

## Pantheon Report

Generated at 2018-10-09 22:48:02 (UTC).  
Data path: AWS India 1 on `ens5 (local)` → India on `em1 (remote)`.  
Repeated the test of 18 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 `nets.org.sg` and have been applied to correct the timestamps in logs.

System info:

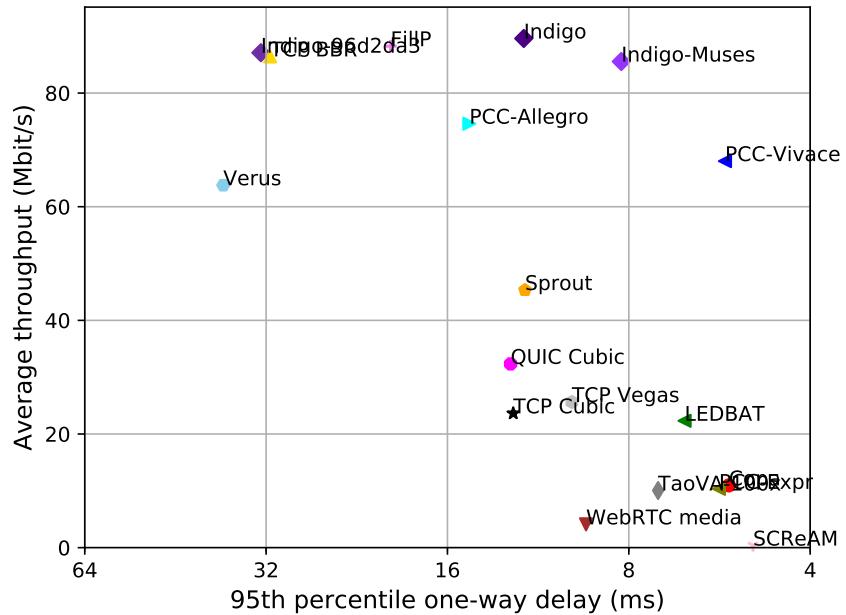
```
Linux 4.15.0-1023-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

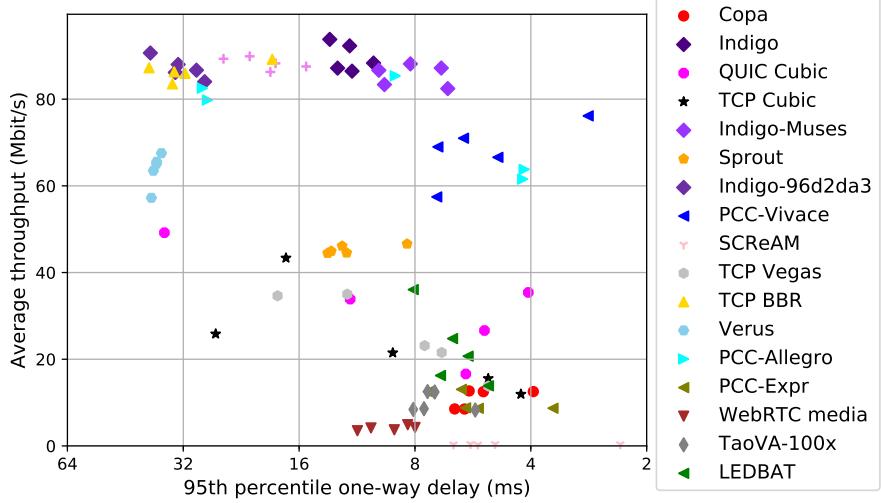
```
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd
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-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

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

test from AWS India 1 to India, 5 runs of 30s each per scheme  
3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS India 1 to India, 5 runs of 30s each per scheme  
3 flows with 10s interval between flows



↳

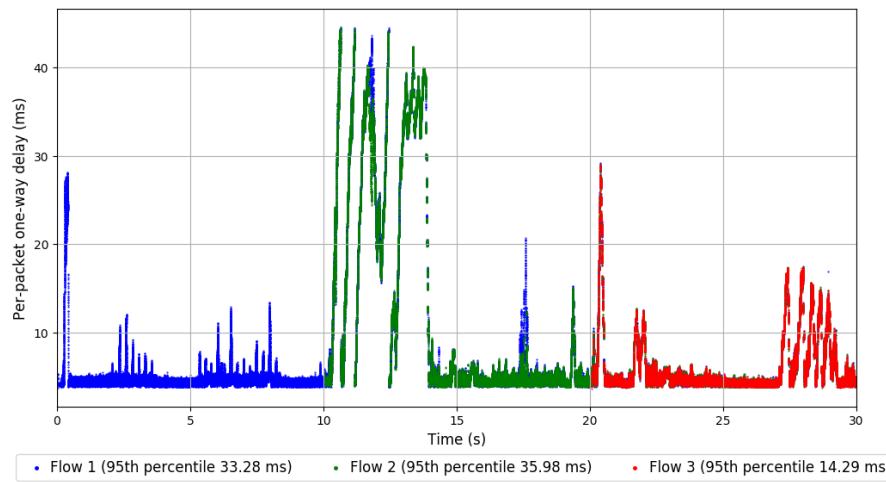
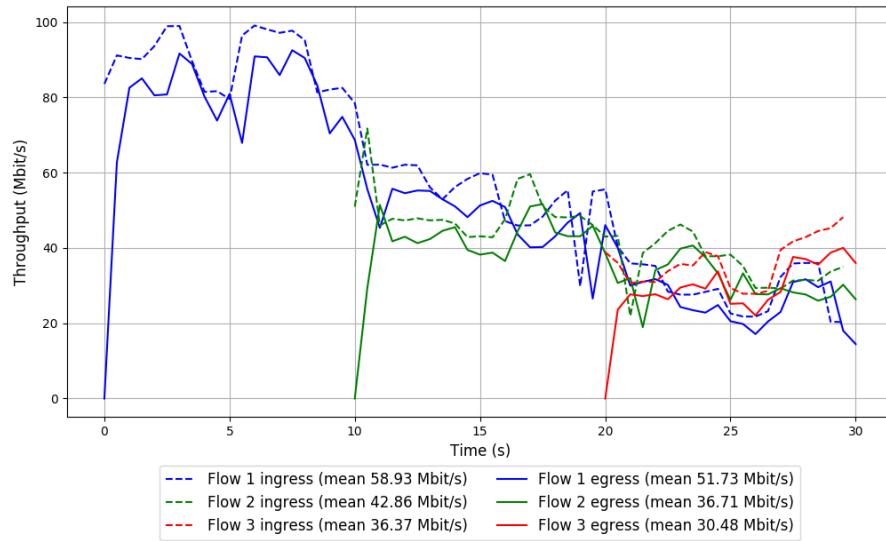
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	54.85	31.90	31.59	28.09	34.02	23.99	11.05	13.22	15.75
Copa	5	5.23	7.46	2.37	5.88	6.77	5.31	81.19	71.73	86.51
TCP Cubic	5	12.89	10.20	11.88	14.97	7.49	9.97	0.68	0.74	1.01
FillP	5	54.10	36.42	30.10	19.90	19.14	20.54	21.74	32.03	35.32
Indigo	5	52.41	38.53	36.51	11.37	12.66	13.59	8.24	9.37	12.49
Indigo-96d2da3	5	59.43	28.51	28.39	33.83	30.18	28.92	47.20	51.82	55.24
LEDBAT	5	12.55	10.19	9.64	6.29	6.57	6.38	1.07	1.15	1.22
Indigo-Muses	5	47.18	38.69	38.73	8.20	8.11	8.37	8.21	6.62	10.74
PCC-Allegro	5	68.80	7.23	3.04	14.43	16.06	15.43	7.89	7.80	8.19
PCC-Expr	5	3.19	8.18	5.28	6.12	5.68	5.66	69.79	32.81	34.88
QUIC Cubic	5	17.33	15.05	15.16	11.92	9.94	16.49	1.99	2.03	2.44
SCReAM	5	0.17	0.19	0.21	4.75	4.80	4.82	0.25	0.30	0.16
Sprout	5	23.15	22.76	21.33	11.32	12.00	12.81	2.32	2.54	4.26
TaoVA-100x	5	2.15	8.74	7.48	6.60	6.93	10.89	91.32	87.89	79.42
TCP Vegas	5	13.27	12.15	12.82	9.12	15.28	9.86	1.36	1.54	1.44
Verus	5	40.63	24.06	22.19	35.23	39.03	39.37	31.20	51.39	45.51
PCC-Vivace	5	48.38	20.48	18.09	5.02	6.59	8.70	6.88	6.99	6.86
WebRTC media	5	2.27	1.42	0.43	9.32	9.39	9.23	0.54	0.45	0.80

Run 1: Statistics of TCP BBR

```
Start at: 2018-10-09 21:10:30
End at: 2018-10-09 21:11:00
Local clock offset: 3.34 ms
Remote clock offset: -3.704 ms

# Below is generated by plot.py at 2018-10-09 22:41:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.31 Mbit/s
95th percentile per-packet one-way delay: 33.771 ms
Loss rate: 13.32%
-- Flow 1:
Average throughput: 51.73 Mbit/s
95th percentile per-packet one-way delay: 33.279 ms
Loss rate: 12.22%
-- Flow 2:
Average throughput: 36.71 Mbit/s
95th percentile per-packet one-way delay: 35.980 ms
Loss rate: 14.36%
-- Flow 3:
Average throughput: 30.48 Mbit/s
95th percentile per-packet one-way delay: 14.289 ms
Loss rate: 16.20%
```

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

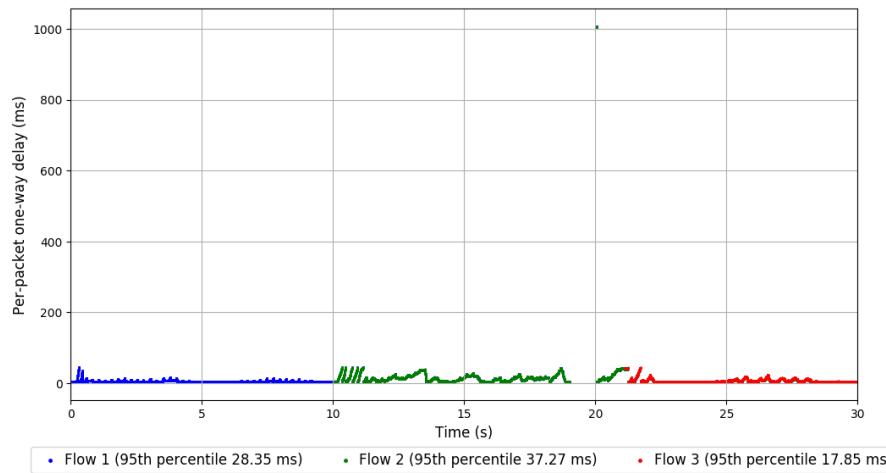
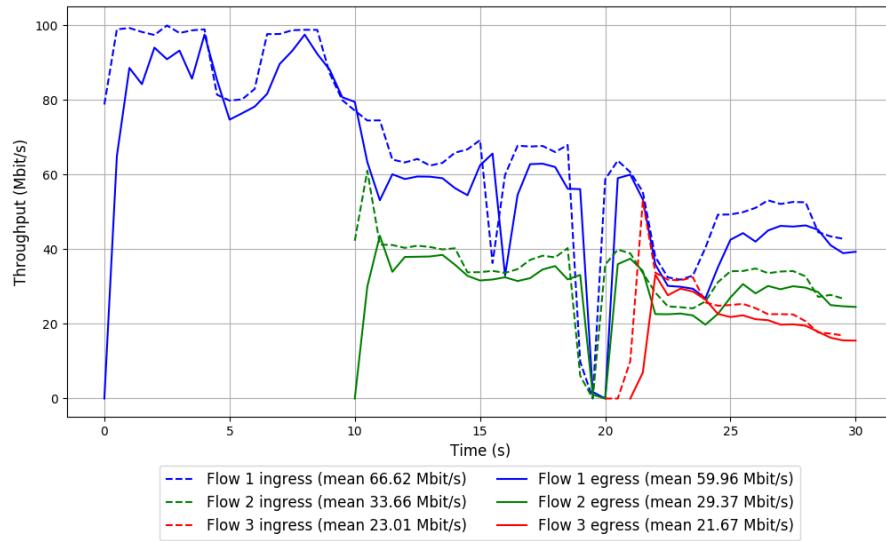


Run 2: Statistics of TCP BBR

```
Start at: 2018-10-09 21:31:40
End at: 2018-10-09 21:32:10
Local clock offset: 3.176 ms
Remote clock offset: -5.093 ms

# Below is generated by plot.py at 2018-10-09 22:41:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.97 Mbit/s
95th percentile per-packet one-way delay: 31.660 ms
Loss rate: 11.09%
-- Flow 1:
Average throughput: 59.96 Mbit/s
95th percentile per-packet one-way delay: 28.346 ms
Loss rate: 9.99%
-- Flow 2:
Average throughput: 29.37 Mbit/s
95th percentile per-packet one-way delay: 37.273 ms
Loss rate: 12.75%
-- Flow 3:
Average throughput: 21.67 Mbit/s
95th percentile per-packet one-way delay: 17.849 ms
Loss rate: 15.80%
```

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

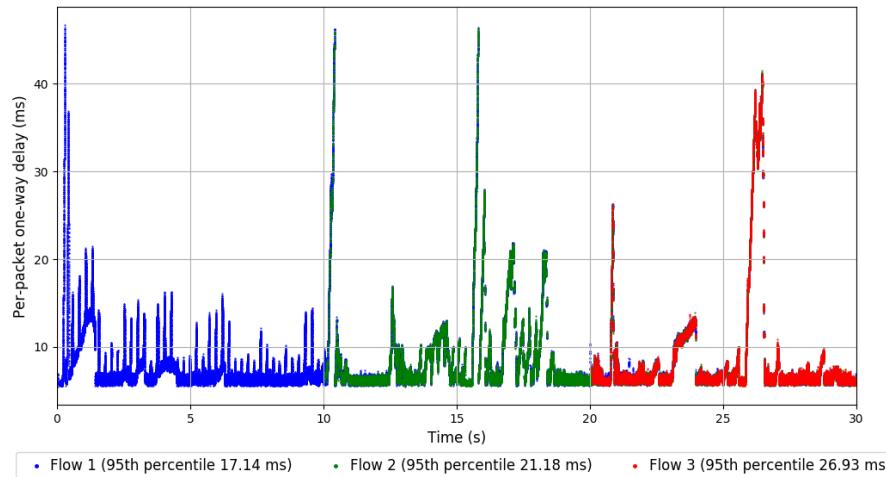
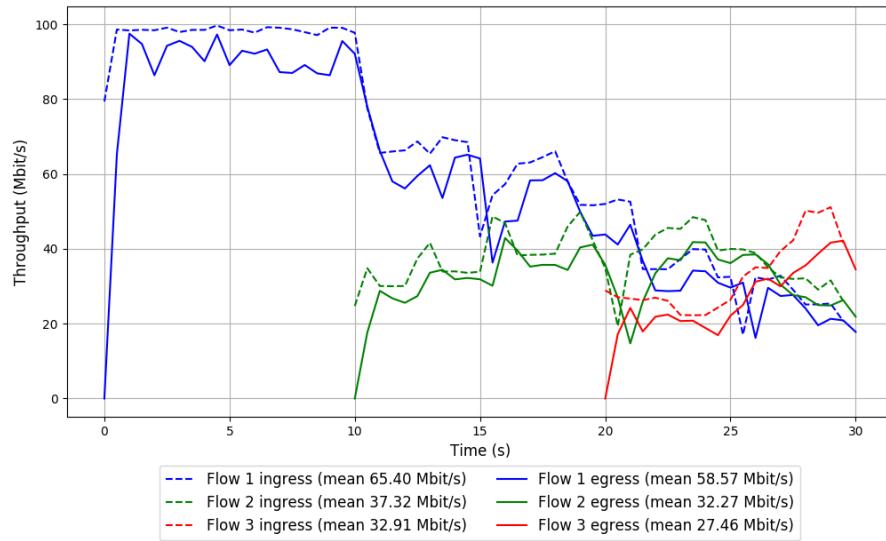


Run 3: Statistics of TCP BBR

```
Start at: 2018-10-09 21:52:40
End at: 2018-10-09 21:53:10
Local clock offset: 0.747 ms
Remote clock offset: -5.541 ms

# Below is generated by plot.py at 2018-10-09 22:41:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.20 Mbit/s
95th percentile per-packet one-way delay: 18.787 ms
Loss rate: 11.88%
-- Flow 1:
Average throughput: 58.57 Mbit/s
95th percentile per-packet one-way delay: 17.142 ms
Loss rate: 10.45%
-- Flow 2:
Average throughput: 32.27 Mbit/s
95th percentile per-packet one-way delay: 21.185 ms
Loss rate: 13.56%
-- Flow 3:
Average throughput: 27.46 Mbit/s
95th percentile per-packet one-way delay: 26.929 ms
Loss rate: 16.59%
```

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

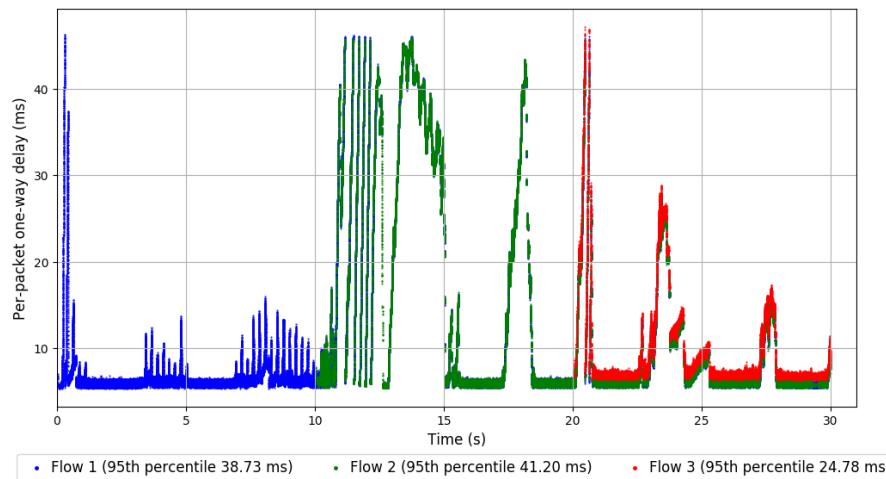
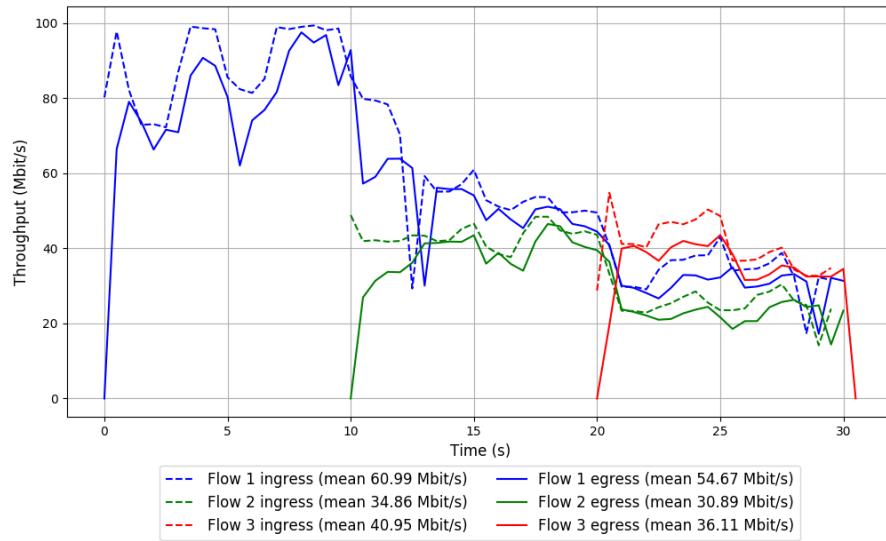


Run 4: Statistics of TCP BBR

```
Start at: 2018-10-09 22:13:54
End at: 2018-10-09 22:14:24
Local clock offset: 0.226 ms
Remote clock offset: -4.191 ms

# Below is generated by plot.py at 2018-10-09 22:41:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.25 Mbit/s
95th percentile per-packet one-way delay: 39.255 ms
Loss rate: 10.81%
-- Flow 1:
Average throughput: 54.67 Mbit/s
95th percentile per-packet one-way delay: 38.728 ms
Loss rate: 10.35%
-- Flow 2:
Average throughput: 30.89 Mbit/s
95th percentile per-packet one-way delay: 41.199 ms
Loss rate: 11.40%
-- Flow 3:
Average throughput: 36.11 Mbit/s
95th percentile per-packet one-way delay: 24.783 ms
Loss rate: 11.82%
```

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

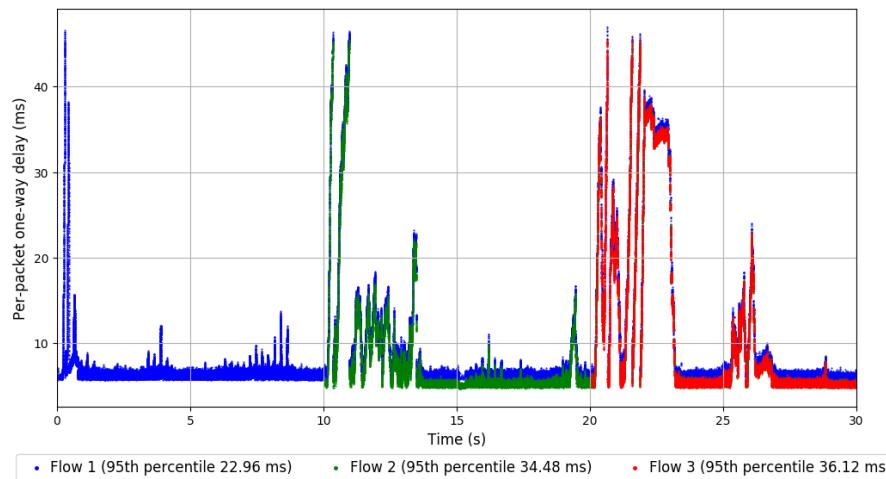
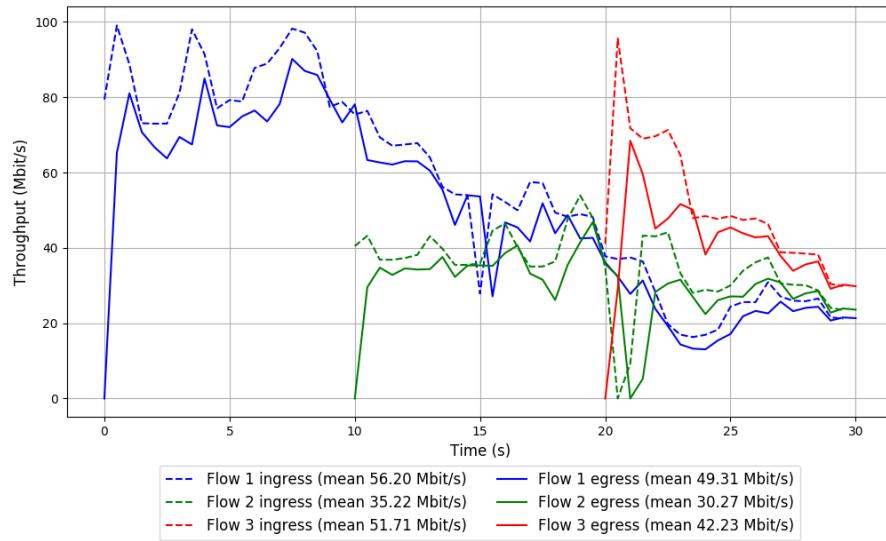


Run 5: Statistics of TCP BBR

```
Start at: 2018-10-09 22:35:09
End at: 2018-10-09 22:35:39
Local clock offset: 0.18 ms
Remote clock offset: -4.96 ms

# Below is generated by plot.py at 2018-10-09 22:41:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.52 Mbit/s
95th percentile per-packet one-way delay: 34.136 ms
Loss rate: 13.77%
-- Flow 1:
Average throughput: 49.31 Mbit/s
95th percentile per-packet one-way delay: 22.959 ms
Loss rate: 12.26%
-- Flow 2:
Average throughput: 30.27 Mbit/s
95th percentile per-packet one-way delay: 34.475 ms
Loss rate: 14.05%
-- Flow 3:
Average throughput: 42.23 Mbit/s
95th percentile per-packet one-way delay: 36.121 ms
Loss rate: 18.34%
```

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

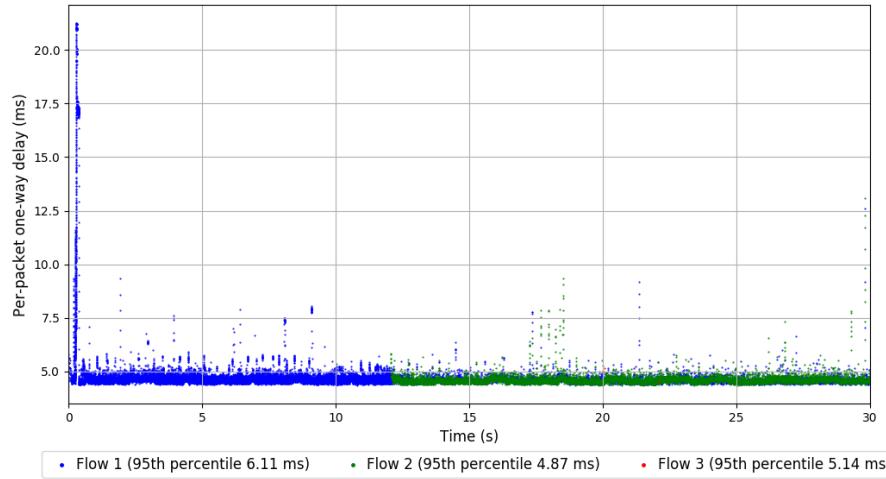
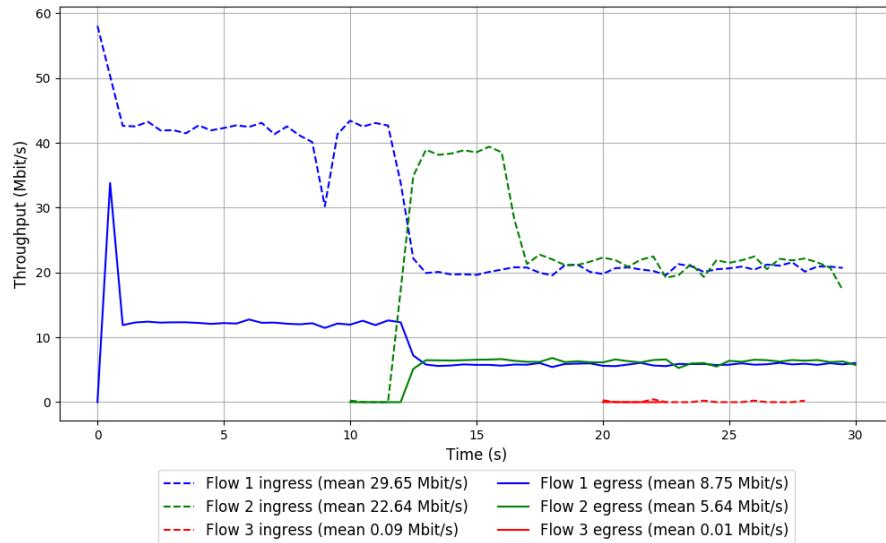


Run 1: Statistics of Copa

```
Start at: 2018-10-09 21:02:24
End at: 2018-10-09 21:02:54
Local clock offset: 1.384 ms
Remote clock offset: -4.942 ms

# Below is generated by plot.py at 2018-10-09 22:41:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.51 Mbit/s
95th percentile per-packet one-way delay: 5.313 ms
Loss rate: 72.04%
-- Flow 1:
Average throughput: 8.75 Mbit/s
95th percentile per-packet one-way delay: 6.109 ms
Loss rate: 70.48%
-- Flow 2:
Average throughput: 5.64 Mbit/s
95th percentile per-packet one-way delay: 4.870 ms
Loss rate: 75.07%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 5.145 ms
Loss rate: 96.53%
```

## Run 1: Report of Copa — Data Link

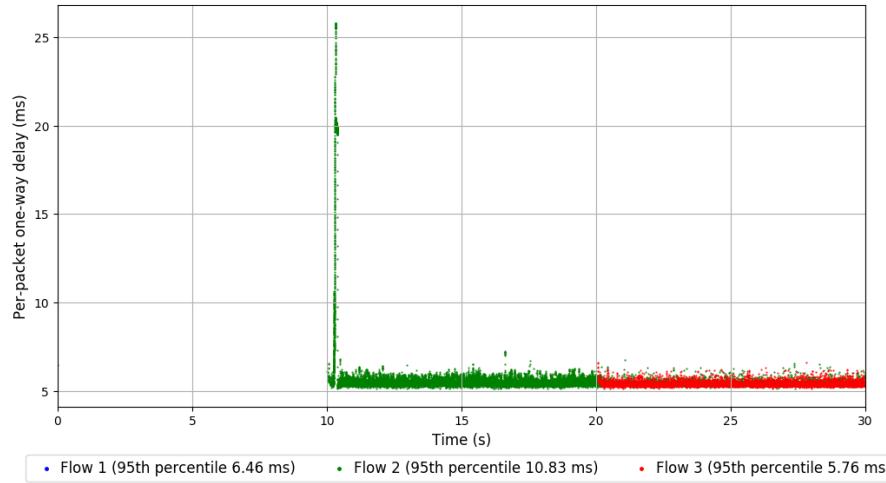
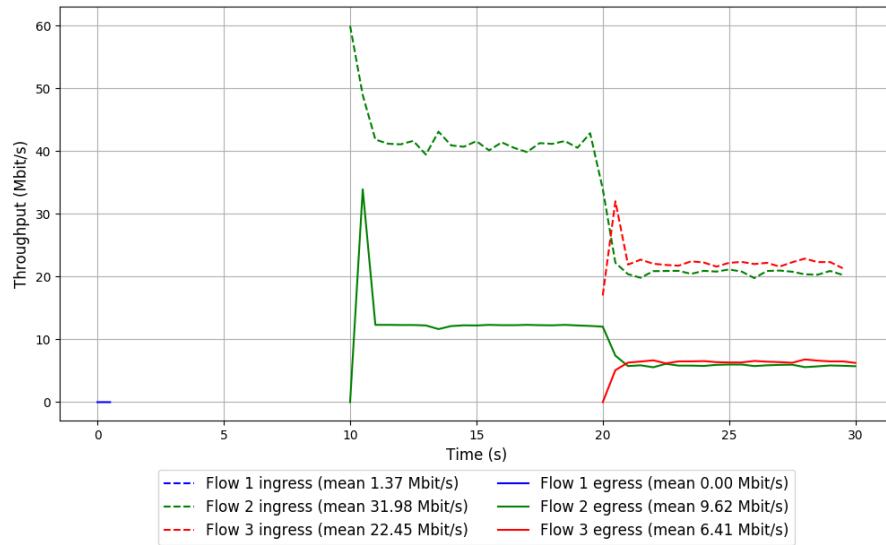


Run 2: Statistics of Copa

```
Start at: 2018-10-09 21:23:35
End at: 2018-10-09 21:24:05
Local clock offset: 1.024 ms
Remote clock offset: -4.857 ms

# Below is generated by plot.py at 2018-10-09 22:41:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.54 Mbit/s
95th percentile per-packet one-way delay: 6.307 ms
Loss rate: 70.32%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 6.463 ms
Loss rate: 97.92%
-- Flow 2:
Average throughput: 9.62 Mbit/s
95th percentile per-packet one-way delay: 10.827 ms
Loss rate: 69.92%
-- Flow 3:
Average throughput: 6.41 Mbit/s
95th percentile per-packet one-way delay: 5.756 ms
Loss rate: 71.46%
```

## Run 2: Report of Copa — Data Link

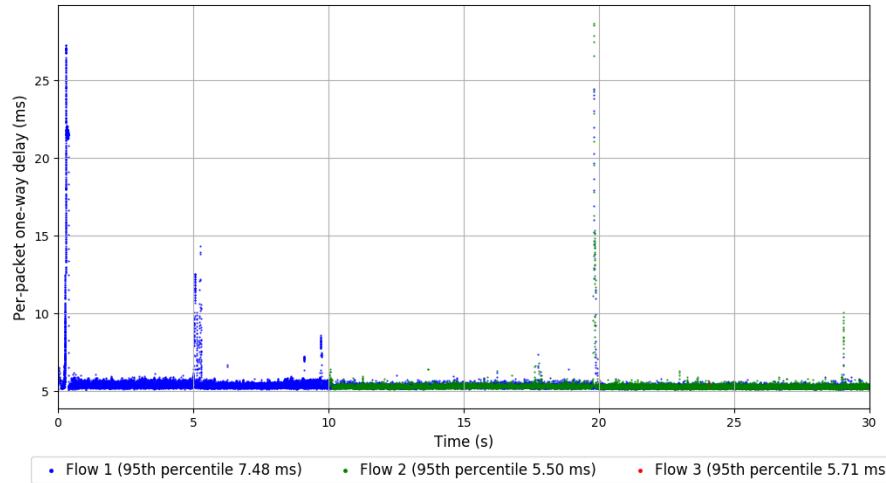
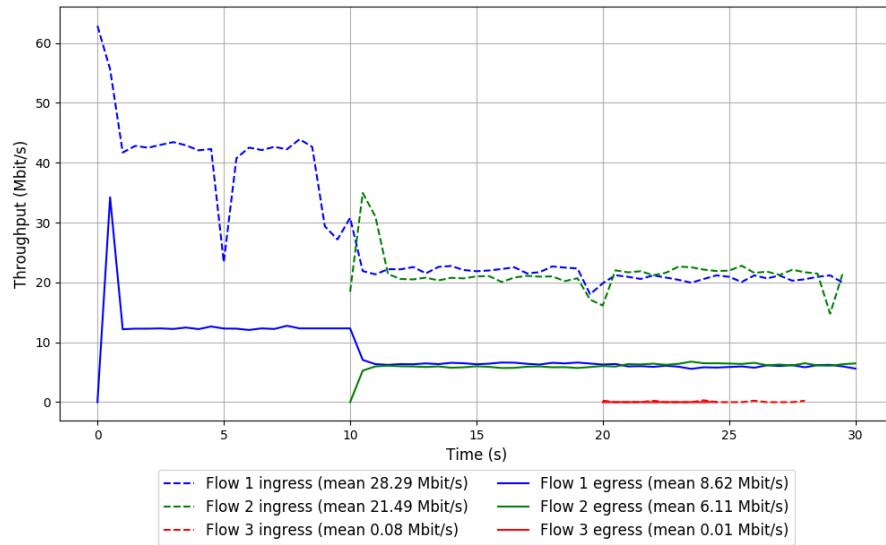


Run 3: Statistics of Copa

```
Start at: 2018-10-09 21:44:35
End at: 2018-10-09 21:45:05
Local clock offset: 1.937 ms
Remote clock offset: -4.683 ms

# Below is generated by plot.py at 2018-10-09 22:41:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.69 Mbit/s
95th percentile per-packet one-way delay: 5.785 ms
Loss rate: 70.23%
-- Flow 1:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 7.481 ms
Loss rate: 69.54%
-- Flow 2:
Average throughput: 6.11 Mbit/s
95th percentile per-packet one-way delay: 5.500 ms
Loss rate: 71.56%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 5.712 ms
Loss rate: 96.07%
```

### Run 3: Report of Copa — Data Link

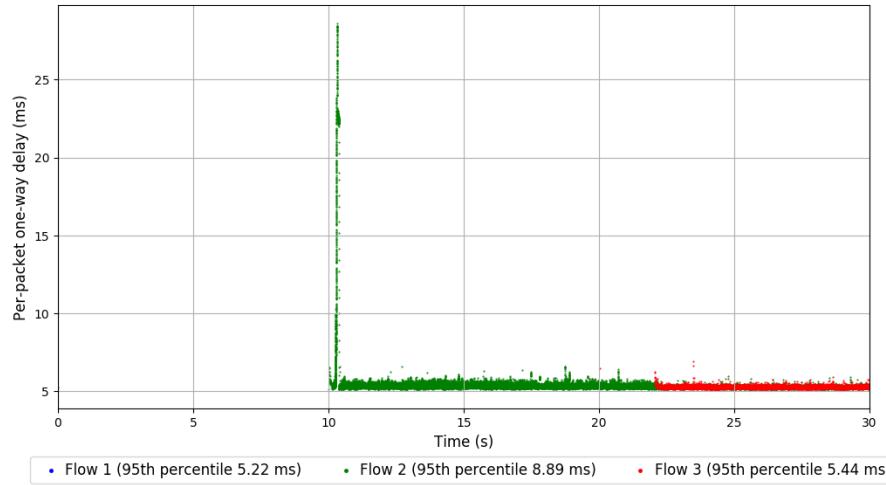
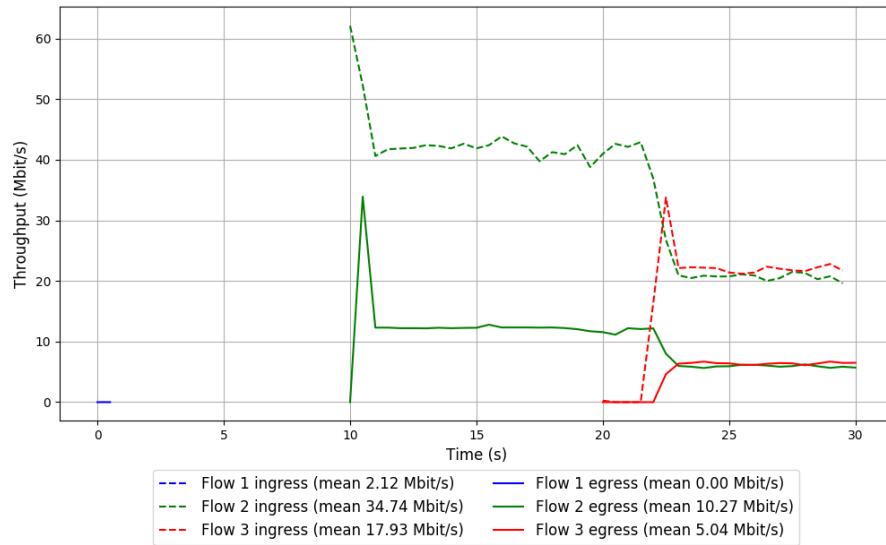


Run 4: Statistics of Copa

```
Start at: 2018-10-09 22:05:50
End at: 2018-10-09 22:06:20
Local clock offset: 1.017 ms
Remote clock offset: -4.888 ms

# Below is generated by plot.py at 2018-10-09 22:41:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.52 Mbit/s
95th percentile per-packet one-way delay: 5.947 ms
Loss rate: 70.73%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5.225 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 10.27 Mbit/s
95th percentile per-packet one-way delay: 8.893 ms
Loss rate: 70.43%
-- Flow 3:
Average throughput: 5.04 Mbit/s
95th percentile per-packet one-way delay: 5.439 ms
Loss rate: 71.87%
```

## Run 4: Report of Copa — Data Link

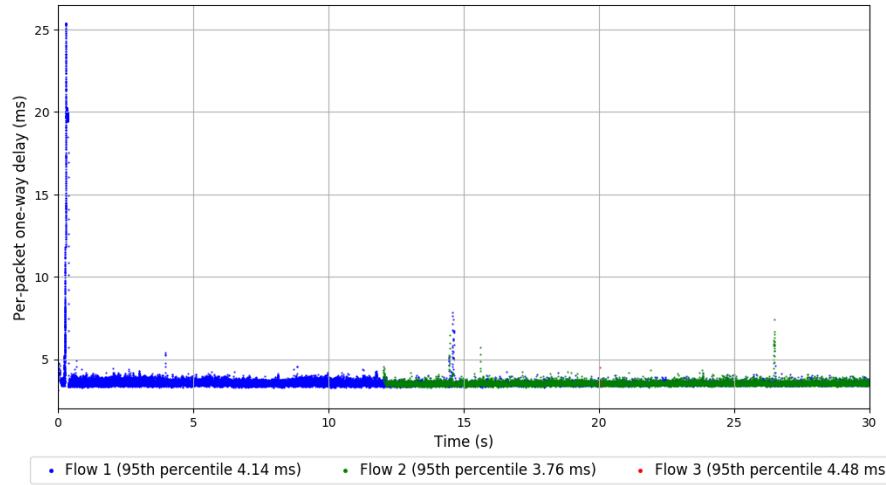
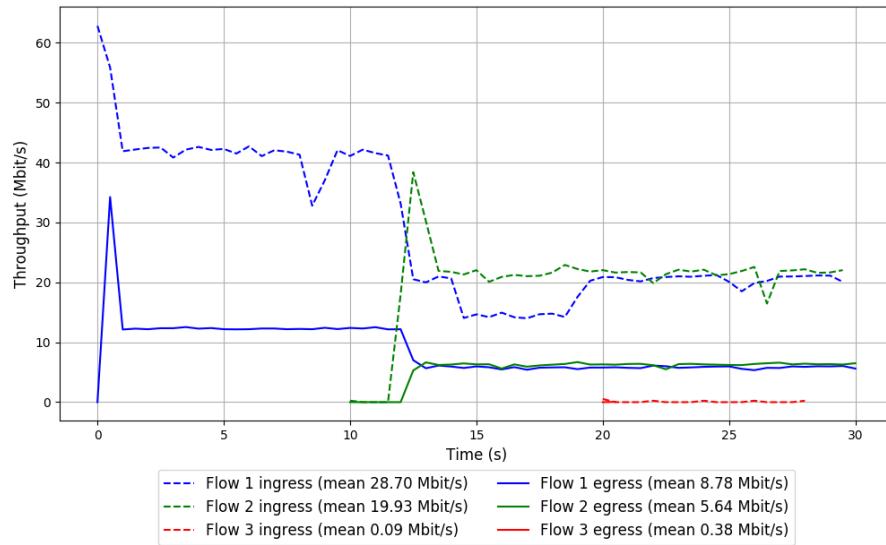


Run 5: Statistics of Copa

```
Start at: 2018-10-09 22:27:02
End at: 2018-10-09 22:27:32
Local clock offset: 2.276 ms
Remote clock offset: -5.108 ms

# Below is generated by plot.py at 2018-10-09 22:41:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.54 Mbit/s
95th percentile per-packet one-way delay: 3.941 ms
Loss rate: 70.15%
-- Flow 1:
Average throughput: 8.78 Mbit/s
95th percentile per-packet one-way delay: 4.142 ms
Loss rate: 69.42%
-- Flow 2:
Average throughput: 5.64 Mbit/s
95th percentile per-packet one-way delay: 3.758 ms
Loss rate: 71.68%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 4.476 ms
Loss rate: 96.64%
```

## Run 5: Report of Copa — Data Link

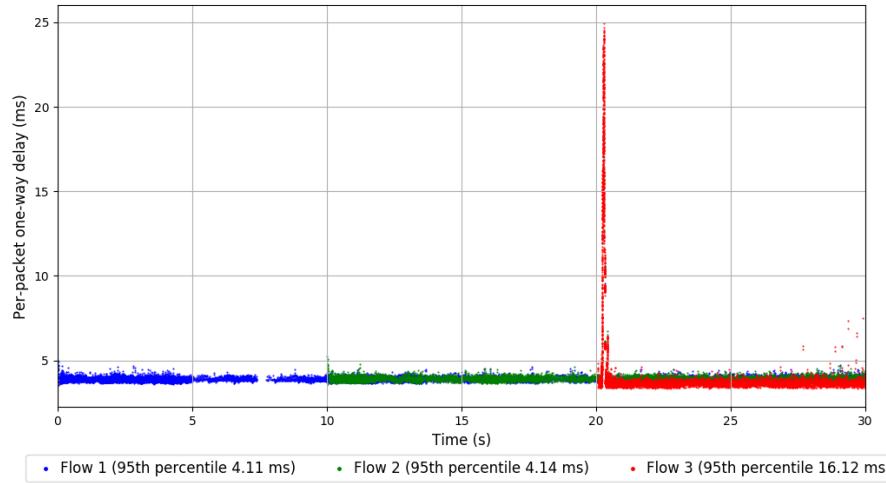
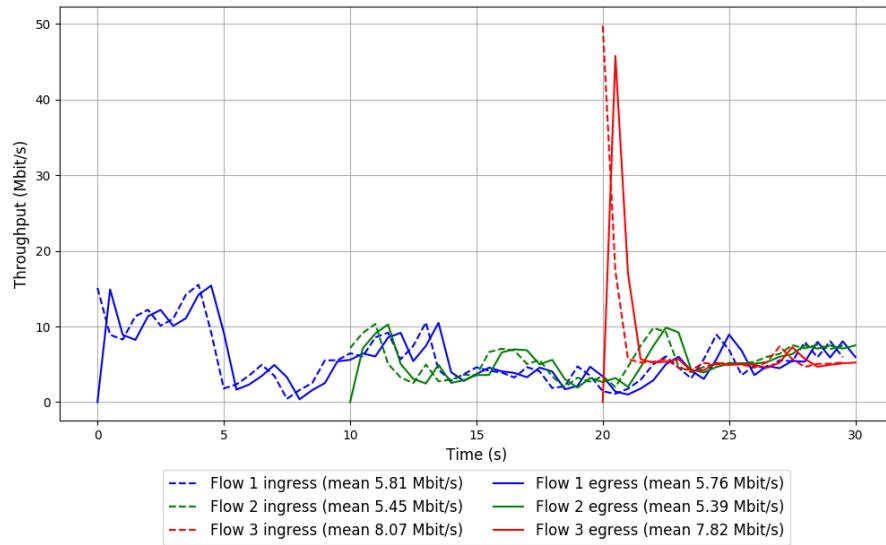


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-10-09 21:03:33
End at: 2018-10-09 21:04:03
Local clock offset: 2.737 ms
Remote clock offset: -4.651 ms

# Below is generated by plot.py at 2018-10-09 22:41:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.95 Mbit/s
95th percentile per-packet one-way delay: 4.245 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 5.76 Mbit/s
95th percentile per-packet one-way delay: 4.112 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 5.39 Mbit/s
95th percentile per-packet one-way delay: 4.140 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 7.82 Mbit/s
95th percentile per-packet one-way delay: 16.121 ms
Loss rate: 3.15%
```

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

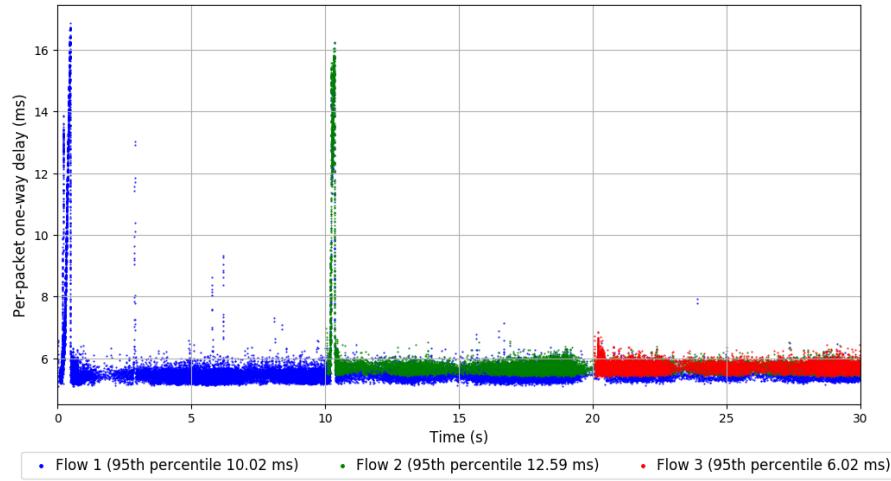
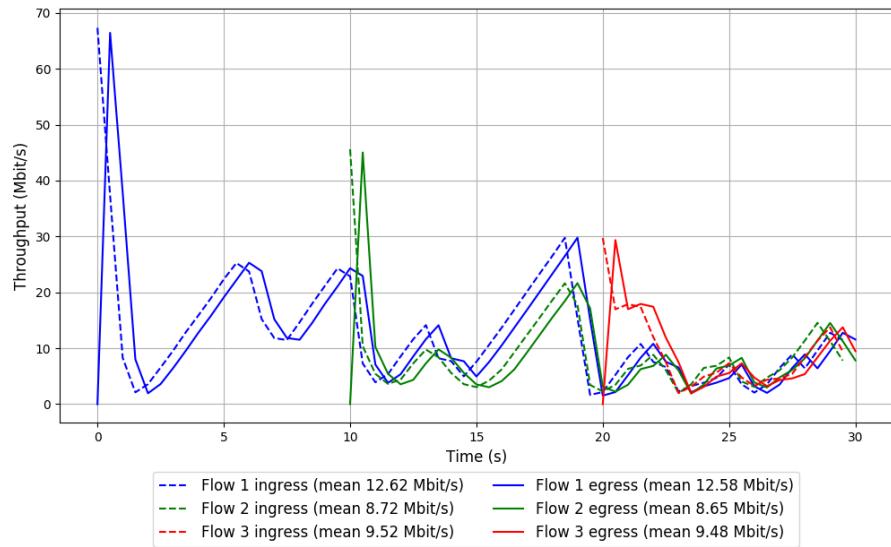


Run 2: Statistics of TCP Cubic

```
Start at: 2018-10-09 21:24:42
End at: 2018-10-09 21:25:12
Local clock offset: 0.945 ms
Remote clock offset: -4.979 ms

# Below is generated by plot.py at 2018-10-09 22:41:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.49 Mbit/s
95th percentile per-packet one-way delay: 9.137 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 12.58 Mbit/s
95th percentile per-packet one-way delay: 10.022 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 8.65 Mbit/s
95th percentile per-packet one-way delay: 12.594 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 9.48 Mbit/s
95th percentile per-packet one-way delay: 6.019 ms
Loss rate: 0.35%
```

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

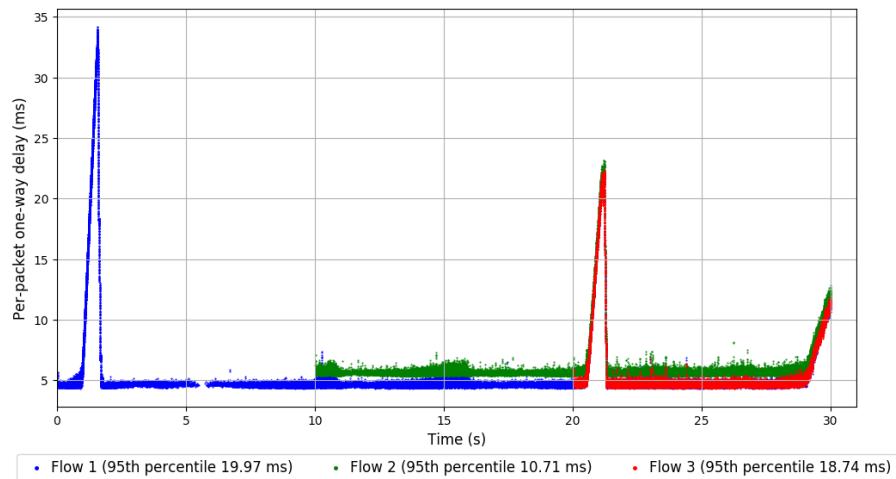
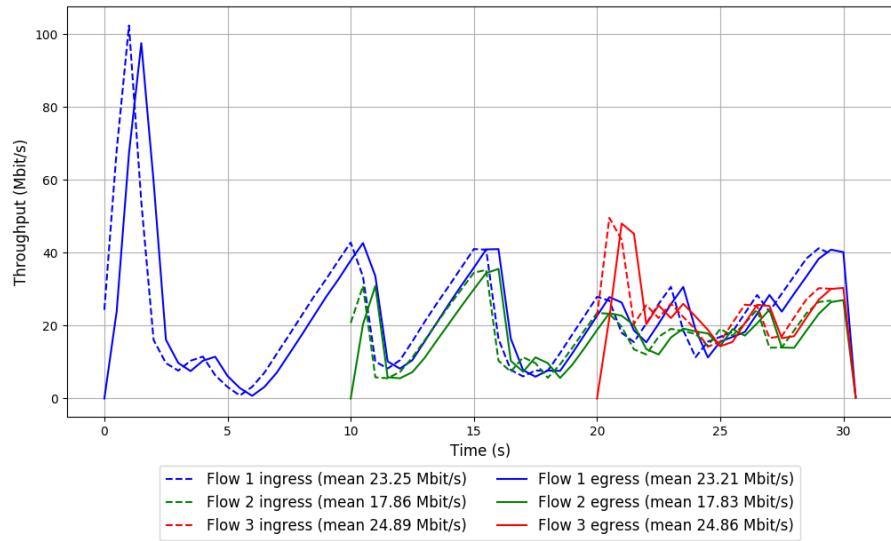


Run 3: Statistics of TCP Cubic

```
Start at: 2018-10-09 21:45:43
End at: 2018-10-09 21:46:13
Local clock offset: 1.492 ms
Remote clock offset: -4.927 ms

# Below is generated by plot.py at 2018-10-09 22:41:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.36 Mbit/s
95th percentile per-packet one-way delay: 17.311 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 23.21 Mbit/s
95th percentile per-packet one-way delay: 19.969 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 17.83 Mbit/s
95th percentile per-packet one-way delay: 10.707 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 24.86 Mbit/s
95th percentile per-packet one-way delay: 18.739 ms
Loss rate: 0.06%
```

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

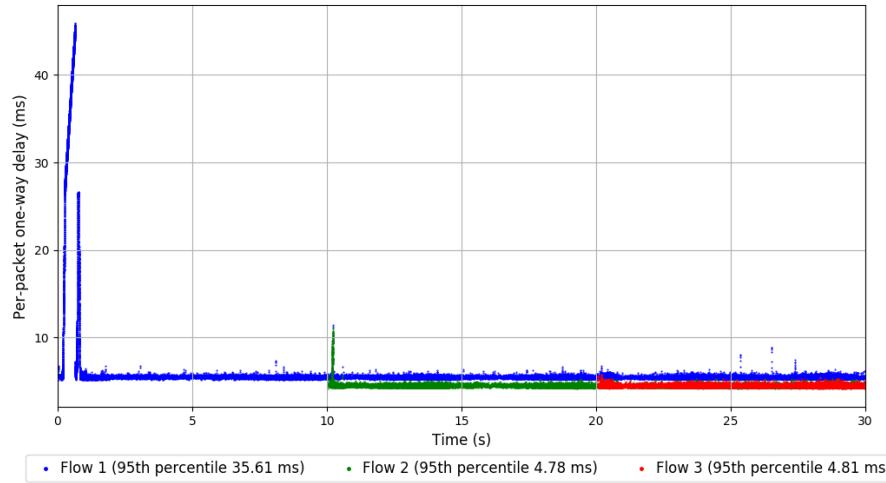
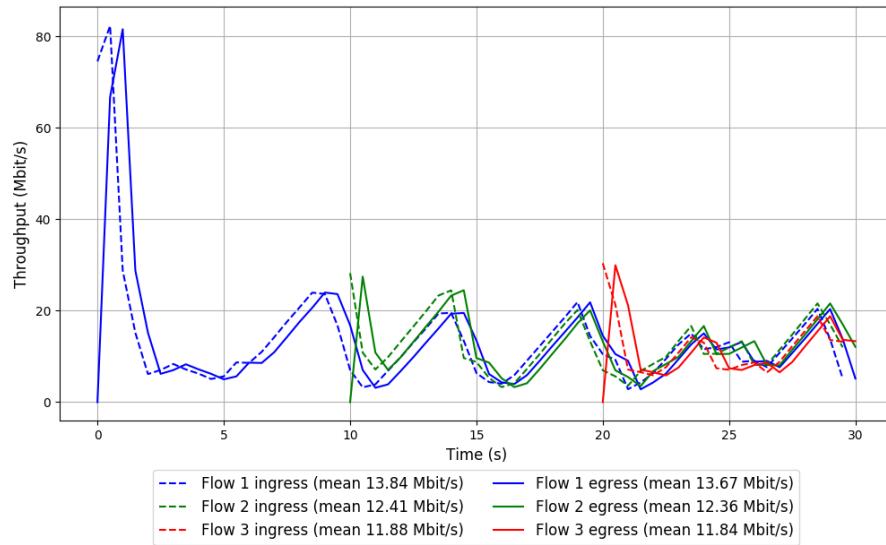


Run 4: Statistics of TCP Cubic

```
Start at: 2018-10-09 22:06:57
End at: 2018-10-09 22:07:27
Local clock offset: 0.968 ms
Remote clock offset: -4.822 ms

# Below is generated by plot.py at 2018-10-09 22:41:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.85 Mbit/s
95th percentile per-packet one-way delay: 26.361 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 13.67 Mbit/s
95th percentile per-packet one-way delay: 35.614 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 12.36 Mbit/s
95th percentile per-packet one-way delay: 4.778 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 11.84 Mbit/s
95th percentile per-packet one-way delay: 4.809 ms
Loss rate: 0.33%
```

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

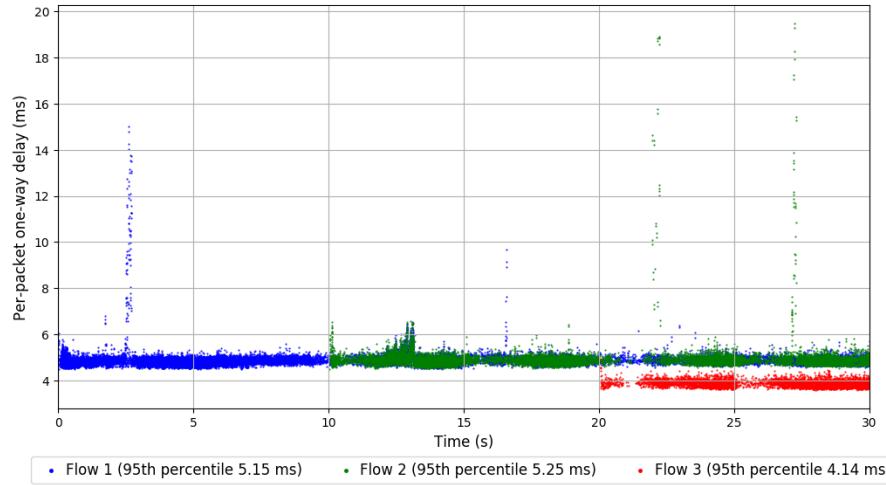
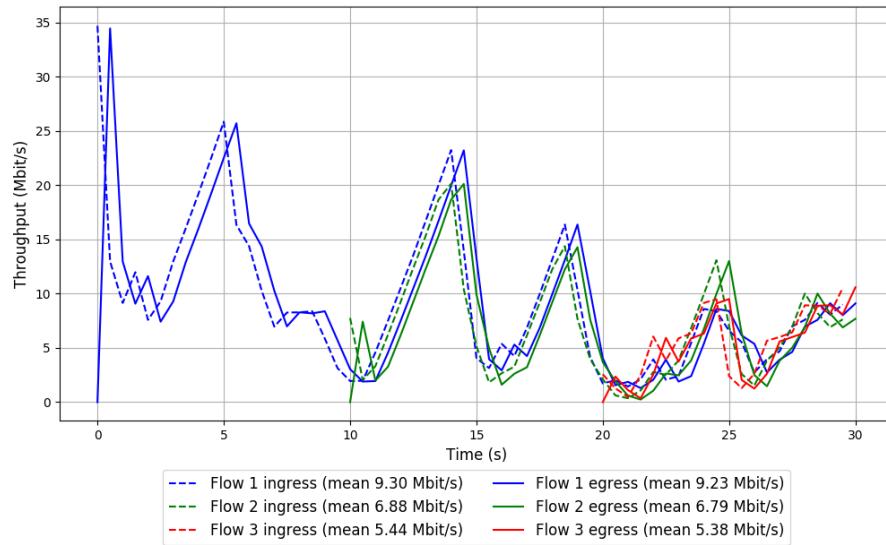


Run 5: Statistics of TCP Cubic

```
Start at: 2018-10-09 22:28:10
End at: 2018-10-09 22:28:40
Local clock offset: 0.574 ms
Remote clock offset: -5.62 ms

# Below is generated by plot.py at 2018-10-09 22:41:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.54 Mbit/s
95th percentile per-packet one-way delay: 5.161 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 9.23 Mbit/s
95th percentile per-packet one-way delay: 5.148 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 6.79 Mbit/s
95th percentile per-packet one-way delay: 5.253 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 5.38 Mbit/s
95th percentile per-packet one-way delay: 4.145 ms
Loss rate: 1.15%
```

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

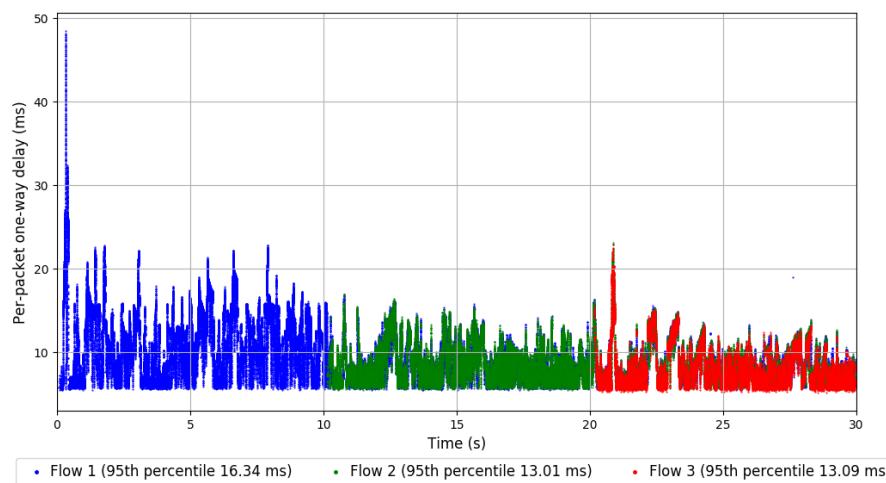
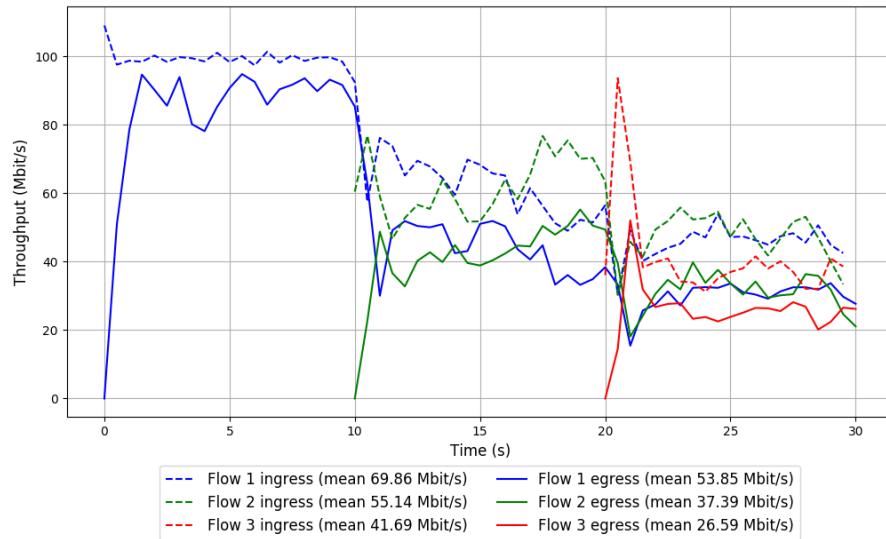


```
Run 1: Statistics of FillP

Start at: 2018-10-09 20:56:22
End at: 2018-10-09 20:56:52
Local clock offset: 1.054 ms
Remote clock offset: -4.091 ms

# Below is generated by plot.py at 2018-10-09 22:42:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.53 Mbit/s
95th percentile per-packet one-way delay: 15.341 ms
Loss rate: 27.27%
-- Flow 1:
Average throughput: 53.85 Mbit/s
95th percentile per-packet one-way delay: 16.338 ms
Loss rate: 22.92%
-- Flow 2:
Average throughput: 37.39 Mbit/s
95th percentile per-packet one-way delay: 13.012 ms
Loss rate: 32.19%
-- Flow 3:
Average throughput: 26.59 Mbit/s
95th percentile per-packet one-way delay: 13.086 ms
Loss rate: 36.22%
```

## Run 1: Report of FillP — Data Link

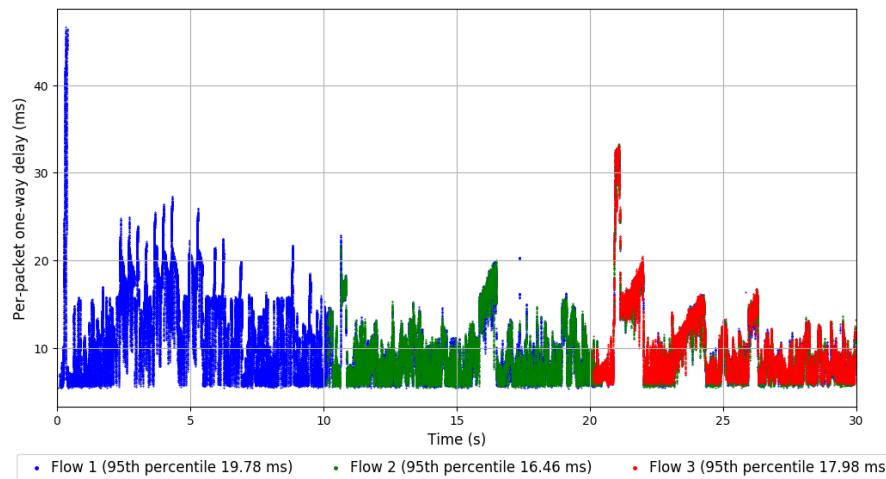
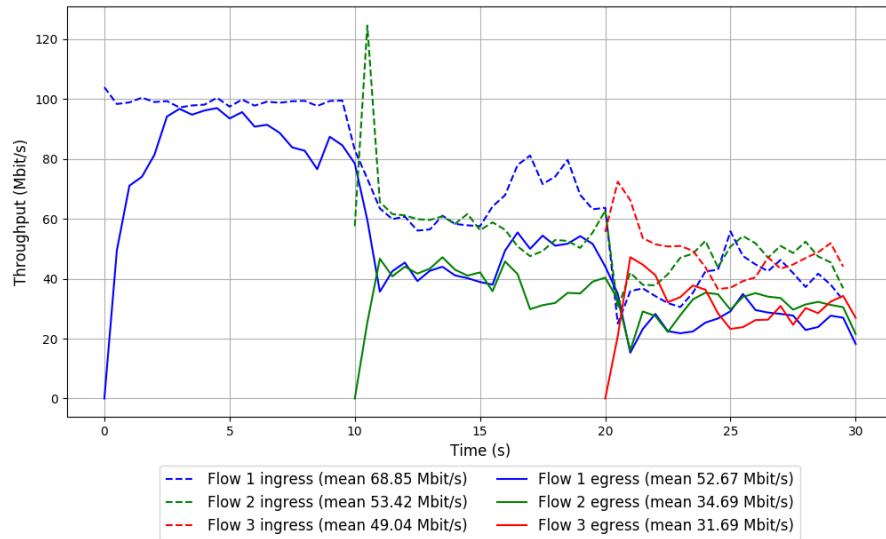


Run 2: Statistics of FillP

```
Start at: 2018-10-09 21:17:34
End at: 2018-10-09 21:18:04
Local clock offset: 1.116 ms
Remote clock offset: -4.123 ms

# Below is generated by plot.py at 2018-10-09 22:42:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.27 Mbit/s
95th percentile per-packet one-way delay: 19.003 ms
Loss rate: 28.50%
-- Flow 1:
Average throughput: 52.67 Mbit/s
95th percentile per-packet one-way delay: 19.781 ms
Loss rate: 23.48%
-- Flow 2:
Average throughput: 34.69 Mbit/s
95th percentile per-packet one-way delay: 16.459 ms
Loss rate: 35.07%
-- Flow 3:
Average throughput: 31.69 Mbit/s
95th percentile per-packet one-way delay: 17.979 ms
Loss rate: 35.35%
```

## Run 2: Report of FillP — Data Link

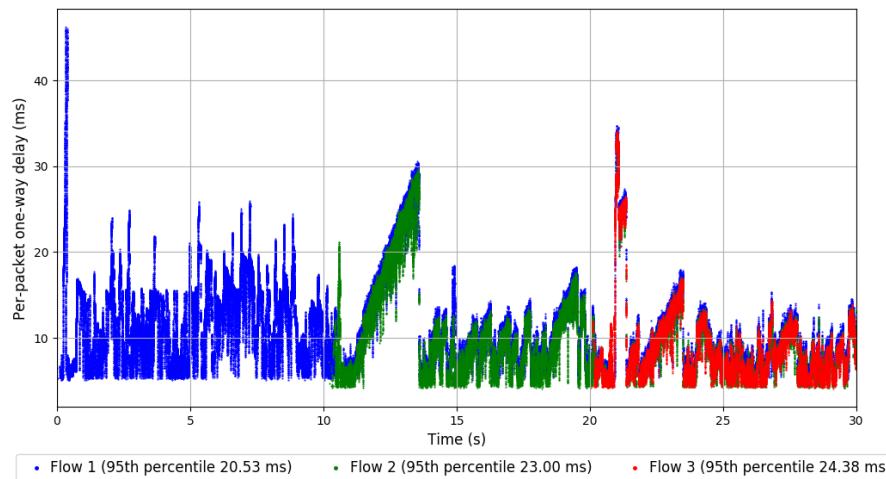
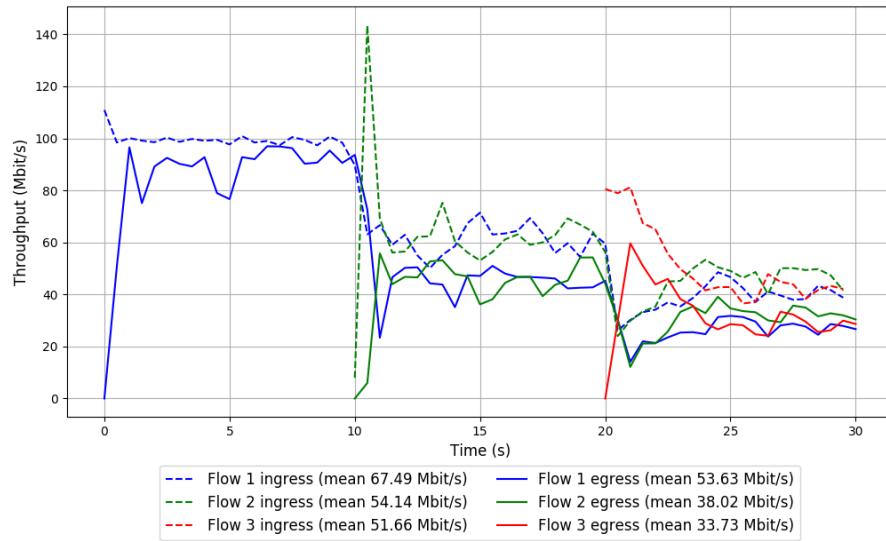


Run 3: Statistics of FillP

```
Start at: 2018-10-09 21:38:40
End at: 2018-10-09 21:39:10
Local clock offset: 1.025 ms
Remote clock offset: -5.259 ms

# Below is generated by plot.py at 2018-10-09 22:42:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.88 Mbit/s
95th percentile per-packet one-way delay: 21.507 ms
Loss rate: 25.52%
-- Flow 1:
Average throughput: 53.63 Mbit/s
95th percentile per-packet one-way delay: 20.526 ms
Loss rate: 20.53%
-- Flow 2:
Average throughput: 38.02 Mbit/s
95th percentile per-packet one-way delay: 22.997 ms
Loss rate: 30.47%
-- Flow 3:
Average throughput: 33.73 Mbit/s
95th percentile per-packet one-way delay: 24.375 ms
Loss rate: 34.72%
```

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

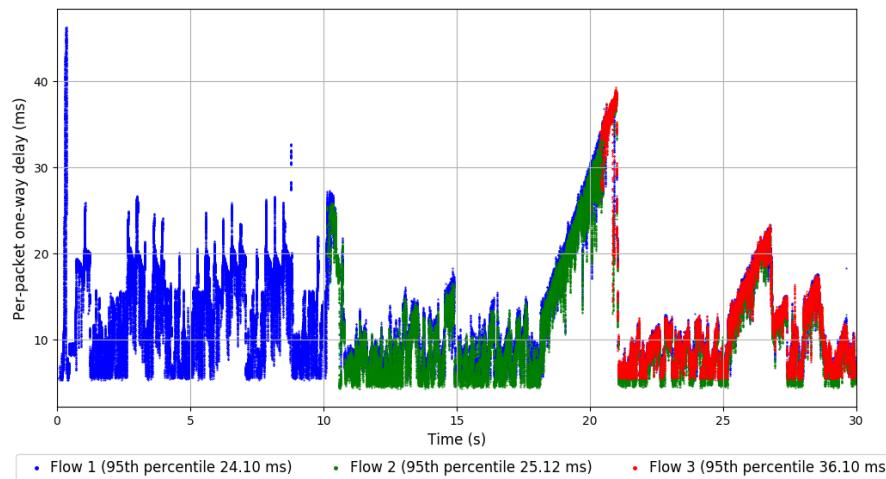
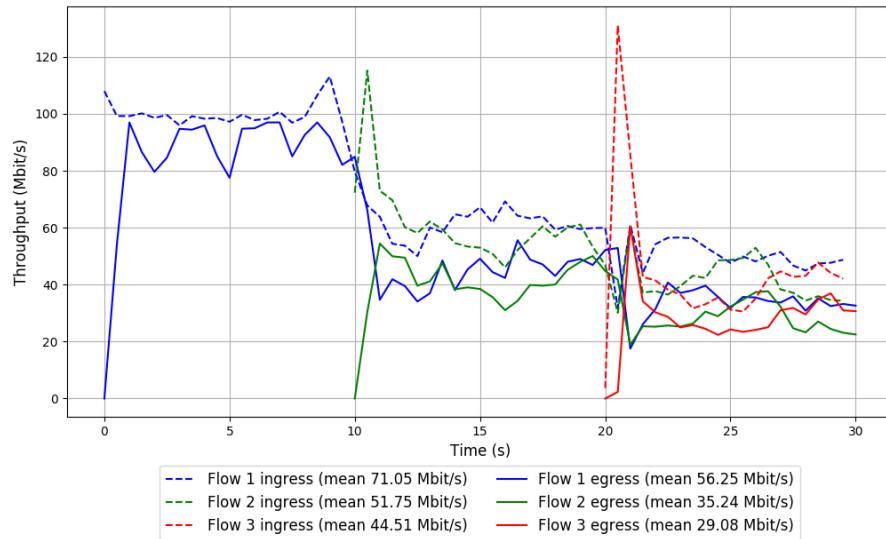


Run 4: Statistics of FillP

```
Start at: 2018-10-09 21:59:51
End at: 2018-10-09 22:00:21
Local clock offset: 0.643 ms
Remote clock offset: -5.068 ms

# Below is generated by plot.py at 2018-10-09 22:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.31 Mbit/s
95th percentile per-packet one-way delay: 25.154 ms
Loss rate: 25.72%
-- Flow 1:
Average throughput: 56.25 Mbit/s
95th percentile per-packet one-way delay: 24.102 ms
Loss rate: 20.83%
-- Flow 2:
Average throughput: 35.24 Mbit/s
95th percentile per-packet one-way delay: 25.124 ms
Loss rate: 31.93%
-- Flow 3:
Average throughput: 29.08 Mbit/s
95th percentile per-packet one-way delay: 36.099 ms
Loss rate: 34.76%
```

Run 4: Report of FillP — Data Link

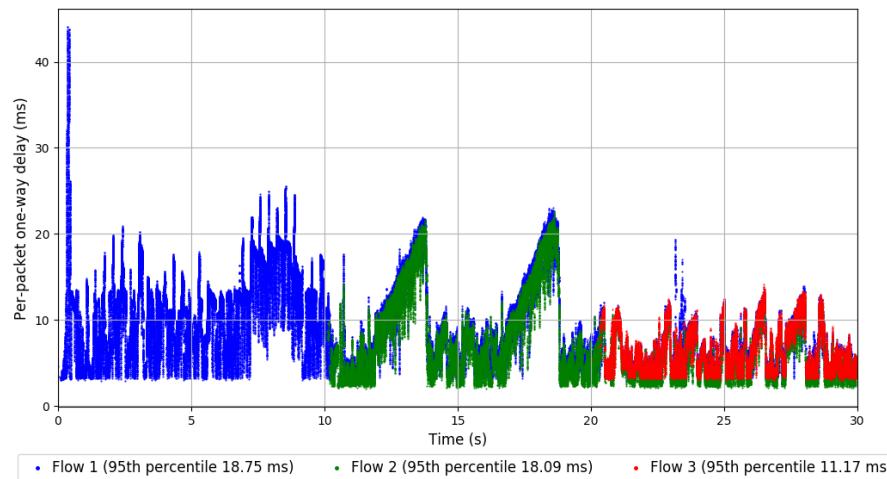
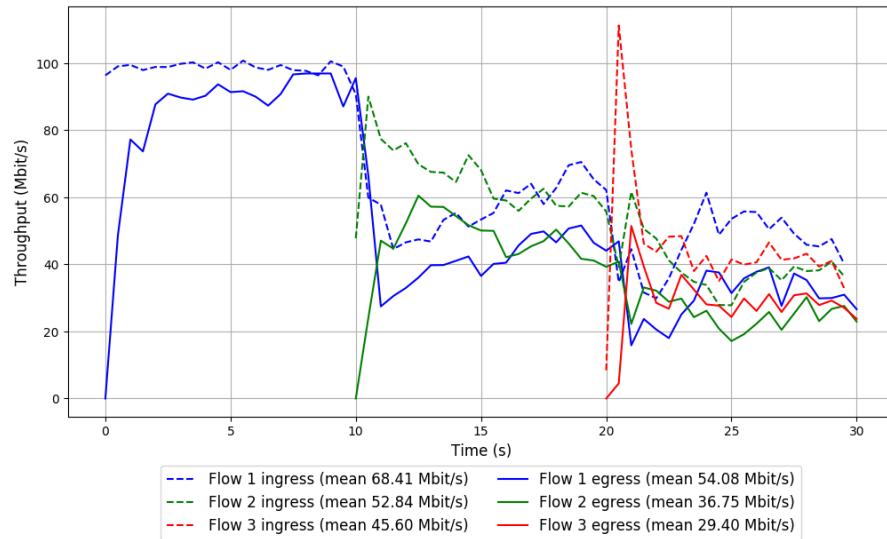


```
Run 5: Statistics of FillP
```

```
Start at: 2018-10-09 22:20:59
End at: 2018-10-09 22:21:29
Local clock offset: 1.652 ms
Remote clock offset: -5.736 ms

# Below is generated by plot.py at 2018-10-09 22:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.26 Mbit/s
95th percentile per-packet one-way delay: 18.427 ms
Loss rate: 25.63%
-- Flow 1:
Average throughput: 54.08 Mbit/s
95th percentile per-packet one-way delay: 18.752 ms
Loss rate: 20.95%
-- Flow 2:
Average throughput: 36.75 Mbit/s
95th percentile per-packet one-way delay: 18.093 ms
Loss rate: 30.47%
-- Flow 3:
Average throughput: 29.40 Mbit/s
95th percentile per-packet one-way delay: 11.171 ms
Loss rate: 35.53%
```

## Run 5: Report of FillP — Data Link

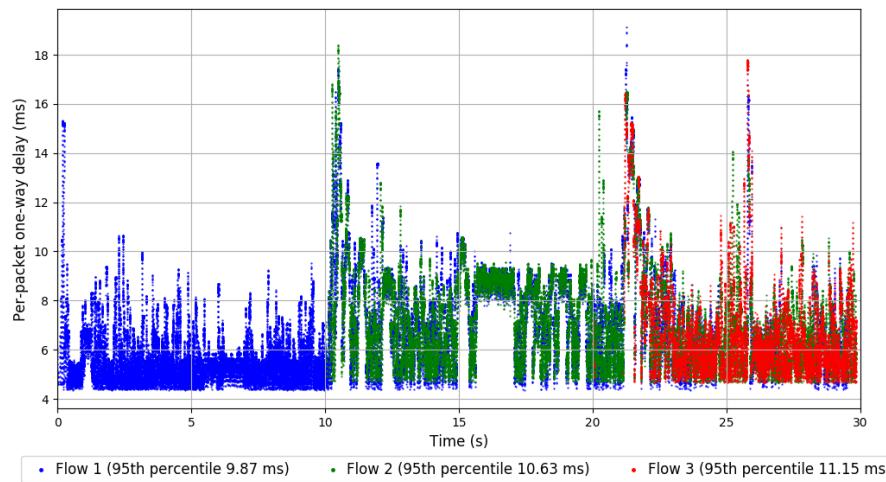
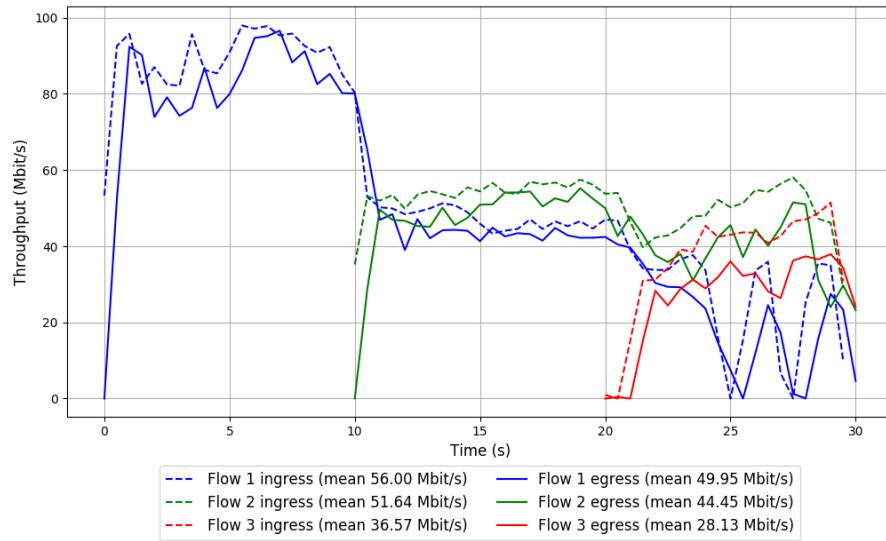


Run 1: Statistics of Indigo

```
Start at: 2018-10-09 21:04:40
End at: 2018-10-09 21:05:10
Local clock offset: 1.729 ms
Remote clock offset: -4.645 ms

# Below is generated by plot.py at 2018-10-09 22:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.33 Mbit/s
95th percentile per-packet one-way delay: 10.251 ms
Loss rate: 13.34%
-- Flow 1:
Average throughput: 49.95 Mbit/s
95th percentile per-packet one-way delay: 9.871 ms
Loss rate: 10.89%
-- Flow 2:
Average throughput: 44.45 Mbit/s
95th percentile per-packet one-way delay: 10.630 ms
Loss rate: 13.93%
-- Flow 3:
Average throughput: 28.13 Mbit/s
95th percentile per-packet one-way delay: 11.148 ms
Loss rate: 23.06%
```

## Run 1: Report of Indigo — Data Link

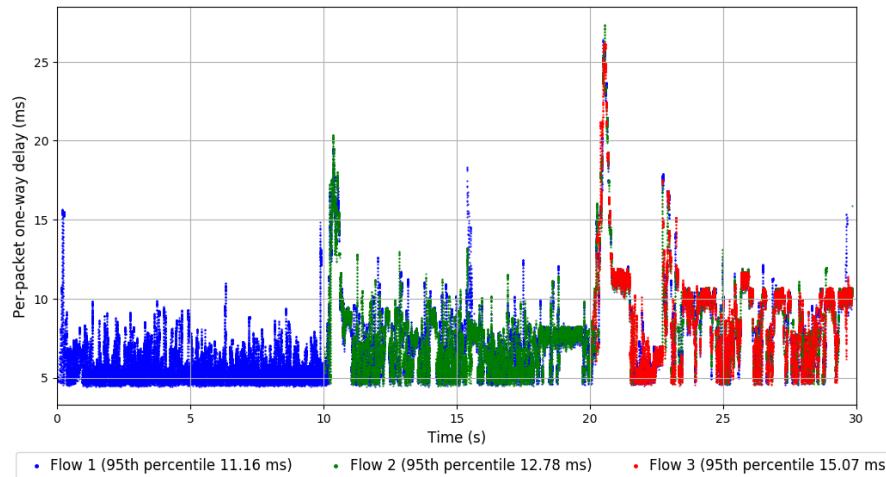
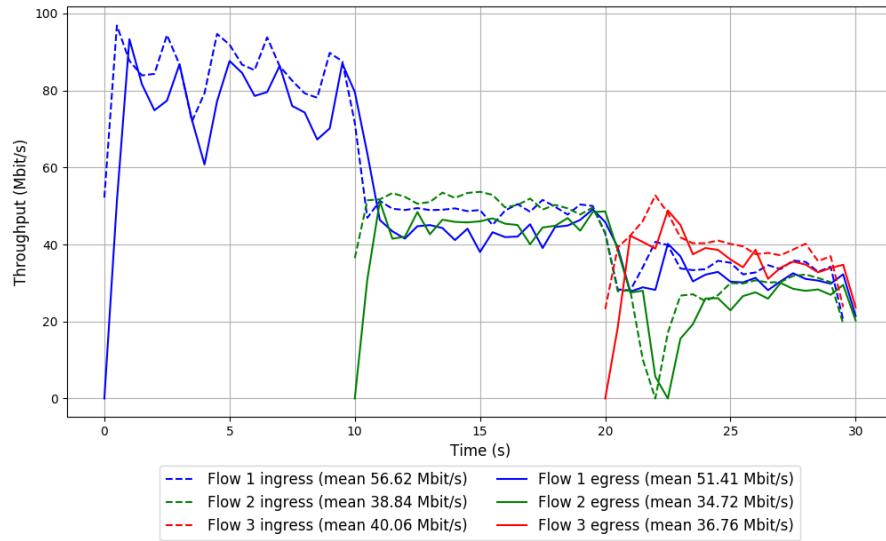


Run 2: Statistics of Indigo

```
Start at: 2018-10-09 21:25:50
End at: 2018-10-09 21:26:20
Local clock offset: 1.43 ms
Remote clock offset: -5.217 ms

# Below is generated by plot.py at 2018-10-09 22:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.46 Mbit/s
95th percentile per-packet one-way delay: 11.657 ms
Loss rate: 9.42%
-- Flow 1:
Average throughput: 51.41 Mbit/s
95th percentile per-packet one-way delay: 11.163 ms
Loss rate: 9.18%
-- Flow 2:
Average throughput: 34.72 Mbit/s
95th percentile per-packet one-way delay: 12.784 ms
Loss rate: 10.57%
-- Flow 3:
Average throughput: 36.76 Mbit/s
95th percentile per-packet one-way delay: 15.073 ms
Loss rate: 8.19%
```

## Run 2: Report of Indigo — Data Link

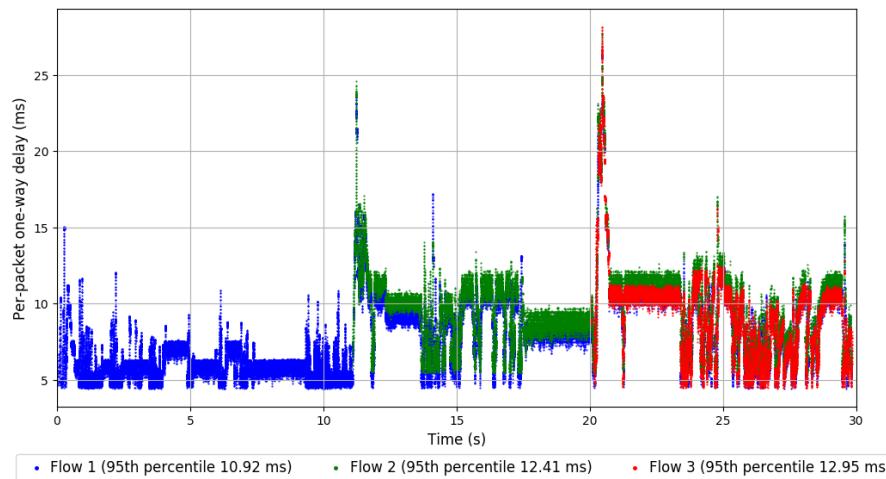
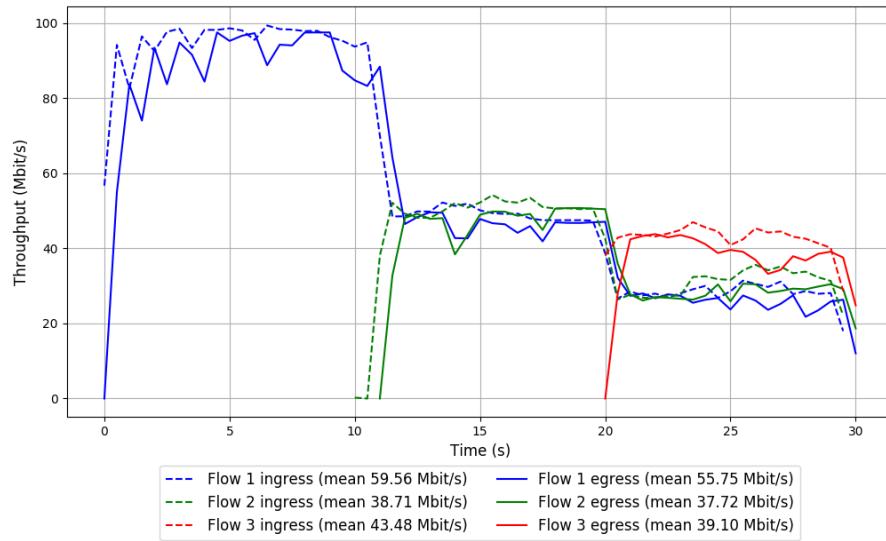


Run 3: Statistics of Indigo

```
Start at: 2018-10-09 21:46:52
End at: 2018-10-09 21:47:22
Local clock offset: 1.769 ms
Remote clock offset: -4.565 ms

# Below is generated by plot.py at 2018-10-09 22:42:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.30 Mbit/s
95th percentile per-packet one-way delay: 11.825 ms
Loss rate: 7.23%
-- Flow 1:
Average throughput: 55.75 Mbit/s
95th percentile per-packet one-way delay: 10.919 ms
Loss rate: 6.40%
-- Flow 2:
Average throughput: 37.72 Mbit/s
95th percentile per-packet one-way delay: 12.410 ms
Loss rate: 7.53%
-- Flow 3:
Average throughput: 39.10 Mbit/s
95th percentile per-packet one-way delay: 12.950 ms
Loss rate: 10.13%
```

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

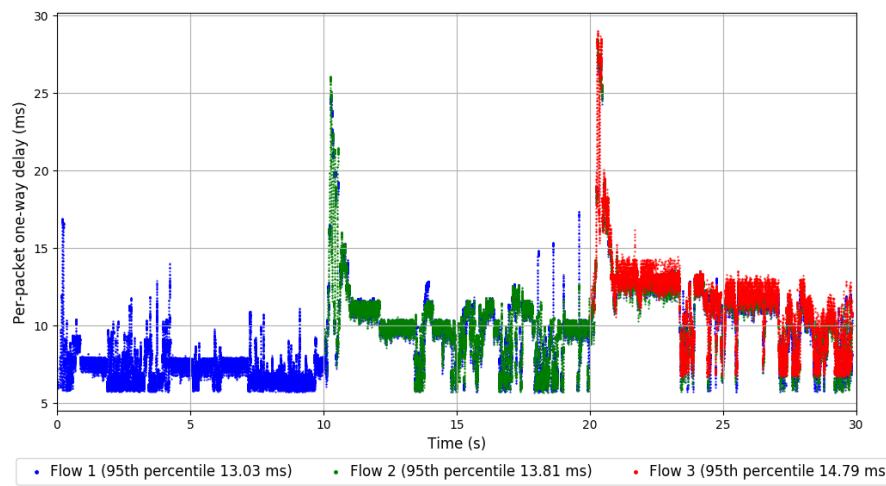
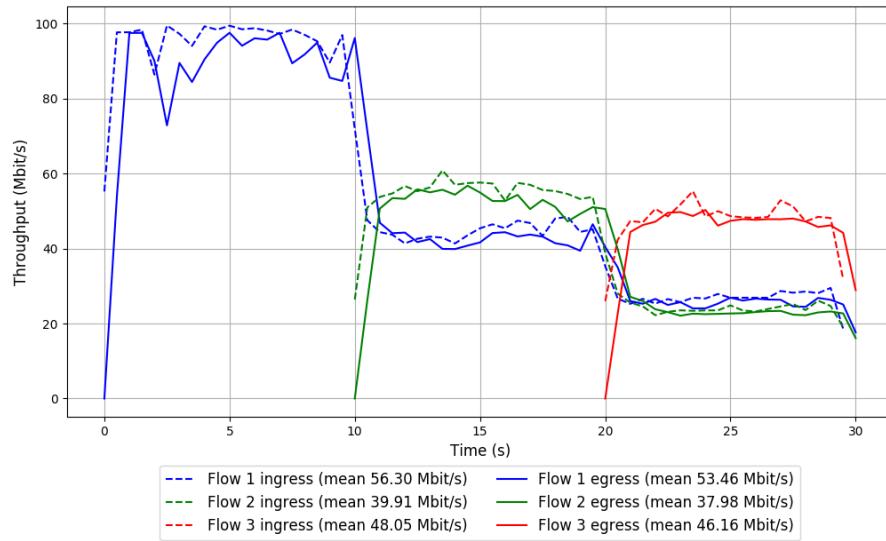


Run 4: Statistics of Indigo

```
Start at: 2018-10-09 22:08:06
End at: 2018-10-09 22:08:36
Local clock offset: -0.291 ms
Remote clock offset: -4.524 ms

# Below is generated by plot.py at 2018-10-09 22:43:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.79 Mbit/s
95th percentile per-packet one-way delay: 13.320 ms
Loss rate: 4.80%
-- Flow 1:
Average throughput: 53.46 Mbit/s
95th percentile per-packet one-way delay: 13.031 ms
Loss rate: 5.04%
-- Flow 2:
Average throughput: 37.98 Mbit/s
95th percentile per-packet one-way delay: 13.812 ms
Loss rate: 4.82%
-- Flow 3:
Average throughput: 46.16 Mbit/s
95th percentile per-packet one-way delay: 14.786 ms
Loss rate: 3.94%
```

## Run 4: Report of Indigo — Data Link

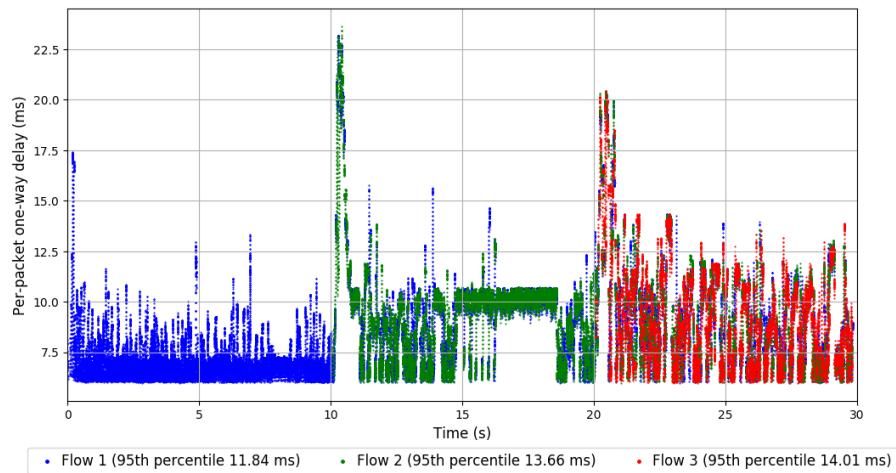
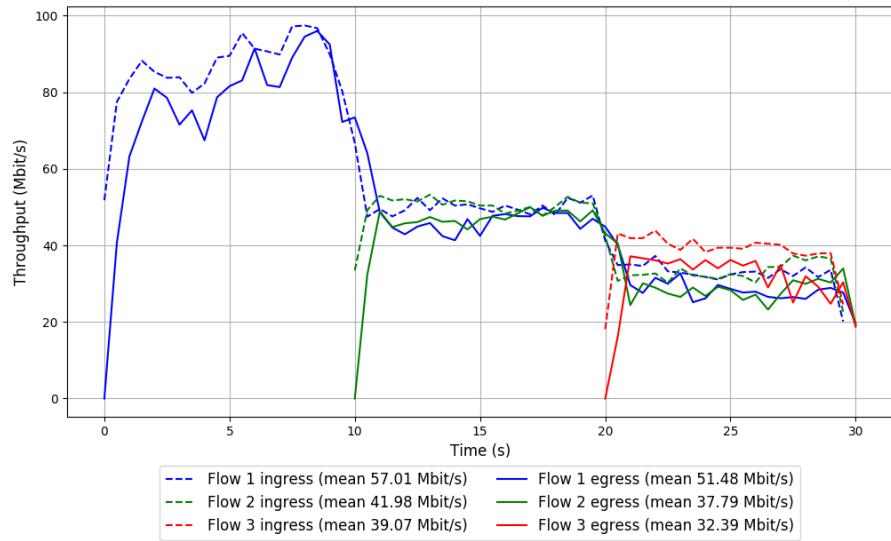


Run 5: Statistics of Indigo

```
Start at: 2018-10-09 22:29:18
End at: 2018-10-09 22:29:48
Local clock offset: -0.64 ms
Remote clock offset: -4.48 ms

# Below is generated by plot.py at 2018-10-09 22:43:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.16 Mbit/s
95th percentile per-packet one-way delay: 12.710 ms
Loss rate: 10.75%
-- Flow 1:
Average throughput: 51.48 Mbit/s
95th percentile per-packet one-way delay: 11.842 ms
Loss rate: 9.69%
-- Flow 2:
Average throughput: 37.79 Mbit/s
95th percentile per-packet one-way delay: 13.661 ms
Loss rate: 9.98%
-- Flow 3:
Average throughput: 32.39 Mbit/s
95th percentile per-packet one-way delay: 14.012 ms
Loss rate: 17.11%
```

## Run 5: Report of Indigo — Data Link

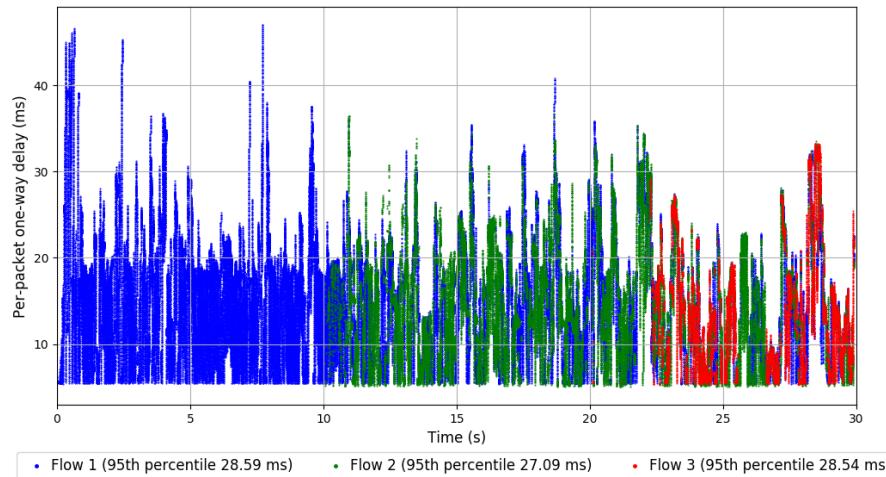
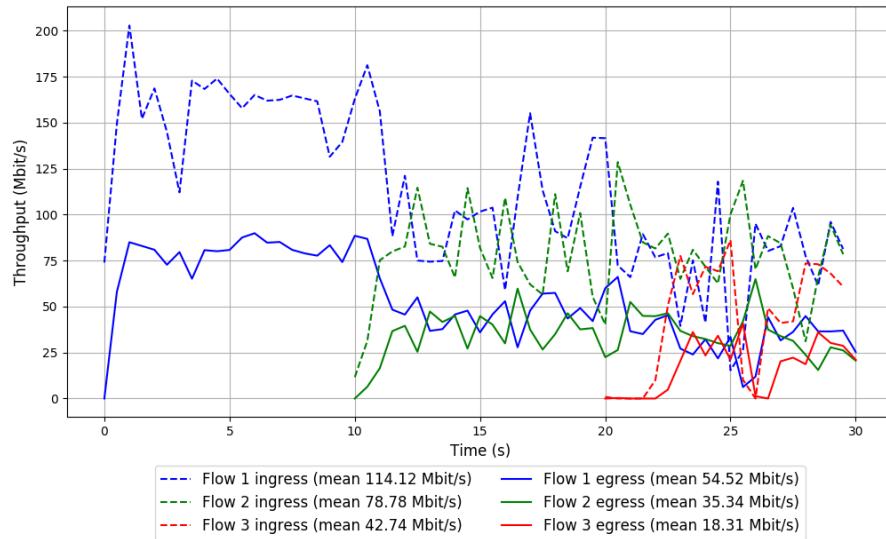


```
Run 1: Statistics of Indigo-96d2da3

Start at: 2018-10-09 21:01:06
End at: 2018-10-09 21:01:36
Local clock offset: 1.013 ms
Remote clock offset: -4.524 ms

# Below is generated by plot.py at 2018-10-09 22:44:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.03 Mbit/s
95th percentile per-packet one-way delay: 28.158 ms
Loss rate: 53.44%
-- Flow 1:
Average throughput: 54.52 Mbit/s
95th percentile per-packet one-way delay: 28.587 ms
Loss rate: 52.20%
-- Flow 2:
Average throughput: 35.34 Mbit/s
95th percentile per-packet one-way delay: 27.095 ms
Loss rate: 55.13%
-- Flow 3:
Average throughput: 18.31 Mbit/s
95th percentile per-packet one-way delay: 28.536 ms
Loss rate: 57.17%
```

Run 1: Report of Indigo-96d2da3 — Data Link

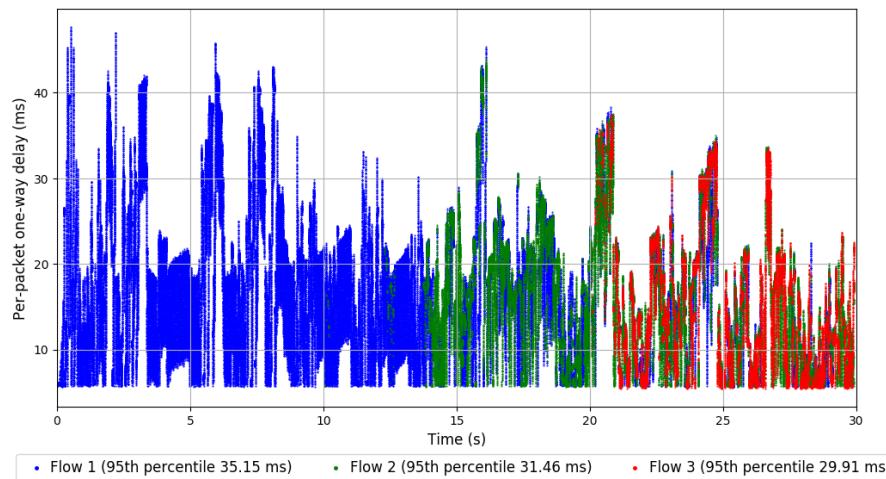
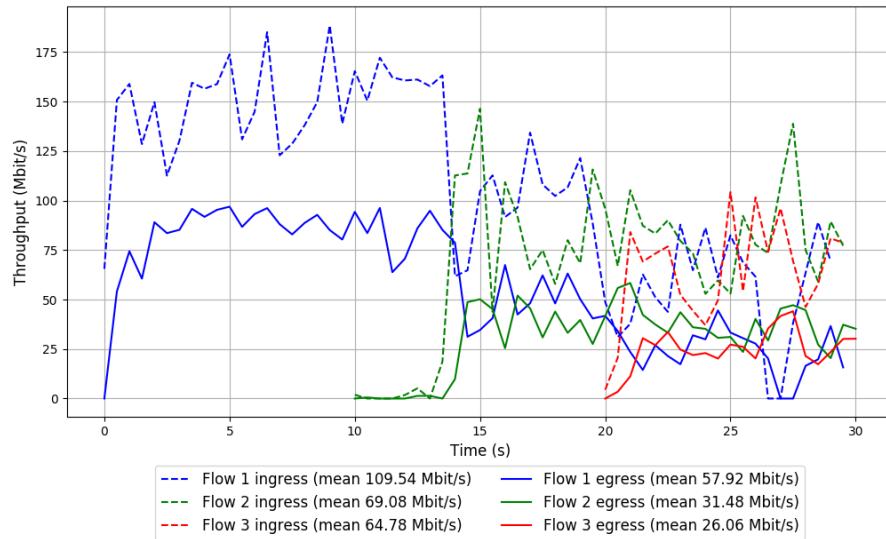


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-10-09 21:22:22
End at: 2018-10-09 21:22:52
Local clock offset: 0.94 ms
Remote clock offset: -4.69 ms

# Below is generated by plot.py at 2018-10-09 22:44:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.16 Mbit/s
95th percentile per-packet one-way delay: 33.552 ms
Loss rate: 50.59%
-- Flow 1:
Average throughput: 57.92 Mbit/s
95th percentile per-packet one-way delay: 35.149 ms
Loss rate: 47.11%
-- Flow 2:
Average throughput: 31.48 Mbit/s
95th percentile per-packet one-way delay: 31.465 ms
Loss rate: 54.43%
-- Flow 3:
Average throughput: 26.06 Mbit/s
95th percentile per-packet one-way delay: 29.906 ms
Loss rate: 59.79%
```

Run 2: Report of Indigo-96d2da3 — Data Link

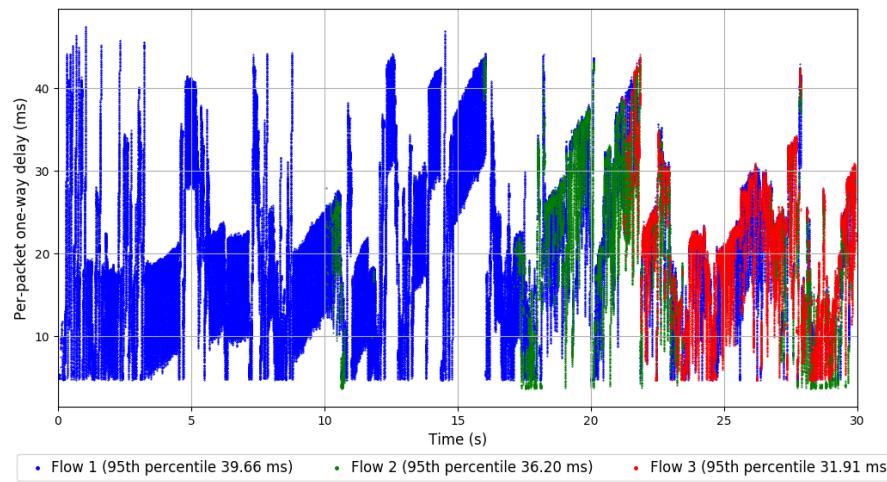
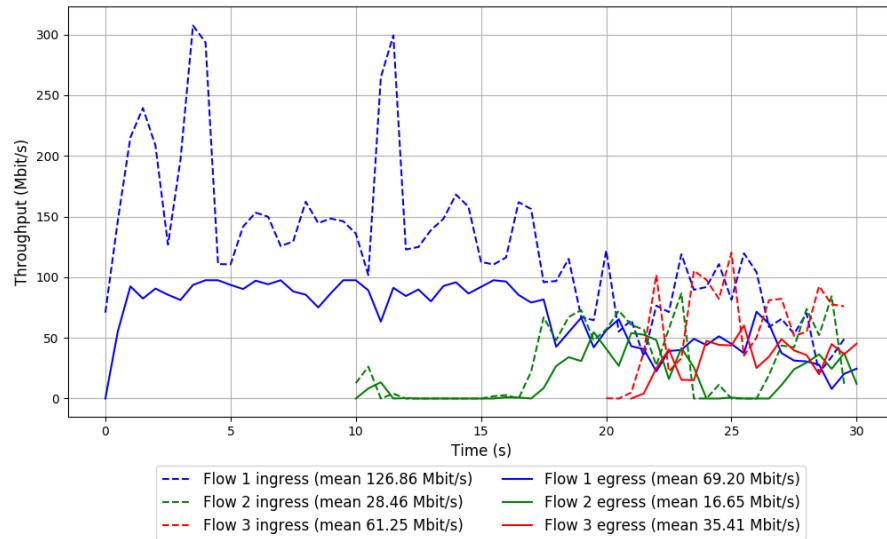


Run 3: Statistics of Indigo-96d2da3

```
Start at: 2018-10-09 21:43:24
End at: 2018-10-09 21:43:54
Local clock offset: 2.381 ms
Remote clock offset: -4.708 ms

# Below is generated by plot.py at 2018-10-09 22:44:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.65 Mbit/s
95th percentile per-packet one-way delay: 38.964 ms
Loss rate: 45.30%
-- Flow 1:
Average throughput: 69.20 Mbit/s
95th percentile per-packet one-way delay: 39.664 ms
Loss rate: 45.42%
-- Flow 2:
Average throughput: 16.65 Mbit/s
95th percentile per-packet one-way delay: 36.204 ms
Loss rate: 41.52%
-- Flow 3:
Average throughput: 35.41 Mbit/s
95th percentile per-packet one-way delay: 31.905 ms
Loss rate: 48.12%
```

### Run 3: Report of Indigo-96d2da3 — Data Link

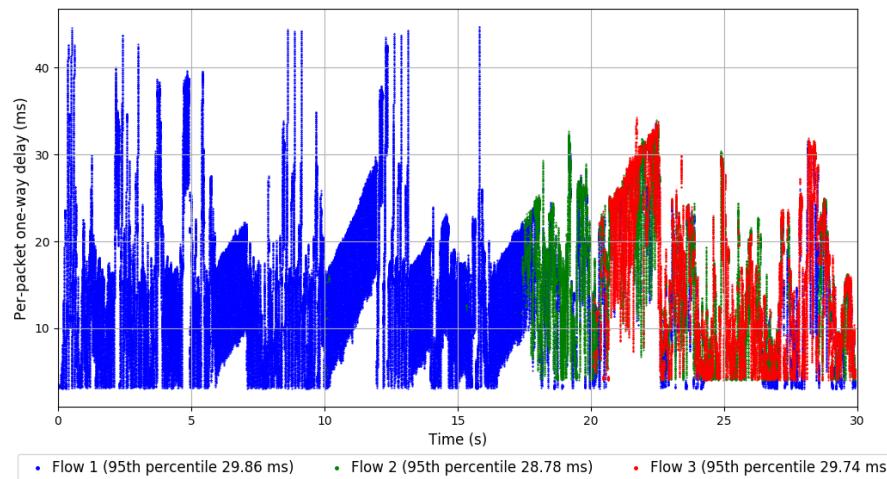
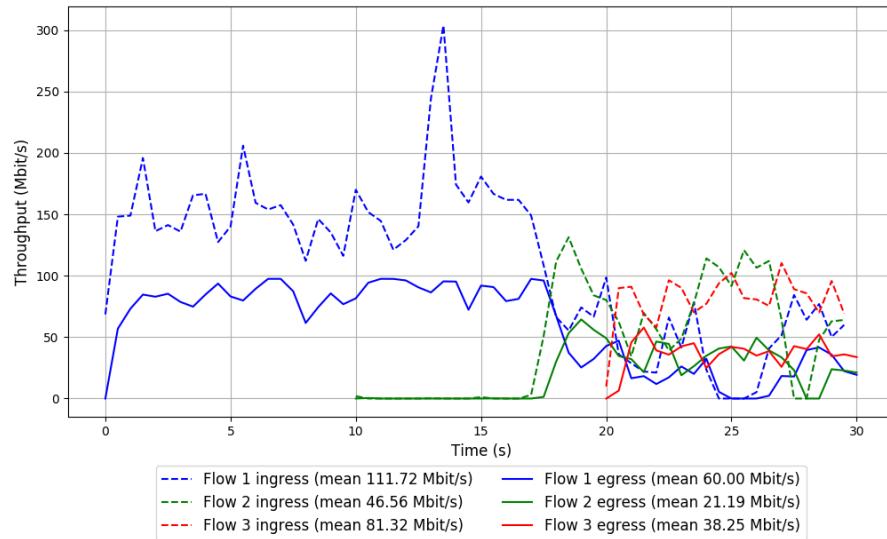


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-10-09 22:04:36
End at: 2018-10-09 22:05:06
Local clock offset: 1.951 ms
Remote clock offset: -5.093 ms

# Below is generated by plot.py at 2018-10-09 22:44:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.69 Mbit/s
95th percentile per-packet one-way delay: 29.571 ms
Loss rate: 48.85%
-- Flow 1:
Average throughput: 60.00 Mbit/s
95th percentile per-packet one-way delay: 29.864 ms
Loss rate: 46.29%
-- Flow 2:
Average throughput: 21.19 Mbit/s
95th percentile per-packet one-way delay: 28.784 ms
Loss rate: 54.51%
-- Flow 3:
Average throughput: 38.25 Mbit/s
95th percentile per-packet one-way delay: 29.741 ms
Loss rate: 52.99%
```

Run 4: Report of Indigo-96d2da3 — Data Link

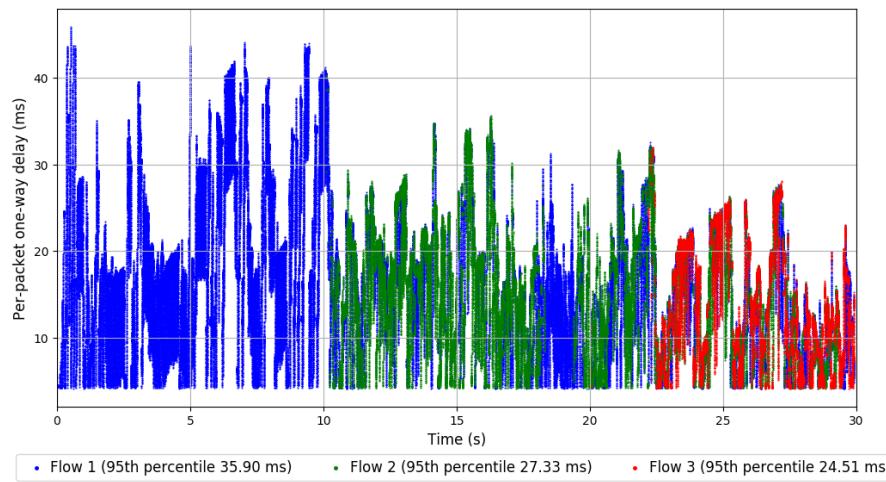
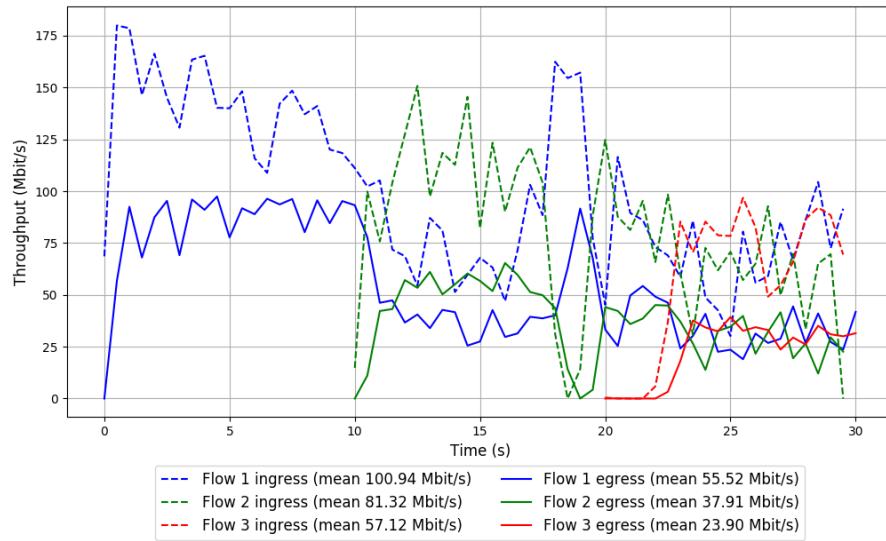


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-10-09 22:25:47
End at: 2018-10-09 22:26:17
Local clock offset: 0.29 ms
Remote clock offset: -5.247 ms

# Below is generated by plot.py at 2018-10-09 22:44:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.00 Mbit/s
95th percentile per-packet one-way delay: 32.992 ms
Loss rate: 49.03%
-- Flow 1:
Average throughput: 55.52 Mbit/s
95th percentile per-packet one-way delay: 35.900 ms
Loss rate: 44.98%
-- Flow 2:
Average throughput: 37.91 Mbit/s
95th percentile per-packet one-way delay: 27.328 ms
Loss rate: 53.52%
-- Flow 3:
Average throughput: 23.90 Mbit/s
95th percentile per-packet one-way delay: 24.509 ms
Loss rate: 58.13%
```

Run 5: Report of Indigo-96d2da3 — Data Link

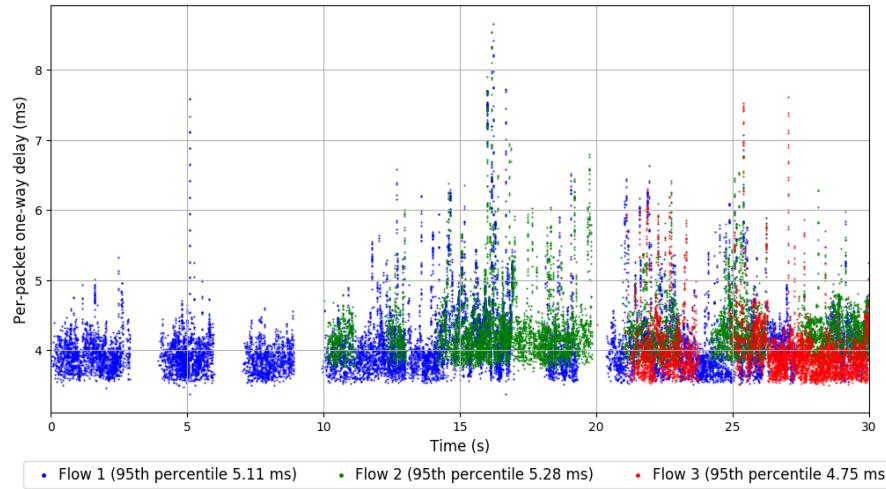
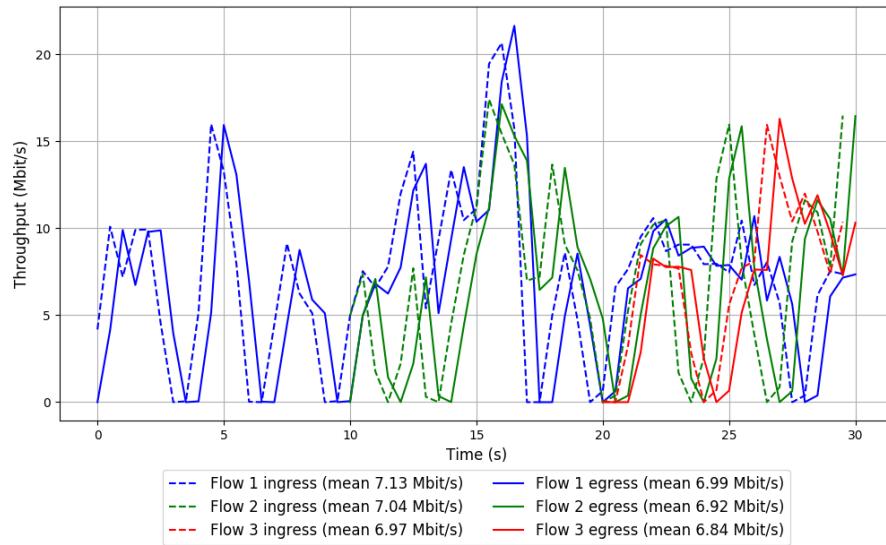


Run 1: Statistics of LEDBAT

```
Start at: 2018-10-09 20:55:14
End at: 2018-10-09 20:55:44
Local clock offset: 0.942 ms
Remote clock offset: -6.098 ms

# Below is generated by plot.py at 2018-10-09 22:44:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.87 Mbit/s
95th percentile per-packet one-way delay: 5.156 ms
Loss rate: 1.92%
-- Flow 1:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 5.107 ms
Loss rate: 2.02%
-- Flow 2:
Average throughput: 6.92 Mbit/s
95th percentile per-packet one-way delay: 5.284 ms
Loss rate: 1.80%
-- Flow 3:
Average throughput: 6.84 Mbit/s
95th percentile per-packet one-way delay: 4.754 ms
Loss rate: 1.84%
```

Run 1: Report of LEDBAT — Data Link

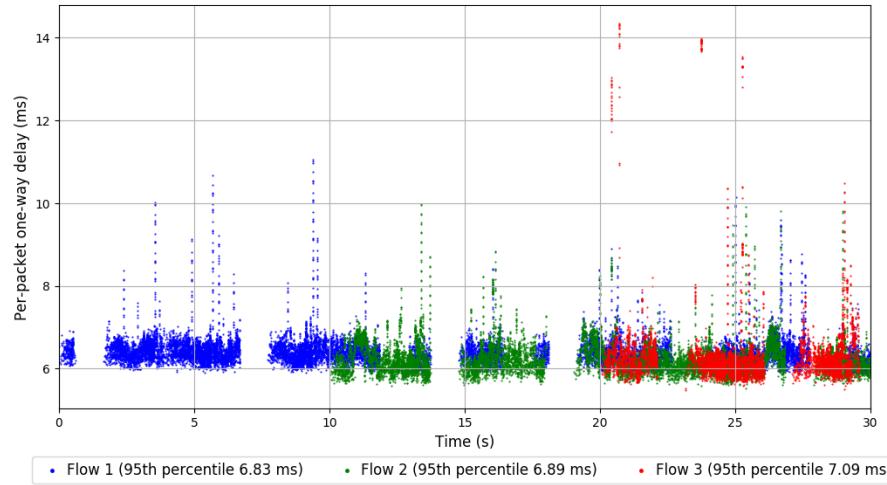
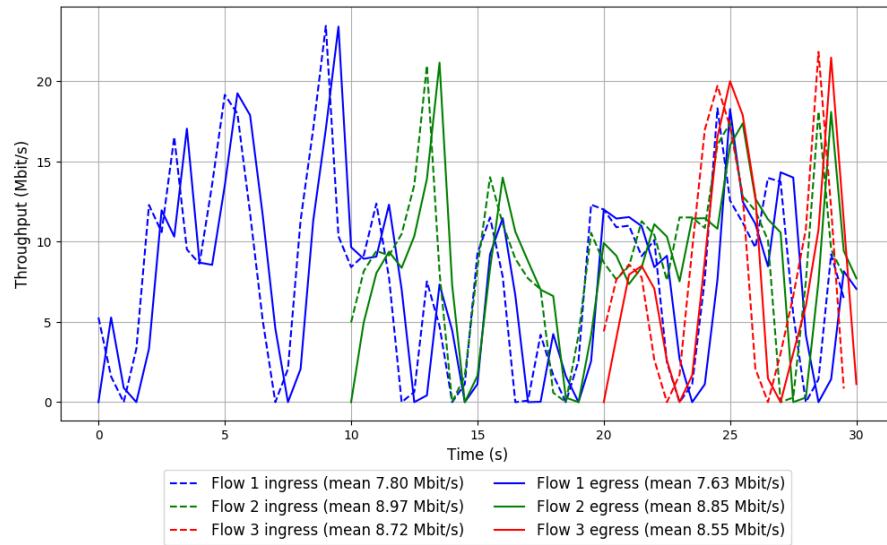


Run 2: Statistics of LEDBAT

```
Start at: 2018-10-09 21:16:26
End at: 2018-10-09 21:16:56
Local clock offset: 1.647 ms
Remote clock offset: -3.681 ms

# Below is generated by plot.py at 2018-10-09 22:44:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.24 Mbit/s
95th percentile per-packet one-way delay: 6.869 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 7.63 Mbit/s
95th percentile per-packet one-way delay: 6.826 ms
Loss rate: 2.10%
-- Flow 2:
Average throughput: 8.85 Mbit/s
95th percentile per-packet one-way delay: 6.886 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 8.55 Mbit/s
95th percentile per-packet one-way delay: 7.090 ms
Loss rate: 1.93%
```

Run 2: Report of LEDBAT — Data Link

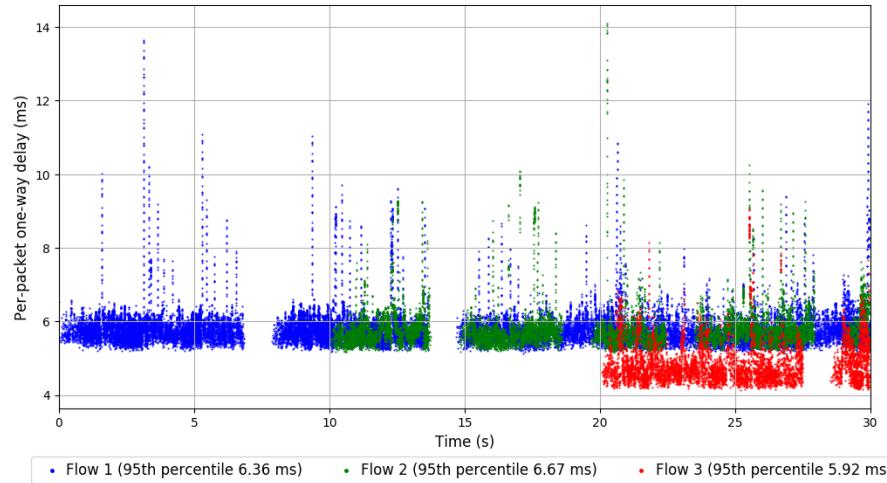
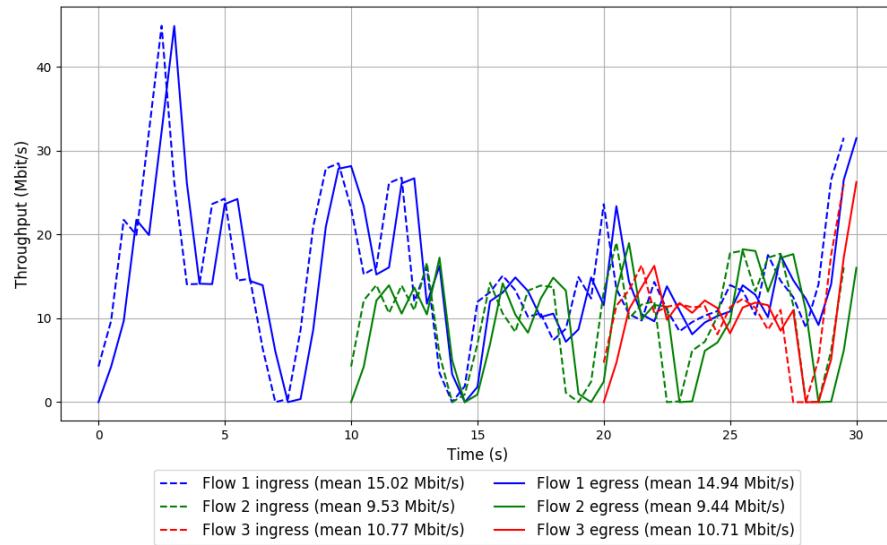


Run 3: Statistics of LEDBAT

```
Start at: 2018-10-09 21:37:30
End at: 2018-10-09 21:38:00
Local clock offset: 1.455 ms
Remote clock offset: -4.914 ms

# Below is generated by plot.py at 2018-10-09 22:44:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.76 Mbit/s
95th percentile per-packet one-way delay: 6.391 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 14.94 Mbit/s
95th percentile per-packet one-way delay: 6.356 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 9.44 Mbit/s
95th percentile per-packet one-way delay: 6.668 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 10.71 Mbit/s
95th percentile per-packet one-way delay: 5.920 ms
Loss rate: 0.58%
```

Run 3: Report of LEDBAT — Data Link

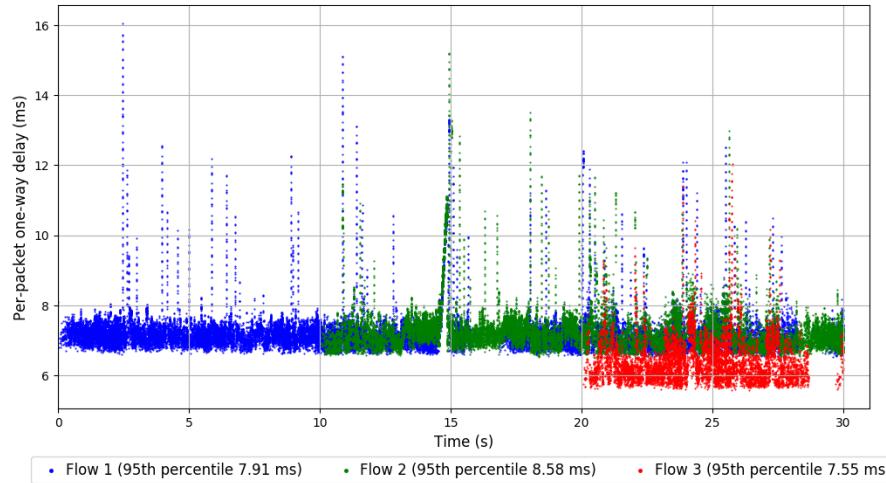
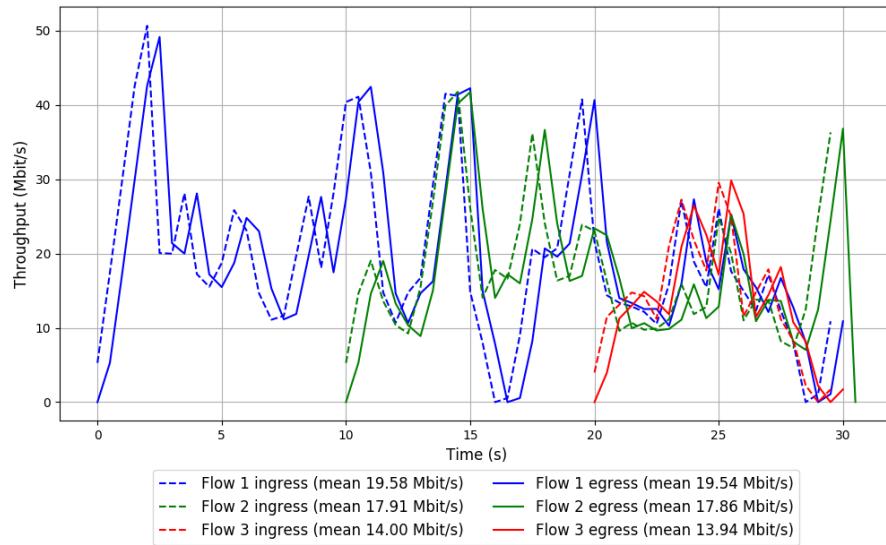


Run 4: Statistics of LEDBAT

```
Start at: 2018-10-09 21:58:42
End at: 2018-10-09 21:59:12
Local clock offset: 0.029 ms
Remote clock offset: -4.73 ms

# Below is generated by plot.py at 2018-10-09 22:44:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.06 Mbit/s
95th percentile per-packet one-way delay: 8.086 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 19.54 Mbit/s
95th percentile per-packet one-way delay: 7.911 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 17.86 Mbit/s
95th percentile per-packet one-way delay: 8.583 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 13.94 Mbit/s
95th percentile per-packet one-way delay: 7.551 ms
Loss rate: 0.45%
```

Run 4: Report of LEDBAT — Data Link

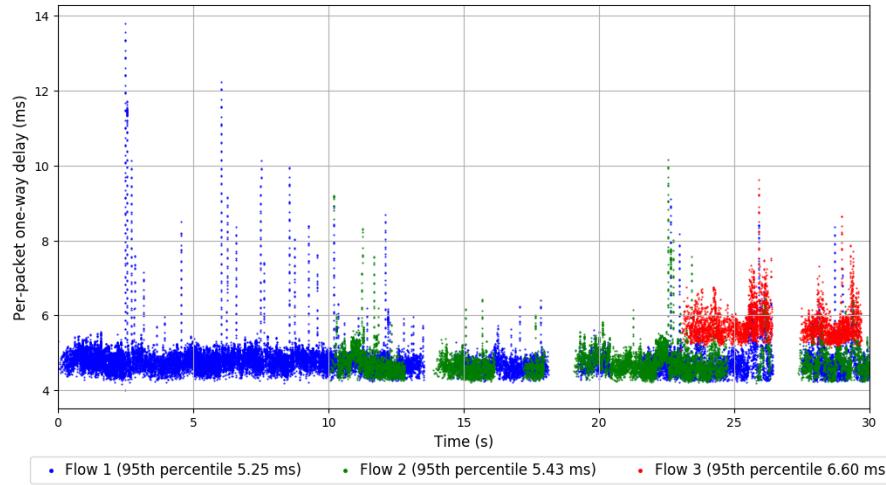
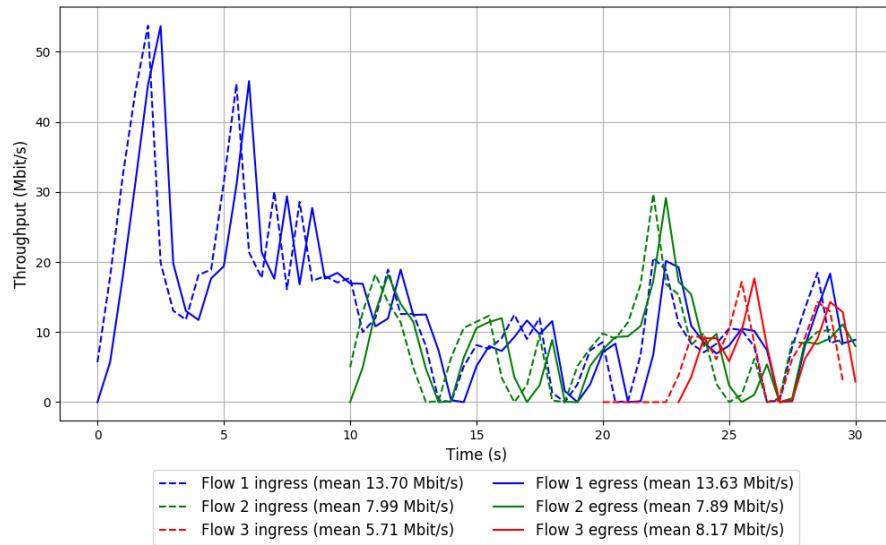


Run 5: Statistics of LEDBAT

```
Start at: 2018-10-09 22:19:44
End at: 2018-10-09 22:20:14
Local clock offset: 0.586 ms
Remote clock offset: -4.899 ms

# Below is generated by plot.py at 2018-10-09 22:44:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.70 Mbit/s
95th percentile per-packet one-way delay: 5.822 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 13.63 Mbit/s
95th percentile per-packet one-way delay: 5.251 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 5.435 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 6.597 ms
Loss rate: 1.30%
```

Run 5: Report of LEDBAT — Data Link

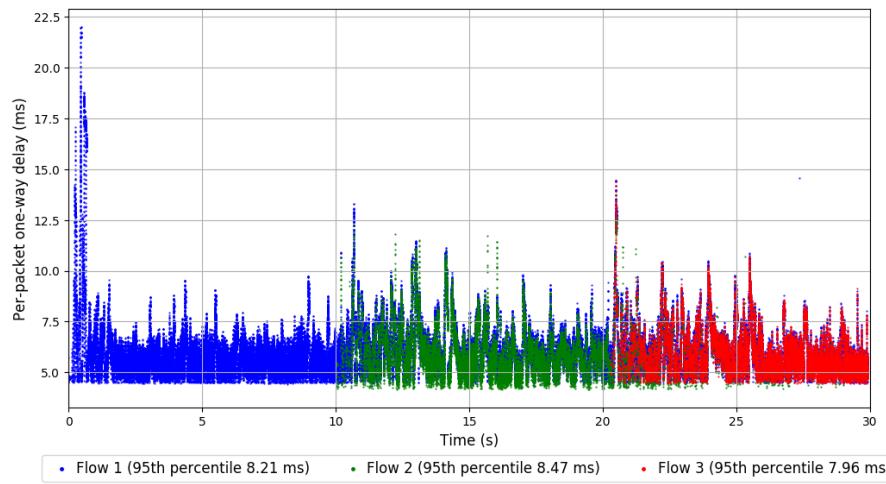
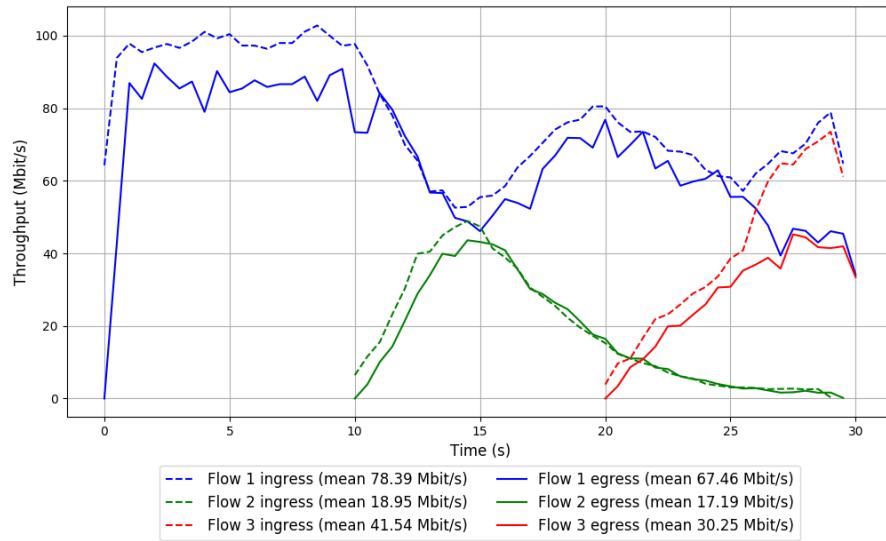


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-10-09 21:14:05
End at: 2018-10-09 21:14:35
Local clock offset: 2.65 ms
Remote clock offset: -4.055 ms

# Below is generated by plot.py at 2018-10-09 22:44:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.13 Mbit/s
95th percentile per-packet one-way delay: 8.221 ms
Loss rate: 15.11%
-- Flow 1:
Average throughput: 67.46 Mbit/s
95th percentile per-packet one-way delay: 8.213 ms
Loss rate: 13.95%
-- Flow 2:
Average throughput: 17.19 Mbit/s
95th percentile per-packet one-way delay: 8.474 ms
Loss rate: 9.29%
-- Flow 3:
Average throughput: 30.25 Mbit/s
95th percentile per-packet one-way delay: 7.964 ms
Loss rate: 27.21%
```

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

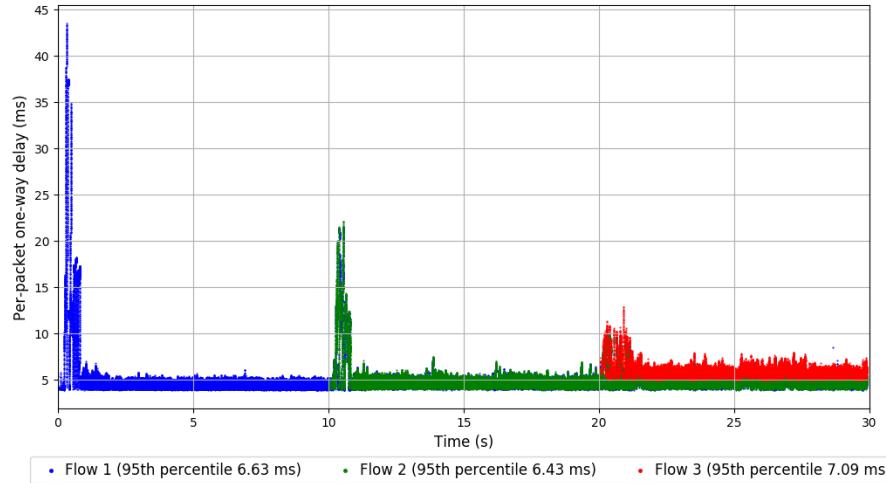
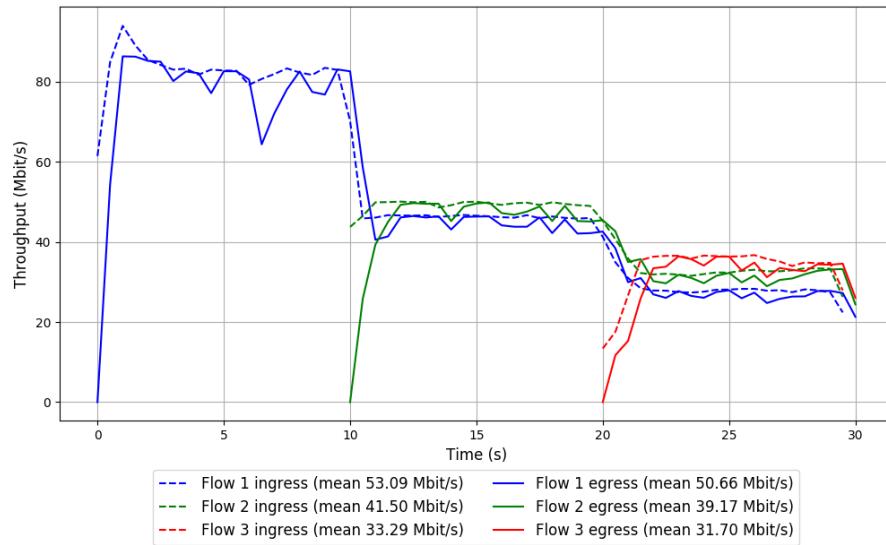


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-10-09 21:35:10
End at: 2018-10-09 21:35:40
Local clock offset: 1.515 ms
Remote clock offset: -5.038 ms

# Below is generated by plot.py at 2018-10-09 22:45:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.18 Mbit/s
95th percentile per-packet one-way delay: 6.835 ms
Loss rate: 4.92%
-- Flow 1:
Average throughput: 50.66 Mbit/s
95th percentile per-packet one-way delay: 6.632 ms
Loss rate: 4.59%
-- Flow 2:
Average throughput: 39.17 Mbit/s
95th percentile per-packet one-way delay: 6.433 ms
Loss rate: 5.61%
-- Flow 3:
Average throughput: 31.70 Mbit/s
95th percentile per-packet one-way delay: 7.090 ms
Loss rate: 4.77%
```

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

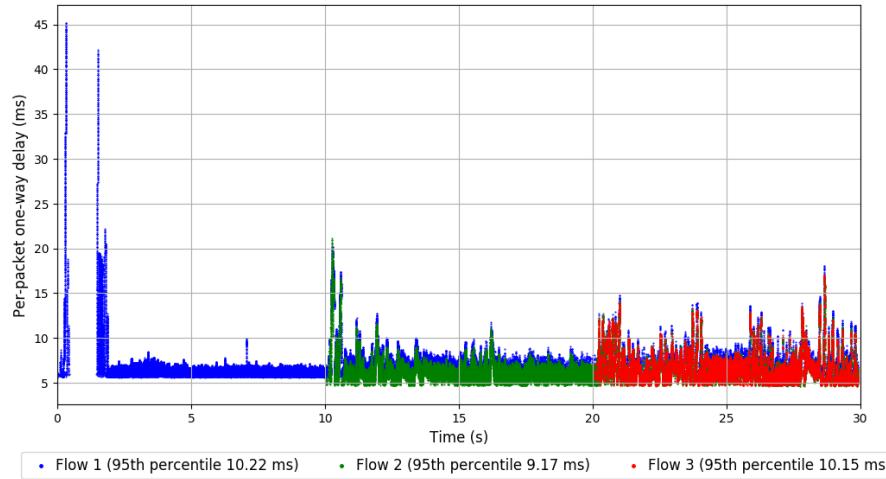
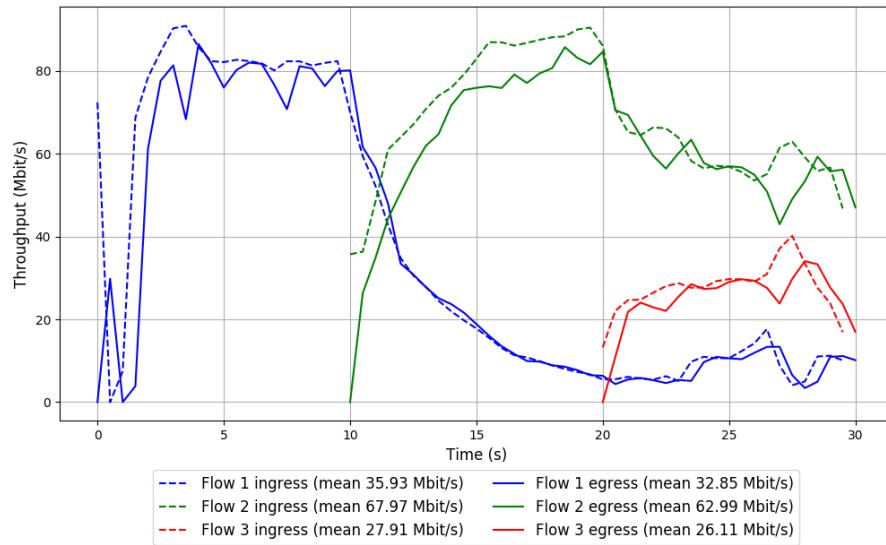


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-10-09 21:56:22
End at: 2018-10-09 21:56:52
Local clock offset: 0.68 ms
Remote clock offset: -5.292 ms

# Below is generated by plot.py at 2018-10-09 22:45:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.36 Mbit/s
95th percentile per-packet one-way delay: 9.605 ms
Loss rate: 7.72%
-- Flow 1:
Average throughput: 32.85 Mbit/s
95th percentile per-packet one-way delay: 10.221 ms
Loss rate: 8.55%
-- Flow 2:
Average throughput: 62.99 Mbit/s
95th percentile per-packet one-way delay: 9.171 ms
Loss rate: 7.33%
-- Flow 3:
Average throughput: 26.11 Mbit/s
95th percentile per-packet one-way delay: 10.148 ms
Loss rate: 6.44%
```

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

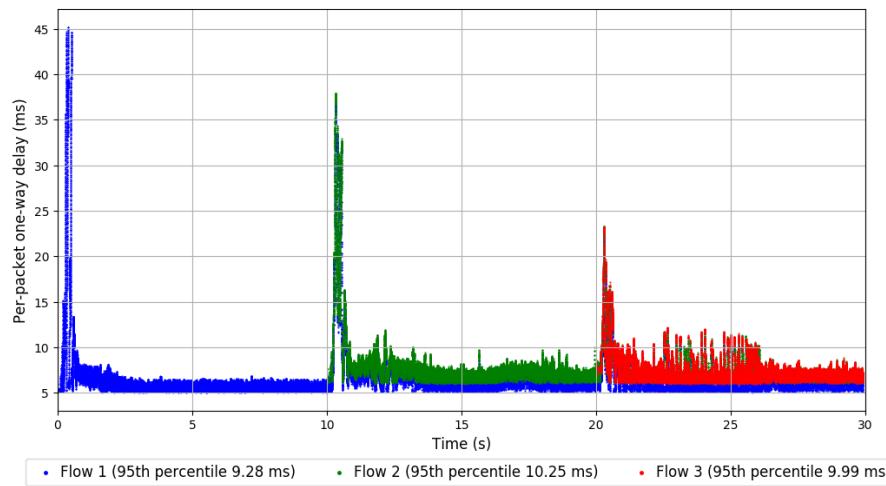
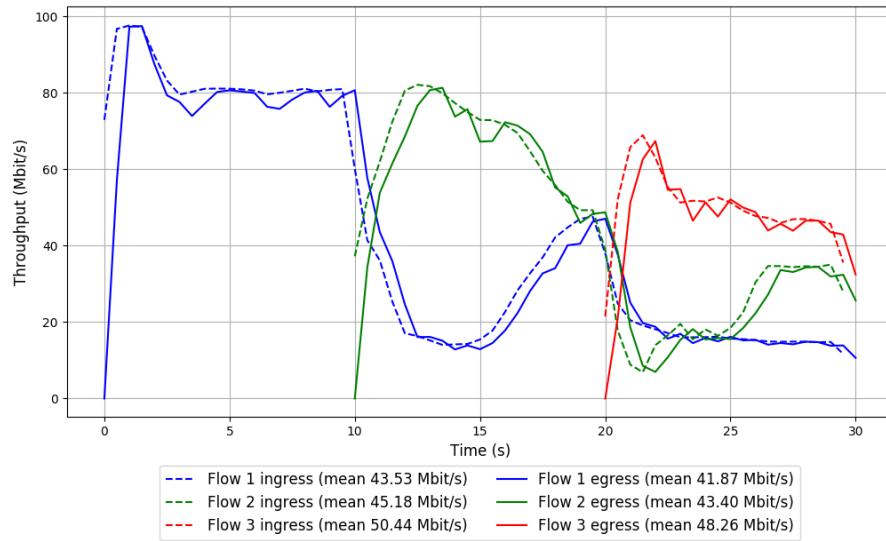


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-10-09 22:17:25
End at: 2018-10-09 22:17:55
Local clock offset: 0.187 ms
Remote clock offset: -4.465 ms

# Below is generated by plot.py at 2018-10-09 22:45:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.66 Mbit/s
95th percentile per-packet one-way delay: 9.931 ms
Loss rate: 3.95%
-- Flow 1:
Average throughput: 41.87 Mbit/s
95th percentile per-packet one-way delay: 9.277 ms
Loss rate: 3.82%
-- Flow 2:
Average throughput: 43.40 Mbit/s
95th percentile per-packet one-way delay: 10.249 ms
Loss rate: 3.93%
-- Flow 3:
Average throughput: 48.26 Mbit/s
95th percentile per-packet one-way delay: 9.990 ms
Loss rate: 4.34%
```

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

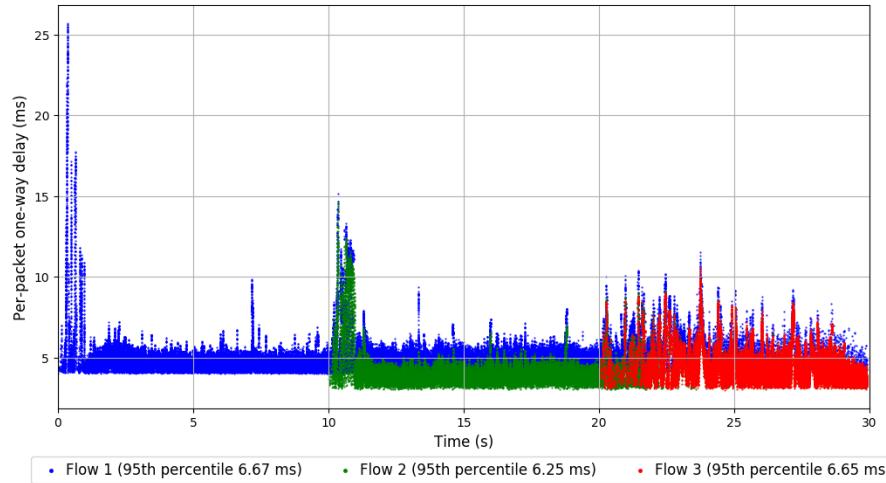
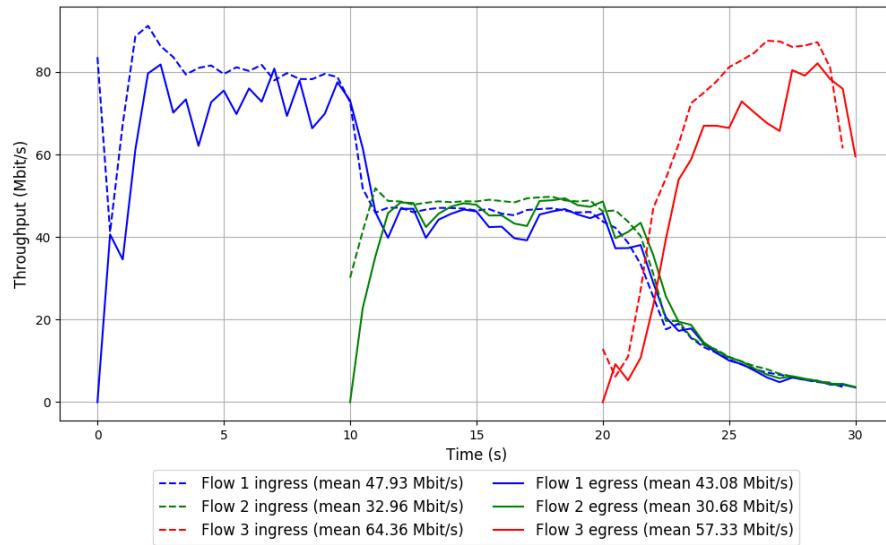


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-10-09 22:38:39
End at: 2018-10-09 22:39:09
Local clock offset: 1.726 ms
Remote clock offset: -5.11 ms

# Below is generated by plot.py at 2018-10-09 22:45:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.43 Mbit/s
95th percentile per-packet one-way delay: 6.575 ms
Loss rate: 9.54%
-- Flow 1:
Average throughput: 43.08 Mbit/s
95th percentile per-packet one-way delay: 6.668 ms
Loss rate: 10.12%
-- Flow 2:
Average throughput: 30.68 Mbit/s
95th percentile per-packet one-way delay: 6.248 ms
Loss rate: 6.92%
-- Flow 3:
Average throughput: 57.33 Mbit/s
95th percentile per-packet one-way delay: 6.649 ms
Loss rate: 10.92%
```

Run 5: Report of Indigo-Muses — Data Link

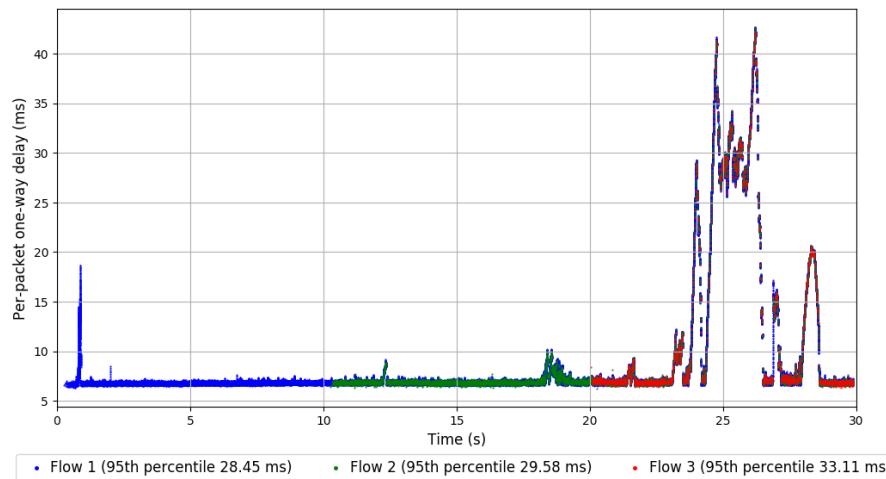
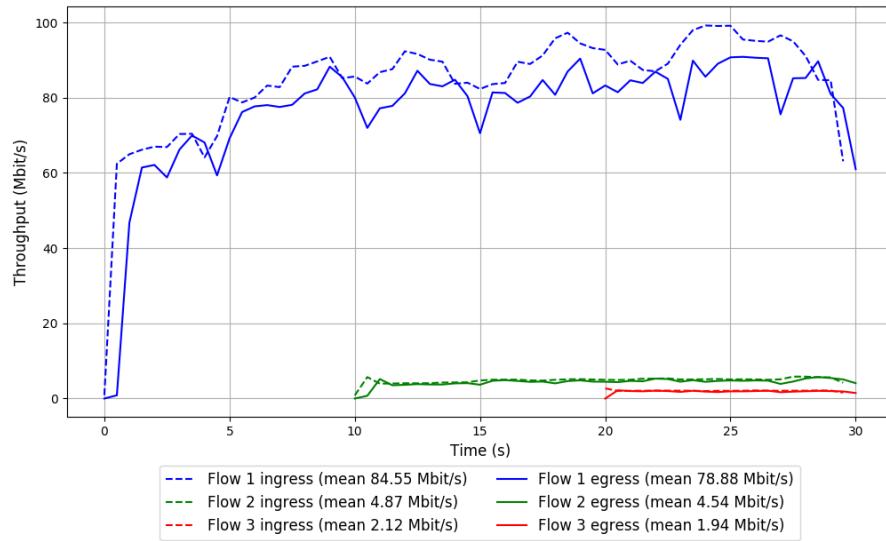


Run 1: Statistics of PCC-Allegro

```
Start at: 2018-10-09 21:12:50
End at: 2018-10-09 21:13:20
Local clock offset: 1.0 ms
Remote clock offset: -3.658 ms

# Below is generated by plot.py at 2018-10-09 22:45:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.53 Mbit/s
95th percentile per-packet one-way delay: 28.538 ms
Loss rate: 7.52%
-- Flow 1:
Average throughput: 78.88 Mbit/s
95th percentile per-packet one-way delay: 28.451 ms
Loss rate: 7.50%
-- Flow 2:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 29.582 ms
Loss rate: 8.00%
-- Flow 3:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 33.114 ms
Loss rate: 8.39%
```

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

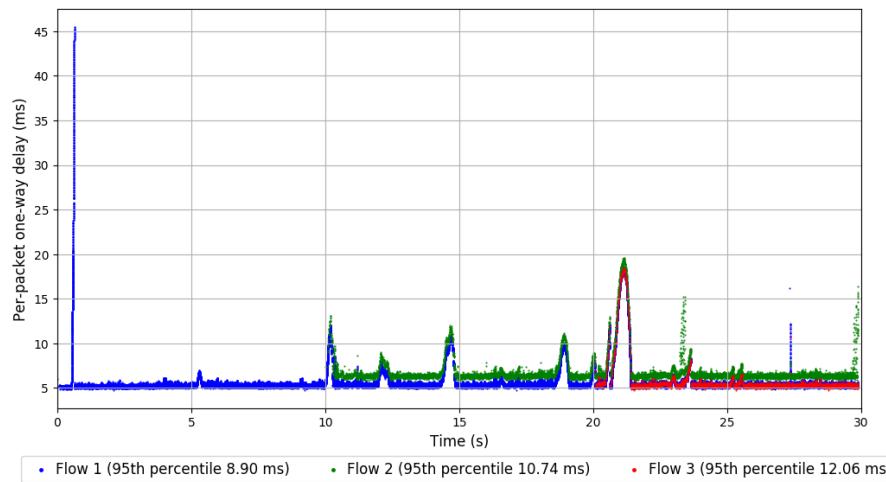
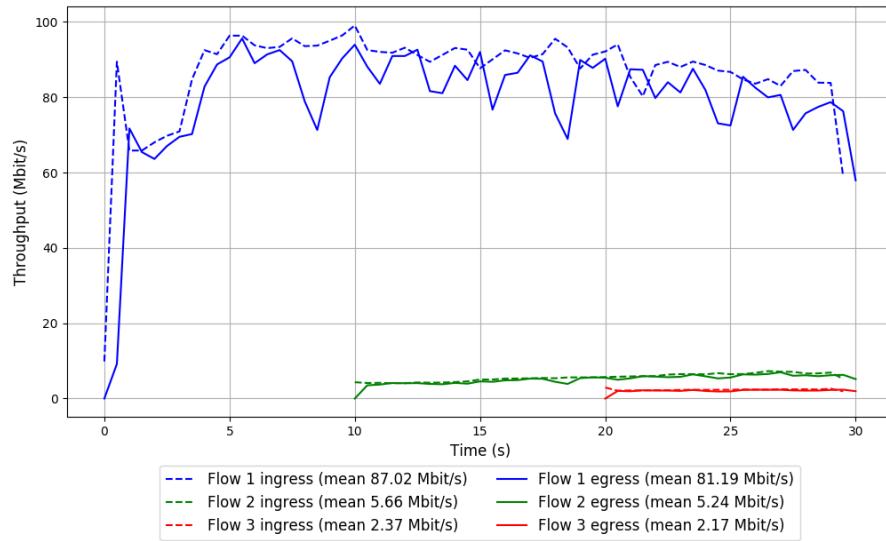


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-10-09 21:33:59
End at: 2018-10-09 21:34:29
Local clock offset: 0.827 ms
Remote clock offset: -4.708 ms

# Below is generated by plot.py at 2018-10-09 22:45:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.38 Mbit/s
95th percentile per-packet one-way delay: 8.999 ms
Loss rate: 6.75%
-- Flow 1:
Average throughput: 81.19 Mbit/s
95th percentile per-packet one-way delay: 8.902 ms
Loss rate: 6.70%
-- Flow 2:
Average throughput: 5.24 Mbit/s
95th percentile per-packet one-way delay: 10.736 ms
Loss rate: 7.29%
-- Flow 3:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 12.059 ms
Loss rate: 8.73%
```

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

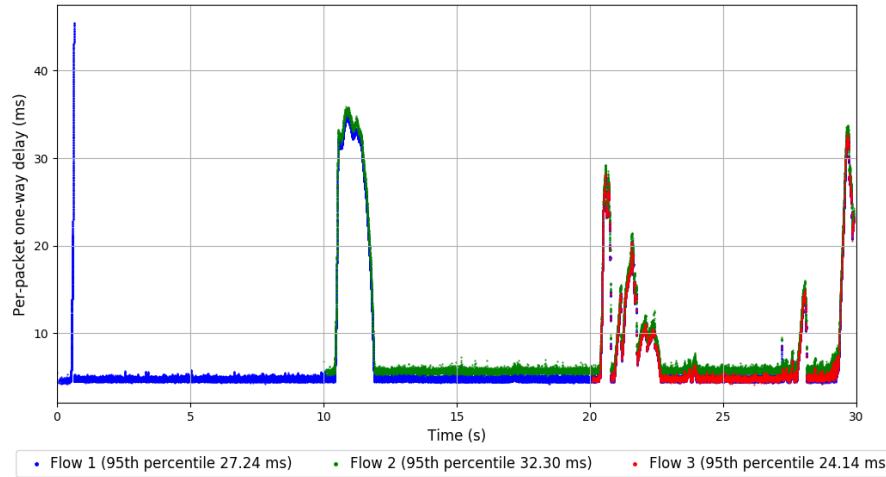
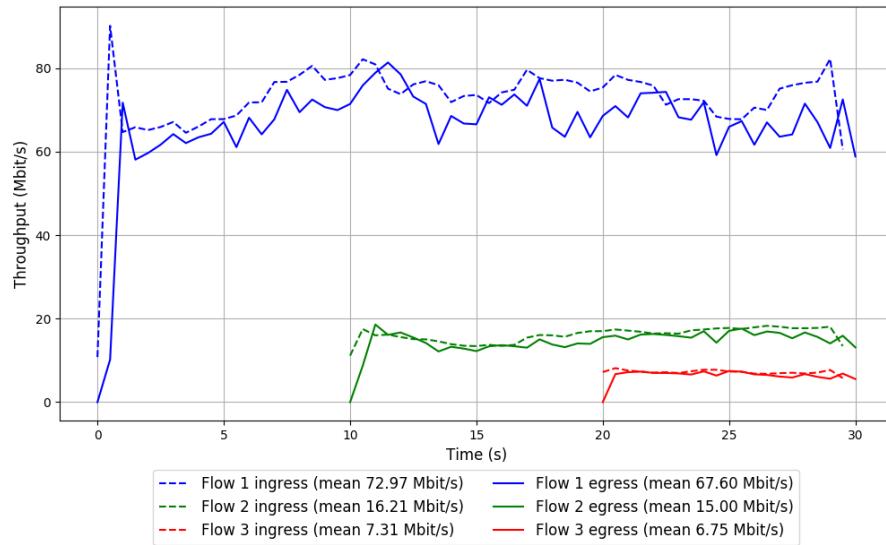


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-10-09 21:55:11
End at: 2018-10-09 21:55:41
Local clock offset: 1.39 ms
Remote clock offset: -5.005 ms

# Below is generated by plot.py at 2018-10-09 22:45:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.80 Mbit/s
95th percentile per-packet one-way delay: 27.685 ms
Loss rate: 7.32%
-- Flow 1:
Average throughput: 67.60 Mbit/s
95th percentile per-packet one-way delay: 27.237 ms
Loss rate: 7.30%
-- Flow 2:
Average throughput: 15.00 Mbit/s
95th percentile per-packet one-way delay: 32.304 ms
Loss rate: 7.39%
-- Flow 3:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 24.141 ms
Loss rate: 7.52%
```

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

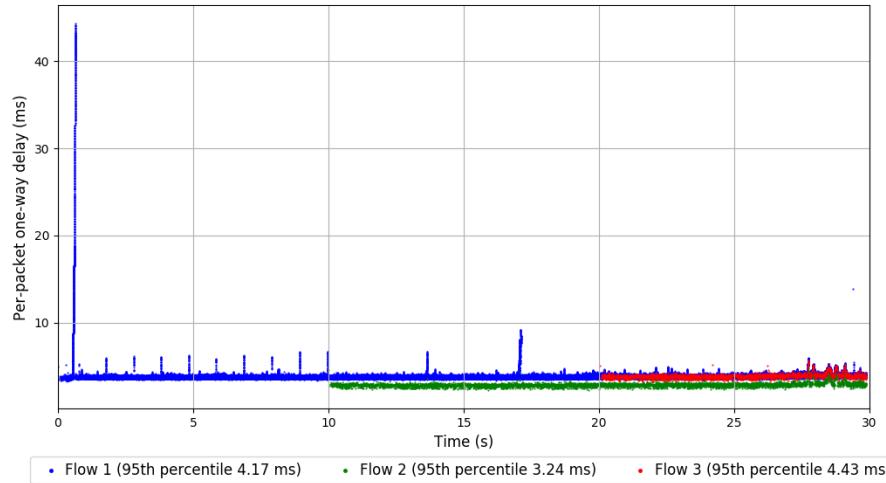
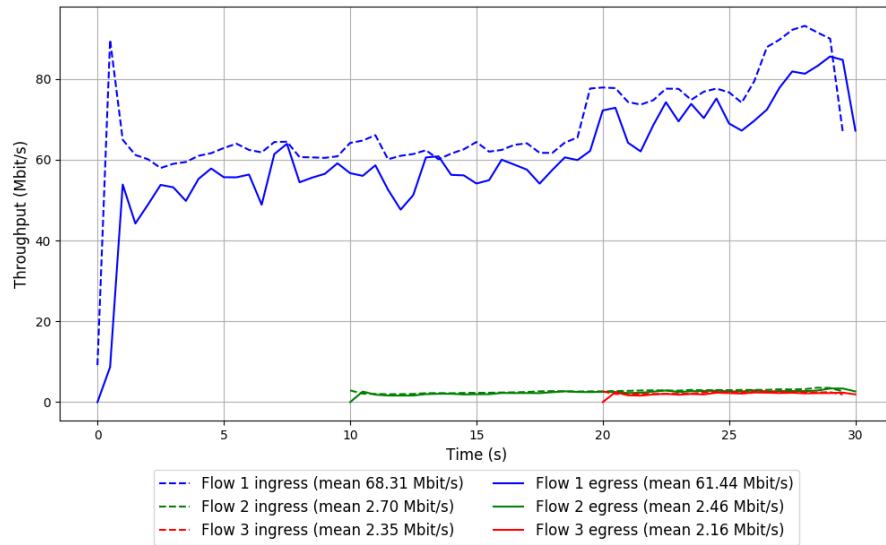


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-10-09 22:16:14
End at: 2018-10-09 22:16:44
Local clock offset: 1.513 ms
Remote clock offset: -5.734 ms

# Below is generated by plot.py at 2018-10-09 22:45:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.79 Mbit/s
95th percentile per-packet one-way delay: 4.162 ms
Loss rate: 10.00%
-- Flow 1:
Average throughput: 61.44 Mbit/s
95th percentile per-packet one-way delay: 4.167 ms
Loss rate: 10.05%
-- Flow 2:
Average throughput: 2.46 Mbit/s
95th percentile per-packet one-way delay: 3.238 ms
Loss rate: 8.90%
-- Flow 3:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 4.433 ms
Loss rate: 8.22%
```

Run 4: Report of PCC-Allegro — Data Link

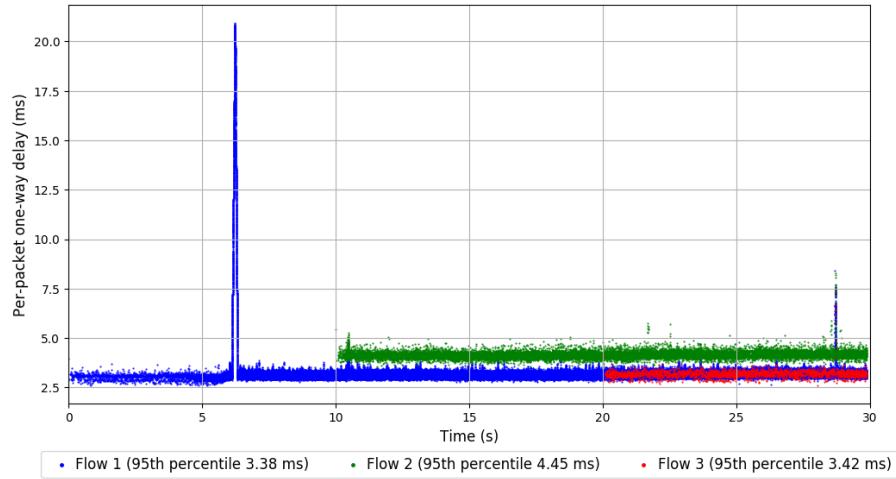
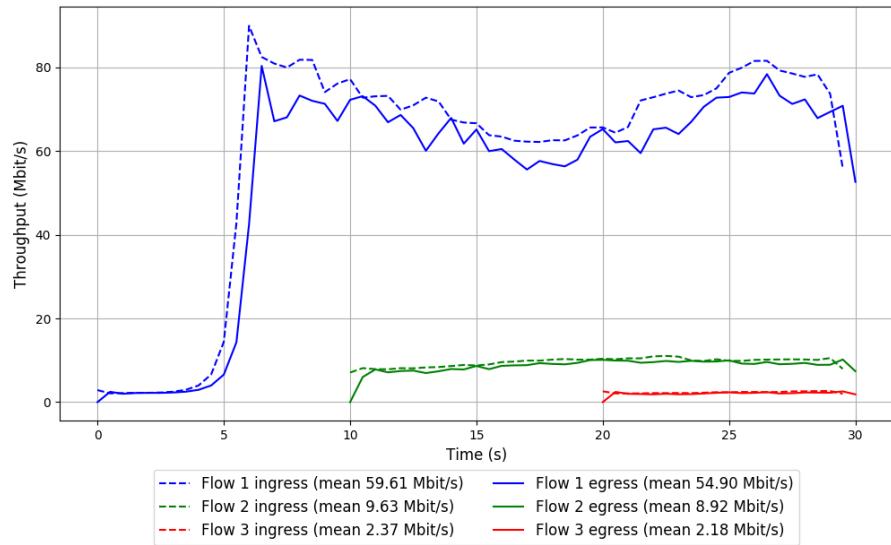


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-10-09 22:37:29
End at: 2018-10-09 22:37:59
Local clock offset: 0.968 ms
Remote clock offset: -6.09 ms

# Below is generated by plot.py at 2018-10-09 22:46:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.54 Mbit/s
95th percentile per-packet one-way delay: 4.199 ms
Loss rate: 7.87%
-- Flow 1:
Average throughput: 54.90 Mbit/s
95th percentile per-packet one-way delay: 3.376 ms
Loss rate: 7.91%
-- Flow 2:
Average throughput: 8.92 Mbit/s
95th percentile per-packet one-way delay: 4.452 ms
Loss rate: 7.41%
-- Flow 3:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 3.423 ms
Loss rate: 8.07%
```

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

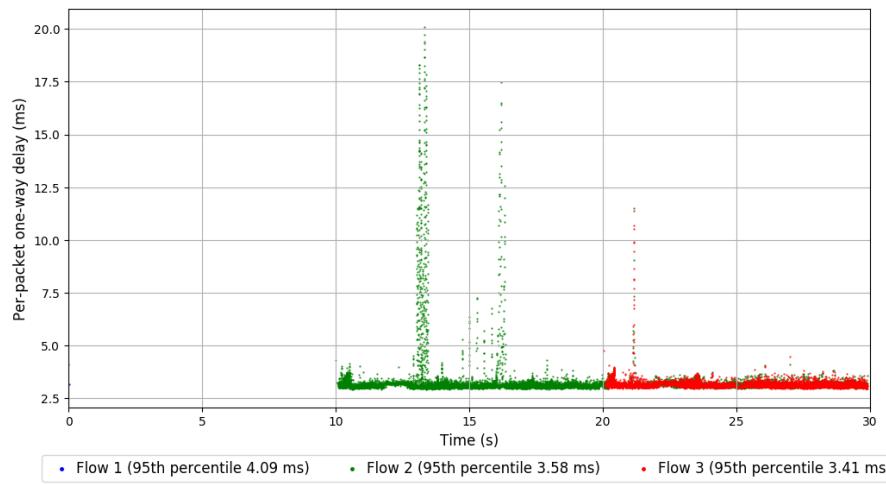
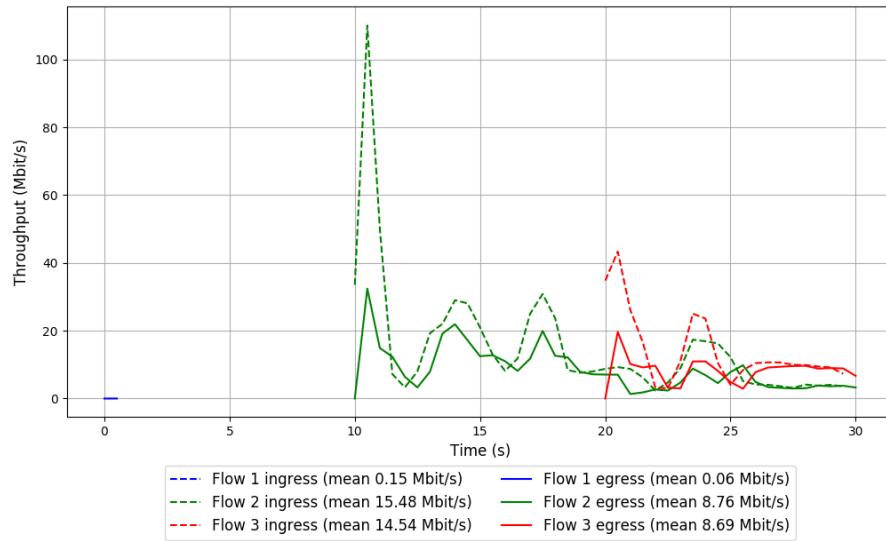


Run 1: Statistics of PCC-Expr

```
Start at: 2018-10-09 20:54:07
End at: 2018-10-09 20:54:37
Local clock offset: 0.986 ms
Remote clock offset: -6.617 ms

# Below is generated by plot.py at 2018-10-09 22:46:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.70 Mbit/s
95th percentile per-packet one-way delay: 3.504 ms
Loss rate: 42.41%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 4.088 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 8.76 Mbit/s
95th percentile per-packet one-way delay: 3.581 ms
Loss rate: 43.42%
-- Flow 3:
Average throughput: 8.69 Mbit/s
95th percentile per-packet one-way delay: 3.407 ms
Loss rate: 40.24%
```

Run 1: Report of PCC-Expr — Data Link

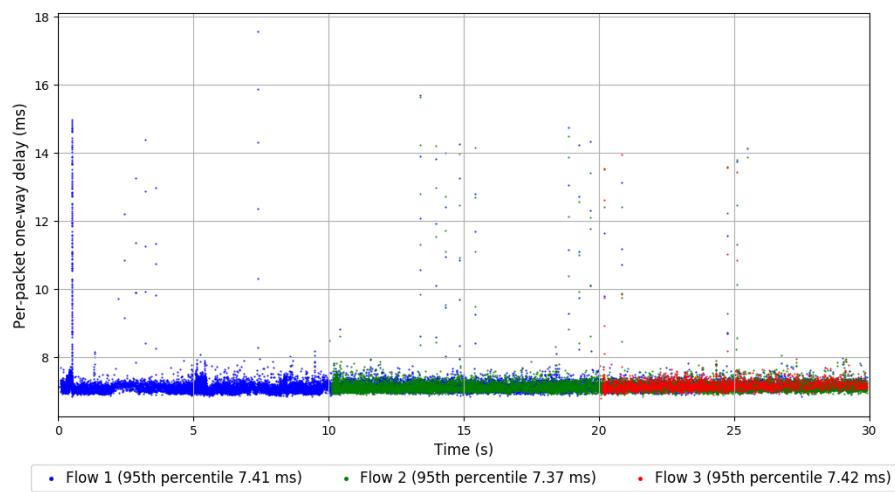
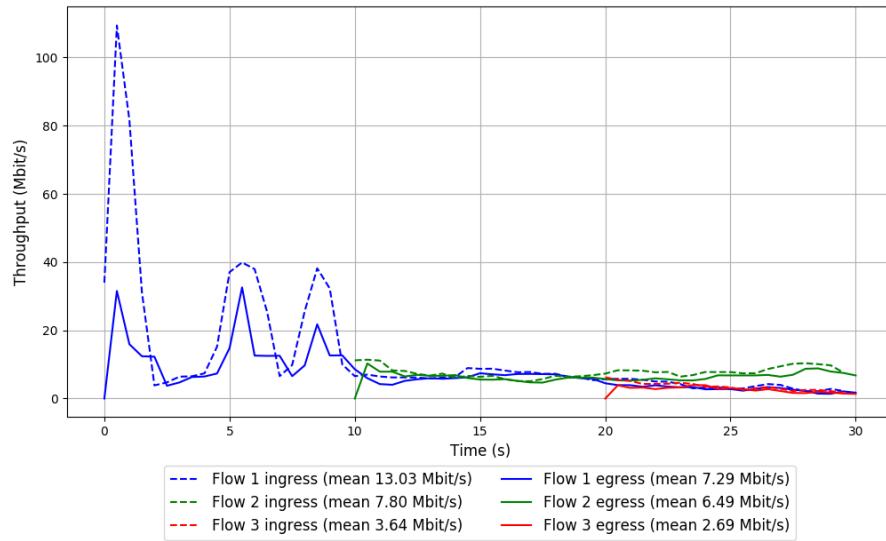


Run 2: Statistics of PCC-Expr

```
Start at: 2018-10-09 21:15:17
End at: 2018-10-09 21:15:47
Local clock offset: 0.34 ms
Remote clock offset: -3.692 ms

# Below is generated by plot.py at 2018-10-09 22:46:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.50 Mbit/s
95th percentile per-packet one-way delay: 7.395 ms
Loss rate: 35.65%
-- Flow 1:
Average throughput: 7.29 Mbit/s
95th percentile per-packet one-way delay: 7.406 ms
Loss rate: 44.02%
-- Flow 2:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 7.366 ms
Loss rate: 16.82%
-- Flow 3:
Average throughput: 2.69 Mbit/s
95th percentile per-packet one-way delay: 7.424 ms
Loss rate: 26.17%
```

Run 2: Report of PCC-Expr — Data Link

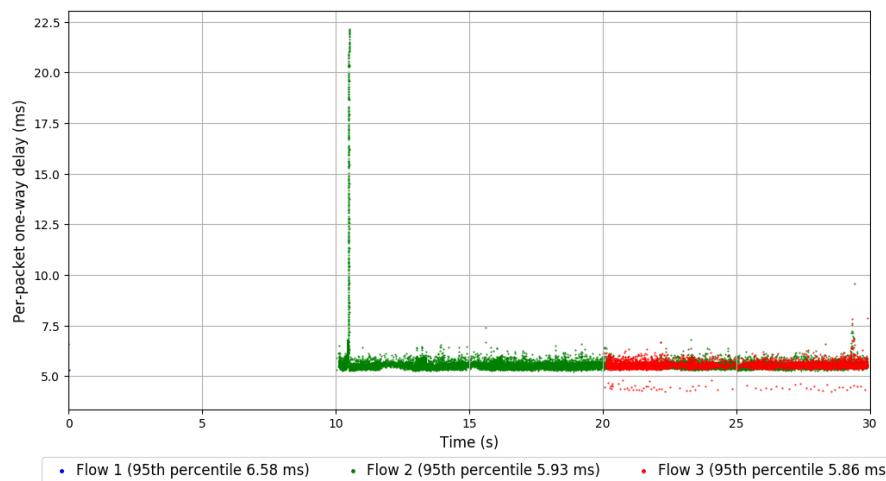
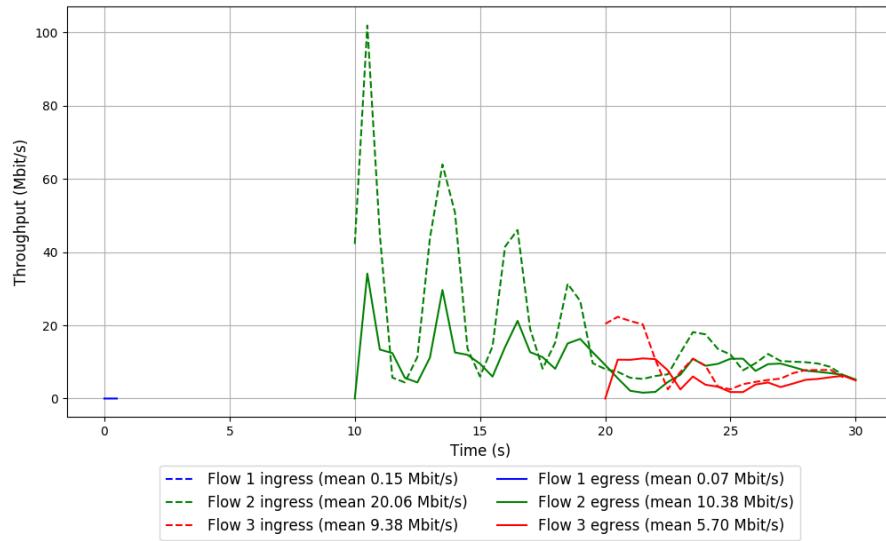


Run 3: Statistics of PCC-Expr

```
Start at: 2018-10-09 21:36:21
End at: 2018-10-09 21:36:51
Local clock offset: 1.246 ms
Remote clock offset: -4.996 ms

# Below is generated by plot.py at 2018-10-09 22:46:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.79 Mbit/s
95th percentile per-packet one-way delay: 5.910 ms
Loss rate: 46.54%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 6.582 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.38 Mbit/s
95th percentile per-packet one-way delay: 5.928 ms
Loss rate: 48.23%
-- Flow 3:
Average throughput: 5.70 Mbit/s
95th percentile per-packet one-way delay: 5.863 ms
Loss rate: 39.27%
```

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

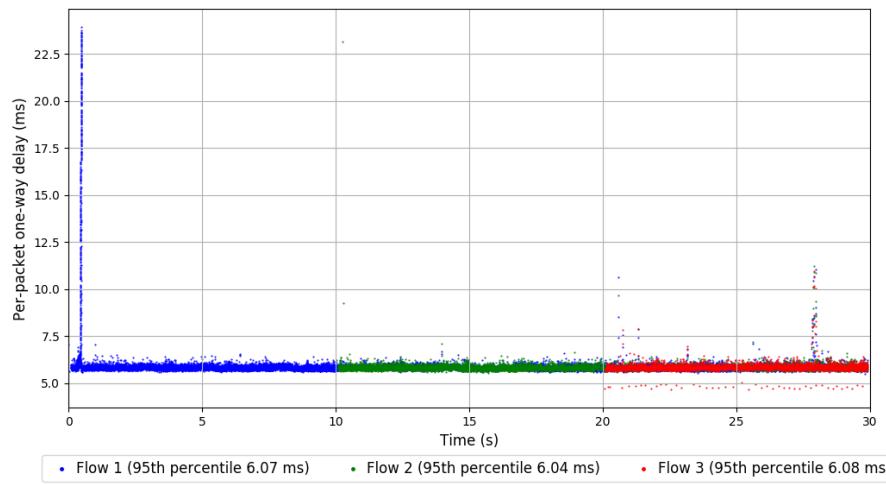
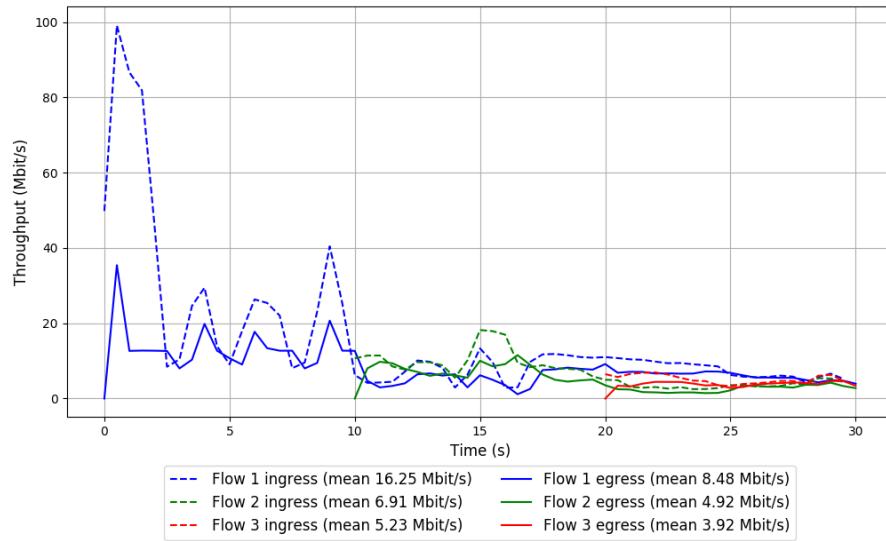


Run 4: Statistics of PCC-Expr

```
Start at: 2018-10-09 21:57:34
End at: 2018-10-09 21:58:04
Local clock offset: 0.581 ms
Remote clock offset: -5.255 ms

# Below is generated by plot.py at 2018-10-09 22:46:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.05 Mbit/s
95th percentile per-packet one-way delay: 6.060 ms
Loss rate: 42.20%
-- Flow 1:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 6.071 ms
Loss rate: 47.81%
-- Flow 2:
Average throughput: 4.92 Mbit/s
95th percentile per-packet one-way delay: 6.036 ms
Loss rate: 28.88%
-- Flow 3:
Average throughput: 3.92 Mbit/s
95th percentile per-packet one-way delay: 6.080 ms
Loss rate: 24.97%
```

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

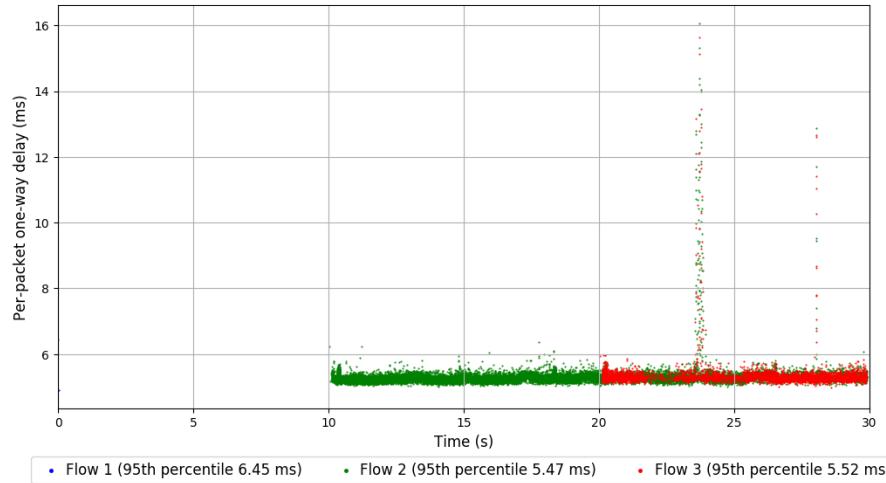
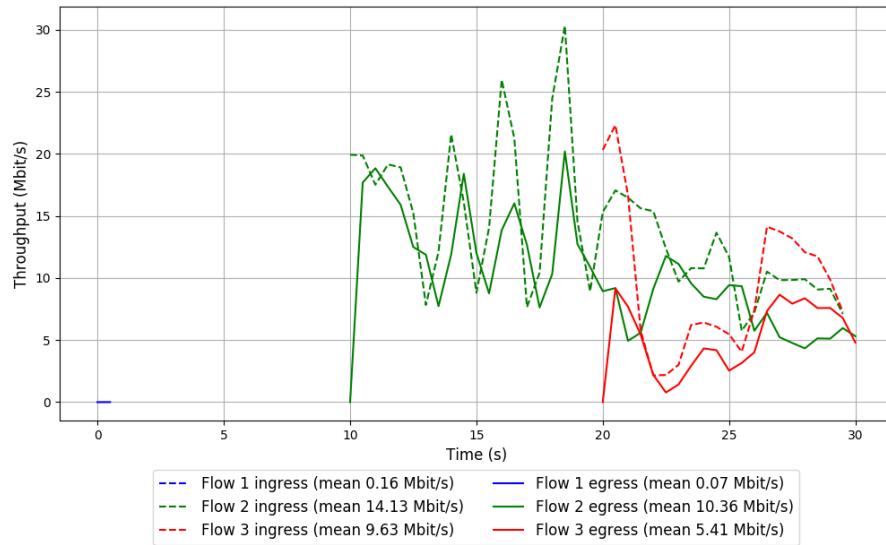


Run 5: Statistics of PCC-Expr

```
Start at: 2018-10-09 22:18:37
End at: 2018-10-09 22:19:07
Local clock offset: 0.186 ms
Remote clock offset: -5.427 ms

# Below is generated by plot.py at 2018-10-09 22:46:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.68 Mbit/s
95th percentile per-packet one-way delay: 5.477 ms
Loss rate: 31.02%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 6.446 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.36 Mbit/s
95th percentile per-packet one-way delay: 5.467 ms
Loss rate: 26.70%
-- Flow 3:
Average throughput: 5.41 Mbit/s
95th percentile per-packet one-way delay: 5.520 ms
Loss rate: 43.77%
```

Run 5: Report of PCC-Expr — Data Link

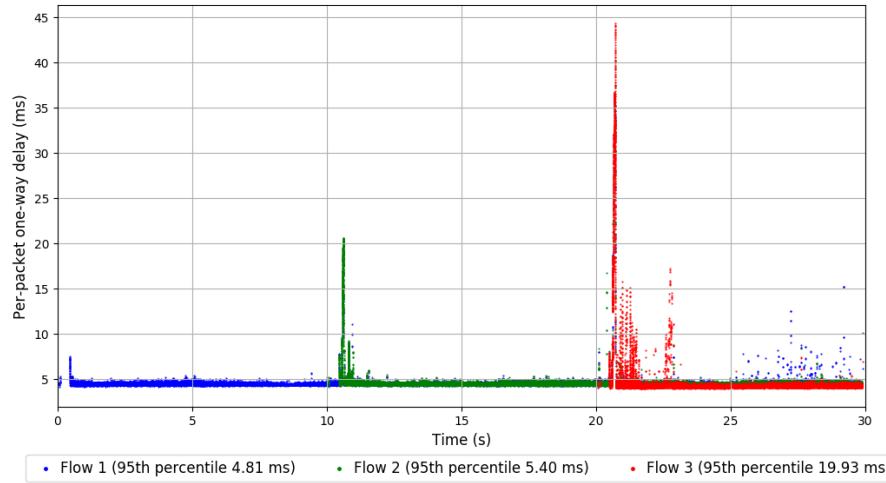
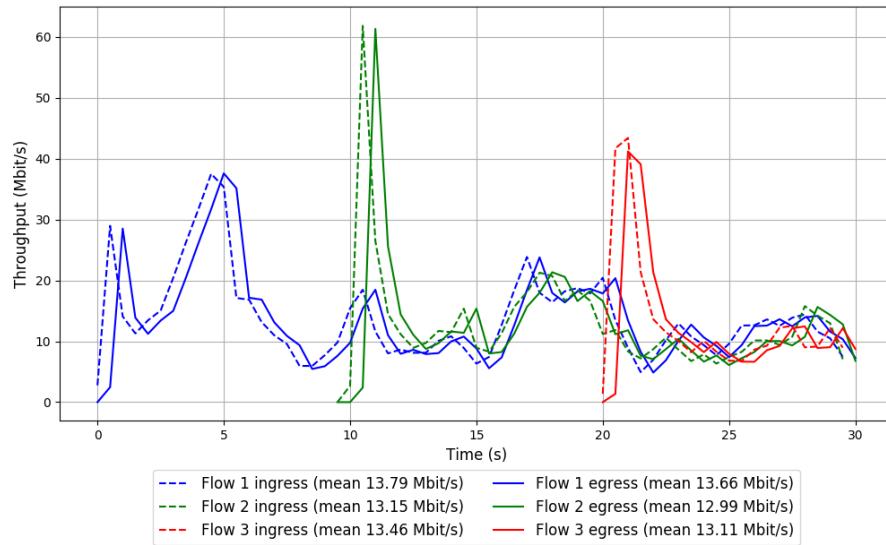


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-10-09 21:05:54
End at: 2018-10-09 21:06:24
Local clock offset: 1.129 ms
Remote clock offset: -5.608 ms

# Below is generated by plot.py at 2018-10-09 22:46:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.63 Mbit/s
95th percentile per-packet one-way delay: 5.279 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 13.66 Mbit/s
95th percentile per-packet one-way delay: 4.814 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 12.99 Mbit/s
95th percentile per-packet one-way delay: 5.398 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 13.11 Mbit/s
95th percentile per-packet one-way delay: 19.935 ms
Loss rate: 2.54%
```

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

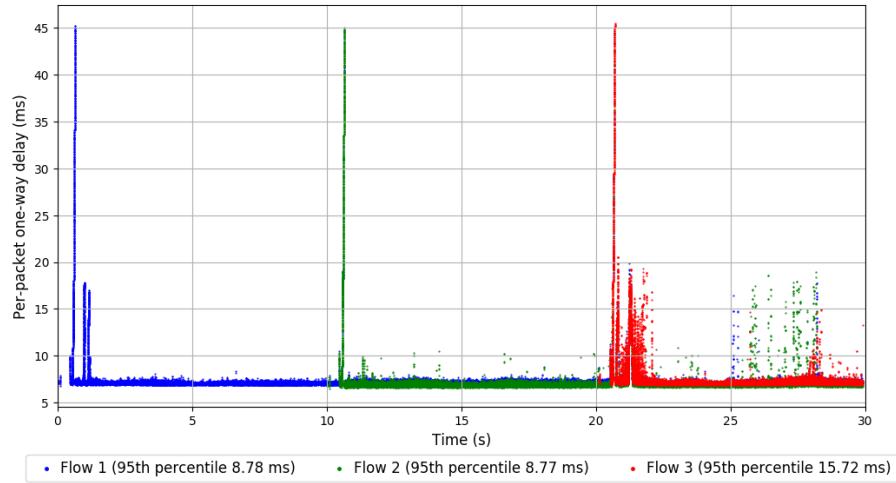
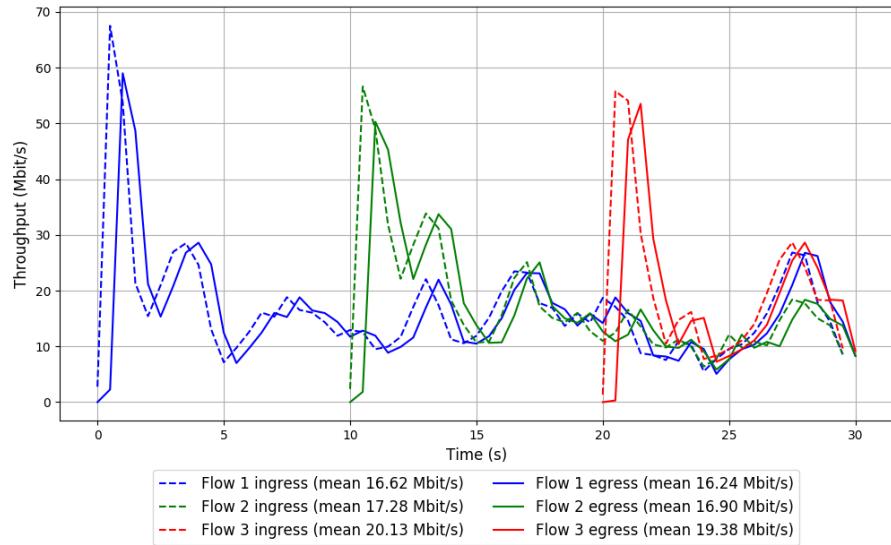


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-10-09 21:27:05
End at: 2018-10-09 21:27:35
Local clock offset: 0.518 ms
Remote clock offset: -4.057 ms

# Below is generated by plot.py at 2018-10-09 22:46:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.87 Mbit/s
95th percentile per-packet one-way delay: 11.788 ms
Loss rate: 2.53%
-- Flow 1:
Average throughput: 16.24 Mbit/s
95th percentile per-packet one-way delay: 8.778 ms
Loss rate: 2.29%
-- Flow 2:
Average throughput: 16.90 Mbit/s
95th percentile per-packet one-way delay: 8.766 ms
Loss rate: 2.23%
-- Flow 3:
Average throughput: 19.38 Mbit/s
95th percentile per-packet one-way delay: 15.719 ms
Loss rate: 3.65%
```

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

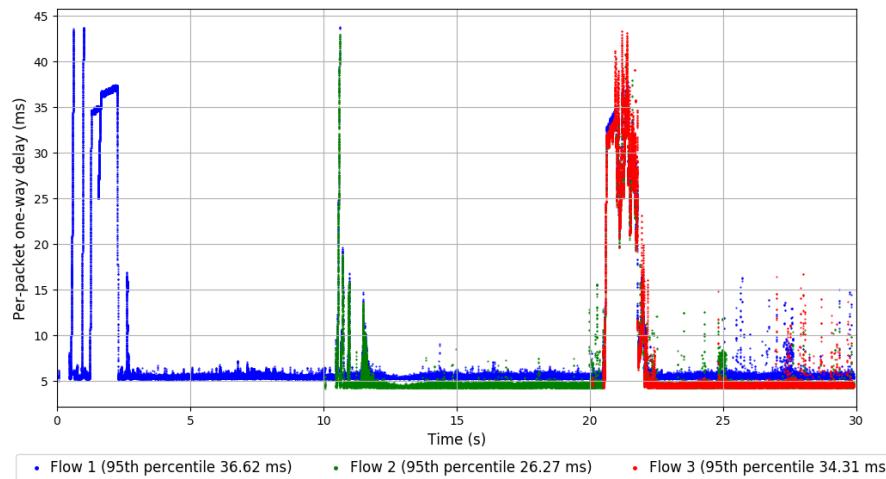
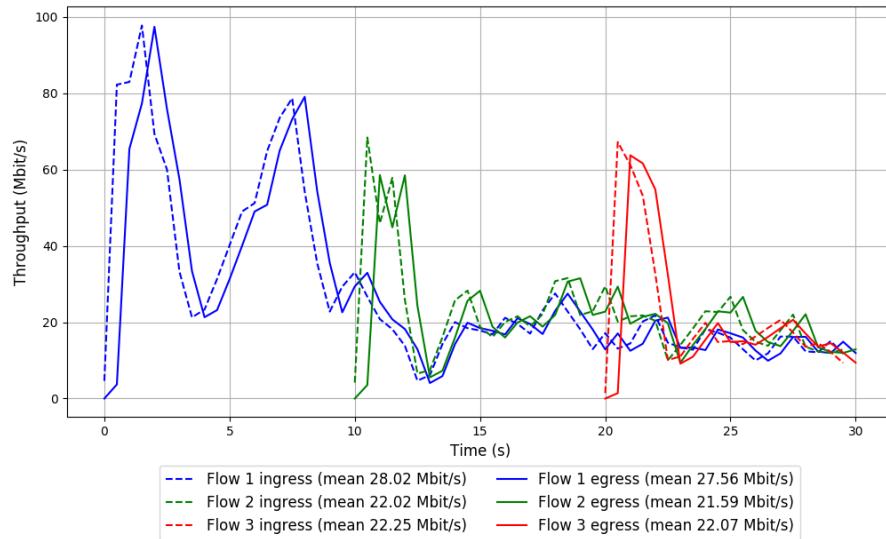


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-10-09 21:48:05
End at: 2018-10-09 21:48:35
Local clock offset: 1.913 ms
Remote clock offset: -4.634 ms

# Below is generated by plot.py at 2018-10-09 22:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.19 Mbit/s
95th percentile per-packet one-way delay: 35.820 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 27.56 Mbit/s
95th percentile per-packet one-way delay: 36.625 ms
Loss rate: 1.65%
-- Flow 2:
Average throughput: 21.59 Mbit/s
95th percentile per-packet one-way delay: 26.268 ms
Loss rate: 1.97%
-- Flow 3:
Average throughput: 22.07 Mbit/s
95th percentile per-packet one-way delay: 34.314 ms
Loss rate: 0.83%
```

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

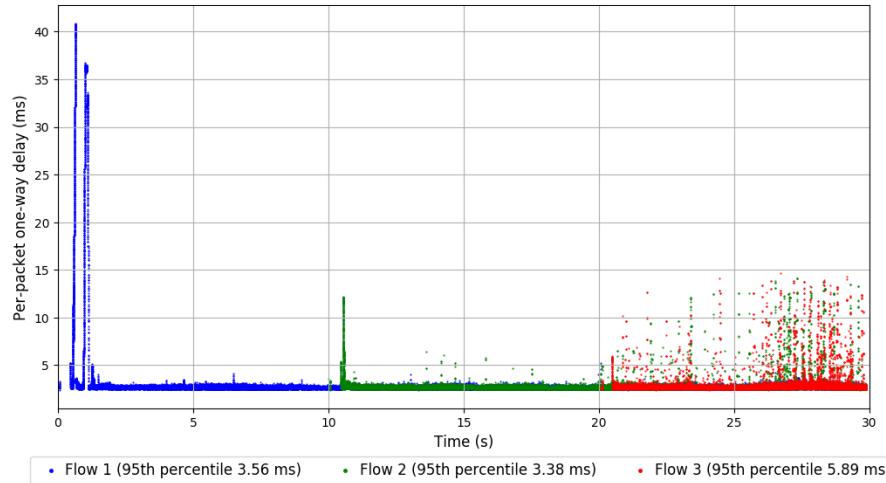
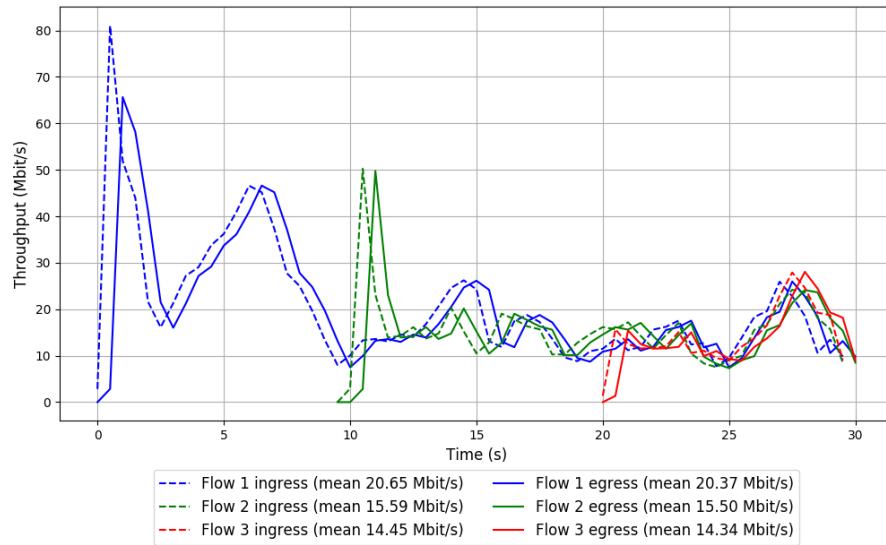


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-10-09 22:09:20
End at: 2018-10-09 22:09:50
Local clock offset: 2.564 ms
Remote clock offset: -4.845 ms

# Below is generated by plot.py at 2018-10-09 22:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.41 Mbit/s
95th percentile per-packet one-way delay: 4.061 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 20.37 Mbit/s
95th percentile per-packet one-way delay: 3.561 ms
Loss rate: 1.34%
-- Flow 2:
Average throughput: 15.50 Mbit/s
95th percentile per-packet one-way delay: 3.380 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 14.34 Mbit/s
95th percentile per-packet one-way delay: 5.891 ms
Loss rate: 0.82%
```

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

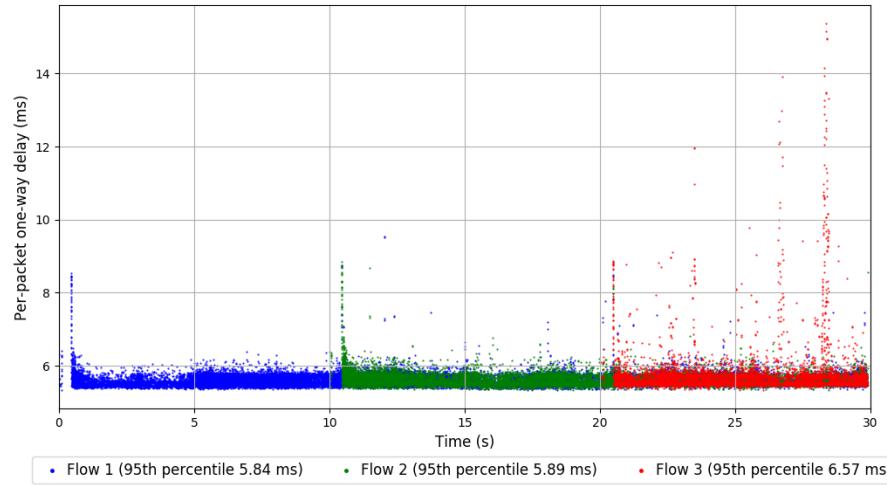
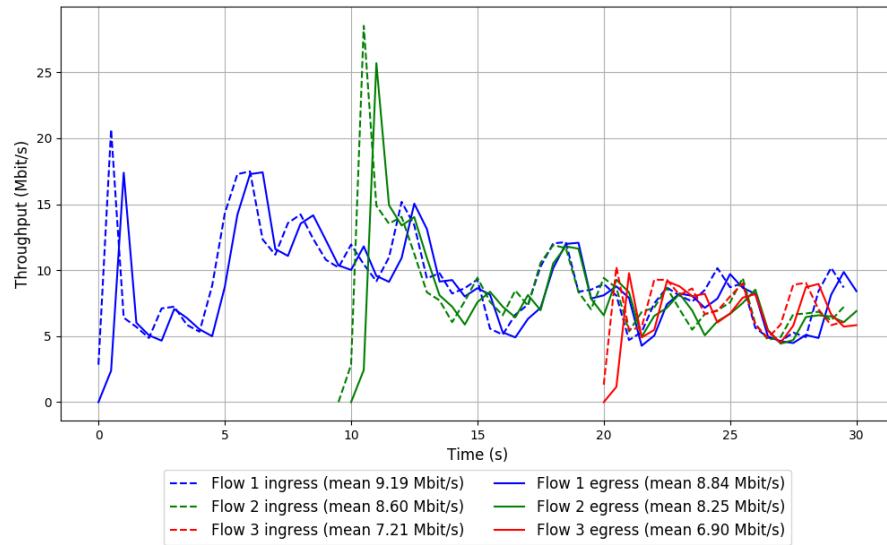


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-10-09 22:30:35
End at: 2018-10-09 22:31:05
Local clock offset: 0.179 ms
Remote clock offset: -5.2 ms

# Below is generated by plot.py at 2018-10-09 22:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.60 Mbit/s
95th percentile per-packet one-way delay: 5.902 ms
Loss rate: 3.95%
-- Flow 1:
Average throughput: 8.84 Mbit/s
95th percentile per-packet one-way delay: 5.845 ms
Loss rate: 3.74%
-- Flow 2:
Average throughput: 8.25 Mbit/s
95th percentile per-packet one-way delay: 5.893 ms
Loss rate: 4.12%
-- Flow 3:
Average throughput: 6.90 Mbit/s
95th percentile per-packet one-way delay: 6.568 ms
Loss rate: 4.35%
```

Run 5: Report of QUIC Cubic — Data Link

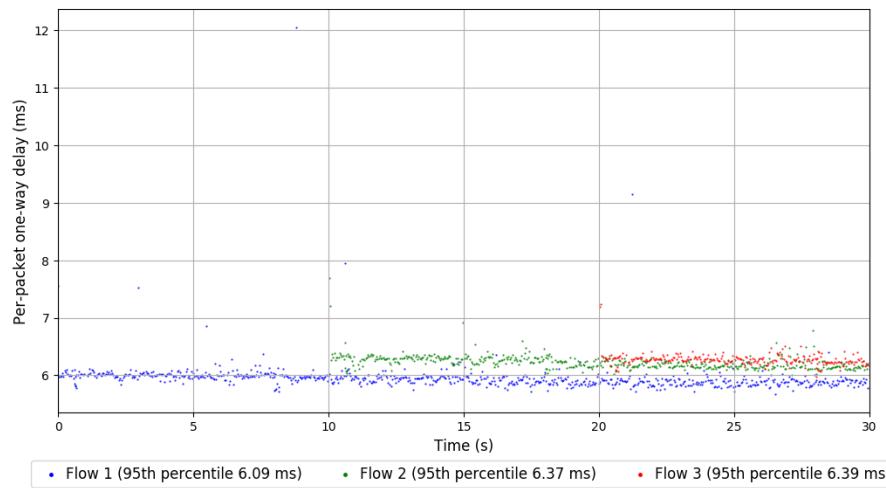
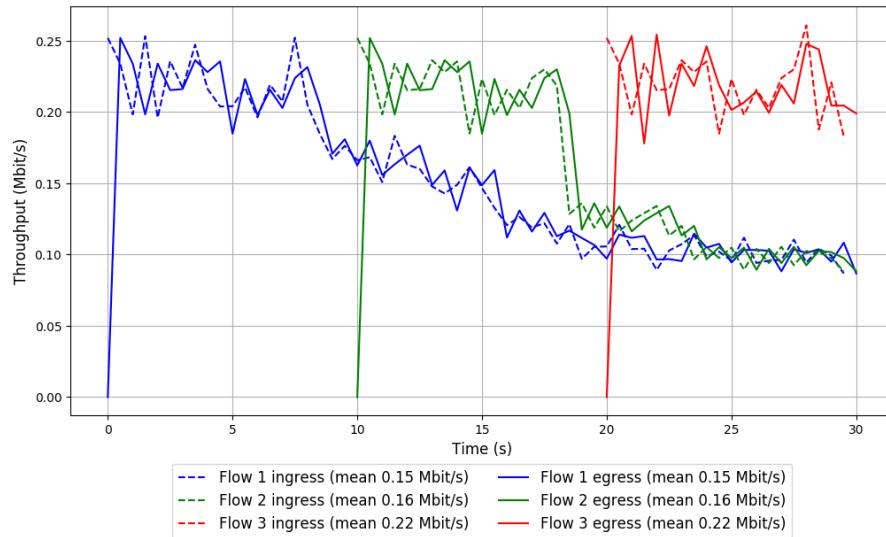


```
Run 1: Statistics of SCReAM

Start at: 2018-10-09 21:11:44
End at: 2018-10-09 21:12:14
Local clock offset: 1.405 ms
Remote clock offset: -3.668 ms

# Below is generated by plot.py at 2018-10-09 22:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 6.353 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 6.089 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 6.366 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 6.395 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

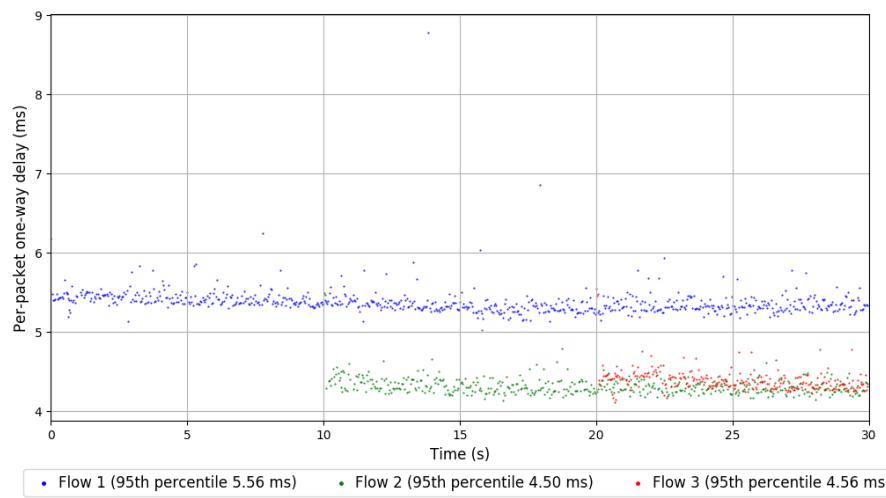
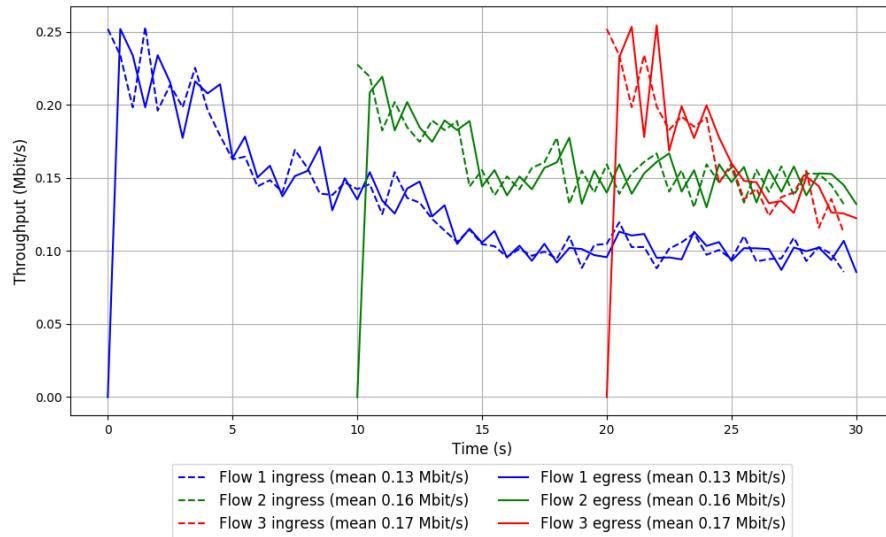


Run 2: Statistics of SCReAM

```
Start at: 2018-10-09 21:32:53
End at: 2018-10-09 21:33:23
Local clock offset: 1.718 ms
Remote clock offset: -4.513 ms

# Below is generated by plot.py at 2018-10-09 22:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 5.491 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 5.557 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 4.497 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 4.563 ms
Loss rate: 0.42%
```

Run 2: Report of SCReAM — Data Link

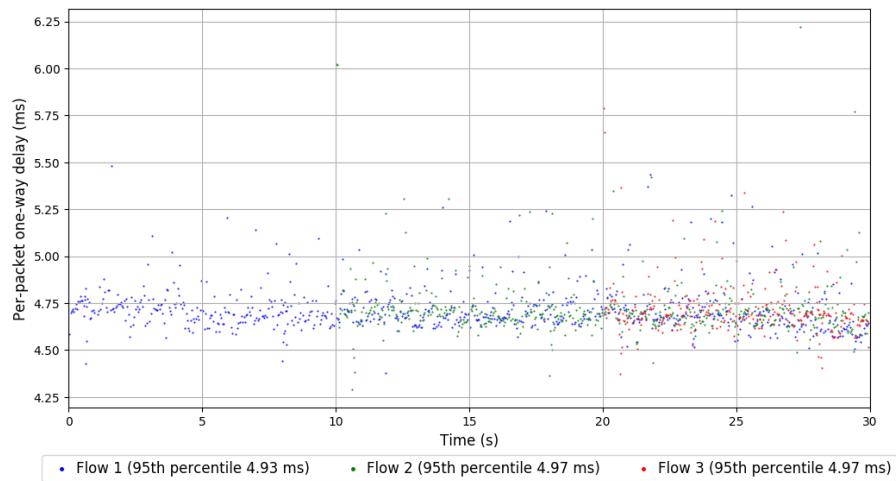
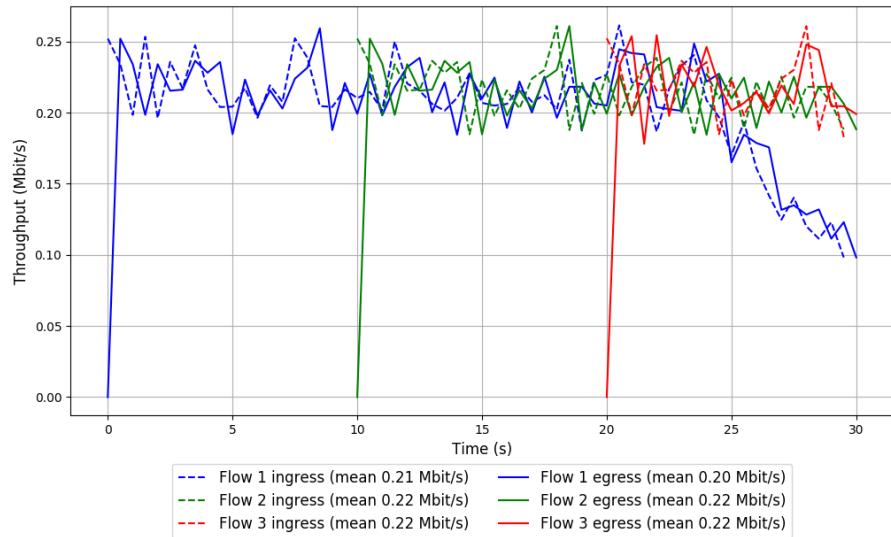


Run 3: Statistics of SCReAM

```
Start at: 2018-10-09 21:54:04
End at: 2018-10-09 21:54:34
Local clock offset: 1.461 ms
Remote clock offset: -4.943 ms

# Below is generated by plot.py at 2018-10-09 22:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 4.954 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 4.928 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 4.967 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 4.972 ms
Loss rate: 0.00%
```

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

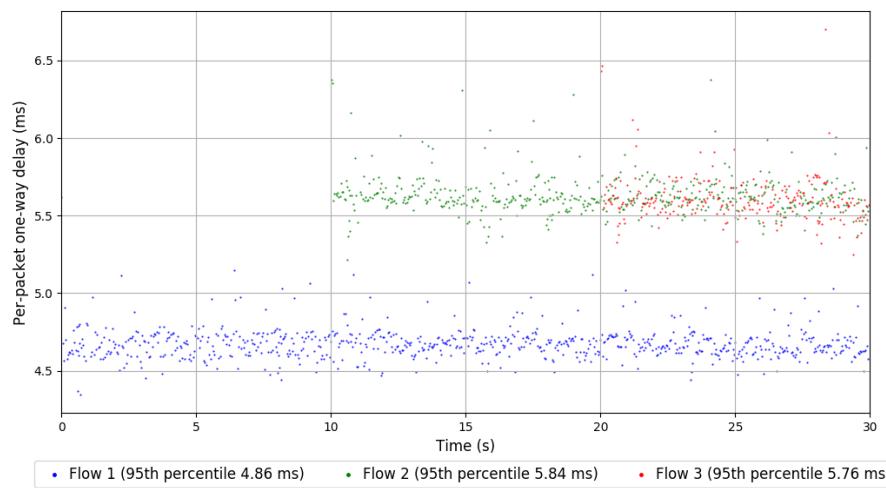
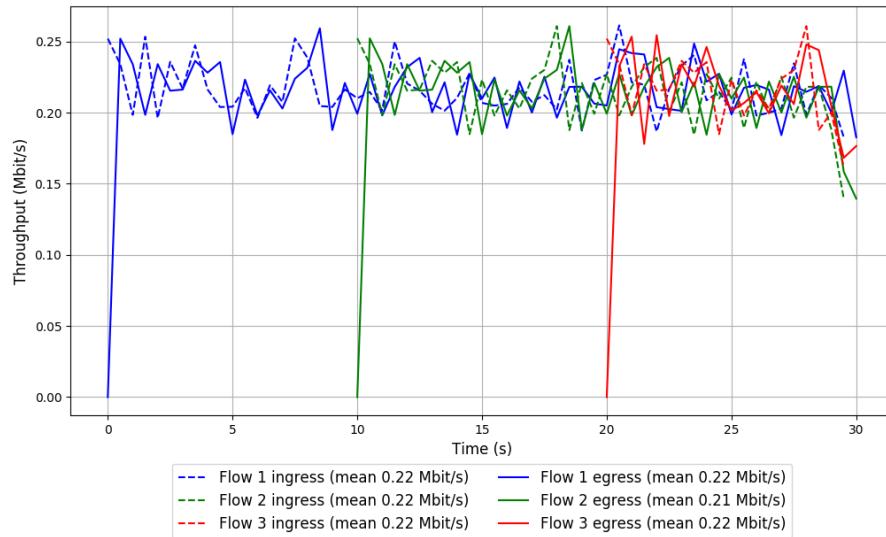


Run 4: Statistics of SCReAM

```
Start at: 2018-10-09 22:15:07
End at: 2018-10-09 22:15:37
Local clock offset: -0.04 ms
Remote clock offset: -5.365 ms

# Below is generated by plot.py at 2018-10-09 22:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 5.739 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 4.855 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 5.843 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 5.758 ms
Loss rate: 0.39%
```

Run 4: Report of SCReAM — Data Link

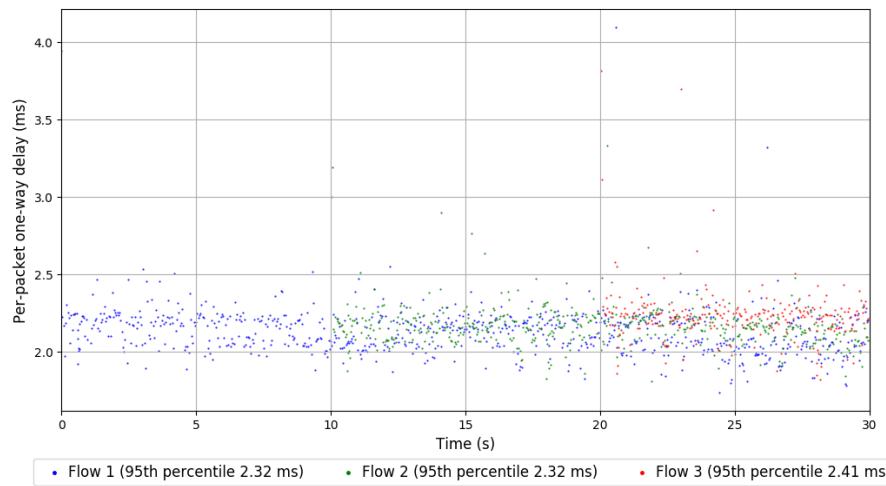
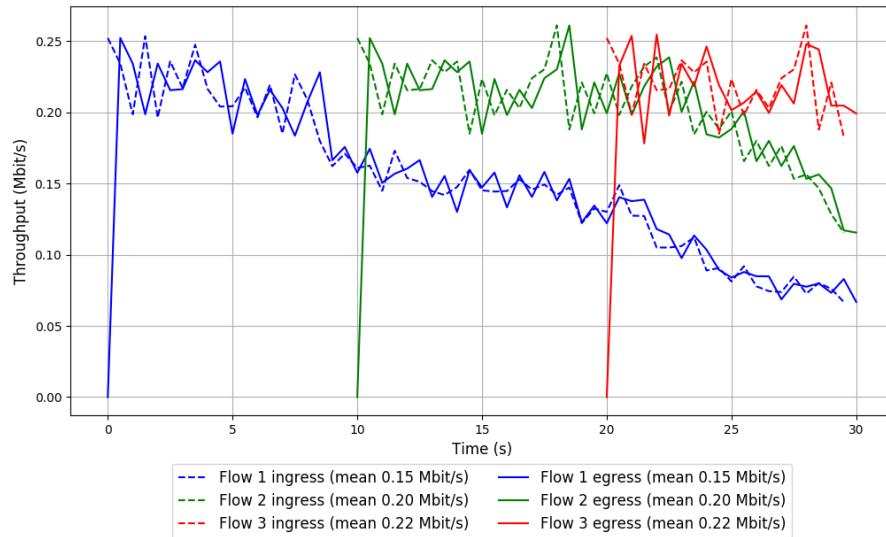


Run 5: Statistics of SCReAM

```
Start at: 2018-10-09 22:36:23
End at: 2018-10-09 22:36:53
Local clock offset: 1.926 ms
Remote clock offset: -6.023 ms

# Below is generated by plot.py at 2018-10-09 22:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 2.342 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 2.321 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 2.319 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.411 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

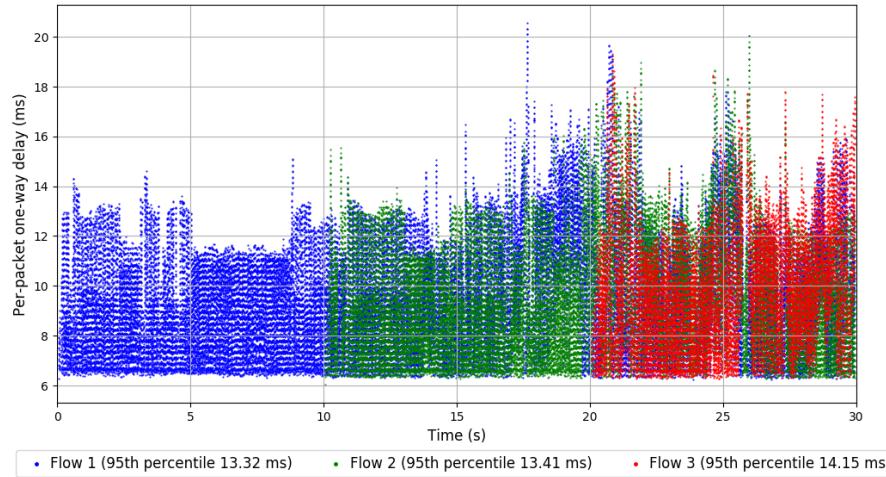
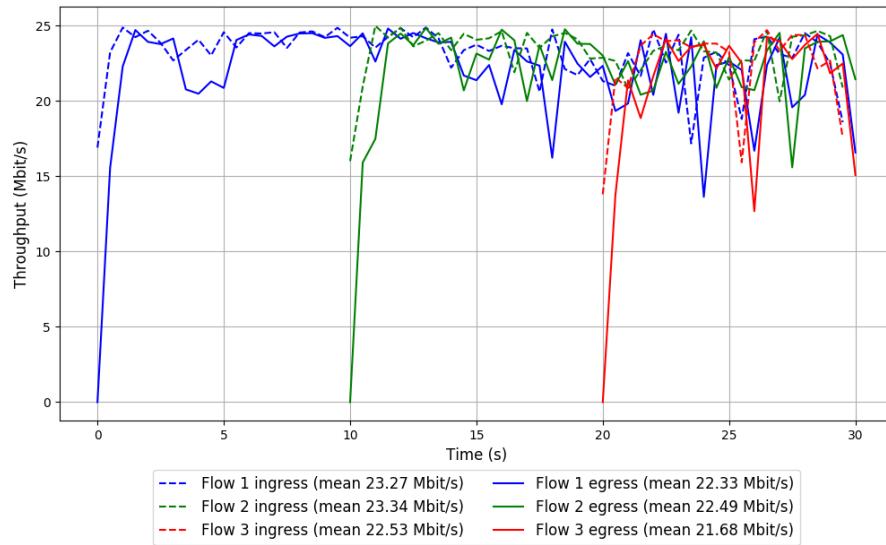


Run 1: Statistics of Sprout

```
Start at: 2018-10-09 21:09:21
End at: 2018-10-09 21:09:51
Local clock offset: 0.154 ms
Remote clock offset: -4.398 ms

# Below is generated by plot.py at 2018-10-09 22:46:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.46 Mbit/s
95th percentile per-packet one-way delay: 13.488 ms
Loss rate: 3.82%
-- Flow 1:
Average throughput: 22.33 Mbit/s
95th percentile per-packet one-way delay: 13.325 ms
Loss rate: 3.99%
-- Flow 2:
Average throughput: 22.49 Mbit/s
95th percentile per-packet one-way delay: 13.413 ms
Loss rate: 3.63%
-- Flow 3:
Average throughput: 21.68 Mbit/s
95th percentile per-packet one-way delay: 14.154 ms
Loss rate: 3.69%
```

## Run 1: Report of Sprout — Data Link

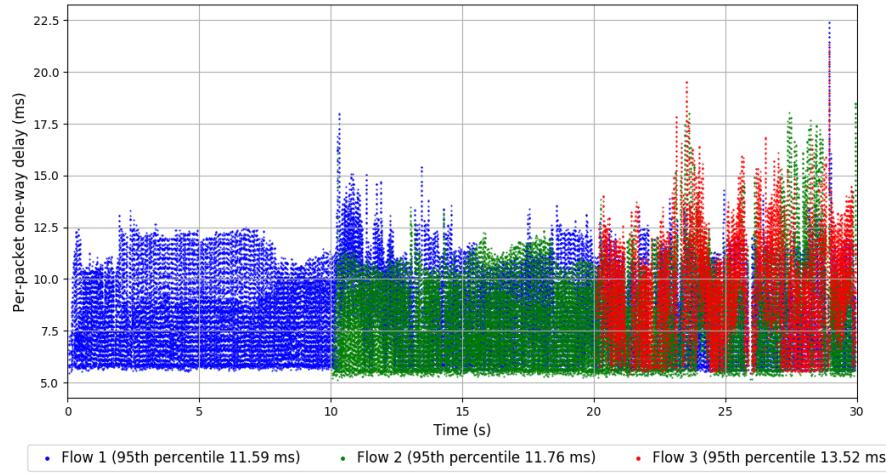
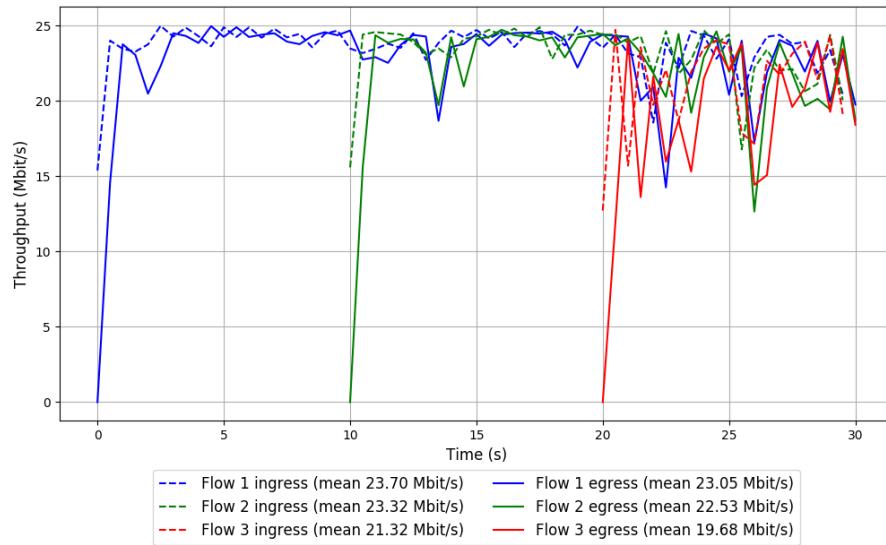


Run 2: Statistics of Sprout

```
Start at: 2018-10-09 21:30:31
End at: 2018-10-09 21:31:01
Local clock offset: 1.302 ms
Remote clock offset: -4.846 ms

# Below is generated by plot.py at 2018-10-09 22:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.55 Mbit/s
95th percentile per-packet one-way delay: 12.037 ms
Loss rate: 3.67%
-- Flow 1:
Average throughput: 23.05 Mbit/s
95th percentile per-packet one-way delay: 11.593 ms
Loss rate: 2.71%
-- Flow 2:
Average throughput: 22.53 Mbit/s
95th percentile per-packet one-way delay: 11.756 ms
Loss rate: 3.33%
-- Flow 3:
Average throughput: 19.68 Mbit/s
95th percentile per-packet one-way delay: 13.516 ms
Loss rate: 7.63%
```

## Run 2: Report of Sprout — Data Link

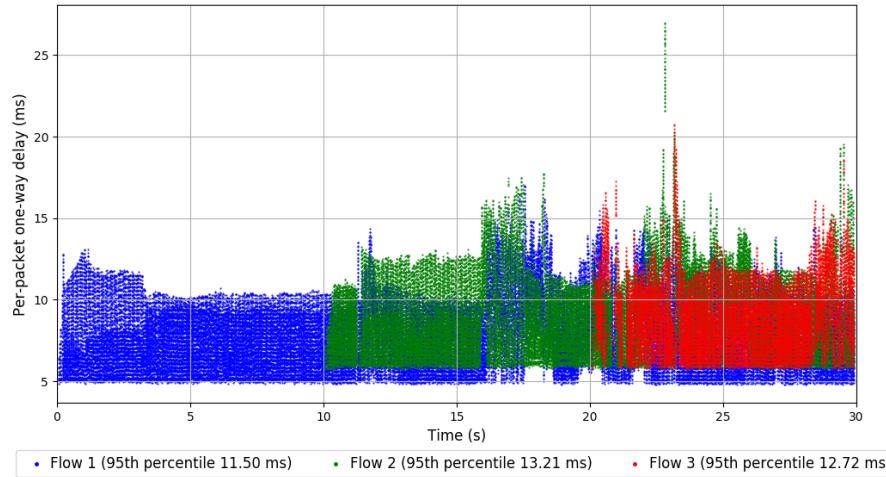
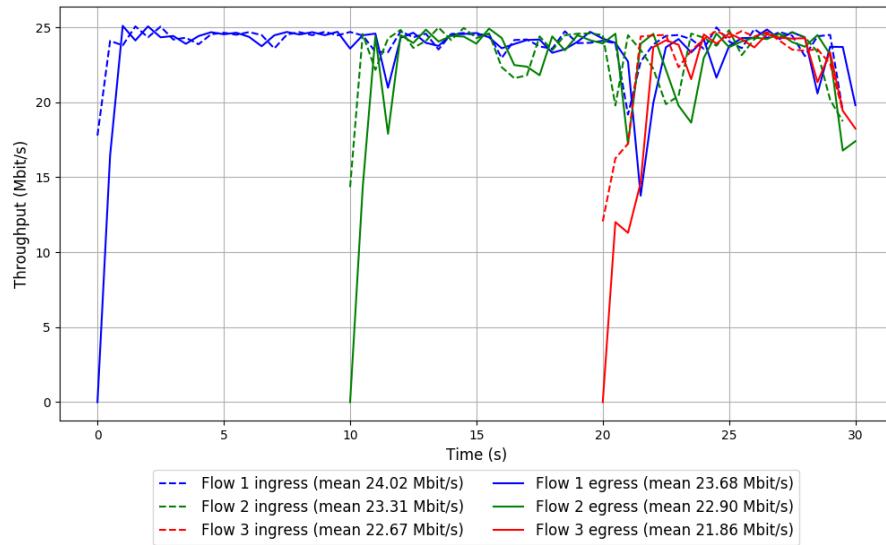


Run 3: Statistics of Sprout

```
Start at: 2018-10-09 21:51:31
End at: 2018-10-09 21:52:01
Local clock offset: 1.094 ms
Remote clock offset: -4.956 ms

# Below is generated by plot.py at 2018-10-09 22:46:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.13 Mbit/s
95th percentile per-packet one-way delay: 12.368 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 23.68 Mbit/s
95th percentile per-packet one-way delay: 11.501 ms
Loss rate: 1.41%
-- Flow 2:
Average throughput: 22.90 Mbit/s
95th percentile per-packet one-way delay: 13.205 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 21.86 Mbit/s
95th percentile per-packet one-way delay: 12.722 ms
Loss rate: 3.71%
```

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

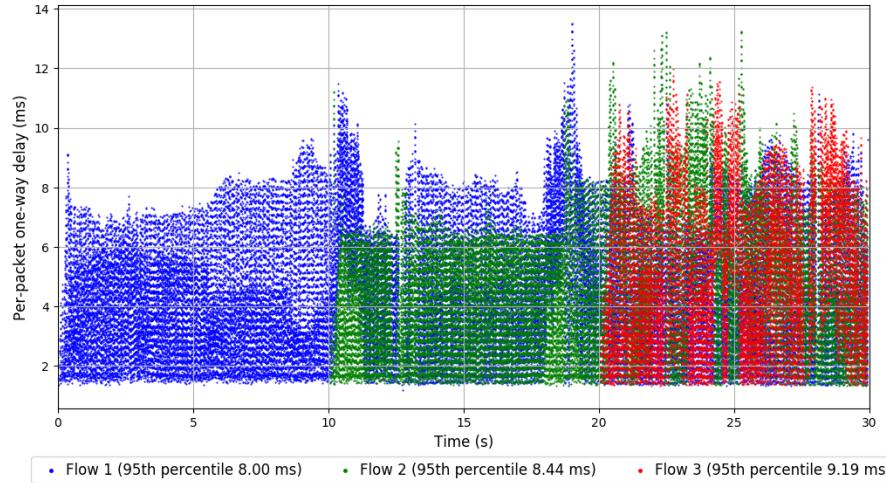
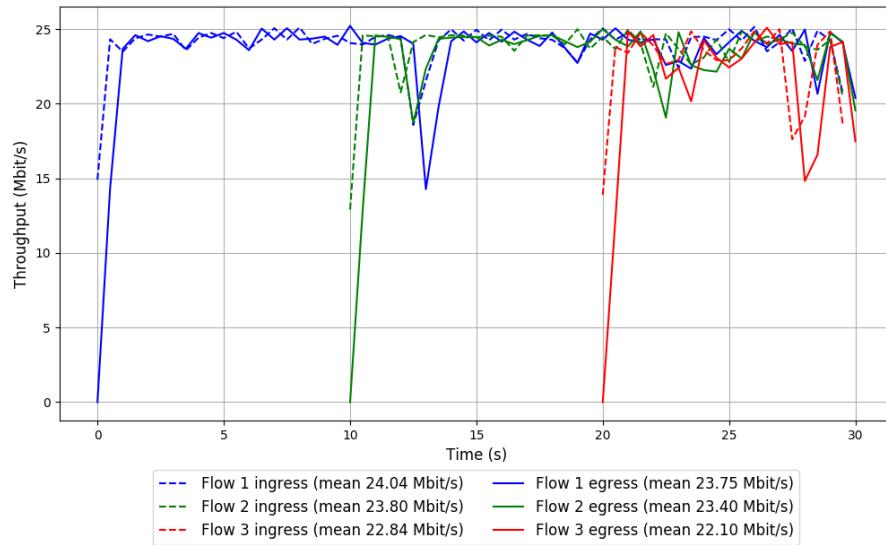


Run 4: Statistics of Sprout

```
Start at: 2018-10-09 22:12:46
End at: 2018-10-09 22:13:16
Local clock offset: 2.561 ms
Remote clock offset: -5.938 ms

# Below is generated by plot.py at 2018-10-09 22:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.61 Mbit/s
95th percentile per-packet one-way delay: 8.387 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 23.75 Mbit/s
95th percentile per-packet one-way delay: 8.000 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 23.40 Mbit/s
95th percentile per-packet one-way delay: 8.440 ms
Loss rate: 1.65%
-- Flow 3:
Average throughput: 22.10 Mbit/s
95th percentile per-packet one-way delay: 9.189 ms
Loss rate: 3.25%
```

Run 4: Report of Sprout — Data Link

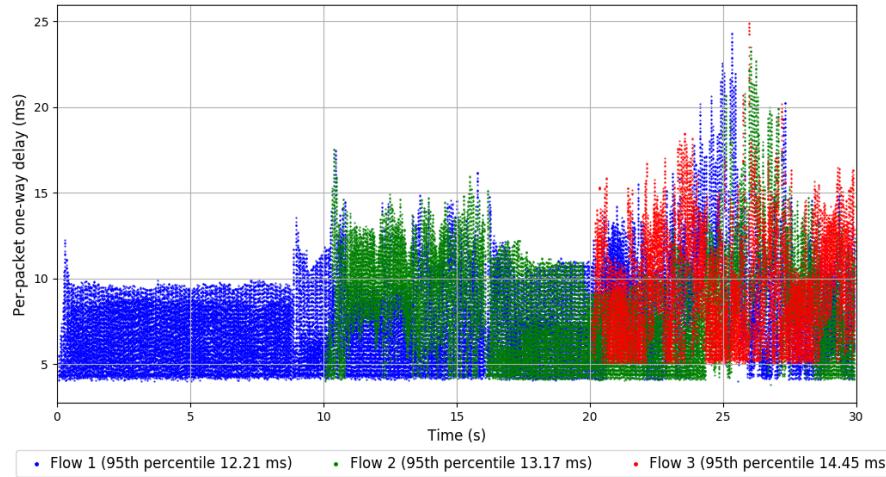
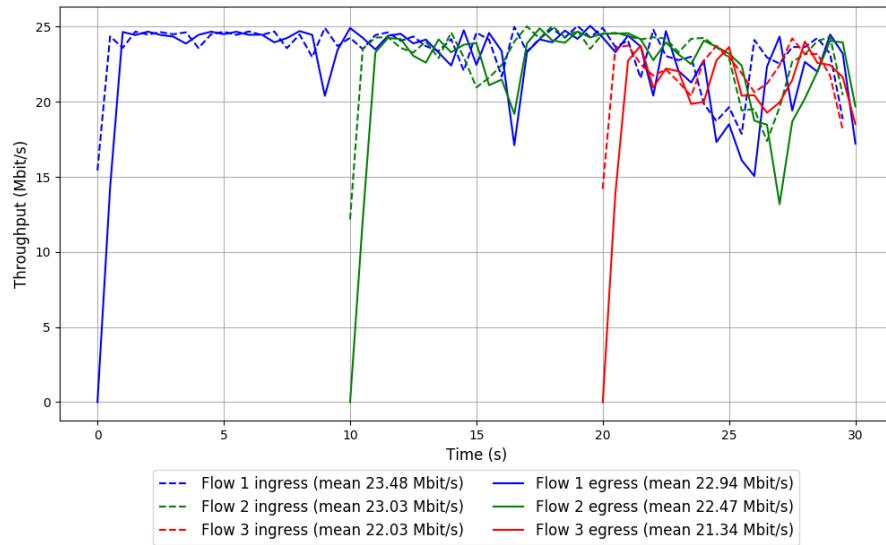


Run 5: Statistics of Sprout

```
Start at: 2018-10-09 22:34:00
End at: 2018-10-09 22:34:30
Local clock offset: -0.175 ms
Remote clock offset: -6.017 ms

# Below is generated by plot.py at 2018-10-09 22:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.94 Mbit/s
95th percentile per-packet one-way delay: 13.204 ms
Loss rate: 2.44%
-- Flow 1:
Average throughput: 22.94 Mbit/s
95th percentile per-packet one-way delay: 12.205 ms
Loss rate: 2.31%
-- Flow 2:
Average throughput: 22.47 Mbit/s
95th percentile per-packet one-way delay: 13.172 ms
Loss rate: 2.37%
-- Flow 3:
Average throughput: 21.34 Mbit/s
95th percentile per-packet one-way delay: 14.449 ms
Loss rate: 3.02%
```

Run 5: Report of Sprout — Data Link

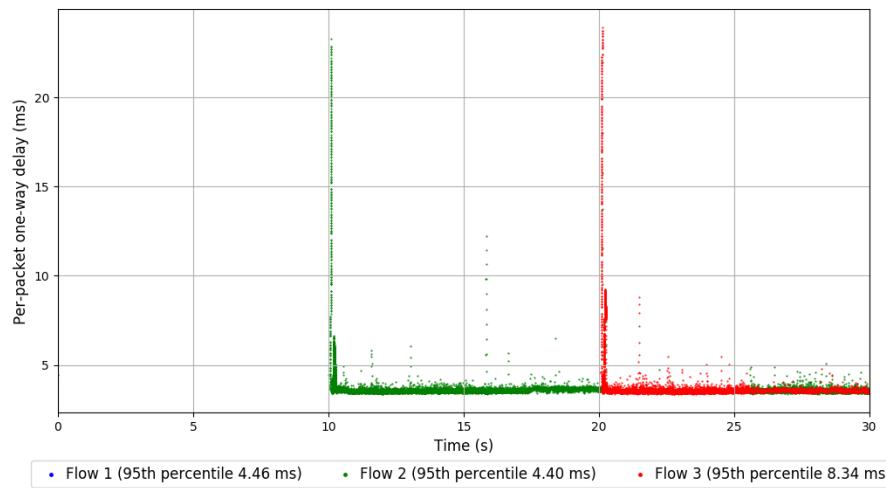
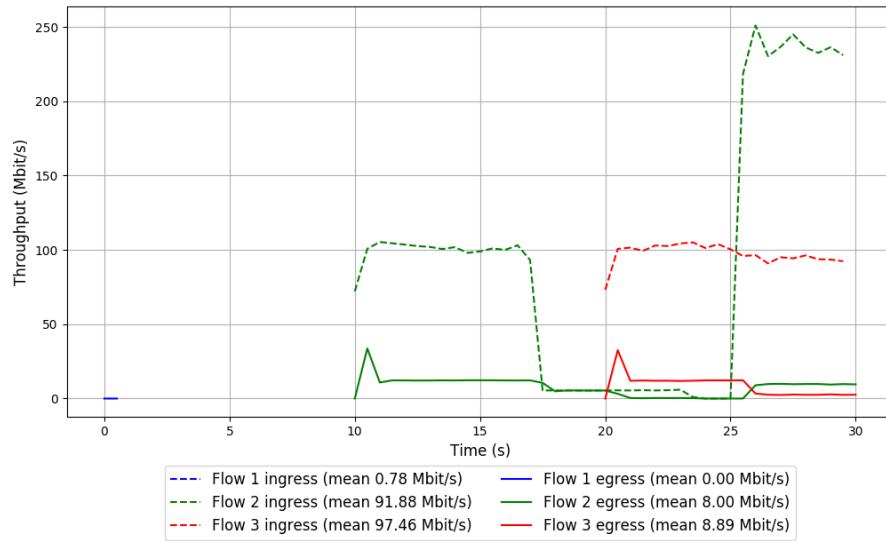


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-10-09 21:07:04
End at: 2018-10-09 21:07:34
Local clock offset: 3.219 ms
Remote clock offset: -4.209 ms

# Below is generated by plot.py at 2018-10-09 22:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.28 Mbit/s
95th percentile per-packet one-way delay: 5.577 ms
Loss rate: 91.15%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4.460 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 8.00 Mbit/s
95th percentile per-packet one-way delay: 4.401 ms
Loss rate: 91.30%
-- Flow 3:
Average throughput: 8.89 Mbit/s
95th percentile per-packet one-way delay: 8.336 ms
Loss rate: 90.88%
```

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

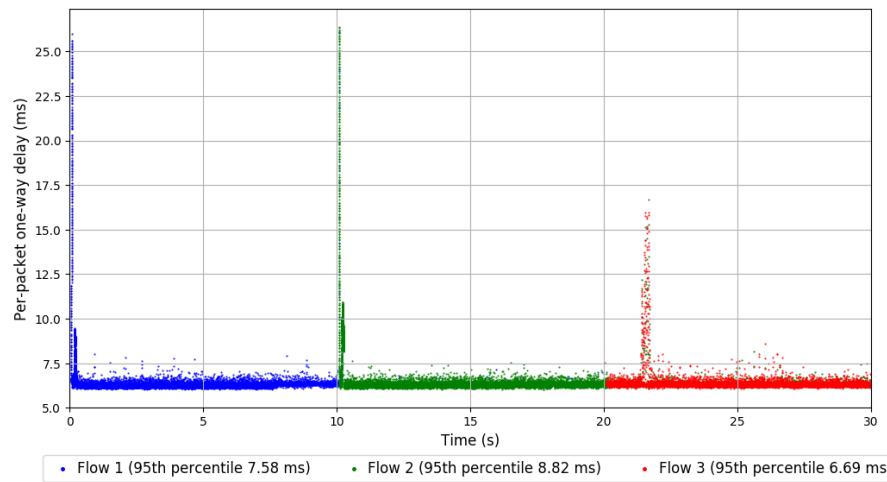
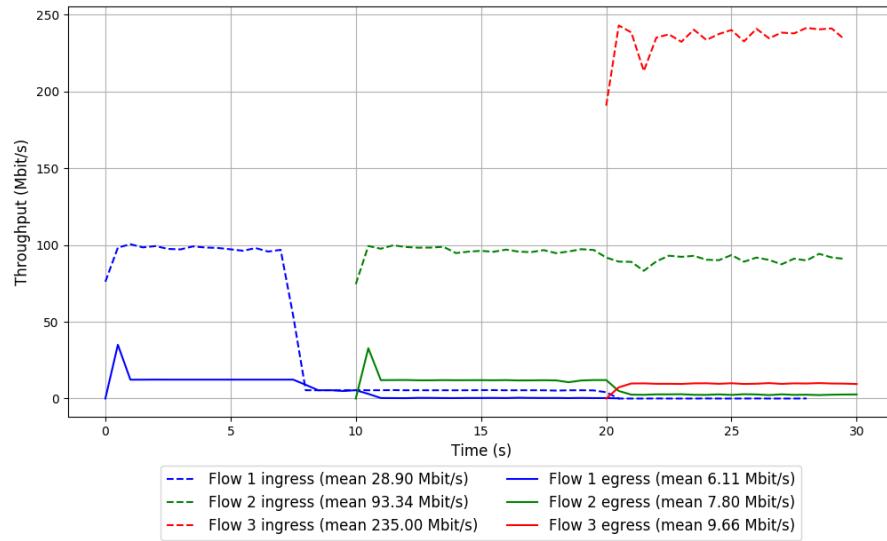


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-10-09 21:28:14
End at: 2018-10-09 21:28:44
Local clock offset: 0.59 ms
Remote clock offset: -4.632 ms

# Below is generated by plot.py at 2018-10-09 22:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.53 Mbit/s
95th percentile per-packet one-way delay: 7.419 ms
Loss rate: 92.52%
-- Flow 1:
Average throughput: 6.11 Mbit/s
95th percentile per-packet one-way delay: 7.585 ms
Loss rate: 84.87%
-- Flow 2:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 8.819 ms
Loss rate: 91.64%
-- Flow 3:
Average throughput: 9.66 Mbit/s
95th percentile per-packet one-way delay: 6.689 ms
Loss rate: 95.89%
```

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

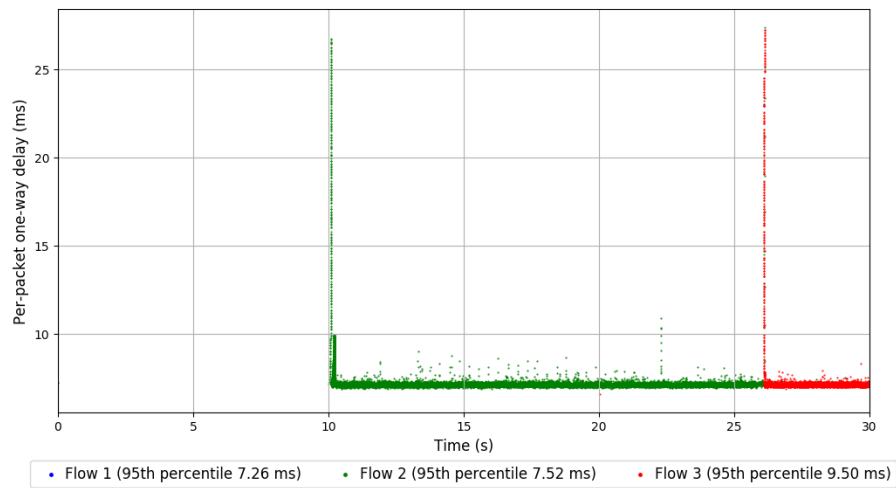
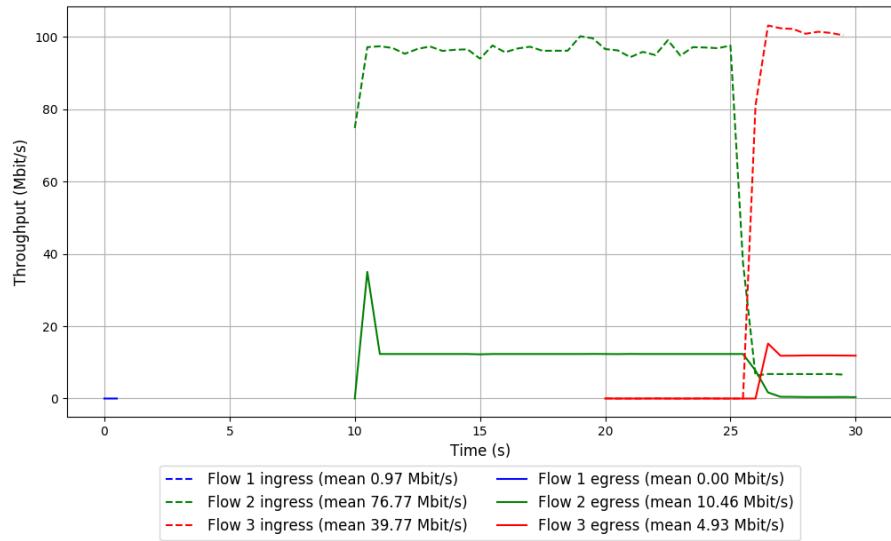


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-10-09 21:49:14
End at: 2018-10-09 21:49:44
Local clock offset: 0.494 ms
Remote clock offset: -4.337 ms

# Below is generated by plot.py at 2018-10-09 22:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.59 Mbit/s
95th percentile per-packet one-way delay: 7.579 ms
Loss rate: 86.65%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 7.257 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 10.46 Mbit/s
95th percentile per-packet one-way delay: 7.517 ms
Loss rate: 86.41%
-- Flow 3:
Average throughput: 4.93 Mbit/s
95th percentile per-packet one-way delay: 9.503 ms
Loss rate: 87.59%
```

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

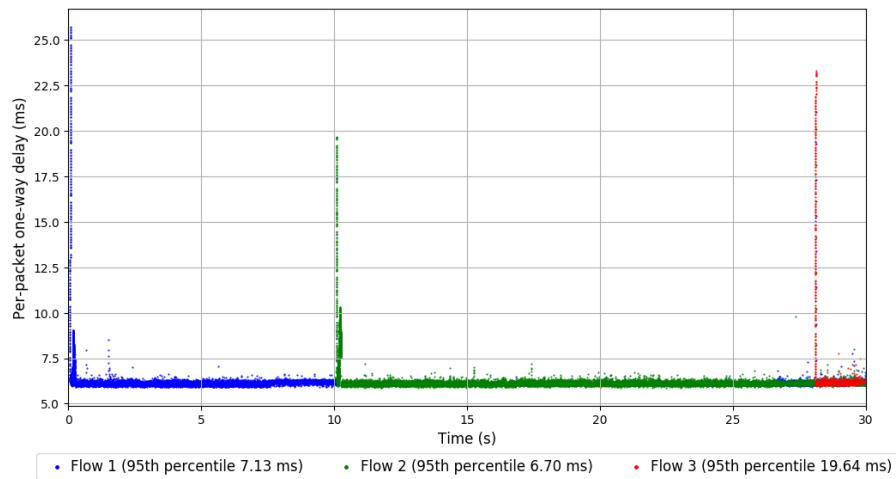
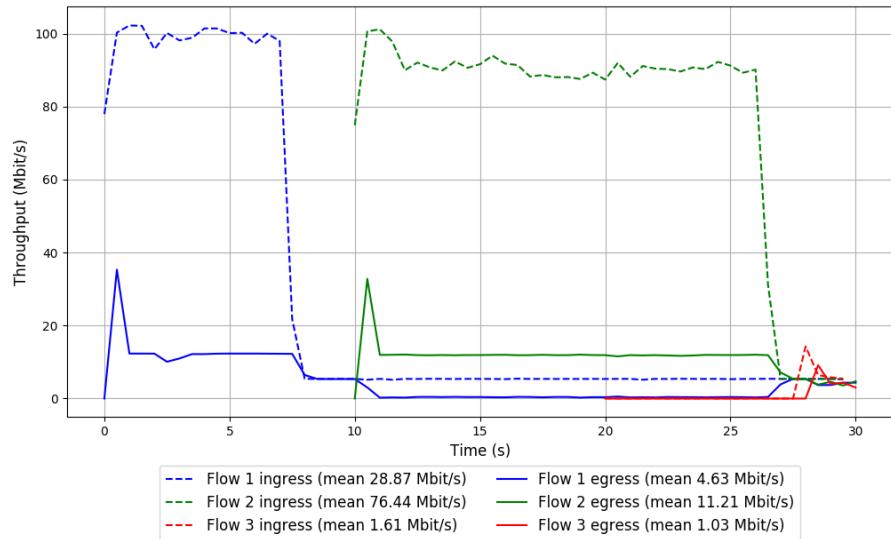


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-10-09 22:10:29
End at: 2018-10-09 22:10:59
Local clock offset: 0.405 ms
Remote clock offset: -4.492 ms

# Below is generated by plot.py at 2018-10-09 22:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.44 Mbit/s
95th percentile per-packet one-way delay: 7.108 ms
Loss rate: 84.51%
-- Flow 1:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 7.131 ms
Loss rate: 83.97%
-- Flow 2:
Average throughput: 11.21 Mbit/s
95th percentile per-packet one-way delay: 6.704 ms
Loss rate: 85.33%
-- Flow 3:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 19.643 ms
Loss rate: 36.25%
```

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

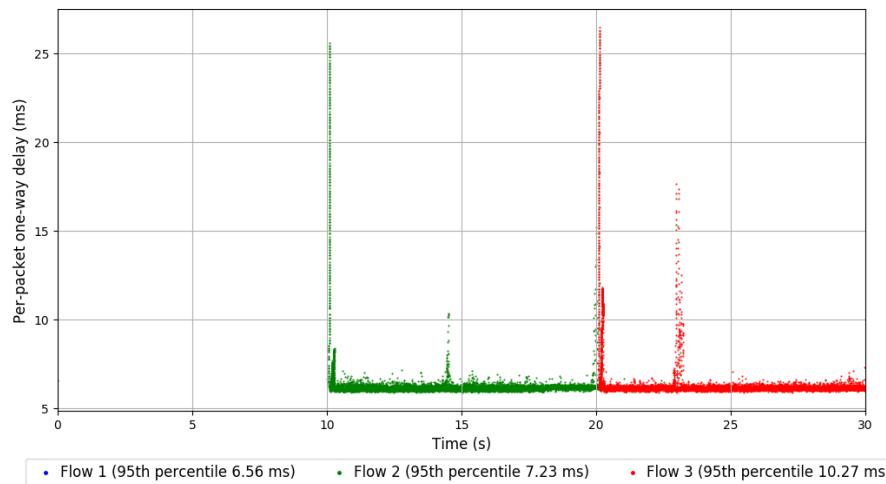
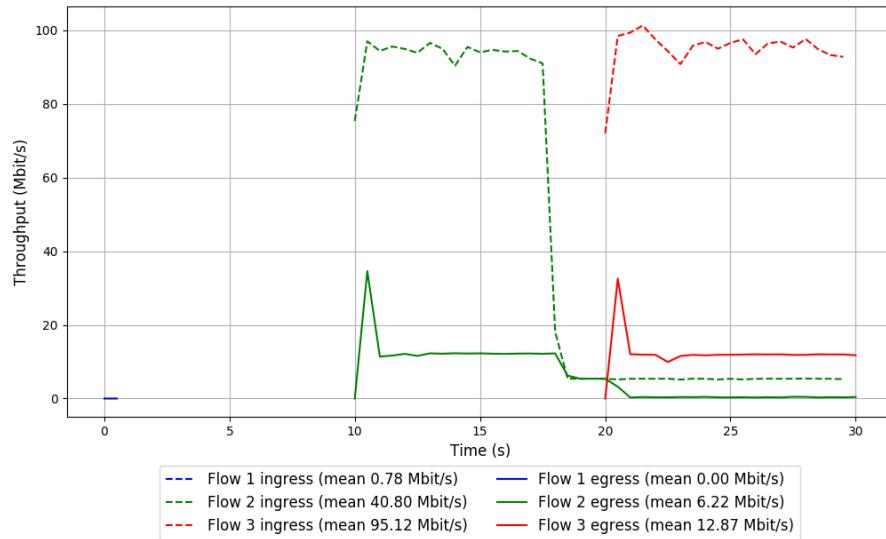


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-10-09 22:31:44
End at: 2018-10-09 22:32:14
Local clock offset: 0.21 ms
Remote clock offset: -4.689 ms

# Below is generated by plot.py at 2018-10-09 22:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.42 Mbit/s
95th percentile per-packet one-way delay: 8.082 ms
Loss rate: 85.68%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 6.564 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 6.22 Mbit/s
95th percentile per-packet one-way delay: 7.230 ms
Loss rate: 84.77%
-- Flow 3:
Average throughput: 12.87 Mbit/s
95th percentile per-packet one-way delay: 10.269 ms
Loss rate: 86.47%
```

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

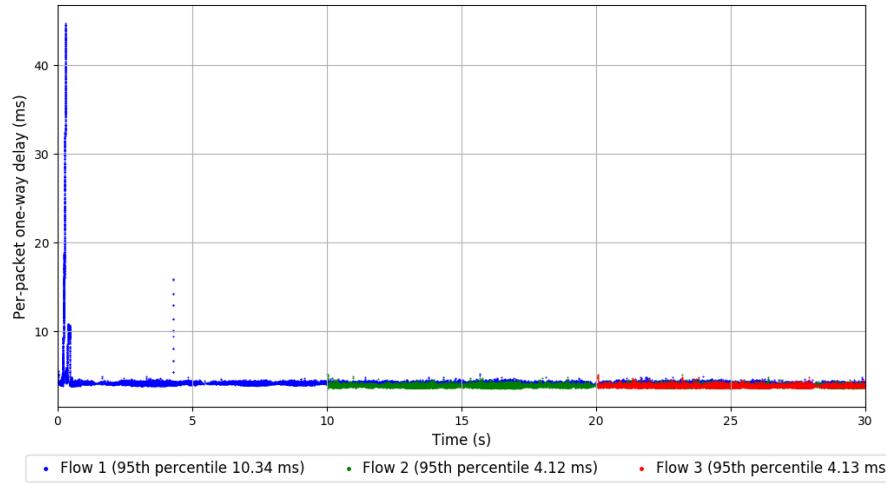
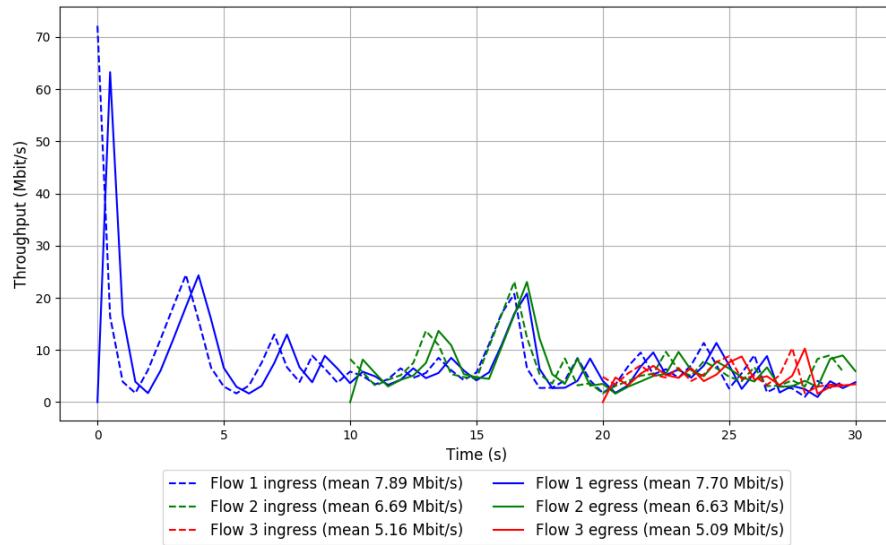


Run 1: Statistics of TCP Vegas

```
Start at: 2018-10-09 21:08:12
End at: 2018-10-09 21:08:42
Local clock offset: 2.181 ms
Remote clock offset: -5.094 ms

# Below is generated by plot.py at 2018-10-09 22:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.81 Mbit/s
95th percentile per-packet one-way delay: 5.159 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 10.344 ms
Loss rate: 2.37%
-- Flow 2:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 4.118 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 5.09 Mbit/s
95th percentile per-packet one-way delay: 4.131 ms
Loss rate: 1.21%
```

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

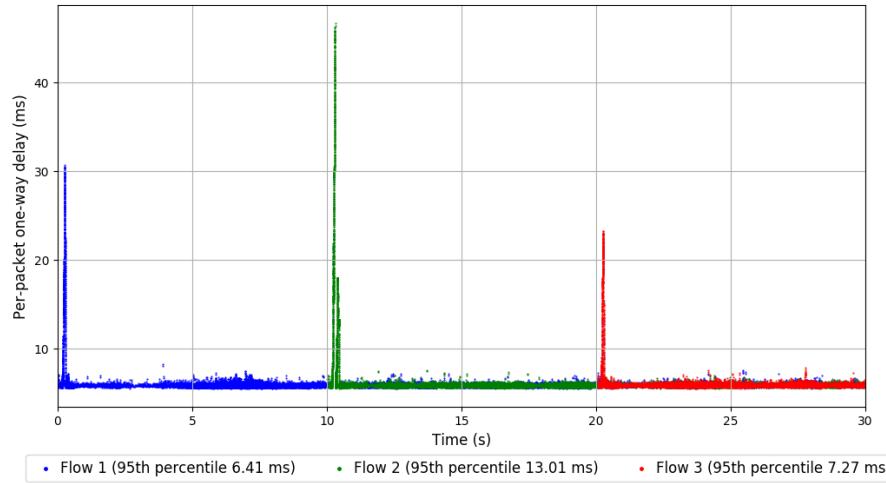
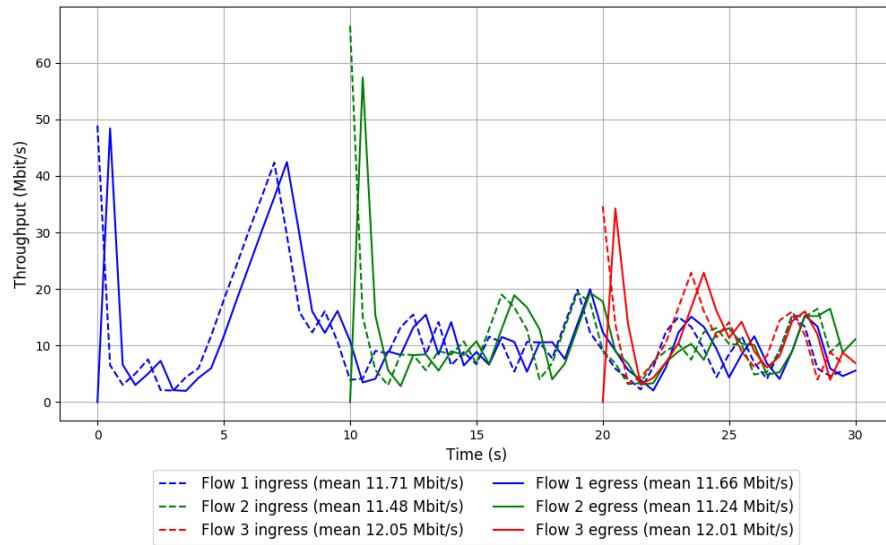


Run 2: Statistics of TCP Vegas

```
Start at: 2018-10-09 21:29:23
End at: 2018-10-09 21:29:53
Local clock offset: 1.351 ms
Remote clock offset: -4.468 ms

# Below is generated by plot.py at 2018-10-09 22:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.14 Mbit/s
95th percentile per-packet one-way delay: 7.550 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 6.411 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 11.24 Mbit/s
95th percentile per-packet one-way delay: 13.013 ms
Loss rate: 2.13%
-- Flow 3:
Average throughput: 12.01 Mbit/s
95th percentile per-packet one-way delay: 7.269 ms
Loss rate: 0.32%
```

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

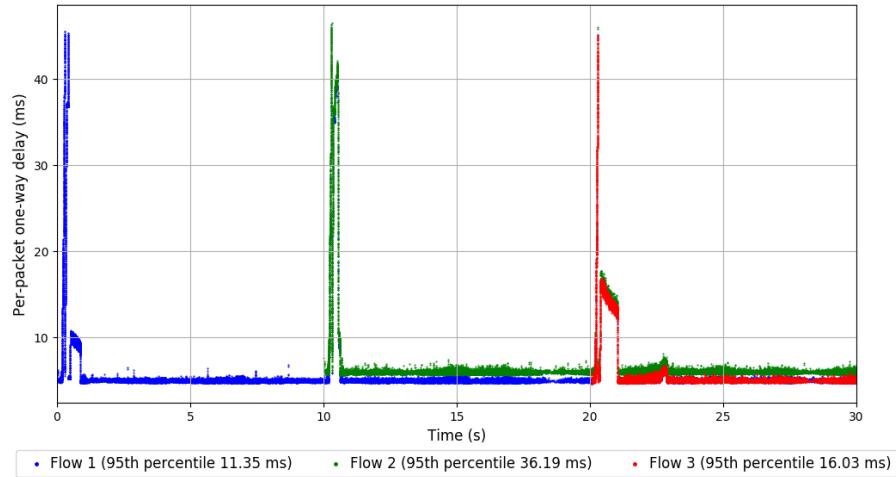
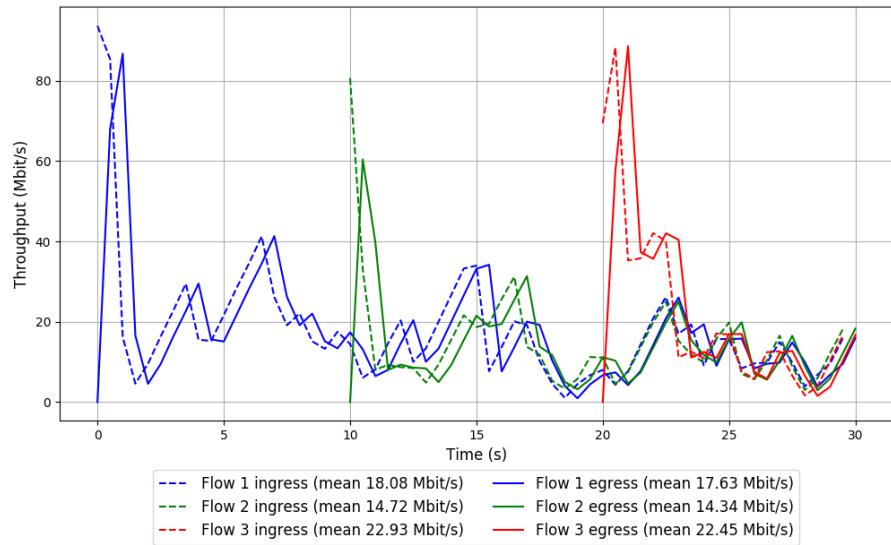


Run 3: Statistics of TCP Vegas

```
Start at: 2018-10-09 21:50:22
End at: 2018-10-09 21:50:52
Local clock offset: 0.62 ms
Remote clock offset: -5.52 ms

# Below is generated by plot.py at 2018-10-09 22:46:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.64 Mbit/s
95th percentile per-packet one-way delay: 18.204 ms
Loss rate: 2.45%
-- Flow 1:
Average throughput: 17.63 Mbit/s
95th percentile per-packet one-way delay: 11.345 ms
Loss rate: 2.49%
-- Flow 2:
Average throughput: 14.34 Mbit/s
95th percentile per-packet one-way delay: 36.192 ms
Loss rate: 2.63%
-- Flow 3:
Average throughput: 22.45 Mbit/s
95th percentile per-packet one-way delay: 16.032 ms
Loss rate: 2.10%
```

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

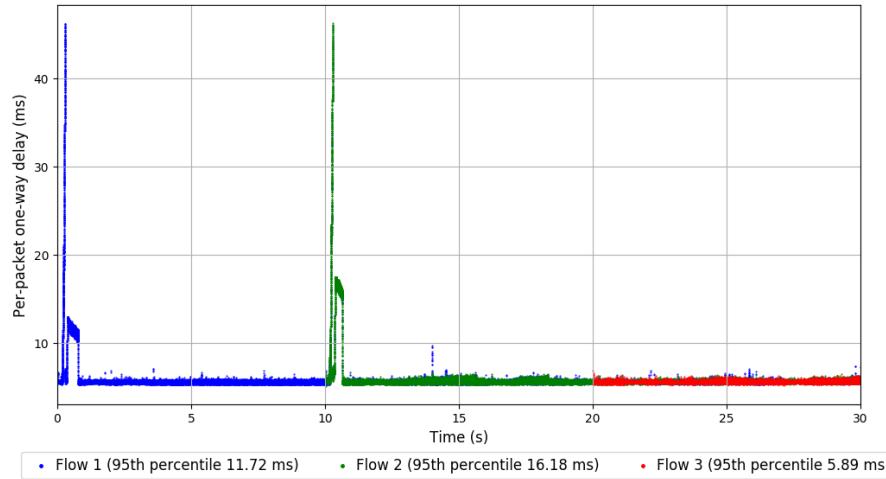
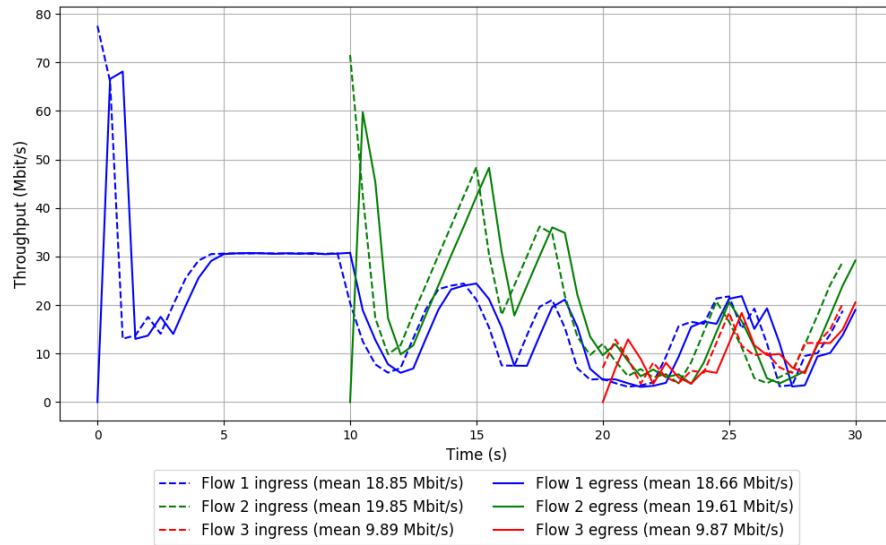


Run 4: Statistics of TCP Vegas

```
Start at: 2018-10-09 22:11:37
End at: 2018-10-09 22:12:07
Local clock offset: 0.541 ms
Remote clock offset: -4.962 ms

# Below is generated by plot.py at 2018-10-09 22:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.01 Mbit/s
95th percentile per-packet one-way delay: 11.993 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 18.66 Mbit/s
95th percentile per-packet one-way delay: 11.719 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 19.61 Mbit/s
95th percentile per-packet one-way delay: 16.176 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 9.87 Mbit/s
95th percentile per-packet one-way delay: 5.895 ms
Loss rate: 0.22%
```

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

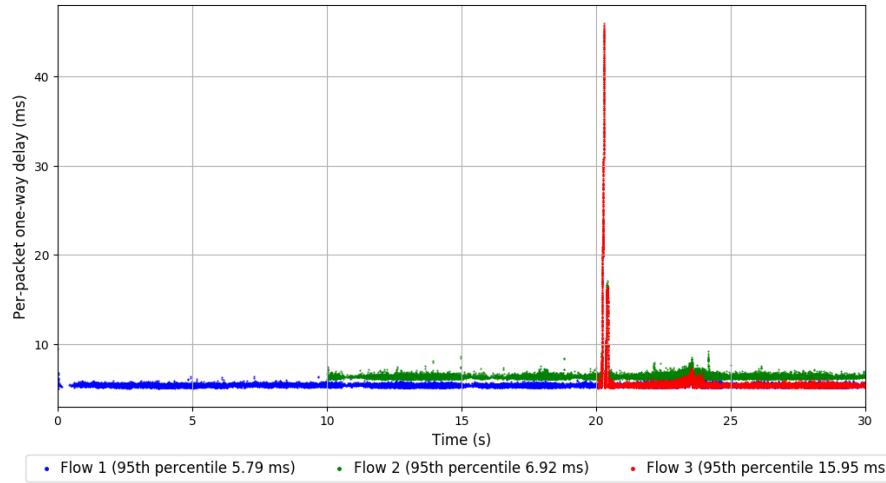
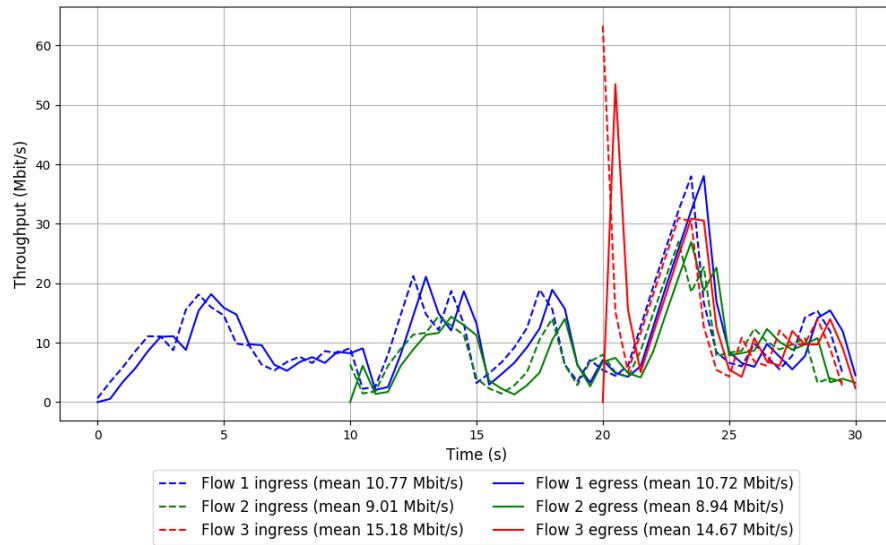


Run 5: Statistics of TCP Vegas

```
Start at: 2018-10-09 22:32:52
End at: 2018-10-09 22:33:22
Local clock offset: -0.53 ms
Remote clock offset: -5.329 ms

# Below is generated by plot.py at 2018-10-09 22:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.55 Mbit/s
95th percentile per-packet one-way delay: 6.817 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 10.72 Mbit/s
95th percentile per-packet one-way delay: 5.793 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 8.94 Mbit/s
95th percentile per-packet one-way delay: 6.915 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 14.67 Mbit/s
95th percentile per-packet one-way delay: 15.954 ms
Loss rate: 3.33%
```

Run 5: Report of TCP Vegas — Data Link

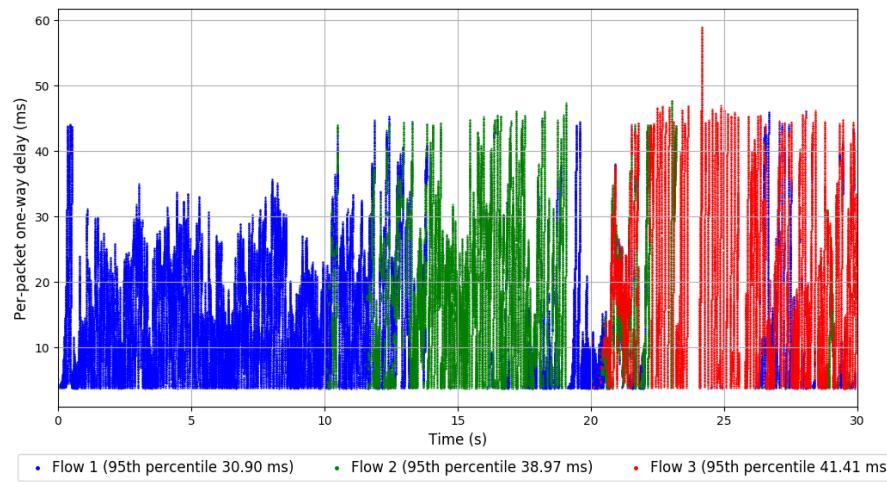
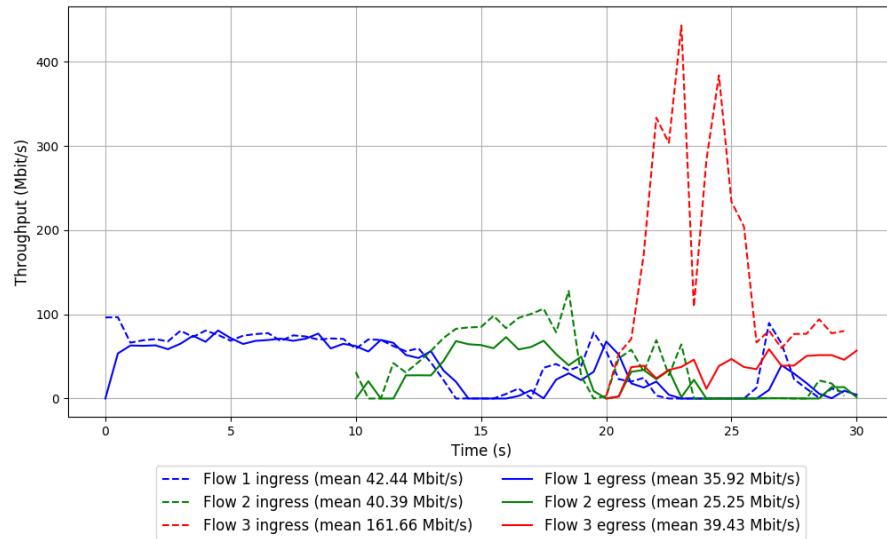


Run 1: Statistics of Verus

```
Start at: 2018-10-09 20:57:32
End at: 2018-10-09 20:58:02
Local clock offset: 1.045 ms
Remote clock offset: -6.098 ms

# Below is generated by plot.py at 2018-10-09 22:47:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.56 Mbit/s
95th percentile per-packet one-way delay: 37.509 ms
Loss rate: 46.47%
-- Flow 1:
Average throughput: 35.92 Mbit/s
95th percentile per-packet one-way delay: 30.896 ms
Loss rate: 15.33%
-- Flow 2:
Average throughput: 25.25 Mbit/s
95th percentile per-packet one-way delay: 38.967 ms
Loss rate: 37.60%
-- Flow 3:
Average throughput: 39.43 Mbit/s
95th percentile per-packet one-way delay: 41.413 ms
Loss rate: 75.57%
```

Run 1: Report of Verus — Data Link

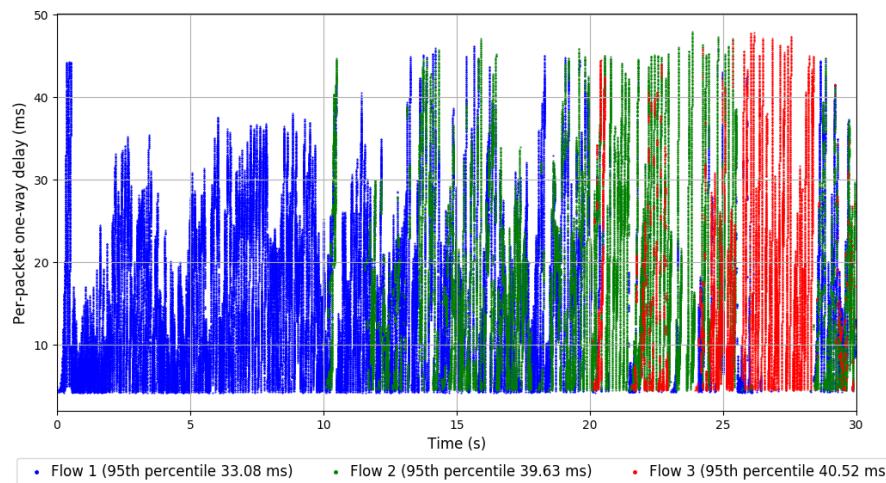
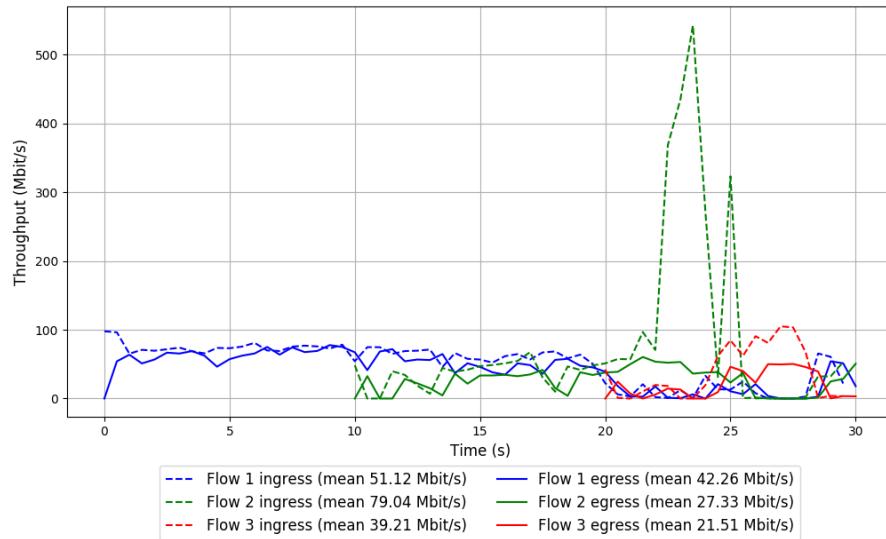


Run 2: Statistics of Verus

```
Start at: 2018-10-09 21:18:46
End at: 2018-10-09 21:19:16
Local clock offset: 2.481 ms
Remote clock offset: -4.262 ms

# Below is generated by plot.py at 2018-10-09 22:47:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.54 Mbit/s
95th percentile per-packet one-way delay: 36.459 ms
Loss rate: 42.07%
-- Flow 1:
Average throughput: 42.26 Mbit/s
95th percentile per-packet one-way delay: 33.077 ms
Loss rate: 17.33%
-- Flow 2:
Average throughput: 27.33 Mbit/s
95th percentile per-packet one-way delay: 39.631 ms
Loss rate: 65.40%
-- Flow 3:
Average throughput: 21.51 Mbit/s
95th percentile per-packet one-way delay: 40.521 ms
Loss rate: 45.12%
```

Run 2: Report of Verus — Data Link

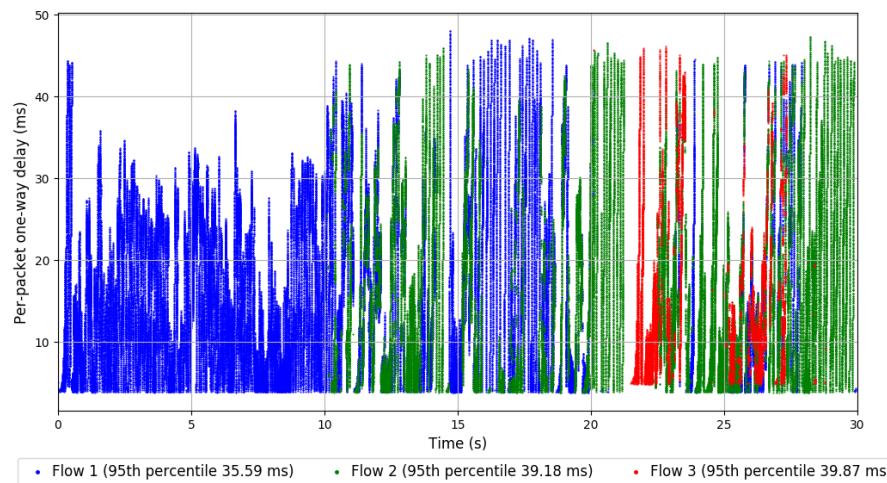
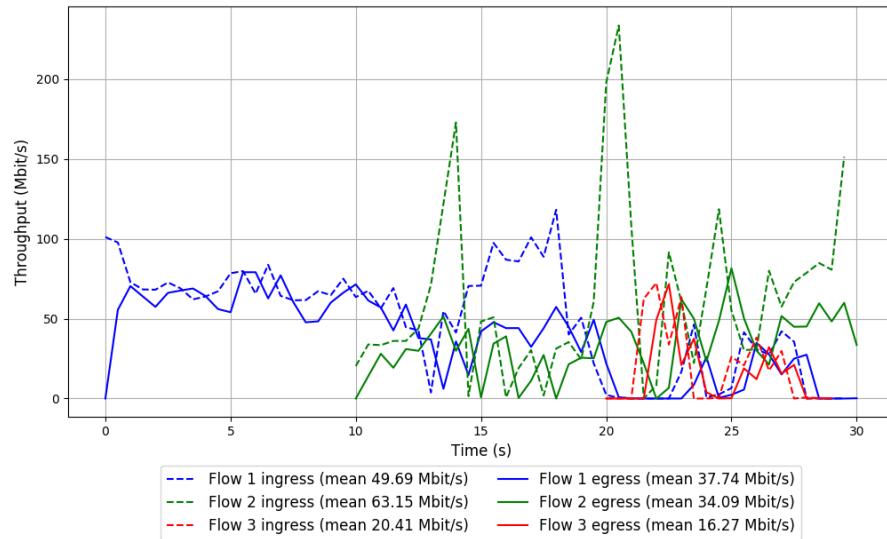


Run 3: Statistics of Verus

```
Start at: 2018-10-09 21:39:53
End at: 2018-10-09 21:40:23
Local clock offset: 2.771 ms
Remote clock offset: -4.042 ms

# Below is generated by plot.py at 2018-10-09 22:47:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.08 Mbit/s
95th percentile per-packet one-way delay: 37.548 ms
Loss rate: 33.37%
-- Flow 1:
Average throughput: 37.74 Mbit/s
95th percentile per-packet one-way delay: 35.587 ms
Loss rate: 24.05%
-- Flow 2:
Average throughput: 34.09 Mbit/s
95th percentile per-packet one-way delay: 39.183 ms
Loss rate: 46.03%
-- Flow 3:
Average throughput: 16.27 Mbit/s
95th percentile per-packet one-way delay: 39.872 ms
Loss rate: 22.46%
```

Run 3: Report of Verus — Data Link

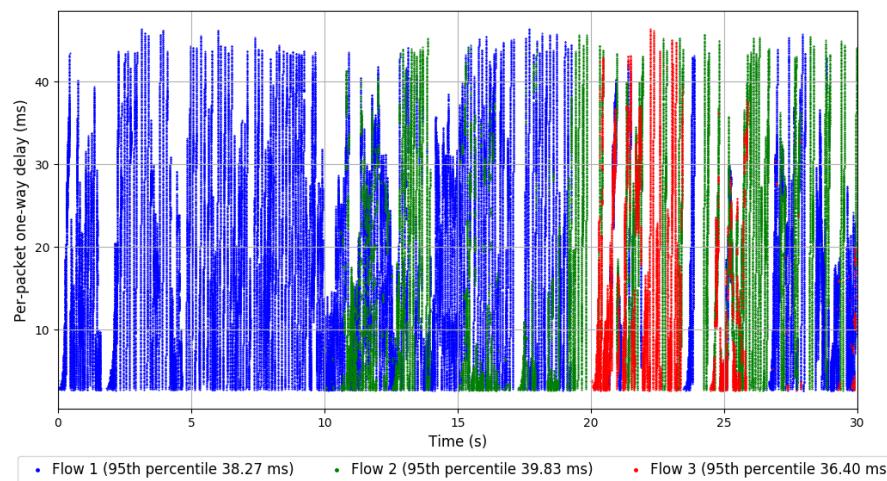
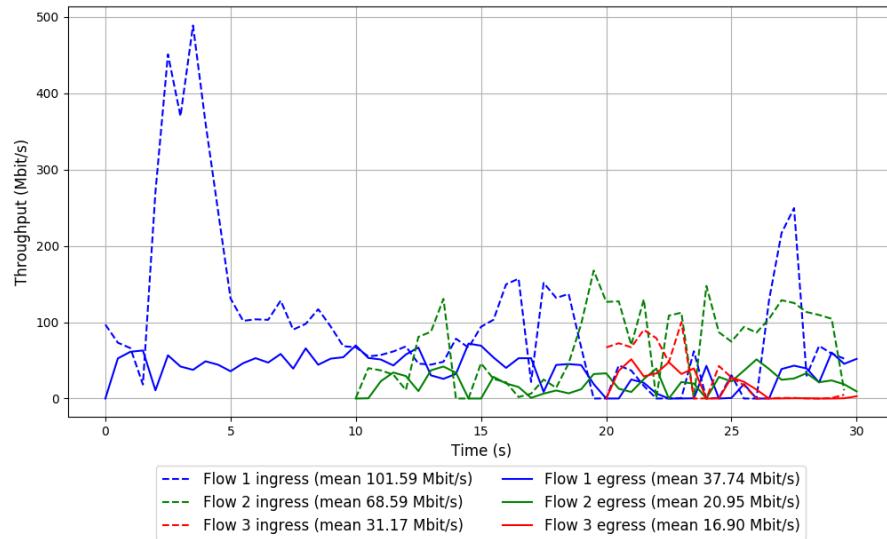


Run 4: Statistics of Verus

```
Start at: 2018-10-09 22:01:03
End at: 2018-10-09 22:01:33
Local clock offset: 2.023 ms
Remote clock offset: -5.452 ms

# Below is generated by plot.py at 2018-10-09 22:47:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.24 Mbit/s
95th percentile per-packet one-way delay: 38.709 ms
Loss rate: 63.62%
-- Flow 1:
Average throughput: 37.74 Mbit/s
95th percentile per-packet one-way delay: 38.275 ms
Loss rate: 62.83%
-- Flow 2:
Average throughput: 20.95 Mbit/s
95th percentile per-packet one-way delay: 39.833 ms
Loss rate: 69.39%
-- Flow 3:
Average throughput: 16.90 Mbit/s
95th percentile per-packet one-way delay: 36.401 ms
Loss rate: 45.93%
```

Run 4: Report of Verus — Data Link

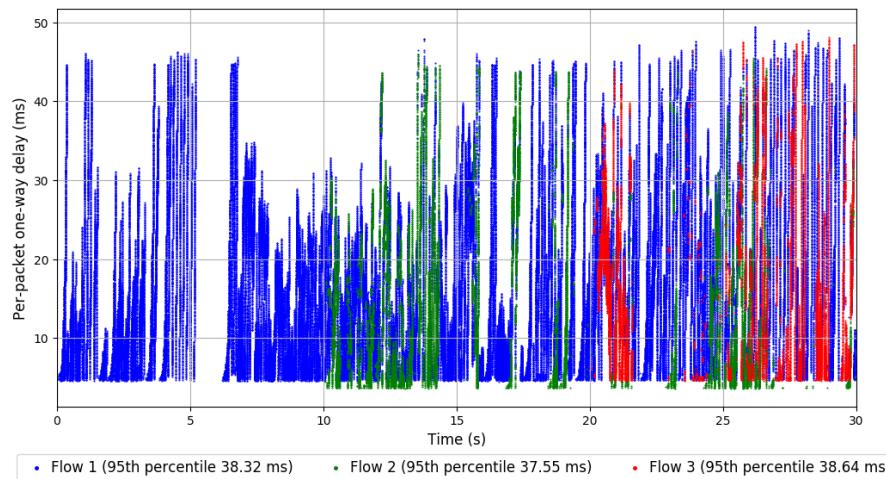
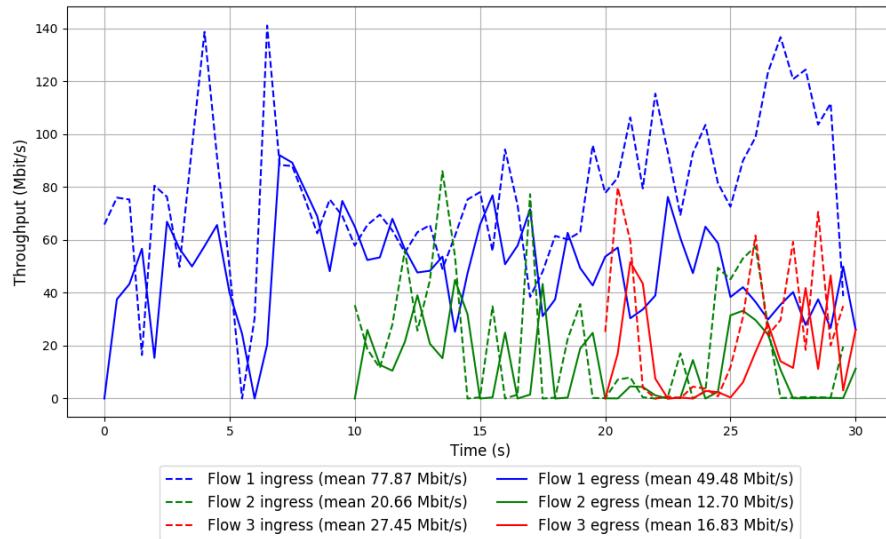


Run 5: Statistics of Verus

```
Start at: 2018-10-09 22:22:12
End at: 2018-10-09 22:22:42
Local clock offset: 1.426 ms
Remote clock offset: -4.561 ms

# Below is generated by plot.py at 2018-10-09 22:47:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.48 Mbit/s
95th percentile per-packet one-way delay: 38.267 ms
Loss rate: 36.91%
-- Flow 1:
Average throughput: 49.48 Mbit/s
95th percentile per-packet one-way delay: 38.319 ms
Loss rate: 36.45%
-- Flow 2:
Average throughput: 12.70 Mbit/s
95th percentile per-packet one-way delay: 37.552 ms
Loss rate: 38.51%
-- Flow 3:
Average throughput: 16.83 Mbit/s
95th percentile per-packet one-way delay: 38.642 ms
Loss rate: 38.46%
```

Run 5: Report of Verus — Data Link

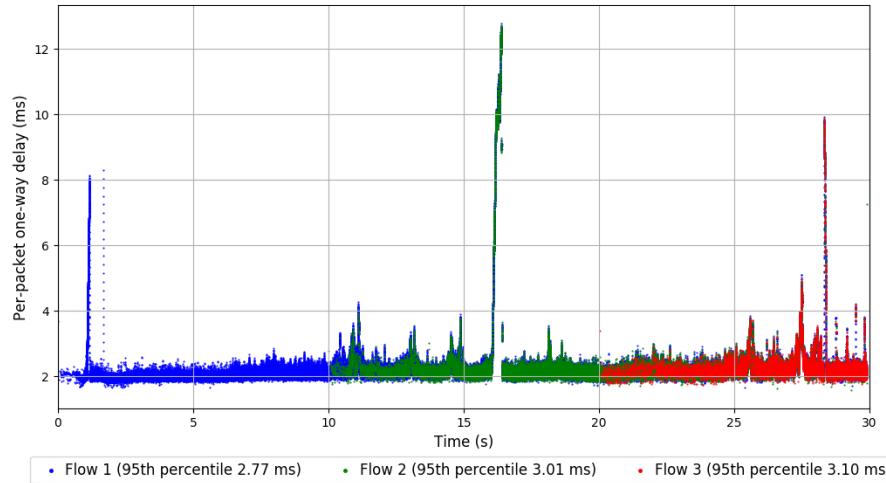
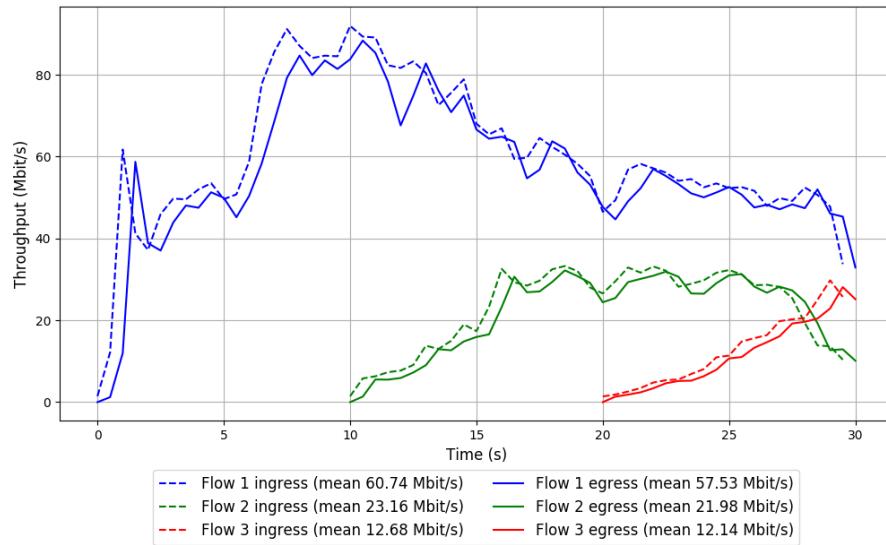


Run 1: Statistics of PCC-Vivace

```
Start at: 2018-10-09 20:58:44
End at: 2018-10-09 20:59:14
Local clock offset: 2.402 ms
Remote clock offset: -6.66 ms

# Below is generated by plot.py at 2018-10-09 22:47:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.14 Mbit/s
95th percentile per-packet one-way delay: 2.839 ms
Loss rate: 5.21%
-- Flow 1:
Average throughput: 57.53 Mbit/s
95th percentile per-packet one-way delay: 2.769 ms
Loss rate: 5.30%
-- Flow 2:
Average throughput: 21.98 Mbit/s
95th percentile per-packet one-way delay: 3.013 ms
Loss rate: 5.09%
-- Flow 3:
Average throughput: 12.14 Mbit/s
95th percentile per-packet one-way delay: 3.104 ms
Loss rate: 4.29%
```

Run 1: Report of PCC-Vivace — Data Link

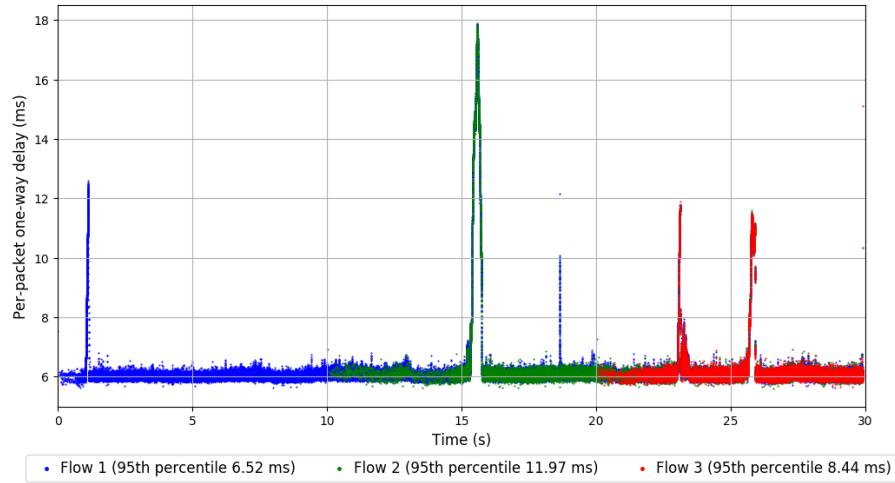
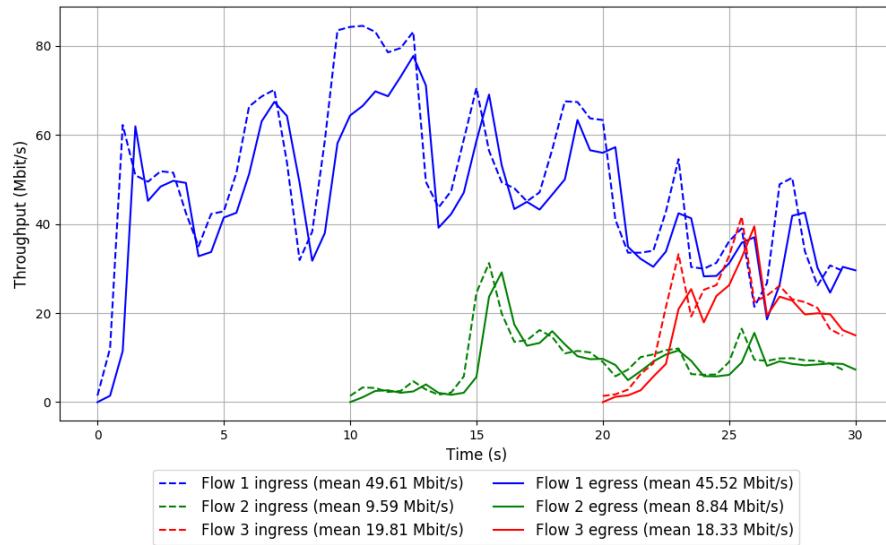


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-10-09 21:20:04
End at: 2018-10-09 21:20:34
Local clock offset: 0.981 ms
Remote clock offset: -4.461 ms

# Below is generated by plot.py at 2018-10-09 22:47:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.44 Mbit/s
95th percentile per-packet one-way delay: 7.024 ms
Loss rate: 8.11%
-- Flow 1:
Average throughput: 45.52 Mbit/s
95th percentile per-packet one-way delay: 6.516 ms
Loss rate: 8.24%
-- Flow 2:
Average throughput: 8.84 Mbit/s
95th percentile per-packet one-way delay: 11.974 ms
Loss rate: 7.84%
-- Flow 3:
Average throughput: 18.33 Mbit/s
95th percentile per-packet one-way delay: 8.444 ms
Loss rate: 7.42%
```

Run 2: Report of PCC-Vivace — Data Link

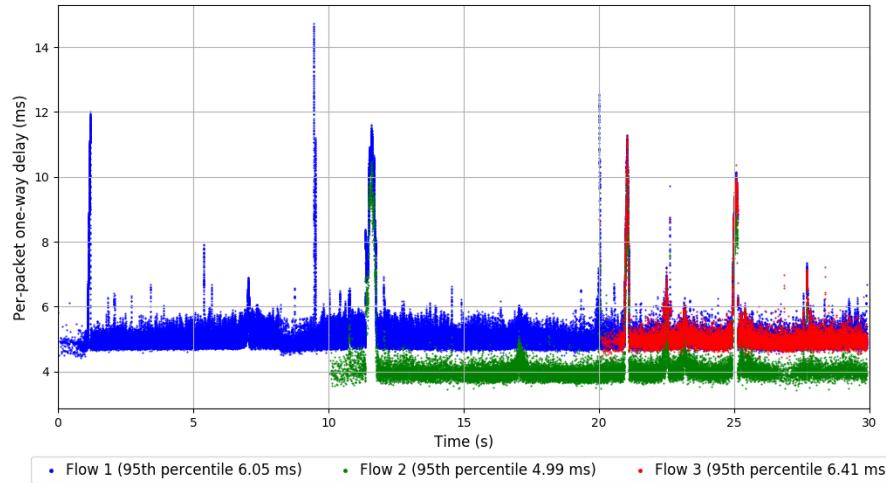
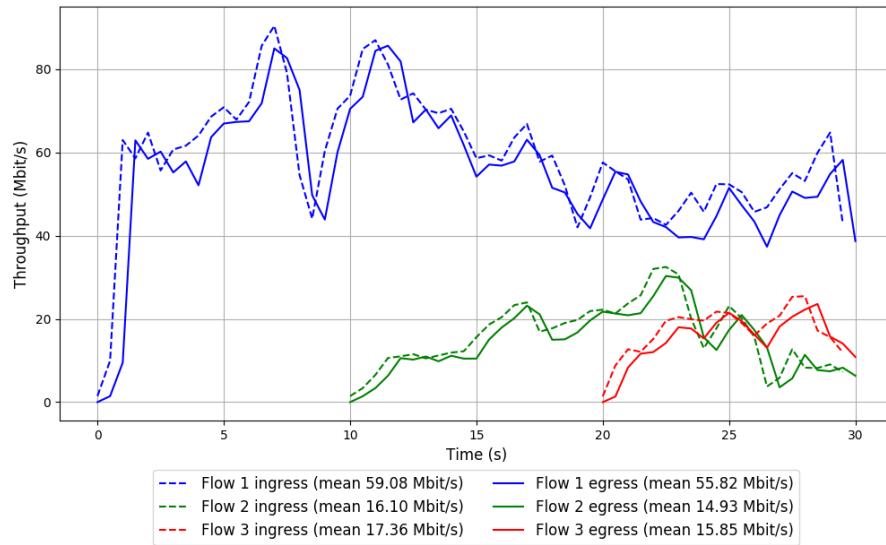


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-10-09 21:41:05
End at: 2018-10-09 21:41:35
Local clock offset: 1.731 ms
Remote clock offset: -5.309 ms

# Below is generated by plot.py at 2018-10-09 22:47:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.99 Mbit/s
95th percentile per-packet one-way delay: 5.985 ms
Loss rate: 6.01%
-- Flow 1:
Average throughput: 55.82 Mbit/s
95th percentile per-packet one-way delay: 6.051 ms
Loss rate: 5.51%
-- Flow 2:
Average throughput: 14.93 Mbit/s
95th percentile per-packet one-way delay: 4.994 ms
Loss rate: 7.31%
-- Flow 3:
Average throughput: 15.85 Mbit/s
95th percentile per-packet one-way delay: 6.414 ms
Loss rate: 8.73%
```

Run 3: Report of PCC-Vivace — Data Link

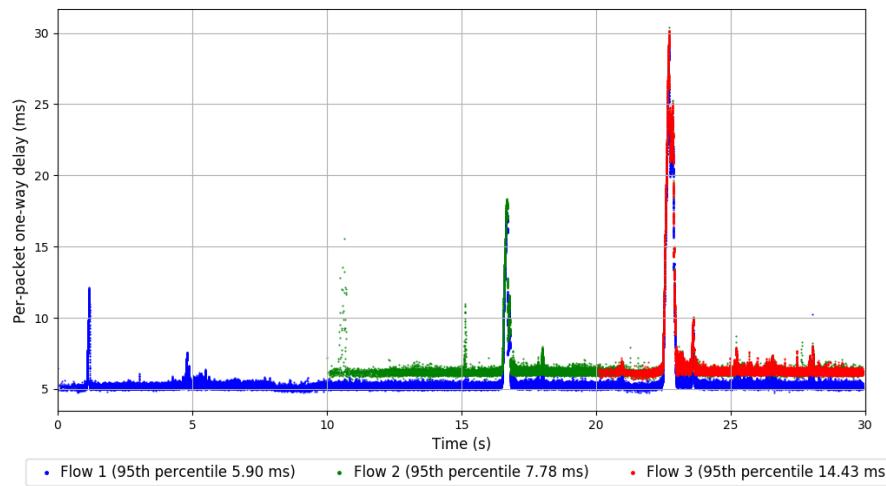
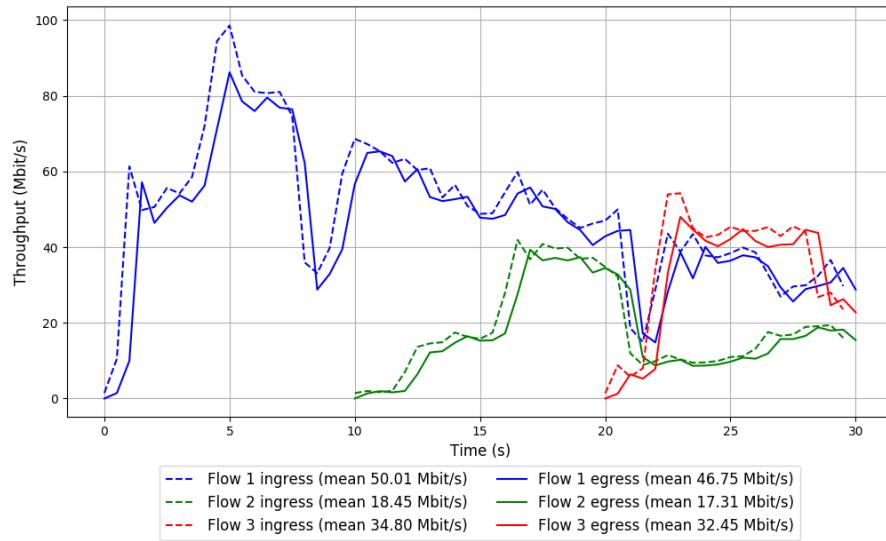


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-10-09 22:02:16
End at: 2018-10-09 22:02:46
Local clock offset: 0.335 ms
Remote clock offset: -4.892 ms

# Below is generated by plot.py at 2018-10-09 22:48:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.98 Mbit/s
95th percentile per-packet one-way delay: 6.977 ms
Loss rate: 6.51%
-- Flow 1:
Average throughput: 46.75 Mbit/s
95th percentile per-packet one-way delay: 5.899 ms
Loss rate: 6.52%
-- Flow 2:
Average throughput: 17.31 Mbit/s
95th percentile per-packet one-way delay: 7.779 ms
Loss rate: 6.19%
-- Flow 3:
Average throughput: 32.45 Mbit/s
95th percentile per-packet one-way delay: 14.425 ms
Loss rate: 6.78%
```

Run 4: Report of PCC-Vivace — Data Link

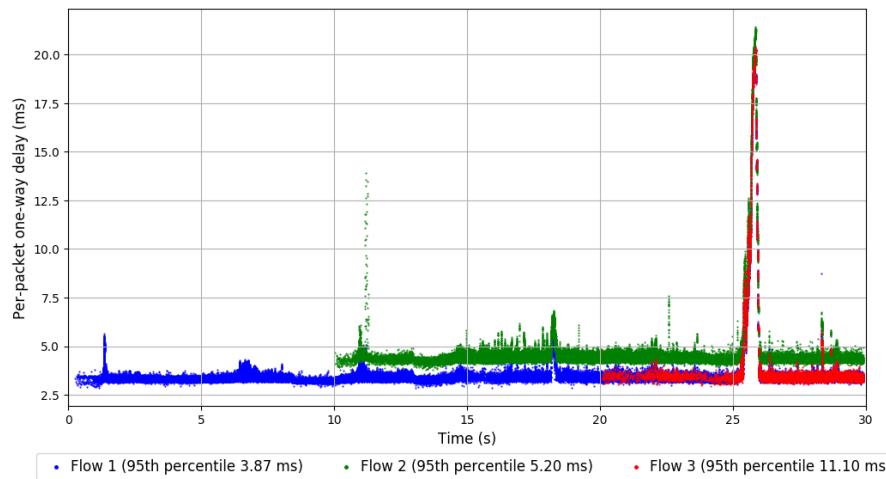
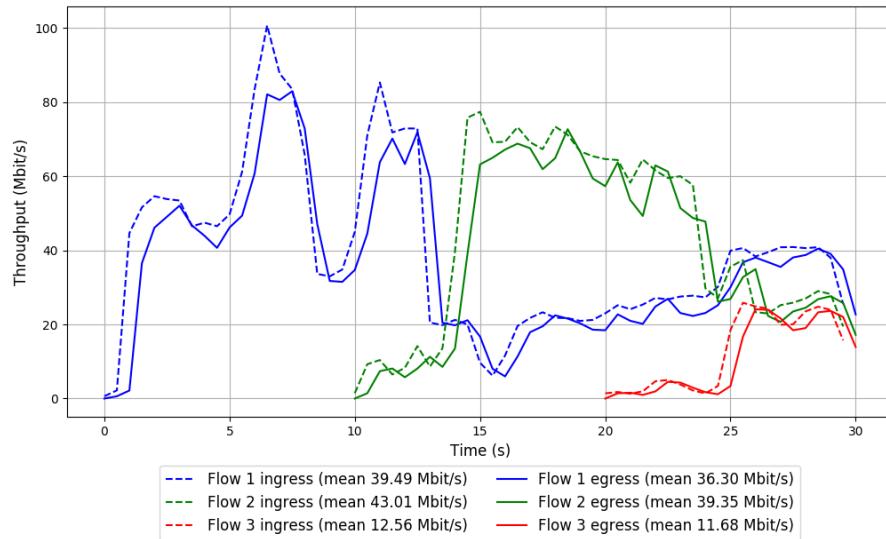


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-10-09 22:23:25
End at: 2018-10-09 22:23:55
Local clock offset: 0.836 ms
Remote clock offset: -5.672 ms

# Below is generated by plot.py at 2018-10-09 22:48:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.58 Mbit/s
95th percentile per-packet one-way delay: 4.872 ms
Loss rate: 8.62%
-- Flow 1:
Average throughput: 36.30 Mbit/s
95th percentile per-packet one-way delay: 3.869 ms
Loss rate: 8.85%
-- Flow 2:
Average throughput: 39.35 Mbit/s
95th percentile per-packet one-way delay: 5.201 ms
Loss rate: 8.52%
-- Flow 3:
Average throughput: 11.68 Mbit/s
95th percentile per-packet one-way delay: 11.102 ms
Loss rate: 7.08%
```

Run 5: Report of PCC-Vivace — Data Link

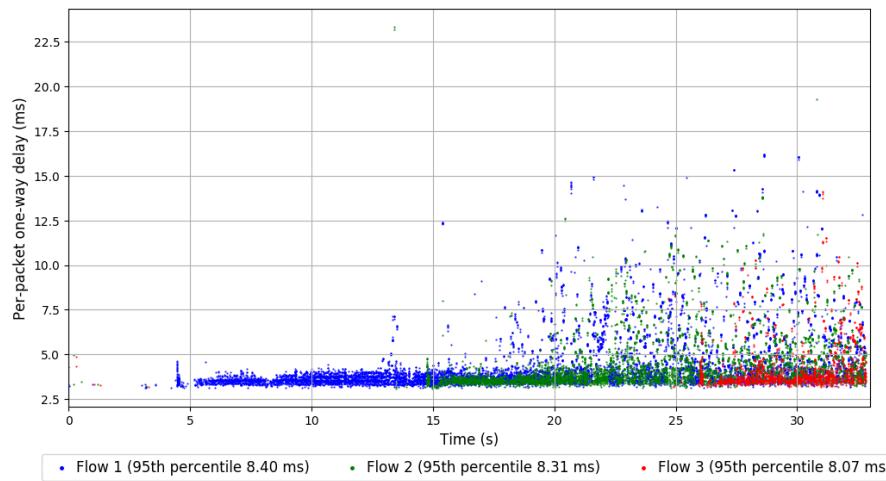
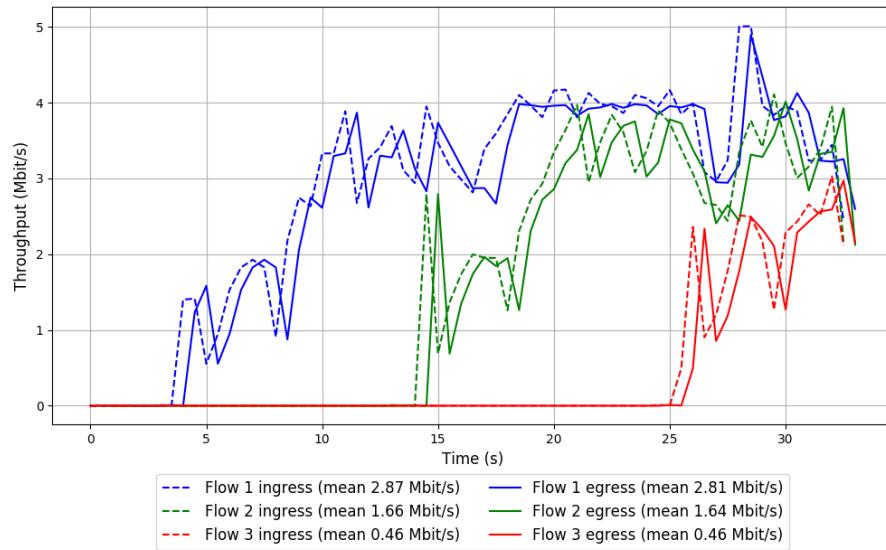


```
Run 1: Statistics of WebRTC media

Start at: 2018-10-09 20:59:58
End at: 2018-10-09 21:00:28
Local clock offset: 1.101 ms
Remote clock offset: -6.502 ms

# Below is generated by plot.py at 2018-10-09 22:48:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.89 Mbit/s
95th percentile per-packet one-way delay: 8.355 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 2.81 Mbit/s
95th percentile per-packet one-way delay: 8.402 ms
Loss rate: 1.96%
-- Flow 2:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 8.314 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 8.074 ms
Loss rate: 1.24%
```

Run 1: Report of WebRTC media — Data Link

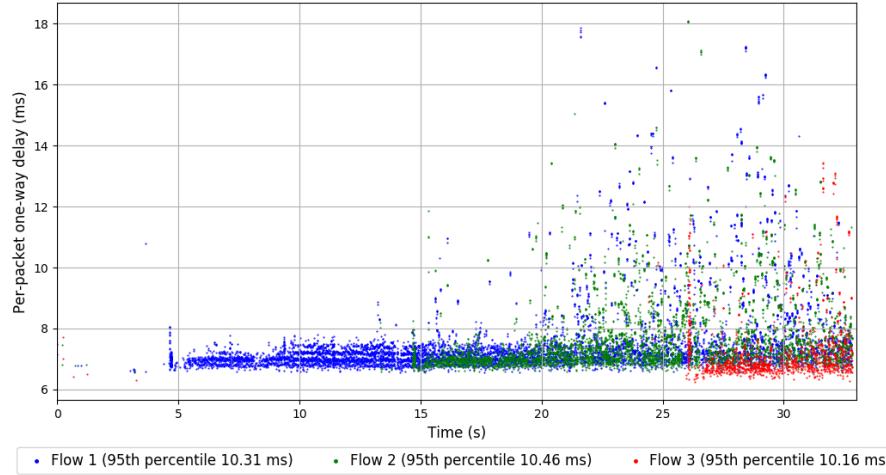
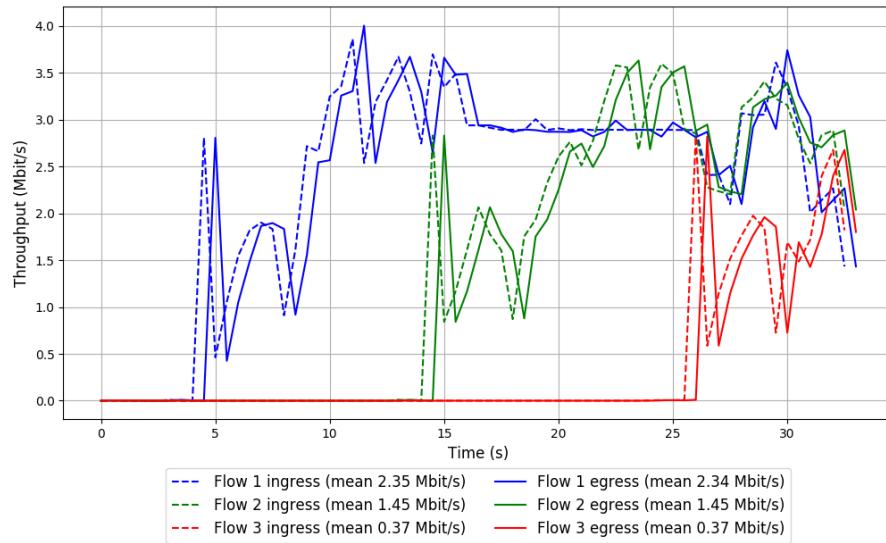


Run 2: Statistics of WebRTC media

```
Start at: 2018-10-09 21:21:15
End at: 2018-10-09 21:21:45
Local clock offset: 0.276 ms
Remote clock offset: -4.28 ms

# Below is generated by plot.py at 2018-10-09 22:48:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.15 Mbit/s
95th percentile per-packet one-way delay: 10.408 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 10.310 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 10.459 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 10.162 ms
Loss rate: 0.08%
```

Run 2: Report of WebRTC media — Data Link

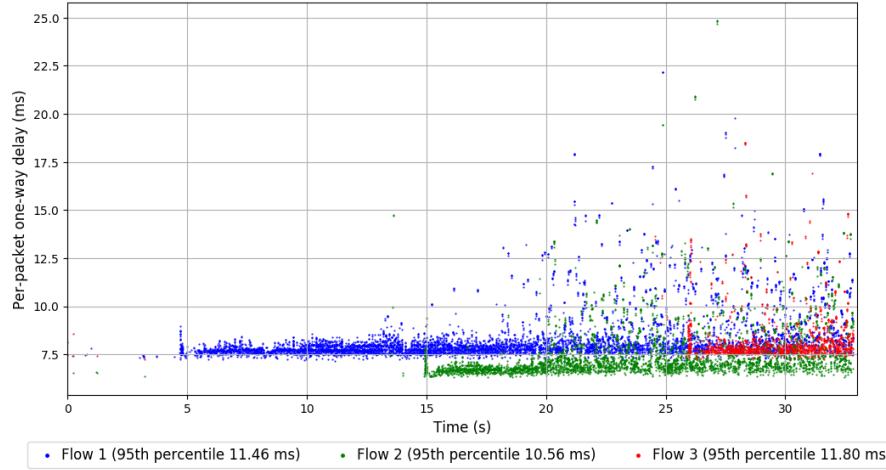
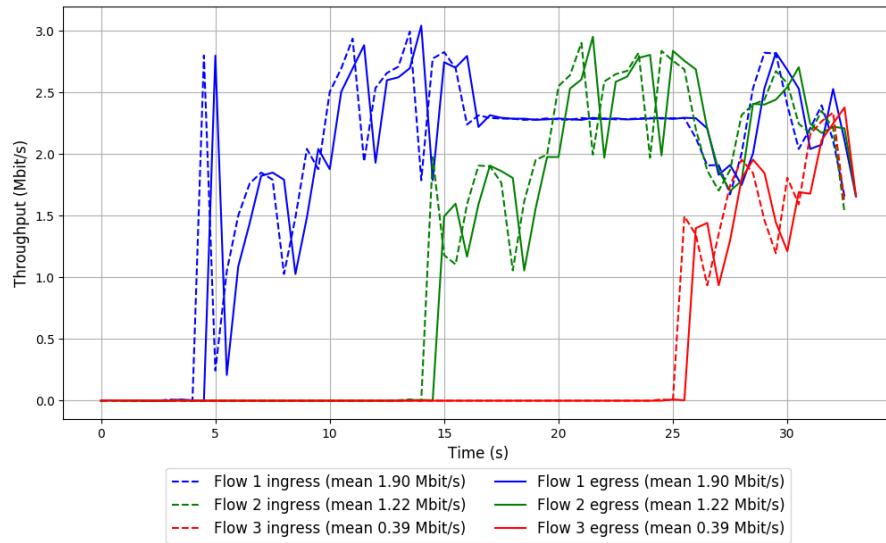


Run 3: Statistics of WebRTC media

```
Start at: 2018-10-09 21:42:17
End at: 2018-10-09 21:42:47
Local clock offset: -5.439 ms
Remote clock offset: -9.674 ms

# Below is generated by plot.py at 2018-10-09 22:48:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.50 Mbit/s
95th percentile per-packet one-way delay: 11.289 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 11.458 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 10.563 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 11.797 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

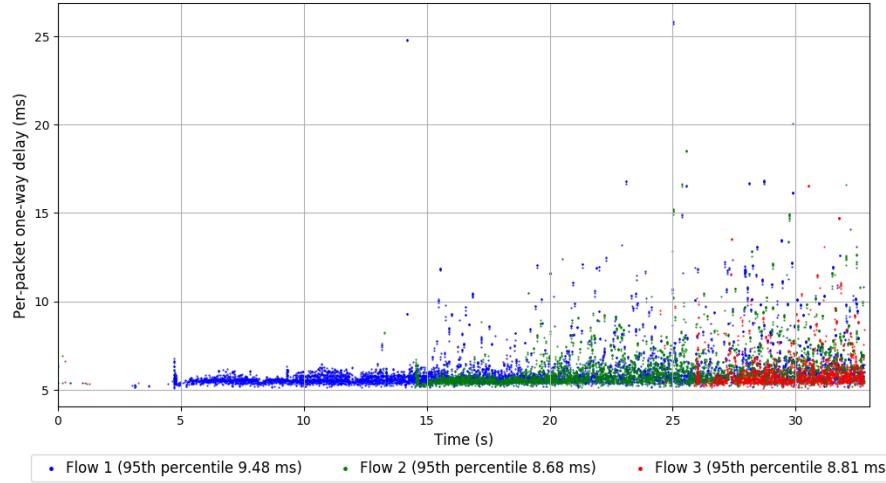
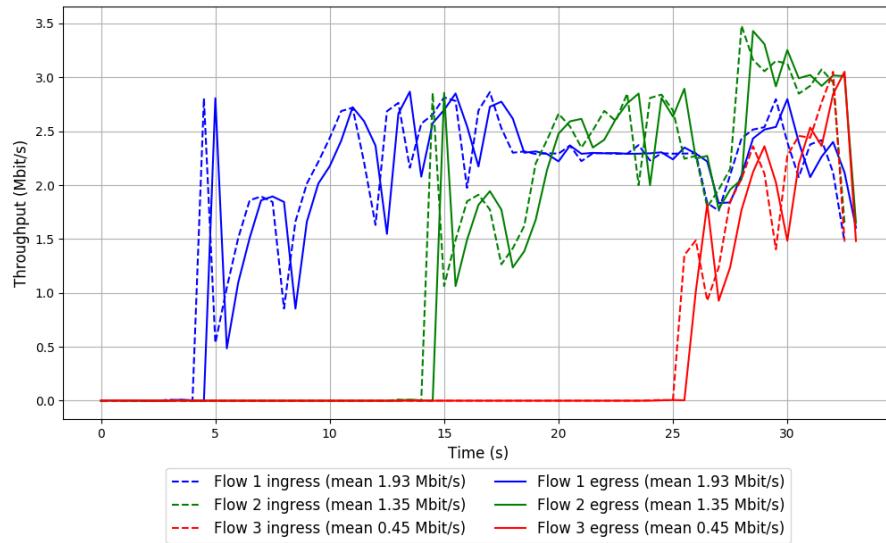


Run 4: Statistics of WebRTC media

```
Start at: 2018-10-09 22:03:29
End at: 2018-10-09 22:03:59
Local clock offset: 0.109 ms
Remote clock offset: -4.695 ms

# Below is generated by plot.py at 2018-10-09 22:48:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.72 Mbit/s
95th percentile per-packet one-way delay: 9.053 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 9.478 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 8.683 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 8.808 ms
Loss rate: 0.05%
```

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



Run 5: Statistics of WebRTC media

```
Start at: 2018-10-09 22:24:39
End at: 2018-10-09 22:25:09
Local clock offset: 1.382 ms
Remote clock offset: -4.628 ms

# Below is generated by plot.py at 2018-10-09 22:48:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.25 Mbit/s
95th percentile per-packet one-way delay: 7.997 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 6.955 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 8.930 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 7.294 ms
Loss rate: 2.64%
```

Run 5: Report of WebRTC media — Data Link

