

## Pantheon Report

Generated at 2018-10-26 08:12:29 (UTC).  
Data path: India on `em1` (*remote*) → AWS India 1 on `ens5` (*local*).  
Repeated the test of 18 congestion control schemes 5 times.  
Each test lasted for 30 seconds running 1 flow.  
NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

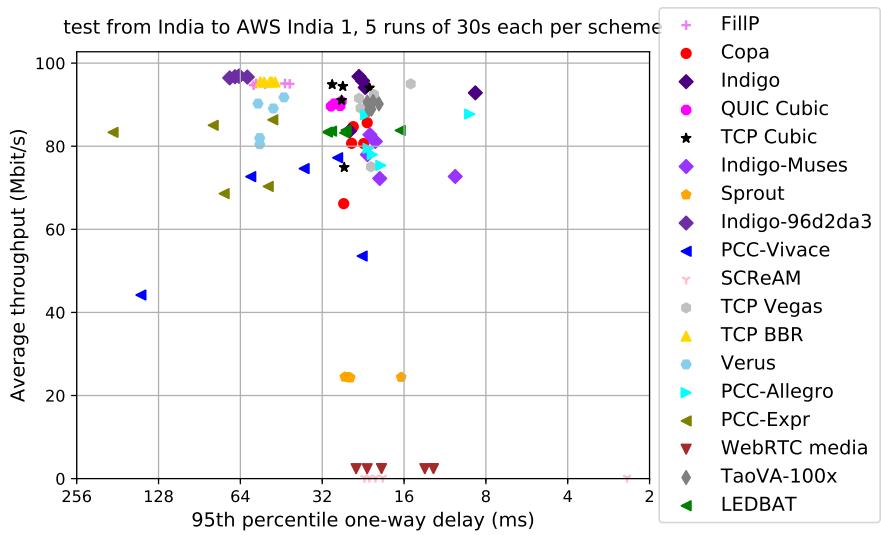
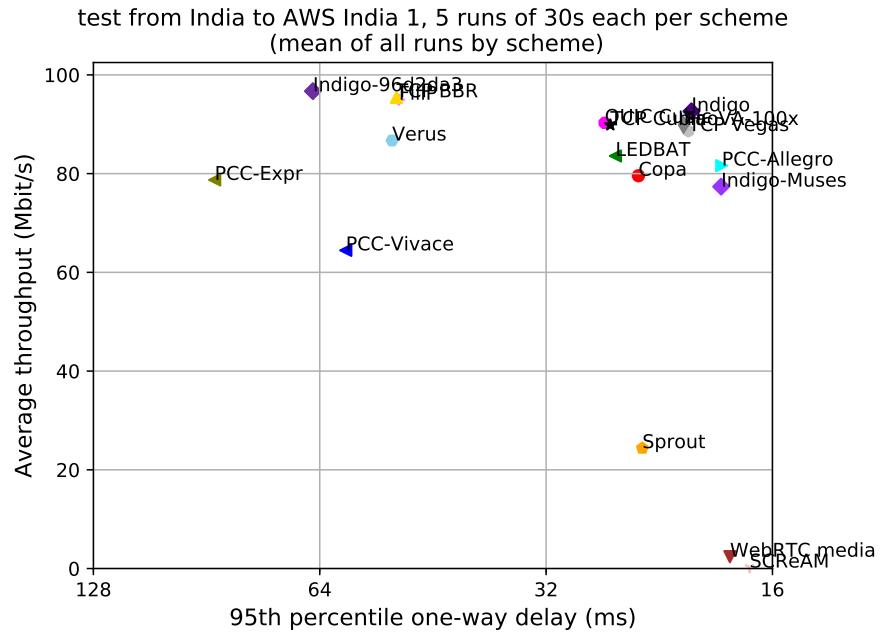
System info:

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

Git summary:

```
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
```

third\_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851



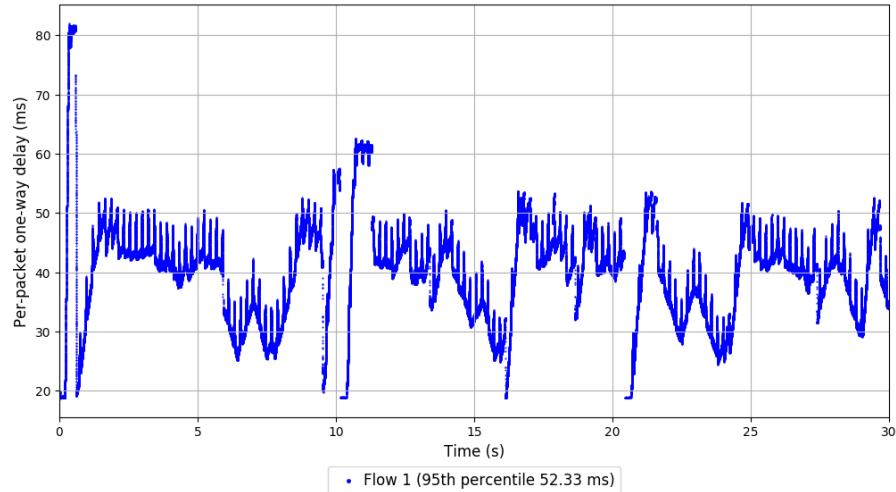
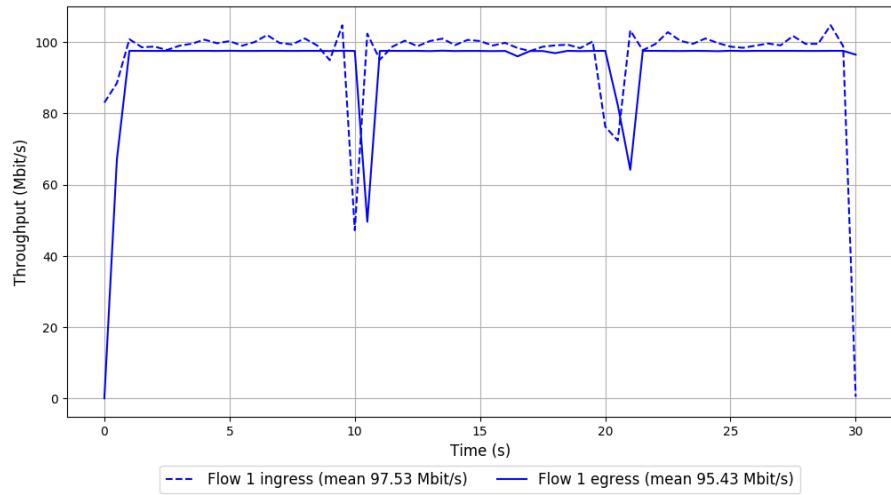
| scheme         | # runs | mean avg tput (Mbit/s)<br>flow 1 | mean 95th-%ile delay (ms)<br>flow 1 | mean loss rate (%)<br>flow 1 |
|----------------|--------|----------------------------------|-------------------------------------|------------------------------|
| TCP BBR        | 5      | 95.46                            | 50.60                               | 2.52                         |
| Copa           | 5      | 79.57                            | 24.12                               | 0.11                         |
| TCP Cubic      | 5      | 89.85                            | 26.29                               | 0.21                         |
| FillP          | 5      | 94.97                            | 50.23                               | 1.74                         |
| Indigo         | 5      | 92.63                            | 20.51                               | 0.15                         |
| Indigo-96d2da3 | 5      | 96.71                            | 65.35                               | 6.82                         |
| LEDBAT         | 5      | 83.58                            | 25.88                               | 0.10                         |
| Indigo-Muses   | 5      | 77.36                            | 18.72                               | 0.10                         |
| PCC-Allegro    | 5      | 81.62                            | 18.69                               | 0.11                         |
| PCC-Expr       | 5      | 78.73                            | 88.29                               | 0.14                         |
| QUIC Cubic     | 5      | 90.28                            | 26.74                               | 0.14                         |
| SCReAM         | 5      | 0.20                             | 17.16                               | 0.13                         |
| Sprout         | 5      | 24.39                            | 23.83                               | 0.10                         |
| TaoVA-100x     | 5      | 89.85                            | 21.01                               | 0.09                         |
| TCP Vegas      | 5      | 88.63                            | 20.70                               | 0.12                         |
| Verus          | 5      | 86.71                            | 51.29                               | 0.44                         |
| PCC-Vivace     | 5      | 64.45                            | 59.10                               | 0.20                         |
| WebRTC media   | 5      | 2.39                             | 18.23                               | 0.07                         |

Run 1: Statistics of TCP BBR

```
Start at: 2018-10-26 06:16:07
End at: 2018-10-26 06:16:37
Local clock offset: -0.245 ms
Remote clock offset: -5.04 ms

# Below is generated by plot.py at 2018-10-26 08:01:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.43 Mbit/s
95th percentile per-packet one-way delay: 52.328 ms
Loss rate: 2.24%
-- Flow 1:
Average throughput: 95.43 Mbit/s
95th percentile per-packet one-way delay: 52.328 ms
Loss rate: 2.24%
```

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

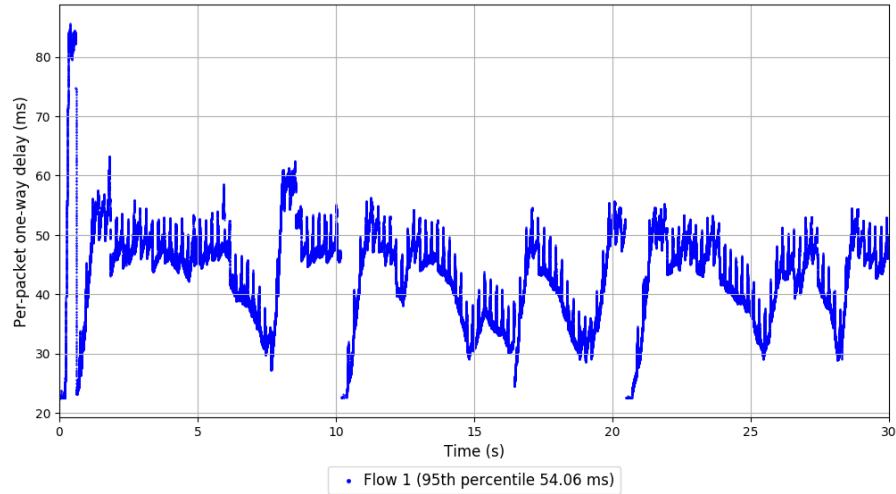
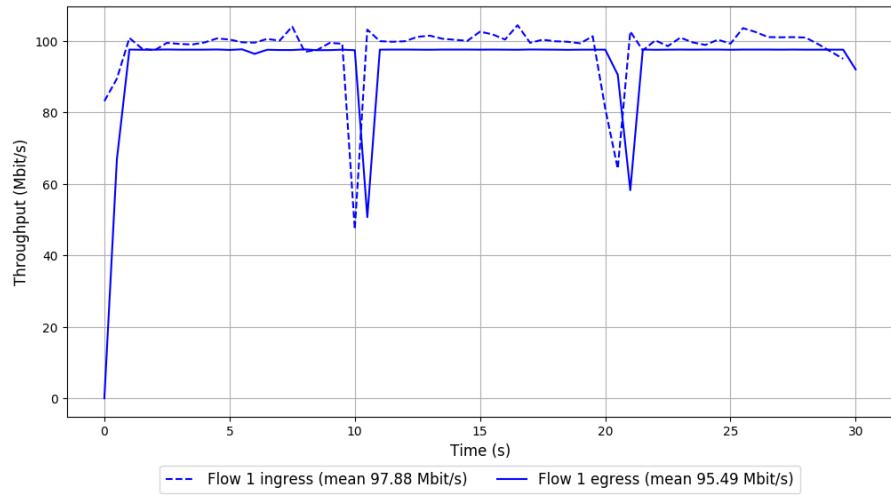


Run 2: Statistics of TCP BBR

```
Start at: 2018-10-26 06:38:48
End at: 2018-10-26 06:39:18
Local clock offset: 4.167 ms
Remote clock offset: -5.428 ms

# Below is generated by plot.py at 2018-10-26 08:01:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.49 Mbit/s
95th percentile per-packet one-way delay: 54.056 ms
Loss rate: 2.53%
-- Flow 1:
Average throughput: 95.49 Mbit/s
95th percentile per-packet one-way delay: 54.056 ms
Loss rate: 2.53%
```

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

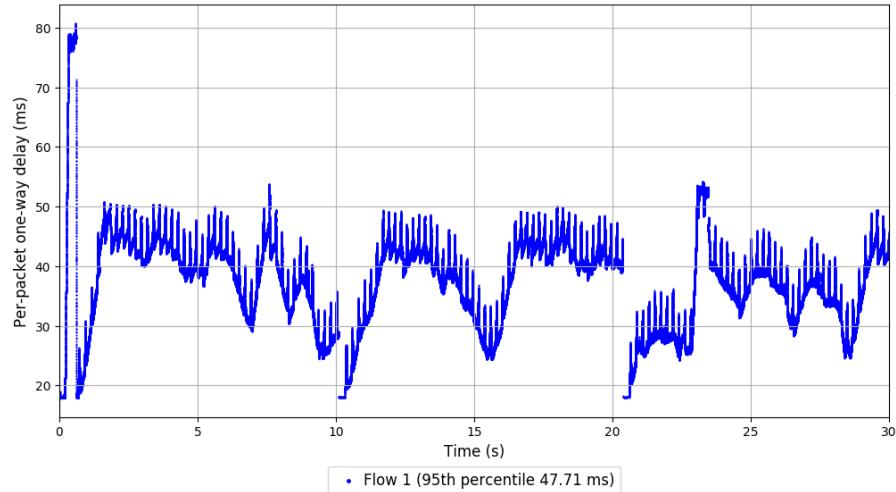
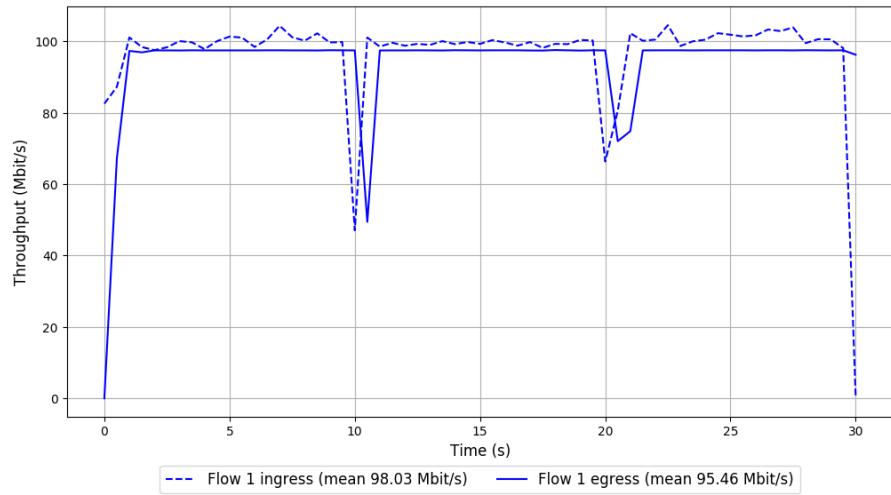


Run 3: Statistics of TCP BBR

```
Start at: 2018-10-26 07:01:20
End at: 2018-10-26 07:01:50
Local clock offset: 2.445 ms
Remote clock offset: -3.197 ms

# Below is generated by plot.py at 2018-10-26 08:01:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.46 Mbit/s
95th percentile per-packet one-way delay: 47.712 ms
Loss rate: 2.70%
-- Flow 1:
Average throughput: 95.46 Mbit/s
95th percentile per-packet one-way delay: 47.712 ms
Loss rate: 2.70%
```

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

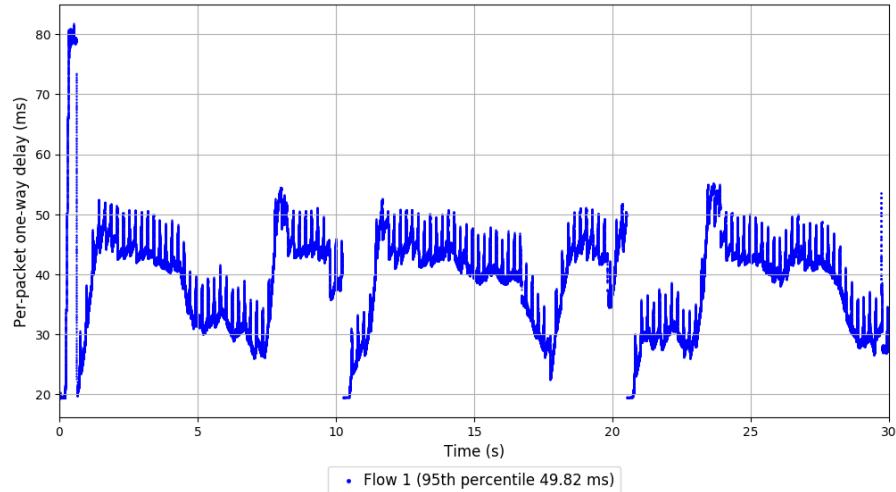
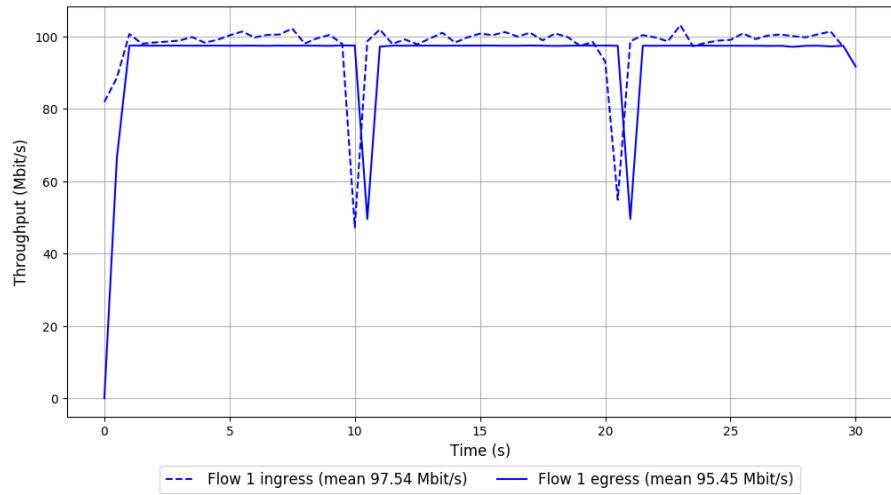


Run 4: Statistics of TCP BBR

```
Start at: 2018-10-26 07:23:04
End at: 2018-10-26 07:23:34
Local clock offset: 0.839 ms
Remote clock offset: -4.335 ms

# Below is generated by plot.py at 2018-10-26 08:01:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.45 Mbit/s
95th percentile per-packet one-way delay: 49.816 ms
Loss rate: 2.24%
-- Flow 1:
Average throughput: 95.45 Mbit/s
95th percentile per-packet one-way delay: 49.816 ms
Loss rate: 2.24%
```

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

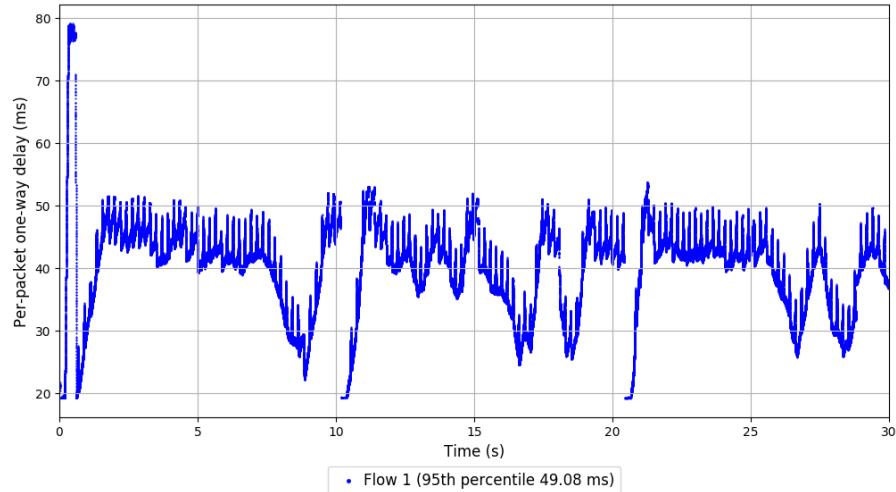
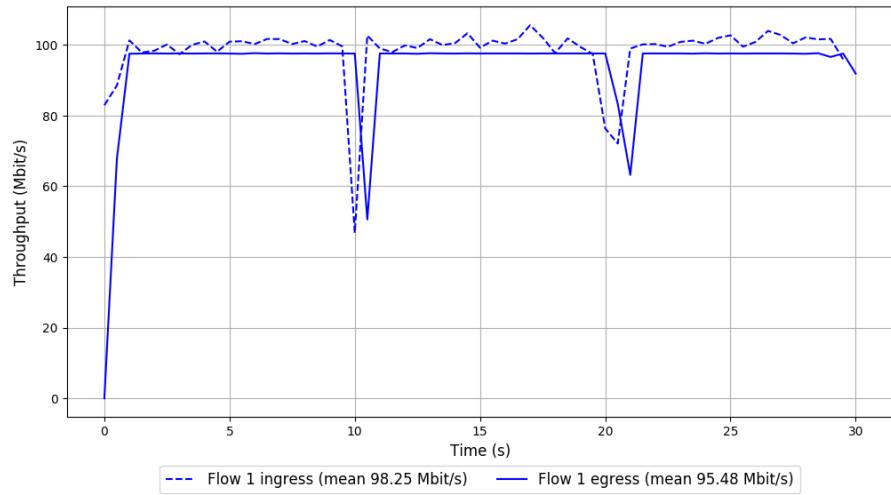


Run 5: Statistics of TCP BBR

```
Start at: 2018-10-26 07:44:20
End at: 2018-10-26 07:44:50
Local clock offset: 1.949 ms
Remote clock offset: -4.042 ms

# Below is generated by plot.py at 2018-10-26 08:01:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.48 Mbit/s
95th percentile per-packet one-way delay: 49.080 ms
Loss rate: 2.90%
-- Flow 1:
Average throughput: 95.48 Mbit/s
95th percentile per-packet one-way delay: 49.080 ms
Loss rate: 2.90%
```

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

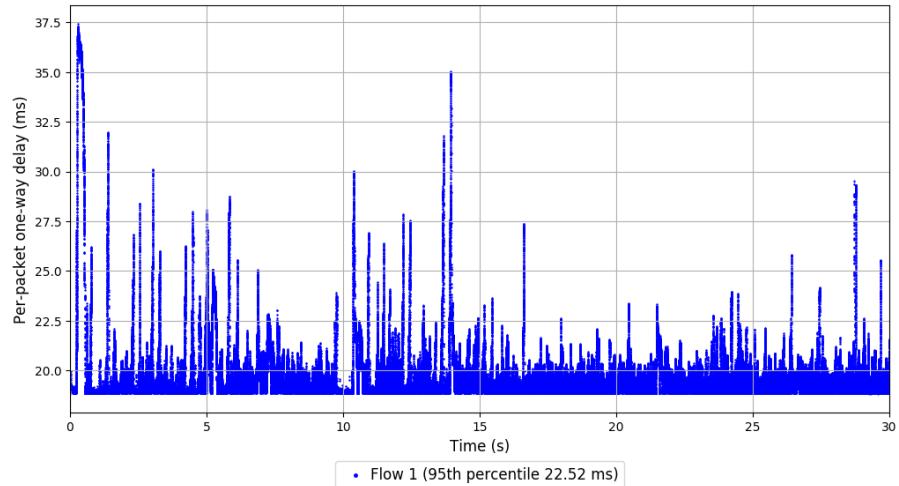
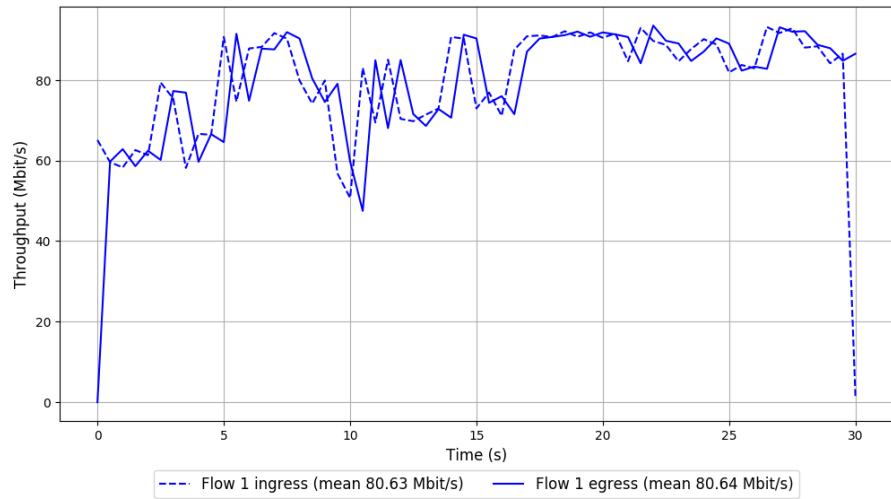


Run 1: Statistics of Copa

```
Start at: 2018-10-26 06:18:47
End at: 2018-10-26 06:19:17
Local clock offset: -0.309 ms
Remote clock offset: -5.168 ms

# Below is generated by plot.py at 2018-10-26 08:02:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.64 Mbit/s
95th percentile per-packet one-way delay: 22.516 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 80.64 Mbit/s
95th percentile per-packet one-way delay: 22.516 ms
Loss rate: 0.09%
```

### Run 1: Report of Copa — Data Link

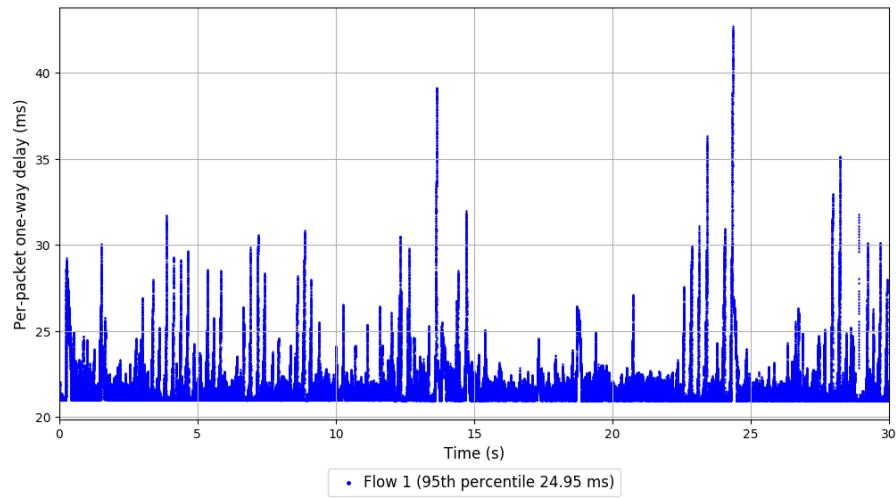
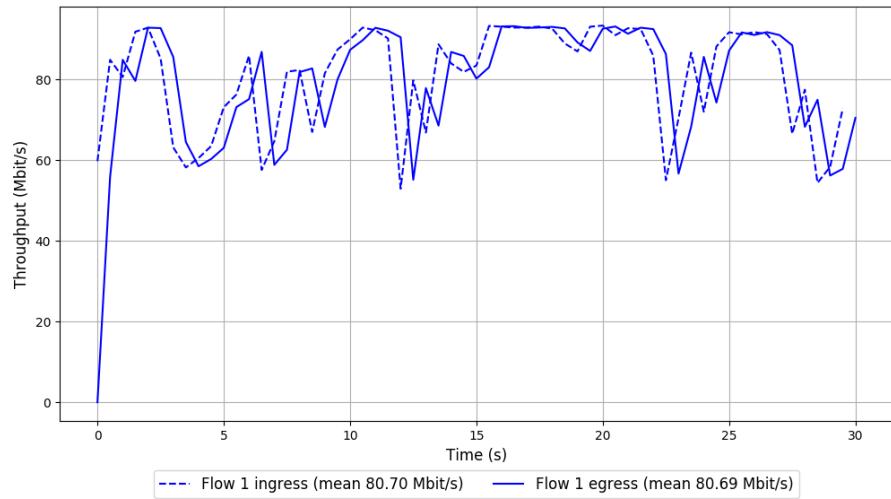


Run 2: Statistics of Copa

```
Start at: 2018-10-26 06:41:24
End at: 2018-10-26 06:41:54
Local clock offset: 2.73 ms
Remote clock offset: -5.573 ms

# Below is generated by plot.py at 2018-10-26 08:02:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.69 Mbit/s
95th percentile per-packet one-way delay: 24.947 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 80.69 Mbit/s
95th percentile per-packet one-way delay: 24.947 ms
Loss rate: 0.10%
```

## Run 2: Report of Copa — Data Link

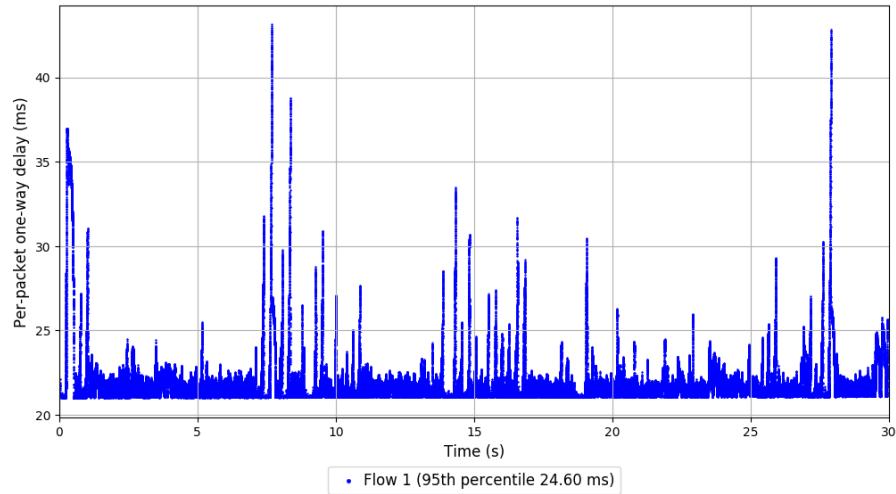
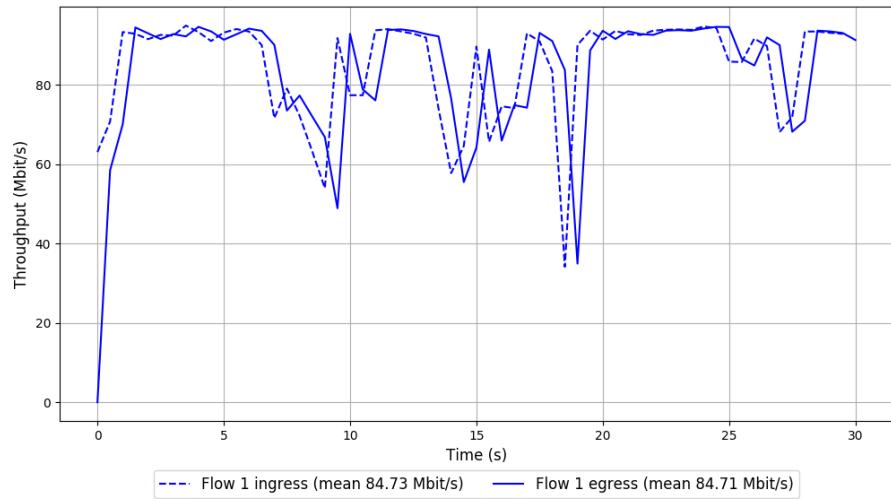


Run 3: Statistics of Copa

```
Start at: 2018-10-26 07:03:51
End at: 2018-10-26 07:04:21
Local clock offset: 4.452 ms
Remote clock offset: -3.844 ms

# Below is generated by plot.py at 2018-10-26 08:02:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.71 Mbit/s
95th percentile per-packet one-way delay: 24.599 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 84.71 Mbit/s
95th percentile per-packet one-way delay: 24.599 ms
Loss rate: 0.11%
```

### Run 3: Report of Copa — Data Link

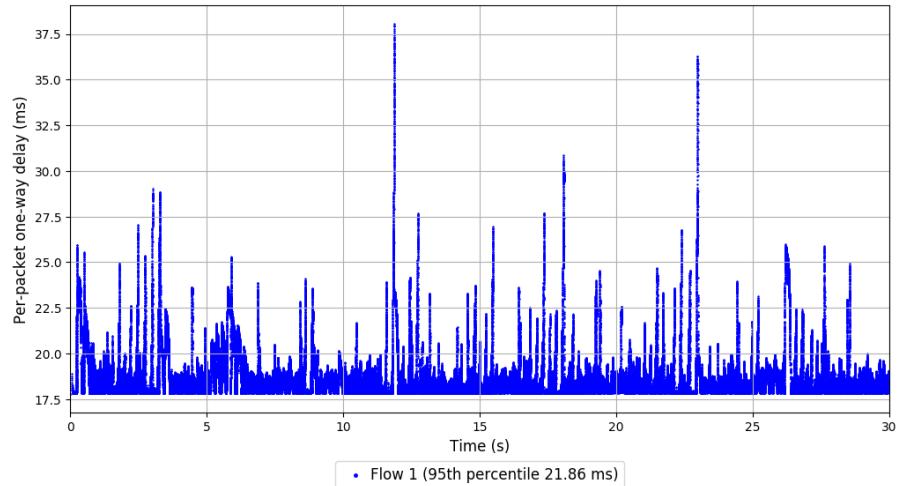
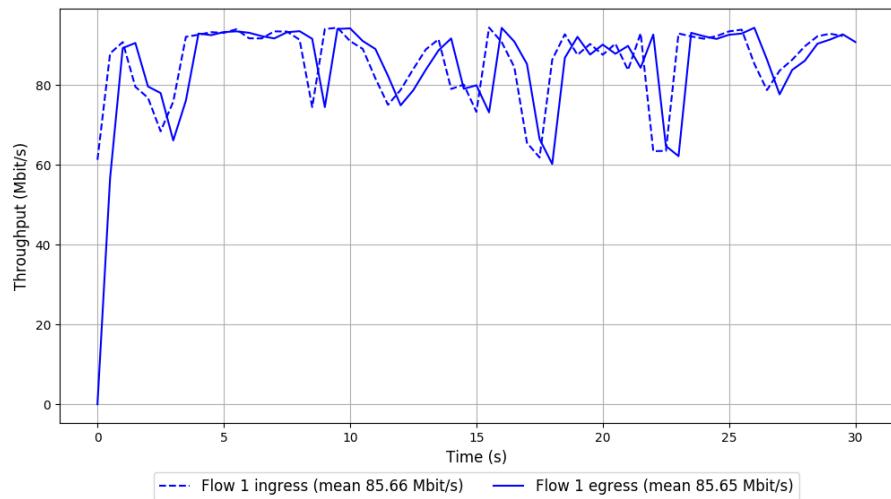


Run 4: Statistics of Copa

```
Start at: 2018-10-26 07:25:31
End at: 2018-10-26 07:26:01
Local clock offset: 0.363 ms
Remote clock offset: -3.169 ms

# Below is generated by plot.py at 2018-10-26 08:03:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.65 Mbit/s
95th percentile per-packet one-way delay: 21.860 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 85.65 Mbit/s
95th percentile per-packet one-way delay: 21.860 ms
Loss rate: 0.10%
```

### Run 4: Report of Copa — Data Link

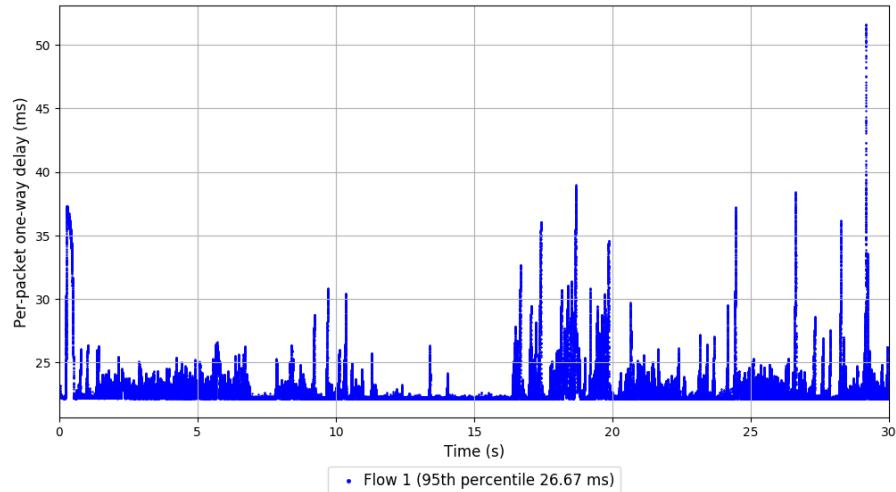
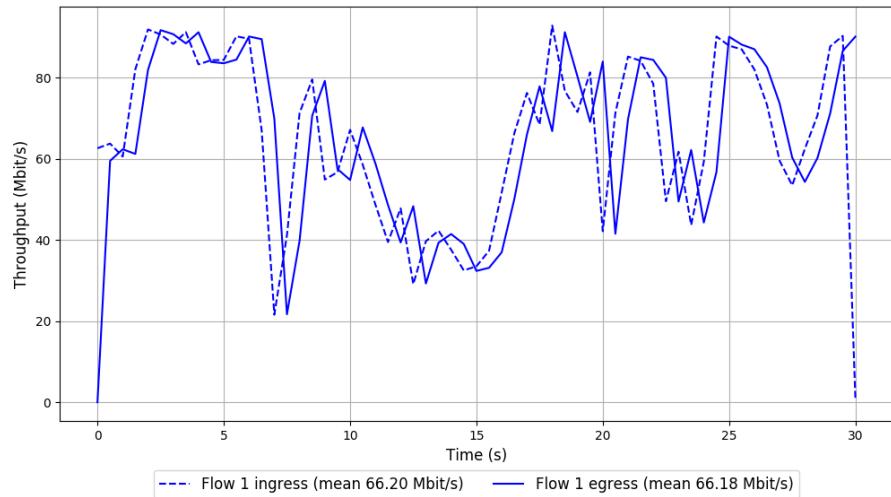


Run 5: Statistics of Copa

```
Start at: 2018-10-26 07:47:00
End at: 2018-10-26 07:47:30
Local clock offset: 3.517 ms
Remote clock offset: -5.517 ms

# Below is generated by plot.py at 2018-10-26 08:03:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.18 Mbit/s
95th percentile per-packet one-way delay: 26.673 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 66.18 Mbit/s
95th percentile per-packet one-way delay: 26.673 ms
Loss rate: 0.13%
```

### Run 5: Report of Copa — Data Link

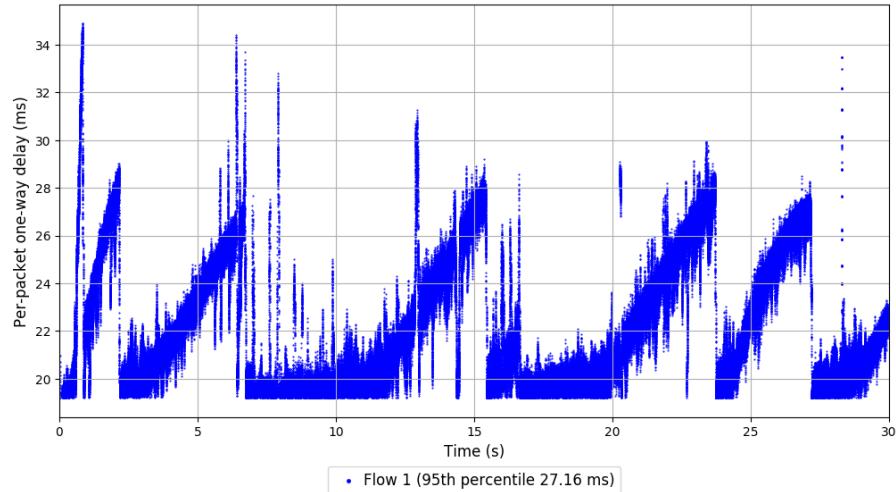
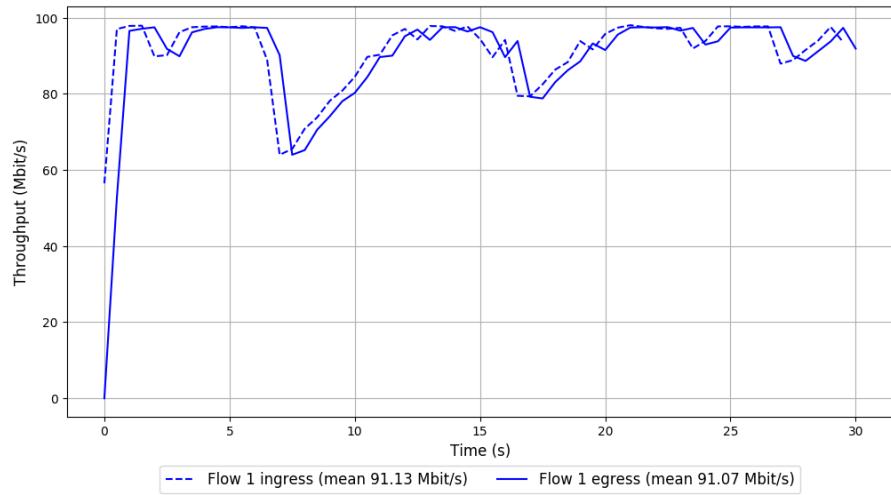


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-10-26 06:21:21
End at: 2018-10-26 06:21:51
Local clock offset: 0.583 ms
Remote clock offset: -4.724 ms

# Below is generated by plot.py at 2018-10-26 08:03:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.07 Mbit/s
95th percentile per-packet one-way delay: 27.155 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 91.07 Mbit/s
95th percentile per-packet one-way delay: 27.155 ms
Loss rate: 0.15%
```

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

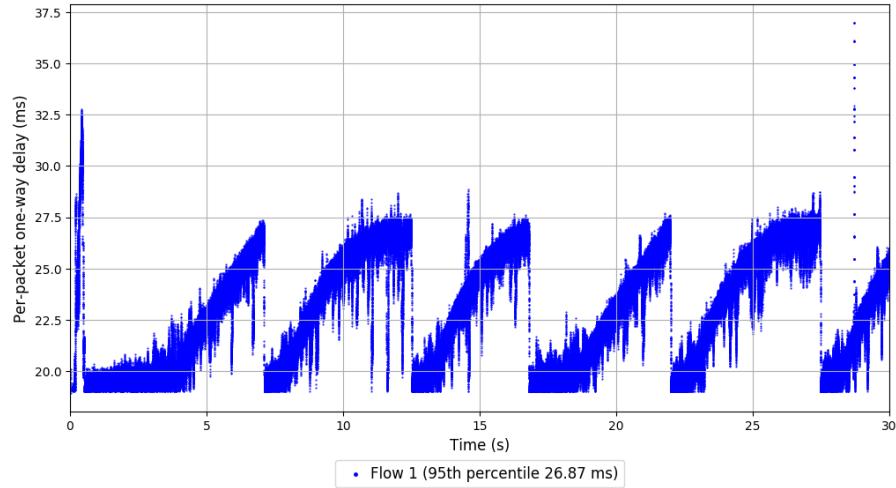
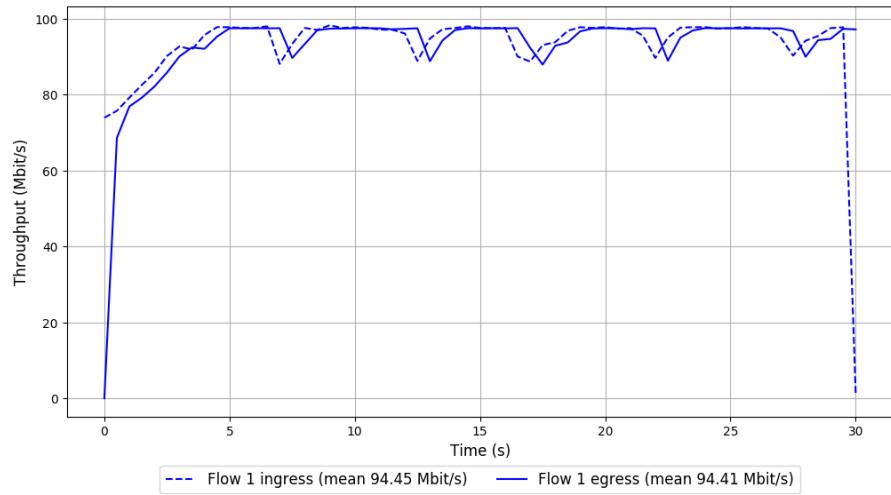


Run 2: Statistics of TCP Cubic

```
Start at: 2018-10-26 06:44:03
End at: 2018-10-26 06:44:33
Local clock offset: 2.239 ms
Remote clock offset: -4.257 ms

# Below is generated by plot.py at 2018-10-26 08:03:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.41 Mbit/s
95th percentile per-packet one-way delay: 26.874 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 94.41 Mbit/s
95th percentile per-packet one-way delay: 26.874 ms
Loss rate: 0.14%
```

Run 2: Report of TCP Cubic — Data Link

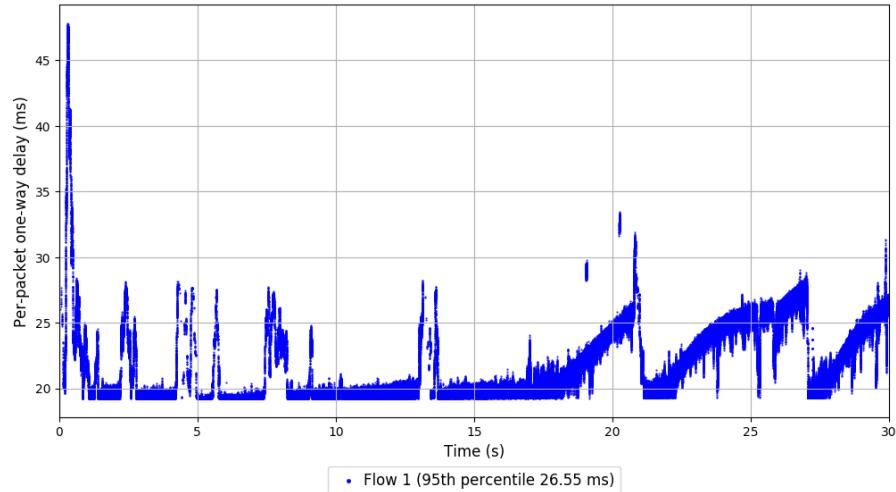
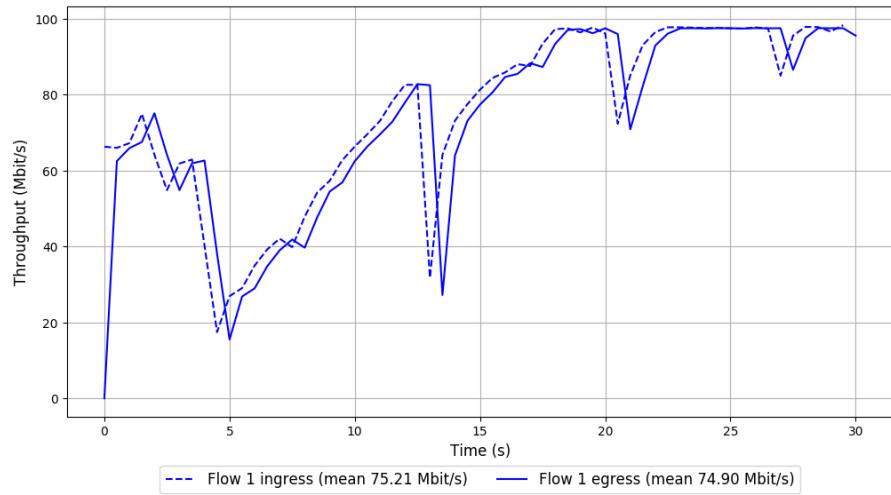


Run 3: Statistics of TCP Cubic

```
Start at: 2018-10-26 07:06:18
End at: 2018-10-26 07:06:48
Local clock offset: 1.88 ms
Remote clock offset: -4.279 ms

# Below is generated by plot.py at 2018-10-26 08:03:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.90 Mbit/s
95th percentile per-packet one-way delay: 26.553 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 74.90 Mbit/s
95th percentile per-packet one-way delay: 26.553 ms
Loss rate: 0.53%
```

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

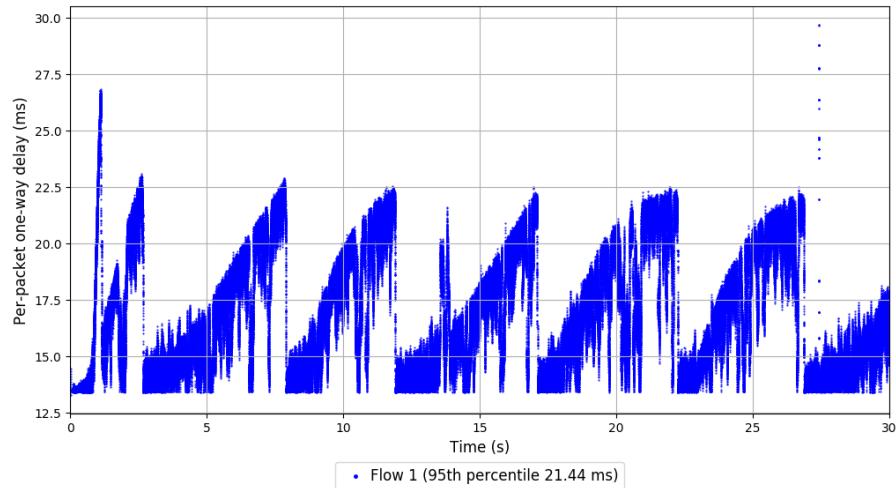
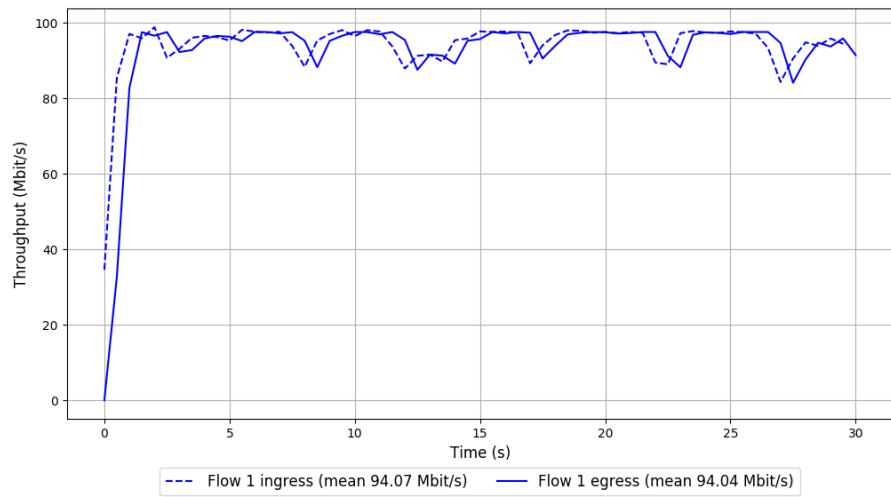


```
Run 4: Statistics of TCP Cubic
```

```
Start at: 2018-10-26 07:27:58
End at: 2018-10-26 07:28:28
Local clock offset: 3.97 ms
Remote clock offset: 4.881 ms

# Below is generated by plot.py at 2018-10-26 08:03:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.04 Mbit/s
95th percentile per-packet one-way delay: 21.440 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 94.04 Mbit/s
95th percentile per-packet one-way delay: 21.440 ms
Loss rate: 0.12%
```

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

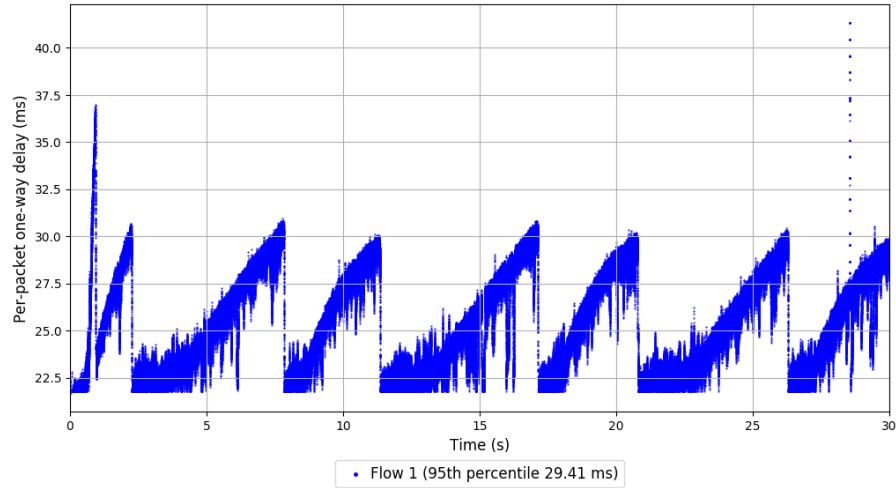
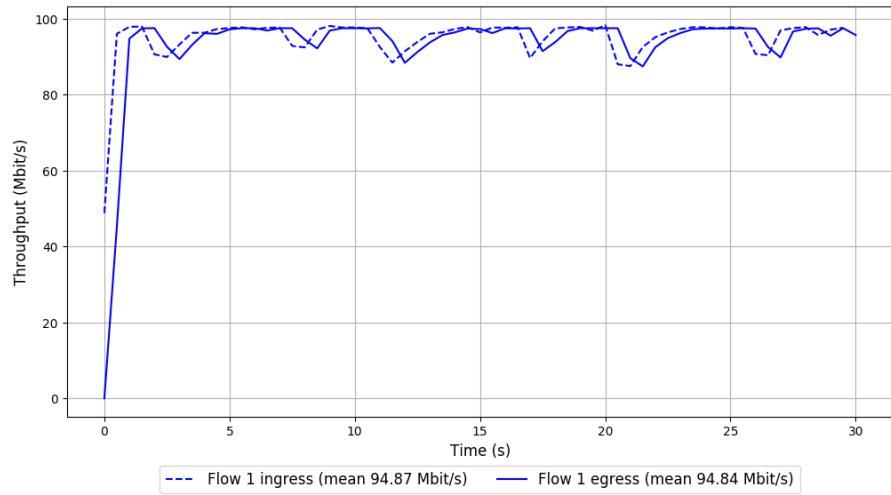


Run 5: Statistics of TCP Cubic

```
Start at: 2018-10-26 07:49:30
End at: 2018-10-26 07:50:00
Local clock offset: 4.202 ms
Remote clock offset: -4.48 ms

# Below is generated by plot.py at 2018-10-26 08:03:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.84 Mbit/s
95th percentile per-packet one-way delay: 29.409 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 94.84 Mbit/s
95th percentile per-packet one-way delay: 29.409 ms
Loss rate: 0.12%
```

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

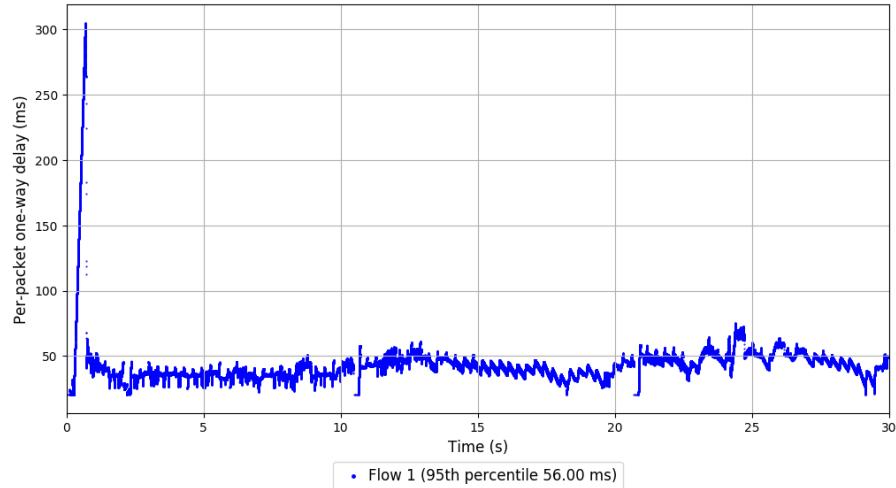
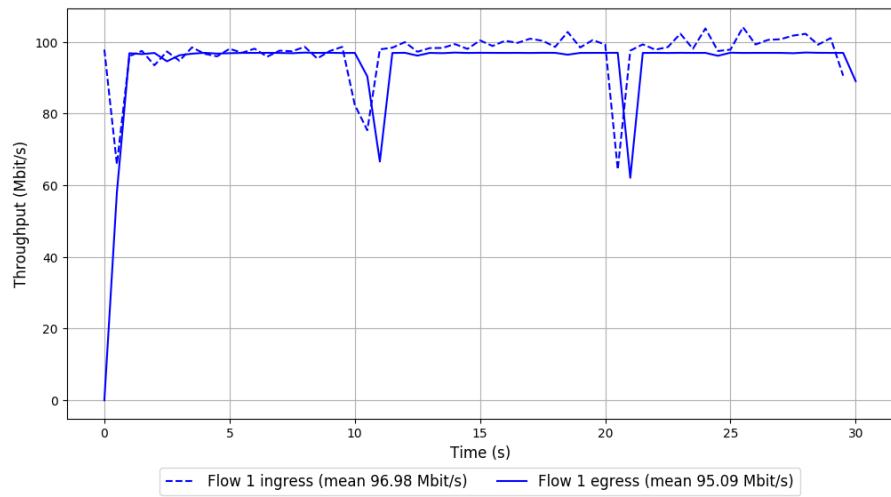


```
Run 1: Statistics of FillP

Start at: 2018-10-26 06:24:03
End at: 2018-10-26 06:24:33
Local clock offset: 1.947 ms
Remote clock offset: -4.81 ms

# Below is generated by plot.py at 2018-10-26 08:03:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.09 Mbit/s
95th percentile per-packet one-way delay: 56.004 ms
Loss rate: 2.04%
-- Flow 1:
Average throughput: 95.09 Mbit/s
95th percentile per-packet one-way delay: 56.004 ms
Loss rate: 2.04%
```

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

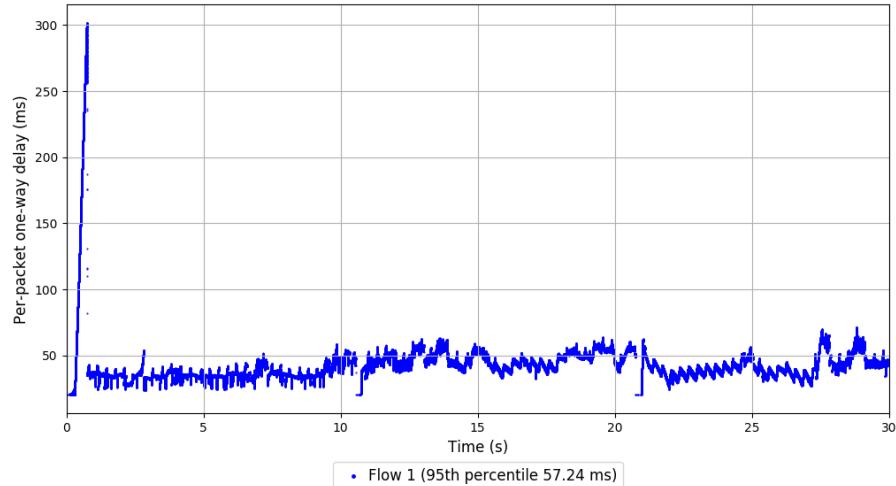
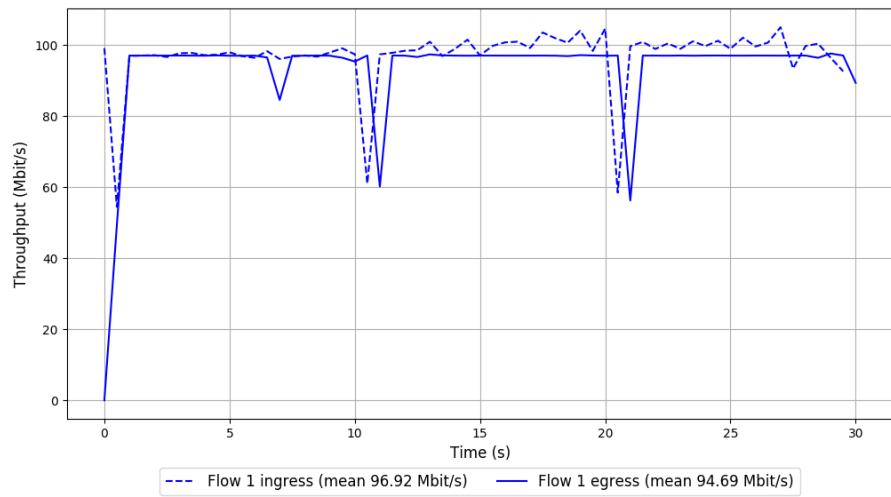


Run 2: Statistics of FillP

```
Start at: 2018-10-26 06:46:43
End at: 2018-10-26 06:47:13
Local clock offset: 2.702 ms
Remote clock offset: -5.106 ms

# Below is generated by plot.py at 2018-10-26 08:03:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.69 Mbit/s
95th percentile per-packet one-way delay: 57.243 ms
Loss rate: 2.39%
-- Flow 1:
Average throughput: 94.69 Mbit/s
95th percentile per-packet one-way delay: 57.243 ms
Loss rate: 2.39%
```

## Run 2: Report of FillP — Data Link

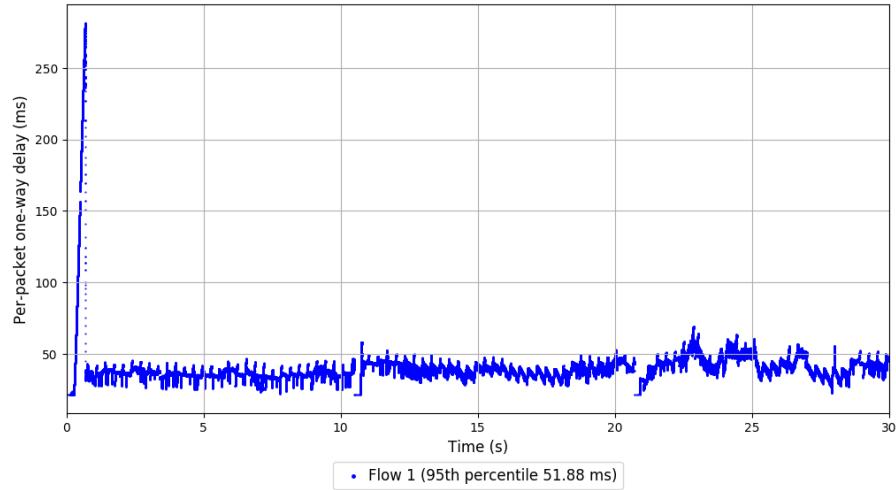
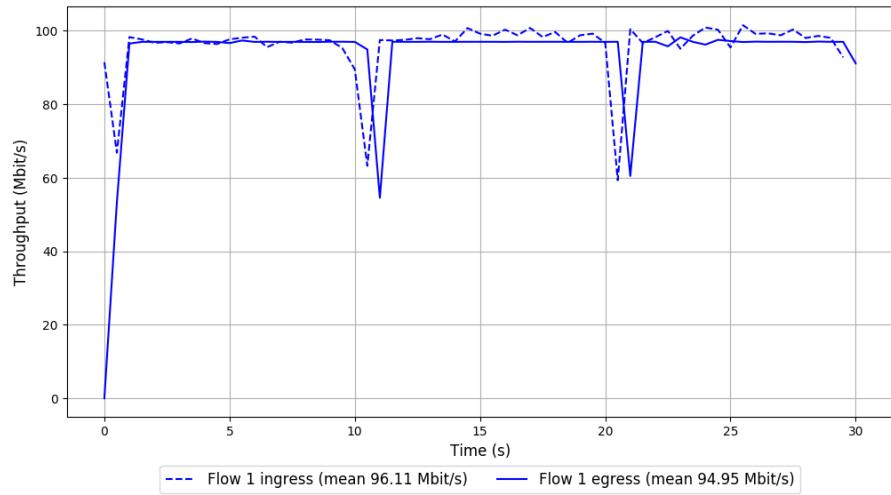


Run 3: Statistics of FillP

```
Start at: 2018-10-26 07:08:51
End at: 2018-10-26 07:09:21
Local clock offset: 4.139 ms
Remote clock offset: -4.1 ms

# Below is generated by plot.py at 2018-10-26 08:04:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.95 Mbit/s
95th percentile per-packet one-way delay: 51.879 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 94.95 Mbit/s
95th percentile per-packet one-way delay: 51.879 ms
Loss rate: 1.29%
```

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

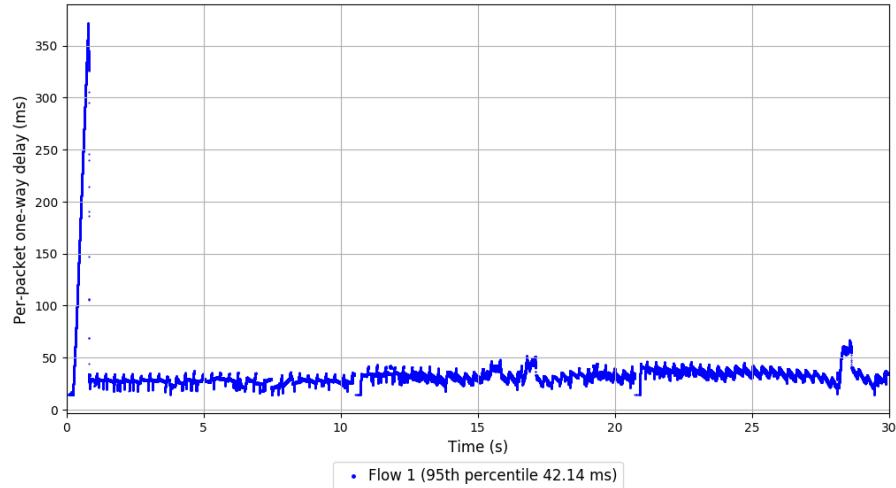
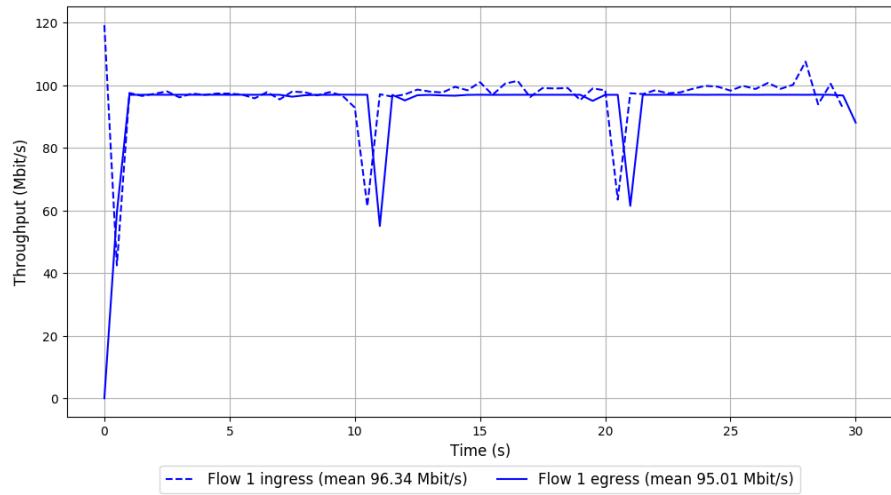


Run 4: Statistics of FillP

```
Start at: 2018-10-26 07:30:26
End at: 2018-10-26 07:30:56
Local clock offset: 3.12 ms
Remote clock offset: 3.176 ms

# Below is generated by plot.py at 2018-10-26 08:04:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 42.143 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 42.143 ms
Loss rate: 1.47%
```

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

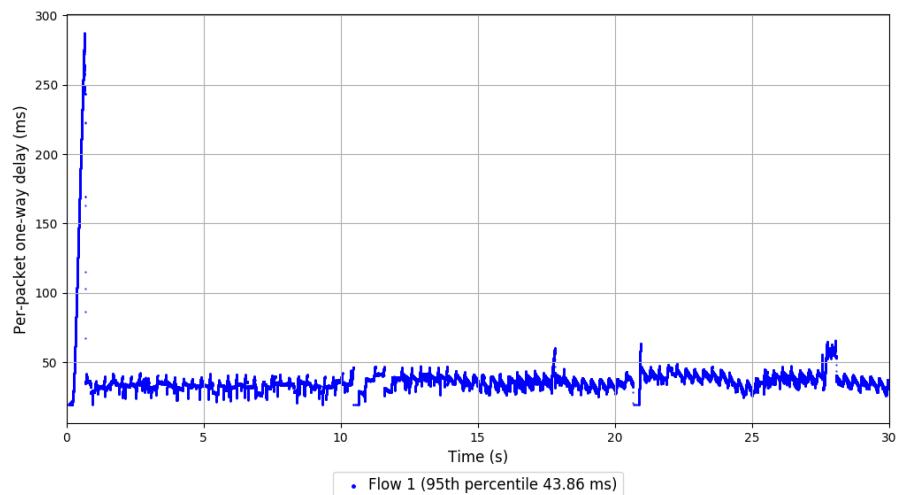
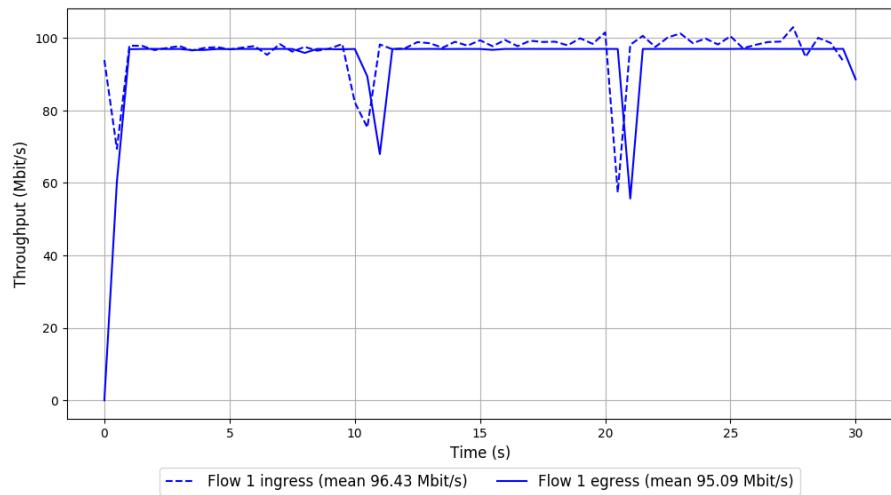


Run 5: Statistics of FillP

```
Start at: 2018-10-26 07:51:59
End at: 2018-10-26 07:52:29
Local clock offset: 1.713 ms
Remote clock offset: -4.606 ms

# Below is generated by plot.py at 2018-10-26 08:04:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.09 Mbit/s
95th percentile per-packet one-way delay: 43.863 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 95.09 Mbit/s
95th percentile per-packet one-way delay: 43.863 ms
Loss rate: 1.49%
```

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

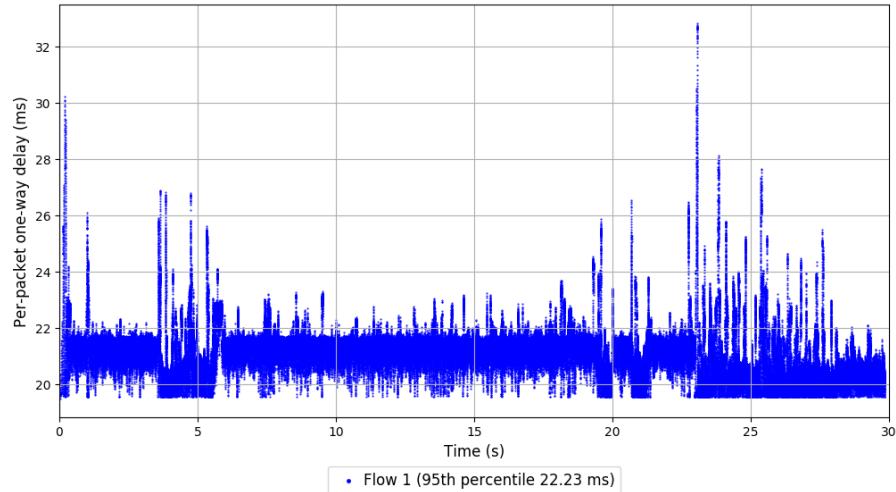
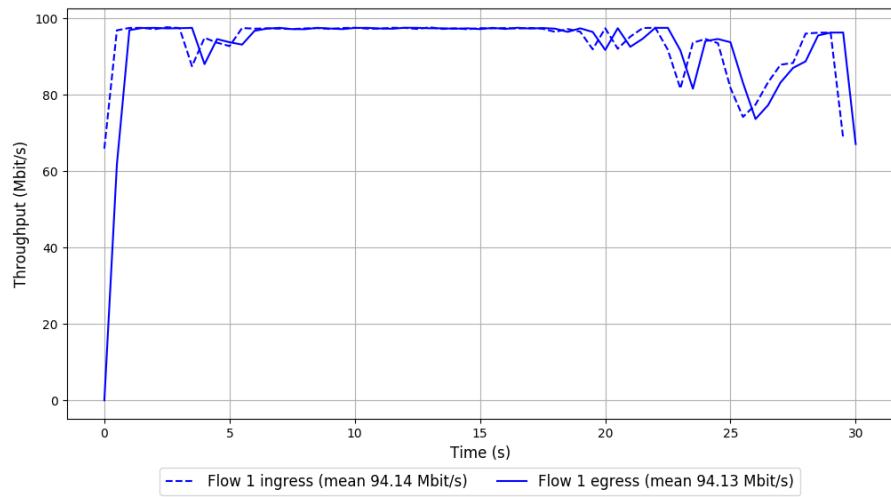


Run 1: Statistics of Indigo

```
Start at: 2018-10-26 06:30:20
End at: 2018-10-26 06:30:50
Local clock offset: 1.145 ms
Remote clock offset: -4.701 ms

# Below is generated by plot.py at 2018-10-26 08:04:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.13 Mbit/s
95th percentile per-packet one-way delay: 22.230 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 94.13 Mbit/s
95th percentile per-packet one-way delay: 22.230 ms
Loss rate: 0.10%
```

## Run 1: Report of Indigo — Data Link

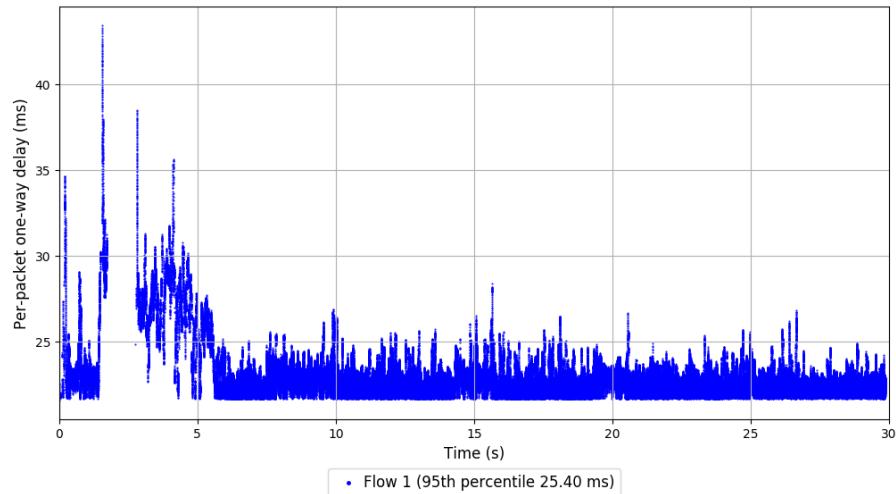
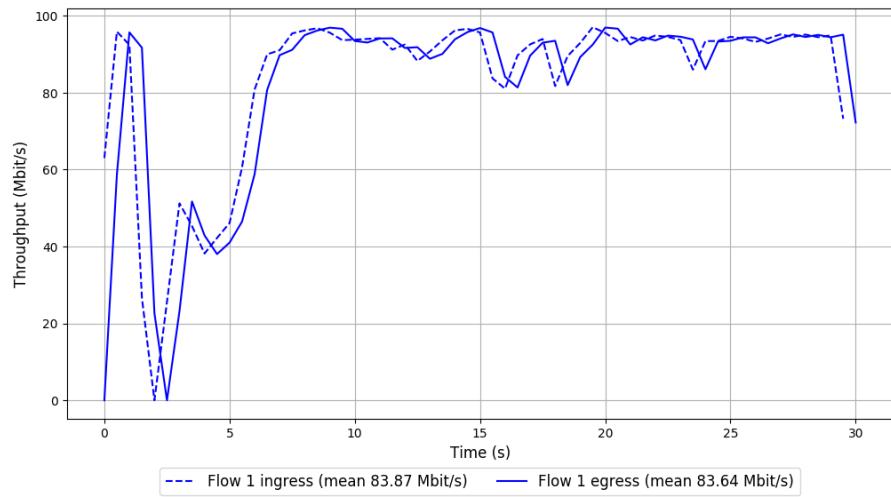


Run 2: Statistics of Indigo

```
Start at: 2018-10-26 06:52:43
End at: 2018-10-26 06:53:13
Local clock offset: 4.298 ms
Remote clock offset: -5.068 ms

# Below is generated by plot.py at 2018-10-26 08:04:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.64 Mbit/s
95th percentile per-packet one-way delay: 25.399 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 83.64 Mbit/s
95th percentile per-packet one-way delay: 25.399 ms
Loss rate: 0.36%
```

## Run 2: Report of Indigo — Data Link

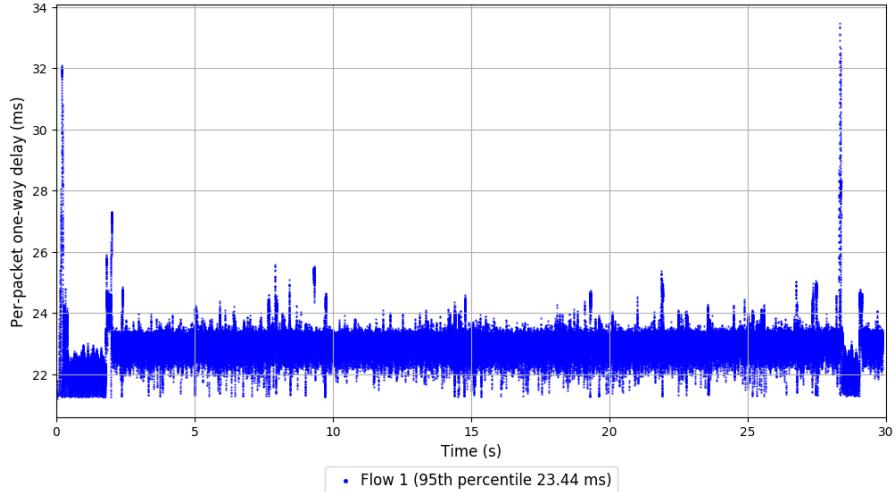
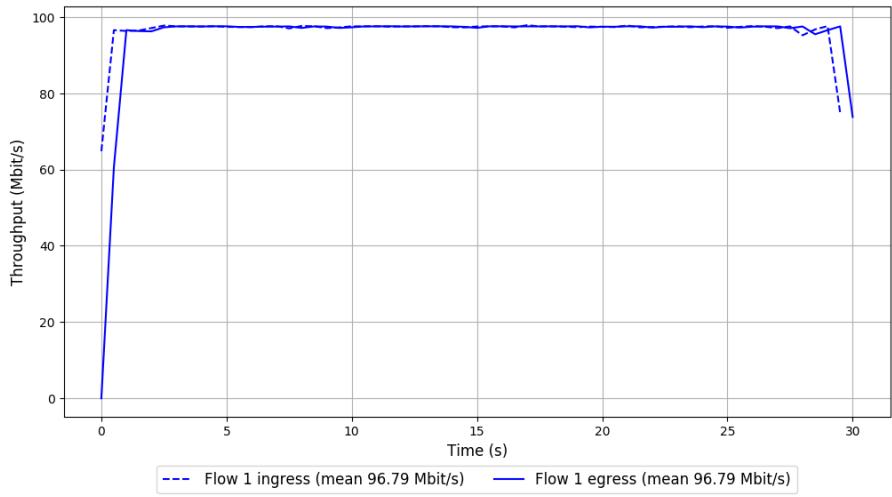


Run 3: Statistics of Indigo

```
Start at: 2018-10-26 07:14:49
End at: 2018-10-26 07:15:19
Local clock offset: 3.111 ms
Remote clock offset: -4.23 ms

# Below is generated by plot.py at 2018-10-26 08:04:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.79 Mbit/s
95th percentile per-packet one-way delay: 23.439 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 96.79 Mbit/s
95th percentile per-packet one-way delay: 23.439 ms
Loss rate: 0.10%
```

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

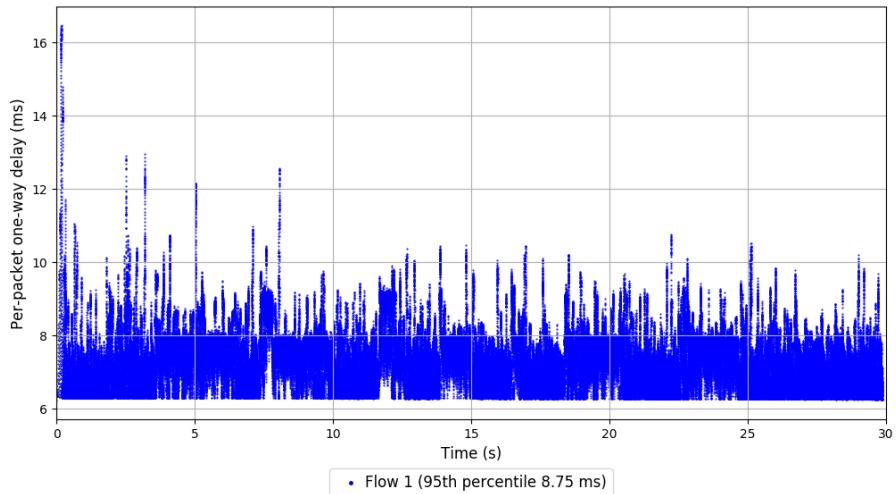
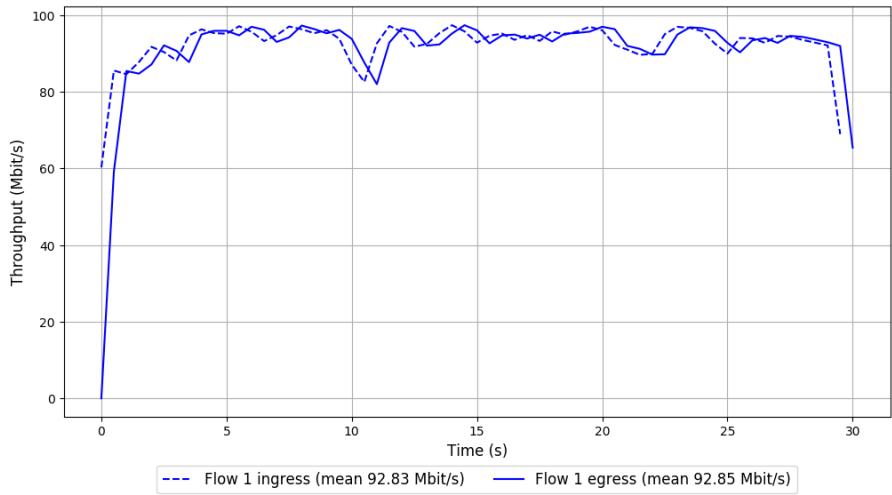


Run 4: Statistics of Indigo

```
Start at: 2018-10-26 07:36:12
End at: 2018-10-26 07:36:43
Local clock offset: 1.815 ms
Remote clock offset: 9.228 ms

# Below is generated by plot.py at 2018-10-26 08:04:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.85 Mbit/s
95th percentile per-packet one-way delay: 8.748 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 92.85 Mbit/s
95th percentile per-packet one-way delay: 8.748 ms
Loss rate: 0.09%
```

## Run 4: Report of Indigo — Data Link

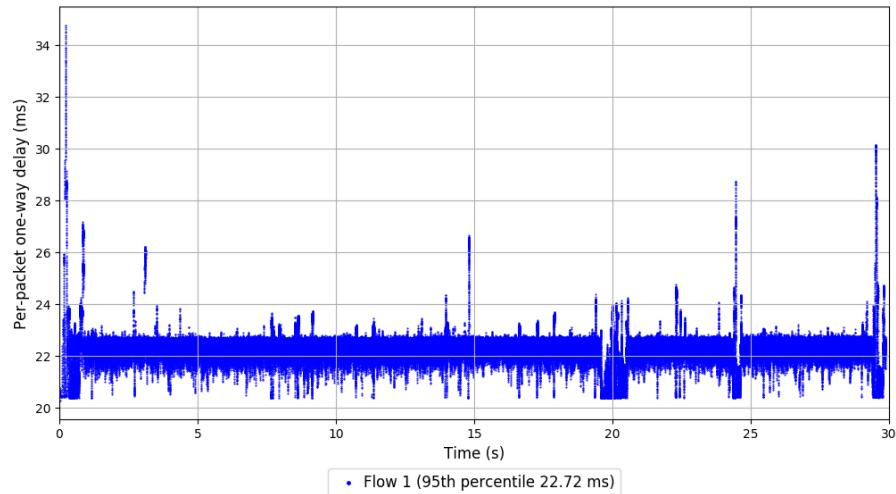
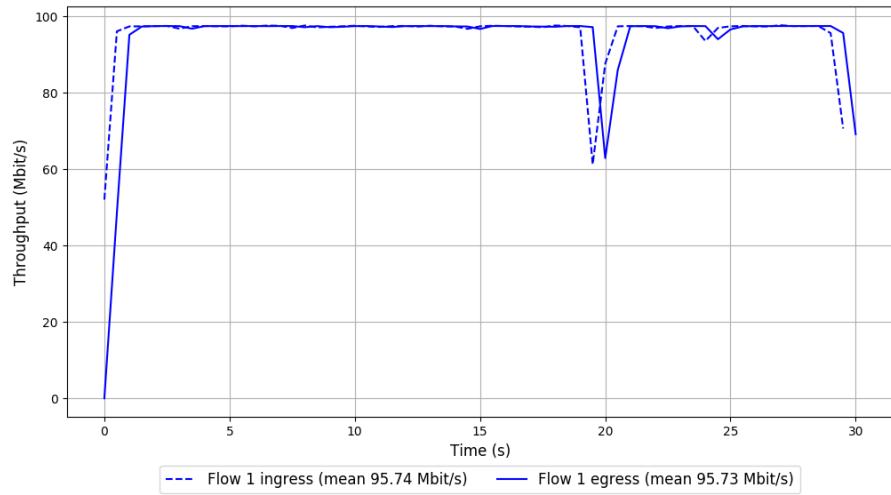


Run 5: Statistics of Indigo

```
Start at: 2018-10-26 07:57:55
End at: 2018-10-26 07:58:25
Local clock offset: 2.371 ms
Remote clock offset: -4.899 ms

# Below is generated by plot.py at 2018-10-26 08:05:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.73 Mbit/s
95th percentile per-packet one-way delay: 22.722 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 95.73 Mbit/s
95th percentile per-packet one-way delay: 22.722 ms
Loss rate: 0.10%
```

## Run 5: Report of Indigo — Data Link

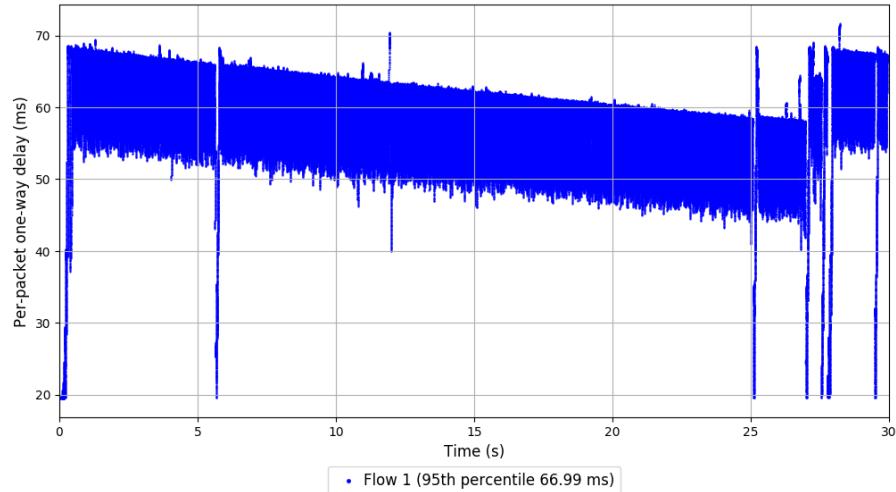
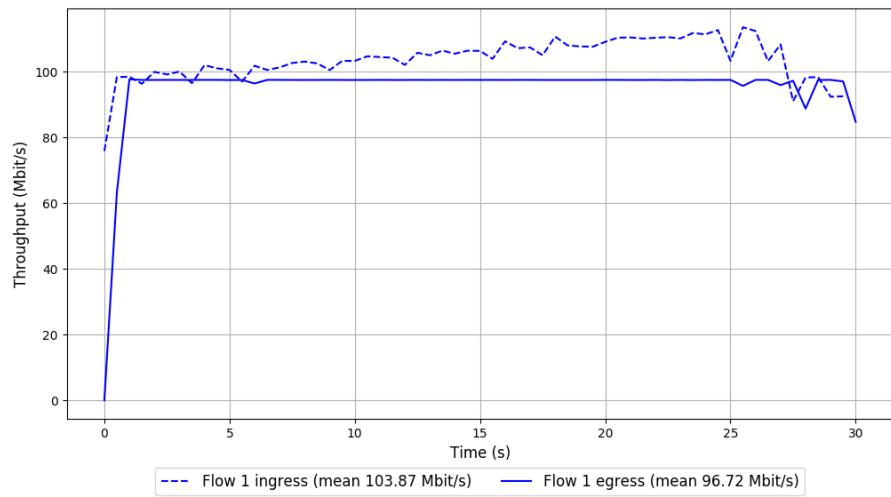


```
Run 1: Statistics of Indigo-96d2da3
```

```
Start at: 2018-10-26 06:26:36
End at: 2018-10-26 06:27:06
Local clock offset: 1.805 ms
Remote clock offset: -3.932 ms

# Below is generated by plot.py at 2018-10-26 08:05:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.72 Mbit/s
95th percentile per-packet one-way delay: 66.991 ms
Loss rate: 6.96%
-- Flow 1:
Average throughput: 96.72 Mbit/s
95th percentile per-packet one-way delay: 66.991 ms
Loss rate: 6.96%
```

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

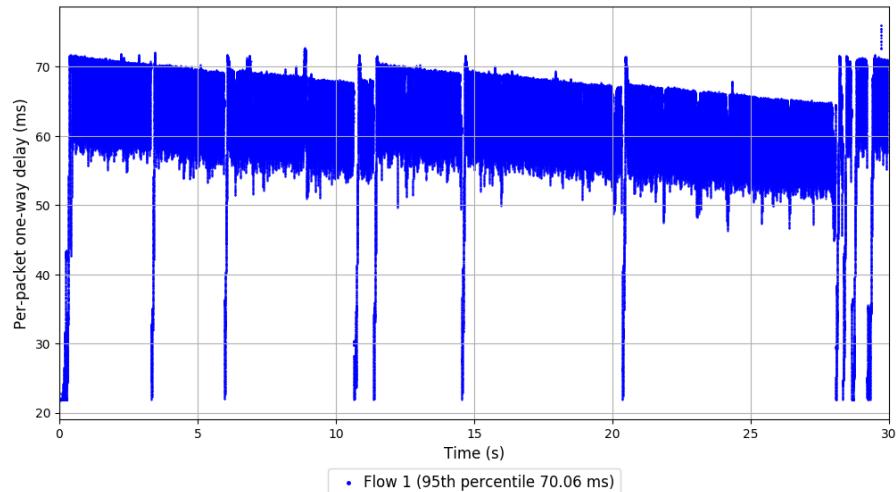
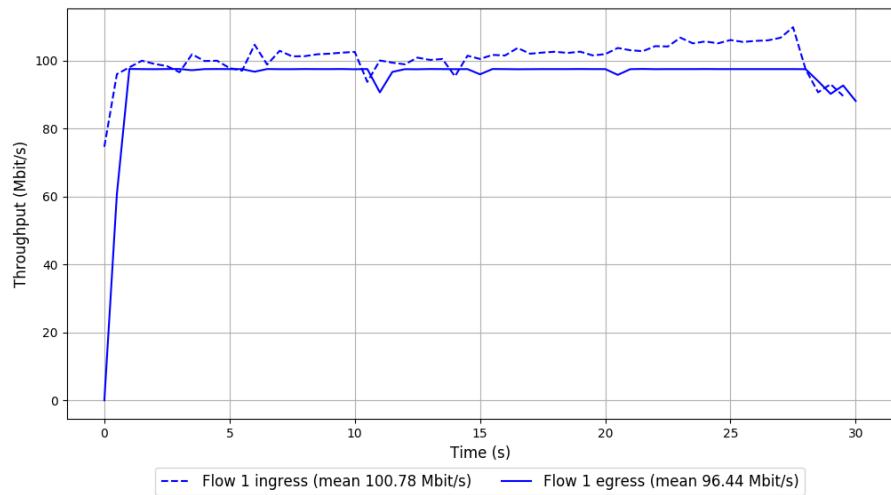


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 06:49:04
End at: 2018-10-26 06:49:34
Local clock offset: 4.069 ms
Remote clock offset: -5.43 ms

# Below is generated by plot.py at 2018-10-26 08:05:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.44 Mbit/s
95th percentile per-packet one-way delay: 70.060 ms
Loss rate: 4.39%
-- Flow 1:
Average throughput: 96.44 Mbit/s
95th percentile per-packet one-way delay: 70.060 ms
Loss rate: 4.39%
```

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

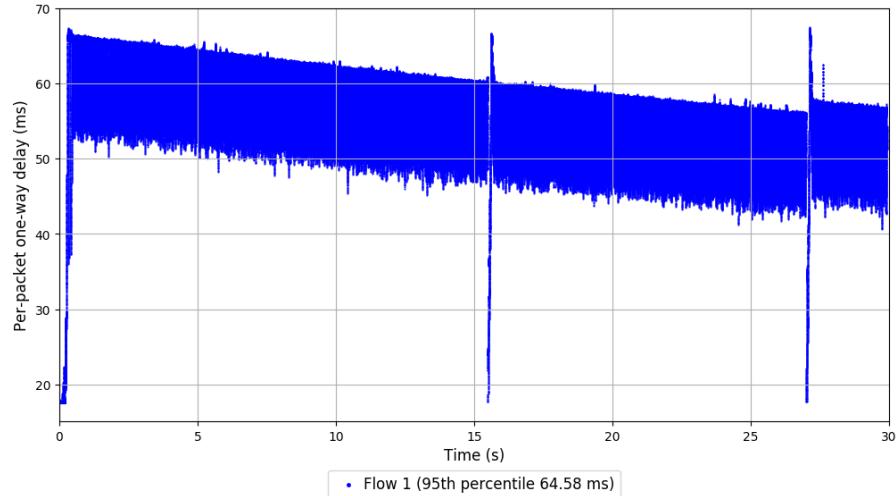
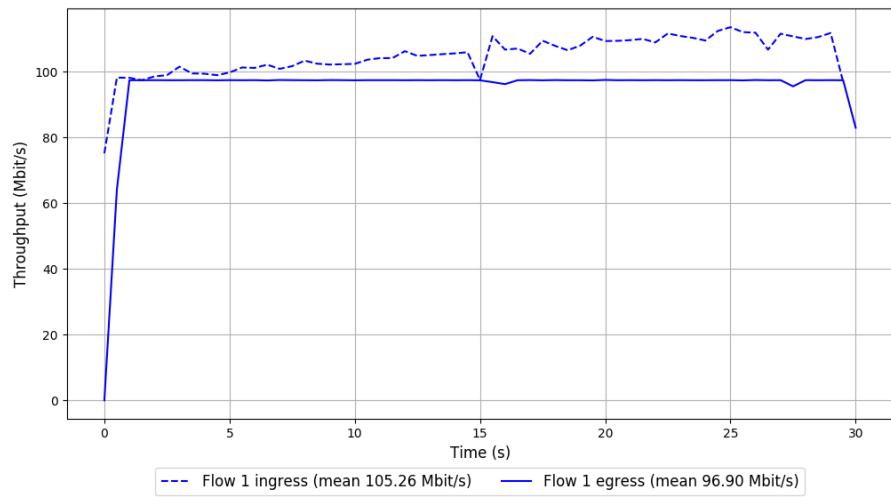


Run 3: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 07:11:09
End at: 2018-10-26 07:11:39
Local clock offset: 2.353 ms
Remote clock offset: -1.658 ms

# Below is generated by plot.py at 2018-10-26 08:05:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 64.583 ms
Loss rate: 8.01%
-- Flow 1:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 64.583 ms
Loss rate: 8.01%
```

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

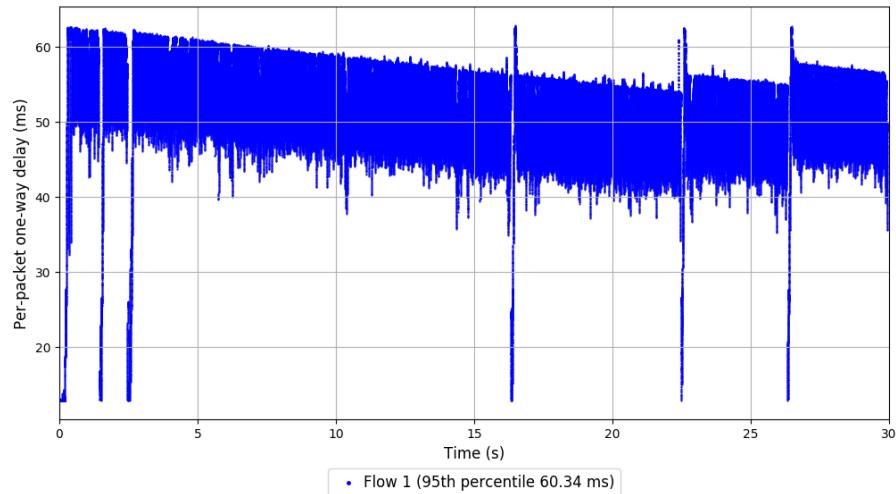
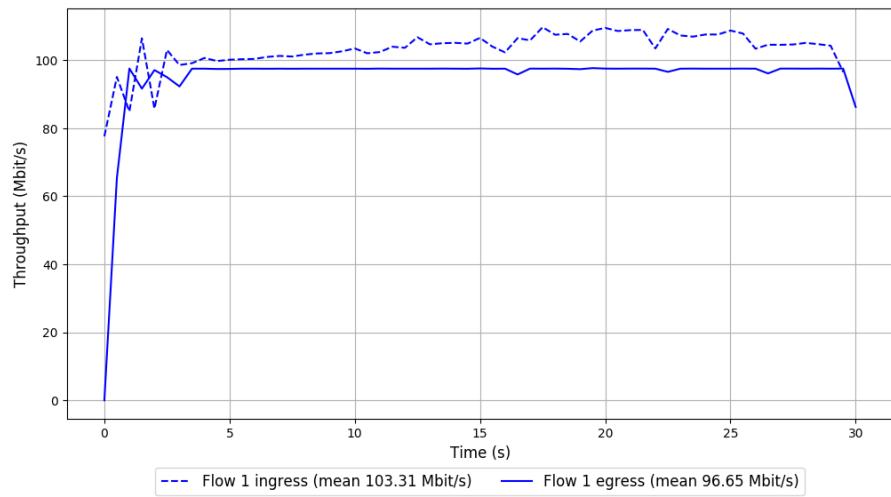


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 07:32:42
End at: 2018-10-26 07:33:12
Local clock offset: 1.094 ms
Remote clock offset: 2.293 ms

# Below is generated by plot.py at 2018-10-26 08:05:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.65 Mbit/s
95th percentile per-packet one-way delay: 60.345 ms
Loss rate: 6.50%
-- Flow 1:
Average throughput: 96.65 Mbit/s
95th percentile per-packet one-way delay: 60.345 ms
Loss rate: 6.50%
```

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

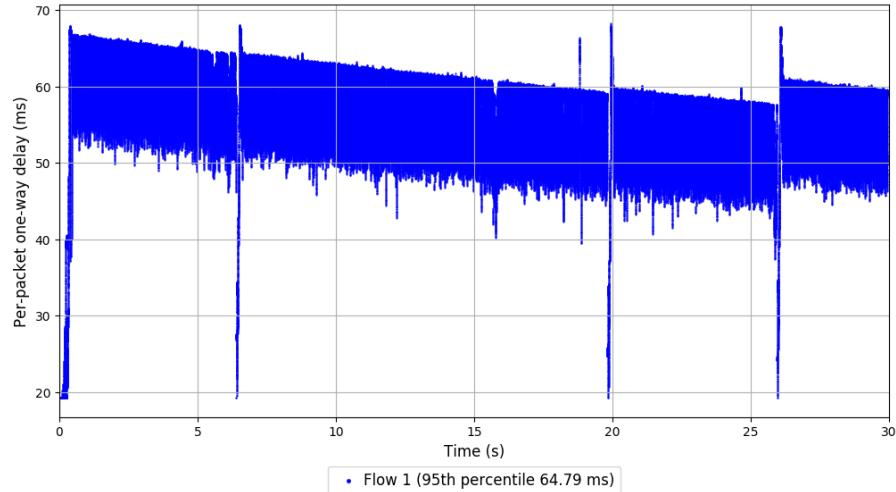
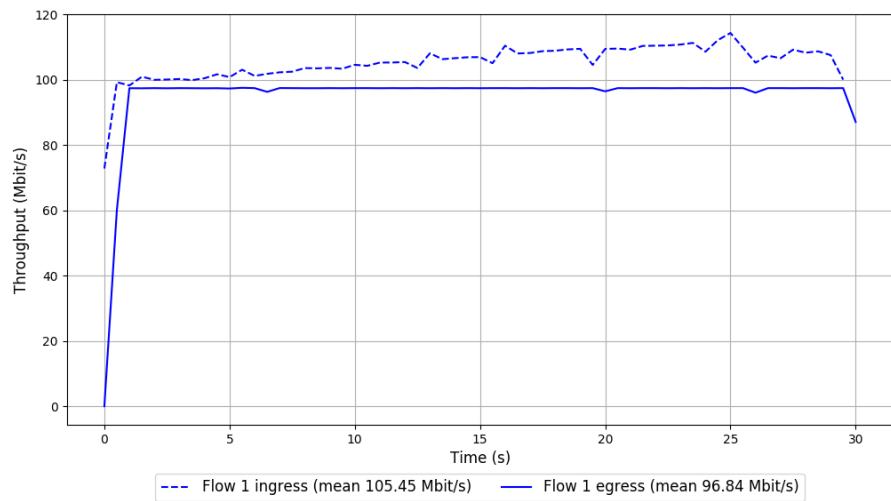


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 07:54:19
End at: 2018-10-26 07:54:49
Local clock offset: 2.228 ms
Remote clock offset: -3.993 ms

# Below is generated by plot.py at 2018-10-26 08:05:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.84 Mbit/s
95th percentile per-packet one-way delay: 64.787 ms
Loss rate: 8.24%
-- Flow 1:
Average throughput: 96.84 Mbit/s
95th percentile per-packet one-way delay: 64.787 ms
Loss rate: 8.24%
```

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

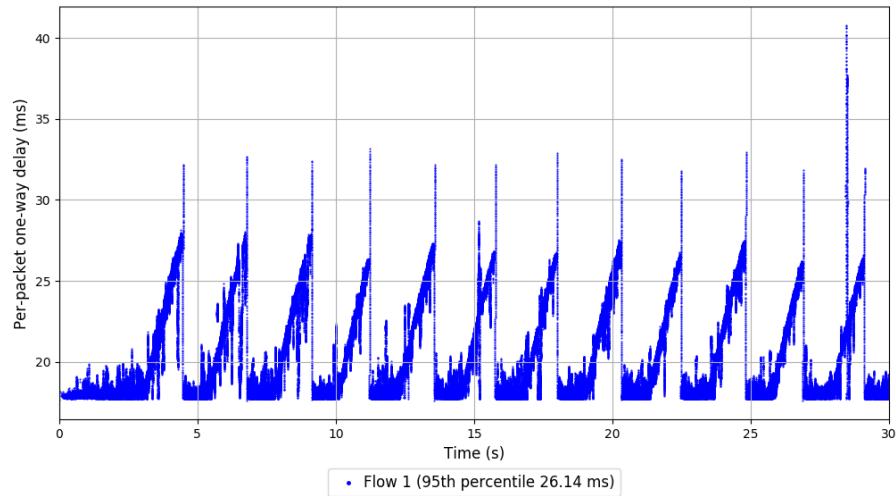
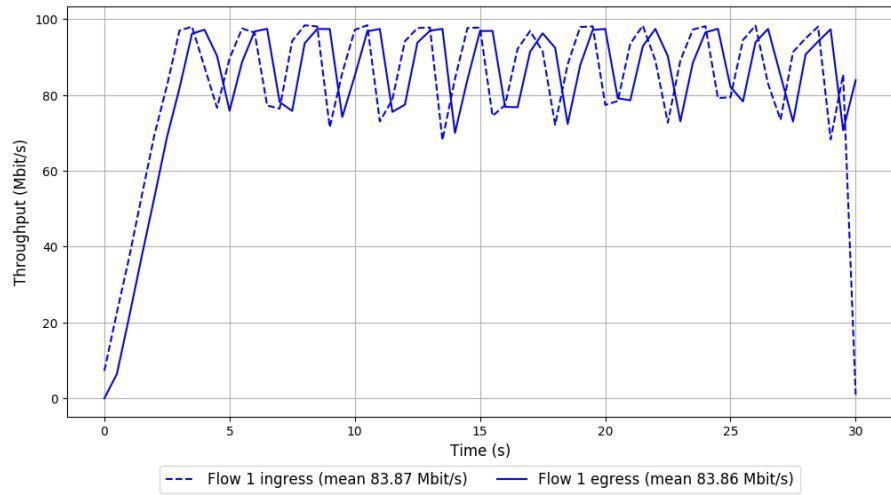


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-10-26 06:27:55
End at: 2018-10-26 06:28:25
Local clock offset: -0.165 ms
Remote clock offset: -4.151 ms

# Below is generated by plot.py at 2018-10-26 08:05:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.86 Mbit/s
95th percentile per-packet one-way delay: 26.136 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 83.86 Mbit/s
95th percentile per-packet one-way delay: 26.136 ms
Loss rate: 0.11%
```

## Run 1: Report of LEDBAT — Data Link

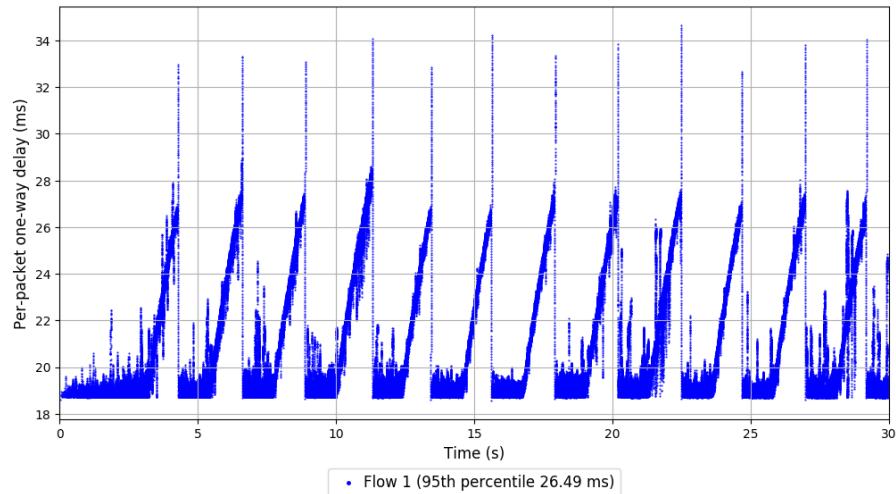
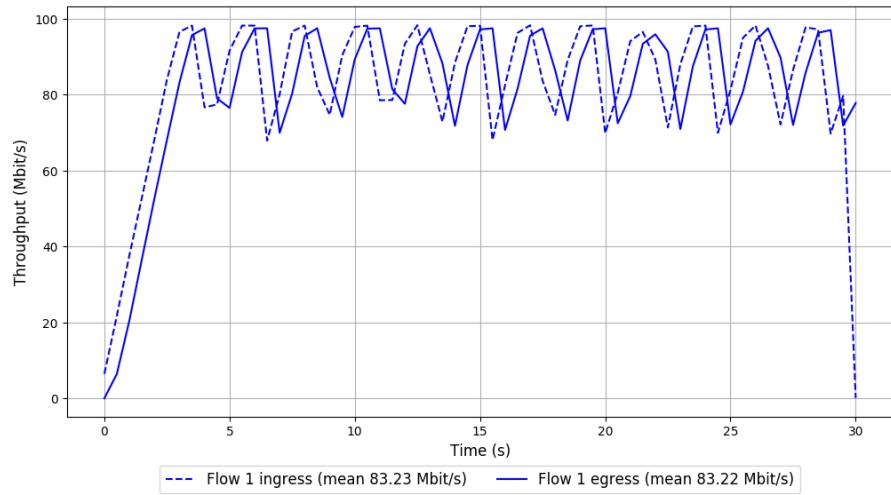


Run 2: Statistics of LEDBAT

```
Start at: 2018-10-26 06:50:15
End at: 2018-10-26 06:50:45
Local clock offset: 3.557 ms
Remote clock offset: -2.833 ms

# Below is generated by plot.py at 2018-10-26 08:05:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.22 Mbit/s
95th percentile per-packet one-way delay: 26.487 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 83.22 Mbit/s
95th percentile per-packet one-way delay: 26.487 ms
Loss rate: 0.10%
```

## Run 2: Report of LEDBAT — Data Link

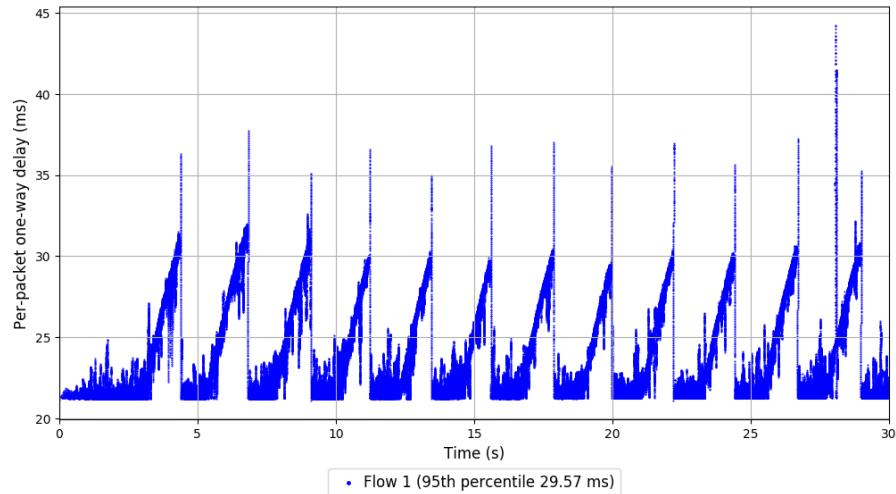
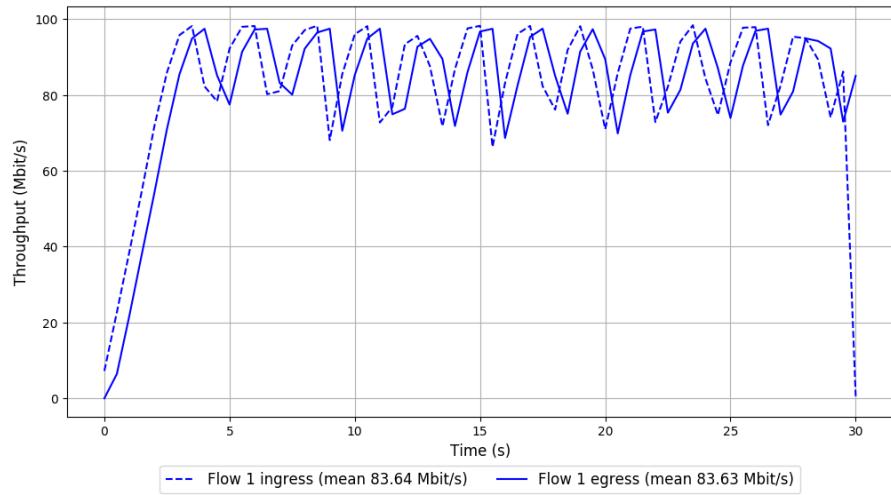


Run 3: Statistics of LEDBAT

```
Start at: 2018-10-26 07:12:26
End at: 2018-10-26 07:12:56
Local clock offset: -2.57 ms
Remote clock offset: -10.058 ms

# Below is generated by plot.py at 2018-10-26 08:06:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.63 Mbit/s
95th percentile per-packet one-way delay: 29.574 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 83.63 Mbit/s
95th percentile per-packet one-way delay: 29.574 ms
Loss rate: 0.11%
```

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

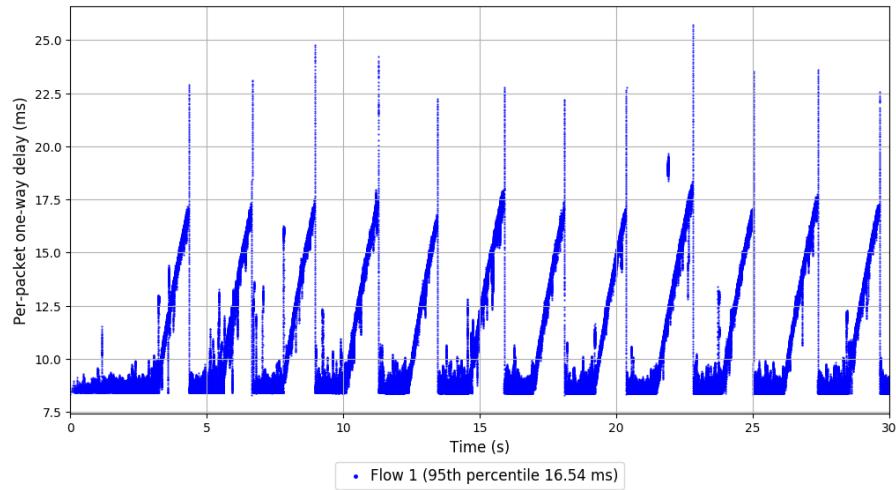
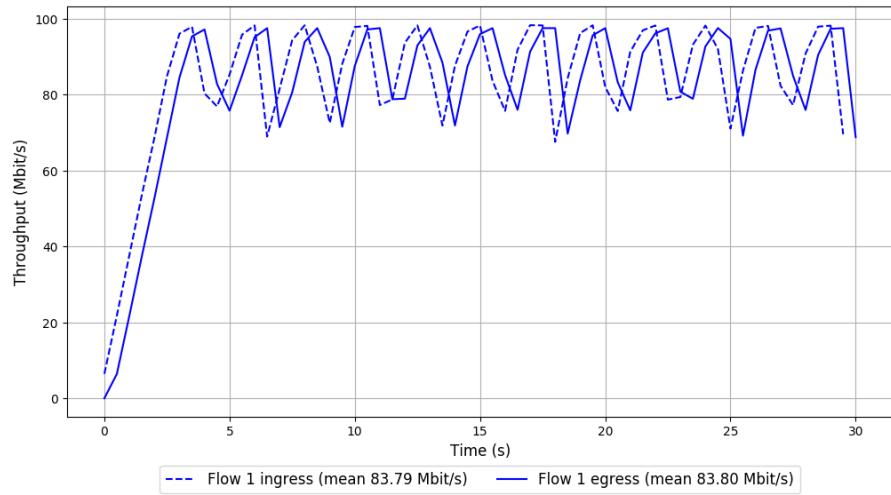


Run 4: Statistics of LEDBAT

```
Start at: 2018-10-26 07:33:52
End at: 2018-10-26 07:34:22
Local clock offset: 1.195 ms
Remote clock offset: 6.728 ms

# Below is generated by plot.py at 2018-10-26 08:06:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.80 Mbit/s
95th percentile per-packet one-way delay: 16.538 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 83.80 Mbit/s
95th percentile per-packet one-way delay: 16.538 ms
Loss rate: 0.08%
```

## Run 4: Report of LEDBAT — Data Link

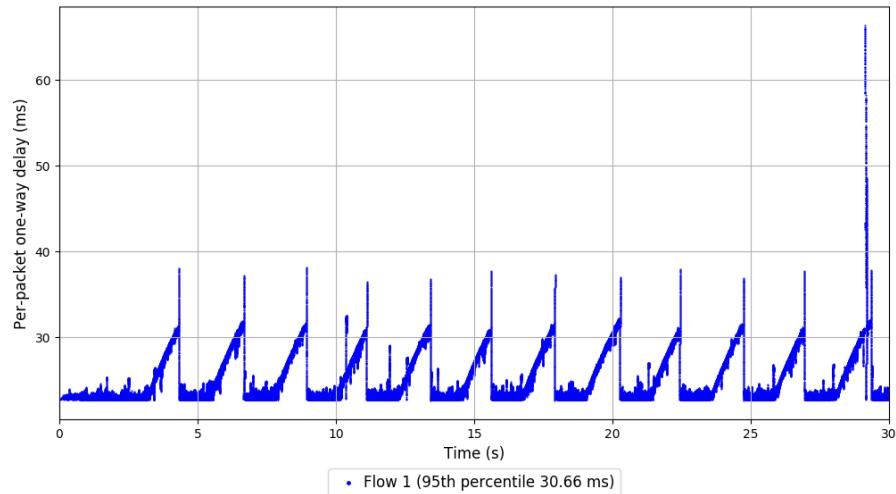
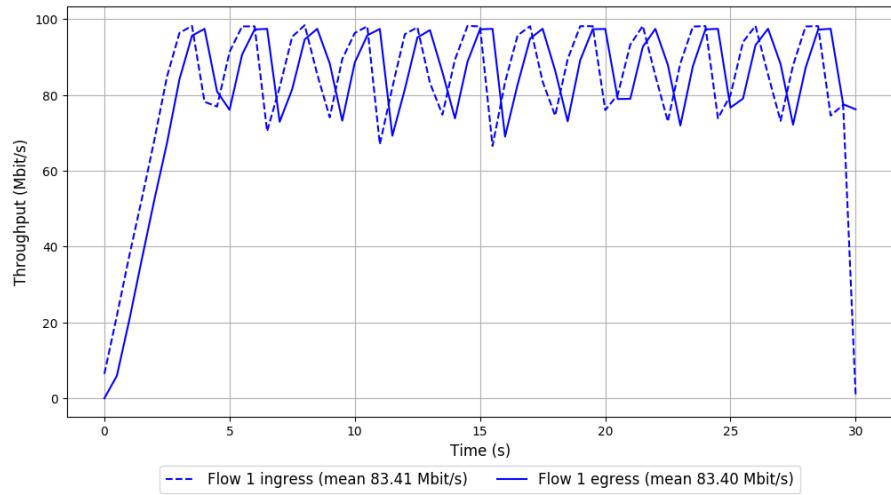


Run 5: Statistics of LEDBAT

```
Start at: 2018-10-26 07:55:32
End at: 2018-10-26 07:56:03
Local clock offset: 4.547 ms
Remote clock offset: -5.197 ms

# Below is generated by plot.py at 2018-10-26 08:06:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.40 Mbit/s
95th percentile per-packet one-way delay: 30.658 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 83.40 Mbit/s
95th percentile per-packet one-way delay: 30.658 ms
Loss rate: 0.10%
```

Run 5: Report of LEDBAT — Data Link

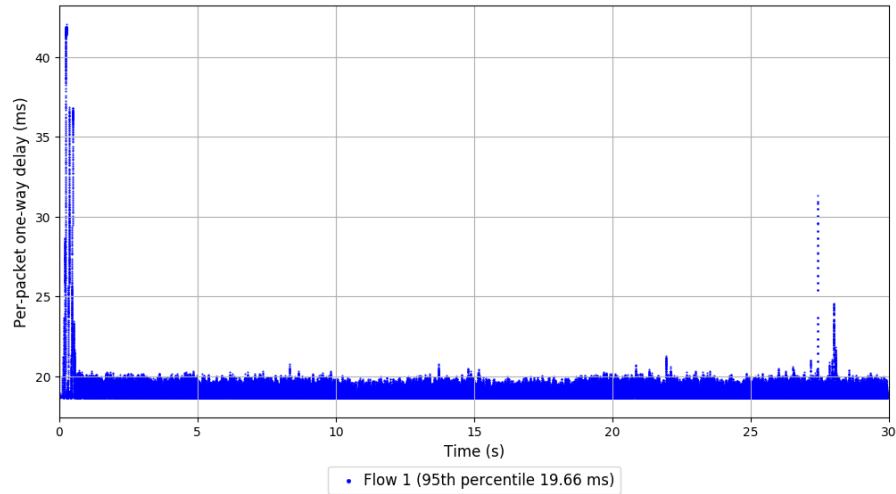
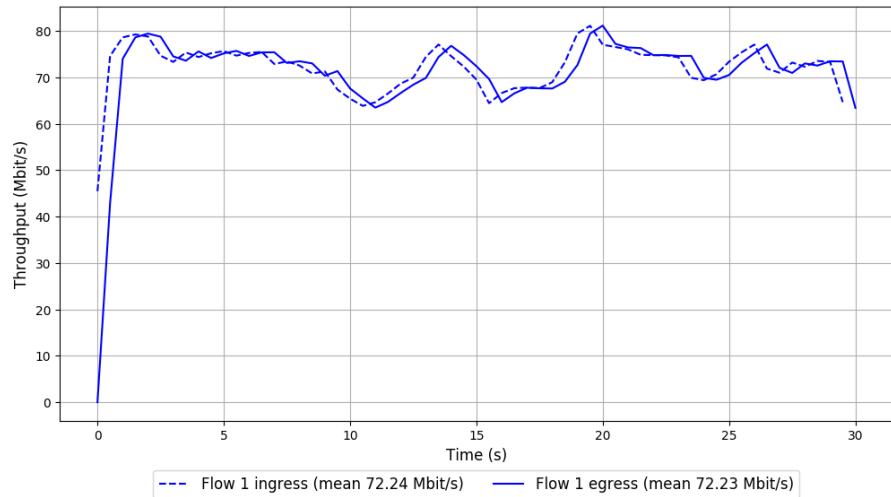


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-10-26 06:13:41
End at: 2018-10-26 06:14:11
Local clock offset: 0.707 ms
Remote clock offset: -3.928 ms

# Below is generated by plot.py at 2018-10-26 08:06:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.23 Mbit/s
95th percentile per-packet one-way delay: 19.658 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 72.23 Mbit/s
95th percentile per-packet one-way delay: 19.658 ms
Loss rate: 0.09%
```

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

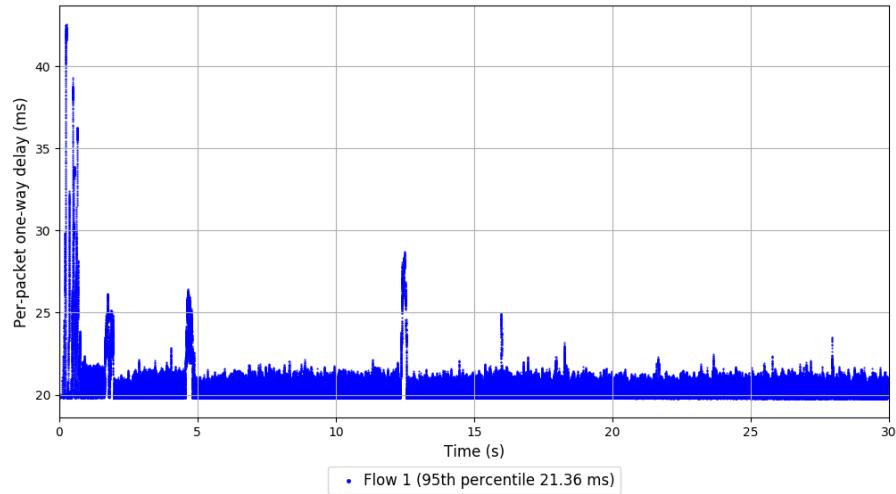
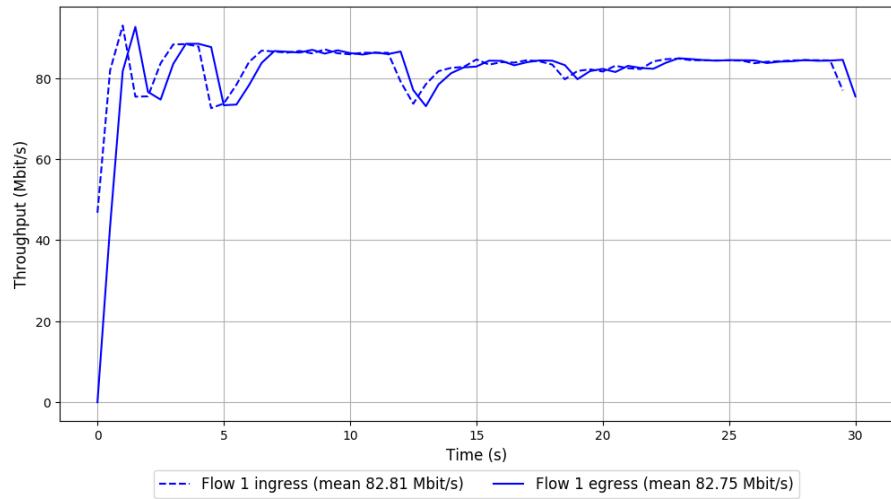


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-10-26 06:36:20
End at: 2018-10-26 06:36:50
Local clock offset: 1.673 ms
Remote clock offset: -5.008 ms

# Below is generated by plot.py at 2018-10-26 08:06:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.75 Mbit/s
95th percentile per-packet one-way delay: 21.362 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 82.75 Mbit/s
95th percentile per-packet one-way delay: 21.362 ms
Loss rate: 0.16%
```

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

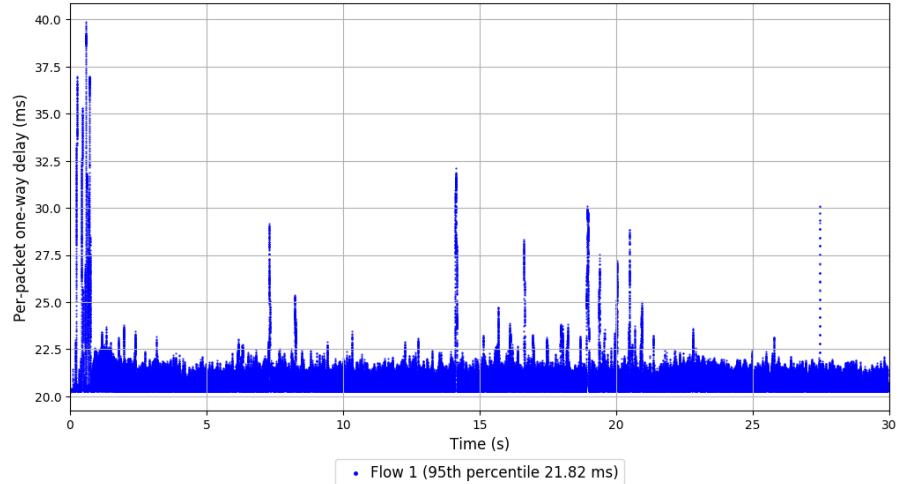
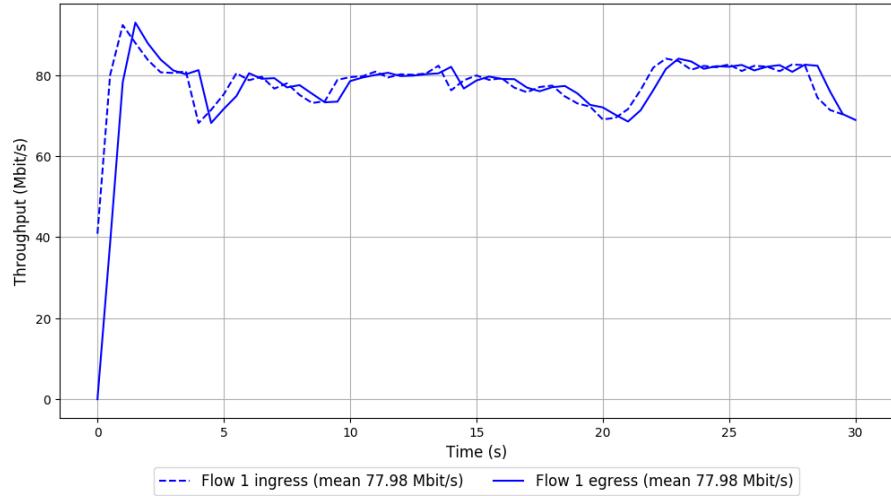


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-10-26 06:58:50
End at: 2018-10-26 06:59:20
Local clock offset: 3.627 ms
Remote clock offset: -4.409 ms

# Below is generated by plot.py at 2018-10-26 08:06:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.98 Mbit/s
95th percentile per-packet one-way delay: 21.817 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 77.98 Mbit/s
95th percentile per-packet one-way delay: 21.817 ms
Loss rate: 0.10%
```

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

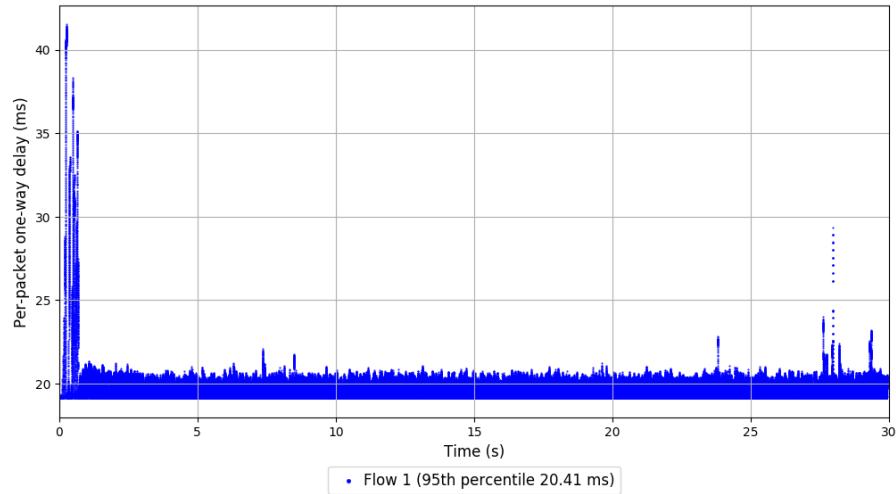
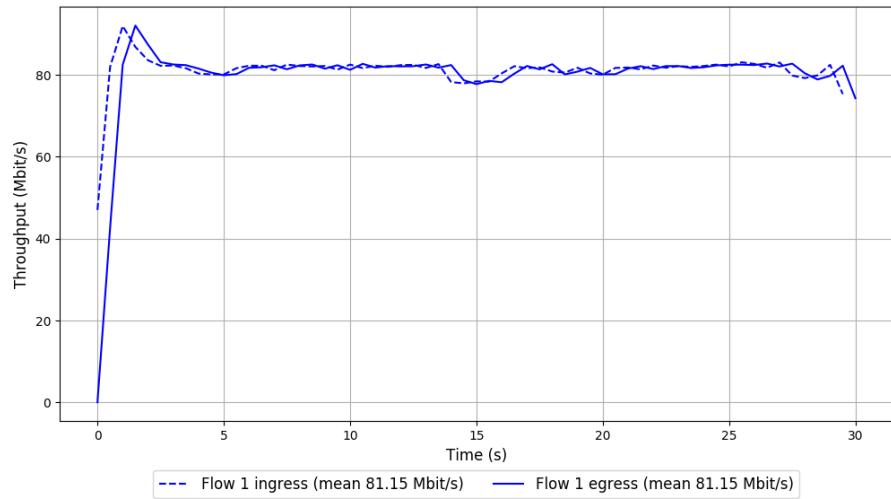


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-10-26 07:20:43
End at: 2018-10-26 07:21:13
Local clock offset: 1.078 ms
Remote clock offset: -3.874 ms

# Below is generated by plot.py at 2018-10-26 08:06:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.15 Mbit/s
95th percentile per-packet one-way delay: 20.407 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 81.15 Mbit/s
95th percentile per-packet one-way delay: 20.407 ms
Loss rate: 0.09%
```

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

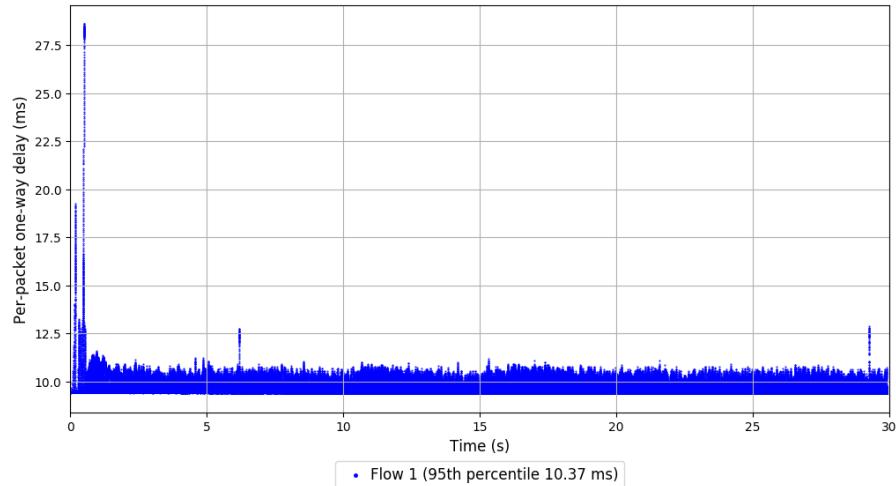
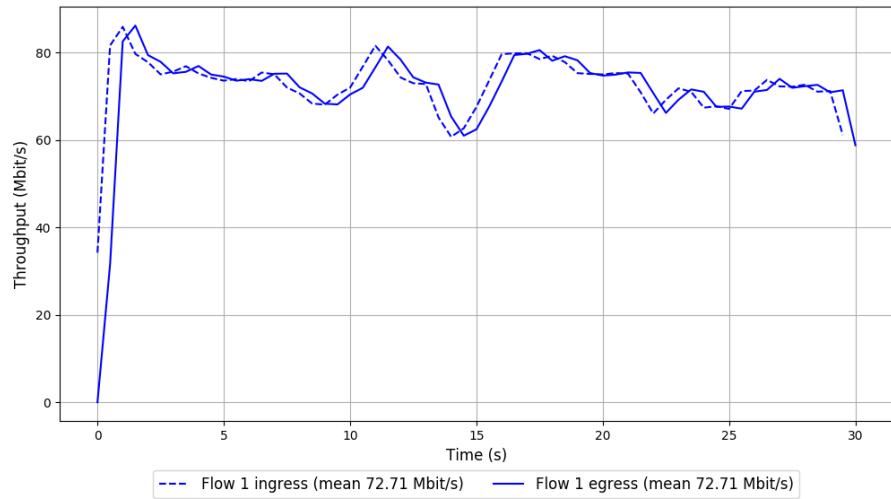


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-10-26 07:42:02
End at: 2018-10-26 07:42:32
Local clock offset: 2.082 ms
Remote clock offset: 5.982 ms

# Below is generated by plot.py at 2018-10-26 08:06:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.71 Mbit/s
95th percentile per-packet one-way delay: 10.372 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 72.71 Mbit/s
95th percentile per-packet one-way delay: 10.372 ms
Loss rate: 0.08%
```

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

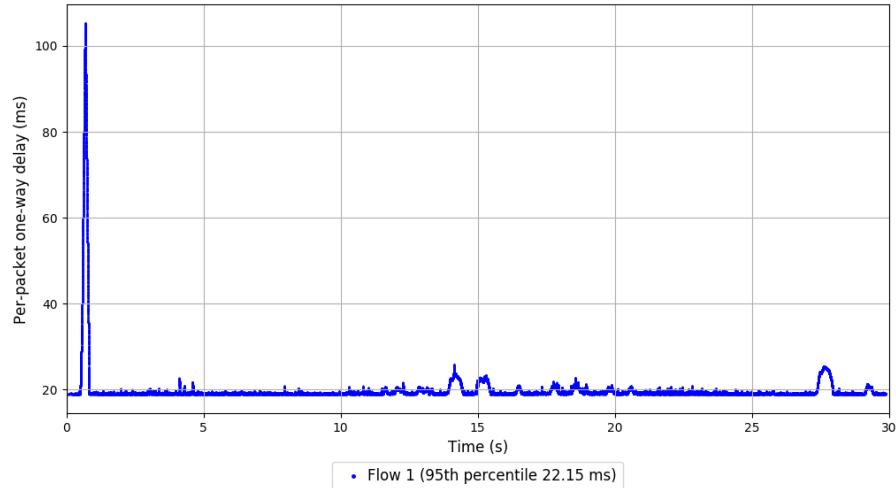
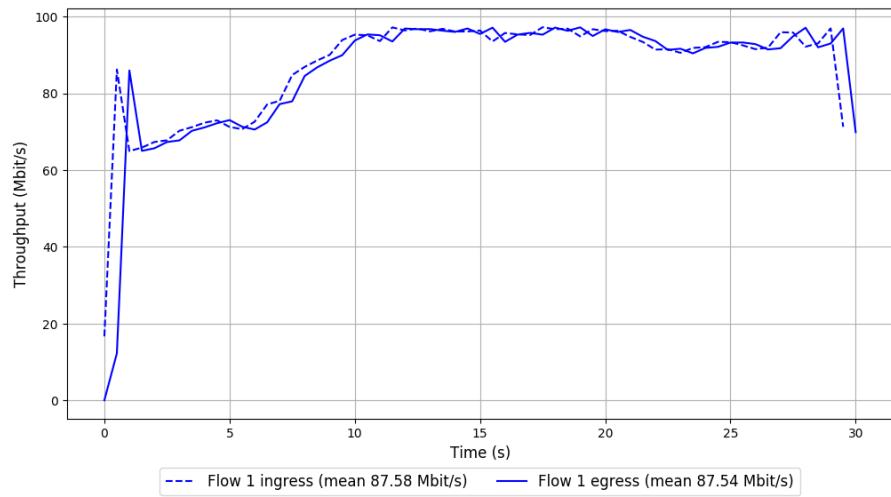


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-10-26 06:29:10
End at: 2018-10-26 06:29:40
Local clock offset: 0.406 ms
Remote clock offset: -4.802 ms

# Below is generated by plot.py at 2018-10-26 08:07:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.54 Mbit/s
95th percentile per-packet one-way delay: 22.146 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 87.54 Mbit/s
95th percentile per-packet one-way delay: 22.146 ms
Loss rate: 0.14%
```

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

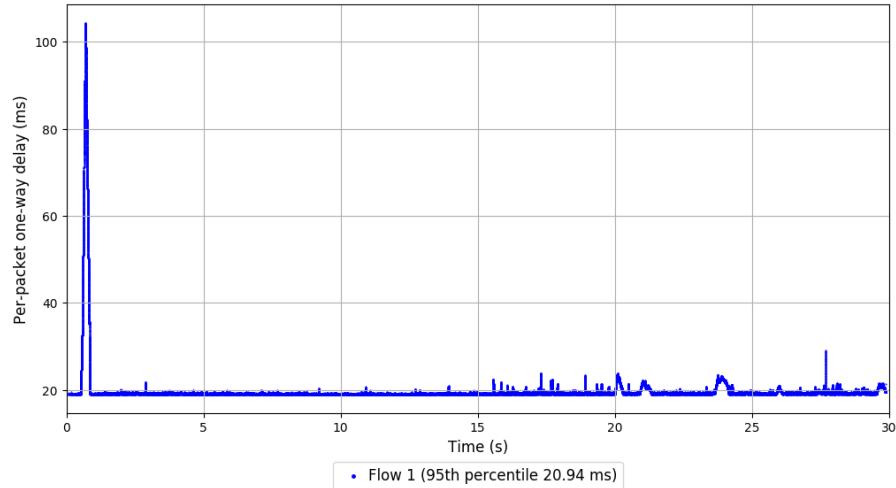
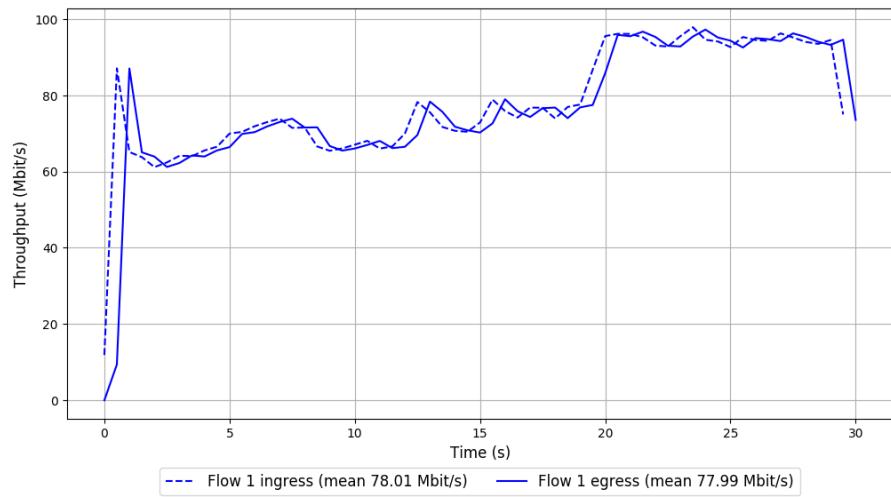


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-10-26 06:51:29
End at: 2018-10-26 06:51:59
Local clock offset: 3.368 ms
Remote clock offset: -3.413 ms

# Below is generated by plot.py at 2018-10-26 08:07:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.99 Mbit/s
95th percentile per-packet one-way delay: 20.940 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 77.99 Mbit/s
95th percentile per-packet one-way delay: 20.940 ms
Loss rate: 0.11%
```

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

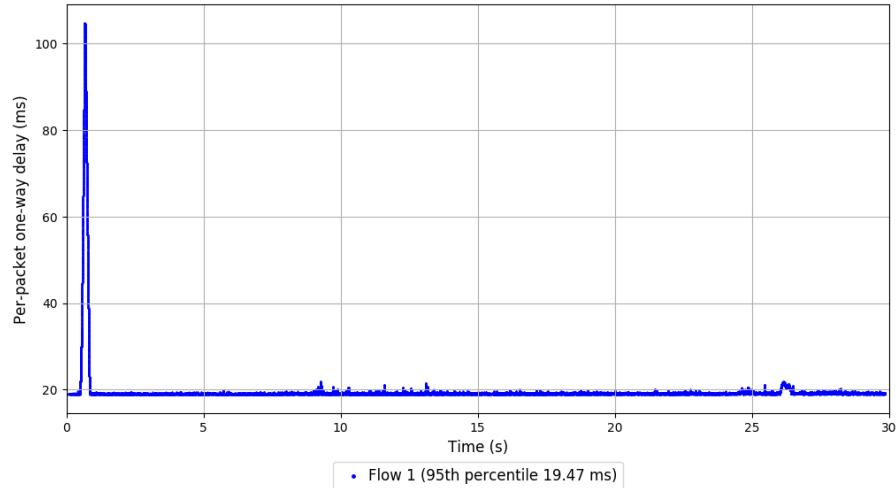
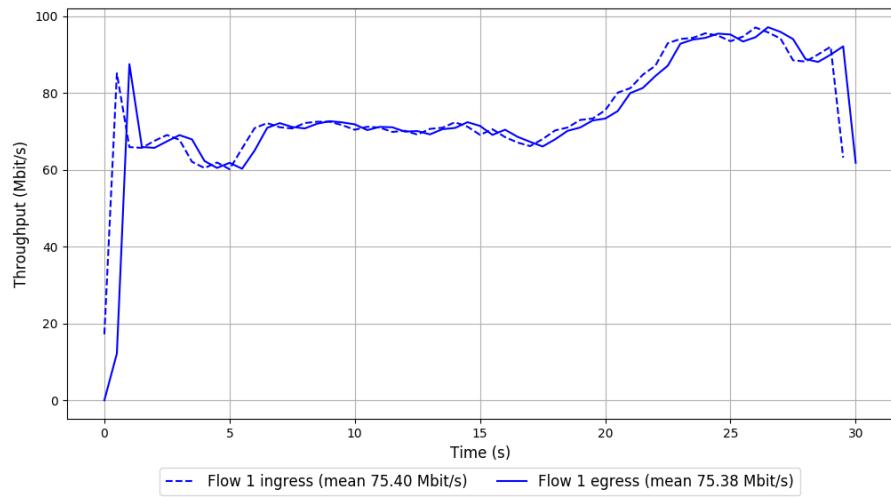


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-10-26 07:13:40
End at: 2018-10-26 07:14:10
Local clock offset: 1.863 ms
Remote clock offset: -3.313 ms

# Below is generated by plot.py at 2018-10-26 08:07:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.38 Mbit/s
95th percentile per-packet one-way delay: 19.472 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 75.38 Mbit/s
95th percentile per-packet one-way delay: 19.472 ms
Loss rate: 0.11%
```

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

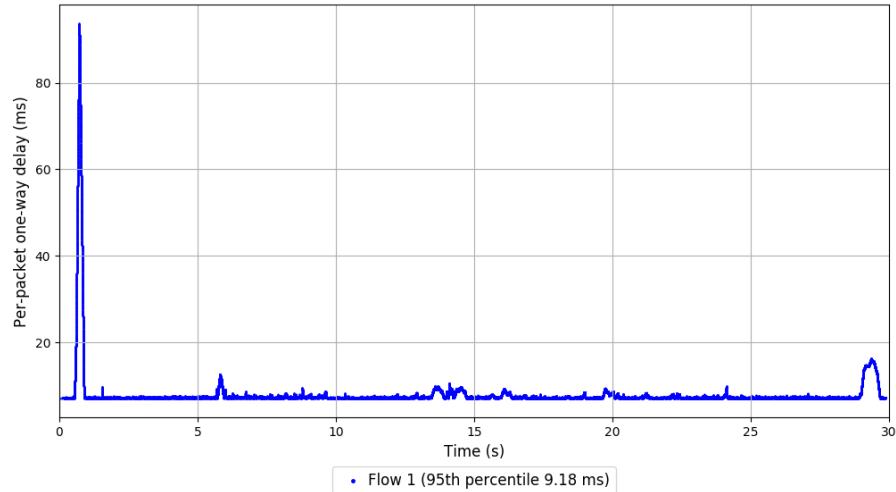
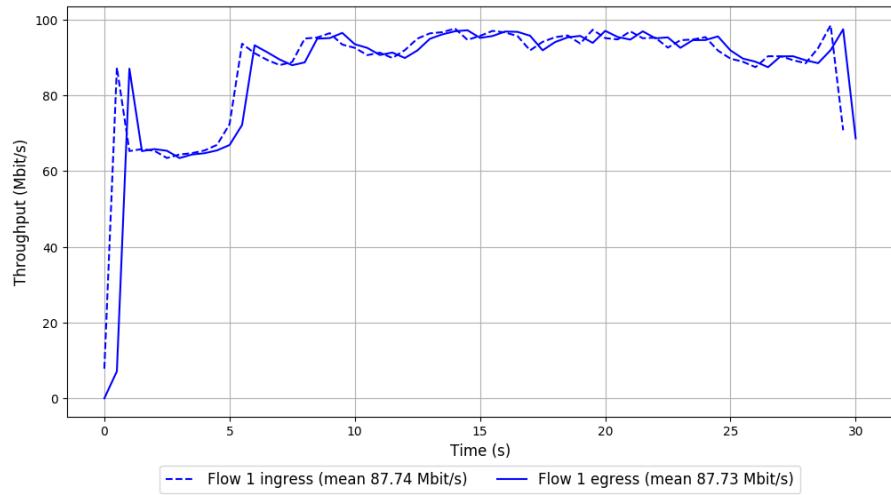


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-10-26 07:35:03
End at: 2018-10-26 07:35:33
Local clock offset: 1.84 ms
Remote clock offset: 8.57 ms

# Below is generated by plot.py at 2018-10-26 08:07:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.73 Mbit/s
95th percentile per-packet one-way delay: 9.178 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 87.73 Mbit/s
95th percentile per-packet one-way delay: 9.178 ms
Loss rate: 0.10%
```

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

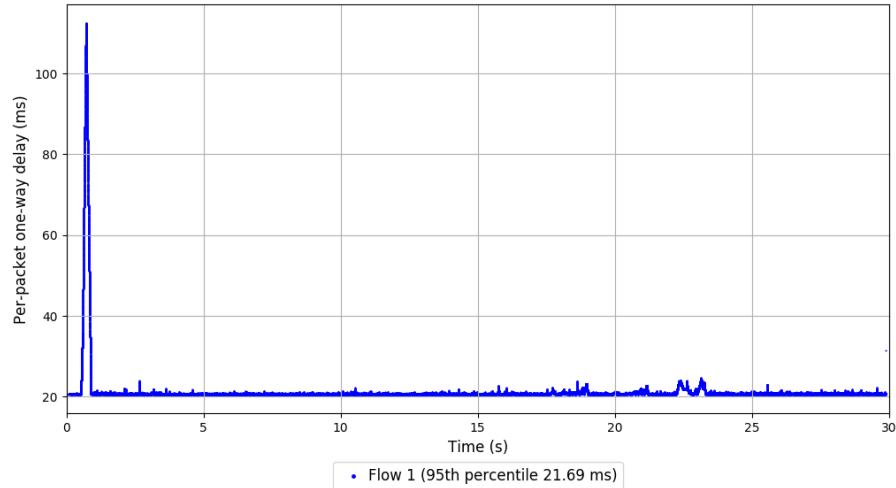
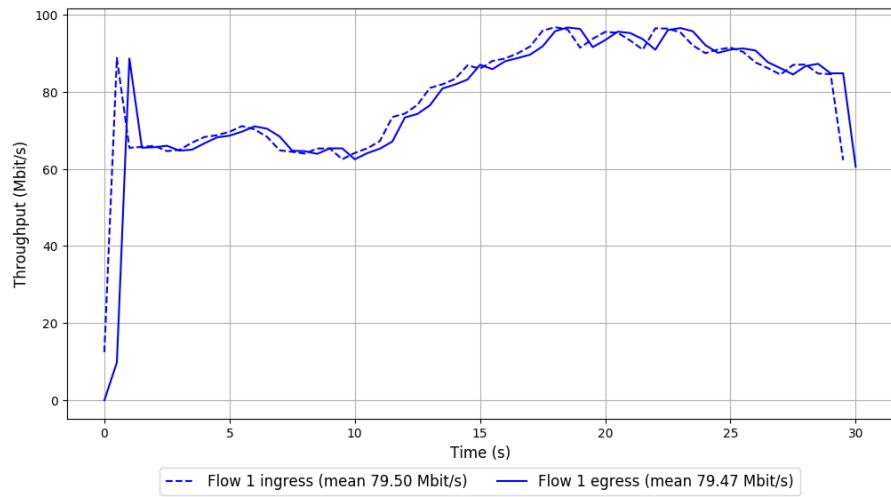


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-10-26 07:56:43
End at: 2018-10-26 07:57:13
Local clock offset: 2.21 ms
Remote clock offset: -5.32 ms

# Below is generated by plot.py at 2018-10-26 08:07:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 79.47 Mbit/s
95th percentile per-packet one-way delay: 21.690 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 79.47 Mbit/s
95th percentile per-packet one-way delay: 21.690 ms
Loss rate: 0.11%
```

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

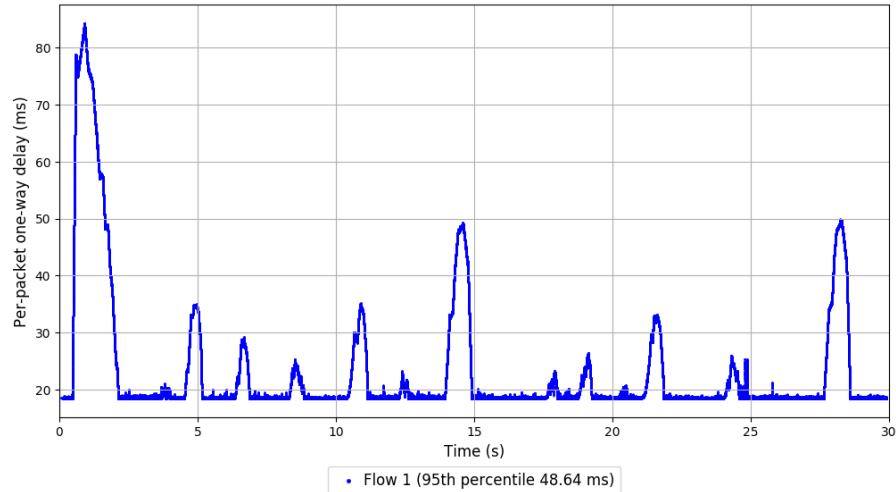
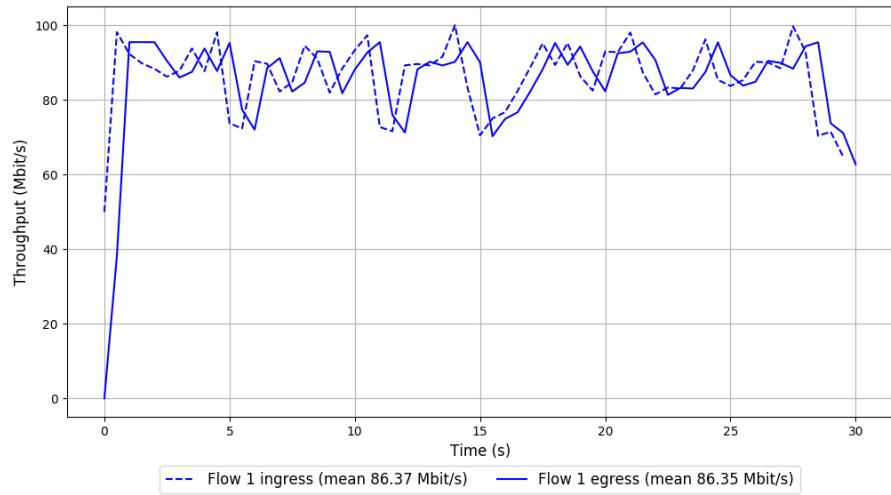


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-10-26 06:17:23
End at: 2018-10-26 06:17:53
Local clock offset: -0.239 ms
Remote clock offset: -4.72 ms

# Below is generated by plot.py at 2018-10-26 08:08:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.35 Mbit/s
95th percentile per-packet one-way delay: 48.638 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 86.35 Mbit/s
95th percentile per-packet one-way delay: 48.638 ms
Loss rate: 0.12%
```

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

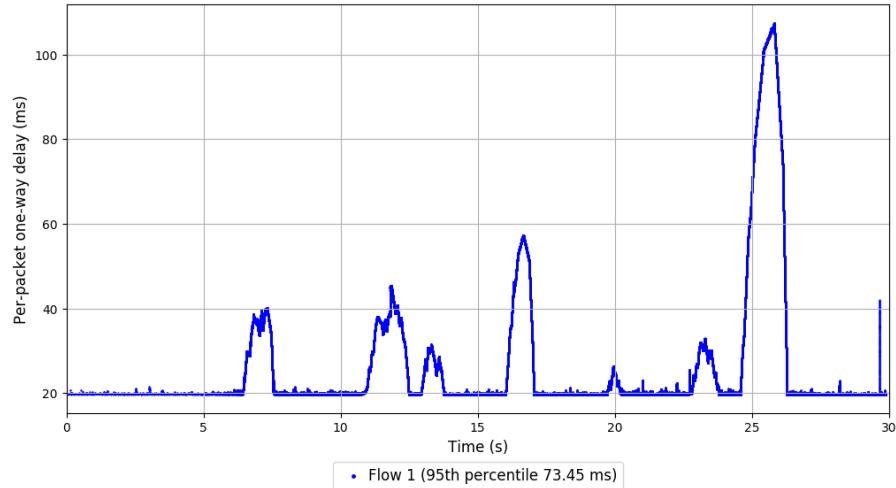
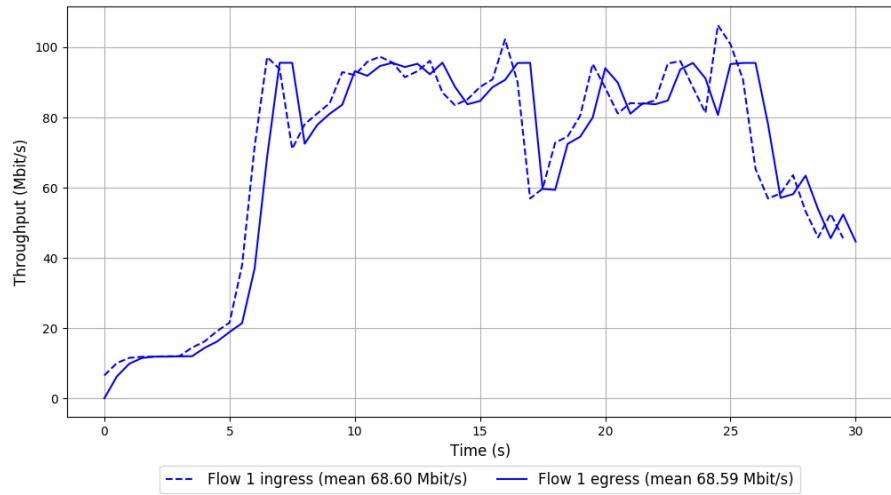


```
Run 2: Statistics of PCC-Expr
```

```
Start at: 2018-10-26 06:40:06
End at: 2018-10-26 06:40:36
Local clock offset: 2.423 ms
Remote clock offset: -4.581 ms

# Below is generated by plot.py at 2018-10-26 08:08:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.59 Mbit/s
95th percentile per-packet one-way delay: 73.449 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 68.59 Mbit/s
95th percentile per-packet one-way delay: 73.449 ms
Loss rate: 0.11%
```

Run 2: Report of PCC-Expr — Data Link

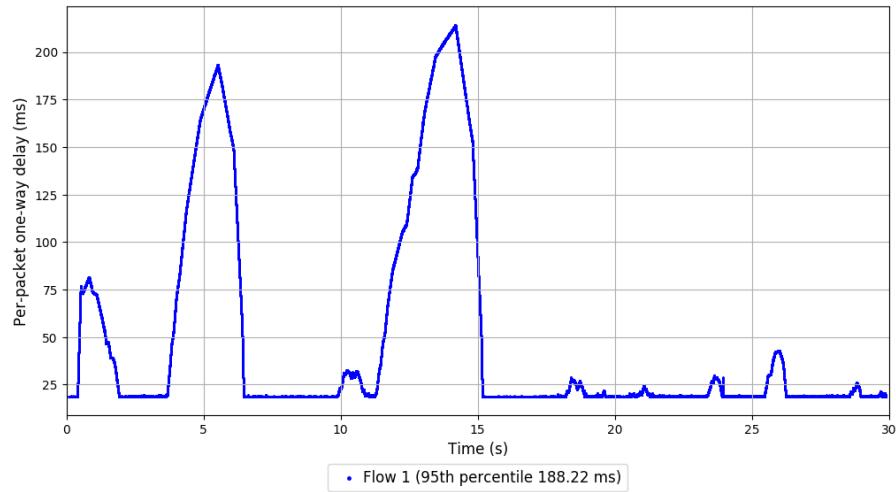
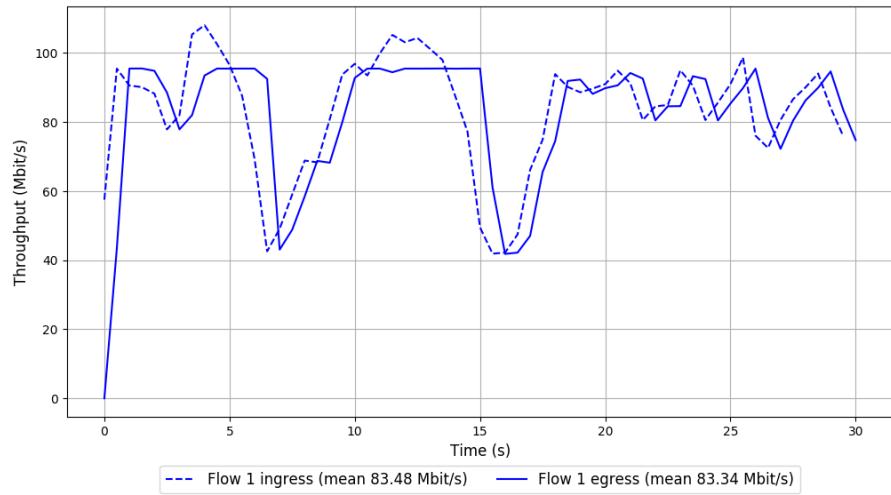


Run 3: Statistics of PCC-Expr

```
Start at: 2018-10-26 07:02:34
End at: 2018-10-26 07:03:04
Local clock offset: 2.554 ms
Remote clock offset: -3.644 ms

# Below is generated by plot.py at 2018-10-26 08:08:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.34 Mbit/s
95th percentile per-packet one-way delay: 188.223 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 83.34 Mbit/s
95th percentile per-packet one-way delay: 188.223 ms
Loss rate: 0.26%
```

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

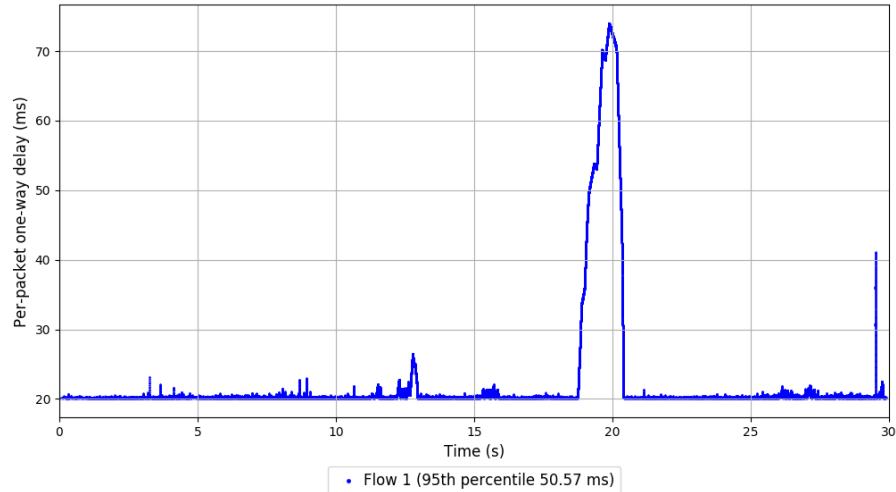
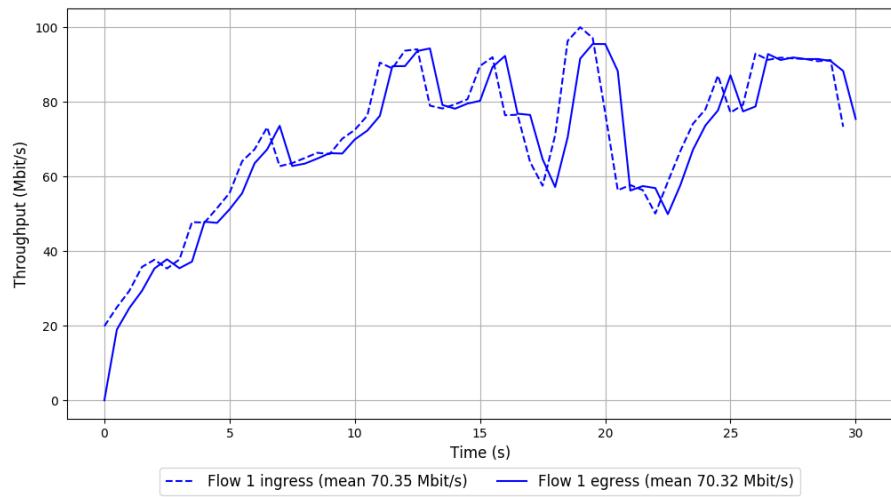


Run 4: Statistics of PCC-Expr

```
Start at: 2018-10-26 07:24:16
End at: 2018-10-26 07:24:46
Local clock offset: 1.363 ms
Remote clock offset: -4.477 ms

# Below is generated by plot.py at 2018-10-26 08:08:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.32 Mbit/s
95th percentile per-packet one-way delay: 50.571 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 70.32 Mbit/s
95th percentile per-packet one-way delay: 50.571 ms
Loss rate: 0.12%
```

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

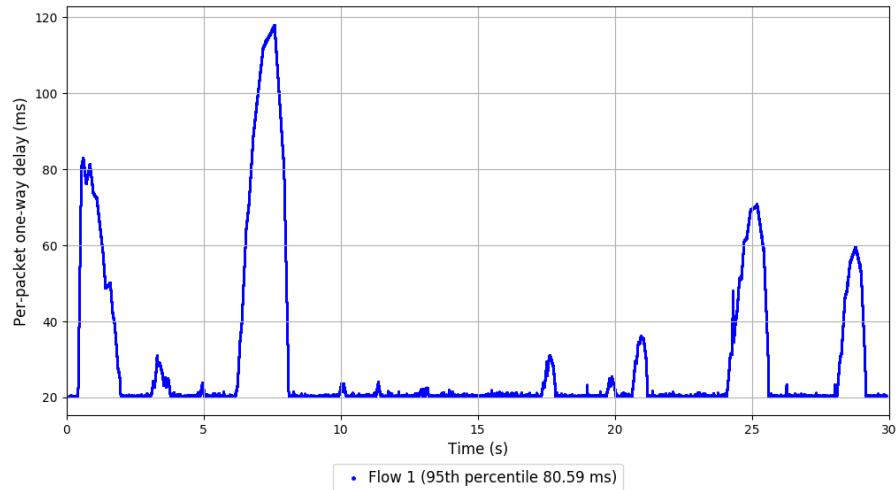
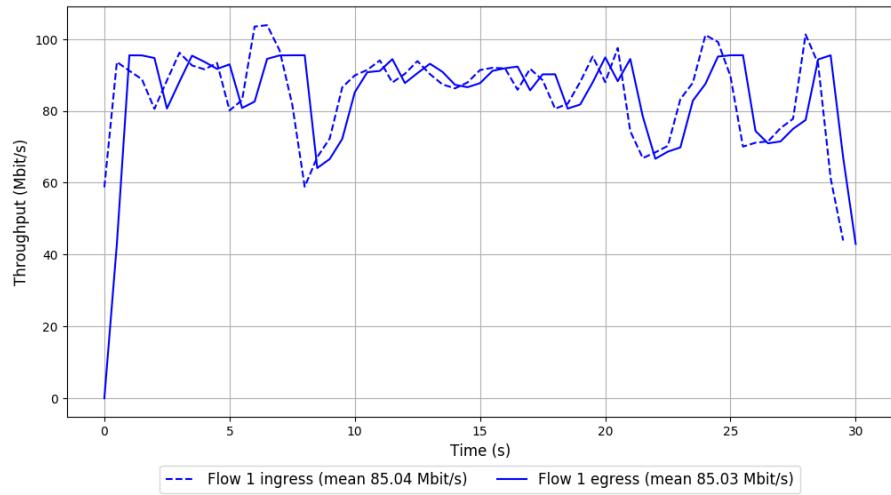


Run 5: Statistics of PCC-Expr

```
Start at: 2018-10-26 07:45:36
End at: 2018-10-26 07:46:06
Local clock offset: 1.835 ms
Remote clock offset: -5.271 ms

# Below is generated by plot.py at 2018-10-26 08:09:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.03 Mbit/s
95th percentile per-packet one-way delay: 80.587 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 85.03 Mbit/s
95th percentile per-packet one-way delay: 80.587 ms
Loss rate: 0.10%
```

Run 5: Report of PCC-Expr — Data Link

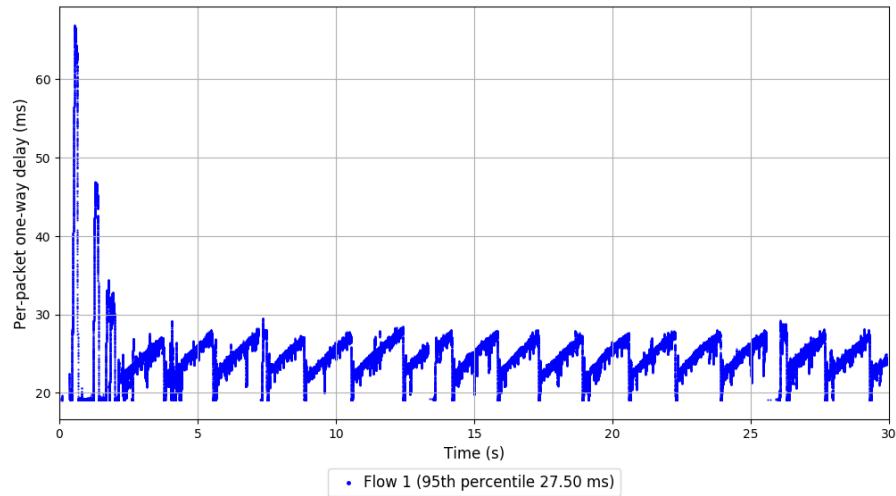
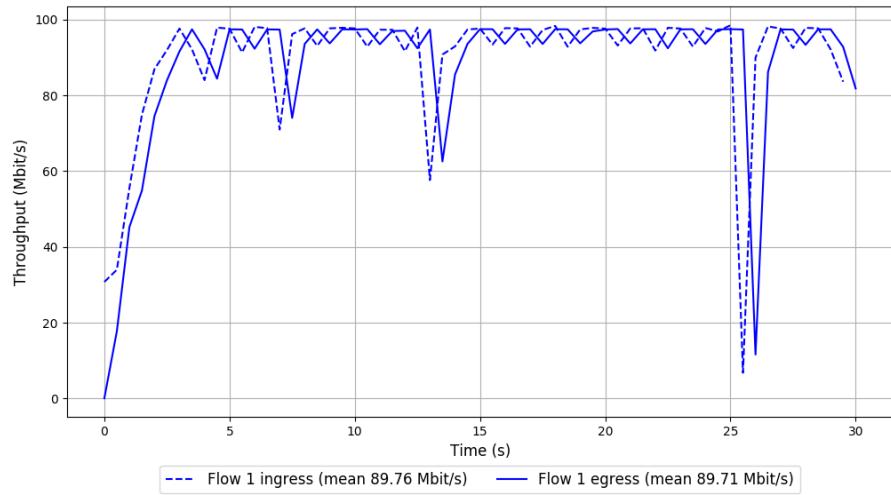


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-10-26 06:20:07
End at: 2018-10-26 06:20:37
Local clock offset: 0.352 ms
Remote clock offset: -4.827 ms

# Below is generated by plot.py at 2018-10-26 08:09:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.71 Mbit/s
95th percentile per-packet one-way delay: 27.502 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 89.71 Mbit/s
95th percentile per-packet one-way delay: 27.502 ms
Loss rate: 0.15%
```

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

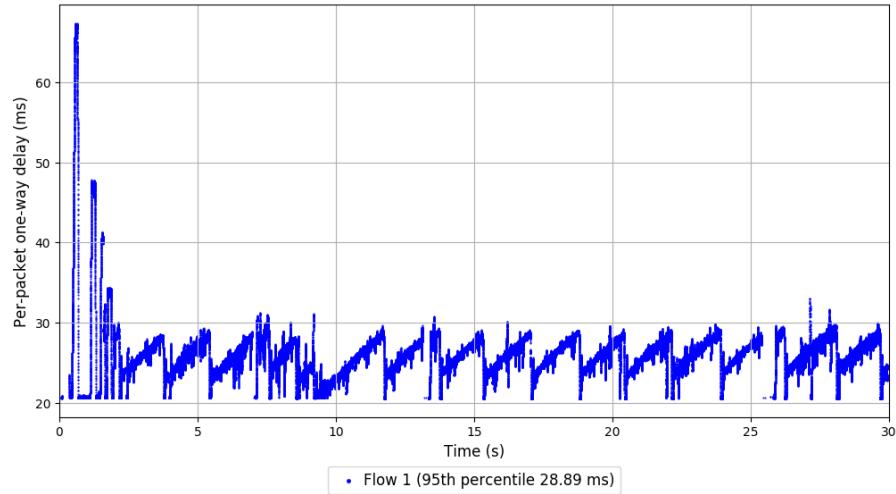
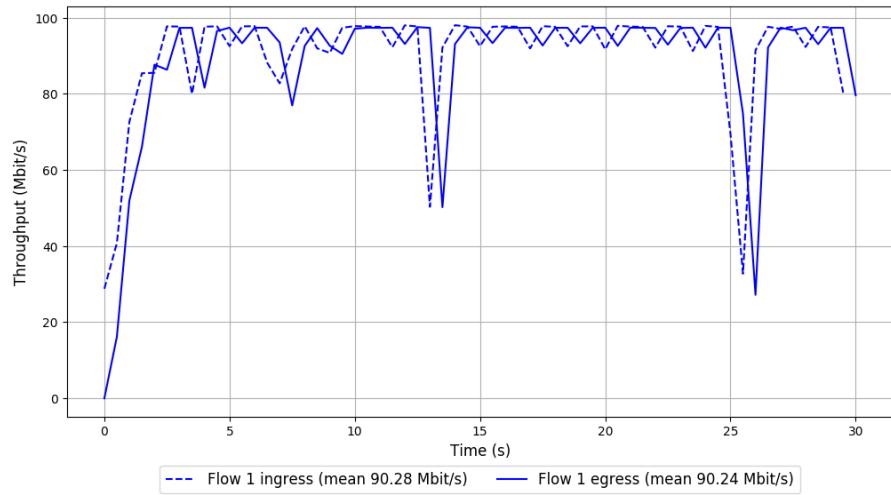


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-10-26 06:42:48
End at: 2018-10-26 06:43:18
Local clock offset: 2.773 ms
Remote clock offset: -5.248 ms

# Below is generated by plot.py at 2018-10-26 08:09:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.24 Mbit/s
95th percentile per-packet one-way delay: 28.894 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 90.24 Mbit/s
95th percentile per-packet one-way delay: 28.894 ms
Loss rate: 0.14%
```

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

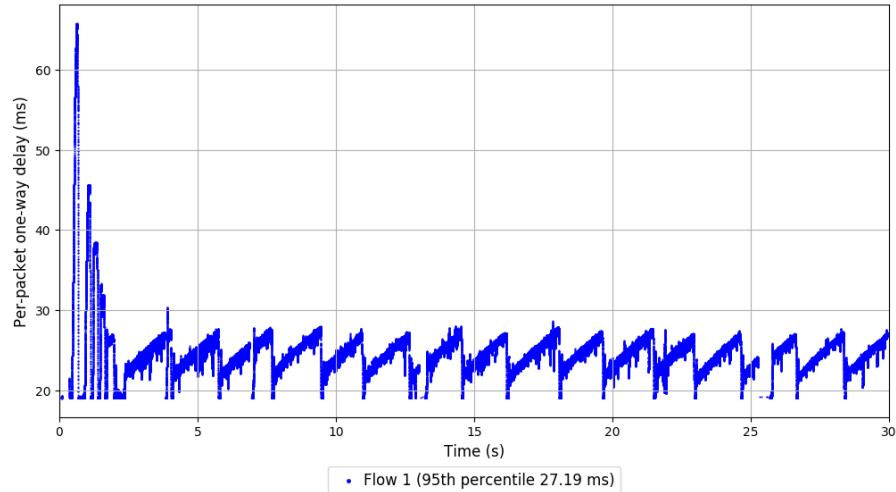
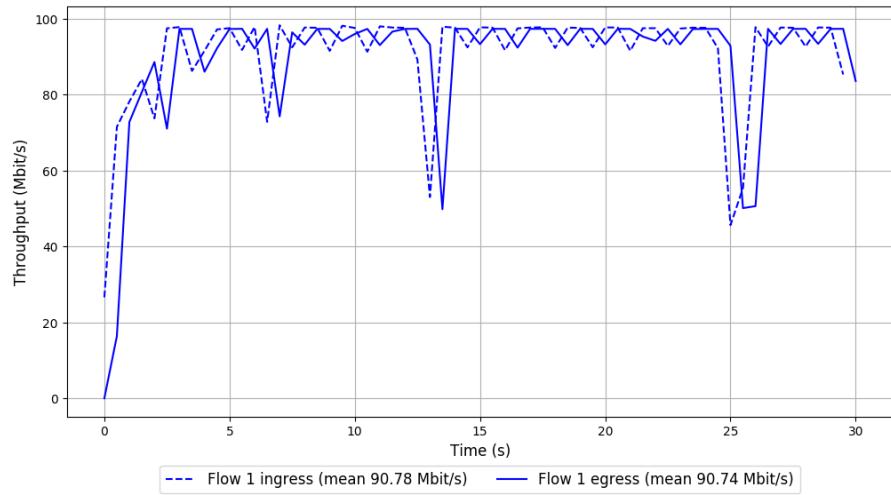


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-10-26 07:05:08
End at: 2018-10-26 07:05:38
Local clock offset: 2.317 ms
Remote clock offset: -3.861 ms

# Below is generated by plot.py at 2018-10-26 08:09:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.74 Mbit/s
95th percentile per-packet one-way delay: 27.192 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 90.74 Mbit/s
95th percentile per-packet one-way delay: 27.192 ms
Loss rate: 0.13%
```

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

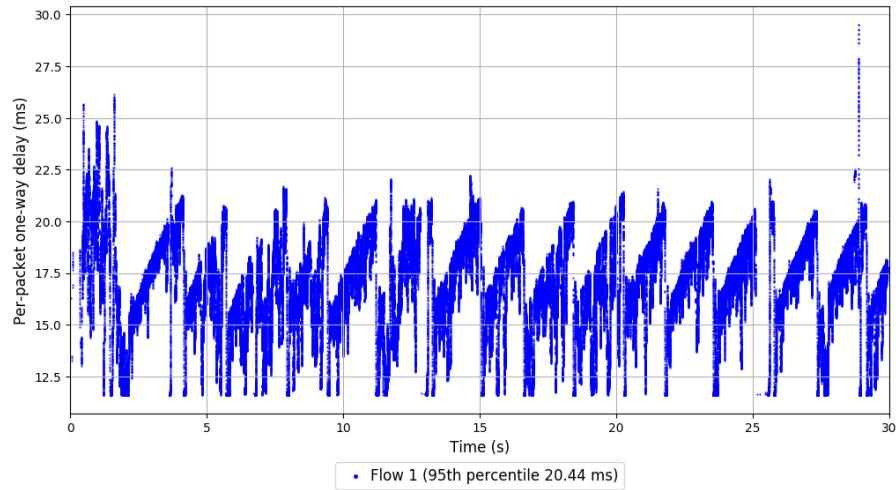
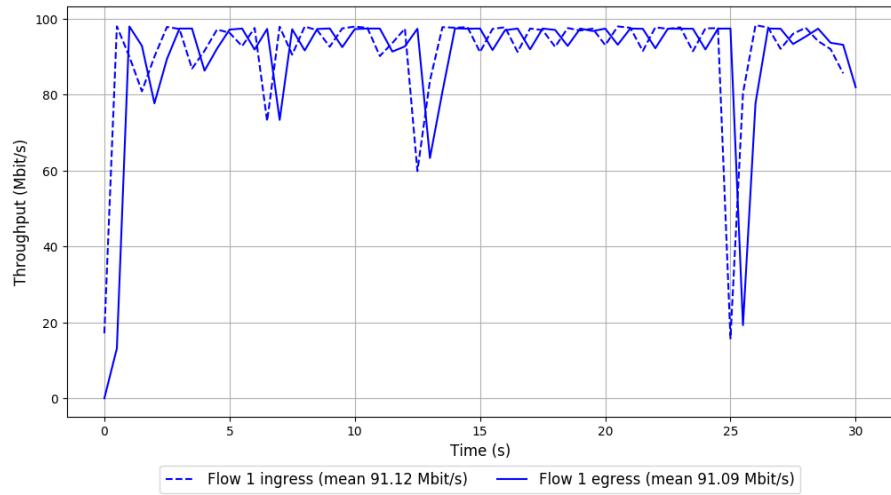


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-10-26 07:26:45
End at: 2018-10-26 07:27:15
Local clock offset: 0.654 ms
Remote clock offset: 3.355 ms

# Below is generated by plot.py at 2018-10-26 08:09:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.09 Mbit/s
95th percentile per-packet one-way delay: 20.442 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 91.09 Mbit/s
95th percentile per-packet one-way delay: 20.442 ms
Loss rate: 0.16%
```

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

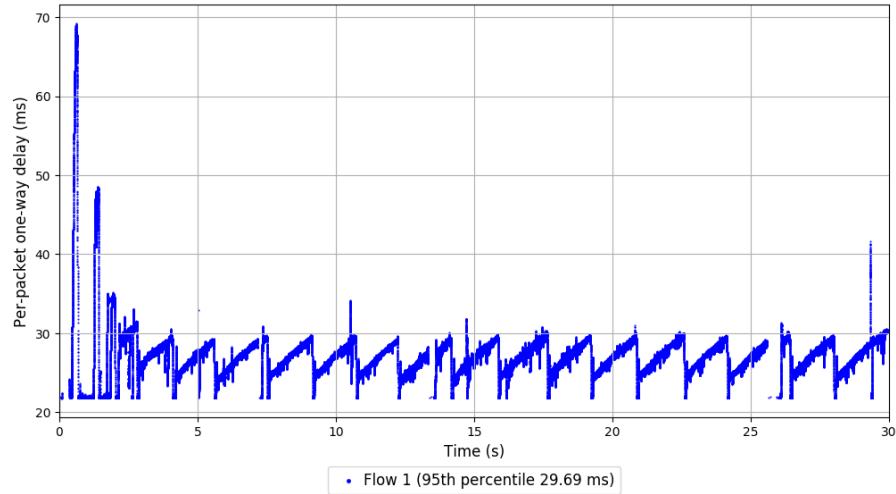
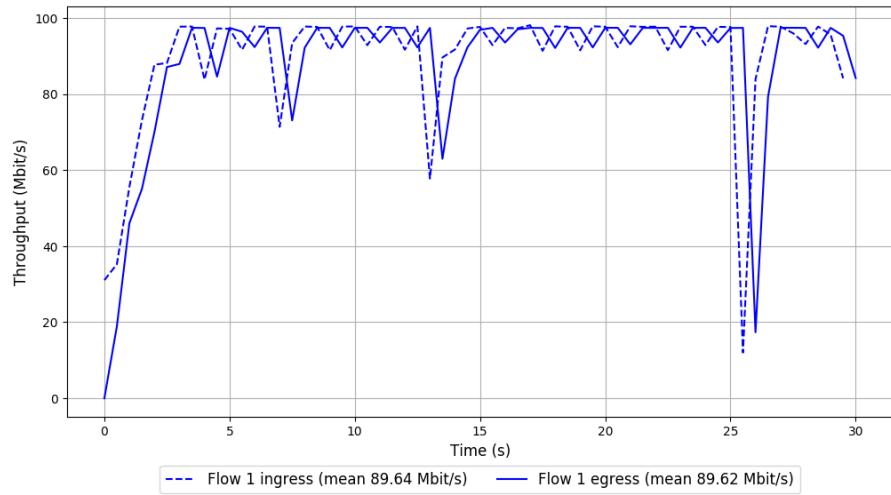


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-10-26 07:48:17
End at: 2018-10-26 07:48:47
Local clock offset: 2.662 ms
Remote clock offset: -6.062 ms

# Below is generated by plot.py at 2018-10-26 08:09:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.62 Mbit/s
95th percentile per-packet one-way delay: 29.688 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 89.62 Mbit/s
95th percentile per-packet one-way delay: 29.688 ms
Loss rate: 0.12%
```

Run 5: Report of QUIC Cubic — Data Link

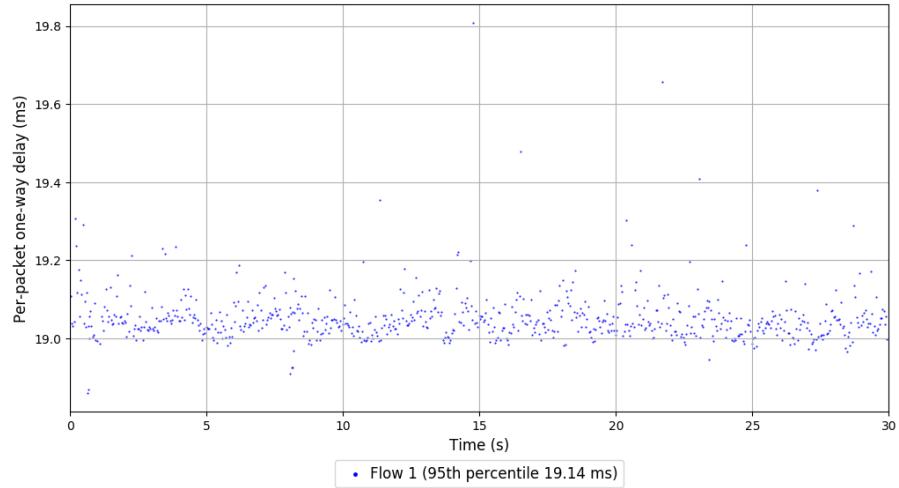
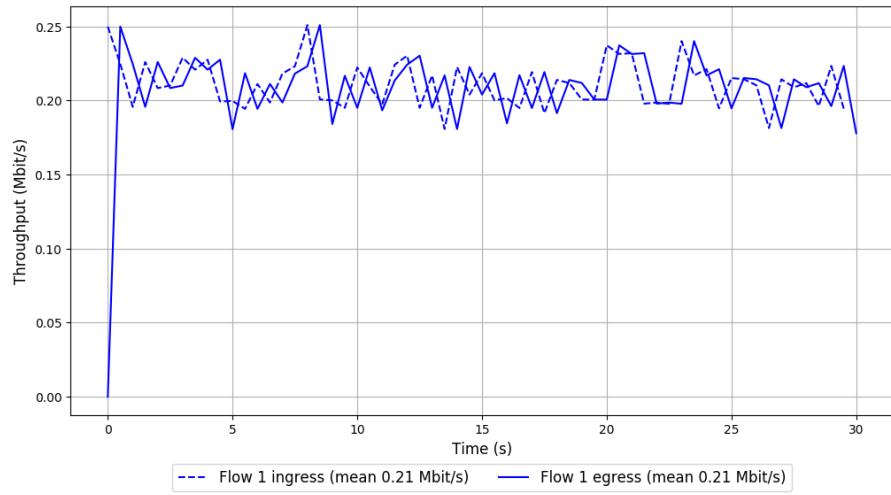


```
Run 1: Statistics of SCReAM

Start at: 2018-10-26 06:11:25
End at: 2018-10-26 06:11:55
Local clock offset: -0.135 ms
Remote clock offset: -5.063 ms

# Below is generated by plot.py at 2018-10-26 08:09:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.145 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.145 ms
Loss rate: 0.13%
```

Run 1: Report of SCReAM — Data Link

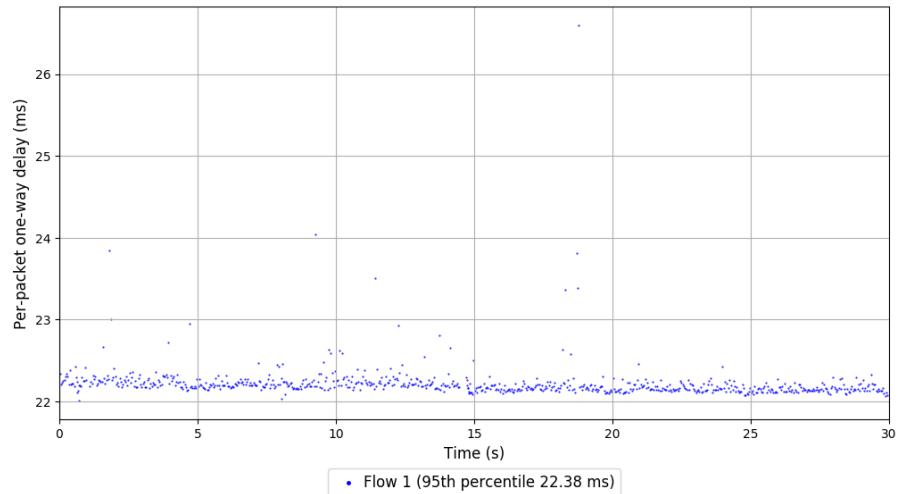
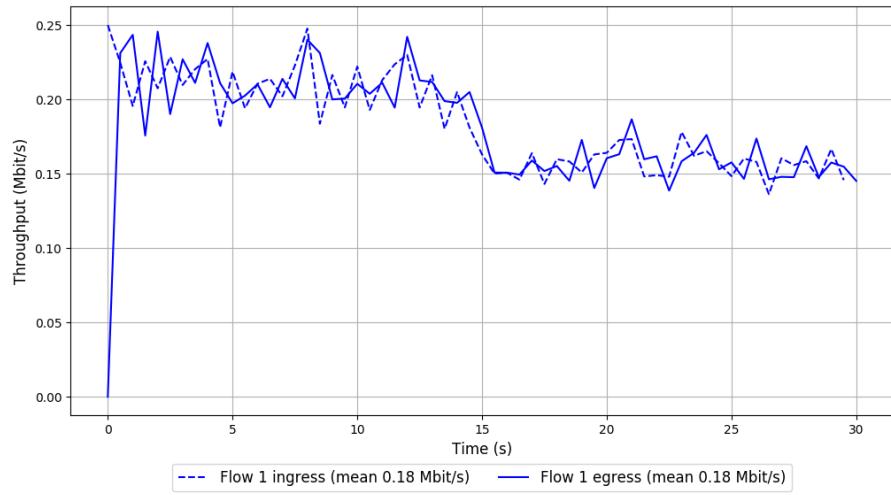


Run 2: Statistics of SCReAM

```
Start at: 2018-10-26 06:34:02
End at: 2018-10-26 06:34:32
Local clock offset: 3.141 ms
Remote clock offset: -5.664 ms

# Below is generated by plot.py at 2018-10-26 08:09:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 22.376 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 22.376 ms
Loss rate: 0.11%
```

Run 2: Report of SCReAM — Data Link

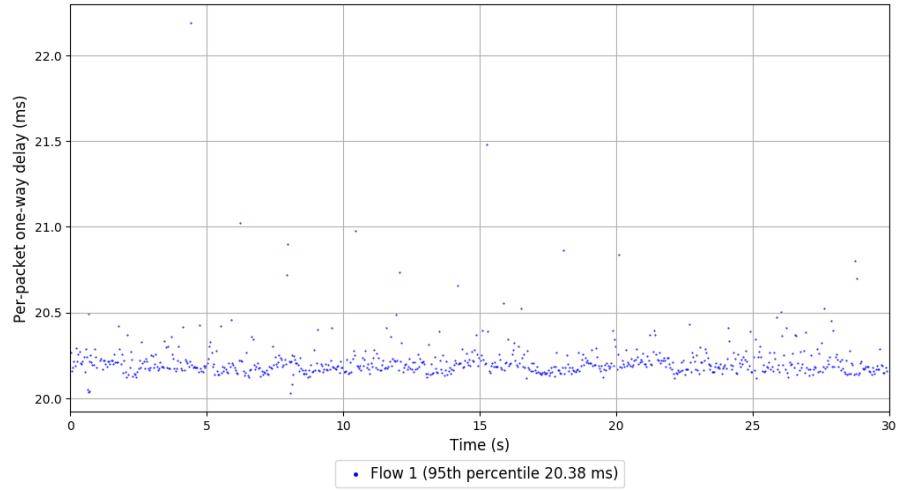
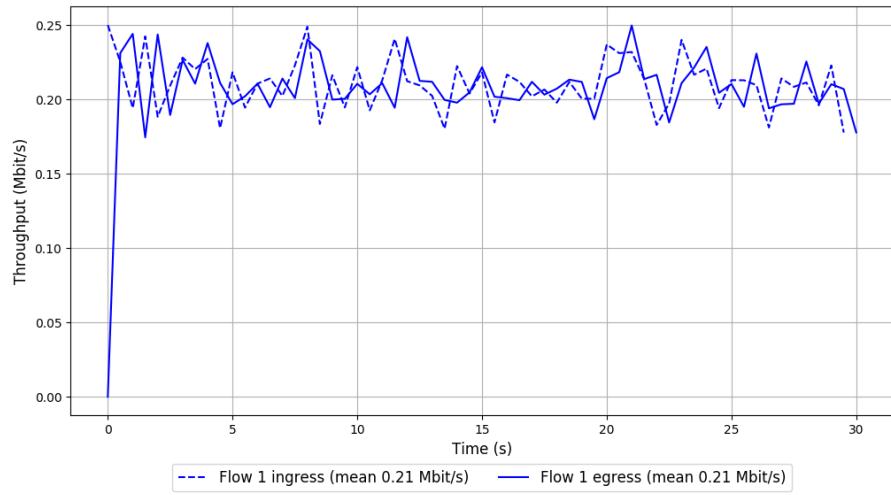


Run 3: Statistics of SCReAM

```
Start at: 2018-10-26 06:56:28
End at: 2018-10-26 06:56:58
Local clock offset: 2.484 ms
Remote clock offset: -5.409 ms

# Below is generated by plot.py at 2018-10-26 08:09:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 20.384 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 20.384 ms
Loss rate: 0.13%
```

Run 3: Report of SCReAM — Data Link

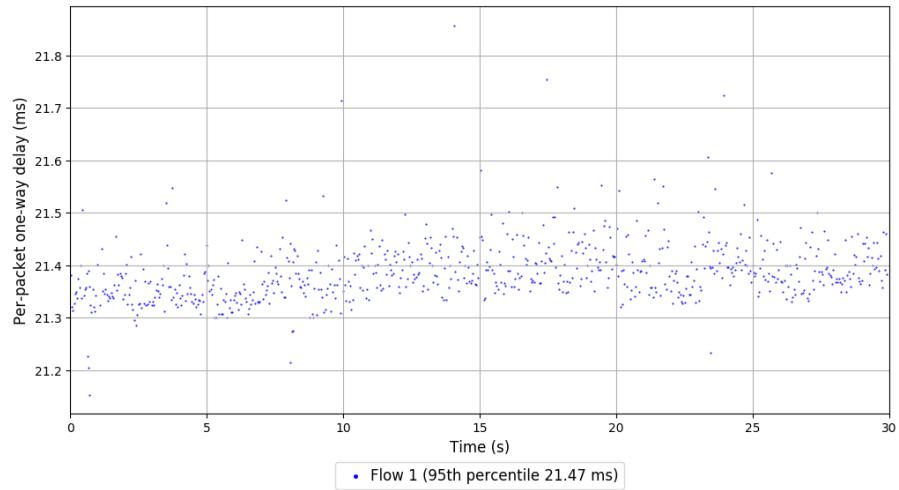
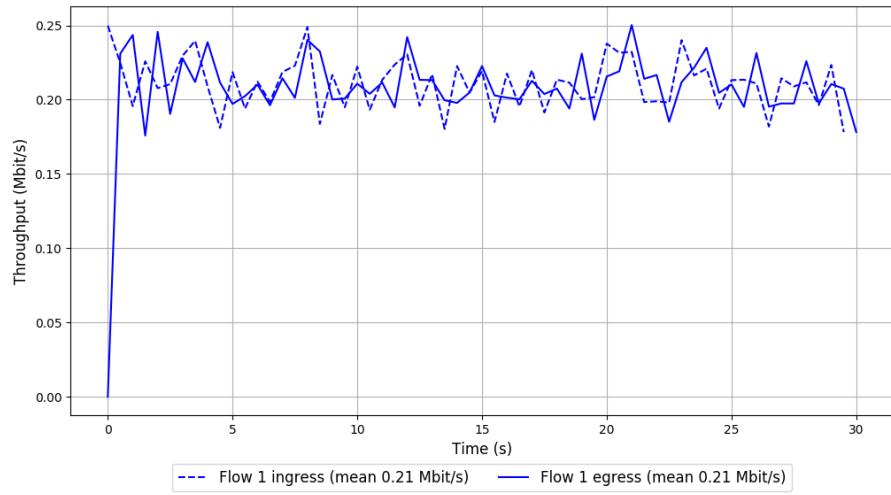


Run 4: Statistics of SCReAM

```
Start at: 2018-10-26 07:18:25
End at: 2018-10-26 07:18:55
Local clock offset: 3.516 ms
Remote clock offset: -3.691 ms

# Below is generated by plot.py at 2018-10-26 08:09:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 21.472 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 21.472 ms
Loss rate: 0.13%
```

Run 4: Report of SCReAM — Data Link

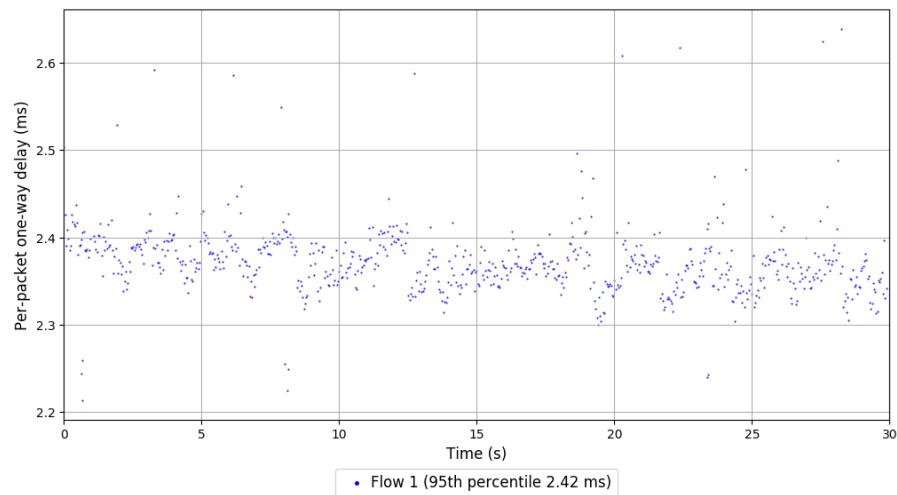
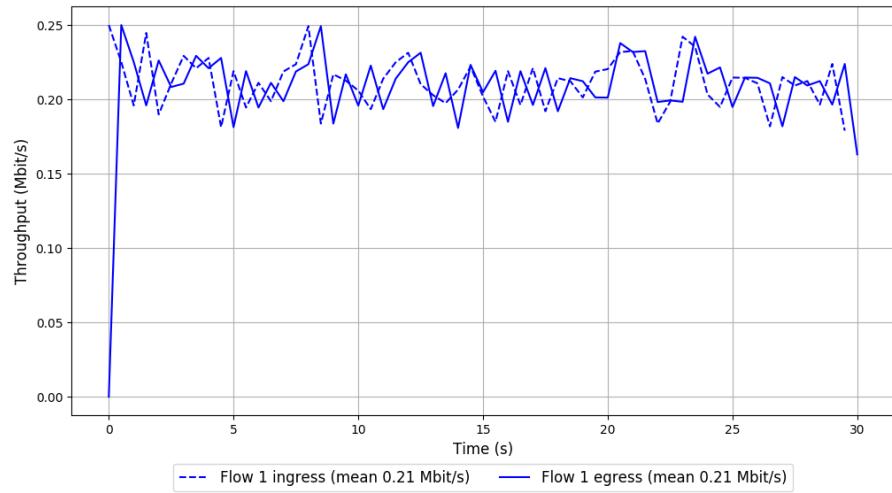


Run 5: Statistics of SCReAM

```
Start at: 2018-10-26 07:39:47
End at: 2018-10-26 07:40:17
Local clock offset: 1.273 ms
Remote clock offset: 12.365 ms

# Below is generated by plot.py at 2018-10-26 08:09:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 2.419 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 2.419 ms
Loss rate: 0.13%
```

Run 5: Report of SCReAM — Data Link

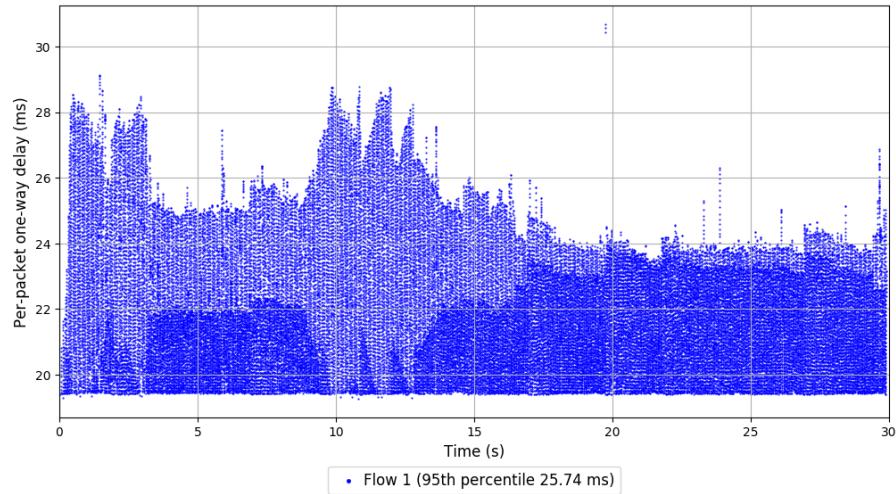
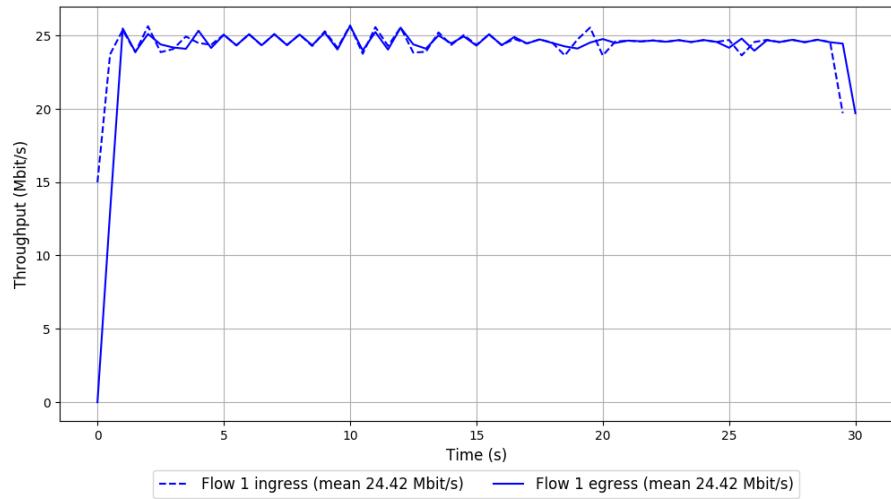


Run 1: Statistics of Sprout

```
Start at: 2018-10-26 06:25:29
End at: 2018-10-26 06:25:59
Local clock offset: 0.648 ms
Remote clock offset: -4.971 ms

# Below is generated by plot.py at 2018-10-26 08:09:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.42 Mbit/s
95th percentile per-packet one-way delay: 25.740 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 24.42 Mbit/s
95th percentile per-packet one-way delay: 25.740 ms
Loss rate: 0.08%
```

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

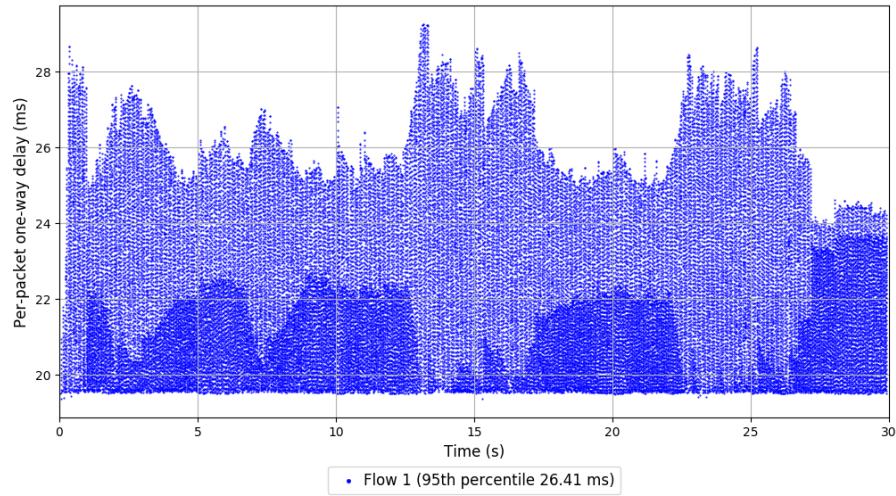
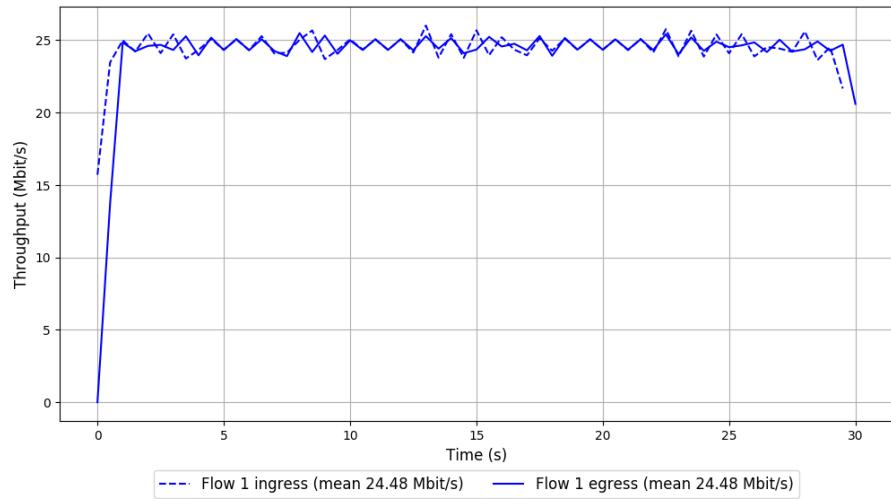


Run 2: Statistics of Sprout

```
Start at: 2018-10-26 06:47:58
End at: 2018-10-26 06:48:28
Local clock offset: 2.464 ms
Remote clock offset: -4.646 ms

# Below is generated by plot.py at 2018-10-26 08:09:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.48 Mbit/s
95th percentile per-packet one-way delay: 26.414 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.48 Mbit/s
95th percentile per-packet one-way delay: 26.414 ms
Loss rate: 0.13%
```

## Run 2: Report of Sprout — Data Link

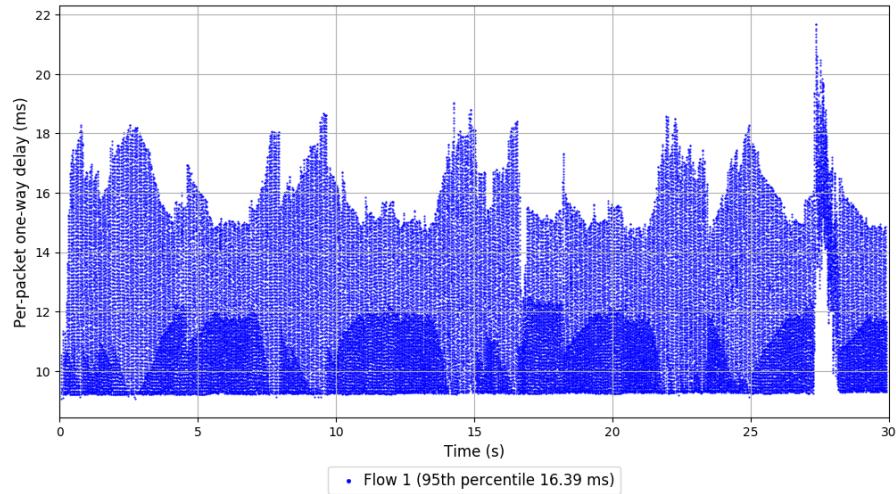
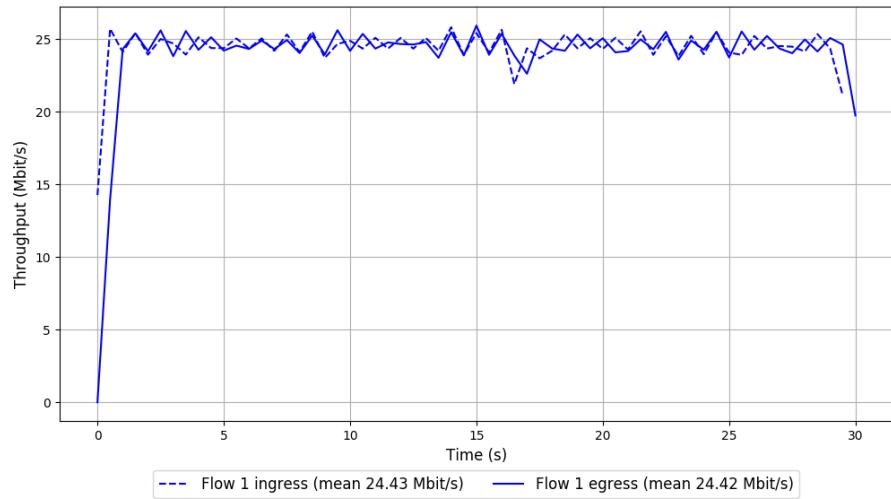


Run 3: Statistics of Sprout

```
Start at: 2018-10-26 07:10:03
End at: 2018-10-26 07:10:33
Local clock offset: 1.564 ms
Remote clock offset: 5.865 ms

# Below is generated by plot.py at 2018-10-26 08:09:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.42 Mbit/s
95th percentile per-packet one-way delay: 16.385 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 24.42 Mbit/s
95th percentile per-packet one-way delay: 16.385 ms
Loss rate: 0.09%
```

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

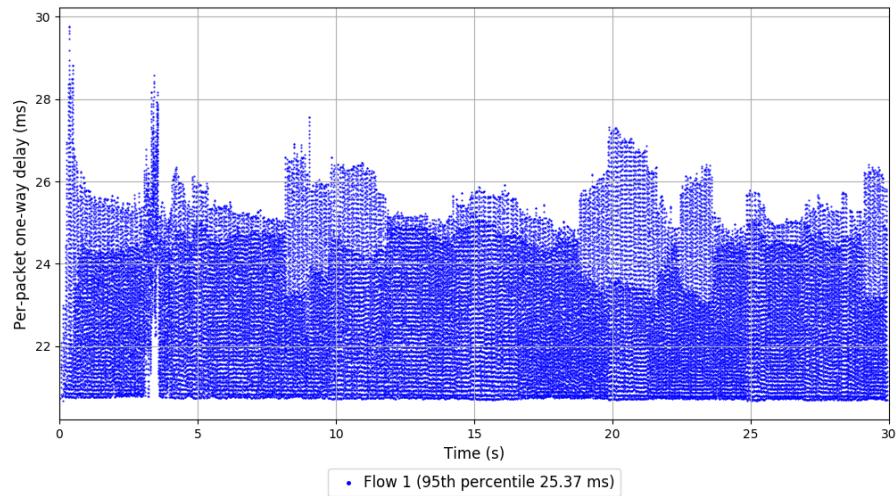
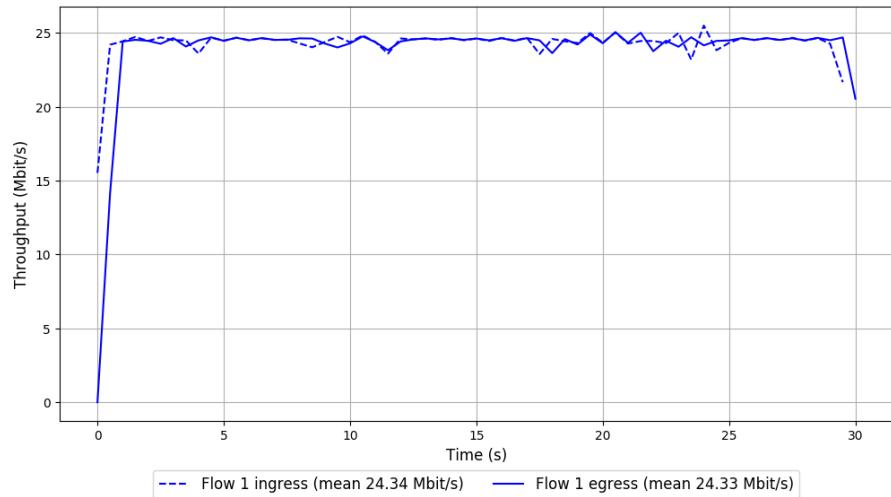


Run 4: Statistics of Sprout

```
Start at: 2018-10-26 07:31:36
End at: 2018-10-26 07:32:06
Local clock offset: 1.972 ms
Remote clock offset: -4.515 ms

# Below is generated by plot.py at 2018-10-26 08:09:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.33 Mbit/s
95th percentile per-packet one-way delay: 25.369 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 24.33 Mbit/s
95th percentile per-packet one-way delay: 25.369 ms
Loss rate: 0.12%
```

## Run 4: Report of Sprout — Data Link

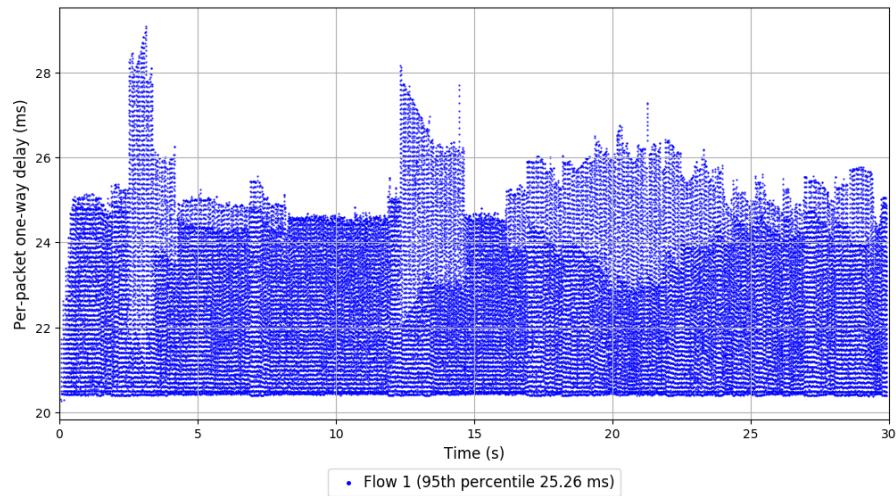
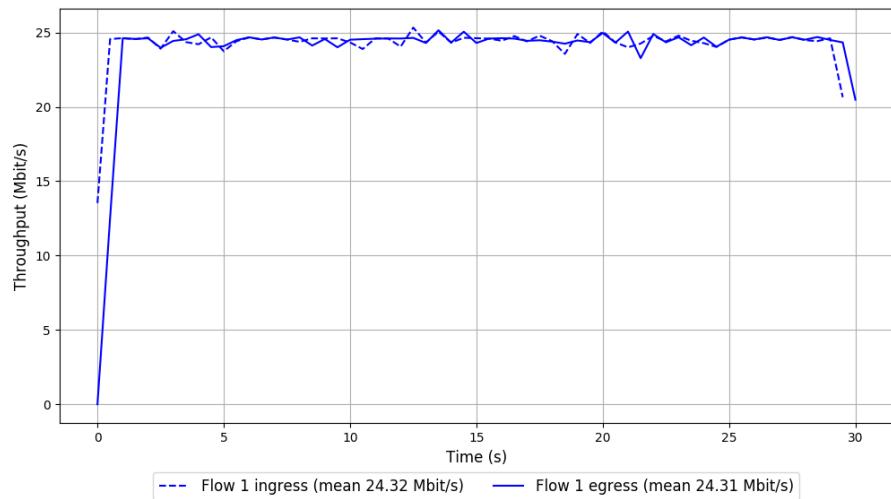


Run 5: Statistics of Sprout

```
Start at: 2018-10-26 07:53:12
End at: 2018-10-26 07:53:42
Local clock offset: 2.467 ms
Remote clock offset: -4.884 ms

# Below is generated by plot.py at 2018-10-26 08:09:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.31 Mbit/s
95th percentile per-packet one-way delay: 25.258 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 24.31 Mbit/s
95th percentile per-packet one-way delay: 25.258 ms
Loss rate: 0.08%
```

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

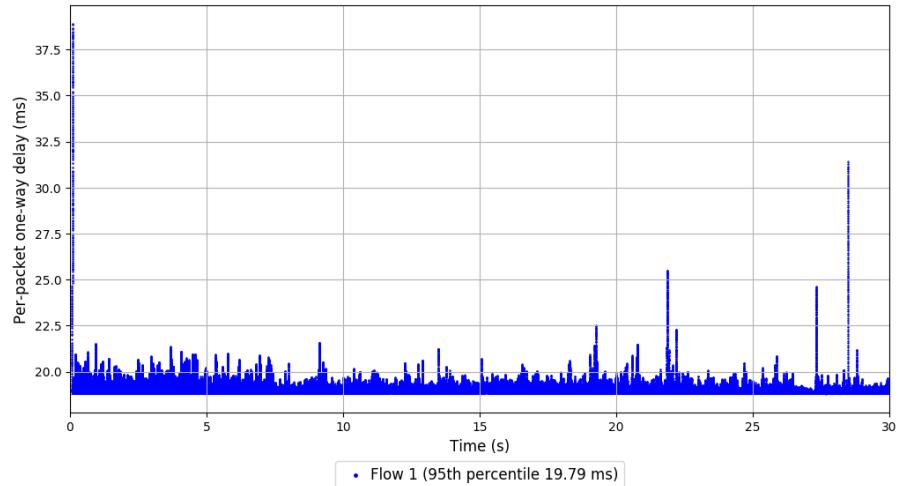
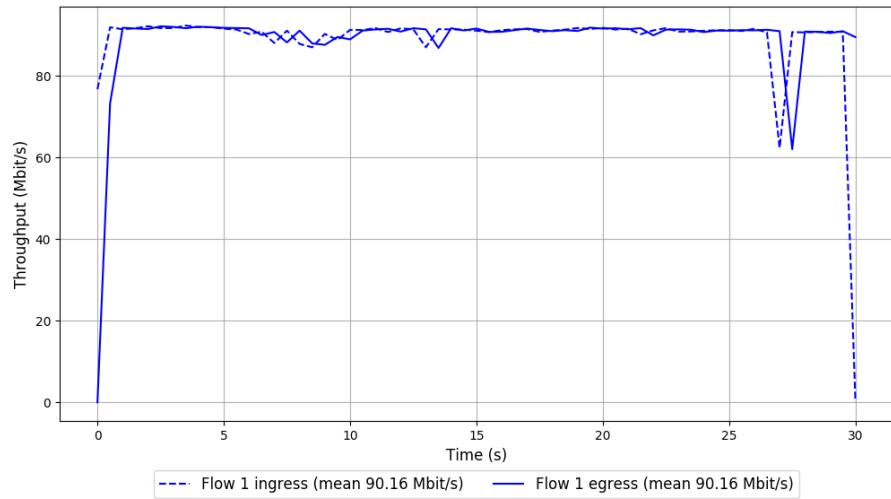


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-10-26 06:22:37
End at: 2018-10-26 06:23:08
Local clock offset: -0.202 ms
Remote clock offset: -5.192 ms

# Below is generated by plot.py at 2018-10-26 08:11:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.16 Mbit/s
95th percentile per-packet one-way delay: 19.787 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 90.16 Mbit/s
95th percentile per-packet one-way delay: 19.787 ms
Loss rate: 0.09%
```

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

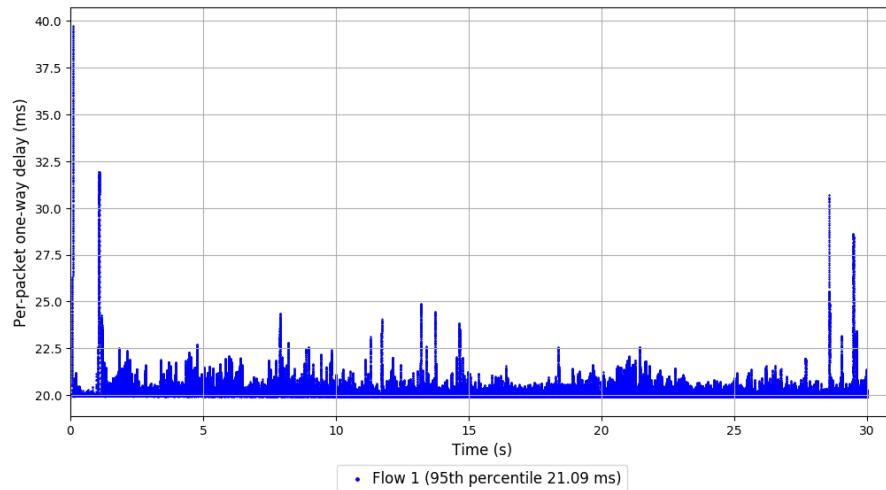
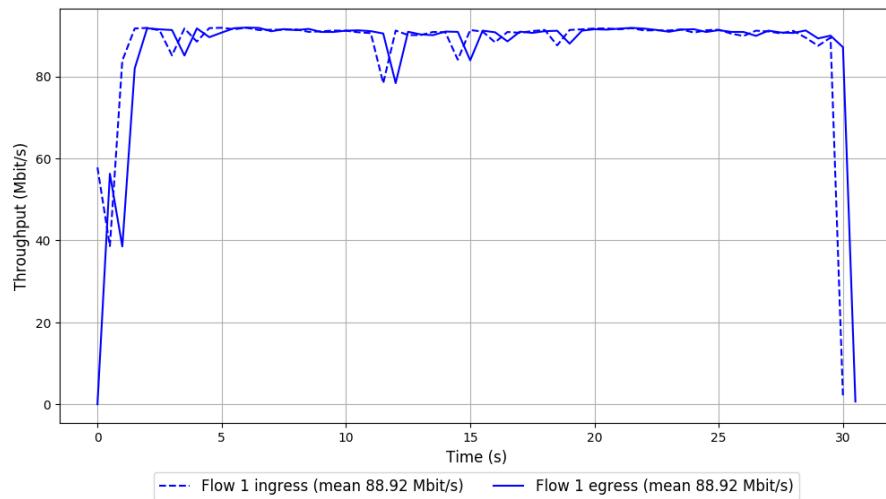


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-10-26 06:45:20
End at: 2018-10-26 06:45:50
Local clock offset: 2.623 ms
Remote clock offset: -4.851 ms

# Below is generated by plot.py at 2018-10-26 08:11:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.92 Mbit/s
95th percentile per-packet one-way delay: 21.086 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 88.92 Mbit/s
95th percentile per-packet one-way delay: 21.086 ms
Loss rate: 0.09%
```

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

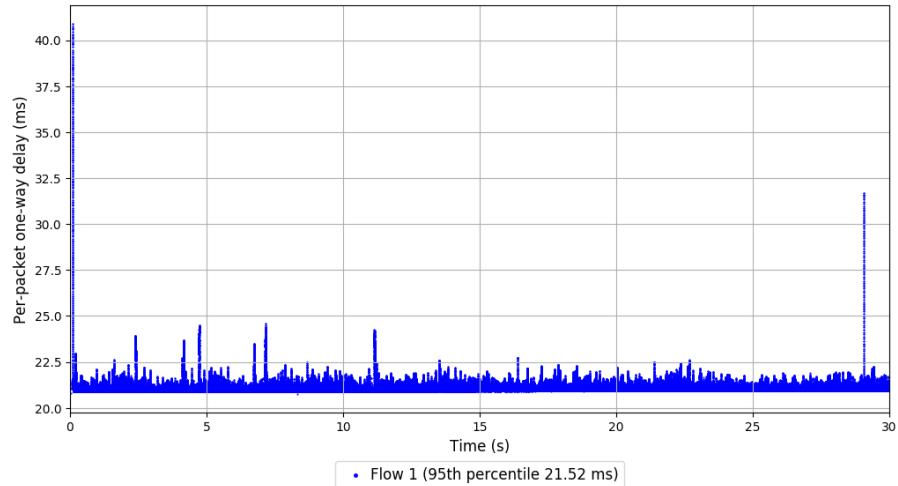
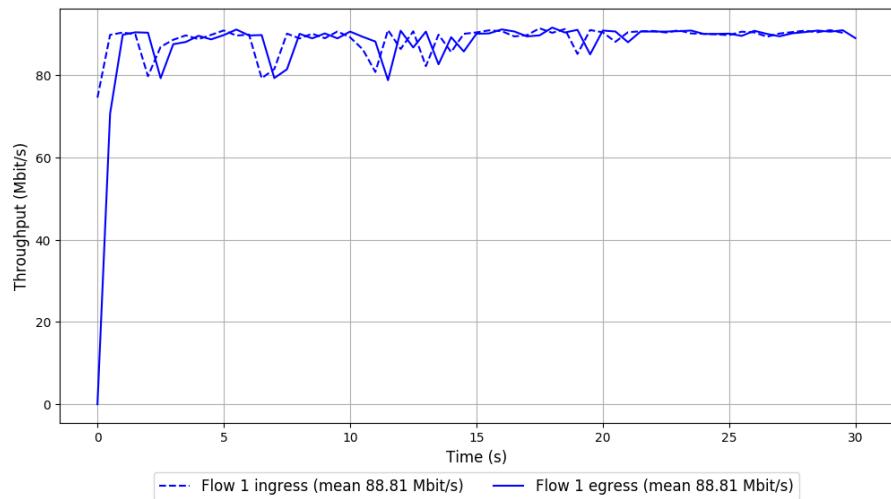


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-10-26 07:07:33
End at: 2018-10-26 07:08:03
Local clock offset: 4.331 ms
Remote clock offset: -3.356 ms

# Below is generated by plot.py at 2018-10-26 08:11:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.81 Mbit/s
95th percentile per-packet one-way delay: 21.516 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 88.81 Mbit/s
95th percentile per-packet one-way delay: 21.516 ms
Loss rate: 0.09%
```

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

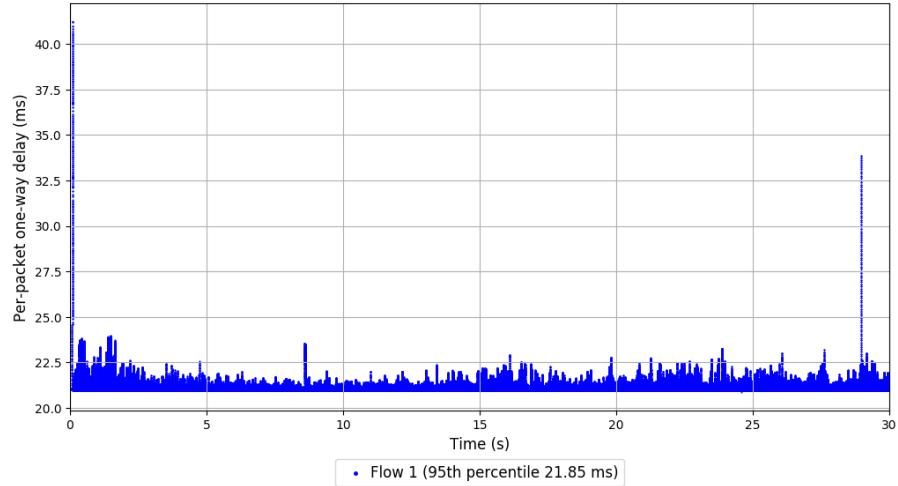
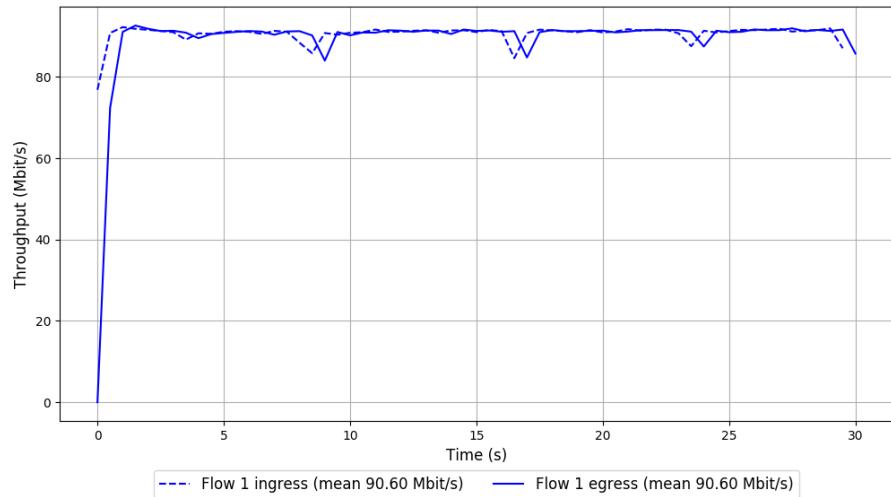


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-10-26 07:29:09
End at: 2018-10-26 07:29:39
Local clock offset: 2.532 ms
Remote clock offset: -4.13 ms

# Below is generated by plot.py at 2018-10-26 08:11:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.60 Mbit/s
95th percentile per-packet one-way delay: 21.847 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 90.60 Mbit/s
95th percentile per-packet one-way delay: 21.847 ms
Loss rate: 0.10%
```

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

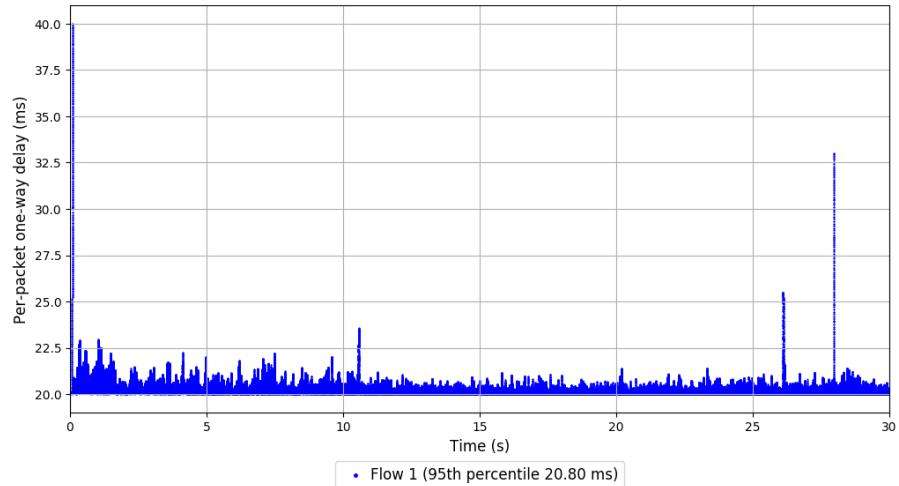
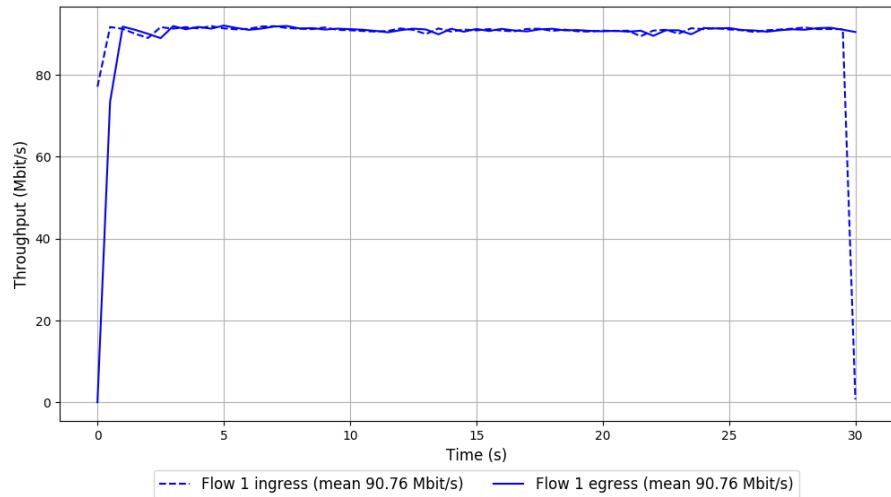


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-10-26 07:50:42
End at: 2018-10-26 07:51:12
Local clock offset: 2.418 ms
Remote clock offset: -4.547 ms

# Below is generated by plot.py at 2018-10-26 08:11:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.76 Mbit/s
95th percentile per-packet one-way delay: 20.798 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 90.76 Mbit/s
95th percentile per-packet one-way delay: 20.798 ms
Loss rate: 0.10%
```

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

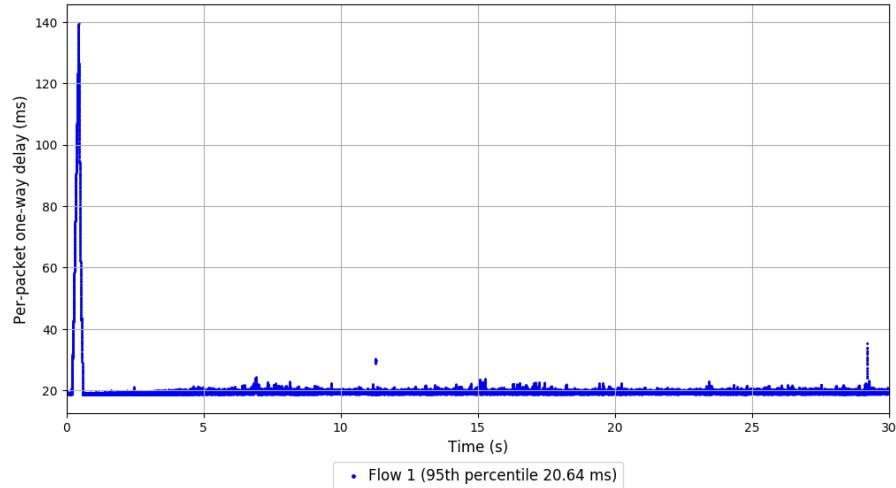
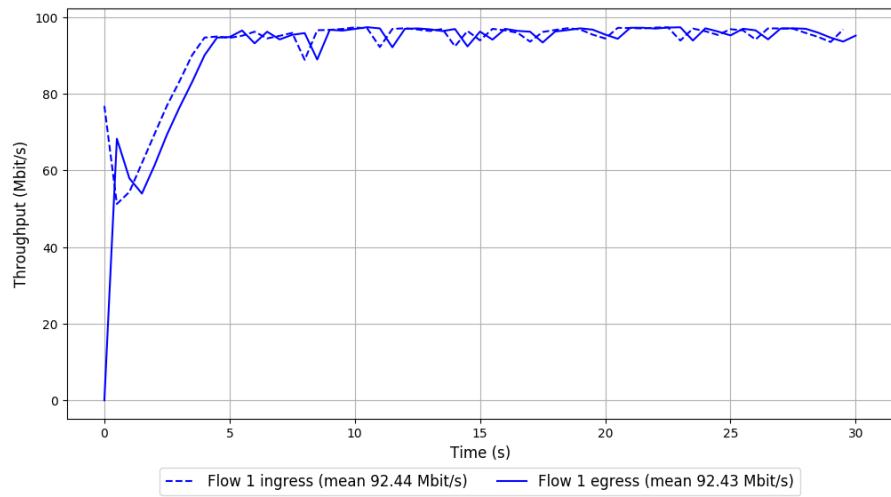


Run 1: Statistics of TCP Vegas

```
Start at: 2018-10-26 06:14:51
End at: 2018-10-26 06:15:21
Local clock offset: 0.274 ms
Remote clock offset: -4.362 ms

# Below is generated by plot.py at 2018-10-26 08:11:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.43 Mbit/s
95th percentile per-packet one-way delay: 20.644 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 92.43 Mbit/s
95th percentile per-packet one-way delay: 20.644 ms
Loss rate: 0.10%
```

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

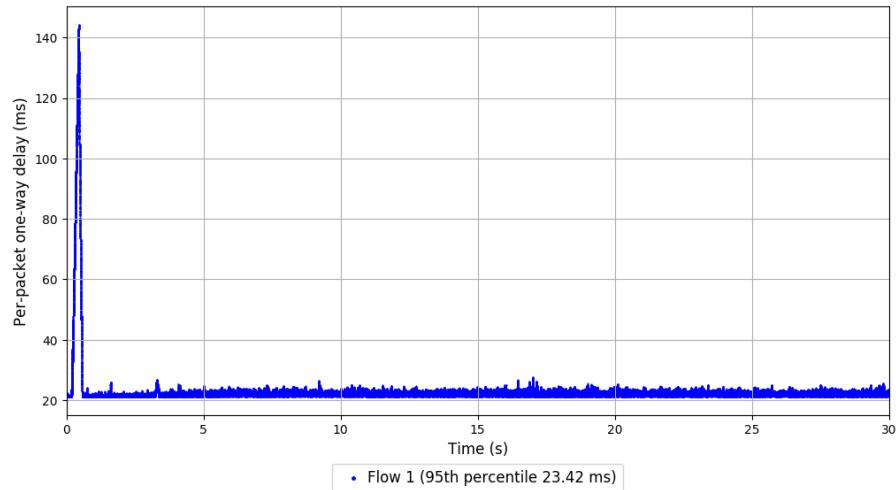
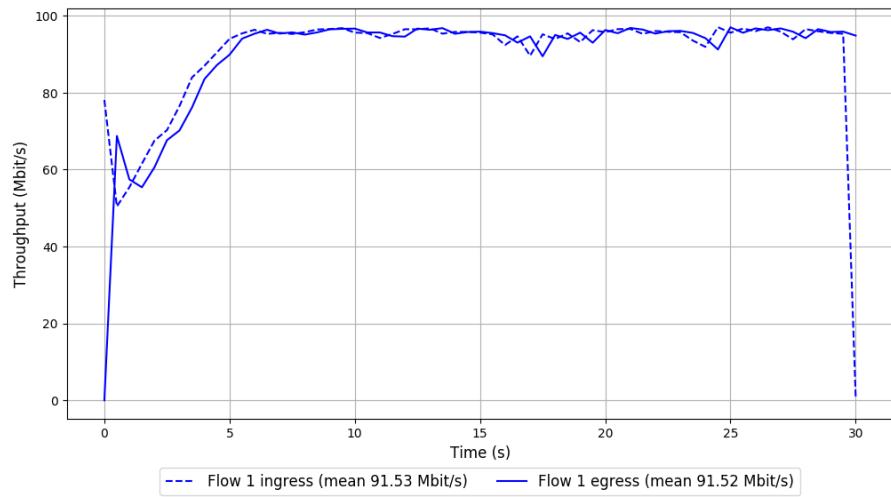


Run 2: Statistics of TCP Vegas

```
Start at: 2018-10-26 06:37:36
End at: 2018-10-26 06:38:06
Local clock offset: 2.449 ms
Remote clock offset: -5.709 ms

# Below is generated by plot.py at 2018-10-26 08:11:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.52 Mbit/s
95th percentile per-packet one-way delay: 23.418 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 91.52 Mbit/s
95th percentile per-packet one-way delay: 23.418 ms
Loss rate: 0.10%
```

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

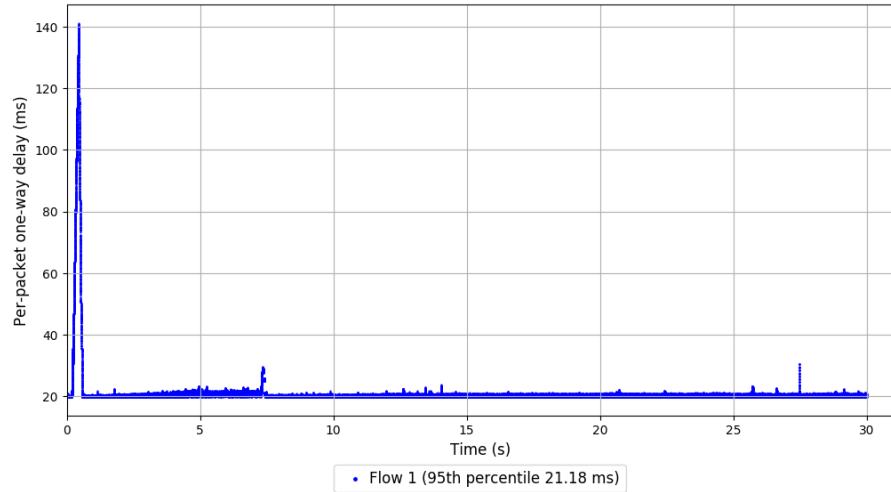
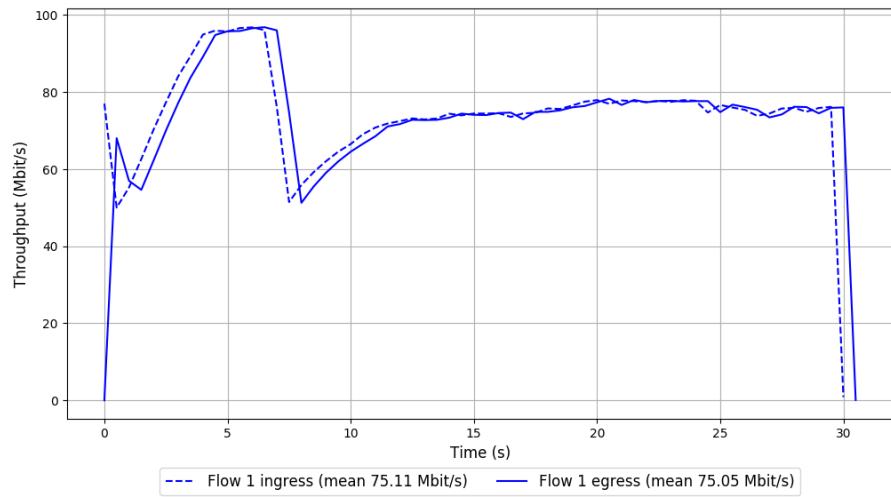


Run 3: Statistics of TCP Vegas

```
Start at: 2018-10-26 07:00:07
End at: 2018-10-26 07:00:37
Local clock offset: 3.447 ms
Remote clock offset: -4.035 ms

# Below is generated by plot.py at 2018-10-26 08:11:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.05 Mbit/s
95th percentile per-packet one-way delay: 21.176 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 75.05 Mbit/s
95th percentile per-packet one-way delay: 21.176 ms
Loss rate: 0.18%
```

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

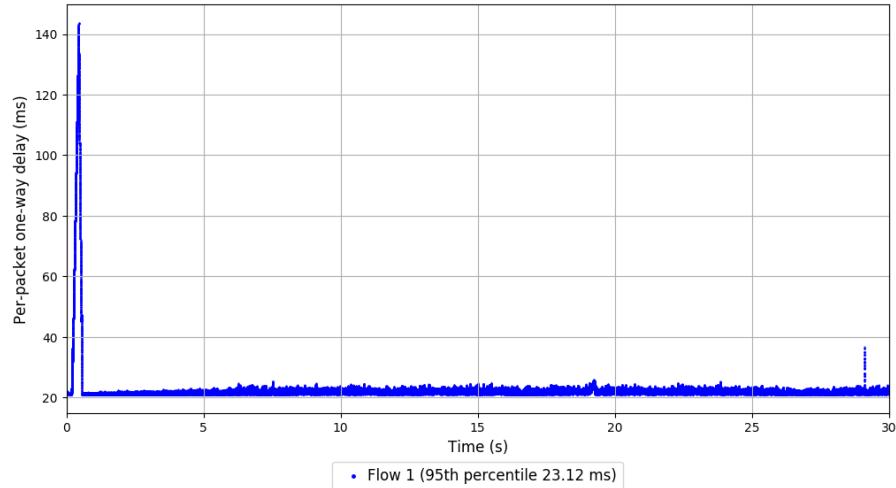
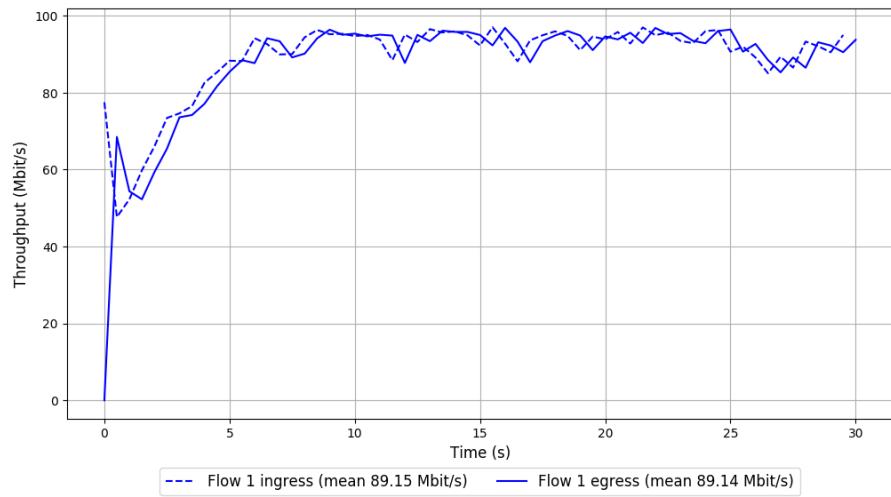


Run 4: Statistics of TCP Vegas

```
Start at: 2018-10-26 07:21:53
End at: 2018-10-26 07:22:23
Local clock offset: 3.182 ms
Remote clock offset: -3.606 ms

# Below is generated by plot.py at 2018-10-26 08:11:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.14 Mbit/s
95th percentile per-packet one-way delay: 23.119 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 89.14 Mbit/s
95th percentile per-packet one-way delay: 23.119 ms
Loss rate: 0.10%
```

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

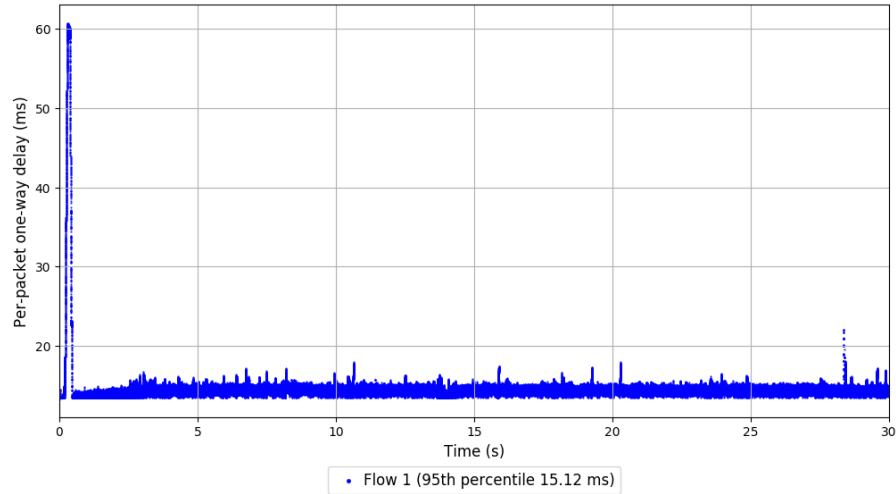
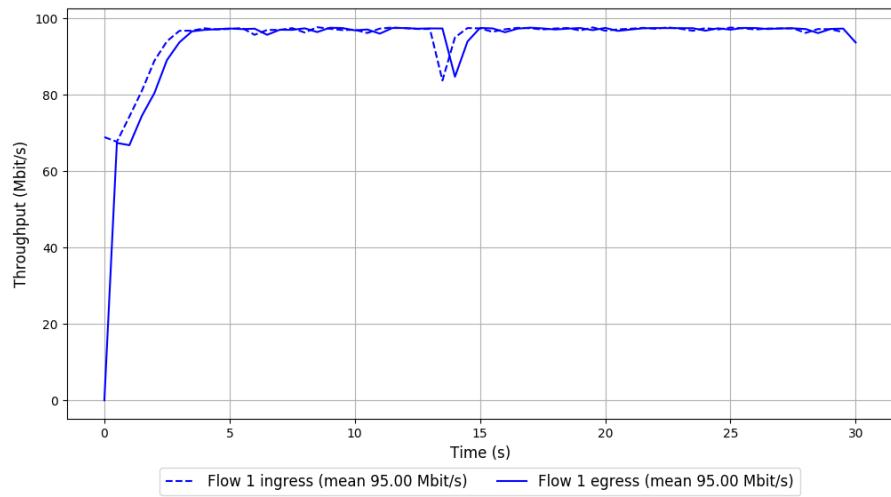


Run 5: Statistics of TCP Vegas

```
Start at: 2018-10-26 07:43:11
End at: 2018-10-26 07:43:41
Local clock offset: 2.775 ms
Remote clock offset: 2.564 ms

# Below is generated by plot.py at 2018-10-26 08:11:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.00 Mbit/s
95th percentile per-packet one-way delay: 15.121 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 95.00 Mbit/s
95th percentile per-packet one-way delay: 15.121 ms
Loss rate: 0.10%
```

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

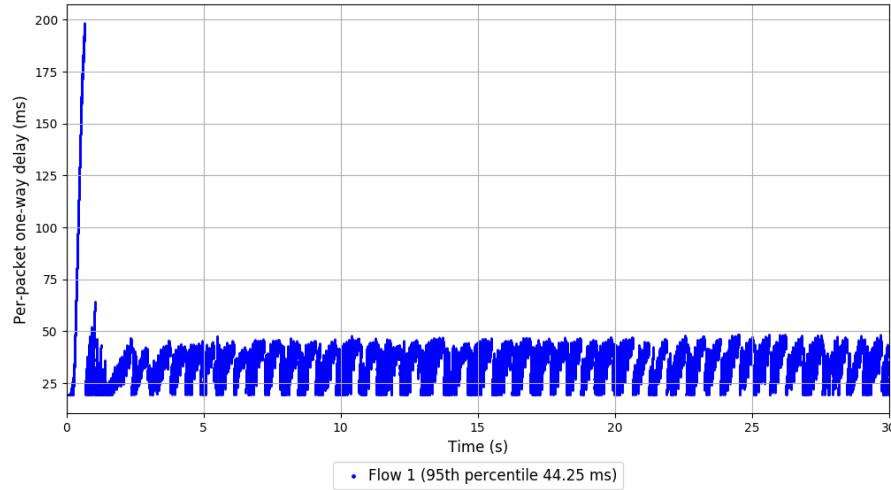
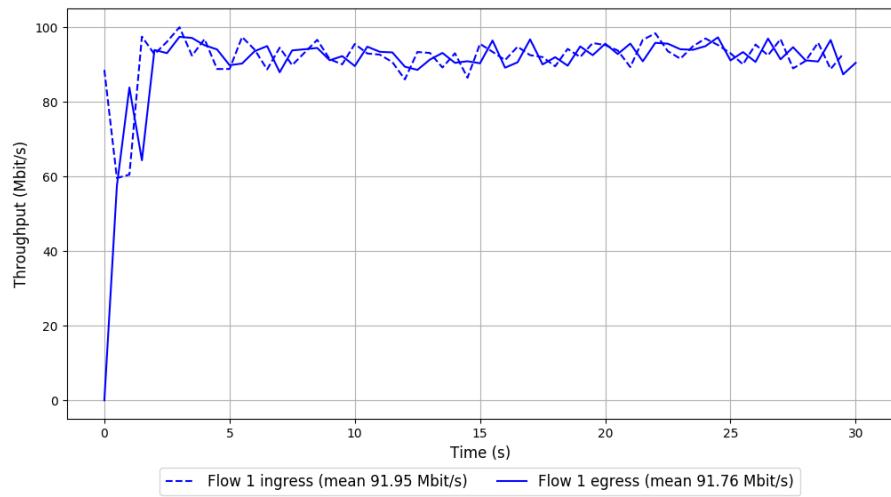


Run 1: Statistics of Verus

```
Start at: 2018-10-26 06:09:06
End at: 2018-10-26 06:09:36
Local clock offset: -0.079 ms
Remote clock offset: -5.313 ms

# Below is generated by plot.py at 2018-10-26 08:11:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.76 Mbit/s
95th percentile per-packet one-way delay: 44.251 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 91.76 Mbit/s
95th percentile per-packet one-way delay: 44.251 ms
Loss rate: 0.28%
```

Run 1: Report of Verus — Data Link

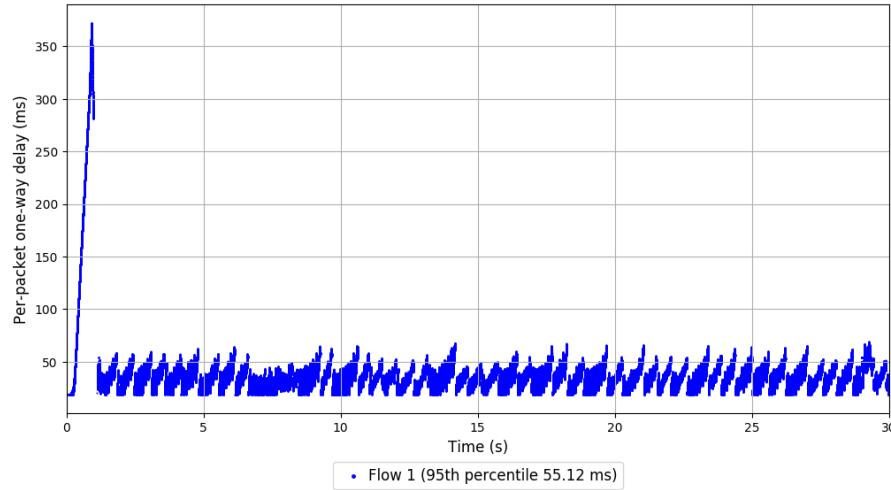
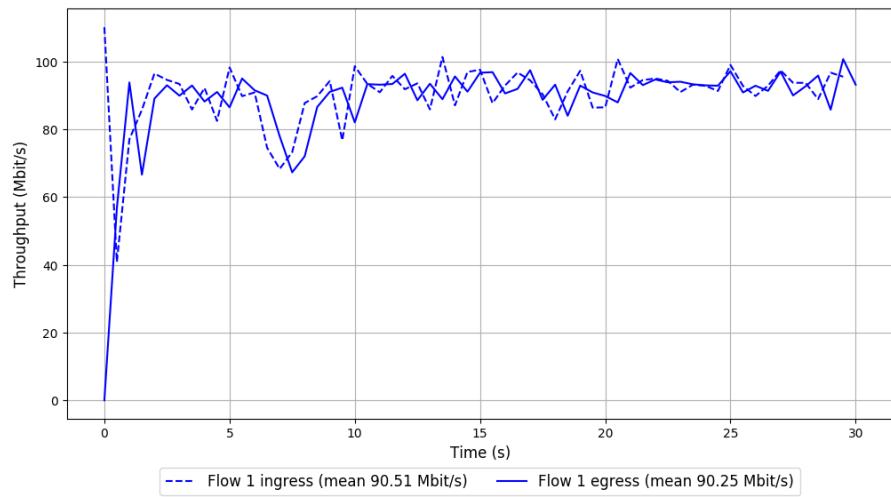


Run 2: Statistics of Verus

```
Start at: 2018-10-26 06:31:40
End at: 2018-10-26 06:32:10
Local clock offset: 0.281 ms
Remote clock offset: -4.766 ms

# Below is generated by plot.py at 2018-10-26 08:12:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.25 Mbit/s
95th percentile per-packet one-way delay: 55.119 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 90.25 Mbit/s
95th percentile per-packet one-way delay: 55.119 ms
Loss rate: 0.37%
```

Run 2: Report of Verus — Data Link

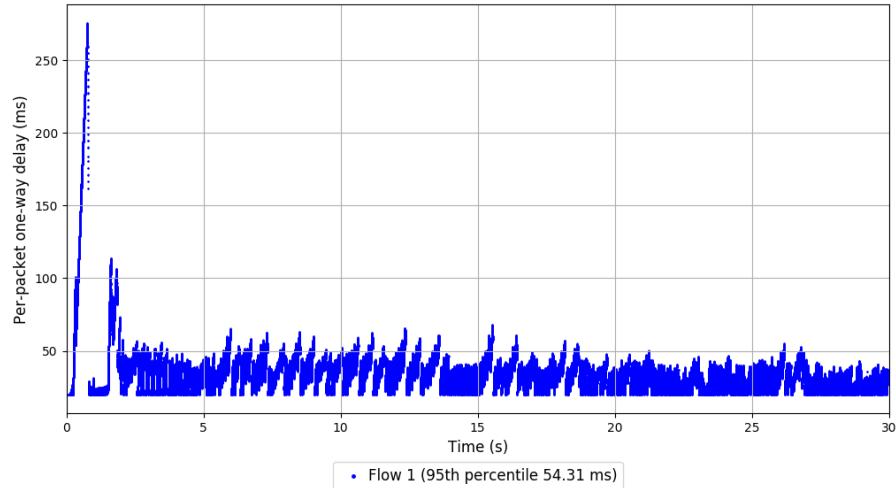
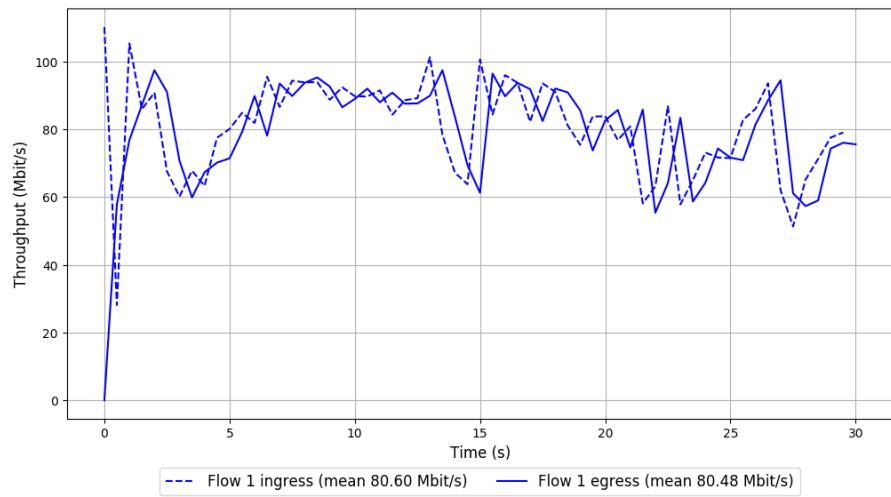


Run 3: Statistics of Verus

```
Start at: 2018-10-26 06:54:01
End at: 2018-10-26 06:54:31
Local clock offset: 2.741 ms
Remote clock offset: -4.768 ms

# Below is generated by plot.py at 2018-10-26 08:12:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.48 Mbit/s
95th percentile per-packet one-way delay: 54.311 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 80.48 Mbit/s
95th percentile per-packet one-way delay: 54.311 ms
Loss rate: 0.23%
```

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

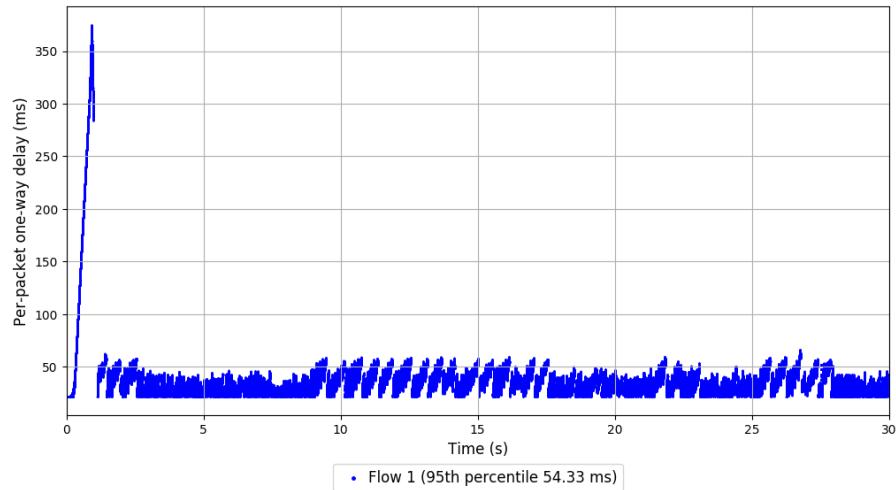
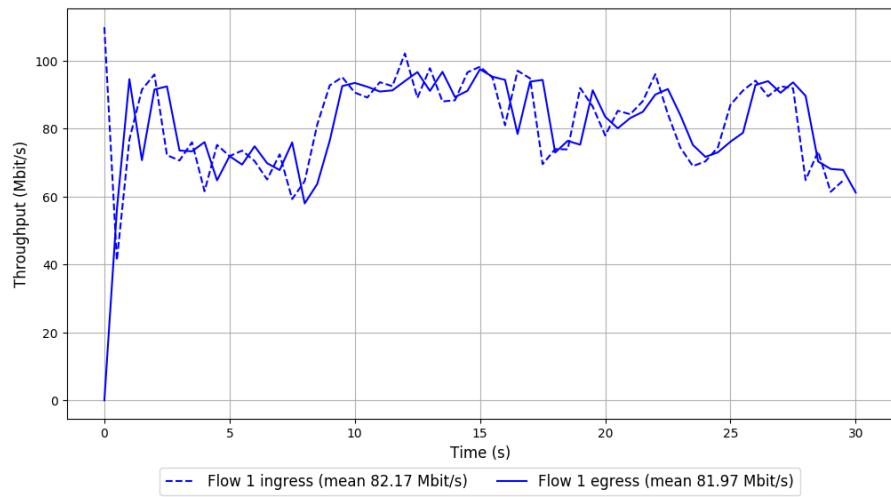


Run 4: Statistics of Verus

```
Start at: 2018-10-26 07:16:07
End at: 2018-10-26 07:16:37
Local clock offset: 3.441 ms
Remote clock offset: -3.975 ms

# Below is generated by plot.py at 2018-10-26 08:12:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.97 Mbit/s
95th percentile per-packet one-way delay: 54.333 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 81.97 Mbit/s
95th percentile per-packet one-way delay: 54.333 ms
Loss rate: 0.23%
```

Run 4: Report of Verus — Data Link

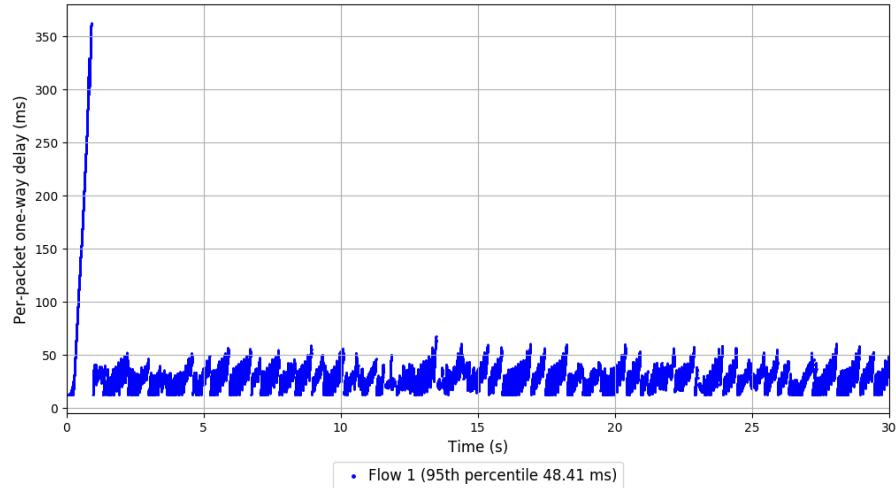
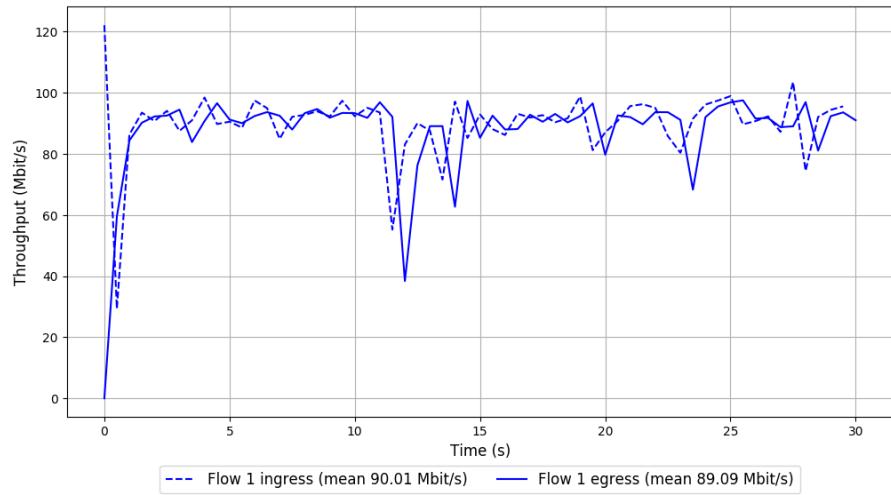


Run 5: Statistics of Verus

```
Start at: 2018-10-26 07:37:29
End at: 2018-10-26 07:37:59
Local clock offset: 4.77 ms
Remote clock offset: 6.016 ms

# Below is generated by plot.py at 2018-10-26 08:12:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.09 Mbit/s
95th percentile per-packet one-way delay: 48.415 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 89.09 Mbit/s
95th percentile per-packet one-way delay: 48.415 ms
Loss rate: 1.11%
```

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

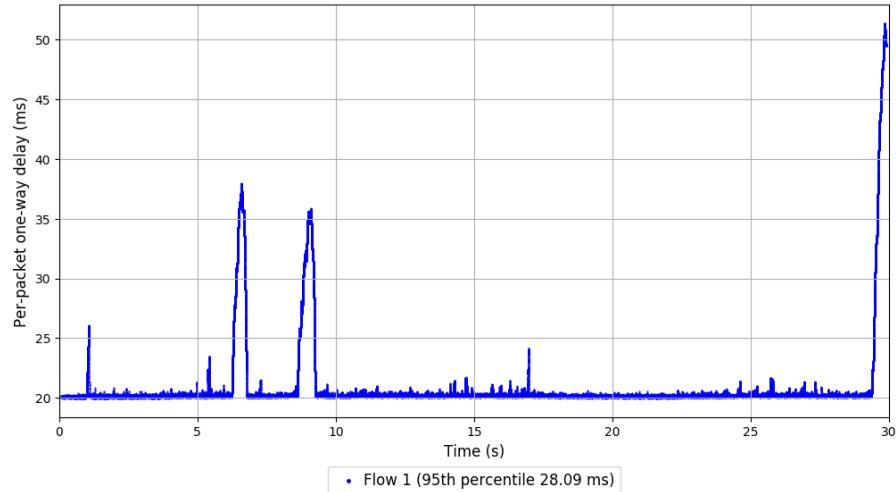
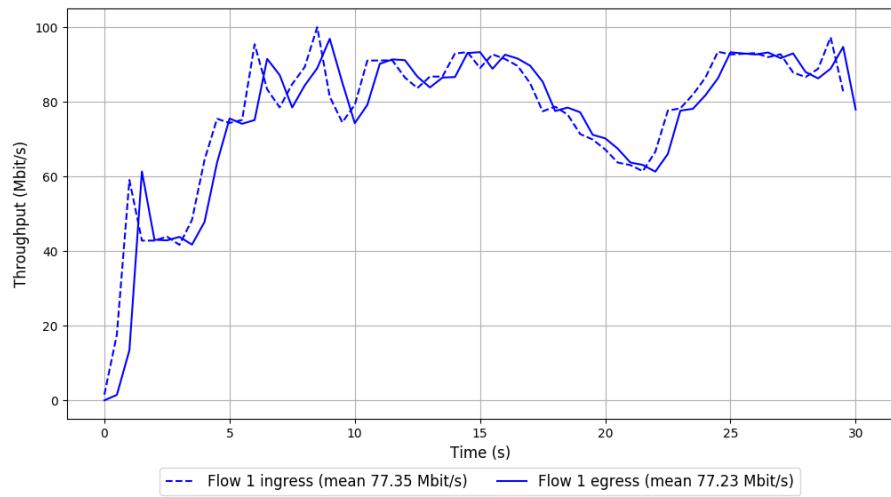


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-10-26 06:12:30
End at: 2018-10-26 06:13:00
Local clock offset: 0.551 ms
Remote clock offset: -5.494 ms

# Below is generated by plot.py at 2018-10-26 08:12:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.23 Mbit/s
95th percentile per-packet one-way delay: 28.085 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 77.23 Mbit/s
95th percentile per-packet one-way delay: 28.085 ms
Loss rate: 0.25%
```

Run 1: Report of PCC-Vivace — Data Link

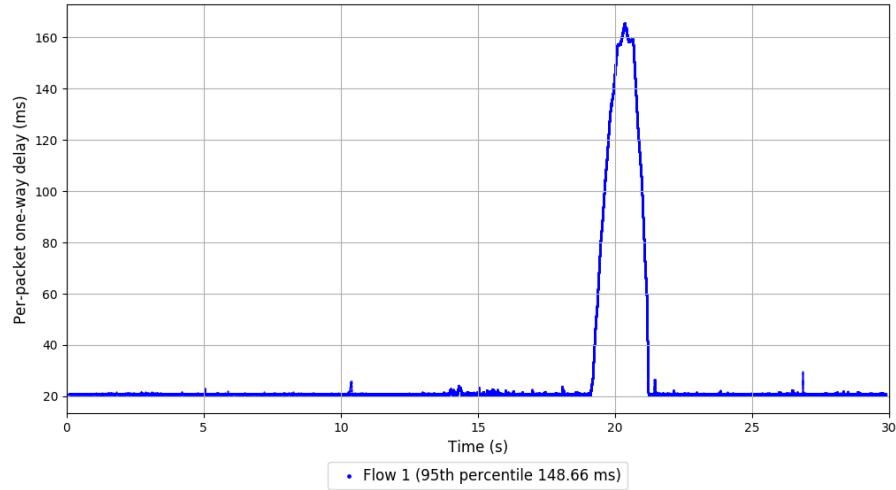
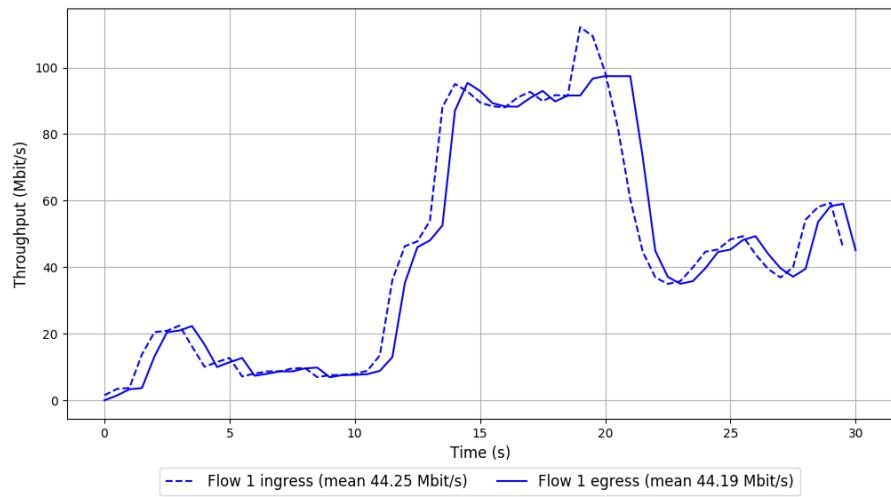


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-10-26 06:35:07
End at: 2018-10-26 06:35:37
Local clock offset: 2.458 ms
Remote clock offset: -4.991 ms

# Below is generated by plot.py at 2018-10-26 08:12:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 44.19 Mbit/s
95th percentile per-packet one-way delay: 148.655 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 44.19 Mbit/s
95th percentile per-packet one-way delay: 148.655 ms
Loss rate: 0.22%
```

Run 2: Report of PCC-Vivace — Data Link

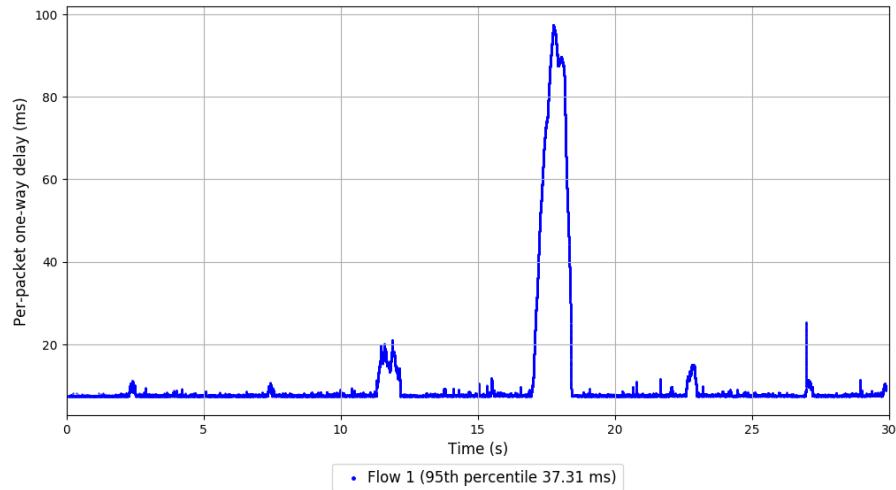
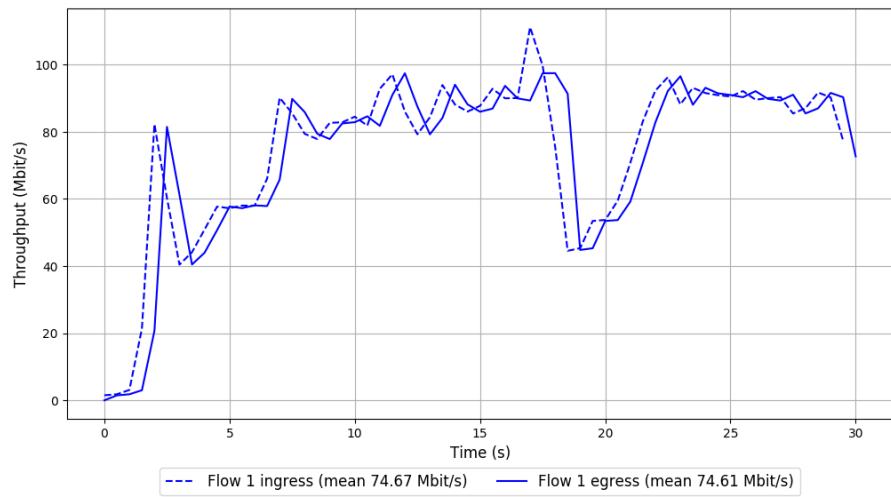


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-10-26 06:57:33
End at: 2018-10-26 06:58:03
Local clock offset: 3.529 ms
Remote clock offset: 8.326 ms

# Below is generated by plot.py at 2018-10-26 08:12:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.61 Mbit/s
95th percentile per-packet one-way delay: 37.308 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 74.61 Mbit/s
95th percentile per-packet one-way delay: 37.308 ms
Loss rate: 0.16%
```

Run 3: Report of PCC-Vivace — Data Link

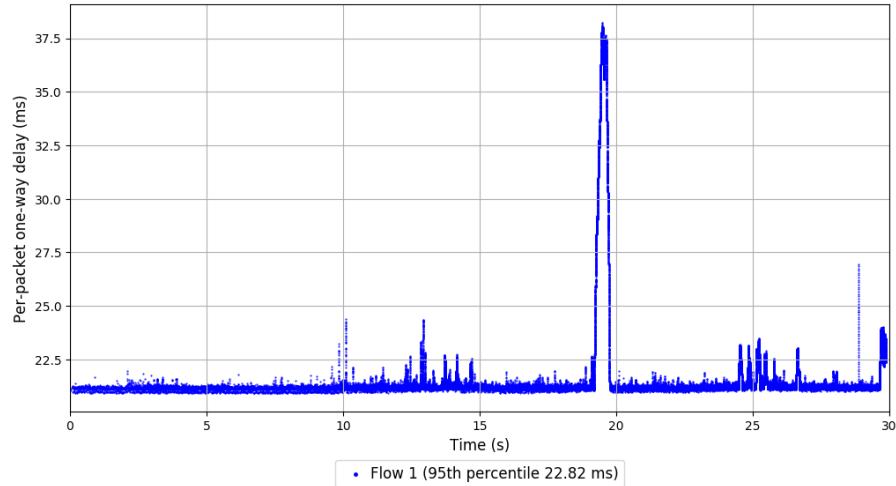
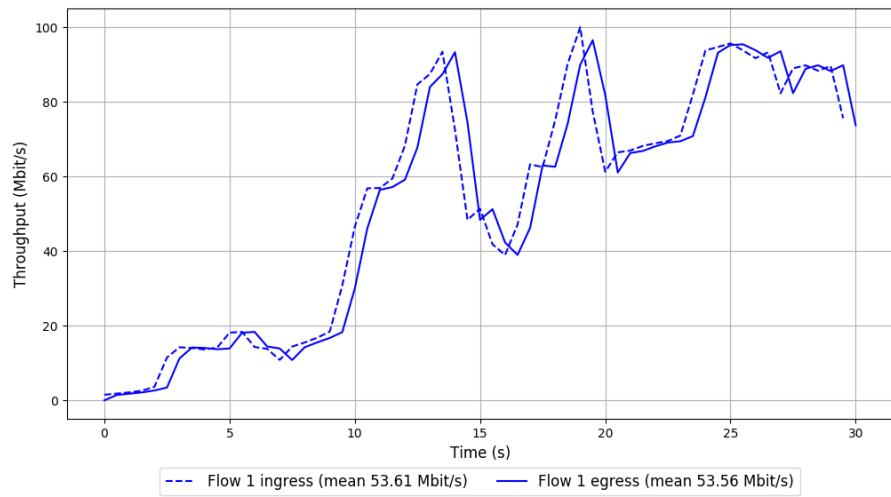


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-10-26 07:19:30
End at: 2018-10-26 07:20:00
Local clock offset: 3.115 ms
Remote clock offset: -3.852 ms

# Below is generated by plot.py at 2018-10-26 08:12:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 53.56 Mbit/s
95th percentile per-packet one-way delay: 22.820 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 53.56 Mbit/s
95th percentile per-packet one-way delay: 22.820 ms
Loss rate: 0.19%
```

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

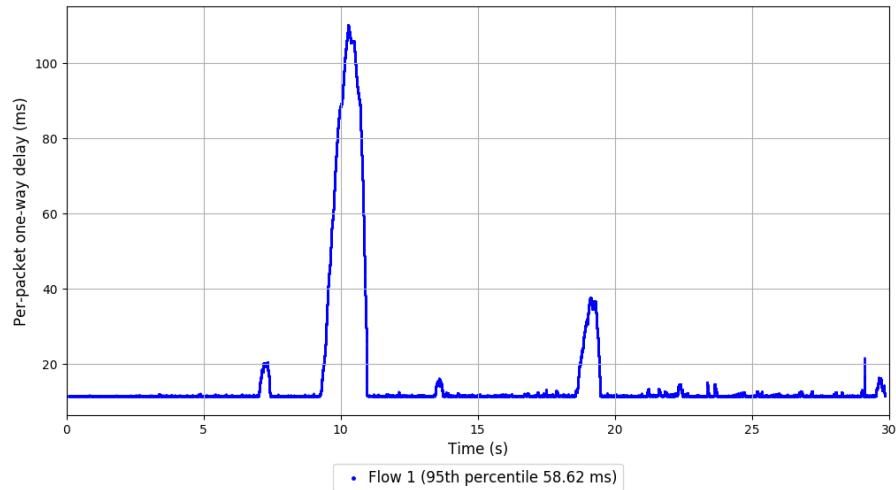
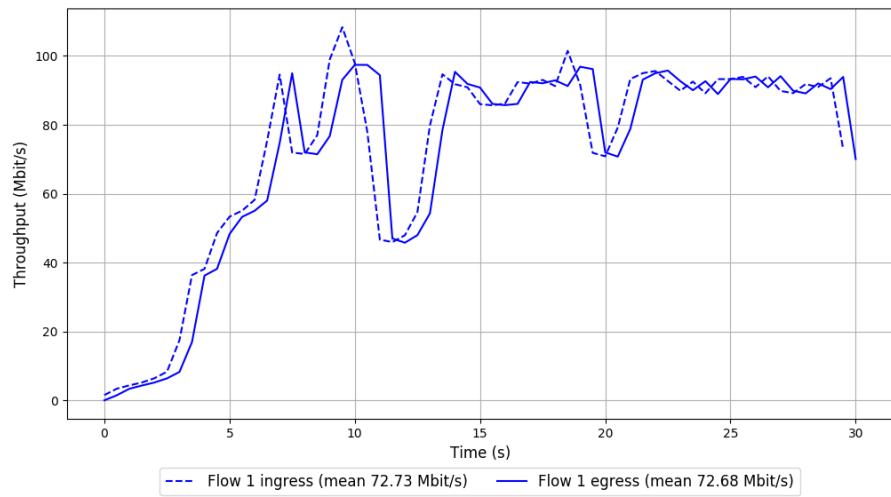


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-10-26 07:40:52
End at: 2018-10-26 07:41:22
Local clock offset: 3.797 ms
Remote clock offset: 5.659 ms

# Below is generated by plot.py at 2018-10-26 08:12:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.68 Mbit/s
95th percentile per-packet one-way delay: 58.622 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 72.68 Mbit/s
95th percentile per-packet one-way delay: 58.622 ms
Loss rate: 0.16%
```

Run 5: Report of PCC-Vivace — Data Link

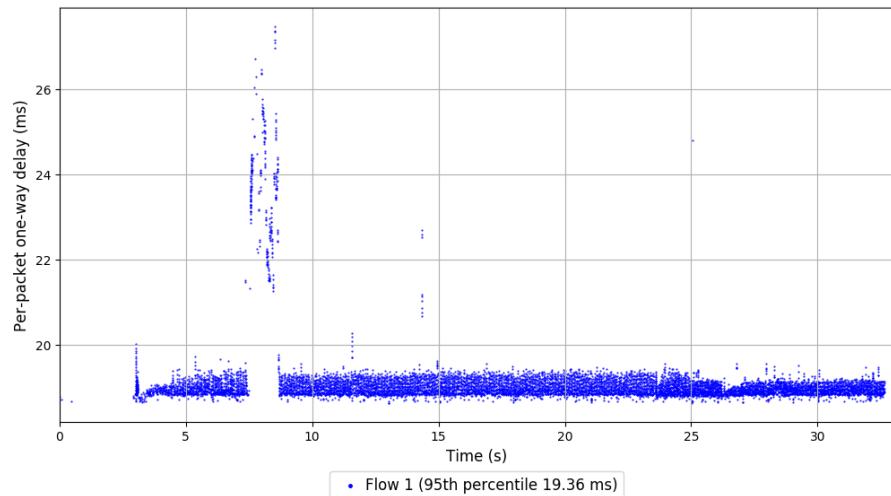
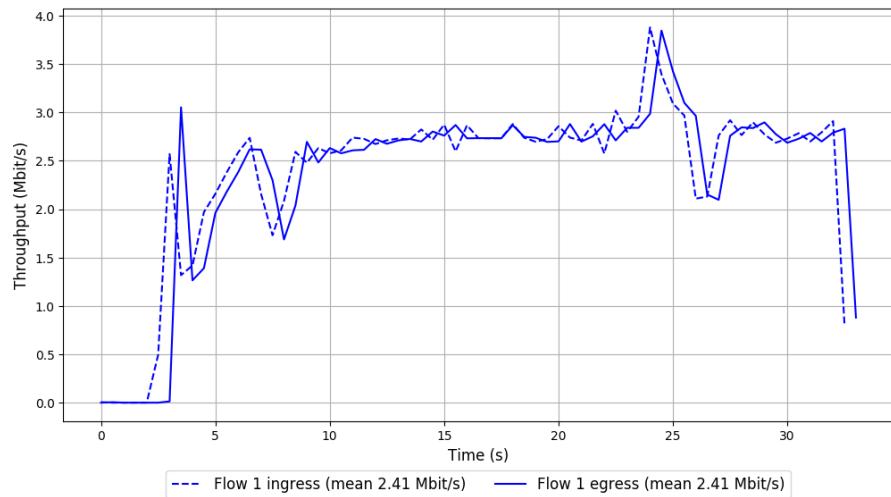


```
Run 1: Statistics of WebRTC media

Start at: 2018-10-26 06:10:20
End at: 2018-10-26 06:10:50
Local clock offset: 0.313 ms
Remote clock offset: -4.376 ms

# Below is generated by plot.py at 2018-10-26 08:12:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 19.365 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 19.365 ms
Loss rate: 0.06%
```

Run 1: Report of WebRTC media — Data Link

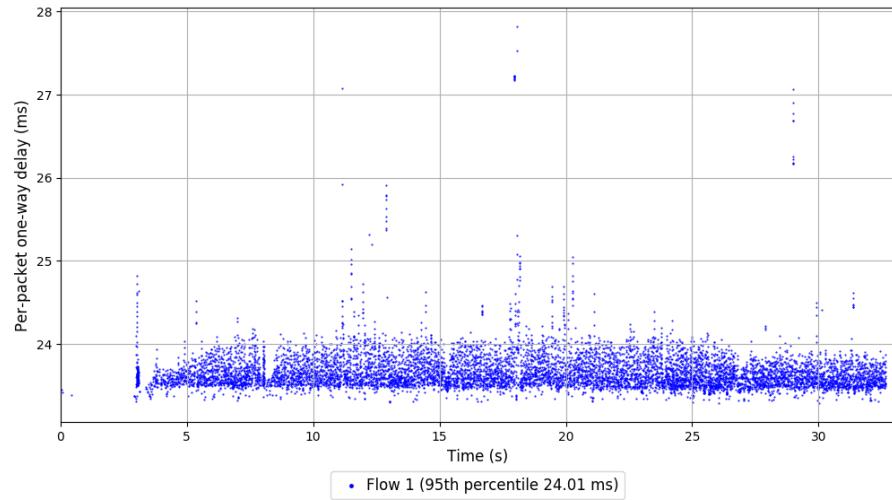
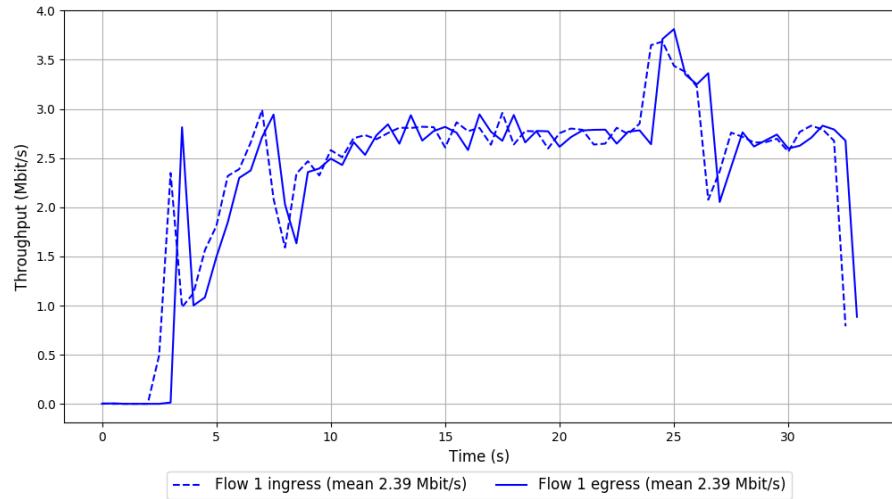


Run 2: Statistics of WebRTC media

```
Start at: 2018-10-26 06:32:56
End at: 2018-10-26 06:33:26
Local clock offset: 4.089 ms
Remote clock offset: -5.913 ms

# Below is generated by plot.py at 2018-10-26 08:12:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 24.013 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 24.013 ms
Loss rate: 0.06%
```

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

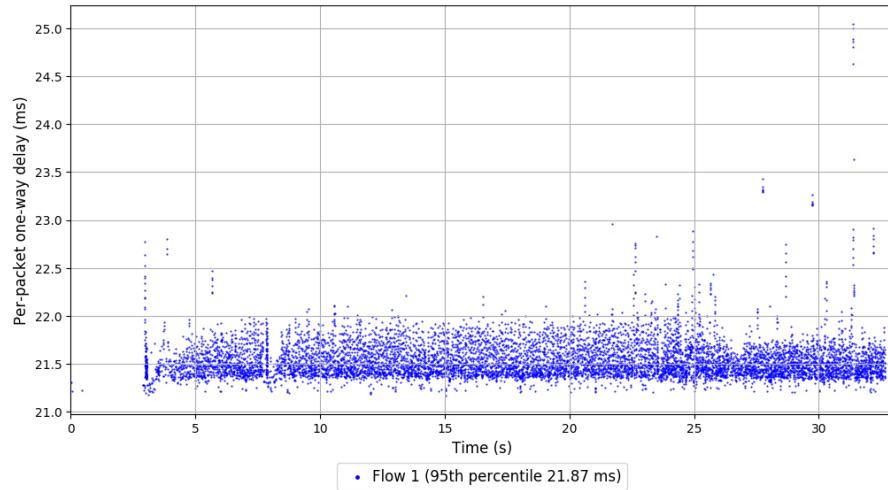
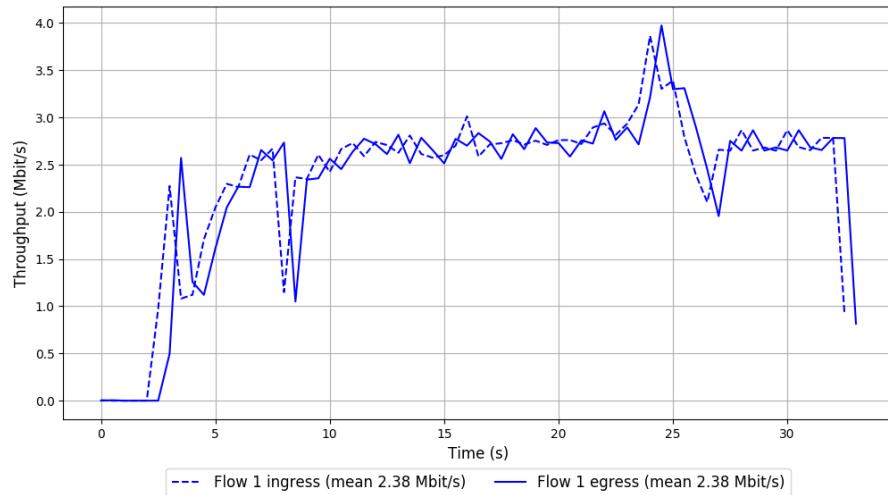


Run 3: Statistics of WebRTC media

```
Start at: 2018-10-26 06:55:22
End at: 2018-10-26 06:55:52
Local clock offset: 4.958 ms
Remote clock offset: -4.11 ms

# Below is generated by plot.py at 2018-10-26 08:12:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 21.867 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 21.867 ms
Loss rate: 0.13%
```

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

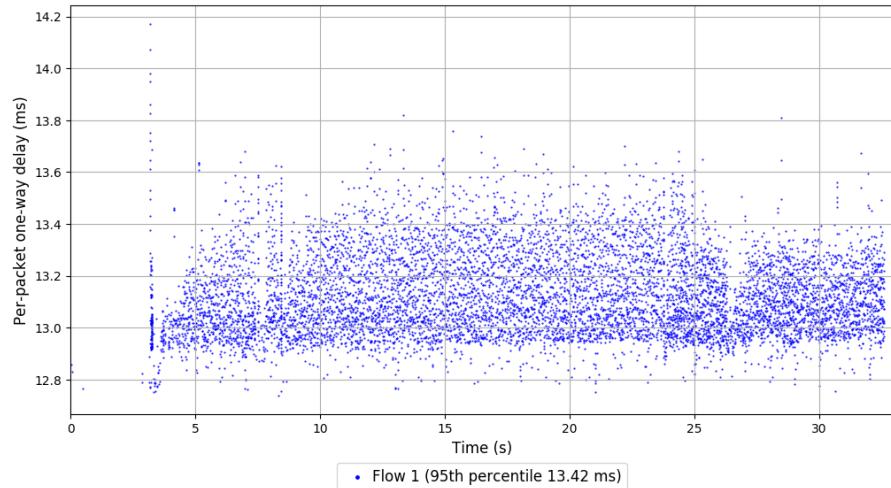
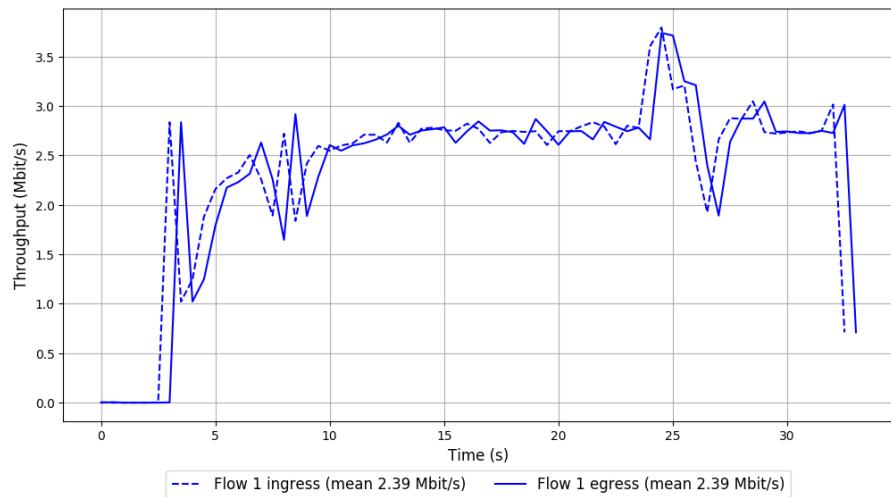


Run 4: Statistics of WebRTC media

```
Start at: 2018-10-26 07:17:20
End at: 2018-10-26 07:17:50
Local clock offset: 2.707 ms
Remote clock offset: 3.864 ms

# Below is generated by plot.py at 2018-10-26 08:12:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 13.418 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 13.418 ms
Loss rate: 0.06%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-10-26 07:38:42
End at: 2018-10-26 07:39:12
Local clock offset: 1.924 ms
Remote clock offset: 3.468 ms

# Below is generated by plot.py at 2018-10-26 08:12:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 12.472 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 12.472 ms
Loss rate: 0.06%
```

Run 5: Report of WebRTC media — Data Link

