

## Pantheon Report

Generated at 2019-05-31 00:57:31 (UTC).

Data path: GCE Tokyo on *ens4 (remote)* →GCE Sydney 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:

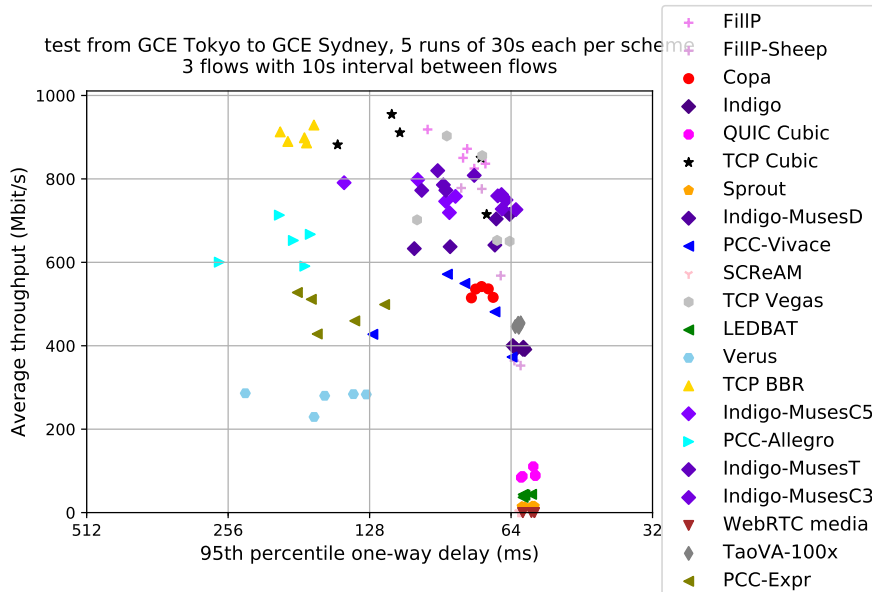
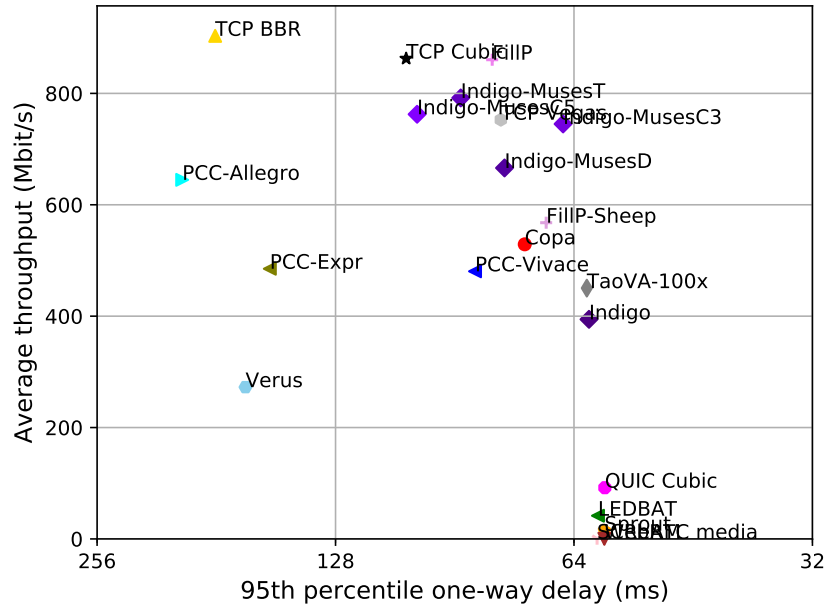
```
Linux 4.15.0-1029-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### 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 Tokyo to GCE Sydney, 5 runs of 30s each per scheme  
 3 flows with 10s interval between flows (mean of all runs by scheme)



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	466.73	449.91	417.15	175.51	191.84	163.15	1.37	1.57	2.81
Copa	5	276.89	262.89	234.73	73.22	74.84	73.90	0.37	0.56	1.40
TCP Cubic	5	453.67	428.48	376.27	86.09	120.02	90.32	0.37	0.59	1.40
FillP	5	535.45	354.82	271.67	87.40	63.46	61.78	0.38	0.56	1.30
FillP-Sheep	5	270.51	323.39	251.04	75.40	60.81	61.98	0.46	0.50	1.45
Indigo	5	211.90	193.57	165.43	61.36	61.12	59.64	0.42	0.64	1.48
Indigo-MusesC3	5	439.58	369.40	255.10	67.29	64.99	62.53	0.28	0.61	2.00
Indigo-MusesC5	5	466.90	393.72	161.86	99.03	102.82	60.67	0.33	0.54	2.08
Indigo-MusesD	5	396.94	310.63	264.10	86.33	67.68	61.41	0.32	0.57	2.03
Indigo-MusesT	5	484.36	390.70	210.42	94.47	75.23	61.98	0.30	0.58	1.98
LEDBAT	5	26.51	18.56	8.75	58.16	58.07	60.18	0.66	1.16	2.38
PCC-Allegro	5	353.33	314.83	252.81	183.87	157.66	196.45	3.89	1.71	3.77
PCC-Expr	5	279.33	238.98	144.23	153.86	123.29	80.24	2.19	5.24	1.59
QUIC Cubic	5	54.85	41.17	29.10	57.15	57.92	57.75	0.55	1.22	1.62
SCReAM	5	0.22	0.22	0.22	59.58	59.85	57.81	0.38	0.61	1.09
Sprout	5	7.48	7.60	7.04	58.58	57.30	57.32	0.44	0.63	1.26
TaoVA-100x	5	230.58	226.82	209.40	59.99	61.69	61.89	0.43	0.68	0.76
TCP Vegas	5	376.22	354.00	428.09	63.95	79.61	78.39	0.36	0.53	1.44
Verus	5	152.55	128.45	107.78	142.96	145.89	136.87	0.96	1.85	2.02
PCC-Vivace	5	307.49	191.62	140.10	80.31	74.94	87.02	0.41	0.79	1.56
WebRTC media	5	0.05	0.05	0.05	58.01	57.90	57.98	0.00	0.02	0.02



Run 1: Statistics of TCP BBR

Start at: 2019-05-30 19:13:33  
End at: 2019-05-30 19:14:03  
Local clock offset: -0.129 ms  
Remote clock offset: -0.112 ms

# Below is generated by plot.py at 2019-05-30 22:37:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 886.29 Mbit/s  
95th percentile per-packet one-way delay: 174.343 ms  
Loss rate: 1.65%

-- Flow 1:

Average throughput: 456.39 Mbit/s  
95th percentile per-packet one-way delay: 184.814 ms  
Loss rate: 1.32%

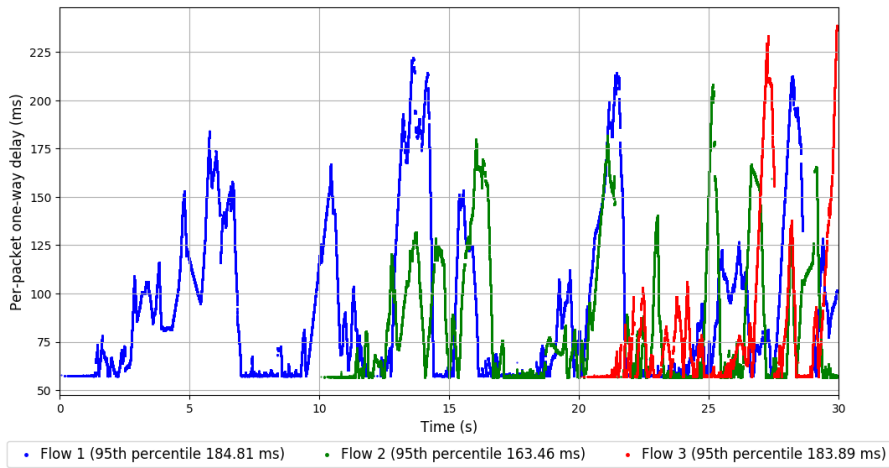
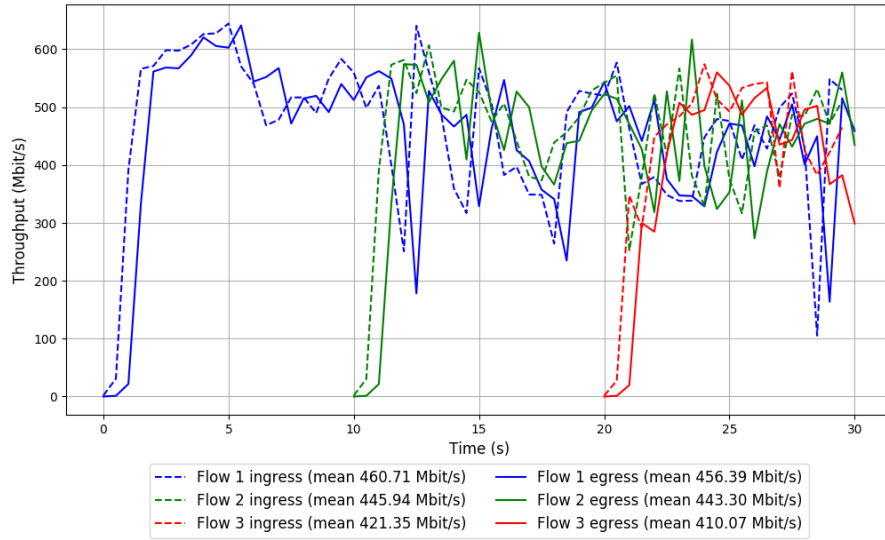
-- Flow 2:

Average throughput: 443.30 Mbit/s  
95th percentile per-packet one-way delay: 163.460 ms  
Loss rate: 1.16%

-- Flow 3:

Average throughput: 410.07 Mbit/s  
95th percentile per-packet one-way delay: 183.889 ms  
Loss rate: 3.80%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-05-30 19:49:39

End at: 2019-05-30 19:50:09

Local clock offset: -0.216 ms

Remote clock offset: -0.3 ms

# Below is generated by plot.py at 2019-05-30 22:37:57

# Datalink statistics

-- Total of 3 flows:

Average throughput: 898.61 Mbit/s

95th percentile per-packet one-way delay: 176.162 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 463.47 Mbit/s

95th percentile per-packet one-way delay: 157.642 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 451.38 Mbit/s

95th percentile per-packet one-way delay: 183.497 ms

Loss rate: 1.06%

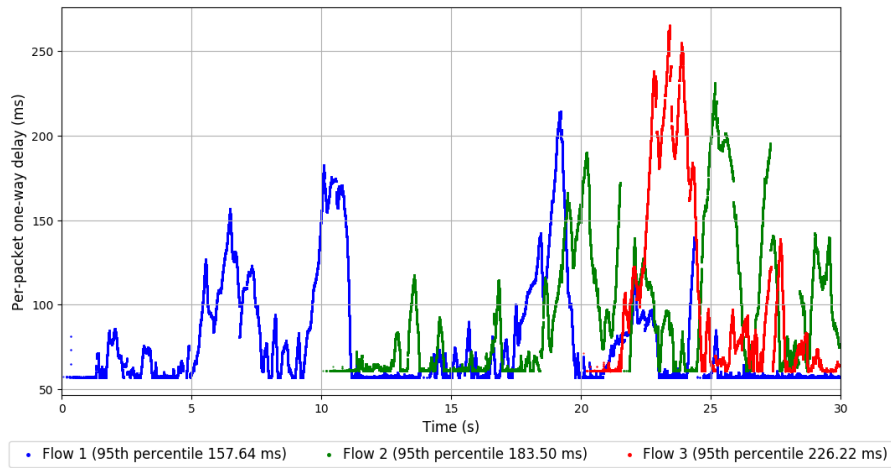
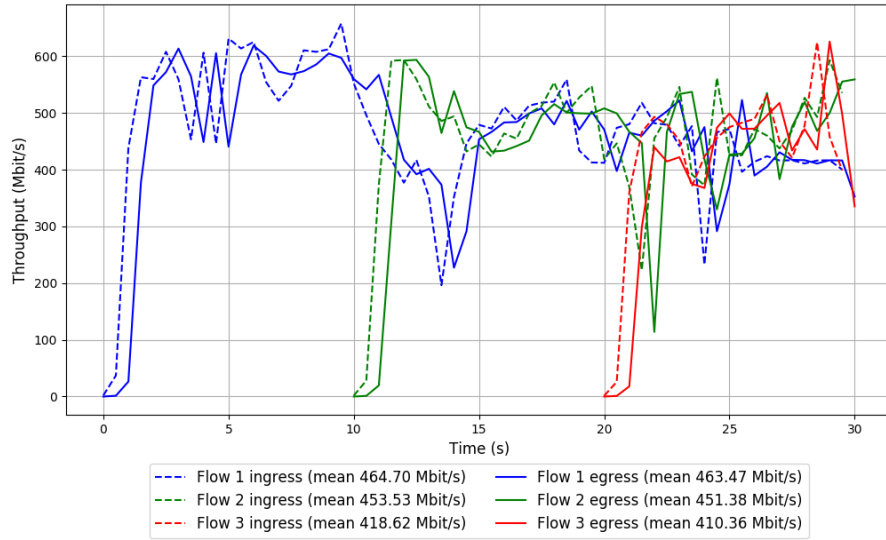
-- Flow 3:

Average throughput: 410.36 Mbit/s

95th percentile per-packet one-way delay: 226.221 ms

Loss rate: 3.24%

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



Run 3: Statistics of TCP BBR

Start at: 2019-05-30 20:25:17

End at: 2019-05-30 20:25:47

Local clock offset: -0.458 ms

Remote clock offset: -0.15 ms

# Below is generated by plot.py at 2019-05-30 22:38:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 929.18 Mbit/s

95th percentile per-packet one-way delay: 168.157 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 479.78 Mbit/s

95th percentile per-packet one-way delay: 152.983 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 463.78 Mbit/s

95th percentile per-packet one-way delay: 184.864 ms

Loss rate: 1.43%

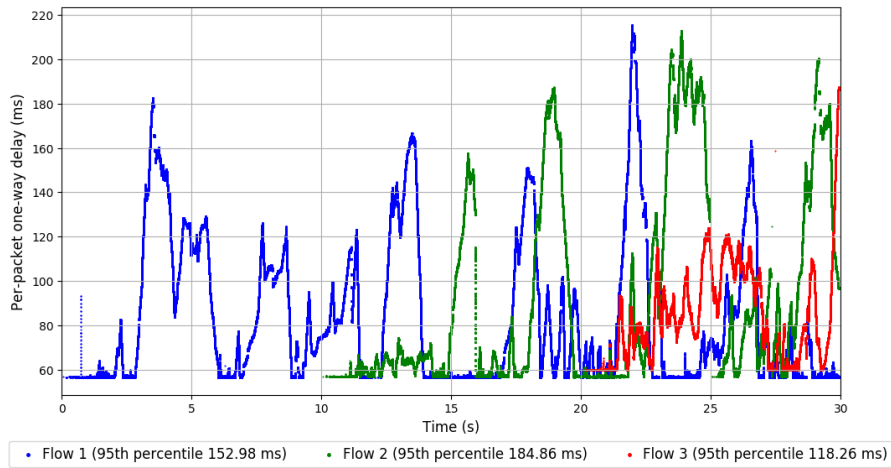
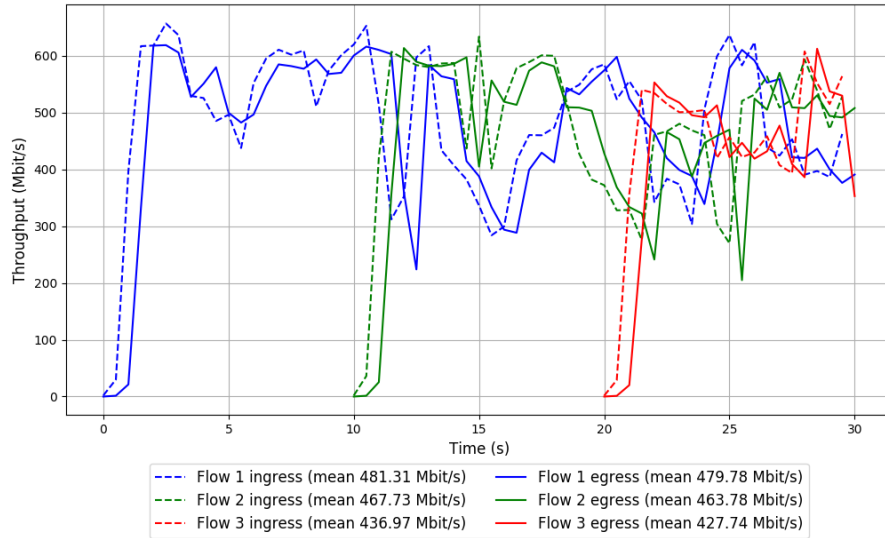
-- Flow 3:

Average throughput: 427.74 Mbit/s

95th percentile per-packet one-way delay: 118.260 ms

Loss rate: 3.30%

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



Run 4: Statistics of TCP BBR

Start at: 2019-05-30 21:01:10

End at: 2019-05-30 21:01:40

Local clock offset: -0.162 ms

Remote clock offset: 0.654 ms

# Below is generated by plot.py at 2019-05-30 22:38:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 912.81 Mbit/s

95th percentile per-packet one-way delay: 198.329 ms

Loss rate: 2.24%

-- Flow 1:

Average throughput: 474.79 Mbit/s

95th percentile per-packet one-way delay: 191.761 ms

Loss rate: 1.93%

-- Flow 2:

Average throughput: 448.45 Mbit/s

95th percentile per-packet one-way delay: 211.837 ms

Loss rate: 2.71%

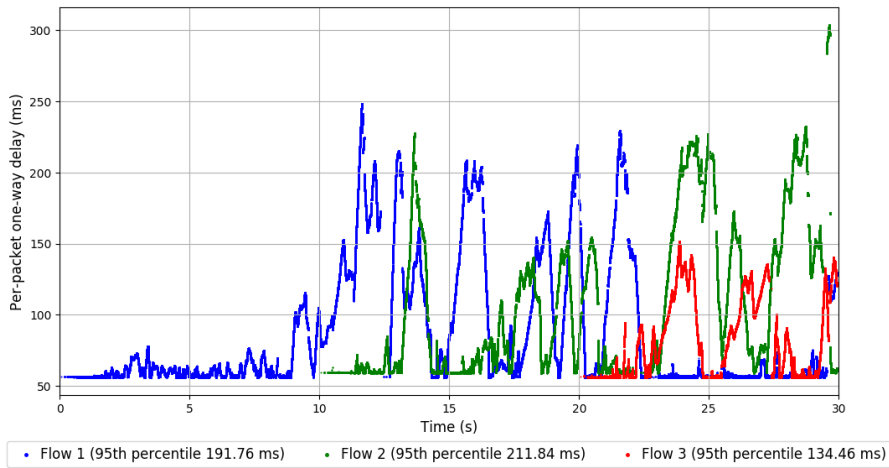
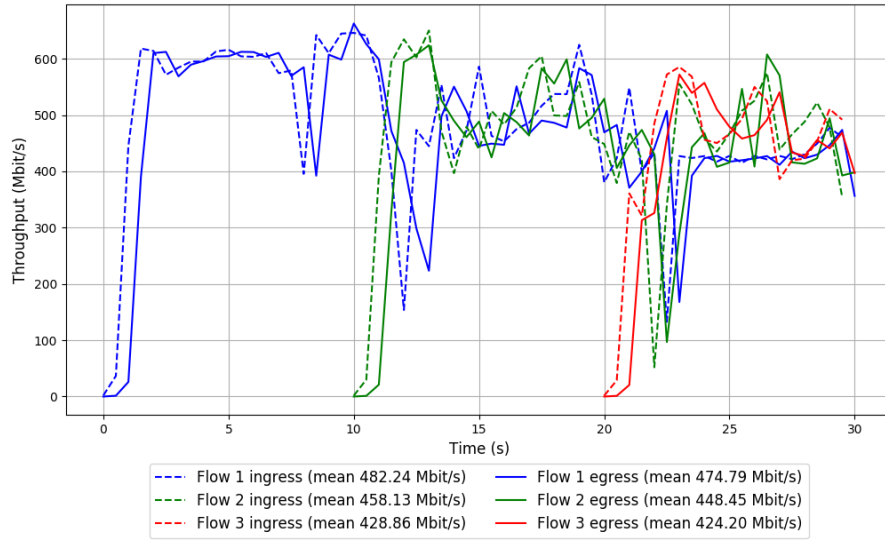
-- Flow 3:

Average throughput: 424.20 Mbit/s

95th percentile per-packet one-way delay: 134.456 ms

Loss rate: 2.26%

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





Run 5: Statistics of TCP BBR

Start at: 2019-05-30 21:37:28  
End at: 2019-05-30 21:37:58  
Local clock offset: 0.009 ms  
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2019-05-30 22:38:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 889.80 Mbit/s  
95th percentile per-packet one-way delay: 191.072 ms  
Loss rate: 1.88%

-- Flow 1:

Average throughput: 459.21 Mbit/s  
95th percentile per-packet one-way delay: 190.329 ms  
Loss rate: 2.26%

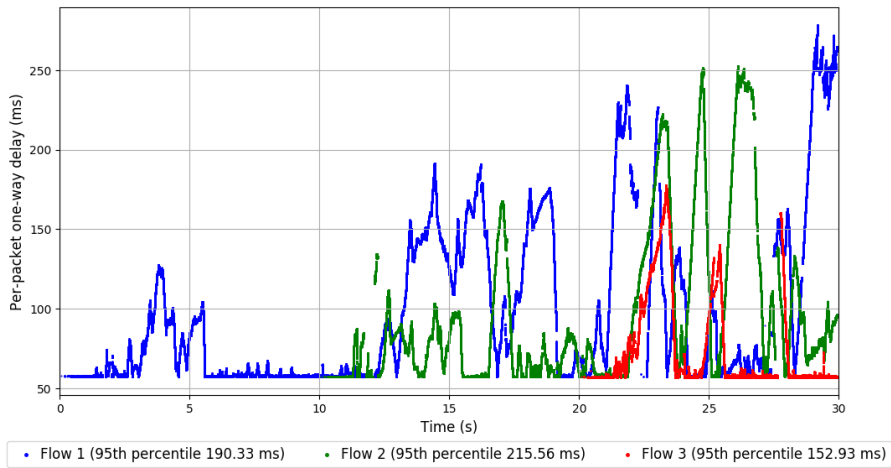
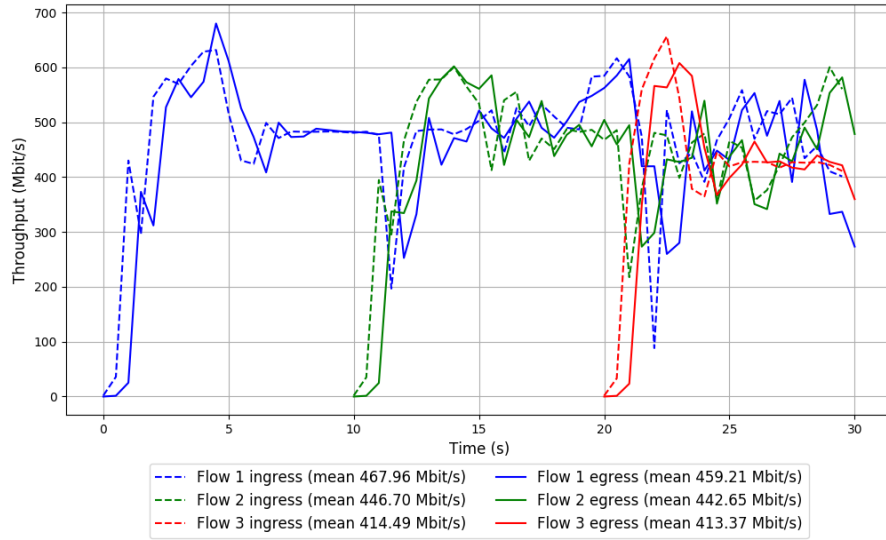
-- Flow 2:

Average throughput: 442.65 Mbit/s  
95th percentile per-packet one-way delay: 215.563 ms  
Loss rate: 1.50%

-- Flow 3:

Average throughput: 413.37 Mbit/s  
95th percentile per-packet one-way delay: 152.930 ms  
Loss rate: 1.45%

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

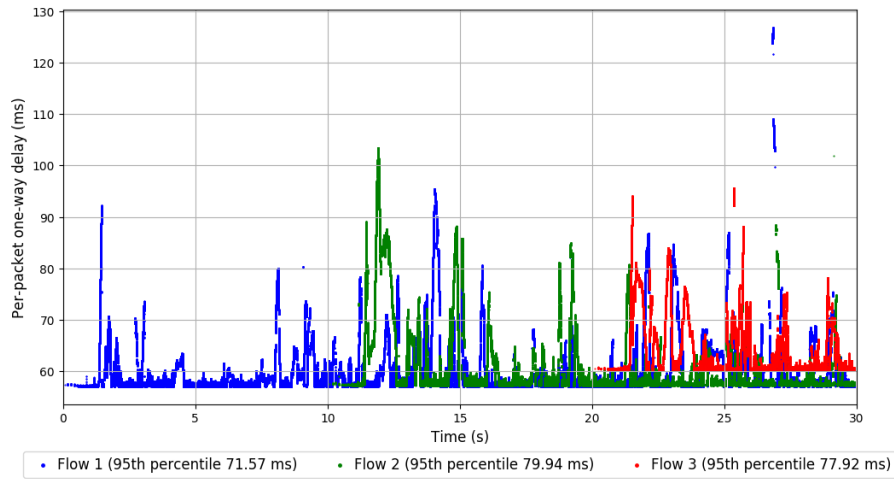
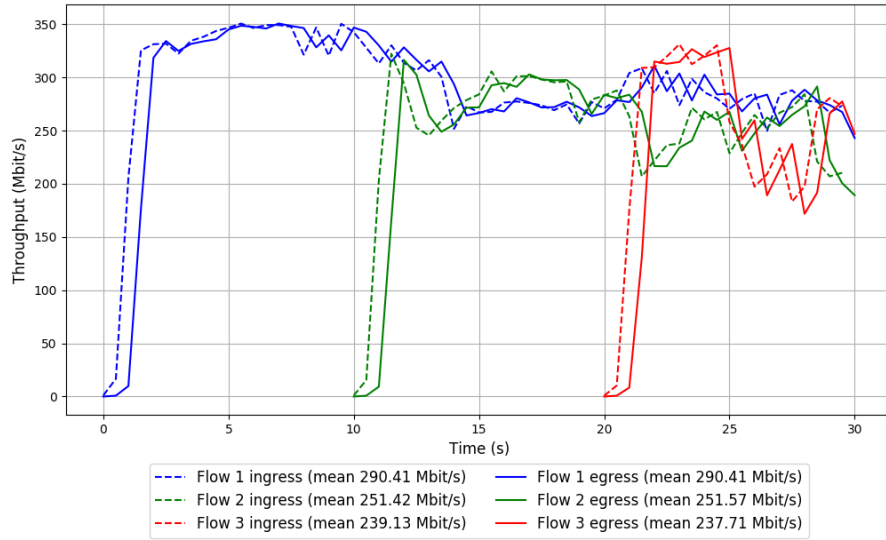


Run 1: Statistics of Copa

Start at: 2019-05-30 19:11:30  
End at: 2019-05-30 19:12:00  
Local clock offset: 0.24 ms  
Remote clock offset: -0.071 ms

```
# Below is generated by plot.py at 2019-05-30 22:39:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 535.89 Mbit/s
95th percentile per-packet one-way delay: 76.144 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 290.41 Mbit/s
95th percentile per-packet one-way delay: 71.566 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 251.57 Mbit/s
95th percentile per-packet one-way delay: 79.935 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 237.71 Mbit/s
95th percentile per-packet one-way delay: 77.920 ms
Loss rate: 1.76%
```

### Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-05-30 19:47:38  
End at: 2019-05-30 19:48:08  
Local clock offset: -0.224 ms  
Remote clock offset: -0.136 ms

# Below is generated by plot.py at 2019-05-30 22:39:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 514.83 Mbit/s  
95th percentile per-packet one-way delay: 77.724 ms  
Loss rate: 0.64%

-- Flow 1:

Average throughput: 278.99 Mbit/s  
95th percentile per-packet one-way delay: 75.755 ms  
Loss rate: 0.38%

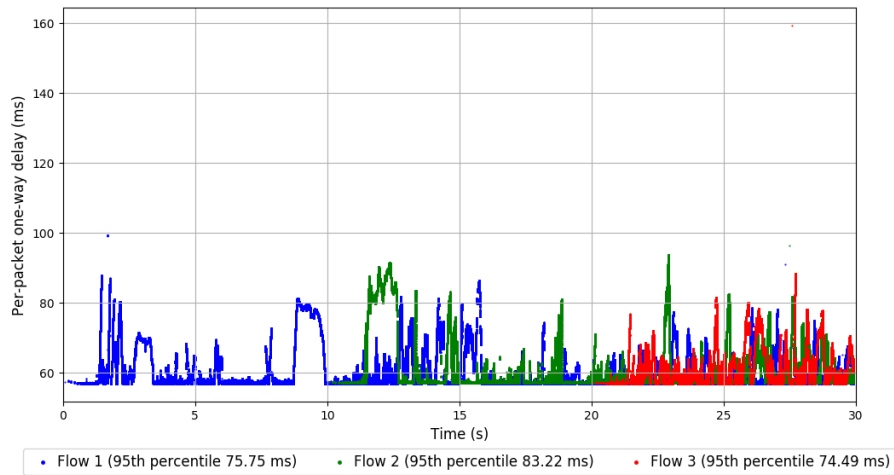
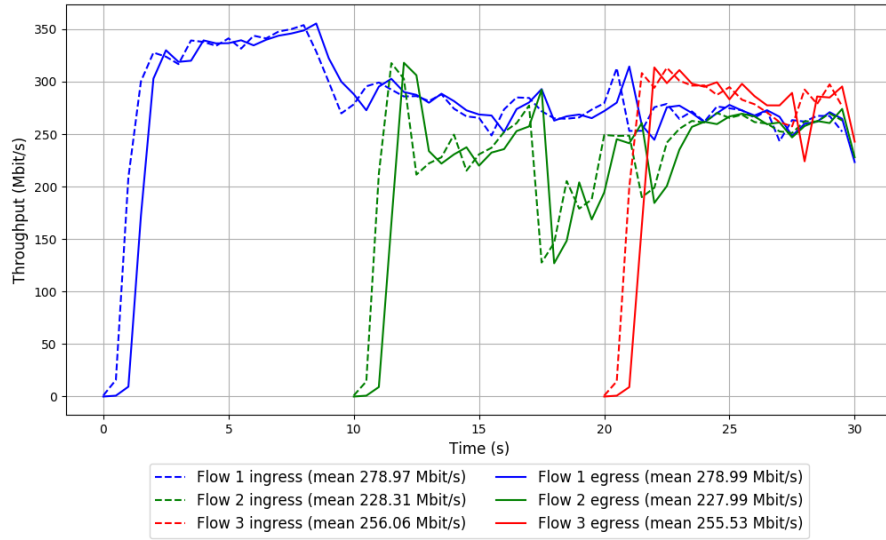
-- Flow 2:

Average throughput: 227.99 Mbit/s  
95th percentile per-packet one-way delay: 83.215 ms  
Loss rate: 0.71%

-- Flow 3:

Average throughput: 255.53 Mbit/s  
95th percentile per-packet one-way delay: 74.486 ms  
Loss rate: 1.36%

## Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-05-30 20:23:13

End at: 2019-05-30 20:23:43

Local clock offset: -0.05 ms

Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2019-05-30 22:39:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 536.36 Mbit/s

95th percentile per-packet one-way delay: 71.557 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 283.91 Mbit/s

95th percentile per-packet one-way delay: 69.247 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 267.93 Mbit/s

95th percentile per-packet one-way delay: 71.258 ms

Loss rate: 0.48%

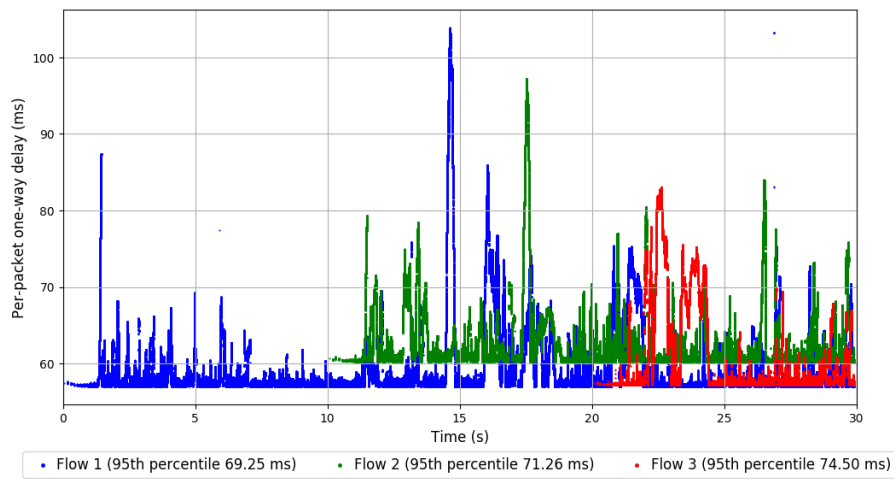
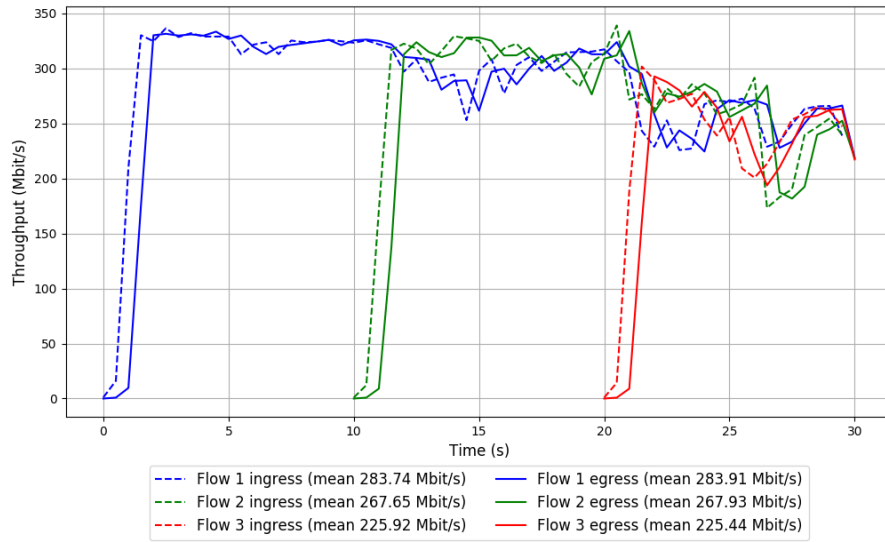
-- Flow 3:

Average throughput: 225.44 Mbit/s

95th percentile per-packet one-way delay: 74.498 ms

Loss rate: 1.36%

### Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

Start at: 2019-05-30 20:59:05

End at: 2019-05-30 20:59:35

Local clock offset: -0.239 ms

Remote clock offset: 0.01 ms

# Below is generated by plot.py at 2019-05-30 22:56:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 541.91 Mbit/s

95th percentile per-packet one-way delay: 73.949 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 274.37 Mbit/s

95th percentile per-packet one-way delay: 80.365 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 274.68 Mbit/s

95th percentile per-packet one-way delay: 72.886 ms

Loss rate: 0.63%

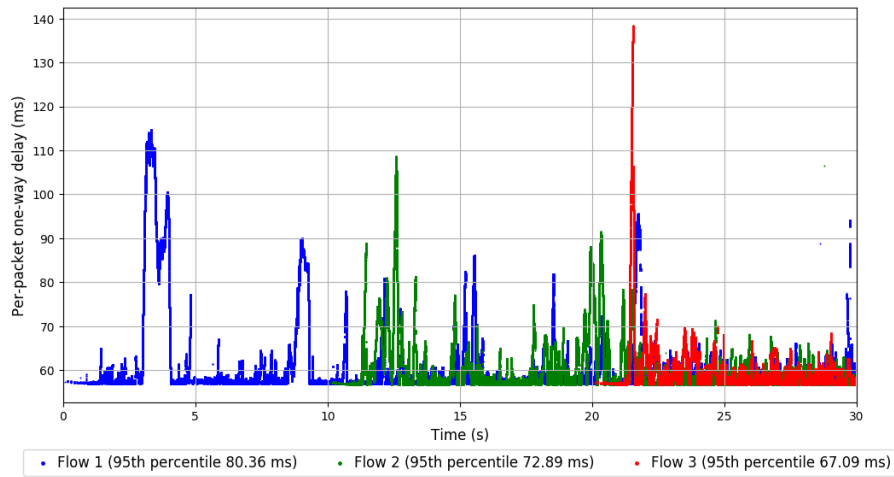
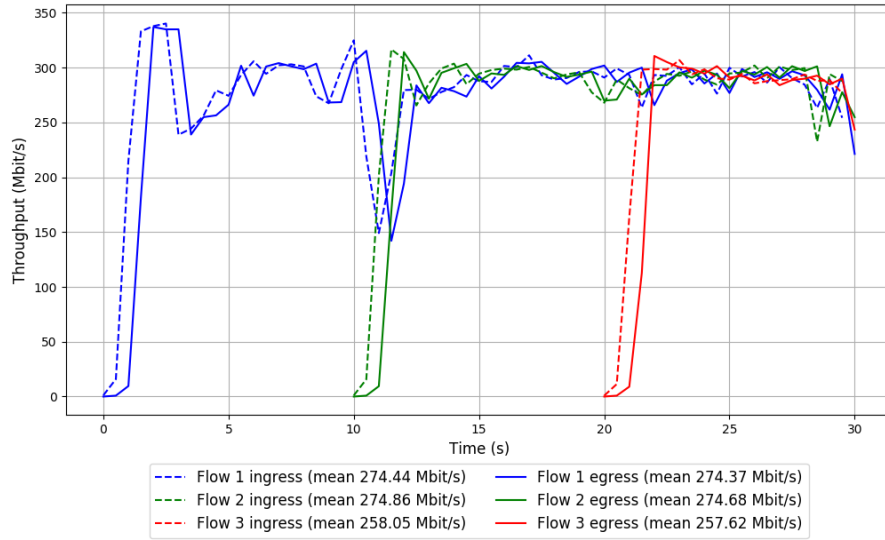
-- Flow 3:

Average throughput: 257.62 Mbit/s

95th percentile per-packet one-way delay: 67.088 ms

Loss rate: 1.35%

### Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-05-30 21:35:25

End at: 2019-05-30 21:35:55

Local clock offset: -0.456 ms

Remote clock offset: 0.073 ms

# Below is generated by plot.py at 2019-05-30 22:56:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 515.99 Mbit/s

95th percentile per-packet one-way delay: 69.874 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 256.76 Mbit/s

95th percentile per-packet one-way delay: 69.163 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 292.29 Mbit/s

95th percentile per-packet one-way delay: 66.882 ms

Loss rate: 0.46%

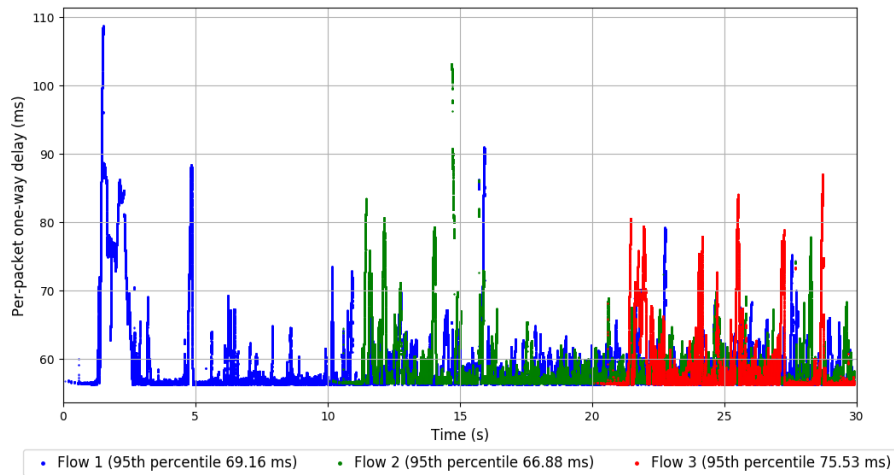
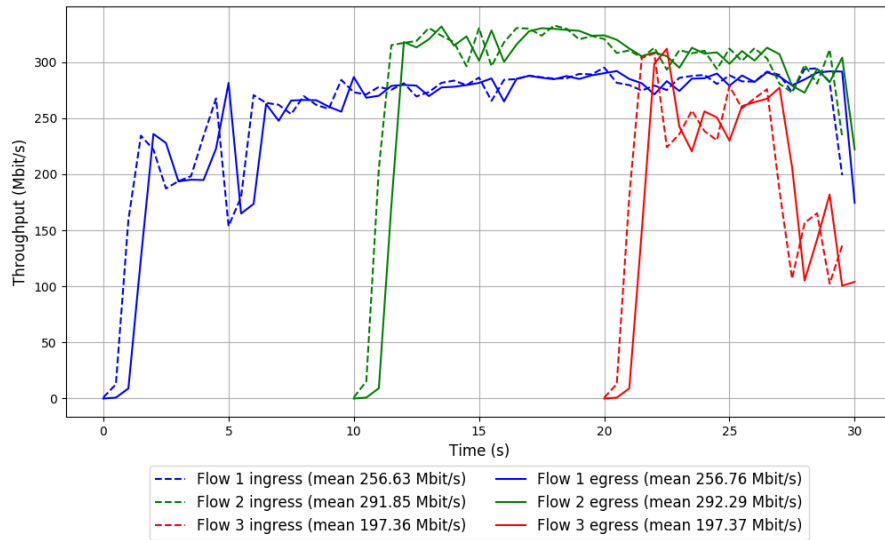
-- Flow 3:

Average throughput: 197.37 Mbit/s

95th percentile per-packet one-way delay: 75.530 ms

Loss rate: 1.16%

### Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-05-30 19:05:59  
End at: 2019-05-30 19:06:29  
Local clock offset: 0.07 ms  
Remote clock offset: -0.439 ms

# Below is generated by plot.py at 2019-05-30 22:56:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 954.81 Mbit/s  
95th percentile per-packet one-way delay: 114.847 ms  
Loss rate: 0.72%

-- Flow 1:

Average throughput: 483.76 Mbit/s  
95th percentile per-packet one-way delay: 99.789 ms  
Loss rate: 0.47%

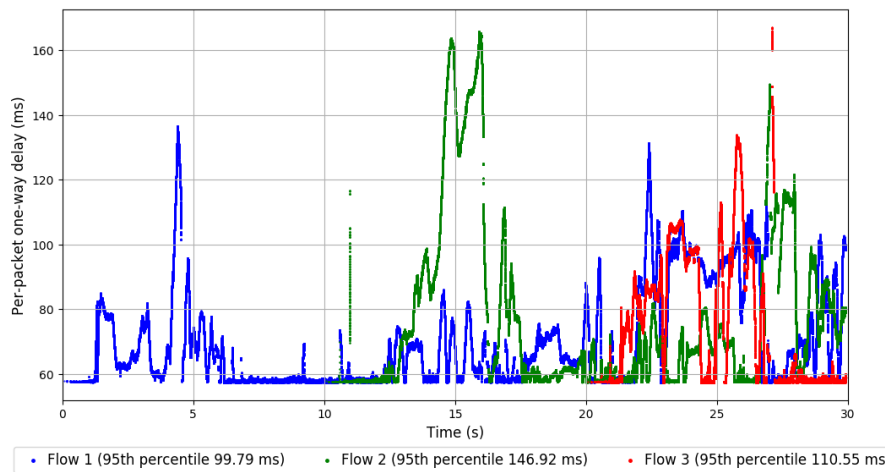
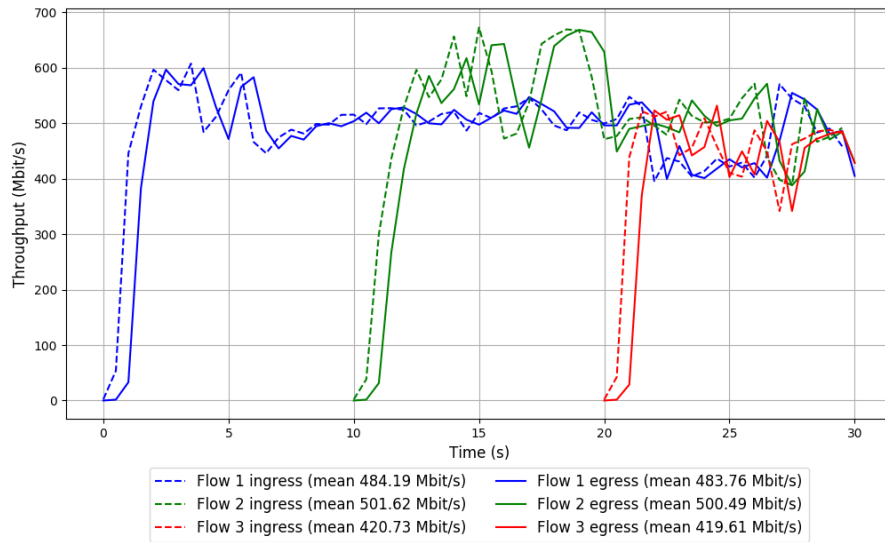
-- Flow 2:

Average throughput: 500.49 Mbit/s  
95th percentile per-packet one-way delay: 146.922 ms  
Loss rate: 0.79%

-- Flow 3:

Average throughput: 419.61 Mbit/s  
95th percentile per-packet one-way delay: 110.551 ms  
Loss rate: 1.37%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-05-30 19:41:58  
End at: 2019-05-30 19:42:28  
Local clock offset: -0.196 ms  
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2019-05-30 22:56:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 910.87 Mbit/s  
95th percentile per-packet one-way delay: 110.346 ms  
Loss rate: 0.71%

-- Flow 1:

Average throughput: 453.39 Mbit/s  
95th percentile per-packet one-way delay: 78.757 ms  
Loss rate: 0.39%

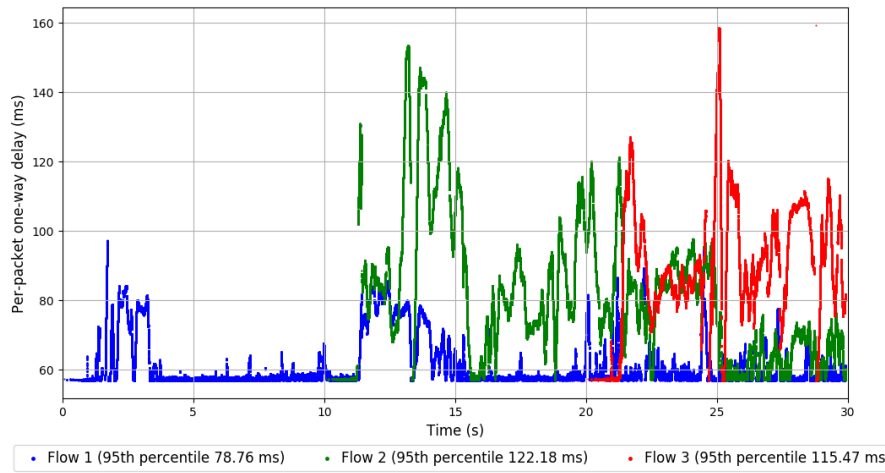
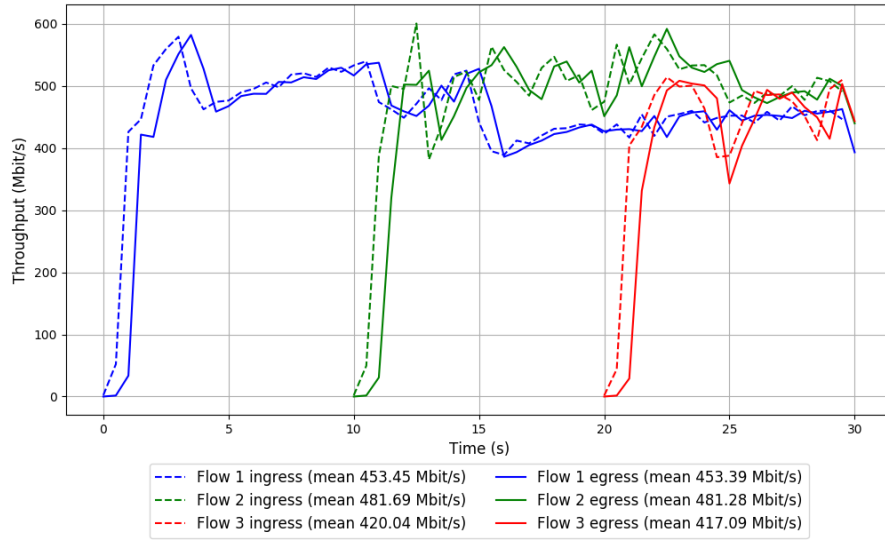
-- Flow 2:

Average throughput: 481.28 Mbit/s  
95th percentile per-packet one-way delay: 122.182 ms  
Loss rate: 0.66%

-- Flow 3:

Average throughput: 417.09 Mbit/s  
95th percentile per-packet one-way delay: 115.475 ms  
Loss rate: 1.84%

Run 2: Report of TCP Cubic — Data Link





Run 3: Statistics of TCP Cubic

Start at: 2019-05-30 20:17:53  
End at: 2019-05-30 20:18:23  
Local clock offset: -0.217 ms  
Remote clock offset: -0.234 ms

# Below is generated by plot.py at 2019-05-30 22:56:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 714.87 Mbit/s  
95th percentile per-packet one-way delay: 72.145 ms  
Loss rate: 0.46%

-- Flow 1:

Average throughput: 420.62 Mbit/s  
95th percentile per-packet one-way delay: 66.624 ms  
Loss rate: 0.31%

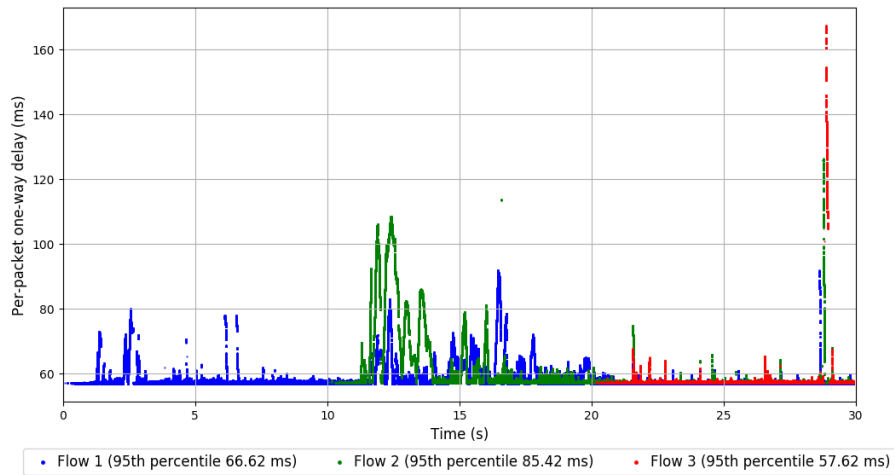
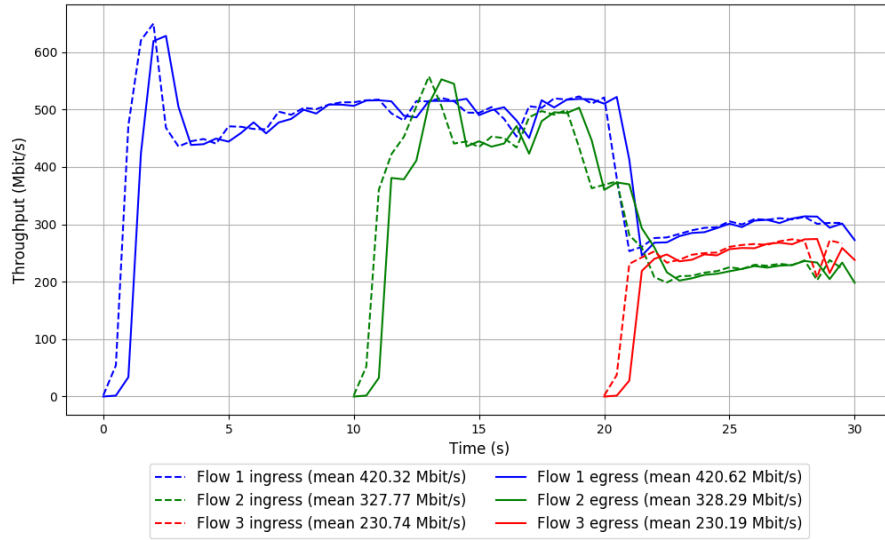
-- Flow 2:

Average throughput: 328.29 Mbit/s  
95th percentile per-packet one-way delay: 85.420 ms  
Loss rate: 0.41%

-- Flow 3:

Average throughput: 230.19 Mbit/s  
95th percentile per-packet one-way delay: 57.615 ms  
Loss rate: 1.42%

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



Run 4: Statistics of TCP Cubic

Start at: 2019-05-30 20:53:32  
End at: 2019-05-30 20:54:02  
Local clock offset: 0.24 ms  
Remote clock offset: -0.164 ms

# Below is generated by plot.py at 2019-05-30 22:56:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 850.01 Mbit/s  
95th percentile per-packet one-way delay: 74.184 ms  
Loss rate: 0.57%

-- Flow 1:

Average throughput: 443.70 Mbit/s  
95th percentile per-packet one-way delay: 66.224 ms  
Loss rate: 0.40%

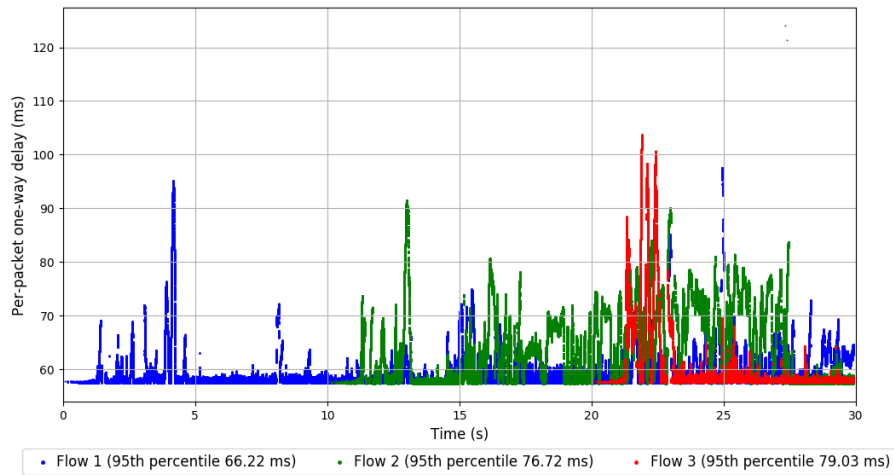
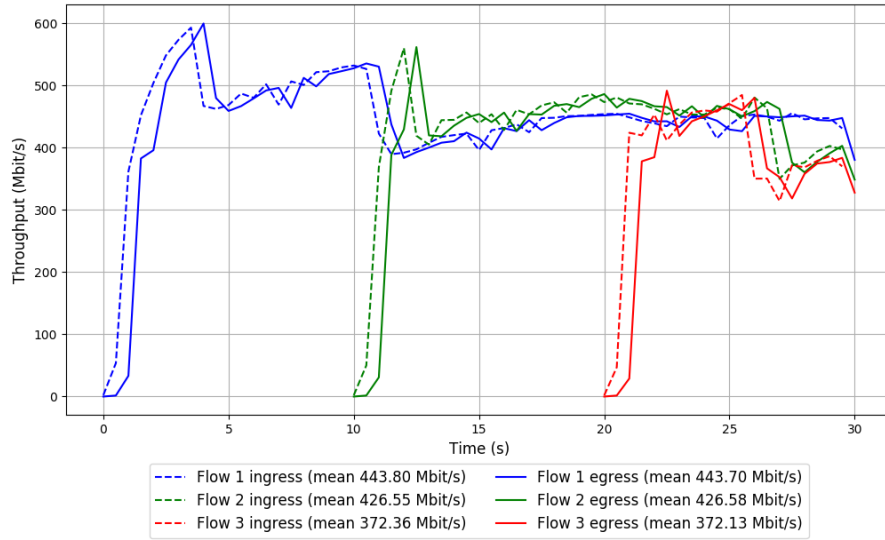
-- Flow 2:

Average throughput: 426.58 Mbit/s  
95th percentile per-packet one-way delay: 76.719 ms  
Loss rate: 0.57%

-- Flow 3:

Average throughput: 372.13 Mbit/s  
95th percentile per-packet one-way delay: 79.028 ms  
Loss rate: 1.21%

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



Run 5: Statistics of TCP Cubic

Start at: 2019-05-30 21:29:43  
End at: 2019-05-30 21:30:13  
Local clock offset: -0.047 ms  
Remote clock offset: -0.382 ms

# Below is generated by plot.py at 2019-05-30 22:56:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 881.88 Mbit/s  
95th percentile per-packet one-way delay: 149.708 ms  
Loss rate: 0.50%

-- Flow 1:

Average throughput: 466.87 Mbit/s  
95th percentile per-packet one-way delay: 119.081 ms  
Loss rate: 0.28%

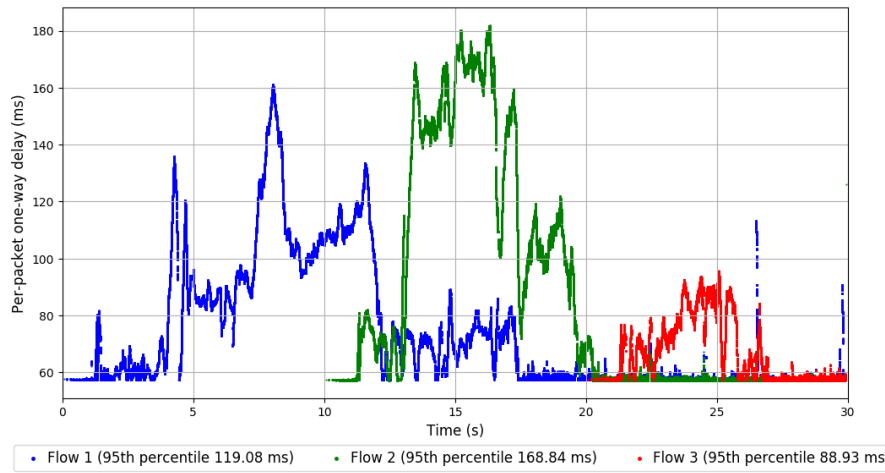
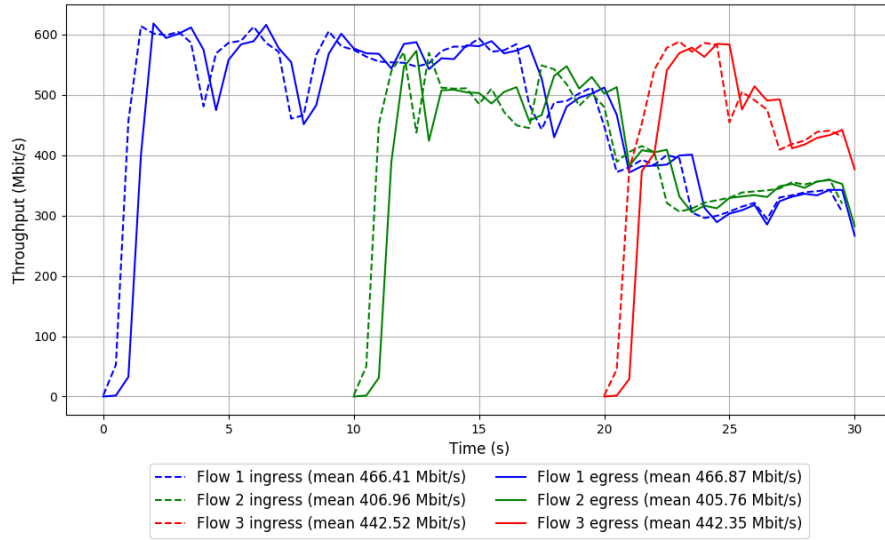
-- Flow 2:

Average throughput: 405.76 Mbit/s  
95th percentile per-packet one-way delay: 168.839 ms  
Loss rate: 0.52%

-- Flow 3:

Average throughput: 442.35 Mbit/s  
95th percentile per-packet one-way delay: 88.930 ms  
Loss rate: 1.18%

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



Run 1: Statistics of FillP

Start at: 2019-05-30 19:33:36

End at: 2019-05-30 19:34:06

Local clock offset: -0.077 ms

Remote clock offset: 0.416 ms

# Below is generated by plot.py at 2019-05-30 23:00:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 918.49 Mbit/s

95th percentile per-packet one-way delay: 96.325 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 558.86 Mbit/s

95th percentile per-packet one-way delay: 99.443 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 392.79 Mbit/s

95th percentile per-packet one-way delay: 60.625 ms

Loss rate: 0.59%

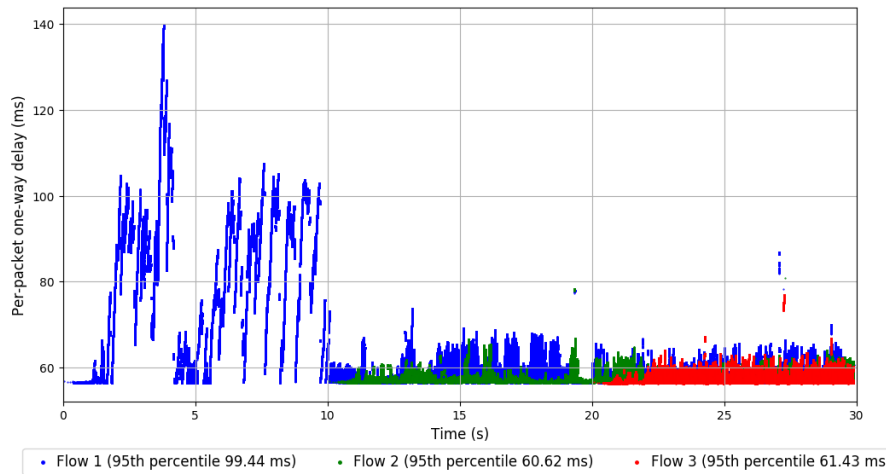
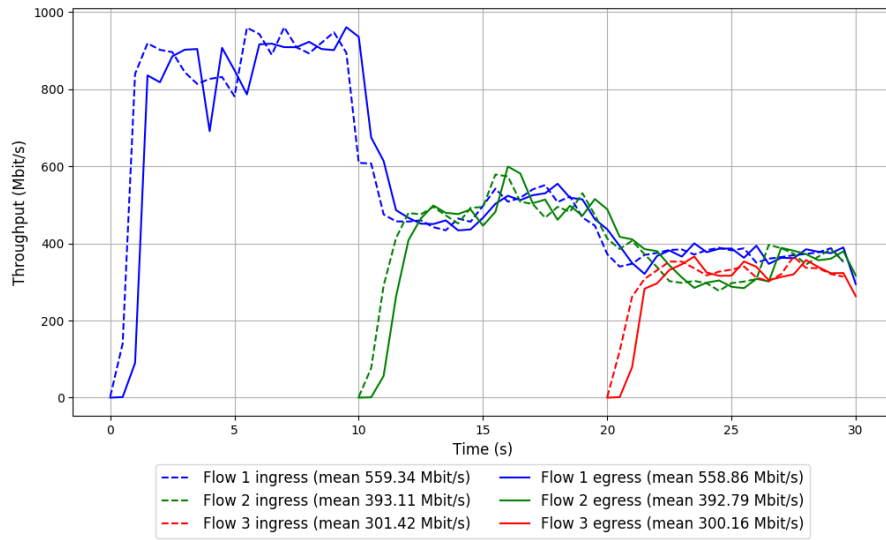
-- Flow 3:

Average throughput: 300.16 Mbit/s

95th percentile per-packet one-way delay: 61.433 ms

Loss rate: 1.57%

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





Run 2: Statistics of FillP

Start at: 2019-05-30 20:09:43  
End at: 2019-05-30 20:10:13  
Local clock offset: -0.461 ms  
Remote clock offset: -0.749 ms

# Below is generated by plot.py at 2019-05-30 23:10:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 824.80 Mbit/s  
95th percentile per-packet one-way delay: 76.647 ms  
Loss rate: 0.42%

-- Flow 1:

Average throughput: 522.24 Mbit/s  
95th percentile per-packet one-way delay: 84.865 ms  
Loss rate: 0.26%

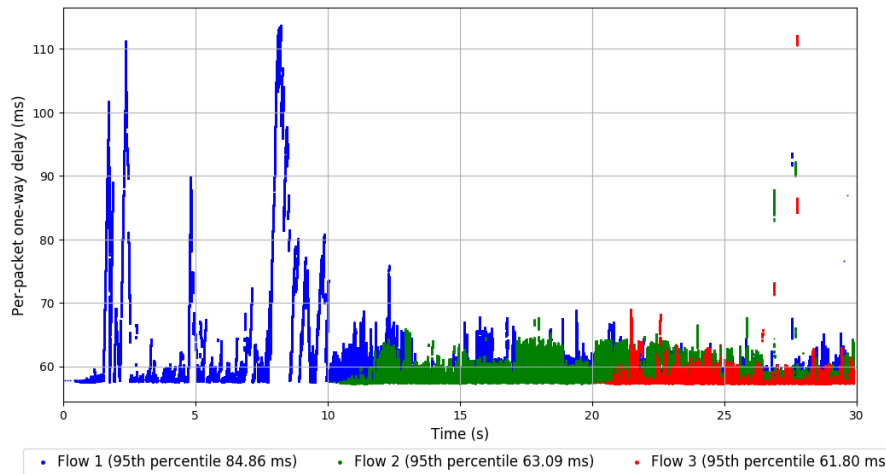
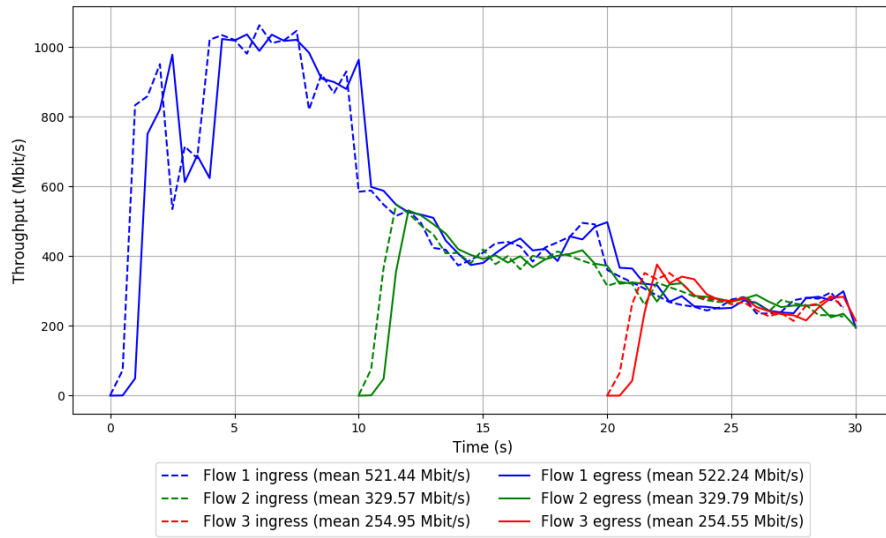
-- Flow 2:

Average throughput: 329.79 Mbit/s  
95th percentile per-packet one-way delay: 63.090 ms  
Loss rate: 0.48%

-- Flow 3:

Average throughput: 254.55 Mbit/s  
95th percentile per-packet one-way delay: 61.805 ms  
Loss rate: 1.25%

## Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-05-30 20:45:21

End at: 2019-05-30 20:45:51

Local clock offset: -0.221 ms

Remote clock offset: 0.015 ms

# Below is generated by plot.py at 2019-05-30 23:13:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 850.34 Mbit/s

95th percentile per-packet one-way delay: 80.970 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 541.92 Mbit/s

95th percentile per-packet one-way delay: 87.767 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 339.29 Mbit/s

95th percentile per-packet one-way delay: 59.928 ms

Loss rate: 0.74%

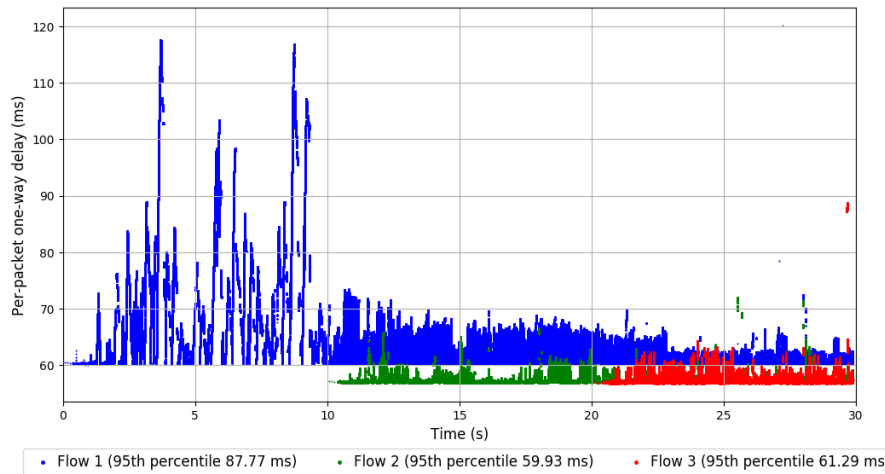
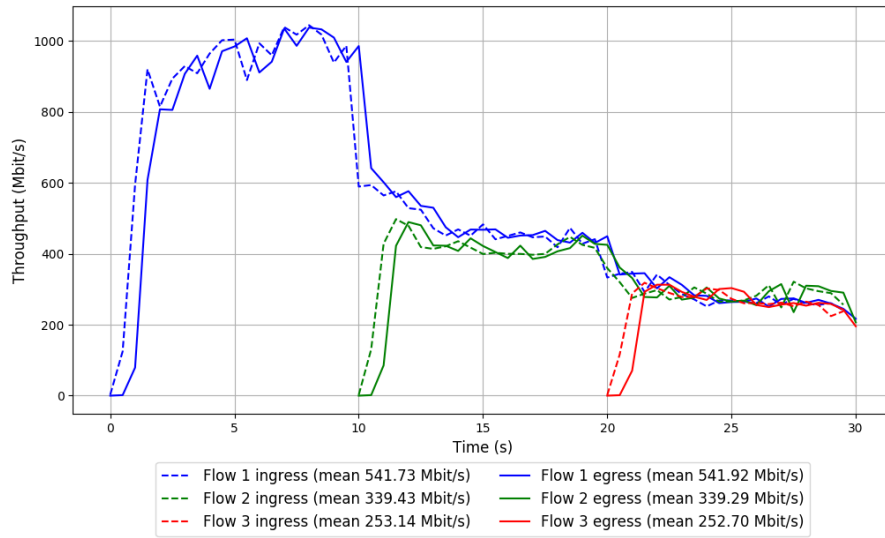
-- Flow 3:

Average throughput: 252.70 Mbit/s

95th percentile per-packet one-way delay: 61.286 ms

Loss rate: 1.22%

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



Run 4: Statistics of FillP

Start at: 2019-05-30 21:21:16

End at: 2019-05-30 21:21:46

Local clock offset: 0.195 ms

Remote clock offset: 0.042 ms

# Below is generated by plot.py at 2019-05-30 23:13:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 836.41 Mbit/s

95th percentile per-packet one-way delay: 72.578 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 511.89 Mbit/s

95th percentile per-packet one-way delay: 81.536 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 353.75 Mbit/s

95th percentile per-packet one-way delay: 67.481 ms

Loss rate: 0.49%

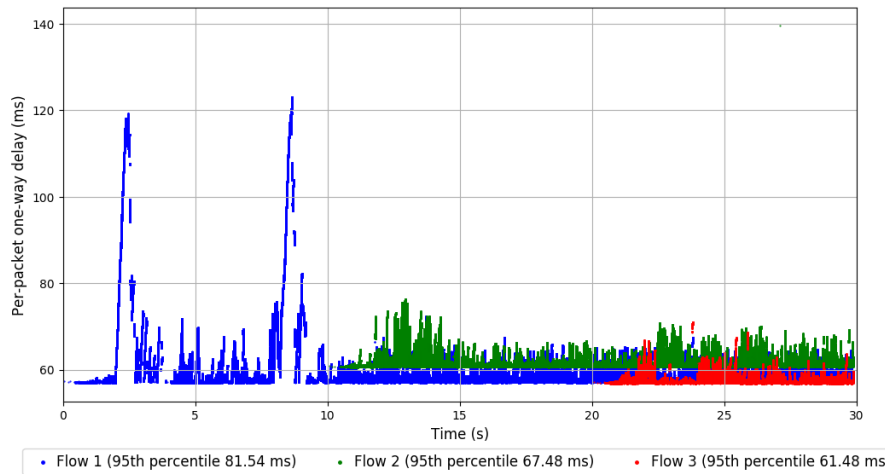
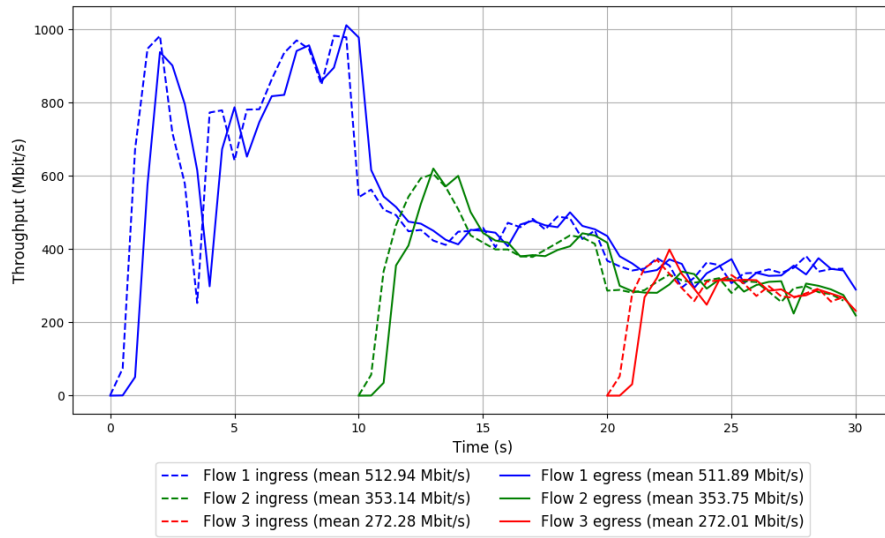
-- Flow 3:

Average throughput: 272.01 Mbit/s

95th percentile per-packet one-way delay: 61.477 ms

Loss rate: 1.15%

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



Run 5: Statistics of FillP

Start at: 2019-05-30 21:57:20

End at: 2019-05-30 21:57:50

Local clock offset: 0.002 ms

Remote clock offset: -0.14 ms

# Below is generated by plot.py at 2019-05-30 23:14:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 872.18 Mbit/s

95th percentile per-packet one-way delay: 79.359 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 542.36 Mbit/s

95th percentile per-packet one-way delay: 83.382 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 358.50 Mbit/s

95th percentile per-packet one-way delay: 66.167 ms

Loss rate: 0.52%

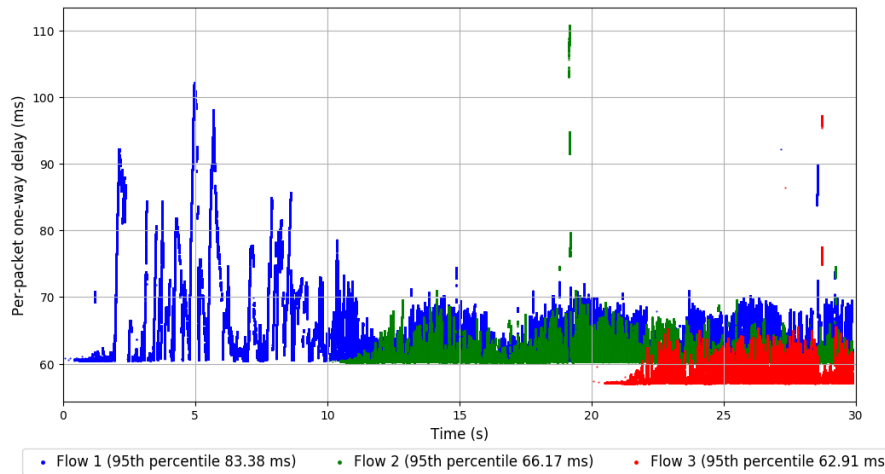
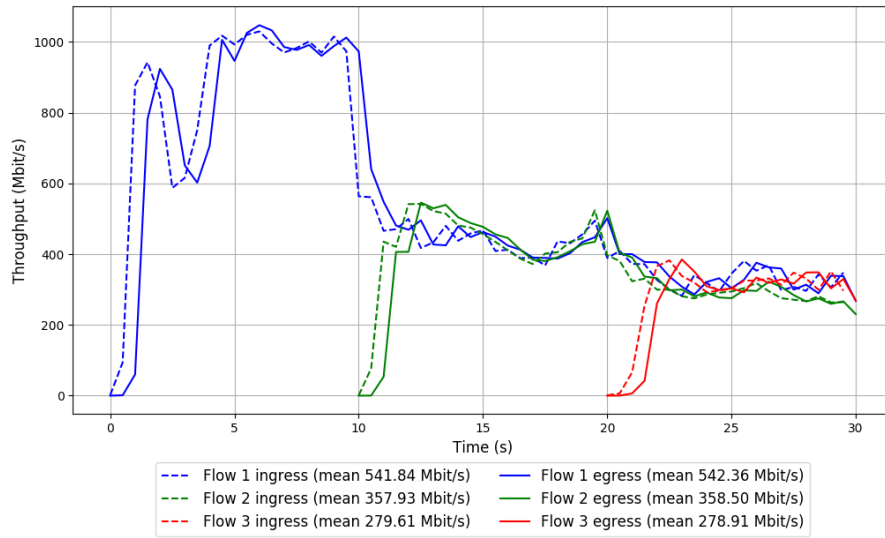
-- Flow 3:

Average throughput: 278.91 Mbit/s

95th percentile per-packet one-way delay: 62.910 ms

Loss rate: 1.30%

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





Run 1: Statistics of FillP-Sheep

Start at: 2019-05-30 19:37:24

End at: 2019-05-30 19:37:54

Local clock offset: -0.415 ms

Remote clock offset: -0.3 ms

# Below is generated by plot.py at 2019-05-30 23:14:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 568.08 Mbit/s

95th percentile per-packet one-way delay: 67.326 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 266.28 Mbit/s

95th percentile per-packet one-way delay: 73.075 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 330.04 Mbit/s

95th percentile per-packet one-way delay: 60.142 ms

Loss rate: 0.38%

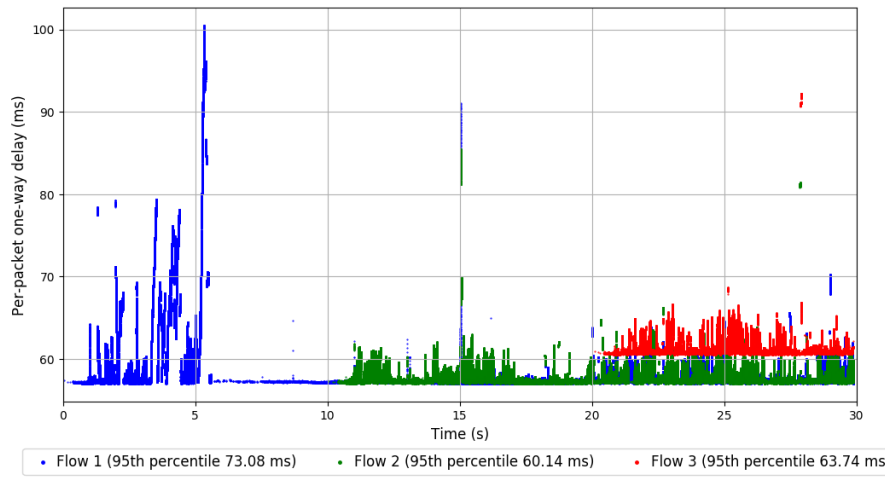
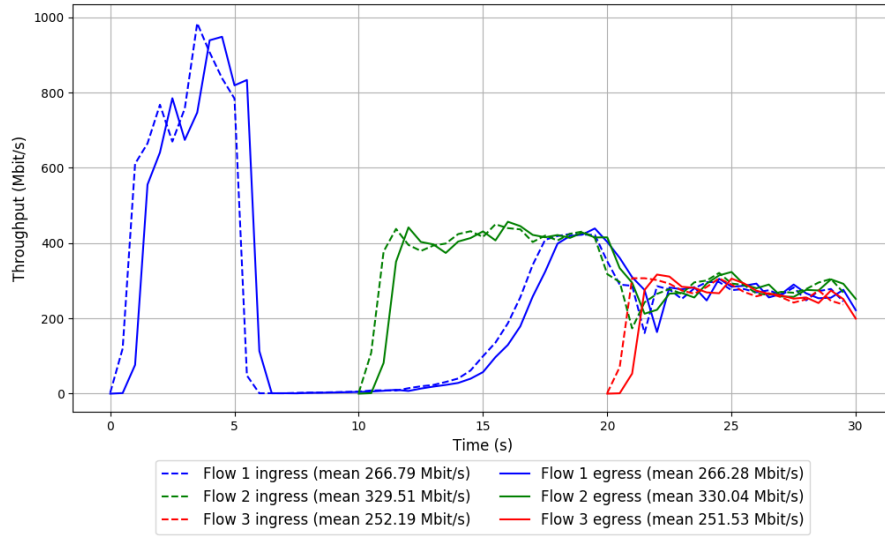
-- Flow 3:

Average throughput: 251.53 Mbit/s

95th percentile per-packet one-way delay: 63.737 ms

Loss rate: 1.42%

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



Run 2: Statistics of FillP-Sheep

Start at: 2019-05-30 20:13:27  
End at: 2019-05-30 20:13:57  
Local clock offset: -0.481 ms  
Remote clock offset: -0.155 ms

# Below is generated by plot.py at 2019-05-30 23:14:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 364.24 Mbit/s  
95th percentile per-packet one-way delay: 62.966 ms  
Loss rate: 1.03%

-- Flow 1:

Average throughput: 58.50 Mbit/s  
95th percentile per-packet one-way delay: 74.151 ms  
Loss rate: 1.28%

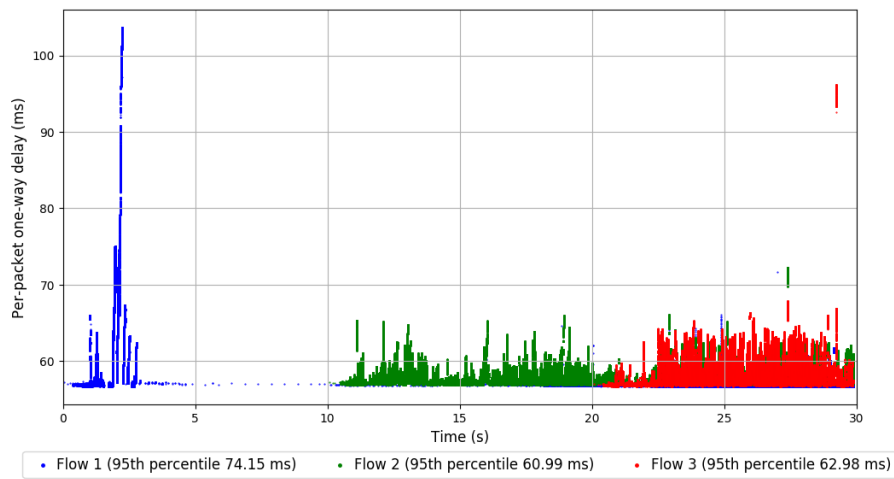
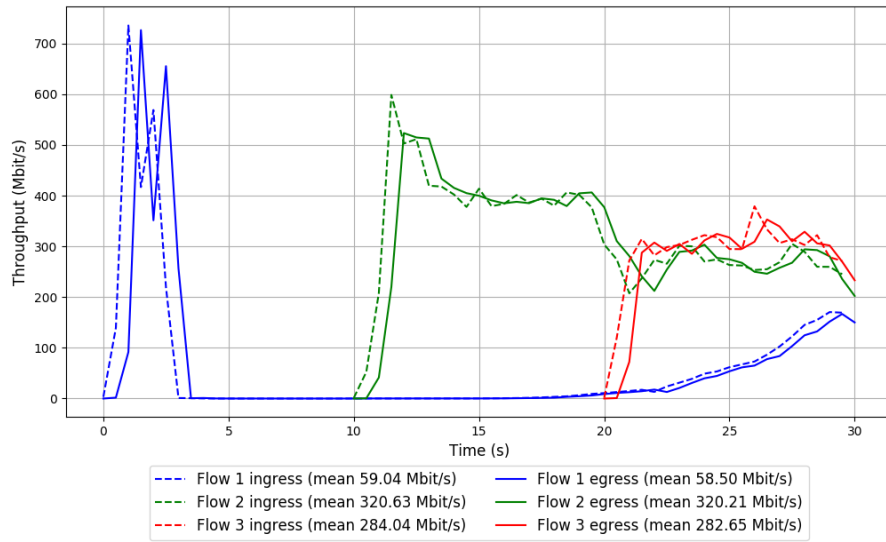
-- Flow 2:

Average throughput: 320.21 Mbit/s  
95th percentile per-packet one-way delay: 60.993 ms  
Loss rate: 0.68%

-- Flow 3:

Average throughput: 282.65 Mbit/s  
95th percentile per-packet one-way delay: 62.984 ms  
Loss rate: 1.65%

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



Run 3: Statistics of FillP-Sheep

Start at: 2019-05-30 20:49:05  
End at: 2019-05-30 20:49:35  
Local clock offset: -0.611 ms  
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2019-05-30 23:14:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 352.47 Mbit/s  
95th percentile per-packet one-way delay: 61.083 ms  
Loss rate: 0.69%

-- Flow 1:

Average throughput: 43.45 Mbit/s  
95th percentile per-packet one-way delay: 58.800 ms  
Loss rate: 0.00%

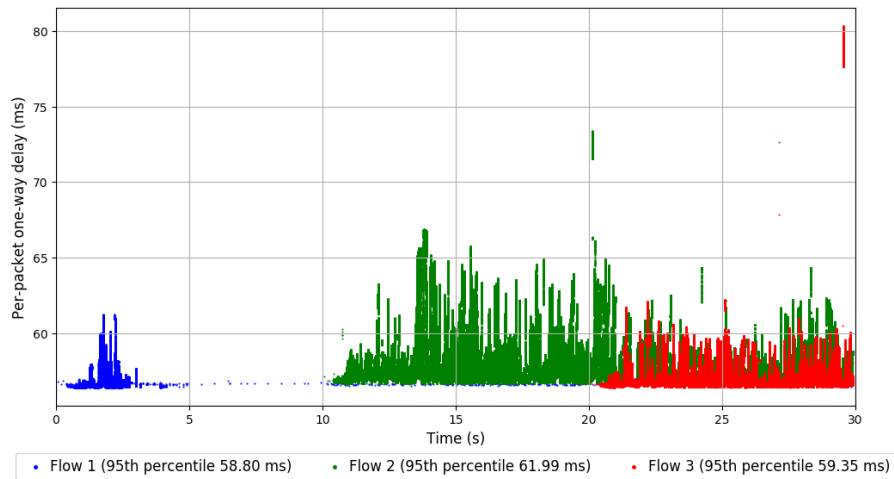
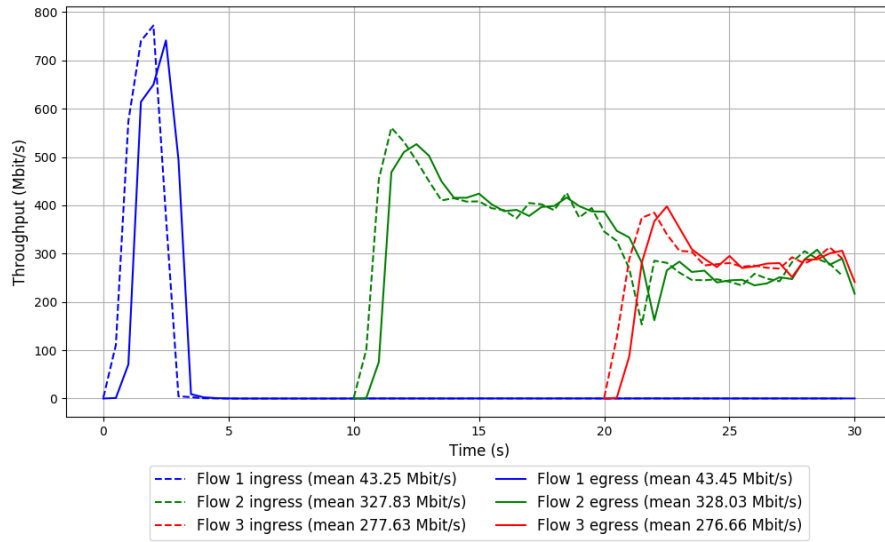
-- Flow 2:

Average throughput: 328.03 Mbit/s  
95th percentile per-packet one-way delay: 61.987 ms  
Loss rate: 0.48%

-- Flow 3:

Average throughput: 276.66 Mbit/s  
95th percentile per-packet one-way delay: 59.351 ms  
Loss rate: 1.51%

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



Run 4: Statistics of FillP-Sheep

Start at: 2019-05-30 21:25:00  
End at: 2019-05-30 21:25:30  
Local clock offset: -0.461 ms  
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2019-05-30 23:19:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 776.02 Mbit/s  
95th percentile per-packet one-way delay: 73.864 ms  
Loss rate: 0.41%

-- Flow 1:

Average throughput: 484.31 Mbit/s  
95th percentile per-packet one-way delay: 84.505 ms  
Loss rate: 0.26%

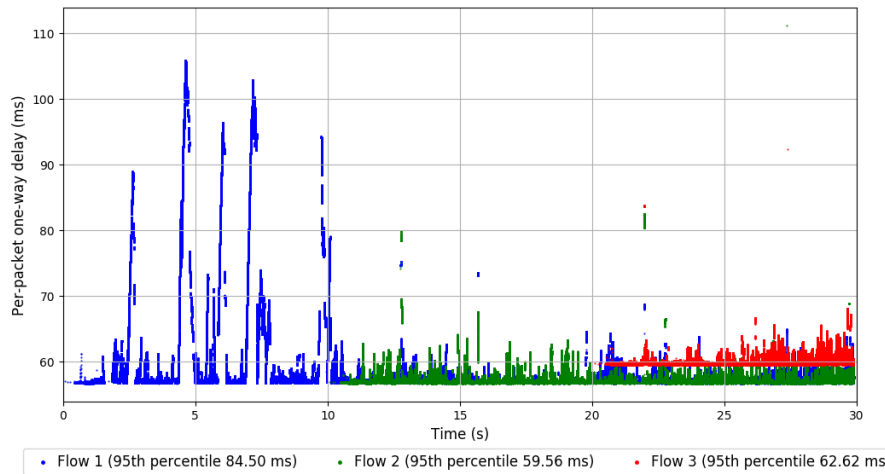
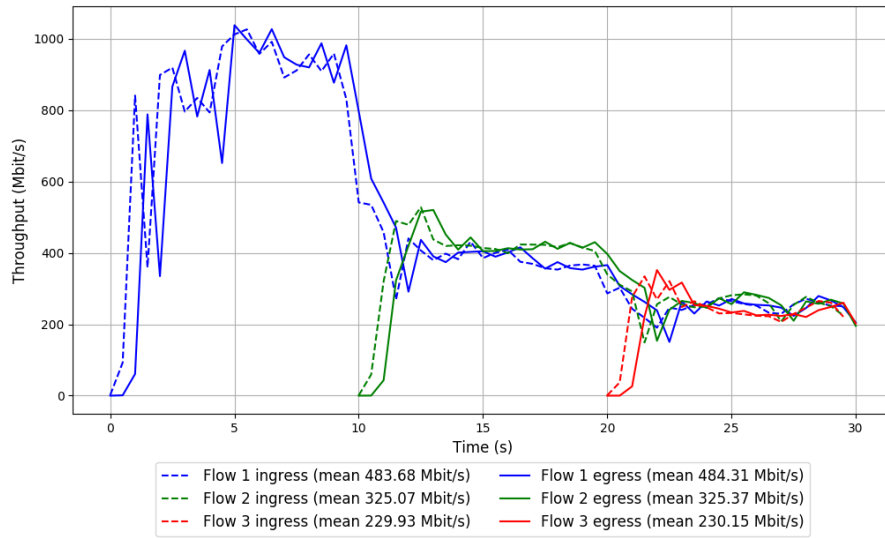
-- Flow 2:

Average throughput: 325.37 Mbit/s  
95th percentile per-packet one-way delay: 59.560 ms  
Loss rate: 0.44%

-- Flow 3:

Average throughput: 230.15 Mbit/s  
95th percentile per-packet one-way delay: 62.620 ms  
Loss rate: 1.26%

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





Run 5: Statistics of FillP-Sheep

Start at: 2019-05-30 22:01:07  
End at: 2019-05-30 22:01:37  
Local clock offset: 0.19 ms  
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2019-05-30 23:21:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 778.17 Mbit/s  
95th percentile per-packet one-way delay: 81.708 ms  
Loss rate: 0.39%

-- Flow 1:

Average throughput: 500.00 Mbit/s  
95th percentile per-packet one-way delay: 86.463 ms  
Loss rate: 0.19%

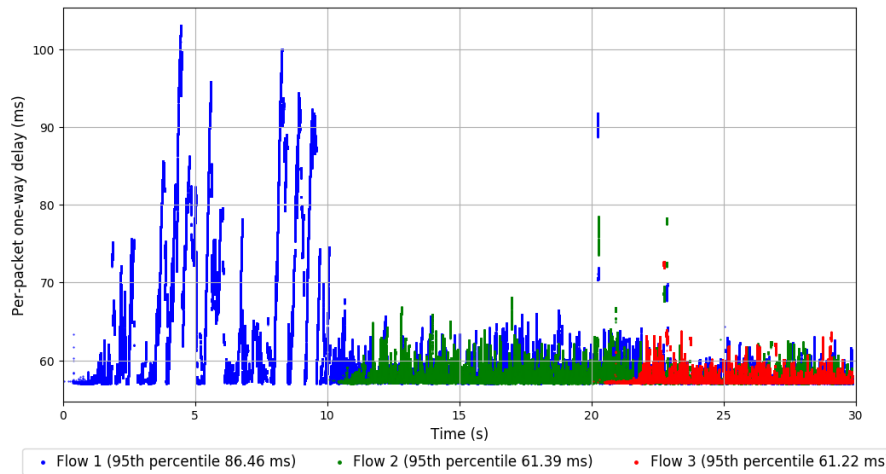
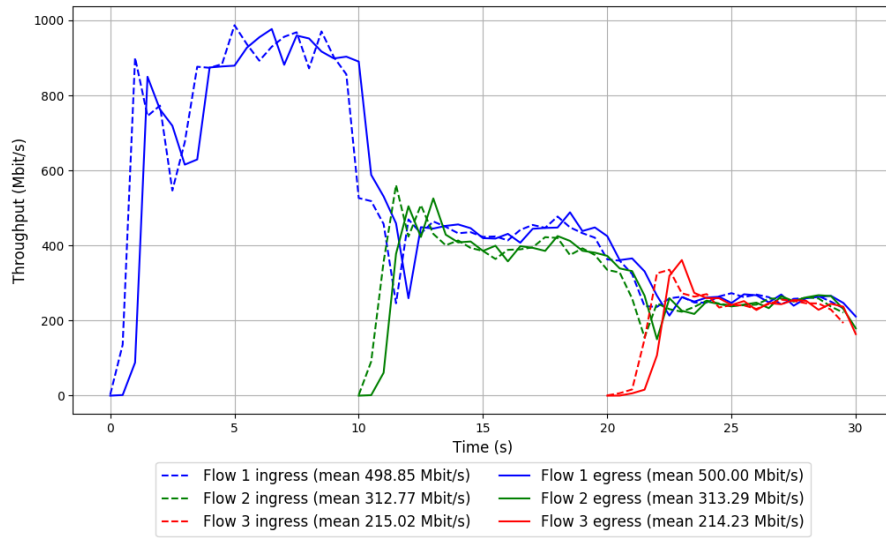
-- Flow 2:

Average throughput: 313.29 Mbit/s  
95th percentile per-packet one-way delay: 61.391 ms  
Loss rate: 0.52%

-- Flow 3:

Average throughput: 214.23 Mbit/s  
95th percentile per-packet one-way delay: 61.218 ms  
Loss rate: 1.41%

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



Run 1: Statistics of Indigo

Start at: 2019-05-30 19:31:47  
End at: 2019-05-30 19:32:17  
Local clock offset: -0.179 ms  
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2019-05-30 23:21:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 400.30 Mbit/s  
95th percentile per-packet one-way delay: 63.446 ms  
Loss rate: 0.62%

-- Flow 1:

Average throughput: 207.71 Mbit/s  
95th percentile per-packet one-way delay: 64.612 ms  
Loss rate: 0.44%

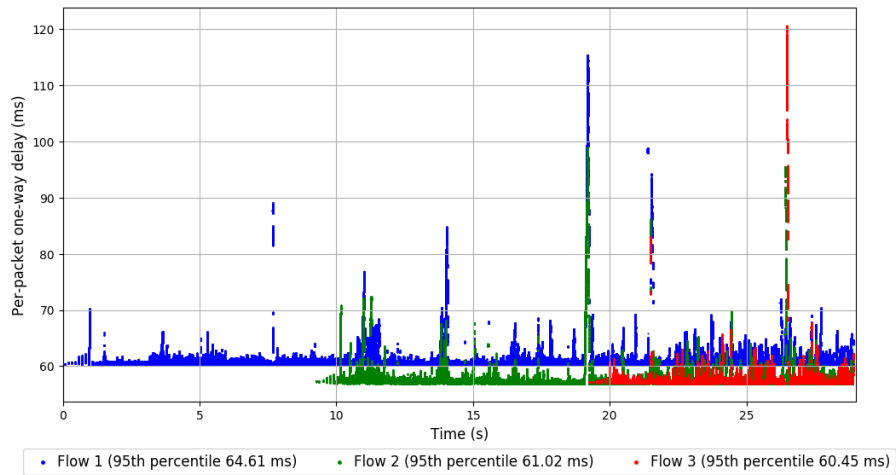
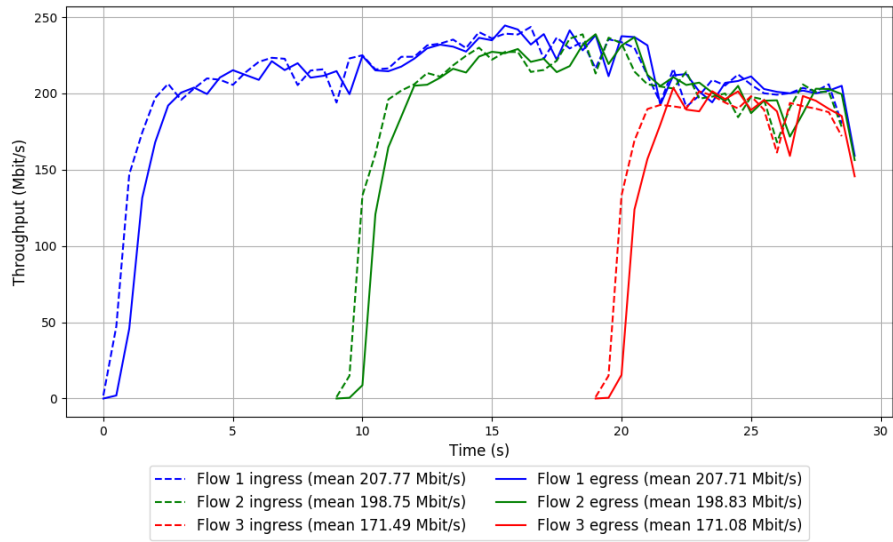
-- Flow 2:

Average throughput: 198.83 Mbit/s  
95th percentile per-packet one-way delay: 61.023 ms  
Loss rate: 0.57%

-- Flow 3:

Average throughput: 171.08 Mbit/s  
95th percentile per-packet one-way delay: 60.448 ms  
Loss rate: 1.40%

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



Run 2: Statistics of Indigo

Start at: 2019-05-30 20:07:52  
End at: 2019-05-30 20:08:22  
Local clock offset: -0.221 ms  
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2019-05-30 23:22:11

# Datalink statistics

-- Total of 3 flows:

Average throughput: 396.45 Mbit/s  
95th percentile per-packet one-way delay: 60.260 ms  
Loss rate: 0.57%

-- Flow 1:

Average throughput: 208.14 Mbit/s  
95th percentile per-packet one-way delay: 60.051 ms  
Loss rate: 0.37%

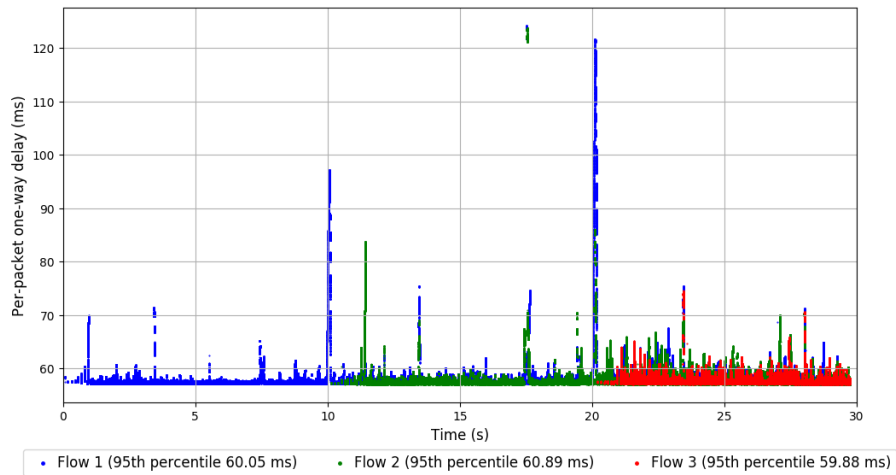
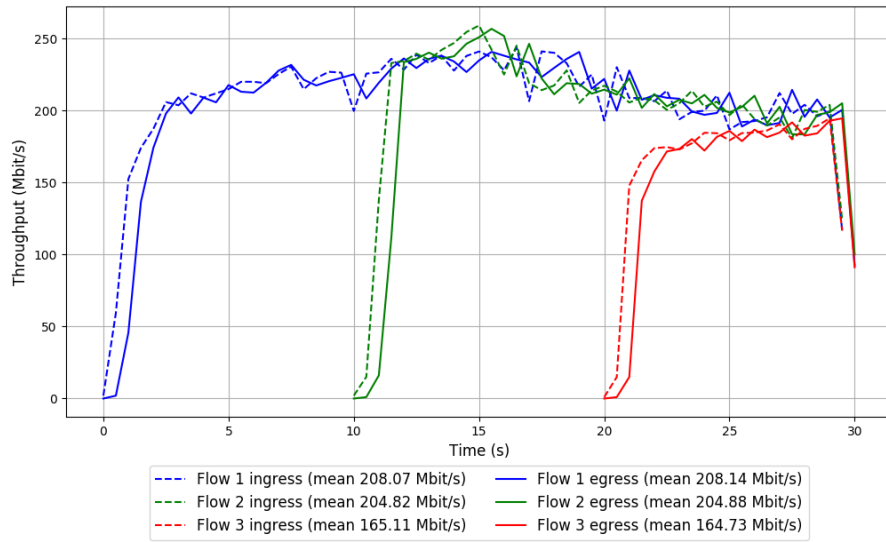
-- Flow 2:

Average throughput: 204.88 Mbit/s  
95th percentile per-packet one-way delay: 60.893 ms  
Loss rate: 0.56%

-- Flow 3:

Average throughput: 164.73 Mbit/s  
95th percentile per-packet one-way delay: 59.879 ms  
Loss rate: 1.41%

## Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-05-30 20:43:31  
End at: 2019-05-30 20:44:01  
Local clock offset: -0.026 ms  
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2019-05-30 23:25:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 392.26 Mbit/s  
95th percentile per-packet one-way delay: 62.411 ms  
Loss rate: 0.78%

-- Flow 1:

Average throughput: 212.87 Mbit/s  
95th percentile per-packet one-way delay: 60.479 ms  
Loss rate: 0.49%

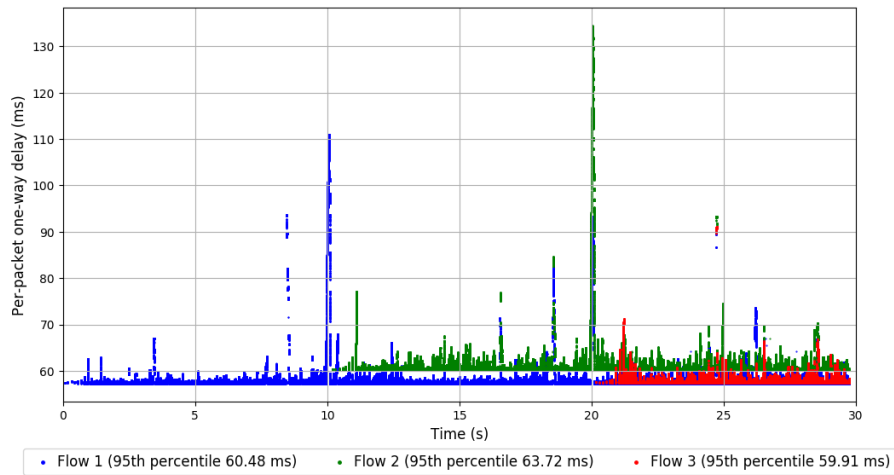
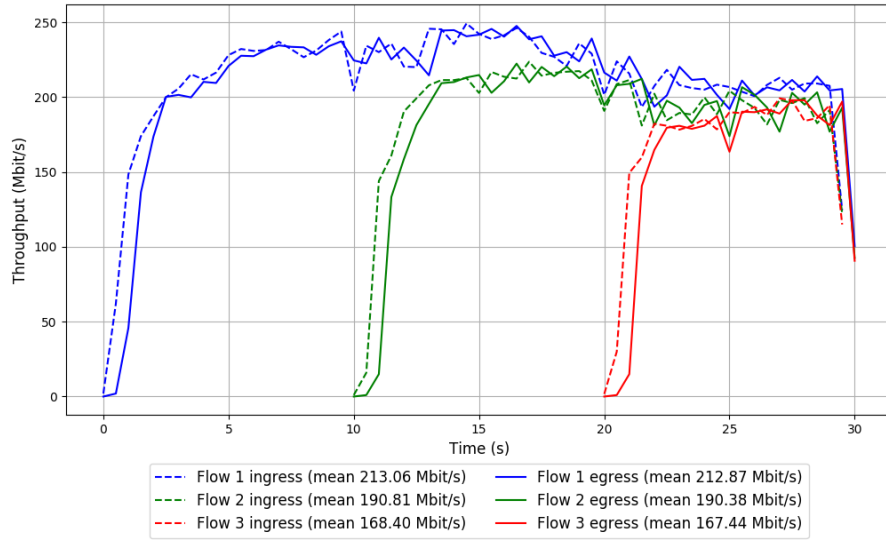
-- Flow 2:

Average throughput: 190.38 Mbit/s  
95th percentile per-packet one-way delay: 63.721 ms  
Loss rate: 0.83%

-- Flow 3:

Average throughput: 167.44 Mbit/s  
95th percentile per-packet one-way delay: 59.906 ms  
Loss rate: 1.78%

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





Run 4: Statistics of Indigo

Start at: 2019-05-30 21:19:26

End at: 2019-05-30 21:19:56

Local clock offset: 0.354 ms

Remote clock offset: 0.059 ms

# Below is generated by plot.py at 2019-05-30 23:28:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 391.06 Mbit/s

95th percentile per-packet one-way delay: 59.832 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 219.13 Mbit/s

95th percentile per-packet one-way delay: 59.727 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 182.58 Mbit/s

95th percentile per-packet one-way delay: 60.161 ms

Loss rate: 0.64%

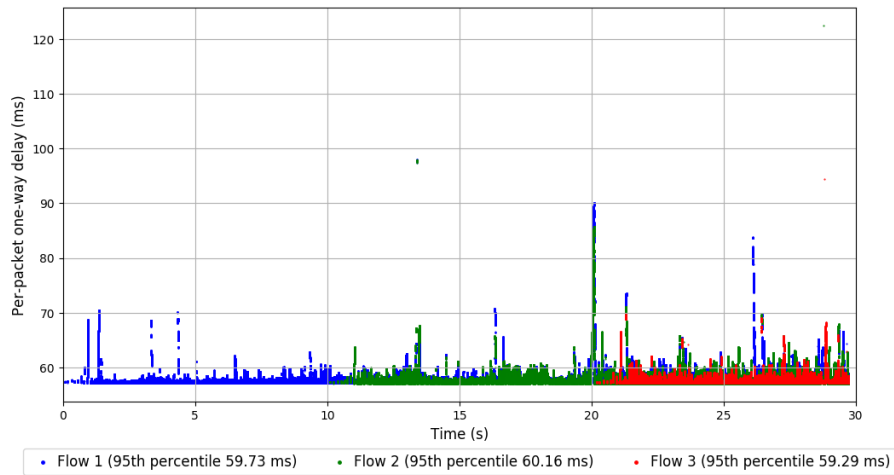
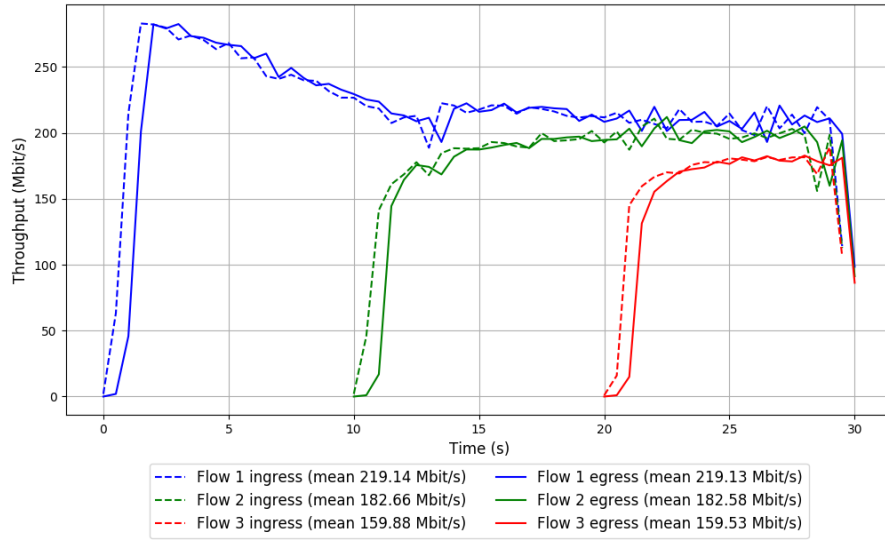
-- Flow 3:

Average throughput: 159.53 Mbit/s

95th percentile per-packet one-way delay: 59.289 ms

Loss rate: 1.43%

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



Run 5: Statistics of Indigo

Start at: 2019-05-30 21:55:30

End at: 2019-05-30 21:56:00

Local clock offset: -0.403 ms

Remote clock offset: 0.296 ms

# Below is generated by plot.py at 2019-05-30 23:28:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 391.39 Mbit/s

95th percentile per-packet one-way delay: 60.391 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 211.64 Mbit/s

95th percentile per-packet one-way delay: 61.922 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 191.16 Mbit/s

95th percentile per-packet one-way delay: 59.779 ms

Loss rate: 0.59%

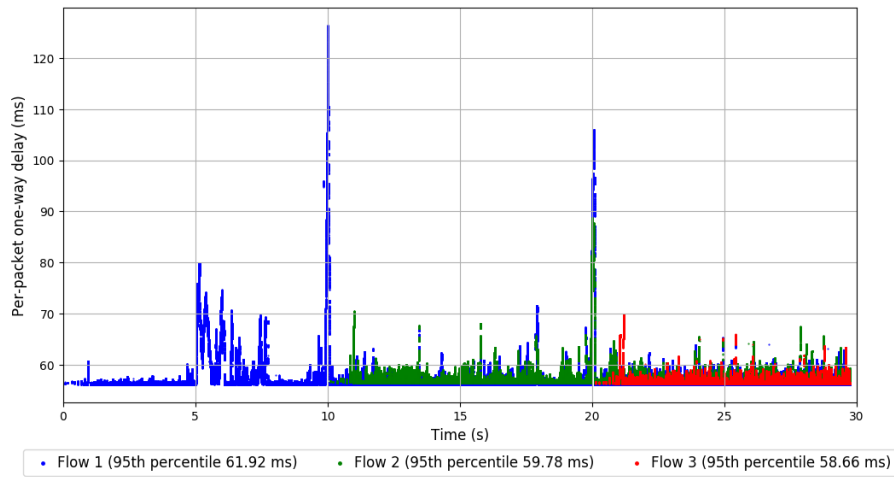
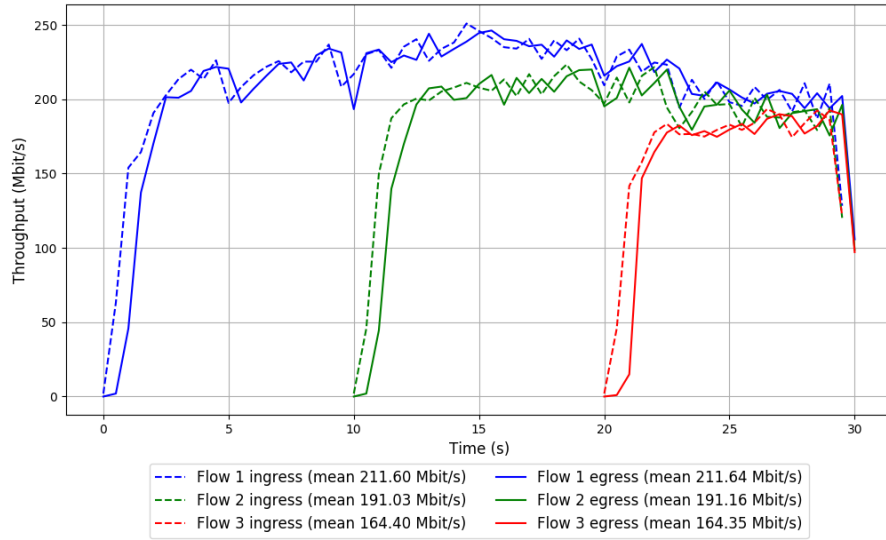
-- Flow 3:

Average throughput: 164.35 Mbit/s

95th percentile per-packet one-way delay: 58.662 ms

Loss rate: 1.36%

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



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-05-30 19:08:00  
End at: 2019-05-30 19:08:30  
Local clock offset: -0.355 ms  
Remote clock offset: -0.171 ms

# Below is generated by plot.py at 2019-05-30 23:28:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 727.87 Mbit/s  
95th percentile per-packet one-way delay: 66.838 ms  
Loss rate: 0.48%

-- Flow 1:

Average throughput: 425.59 Mbit/s  
95th percentile per-packet one-way delay: 68.089 ms  
Loss rate: 0.24%

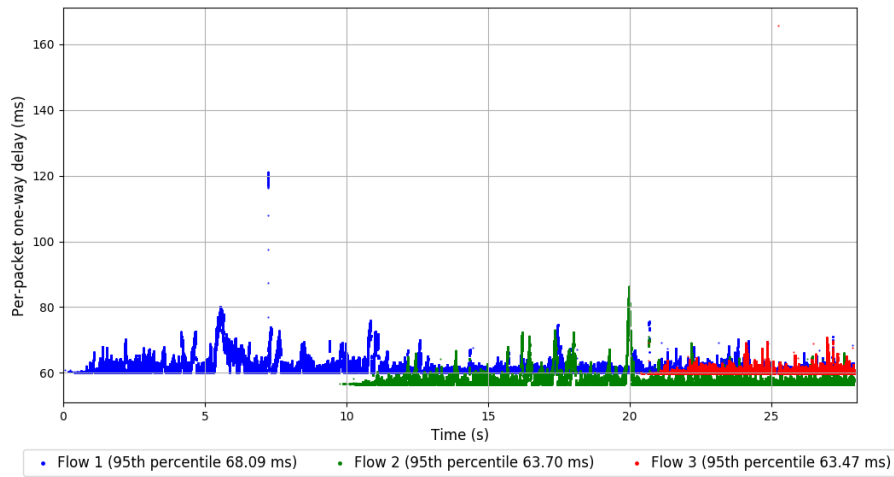
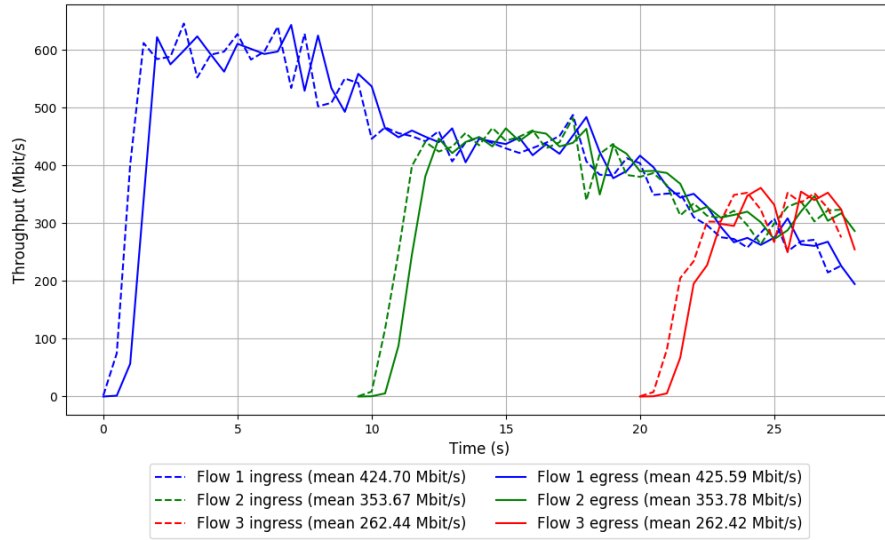
-- Flow 2:

Average throughput: 353.78 Mbit/s  
95th percentile per-packet one-way delay: 63.697 ms  
Loss rate: 0.59%

-- Flow 3:

Average throughput: 262.42 Mbit/s  
95th percentile per-packet one-way delay: 63.470 ms  
Loss rate: 1.51%

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



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-05-30 19:43:58  
End at: 2019-05-30 19:44:28  
Local clock offset: -0.664 ms  
Remote clock offset: -0.122 ms

# Below is generated by plot.py at 2019-05-30 23:31:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 726.38 Mbit/s  
95th percentile per-packet one-way delay: 62.483 ms  
Loss rate: 0.60%

-- Flow 1:

Average throughput: 426.20 Mbit/s  
95th percentile per-packet one-way delay: 63.269 ms  
Loss rate: 0.33%

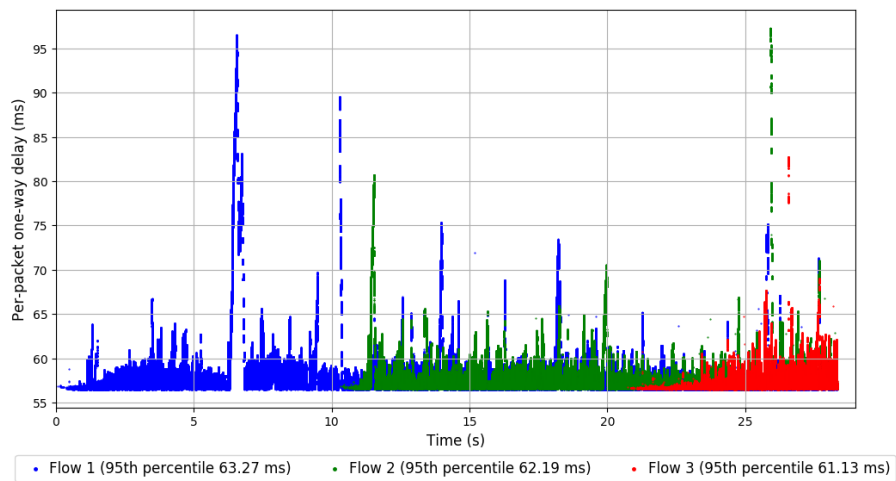
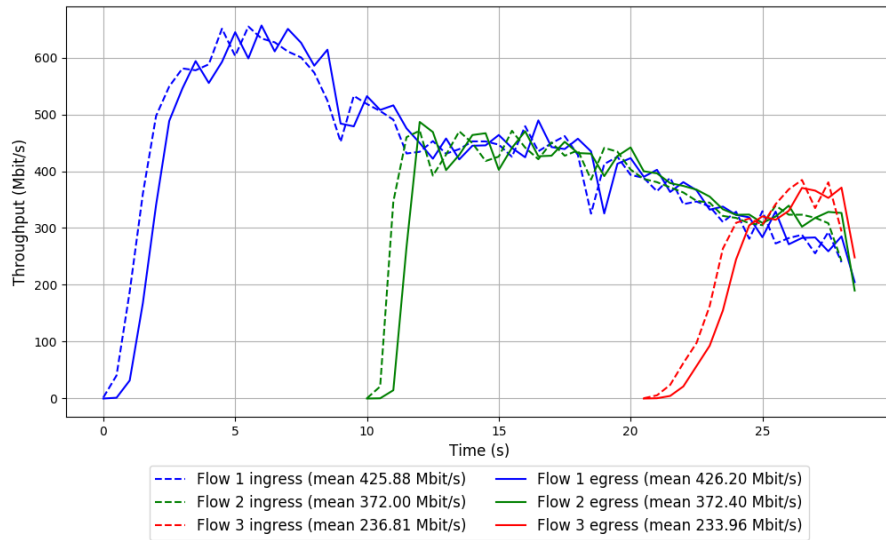
-- Flow 2:

Average throughput: 372.40 Mbit/s  
95th percentile per-packet one-way delay: 62.190 ms  
Loss rate: 0.52%

-- Flow 3:

Average throughput: 233.96 Mbit/s  
95th percentile per-packet one-way delay: 61.134 ms  
Loss rate: 2.68%

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



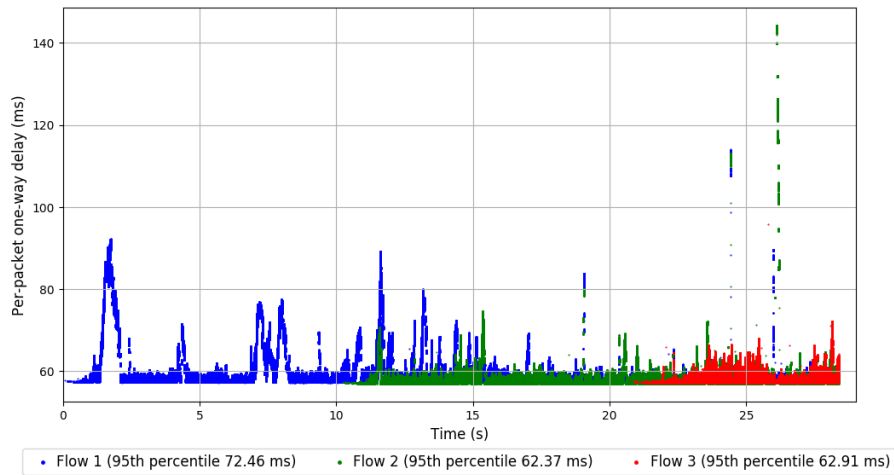
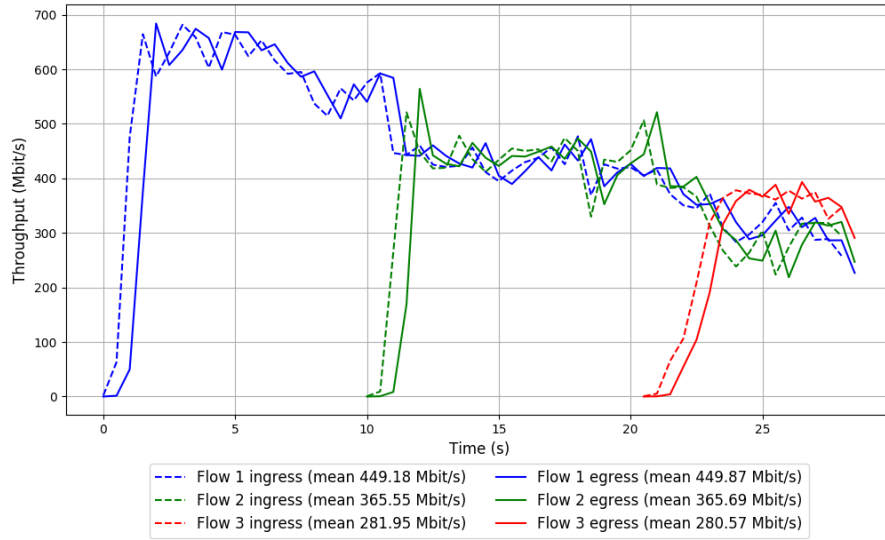


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-05-30 20:19:44  
End at: 2019-05-30 20:20:14  
Local clock offset: -0.19 ms  
Remote clock offset: -0.155 ms

```
# Below is generated by plot.py at 2019-05-30 23:33:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 759.29 Mbit/s
95th percentile per-packet one-way delay: 68.317 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 449.87 Mbit/s
95th percentile per-packet one-way delay: 72.457 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 365.69 Mbit/s
95th percentile per-packet one-way delay: 62.374 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 280.57 Mbit/s
95th percentile per-packet one-way delay: 62.915 ms
Loss rate: 2.02%
```

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

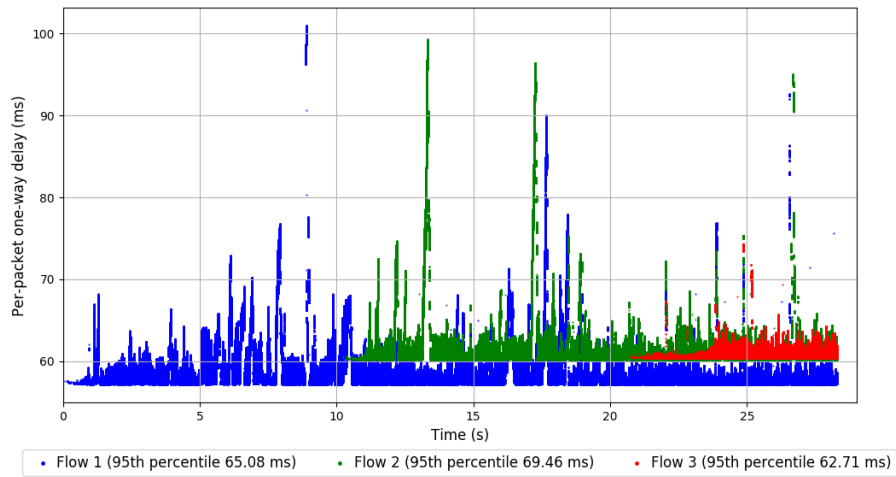
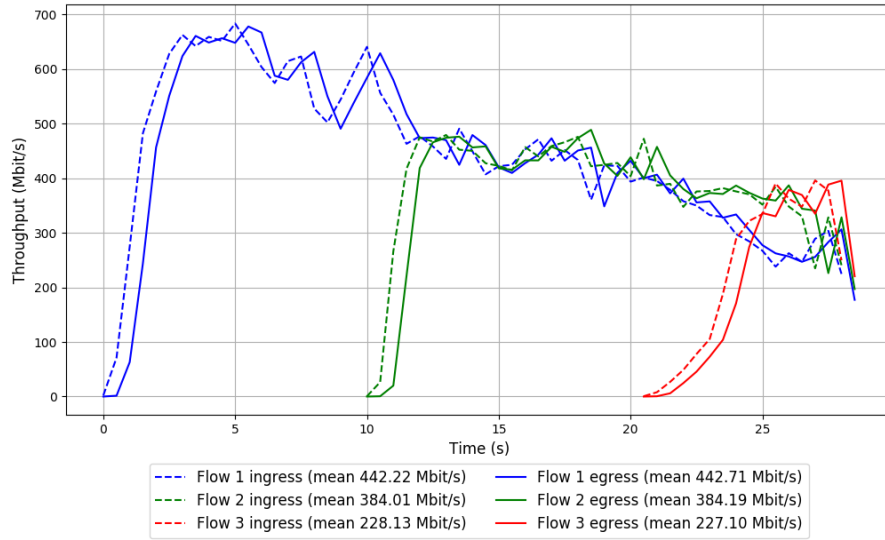


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-05-30 20:55:29  
End at: 2019-05-30 20:55:59  
Local clock offset: 0.089 ms  
Remote clock offset: -0.017 ms

```
# Below is generated by plot.py at 2019-05-30 23:35:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 749.53 Mbit/s
95th percentile per-packet one-way delay: 65.598 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 442.71 Mbit/s
95th percentile per-packet one-way delay: 65.078 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 384.19 Mbit/s
95th percentile per-packet one-way delay: 69.456 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 227.10 Mbit/s
95th percentile per-packet one-way delay: 62.707 ms
Loss rate: 2.04%
```

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



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-05-30 21:31:42

End at: 2019-05-30 21:32:12

Local clock offset: 0.104 ms

Remote clock offset: 0.07 ms

# Below is generated by plot.py at 2019-05-30 23:36:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 762.48 Mbit/s

95th percentile per-packet one-way delay: 67.072 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 453.51 Mbit/s

95th percentile per-packet one-way delay: 67.535 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 370.96 Mbit/s

95th percentile per-packet one-way delay: 67.230 ms

Loss rate: 0.68%

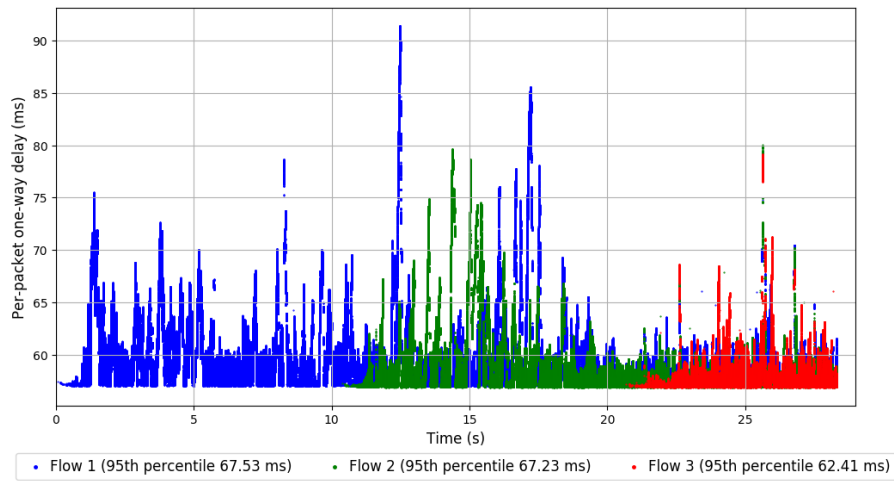
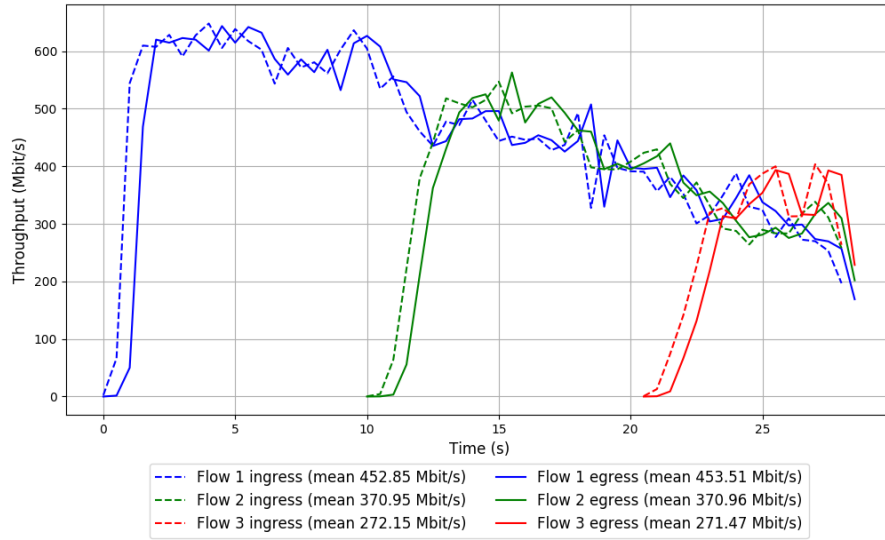
-- Flow 3:

Average throughput: 271.47 Mbit/s

95th percentile per-packet one-way delay: 62.408 ms

Loss rate: 1.77%

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



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-05-30 19:20:42  
End at: 2019-05-30 19:21:12  
Local clock offset: 0.228 ms  
Remote clock offset: -0.235 ms

# Below is generated by plot.py at 2019-05-30 23:39:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 758.11 Mbit/s  
95th percentile per-packet one-way delay: 84.045 ms  
Loss rate: 0.37%

-- Flow 1:

Average throughput: 475.05 Mbit/s  
95th percentile per-packet one-way delay: 87.204 ms  
Loss rate: 0.25%

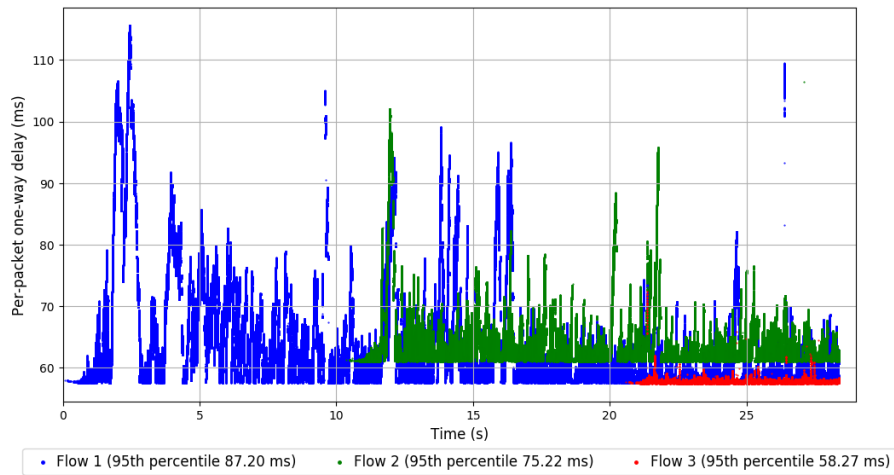
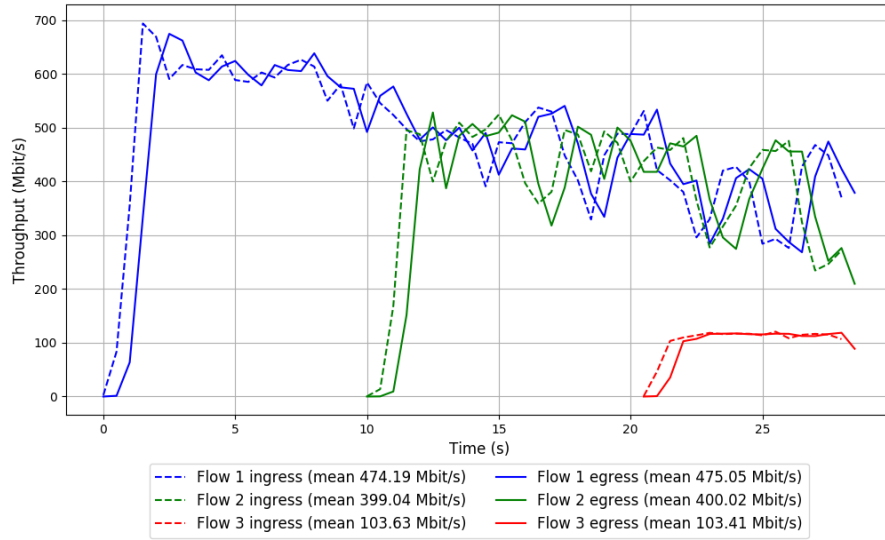
-- Flow 2:

Average throughput: 400.02 Mbit/s  
95th percentile per-packet one-way delay: 75.221 ms  
Loss rate: 0.43%

-- Flow 3:

Average throughput: 103.41 Mbit/s  
95th percentile per-packet one-way delay: 58.275 ms  
Loss rate: 1.75%

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



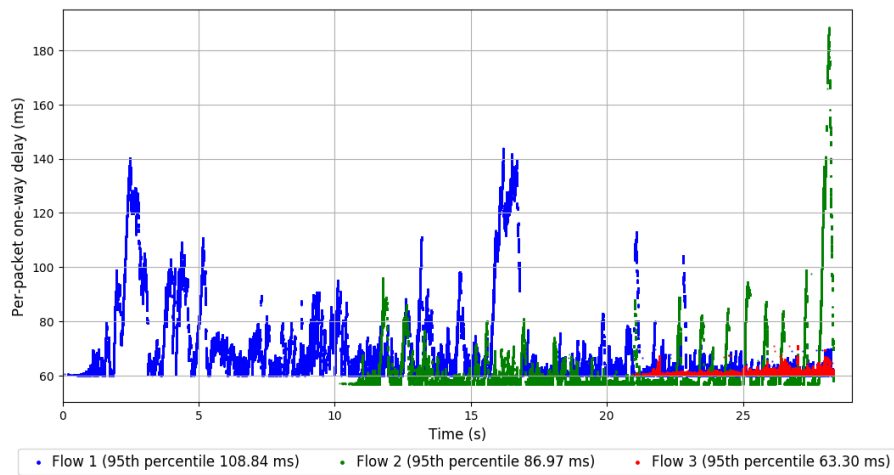
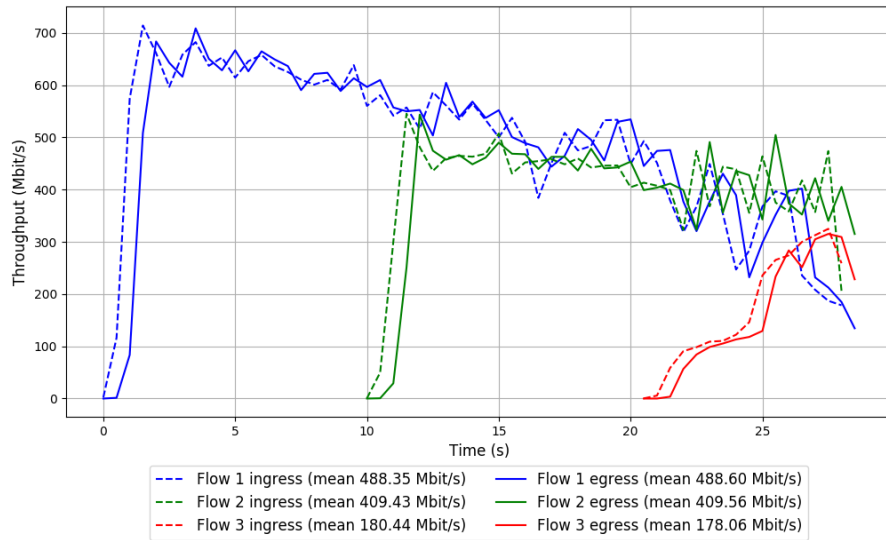


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-05-30 19:56:47  
End at: 2019-05-30 19:57:17  
Local clock offset: -0.198 ms  
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2019-05-30 23:42:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 798.36 Mbit/s  
95th percentile per-packet one-way delay: 101.081 ms  
Loss rate: 0.41%  
-- Flow 1:  
Average throughput: 488.60 Mbit/s  
95th percentile per-packet one-way delay: 108.838 ms  
Loss rate: 0.33%  
-- Flow 2:  
Average throughput: 409.56 Mbit/s  
95th percentile per-packet one-way delay: 86.968 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 178.06 Mbit/s  
95th percentile per-packet one-way delay: 63.295 ms  
Loss rate: 2.88%

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



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-05-30 20:32:25  
End at: 2019-05-30 20:32:55  
Local clock offset: -0.393 ms  
Remote clock offset: -0.224 ms

# Below is generated by plot.py at 2019-05-30 23:42:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 719.12 Mbit/s  
95th percentile per-packet one-way delay: 86.570 ms  
Loss rate: 0.47%

-- Flow 1:

Average throughput: 456.89 Mbit/s  
95th percentile per-packet one-way delay: 86.570 ms  
Loss rate: 0.32%

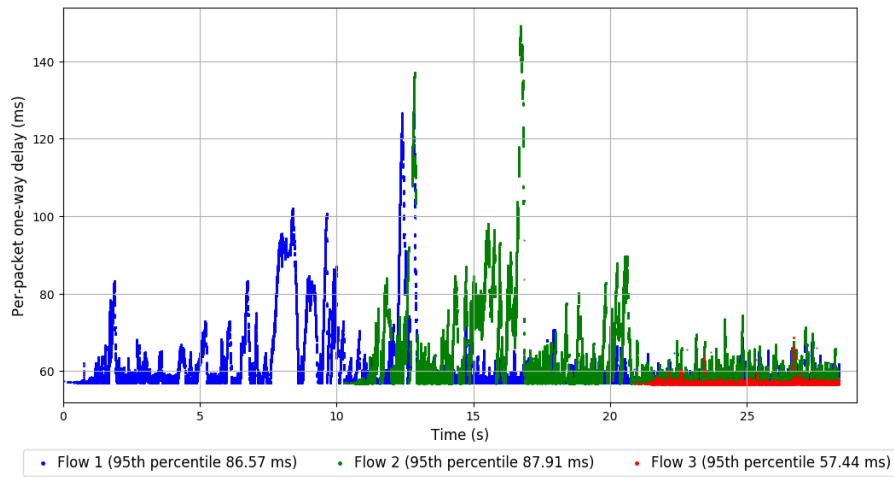
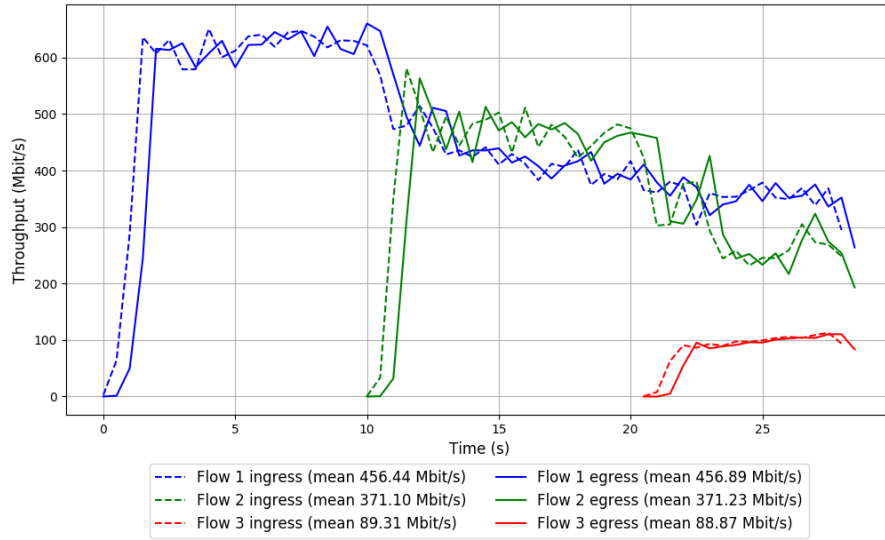
-- Flow 2:

Average throughput: 371.23 Mbit/s  
95th percentile per-packet one-way delay: 87.910 ms  
Loss rate: 0.61%

-- Flow 3:

Average throughput: 88.87 Mbit/s  
95th percentile per-packet one-way delay: 57.443 ms  
Loss rate: 1.94%

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

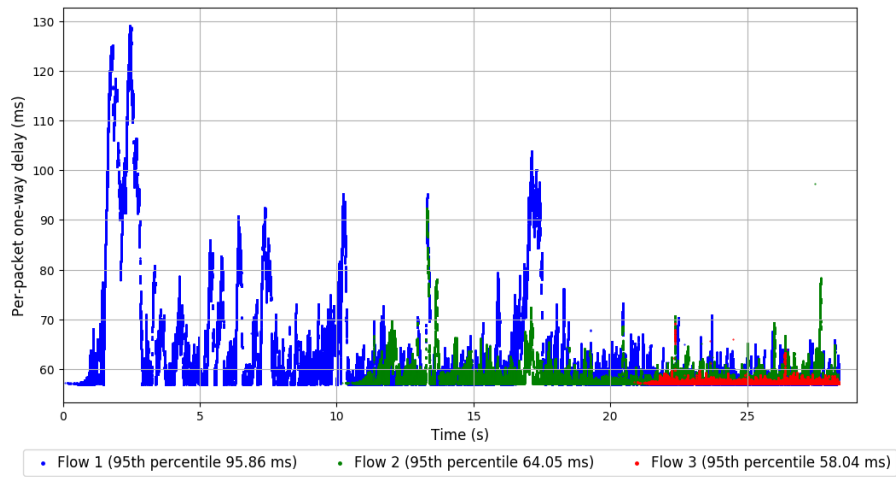
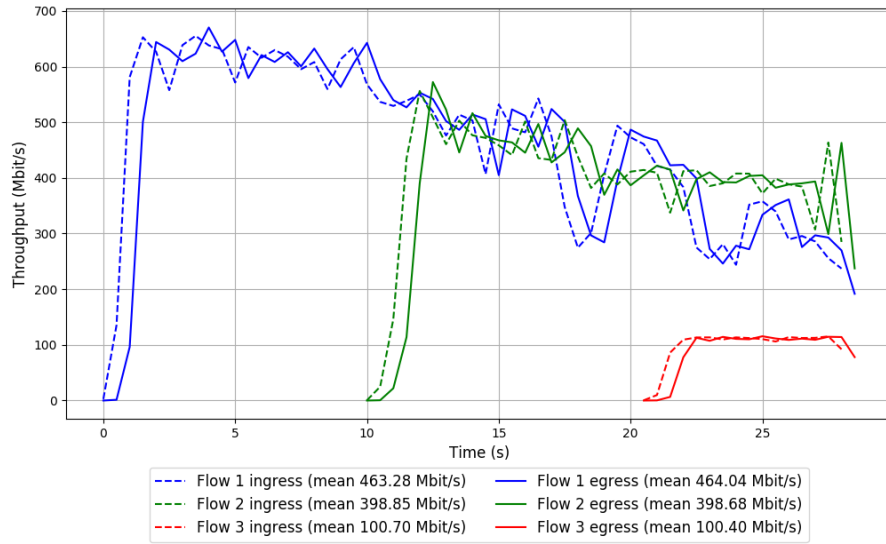


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-05-30 21:08:25  
End at: 2019-05-30 21:08:55  
Local clock offset: -0.137 ms  
Remote clock offset: -0.131 ms

```
# Below is generated by plot.py at 2019-05-30 23:42:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 746.21 Mbit/s
95th percentile per-packet one-way delay: 88.186 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 464.04 Mbit/s
95th percentile per-packet one-way delay: 95.864 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 398.68 Mbit/s
95th percentile per-packet one-way delay: 64.049 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 100.40 Mbit/s
95th percentile per-packet one-way delay: 58.044 ms
Loss rate: 1.85%
```

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



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-05-30 21:44:35

End at: 2019-05-30 21:45:05

Local clock offset: -0.045 ms

Remote clock offset: 0.56 ms

# Below is generated by plot.py at 2019-05-30 23:46:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 790.84 Mbit/s

95th percentile per-packet one-way delay: 145.038 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 449.91 Mbit/s

95th percentile per-packet one-way delay: 116.685 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 389.09 Mbit/s

95th percentile per-packet one-way delay: 199.976 ms

Loss rate: 0.88%

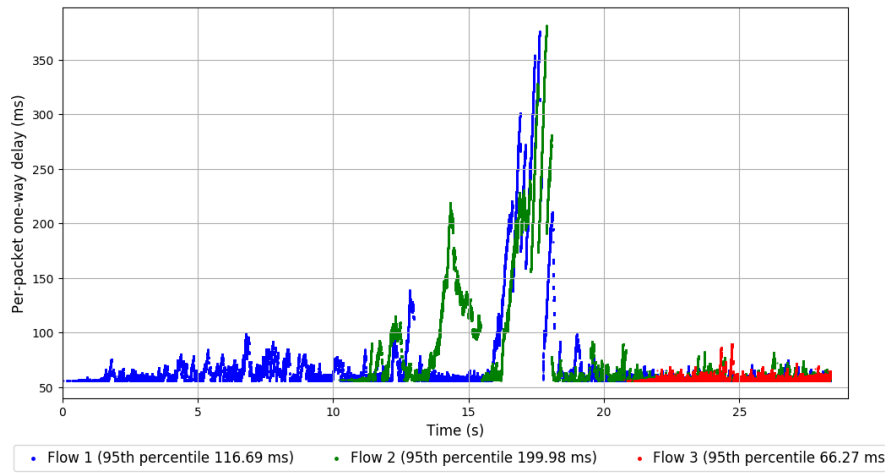
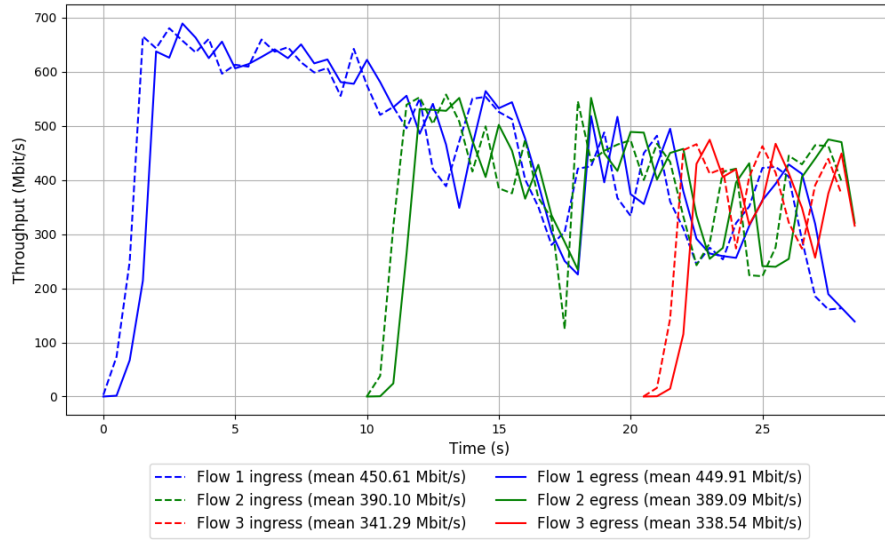
-- Flow 3:

Average throughput: 338.54 Mbit/s

95th percentile per-packet one-way delay: 66.272 ms

Loss rate: 2.00%

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





Run 1: Statistics of Indigo-MusesD

Start at: 2019-05-30 19:22:31

End at: 2019-05-30 19:23:01

Local clock offset: -0.171 ms

Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2019-05-30 23:47:11

# Datalink statistics

-- Total of 3 flows:

Average throughput: 704.05 Mbit/s

95th percentile per-packet one-way delay: 68.816 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 407.06 Mbit/s

95th percentile per-packet one-way delay: 72.053 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 348.47 Mbit/s

95th percentile per-packet one-way delay: 61.939 ms

Loss rate: 0.41%

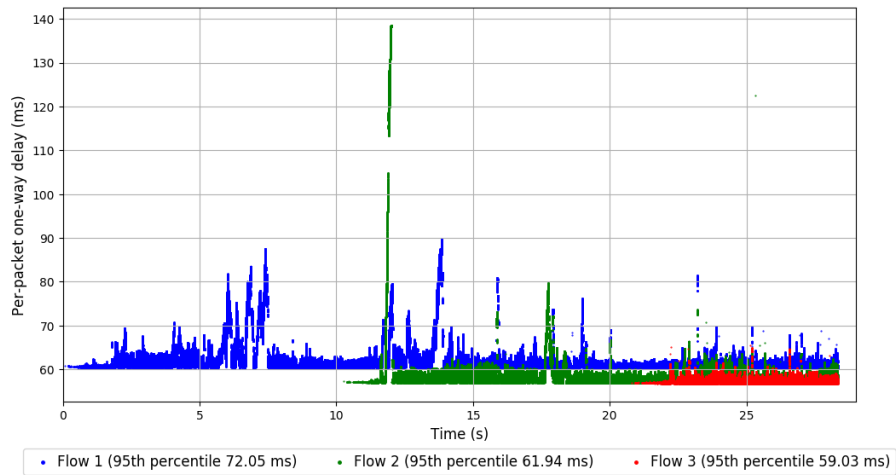
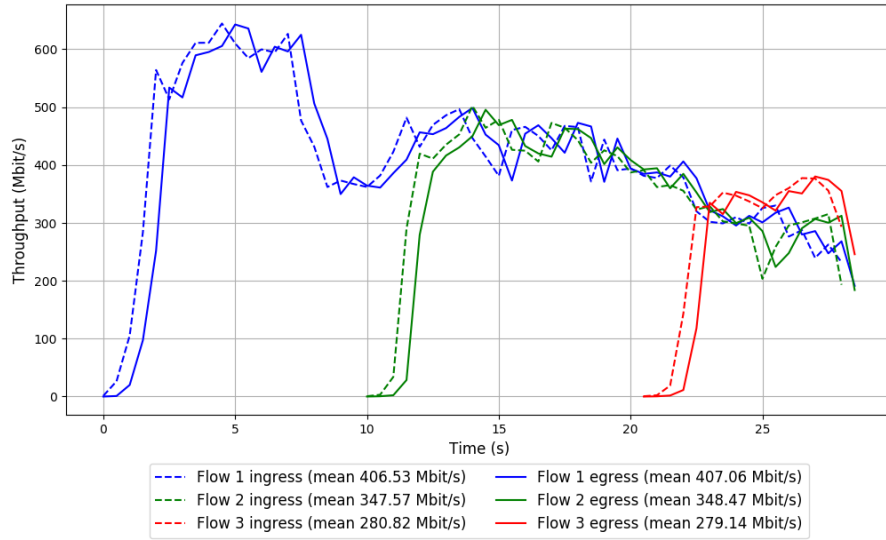
-- Flow 3:

Average throughput: 279.14 Mbit/s

95th percentile per-packet one-way delay: 59.034 ms

Loss rate: 2.15%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-05-30 19:58:39

End at: 2019-05-30 19:59:09

Local clock offset: -0.382 ms

Remote clock offset: -0.26 ms

# Below is generated by plot.py at 2019-05-30 23:47:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 632.85 Mbit/s

95th percentile per-packet one-way delay: 102.822 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 382.29 Mbit/s

95th percentile per-packet one-way delay: 134.097 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 291.28 Mbit/s

95th percentile per-packet one-way delay: 68.407 ms

Loss rate: 0.86%

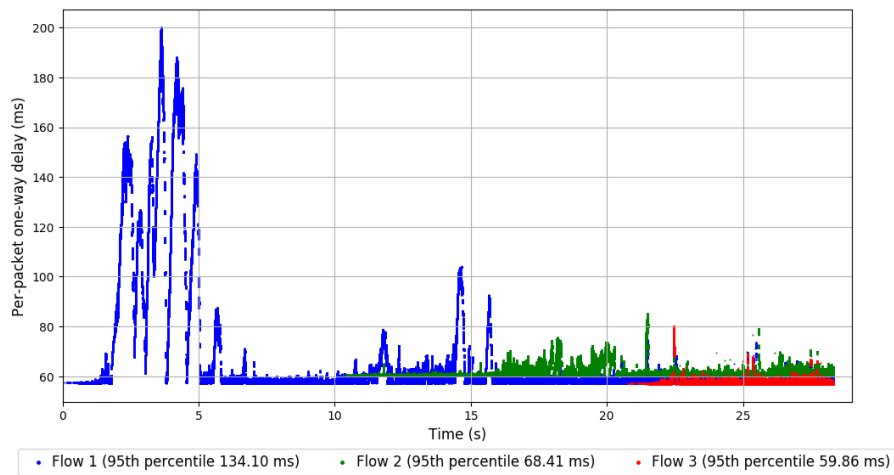
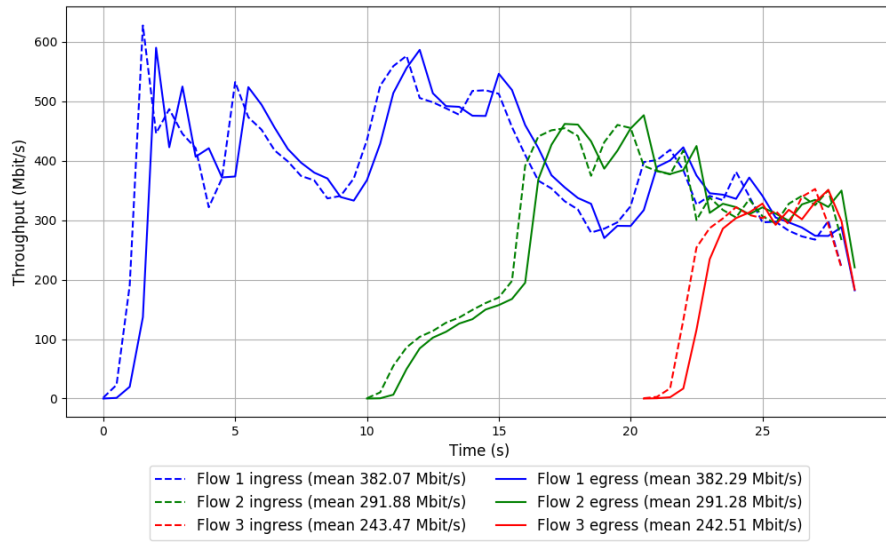
-- Flow 3:

Average throughput: 242.51 Mbit/s

95th percentile per-packet one-way delay: 59.862 ms

Loss rate: 1.86%

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



Run 3: Statistics of Indigo-MusesD

Start at: 2019-05-30 20:34:13  
End at: 2019-05-30 20:34:43  
Local clock offset: -0.151 ms  
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2019-05-30 23:49:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 641.29 Mbit/s  
95th percentile per-packet one-way delay: 69.290 ms  
Loss rate: 0.47%

-- Flow 1:

Average throughput: 411.27 Mbit/s  
95th percentile per-packet one-way delay: 69.228 ms  
Loss rate: 0.30%

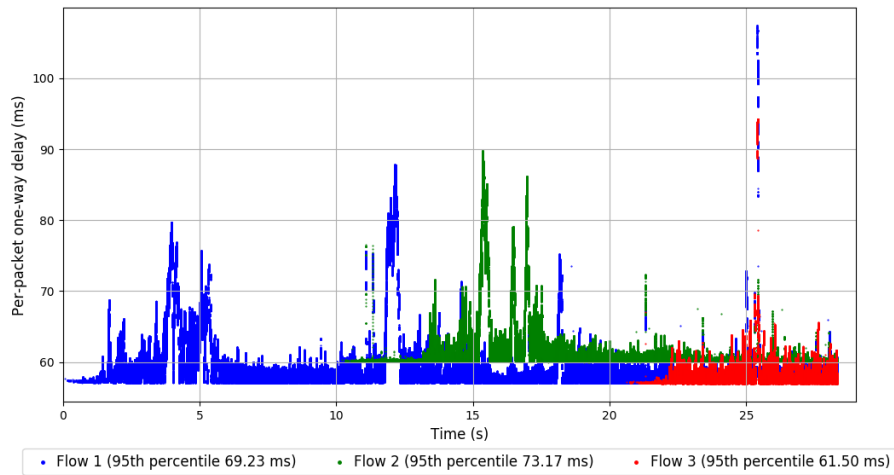
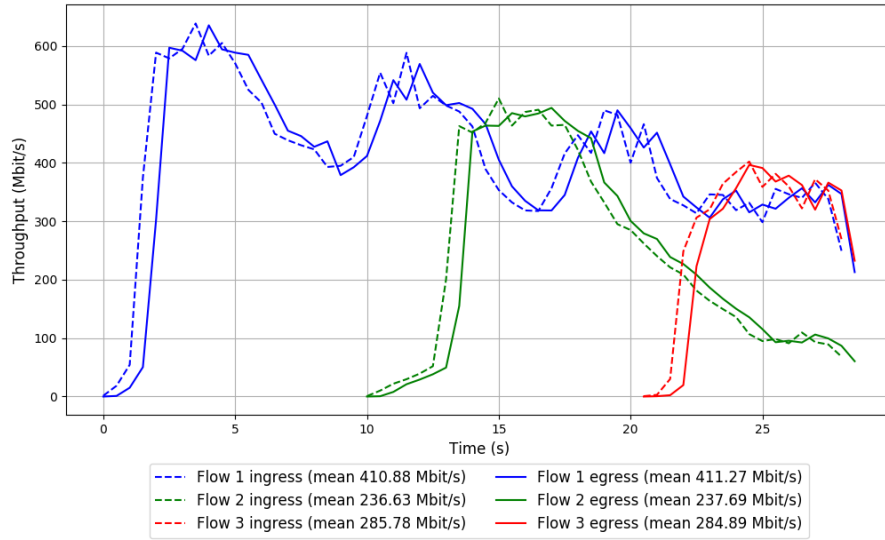
-- Flow 2:

Average throughput: 237.69 Mbit/s  
95th percentile per-packet one-way delay: 73.165 ms  
Loss rate: 0.22%

-- Flow 3:

Average throughput: 284.89 Mbit/s  
95th percentile per-packet one-way delay: 61.497 ms  
Loss rate: 1.81%

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

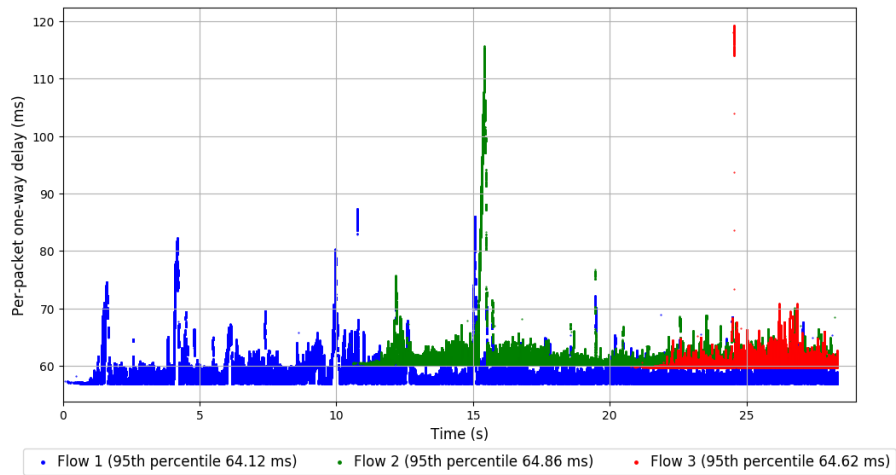
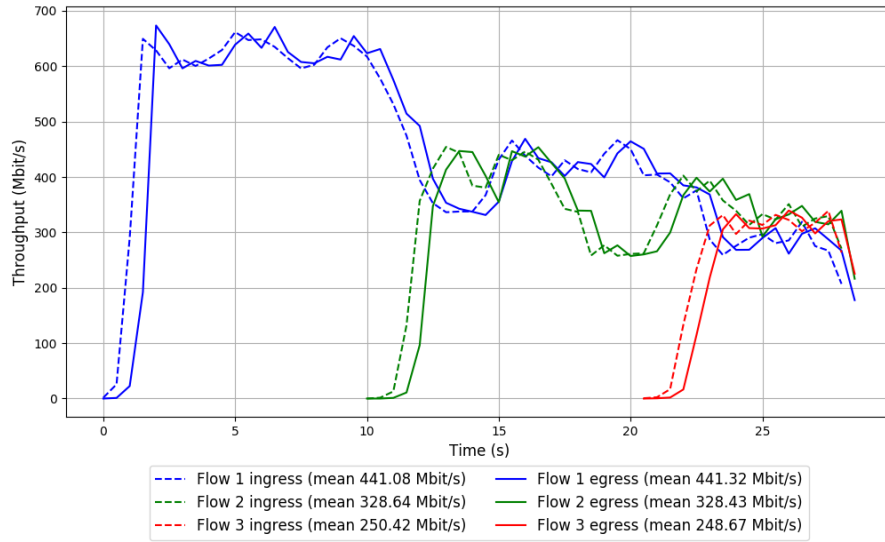


Run 4: Statistics of Indigo-MusesD

Start at: 2019-05-30 21:10:13  
End at: 2019-05-30 21:10:43  
Local clock offset: -0.35 ms  
Remote clock offset: -0.057 ms

```
# Below is generated by plot.py at 2019-05-30 23:52:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 715.02 Mbit/s
95th percentile per-packet one-way delay: 64.410 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 441.32 Mbit/s
95th percentile per-packet one-way delay: 64.124 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 328.43 Mbit/s
95th percentile per-packet one-way delay: 64.865 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 248.67 Mbit/s
95th percentile per-packet one-way delay: 64.624 ms
Loss rate: 2.28%
```

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





Run 5: Statistics of Indigo-MusesD

Start at: 2019-05-30 21:46:26  
End at: 2019-05-30 21:46:56  
Local clock offset: 0.171 ms  
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2019-05-30 23:53:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 637.44 Mbit/s  
95th percentile per-packet one-way delay: 86.269 ms  
Loss rate: 0.61%

-- Flow 1:

Average throughput: 342.78 Mbit/s  
95th percentile per-packet one-way delay: 92.165 ms  
Loss rate: 0.30%

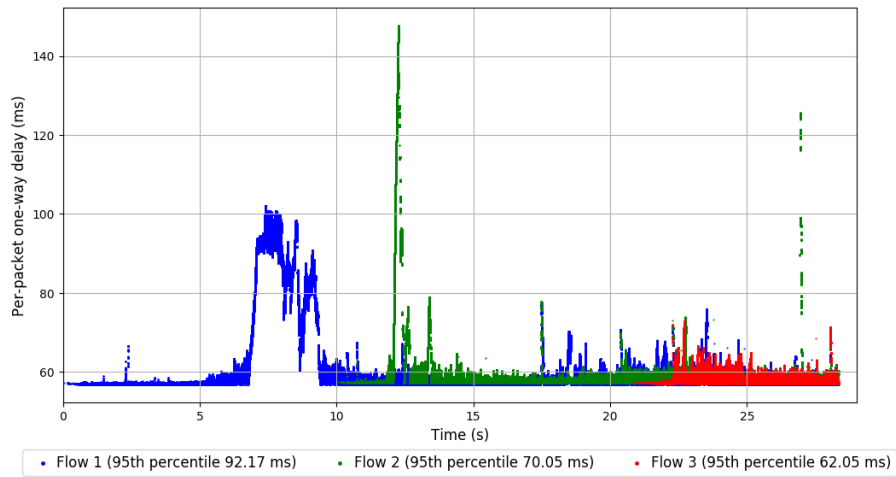
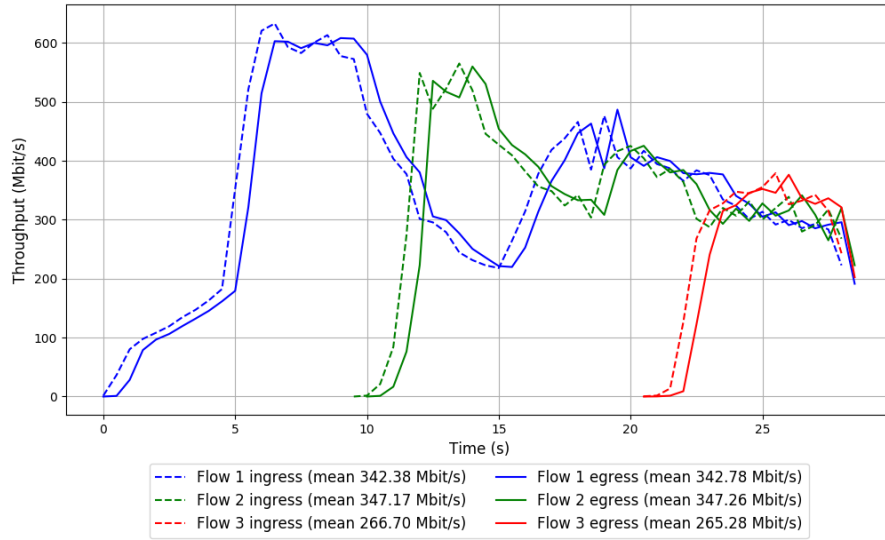
-- Flow 2:

Average throughput: 347.26 Mbit/s  
95th percentile per-packet one-way delay: 70.045 ms  
Loss rate: 0.62%

-- Flow 3:

Average throughput: 265.28 Mbit/s  
95th percentile per-packet one-way delay: 62.053 ms  
Loss rate: 2.06%

Run 5: Report of Indigo-MusesD — Data Link

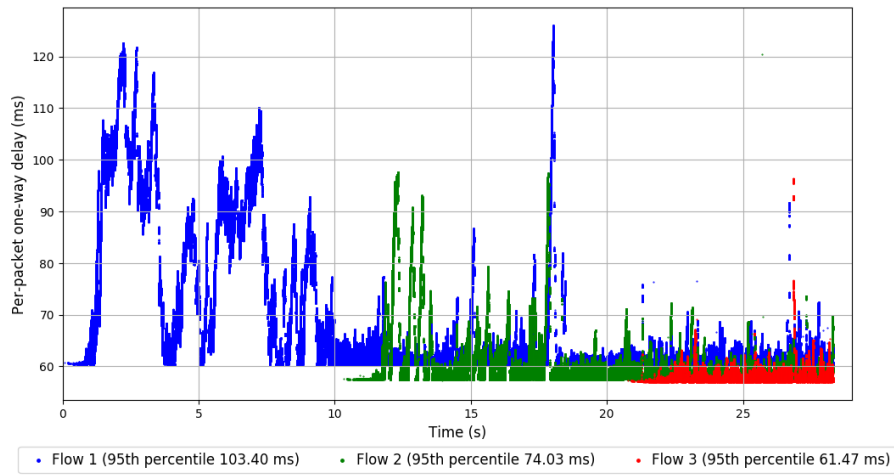
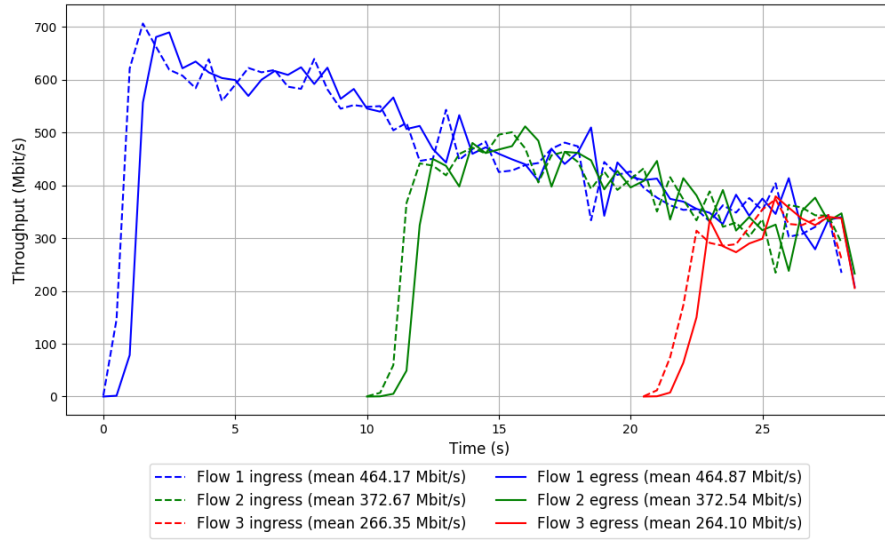


Run 1: Statistics of Indigo-MuseST

Start at: 2019-05-30 19:16:56  
End at: 2019-05-30 19:17:26  
Local clock offset: -0.096 ms  
Remote clock offset: -0.162 ms

```
# Below is generated by plot.py at 2019-05-30 23:57:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 772.49 Mbit/s
95th percentile per-packet one-way delay: 99.150 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 464.87 Mbit/s
95th percentile per-packet one-way delay: 103.404 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 372.54 Mbit/s
95th percentile per-packet one-way delay: 74.031 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 264.10 Mbit/s
95th percentile per-packet one-way delay: 61.473 ms
Loss rate: 2.32%
```

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MuseST

Start at: 2019-05-30 19:53:00  
End at: 2019-05-30 19:53:30  
Local clock offset: -0.416 ms  
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2019-05-30 23:57:55

# Datalink statistics

-- Total of 3 flows:

Average throughput: 772.72 Mbit/s  
95th percentile per-packet one-way delay: 88.101 ms  
Loss rate: 0.51%

-- Flow 1:

Average throughput: 491.33 Mbit/s  
95th percentile per-packet one-way delay: 93.709 ms  
Loss rate: 0.31%

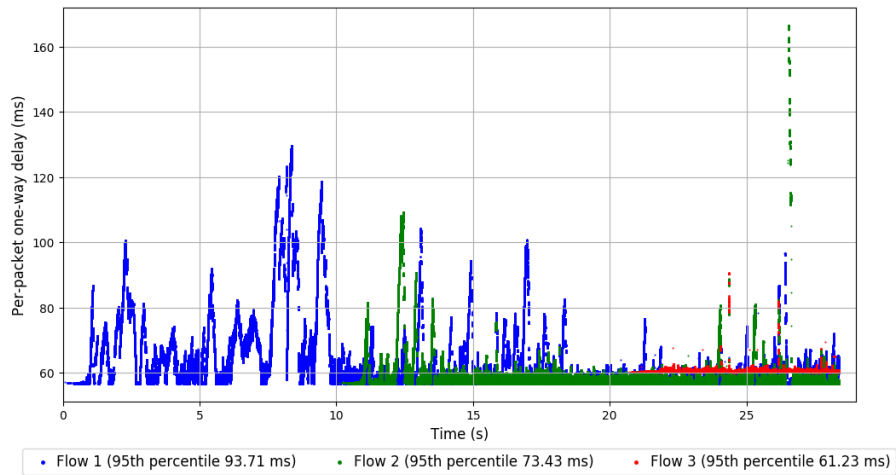
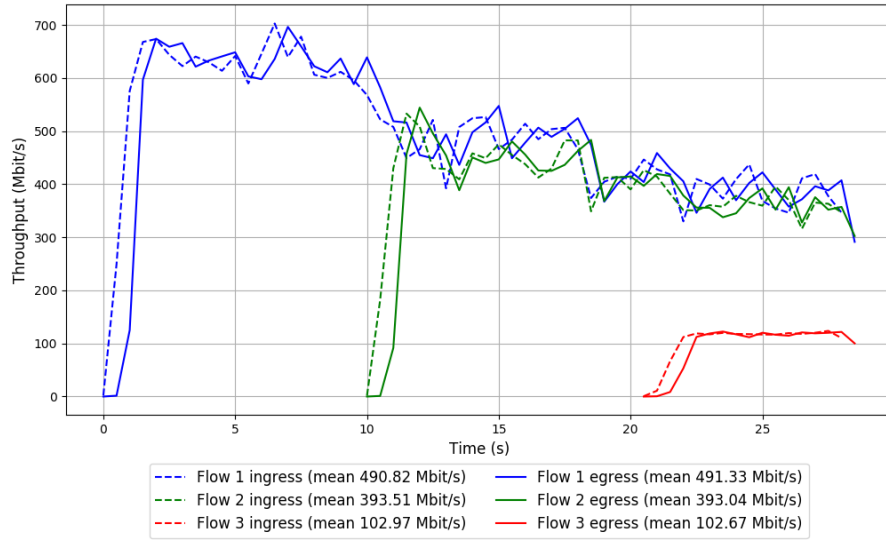
-- Flow 2:

Average throughput: 393.04 Mbit/s  
95th percentile per-packet one-way delay: 73.429 ms  
Loss rate: 0.74%

-- Flow 3:

Average throughput: 102.67 Mbit/s  
95th percentile per-packet one-way delay: 61.232 ms  
Loss rate: 1.82%

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

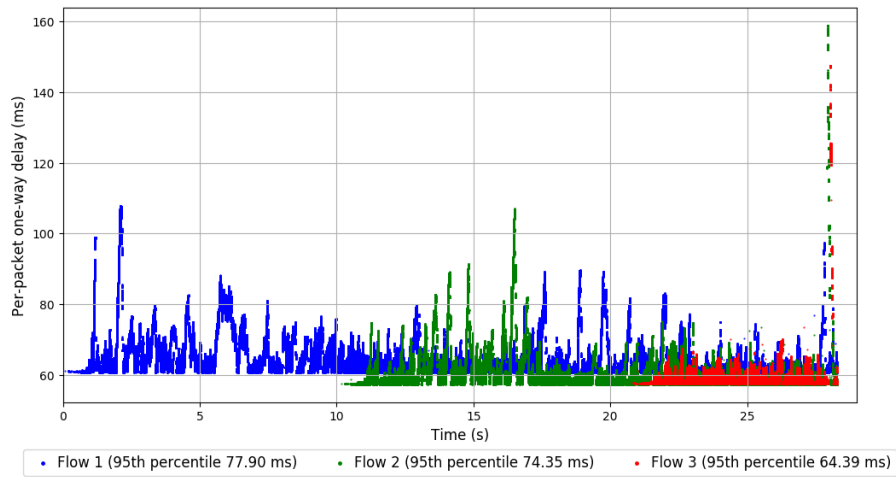
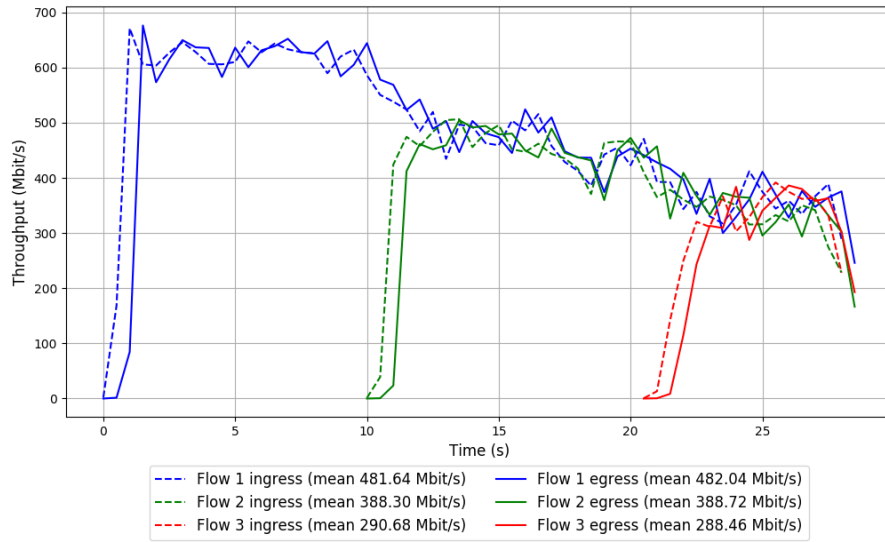


Run 3: Statistics of Indigo-MuseST

Start at: 2019-05-30 20:28:40  
End at: 2019-05-30 20:29:10  
Local clock offset: 0.187 ms  
Remote clock offset: -0.044 ms

```
# Below is generated by plot.py at 2019-05-31 00:01:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 808.38 Mbit/s
95th percentile per-packet one-way delay: 76.658 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 482.04 Mbit/s
95th percentile per-packet one-way delay: 77.904 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 388.72 Mbit/s
95th percentile per-packet one-way delay: 74.352 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 288.46 Mbit/s
95th percentile per-packet one-way delay: 64.389 ms
Loss rate: 2.38%
```

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





Run 4: Statistics of Indigo-MuseST

Start at: 2019-05-30 21:04:31  
End at: 2019-05-30 21:05:01  
Local clock offset: -0.157 ms  
Remote clock offset: -0.923 ms

# Below is generated by plot.py at 2019-05-31 00:01:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 785.71 Mbit/s  
95th percentile per-packet one-way delay: 89.178 ms  
Loss rate: 0.44%

-- Flow 1:

Average throughput: 491.66 Mbit/s  
95th percentile per-packet one-way delay: 98.069 ms  
Loss rate: 0.27%

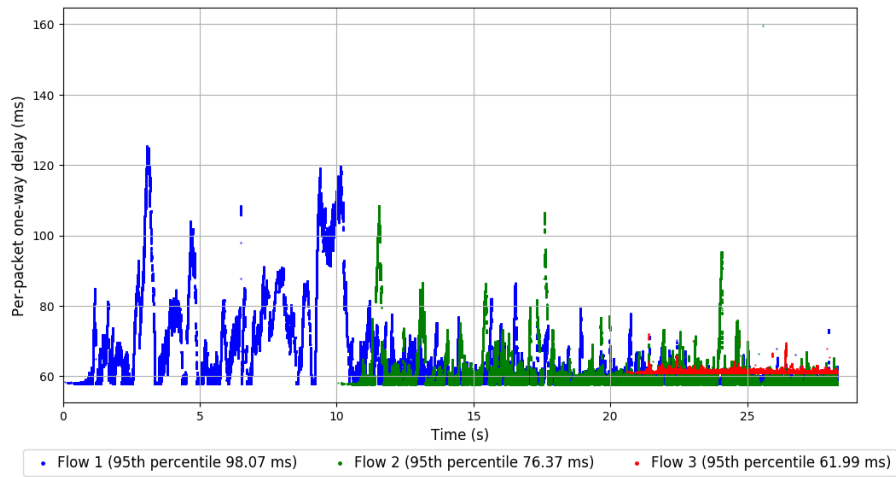
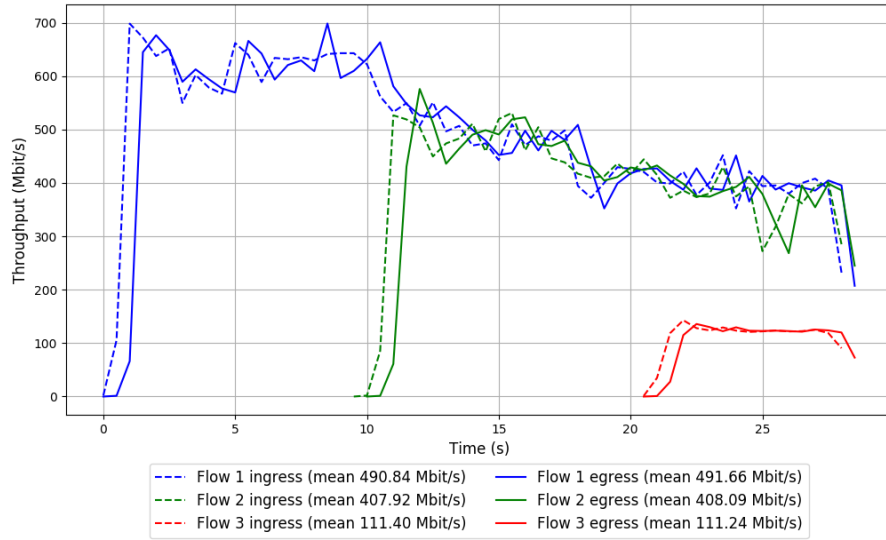
-- Flow 2:

Average throughput: 408.09 Mbit/s  
95th percentile per-packet one-way delay: 76.371 ms  
Loss rate: 0.60%

-- Flow 3:

Average throughput: 111.24 Mbit/s  
95th percentile per-packet one-way delay: 61.995 ms  
Loss rate: 1.78%

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



Run 5: Statistics of Indigo-MuseST

Start at: 2019-05-30 21:40:47

End at: 2019-05-30 21:41:17

Local clock offset: -0.473 ms

Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2019-05-31 00:03:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 819.85 Mbit/s

95th percentile per-packet one-way delay: 91.687 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 491.91 Mbit/s

95th percentile per-packet one-way delay: 99.264 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 391.12 Mbit/s

95th percentile per-packet one-way delay: 77.955 ms

Loss rate: 0.34%

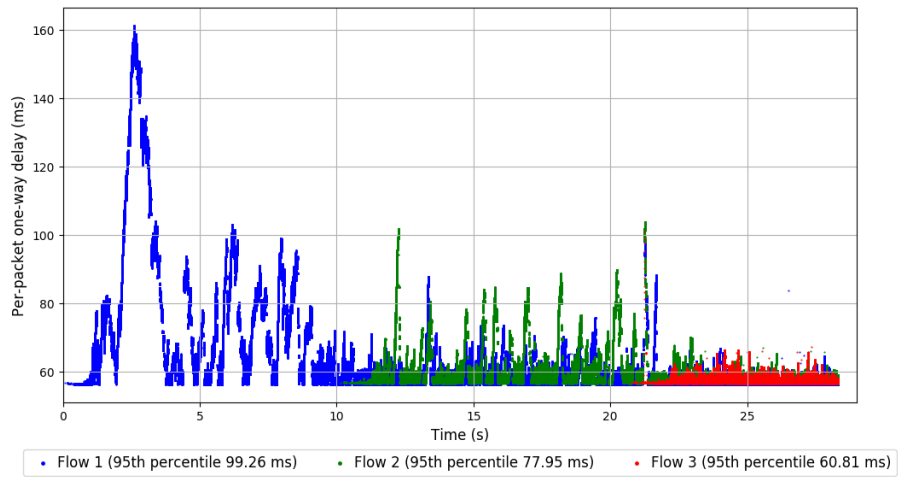
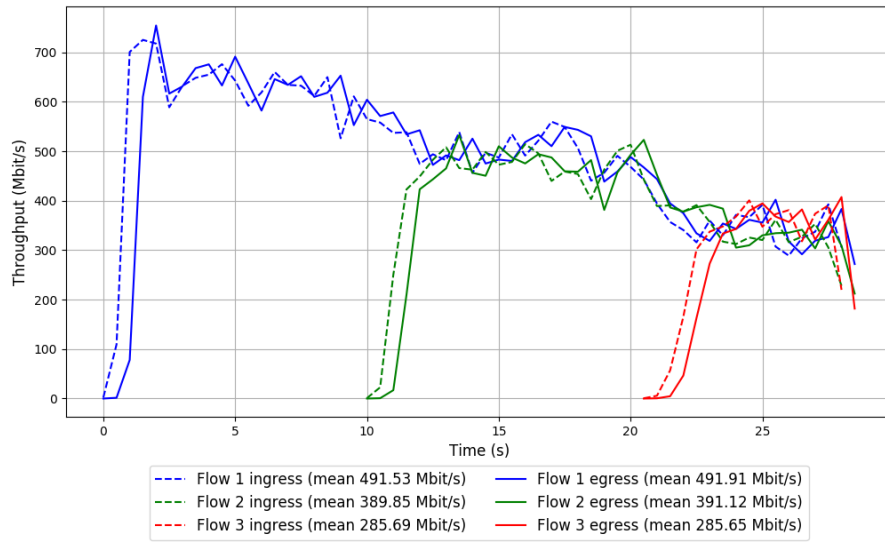
-- Flow 3:

Average throughput: 285.65 Mbit/s

95th percentile per-packet one-way delay: 60.811 ms

Loss rate: 1.60%

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



Run 1: Statistics of LEDBAT

Start at: 2019-05-30 19:15:39

End at: 2019-05-30 19:16:09

Local clock offset: -0.191 ms

Remote clock offset: 0.077 ms

# Below is generated by plot.py at 2019-05-31 00:03:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 43.79 Mbit/s

95th percentile per-packet one-way delay: 57.880 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 28.28 Mbit/s

95th percentile per-packet one-way delay: 57.852 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 18.77 Mbit/s

95th percentile per-packet one-way delay: 57.940 ms

Loss rate: 1.15%

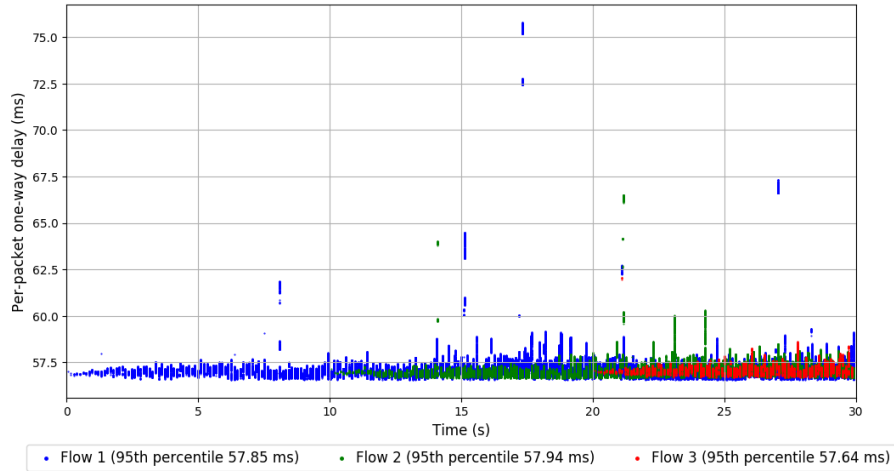
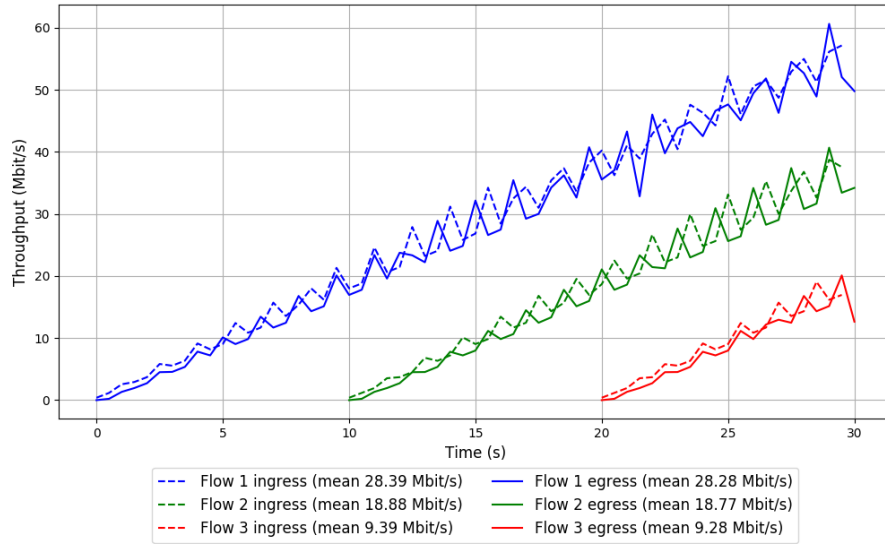
-- Flow 3:

Average throughput: 9.28 Mbit/s

95th percentile per-packet one-way delay: 57.637 ms

Loss rate: 2.32%

# Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-05-30 19:51:43

End at: 2019-05-30 19:52:13

Local clock offset: -0.495 ms

Remote clock offset: 0.032 ms

# Below is generated by plot.py at 2019-05-31 00:03:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 43.48 Mbit/s

95th percentile per-packet one-way delay: 60.306 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 28.20 Mbit/s

95th percentile per-packet one-way delay: 58.572 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 18.74 Mbit/s

95th percentile per-packet one-way delay: 58.603 ms

Loss rate: 1.15%

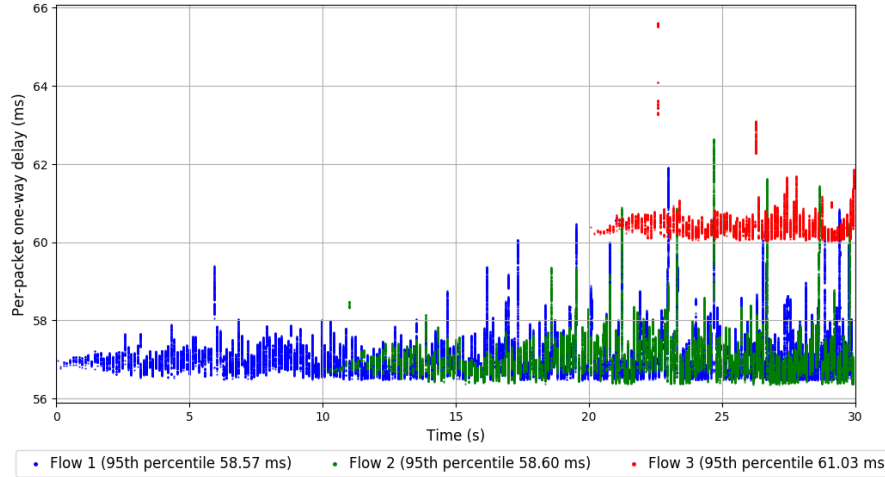
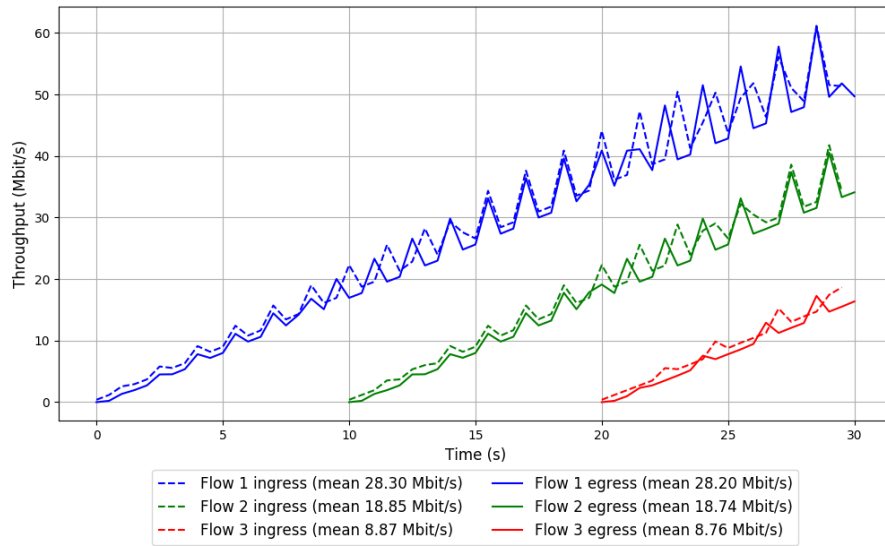
-- Flow 3:

Average throughput: 8.76 Mbit/s

95th percentile per-packet one-way delay: 61.035 ms

Loss rate: 2.38%

Run 2: Report of LEDBAT — Data Link





Run 3: Statistics of LEDBAT

Start at: 2019-05-30 20:27:23  
End at: 2019-05-30 20:27:53  
Local clock offset: -0.379 ms  
Remote clock offset: -0.179 ms

# Below is generated by plot.py at 2019-05-31 00:03:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 42.62 Mbit/s  
95th percentile per-packet one-way delay: 60.140 ms  
Loss rate: 0.99%

-- Flow 1:

Average throughput: 28.26 Mbit/s  
95th percentile per-packet one-way delay: 58.207 ms  
Loss rate: 0.76%

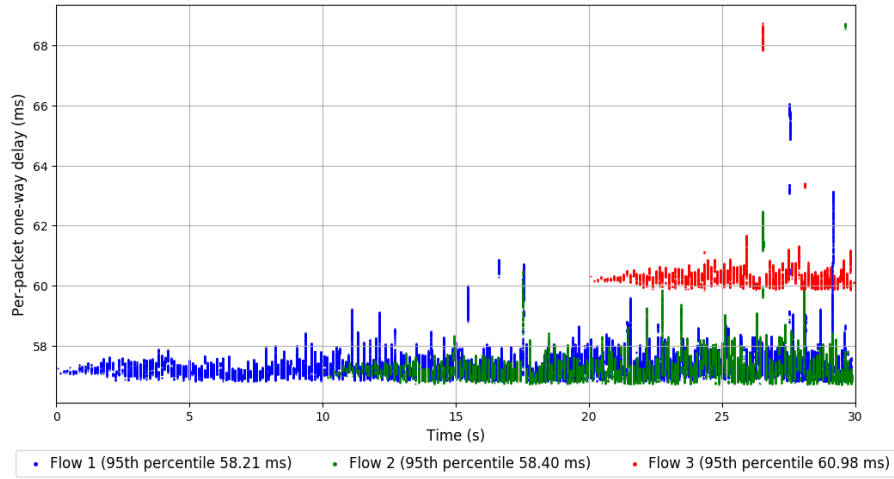
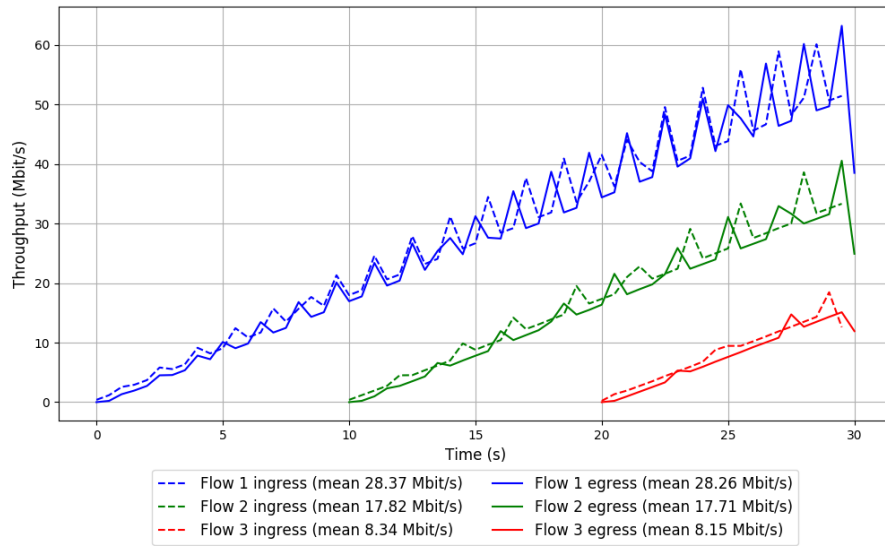
-- Flow 2:

Average throughput: 17.71 Mbit/s  
95th percentile per-packet one-way delay: 58.398 ms  
Loss rate: 1.18%

-- Flow 3:

Average throughput: 8.15 Mbit/s  
95th percentile per-packet one-way delay: 60.985 ms  
Loss rate: 2.45%

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



Run 4: Statistics of LEDBAT

Start at: 2019-05-30 21:03:14

End at: 2019-05-30 21:03:44

Local clock offset: -0.48 ms

Remote clock offset: 0.042 ms

# Below is generated by plot.py at 2019-05-31 00:03:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 41.96 Mbit/s

95th percentile per-packet one-way delay: 59.812 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 26.75 Mbit/s

95th percentile per-packet one-way delay: 58.126 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 18.62 Mbit/s

95th percentile per-packet one-way delay: 57.719 ms

Loss rate: 1.15%

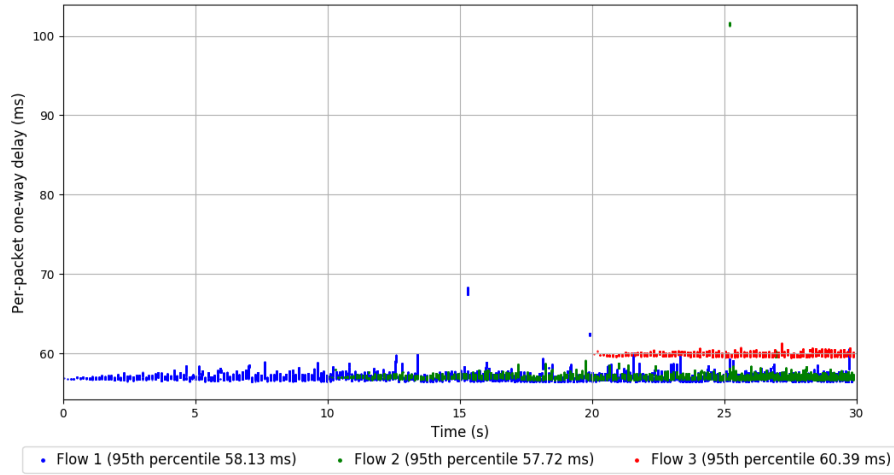
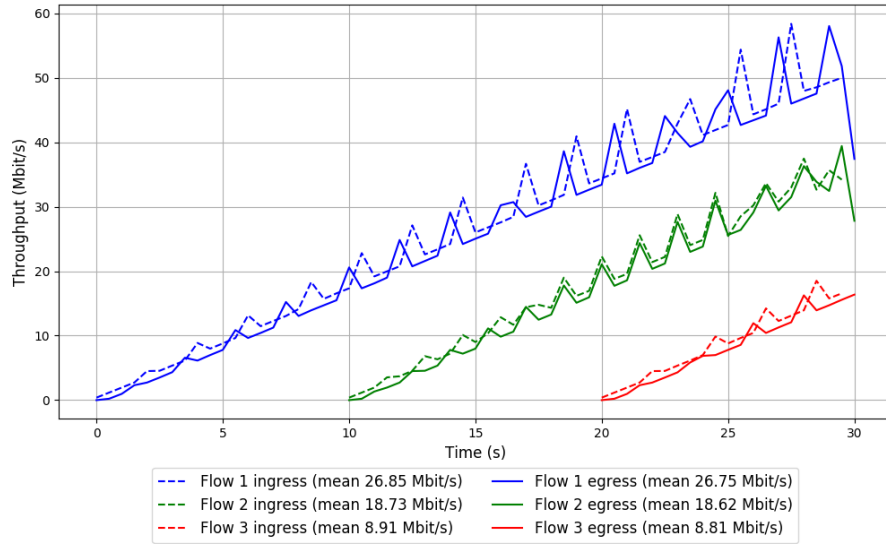
-- Flow 3:

Average throughput: 8.81 Mbit/s

95th percentile per-packet one-way delay: 60.388 ms

Loss rate: 2.38%

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



Run 5: Statistics of LEDBAT

Start at: 2019-05-30 21:39:30

End at: 2019-05-30 21:40:00

Local clock offset: -0.082 ms

Remote clock offset: 0.364 ms

# Below is generated by plot.py at 2019-05-31 00:03:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 36.52 Mbit/s

95th percentile per-packet one-way delay: 60.335 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 21.04 Mbit/s

95th percentile per-packet one-way delay: 58.056 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 18.94 Mbit/s

95th percentile per-packet one-way delay: 57.674 ms

Loss rate: 1.15%

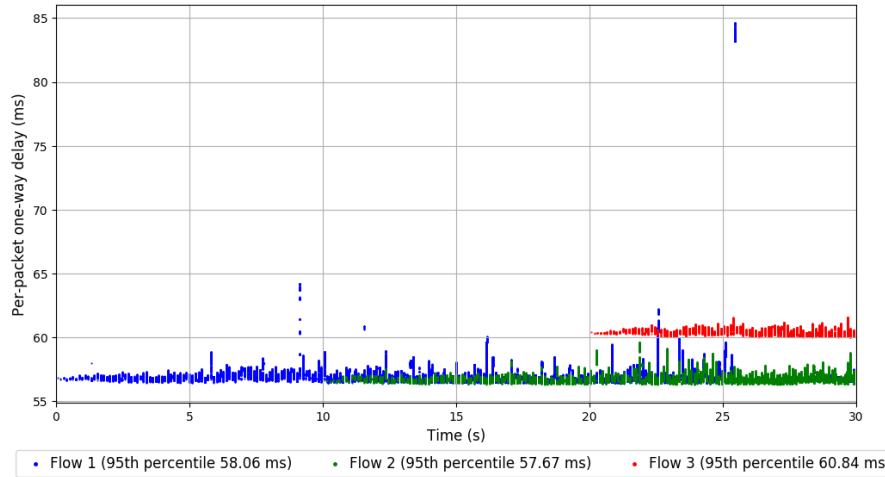
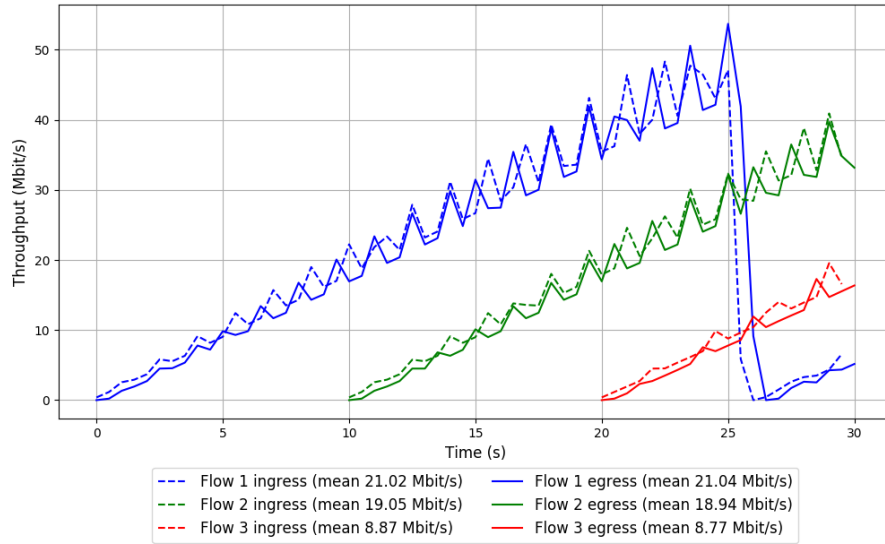
-- Flow 3:

Average throughput: 8.77 Mbit/s

95th percentile per-packet one-way delay: 60.842 ms

Loss rate: 2.38%

Run 5: Report of LEDBAT — Data Link

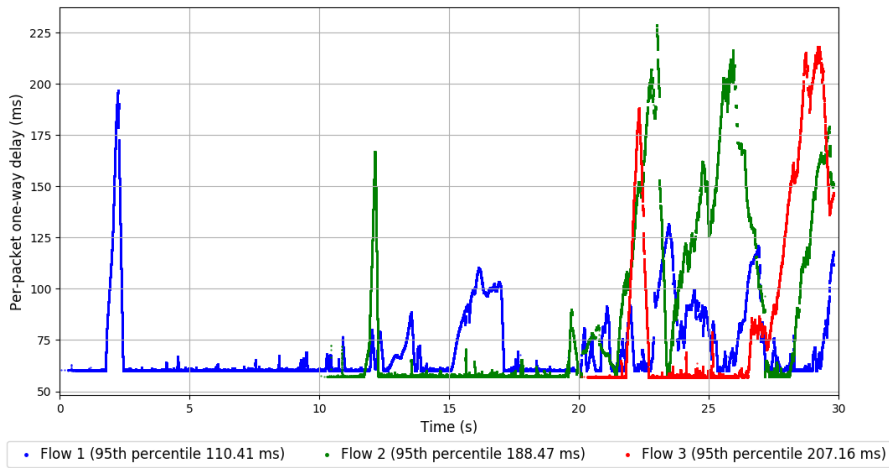
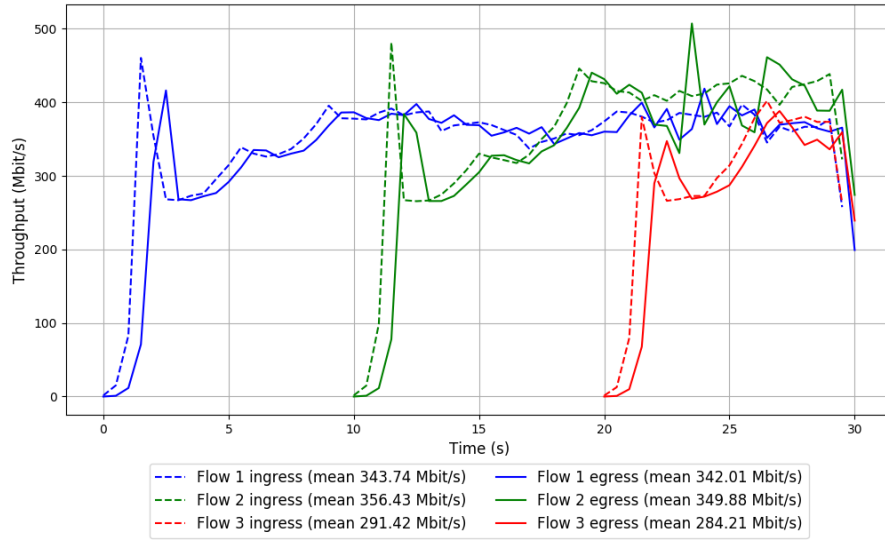


Run 1: Statistics of PCC-Allegro

Start at: 2019-05-30 19:18:45  
End at: 2019-05-30 19:19:15  
Local clock offset: -0.133 ms  
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2019-05-31 00:18:50  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 667.10 Mbit/s  
95th percentile per-packet one-way delay: 171.185 ms  
Loss rate: 1.81%  
-- Flow 1:  
Average throughput: 342.01 Mbit/s  
95th percentile per-packet one-way delay: 110.409 ms  
Loss rate: 0.90%  
-- Flow 2:  
Average throughput: 349.88 Mbit/s  
95th percentile per-packet one-way delay: 188.470 ms  
Loss rate: 2.41%  
-- Flow 3:  
Average throughput: 284.21 Mbit/s  
95th percentile per-packet one-way delay: 207.162 ms  
Loss rate: 3.61%

Run 1: Report of PCC-Allegro — Data Link



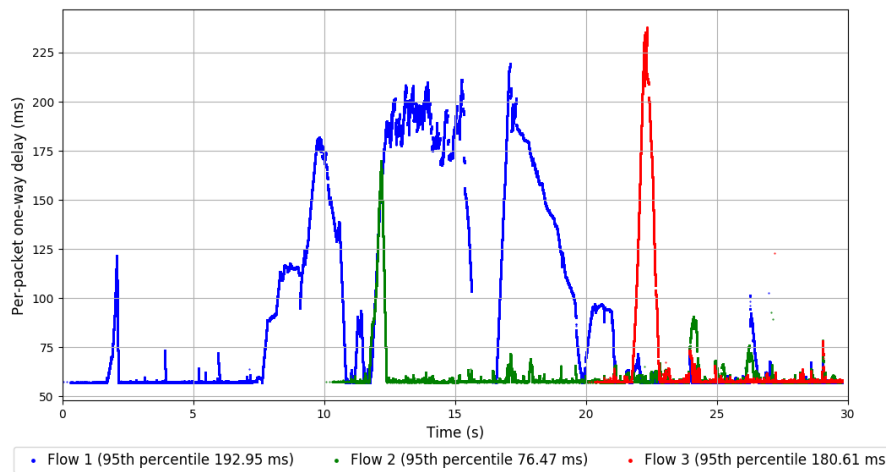
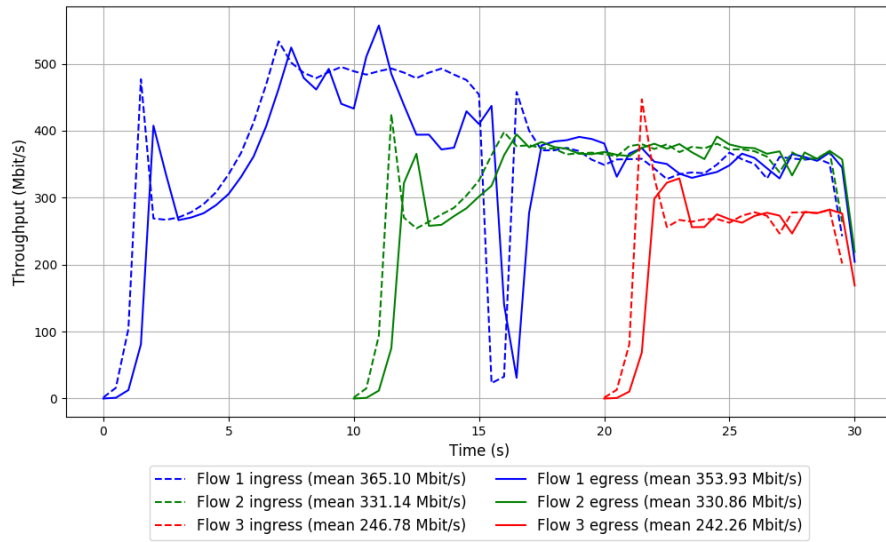


Run 2: Statistics of PCC-Allegro

Start at: 2019-05-30 19:54:50  
End at: 2019-05-30 19:55:20  
Local clock offset: 0.163 ms  
Remote clock offset: -0.072 ms

```
# Below is generated by plot.py at 2019-05-31 00:18:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 652.37 Mbit/s
95th percentile per-packet one-way delay: 185.967 ms
Loss rate: 2.46%
-- Flow 1:
Average throughput: 353.93 Mbit/s
95th percentile per-packet one-way delay: 192.949 ms
Loss rate: 3.43%
-- Flow 2:
Average throughput: 330.86 Mbit/s
95th percentile per-packet one-way delay: 76.470 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 242.26 Mbit/s
95th percentile per-packet one-way delay: 180.606 ms
Loss rate: 2.98%
```

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

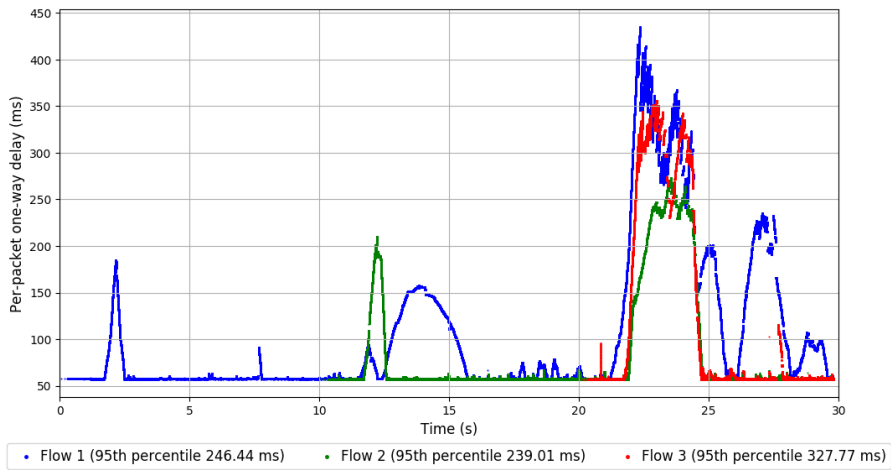
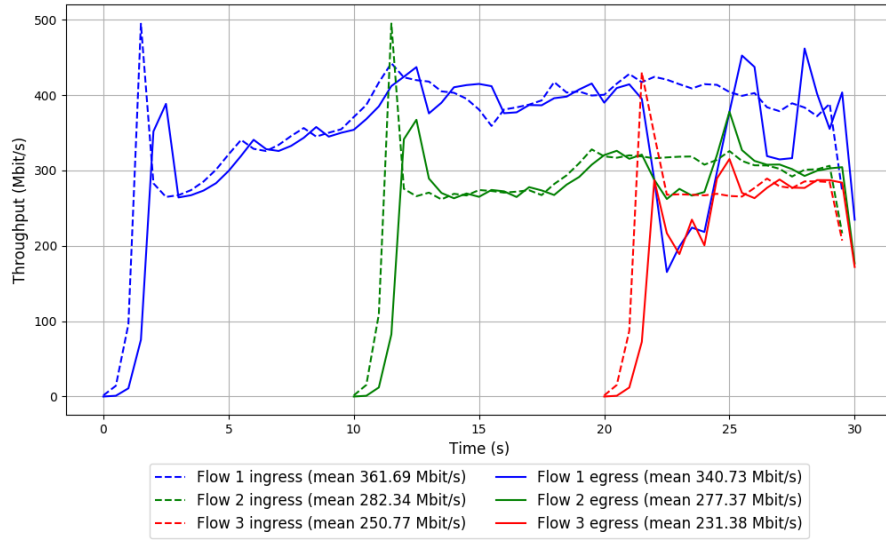


Run 3: Statistics of PCC-Allegro

Start at: 2019-05-30 20:30:32  
End at: 2019-05-30 20:31:02  
Local clock offset: -0.024 ms  
Remote clock offset: -0.016 ms

```
# Below is generated by plot.py at 2019-05-31 00:18:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 600.37 Mbit/s
95th percentile per-packet one-way delay: 267.324 ms
Loss rate: 5.38%
-- Flow 1:
Average throughput: 340.73 Mbit/s
95th percentile per-packet one-way delay: 246.441 ms
Loss rate: 6.17%
-- Flow 2:
Average throughput: 277.37 Mbit/s
95th percentile per-packet one-way delay: 239.011 ms
Loss rate: 2.34%
-- Flow 3:
Average throughput: 231.38 Mbit/s
95th percentile per-packet one-way delay: 327.770 ms
Loss rate: 8.83%
```

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



Run 4: Statistics of PCC-Allegro

Start at: 2019-05-30 21:06:22

End at: 2019-05-30 21:06:52

Local clock offset: 0.308 ms

Remote clock offset: 0.06 ms

# Below is generated by plot.py at 2019-05-31 00:24:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 713.13 Mbit/s

95th percentile per-packet one-way delay: 199.162 ms

Loss rate: 3.20%

-- Flow 1:

Average throughput: 425.58 Mbit/s

95th percentile per-packet one-way delay: 191.540 ms

Loss rate: 4.33%

-- Flow 2:

Average throughput: 312.50 Mbit/s

95th percentile per-packet one-way delay: 203.476 ms

Loss rate: 1.33%

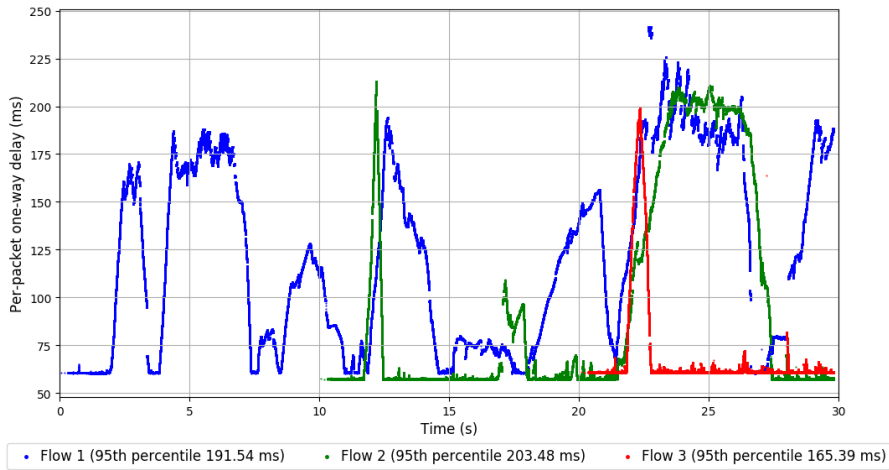
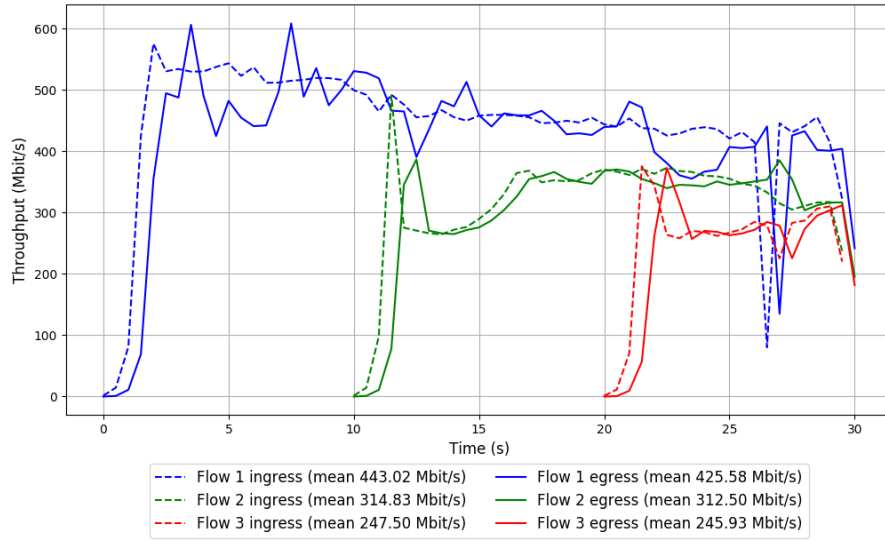
-- Flow 3:

Average throughput: 245.93 Mbit/s

95th percentile per-packet one-way delay: 165.391 ms

Loss rate: 1.87%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-05-30 21:42:40

End at: 2019-05-30 21:43:10

Local clock offset: -0.49 ms

Remote clock offset: 0.016 ms

# Below is generated by plot.py at 2019-05-31 00:24:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 590.83 Mbit/s

95th percentile per-packet one-way delay: 175.787 ms

Loss rate: 3.23%

-- Flow 1:

Average throughput: 304.41 Mbit/s

95th percentile per-packet one-way delay: 178.035 ms

Loss rate: 4.60%

-- Flow 2:

Average throughput: 303.56 Mbit/s

95th percentile per-packet one-way delay: 80.849 ms

Loss rate: 1.80%

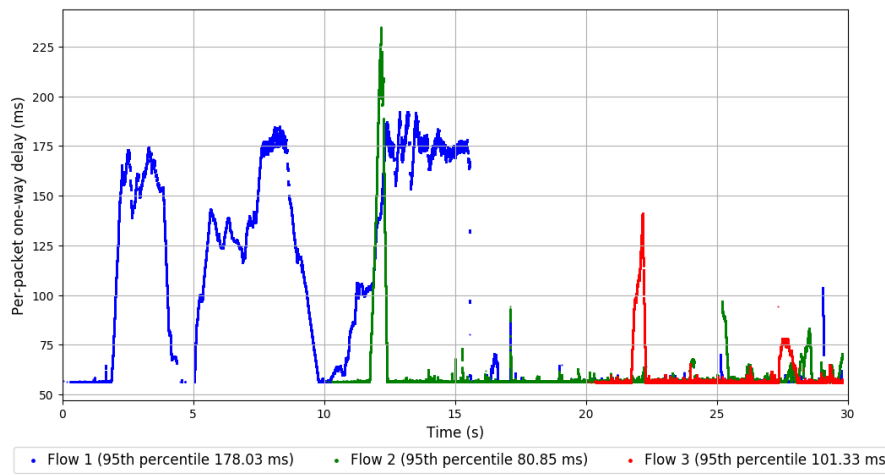
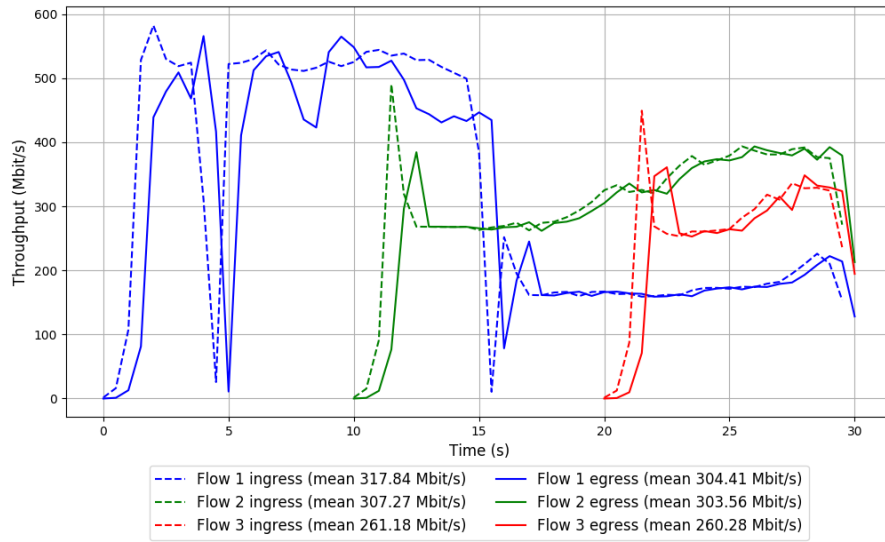
-- Flow 3:

Average throughput: 260.28 Mbit/s

95th percentile per-packet one-way delay: 101.334 ms

Loss rate: 1.54%

Run 5: Report of PCC-Allegro — Data Link





Run 1: Statistics of PCC-Expr

Start at: 2019-05-30 19:26:45  
End at: 2019-05-30 19:27:15  
Local clock offset: -0.202 ms  
Remote clock offset: -0.179 ms

# Below is generated by plot.py at 2019-05-31 00:24:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 428.22 Mbit/s  
95th percentile per-packet one-way delay: 165.446 ms  
Loss rate: 1.43%

-- Flow 1:

Average throughput: 253.56 Mbit/s  
95th percentile per-packet one-way delay: 166.925 ms  
Loss rate: 1.11%

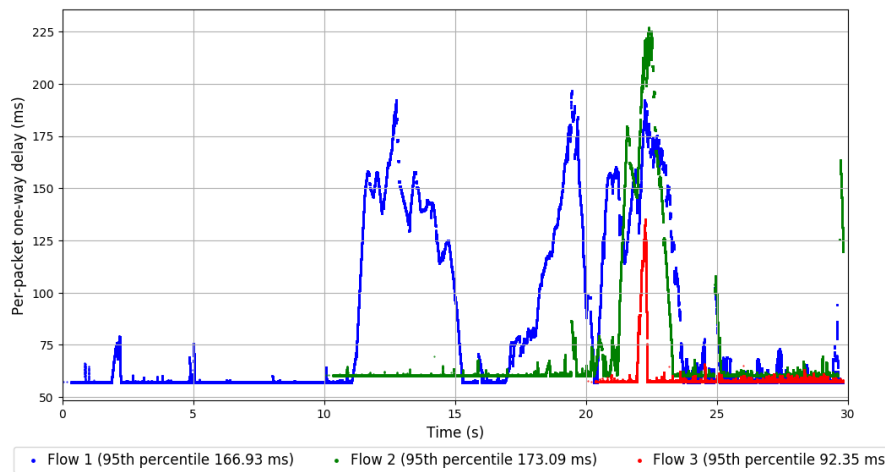
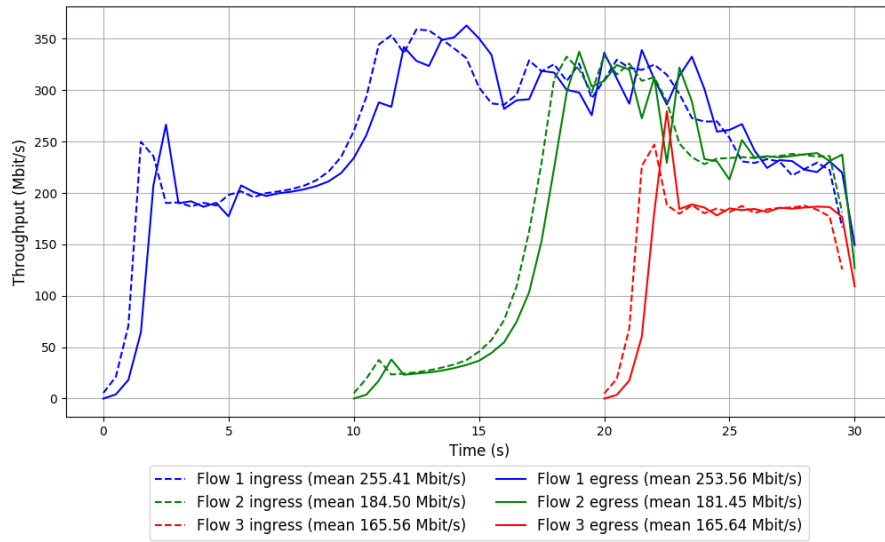
-- Flow 2:

Average throughput: 181.45 Mbit/s  
95th percentile per-packet one-way delay: 173.090 ms  
Loss rate: 2.24%

-- Flow 3:

Average throughput: 165.64 Mbit/s  
95th percentile per-packet one-way delay: 92.348 ms  
Loss rate: 1.12%

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



Run 2: Statistics of PCC-Expr

Start at: 2019-05-30 20:02:48  
End at: 2019-05-30 20:03:18  
Local clock offset: -0.306 ms  
Remote clock offset: -0.154 ms

# Below is generated by plot.py at 2019-05-31 00:24:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 527.64 Mbit/s  
95th percentile per-packet one-way delay: 182.396 ms  
Loss rate: 10.22%

-- Flow 1:

Average throughput: 271.20 Mbit/s  
95th percentile per-packet one-way delay: 148.032 ms  
Loss rate: 0.96%

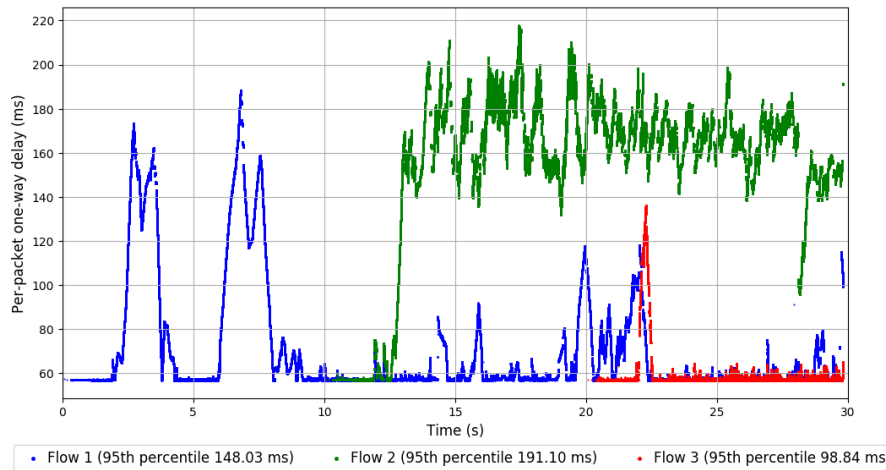
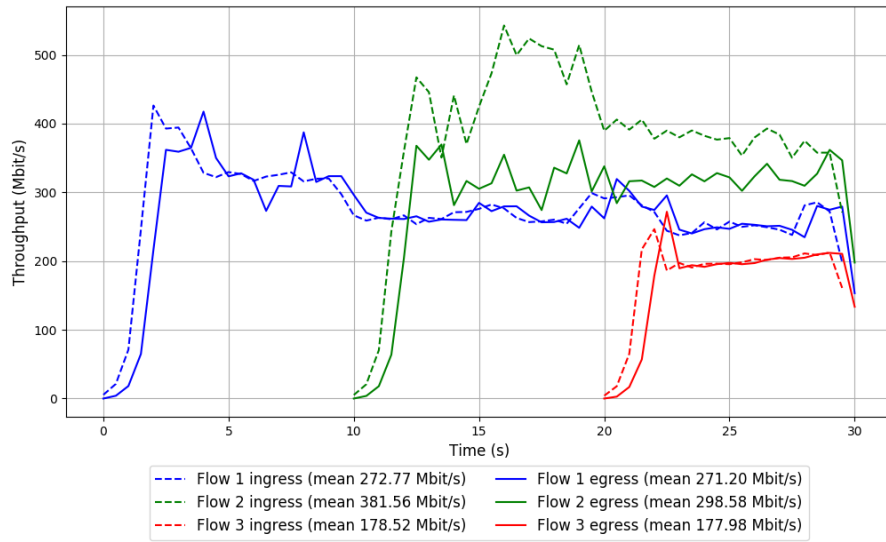
-- Flow 2:

Average throughput: 298.58 Mbit/s  
95th percentile per-packet one-way delay: 191.102 ms  
Loss rate: 22.20%

-- Flow 3:

Average throughput: 177.98 Mbit/s  
95th percentile per-packet one-way delay: 98.842 ms  
Loss rate: 1.46%

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



Run 3: Statistics of PCC-Expr

Start at: 2019-05-30 20:38:23  
End at: 2019-05-30 20:38:53  
Local clock offset: -0.217 ms  
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2019-05-31 00:24:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 498.85 Mbit/s  
95th percentile per-packet one-way delay: 118.936 ms  
Loss rate: 0.86%

-- Flow 1:

Average throughput: 291.55 Mbit/s  
95th percentile per-packet one-way delay: 127.613 ms  
Loss rate: 1.01%

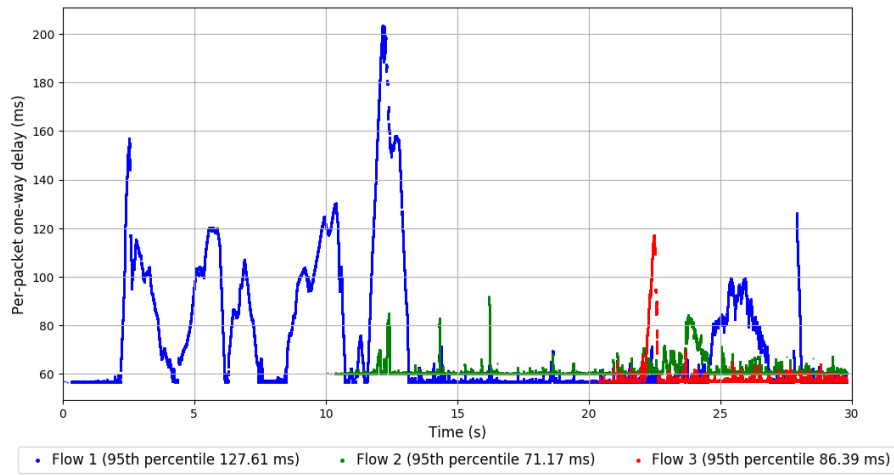
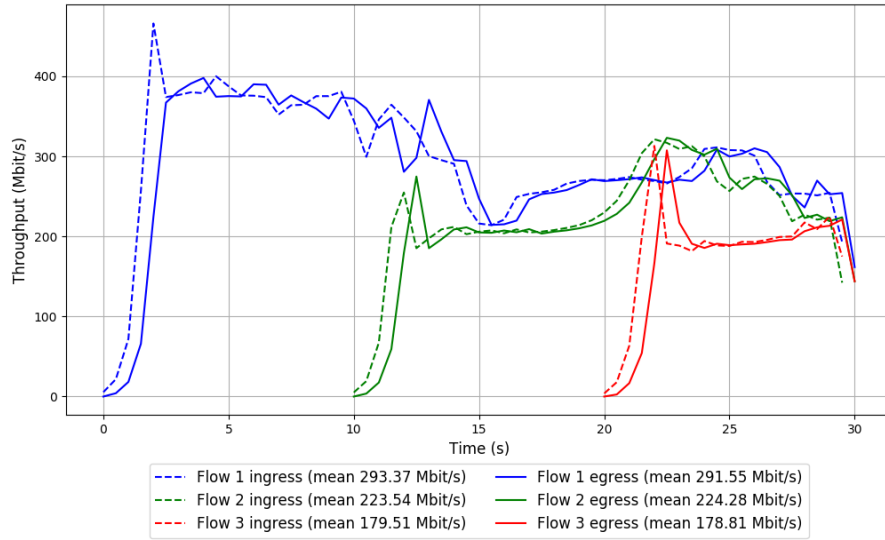
-- Flow 2:

Average throughput: 224.28 Mbit/s  
95th percentile per-packet one-way delay: 71.169 ms  
Loss rate: 0.28%

-- Flow 3:

Average throughput: 178.81 Mbit/s  
95th percentile per-packet one-way delay: 86.389 ms  
Loss rate: 1.58%

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



Run 4: Statistics of PCC-Expr

Start at: 2019-05-30 21:14:27

End at: 2019-05-30 21:14:57

Local clock offset: -0.12 ms

Remote clock offset: -0.19 ms

# Below is generated by plot.py at 2019-05-31 00:34:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 511.32 Mbit/s

95th percentile per-packet one-way delay: 170.332 ms

Loss rate: 3.77%

-- Flow 1:

Average throughput: 281.59 Mbit/s

95th percentile per-packet one-way delay: 176.404 ms

Loss rate: 5.99%

-- Flow 2:

Average throughput: 255.17 Mbit/s

95th percentile per-packet one-way delay: 116.919 ms

Loss rate: 0.69%

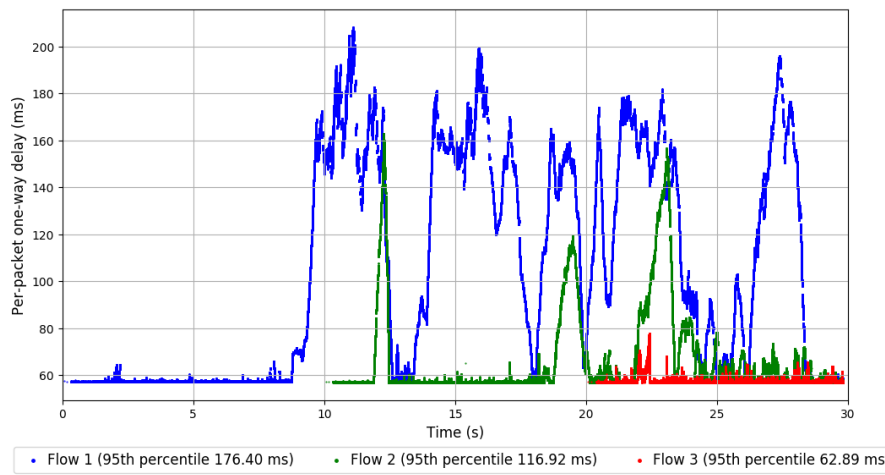
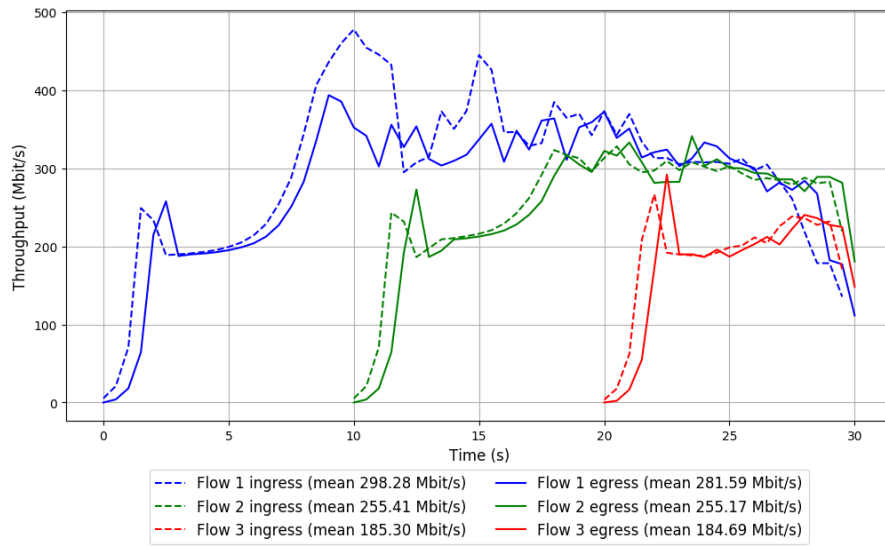
-- Flow 3:

Average throughput: 184.69 Mbit/s

95th percentile per-packet one-way delay: 62.887 ms

Loss rate: 1.52%

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





Run 5: Statistics of PCC-Expr

Start at: 2019-05-30 21:50:36  
End at: 2019-05-30 21:51:06  
Local clock offset: 0.244 ms  
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-05-31 00:34:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 459.60 Mbit/s  
95th percentile per-packet one-way delay: 137.661 ms  
Loss rate: 1.50%

-- Flow 1:

Average throughput: 298.75 Mbit/s  
95th percentile per-packet one-way delay: 150.322 ms  
Loss rate: 1.87%

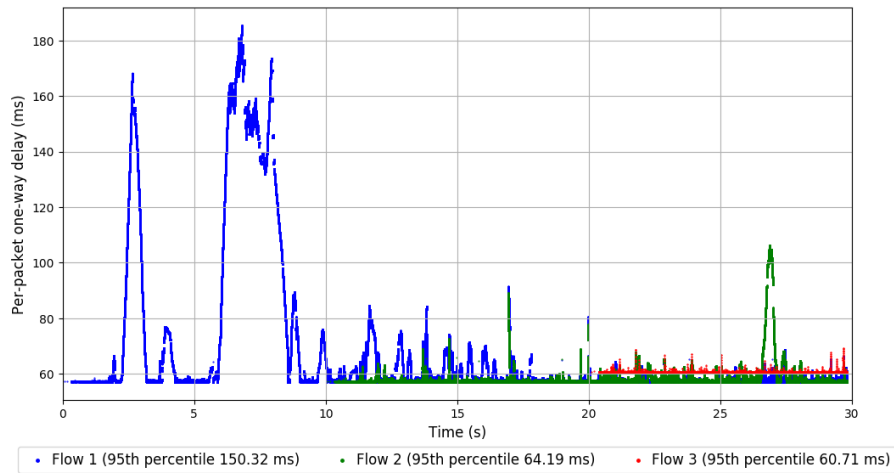
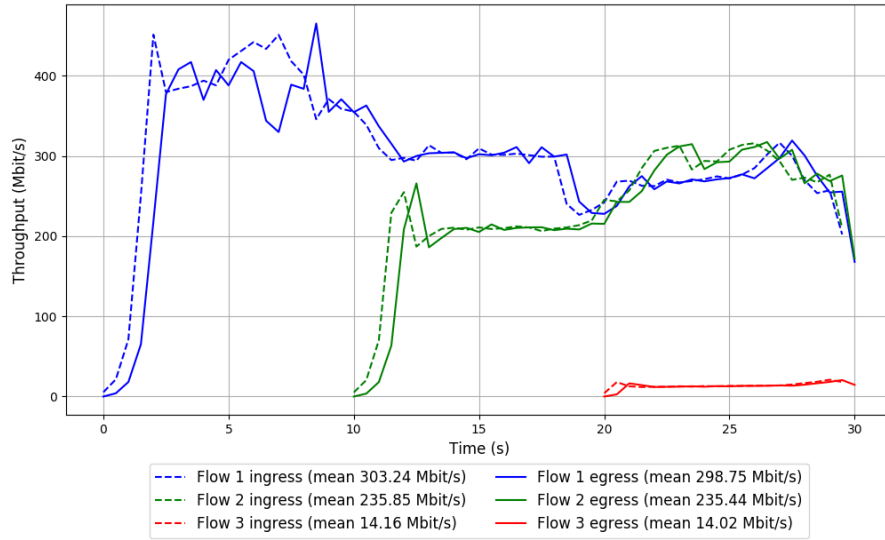
-- Flow 2:

Average throughput: 235.44 Mbit/s  
95th percentile per-packet one-way delay: 64.191 ms  
Loss rate: 0.77%

-- Flow 3:

Average throughput: 14.02 Mbit/s  
95th percentile per-packet one-way delay: 60.711 ms  
Loss rate: 2.28%

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



Run 1: Statistics of QUIC Cubic

Start at: 2019-05-30 19:39:00  
End at: 2019-05-30 19:39:30  
Local clock offset: -0.44 ms  
Remote clock offset: -0.109 ms

# Below is generated by plot.py at 2019-05-31 00:34:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 89.93 Mbit/s  
95th percentile per-packet one-way delay: 56.876 ms  
Loss rate: 0.74%

-- Flow 1:

Average throughput: 54.83 Mbit/s  
95th percentile per-packet one-way delay: 56.837 ms  
Loss rate: 0.59%

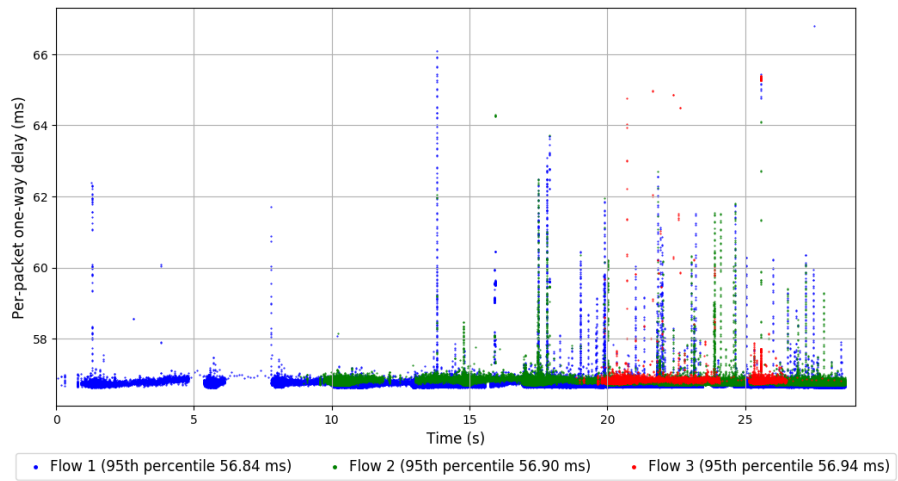
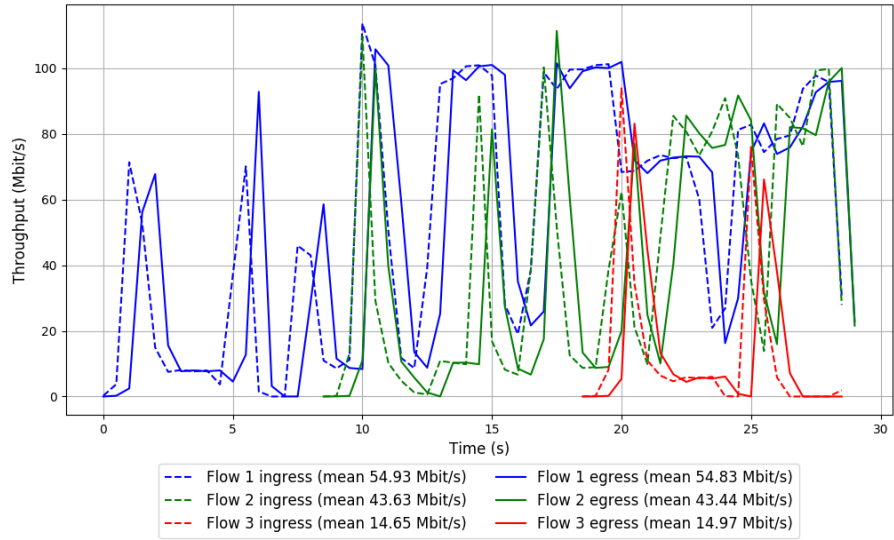
-- Flow 2:

Average throughput: 43.44 Mbit/s  
95th percentile per-packet one-way delay: 56.901 ms  
Loss rate: 1.02%

-- Flow 3:

Average throughput: 14.97 Mbit/s  
95th percentile per-packet one-way delay: 56.938 ms  
Loss rate: 0.66%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-05-30 20:14:55  
End at: 2019-05-30 20:15:25  
Local clock offset: 0.029 ms  
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2019-05-31 00:34:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 84.16 Mbit/s  
95th percentile per-packet one-way delay: 60.911 ms  
Loss rate: 0.86%

-- Flow 1:

Average throughput: 55.69 Mbit/s  
95th percentile per-packet one-way delay: 57.391 ms  
Loss rate: 0.58%

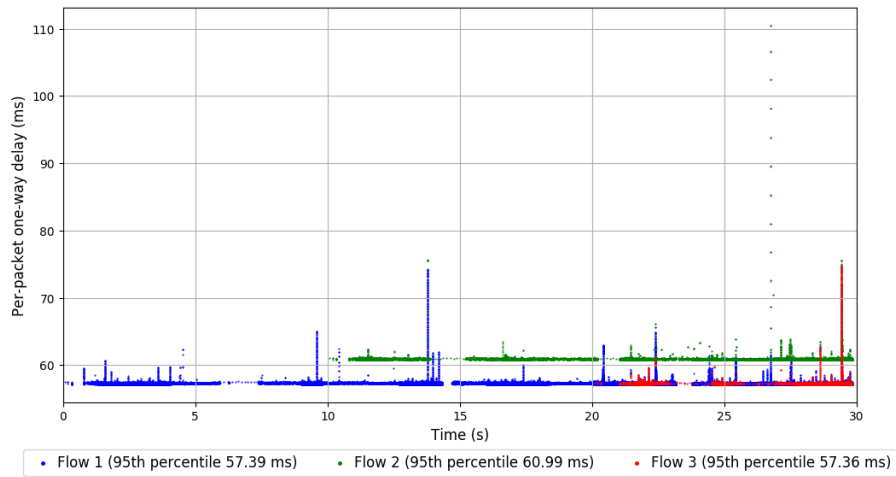
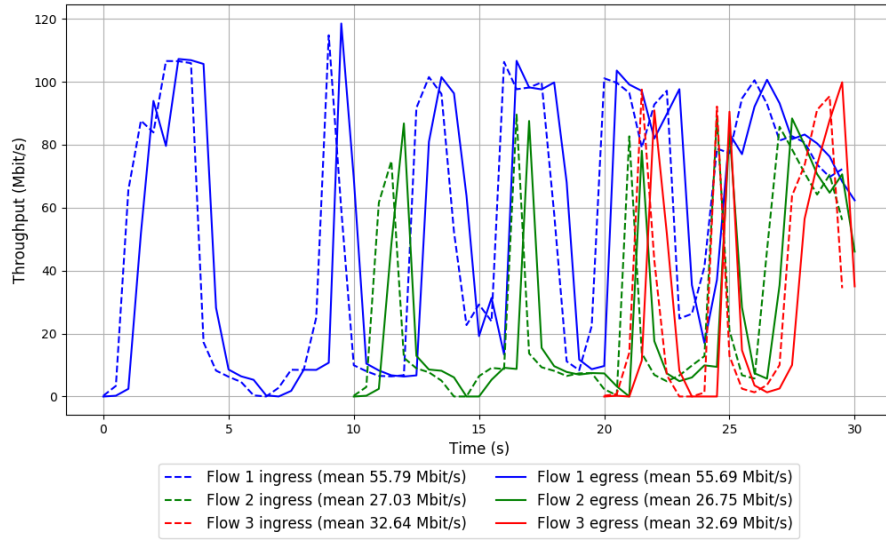
-- Flow 2:

Average throughput: 26.75 Mbit/s  
95th percentile per-packet one-way delay: 60.989 ms  
Loss rate: 1.63%

-- Flow 3:

Average throughput: 32.69 Mbit/s  
95th percentile per-packet one-way delay: 57.359 ms  
Loss rate: 1.04%

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



Run 3: Statistics of QUIC Cubic

Start at: 2019-05-30 20:50:33

End at: 2019-05-30 20:51:03

Local clock offset: 0.001 ms

Remote clock offset: 0.082 ms

# Below is generated by plot.py at 2019-05-31 00:34:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 110.50 Mbit/s

95th percentile per-packet one-way delay: 57.399 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 64.41 Mbit/s

95th percentile per-packet one-way delay: 57.328 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 39.94 Mbit/s

95th percentile per-packet one-way delay: 57.460 ms

Loss rate: 1.07%

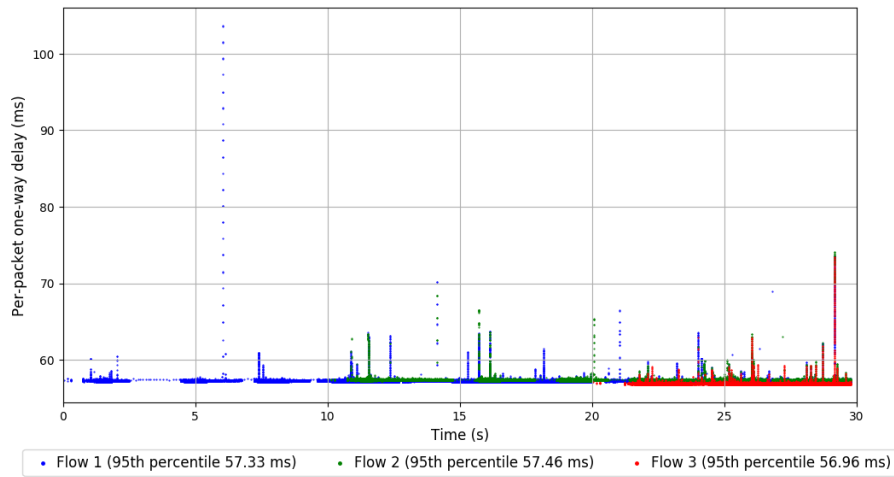
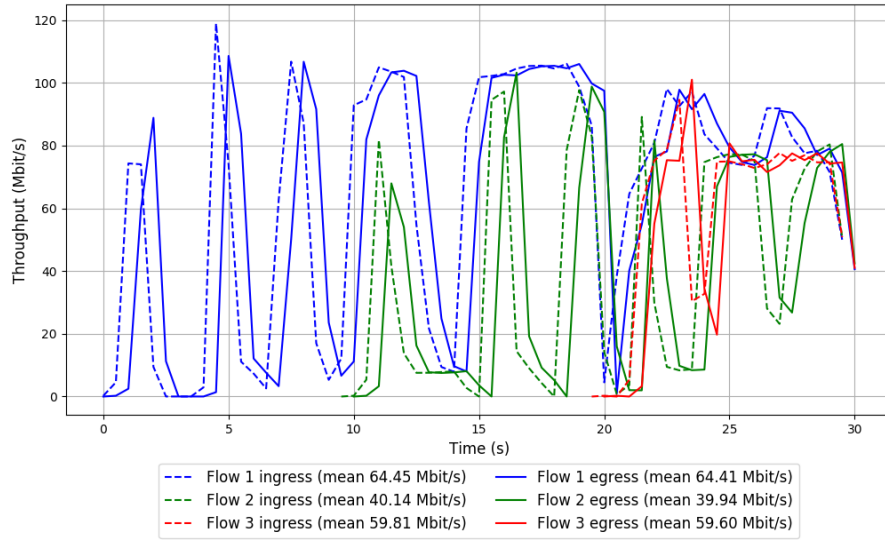
-- Flow 3:

Average throughput: 59.60 Mbit/s

95th percentile per-packet one-way delay: 56.958 ms

Loss rate: 1.55%

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





Run 4: Statistics of QUIC Cubic

Start at: 2019-05-30 21:26:45  
End at: 2019-05-30 21:27:15  
Local clock offset: 0.21 ms  
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2019-05-31 00:34:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 87.03 Mbit/s  
95th percentile per-packet one-way delay: 60.538 ms  
Loss rate: 0.74%

-- Flow 1:

Average throughput: 53.59 Mbit/s  
95th percentile per-packet one-way delay: 57.418 ms  
Loss rate: 0.55%

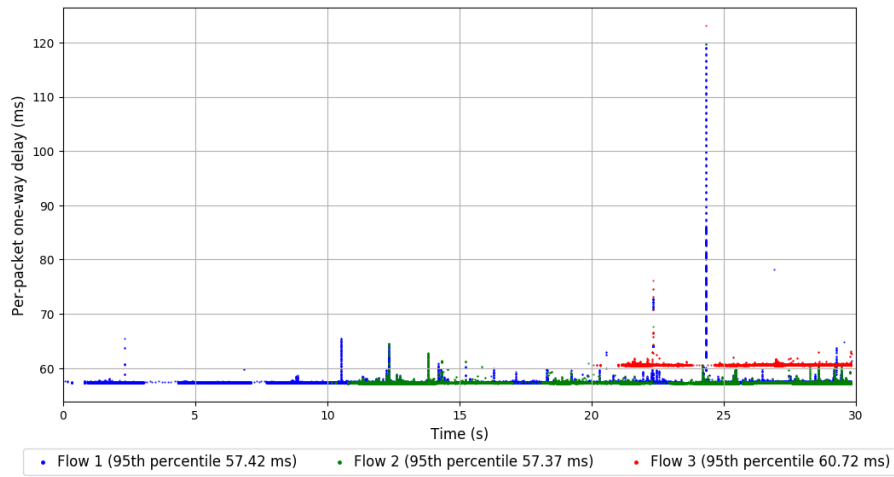
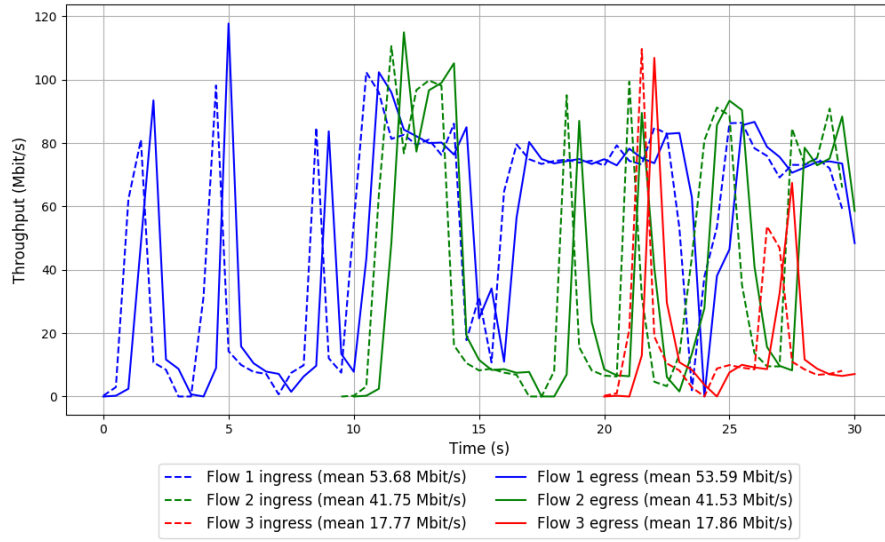
-- Flow 2:

Average throughput: 41.53 Mbit/s  
95th percentile per-packet one-way delay: 57.365 ms  
Loss rate: 1.12%

-- Flow 3:

Average throughput: 17.86 Mbit/s  
95th percentile per-packet one-way delay: 60.717 ms  
Loss rate: 0.67%

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



Run 5: Statistics of QUIC Cubic

Start at: 2019-05-30 22:02:53

End at: 2019-05-30 22:03:23

Local clock offset: -0.021 ms

Remote clock offset: 0.201 ms

# Below is generated by plot.py at 2019-05-31 00:34:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 88.39 Mbit/s

95th percentile per-packet one-way delay: 56.832 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 45.71 Mbit/s

95th percentile per-packet one-way delay: 56.777 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 54.21 Mbit/s

95th percentile per-packet one-way delay: 56.867 ms

Loss rate: 1.27%

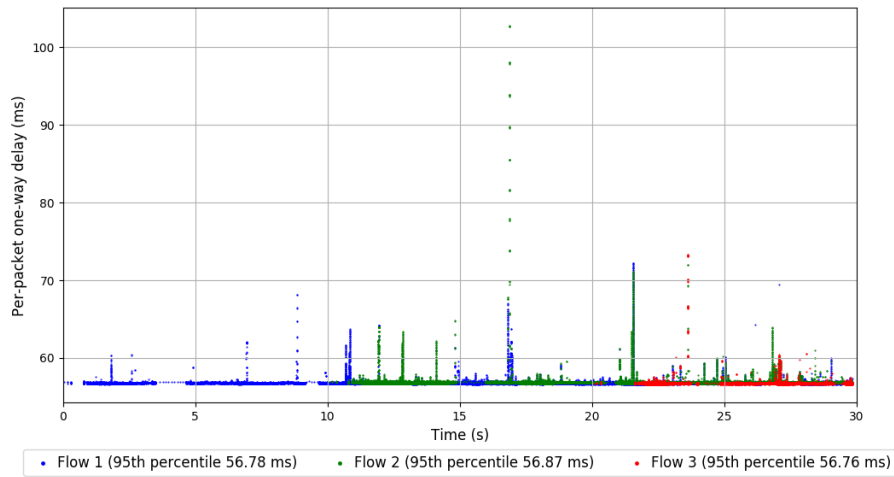
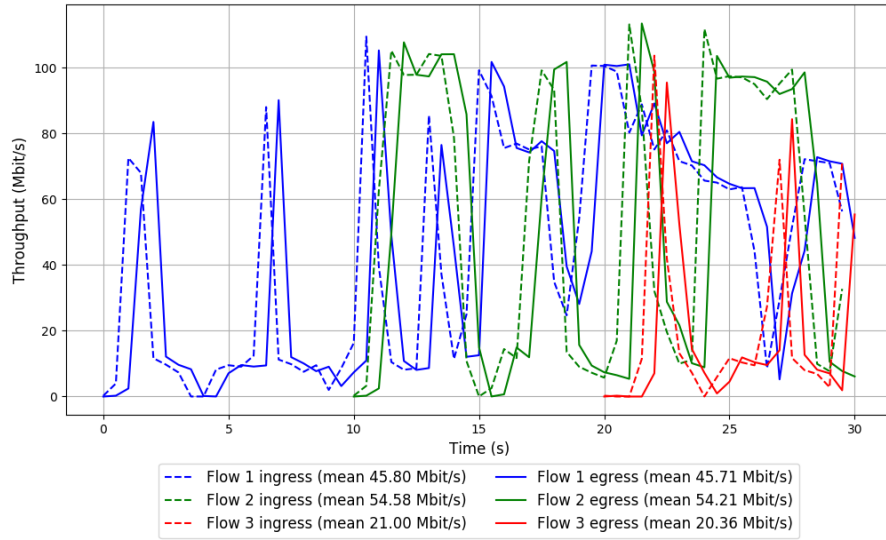
-- Flow 3:

Average throughput: 20.36 Mbit/s

95th percentile per-packet one-way delay: 56.758 ms

Loss rate: 4.20%

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



Run 1: Statistics of SCReAM

Start at: 2019-05-30 19:30:35  
End at: 2019-05-30 19:31:05  
Local clock offset: -0.048 ms  
Remote clock offset: -0.257 ms

# Below is generated by plot.py at 2019-05-31 00:34:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 61.160 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.165 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.173 ms

Loss rate: 0.61%

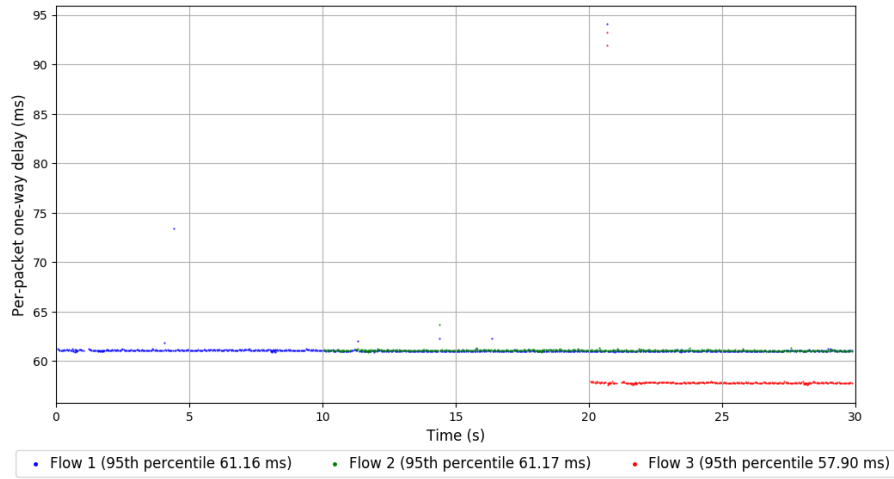
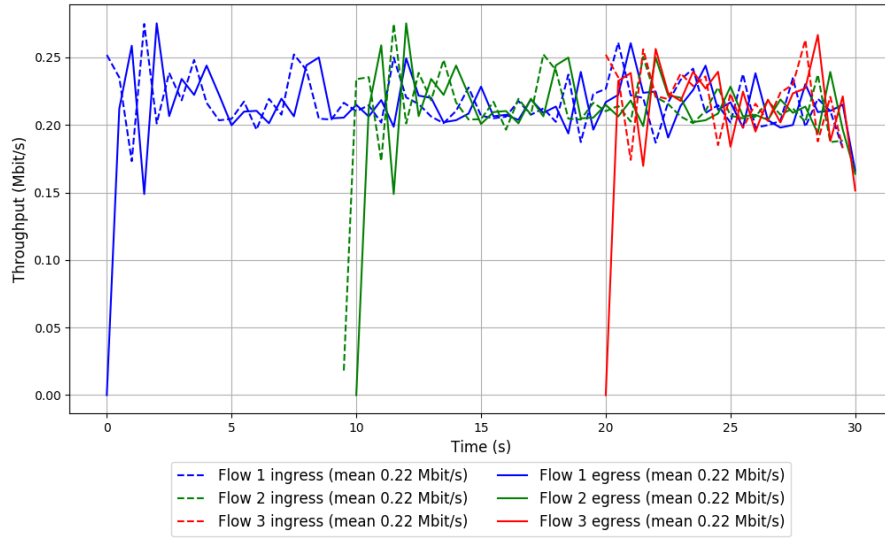
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.896 ms

Loss rate: 1.08%

# Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-05-30 20:06:40  
End at: 2019-05-30 20:07:10  
Local clock offset: 0.108 ms  
Remote clock offset: -0.154 ms

# Below is generated by plot.py at 2019-05-31 00:34:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 57.829 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.664 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.736 ms

Loss rate: 0.61%

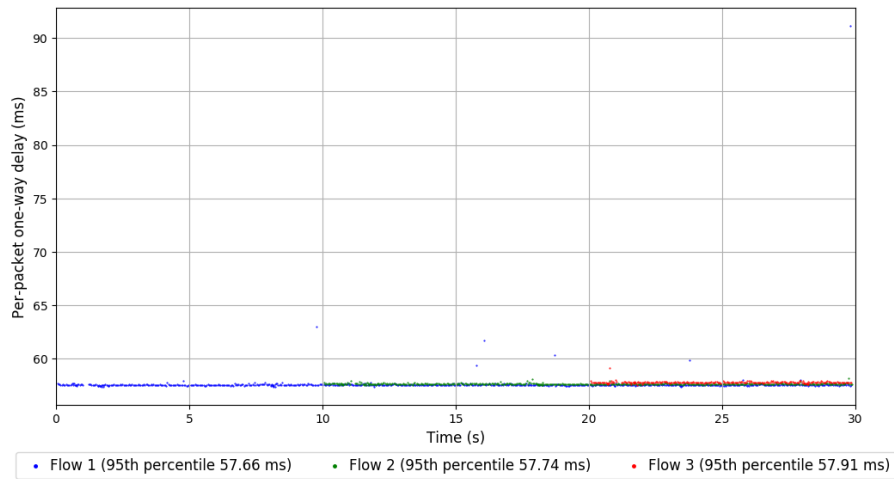
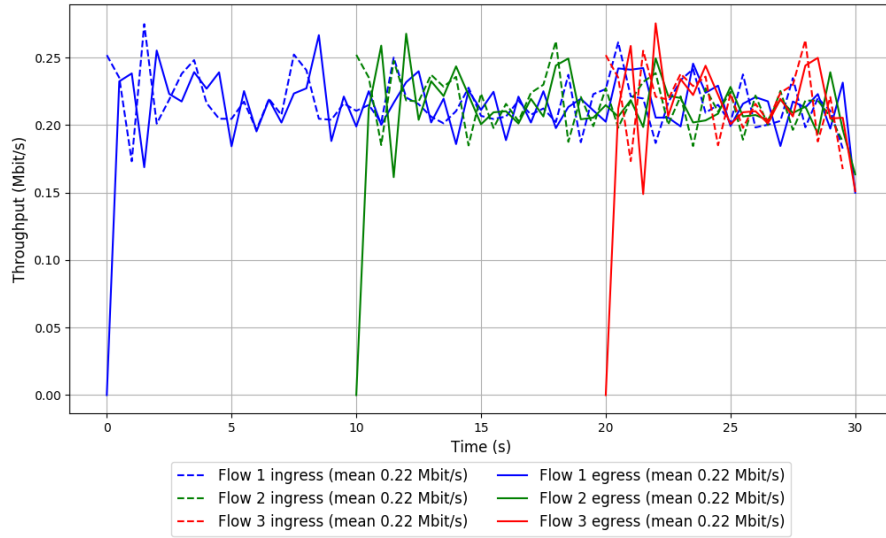
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.911 ms

Loss rate: 1.11%

## Run 2: Report of SCReAM — Data Link





Run 3: Statistics of SCReAM

Start at: 2019-05-30 20:42:19

End at: 2019-05-30 20:42:49

Local clock offset: 0.257 ms

Remote clock offset: -0.59 ms

# Below is generated by plot.py at 2019-05-31 00:34:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 61.758 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.220 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.787 ms

Loss rate: 0.61%

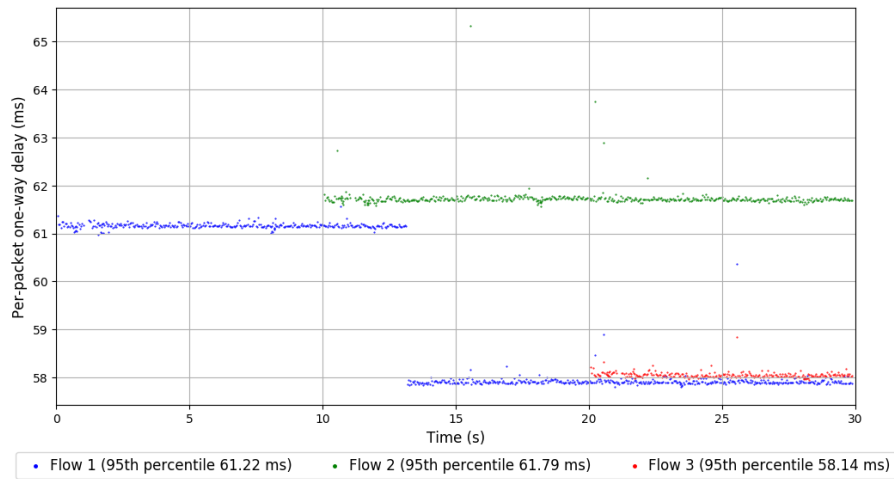
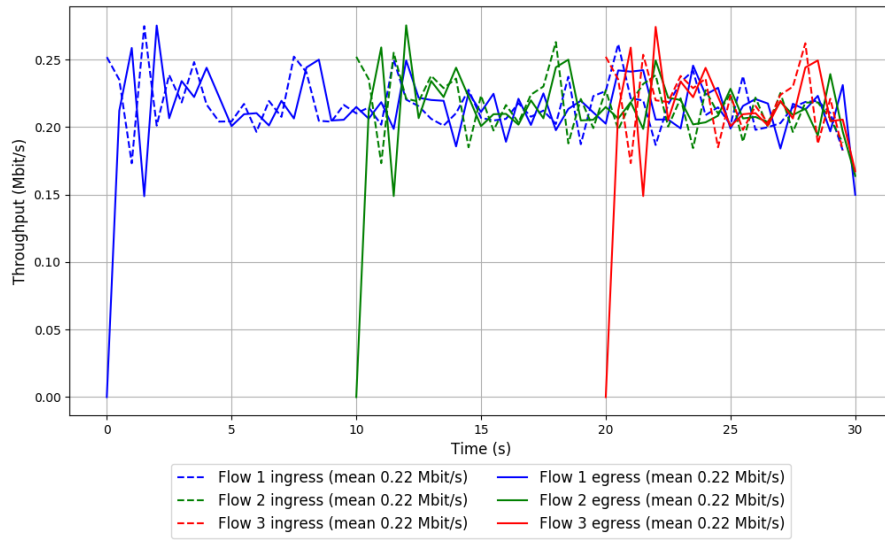
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 58.141 ms

Loss rate: 1.08%

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



Run 4: Statistics of SCReAM

Start at: 2019-05-30 21:18:14  
End at: 2019-05-30 21:18:44  
Local clock offset: 0.372 ms  
Remote clock offset: -0.465 ms

# Below is generated by plot.py at 2019-05-31 00:34:52

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 61.551 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.129 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.585 ms

Loss rate: 0.61%

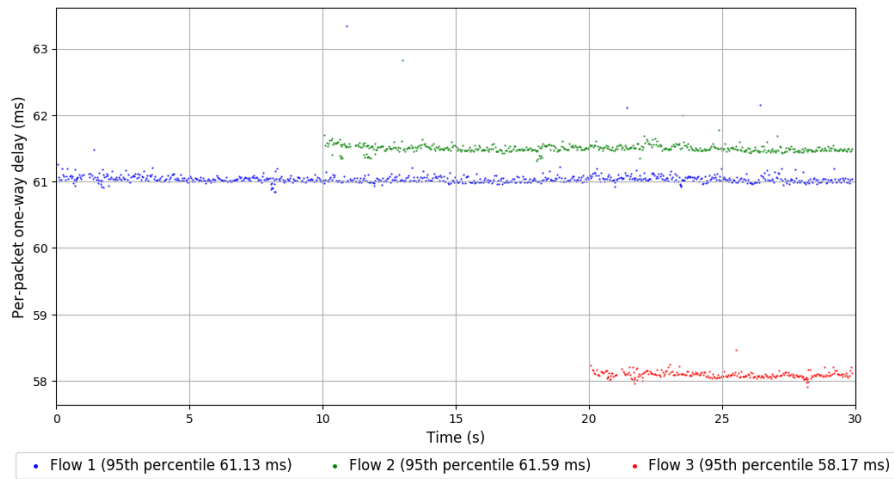
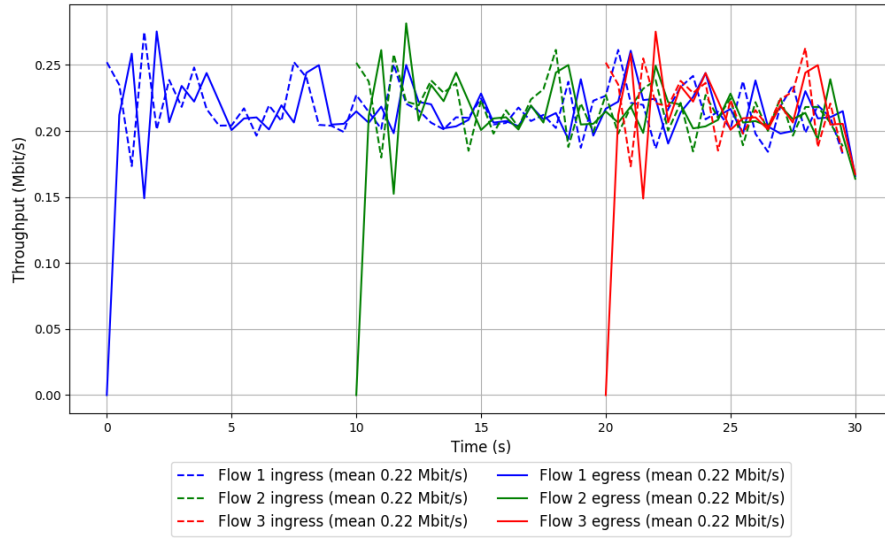
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 58.174 ms

Loss rate: 1.08%

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



Run 5: Statistics of SCReAM

Start at: 2019-05-30 21:54:18  
End at: 2019-05-30 21:54:48  
Local clock offset: -0.289 ms  
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2019-05-31 00:34:52

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 56.930 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 56.740 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 56.951 ms

Loss rate: 0.61%

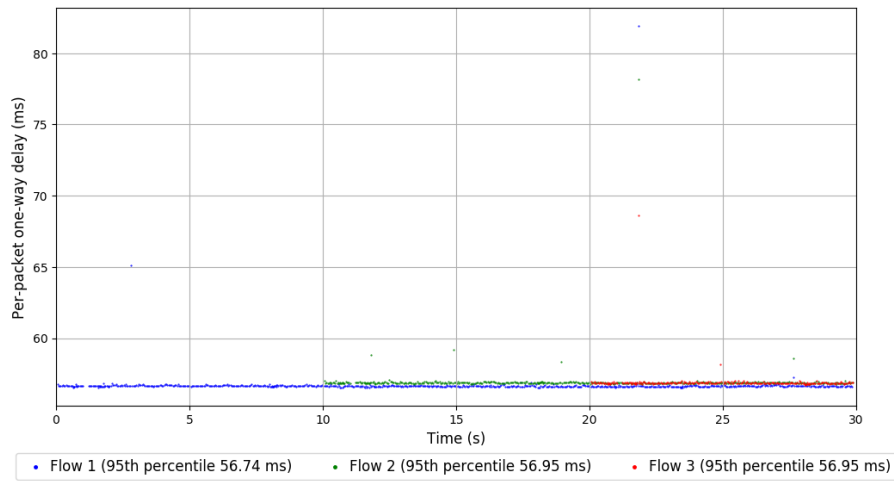
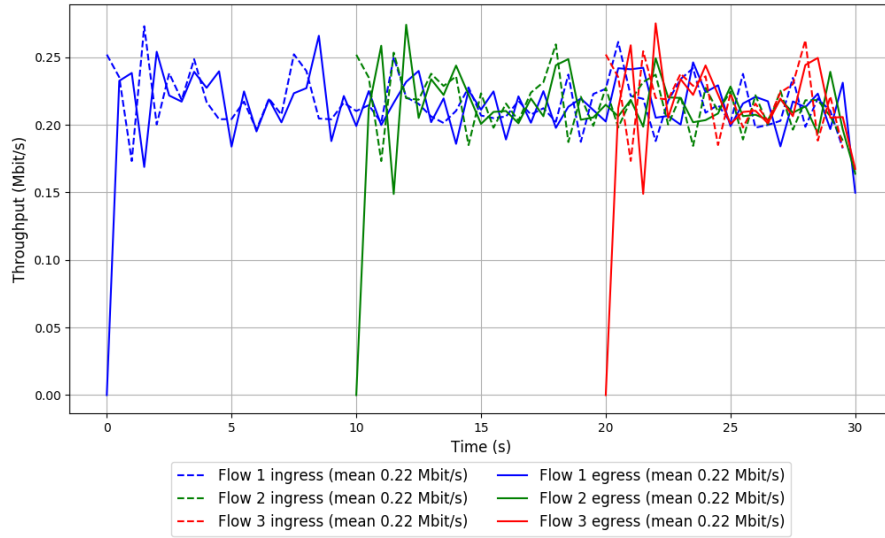
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 56.949 ms

Loss rate: 1.09%

Run 5: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-05-30 19:25:31

End at: 2019-05-30 19:26:01

Local clock offset: -0.289 ms

Remote clock offset: 0.0 ms

# Below is generated by plot.py at 2019-05-31 00:34:52

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.17 Mbit/s

95th percentile per-packet one-way delay: 57.521 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 7.86 Mbit/s

95th percentile per-packet one-way delay: 57.516 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 7.80 Mbit/s

95th percentile per-packet one-way delay: 57.559 ms

Loss rate: 0.77%

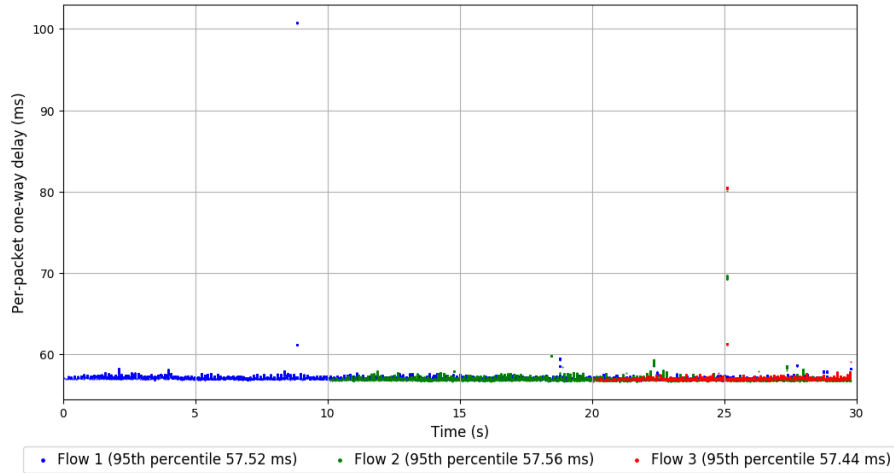
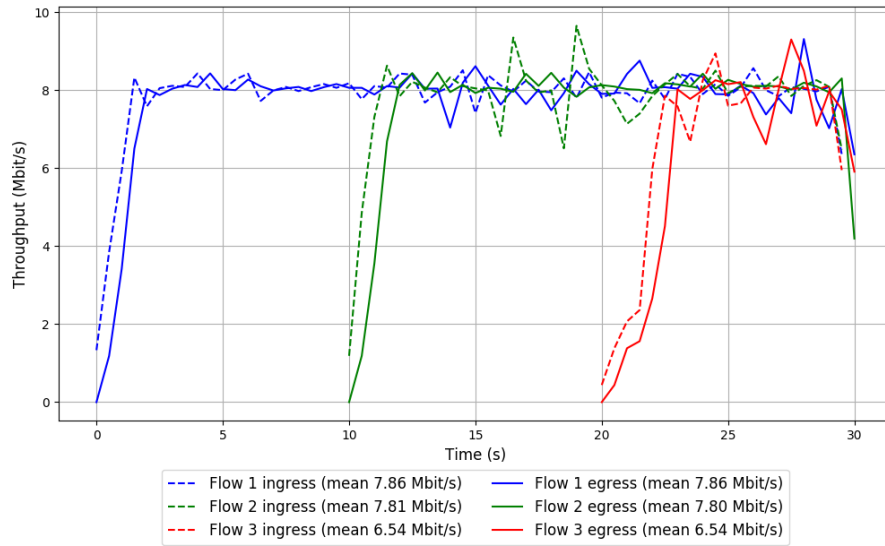
-- Flow 3:

Average throughput: 6.54 Mbit/s

95th percentile per-packet one-way delay: 57.441 ms

Loss rate: 1.57%

Run 1: Report of Sprout — Data Link





Run 2: Statistics of Sprout

Start at: 2019-05-30 20:01:34  
End at: 2019-05-30 20:02:04  
Local clock offset: -0.508 ms  
Remote clock offset: 0.396 ms

# Below is generated by plot.py at 2019-05-31 00:34:52

# Datalink statistics

-- Total of 3 flows:

Average throughput: 14.03 Mbit/s  
95th percentile per-packet one-way delay: 59.879 ms  
Loss rate: 0.57%

-- Flow 1:

Average throughput: 6.98 Mbit/s  
95th percentile per-packet one-way delay: 60.014 ms  
Loss rate: 0.49%

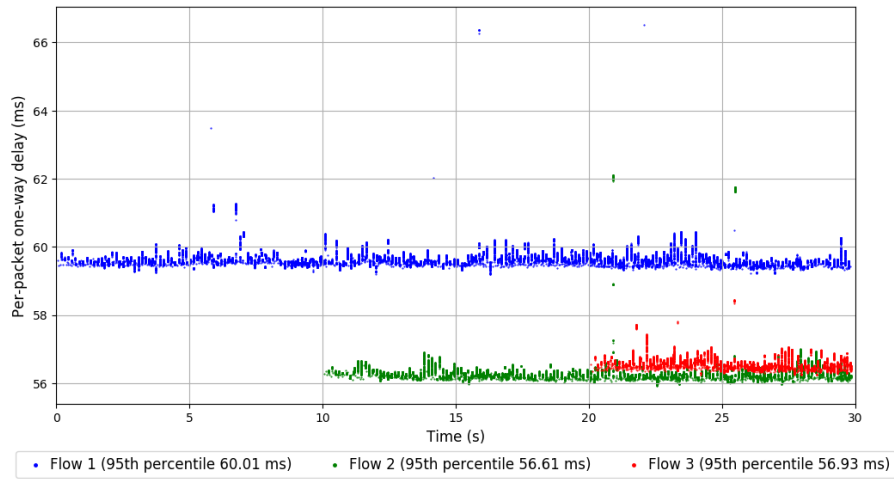
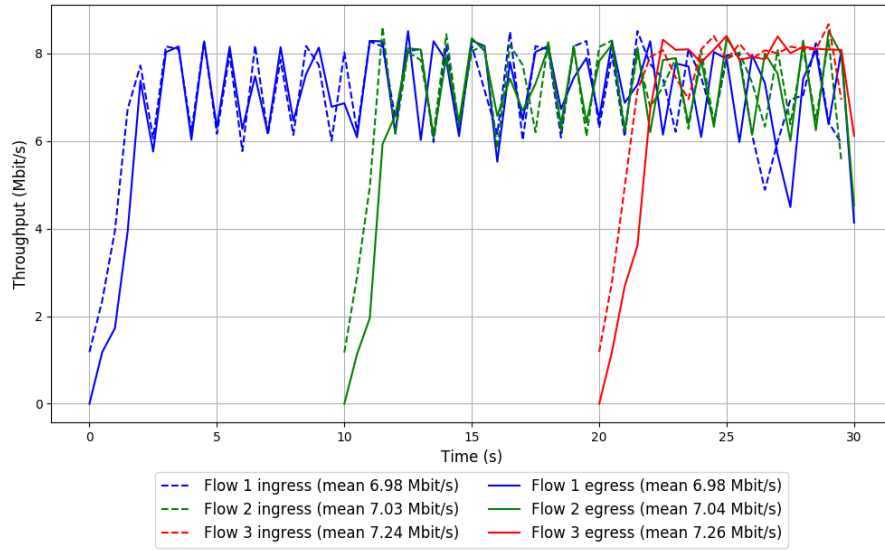
-- Flow 2:

Average throughput: 7.04 Mbit/s  
95th percentile per-packet one-way delay: 56.610 ms  
Loss rate: 0.48%

-- Flow 3:

Average throughput: 7.26 Mbit/s  
95th percentile per-packet one-way delay: 56.929 ms  
Loss rate: 0.98%

Run 2: Report of Sprout — Data Link

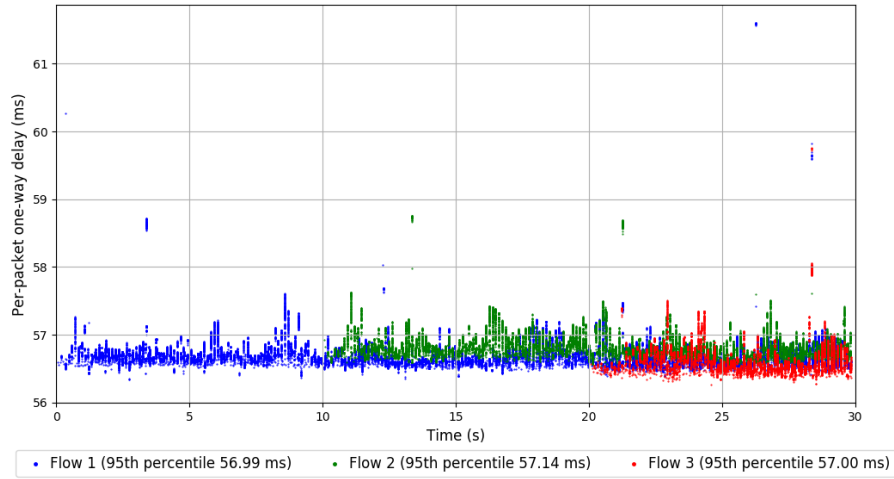
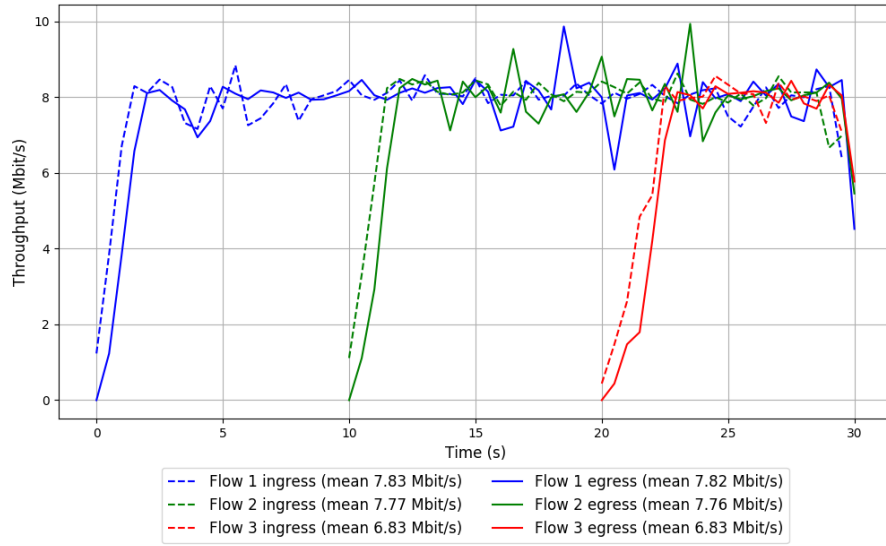


Run 3: Statistics of Sprout

Start at: 2019-05-30 20:37:09  
End at: 2019-05-30 20:37:39  
Local clock offset: -0.619 ms  
Remote clock offset: 0.068 ms

```
# Below is generated by plot.py at 2019-05-31 00:34:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.21 Mbit/s
95th percentile per-packet one-way delay: 57.067 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 7.82 Mbit/s
95th percentile per-packet one-way delay: 56.986 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 57.143 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 6.83 Mbit/s
95th percentile per-packet one-way delay: 57.000 ms
Loss rate: 0.97%
```

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



Run 4: Statistics of Sprout

Start at: 2019-05-30 21:13:14  
End at: 2019-05-30 21:13:44  
Local clock offset: 0.113 ms  
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2019-05-31 00:34:52

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.28 Mbit/s  
95th percentile per-packet one-way delay: 57.730 ms  
Loss rate: 0.67%

-- Flow 1:

Average throughput: 7.84 Mbit/s  
95th percentile per-packet one-way delay: 57.577 ms  
Loss rate: 0.49%

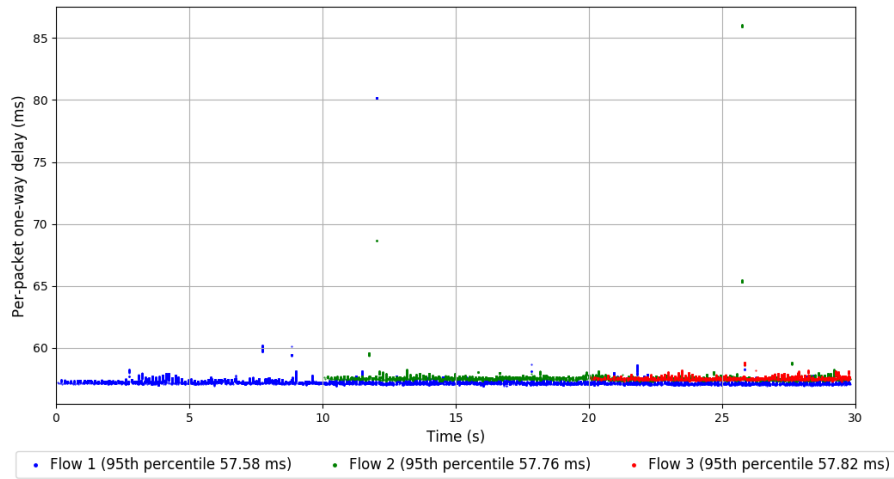
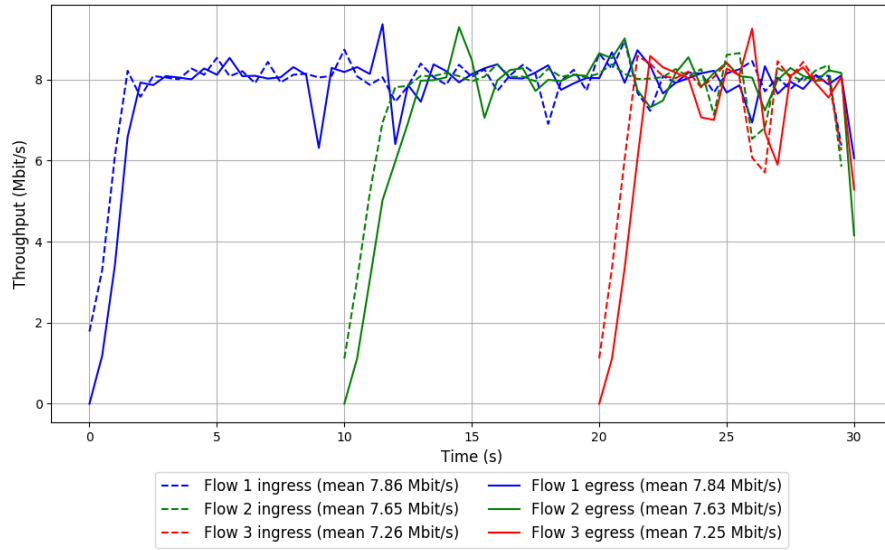
-- Flow 2:

Average throughput: 7.63 Mbit/s  
95th percentile per-packet one-way delay: 57.761 ms  
Loss rate: 0.63%

-- Flow 3:

Average throughput: 7.25 Mbit/s  
95th percentile per-packet one-way delay: 57.819 ms  
Loss rate: 1.36%

Run 4: Report of Sprout — Data Link

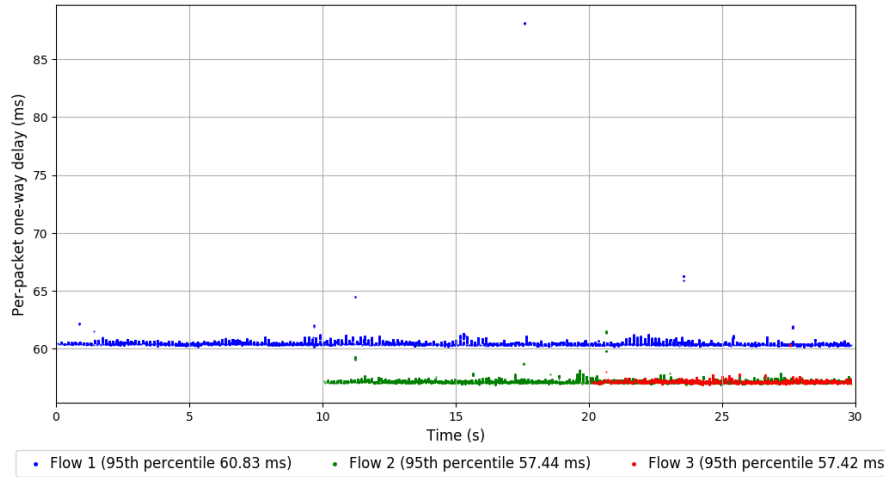
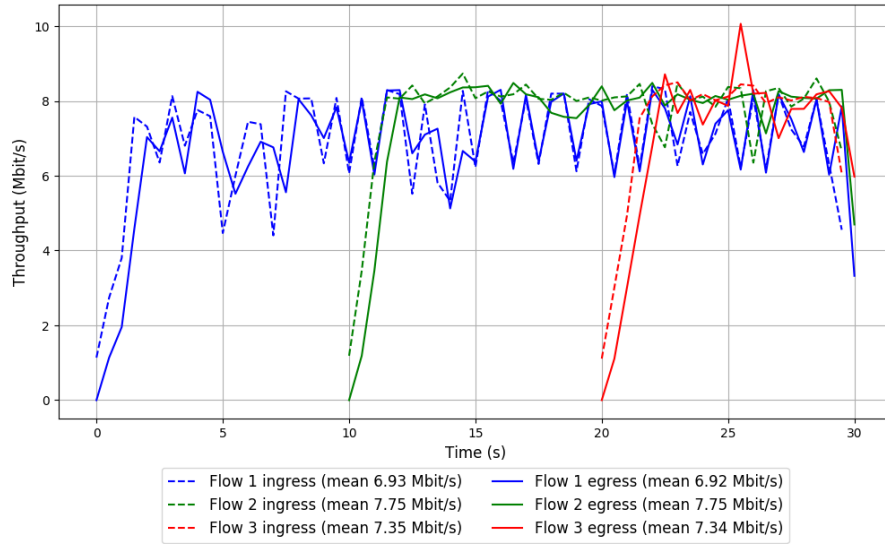


Run 5: Statistics of Sprout

Start at: 2019-05-30 21:49:22  
End at: 2019-05-30 21:49:52  
Local clock offset: 0.141 ms  
Remote clock offset: -0.105 ms

```
# Below is generated by plot.py at 2019-05-31 00:34:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.46 Mbit/s
95th percentile per-packet one-way delay: 60.697 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 6.92 Mbit/s
95th percentile per-packet one-way delay: 60.827 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 57.438 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 7.34 Mbit/s
95th percentile per-packet one-way delay: 57.423 ms
Loss rate: 1.40%
```

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





Run 1: Statistics of TaoVA-100x

Start at: 2019-05-30 19:35:29  
End at: 2019-05-30 19:35:59  
Local clock offset: -0.146 ms  
Remote clock offset: -0.115 ms

# Below is generated by plot.py at 2019-05-31 00:38:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 454.83 Mbit/s  
95th percentile per-packet one-way delay: 61.051 ms  
Loss rate: 0.58%

-- Flow 1:

Average throughput: 228.97 Mbit/s  
95th percentile per-packet one-way delay: 59.339 ms  
Loss rate: 0.46%

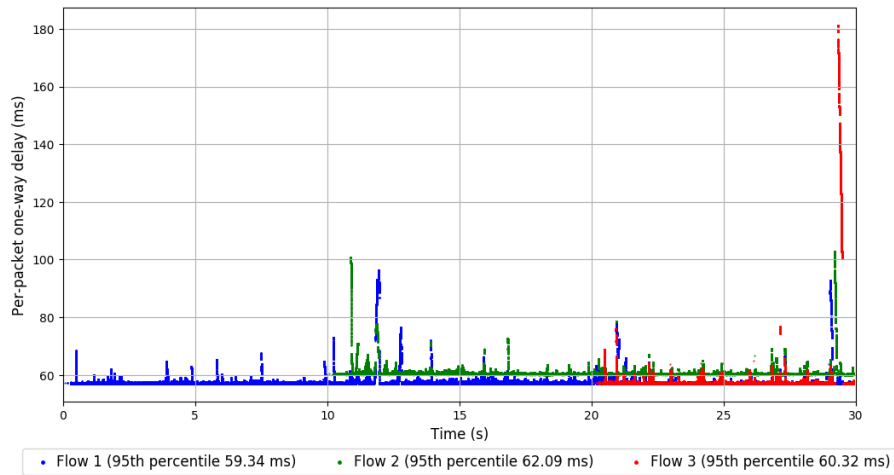
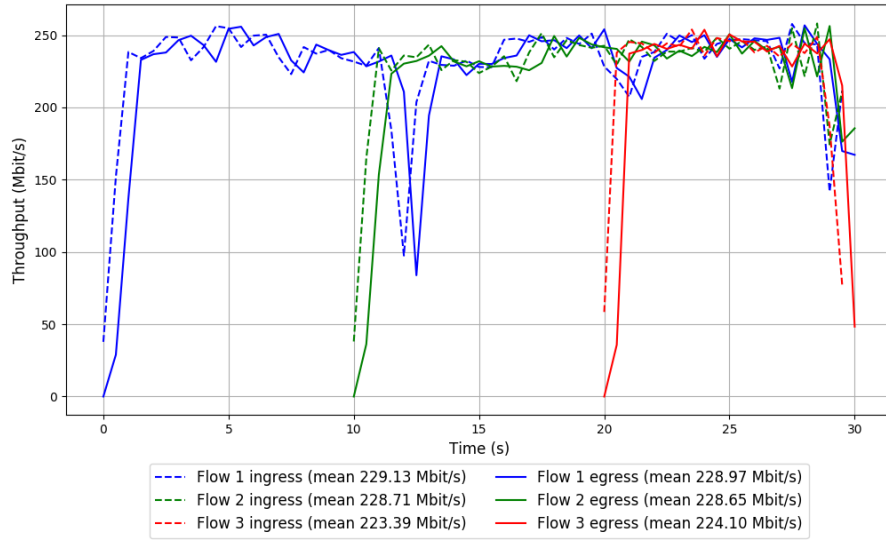
-- Flow 2:

Average throughput: 228.65 Mbit/s  
95th percentile per-packet one-way delay: 62.090 ms  
Loss rate: 0.61%

-- Flow 3:

Average throughput: 224.10 Mbit/s  
95th percentile per-packet one-way delay: 60.316 ms  
Loss rate: 0.85%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-05-30 20:11:31  
End at: 2019-05-30 20:12:01  
Local clock offset: 0.039 ms  
Remote clock offset: -0.211 ms

# Below is generated by plot.py at 2019-05-31 00:38:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 446.06 Mbit/s  
95th percentile per-packet one-way delay: 62.666 ms  
Loss rate: 0.60%

-- Flow 1:

Average throughput: 233.54 Mbit/s  
95th percentile per-packet one-way delay: 62.557 ms  
Loss rate: 0.45%

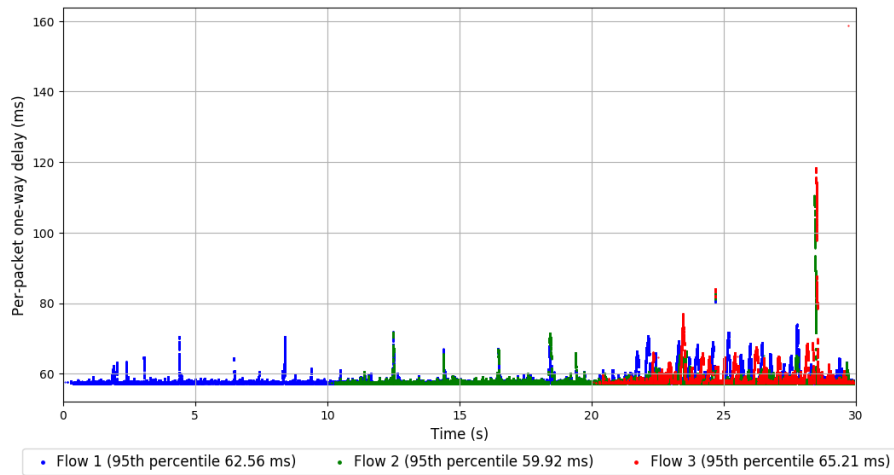
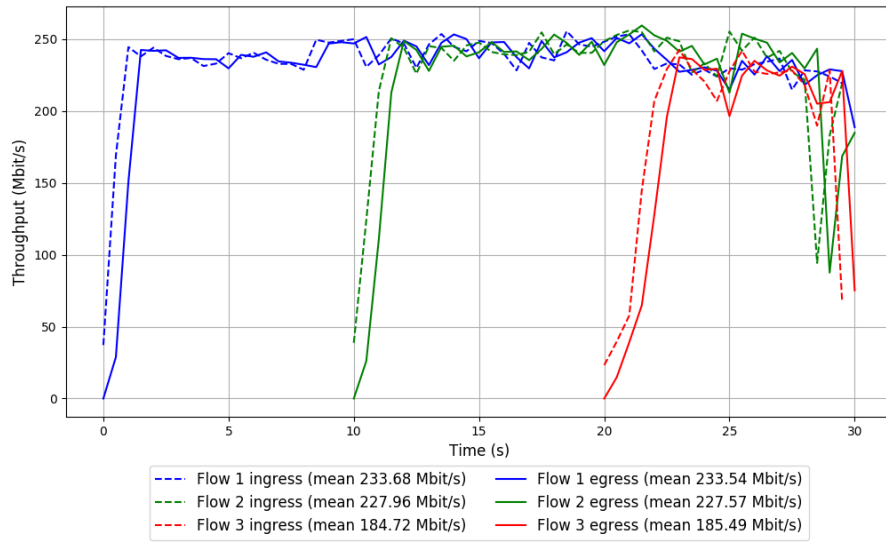
-- Flow 2:

Average throughput: 227.57 Mbit/s  
95th percentile per-packet one-way delay: 59.921 ms  
Loss rate: 0.76%

-- Flow 3:

Average throughput: 185.49 Mbit/s  
95th percentile per-packet one-way delay: 65.209 ms  
Loss rate: 0.77%

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

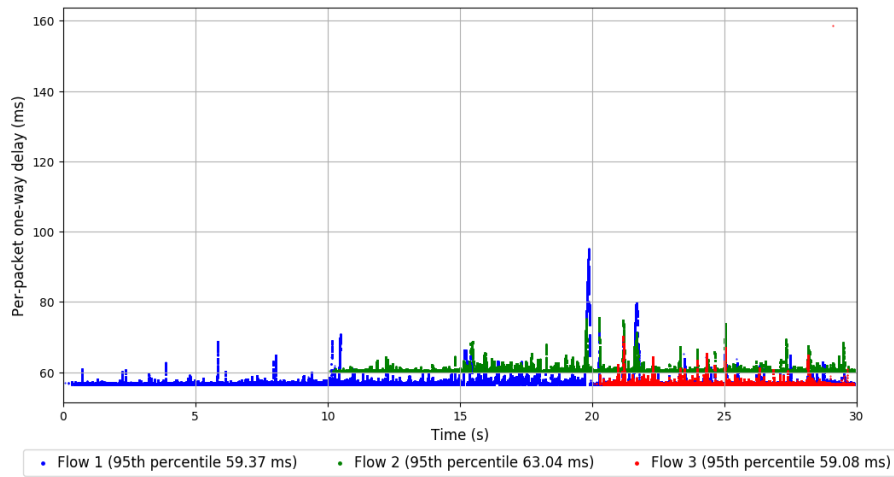
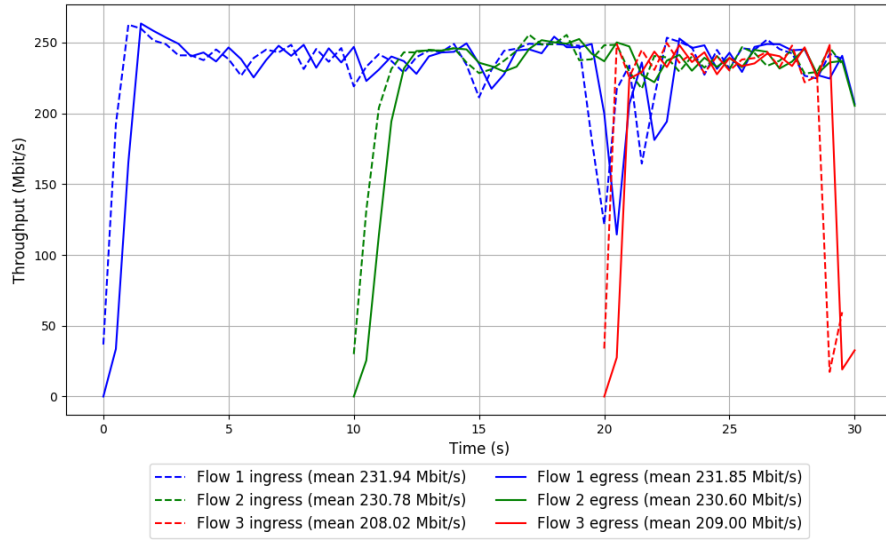


Run 3: Statistics of TaoVA-100x

Start at: 2019-05-30 20:47:09  
End at: 2019-05-30 20:47:39  
Local clock offset: -0.6 ms  
Remote clock offset: -0.131 ms

```
# Below is generated by plot.py at 2019-05-31 00:38:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 453.92 Mbit/s
95th percentile per-packet one-way delay: 61.814 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 231.85 Mbit/s
95th percentile per-packet one-way delay: 59.373 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 230.60 Mbit/s
95th percentile per-packet one-way delay: 63.041 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 209.00 Mbit/s
95th percentile per-packet one-way delay: 59.079 ms
Loss rate: 0.69%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-05-30 21:23:04

End at: 2019-05-30 21:23:34

Local clock offset: 0.281 ms

Remote clock offset: 0.06 ms

# Below is generated by plot.py at 2019-05-31 00:38:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 452.62 Mbit/s

95th percentile per-packet one-way delay: 61.112 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 230.36 Mbit/s

95th percentile per-packet one-way delay: 59.364 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 224.61 Mbit/s

95th percentile per-packet one-way delay: 60.965 ms

Loss rate: 0.64%

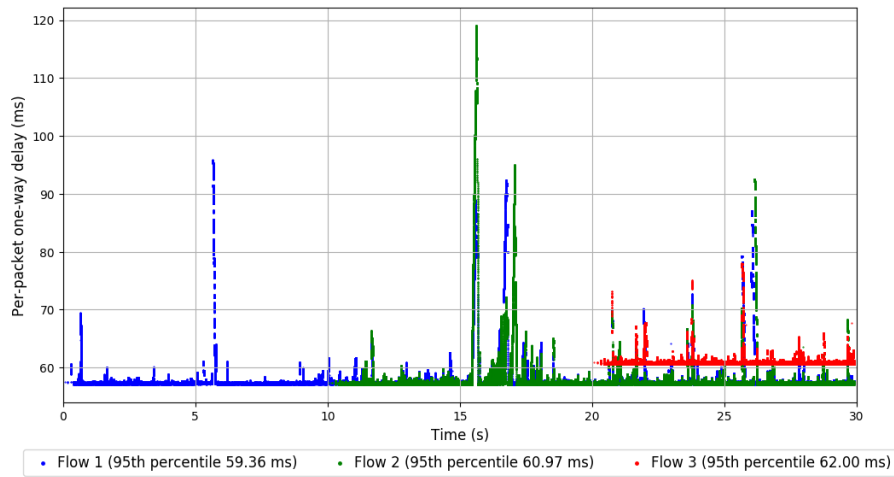
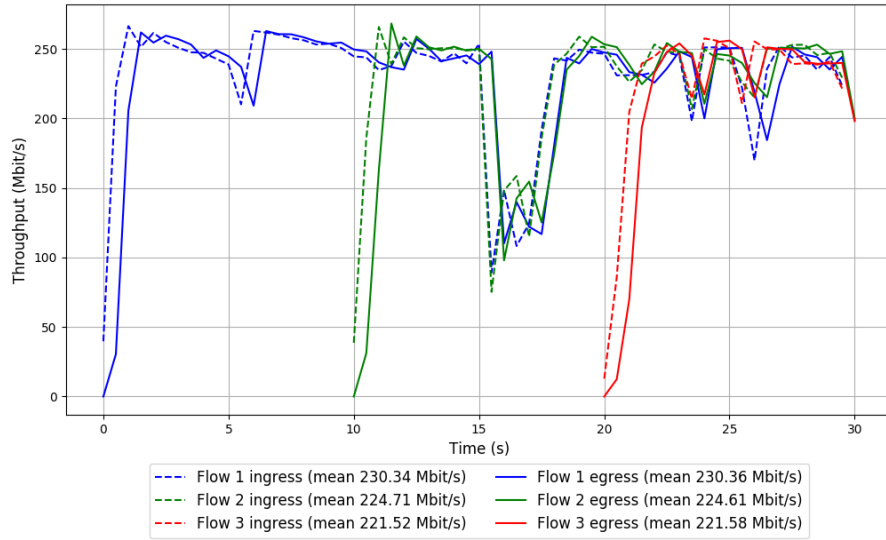
-- Flow 3:

Average throughput: 221.58 Mbit/s

95th percentile per-packet one-way delay: 61.996 ms

Loss rate: 1.20%

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





Run 5: Statistics of TaoVA-100x

Start at: 2019-05-30 21:59:10  
End at: 2019-05-30 21:59:40  
Local clock offset: 0.249 ms  
Remote clock offset: -0.347 ms

# Below is generated by plot.py at 2019-05-31 00:38:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 444.31 Mbit/s  
95th percentile per-packet one-way delay: 61.638 ms  
Loss rate: 0.50%

-- Flow 1:

Average throughput: 228.19 Mbit/s  
95th percentile per-packet one-way delay: 59.311 ms  
Loss rate: 0.43%

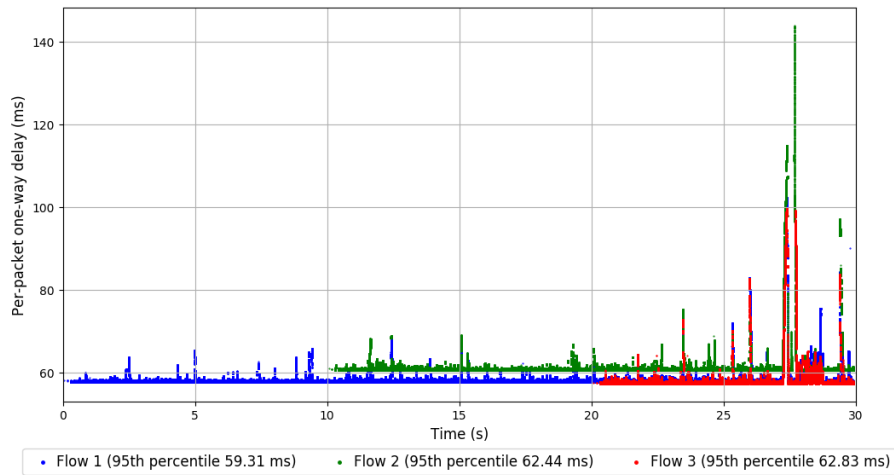
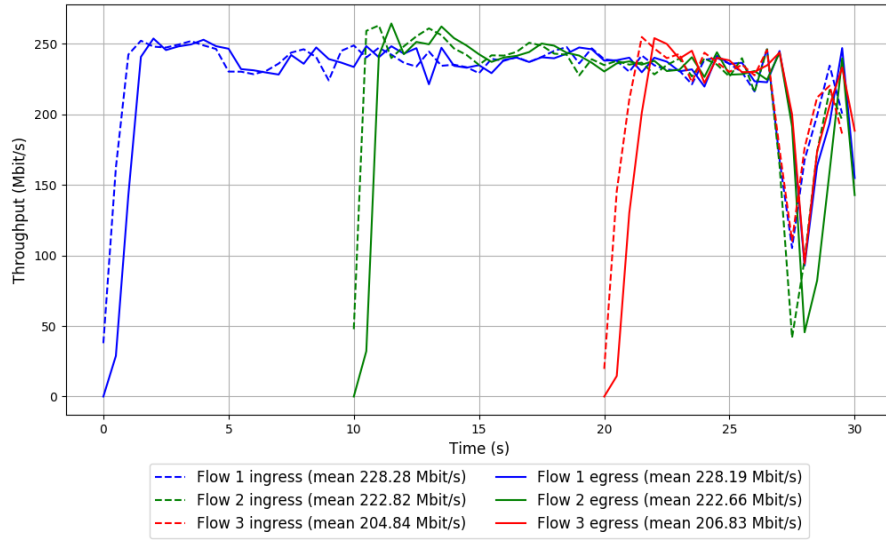
-- Flow 2:

Average throughput: 222.66 Mbit/s  
95th percentile per-packet one-way delay: 62.438 ms  
Loss rate: 0.68%

-- Flow 3:

Average throughput: 206.83 Mbit/s  
95th percentile per-packet one-way delay: 62.826 ms  
Loss rate: 0.31%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-05-30 19:28:37  
End at: 2019-05-30 19:29:07  
Local clock offset: -0.34 ms  
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2019-05-31 00:41:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 902.92 Mbit/s  
95th percentile per-packet one-way delay: 87.688 ms  
Loss rate: 0.63%

-- Flow 1:

Average throughput: 468.40 Mbit/s  
95th percentile per-packet one-way delay: 69.204 ms  
Loss rate: 0.39%

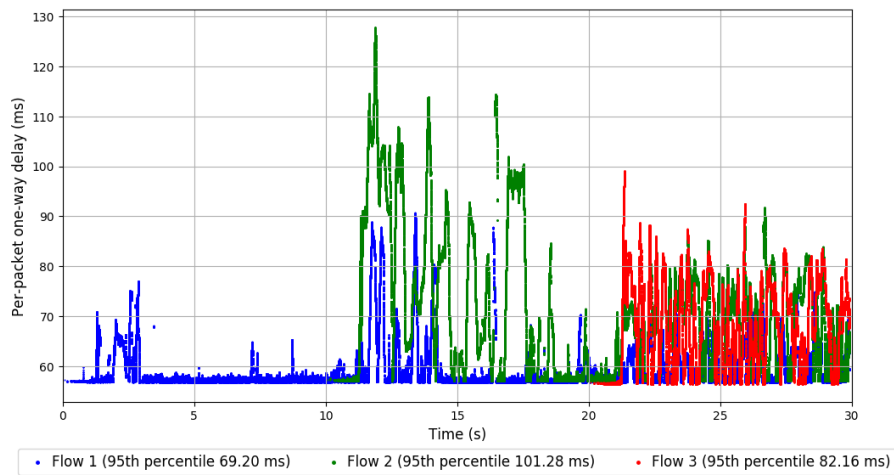
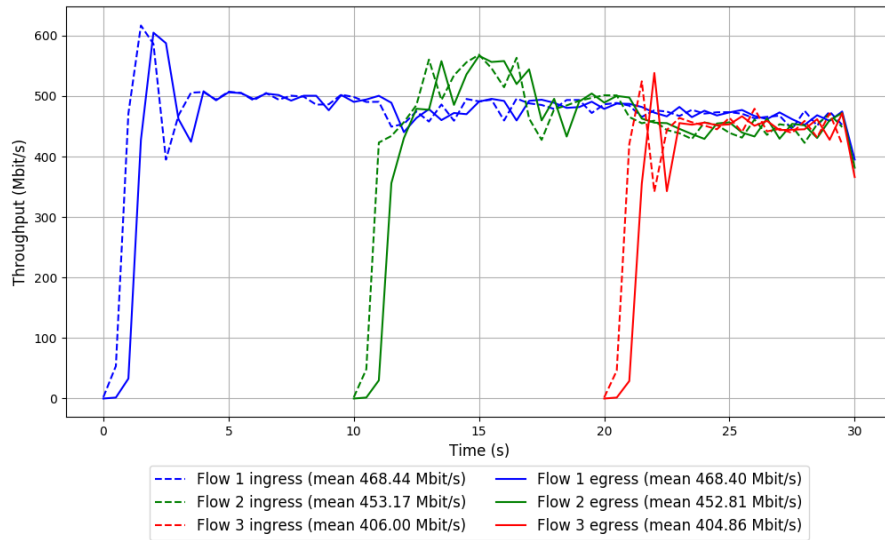
-- Flow 2:

Average throughput: 452.81 Mbit/s  
95th percentile per-packet one-way delay: 101.278 ms  
Loss rate: 0.63%

-- Flow 3:

Average throughput: 404.86 Mbit/s  
95th percentile per-packet one-way delay: 82.157 ms  
Loss rate: 1.42%

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



Run 2: Statistics of TCP Vegas

Start at: 2019-05-30 20:04:50

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

Local clock offset: -0.262 ms

Remote clock offset: 0.081 ms

# Below is generated by plot.py at 2019-05-31 00:47:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 701.79 Mbit/s

95th percentile per-packet one-way delay: 101.436 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 269.07 Mbit/s

95th percentile per-packet one-way delay: 58.544 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 417.39 Mbit/s

95th percentile per-packet one-way delay: 70.781 ms

Loss rate: 0.35%

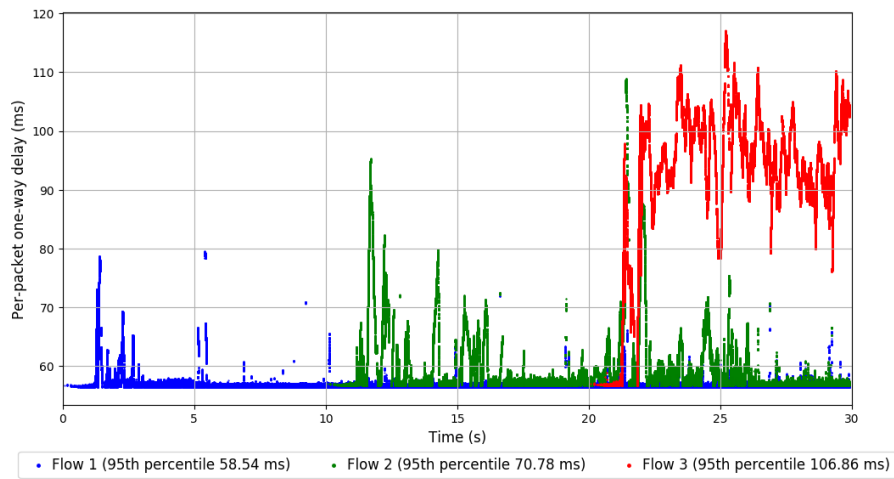
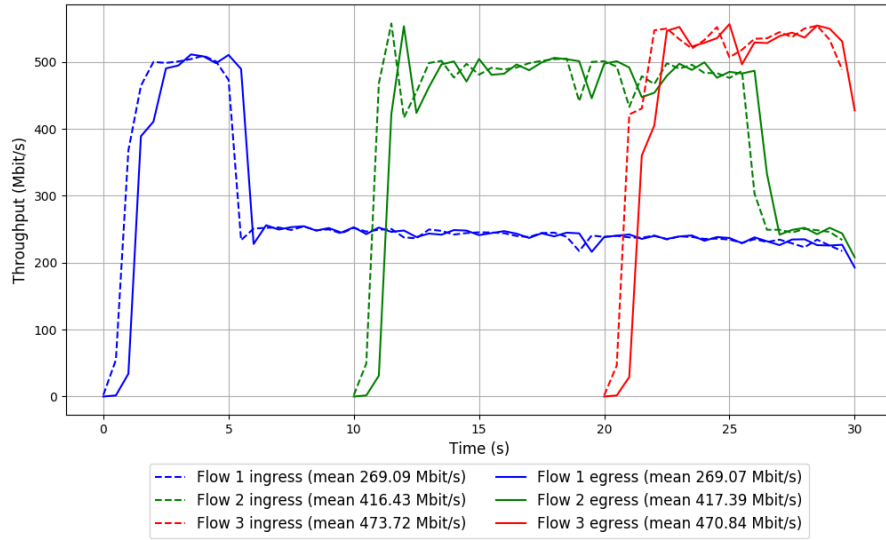
-- Flow 3:

Average throughput: 470.84 Mbit/s

95th percentile per-packet one-way delay: 106.864 ms

Loss rate: 1.75%

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



Run 3: Statistics of TCP Vegas

Start at: 2019-05-30 20:40:23  
End at: 2019-05-30 20:40:53  
Local clock offset: 0.01 ms  
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2019-05-31 00:52:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 855.71 Mbit/s  
95th percentile per-packet one-way delay: 73.726 ms  
Loss rate: 0.59%

-- Flow 1:

Average throughput: 486.70 Mbit/s  
95th percentile per-packet one-way delay: 66.864 ms  
Loss rate: 0.39%

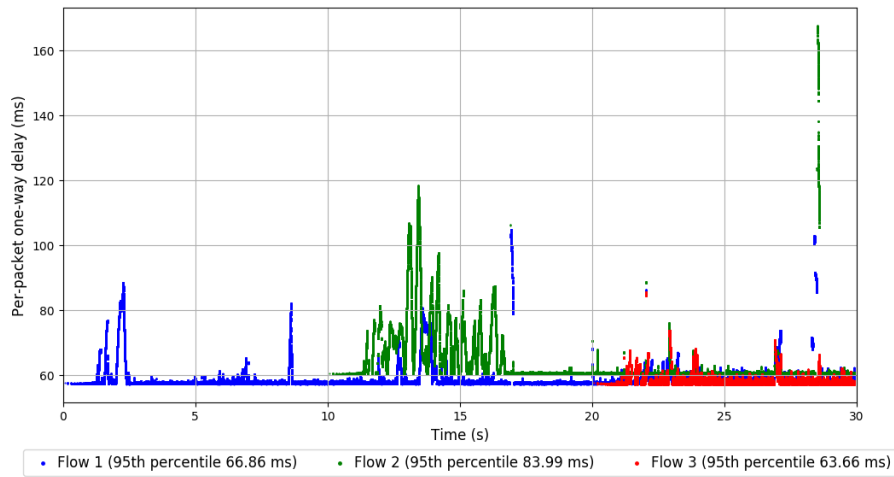
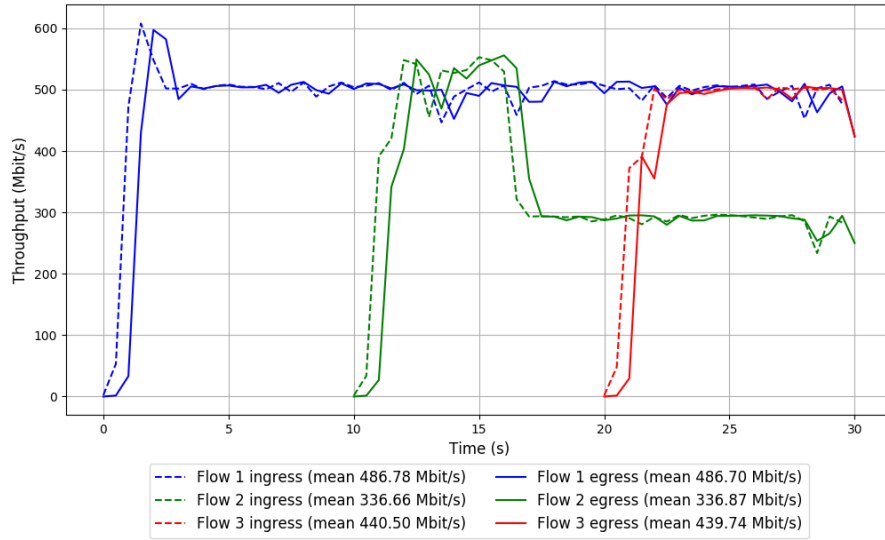
-- Flow 2:

Average throughput: 336.87 Mbit/s  
95th percentile per-packet one-way delay: 83.988 ms  
Loss rate: 0.53%

-- Flow 3:

Average throughput: 439.74 Mbit/s  
95th percentile per-packet one-way delay: 63.658 ms  
Loss rate: 1.32%

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





Run 4: Statistics of TCP Vegas

Start at: 2019-05-30 21:16:28  
End at: 2019-05-30 21:16:58  
Local clock offset: -0.02 ms  
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2019-05-31 00:52:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 650.52 Mbit/s  
95th percentile per-packet one-way delay: 64.449 ms  
Loss rate: 0.58%

-- Flow 1:

Average throughput: 313.44 Mbit/s  
95th percentile per-packet one-way delay: 62.531 ms  
Loss rate: 0.29%

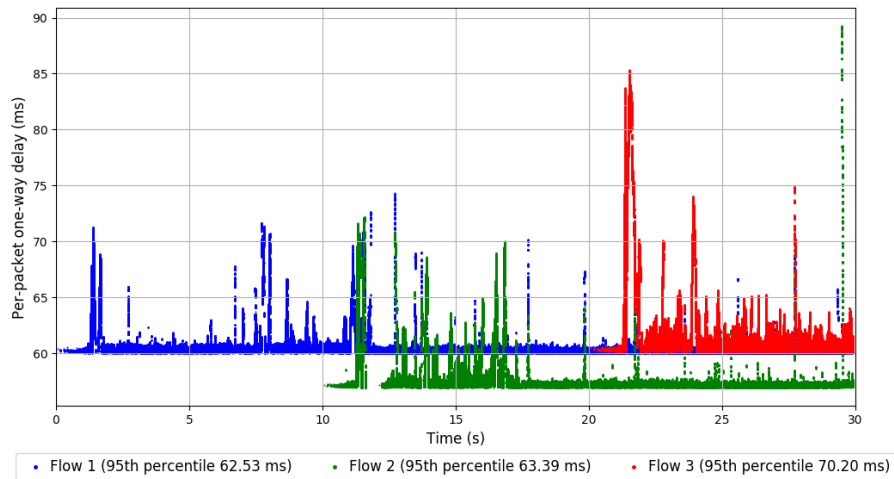
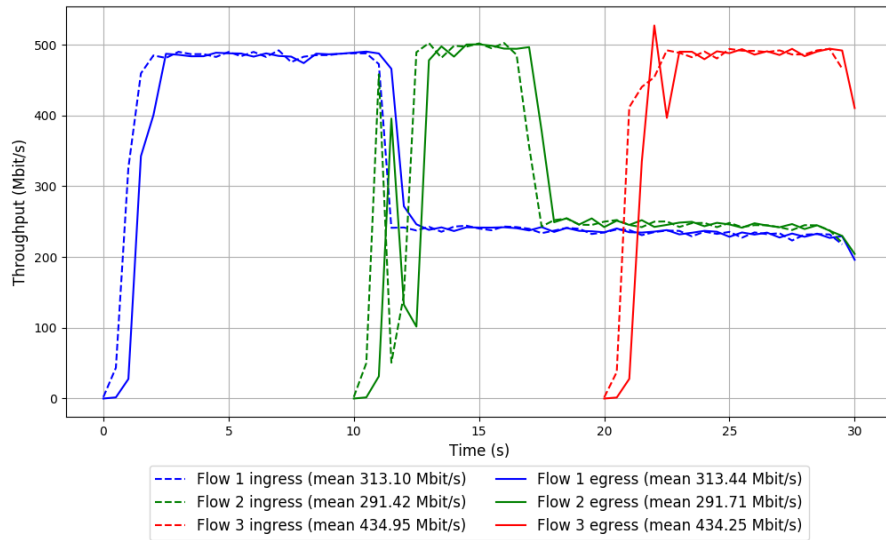
-- Flow 2:

Average throughput: 291.71 Mbit/s  
95th percentile per-packet one-way delay: 63.389 ms  
Loss rate: 0.48%

-- Flow 3:

Average throughput: 434.25 Mbit/s  
95th percentile per-packet one-way delay: 70.205 ms  
Loss rate: 1.34%

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



Run 5: Statistics of TCP Vegas

Start at: 2019-05-30 21:52:32  
End at: 2019-05-30 21:53:02  
Local clock offset: -0.047 ms  
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2019-05-31 00:52:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 652.60 Mbit/s  
95th percentile per-packet one-way delay: 68.524 ms  
Loss rate: 0.64%

-- Flow 1:

Average throughput: 343.49 Mbit/s  
95th percentile per-packet one-way delay: 62.603 ms  
Loss rate: 0.33%

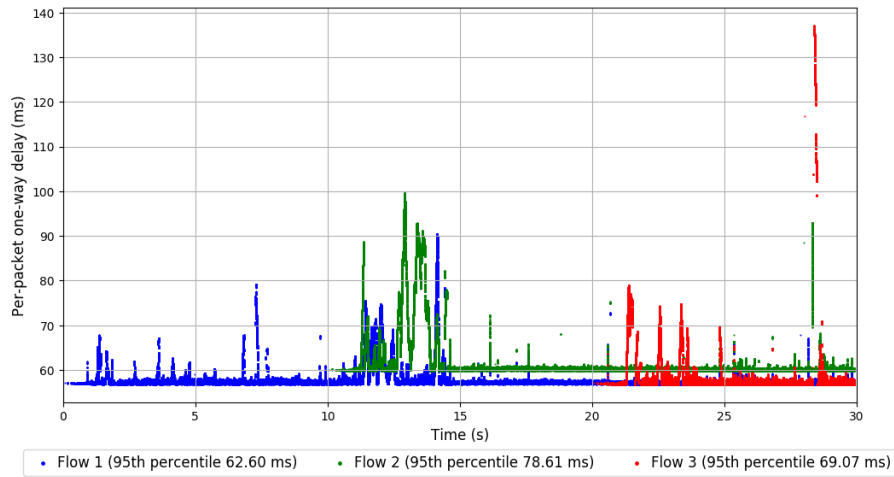
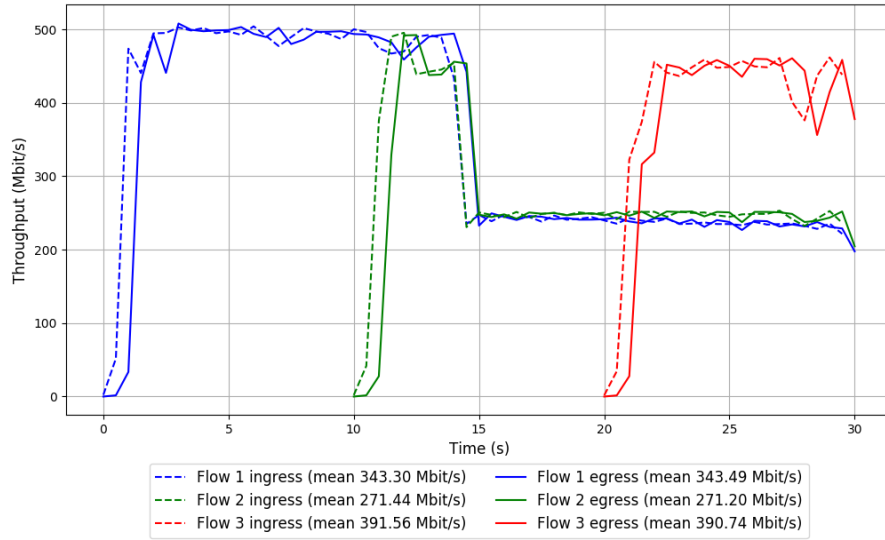
-- Flow 2:

Average throughput: 271.20 Mbit/s  
95th percentile per-packet one-way delay: 78.609 ms  
Loss rate: 0.68%

-- Flow 3:

Average throughput: 390.74 Mbit/s  
95th percentile per-packet one-way delay: 69.066 ms  
Loss rate: 1.39%

Run 5: Report of TCP Vegas — Data Link

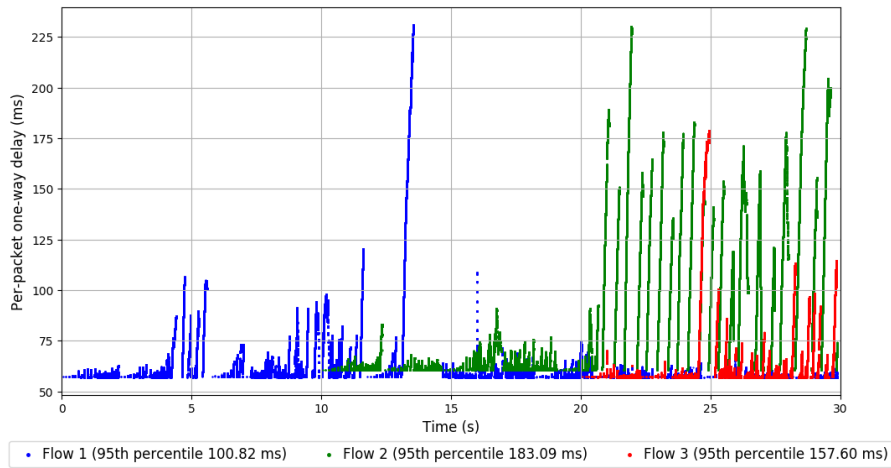
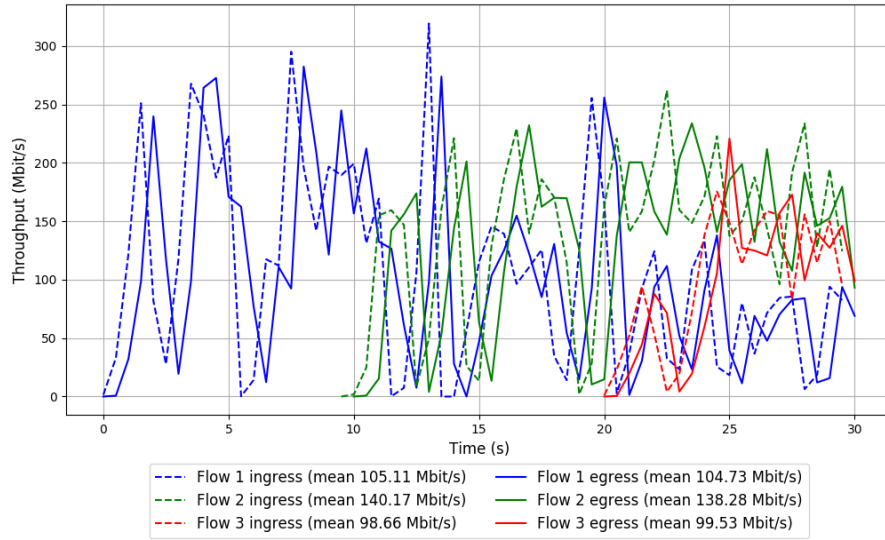


Run 1: Statistics of Verus

Start at: 2019-05-30 19:04:24  
End at: 2019-05-30 19:04:54  
Local clock offset: -0.19 ms  
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2019-05-31 00:52:07  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 229.33 Mbit/s  
95th percentile per-packet one-way delay: 168.013 ms  
Loss rate: 1.16%  
-- Flow 1:  
Average throughput: 104.73 Mbit/s  
95th percentile per-packet one-way delay: 100.817 ms  
Loss rate: 0.75%  
-- Flow 2:  
Average throughput: 138.28 Mbit/s  
95th percentile per-packet one-way delay: 183.085 ms  
Loss rate: 1.95%  
-- Flow 3:  
Average throughput: 99.53 Mbit/s  
95th percentile per-packet one-way delay: 157.598 ms  
Loss rate: 0.19%

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



Run 2: Statistics of Verus

Start at: 2019-05-30 19:40:18  
End at: 2019-05-30 19:40:48  
Local clock offset: -0.047 ms  
Remote clock offset: -0.243 ms

# Below is generated by plot.py at 2019-05-31 00:52:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 286.14 Mbit/s  
95th percentile per-packet one-way delay: 235.354 ms  
Loss rate: 2.91%

-- Flow 1:

Average throughput: 174.44 Mbit/s  
95th percentile per-packet one-way delay: 203.120 ms  
Loss rate: 1.29%

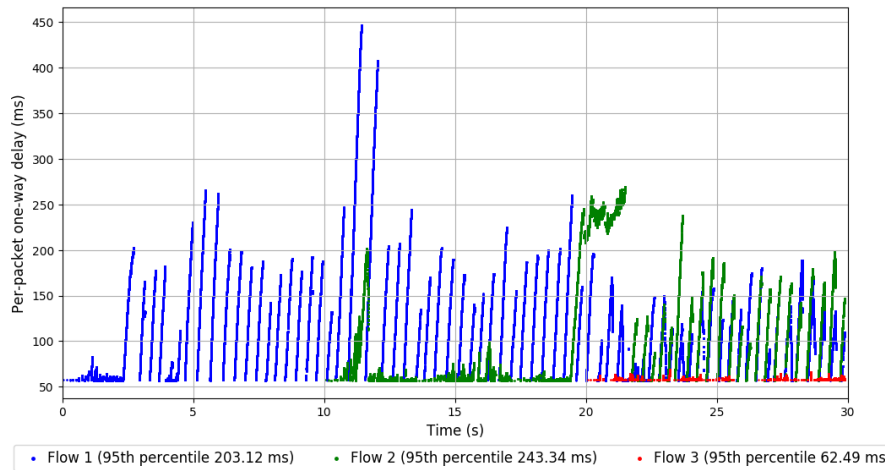
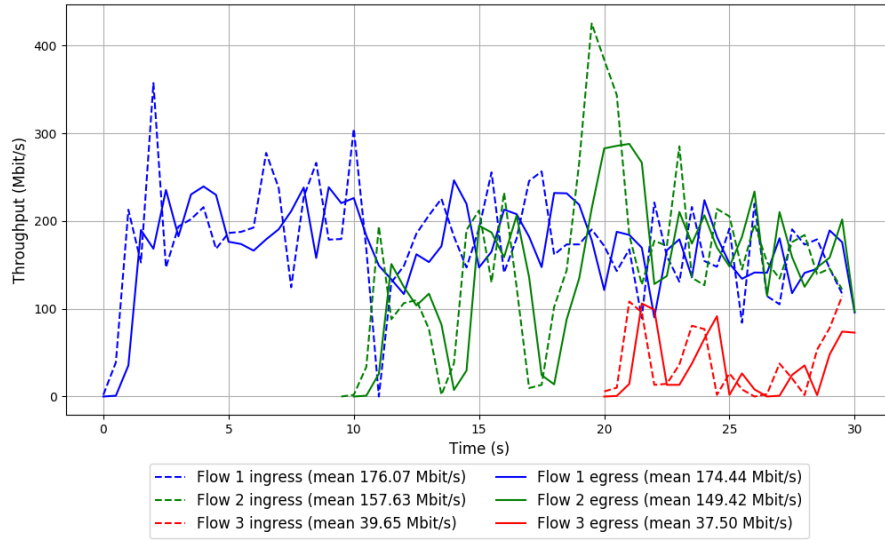
-- Flow 2:

Average throughput: 149.42 Mbit/s  
95th percentile per-packet one-way delay: 243.342 ms  
Loss rate: 5.19%

-- Flow 3:

Average throughput: 37.50 Mbit/s  
95th percentile per-packet one-way delay: 62.491 ms  
Loss rate: 6.51%

Run 2: Report of Verus — Data Link



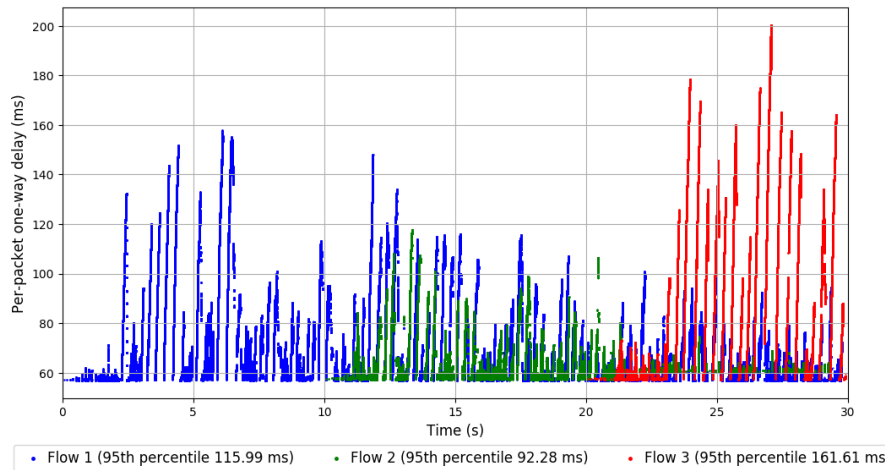
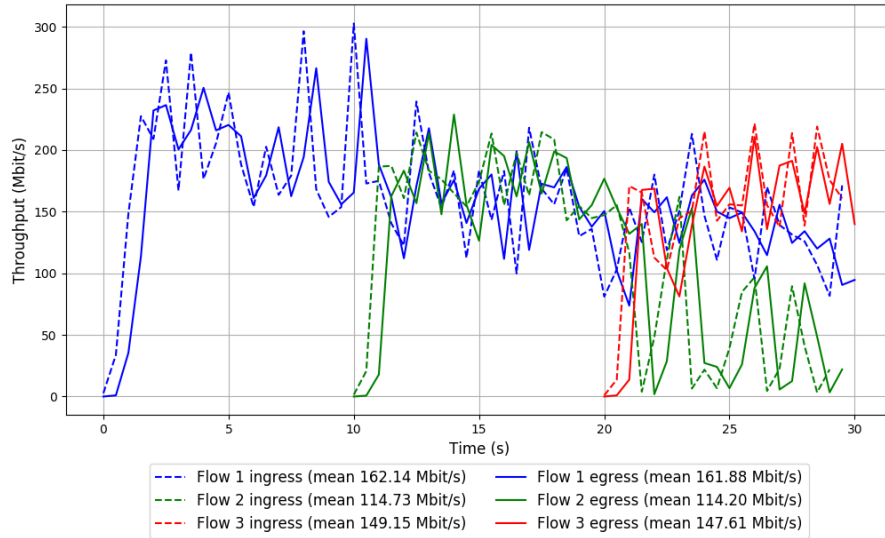


Run 3: Statistics of Verus

Start at: 2019-05-30 20:16:13  
End at: 2019-05-30 20:16:43  
Local clock offset: -0.243 ms  
Remote clock offset: -0.227 ms

```
# Below is generated by plot.py at 2019-05-31 00:52:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 283.27 Mbit/s
95th percentile per-packet one-way delay: 130.099 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 161.88 Mbit/s
95th percentile per-packet one-way delay: 115.993 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 114.20 Mbit/s
95th percentile per-packet one-way delay: 92.281 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 147.61 Mbit/s
95th percentile per-packet one-way delay: 161.611 ms
Loss rate: 1.88%
```

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

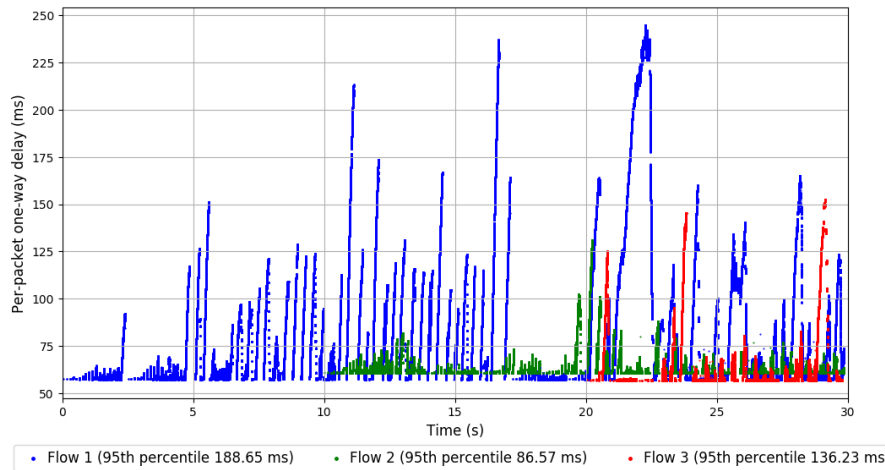
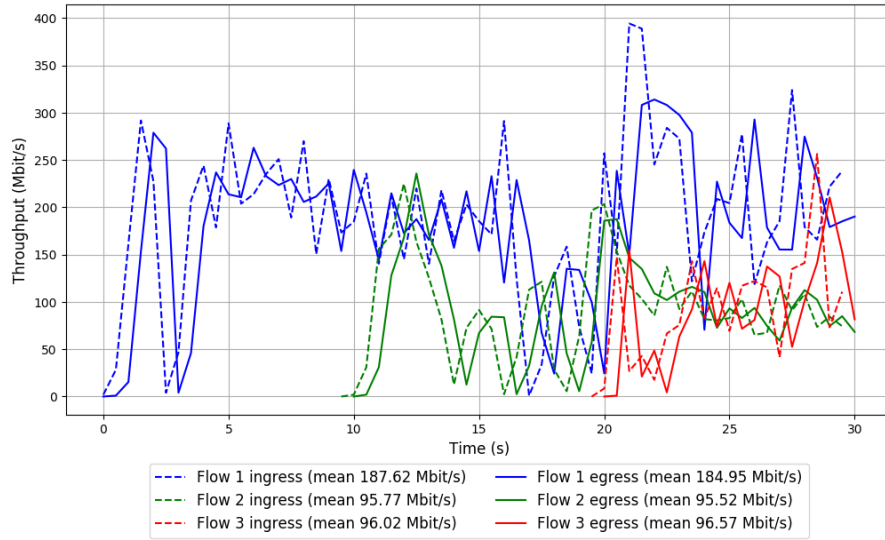


Run 4: Statistics of Verus

Start at: 2019-05-30 20:51:52  
End at: 2019-05-30 20:52:22  
Local clock offset: -0.137 ms  
Remote clock offset: -0.096 ms

```
# Below is generated by plot.py at 2019-05-31 00:52:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 280.06 Mbit/s
95th percentile per-packet one-way delay: 159.503 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 184.95 Mbit/s
95th percentile per-packet one-way delay: 188.645 ms
Loss rate: 1.82%
-- Flow 2:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 86.570 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 96.57 Mbit/s
95th percentile per-packet one-way delay: 136.231 ms
Loss rate: 1.53%
```

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



Run 5: Statistics of Verus

Start at: 2019-05-30 21:28:03

End at: 2019-05-30 21:28:33

Local clock offset: -0.474 ms

Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2019-05-31 00:56:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 284.02 Mbit/s

95th percentile per-packet one-way delay: 138.569 ms

Loss rate: 0.38%

-- Flow 1:

Average throughput: 136.76 Mbit/s

95th percentile per-packet one-way delay: 106.238 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 144.84 Mbit/s

95th percentile per-packet one-way delay: 124.193 ms

Loss rate: 1.11%

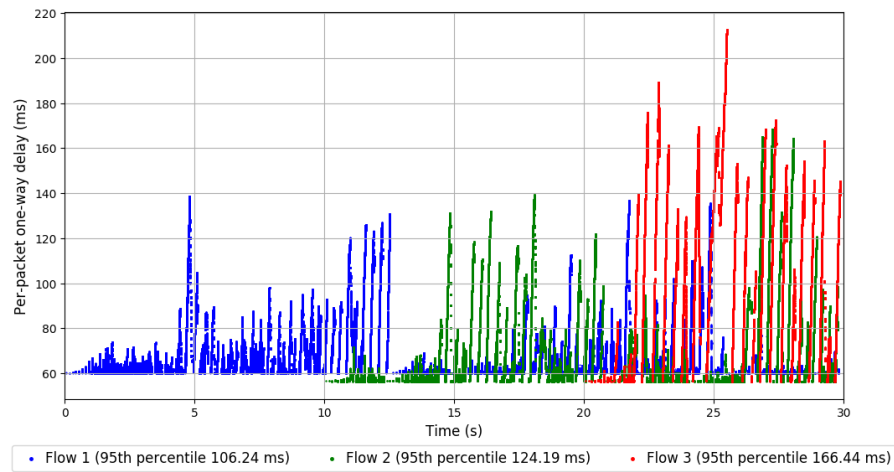
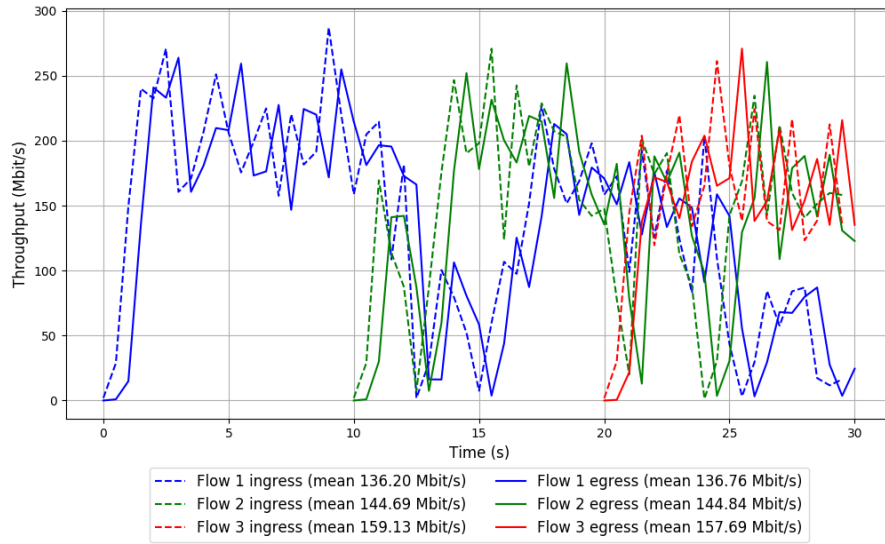
-- Flow 3:

Average throughput: 157.69 Mbit/s

95th percentile per-packet one-way delay: 166.443 ms

Loss rate: 0.00%

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



Run 1: Statistics of PCC-Vivace

Start at: 2019-05-30 19:09:48  
End at: 2019-05-30 19:10:18  
Local clock offset: 0.011 ms  
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2019-05-31 00:56:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 427.41 Mbit/s  
95th percentile per-packet one-way delay: 125.997 ms  
Loss rate: 0.82%

-- Flow 1:

Average throughput: 307.57 Mbit/s  
95th percentile per-packet one-way delay: 134.239 ms  
Loss rate: 0.51%

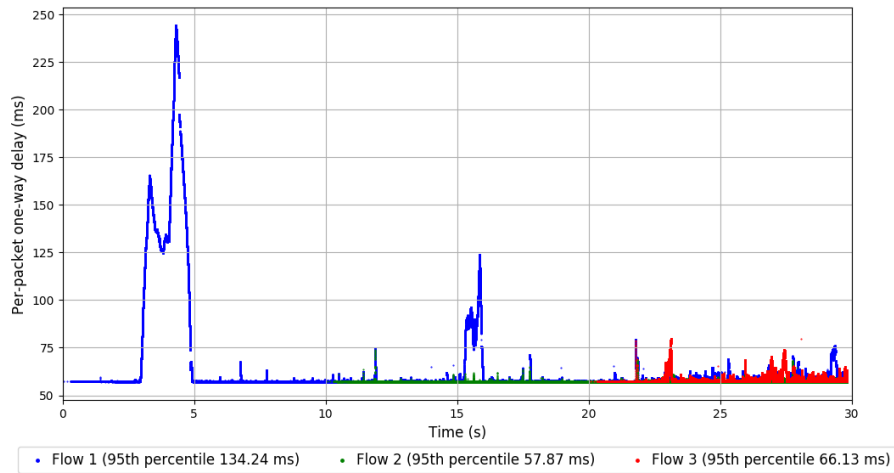
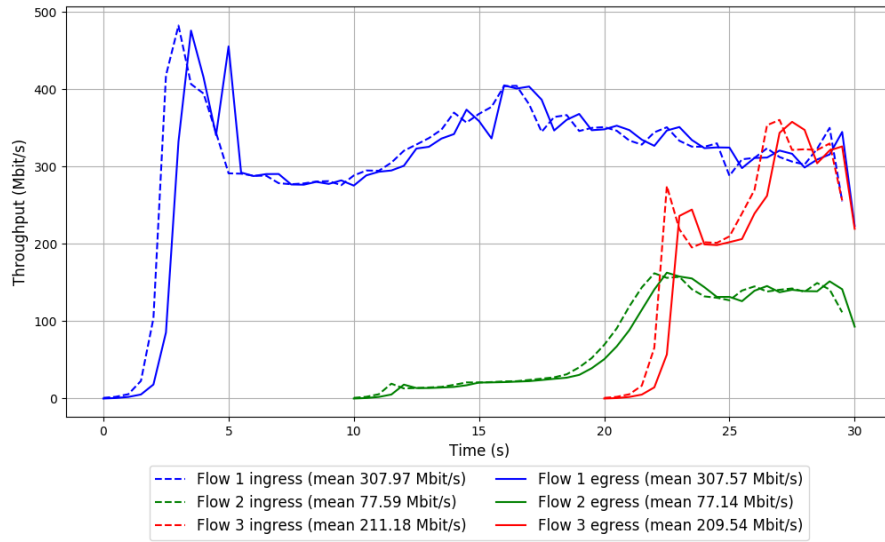
-- Flow 2:

Average throughput: 77.14 Mbit/s  
95th percentile per-packet one-way delay: 57.865 ms  
Loss rate: 1.15%

-- Flow 3:

Average throughput: 209.54 Mbit/s  
95th percentile per-packet one-way delay: 66.132 ms  
Loss rate: 1.93%

Run 1: Report of PCC-Vivace — Data Link





Run 2: Statistics of PCC-Vivace

Start at: 2019-05-30 19:45:46

End at: 2019-05-30 19:46:16

Local clock offset: -0.19 ms

Remote clock offset: 0.047 ms

# Below is generated by plot.py at 2019-05-31 00:57:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 549.35 Mbit/s

95th percentile per-packet one-way delay: 80.280 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 314.46 Mbit/s

95th percentile per-packet one-way delay: 65.773 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 312.46 Mbit/s

95th percentile per-packet one-way delay: 132.156 ms

Loss rate: 0.47%

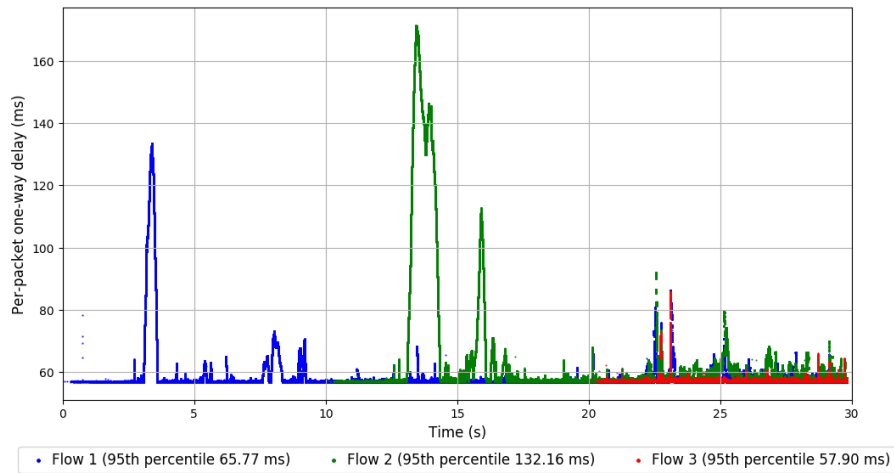
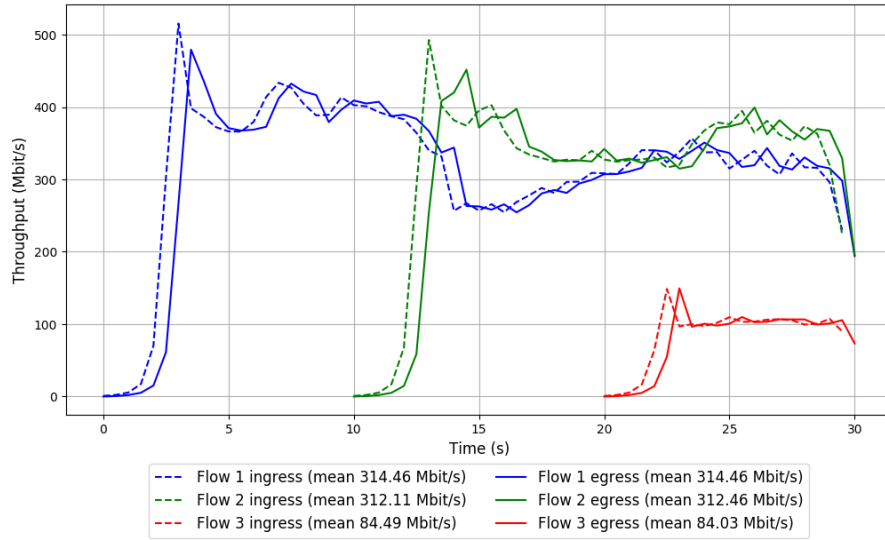
-- Flow 3:

Average throughput: 84.03 Mbit/s

95th percentile per-packet one-way delay: 57.897 ms

Loss rate: 1.75%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-05-30 20:21:34

End at: 2019-05-30 20:22:04

Local clock offset: -0.172 ms

Remote clock offset: 0.409 ms

# Below is generated by plot.py at 2019-05-31 00:57:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 373.03 Mbit/s

95th percentile per-packet one-way delay: 63.697 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 322.60 Mbit/s

95th percentile per-packet one-way delay: 64.638 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 53.68 Mbit/s

95th percentile per-packet one-way delay: 56.830 ms

Loss rate: 1.04%

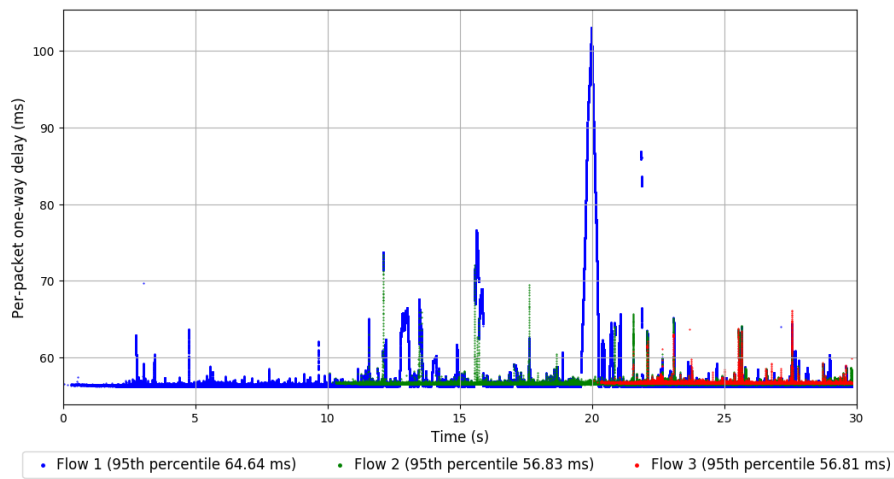
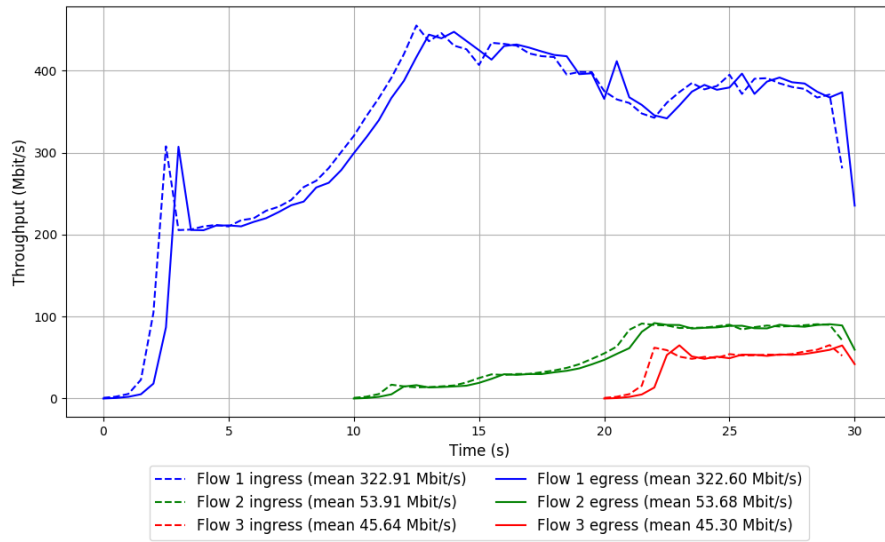
-- Flow 3:

Average throughput: 45.30 Mbit/s

95th percentile per-packet one-way delay: 56.812 ms

Loss rate: 1.95%

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



Run 4: Statistics of PCC-Vivace

Start at: 2019-05-30 20:57:18  
End at: 2019-05-30 20:57:48  
Local clock offset: -0.447 ms  
Remote clock offset: -0.724 ms

# Below is generated by plot.py at 2019-05-31 00:57:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 481.33 Mbit/s  
95th percentile per-packet one-way delay: 69.255 ms  
Loss rate: 0.55%

-- Flow 1:

Average throughput: 282.26 Mbit/s  
95th percentile per-packet one-way delay: 74.197 ms  
Loss rate: 0.32%

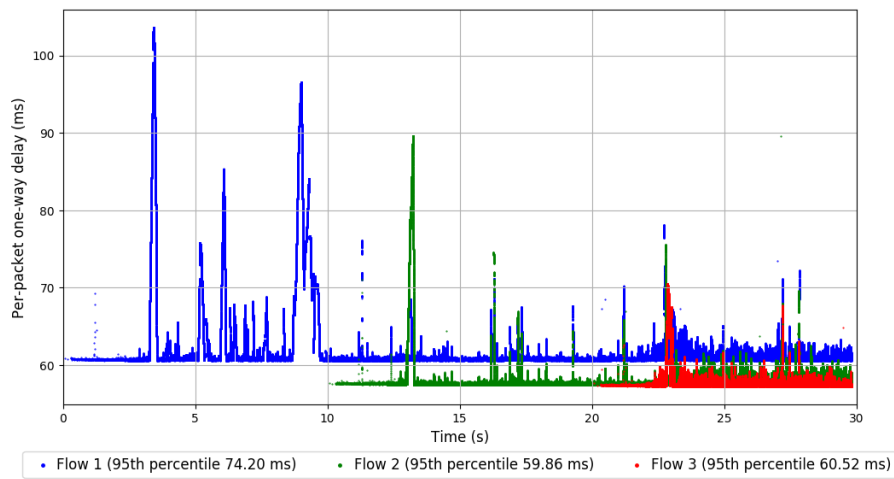
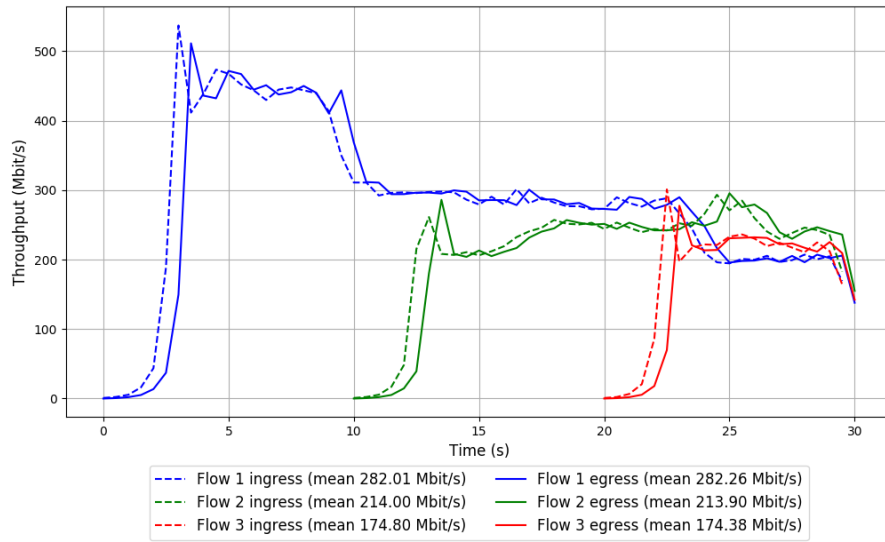
-- Flow 2:

Average throughput: 213.90 Mbit/s  
95th percentile per-packet one-way delay: 59.856 ms  
Loss rate: 0.64%

-- Flow 3:

Average throughput: 174.38 Mbit/s  
95th percentile per-packet one-way delay: 60.518 ms  
Loss rate: 1.43%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-05-30 21:33:33

End at: 2019-05-30 21:34:03

Local clock offset: 0.212 ms

Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2019-05-31 00:57:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 571.55 Mbit/s

95th percentile per-packet one-way delay: 87.454 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 310.54 Mbit/s

95th percentile per-packet one-way delay: 62.693 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 300.92 Mbit/s

95th percentile per-packet one-way delay: 67.995 ms

Loss rate: 0.67%

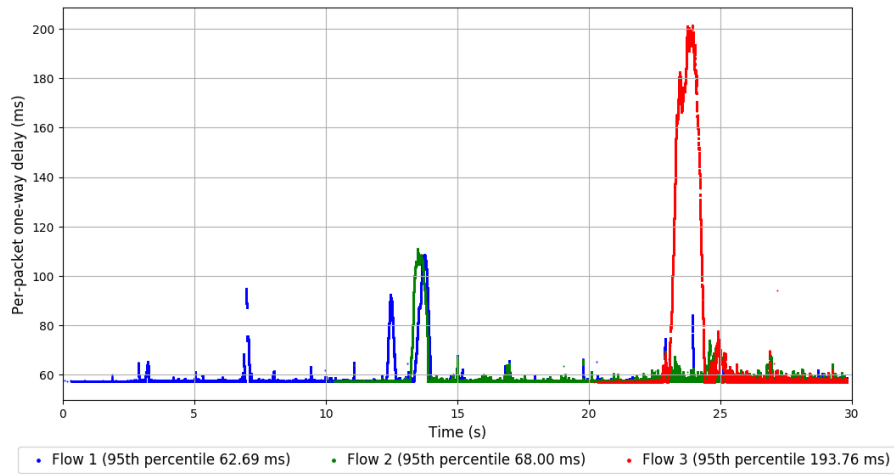
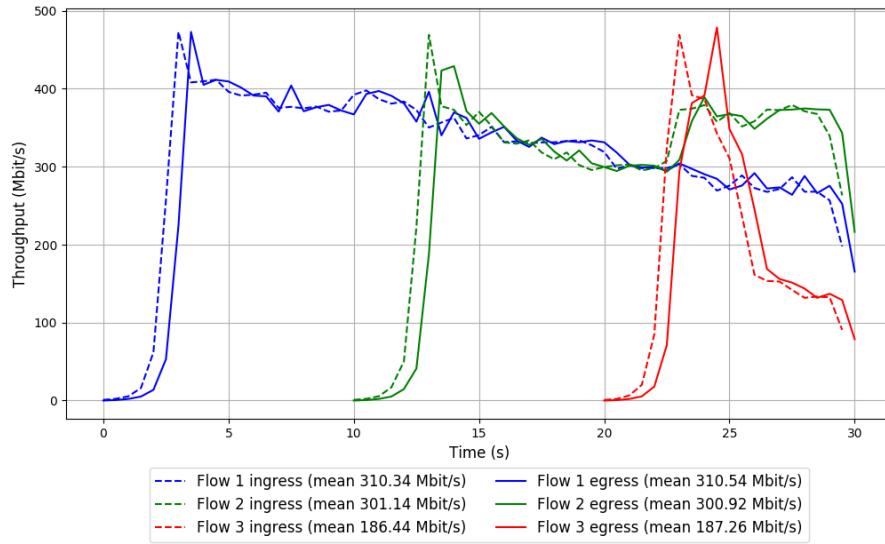
-- Flow 3:

Average throughput: 187.26 Mbit/s

95th percentile per-packet one-way delay: 193.757 ms

Loss rate: 0.75%

Run 5: Report of PCC-Vivace — Data Link



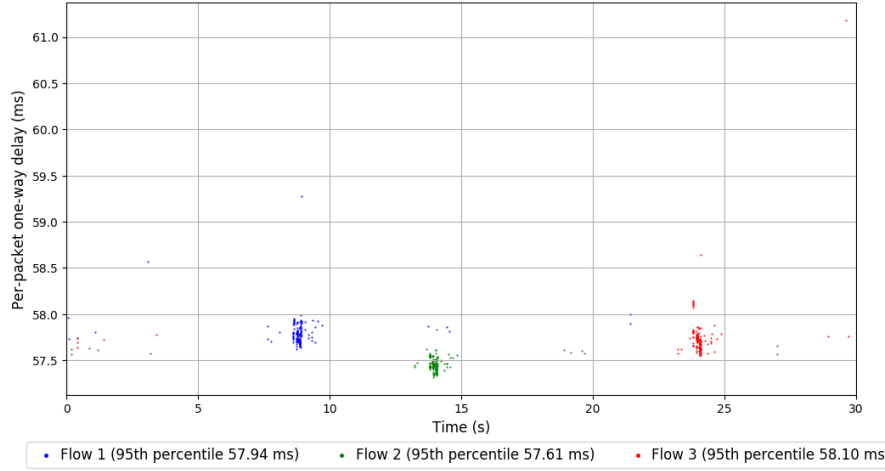
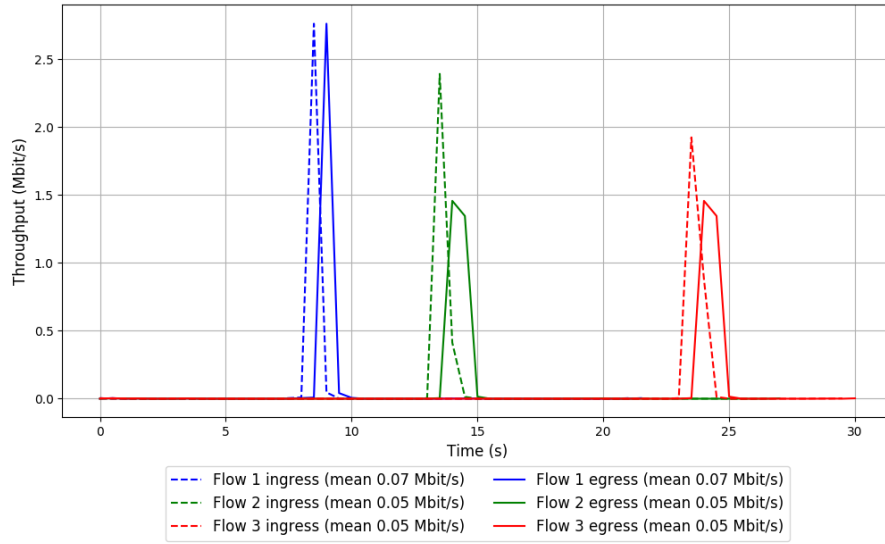


Run 1: Statistics of WebRTC media

Start at: 2019-05-30 19:24:19  
End at: 2019-05-30 19:24:49  
Local clock offset: 0.178 ms  
Remote clock offset: -0.089 ms

```
# Below is generated by plot.py at 2019-05-31 00:57:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 57.927 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 57.943 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.609 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 58.099 ms
Loss rate: 0.00%
```

# Run 1: Report of WebRTC media — Data Link

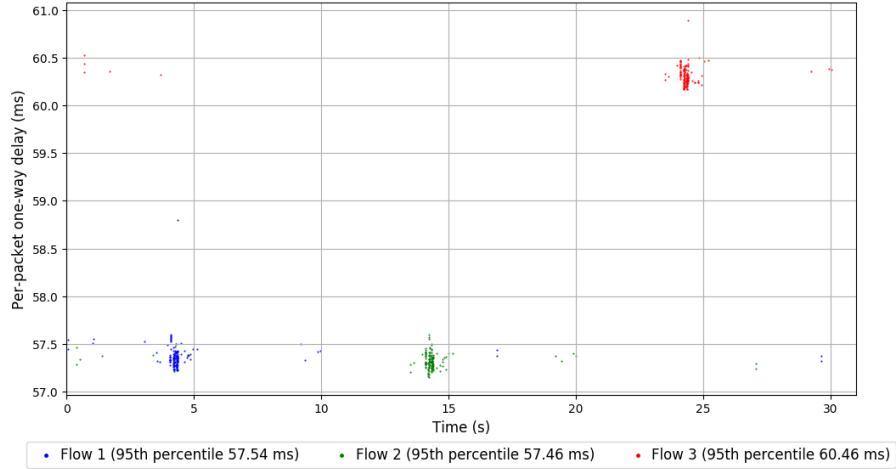
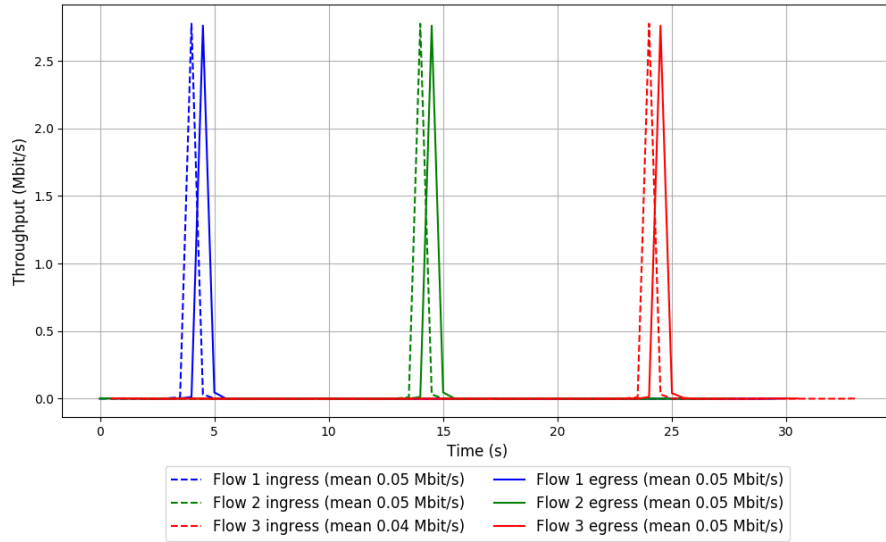


Run 2: Statistics of WebRTC media

Start at: 2019-05-30 20:00:22  
End at: 2019-05-30 20:00:52  
Local clock offset: -0.188 ms  
Remote clock offset: -0.197 ms

```
# Below is generated by plot.py at 2019-05-31 00:57:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 60.413 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.544 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.459 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 60.462 ms
Loss rate: 0.05%
```

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



Run 3: Statistics of WebRTC media

Start at: 2019-05-30 20:35:57

End at: 2019-05-30 20:36:27

Local clock offset: -0.198 ms

Remote clock offset: 0.027 ms

# Below is generated by plot.py at 2019-05-31 00:57:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 60.439 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 60.497 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 60.231 ms

Loss rate: 0.05%

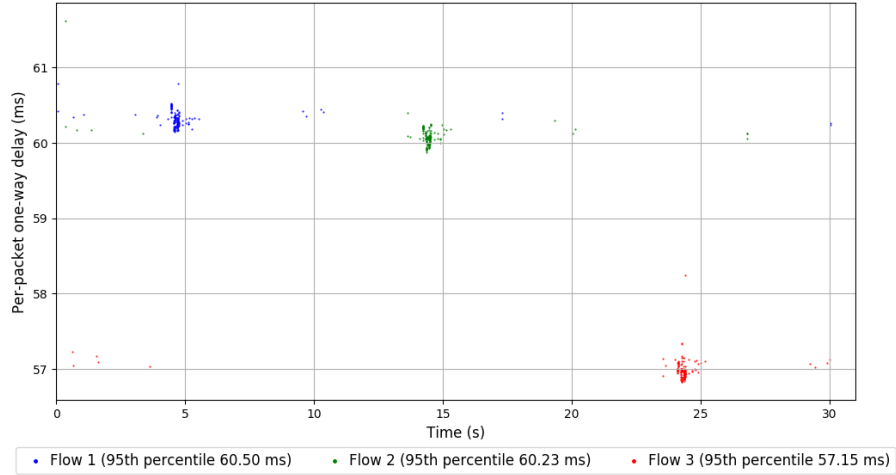
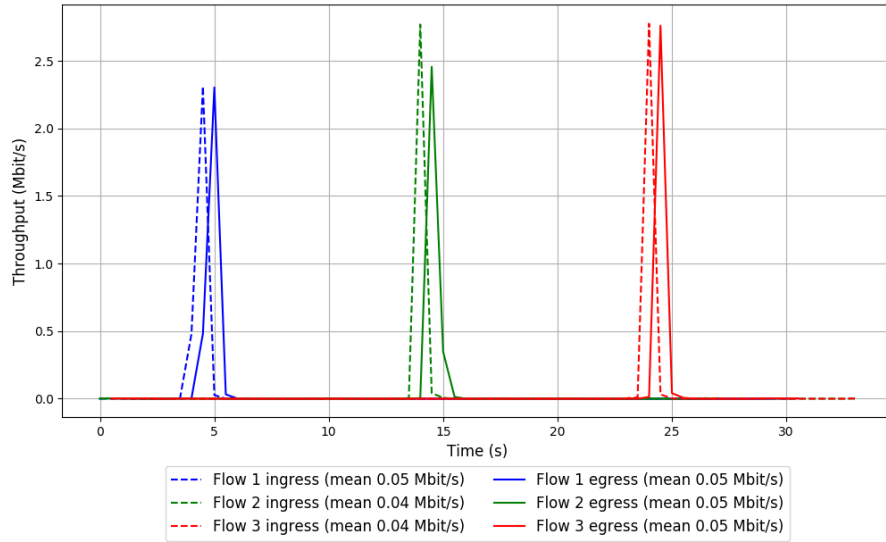
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 57.148 ms

Loss rate: 0.05%

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

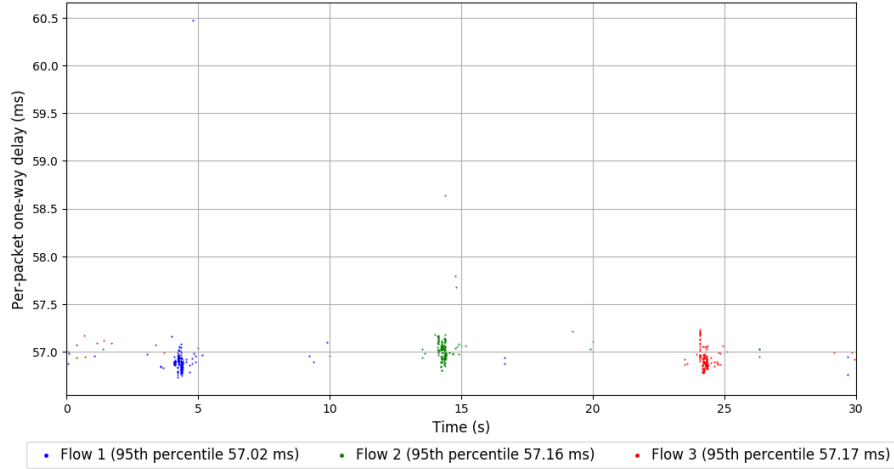
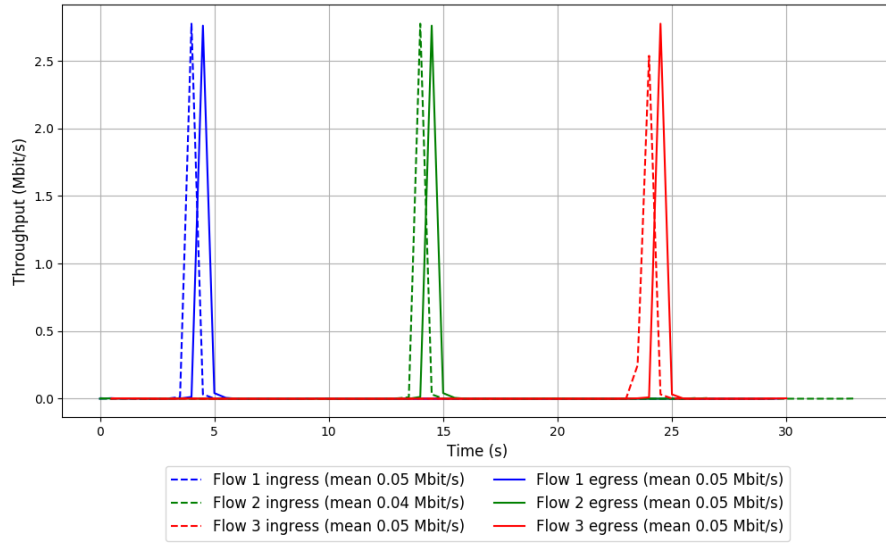


Run 4: Statistics of WebRTC media

Start at: 2019-05-30 21:12:02  
End at: 2019-05-30 21:12:32  
Local clock offset: -0.355 ms  
Remote clock offset: -0.126 ms

```
# Below is generated by plot.py at 2019-05-31 00:57:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 57.135 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.020 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.162 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.167 ms
Loss rate: 0.00%
```

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





Run 5: Statistics of WebRTC media

Start at: 2019-05-30 21:48:10  
End at: 2019-05-30 21:48:40  
Local clock offset: -0.247 ms  
Remote clock offset: -0.106 ms

```
# Below is generated by plot.py at 2019-05-31 00:57:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 57.057 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.067 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.044 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.038 ms
Loss rate: 0.00%
```

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

