

## Pantheon Report

Generated at 2019-02-20 18:08:34 (UTC).

Data path: GCE Iowa on **ens4** (*local*) → GCE Tokyo on **ens4** (*remote*).

Repeated the test of 21 congestion control schemes 5 times.

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

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

### System info:

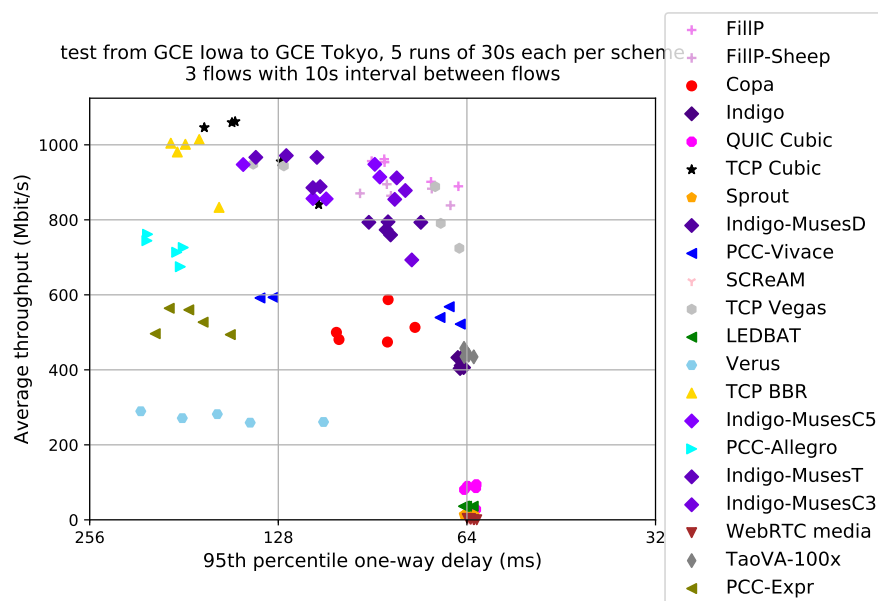
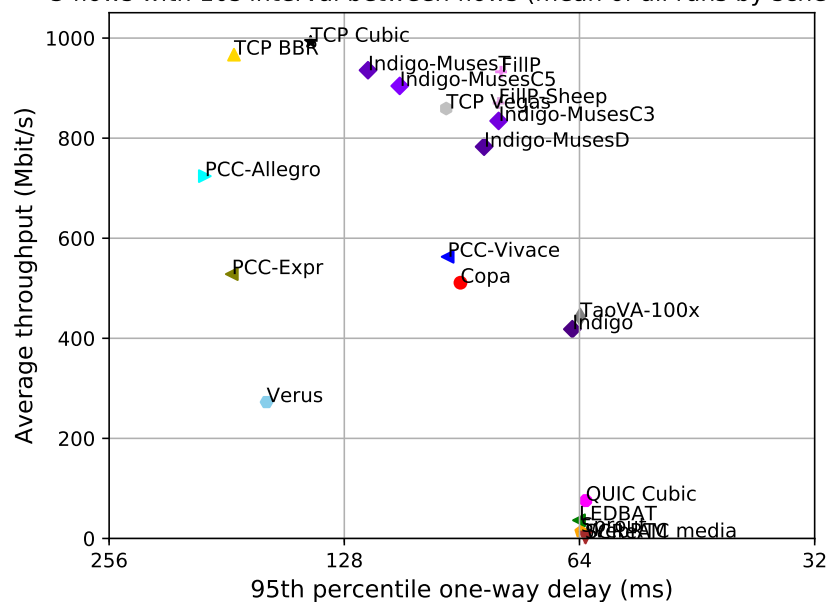
```
Linux 4.15.0-1026-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

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

third\_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4  
third\_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from GCE Iowa to GCE Tokyo, 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	504.11	477.93	434.57	184.00	170.25	139.07	1.95	1.84	0.84
Copa	5	259.58	260.68	234.47	79.84	99.56	90.51	0.00	0.02	0.00
TCP Cubic	5	546.56	442.14	455.21	136.52	117.32	130.84	0.15	0.09	0.31
FillP	5	596.20	384.24	242.57	83.92	69.48	66.40	0.04	0.01	0.01
FillP-Sheep	5	560.84	332.34	264.18	85.87	68.15	68.98	0.22	0.01	0.04
Indigo	5	213.66	216.84	187.93	64.65	65.84	66.17	0.00	0.00	0.17
Indigo-MusesC3	4	505.83	405.69	261.40	84.90	76.28	66.06	0.00	0.00	0.00
Indigo-MusesC5	5	547.18	451.61	238.00	98.40	114.89	67.99	0.05	0.15	0.00
Indigo-MusesD	5	455.51	385.12	280.89	87.76	73.59	65.30	0.00	0.02	0.01
Indigo-MusesT	5	557.14	453.65	299.51	122.30	106.68	68.05	0.03	0.05	0.00
LEDBAT	5	23.37	15.61	7.72	64.26	63.74	63.56	0.00	0.00	0.00
PCC-Allegro	5	409.51	345.18	258.22	190.63	171.86	161.47	4.89	3.36	1.50
PCC-Expr	5	297.75	254.02	185.90	176.30	179.49	103.40	2.70	5.38	0.74
QUIC Cubic	5	44.58	36.09	21.69	62.80	62.74	62.67	0.00	0.00	0.00
SCReAM	5	0.22	0.22	0.22	62.95	62.84	62.93	0.00	0.00	0.00
Sprout	5	6.77	6.71	6.49	63.73	63.57	63.62	0.00	0.00	0.00
TaoVA-100x	5	225.62	223.63	204.85	63.68	63.75	65.20	0.01	0.01	0.02
TCP Vegas	5	431.42	453.74	377.93	68.97	91.07	96.15	0.00	0.07	0.17
Verus	5	145.45	133.04	119.09	120.91	137.09	172.52	0.30	0.51	3.65
PCC-Vivace	5	322.07	290.24	145.09	97.31	99.02	78.09	0.13	0.06	0.00
WebRTC media	5	0.79	0.92	0.37	62.63	62.82	62.87	0.00	0.00	0.00



Run 1: Statistics of TCP BBR

Start at: 2019-02-20 12:14:04

End at: 2019-02-20 12:14:34

Local clock offset: -0.081 ms

Remote clock offset: -0.78 ms

# Below is generated by plot.py at 2019-02-20 15:41:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 980.92 Mbit/s

95th percentile per-packet one-way delay: 185.500 ms

Loss rate: 2.14%

-- Flow 1:

Average throughput: 510.14 Mbit/s

95th percentile per-packet one-way delay: 198.688 ms

Loss rate: 2.78%

-- Flow 2:

Average throughput: 487.81 Mbit/s

95th percentile per-packet one-way delay: 178.745 ms

Loss rate: 1.90%

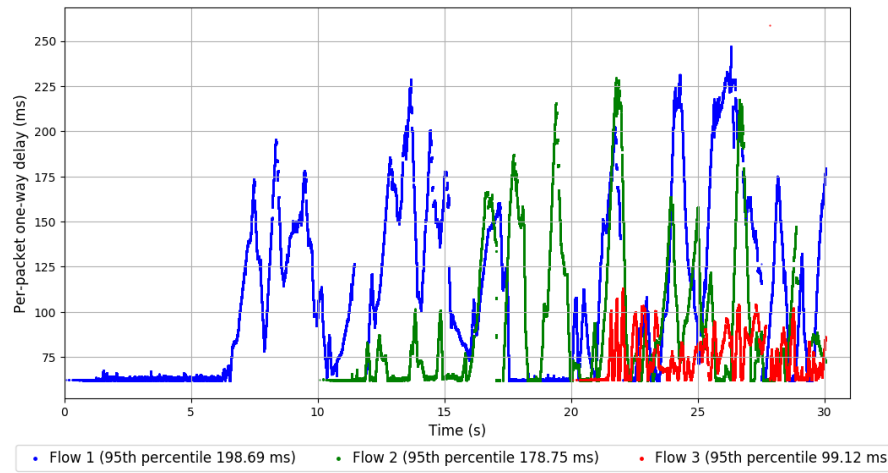
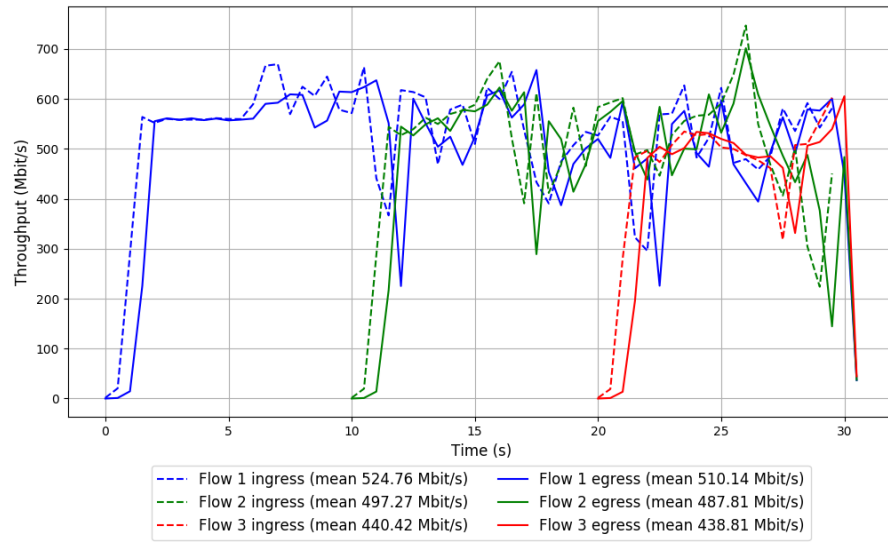
-- Flow 3:

Average throughput: 438.81 Mbit/s

95th percentile per-packet one-way delay: 99.125 ms

Loss rate: 0.36%

# Run 1: Report of TCP BBR — Data Link

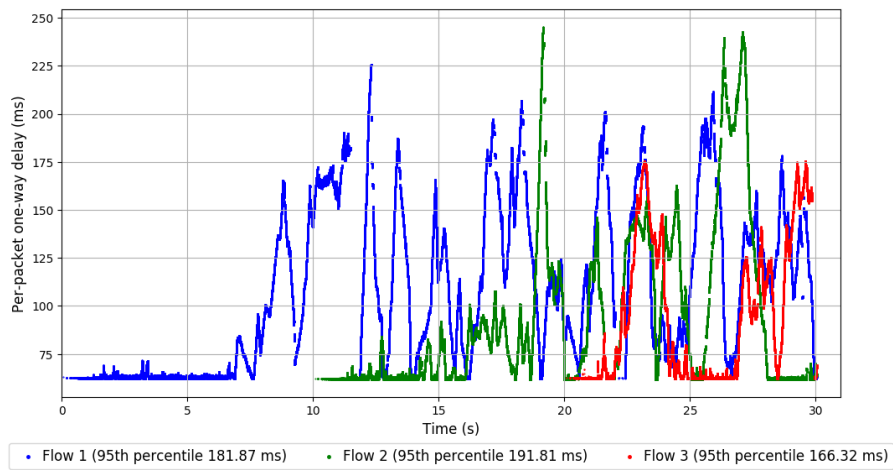
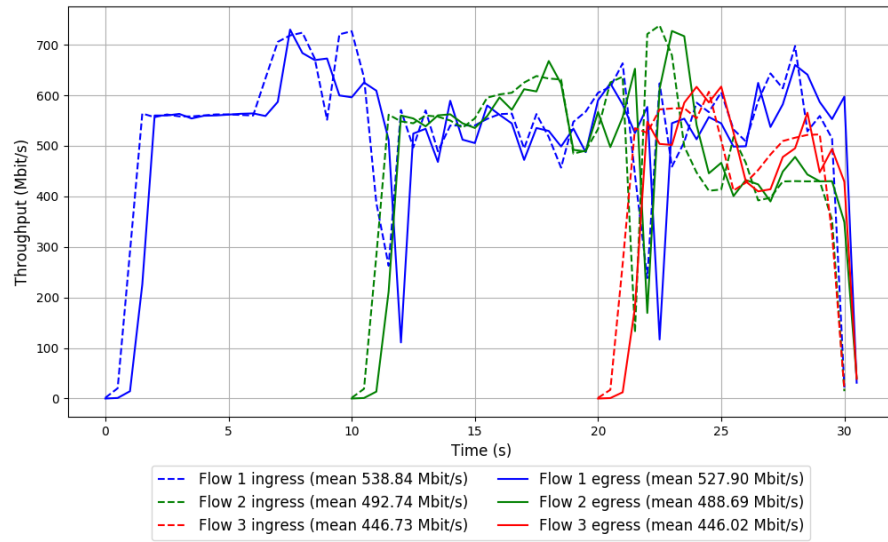


Run 2: Statistics of TCP BBR

Start at: 2019-02-20 12:51:24  
End at: 2019-02-20 12:51:54  
Local clock offset: -0.074 ms  
Remote clock offset: -0.844 ms

# Below is generated by plot.py at 2019-02-20 15:41:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1001.46 Mbit/s  
95th percentile per-packet one-way delay: 180.088 ms  
Loss rate: 1.54%  
-- Flow 1:  
Average throughput: 527.90 Mbit/s  
95th percentile per-packet one-way delay: 181.874 ms  
Loss rate: 2.15%  
-- Flow 2:  
Average throughput: 488.69 Mbit/s  
95th percentile per-packet one-way delay: 191.809 ms  
Loss rate: 1.00%  
-- Flow 3:  
Average throughput: 446.02 Mbit/s  
95th percentile per-packet one-way delay: 166.318 ms  
Loss rate: 0.52%

## Run 2: Report of TCP BBR — Data Link

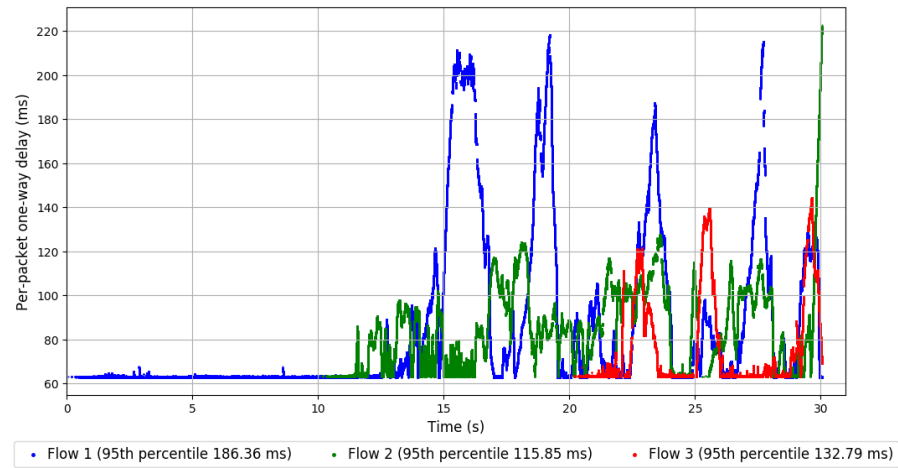
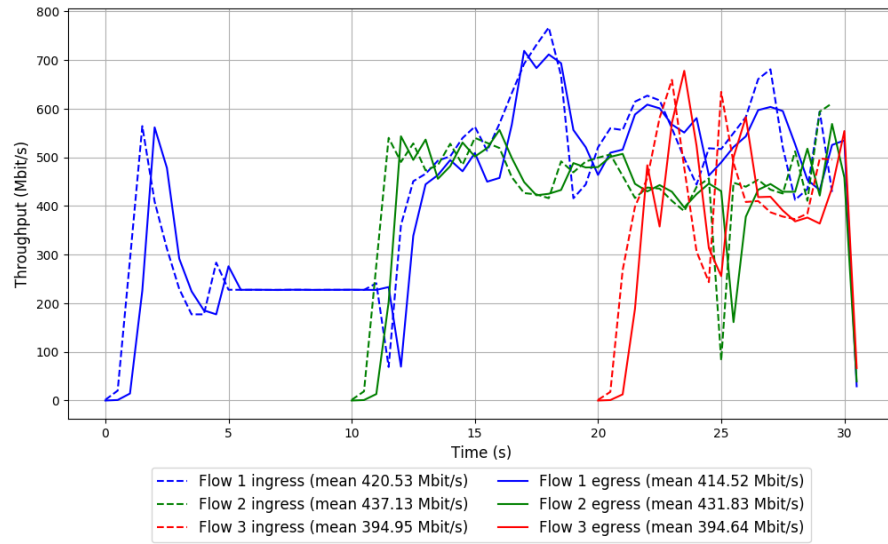


Run 3: Statistics of TCP BBR

Start at: 2019-02-20 13:28:19  
End at: 2019-02-20 13:28:49  
Local clock offset: -0.151 ms  
Remote clock offset: -0.175 ms

# Below is generated by plot.py at 2019-02-20 15:41:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 833.29 Mbit/s  
95th percentile per-packet one-way delay: 159.111 ms  
Loss rate: 1.14%  
-- Flow 1:  
Average throughput: 414.52 Mbit/s  
95th percentile per-packet one-way delay: 186.358 ms  
Loss rate: 1.43%  
-- Flow 2:  
Average throughput: 431.83 Mbit/s  
95th percentile per-packet one-way delay: 115.852 ms  
Loss rate: 1.21%  
-- Flow 3:  
Average throughput: 394.64 Mbit/s  
95th percentile per-packet one-way delay: 132.793 ms  
Loss rate: 0.08%

### Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-02-20 14:05:20

End at: 2019-02-20 14:05:51

Local clock offset: -0.079 ms

Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2019-02-20 15:41:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1004.37 Mbit/s

95th percentile per-packet one-way delay: 190.008 ms

Loss rate: 2.16%

-- Flow 1:

Average throughput: 535.24 Mbit/s

95th percentile per-packet one-way delay: 177.598 ms

Loss rate: 1.68%

-- Flow 2:

Average throughput: 488.82 Mbit/s

95th percentile per-packet one-way delay: 194.348 ms

Loss rate: 2.99%

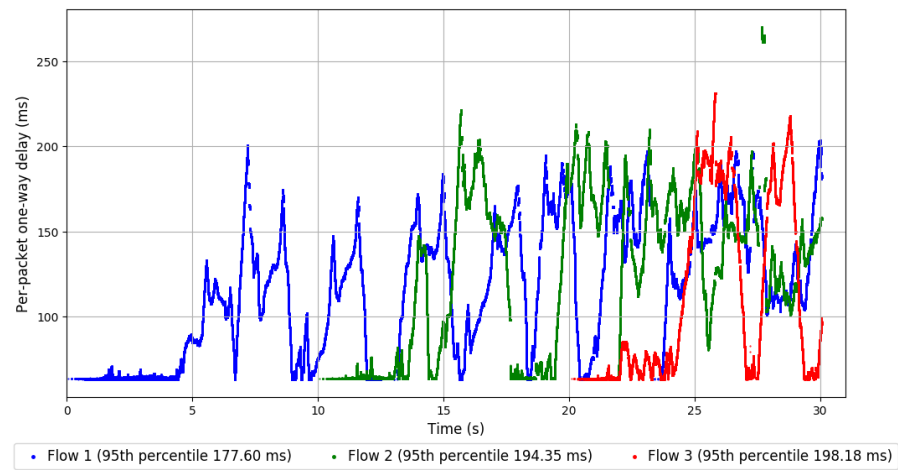
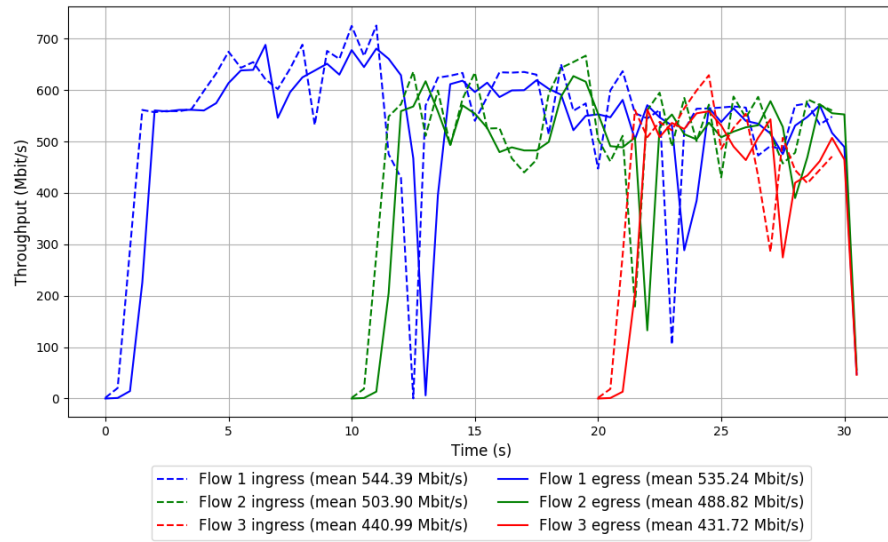
-- Flow 3:

Average throughput: 431.72 Mbit/s

95th percentile per-packet one-way delay: 198.182 ms

Loss rate: 2.08%

# Run 4: Report of TCP BBR — Data Link



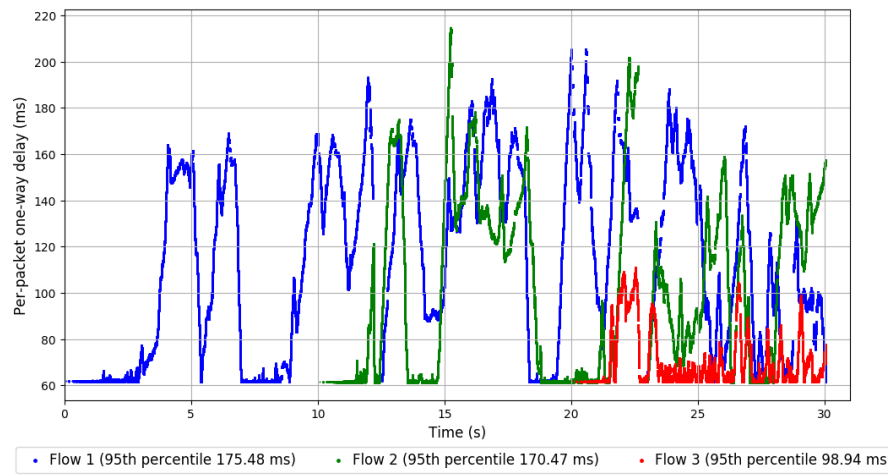
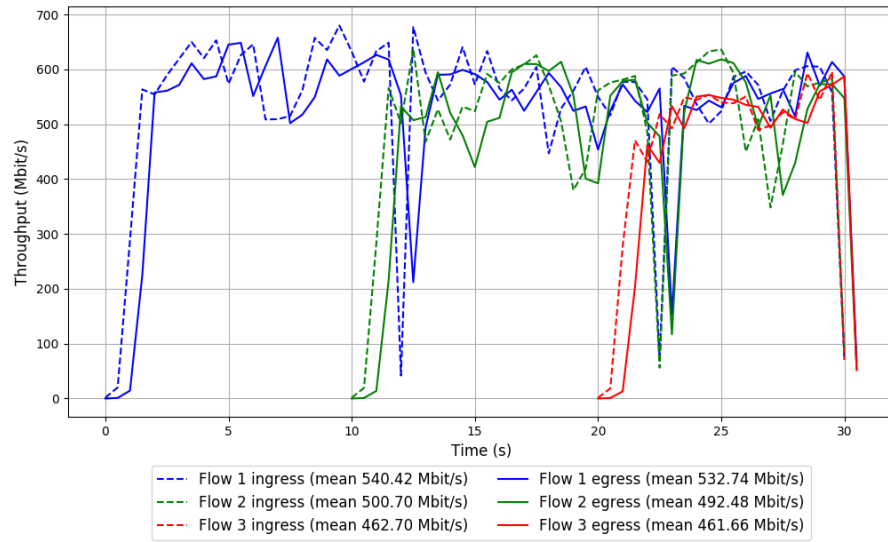


Run 5: Statistics of TCP BBR

Start at: 2019-02-20 14:42:13  
End at: 2019-02-20 14:42:43  
Local clock offset: -0.075 ms  
Remote clock offset: -1.561 ms

# Below is generated by plot.py at 2019-02-20 15:42:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1014.25 Mbit/s  
95th percentile per-packet one-way delay: 171.155 ms  
Loss rate: 1.75%  
-- Flow 1:  
Average throughput: 532.74 Mbit/s  
95th percentile per-packet one-way delay: 175.476 ms  
Loss rate: 1.72%  
-- Flow 2:  
Average throughput: 492.48 Mbit/s  
95th percentile per-packet one-way delay: 170.474 ms  
Loss rate: 2.09%  
-- Flow 3:  
Average throughput: 461.66 Mbit/s  
95th percentile per-packet one-way delay: 98.945 ms  
Loss rate: 1.14%

## Run 5: Report of TCP BBR — Data Link

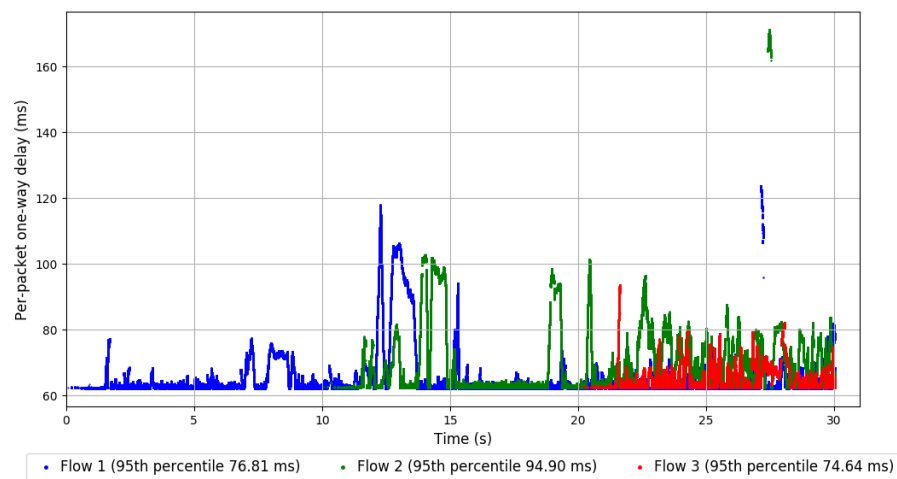
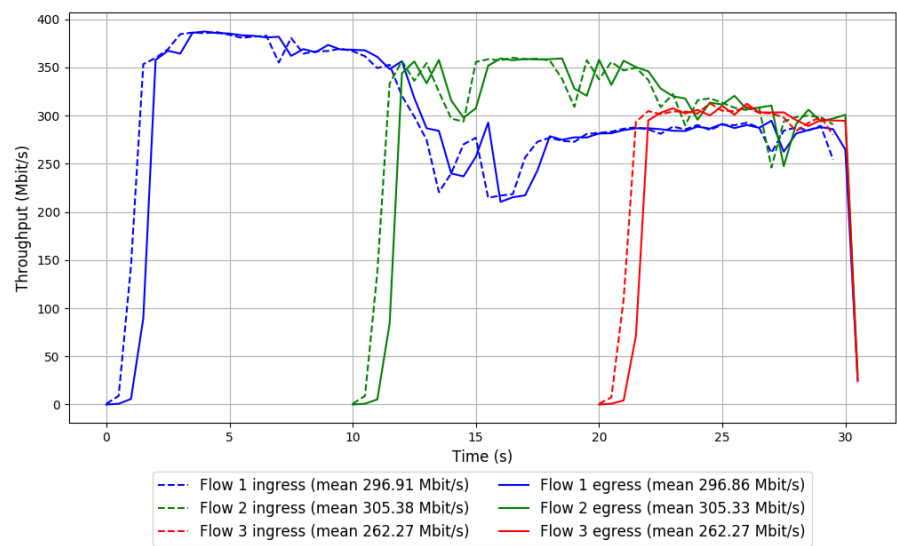


Run 1: Statistics of Copa

Start at: 2019-02-20 12:33:26  
End at: 2019-02-20 12:33:56  
Local clock offset: -0.045 ms  
Remote clock offset: -0.826 ms

# Below is generated by plot.py at 2019-02-20 15:43:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 587.24 Mbit/s  
95th percentile per-packet one-way delay: 85.498 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 296.86 Mbit/s  
95th percentile per-packet one-way delay: 76.811 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 305.33 Mbit/s  
95th percentile per-packet one-way delay: 94.897 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 262.27 Mbit/s  
95th percentile per-packet one-way delay: 74.639 ms  
Loss rate: 0.00%

Run 1: Report of Copa — Data Link

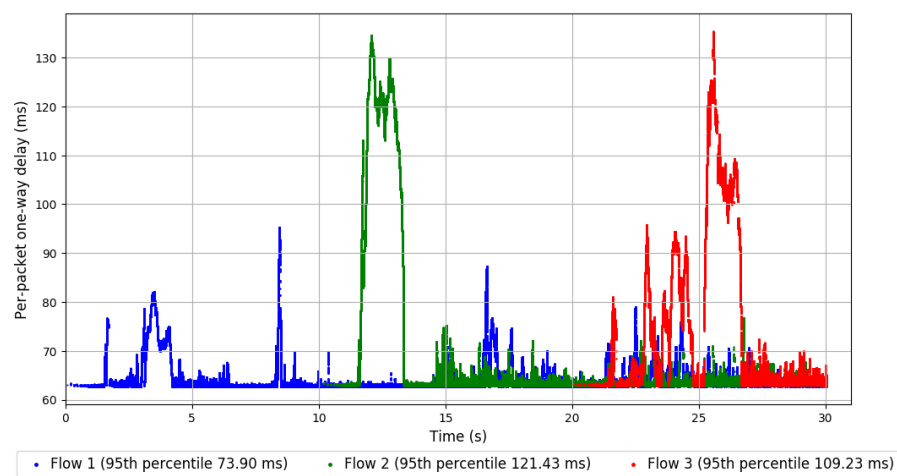
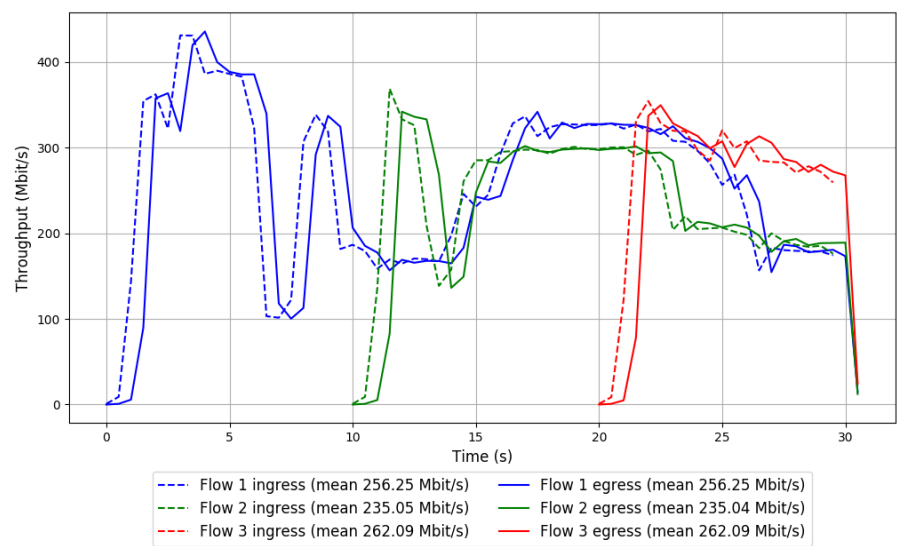


Run 2: Statistics of Copa

Start at: 2019-02-20 13:10:41  
End at: 2019-02-20 13:11:11  
Local clock offset: -0.093 ms  
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2019-02-20 15:43:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 499.91 Mbit/s  
95th percentile per-packet one-way delay: 103.385 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 256.25 Mbit/s  
95th percentile per-packet one-way delay: 73.900 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 235.04 Mbit/s  
95th percentile per-packet one-way delay: 121.427 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 262.09 Mbit/s  
95th percentile per-packet one-way delay: 109.230 ms  
Loss rate: 0.00%

Run 2: Report of Copa — Data Link

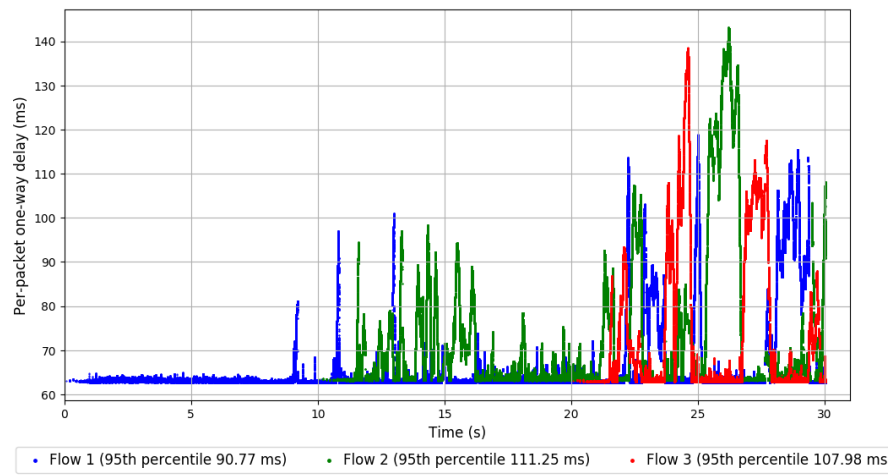
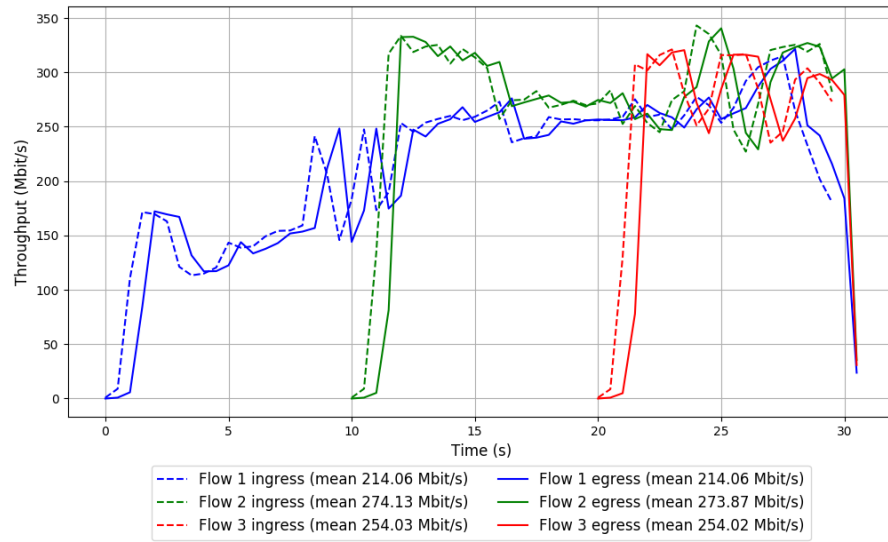


Run 3: Statistics of Copa

Start at: 2019-02-20 13:47:24  
End at: 2019-02-20 13:47:55  
Local clock offset: -0.157 ms  
Remote clock offset: -0.138 ms

# Below is generated by plot.py at 2019-02-20 15:43:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 480.86 Mbit/s  
95th percentile per-packet one-way delay: 102.414 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 214.06 Mbit/s  
95th percentile per-packet one-way delay: 90.768 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 273.87 Mbit/s  
95th percentile per-packet one-way delay: 111.254 ms  
Loss rate: 0.10%  
-- Flow 3:  
Average throughput: 254.02 Mbit/s  
95th percentile per-packet one-way delay: 107.980 ms  
Loss rate: 0.00%

### Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

Start at: 2019-02-20 14:24:22

End at: 2019-02-20 14:24:52

Local clock offset: 0.008 ms

Remote clock offset: 1.046 ms

# Below is generated by plot.py at 2019-02-20 15:52:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 474.13 Mbit/s

95th percentile per-packet one-way delay: 85.706 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 250.29 Mbit/s

95th percentile per-packet one-way delay: 82.795 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 238.61 Mbit/s

95th percentile per-packet one-way delay: 89.246 ms

Loss rate: 0.00%

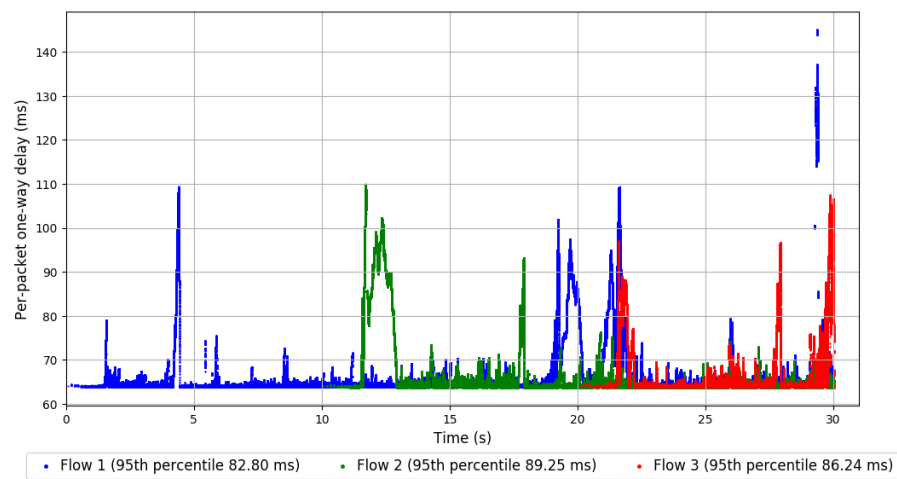
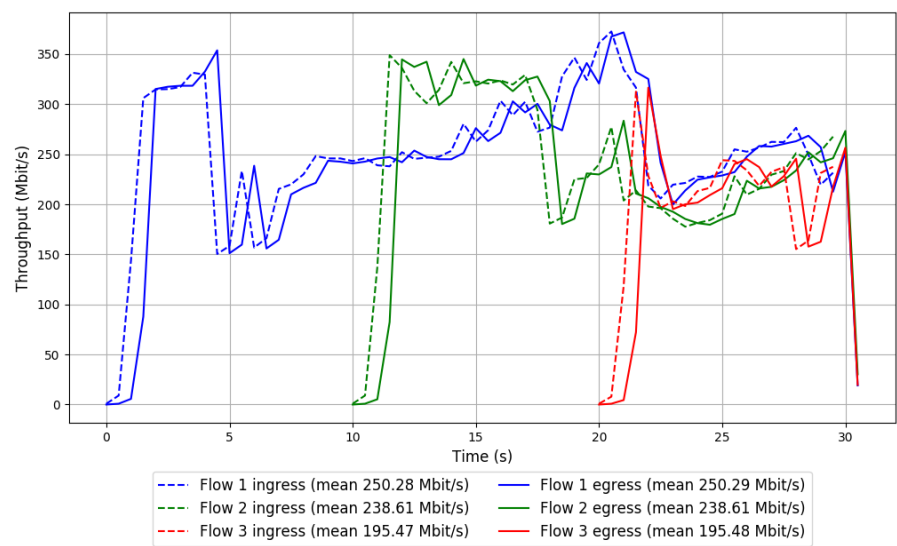
-- Flow 3:

Average throughput: 195.48 Mbit/s

95th percentile per-packet one-way delay: 86.236 ms

Loss rate: 0.00%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-02-20 15:01:28

End at: 2019-02-20 15:01:58

Local clock offset: -0.065 ms

Remote clock offset: 1.14 ms

# Below is generated by plot.py at 2019-02-20 15:56:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 513.21 Mbit/s

95th percentile per-packet one-way delay: 77.454 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 280.45 Mbit/s

95th percentile per-packet one-way delay: 74.906 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 250.53 Mbit/s

95th percentile per-packet one-way delay: 80.990 ms

Loss rate: 0.00%

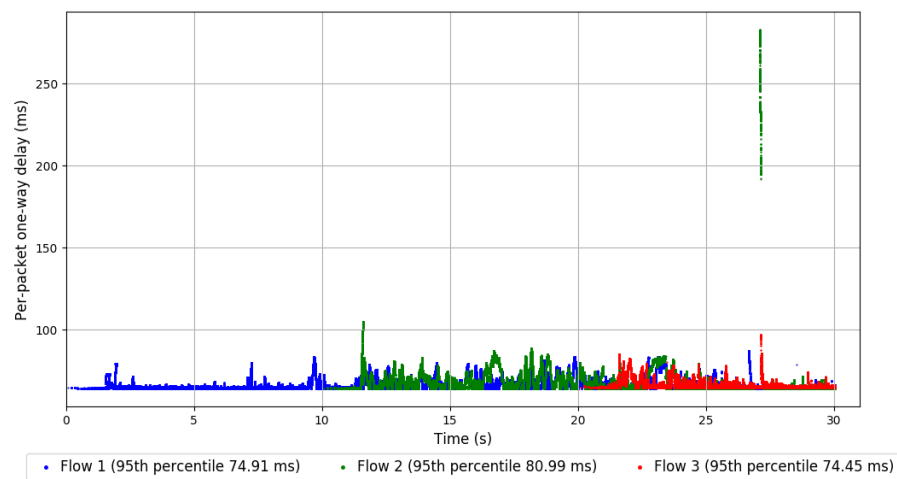
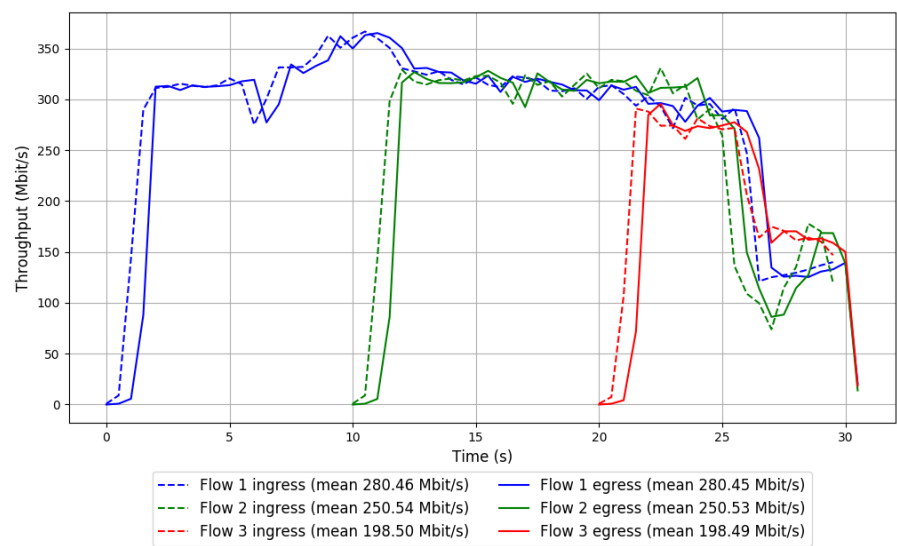
-- Flow 3:

Average throughput: 198.49 Mbit/s

95th percentile per-packet one-way delay: 74.450 ms

Loss rate: 0.00%

Run 5: Report of Copa — Data Link

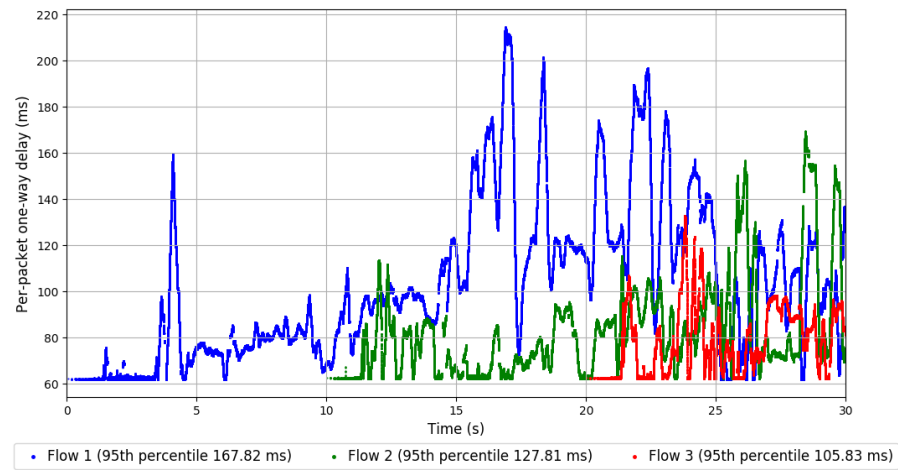
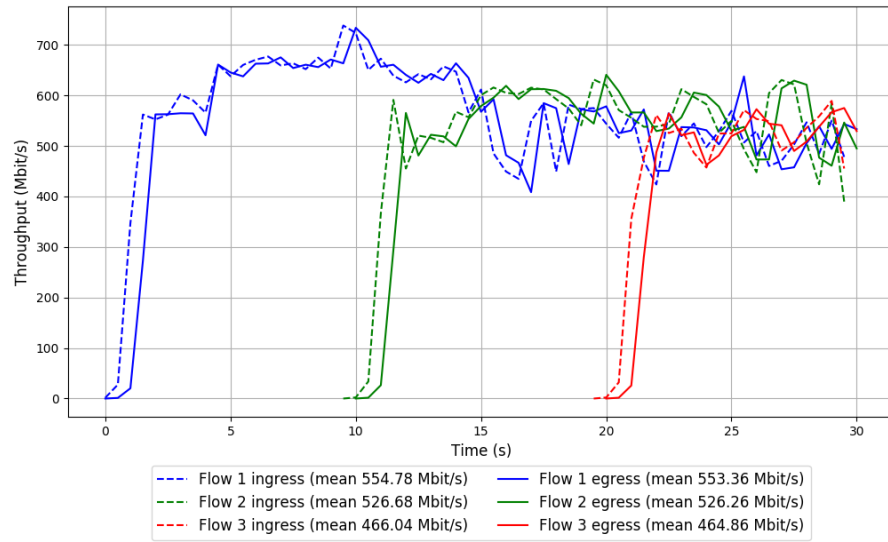


Run 1: Statistics of TCP Cubic

Start at: 2019-02-20 12:10:18  
End at: 2019-02-20 12:10:48  
Local clock offset: -0.131 ms  
Remote clock offset: -0.871 ms

# Below is generated by plot.py at 2019-02-20 15:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1059.35 Mbit/s  
95th percentile per-packet one-way delay: 151.751 ms  
Loss rate: 0.15%  
-- Flow 1:  
Average throughput: 553.36 Mbit/s  
95th percentile per-packet one-way delay: 167.822 ms  
Loss rate: 0.17%  
-- Flow 2:  
Average throughput: 526.26 Mbit/s  
95th percentile per-packet one-way delay: 127.810 ms  
Loss rate: 0.08%  
-- Flow 3:  
Average throughput: 464.86 Mbit/s  
95th percentile per-packet one-way delay: 105.834 ms  
Loss rate: 0.24%

# Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-02-20 12:47:51

End at: 2019-02-20 12:48:21

Local clock offset: -0.076 ms

Remote clock offset: 0.127 ms

# Below is generated by plot.py at 2019-02-20 15:59:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 840.88 Mbit/s

95th percentile per-packet one-way delay: 110.347 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 476.71 Mbit/s

95th percentile per-packet one-way delay: 115.882 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 328.01 Mbit/s

95th percentile per-packet one-way delay: 90.446 ms

Loss rate: 0.00%

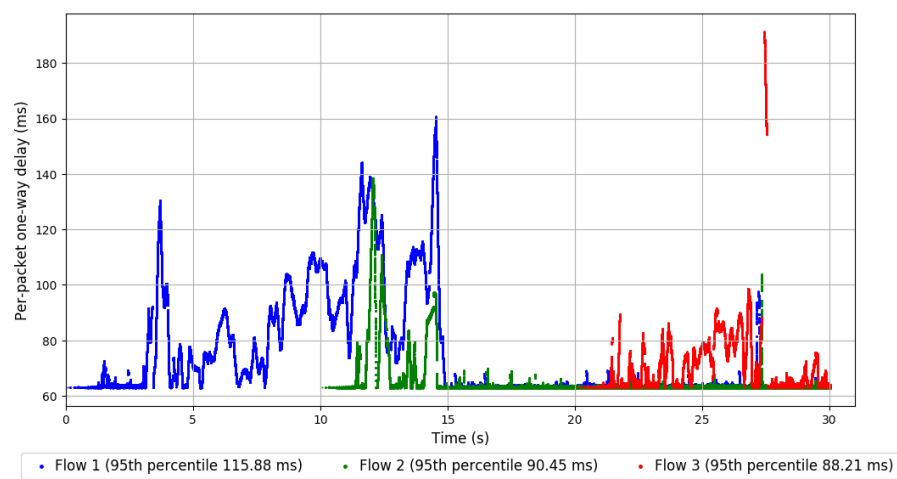
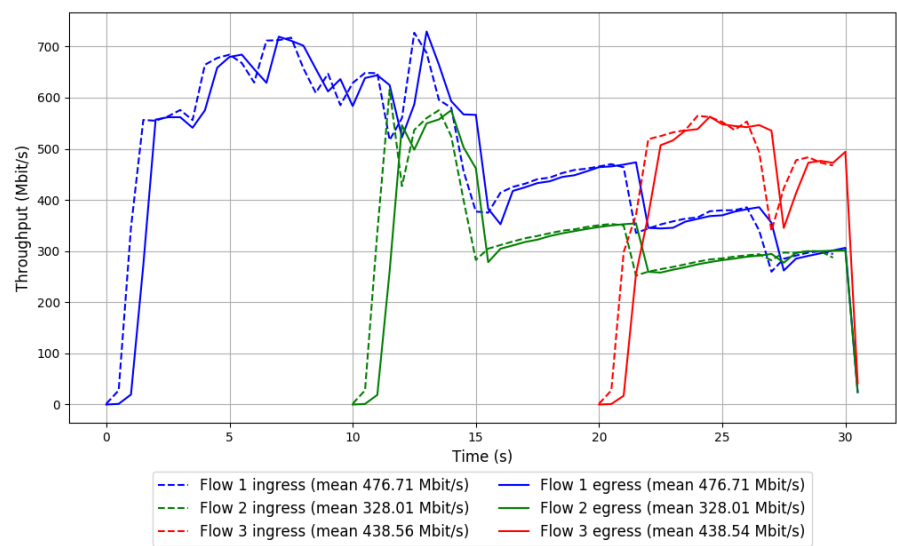
-- Flow 3:

Average throughput: 438.54 Mbit/s

95th percentile per-packet one-way delay: 88.212 ms

Loss rate: 0.00%

Run 2: Report of TCP Cubic — Data Link



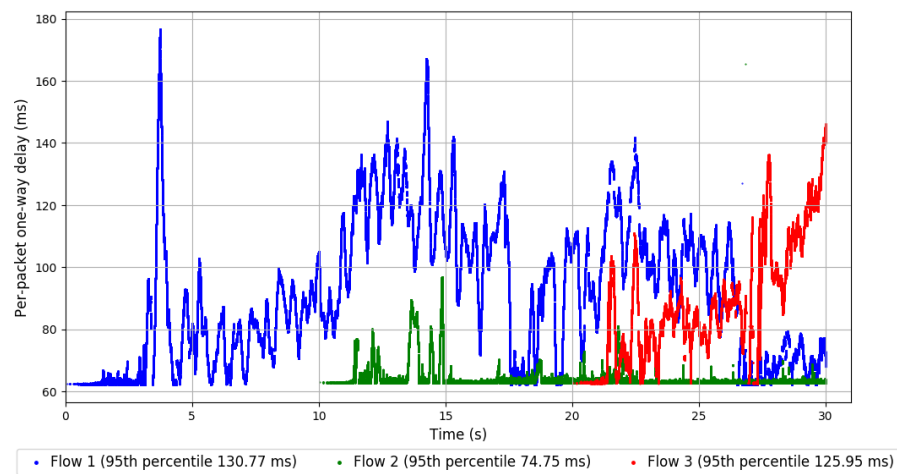
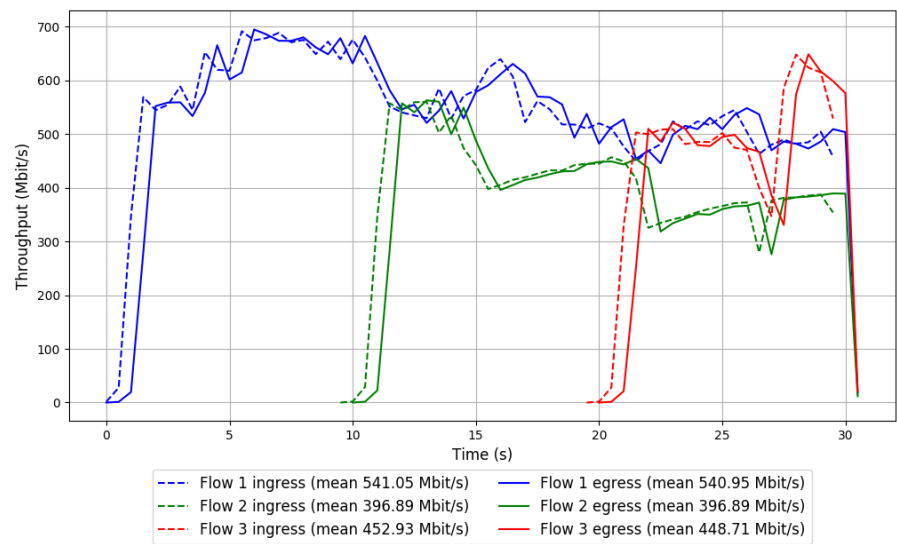


Run 3: Statistics of TCP Cubic

Start at: 2019-02-20 13:24:40  
End at: 2019-02-20 13:25:10  
Local clock offset: -0.089 ms  
Remote clock offset: -0.525 ms

# Below is generated by plot.py at 2019-02-20 15:59:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 954.80 Mbit/s  
95th percentile per-packet one-way delay: 126.719 ms  
Loss rate: 0.15%  
-- Flow 1:  
Average throughput: 540.95 Mbit/s  
95th percentile per-packet one-way delay: 130.766 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 396.89 Mbit/s  
95th percentile per-packet one-way delay: 74.745 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 448.71 Mbit/s  
95th percentile per-packet one-way delay: 125.953 ms  
Loss rate: 0.92%

Run 3: Report of TCP Cubic — Data Link

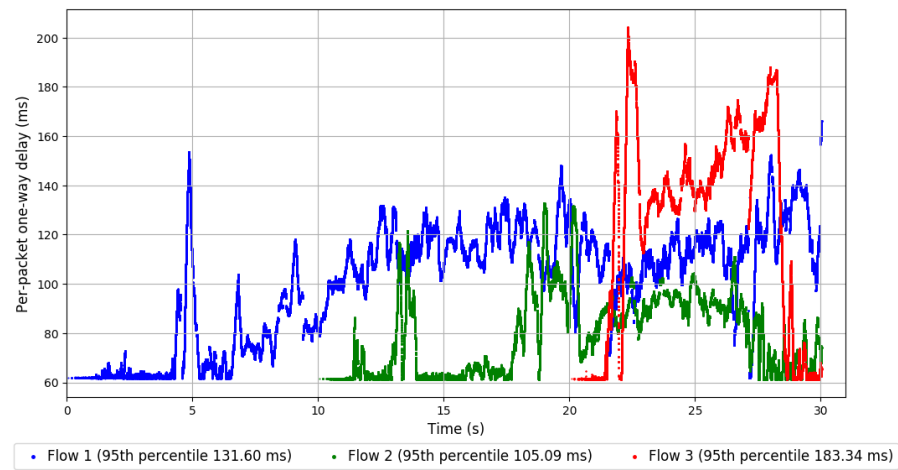
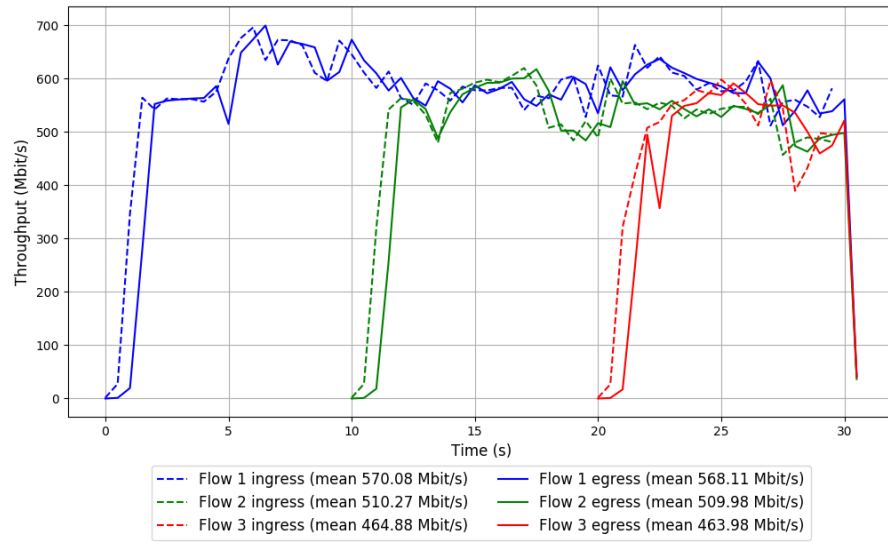


Run 4: Statistics of TCP Cubic

Start at: 2019-02-20 14:01:32  
End at: 2019-02-20 14:02:02  
Local clock offset: -0.081 ms  
Remote clock offset: -1.558 ms

# Below is generated by plot.py at 2019-02-20 16:00:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1061.97 Mbit/s  
95th percentile per-packet one-way delay: 149.996 ms  
Loss rate: 0.23%  
-- Flow 1:  
Average throughput: 568.11 Mbit/s  
95th percentile per-packet one-way delay: 131.605 ms  
Loss rate: 0.34%  
-- Flow 2:  
Average throughput: 509.98 Mbit/s  
95th percentile per-packet one-way delay: 105.092 ms  
Loss rate: 0.06%  
-- Flow 3:  
Average throughput: 463.98 Mbit/s  
95th percentile per-packet one-way delay: 183.335 ms  
Loss rate: 0.18%

# Run 4: Report of TCP Cubic — Data Link

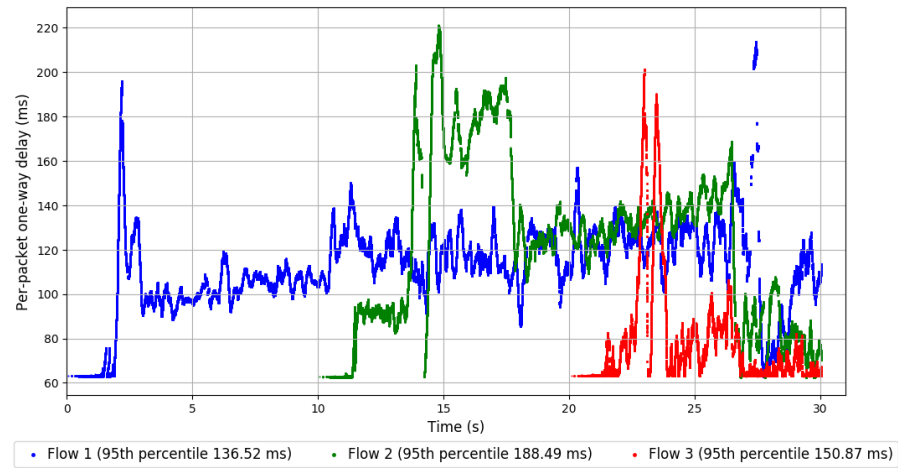
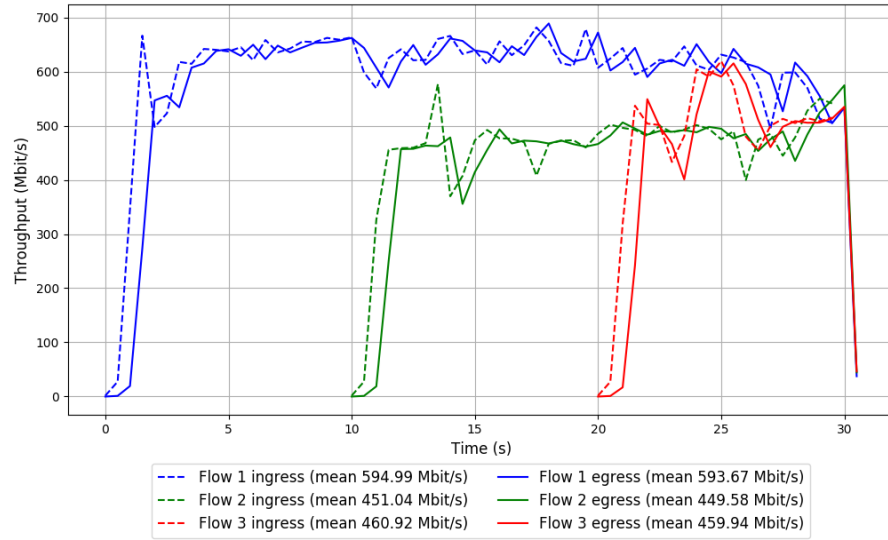


Run 5: Statistics of TCP Cubic

Start at: 2019-02-20 14:38:26  
End at: 2019-02-20 14:38:56  
Local clock offset: -0.047 ms  
Remote clock offset: -0.222 ms

# Below is generated by plot.py at 2019-02-20 16:00:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1045.98 Mbit/s  
95th percentile per-packet one-way delay: 167.975 ms  
Loss rate: 0.25%  
-- Flow 1:  
Average throughput: 593.67 Mbit/s  
95th percentile per-packet one-way delay: 136.519 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 449.58 Mbit/s  
95th percentile per-packet one-way delay: 188.493 ms  
Loss rate: 0.32%  
-- Flow 3:  
Average throughput: 459.94 Mbit/s  
95th percentile per-packet one-way delay: 150.865 ms  
Loss rate: 0.21%

# Run 5: Report of TCP Cubic — Data Link

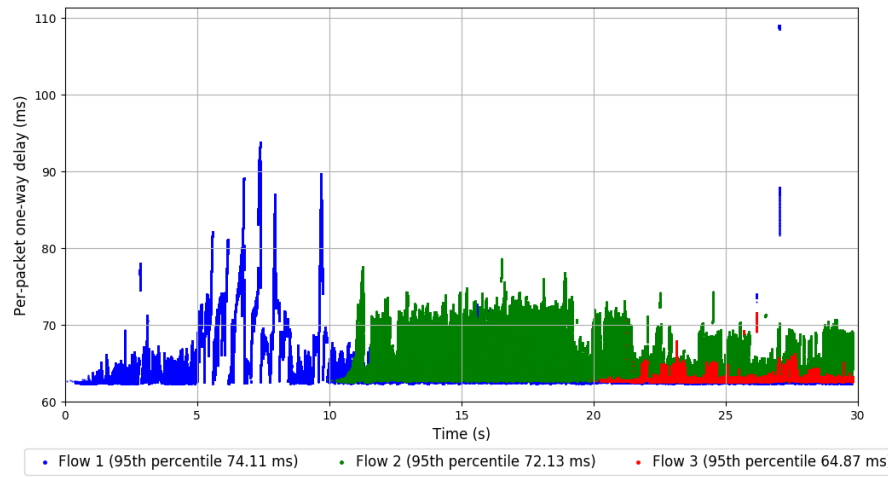
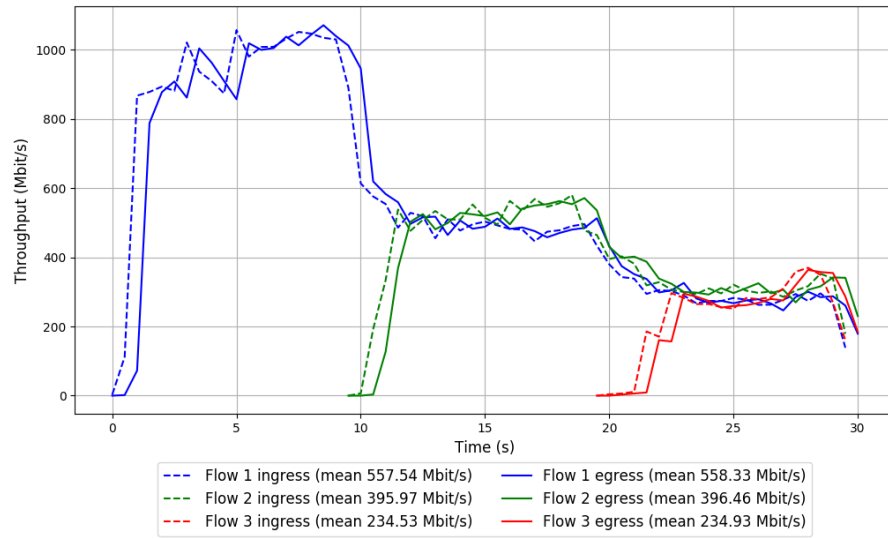


Run 1: Statistics of FillP

Start at: 2019-02-20 12:01:59  
End at: 2019-02-20 12:02:29  
Local clock offset: -0.099 ms  
Remote clock offset: -0.407 ms

# Below is generated by plot.py at 2019-02-20 16:01:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 901.40 Mbit/s  
95th percentile per-packet one-way delay: 73.028 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 558.33 Mbit/s  
95th percentile per-packet one-way delay: 74.107 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 396.46 Mbit/s  
95th percentile per-packet one-way delay: 72.133 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 234.93 Mbit/s  
95th percentile per-packet one-way delay: 64.869 ms  
Loss rate: 0.00%

# Run 1: Report of FillP — Data Link



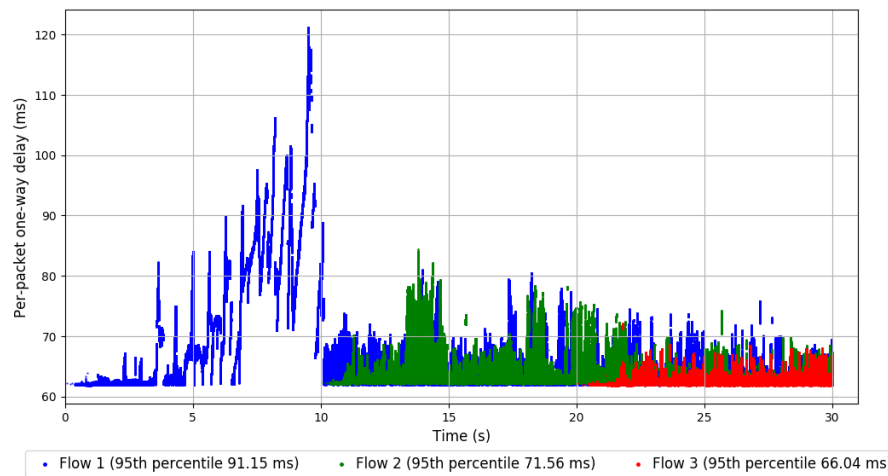
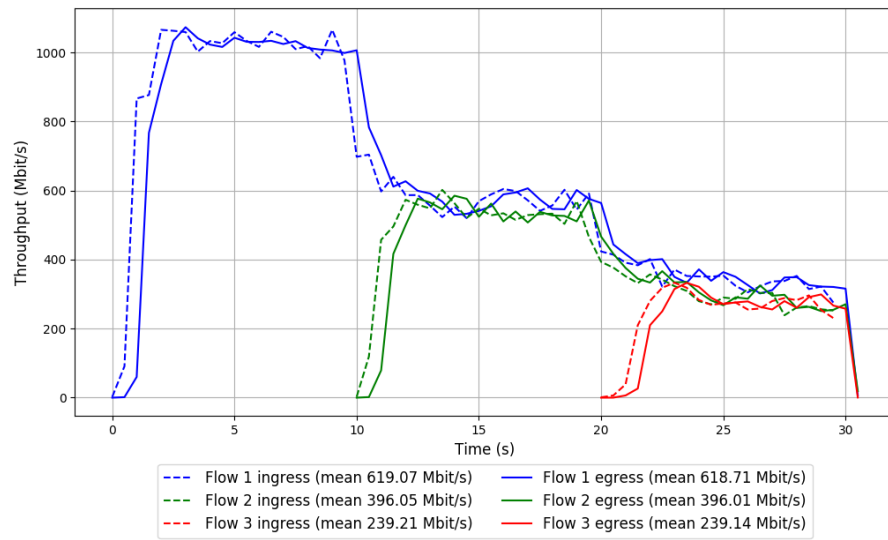


Run 2: Statistics of FillP

Start at: 2019-02-20 12:39:22  
End at: 2019-02-20 12:39:52  
Local clock offset: -0.056 ms  
Remote clock offset: -0.969 ms

# Below is generated by plot.py at 2019-02-20 16:14:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 961.74 Mbit/s  
95th percentile per-packet one-way delay: 86.721 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 618.71 Mbit/s  
95th percentile per-packet one-way delay: 91.151 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 396.01 Mbit/s  
95th percentile per-packet one-way delay: 71.558 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 239.14 Mbit/s  
95th percentile per-packet one-way delay: 66.038 ms  
Loss rate: 0.03%

## Run 2: Report of FillP — Data Link

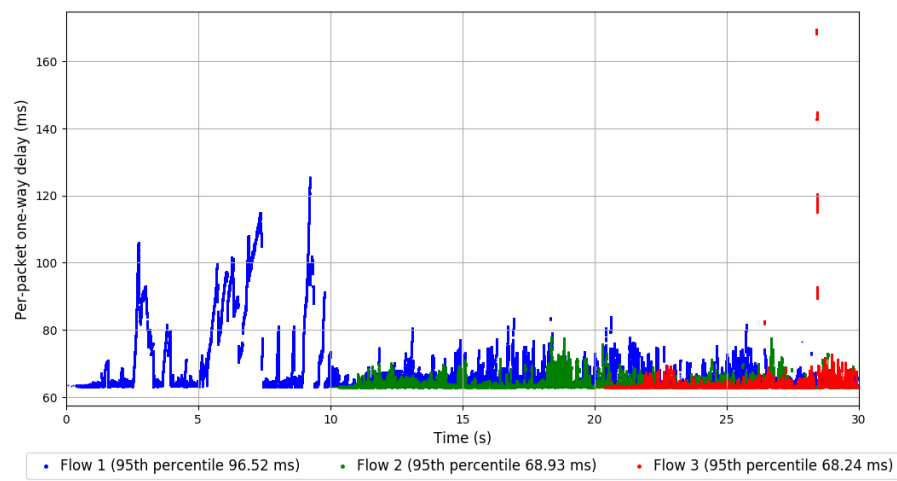
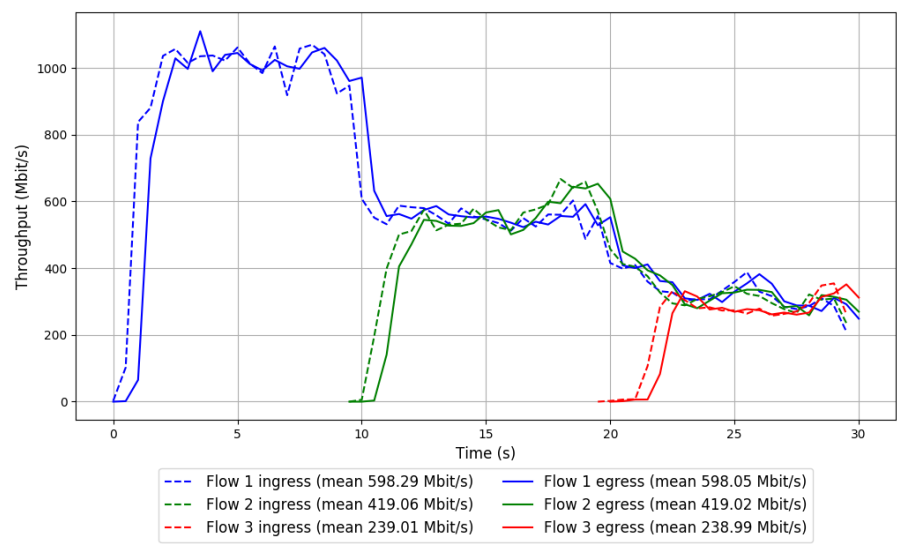


Run 3: Statistics of FillP

Start at: 2019-02-20 13:16:19  
End at: 2019-02-20 13:16:49  
Local clock offset: -0.093 ms  
Remote clock offset: -0.126 ms

# Below is generated by plot.py at 2019-02-20 16:17:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 956.66 Mbit/s  
95th percentile per-packet one-way delay: 90.826 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 598.05 Mbit/s  
95th percentile per-packet one-way delay: 96.518 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 419.02 Mbit/s  
95th percentile per-packet one-way delay: 68.934 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 238.99 Mbit/s  
95th percentile per-packet one-way delay: 68.237 ms  
Loss rate: 0.01%

Run 3: Report of FillP — Data Link

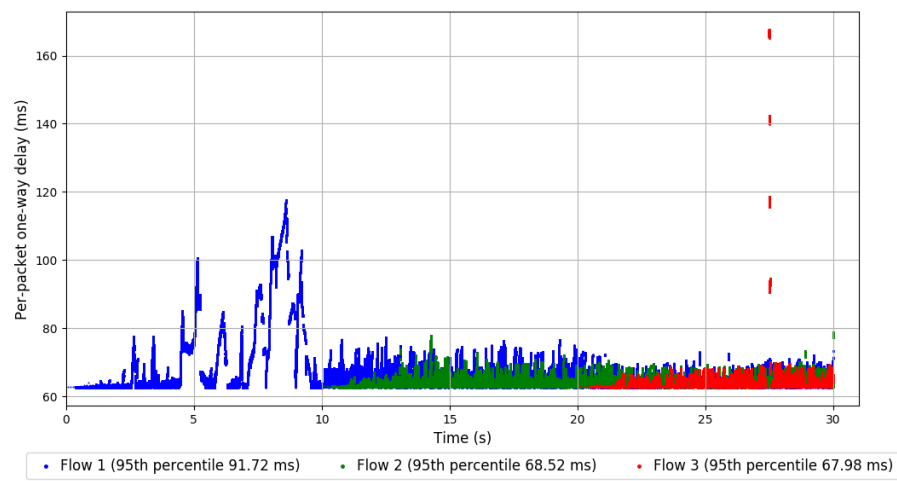
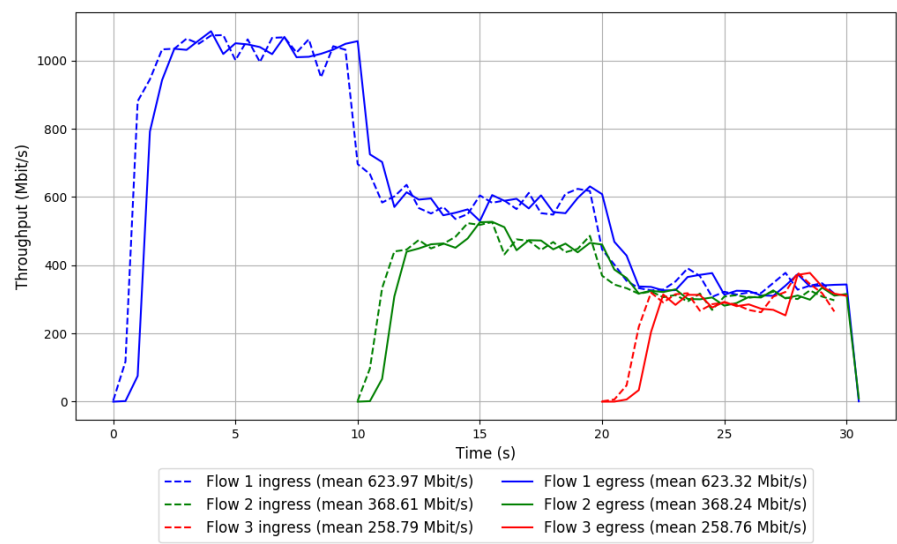


Run 4: Statistics of FillP

Start at: 2019-02-20 13:53:13  
End at: 2019-02-20 13:53:43  
Local clock offset: -0.176 ms  
Remote clock offset: -0.245 ms

# Below is generated by plot.py at 2019-02-20 16:17:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 953.76 Mbit/s  
95th percentile per-packet one-way delay: 86.612 ms  
Loss rate: 0.08%  
-- Flow 1:  
Average throughput: 623.32 Mbit/s  
95th percentile per-packet one-way delay: 91.721 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 368.24 Mbit/s  
95th percentile per-packet one-way delay: 68.519 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 258.76 Mbit/s  
95th percentile per-packet one-way delay: 67.982 ms  
Loss rate: 0.00%

Run 4: Report of FillP — Data Link

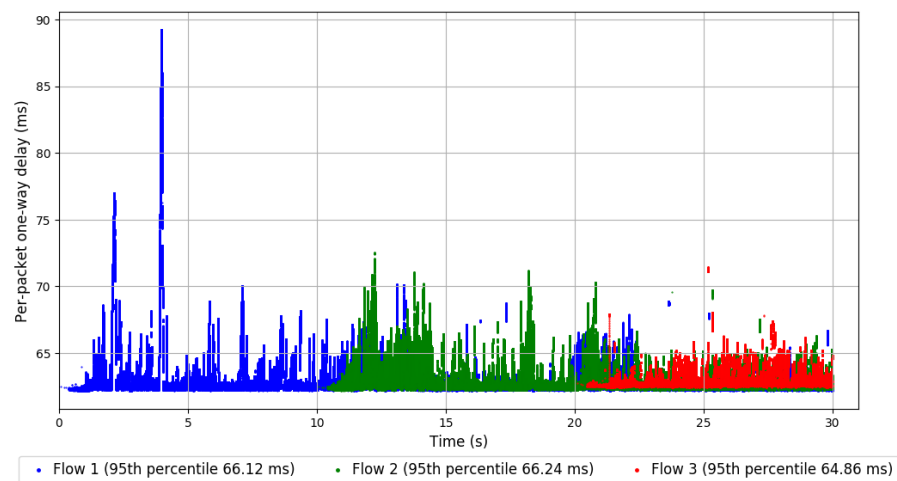
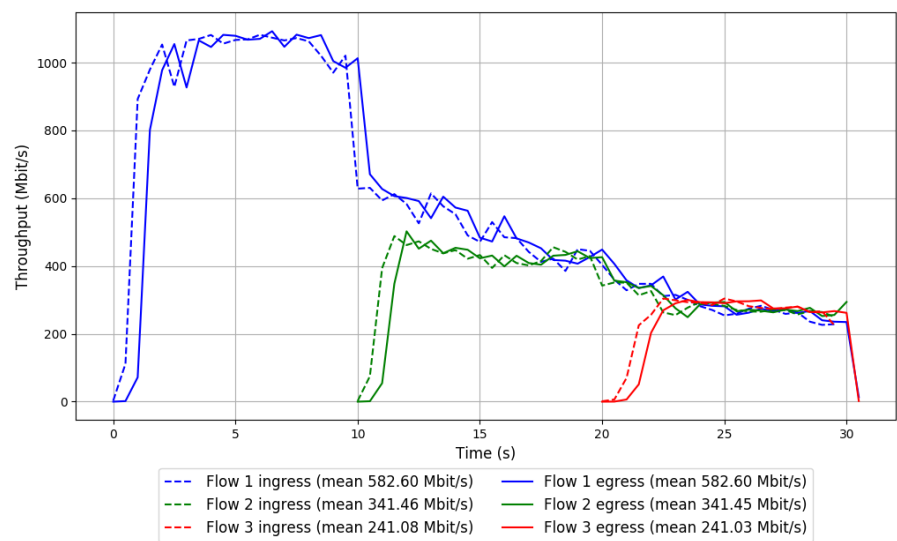


Run 5: Statistics of FillP

Start at: 2019-02-20 14:30:06  
End at: 2019-02-20 14:30:36  
Local clock offset: -0.021 ms  
Remote clock offset: -0.776 ms

# Below is generated by plot.py at 2019-02-20 16:18:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 889.43 Mbit/s  
95th percentile per-packet one-way delay: 66.038 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 582.60 Mbit/s  
95th percentile per-packet one-way delay: 66.123 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 341.45 Mbit/s  
95th percentile per-packet one-way delay: 66.239 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 241.03 Mbit/s  
95th percentile per-packet one-way delay: 64.858 ms  
Loss rate: 0.00%

Run 5: Report of FillP — Data Link



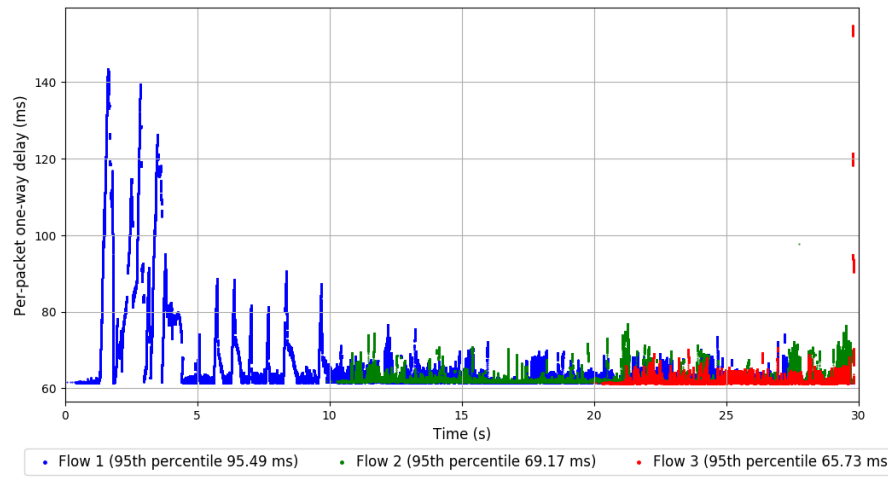
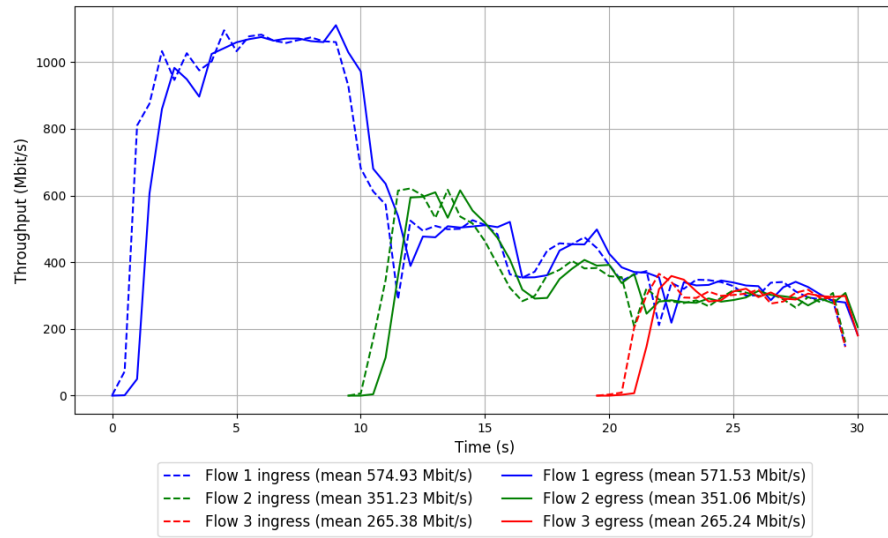


Run 1: Statistics of FillP-Sheep

Start at: 2019-02-20 12:23:45  
End at: 2019-02-20 12:24:15  
Local clock offset: -0.082 ms  
Remote clock offset: -1.448 ms

# Below is generated by plot.py at 2019-02-20 16:18:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 894.92 Mbit/s  
95th percentile per-packet one-way delay: 85.890 ms  
Loss rate: 0.40%  
-- Flow 1:  
Average throughput: 571.53 Mbit/s  
95th percentile per-packet one-way delay: 95.490 ms  
Loss rate: 0.59%  
-- Flow 2:  
Average throughput: 351.06 Mbit/s  
95th percentile per-packet one-way delay: 69.172 ms  
Loss rate: 0.05%  
-- Flow 3:  
Average throughput: 265.24 Mbit/s  
95th percentile per-packet one-way delay: 65.728 ms  
Loss rate: 0.04%

# Run 1: Report of FillP-Sheep — Data Link

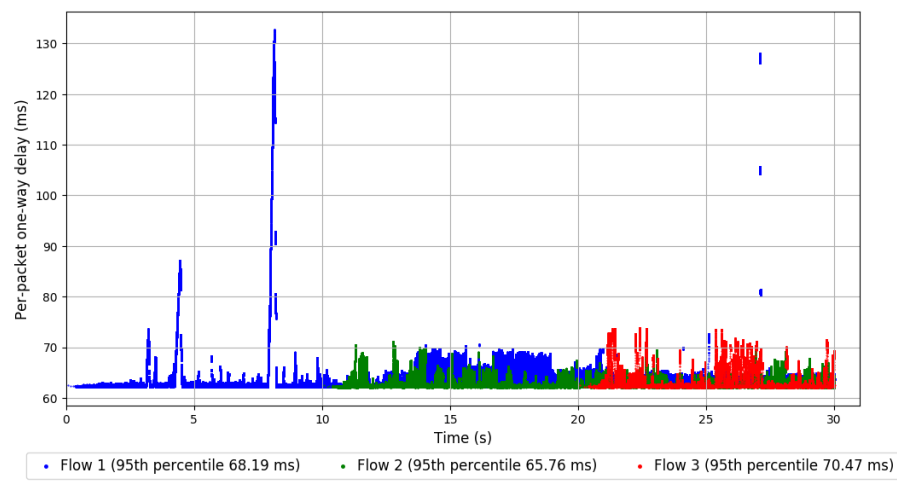
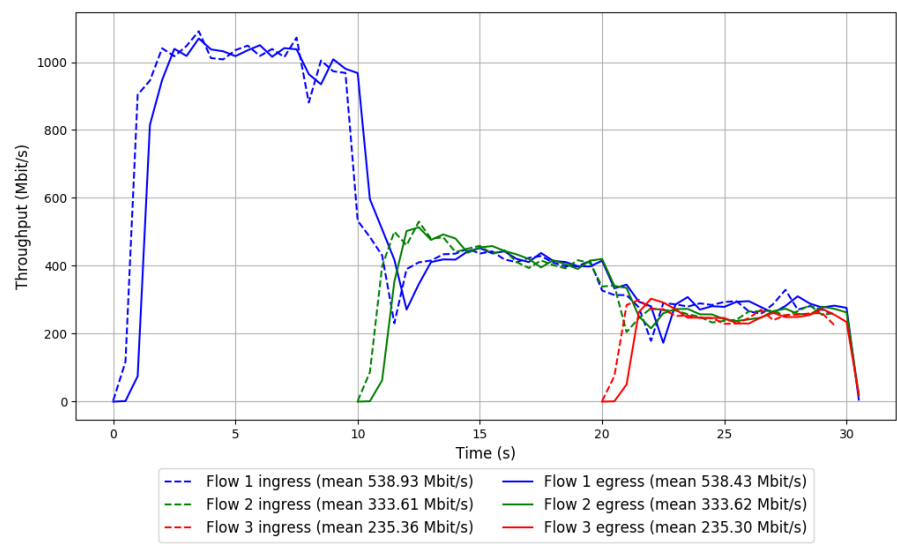


Run 2: Statistics of FillP-Sheep

Start at: 2019-02-20 13:01:09  
End at: 2019-02-20 13:01:39  
Local clock offset: -0.074 ms  
Remote clock offset: -0.612 ms

# Below is generated by plot.py at 2019-02-20 16:18:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 838.45 Mbit/s  
95th percentile per-packet one-way delay: 67.992 ms  
Loss rate: 0.06%  
-- Flow 1:  
Average throughput: 538.43 Mbit/s  
95th percentile per-packet one-way delay: 68.185 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 333.62 Mbit/s  
95th percentile per-packet one-way delay: 65.764 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 235.30 Mbit/s  
95th percentile per-packet one-way delay: 70.473 ms  
Loss rate: 0.03%

Run 2: Report of FillP-Sheep — Data Link

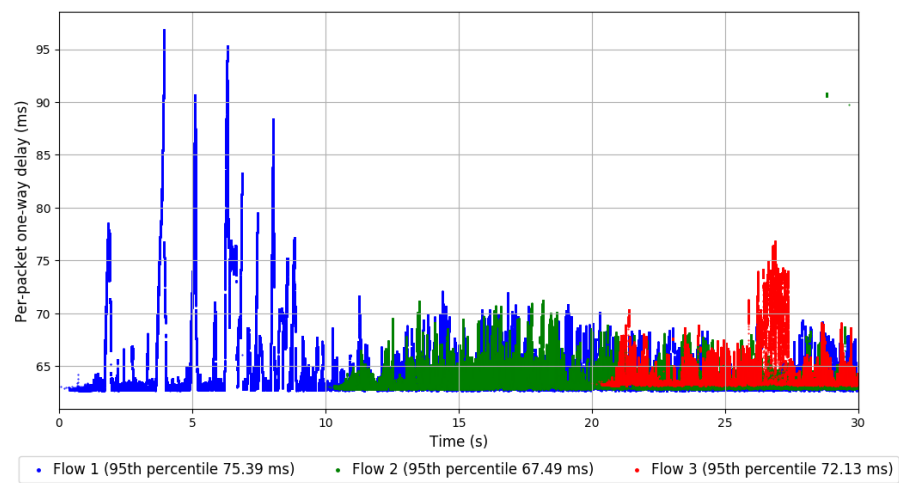
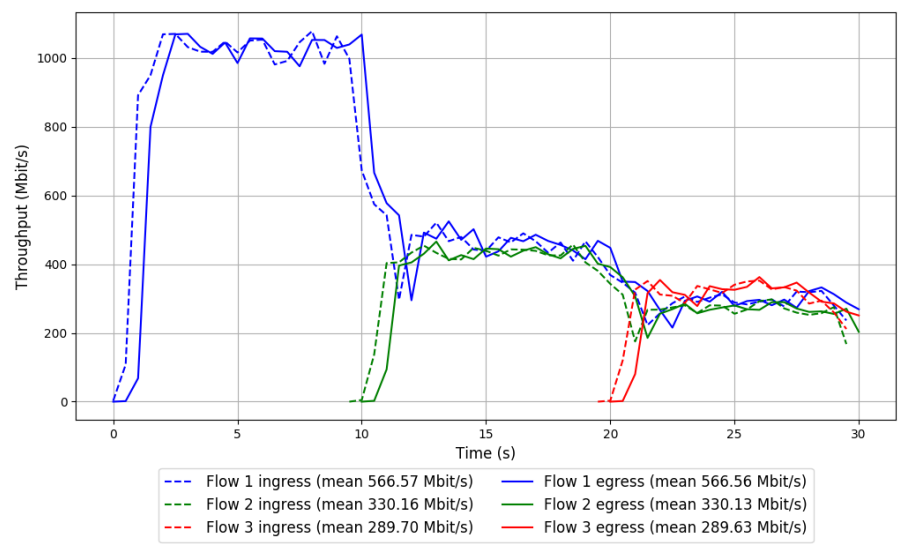


Run 3: Statistics of FillP-Sheep

Start at: 2019-02-20 13:37:56  
End at: 2019-02-20 13:38:26  
Local clock offset: -0.135 ms  
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2019-02-20 16:19:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 883.01 Mbit/s  
95th percentile per-packet one-way delay: 72.823 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 566.56 Mbit/s  
95th percentile per-packet one-way delay: 75.392 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 330.13 Mbit/s  
95th percentile per-packet one-way delay: 67.487 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 289.63 Mbit/s  
95th percentile per-packet one-way delay: 72.127 ms  
Loss rate: 0.02%

Run 3: Report of FillP-Sheep — Data Link

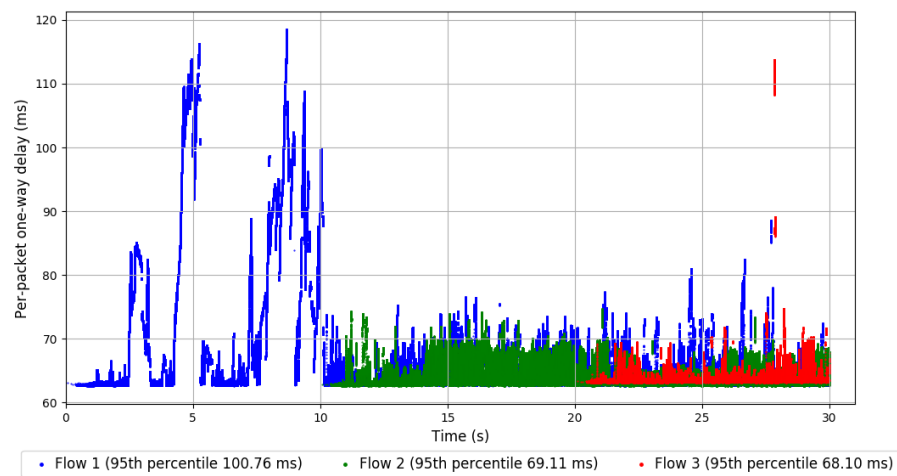
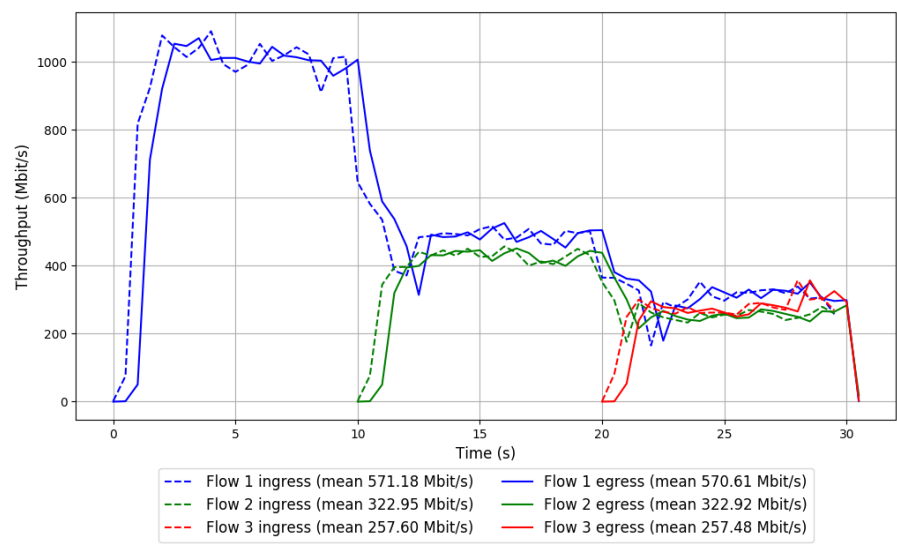


Run 4: Statistics of FillP-Sheep

Start at: 2019-02-20 14:15:05  
End at: 2019-02-20 14:15:35  
Local clock offset: 0.041 ms  
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2019-02-20 16:20:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 870.53 Mbit/s  
95th percentile per-packet one-way delay: 94.789 ms  
Loss rate: 0.06%  
-- Flow 1:  
Average throughput: 570.61 Mbit/s  
95th percentile per-packet one-way delay: 100.764 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 322.92 Mbit/s  
95th percentile per-packet one-way delay: 69.108 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 257.48 Mbit/s  
95th percentile per-packet one-way delay: 68.101 ms  
Loss rate: 0.00%

Run 4: Report of FillP-Sheep — Data Link





Run 5: Statistics of FillP-Sheep

Start at: 2019-02-20 14:51:58

End at: 2019-02-20 14:52:28

Local clock offset: -0.064 ms

Remote clock offset: 0.581 ms

# Below is generated by plot.py at 2019-02-20 16:34:11

# Datalink statistics

-- Total of 3 flows:

Average throughput: 864.20 Mbit/s

95th percentile per-packet one-way delay: 84.616 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 557.08 Mbit/s

95th percentile per-packet one-way delay: 89.535 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 323.99 Mbit/s

95th percentile per-packet one-way delay: 69.198 ms

Loss rate: 0.00%

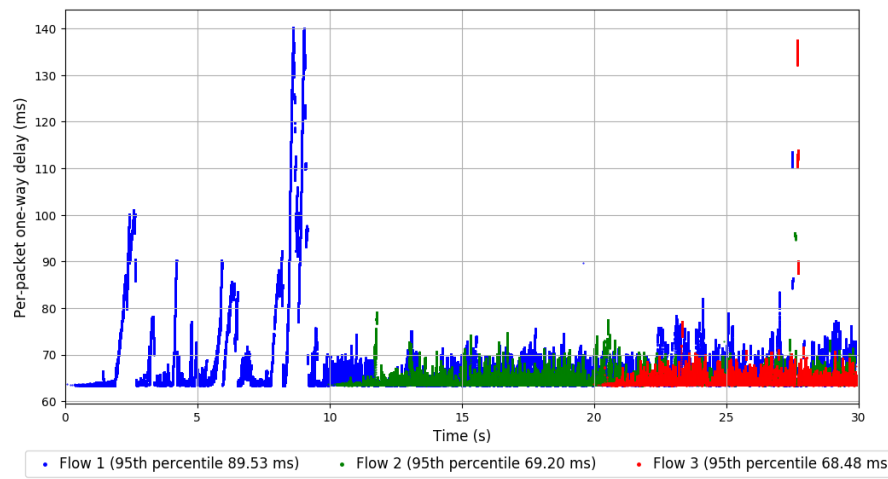
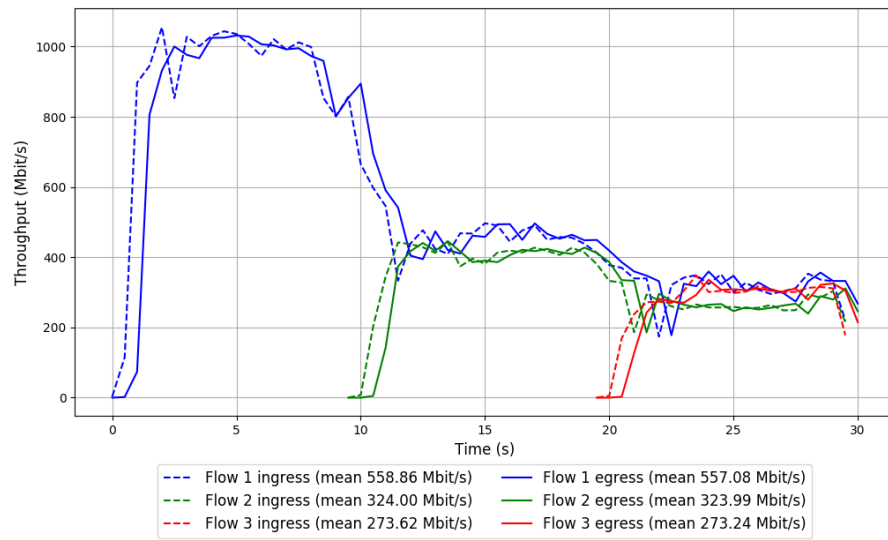
-- Flow 3:

Average throughput: 273.24 Mbit/s

95th percentile per-packet one-way delay: 68.479 ms

Loss rate: 0.11%

# Run 5: Report of FillP-Sheep — Data Link

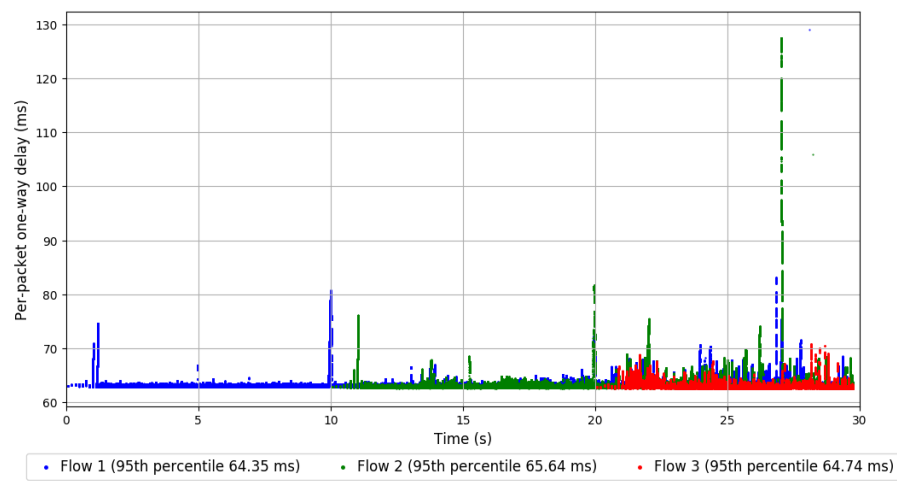
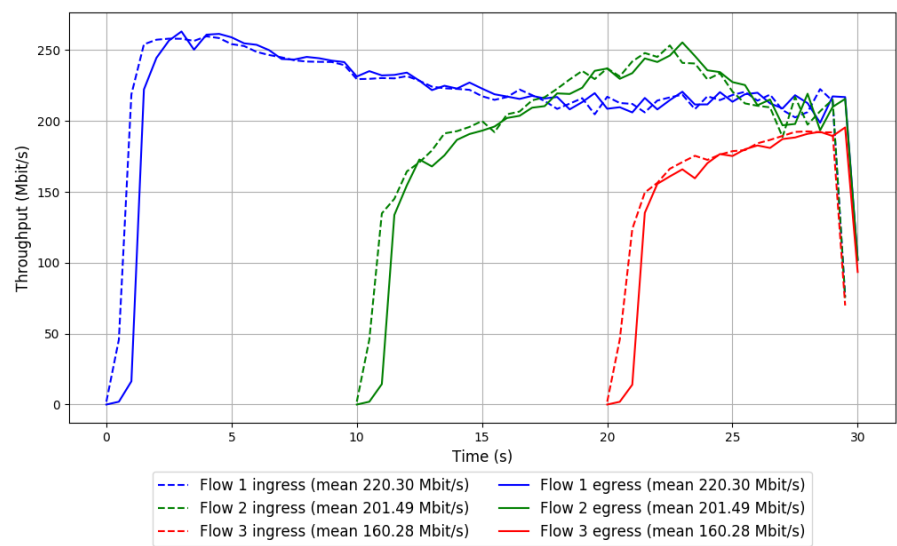


Run 1: Statistics of Indigo

Start at: 2019-02-20 12:27:39  
End at: 2019-02-20 12:28:09  
Local clock offset: -0.107 ms  
Remote clock offset: -0.179 ms

# Below is generated by plot.py at 2019-02-20 16:34:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 406.00 Mbit/s  
95th percentile per-packet one-way delay: 64.786 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 220.30 Mbit/s  
95th percentile per-packet one-way delay: 64.349 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 201.49 Mbit/s  
95th percentile per-packet one-way delay: 65.638 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 160.28 Mbit/s  
95th percentile per-packet one-way delay: 64.739 ms  
Loss rate: 0.00%

Run 1: Report of Indigo — Data Link

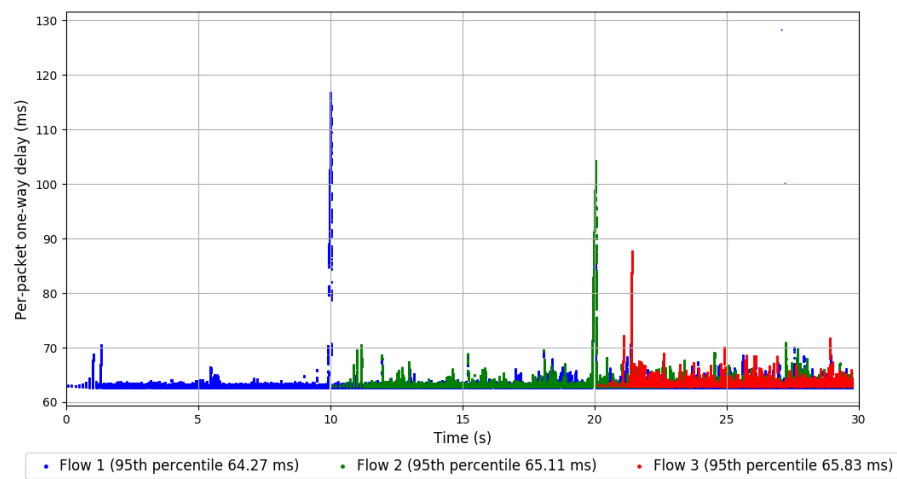
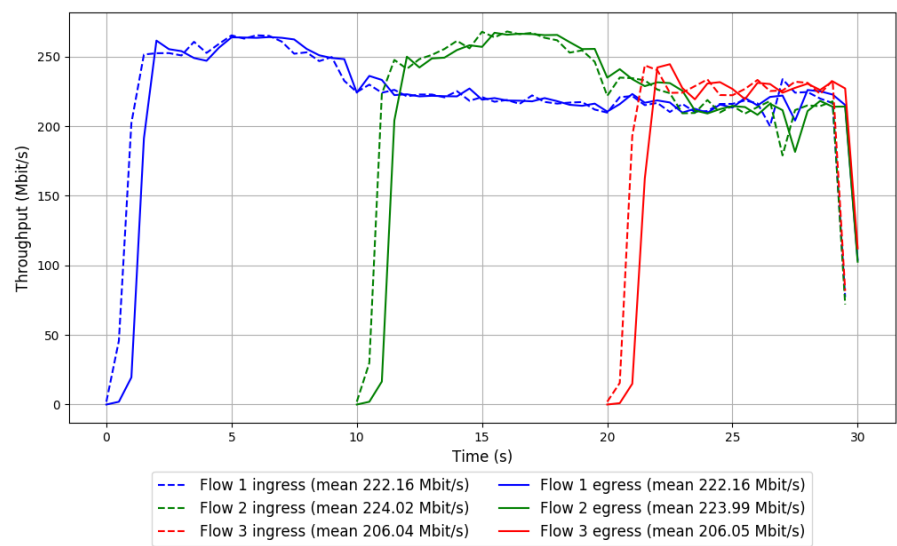


Run 2: Statistics of Indigo

Start at: 2019-02-20 13:04:56  
End at: 2019-02-20 13:05:26  
Local clock offset: -0.091 ms  
Remote clock offset: -0.196 ms

# Below is generated by plot.py at 2019-02-20 16:34:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 437.34 Mbit/s  
95th percentile per-packet one-way delay: 64.895 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 222.16 Mbit/s  
95th percentile per-packet one-way delay: 64.266 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 223.99 Mbit/s  
95th percentile per-packet one-way delay: 65.106 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 206.05 Mbit/s  
95th percentile per-packet one-way delay: 65.835 ms  
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link

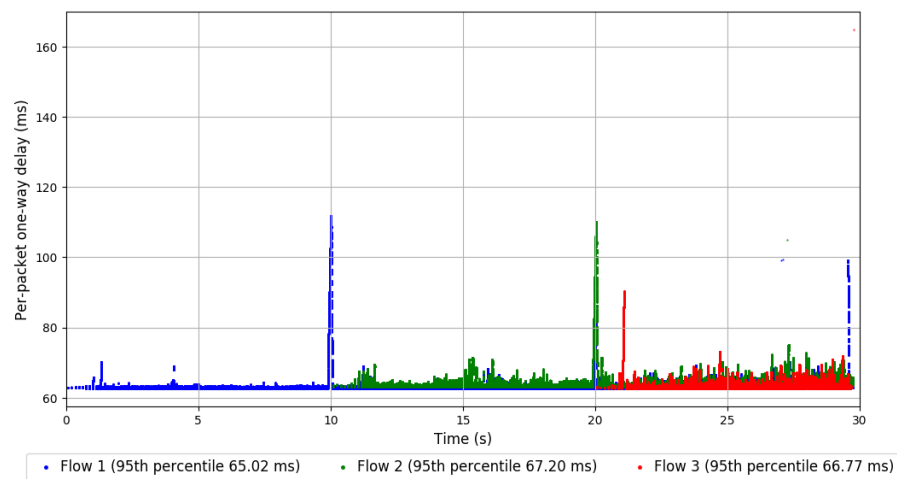
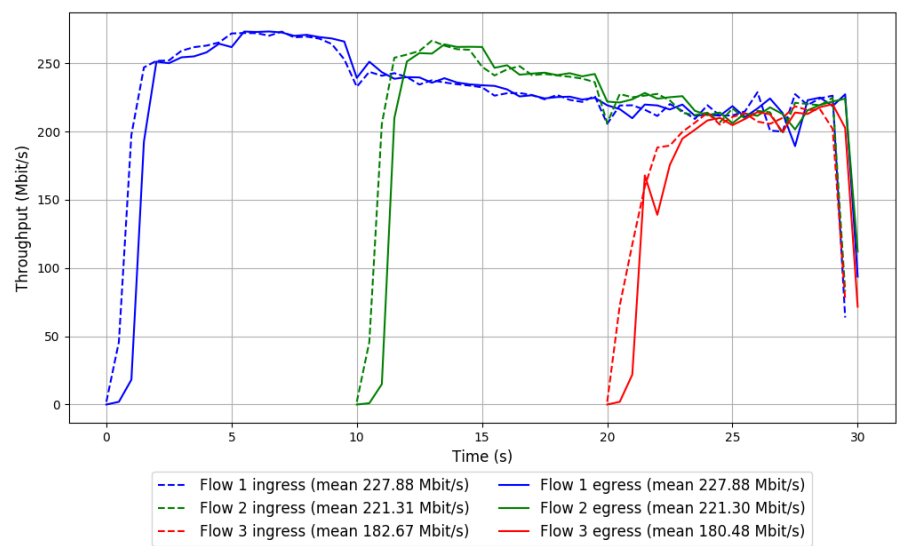


Run 3: Statistics of Indigo

Start at: 2019-02-20 13:41:43  
End at: 2019-02-20 13:42:13  
Local clock offset: -0.138 ms  
Remote clock offset: -0.206 ms

# Below is generated by plot.py at 2019-02-20 16:34:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 432.83 Mbit/s  
95th percentile per-packet one-way delay: 66.162 ms  
Loss rate: 0.12%  
-- Flow 1:  
Average throughput: 227.88 Mbit/s  
95th percentile per-packet one-way delay: 65.018 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 221.30 Mbit/s  
95th percentile per-packet one-way delay: 67.202 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 180.48 Mbit/s  
95th percentile per-packet one-way delay: 66.767 ms  
Loss rate: 0.87%

Run 3: Report of Indigo — Data Link



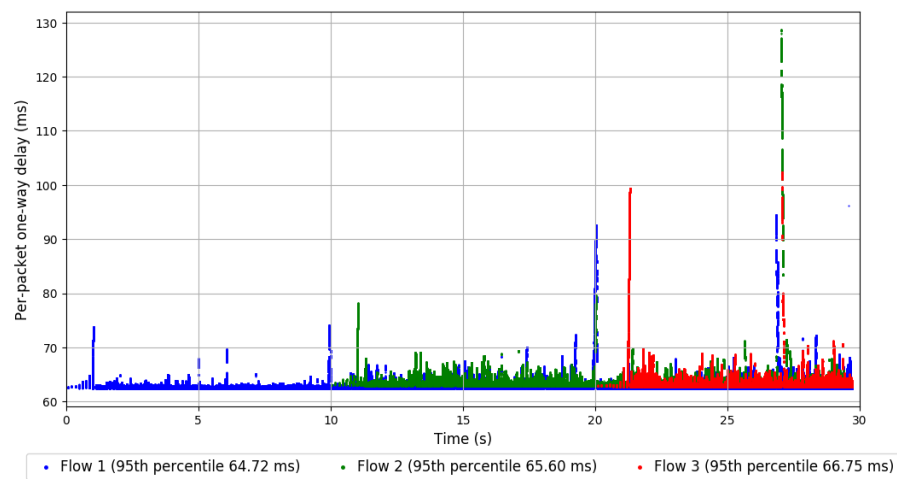
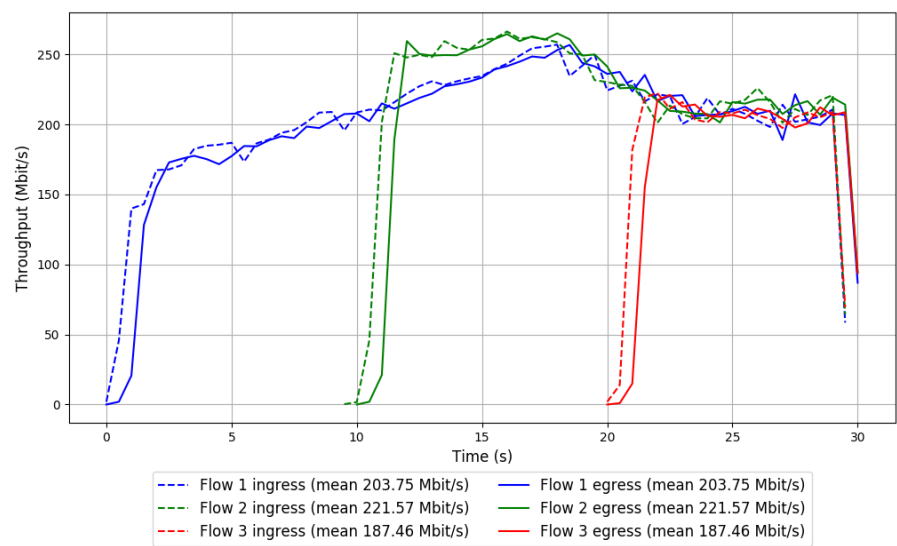


Run 4: Statistics of Indigo

Start at: 2019-02-20 14:18:48  
End at: 2019-02-20 14:19:18  
Local clock offset: -0.024 ms  
Remote clock offset: -0.299 ms

# Below is generated by plot.py at 2019-02-20 16:34:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 411.41 Mbit/s  
95th percentile per-packet one-way delay: 65.366 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 203.75 Mbit/s  
95th percentile per-packet one-way delay: 64.715 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 221.57 Mbit/s  
95th percentile per-packet one-way delay: 65.599 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 187.46 Mbit/s  
95th percentile per-packet one-way delay: 66.747 ms  
Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-02-20 14:55:40

End at: 2019-02-20 14:56:10

Local clock offset: -0.055 ms

Remote clock offset: 0.245 ms

# Below is generated by plot.py at 2019-02-20 16:34:11

# Datalink statistics

-- Total of 3 flows:

Average throughput: 403.62 Mbit/s

95th percentile per-packet one-way delay: 65.624 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 194.21 Mbit/s

95th percentile per-packet one-way delay: 64.884 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 215.86 Mbit/s

95th percentile per-packet one-way delay: 65.658 ms

Loss rate: 0.00%

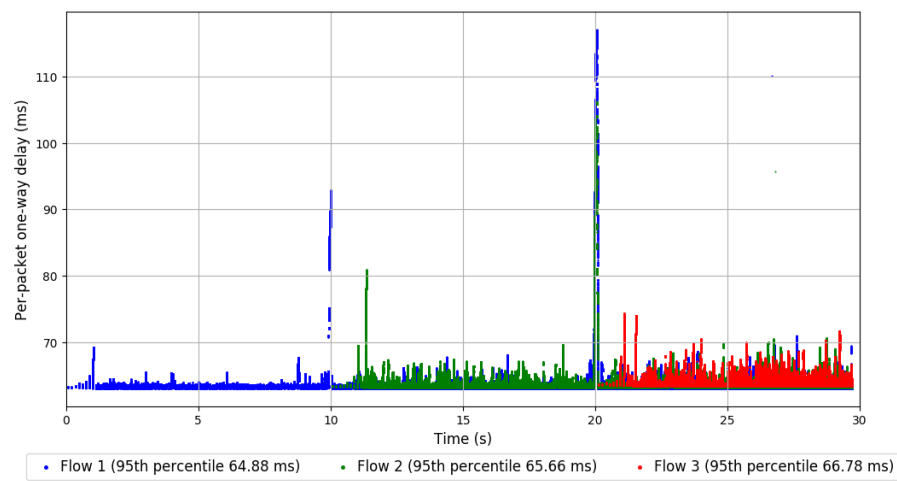
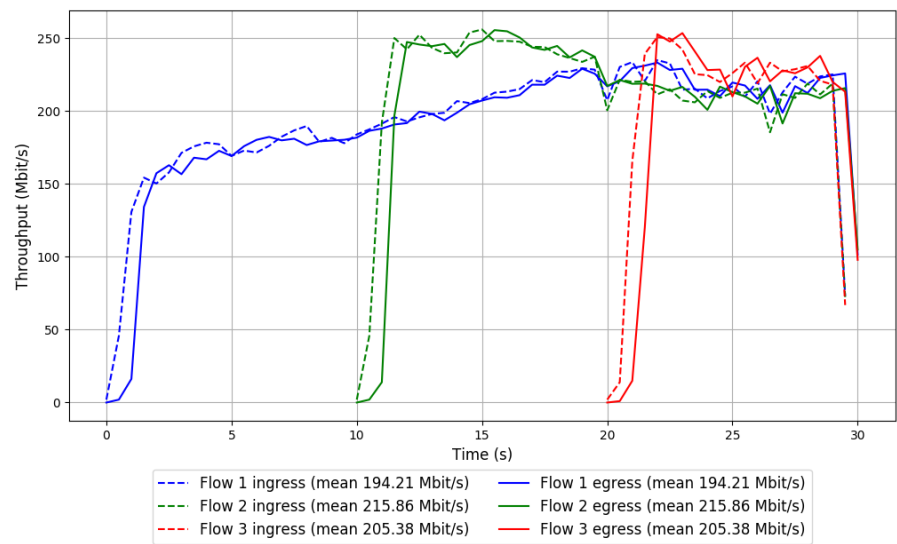
-- Flow 3:

Average throughput: 205.38 Mbit/s

95th percentile per-packet one-way delay: 66.782 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

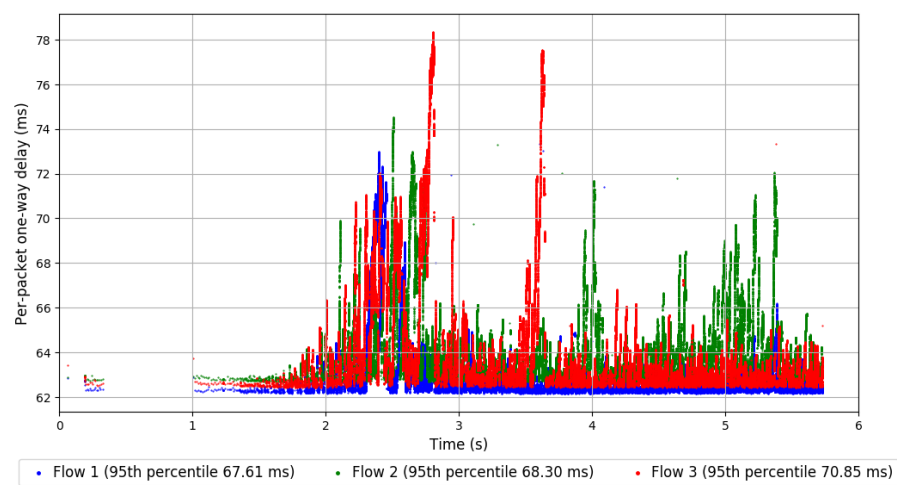
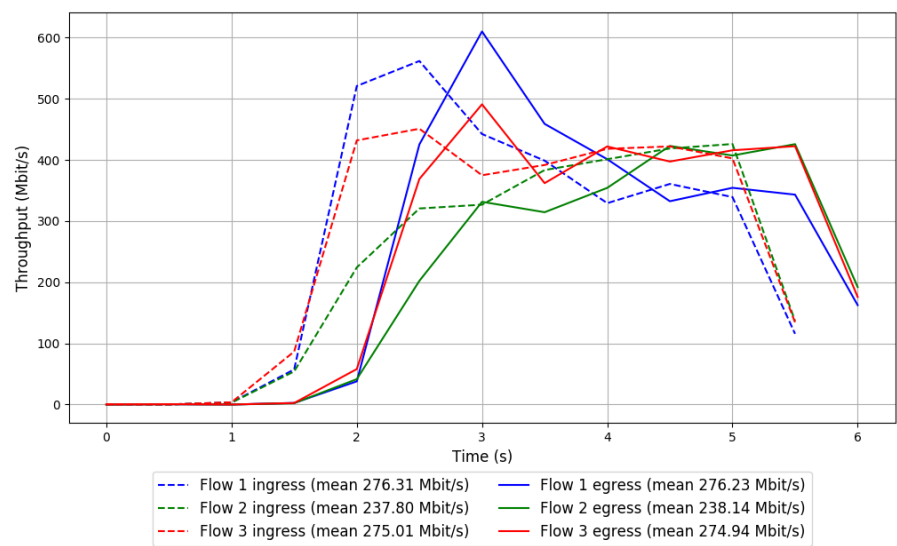
Start at: 2019-02-20 11:58:49

End at: 2019-02-20 11:59:19

Local clock offset: -0.114 ms

Remote clock offset: -0.503 ms

Run 1: Report of Indigo-MusesC3 — Data Link

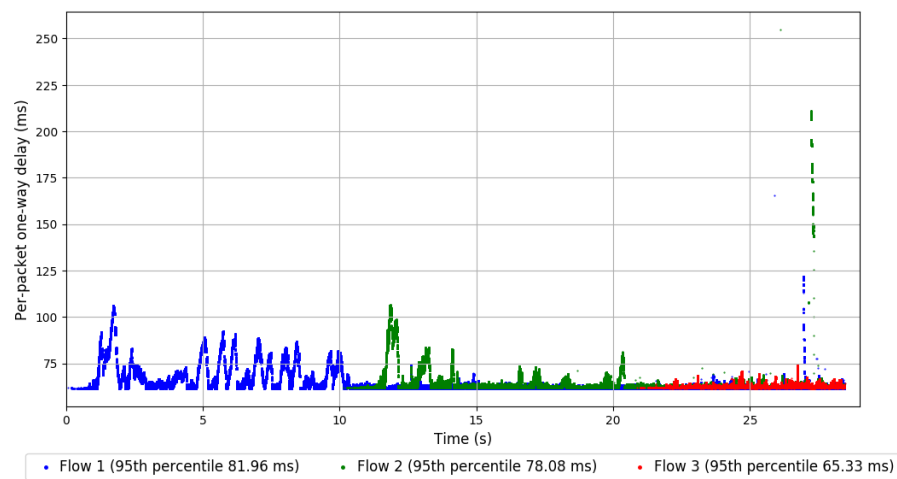
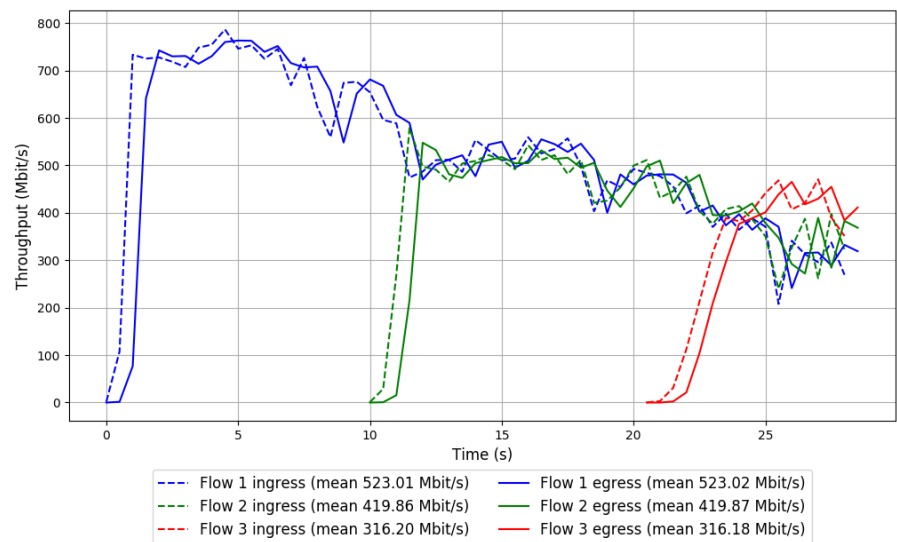


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-20 12:35:34  
End at: 2019-02-20 12:36:04  
Local clock offset: -0.082 ms  
Remote clock offset: -1.447 ms

# Below is generated by plot.py at 2019-02-20 16:36:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 878.22 Mbit/s  
95th percentile per-packet one-way delay: 80.256 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 523.02 Mbit/s  
95th percentile per-packet one-way delay: 81.960 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 419.87 Mbit/s  
95th percentile per-packet one-way delay: 78.079 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 316.18 Mbit/s  
95th percentile per-packet one-way delay: 65.330 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesC3 — Data Link



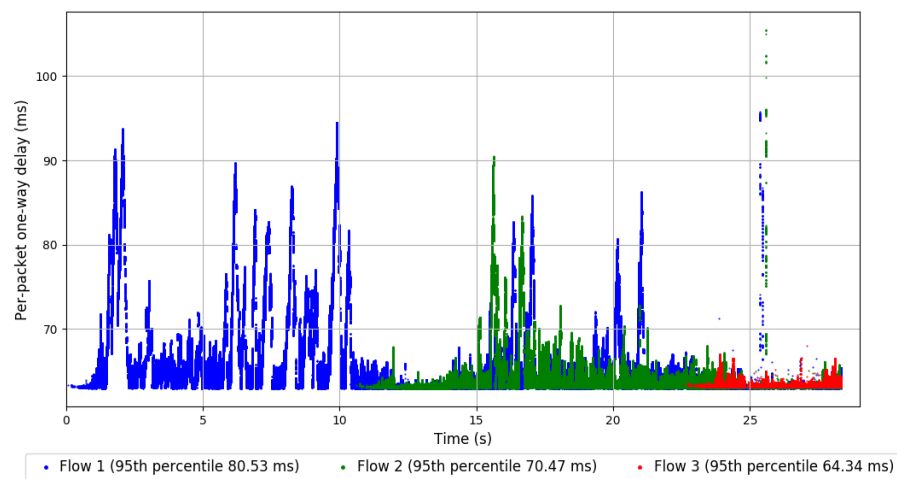
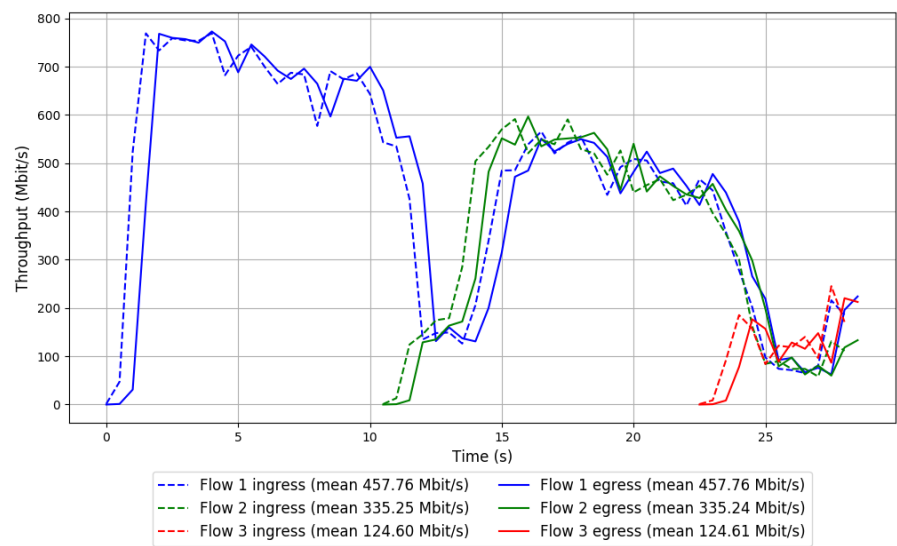


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-20 13:12:41  
End at: 2019-02-20 13:13:11  
Local clock offset: -0.087 ms  
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2019-02-20 16:36:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 693.09 Mbit/s  
95th percentile per-packet one-way delay: 78.376 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 457.76 Mbit/s  
95th percentile per-packet one-way delay: 80.531 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 335.24 Mbit/s  
95th percentile per-packet one-way delay: 70.467 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 124.61 Mbit/s  
95th percentile per-packet one-way delay: 64.340 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-20 13:49:24

End at: 2019-02-20 13:49:54

Local clock offset: -0.138 ms

Remote clock offset: 0.612 ms

# Below is generated by plot.py at 2019-02-20 16:47:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 911.92 Mbit/s

95th percentile per-packet one-way delay: 82.835 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 541.75 Mbit/s

95th percentile per-packet one-way delay: 84.758 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 447.61 Mbit/s

95th percentile per-packet one-way delay: 82.117 ms

Loss rate: 0.00%

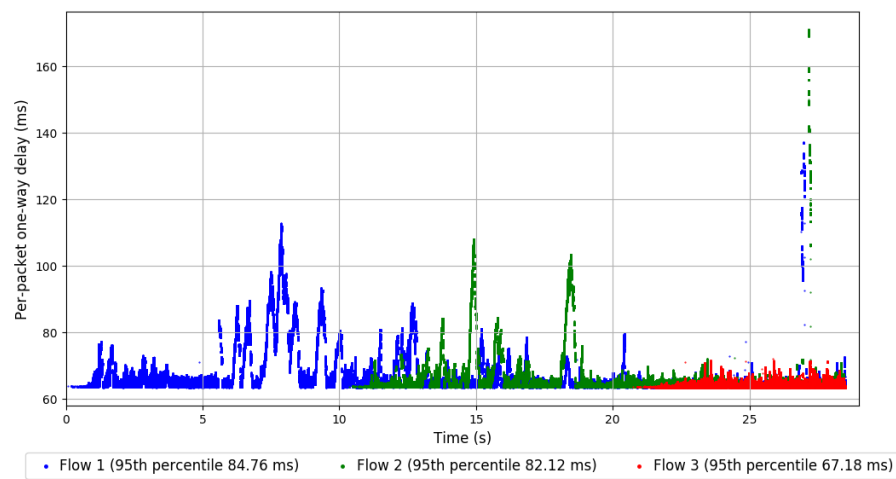
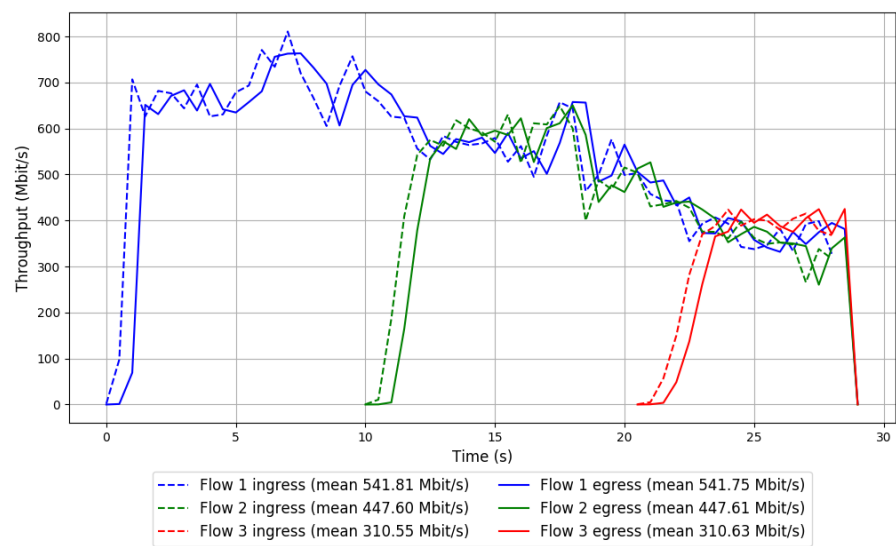
-- Flow 3:

Average throughput: 310.63 Mbit/s

95th percentile per-packet one-way delay: 67.180 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-20 14:26:20

End at: 2019-02-20 14:26:50

Local clock offset: -0.011 ms

Remote clock offset: 1.229 ms

# Below is generated by plot.py at 2019-02-20 16:47:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 854.60 Mbit/s

95th percentile per-packet one-way delay: 83.439 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 500.78 Mbit/s

95th percentile per-packet one-way delay: 92.345 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 420.05 Mbit/s

95th percentile per-packet one-way delay: 74.465 ms

Loss rate: 0.01%

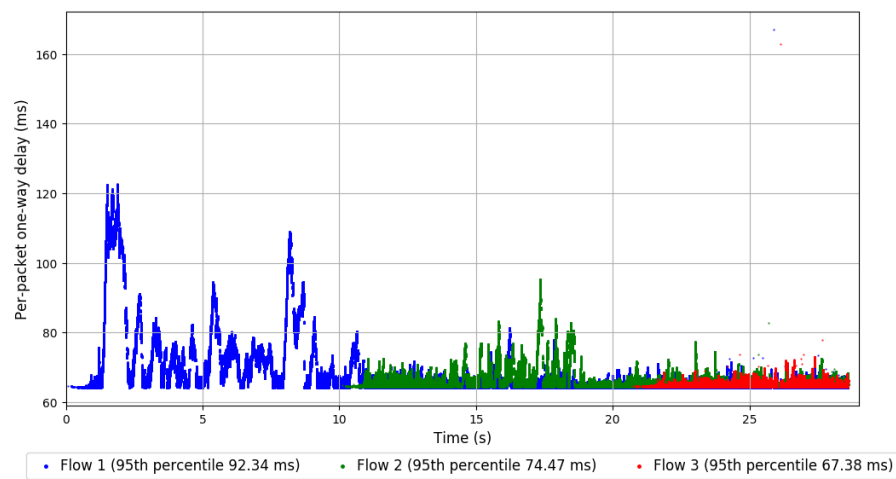
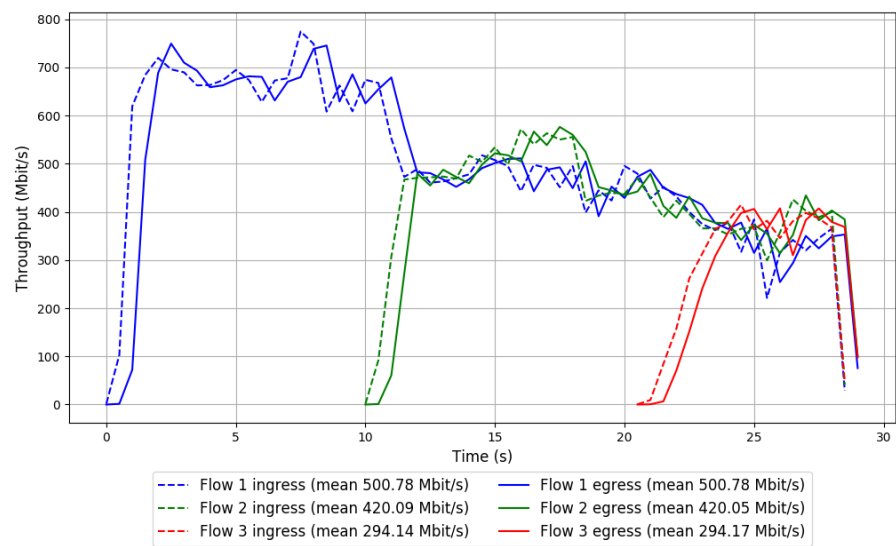
-- Flow 3:

Average throughput: 294.17 Mbit/s

95th percentile per-packet one-way delay: 67.375 ms

Loss rate: 0.01%

Run 5: Report of Indigo-MusesC3 — Data Link

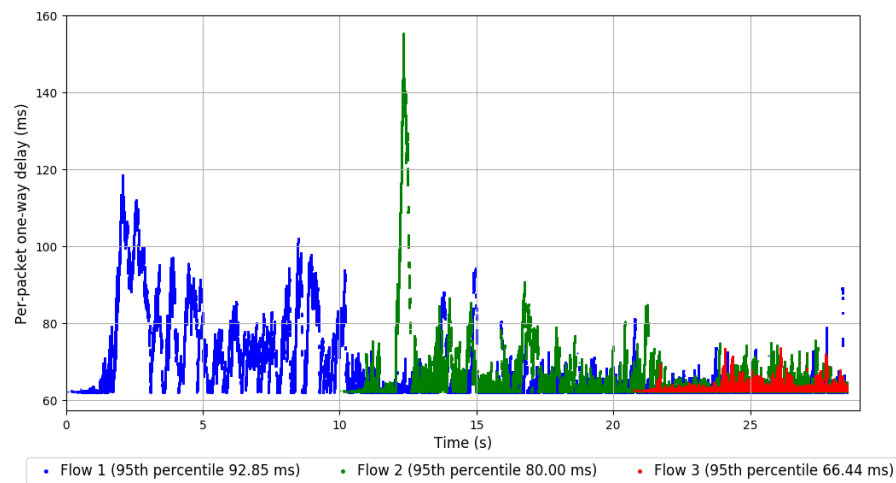
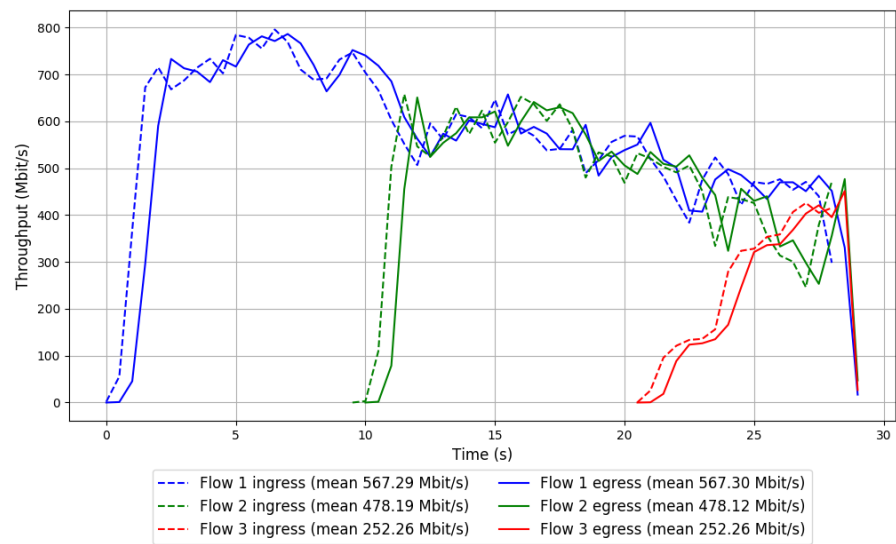


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-20 12:25:38  
End at: 2019-02-20 12:26:08  
Local clock offset: -0.045 ms  
Remote clock offset: -0.668 ms

# Below is generated by plot.py at 2019-02-20 16:49:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 947.92 Mbit/s  
95th percentile per-packet one-way delay: 89.782 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 567.30 Mbit/s  
95th percentile per-packet one-way delay: 92.846 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 478.12 Mbit/s  
95th percentile per-packet one-way delay: 80.001 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 252.26 Mbit/s  
95th percentile per-packet one-way delay: 66.445 ms  
Loss rate: 0.00%

Run 1: Report of Indigo-MusesC5 — Data Link



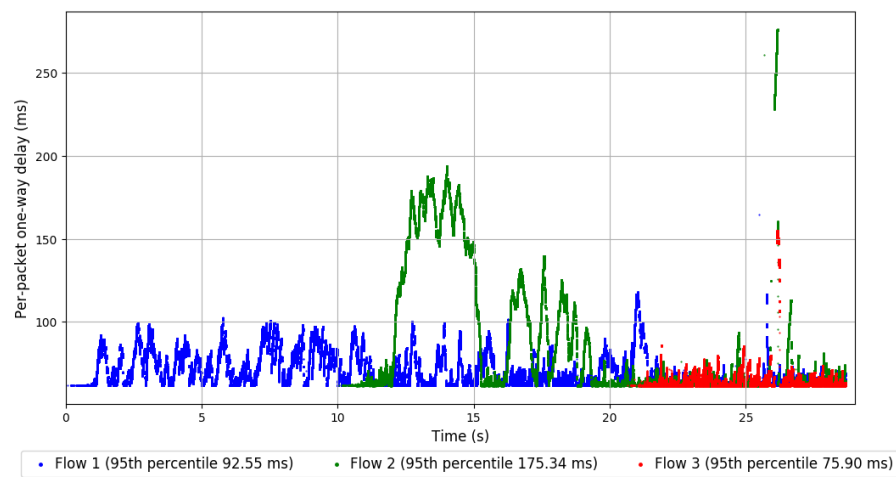
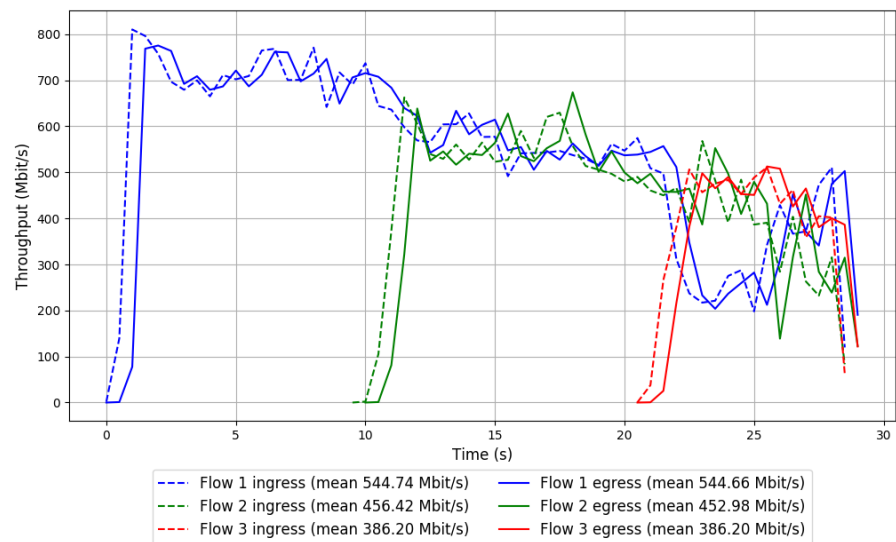


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-20 13:02:57  
End at: 2019-02-20 13:03:27  
Local clock offset: -0.093 ms  
Remote clock offset: -1.361 ms

# Below is generated by plot.py at 2019-02-20 16:50:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 947.39 Mbit/s  
95th percentile per-packet one-way delay: 145.622 ms  
Loss rate: 0.24%  
-- Flow 1:  
Average throughput: 544.66 Mbit/s  
95th percentile per-packet one-way delay: 92.551 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 452.98 Mbit/s  
95th percentile per-packet one-way delay: 175.339 ms  
Loss rate: 0.76%  
-- Flow 3:  
Average throughput: 386.20 Mbit/s  
95th percentile per-packet one-way delay: 75.904 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-20 13:39:46

End at: 2019-02-20 13:40:16

Local clock offset: -0.109 ms

Remote clock offset: -1.66 ms

# Below is generated by plot.py at 2019-02-20 16:50:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 914.13 Mbit/s

95th percentile per-packet one-way delay: 88.148 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 539.41 Mbit/s

95th percentile per-packet one-way delay: 93.377 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 436.14 Mbit/s

95th percentile per-packet one-way delay: 76.694 ms

Loss rate: 0.00%

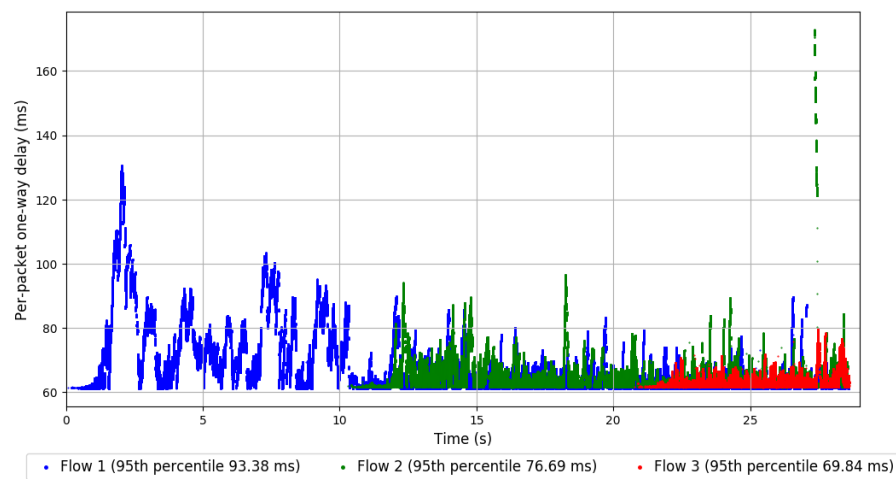
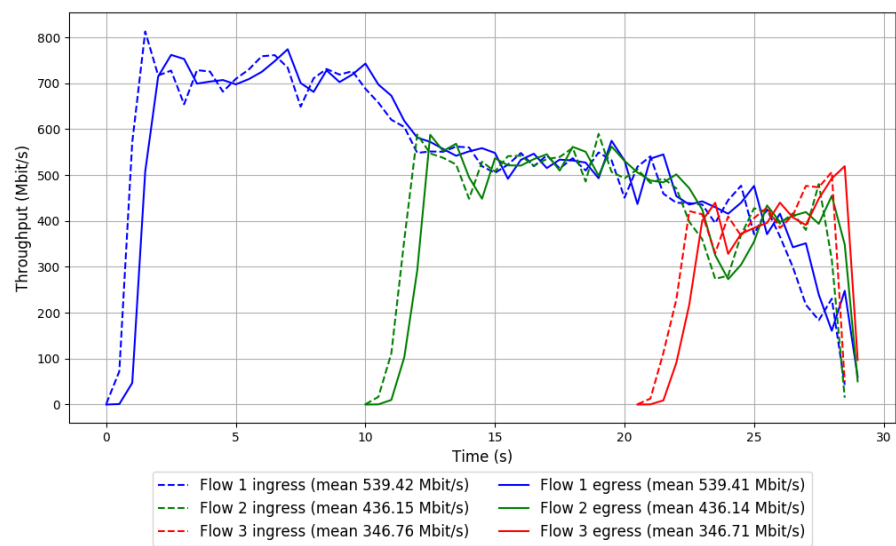
-- Flow 3:

Average throughput: 346.71 Mbit/s

95th percentile per-packet one-way delay: 69.844 ms

Loss rate: 0.01%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-20 14:16:54

End at: 2019-02-20 14:17:24

Local clock offset: -0.023 ms

Remote clock offset: 0.936 ms

# Below is generated by plot.py at 2019-02-20 16:50:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 855.87 Mbit/s

95th percentile per-packet one-way delay: 107.335 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 550.26 Mbit/s

95th percentile per-packet one-way delay: 102.298 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 433.54 Mbit/s

95th percentile per-packet one-way delay: 127.497 ms

Loss rate: 0.00%

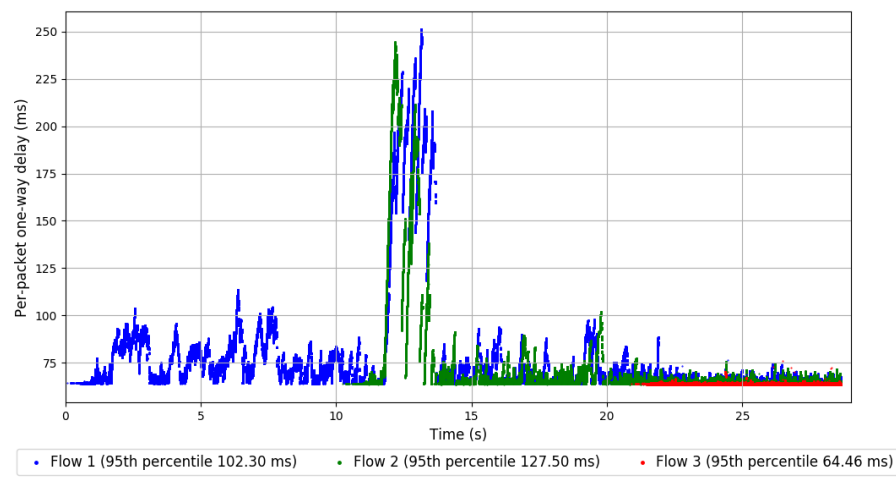
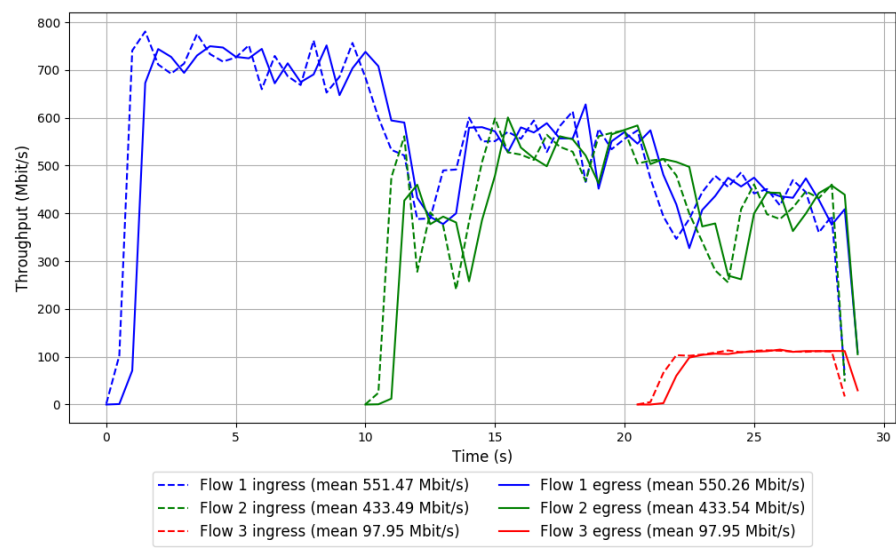
-- Flow 3:

Average throughput: 97.95 Mbit/s

95th percentile per-packet one-way delay: 64.458 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesC5 — Data Link

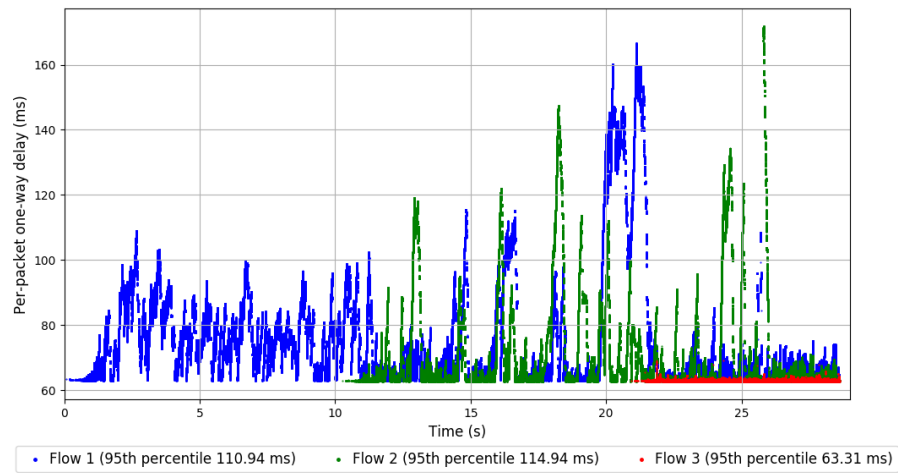
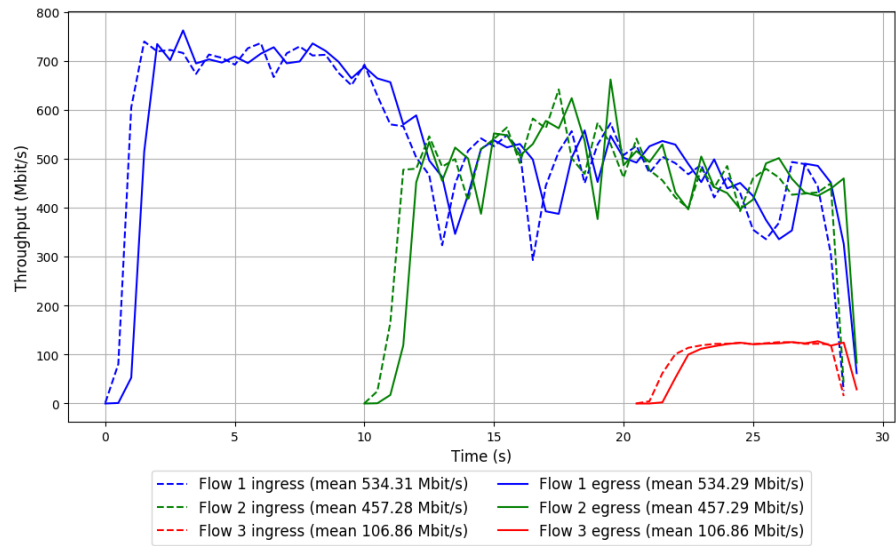


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-02-20 14:53:46  
End at: 2019-02-20 14:54:16  
Local clock offset: -0.046 ms  
Remote clock offset: -0.389 ms

# Below is generated by plot.py at 2019-02-20 16:50:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 856.71 Mbit/s  
95th percentile per-packet one-way delay: 112.700 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 534.29 Mbit/s  
95th percentile per-packet one-way delay: 110.936 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 457.29 Mbit/s  
95th percentile per-packet one-way delay: 114.935 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 106.86 Mbit/s  
95th percentile per-packet one-way delay: 63.313 ms  
Loss rate: 0.00%

# Run 5: Report of Indigo-MusesC5 — Data Link



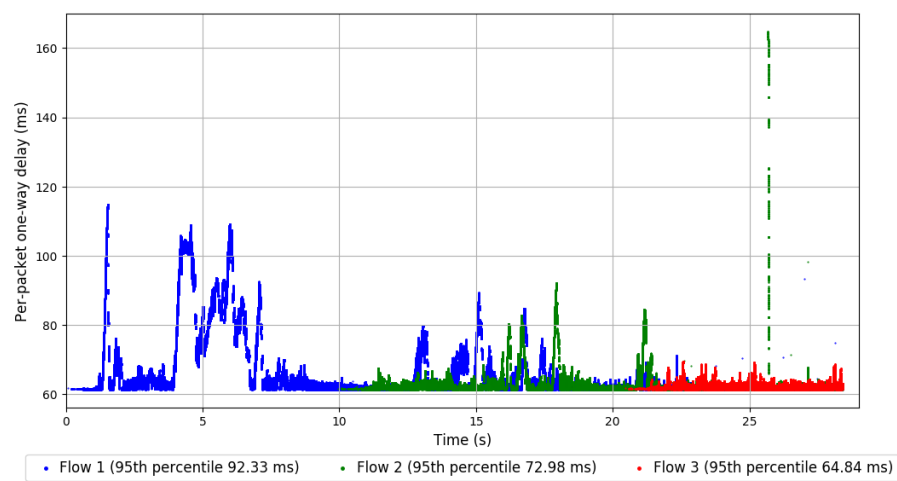
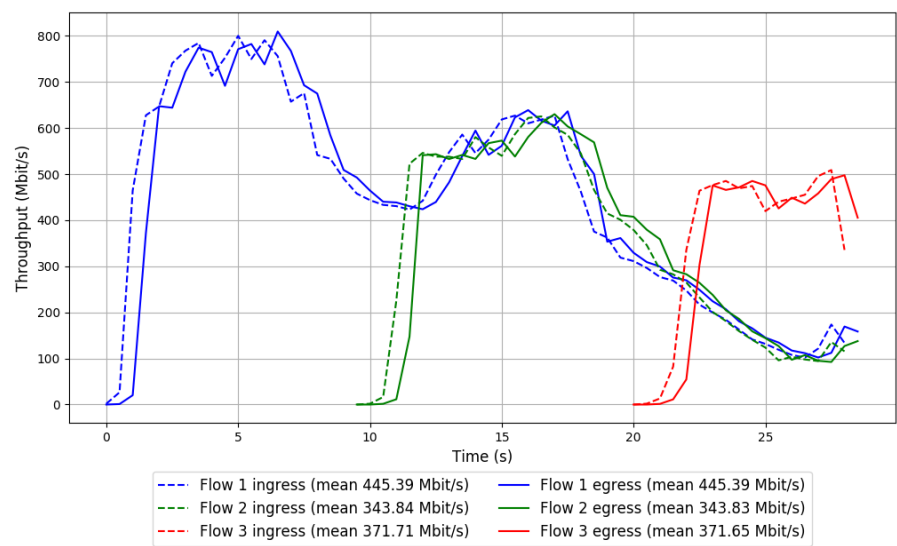


Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-20 12:20:38  
End at: 2019-02-20 12:21:08  
Local clock offset: -0.086 ms  
Remote clock offset: -1.438 ms

# Below is generated by plot.py at 2019-02-20 16:50:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 773.40 Mbit/s  
95th percentile per-packet one-way delay: 86.122 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 445.39 Mbit/s  
95th percentile per-packet one-way delay: 92.330 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 343.83 Mbit/s  
95th percentile per-packet one-way delay: 72.979 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 371.65 Mbit/s  
95th percentile per-packet one-way delay: 64.838 ms  
Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link

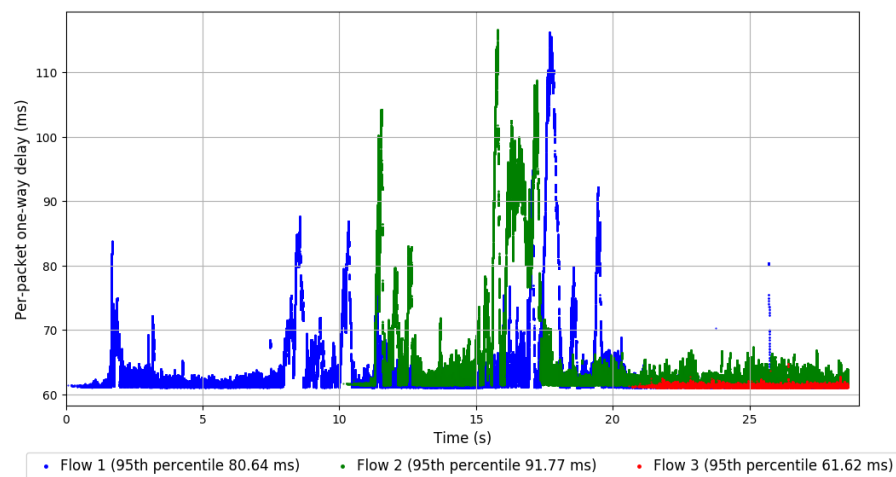
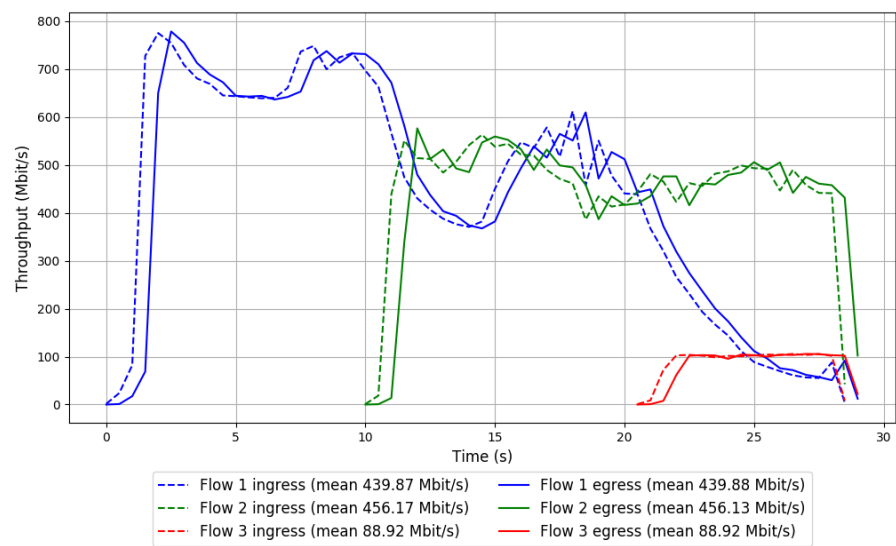


Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-20 12:58:04  
End at: 2019-02-20 12:58:34  
Local clock offset: -0.07 ms  
Remote clock offset: -1.586 ms

# Below is generated by plot.py at 2019-02-20 16:59:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 759.72 Mbit/s  
95th percentile per-packet one-way delay: 84.722 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 439.88 Mbit/s  
95th percentile per-packet one-way delay: 80.637 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 456.13 Mbit/s  
95th percentile per-packet one-way delay: 91.767 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 88.92 Mbit/s  
95th percentile per-packet one-way delay: 61.624 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesD — Data Link

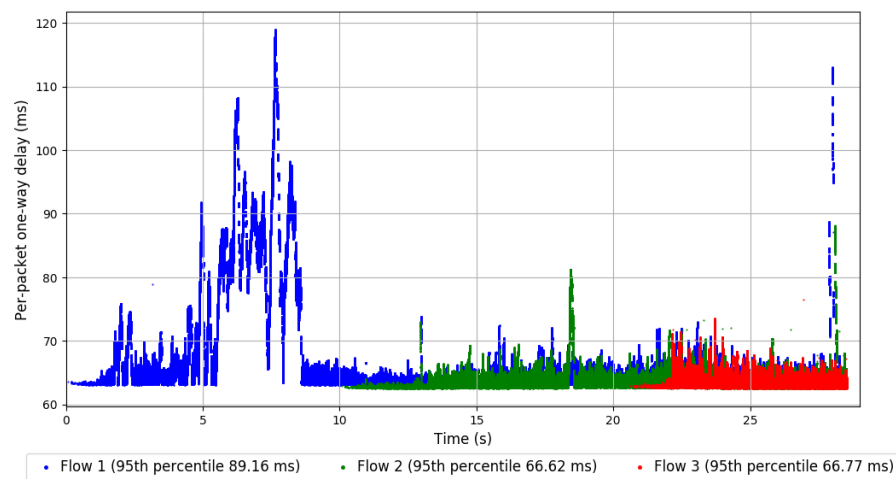
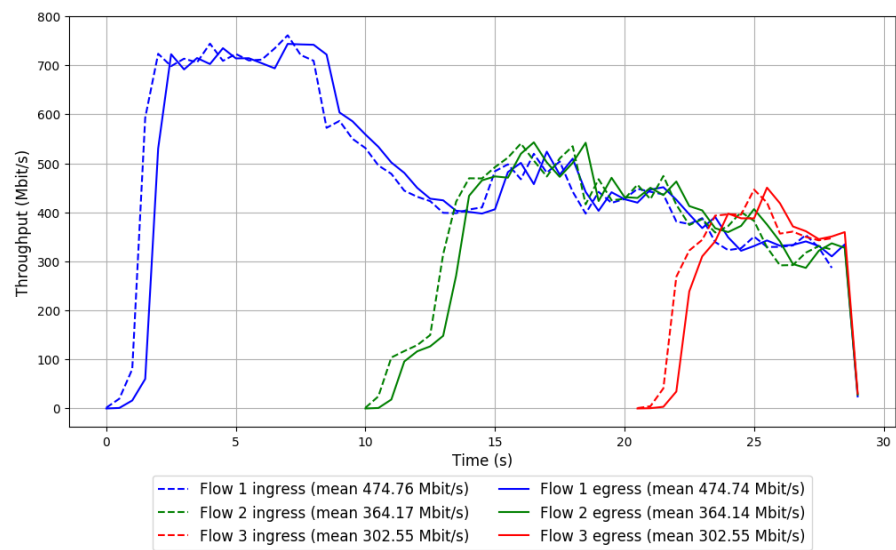


Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-20 13:34:49  
End at: 2019-02-20 13:35:19  
Local clock offset: -0.122 ms  
Remote clock offset: -0.186 ms

# Below is generated by plot.py at 2019-02-20 17:00:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 794.77 Mbit/s  
95th percentile per-packet one-way delay: 85.522 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 474.74 Mbit/s  
95th percentile per-packet one-way delay: 89.155 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 364.14 Mbit/s  
95th percentile per-packet one-way delay: 66.616 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 302.55 Mbit/s  
95th percentile per-packet one-way delay: 66.772 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesD — Data Link

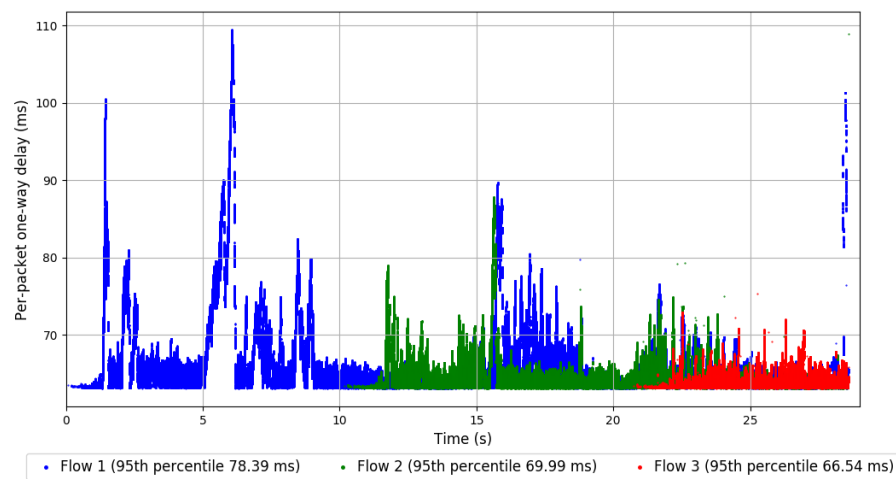
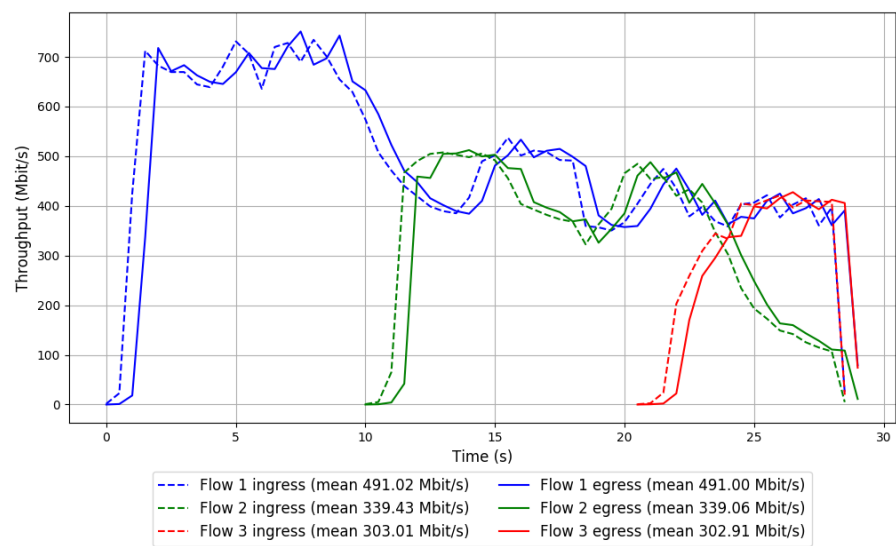


Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-20 14:11:57  
End at: 2019-02-20 14:12:27  
Local clock offset: -0.055 ms  
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2019-02-20 17:03:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 793.27 Mbit/s  
95th percentile per-packet one-way delay: 75.809 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 491.00 Mbit/s  
95th percentile per-packet one-way delay: 78.390 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 339.06 Mbit/s  
95th percentile per-packet one-way delay: 69.989 ms  
Loss rate: 0.07%  
-- Flow 3:  
Average throughput: 302.91 Mbit/s  
95th percentile per-packet one-way delay: 66.536 ms  
Loss rate: 0.03%

Run 4: Report of Indigo-MusesD — Data Link



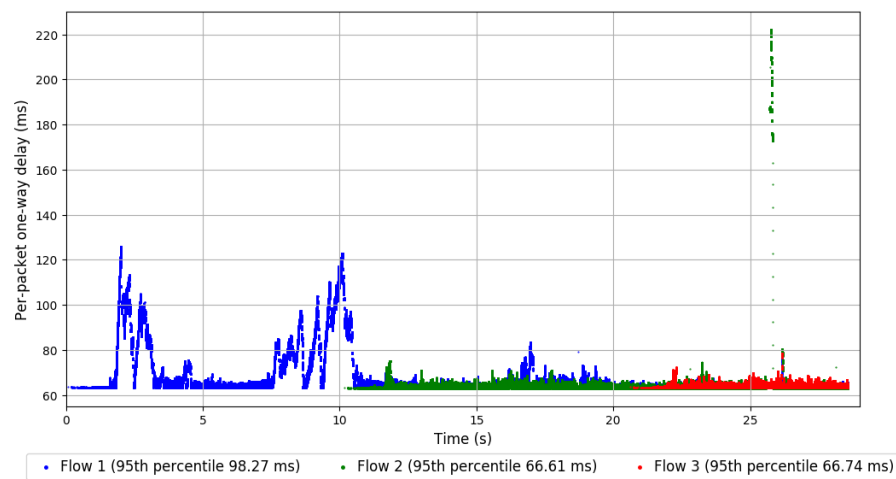
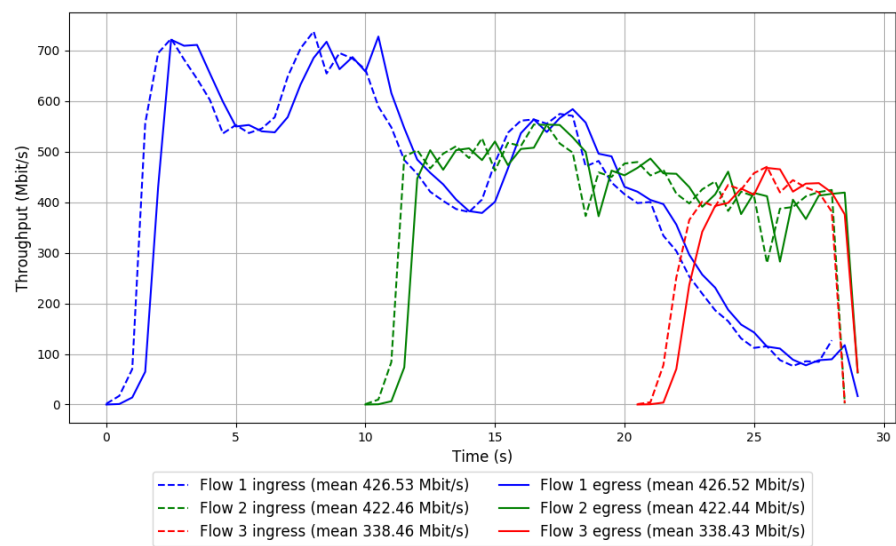


Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-20 14:48:51  
End at: 2019-02-20 14:49:21  
Local clock offset: -0.029 ms  
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2019-02-20 17:03:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 793.42 Mbit/s  
95th percentile per-packet one-way delay: 91.763 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 426.52 Mbit/s  
95th percentile per-packet one-way delay: 98.265 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 422.44 Mbit/s  
95th percentile per-packet one-way delay: 66.607 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 338.43 Mbit/s  
95th percentile per-packet one-way delay: 66.743 ms  
Loss rate: 0.01%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-20 12:17:26

End at: 2019-02-20 12:17:56

Local clock offset: -0.11 ms

Remote clock offset: -0.13 ms

# Below is generated by plot.py at 2019-02-20 17:06:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 971.31 Mbit/s

95th percentile per-packet one-way delay: 124.283 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 572.71 Mbit/s

95th percentile per-packet one-way delay: 137.427 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 466.72 Mbit/s

95th percentile per-packet one-way delay: 86.861 ms

Loss rate: 0.00%

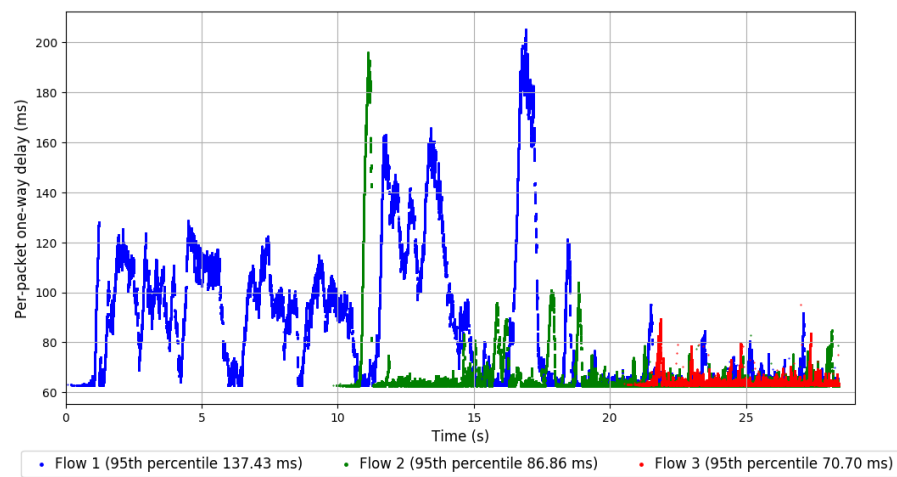
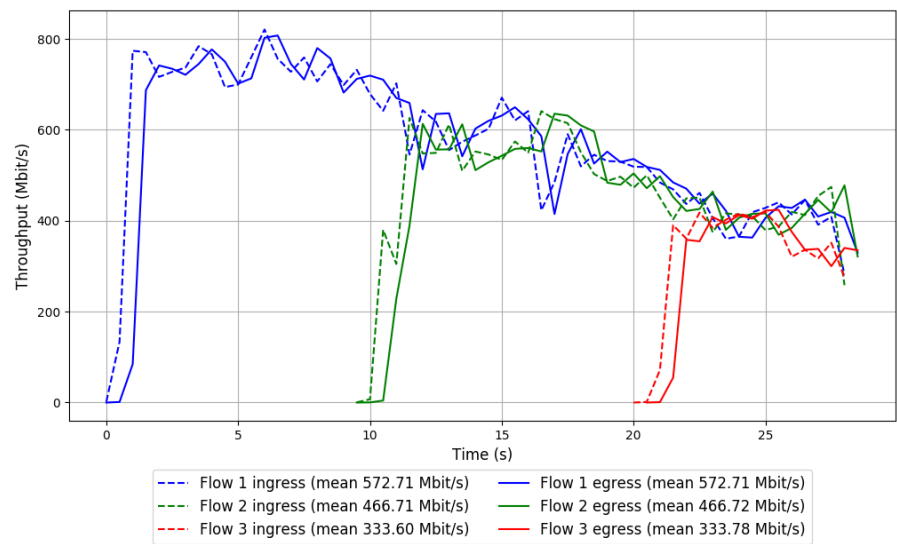
-- Flow 3:

Average throughput: 333.78 Mbit/s

95th percentile per-packet one-way delay: 70.705 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesT — Data Link

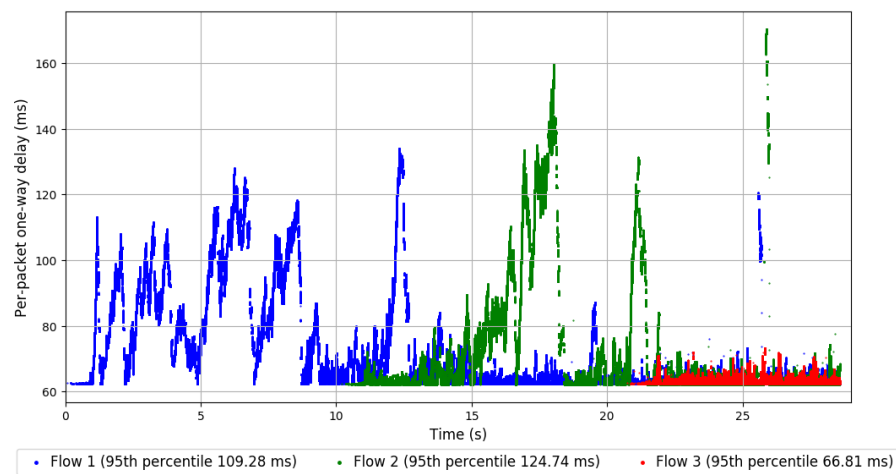
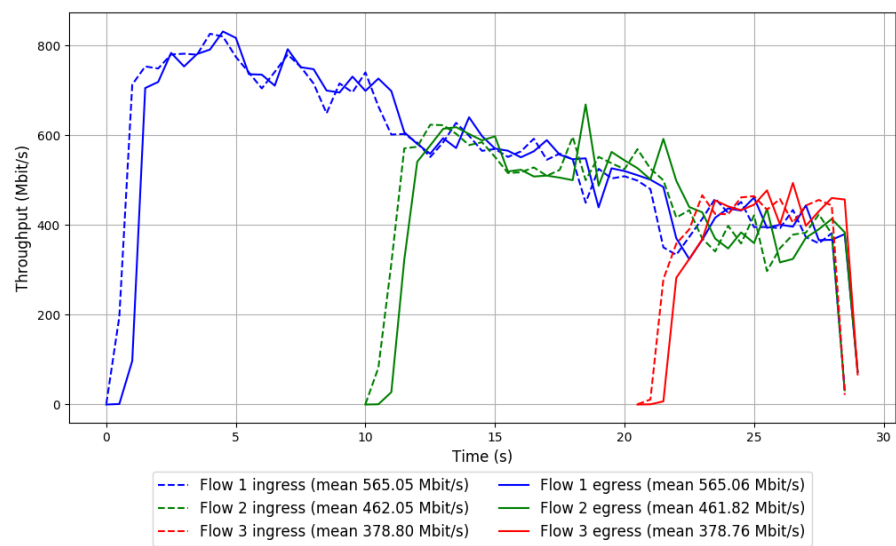


Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-20 12:54:53  
End at: 2019-02-20 12:55:23  
Local clock offset: -0.065 ms  
Remote clock offset: -0.488 ms

# Below is generated by plot.py at 2019-02-20 17:07:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 966.55 Mbit/s  
95th percentile per-packet one-way delay: 111.063 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 565.06 Mbit/s  
95th percentile per-packet one-way delay: 109.275 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 461.82 Mbit/s  
95th percentile per-packet one-way delay: 124.742 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 378.76 Mbit/s  
95th percentile per-packet one-way delay: 66.805 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-20 13:31:36

End at: 2019-02-20 13:32:06

Local clock offset: -0.115 ms

Remote clock offset: 0.11 ms

# Below is generated by plot.py at 2019-02-20 17:07:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 966.65 Mbit/s

95th percentile per-packet one-way delay: 139.020 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 569.27 Mbit/s

95th percentile per-packet one-way delay: 136.067 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 461.65 Mbit/s

95th percentile per-packet one-way delay: 165.102 ms

Loss rate: 0.08%

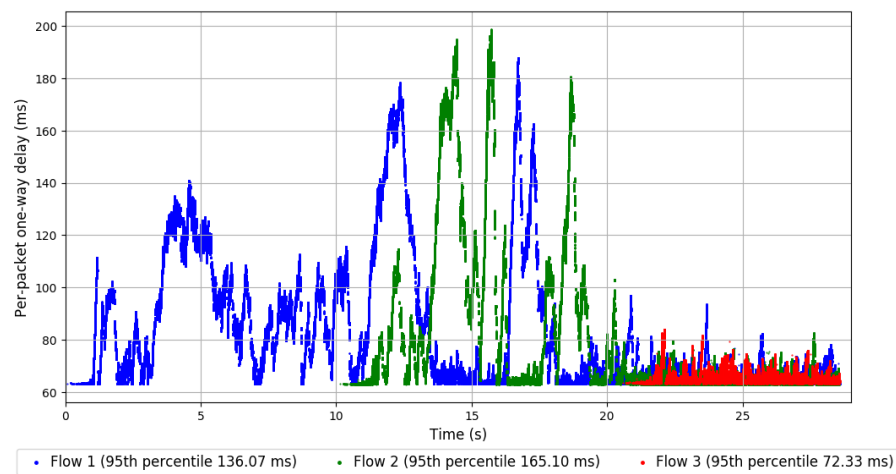
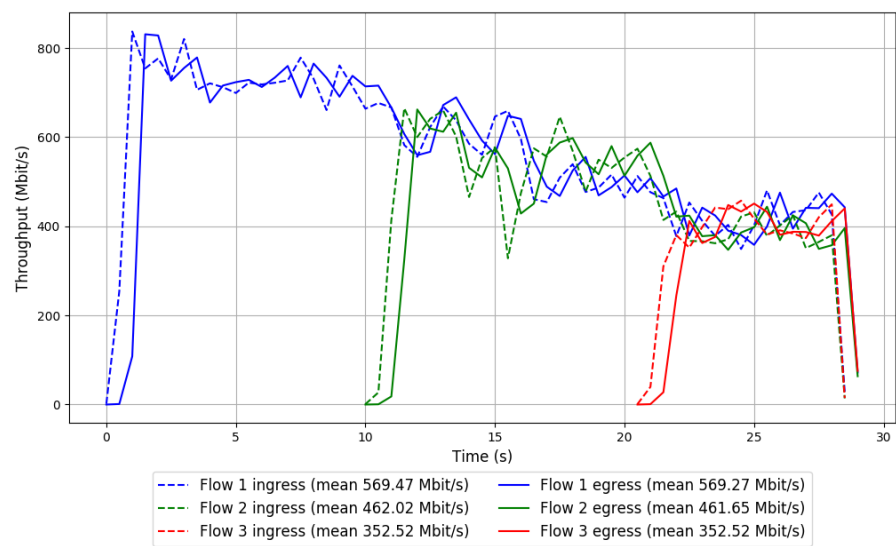
-- Flow 3:

Average throughput: 352.52 Mbit/s

95th percentile per-packet one-way delay: 72.333 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesT — Data Link





Run 4: Statistics of Indigo-MusesT

Start at: 2019-02-20 14:08:49

End at: 2019-02-20 14:09:19

Local clock offset: -0.051 ms

Remote clock offset: -0.72 ms

# Below is generated by plot.py at 2019-02-20 17:07:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 888.59 Mbit/s

95th percentile per-packet one-way delay: 109.752 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 526.43 Mbit/s

95th percentile per-packet one-way delay: 112.925 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 421.55 Mbit/s

95th percentile per-packet one-way delay: 88.629 ms

Loss rate: 0.02%

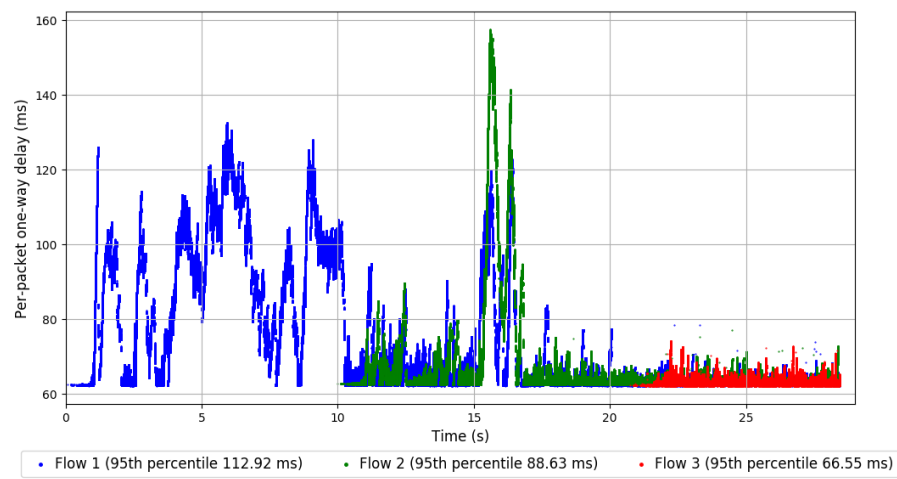
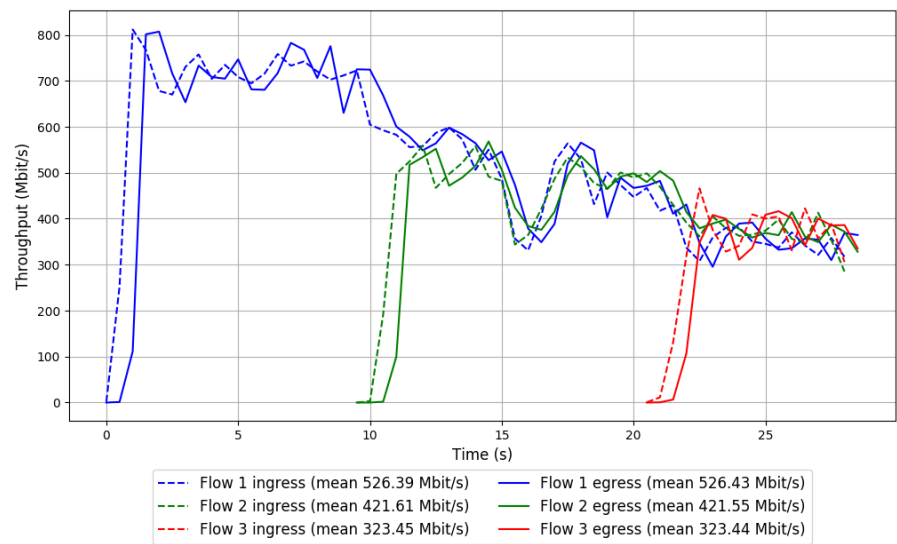
-- Flow 3:

Average throughput: 323.44 Mbit/s

95th percentile per-packet one-way delay: 66.550 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesT — Data Link

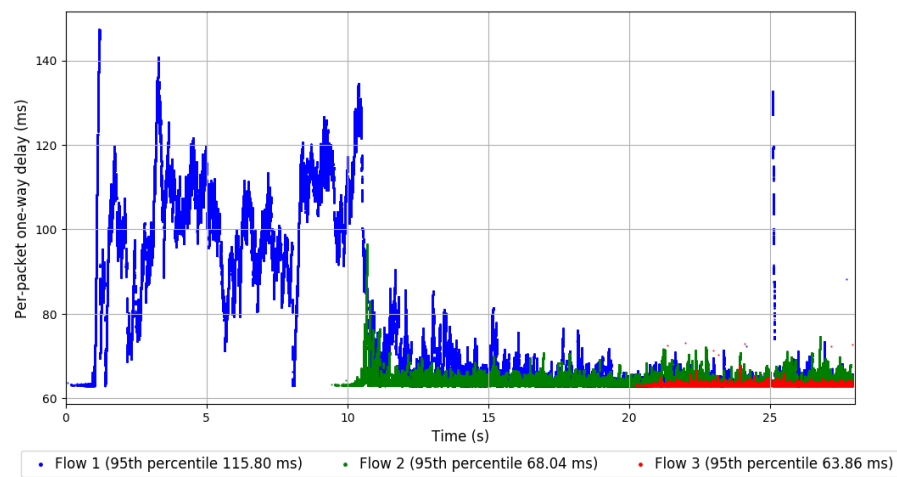
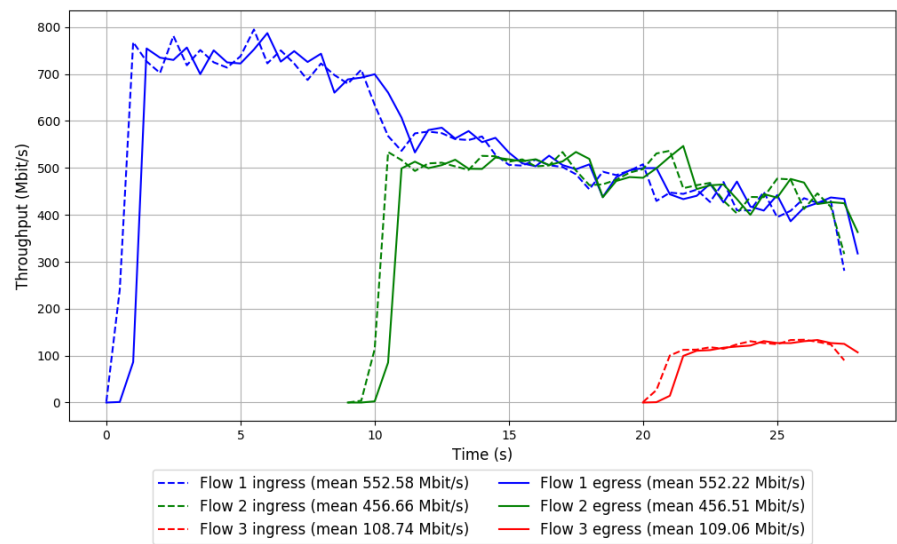


Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-20 14:45:41  
End at: 2019-02-20 14:46:11  
Local clock offset: -0.072 ms  
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2019-02-20 17:13:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 885.69 Mbit/s  
95th percentile per-packet one-way delay: 112.724 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 552.22 Mbit/s  
95th percentile per-packet one-way delay: 115.799 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 456.51 Mbit/s  
95th percentile per-packet one-way delay: 68.042 ms  
Loss rate: 0.09%  
-- Flow 3:  
Average throughput: 109.06 Mbit/s  
95th percentile per-packet one-way delay: 63.862 ms  
Loss rate: 0.00%

Run 5: Report of Indigo-MusesT — Data Link

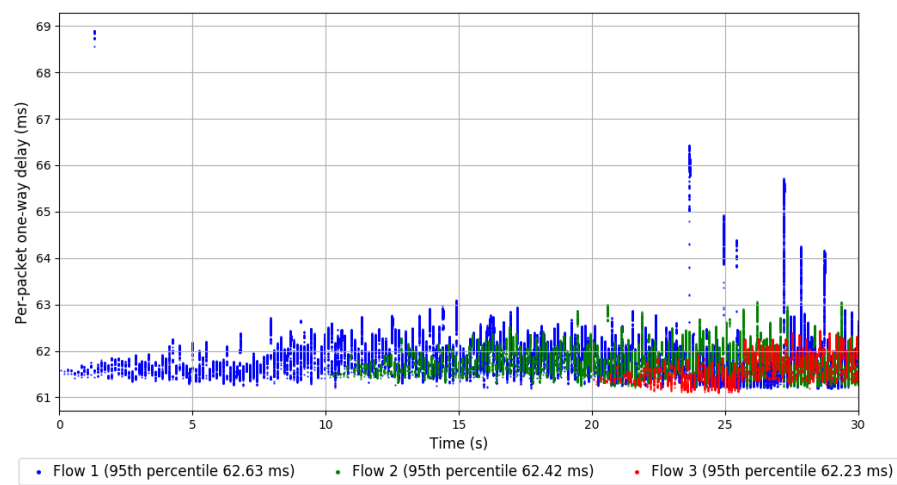
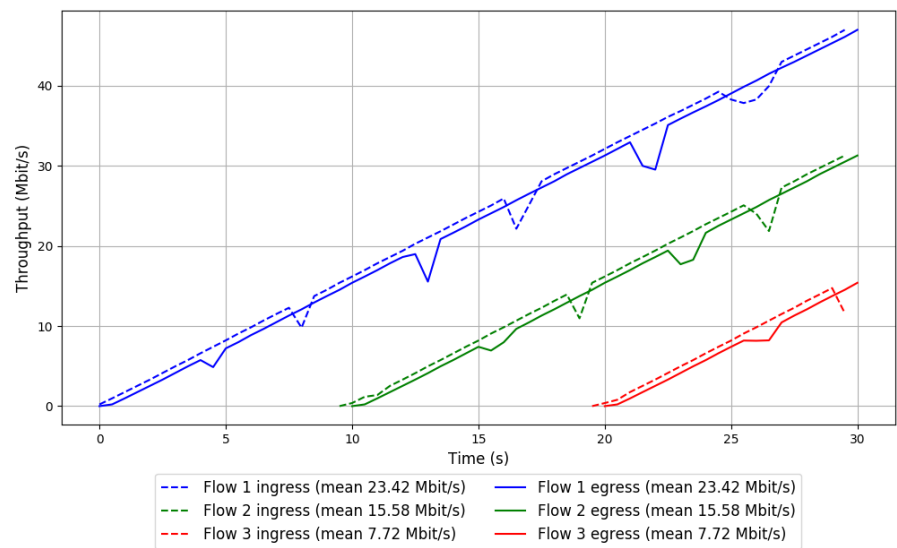


```
Run 1: Statistics of LEDBAT

Start at: 2019-02-20 12:22:28
End at: 2019-02-20 12:22:58
Local clock offset: -0.086 ms
Remote clock offset: -1.591 ms

# Below is generated by plot.py at 2019-02-20 17:13:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.35 Mbit/s
95th percentile per-packet one-way delay: 62.541 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.42 Mbit/s
95th percentile per-packet one-way delay: 62.627 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.58 Mbit/s
95th percentile per-packet one-way delay: 62.424 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.72 Mbit/s
95th percentile per-packet one-way delay: 62.232 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

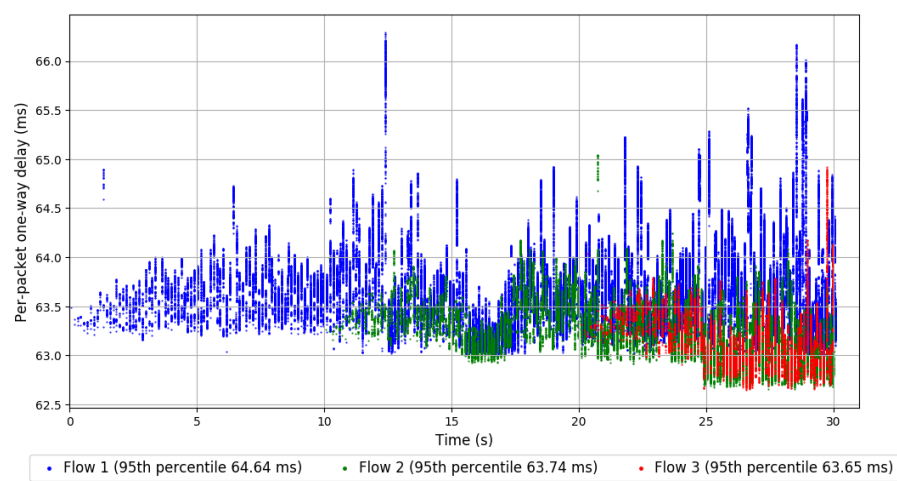
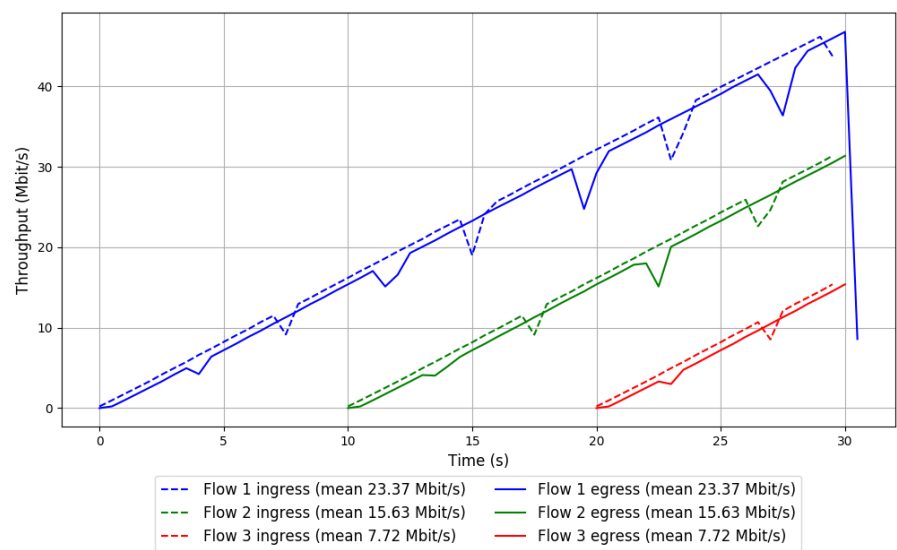


Run 2: Statistics of LEDBAT

Start at: 2019-02-20 12:59:53  
End at: 2019-02-20 13:00:23  
Local clock offset: -0.054 ms  
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2019-02-20 17:13:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 36.29 Mbit/s  
95th percentile per-packet one-way delay: 64.466 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 23.37 Mbit/s  
95th percentile per-packet one-way delay: 64.644 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 15.63 Mbit/s  
95th percentile per-packet one-way delay: 63.741 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 7.72 Mbit/s  
95th percentile per-packet one-way delay: 63.648 ms  
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link



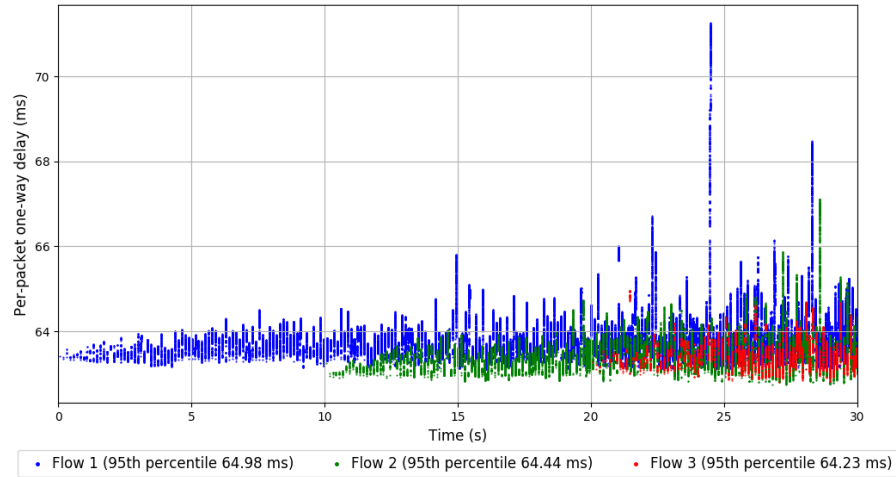
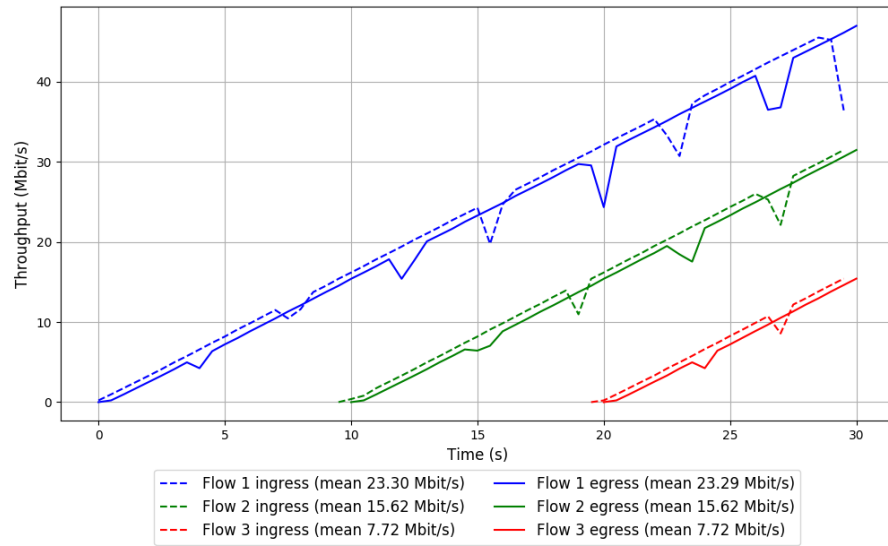


Run 3: Statistics of LEDBAT

Start at: 2019-02-20 13:36:40  
End at: 2019-02-20 13:37:10  
Local clock offset: -0.13 ms  
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2019-02-20 17:13:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 36.23 Mbit/s  
95th percentile per-packet one-way delay: 64.817 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 23.29 Mbit/s  
95th percentile per-packet one-way delay: 64.976 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 15.62 Mbit/s  
95th percentile per-packet one-way delay: 64.439 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 7.72 Mbit/s  
95th percentile per-packet one-way delay: 64.231 ms  
Loss rate: 0.00%

### Run 3: Report of LEDBAT — Data Link

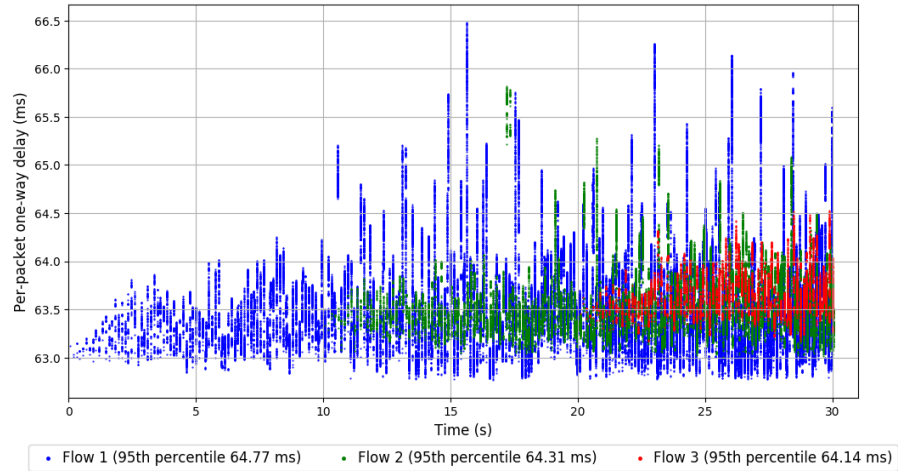
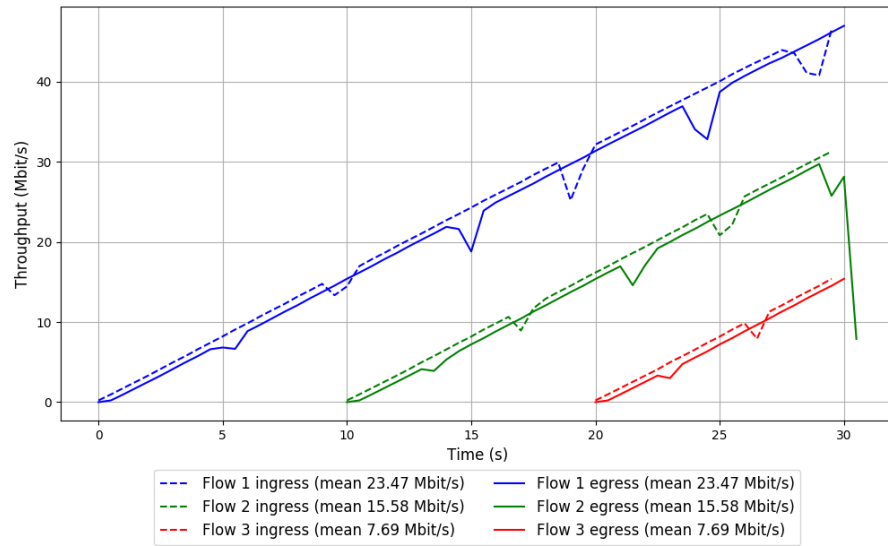


Run 4: Statistics of LEDBAT

Start at: 2019-02-20 14:13:49  
End at: 2019-02-20 14:14:19  
Local clock offset: -0.033 ms  
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2019-02-20 17:13:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 36.35 Mbit/s  
95th percentile per-packet one-way delay: 64.569 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 23.47 Mbit/s  
95th percentile per-packet one-way delay: 64.773 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 15.58 Mbit/s  
95th percentile per-packet one-way delay: 64.313 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 7.69 Mbit/s  
95th percentile per-packet one-way delay: 64.143 ms  
Loss rate: 0.00%

#### Run 4: Report of LEDBAT — Data Link

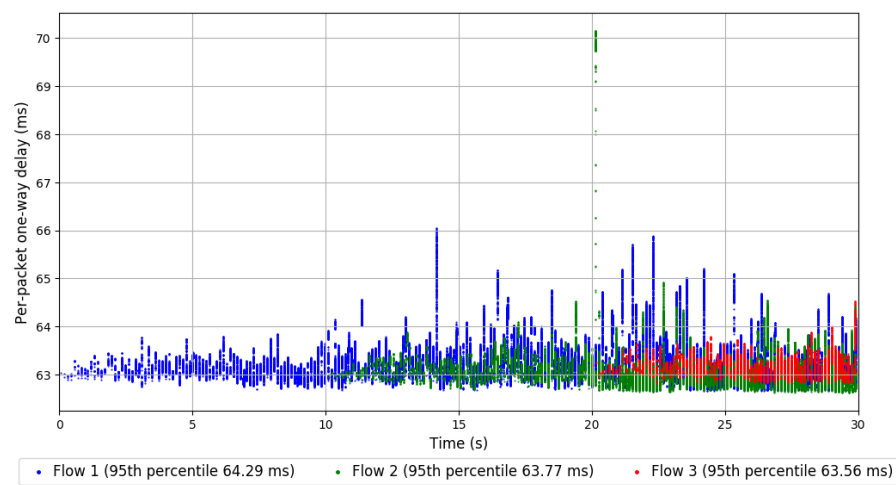
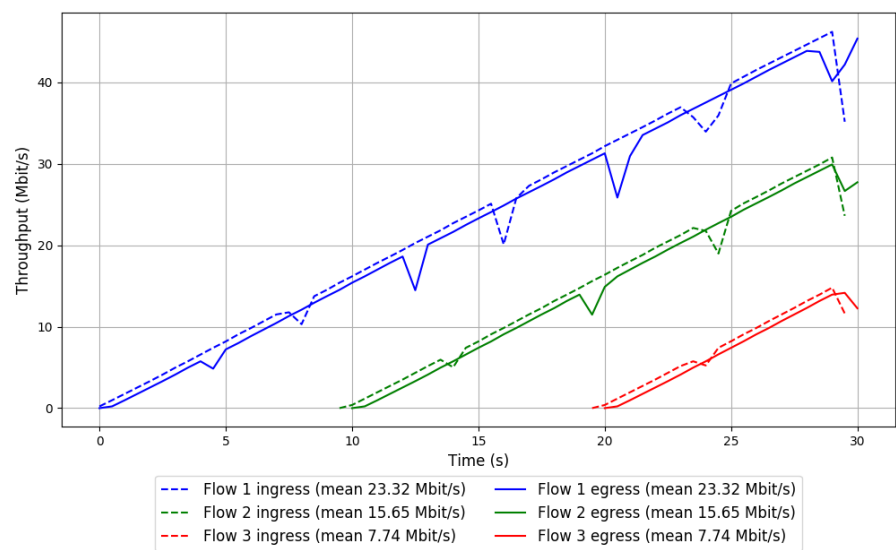


Run 5: Statistics of LEDBAT

Start at: 2019-02-20 14:50:42  
End at: 2019-02-20 14:51:12  
Local clock offset: -0.041 ms  
Remote clock offset: -0.161 ms

# Below is generated by plot.py at 2019-02-20 17:13:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 36.31 Mbit/s  
95th percentile per-packet one-way delay: 64.082 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 23.32 Mbit/s  
95th percentile per-packet one-way delay: 64.291 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 15.65 Mbit/s  
95th percentile per-packet one-way delay: 63.769 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 7.74 Mbit/s  
95th percentile per-packet one-way delay: 63.565 ms  
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

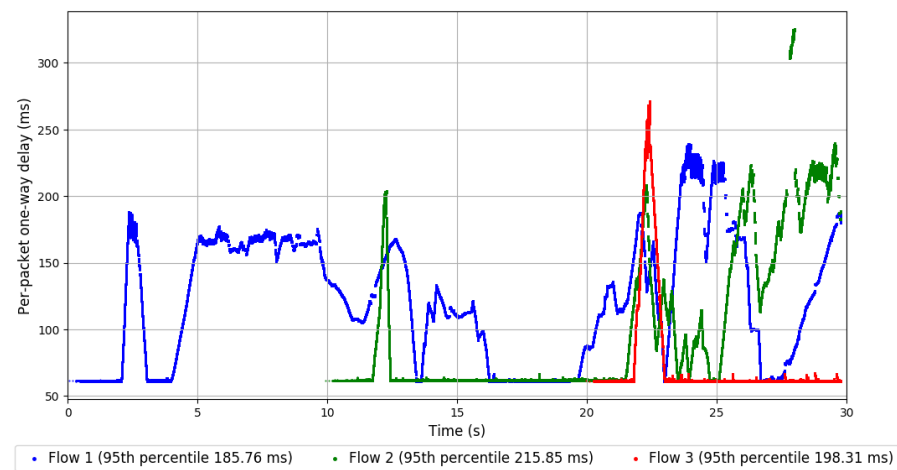
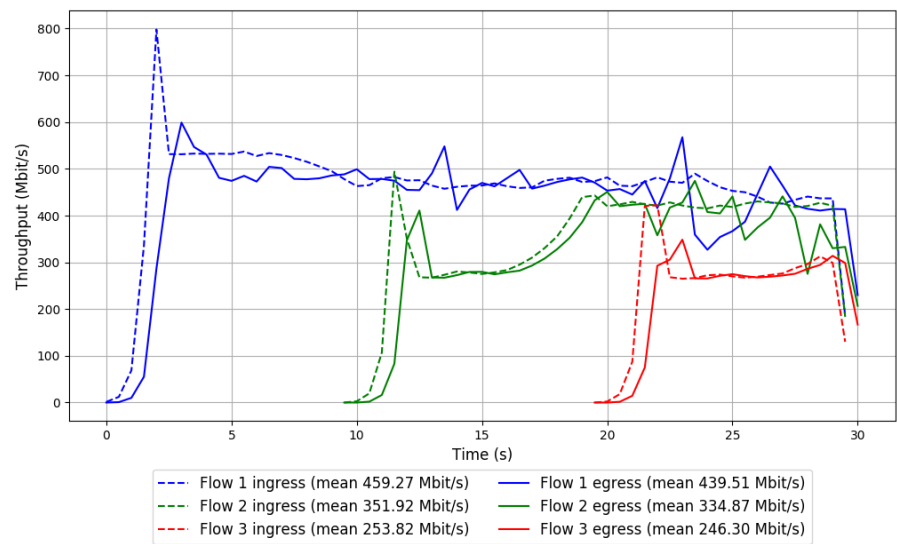


```
Run 1: Statistics of PCC-Allegro

Start at: 2019-02-20 12:06:14
End at: 2019-02-20 12:06:44
Local clock offset: -0.132 ms
Remote clock offset: -1.574 ms

# Below is generated by plot.py at 2019-02-20 17:30:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 744.39 Mbit/s
95th percentile per-packet one-way delay: 207.449 ms
Loss rate: 4.32%
-- Flow 1:
Average throughput: 439.51 Mbit/s
95th percentile per-packet one-way delay: 185.759 ms
Loss rate: 4.30%
-- Flow 2:
Average throughput: 334.87 Mbit/s
95th percentile per-packet one-way delay: 215.849 ms
Loss rate: 4.84%
-- Flow 3:
Average throughput: 246.30 Mbit/s
95th percentile per-packet one-way delay: 198.315 ms
Loss rate: 2.96%
```

Run 1: Report of PCC-Allegro — Data Link



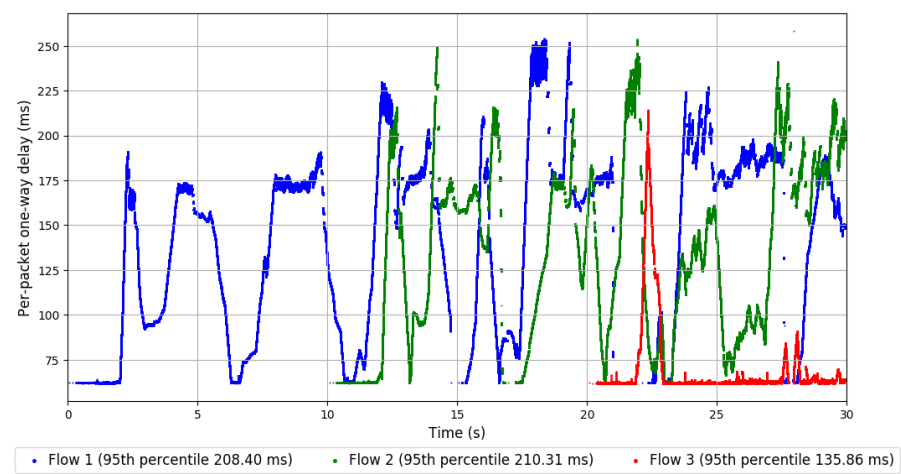
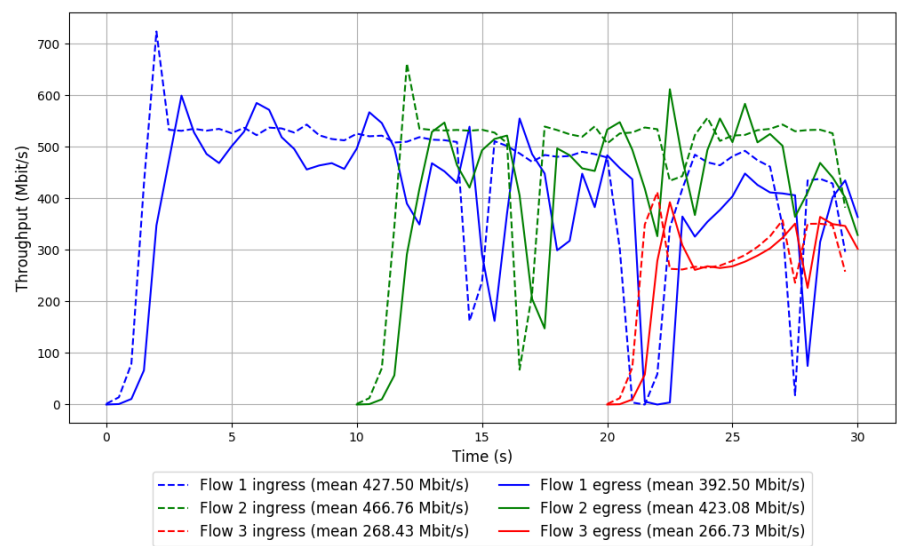


Run 2: Statistics of PCC-Allegro

Start at: 2019-02-20 12:43:42  
End at: 2019-02-20 12:44:12  
Local clock offset: -0.066 ms  
Remote clock offset: -0.851 ms

# Below is generated by plot.py at 2019-02-20 17:31:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 761.52 Mbit/s  
95th percentile per-packet one-way delay: 206.967 ms  
Loss rate: 7.81%  
-- Flow 1:  
Average throughput: 392.50 Mbit/s  
95th percentile per-packet one-way delay: 208.403 ms  
Loss rate: 8.18%  
-- Flow 2:  
Average throughput: 423.08 Mbit/s  
95th percentile per-packet one-way delay: 210.306 ms  
Loss rate: 9.35%  
-- Flow 3:  
Average throughput: 266.73 Mbit/s  
95th percentile per-packet one-way delay: 135.864 ms  
Loss rate: 0.62%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-02-20 13:20:37

End at: 2019-02-20 13:21:07

Local clock offset: -0.074 ms

Remote clock offset: -0.34 ms

# Below is generated by plot.py at 2019-02-20 17:31:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 675.00 Mbit/s

95th percentile per-packet one-way delay: 183.480 ms

Loss rate: 3.17%

-- Flow 1:

Average throughput: 377.30 Mbit/s

95th percentile per-packet one-way delay: 190.095 ms

Loss rate: 5.41%

-- Flow 2:

Average throughput: 324.47 Mbit/s

95th percentile per-packet one-way delay: 150.764 ms

Loss rate: 0.25%

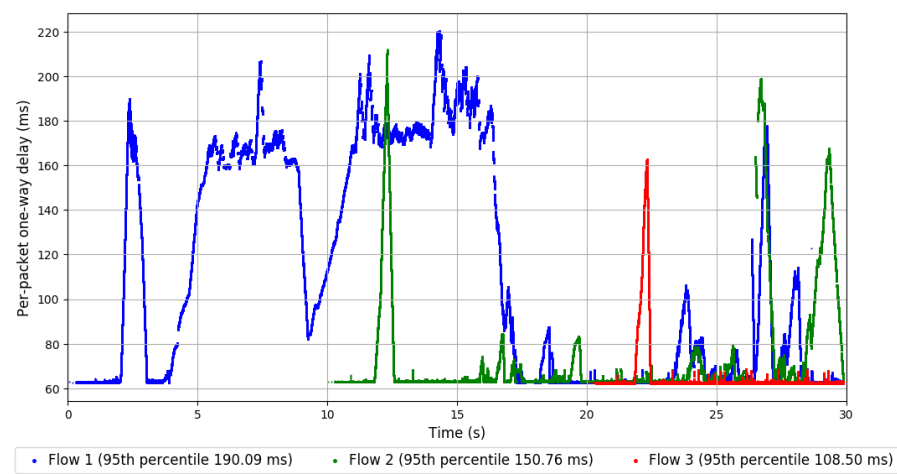
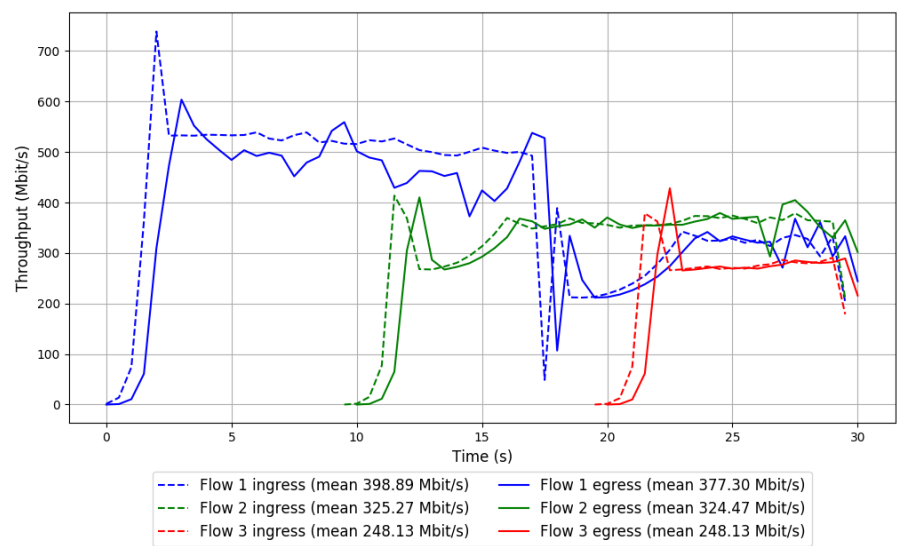
-- Flow 3:

Average throughput: 248.13 Mbit/s

95th percentile per-packet one-way delay: 108.500 ms

Loss rate: 0.00%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-02-20 13:57:32

End at: 2019-02-20 13:58:02

Local clock offset: -0.104 ms

Remote clock offset: 0.524 ms

# Below is generated by plot.py at 2019-02-20 17:31:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 713.58 Mbit/s

95th percentile per-packet one-way delay: 185.932 ms

Loss rate: 3.21%

-- Flow 1:

Average throughput: 426.09 Mbit/s

95th percentile per-packet one-way delay: 184.711 ms

Loss rate: 4.09%

-- Flow 2:

Average throughput: 314.21 Mbit/s

95th percentile per-packet one-way delay: 196.253 ms

Loss rate: 1.22%

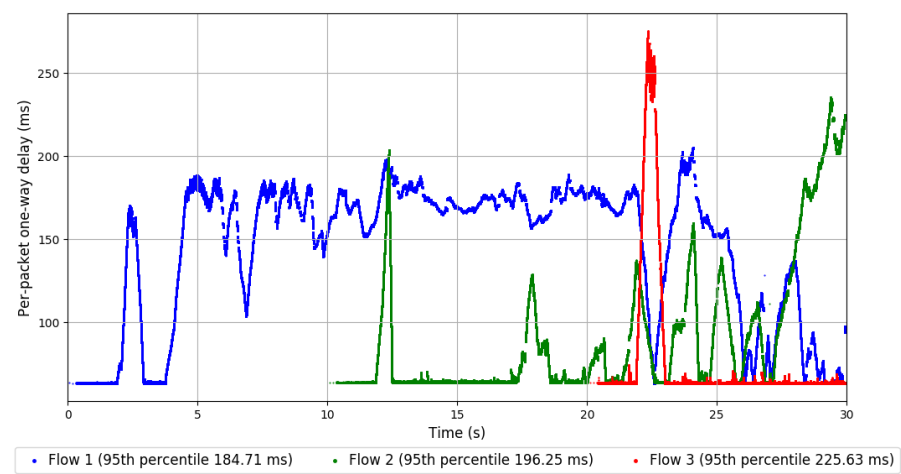
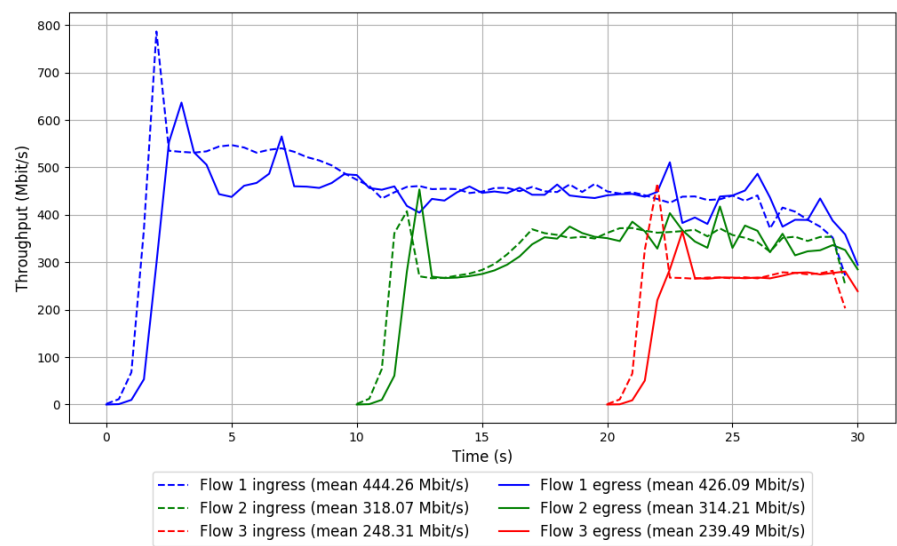
-- Flow 3:

Average throughput: 239.49 Mbit/s

95th percentile per-packet one-way delay: 225.627 ms

Loss rate: 3.56%

Run 4: Report of PCC-Allegro — Data Link

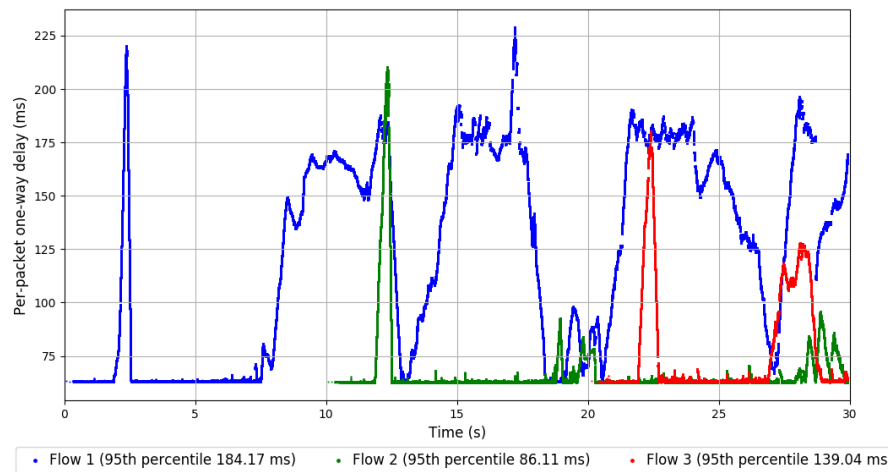
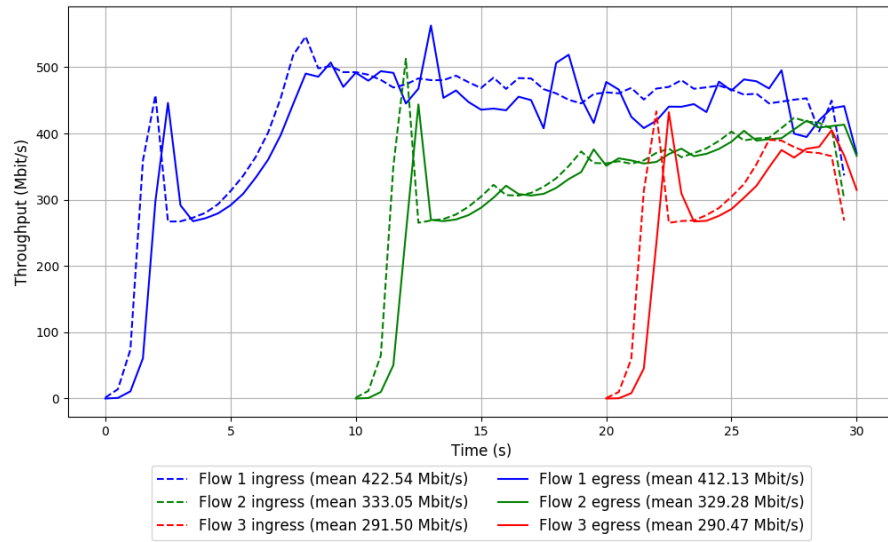


Run 5: Statistics of PCC-Allegro

Start at: 2019-02-20 14:34:24  
End at: 2019-02-20 14:34:54  
Local clock offset: -0.02 ms  
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2019-02-20 17:31:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 726.13 Mbit/s  
95th percentile per-packet one-way delay: 181.505 ms  
Loss rate: 1.79%  
-- Flow 1:  
Average throughput: 412.13 Mbit/s  
95th percentile per-packet one-way delay: 184.166 ms  
Loss rate: 2.47%  
-- Flow 2:  
Average throughput: 329.28 Mbit/s  
95th percentile per-packet one-way delay: 86.110 ms  
Loss rate: 1.13%  
-- Flow 3:  
Average throughput: 290.47 Mbit/s  
95th percentile per-packet one-way delay: 139.036 ms  
Loss rate: 0.34%

## Run 5: Report of PCC-Allegro — Data Link



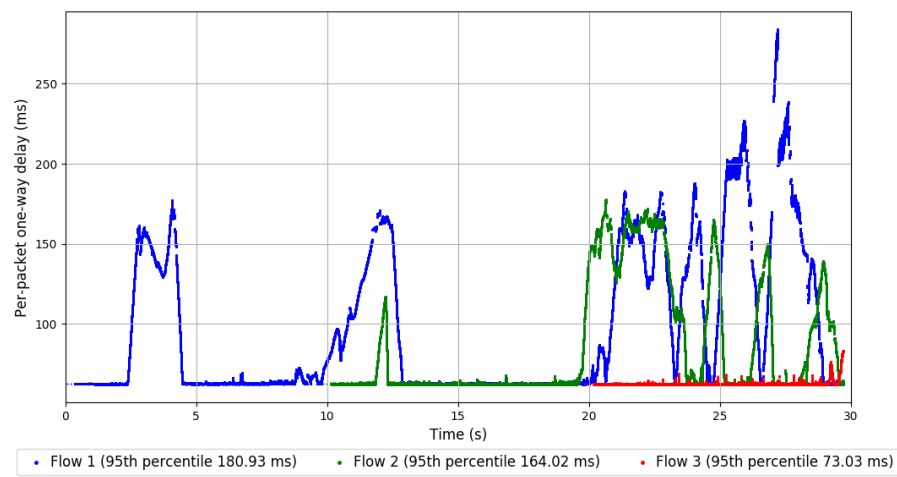
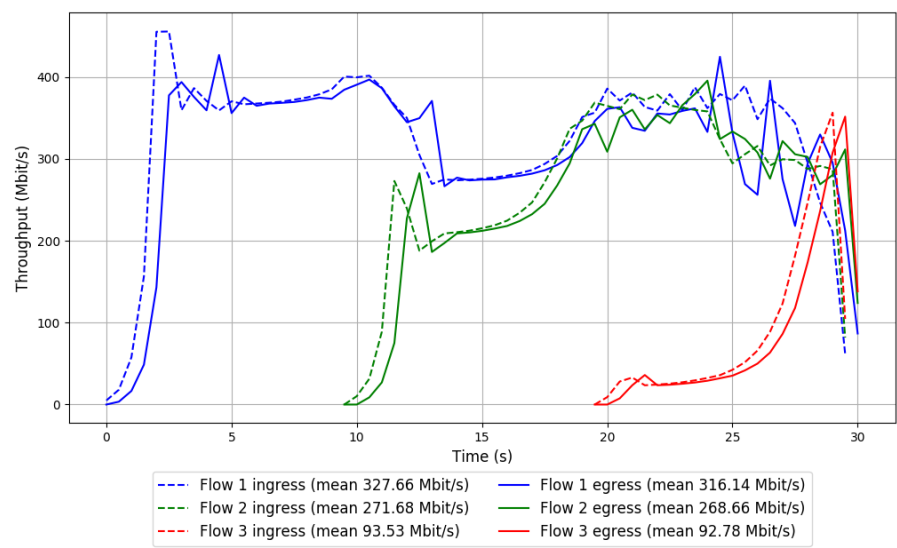


Run 1: Statistics of PCC-Expr

Start at: 2019-02-20 12:08:17  
End at: 2019-02-20 12:08:47  
Local clock offset: -0.1 ms  
Remote clock offset: -0.323 ms

# Below is generated by plot.py at 2019-02-20 17:31:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 527.05 Mbit/s  
95th percentile per-packet one-way delay: 168.743 ms  
Loss rate: 2.55%  
-- Flow 1:  
Average throughput: 316.14 Mbit/s  
95th percentile per-packet one-way delay: 180.933 ms  
Loss rate: 3.53%  
-- Flow 2:  
Average throughput: 268.66 Mbit/s  
95th percentile per-packet one-way delay: 164.017 ms  
Loss rate: 1.11%  
-- Flow 3:  
Average throughput: 92.78 Mbit/s  
95th percentile per-packet one-way delay: 73.031 ms  
Loss rate: 0.79%

Run 1: Report of PCC-Expr — Data Link

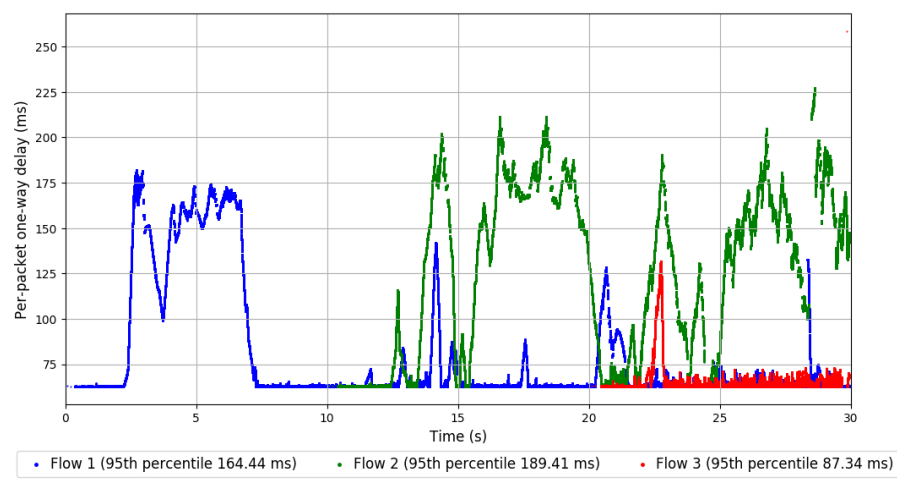
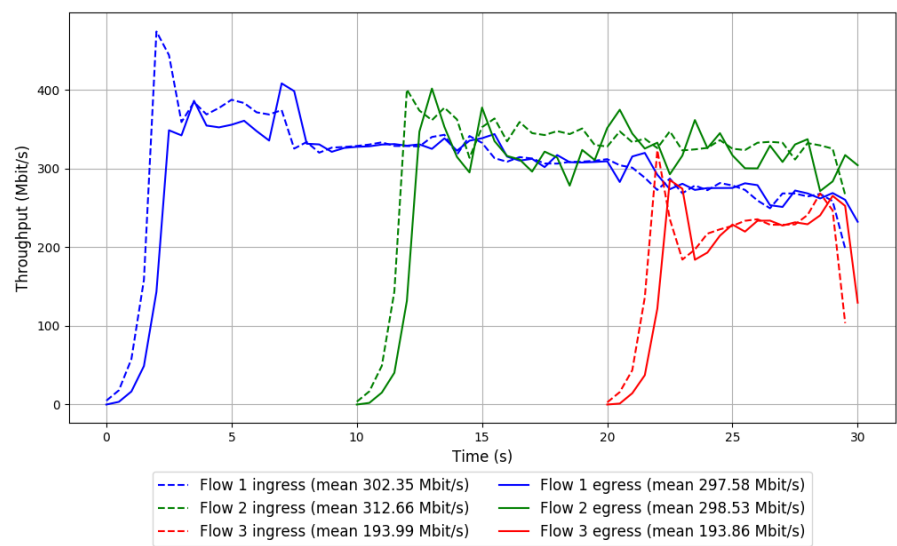


Run 2: Statistics of PCC-Expr

Start at: 2019-02-20 12:45:46  
End at: 2019-02-20 12:46:16  
Local clock offset: -0.066 ms  
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2019-02-20 17:31:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 559.96 Mbit/s  
95th percentile per-packet one-way delay: 177.861 ms  
Loss rate: 2.47%  
-- Flow 1:  
Average throughput: 297.58 Mbit/s  
95th percentile per-packet one-way delay: 164.442 ms  
Loss rate: 1.58%  
-- Flow 2:  
Average throughput: 298.53 Mbit/s  
95th percentile per-packet one-way delay: 189.405 ms  
Loss rate: 4.51%  
-- Flow 3:  
Average throughput: 193.86 Mbit/s  
95th percentile per-packet one-way delay: 87.338 ms  
Loss rate: 0.06%

Run 2: Report of PCC-Expr — Data Link

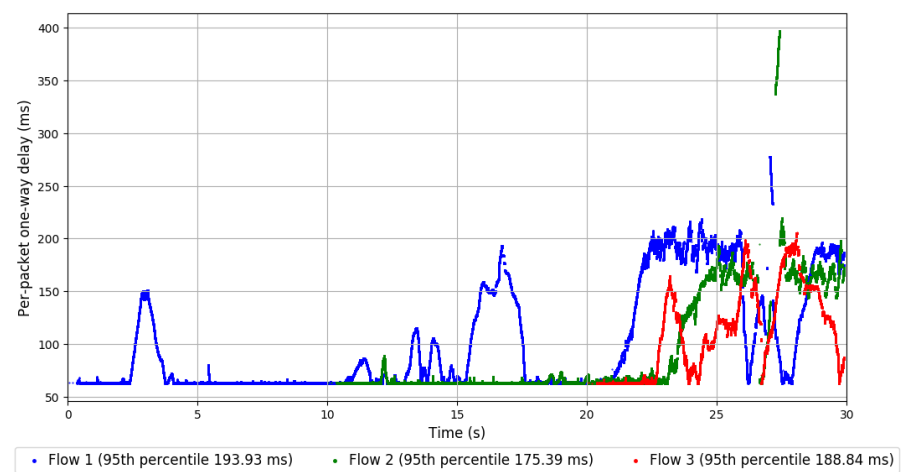
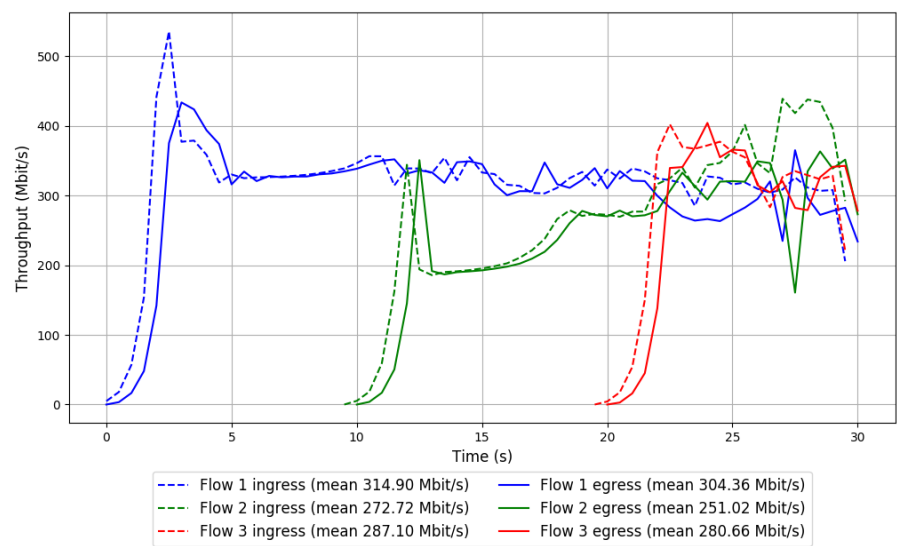


Run 3: Statistics of PCC-Expr

Start at: 2019-02-20 13:22:35  
End at: 2019-02-20 13:23:05  
Local clock offset: -0.088 ms  
Remote clock offset: -0.208 ms

# Below is generated by plot.py at 2019-02-20 17:34:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 564.18 Mbit/s  
95th percentile per-packet one-way delay: 191.124 ms  
Loss rate: 4.59%  
-- Flow 1:  
Average throughput: 304.36 Mbit/s  
95th percentile per-packet one-way delay: 193.928 ms  
Loss rate: 3.35%  
-- Flow 2:  
Average throughput: 251.02 Mbit/s  
95th percentile per-packet one-way delay: 175.391 ms  
Loss rate: 7.96%  
-- Flow 3:  
Average throughput: 280.66 Mbit/s  
95th percentile per-packet one-way delay: 188.843 ms  
Loss rate: 2.24%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-02-20 13:59:33

End at: 2019-02-20 14:00:03

Local clock offset: -0.121 ms

Remote clock offset: 0.052 ms

# Below is generated by plot.py at 2019-02-20 17:40:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 493.93 Mbit/s

95th percentile per-packet one-way delay: 152.701 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 300.31 Mbit/s

95th percentile per-packet one-way delay: 145.074 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 204.13 Mbit/s

95th percentile per-packet one-way delay: 162.058 ms

Loss rate: 2.70%

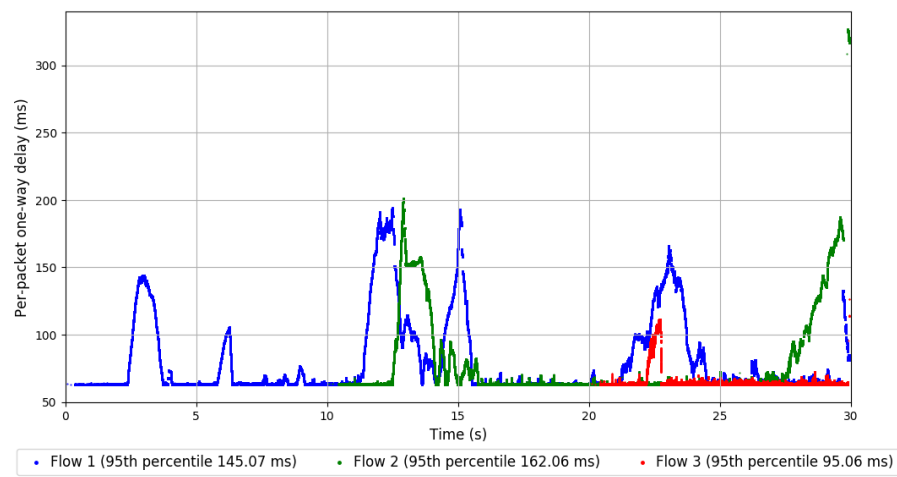
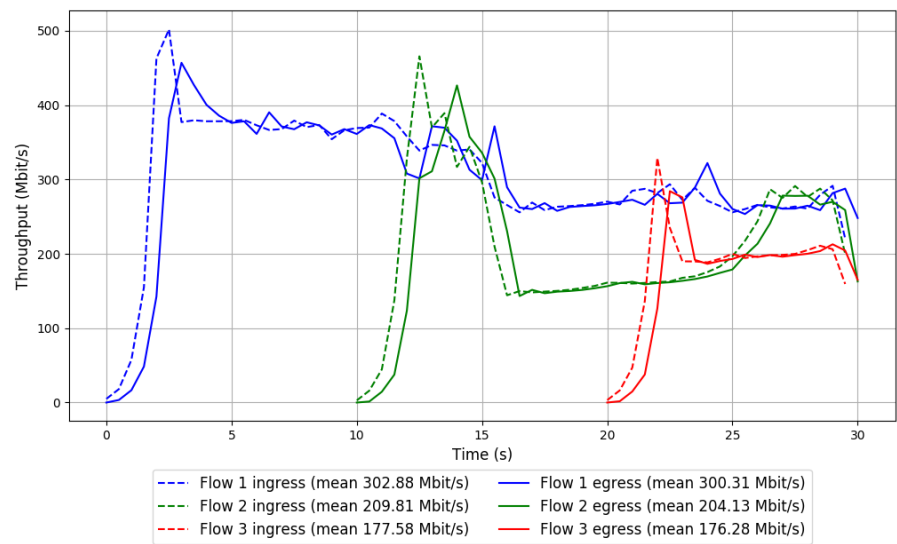
-- Flow 3:

Average throughput: 176.28 Mbit/s

95th percentile per-packet one-way delay: 95.059 ms

Loss rate: 0.60%

Run 4: Report of PCC-Expr — Data Link



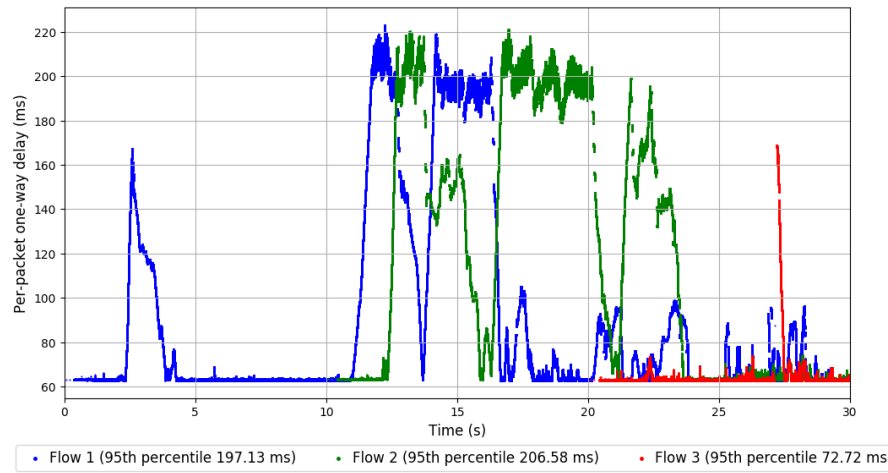
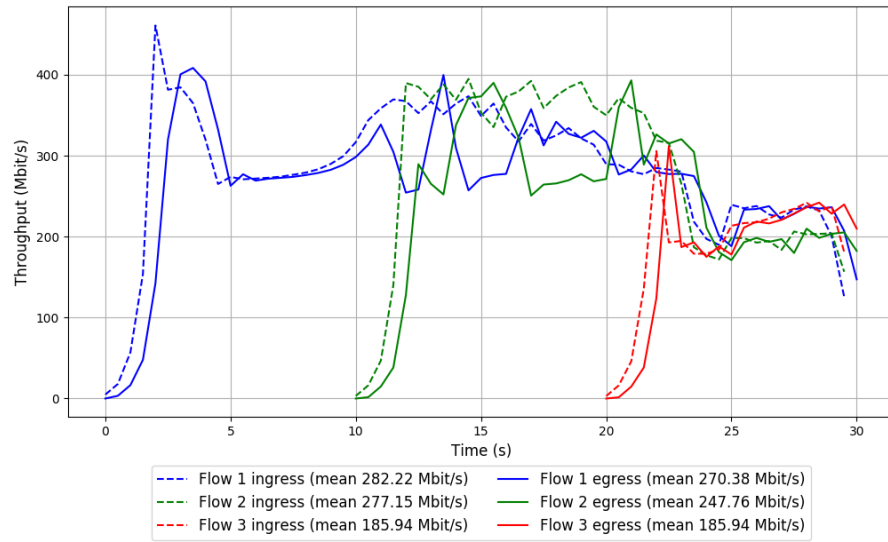


Run 5: Statistics of PCC-Expr

Start at: 2019-02-20 14:36:26  
End at: 2019-02-20 14:36:56  
Local clock offset: -0.046 ms  
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-02-20 17:41:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 496.35 Mbit/s  
95th percentile per-packet one-way delay: 201.204 ms  
Loss rate: 5.95%  
-- Flow 1:  
Average throughput: 270.38 Mbit/s  
95th percentile per-packet one-way delay: 197.133 ms  
Loss rate: 4.20%  
-- Flow 2:  
Average throughput: 247.76 Mbit/s  
95th percentile per-packet one-way delay: 206.581 ms  
Loss rate: 10.63%  
-- Flow 3:  
Average throughput: 185.94 Mbit/s  
95th percentile per-packet one-way delay: 72.715 ms  
Loss rate: 0.00%

## Run 5: Report of PCC-Expr — Data Link

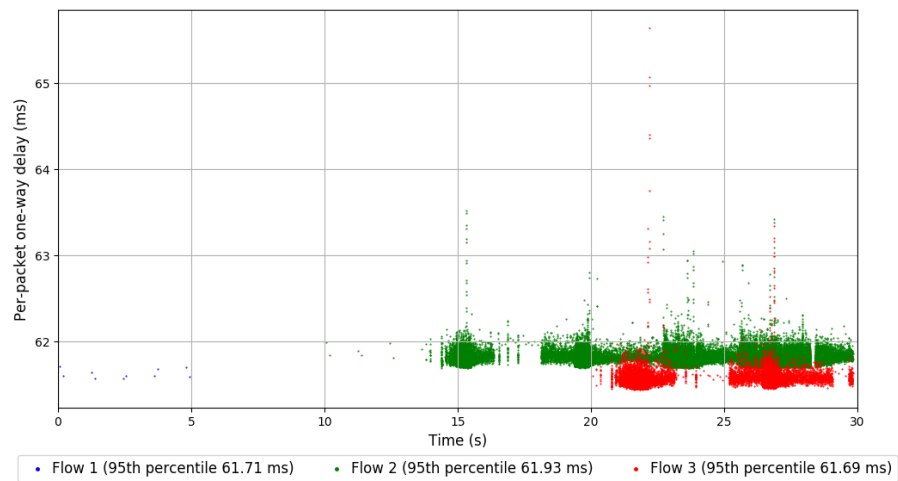
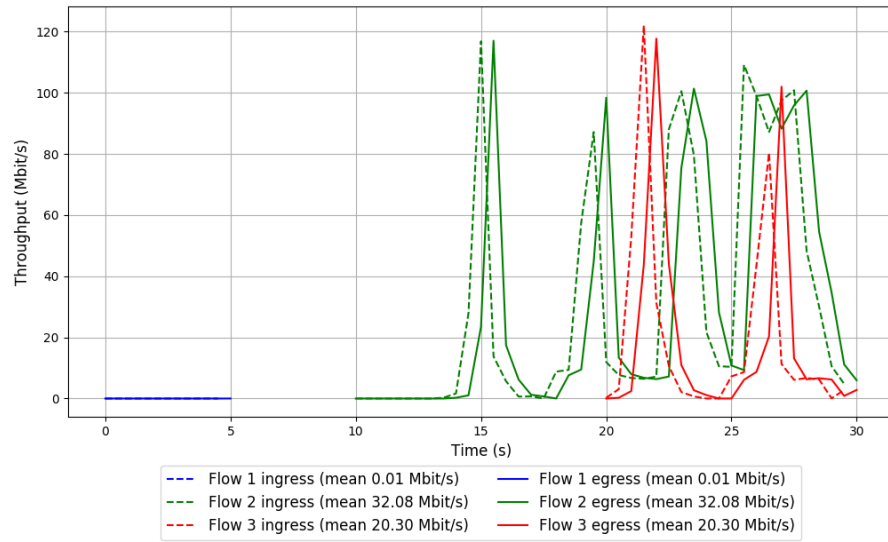


Run 1: Statistics of QUIC Cubic

Start at: 2019-02-20 12:16:12  
End at: 2019-02-20 12:16:42  
Local clock offset: -0.092 ms  
Remote clock offset: -1.294 ms

# Below is generated by plot.py at 2019-02-20 17:41:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 27.95 Mbit/s  
95th percentile per-packet one-way delay: 61.918 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.01 Mbit/s  
95th percentile per-packet one-way delay: 61.706 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 32.08 Mbit/s  
95th percentile per-packet one-way delay: 61.934 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 20.30 Mbit/s  
95th percentile per-packet one-way delay: 61.693 ms  
Loss rate: 0.00%

## Run 1: Report of QUIC Cubic — Data Link

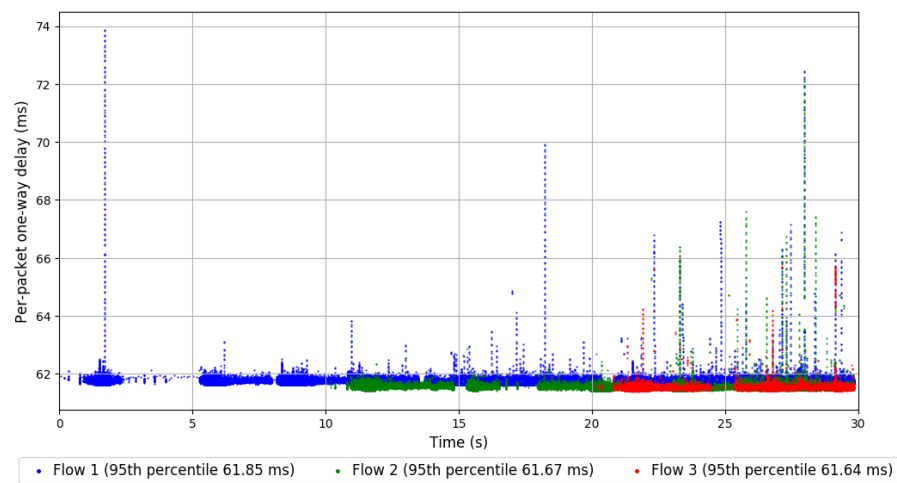
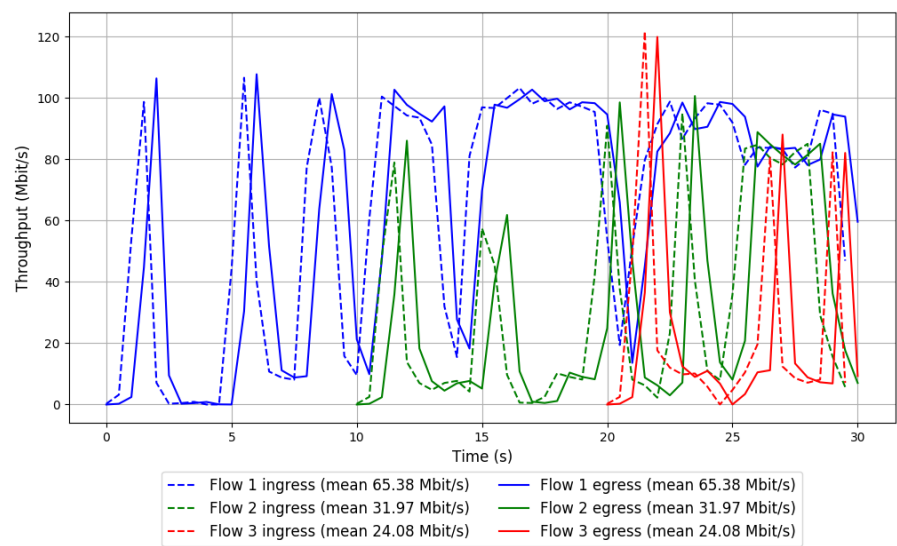


Run 2: Statistics of QUIC Cubic

Start at: 2019-02-20 12:53:35  
End at: 2019-02-20 12:54:05  
Local clock offset: -0.118 ms  
Remote clock offset: -1.437 ms

# Below is generated by plot.py at 2019-02-20 17:41:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.49 Mbit/s  
95th percentile per-packet one-way delay: 61.827 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 65.38 Mbit/s  
95th percentile per-packet one-way delay: 61.847 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 31.97 Mbit/s  
95th percentile per-packet one-way delay: 61.674 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 24.08 Mbit/s  
95th percentile per-packet one-way delay: 61.642 ms  
Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-02-20 13:30:18

End at: 2019-02-20 13:30:48

Local clock offset: -0.12 ms

Remote clock offset: 0.608 ms

# Below is generated by plot.py at 2019-02-20 17:41:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.13 Mbit/s

95th percentile per-packet one-way delay: 63.889 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 52.84 Mbit/s

95th percentile per-packet one-way delay: 63.904 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 43.27 Mbit/s

95th percentile per-packet one-way delay: 63.875 ms

Loss rate: 0.00%

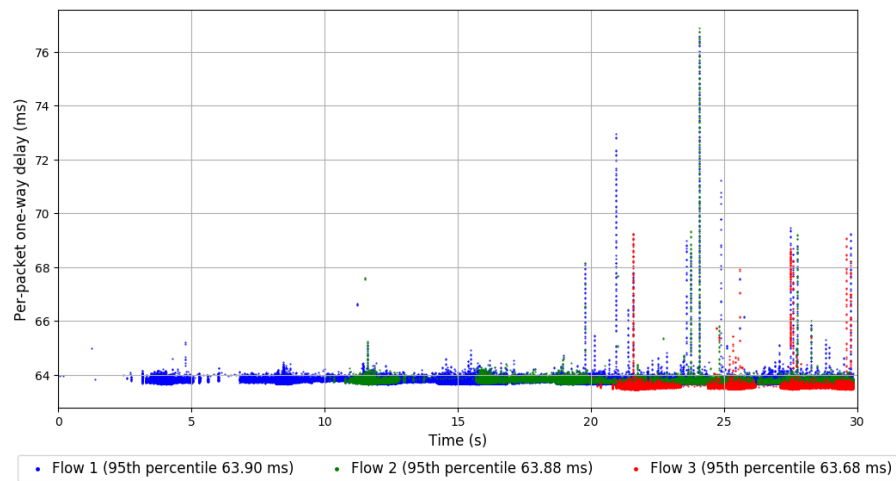
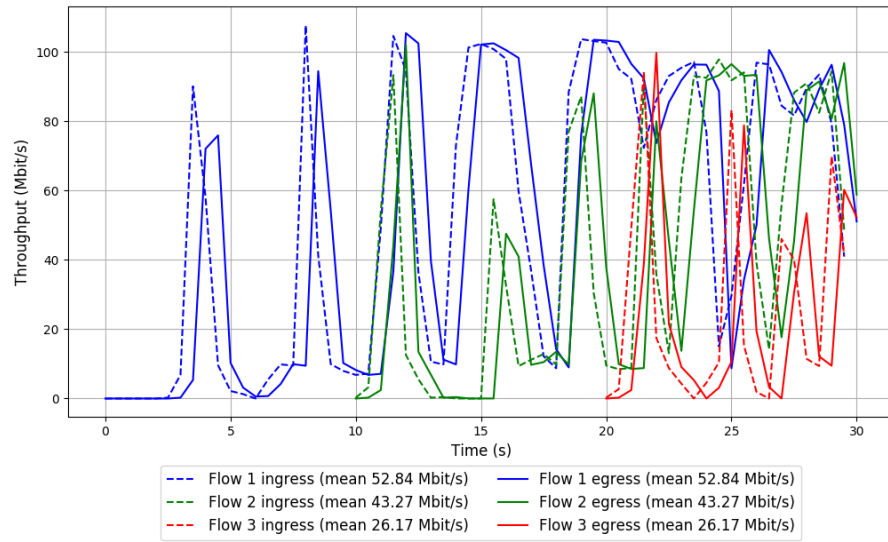
-- Flow 3:

Average throughput: 26.17 Mbit/s

95th percentile per-packet one-way delay: 63.676 ms

Loss rate: 0.00%

### Run 3: Report of QUIC Cubic — Data Link





Run 4: Statistics of QUIC Cubic

Start at: 2019-02-20 14:07:31

End at: 2019-02-20 14:08:01

Local clock offset: -0.045 ms

Remote clock offset: 1.307 ms

# Below is generated by plot.py at 2019-02-20 17:41:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 80.33 Mbit/s

95th percentile per-packet one-way delay: 64.624 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 47.33 Mbit/s

95th percentile per-packet one-way delay: 64.584 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 41.31 Mbit/s

95th percentile per-packet one-way delay: 64.599 ms

Loss rate: 0.00%

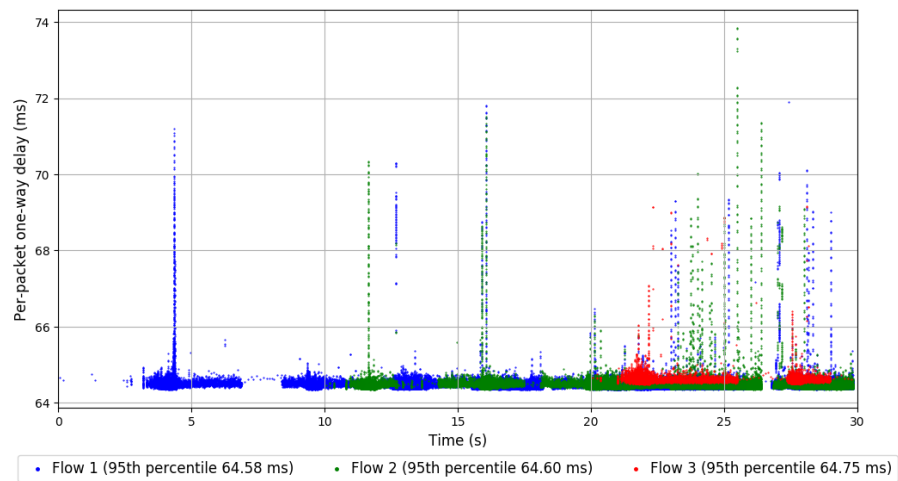
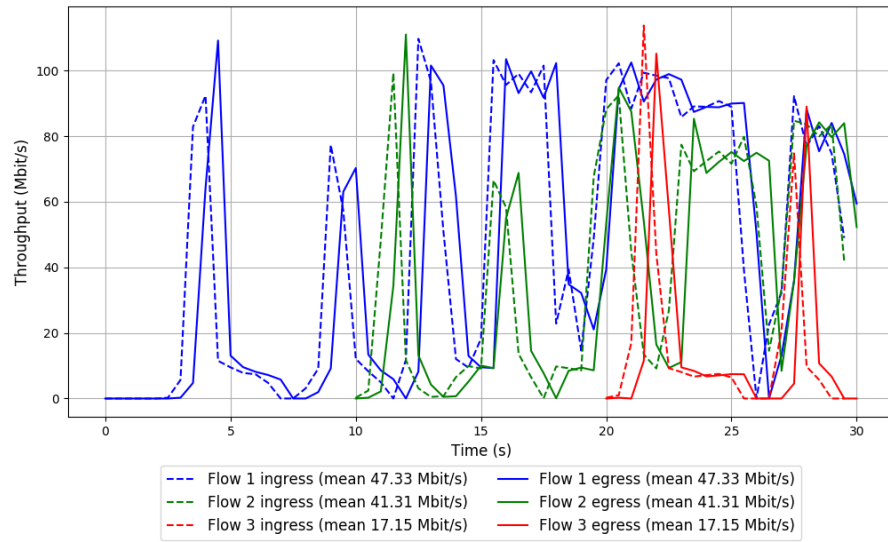
-- Flow 3:

Average throughput: 17.15 Mbit/s

95th percentile per-packet one-way delay: 64.755 ms

Loss rate: 0.00%

#### Run 4: Report of QUIC Cubic — Data Link

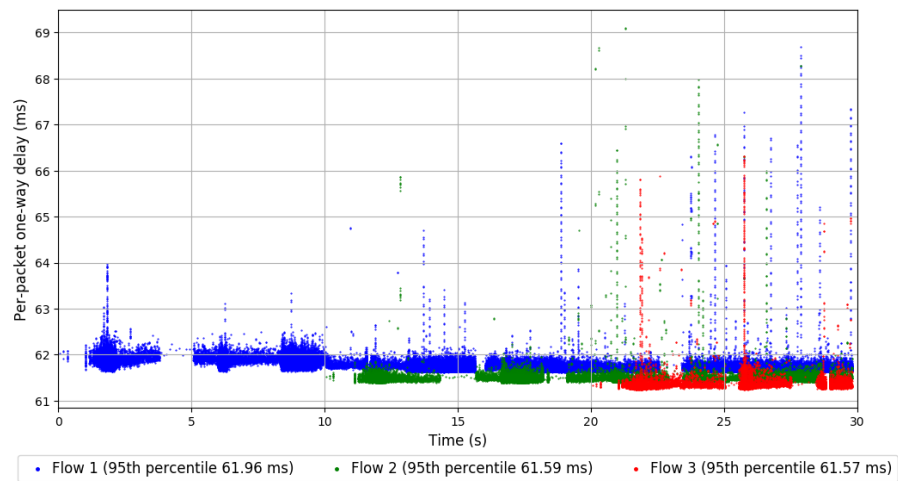
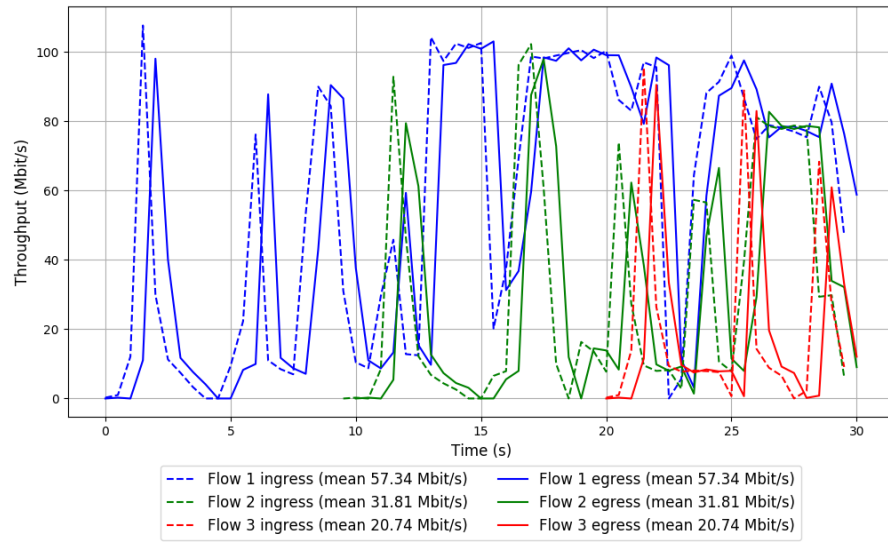


Run 5: Statistics of QUIC Cubic

Start at: 2019-02-20 14:44:23  
End at: 2019-02-20 14:44:53  
Local clock offset: -0.049 ms  
Remote clock offset: -1.564 ms

# Below is generated by plot.py at 2019-02-20 17:41:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.25 Mbit/s  
95th percentile per-packet one-way delay: 61.920 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 57.34 Mbit/s  
95th percentile per-packet one-way delay: 61.957 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 31.81 Mbit/s  
95th percentile per-packet one-way delay: 61.594 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 20.74 Mbit/s  
95th percentile per-packet one-way delay: 61.569 ms  
Loss rate: 0.00%

## Run 5: Report of QUIC Cubic — Data Link

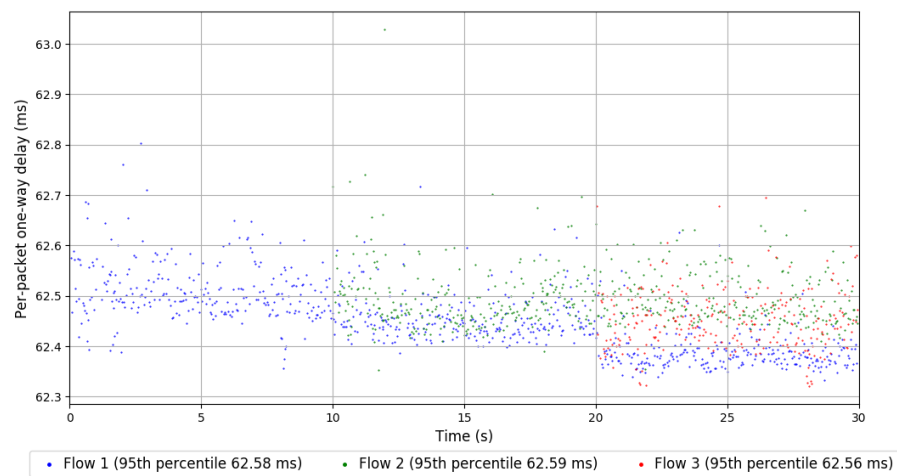
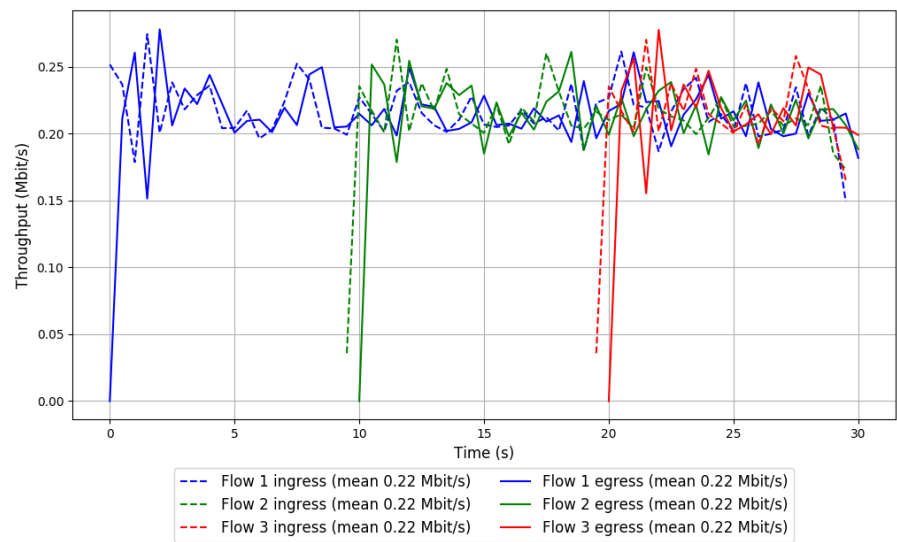


```
Run 1: Statistics of SReAM

Start at: 2019-02-20 12:05:02
End at: 2019-02-20 12:05:32
Local clock offset: -0.092 ms
Remote clock offset: -0.374 ms

# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 62.583 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.582 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.592 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.562 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

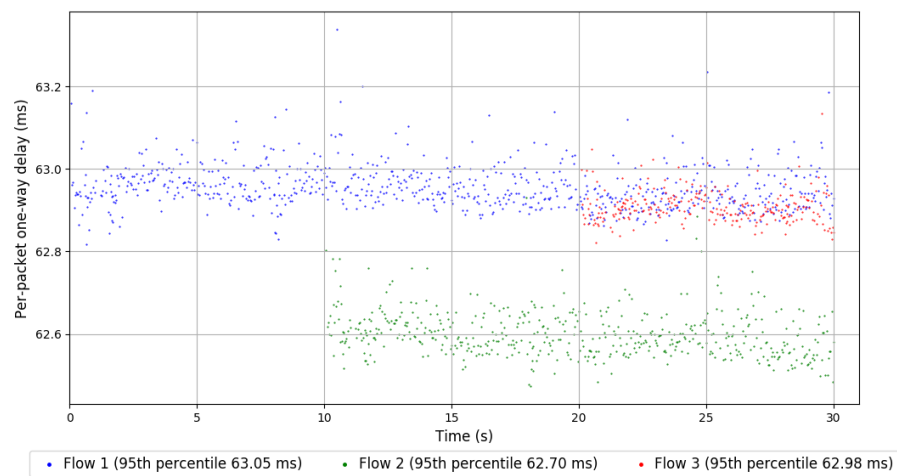
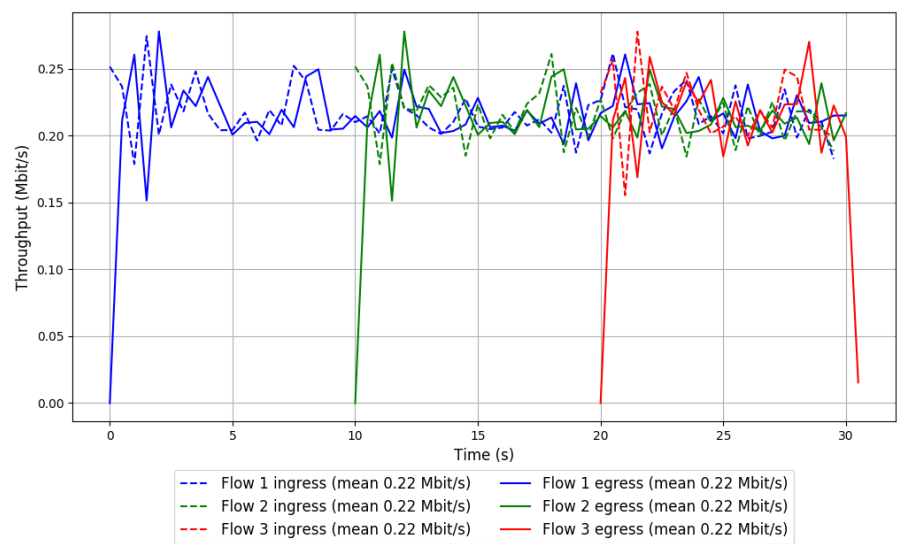


Run 2: Statistics of SReAM

Start at: 2019-02-20 12:42:30  
End at: 2019-02-20 12:43:00  
Local clock offset: -0.067 ms  
Remote clock offset: -0.344 ms

# Below is generated by plot.py at 2019-02-20 17:41:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 63.017 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 63.049 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 62.697 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 62.977 ms  
Loss rate: 0.00%

Run 2: Report of SCReAM — Data Link



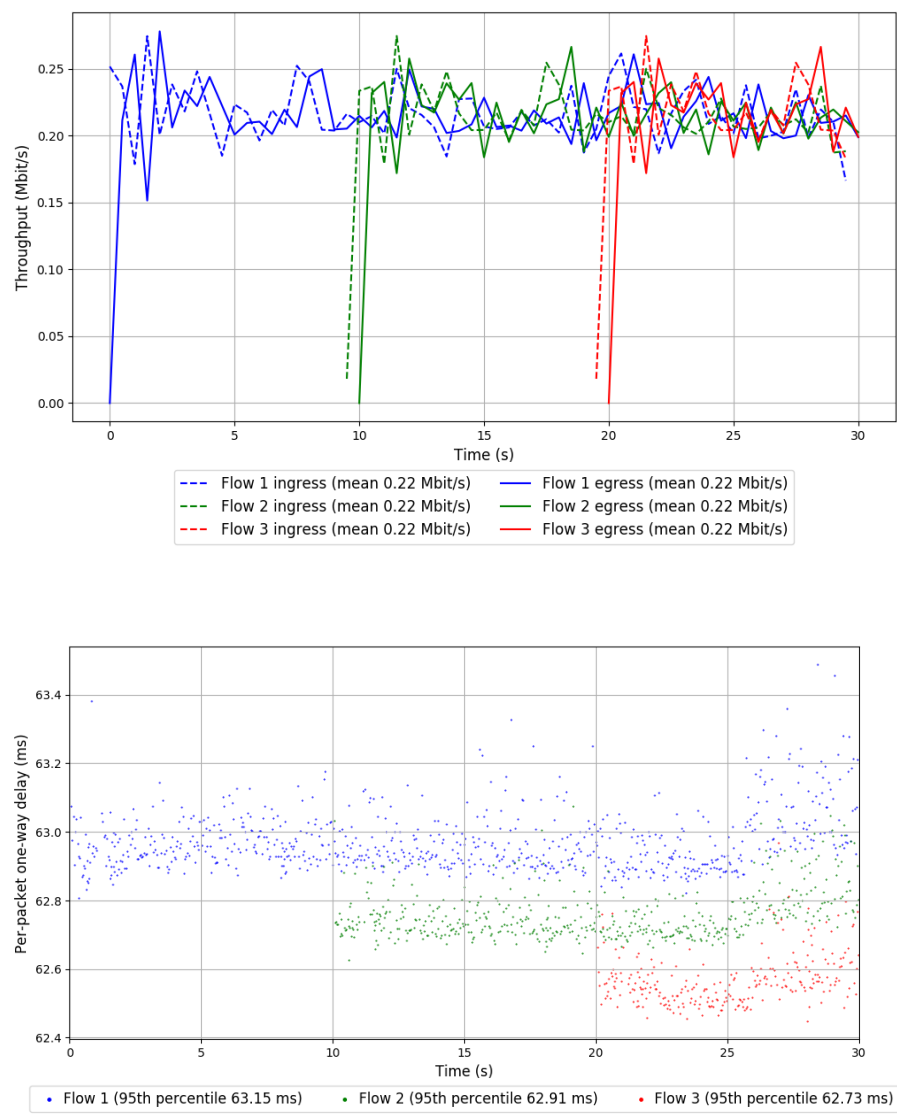


Run 3: Statistics of SCReAM

Start at: 2019-02-20 13:19:25  
End at: 2019-02-20 13:19:55  
Local clock offset: -0.062 ms  
Remote clock offset: -0.418 ms

# Below is generated by plot.py at 2019-02-20 17:41:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 63.087 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 63.147 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 62.912 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 62.731 ms  
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

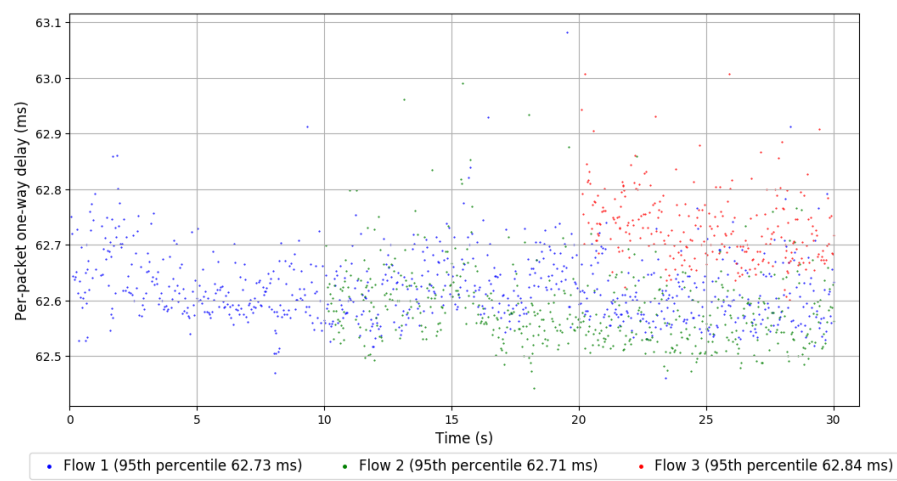
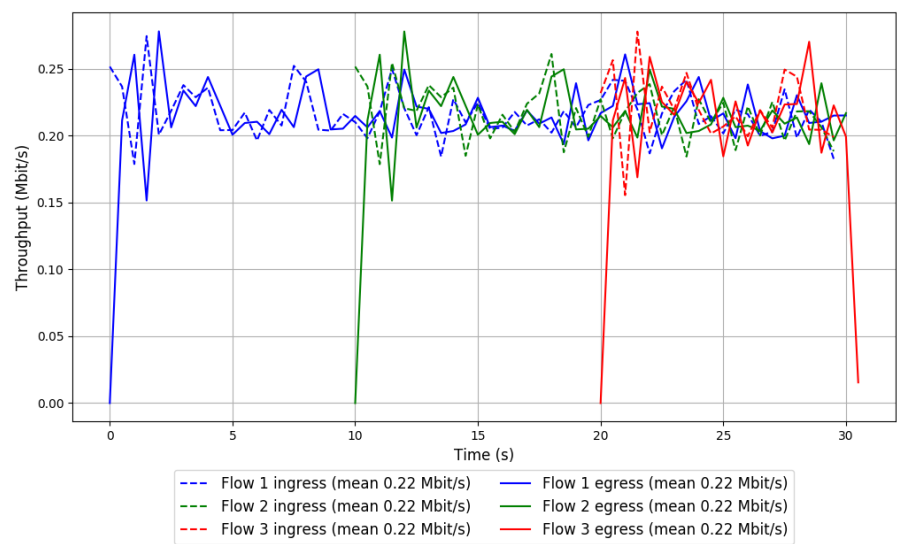


Run 4: Statistics of SReAM

Start at: 2019-02-20 13:56:19  
End at: 2019-02-20 13:56:50  
Local clock offset: -0.134 ms  
Remote clock offset: -0.515 ms

# Below is generated by plot.py at 2019-02-20 17:41:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 62.777 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 62.730 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 62.713 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 62.837 ms  
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2019-02-20 14:33:12

End at: 2019-02-20 14:33:42

Local clock offset: -0.006 ms

Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2019-02-20 17:41:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 63.470 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.259 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.301 ms

Loss rate: 0.00%

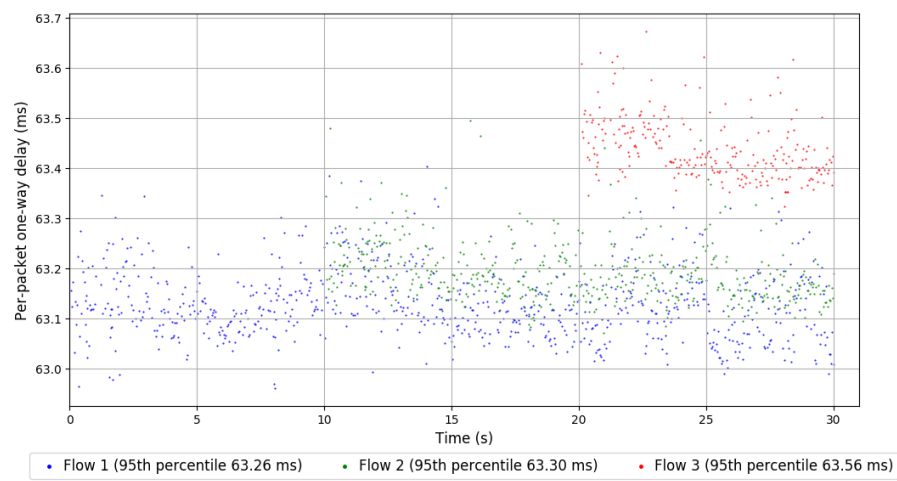
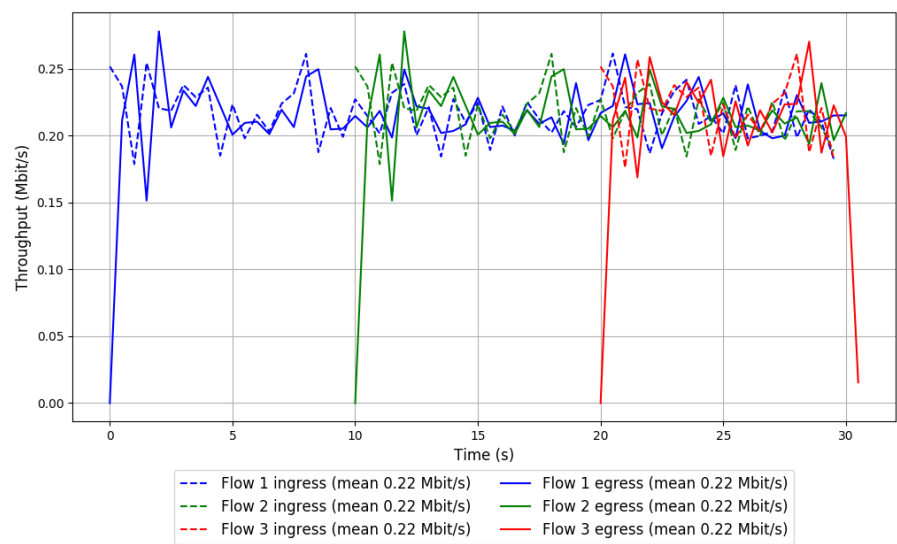
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.560 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-02-20 12:03:48

End at: 2019-02-20 12:04:18

Local clock offset: -0.11 ms

Remote clock offset: 0.622 ms

# Below is generated by plot.py at 2019-02-20 17:41:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 13.52 Mbit/s

95th percentile per-packet one-way delay: 64.500 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 6.78 Mbit/s

95th percentile per-packet one-way delay: 64.568 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 6.78 Mbit/s

95th percentile per-packet one-way delay: 64.279 ms

Loss rate: 0.00%

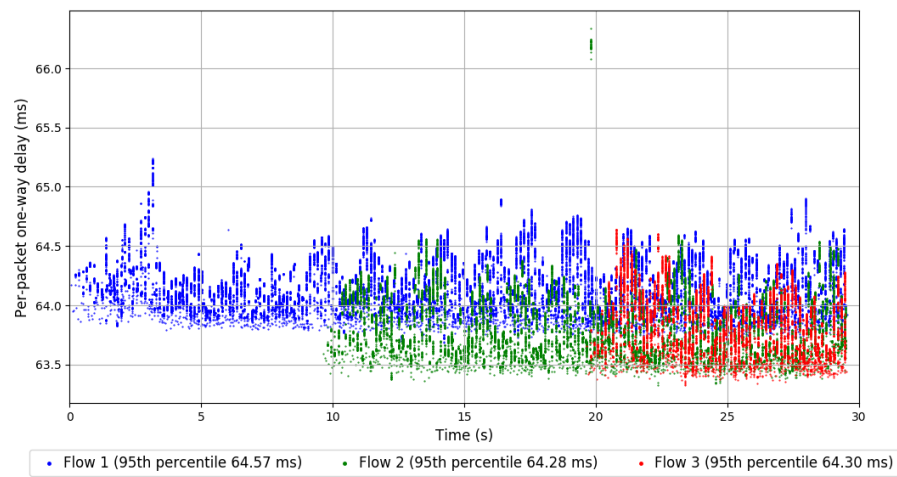
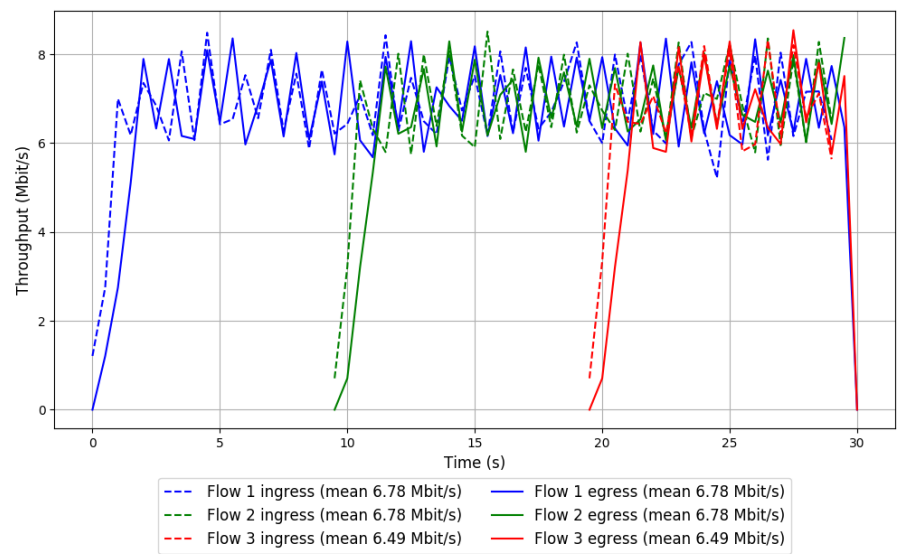
-- Flow 3:

Average throughput: 6.49 Mbit/s

95th percentile per-packet one-way delay: 64.300 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



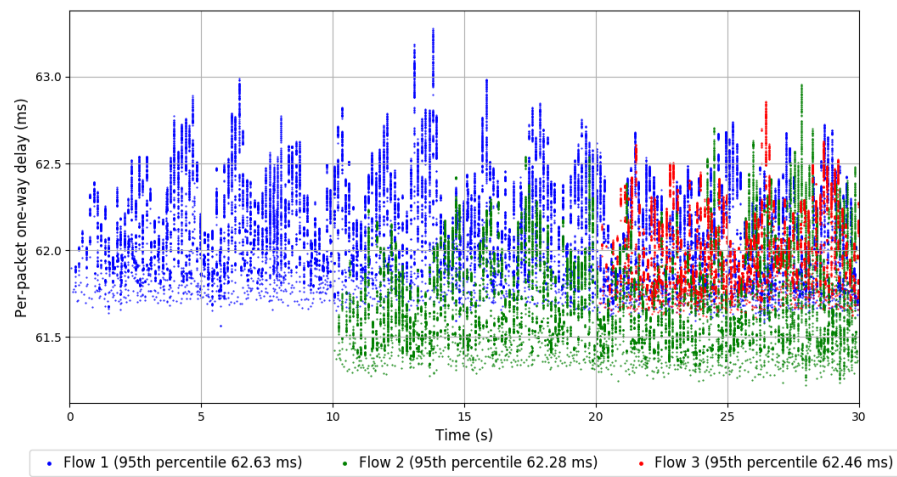
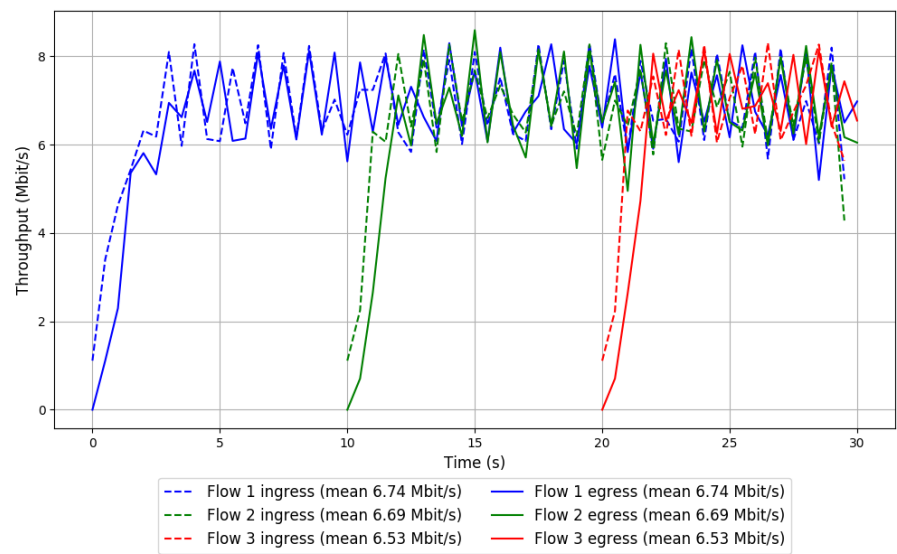


Run 2: Statistics of Sprout

Start at: 2019-02-20 12:41:16  
End at: 2019-02-20 12:41:46  
Local clock offset: -0.094 ms  
Remote clock offset: -1.564 ms

# Below is generated by plot.py at 2019-02-20 17:41:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 13.34 Mbit/s  
95th percentile per-packet one-way delay: 62.537 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 6.74 Mbit/s  
95th percentile per-packet one-way delay: 62.630 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 6.69 Mbit/s  
95th percentile per-packet one-way delay: 62.282 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 6.53 Mbit/s  
95th percentile per-packet one-way delay: 62.461 ms  
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

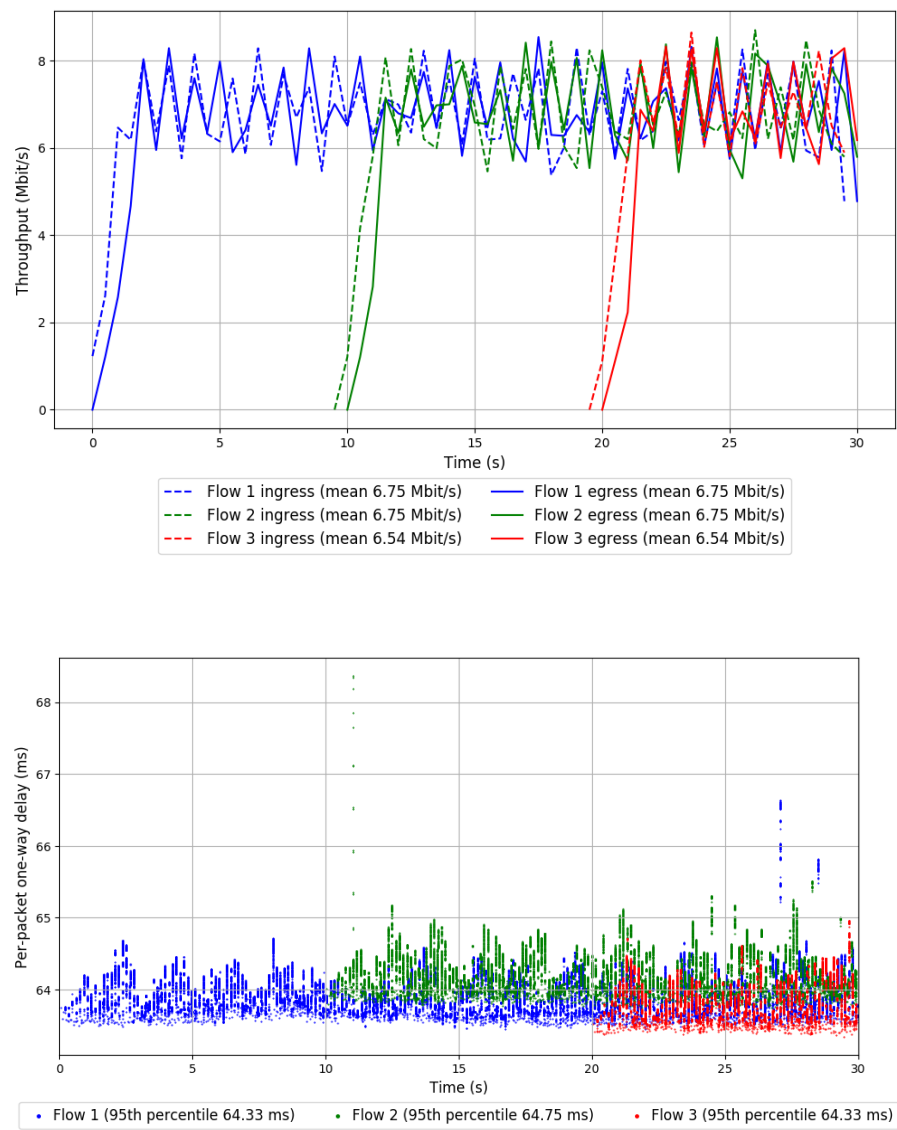


Run 3: Statistics of Sprout

Start at: 2019-02-20 13:18:11  
End at: 2019-02-20 13:18:41  
Local clock offset: -0.056 ms  
Remote clock offset: 0.653 ms

# Below is generated by plot.py at 2019-02-20 17:41:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 13.40 Mbit/s  
95th percentile per-packet one-way delay: 64.534 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 6.75 Mbit/s  
95th percentile per-packet one-way delay: 64.331 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 6.75 Mbit/s  
95th percentile per-packet one-way delay: 64.745 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 6.54 Mbit/s  
95th percentile per-packet one-way delay: 64.328 ms  
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

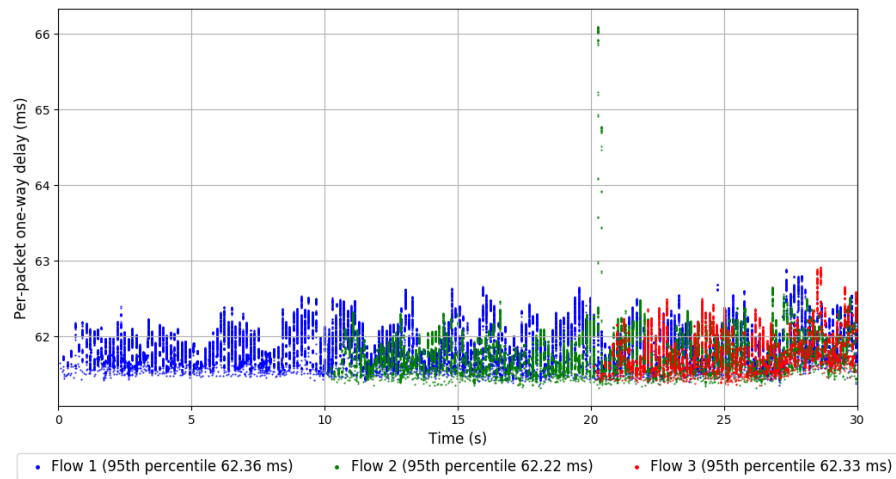
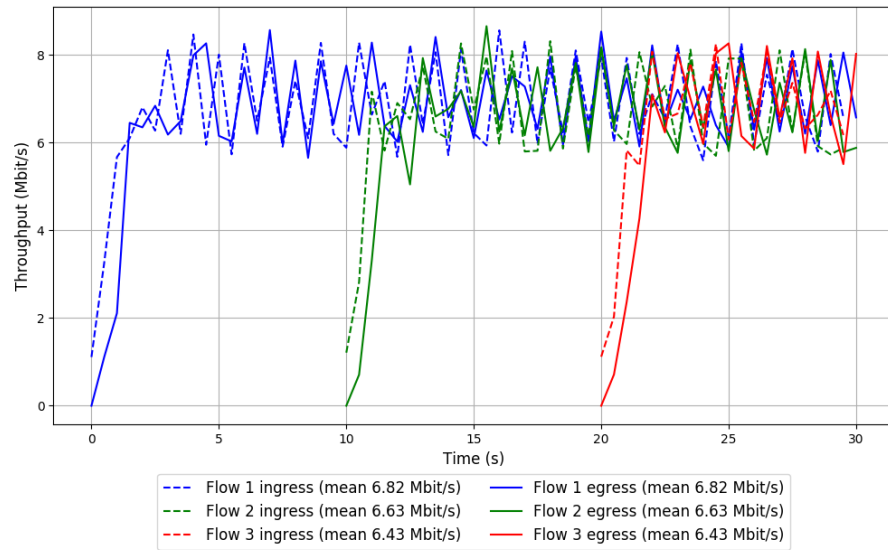


#### Run 4: Statistics of Sprout

Start at: 2019-02-20 13:55:06  
End at: 2019-02-20 13:55:36  
Local clock offset: -0.134 ms  
Remote clock offset: -1.591 ms

```
# Below is generated by plot.py at 2019-02-20 17:41:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.35 Mbit/s
95th percentile per-packet one-way delay: 62.320 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.82 Mbit/s
95th percentile per-packet one-way delay: 62.356 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 62.223 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.43 Mbit/s
95th percentile per-packet one-way delay: 62.327 ms
Loss rate: 0.00%
```

#### Run 4: Report of Sprout — Data Link

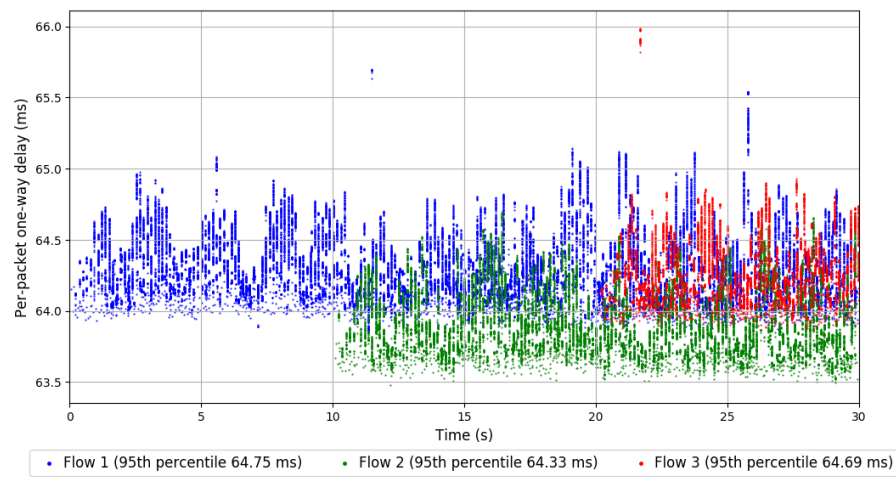
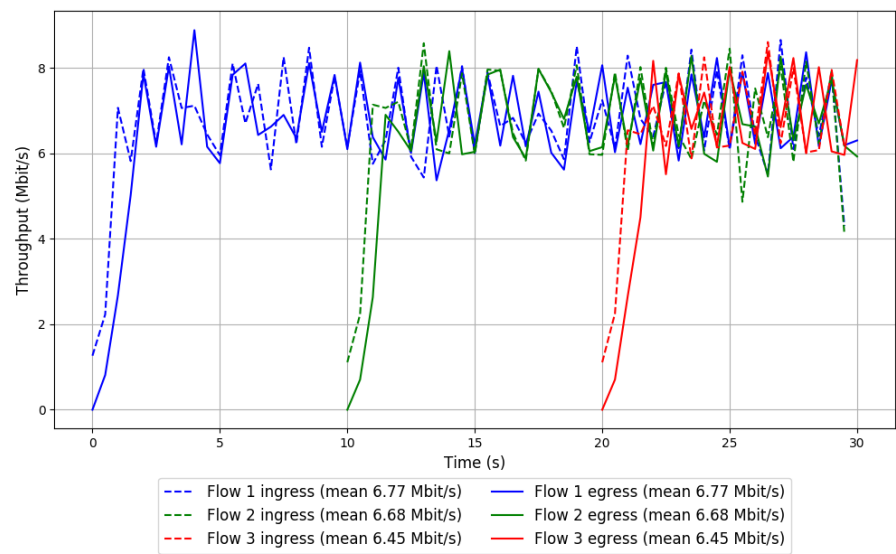


Run 5: Statistics of Sprout

Start at: 2019-02-20 14:31:58  
End at: 2019-02-20 14:32:28  
Local clock offset: -0.023 ms  
Remote clock offset: 0.568 ms

# Below is generated by plot.py at 2019-02-20 17:41:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 13.33 Mbit/s  
95th percentile per-packet one-way delay: 64.677 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 6.77 Mbit/s  
95th percentile per-packet one-way delay: 64.749 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 6.68 Mbit/s  
95th percentile per-packet one-way delay: 64.333 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 6.45 Mbit/s  
95th percentile per-packet one-way delay: 64.689 ms  
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



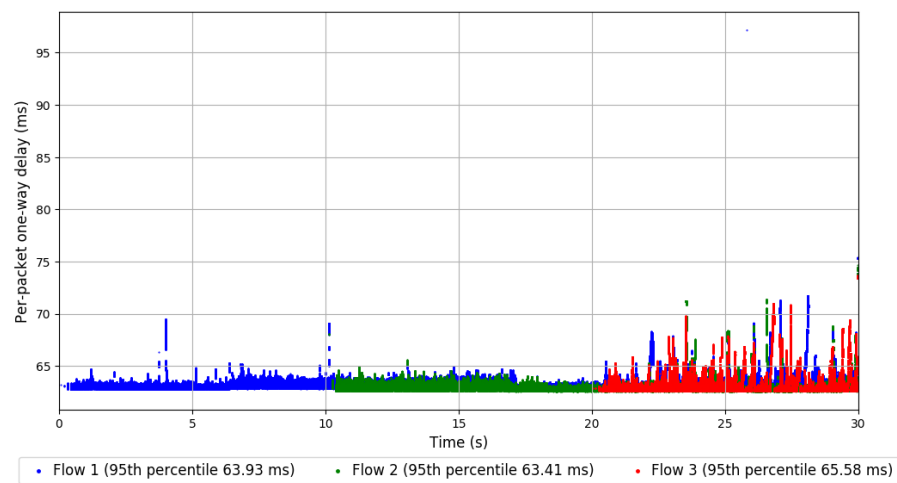
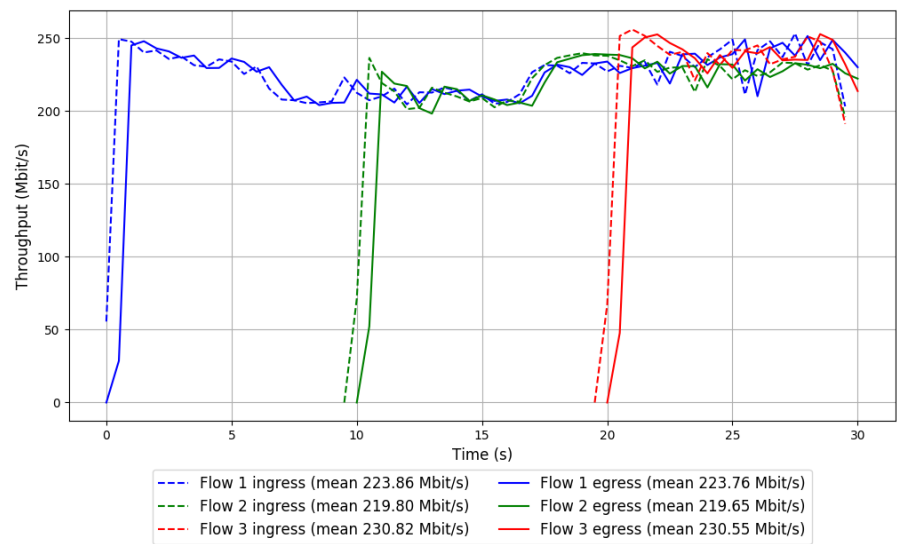


```
Run 1: Statistics of TaoVA-100x

Start at: 2019-02-20 12:29:30
End at: 2019-02-20 12:30:00
Local clock offset: -0.076 ms
Remote clock offset: -0.237 ms

# Below is generated by plot.py at 2019-02-20 17:48:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 447.17 Mbit/s
95th percentile per-packet one-way delay: 64.078 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 223.76 Mbit/s
95th percentile per-packet one-way delay: 63.930 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 219.65 Mbit/s
95th percentile per-packet one-way delay: 63.409 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 230.55 Mbit/s
95th percentile per-packet one-way delay: 65.577 ms
Loss rate: 0.07%
```

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

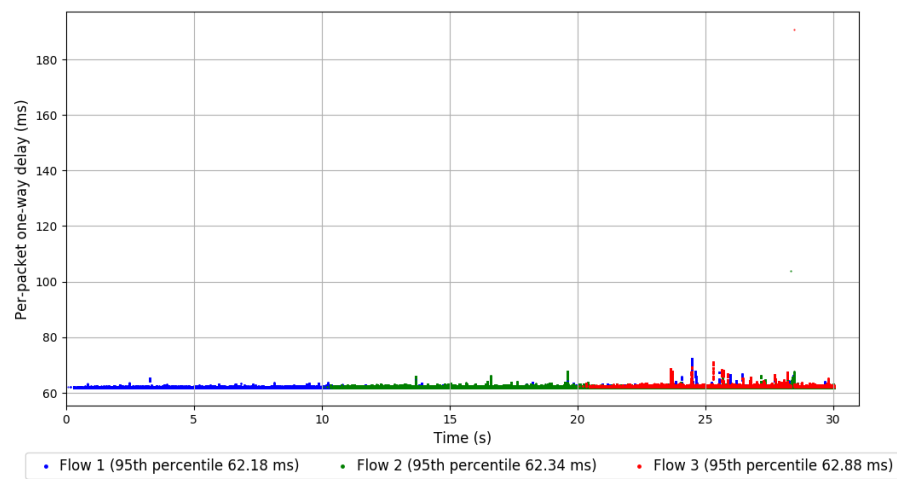
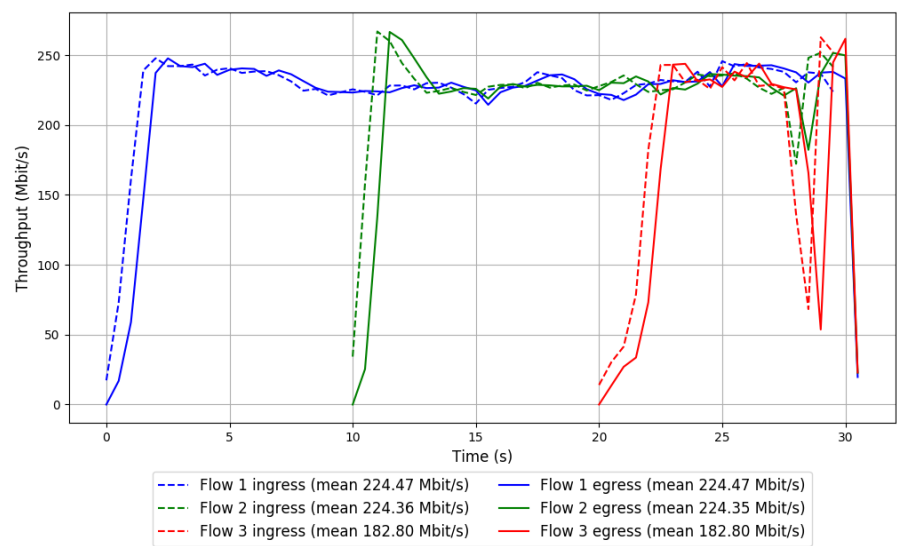


Run 2: Statistics of TaoVA-100x

Start at: 2019-02-20 13:06:50  
End at: 2019-02-20 13:07:20  
Local clock offset: -0.044 ms  
Remote clock offset: -0.873 ms

# Below is generated by plot.py at 2019-02-20 17:48:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 434.64 Mbit/s  
95th percentile per-packet one-way delay: 62.412 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 224.47 Mbit/s  
95th percentile per-packet one-way delay: 62.178 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 224.35 Mbit/s  
95th percentile per-packet one-way delay: 62.342 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 182.80 Mbit/s  
95th percentile per-packet one-way delay: 62.885 ms  
Loss rate: 0.01%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-02-20 13:43:36

End at: 2019-02-20 13:44:06

Local clock offset: -0.134 ms

Remote clock offset: -0.15 ms

# Below is generated by plot.py at 2019-02-20 17:48:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 439.22 Mbit/s

95th percentile per-packet one-way delay: 63.599 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 221.93 Mbit/s

95th percentile per-packet one-way delay: 63.392 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 226.83 Mbit/s

95th percentile per-packet one-way delay: 63.687 ms

Loss rate: 0.02%

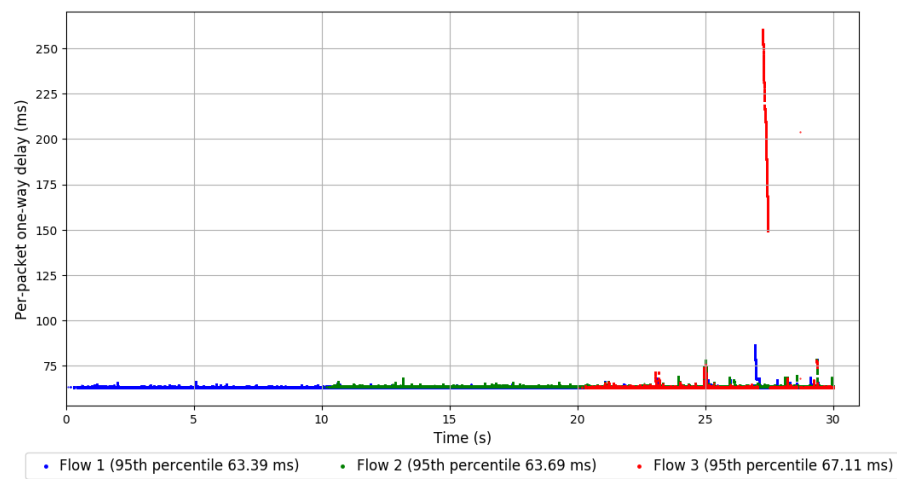
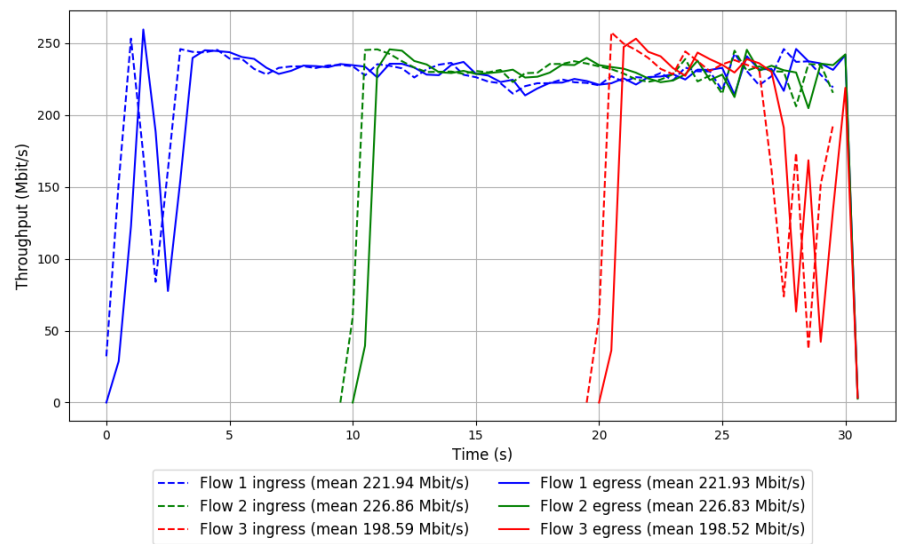
-- Flow 3:

Average throughput: 198.52 Mbit/s

95th percentile per-packet one-way delay: 67.109 ms

Loss rate: 0.04%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-02-20 14:20:39

End at: 2019-02-20 14:21:09

Local clock offset: 0.034 ms

Remote clock offset: 0.301 ms

# Below is generated by plot.py at 2019-02-20 17:48:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 435.41 Mbit/s

95th percentile per-packet one-way delay: 64.612 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 225.05 Mbit/s

95th percentile per-packet one-way delay: 64.486 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 216.59 Mbit/s

95th percentile per-packet one-way delay: 64.093 ms

Loss rate: 0.00%

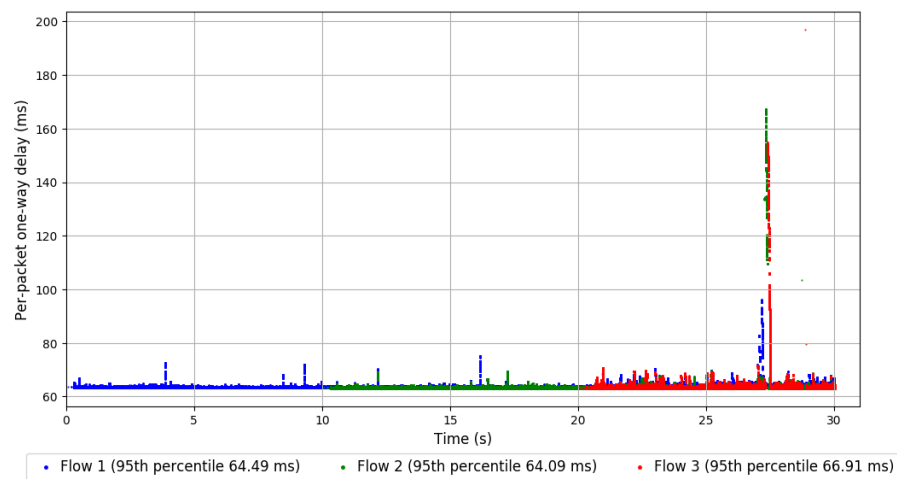
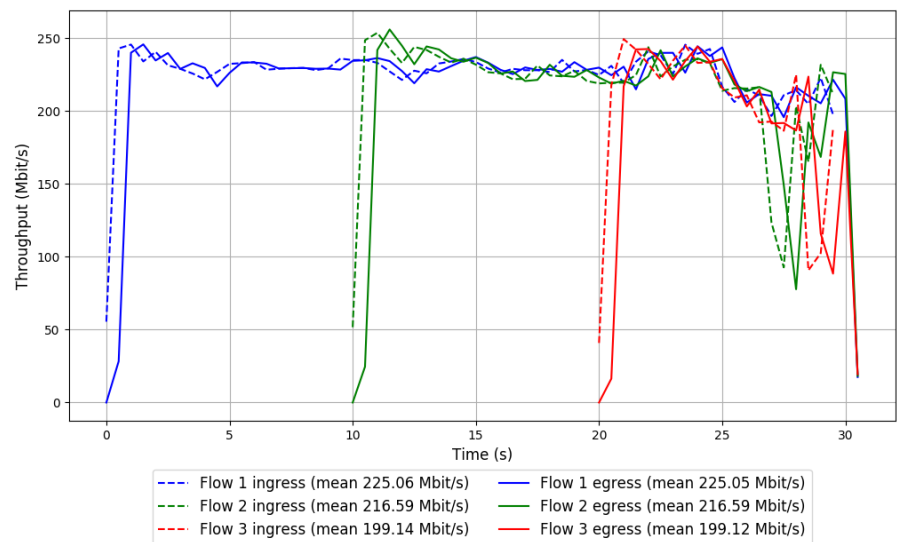
-- Flow 3:

Average throughput: 199.12 Mbit/s

95th percentile per-packet one-way delay: 66.910 ms

Loss rate: 0.00%

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



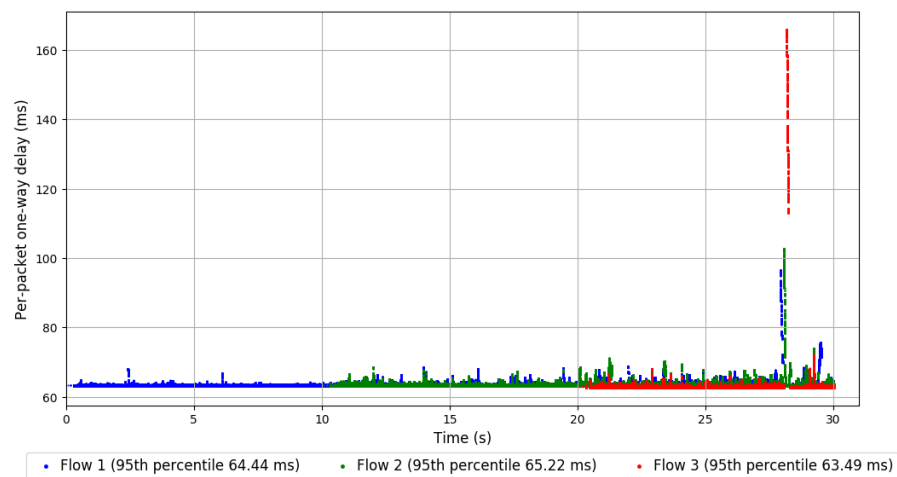
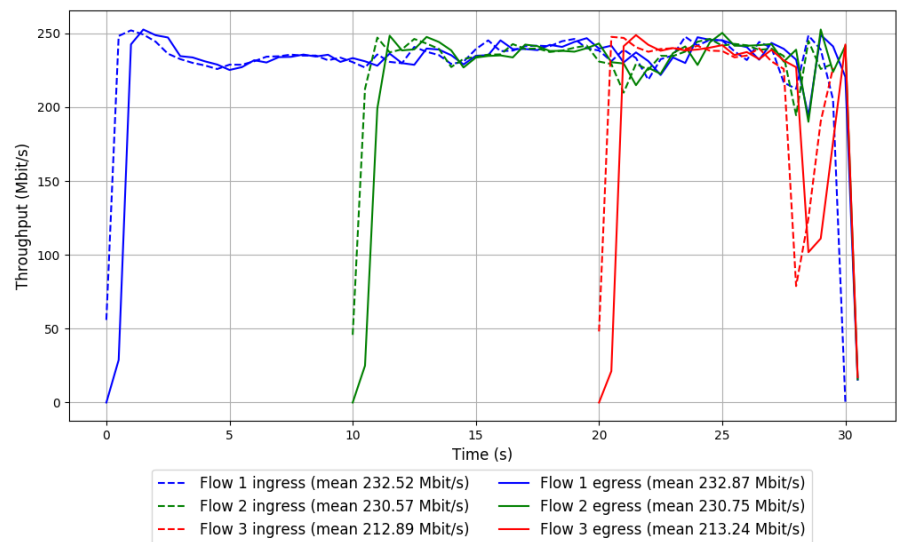


Run 5: Statistics of TaoVA-100x

Start at: 2019-02-20 14:57:31  
End at: 2019-02-20 14:58:01  
Local clock offset: -0.06 ms  
Remote clock offset: -0.147 ms

# Below is generated by plot.py at 2019-02-20 17:49:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 457.35 Mbit/s  
95th percentile per-packet one-way delay: 64.684 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 232.87 Mbit/s  
95th percentile per-packet one-way delay: 64.436 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 230.75 Mbit/s  
95th percentile per-packet one-way delay: 65.224 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 213.24 Mbit/s  
95th percentile per-packet one-way delay: 63.494 ms  
Loss rate: 0.00%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-02-20 12:31:25

End at: 2019-02-20 12:31:55

Local clock offset: -0.077 ms

Remote clock offset: 0.683 ms

# Below is generated by plot.py at 2019-02-20 17:51:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 943.93 Mbit/s

95th percentile per-packet one-way delay: 125.417 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 450.17 Mbit/s

95th percentile per-packet one-way delay: 70.429 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 523.16 Mbit/s

95th percentile per-packet one-way delay: 130.869 ms

Loss rate: 0.13%

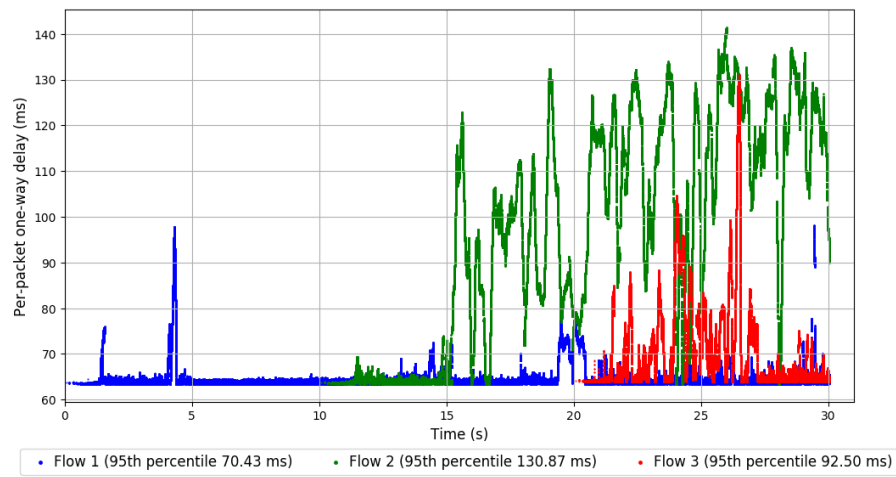
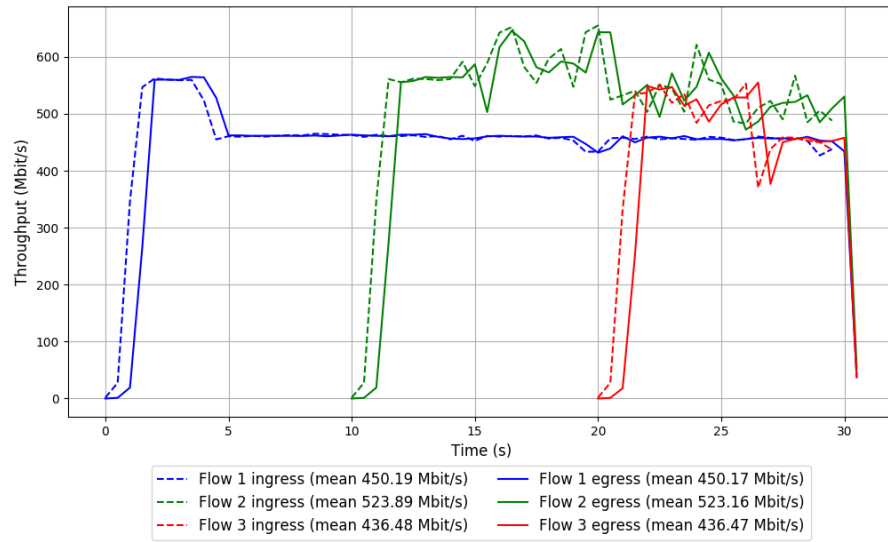
-- Flow 3:

Average throughput: 436.47 Mbit/s

95th percentile per-packet one-way delay: 92.499 ms

Loss rate: 0.00%

# Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-02-20 13:08:44

End at: 2019-02-20 13:09:14

Local clock offset: -0.076 ms

Remote clock offset: 1.306 ms

# Below is generated by plot.py at 2019-02-20 17:58:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 888.55 Mbit/s

95th percentile per-packet one-way delay: 71.917 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 456.63 Mbit/s

95th percentile per-packet one-way delay: 71.826 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 442.55 Mbit/s

95th percentile per-packet one-way delay: 71.027 ms

Loss rate: 0.00%

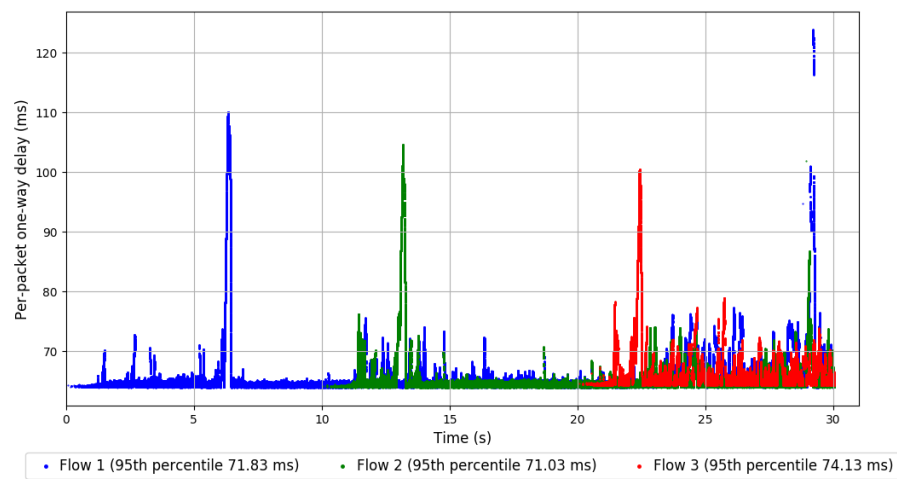
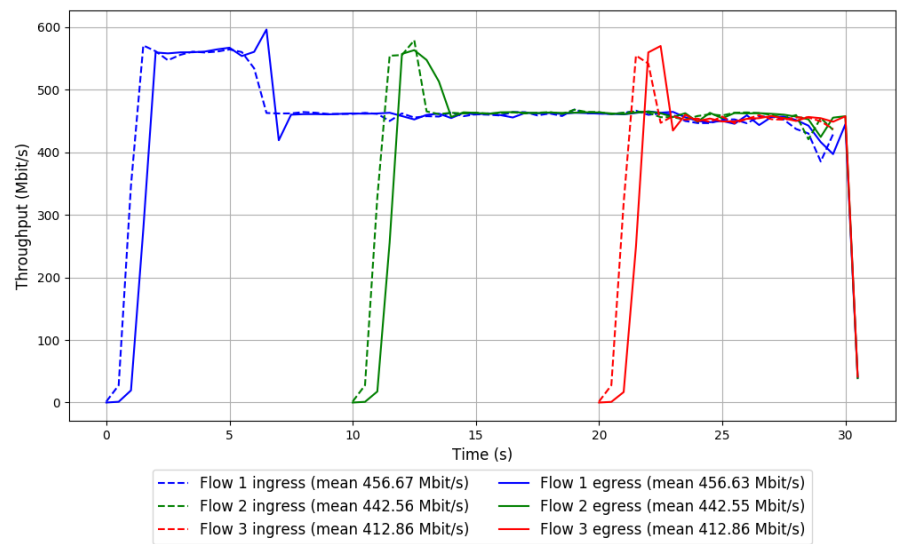
-- Flow 3:

Average throughput: 412.86 Mbit/s

95th percentile per-packet one-way delay: 74.129 ms

Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-02-20 13:45:32

End at: 2019-02-20 13:46:02

Local clock offset: -0.122 ms

Remote clock offset: 0.583 ms

# Below is generated by plot.py at 2019-02-20 17:58:11

# Datalink statistics

-- Total of 3 flows:

Average throughput: 790.65 Mbit/s

95th percentile per-packet one-way delay: 70.462 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 385.36 Mbit/s

95th percentile per-packet one-way delay: 67.332 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 408.20 Mbit/s

95th percentile per-packet one-way delay: 72.764 ms

Loss rate: 0.00%

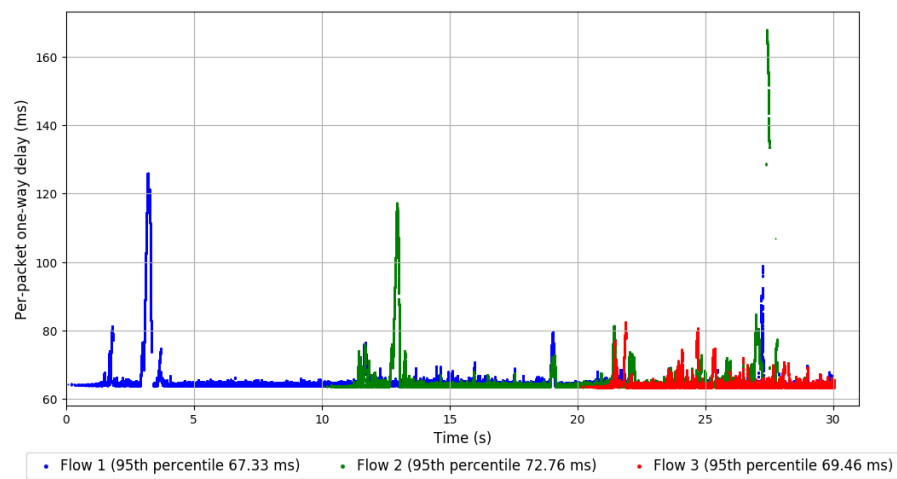
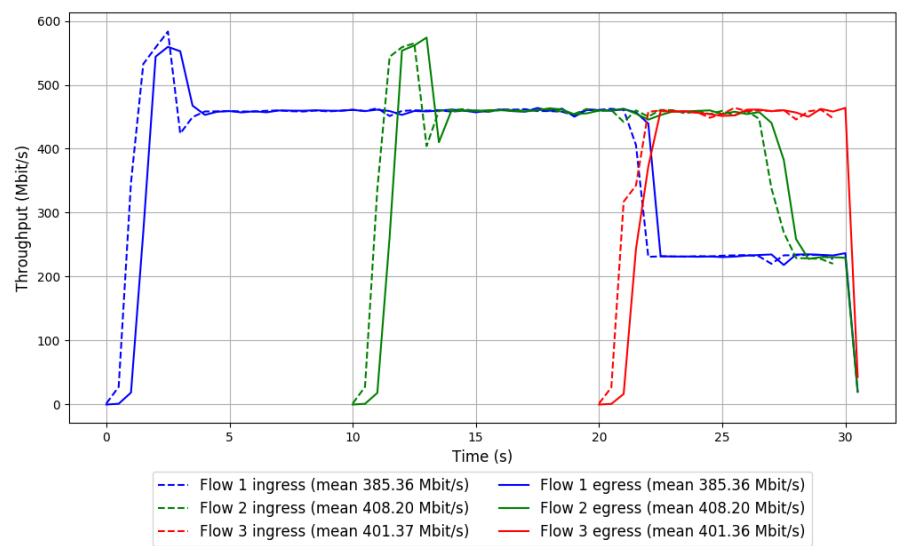
-- Flow 3:

Average throughput: 401.36 Mbit/s

95th percentile per-packet one-way delay: 69.463 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



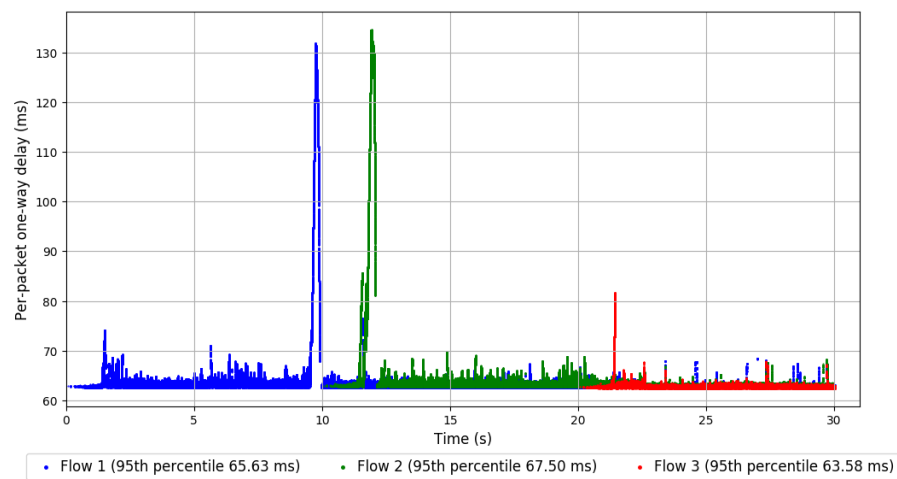
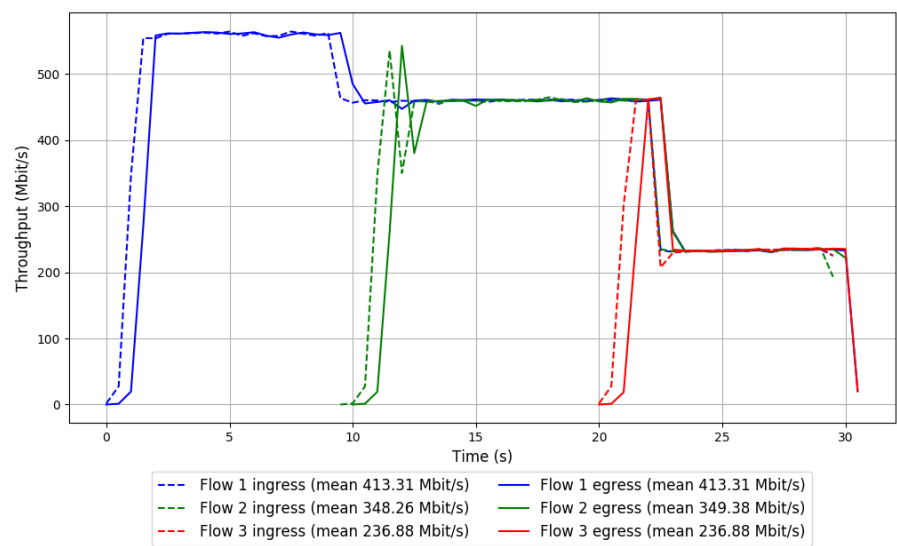


Run 4: Statistics of TCP Vegas

Start at: 2019-02-20 14:22:33  
End at: 2019-02-20 14:23:03  
Local clock offset: -0.022 ms  
Remote clock offset: -0.505 ms

# Below is generated by plot.py at 2019-02-20 18:01:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 724.25 Mbit/s  
95th percentile per-packet one-way delay: 65.805 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 413.31 Mbit/s  
95th percentile per-packet one-way delay: 65.631 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 349.38 Mbit/s  
95th percentile per-packet one-way delay: 67.505 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 236.88 Mbit/s  
95th percentile per-packet one-way delay: 63.583 ms  
Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-02-20 14:59:27

End at: 2019-02-20 14:59:57

Local clock offset: -0.087 ms

Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2019-02-20 18:05:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 948.50 Mbit/s

95th percentile per-packet one-way delay: 140.346 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 451.62 Mbit/s

95th percentile per-packet one-way delay: 69.611 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 545.41 Mbit/s

95th percentile per-packet one-way delay: 113.197 ms

Loss rate: 0.20%

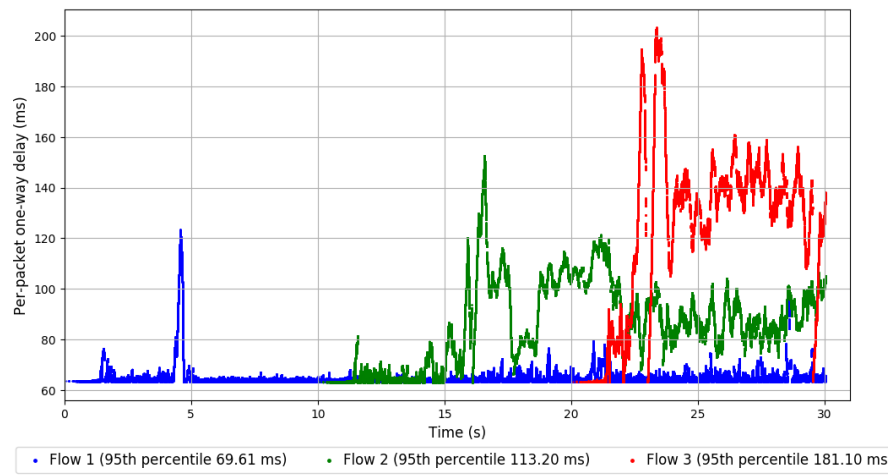
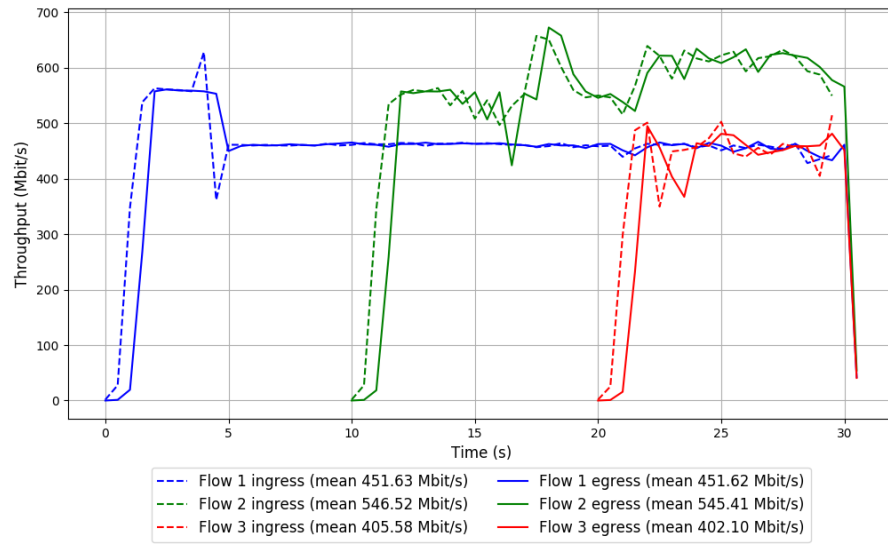
-- Flow 3:

Average throughput: 402.10 Mbit/s

95th percentile per-packet one-way delay: 181.100 ms

Loss rate: 0.85%

# Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-02-20 12:12:25

End at: 2019-02-20 12:12:55

Local clock offset: -0.133 ms

Remote clock offset: 1.245 ms

# Below is generated by plot.py at 2019-02-20 18:05:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 271.21 Mbit/s

95th percentile per-packet one-way delay: 182.158 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 161.51 Mbit/s

95th percentile per-packet one-way delay: 96.485 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 99.29 Mbit/s

95th percentile per-packet one-way delay: 96.862 ms

Loss rate: 0.96%

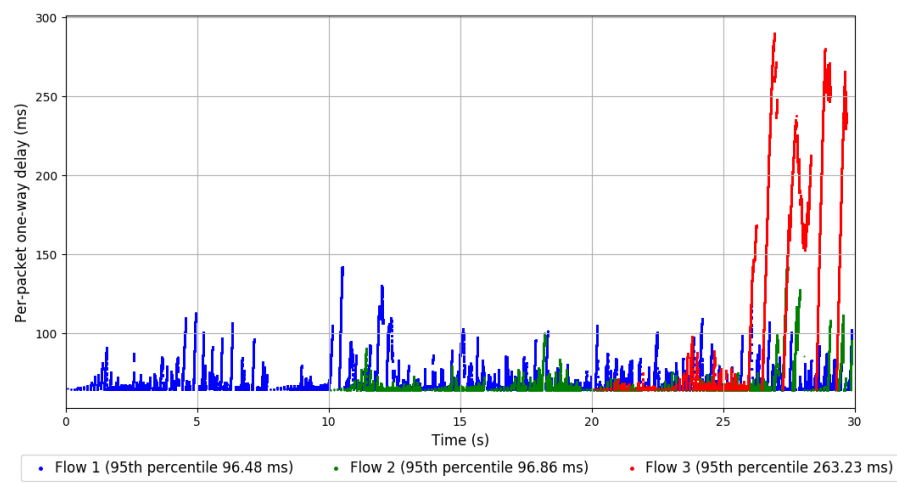
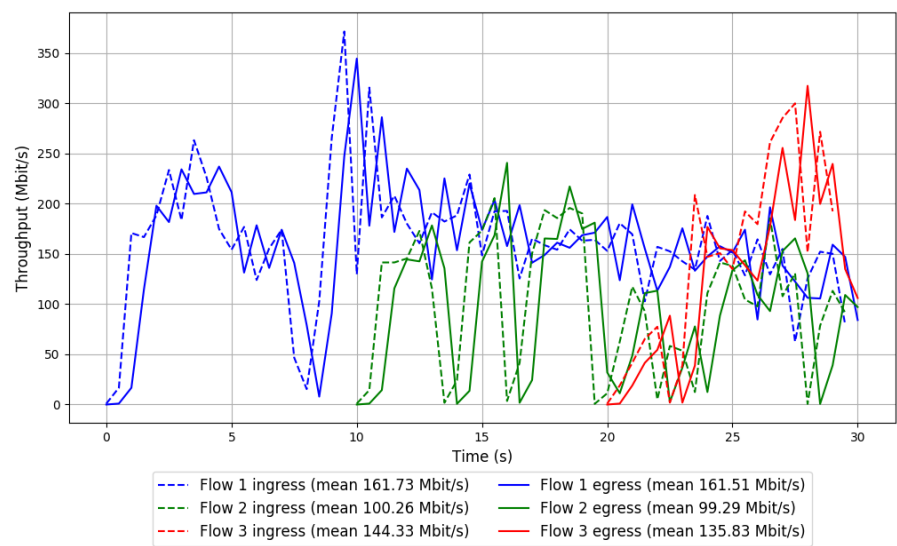
-- Flow 3:

Average throughput: 135.83 Mbit/s

95th percentile per-packet one-way delay: 263.234 ms

Loss rate: 4.15%

Run 1: Report of Verus — Data Link

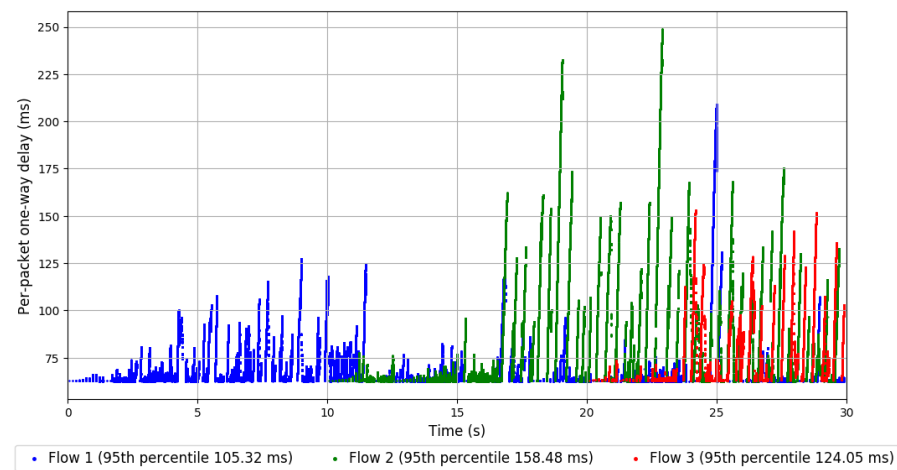
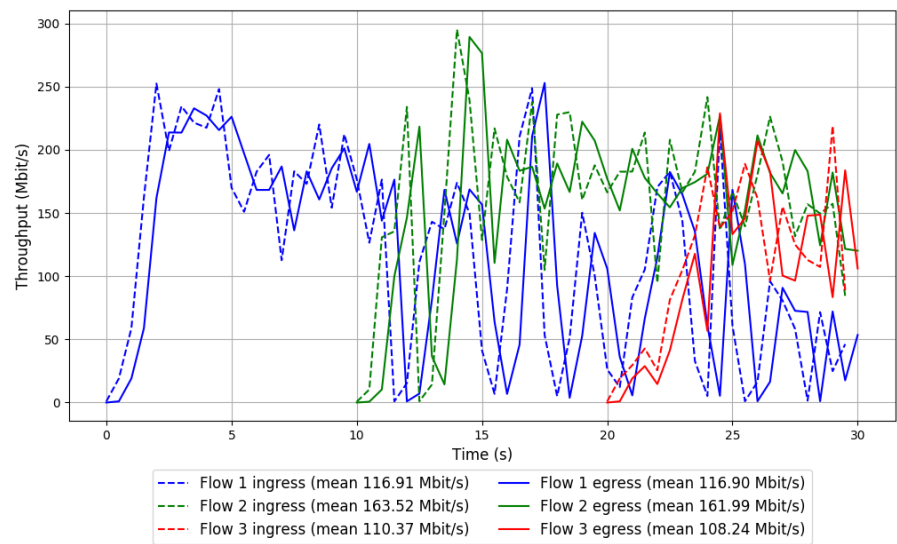


Run 2: Statistics of Verus

Start at: 2019-02-20 12:49:47  
End at: 2019-02-20 12:50:17  
Local clock offset: -0.068 ms  
Remote clock offset: -0.174 ms

# Below is generated by plot.py at 2019-02-20 18:05:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 259.14 Mbit/s  
95th percentile per-packet one-way delay: 141.929 ms  
Loss rate: 0.51%  
-- Flow 1:  
Average throughput: 116.90 Mbit/s  
95th percentile per-packet one-way delay: 105.323 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 161.99 Mbit/s  
95th percentile per-packet one-way delay: 158.480 ms  
Loss rate: 0.58%  
-- Flow 3:  
Average throughput: 108.24 Mbit/s  
95th percentile per-packet one-way delay: 124.049 ms  
Loss rate: 1.92%

Run 2: Report of Verus — Data Link



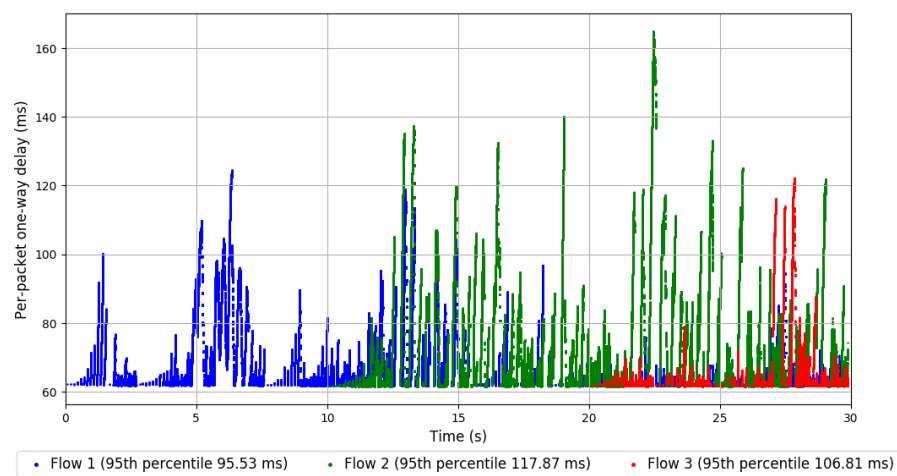
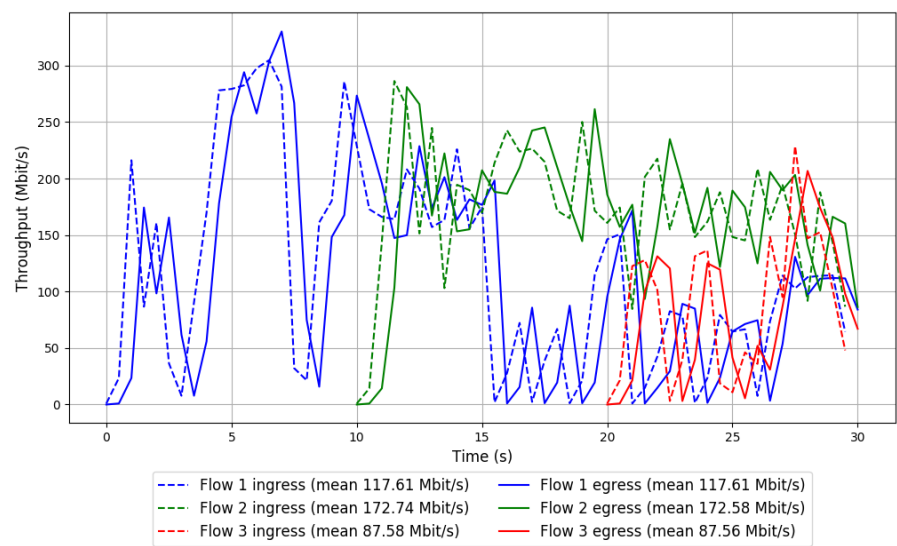


Run 3: Statistics of Verus

Start at: 2019-02-20 13:26:41  
End at: 2019-02-20 13:27:11  
Local clock offset: -0.075 ms  
Remote clock offset: -1.443 ms

# Below is generated by plot.py at 2019-02-20 18:05:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 260.94 Mbit/s  
95th percentile per-packet one-way delay: 108.392 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 117.61 Mbit/s  
95th percentile per-packet one-way delay: 95.535 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 172.58 Mbit/s  
95th percentile per-packet one-way delay: 117.874 ms  
Loss rate: 0.08%  
-- Flow 3:  
Average throughput: 87.56 Mbit/s  
95th percentile per-packet one-way delay: 106.807 ms  
Loss rate: 0.00%

Run 3: Report of Verus — Data Link

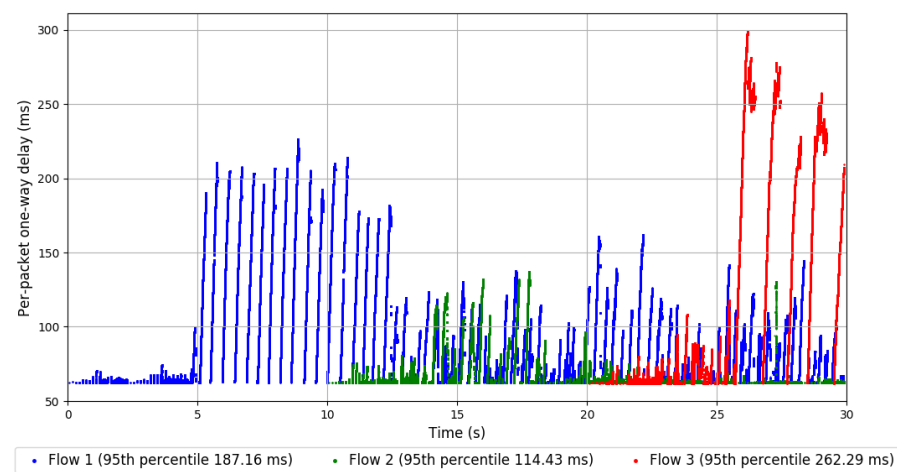
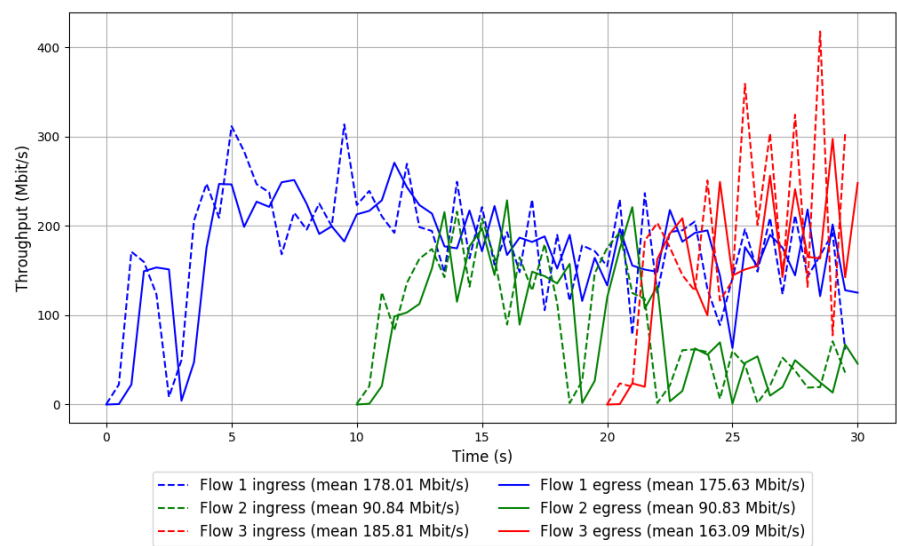


Run 4: Statistics of Verus

Start at: 2019-02-20 14:03:38  
End at: 2019-02-20 14:04:08  
Local clock offset: -0.047 ms  
Remote clock offset: -0.792 ms

# Below is generated by plot.py at 2019-02-20 18:05:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 289.58 Mbit/s  
95th percentile per-packet one-way delay: 212.175 ms  
Loss rate: 3.29%  
-- Flow 1:  
Average throughput: 175.63 Mbit/s  
95th percentile per-packet one-way delay: 187.160 ms  
Loss rate: 1.36%  
-- Flow 2:  
Average throughput: 90.83 Mbit/s  
95th percentile per-packet one-way delay: 114.434 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 163.09 Mbit/s  
95th percentile per-packet one-way delay: 262.294 ms  
Loss rate: 12.20%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2019-02-20 14:40:32

End at: 2019-02-20 14:41:02

Local clock offset: -0.064 ms

Remote clock offset: 0.558 ms

# Below is generated by plot.py at 2019-02-20 18:07:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 281.83 Mbit/s

95th percentile per-packet one-way delay: 160.152 ms

Loss rate: 0.31%

-- Flow 1:

Average throughput: 155.59 Mbit/s

95th percentile per-packet one-way delay: 120.039 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 140.52 Mbit/s

95th percentile per-packet one-way delay: 197.792 ms

Loss rate: 0.94%

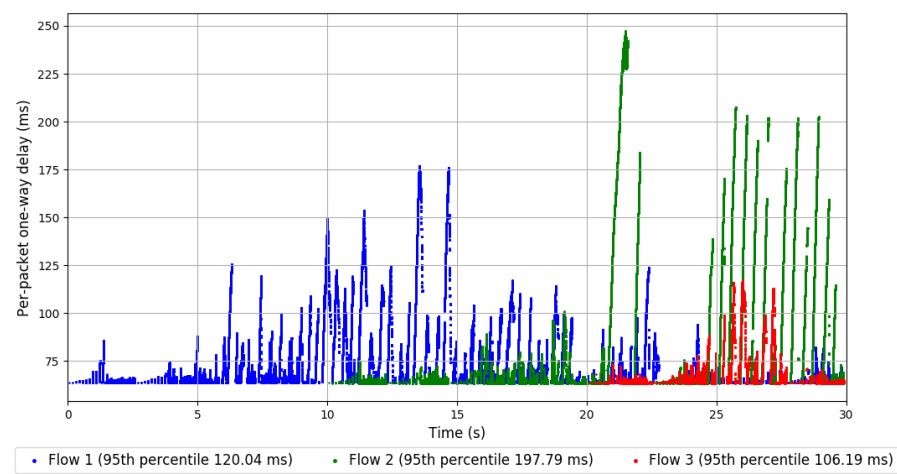
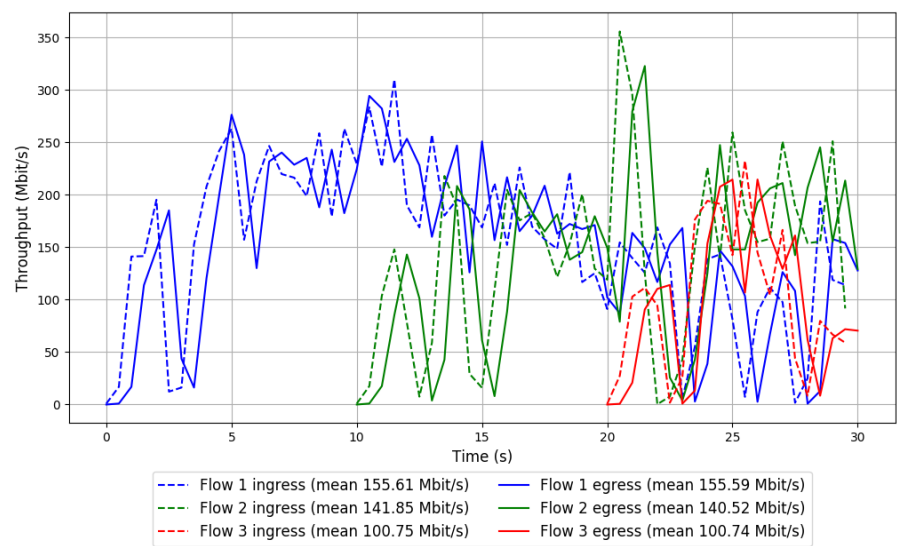
-- Flow 3:

Average throughput: 100.74 Mbit/s

95th percentile per-packet one-way delay: 106.194 ms

Loss rate: 0.00%

Run 5: Report of Verus — Data Link

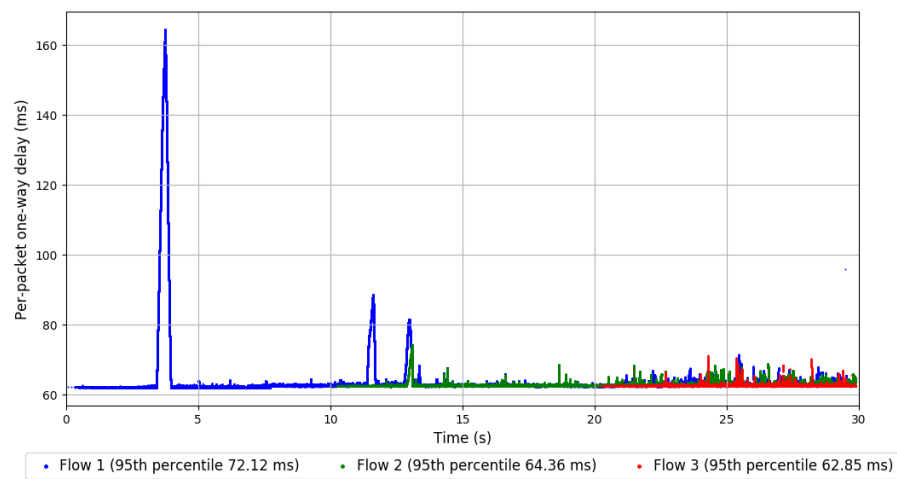
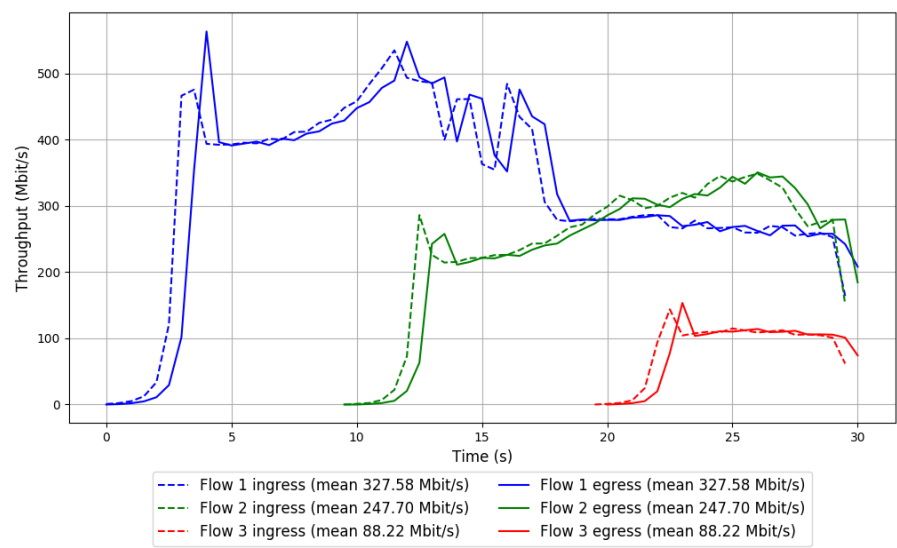


Run 1: Statistics of PCC-Vivace

Start at: 2019-02-20 12:00:10  
End at: 2019-02-20 12:00:40  
Local clock offset: -0.098 ms  
Remote clock offset: -0.704 ms

# Below is generated by plot.py at 2019-02-20 18:07:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 521.91 Mbit/s  
95th percentile per-packet one-way delay: 65.589 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 327.58 Mbit/s  
95th percentile per-packet one-way delay: 72.119 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 247.70 Mbit/s  
95th percentile per-packet one-way delay: 64.362 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 88.22 Mbit/s  
95th percentile per-packet one-way delay: 62.852 ms  
Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



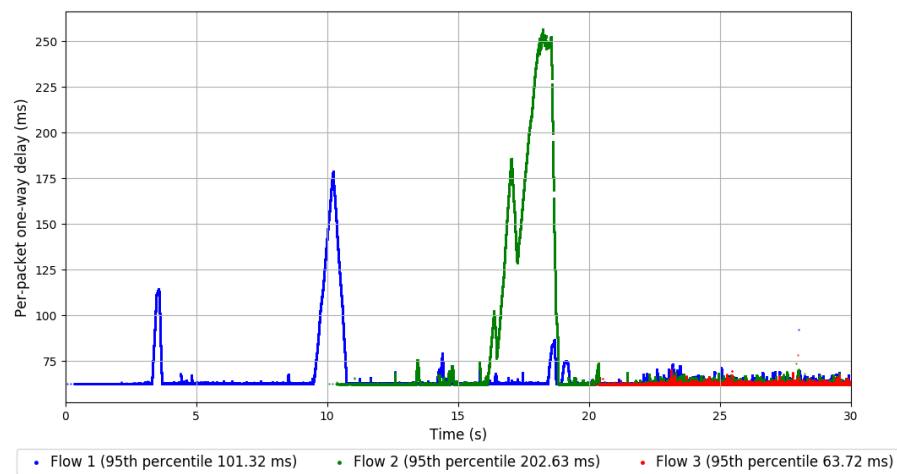
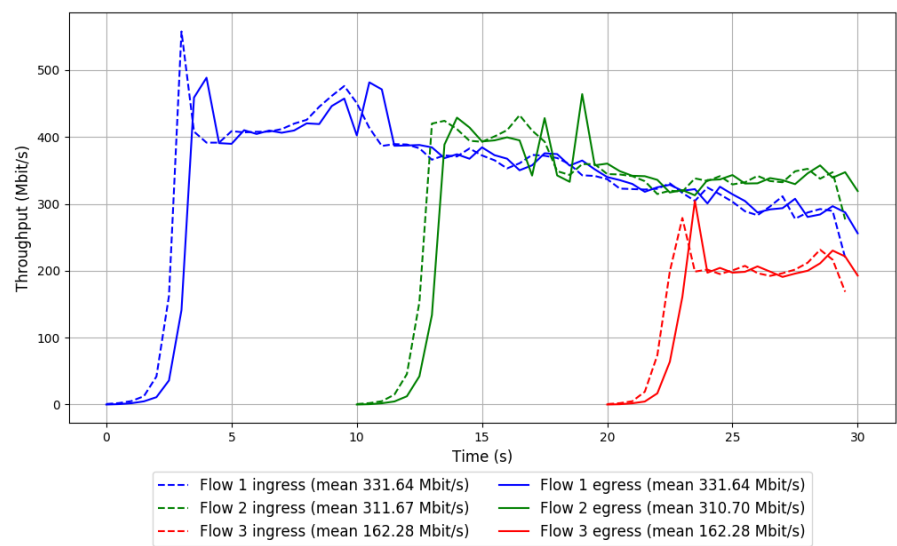


Run 2: Statistics of PCC-Vivace

Start at: 2019-02-20 12:37:29  
End at: 2019-02-20 12:37:59  
Local clock offset: -0.091 ms  
Remote clock offset: -0.671 ms

# Below is generated by plot.py at 2019-02-20 18:08:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 591.66 Mbit/s  
95th percentile per-packet one-way delay: 136.915 ms  
Loss rate: 0.11%  
-- Flow 1:  
Average throughput: 331.64 Mbit/s  
95th percentile per-packet one-way delay: 101.321 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 310.70 Mbit/s  
95th percentile per-packet one-way delay: 202.627 ms  
Loss rate: 0.31%  
-- Flow 3:  
Average throughput: 162.28 Mbit/s  
95th percentile per-packet one-way delay: 63.716 ms  
Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link

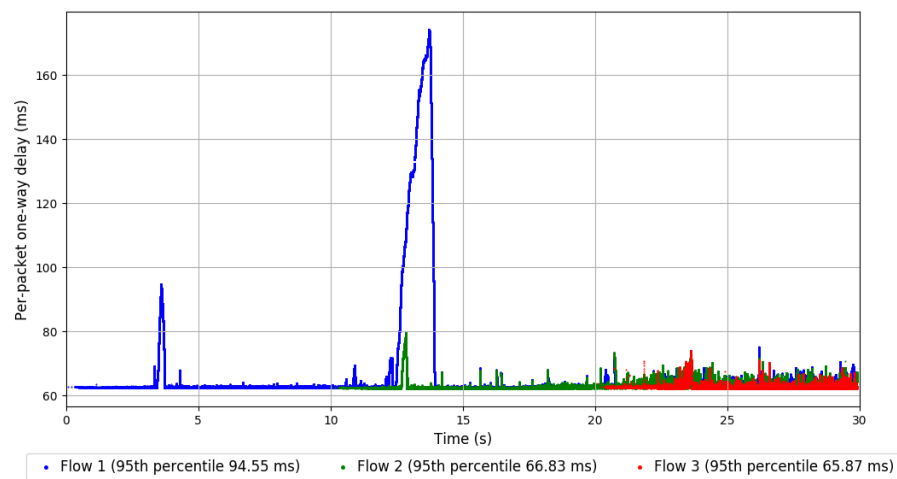
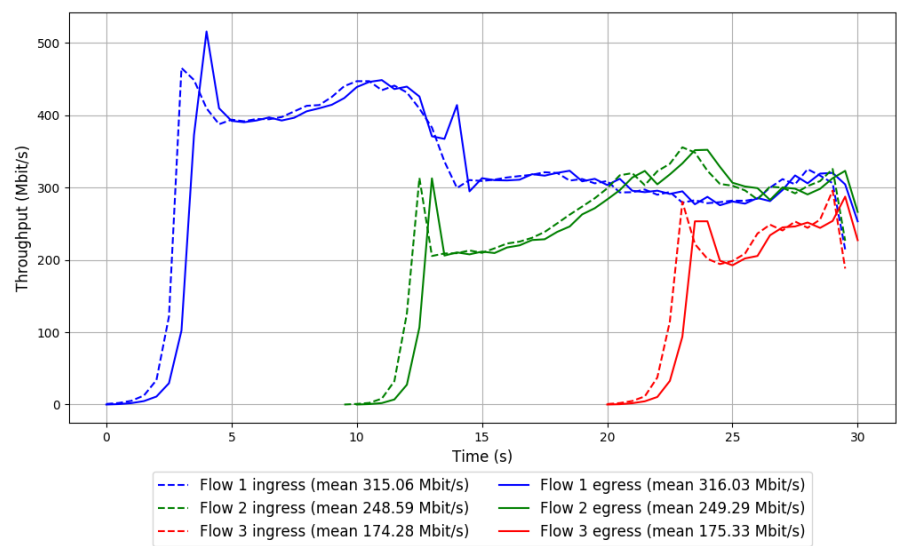


Run 3: Statistics of PCC-Vivace

Start at: 2019-02-20 13:14:27  
End at: 2019-02-20 13:14:57  
Local clock offset: -0.075 ms  
Remote clock offset: -0.861 ms

# Below is generated by plot.py at 2019-02-20 18:08:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 539.53 Mbit/s  
95th percentile per-packet one-way delay: 70.649 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 316.03 Mbit/s  
95th percentile per-packet one-way delay: 94.553 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 249.29 Mbit/s  
95th percentile per-packet one-way delay: 66.832 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 175.33 Mbit/s  
95th percentile per-packet one-way delay: 65.866 ms  
Loss rate: 0.01%

Run 3: Report of PCC-Vivace — Data Link

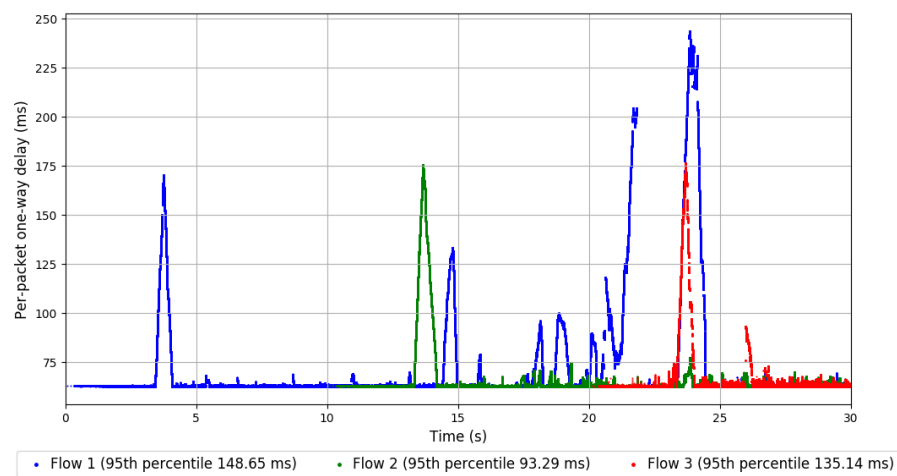
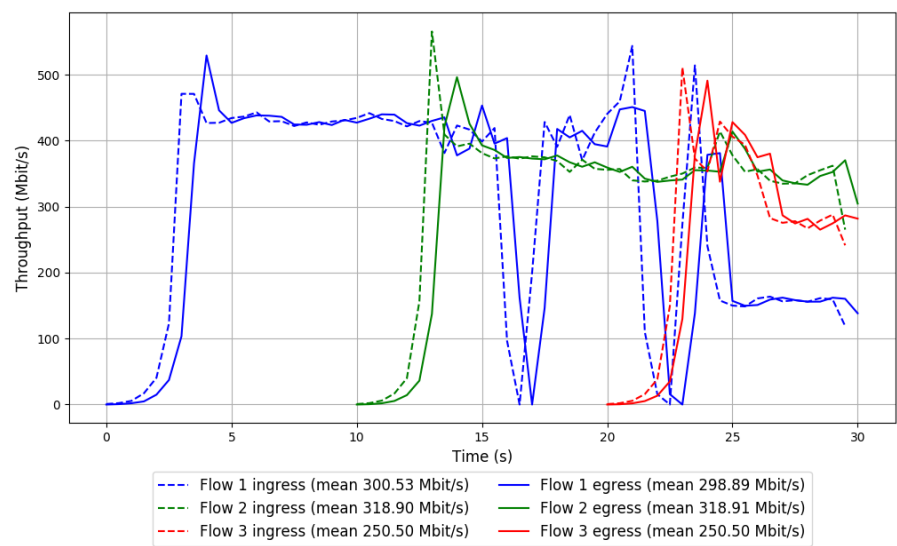


Run 4: Statistics of PCC-Vivace

Start at: 2019-02-20 13:51:19  
End at: 2019-02-20 13:51:49  
Local clock offset: -0.123 ms  
Remote clock offset: -0.114 ms

# Below is generated by plot.py at 2019-02-20 18:08:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 593.39 Mbit/s  
95th percentile per-packet one-way delay: 130.511 ms  
Loss rate: 0.32%  
-- Flow 1:  
Average throughput: 298.89 Mbit/s  
95th percentile per-packet one-way delay: 148.648 ms  
Loss rate: 0.63%  
-- Flow 2:  
Average throughput: 318.91 Mbit/s  
95th percentile per-packet one-way delay: 93.291 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 250.50 Mbit/s  
95th percentile per-packet one-way delay: 135.139 ms  
Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link

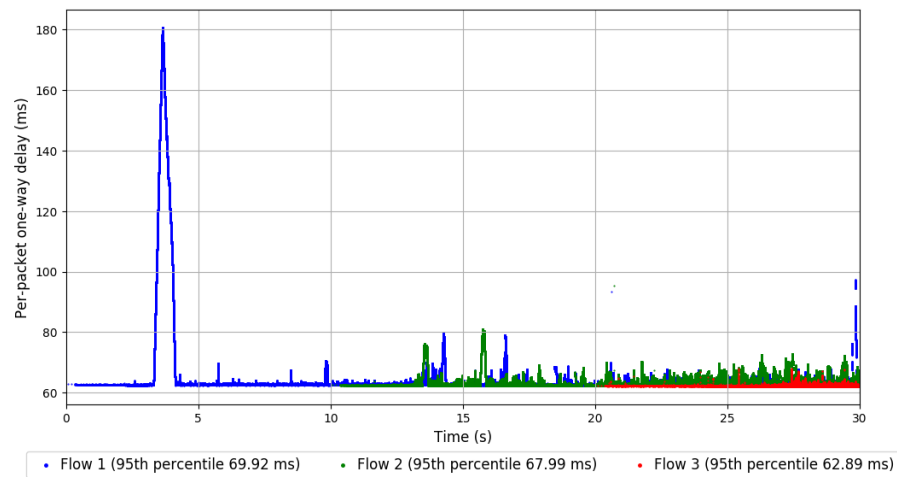
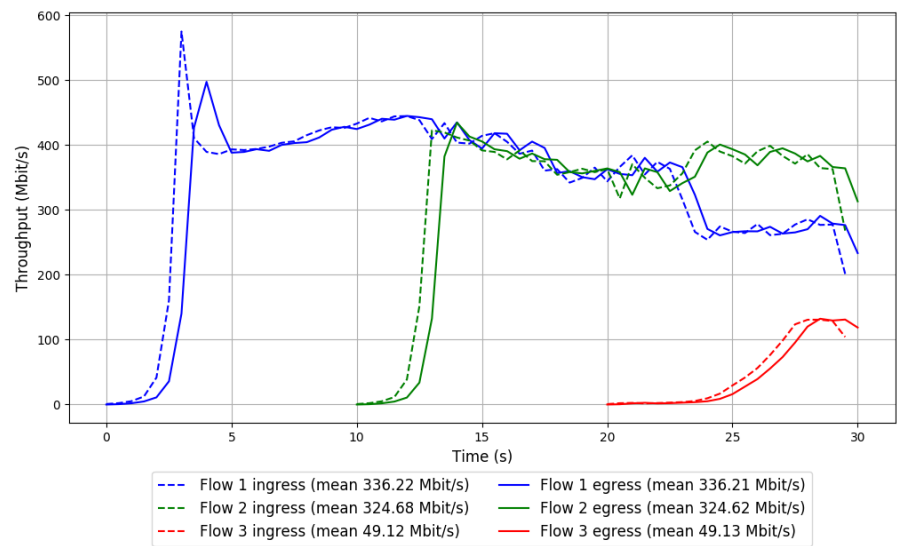


Run 5: Statistics of PCC-Vivace

Start at: 2019-02-20 14:28:14  
End at: 2019-02-20 14:28:44  
Local clock offset: 0.009 ms  
Remote clock offset: -0.723 ms

# Below is generated by plot.py at 2019-02-20 18:08:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 568.22 Mbit/s  
95th percentile per-packet one-way delay: 68.308 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 336.21 Mbit/s  
95th percentile per-packet one-way delay: 69.919 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 324.62 Mbit/s  
95th percentile per-packet one-way delay: 67.993 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 49.13 Mbit/s  
95th percentile per-packet one-way delay: 62.886 ms  
Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



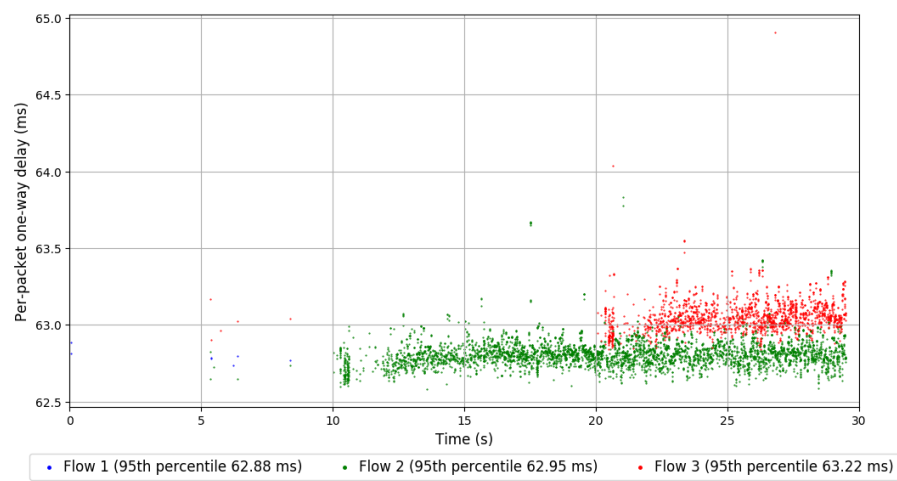
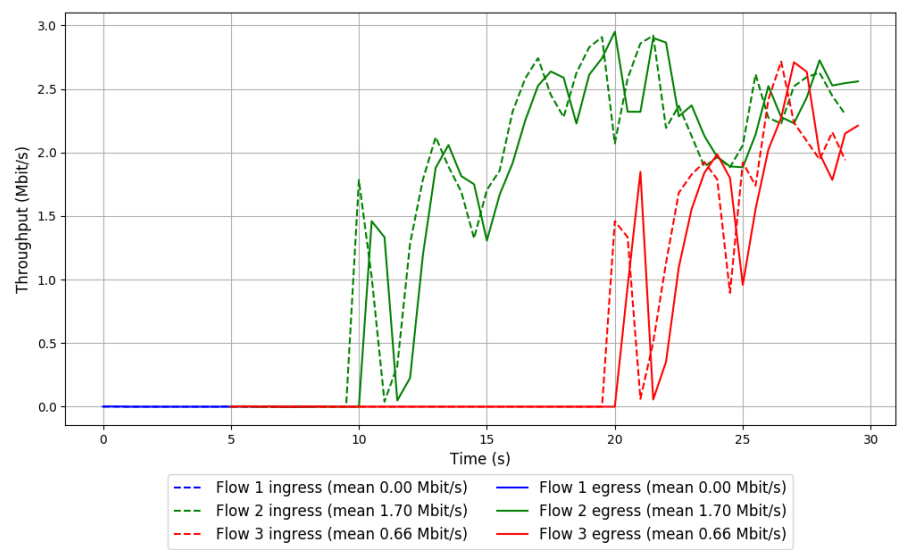


Run 1: Statistics of WebRTC media

Start at: 2019-02-20 12:19:25  
End at: 2019-02-20 12:19:55  
Local clock offset: -0.13 ms  
Remote clock offset: -0.278 ms

# Below is generated by plot.py at 2019-02-20 18:08:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1.94 Mbit/s  
95th percentile per-packet one-way delay: 63.137 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 62.885 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 1.70 Mbit/s  
95th percentile per-packet one-way delay: 62.948 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.66 Mbit/s  
95th percentile per-packet one-way delay: 63.222 ms  
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

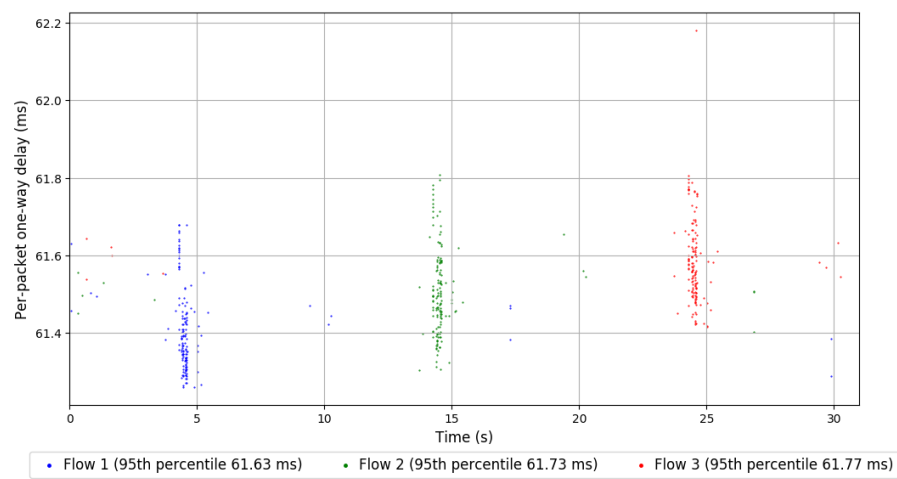
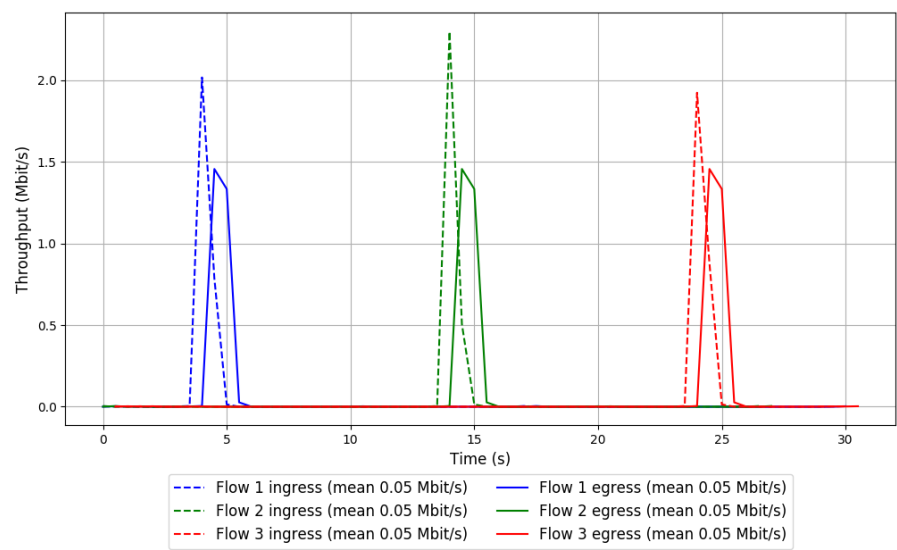


Run 2: Statistics of WebRTC media

Start at: 2019-02-20 12:56:51  
End at: 2019-02-20 12:57:21  
Local clock offset: -0.062 ms  
Remote clock offset: -1.421 ms

# Below is generated by plot.py at 2019-02-20 18:08:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 61.733 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 61.627 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 61.725 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 61.771 ms  
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-02-20 13:33:36

End at: 2019-02-20 13:34:06

Local clock offset: -0.119 ms

Remote clock offset: 0.632 ms

# Below is generated by plot.py at 2019-02-20 18:08:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.84 Mbit/s

95th percentile per-packet one-way delay: 63.917 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.11 Mbit/s

95th percentile per-packet one-way delay: 63.809 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 63.897 ms

Loss rate: 0.00%

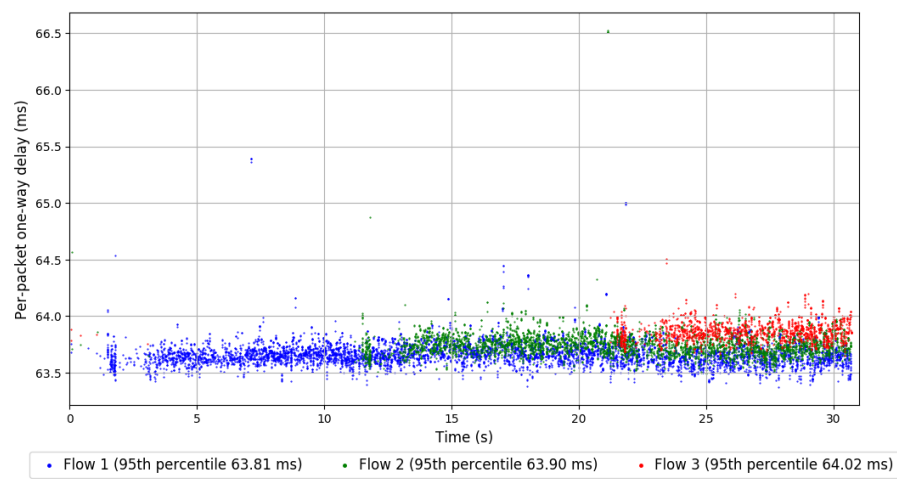
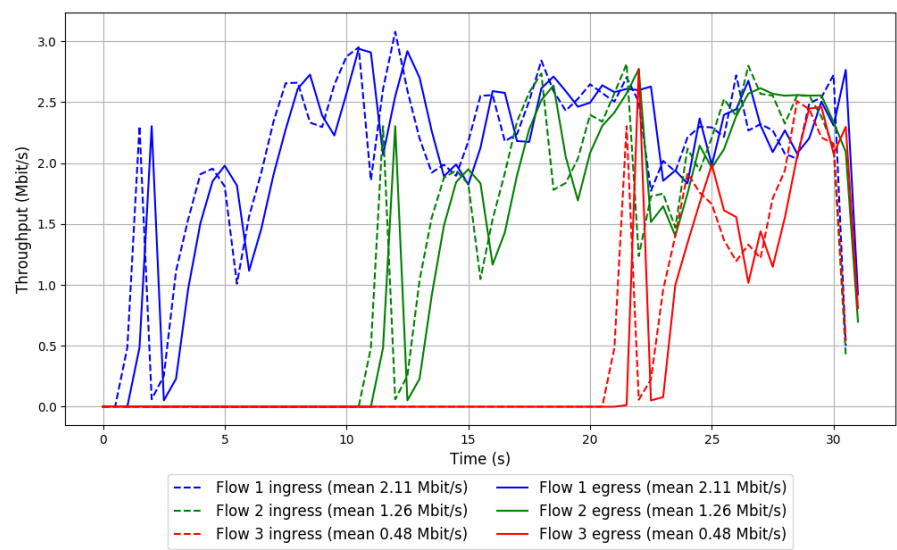
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 64.015 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

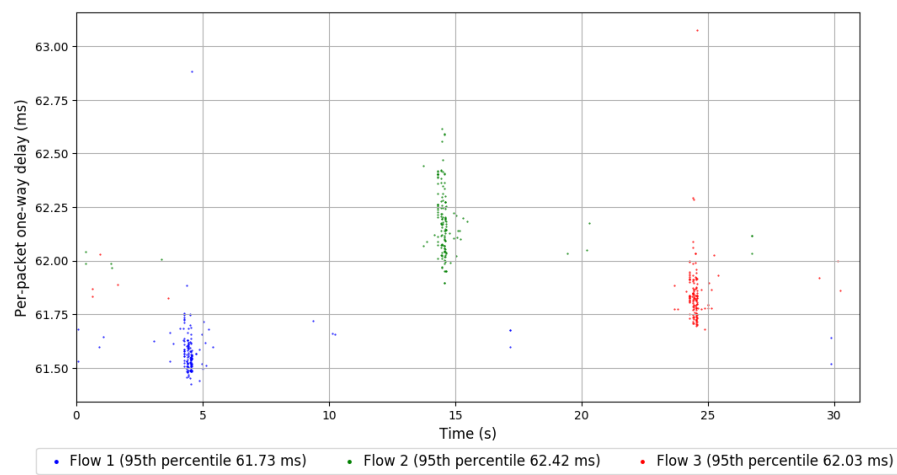
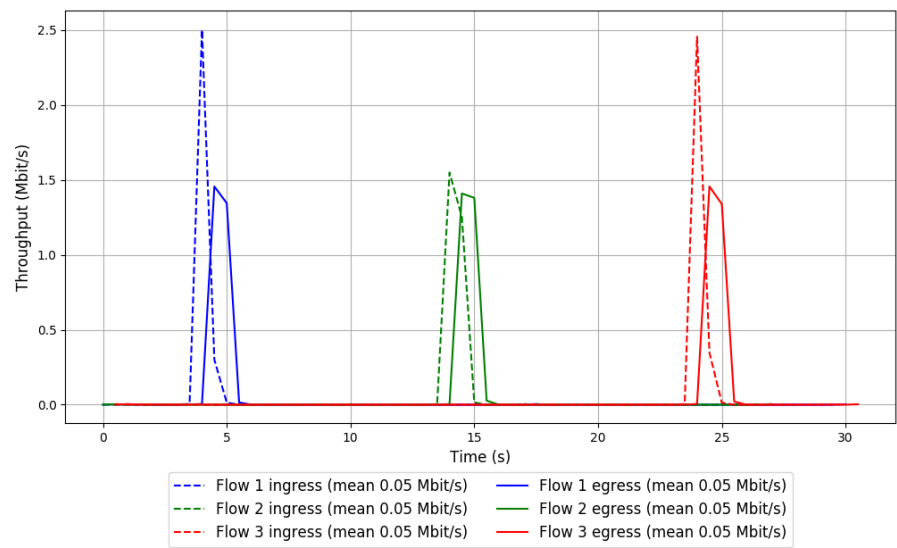


Run 4: Statistics of WebRTC media

Start at: 2019-02-20 14:10:45  
End at: 2019-02-20 14:11:15  
Local clock offset: -0.039 ms  
Remote clock offset: -1.449 ms

# Below is generated by plot.py at 2019-02-20 18:08:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 62.362 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 61.727 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 62.420 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 62.030 ms  
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-02-20 14:47:38  
End at: 2019-02-20 14:48:08  
Local clock offset: -0.037 ms  
Remote clock offset: -0.347 ms

# Below is generated by plot.py at 2019-02-20 18:08:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.54 Mbit/s  
95th percentile per-packet one-way delay: 63.175 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 1.74 Mbit/s  
95th percentile per-packet one-way delay: 63.121 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 1.53 Mbit/s  
95th percentile per-packet one-way delay: 63.117 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.59 Mbit/s  
95th percentile per-packet one-way delay: 63.288 ms  
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

