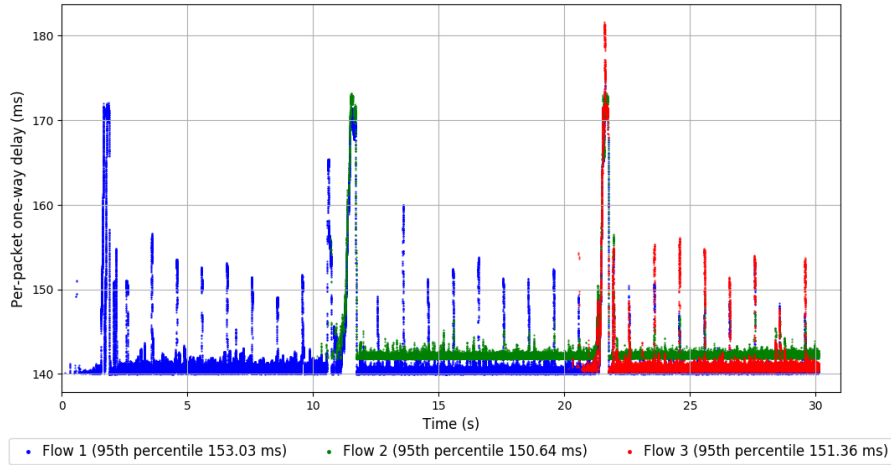
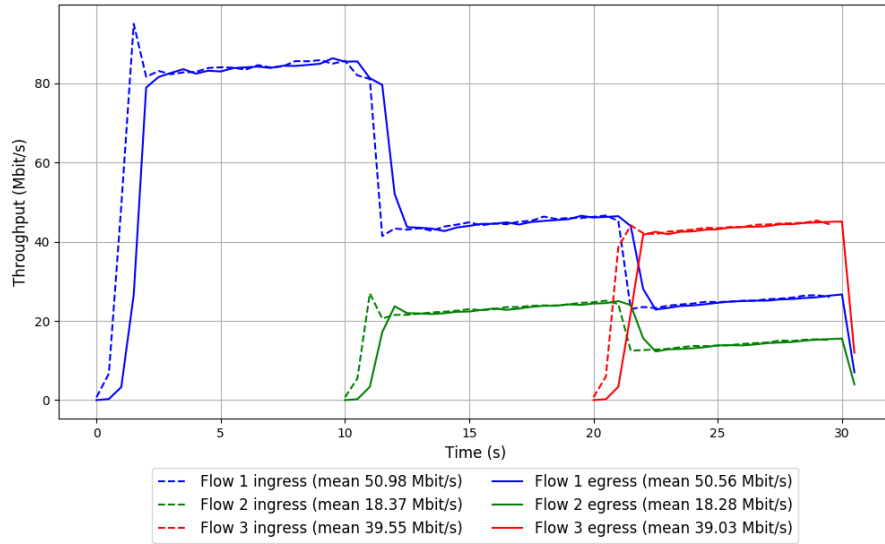


Run 5: Statistics of TCP Vegas

Start at: 2019-05-30 02:13:47
End at: 2019-05-30 02:14:17
Local clock offset: -58.653 ms
Remote clock offset: 6.67 ms

```
# Below is generated by plot.py at 2019-05-30 02:50:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.71 Mbit/s
95th percentile per-packet one-way delay: 152.595 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 50.56 Mbit/s
95th percentile per-packet one-way delay: 153.025 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 18.28 Mbit/s
95th percentile per-packet one-way delay: 150.643 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 39.03 Mbit/s
95th percentile per-packet one-way delay: 151.361 ms
Loss rate: 1.29%
```

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-05-30 00:36:59

End at: 2019-05-30 00:37:29

Local clock offset: -1.665 ms

Remote clock offset: 8.012 ms

Below is generated by plot.py at 2019-05-30 02:50:35

Datalink statistics

-- Total of 3 flows:

Average throughput: 43.61 Mbit/s

95th percentile per-packet one-way delay: 121.789 ms

Loss rate: 42.75%

-- Flow 1:

Average throughput: 19.71 Mbit/s

95th percentile per-packet one-way delay: 114.672 ms

Loss rate: 17.87%

-- Flow 2:

Average throughput: 29.78 Mbit/s

95th percentile per-packet one-way delay: 134.836 ms

Loss rate: 57.18%

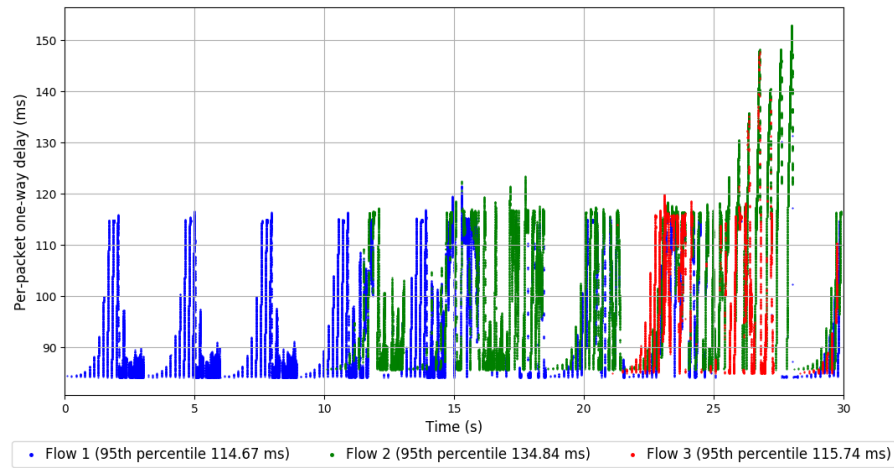
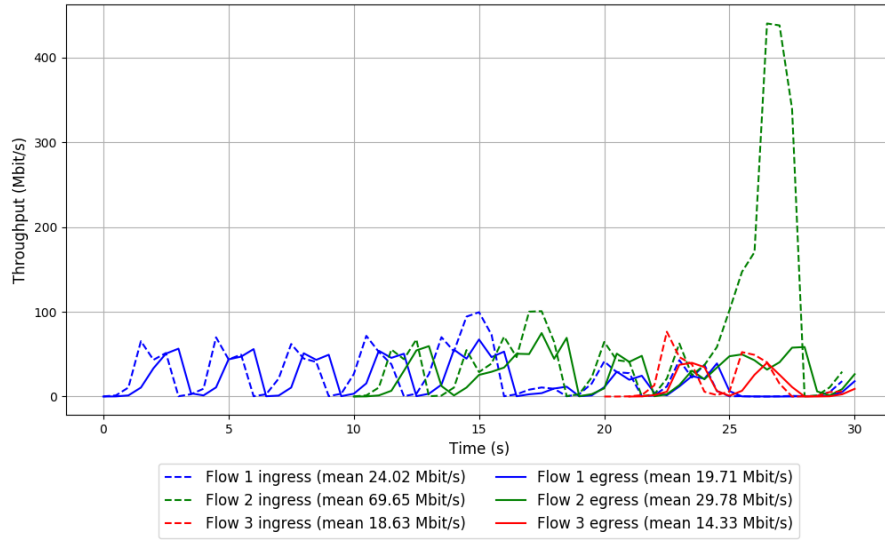
-- Flow 3:

Average throughput: 14.33 Mbit/s

95th percentile per-packet one-way delay: 115.739 ms

Loss rate: 30.88%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-05-30 01:03:43

End at: 2019-05-30 01:04:13

Local clock offset: -1.31 ms

Remote clock offset: 6.987 ms

Below is generated by plot.py at 2019-05-30 02:50:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 43.13 Mbit/s

95th percentile per-packet one-way delay: 160.960 ms

Loss rate: 74.79%

-- Flow 1:

Average throughput: 26.84 Mbit/s

95th percentile per-packet one-way delay: 164.055 ms

Loss rate: 78.06%

-- Flow 2:

Average throughput: 23.03 Mbit/s

95th percentile per-packet one-way delay: 139.942 ms

Loss rate: 64.70%

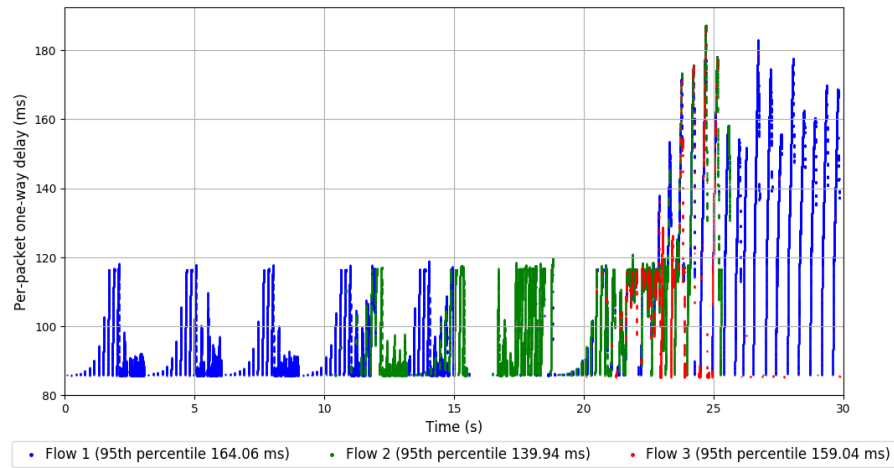
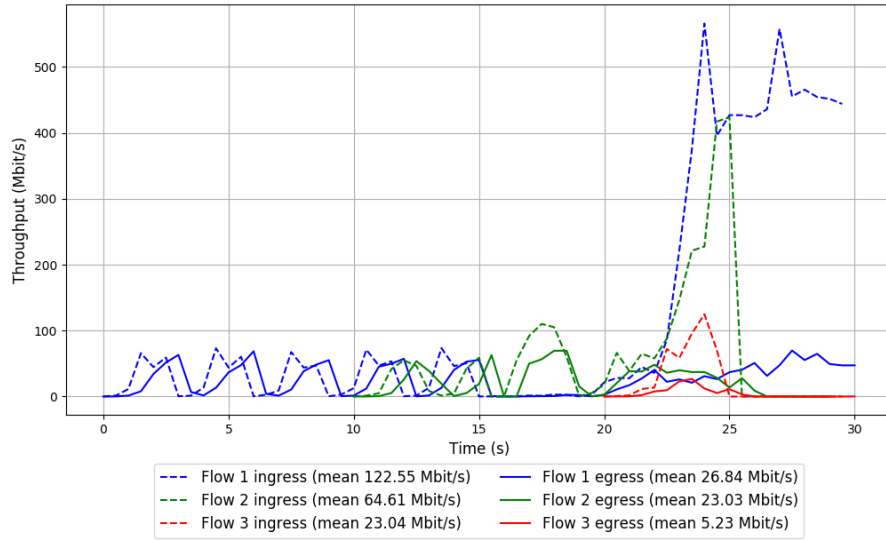
-- Flow 3:

Average throughput: 5.23 Mbit/s

95th percentile per-packet one-way delay: 159.042 ms

Loss rate: 77.28%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-05-30 01:31:36

End at: 2019-05-30 01:32:06

Local clock offset: -1.232 ms

Remote clock offset: 1.61 ms

Below is generated by plot.py at 2019-05-30 02:50:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 44.76 Mbit/s

95th percentile per-packet one-way delay: 160.651 ms

Loss rate: 69.12%

-- Flow 1:

Average throughput: 25.10 Mbit/s

95th percentile per-packet one-way delay: 158.861 ms

Loss rate: 68.08%

-- Flow 2:

Average throughput: 29.35 Mbit/s

95th percentile per-packet one-way delay: 163.168 ms

Loss rate: 72.76%

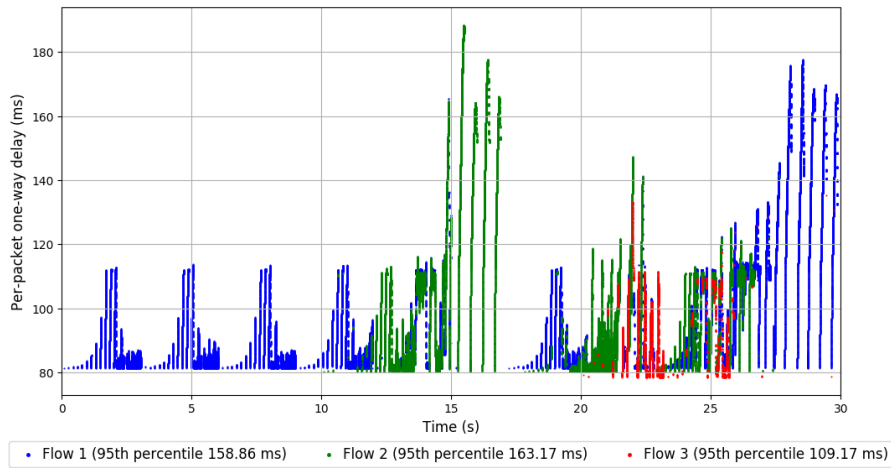
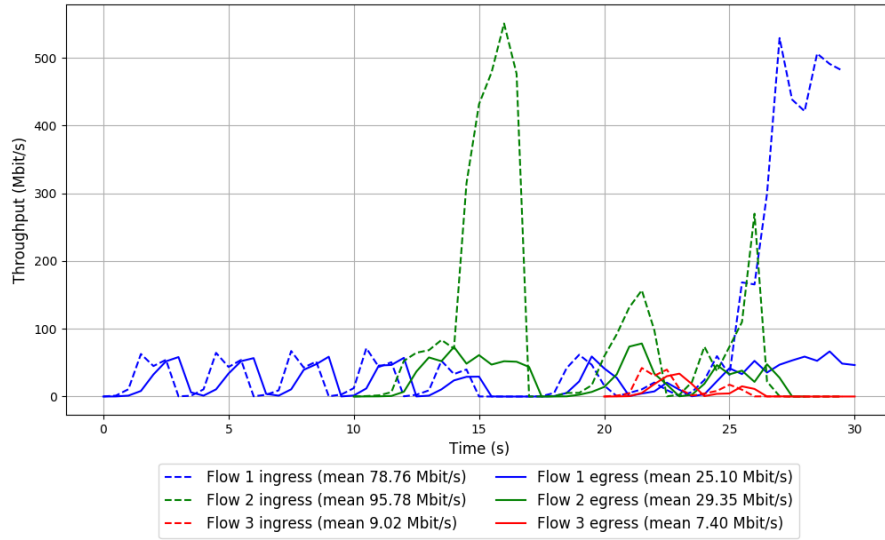
-- Flow 3:

Average throughput: 7.40 Mbit/s

95th percentile per-packet one-way delay: 109.167 ms

Loss rate: 17.49%

Run 3: Report of Verus — Data Link

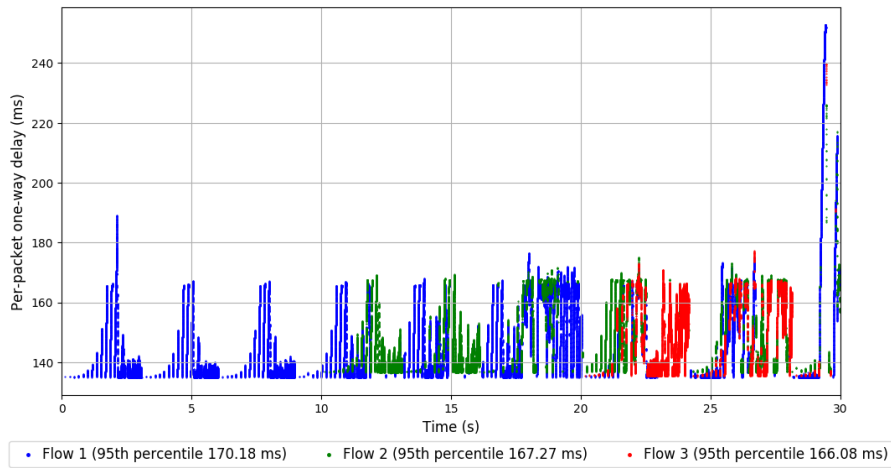
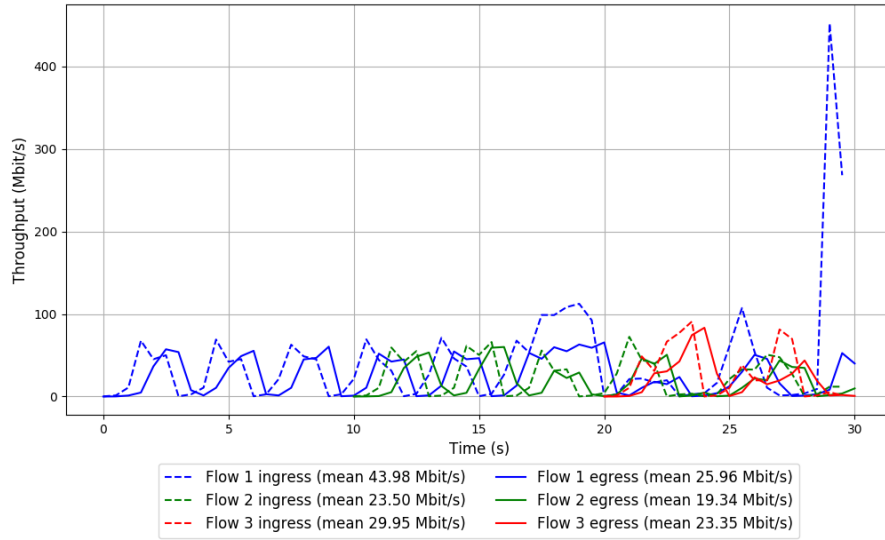


Run 4: Statistics of Verus

Start at: 2019-05-30 01:58:28
End at: 2019-05-30 01:58:58
Local clock offset: -58.592 ms
Remote clock offset: 2.029 ms

```
# Below is generated by plot.py at 2019-05-30 02:51:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.37 Mbit/s
95th percentile per-packet one-way delay: 167.287 ms
Loss rate: 32.95%
-- Flow 1:
Average throughput: 25.96 Mbit/s
95th percentile per-packet one-way delay: 170.177 ms
Loss rate: 40.90%
-- Flow 2:
Average throughput: 19.34 Mbit/s
95th percentile per-packet one-way delay: 167.274 ms
Loss rate: 17.59%
-- Flow 3:
Average throughput: 23.35 Mbit/s
95th percentile per-packet one-way delay: 166.083 ms
Loss rate: 21.60%
```

Run 4: Report of Verus — Data Link

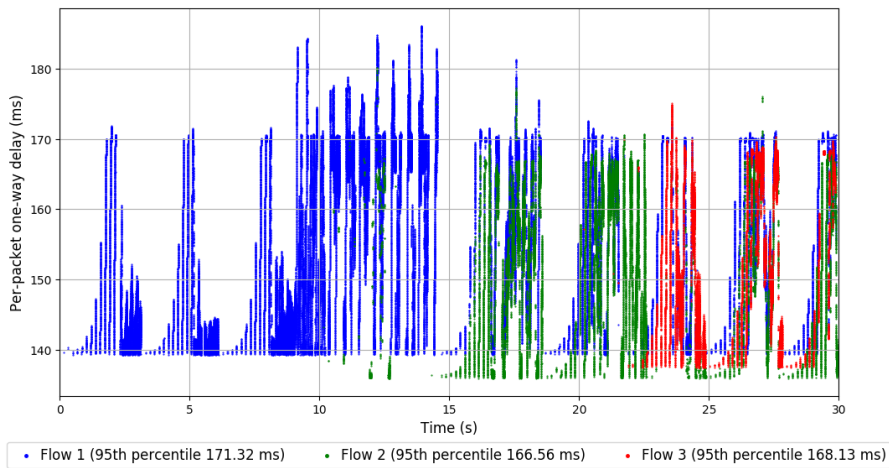
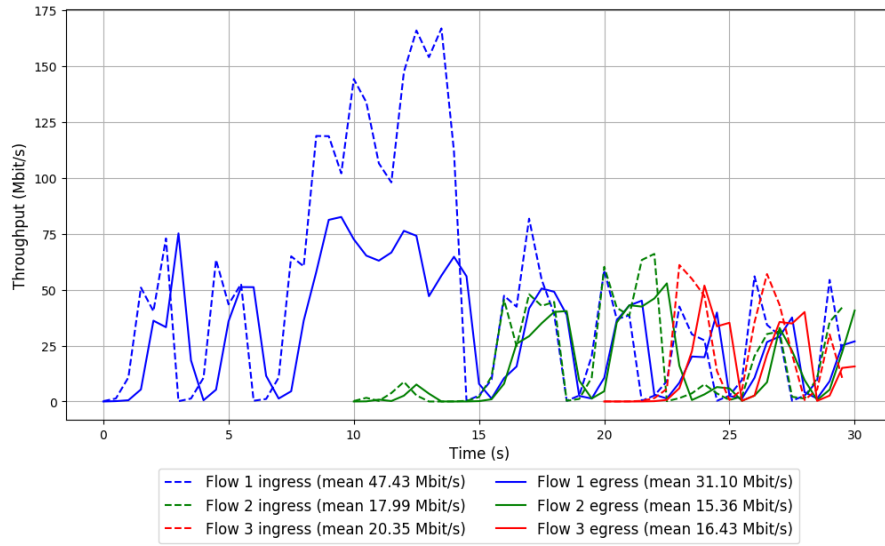


Run 5: Statistics of Verus

Start at: 2019-05-30 02:25:17
End at: 2019-05-30 02:25:47
Local clock offset: -58.689 ms
Remote clock offset: 1.872 ms

```
# Below is generated by plot.py at 2019-05-30 02:51:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.60 Mbit/s
95th percentile per-packet one-way delay: 170.210 ms
Loss rate: 29.29%
-- Flow 1:
Average throughput: 31.10 Mbit/s
95th percentile per-packet one-way delay: 171.317 ms
Loss rate: 34.39%
-- Flow 2:
Average throughput: 15.36 Mbit/s
95th percentile per-packet one-way delay: 166.565 ms
Loss rate: 14.66%
-- Flow 3:
Average throughput: 16.43 Mbit/s
95th percentile per-packet one-way delay: 168.128 ms
Loss rate: 19.21%
```

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-05-30 00:43:25

End at: 2019-05-30 00:43:55

Local clock offset: -0.796 ms

Remote clock offset: 3.405 ms

Below is generated by plot.py at 2019-05-30 02:51:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.88 Mbit/s

95th percentile per-packet one-way delay: 108.328 ms

Loss rate: 0.37%

-- Flow 1:

Average throughput: 62.61 Mbit/s

95th percentile per-packet one-way delay: 108.795 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 12.14 Mbit/s

95th percentile per-packet one-way delay: 105.388 ms

Loss rate: 0.77%

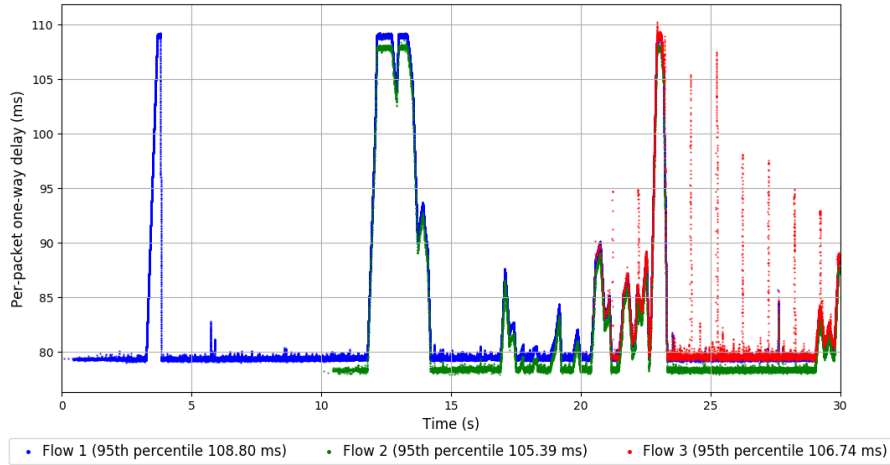
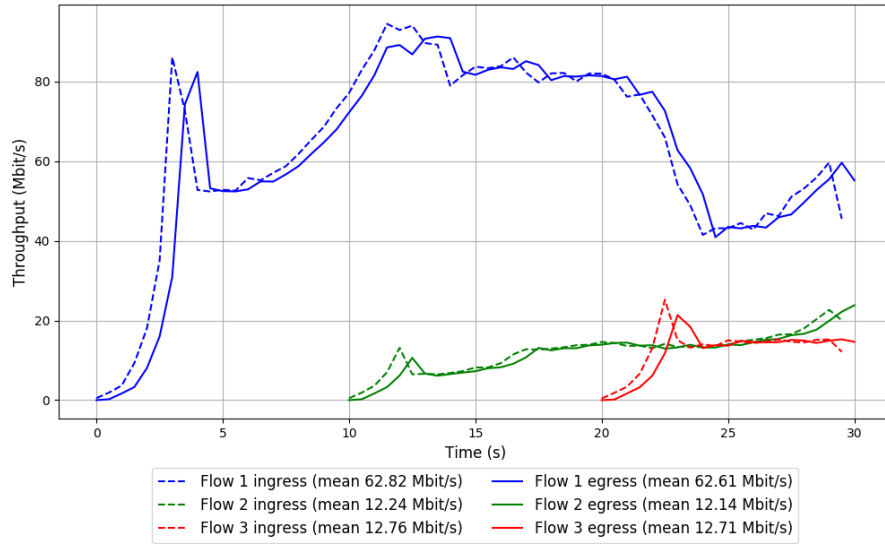
-- Flow 3:

Average throughput: 12.71 Mbit/s

95th percentile per-packet one-way delay: 106.739 ms

Loss rate: 0.34%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-05-30 01:10:56

End at: 2019-05-30 01:11:27

Local clock offset: -0.676 ms

Remote clock offset: 7.788 ms

Below is generated by plot.py at 2019-05-30 02:51:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 52.44 Mbit/s

95th percentile per-packet one-way delay: 115.159 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 11.26 Mbit/s

95th percentile per-packet one-way delay: 113.546 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 59.21 Mbit/s

95th percentile per-packet one-way delay: 115.200 ms

Loss rate: 0.75%

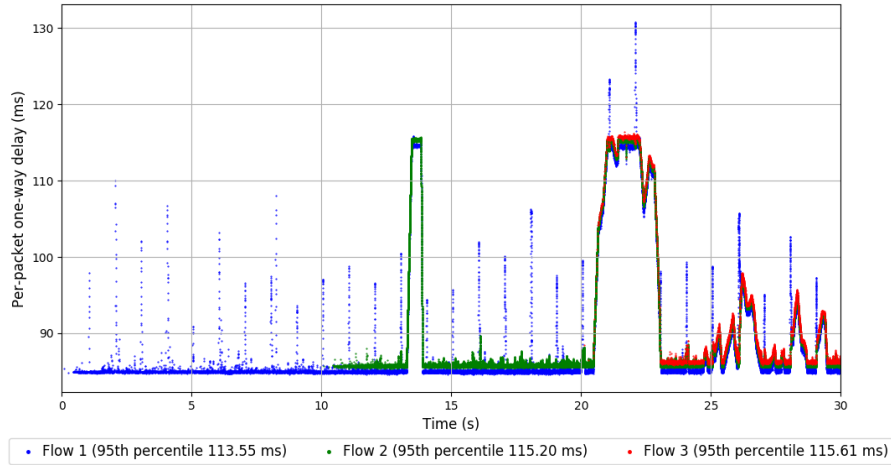
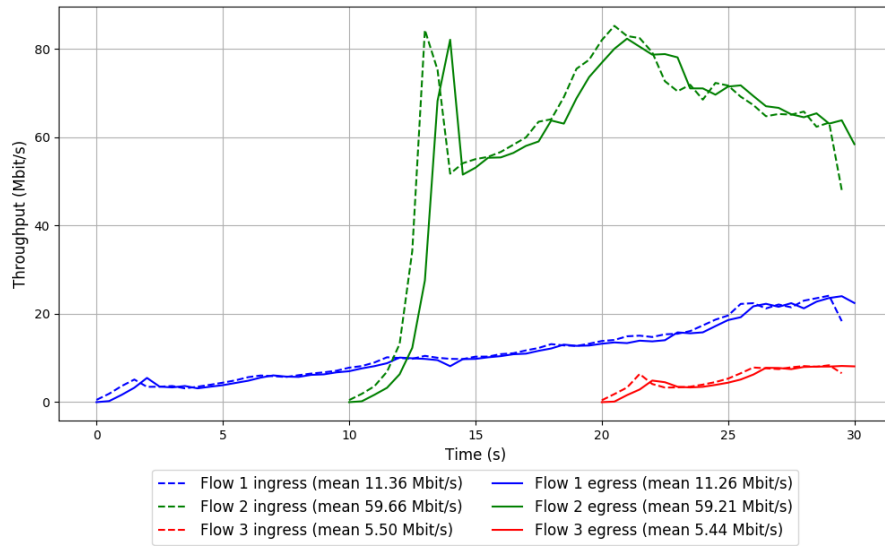
-- Flow 3:

Average throughput: 5.44 Mbit/s

95th percentile per-packet one-way delay: 115.606 ms

Loss rate: 1.13%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-05-30 01:38:07

End at: 2019-05-30 01:38:37

Local clock offset: -1.91 ms

Remote clock offset: 1.35 ms

Below is generated by plot.py at 2019-05-30 02:51:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.49 Mbit/s

95th percentile per-packet one-way delay: 108.593 ms

Loss rate: 1.03%

-- Flow 1:

Average throughput: 66.43 Mbit/s

95th percentile per-packet one-way delay: 108.516 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 11.96 Mbit/s

95th percentile per-packet one-way delay: 110.773 ms

Loss rate: 2.18%

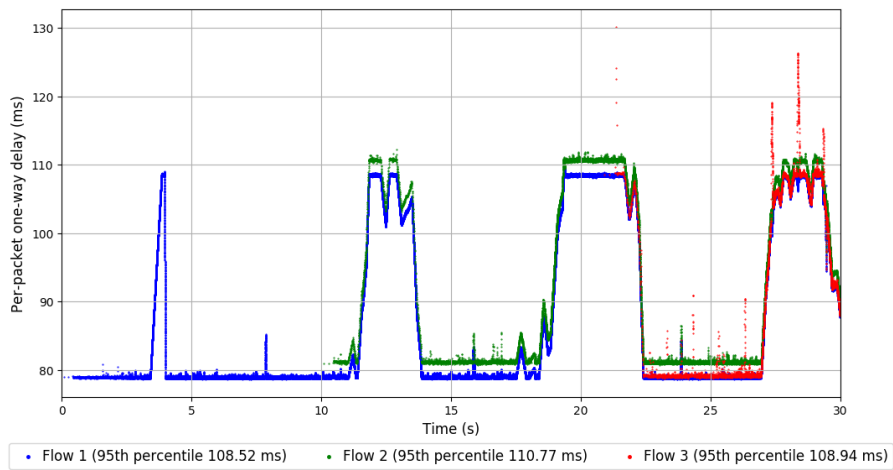
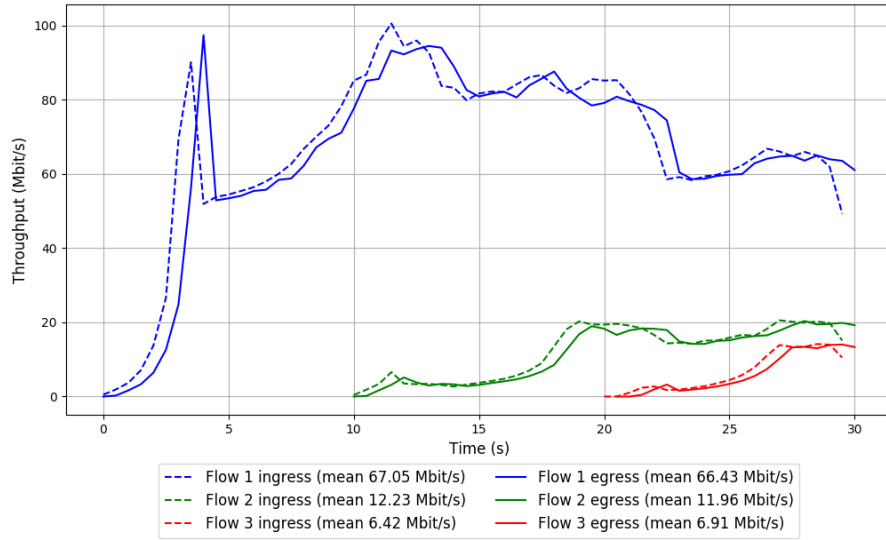
-- Flow 3:

Average throughput: 6.91 Mbit/s

95th percentile per-packet one-way delay: 108.942 ms

Loss rate: 0.86%

Run 3: Report of PCC-Vivace — Data Link

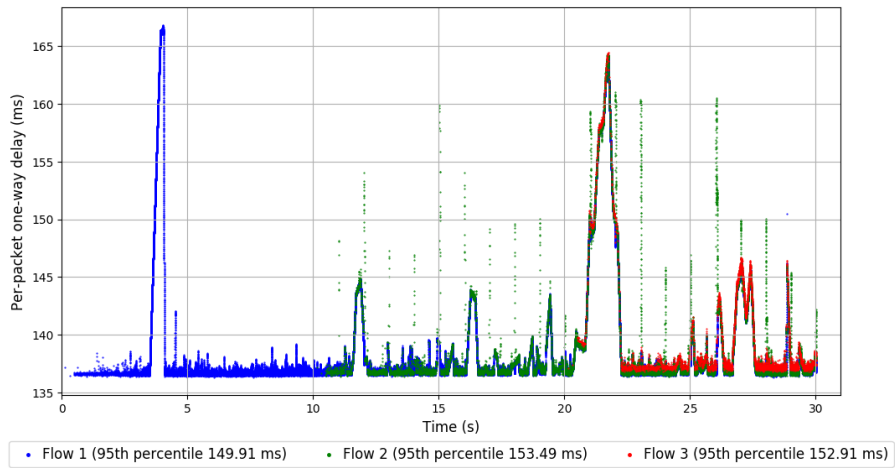
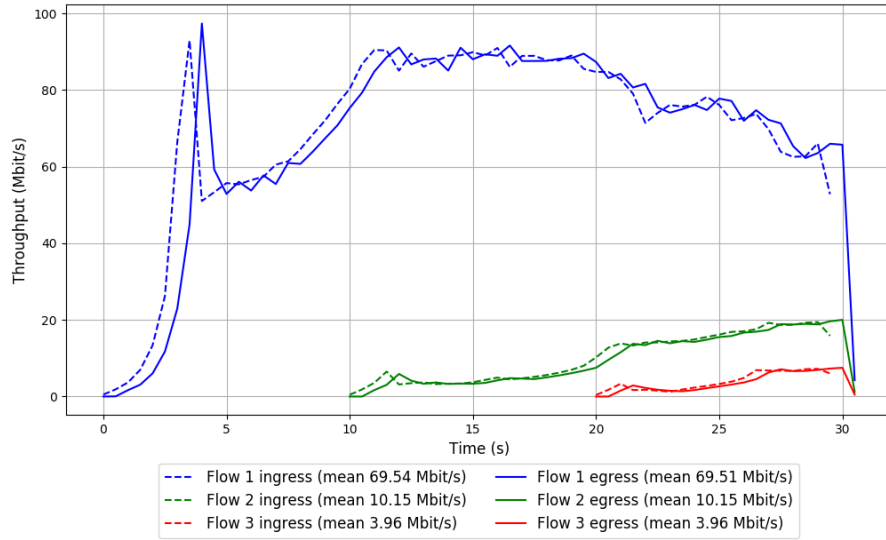


Run 4: Statistics of PCC-Vivace

Start at: 2019-05-30 02:04:57
End at: 2019-05-30 02:05:27
Local clock offset: -58.085 ms
Remote clock offset: 2.52 ms

```
# Below is generated by plot.py at 2019-05-30 02:51:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.57 Mbit/s
95th percentile per-packet one-way delay: 150.203 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 69.51 Mbit/s
95th percentile per-packet one-way delay: 149.906 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 10.15 Mbit/s
95th percentile per-packet one-way delay: 153.492 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 3.96 Mbit/s
95th percentile per-packet one-way delay: 152.905 ms
Loss rate: 0.00%
```

Run 4: Report of PCC-Vivace — Data Link

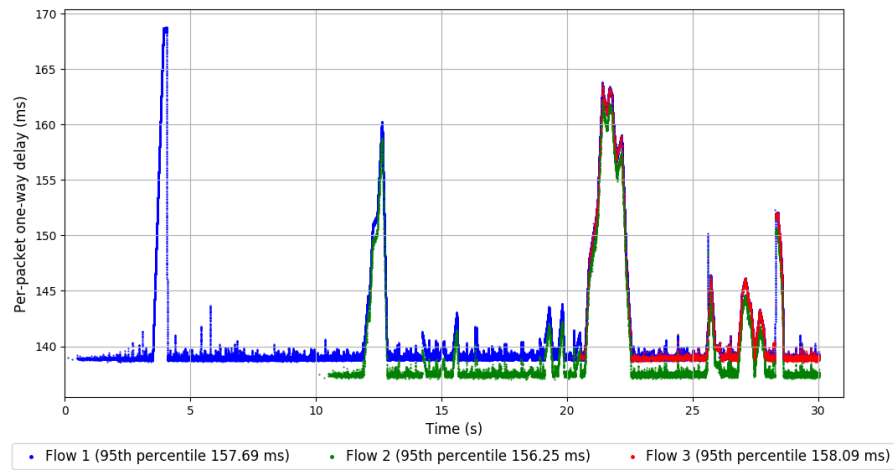
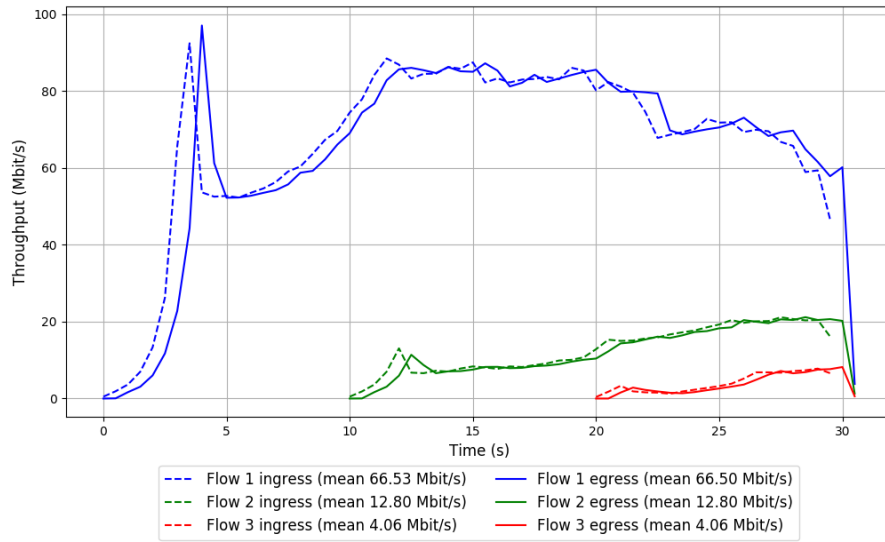


Run 5: Statistics of PCC-Vivace

Start at: 2019-05-30 02:31:50
End at: 2019-05-30 02:32:20
Local clock offset: -58.437 ms
Remote clock offset: 2.817 ms

```
# Below is generated by plot.py at 2019-05-30 02:51:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.35 Mbit/s
95th percentile per-packet one-way delay: 157.515 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 66.50 Mbit/s
95th percentile per-packet one-way delay: 157.693 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 12.80 Mbit/s
95th percentile per-packet one-way delay: 156.252 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 158.092 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2019-05-30 00:49:43

End at: 2019-05-30 00:50:13

Local clock offset: -0.729 ms

Remote clock offset: 3.696 ms

Below is generated by plot.py at 2019-05-30 02:51:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 81.547 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 81.822 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 80.854 ms

Loss rate: 0.00%

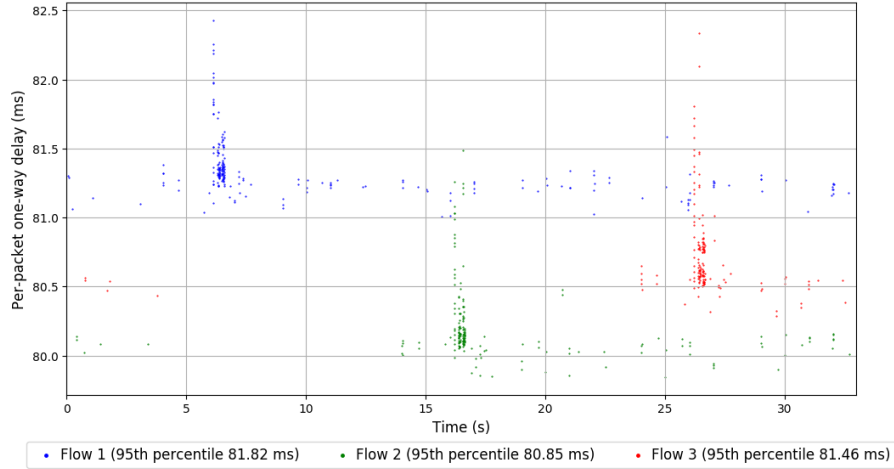
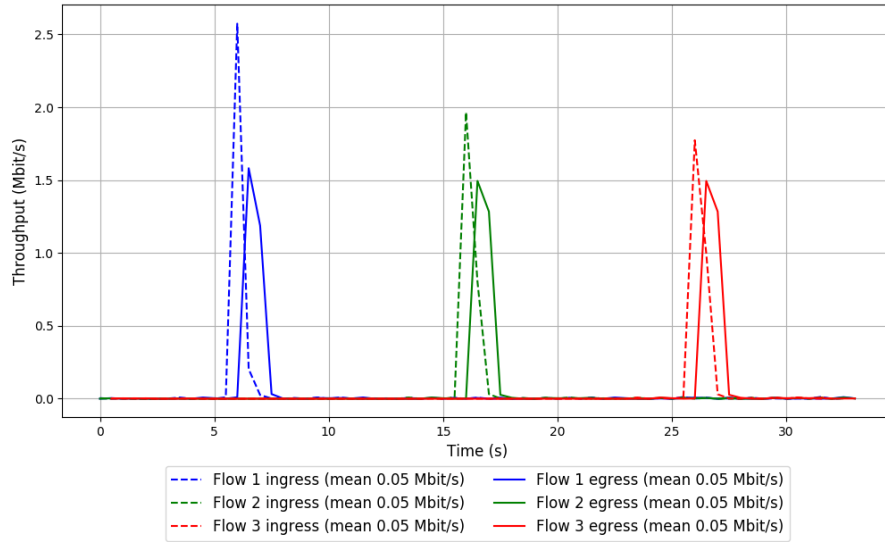
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 81.460 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-05-30 01:17:12

End at: 2019-05-30 01:17:42

Local clock offset: -1.67 ms

Remote clock offset: 8.239 ms

Below is generated by plot.py at 2019-05-30 02:51:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 87.529 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 86.150 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 87.354 ms

Loss rate: 0.00%

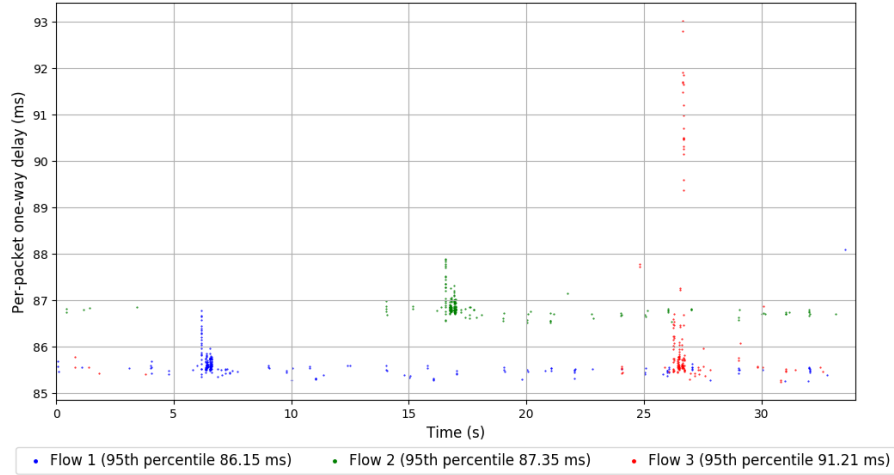
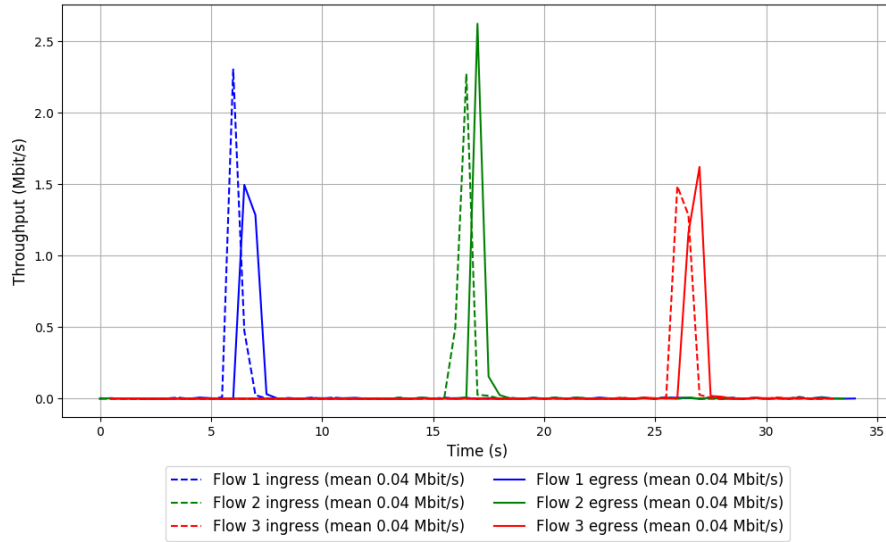
-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 91.212 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

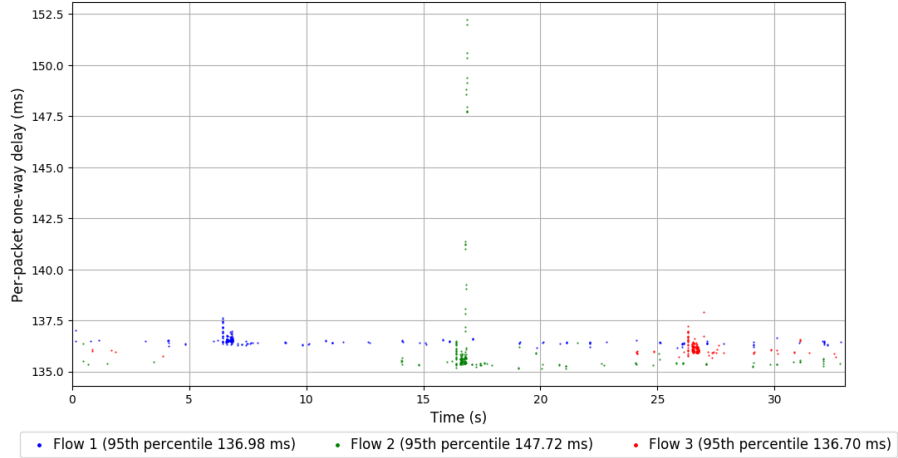
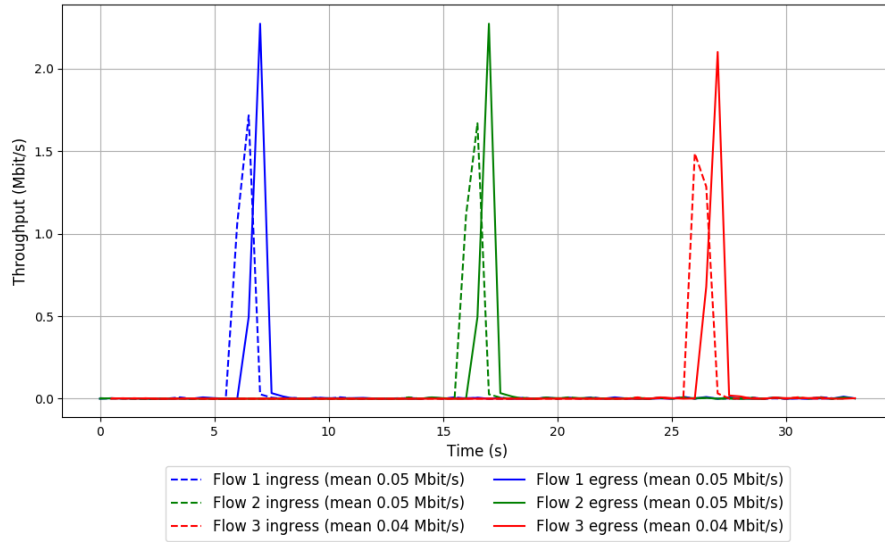


Run 3: Statistics of WebRTC media

Start at: 2019-05-30 01:44:26
End at: 2019-05-30 01:44:56
Local clock offset: -57.845 ms
Remote clock offset: 1.388 ms

```
# Below is generated by plot.py at 2019-05-30 02:51:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 137.172 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 136.976 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 147.718 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 136.702 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-05-30 02:11:15

End at: 2019-05-30 02:11:45

Local clock offset: -58.7 ms

Remote clock offset: 7.919 ms

Below is generated by plot.py at 2019-05-30 02:51:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 143.945 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 141.899 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 144.949 ms

Loss rate: 0.00%

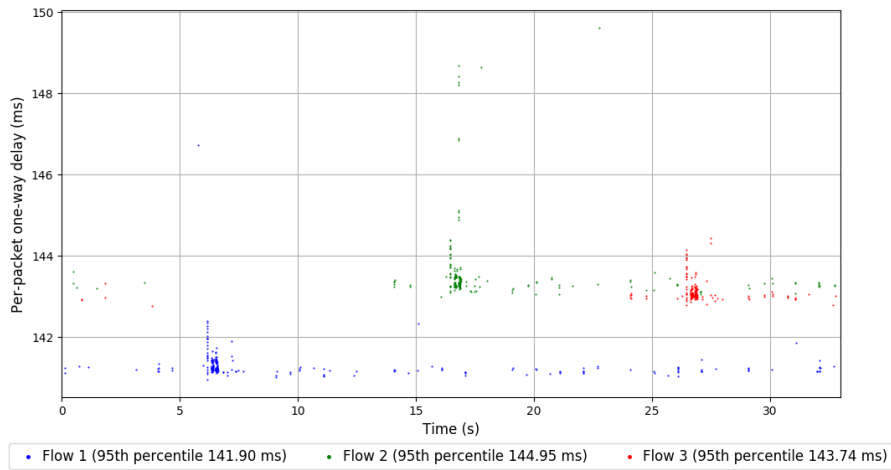
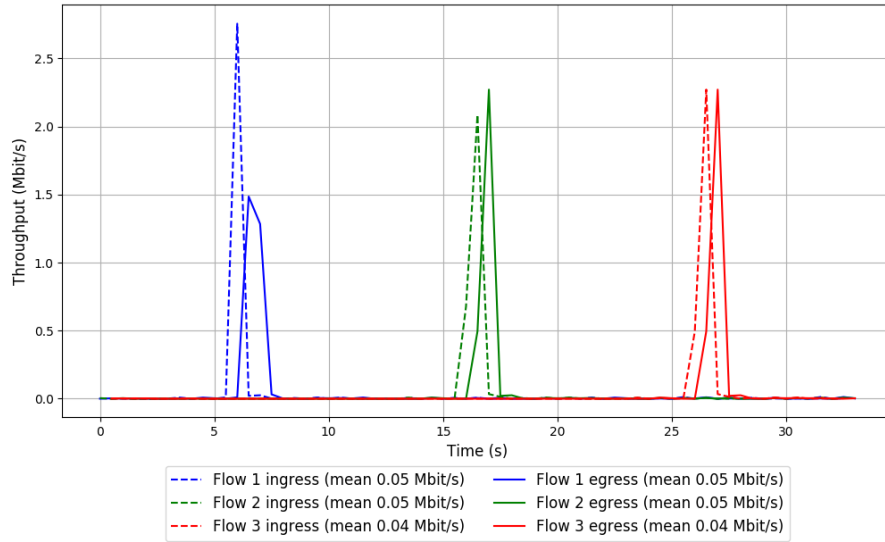
-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 143.737 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-05-30 02:38:10
End at: 2019-05-30 02:38:40
Local clock offset: -58.676 ms
Remote clock offset: -0.16 ms

```
# Below is generated by plot.py at 2019-05-30 02:51:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 137.143 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 137.125 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 135.771 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 143.596 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

