

## Pantheon Report

Generated at 2018-10-03 06:27:52 (UTC).  
Data path: GCE Sydney on `ens4 (local)` → GCE Tokyo on `ens4 (remote)`.  
Repeated the test of 18 congestion control schemes 5 times.  
Each test lasted for 30 seconds running 1 flow.  
NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.

System info:

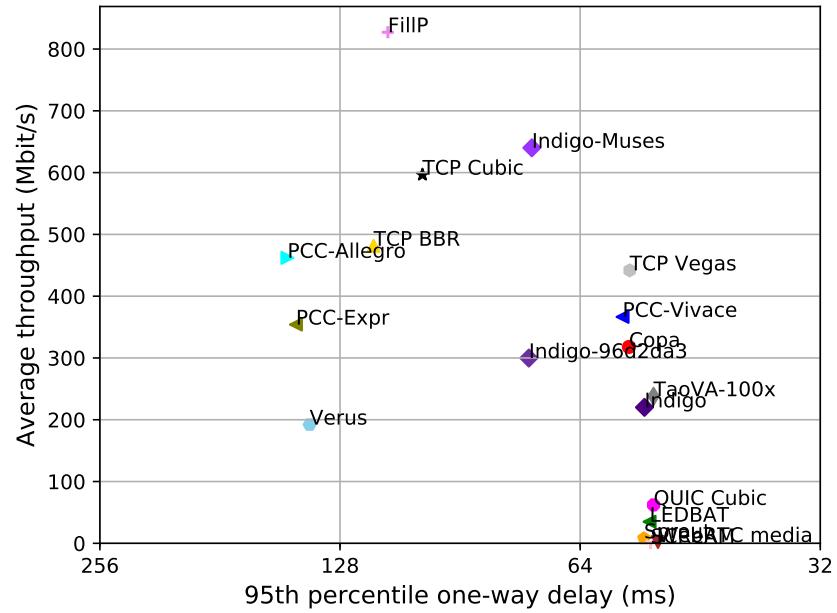
```
Linux 4.15.0-1019-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

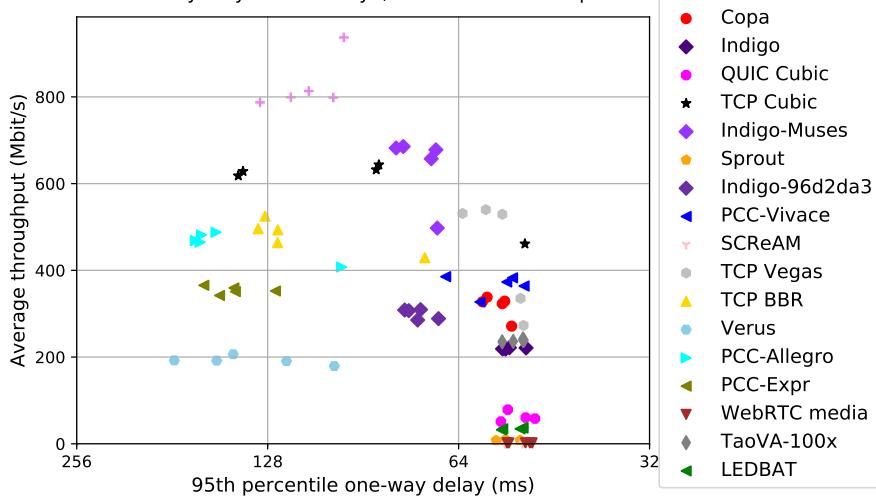
```
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbfed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-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 GCE Sydney to GCE Tokyo, 5 runs of 30s each per scheme  
(mean of all runs by scheme)



test from GCE Sydney to GCE Tokyo, 5 runs of 30s each per scheme



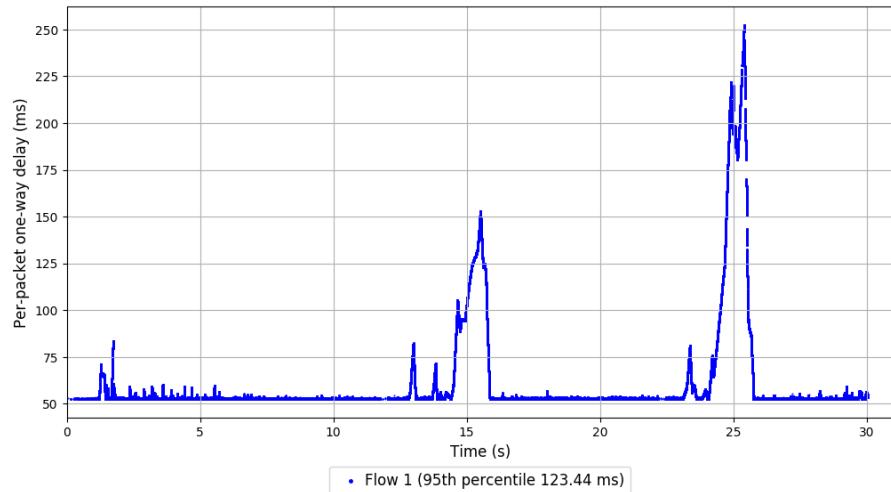
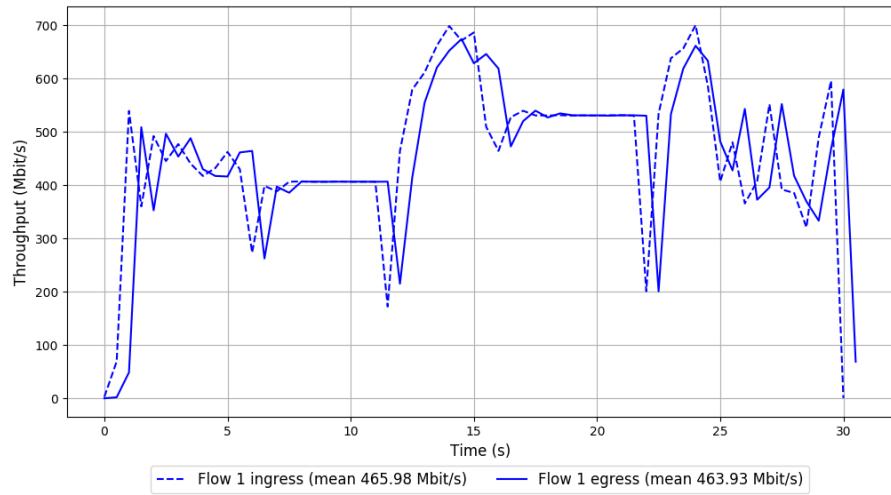
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	481.56	116.17	0.29
Copa	5	317.82	55.59	0.02
TCP Cubic	5	596.64	100.90	0.10
FillP	5	827.15	111.49	1.26
Indigo	5	220.04	53.16	0.01
Indigo-96d2da3	5	299.82	74.22	0.00
LEDBAT	5	34.90	52.39	0.00
Indigo-Muses	5	640.13	73.57	0.05
PCC-Allegro	5	462.06	148.98	1.46
PCC-Expr	5	354.04	145.38	3.54
QUIC Cubic	4	62.13	51.78	0.00
SCReAM	5	0.21	52.23	0.03
Sprout	5	8.15	53.23	0.00
TaoVA-100x	5	238.04	51.78	0.00
TCP Vegas	5	441.74	55.47	0.00
Verus	5	192.16	139.74	0.73
PCC-Vivace	5	366.47	56.63	0.01
WebRTC media	5	2.09	51.12	0.00

Run 1: Statistics of TCP BBR

```
Start at: 2018-10-03 02:30:46
End at: 2018-10-03 02:31:16
Local clock offset: -0.173 ms
Remote clock offset: -0.788 ms

# Below is generated by plot.py at 2018-10-03 04:50:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 463.93 Mbit/s
95th percentile per-packet one-way delay: 123.445 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 463.93 Mbit/s
95th percentile per-packet one-way delay: 123.445 ms
Loss rate: 0.45%
```

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

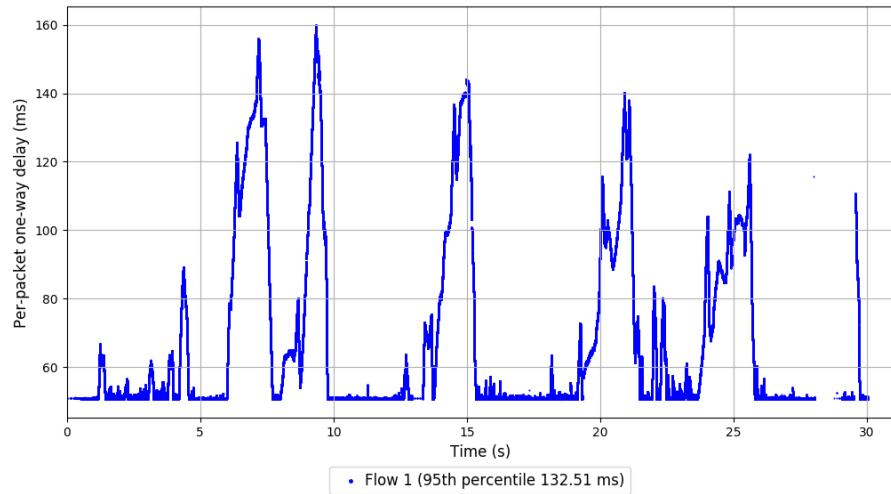
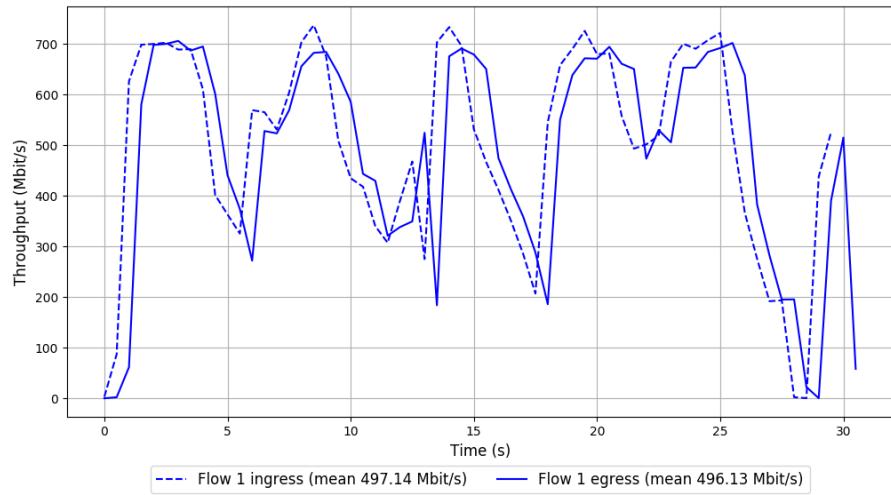


Run 2: Statistics of TCP BBR

```
Start at: 2018-10-03 02:56:07
End at: 2018-10-03 02:56:37
Local clock offset: -0.027 ms
Remote clock offset: 0.745 ms

# Below is generated by plot.py at 2018-10-03 04:51:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 496.13 Mbit/s
95th percentile per-packet one-way delay: 132.513 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 496.13 Mbit/s
95th percentile per-packet one-way delay: 132.513 ms
Loss rate: 0.20%
```

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

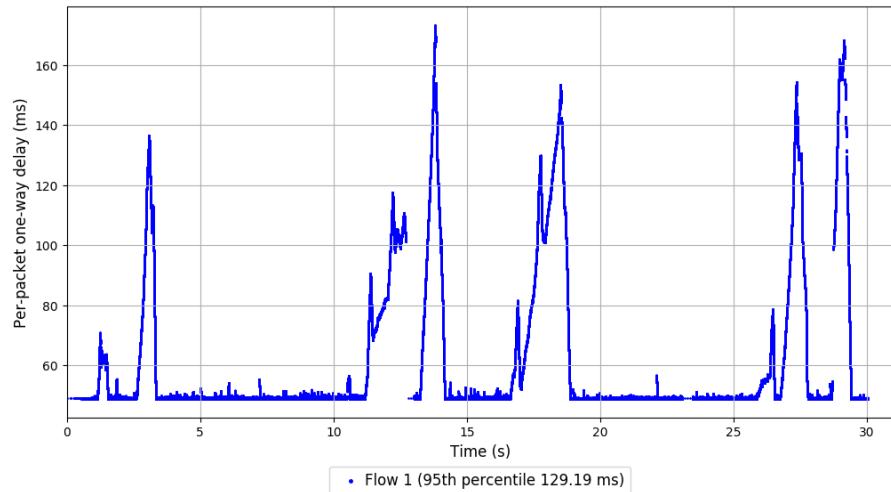
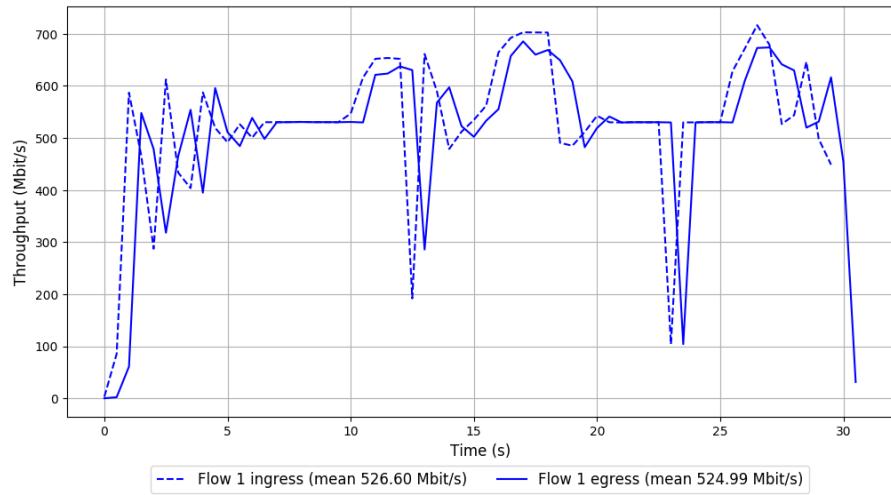


Run 3: Statistics of TCP BBR

```
Start at: 2018-10-03 03:21:33
End at: 2018-10-03 03:22:03
Local clock offset: -0.299 ms
Remote clock offset: -1.334 ms

# Below is generated by plot.py at 2018-10-03 04:51:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 524.99 Mbit/s
95th percentile per-packet one-way delay: 129.187 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 524.99 Mbit/s
95th percentile per-packet one-way delay: 129.187 ms
Loss rate: 0.30%
```

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

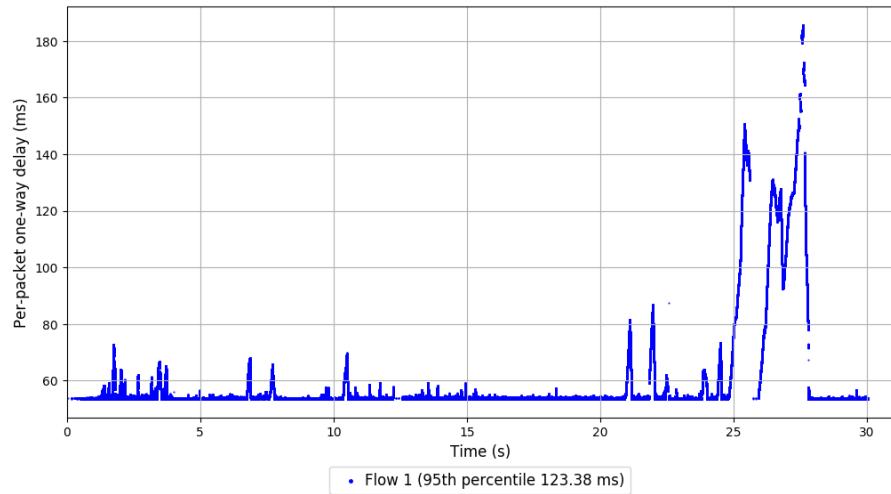
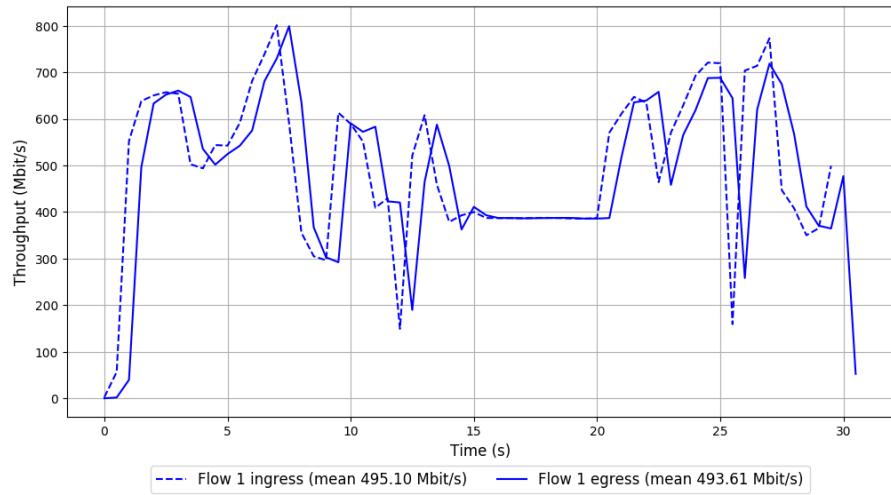


Run 4: Statistics of TCP BBR

```
Start at: 2018-10-03 03:47:16
End at: 2018-10-03 03:47:46
Local clock offset: -0.227 ms
Remote clock offset: 0.423 ms

# Below is generated by plot.py at 2018-10-03 04:51:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 493.61 Mbit/s
95th percentile per-packet one-way delay: 123.376 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 493.61 Mbit/s
95th percentile per-packet one-way delay: 123.376 ms
Loss rate: 0.31%
```

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

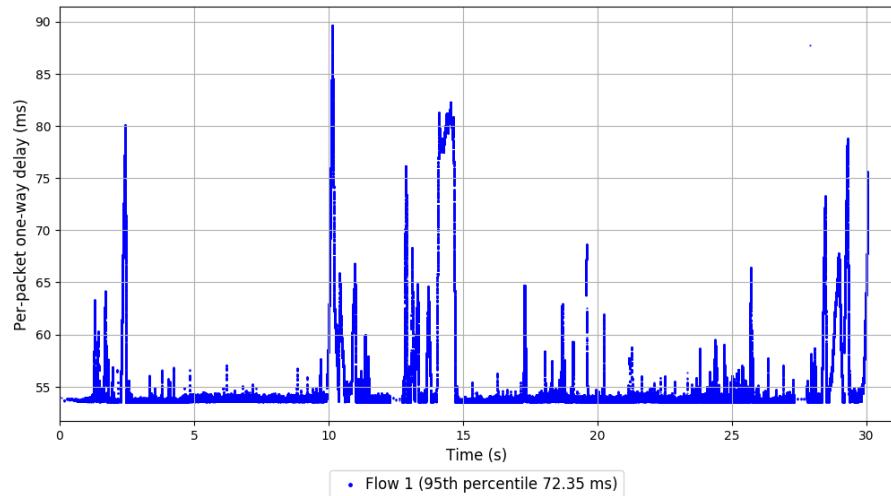
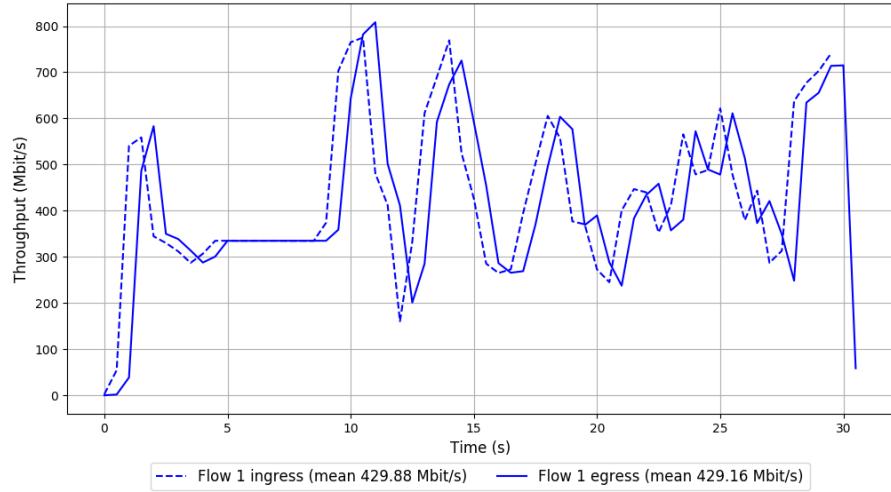


Run 5: Statistics of TCP BBR

```
Start at: 2018-10-03 04:13:08
End at: 2018-10-03 04:13:38
Local clock offset: -0.417 ms
Remote clock offset: -0.221 ms

# Below is generated by plot.py at 2018-10-03 04:51:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 429.16 Mbit/s
95th percentile per-packet one-way delay: 72.351 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 429.16 Mbit/s
95th percentile per-packet one-way delay: 72.351 ms
Loss rate: 0.18%
```

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

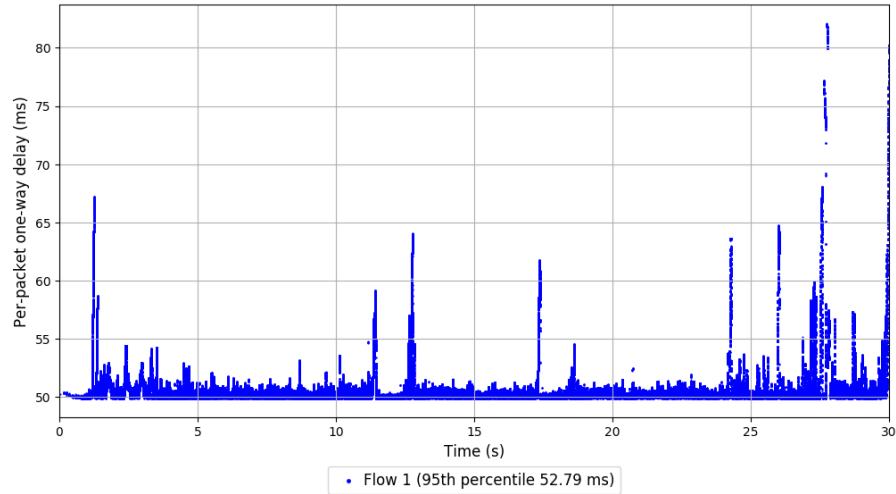
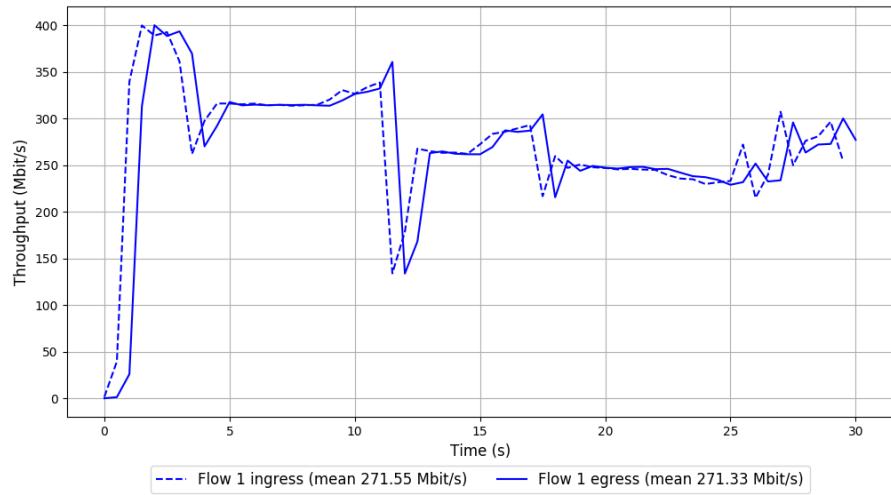


Run 1: Statistics of Copa

```
Start at: 2018-10-03 02:32:18
End at: 2018-10-03 02:32:48
Local clock offset: -0.216 ms
Remote clock offset: -0.188 ms

# Below is generated by plot.py at 2018-10-03 04:51:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 271.33 Mbit/s
95th percentile per-packet one-way delay: 52.792 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 271.33 Mbit/s
95th percentile per-packet one-way delay: 52.792 ms
Loss rate: 0.08%
```

## Run 1: Report of Copa — Data Link

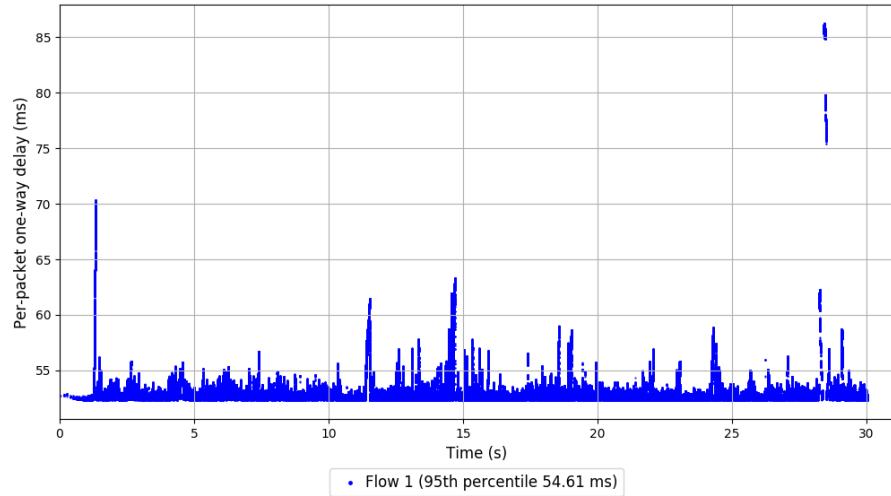
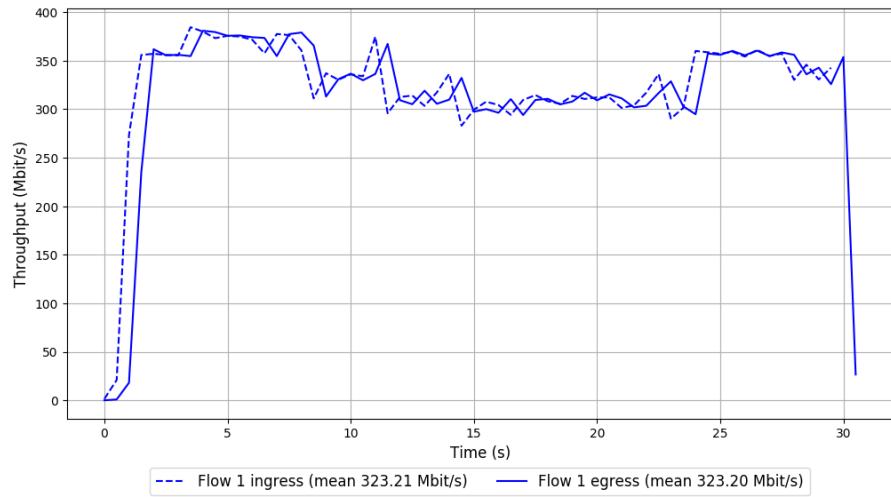


Run 2: Statistics of Copa

```
Start at: 2018-10-03 02:57:41
End at: 2018-10-03 02:58:11
Local clock offset: -0.305 ms
Remote clock offset: -1.454 ms

# Below is generated by plot.py at 2018-10-03 04:53:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 323.20 Mbit/s
95th percentile per-packet one-way delay: 54.613 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 323.20 Mbit/s
95th percentile per-packet one-way delay: 54.613 ms
Loss rate: 0.01%
```

## Run 2: Report of Copa — Data Link

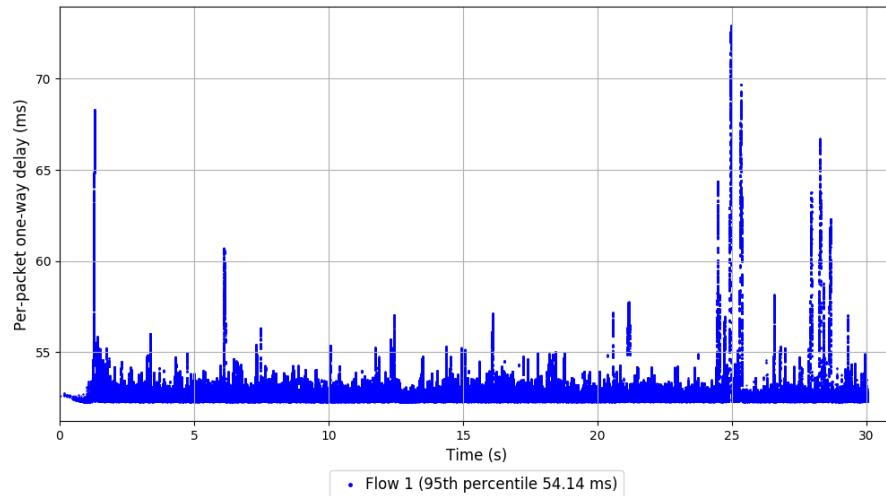
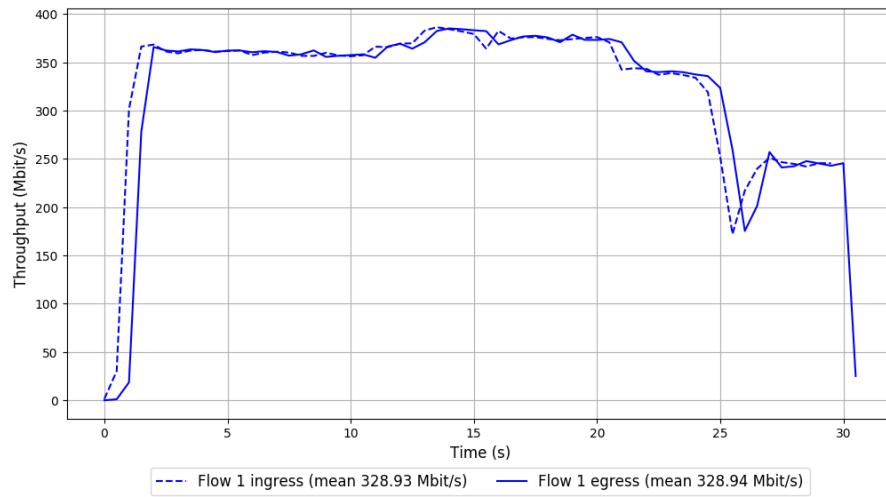


Run 3: Statistics of Copa

```
Start at: 2018-10-03 03:23:08
End at: 2018-10-03 03:23:38
Local clock offset: -0.256 ms
Remote clock offset: -0.686 ms

# Below is generated by plot.py at 2018-10-03 04:53:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 328.94 Mbit/s
95th percentile per-packet one-way delay: 54.137 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 328.94 Mbit/s
95th percentile per-packet one-way delay: 54.137 ms
Loss rate: 0.01%
```

### Run 3: Report of Copa — Data Link

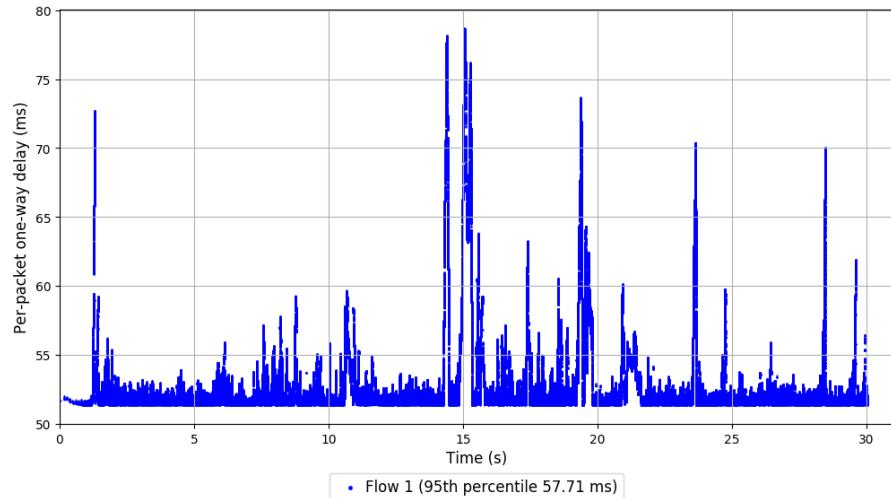
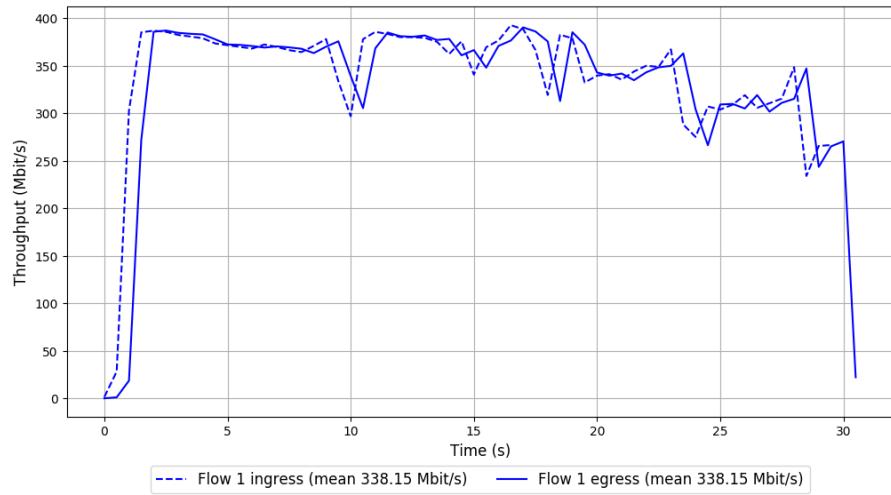


Run 4: Statistics of Copa

```
Start at: 2018-10-03 03:48:51
End at: 2018-10-03 03:49:21
Local clock offset: -0.027 ms
Remote clock offset: 1.363 ms

# Below is generated by plot.py at 2018-10-03 05:04:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 338.15 Mbit/s
95th percentile per-packet one-way delay: 57.712 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 338.15 Mbit/s
95th percentile per-packet one-way delay: 57.712 ms
Loss rate: 0.00%
```

## Run 4: Report of Copa — Data Link

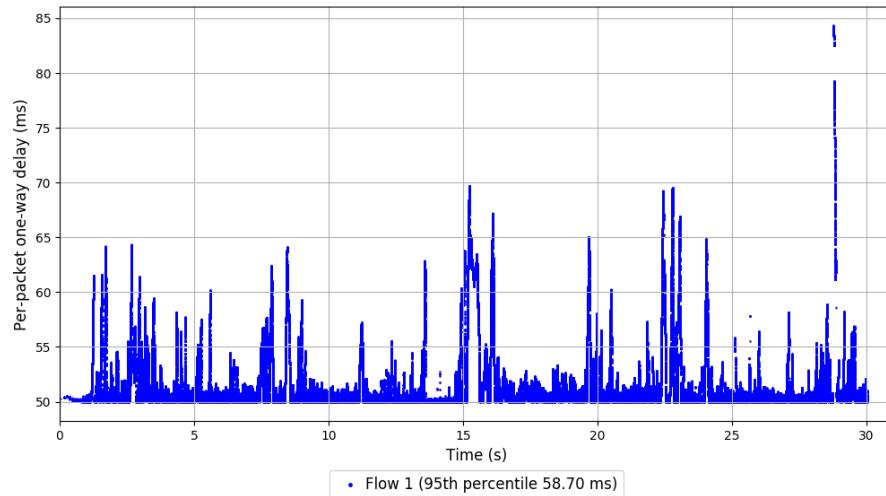
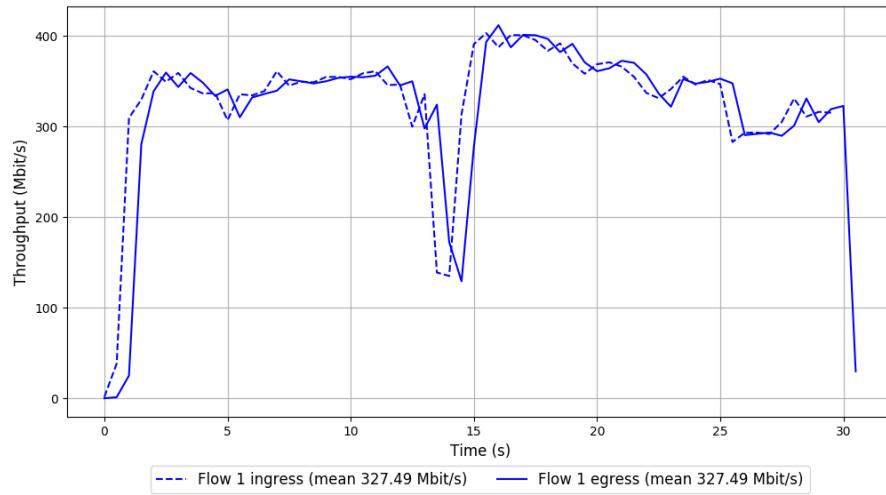


Run 5: Statistics of Copa

```
Start at: 2018-10-03 04:14:38
End at: 2018-10-03 04:15:08
Local clock offset: -0.145 ms
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2018-10-03 05:04:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 327.49 Mbit/s
95th percentile per-packet one-way delay: 58.703 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 327.49 Mbit/s
95th percentile per-packet one-way delay: 58.703 ms
Loss rate: 0.00%
```

### Run 5: Report of Copa — Data Link

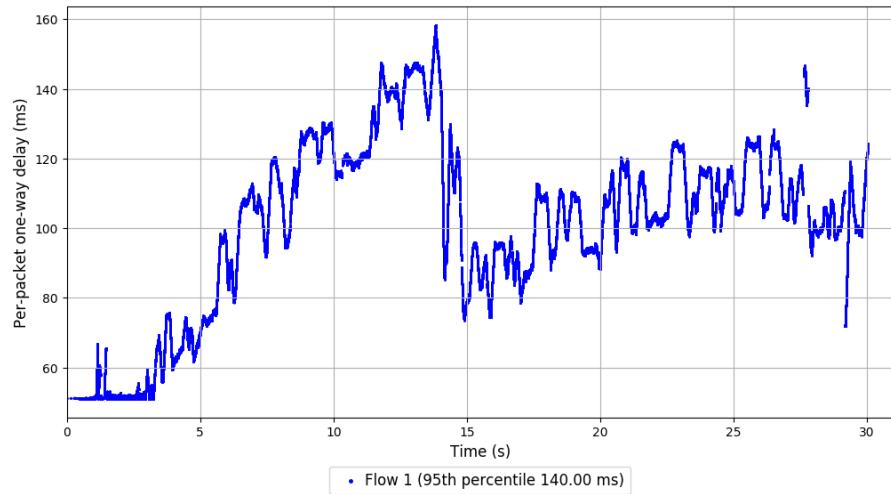
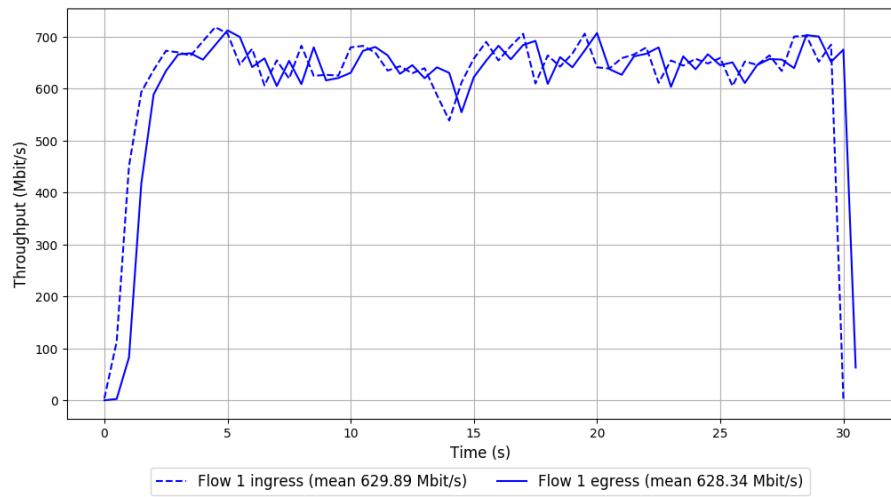


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-10-03 02:45:10
End at: 2018-10-03 02:45:40
Local clock offset: -0.202 ms
Remote clock offset: 1.024 ms

# Below is generated by plot.py at 2018-10-03 05:05:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 628.34 Mbit/s
95th percentile per-packet one-way delay: 139.998 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 628.34 Mbit/s
95th percentile per-packet one-way delay: 139.998 ms
Loss rate: 0.24%
```

Run 1: Report of TCP Cubic — Data Link

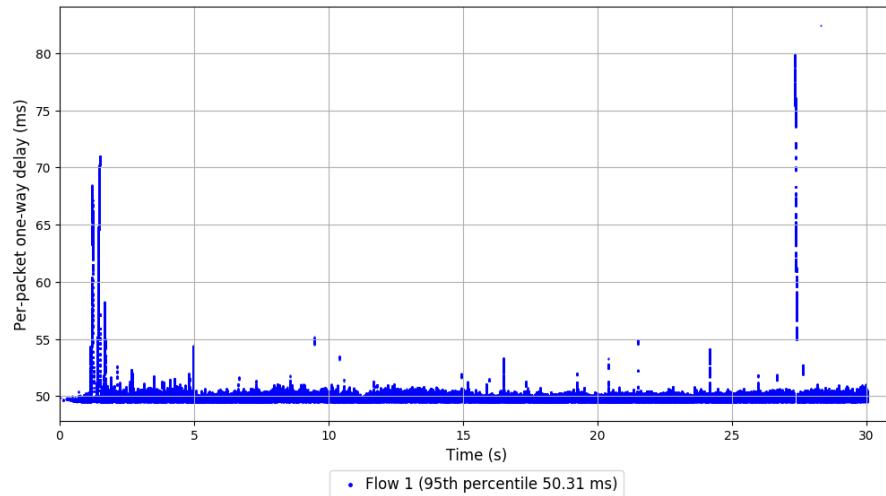
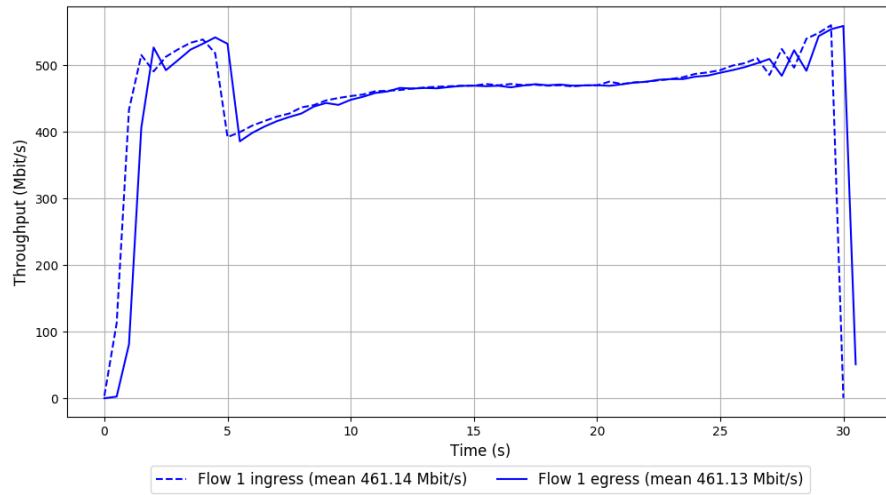


Run 2: Statistics of TCP Cubic

```
Start at: 2018-10-03 03:10:53
End at: 2018-10-03 03:11:23
Local clock offset: -0.204 ms
Remote clock offset: -0.263 ms

# Below is generated by plot.py at 2018-10-03 05:05:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 461.13 Mbit/s
95th percentile per-packet one-way delay: 50.308 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 461.13 Mbit/s
95th percentile per-packet one-way delay: 50.308 ms
Loss rate: 0.00%
```

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

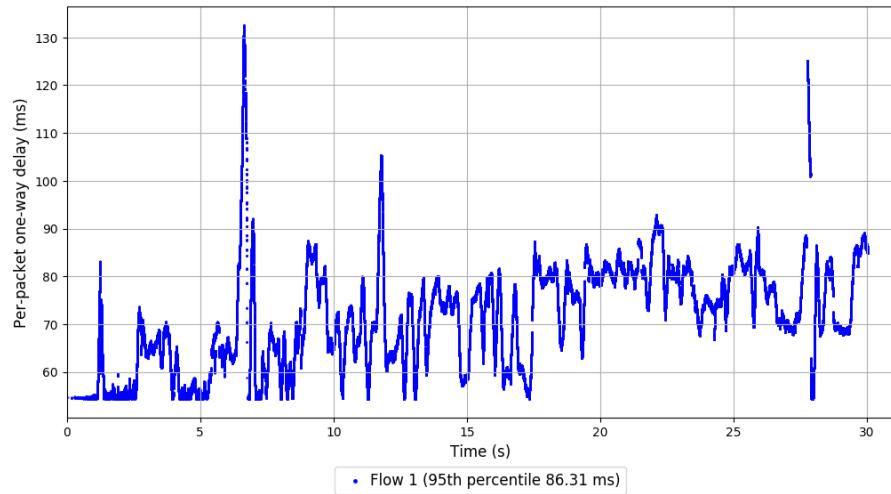
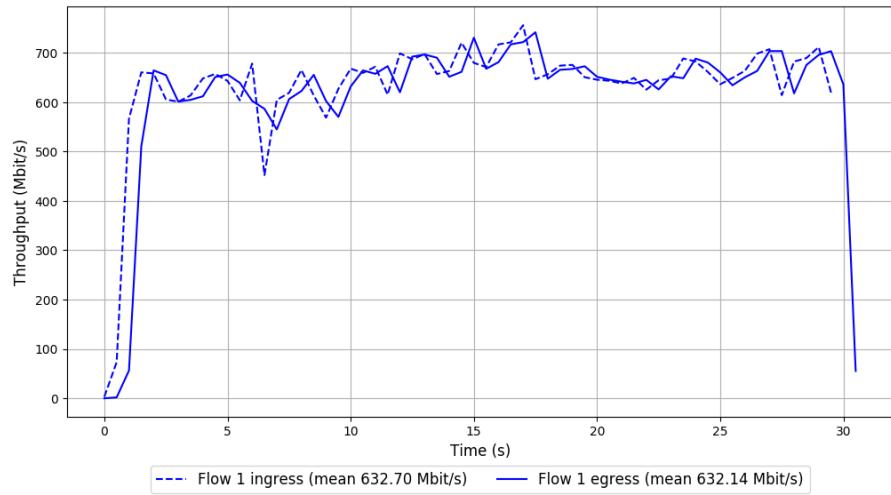


Run 3: Statistics of TCP Cubic

```
Start at: 2018-10-03 03:36:17
End at: 2018-10-03 03:36:47
Local clock offset: -0.428 ms
Remote clock offset: 1.128 ms

# Below is generated by plot.py at 2018-10-03 05:05:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 632.14 Mbit/s
95th percentile per-packet one-way delay: 86.309 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 632.14 Mbit/s
95th percentile per-packet one-way delay: 86.309 ms
Loss rate: 0.10%
```

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

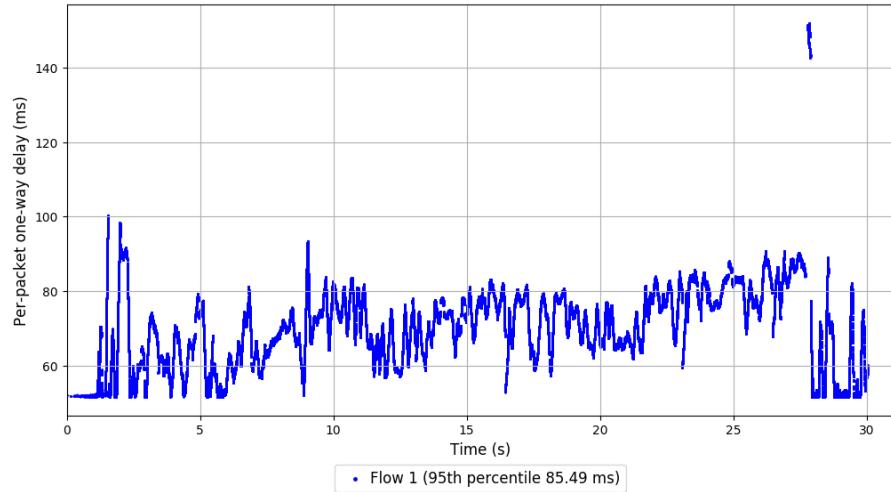
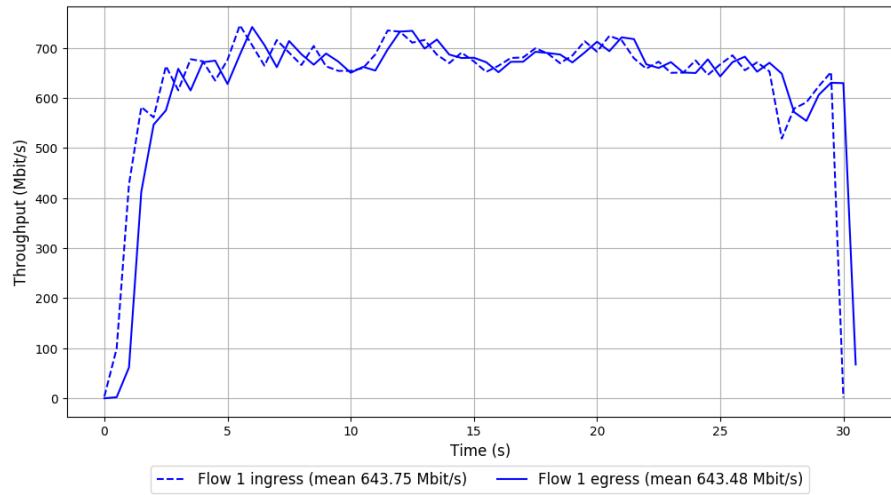


Run 4: Statistics of TCP Cubic

```
Start at: 2018-10-03 04:02:07
End at: 2018-10-03 04:02:37
Local clock offset: -0.319 ms
Remote clock offset: -1.531 ms

# Below is generated by plot.py at 2018-10-03 05:06:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 643.48 Mbit/s
95th percentile per-packet one-way delay: 85.487 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 643.48 Mbit/s
95th percentile per-packet one-way delay: 85.487 ms
Loss rate: 0.05%
```

Run 4: Report of TCP Cubic — Data Link

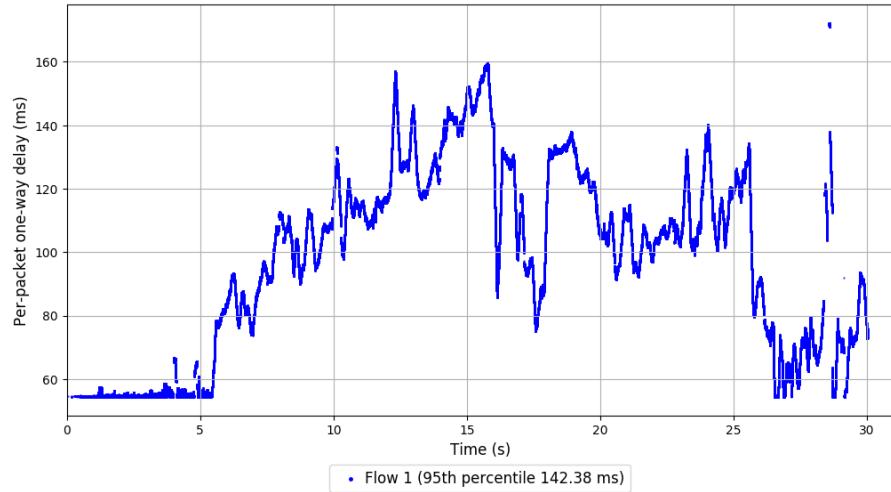
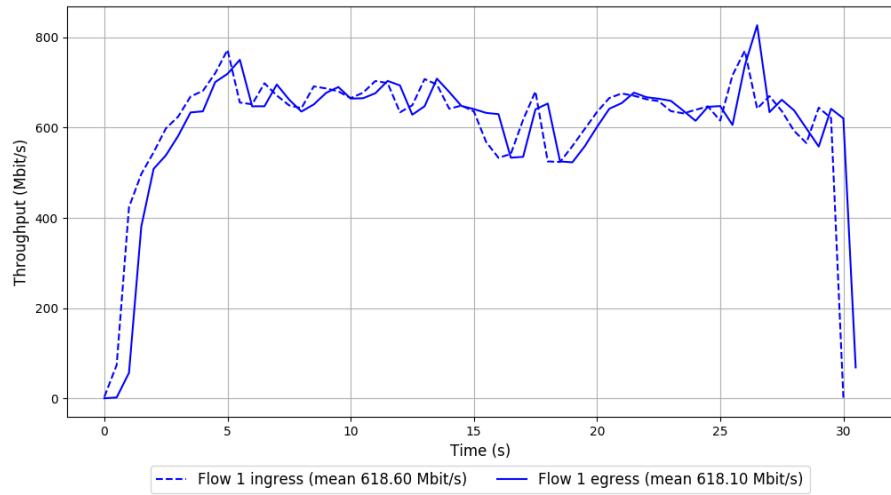


Run 5: Statistics of TCP Cubic

```
Start at: 2018-10-03 04:27:54
End at: 2018-10-03 04:28:24
Local clock offset: -0.344 ms
Remote clock offset: 1.278 ms

# Below is generated by plot.py at 2018-10-03 05:07:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 618.10 Mbit/s
95th percentile per-packet one-way delay: 142.385 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 618.10 Mbit/s
95th percentile per-packet one-way delay: 142.385 ms
Loss rate: 0.09%
```

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

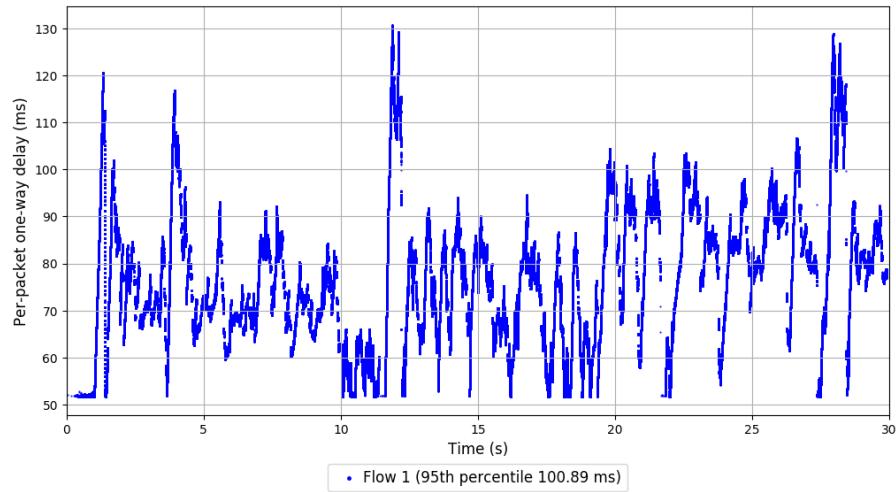
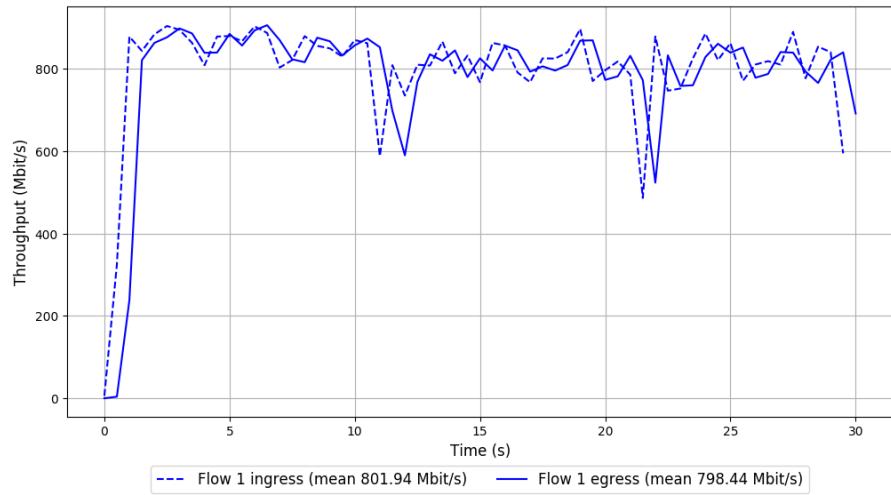


```
Run 1: Statistics of FillP

Start at: 2018-10-03 02:43:32
End at: 2018-10-03 02:44:03
Local clock offset: -0.163 ms
Remote clock offset: -1.557 ms

# Below is generated by plot.py at 2018-10-03 05:14:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 798.44 Mbit/s
95th percentile per-packet one-way delay: 100.885 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 798.44 Mbit/s
95th percentile per-packet one-way delay: 100.885 ms
Loss rate: 0.44%
```

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

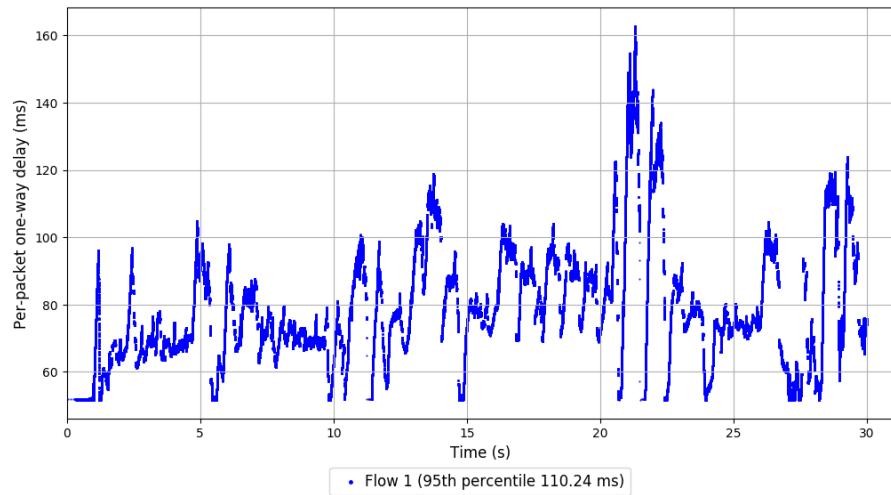
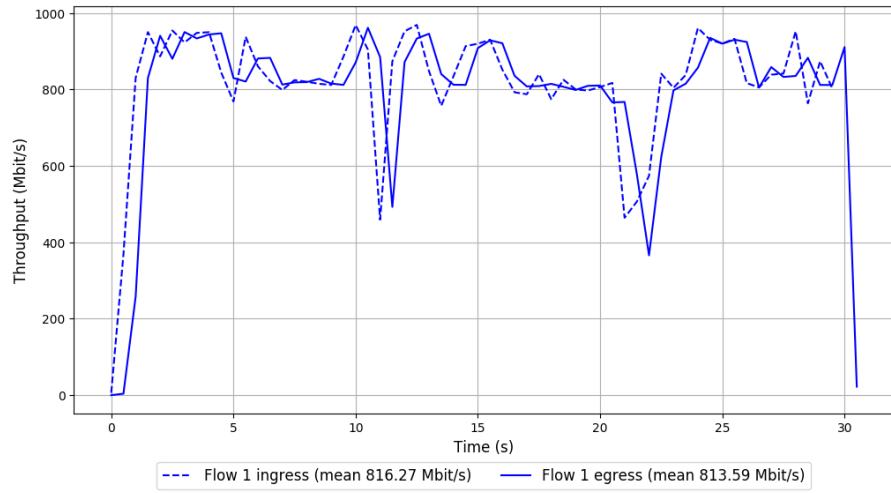


```
Run 2: Statistics of FillP
```

```
Start at: 2018-10-03 03:09:15
End at: 2018-10-03 03:09:45
Local clock offset: -0.117 ms
Remote clock offset: 1.276 ms

# Below is generated by plot.py at 2018-10-03 05:25:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 813.59 Mbit/s
95th percentile per-packet one-way delay: 110.241 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 813.59 Mbit/s
95th percentile per-packet one-way delay: 110.241 ms
Loss rate: 0.33%
```

## Run 2: Report of FillP — Data Link

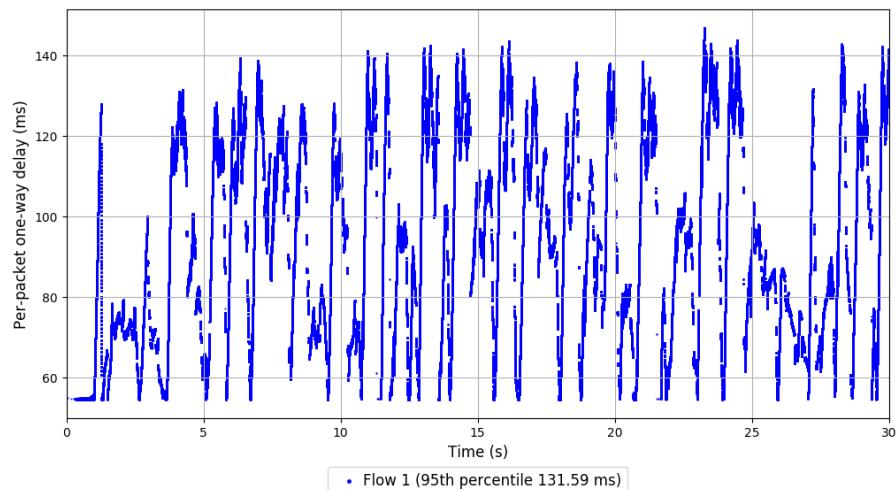
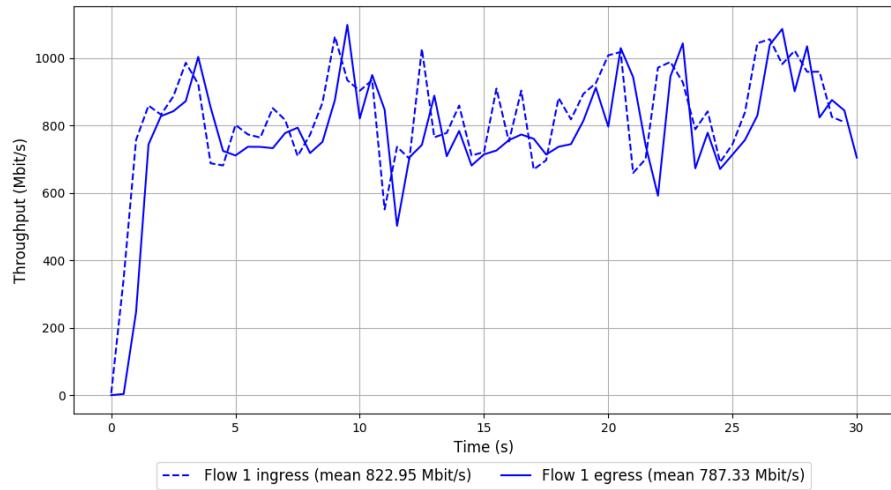


Run 3: Statistics of FillP

```
Start at: 2018-10-03 03:34:39
End at: 2018-10-03 03:35:09
Local clock offset: -0.366 ms
Remote clock offset: 1.404 ms

# Below is generated by plot.py at 2018-10-03 05:26:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 787.33 Mbit/s
95th percentile per-packet one-way delay: 131.585 ms
Loss rate: 4.34%
-- Flow 1:
Average throughput: 787.33 Mbit/s
95th percentile per-packet one-way delay: 131.585 ms
Loss rate: 4.34%
```

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

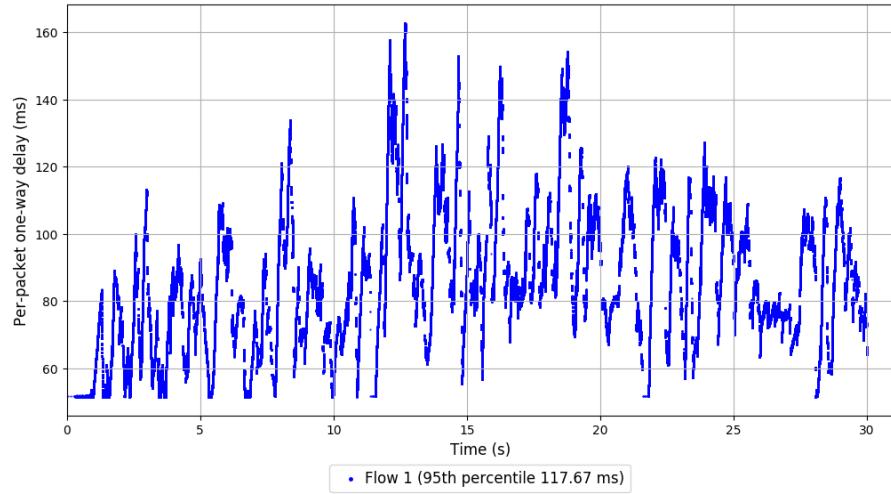
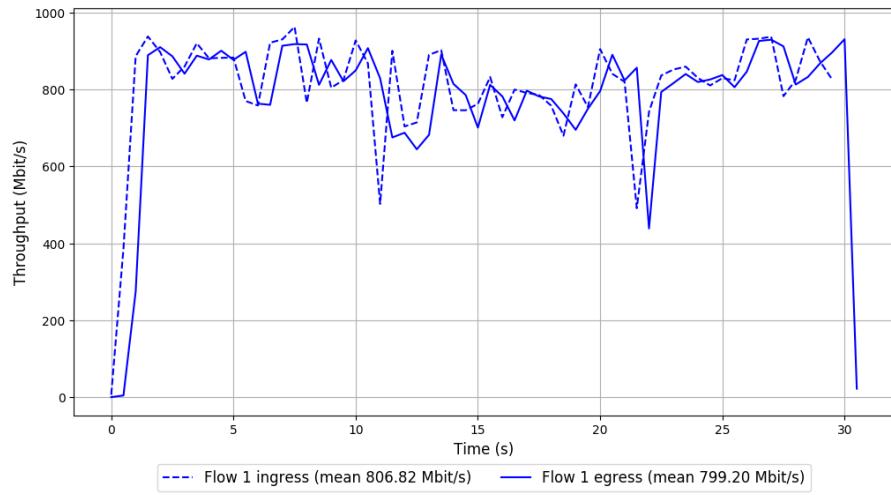


```
Run 4: Statistics of FillP
```

```
Start at: 2018-10-03 04:00:29
End at: 2018-10-03 04:00:59
Local clock offset: -0.34 ms
Remote clock offset: 1.193 ms

# Below is generated by plot.py at 2018-10-03 05:26:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 799.20 Mbit/s
95th percentile per-packet one-way delay: 117.665 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 799.20 Mbit/s
95th percentile per-packet one-way delay: 117.665 ms
Loss rate: 0.94%
```

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

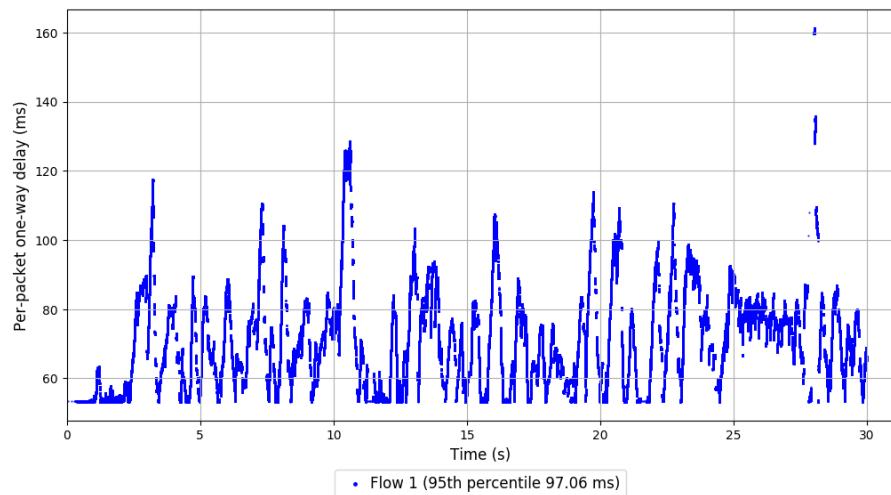
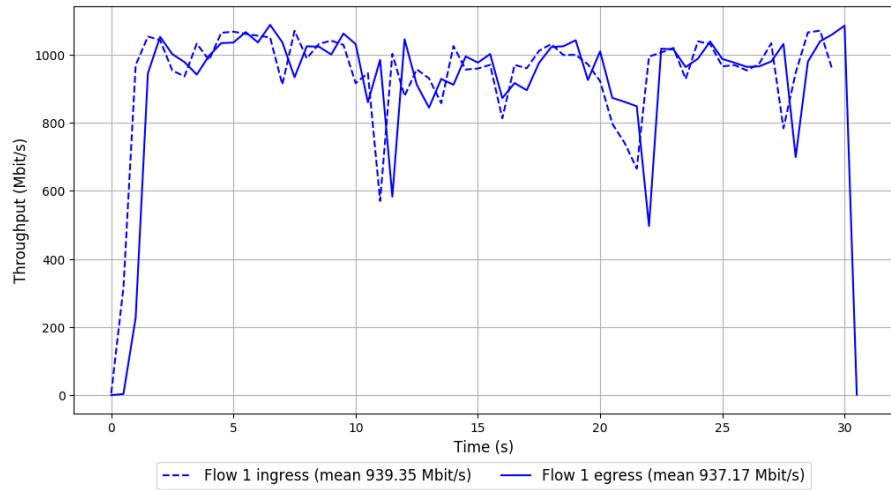


```
Run 5: Statistics of FillP
```

```
Start at: 2018-10-03 04:26:11
End at: 2018-10-03 04:26:41
Local clock offset: -0.353 ms
Remote clock offset: -0.127 ms

# Below is generated by plot.py at 2018-10-03 05:31:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 937.17 Mbit/s
95th percentile per-packet one-way delay: 97.065 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 937.17 Mbit/s
95th percentile per-packet one-way delay: 97.065 ms
Loss rate: 0.24%
```

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

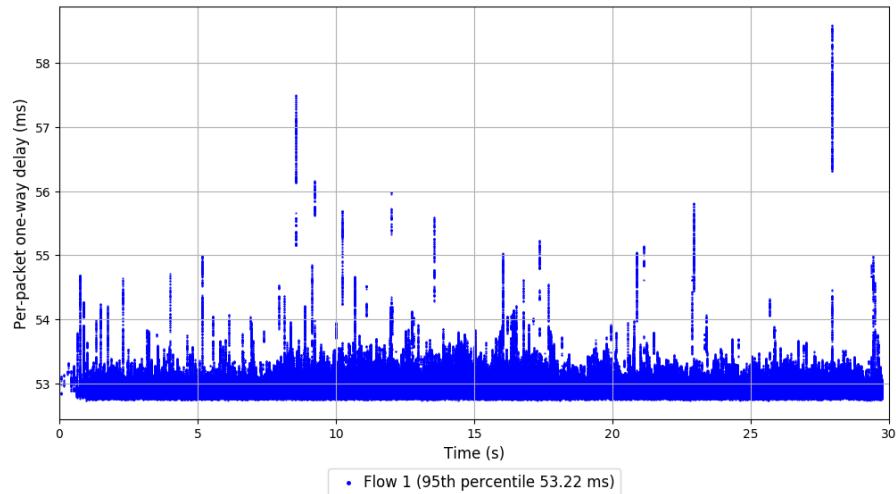
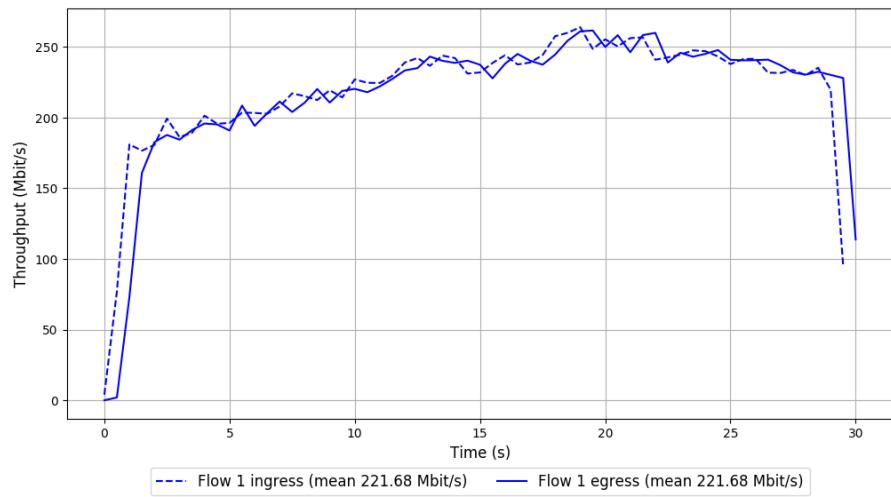


Run 1: Statistics of Indigo

```
Start at: 2018-10-03 02:35:19
End at: 2018-10-03 02:35:49
Local clock offset: -0.146 ms
Remote clock offset: -0.197 ms

# Below is generated by plot.py at 2018-10-03 05:31:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.68 Mbit/s
95th percentile per-packet one-way delay: 53.224 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.68 Mbit/s
95th percentile per-packet one-way delay: 53.224 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link

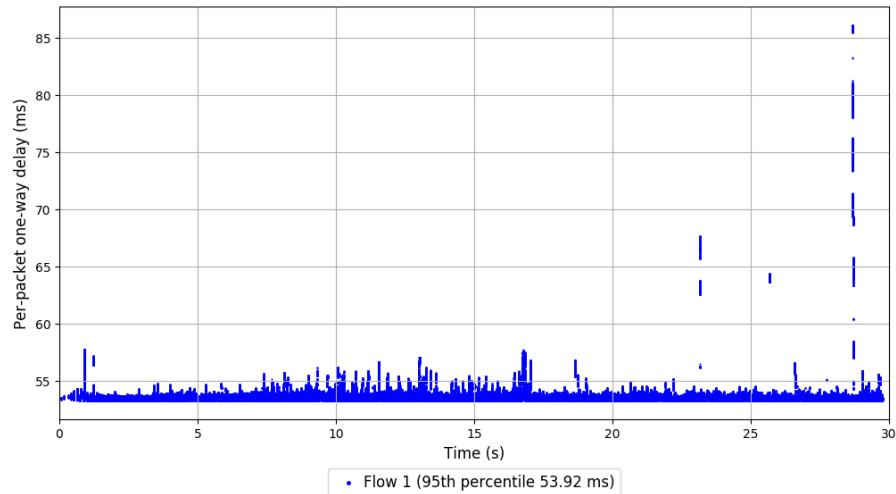
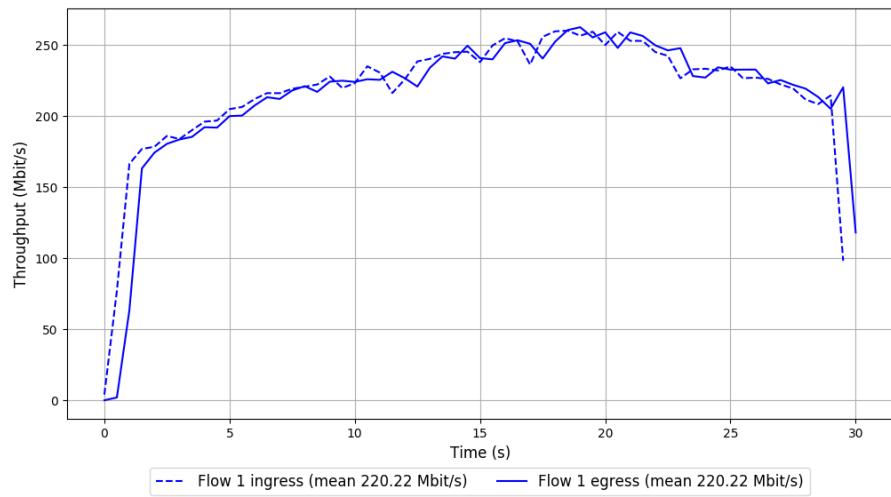


Run 2: Statistics of Indigo

```
Start at: 2018-10-03 03:00:56
End at: 2018-10-03 03:01:26
Local clock offset: -0.296 ms
Remote clock offset: 0.265 ms

# Below is generated by plot.py at 2018-10-03 05:31:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 220.22 Mbit/s
95th percentile per-packet one-way delay: 53.921 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 220.22 Mbit/s
95th percentile per-packet one-way delay: 53.921 ms
Loss rate: 0.01%
```

Run 2: Report of Indigo — Data Link

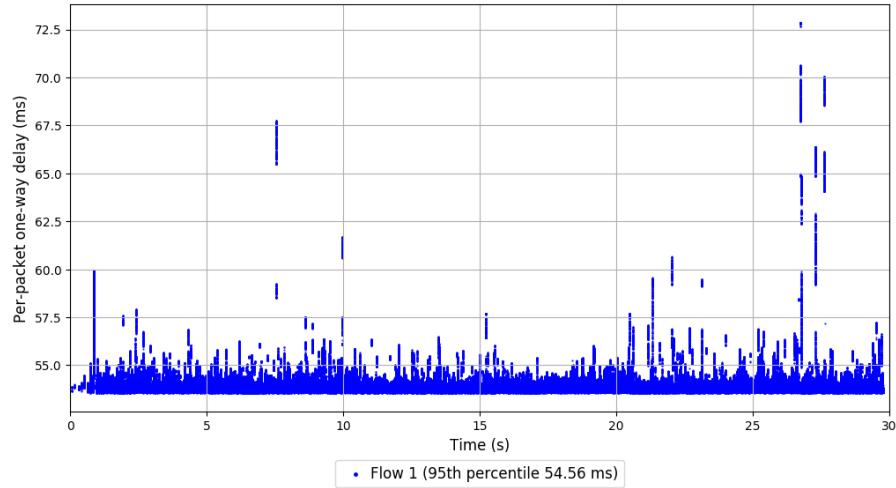
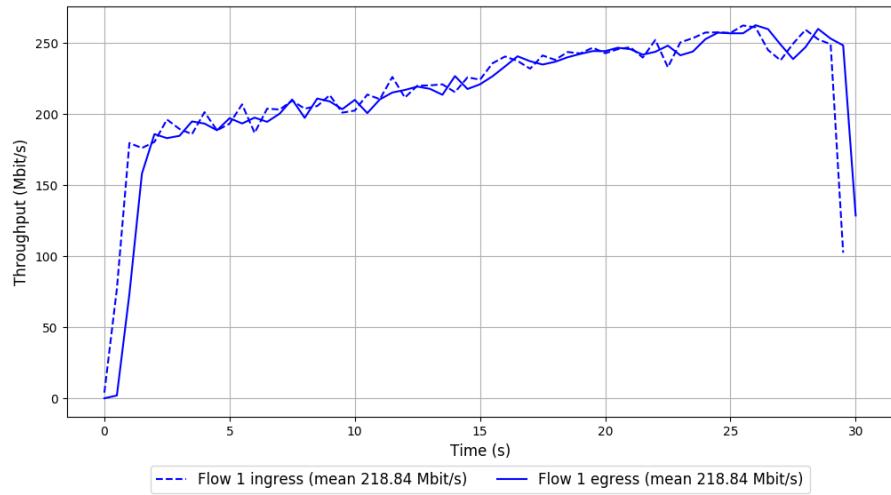


Run 3: Statistics of Indigo

```
Start at: 2018-10-03 03:26:23
End at: 2018-10-03 03:26:53
Local clock offset: -0.261 ms
Remote clock offset: 0.598 ms

# Below is generated by plot.py at 2018-10-03 05:31:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 218.84 Mbit/s
95th percentile per-packet one-way delay: 54.559 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 218.84 Mbit/s
95th percentile per-packet one-way delay: 54.559 ms
Loss rate: 0.01%
```

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

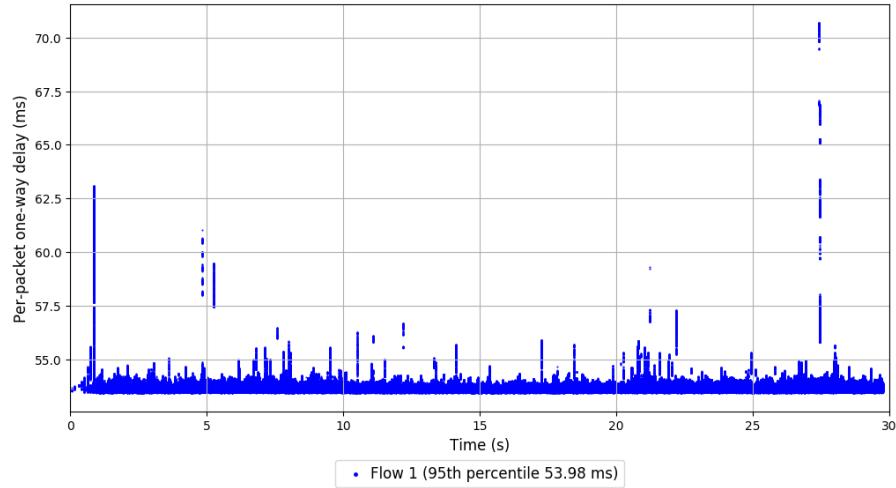
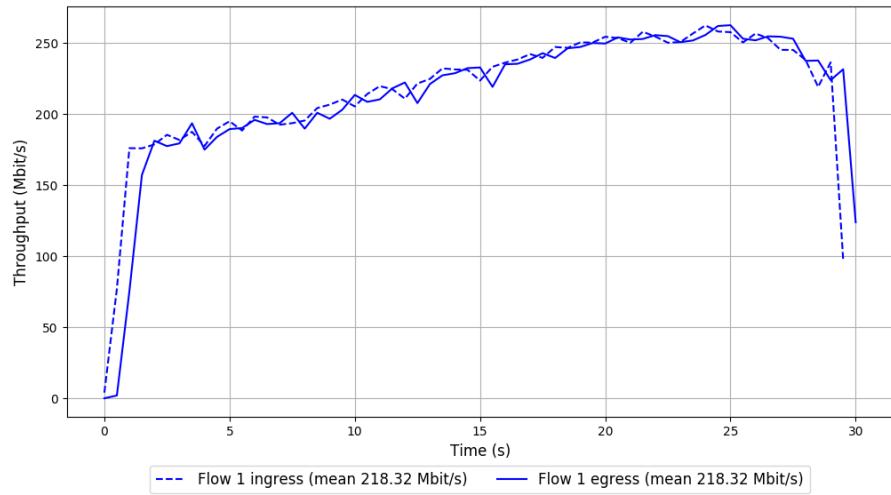


Run 4: Statistics of Indigo

```
Start at: 2018-10-03 03:52:10
End at: 2018-10-03 03:52:40
Local clock offset: -0.139 ms
Remote clock offset: -0.186 ms

# Below is generated by plot.py at 2018-10-03 05:31:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 218.32 Mbit/s
95th percentile per-packet one-way delay: 53.983 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 218.32 Mbit/s
95th percentile per-packet one-way delay: 53.983 ms
Loss rate: 0.01%
```

## Run 4: Report of Indigo — Data Link

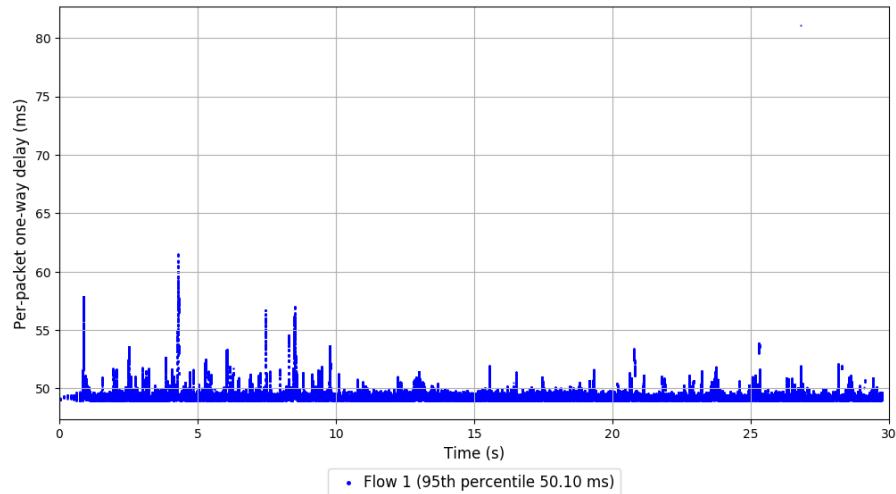
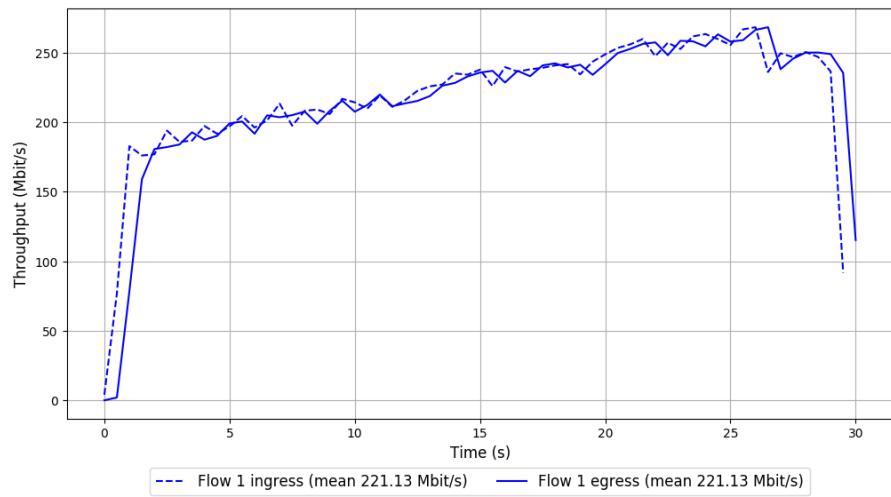


Run 5: Statistics of Indigo

```
Start at: 2018-10-03 04:17:56
End at: 2018-10-03 04:18:26
Local clock offset: -0.141 ms
Remote clock offset: -1.131 ms

# Below is generated by plot.py at 2018-10-03 05:31:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.13 Mbit/s
95th percentile per-packet one-way delay: 50.103 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.13 Mbit/s
95th percentile per-packet one-way delay: 50.103 ms
Loss rate: 0.00%
```

## Run 5: Report of Indigo — Data Link

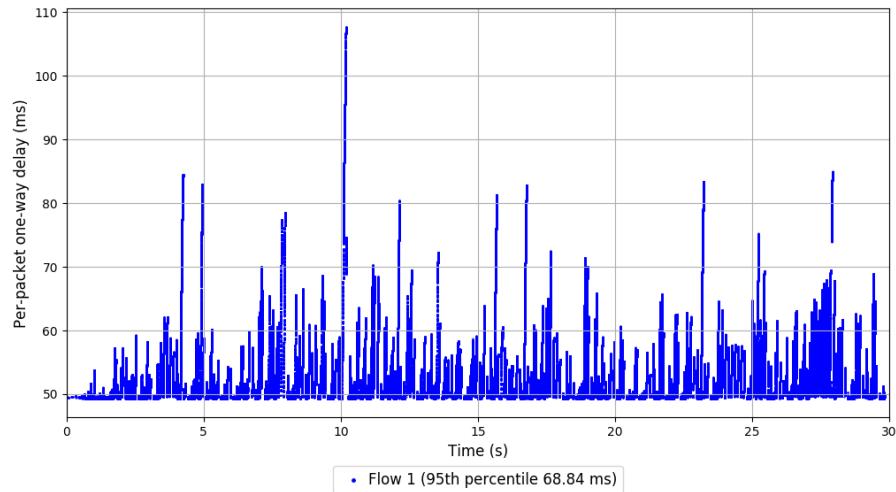
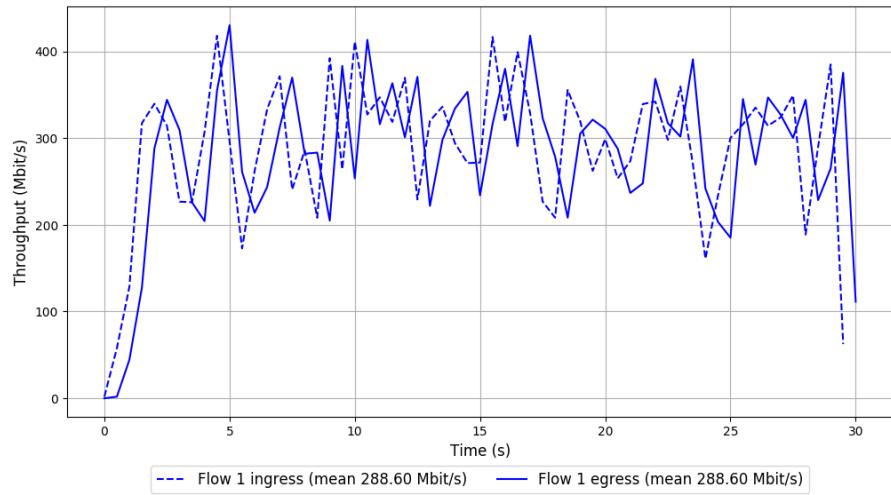


```
Run 1: Statistics of Indigo-96d2da3
```

```
Start at: 2018-10-03 02:46:46
End at: 2018-10-03 02:47:16
Local clock offset: 0.106 ms
Remote clock offset: -0.801 ms

# Below is generated by plot.py at 2018-10-03 05:31:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 288.60 Mbit/s
95th percentile per-packet one-way delay: 68.845 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 288.60 Mbit/s
95th percentile per-packet one-way delay: 68.845 ms
Loss rate: 0.00%
```

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

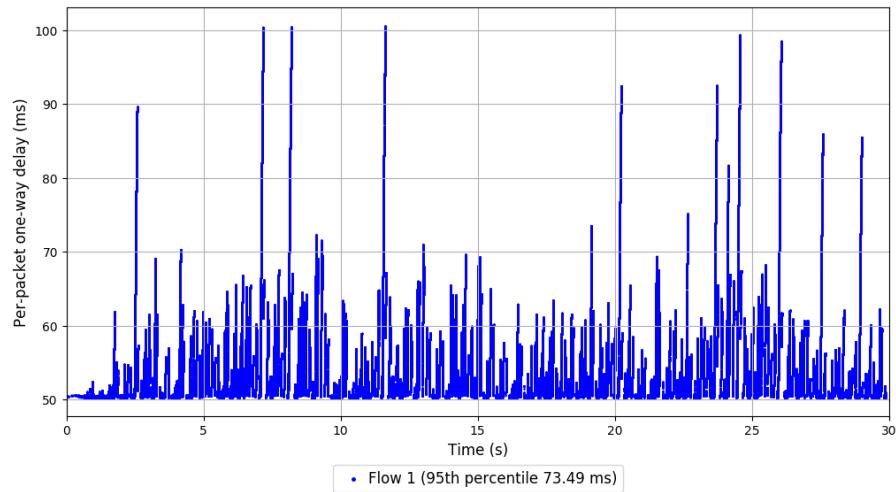
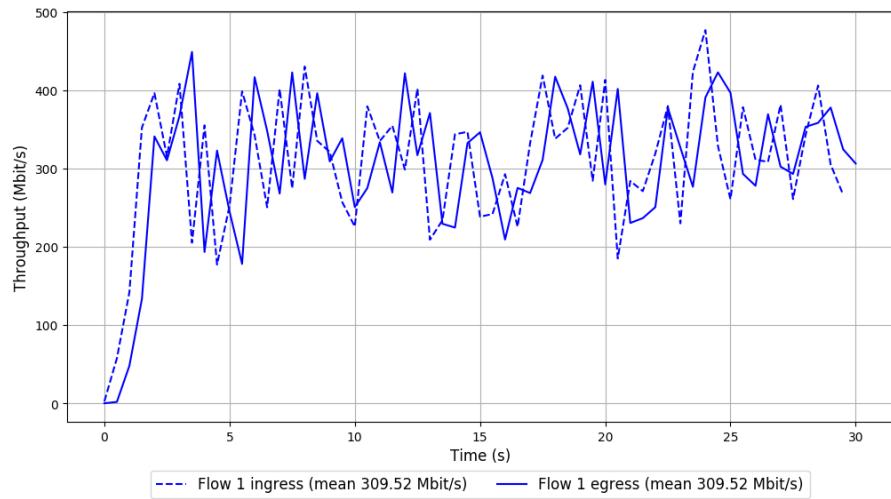


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-10-03 03:12:22
End at: 2018-10-03 03:12:52
Local clock offset: -0.288 ms
Remote clock offset: 0.003 ms

# Below is generated by plot.py at 2018-10-03 05:31:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 309.52 Mbit/s
95th percentile per-packet one-way delay: 73.486 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 309.52 Mbit/s
95th percentile per-packet one-way delay: 73.486 ms
Loss rate: 0.00%
```

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

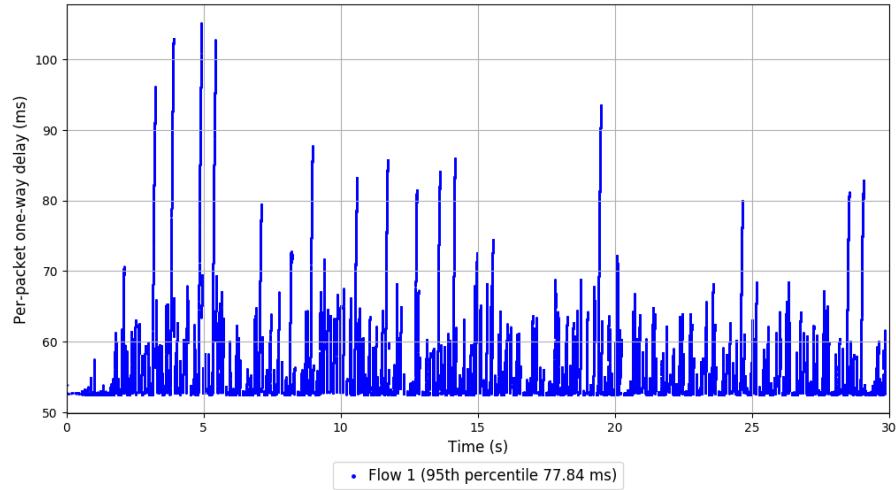
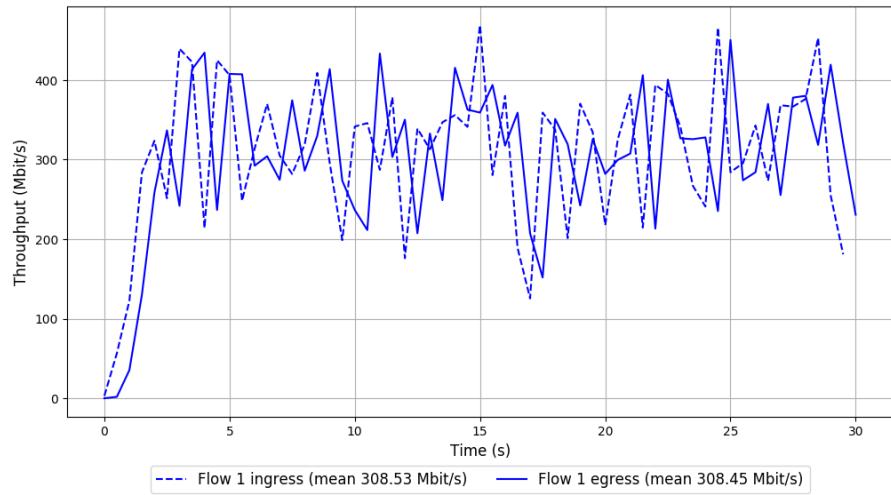


Run 3: Statistics of Indigo-96d2da3

```
Start at: 2018-10-03 03:37:54
End at: 2018-10-03 03:38:24
Local clock offset: -0.074 ms
Remote clock offset: -0.977 ms

# Below is generated by plot.py at 2018-10-03 05:31:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 308.45 Mbit/s
95th percentile per-packet one-way delay: 77.845 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 308.45 Mbit/s
95th percentile per-packet one-way delay: 77.845 ms
Loss rate: 0.00%
```

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

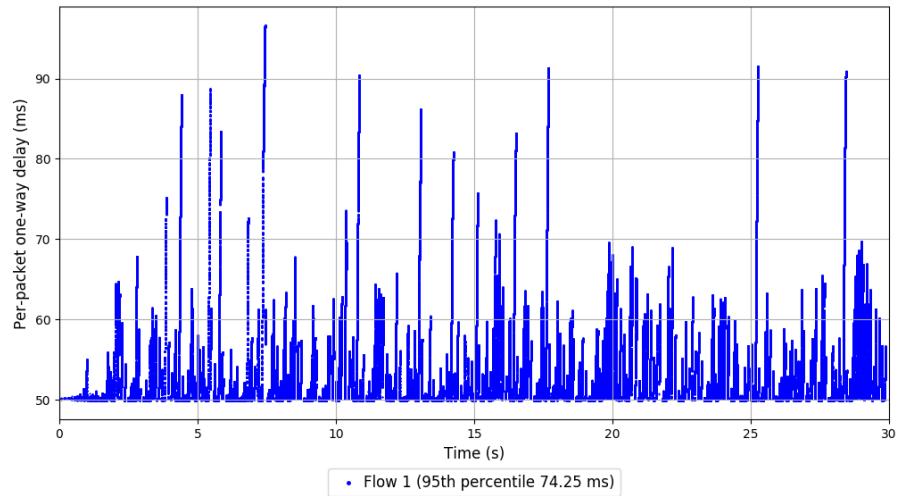
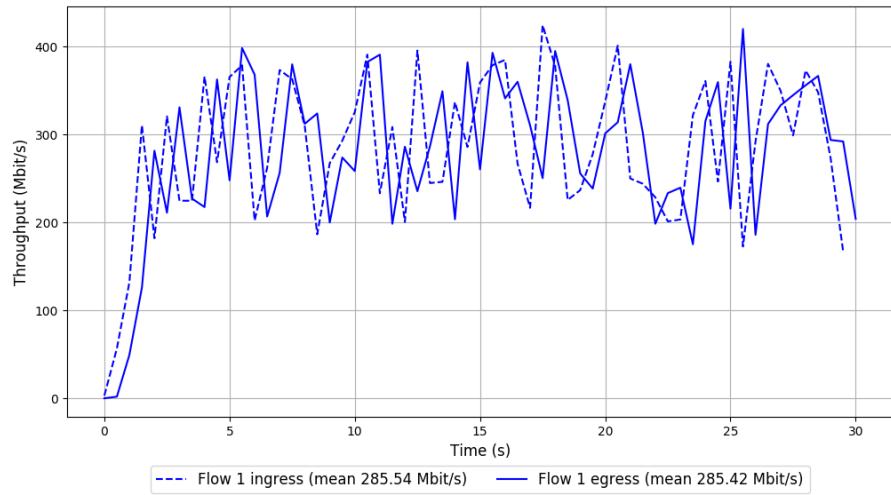


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-10-03 04:03:46
End at: 2018-10-03 04:04:16
Local clock offset: -0.17 ms
Remote clock offset: -0.121 ms

# Below is generated by plot.py at 2018-10-03 05:31:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 285.42 Mbit/s
95th percentile per-packet one-way delay: 74.255 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 285.42 Mbit/s
95th percentile per-packet one-way delay: 74.255 ms
Loss rate: 0.02%
```

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

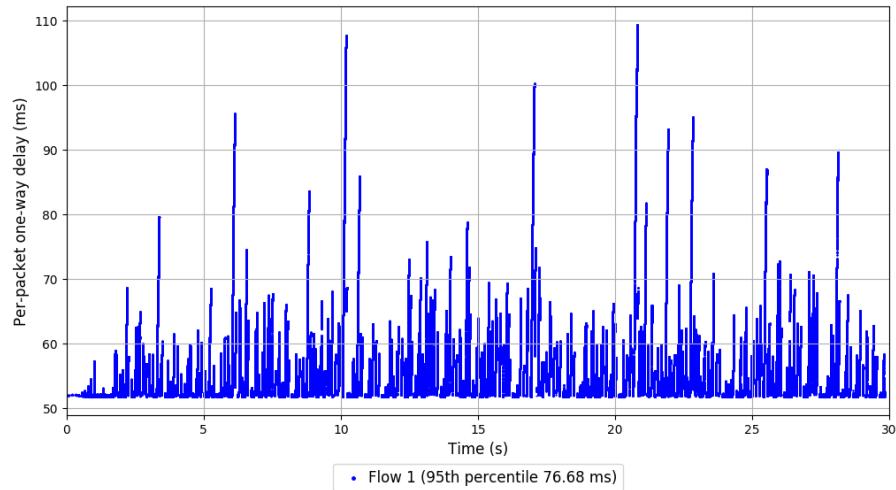
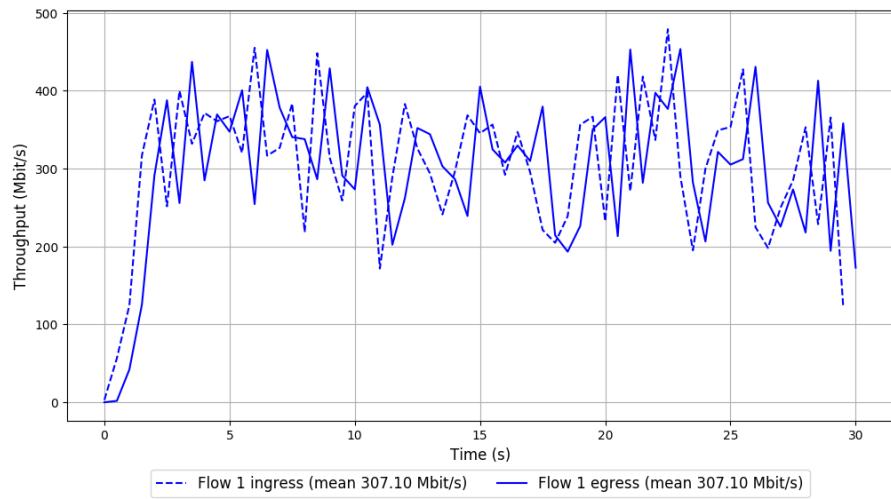


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-10-03 04:29:31
End at: 2018-10-03 04:30:01
Local clock offset: -0.222 ms
Remote clock offset: -1.226 ms

# Below is generated by plot.py at 2018-10-03 05:31:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 307.10 Mbit/s
95th percentile per-packet one-way delay: 76.677 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 307.10 Mbit/s
95th percentile per-packet one-way delay: 76.677 ms
Loss rate: 0.00%
```

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

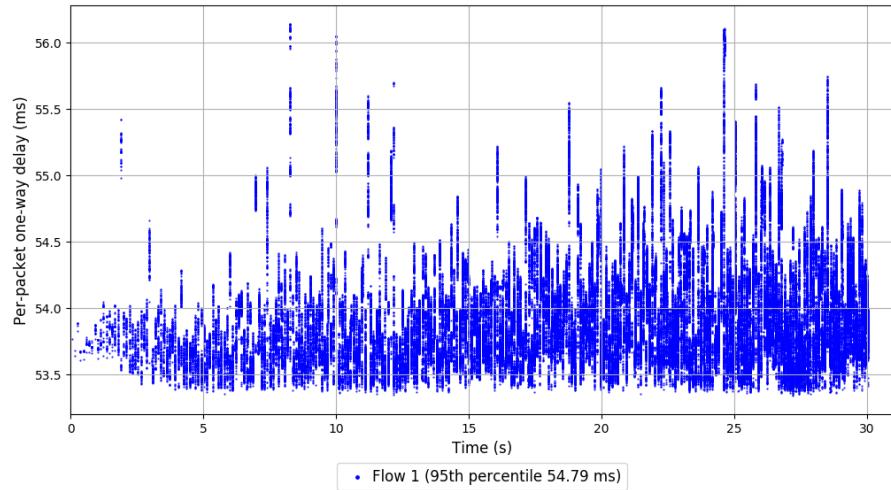
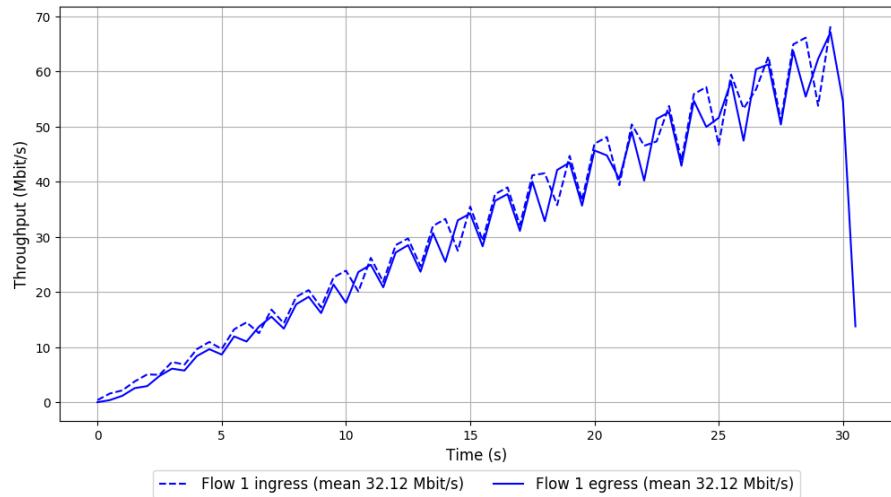


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-10-03 02:40:55
End at: 2018-10-03 02:41:25
Local clock offset: -0.001 ms
Remote clock offset: -0.182 ms

# Below is generated by plot.py at 2018-10-03 05:31:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.12 Mbit/s
95th percentile per-packet one-way delay: 54.794 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 32.12 Mbit/s
95th percentile per-packet one-way delay: 54.794 ms
Loss rate: 0.00%
```

## Run 1: Report of LEDBAT — Data Link

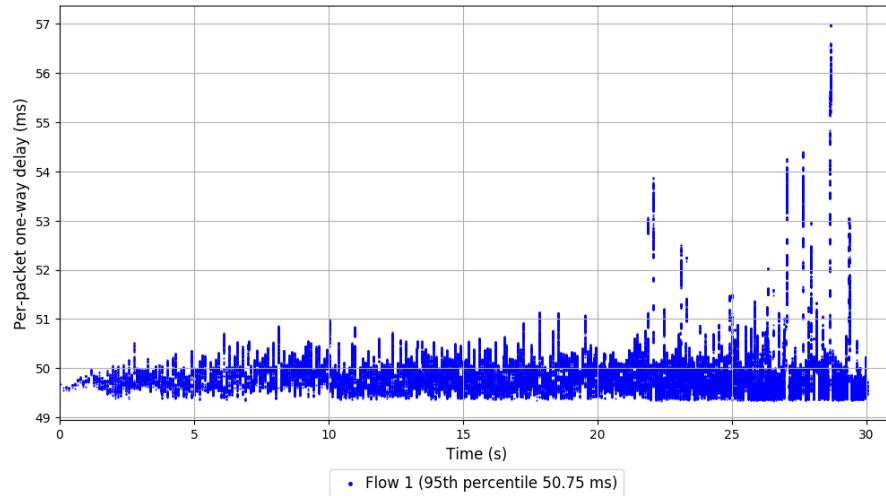
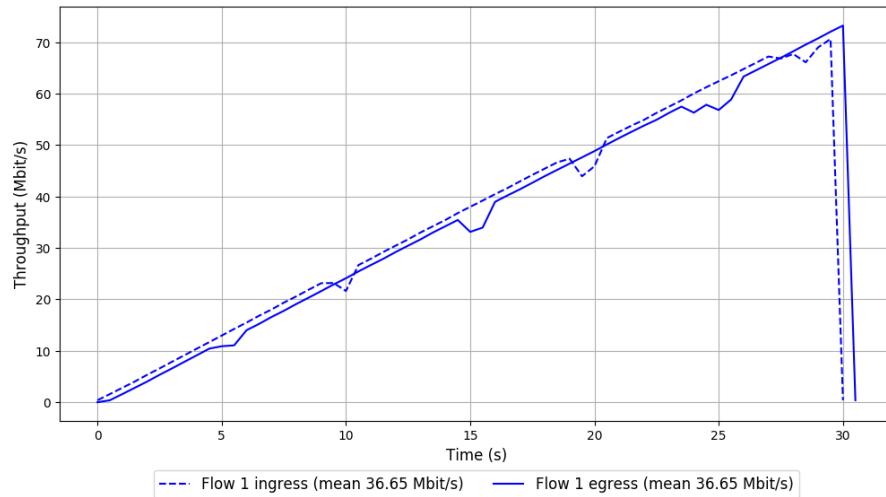


Run 2: Statistics of LEDBAT

```
Start at: 2018-10-03 03:06:37
End at: 2018-10-03 03:07:07
Local clock offset: -0.463 ms
Remote clock offset: -1.006 ms

# Below is generated by plot.py at 2018-10-03 05:31:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.65 Mbit/s
95th percentile per-packet one-way delay: 50.751 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 36.65 Mbit/s
95th percentile per-packet one-way delay: 50.751 ms
Loss rate: 0.00%
```

## Run 2: Report of LEDBAT — Data Link

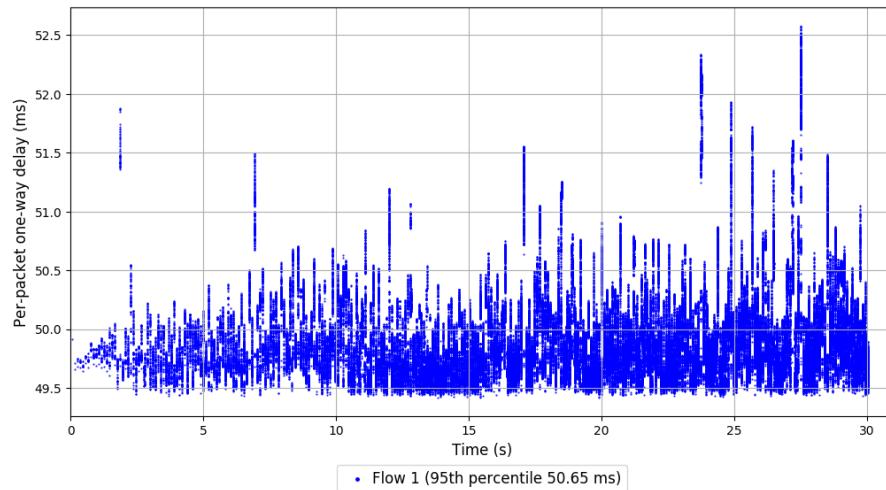
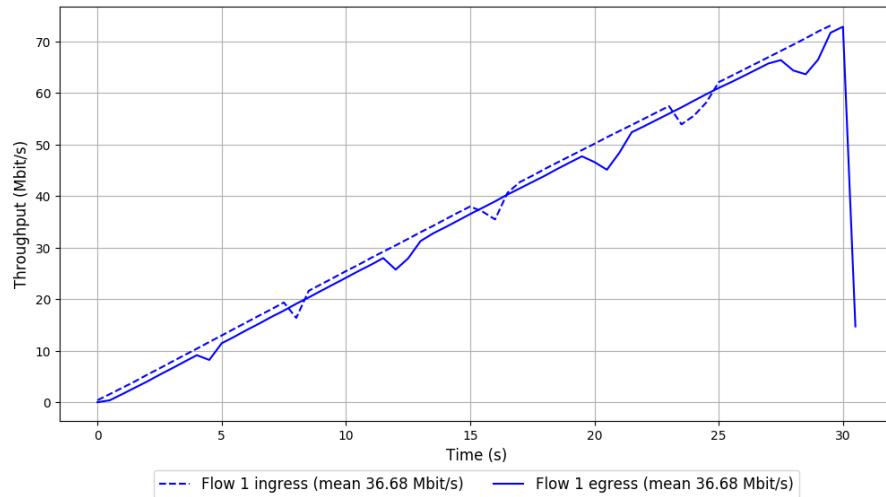


Run 3: Statistics of LEDBAT

```
Start at: 2018-10-03 03:32:00
End at: 2018-10-03 03:32:30
Local clock offset: -0.399 ms
Remote clock offset: -0.653 ms

# Below is generated by plot.py at 2018-10-03 05:31:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.68 Mbit/s
95th percentile per-packet one-way delay: 50.648 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 36.68 Mbit/s
95th percentile per-packet one-way delay: 50.648 ms
Loss rate: 0.00%
```

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

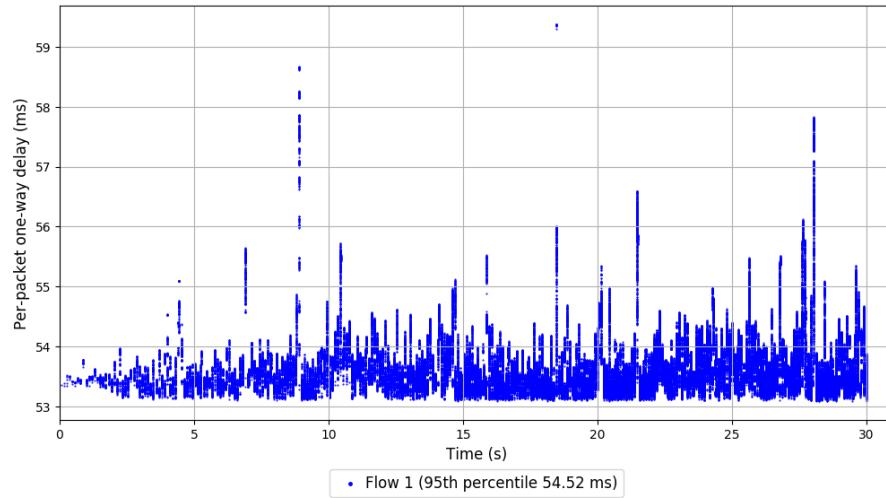
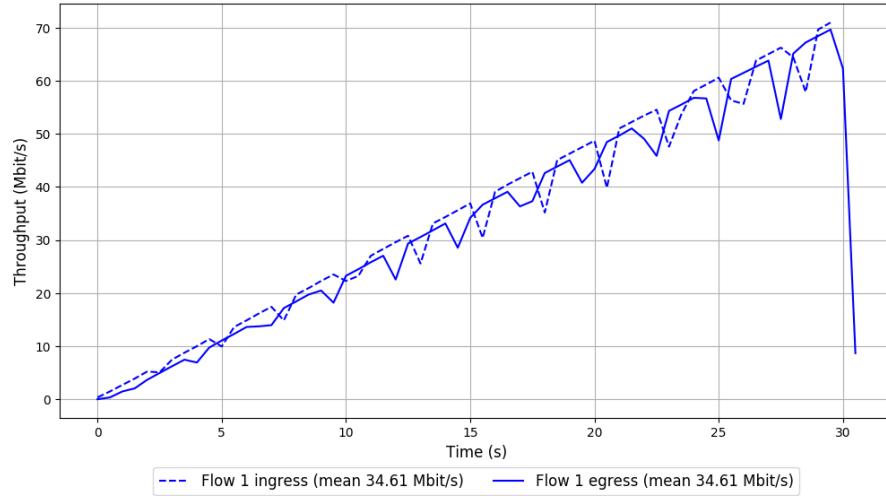


Run 4: Statistics of LEDBAT

```
Start at: 2018-10-03 03:57:50
End at: 2018-10-03 03:58:20
Local clock offset: -0.223 ms
Remote clock offset: 0.139 ms

# Below is generated by plot.py at 2018-10-03 05:31:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.61 Mbit/s
95th percentile per-packet one-way delay: 54.525 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.61 Mbit/s
95th percentile per-packet one-way delay: 54.525 ms
Loss rate: 0.00%
```

## Run 4: Report of LEDBAT — Data Link

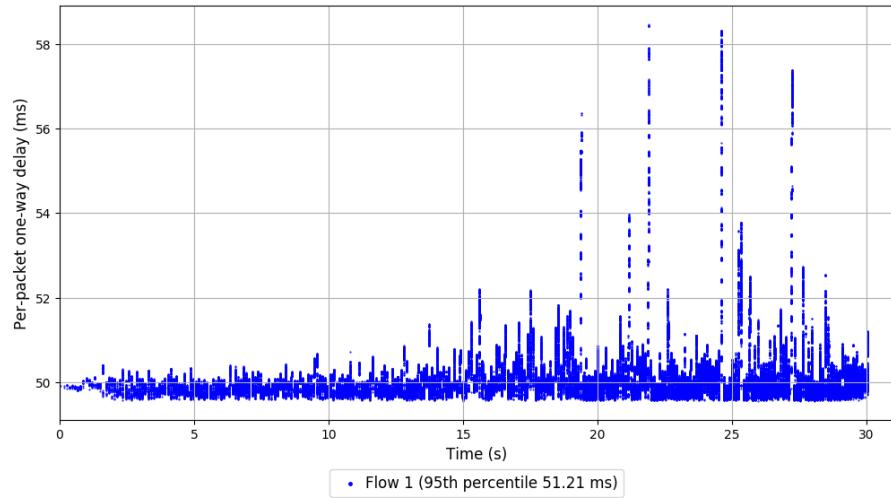
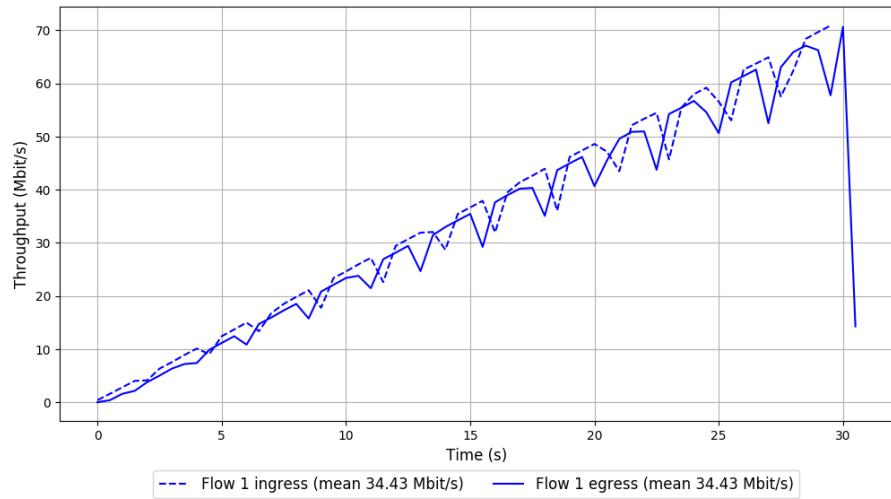


Run 5: Statistics of LEDBAT

```
Start at: 2018-10-03 04:23:32
End at: 2018-10-03 04:24:02
Local clock offset: -0.387 ms
Remote clock offset: -0.432 ms

# Below is generated by plot.py at 2018-10-03 05:31:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.43 Mbit/s
95th percentile per-packet one-way delay: 51.209 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.43 Mbit/s
95th percentile per-packet one-way delay: 51.209 ms
Loss rate: 0.00%
```

## Run 5: Report of LEDBAT — Data Link

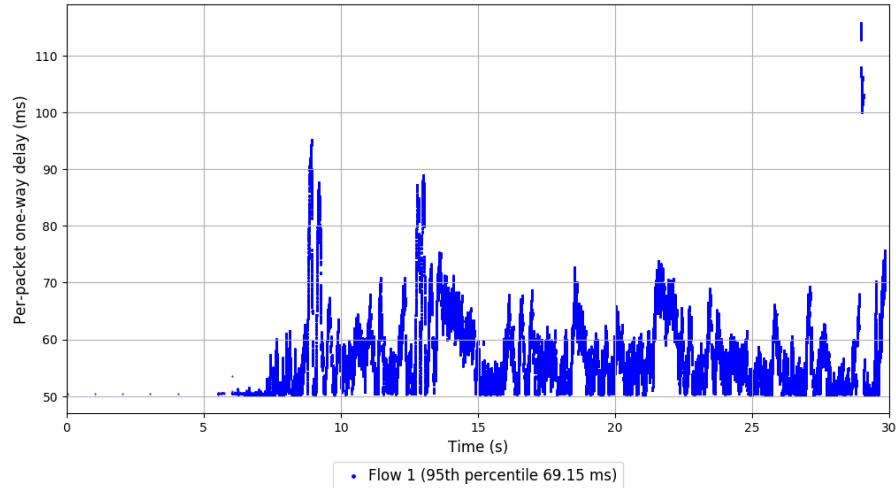
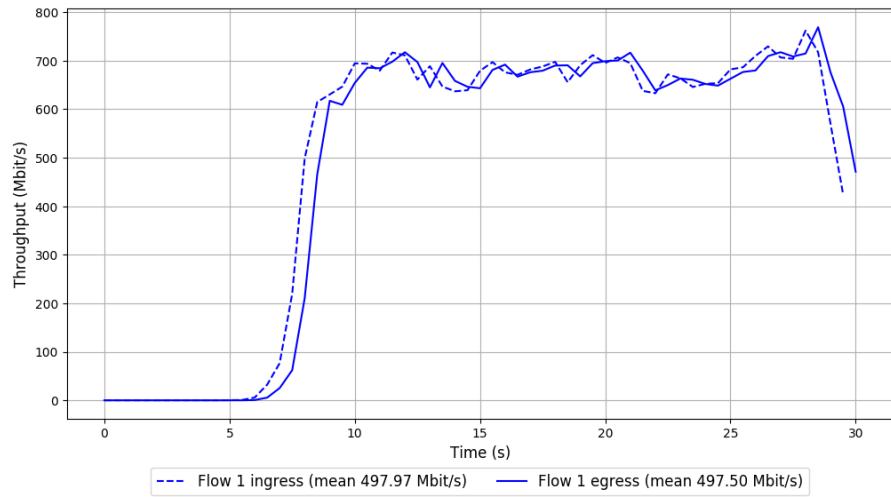


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-10-03 02:33:49
End at: 2018-10-03 02:34:19
Local clock offset: -0.219 ms
Remote clock offset: -0.279 ms

# Below is generated by plot.py at 2018-10-03 05:38:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 497.50 Mbit/s
95th percentile per-packet one-way delay: 69.152 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 497.50 Mbit/s
95th percentile per-packet one-way delay: 69.152 ms
Loss rate: 0.10%
```

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

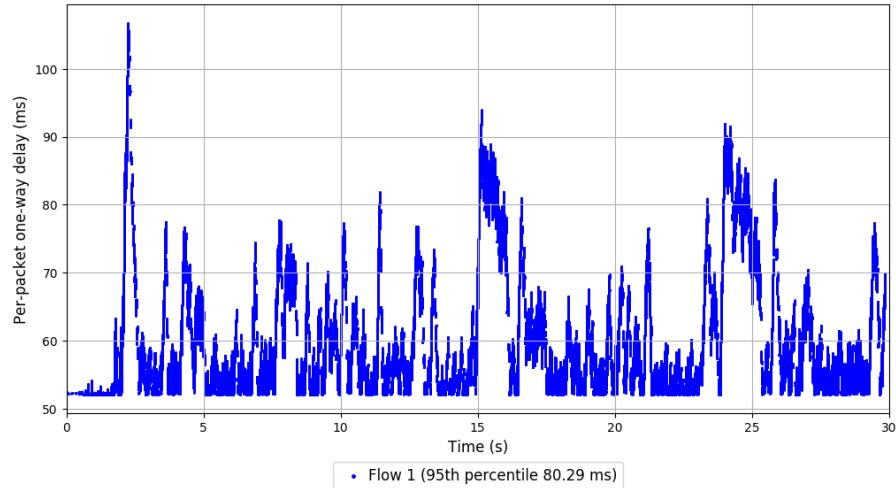
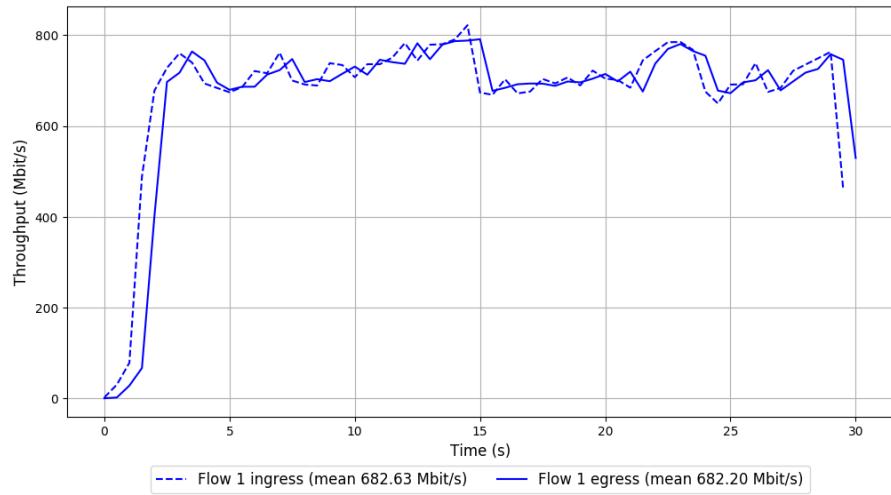


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-10-03 02:59:17
End at: 2018-10-03 02:59:47
Local clock offset: -0.198 ms
Remote clock offset: -1.418 ms

# Below is generated by plot.py at 2018-10-03 05:43:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 682.20 Mbit/s
95th percentile per-packet one-way delay: 80.293 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 682.20 Mbit/s
95th percentile per-packet one-way delay: 80.293 ms
Loss rate: 0.08%
```

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

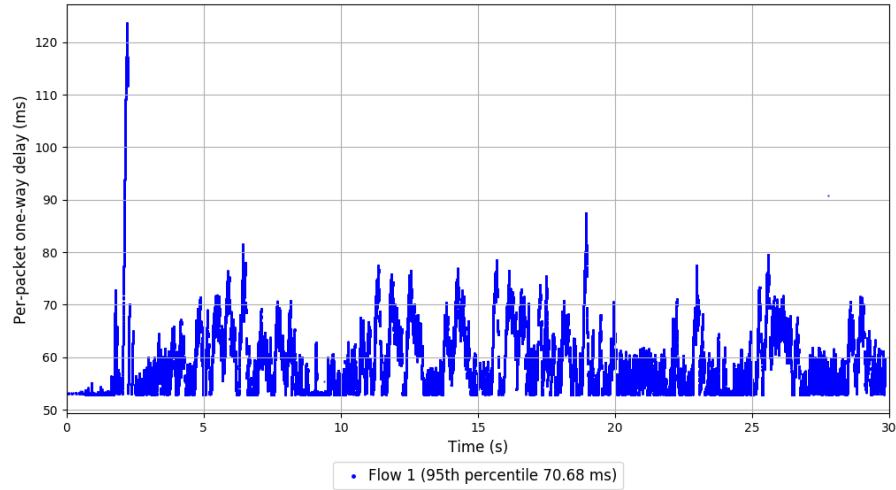
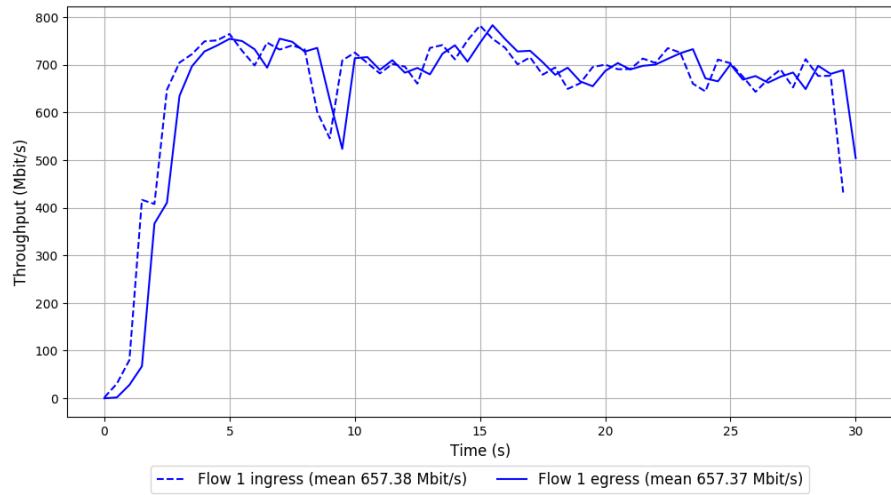


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-10-03 03:24:45
End at: 2018-10-03 03:25:15
Local clock offset: -0.227 ms
Remote clock offset: -0.592 ms

# Below is generated by plot.py at 2018-10-03 05:43:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 657.37 Mbit/s
95th percentile per-packet one-way delay: 70.684 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 657.37 Mbit/s
95th percentile per-packet one-way delay: 70.684 ms
Loss rate: 0.01%
```

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

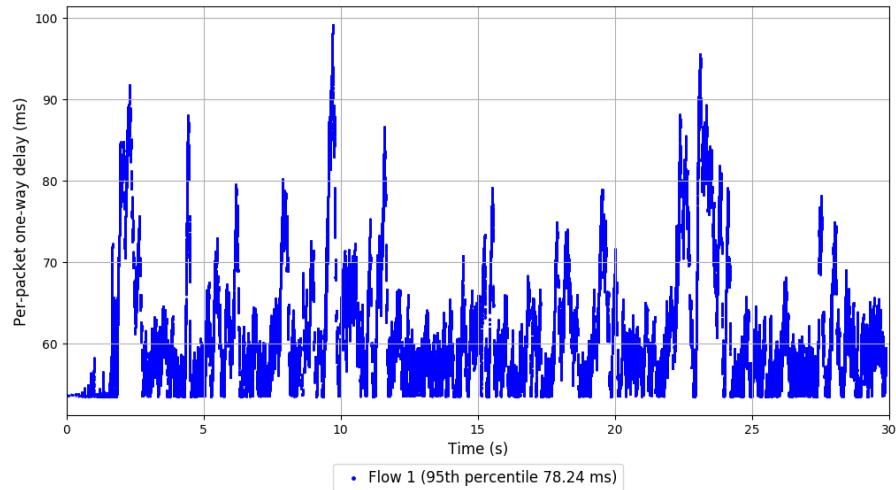
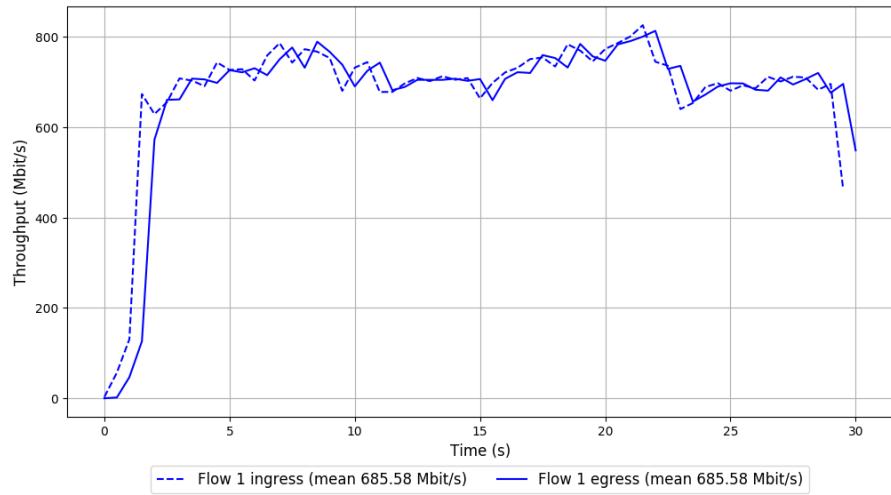


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-10-03 03:50:30
End at: 2018-10-03 03:51:00
Local clock offset: -0.218 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-10-03 05:43:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 685.58 Mbit/s
95th percentile per-packet one-way delay: 78.242 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 685.58 Mbit/s
95th percentile per-packet one-way delay: 78.242 ms
Loss rate: 0.01%
```

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

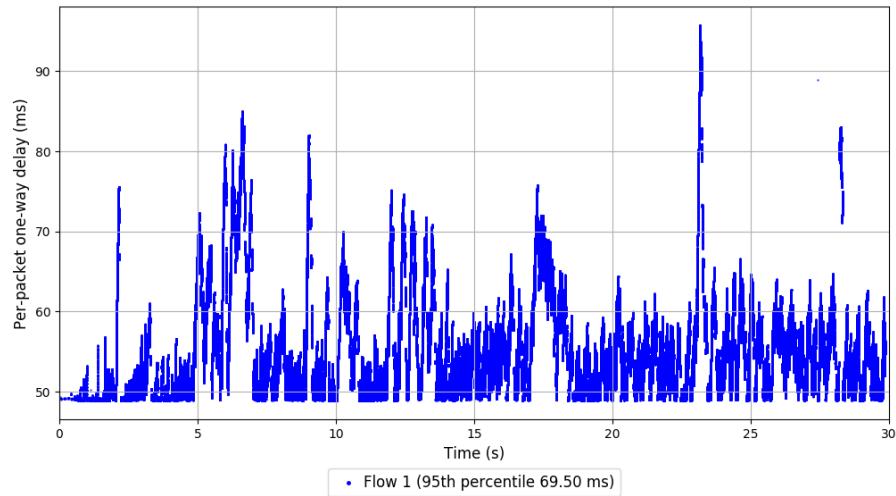
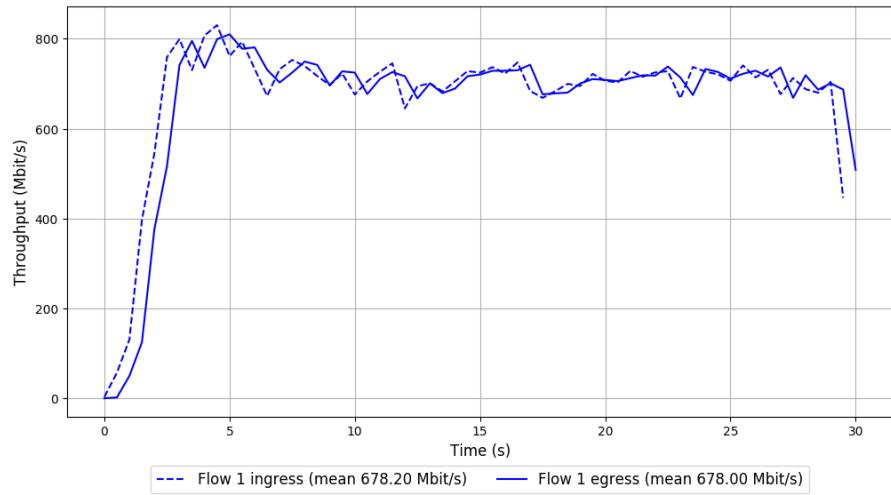


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-10-03 04:16:16
End at: 2018-10-03 04:16:46
Local clock offset: -0.29 ms
Remote clock offset: -1.503 ms

# Below is generated by plot.py at 2018-10-03 05:45:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 678.00 Mbit/s
95th percentile per-packet one-way delay: 69.495 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 678.00 Mbit/s
95th percentile per-packet one-way delay: 69.495 ms
Loss rate: 0.03%
```

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

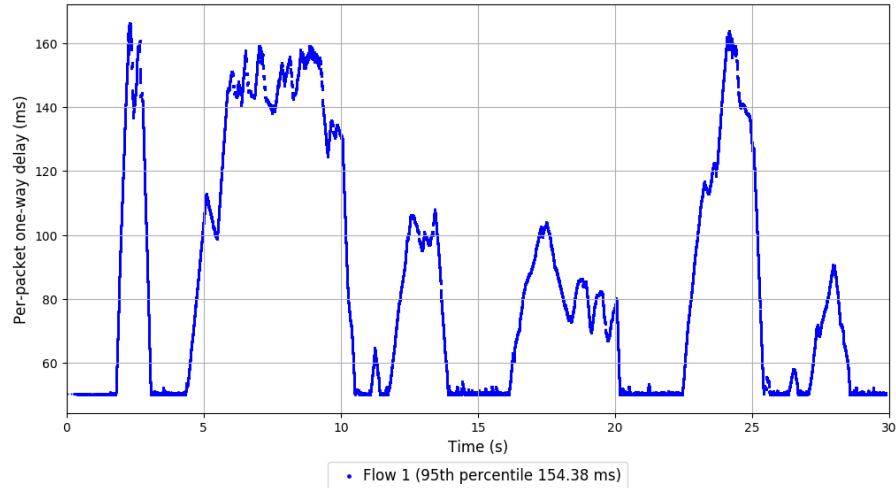
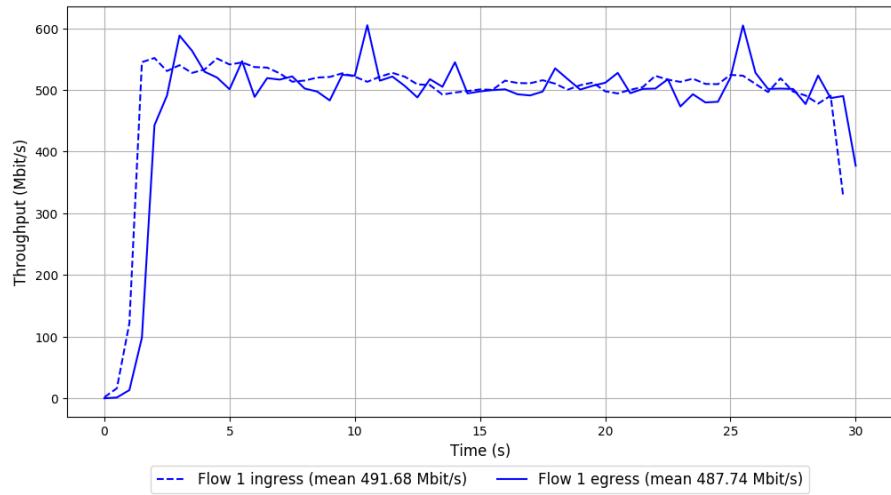


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-10-03 02:25:06
End at: 2018-10-03 02:25:36
Local clock offset: -0.06 ms
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2018-10-03 05:51:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 487.74 Mbit/s
95th percentile per-packet one-way delay: 154.382 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 487.74 Mbit/s
95th percentile per-packet one-way delay: 154.382 ms
Loss rate: 0.80%
```

Run 1: Report of PCC-Allegro — Data Link

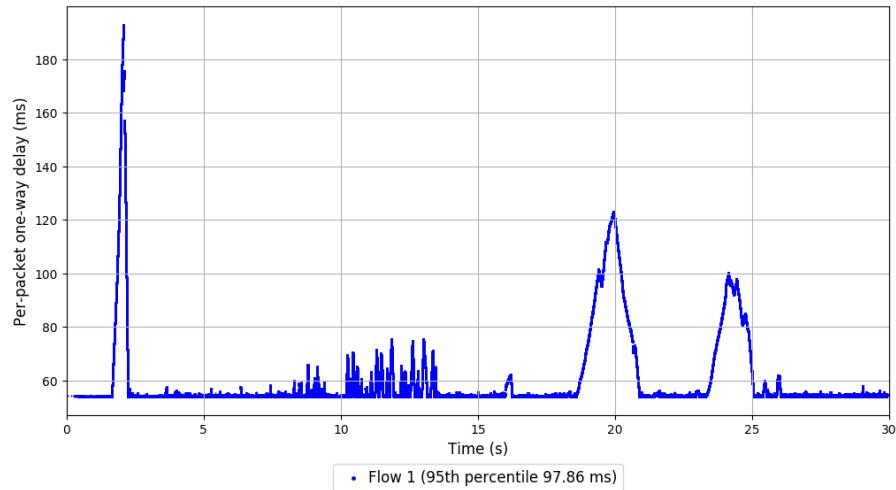
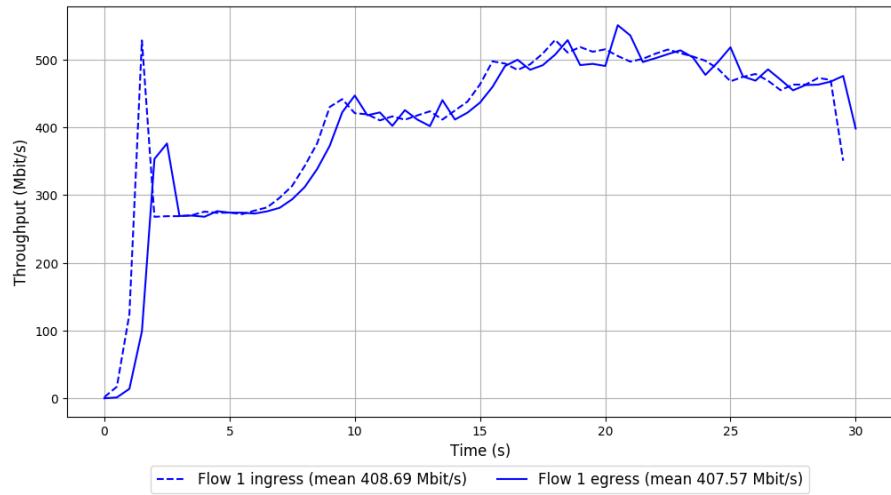


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-10-03 02:50:21
End at: 2018-10-03 02:50:52
Local clock offset: -0.077 ms
Remote clock offset: 0.462 ms

# Below is generated by plot.py at 2018-10-03 05:51:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 407.57 Mbit/s
95th percentile per-packet one-way delay: 97.856 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 407.57 Mbit/s
95th percentile per-packet one-way delay: 97.856 ms
Loss rate: 0.28%
```

Run 2: Report of PCC-Allegro — Data Link

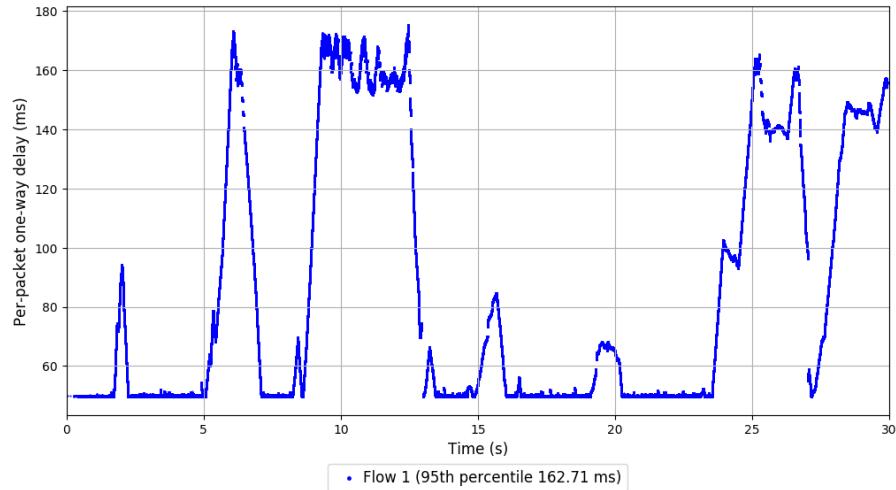
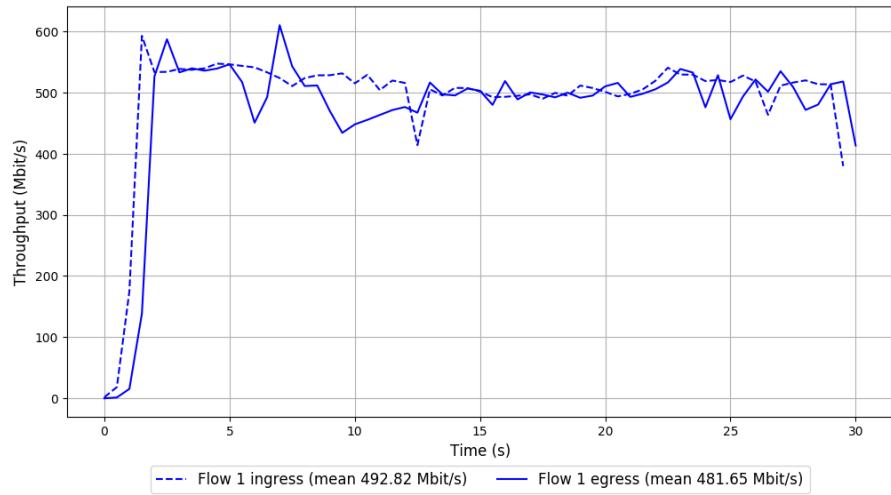


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-10-03 03:15:57
End at: 2018-10-03 03:16:27
Local clock offset: -0.258 ms
Remote clock offset: -0.175 ms

# Below is generated by plot.py at 2018-10-03 05:52:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 481.65 Mbit/s
95th percentile per-packet one-way delay: 162.710 ms
Loss rate: 2.26%
-- Flow 1:
Average throughput: 481.65 Mbit/s
95th percentile per-packet one-way delay: 162.710 ms
Loss rate: 2.26%
```

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

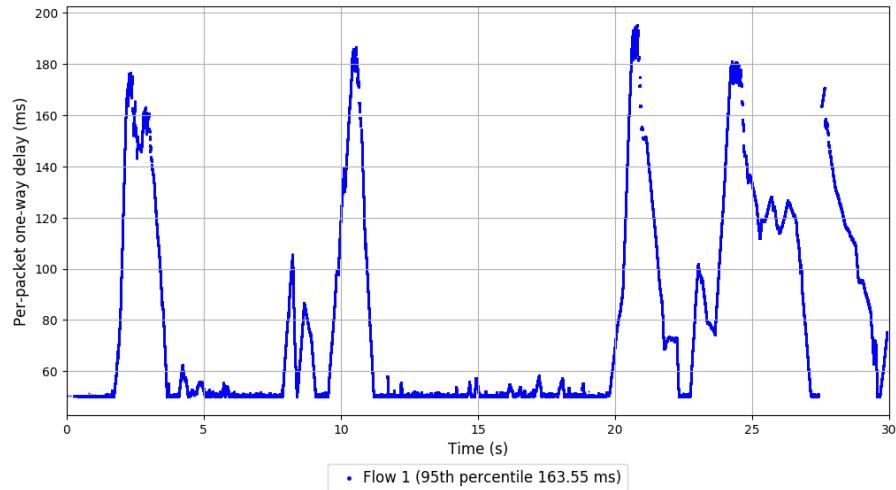
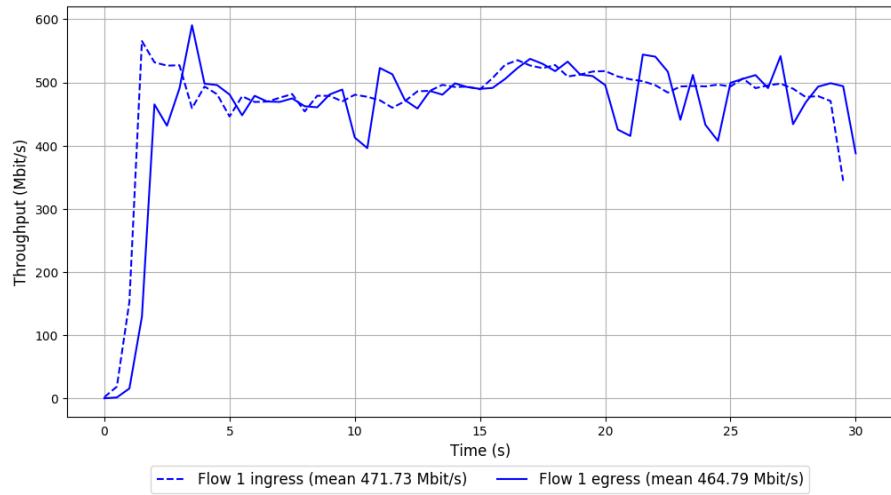


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-10-03 03:41:29
End at: 2018-10-03 03:41:59
Local clock offset: -0.24 ms
Remote clock offset: -0.142 ms

# Below is generated by plot.py at 2018-10-03 06:00:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 464.79 Mbit/s
95th percentile per-packet one-way delay: 163.551 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 464.79 Mbit/s
95th percentile per-packet one-way delay: 163.551 ms
Loss rate: 1.47%
```

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

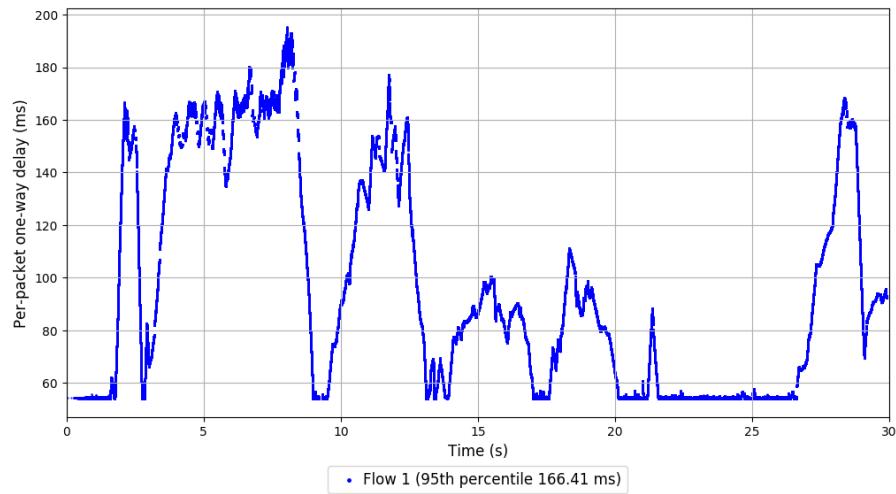
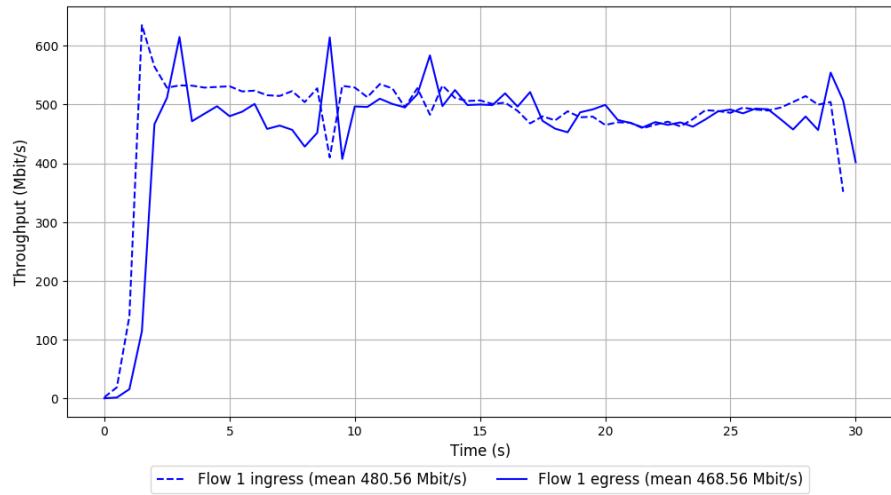


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-10-03 04:07:21
End at: 2018-10-03 04:07:51
Local clock offset: -0.132 ms
Remote clock offset: 1.134 ms

# Below is generated by plot.py at 2018-10-03 06:05:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 468.56 Mbit/s
95th percentile per-packet one-way delay: 166.415 ms
Loss rate: 2.50%
-- Flow 1:
Average throughput: 468.56 Mbit/s
95th percentile per-packet one-way delay: 166.415 ms
Loss rate: 2.50%
```

Run 5: Report of PCC-Allegro — Data Link

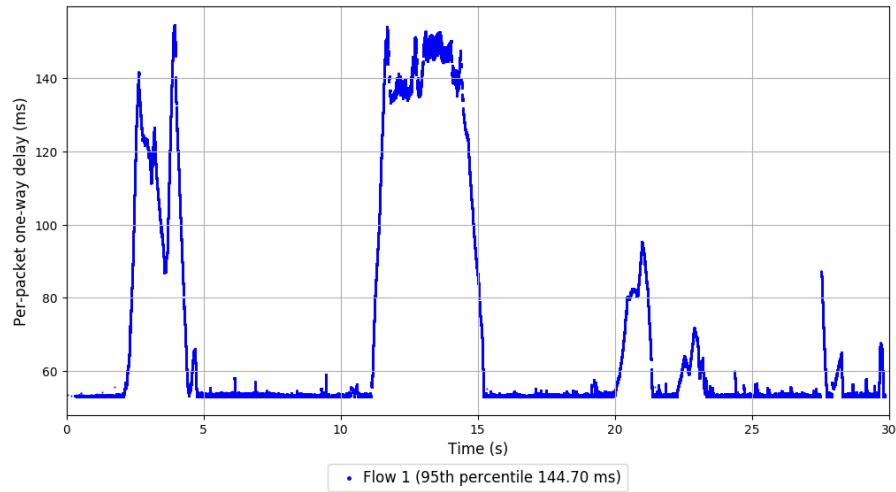
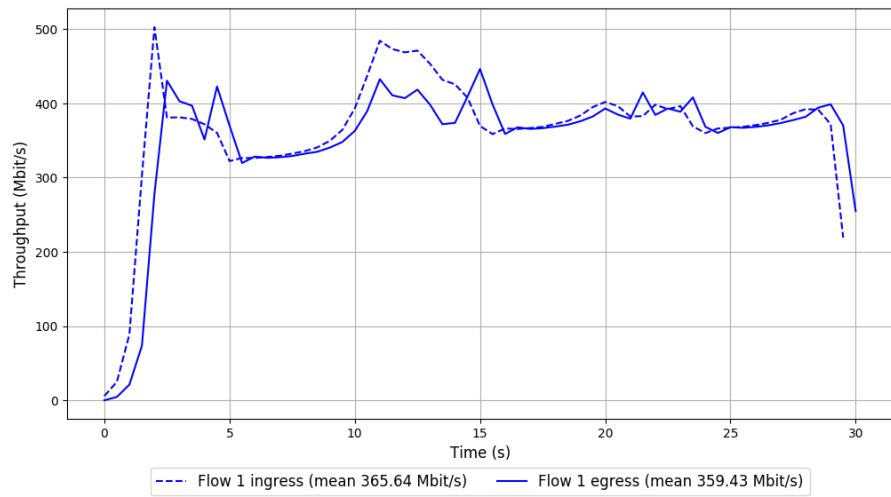


Run 1: Statistics of PCC-Expr

```
Start at: 2018-10-03 02:39:17
End at: 2018-10-03 02:39:47
Local clock offset: -0.116 ms
Remote clock offset: -0.673 ms

# Below is generated by plot.py at 2018-10-03 06:05:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 359.43 Mbit/s
95th percentile per-packet one-way delay: 144.703 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 359.43 Mbit/s
95th percentile per-packet one-way delay: 144.703 ms
Loss rate: 1.71%
```

Run 1: Report of PCC-Expr — Data Link

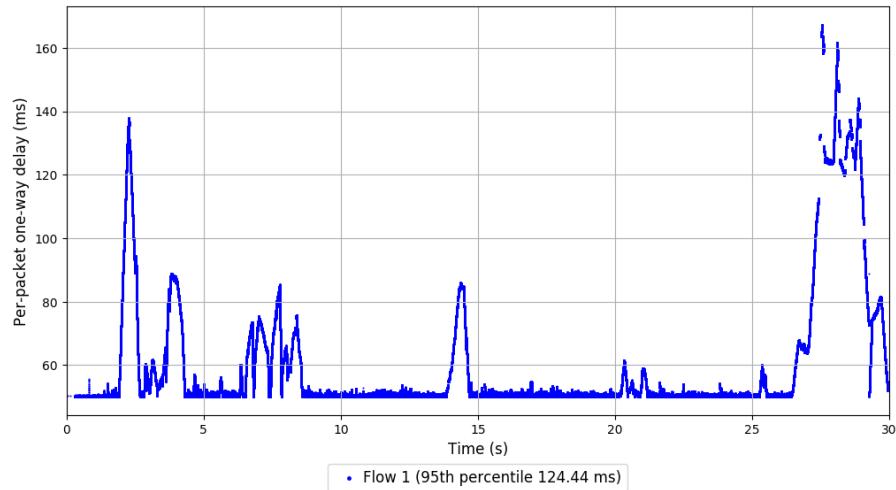
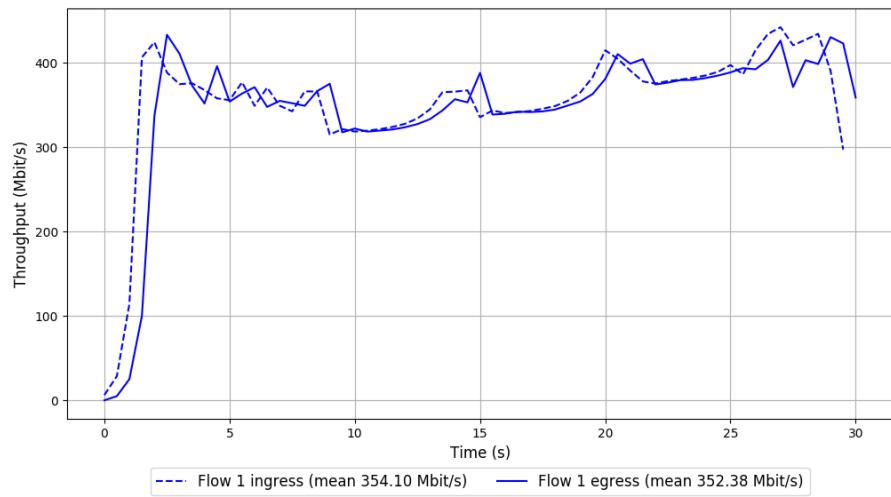


Run 2: Statistics of PCC-Expr

```
Start at: 2018-10-03 03:05:00
End at: 2018-10-03 03:05:30
Local clock offset: -0.216 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-10-03 06:05:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 352.38 Mbit/s
95th percentile per-packet one-way delay: 124.445 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 352.38 Mbit/s
95th percentile per-packet one-way delay: 124.445 ms
Loss rate: 0.48%
```

Run 2: Report of PCC-Expr — Data Link

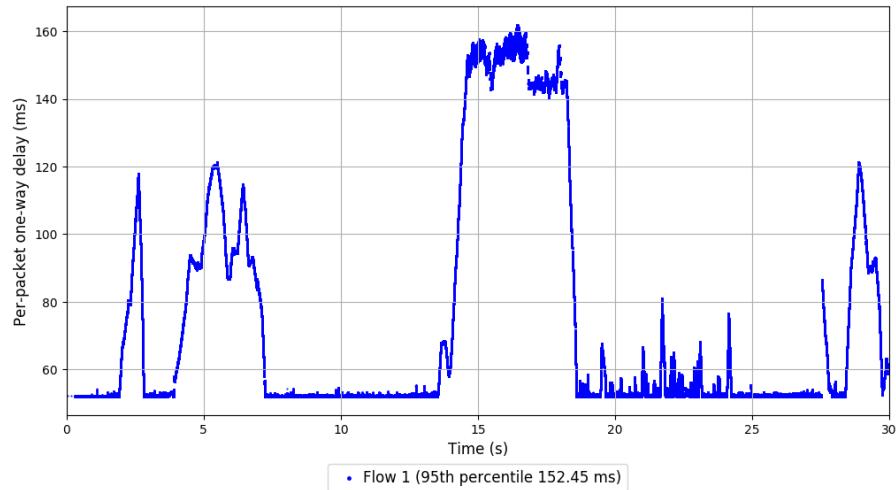
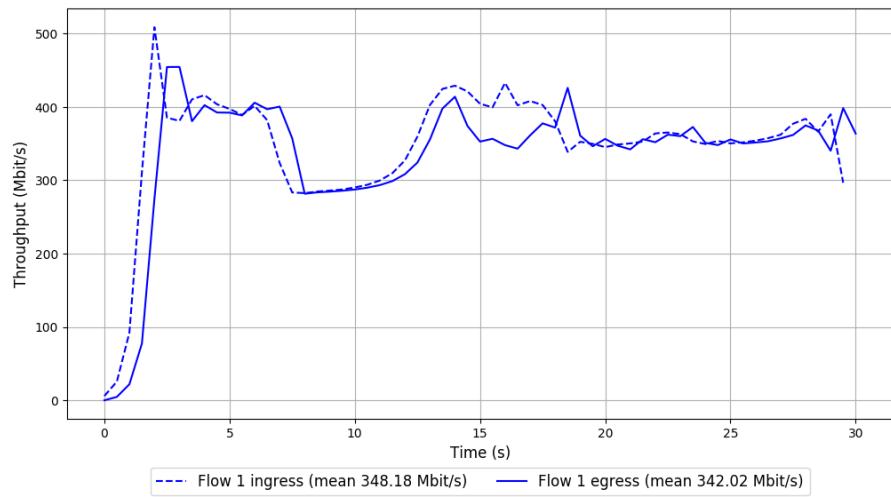


Run 3: Statistics of PCC-Expr

```
Start at: 2018-10-03 03:30:23
End at: 2018-10-03 03:30:53
Local clock offset: -0.355 ms
Remote clock offset: -1.296 ms

# Below is generated by plot.py at 2018-10-03 06:05:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 342.02 Mbit/s
95th percentile per-packet one-way delay: 152.450 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 342.02 Mbit/s
95th percentile per-packet one-way delay: 152.450 ms
Loss rate: 1.78%
```

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

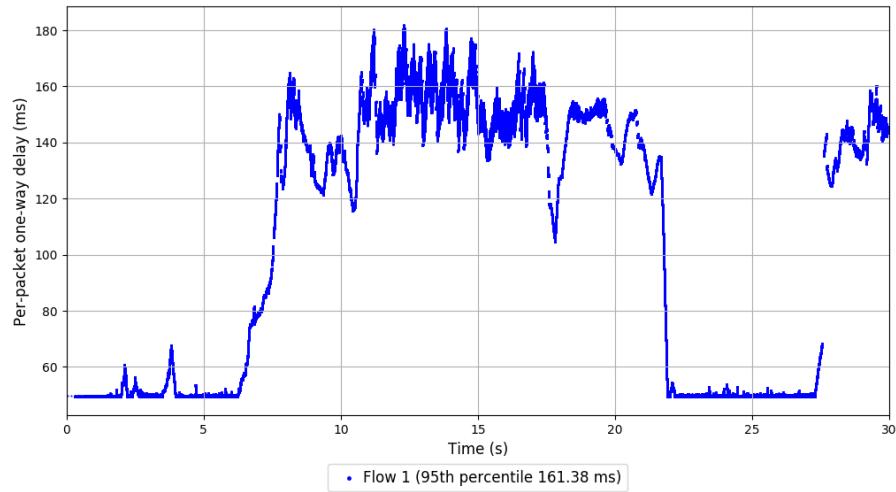
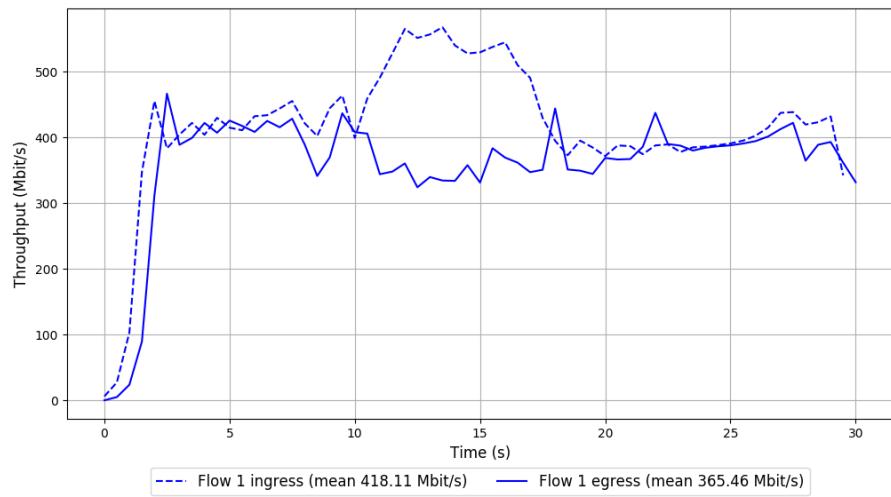


Run 4: Statistics of PCC-Expr

```
Start at: 2018-10-03 03:56:11
End at: 2018-10-03 03:56:41
Local clock offset: -0.089 ms
Remote clock offset: -0.385 ms

# Below is generated by plot.py at 2018-10-03 06:06:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 365.46 Mbit/s
95th percentile per-packet one-way delay: 161.380 ms
Loss rate: 12.59%
-- Flow 1:
Average throughput: 365.46 Mbit/s
95th percentile per-packet one-way delay: 161.380 ms
Loss rate: 12.59%
```

Run 4: Report of PCC-Expr — Data Link

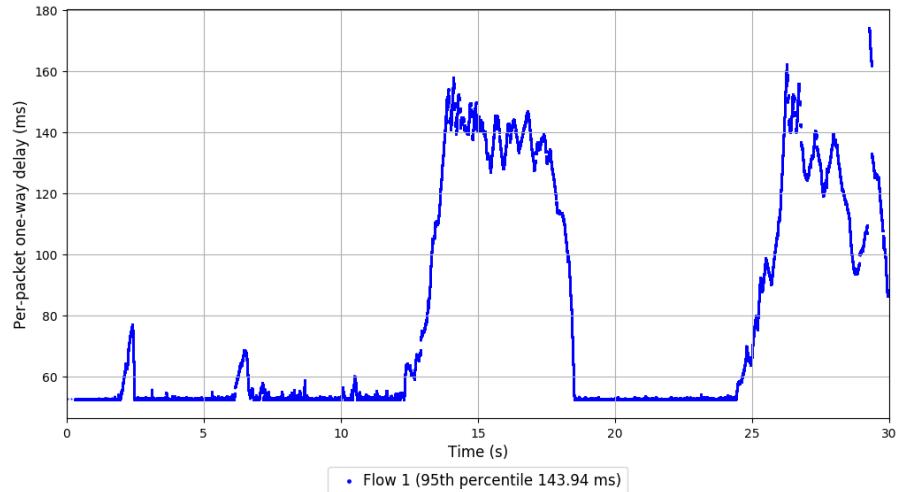
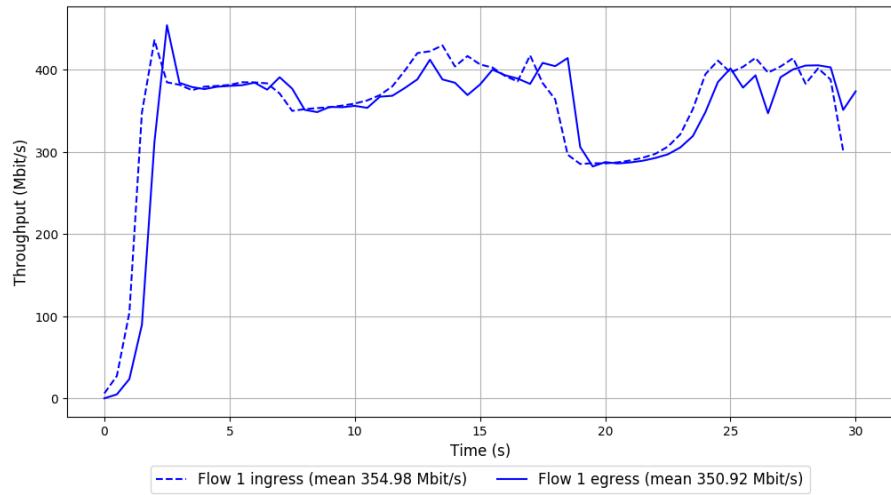


Run 5: Statistics of PCC-Expr

```
Start at: 2018-10-03 04:21:55
End at: 2018-10-03 04:22:25
Local clock offset: -0.289 ms
Remote clock offset: -0.842 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 350.92 Mbit/s
95th percentile per-packet one-way delay: 143.942 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 350.92 Mbit/s
95th percentile per-packet one-way delay: 143.942 ms
Loss rate: 1.15%
```

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

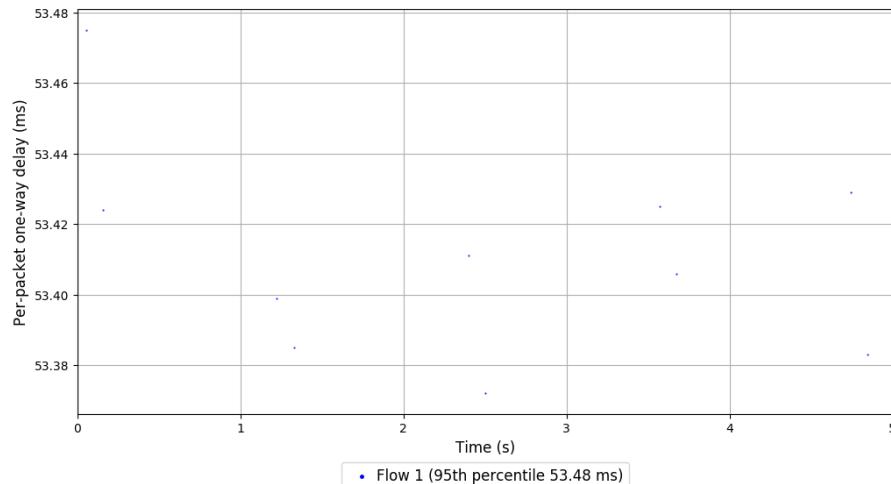
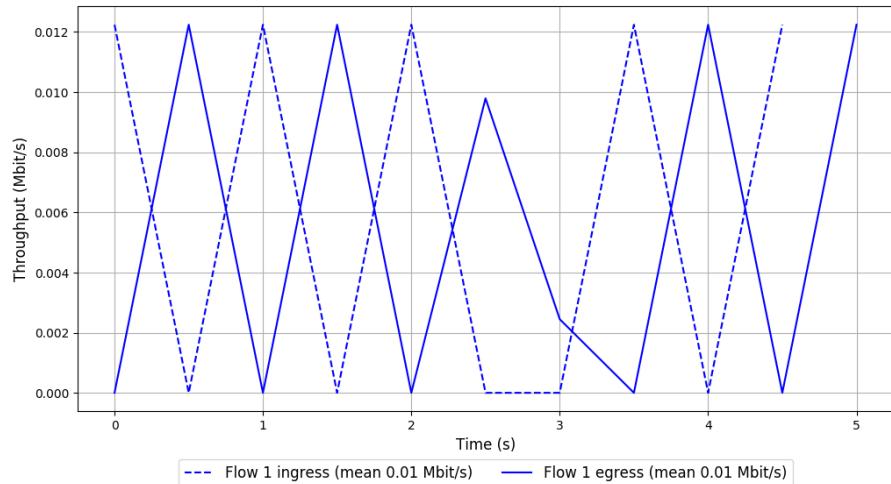
Start at: 2018-10-03 02:38:10

End at: 2018-10-03 02:38:40

Local clock offset: -0.134 ms

Remote clock offset: -0.346 ms

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

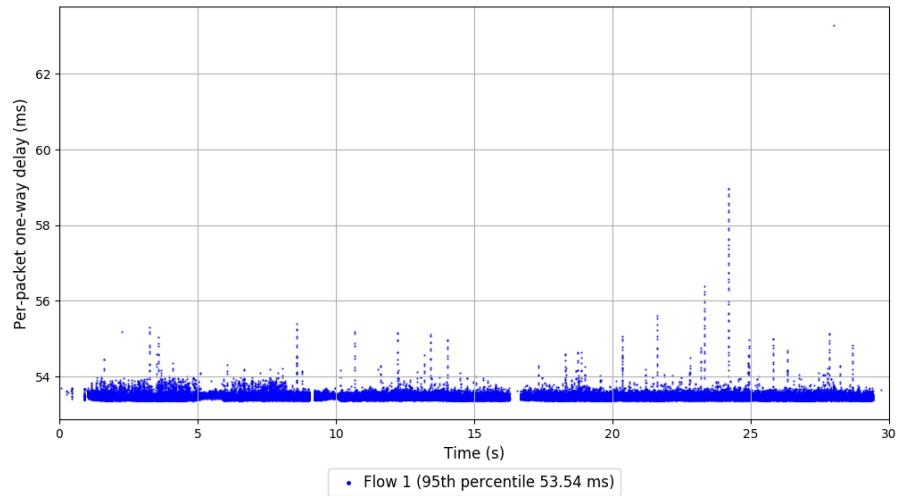
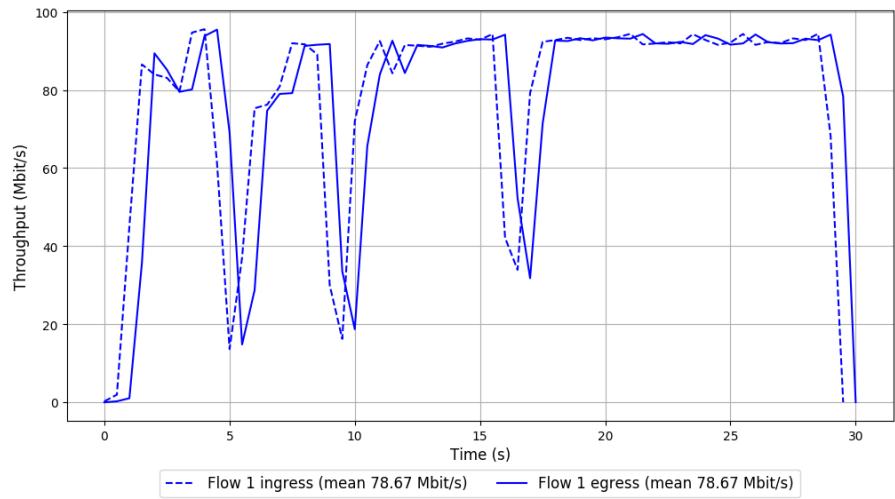


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-10-03 03:03:49
End at: 2018-10-03 03:04:19
Local clock offset: -0.143 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.67 Mbit/s
95th percentile per-packet one-way delay: 53.540 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 78.67 Mbit/s
95th percentile per-packet one-way delay: 53.540 ms
Loss rate: 0.00%
```

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

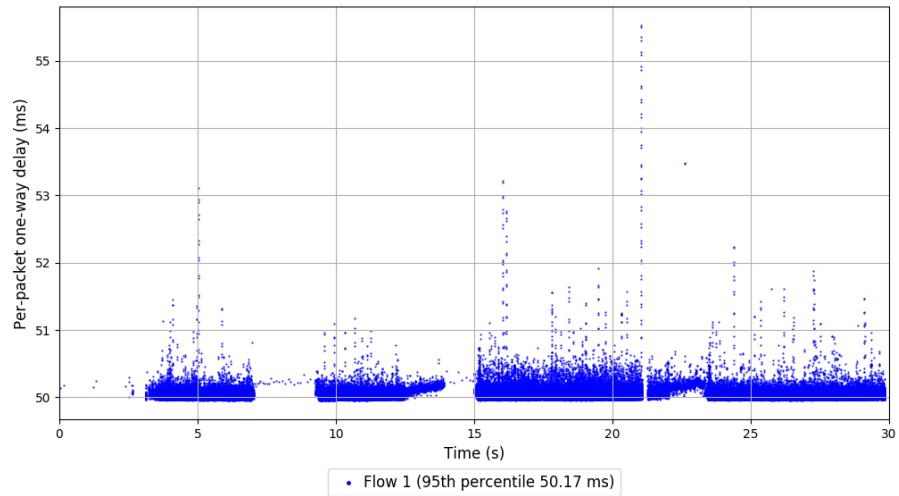
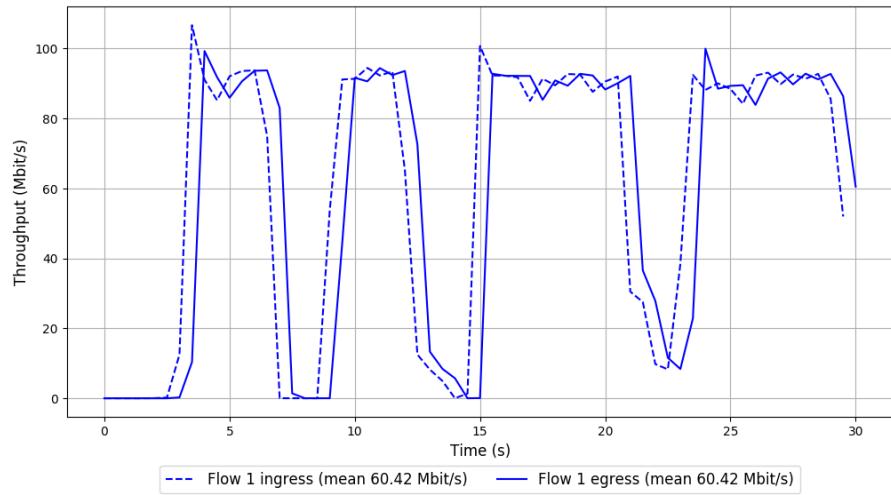


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-10-03 03:29:13
End at: 2018-10-03 03:29:43
Local clock offset: -0.272 ms
Remote clock offset: -0.309 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.42 Mbit/s
95th percentile per-packet one-way delay: 50.170 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.42 Mbit/s
95th percentile per-packet one-way delay: 50.170 ms
Loss rate: 0.00%
```

Run 3: Report of QUIC Cubic — Data Link

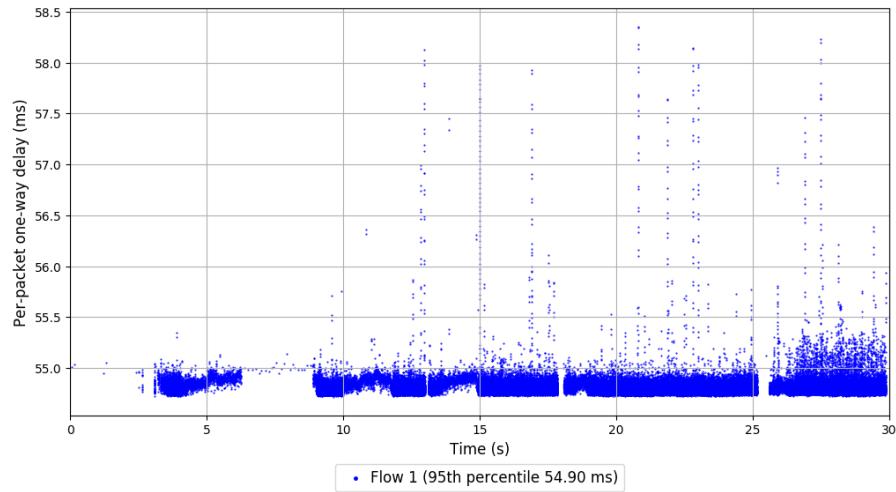
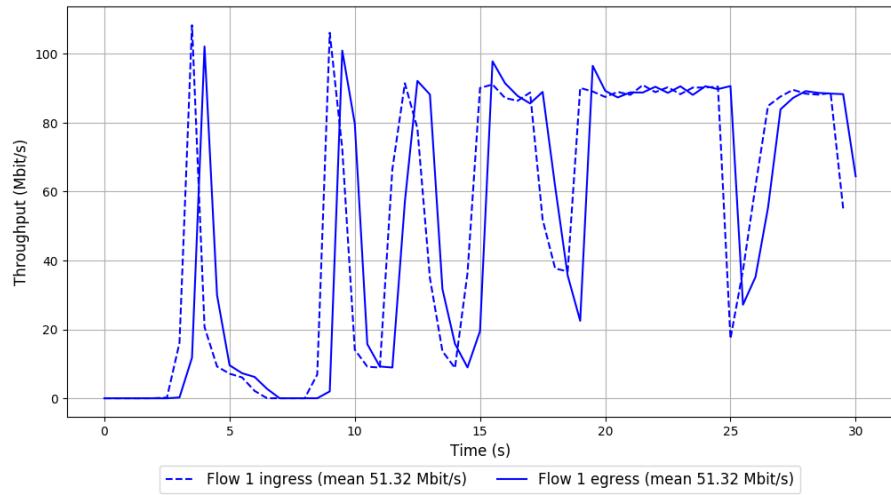


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-10-03 03:55:01
End at: 2018-10-03 03:55:31
Local clock offset: -0.477 ms
Remote clock offset: 0.937 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 51.32 Mbit/s
95th percentile per-packet one-way delay: 54.900 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 51.32 Mbit/s
95th percentile per-packet one-way delay: 54.900 ms
Loss rate: 0.01%
```

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

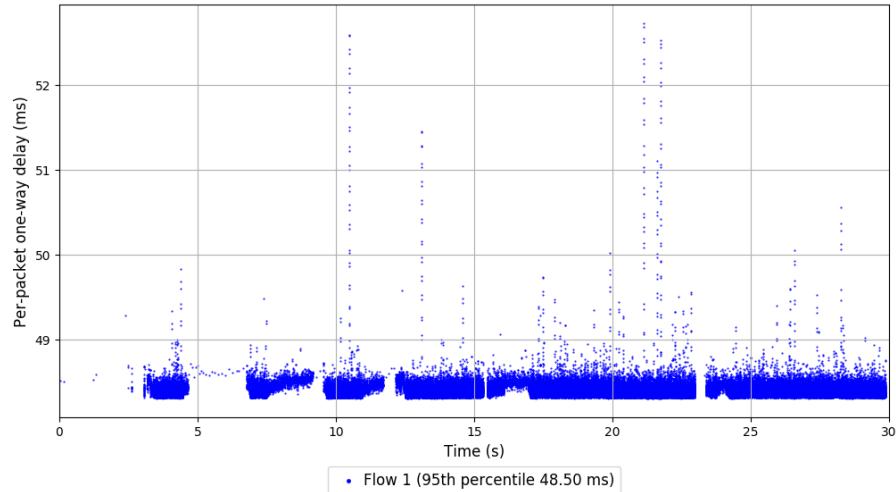
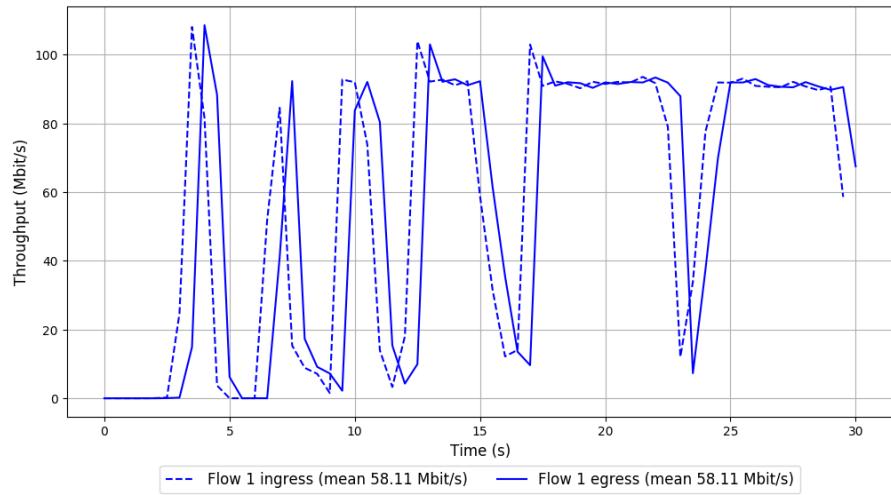


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-10-03 04:20:45
End at: 2018-10-03 04:21:15
Local clock offset: -0.184 ms
Remote clock offset: -1.484 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.11 Mbit/s
95th percentile per-packet one-way delay: 48.501 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.11 Mbit/s
95th percentile per-packet one-way delay: 48.501 ms
Loss rate: 0.00%
```

Run 5: Report of QUIC Cubic — Data Link

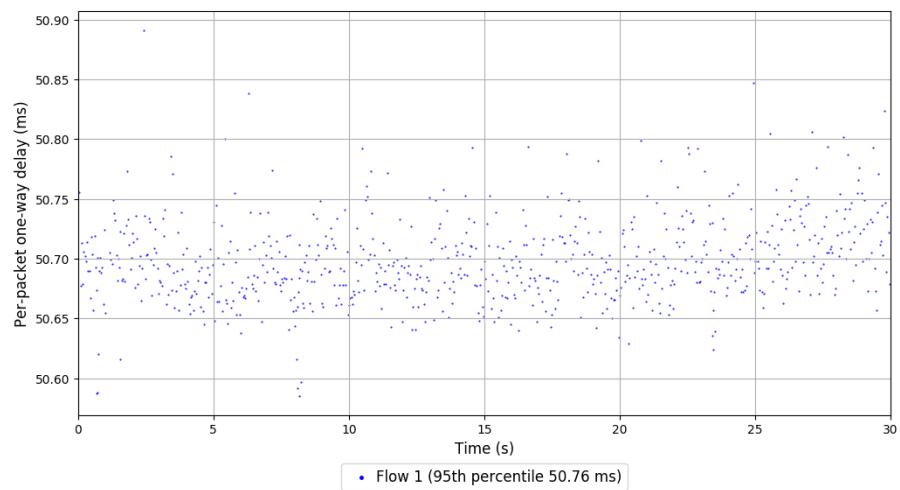
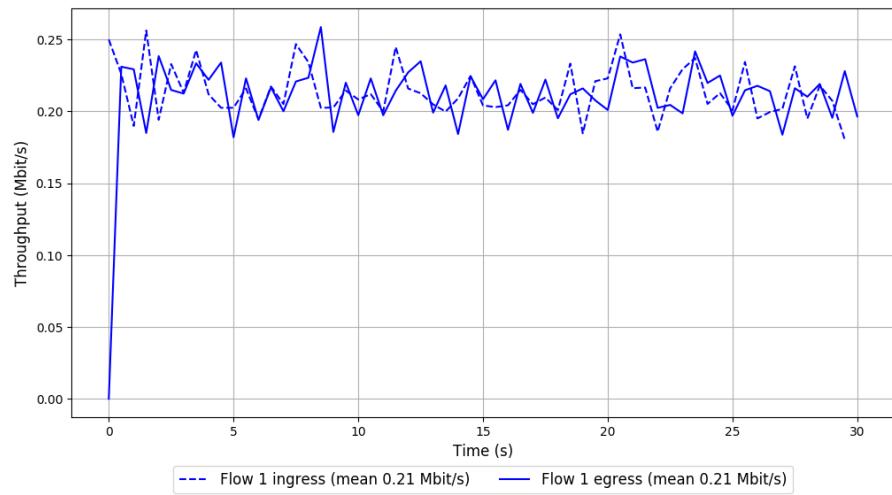


Run 1: Statistics of SCReAM

```
Start at: 2018-10-03 02:22:52
End at: 2018-10-03 02:23:22
Local clock offset: -0.27 ms
Remote clock offset: 0.051 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.757 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.757 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

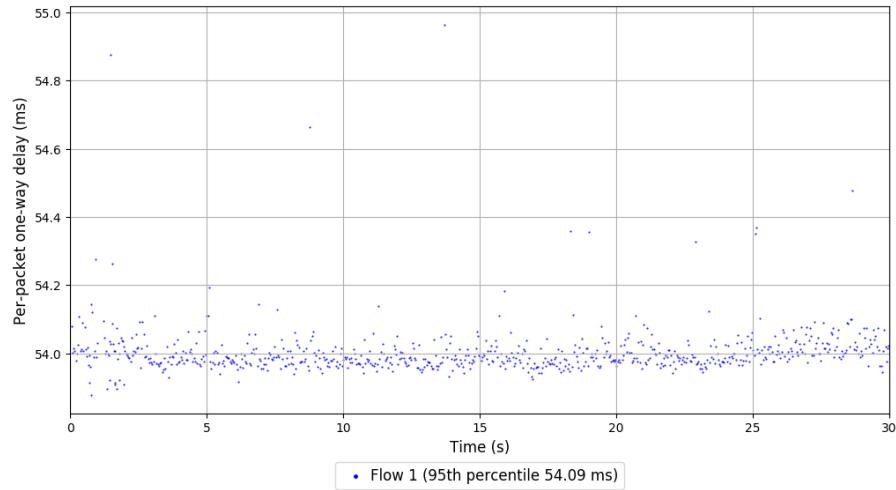
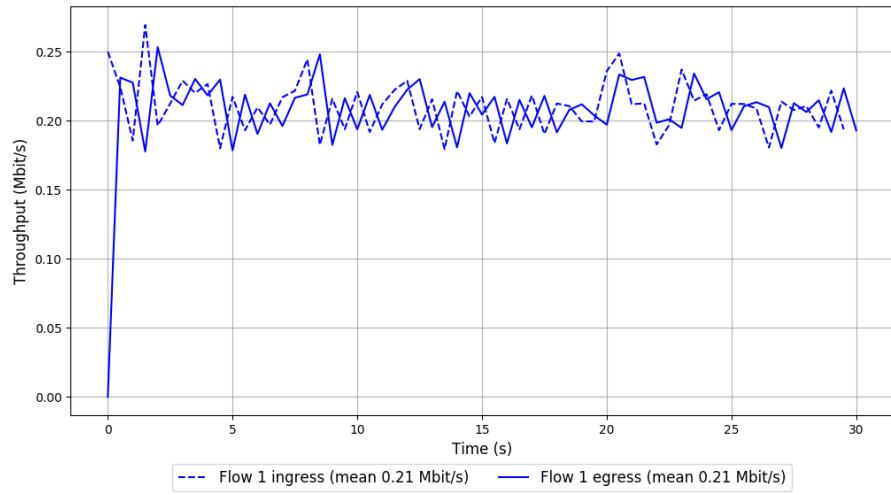


Run 2: Statistics of SCReAM

```
Start at: 2018-10-03 02:48:08
End at: 2018-10-03 02:48:38
Local clock offset: -0.082 ms
Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 54.085 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 54.085 ms
Loss rate: 0.13%
```

Run 2: Report of SCReAM — Data Link

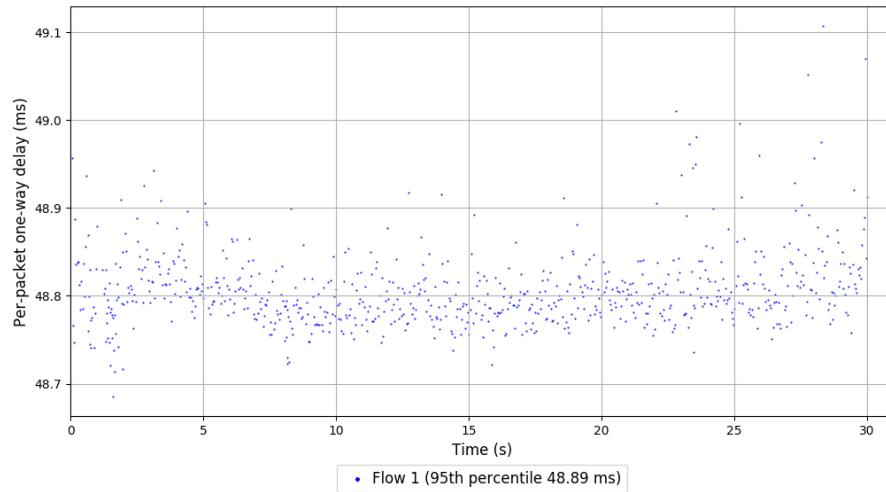
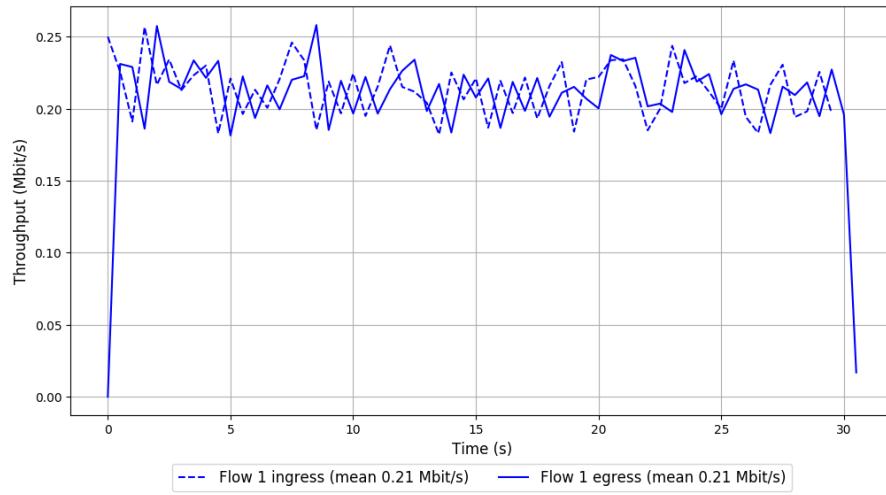


Run 3: Statistics of SCReAM

```
Start at: 2018-10-03 03:13:43
End at: 2018-10-03 03:14:13
Local clock offset: -0.085 ms
Remote clock offset: -1.282 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 48.887 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 48.887 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

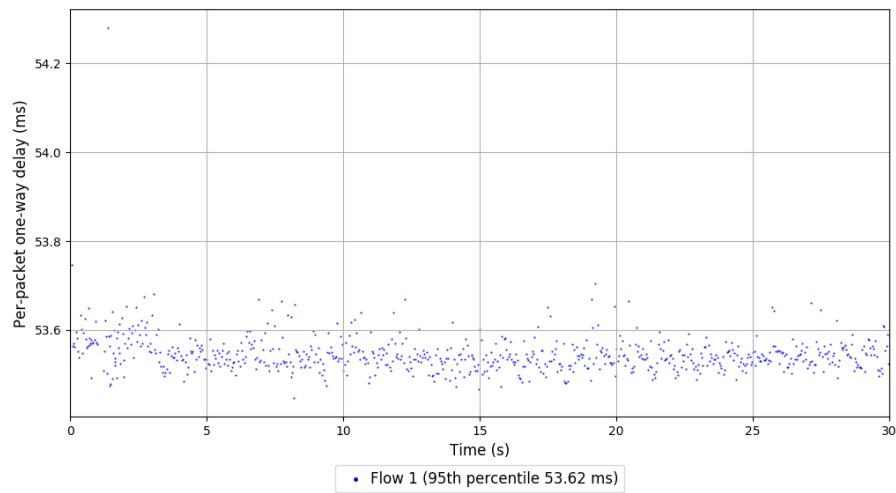
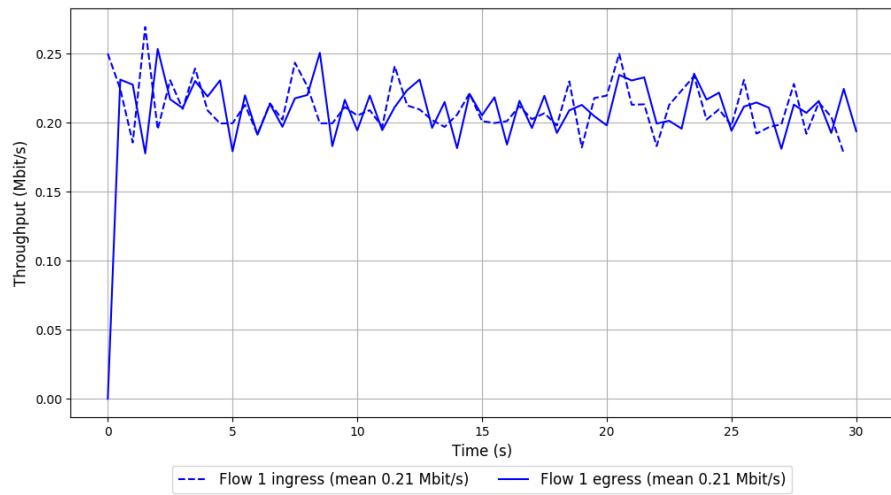


Run 4: Statistics of SCReAM

```
Start at: 2018-10-03 03:39:16
End at: 2018-10-03 03:39:46
Local clock offset: 0.022 ms
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.617 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.617 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

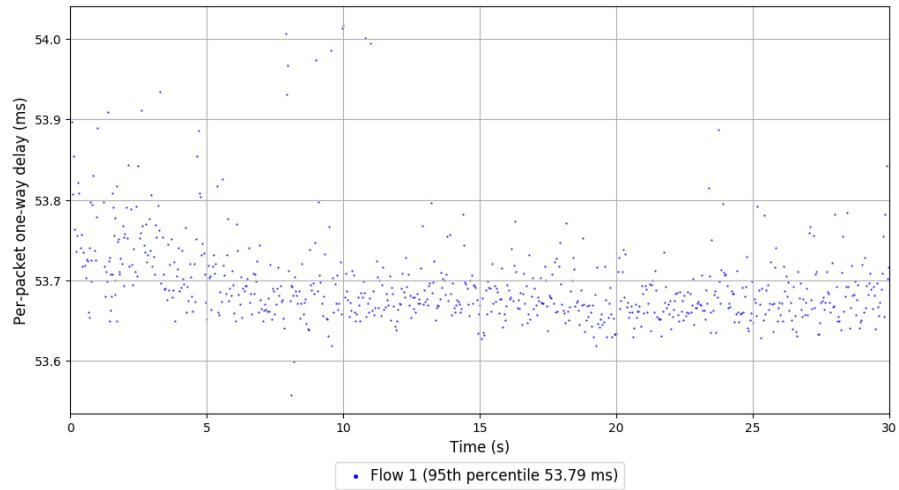
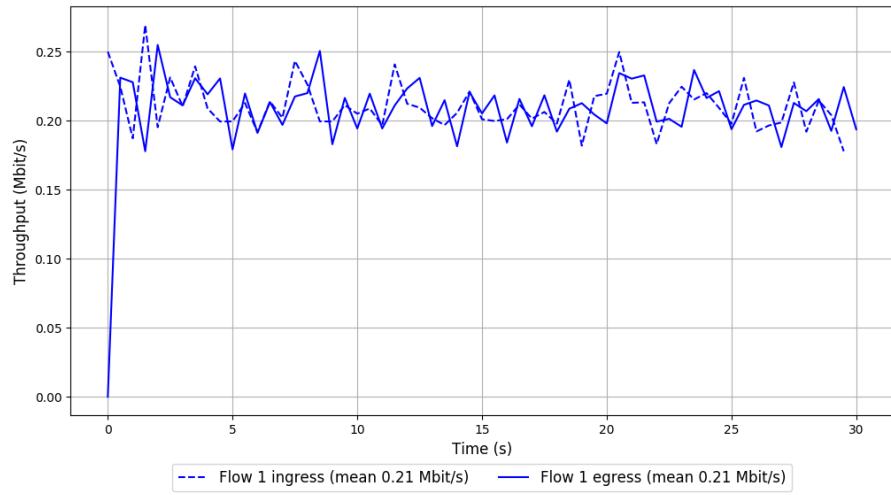


Run 5: Statistics of SCReAM

```
Start at: 2018-10-03 04:05:07
End at: 2018-10-03 04:05:37
Local clock offset: -0.299 ms
Remote clock offset: -0.146 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.794 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.794 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

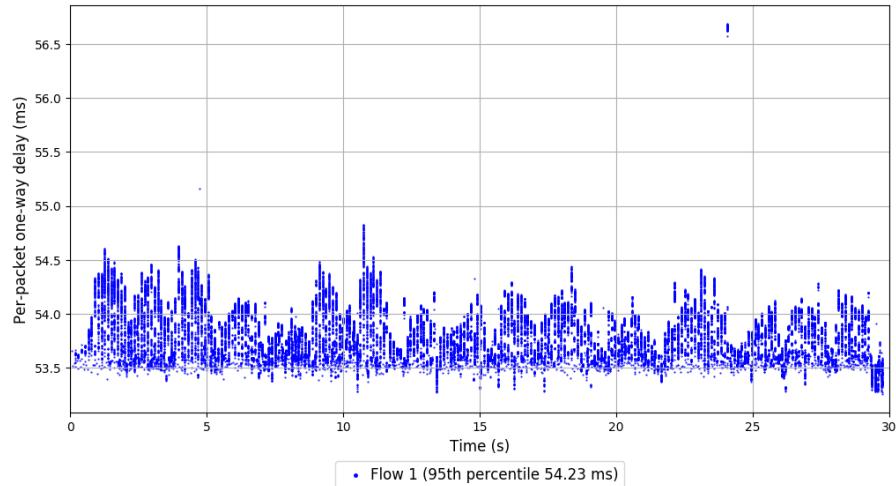
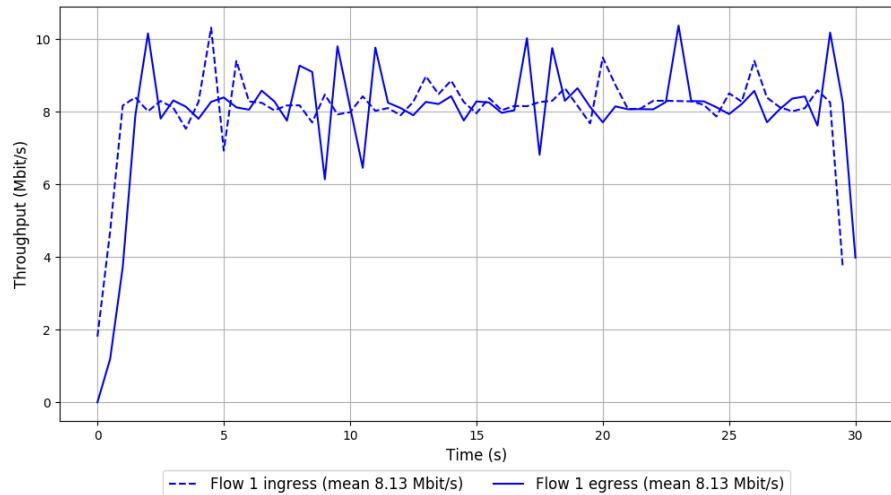


Run 1: Statistics of Sprout

```
Start at: 2018-10-03 02:28:15
End at: 2018-10-03 02:28:45
Local clock offset: -0.13 ms
Remote clock offset: -0.319 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.13 Mbit/s
95th percentile per-packet one-way delay: 54.228 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.13 Mbit/s
95th percentile per-packet one-way delay: 54.228 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

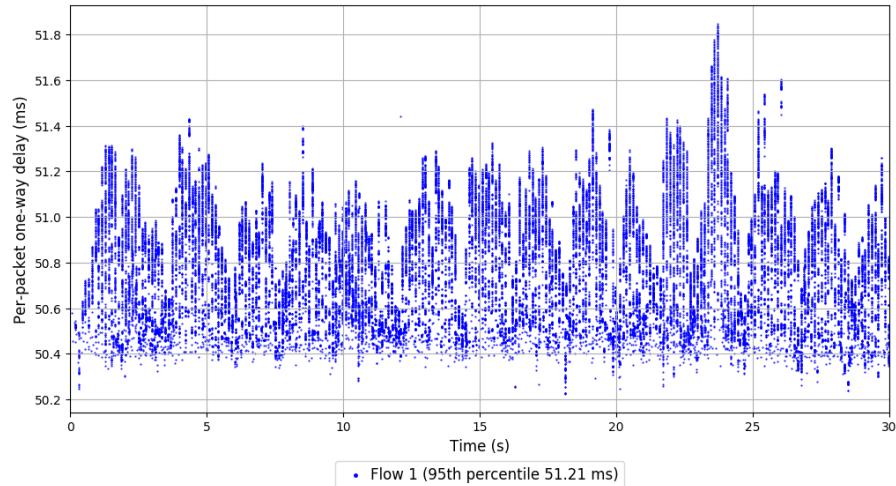
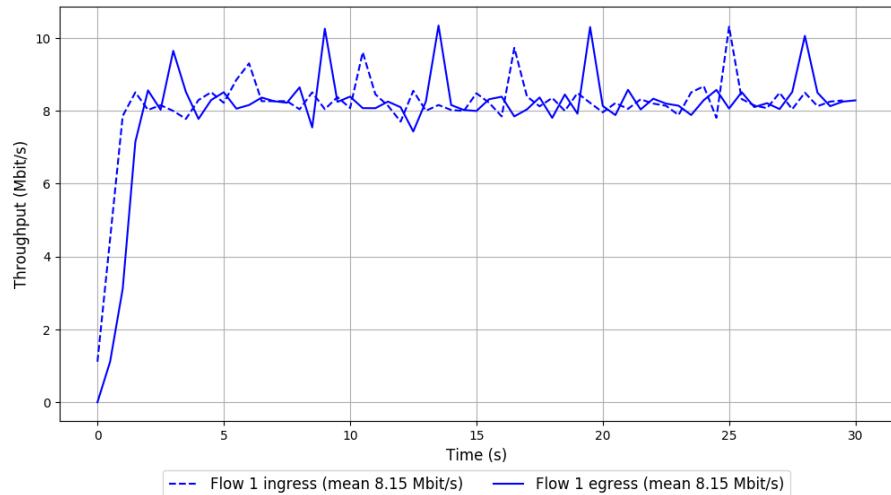


Run 2: Statistics of Sprout

```
Start at: 2018-10-03 02:53:27
End at: 2018-10-03 02:53:57
Local clock offset: -0.228 ms
Remote clock offset: 0.268 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.15 Mbit/s
95th percentile per-packet one-way delay: 51.206 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.15 Mbit/s
95th percentile per-packet one-way delay: 51.206 ms
Loss rate: 0.00%
```

## Run 2: Report of Sprout — Data Link

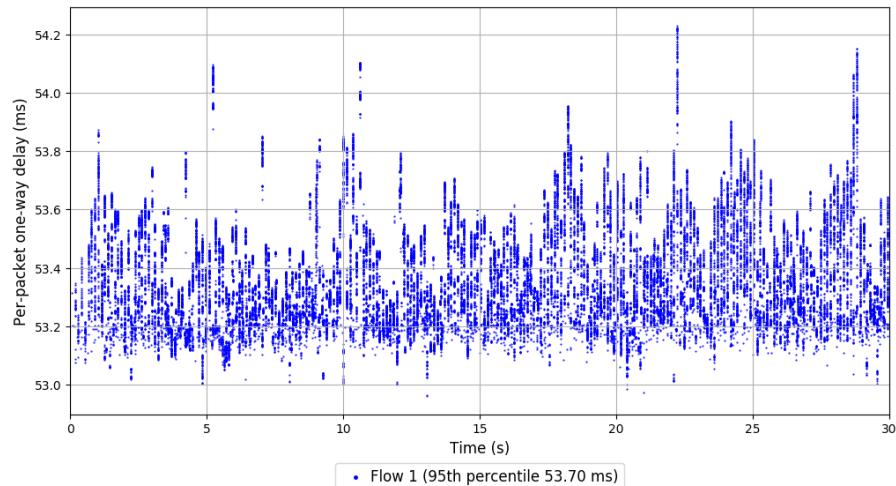
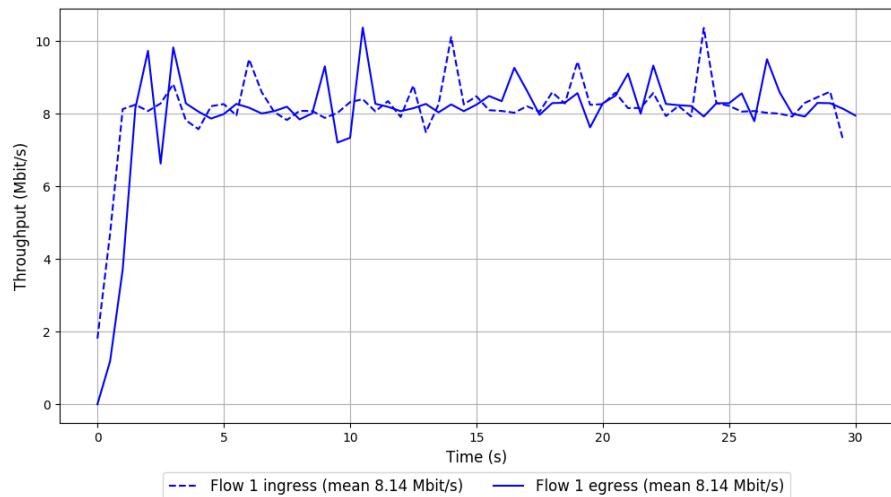


Run 3: Statistics of Sprout

```
Start at: 2018-10-03 03:19:05
End at: 2018-10-03 03:19:35
Local clock offset: -0.203 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 53.702 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 53.702 ms
Loss rate: 0.00%
```

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

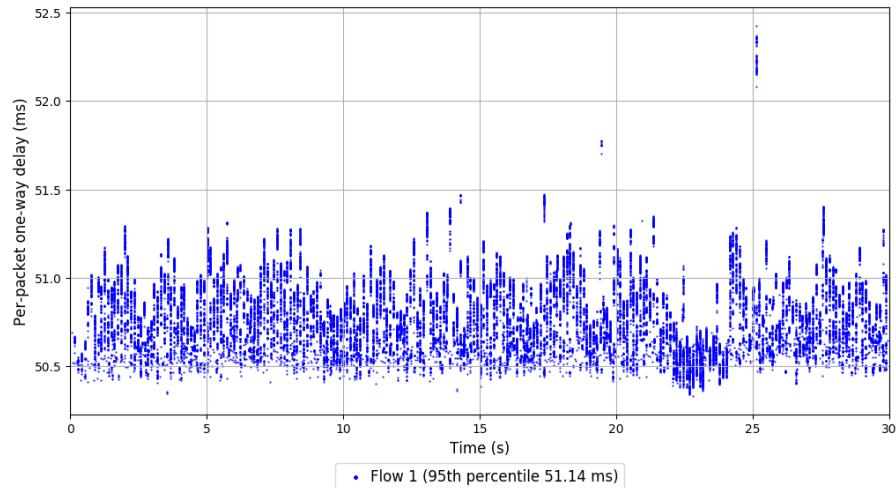
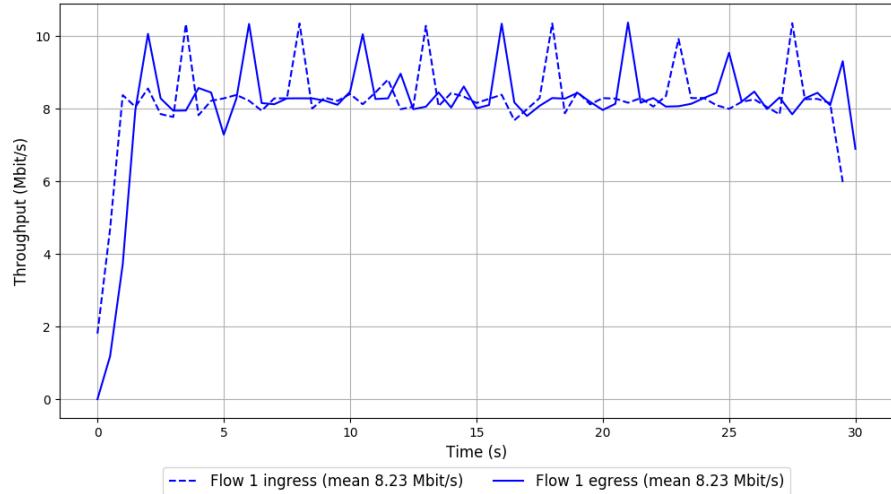


Run 4: Statistics of Sprout

```
Start at: 2018-10-03 03:44:36
End at: 2018-10-03 03:45:06
Local clock offset: -0.376 ms
Remote clock offset: 0.205 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.23 Mbit/s
95th percentile per-packet one-way delay: 51.137 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.23 Mbit/s
95th percentile per-packet one-way delay: 51.137 ms
Loss rate: 0.00%
```

## Run 4: Report of Sprout — Data Link

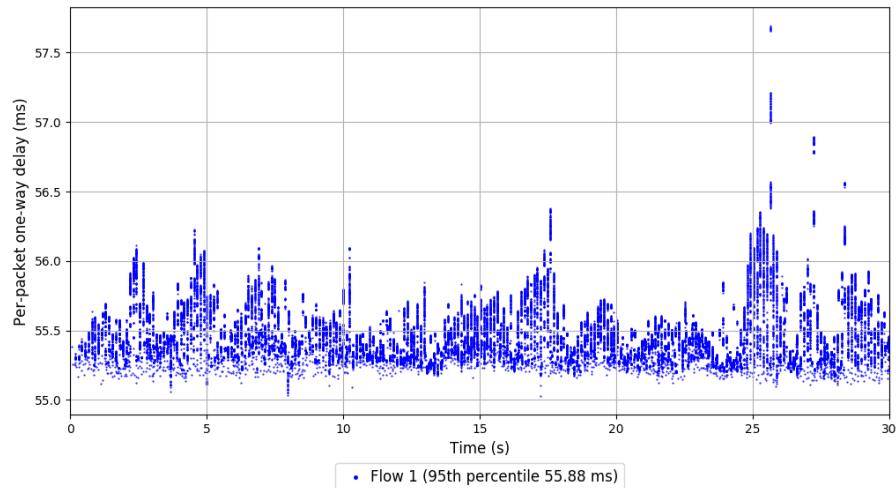
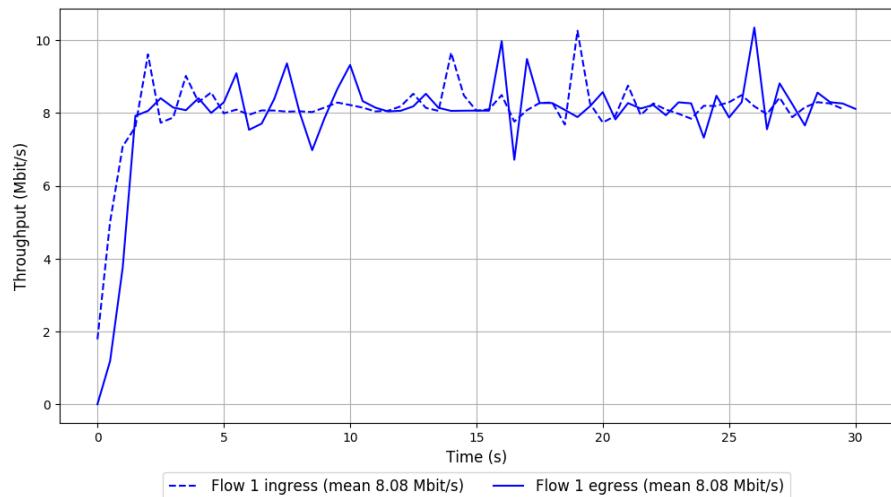


Run 5: Statistics of Sprout

```
Start at: 2018-10-03 04:10:28
End at: 2018-10-03 04:10:58
Local clock offset: -0.38 ms
Remote clock offset: 1.208 ms

# Below is generated by plot.py at 2018-10-03 06:10:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.08 Mbit/s
95th percentile per-packet one-way delay: 55.880 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.08 Mbit/s
95th percentile per-packet one-way delay: 55.880 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

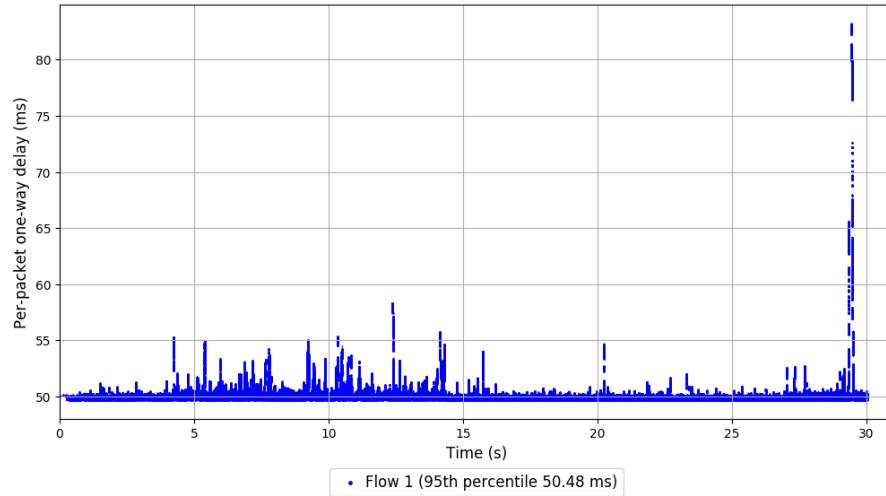
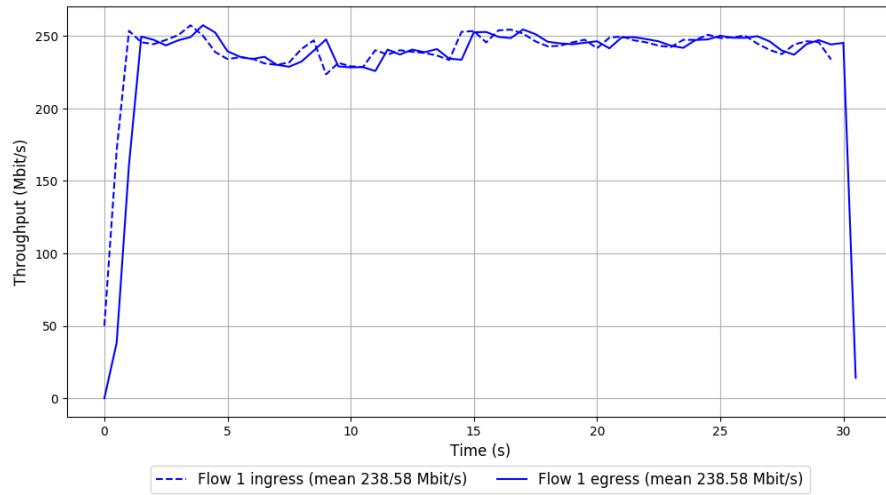


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-10-03 02:42:04
End at: 2018-10-03 02:42:34
Local clock offset: 0.0 ms
Remote clock offset: -0.487 ms

# Below is generated by plot.py at 2018-10-03 06:11:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 238.58 Mbit/s
95th percentile per-packet one-way delay: 50.482 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 238.58 Mbit/s
95th percentile per-packet one-way delay: 50.482 ms
Loss rate: 0.00%
```

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

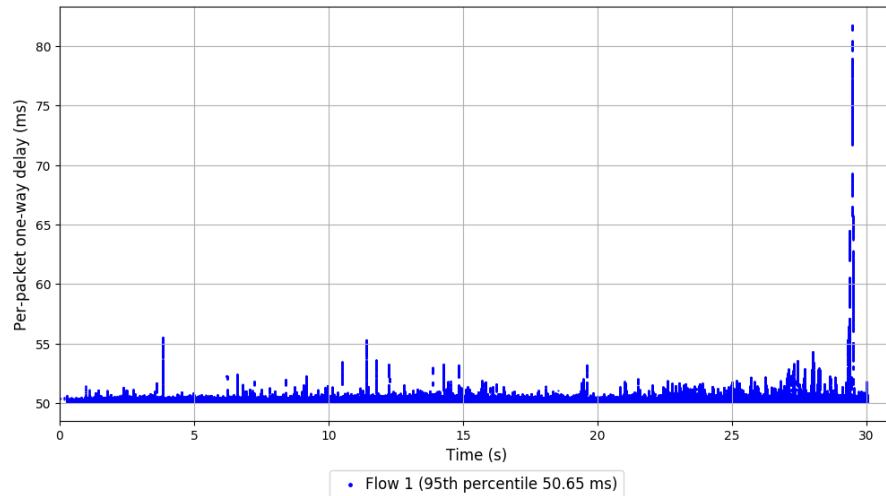
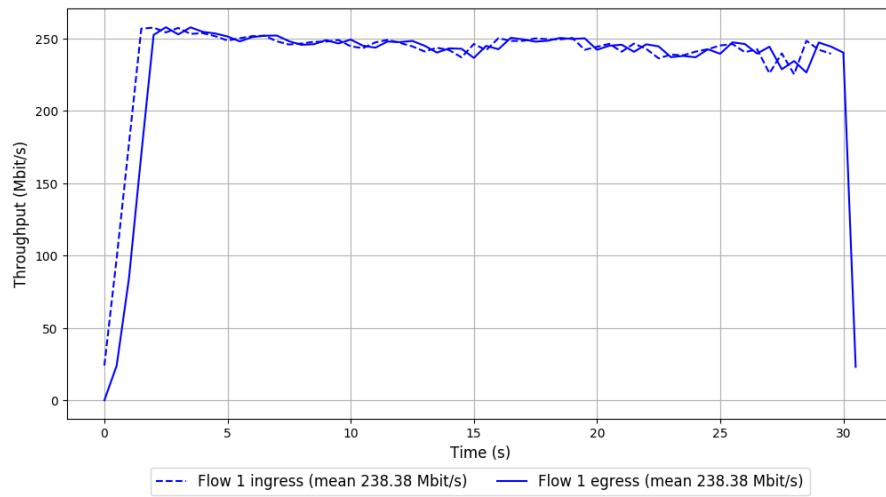


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-10-03 03:07:47
End at: 2018-10-03 03:08:17
Local clock offset: -0.254 ms
Remote clock offset: -0.143 ms

# Below is generated by plot.py at 2018-10-03 06:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 238.38 Mbit/s
95th percentile per-packet one-way delay: 50.649 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 238.38 Mbit/s
95th percentile per-packet one-way delay: 50.649 ms
Loss rate: 0.00%
```

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

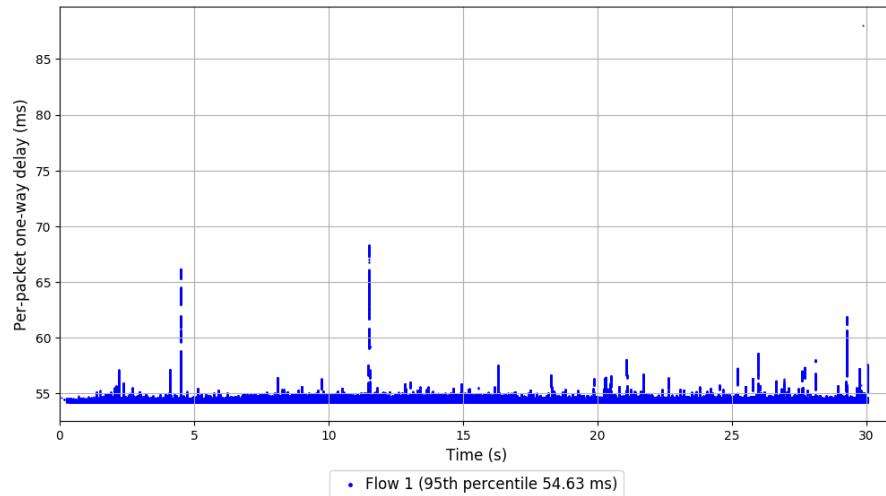
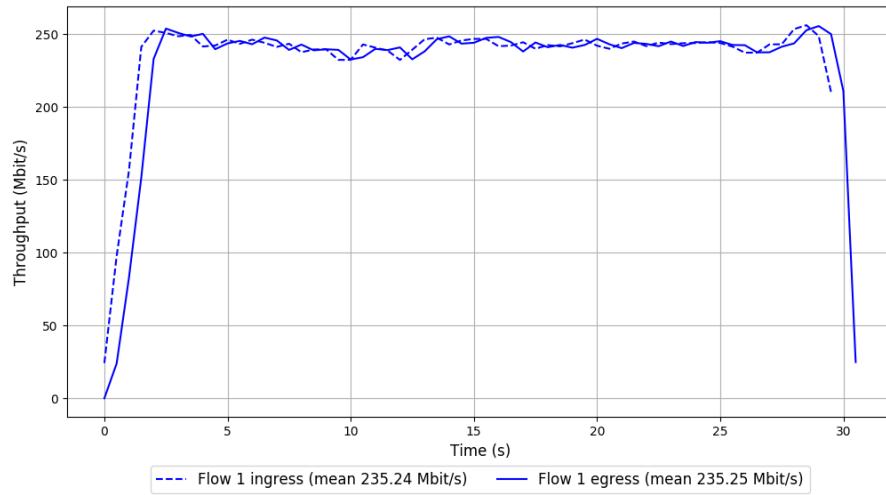


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-10-03 03:33:10
End at: 2018-10-03 03:33:40
Local clock offset: 0.01 ms
Remote clock offset: 0.941 ms

# Below is generated by plot.py at 2018-10-03 06:11:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 235.25 Mbit/s
95th percentile per-packet one-way delay: 54.632 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 235.25 Mbit/s
95th percentile per-packet one-way delay: 54.632 ms
Loss rate: 0.01%
```

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

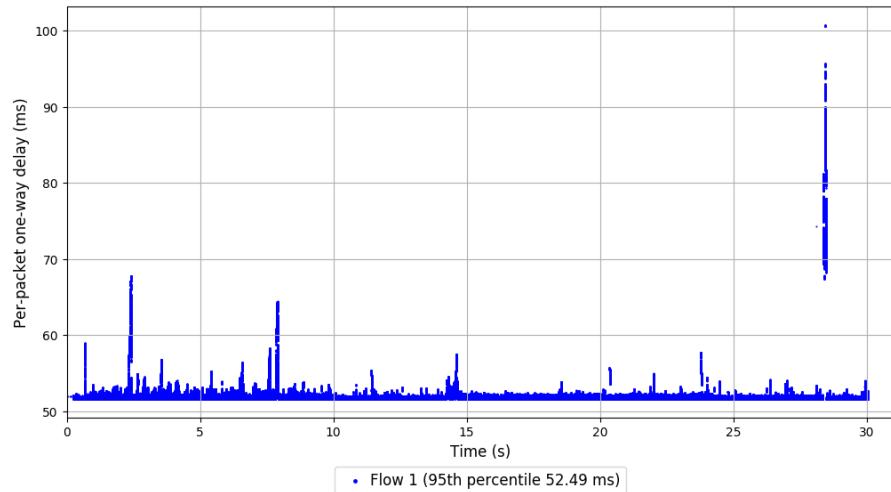
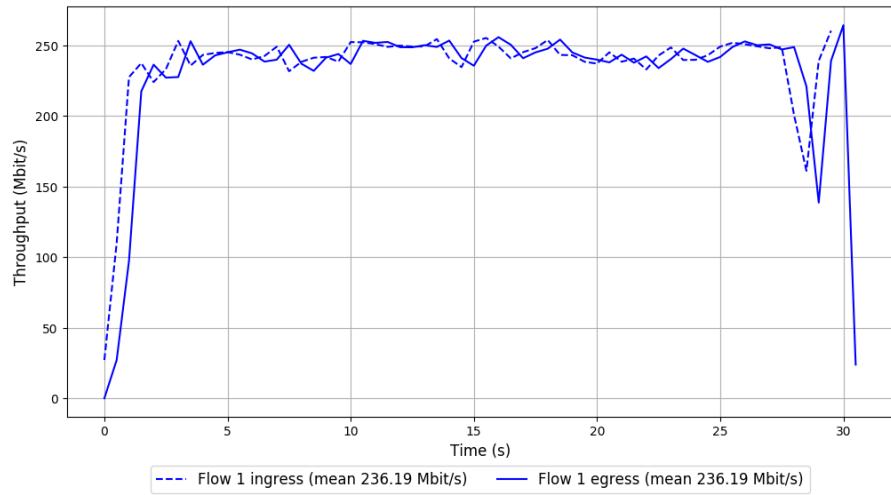


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-10-03 03:59:00
End at: 2018-10-03 03:59:30
Local clock offset: -0.353 ms
Remote clock offset: 1.194 ms

# Below is generated by plot.py at 2018-10-03 06:11:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 236.19 Mbit/s
95th percentile per-packet one-way delay: 52.488 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 236.19 Mbit/s
95th percentile per-packet one-way delay: 52.488 ms
Loss rate: 0.00%
```

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

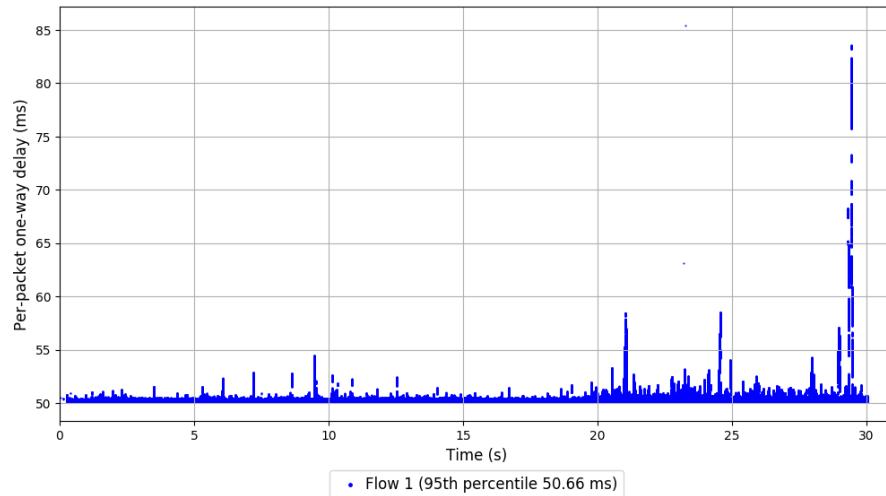
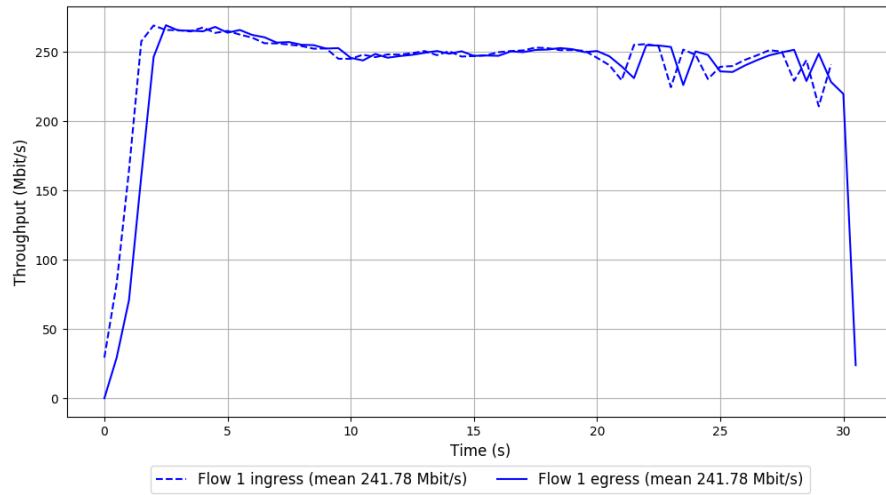


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-10-03 04:24:42
End at: 2018-10-03 04:25:12
Local clock offset: -0.281 ms
Remote clock offset: -0.129 ms

# Below is generated by plot.py at 2018-10-03 06:12:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 241.78 Mbit/s
95th percentile per-packet one-way delay: 50.663 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 241.78 Mbit/s
95th percentile per-packet one-way delay: 50.663 ms
Loss rate: 0.00%
```

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

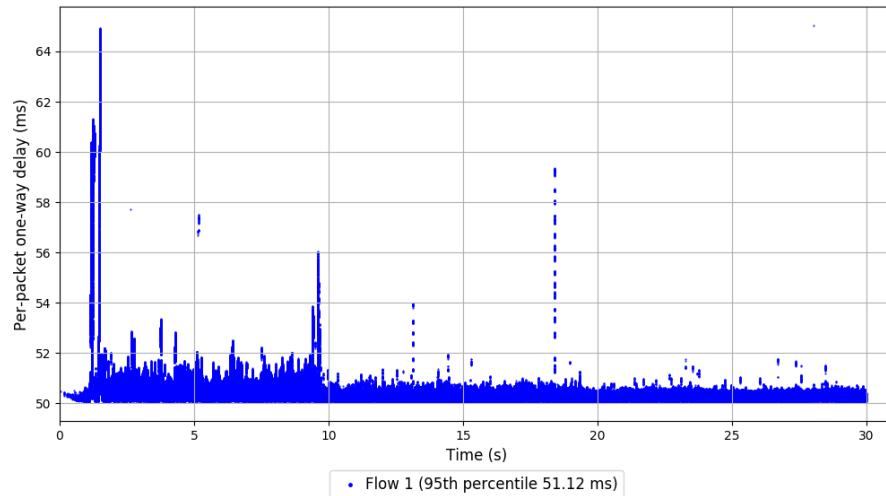
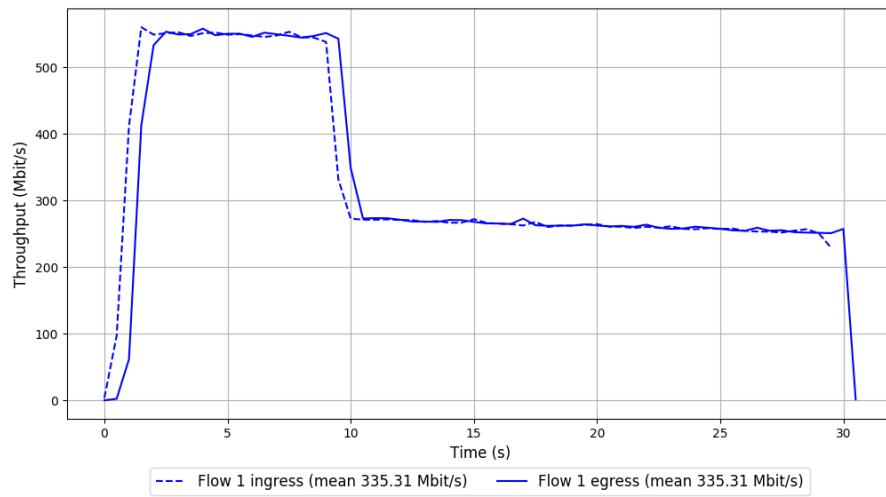


Run 1: Statistics of TCP Vegas

```
Start at: 2018-10-03 02:29:23
End at: 2018-10-03 02:29:53
Local clock offset: -0.115 ms
Remote clock offset: -0.188 ms

# Below is generated by plot.py at 2018-10-03 06:13:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 335.31 Mbit/s
95th percentile per-packet one-way delay: 51.118 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 335.31 Mbit/s
95th percentile per-packet one-way delay: 51.118 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Vegas — Data Link

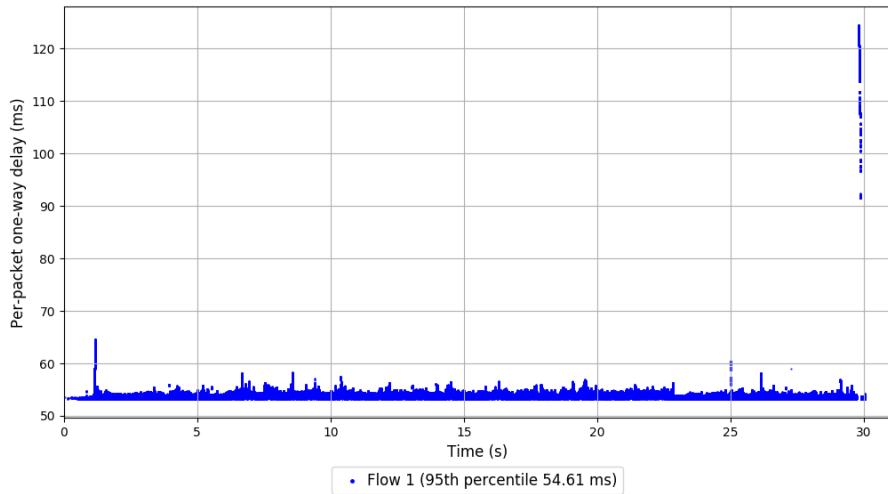
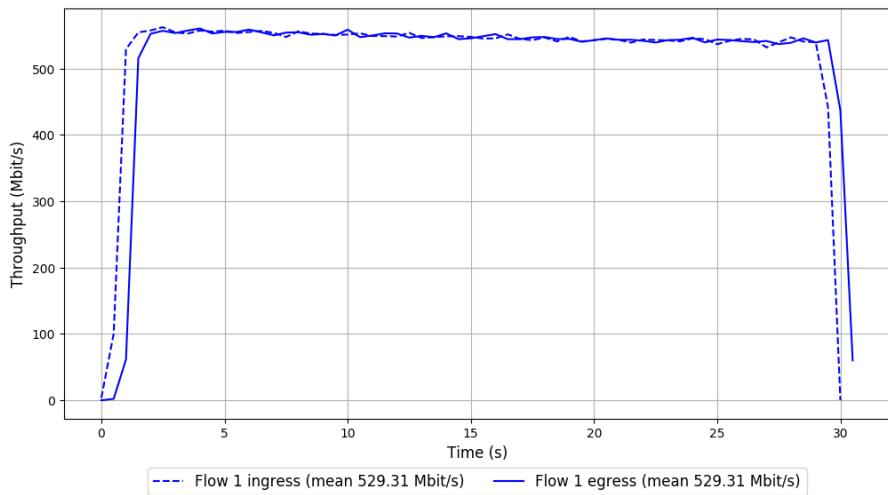


Run 2: Statistics of TCP Vegas

```
Start at: 2018-10-03 02:54:35
End at: 2018-10-03 02:55:05
Local clock offset: -0.428 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2018-10-03 06:19:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 529.31 Mbit/s
95th percentile per-packet one-way delay: 54.610 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 529.31 Mbit/s
95th percentile per-packet one-way delay: 54.610 ms
Loss rate: 0.01%
```

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

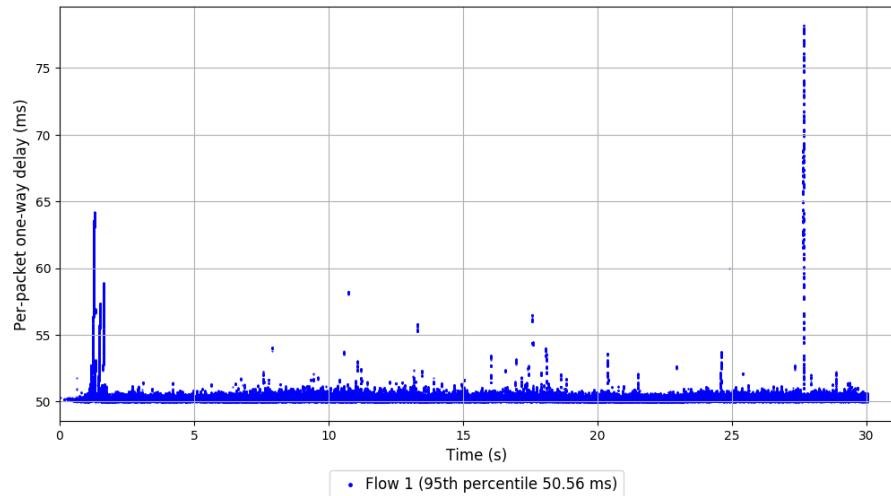
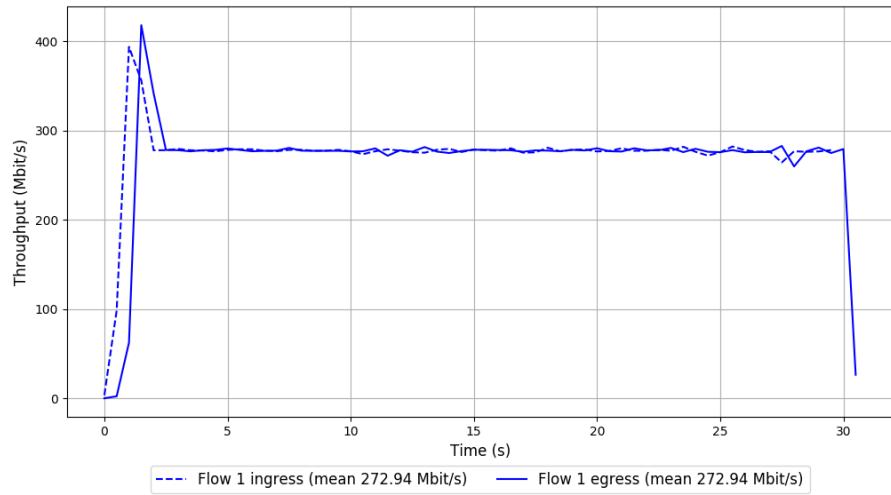


Run 3: Statistics of TCP Vegas

```
Start at: 2018-10-03 03:20:12
End at: 2018-10-03 03:20:42
Local clock offset: -0.217 ms
Remote clock offset: -0.143 ms

# Below is generated by plot.py at 2018-10-03 06:19:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 272.94 Mbit/s
95th percentile per-packet one-way delay: 50.564 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 272.94 Mbit/s
95th percentile per-packet one-way delay: 50.564 ms
Loss rate: 0.00%
```

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

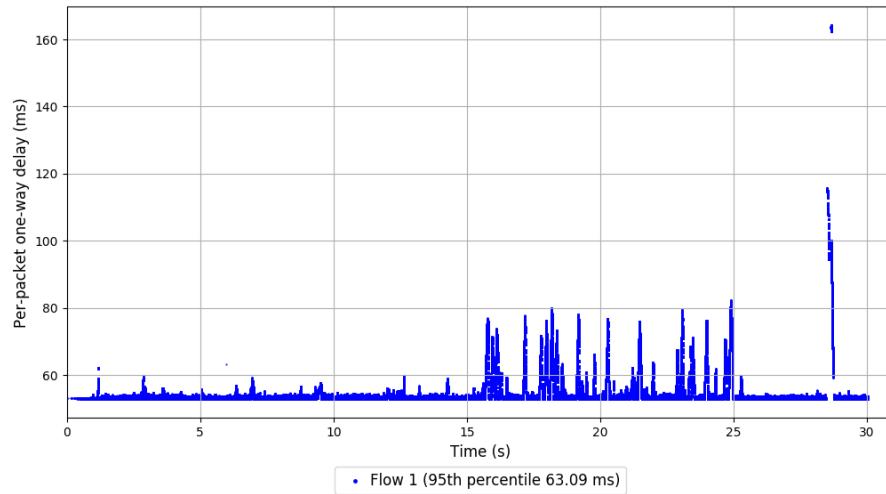
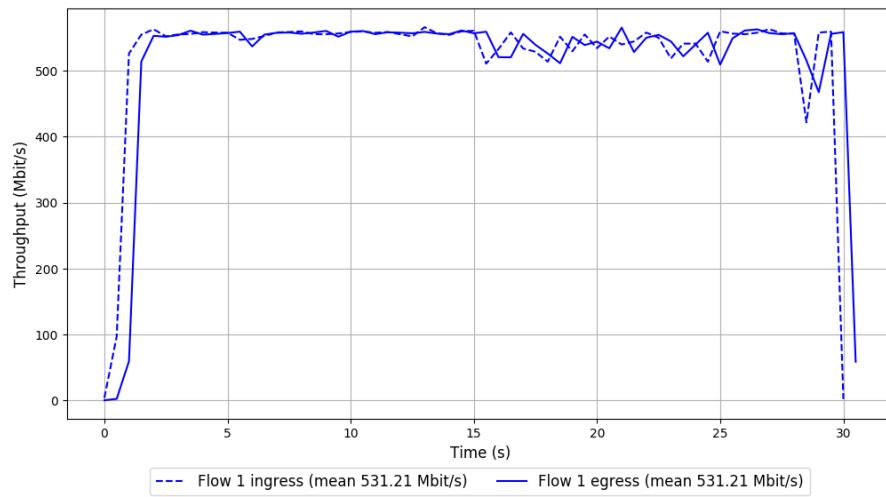


Run 4: Statistics of TCP Vegas

```
Start at: 2018-10-03 03:45:44
End at: 2018-10-03 03:46:14
Local clock offset: -0.295 ms
Remote clock offset: -0.417 ms

# Below is generated by plot.py at 2018-10-03 06:23:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 531.21 Mbit/s
95th percentile per-packet one-way delay: 63.092 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 531.21 Mbit/s
95th percentile per-packet one-way delay: 63.092 ms
Loss rate: 0.01%
```

Run 4: Report of TCP Vegas — Data Link

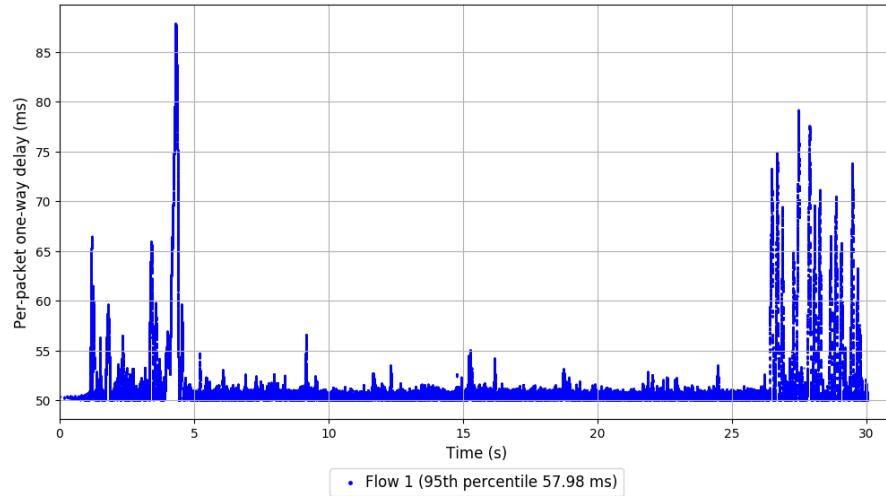
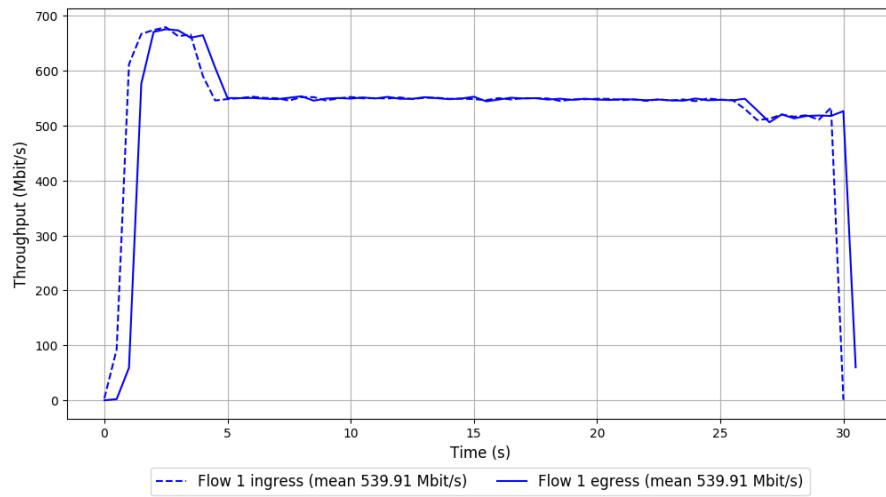


Run 5: Statistics of TCP Vegas

```
Start at: 2018-10-03 04:11:35
End at: 2018-10-03 04:12:05
Local clock offset: -0.274 ms
Remote clock offset: -0.169 ms

# Below is generated by plot.py at 2018-10-03 06:24:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 539.91 Mbit/s
95th percentile per-packet one-way delay: 57.978 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 539.91 Mbit/s
95th percentile per-packet one-way delay: 57.978 ms
Loss rate: 0.00%
```

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

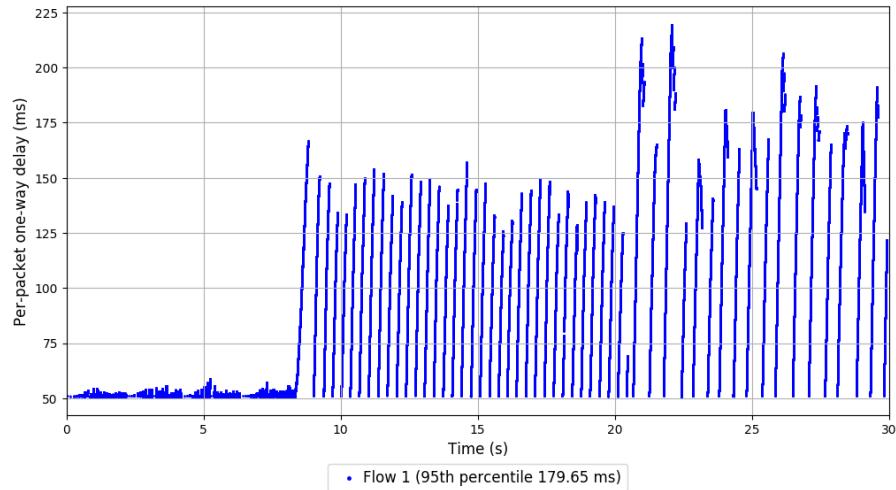
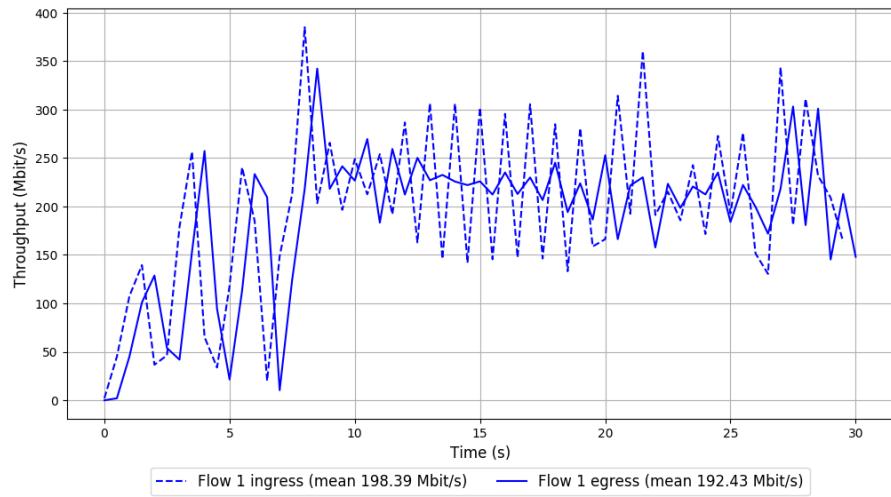


Run 1: Statistics of Verus

```
Start at: 2018-10-03 02:36:46
End at: 2018-10-03 02:37:16
Local clock offset: -0.079 ms
Remote clock offset: 0.524 ms

# Below is generated by plot.py at 2018-10-03 06:24:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 192.43 Mbit/s
95th percentile per-packet one-way delay: 179.651 ms
Loss rate: 2.96%
-- Flow 1:
Average throughput: 192.43 Mbit/s
95th percentile per-packet one-way delay: 179.651 ms
Loss rate: 2.96%
```

## Run 1: Report of Verus — Data Link

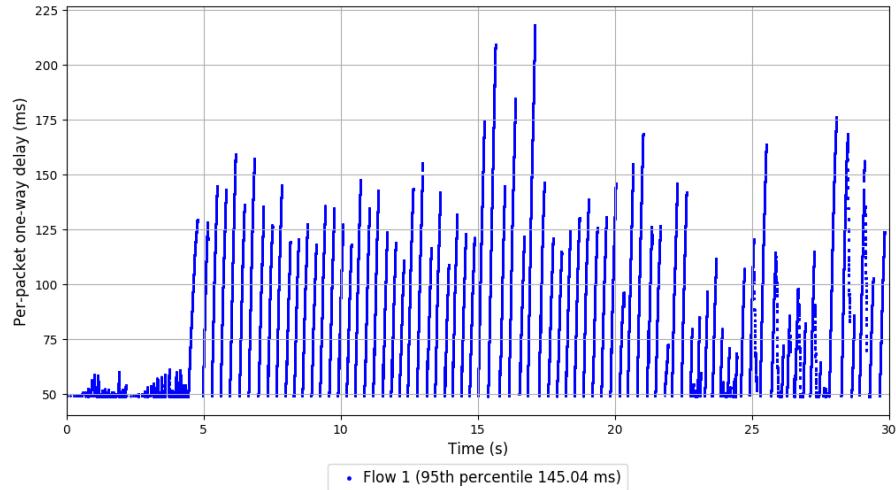
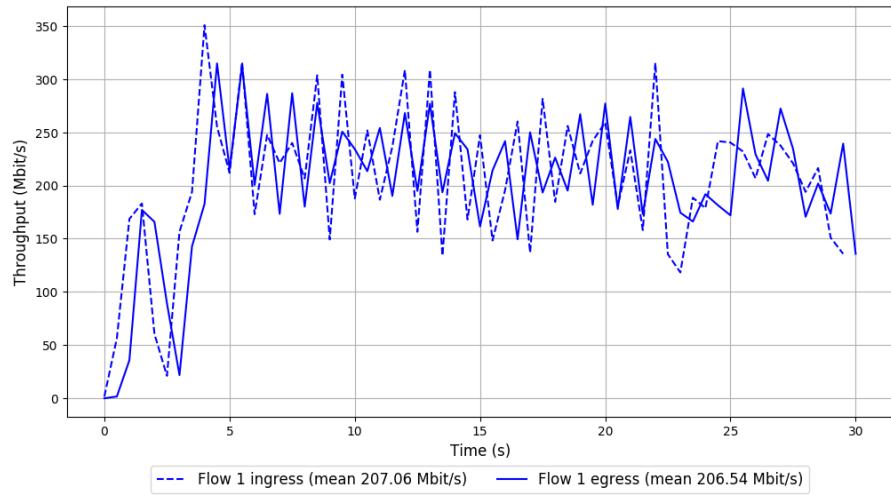


Run 2: Statistics of Verus

```
Start at: 2018-10-03 03:02:23
End at: 2018-10-03 03:02:53
Local clock offset: 0.069 ms
Remote clock offset: -1.373 ms

# Below is generated by plot.py at 2018-10-03 06:24:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.54 Mbit/s
95th percentile per-packet one-way delay: 145.037 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 206.54 Mbit/s
95th percentile per-packet one-way delay: 145.037 ms
Loss rate: 0.00%
```

## Run 2: Report of Verus — Data Link

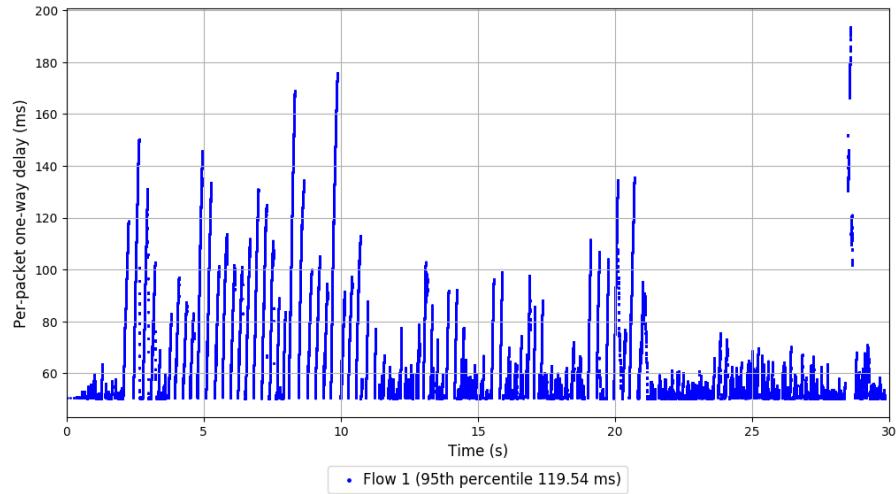
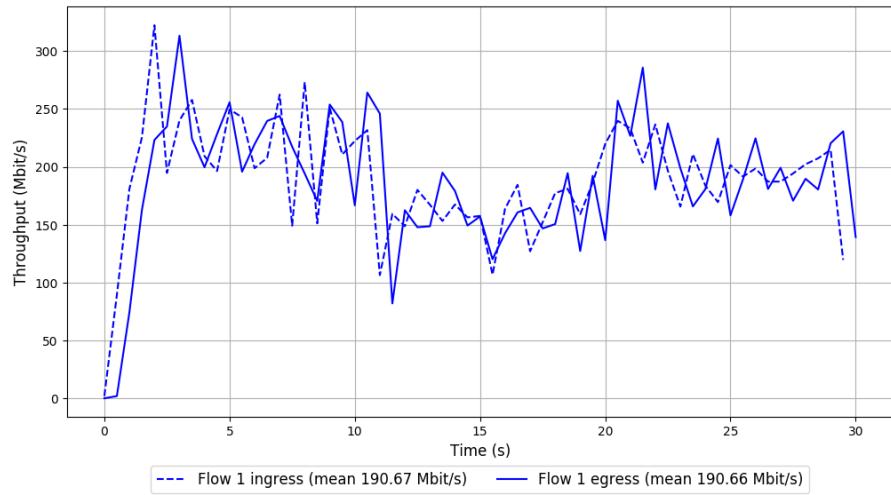


Run 3: Statistics of Verus

```
Start at: 2018-10-03 03:27:49
End at: 2018-10-03 03:28:19
Local clock offset: -0.301 ms
Remote clock offset: 0.124 ms

# Below is generated by plot.py at 2018-10-03 06:24:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 190.66 Mbit/s
95th percentile per-packet one-way delay: 119.543 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 190.66 Mbit/s
95th percentile per-packet one-way delay: 119.543 ms
Loss rate: 0.00%
```

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

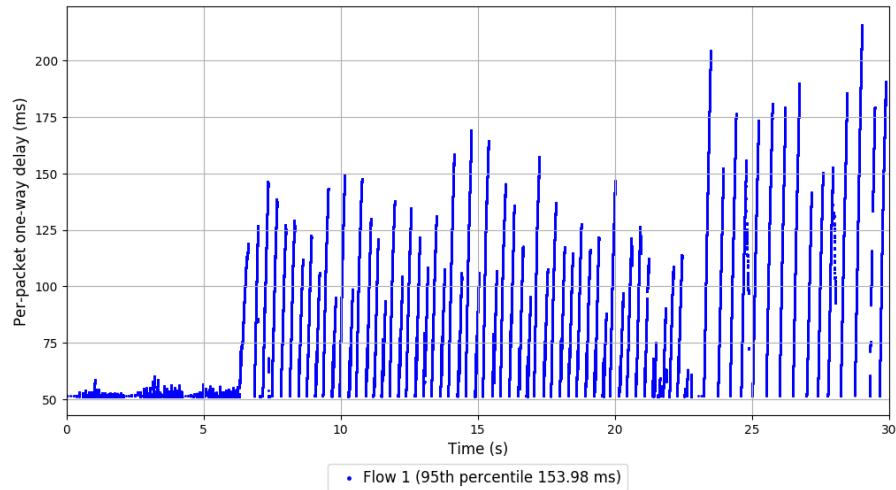
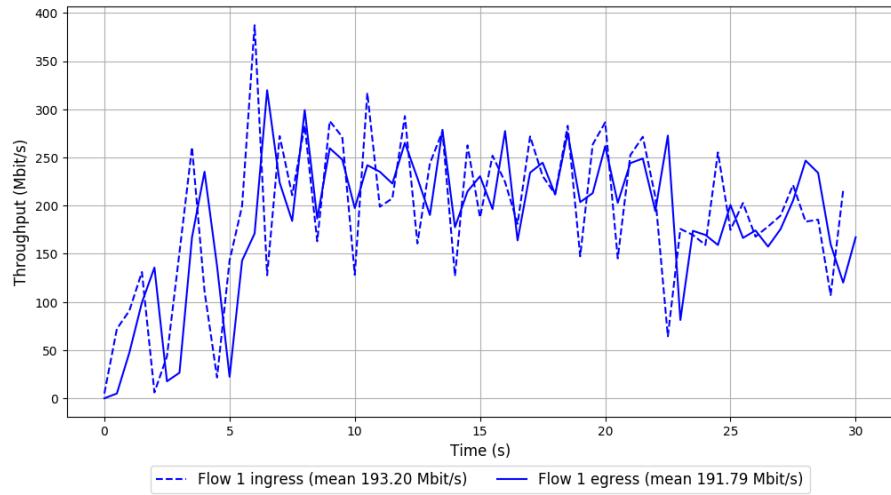


Run 4: Statistics of Verus

```
Start at: 2018-10-03 03:53:37
End at: 2018-10-03 03:54:07
Local clock offset: -0.182 ms
Remote clock offset: 0.923 ms

# Below is generated by plot.py at 2018-10-03 06:24:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 191.79 Mbit/s
95th percentile per-packet one-way delay: 153.982 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 191.79 Mbit/s
95th percentile per-packet one-way delay: 153.982 ms
Loss rate: 0.66%
```

## Run 4: Report of Verus — Data Link

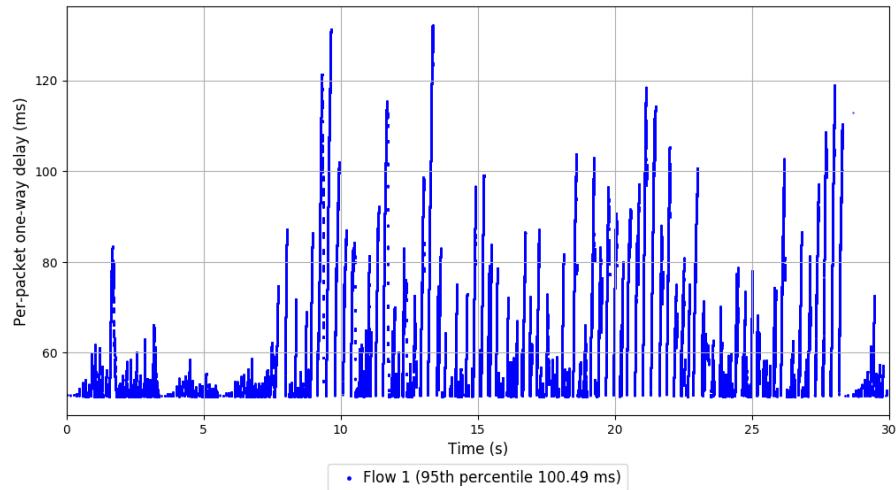
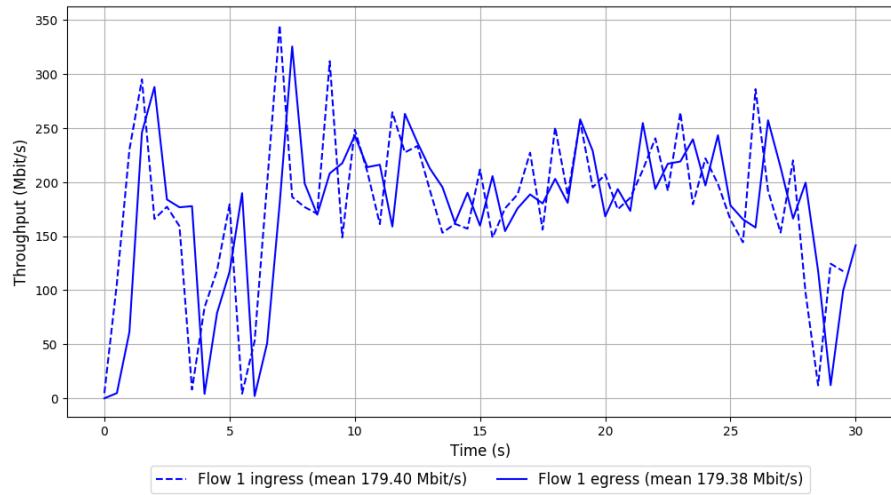


Run 5: Statistics of Verus

```
Start at: 2018-10-03 04:19:22
End at: 2018-10-03 04:19:52
Local clock offset: -0.4 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2018-10-03 06:24:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 179.38 Mbit/s
95th percentile per-packet one-way delay: 100.492 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 179.38 Mbit/s
95th percentile per-packet one-way delay: 100.492 ms
Loss rate: 0.01%
```

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

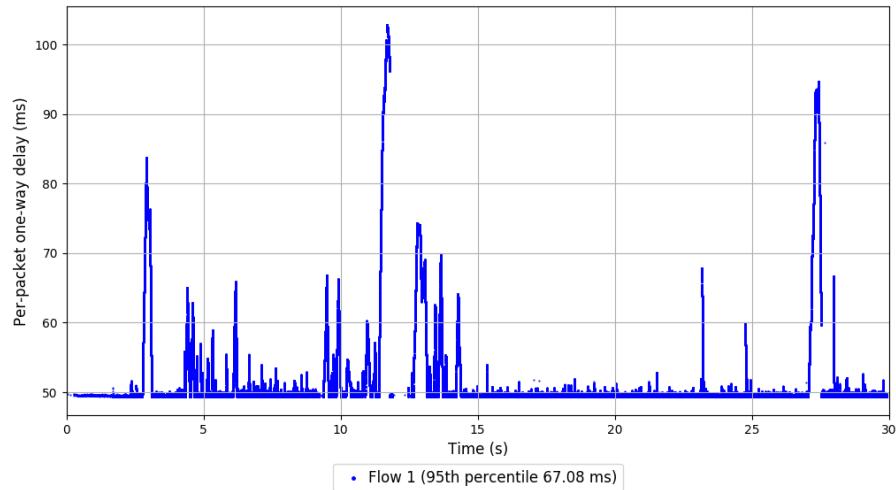
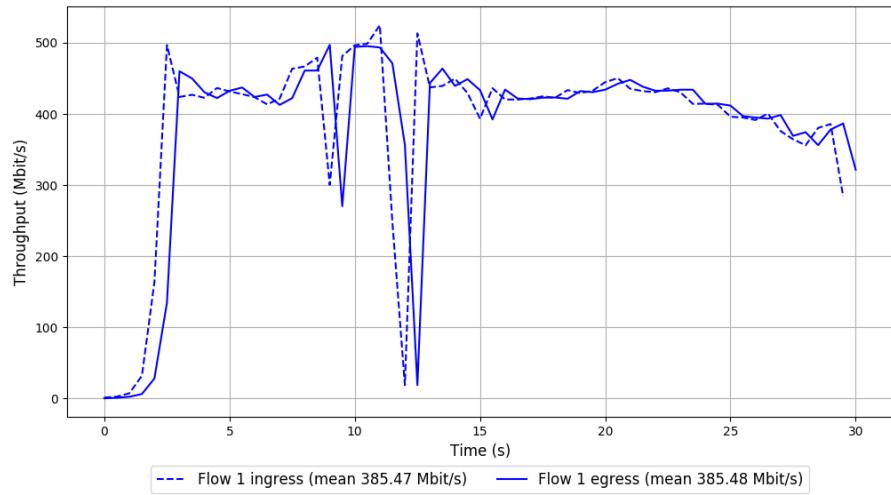


Run 1: Statistics of PCC-Vivace

```
Start at: 2018-10-03 02:26:43
End at: 2018-10-03 02:27:13
Local clock offset: -0.108 ms
Remote clock offset: -0.806 ms

# Below is generated by plot.py at 2018-10-03 06:27:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 385.48 Mbit/s
95th percentile per-packet one-way delay: 67.080 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 385.48 Mbit/s
95th percentile per-packet one-way delay: 67.080 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Vivace — Data Link

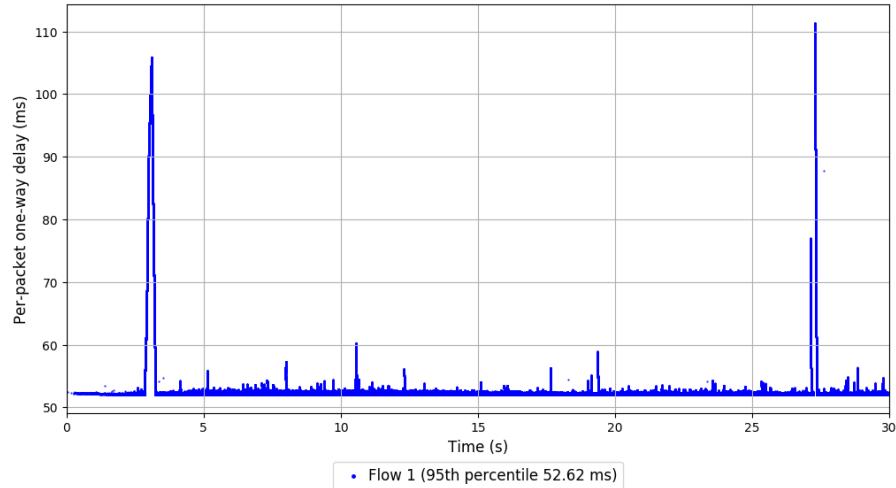
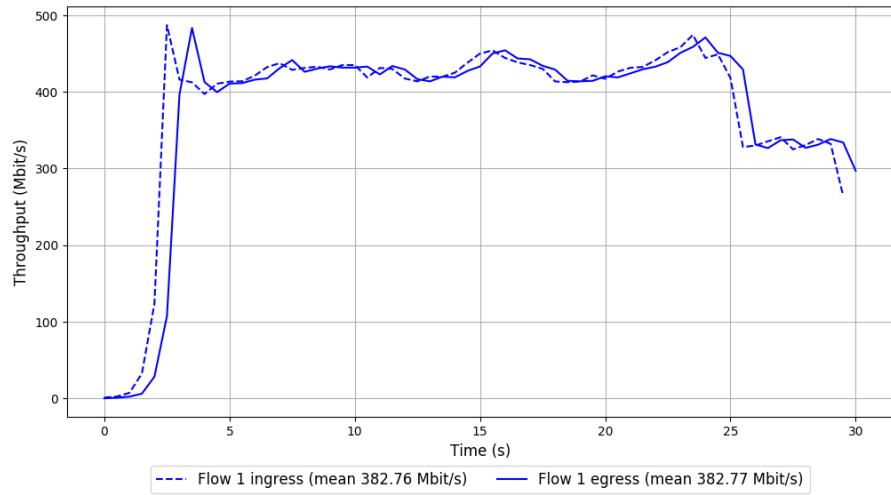


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-10-03 02:51:54
End at: 2018-10-03 02:52:24
Local clock offset: 0.033 ms
Remote clock offset: -0.757 ms

# Below is generated by plot.py at 2018-10-03 06:27:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 382.77 Mbit/s
95th percentile per-packet one-way delay: 52.622 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 382.77 Mbit/s
95th percentile per-packet one-way delay: 52.622 ms
Loss rate: 0.01%
```

Run 2: Report of PCC-Vivace — Data Link

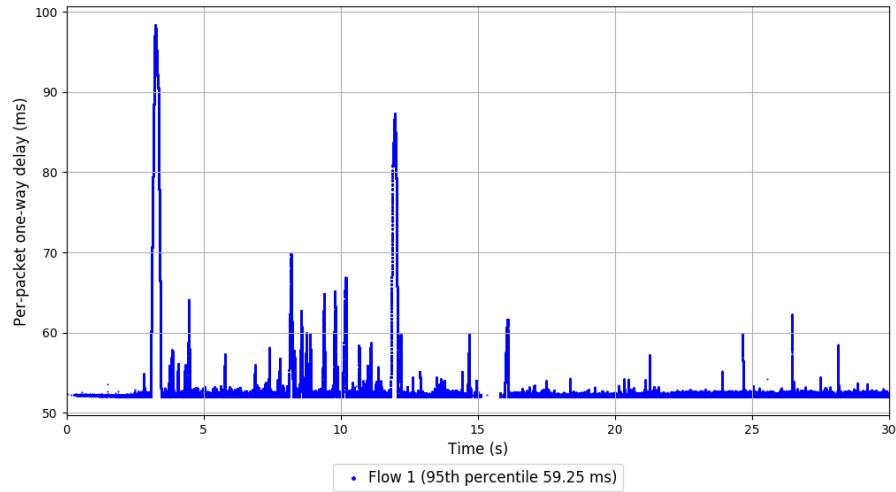
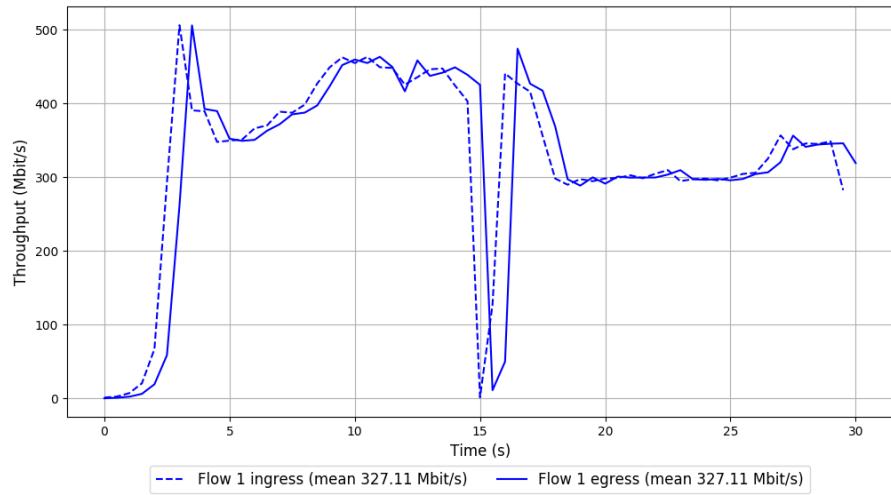


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-10-03 03:17:35
End at: 2018-10-03 03:18:05
Local clock offset: -0.268 ms
Remote clock offset: -1.422 ms

# Below is generated by plot.py at 2018-10-03 06:27:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 327.11 Mbit/s
95th percentile per-packet one-way delay: 59.247 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 327.11 Mbit/s
95th percentile per-packet one-way delay: 59.247 ms
Loss rate: 0.01%
```

Run 3: Report of PCC-Vivace — Data Link

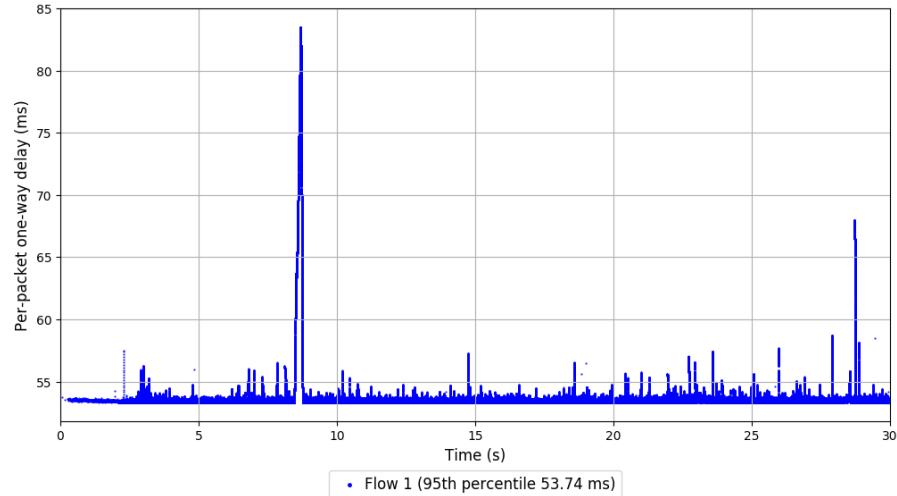
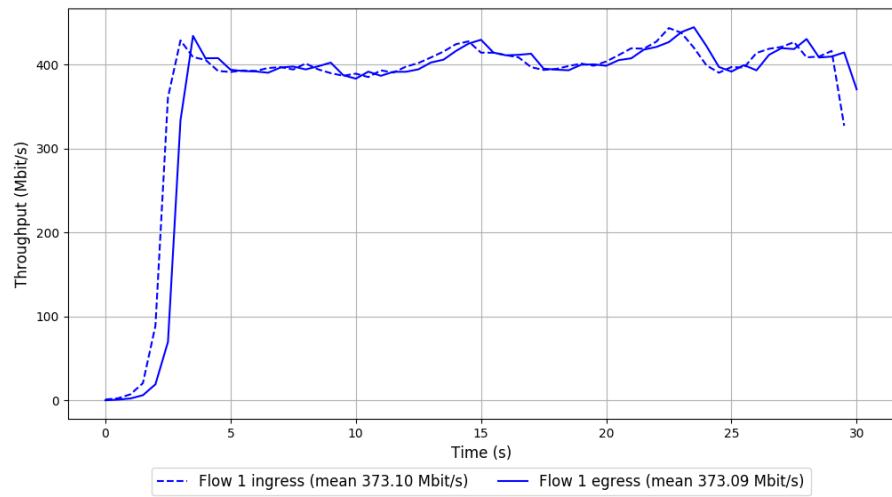


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-10-03 03:43:05
End at: 2018-10-03 03:43:35
Local clock offset: -0.164 ms
Remote clock offset: -0.157 ms

# Below is generated by plot.py at 2018-10-03 06:27:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 373.09 Mbit/s
95th percentile per-packet one-way delay: 53.745 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 373.09 Mbit/s
95th percentile per-packet one-way delay: 53.745 ms
Loss rate: 0.01%
```

Run 4: Report of PCC-Vivace — Data Link

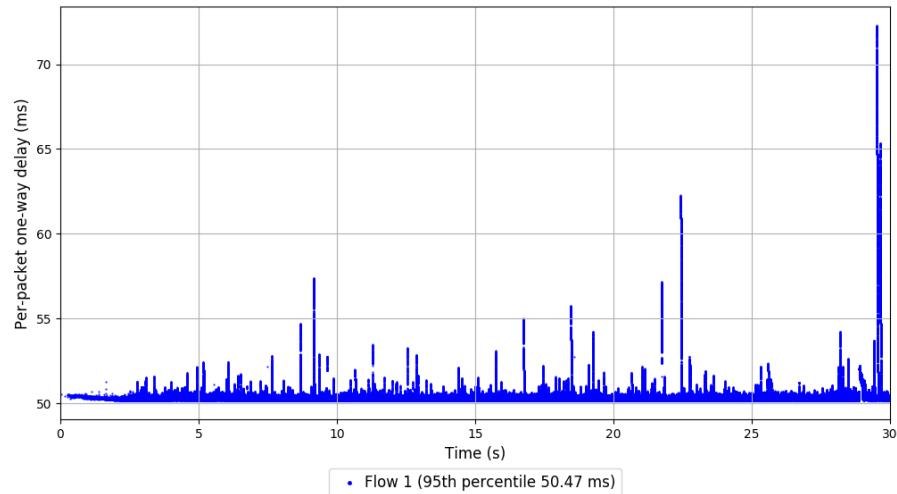
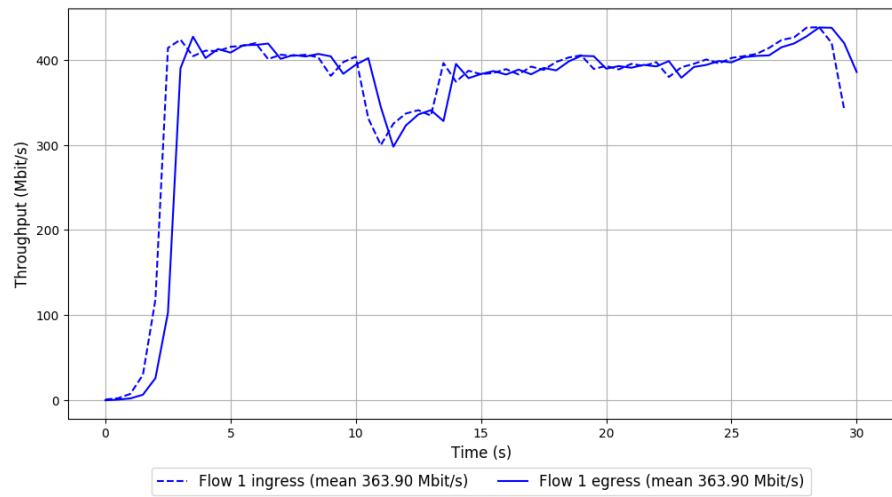


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-10-03 04:08:57
End at: 2018-10-03 04:09:27
Local clock offset: -0.246 ms
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2018-10-03 06:27:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 363.90 Mbit/s
95th percentile per-packet one-way delay: 50.465 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 363.90 Mbit/s
95th percentile per-packet one-way delay: 50.465 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Vivace — Data Link

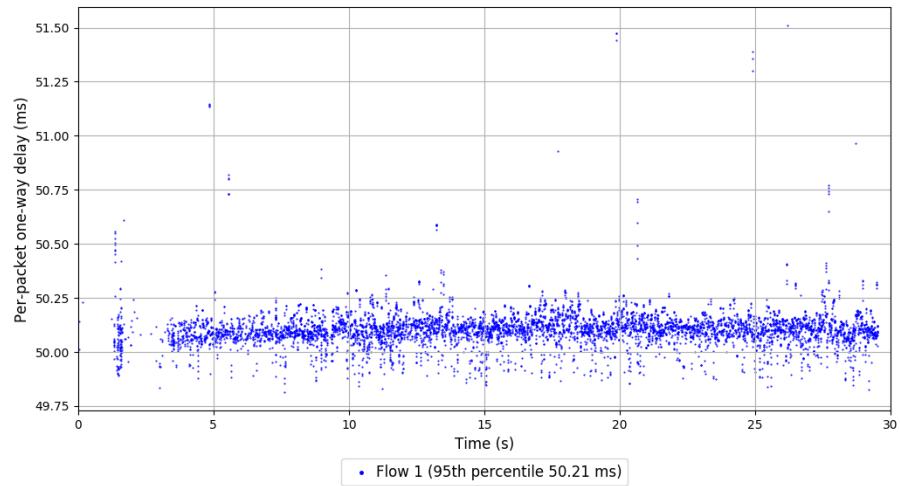
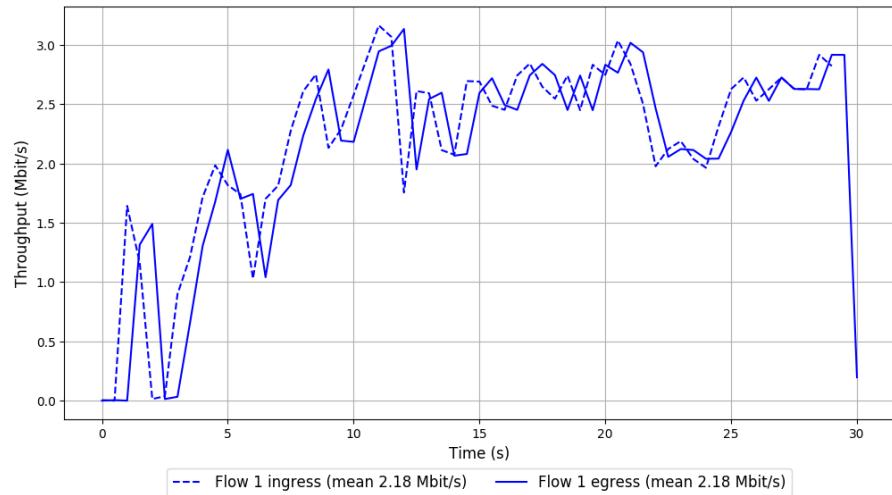


Run 1: Statistics of WebRTC media

```
Start at: 2018-10-03 02:23:59
End at: 2018-10-03 02:24:29
Local clock offset: 0.046 ms
Remote clock offset: -0.364 ms

# Below is generated by plot.py at 2018-10-03 06:27:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 50.208 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 50.208 ms
Loss rate: 0.00%
```

### Run 1: Report of WebRTC media — Data Link

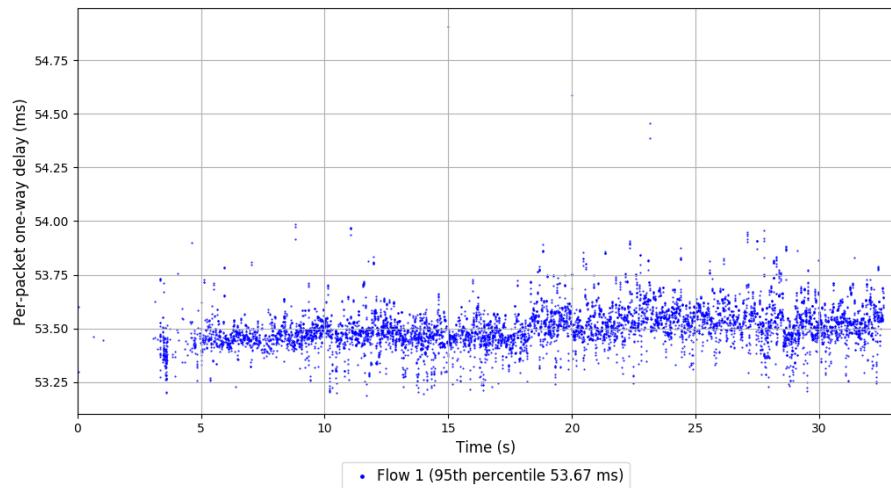
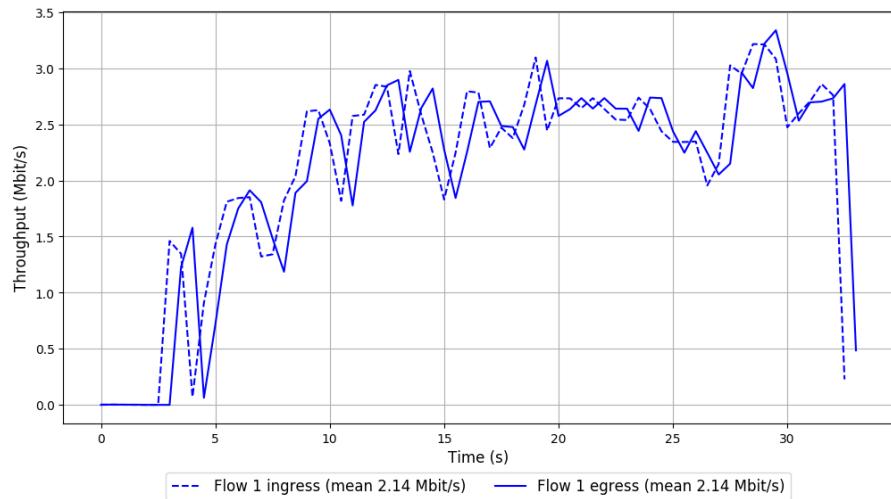


Run 2: Statistics of WebRTC media

```
Start at: 2018-10-03 02:49:14
End at: 2018-10-03 02:49:44
Local clock offset: -0.037 ms
Remote clock offset: -0.273 ms

# Below is generated by plot.py at 2018-10-03 06:27:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 53.668 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 53.668 ms
Loss rate: 0.00%
```

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

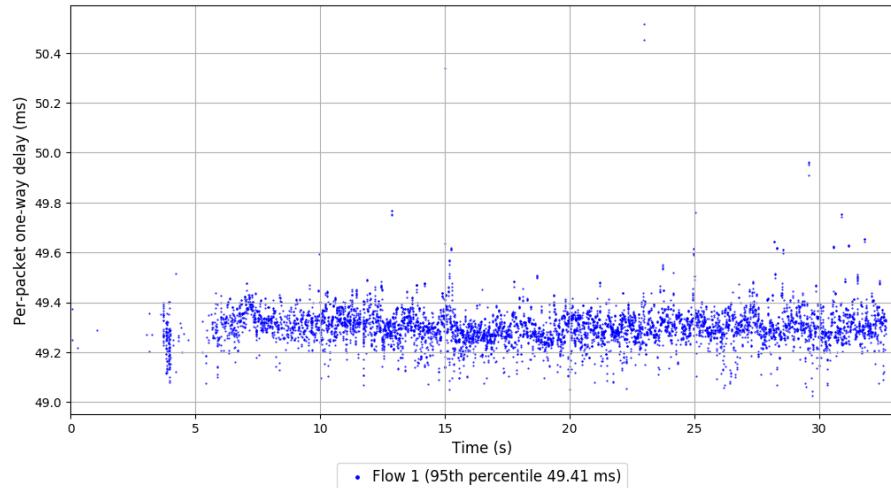
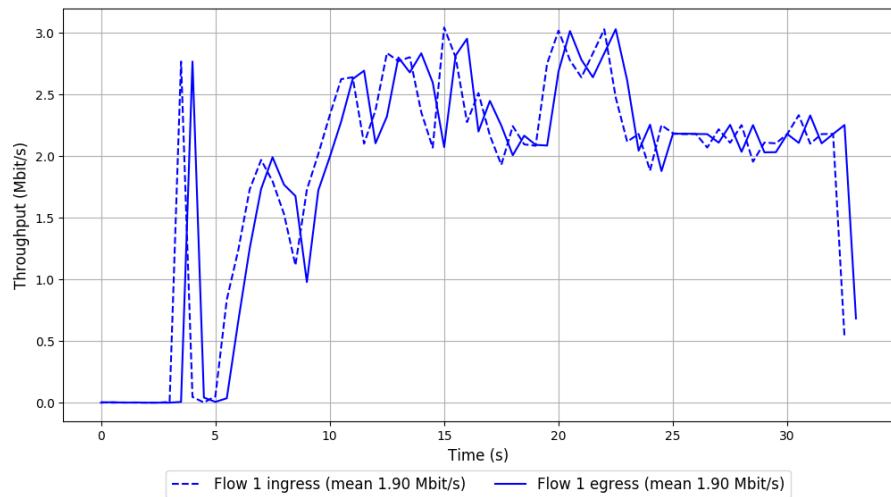


Run 3: Statistics of WebRTC media

```
Start at: 2018-10-03 03:14:50
End at: 2018-10-03 03:15:20
Local clock offset: -0.287 ms
Remote clock offset: -1.406 ms

# Below is generated by plot.py at 2018-10-03 06:27:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 49.409 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 49.409 ms
Loss rate: 0.00%
```

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

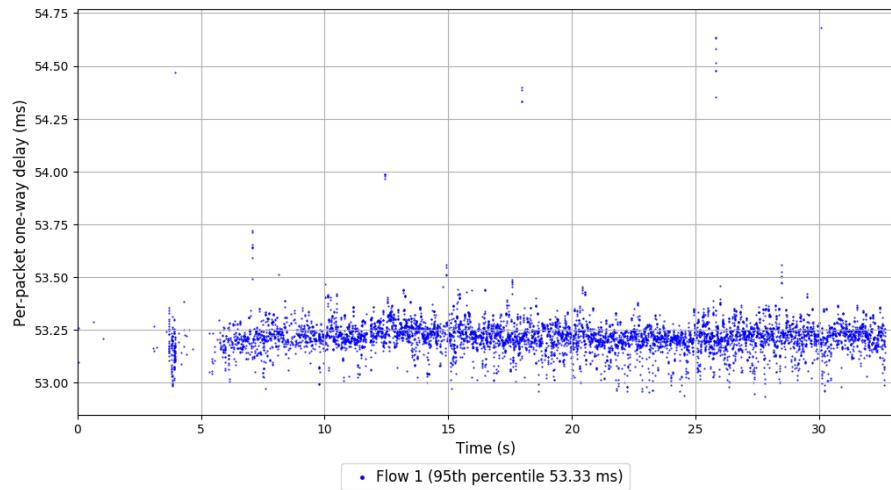
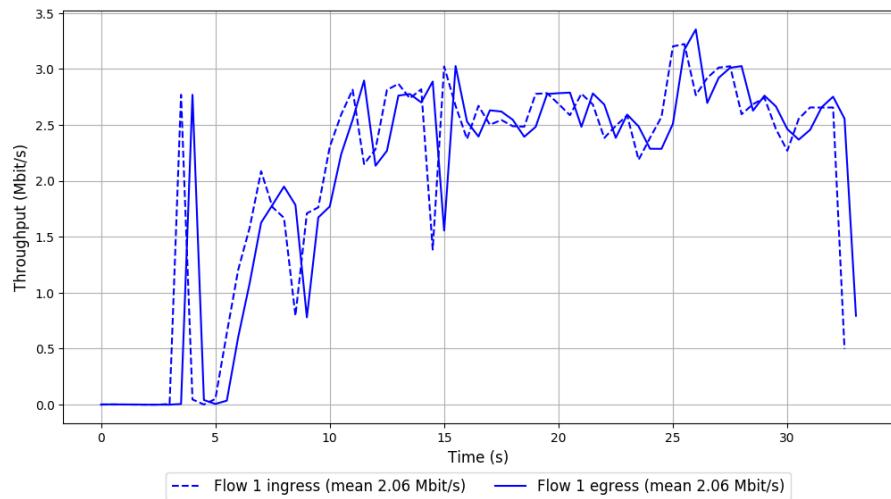


Run 4: Statistics of WebRTC media

```
Start at: 2018-10-03 03:40:22
End at: 2018-10-03 03:40:52
Local clock offset: -0.288 ms
Remote clock offset: -0.149 ms

# Below is generated by plot.py at 2018-10-03 06:27:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 53.327 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 53.327 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-10-03 04:06:14
End at: 2018-10-03 04:06:44
Local clock offset: -0.148 ms
Remote clock offset: -1.507 ms

# Below is generated by plot.py at 2018-10-03 06:27:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 49.002 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 49.002 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

