

## Pantheon Report

Generated at 2018-12-02 13:02:07 (UTC).

Data path: Saudi Arabia on `enp2s0` (*remote*) → AWS California 1 on `ens5` (*local*).

Repeated the test of 19 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:

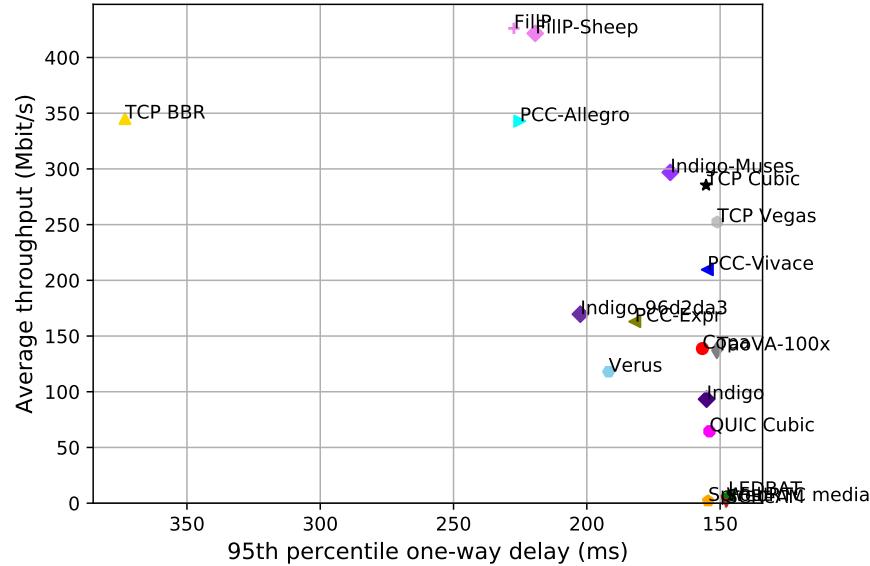
```
Linux 4.15.0-1027-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

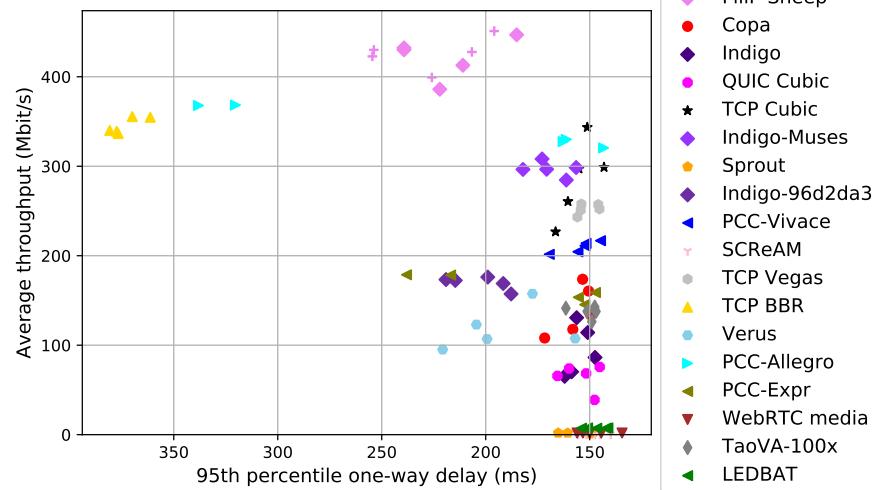
```
branch: muses @ 7b6dad87cde3ab65f7c4052140eb54098aa58e9d
third_party/fillp @ d6da1459332fce6963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
```

```
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from Saudi Arabia to AWS California 1, 5 runs of 30s each per scheme  
(mean of all runs by scheme)



test from Saudi Arabia to AWS California 1, 5 runs of 30s each per scheme



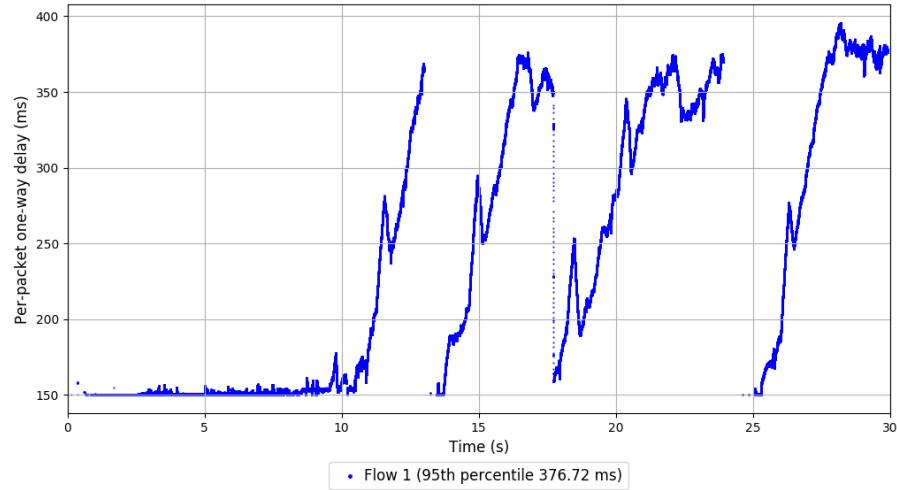
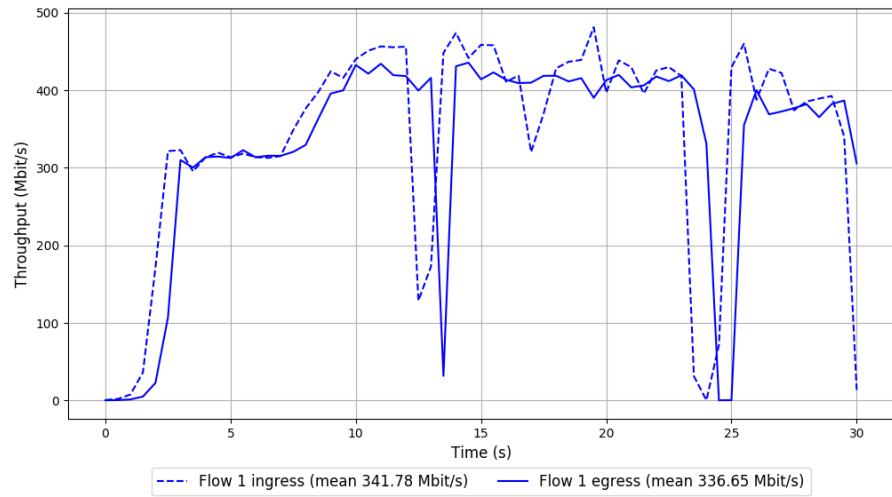
| scheme         | # runs | mean avg tput (Mbit/s)<br>flow 1 | mean 95th-%ile delay (ms)<br>flow 1 | mean loss rate (%)<br>flow 1 |
|----------------|--------|----------------------------------|-------------------------------------|------------------------------|
| TCP BBR        | 5      | 345.21                           | 373.24                              | 2.30                         |
| Copa           | 5      | 138.76                           | 156.65                              | 0.77                         |
| TCP Cubic      | 5      | 285.38                           | 155.26                              | 0.85                         |
| FillP          | 5      | 426.19                           | 227.35                              | 0.94                         |
| FillP-Sheep    | 5      | 421.65                           | 219.36                              | 1.91                         |
| Indigo         | 5      | 93.34                            | 155.08                              | 0.80                         |
| Indigo-96d2da3 | 5      | 169.61                           | 202.43                              | 1.56                         |
| LEDBAT         | 5      | 7.31                             | 147.01                              | 1.48                         |
| Indigo-Muses   | 5      | 296.87                           | 168.69                              | 1.01                         |
| PCC-Allegro    | 5      | 342.86                           | 225.15                              | 1.01                         |
| PCC-Expr       | 5      | 162.96                           | 182.02                              | 0.93                         |
| QUIC Cubic     | 5      | 64.52                            | 154.00                              | 0.97                         |
| SCReAM         | 5      | 0.22                             | 147.88                              | 0.74                         |
| Sprout         | 5      | 2.07                             | 154.50                              | 1.10                         |
| TaoVA-100x     | 5      | 137.14                           | 151.24                              | 0.80                         |
| TCP Vegas      | 5      | 252.26                           | 151.09                              | 0.71                         |
| Verus          | 5      | 118.01                           | 191.81                              | 1.68                         |
| PCC-Vivace     | 5      | 209.56                           | 154.81                              | 0.82                         |
| WebRTC media   | 5      | 1.86                             | 147.66                              | 0.83                         |

Run 1: Statistics of TCP BBR

```
Start at: 2018-12-02 09:50:19
End at: 2018-12-02 09:50:49
Local clock offset: -9.014 ms
Remote clock offset: -45.905 ms

# Below is generated by plot.py at 2018-12-02 12:36:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 336.65 Mbit/s
95th percentile per-packet one-way delay: 376.719 ms
Loss rate: 2.37%
-- Flow 1:
Average throughput: 336.65 Mbit/s
95th percentile per-packet one-way delay: 376.719 ms
Loss rate: 2.37%
```

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

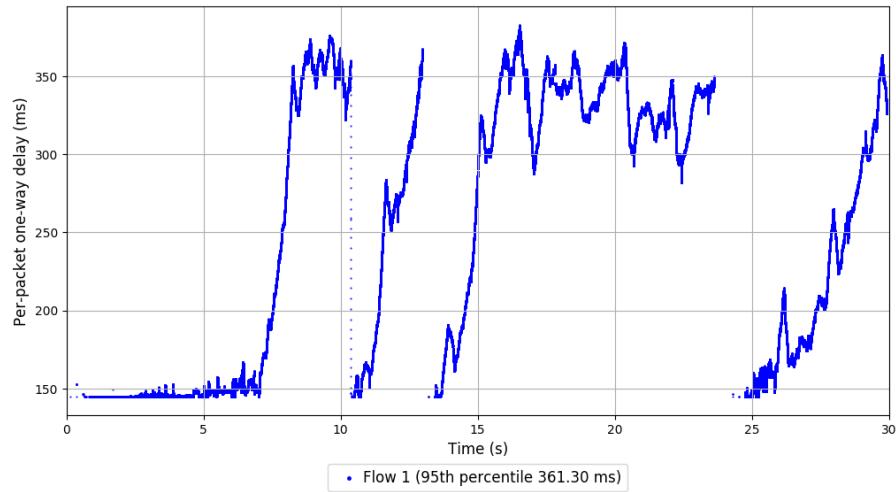
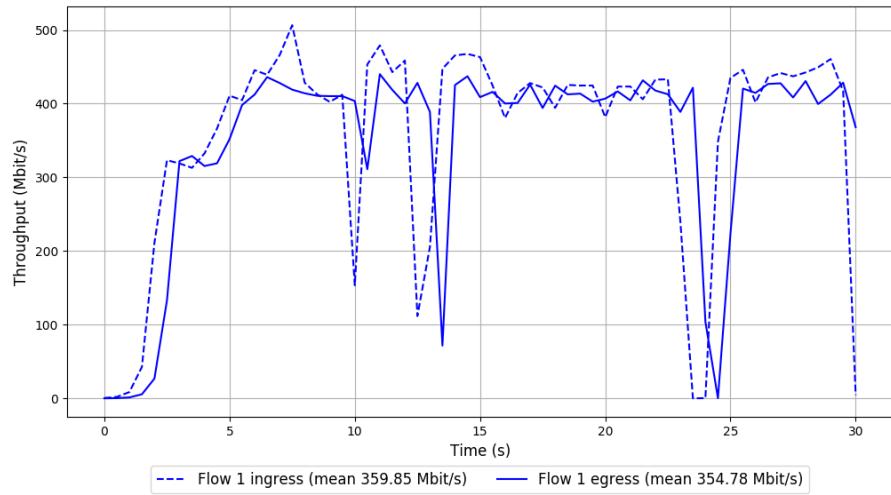


Run 2: Statistics of TCP BBR

```
Start at: 2018-12-02 10:21:57
End at: 2018-12-02 10:22:27
Local clock offset: -5.807 ms
Remote clock offset: -42.618 ms

# Below is generated by plot.py at 2018-12-02 12:36:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 354.78 Mbit/s
95th percentile per-packet one-way delay: 361.295 ms
Loss rate: 2.13%
-- Flow 1:
Average throughput: 354.78 Mbit/s
95th percentile per-packet one-way delay: 361.295 ms
Loss rate: 2.13%
```

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

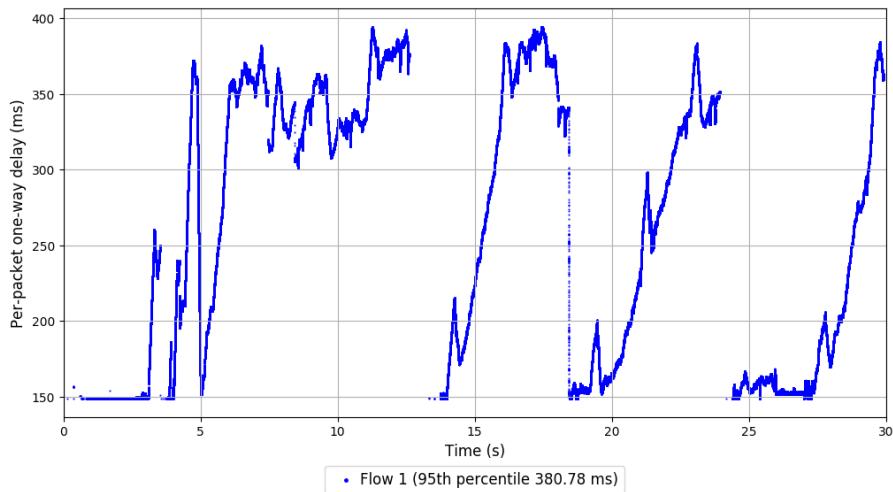
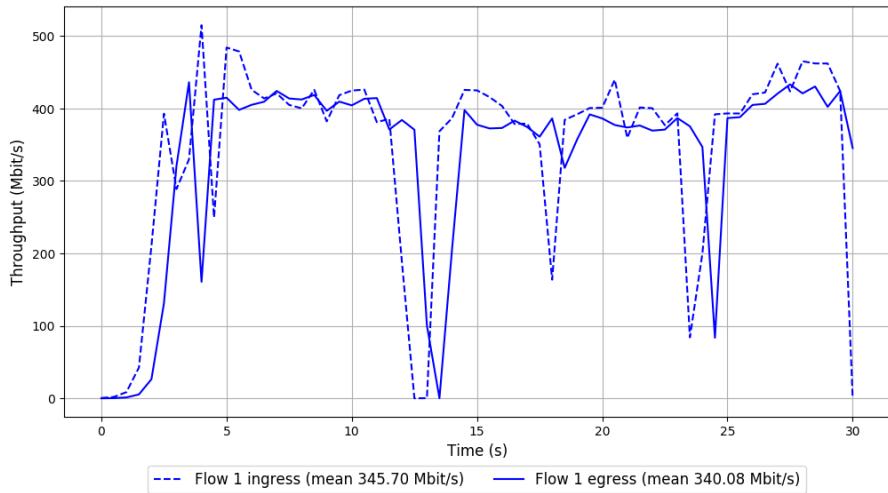


Run 3: Statistics of TCP BBR

```
Start at: 2018-12-02 10:59:34
End at: 2018-12-02 11:00:04
Local clock offset: 1.564 ms
Remote clock offset: -42.091 ms

# Below is generated by plot.py at 2018-12-02 12:36:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 340.08 Mbit/s
95th percentile per-packet one-way delay: 380.782 ms
Loss rate: 2.35%
-- Flow 1:
Average throughput: 340.08 Mbit/s
95th percentile per-packet one-way delay: 380.782 ms
Loss rate: 2.35%
```

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

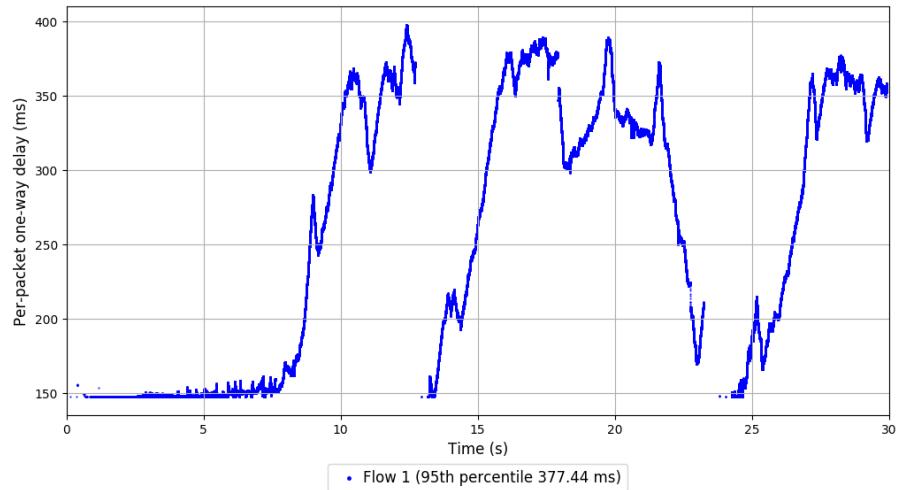
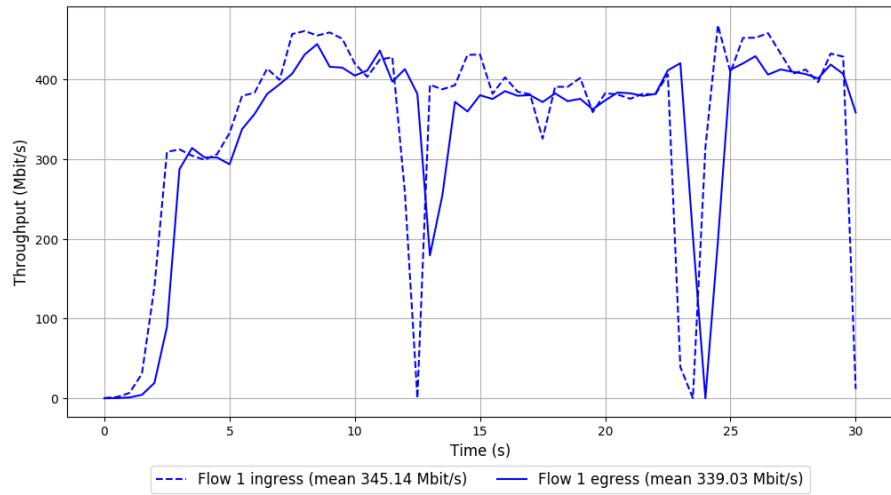


Run 4: Statistics of TCP BBR

```
Start at: 2018-12-02 11:37:07
End at: 2018-12-02 11:37:37
Local clock offset: -2.909 ms
Remote clock offset: -38.752 ms

# Below is generated by plot.py at 2018-12-02 12:36:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 339.03 Mbit/s
95th percentile per-packet one-way delay: 377.439 ms
Loss rate: 2.53%
-- Flow 1:
Average throughput: 339.03 Mbit/s
95th percentile per-packet one-way delay: 377.439 ms
Loss rate: 2.53%
```

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

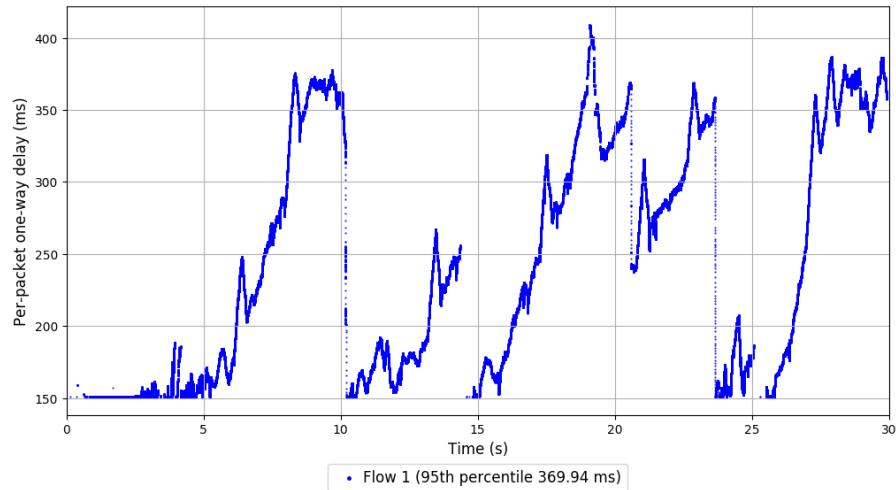
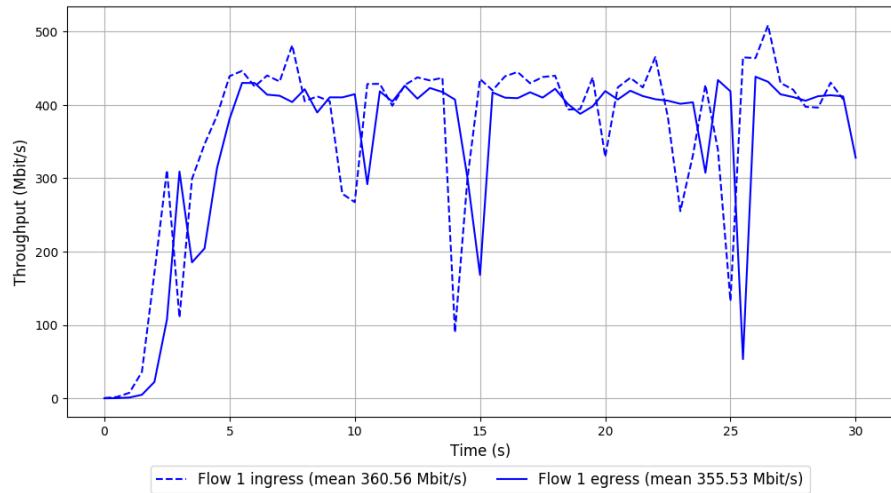


Run 5: Statistics of TCP BBR

```
Start at: 2018-12-02 12:14:31
End at: 2018-12-02 12:15:01
Local clock offset: -4.176 ms
Remote clock offset: -39.403 ms

# Below is generated by plot.py at 2018-12-02 12:36:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 355.53 Mbit/s
95th percentile per-packet one-way delay: 369.945 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 355.53 Mbit/s
95th percentile per-packet one-way delay: 369.945 ms
Loss rate: 2.14%
```

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

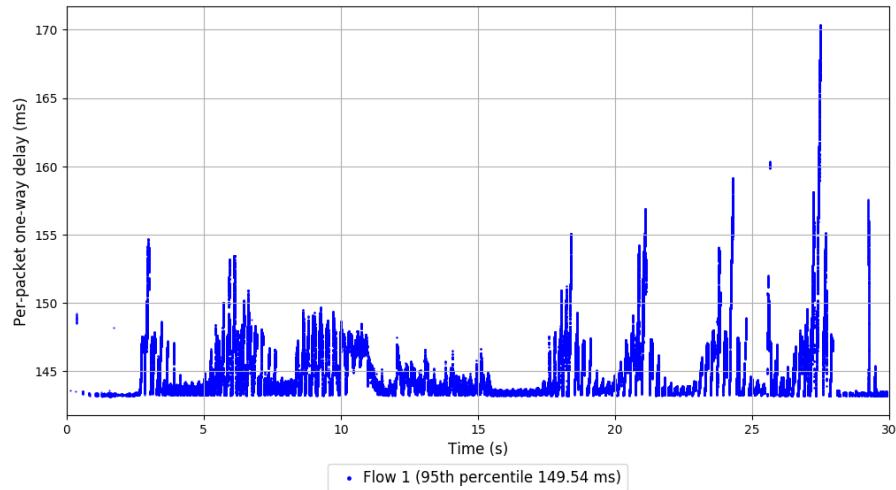
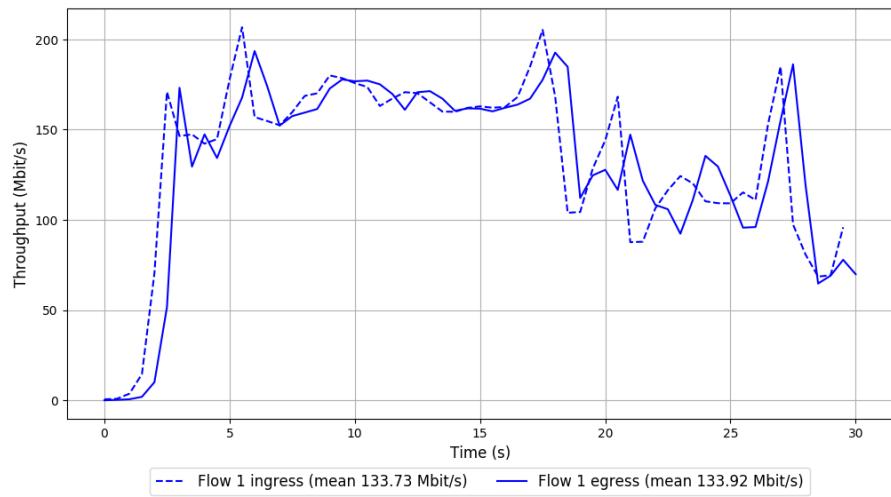


Run 1: Statistics of Copa

```
Start at: 2018-12-02 09:40:31
End at: 2018-12-02 09:41:01
Local clock offset: -7.854 ms
Remote clock offset: -43.195 ms

# Below is generated by plot.py at 2018-12-02 12:36:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 133.92 Mbit/s
95th percentile per-packet one-way delay: 149.544 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 133.92 Mbit/s
95th percentile per-packet one-way delay: 149.544 ms
Loss rate: 0.58%
```

## Run 1: Report of Copa — Data Link

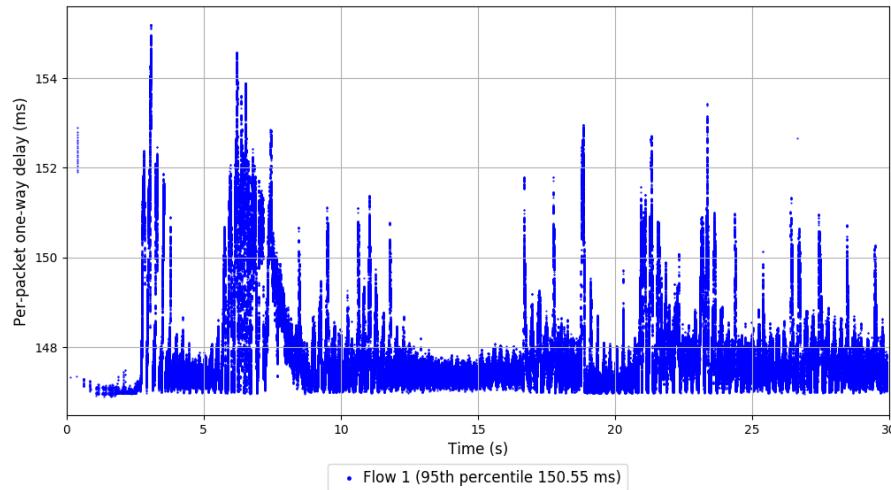
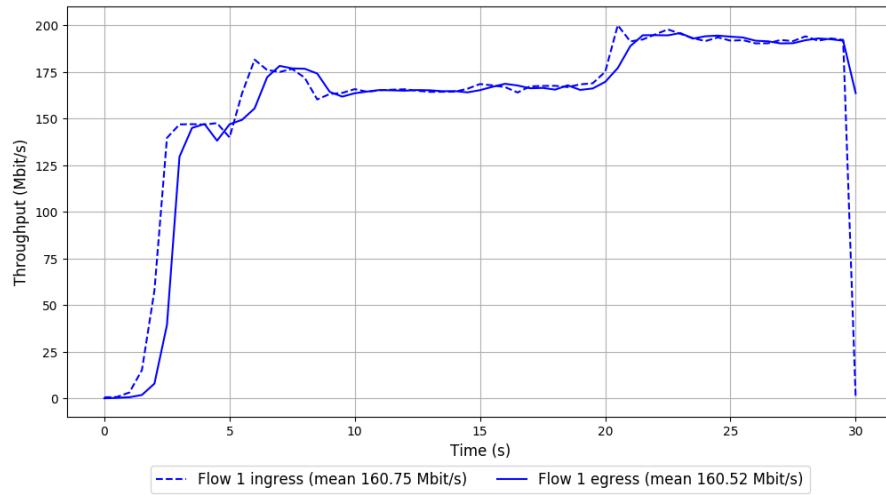


Run 2: Statistics of Copa

```
Start at: 2018-12-02 10:12:08
End at: 2018-12-02 10:12:38
Local clock offset: -9.19 ms
Remote clock offset: -42.926 ms

# Below is generated by plot.py at 2018-12-02 12:36:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 160.52 Mbit/s
95th percentile per-packet one-way delay: 150.549 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 160.52 Mbit/s
95th percentile per-packet one-way delay: 150.549 ms
Loss rate: 0.89%
```

## Run 2: Report of Copa — Data Link

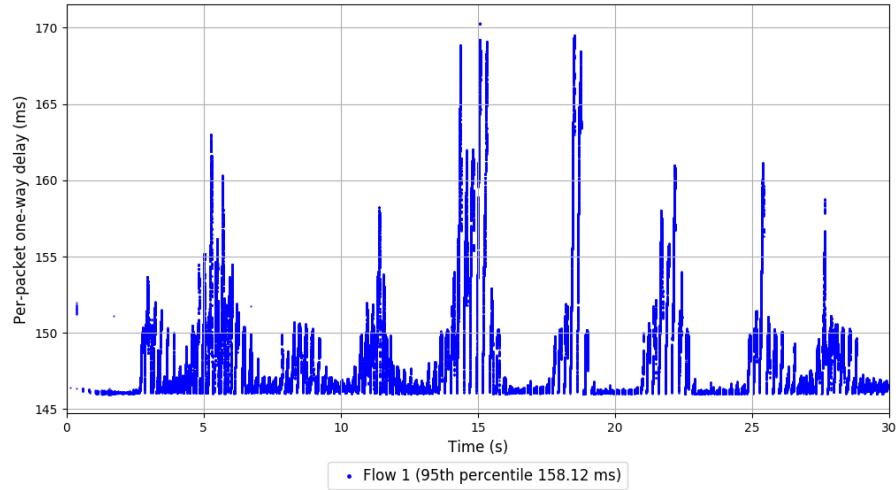
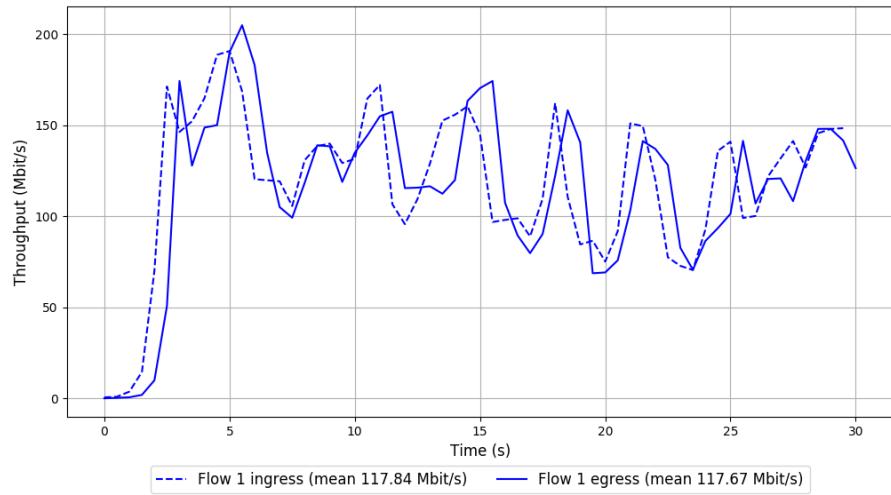


Run 3: Statistics of Copa

```
Start at: 2018-12-02 10:38:02
End at: 2018-12-02 10:38:32
Local clock offset: 1.375 ms
Remote clock offset: -39.559 ms

# Below is generated by plot.py at 2018-12-02 12:36:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 117.67 Mbit/s
95th percentile per-packet one-way delay: 158.122 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 117.67 Mbit/s
95th percentile per-packet one-way delay: 158.122 ms
Loss rate: 0.87%
```

### Run 3: Report of Copa — Data Link

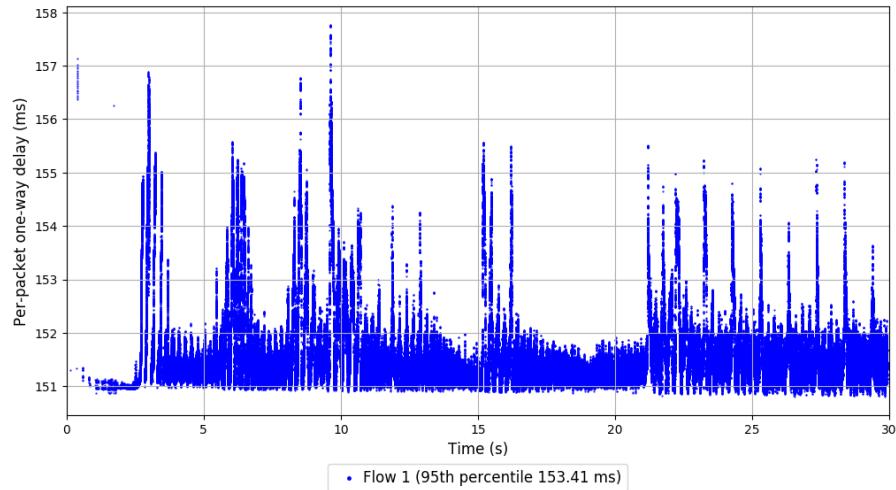
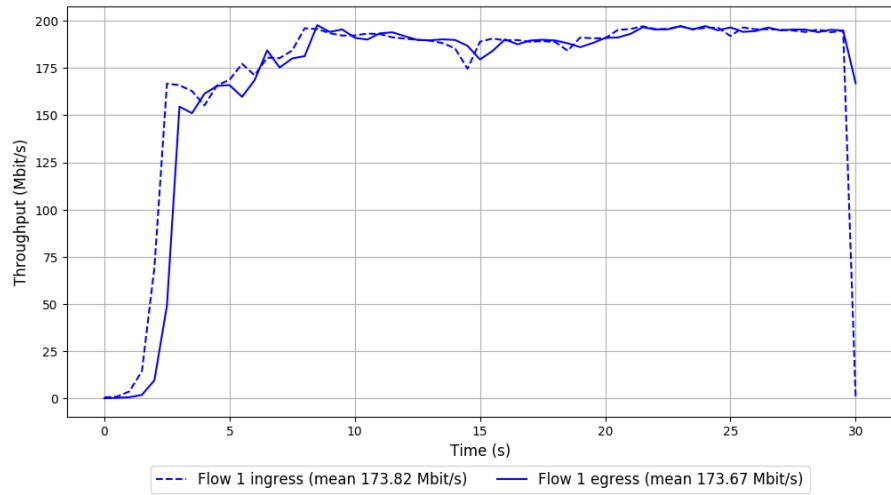


Run 4: Statistics of Copa

```
Start at: 2018-12-02 11:27:17
End at: 2018-12-02 11:27:47
Local clock offset: -10.903 ms
Remote clock offset: -48.245 ms

# Below is generated by plot.py at 2018-12-02 12:39:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 173.67 Mbit/s
95th percentile per-packet one-way delay: 153.406 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 173.67 Mbit/s
95th percentile per-packet one-way delay: 153.406 ms
Loss rate: 0.83%
```

### Run 4: Report of Copa — Data Link

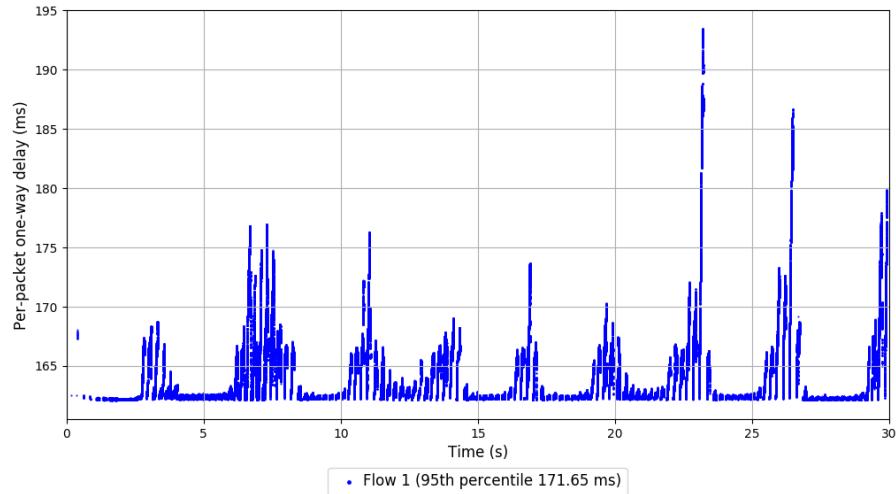
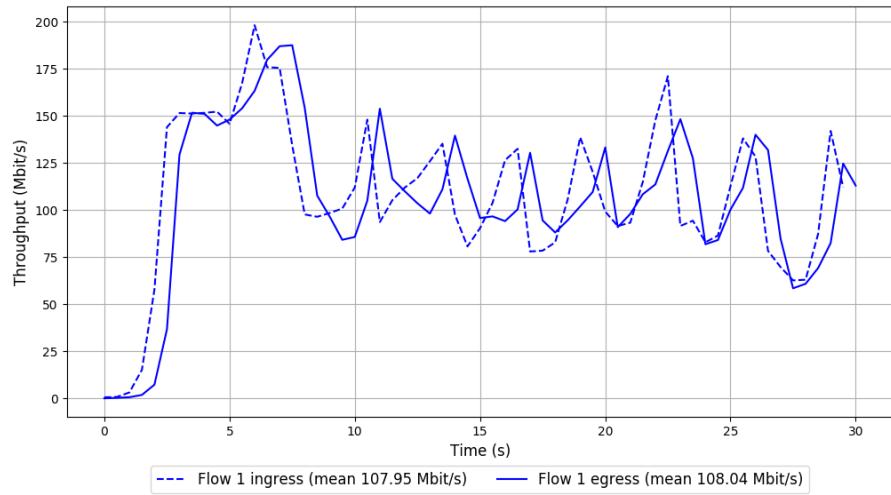


Run 5: Statistics of Copa

```
Start at: 2018-12-02 11:52:59
End at: 2018-12-02 11:53:29
Local clock offset: 9.317 ms
Remote clock offset: -41.186 ms

# Below is generated by plot.py at 2018-12-02 12:39:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 108.04 Mbit/s
95th percentile per-packet one-way delay: 171.653 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 108.04 Mbit/s
95th percentile per-packet one-way delay: 171.653 ms
Loss rate: 0.67%
```

## Run 5: Report of Copa — Data Link

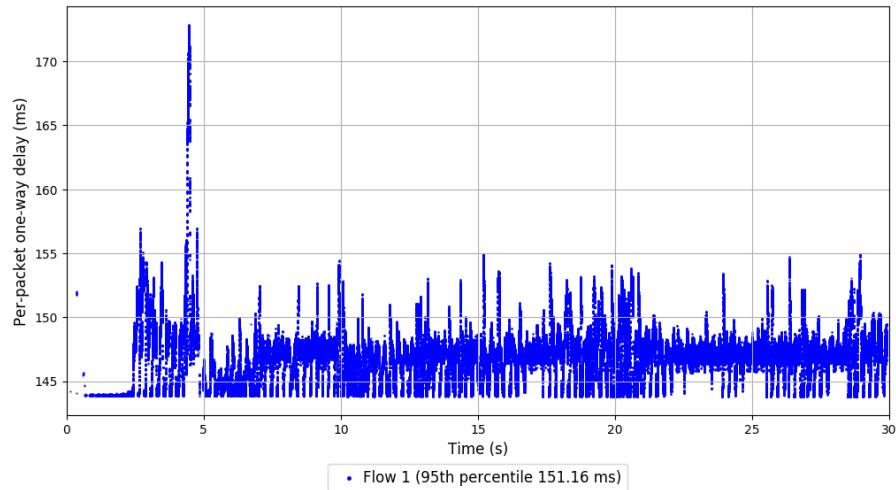
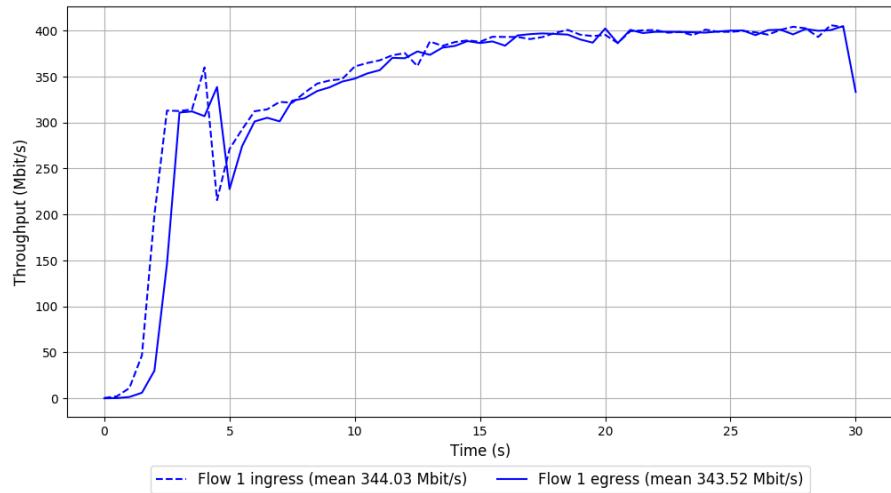


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-12-02 09:39:04
End at: 2018-12-02 09:39:34
Local clock offset: -10.636 ms
Remote clock offset: -40.85 ms

# Below is generated by plot.py at 2018-12-02 12:39:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 343.52 Mbit/s
95th percentile per-packet one-way delay: 151.157 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 343.52 Mbit/s
95th percentile per-packet one-way delay: 151.157 ms
Loss rate: 0.90%
```

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

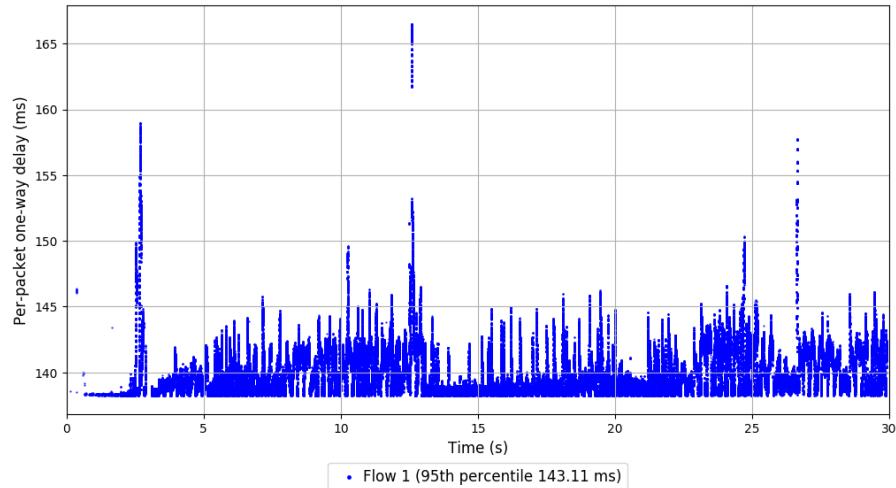
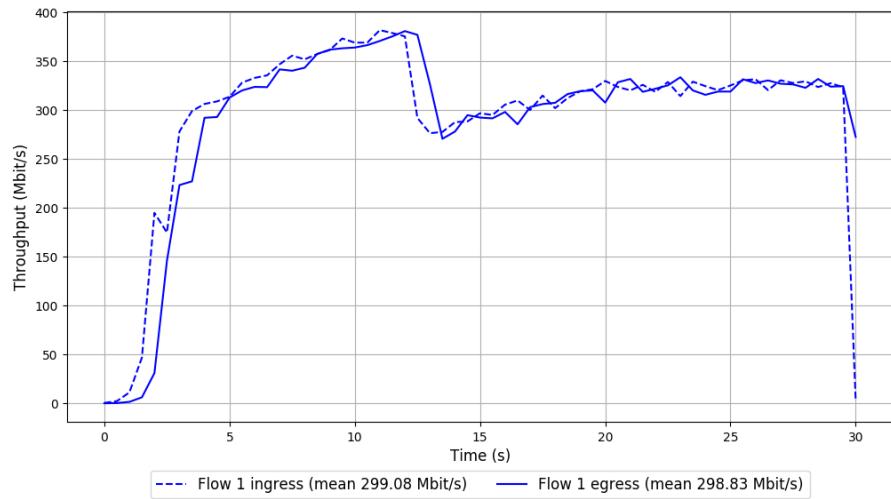


Run 2: Statistics of TCP Cubic

```
Start at: 2018-12-02 10:10:42
End at: 2018-12-02 10:11:13
Local clock offset: -9.54 ms
Remote clock offset: -34.55 ms

# Below is generated by plot.py at 2018-12-02 12:39:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 298.83 Mbit/s
95th percentile per-packet one-way delay: 143.110 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 298.83 Mbit/s
95th percentile per-packet one-way delay: 143.110 ms
Loss rate: 0.83%
```

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

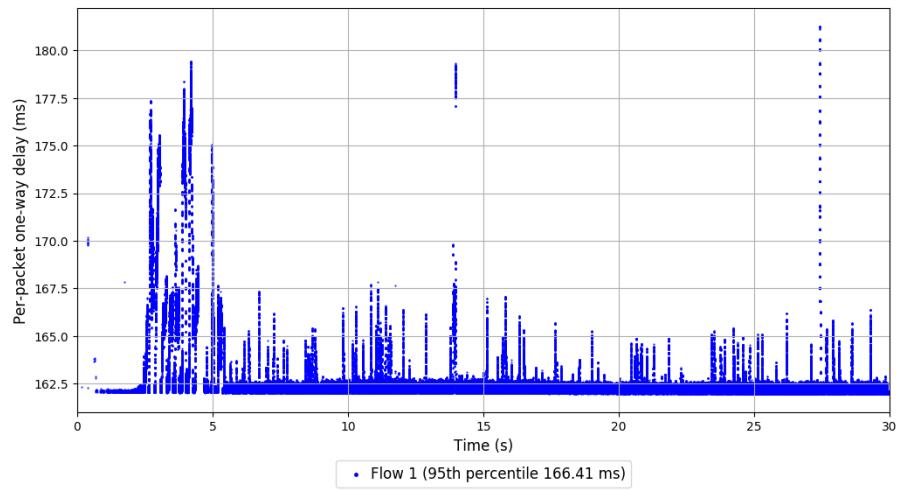
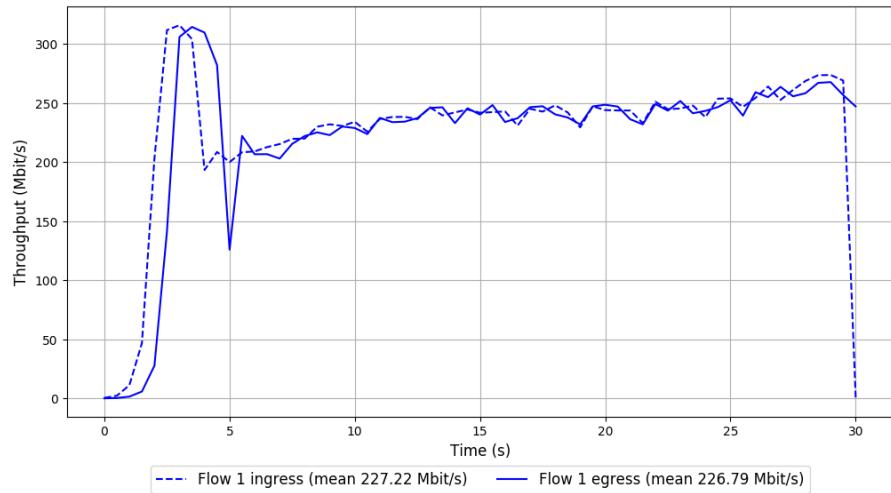


Run 3: Statistics of TCP Cubic

```
Start at: 2018-12-02 10:36:40
End at: 2018-12-02 10:37:10
Local clock offset: 8.545 ms
Remote clock offset: -42.594 ms

# Below is generated by plot.py at 2018-12-02 12:39:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 226.79 Mbit/s
95th percentile per-packet one-way delay: 166.412 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 226.79 Mbit/s
95th percentile per-packet one-way delay: 166.412 ms
Loss rate: 0.93%
```

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

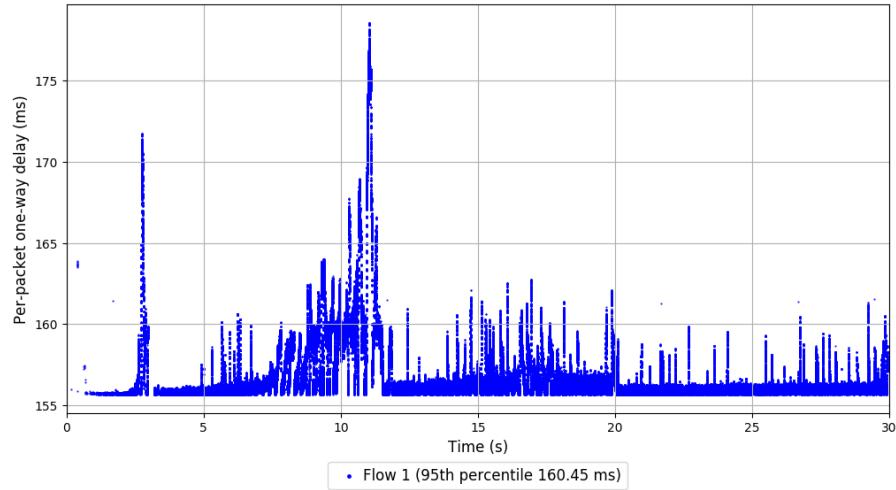
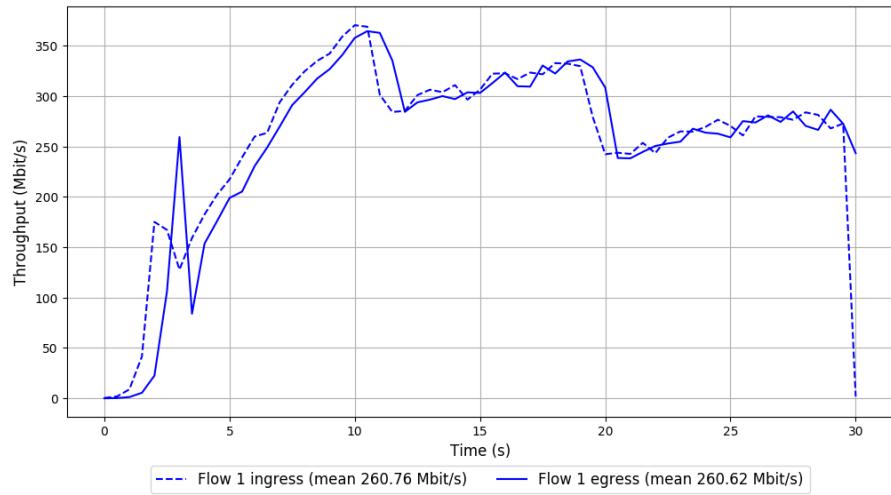


Run 4: Statistics of TCP Cubic

```
Start at: 2018-12-02 11:25:52
End at: 2018-12-02 11:26:22
Local clock offset: -6.107 ms
Remote clock offset: -47.939 ms

# Below is generated by plot.py at 2018-12-02 12:39:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 260.62 Mbit/s
95th percentile per-packet one-way delay: 160.454 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 260.62 Mbit/s
95th percentile per-packet one-way delay: 160.454 ms
Loss rate: 0.80%
```

Run 4: Report of TCP Cubic — Data Link

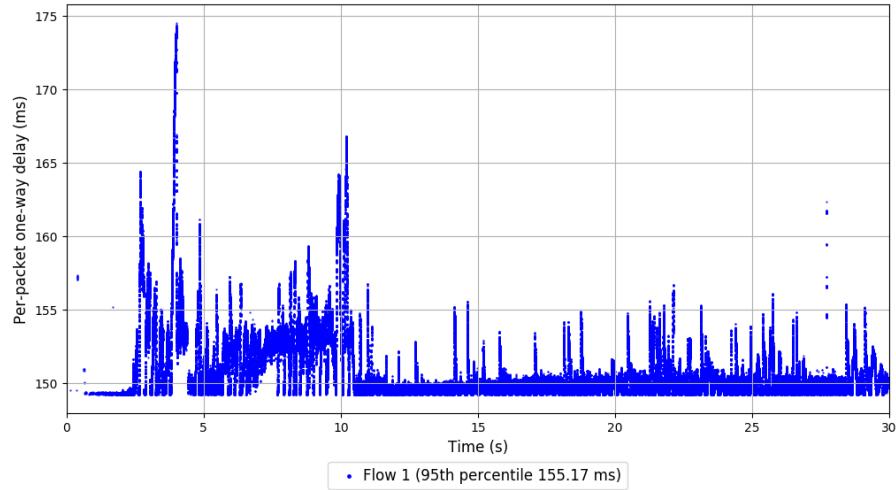
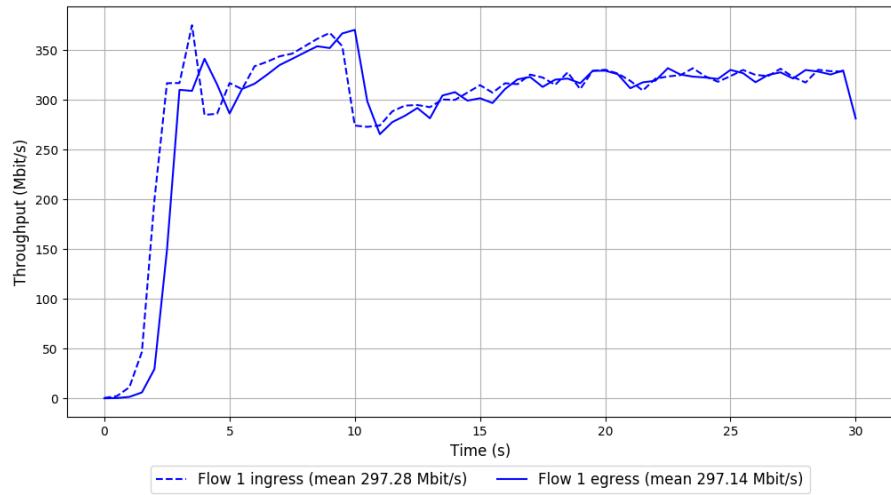


Run 5: Statistics of TCP Cubic

```
Start at: 2018-12-02 11:51:34
End at: 2018-12-02 11:52:04
Local clock offset: 2.329 ms
Remote clock offset: -40.759 ms

# Below is generated by plot.py at 2018-12-02 12:39:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 297.14 Mbit/s
95th percentile per-packet one-way delay: 155.172 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 297.14 Mbit/s
95th percentile per-packet one-way delay: 155.172 ms
Loss rate: 0.77%
```

Run 5: Report of TCP Cubic — Data Link

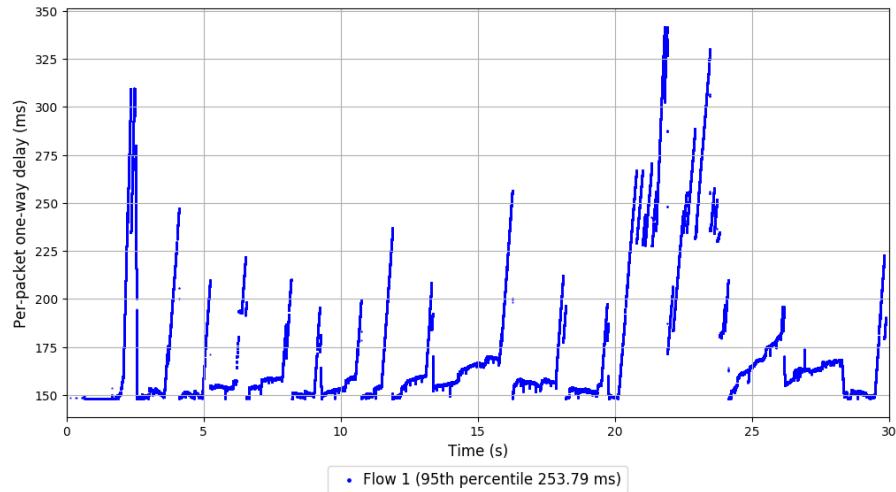
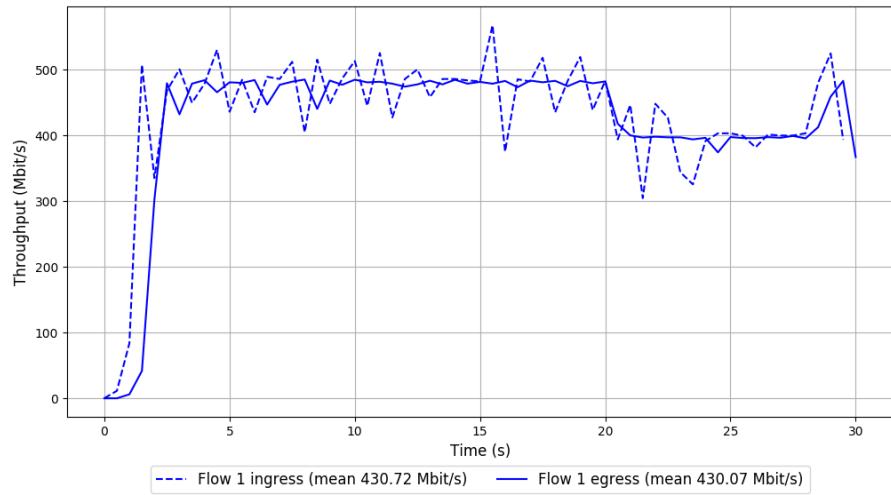


```
Run 1: Statistics of FillP
```

```
Start at: 2018-12-02 09:48:50
End at: 2018-12-02 09:49:20
Local clock offset: -5.531 ms
Remote clock offset: -40.652 ms

# Below is generated by plot.py at 2018-12-02 12:42:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 430.07 Mbit/s
95th percentile per-packet one-way delay: 253.792 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 430.07 Mbit/s
95th percentile per-packet one-way delay: 253.792 ms
Loss rate: 0.90%
```

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

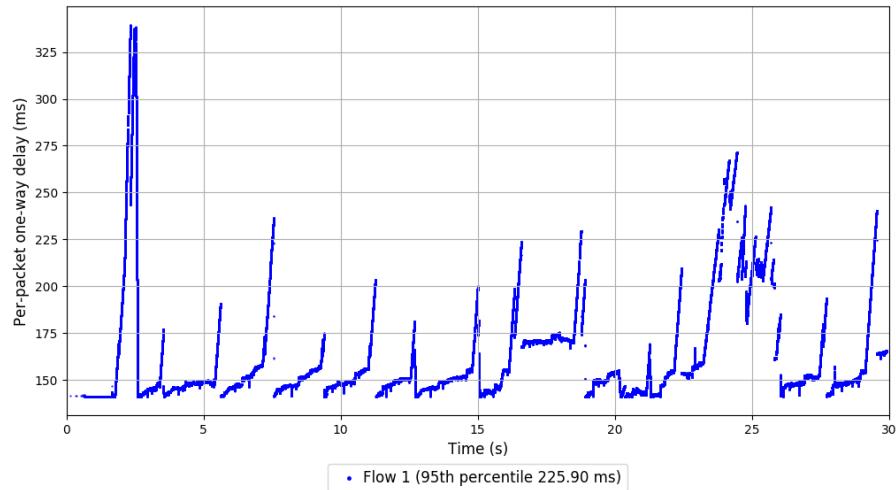
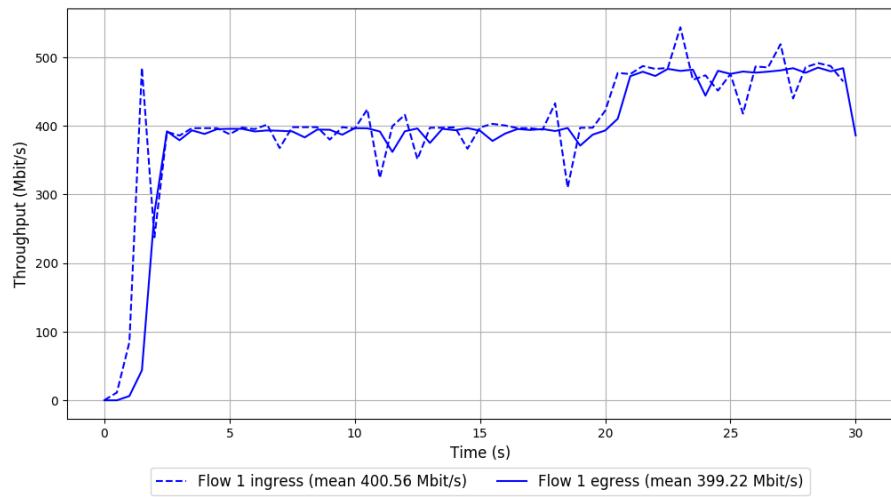


Run 2: Statistics of FillP

```
Start at: 2018-12-02 10:20:31
End at: 2018-12-02 10:21:01
Local clock offset: -6.461 ms
Remote clock offset: -40.006 ms

# Below is generated by plot.py at 2018-12-02 12:43:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 399.22 Mbit/s
95th percentile per-packet one-way delay: 225.901 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 399.22 Mbit/s
95th percentile per-packet one-way delay: 225.901 ms
Loss rate: 1.07%
```

## Run 2: Report of FillP — Data Link

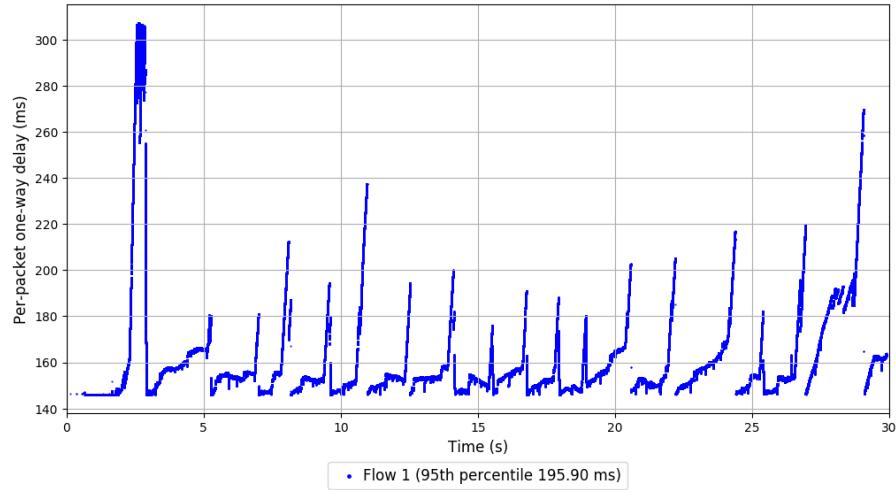
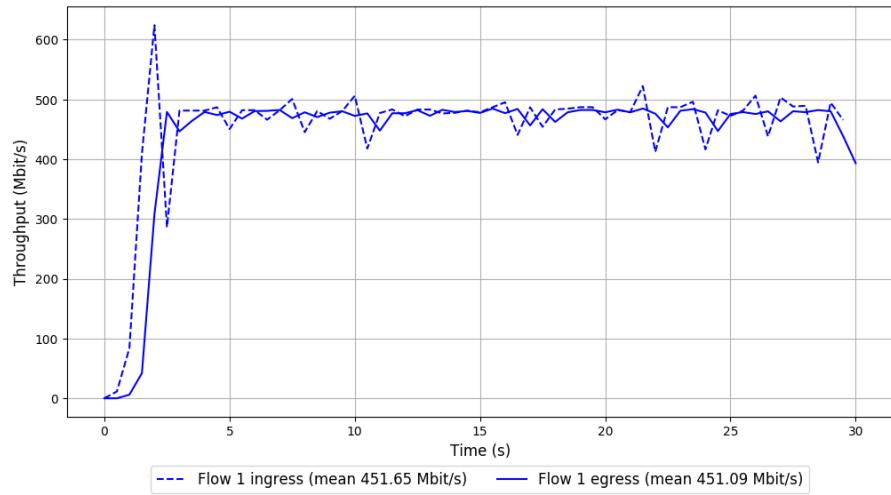


Run 3: Statistics of FillP

```
Start at: 2018-12-02 10:58:06
End at: 2018-12-02 10:58:36
Local clock offset: 3.555 ms
Remote clock offset: -38.233 ms

# Below is generated by plot.py at 2018-12-02 12:45:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 451.09 Mbit/s
95th percentile per-packet one-way delay: 195.901 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 451.09 Mbit/s
95th percentile per-packet one-way delay: 195.901 ms
Loss rate: 0.87%
```

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

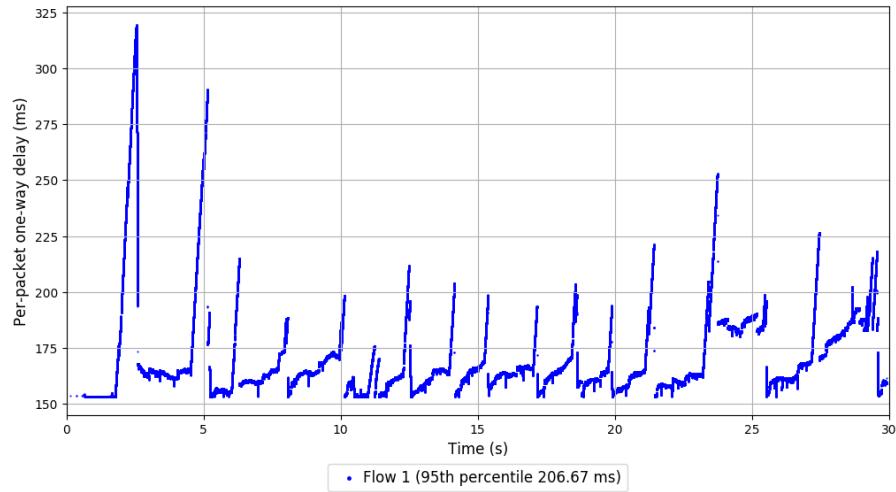
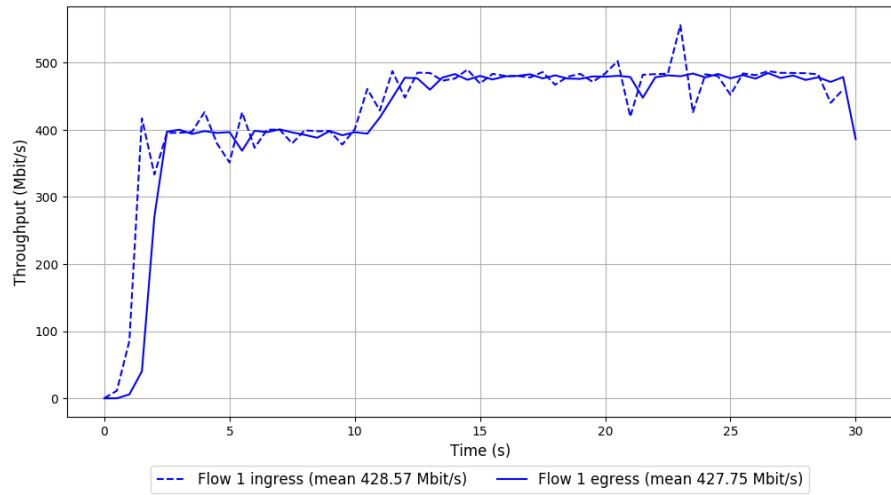


Run 4: Statistics of FillP

```
Start at: 2018-12-02 11:35:39
End at: 2018-12-02 11:36:09
Local clock offset: -5.468 ms
Remote clock offset: -46.904 ms

# Below is generated by plot.py at 2018-12-02 12:45:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 427.75 Mbit/s
95th percentile per-packet one-way delay: 206.667 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 427.75 Mbit/s
95th percentile per-packet one-way delay: 206.667 ms
Loss rate: 0.93%
```

Run 4: Report of FillP — Data Link

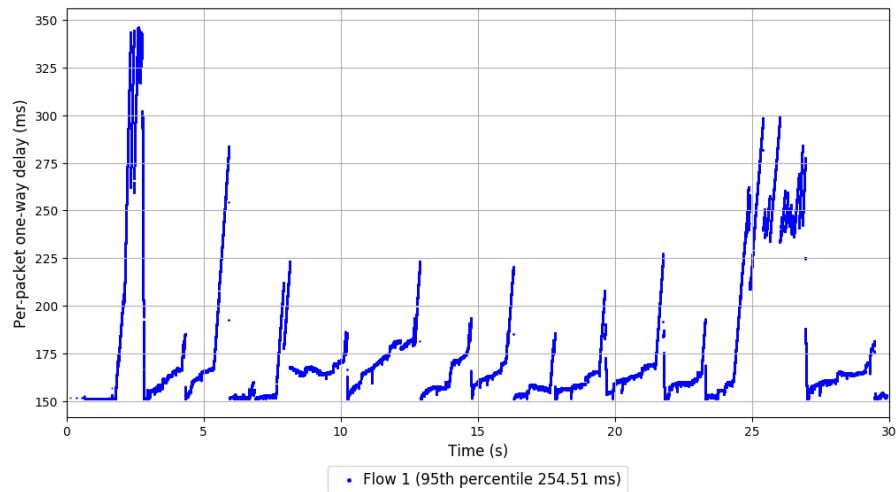
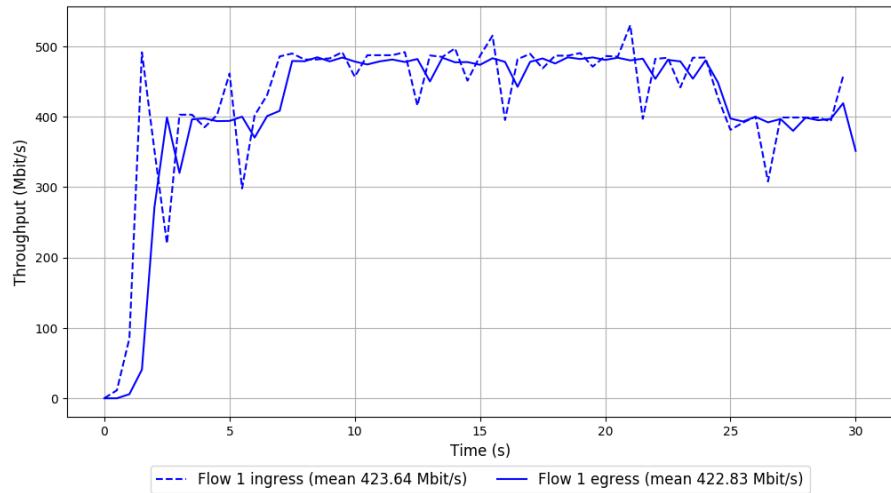


Run 5: Statistics of FillP

```
Start at: 2018-12-02 12:13:03
End at: 2018-12-02 12:13:33
Local clock offset: -3.538 ms
Remote clock offset: -44.948 ms

# Below is generated by plot.py at 2018-12-02 12:45:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 422.83 Mbit/s
95th percentile per-packet one-way delay: 254.506 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 422.83 Mbit/s
95th percentile per-packet one-way delay: 254.506 ms
Loss rate: 0.92%
```

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

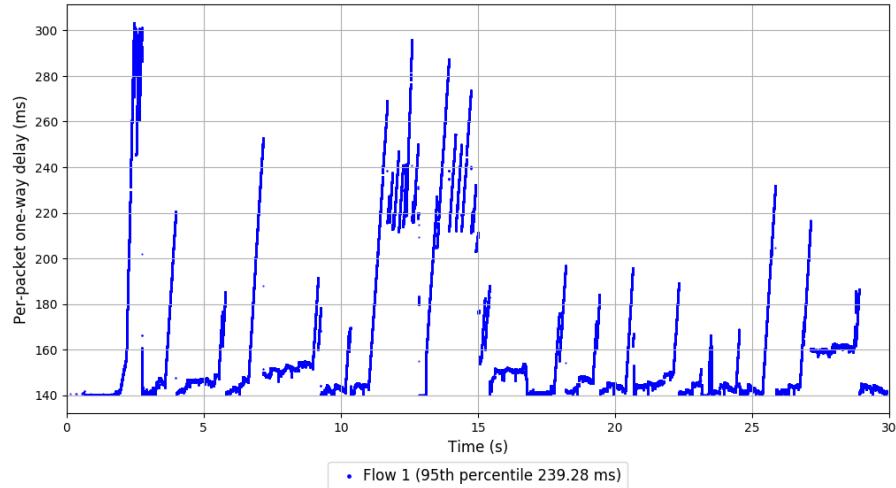
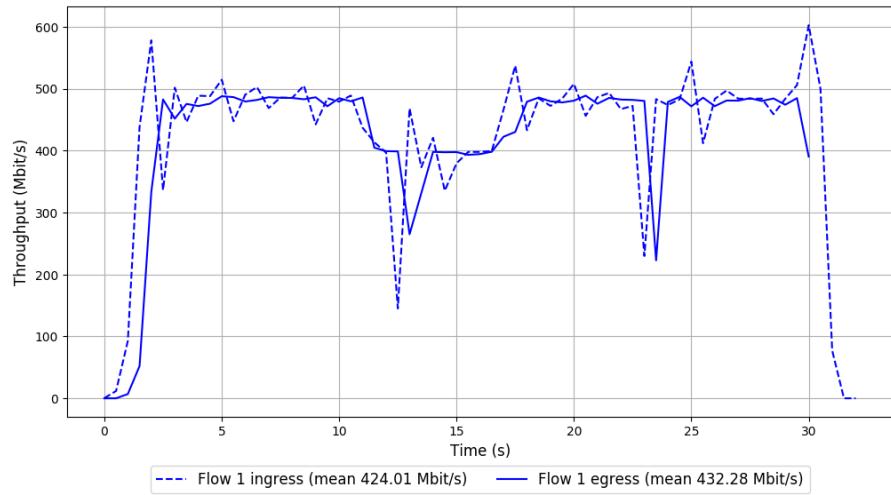


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2018-12-02 10:01:22
End at: 2018-12-02 10:01:52
Local clock offset: -2.158 ms
Remote clock offset: -35.05 ms

# Below is generated by plot.py at 2018-12-02 12:45:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 432.28 Mbit/s
95th percentile per-packet one-way delay: 239.284 ms
Loss rate: 5.33%
-- Flow 1:
Average throughput: 432.28 Mbit/s
95th percentile per-packet one-way delay: 239.284 ms
Loss rate: 5.33%
```

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

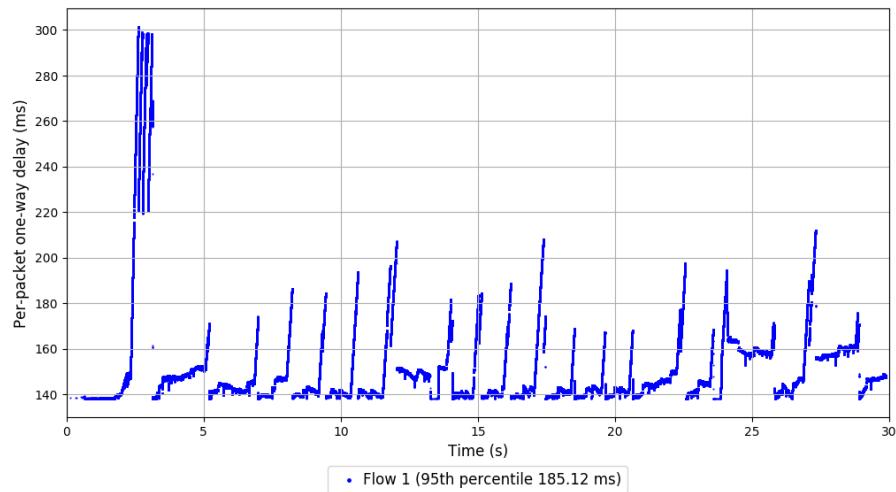
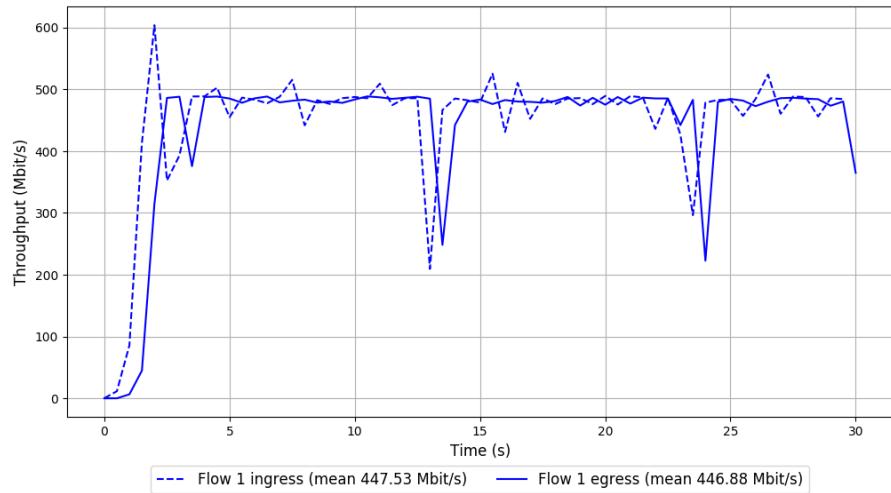


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-12-02 10:27:37
End at: 2018-12-02 10:28:07
Local clock offset: -8.821 ms
Remote clock offset: -39.677 ms

# Below is generated by plot.py at 2018-12-02 12:46:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 446.88 Mbit/s
95th percentile per-packet one-way delay: 185.125 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 446.88 Mbit/s
95th percentile per-packet one-way delay: 185.125 ms
Loss rate: 1.01%
```

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

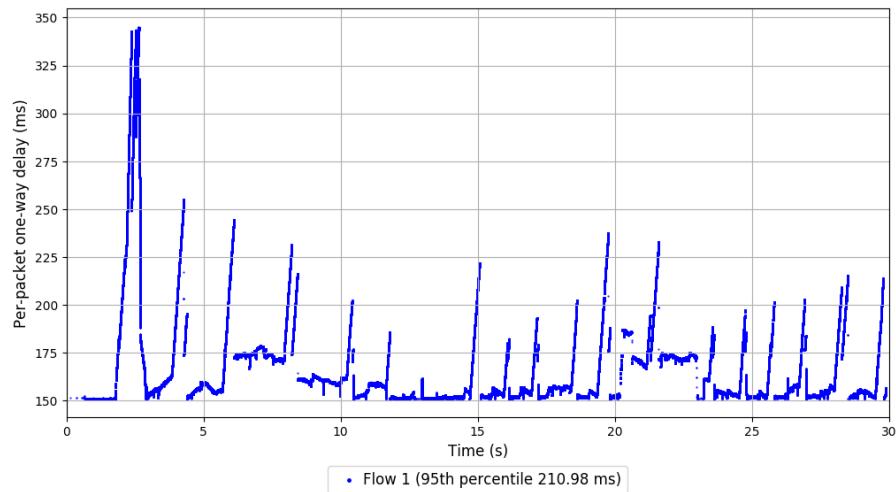
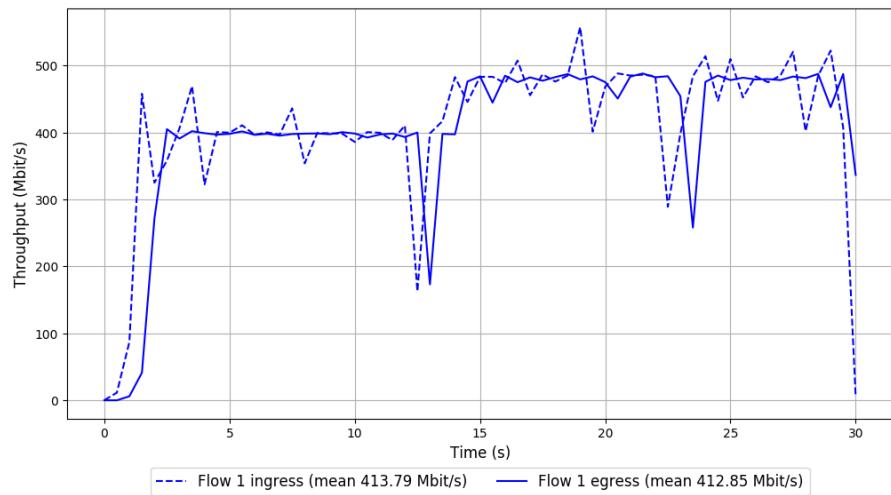


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-12-02 11:16:32
End at: 2018-12-02 11:17:02
Local clock offset: 1.549 ms
Remote clock offset: -41.921 ms

# Below is generated by plot.py at 2018-12-02 12:46:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 412.85 Mbit/s
95th percentile per-packet one-way delay: 210.980 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 412.85 Mbit/s
95th percentile per-packet one-way delay: 210.980 ms
Loss rate: 1.10%
```

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

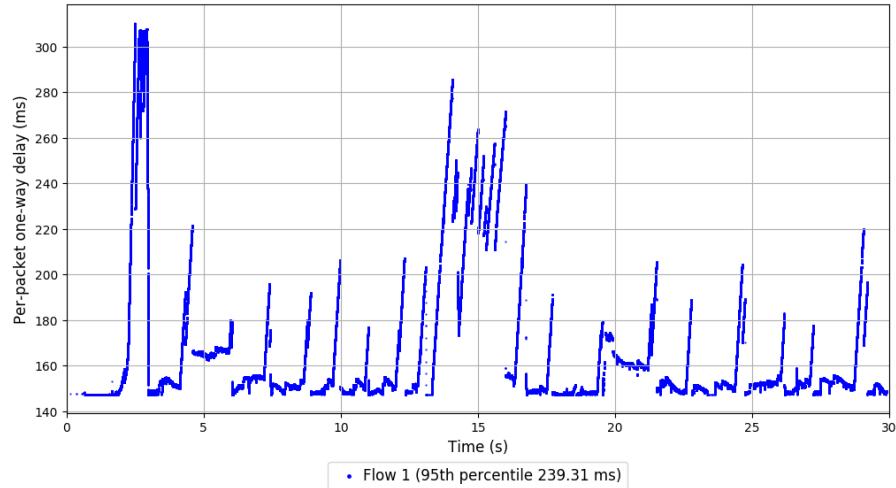
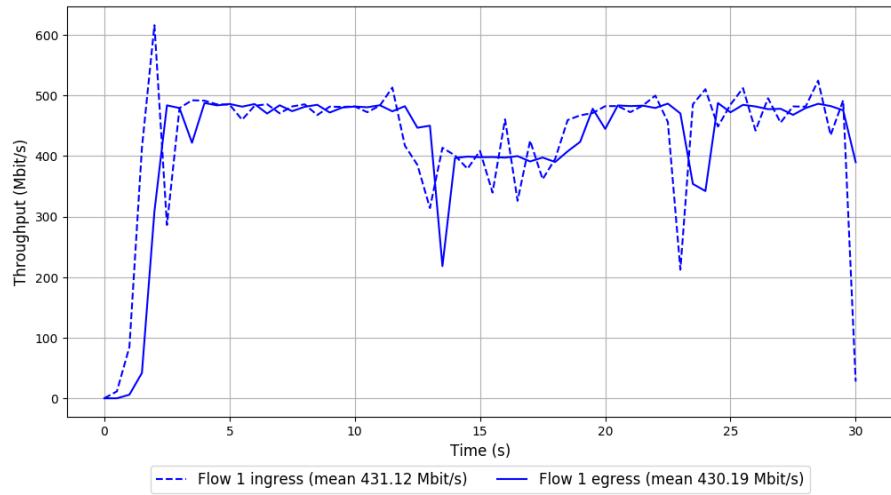


Run 4: Statistics of FillP-Sheep

```
Start at: 2018-12-02 11:42:31
End at: 2018-12-02 11:43:01
Local clock offset: 2.496 ms
Remote clock offset: -33.227 ms

# Below is generated by plot.py at 2018-12-02 12:48:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 430.19 Mbit/s
95th percentile per-packet one-way delay: 239.306 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 430.19 Mbit/s
95th percentile per-packet one-way delay: 239.306 ms
Loss rate: 1.11%
```

Run 4: Report of FillP-Sheep — Data Link

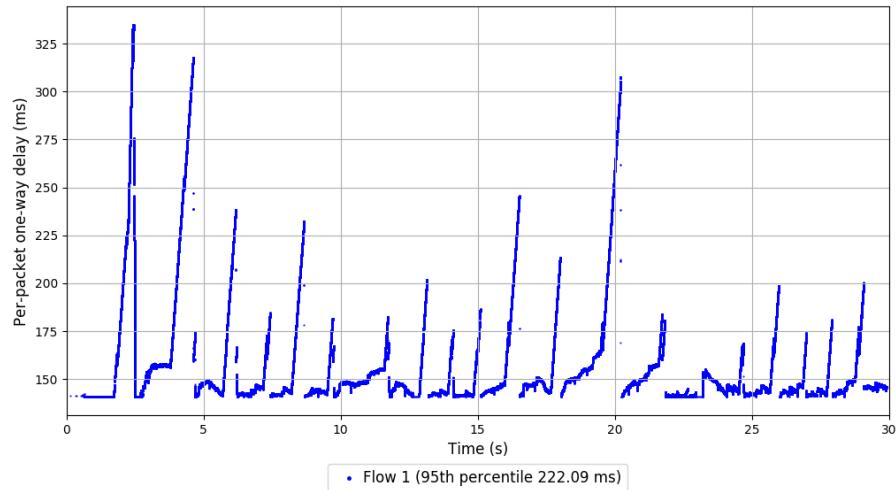
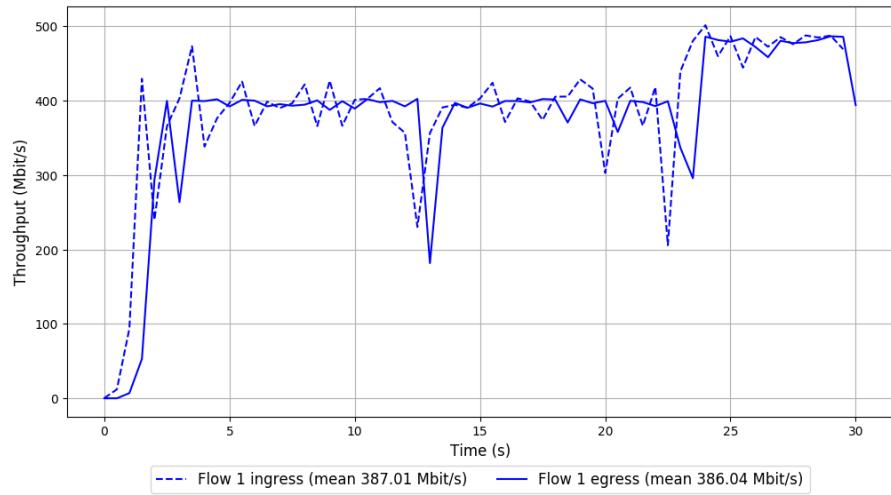


Run 5: Statistics of FillP-Sheep

```
Start at: 2018-12-02 12:25:44
End at: 2018-12-02 12:26:14
Local clock offset: -7.634 ms
Remote clock offset: -37.331 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 386.04 Mbit/s
95th percentile per-packet one-way delay: 222.090 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 386.04 Mbit/s
95th percentile per-packet one-way delay: 222.090 ms
Loss rate: 0.98%
```

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

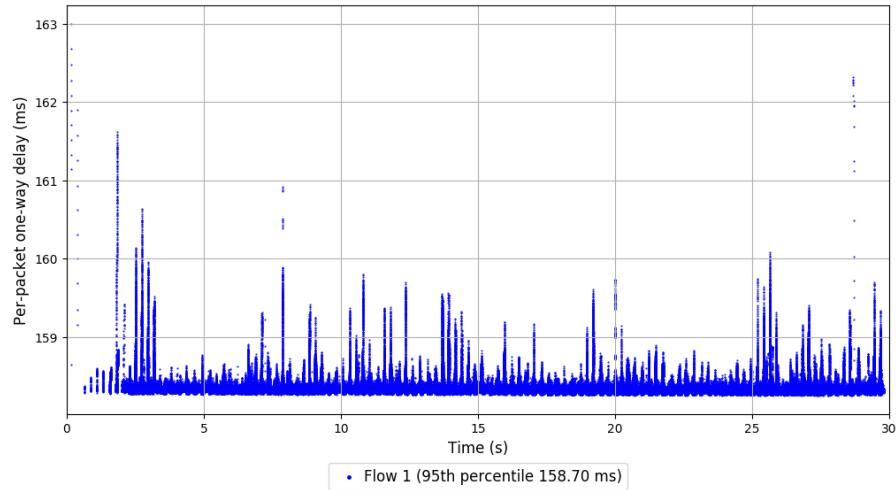
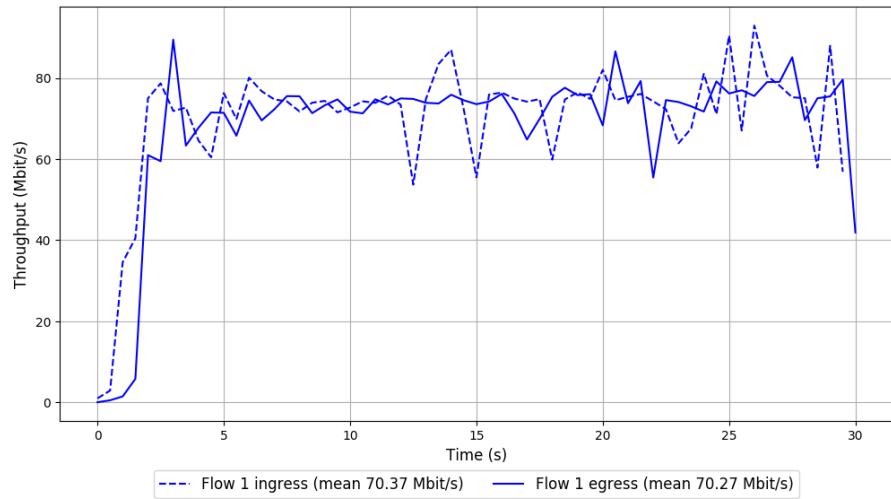


Run 1: Statistics of Indigo

```
Start at: 2018-12-02 09:51:48
End at: 2018-12-02 09:52:18
Local clock offset: 0.694 ms
Remote clock offset: -44.515 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.27 Mbit/s
95th percentile per-packet one-way delay: 158.699 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 70.27 Mbit/s
95th percentile per-packet one-way delay: 158.699 ms
Loss rate: 0.89%
```

## Run 1: Report of Indigo — Data Link

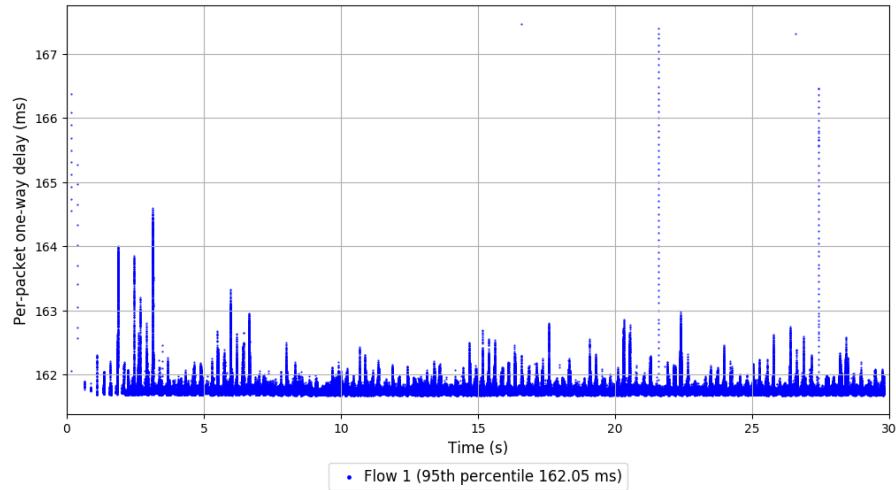
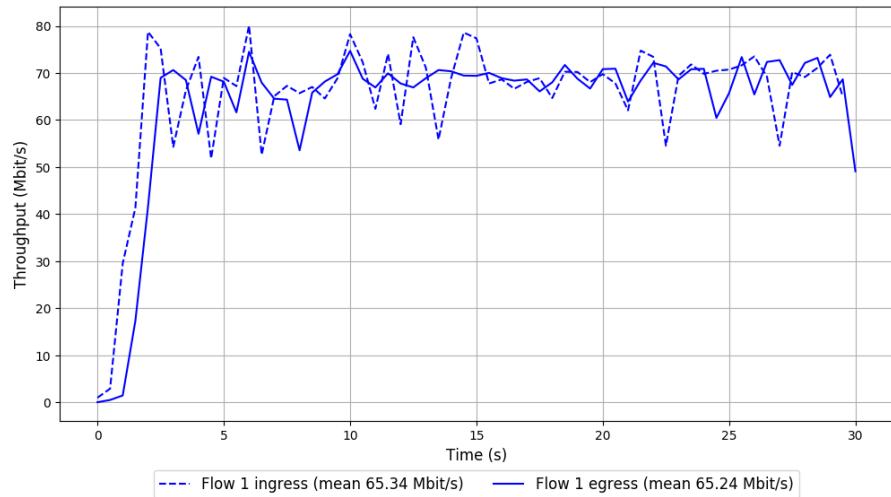


Run 2: Statistics of Indigo

```
Start at: 2018-12-02 10:23:46
End at: 2018-12-02 10:24:16
Local clock offset: 0.244 ms
Remote clock offset: -48.023 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.24 Mbit/s
95th percentile per-packet one-way delay: 162.049 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 65.24 Mbit/s
95th percentile per-packet one-way delay: 162.049 ms
Loss rate: 0.91%
```

## Run 2: Report of Indigo — Data Link

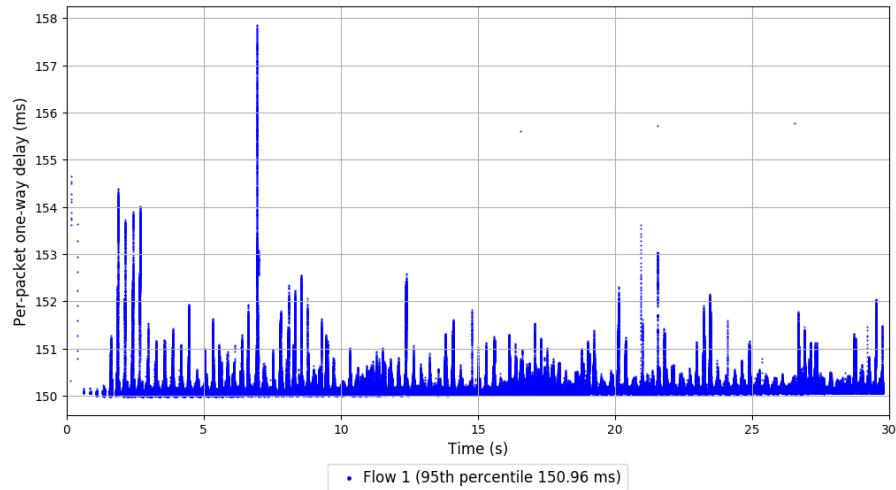
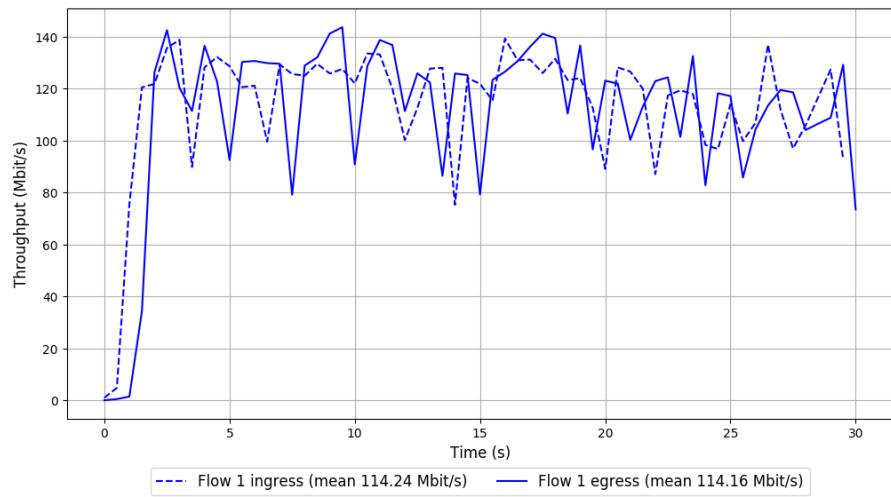


Run 3: Statistics of Indigo

```
Start at: 2018-12-02 11:06:45
End at: 2018-12-02 11:07:15
Local clock offset: -4.055 ms
Remote clock offset: -47.334 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 114.16 Mbit/s
95th percentile per-packet one-way delay: 150.961 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 114.16 Mbit/s
95th percentile per-packet one-way delay: 150.961 ms
Loss rate: 0.82%
```

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

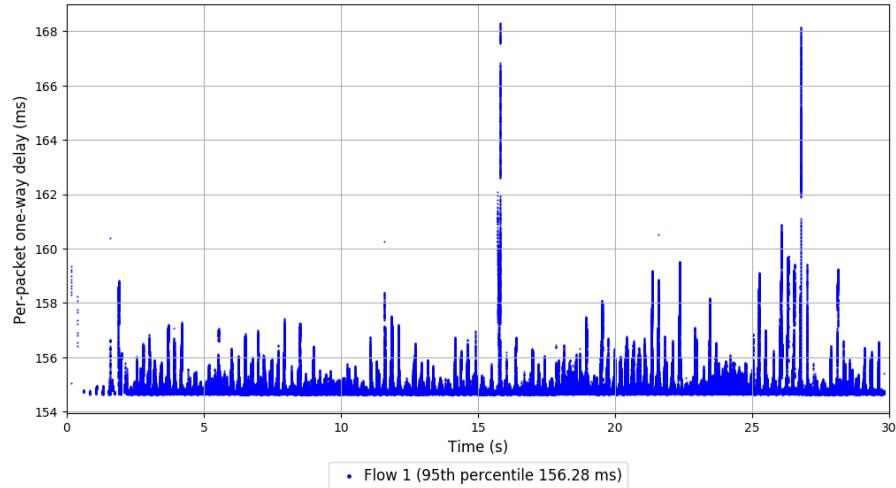
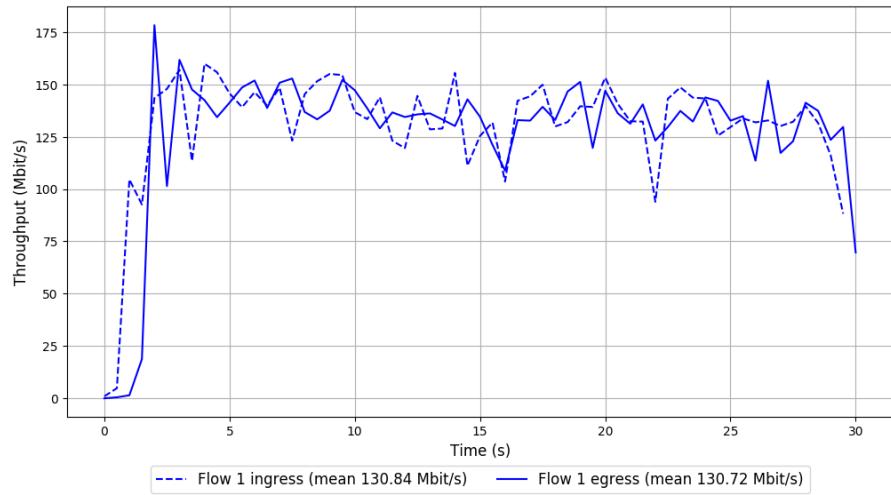


Run 4: Statistics of Indigo

```
Start at: 2018-12-02 11:38:35
End at: 2018-12-02 11:39:05
Local clock offset: 3.225 ms
Remote clock offset: -45.313 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 130.72 Mbit/s
95th percentile per-packet one-way delay: 156.280 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 130.72 Mbit/s
95th percentile per-packet one-way delay: 156.280 ms
Loss rate: 0.82%
```

## Run 4: Report of Indigo — Data Link

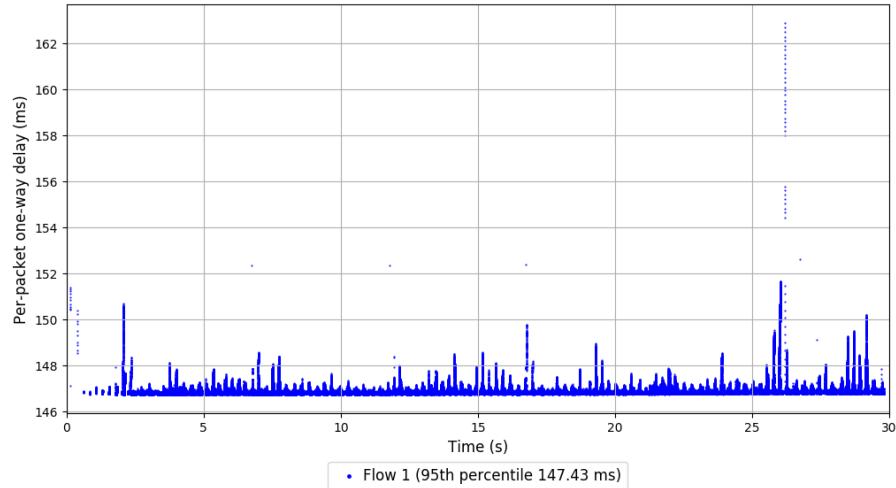
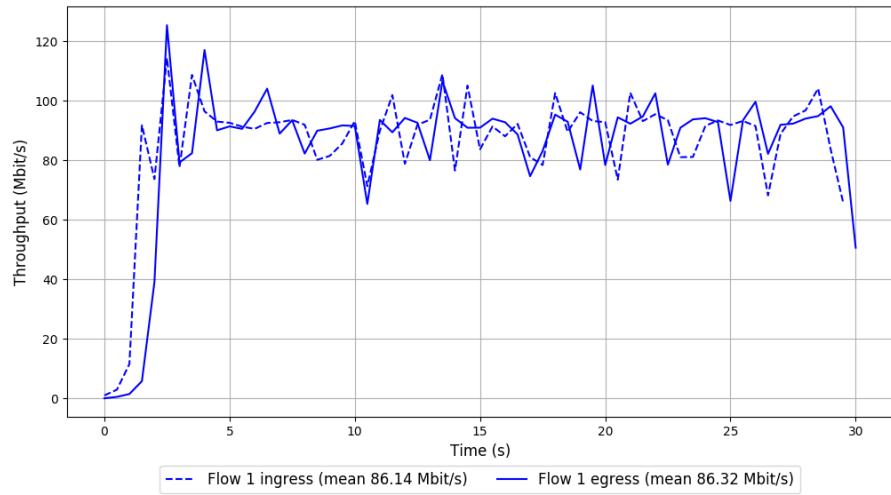


Run 5: Statistics of Indigo

```
Start at: 2018-12-02 12:21:43
End at: 2018-12-02 12:22:13
Local clock offset: -6.017 ms
Remote clock offset: -36.445 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.32 Mbit/s
95th percentile per-packet one-way delay: 147.432 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 86.32 Mbit/s
95th percentile per-packet one-way delay: 147.432 ms
Loss rate: 0.54%
```

## Run 5: Report of Indigo — Data Link

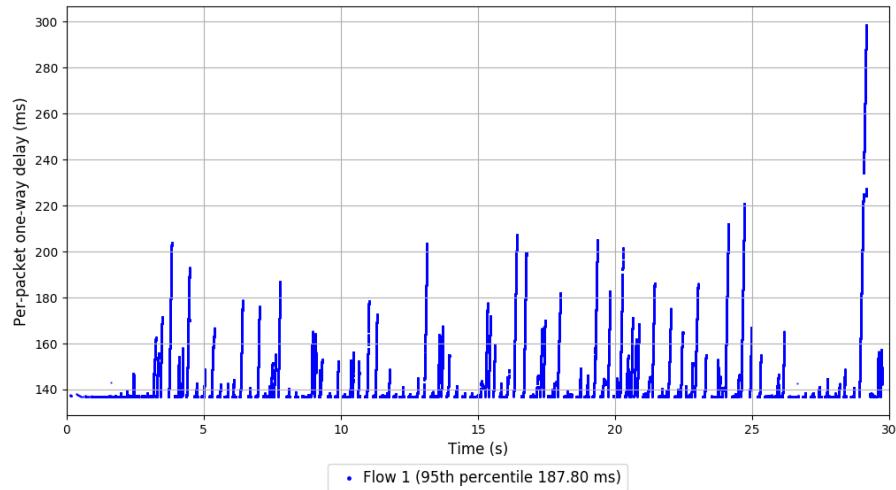
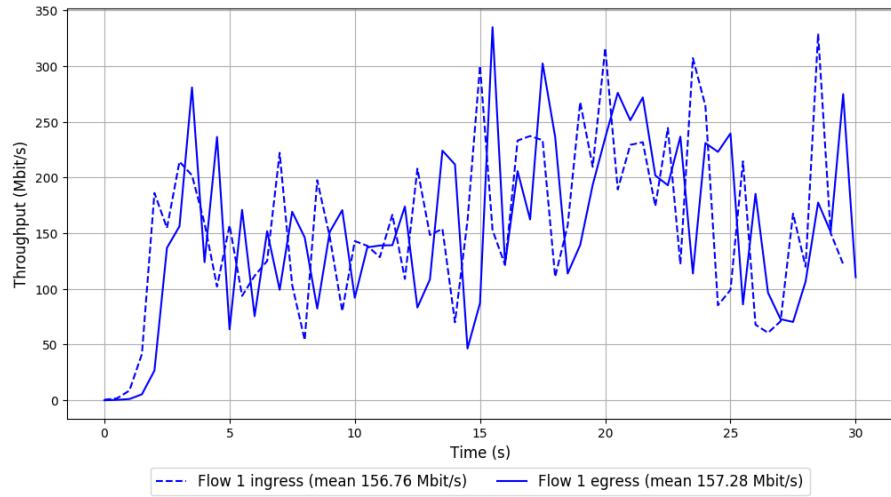


```
Run 1: Statistics of Indigo-96d2da3
```

```
Start at: 2018-12-02 09:35:23
End at: 2018-12-02 09:35:53
Local clock offset: -7.918 ms
Remote clock offset: -36.123 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 157.28 Mbit/s
95th percentile per-packet one-way delay: 187.798 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 157.28 Mbit/s
95th percentile per-packet one-way delay: 187.798 ms
Loss rate: 0.75%
```

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

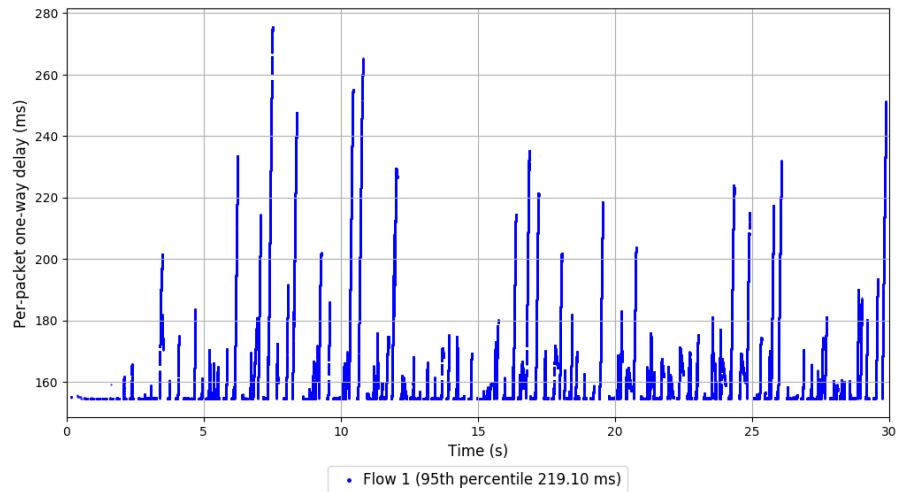
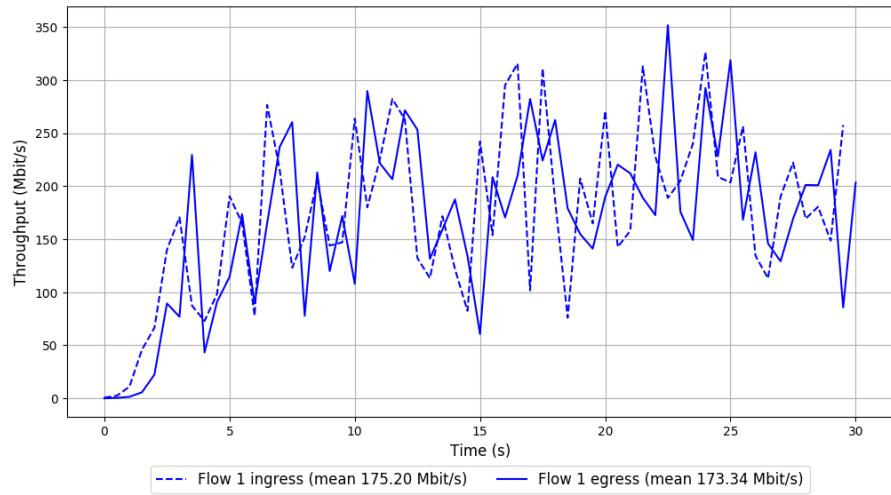


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-12-02 10:07:02
End at: 2018-12-02 10:07:32
Local clock offset: -1.679 ms
Remote clock offset: -48.603 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 173.34 Mbit/s
95th percentile per-packet one-way delay: 219.099 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 173.34 Mbit/s
95th percentile per-packet one-way delay: 219.099 ms
Loss rate: 1.24%
```

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

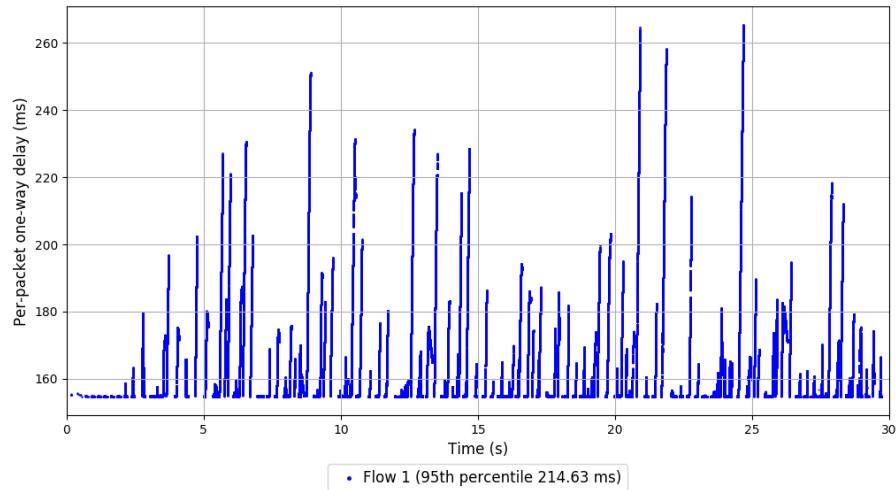
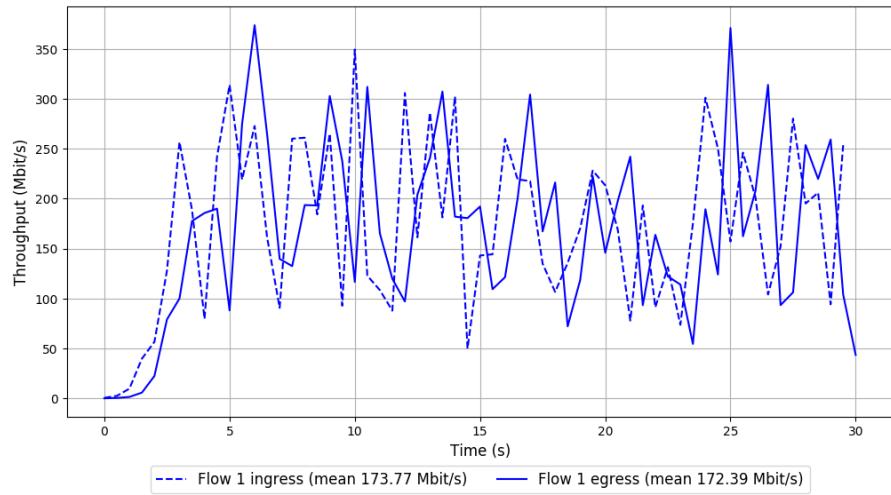


Run 3: Statistics of Indigo-96d2da3

```
Start at: 2018-12-02 10:32:58
End at: 2018-12-02 10:33:28
Local clock offset: -5.493 ms
Remote clock offset: -48.637 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 172.39 Mbit/s
95th percentile per-packet one-way delay: 214.635 ms
Loss rate: 2.04%
-- Flow 1:
Average throughput: 172.39 Mbit/s
95th percentile per-packet one-way delay: 214.635 ms
Loss rate: 2.04%
```

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

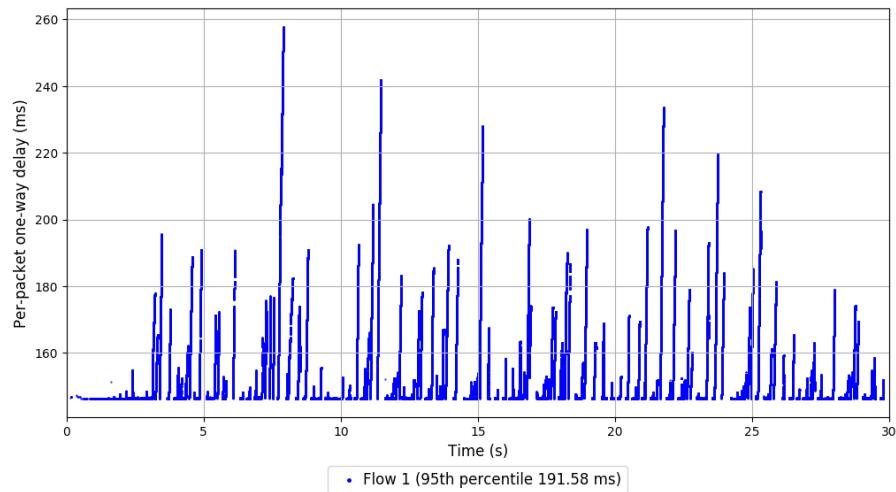
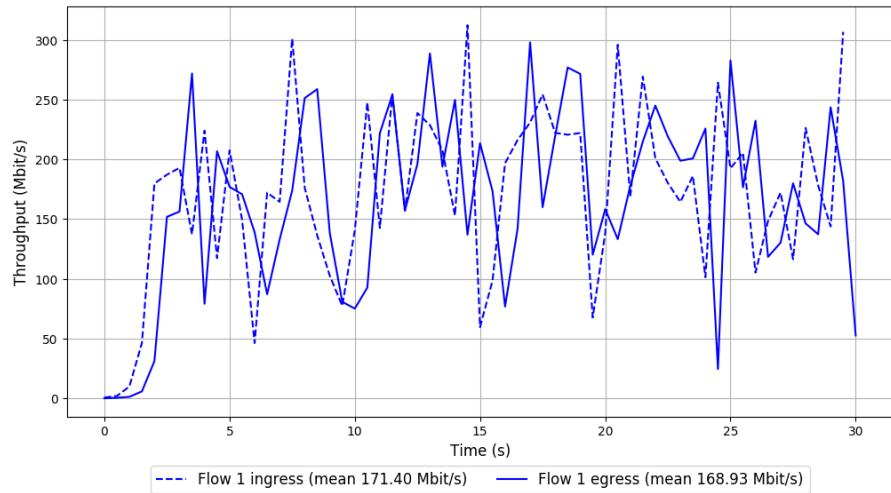


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-12-02 11:22:12
End at: 2018-12-02 11:22:42
Local clock offset: -3.548 ms
Remote clock offset: -41.82 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 168.93 Mbit/s
95th percentile per-packet one-way delay: 191.581 ms
Loss rate: 2.48%
-- Flow 1:
Average throughput: 168.93 Mbit/s
95th percentile per-packet one-way delay: 191.581 ms
Loss rate: 2.48%
```

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

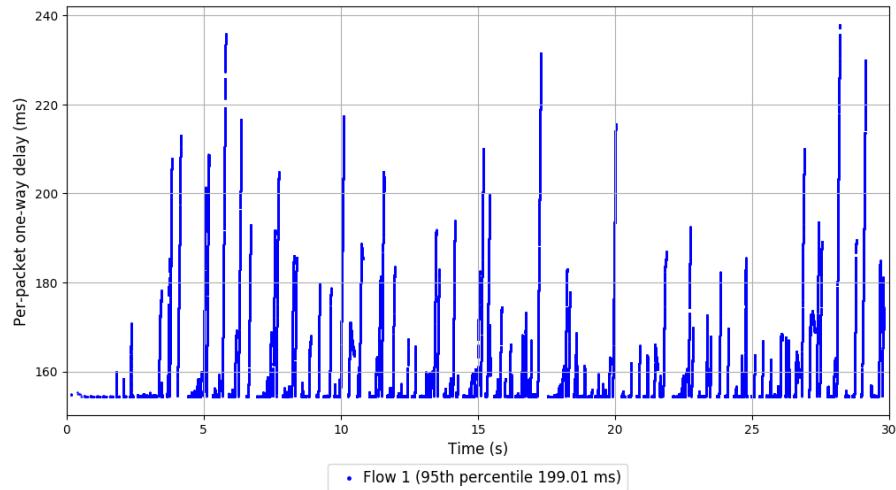
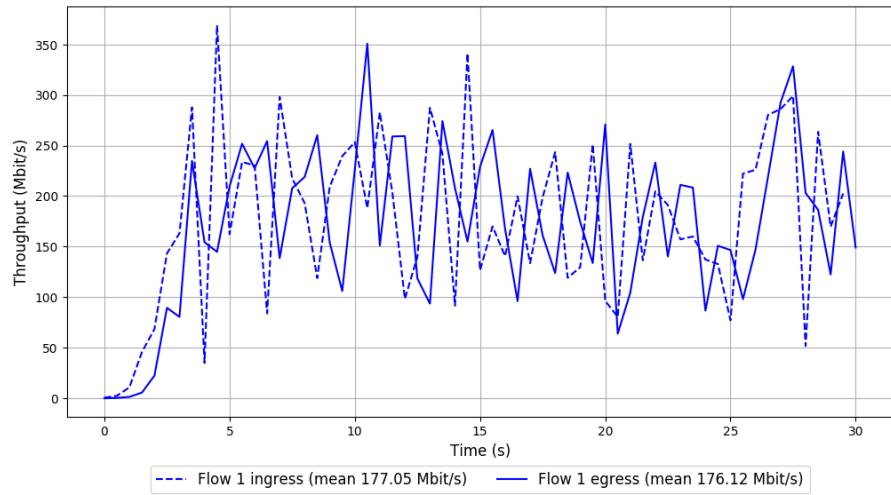


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-12-02 11:47:51
End at: 2018-12-02 11:48:21
Local clock offset: -1.8 ms
Remote clock offset: -44.437 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 176.12 Mbit/s
95th percentile per-packet one-way delay: 199.013 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 176.12 Mbit/s
95th percentile per-packet one-way delay: 199.013 ms
Loss rate: 1.27%
```

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

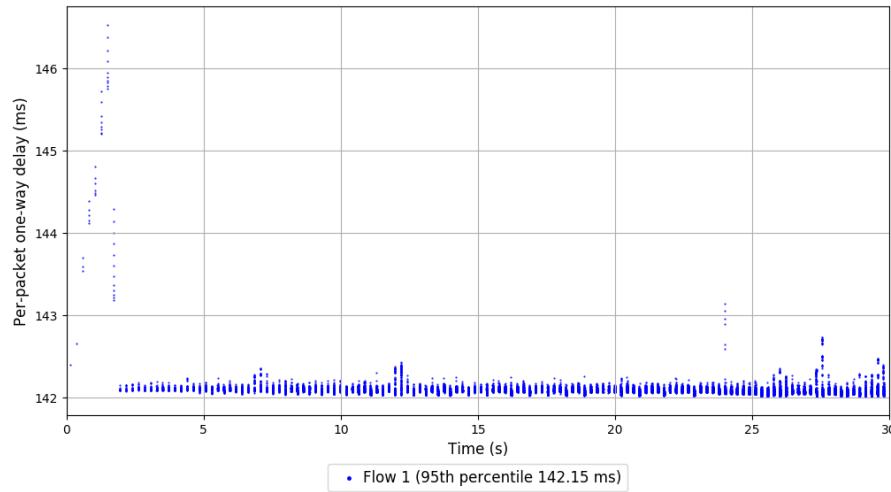
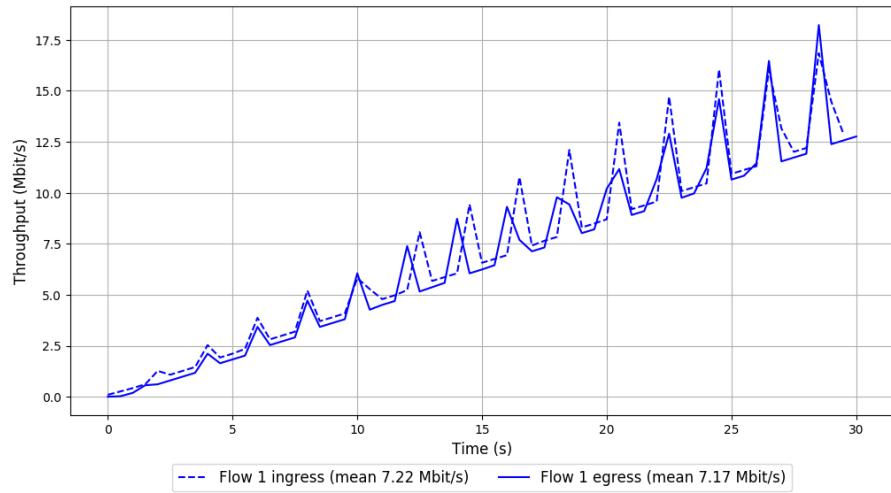


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-12-02 09:53:04
End at: 2018-12-02 09:53:34
Local clock offset: 0.435 ms
Remote clock offset: -34.186 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.17 Mbit/s
95th percentile per-packet one-way delay: 142.149 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 7.17 Mbit/s
95th percentile per-packet one-way delay: 142.149 ms
Loss rate: 1.49%
```

## Run 1: Report of LEDBAT — Data Link

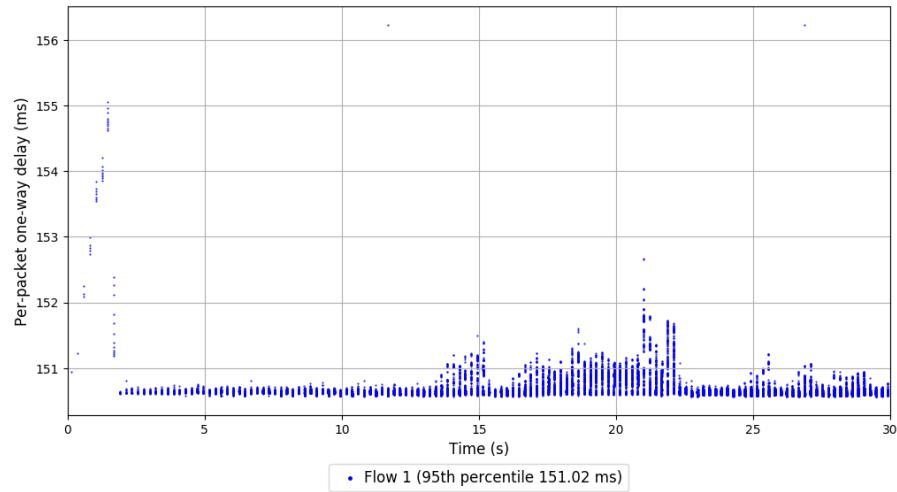
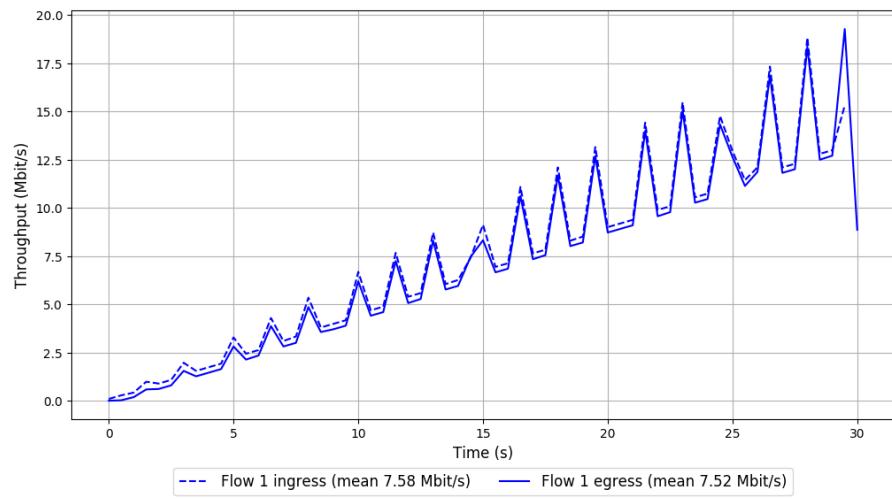


Run 2: Statistics of LEDBAT

```
Start at: 2018-12-02 10:25:02
End at: 2018-12-02 10:25:32
Local clock offset: -2.117 ms
Remote clock offset: -44.847 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.52 Mbit/s
95th percentile per-packet one-way delay: 151.024 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 7.52 Mbit/s
95th percentile per-packet one-way delay: 151.024 ms
Loss rate: 1.45%
```

## Run 2: Report of LEDBAT — Data Link

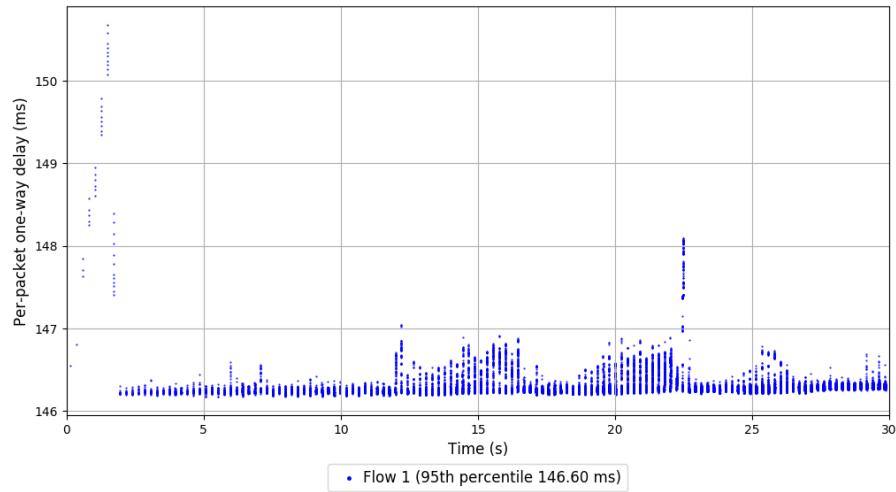
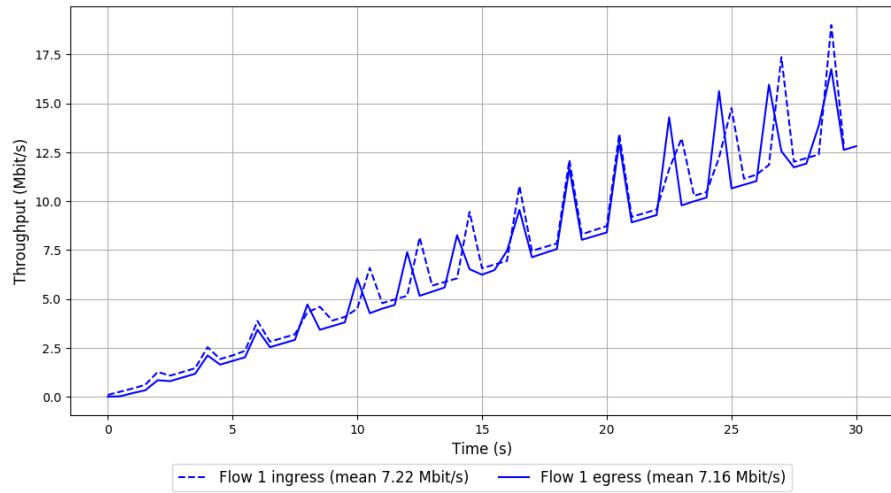


Run 3: Statistics of LEDBAT

```
Start at: 2018-12-02 11:08:13
End at: 2018-12-02 11:08:43
Local clock offset: -1.316 ms
Remote clock offset: -40.579 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.16 Mbit/s
95th percentile per-packet one-way delay: 146.604 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 7.16 Mbit/s
95th percentile per-packet one-way delay: 146.604 ms
Loss rate: 1.50%
```

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

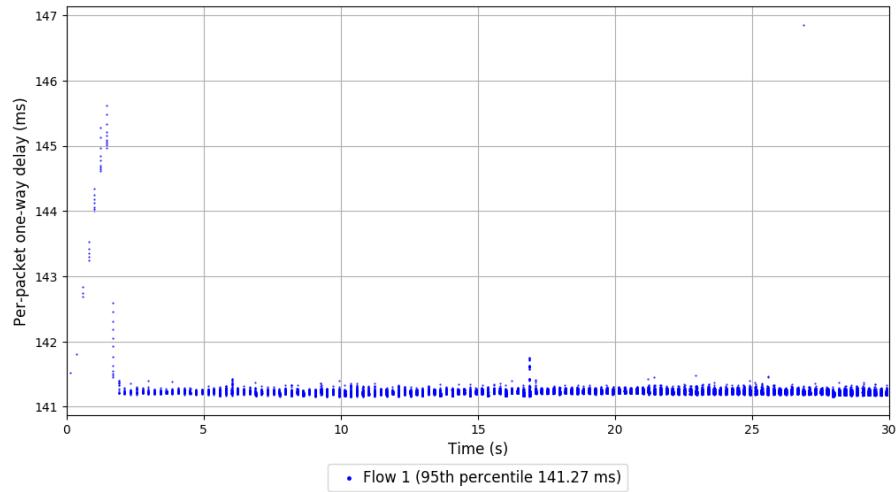
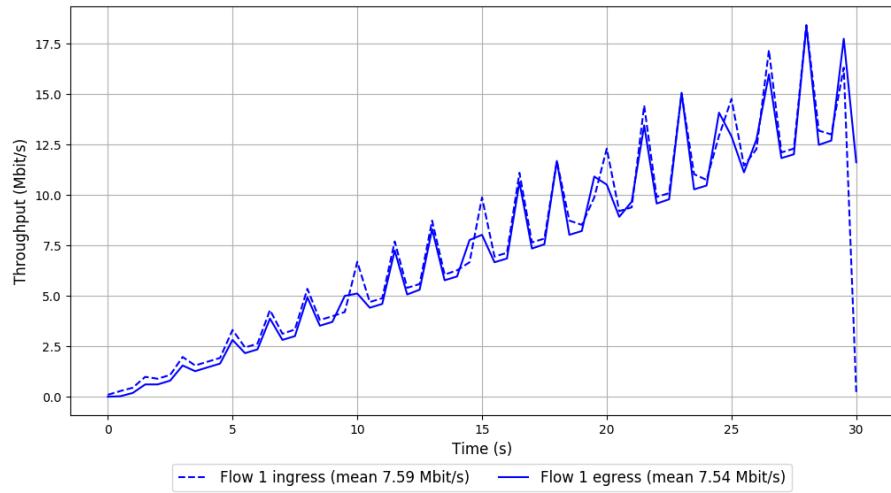


Run 4: Statistics of LEDBAT

```
Start at: 2018-12-02 11:39:55
End at: 2018-12-02 11:40:25
Local clock offset: -4.086 ms
Remote clock offset: -39.189 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.54 Mbit/s
95th percentile per-packet one-way delay: 141.272 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 7.54 Mbit/s
95th percentile per-packet one-way delay: 141.272 ms
Loss rate: 1.45%
```

## Run 4: Report of LEDBAT — Data Link

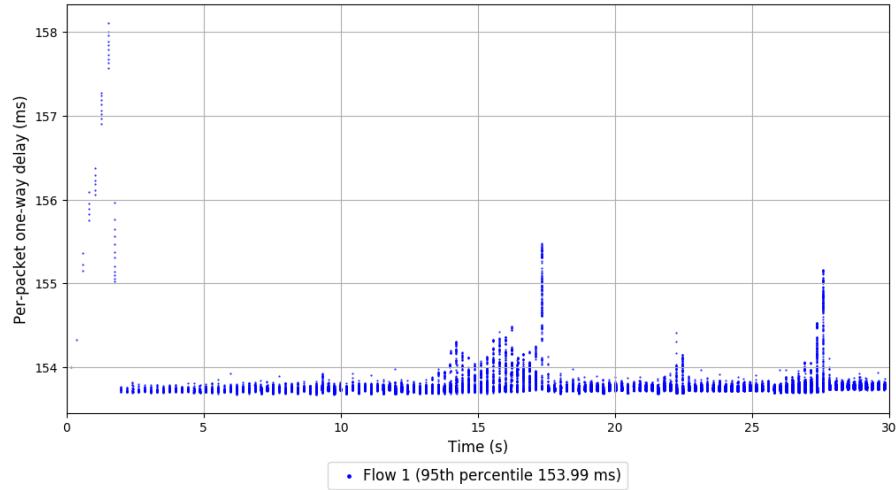
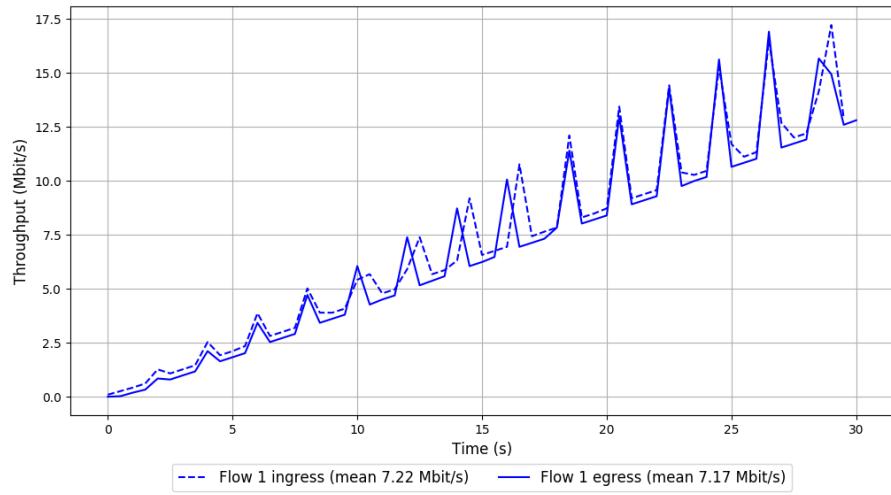


Run 5: Statistics of LEDBAT

```
Start at: 2018-12-02 12:23:09
End at: 2018-12-02 12:23:39
Local clock offset: -7.567 ms
Remote clock offset: -44.82 ms

# Below is generated by plot.py at 2018-12-02 12:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.17 Mbit/s
95th percentile per-packet one-way delay: 153.986 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 7.17 Mbit/s
95th percentile per-packet one-way delay: 153.986 ms
Loss rate: 1.50%
```

## Run 5: Report of LEDBAT — Data Link

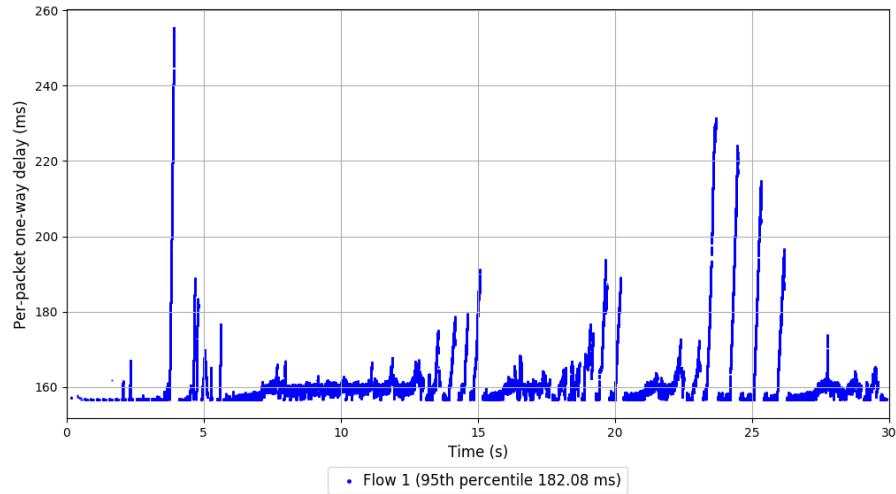
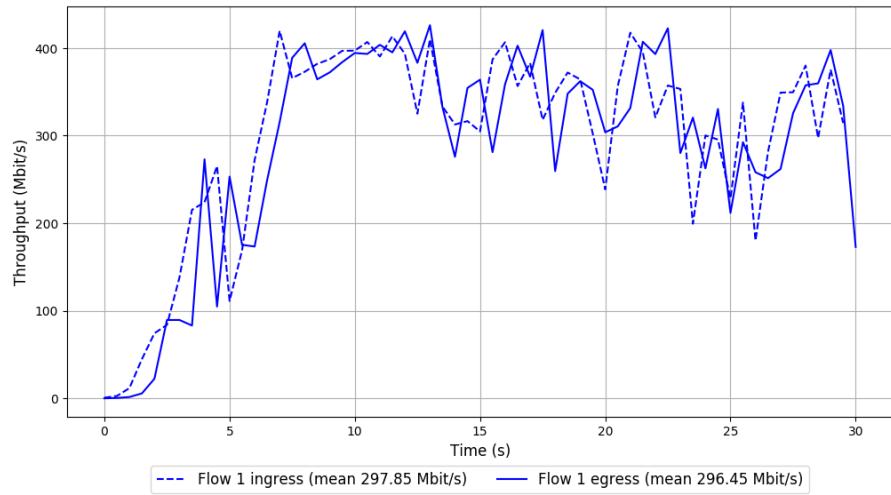


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-12-02 09:41:54
End at: 2018-12-02 09:42:24
Local clock offset: 1.402 ms
Remote clock offset: -47.441 ms

# Below is generated by plot.py at 2018-12-02 12:51:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 296.45 Mbit/s
95th percentile per-packet one-way delay: 182.082 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 296.45 Mbit/s
95th percentile per-packet one-way delay: 182.082 ms
Loss rate: 1.20%
```

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

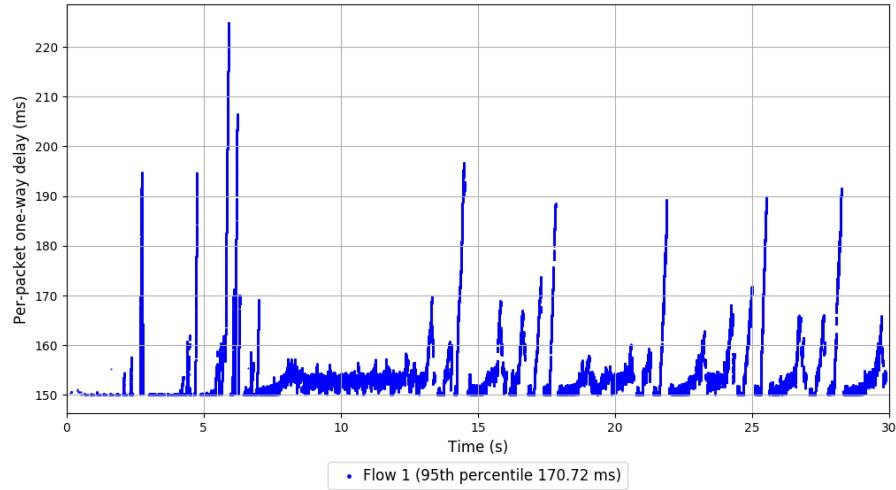
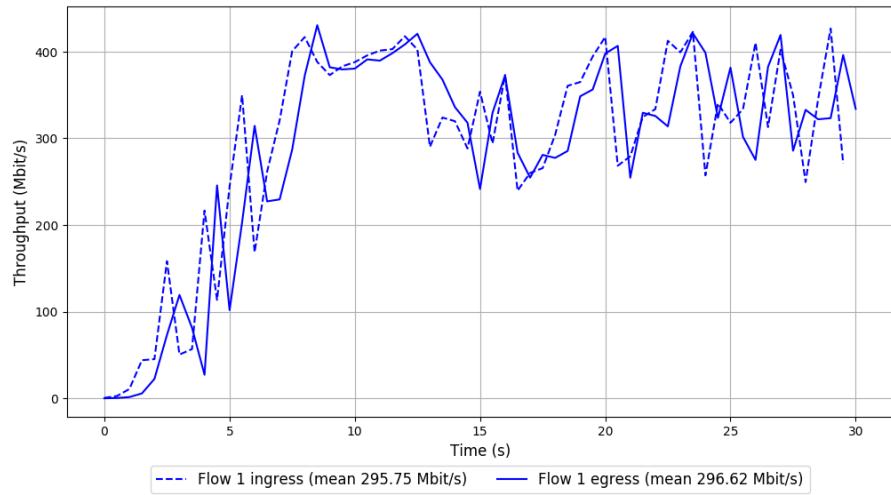


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-12-02 10:13:33
End at: 2018-12-02 10:14:03
Local clock offset: -13.904 ms
Remote clock offset: -50.624 ms

# Below is generated by plot.py at 2018-12-02 12:51:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 296.62 Mbit/s
95th percentile per-packet one-way delay: 170.722 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 296.62 Mbit/s
95th percentile per-packet one-way delay: 170.722 ms
Loss rate: 0.45%
```

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

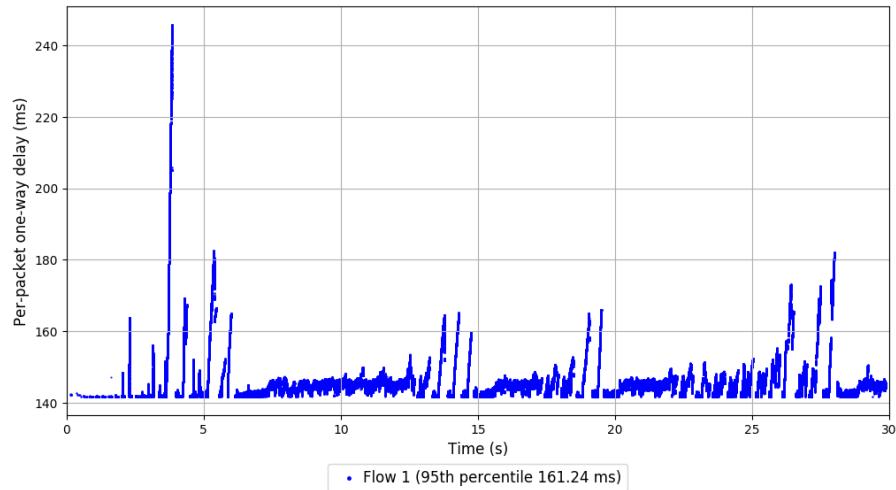
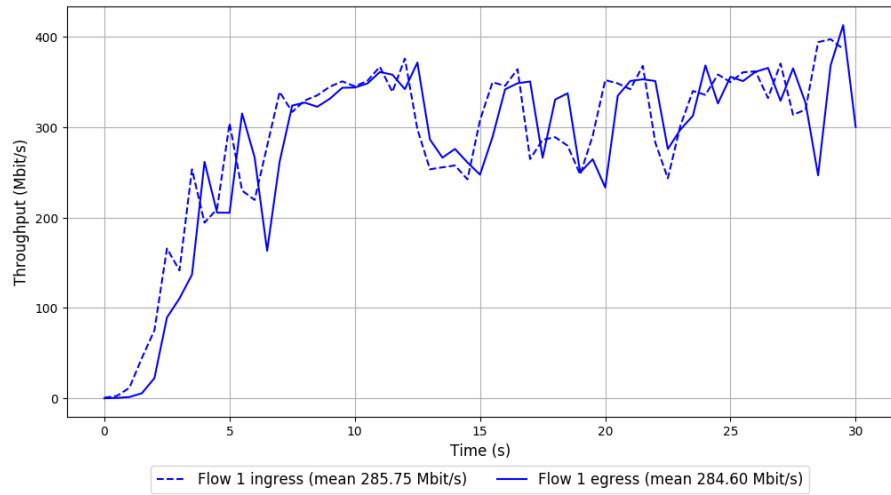


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-12-02 10:39:24
End at: 2018-12-02 10:39:54
Local clock offset: -2.863 ms
Remote clock offset: -39.745 ms

# Below is generated by plot.py at 2018-12-02 12:51:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 284.60 Mbit/s
95th percentile per-packet one-way delay: 161.240 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 284.60 Mbit/s
95th percentile per-packet one-way delay: 161.240 ms
Loss rate: 1.14%
```

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

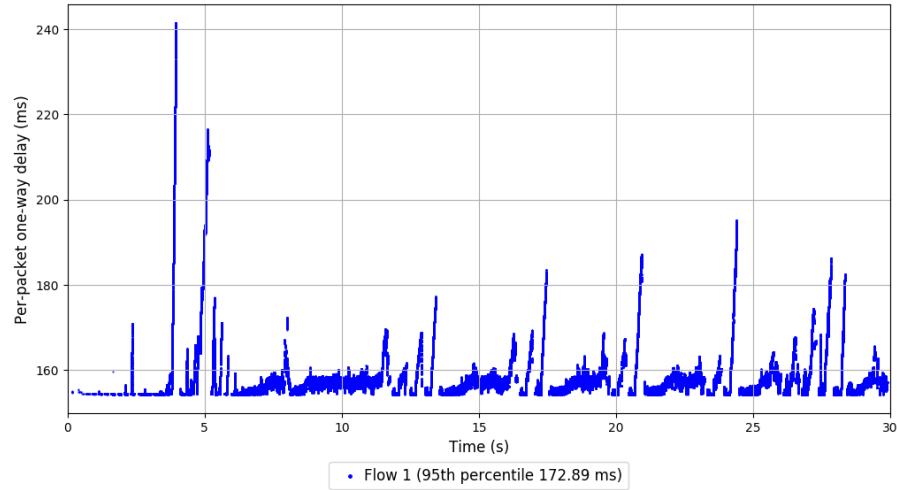
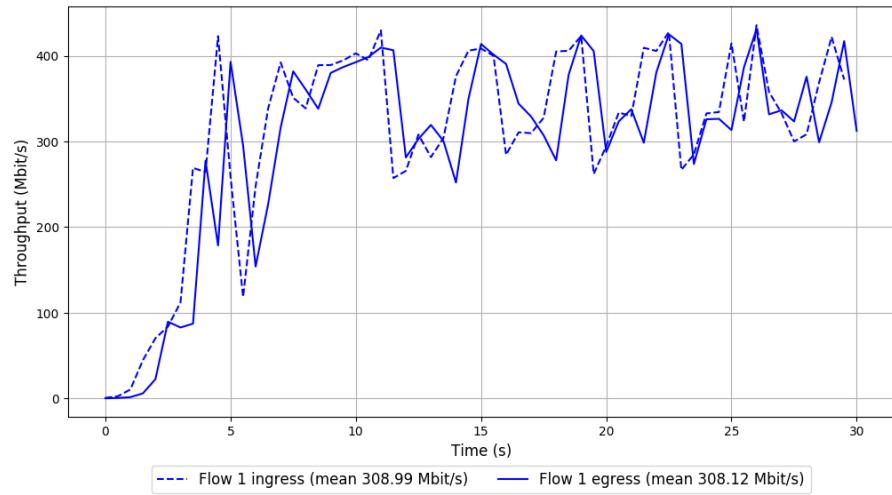


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-12-02 11:28:44
End at: 2018-12-02 11:29:14
Local clock offset: 0.975 ms
Remote clock offset: -45.688 ms

# Below is generated by plot.py at 2018-12-02 12:51:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 308.12 Mbit/s
95th percentile per-packet one-way delay: 172.894 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 308.12 Mbit/s
95th percentile per-packet one-way delay: 172.894 ms
Loss rate: 1.02%
```

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

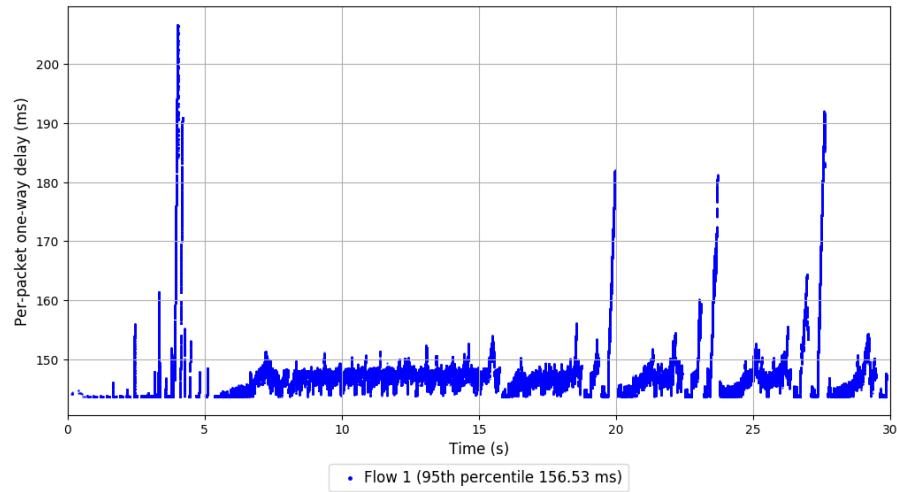
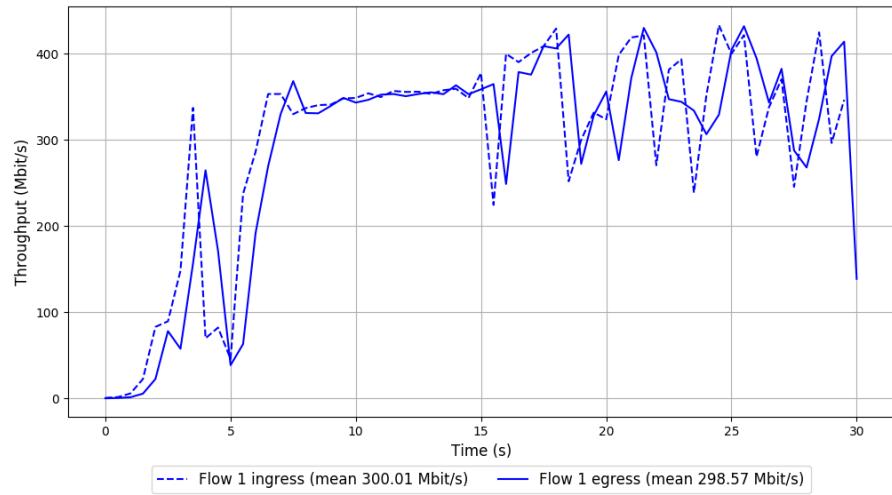


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-12-02 11:54:19
End at: 2018-12-02 11:54:49
Local clock offset: -2.414 ms
Remote clock offset: -34.314 ms

# Below is generated by plot.py at 2018-12-02 12:52:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 298.57 Mbit/s
95th percentile per-packet one-way delay: 156.529 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 298.57 Mbit/s
95th percentile per-packet one-way delay: 156.529 ms
Loss rate: 1.25%
```

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

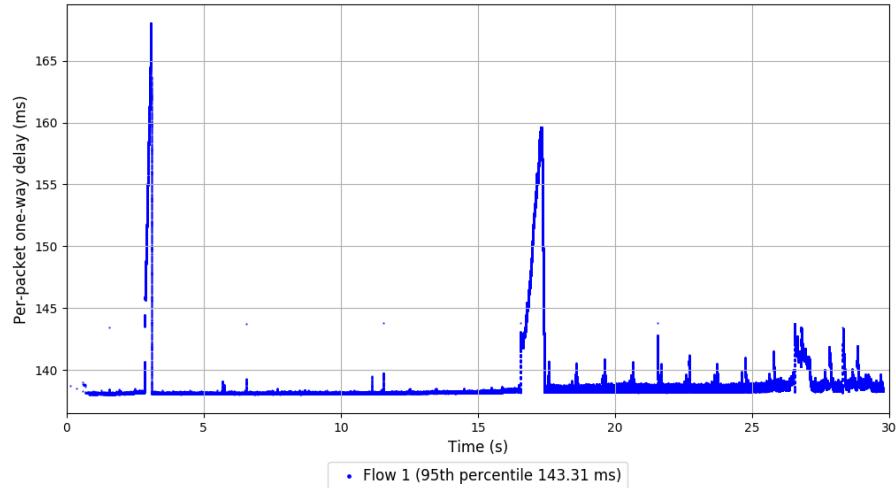
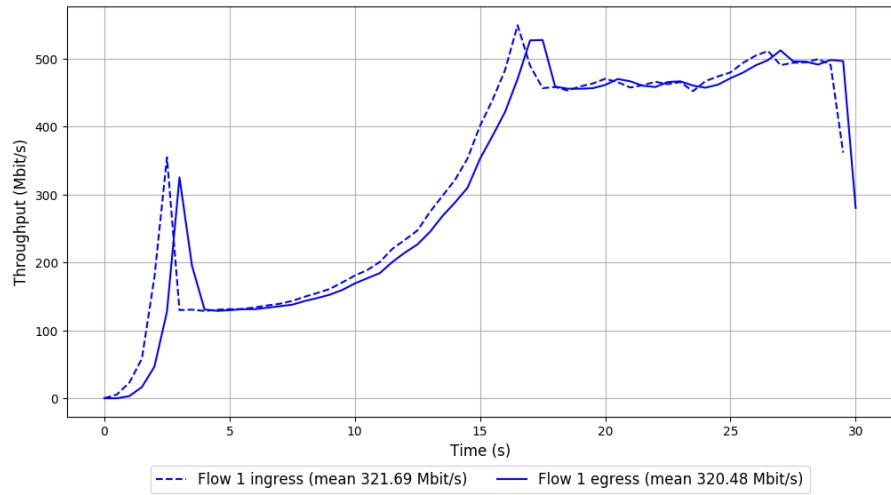


Run 1: Statistics of PCC-Allegro

```
Start at: 2018-12-02 09:46:02
End at: 2018-12-02 09:46:32
Local clock offset: -7.521 ms
Remote clock offset: -32.499 ms

# Below is generated by plot.py at 2018-12-02 12:52:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 320.48 Mbit/s
95th percentile per-packet one-way delay: 143.315 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 320.48 Mbit/s
95th percentile per-packet one-way delay: 143.315 ms
Loss rate: 1.12%
```

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

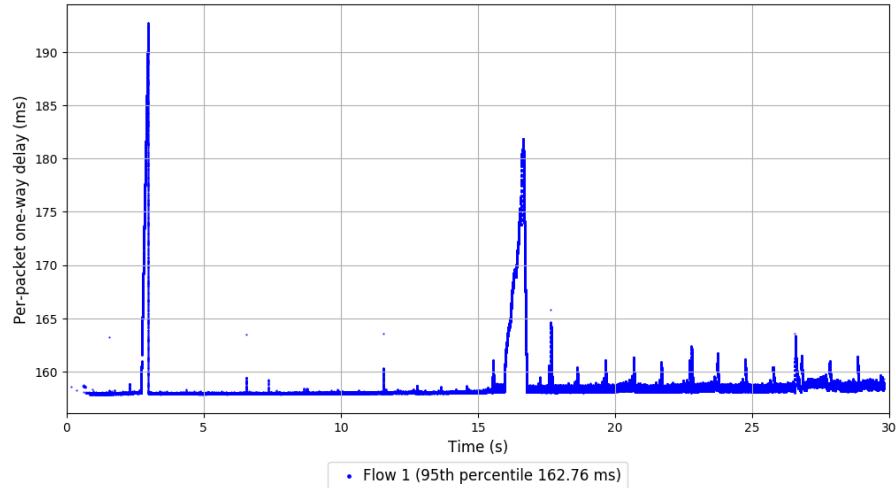
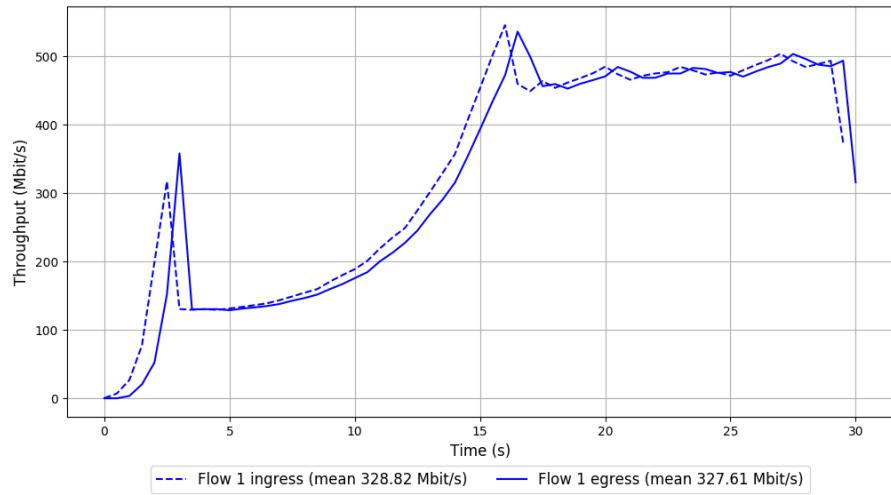


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-12-02 10:17:44
End at: 2018-12-02 10:18:14
Local clock offset: 2.786 ms
Remote clock offset: -47.444 ms

# Below is generated by plot.py at 2018-12-02 12:52:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 327.61 Mbit/s
95th percentile per-packet one-way delay: 162.756 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 327.61 Mbit/s
95th percentile per-packet one-way delay: 162.756 ms
Loss rate: 1.09%
```

Run 2: Report of PCC-Allegro — Data Link

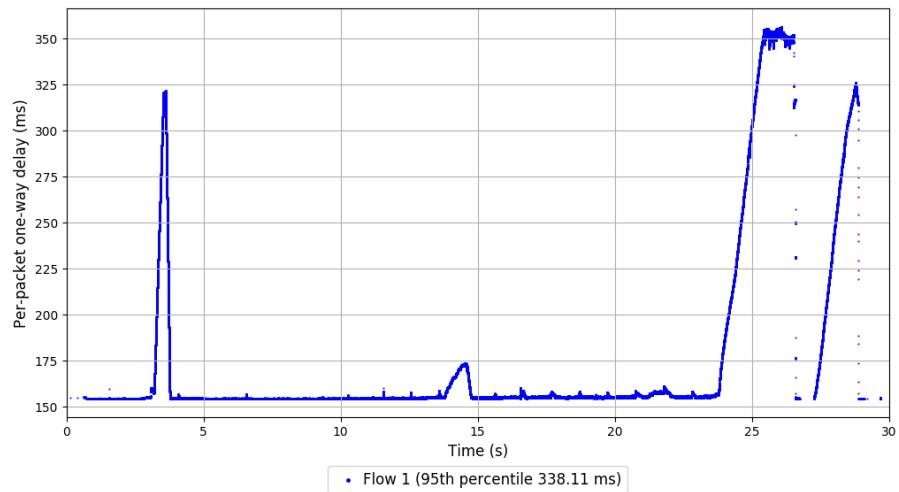
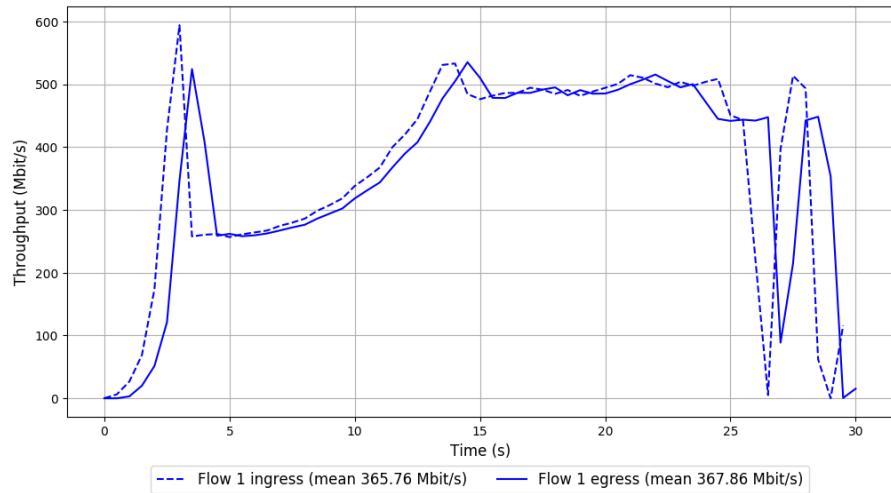


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-12-02 10:49:26
End at: 2018-12-02 10:49:56
Local clock offset: 4.498 ms
Remote clock offset: -40.119 ms

# Below is generated by plot.py at 2018-12-02 12:53:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 367.86 Mbit/s
95th percentile per-packet one-way delay: 338.113 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 367.86 Mbit/s
95th percentile per-packet one-way delay: 338.113 ms
Loss rate: 0.51%
```

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

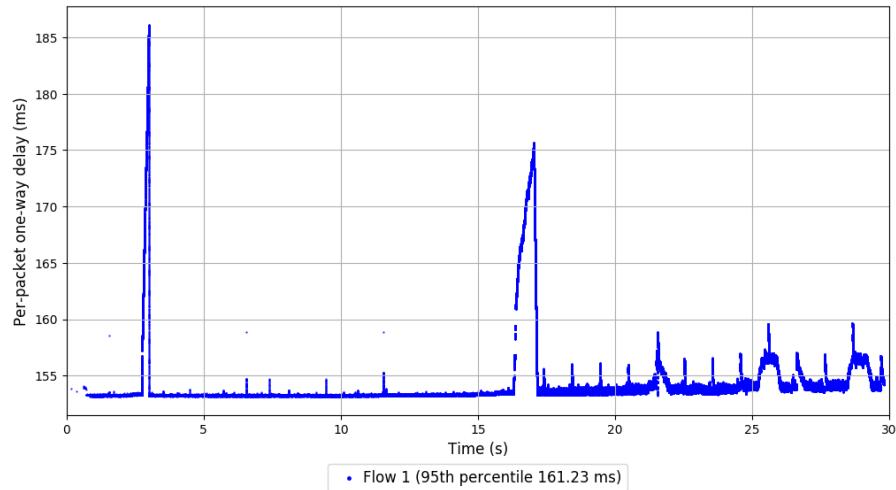
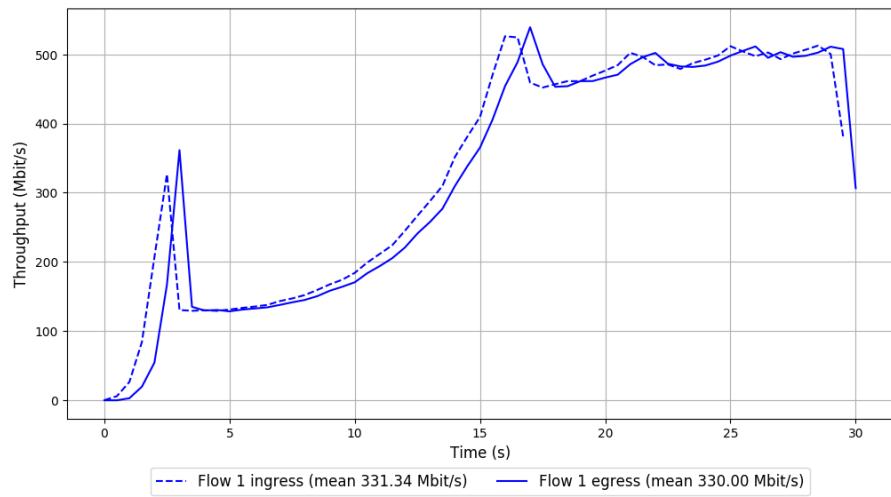


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-12-02 11:32:52
End at: 2018-12-02 11:33:22
Local clock offset: 2.517 ms
Remote clock offset: -38.496 ms

# Below is generated by plot.py at 2018-12-02 12:55:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 330.00 Mbit/s
95th percentile per-packet one-way delay: 161.233 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 330.00 Mbit/s
95th percentile per-packet one-way delay: 161.233 ms
Loss rate: 1.15%
```

Run 4: Report of PCC-Allegro — Data Link

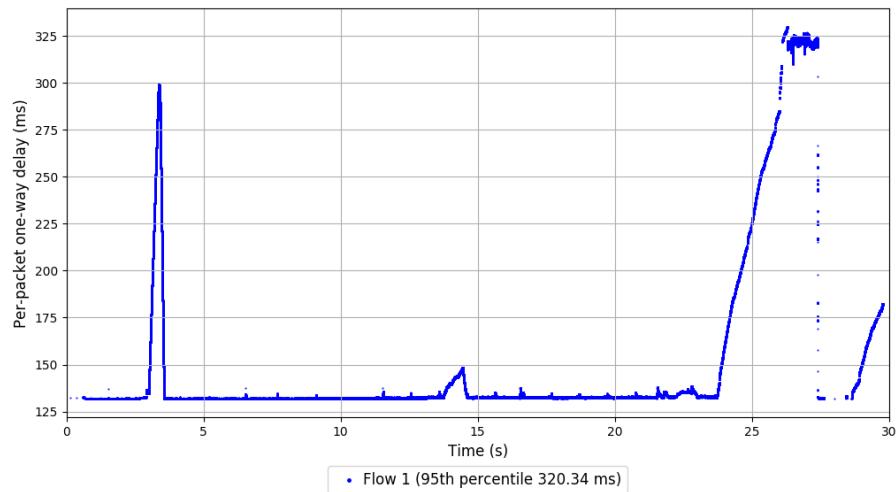
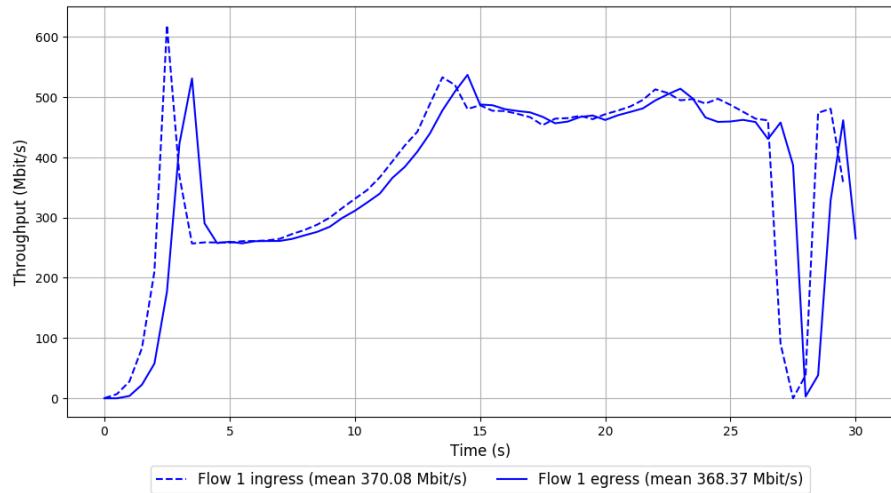


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-12-02 12:04:24
End at: 2018-12-02 12:04:54
Local clock offset: -8.394 ms
Remote clock offset: -31.681 ms

# Below is generated by plot.py at 2018-12-02 12:55:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 368.37 Mbit/s
95th percentile per-packet one-way delay: 320.337 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 368.37 Mbit/s
95th percentile per-packet one-way delay: 320.337 ms
Loss rate: 1.20%
```

Run 5: Report of PCC-Allegro — Data Link

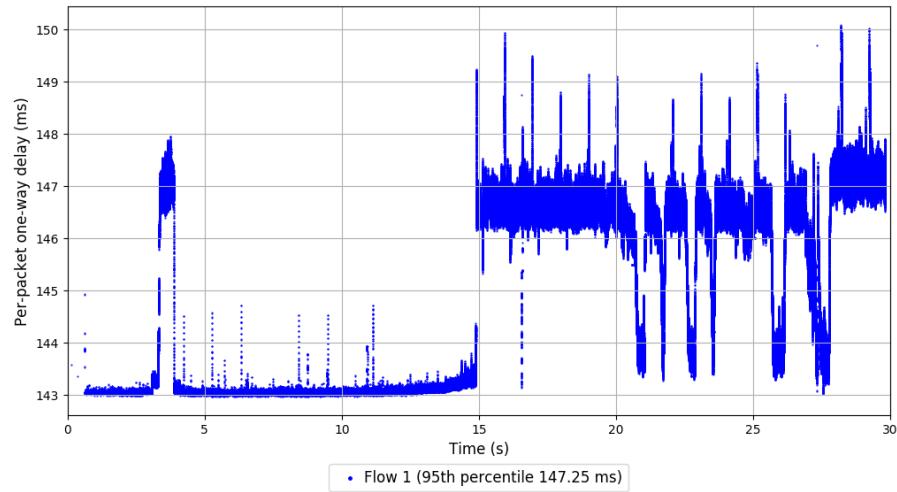
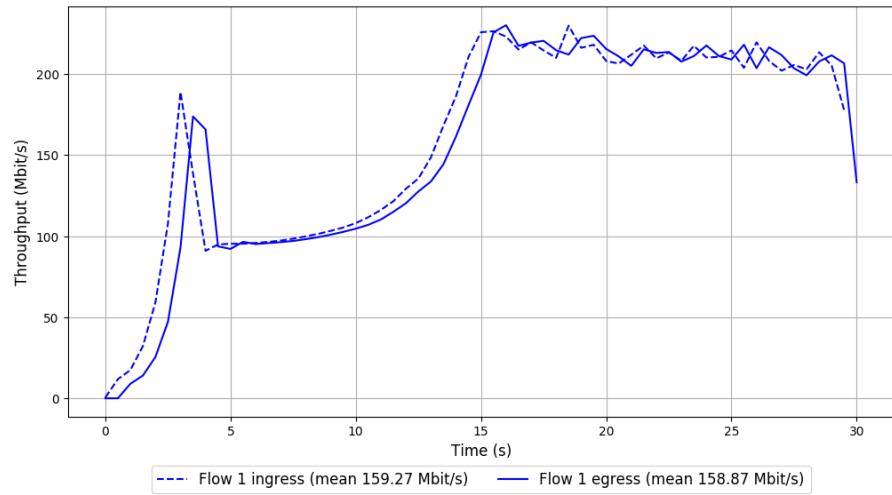


Run 1: Statistics of PCC-Expr

```
Start at: 2018-12-02 09:43:20
End at: 2018-12-02 09:43:50
Local clock offset: -6.96 ms
Remote clock offset: -42.318 ms

# Below is generated by plot.py at 2018-12-02 12:55:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 158.87 Mbit/s
95th percentile per-packet one-way delay: 147.250 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 158.87 Mbit/s
95th percentile per-packet one-way delay: 147.250 ms
Loss rate: 1.09%
```

Run 1: Report of PCC-Expr — Data Link

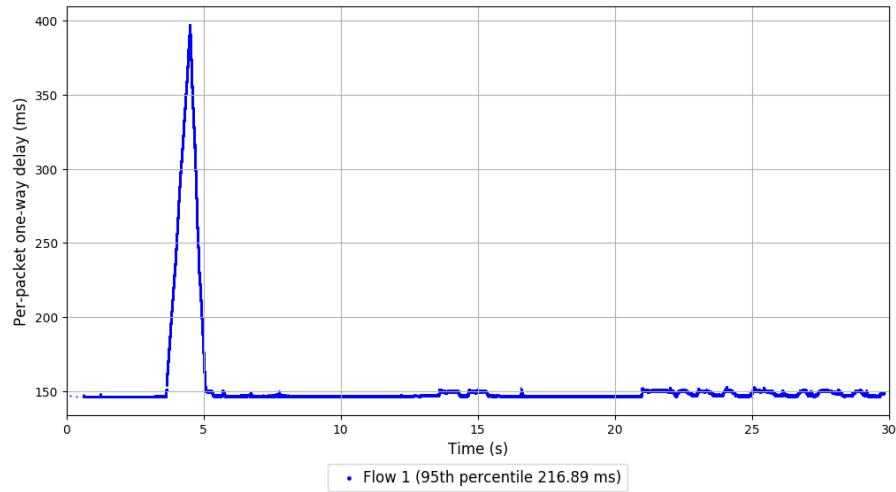
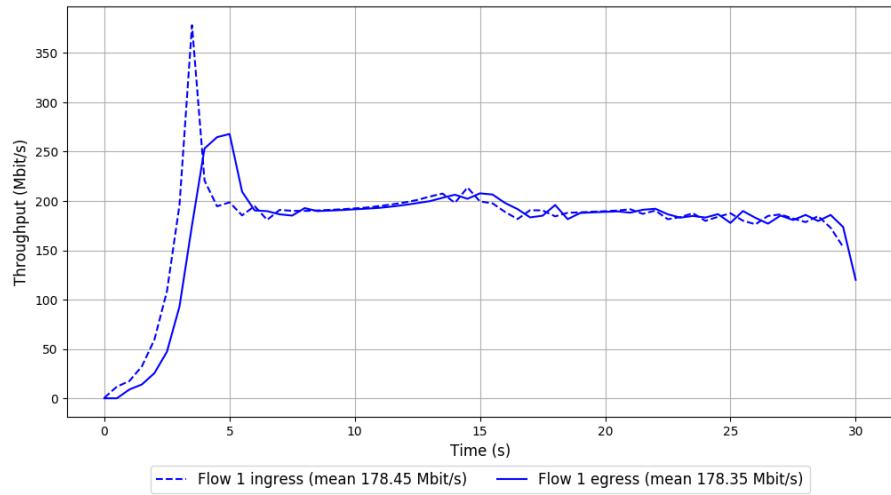


Run 2: Statistics of PCC-Expr

```
Start at: 2018-12-02 10:14:58
End at: 2018-12-02 10:15:28
Local clock offset: 0.17 ms
Remote clock offset: -38.357 ms

# Below is generated by plot.py at 2018-12-02 12:55:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 178.35 Mbit/s
95th percentile per-packet one-way delay: 216.893 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 178.35 Mbit/s
95th percentile per-packet one-way delay: 216.893 ms
Loss rate: 0.79%
```

Run 2: Report of PCC-Expr — Data Link

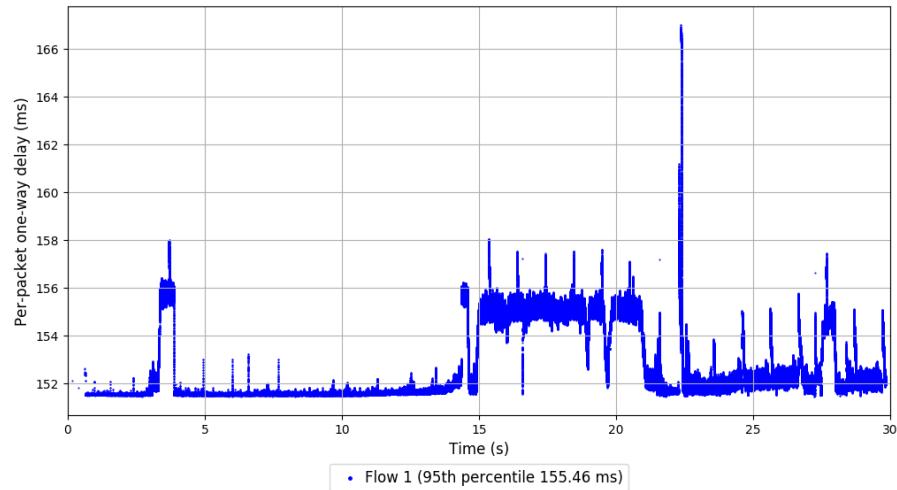
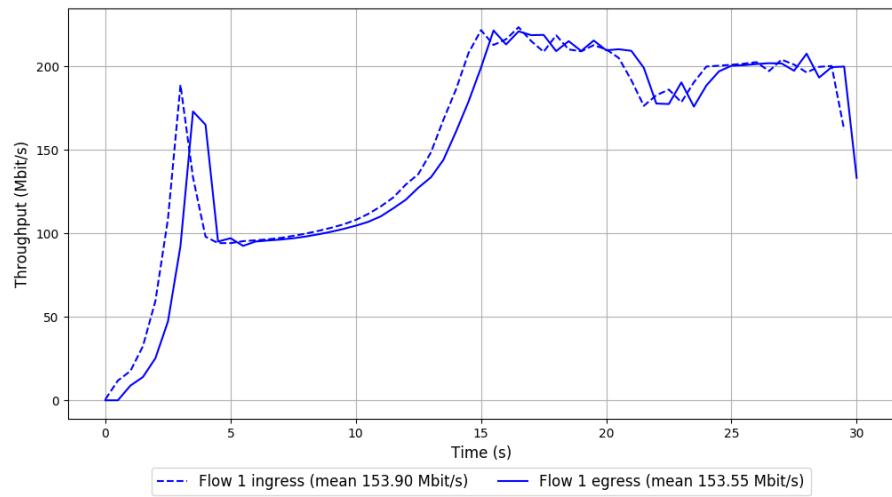


Run 3: Statistics of PCC-Expr

```
Start at: 2018-12-02 10:46:31
End at: 2018-12-02 10:47:01
Local clock offset: 2.065 ms
Remote clock offset: -39.587 ms

# Below is generated by plot.py at 2018-12-02 12:55:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 153.55 Mbit/s
95th percentile per-packet one-way delay: 155.457 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 153.55 Mbit/s
95th percentile per-packet one-way delay: 155.457 ms
Loss rate: 0.98%
```

Run 3: Report of PCC-Expr — Data Link

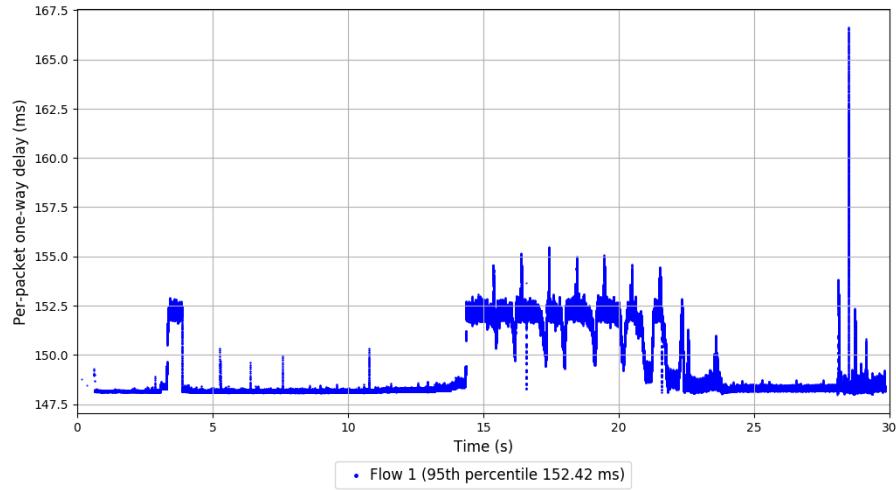
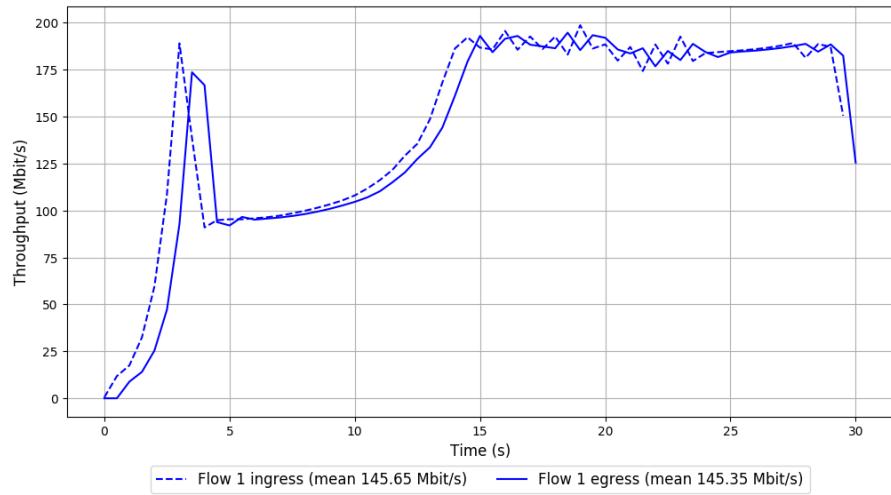


Run 4: Statistics of PCC-Expr

```
Start at: 2018-12-02 11:30:10
End at: 2018-12-02 11:30:40
Local clock offset: -0.672 ms
Remote clock offset: -36.004 ms

# Below is generated by plot.py at 2018-12-02 12:55:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 145.35 Mbit/s
95th percentile per-packet one-way delay: 152.418 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 145.35 Mbit/s
95th percentile per-packet one-way delay: 152.418 ms
Loss rate: 0.95%
```

Run 4: Report of PCC-Expr — Data Link

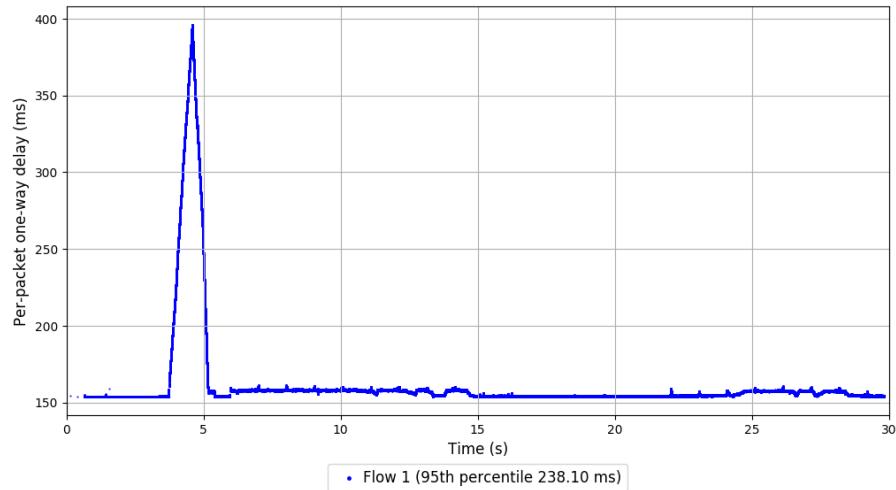
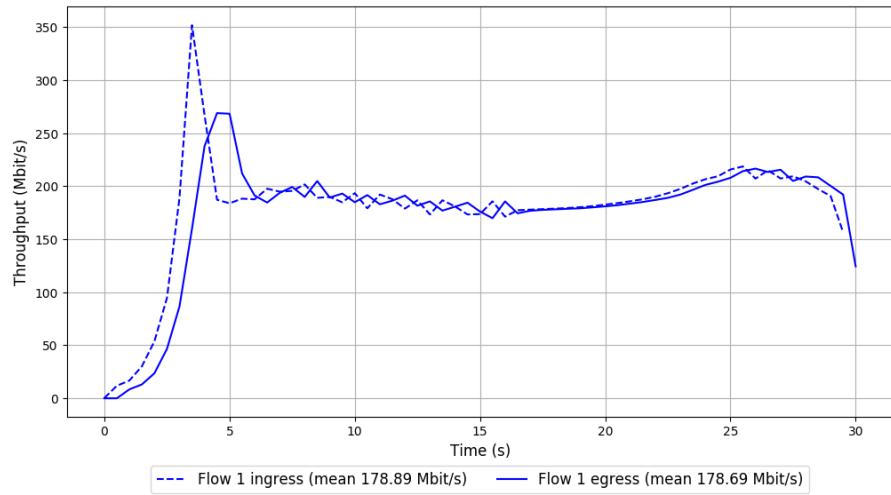


Run 5: Statistics of PCC-Expr

```
Start at: 2018-12-02 12:01:28
End at: 2018-12-02 12:01:58
Local clock offset: -4.996 ms
Remote clock offset: -45.18 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 178.69 Mbit/s
95th percentile per-packet one-way delay: 238.102 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 178.69 Mbit/s
95th percentile per-packet one-way delay: 238.102 ms
Loss rate: 0.86%
```

Run 5: Report of PCC-Expr — Data Link

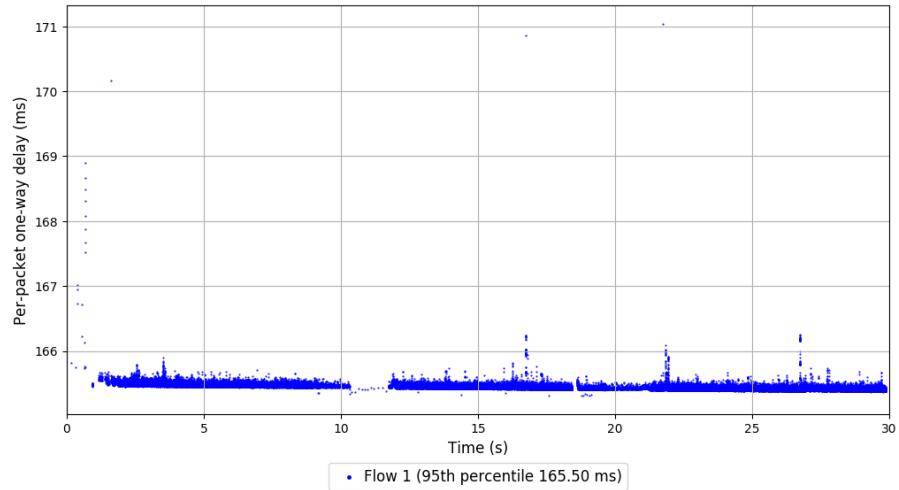
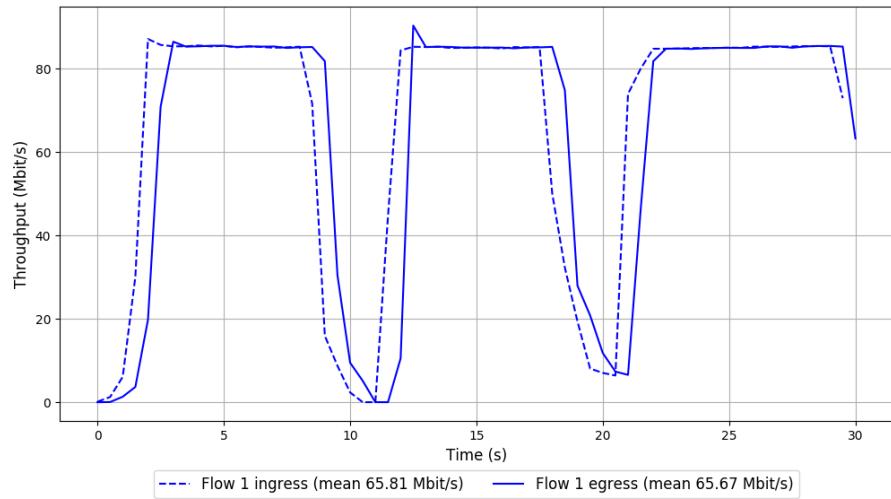


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-12-02 09:34:09
End at: 2018-12-02 09:34:39
Local clock offset: 1.993 ms
Remote clock offset: -49.065 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.67 Mbit/s
95th percentile per-packet one-way delay: 165.505 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 65.67 Mbit/s
95th percentile per-packet one-way delay: 165.505 ms
Loss rate: 0.96%
```

Run 1: Report of QUIC Cubic — Data Link

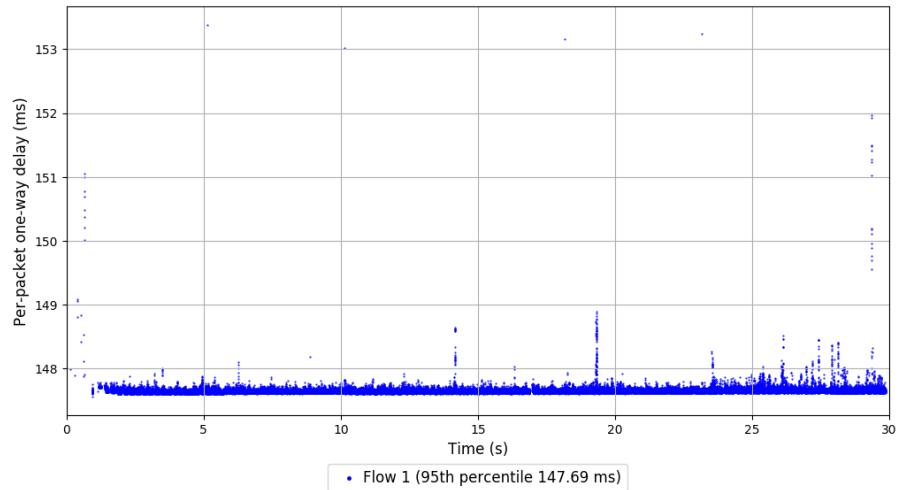
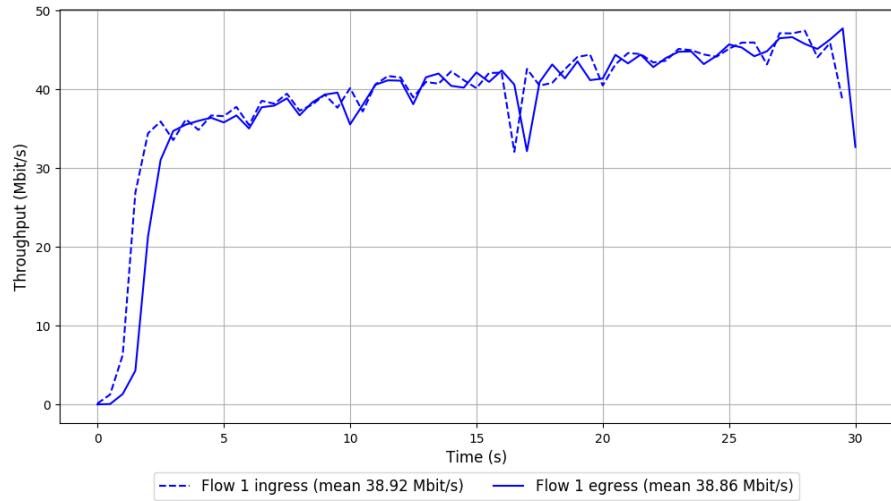


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-12-02 10:05:48
End at: 2018-12-02 10:06:18
Local clock offset: -8.018 ms
Remote clock offset: -48.112 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.86 Mbit/s
95th percentile per-packet one-way delay: 147.692 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 38.86 Mbit/s
95th percentile per-packet one-way delay: 147.692 ms
Loss rate: 0.77%
```

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

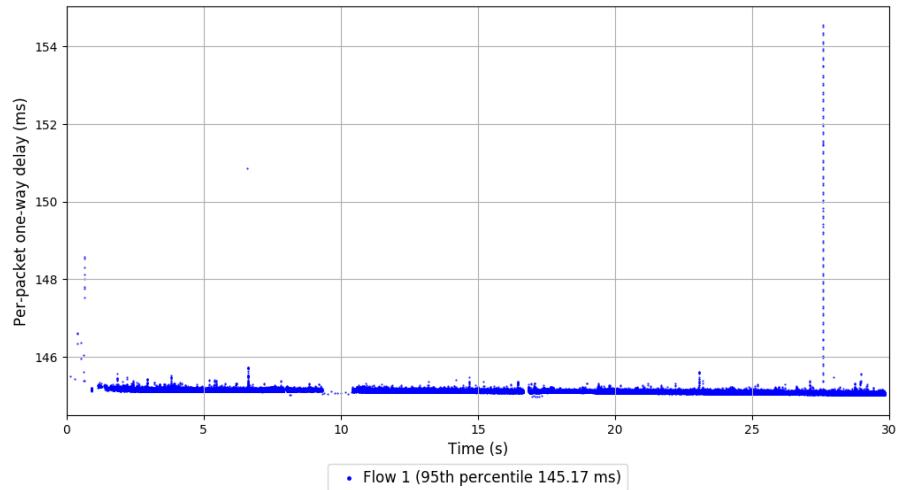
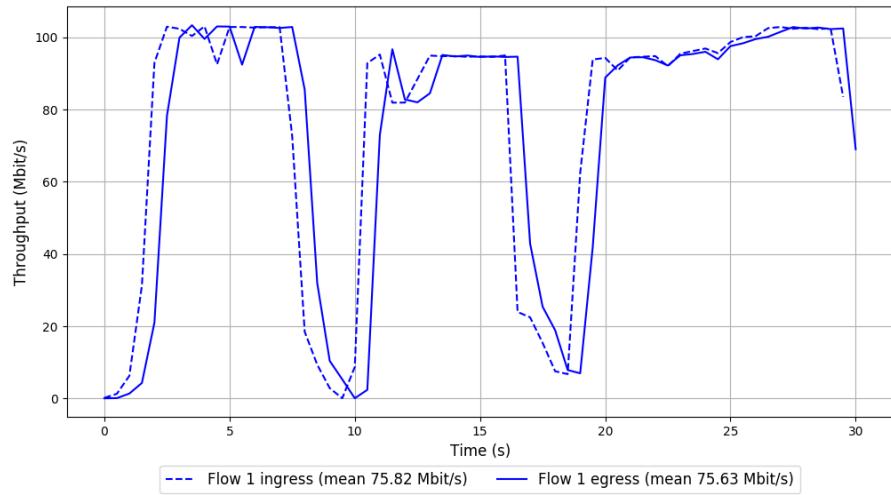


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-12-02 10:31:43
End at: 2018-12-02 10:32:13
Local clock offset: -0.441 ms
Remote clock offset: -39.339 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.63 Mbit/s
95th percentile per-packet one-way delay: 145.172 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 75.63 Mbit/s
95th percentile per-packet one-way delay: 145.172 ms
Loss rate: 0.98%
```

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

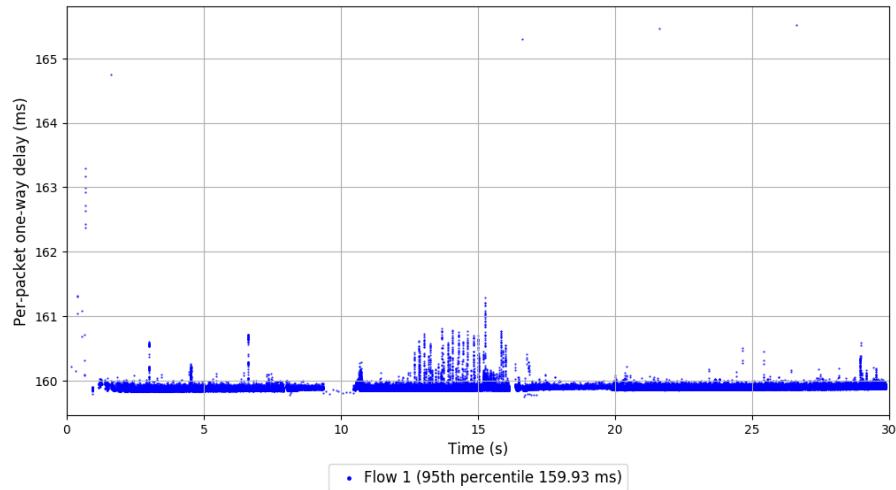
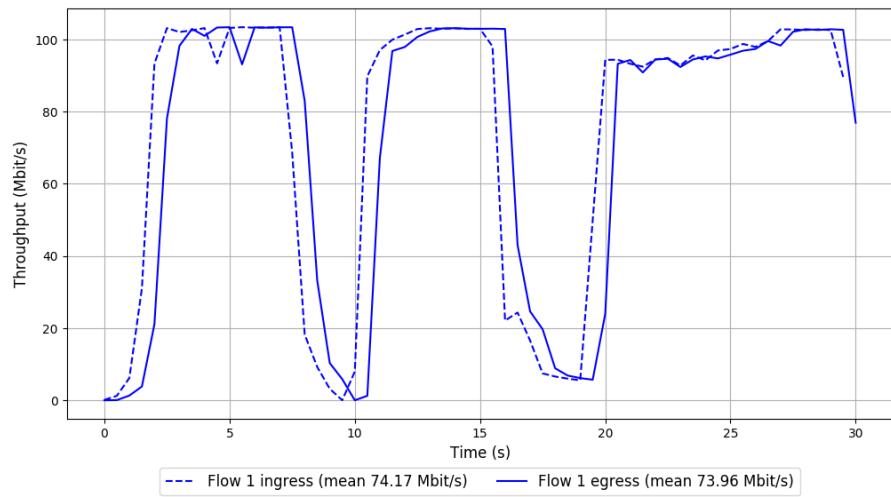


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-12-02 11:20:56
End at: 2018-12-02 11:21:26
Local clock offset: 6.448 ms
Remote clock offset: -39.834 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.96 Mbit/s
95th percentile per-packet one-way delay: 159.925 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 73.96 Mbit/s
95th percentile per-packet one-way delay: 159.925 ms
Loss rate: 1.02%
```

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

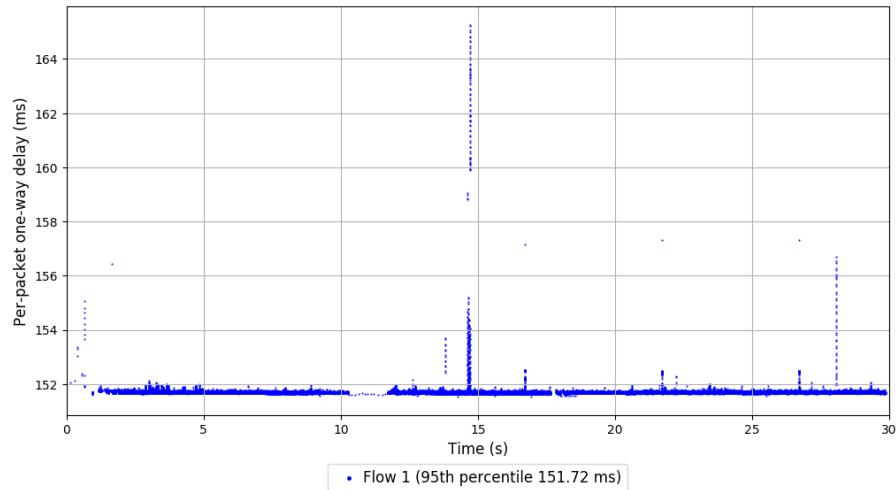
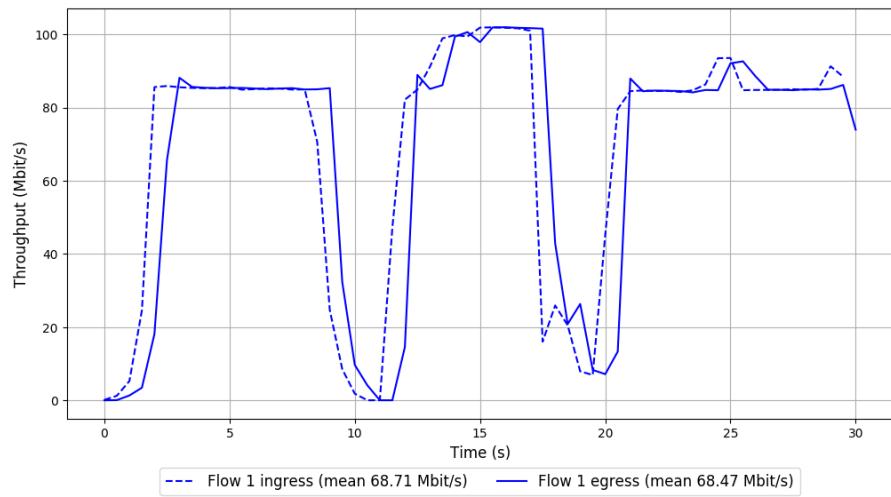


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-12-02 11:46:36
End at: 2018-12-02 11:47:06
Local clock offset: 1.346 ms
Remote clock offset: -38.615 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.47 Mbit/s
95th percentile per-packet one-way delay: 151.717 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 68.47 Mbit/s
95th percentile per-packet one-way delay: 151.717 ms
Loss rate: 1.10%
```

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

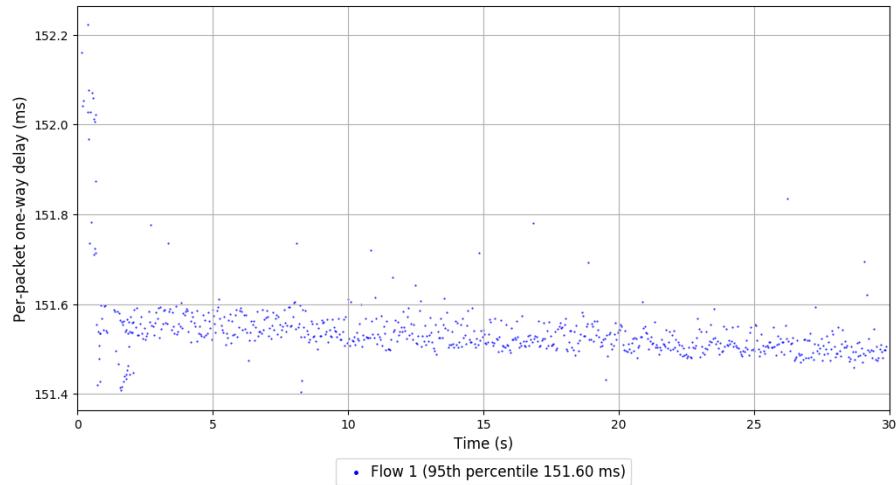
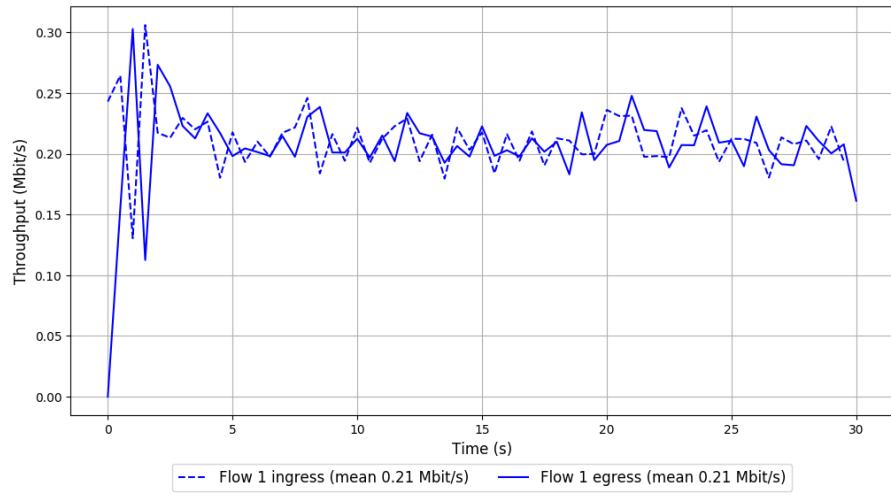


Run 1: Statistics of SCReAM

```
Start at: 2018-12-02 09:37:53
End at: 2018-12-02 09:38:23
Local clock offset: -6.707 ms
Remote clock offset: -44.35 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 151.605 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 151.605 ms
Loss rate: 0.77%
```

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

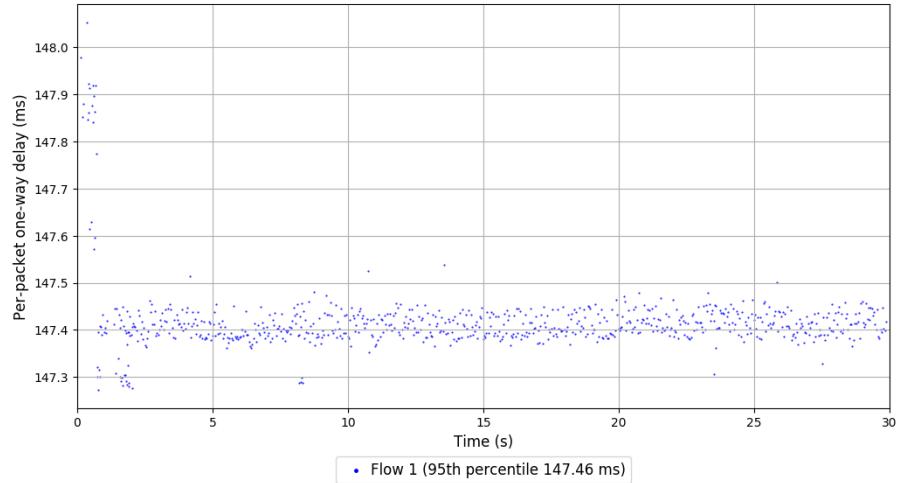
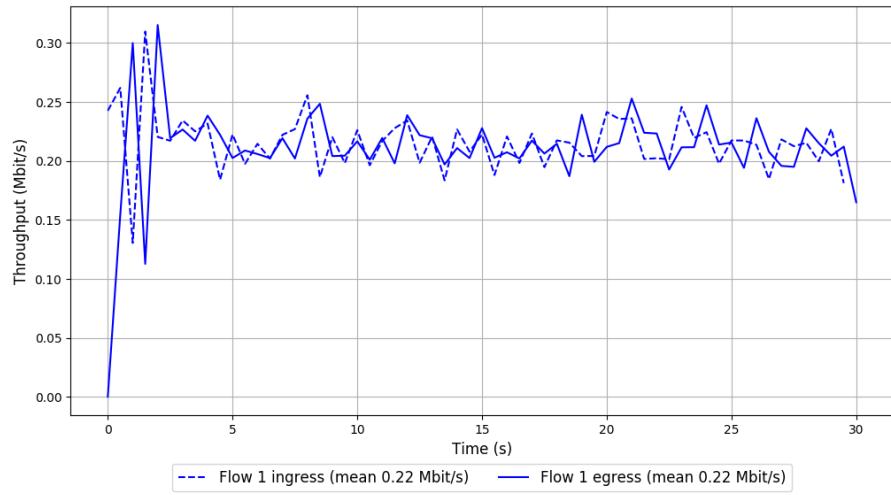


Run 2: Statistics of SCReAM

```
Start at: 2018-12-02 10:09:32
End at: 2018-12-02 10:10:02
Local clock offset: -1.383 ms
Remote clock offset: -41.065 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 147.459 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 147.459 ms
Loss rate: 0.64%
```

## Run 2: Report of SCReAM — Data Link

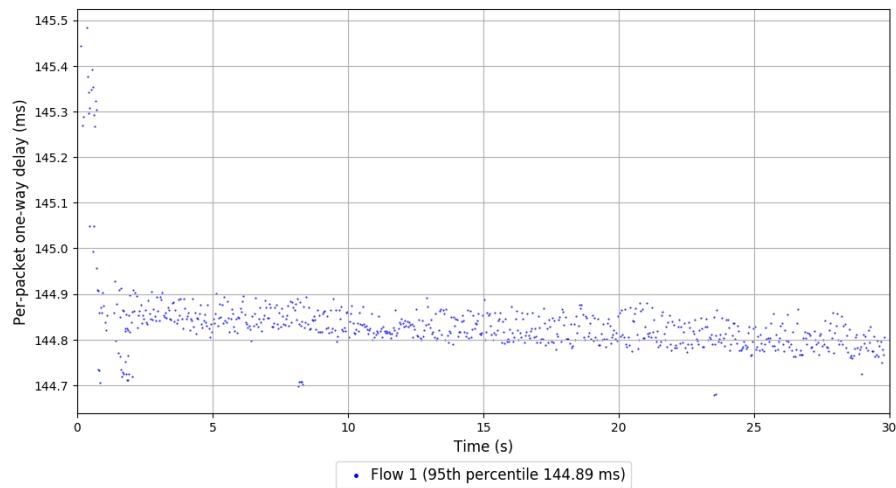
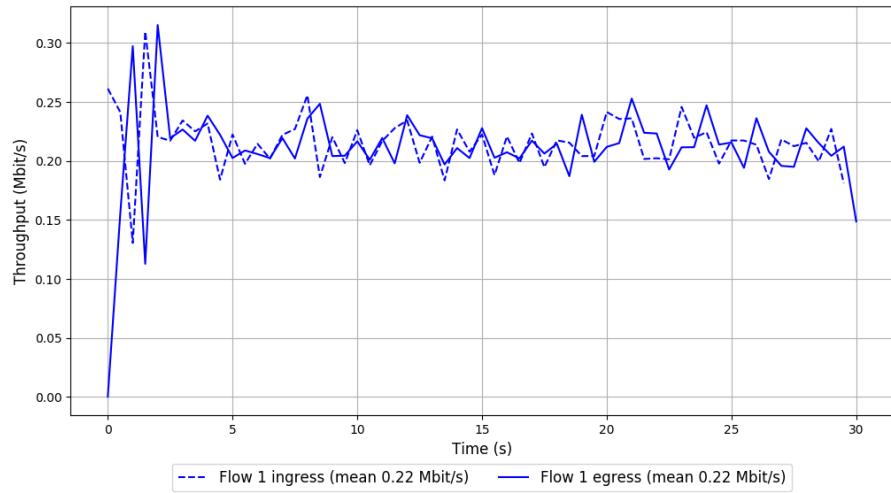


Run 3: Statistics of SCReAM

```
Start at: 2018-12-02 10:35:29
End at: 2018-12-02 10:35:59
Local clock offset: -0.469 ms
Remote clock offset: -34.133 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 144.891 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 144.891 ms
Loss rate: 0.76%
```

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

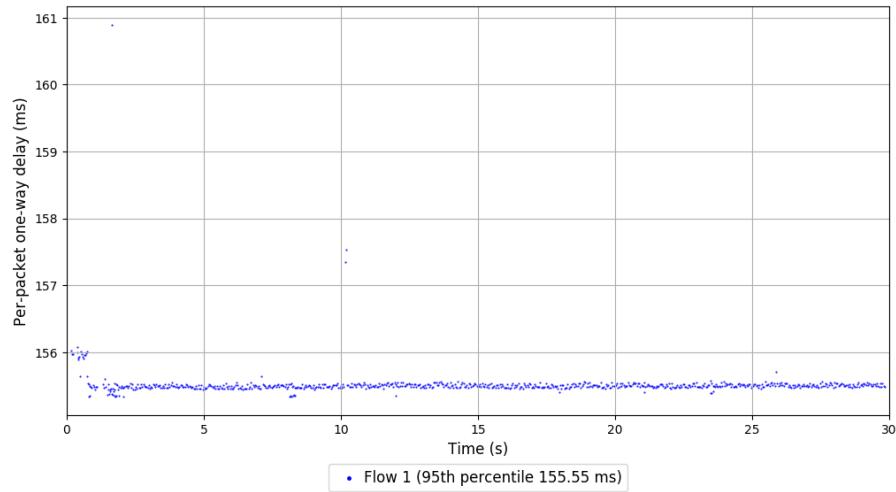
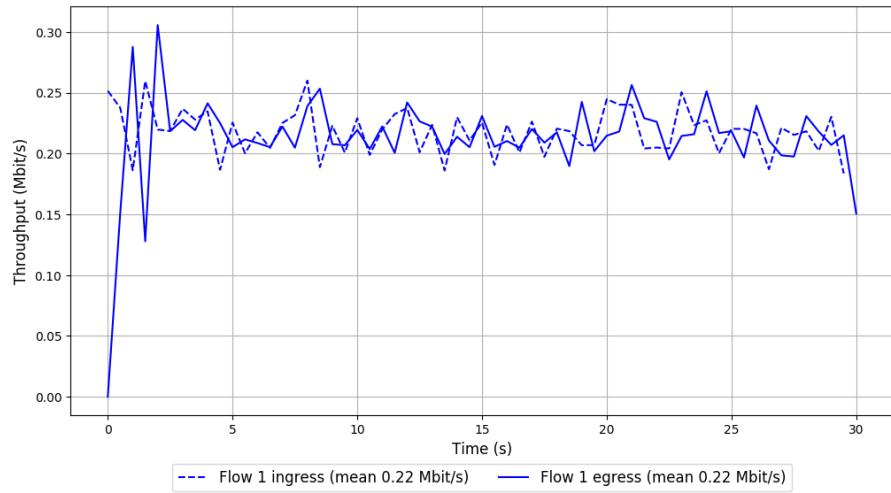


Run 4: Statistics of SCReAM

```
Start at: 2018-12-02 11:24:42
End at: 2018-12-02 11:25:12
Local clock offset: 1.532 ms
Remote clock offset: -45.631 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 155.549 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 155.549 ms
Loss rate: 0.77%
```

Run 4: Report of SCReAM — Data Link

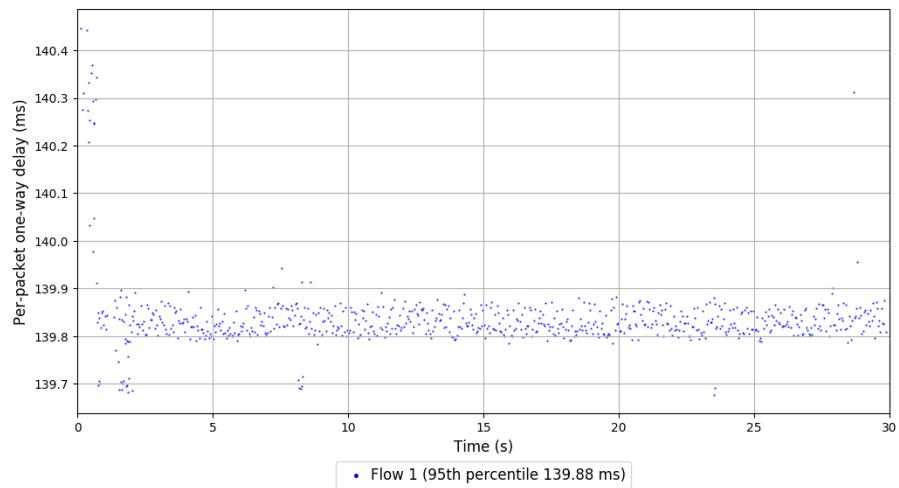
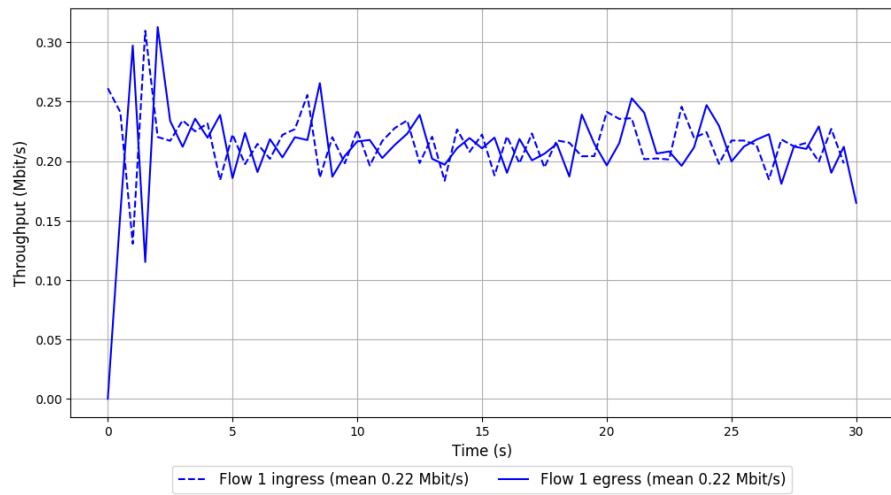


Run 5: Statistics of SCReAM

```
Start at: 2018-12-02 11:50:23
End at: 2018-12-02 11:50:53
Local clock offset: -6.496 ms
Remote clock offset: -40.147 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.879 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.879 ms
Loss rate: 0.77%
```

Run 5: Report of SCReAM — Data Link

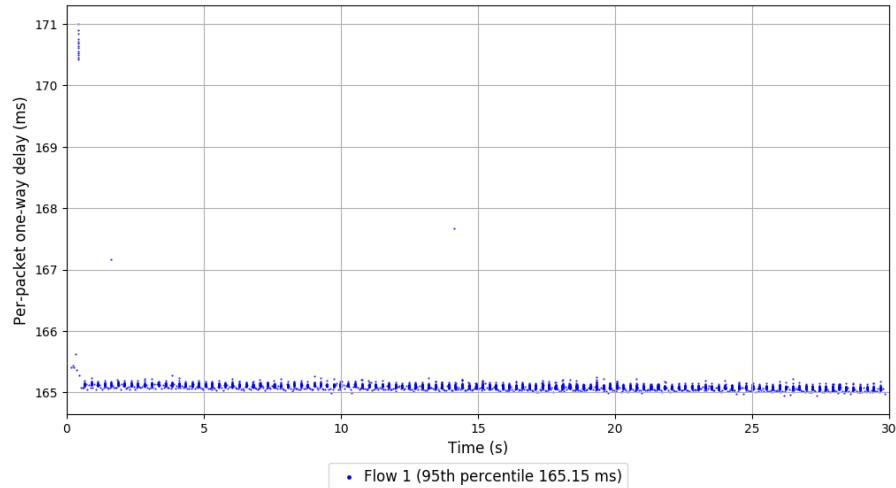
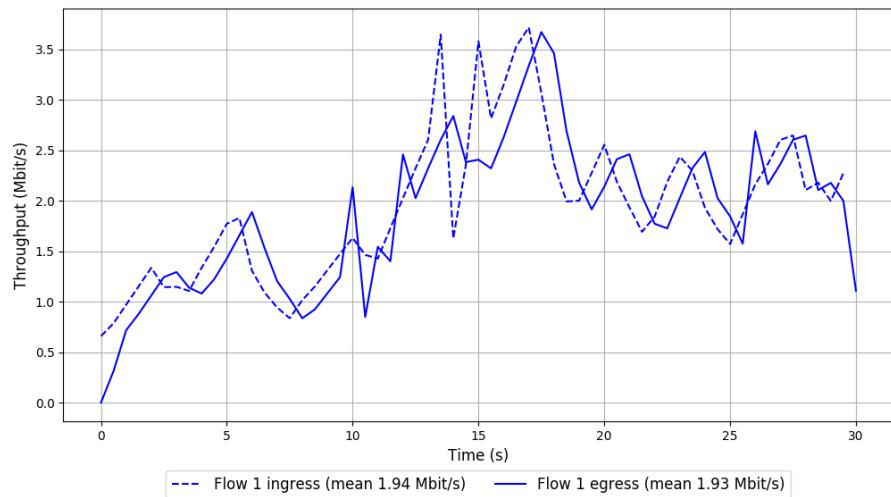


Run 1: Statistics of Sprout

```
Start at: 2018-12-02 09:36:42
End at: 2018-12-02 09:37:12
Local clock offset: 9.232 ms
Remote clock offset: -41.864 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 165.148 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 165.148 ms
Loss rate: 1.01%
```

Run 1: Report of Sprout — Data Link

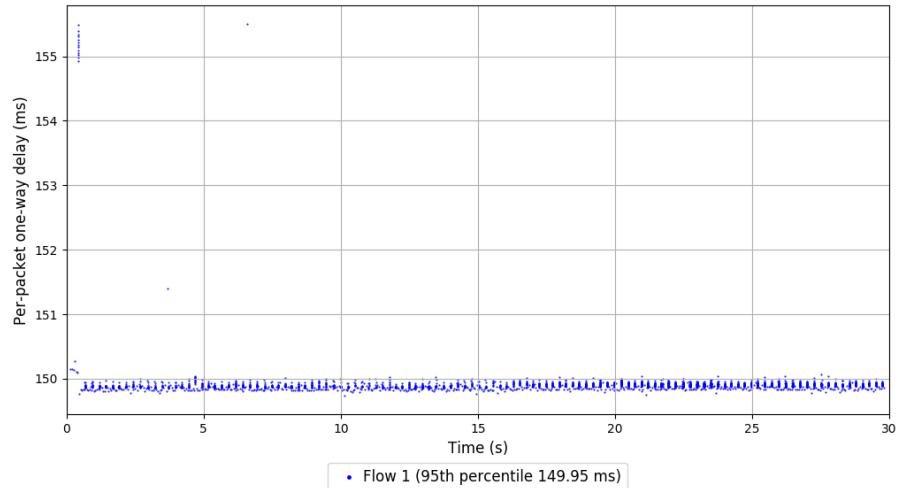
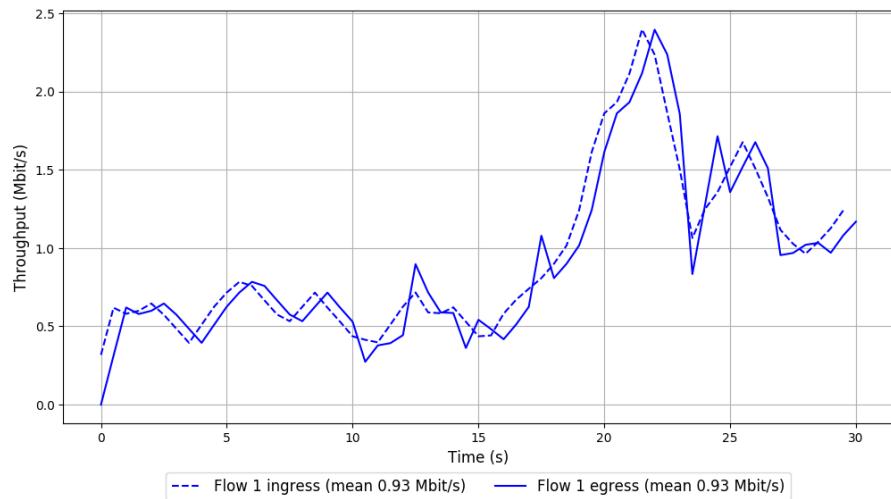


Run 2: Statistics of Sprout

```
Start at: 2018-12-02 10:08:21
End at: 2018-12-02 10:08:51
Local clock offset: -7.552 ms
Remote clock offset: -44.172 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 149.954 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 149.954 ms
Loss rate: 1.15%
```

## Run 2: Report of Sprout — Data Link

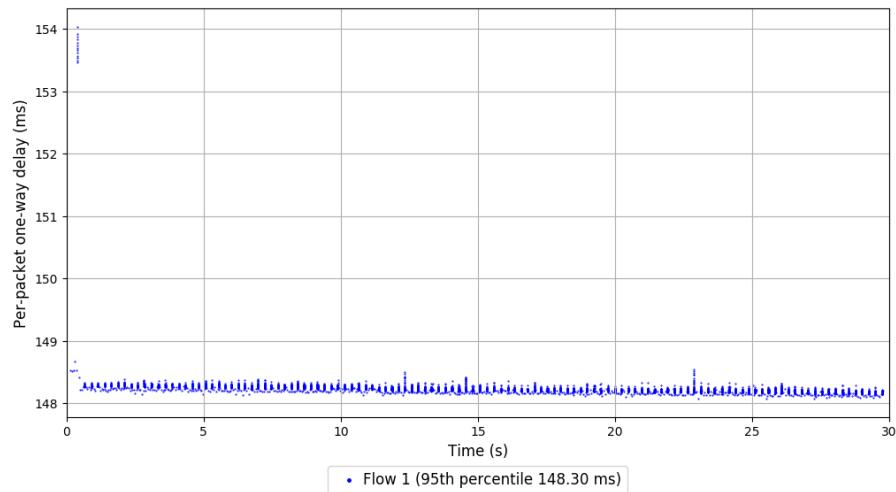
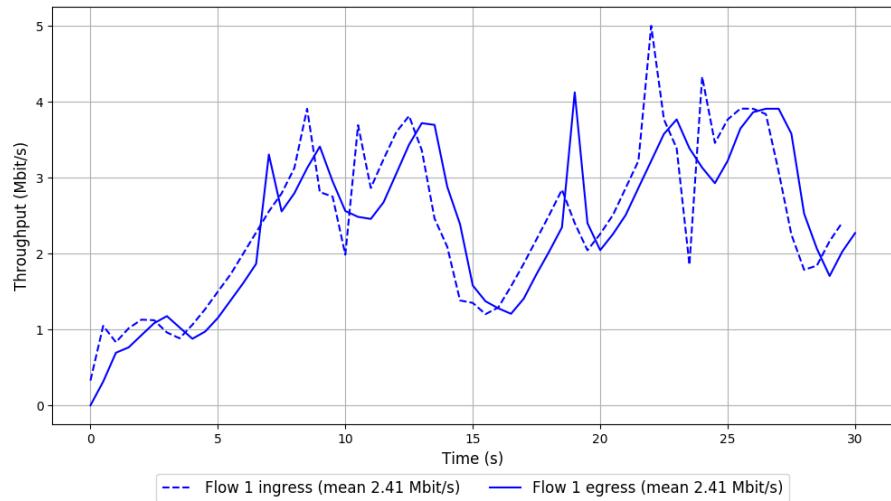


Run 3: Statistics of Sprout

```
Start at: 2018-12-02 10:34:18
End at: 2018-12-02 10:34:48
Local clock offset: -4.287 ms
Remote clock offset: -41.2 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 148.299 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 148.299 ms
Loss rate: 0.86%
```

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

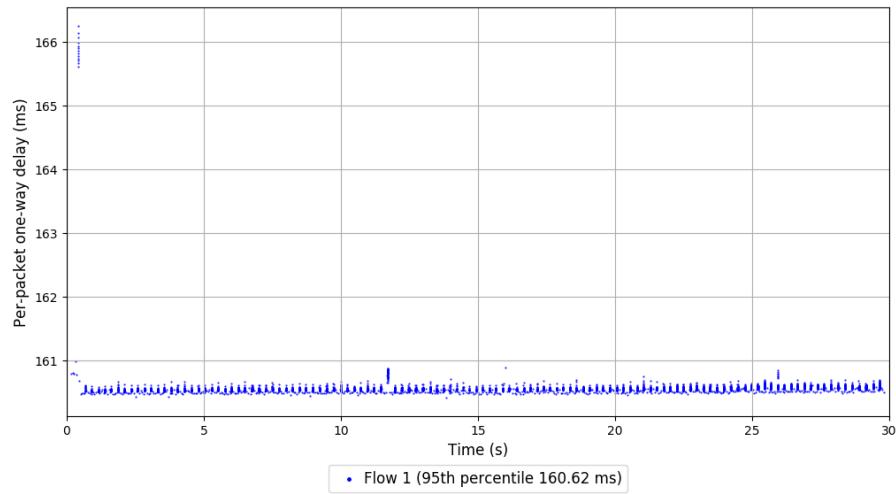
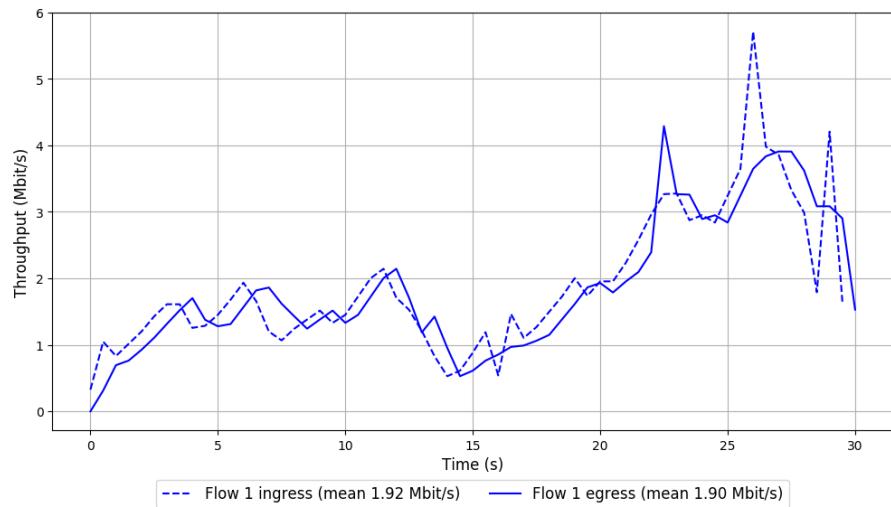


Run 4: Statistics of Sprout

```
Start at: 2018-12-02 11:23:31
End at: 2018-12-02 11:24:01
Local clock offset: 9.968 ms
Remote clock offset: -36.815 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 160.620 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 160.620 ms
Loss rate: 1.44%
```

## Run 4: Report of Sprout — Data Link

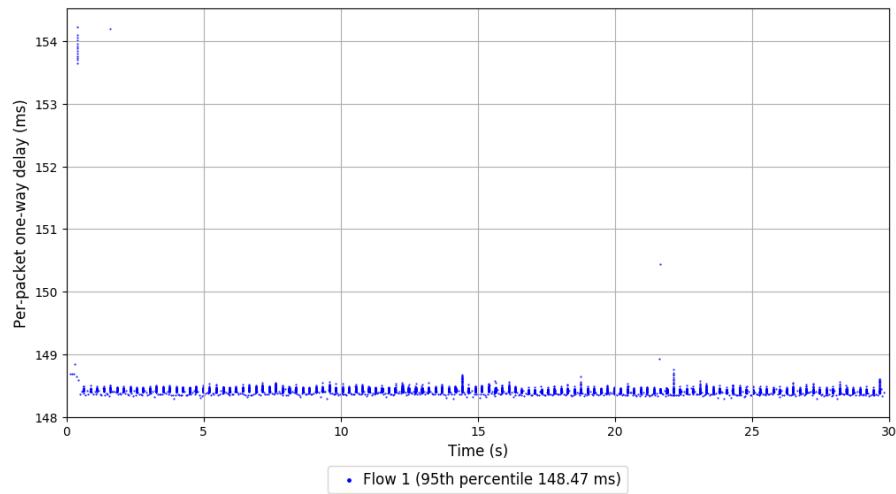
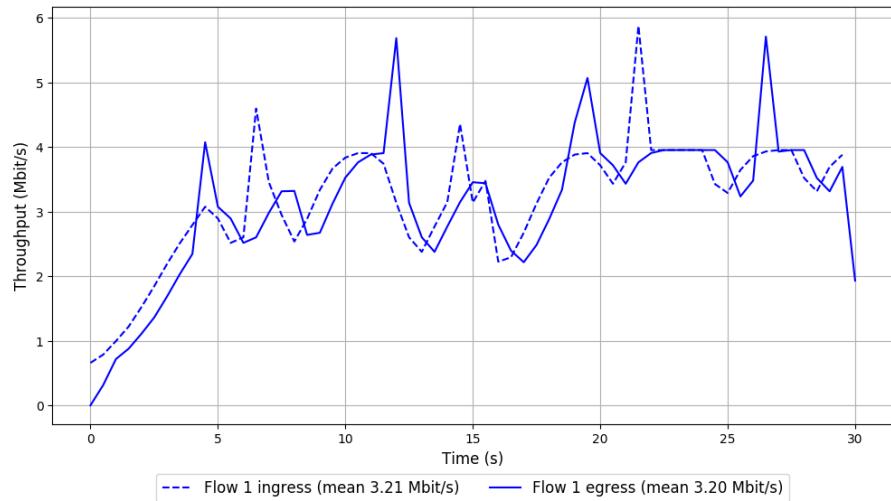


Run 5: Statistics of Sprout

```
Start at: 2018-12-02 11:49:11
End at: 2018-12-02 11:49:41
Local clock offset: -1.401 ms
Remote clock offset: -43.639 ms

# Below is generated by plot.py at 2018-12-02 12:56:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.20 Mbit/s
95th percentile per-packet one-way delay: 148.472 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 3.20 Mbit/s
95th percentile per-packet one-way delay: 148.472 ms
Loss rate: 1.02%
```

## Run 5: Report of Sprout — Data Link

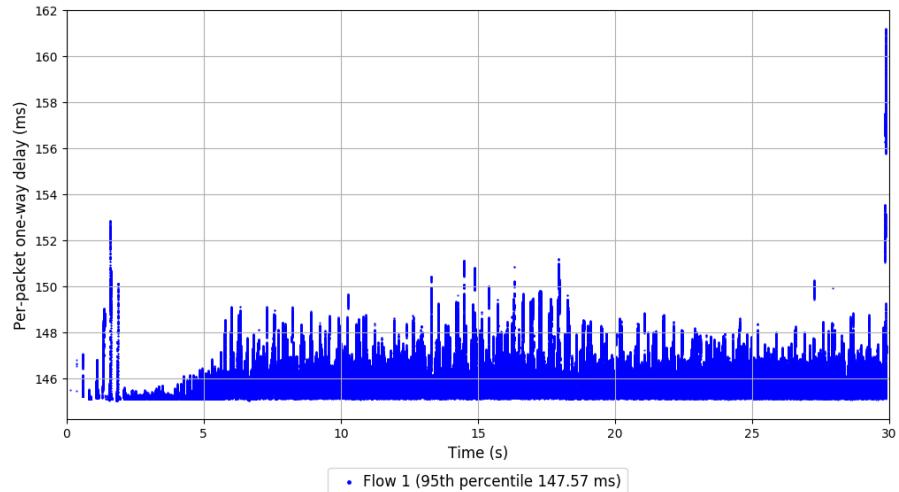
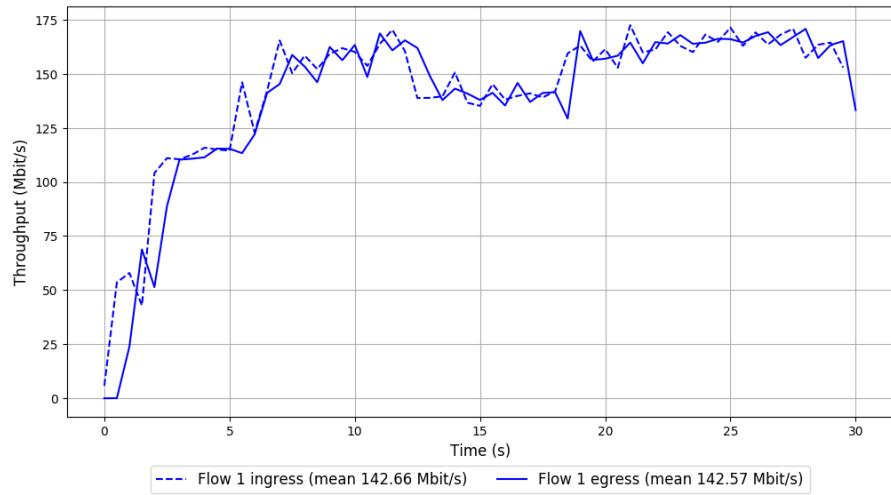


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-12-02 09:47:25
End at: 2018-12-02 09:47:55
Local clock offset: -6.458 ms
Remote clock offset: -38.441 ms

# Below is generated by plot.py at 2018-12-02 12:58:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 142.57 Mbit/s
95th percentile per-packet one-way delay: 147.566 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 142.57 Mbit/s
95th percentile per-packet one-way delay: 147.566 ms
Loss rate: 0.80%
```

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

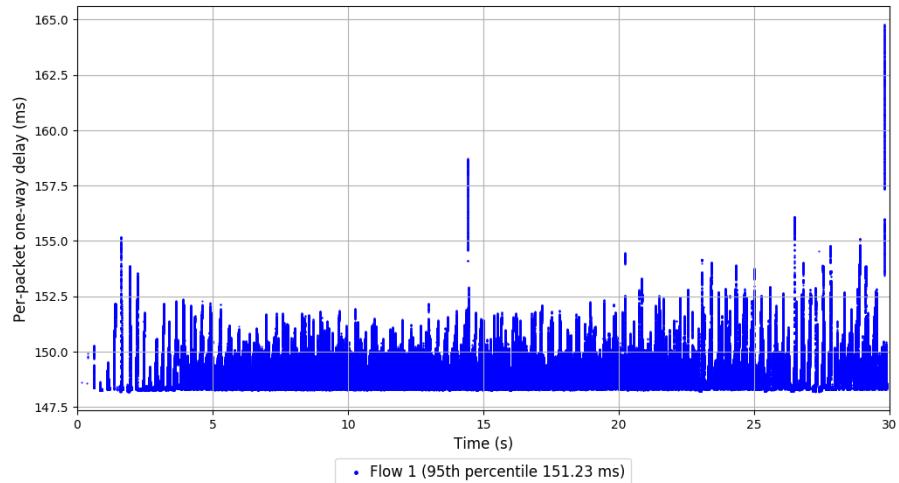
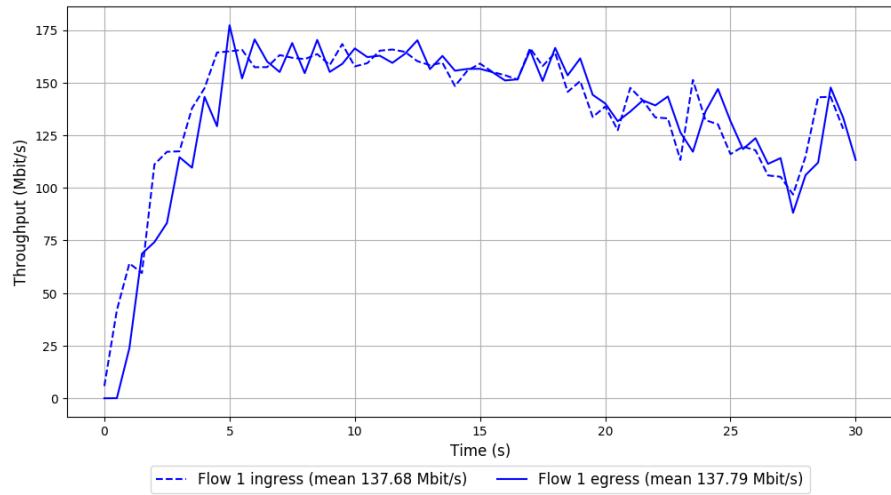


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-12-02 10:19:07
End at: 2018-12-02 10:19:37
Local clock offset: 0.599 ms
Remote clock offset: -34.322 ms

# Below is generated by plot.py at 2018-12-02 12:58:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 137.79 Mbit/s
95th percentile per-packet one-way delay: 151.231 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 137.79 Mbit/s
95th percentile per-packet one-way delay: 151.231 ms
Loss rate: 0.72%
```

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

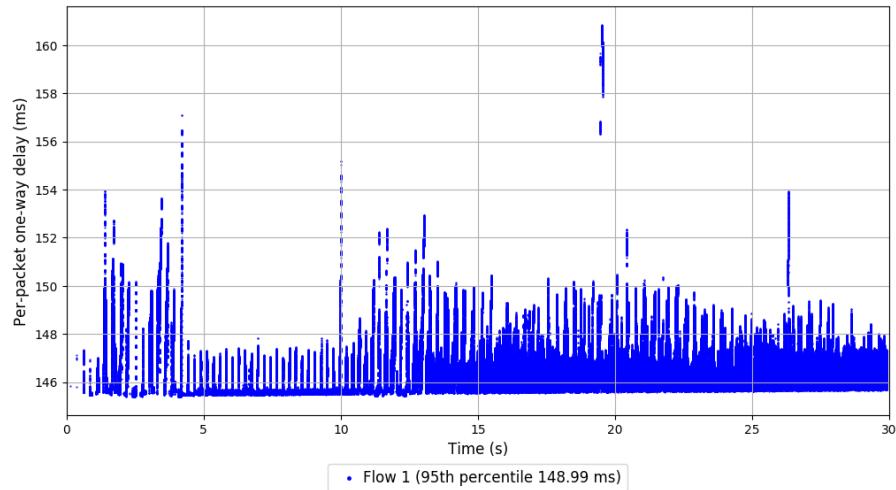
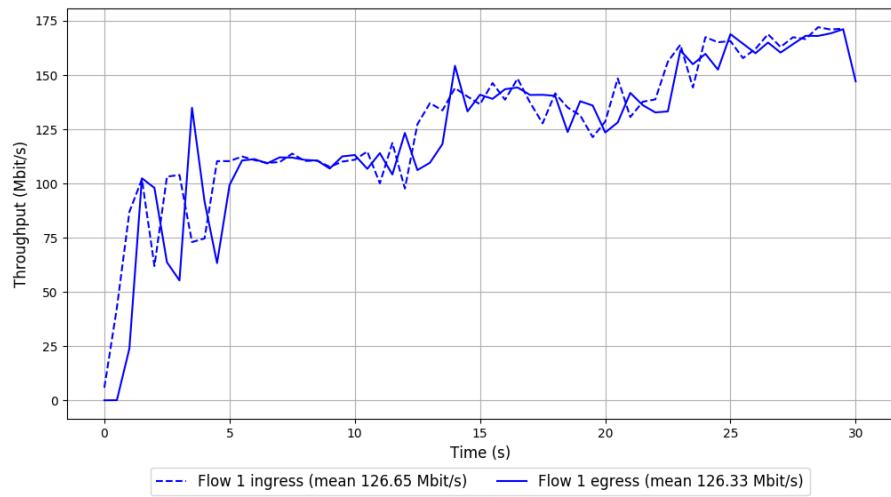


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-12-02 10:56:34
End at: 2018-12-02 10:57:04
Local clock offset: -0.217 ms
Remote clock offset: -36.459 ms

# Below is generated by plot.py at 2018-12-02 12:58:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 126.33 Mbit/s
95th percentile per-packet one-way delay: 148.987 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 126.33 Mbit/s
95th percentile per-packet one-way delay: 148.987 ms
Loss rate: 0.99%
```

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

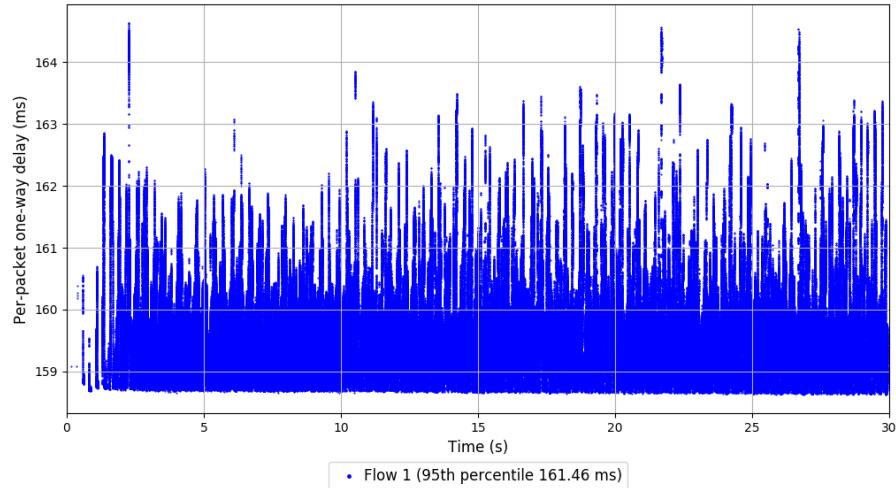
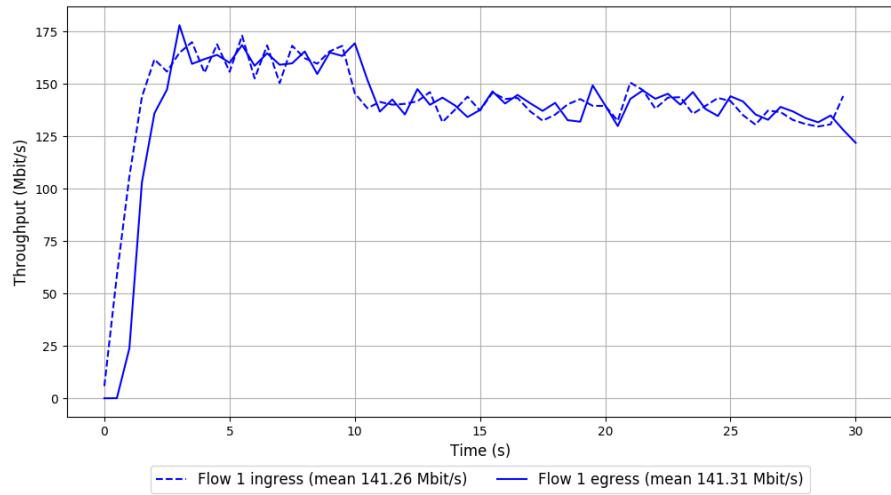


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-12-02 11:34:15
End at: 2018-12-02 11:34:45
Local clock offset: 4.667 ms
Remote clock offset: -47.578 ms

# Below is generated by plot.py at 2018-12-02 12:58:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 141.31 Mbit/s
95th percentile per-packet one-way delay: 161.455 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 141.31 Mbit/s
95th percentile per-packet one-way delay: 161.455 ms
Loss rate: 0.69%
```

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

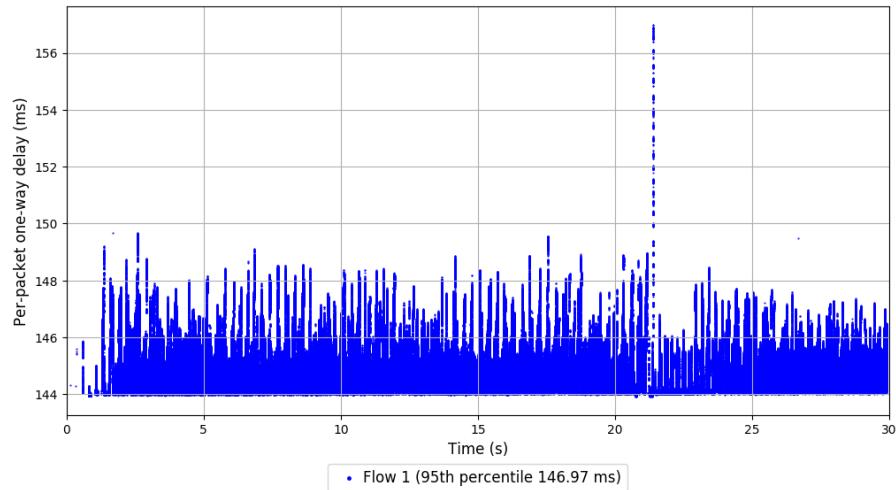
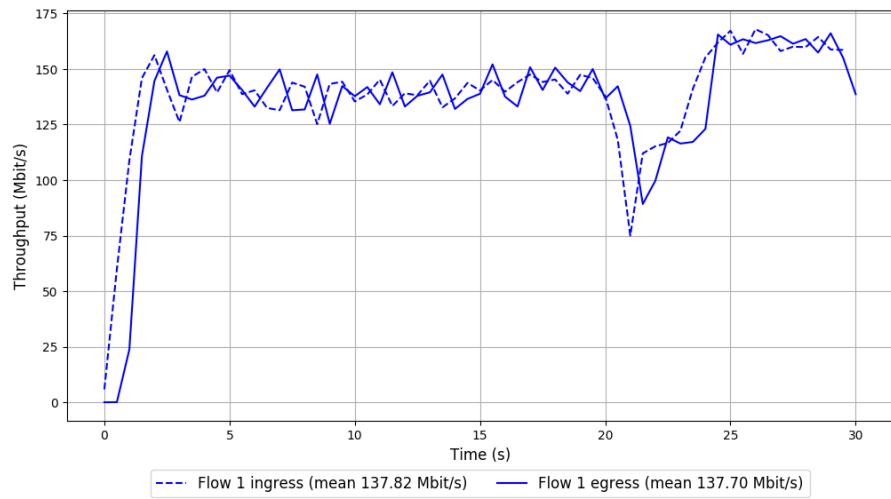


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-12-02 12:11:31
End at: 2018-12-02 12:12:01
Local clock offset: -2.976 ms
Remote clock offset: -37.173 ms

# Below is generated by plot.py at 2018-12-02 12:58:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 137.70 Mbit/s
95th percentile per-packet one-way delay: 146.970 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 137.70 Mbit/s
95th percentile per-packet one-way delay: 146.970 ms
Loss rate: 0.81%
```

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

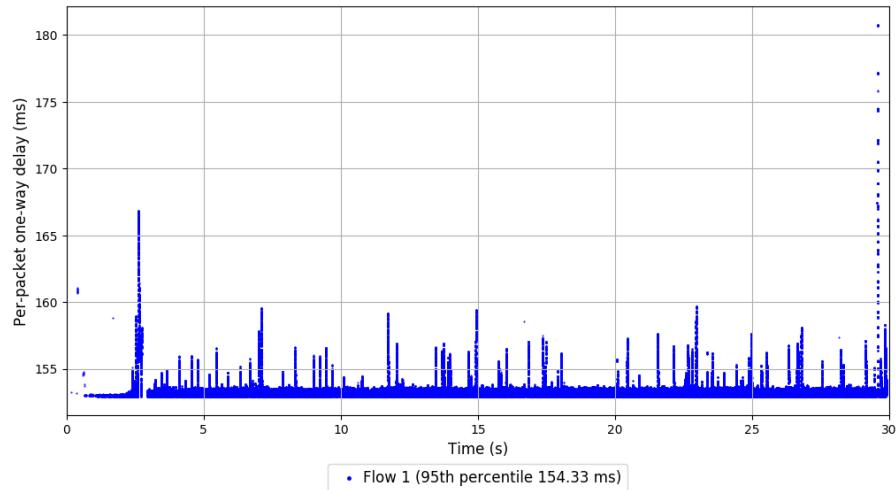
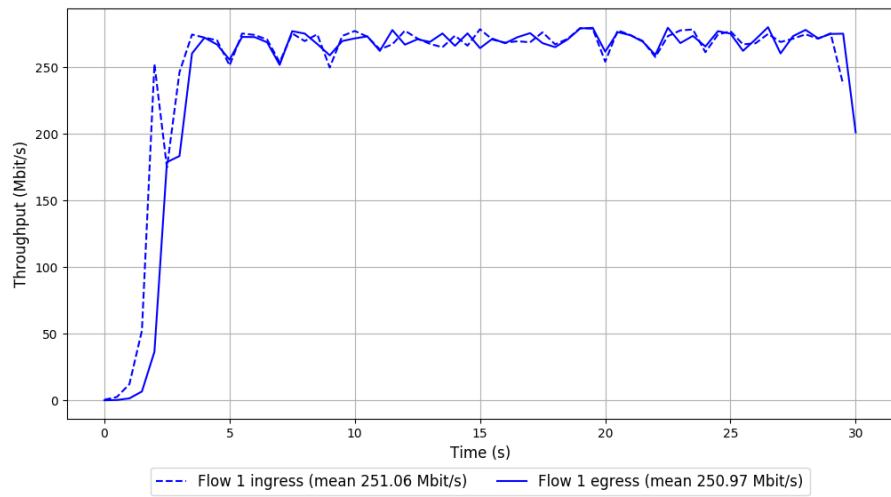


Run 1: Statistics of TCP Vegas

```
Start at: 2018-12-02 09:54:16
End at: 2018-12-02 09:54:46
Local clock offset: -1.215 ms
Remote clock offset: -46.801 ms

# Below is generated by plot.py at 2018-12-02 12:58:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 250.97 Mbit/s
95th percentile per-packet one-way delay: 154.328 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 250.97 Mbit/s
95th percentile per-packet one-way delay: 154.328 ms
Loss rate: 0.76%
```

Run 1: Report of TCP Vegas — Data Link

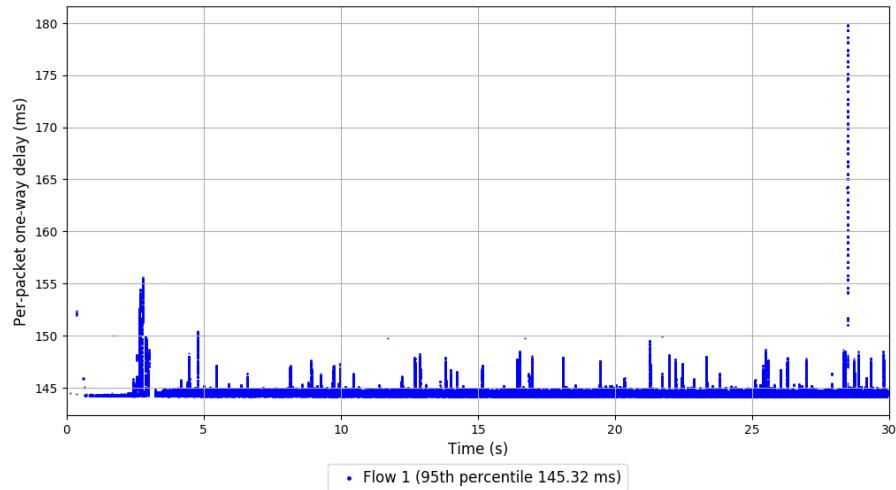
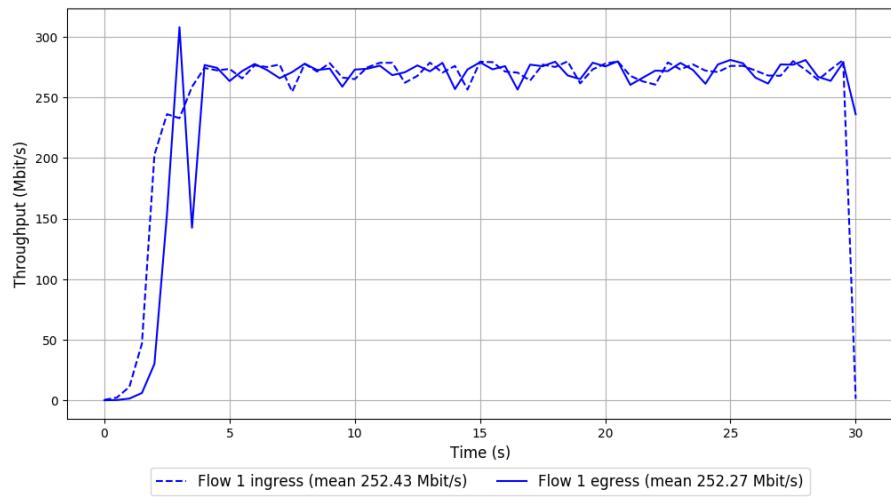


Run 2: Statistics of TCP Vegas

```
Start at: 2018-12-02 10:26:14
End at: 2018-12-02 10:26:44
Local clock offset: -8.448 ms
Remote clock offset: -44.861 ms

# Below is generated by plot.py at 2018-12-02 12:58:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 252.27 Mbit/s
95th percentile per-packet one-way delay: 145.322 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 252.27 Mbit/s
95th percentile per-packet one-way delay: 145.322 ms
Loss rate: 0.79%
```

Run 2: Report of TCP Vegas — Data Link

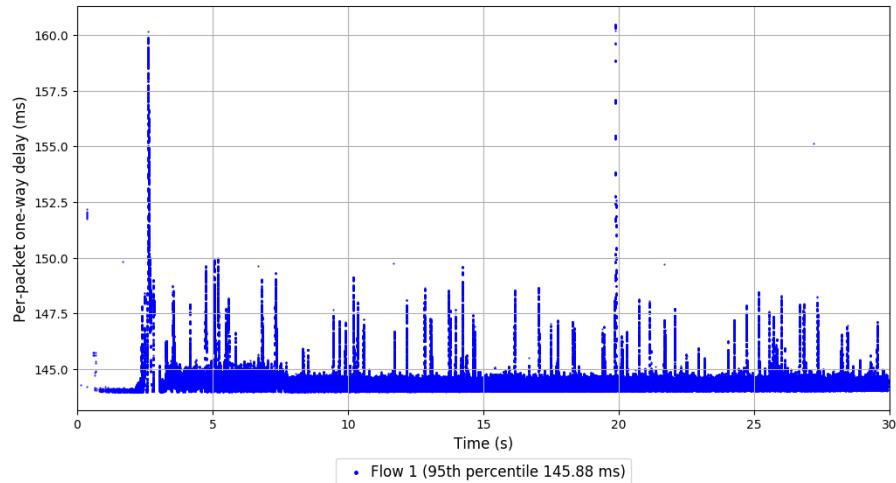
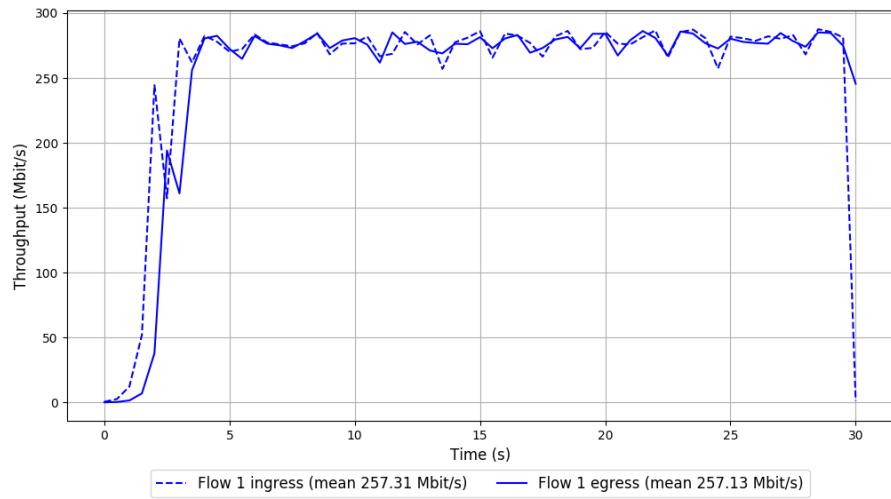


Run 3: Statistics of TCP Vegas

```
Start at: 2018-12-02 11:09:25
End at: 2018-12-02 11:09:55
Local clock offset: -3.174 ms
Remote clock offset: -40.094 ms

# Below is generated by plot.py at 2018-12-02 12:59:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 257.13 Mbit/s
95th percentile per-packet one-way delay: 145.880 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 257.13 Mbit/s
95th percentile per-packet one-way delay: 145.880 ms
Loss rate: 0.79%
```

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

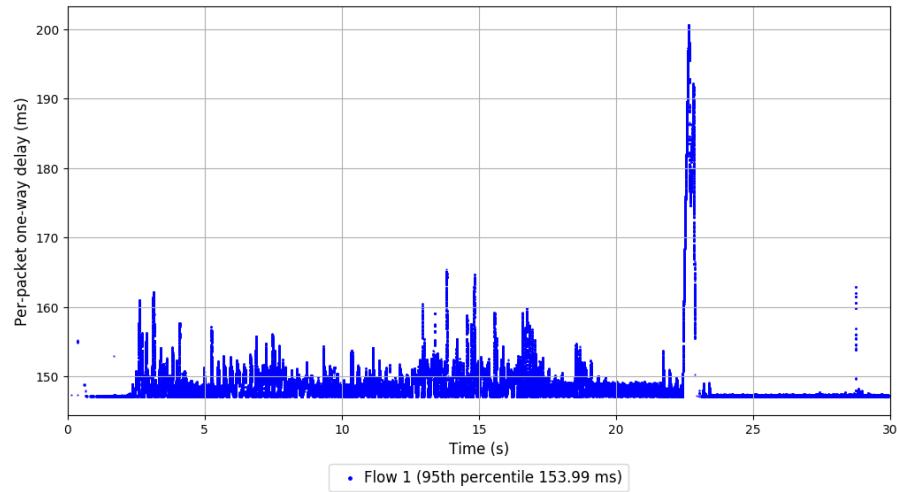
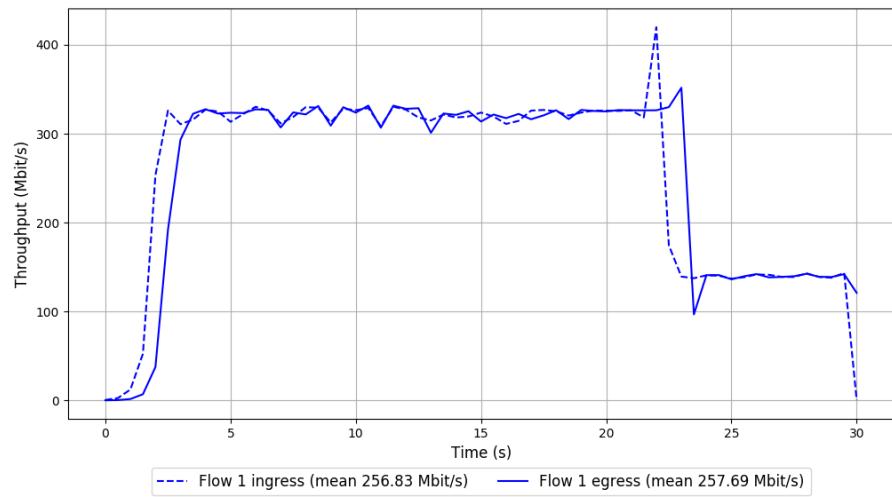


Run 4: Statistics of TCP Vegas

```
Start at: 2018-12-02 11:41:07
End at: 2018-12-02 11:41:37
Local clock offset: -5.228 ms
Remote clock offset: -46.254 ms

# Below is generated by plot.py at 2018-12-02 13:01:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 257.69 Mbit/s
95th percentile per-packet one-way delay: 153.992 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 257.69 Mbit/s
95th percentile per-packet one-way delay: 153.992 ms
Loss rate: 0.40%
```

Run 4: Report of TCP Vegas — Data Link

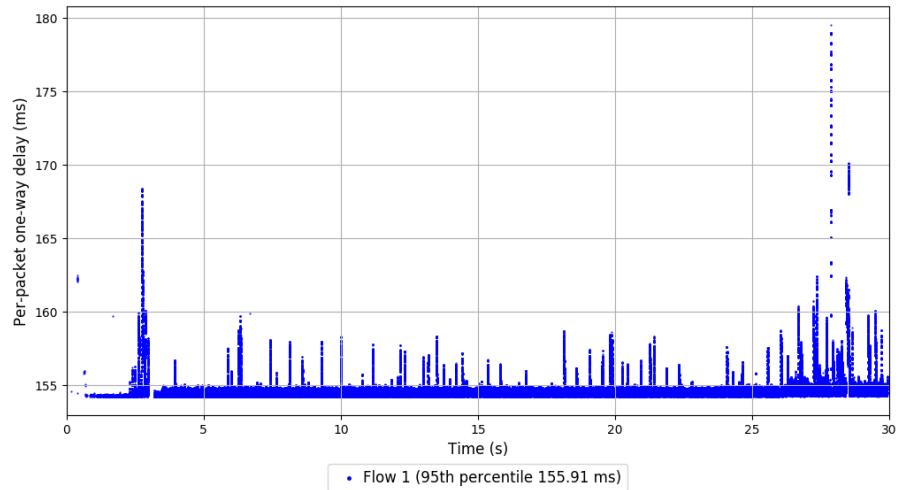
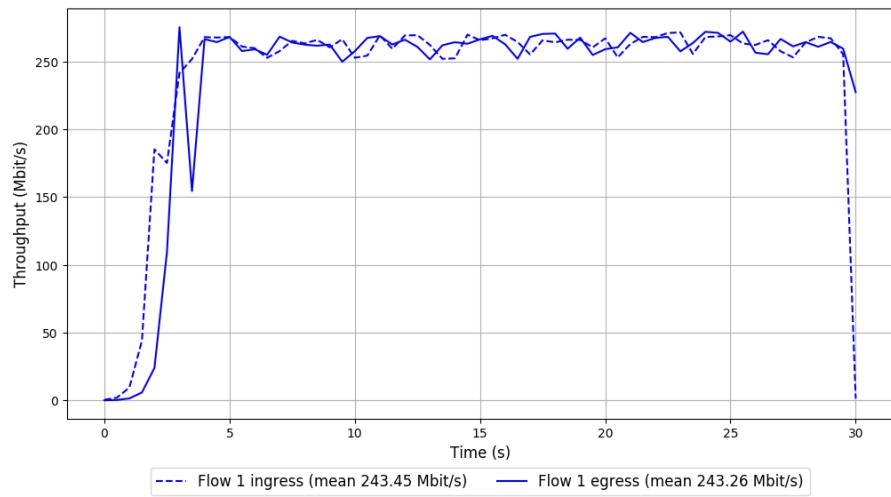


Run 5: Statistics of TCP Vegas

```
Start at: 2018-12-02 12:24:21
End at: 2018-12-02 12:24:51
Local clock offset: 1.669 ms
Remote clock offset: -36.041 ms

# Below is generated by plot.py at 2018-12-02 13:01:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 243.26 Mbit/s
95th percentile per-packet one-way delay: 155.914 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 243.26 Mbit/s
95th percentile per-packet one-way delay: 155.914 ms
Loss rate: 0.82%
```

Run 5: Report of TCP Vegas — Data Link

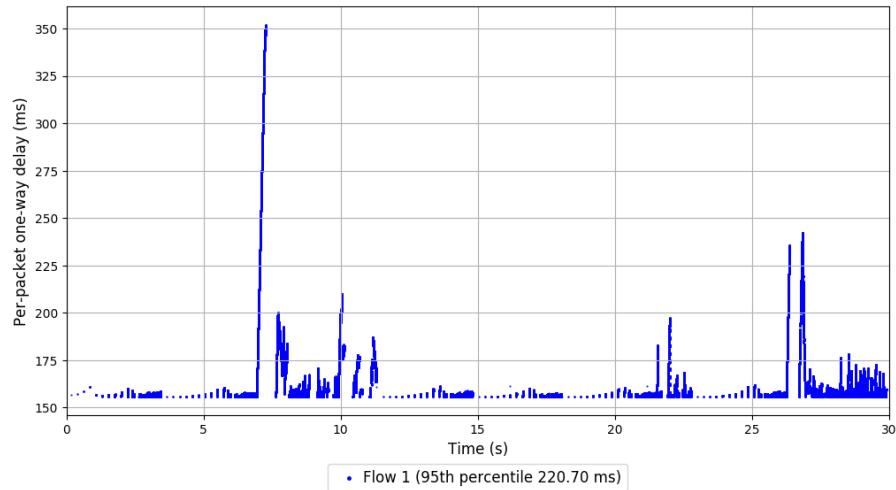
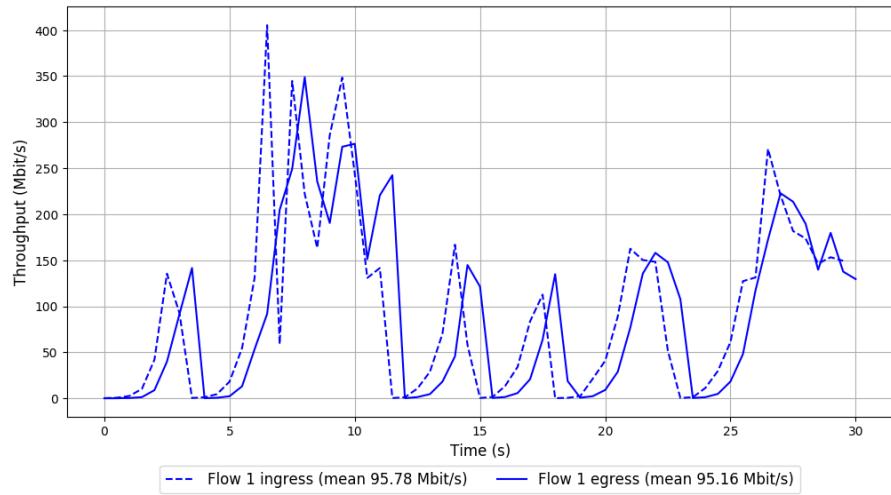


Run 1: Statistics of Verus

```
Start at: 2018-12-02 09:44:45
End at: 2018-12-02 09:45:15
Local clock offset: -6.242 ms
Remote clock offset: -48.789 ms

# Below is generated by plot.py at 2018-12-02 13:01:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.16 Mbit/s
95th percentile per-packet one-way delay: 220.700 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 95.16 Mbit/s
95th percentile per-packet one-way delay: 220.700 ms
Loss rate: 1.45%
```

## Run 1: Report of Verus — Data Link

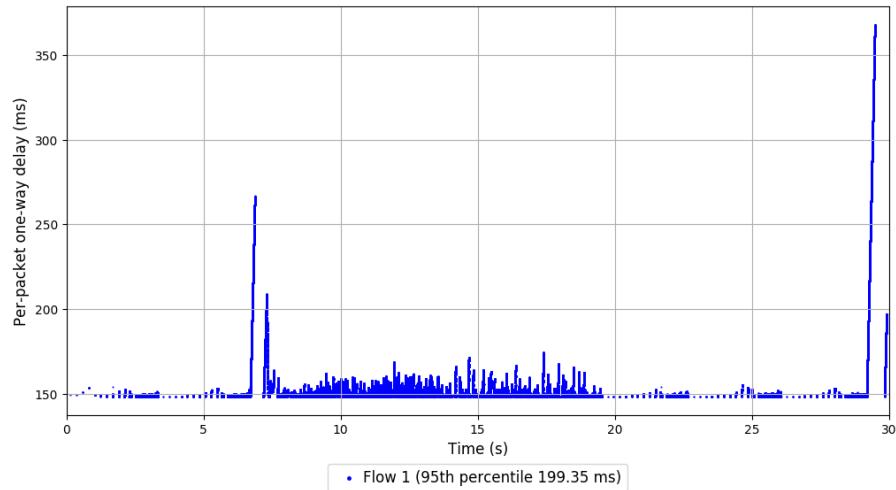
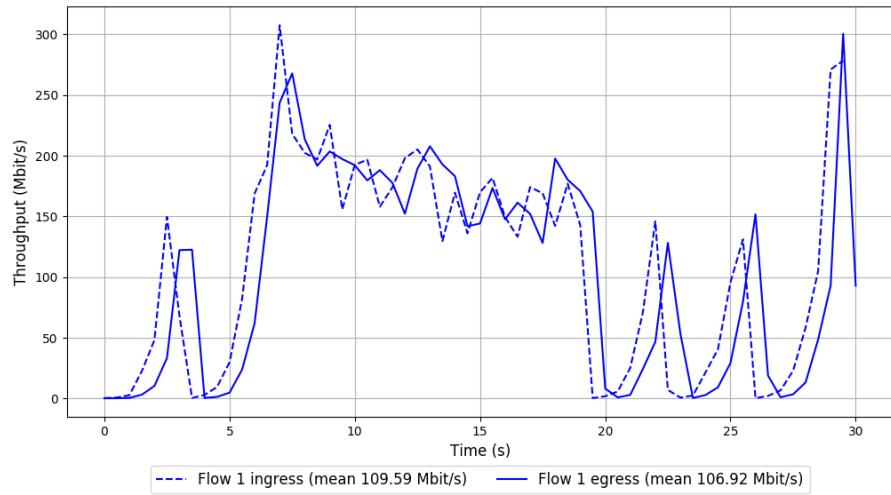


Run 2: Statistics of Verus

```
Start at: 2018-12-02 10:16:25
End at: 2018-12-02 10:16:55
Local clock offset: -7.362 ms
Remote clock offset: -48.1 ms

# Below is generated by plot.py at 2018-12-02 13:01:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 106.92 Mbit/s
95th percentile per-packet one-way delay: 199.352 ms
Loss rate: 2.92%
-- Flow 1:
Average throughput: 106.92 Mbit/s
95th percentile per-packet one-way delay: 199.352 ms
Loss rate: 2.92%
```

## Run 2: Report of Verus — Data Link

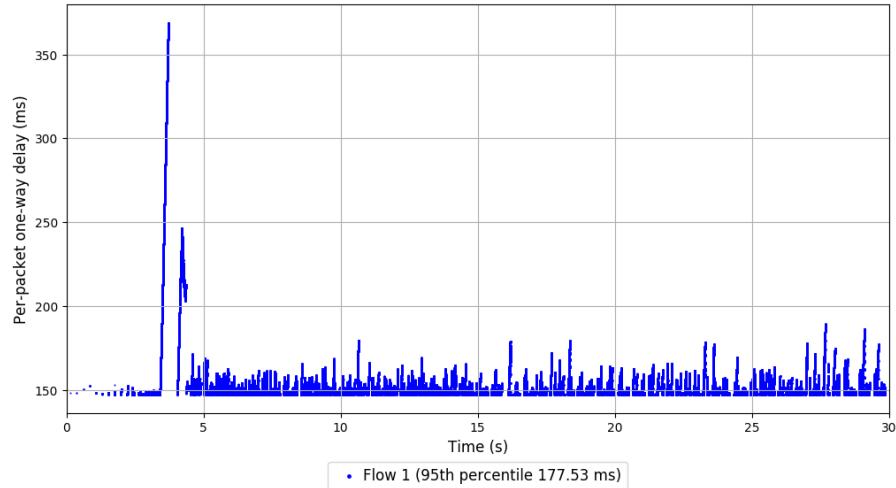
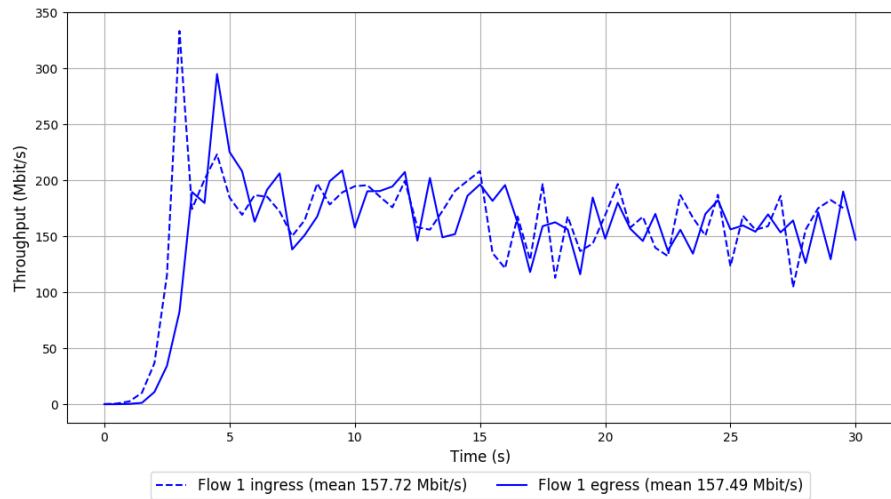


Run 3: Statistics of Verus

```
Start at: 2018-12-02 10:48:05
End at: 2018-12-02 10:48:35
Local clock offset: 3.842 ms
Remote clock offset: -33.623 ms

# Below is generated by plot.py at 2018-12-02 13:01:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 157.49 Mbit/s
95th percentile per-packet one-way delay: 177.525 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 157.49 Mbit/s
95th percentile per-packet one-way delay: 177.525 ms
Loss rate: 1.04%
```

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

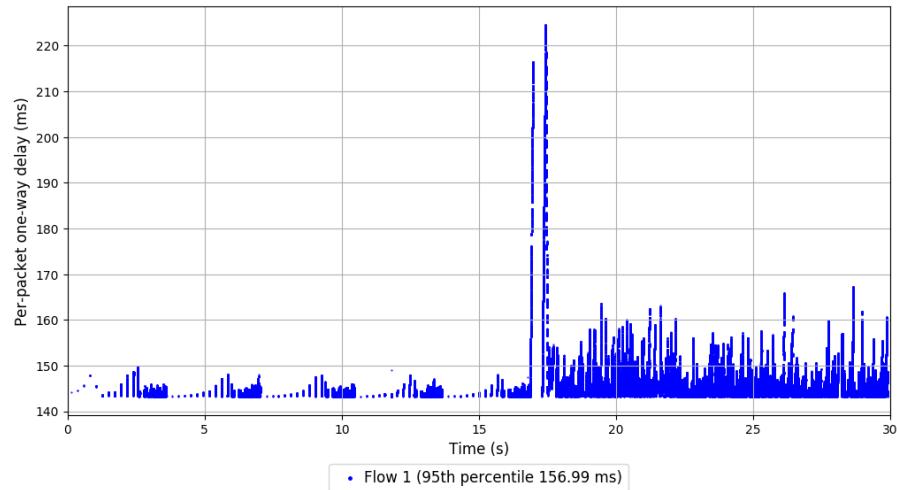
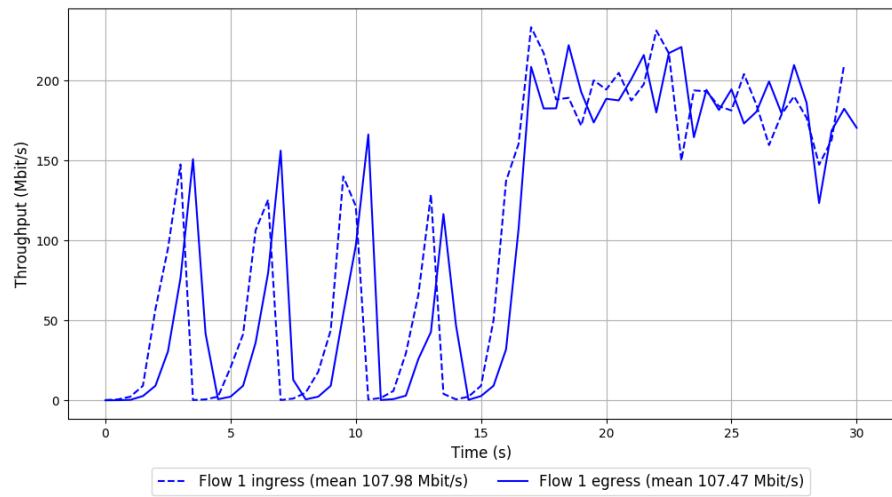


Run 4: Statistics of Verus

```
Start at: 2018-12-02 11:31:34
End at: 2018-12-02 11:32:04
Local clock offset: -8.199 ms
Remote clock offset: -44.606 ms

# Below is generated by plot.py at 2018-12-02 13:01:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 107.47 Mbit/s
95th percentile per-packet one-way delay: 156.994 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 107.47 Mbit/s
95th percentile per-packet one-way delay: 156.994 ms
Loss rate: 1.17%
```

Run 4: Report of Verus — Data Link

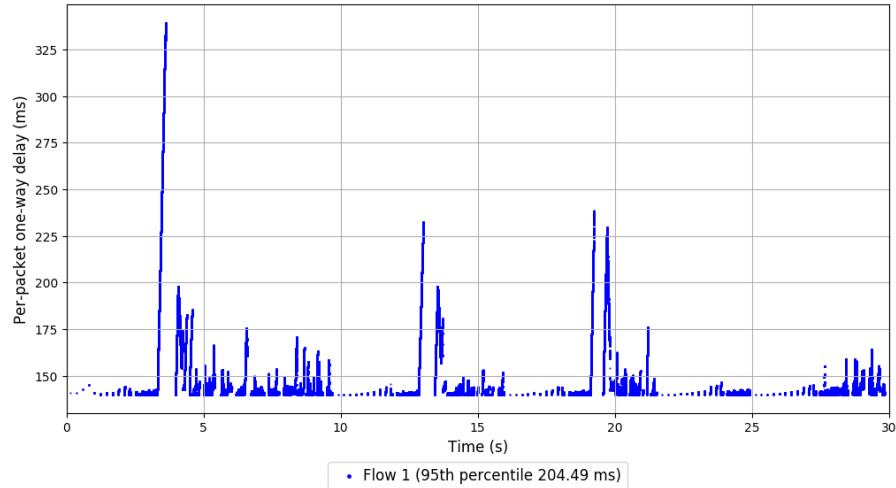
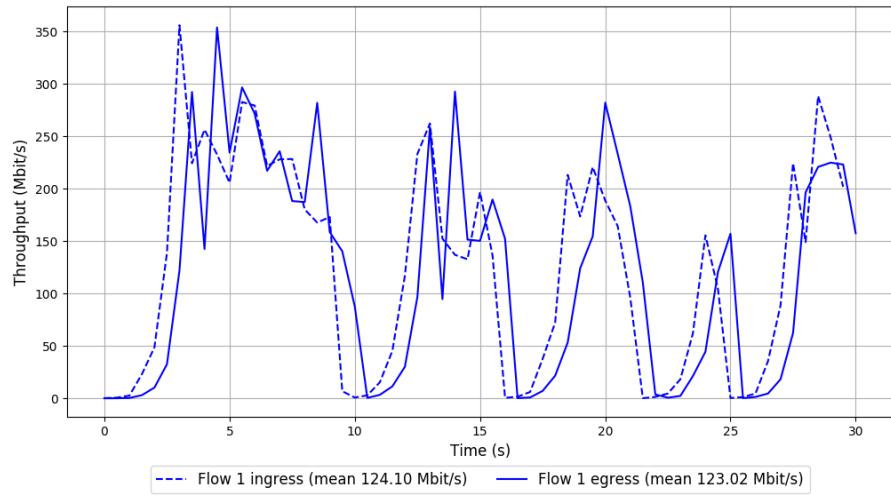


Run 5: Statistics of Verus

```
Start at: 2018-12-02 12:03:04
End at: 2018-12-02 12:03:35
Local clock offset: -6.028 ms
Remote clock offset: -37.601 ms

# Below is generated by plot.py at 2018-12-02 13:01:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 123.02 Mbit/s
95th percentile per-packet one-way delay: 204.487 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 123.02 Mbit/s
95th percentile per-packet one-way delay: 204.487 ms
Loss rate: 1.80%
```

Run 5: Report of Verus — Data Link

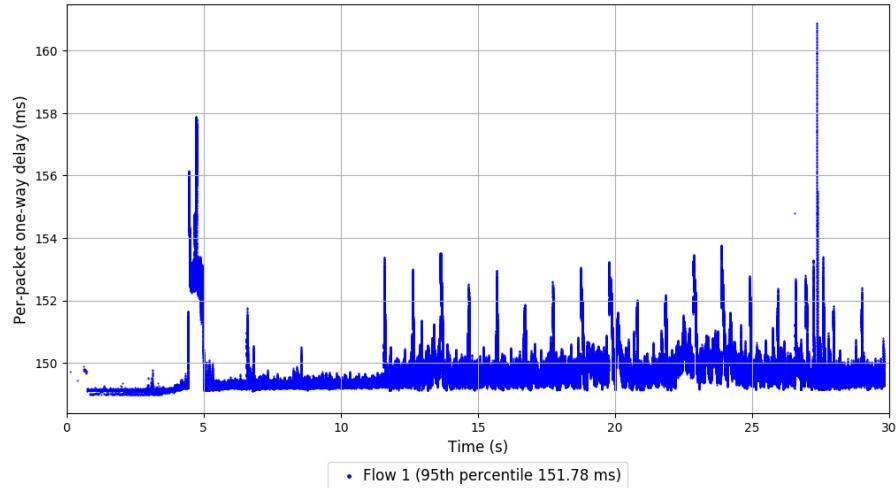
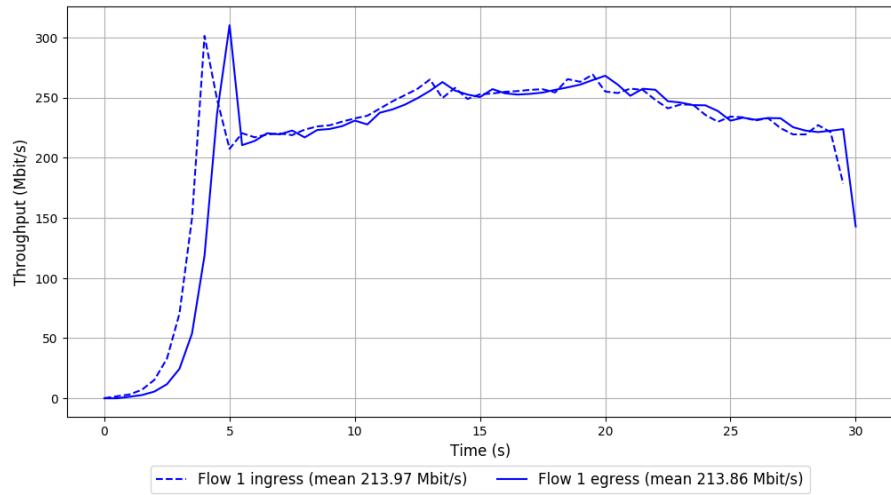


Run 1: Statistics of PCC-Vivace

```
Start at: 2018-12-02 10:03:11
End at: 2018-12-02 10:03:41
Local clock offset: -3.28 ms
Remote clock offset: -39.372 ms

# Below is generated by plot.py at 2018-12-02 13:02:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 213.86 Mbit/s
95th percentile per-packet one-way delay: 151.776 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 213.86 Mbit/s
95th percentile per-packet one-way delay: 151.776 ms
Loss rate: 0.80%
```

Run 1: Report of PCC-Vivace — Data Link

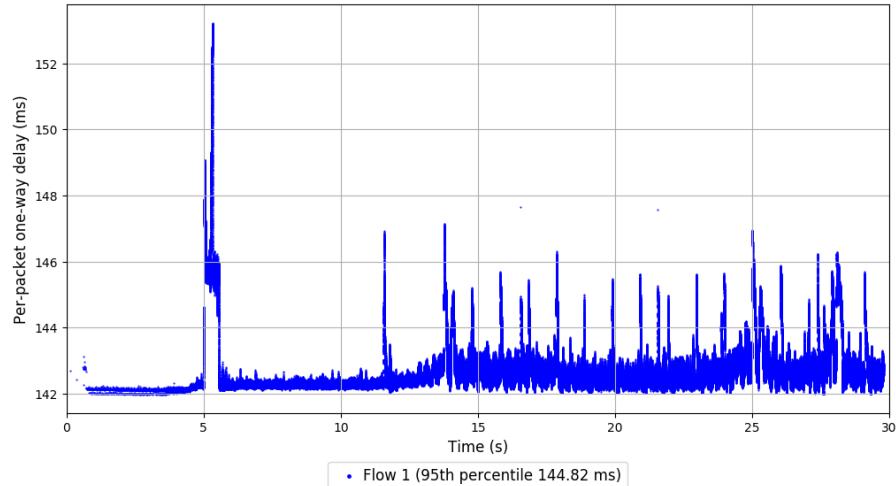
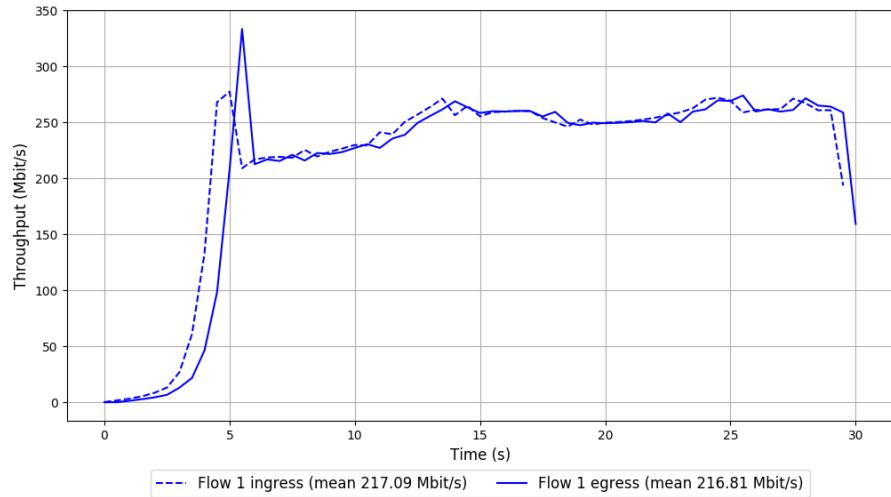


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-12-02 10:29:06
End at: 2018-12-02 10:29:36
Local clock offset: -6.239 ms
Remote clock offset: -41.429 ms

# Below is generated by plot.py at 2018-12-02 13:02:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 216.81 Mbit/s
95th percentile per-packet one-way delay: 144.817 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 216.81 Mbit/s
95th percentile per-packet one-way delay: 144.817 ms
Loss rate: 0.86%
```

Run 2: Report of PCC-Vivace — Data Link

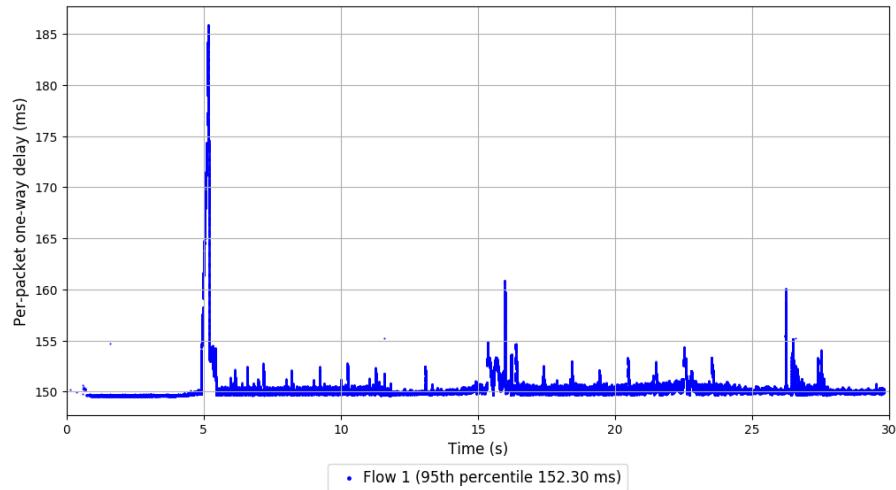
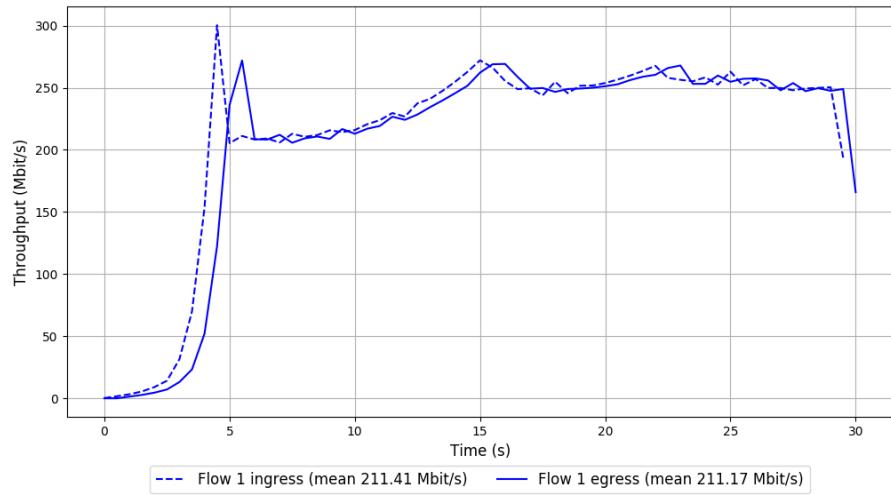


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-12-02 11:18:20
End at: 2018-12-02 11:18:50
Local clock offset: -0.818 ms
Remote clock offset: -42.692 ms

# Below is generated by plot.py at 2018-12-02 13:02:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 211.17 Mbit/s
95th percentile per-packet one-way delay: 152.301 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 211.17 Mbit/s
95th percentile per-packet one-way delay: 152.301 ms
Loss rate: 0.84%
```

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

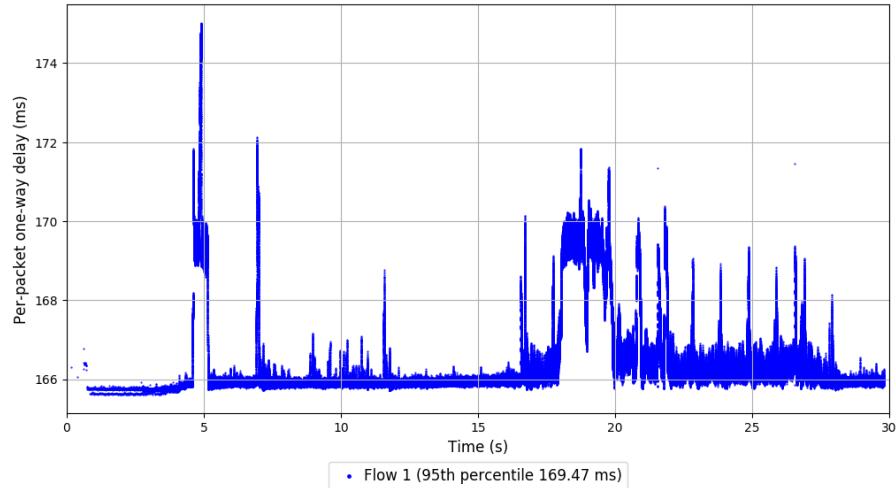
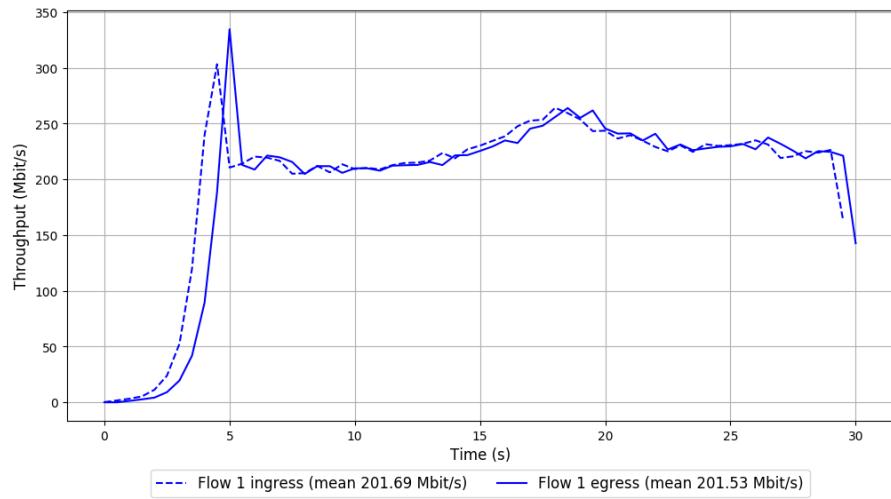


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-12-02 11:44:00
End at: 2018-12-02 11:44:30
Local clock offset: 12.678 ms
Remote clock offset: -46.999 ms

# Below is generated by plot.py at 2018-12-02 13:02:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 201.53 Mbit/s
95th percentile per-packet one-way delay: 169.465 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 201.53 Mbit/s
95th percentile per-packet one-way delay: 169.465 ms
Loss rate: 0.81%
```

Run 4: Report of PCC-Vivace — Data Link

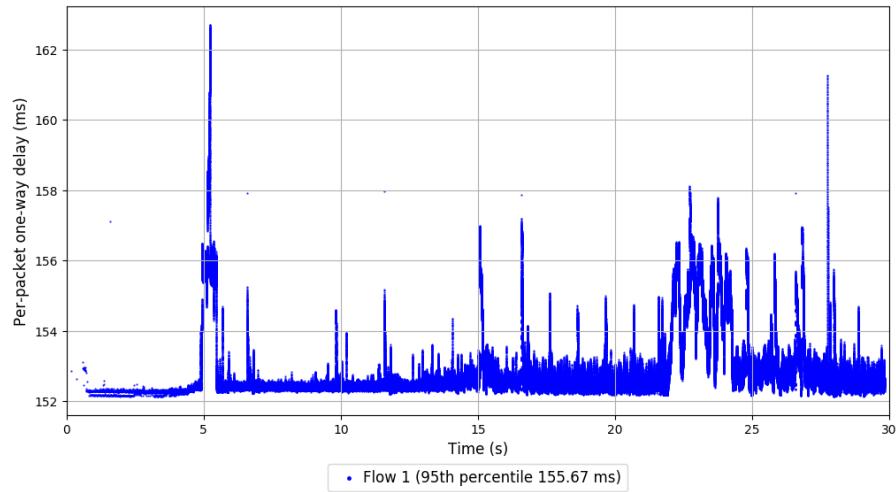
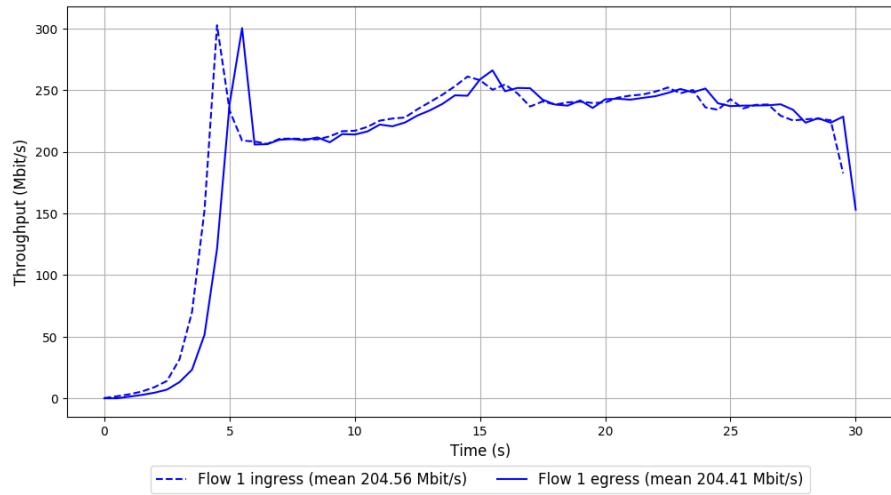


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-12-02 12:27:10
End at: 2018-12-02 12:27:40
Local clock offset: -3.931 ms
Remote clock offset: -45.365 ms

# Below is generated by plot.py at 2018-12-02 13:02:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.41 Mbit/s
95th percentile per-packet one-way delay: 155.666 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 204.41 Mbit/s
95th percentile per-packet one-way delay: 155.666 ms
Loss rate: 0.81%
```

Run 5: Report of PCC-Vivace — Data Link

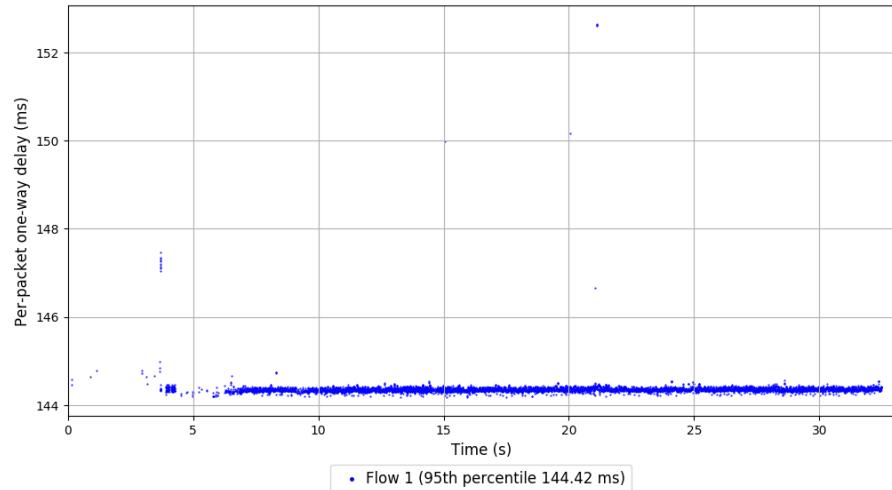
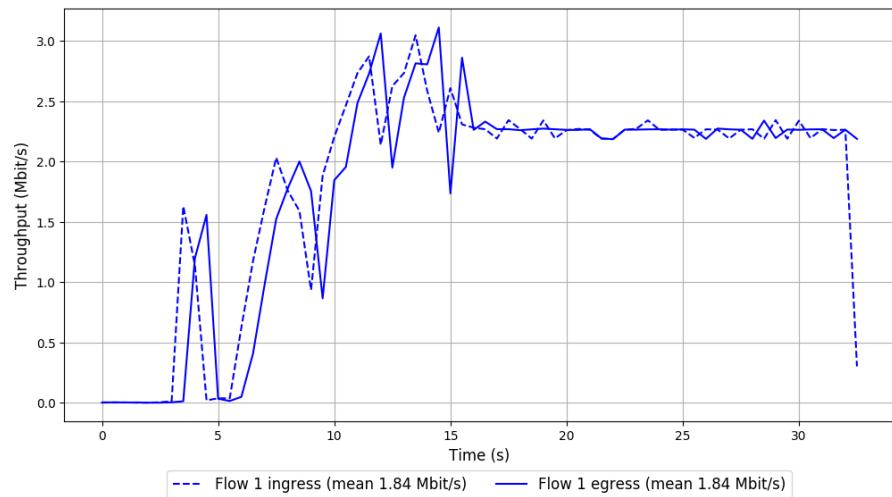


```
Run 1: Statistics of WebRTC media

Start at: 2018-12-02 10:04:37
End at: 2018-12-02 10:05:07
Local clock offset: -5.67 ms
Remote clock offset: -36.815 ms

# Below is generated by plot.py at 2018-12-02 13:02:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 144.417 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 144.417 ms
Loss rate: 0.88%
```

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

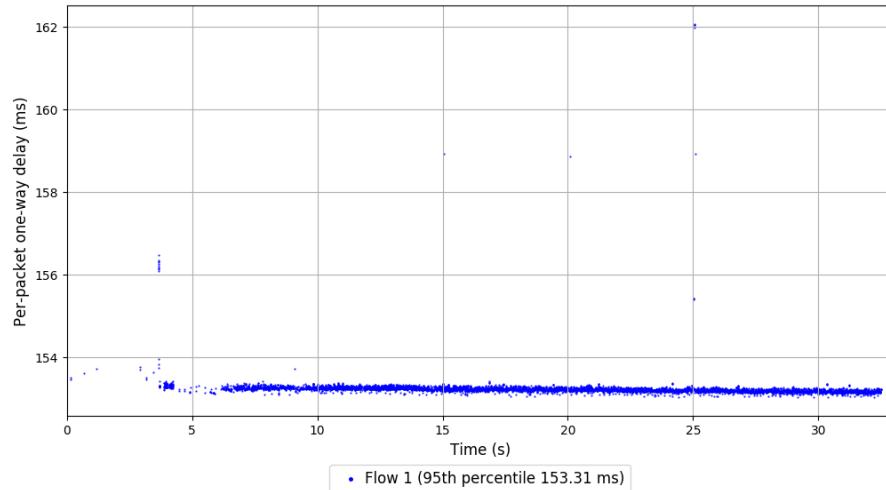
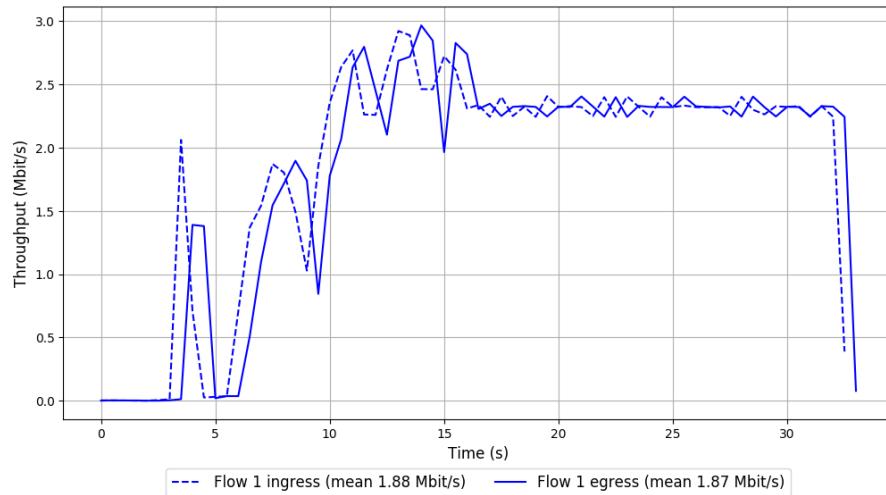


Run 2: Statistics of WebRTC media

```
Start at: 2018-12-02 10:30:32
End at: 2018-12-02 10:31:02
Local clock offset: 6.898 ms
Remote clock offset: -39.845 ms

# Below is generated by plot.py at 2018-12-02 13:02:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 153.308 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 153.308 ms
Loss rate: 0.83%
```

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

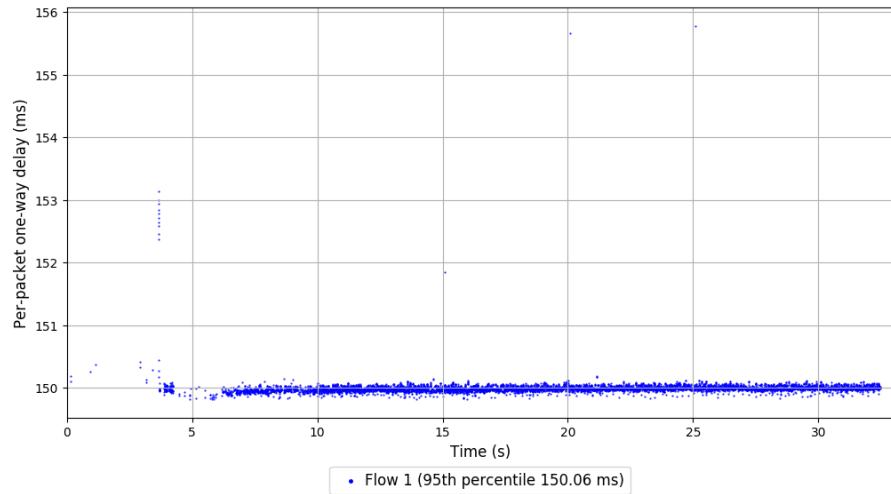
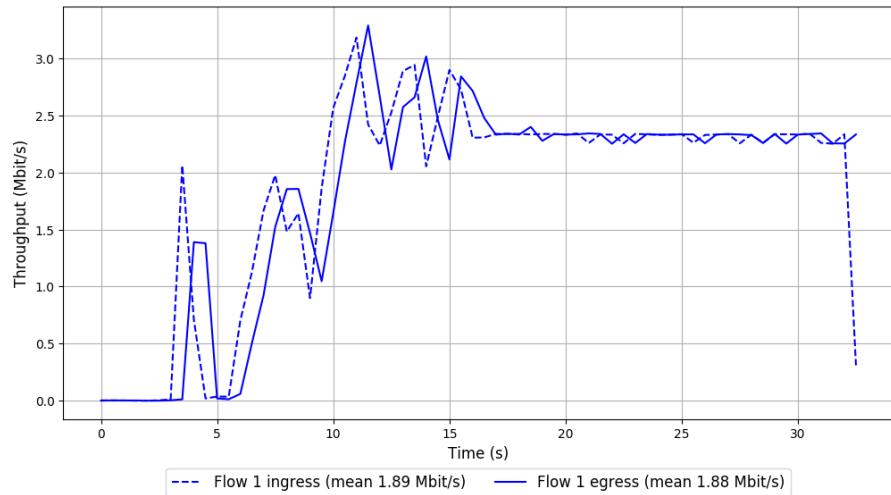


Run 3: Statistics of WebRTC media

```
Start at: 2018-12-02 11:19:45
End at: 2018-12-02 11:20:15
Local clock offset: -5.906 ms
Remote clock offset: -47.99 ms

# Below is generated by plot.py at 2018-12-02 13:02:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 150.058 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 150.058 ms
Loss rate: 0.82%
```

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

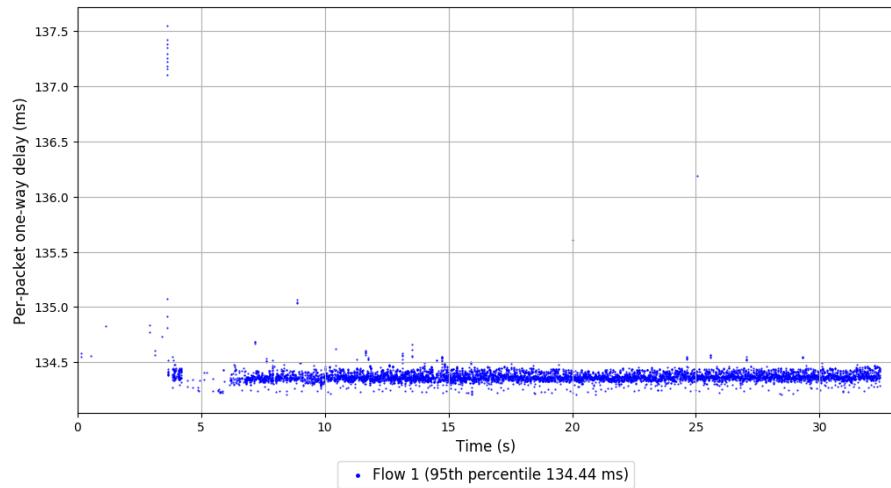
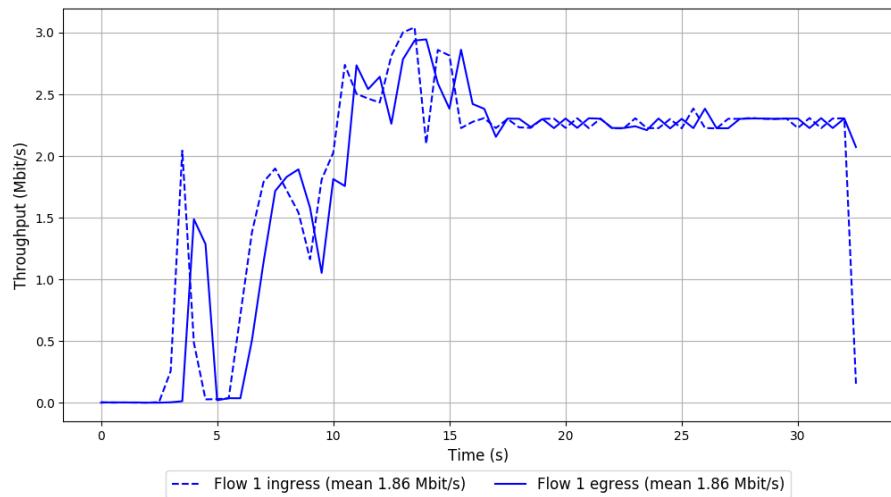


Run 4: Statistics of WebRTC media

```
Start at: 2018-12-02 11:45:25
End at: 2018-12-02 11:45:55
Local clock offset: -6.097 ms
Remote clock offset: -34.345 ms

# Below is generated by plot.py at 2018-12-02 13:02:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 134.440 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 134.440 ms
Loss rate: 0.83%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-12-02 12:28:35
End at: 2018-12-02 12:29:05
Local clock offset: 0.464 ms
Remote clock offset: -39.605 ms

# Below is generated by plot.py at 2018-12-02 13:02:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 156.076 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 156.076 ms
Loss rate: 0.81%
```

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

