

## Pantheon Report

Generated at 2019-03-28 02:38:24 (UTC).

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

Repeated the test of 21 congestion control schemes 5 times.

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

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

### System info:

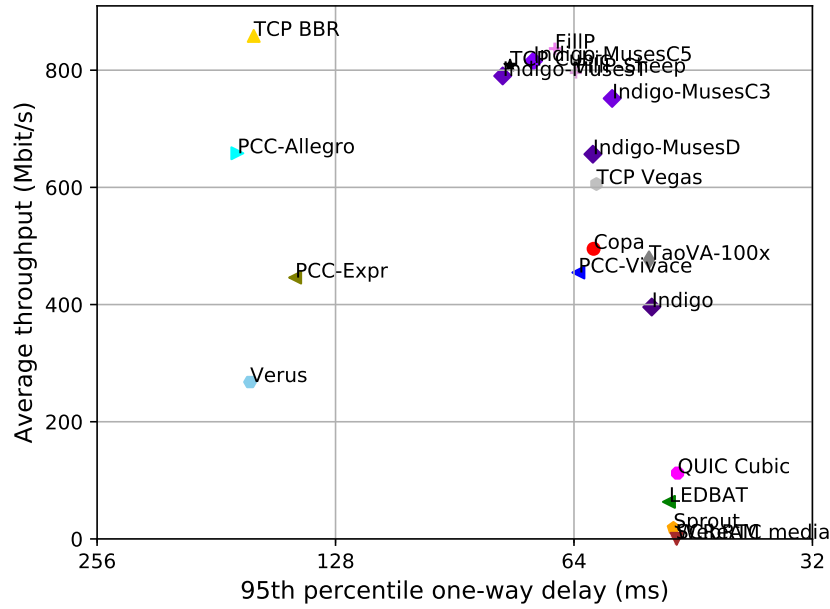
```
Linux 4.15.0-1028-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

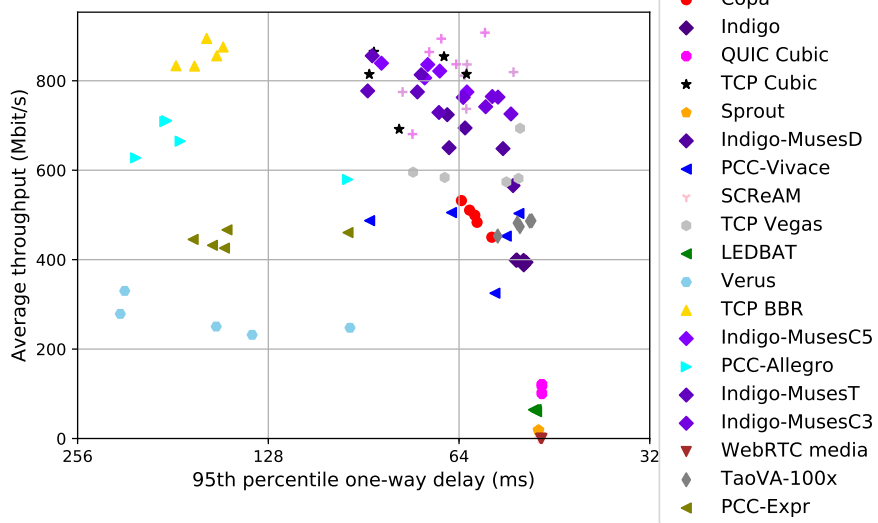
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d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

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

test from GCE Iowa to GCE London, 5 runs of 30s each per scheme  
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE Iowa to GCE London, 5 runs of 30s each per scheme  
 3 flows with 10s interval between flows



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	440.40	434.37	391.29	153.20	173.52	146.34	0.73	1.34	1.67
Copa	5	260.21	247.57	212.94	59.35	61.63	62.71	0.27	0.53	1.09
TCP Cubic	5	424.82	393.43	367.34	79.67	67.48	75.73	0.32	0.43	1.01
FillP	5	522.25	342.15	264.87	74.64	52.04	50.22	0.19	0.40	1.04
FillP-Sheep	5	495.22	331.06	245.39	69.62	52.60	51.47	0.25	0.41	1.09
Indigo	5	209.65	194.13	174.97	50.87	51.48	50.49	0.31	0.51	1.14
Indigo-MusesC3	5	435.88	378.18	267.76	58.76	56.89	51.26	0.24	0.43	1.69
Indigo-MusesC5	5	486.57	406.22	252.47	71.94	70.36	56.63	0.27	0.36	1.34
Indigo-MusesD	5	410.87	262.67	283.92	65.24	58.59	51.57	0.24	0.26	1.63
Indigo-MusesT	5	479.55	410.23	171.74	82.61	73.19	50.13	0.29	0.50	1.41
LEDBAT	5	40.59	27.37	13.71	48.47	48.61	48.20	0.50	0.95	1.91
PCC-Allegro	5	349.95	339.83	253.03	150.77	180.87	123.43	4.07	4.55	1.40
PCC-Expr	5	238.92	231.95	162.20	130.38	108.86	97.55	1.29	1.21	2.24
QUIC Cubic	5	61.28	59.61	33.04	47.35	47.36	47.05	0.39	0.56	1.52
SCReAM	5	0.22	0.22	0.22	47.31	47.26	47.62	0.26	0.61	1.09
Sprout	5	9.50	9.44	9.13	47.84	47.91	47.92	0.35	0.52	0.88
TaoVA-100x	5	242.02	237.71	230.98	49.69	52.00	53.41	0.34	0.45	0.96
TCP Vegas	5	311.85	290.83	304.24	50.18	59.35	73.19	0.27	0.42	0.97
Verus	5	153.39	137.23	70.73	129.51	188.81	73.78	1.11	2.32	1.16
PCC-Vivace	5	248.36	219.72	184.49	59.79	81.98	79.04	0.37	0.54	1.17
WebRTC media	5	0.05	0.05	0.05	47.32	47.52	47.45	0.00	0.00	0.02



Run 1: Statistics of TCP BBR

Start at: 2019-03-27 20:49:17  
End at: 2019-03-27 20:49:47  
Local clock offset: -0.136 ms  
Remote clock offset: -0.249 ms

# Below is generated by plot.py at 2019-03-28 00:13:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 875.49 Mbit/s  
95th percentile per-packet one-way delay: 150.838 ms  
Loss rate: 0.80%

-- Flow 1:

Average throughput: 456.64 Mbit/s  
95th percentile per-packet one-way delay: 152.405 ms  
Loss rate: 0.83%

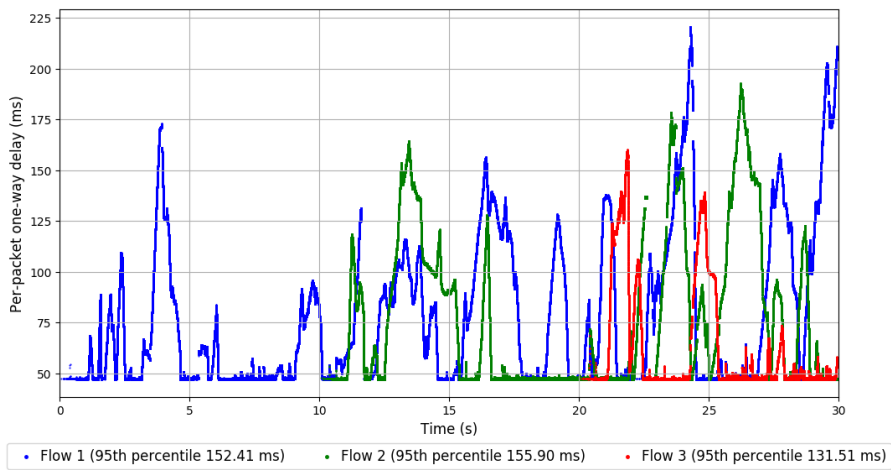
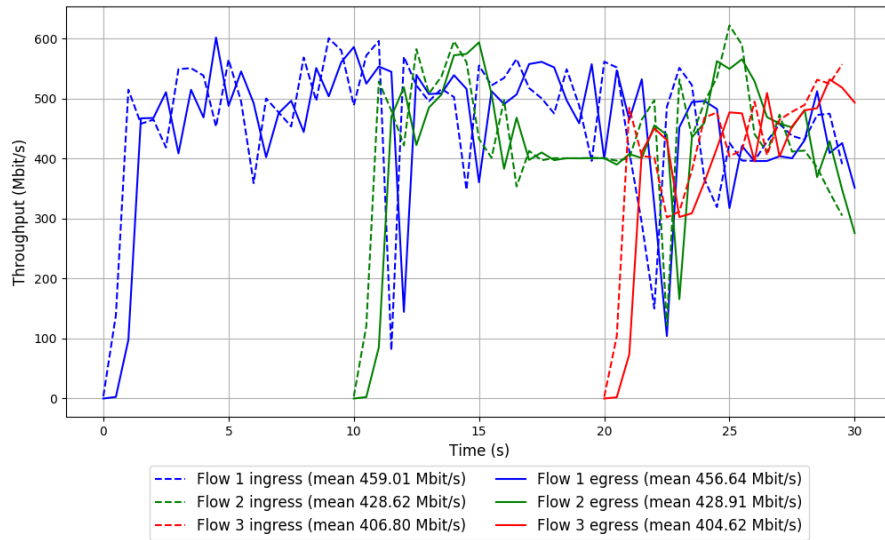
-- Flow 2:

Average throughput: 428.91 Mbit/s  
95th percentile per-packet one-way delay: 155.897 ms  
Loss rate: 0.41%

-- Flow 3:

Average throughput: 404.62 Mbit/s  
95th percentile per-packet one-way delay: 131.508 ms  
Loss rate: 1.49%

### Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-03-27 21:24:44

End at: 2019-03-27 21:25:14

Local clock offset: -0.178 ms

Remote clock offset: -0.29 ms

# Below is generated by plot.py at 2019-03-28 00:13:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 855.88 Mbit/s

95th percentile per-packet one-way delay: 154.404 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 429.35 Mbit/s

95th percentile per-packet one-way delay: 155.080 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 460.46 Mbit/s

95th percentile per-packet one-way delay: 164.688 ms

Loss rate: 1.34%

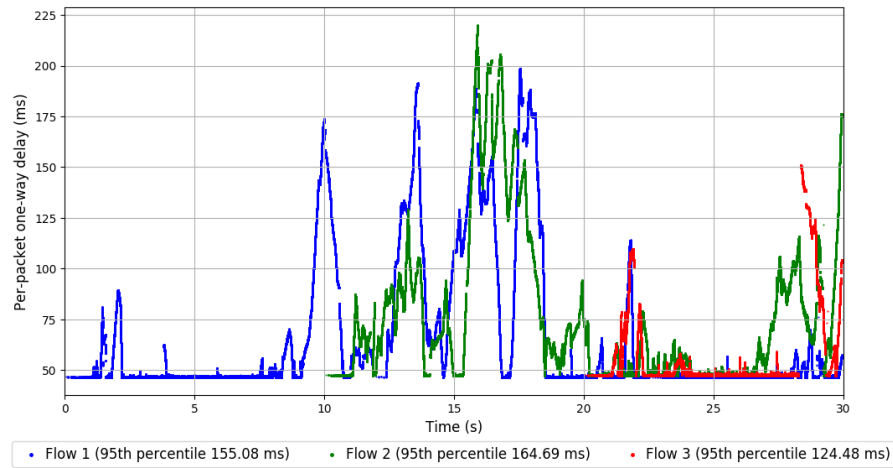
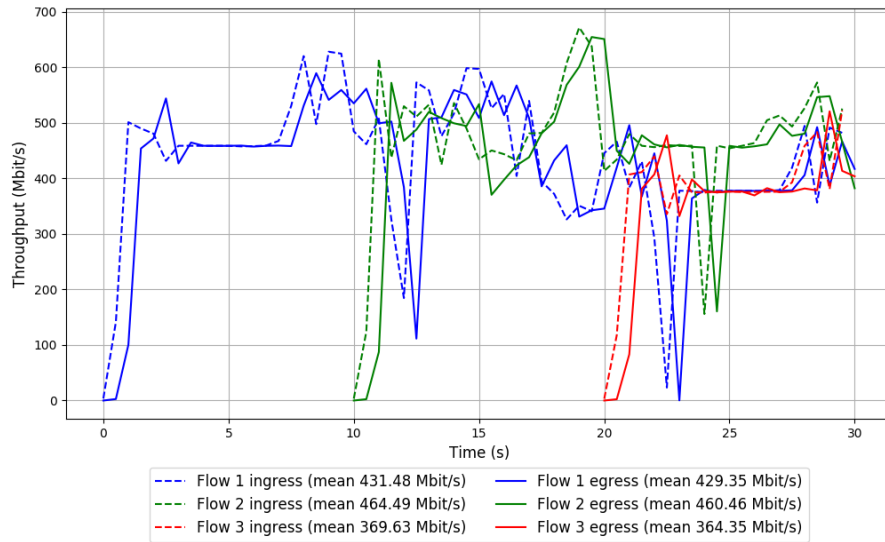
-- Flow 3:

Average throughput: 364.35 Mbit/s

95th percentile per-packet one-way delay: 124.477 ms

Loss rate: 2.37%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-03-27 22:00:22  
End at: 2019-03-27 22:00:52  
Local clock offset: -0.05 ms  
Remote clock offset: -0.362 ms

# Below is generated by plot.py at 2019-03-28 00:13:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 894.72 Mbit/s  
95th percentile per-packet one-way delay: 160.165 ms  
Loss rate: 0.93%

-- Flow 1:

Average throughput: 438.74 Mbit/s  
95th percentile per-packet one-way delay: 136.776 ms  
Loss rate: 0.19%

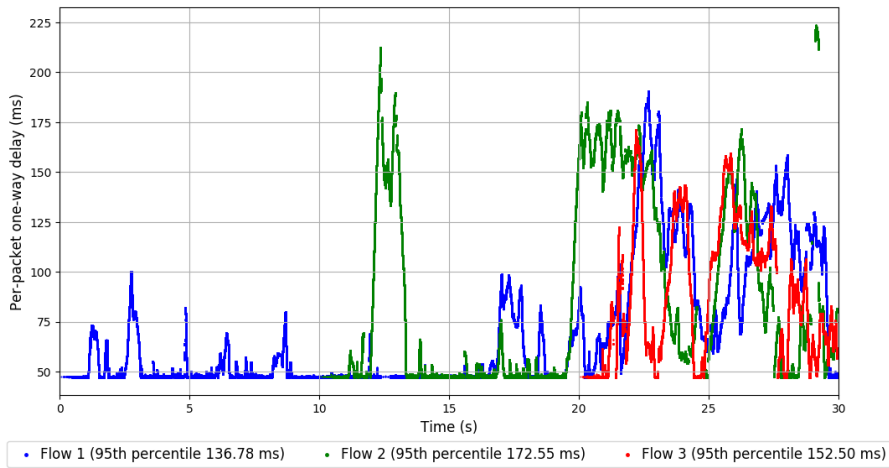
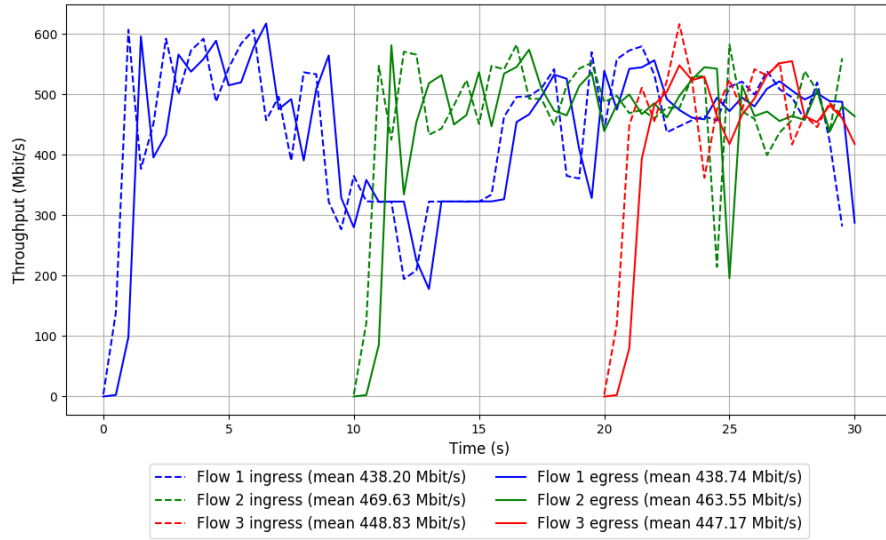
-- Flow 2:

Average throughput: 463.55 Mbit/s  
95th percentile per-packet one-way delay: 172.551 ms  
Loss rate: 1.76%

-- Flow 3:

Average throughput: 447.17 Mbit/s  
95th percentile per-packet one-way delay: 152.504 ms  
Loss rate: 1.32%

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



Run 4: Statistics of TCP BBR

Start at: 2019-03-27 22:35:56  
End at: 2019-03-27 22:36:26  
Local clock offset: -0.098 ms  
Remote clock offset: -0.395 ms

# Below is generated by plot.py at 2019-03-28 00:13:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 832.88 Mbit/s  
95th percentile per-packet one-way delay: 167.367 ms  
Loss rate: 1.35%

-- Flow 1:

Average throughput: 426.23 Mbit/s  
95th percentile per-packet one-way delay: 144.878 ms  
Loss rate: 1.33%

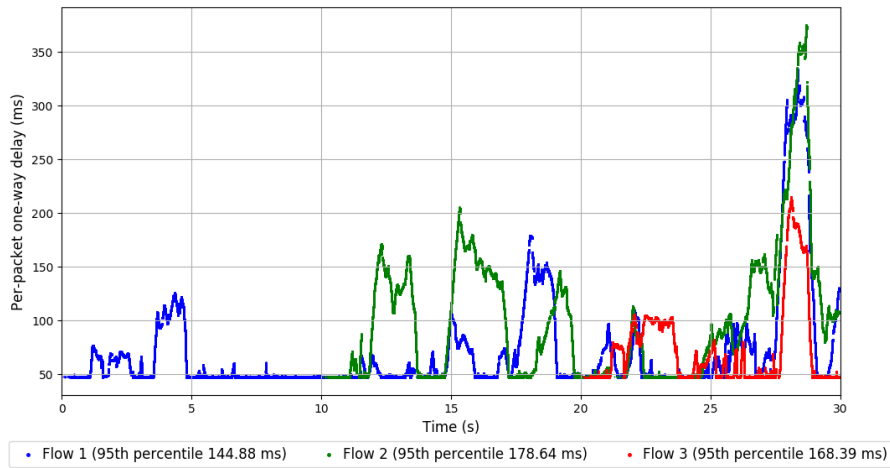
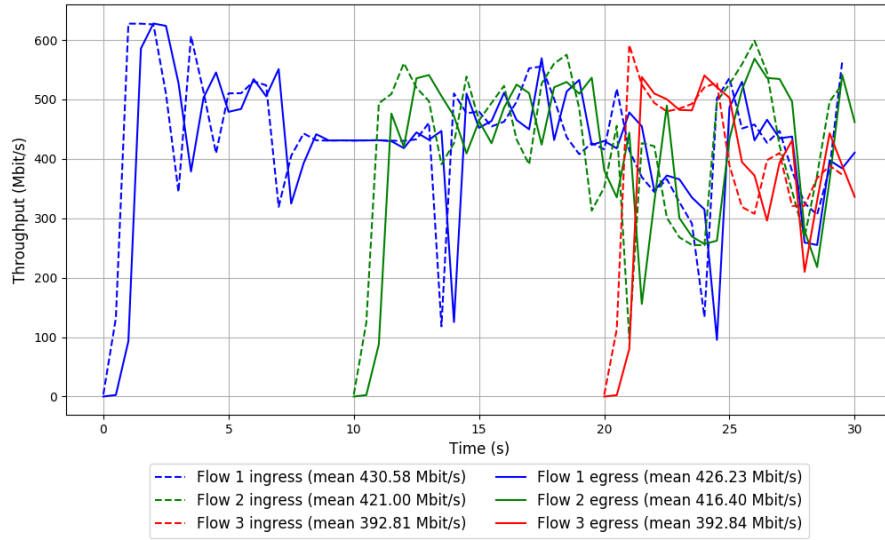
-- Flow 2:

Average throughput: 416.40 Mbit/s  
95th percentile per-packet one-way delay: 178.636 ms  
Loss rate: 1.57%

-- Flow 3:

Average throughput: 392.84 Mbit/s  
95th percentile per-packet one-way delay: 168.391 ms  
Loss rate: 0.95%

### Run 4: Report of TCP BBR — Data Link





Run 5: Statistics of TCP BBR

Start at: 2019-03-27 23:12:09  
End at: 2019-03-27 23:12:39  
Local clock offset: -0.107 ms  
Remote clock offset: -0.447 ms

# Below is generated by plot.py at 2019-03-28 00:13:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 833.64 Mbit/s  
95th percentile per-packet one-way delay: 179.010 ms  
Loss rate: 1.10%

-- Flow 1:

Average throughput: 451.06 Mbit/s  
95th percentile per-packet one-way delay: 176.868 ms  
Loss rate: 0.49%

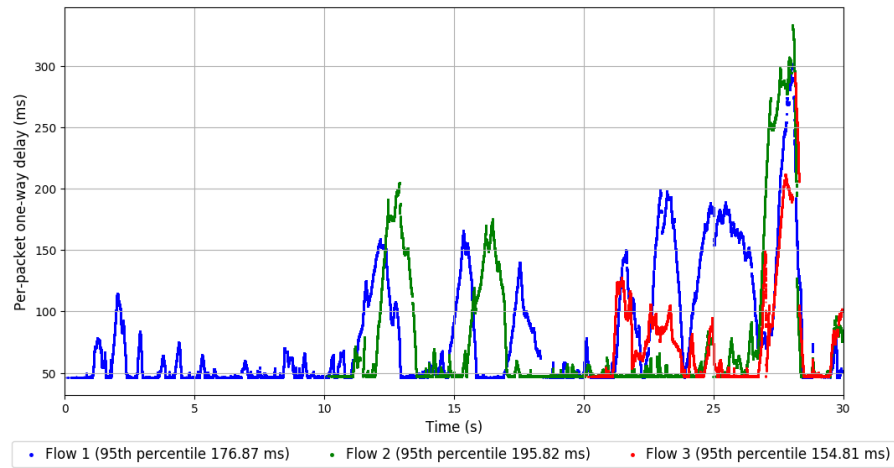
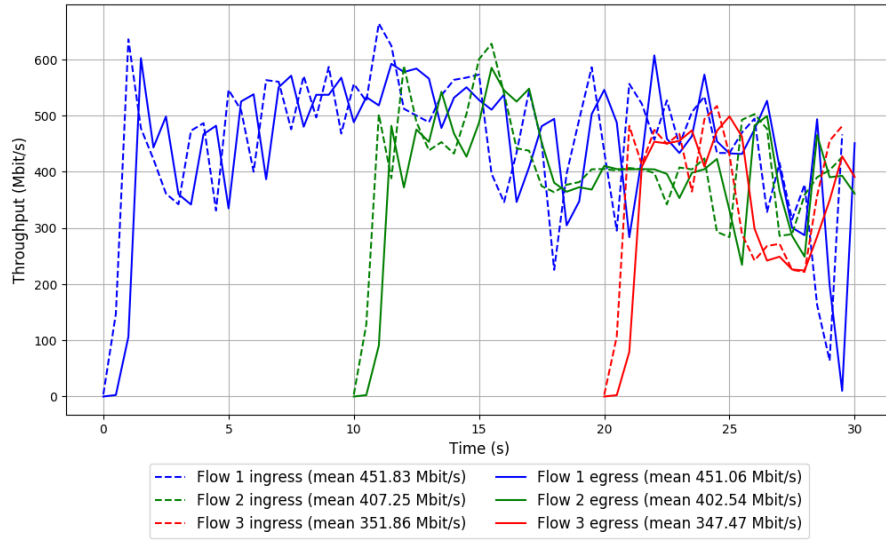
-- Flow 2:

Average throughput: 402.54 Mbit/s  
95th percentile per-packet one-way delay: 195.821 ms  
Loss rate: 1.63%

-- Flow 3:

Average throughput: 347.47 Mbit/s  
95th percentile per-packet one-way delay: 154.807 ms  
Loss rate: 2.20%

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



Run 1: Statistics of Copa

Start at: 2019-03-27 20:42:20  
End at: 2019-03-27 20:42:50  
Local clock offset: -0.059 ms  
Remote clock offset: -0.222 ms

# Below is generated by plot.py at 2019-03-28 00:13:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 450.16 Mbit/s  
95th percentile per-packet one-way delay: 56.816 ms  
Loss rate: 0.45%

-- Flow 1:

Average throughput: 222.50 Mbit/s  
95th percentile per-packet one-way delay: 54.124 ms  
Loss rate: 0.16%

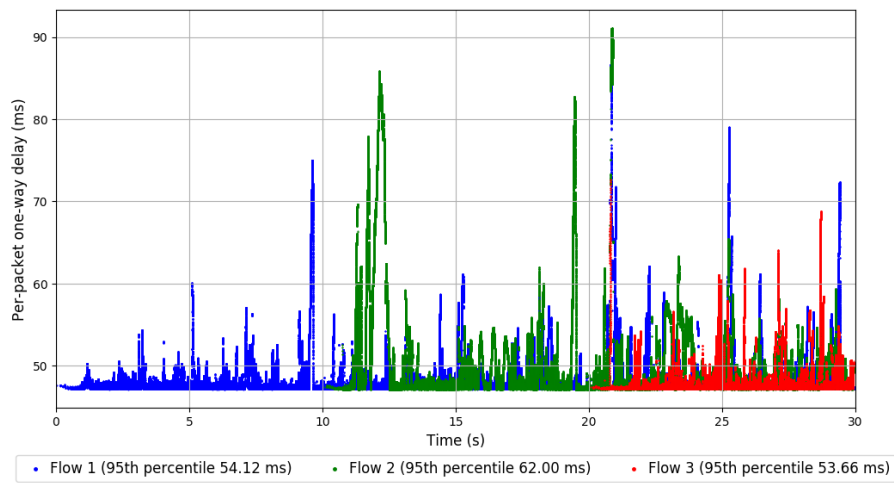
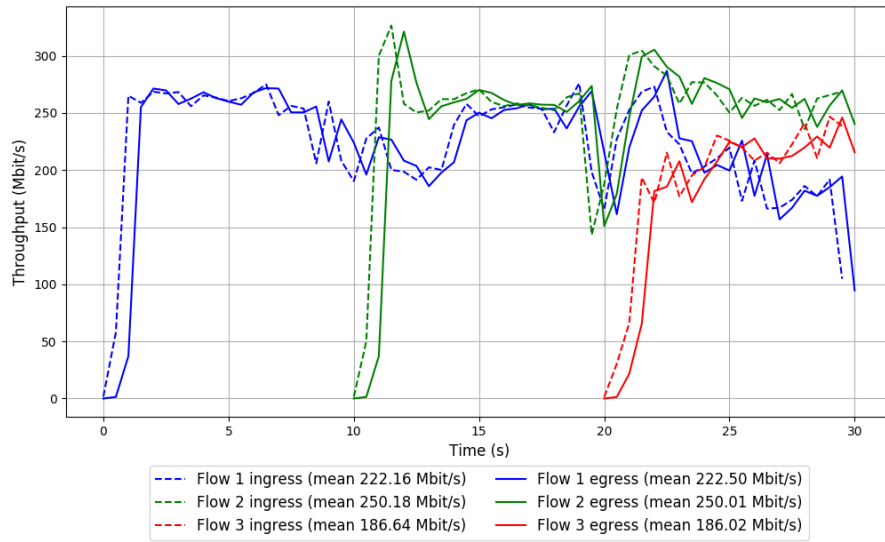
-- Flow 2:

Average throughput: 250.01 Mbit/s  
95th percentile per-packet one-way delay: 62.000 ms  
Loss rate: 0.54%

-- Flow 3:

Average throughput: 186.02 Mbit/s  
95th percentile per-packet one-way delay: 53.661 ms  
Loss rate: 1.27%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-03-27 21:17:43  
End at: 2019-03-27 21:18:13  
Local clock offset: -0.141 ms  
Remote clock offset: -0.292 ms

# Below is generated by plot.py at 2019-03-28 00:14:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 510.61 Mbit/s  
95th percentile per-packet one-way delay: 61.591 ms  
Loss rate: 0.43%

-- Flow 1:

Average throughput: 257.69 Mbit/s  
95th percentile per-packet one-way delay: 62.443 ms  
Loss rate: 0.20%

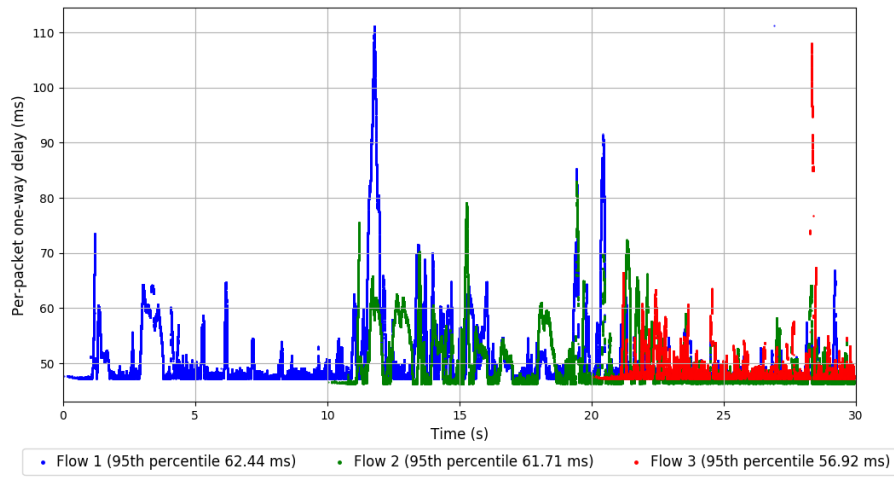
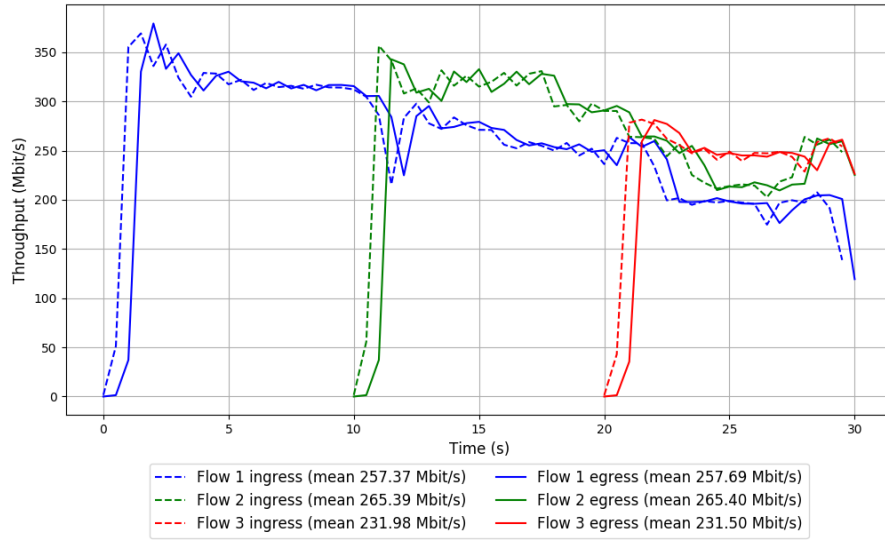
-- Flow 2:

Average throughput: 265.40 Mbit/s  
95th percentile per-packet one-way delay: 61.710 ms  
Loss rate: 0.46%

-- Flow 3:

Average throughput: 231.50 Mbit/s  
95th percentile per-packet one-way delay: 56.925 ms  
Loss rate: 1.16%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-03-27 21:53:20  
End at: 2019-03-27 21:53:50  
Local clock offset: -0.066 ms  
Remote clock offset: -0.349 ms

# Below is generated by plot.py at 2019-03-28 00:14:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 483.46 Mbit/s  
95th percentile per-packet one-way delay: 59.942 ms  
Loss rate: 0.57%

-- Flow 1:

Average throughput: 259.54 Mbit/s  
95th percentile per-packet one-way delay: 59.010 ms  
Loss rate: 0.41%

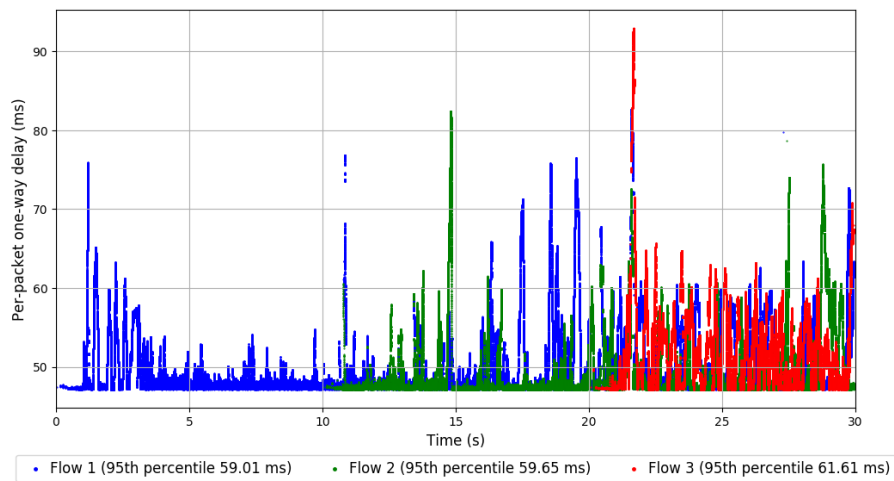
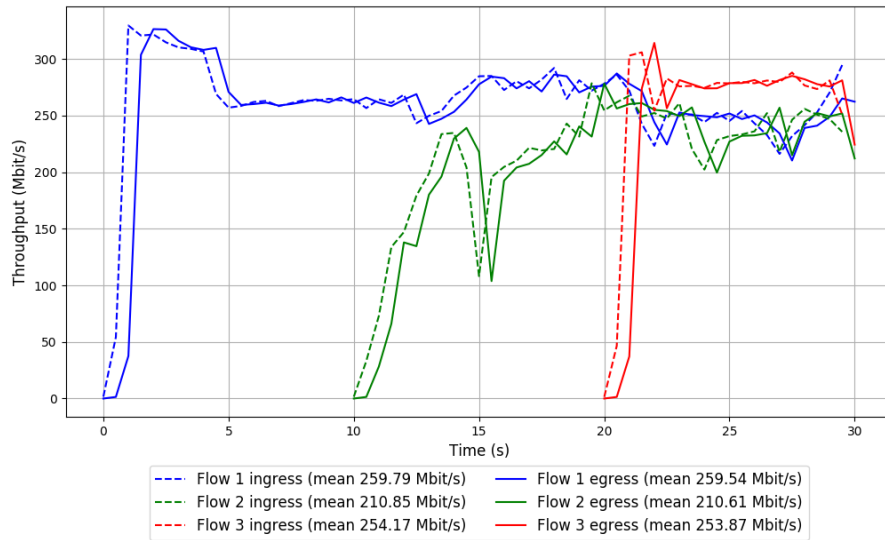
-- Flow 2:

Average throughput: 210.61 Mbit/s  
95th percentile per-packet one-way delay: 59.647 ms  
Loss rate: 0.58%

-- Flow 3:

Average throughput: 253.87 Mbit/s  
95th percentile per-packet one-way delay: 61.614 ms  
Loss rate: 1.06%

### Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

Start at: 2019-03-27 22:28:38  
End at: 2019-03-27 22:29:08  
Local clock offset: -0.049 ms  
Remote clock offset: -0.386 ms

# Below is generated by plot.py at 2019-03-28 00:31:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 532.08 Mbit/s  
95th percentile per-packet one-way delay: 63.455 ms  
Loss rate: 0.44%

-- Flow 1:

Average throughput: 290.98 Mbit/s  
95th percentile per-packet one-way delay: 62.074 ms  
Loss rate: 0.24%

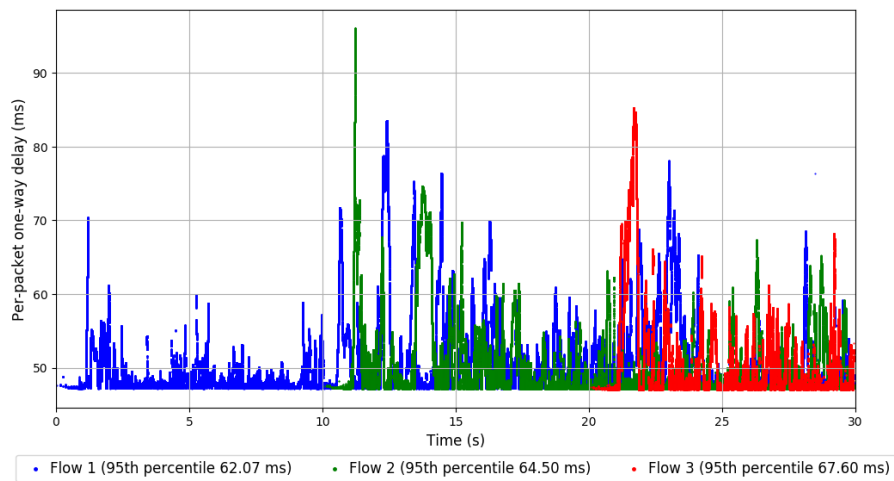
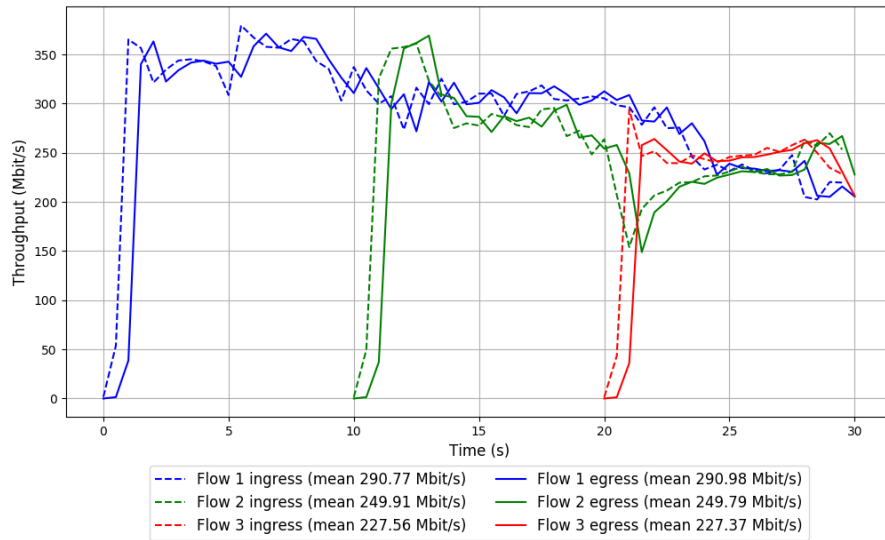
-- Flow 2:

Average throughput: 249.79 Mbit/s  
95th percentile per-packet one-way delay: 64.500 ms  
Loss rate: 0.52%

-- Flow 3:

Average throughput: 227.37 Mbit/s  
95th percentile per-packet one-way delay: 67.598 ms  
Loss rate: 1.03%

### Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-03-27 23:04:57  
End at: 2019-03-27 23:05:27  
Local clock offset: -0.118 ms  
Remote clock offset: -0.458 ms

# Below is generated by plot.py at 2019-03-28 00:31:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 499.40 Mbit/s  
95th percentile per-packet one-way delay: 60.437 ms  
Loss rate: 0.46%

-- Flow 1:

Average throughput: 270.35 Mbit/s  
95th percentile per-packet one-way delay: 59.086 ms  
Loss rate: 0.32%

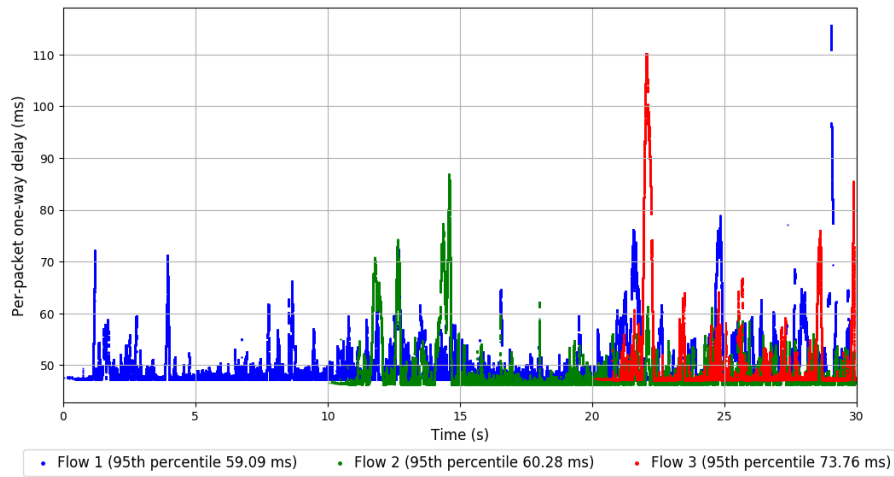
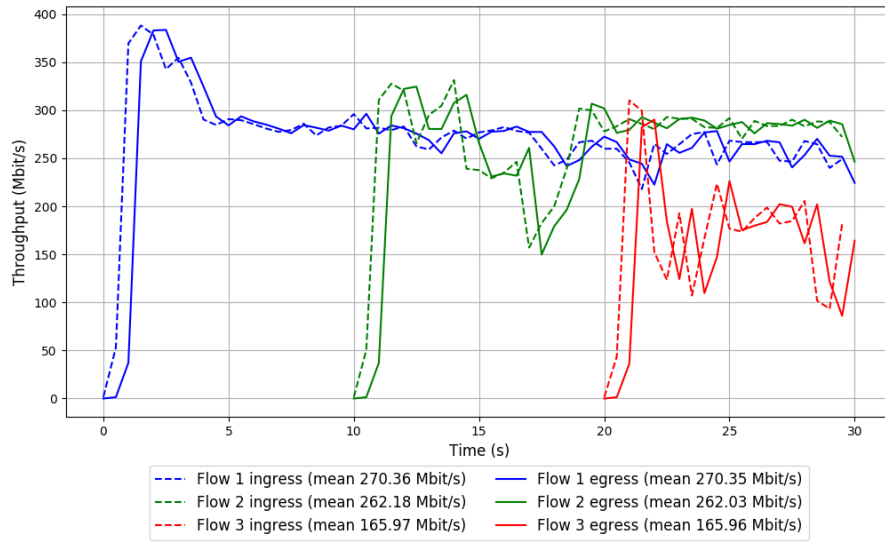
-- Flow 2:

Average throughput: 262.03 Mbit/s  
95th percentile per-packet one-way delay: 60.281 ms  
Loss rate: 0.53%

-- Flow 3:

Average throughput: 165.96 Mbit/s  
95th percentile per-packet one-way delay: 73.761 ms  
Loss rate: 0.95%

### Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-03-27 20:53:06  
End at: 2019-03-27 20:53:36  
Local clock offset: -0.127 ms  
Remote clock offset: -0.245 ms

# Below is generated by plot.py at 2019-03-28 00:31:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 814.47 Mbit/s  
95th percentile per-packet one-way delay: 88.675 ms  
Loss rate: 0.43%

-- Flow 1:

Average throughput: 421.29 Mbit/s  
95th percentile per-packet one-way delay: 101.757 ms  
Loss rate: 0.32%

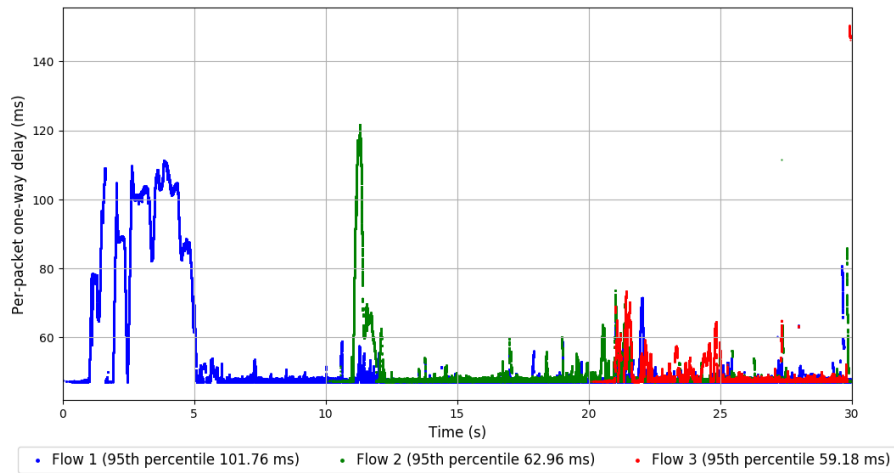
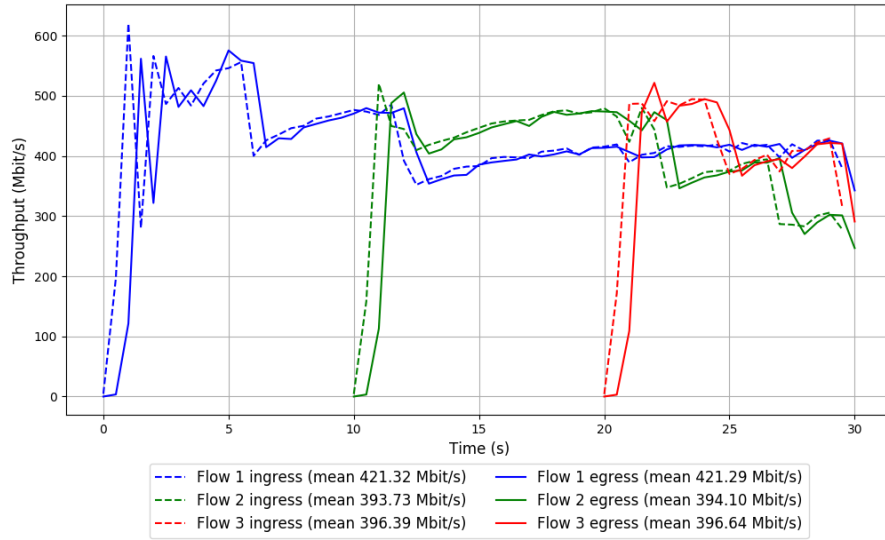
-- Flow 2:

Average throughput: 394.10 Mbit/s  
95th percentile per-packet one-way delay: 62.961 ms  
Loss rate: 0.38%

-- Flow 3:

Average throughput: 396.64 Mbit/s  
95th percentile per-packet one-way delay: 59.178 ms  
Loss rate: 0.89%

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



Run 2: Statistics of TCP Cubic

Start at: 2019-03-27 21:28:29  
End at: 2019-03-27 21:28:59  
Local clock offset: -0.183 ms  
Remote clock offset: -0.281 ms

# Below is generated by plot.py at 2019-03-28 00:31:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 864.12 Mbit/s  
95th percentile per-packet one-way delay: 87.209 ms  
Loss rate: 0.51%

-- Flow 1:

Average throughput: 453.64 Mbit/s  
95th percentile per-packet one-way delay: 96.861 ms  
Loss rate: 0.35%

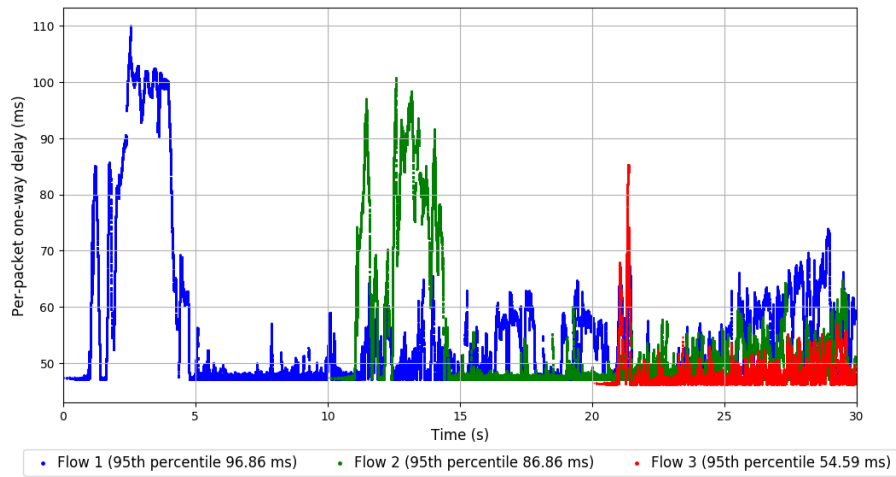
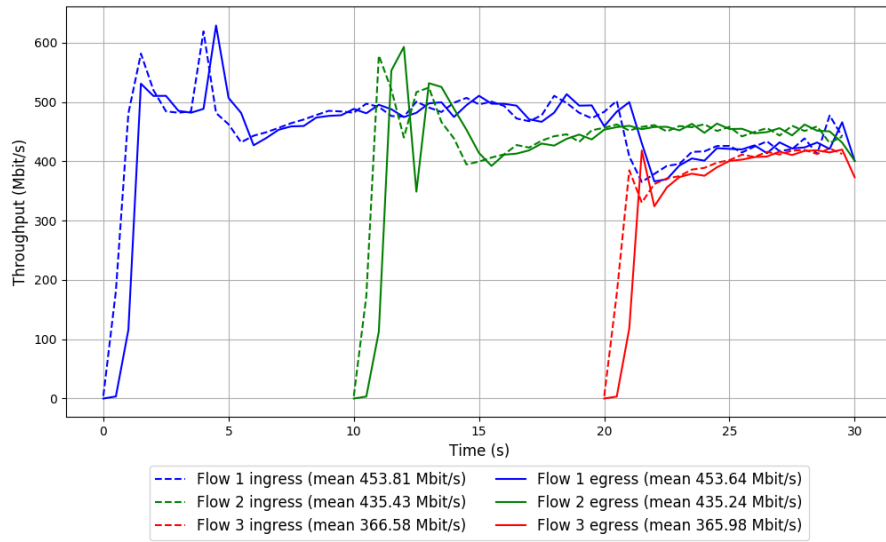
-- Flow 2:

Average throughput: 435.24 Mbit/s  
95th percentile per-packet one-way delay: 86.856 ms  
Loss rate: 0.52%

-- Flow 3:

Average throughput: 365.98 Mbit/s  
95th percentile per-packet one-way delay: 54.593 ms  
Loss rate: 1.10%

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





Run 3: Statistics of TCP Cubic

Start at: 2019-03-27 22:04:10  
End at: 2019-03-27 22:04:40  
Local clock offset: -0.035 ms  
Remote clock offset: -0.354 ms

# Below is generated by plot.py at 2019-03-28 00:31:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 854.15 Mbit/s  
95th percentile per-packet one-way delay: 67.587 ms  
Loss rate: 0.51%

-- Flow 1:

Average throughput: 458.86 Mbit/s  
95th percentile per-packet one-way delay: 65.741 ms  
Loss rate: 0.36%

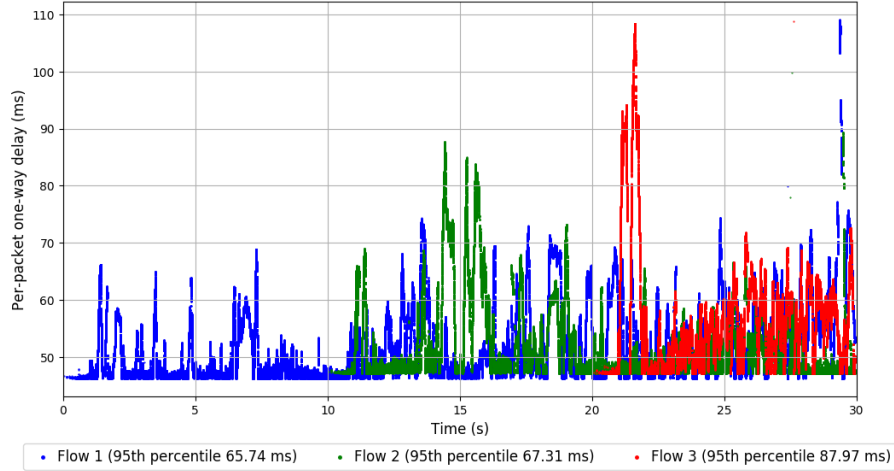
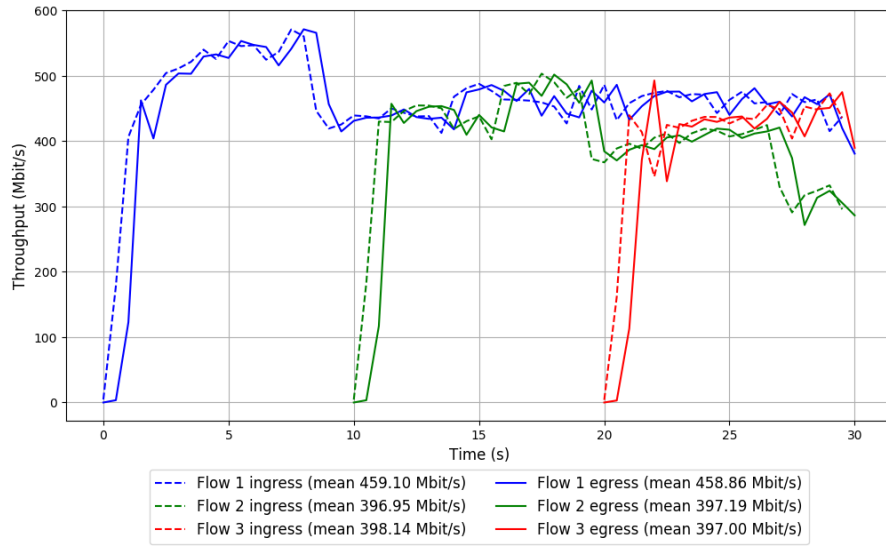
-- Flow 2:

Average throughput: 397.19 Mbit/s  
95th percentile per-packet one-way delay: 67.315 ms  
Loss rate: 0.41%

-- Flow 3:

Average throughput: 397.00 Mbit/s  
95th percentile per-packet one-way delay: 87.974 ms  
Loss rate: 1.23%

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



Run 4: Statistics of TCP Cubic

Start at: 2019-03-27 22:39:38  
End at: 2019-03-27 22:40:08  
Local clock offset: -0.06 ms  
Remote clock offset: -0.463 ms

# Below is generated by plot.py at 2019-03-28 00:31:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 691.71 Mbit/s  
95th percentile per-packet one-way delay: 79.556 ms  
Loss rate: 0.40%

-- Flow 1:

Average throughput: 368.82 Mbit/s  
95th percentile per-packet one-way delay: 79.707 ms  
Loss rate: 0.24%

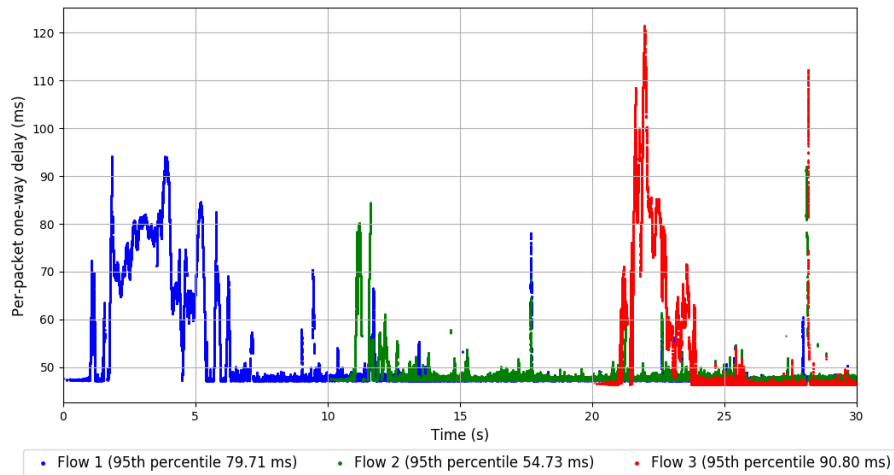
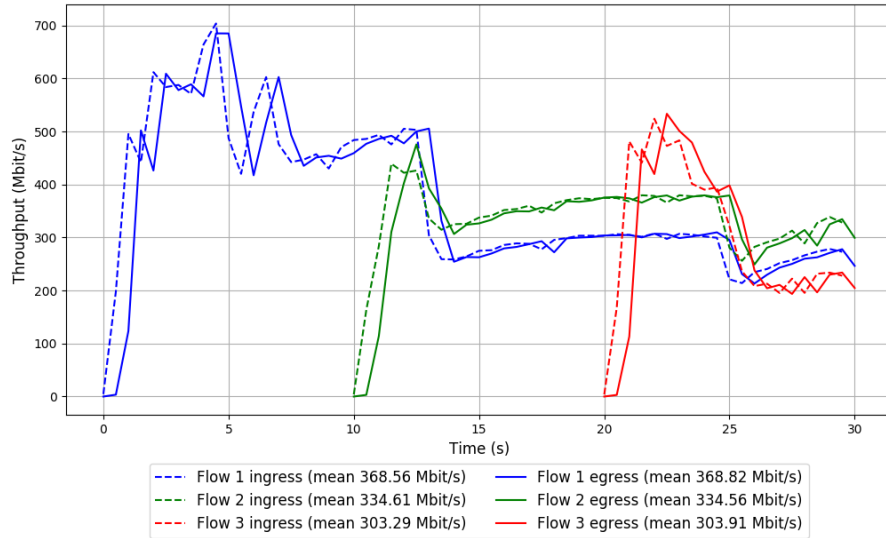
-- Flow 2:

Average throughput: 334.56 Mbit/s  
95th percentile per-packet one-way delay: 54.726 ms  
Loss rate: 0.49%

-- Flow 3:

Average throughput: 303.91 Mbit/s  
95th percentile per-packet one-way delay: 90.795 ms  
Loss rate: 0.74%

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



Run 5: Statistics of TCP Cubic

Start at: 2019-03-27 23:15:53  
End at: 2019-03-27 23:16:23  
Local clock offset: -0.116 ms  
Remote clock offset: -0.464 ms

# Below is generated by plot.py at 2019-03-28 00:31:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 814.75 Mbit/s  
95th percentile per-packet one-way delay: 62.281 ms  
Loss rate: 0.45%

-- Flow 1:

Average throughput: 421.50 Mbit/s  
95th percentile per-packet one-way delay: 54.261 ms  
Loss rate: 0.32%

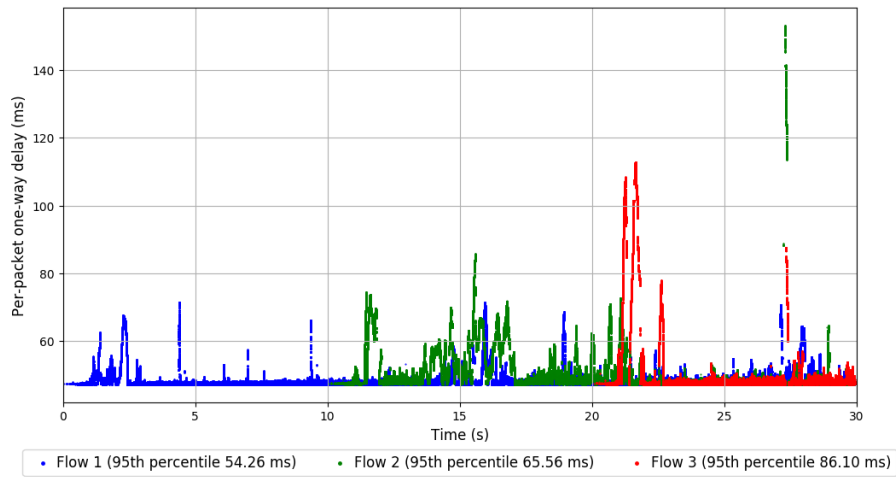
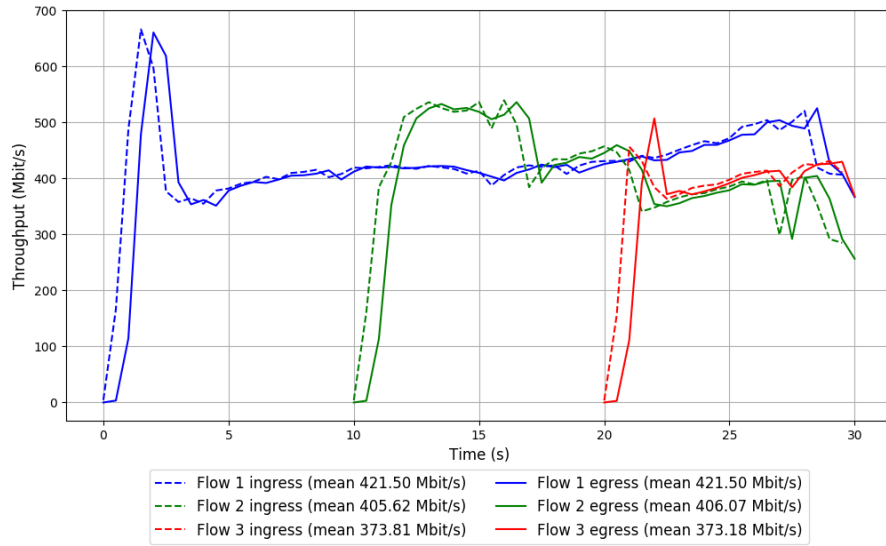
-- Flow 2:

Average throughput: 406.07 Mbit/s  
95th percentile per-packet one-way delay: 65.555 ms  
Loss rate: 0.35%

-- Flow 3:

Average throughput: 373.18 Mbit/s  
95th percentile per-packet one-way delay: 86.096 ms  
Loss rate: 1.11%

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



Run 1: Statistics of FillP

Start at: 2019-03-27 20:59:48  
End at: 2019-03-27 21:00:18  
Local clock offset: -0.132 ms  
Remote clock offset: -0.233 ms

# Below is generated by plot.py at 2019-03-28 00:31:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 680.75 Mbit/s  
95th percentile per-packet one-way delay: 75.805 ms  
Loss rate: 0.44%

-- Flow 1:

Average throughput: 386.21 Mbit/s  
95th percentile per-packet one-way delay: 82.933 ms  
Loss rate: 0.30%

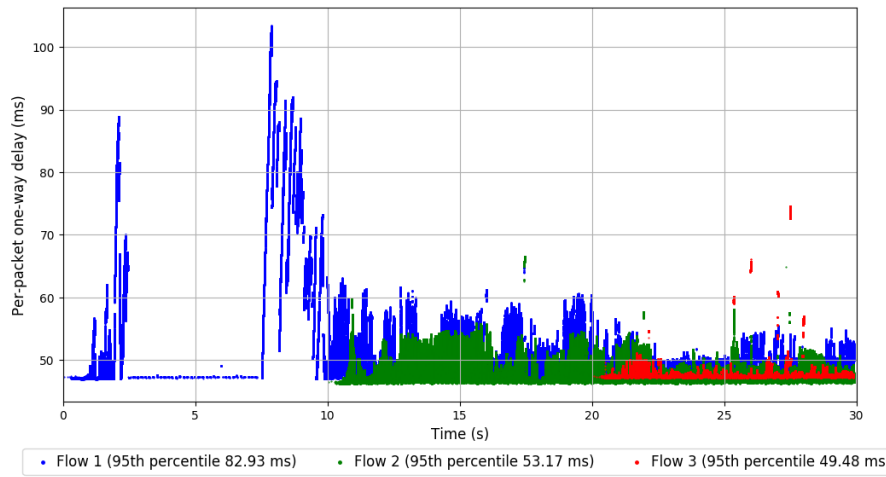
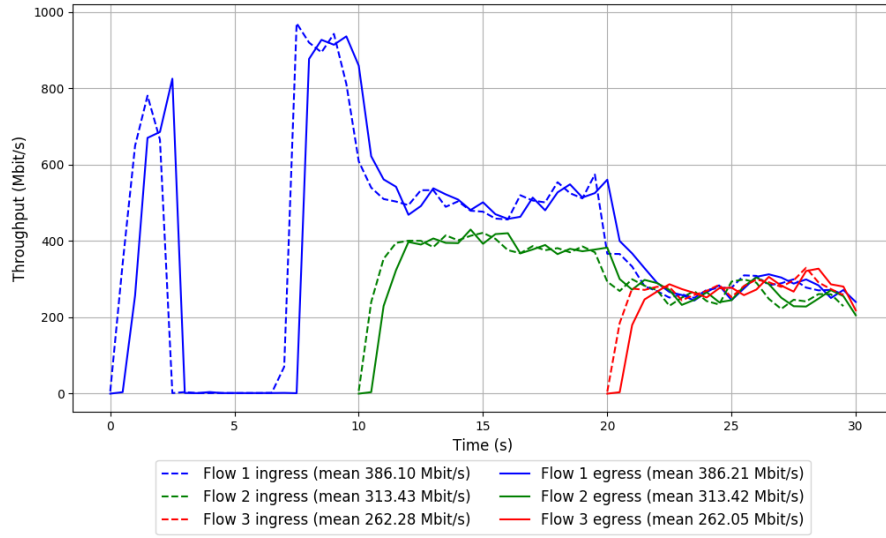
-- Flow 2:

Average throughput: 313.42 Mbit/s  
95th percentile per-packet one-way delay: 53.168 ms  
Loss rate: 0.39%

-- Flow 3:

Average throughput: 262.05 Mbit/s  
95th percentile per-packet one-way delay: 49.483 ms  
Loss rate: 1.17%

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





Run 2: Statistics of FillP

Start at: 2019-03-27 21:35:14  
End at: 2019-03-27 21:35:44  
Local clock offset: -0.182 ms  
Remote clock offset: -0.317 ms

# Below is generated by plot.py at 2019-03-28 00:45:57

# Datalink statistics

-- Total of 3 flows:

Average throughput: 836.97 Mbit/s  
95th percentile per-packet one-way delay: 64.671 ms  
Loss rate: 0.29%

-- Flow 1:

Average throughput: 535.88 Mbit/s  
95th percentile per-packet one-way delay: 69.274 ms  
Loss rate: 0.15%

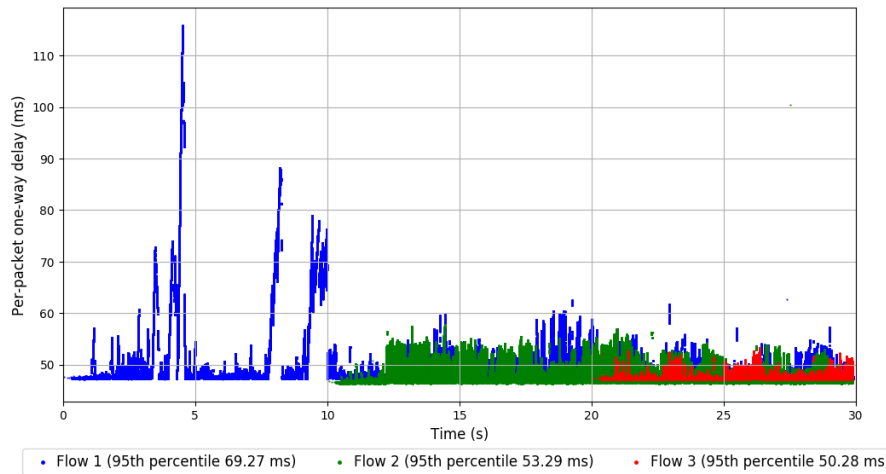
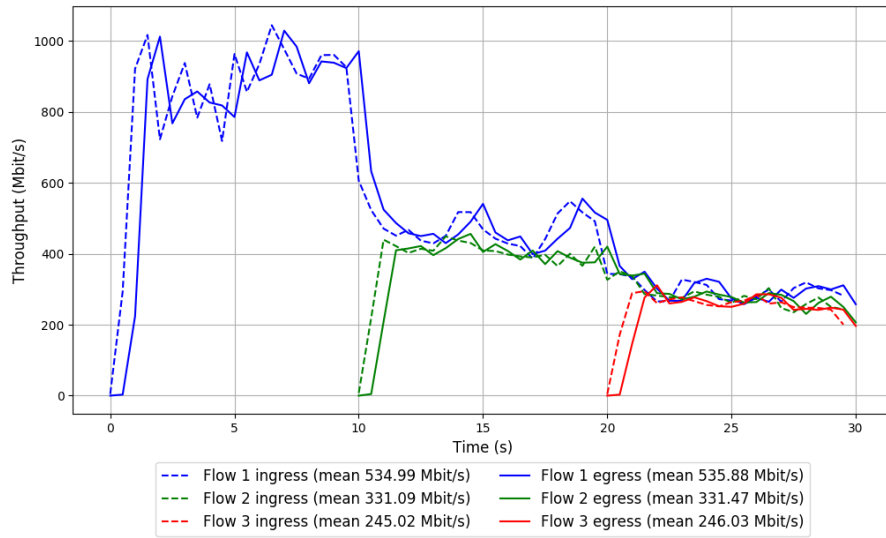
-- Flow 2:

Average throughput: 331.47 Mbit/s  
95th percentile per-packet one-way delay: 53.287 ms  
Loss rate: 0.42%

-- Flow 3:

Average throughput: 246.03 Mbit/s  
95th percentile per-packet one-way delay: 50.285 ms  
Loss rate: 0.80%

## Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-03-27 22:10:47  
End at: 2019-03-27 22:11:17  
Local clock offset: -0.032 ms  
Remote clock offset: -0.378 ms

# Below is generated by plot.py at 2019-03-28 00:49:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 907.65 Mbit/s  
95th percentile per-packet one-way delay: 58.235 ms  
Loss rate: 0.35%

-- Flow 1:

Average throughput: 569.42 Mbit/s  
95th percentile per-packet one-way delay: 68.221 ms  
Loss rate: 0.21%

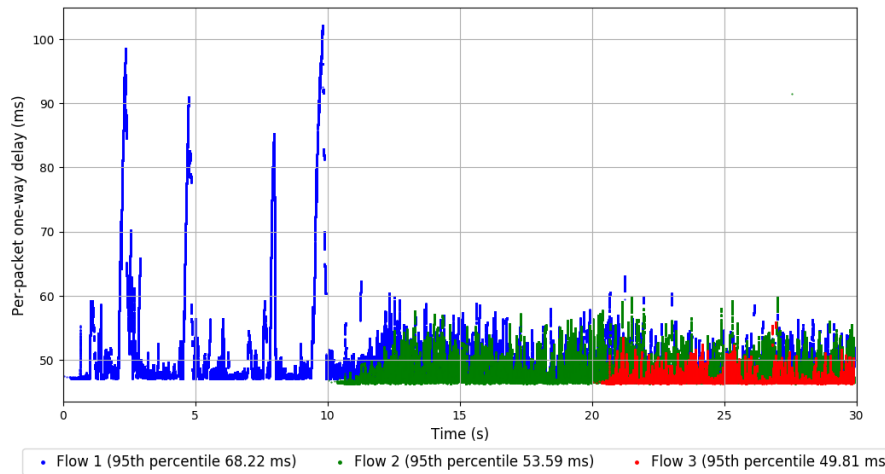
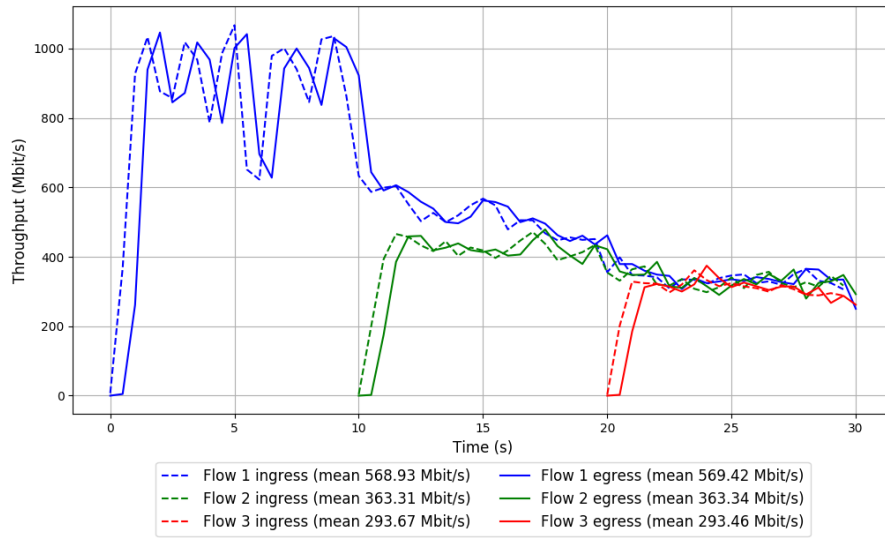
-- Flow 2:

Average throughput: 363.34 Mbit/s  
95th percentile per-packet one-way delay: 53.587 ms  
Loss rate: 0.37%

-- Flow 3:

Average throughput: 293.46 Mbit/s  
95th percentile per-packet one-way delay: 49.813 ms  
Loss rate: 1.16%

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



Run 4: Statistics of FillP

Start at: 2019-03-27 22:46:33  
End at: 2019-03-27 22:47:03  
Local clock offset: -0.139 ms  
Remote clock offset: -0.437 ms

# Below is generated by plot.py at 2019-03-28 00:49:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 864.35 Mbit/s  
95th percentile per-packet one-way delay: 71.320 ms  
Loss rate: 0.30%

-- Flow 1:

Average throughput: 548.55 Mbit/s  
95th percentile per-packet one-way delay: 75.757 ms  
Loss rate: 0.15%

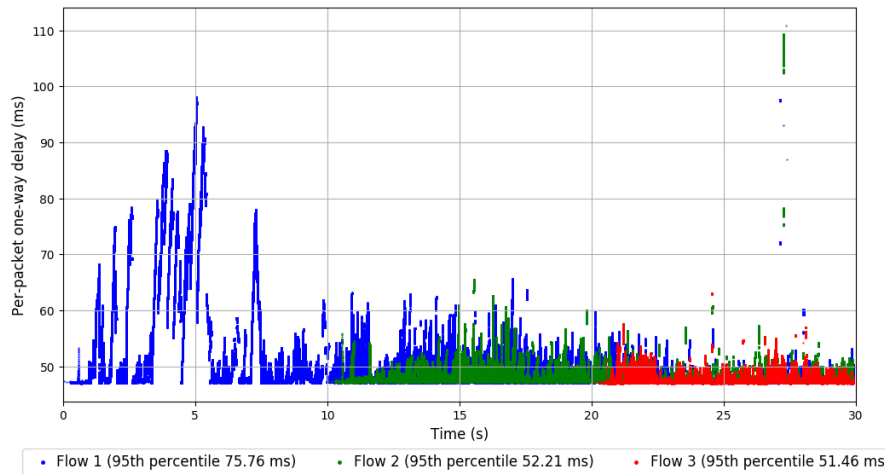
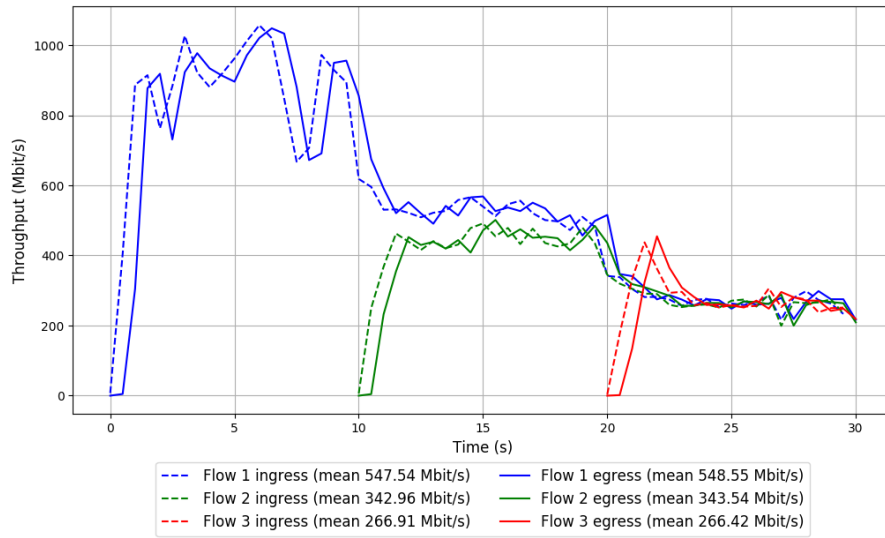
-- Flow 2:

Average throughput: 343.54 Mbit/s  
95th percentile per-packet one-way delay: 52.206 ms  
Loss rate: 0.41%

-- Flow 3:

Average throughput: 266.42 Mbit/s  
95th percentile per-packet one-way delay: 51.462 ms  
Loss rate: 1.00%

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



Run 5: Statistics of FillP

Start at: 2019-03-27 23:22:44  
End at: 2019-03-27 23:23:14  
Local clock offset: -0.101 ms  
Remote clock offset: -0.462 ms

# Below is generated by plot.py at 2019-03-28 00:49:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 894.06 Mbit/s  
95th percentile per-packet one-way delay: 68.270 ms  
Loss rate: 0.32%

-- Flow 1:

Average throughput: 571.20 Mbit/s  
95th percentile per-packet one-way delay: 77.027 ms  
Loss rate: 0.16%

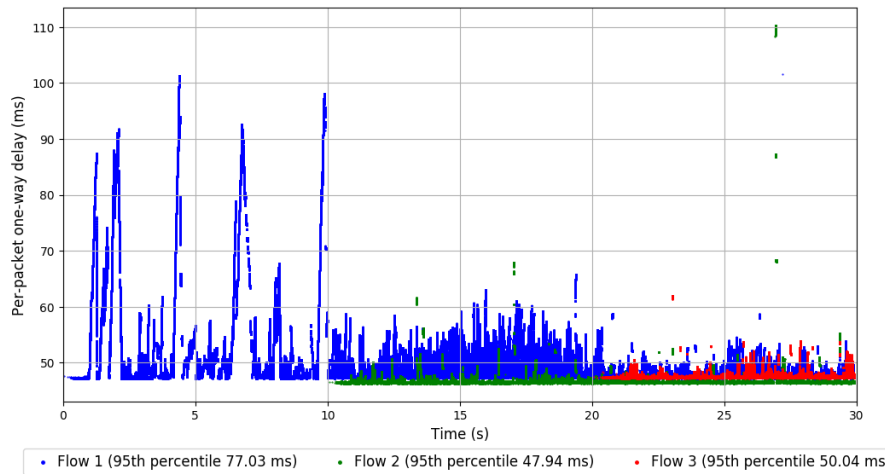
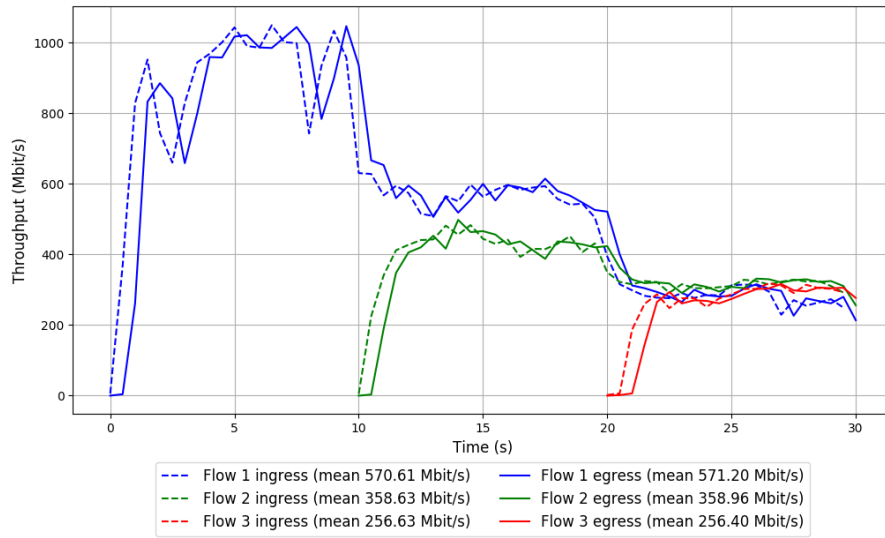
-- Flow 2:

Average throughput: 358.96 Mbit/s  
95th percentile per-packet one-way delay: 47.938 ms  
Loss rate: 0.43%

-- Flow 3:

Average throughput: 256.40 Mbit/s  
95th percentile per-packet one-way delay: 50.042 ms  
Loss rate: 1.05%

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





Run 1: Statistics of FillP-Sheep

Start at: 2019-03-27 20:51:21  
End at: 2019-03-27 20:51:51  
Local clock offset: -0.091 ms  
Remote clock offset: -0.225 ms

# Below is generated by plot.py at 2019-03-28 00:49:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 775.00 Mbit/s  
95th percentile per-packet one-way delay: 78.571 ms  
Loss rate: 0.49%

-- Flow 1:

Average throughput: 488.27 Mbit/s  
95th percentile per-packet one-way delay: 87.748 ms  
Loss rate: 0.42%

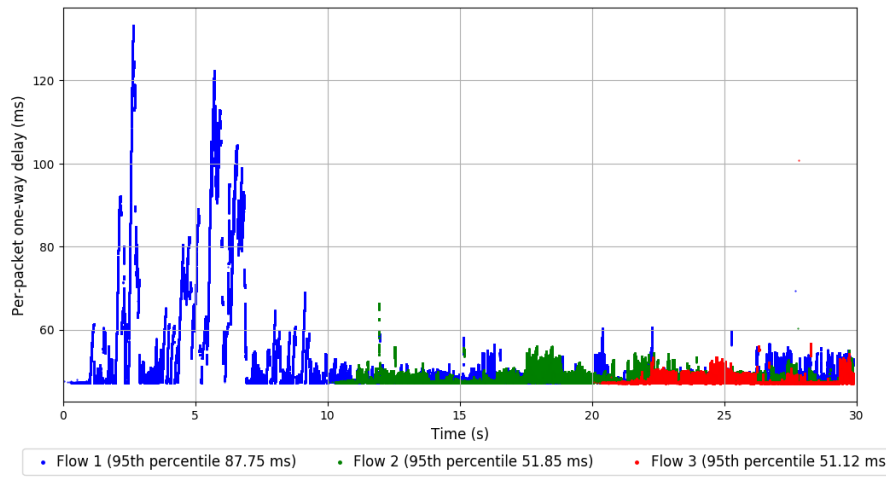
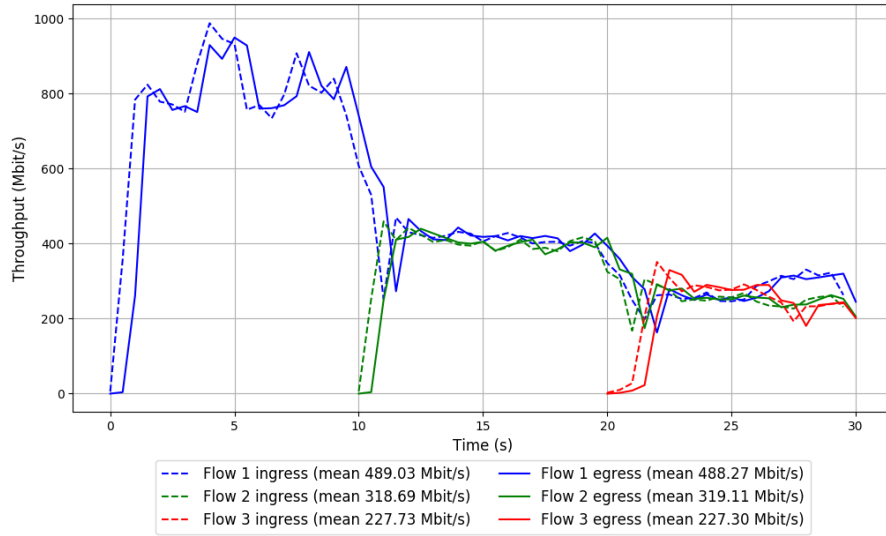
-- Flow 2:

Average throughput: 319.11 Mbit/s  
95th percentile per-packet one-way delay: 51.849 ms  
Loss rate: 0.37%

-- Flow 3:

Average throughput: 227.30 Mbit/s  
95th percentile per-packet one-way delay: 51.121 ms  
Loss rate: 1.28%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-03-27 21:26:43  
End at: 2019-03-27 21:27:13  
Local clock offset: -0.167 ms  
Remote clock offset: -0.311 ms

# Below is generated by plot.py at 2019-03-28 00:49:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 836.56 Mbit/s  
95th percentile per-packet one-way delay: 62.179 ms  
Loss rate: 0.36%

-- Flow 1:

Average throughput: 525.61 Mbit/s  
95th percentile per-packet one-way delay: 68.580 ms  
Loss rate: 0.20%

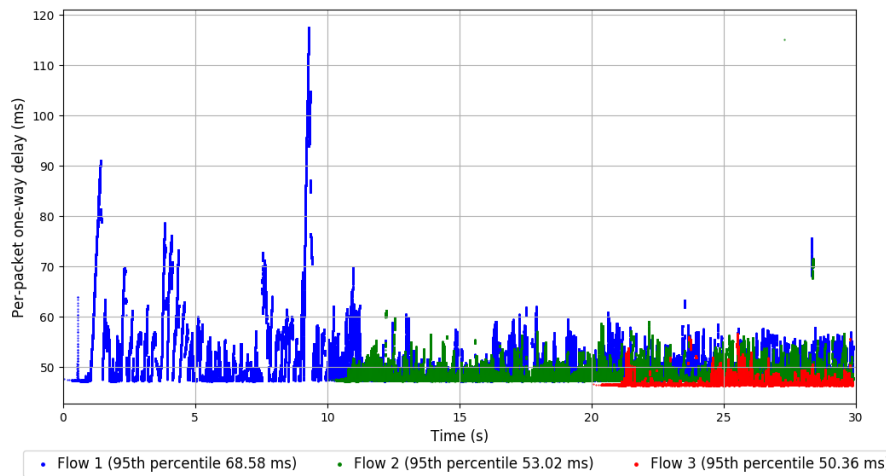
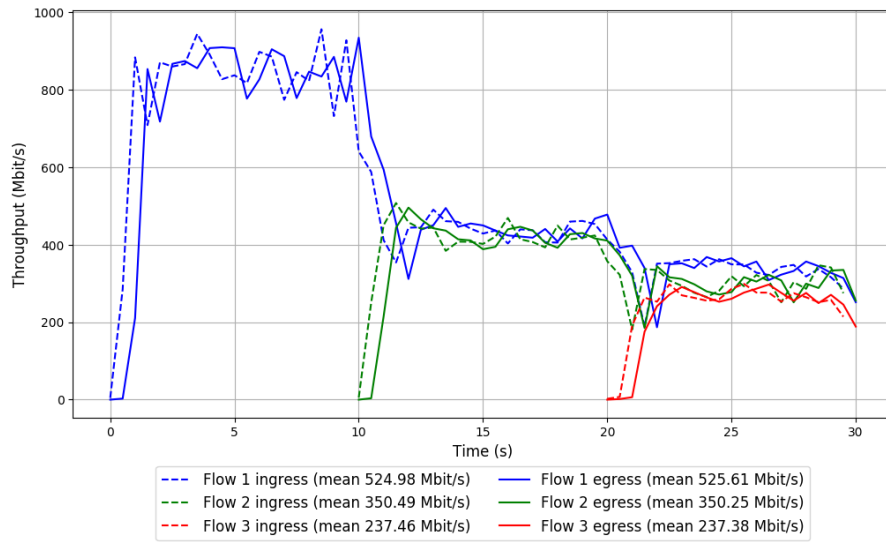
-- Flow 2:

Average throughput: 350.25 Mbit/s  
95th percentile per-packet one-way delay: 53.016 ms  
Loss rate: 0.46%

-- Flow 3:

Average throughput: 237.38 Mbit/s  
95th percentile per-packet one-way delay: 50.364 ms  
Loss rate: 1.12%

## Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-03-27 22:02:24  
End at: 2019-03-27 22:02:54  
Local clock offset: -0.043 ms  
Remote clock offset: -0.382 ms

# Below is generated by plot.py at 2019-03-28 00:49:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 811.55 Mbit/s  
95th percentile per-packet one-way delay: 62.727 ms  
Loss rate: 0.34%

-- Flow 1:

Average throughput: 501.76 Mbit/s  
95th percentile per-packet one-way delay: 68.792 ms  
Loss rate: 0.19%

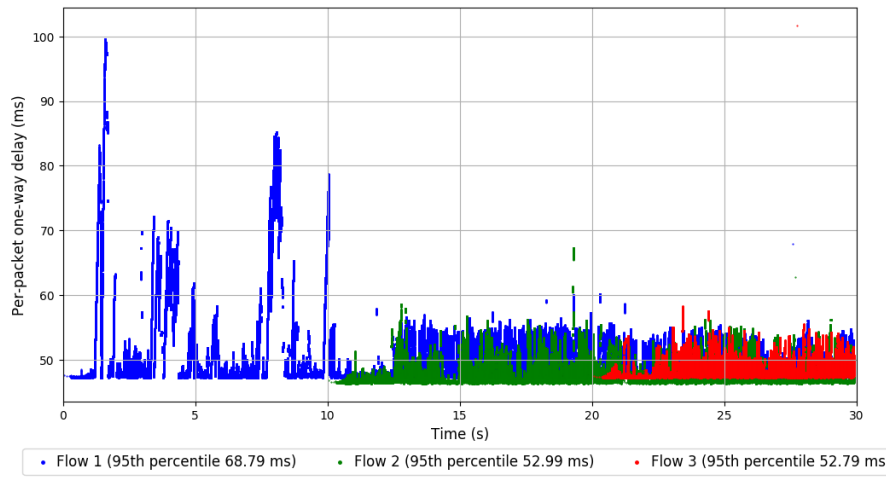
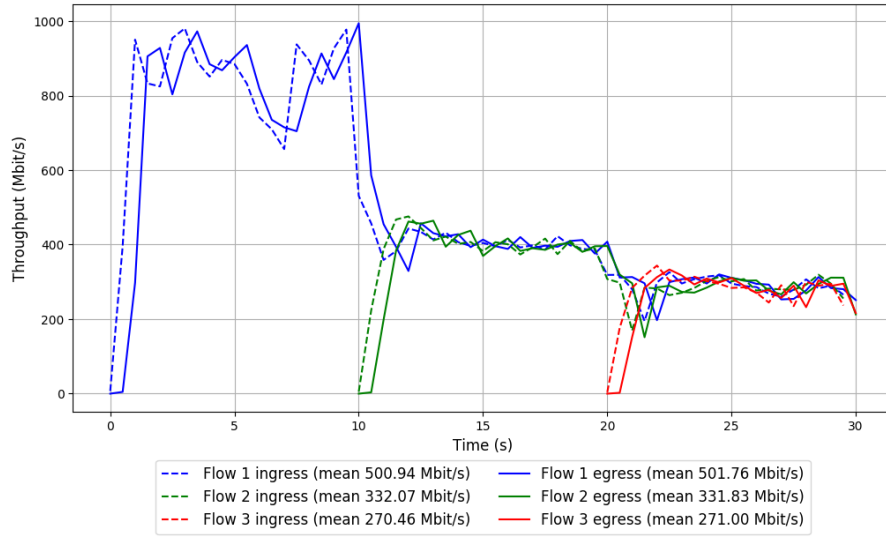
-- Flow 2:

Average throughput: 331.83 Mbit/s  
95th percentile per-packet one-way delay: 52.990 ms  
Loss rate: 0.49%

-- Flow 3:

Average throughput: 271.00 Mbit/s  
95th percentile per-packet one-way delay: 52.788 ms  
Loss rate: 0.78%

### Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-03-27 22:37:56

End at: 2019-03-27 22:38:26

Local clock offset: -0.109 ms

Remote clock offset: -0.42 ms

# Below is generated by plot.py at 2019-03-28 00:49:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 737.12 Mbit/s

95th percentile per-packet one-way delay: 62.330 ms

Loss rate: 0.34%

-- Flow 1:

Average throughput: 454.60 Mbit/s

95th percentile per-packet one-way delay: 70.687 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 307.45 Mbit/s

95th percentile per-packet one-way delay: 52.406 ms

Loss rate: 0.38%

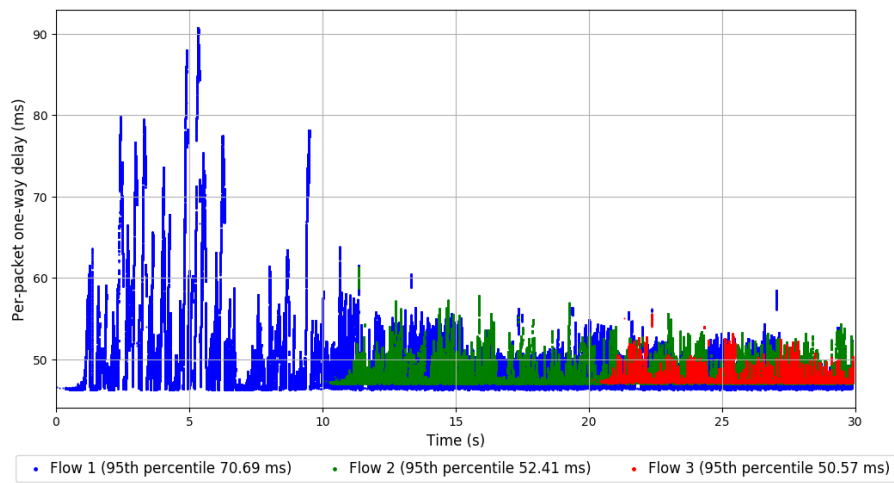
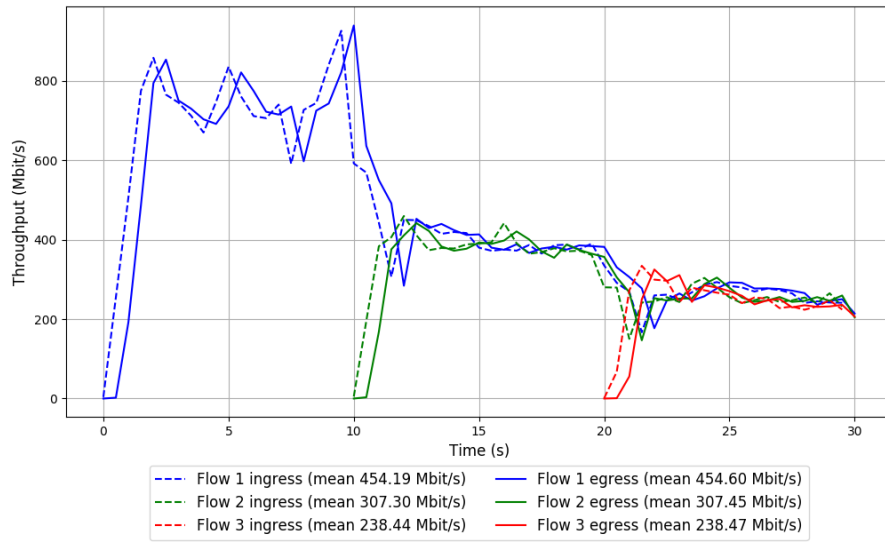
-- Flow 3:

Average throughput: 238.47 Mbit/s

95th percentile per-packet one-way delay: 50.571 ms

Loss rate: 1.00%

### Run 4: Report of FillP-Sheep — Data Link



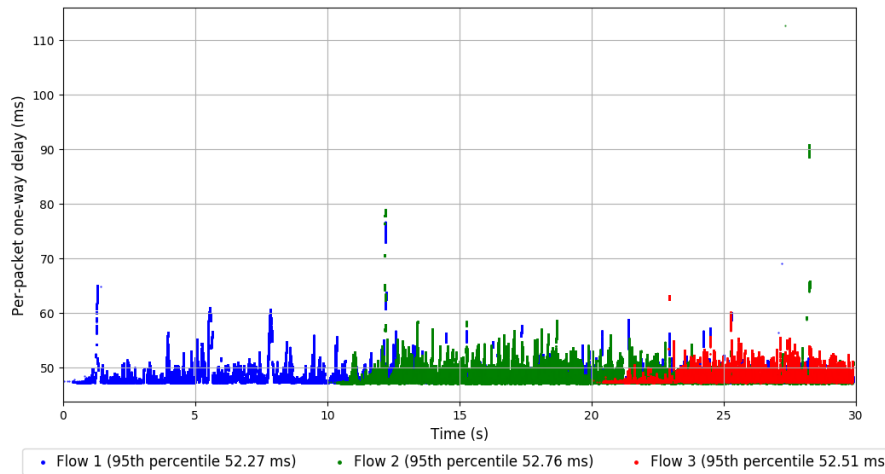
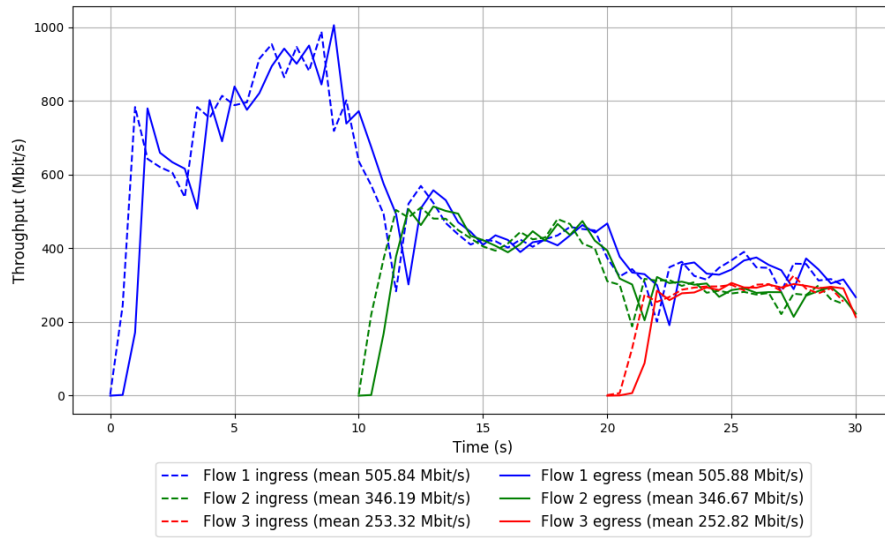


Run 5: Statistics of FillP-Sheep

Start at: 2019-03-27 23:14:08  
End at: 2019-03-27 23:14:38  
Local clock offset: -0.098 ms  
Remote clock offset: -0.476 ms

```
# Below is generated by plot.py at 2019-03-28 01:06:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 819.40 Mbit/s
95th percentile per-packet one-way delay: 52.505 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 505.88 Mbit/s
95th percentile per-packet one-way delay: 52.269 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 346.67 Mbit/s
95th percentile per-packet one-way delay: 52.755 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 252.82 Mbit/s
95th percentile per-packet one-way delay: 52.507 ms
Loss rate: 1.27%
```

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



Run 1: Statistics of Indigo

Start at: 2019-03-27 21:06:10  
End at: 2019-03-27 21:06:40  
Local clock offset: -0.144 ms  
Remote clock offset: -0.251 ms

# Below is generated by plot.py at 2019-03-28 01:06:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 398.76 Mbit/s  
95th percentile per-packet one-way delay: 52.003 ms  
Loss rate: 0.52%

-- Flow 1:

Average throughput: 213.29 Mbit/s  
95th percentile per-packet one-way delay: 50.917 ms  
Loss rate: 0.35%

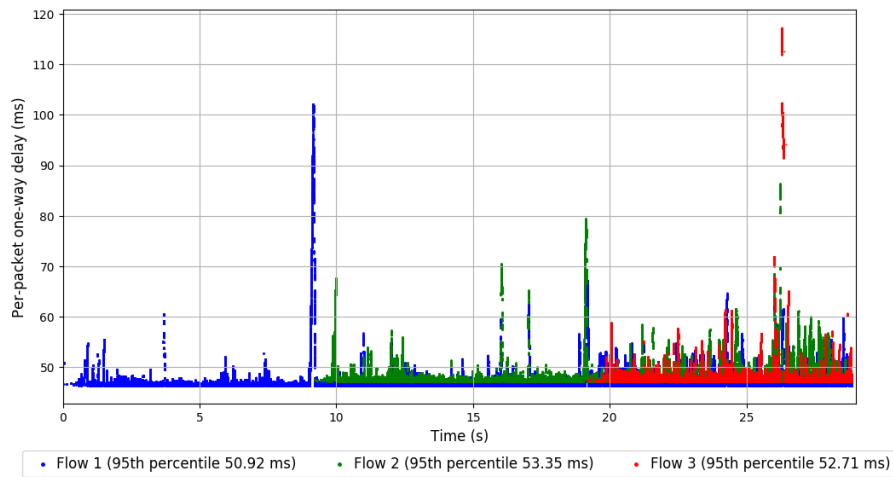
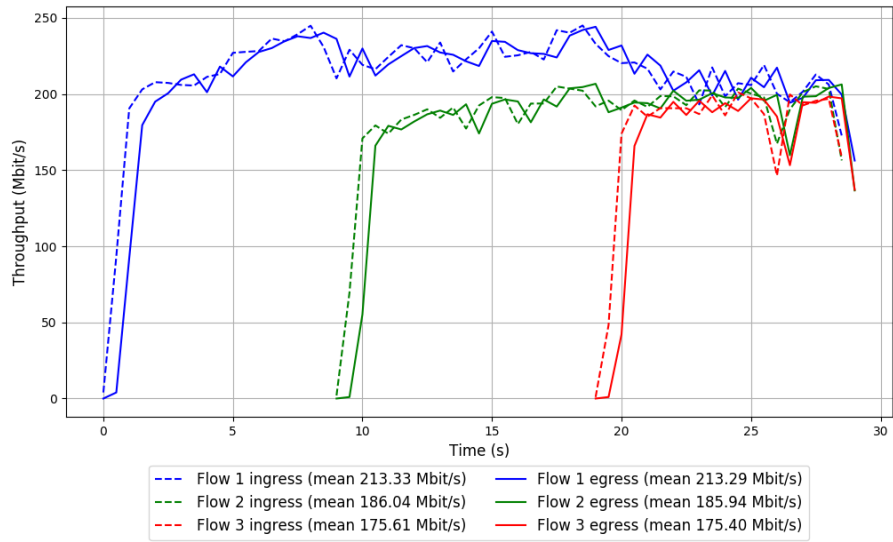
-- Flow 2:

Average throughput: 185.94 Mbit/s  
95th percentile per-packet one-way delay: 53.349 ms  
Loss rate: 0.54%

-- Flow 3:

Average throughput: 175.40 Mbit/s  
95th percentile per-packet one-way delay: 52.708 ms  
Loss rate: 1.11%

# Run 1: Report of Indigo — Data Link

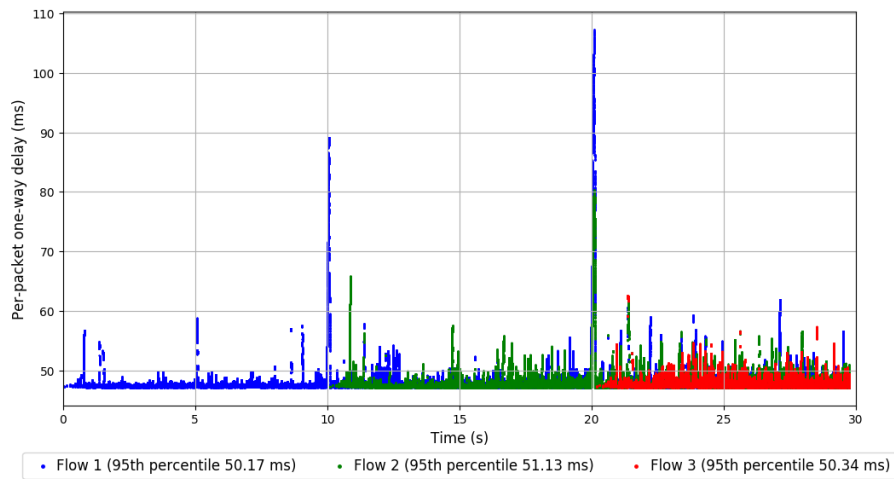
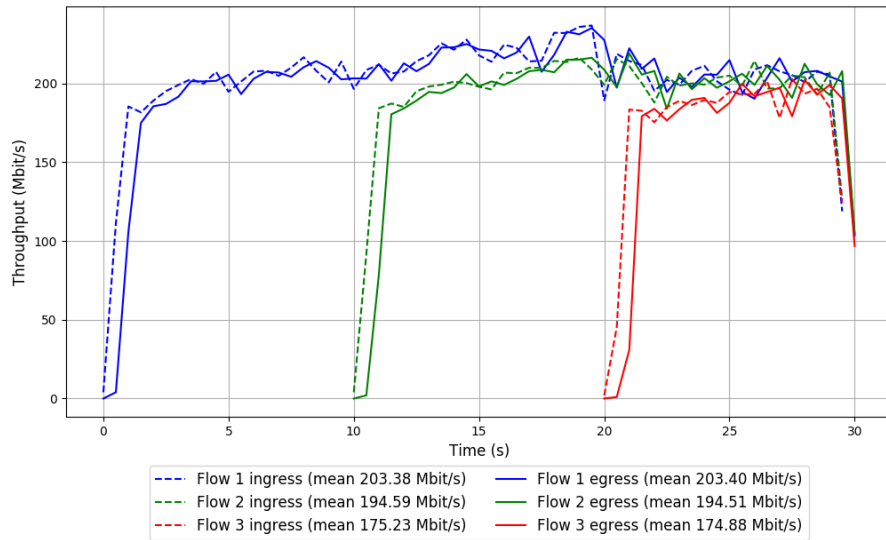


Run 2: Statistics of Indigo

Start at: 2019-03-27 21:41:42  
End at: 2019-03-27 21:42:12  
Local clock offset: -0.11 ms  
Remote clock offset: -0.307 ms

```
# Below is generated by plot.py at 2019-03-28 01:06:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 388.45 Mbit/s
95th percentile per-packet one-way delay: 50.586 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 203.40 Mbit/s
95th percentile per-packet one-way delay: 50.169 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 194.51 Mbit/s
95th percentile per-packet one-way delay: 51.130 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 174.88 Mbit/s
95th percentile per-packet one-way delay: 50.338 ms
Loss rate: 1.19%
```

## Run 2: Report of Indigo — Data Link

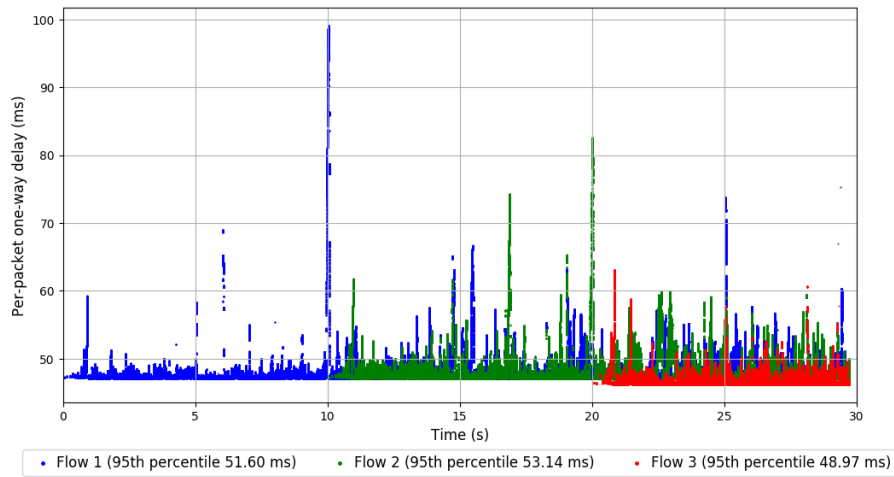
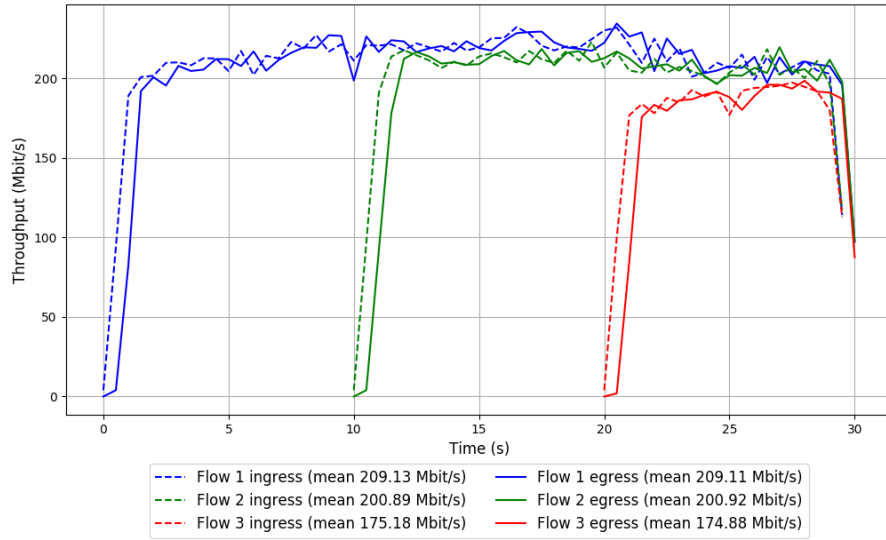


Run 3: Statistics of Indigo

Start at: 2019-03-27 22:17:18  
End at: 2019-03-27 22:17:48  
Local clock offset: -0.066 ms  
Remote clock offset: -0.334 ms

```
# Below is generated by plot.py at 2019-03-28 01:06:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 399.05 Mbit/s
95th percentile per-packet one-way delay: 51.862 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 209.11 Mbit/s
95th percentile per-packet one-way delay: 51.599 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 200.92 Mbit/s
95th percentile per-packet one-way delay: 53.139 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 174.88 Mbit/s
95th percentile per-packet one-way delay: 48.973 ms
Loss rate: 1.15%
```

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





Run 4: Statistics of Indigo

Start at: 2019-03-27 22:53:14  
End at: 2019-03-27 22:53:44  
Local clock offset: -0.115 ms  
Remote clock offset: -0.441 ms

# Below is generated by plot.py at 2019-03-28 01:06:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 398.28 Mbit/s  
95th percentile per-packet one-way delay: 50.624 ms  
Loss rate: 0.45%

-- Flow 1:

Average throughput: 212.49 Mbit/s  
95th percentile per-packet one-way delay: 50.958 ms  
Loss rate: 0.23%

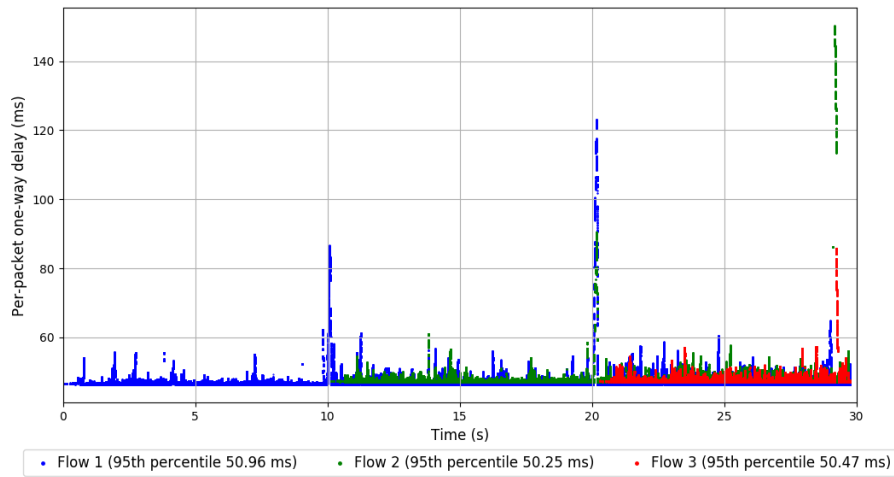
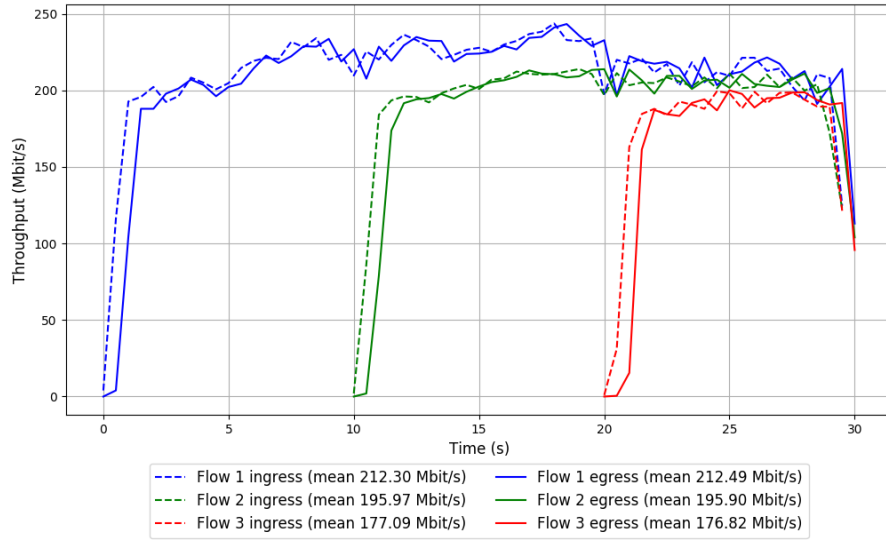
-- Flow 2:

Average throughput: 195.90 Mbit/s  
95th percentile per-packet one-way delay: 50.251 ms  
Loss rate: 0.51%

-- Flow 3:

Average throughput: 176.82 Mbit/s  
95th percentile per-packet one-way delay: 50.469 ms  
Loss rate: 1.16%

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

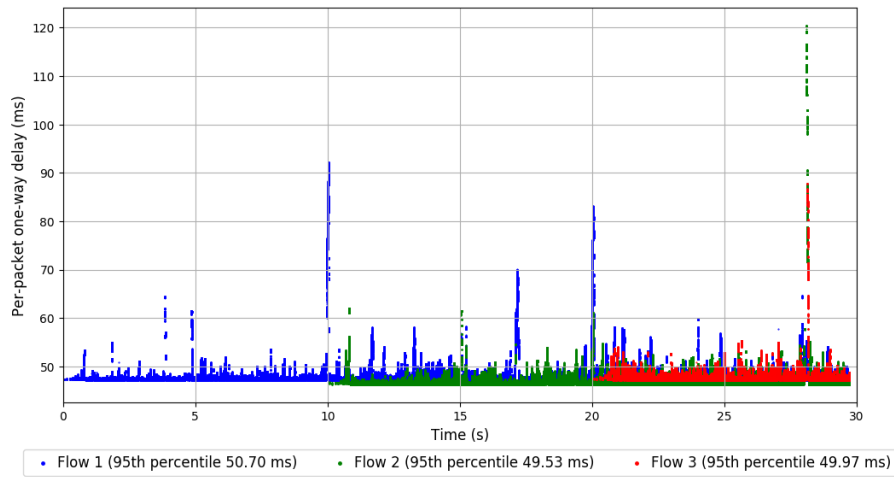
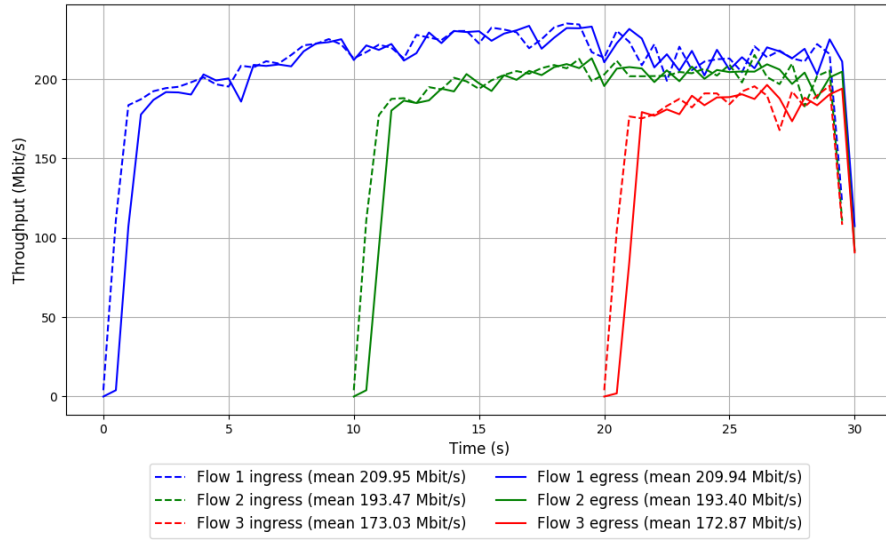


Run 5: Statistics of Indigo

Start at: 2019-03-27 23:29:15  
End at: 2019-03-27 23:29:45  
Local clock offset: -0.151 ms  
Remote clock offset: -0.502 ms

```
# Below is generated by plot.py at 2019-03-28 01:06:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 394.26 Mbit/s
95th percentile per-packet one-way delay: 50.187 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 209.94 Mbit/s
95th percentile per-packet one-way delay: 50.700 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 193.40 Mbit/s
95th percentile per-packet one-way delay: 49.533 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 172.87 Mbit/s
95th percentile per-packet one-way delay: 49.974 ms
Loss rate: 1.08%
```

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



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-03-27 21:04:23  
End at: 2019-03-27 21:04:53  
Local clock offset: -0.136 ms  
Remote clock offset: -0.263 ms

# Below is generated by plot.py at 2019-03-28 01:06:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 764.79 Mbit/s  
95th percentile per-packet one-way delay: 56.719 ms  
Loss rate: 0.47%

-- Flow 1:

Average throughput: 445.36 Mbit/s  
95th percentile per-packet one-way delay: 57.638 ms  
Loss rate: 0.24%

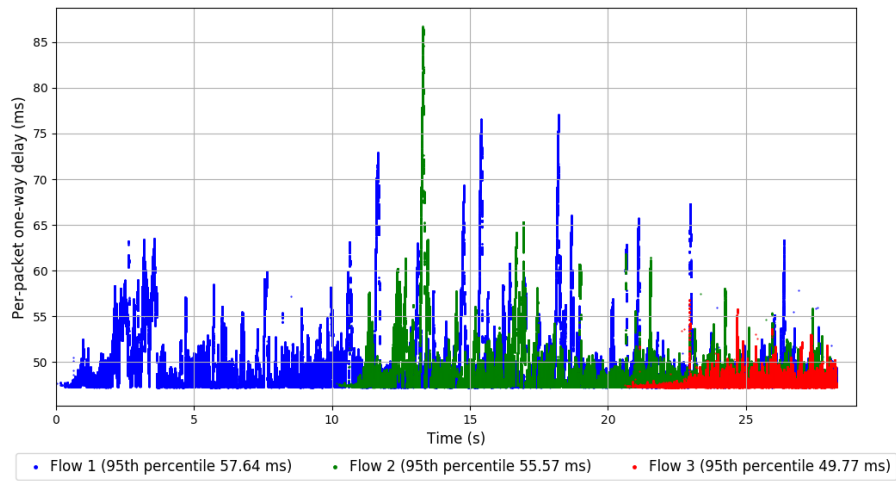
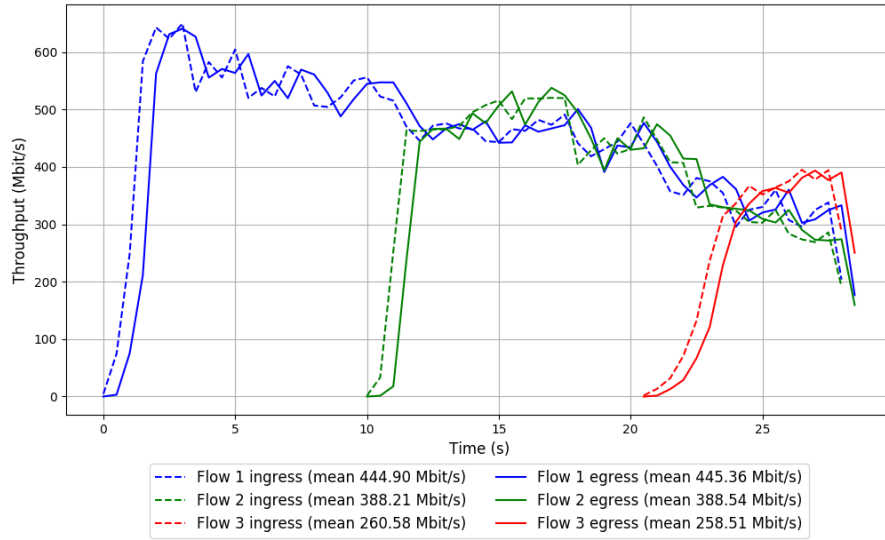
-- Flow 2:

Average throughput: 388.54 Mbit/s  
95th percentile per-packet one-way delay: 55.567 ms  
Loss rate: 0.44%

-- Flow 3:

Average throughput: 258.51 Mbit/s  
95th percentile per-packet one-way delay: 49.770 ms  
Loss rate: 2.02%

### Run 1: Report of Indigo-MusesC3 — Data Link

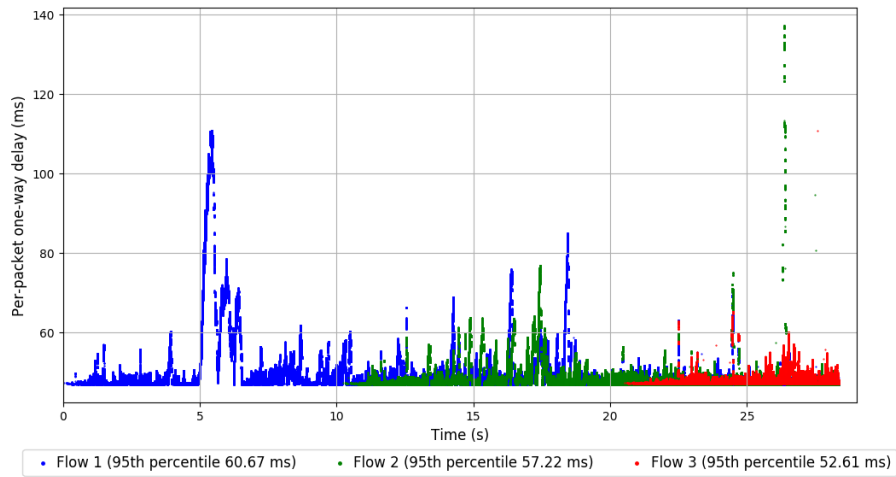
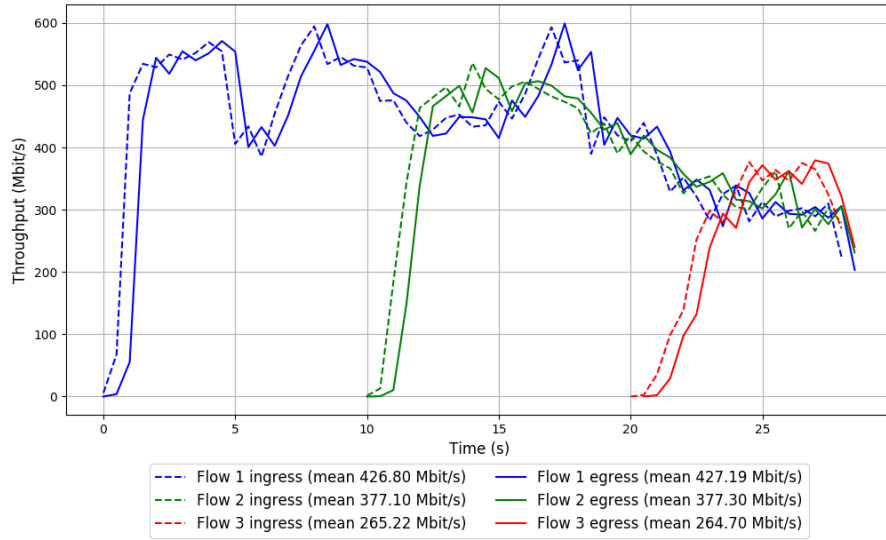


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-03-27 21:39:52  
End at: 2019-03-27 21:40:22  
Local clock offset: -0.19 ms  
Remote clock offset: -0.295 ms

```
# Below is generated by plot.py at 2019-03-28 01:06:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 741.99 Mbit/s
95th percentile per-packet one-way delay: 58.098 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 427.19 Mbit/s
95th percentile per-packet one-way delay: 60.670 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 377.30 Mbit/s
95th percentile per-packet one-way delay: 57.216 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 264.70 Mbit/s
95th percentile per-packet one-way delay: 52.614 ms
Loss rate: 1.40%
```

## Run 2: Report of Indigo-MusesC3 — Data Link





Run 3: Statistics of Indigo-MusesC3

Start at: 2019-03-27 22:15:29

End at: 2019-03-27 22:15:59

Local clock offset: -0.052 ms

Remote clock offset: -0.34 ms

# Below is generated by plot.py at 2019-03-28 01:16:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 762.80 Mbit/s

95th percentile per-packet one-way delay: 63.038 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 444.61 Mbit/s

95th percentile per-packet one-way delay: 66.645 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 379.05 Mbit/s

95th percentile per-packet one-way delay: 60.361 ms

Loss rate: 0.33%

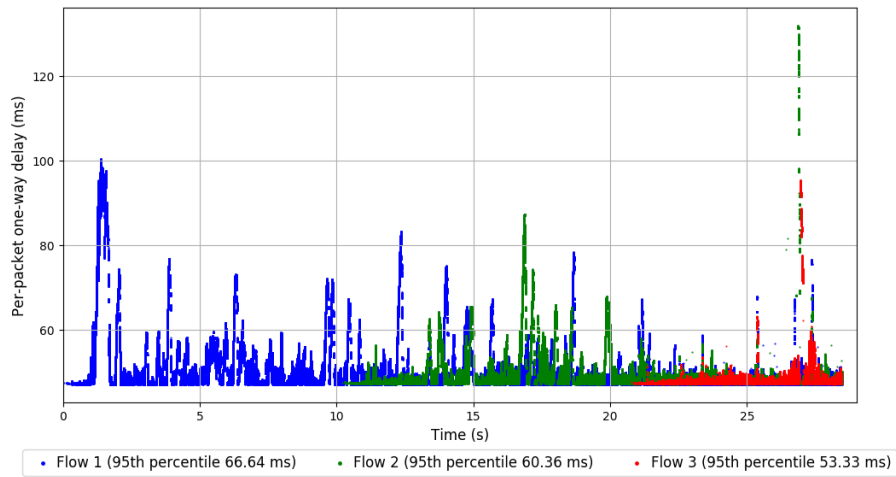
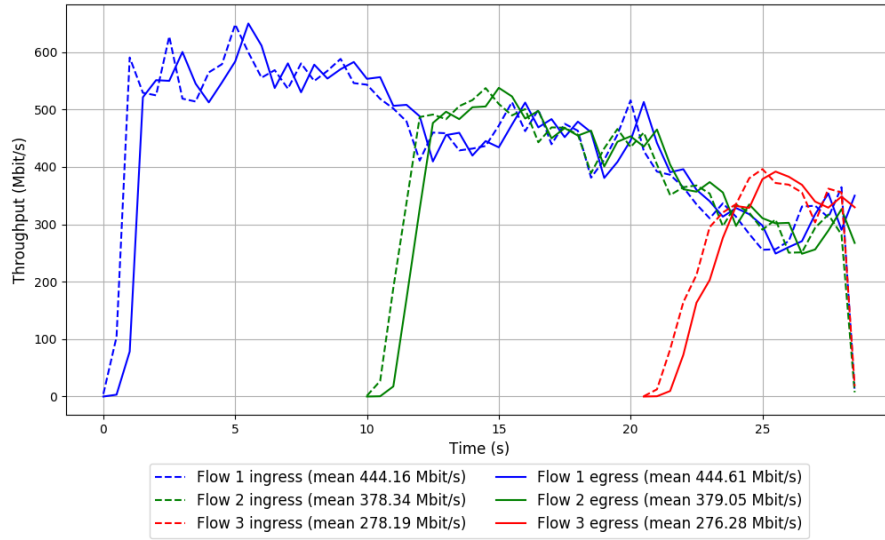
-- Flow 3:

Average throughput: 276.28 Mbit/s

95th percentile per-packet one-way delay: 53.328 ms

Loss rate: 1.82%

### Run 3: Report of Indigo-MusesC3 — Data Link

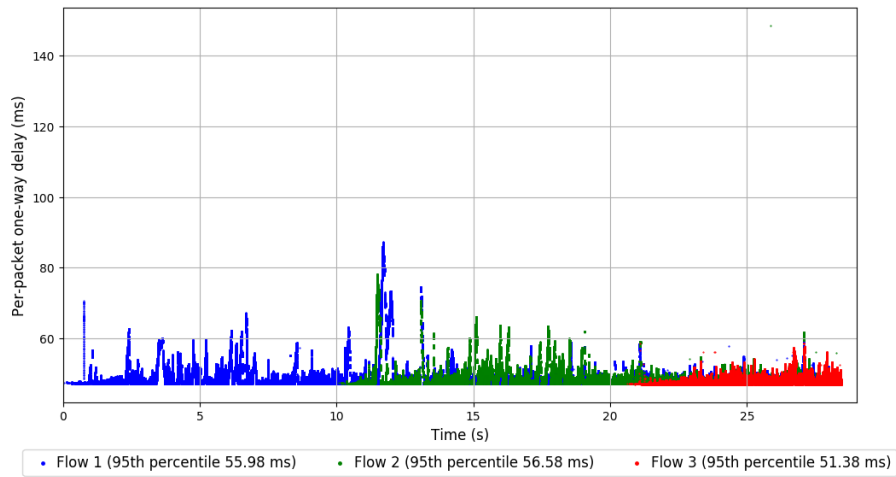
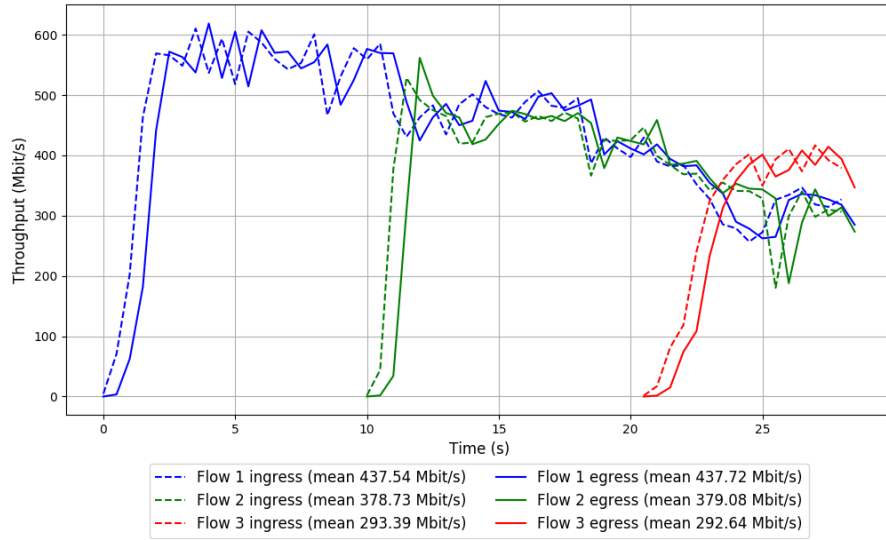


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-03-27 22:51:23  
End at: 2019-03-27 22:51:53  
Local clock offset: -0.102 ms  
Remote clock offset: -0.426 ms

```
# Below is generated by plot.py at 2019-03-28 01:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 763.49 Mbit/s
95th percentile per-packet one-way delay: 55.553 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 437.72 Mbit/s
95th percentile per-packet one-way delay: 55.982 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 379.08 Mbit/s
95th percentile per-packet one-way delay: 56.583 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 292.64 Mbit/s
95th percentile per-packet one-way delay: 51.380 ms
Loss rate: 1.46%
```

### Run 4: Report of Indigo-MusesC3 — Data Link

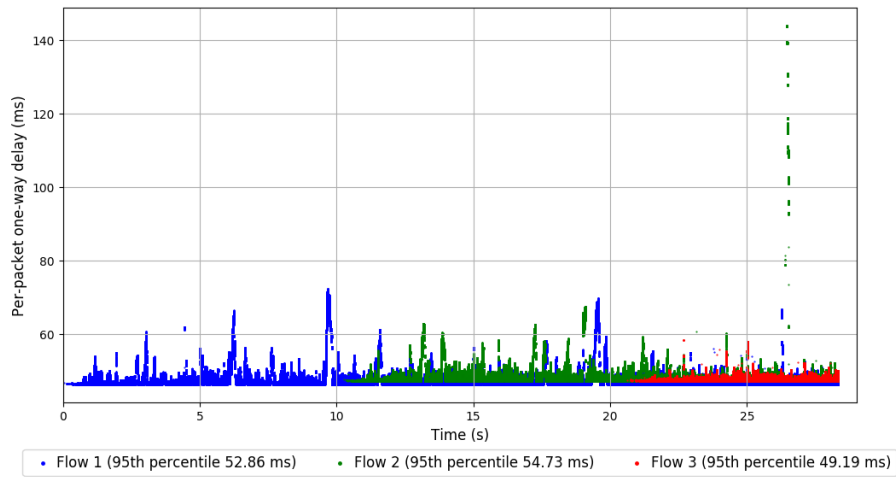
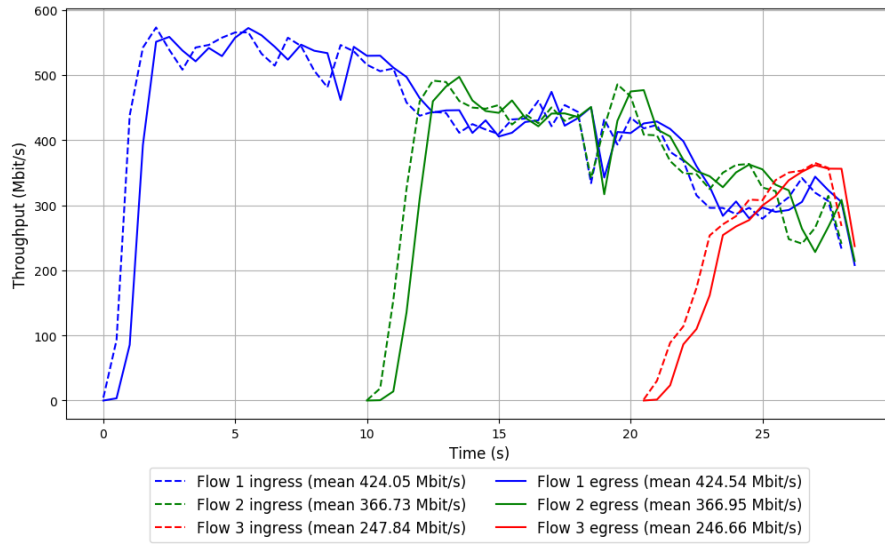


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-03-27 23:27:27  
End at: 2019-03-27 23:27:57  
Local clock offset: -0.106 ms  
Remote clock offset: -0.472 ms

```
# Below is generated by plot.py at 2019-03-28 01:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 725.81 Mbit/s
95th percentile per-packet one-way delay: 52.996 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 424.54 Mbit/s
95th percentile per-packet one-way delay: 52.860 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 366.95 Mbit/s
95th percentile per-packet one-way delay: 54.731 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 246.66 Mbit/s
95th percentile per-packet one-way delay: 49.188 ms
Loss rate: 1.76%
```

### Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-03-27 21:09:44  
End at: 2019-03-27 21:10:14  
Local clock offset: -0.143 ms  
Remote clock offset: -0.292 ms

# Below is generated by plot.py at 2019-03-28 01:20:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 839.28 Mbit/s  
95th percentile per-packet one-way delay: 84.842 ms  
Loss rate: 0.32%

-- Flow 1:

Average throughput: 479.38 Mbit/s  
95th percentile per-packet one-way delay: 93.223 ms  
Loss rate: 0.17%

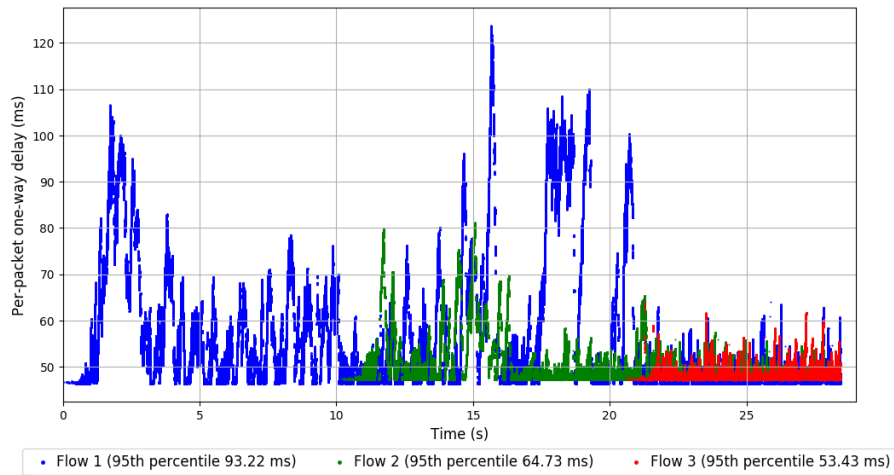
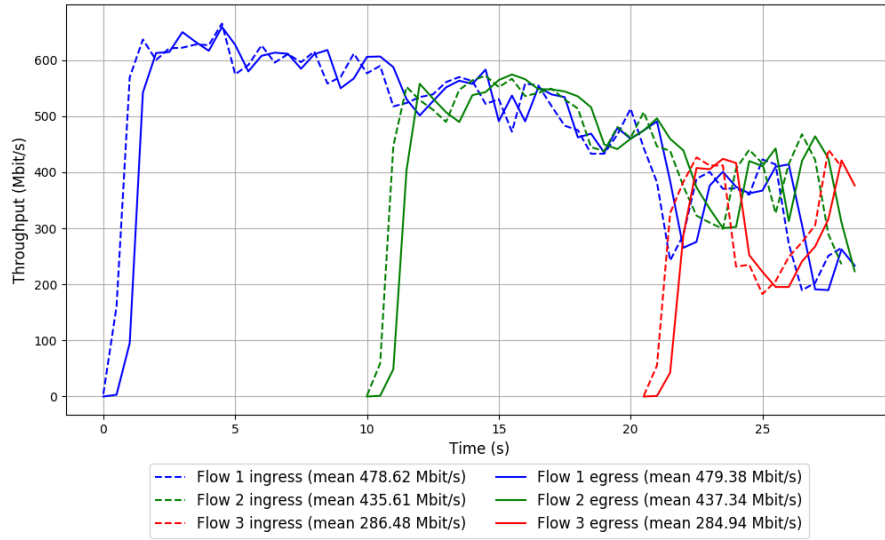
-- Flow 2:

Average throughput: 437.34 Mbit/s  
95th percentile per-packet one-way delay: 64.727 ms  
Loss rate: 0.18%

-- Flow 3:

Average throughput: 284.94 Mbit/s  
95th percentile per-packet one-way delay: 53.427 ms  
Loss rate: 1.74%

# Run 1: Report of Indigo-MusesC5 — Data Link





Run 2: Statistics of Indigo-MusesC5

Start at: 2019-03-27 21:45:20  
End at: 2019-03-27 21:45:50  
Local clock offset: -0.105 ms  
Remote clock offset: -0.318 ms

# Below is generated by plot.py at 2019-03-28 01:20:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 775.01 Mbit/s  
95th percentile per-packet one-way delay: 62.197 ms  
Loss rate: 0.37%

-- Flow 1:

Average throughput: 491.74 Mbit/s  
95th percentile per-packet one-way delay: 63.309 ms  
Loss rate: 0.30%

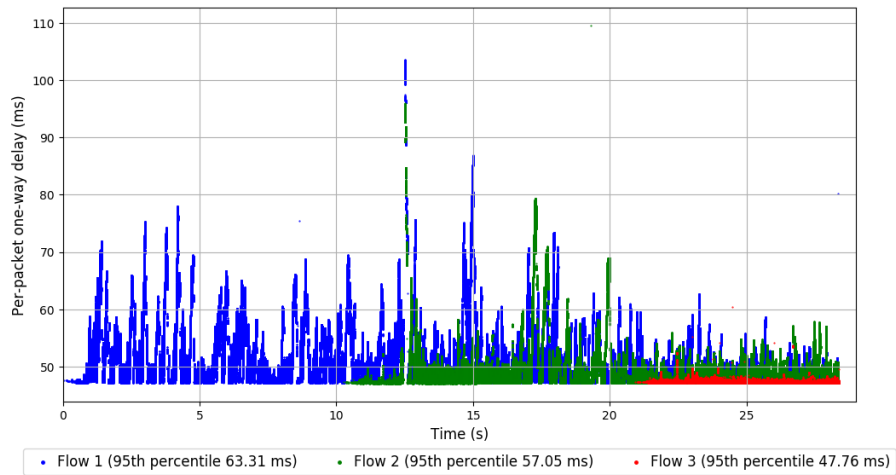
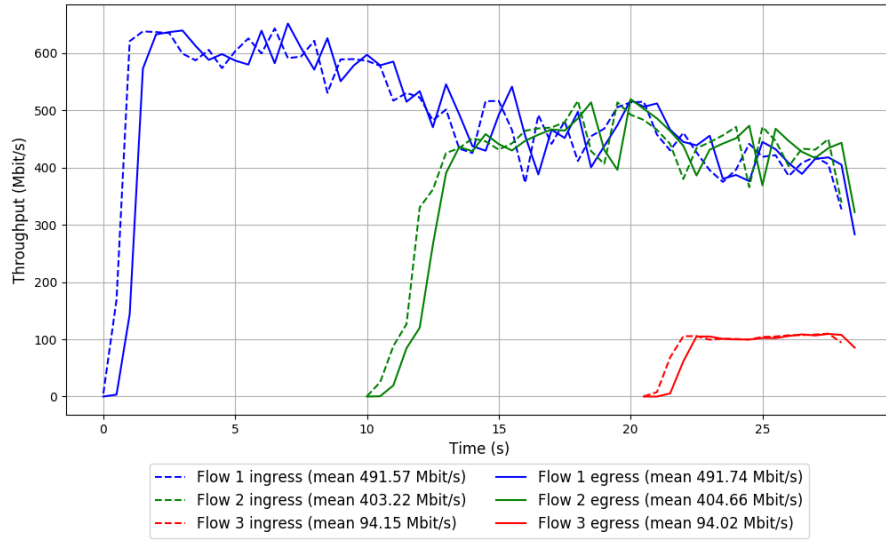
-- Flow 2:

Average throughput: 404.66 Mbit/s  
95th percentile per-packet one-way delay: 57.050 ms  
Loss rate: 0.41%

-- Flow 3:

Average throughput: 94.02 Mbit/s  
95th percentile per-packet one-way delay: 47.757 ms  
Loss rate: 1.34%

## Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-03-27 22:20:44  
End at: 2019-03-27 22:21:14  
Local clock offset: -0.069 ms  
Remote clock offset: -0.405 ms

# Below is generated by plot.py at 2019-03-28 01:20:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 821.77 Mbit/s  
95th percentile per-packet one-way delay: 68.654 ms  
Loss rate: 0.37%

-- Flow 1:

Average throughput: 478.92 Mbit/s  
95th percentile per-packet one-way delay: 68.656 ms  
Loss rate: 0.27%

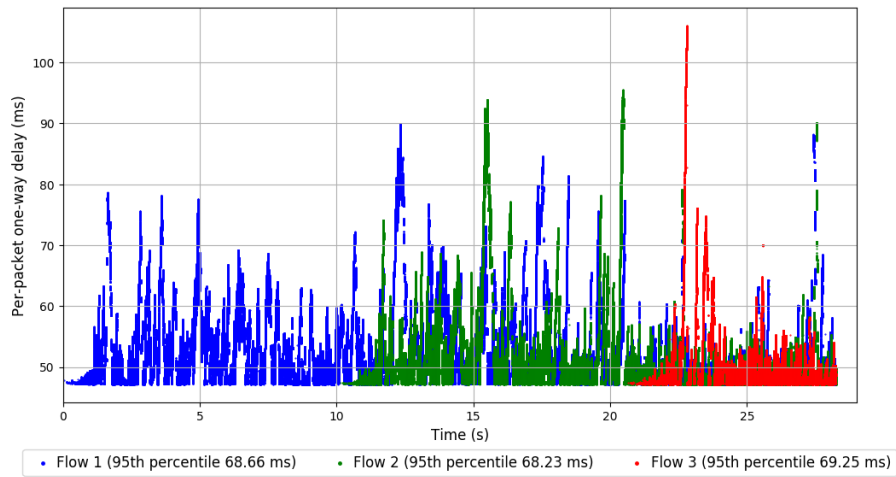
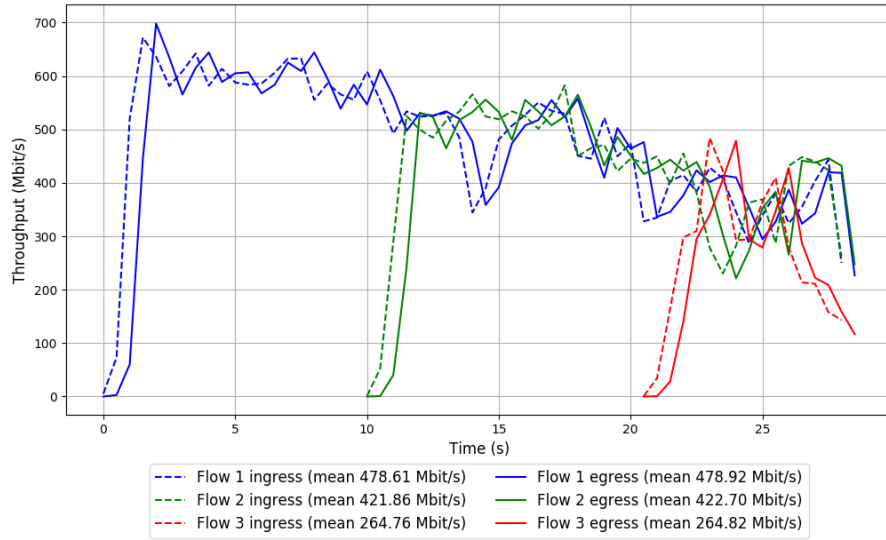
-- Flow 2:

Average throughput: 422.70 Mbit/s  
95th percentile per-packet one-way delay: 68.227 ms  
Loss rate: 0.32%

-- Flow 3:

Average throughput: 264.82 Mbit/s  
95th percentile per-packet one-way delay: 69.251 ms  
Loss rate: 1.15%

### Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-03-27 22:57:03

End at: 2019-03-27 22:57:33

Local clock offset: -0.097 ms

Remote clock offset: -0.45 ms

# Below is generated by plot.py at 2019-03-28 01:20:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 836.27 Mbit/s

95th percentile per-packet one-way delay: 71.708 ms

Loss rate: 0.44%

-- Flow 1:

Average throughput: 483.97 Mbit/s

95th percentile per-packet one-way delay: 66.877 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 413.28 Mbit/s

95th percentile per-packet one-way delay: 80.592 ms

Loss rate: 0.57%

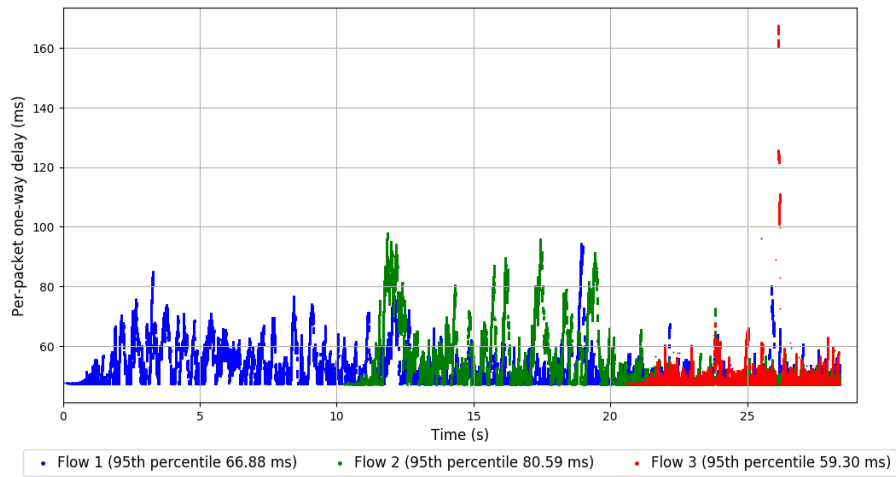
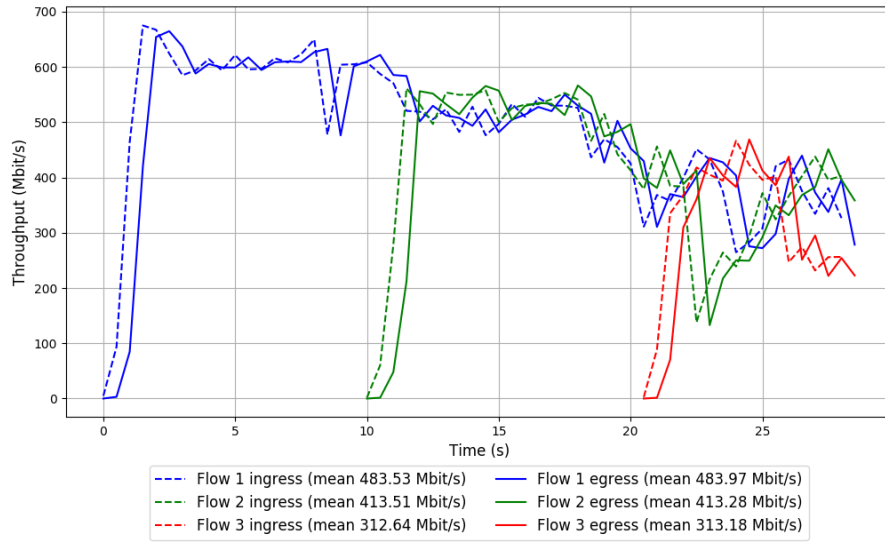
-- Flow 3:

Average throughput: 313.18 Mbit/s

95th percentile per-packet one-way delay: 59.295 ms

Loss rate: 1.00%

### Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-03-27 23:32:54  
End at: 2019-03-27 23:33:24  
Local clock offset: -0.163 ms  
Remote clock offset: -0.489 ms

# Below is generated by plot.py at 2019-03-28 01:22:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 806.39 Mbit/s  
95th percentile per-packet one-way delay: 72.512 ms  
Loss rate: 0.44%

-- Flow 1:

Average throughput: 498.85 Mbit/s  
95th percentile per-packet one-way delay: 67.634 ms  
Loss rate: 0.32%

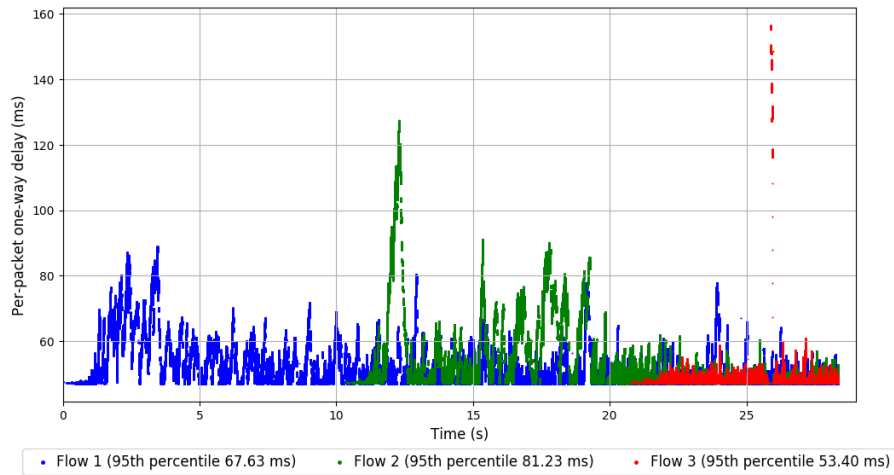
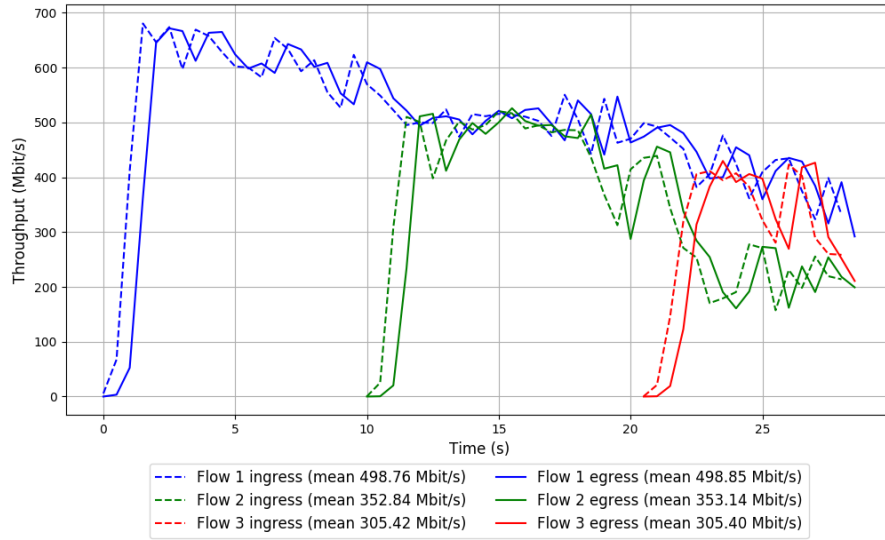
-- Flow 2:

Average throughput: 353.14 Mbit/s  
95th percentile per-packet one-way delay: 81.229 ms  
Loss rate: 0.33%

-- Flow 3:

Average throughput: 305.40 Mbit/s  
95th percentile per-packet one-way delay: 53.397 ms  
Loss rate: 1.48%

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





Run 1: Statistics of Indigo-MusesD

Start at: 2019-03-27 21:01:27  
End at: 2019-03-27 21:01:57  
Local clock offset: -0.125 ms  
Remote clock offset: -0.249 ms

# Below is generated by plot.py at 2019-03-28 01:30:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 694.49 Mbit/s  
95th percentile per-packet one-way delay: 62.611 ms  
Loss rate: 0.35%

-- Flow 1:

Average throughput: 430.88 Mbit/s  
95th percentile per-packet one-way delay: 61.896 ms  
Loss rate: 0.22%

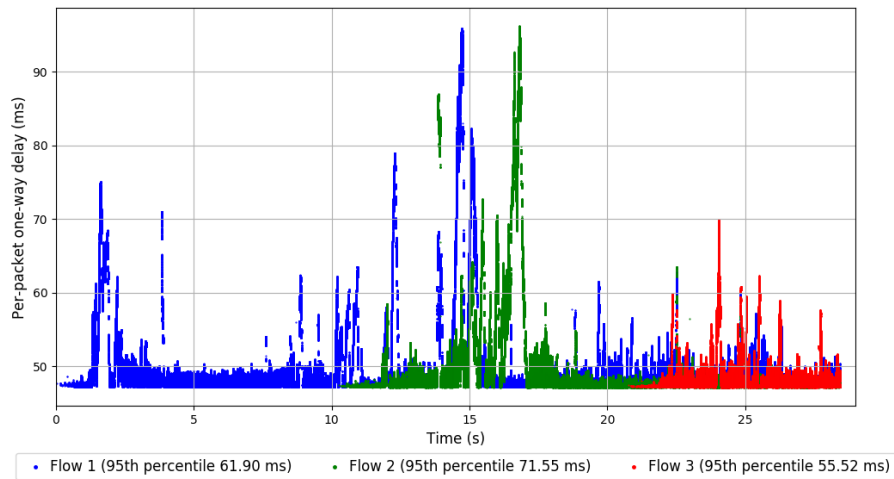
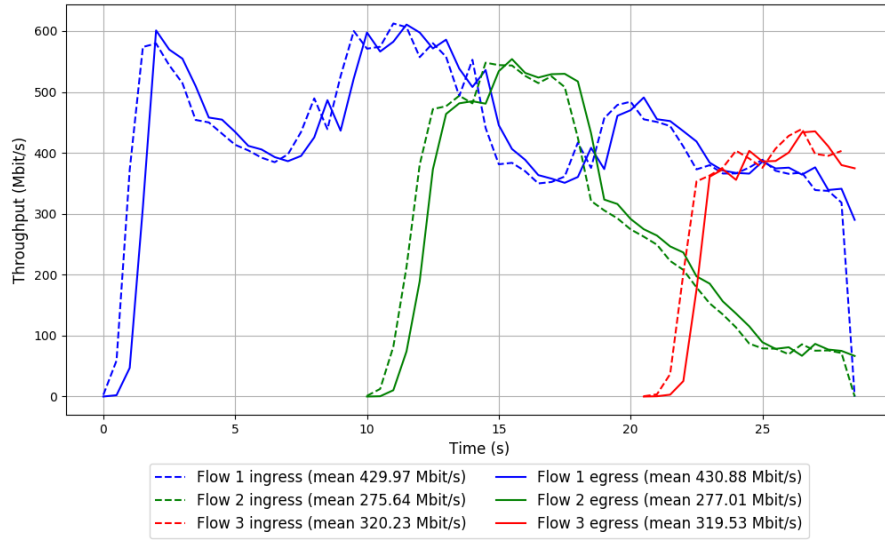
-- Flow 2:

Average throughput: 277.01 Mbit/s  
95th percentile per-packet one-way delay: 71.554 ms  
Loss rate: 0.13%

-- Flow 3:

Average throughput: 319.53 Mbit/s  
95th percentile per-packet one-way delay: 55.525 ms  
Loss rate: 1.42%

# Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-03-27 21:37:01  
End at: 2019-03-27 21:37:31  
Local clock offset: -0.197 ms  
Remote clock offset: -0.284 ms

# Below is generated by plot.py at 2019-03-28 01:30:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 565.57 Mbit/s  
95th percentile per-packet one-way delay: 52.595 ms  
Loss rate: 0.50%

-- Flow 1:

Average throughput: 410.91 Mbit/s  
95th percentile per-packet one-way delay: 53.539 ms  
Loss rate: 0.28%

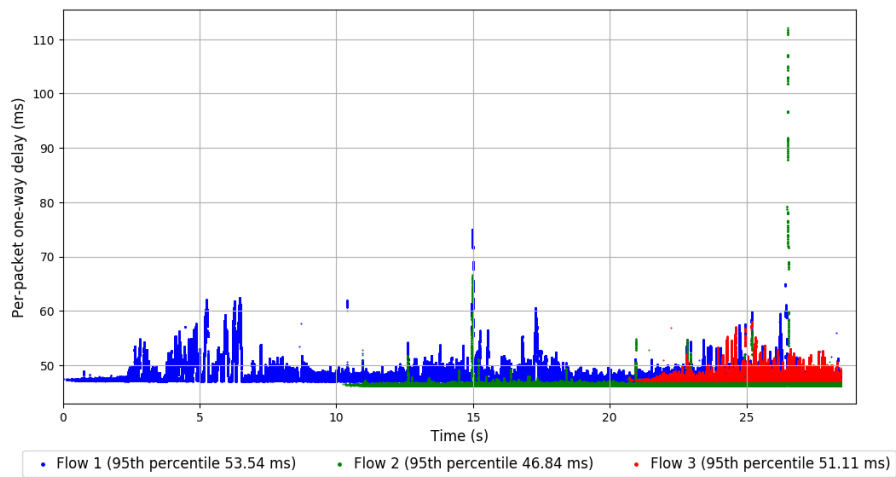
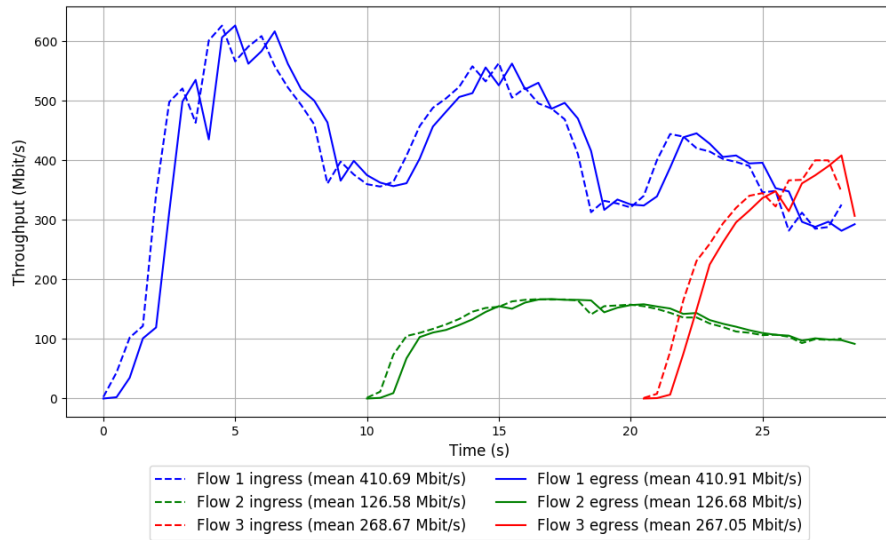
-- Flow 2:

Average throughput: 126.68 Mbit/s  
95th percentile per-packet one-way delay: 46.842 ms  
Loss rate: 0.42%

-- Flow 3:

Average throughput: 267.05 Mbit/s  
95th percentile per-packet one-way delay: 51.109 ms  
Loss rate: 1.79%

## Run 2: Report of Indigo-MusesD — Data Link

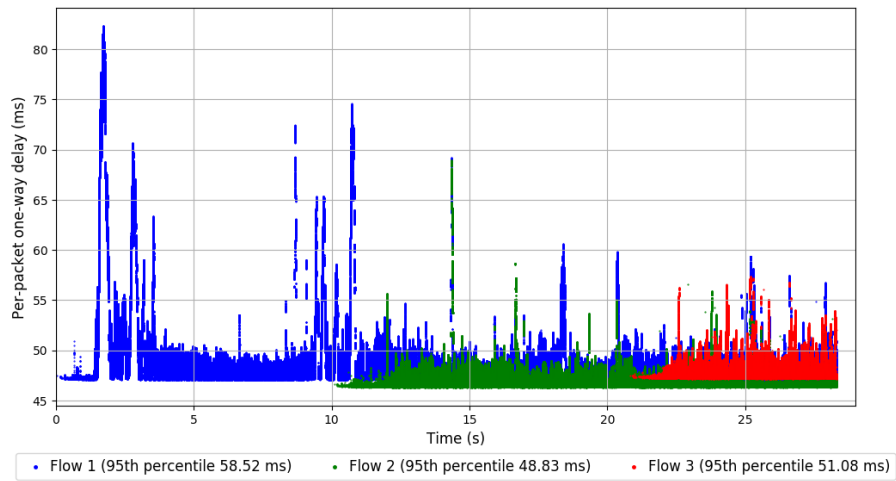
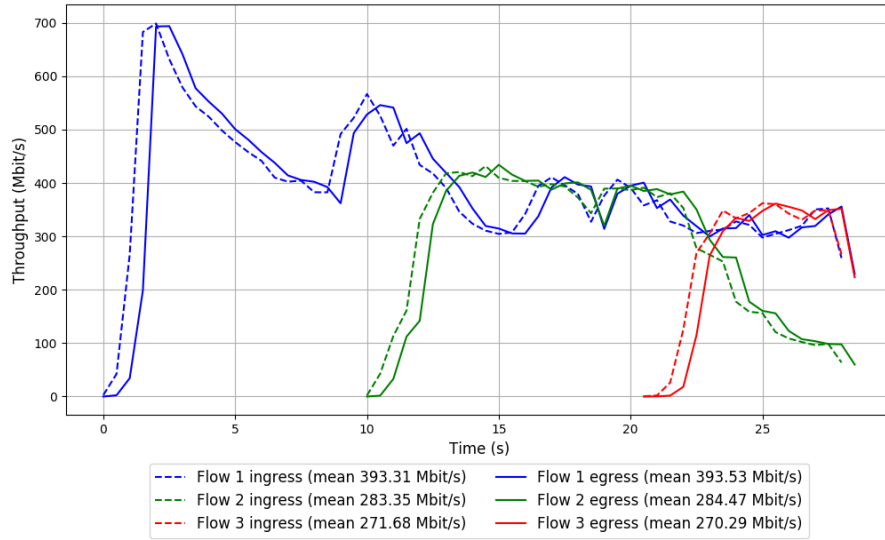


Run 3: Statistics of Indigo-MusesD

Start at: 2019-03-27 22:12:35  
End at: 2019-03-27 22:13:05  
Local clock offset: -0.029 ms  
Remote clock offset: -0.372 ms

```
# Below is generated by plot.py at 2019-03-28 01:30:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 648.33 Mbit/s
95th percentile per-packet one-way delay: 54.547 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 393.53 Mbit/s
95th percentile per-packet one-way delay: 58.517 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 284.47 Mbit/s
95th percentile per-packet one-way delay: 48.828 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 270.29 Mbit/s
95th percentile per-packet one-way delay: 51.079 ms
Loss rate: 1.76%
```

### Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-03-27 22:48:23  
End at: 2019-03-27 22:48:53  
Local clock offset: -0.108 ms  
Remote clock offset: -0.432 ms

# Below is generated by plot.py at 2019-03-28 01:32:55

# Datalink statistics

-- Total of 3 flows:

Average throughput: 724.20 Mbit/s  
95th percentile per-packet one-way delay: 66.801 ms  
Loss rate: 0.43%

-- Flow 1:

Average throughput: 410.30 Mbit/s  
95th percentile per-packet one-way delay: 71.022 ms  
Loss rate: 0.17%

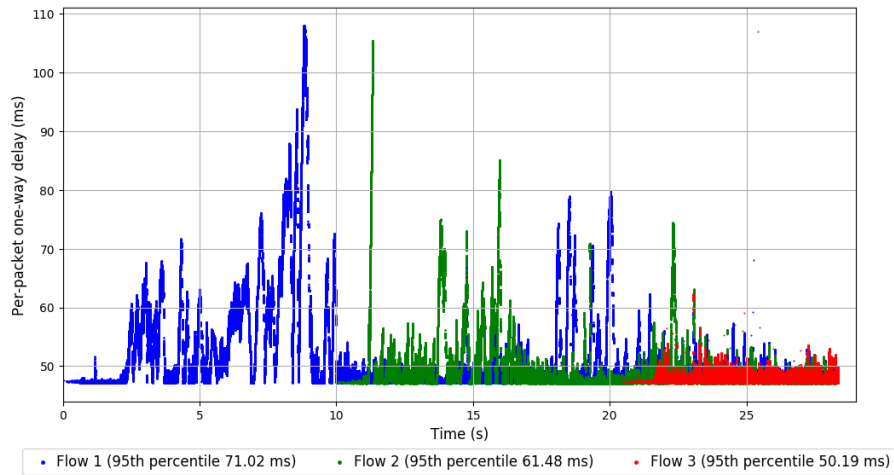
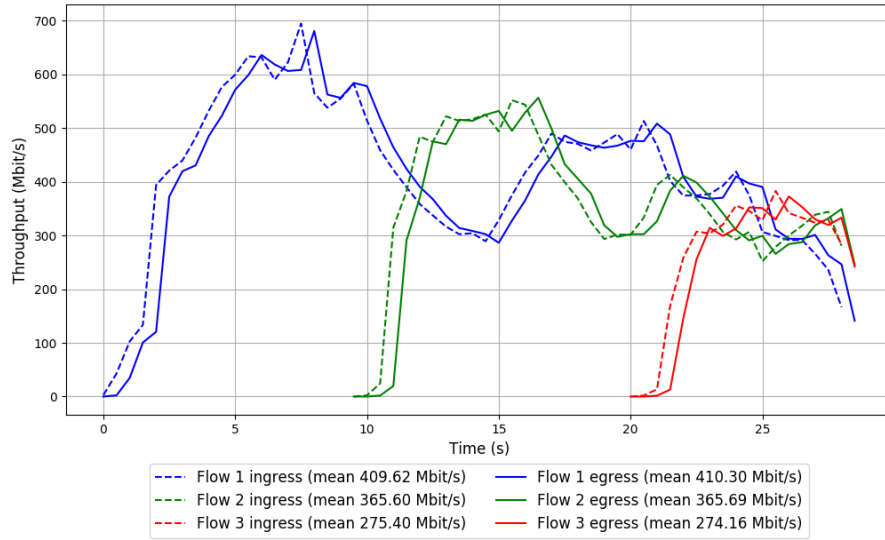
-- Flow 2:

Average throughput: 365.69 Mbit/s  
95th percentile per-packet one-way delay: 61.476 ms  
Loss rate: 0.49%

-- Flow 3:

Average throughput: 274.16 Mbit/s  
95th percentile per-packet one-way delay: 50.192 ms  
Loss rate: 1.62%

### Run 4: Report of Indigo-MusesD — Data Link





Run 5: Statistics of Indigo-MusesD

Start at: 2019-03-27 23:24:33  
End at: 2019-03-27 23:25:03  
Local clock offset: -0.107 ms  
Remote clock offset: -0.431 ms

# Below is generated by plot.py at 2019-03-28 01:32:55

# Datalink statistics

-- Total of 3 flows:

Average throughput: 650.33 Mbit/s  
95th percentile per-packet one-way delay: 66.357 ms  
Loss rate: 0.39%

-- Flow 1:

Average throughput: 408.72 Mbit/s  
95th percentile per-packet one-way delay: 81.240 ms  
Loss rate: 0.27%

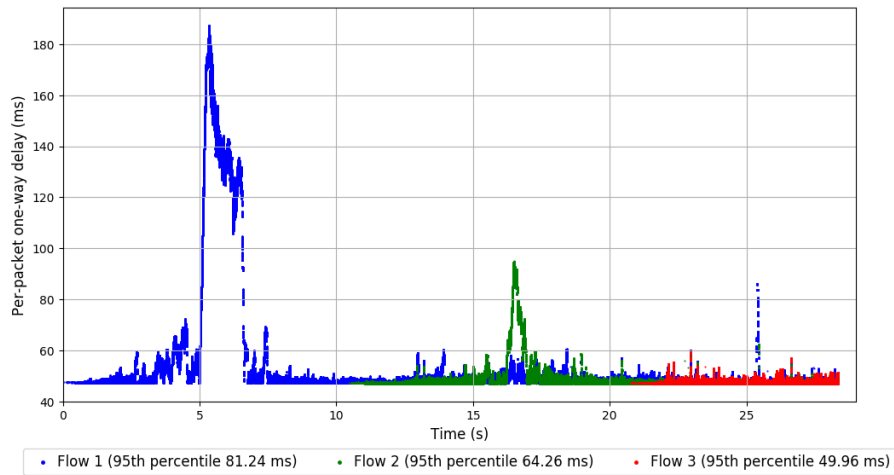
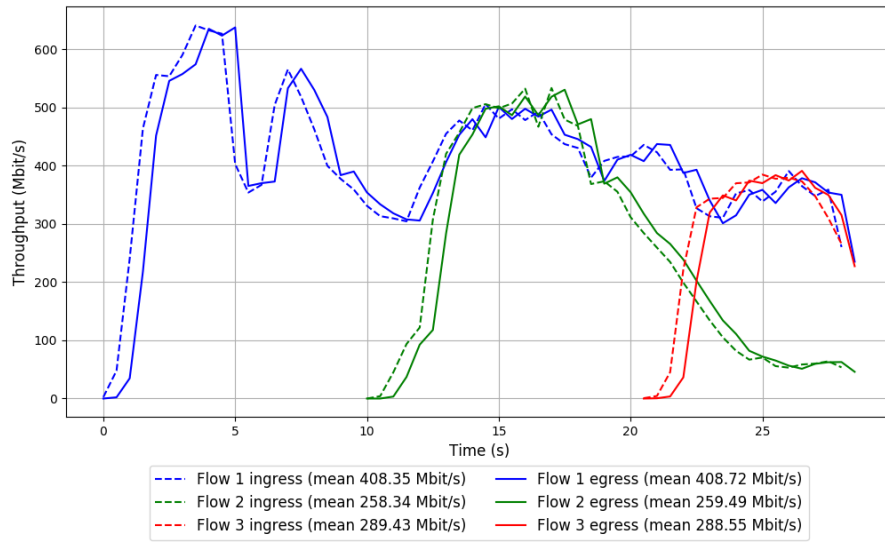
-- Flow 2:

Average throughput: 259.49 Mbit/s  
95th percentile per-packet one-way delay: 64.264 ms  
Loss rate: 0.15%

-- Flow 3:

Average throughput: 288.55 Mbit/s  
95th percentile per-packet one-way delay: 49.963 ms  
Loss rate: 1.55%

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



Run 1: Statistics of Indigo-MuseST

Start at: 2019-03-27 20:45:32  
End at: 2019-03-27 20:46:02  
Local clock offset: -0.138 ms  
Remote clock offset: -0.239 ms

# Below is generated by plot.py at 2019-03-28 01:36:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 855.85 Mbit/s  
95th percentile per-packet one-way delay: 87.743 ms  
Loss rate: 0.40%

-- Flow 1:

Average throughput: 496.92 Mbit/s  
95th percentile per-packet one-way delay: 93.589 ms  
Loss rate: 0.26%

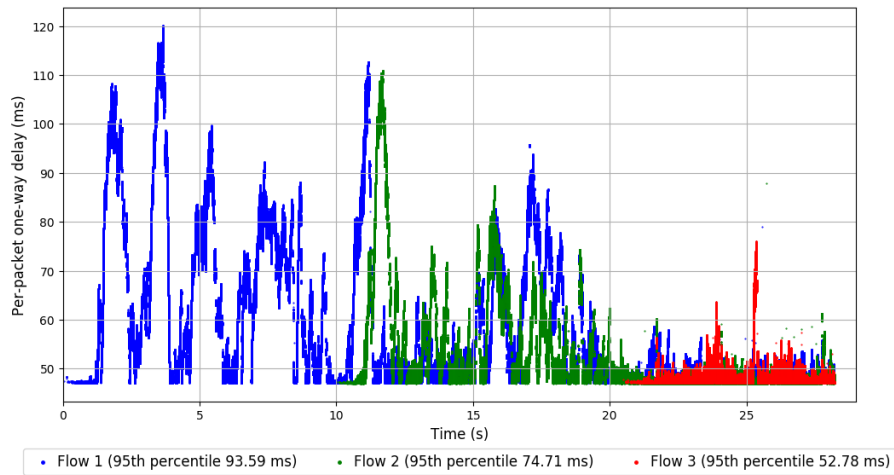
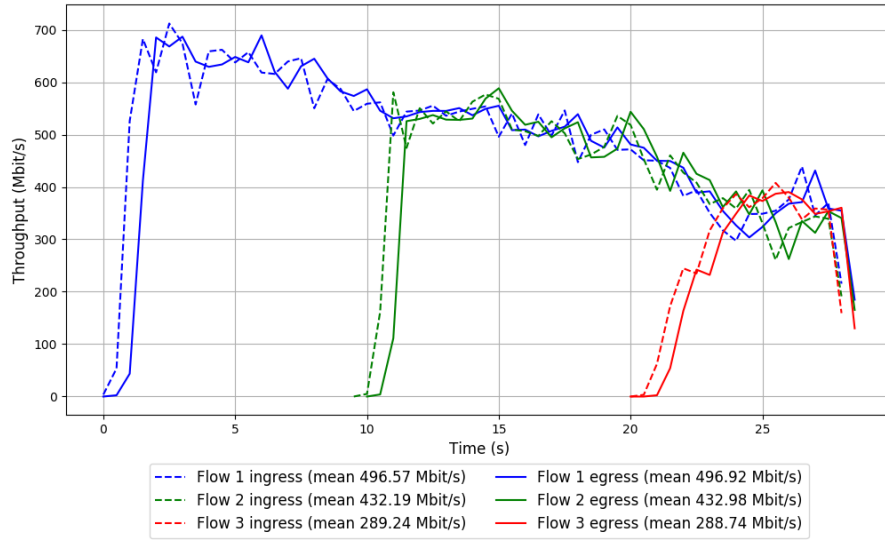
-- Flow 2:

Average throughput: 432.98 Mbit/s  
95th percentile per-packet one-way delay: 74.707 ms  
Loss rate: 0.38%

-- Flow 3:

Average throughput: 288.74 Mbit/s  
95th percentile per-packet one-way delay: 52.781 ms  
Loss rate: 1.36%

# Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MuseST

Start at: 2019-03-27 21:21:00  
End at: 2019-03-27 21:21:30  
Local clock offset: -0.194 ms  
Remote clock offset: -0.215 ms

# Below is generated by plot.py at 2019-03-28 01:36:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 777.33 Mbit/s  
95th percentile per-packet one-way delay: 89.205 ms  
Loss rate: 0.44%

-- Flow 1:

Average throughput: 481.56 Mbit/s  
95th percentile per-packet one-way delay: 93.635 ms  
Loss rate: 0.30%

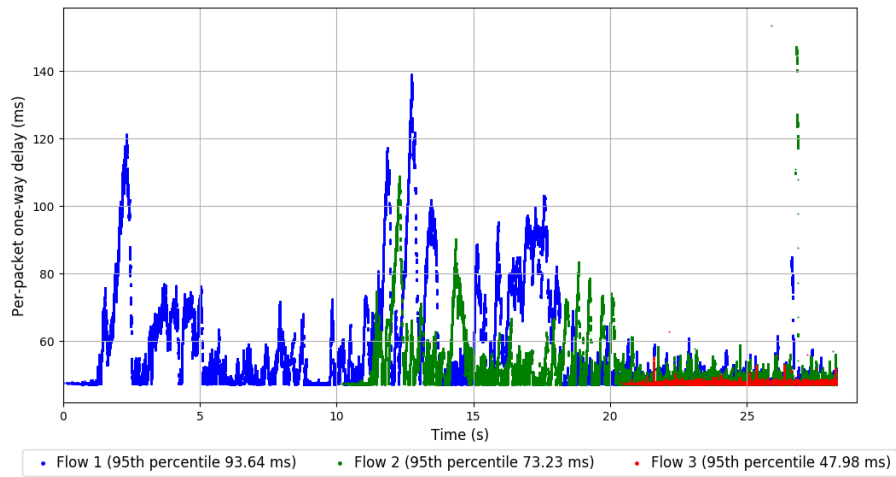
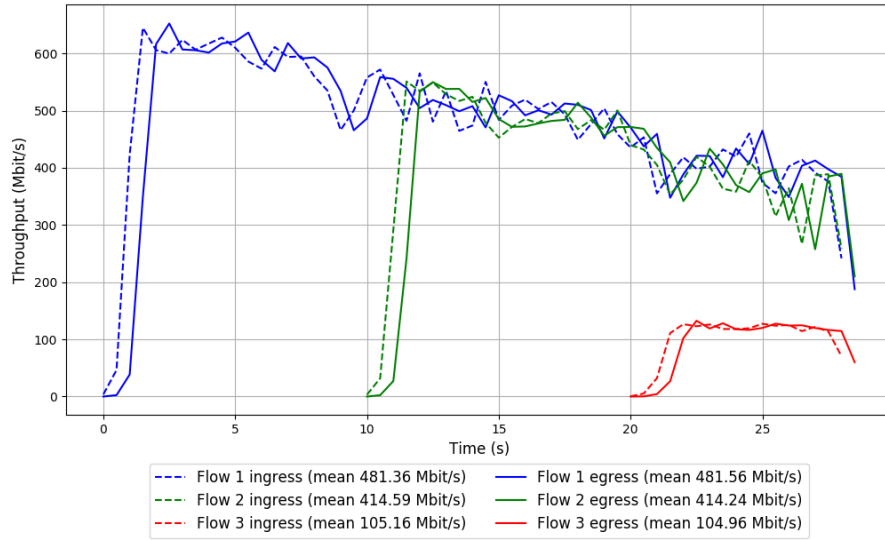
-- Flow 2:

Average throughput: 414.24 Mbit/s  
95th percentile per-packet one-way delay: 73.229 ms  
Loss rate: 0.61%

-- Flow 3:

Average throughput: 104.96 Mbit/s  
95th percentile per-packet one-way delay: 47.978 ms  
Loss rate: 1.32%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MuseST

Start at: 2019-03-27 21:56:35  
End at: 2019-03-27 21:57:05  
Local clock offset: -0.047 ms  
Remote clock offset: -0.331 ms

# Below is generated by plot.py at 2019-03-28 01:39:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 813.44 Mbit/s  
95th percentile per-packet one-way delay: 73.443 ms  
Loss rate: 0.41%

-- Flow 1:

Average throughput: 490.00 Mbit/s  
95th percentile per-packet one-way delay: 78.946 ms  
Loss rate: 0.28%

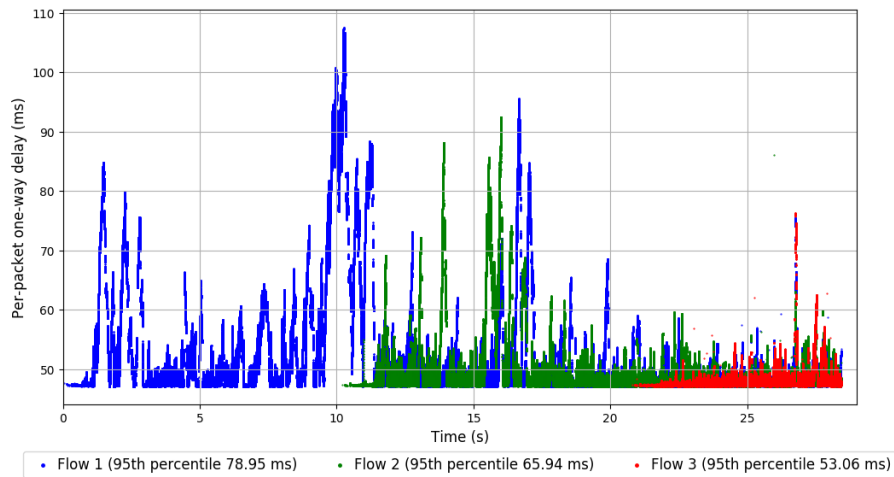
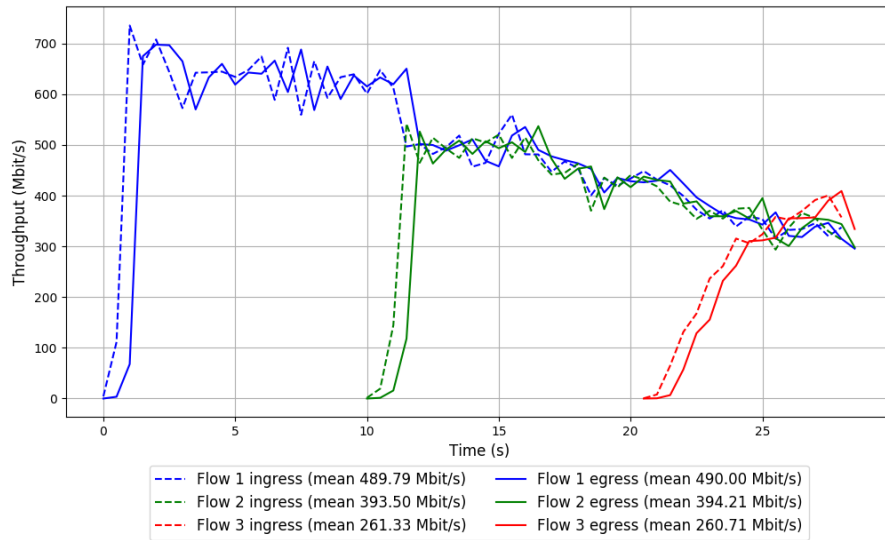
-- Flow 2:

Average throughput: 394.21 Mbit/s  
95th percentile per-packet one-way delay: 65.939 ms  
Loss rate: 0.34%

-- Flow 3:

Average throughput: 260.71 Mbit/s  
95th percentile per-packet one-way delay: 53.062 ms  
Loss rate: 1.51%

### Run 3: Report of Indigo-MusesT — Data Link





Run 4: Statistics of Indigo-MuseST

Start at: 2019-03-27 22:32:08  
End at: 2019-03-27 22:32:38  
Local clock offset: -0.09 ms  
Remote clock offset: -0.415 ms

# Below is generated by plot.py at 2019-03-28 01:43:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 775.11 Mbit/s  
95th percentile per-packet one-way delay: 74.463 ms  
Loss rate: 0.44%

-- Flow 1:

Average throughput: 481.72 Mbit/s  
95th percentile per-packet one-way delay: 74.246 ms  
Loss rate: 0.32%

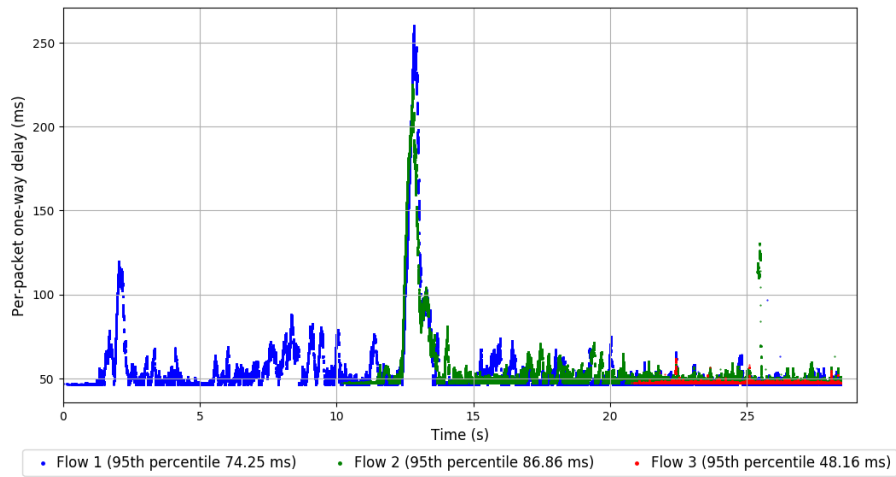
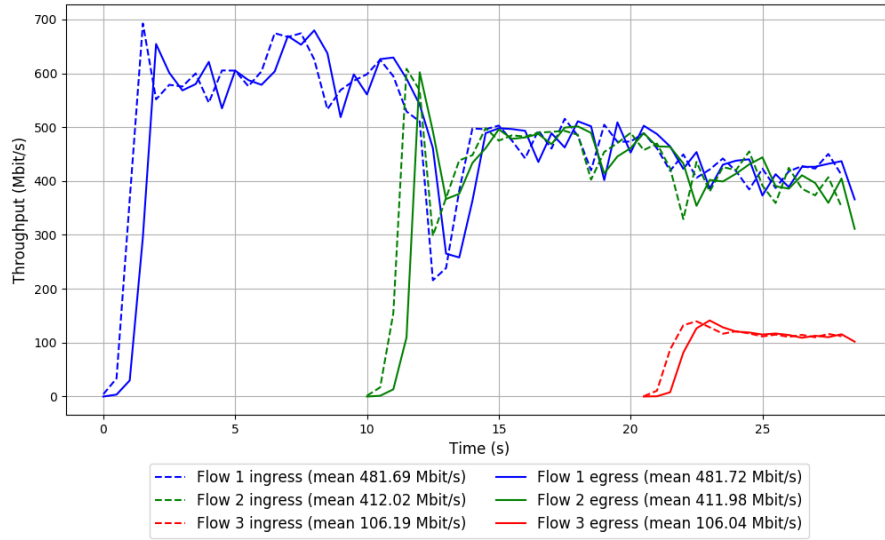
-- Flow 2:

Average throughput: 411.98 Mbit/s  
95th percentile per-packet one-way delay: 86.860 ms  
Loss rate: 0.54%

-- Flow 3:

Average throughput: 106.04 Mbit/s  
95th percentile per-packet one-way delay: 48.165 ms  
Loss rate: 1.36%

Run 4: Report of Indigo-MusesT — Data Link

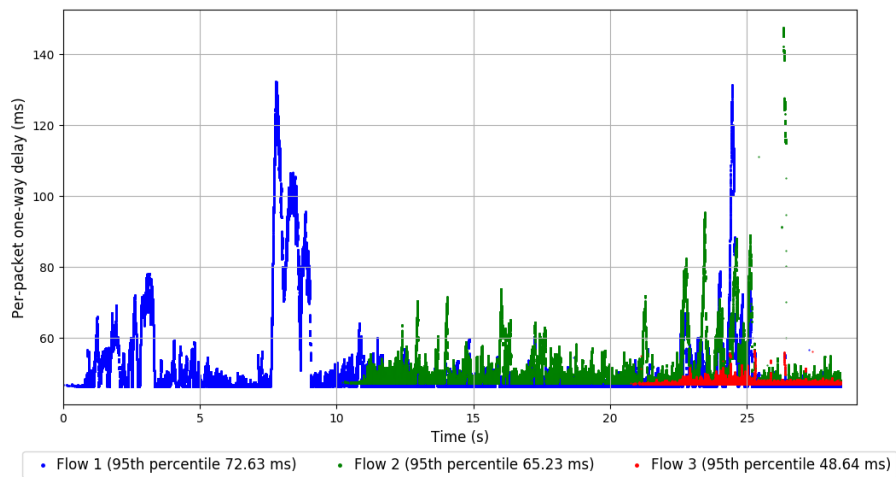
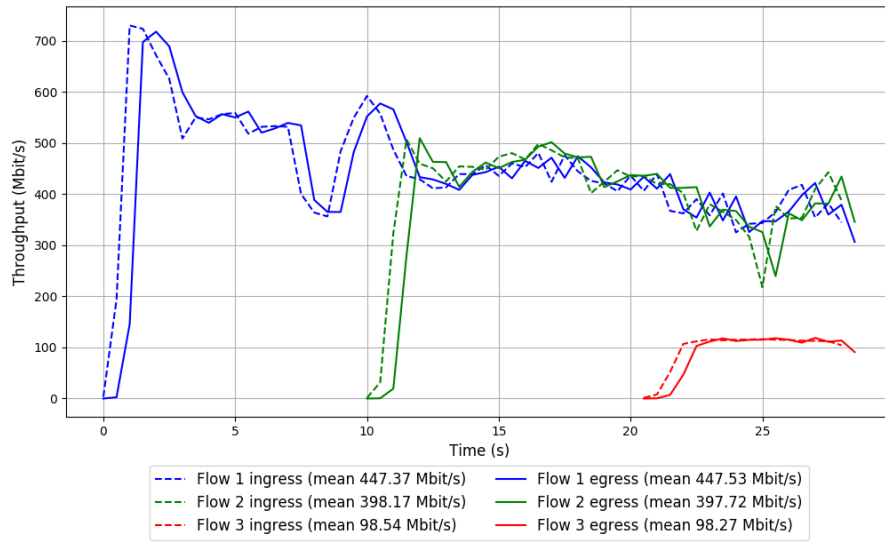


Run 5: Statistics of Indigo-MuseST

Start at: 2019-03-27 23:08:25  
End at: 2019-03-27 23:08:55  
Local clock offset: -0.086 ms  
Remote clock offset: -0.464 ms

```
# Below is generated by plot.py at 2019-03-28 01:43:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 729.15 Mbit/s
95th percentile per-packet one-way delay: 68.849 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 447.53 Mbit/s
95th percentile per-packet one-way delay: 72.632 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 397.72 Mbit/s
95th percentile per-packet one-way delay: 65.230 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 98.27 Mbit/s
95th percentile per-packet one-way delay: 48.640 ms
Loss rate: 1.51%
```

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



Run 1: Statistics of LEDBAT

Start at: 2019-03-27 21:14:42  
End at: 2019-03-27 21:15:12  
Local clock offset: -0.173 ms  
Remote clock offset: -0.276 ms

# Below is generated by plot.py at 2019-03-28 01:43:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 63.35 Mbit/s  
95th percentile per-packet one-way delay: 48.650 ms  
Loss rate: 0.82%

-- Flow 1:

Average throughput: 40.85 Mbit/s  
95th percentile per-packet one-way delay: 48.588 ms  
Loss rate: 0.63%

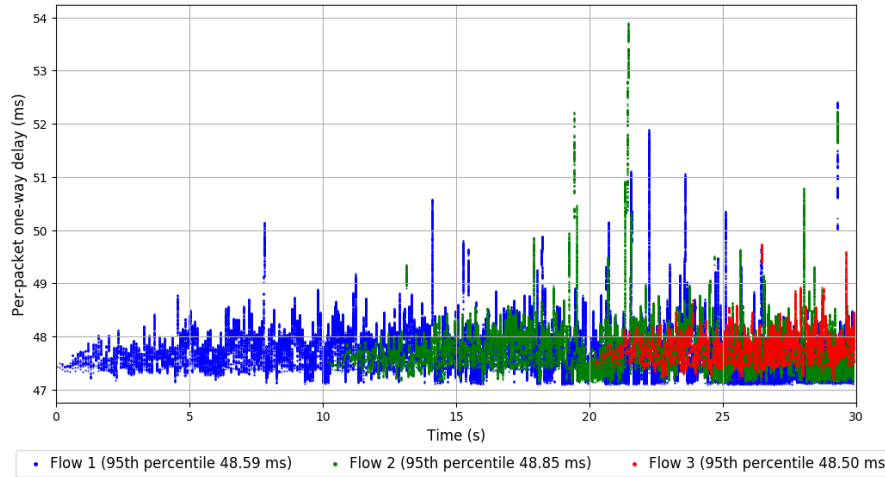
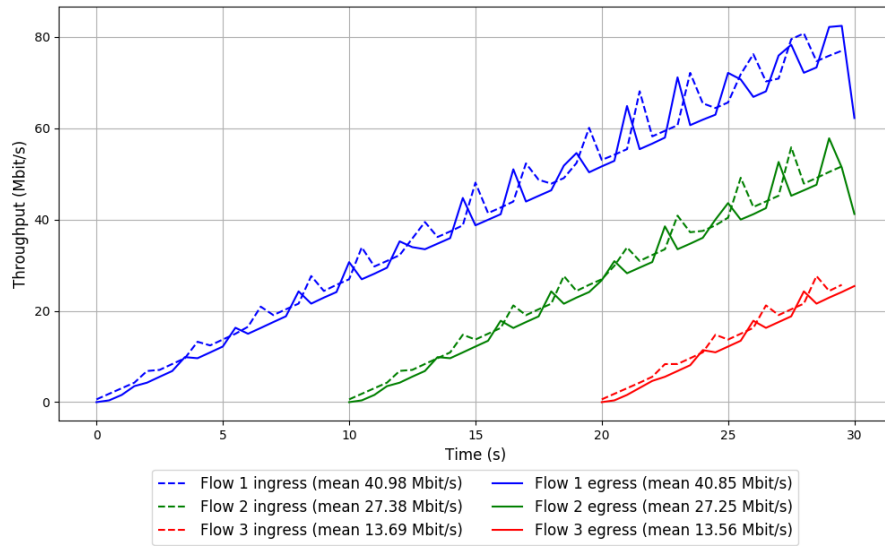
-- Flow 2:

Average throughput: 27.25 Mbit/s  
95th percentile per-packet one-way delay: 48.846 ms  
Loss rate: 0.96%

-- Flow 3:

Average throughput: 13.56 Mbit/s  
95th percentile per-packet one-way delay: 48.497 ms  
Loss rate: 1.92%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-03-27 21:50:21  
End at: 2019-03-27 21:50:51  
Local clock offset: -0.062 ms  
Remote clock offset: -0.389 ms

# Below is generated by plot.py at 2019-03-28 01:43:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 63.70 Mbit/s  
95th percentile per-packet one-way delay: 48.689 ms  
Loss rate: 0.81%

-- Flow 1:

Average throughput: 40.98 Mbit/s  
95th percentile per-packet one-way delay: 48.871 ms  
Loss rate: 0.63%

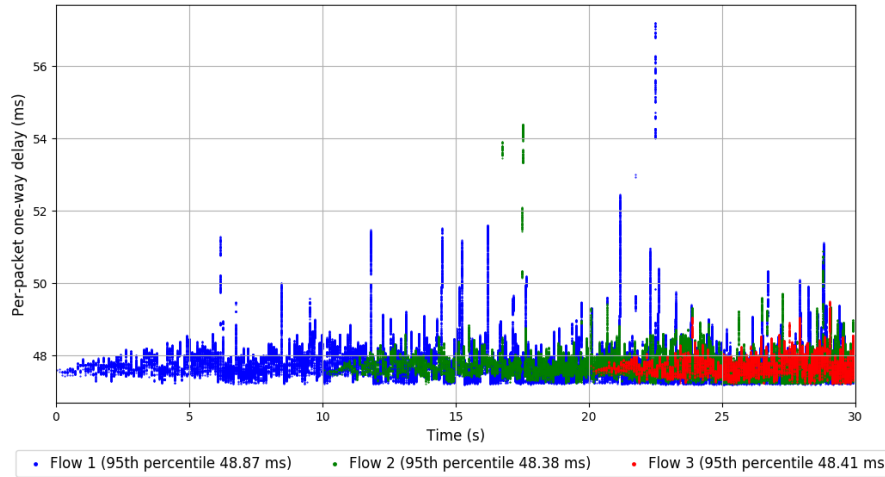
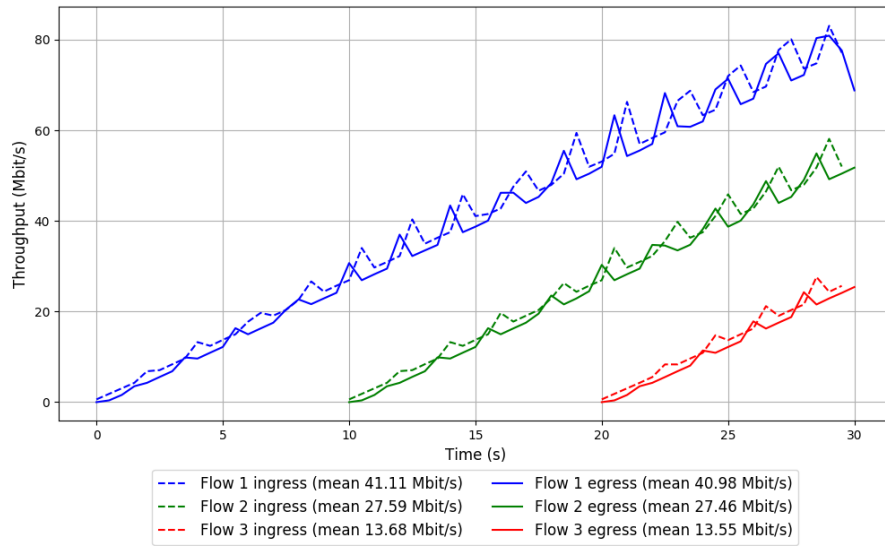
-- Flow 2:

Average throughput: 27.46 Mbit/s  
95th percentile per-packet one-way delay: 48.385 ms  
Loss rate: 0.95%

-- Flow 3:

Average throughput: 13.55 Mbit/s  
95th percentile per-packet one-way delay: 48.415 ms  
Loss rate: 1.93%

Run 2: Report of LEDBAT — Data Link





Run 3: Statistics of LEDBAT

Start at: 2019-03-27 22:25:44  
End at: 2019-03-27 22:26:14  
Local clock offset: -0.066 ms  
Remote clock offset: -0.388 ms

# Below is generated by plot.py at 2019-03-28 01:43:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 64.71 Mbit/s  
95th percentile per-packet one-way delay: 48.368 ms  
Loss rate: 0.81%

-- Flow 1:

Average throughput: 41.99 Mbit/s  
95th percentile per-packet one-way delay: 47.941 ms  
Loss rate: 0.62%

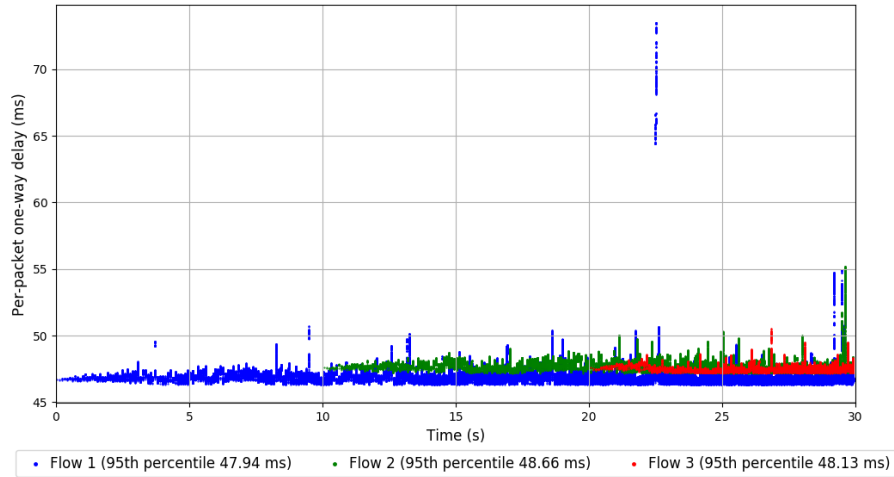
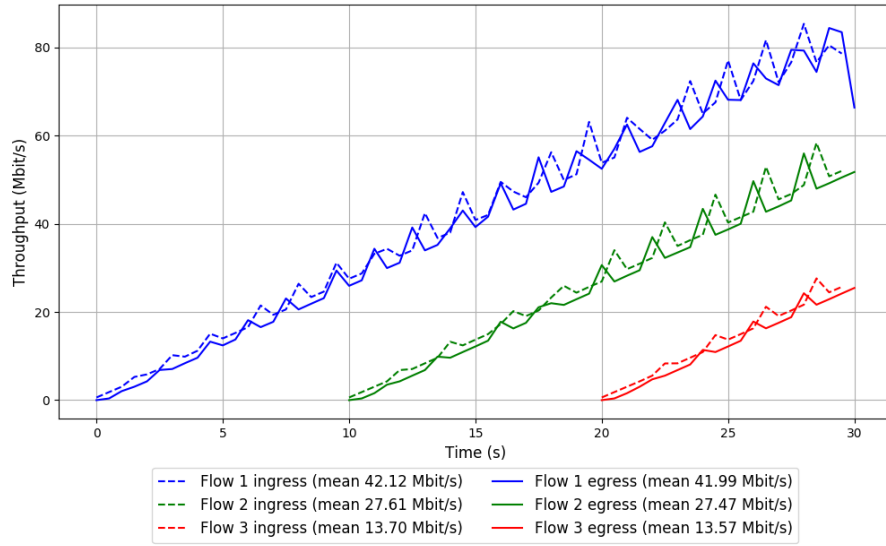
-- Flow 2:

Average throughput: 27.47 Mbit/s  
95th percentile per-packet one-way delay: 48.658 ms  
Loss rate: 0.95%

-- Flow 3:

Average throughput: 13.57 Mbit/s  
95th percentile per-packet one-way delay: 48.133 ms  
Loss rate: 1.92%

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

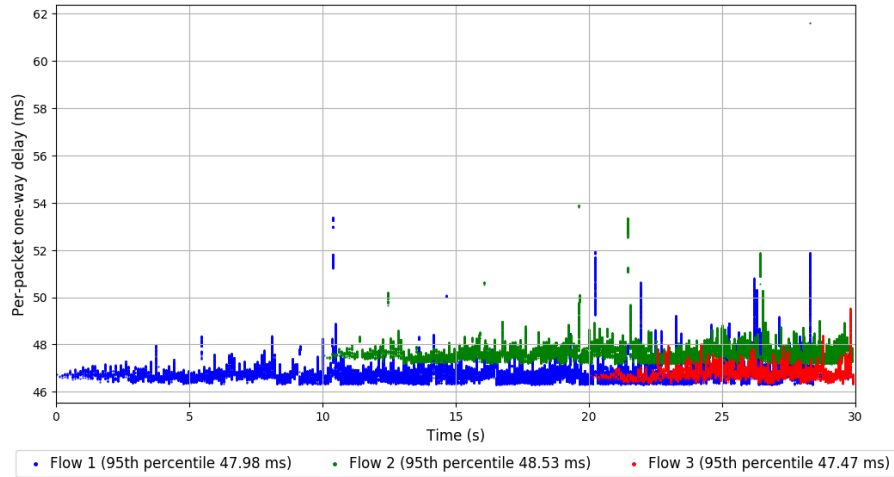
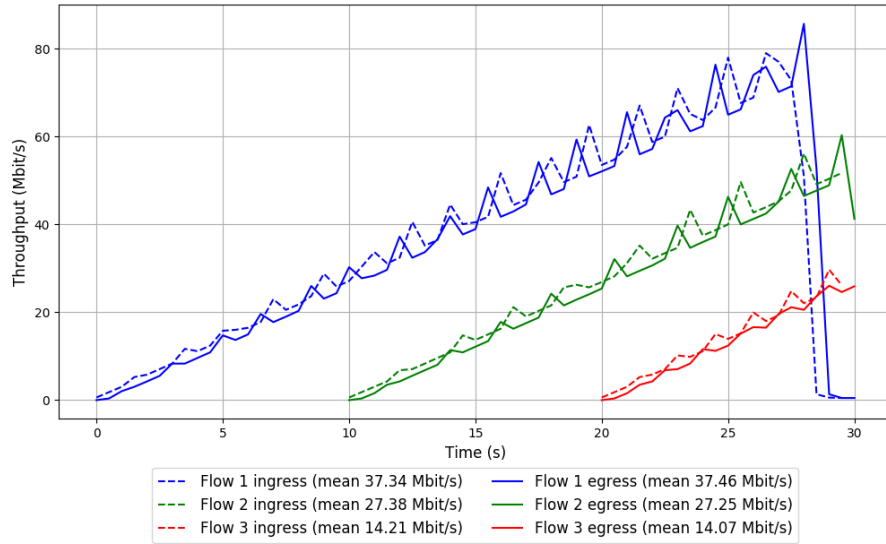


Run 4: Statistics of LEDBAT

Start at: 2019-03-27 23:02:03  
End at: 2019-03-27 23:02:33  
Local clock offset: -0.089 ms  
Remote clock offset: -0.476 ms

```
# Below is generated by plot.py at 2019-03-28 01:43:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.17 Mbit/s
95th percentile per-packet one-way delay: 48.287 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 37.46 Mbit/s
95th percentile per-packet one-way delay: 47.978 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.25 Mbit/s
95th percentile per-packet one-way delay: 48.531 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 14.07 Mbit/s
95th percentile per-packet one-way delay: 47.469 ms
Loss rate: 1.89%
```

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

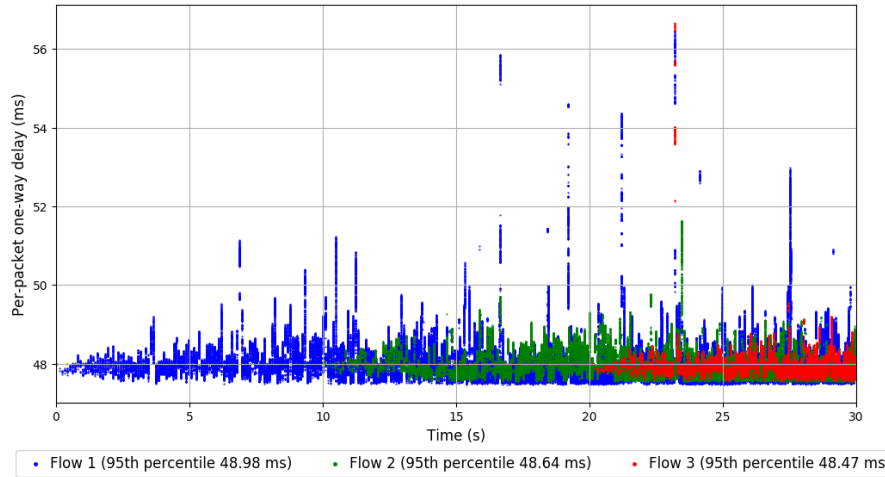
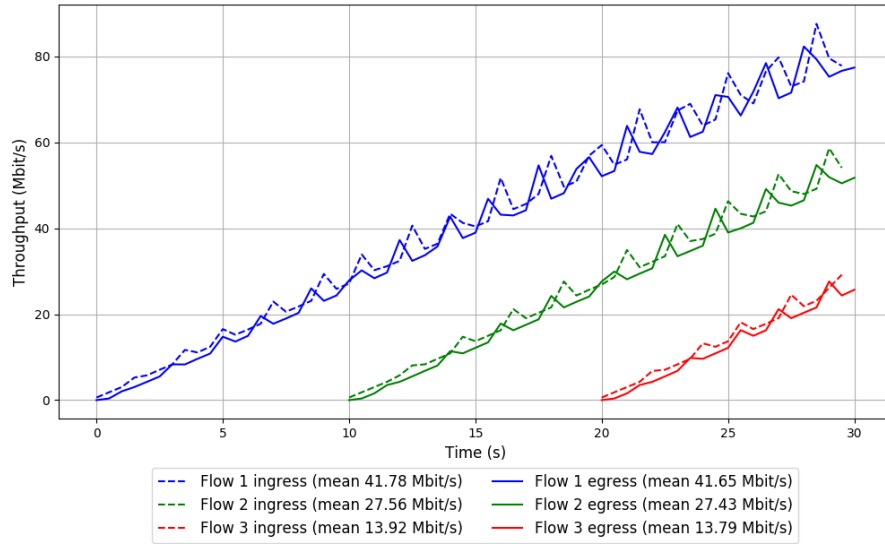


Run 5: Statistics of LEDBAT

Start at: 2019-03-27 23:37:54  
End at: 2019-03-27 23:38:24  
Local clock offset: 0.217 ms  
Remote clock offset: -0.475 ms

```
# Below is generated by plot.py at 2019-03-28 01:43:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.40 Mbit/s
95th percentile per-packet one-way delay: 48.832 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 41.65 Mbit/s
95th percentile per-packet one-way delay: 48.985 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 27.43 Mbit/s
95th percentile per-packet one-way delay: 48.643 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 13.79 Mbit/s
95th percentile per-packet one-way delay: 48.466 ms
Loss rate: 1.91%
```

Run 5: Report of LEDBAT — Data Link

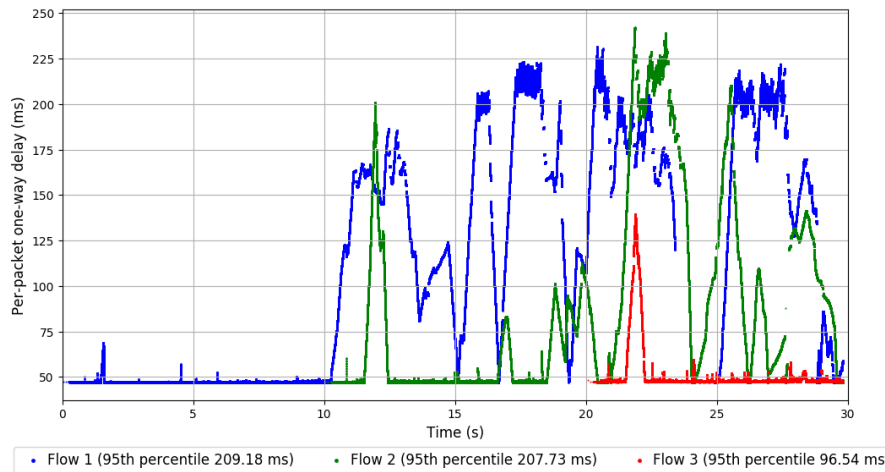
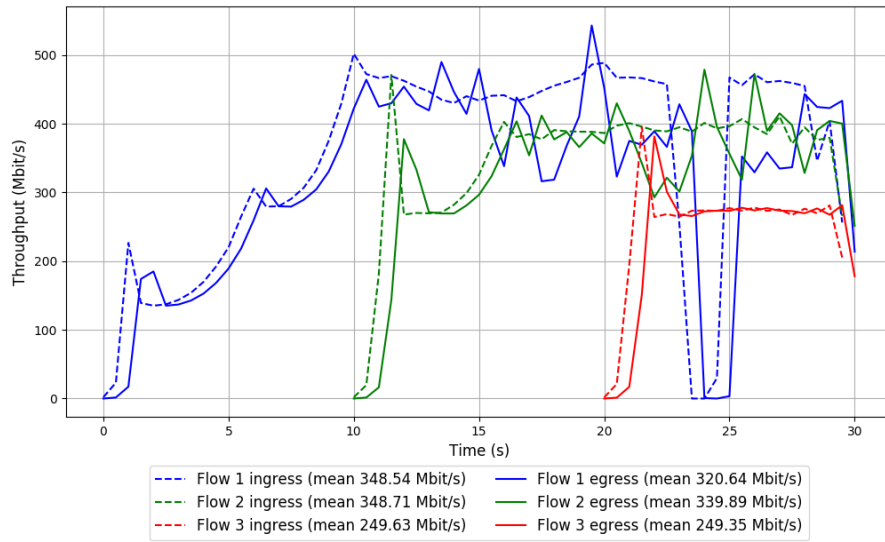


Run 1: Statistics of PCC-Allegro

Start at: 2019-03-27 20:57:53  
End at: 2019-03-27 20:58:23  
Local clock offset: -0.118 ms  
Remote clock offset: -0.235 ms

# Below is generated by plot.py at 2019-03-28 01:59:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 627.70 Mbit/s  
95th percentile per-packet one-way delay: 207.283 ms  
Loss rate: 5.55%  
-- Flow 1:  
Average throughput: 320.64 Mbit/s  
95th percentile per-packet one-way delay: 209.175 ms  
Loss rate: 8.30%  
-- Flow 2:  
Average throughput: 339.89 Mbit/s  
95th percentile per-packet one-way delay: 207.726 ms  
Loss rate: 2.99%  
-- Flow 3:  
Average throughput: 249.35 Mbit/s  
95th percentile per-packet one-way delay: 96.543 ms  
Loss rate: 1.10%

Run 1: Report of PCC-Allegro — Data Link



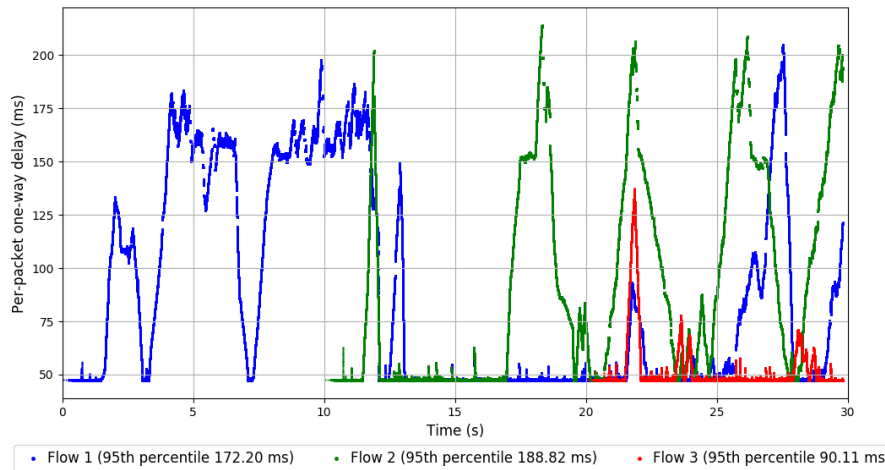
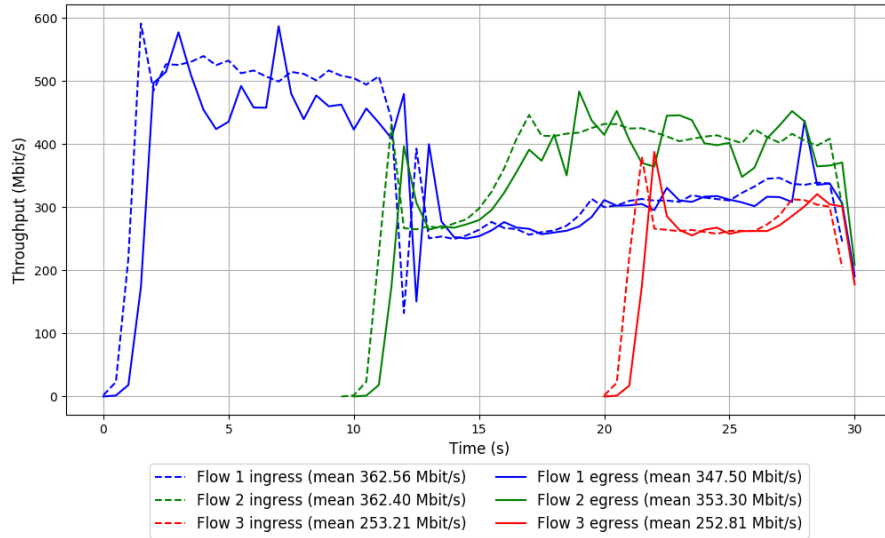


Run 2: Statistics of PCC-Allegro

Start at: 2019-03-27 21:33:18  
End at: 2019-03-27 21:33:48  
Local clock offset: -0.193 ms  
Remote clock offset: -0.273 ms

# Below is generated by plot.py at 2019-03-28 02:00:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 664.84 Mbit/s  
95th percentile per-packet one-way delay: 176.364 ms  
Loss rate: 3.54%  
-- Flow 1:  
Average throughput: 347.50 Mbit/s  
95th percentile per-packet one-way delay: 172.201 ms  
Loss rate: 4.46%  
-- Flow 2:  
Average throughput: 353.30 Mbit/s  
95th percentile per-packet one-way delay: 188.818 ms  
Loss rate: 2.98%  
-- Flow 3:  
Average throughput: 252.81 Mbit/s  
95th percentile per-packet one-way delay: 90.115 ms  
Loss rate: 1.13%

Run 2: Report of PCC-Allegro — Data Link

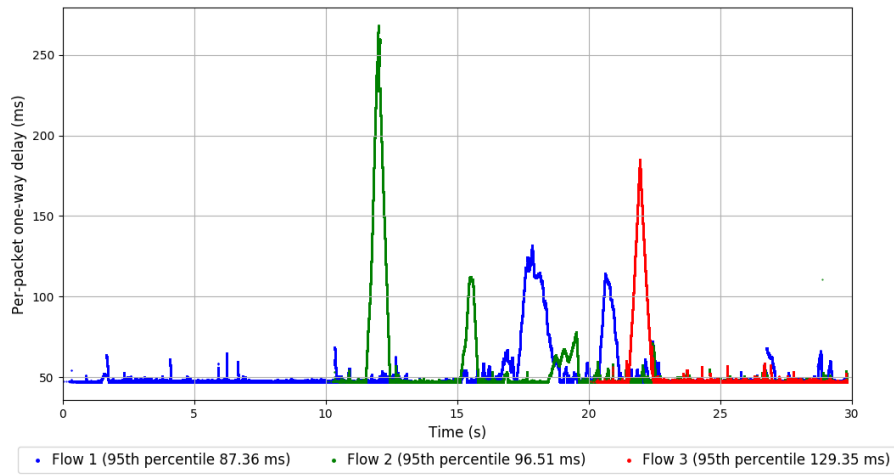
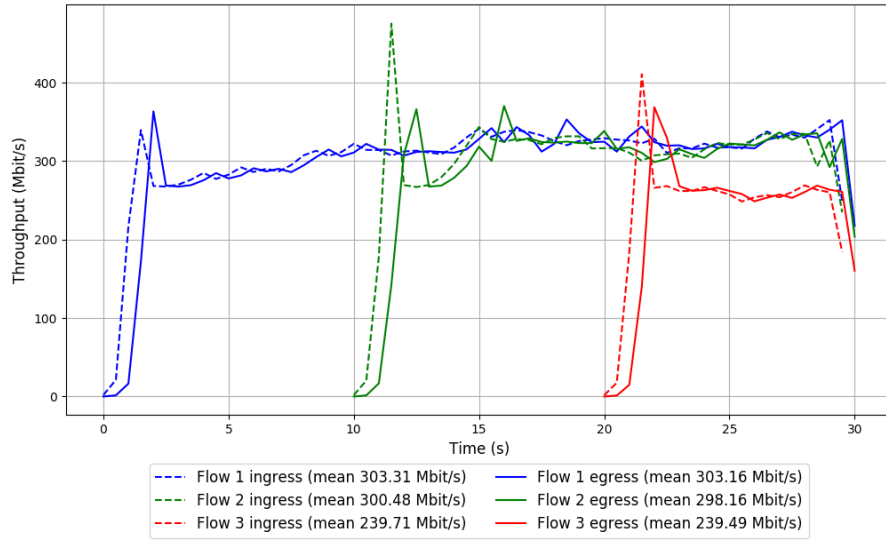


Run 3: Statistics of PCC-Allegro

Start at: 2019-03-27 22:08:57  
End at: 2019-03-27 22:09:27  
Local clock offset: -0.018 ms  
Remote clock offset: -0.395 ms

```
# Below is generated by plot.py at 2019-03-28 02:00:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 579.25 Mbit/s
95th percentile per-packet one-way delay: 95.956 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 303.16 Mbit/s
95th percentile per-packet one-way delay: 87.359 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 298.16 Mbit/s
95th percentile per-packet one-way delay: 96.510 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 239.49 Mbit/s
95th percentile per-packet one-way delay: 129.348 ms
Loss rate: 1.03%
```

### Run 3: Report of PCC-Allegro — Data Link

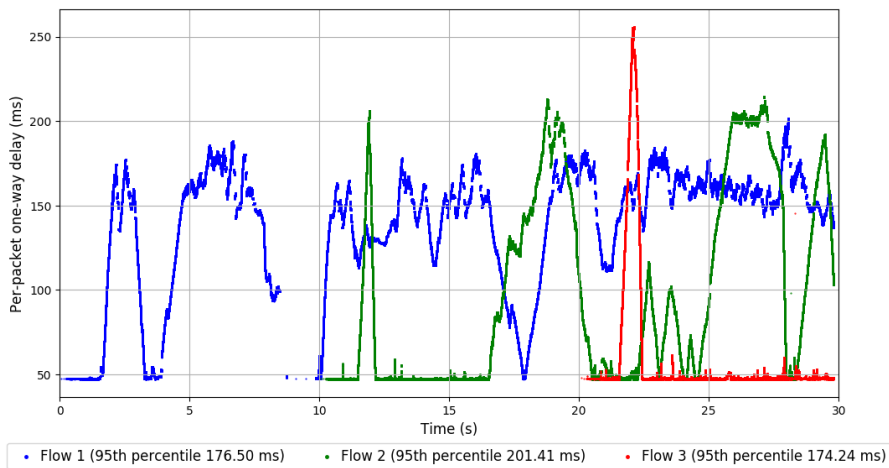
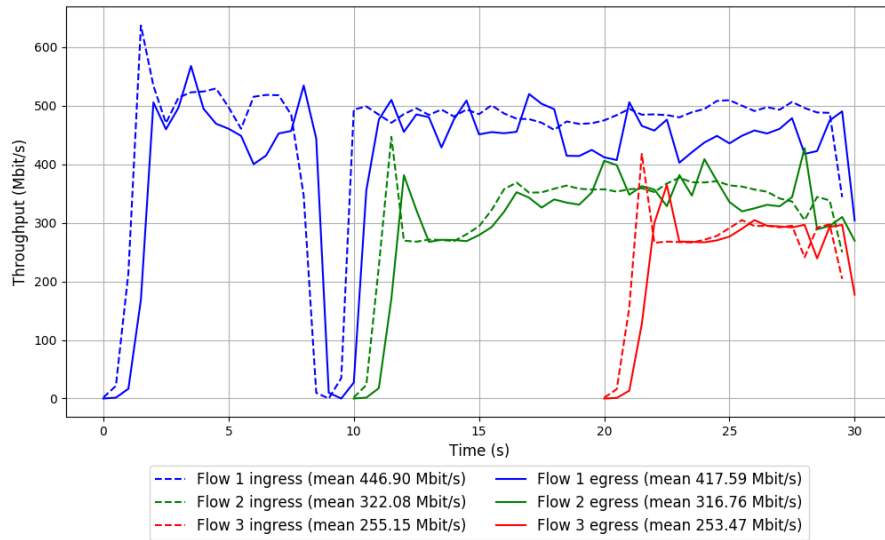


Run 4: Statistics of PCC-Allegro

Start at: 2019-03-27 22:44:30  
End at: 2019-03-27 22:45:00  
Local clock offset: -0.096 ms  
Remote clock offset: -0.408 ms

```
# Below is generated by plot.py at 2019-03-28 02:04:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 710.67 Mbit/s
95th percentile per-packet one-way delay: 185.305 ms
Loss rate: 4.90%
-- Flow 1:
Average throughput: 417.59 Mbit/s
95th percentile per-packet one-way delay: 176.499 ms
Loss rate: 6.86%
-- Flow 2:
Average throughput: 316.76 Mbit/s
95th percentile per-packet one-way delay: 201.410 ms
Loss rate: 2.12%
-- Flow 3:
Average throughput: 253.47 Mbit/s
95th percentile per-packet one-way delay: 174.235 ms
Loss rate: 1.62%
```

### Run 4: Report of PCC-Allegro — Data Link

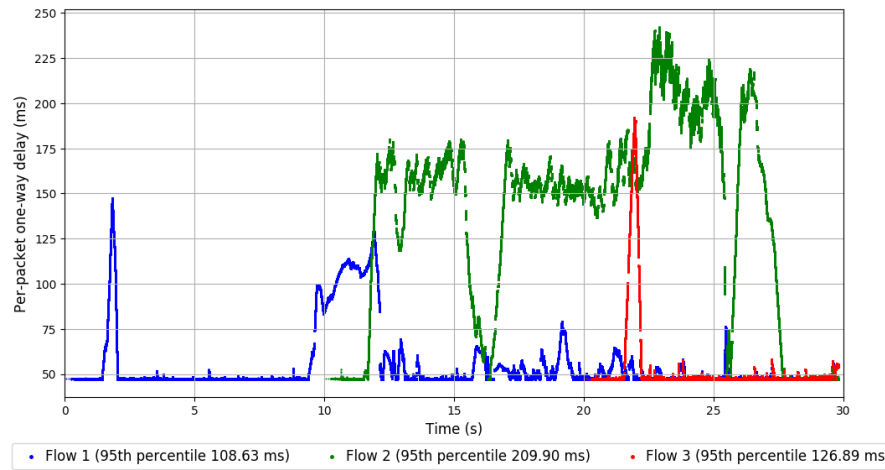
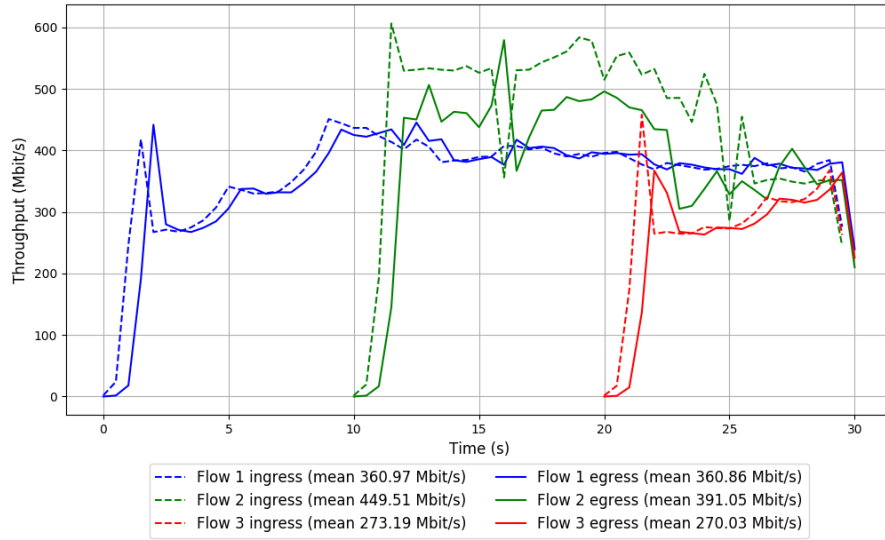


Run 5: Statistics of PCC-Allegro

Start at: 2019-03-27 23:20:44  
End at: 2019-03-27 23:21:14  
Local clock offset: -0.129 ms  
Remote clock offset: -0.464 ms

```
# Below is generated by plot.py at 2019-03-28 02:05:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 708.64 Mbit/s
95th percentile per-packet one-way delay: 186.453 ms
Loss rate: 5.77%
-- Flow 1:
Average throughput: 360.86 Mbit/s
95th percentile per-packet one-way delay: 108.632 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 391.05 Mbit/s
95th percentile per-packet one-way delay: 209.904 ms
Loss rate: 13.42%
-- Flow 3:
Average throughput: 270.03 Mbit/s
95th percentile per-packet one-way delay: 126.885 ms
Loss rate: 2.12%
```

Run 5: Report of PCC-Allegro — Data Link





Run 1: Statistics of PCC-Expr

Start at: 2019-03-27 21:11:35  
End at: 2019-03-27 21:12:05  
Local clock offset: -0.147 ms  
Remote clock offset: -0.251 ms

# Below is generated by plot.py at 2019-03-28 02:05:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 466.60 Mbit/s  
95th percentile per-packet one-way delay: 148.754 ms  
Loss rate: 1.94%

-- Flow 1:

Average throughput: 256.02 Mbit/s  
95th percentile per-packet one-way delay: 178.865 ms  
Loss rate: 2.85%

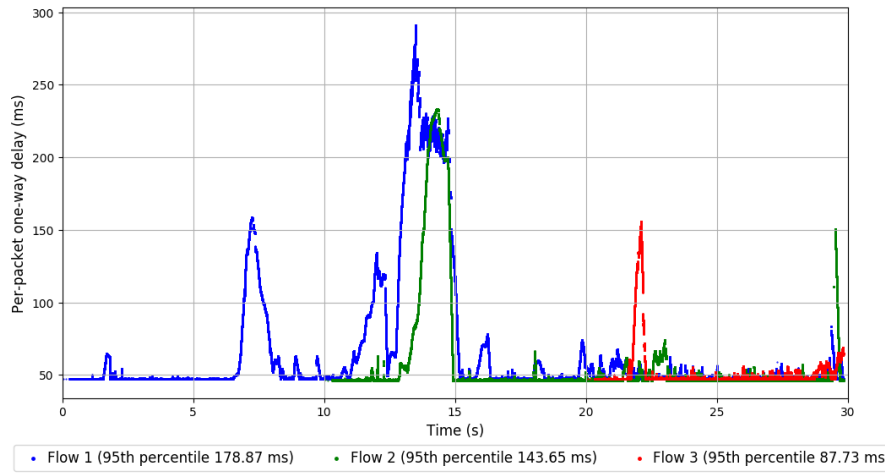
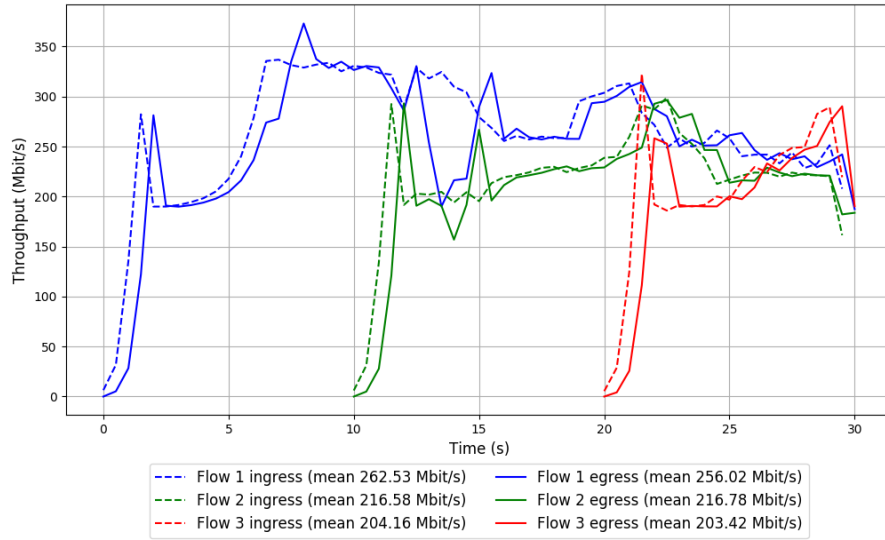
-- Flow 2:

Average throughput: 216.78 Mbit/s  
95th percentile per-packet one-way delay: 143.652 ms  
Loss rate: 0.47%

-- Flow 3:

Average throughput: 203.42 Mbit/s  
95th percentile per-packet one-way delay: 87.727 ms  
Loss rate: 1.51%

# Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-03-27 21:47:10  
End at: 2019-03-27 21:47:40  
Local clock offset: -0.076 ms  
Remote clock offset: -0.289 ms

# Below is generated by plot.py at 2019-03-28 02:05:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 432.04 Mbit/s  
95th percentile per-packet one-way delay: 156.823 ms  
Loss rate: 2.44%

-- Flow 1:

Average throughput: 222.55 Mbit/s  
95th percentile per-packet one-way delay: 161.515 ms  
Loss rate: 2.43%

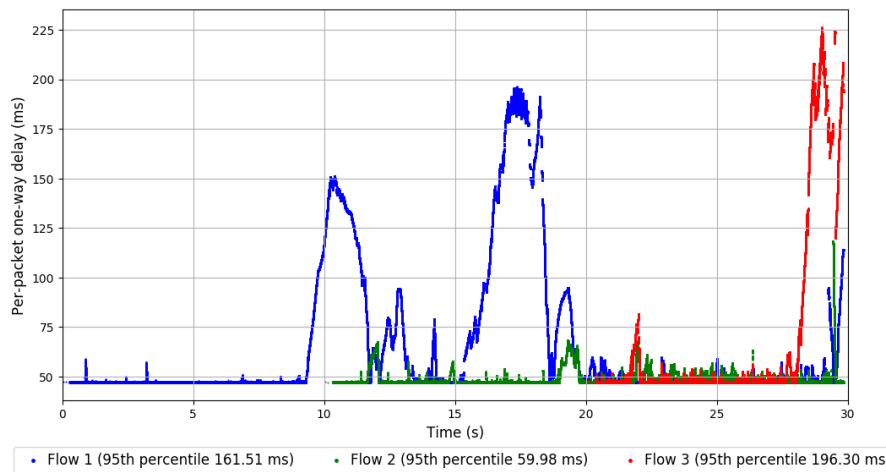
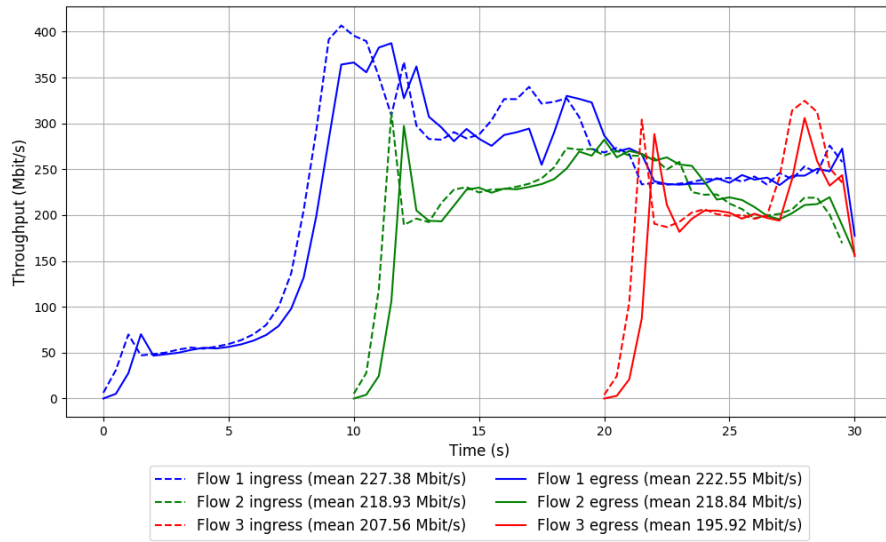
-- Flow 2:

Average throughput: 218.84 Mbit/s  
95th percentile per-packet one-way delay: 59.985 ms  
Loss rate: 0.52%

-- Flow 3:

Average throughput: 195.92 Mbit/s  
95th percentile per-packet one-way delay: 196.296 ms  
Loss rate: 6.53%

## Run 2: Report of PCC-Expr — Data Link

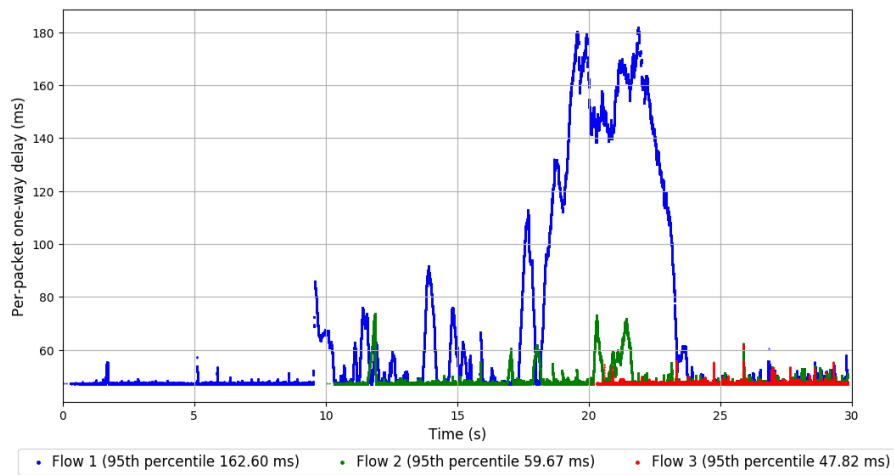
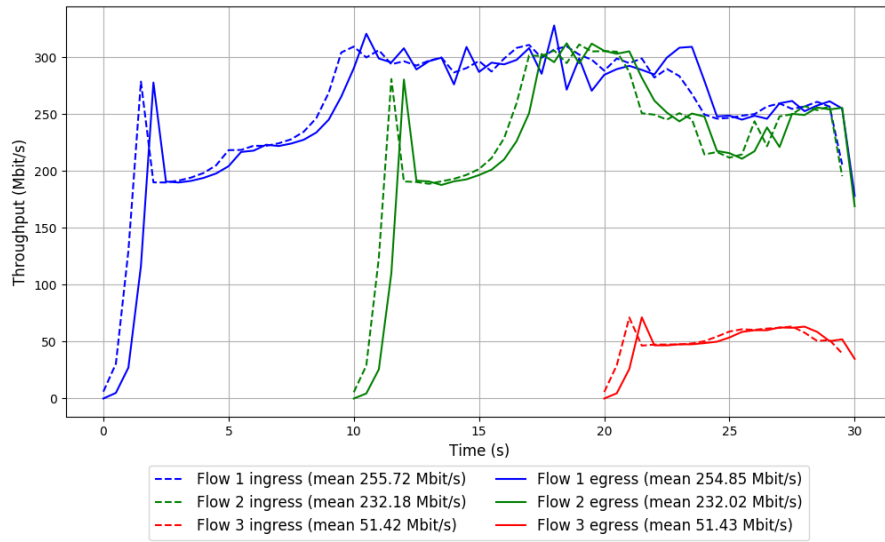


Run 3: Statistics of PCC-Expr

Start at: 2019-03-27 22:22:38  
End at: 2019-03-27 22:23:08  
Local clock offset: -0.08 ms  
Remote clock offset: -0.402 ms

```
# Below is generated by plot.py at 2019-03-28 02:05:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 425.81 Mbit/s
95th percentile per-packet one-way delay: 150.125 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 254.85 Mbit/s
95th percentile per-packet one-way delay: 162.605 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 232.02 Mbit/s
95th percentile per-packet one-way delay: 59.667 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 51.43 Mbit/s
95th percentile per-packet one-way delay: 47.820 ms
Loss rate: 0.96%
```

### Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-03-27 22:58:58  
End at: 2019-03-27 22:59:28  
Local clock offset: -0.494 ms  
Remote clock offset: -0.458 ms

# Below is generated by plot.py at 2019-03-28 02:12:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 445.23 Mbit/s  
95th percentile per-packet one-way delay: 168.232 ms  
Loss rate: 1.78%

-- Flow 1:

Average throughput: 217.98 Mbit/s  
95th percentile per-packet one-way delay: 65.020 ms  
Loss rate: 0.26%

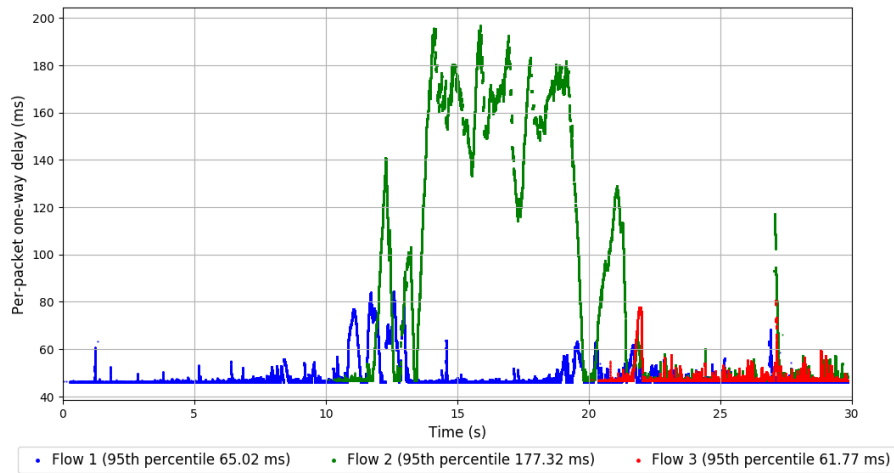
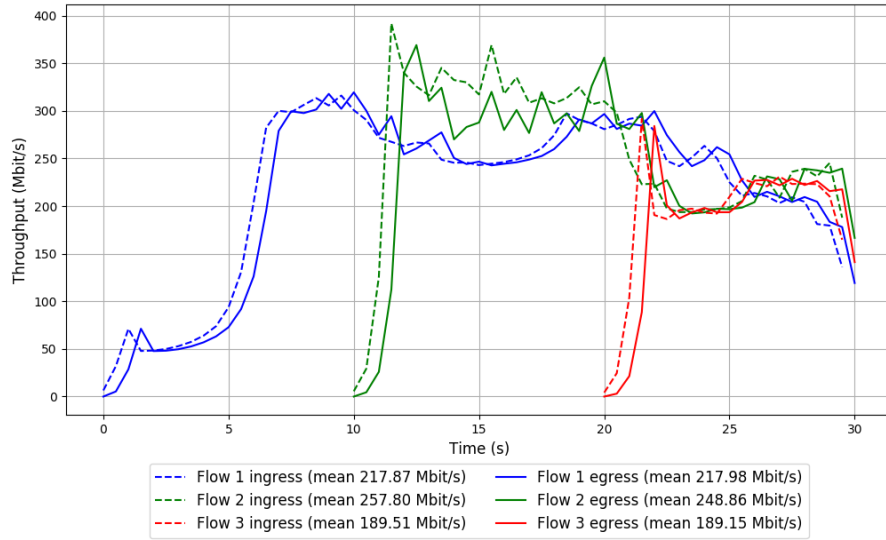
-- Flow 2:

Average throughput: 248.86 Mbit/s  
95th percentile per-packet one-way delay: 177.317 ms  
Loss rate: 3.93%

-- Flow 3:

Average throughput: 189.15 Mbit/s  
95th percentile per-packet one-way delay: 61.773 ms  
Loss rate: 1.15%

### Run 4: Report of PCC-Expr — Data Link





Run 5: Statistics of PCC-Expr

Start at: 2019-03-27 23:34:45  
End at: 2019-03-27 23:35:15  
Local clock offset: -0.18 ms  
Remote clock offset: -0.505 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 460.54 Mbit/s  
95th percentile per-packet one-way delay: 95.819 ms  
Loss rate: 0.46%

-- Flow 1:

Average throughput: 243.20 Mbit/s  
95th percentile per-packet one-way delay: 83.890 ms  
Loss rate: 0.26%

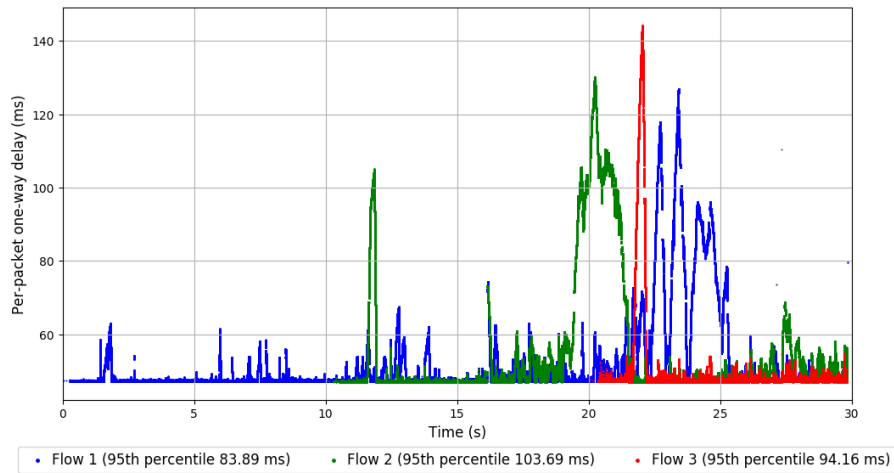
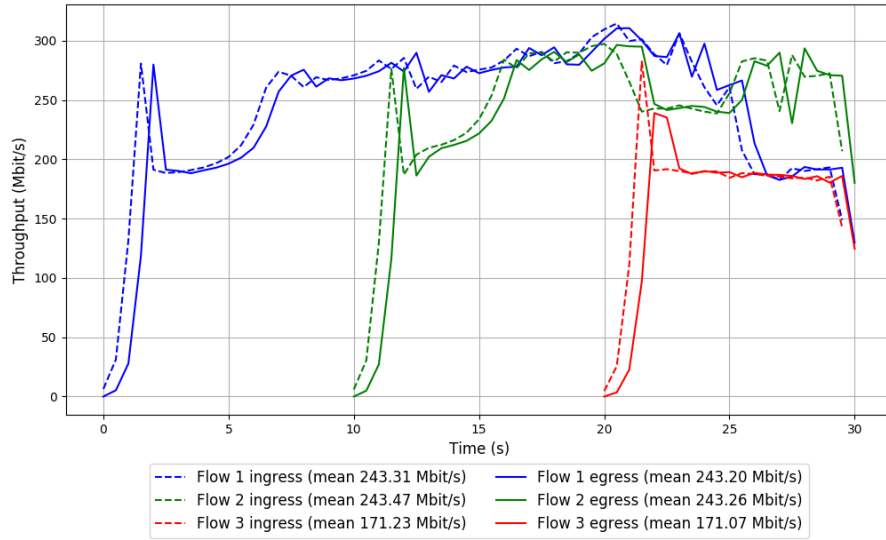
-- Flow 2:

Average throughput: 243.26 Mbit/s  
95th percentile per-packet one-way delay: 103.686 ms  
Loss rate: 0.56%

-- Flow 3:

Average throughput: 171.07 Mbit/s  
95th percentile per-packet one-way delay: 94.155 ms  
Loss rate: 1.06%

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



Run 1: Statistics of QUIC Cubic

Start at: 2019-03-27 20:44:14  
End at: 2019-03-27 20:44:44  
Local clock offset: -0.107 ms  
Remote clock offset: -0.276 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 121.07 Mbit/s  
95th percentile per-packet one-way delay: 47.333 ms  
Loss rate: 0.56%

-- Flow 1:

Average throughput: 54.61 Mbit/s  
95th percentile per-packet one-way delay: 47.233 ms  
Loss rate: 0.41%

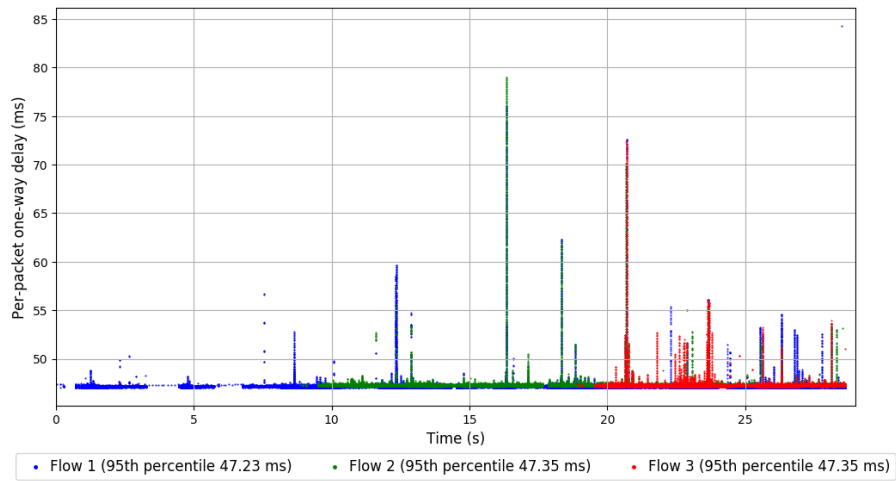
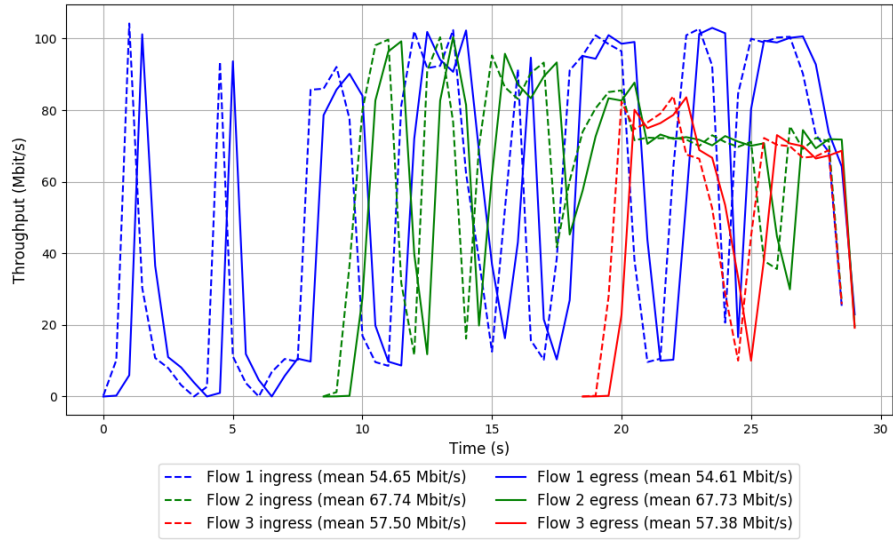
-- Flow 2:

Average throughput: 67.73 Mbit/s  
95th percentile per-packet one-way delay: 47.355 ms  
Loss rate: 0.49%

-- Flow 3:

Average throughput: 57.38 Mbit/s  
95th percentile per-packet one-way delay: 47.353 ms  
Loss rate: 1.14%

# Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-03-27 21:19:42

End at: 2019-03-27 21:20:12

Local clock offset: -0.18 ms

Remote clock offset: -0.28 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 102.34 Mbit/s

95th percentile per-packet one-way delay: 47.379 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 55.36 Mbit/s

95th percentile per-packet one-way delay: 47.396 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 62.55 Mbit/s

95th percentile per-packet one-way delay: 47.340 ms

Loss rate: 0.55%

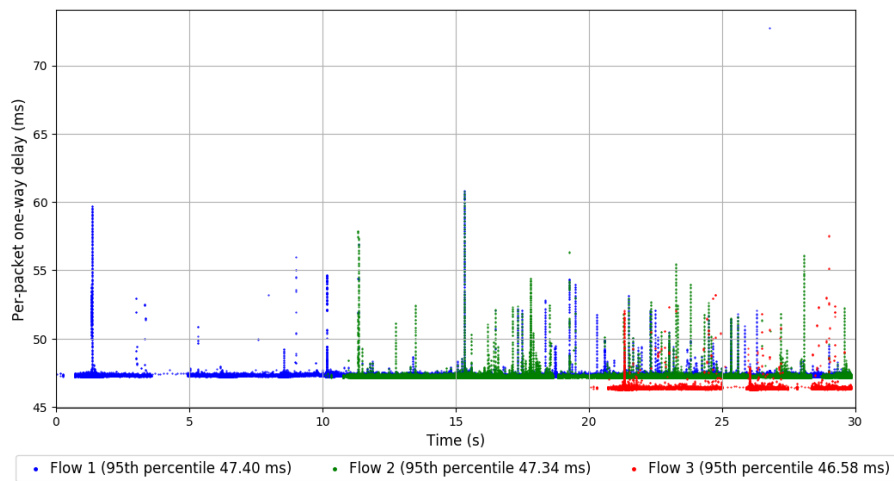
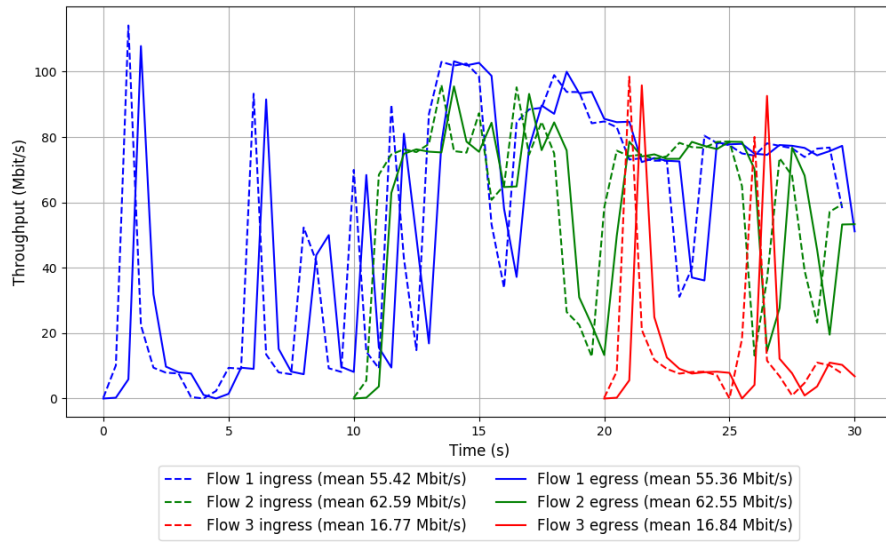
-- Flow 3:

Average throughput: 16.84 Mbit/s

95th percentile per-packet one-way delay: 46.578 ms

Loss rate: 0.54%

## Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-03-27 21:55:18  
End at: 2019-03-27 21:55:48  
Local clock offset: -0.033 ms  
Remote clock offset: -0.347 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 99.75 Mbit/s  
95th percentile per-packet one-way delay: 47.349 ms  
Loss rate: 0.71%

-- Flow 1:

Average throughput: 52.50 Mbit/s  
95th percentile per-packet one-way delay: 47.355 ms  
Loss rate: 0.47%

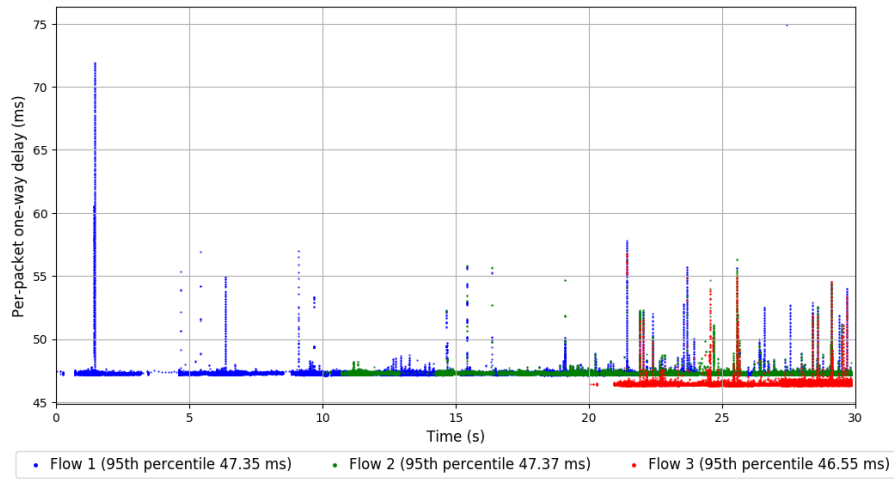
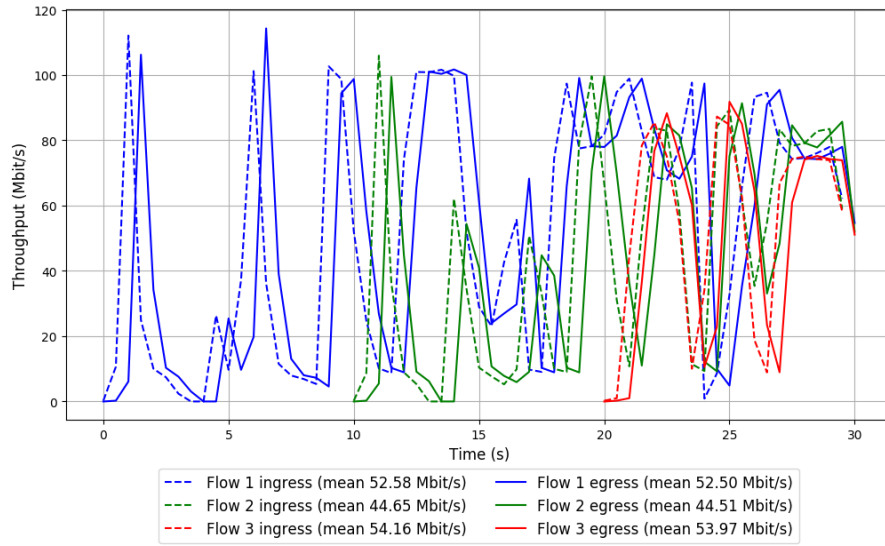
-- Flow 2:

Average throughput: 44.51 Mbit/s  
95th percentile per-packet one-way delay: 47.367 ms  
Loss rate: 0.78%

-- Flow 3:

Average throughput: 53.97 Mbit/s  
95th percentile per-packet one-way delay: 46.555 ms  
Loss rate: 1.31%

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





Run 4: Statistics of QUIC Cubic

Start at: 2019-03-27 22:30:49  
End at: 2019-03-27 22:31:19  
Local clock offset: -0.089 ms  
Remote clock offset: -0.412 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 121.31 Mbit/s  
95th percentile per-packet one-way delay: 47.380 ms  
Loss rate: 0.51%

-- Flow 1:

Average throughput: 75.37 Mbit/s  
95th percentile per-packet one-way delay: 47.389 ms  
Loss rate: 0.27%

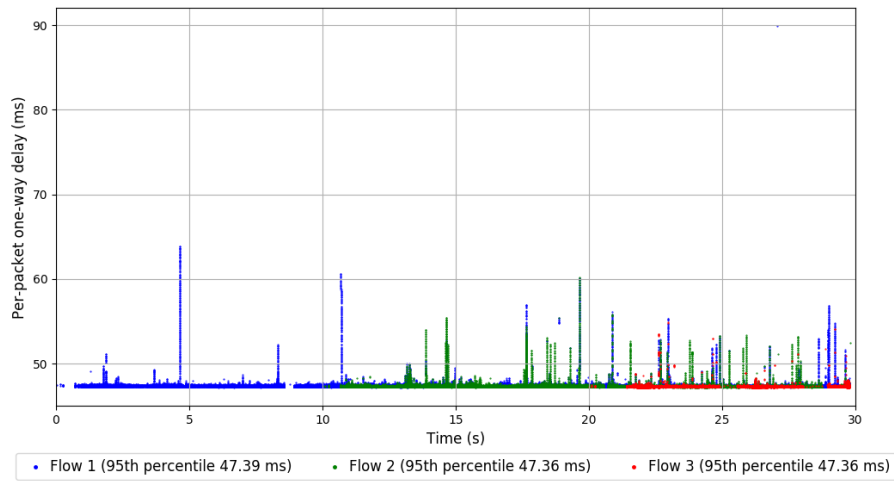
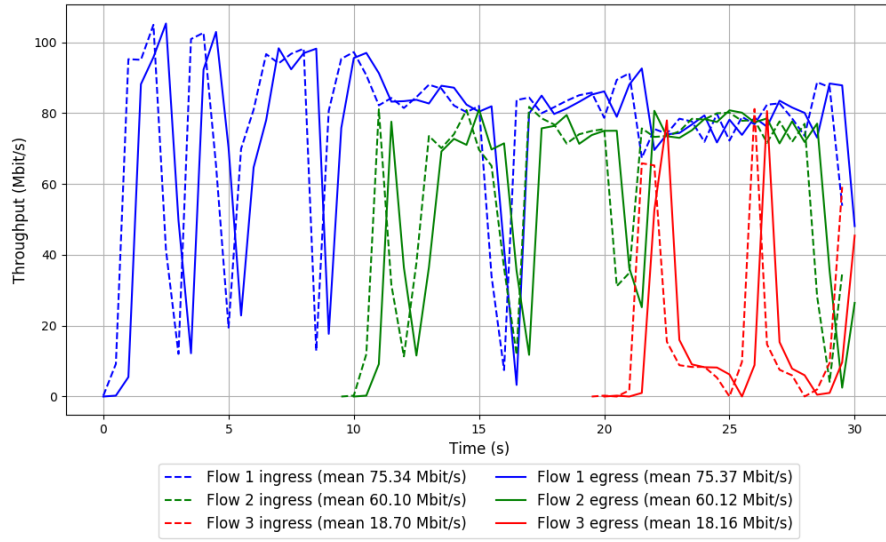
-- Flow 2:

Average throughput: 60.12 Mbit/s  
95th percentile per-packet one-way delay: 47.358 ms  
Loss rate: 0.42%

-- Flow 3:

Average throughput: 18.16 Mbit/s  
95th percentile per-packet one-way delay: 47.357 ms  
Loss rate: 3.94%

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



Run 5: Statistics of QUIC Cubic

Start at: 2019-03-27 23:07:06  
End at: 2019-03-27 23:07:36  
Local clock offset: -0.085 ms  
Remote clock offset: -0.462 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 117.25 Mbit/s  
95th percentile per-packet one-way delay: 47.366 ms  
Loss rate: 0.44%

-- Flow 1:

Average throughput: 68.57 Mbit/s  
95th percentile per-packet one-way delay: 47.357 ms  
Loss rate: 0.35%

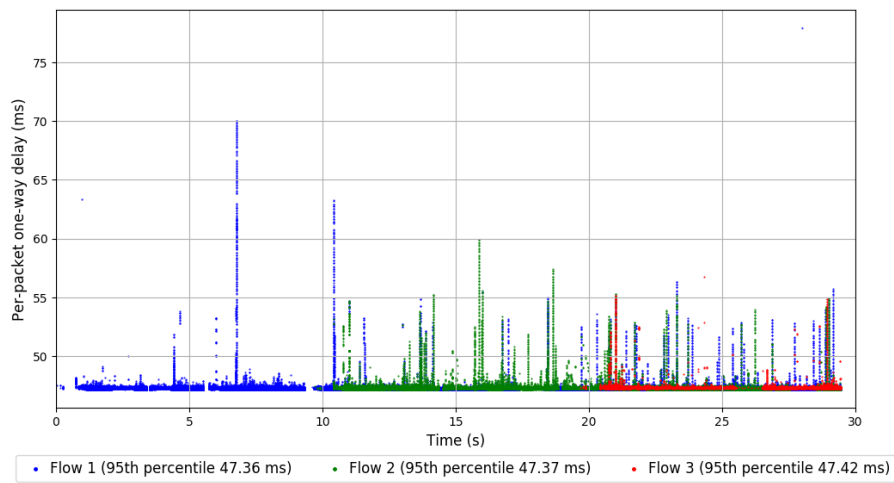
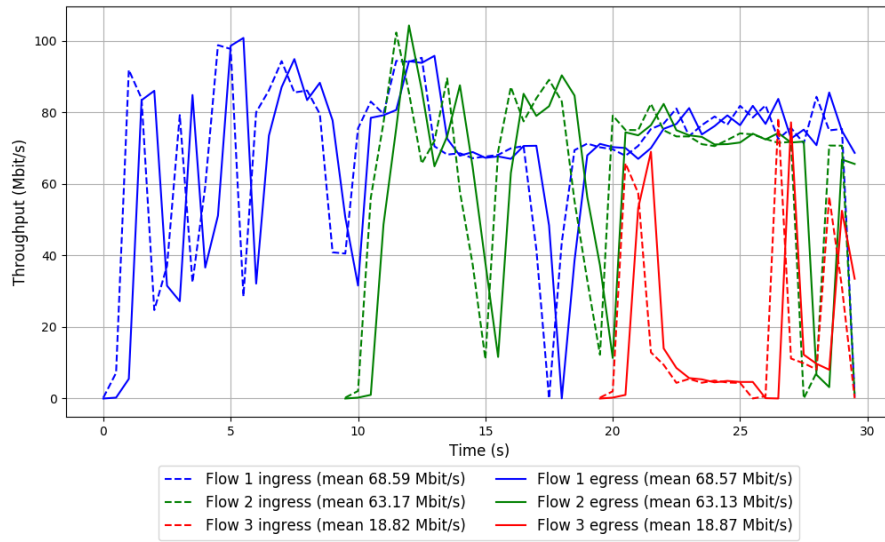
-- Flow 2:

Average throughput: 63.13 Mbit/s  
95th percentile per-packet one-way delay: 47.369 ms  
Loss rate: 0.54%

-- Flow 3:

Average throughput: 18.87 Mbit/s  
95th percentile per-packet one-way delay: 47.424 ms  
Loss rate: 0.68%

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



Run 1: Statistics of SCReAM

Start at: 2019-03-27 21:03:12  
End at: 2019-03-27 21:03:42  
Local clock offset: -0.086 ms  
Remote clock offset: -0.281 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 47.569 ms  
Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 47.554 ms  
Loss rate: 0.26%

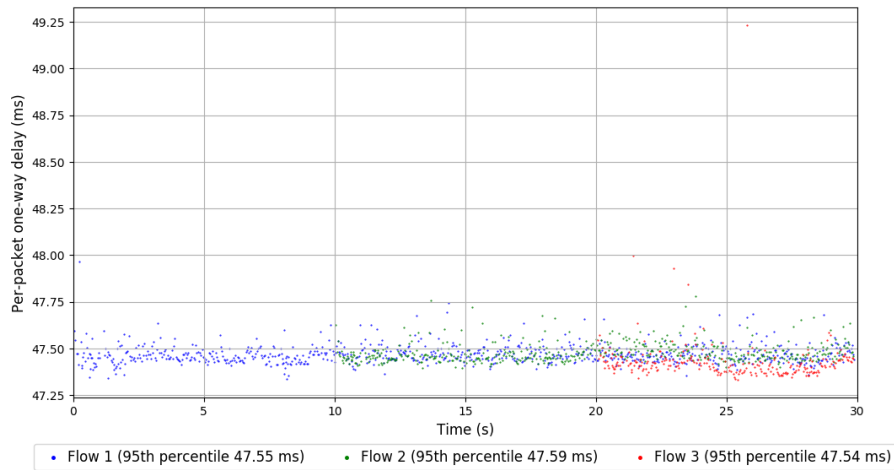
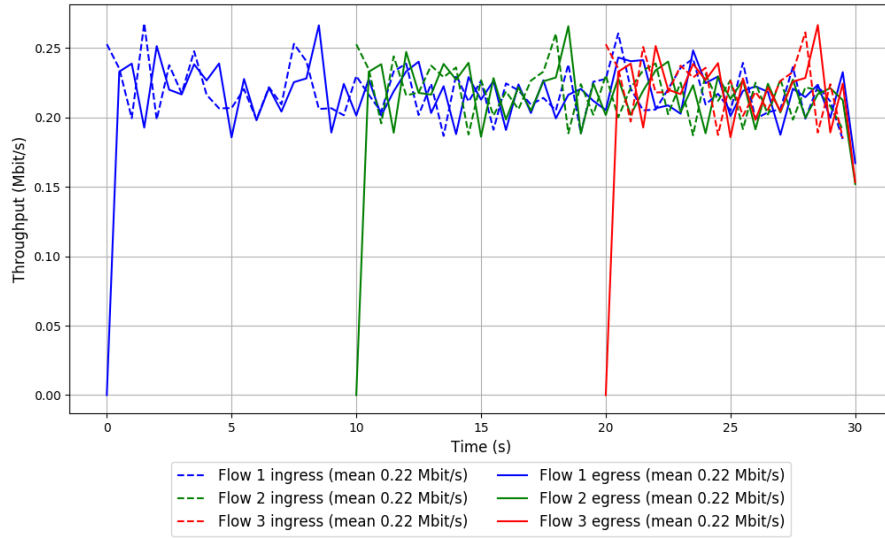
-- Flow 2:

Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 47.587 ms  
Loss rate: 0.62%

-- Flow 3:

Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 47.540 ms  
Loss rate: 1.09%

# Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-03-27 21:38:40

End at: 2019-03-27 21:39:10

Local clock offset: -0.189 ms

Remote clock offset: -0.33 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 47.350 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 46.684 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 46.621 ms

Loss rate: 0.62%

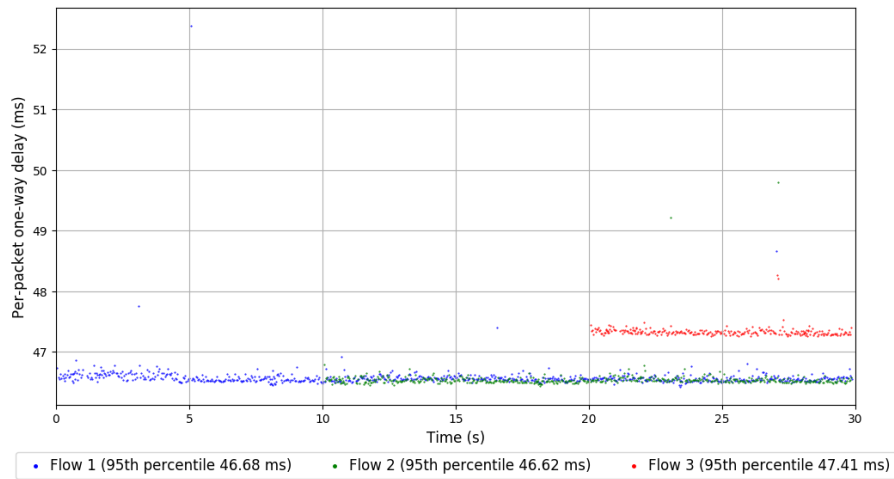
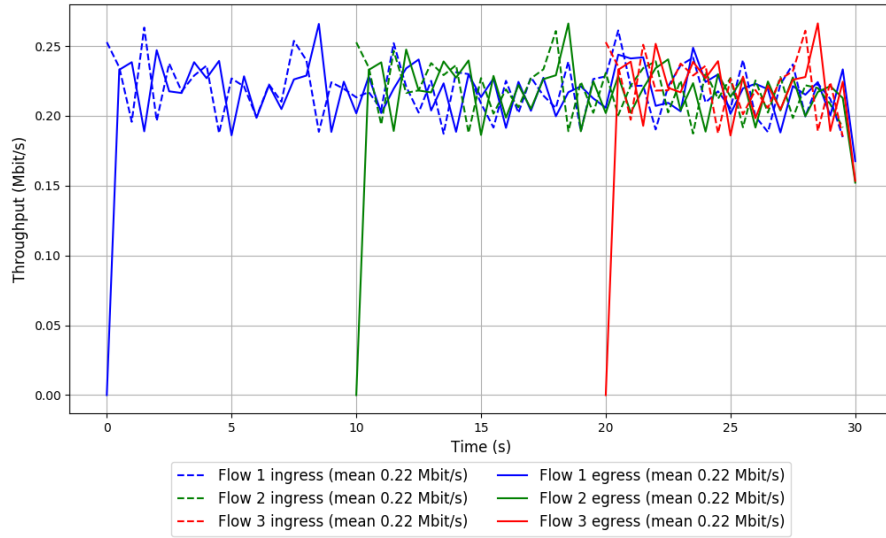
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 47.413 ms

Loss rate: 1.09%

## Run 2: Report of SCReAM — Data Link





Run 3: Statistics of SCReAM

Start at: 2019-03-27 22:14:18  
End at: 2019-03-27 22:14:48  
Local clock offset: -0.063 ms  
Remote clock offset: -0.388 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 47.561 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 46.789 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 47.605 ms

Loss rate: 0.61%

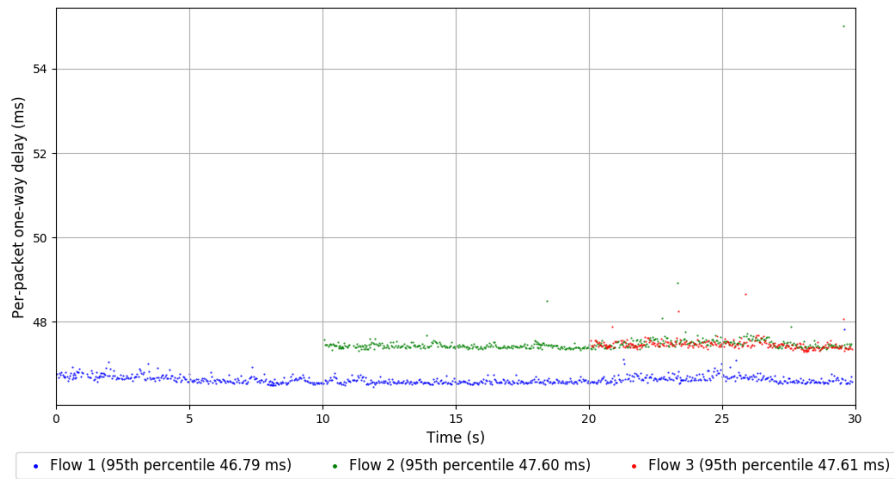
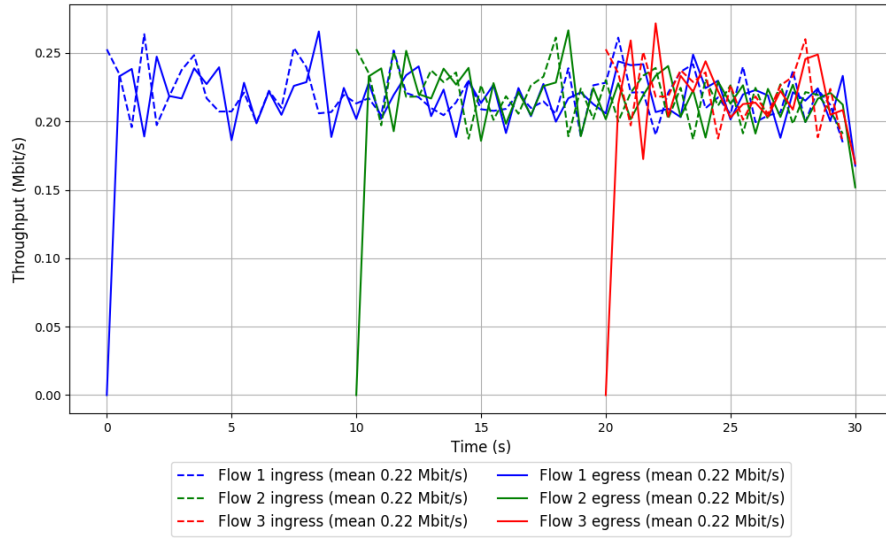
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 47.610 ms

Loss rate: 1.09%

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



Run 4: Statistics of SCReAM

Start at: 2019-03-27 22:50:11  
End at: 2019-03-27 22:50:41  
Local clock offset: 0.264 ms  
Remote clock offset: -0.418 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 47.889 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 47.901 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 47.811 ms

Loss rate: 0.61%

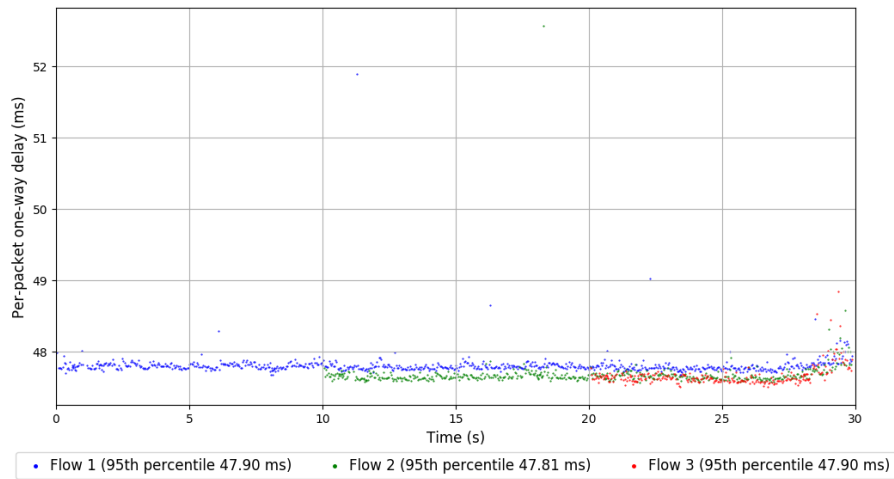
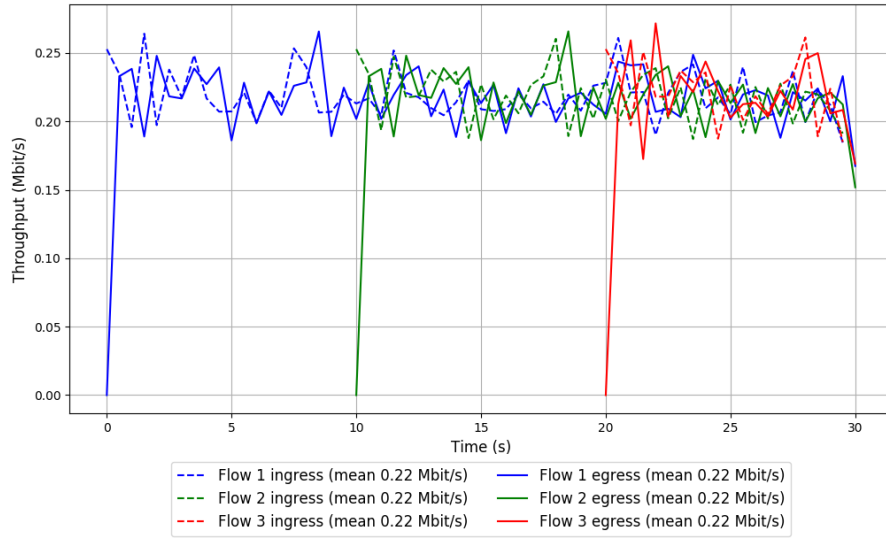
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 47.895 ms

Loss rate: 1.09%

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



Run 5: Statistics of SCReAM

Start at: 2019-03-27 23:26:16  
End at: 2019-03-27 23:26:46  
Local clock offset: -0.146 ms  
Remote clock offset: -0.486 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 47.620 ms  
Loss rate: 0.52%

-- Flow 1:

Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 47.646 ms  
Loss rate: 0.26%

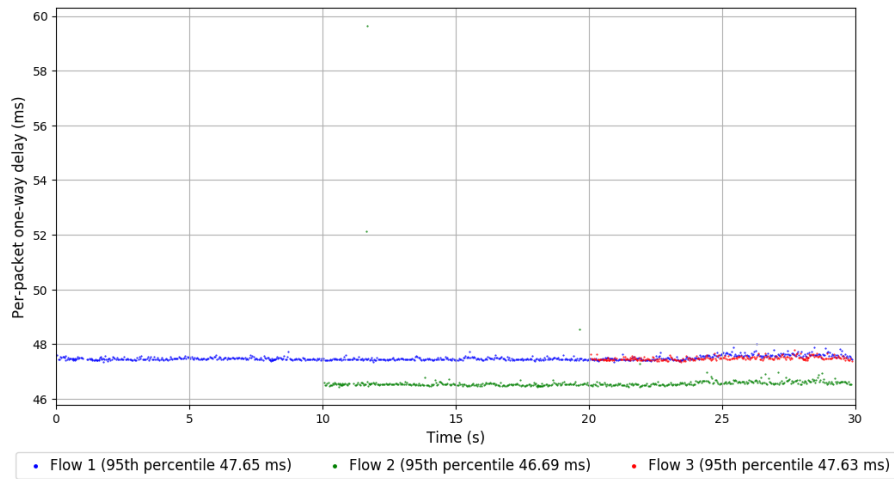
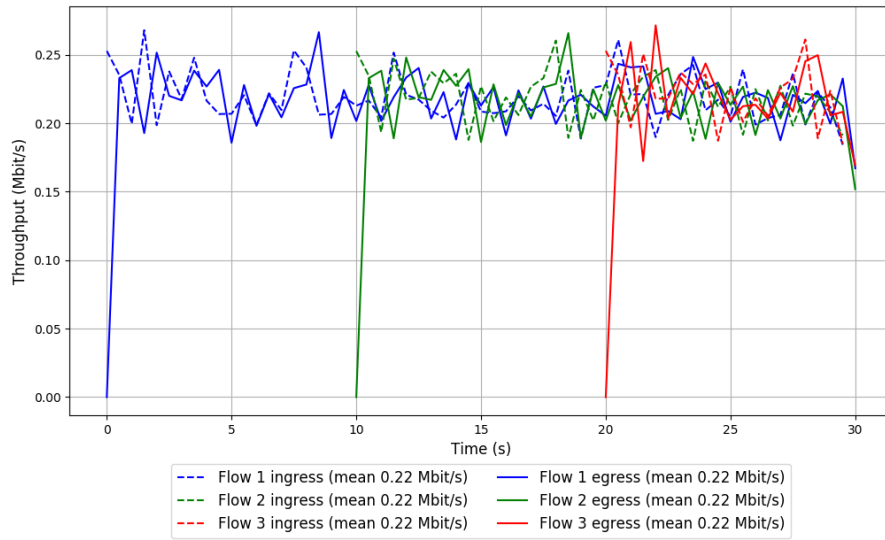
-- Flow 2:

Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 46.694 ms  
Loss rate: 0.61%

-- Flow 3:

Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 47.628 ms  
Loss rate: 1.09%

### Run 5: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-03-27 21:13:29  
End at: 2019-03-27 21:13:59  
Local clock offset: -0.156 ms  
Remote clock offset: -0.277 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 18.84 Mbit/s  
95th percentile per-packet one-way delay: 47.938 ms  
Loss rate: 0.49%

-- Flow 1:

Average throughput: 9.40 Mbit/s  
95th percentile per-packet one-way delay: 47.938 ms  
Loss rate: 0.30%

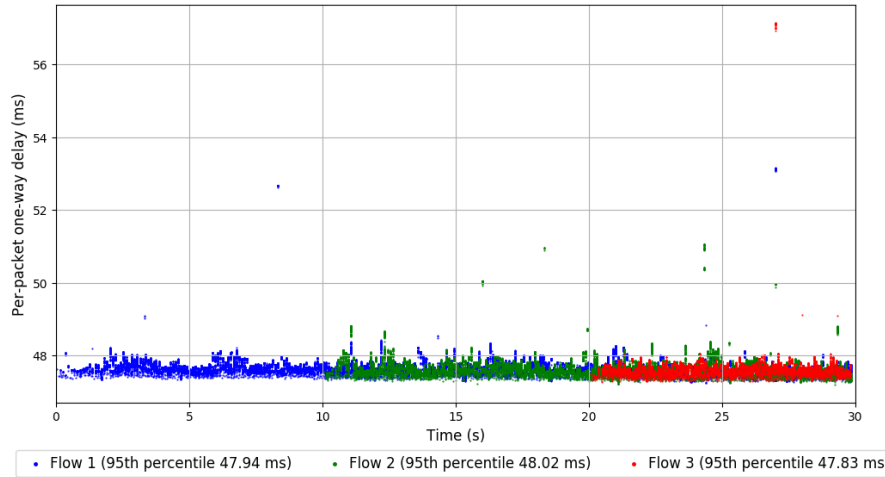
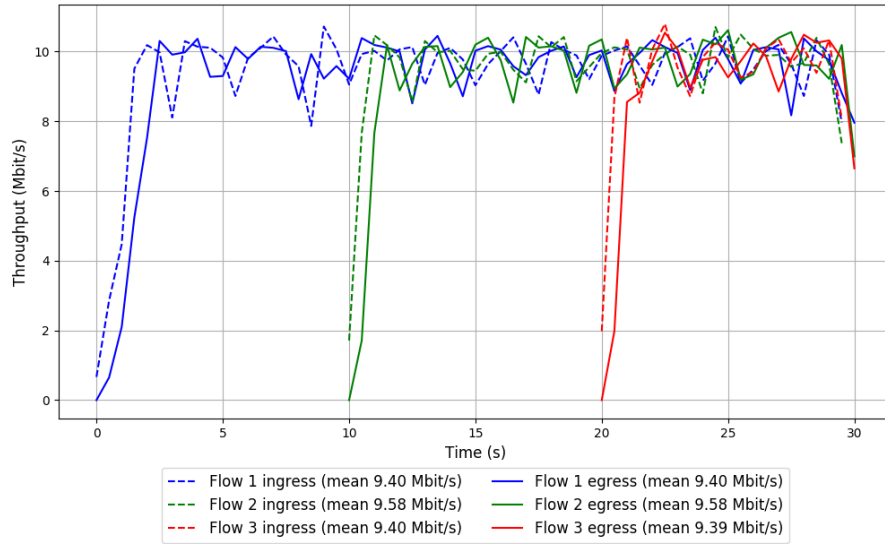
-- Flow 2:

Average throughput: 9.58 Mbit/s  
95th percentile per-packet one-way delay: 48.024 ms  
Loss rate: 0.49%

-- Flow 3:

Average throughput: 9.39 Mbit/s  
95th percentile per-packet one-way delay: 47.829 ms  
Loss rate: 1.09%

Run 1: Report of Sprout — Data Link





Run 2: Statistics of Sprout

Start at: 2019-03-27 21:49:08  
End at: 2019-03-27 21:49:38  
Local clock offset: -0.071 ms  
Remote clock offset: -0.321 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 18.95 Mbit/s  
95th percentile per-packet one-way delay: 47.884 ms  
Loss rate: 0.43%

-- Flow 1:

Average throughput: 9.55 Mbit/s  
95th percentile per-packet one-way delay: 47.886 ms  
Loss rate: 0.39%

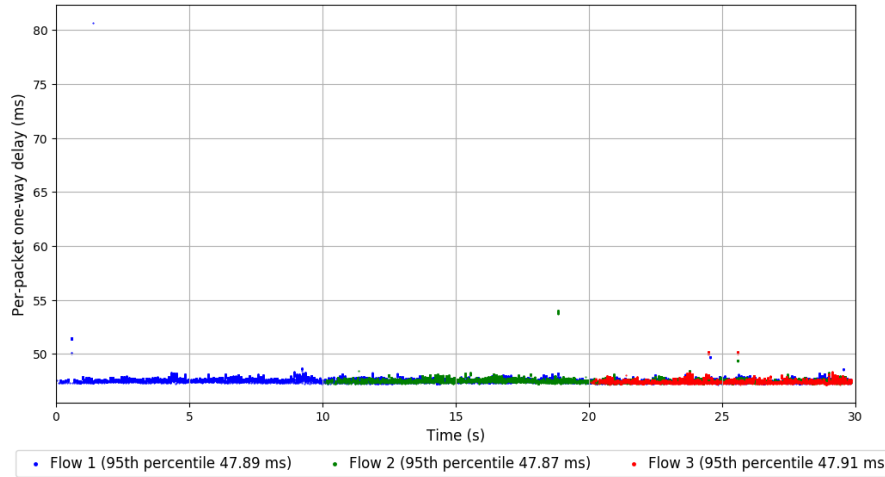
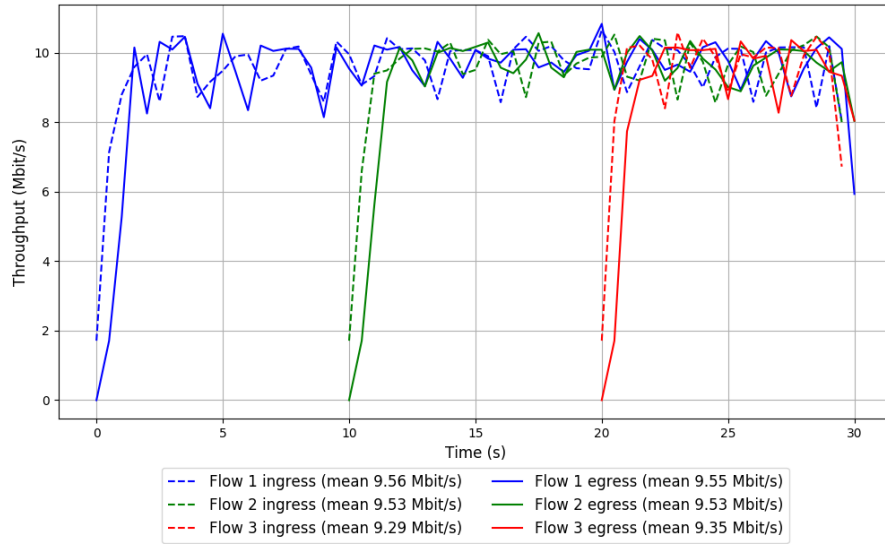
-- Flow 2:

Average throughput: 9.53 Mbit/s  
95th percentile per-packet one-way delay: 47.872 ms  
Loss rate: 0.51%

-- Flow 3:

Average throughput: 9.35 Mbit/s  
95th percentile per-packet one-way delay: 47.909 ms  
Loss rate: 0.40%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-03-27 22:24:31  
End at: 2019-03-27 22:25:01  
Local clock offset: -0.109 ms  
Remote clock offset: -0.368 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 18.60 Mbit/s  
95th percentile per-packet one-way delay: 47.861 ms  
Loss rate: 0.54%

-- Flow 1:

Average throughput: 9.46 Mbit/s  
95th percentile per-packet one-way delay: 47.219 ms  
Loss rate: 0.36%

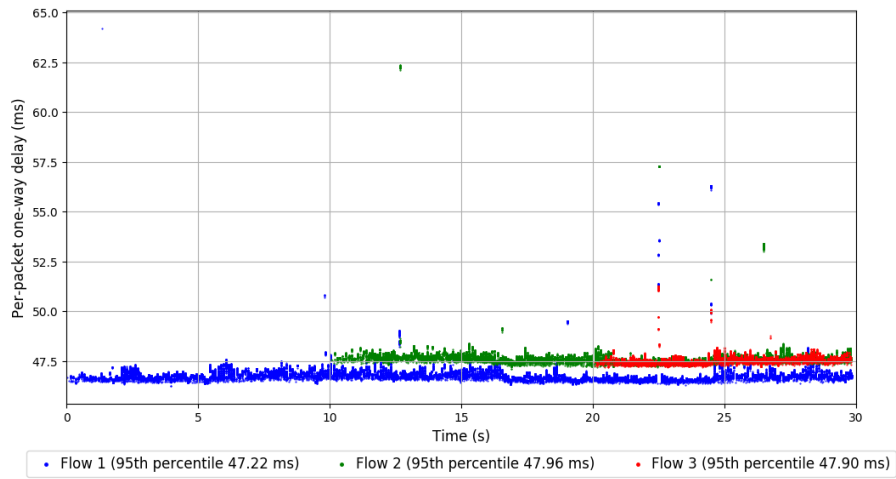
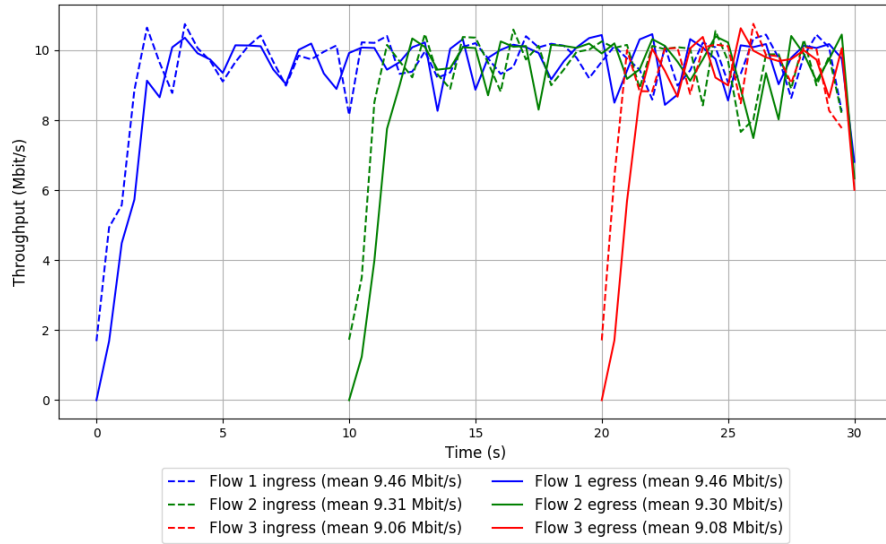
-- Flow 2:

Average throughput: 9.30 Mbit/s  
95th percentile per-packet one-way delay: 47.958 ms  
Loss rate: 0.54%

-- Flow 3:

Average throughput: 9.08 Mbit/s  
95th percentile per-packet one-way delay: 47.900 ms  
Loss rate: 1.12%

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



Run 4: Statistics of Sprout

Start at: 2019-03-27 23:00:50  
End at: 2019-03-27 23:01:20  
Local clock offset: -0.102 ms  
Remote clock offset: -0.422 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 18.57 Mbit/s  
95th percentile per-packet one-way delay: 47.946 ms  
Loss rate: 0.56%

-- Flow 1:

Average throughput: 9.45 Mbit/s  
95th percentile per-packet one-way delay: 48.009 ms  
Loss rate: 0.35%

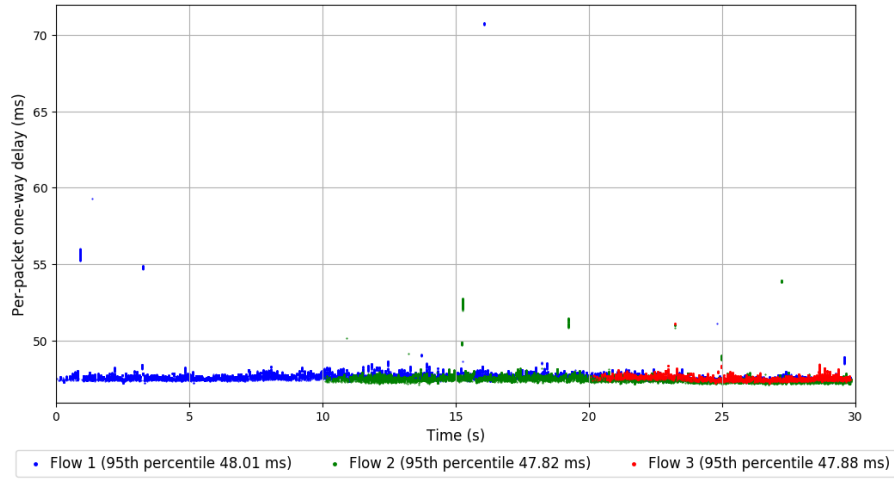
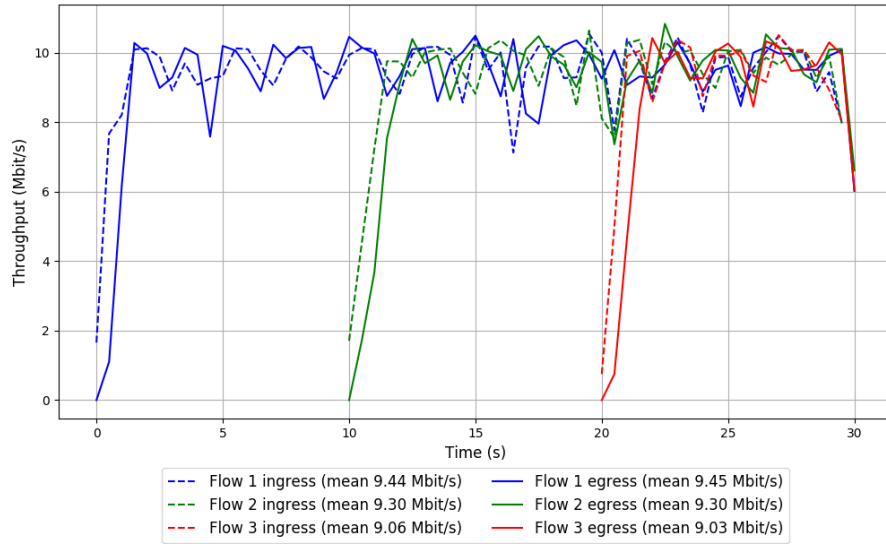
-- Flow 2:

Average throughput: 9.30 Mbit/s  
95th percentile per-packet one-way delay: 47.822 ms  
Loss rate: 0.54%

-- Flow 3:

Average throughput: 9.03 Mbit/s  
95th percentile per-packet one-way delay: 47.883 ms  
Loss rate: 1.27%

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



Run 5: Statistics of Sprout

Start at: 2019-03-27 23:36:41  
End at: 2019-03-27 23:37:11  
Local clock offset: -0.163 ms  
Remote clock offset: -0.493 ms

# Below is generated by plot.py at 2019-03-28 02:13:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 18.84 Mbit/s  
95th percentile per-packet one-way delay: 48.043 ms  
Loss rate: 0.44%

-- Flow 1:

Average throughput: 9.66 Mbit/s  
95th percentile per-packet one-way delay: 48.142 ms  
Loss rate: 0.35%

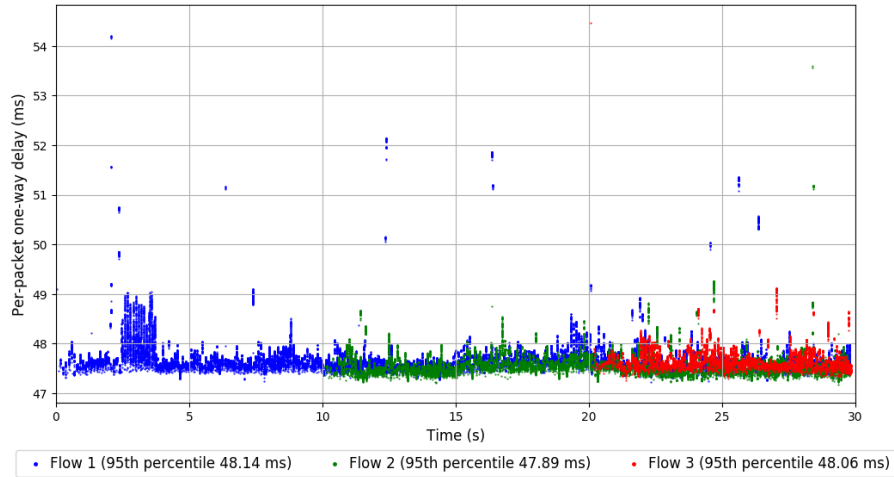
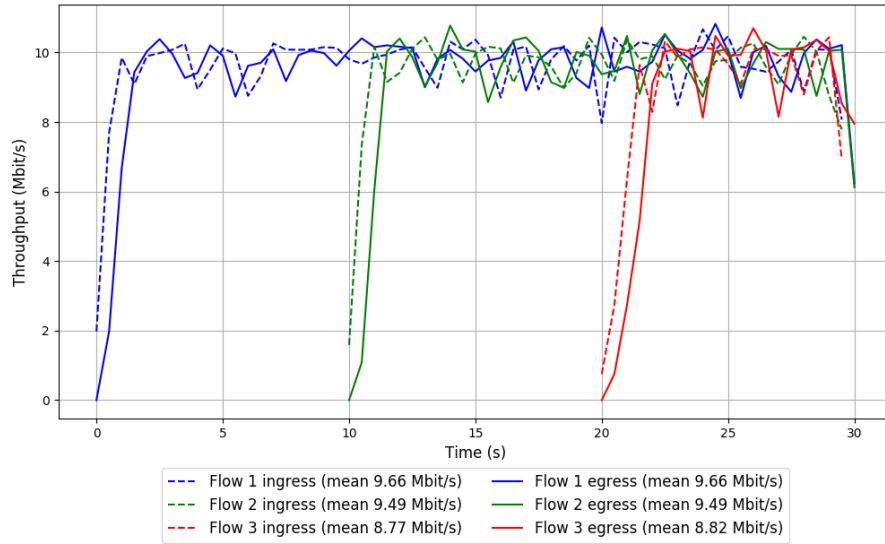
-- Flow 2:

Average throughput: 9.49 Mbit/s  
95th percentile per-packet one-way delay: 47.887 ms  
Loss rate: 0.54%

-- Flow 3:

Average throughput: 8.82 Mbit/s  
95th percentile per-packet one-way delay: 48.065 ms  
Loss rate: 0.51%

Run 5: Report of Sprout — Data Link





Run 1: Statistics of TaoVA-100x

Start at: 2019-03-27 20:47:23  
End at: 2019-03-27 20:47:53  
Local clock offset: -0.081 ms  
Remote clock offset: -0.244 ms

# Below is generated by plot.py at 2019-03-28 02:20:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 452.77 Mbit/s  
95th percentile per-packet one-way delay: 55.609 ms  
Loss rate: 0.44%

-- Flow 1:

Average throughput: 238.56 Mbit/s  
95th percentile per-packet one-way delay: 48.006 ms  
Loss rate: 0.31%

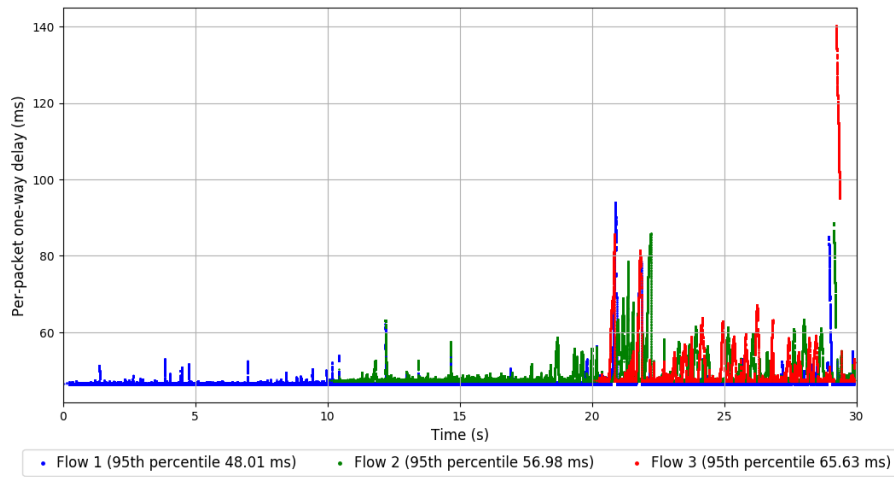
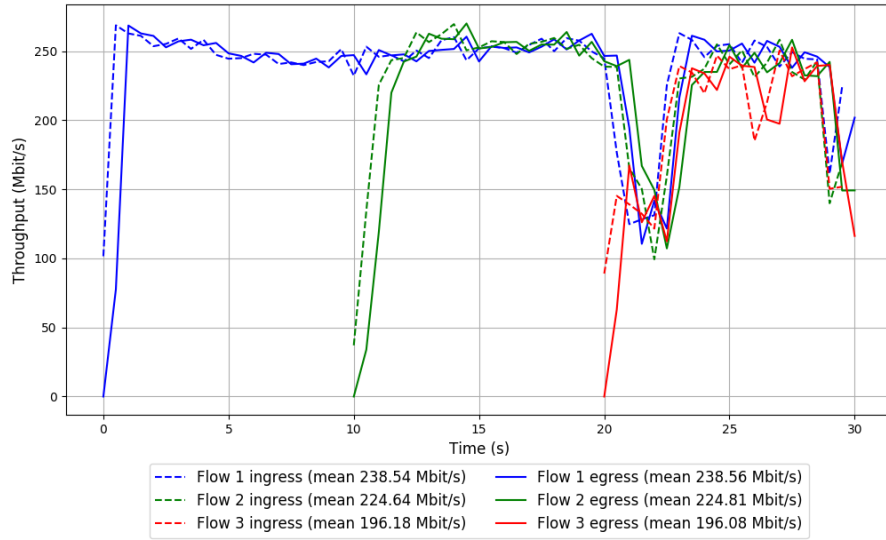
-- Flow 2:

Average throughput: 224.81 Mbit/s  
95th percentile per-packet one-way delay: 56.982 ms  
Loss rate: 0.41%

-- Flow 3:

Average throughput: 196.08 Mbit/s  
95th percentile per-packet one-way delay: 65.631 ms  
Loss rate: 1.02%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-03-27 21:22:47

End at: 2019-03-27 21:23:17

Local clock offset: -0.184 ms

Remote clock offset: -0.33 ms

# Below is generated by plot.py at 2019-03-28 02:22:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 481.86 Mbit/s

95th percentile per-packet one-way delay: 51.765 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 238.05 Mbit/s

95th percentile per-packet one-way delay: 52.342 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 246.99 Mbit/s

95th percentile per-packet one-way delay: 50.770 ms

Loss rate: 0.47%

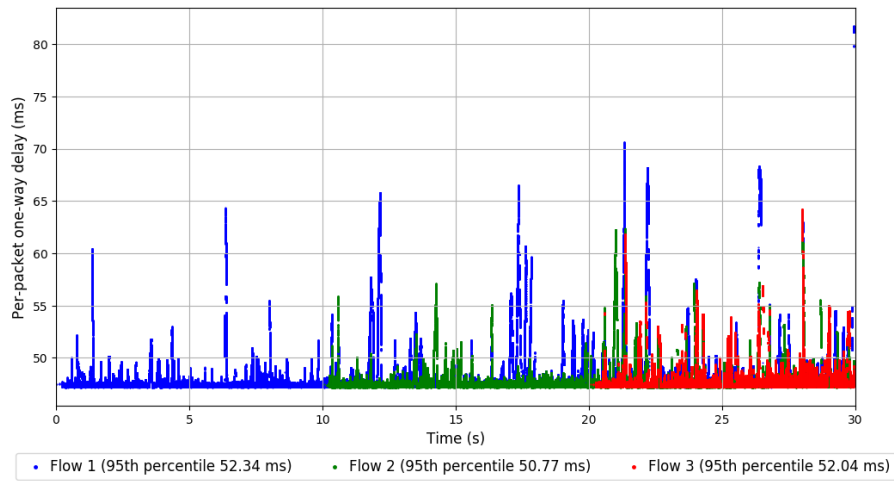
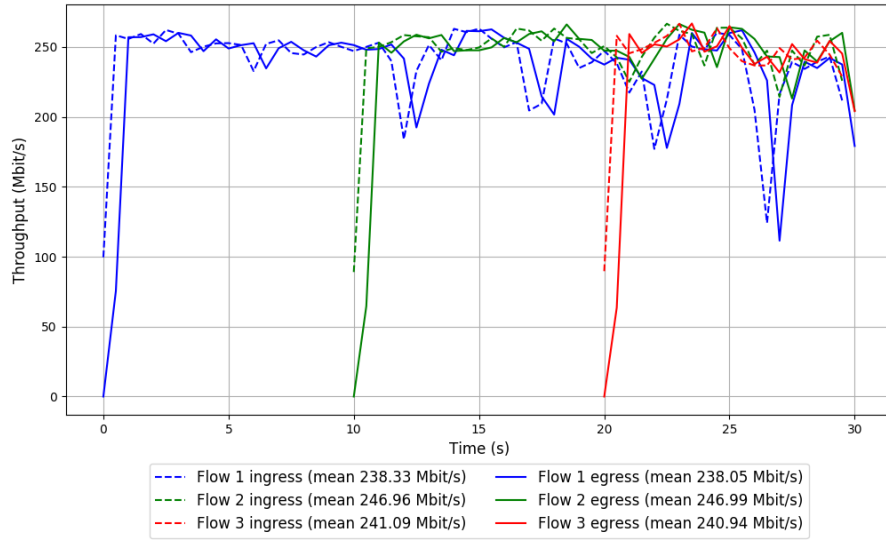
-- Flow 3:

Average throughput: 240.94 Mbit/s

95th percentile per-packet one-way delay: 52.038 ms

Loss rate: 1.02%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-03-27 21:58:25  
End at: 2019-03-27 21:58:55  
Local clock offset: -0.034 ms  
Remote clock offset: -0.367 ms

# Below is generated by plot.py at 2019-03-28 02:22:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 473.84 Mbit/s  
95th percentile per-packet one-way delay: 51.292 ms  
Loss rate: 0.52%

-- Flow 1:

Average throughput: 239.68 Mbit/s  
95th percentile per-packet one-way delay: 49.441 ms  
Loss rate: 0.36%

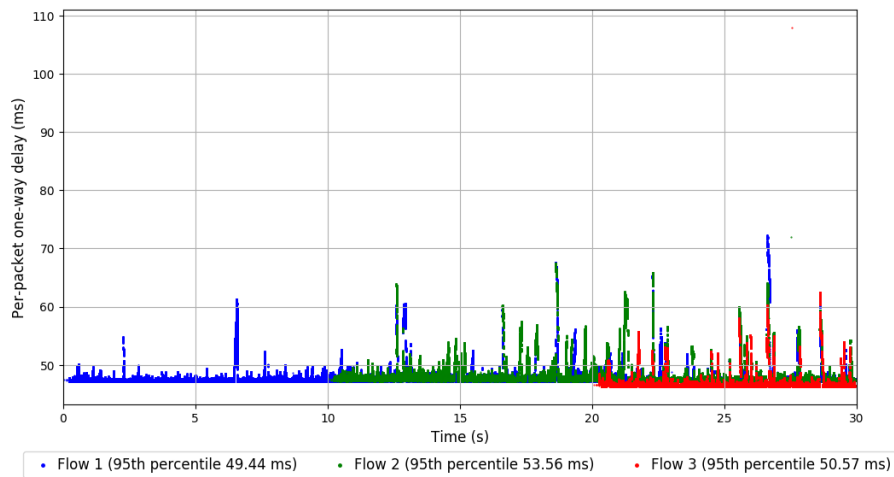
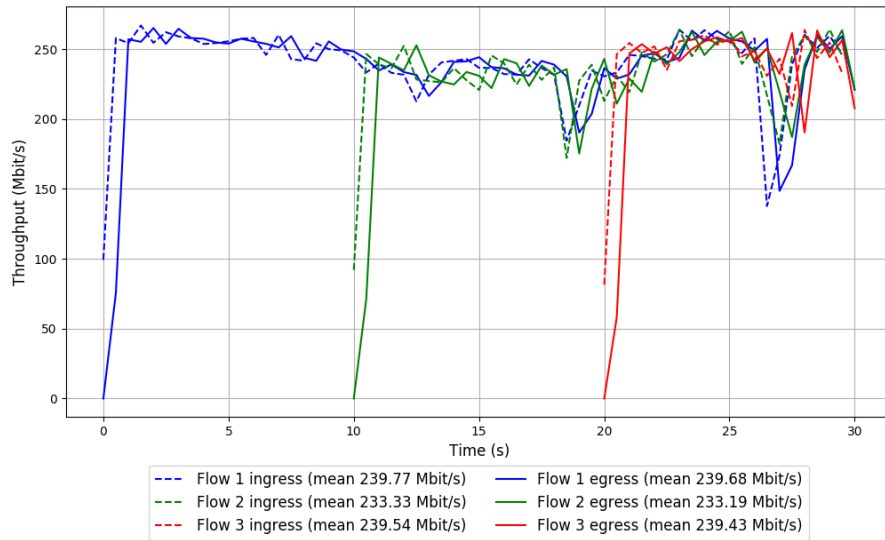
-- Flow 2:

Average throughput: 233.19 Mbit/s  
95th percentile per-packet one-way delay: 53.558 ms  
Loss rate: 0.54%

-- Flow 3:

Average throughput: 239.43 Mbit/s  
95th percentile per-packet one-way delay: 50.572 ms  
Loss rate: 1.00%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-03-27 22:33:57  
End at: 2019-03-27 22:34:27  
Local clock offset: -0.088 ms  
Remote clock offset: -0.396 ms

# Below is generated by plot.py at 2019-03-28 02:22:43

# Datalink statistics

-- Total of 3 flows:

Average throughput: 486.35 Mbit/s  
95th percentile per-packet one-way delay: 49.483 ms  
Loss rate: 0.49%

-- Flow 1:

Average throughput: 243.76 Mbit/s  
95th percentile per-packet one-way delay: 49.913 ms  
Loss rate: 0.31%

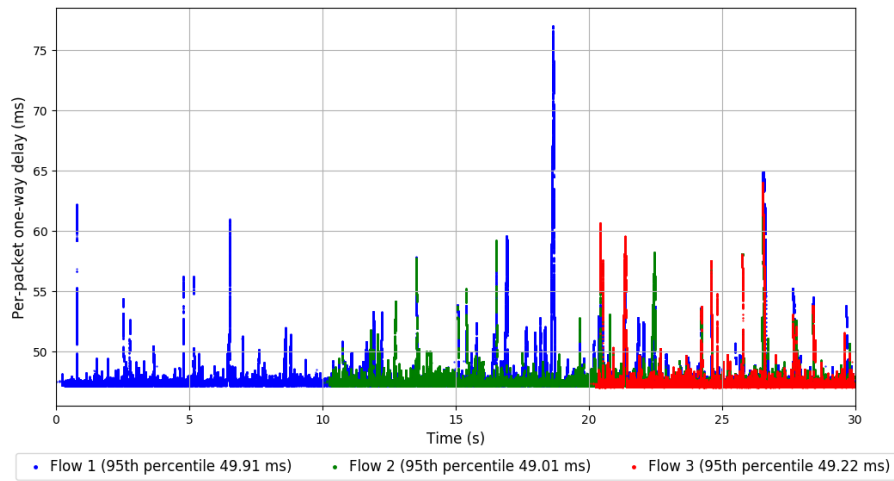
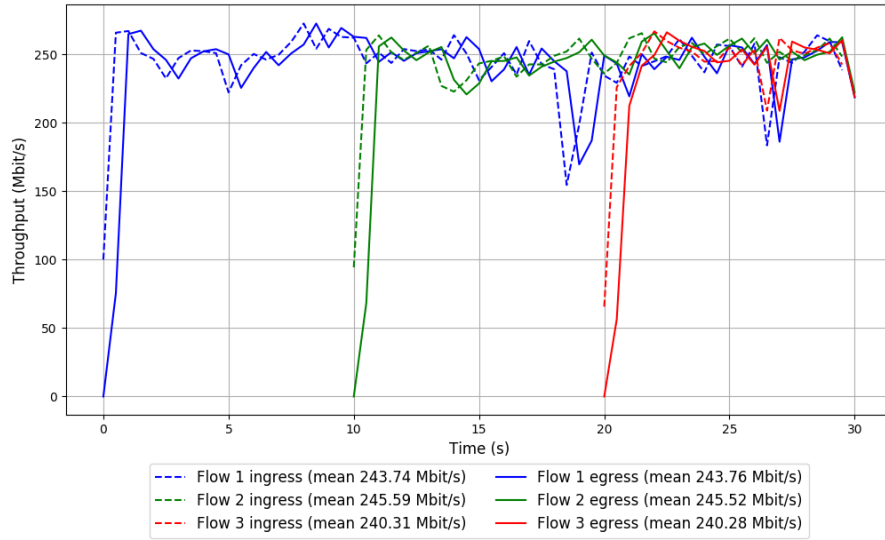
-- Flow 2:

Average throughput: 245.52 Mbit/s  
95th percentile per-packet one-way delay: 49.005 ms  
Loss rate: 0.51%

-- Flow 3:

Average throughput: 240.28 Mbit/s  
95th percentile per-packet one-way delay: 49.222 ms  
Loss rate: 0.97%

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





Run 5: Statistics of TaoVA-100x

Start at: 2019-03-27 23:10:11  
End at: 2019-03-27 23:10:42  
Local clock offset: 0.286 ms  
Remote clock offset: -0.483 ms

# Below is generated by plot.py at 2019-03-28 02:22:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 486.94 Mbit/s  
95th percentile per-packet one-way delay: 49.153 ms  
Loss rate: 0.38%

-- Flow 1:

Average throughput: 250.04 Mbit/s  
95th percentile per-packet one-way delay: 48.769 ms  
Loss rate: 0.29%

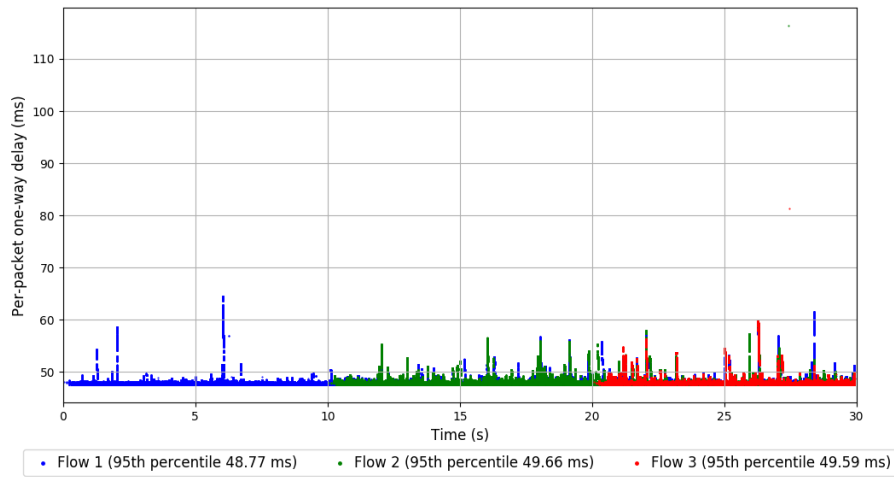
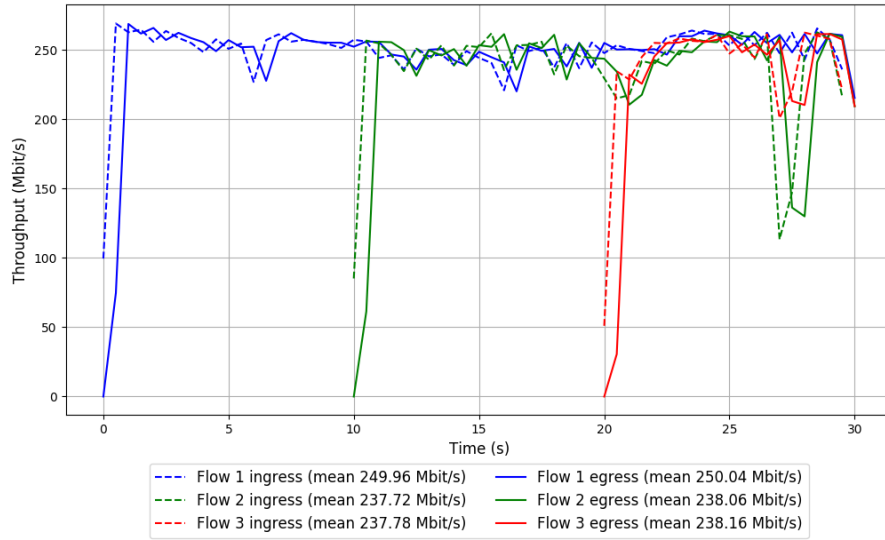
-- Flow 2:

Average throughput: 238.06 Mbit/s  
95th percentile per-packet one-way delay: 49.665 ms  
Loss rate: 0.33%

-- Flow 3:

Average throughput: 238.16 Mbit/s  
95th percentile per-packet one-way delay: 49.589 ms  
Loss rate: 0.79%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-03-27 20:55:00  
End at: 2019-03-27 20:55:30  
Local clock offset: -0.107 ms  
Remote clock offset: -0.245 ms

# Below is generated by plot.py at 2019-03-28 02:22:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 583.81 Mbit/s  
95th percentile per-packet one-way delay: 67.434 ms  
Loss rate: 0.46%

-- Flow 1:

Average throughput: 281.33 Mbit/s  
95th percentile per-packet one-way delay: 46.900 ms  
Loss rate: 0.30%

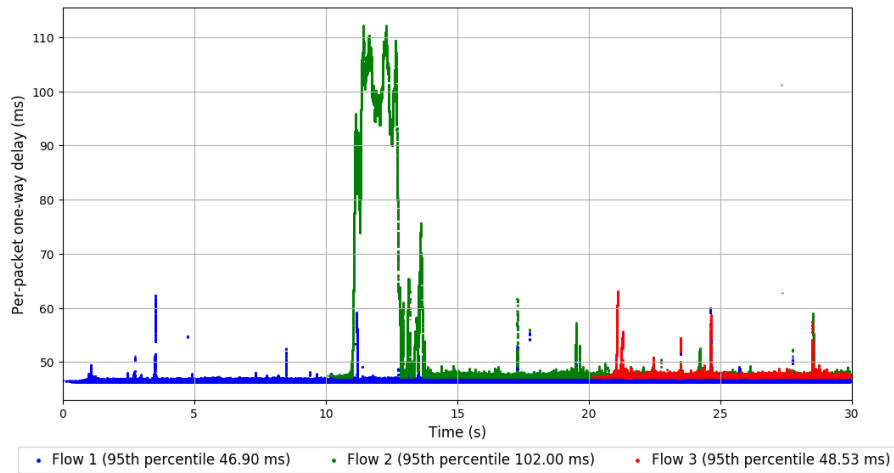
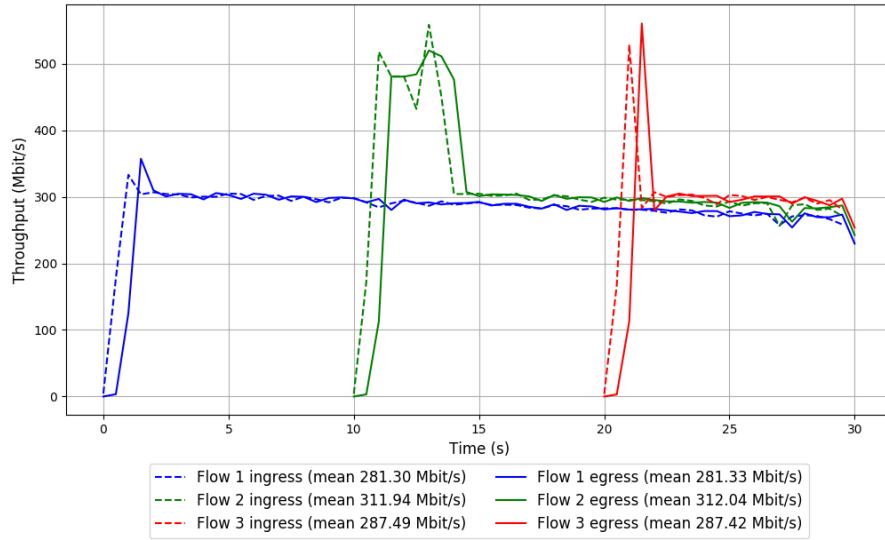
-- Flow 2:

Average throughput: 312.04 Mbit/s  
95th percentile per-packet one-way delay: 101.996 ms  
Loss rate: 0.43%

-- Flow 3:

Average throughput: 287.42 Mbit/s  
95th percentile per-packet one-way delay: 48.532 ms  
Loss rate: 0.98%

# Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-03-27 21:30:25  
End at: 2019-03-27 21:30:55  
Local clock offset: -0.203 ms  
Remote clock offset: -0.306 ms

# Below is generated by plot.py at 2019-03-28 02:25:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 581.64 Mbit/s  
95th percentile per-packet one-way delay: 51.566 ms  
Loss rate: 0.46%

-- Flow 1:

Average throughput: 299.12 Mbit/s  
95th percentile per-packet one-way delay: 56.033 ms  
Loss rate: 0.28%

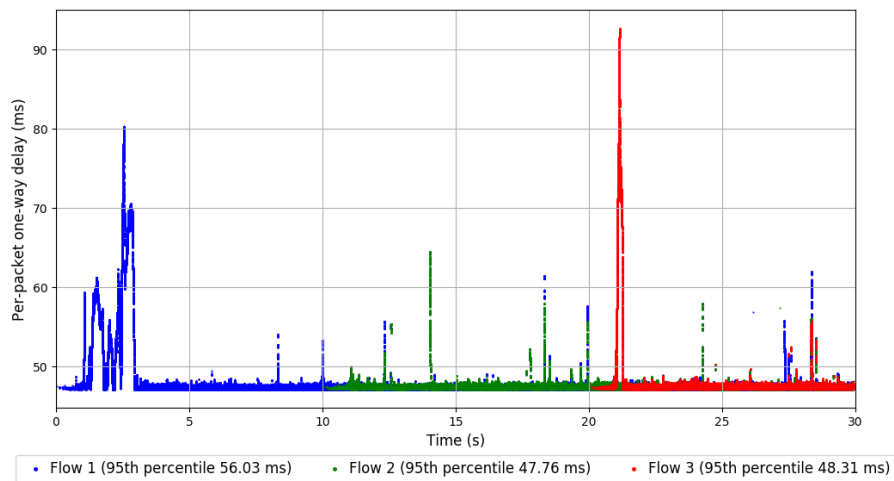
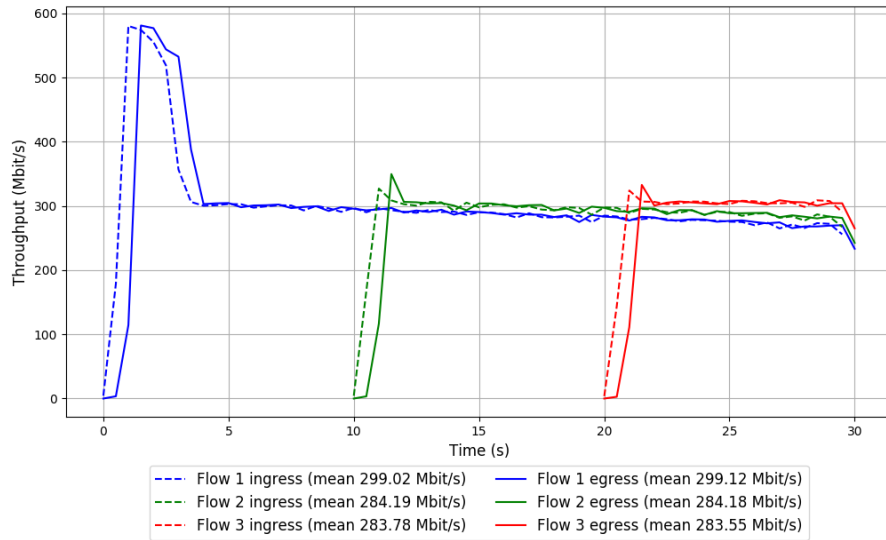
-- Flow 2:

Average throughput: 284.18 Mbit/s  
95th percentile per-packet one-way delay: 47.761 ms  
Loss rate: 0.47%

-- Flow 3:

Average throughput: 283.55 Mbit/s  
95th percentile per-packet one-way delay: 48.308 ms  
Loss rate: 1.03%

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



Run 3: Statistics of TCP Vegas

Start at: 2019-03-27 22:06:04  
End at: 2019-03-27 22:06:34  
Local clock offset: -0.032 ms  
Remote clock offset: -0.383 ms

# Below is generated by plot.py at 2019-03-28 02:26:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 595.55 Mbit/s  
95th percentile per-packet one-way delay: 75.629 ms  
Loss rate: 0.45%

-- Flow 1:

Average throughput: 285.56 Mbit/s  
95th percentile per-packet one-way delay: 47.199 ms  
Loss rate: 0.30%

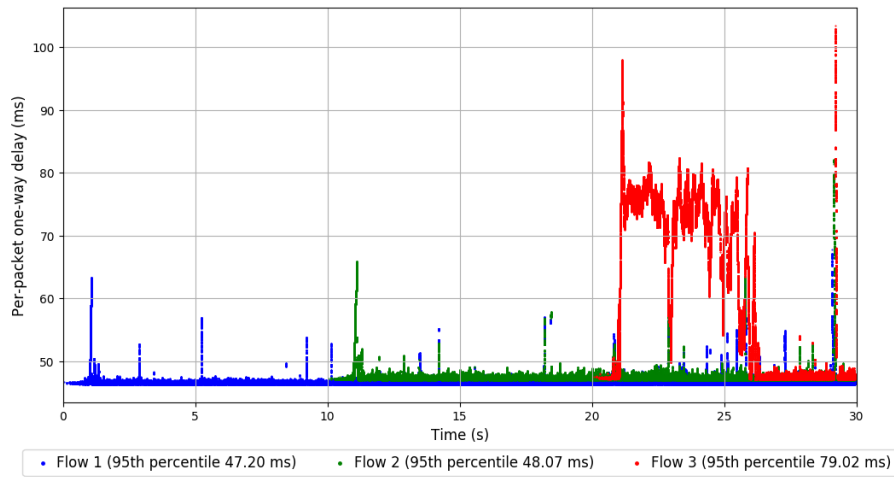
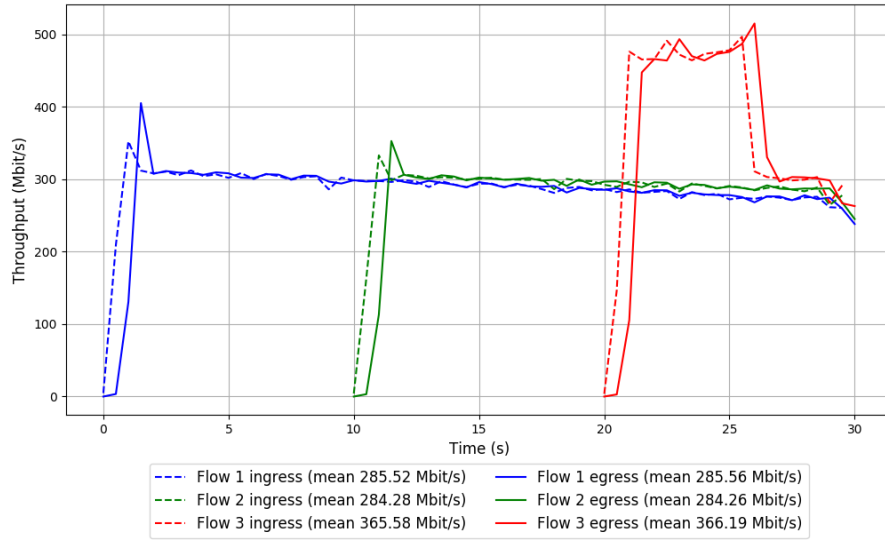
-- Flow 2:

Average throughput: 284.26 Mbit/s  
95th percentile per-packet one-way delay: 48.074 ms  
Loss rate: 0.48%

-- Flow 3:

Average throughput: 366.19 Mbit/s  
95th percentile per-packet one-way delay: 79.022 ms  
Loss rate: 0.79%

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





Run 4: Statistics of TCP Vegas

Start at: 2019-03-27 22:41:30  
End at: 2019-03-27 22:42:01  
Local clock offset: -0.1 ms  
Remote clock offset: -0.413 ms

# Below is generated by plot.py at 2019-03-28 02:28:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 573.86 Mbit/s  
95th percentile per-packet one-way delay: 53.887 ms  
Loss rate: 0.47%

-- Flow 1:

Average throughput: 287.40 Mbit/s  
95th percentile per-packet one-way delay: 49.157 ms  
Loss rate: 0.30%

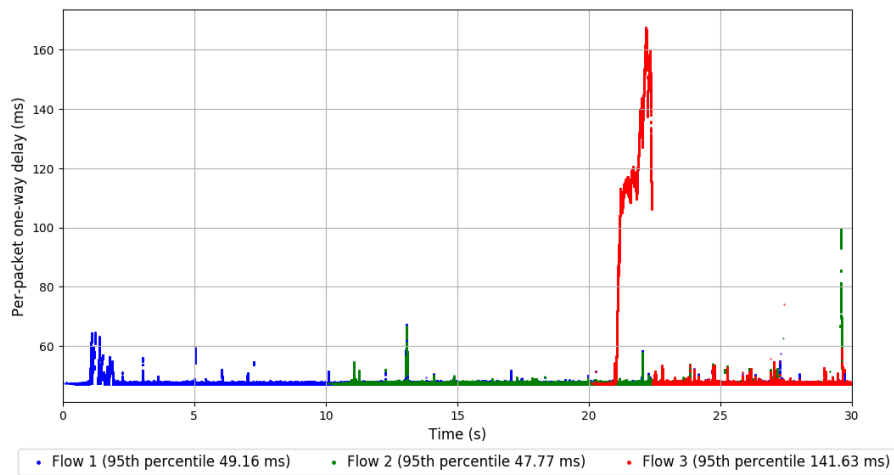
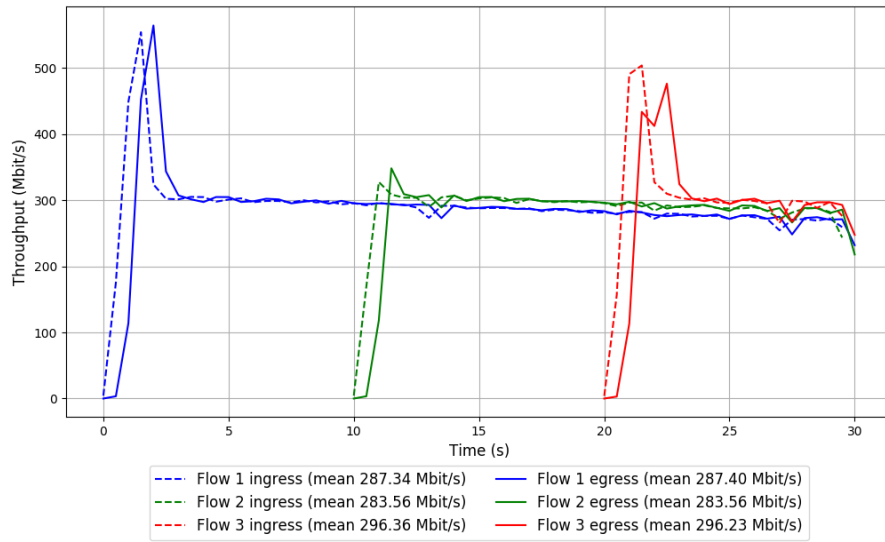
-- Flow 2:

Average throughput: 283.56 Mbit/s  
95th percentile per-packet one-way delay: 47.773 ms  
Loss rate: 0.47%

-- Flow 3:

Average throughput: 296.23 Mbit/s  
95th percentile per-packet one-way delay: 141.627 ms  
Loss rate: 1.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-03-27 23:17:46  
End at: 2019-03-27 23:18:16  
Local clock offset: -0.098 ms  
Remote clock offset: -0.444 ms

# Below is generated by plot.py at 2019-03-28 02:34:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 693.69 Mbit/s  
95th percentile per-packet one-way delay: 51.269 ms  
Loss rate: 0.32%

-- Flow 1:

Average throughput: 405.83 Mbit/s  
95th percentile per-packet one-way delay: 51.605 ms  
Loss rate: 0.18%

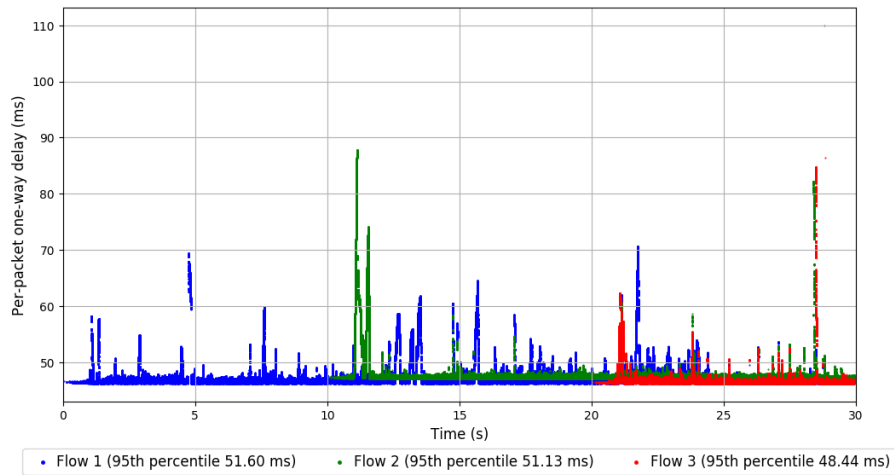
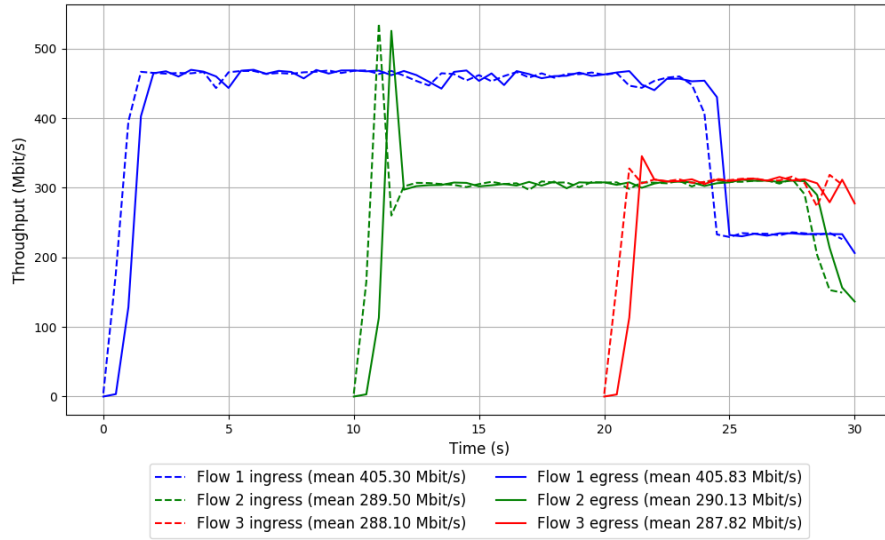
-- Flow 2:

Average throughput: 290.13 Mbit/s  
95th percentile per-packet one-way delay: 51.126 ms  
Loss rate: 0.25%

-- Flow 3:

Average throughput: 287.82 Mbit/s  
95th percentile per-packet one-way delay: 48.436 ms  
Loss rate: 1.03%

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



Run 1: Statistics of Verus

Start at: 2019-03-27 20:40:47

End at: 2019-03-27 20:41:17

Local clock offset: -0.079 ms

Remote clock offset: -0.18 ms

# Below is generated by plot.py at 2019-03-28 02:34:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 231.82 Mbit/s

95th percentile per-packet one-way delay: 135.746 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 124.42 Mbit/s

95th percentile per-packet one-way delay: 91.270 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 123.65 Mbit/s

95th percentile per-packet one-way delay: 212.072 ms

Loss rate: 2.09%

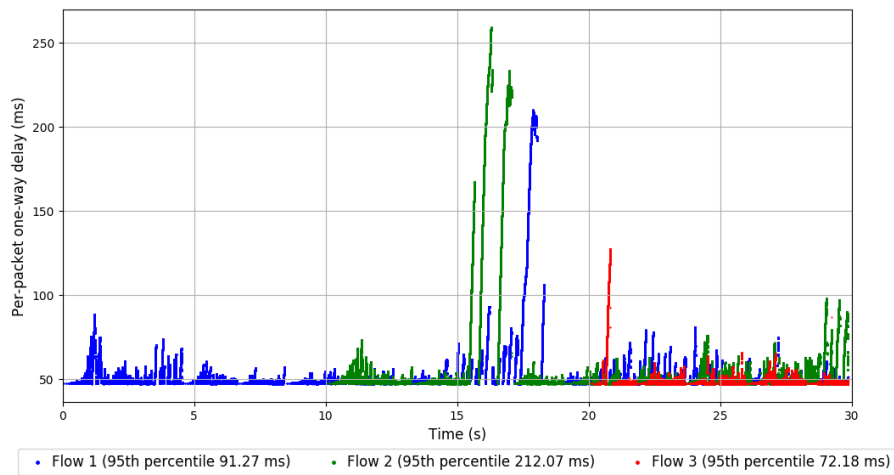
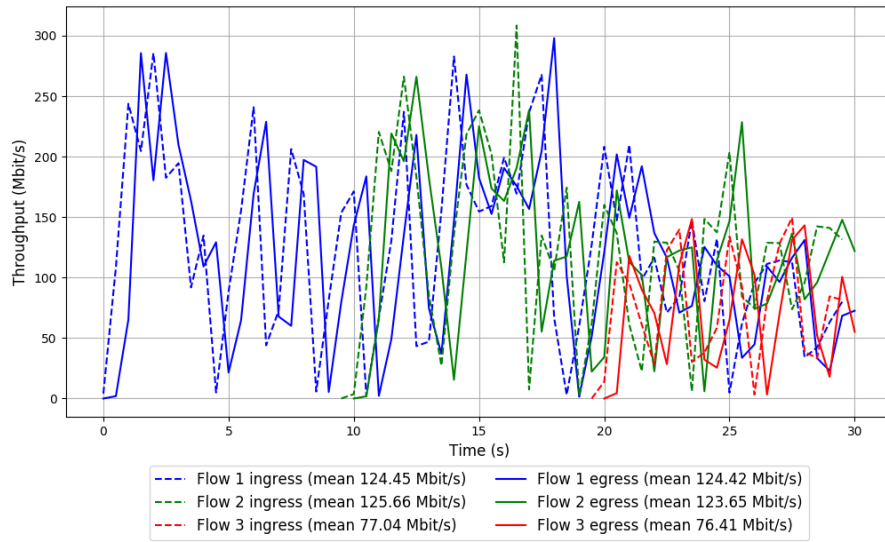
-- Flow 3:

Average throughput: 76.41 Mbit/s

95th percentile per-packet one-way delay: 72.180 ms

Loss rate: 1.73%

### Run 1: Report of Verus — Data Link

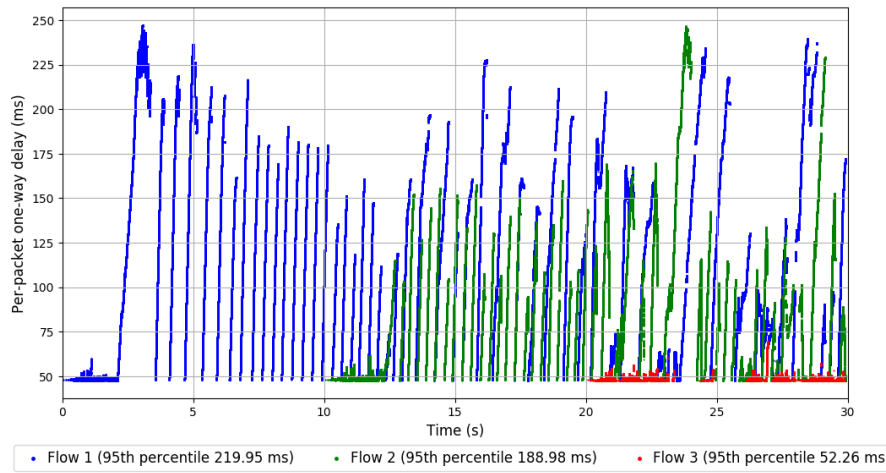
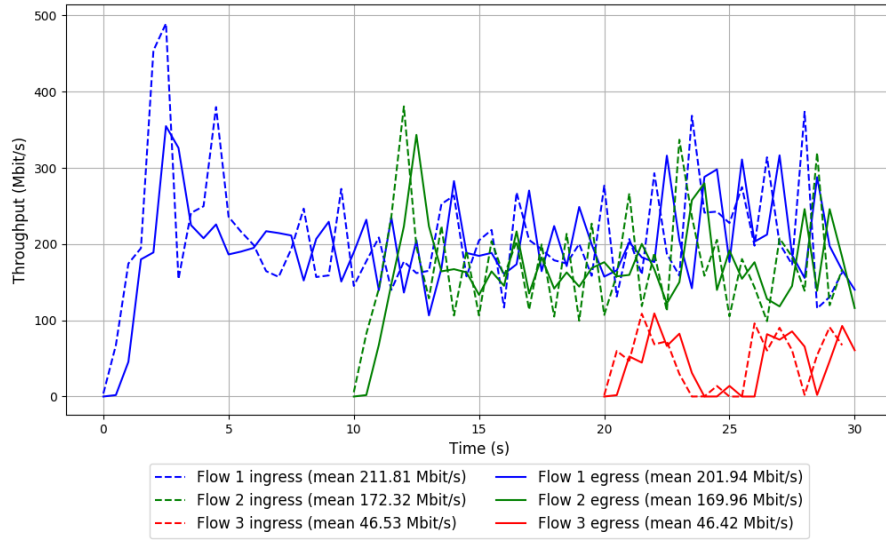


Run 2: Statistics of Verus

Start at: 2019-03-27 21:16:00  
End at: 2019-03-27 21:16:30  
Local clock offset: 0.223 ms  
Remote clock offset: -0.276 ms

```
# Below is generated by plot.py at 2019-03-28 02:35:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.16 Mbit/s
95th percentile per-packet one-way delay: 215.700 ms
Loss rate: 3.38%
-- Flow 1:
Average throughput: 201.94 Mbit/s
95th percentile per-packet one-way delay: 219.946 ms
Loss rate: 4.36%
-- Flow 2:
Average throughput: 169.96 Mbit/s
95th percentile per-packet one-way delay: 188.978 ms
Loss rate: 1.85%
-- Flow 3:
Average throughput: 46.42 Mbit/s
95th percentile per-packet one-way delay: 52.257 ms
Loss rate: 1.38%
```

## Run 2: Report of Verus — Data Link



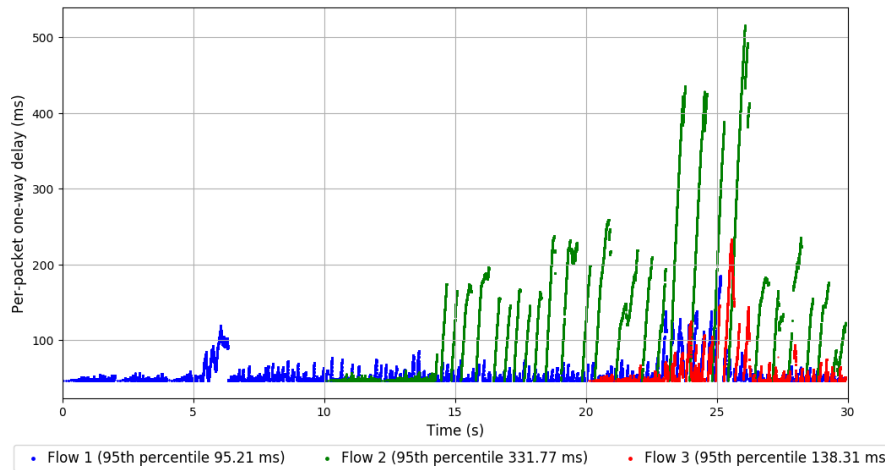
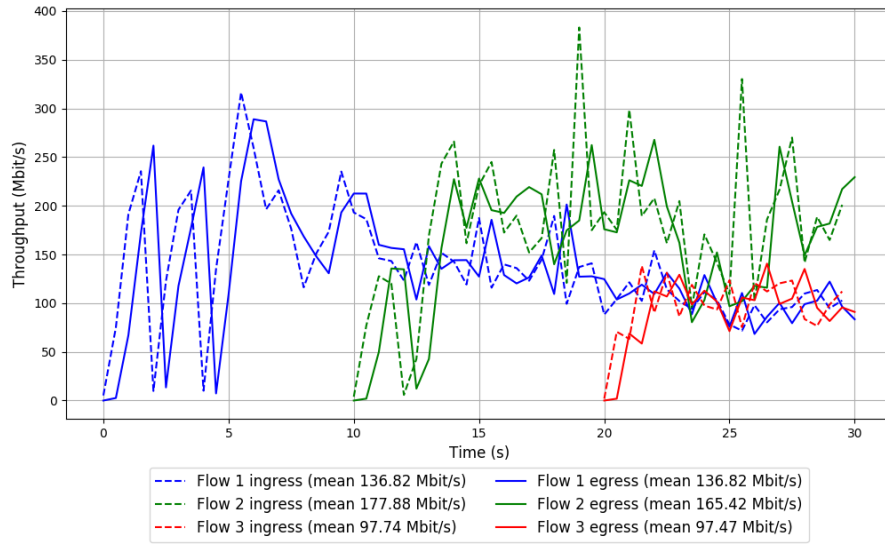


Run 3: Statistics of Verus

Start at: 2019-03-27 21:51:39  
End at: 2019-03-27 21:52:09  
Local clock offset: -0.054 ms  
Remote clock offset: -0.357 ms

```
# Below is generated by plot.py at 2019-03-28 02:35:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 278.77 Mbit/s
95th percentile per-packet one-way delay: 219.206 ms
Loss rate: 3.11%
-- Flow 1:
Average throughput: 136.82 Mbit/s
95th percentile per-packet one-way delay: 95.208 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 165.42 Mbit/s
95th percentile per-packet one-way delay: 331.767 ms
Loss rate: 6.81%
-- Flow 3:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 138.308 ms
Loss rate: 1.24%
```

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

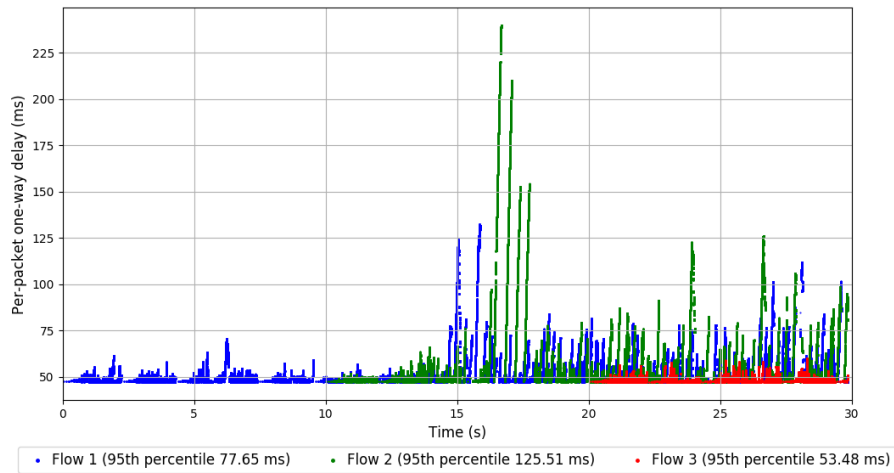
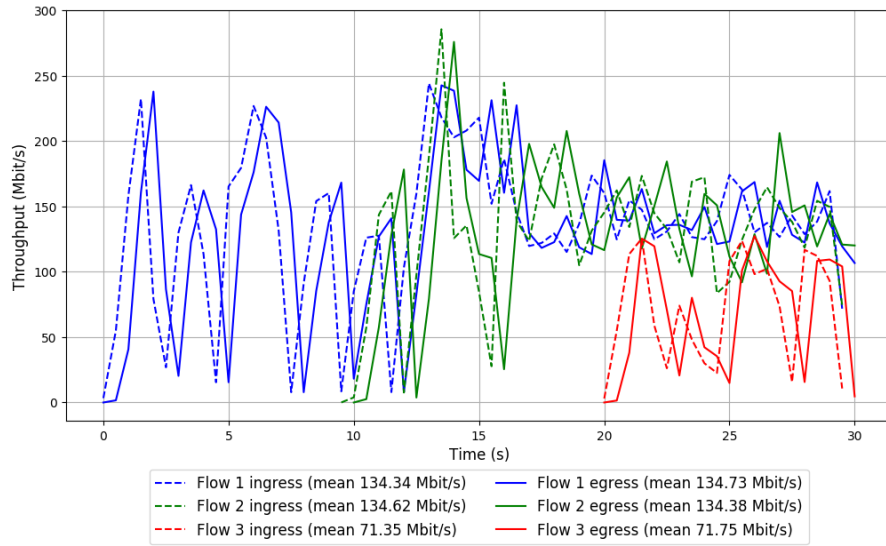


Run 4: Statistics of Verus

Start at: 2019-03-27 22:27:02  
End at: 2019-03-27 22:27:32  
Local clock offset: -0.067 ms  
Remote clock offset: -0.405 ms

```
# Below is generated by plot.py at 2019-03-28 02:35:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 247.68 Mbit/s
95th percentile per-packet one-way delay: 95.131 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 134.73 Mbit/s
95th percentile per-packet one-way delay: 77.646 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 134.38 Mbit/s
95th percentile per-packet one-way delay: 125.514 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 71.75 Mbit/s
95th percentile per-packet one-way delay: 53.475 ms
Loss rate: 0.44%
```

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

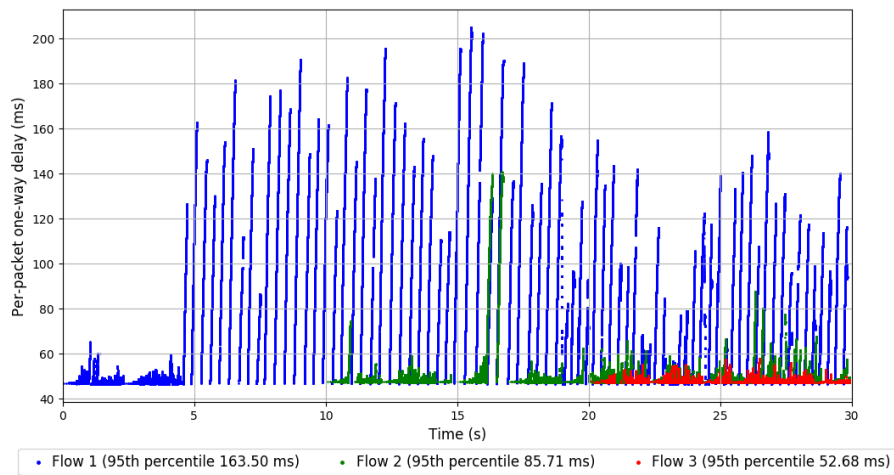
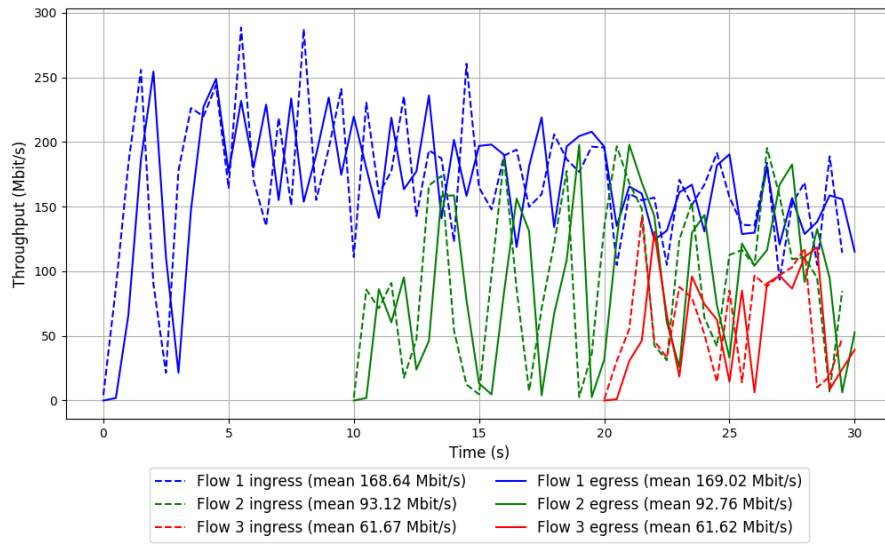


Run 5: Statistics of Verus

Start at: 2019-03-27 23:03:21  
End at: 2019-03-27 23:03:51  
Local clock offset: -0.094 ms  
Remote clock offset: -0.446 ms

```
# Below is generated by plot.py at 2019-03-28 02:35:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 250.42 Mbit/s
95th percentile per-packet one-way delay: 154.670 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 169.02 Mbit/s
95th percentile per-packet one-way delay: 163.501 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 92.76 Mbit/s
95th percentile per-packet one-way delay: 85.710 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 61.62 Mbit/s
95th percentile per-packet one-way delay: 52.680 ms
Loss rate: 1.00%
```

### Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-03-27 21:07:58  
End at: 2019-03-27 21:08:28  
Local clock offset: -0.139 ms  
Remote clock offset: -0.272 ms

# Below is generated by plot.py at 2019-03-28 02:36:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 503.31 Mbit/s  
95th percentile per-packet one-way delay: 51.491 ms  
Loss rate: 0.40%

-- Flow 1:

Average throughput: 282.11 Mbit/s  
95th percentile per-packet one-way delay: 53.634 ms  
Loss rate: 0.15%

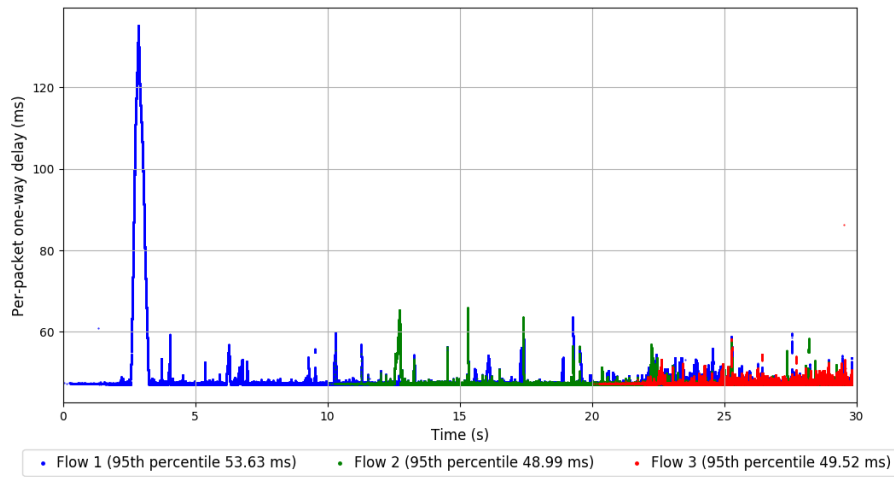
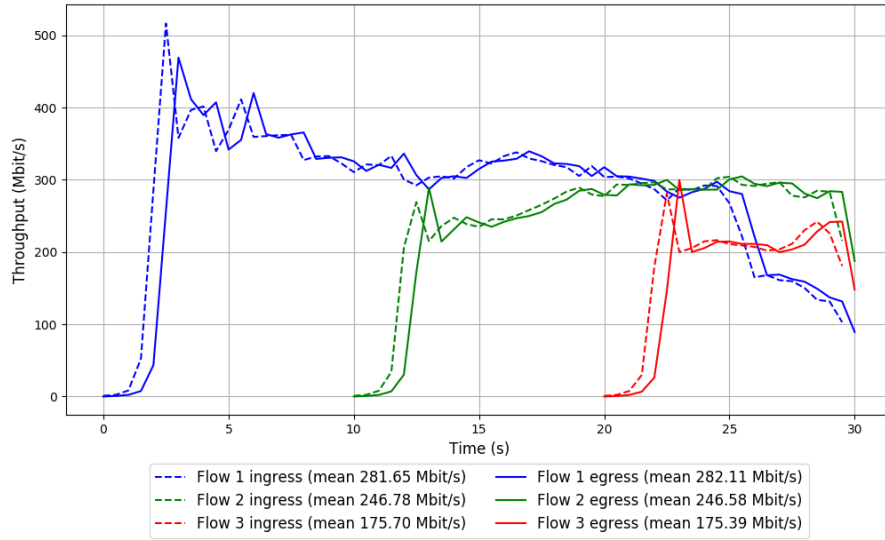
-- Flow 2:

Average throughput: 246.58 Mbit/s  
95th percentile per-packet one-way delay: 48.992 ms  
Loss rate: 0.56%

-- Flow 3:

Average throughput: 175.39 Mbit/s  
95th percentile per-packet one-way delay: 49.518 ms  
Loss rate: 1.14%

Run 1: Report of PCC-Vivace — Data Link





Run 2: Statistics of PCC-Vivace

Start at: 2019-03-27 21:43:33  
End at: 2019-03-27 21:44:03  
Local clock offset: -0.121 ms  
Remote clock offset: -0.297 ms

# Below is generated by plot.py at 2019-03-28 02:37:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 487.26 Mbit/s  
95th percentile per-packet one-way delay: 88.580 ms  
Loss rate: 0.39%

-- Flow 1:

Average throughput: 275.10 Mbit/s  
95th percentile per-packet one-way delay: 71.654 ms  
Loss rate: 0.28%

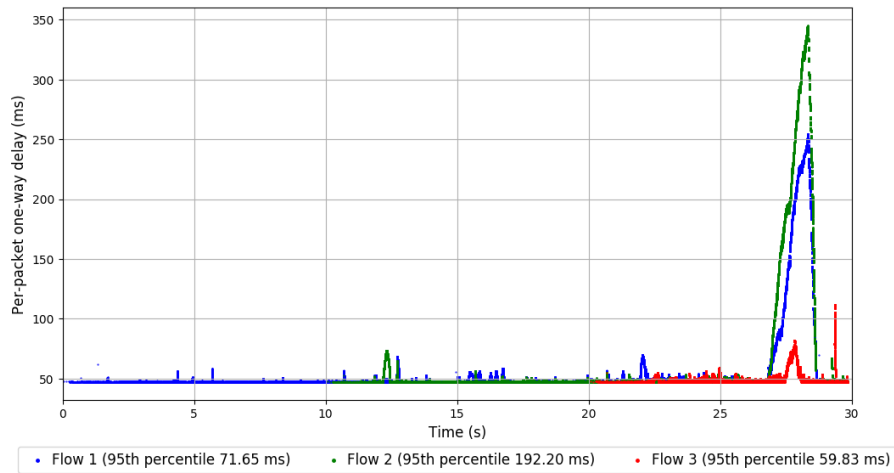
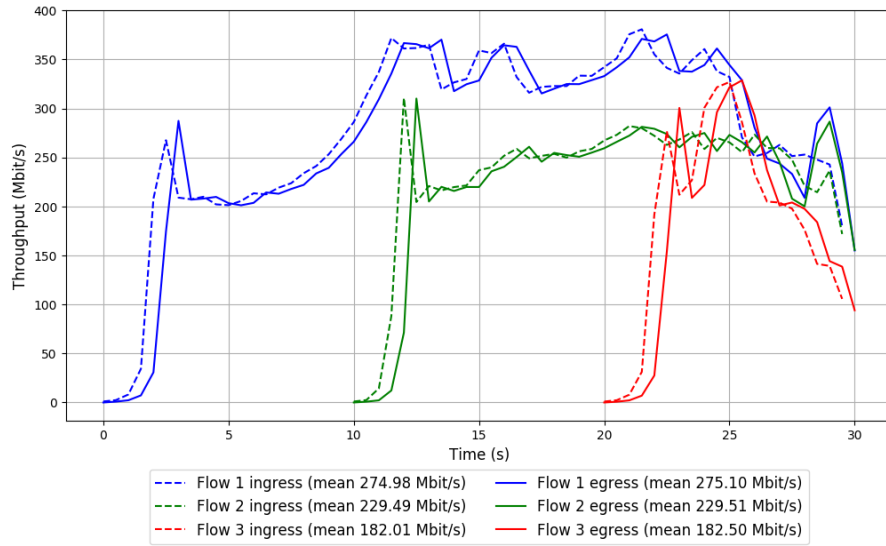
-- Flow 2:

Average throughput: 229.51 Mbit/s  
95th percentile per-packet one-way delay: 192.197 ms  
Loss rate: 0.48%

-- Flow 3:

Average throughput: 182.50 Mbit/s  
95th percentile per-packet one-way delay: 59.834 ms  
Loss rate: 0.70%

## Run 2: Report of PCC-Vivace — Data Link

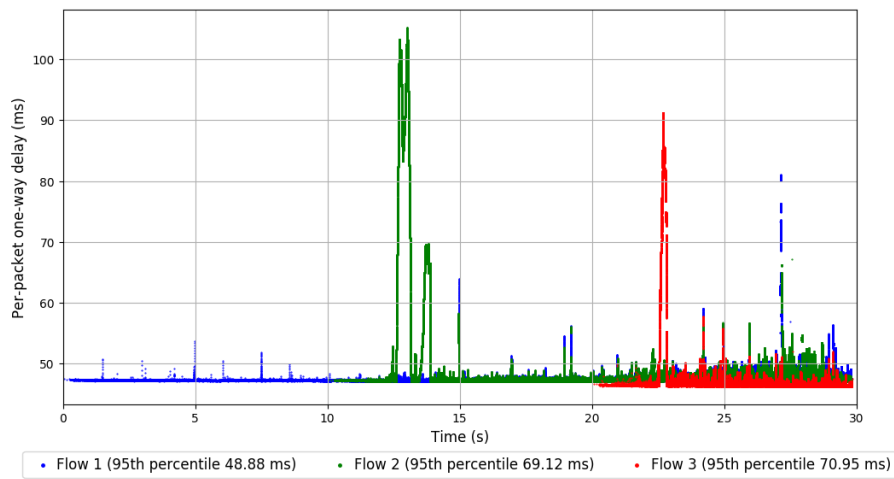
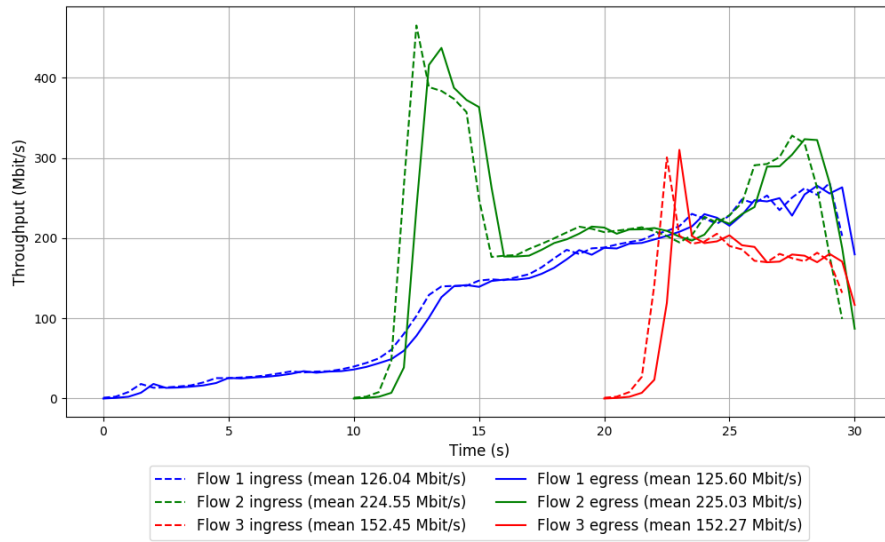


Run 3: Statistics of PCC-Vivace

Start at: 2019-03-27 22:19:08  
End at: 2019-03-27 22:19:38  
Local clock offset: -0.046 ms  
Remote clock offset: -0.377 ms

# Below is generated by plot.py at 2019-03-28 02:37:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 324.96 Mbit/s  
95th percentile per-packet one-way delay: 56.178 ms  
Loss rate: 0.55%  
-- Flow 1:  
Average throughput: 125.60 Mbit/s  
95th percentile per-packet one-way delay: 48.882 ms  
Loss rate: 0.67%  
-- Flow 2:  
Average throughput: 225.03 Mbit/s  
95th percentile per-packet one-way delay: 69.125 ms  
Loss rate: 0.27%  
-- Flow 3:  
Average throughput: 152.27 Mbit/s  
95th percentile per-packet one-way delay: 70.953 ms  
Loss rate: 1.07%

### Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-03-27 22:55:05  
End at: 2019-03-27 22:55:35  
Local clock offset: -0.076 ms  
Remote clock offset: -0.461 ms

# Below is generated by plot.py at 2019-03-28 02:38:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 505.33 Mbit/s  
95th percentile per-packet one-way delay: 65.775 ms  
Loss rate: 0.58%

-- Flow 1:

Average throughput: 334.46 Mbit/s  
95th percentile per-packet one-way delay: 75.740 ms  
Loss rate: 0.34%

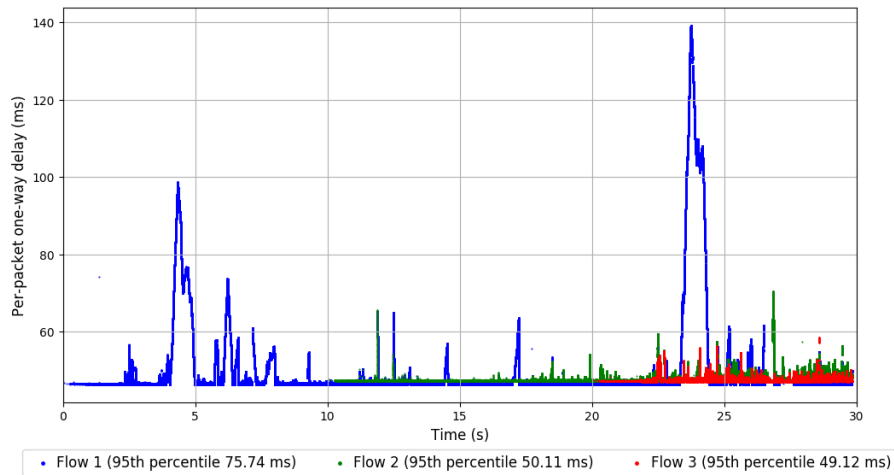
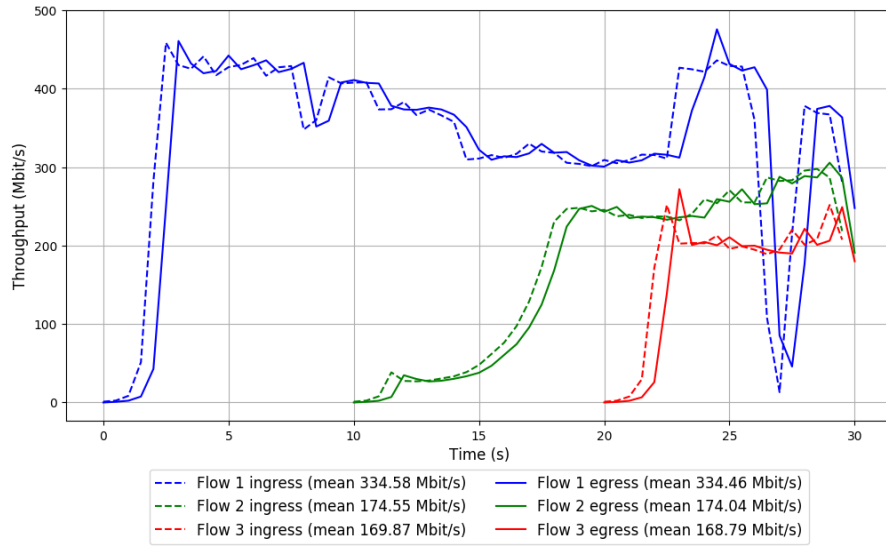
-- Flow 2:

Average throughput: 174.04 Mbit/s  
95th percentile per-packet one-way delay: 50.112 ms  
Loss rate: 0.76%

-- Flow 3:

Average throughput: 168.79 Mbit/s  
95th percentile per-packet one-way delay: 49.125 ms  
Loss rate: 1.57%

### Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-03-27 23:31:09

End at: 2019-03-27 23:31:39

Local clock offset: -0.143 ms

Remote clock offset: -0.47 ms

# Below is generated by plot.py at 2019-03-28 02:38:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 452.62 Mbit/s

95th percentile per-packet one-way delay: 53.911 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 224.55 Mbit/s

95th percentile per-packet one-way delay: 49.051 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 223.42 Mbit/s

95th percentile per-packet one-way delay: 49.487 ms

Loss rate: 0.64%

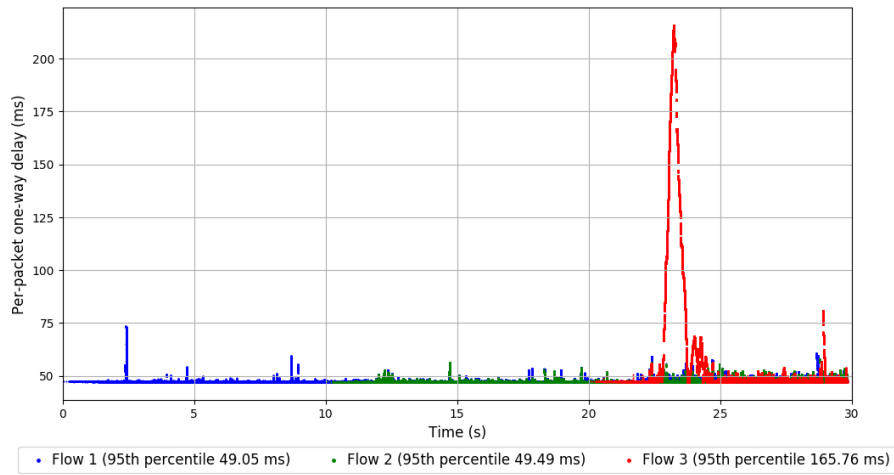
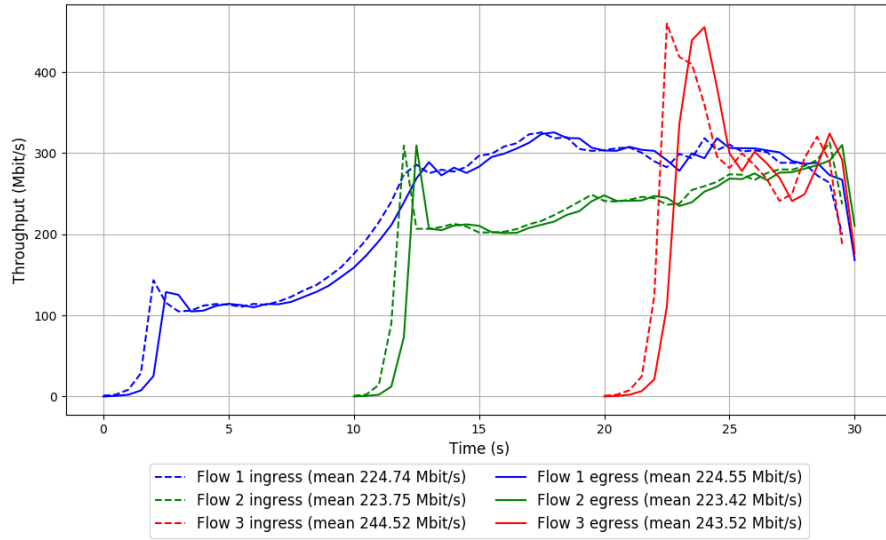
-- Flow 3:

Average throughput: 243.52 Mbit/s

95th percentile per-packet one-way delay: 165.756 ms

Loss rate: 1.36%

Run 5: Report of PCC-Vivace — Data Link



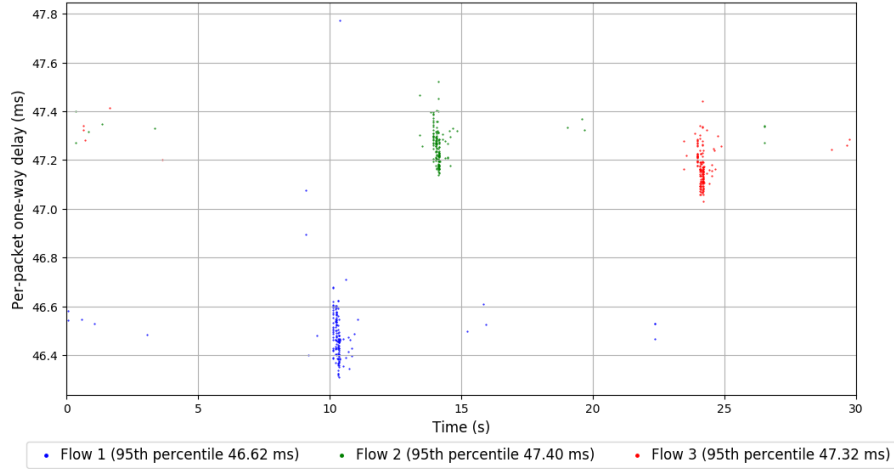
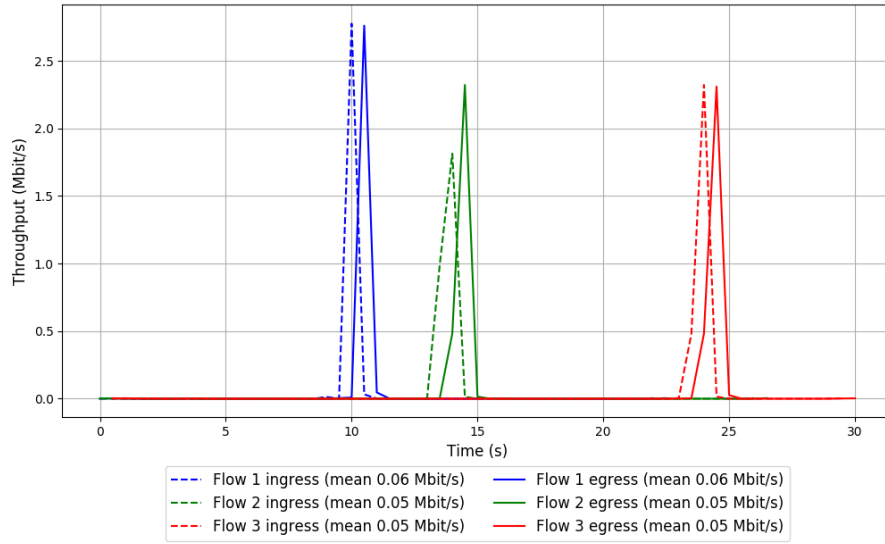


Run 1: Statistics of WebRTC media

Start at: 2019-03-27 20:56:41  
End at: 2019-03-27 20:57:11  
Local clock offset: -0.129 ms  
Remote clock offset: -0.226 ms

```
# Below is generated by plot.py at 2019-03-28 02:38:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 47.341 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.622 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.396 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.322 ms
Loss rate: 0.00%
```

# Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-03-27 21:32:07  
End at: 2019-03-27 21:32:37  
Local clock offset: -0.199 ms  
Remote clock offset: -0.284 ms

# Below is generated by plot.py at 2019-03-28 02:38:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 47.533 ms  
Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 47.512 ms  
Loss rate: 0.00%

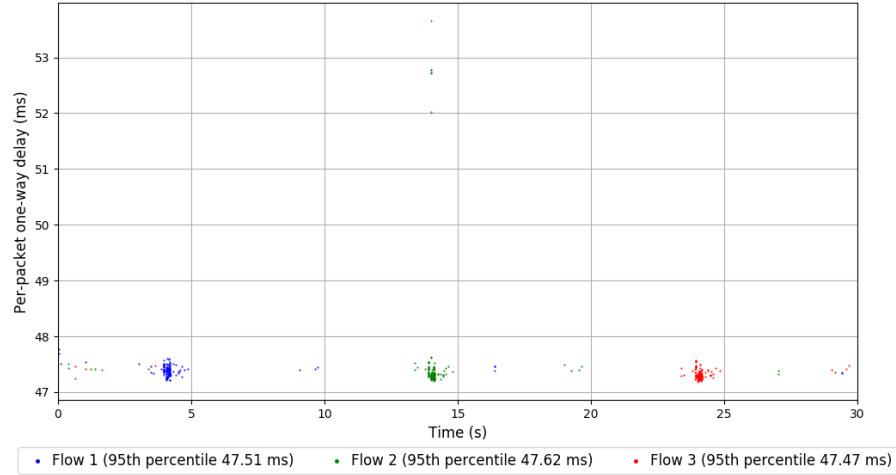
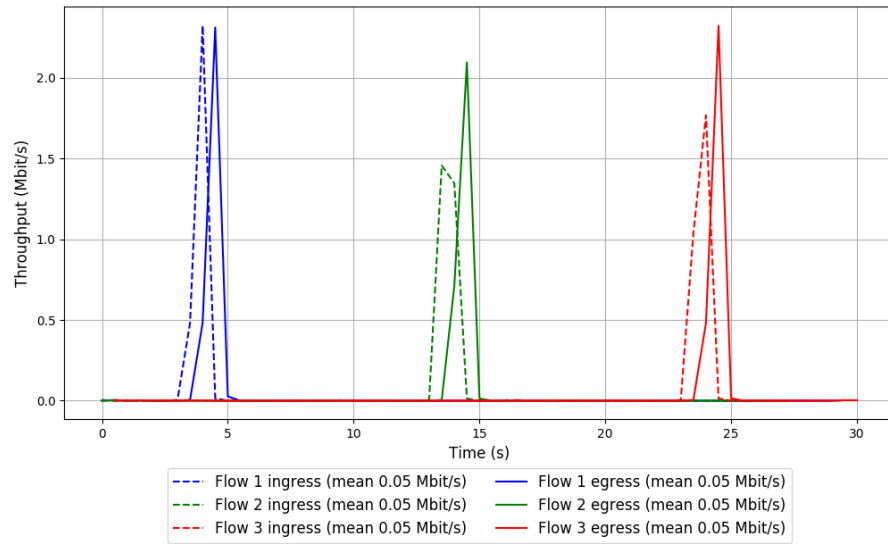
-- Flow 2:

Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 47.625 ms  
Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 47.465 ms  
Loss rate: 0.00%

## Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-03-27 22:07:46

End at: 2019-03-27 22:08:16

Local clock offset: -0.012 ms

Remote clock offset: -0.36 ms

# Below is generated by plot.py at 2019-03-28 02:38:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 47.579 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 47.611 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 47.545 ms

Loss rate: 0.00%

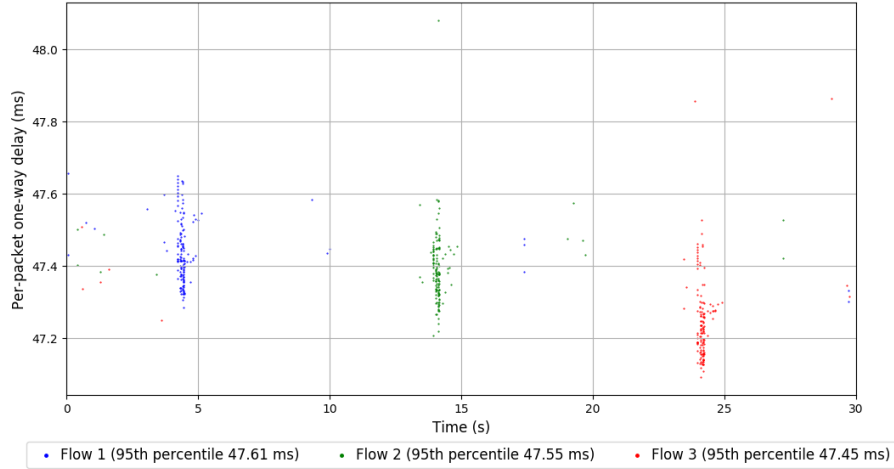
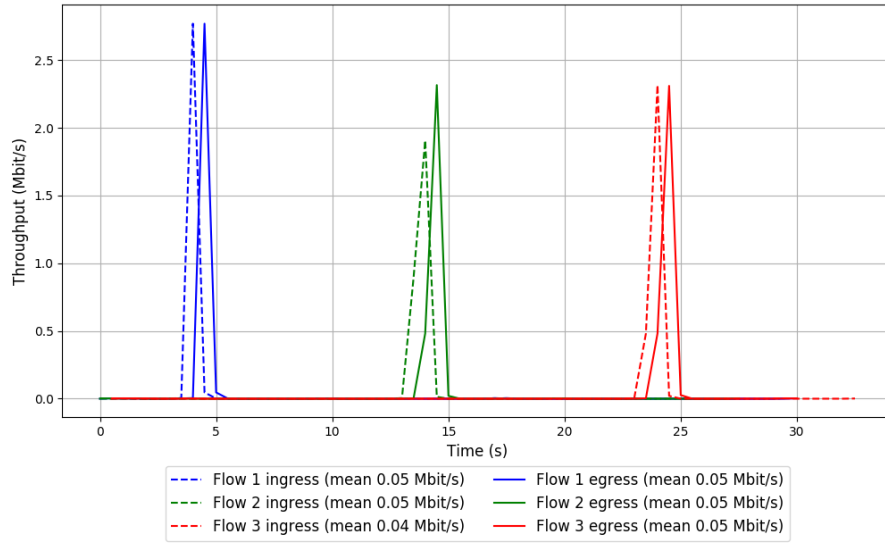
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 47.455 ms

Loss rate: 0.05%

### Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-03-27 22:43:19

End at: 2019-03-27 22:43:49

Local clock offset: -0.118 ms

Remote clock offset: -0.41 ms

# Below is generated by plot.py at 2019-03-28 02:38:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 47.475 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 47.353 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 47.528 ms

Loss rate: 0.00%

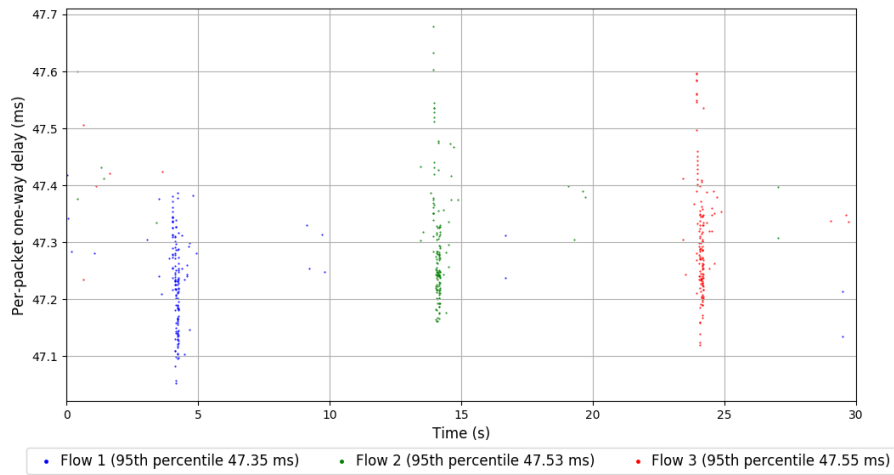
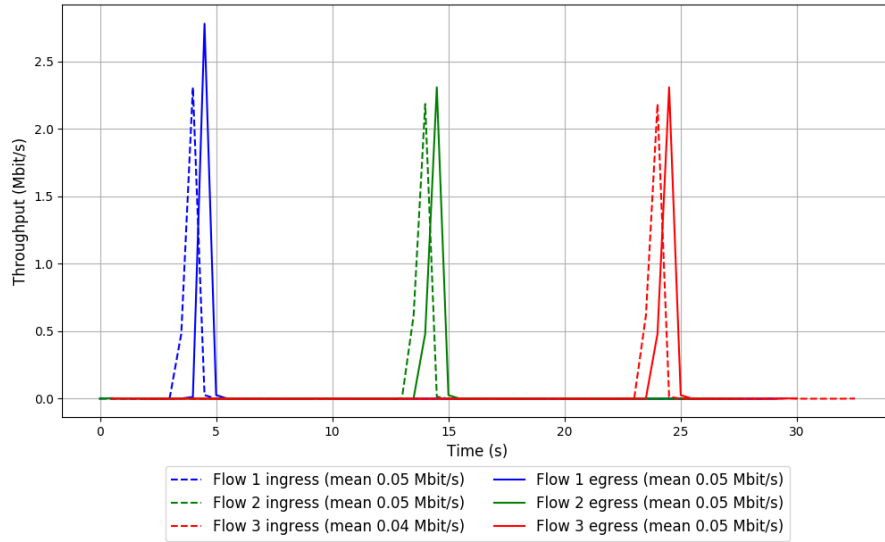
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 47.546 ms

Loss rate: 0.05%

### Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-03-27 23:19:33  
End at: 2019-03-27 23:20:03  
Local clock offset: -0.157 ms  
Remote clock offset: -0.476 ms

```
# Below is generated by plot.py at 2019-03-28 02:38:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 47.502 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.477 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.523 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.473 ms
Loss rate: 0.00%
```

### Run 5: Report of WebRTC media — Data Link

