

## Pantheon Report

Generated at 2019-03-28 02:42:22 (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:

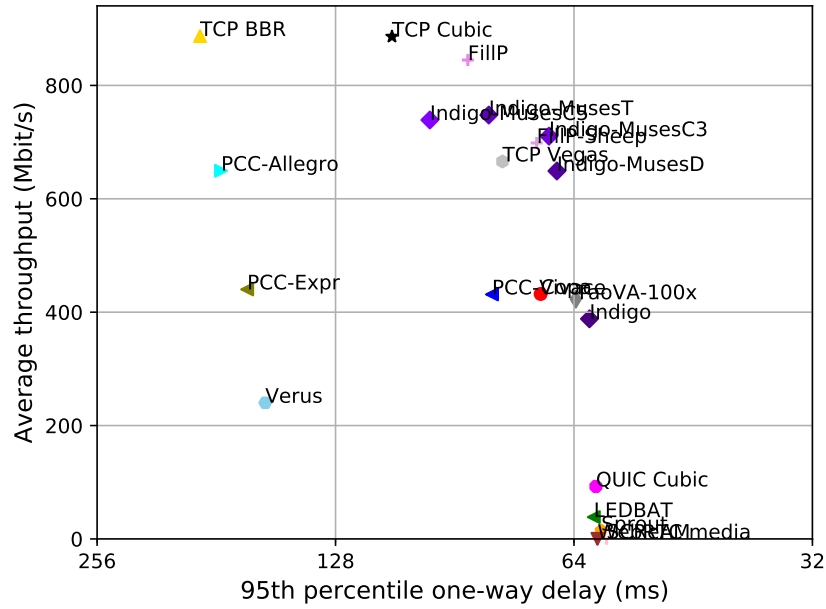
```
Linux 4.15.0-1028-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

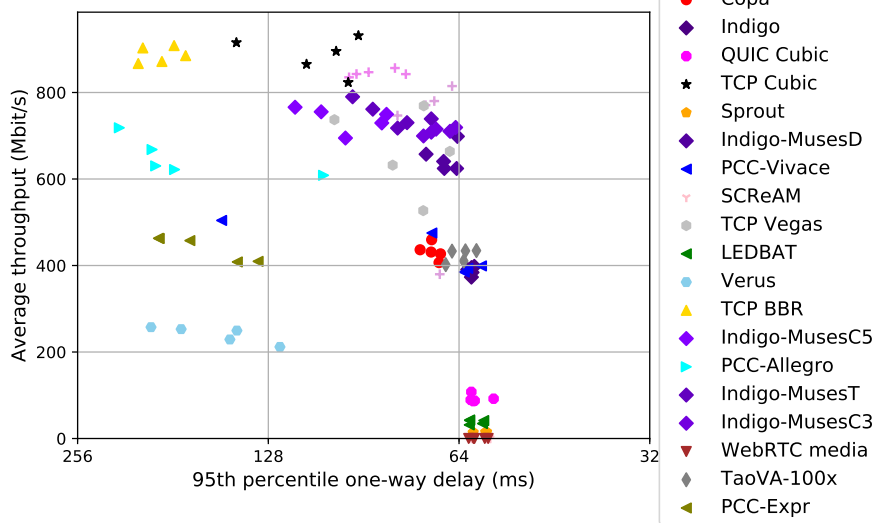
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d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

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

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



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



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	468.88	434.58	394.64	192.37	160.76	203.54	1.43	1.28	2.88
Copa	5	215.08	222.34	210.17	68.19	69.63	72.96	0.42	0.66	1.34
TCP Cubic	5	469.22	427.40	402.64	90.63	107.43	109.67	0.40	0.60	1.46
FillP	5	525.88	349.13	264.51	94.67	71.78	63.68	0.35	0.50	1.32
FillP-Sheep	5	408.45	315.00	245.87	81.11	62.10	63.70	0.27	0.55	1.18
Indigo	5	209.12	188.68	163.88	61.21	60.90	61.05	0.39	0.62	1.34
Indigo-MusesC3	5	416.57	356.56	241.04	70.12	67.37	63.00	0.28	0.53	2.29
Indigo-MusesC5	5	452.41	401.68	108.22	94.78	107.80	58.94	0.33	0.81	2.10
Indigo-MusesD	5	379.37	330.10	215.74	68.75	66.40	60.78	0.34	0.67	1.86
Indigo-MusesT	5	448.29	384.47	199.36	89.33	72.17	61.71	0.34	0.56	1.73
LEDBAT	5	24.43	17.04	8.52	59.95	59.24	59.43	0.55	0.98	2.30
PCC-Allegro	5	358.31	321.53	238.52	198.71	123.64	133.00	3.35	4.59	1.96
PCC-Expr	5	254.11	220.67	120.88	143.58	140.91	96.18	3.80	2.89	3.23
QUIC Cubic	5	53.86	39.87	35.38	58.99	58.02	58.09	0.56	0.73	2.01
SCReAM	5	0.22	0.22	0.22	58.15	58.13	57.47	0.38	0.61	1.08
Sprout	5	7.65	7.30	6.55	58.56	58.43	58.67	0.35	0.66	1.37
TaoVA-100x	5	217.20	208.21	203.95	62.64	63.99	65.20	0.41	0.64	1.32
TCP Vegas	5	374.40	263.31	353.00	70.62	83.29	87.55	0.28	0.46	0.94
Verus	5	138.22	101.53	106.02	170.13	98.44	122.94	0.97	0.95	1.91
PCC-Vivace	5	263.10	185.20	138.54	94.81	60.16	61.47	0.66	0.74	1.95
WebRTC media	5	0.05	0.05	0.05	58.99	59.09	58.46	0.01	0.01	0.00



Run 1: Statistics of TCP BBR

Start at: 2019-03-27 20:42:08

End at: 2019-03-27 20:42:38

Local clock offset: -0.167 ms

Remote clock offset: 0.039 ms

# Below is generated by plot.py at 2019-03-28 00:42:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 908.49 Mbit/s

95th percentile per-packet one-way delay: 180.273 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 488.43 Mbit/s

95th percentile per-packet one-way delay: 189.024 ms

Loss rate: 1.86%

-- Flow 2:

Average throughput: 438.00 Mbit/s

95th percentile per-packet one-way delay: 161.075 ms

Loss rate: 1.24%

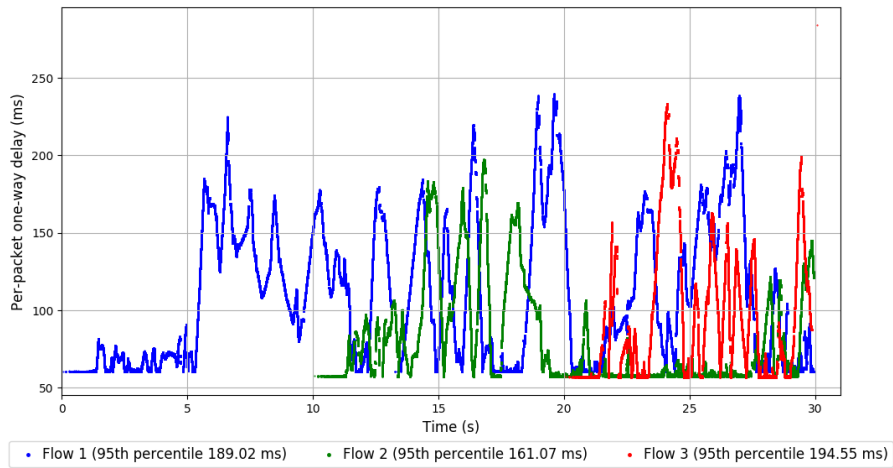
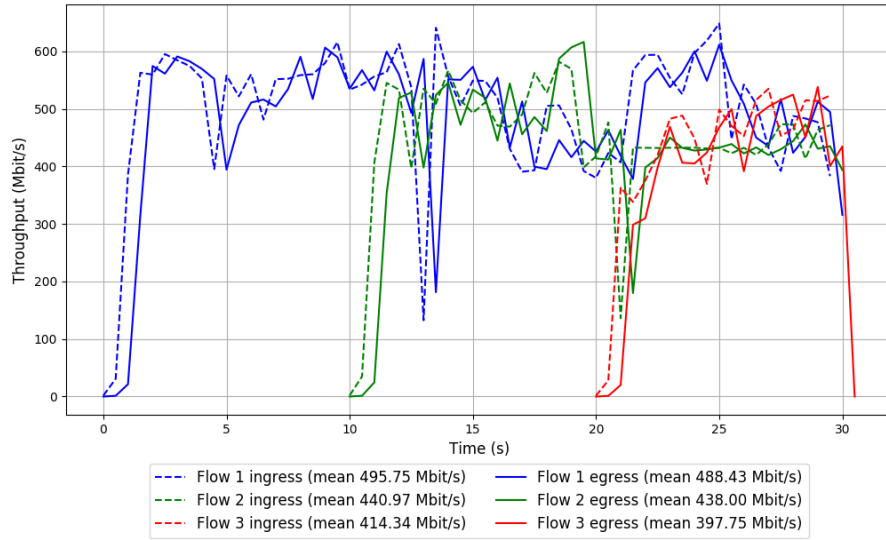
-- Flow 3:

Average throughput: 397.75 Mbit/s

95th percentile per-packet one-way delay: 194.550 ms

Loss rate: 3.75%

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



Run 2: Statistics of TCP BBR

Start at: 2019-03-27 21:23:32

End at: 2019-03-27 21:24:02

Local clock offset: -0.022 ms

Remote clock offset: 0.092 ms

# Below is generated by plot.py at 2019-03-28 00:42:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 871.72 Mbit/s

95th percentile per-packet one-way delay: 188.431 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 470.52 Mbit/s

95th percentile per-packet one-way delay: 186.403 ms

Loss rate: 1.61%

-- Flow 2:

Average throughput: 422.99 Mbit/s

95th percentile per-packet one-way delay: 165.249 ms

Loss rate: 1.51%

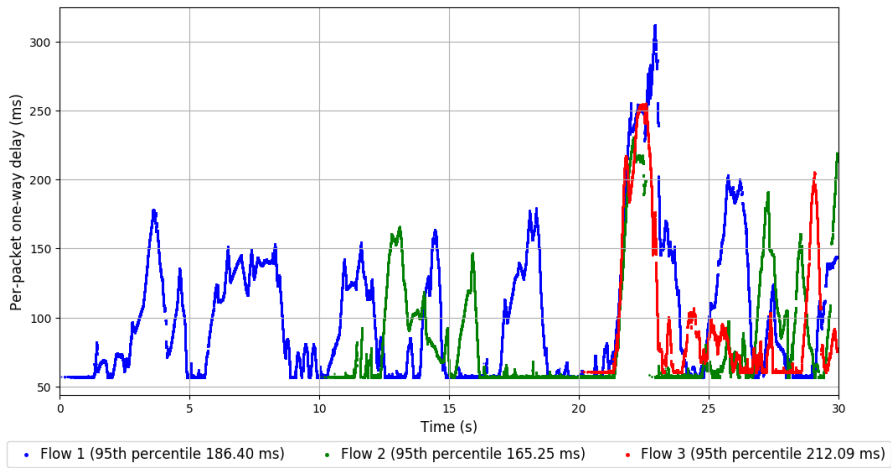
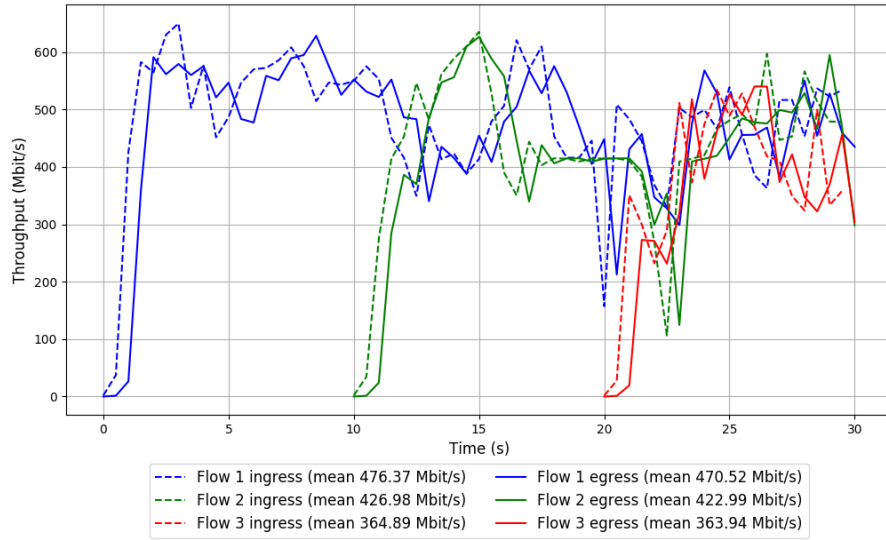
-- Flow 3:

Average throughput: 363.94 Mbit/s

95th percentile per-packet one-way delay: 212.085 ms

Loss rate: 1.44%

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



Run 3: Statistics of TCP BBR

Start at: 2019-03-27 22:04:51

End at: 2019-03-27 22:05:21

Local clock offset: -0.191 ms

Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2019-03-28 00:42:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 867.01 Mbit/s

95th percentile per-packet one-way delay: 205.353 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 441.16 Mbit/s

95th percentile per-packet one-way delay: 212.676 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 433.82 Mbit/s

95th percentile per-packet one-way delay: 184.307 ms

Loss rate: 1.10%

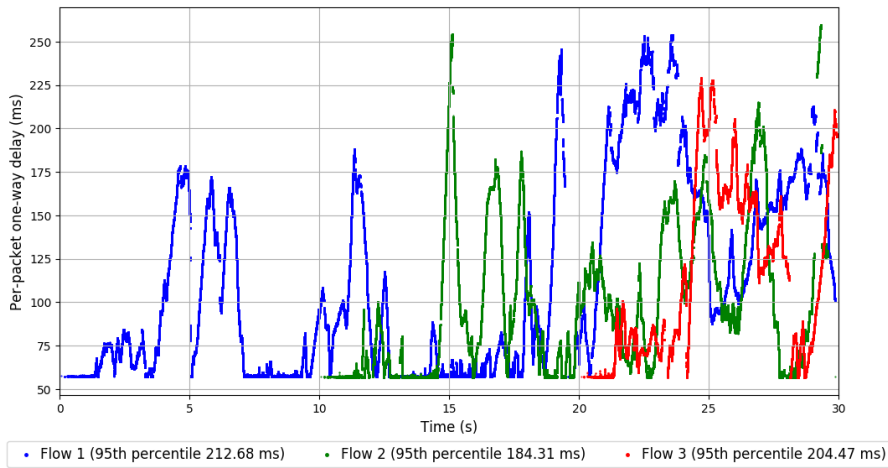
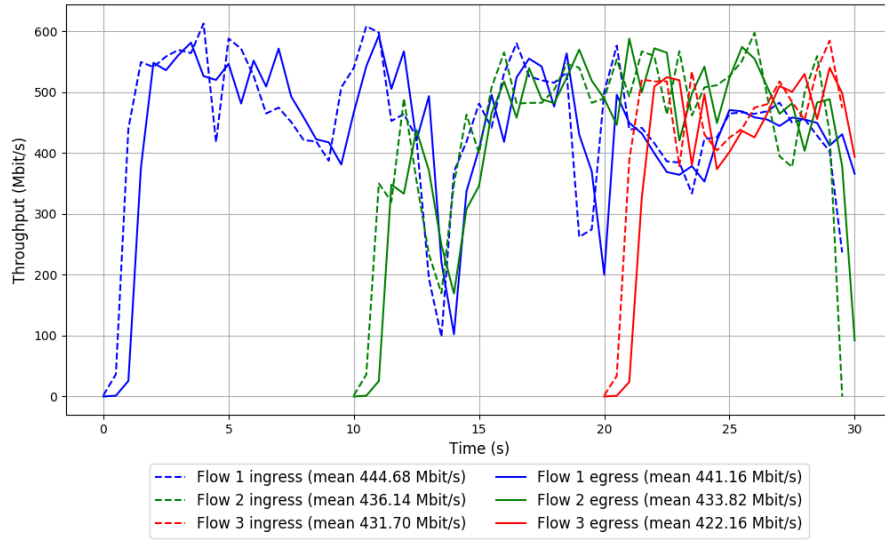
-- Flow 3:

Average throughput: 422.16 Mbit/s

95th percentile per-packet one-way delay: 204.475 ms

Loss rate: 3.34%

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

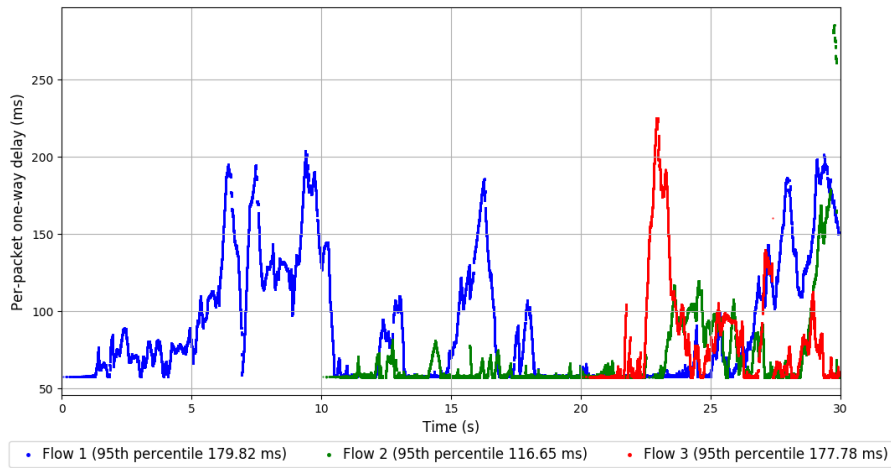
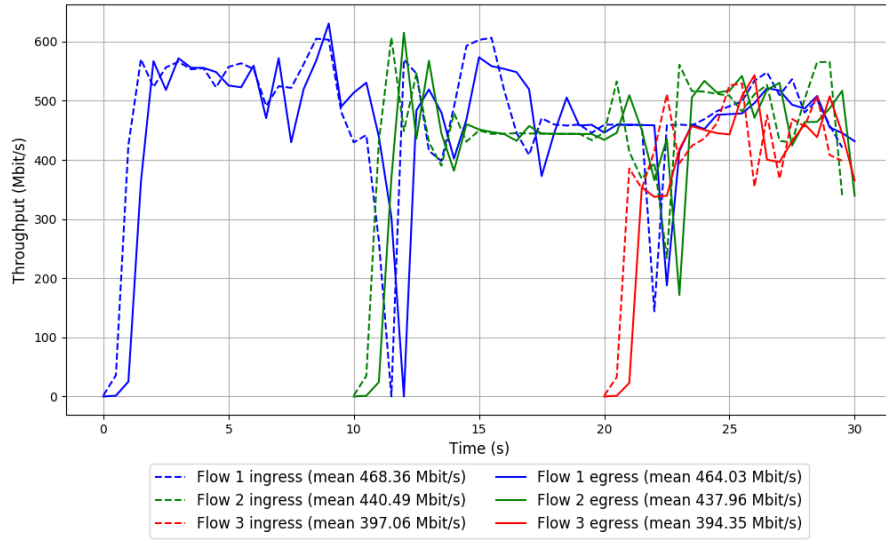


Run 4: Statistics of TCP BBR

Start at: 2019-03-27 22:46:23  
End at: 2019-03-27 22:46:53  
Local clock offset: 0.018 ms  
Remote clock offset: -0.356 ms

```
# Below is generated by plot.py at 2019-03-28 00:42:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 885.22 Mbit/s
95th percentile per-packet one-way delay: 172.871 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 464.03 Mbit/s
95th percentile per-packet one-way delay: 179.817 ms
Loss rate: 1.31%
-- Flow 2:
Average throughput: 437.96 Mbit/s
95th percentile per-packet one-way delay: 116.649 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 394.35 Mbit/s
95th percentile per-packet one-way delay: 177.775 ms
Loss rate: 1.83%
```

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



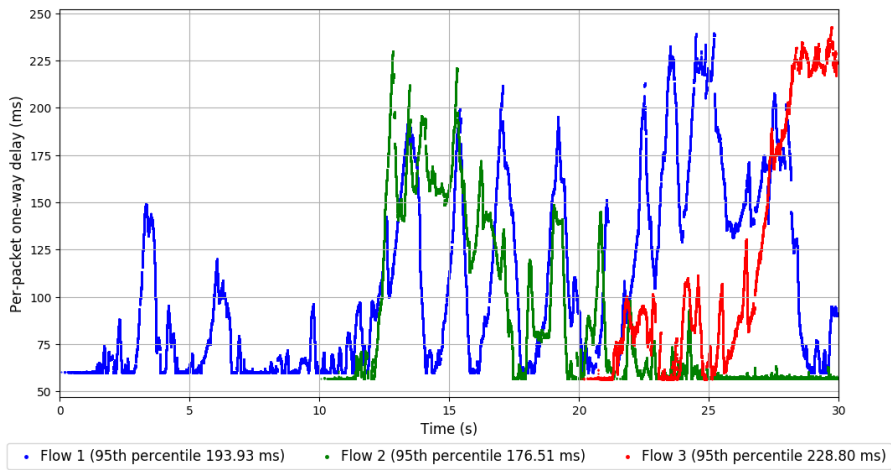
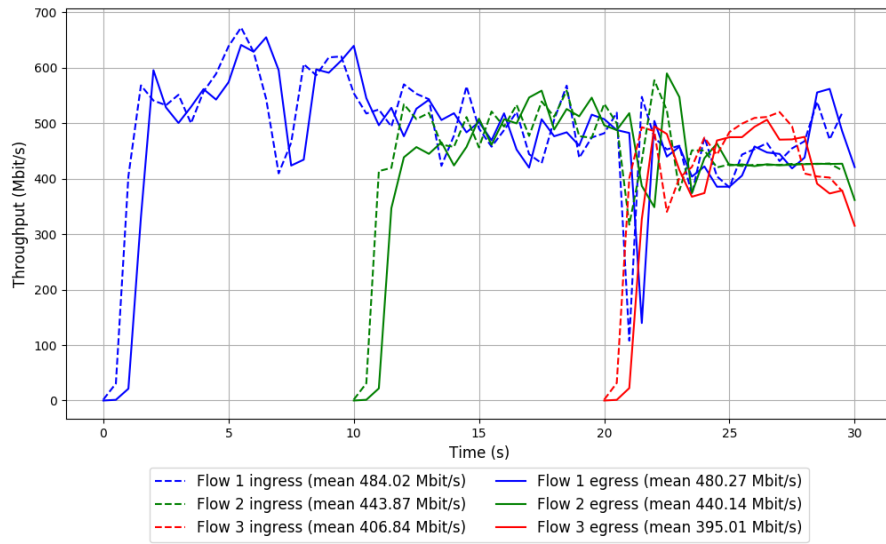


Run 5: Statistics of TCP BBR

Start at: 2019-03-27 23:27:48  
End at: 2019-03-27 23:28:18  
Local clock offset: -0.581 ms  
Remote clock offset: -0.039 ms

```
# Below is generated by plot.py at 2019-03-28 00:42:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 903.09 Mbit/s
95th percentile per-packet one-way delay: 201.964 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 480.27 Mbit/s
95th percentile per-packet one-way delay: 193.930 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 440.14 Mbit/s
95th percentile per-packet one-way delay: 176.510 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 395.01 Mbit/s
95th percentile per-packet one-way delay: 228.801 ms
Loss rate: 4.06%
```

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



Run 1: Statistics of Copa

Start at: 2019-03-27 21:00:07

End at: 2019-03-27 21:00:37

Local clock offset: -0.058 ms

Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2019-03-28 00:42:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 459.63 Mbit/s

95th percentile per-packet one-way delay: 70.703 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 224.93 Mbit/s

95th percentile per-packet one-way delay: 63.834 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 243.22 Mbit/s

95th percentile per-packet one-way delay: 73.158 ms

Loss rate: 0.55%

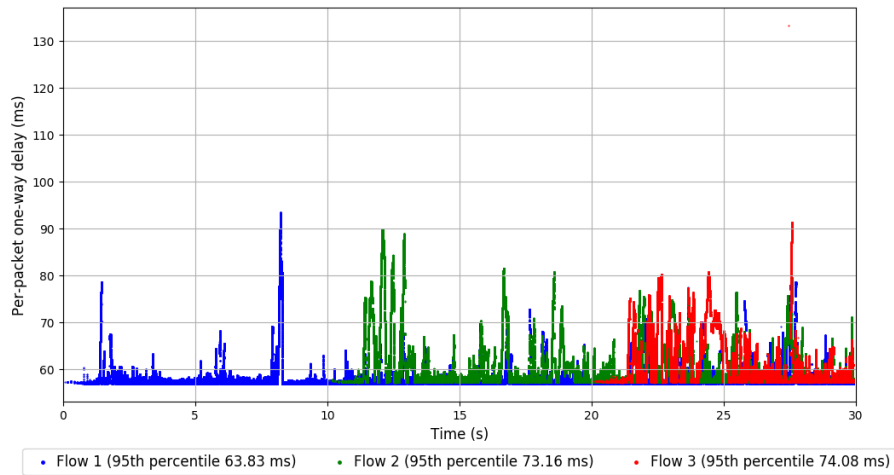
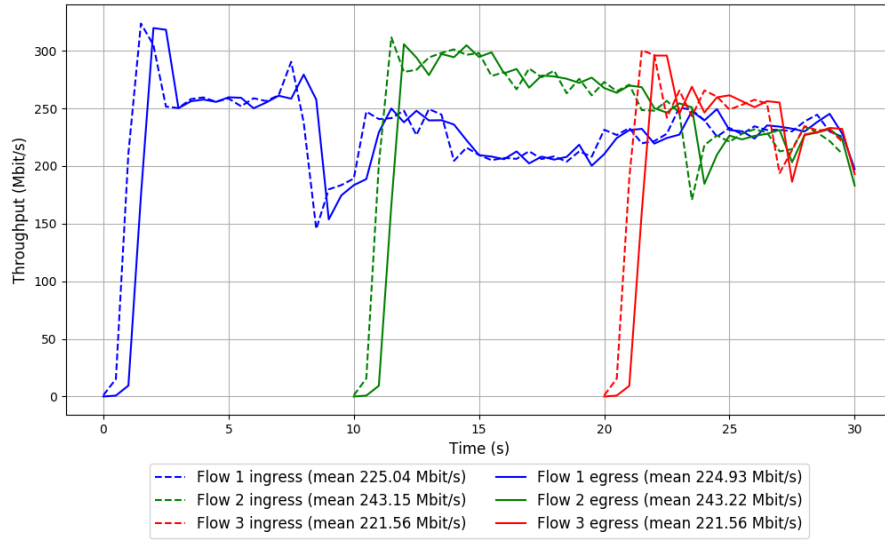
-- Flow 3:

Average throughput: 221.56 Mbit/s

95th percentile per-packet one-way delay: 74.076 ms

Loss rate: 1.24%

### Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-03-27 21:42:36

End at: 2019-03-27 21:43:06

Local clock offset: -0.573 ms

Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2019-03-28 00:42:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 406.71 Mbit/s

95th percentile per-packet one-way delay: 68.829 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 205.70 Mbit/s

95th percentile per-packet one-way delay: 69.830 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 211.81 Mbit/s

95th percentile per-packet one-way delay: 68.180 ms

Loss rate: 0.73%

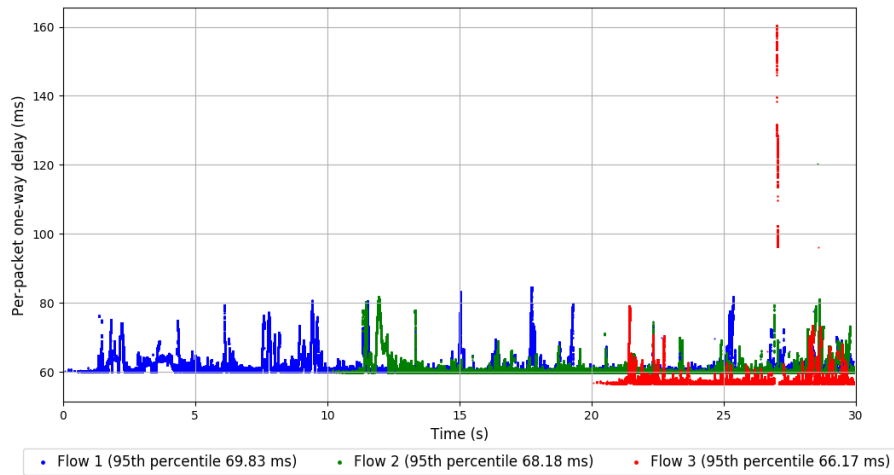
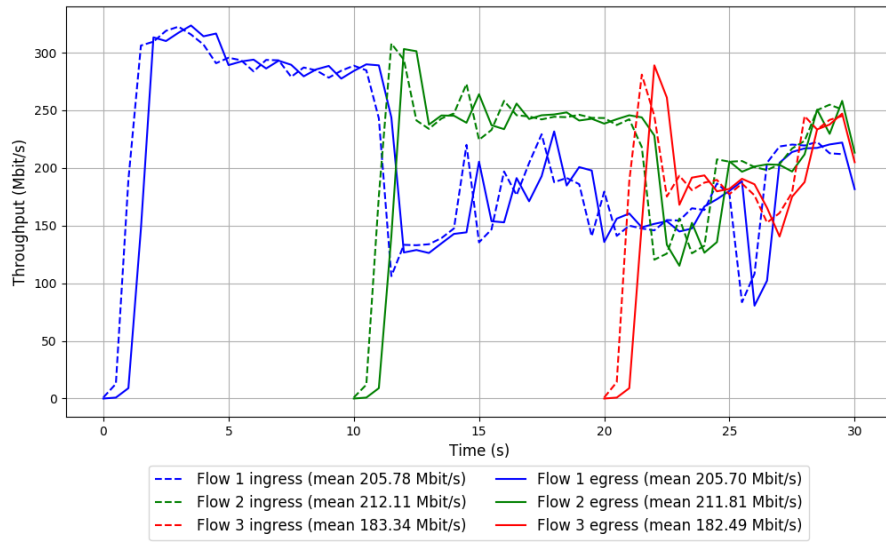
-- Flow 3:

Average throughput: 182.49 Mbit/s

95th percentile per-packet one-way delay: 66.166 ms

Loss rate: 1.60%

## Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-03-27 22:23:28  
End at: 2019-03-27 22:23:58  
Local clock offset: -0.028 ms  
Remote clock offset: -0.334 ms

# Below is generated by plot.py at 2019-03-28 00:42:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 426.96 Mbit/s  
95th percentile per-packet one-way delay: 68.460 ms  
Loss rate: 0.68%

-- Flow 1:

Average throughput: 232.79 Mbit/s  
95th percentile per-packet one-way delay: 69.425 ms  
Loss rate: 0.43%

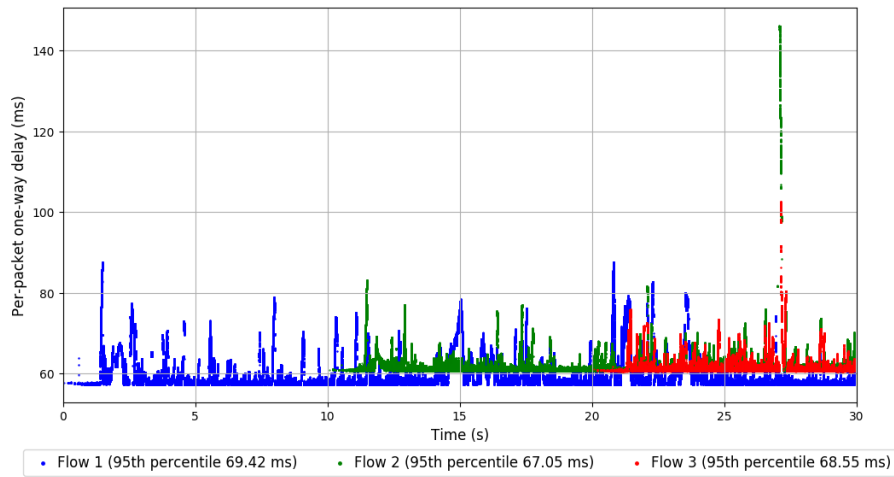
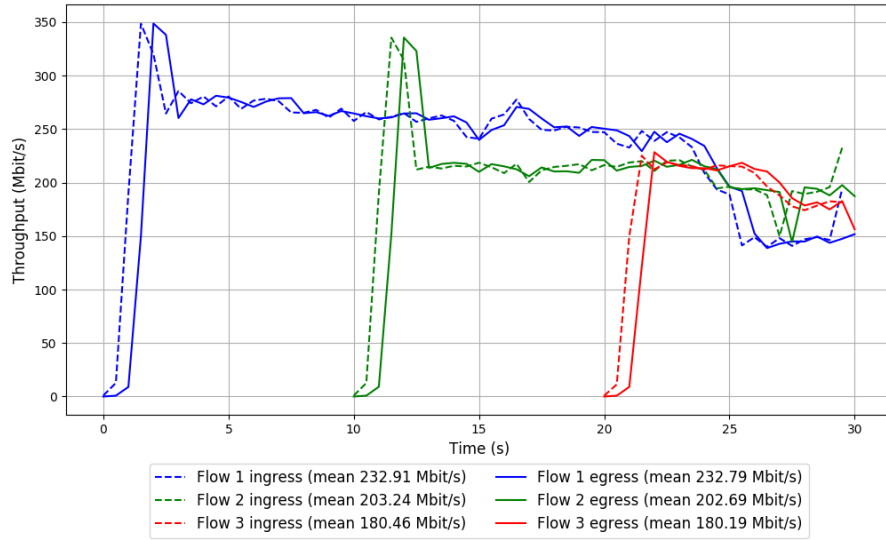
-- Flow 2:

Average throughput: 202.69 Mbit/s  
95th percentile per-packet one-way delay: 67.049 ms  
Loss rate: 0.85%

-- Flow 3:

Average throughput: 180.19 Mbit/s  
95th percentile per-packet one-way delay: 68.551 ms  
Loss rate: 1.31%

### Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

Start at: 2019-03-27 23:04:30  
End at: 2019-03-27 23:05:00  
Local clock offset: -0.051 ms  
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2019-03-28 00:54:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 436.42 Mbit/s  
95th percentile per-packet one-way delay: 73.727 ms  
Loss rate: 0.62%

-- Flow 1:

Average throughput: 193.27 Mbit/s  
95th percentile per-packet one-way delay: 72.642 ms  
Loss rate: 0.46%

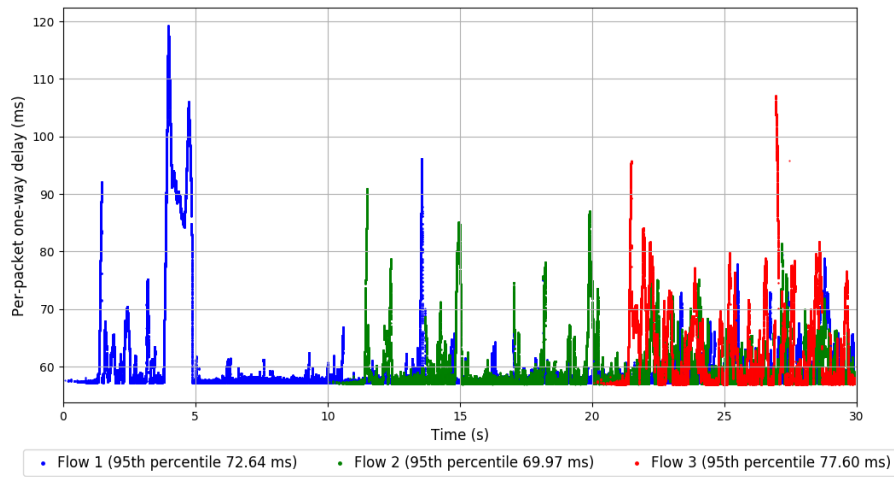
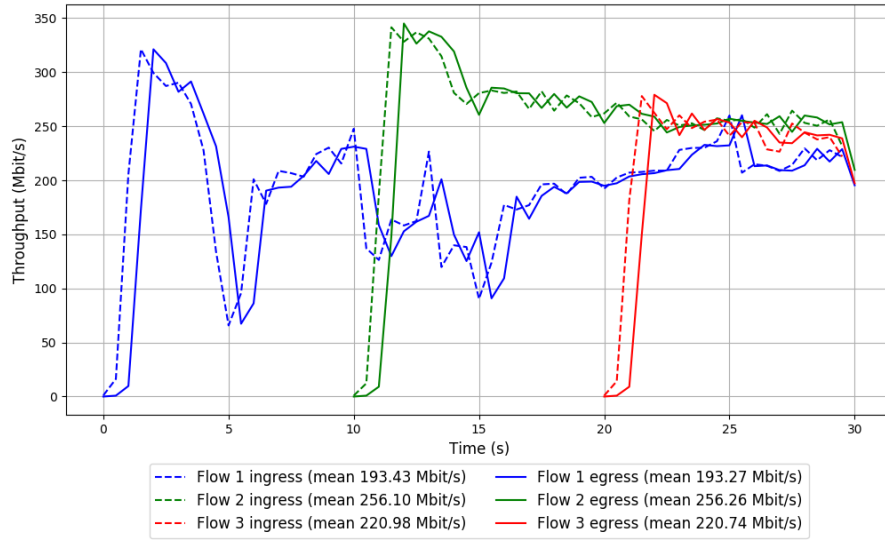
-- Flow 2:

Average throughput: 256.26 Mbit/s  
95th percentile per-packet one-way delay: 69.969 ms  
Loss rate: 0.52%

-- Flow 3:

Average throughput: 220.74 Mbit/s  
95th percentile per-packet one-way delay: 77.597 ms  
Loss rate: 1.25%

### Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-03-27 23:45:53  
End at: 2019-03-27 23:46:23  
Local clock offset: -0.175 ms  
Remote clock offset: -0.008 ms

# Below is generated by plot.py at 2019-03-28 00:54:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 431.11 Mbit/s  
95th percentile per-packet one-way delay: 70.834 ms  
Loss rate: 0.64%

-- Flow 1:

Average throughput: 218.72 Mbit/s  
95th percentile per-packet one-way delay: 65.236 ms  
Loss rate: 0.37%

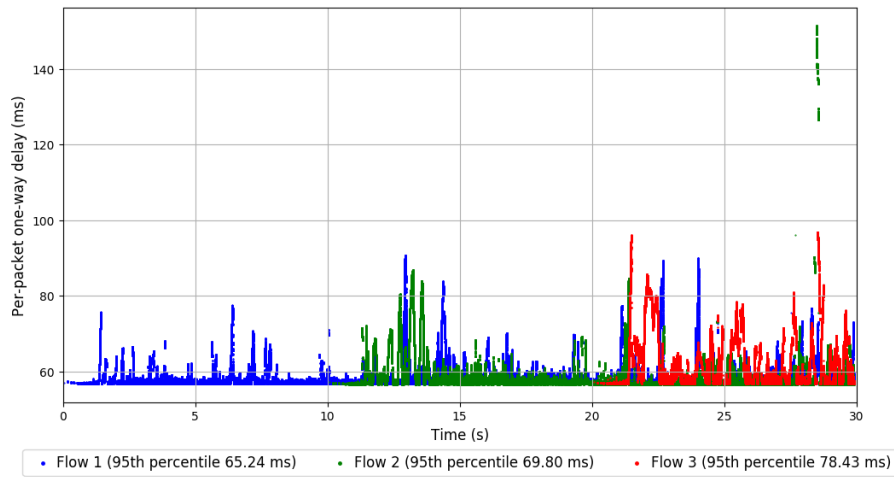
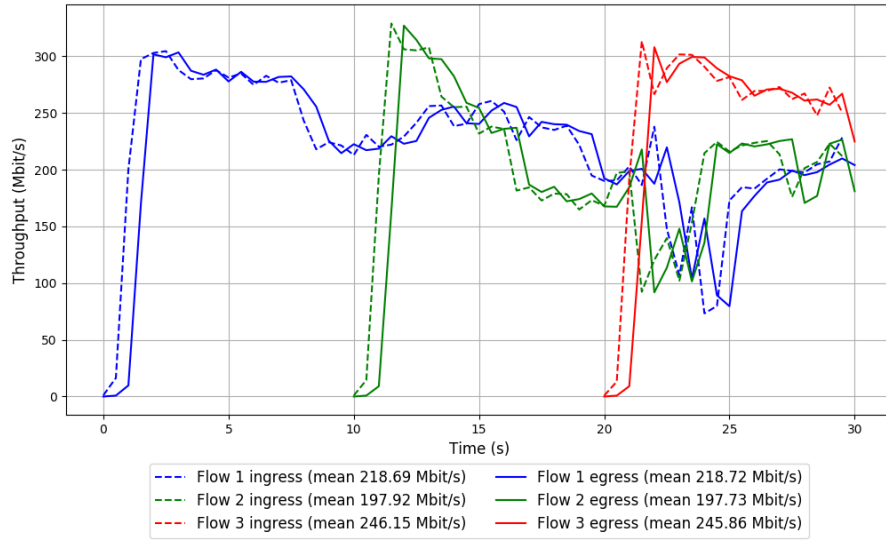
-- Flow 2:

Average throughput: 197.73 Mbit/s  
95th percentile per-packet one-way delay: 69.797 ms  
Loss rate: 0.67%

-- Flow 3:

Average throughput: 245.86 Mbit/s  
95th percentile per-packet one-way delay: 78.427 ms  
Loss rate: 1.29%

### Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-03-27 20:53:22  
End at: 2019-03-27 20:53:52  
Local clock offset: -0.001 ms  
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2019-03-28 00:56:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 823.28 Mbit/s  
95th percentile per-packet one-way delay: 95.738 ms  
Loss rate: 0.60%

-- Flow 1:

Average throughput: 413.84 Mbit/s  
95th percentile per-packet one-way delay: 75.795 ms  
Loss rate: 0.34%

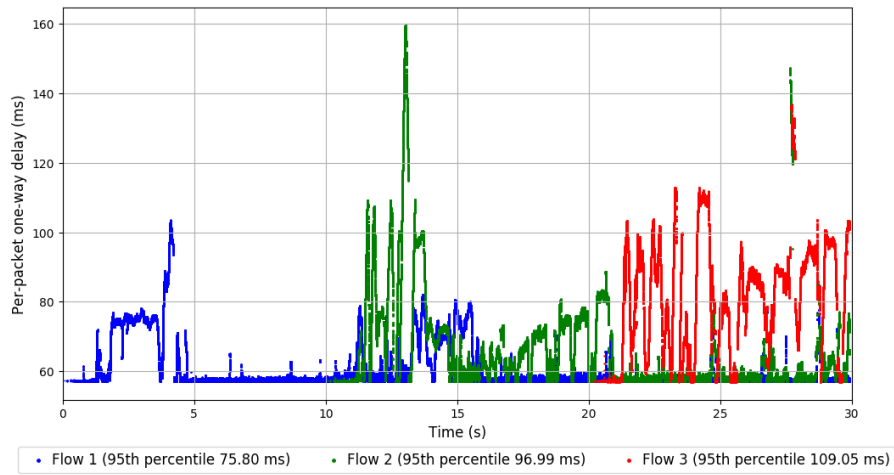
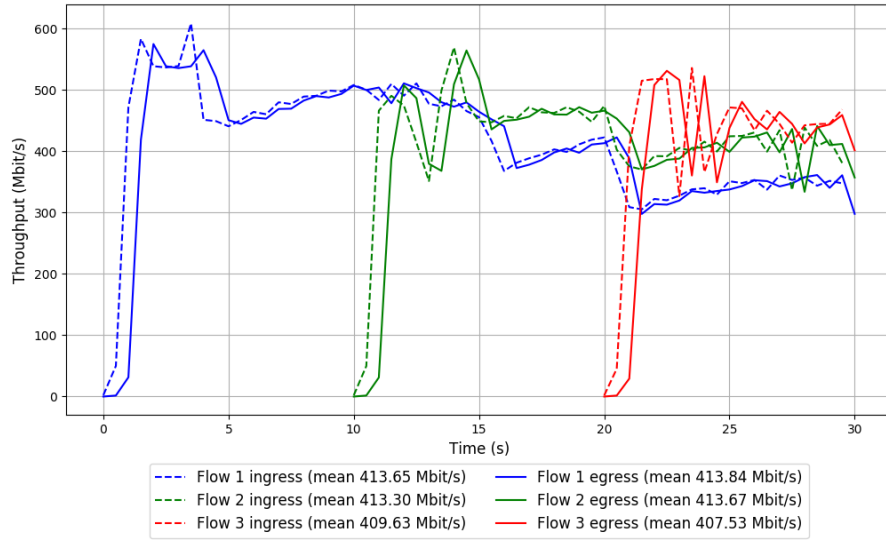
-- Flow 2:

Average throughput: 413.67 Mbit/s  
95th percentile per-packet one-way delay: 96.989 ms  
Loss rate: 0.48%

-- Flow 3:

Average throughput: 407.53 Mbit/s  
95th percentile per-packet one-way delay: 109.046 ms  
Loss rate: 1.65%

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

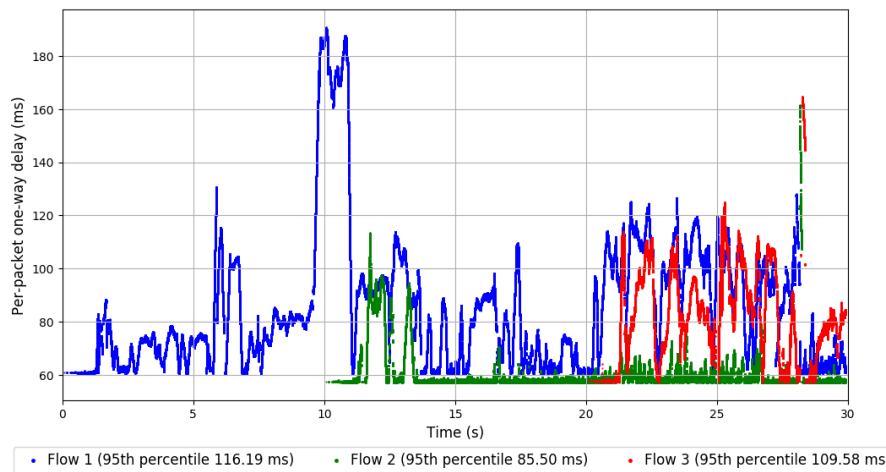
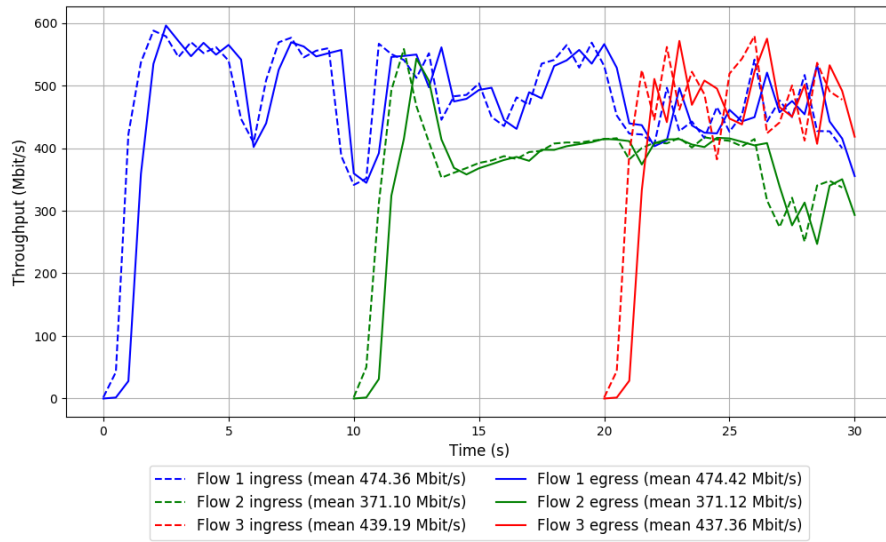


Run 2: Statistics of TCP Cubic

Start at: 2019-03-27 21:35:47  
End at: 2019-03-27 21:36:17  
Local clock offset: 0.083 ms  
Remote clock offset: -0.202 ms

```
# Below is generated by plot.py at 2019-03-28 00:57:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 865.26 Mbit/s
95th percentile per-packet one-way delay: 111.408 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 474.42 Mbit/s
95th percentile per-packet one-way delay: 116.190 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 371.12 Mbit/s
95th percentile per-packet one-way delay: 85.498 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 437.36 Mbit/s
95th percentile per-packet one-way delay: 109.579 ms
Loss rate: 1.57%
```

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





Run 3: Statistics of TCP Cubic

Start at: 2019-03-27 22:16:43

End at: 2019-03-27 22:17:13

Local clock offset: 0.068 ms

Remote clock offset: 0.037 ms

# Below is generated by plot.py at 2019-03-28 00:58:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 931.47 Mbit/s

95th percentile per-packet one-way delay: 92.253 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 492.59 Mbit/s

95th percentile per-packet one-way delay: 91.410 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 461.51 Mbit/s

95th percentile per-packet one-way delay: 74.108 ms

Loss rate: 0.65%

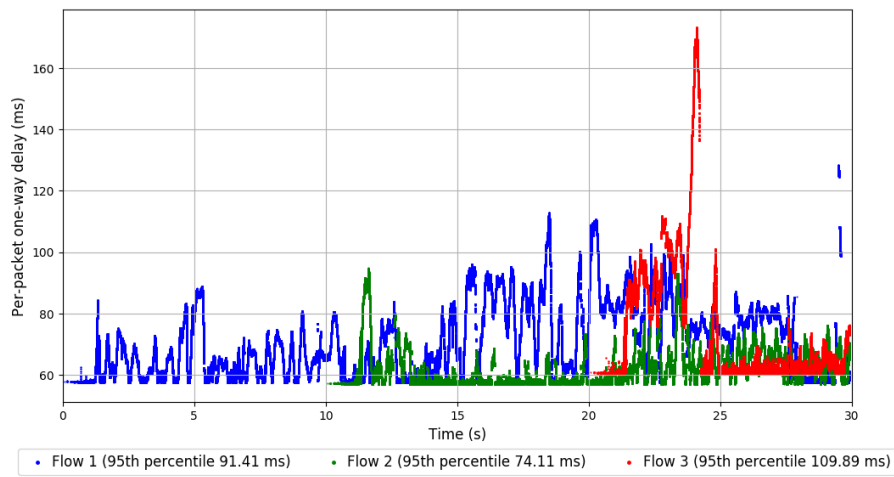
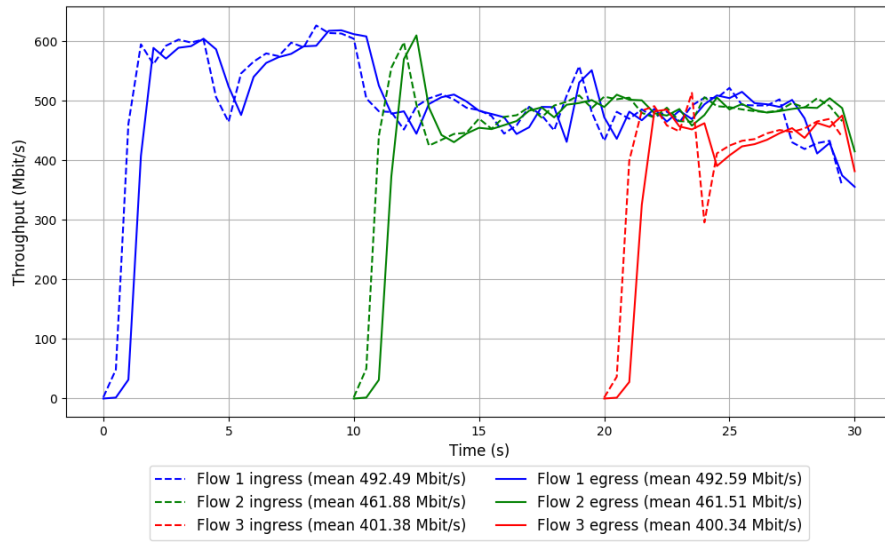
-- Flow 3:

Average throughput: 400.34 Mbit/s

95th percentile per-packet one-way delay: 109.893 ms

Loss rate: 1.44%

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



Run 4: Statistics of TCP Cubic

Start at: 2019-03-27 22:57:51  
End at: 2019-03-27 22:58:21  
Local clock offset: 0.096 ms  
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2019-03-28 00:58:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 895.26 Mbit/s  
95th percentile per-packet one-way delay: 100.025 ms  
Loss rate: 0.57%

-- Flow 1:

Average throughput: 496.70 Mbit/s  
95th percentile per-packet one-way delay: 84.501 ms  
Loss rate: 0.41%

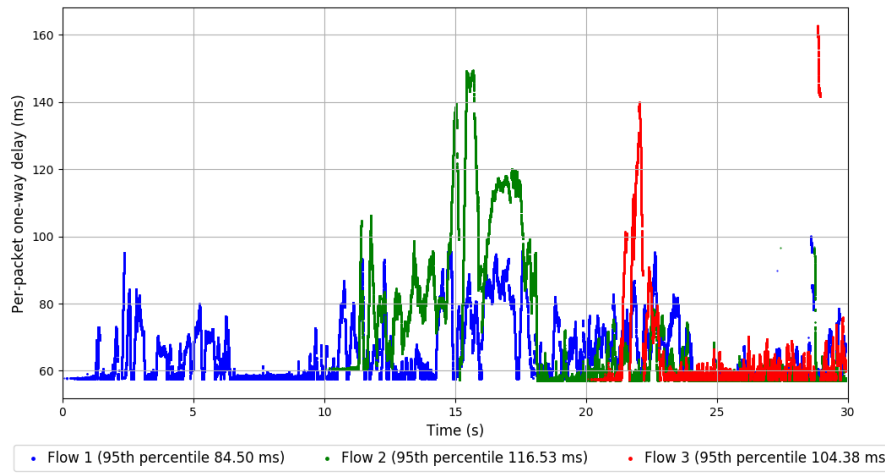
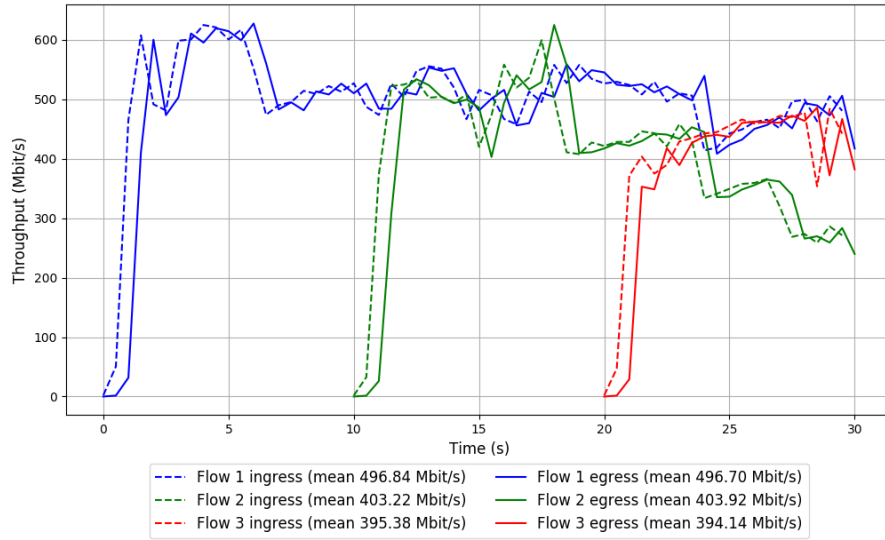
-- Flow 2:

Average throughput: 403.92 Mbit/s  
95th percentile per-packet one-way delay: 116.533 ms  
Loss rate: 0.42%

-- Flow 3:

Average throughput: 394.14 Mbit/s  
95th percentile per-packet one-way delay: 104.383 ms  
Loss rate: 1.46%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-03-27 23:39:23

End at: 2019-03-27 23:39:53

Local clock offset: -0.621 ms

Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2019-03-28 00:58:43

# Datalink statistics

-- Total of 3 flows:

Average throughput: 915.38 Mbit/s

95th percentile per-packet one-way delay: 143.736 ms

Loss rate: 0.73%

-- Flow 1:

Average throughput: 468.53 Mbit/s

95th percentile per-packet one-way delay: 85.230 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 486.79 Mbit/s

95th percentile per-packet one-way delay: 164.046 ms

Loss rate: 0.87%

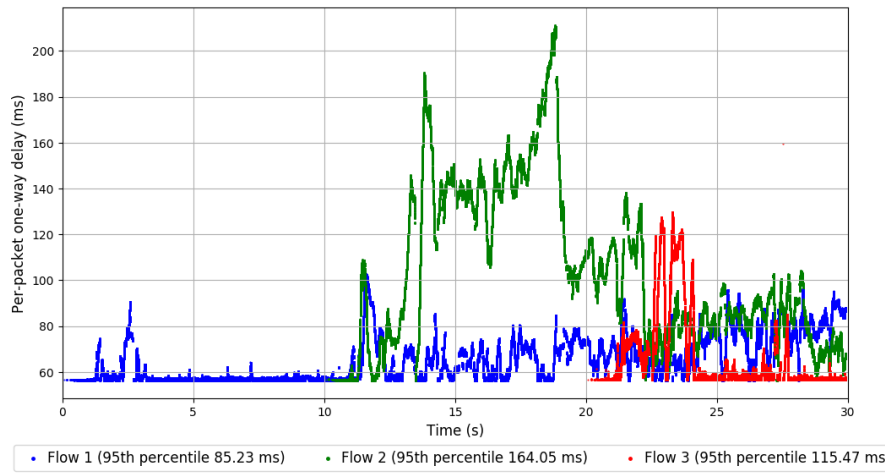
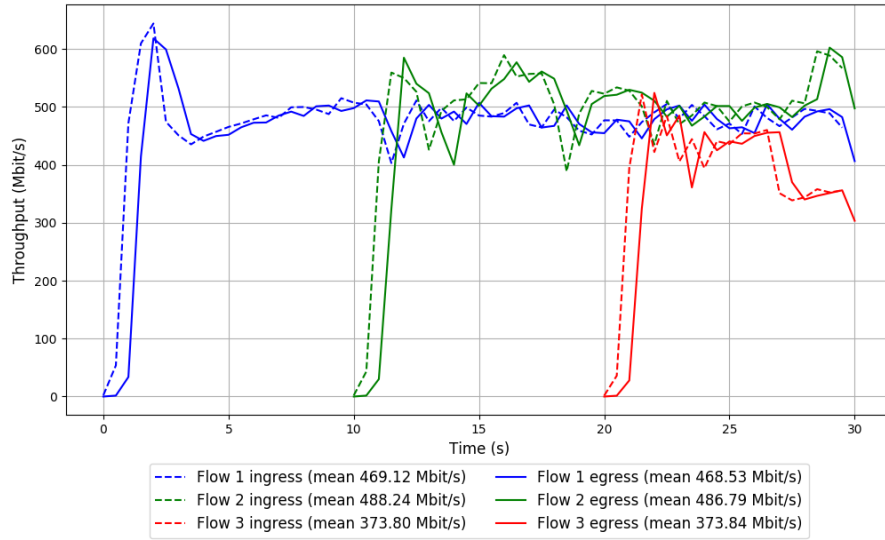
-- Flow 3:

Average throughput: 373.84 Mbit/s

95th percentile per-packet one-way delay: 115.473 ms

Loss rate: 1.18%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-03-27 21:06:51

End at: 2019-03-27 21:07:21

Local clock offset: 0.156 ms

Remote clock offset: 0.046 ms

# Below is generated by plot.py at 2019-03-28 01:00:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 856.56 Mbit/s

95th percentile per-packet one-way delay: 80.790 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 523.44 Mbit/s

95th percentile per-packet one-way delay: 90.441 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 371.85 Mbit/s

95th percentile per-packet one-way delay: 63.471 ms

Loss rate: 0.48%

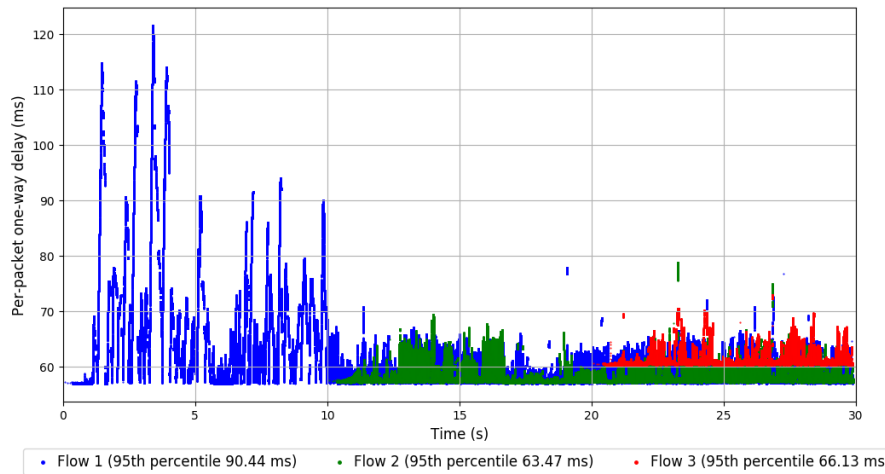
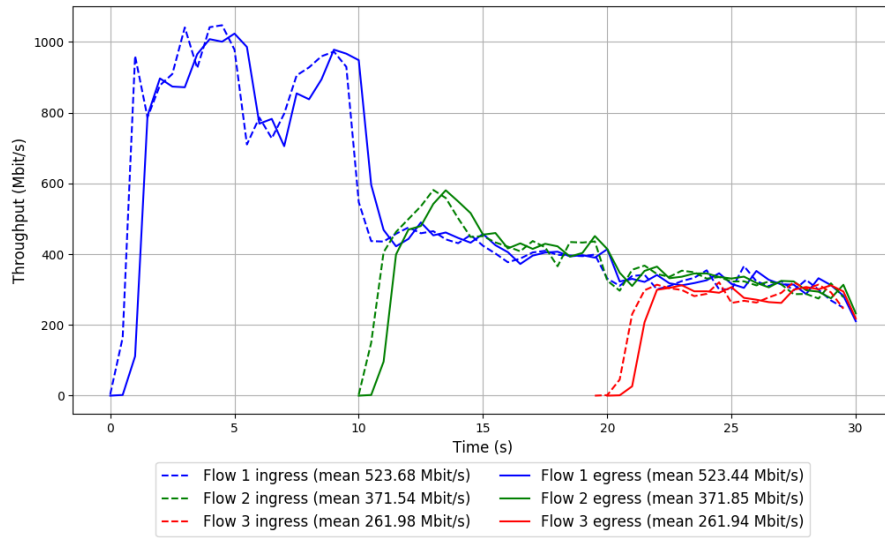
-- Flow 3:

Average throughput: 261.94 Mbit/s

95th percentile per-packet one-way delay: 66.133 ms

Loss rate: 1.39%

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





Run 2: Statistics of FillP

Start at: 2019-03-27 21:48:38

End at: 2019-03-27 21:49:08

Local clock offset: -0.557 ms

Remote clock offset: 0.068 ms

# Below is generated by plot.py at 2019-03-28 01:11:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 842.71 Mbit/s

95th percentile per-packet one-way delay: 92.904 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 519.93 Mbit/s

95th percentile per-packet one-way delay: 101.059 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 351.98 Mbit/s

95th percentile per-packet one-way delay: 65.344 ms

Loss rate: 0.64%

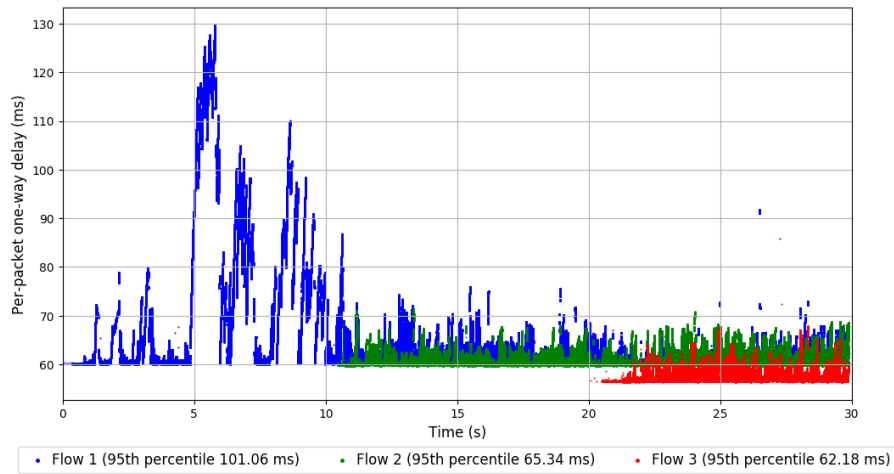
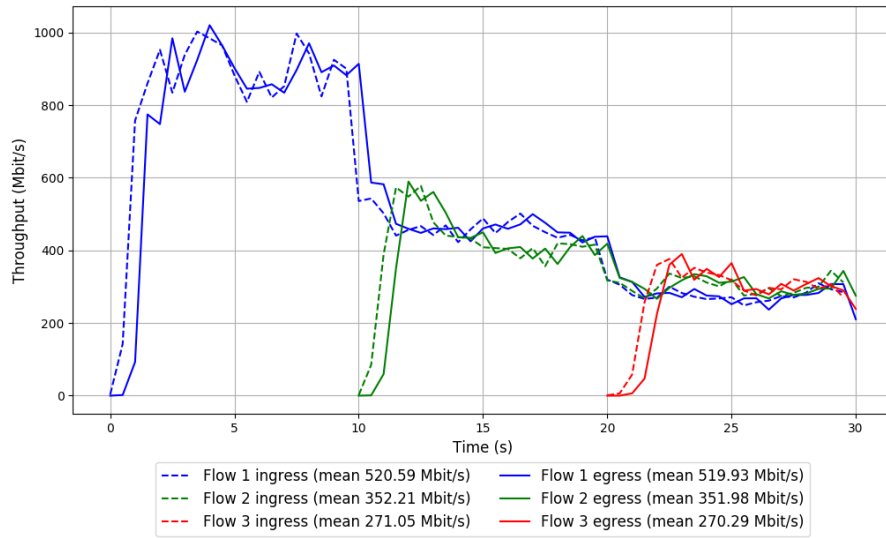
-- Flow 3:

Average throughput: 270.29 Mbit/s

95th percentile per-packet one-way delay: 62.183 ms

Loss rate: 1.42%

## Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-03-27 22:30:07  
End at: 2019-03-27 22:30:37  
Local clock offset: -0.204 ms  
Remote clock offset: -0.278 ms

# Below is generated by plot.py at 2019-03-28 01:12:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 846.91 Mbit/s  
95th percentile per-packet one-way delay: 88.901 ms  
Loss rate: 0.41%

-- Flow 1:

Average throughput: 537.52 Mbit/s  
95th percentile per-packet one-way delay: 93.391 ms  
Loss rate: 0.29%

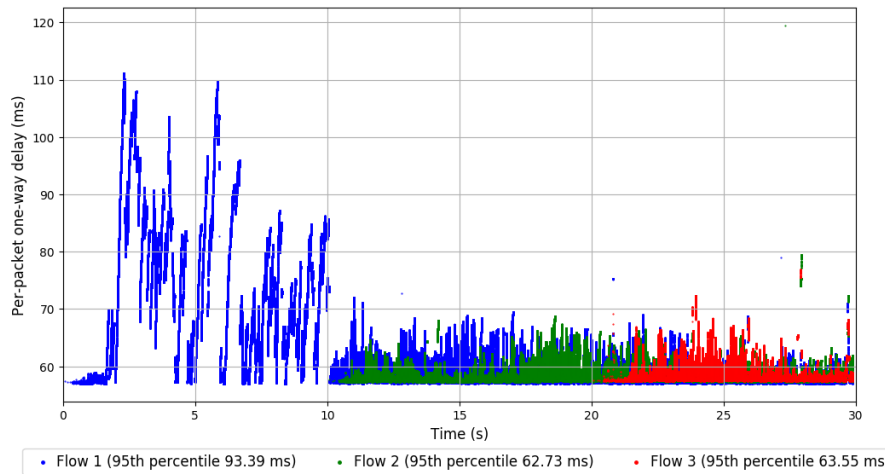
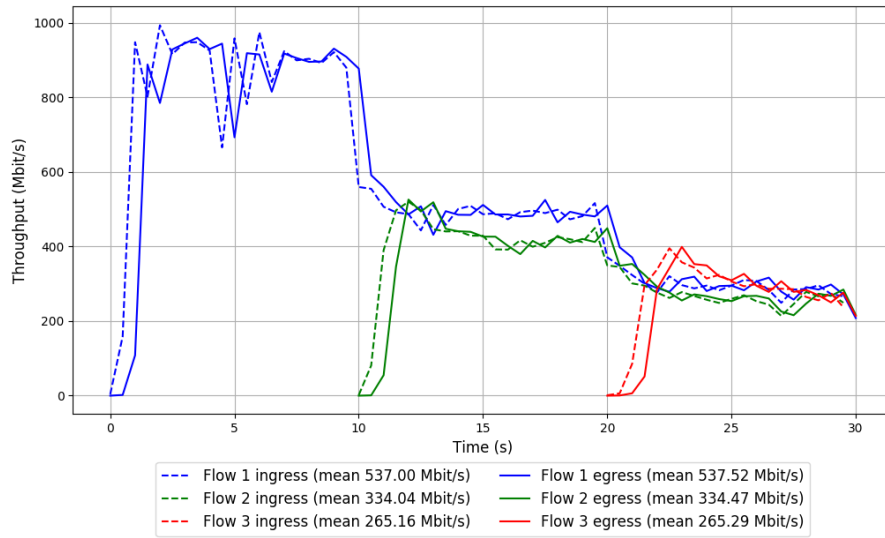
-- Flow 2:

Average throughput: 334.47 Mbit/s  
95th percentile per-packet one-way delay: 62.733 ms  
Loss rate: 0.45%

-- Flow 3:

Average throughput: 265.29 Mbit/s  
95th percentile per-packet one-way delay: 63.555 ms  
Loss rate: 1.09%

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



Run 4: Statistics of FillP

Start at: 2019-03-27 23:10:50  
End at: 2019-03-27 23:11:20  
Local clock offset: 0.016 ms  
Remote clock offset: -0.466 ms

# Below is generated by plot.py at 2019-03-28 01:13:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 842.49 Mbit/s  
95th percentile per-packet one-way delay: 77.650 ms  
Loss rate: 0.41%

-- Flow 1:

Average throughput: 529.49 Mbit/s  
95th percentile per-packet one-way delay: 90.823 ms  
Loss rate: 0.23%

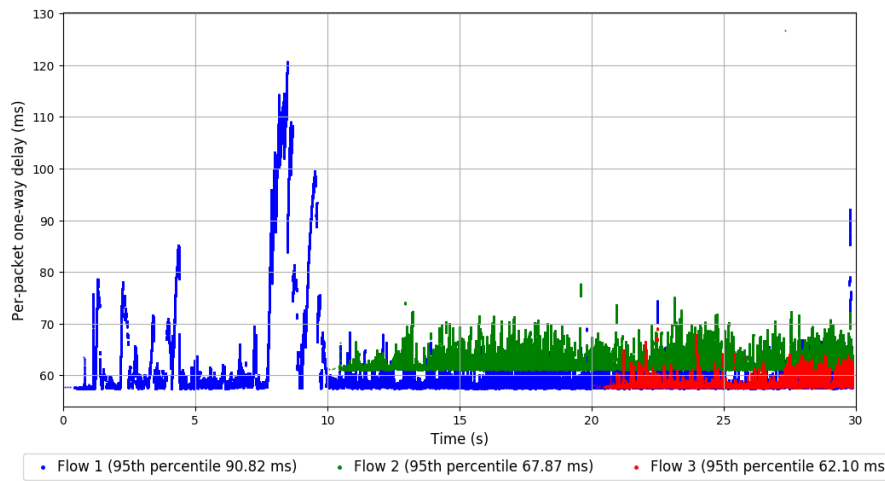
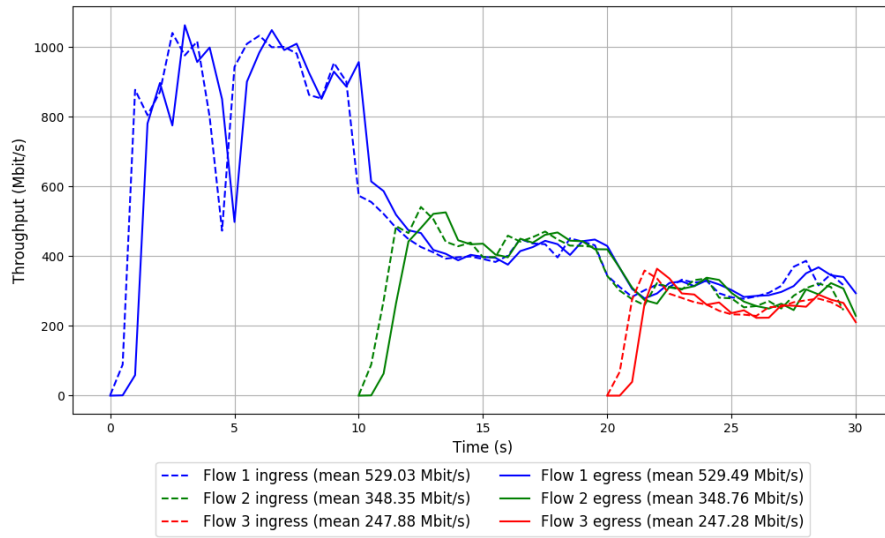
-- Flow 2:

Average throughput: 348.76 Mbit/s  
95th percentile per-packet one-way delay: 67.871 ms  
Loss rate: 0.47%

-- Flow 3:

Average throughput: 247.28 Mbit/s  
95th percentile per-packet one-way delay: 62.103 ms  
Loss rate: 1.42%

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



Run 5: Statistics of FillP

Start at: 2019-03-27 23:52:40  
End at: 2019-03-27 23:53:10  
Local clock offset: 0.022 ms  
Remote clock offset: -0.363 ms

# Below is generated by plot.py at 2019-03-28 01:14:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 835.09 Mbit/s  
95th percentile per-packet one-way delay: 95.448 ms  
Loss rate: 0.49%

-- Flow 1:

Average throughput: 519.01 Mbit/s  
95th percentile per-packet one-way delay: 97.618 ms  
Loss rate: 0.36%

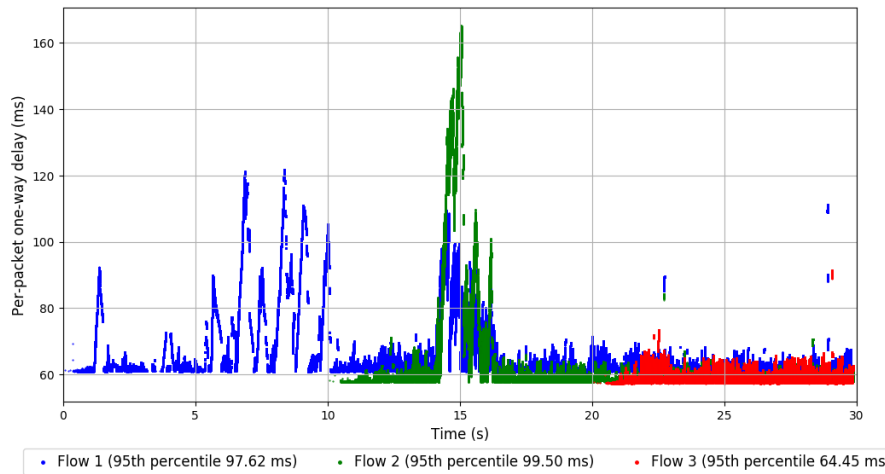
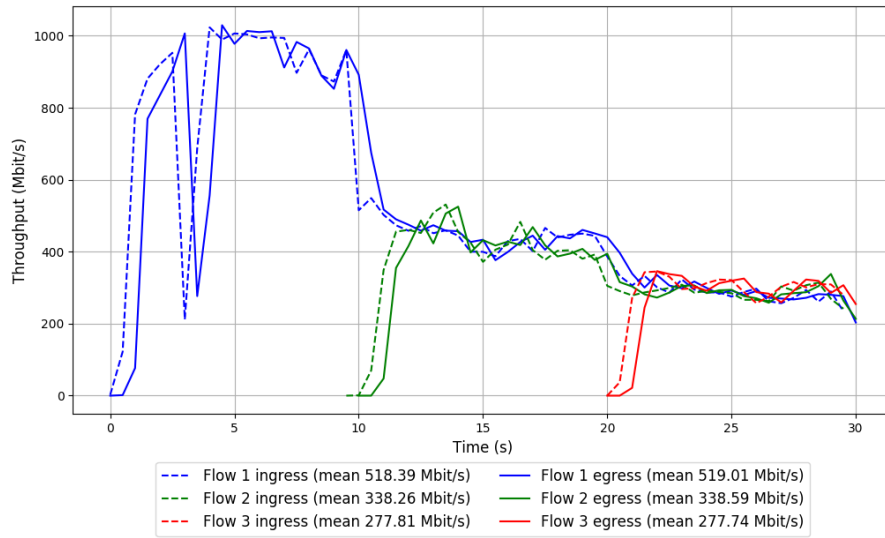
-- Flow 2:

Average throughput: 338.59 Mbit/s  
95th percentile per-packet one-way delay: 99.504 ms  
Loss rate: 0.45%

-- Flow 3:

Average throughput: 277.74 Mbit/s  
95th percentile per-packet one-way delay: 64.449 ms  
Loss rate: 1.30%

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





Run 1: Statistics of FillP-Sheep

Start at: 2019-03-27 20:51:43

End at: 2019-03-27 20:52:13

Local clock offset: -0.127 ms

Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2019-03-28 01:14:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 379.81 Mbit/s

95th percentile per-packet one-way delay: 68.641 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 90.62 Mbit/s

95th percentile per-packet one-way delay: 91.112 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 316.24 Mbit/s

95th percentile per-packet one-way delay: 63.939 ms

Loss rate: 0.52%

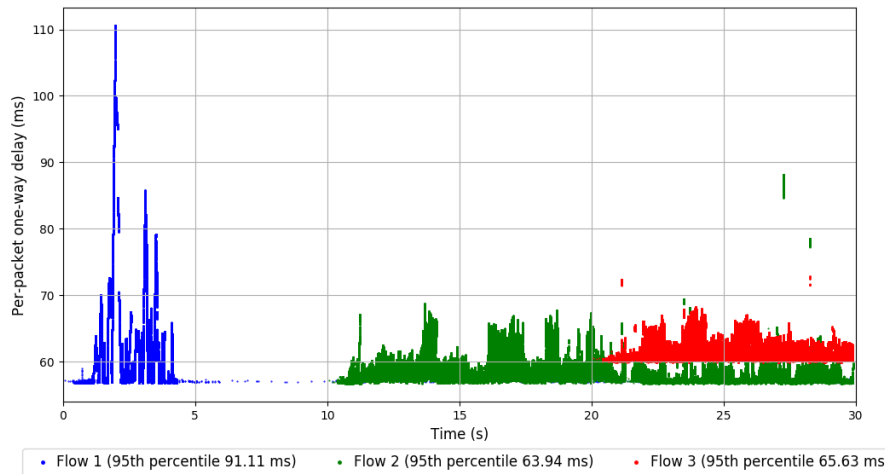
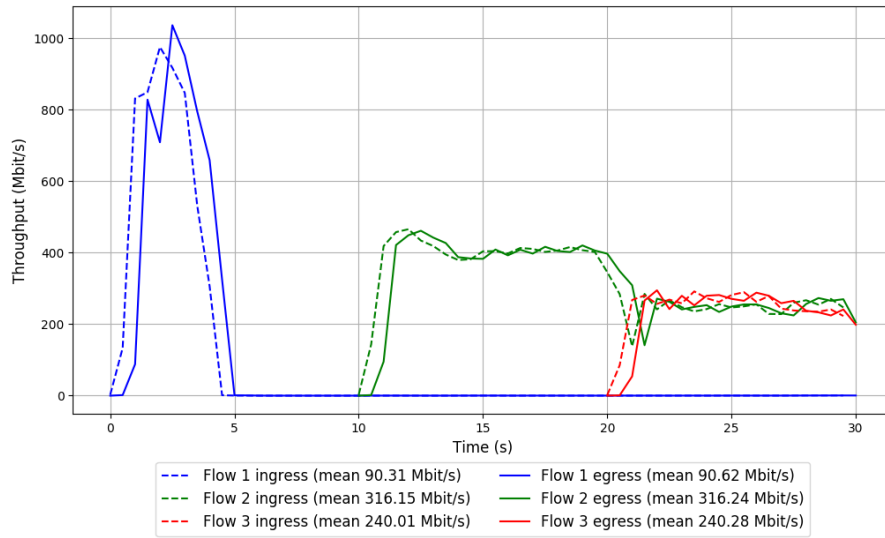
-- Flow 3:

Average throughput: 240.28 Mbit/s

95th percentile per-packet one-way delay: 65.631 ms

Loss rate: 1.27%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-03-27 21:33:29

End at: 2019-03-27 21:33:59

Local clock offset: -0.501 ms

Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2019-03-28 01:14:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 780.22 Mbit/s

95th percentile per-packet one-way delay: 70.024 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 498.73 Mbit/s

95th percentile per-packet one-way delay: 77.082 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 302.54 Mbit/s

95th percentile per-packet one-way delay: 60.783 ms

Loss rate: 0.49%

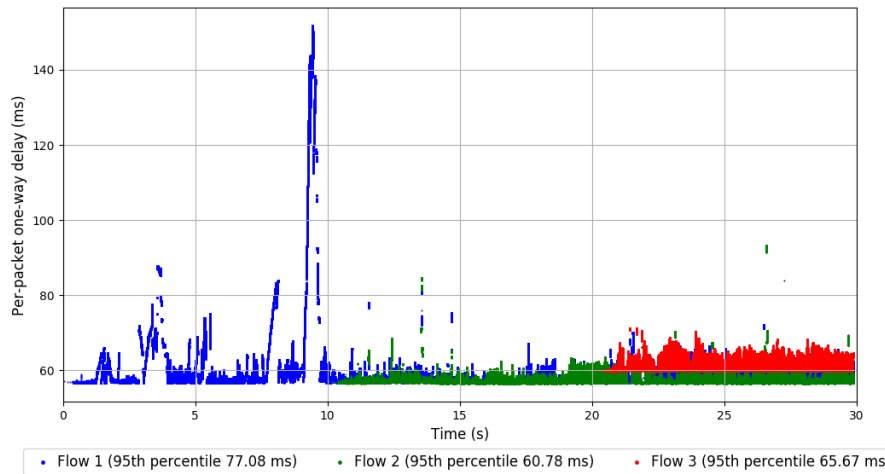
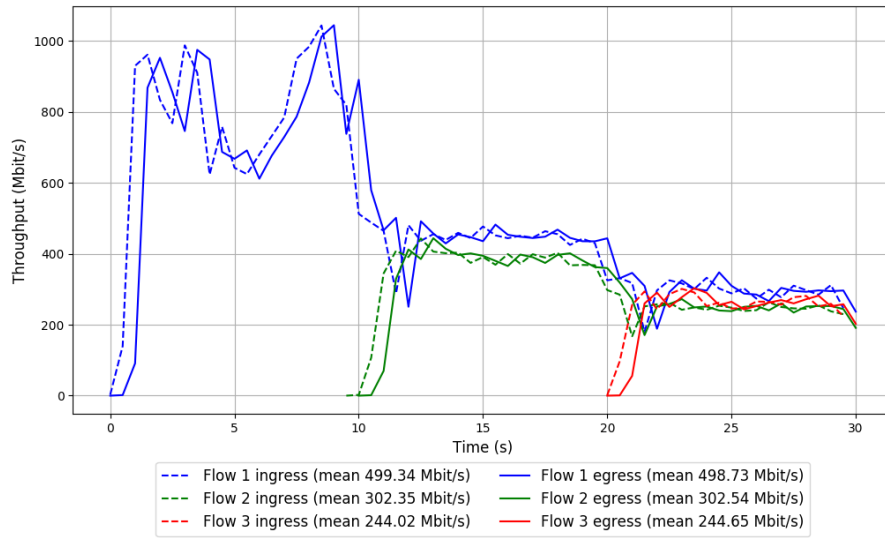
-- Flow 3:

Average throughput: 244.65 Mbit/s

95th percentile per-packet one-way delay: 65.669 ms

Loss rate: 1.15%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-03-27 22:14:32  
End at: 2019-03-27 22:15:02  
Local clock offset: -0.176 ms  
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-03-28 01:14:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 746.80 Mbit/s  
95th percentile per-packet one-way delay: 80.048 ms  
Loss rate: 0.43%

-- Flow 1:

Average throughput: 460.38 Mbit/s  
95th percentile per-packet one-way delay: 86.149 ms  
Loss rate: 0.22%

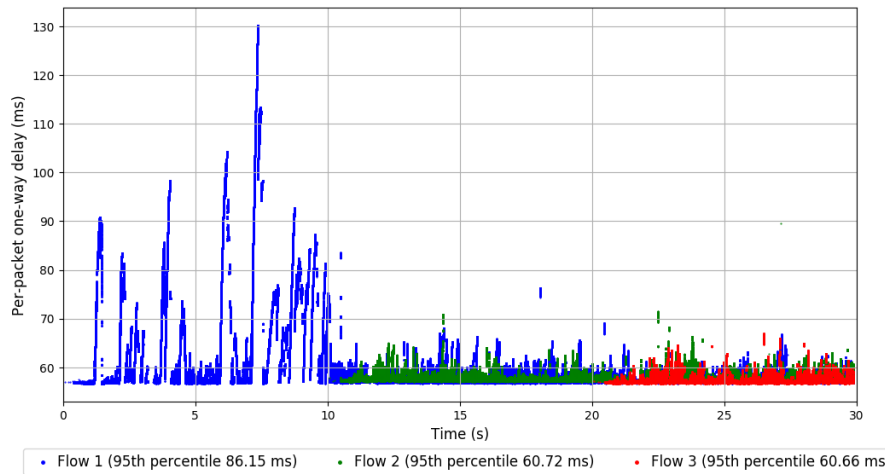
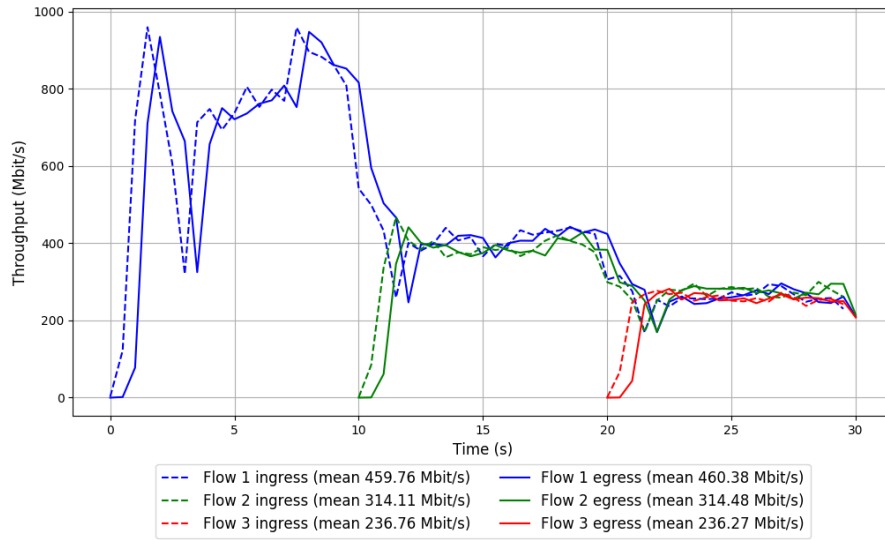
-- Flow 2:

Average throughput: 314.48 Mbit/s  
95th percentile per-packet one-way delay: 60.724 ms  
Loss rate: 0.56%

-- Flow 3:

Average throughput: 236.27 Mbit/s  
95th percentile per-packet one-way delay: 60.656 ms  
Loss rate: 1.33%

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



Run 4: Statistics of FillP-Sheep

Start at: 2019-03-27 22:55:37  
End at: 2019-03-27 22:56:07  
Local clock offset: -0.284 ms  
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2019-03-28 01:18:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 814.83 Mbit/s  
95th percentile per-packet one-way delay: 65.639 ms  
Loss rate: 0.47%

-- Flow 1:

Average throughput: 518.97 Mbit/s  
95th percentile per-packet one-way delay: 71.097 ms  
Loss rate: 0.28%

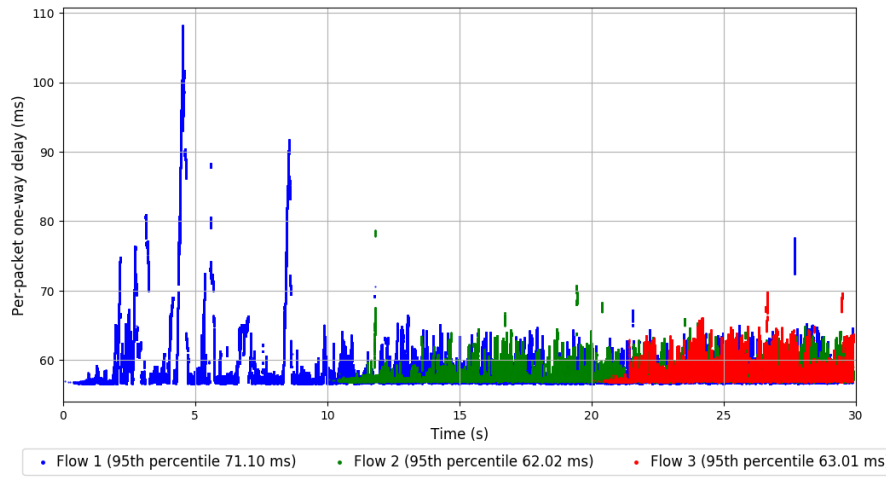
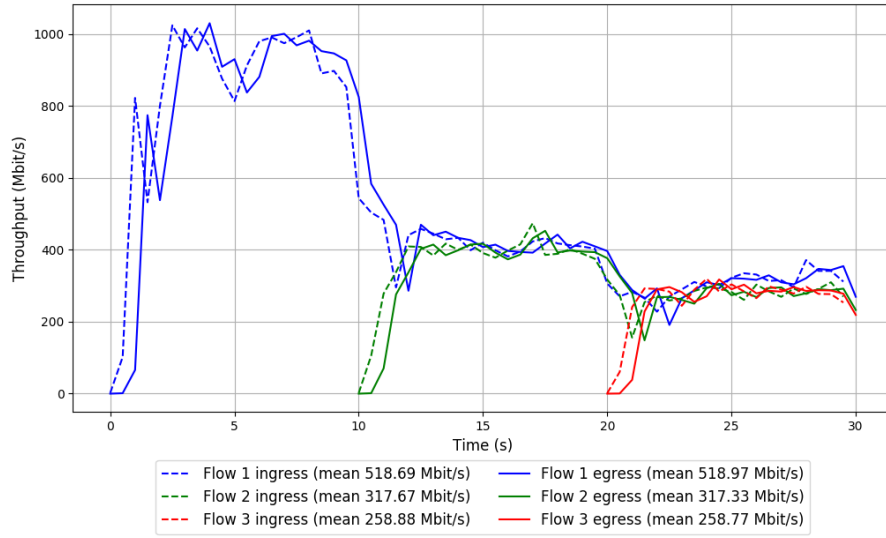
-- Flow 2:

Average throughput: 317.33 Mbit/s  
95th percentile per-packet one-way delay: 62.025 ms  
Loss rate: 0.68%

-- Flow 3:

Average throughput: 258.77 Mbit/s  
95th percentile per-packet one-way delay: 63.013 ms  
Loss rate: 1.10%

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





Run 5: Statistics of FillP-Sheep

Start at: 2019-03-27 23:37:25  
End at: 2019-03-27 23:37:55  
Local clock offset: -0.176 ms  
Remote clock offset: -0.189 ms

# Below is generated by plot.py at 2019-03-28 01:22:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 770.69 Mbit/s  
95th percentile per-packet one-way delay: 72.287 ms  
Loss rate: 0.47%

-- Flow 1:

Average throughput: 473.57 Mbit/s  
95th percentile per-packet one-way delay: 80.127 ms  
Loss rate: 0.36%

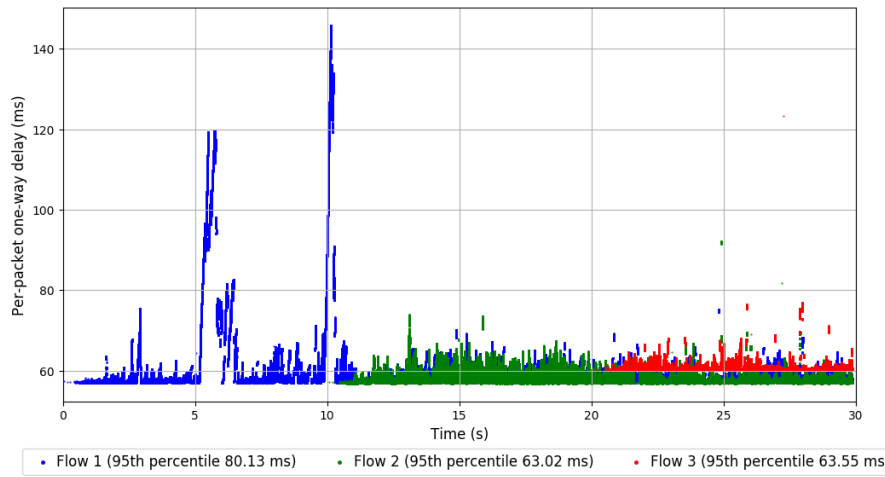
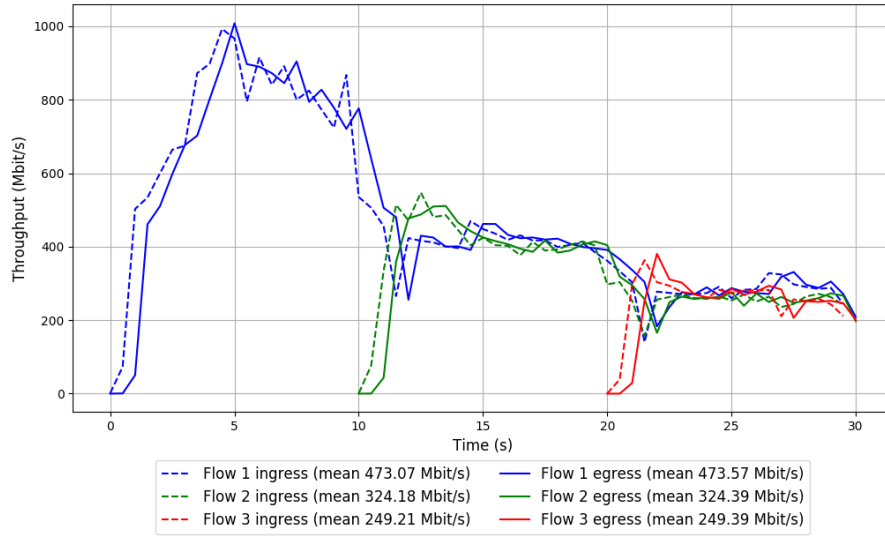
-- Flow 2:

Average throughput: 324.39 Mbit/s  
95th percentile per-packet one-way delay: 63.022 ms  
Loss rate: 0.49%

-- Flow 3:

Average throughput: 249.39 Mbit/s  
95th percentile per-packet one-way delay: 63.555 ms  
Loss rate: 1.03%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-03-27 21:02:35

End at: 2019-03-27 21:03:05

Local clock offset: -0.496 ms

Remote clock offset: 0.074 ms

# Below is generated by plot.py at 2019-03-28 01:24:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 390.69 Mbit/s

95th percentile per-packet one-way delay: 62.010 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 201.22 Mbit/s

95th percentile per-packet one-way delay: 62.744 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 195.35 Mbit/s

95th percentile per-packet one-way delay: 59.693 ms

Loss rate: 0.59%

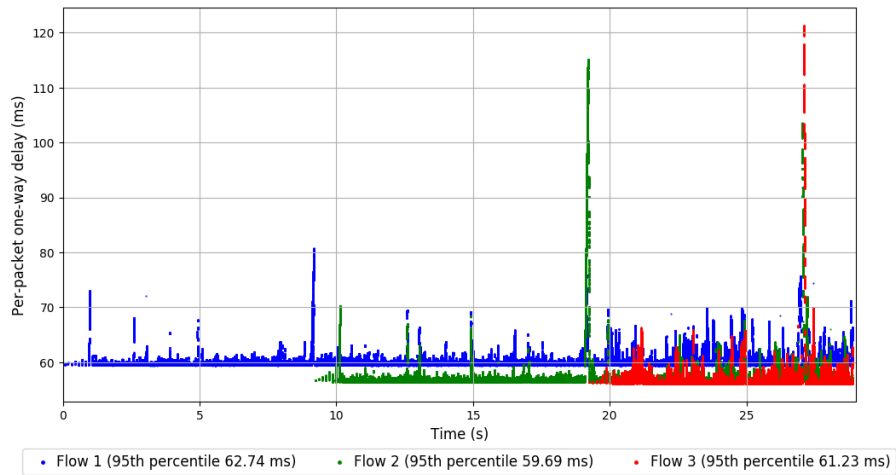
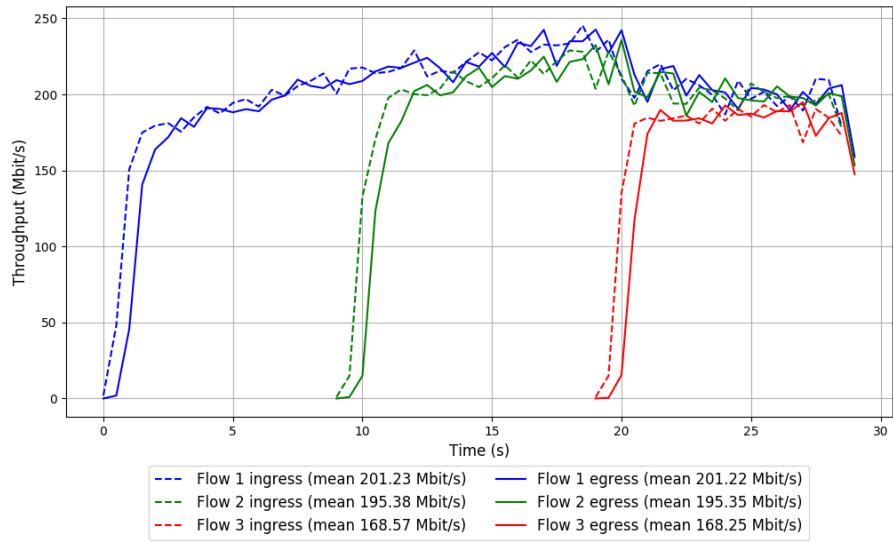
-- Flow 3:

Average throughput: 168.25 Mbit/s

95th percentile per-packet one-way delay: 61.235 ms

Loss rate: 1.37%

# Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-03-27 21:44:47

End at: 2019-03-27 21:45:17

Local clock offset: 0.323 ms

Remote clock offset: 0.079 ms

# Below is generated by plot.py at 2019-03-28 01:24:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 384.02 Mbit/s

95th percentile per-packet one-way delay: 61.040 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 210.04 Mbit/s

95th percentile per-packet one-way delay: 60.437 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 179.16 Mbit/s

95th percentile per-packet one-way delay: 61.988 ms

Loss rate: 0.69%

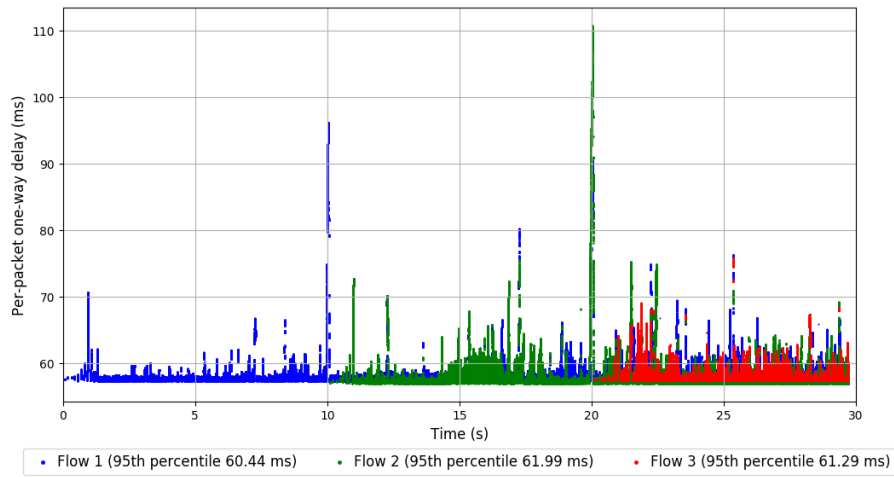
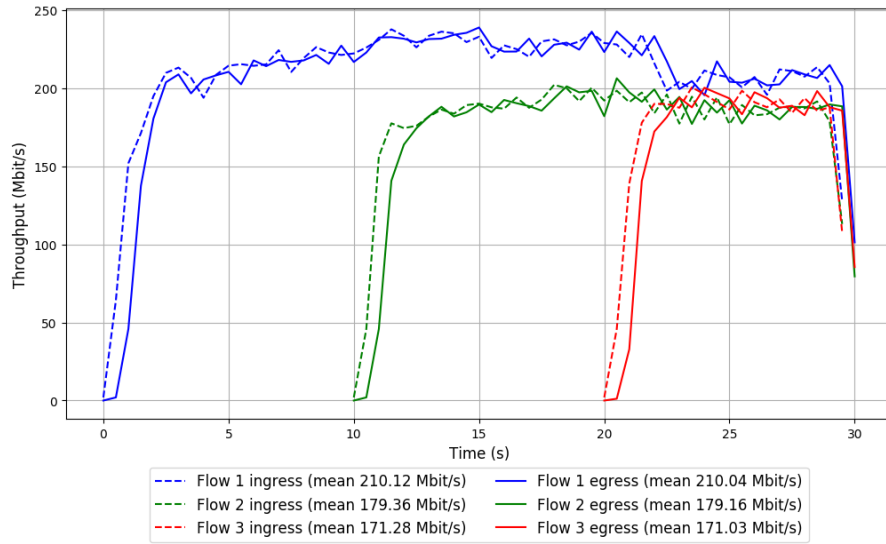
-- Flow 3:

Average throughput: 171.03 Mbit/s

95th percentile per-packet one-way delay: 61.294 ms

Loss rate: 1.32%

## Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-03-27 22:26:07  
End at: 2019-03-27 22:26:37  
Local clock offset: -0.226 ms  
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2019-03-28 01:26:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 398.00 Mbit/s  
95th percentile per-packet one-way delay: 60.544 ms  
Loss rate: 0.58%

-- Flow 1:

Average throughput: 218.45 Mbit/s  
95th percentile per-packet one-way delay: 60.892 ms  
Loss rate: 0.38%

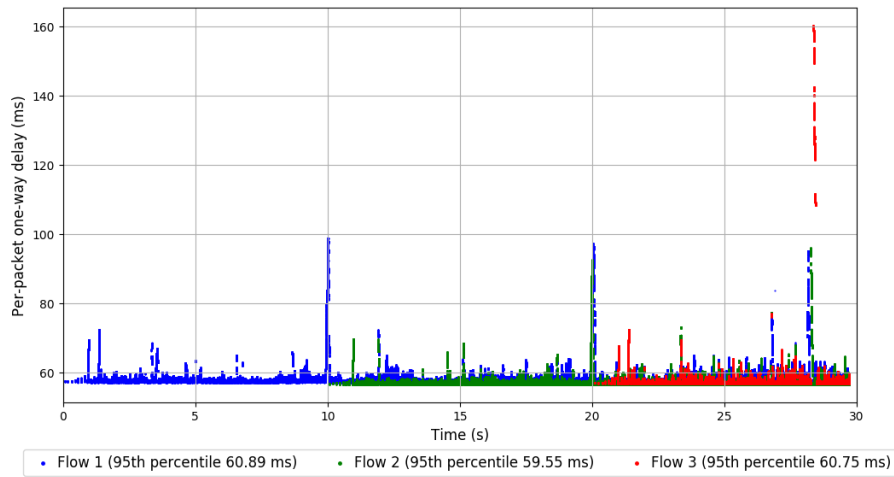
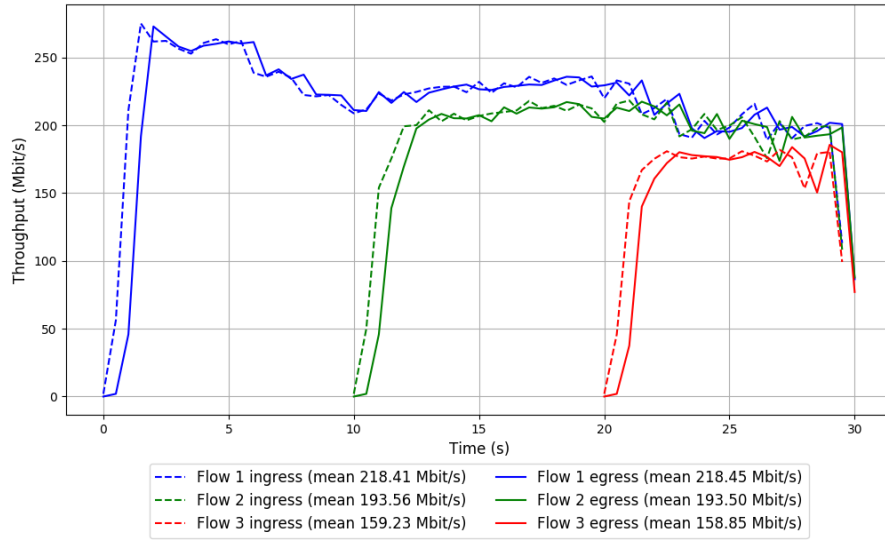
-- Flow 2:

Average throughput: 193.50 Mbit/s  
95th percentile per-packet one-way delay: 59.554 ms  
Loss rate: 0.61%

-- Flow 3:

Average throughput: 158.85 Mbit/s  
95th percentile per-packet one-way delay: 60.747 ms  
Loss rate: 1.36%

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





Run 4: Statistics of Indigo

Start at: 2019-03-27 23:06:45  
End at: 2019-03-27 23:07:15  
Local clock offset: -0.087 ms  
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2019-03-28 01:26:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 373.17 Mbit/s  
95th percentile per-packet one-way delay: 61.186 ms  
Loss rate: 0.59%

-- Flow 1:

Average throughput: 202.84 Mbit/s  
95th percentile per-packet one-way delay: 61.146 ms  
Loss rate: 0.35%

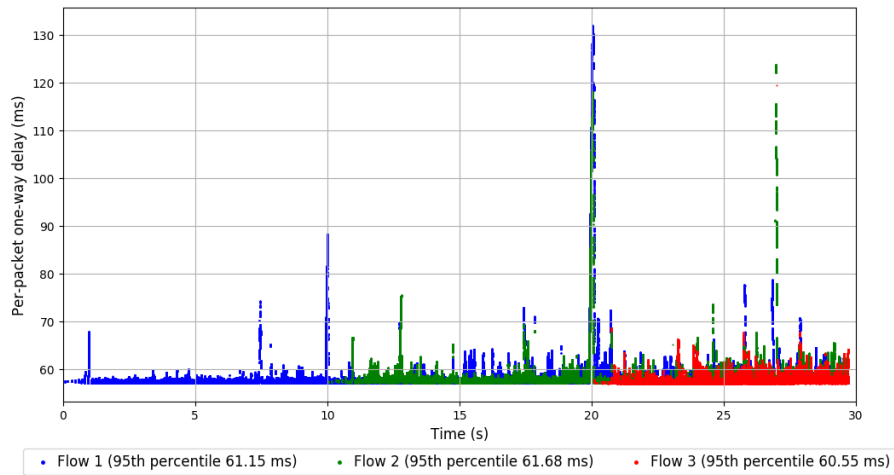
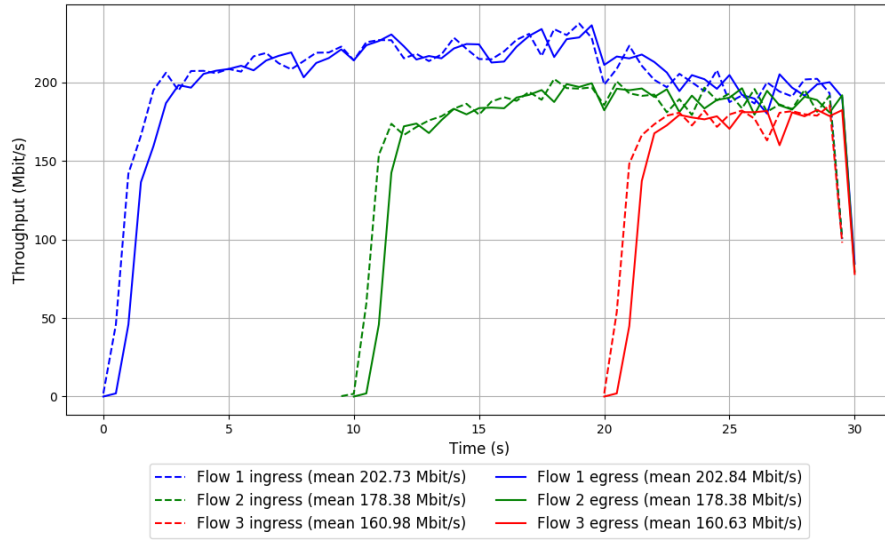
-- Flow 2:

Average throughput: 178.38 Mbit/s  
95th percentile per-packet one-way delay: 61.681 ms  
Loss rate: 0.63%

-- Flow 3:

Average throughput: 160.63 Mbit/s  
95th percentile per-packet one-way delay: 60.546 ms  
Loss rate: 1.41%

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



Run 5: Statistics of Indigo

Start at: 2019-03-27 23:48:10  
End at: 2019-03-27 23:48:40  
Local clock offset: 0.253 ms  
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2019-03-28 01:26:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 395.16 Mbit/s  
95th percentile per-packet one-way delay: 61.165 ms  
Loss rate: 0.54%

-- Flow 1:

Average throughput: 213.07 Mbit/s  
95th percentile per-packet one-way delay: 60.817 ms  
Loss rate: 0.35%

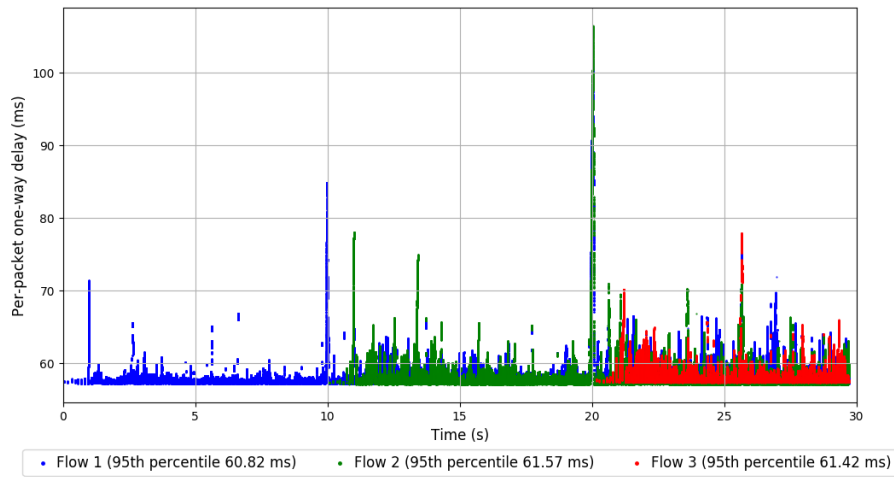
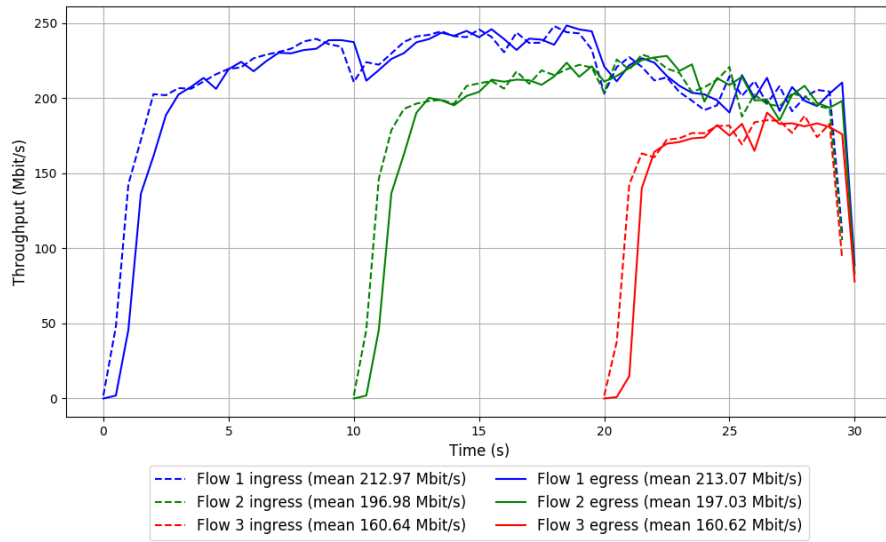
-- Flow 2:

Average throughput: 197.03 Mbit/s  
95th percentile per-packet one-way delay: 61.566 ms  
Loss rate: 0.57%

-- Flow 3:

Average throughput: 160.62 Mbit/s  
95th percentile per-packet one-way delay: 61.419 ms  
Loss rate: 1.24%

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



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-03-27 21:09:00

End at: 2019-03-27 21:09:30

Local clock offset: 0.163 ms

Remote clock offset: 0.128 ms

# Below is generated by plot.py at 2019-03-28 01:26:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 719.19 Mbit/s

95th percentile per-packet one-way delay: 64.797 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 407.98 Mbit/s

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

Loss rate: 0.29%

-- Flow 2:

Average throughput: 367.40 Mbit/s

95th percentile per-packet one-way delay: 67.328 ms

Loss rate: 0.41%

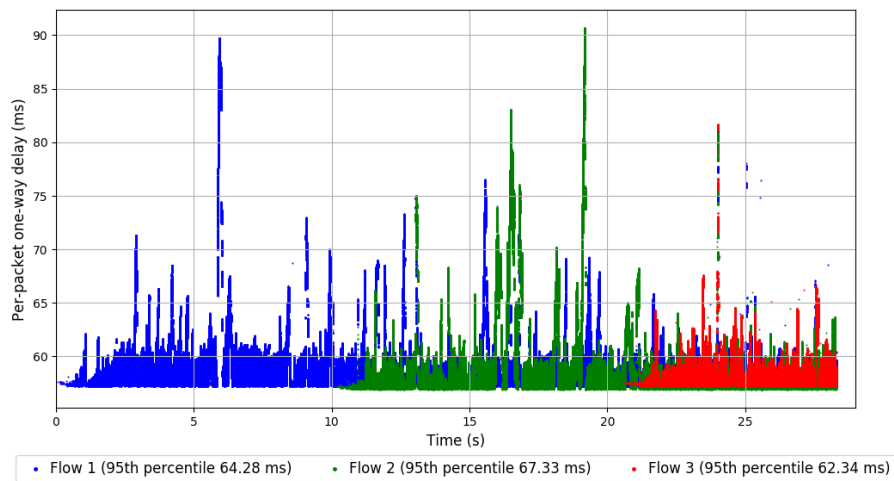
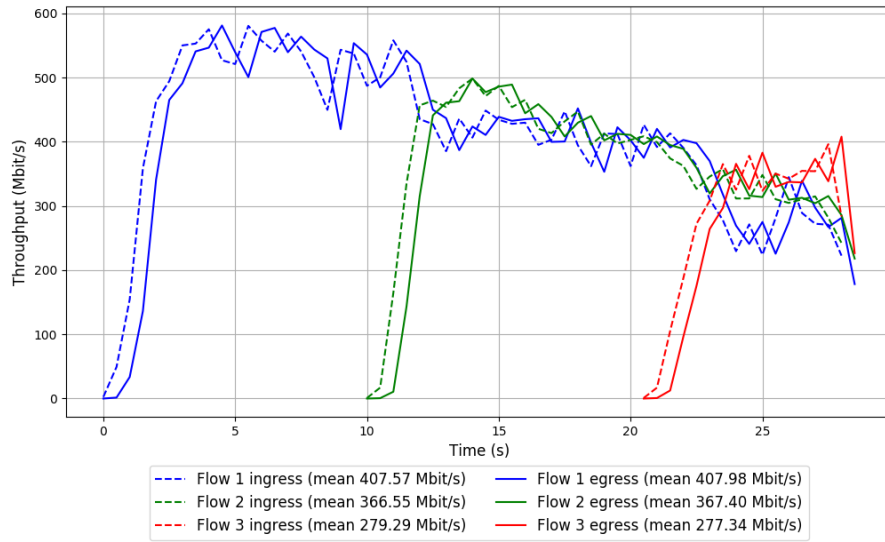
-- Flow 3:

Average throughput: 277.34 Mbit/s

95th percentile per-packet one-way delay: 62.338 ms

Loss rate: 2.16%

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



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-03-27 21:50:49  
End at: 2019-03-27 21:51:19  
Local clock offset: -0.134 ms  
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2019-03-28 01:31:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 710.27 Mbit/s  
95th percentile per-packet one-way delay: 66.135 ms  
Loss rate: 0.49%

-- Flow 1:

Average throughput: 425.98 Mbit/s  
95th percentile per-packet one-way delay: 67.669 ms  
Loss rate: 0.23%

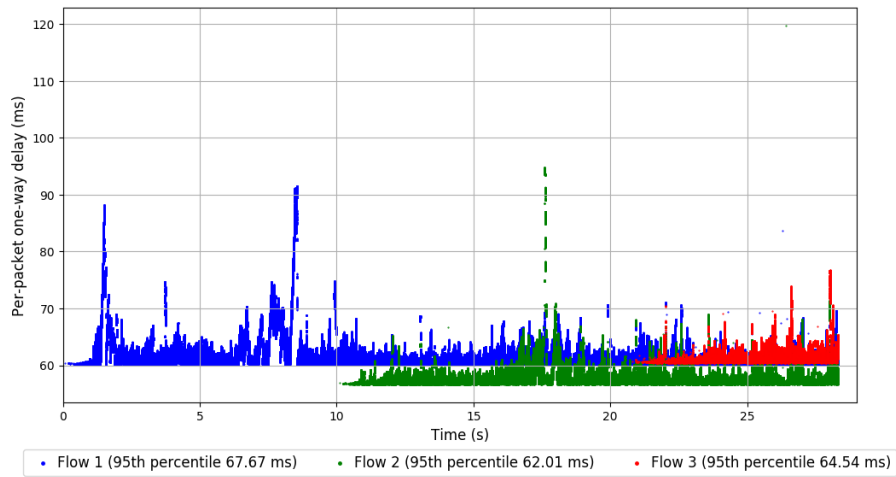
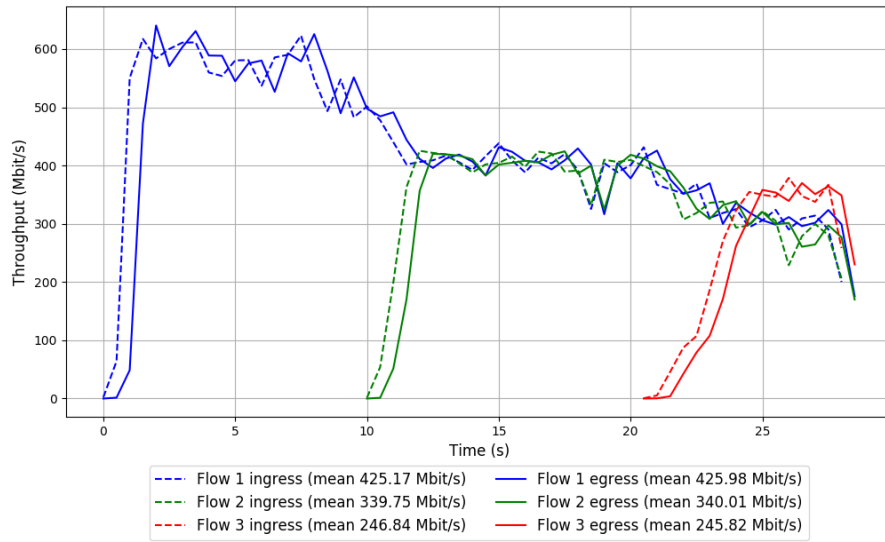
-- Flow 2:

Average throughput: 340.01 Mbit/s  
95th percentile per-packet one-way delay: 62.010 ms  
Loss rate: 0.55%

-- Flow 3:

Average throughput: 245.82 Mbit/s  
95th percentile per-packet one-way delay: 64.541 ms  
Loss rate: 1.97%

Run 2: Report of Indigo-MusesC3 — Data Link





Run 3: Statistics of Indigo-MusesC3

Start at: 2019-03-27 22:32:22  
End at: 2019-03-27 22:32:52  
Local clock offset: -0.352 ms  
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2019-03-28 01:35:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 715.25 Mbit/s  
95th percentile per-packet one-way delay: 69.563 ms  
Loss rate: 0.55%

-- Flow 1:

Average throughput: 426.11 Mbit/s  
95th percentile per-packet one-way delay: 69.399 ms  
Loss rate: 0.26%

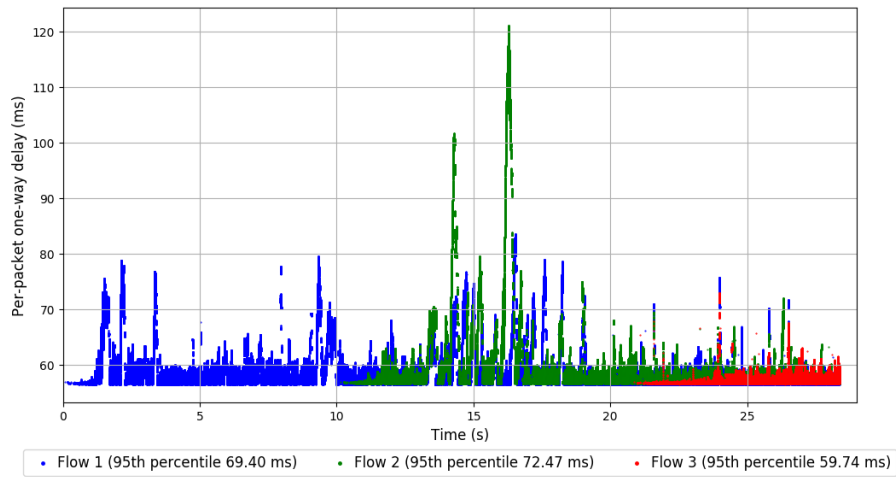
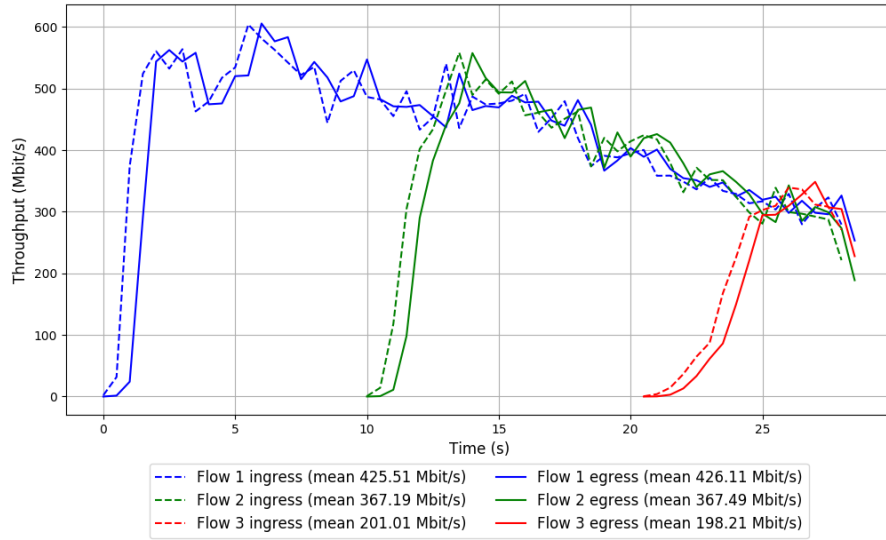
-- Flow 2:

Average throughput: 367.49 Mbit/s  
95th percentile per-packet one-way delay: 72.468 ms  
Loss rate: 0.55%

-- Flow 3:

Average throughput: 198.21 Mbit/s  
95th percentile per-packet one-way delay: 59.745 ms  
Loss rate: 2.87%

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



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-03-27 23:13:05  
End at: 2019-03-27 23:13:35  
Local clock offset: 0.273 ms  
Remote clock offset: -0.175 ms

# Below is generated by plot.py at 2019-03-28 01:36:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 699.53 Mbit/s  
95th percentile per-packet one-way delay: 72.825 ms  
Loss rate: 0.53%

-- Flow 1:

Average throughput: 405.08 Mbit/s  
95th percentile per-packet one-way delay: 75.899 ms  
Loss rate: 0.29%

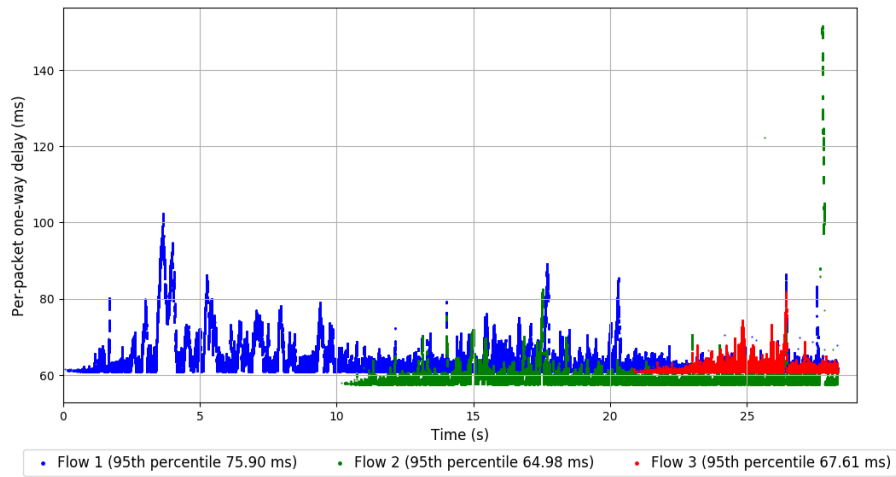
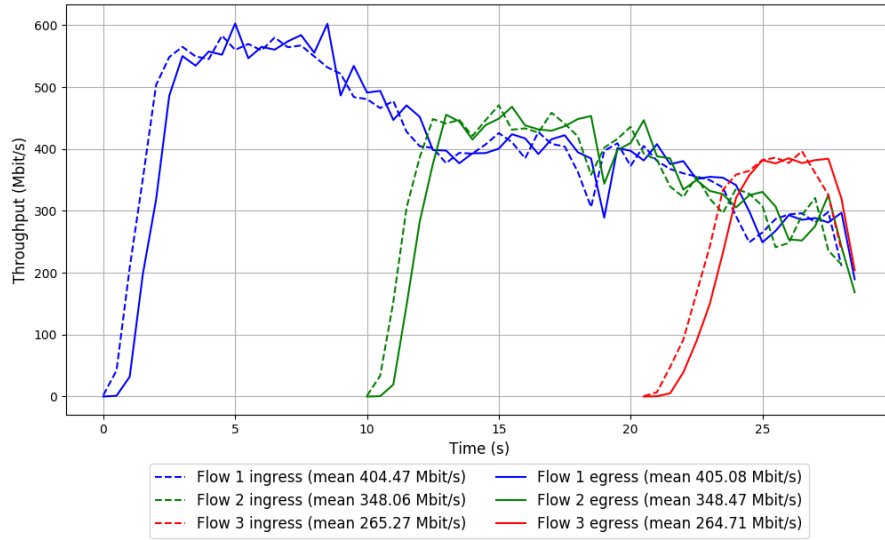
-- Flow 2:

Average throughput: 348.47 Mbit/s  
95th percentile per-packet one-way delay: 64.984 ms  
Loss rate: 0.58%

-- Flow 3:

Average throughput: 264.71 Mbit/s  
95th percentile per-packet one-way delay: 67.610 ms  
Loss rate: 1.78%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-03-27 23:54:38  
End at: 2019-03-27 23:55:08  
Local clock offset: -0.212 ms  
Remote clock offset: -0.375 ms

# Below is generated by plot.py at 2019-03-28 01:36:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 708.25 Mbit/s  
95th percentile per-packet one-way delay: 70.791 ms  
Loss rate: 0.60%

-- Flow 1:

Average throughput: 417.71 Mbit/s  
95th percentile per-packet one-way delay: 73.343 ms  
Loss rate: 0.33%

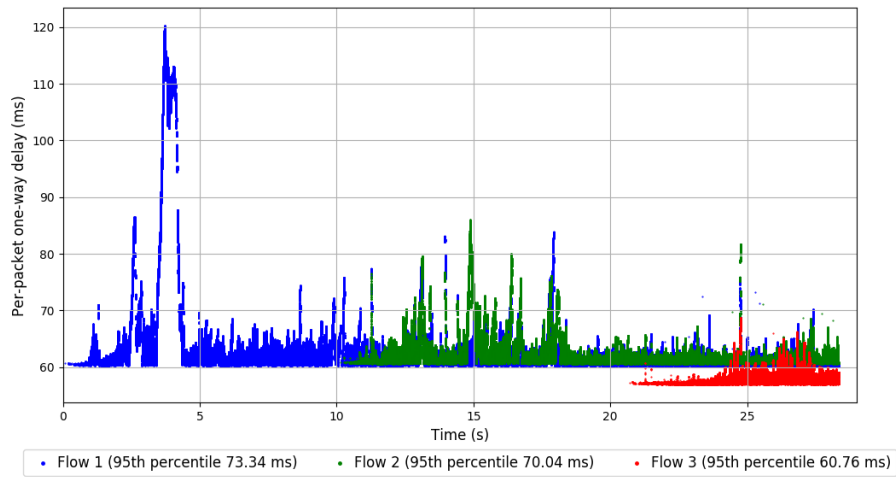
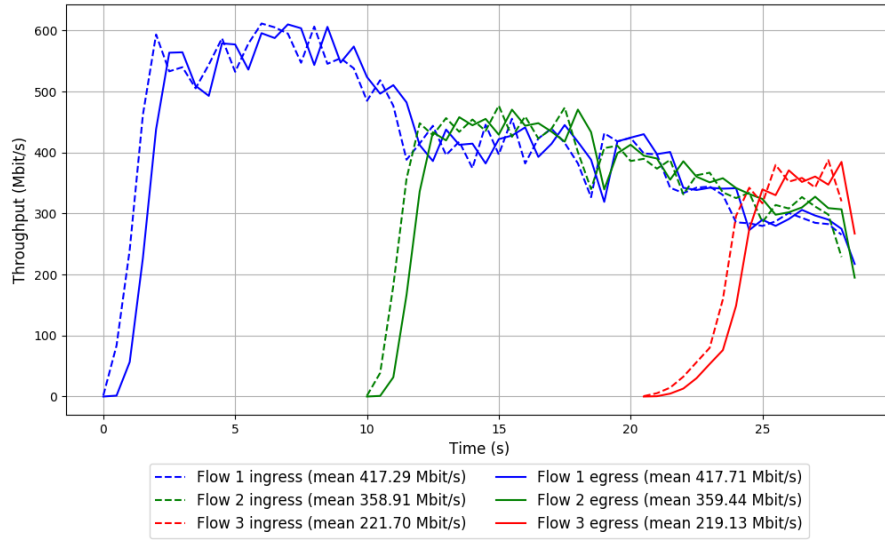
-- Flow 2:

Average throughput: 359.44 Mbit/s  
95th percentile per-packet one-way delay: 70.038 ms  
Loss rate: 0.55%

-- Flow 3:

Average throughput: 219.13 Mbit/s  
95th percentile per-packet one-way delay: 60.760 ms  
Loss rate: 2.67%

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



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-03-27 21:17:46

End at: 2019-03-27 21:18:16

Local clock offset: -0.504 ms

Remote clock offset: 0.694 ms

# Below is generated by plot.py at 2019-03-28 01:37:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 694.72 Mbit/s

95th percentile per-packet one-way delay: 96.710 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 438.08 Mbit/s

95th percentile per-packet one-way delay: 93.794 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 360.42 Mbit/s

95th percentile per-packet one-way delay: 105.323 ms

Loss rate: 0.62%

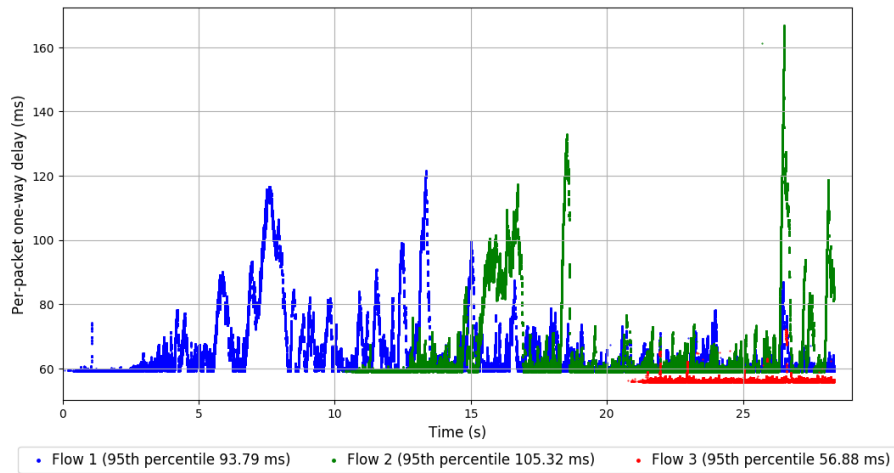
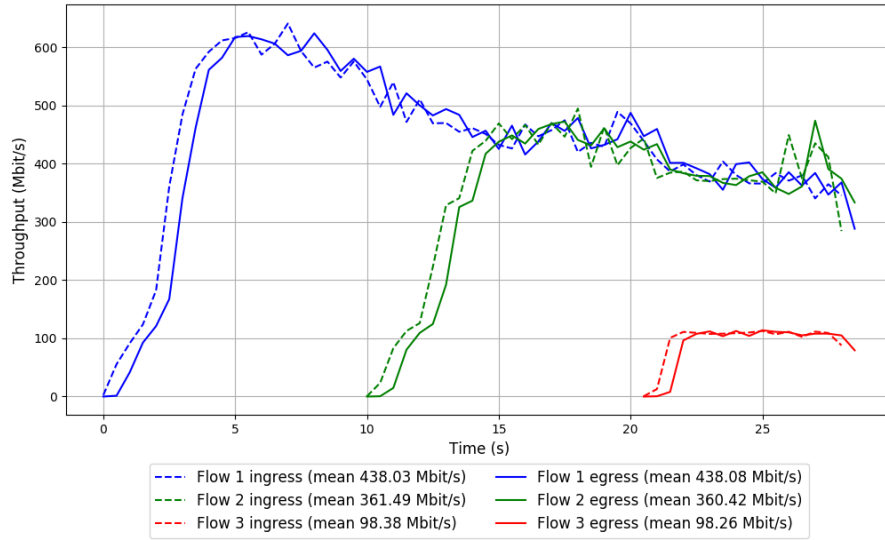
-- Flow 3:

Average throughput: 98.26 Mbit/s

95th percentile per-packet one-way delay: 56.875 ms

Loss rate: 1.68%

Run 1: Report of Indigo-MusesC5 — Data Link





Run 2: Statistics of Indigo-MusesC5

Start at: 2019-03-27 21:59:19

End at: 2019-03-27 21:59:49

Local clock offset: -0.267 ms

Remote clock offset: 0.085 ms

# Below is generated by plot.py at 2019-03-28 01:38:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 729.57 Mbit/s

95th percentile per-packet one-way delay: 84.746 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 439.58 Mbit/s

95th percentile per-packet one-way delay: 82.005 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 417.43 Mbit/s

95th percentile per-packet one-way delay: 88.374 ms

Loss rate: 0.67%

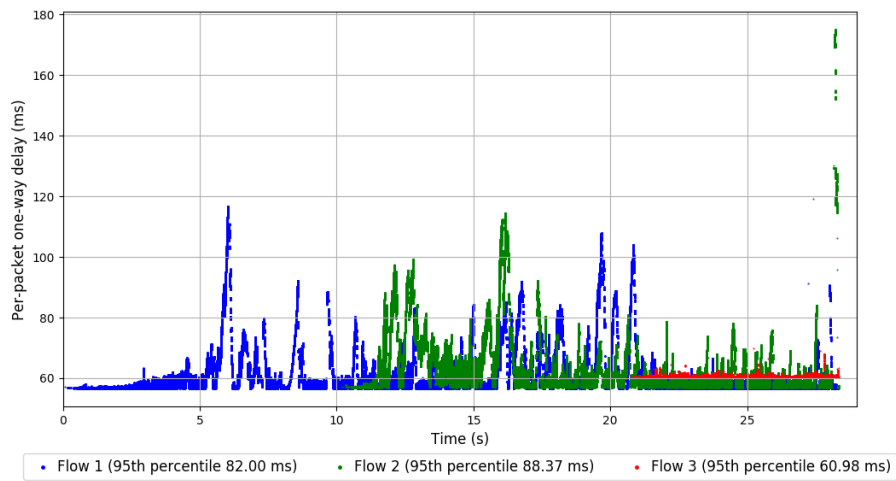
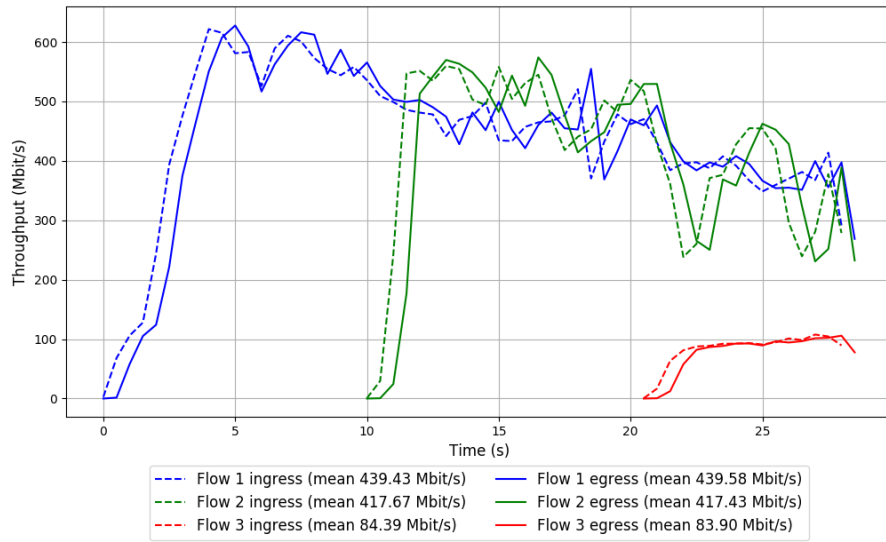
-- Flow 3:

Average throughput: 83.90 Mbit/s

95th percentile per-packet one-way delay: 60.982 ms

Loss rate: 2.04%

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

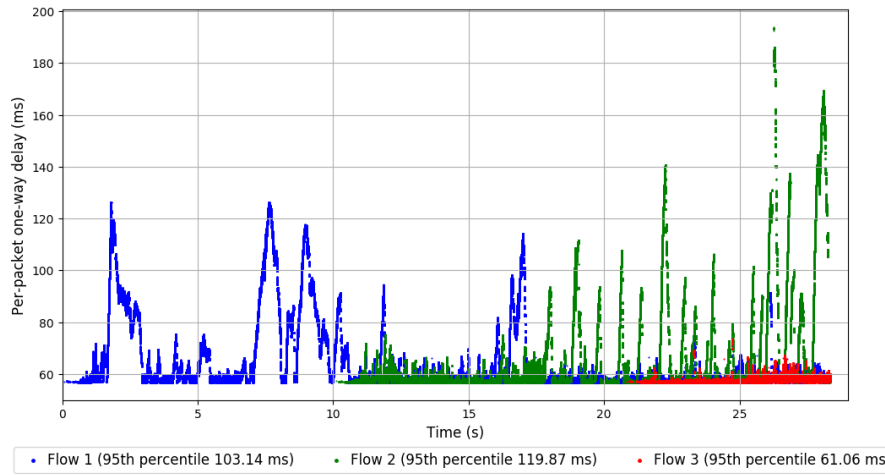
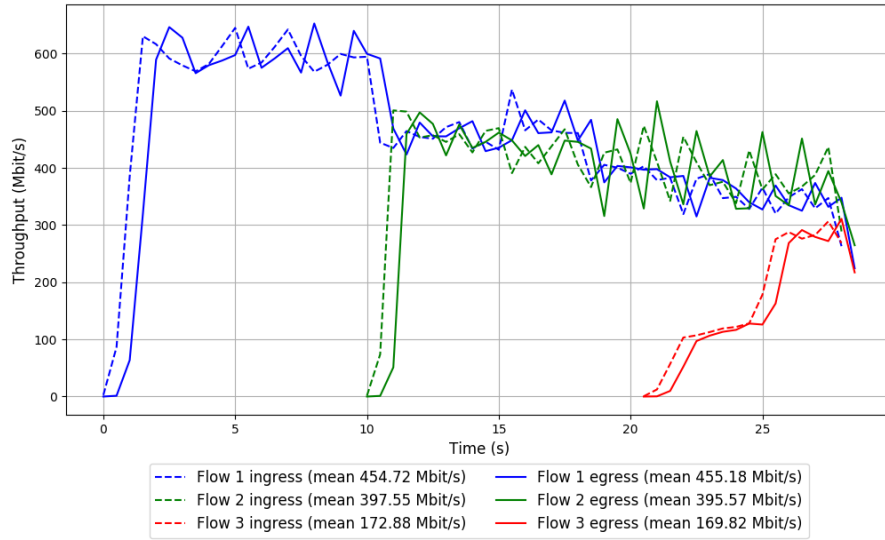


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-03-27 22:40:44  
End at: 2019-03-27 22:41:14  
Local clock offset: -0.195 ms  
Remote clock offset: -0.002 ms

```
# Below is generated by plot.py at 2019-03-28 01:38:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 755.36 Mbit/s
95th percentile per-packet one-way delay: 105.622 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 455.18 Mbit/s
95th percentile per-packet one-way delay: 103.144 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 395.57 Mbit/s
95th percentile per-packet one-way delay: 119.872 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 169.82 Mbit/s
95th percentile per-packet one-way delay: 61.062 ms
Loss rate: 3.24%
```

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



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-03-27 23:22:03

End at: 2019-03-27 23:22:33

Local clock offset: -0.371 ms

Remote clock offset: 0.703 ms

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

# Datalink statistics

-- Total of 3 flows:

Average throughput: 749.54 Mbit/s

95th percentile per-packet one-way delay: 83.299 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 465.48 Mbit/s

95th percentile per-packet one-way delay: 80.613 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 407.11 Mbit/s

95th percentile per-packet one-way delay: 88.561 ms

Loss rate: 0.84%

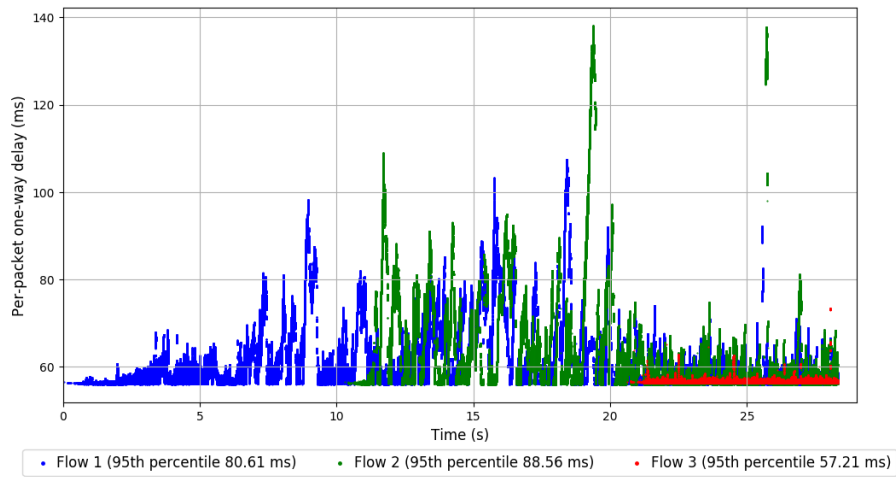
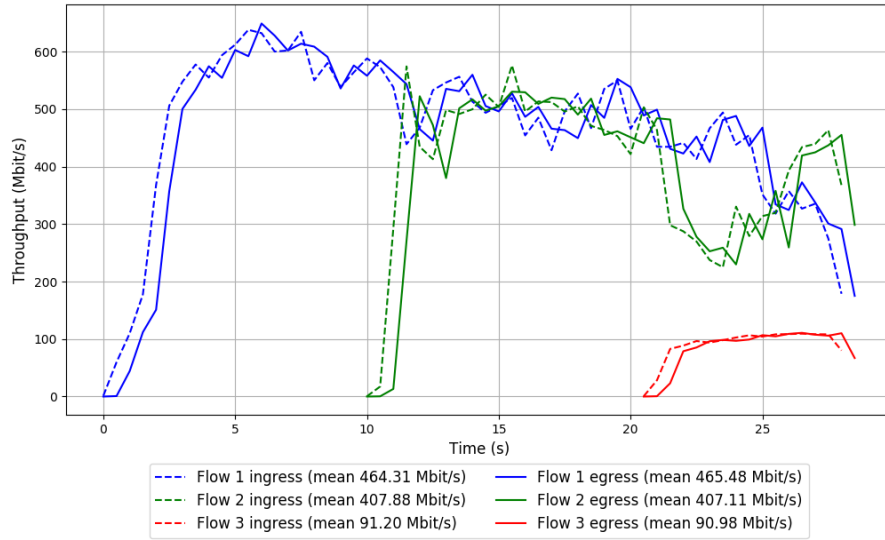
-- Flow 3:

Average throughput: 90.98 Mbit/s

95th percentile per-packet one-way delay: 57.213 ms

Loss rate: 1.76%

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

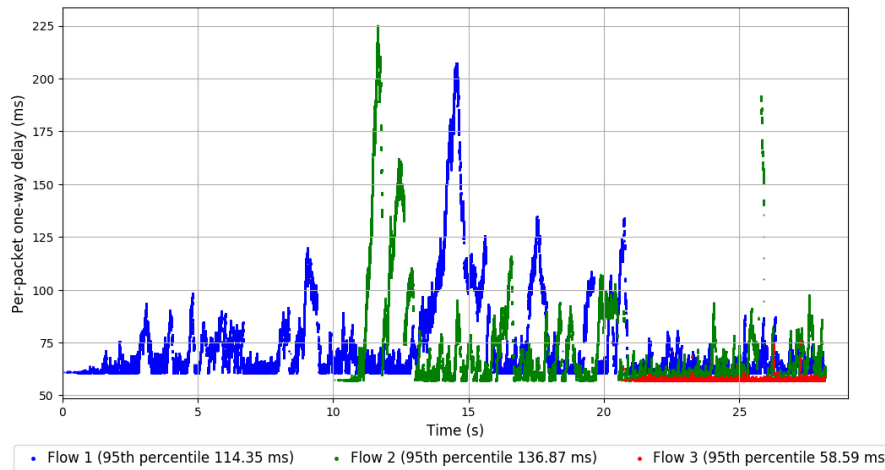
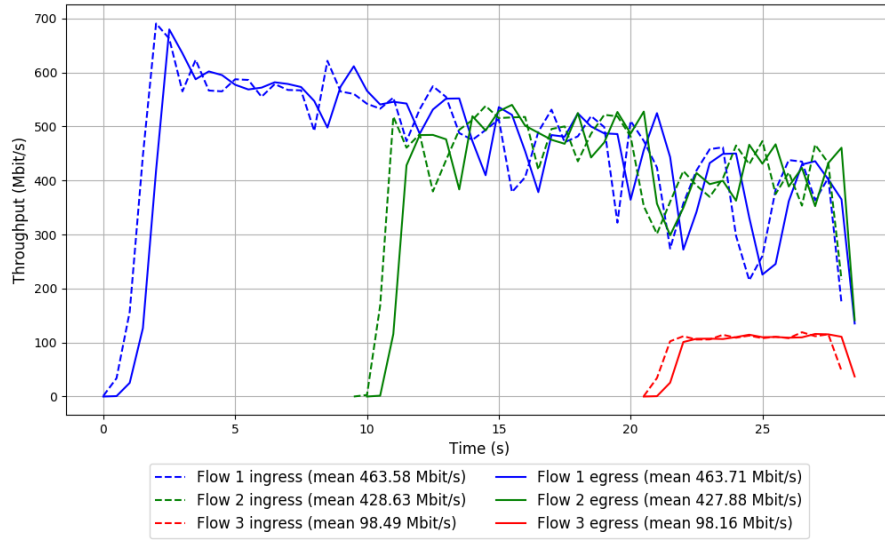


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-03-28 00:03:06  
End at: 2019-03-28 00:03:36  
Local clock offset: -0.143 ms  
Remote clock offset: -0.344 ms

```
# Below is generated by plot.py at 2019-03-28 01:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 765.92 Mbit/s
95th percentile per-packet one-way delay: 116.133 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 463.71 Mbit/s
95th percentile per-packet one-way delay: 114.348 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 427.88 Mbit/s
95th percentile per-packet one-way delay: 136.867 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 98.16 Mbit/s
95th percentile per-packet one-way delay: 58.585 ms
Loss rate: 1.79%
```

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





Run 1: Statistics of Indigo-MusesD

Start at: 2019-03-27 20:57:59  
End at: 2019-03-27 20:58:29  
Local clock offset: -0.441 ms  
Remote clock offset: -0.795 ms

# Below is generated by plot.py at 2019-03-28 01:45:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 640.66 Mbit/s  
95th percentile per-packet one-way delay: 67.690 ms  
Loss rate: 0.60%

-- Flow 1:

Average throughput: 362.85 Mbit/s  
95th percentile per-packet one-way delay: 67.297 ms  
Loss rate: 0.31%

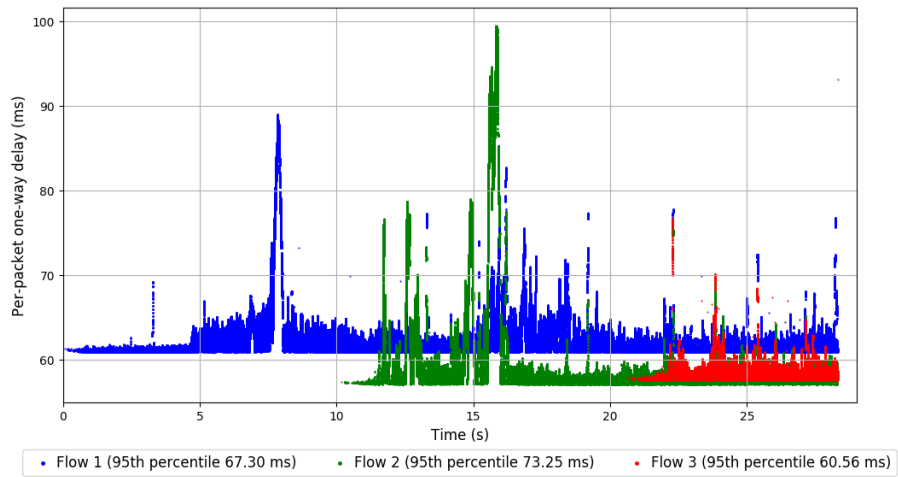
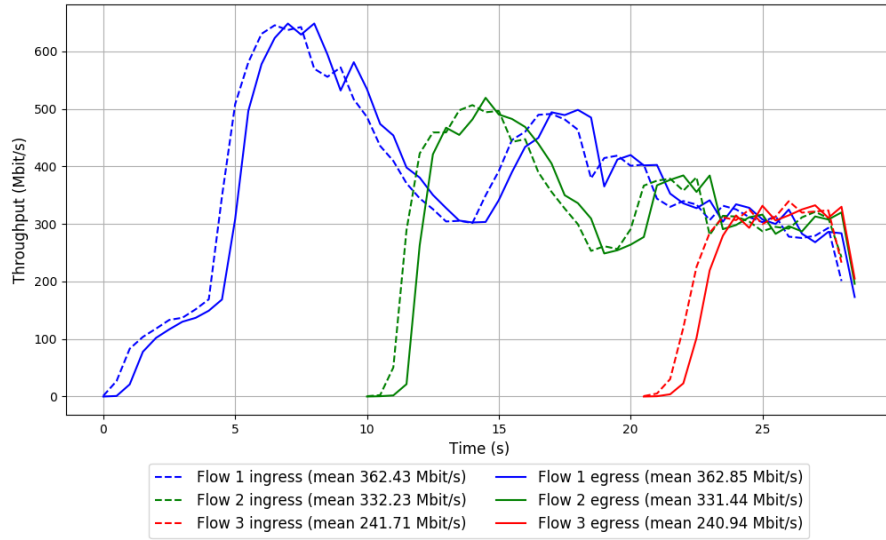
-- Flow 2:

Average throughput: 331.44 Mbit/s  
95th percentile per-packet one-way delay: 73.251 ms  
Loss rate: 0.72%

-- Flow 3:

Average throughput: 240.94 Mbit/s  
95th percentile per-packet one-way delay: 60.563 ms  
Loss rate: 1.79%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-03-27 21:40:34  
End at: 2019-03-27 21:41:04  
Local clock offset: -0.085 ms  
Remote clock offset: -0.661 ms

# Below is generated by plot.py at 2019-03-28 01:46:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 657.36 Mbit/s  
95th percentile per-packet one-way delay: 72.141 ms  
Loss rate: 0.61%

-- Flow 1:

Average throughput: 392.99 Mbit/s  
95th percentile per-packet one-way delay: 79.161 ms  
Loss rate: 0.29%

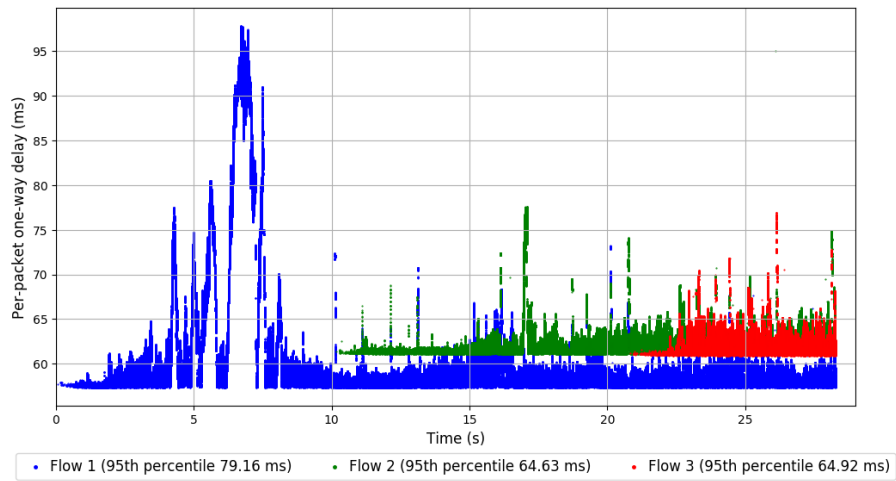
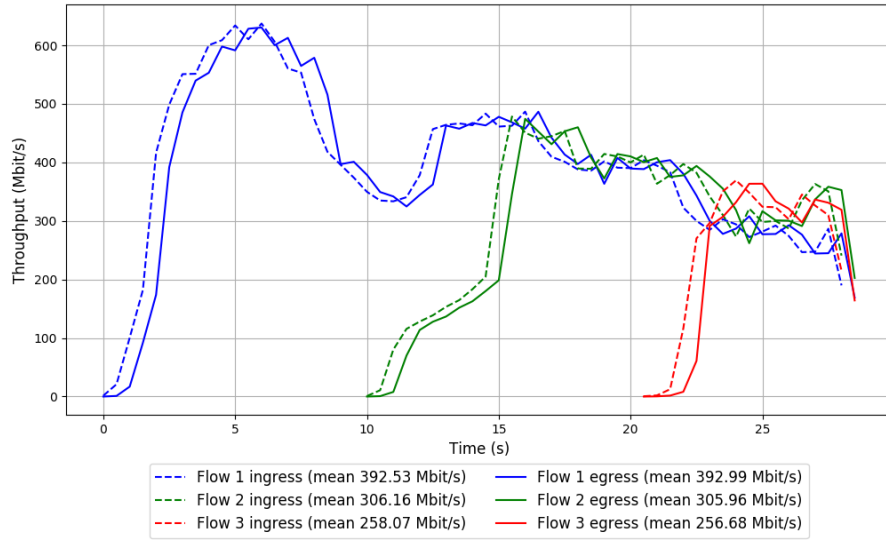
-- Flow 2:

Average throughput: 305.96 Mbit/s  
95th percentile per-packet one-way delay: 64.632 ms  
Loss rate: 0.72%

-- Flow 3:

Average throughput: 256.68 Mbit/s  
95th percentile per-packet one-way delay: 64.918 ms  
Loss rate: 2.10%

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

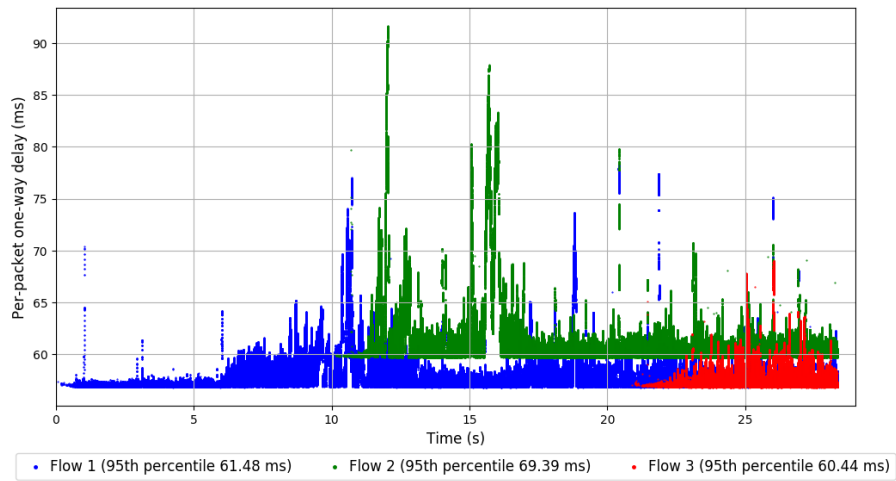
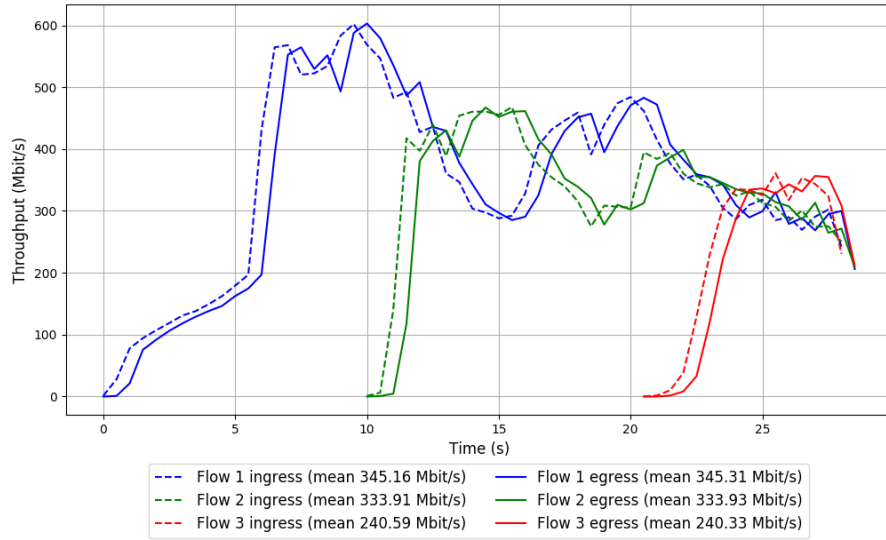


Run 3: Statistics of Indigo-MusesD

Start at: 2019-03-27 22:21:18  
End at: 2019-03-27 22:21:48  
Local clock offset: -0.652 ms  
Remote clock offset: -0.155 ms

```
# Below is generated by plot.py at 2019-03-28 01:46:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 624.32 Mbit/s
95th percentile per-packet one-way delay: 64.569 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 345.31 Mbit/s
95th percentile per-packet one-way delay: 61.479 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 333.93 Mbit/s
95th percentile per-packet one-way delay: 69.392 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 240.33 Mbit/s
95th percentile per-packet one-way delay: 60.435 ms
Loss rate: 1.64%
```

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



Run 4: Statistics of Indigo-MusesD

Start at: 2019-03-27 23:02:28

End at: 2019-03-27 23:02:58

Local clock offset: -0.539 ms

Remote clock offset: 0.297 ms

# Below is generated by plot.py at 2019-03-28 01:47:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 624.41 Mbit/s

95th percentile per-packet one-way delay: 67.524 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 384.89 Mbit/s

95th percentile per-packet one-way delay: 69.494 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 341.38 Mbit/s

95th percentile per-packet one-way delay: 64.263 ms

Loss rate: 0.66%

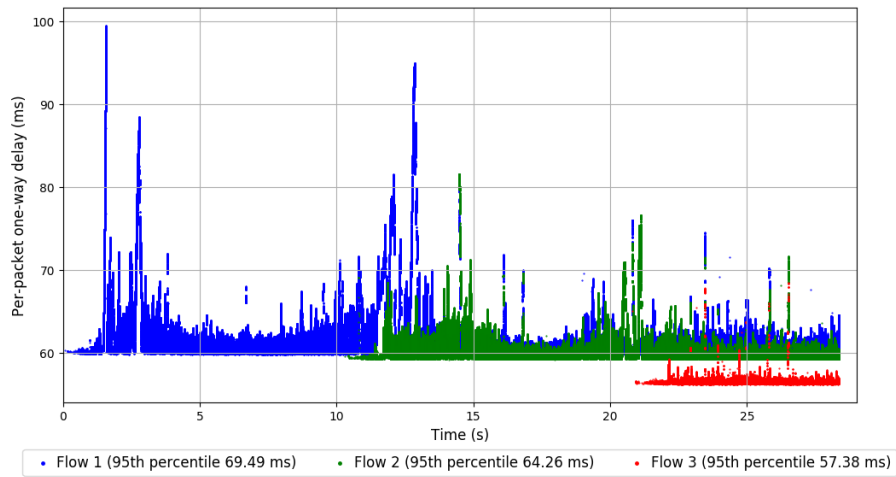
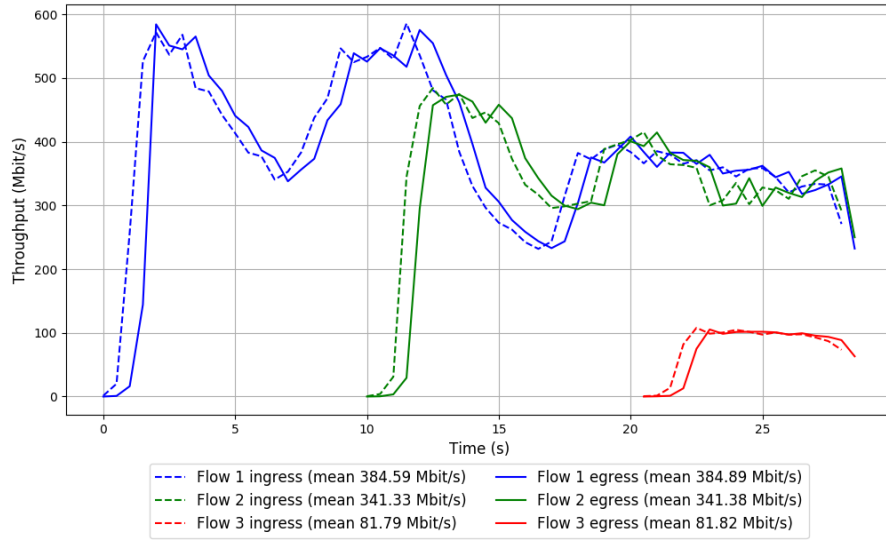
-- Flow 3:

Average throughput: 81.82 Mbit/s

95th percentile per-packet one-way delay: 57.385 ms

Loss rate: 1.62%

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





Run 5: Statistics of Indigo-MusesD

Start at: 2019-03-27 23:43:45  
End at: 2019-03-27 23:44:15  
Local clock offset: -0.408 ms  
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2019-03-28 01:49:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 698.48 Mbit/s  
95th percentile per-packet one-way delay: 64.385 ms  
Loss rate: 0.62%

-- Flow 1:

Average throughput: 410.80 Mbit/s  
95th percentile per-packet one-way delay: 66.311 ms  
Loss rate: 0.35%

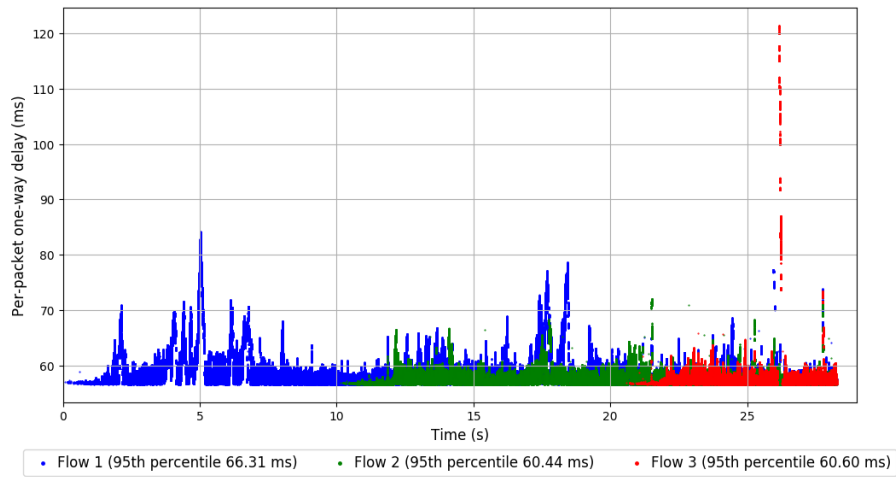
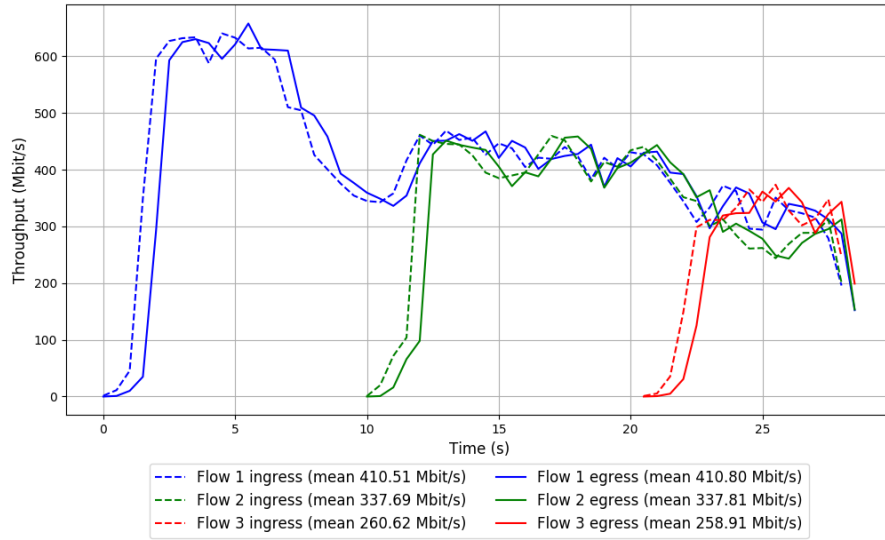
-- Flow 2:

Average throughput: 337.81 Mbit/s  
95th percentile per-packet one-way delay: 60.437 ms  
Loss rate: 0.62%

-- Flow 3:

Average throughput: 258.91 Mbit/s  
95th percentile per-packet one-way delay: 60.604 ms  
Loss rate: 2.13%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MuseST

Start at: 2019-03-27 20:55:45

End at: 2019-03-27 20:56:15

Local clock offset: 0.124 ms

Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2019-03-28 01:50:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 717.74 Mbit/s

95th percentile per-packet one-way delay: 80.020 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 443.45 Mbit/s

95th percentile per-packet one-way delay: 83.690 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 390.56 Mbit/s

95th percentile per-packet one-way delay: 69.232 ms

Loss rate: 0.38%

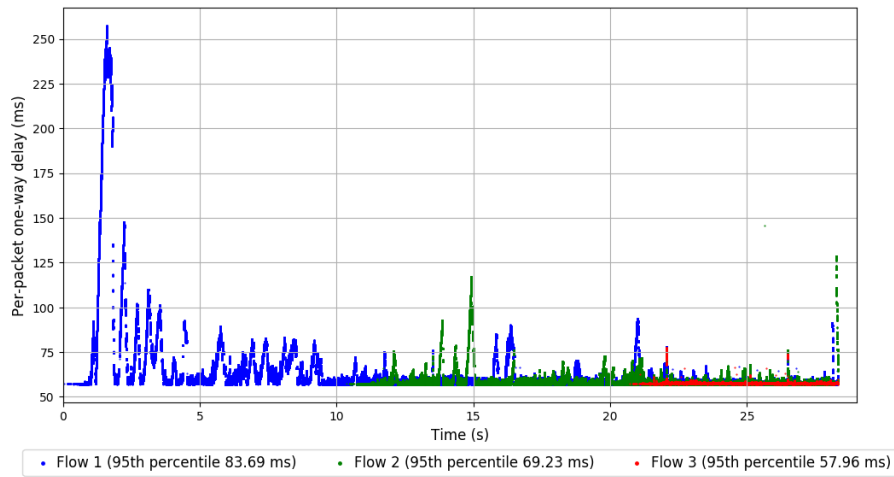
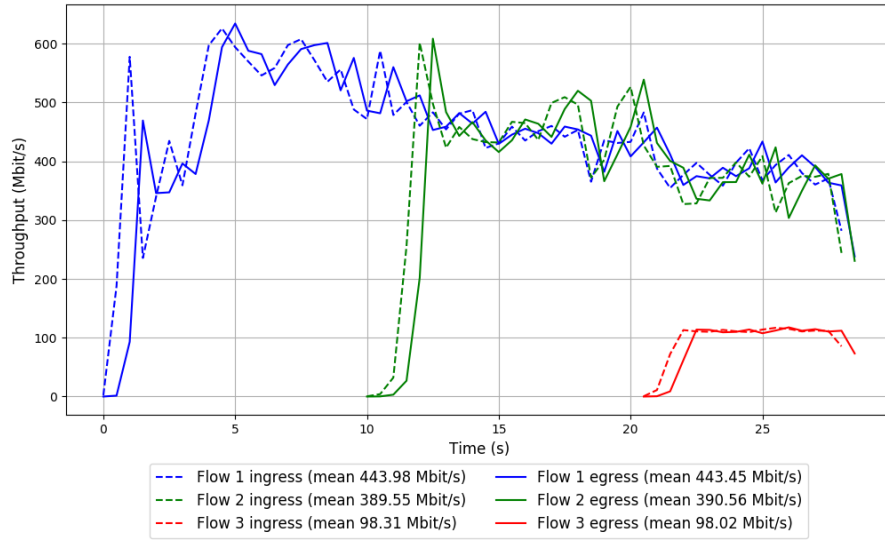
-- Flow 3:

Average throughput: 98.02 Mbit/s

95th percentile per-packet one-way delay: 57.956 ms

Loss rate: 1.73%

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



Run 2: Statistics of Indigo-MuseST

Start at: 2019-03-27 21:38:11  
End at: 2019-03-27 21:38:41  
Local clock offset: -0.095 ms  
Remote clock offset: -0.183 ms

# Below is generated by plot.py at 2019-03-28 01:52:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 761.41 Mbit/s  
95th percentile per-packet one-way delay: 87.563 ms  
Loss rate: 0.52%

-- Flow 1:

Average throughput: 479.23 Mbit/s  
95th percentile per-packet one-way delay: 103.728 ms  
Loss rate: 0.38%

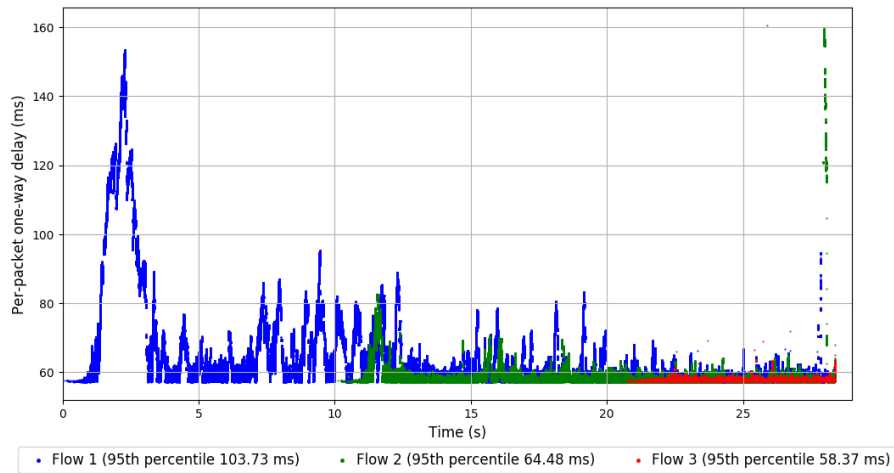
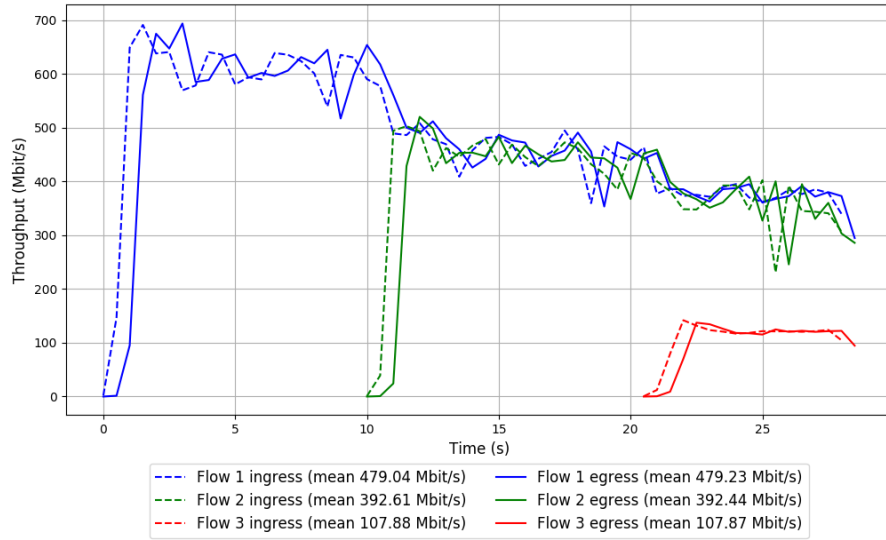
-- Flow 2:

Average throughput: 392.44 Mbit/s  
95th percentile per-packet one-way delay: 64.478 ms  
Loss rate: 0.68%

-- Flow 3:

Average throughput: 107.87 Mbit/s  
95th percentile per-packet one-way delay: 58.366 ms  
Loss rate: 1.51%

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



Run 3: Statistics of Indigo-MuseST

Start at: 2019-03-27 22:19:05  
End at: 2019-03-27 22:19:35  
Local clock offset: -0.615 ms  
Remote clock offset: -0.158 ms

# Below is generated by plot.py at 2019-03-28 01:57:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 790.08 Mbit/s  
95th percentile per-packet one-way delay: 94.228 ms  
Loss rate: 0.44%

-- Flow 1:

Average throughput: 465.64 Mbit/s  
95th percentile per-packet one-way delay: 100.680 ms  
Loss rate: 0.18%

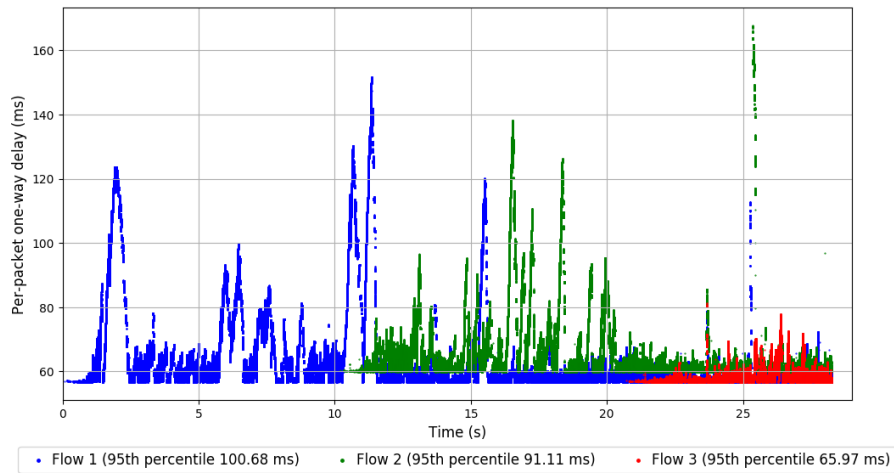
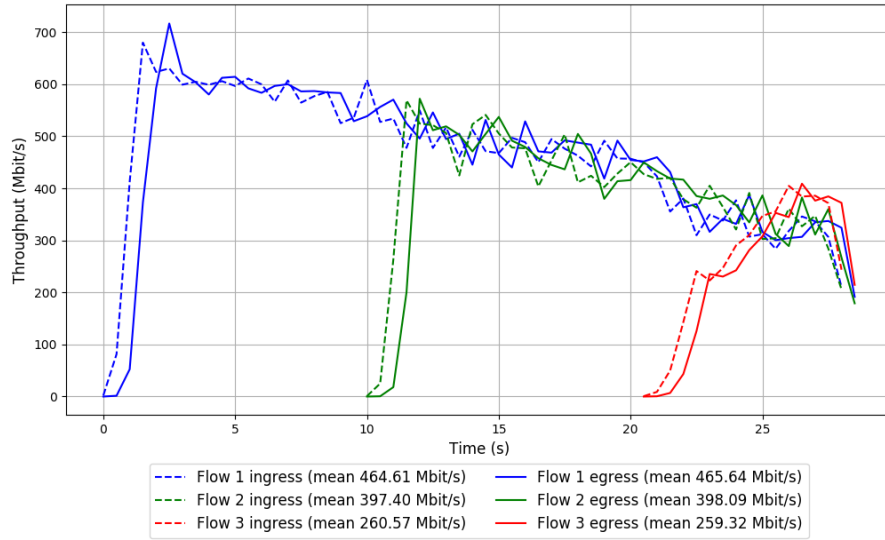
-- Flow 2:

Average throughput: 398.09 Mbit/s  
95th percentile per-packet one-way delay: 91.108 ms  
Loss rate: 0.49%

-- Flow 3:

Average throughput: 259.32 Mbit/s  
95th percentile per-packet one-way delay: 65.969 ms  
Loss rate: 1.97%

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





Run 4: Statistics of Indigo-MuseST

Start at: 2019-03-27 23:00:24

End at: 2019-03-27 23:00:54

Local clock offset: 0.058 ms

Remote clock offset: 0.04 ms

# Below is generated by plot.py at 2019-03-28 01:57:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 730.28 Mbit/s

95th percentile per-packet one-way delay: 77.321 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 415.16 Mbit/s

95th percentile per-packet one-way delay: 84.026 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 377.97 Mbit/s

95th percentile per-packet one-way delay: 71.125 ms

Loss rate: 0.64%

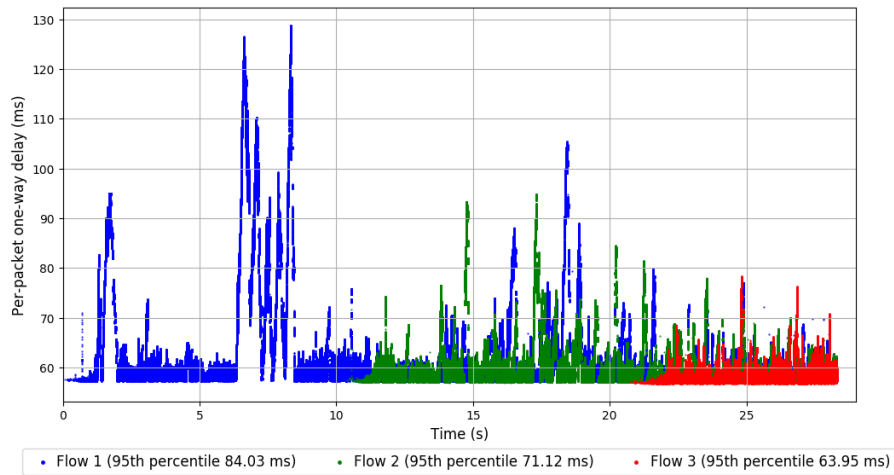
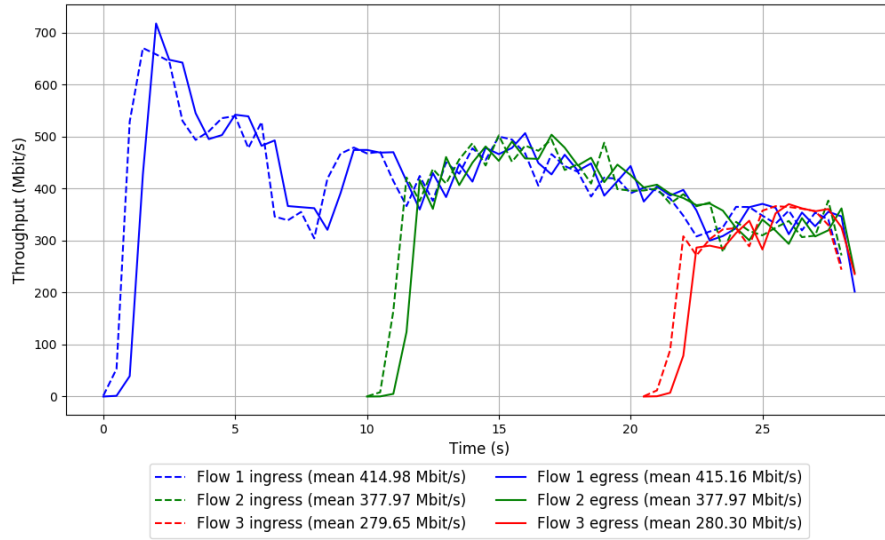
-- Flow 3:

Average throughput: 280.30 Mbit/s

95th percentile per-packet one-way delay: 63.947 ms

Loss rate: 1.23%

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

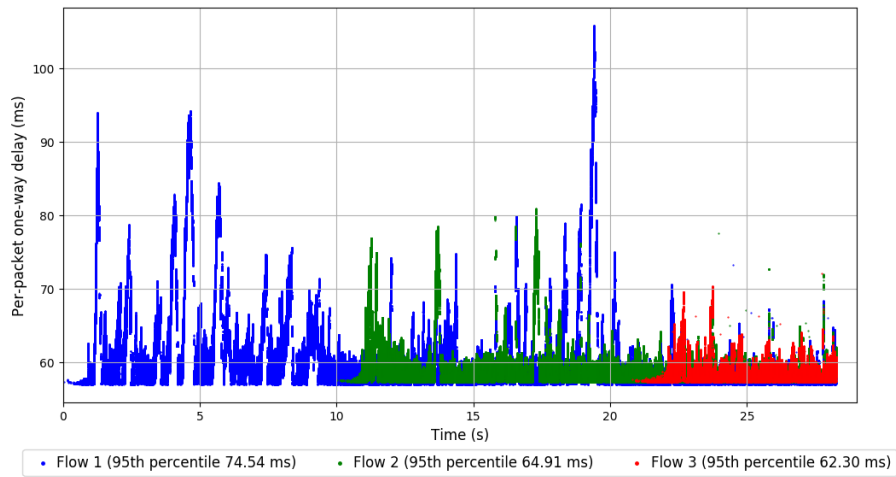
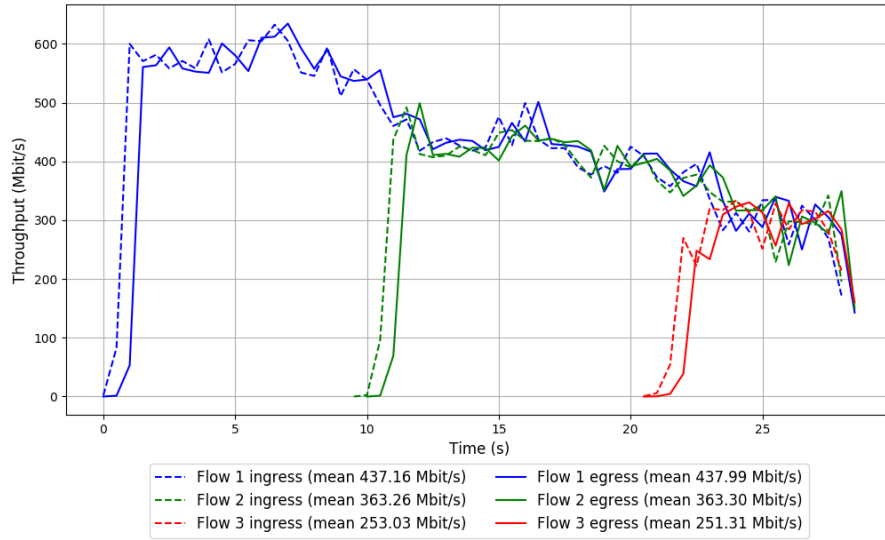


Run 5: Statistics of Indigo-MuseST

Start at: 2019-03-27 23:41:43  
End at: 2019-03-27 23:42:13  
Local clock offset: -0.163 ms  
Remote clock offset: -0.219 ms

```
# Below is generated by plot.py at 2019-03-28 01:57:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 739.07 Mbit/s
95th percentile per-packet one-way delay: 70.795 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 437.99 Mbit/s
95th percentile per-packet one-way delay: 74.541 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 363.30 Mbit/s
95th percentile per-packet one-way delay: 64.909 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 251.31 Mbit/s
95th percentile per-packet one-way delay: 62.296 ms
Loss rate: 2.23%
```

Run 5: Report of Indigo-MusesT — Data Link



Run 1: Statistics of LEDBAT

Start at: 2019-03-27 20:50:26  
End at: 2019-03-27 20:50:56  
Local clock offset: 0.217 ms  
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2019-03-28 01:57:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 34.66 Mbit/s  
95th percentile per-packet one-way delay: 58.776 ms  
Loss rate: 0.70%

-- Flow 1:

Average throughput: 19.79 Mbit/s  
95th percentile per-packet one-way delay: 58.831 ms  
Loss rate: 0.25%

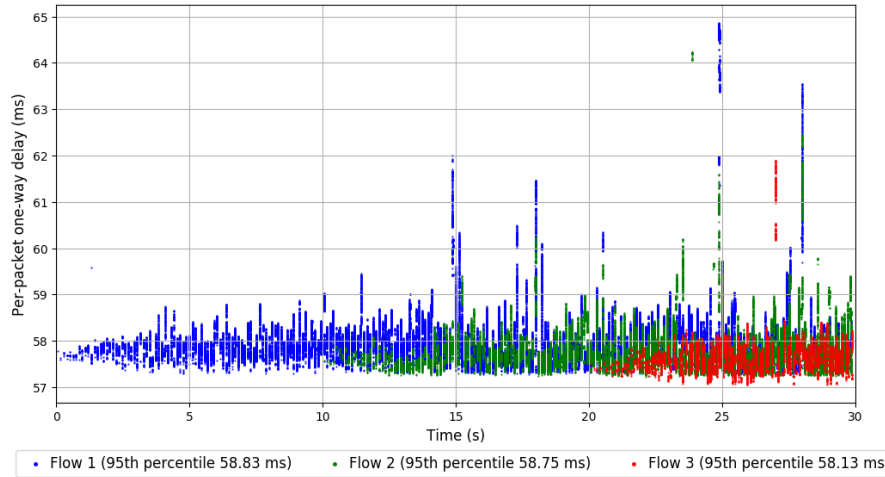
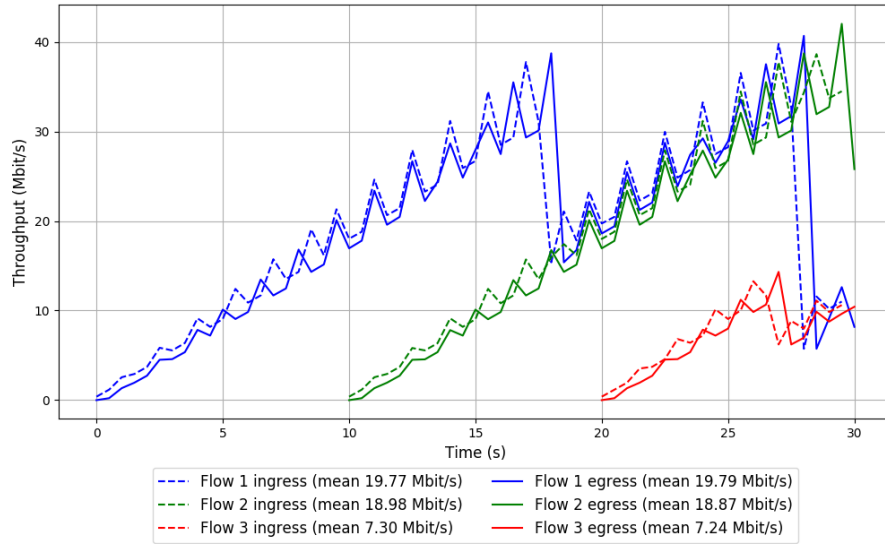
-- Flow 2:

Average throughput: 18.87 Mbit/s  
95th percentile per-packet one-way delay: 58.752 ms  
Loss rate: 1.15%

-- Flow 3:

Average throughput: 7.24 Mbit/s  
95th percentile per-packet one-way delay: 58.135 ms  
Loss rate: 2.01%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-03-27 21:32:08  
End at: 2019-03-27 21:32:38  
Local clock offset: -0.188 ms  
Remote clock offset: -0.191 ms

# Below is generated by plot.py at 2019-03-28 01:57:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 42.79 Mbit/s  
95th percentile per-packet one-way delay: 61.569 ms  
Loss rate: 0.99%

-- Flow 1:

Average throughput: 28.19 Mbit/s  
95th percentile per-packet one-way delay: 58.704 ms  
Loss rate: 0.76%

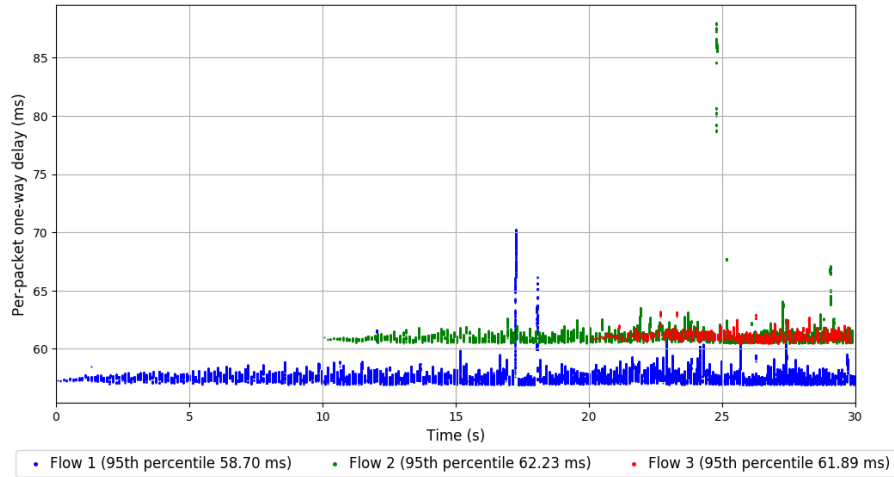
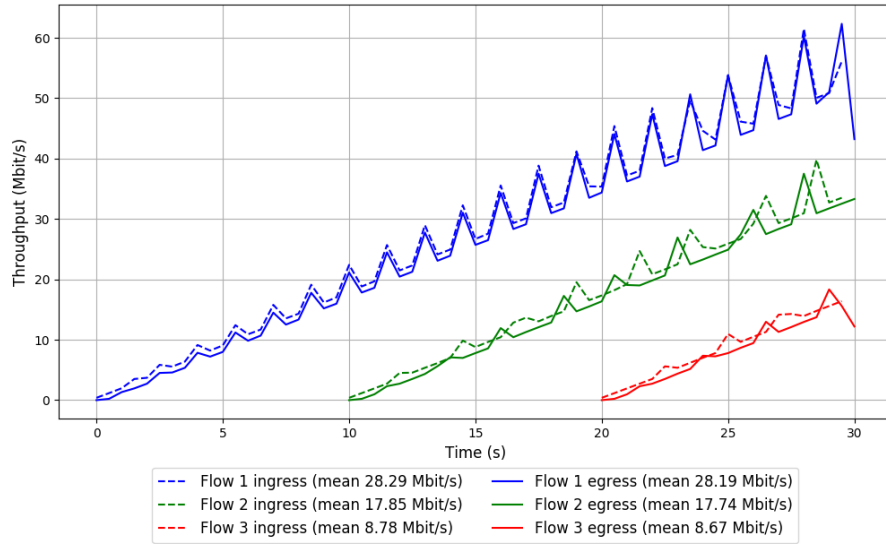
-- Flow 2:

Average throughput: 17.74 Mbit/s  
95th percentile per-packet one-way delay: 62.230 ms  
Loss rate: 1.19%

-- Flow 3:

Average throughput: 8.67 Mbit/s  
95th percentile per-packet one-way delay: 61.886 ms  
Loss rate: 2.42%

Run 2: Report of LEDBAT — Data Link





Run 3: Statistics of LEDBAT

Start at: 2019-03-27 22:13:12  
End at: 2019-03-27 22:13:42  
Local clock offset: -0.599 ms  
Remote clock offset: -0.112 ms

# Below is generated by plot.py at 2019-03-28 01:57:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 41.54 Mbit/s  
95th percentile per-packet one-way delay: 58.509 ms  
Loss rate: 0.89%

-- Flow 1:

Average throughput: 28.08 Mbit/s  
95th percentile per-packet one-way delay: 58.528 ms  
Loss rate: 0.76%

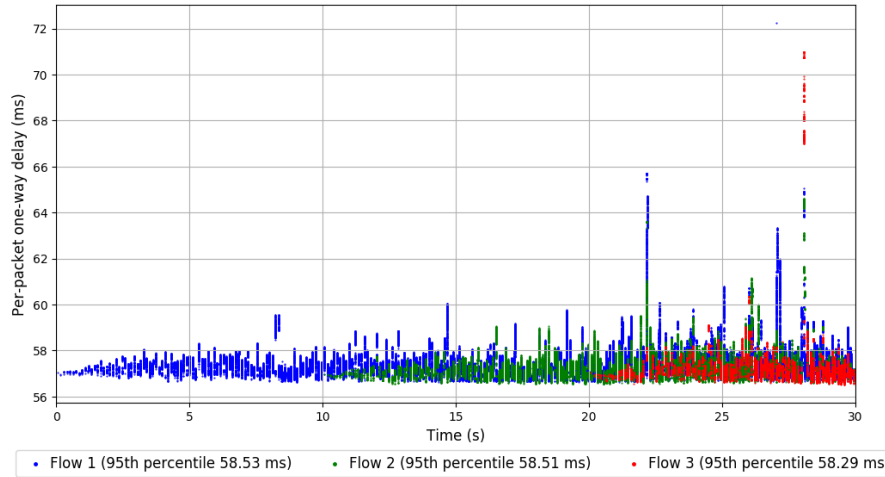
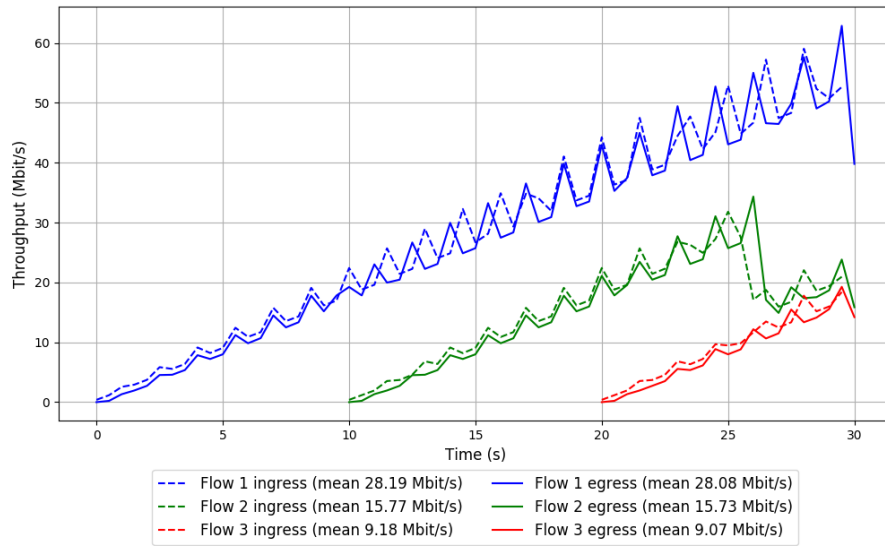
-- Flow 2:

Average throughput: 15.73 Mbit/s  
95th percentile per-packet one-way delay: 58.506 ms  
Loss rate: 0.81%

-- Flow 3:

Average throughput: 9.07 Mbit/s  
95th percentile per-packet one-way delay: 58.286 ms  
Loss rate: 2.29%

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



Run 4: Statistics of LEDBAT

Start at: 2019-03-27 22:54:19  
End at: 2019-03-27 22:54:49  
Local clock offset: -0.449 ms  
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2019-03-28 01:57:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 42.02 Mbit/s  
95th percentile per-packet one-way delay: 61.612 ms  
Loss rate: 1.01%

-- Flow 1:

Average throughput: 26.59 Mbit/s  
95th percentile per-packet one-way delay: 61.817 ms  
Loss rate: 0.79%

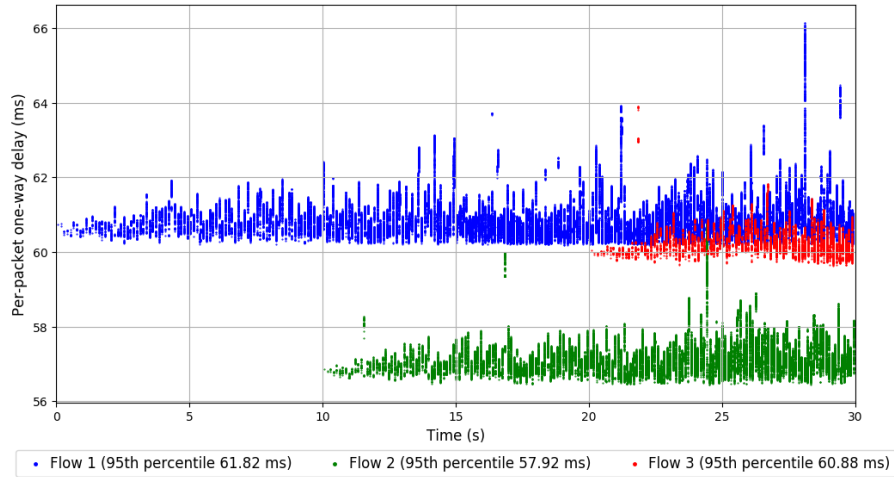
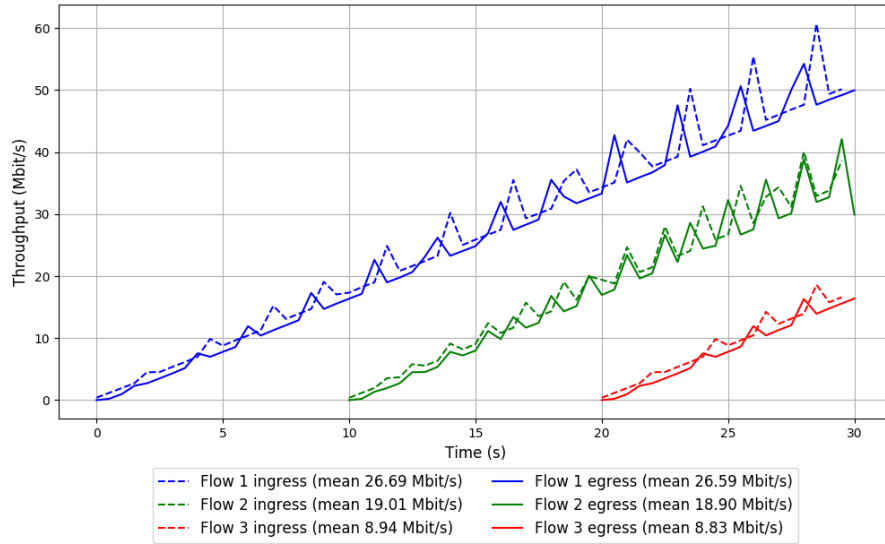
-- Flow 2:

Average throughput: 18.90 Mbit/s  
95th percentile per-packet one-way delay: 57.917 ms  
Loss rate: 1.14%

-- Flow 3:

Average throughput: 8.83 Mbit/s  
95th percentile per-packet one-way delay: 60.884 ms  
Loss rate: 2.39%

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



Run 5: Statistics of LEDBAT

Start at: 2019-03-27 23:36:05

End at: 2019-03-27 23:36:35

Local clock offset: 0.013 ms

Remote clock offset: -0.16 ms

# Below is generated by plot.py at 2019-03-28 01:57:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 31.58 Mbit/s

95th percentile per-packet one-way delay: 61.667 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 19.48 Mbit/s

95th percentile per-packet one-way delay: 61.892 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 13.94 Mbit/s

95th percentile per-packet one-way delay: 58.802 ms

Loss rate: 0.59%

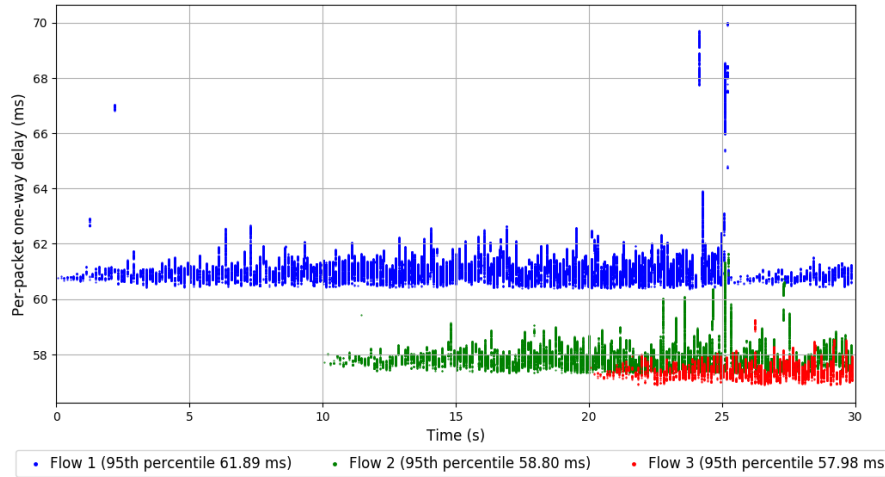
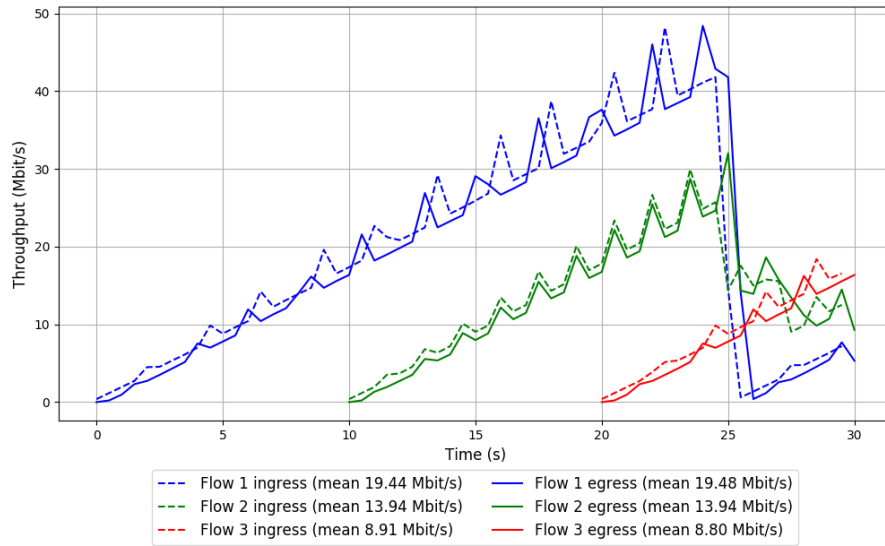
-- Flow 3:

Average throughput: 8.80 Mbit/s

95th percentile per-packet one-way delay: 57.977 ms

Loss rate: 2.38%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-03-27 20:44:42  
End at: 2019-03-27 20:45:12  
Local clock offset: -0.169 ms  
Remote clock offset: -0.128 ms

# Below is generated by plot.py at 2019-03-28 02:11:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 668.11 Mbit/s  
95th percentile per-packet one-way delay: 195.276 ms  
Loss rate: 3.10%

-- Flow 1:

Average throughput: 350.73 Mbit/s  
95th percentile per-packet one-way delay: 214.958 ms  
Loss rate: 3.22%

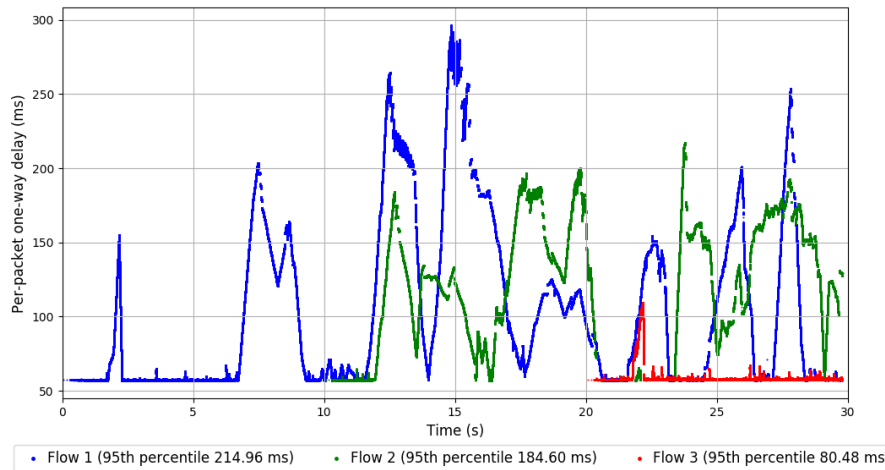
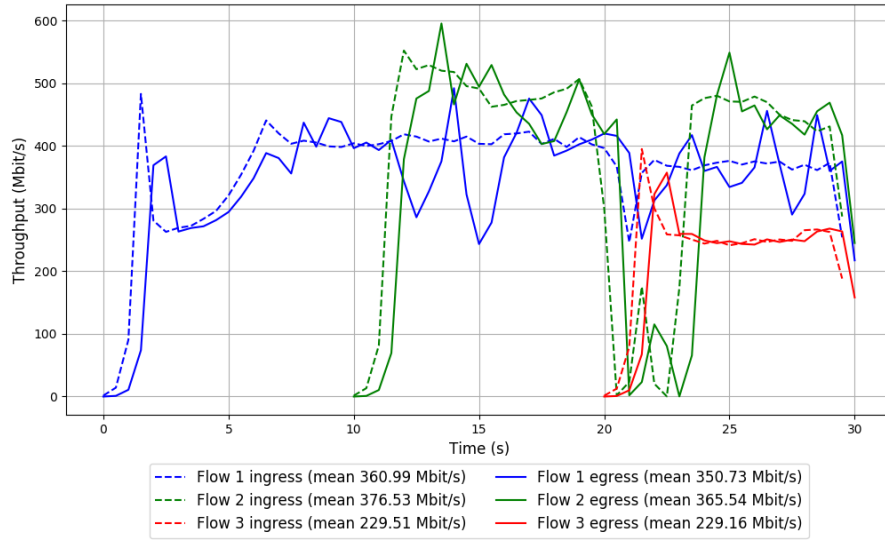
-- Flow 2:

Average throughput: 365.54 Mbit/s  
95th percentile per-packet one-way delay: 184.604 ms  
Loss rate: 3.48%

-- Flow 3:

Average throughput: 229.16 Mbit/s  
95th percentile per-packet one-way delay: 80.481 ms  
Loss rate: 1.32%

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



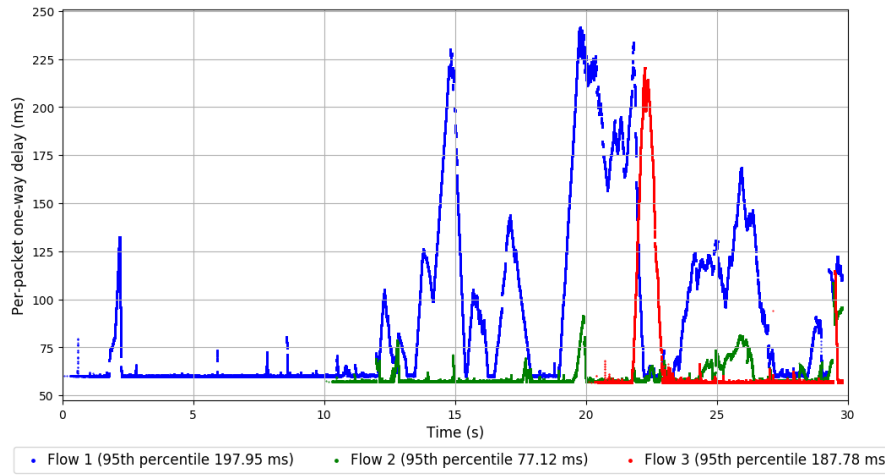
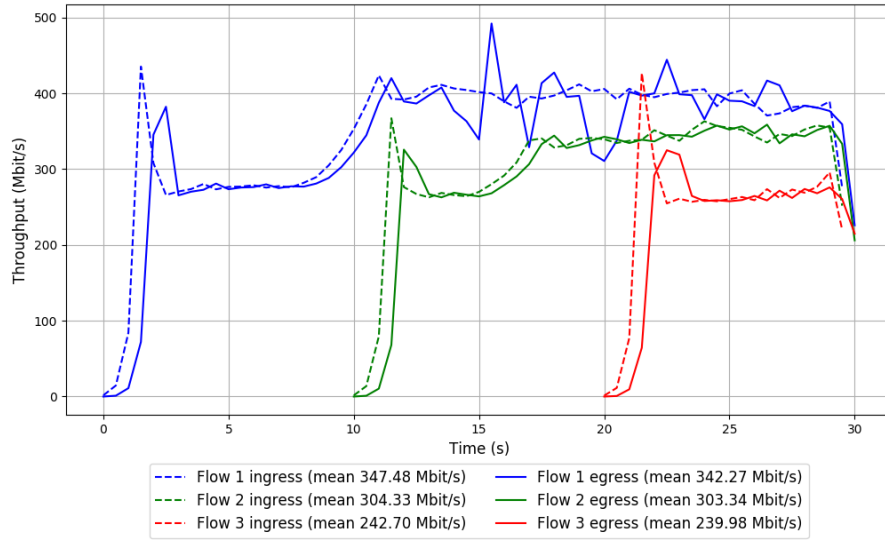


Run 2: Statistics of PCC-Allegro

Start at: 2019-03-27 21:26:08  
End at: 2019-03-27 21:26:38  
Local clock offset: -0.487 ms  
Remote clock offset: -0.325 ms

```
# Below is generated by plot.py at 2019-03-28 02:11:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 621.86 Mbit/s
95th percentile per-packet one-way delay: 179.967 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 342.27 Mbit/s
95th percentile per-packet one-way delay: 197.951 ms
Loss rate: 1.89%
-- Flow 2:
Average throughput: 303.34 Mbit/s
95th percentile per-packet one-way delay: 77.117 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 239.98 Mbit/s
95th percentile per-packet one-way delay: 187.776 ms
Loss rate: 2.27%
```

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-03-27 22:07:30

End at: 2019-03-27 22:08:00

Local clock offset: 0.258 ms

Remote clock offset: -0.201 ms

# Below is generated by plot.py at 2019-03-28 02:11:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 630.27 Mbit/s

95th percentile per-packet one-way delay: 192.723 ms

Loss rate: 2.18%

-- Flow 1:

Average throughput: 363.29 Mbit/s

95th percentile per-packet one-way delay: 237.036 ms

Loss rate: 3.12%

-- Flow 2:

Average throughput: 285.19 Mbit/s

95th percentile per-packet one-way delay: 68.205 ms

Loss rate: 0.65%

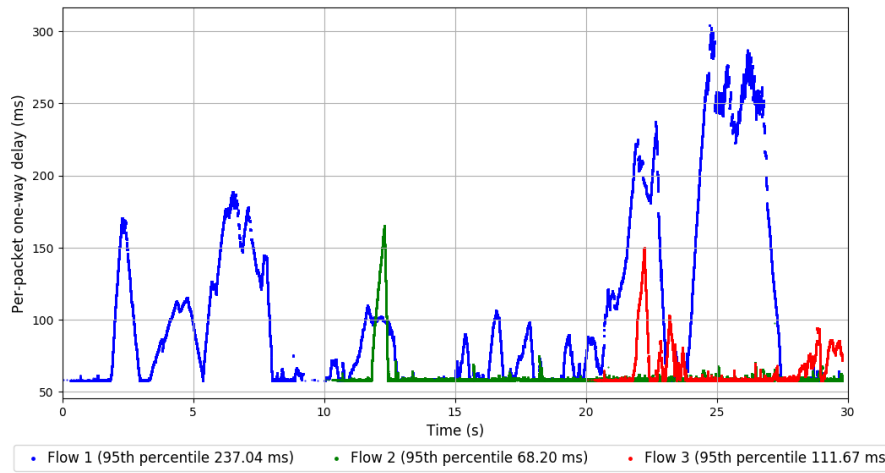
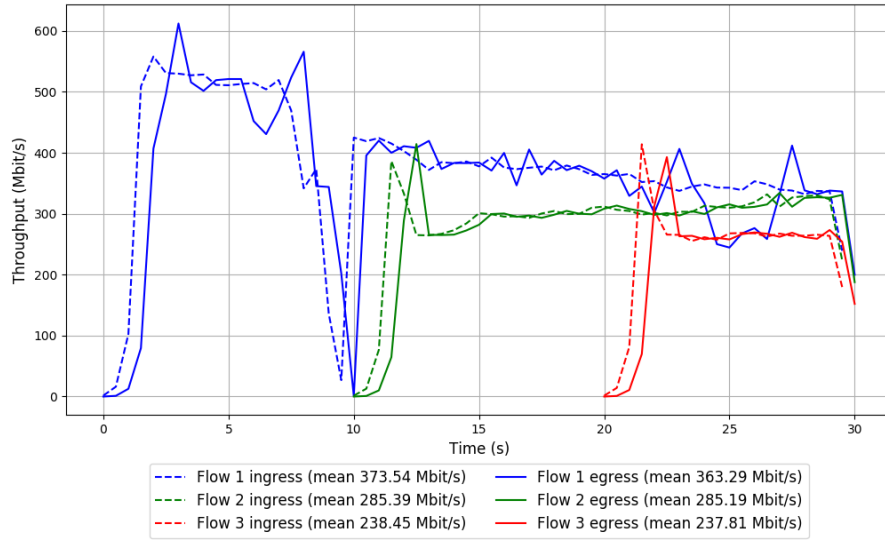
-- Flow 3:

Average throughput: 237.81 Mbit/s

95th percentile per-packet one-way delay: 111.671 ms

Loss rate: 1.44%

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



Run 4: Statistics of PCC-Allegro

Start at: 2019-03-27 22:48:49

End at: 2019-03-27 22:49:19

Local clock offset: -0.042 ms

Remote clock offset: -0.35 ms

# Below is generated by plot.py at 2019-03-28 02:11:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 608.57 Mbit/s

95th percentile per-packet one-way delay: 104.717 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 335.06 Mbit/s

95th percentile per-packet one-way delay: 102.728 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 294.53 Mbit/s

95th percentile per-packet one-way delay: 68.785 ms

Loss rate: 1.08%

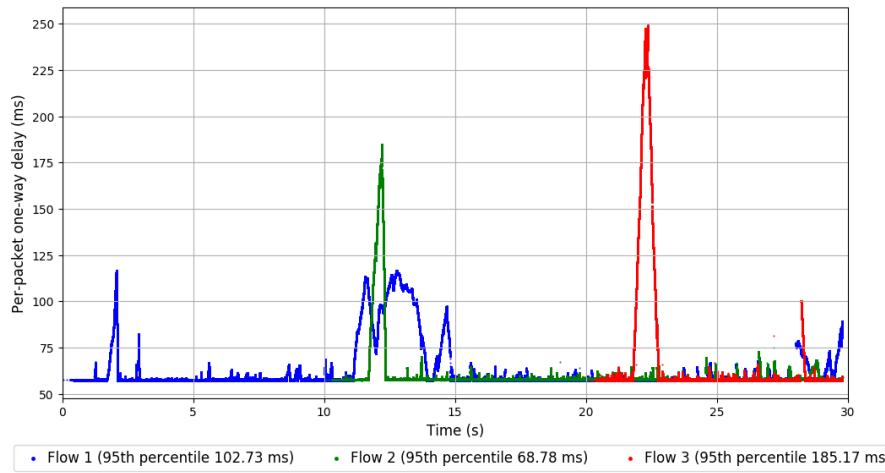
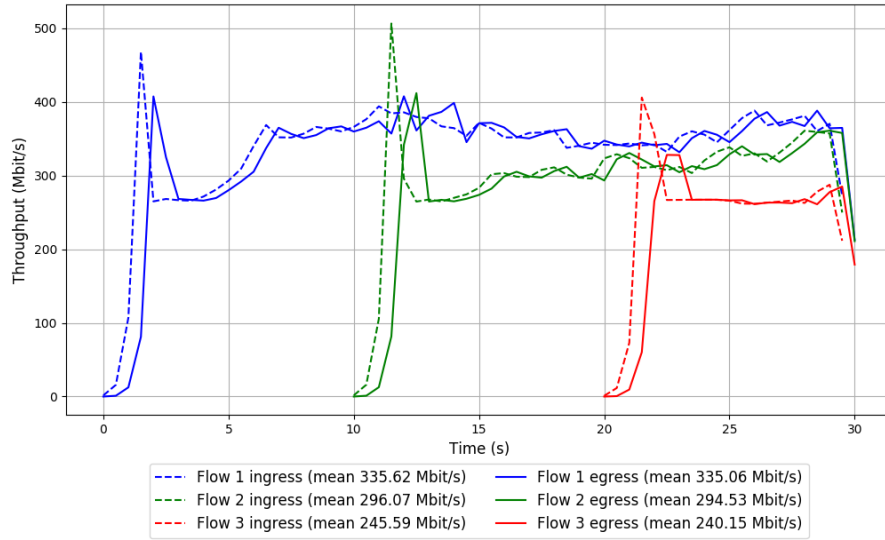
-- Flow 3:

Average throughput: 240.15 Mbit/s

95th percentile per-packet one-way delay: 185.170 ms

Loss rate: 3.33%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-03-27 23:30:19  
End at: 2019-03-27 23:30:49  
Local clock offset: -0.093 ms  
Remote clock offset: -0.141 ms

# Below is generated by plot.py at 2019-03-28 02:17:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 718.42 Mbit/s  
95th percentile per-packet one-way delay: 219.964 ms  
Loss rate: 10.48%

-- Flow 1:

Average throughput: 400.20 Mbit/s  
95th percentile per-packet one-way delay: 240.878 ms  
Loss rate: 7.98%

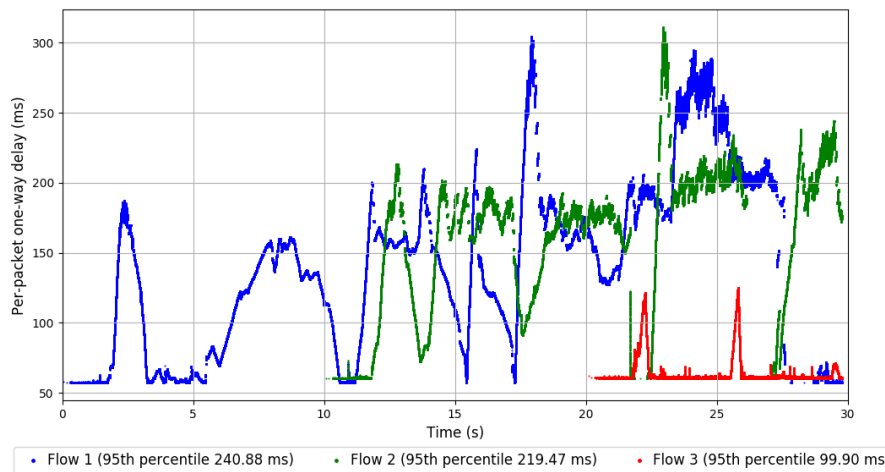
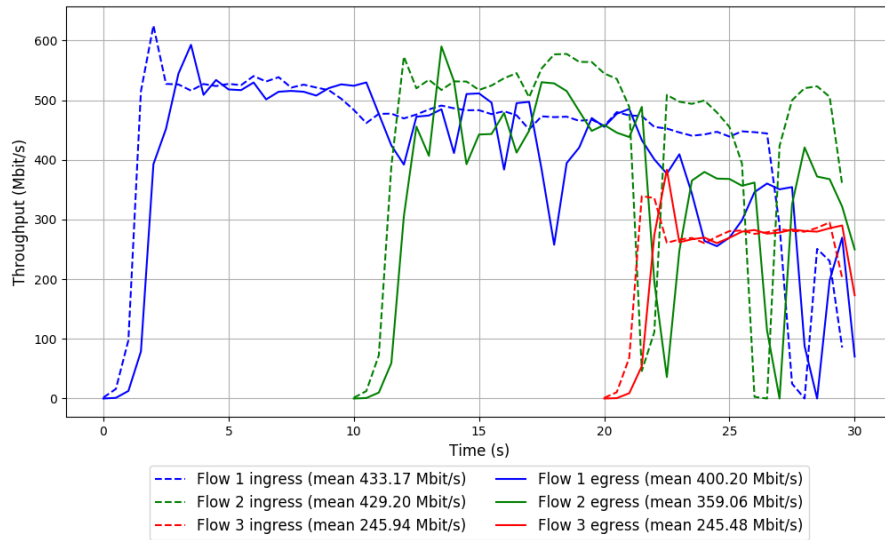
-- Flow 2:

Average throughput: 359.06 Mbit/s  
95th percentile per-packet one-way delay: 219.471 ms  
Loss rate: 16.85%

-- Flow 3:

Average throughput: 245.48 Mbit/s  
95th percentile per-packet one-way delay: 99.900 ms  
Loss rate: 1.44%

Run 5: Report of PCC-Allegro — Data Link





Run 1: Statistics of PCC-Expr

Start at: 2019-03-27 21:19:59  
End at: 2019-03-27 21:20:29  
Local clock offset: -0.083 ms  
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2019-03-28 02:17:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 408.24 Mbit/s  
95th percentile per-packet one-way delay: 143.278 ms  
Loss rate: 1.15%

-- Flow 1:

Average throughput: 240.86 Mbit/s  
95th percentile per-packet one-way delay: 143.362 ms  
Loss rate: 1.13%

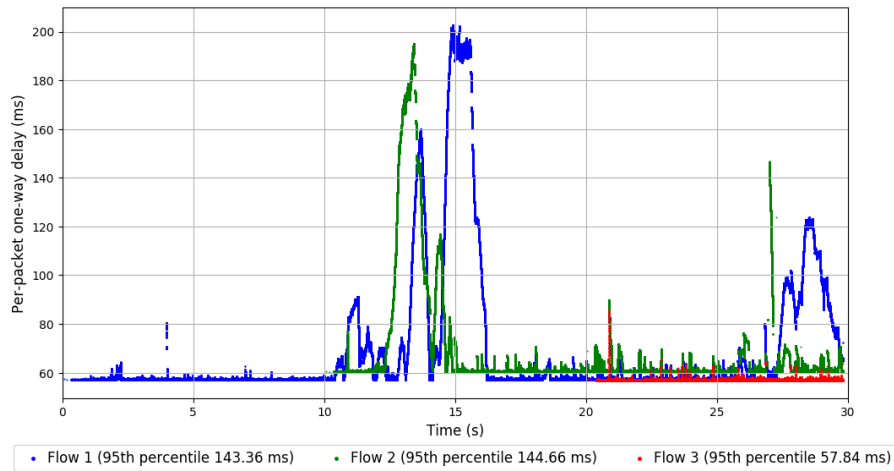
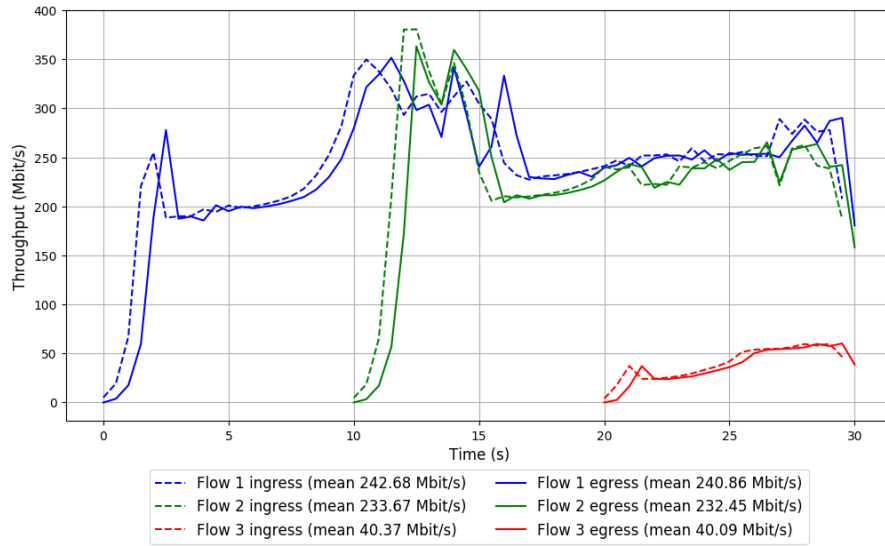
-- Flow 2:

Average throughput: 232.45 Mbit/s  
95th percentile per-packet one-way delay: 144.665 ms  
Loss rate: 1.11%

-- Flow 3:

Average throughput: 40.09 Mbit/s  
95th percentile per-packet one-way delay: 57.836 ms  
Loss rate: 1.84%

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



Run 2: Statistics of PCC-Expr

Start at: 2019-03-27 22:01:15

End at: 2019-03-27 22:01:45

Local clock offset: -0.183 ms

Remote clock offset: -0.15 ms

# Below is generated by plot.py at 2019-03-28 02:17:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 462.47 Mbit/s

95th percentile per-packet one-way delay: 190.313 ms

Loss rate: 2.98%

-- Flow 1:

Average throughput: 272.37 Mbit/s

95th percentile per-packet one-way delay: 153.216 ms

Loss rate: 1.22%

-- Flow 2:

Average throughput: 230.92 Mbit/s

95th percentile per-packet one-way delay: 197.472 ms

Loss rate: 6.22%

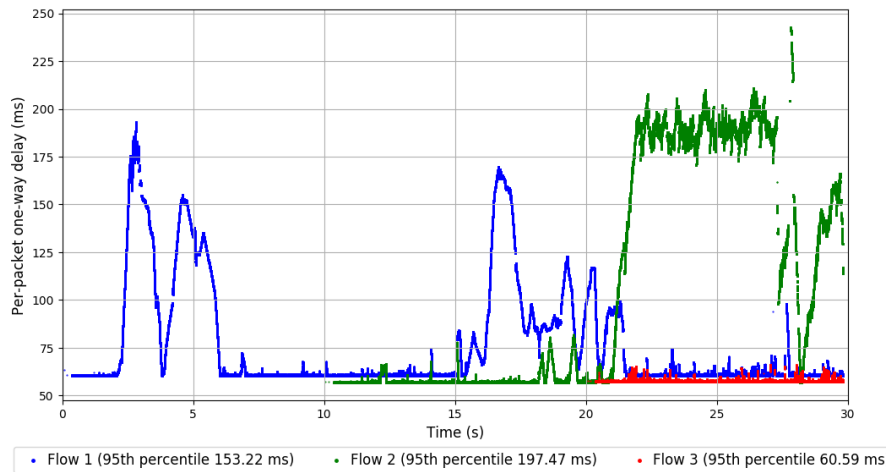
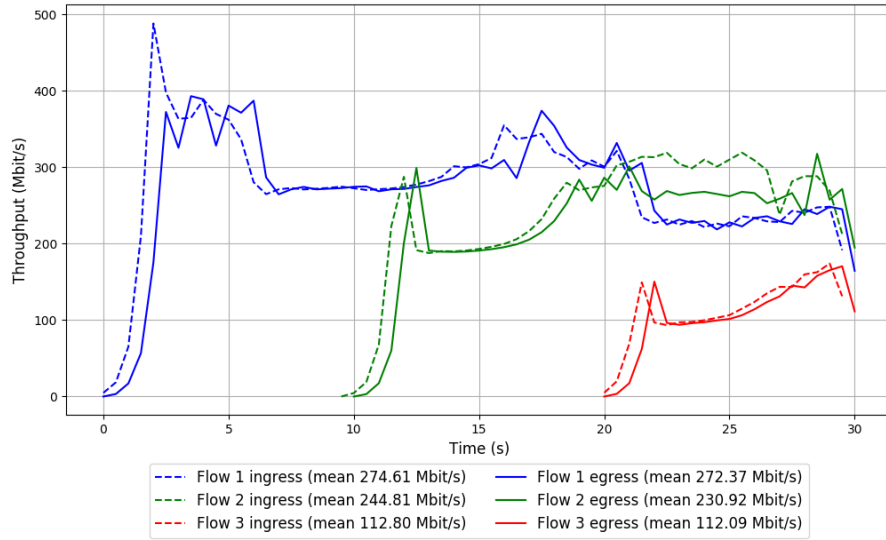
-- Flow 3:

Average throughput: 112.09 Mbit/s

95th percentile per-packet one-way delay: 60.585 ms

Loss rate: 1.80%

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



Run 3: Statistics of PCC-Expr

Start at: 2019-03-27 22:42:52

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

Local clock offset: -0.628 ms

Remote clock offset: -0.34 ms

# Below is generated by plot.py at 2019-03-28 02:17:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 409.60 Mbit/s

95th percentile per-packet one-way delay: 132.855 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 245.67 Mbit/s

95th percentile per-packet one-way delay: 133.126 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 195.40 Mbit/s

95th percentile per-packet one-way delay: 62.975 ms

Loss rate: 0.70%

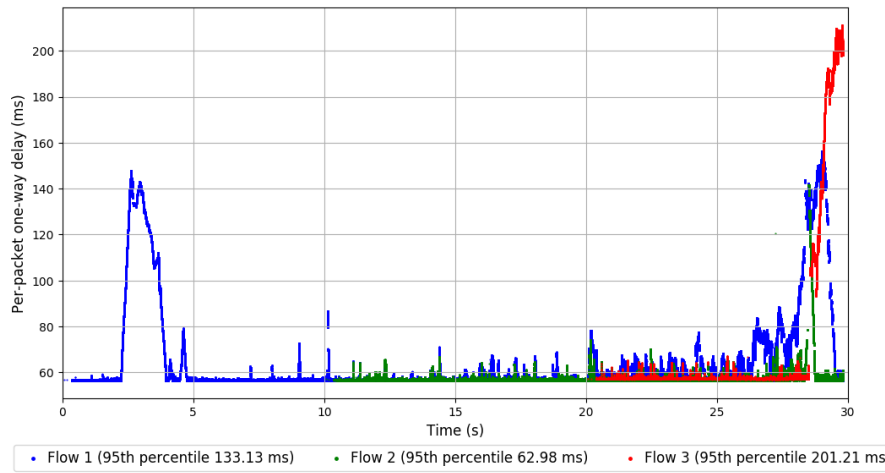
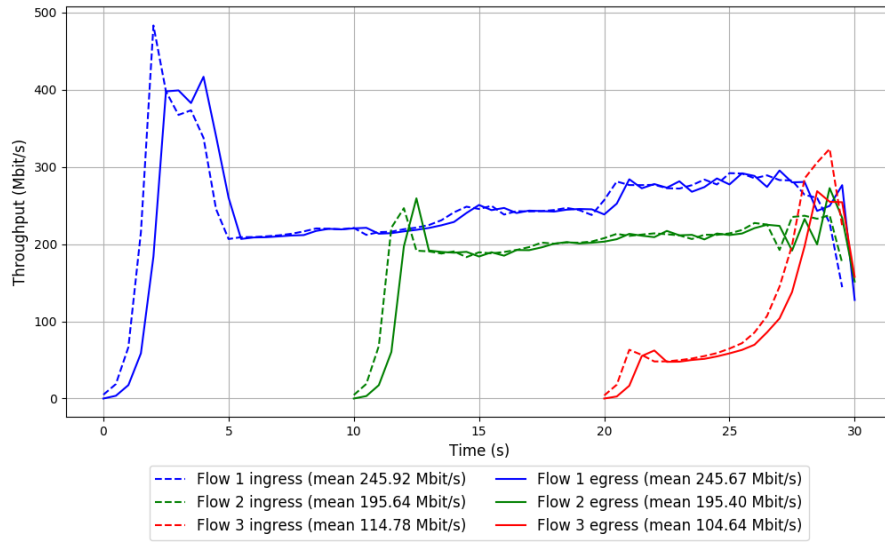
-- Flow 3:

Average throughput: 104.64 Mbit/s

95th percentile per-packet one-way delay: 201.211 ms

Loss rate: 9.90%

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



Run 4: Statistics of PCC-Expr

Start at: 2019-03-27 23:24:10  
End at: 2019-03-27 23:24:40  
Local clock offset: -0.332 ms  
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 462.95 Mbit/s  
95th percentile per-packet one-way delay: 190.839 ms  
Loss rate: 10.17%

-- Flow 1:

Average throughput: 266.63 Mbit/s  
95th percentile per-packet one-way delay: 195.024 ms  
Loss rate: 15.75%

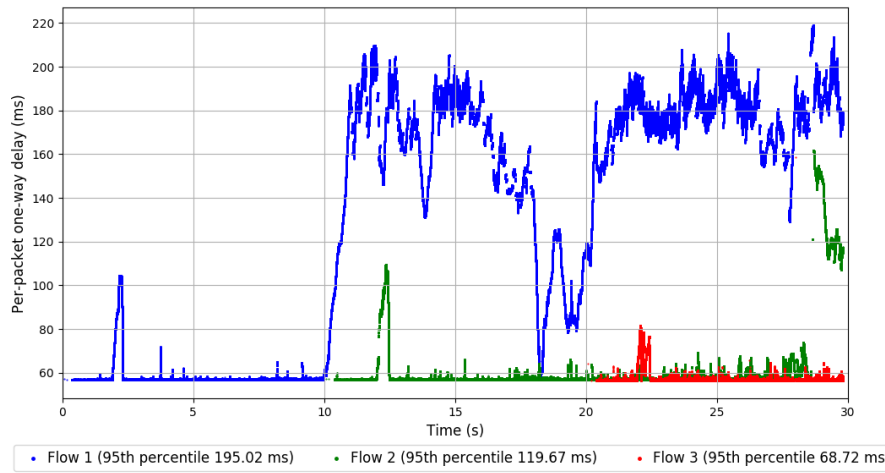
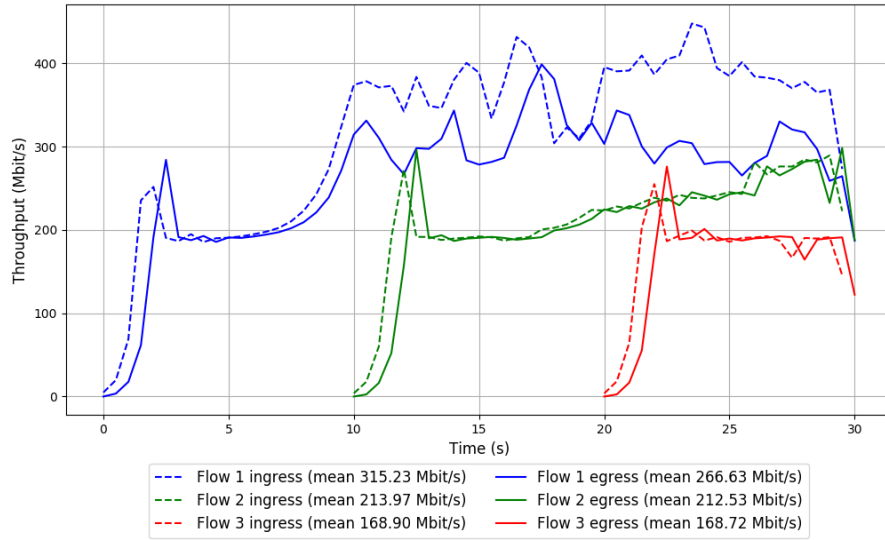
-- Flow 2:

Average throughput: 212.53 Mbit/s  
95th percentile per-packet one-way delay: 119.671 ms  
Loss rate: 1.26%

-- Flow 3:

Average throughput: 168.72 Mbit/s  
95th percentile per-packet one-way delay: 68.717 ms  
Loss rate: 1.37%

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





Run 5: Statistics of PCC-Expr

Start at: 2019-03-28 00:05:14  
End at: 2019-03-28 00:05:44  
Local clock offset: 0.238 ms  
Remote clock offset: -0.317 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 457.63 Mbit/s  
95th percentile per-packet one-way delay: 170.252 ms  
Loss rate: 2.16%

-- Flow 1:

Average throughput: 245.01 Mbit/s  
95th percentile per-packet one-way delay: 93.151 ms  
Loss rate: 0.42%

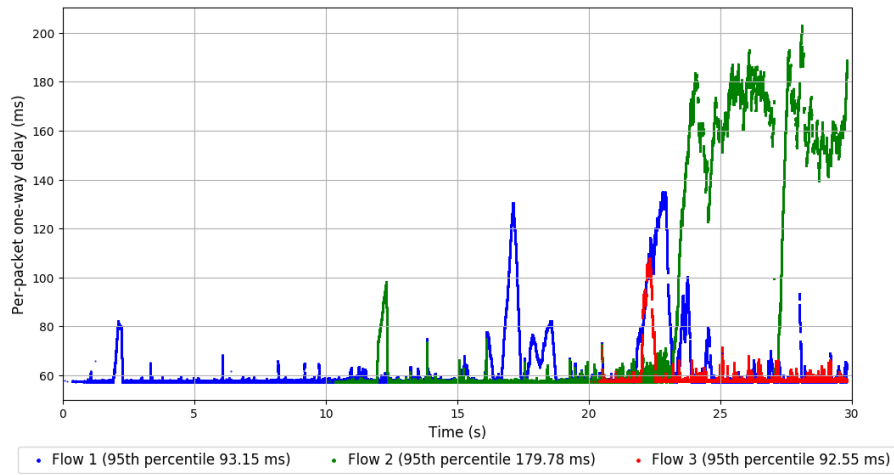
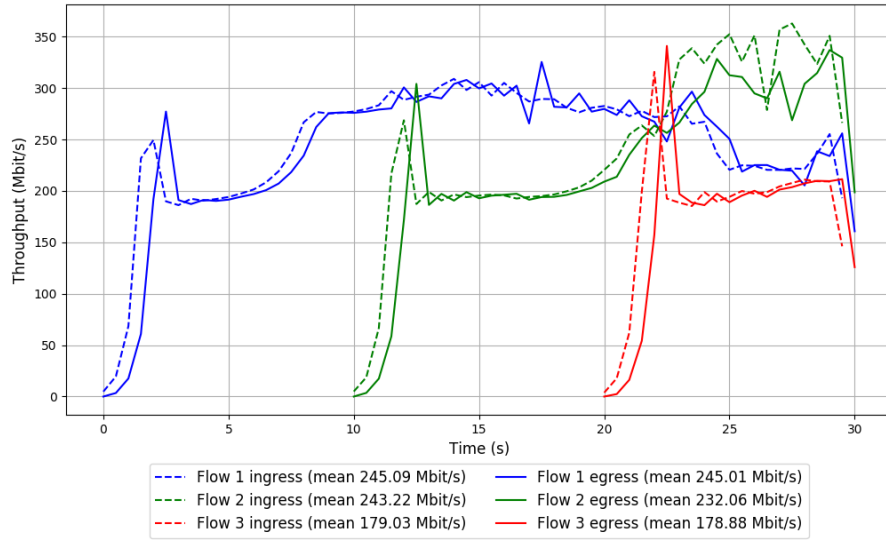
-- Flow 2:

Average throughput: 232.06 Mbit/s  
95th percentile per-packet one-way delay: 179.783 ms  
Loss rate: 5.14%

-- Flow 3:

Average throughput: 178.88 Mbit/s  
95th percentile per-packet one-way delay: 92.550 ms  
Loss rate: 1.24%

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



Run 1: Statistics of QUIC Cubic

Start at: 2019-03-27 20:40:47  
End at: 2019-03-27 20:41:17  
Local clock offset: 0.311 ms  
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 107.82 Mbit/s  
95th percentile per-packet one-way delay: 61.203 ms  
Loss rate: 0.85%

-- Flow 1:

Average throughput: 52.93 Mbit/s  
95th percentile per-packet one-way delay: 61.408 ms  
Loss rate: 0.54%

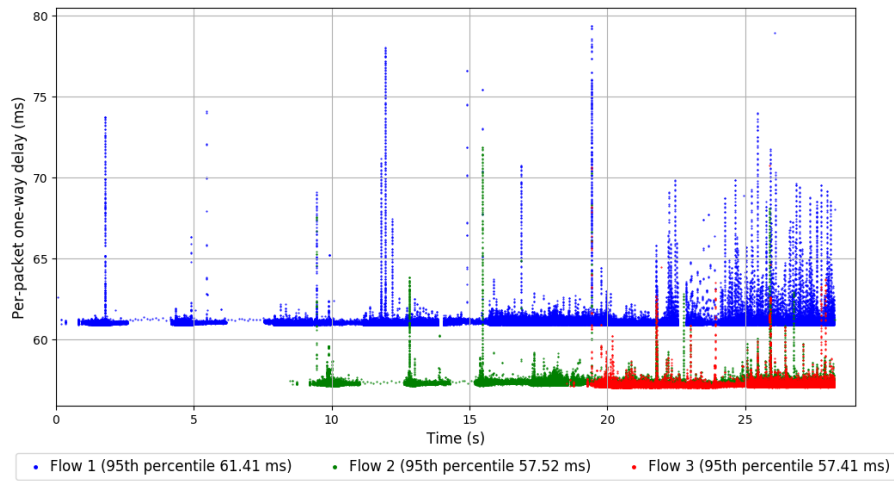
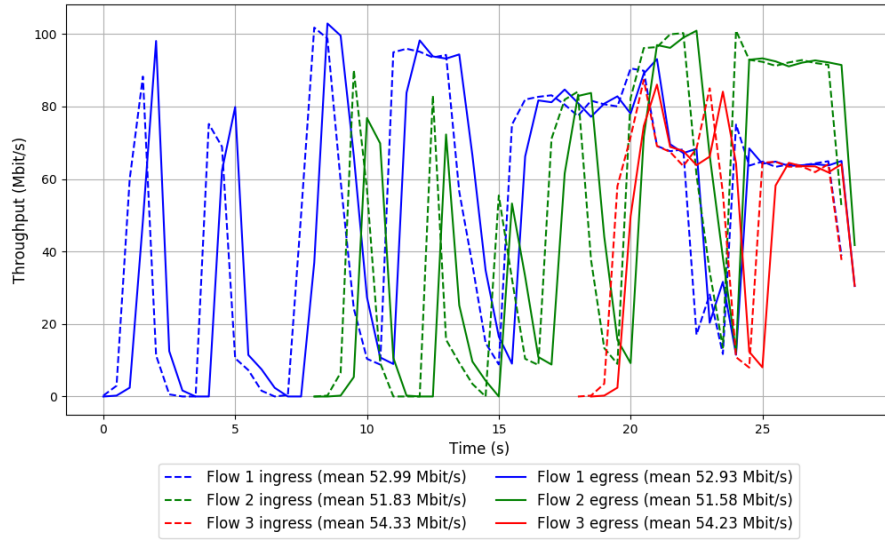
-- Flow 2:

Average throughput: 51.58 Mbit/s  
95th percentile per-packet one-way delay: 57.524 ms  
Loss rate: 1.02%

-- Flow 3:

Average throughput: 54.23 Mbit/s  
95th percentile per-packet one-way delay: 57.414 ms  
Loss rate: 1.35%

# Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-03-27 21:22:11

End at: 2019-03-27 21:22:41

Local clock offset: -0.485 ms

Remote clock offset: 0.605 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 92.02 Mbit/s

95th percentile per-packet one-way delay: 56.445 ms

Loss rate: 0.40%

-- Flow 1:

Average throughput: 50.77 Mbit/s

95th percentile per-packet one-way delay: 56.480 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 31.97 Mbit/s

95th percentile per-packet one-way delay: 56.111 ms

Loss rate: 0.14%

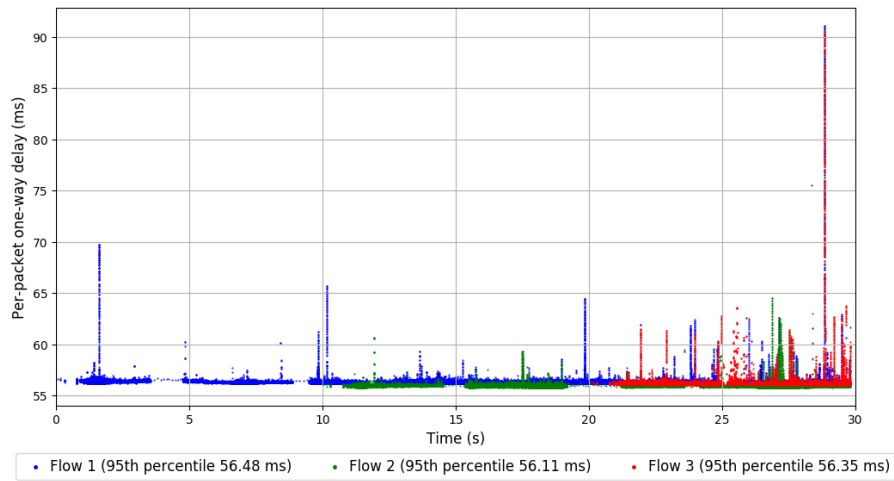
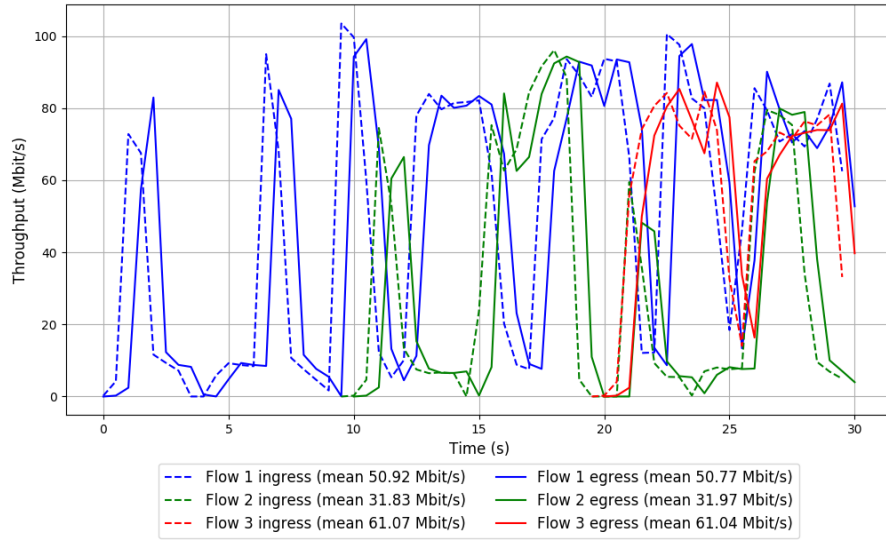
-- Flow 3:

Average throughput: 61.04 Mbit/s

95th percentile per-packet one-way delay: 56.346 ms

Loss rate: 0.06%

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



Run 3: Statistics of QUIC Cubic

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

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

Local clock offset: 0.224 ms

Remote clock offset: -0.469 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 89.33 Mbit/s

95th percentile per-packet one-way delay: 61.345 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 58.34 Mbit/s

95th percentile per-packet one-way delay: 61.409 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 33.98 Mbit/s

95th percentile per-packet one-way delay: 58.042 ms

Loss rate: 1.21%

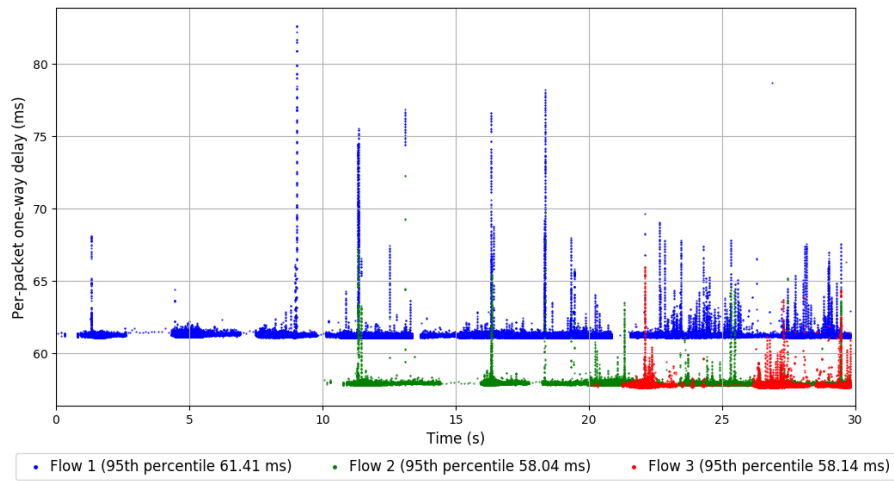
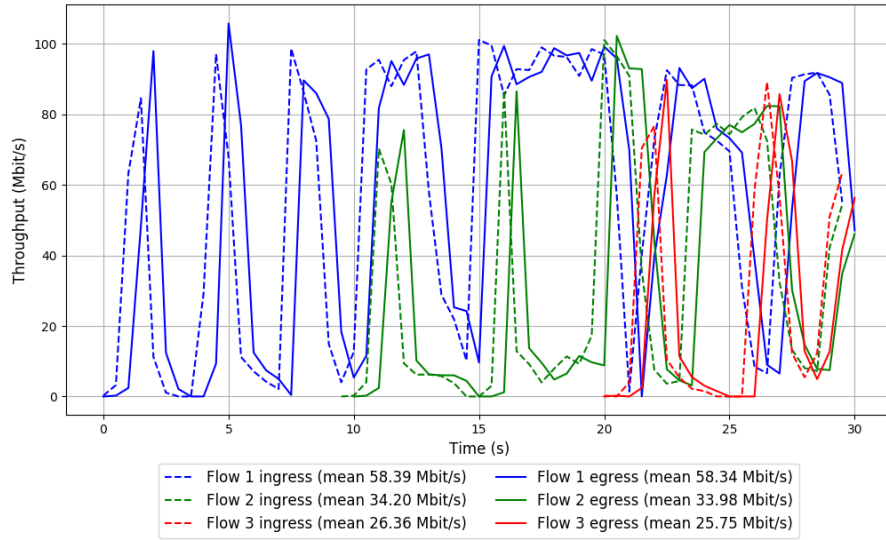
-- Flow 3:

Average throughput: 25.75 Mbit/s

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

Loss rate: 3.42%

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





Run 4: Statistics of QUIC Cubic

Start at: 2019-03-27 22:45:03  
End at: 2019-03-27 22:45:33  
Local clock offset: -0.042 ms  
Remote clock offset: -0.341 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 87.40 Mbit/s  
95th percentile per-packet one-way delay: 60.466 ms  
Loss rate: 0.85%

-- Flow 1:

Average throughput: 59.49 Mbit/s  
95th percentile per-packet one-way delay: 57.748 ms  
Loss rate: 0.58%

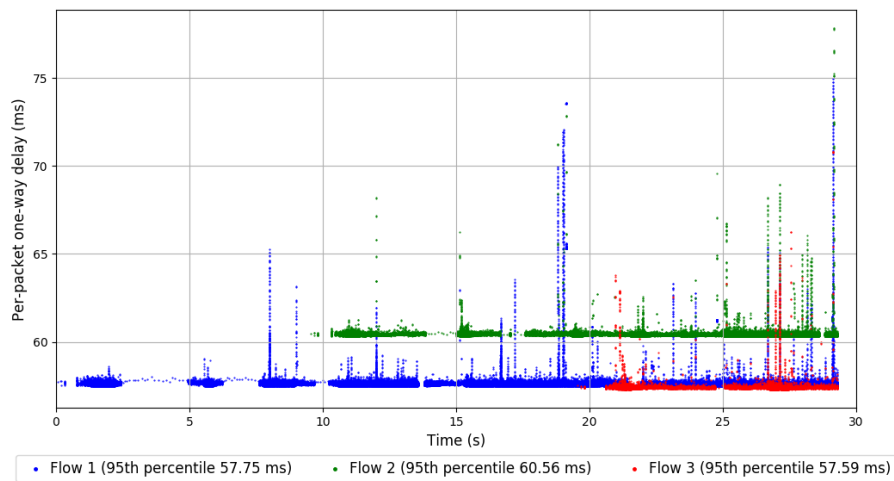
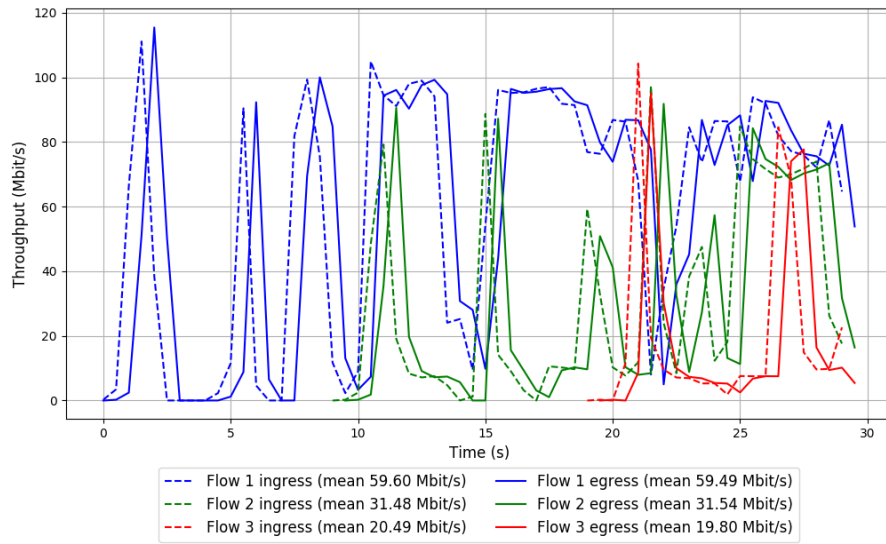
-- Flow 2:

Average throughput: 31.54 Mbit/s  
95th percentile per-packet one-way delay: 60.565 ms  
Loss rate: 0.41%

-- Flow 3:

Average throughput: 19.80 Mbit/s  
95th percentile per-packet one-way delay: 57.594 ms  
Loss rate: 4.49%

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



Run 5: Statistics of QUIC Cubic

Start at: 2019-03-27 23:26:29

End at: 2019-03-27 23:26:59

Local clock offset: 0.153 ms

Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 86.43 Mbit/s

95th percentile per-packet one-way delay: 60.765 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 47.76 Mbit/s

95th percentile per-packet one-way delay: 57.908 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 50.28 Mbit/s

95th percentile per-packet one-way delay: 57.868 ms

Loss rate: 0.86%

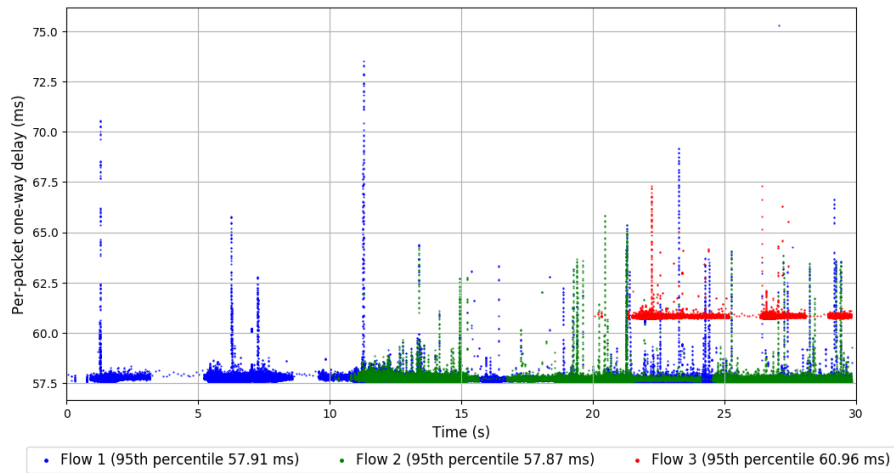
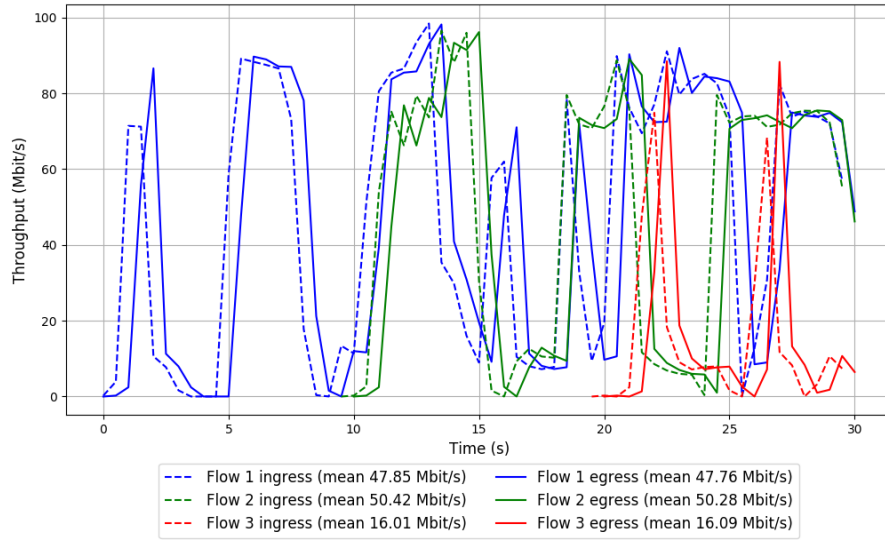
-- Flow 3:

Average throughput: 16.09 Mbit/s

95th percentile per-packet one-way delay: 60.959 ms

Loss rate: 0.73%

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



Run 1: Statistics of SCReAM

Start at: 2019-03-27 21:14:36  
End at: 2019-03-27 21:15:06  
Local clock offset: -0.073 ms  
Remote clock offset: -0.314 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 57.867 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.892 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.435 ms

Loss rate: 0.61%

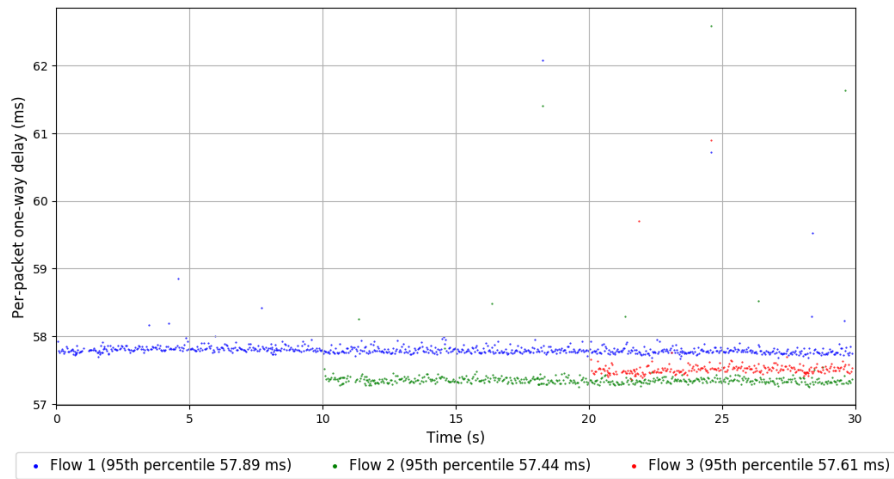
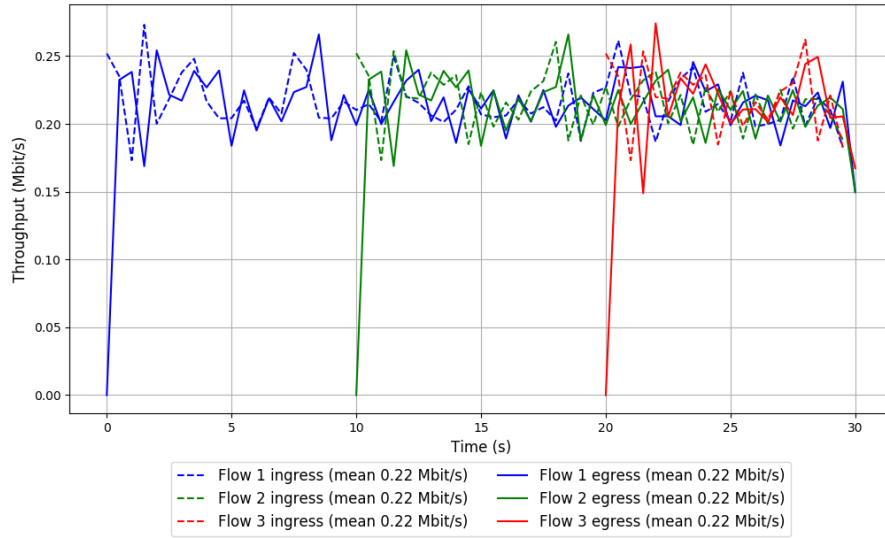
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.613 ms

Loss rate: 1.08%

# Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-03-27 21:56:05

End at: 2019-03-27 21:56:35

Local clock offset: 0.016 ms

Remote clock offset: -0.18 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 57.769 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.412 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.751 ms

Loss rate: 0.61%

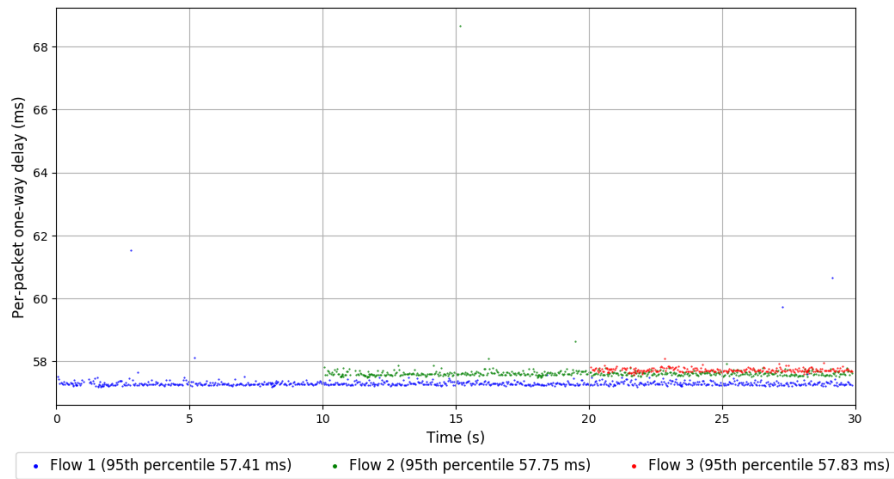
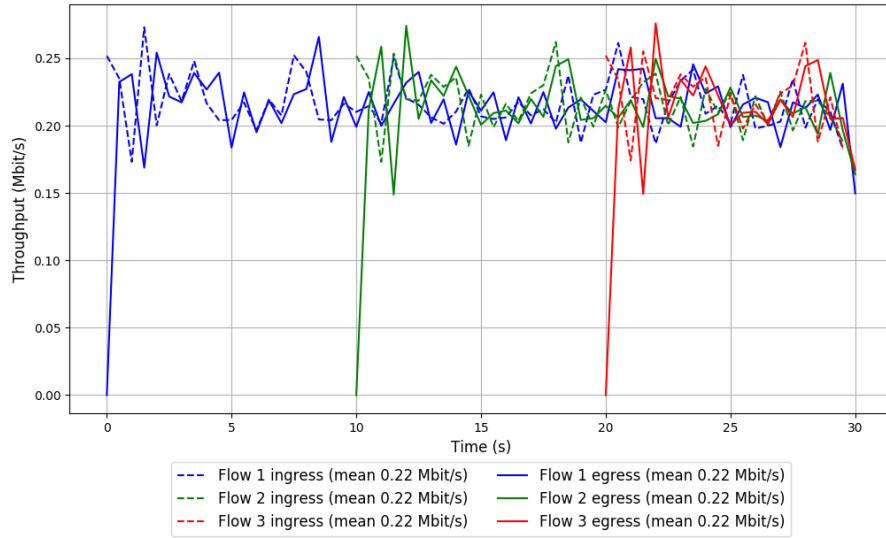
-- Flow 3:

Average throughput: 0.22 Mbit/s

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

Loss rate: 1.09%

## Run 2: Report of SCReAM — Data Link





Run 3: Statistics of SCReAM

Start at: 2019-03-27 22:37:45  
End at: 2019-03-27 22:38:15  
Local clock offset: -0.209 ms  
Remote clock offset: -0.009 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 57.218 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.238 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.131 ms

Loss rate: 0.61%

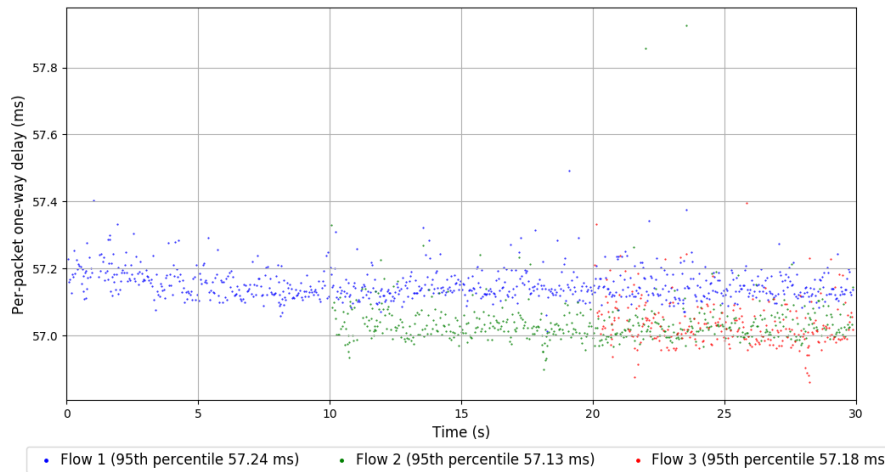
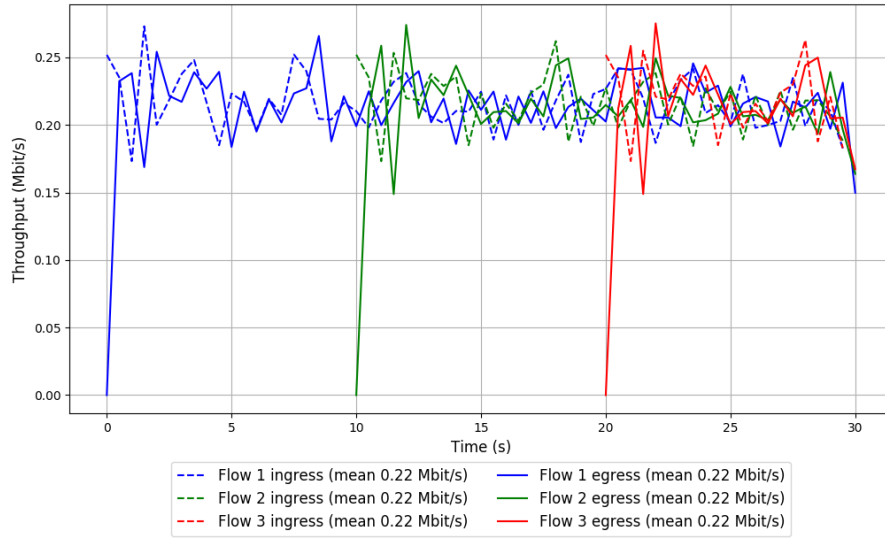
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.180 ms

Loss rate: 1.08%

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



Run 4: Statistics of SCReAM

Start at: 2019-03-27 23:18:57  
End at: 2019-03-27 23:19:27  
Local clock offset: 0.167 ms  
Remote clock offset: -0.162 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 61.149 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.060 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 61.207 ms

Loss rate: 0.61%

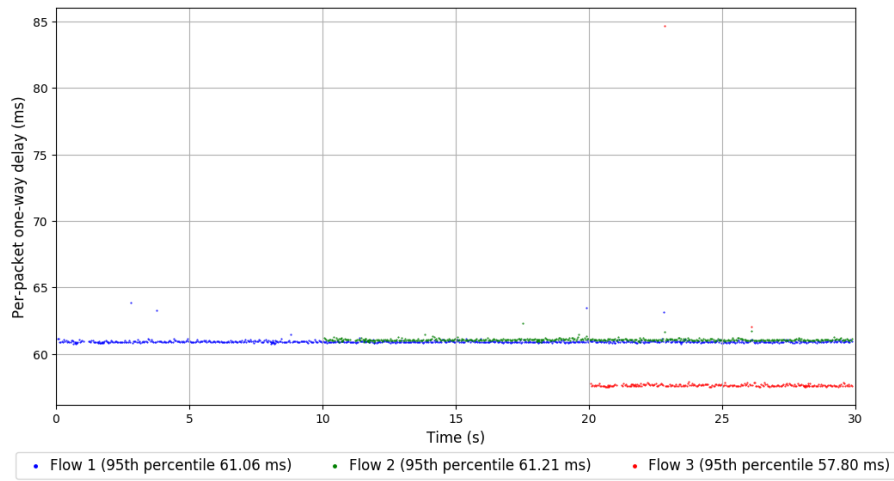
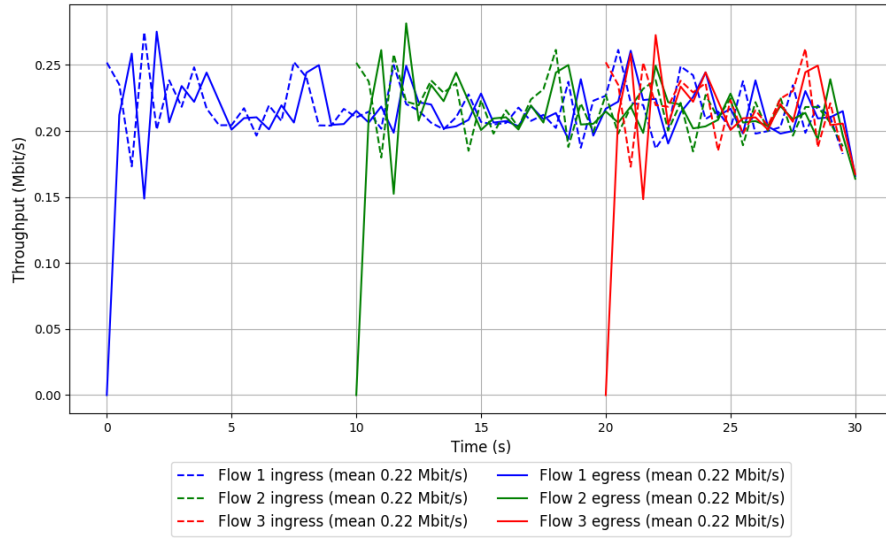
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.795 ms

Loss rate: 1.08%

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



Run 5: Statistics of SCReAM

Start at: 2019-03-28 00:00:05  
End at: 2019-03-28 00:00:35  
Local clock offset: -0.53 ms  
Remote clock offset: -0.352 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 57.132 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.143 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 57.102 ms

Loss rate: 0.62%

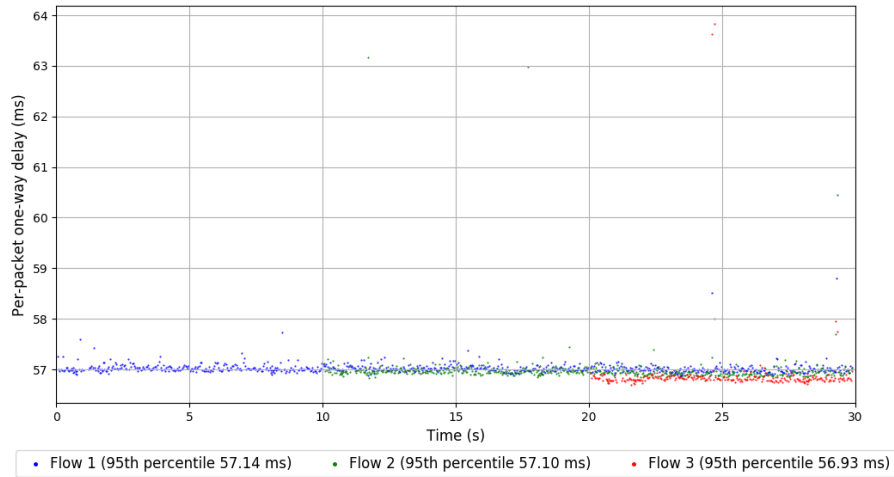
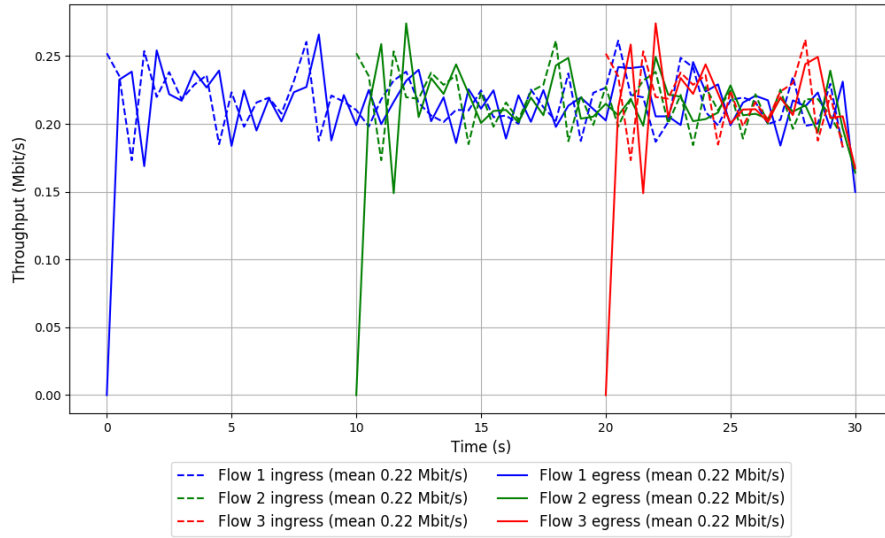
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 56.931 ms

Loss rate: 1.08%

Run 5: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-03-27 21:11:13  
End at: 2019-03-27 21:11:43  
Local clock offset: -0.343 ms  
Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 13.52 Mbit/s  
95th percentile per-packet one-way delay: 60.853 ms  
Loss rate: 0.57%

-- Flow 1:

Average throughput: 7.08 Mbit/s  
95th percentile per-packet one-way delay: 60.835 ms  
Loss rate: 0.13%

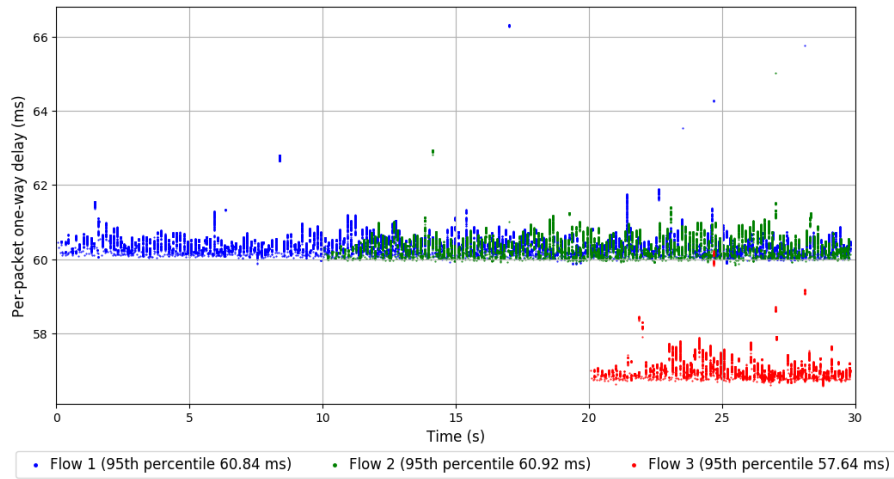
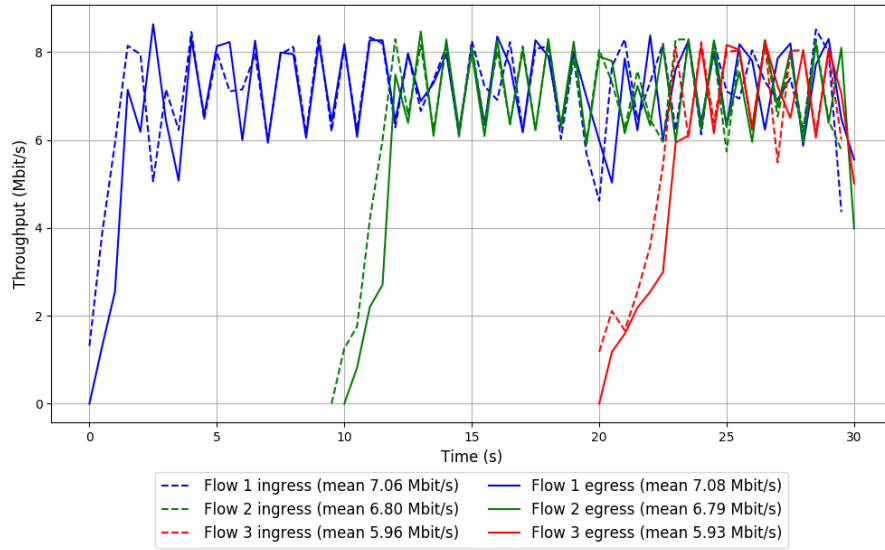
-- Flow 2:

Average throughput: 6.79 Mbit/s  
95th percentile per-packet one-way delay: 60.917 ms  
Loss rate: 0.75%

-- Flow 3:

Average throughput: 5.93 Mbit/s  
95th percentile per-packet one-way delay: 57.642 ms  
Loss rate: 1.70%

Run 1: Report of Sprout — Data Link





Run 2: Statistics of Sprout

Start at: 2019-03-27 21:52:44

End at: 2019-03-27 21:53:14

Local clock offset: -0.164 ms

Remote clock offset: 0.145 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.27 Mbit/s

95th percentile per-packet one-way delay: 57.853 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 7.76 Mbit/s

95th percentile per-packet one-way delay: 57.872 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 7.73 Mbit/s

95th percentile per-packet one-way delay: 57.386 ms

Loss rate: 0.61%

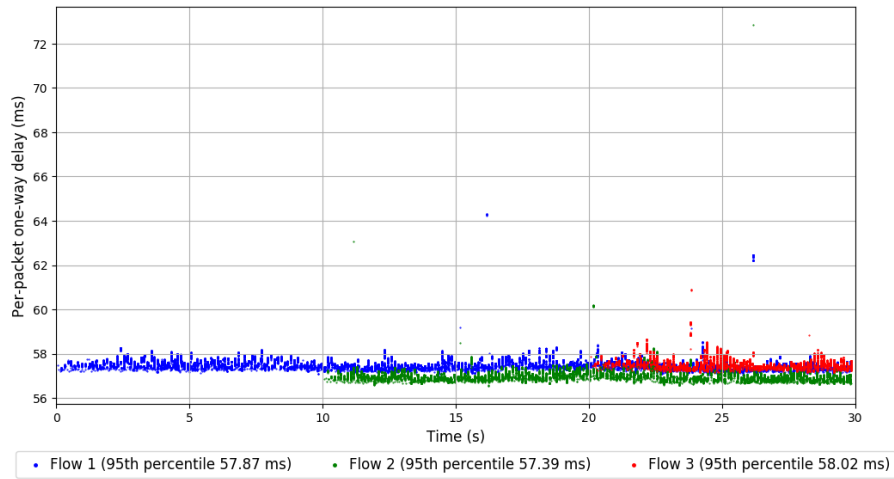
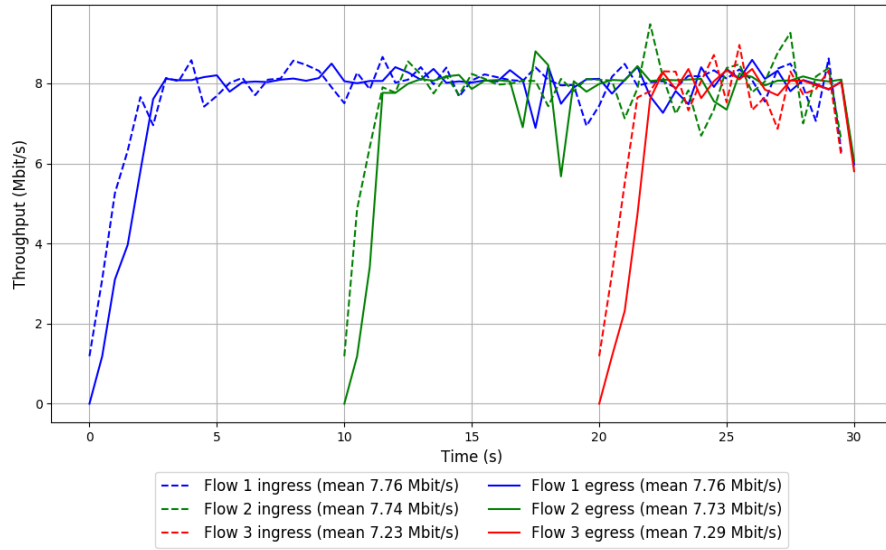
-- Flow 3:

Average throughput: 7.29 Mbit/s

95th percentile per-packet one-way delay: 58.022 ms

Loss rate: 0.47%

## Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-03-27 22:34:35  
End at: 2019-03-27 22:35:05  
Local clock offset: -0.152 ms  
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 14.44 Mbit/s  
95th percentile per-packet one-way delay: 60.748 ms  
Loss rate: 0.69%

-- Flow 1:

Average throughput: 7.76 Mbit/s  
95th percentile per-packet one-way delay: 58.032 ms  
Loss rate: 0.44%

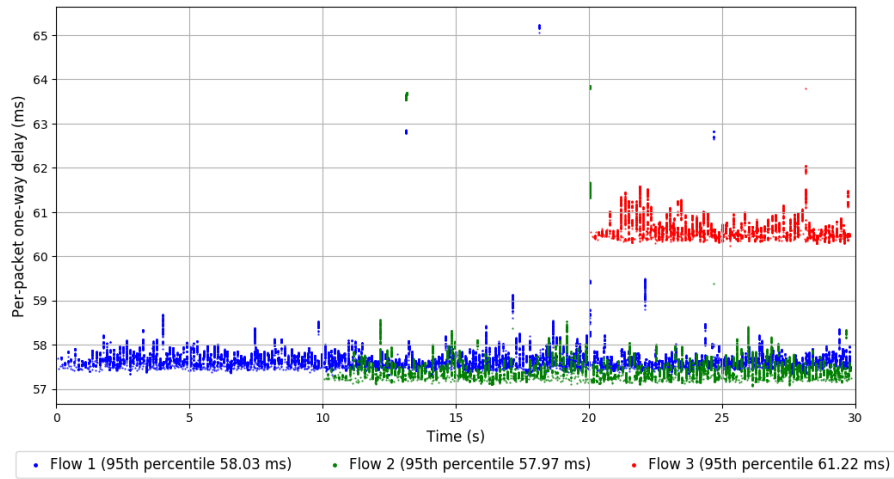
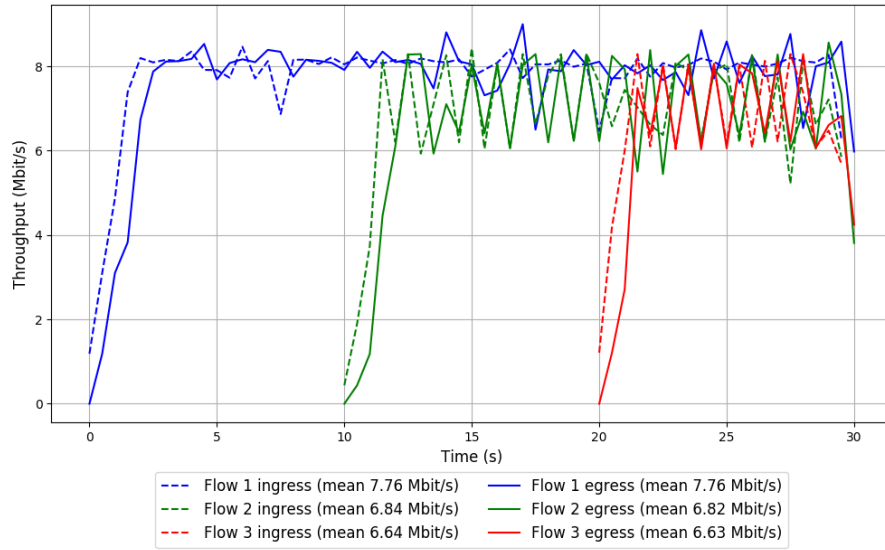
-- Flow 2:

Average throughput: 6.82 Mbit/s  
95th percentile per-packet one-way delay: 57.965 ms  
Loss rate: 0.75%

-- Flow 3:

Average throughput: 6.63 Mbit/s  
95th percentile per-packet one-way delay: 61.218 ms  
Loss rate: 1.45%

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



Run 4: Statistics of Sprout

Start at: 2019-03-27 23:15:12  
End at: 2019-03-27 23:15:43  
Local clock offset: 0.073 ms  
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 14.94 Mbit/s  
95th percentile per-packet one-way delay: 58.033 ms  
Loss rate: 0.63%

-- Flow 1:

Average throughput: 7.87 Mbit/s  
95th percentile per-packet one-way delay: 58.023 ms  
Loss rate: 0.42%

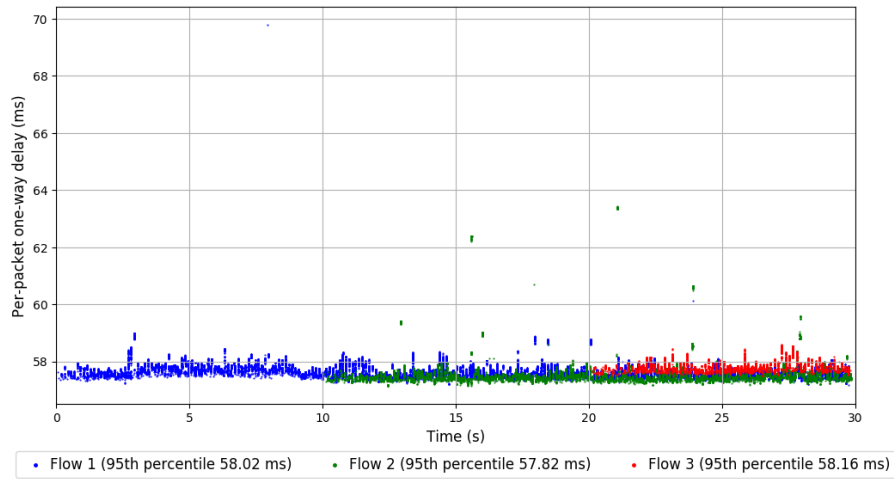
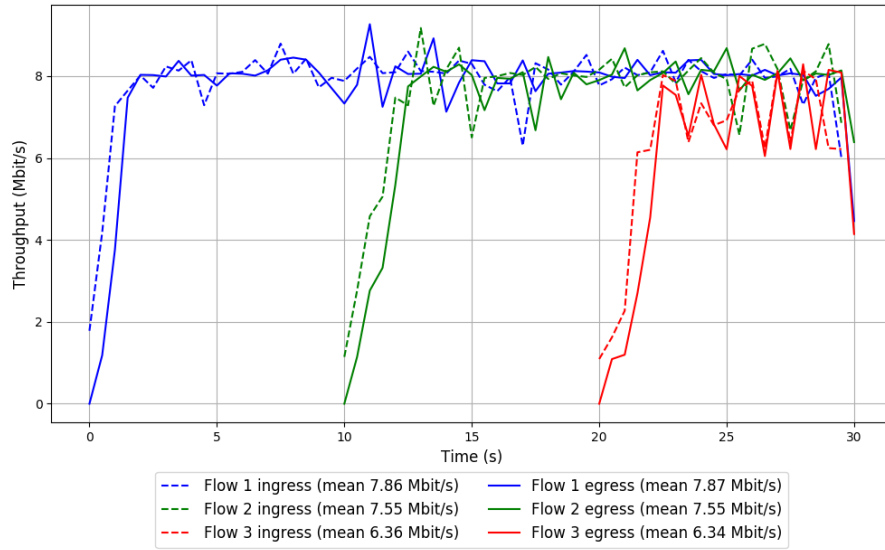
-- Flow 2:

Average throughput: 7.55 Mbit/s  
95th percentile per-packet one-way delay: 57.817 ms  
Loss rate: 0.52%

-- Flow 3:

Average throughput: 6.34 Mbit/s  
95th percentile per-packet one-way delay: 58.157 ms  
Loss rate: 1.65%

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



Run 5: Statistics of Sprout

Start at: 2019-03-27 23:56:40  
End at: 2019-03-27 23:57:10  
Local clock offset: 0.073 ms  
Remote clock offset: -0.283 ms

# Below is generated by plot.py at 2019-03-28 02:25:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 14.94 Mbit/s  
95th percentile per-packet one-way delay: 58.136 ms  
Loss rate: 0.61%

-- Flow 1:

Average throughput: 7.76 Mbit/s  
95th percentile per-packet one-way delay: 58.015 ms  
Loss rate: 0.31%

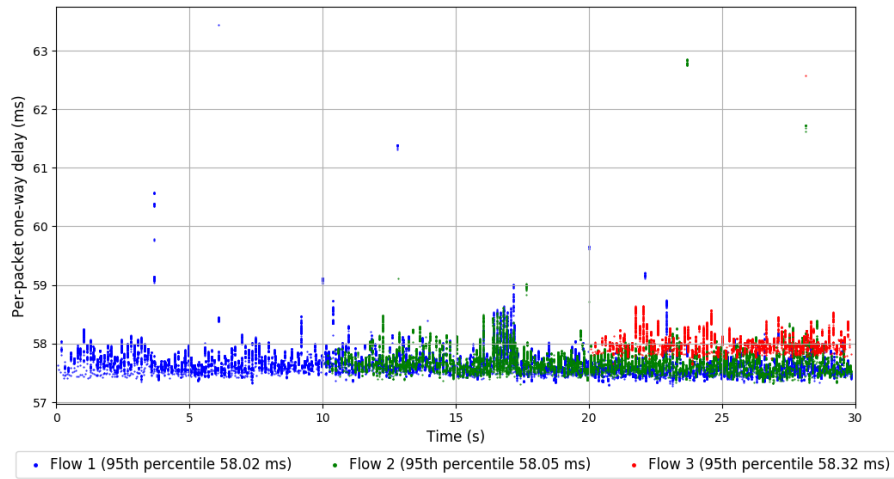
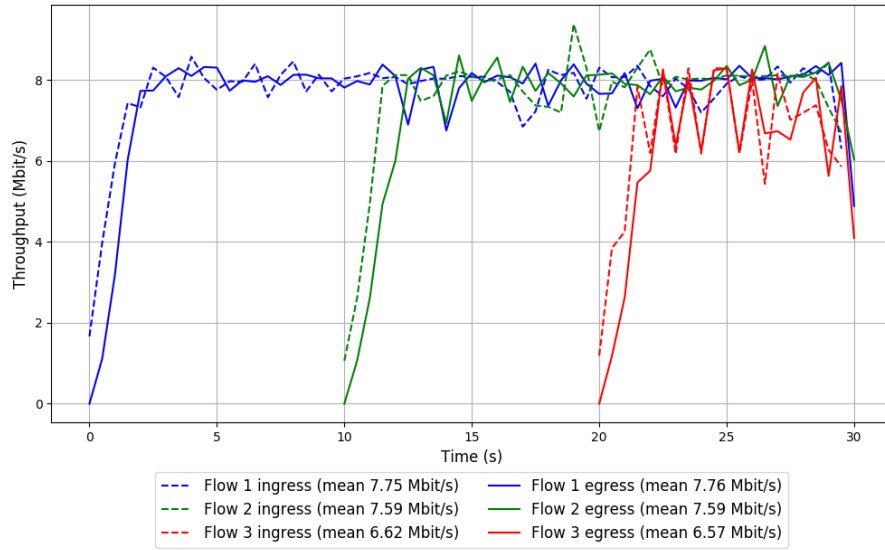
-- Flow 2:

Average throughput: 7.59 Mbit/s  
95th percentile per-packet one-way delay: 58.054 ms  
Loss rate: 0.68%

-- Flow 3:

Average throughput: 6.57 Mbit/s  
95th percentile per-packet one-way delay: 58.320 ms  
Loss rate: 1.56%

Run 5: Report of Sprout — Data Link





Run 1: Statistics of TaoVA-100x

Start at: 2019-03-27 20:48:16  
End at: 2019-03-27 20:48:46  
Local clock offset: -0.368 ms  
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2019-03-28 02:27:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 433.23 Mbit/s  
95th percentile per-packet one-way delay: 65.651 ms  
Loss rate: 0.61%

-- Flow 1:

Average throughput: 221.83 Mbit/s  
95th percentile per-packet one-way delay: 66.332 ms  
Loss rate: 0.38%

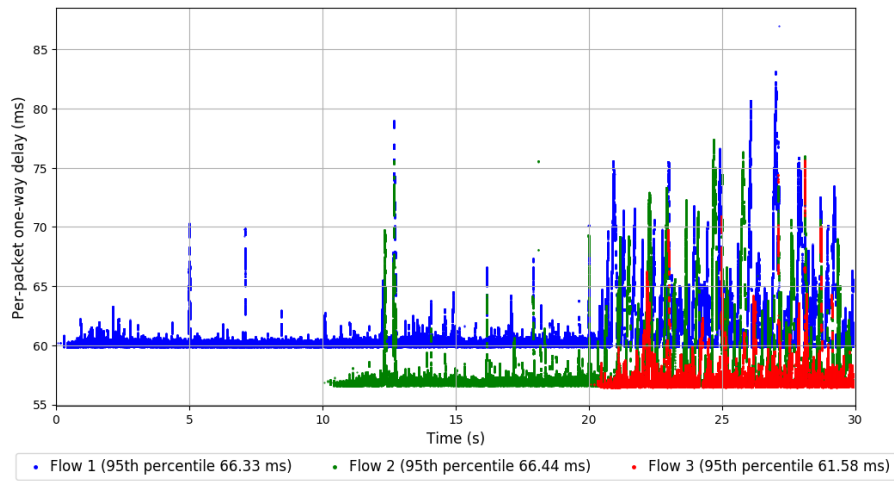
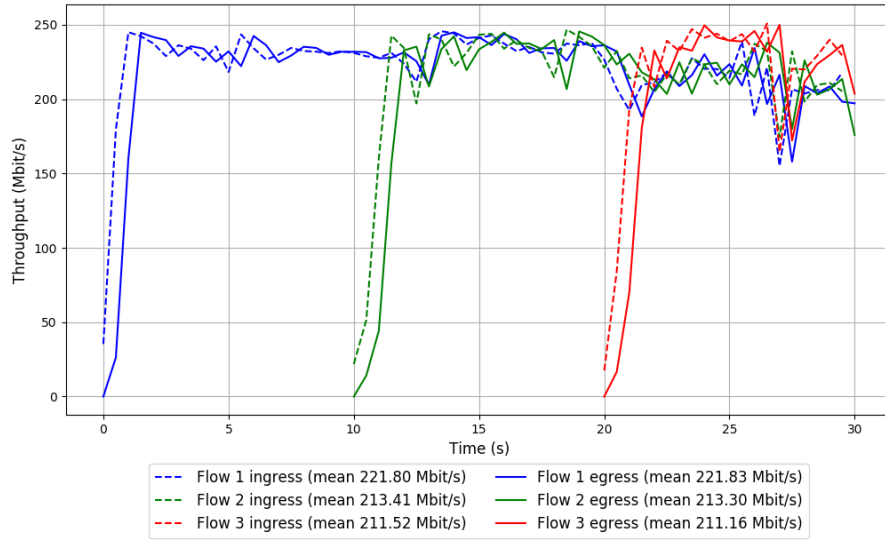
-- Flow 2:

Average throughput: 213.30 Mbit/s  
95th percentile per-packet one-way delay: 66.444 ms  
Loss rate: 0.62%

-- Flow 3:

Average throughput: 211.16 Mbit/s  
95th percentile per-packet one-way delay: 61.583 ms  
Loss rate: 1.32%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-03-27 21:29:35  
End at: 2019-03-27 21:30:05  
Local clock offset: 0.234 ms  
Remote clock offset: -0.299 ms

# Below is generated by plot.py at 2019-03-28 02:27:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 433.91 Mbit/s  
95th percentile per-packet one-way delay: 62.527 ms  
Loss rate: 0.62%

-- Flow 1:

Average throughput: 222.41 Mbit/s  
95th percentile per-packet one-way delay: 60.188 ms  
Loss rate: 0.43%

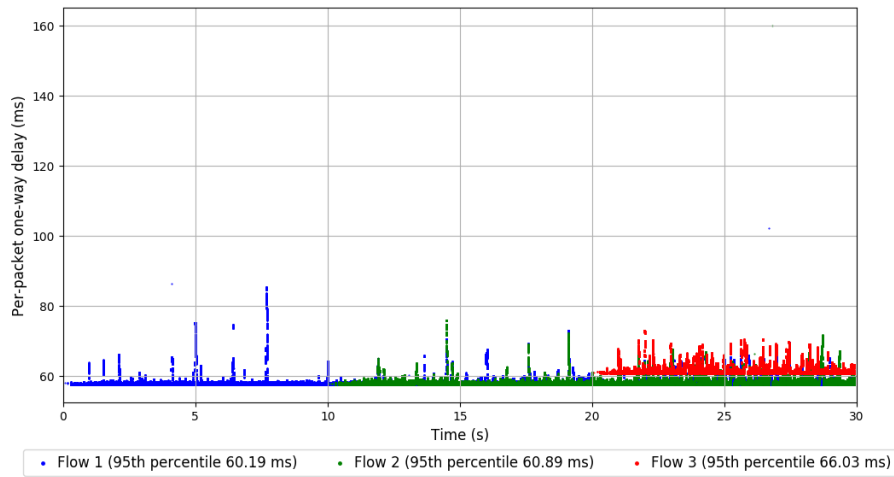
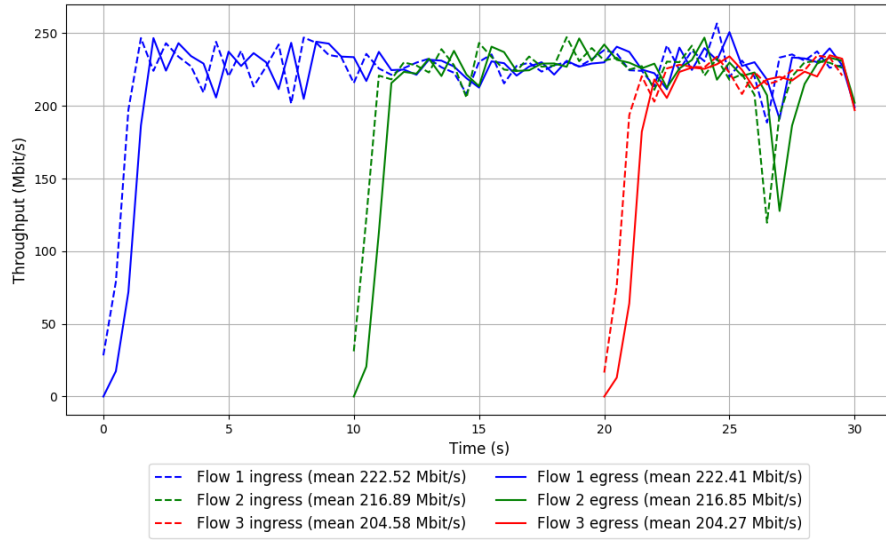
-- Flow 2:

Average throughput: 216.85 Mbit/s  
95th percentile per-packet one-way delay: 60.892 ms  
Loss rate: 0.59%

-- Flow 3:

Average throughput: 204.27 Mbit/s  
95th percentile per-packet one-way delay: 66.034 ms  
Loss rate: 1.33%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-03-27 22:10:59  
End at: 2019-03-27 22:11:29  
Local clock offset: -0.163 ms  
Remote clock offset: -0.255 ms

# Below is generated by plot.py at 2019-03-28 02:27:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 434.50 Mbit/s  
95th percentile per-packet one-way delay: 60.076 ms  
Loss rate: 0.57%

-- Flow 1:

Average throughput: 223.61 Mbit/s  
95th percentile per-packet one-way delay: 59.161 ms  
Loss rate: 0.34%

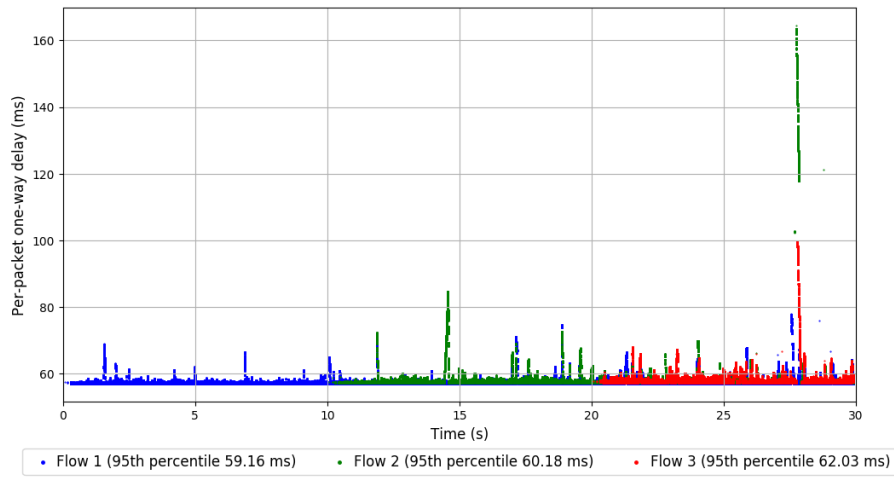
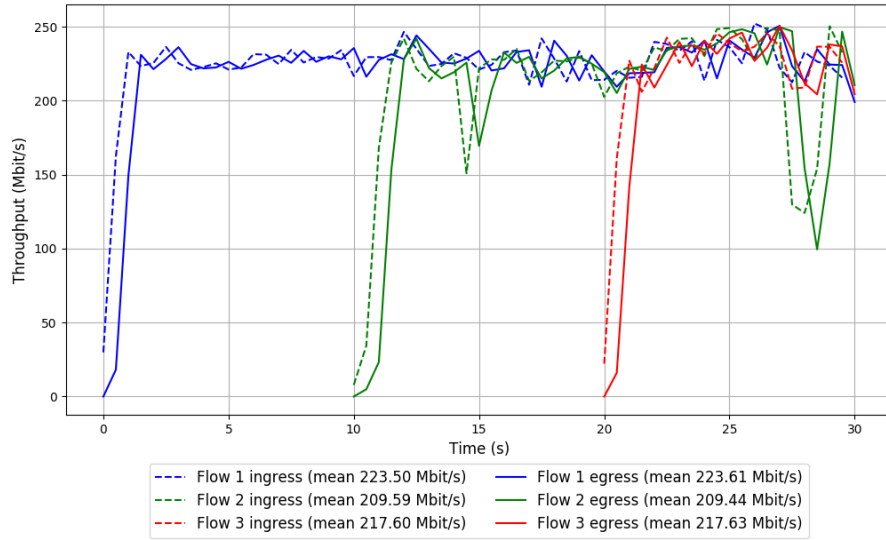
-- Flow 2:

Average throughput: 209.44 Mbit/s  
95th percentile per-packet one-way delay: 60.178 ms  
Loss rate: 0.64%

-- Flow 3:

Average throughput: 217.63 Mbit/s  
95th percentile per-packet one-way delay: 62.027 ms  
Loss rate: 1.13%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-03-27 22:52:08

End at: 2019-03-27 22:52:38

Local clock offset: -0.532 ms

Remote clock offset: 0.044 ms

# Below is generated by plot.py at 2019-03-28 02:27:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 410.51 Mbit/s

95th percentile per-packet one-way delay: 62.924 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 208.41 Mbit/s

95th percentile per-packet one-way delay: 61.454 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 205.29 Mbit/s

95th percentile per-packet one-way delay: 63.537 ms

Loss rate: 0.64%

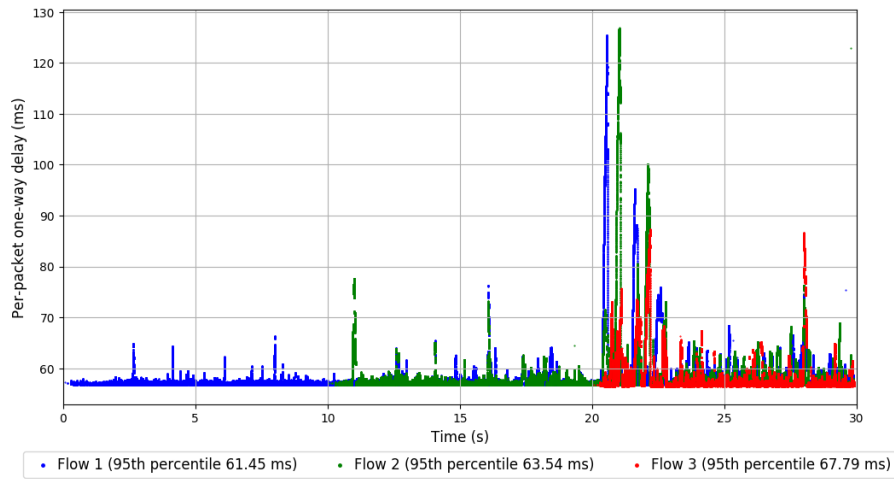
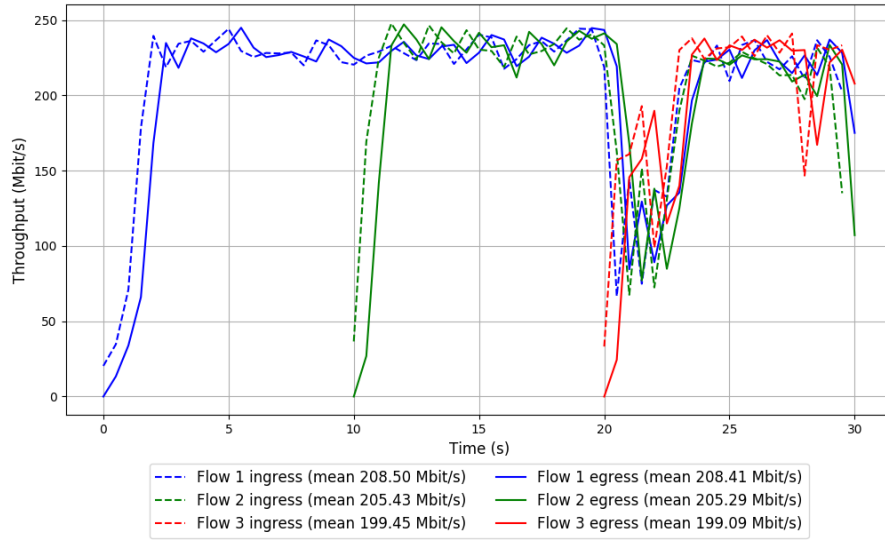
-- Flow 3:

Average throughput: 199.09 Mbit/s

95th percentile per-packet one-way delay: 67.793 ms

Loss rate: 1.33%

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





Run 5: Statistics of TaoVA-100x

Start at: 2019-03-27 23:33:52  
End at: 2019-03-27 23:34:22  
Local clock offset: 0.129 ms  
Remote clock offset: -0.212 ms

# Below is generated by plot.py at 2019-03-28 02:27:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 401.99 Mbit/s  
95th percentile per-packet one-way delay: 67.167 ms  
Loss rate: 0.71%

-- Flow 1:

Average throughput: 209.76 Mbit/s  
95th percentile per-packet one-way delay: 66.040 ms  
Loss rate: 0.47%

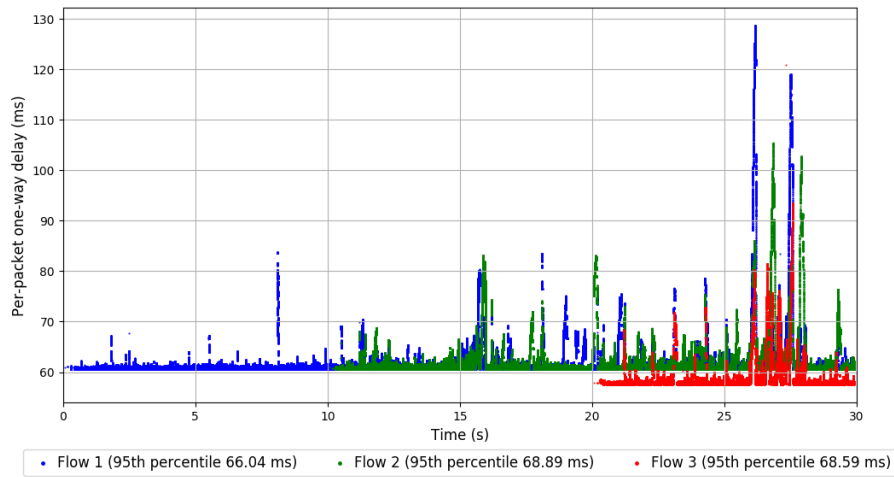
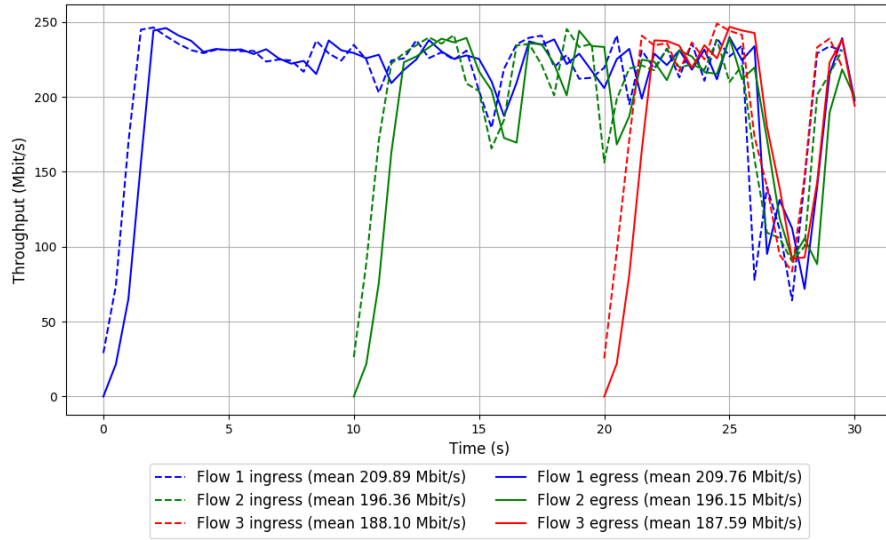
-- Flow 2:

Average throughput: 196.15 Mbit/s  
95th percentile per-packet one-way delay: 68.894 ms  
Loss rate: 0.72%

-- Flow 3:

Average throughput: 187.59 Mbit/s  
95th percentile per-packet one-way delay: 68.586 ms  
Loss rate: 1.47%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-03-27 21:12:28  
End at: 2019-03-27 21:12:58  
Local clock offset: 0.299 ms  
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-03-28 02:28:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 632.06 Mbit/s  
95th percentile per-packet one-way delay: 81.459 ms  
Loss rate: 0.31%

-- Flow 1:

Average throughput: 360.68 Mbit/s  
95th percentile per-packet one-way delay: 71.398 ms  
Loss rate: 0.27%

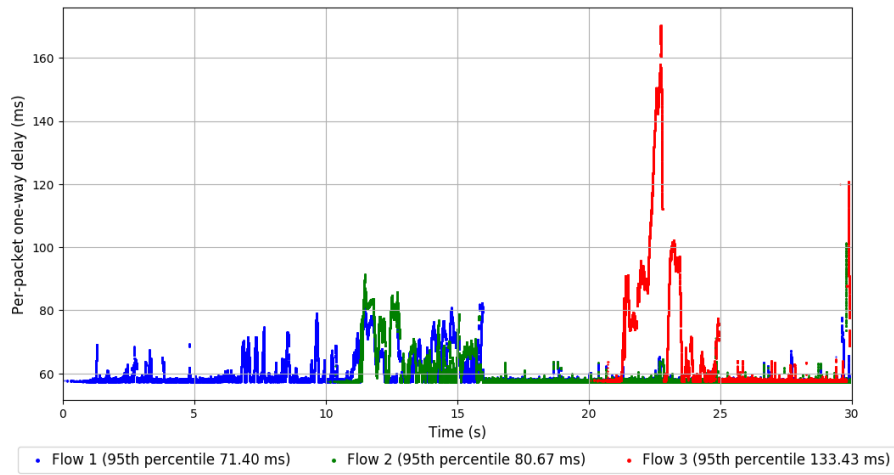
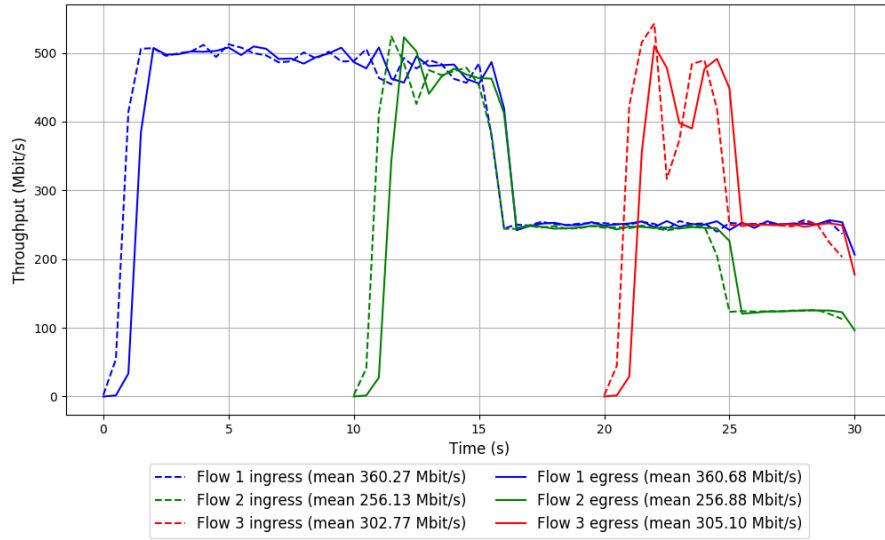
-- Flow 2:

Average throughput: 256.88 Mbit/s  
95th percentile per-packet one-way delay: 80.669 ms  
Loss rate: 0.28%

-- Flow 3:

Average throughput: 305.10 Mbit/s  
95th percentile per-packet one-way delay: 133.431 ms  
Loss rate: 0.47%

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



Run 2: Statistics of TCP Vegas

Start at: 2019-03-27 21:54:00  
End at: 2019-03-27 21:54:30  
Local clock offset: -0.579 ms  
Remote clock offset: -0.187 ms

# Below is generated by plot.py at 2019-03-28 02:36:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 663.89 Mbit/s  
95th percentile per-packet one-way delay: 66.184 ms  
Loss rate: 0.39%

-- Flow 1:

Average throughput: 422.45 Mbit/s  
95th percentile per-packet one-way delay: 63.009 ms  
Loss rate: 0.22%

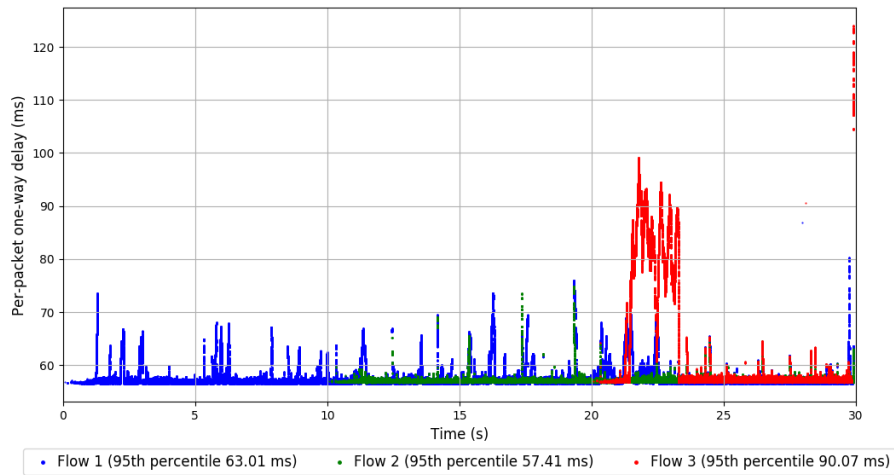
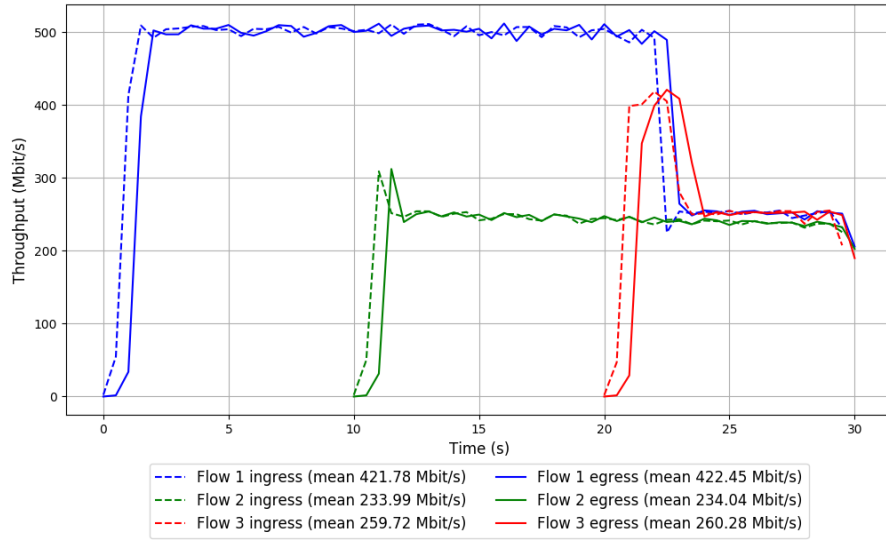
-- Flow 2:

Average throughput: 234.04 Mbit/s  
95th percentile per-packet one-way delay: 57.410 ms  
Loss rate: 0.55%

-- Flow 3:

Average throughput: 260.28 Mbit/s  
95th percentile per-packet one-way delay: 90.066 ms  
Loss rate: 0.94%

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



Run 3: Statistics of TCP Vegas

Start at: 2019-03-27 22:35:50  
End at: 2019-03-27 22:36:20  
Local clock offset: -0.453 ms  
Remote clock offset: -0.422 ms

# Below is generated by plot.py at 2019-03-28 02:36:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 526.87 Mbit/s  
95th percentile per-packet one-way delay: 72.892 ms  
Loss rate: 0.62%

-- Flow 1:

Average throughput: 301.46 Mbit/s  
95th percentile per-packet one-way delay: 75.275 ms  
Loss rate: 0.27%

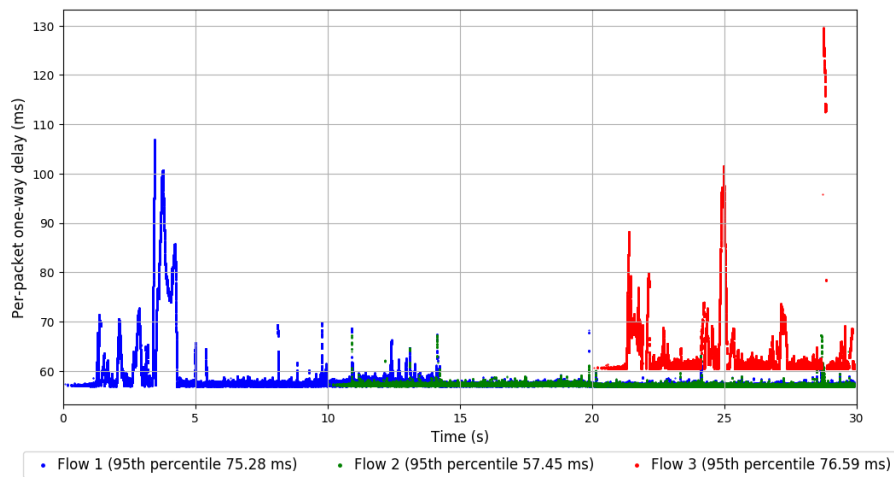
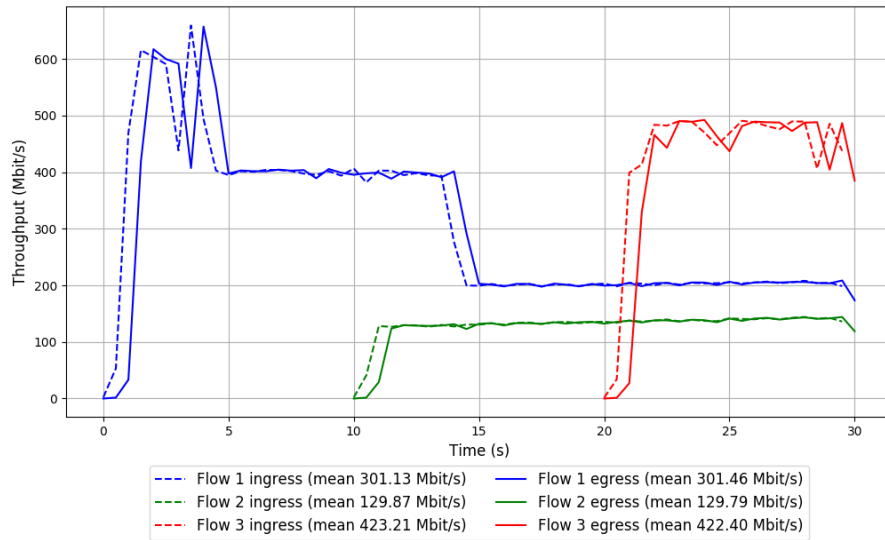
-- Flow 2:

Average throughput: 129.79 Mbit/s  
95th percentile per-packet one-way delay: 57.446 ms  
Loss rate: 0.64%

-- Flow 3:

Average throughput: 422.40 Mbit/s  
95th percentile per-packet one-way delay: 76.586 ms  
Loss rate: 1.37%

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





Run 4: Statistics of TCP Vegas

Start at: 2019-03-27 23:16:27

End at: 2019-03-27 23:16:57

Local clock offset: 0.325 ms

Remote clock offset: 0.023 ms

# Below is generated by plot.py at 2019-03-28 02:38:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 737.17 Mbit/s

95th percentile per-packet one-way delay: 100.662 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 367.44 Mbit/s

95th percentile per-packet one-way delay: 74.382 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 350.78 Mbit/s

95th percentile per-packet one-way delay: 141.540 ms

Loss rate: 0.41%

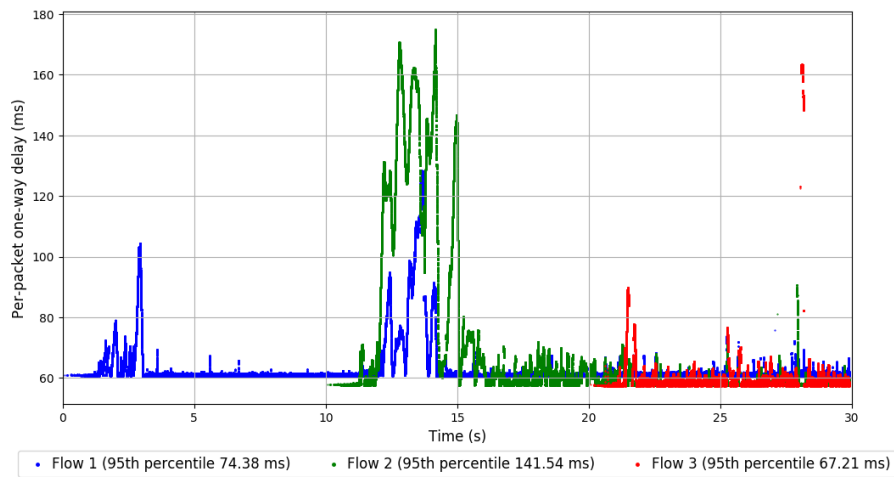
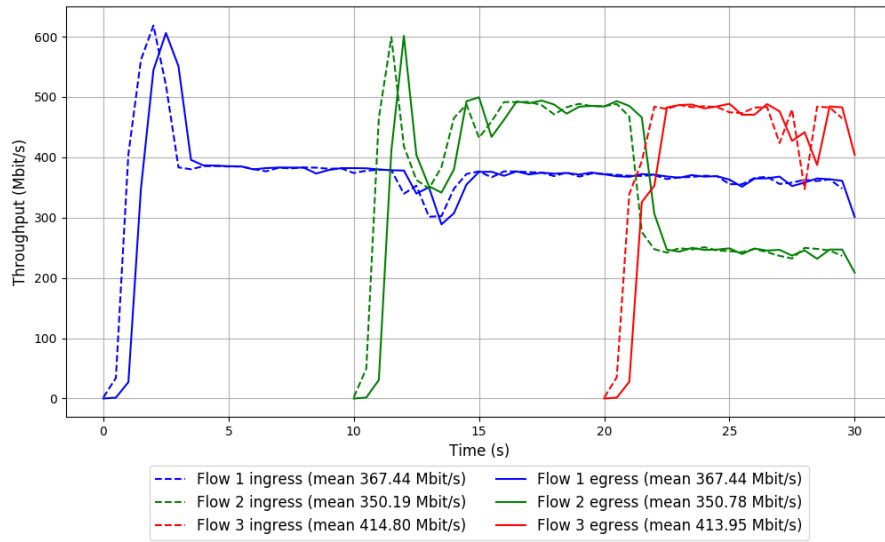
-- Flow 3:

Average throughput: 413.95 Mbit/s

95th percentile per-packet one-way delay: 67.214 ms

Loss rate: 1.39%

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



Run 5: Statistics of TCP Vegas

Start at: 2019-03-27 23:57:55  
End at: 2019-03-27 23:58:25  
Local clock offset: 0.112 ms  
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2019-03-28 02:39:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 769.15 Mbit/s  
95th percentile per-packet one-way delay: 72.760 ms  
Loss rate: 0.32%

-- Flow 1:

Average throughput: 419.98 Mbit/s  
95th percentile per-packet one-way delay: 69.059 ms  
Loss rate: 0.22%

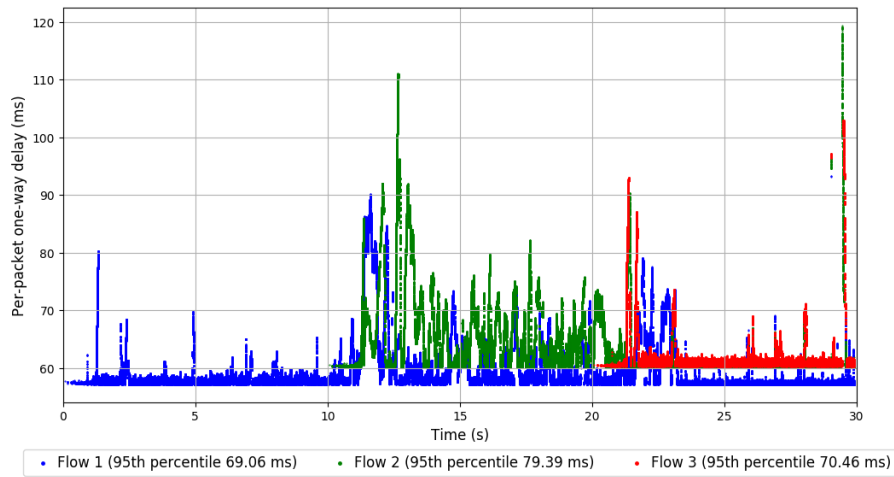
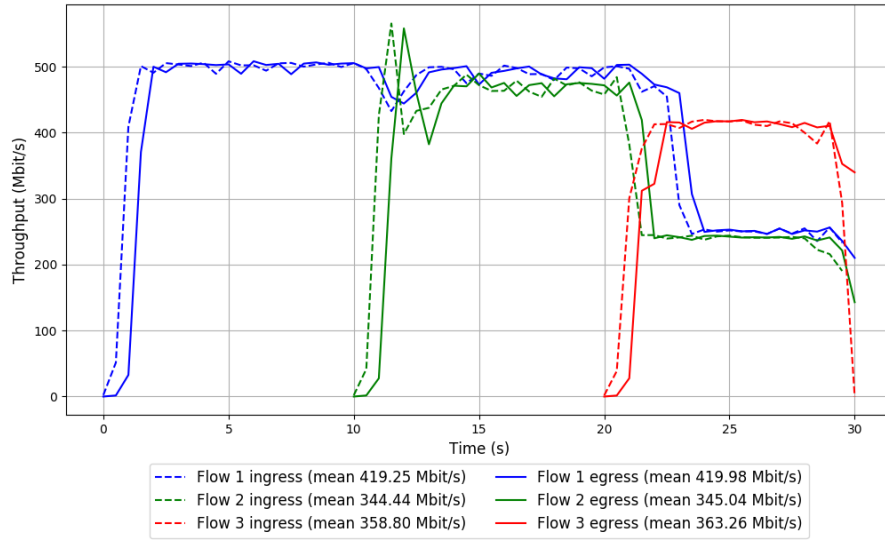
-- Flow 2:

Average throughput: 345.04 Mbit/s  
95th percentile per-packet one-way delay: 79.391 ms  
Loss rate: 0.41%

-- Flow 3:

Average throughput: 363.26 Mbit/s  
95th percentile per-packet one-way delay: 70.464 ms  
Loss rate: 0.52%

Run 5: Report of TCP Vegas — Data Link

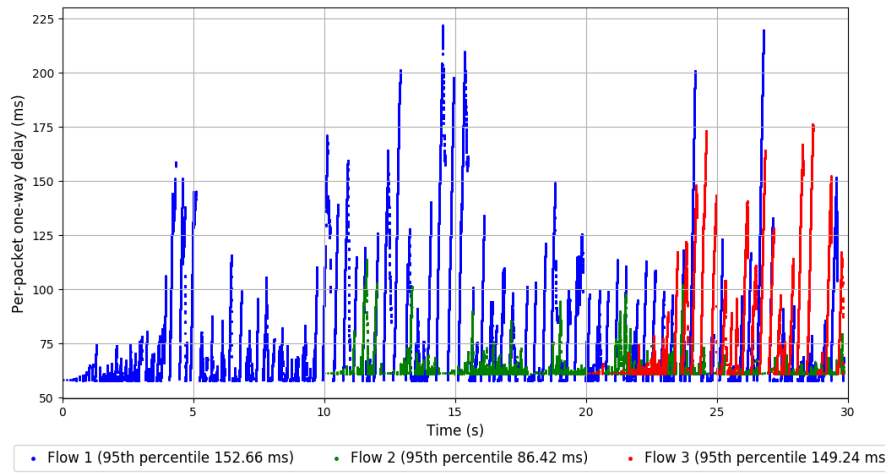
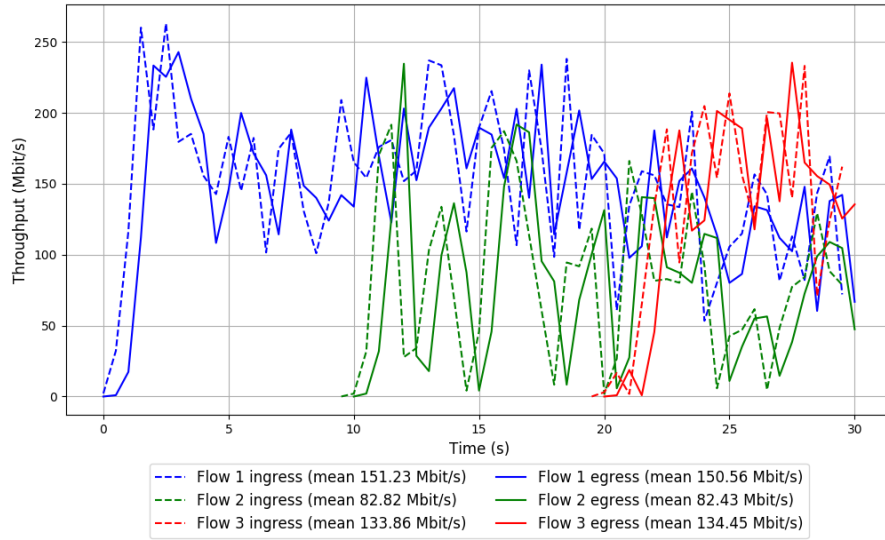


Run 1: Statistics of Verus

Start at: 2019-03-27 21:15:48  
End at: 2019-03-27 21:16:18  
Local clock offset: 0.263 ms  
Remote clock offset: -0.677 ms

# Below is generated by plot.py at 2019-03-28 02:39:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 249.59 Mbit/s  
95th percentile per-packet one-way delay: 143.478 ms  
Loss rate: 0.82%  
-- Flow 1:  
Average throughput: 150.56 Mbit/s  
95th percentile per-packet one-way delay: 152.661 ms  
Loss rate: 0.67%  
-- Flow 2:  
Average throughput: 82.43 Mbit/s  
95th percentile per-packet one-way delay: 86.423 ms  
Loss rate: 1.07%  
-- Flow 3:  
Average throughput: 134.45 Mbit/s  
95th percentile per-packet one-way delay: 149.243 ms  
Loss rate: 1.00%

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



Run 2: Statistics of Verus

Start at: 2019-03-27 21:57:17

End at: 2019-03-27 21:57:47

Local clock offset: -0.186 ms

Remote clock offset: -0.26 ms

# Below is generated by plot.py at 2019-03-28 02:39:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 257.46 Mbit/s

95th percentile per-packet one-way delay: 196.043 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 126.05 Mbit/s

95th percentile per-packet one-way delay: 233.099 ms

Loss rate: 1.62%

-- Flow 2:

Average throughput: 143.71 Mbit/s

95th percentile per-packet one-way delay: 114.167 ms

Loss rate: 0.73%

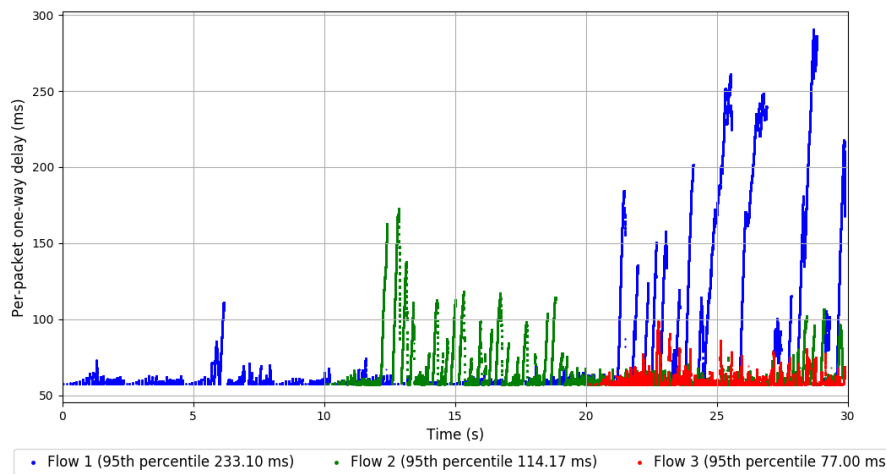
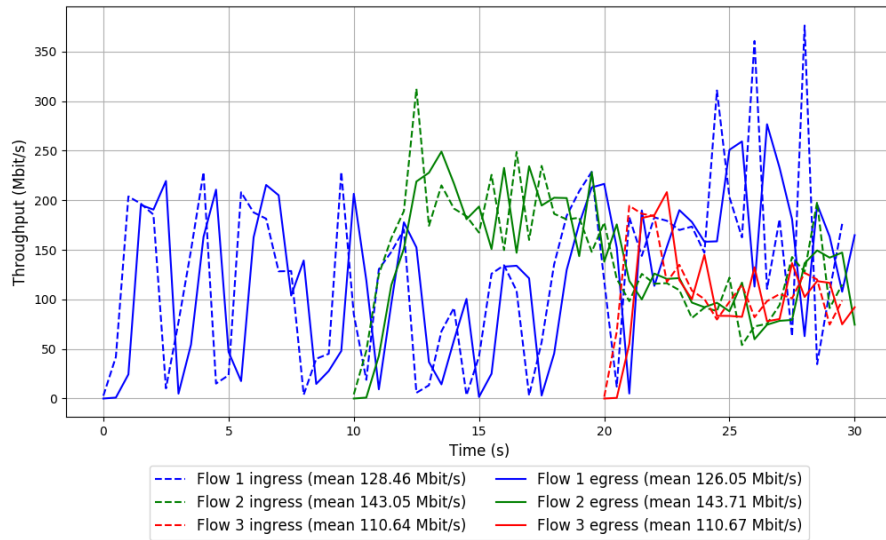
-- Flow 3:

Average throughput: 110.67 Mbit/s

95th percentile per-packet one-way delay: 76.995 ms

Loss rate: 0.84%

## Run 2: Report of Verus — Data Link



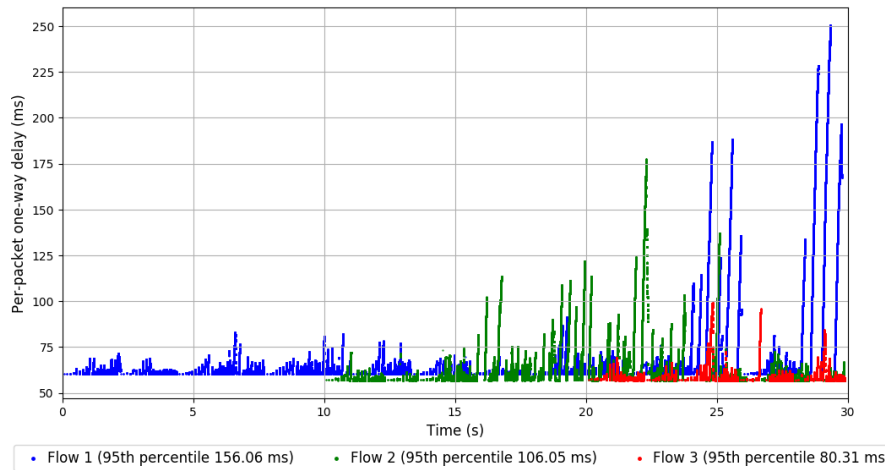
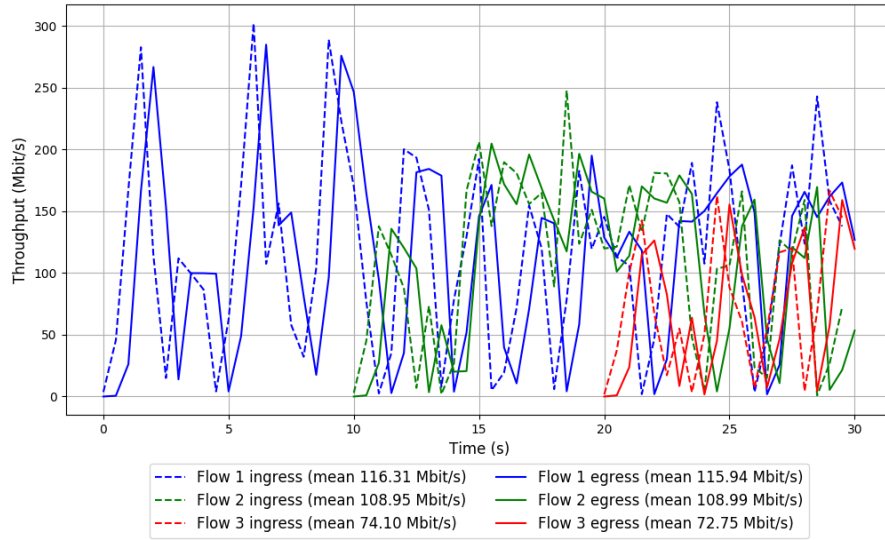


Run 3: Statistics of Verus

Start at: 2019-03-27 22:38:57  
End at: 2019-03-27 22:39:27  
Local clock offset: -0.482 ms  
Remote clock offset: -0.363 ms

```
# Below is generated by plot.py at 2019-03-28 02:39:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 211.79 Mbit/s
95th percentile per-packet one-way delay: 122.704 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 115.94 Mbit/s
95th percentile per-packet one-way delay: 156.062 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 108.99 Mbit/s
95th percentile per-packet one-way delay: 106.045 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 72.75 Mbit/s
95th percentile per-packet one-way delay: 80.308 ms
Loss rate: 2.96%
```

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

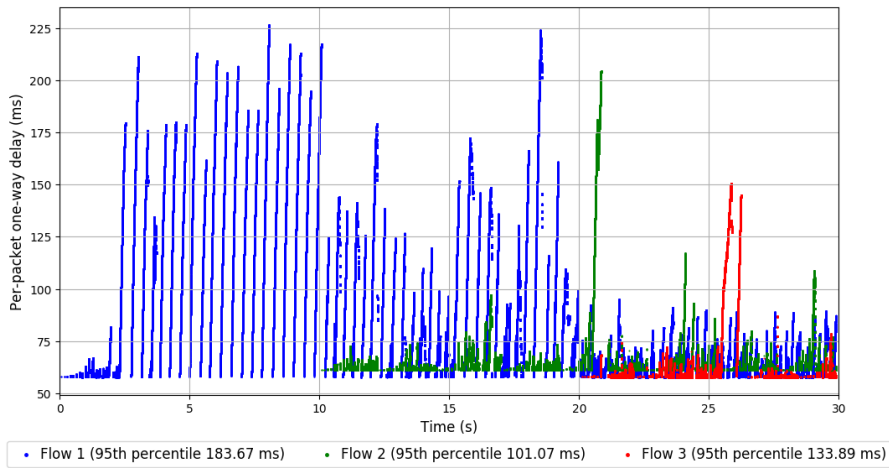
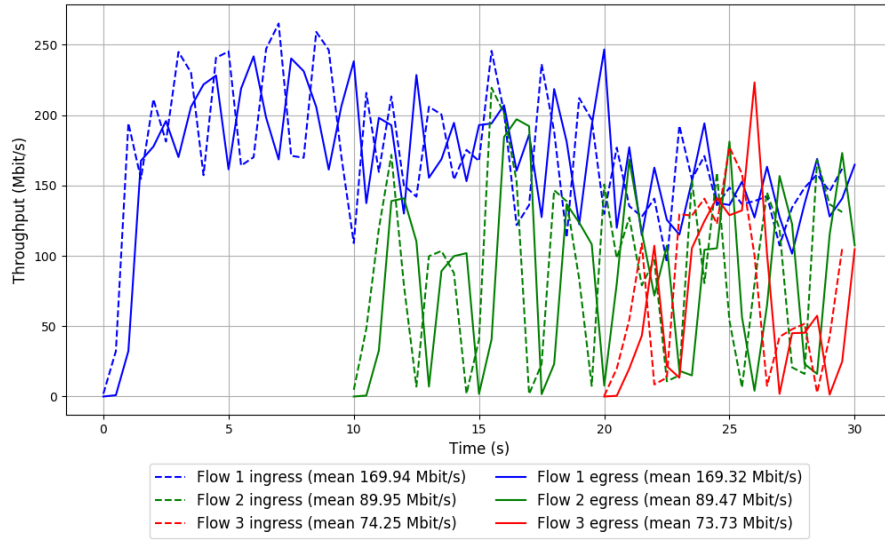


Run 4: Statistics of Verus

Start at: 2019-03-27 23:20:09  
End at: 2019-03-27 23:20:39  
Local clock offset: -0.092 ms  
Remote clock offset: -0.738 ms

```
# Below is generated by plot.py at 2019-03-28 02:39:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 252.91 Mbit/s
95th percentile per-packet one-way delay: 175.708 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 169.32 Mbit/s
95th percentile per-packet one-way delay: 183.670 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 89.47 Mbit/s
95th percentile per-packet one-way delay: 101.074 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 73.73 Mbit/s
95th percentile per-packet one-way delay: 133.890 ms
Loss rate: 1.34%
```

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

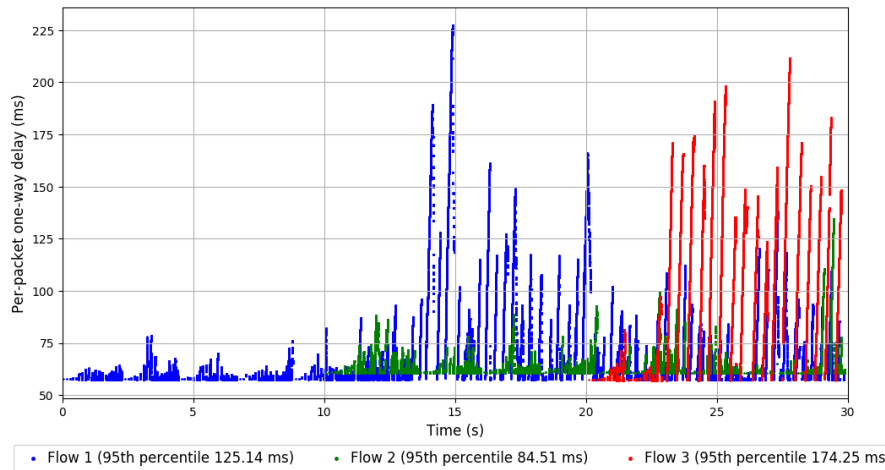
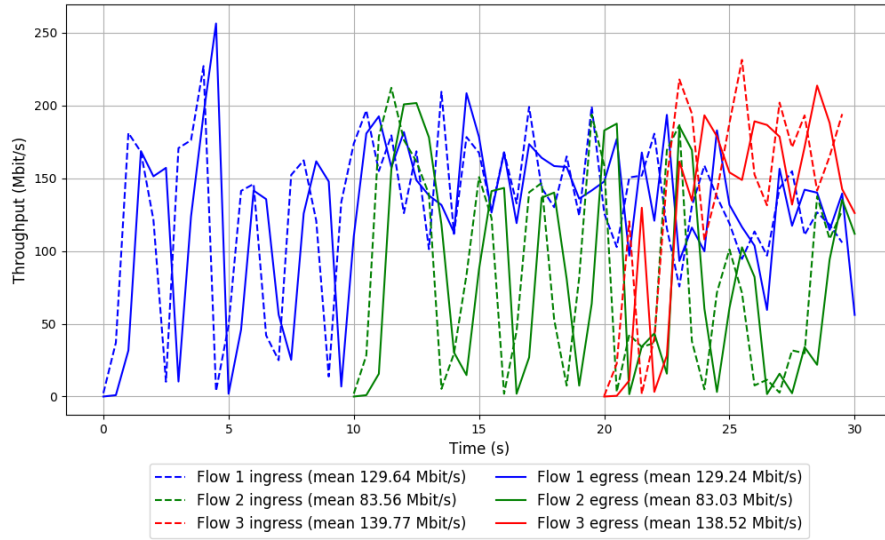


Run 5: Statistics of Verus

Start at: 2019-03-28 00:01:17  
End at: 2019-03-28 00:01:47  
Local clock offset: -0.139 ms  
Remote clock offset: -0.296 ms

```
# Below is generated by plot.py at 2019-03-28 02:41:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 229.02 Mbit/s
95th percentile per-packet one-way delay: 147.185 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 129.24 Mbit/s
95th percentile per-packet one-way delay: 125.143 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 83.03 Mbit/s
95th percentile per-packet one-way delay: 84.510 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 138.52 Mbit/s
95th percentile per-packet one-way delay: 174.246 ms
Loss rate: 3.42%
```

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



Run 1: Statistics of PCC-Vivace

Start at: 2019-03-27 21:04:43  
End at: 2019-03-27 21:05:13  
Local clock offset: -0.252 ms  
Remote clock offset: -0.154 ms

# Below is generated by plot.py at 2019-03-28 02:41:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 504.21 Mbit/s  
95th percentile per-packet one-way delay: 151.681 ms  
Loss rate: 1.18%

-- Flow 1:

Average throughput: 319.85 Mbit/s  
95th percentile per-packet one-way delay: 199.163 ms  
Loss rate: 1.38%

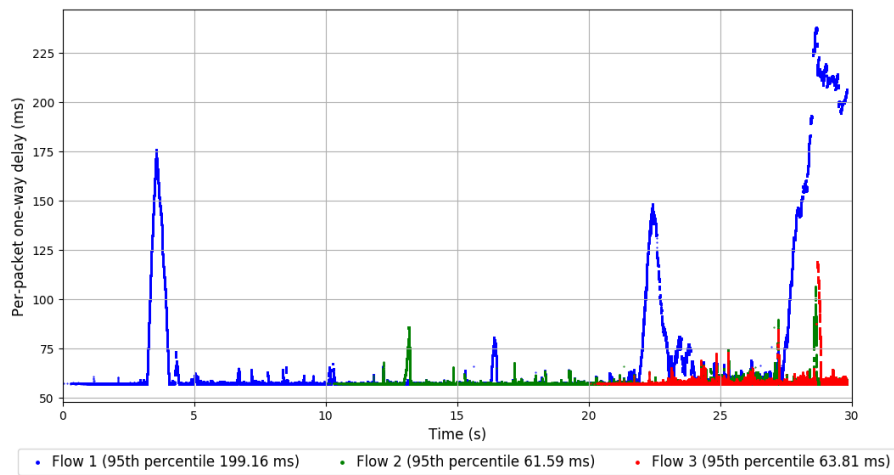
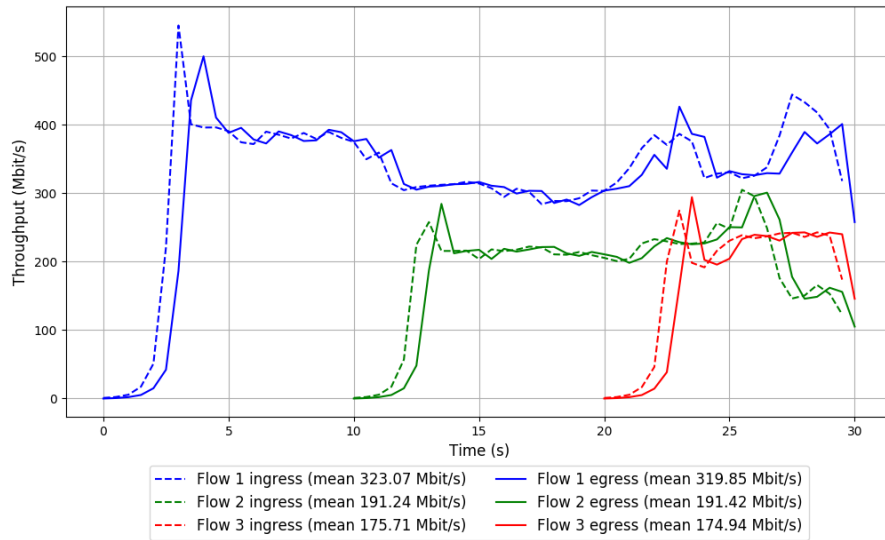
-- Flow 2:

Average throughput: 191.42 Mbit/s  
95th percentile per-packet one-way delay: 61.591 ms  
Loss rate: 0.49%

-- Flow 3:

Average throughput: 174.94 Mbit/s  
95th percentile per-packet one-way delay: 63.806 ms  
Loss rate: 1.59%

Run 1: Report of PCC-Vivace — Data Link





Run 2: Statistics of PCC-Vivace

Start at: 2019-03-27 21:46:44  
End at: 2019-03-27 21:47:14  
Local clock offset: -0.556 ms  
Remote clock offset: -0.795 ms

# Below is generated by plot.py at 2019-03-28 02:41:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 393.39 Mbit/s  
95th percentile per-packet one-way delay: 62.015 ms  
Loss rate: 0.77%

-- Flow 1:

Average throughput: 224.11 Mbit/s  
95th percentile per-packet one-way delay: 62.416 ms  
Loss rate: 0.50%

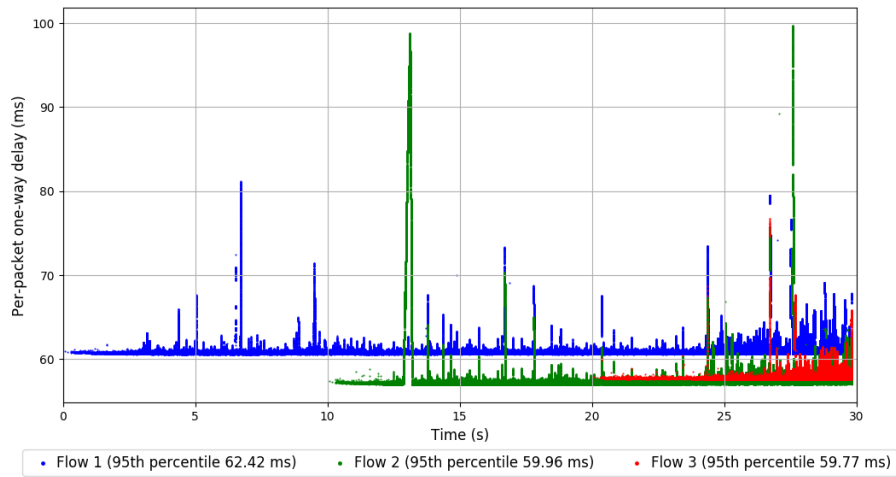
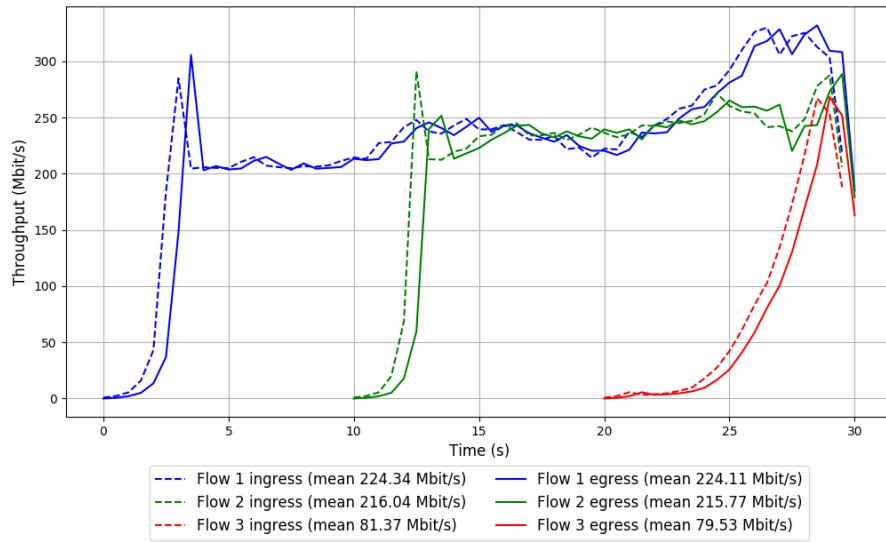
-- Flow 2:

Average throughput: 215.77 Mbit/s  
95th percentile per-packet one-way delay: 59.961 ms  
Loss rate: 0.70%

-- Flow 3:

Average throughput: 79.53 Mbit/s  
95th percentile per-packet one-way delay: 59.765 ms  
Loss rate: 3.41%

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



Run 3: Statistics of PCC-Vivace

Start at: 2019-03-27 22:28:13  
End at: 2019-03-27 22:28:43  
Local clock offset: 0.205 ms  
Remote clock offset: -0.163 ms

# Below is generated by plot.py at 2019-03-28 02:41:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 384.99 Mbit/s  
95th percentile per-packet one-way delay: 62.803 ms  
Loss rate: 0.72%

-- Flow 1:

Average throughput: 262.10 Mbit/s  
95th percentile per-packet one-way delay: 63.538 ms  
Loss rate: 0.40%

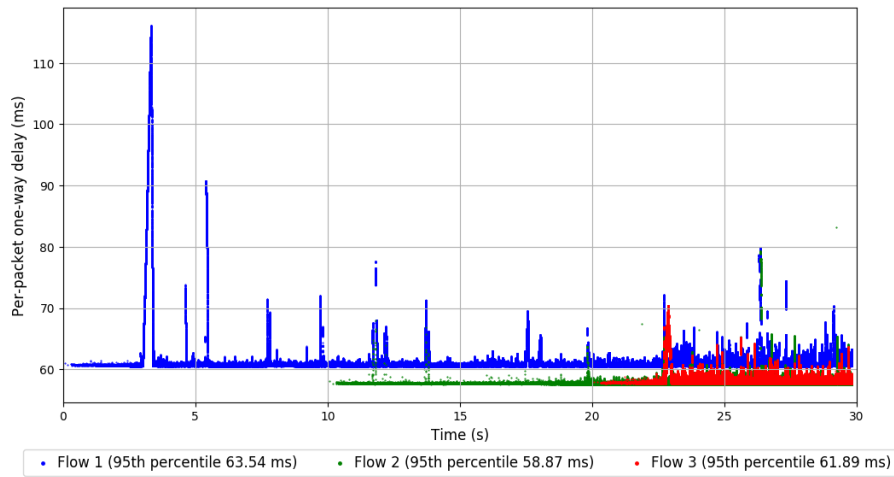
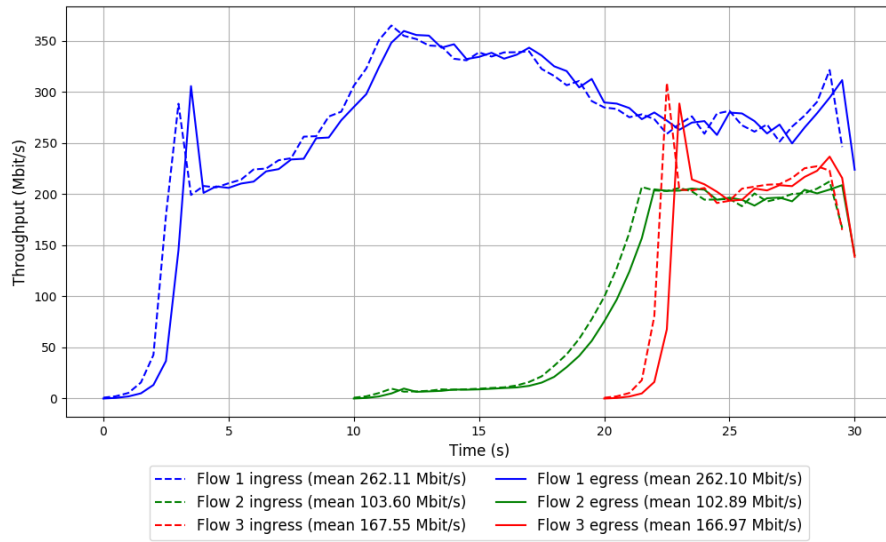
-- Flow 2:

Average throughput: 102.89 Mbit/s  
95th percentile per-packet one-way delay: 58.871 ms  
Loss rate: 1.26%

-- Flow 3:

Average throughput: 166.97 Mbit/s  
95th percentile per-packet one-way delay: 61.887 ms  
Loss rate: 1.56%

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



Run 4: Statistics of PCC-Vivace

Start at: 2019-03-27 23:08:55  
End at: 2019-03-27 23:09:25  
Local clock offset: -0.336 ms  
Remote clock offset: -0.183 ms

# Below is generated by plot.py at 2019-03-28 02:42:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 399.05 Mbit/s  
95th percentile per-packet one-way delay: 58.993 ms  
Loss rate: 0.77%

-- Flow 1:

Average throughput: 203.80 Mbit/s  
95th percentile per-packet one-way delay: 57.933 ms  
Loss rate: 0.50%

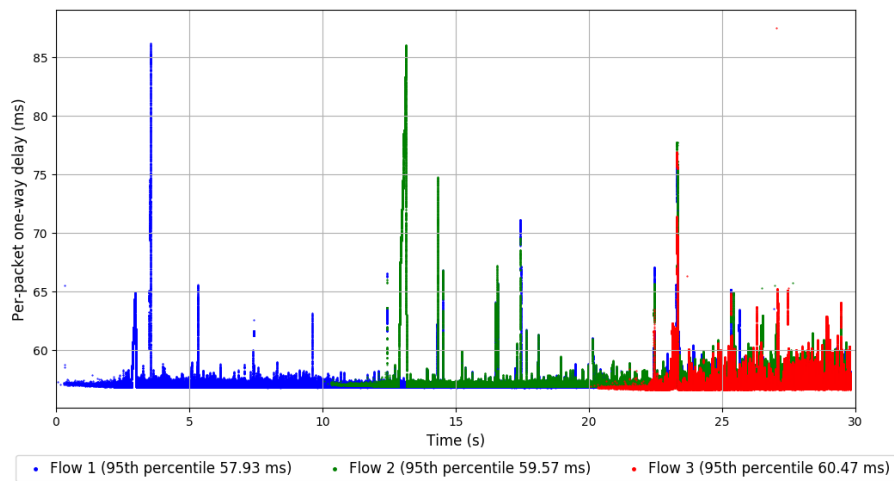
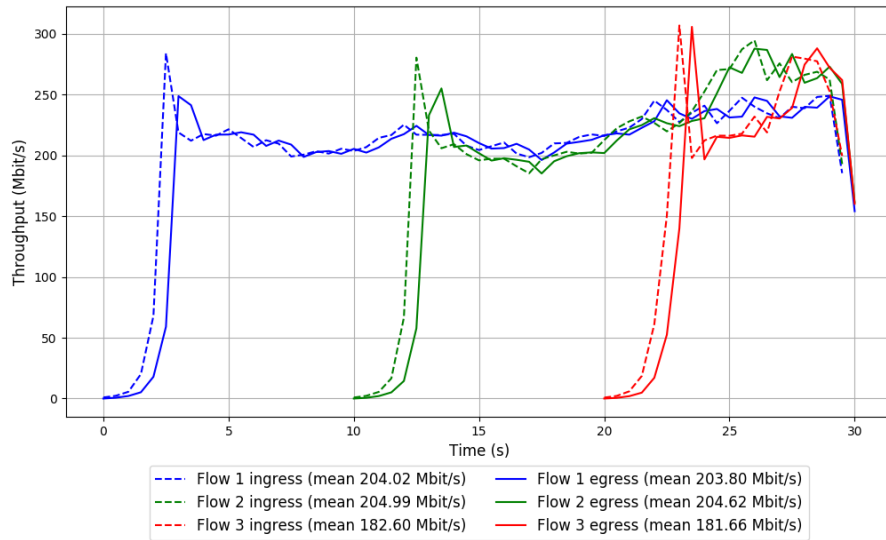
-- Flow 2:

Average throughput: 204.62 Mbit/s  
95th percentile per-packet one-way delay: 59.568 ms  
Loss rate: 0.77%

-- Flow 3:

Average throughput: 181.66 Mbit/s  
95th percentile per-packet one-way delay: 60.473 ms  
Loss rate: 1.70%

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



Run 5: Statistics of PCC-Vivace

Start at: 2019-03-27 23:50:38  
End at: 2019-03-27 23:51:08  
Local clock offset: -0.17 ms  
Remote clock offset: -0.189 ms

# Below is generated by plot.py at 2019-03-28 02:42:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 475.13 Mbit/s  
95th percentile per-packet one-way delay: 70.647 ms  
Loss rate: 0.57%

-- Flow 1:

Average throughput: 305.66 Mbit/s  
95th percentile per-packet one-way delay: 91.009 ms  
Loss rate: 0.52%

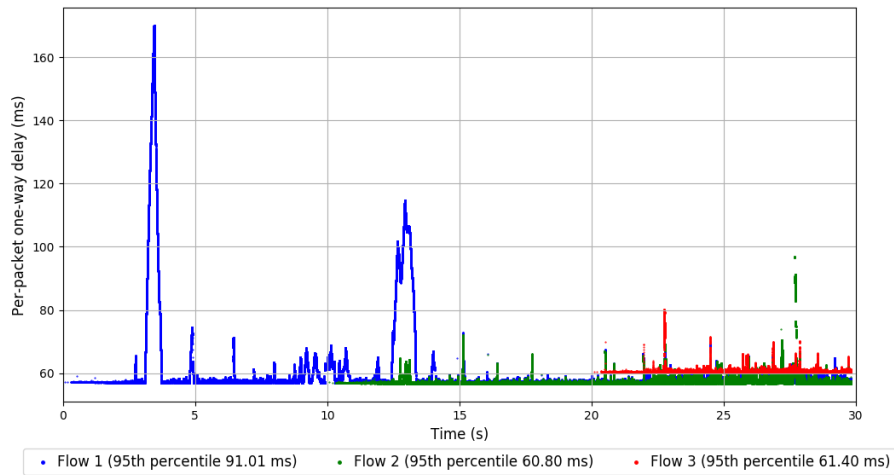
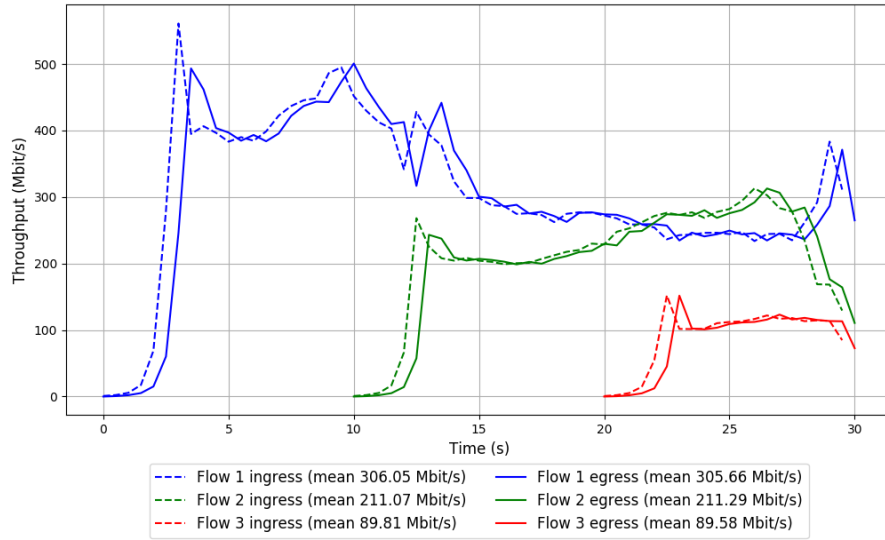
-- Flow 2:

Average throughput: 211.29 Mbit/s  
95th percentile per-packet one-way delay: 60.797 ms  
Loss rate: 0.49%

-- Flow 3:

Average throughput: 89.58 Mbit/s  
95th percentile per-packet one-way delay: 61.403 ms  
Loss rate: 1.48%

Run 5: Report of PCC-Vivace — Data Link





Run 1: Statistics of WebRTC media

Start at: 2019-03-27 20:47:03  
End at: 2019-03-27 20:47:33  
Local clock offset: 0.339 ms  
Remote clock offset: -0.553 ms

# Below is generated by plot.py at 2019-03-28 02:42:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 58.284 ms  
Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.07 Mbit/s  
95th percentile per-packet one-way delay: 58.037 ms  
Loss rate: 0.00%

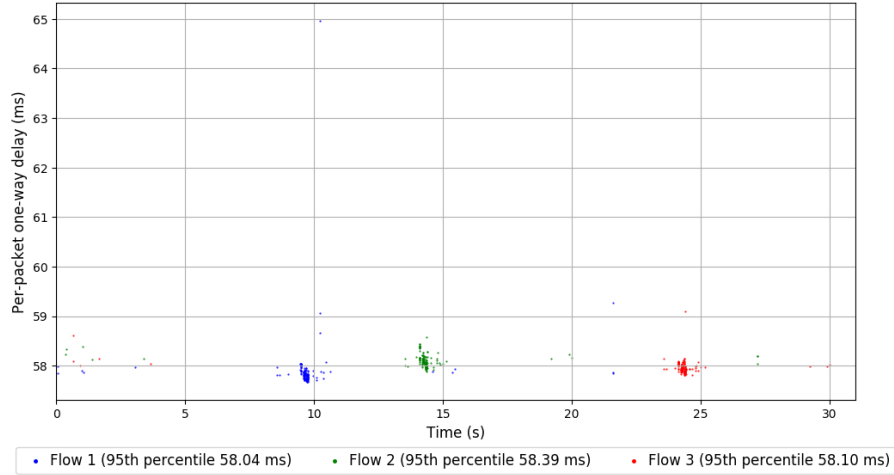
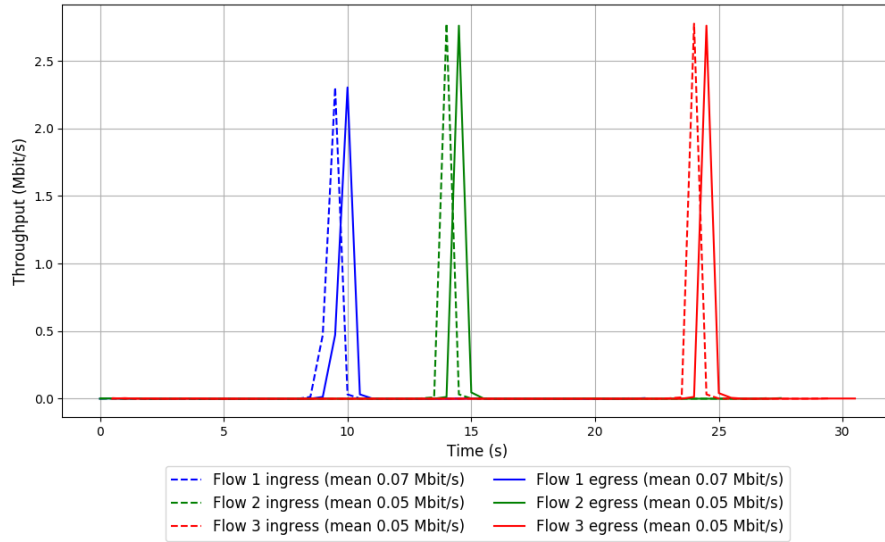
-- Flow 2:

Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 58.387 ms  
Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 58.100 ms  
Loss rate: 0.00%

# Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-03-27 21:28:22

End at: 2019-03-27 21:28:52

Local clock offset: -0.477 ms

Remote clock offset: -0.3 ms

# Below is generated by plot.py at 2019-03-28 02:42:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 60.520 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 60.555 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 60.543 ms

Loss rate: 0.05%

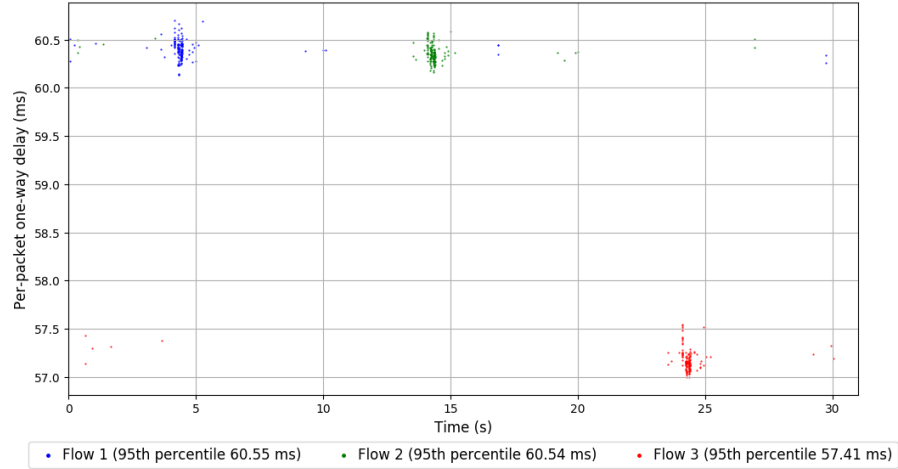
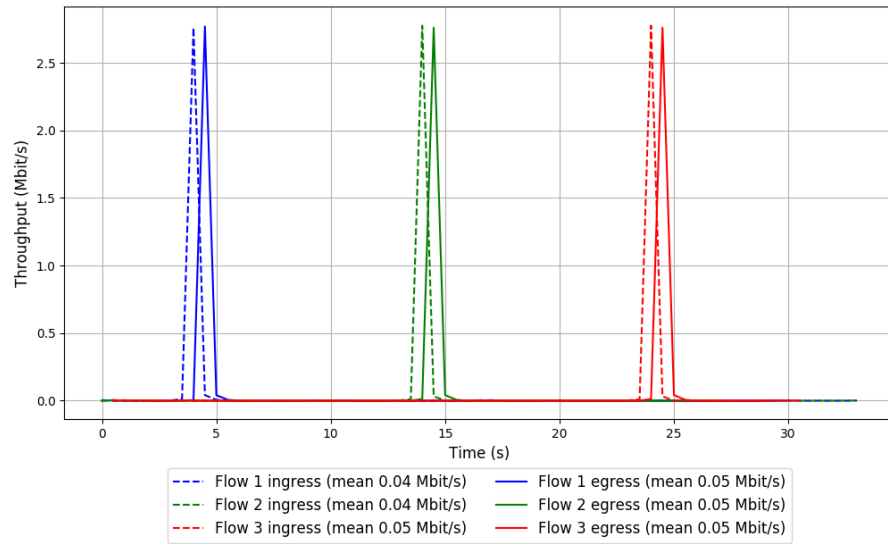
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 57.414 ms

Loss rate: 0.00%

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

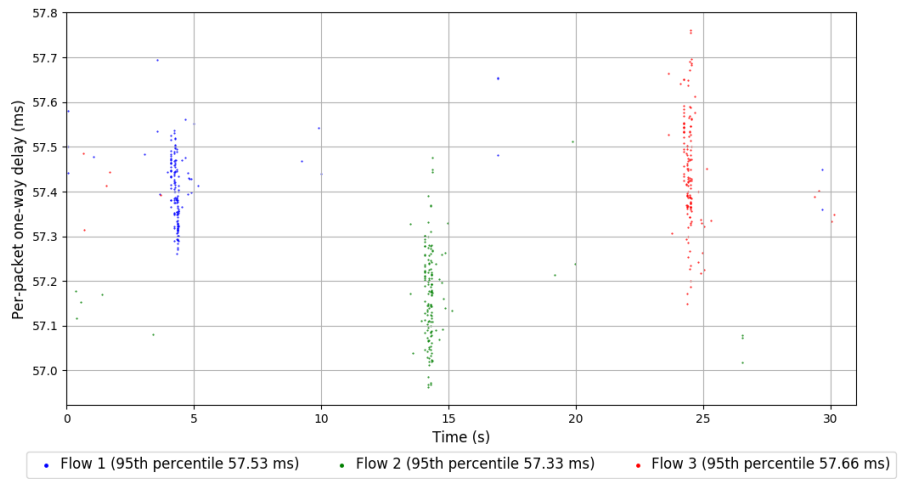
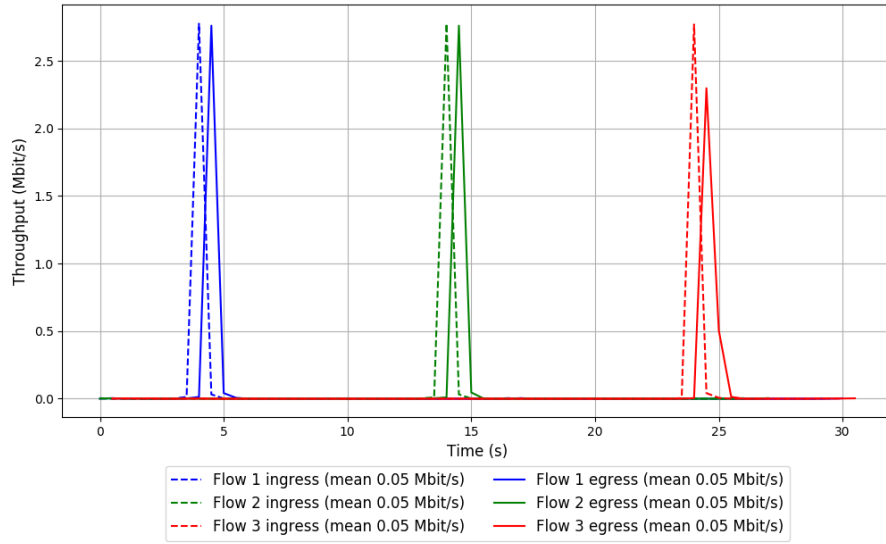


Run 3: Statistics of WebRTC media

Start at: 2019-03-27 22:09:47  
End at: 2019-03-27 22:10:17  
Local clock offset: -0.18 ms  
Remote clock offset: -0.205 ms

```
# Below is generated by plot.py at 2019-03-28 02:42:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 57.576 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.535 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.332 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.664 ms
Loss rate: 0.00%
```

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

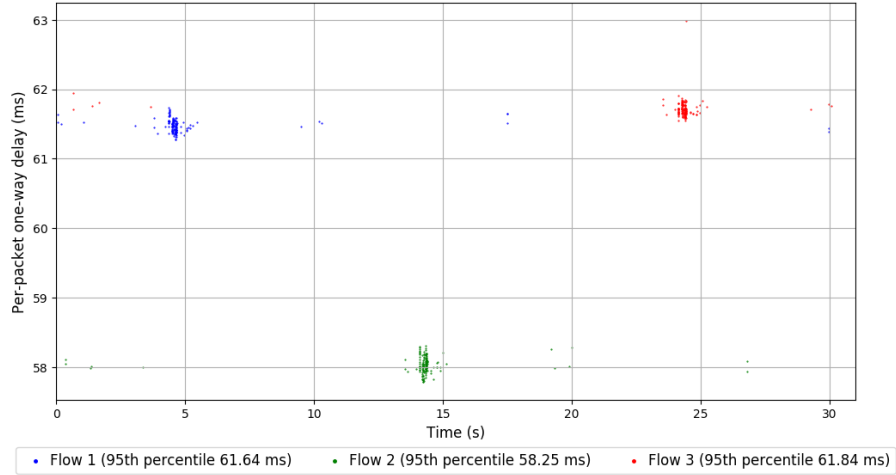
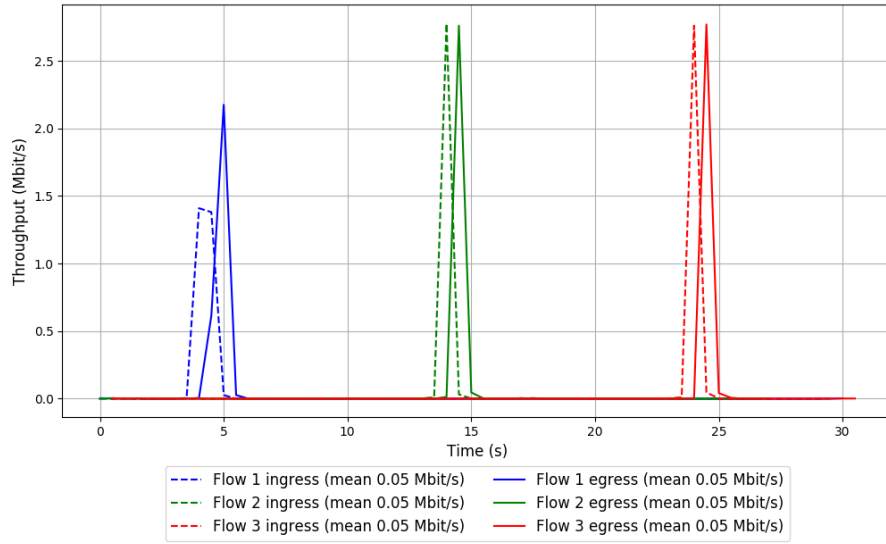


Run 4: Statistics of WebRTC media

Start at: 2019-03-27 22:50:56  
End at: 2019-03-27 22:51:26  
Local clock offset: 0.272 ms  
Remote clock offset: -0.548 ms

```
# Below is generated by plot.py at 2019-03-28 02:42:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 61.795 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 61.642 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 58.247 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 61.836 ms
Loss rate: 0.00%
```

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





Run 5: Statistics of WebRTC media

Start at: 2019-03-27 23:32:40  
End at: 2019-03-27 23:33:10  
Local clock offset: -0.174 ms  
Remote clock offset: -0.058 ms

```
# Below is generated by plot.py at 2019-03-28 02:42:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 60.727 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.201 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 60.950 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.305 ms
Loss rate: 0.00%
```

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

