

## Pantheon Report

Generated at 2018-10-02 15:18:24 (UTC).  
Data path: Brazil on p4p1 (*remote*) → AWS Brazil 1 on `ens5` (*local*).  
Repeated the test of 18 congestion control schemes 5 times.  
Each test lasted for 30 seconds running 1 flow.  
NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

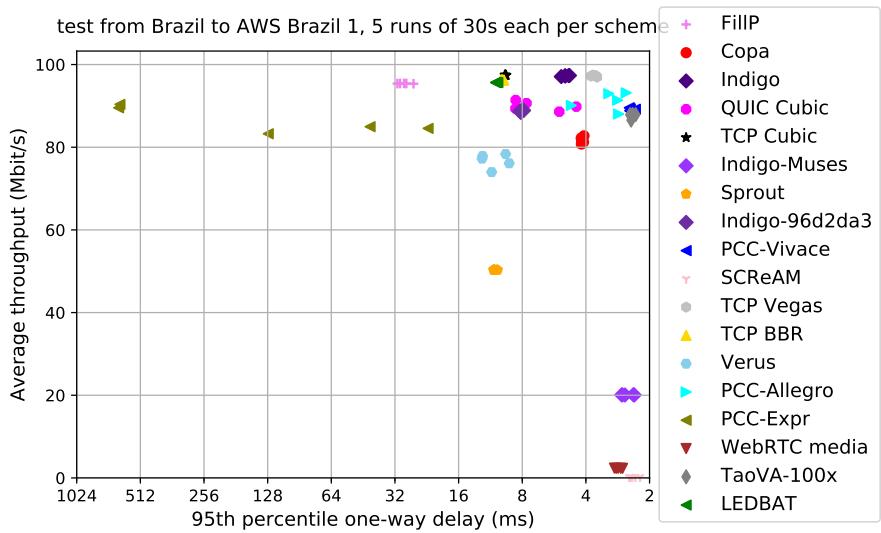
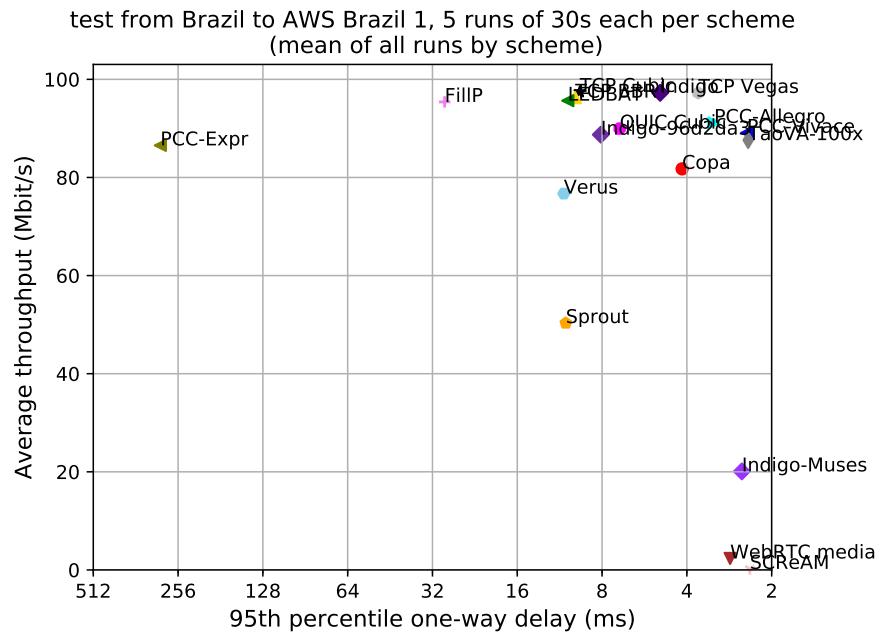
System info:

```
Linux 4.15.0-1021-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbfed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
```

third\_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851



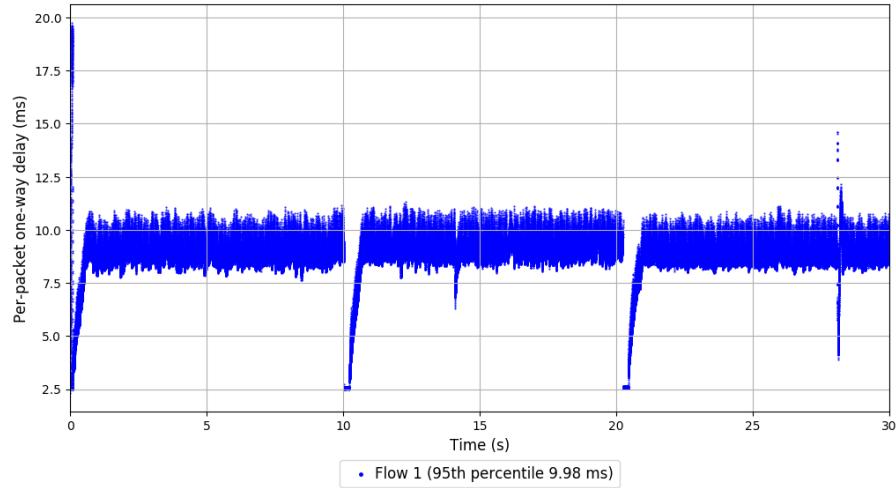
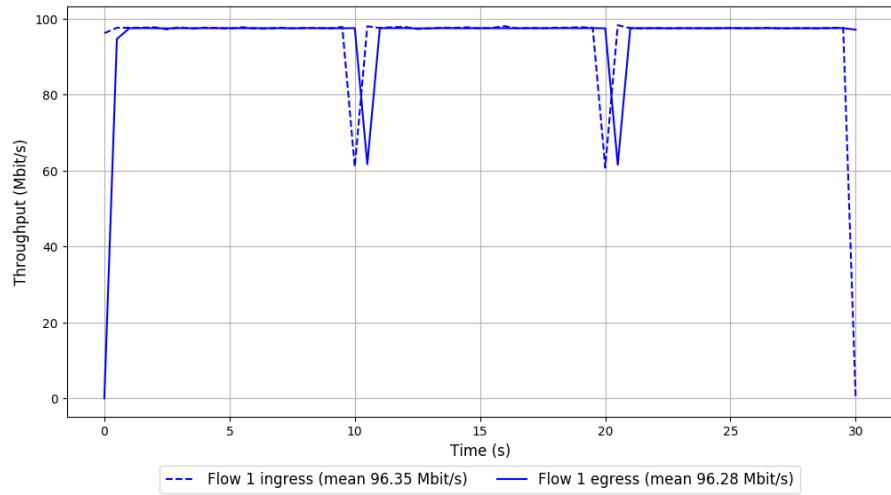
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	96.27	9.96	0.14
Copa	5	81.75	4.16	0.02
TCP Cubic	5	97.44	9.60	0.06
FillP	5	95.40	28.96	1.35
Indigo	5	97.25	4.98	0.02
Indigo-96d2da3	5	88.72	8.08	0.03
LEDBAT	5	95.66	10.59	0.08
Indigo-Muses	5	20.09	2.55	0.02
PCC-Allegro	5	91.12	3.20	0.02
PCC-Expr	5	86.54	295.99	1.70
QUIC Cubic	5	89.96	6.93	0.02
SCReAM	5	0.22	2.39	0.03
Sprout	5	50.32	10.76	0.03
TaoVA-100x	5	87.61	2.42	0.02
TCP Vegas	5	97.24	3.64	0.02
Verus	5	76.71	10.94	0.05
PCC-Vivace	5	89.11	2.45	0.02
WebRTC media	5	2.34	2.81	0.01

Run 1: Statistics of TCP BBR

```
Start at: 2018-10-02 13:28:41
End at: 2018-10-02 13:29:11
Local clock offset: -7.726 ms
Remote clock offset: -0.585 ms

# Below is generated by plot.py at 2018-10-02 15:07:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.28 Mbit/s
95th percentile per-packet one-way delay: 9.978 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.28 Mbit/s
95th percentile per-packet one-way delay: 9.978 ms
Loss rate: 0.09%
```

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

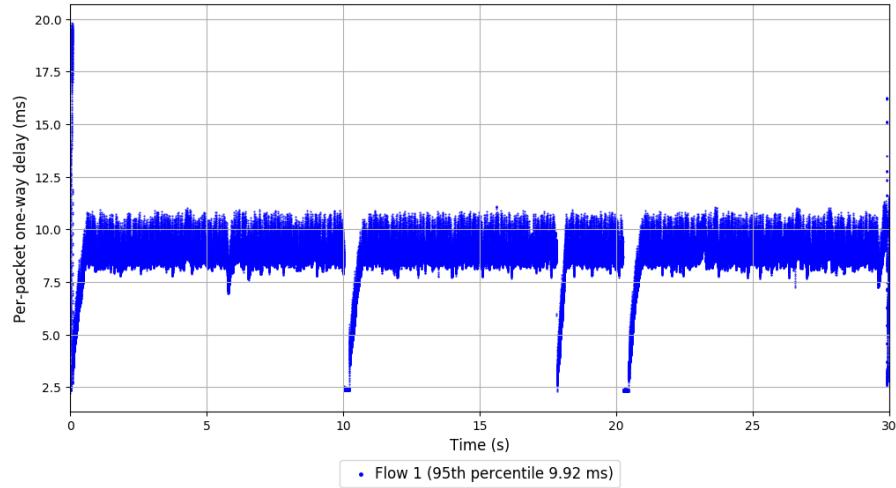
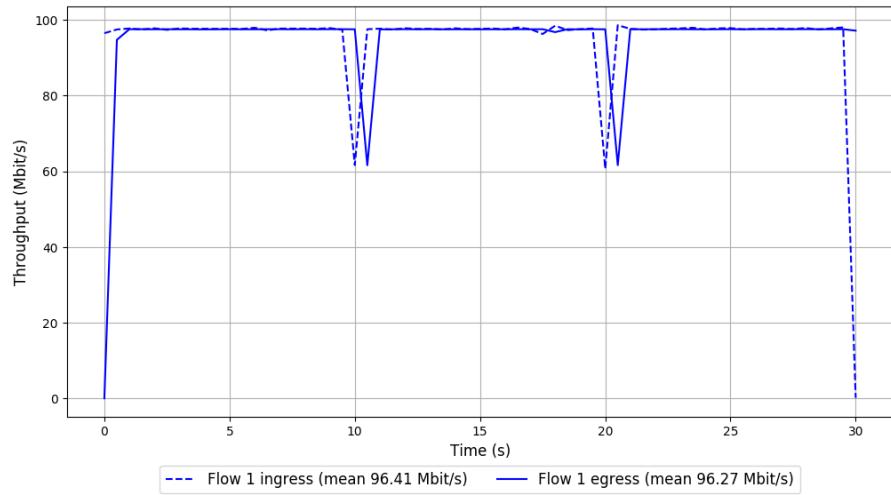


Run 2: Statistics of TCP BBR

```
Start at: 2018-10-02 13:49:03
End at: 2018-10-02 13:49:33
Local clock offset: -8.632 ms
Remote clock offset: -0.43 ms

# Below is generated by plot.py at 2018-10-02 15:07:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 9.917 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 9.917 ms
Loss rate: 0.16%
```

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

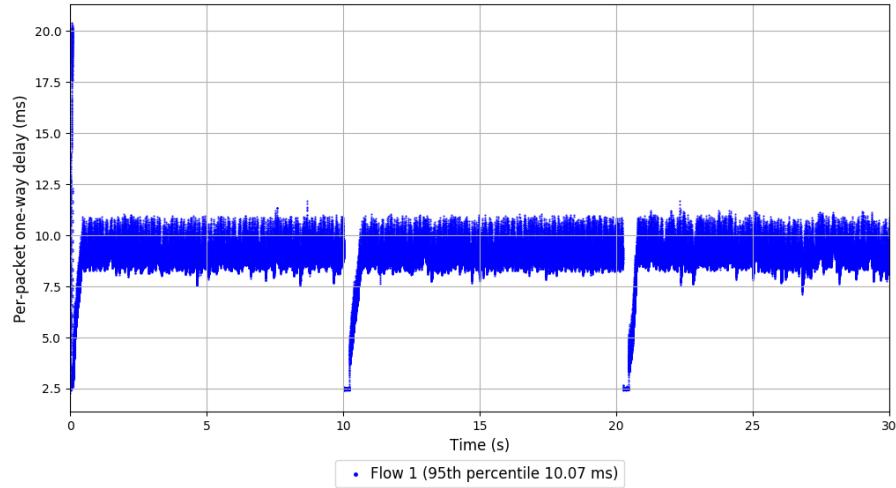
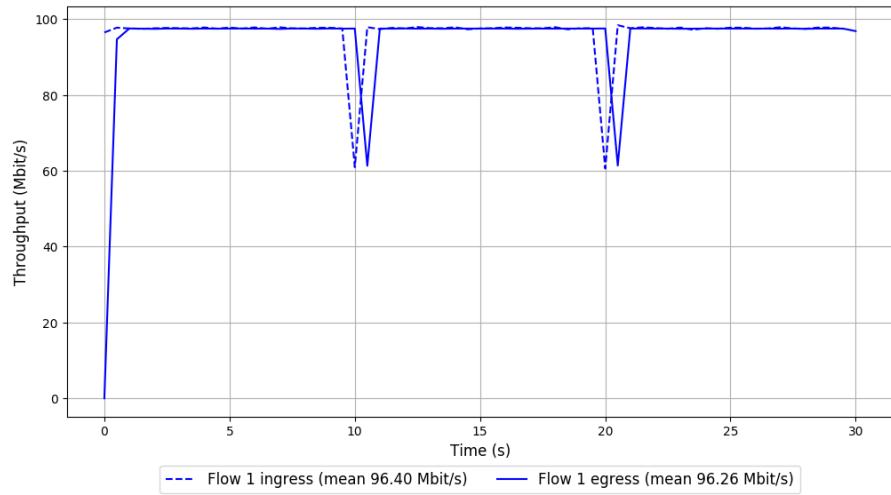


Run 3: Statistics of TCP BBR

```
Start at: 2018-10-02 14:09:25
End at: 2018-10-02 14:09:55
Local clock offset: -7.149 ms
Remote clock offset: -0.201 ms

# Below is generated by plot.py at 2018-10-02 15:07:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 10.066 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 10.066 ms
Loss rate: 0.16%
```

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

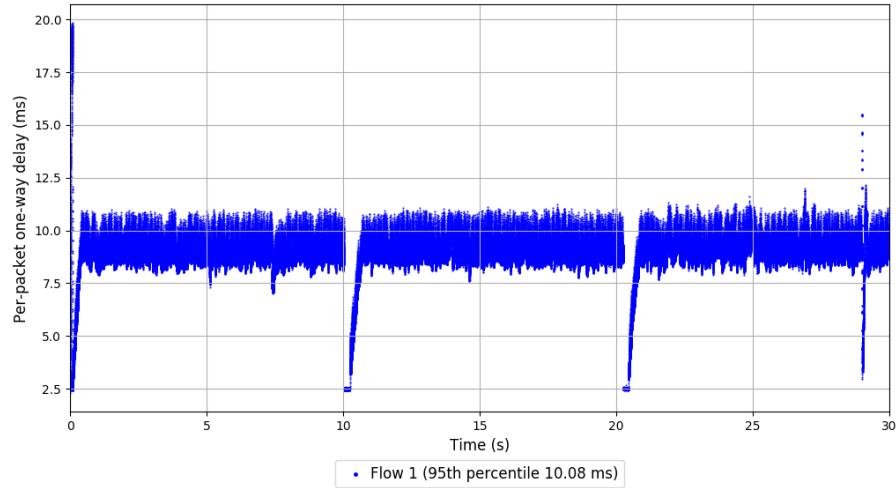
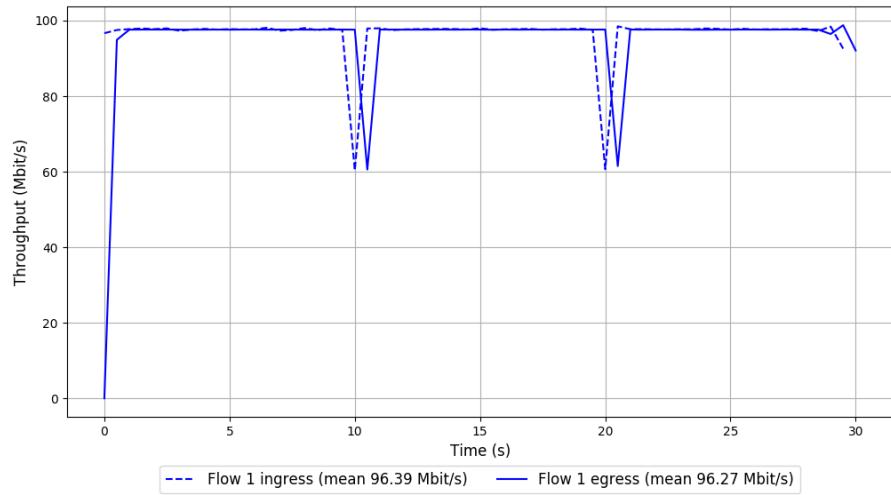


Run 4: Statistics of TCP BBR

```
Start at: 2018-10-02 14:29:47
End at: 2018-10-02 14:30:17
Local clock offset: -7.735 ms
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2018-10-02 15:07:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 10.082 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 10.082 ms
Loss rate: 0.15%
```

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

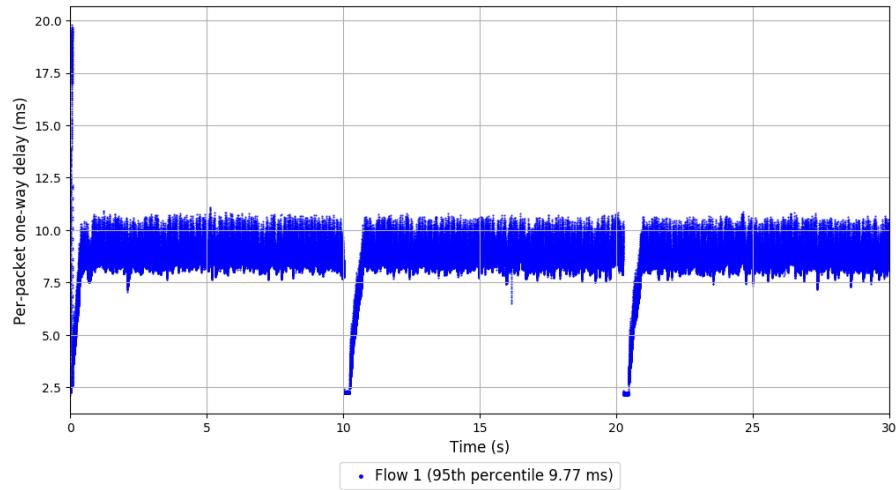
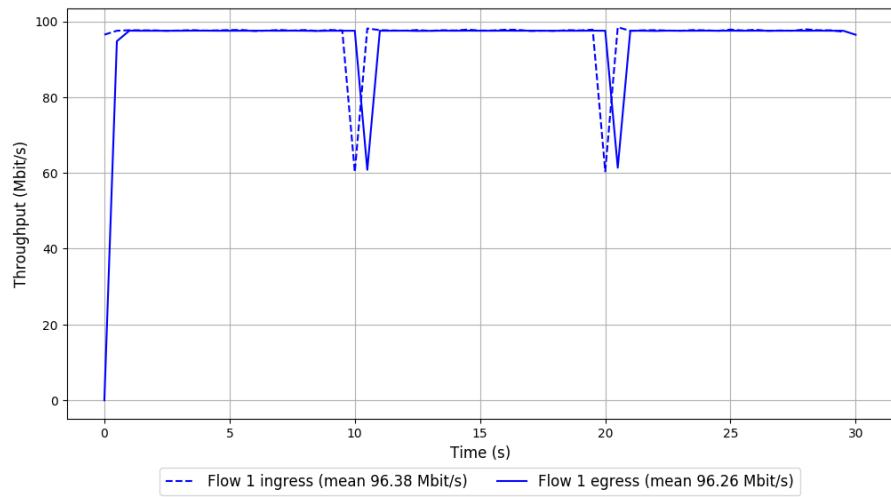


Run 5: Statistics of TCP BBR

```
Start at: 2018-10-02 14:50:10
End at: 2018-10-02 14:50:40
Local clock offset: -5.824 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2018-10-02 15:07:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 9.771 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 9.771 ms
Loss rate: 0.14%
```

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

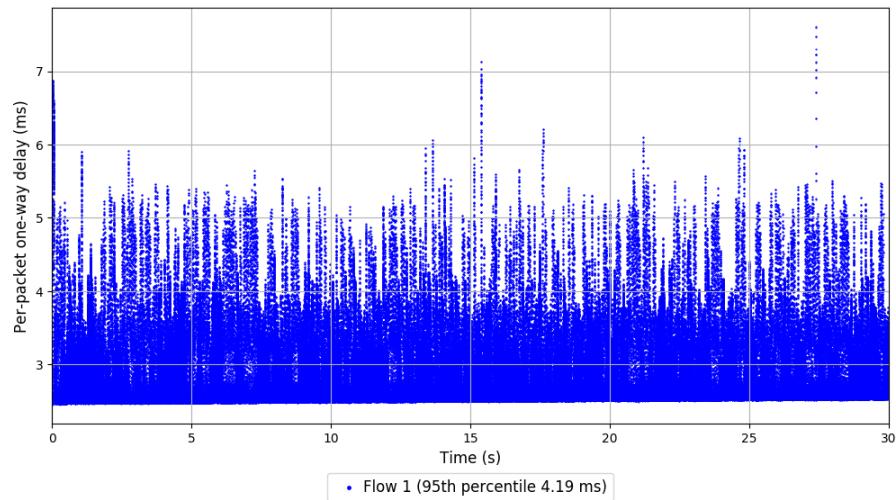
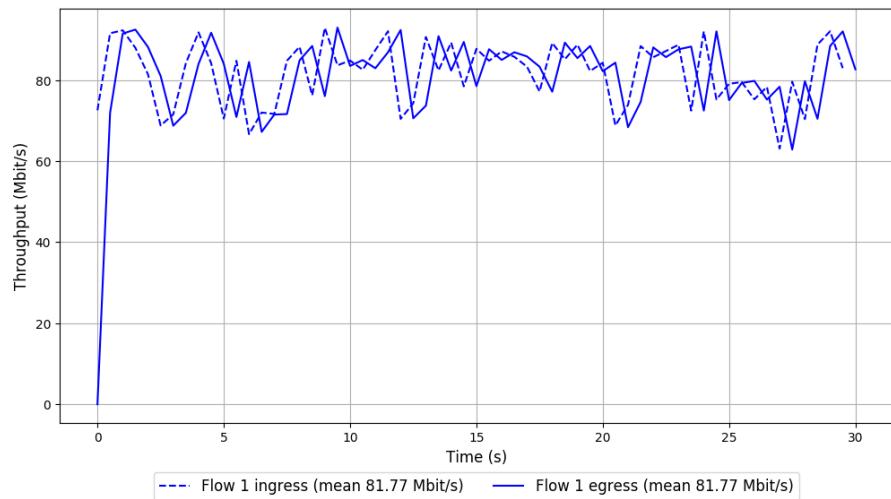


Run 1: Statistics of Copa

```
Start at: 2018-10-02 13:34:19
End at: 2018-10-02 13:34:49
Local clock offset: -8.519 ms
Remote clock offset: -0.602 ms

# Below is generated by plot.py at 2018-10-02 15:07:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.77 Mbit/s
95th percentile per-packet one-way delay: 4.194 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 81.77 Mbit/s
95th percentile per-packet one-way delay: 4.194 ms
Loss rate: 0.02%
```

Run 1: Report of Copa — Data Link

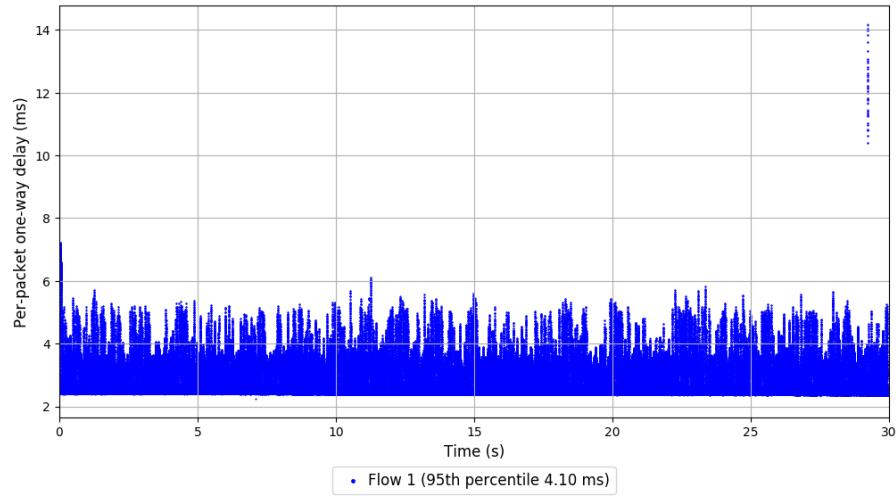
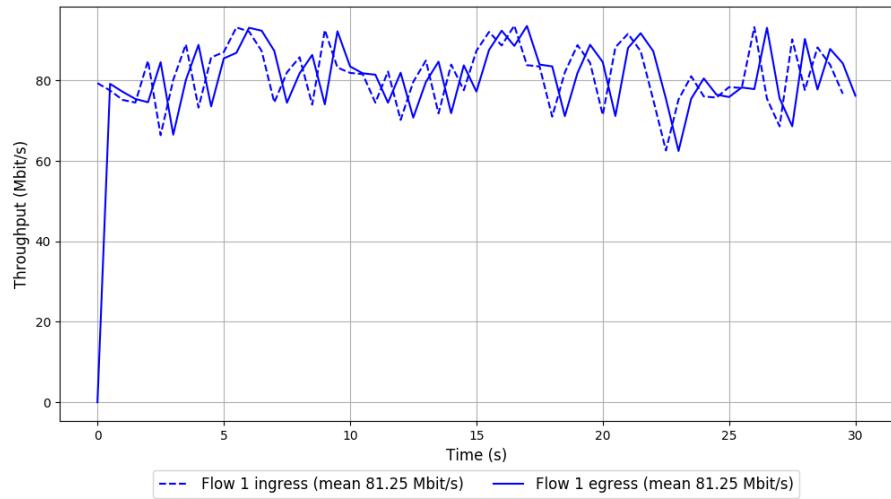


Run 2: Statistics of Copa

```
Start at: 2018-10-02 13:54:42
End at: 2018-10-02 13:55:12
Local clock offset: -7.747 ms
Remote clock offset: -0.367 ms

# Below is generated by plot.py at 2018-10-02 15:07:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.25 Mbit/s
95th percentile per-packet one-way delay: 4.103 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 81.25 Mbit/s
95th percentile per-packet one-way delay: 4.103 ms
Loss rate: 0.02%
```

## Run 2: Report of Copa — Data Link

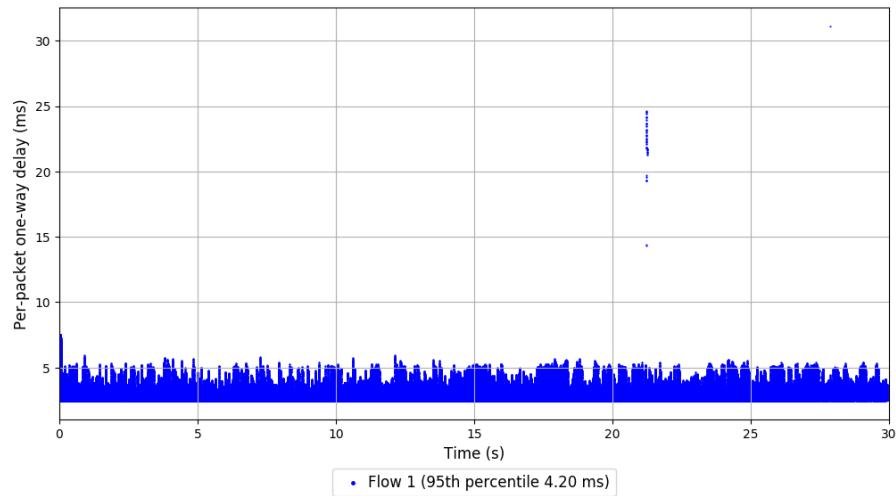
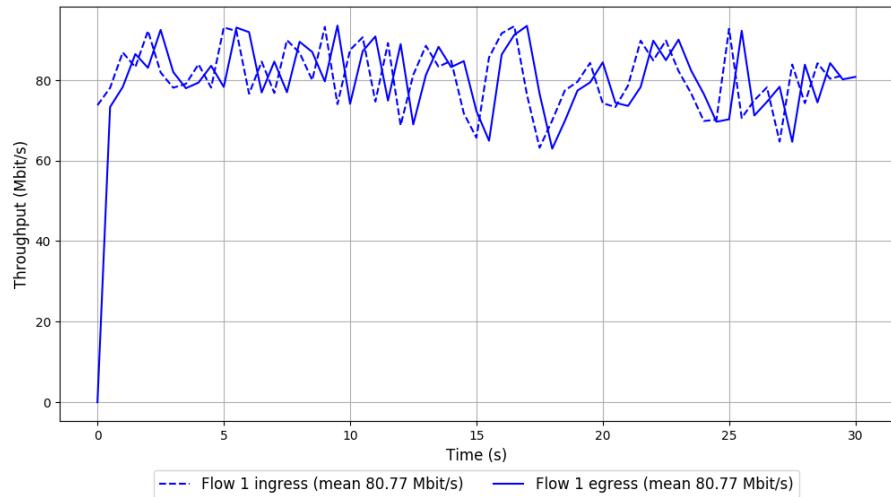


Run 3: Statistics of Copa

```
Start at: 2018-10-02 14:15:04
End at: 2018-10-02 14:15:34
Local clock offset: -7.126 ms
Remote clock offset: -0.195 ms

# Below is generated by plot.py at 2018-10-02 15:07:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.77 Mbit/s
95th percentile per-packet one-way delay: 4.201 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 80.77 Mbit/s
95th percentile per-packet one-way delay: 4.201 ms
Loss rate: 0.02%
```

### Run 3: Report of Copa — Data Link

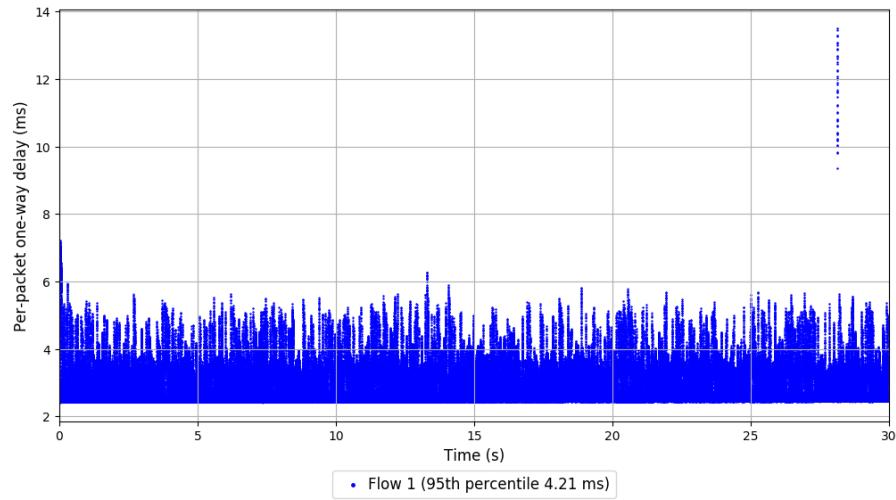
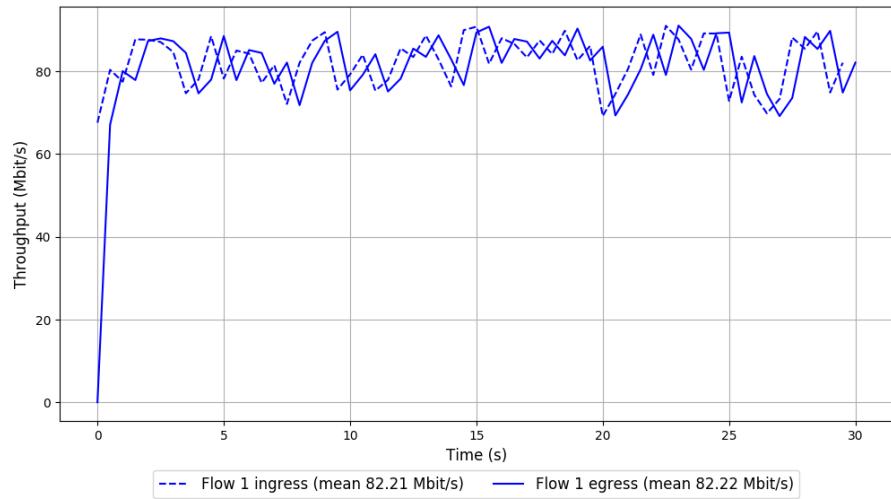


Run 4: Statistics of Copa

```
Start at: 2018-10-02 14:35:27
End at: 2018-10-02 14:35:57
Local clock offset: -7.902 ms
Remote clock offset: -0.13 ms

# Below is generated by plot.py at 2018-10-02 15:09:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.22 Mbit/s
95th percentile per-packet one-way delay: 4.210 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 82.22 Mbit/s
95th percentile per-packet one-way delay: 4.210 ms
Loss rate: 0.01%
```

Run 4: Report of Copa — Data Link

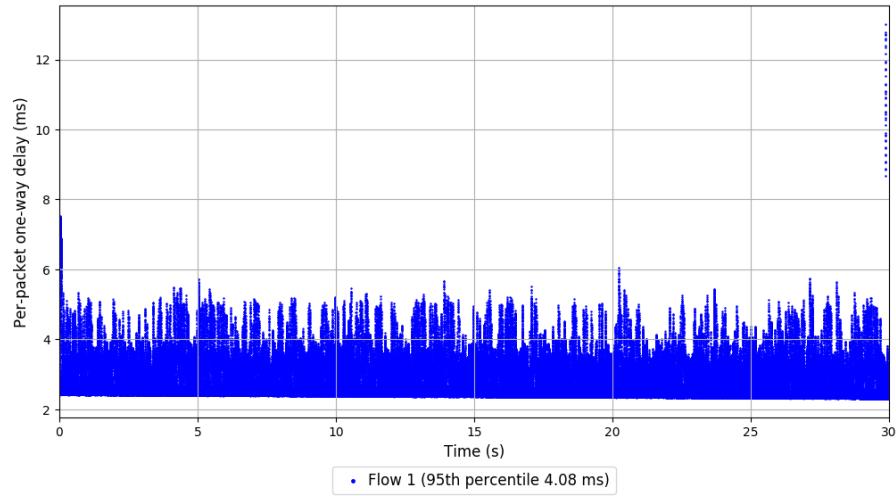
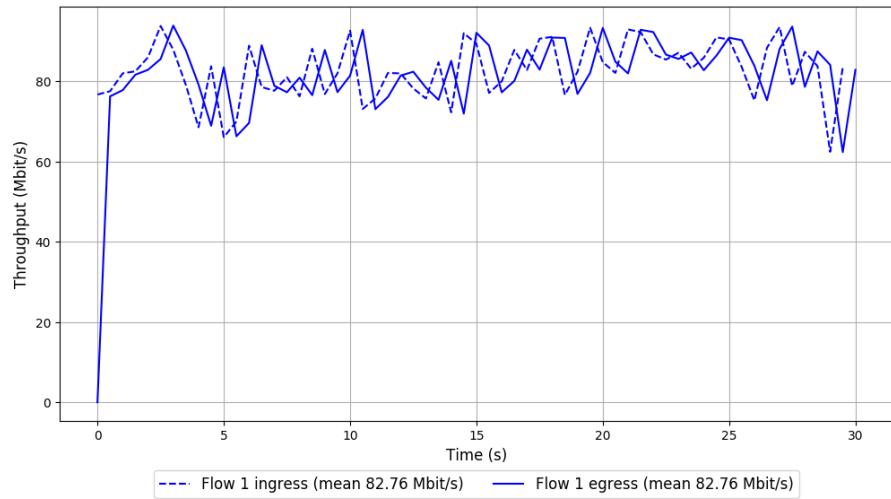


Run 5: Statistics of Copa

```
Start at: 2018-10-02 14:55:49
End at: 2018-10-02 14:56:19
Local clock offset: -3.995 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2018-10-02 15:09:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.76 Mbit/s
95th percentile per-packet one-way delay: 4.084 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 82.76 Mbit/s
95th percentile per-packet one-way delay: 4.084 ms
Loss rate: 0.02%
```

### Run 5: Report of Copa — Data Link

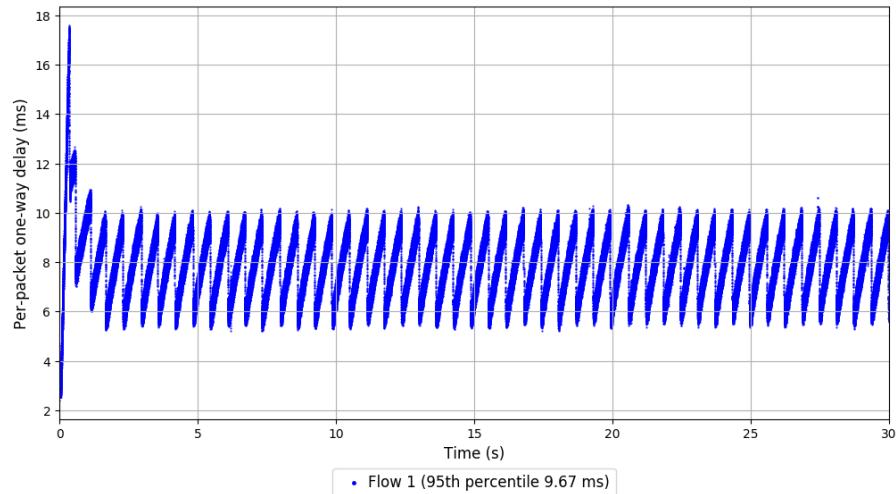
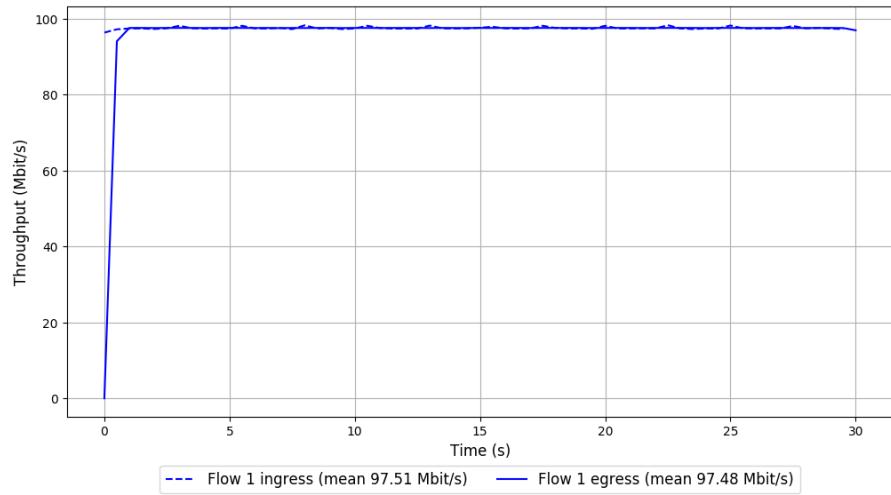


Run 1: Statistics of TCP Cubic

```
Start at: 2018-10-02 13:23:05
End at: 2018-10-02 13:23:35
Local clock offset: -6.547 ms
Remote clock offset: -0.611 ms

# Below is generated by plot.py at 2018-10-02 15:09:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 9.669 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 9.669 ms
Loss rate: 0.05%
```

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

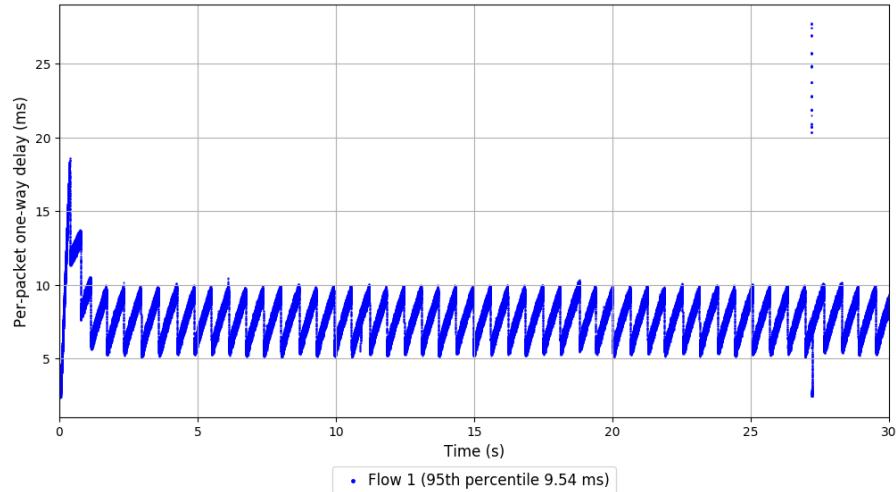
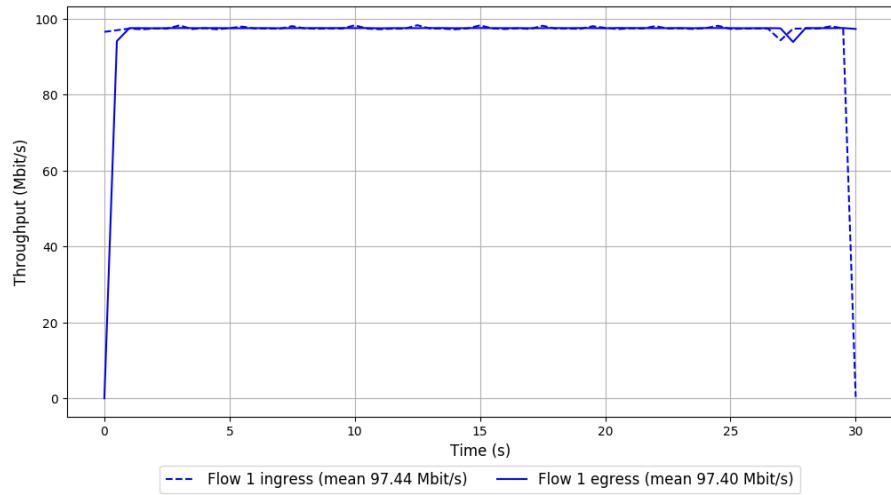


Run 2: Statistics of TCP Cubic

```
Start at: 2018-10-02 13:43:28
End at: 2018-10-02 13:43:58
Local clock offset: -9.392 ms
Remote clock offset: -0.445 ms

# Below is generated by plot.py at 2018-10-02 15:09:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 9.540 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 9.540 ms
Loss rate: 0.06%
```

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

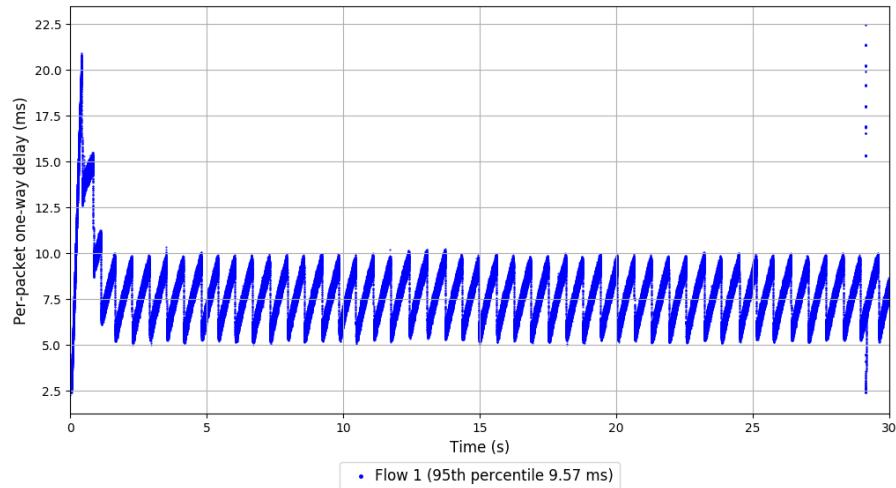
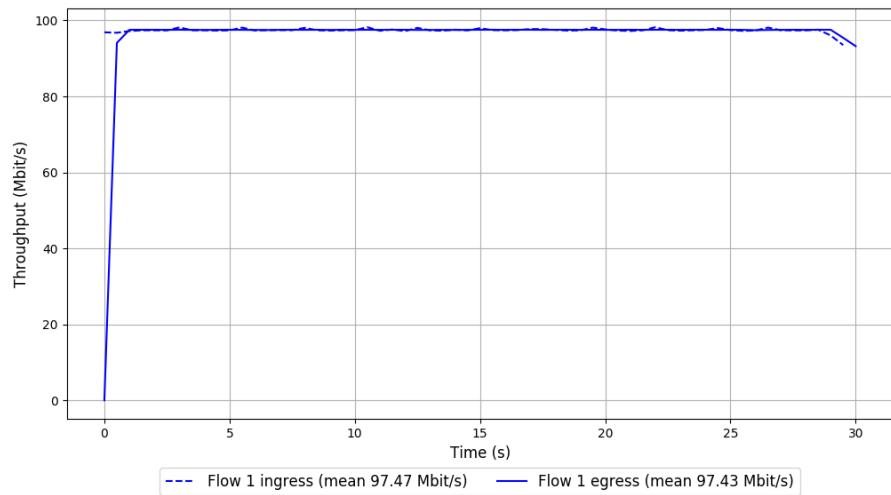


Run 3: Statistics of TCP Cubic

```
Start at: 2018-10-02 14:03:50
End at: 2018-10-02 14:04:20
Local clock offset: -7.243 ms
Remote clock offset: -0.239 ms

# Below is generated by plot.py at 2018-10-02 15:09:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.43 Mbit/s
95th percentile per-packet one-way delay: 9.571 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 97.43 Mbit/s
95th percentile per-packet one-way delay: 9.571 ms
Loss rate: 0.06%
```

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

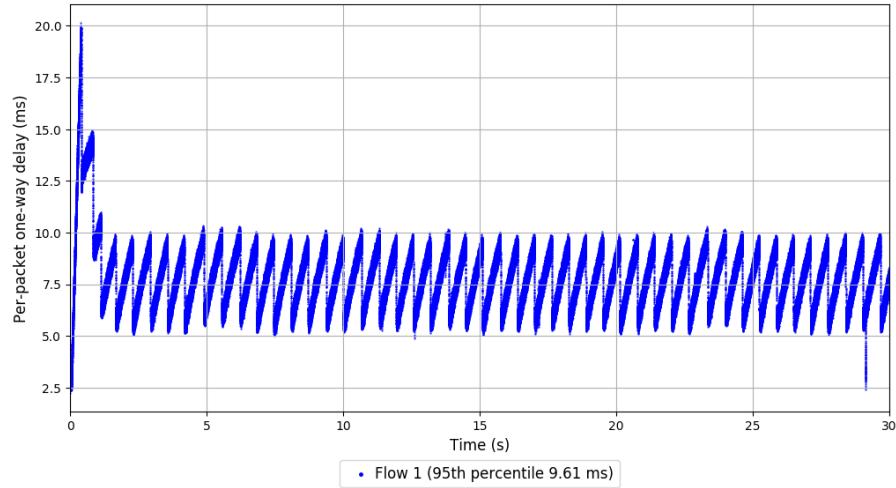
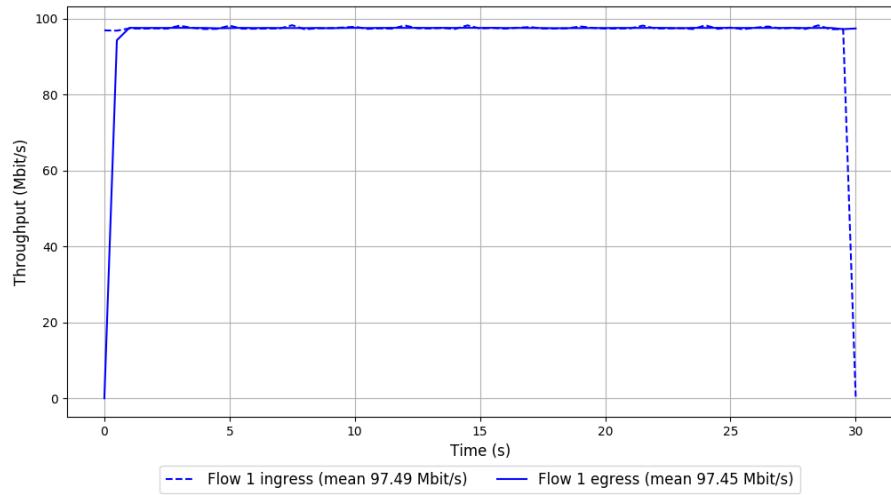


Run 4: Statistics of TCP Cubic

```
Start at: 2018-10-02 14:24:12
End at: 2018-10-02 14:24:42
Local clock offset: -7.575 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2018-10-02 15:09:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 9.605 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 9.605 ms
Loss rate: 0.05%
```

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

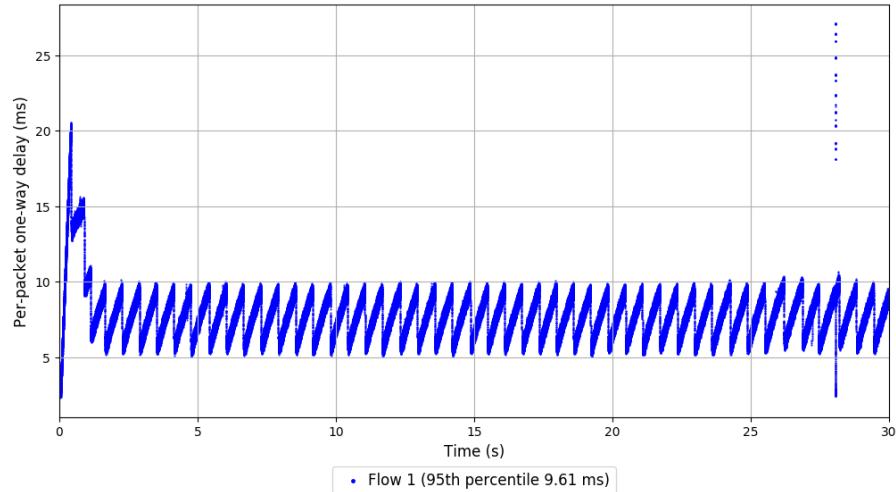
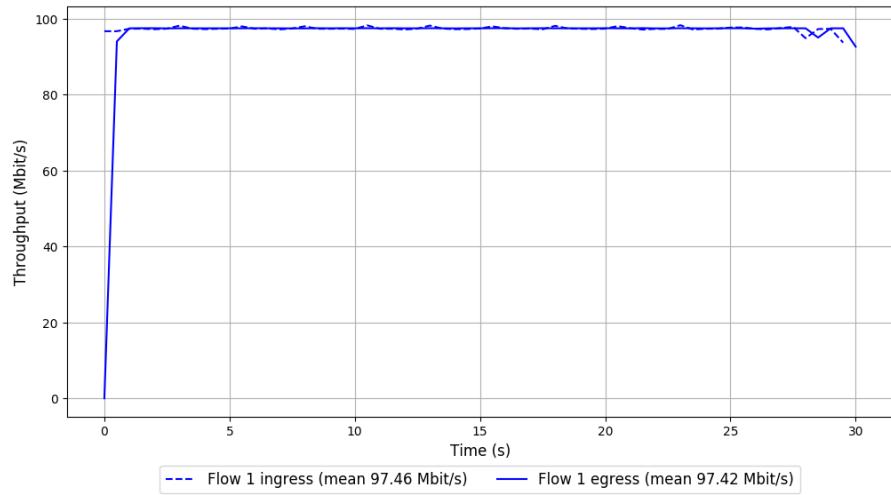


Run 5: Statistics of TCP Cubic

```
Start at: 2018-10-02 14:44:35
End at: 2018-10-02 14:45:05
Local clock offset: -8.211 ms
Remote clock offset: -0.073 ms

# Below is generated by plot.py at 2018-10-02 15:09:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 9.607 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 9.607 ms
Loss rate: 0.06%
```

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

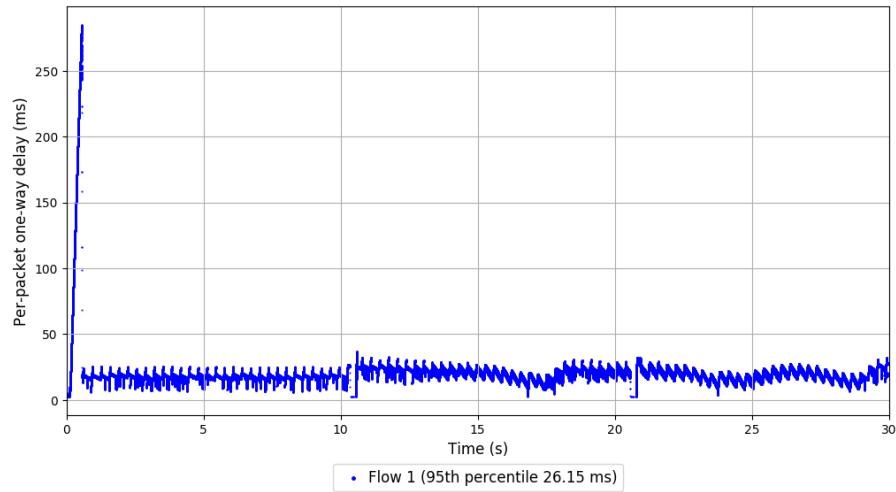
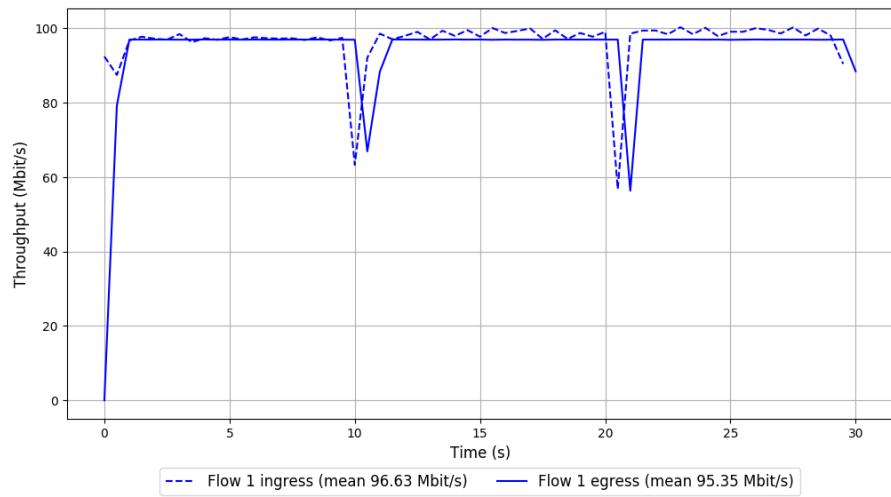


```
Run 1: Statistics of FillP
```

```
Start at: 2018-10-02 13:30:57
End at: 2018-10-02 13:31:27
Local clock offset: -8.077 ms
Remote clock offset: -0.612 ms

# Below is generated by plot.py at 2018-10-02 15:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.35 Mbit/s
95th percentile per-packet one-way delay: 26.150 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 95.35 Mbit/s
95th percentile per-packet one-way delay: 26.150 ms
Loss rate: 1.34%
```

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

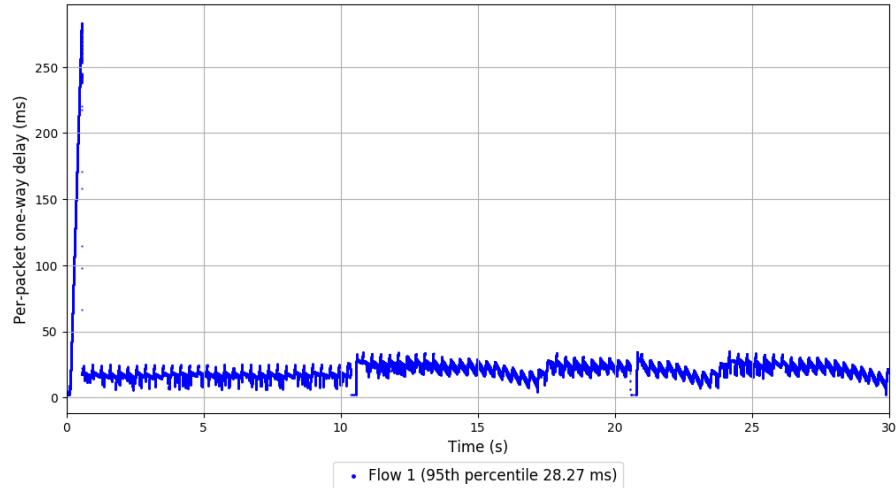
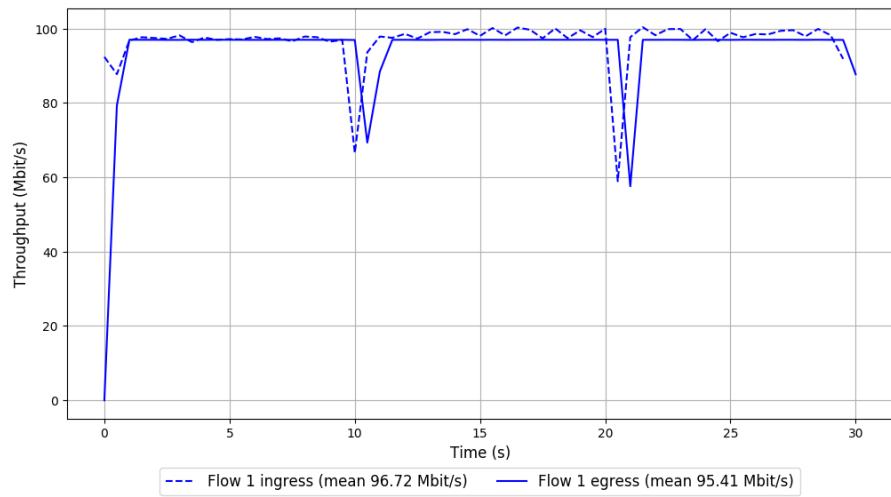


Run 2: Statistics of FillP

```
Start at: 2018-10-02 13:51:19
End at: 2018-10-02 13:51:49
Local clock offset: -8.249 ms
Remote clock offset: -0.399 ms

# Below is generated by plot.py at 2018-10-02 15:09:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.41 Mbit/s
95th percentile per-packet one-way delay: 28.273 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 95.41 Mbit/s
95th percentile per-packet one-way delay: 28.273 ms
Loss rate: 1.37%
```

## Run 2: Report of FillP — Data Link

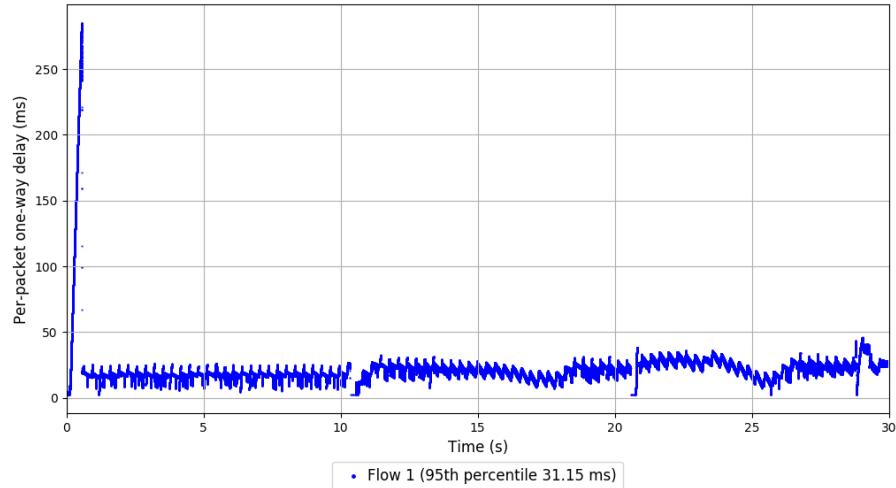
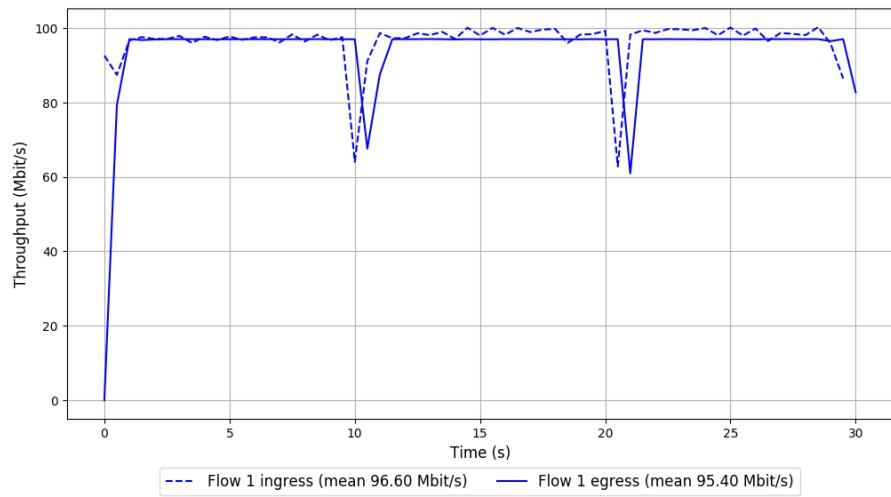


Run 3: Statistics of FillP

```
Start at: 2018-10-02 14:11:41
End at: 2018-10-02 14:12:11
Local clock offset: -7.133 ms
Remote clock offset: -0.231 ms

# Below is generated by plot.py at 2018-10-02 15:09:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.40 Mbit/s
95th percentile per-packet one-way delay: 31.151 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 95.40 Mbit/s
95th percentile per-packet one-way delay: 31.151 ms
Loss rate: 1.26%
```

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

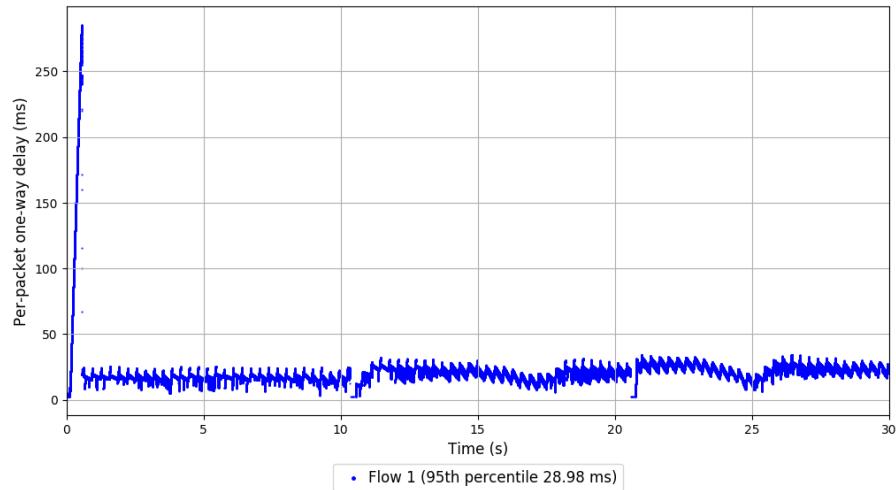
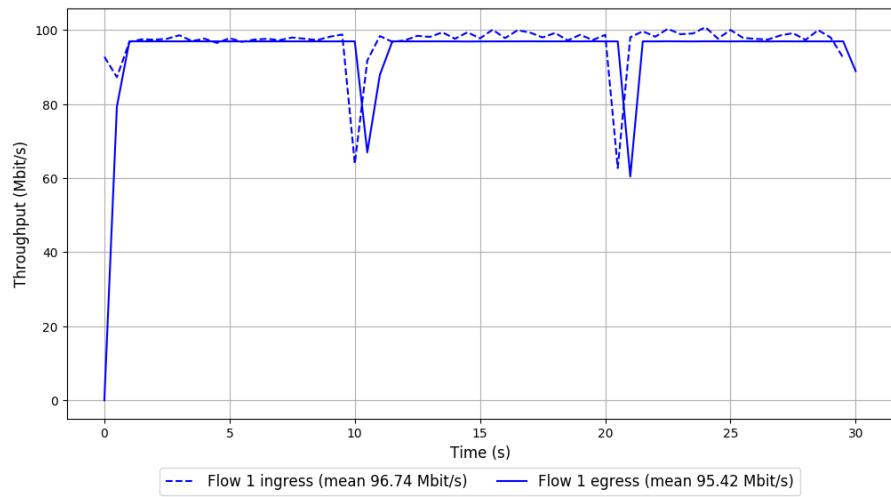


```
Run 4: Statistics of FillP
```

```
Start at: 2018-10-02 14:32:04
End at: 2018-10-02 14:32:34
Local clock offset: -7.807 ms
Remote clock offset: -0.145 ms

# Below is generated by plot.py at 2018-10-02 15:09:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.42 Mbit/s
95th percentile per-packet one-way delay: 28.978 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 95.42 Mbit/s
95th percentile per-packet one-way delay: 28.978 ms
Loss rate: 1.38%
```

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

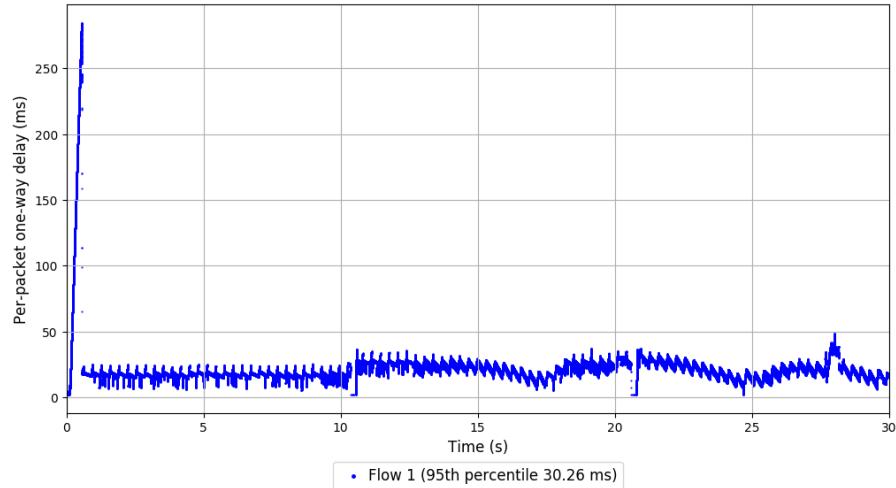
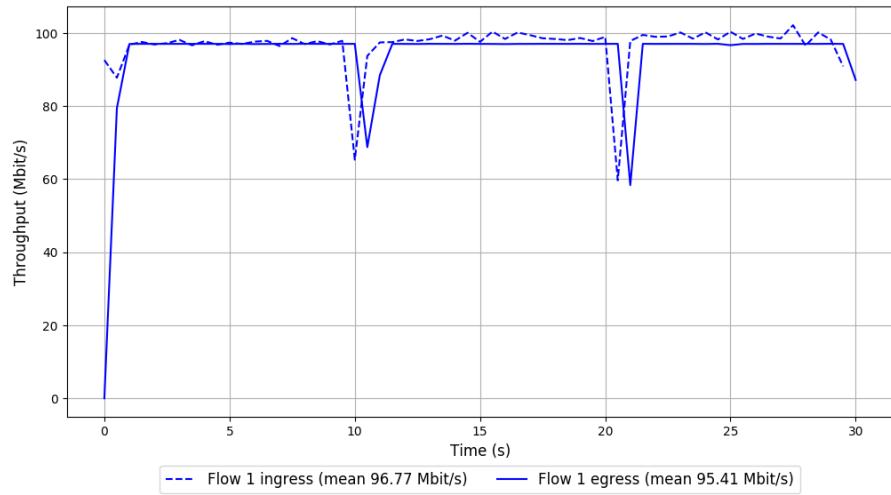


Run 5: Statistics of FillP

```
Start at: 2018-10-02 14:52:26
End at: 2018-10-02 14:52:56
Local clock offset: -4.958 ms
Remote clock offset: 0.039 ms

# Below is generated by plot.py at 2018-10-02 15:10:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.41 Mbit/s
95th percentile per-packet one-way delay: 30.261 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 95.41 Mbit/s
95th percentile per-packet one-way delay: 30.261 ms
Loss rate: 1.42%
```

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

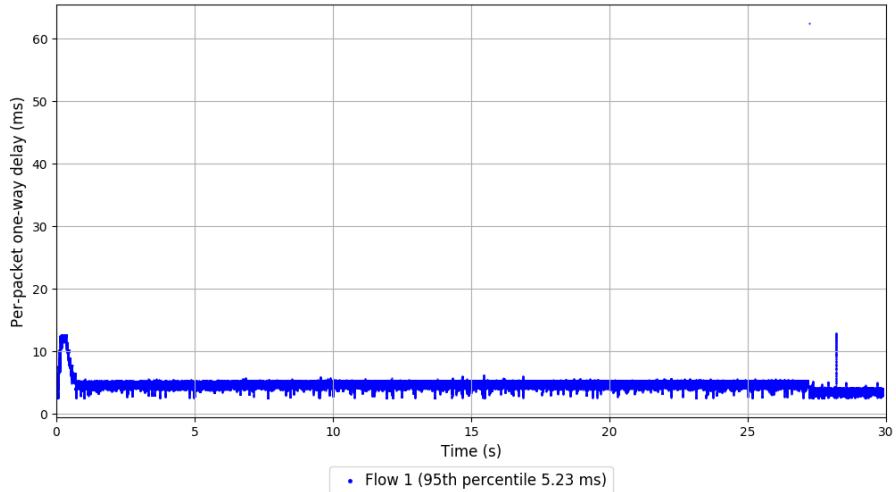
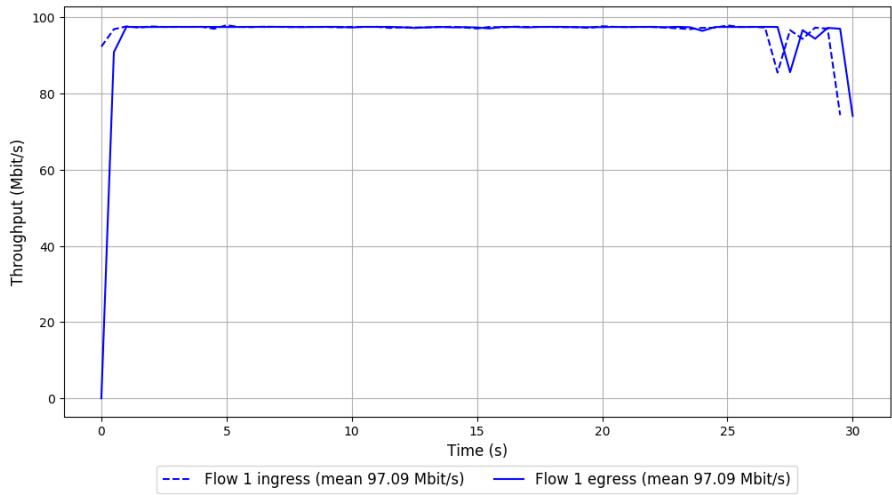


Run 1: Statistics of Indigo

```
Start at: 2018-10-02 13:25:20
End at: 2018-10-02 13:25:51
Local clock offset: -7.083 ms
Remote clock offset: -0.584 ms

# Below is generated by plot.py at 2018-10-02 15:10:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.09 Mbit/s
95th percentile per-packet one-way delay: 5.231 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.09 Mbit/s
95th percentile per-packet one-way delay: 5.231 ms
Loss rate: 0.02%
```

## Run 1: Report of Indigo — Data Link

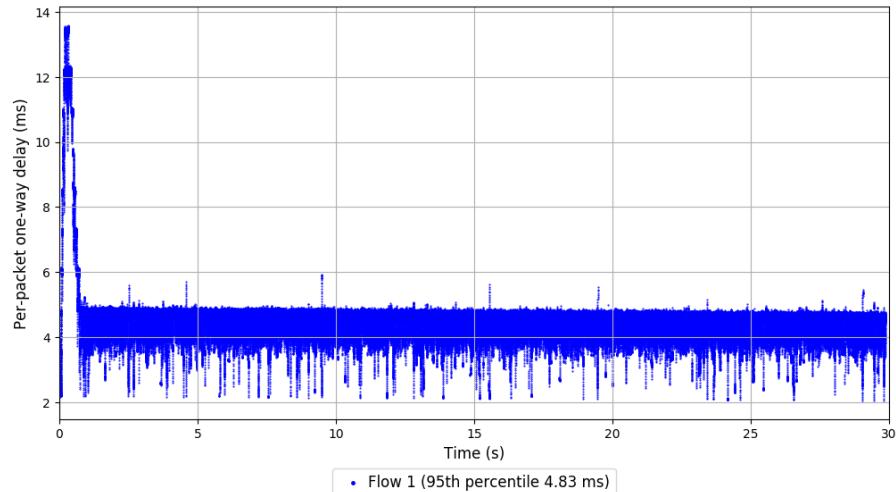
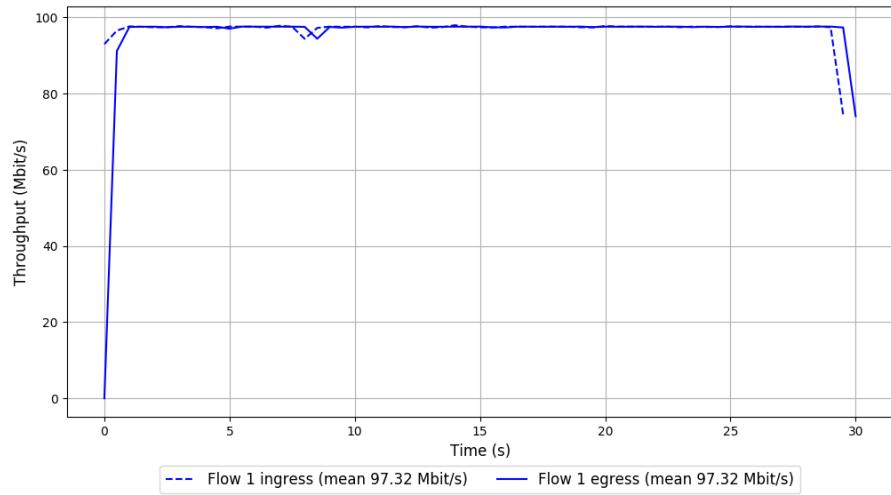


Run 2: Statistics of Indigo

```
Start at: 2018-10-02 13:45:43
End at: 2018-10-02 13:46:13
Local clock offset: -9.571 ms
Remote clock offset: -0.392 ms

# Below is generated by plot.py at 2018-10-02 15:10:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.32 Mbit/s
95th percentile per-packet one-way delay: 4.832 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.32 Mbit/s
95th percentile per-packet one-way delay: 4.832 ms
Loss rate: 0.02%
```

## Run 2: Report of Indigo — Data Link

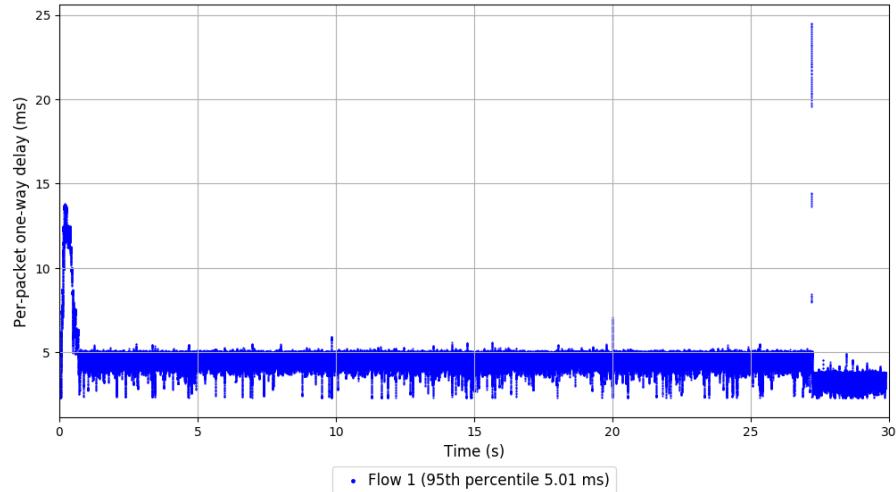
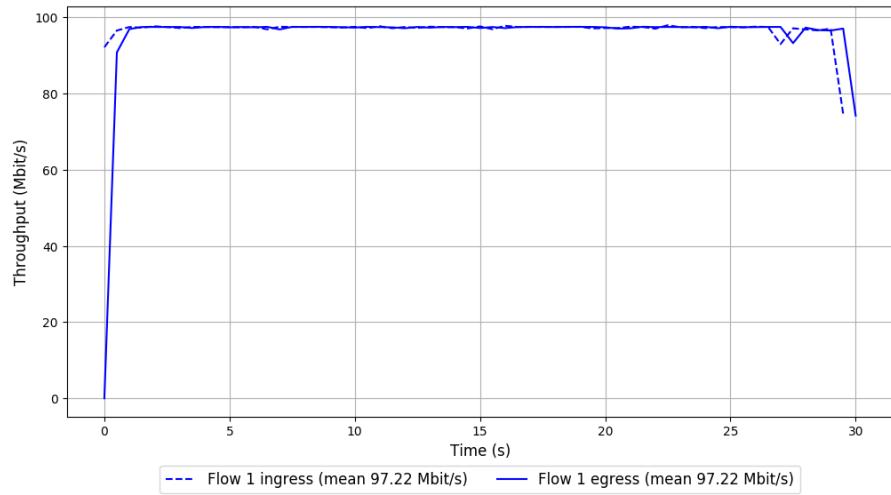


Run 3: Statistics of Indigo

```
Start at: 2018-10-02 14:06:05
End at: 2018-10-02 14:06:35
Local clock offset: -7.225 ms
Remote clock offset: -0.177 ms

# Below is generated by plot.py at 2018-10-02 15:10:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.22 Mbit/s
95th percentile per-packet one-way delay: 5.012 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.22 Mbit/s
95th percentile per-packet one-way delay: 5.012 ms
Loss rate: 0.02%
```

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

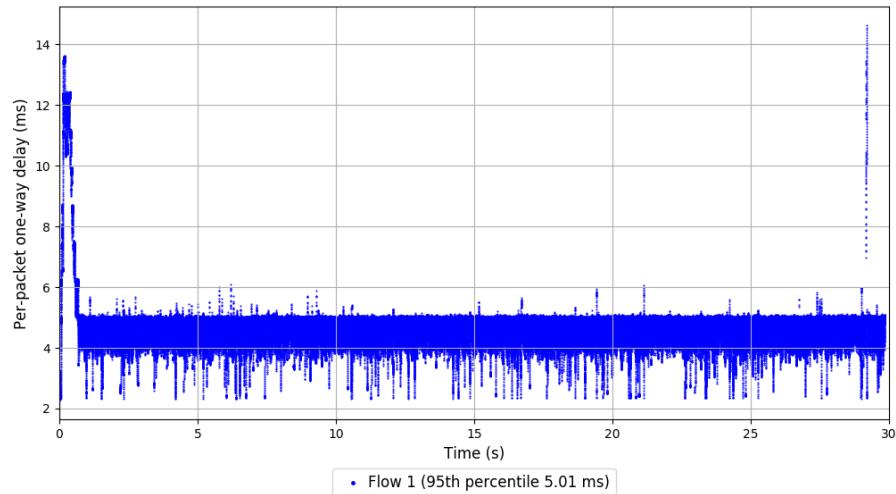
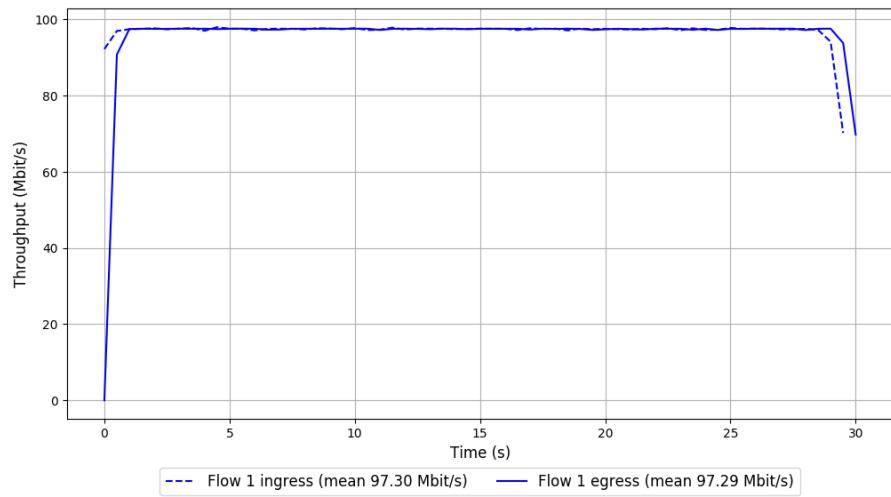


Run 4: Statistics of Indigo

```
Start at: 2018-10-02 14:26:27
End at: 2018-10-02 14:26:57
Local clock offset: -7.703 ms
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2018-10-02 15:10:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.29 Mbit/s
95th percentile per-packet one-way delay: 5.015 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.29 Mbit/s
95th percentile per-packet one-way delay: 5.015 ms
Loss rate: 0.02%
```

## Run 4: Report of Indigo — Data Link

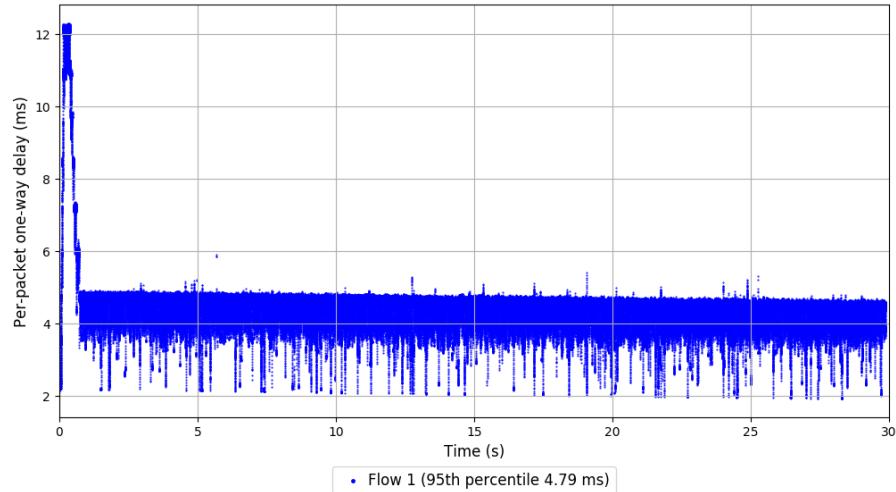
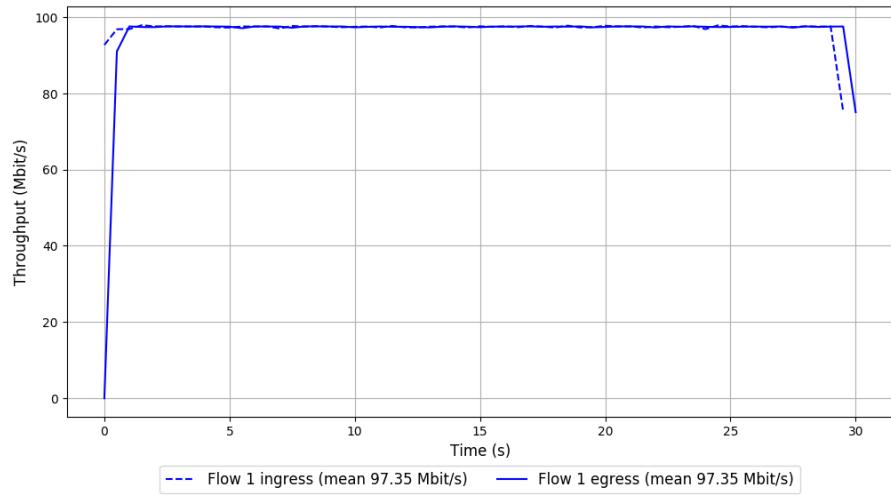


Run 5: Statistics of Indigo

```
Start at: 2018-10-02 14:46:50
End at: 2018-10-02 14:47:20
Local clock offset: -7.516 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2018-10-02 15:10:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.35 Mbit/s
95th percentile per-packet one-way delay: 4.786 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.35 Mbit/s
95th percentile per-packet one-way delay: 4.786 ms
Loss rate: 0.02%
```

## Run 5: Report of Indigo — Data Link

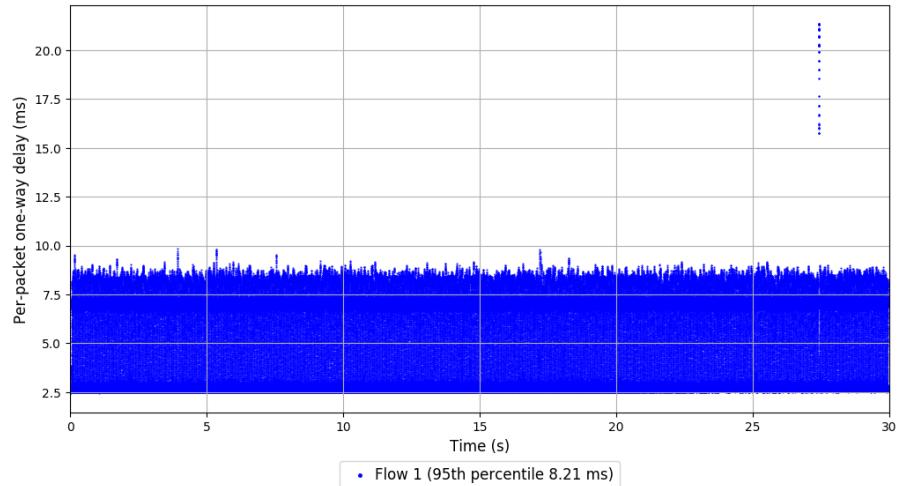
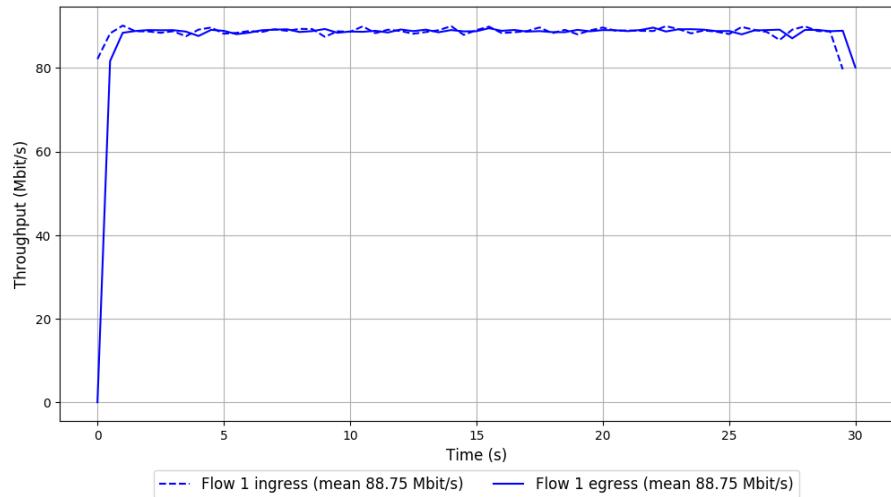


```
Run 1: Statistics of Indigo-96d2da3
```

```
Start at: 2018-10-02 13:41:09
End at: 2018-10-02 13:41:39
Local clock offset: -9.187 ms
Remote clock offset: -0.531 ms

# Below is generated by plot.py at 2018-10-02 15:10:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.75 Mbit/s
95th percentile per-packet one-way delay: 8.210 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 88.75 Mbit/s
95th percentile per-packet one-way delay: 8.210 ms
Loss rate: 0.01%
```

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

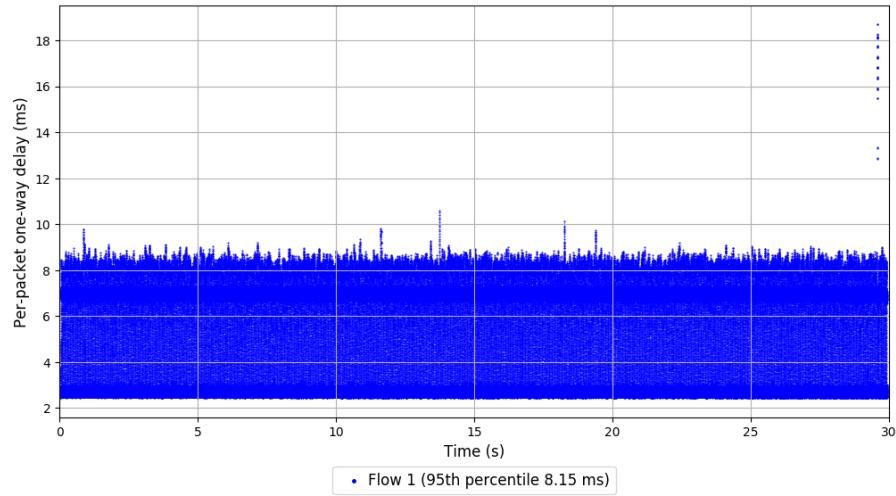
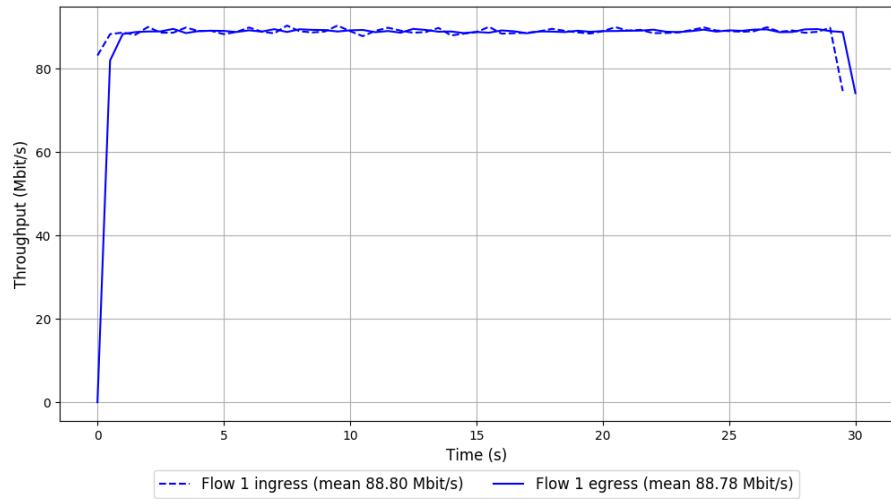


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-10-02 14:01:31
End at: 2018-10-02 14:02:01
Local clock offset: -7.295 ms
Remote clock offset: -0.316 ms

# Below is generated by plot.py at 2018-10-02 15:10:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.78 Mbit/s
95th percentile per-packet one-way delay: 8.147 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 88.78 Mbit/s
95th percentile per-packet one-way delay: 8.147 ms
Loss rate: 0.04%
```

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

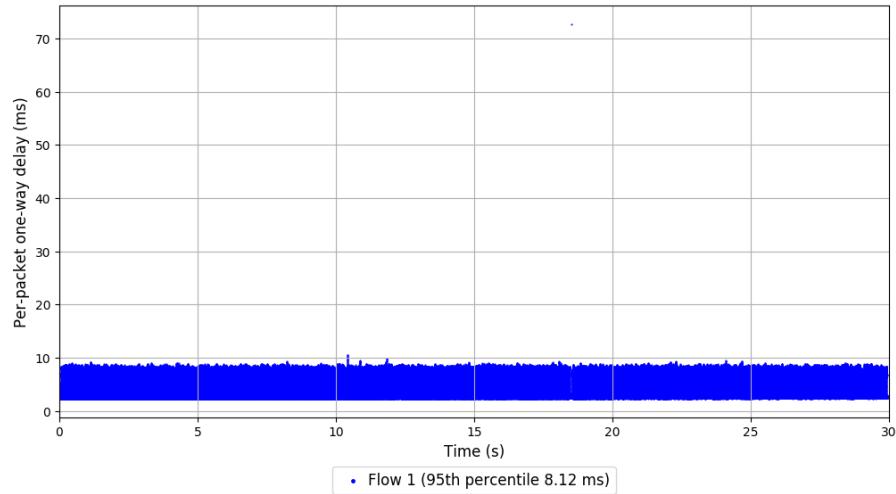
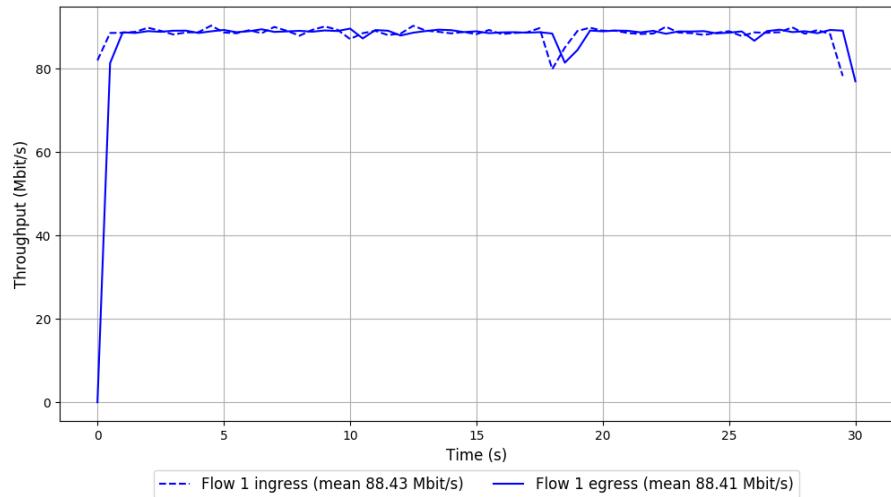


Run 3: Statistics of Indigo-96d2da3

```
Start at: 2018-10-02 14:21:54
End at: 2018-10-02 14:22:24
Local clock offset: -7.49 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2018-10-02 15:11:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.41 Mbit/s
95th percentile per-packet one-way delay: 8.120 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 88.41 Mbit/s
95th percentile per-packet one-way delay: 8.120 ms
Loss rate: 0.03%
```

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

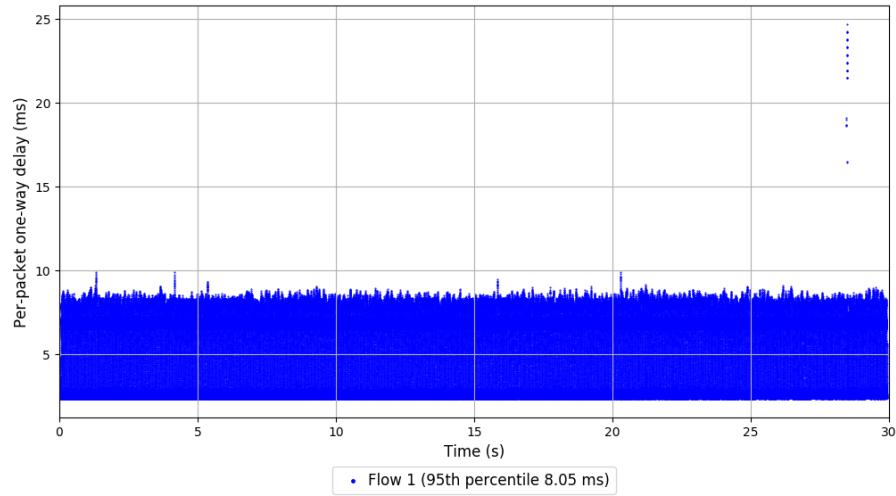
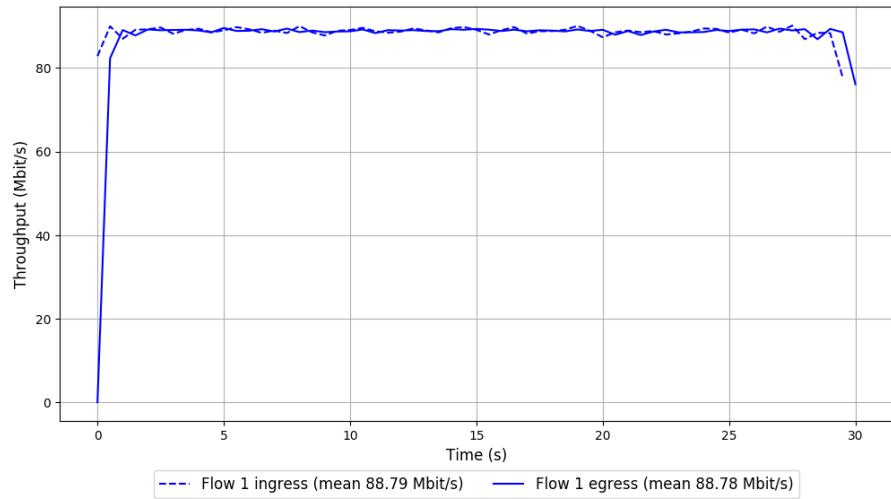


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-10-02 14:42:16
End at: 2018-10-02 14:42:46
Local clock offset: -8.155 ms
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2018-10-02 15:11:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.78 Mbit/s
95th percentile per-packet one-way delay: 8.053 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 88.78 Mbit/s
95th percentile per-packet one-way delay: 8.053 ms
Loss rate: 0.03%
```

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

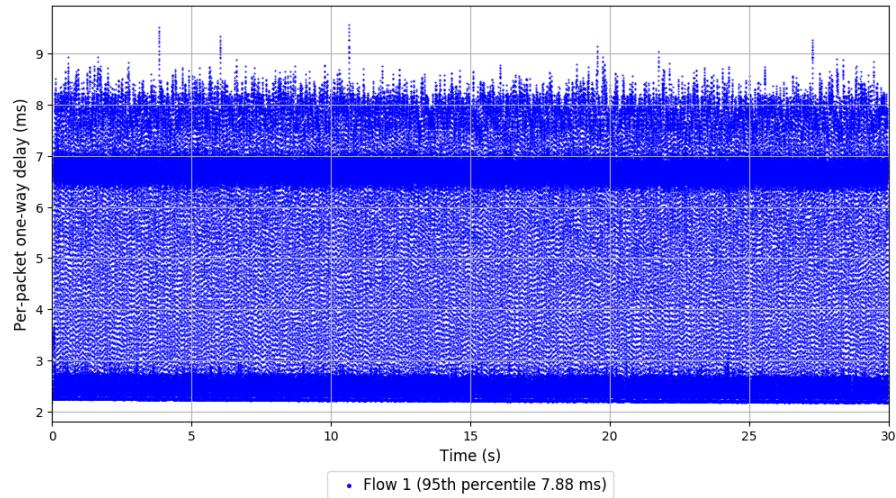
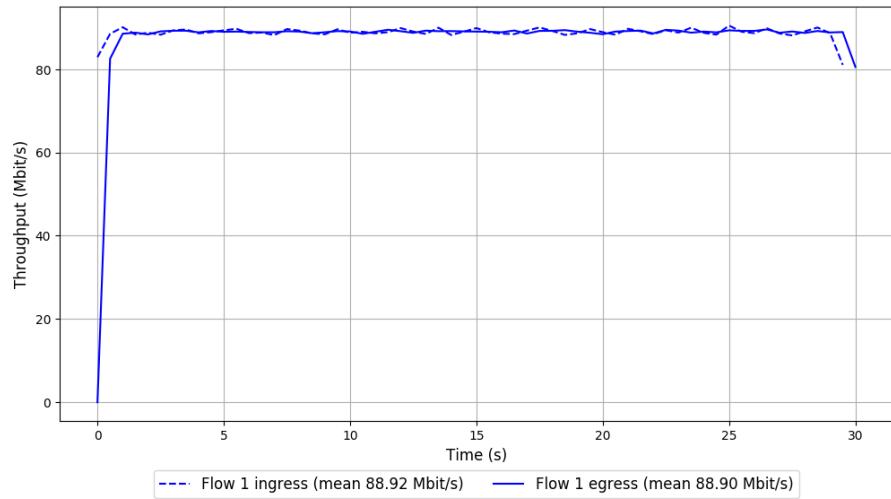


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-10-02 15:02:39
End at: 2018-10-02 15:03:09
Local clock offset: -2.769 ms
Remote clock offset: 0.151 ms

# Below is generated by plot.py at 2018-10-02 15:11:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.90 Mbit/s
95th percentile per-packet one-way delay: 7.883 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 88.90 Mbit/s
95th percentile per-packet one-way delay: 7.883 ms
Loss rate: 0.03%
```

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

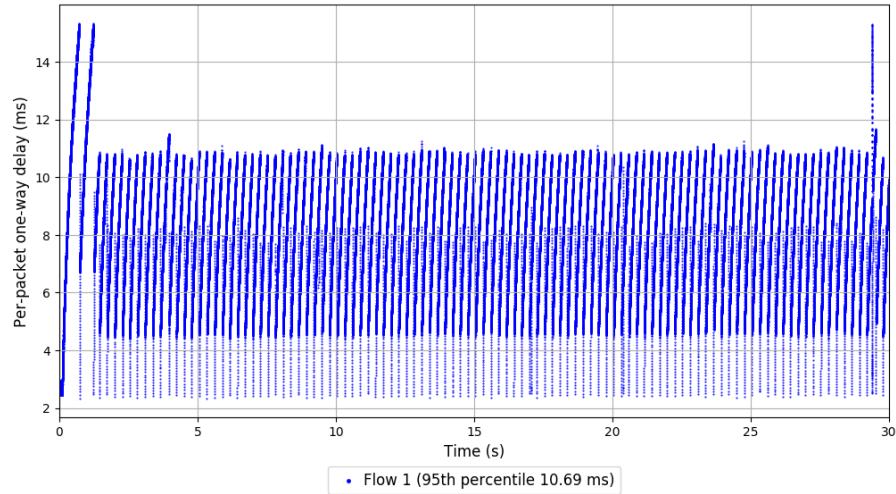
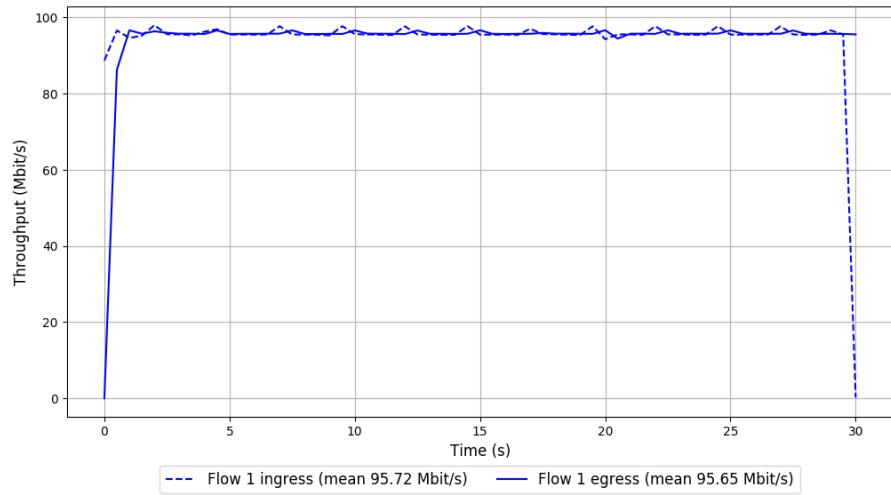


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-10-02 13:37:42
End at: 2018-10-02 13:38:12
Local clock offset: -8.85 ms
Remote clock offset: -0.537 ms

# Below is generated by plot.py at 2018-10-02 15:11:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 10.691 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 10.691 ms
Loss rate: 0.08%
```

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

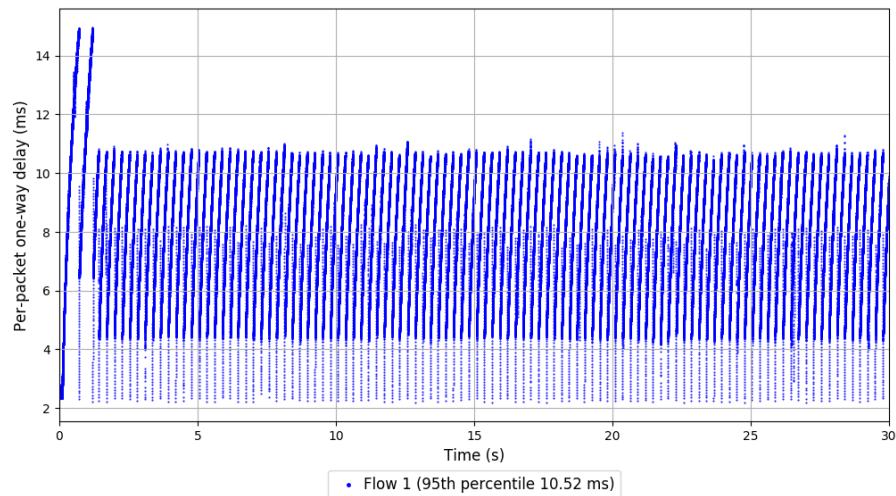
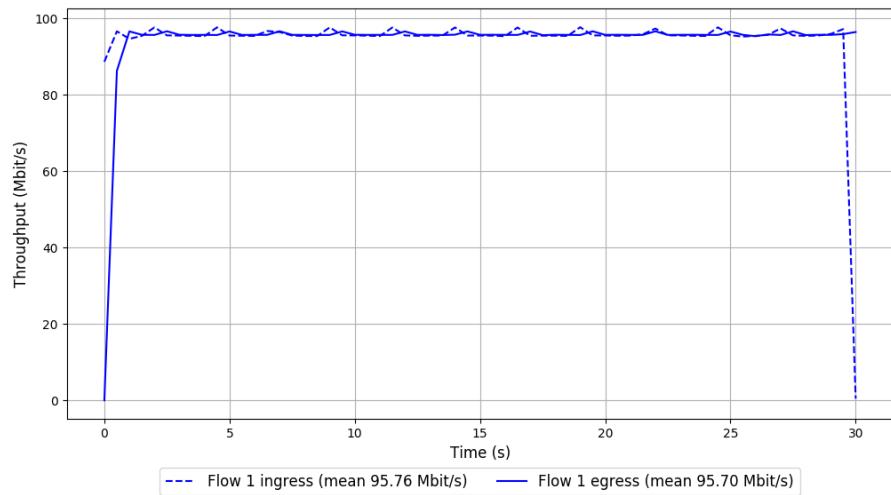


Run 2: Statistics of LEDBAT

```
Start at: 2018-10-02 13:58:04
End at: 2018-10-02 13:58:34
Local clock offset: -7.464 ms
Remote clock offset: -0.23 ms

# Below is generated by plot.py at 2018-10-02 15:11:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.70 Mbit/s
95th percentile per-packet one-way delay: 10.517 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 95.70 Mbit/s
95th percentile per-packet one-way delay: 10.517 ms
Loss rate: 0.08%
```

## Run 2: Report of LEDBAT — Data Link

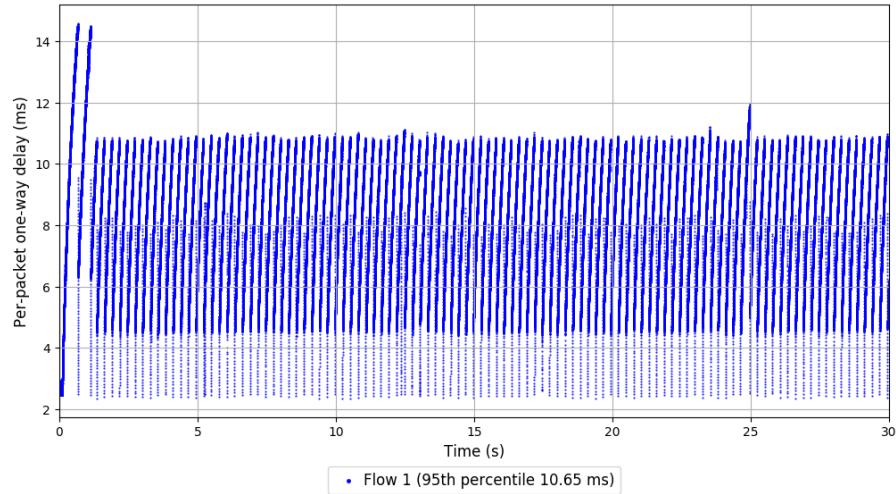
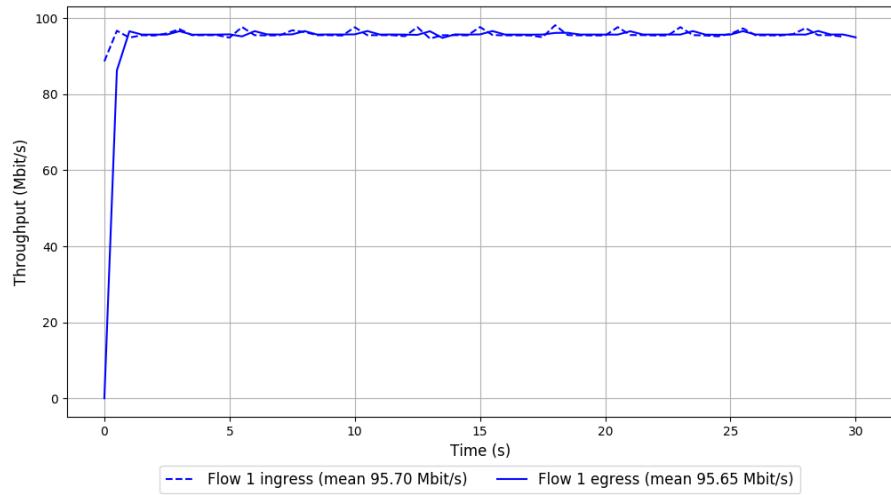


Run 3: Statistics of LEDBAT

```
Start at: 2018-10-02 14:18:27
End at: 2018-10-02 14:18:57
Local clock offset: -7.313 ms
Remote clock offset: -0.173 ms

# Below is generated by plot.py at 2018-10-02 15:12:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 10.649 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 10.649 ms
Loss rate: 0.07%
```

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

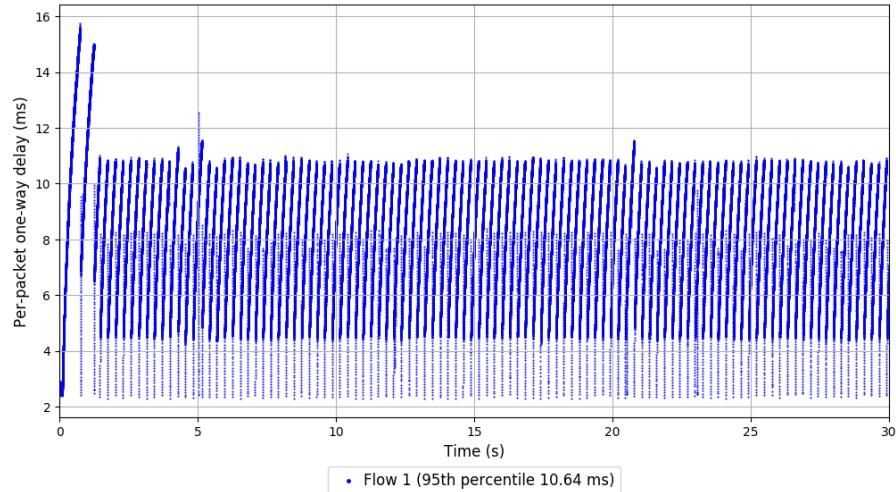
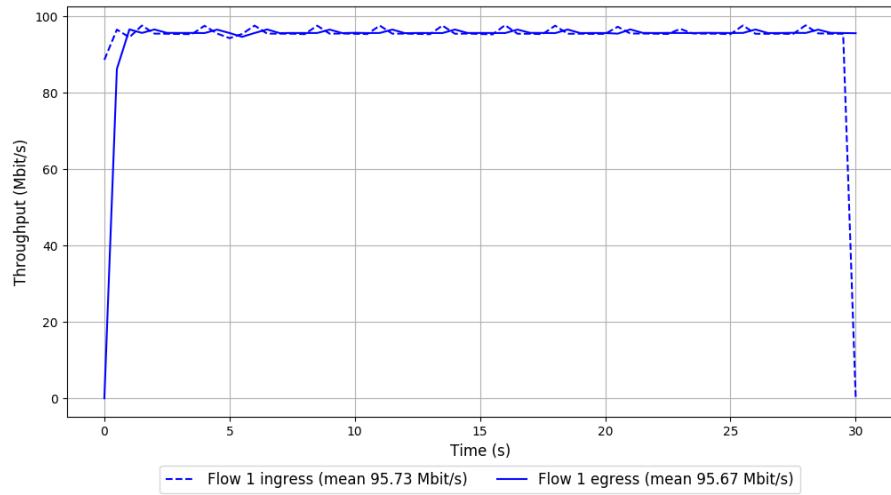


Run 4: Statistics of LEDBAT

```
Start at: 2018-10-02 14:38:49
End at: 2018-10-02 14:39:19
Local clock offset: -7.985 ms
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2018-10-02 15:12:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 10.640 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 10.640 ms
Loss rate: 0.08%
```

## Run 4: Report of LEDBAT — Data Link

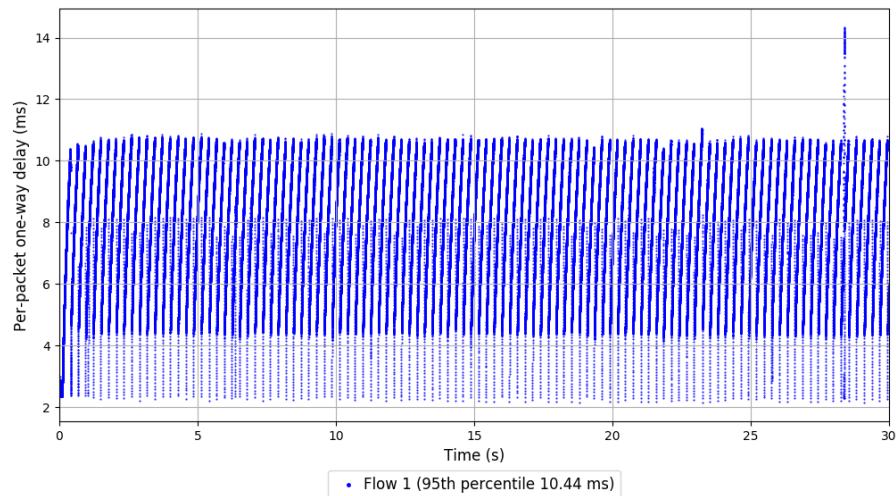
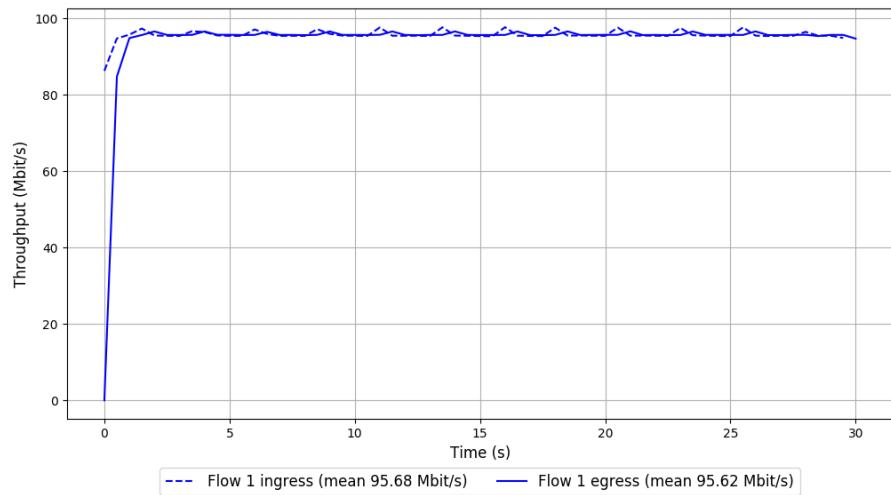


Run 5: Statistics of LEDBAT

```
Start at: 2018-10-02 14:59:12
End at: 2018-10-02 14:59:42
Local clock offset: -3.27 ms
Remote clock offset: 0.056 ms

# Below is generated by plot.py at 2018-10-02 15:12:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.62 Mbit/s
95th percentile per-packet one-way delay: 10.438 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 95.62 Mbit/s
95th percentile per-packet one-way delay: 10.438 ms
Loss rate: 0.08%
```

## Run 5: Report of LEDBAT — Data Link

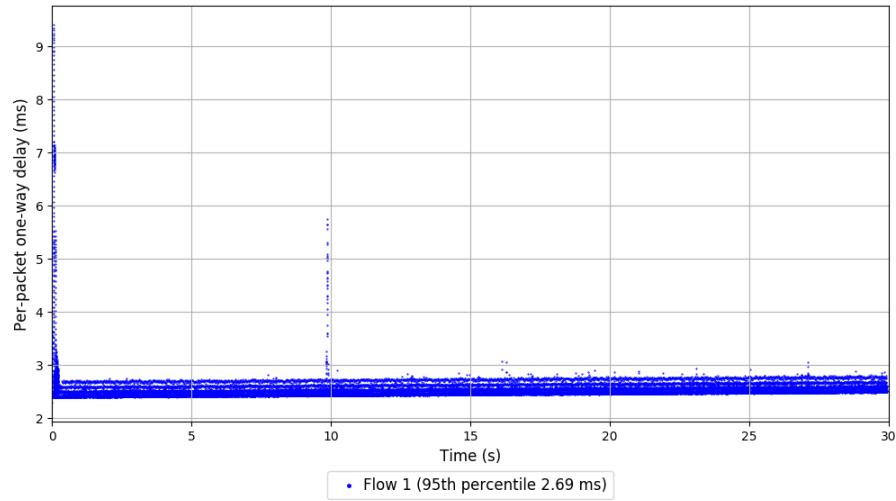
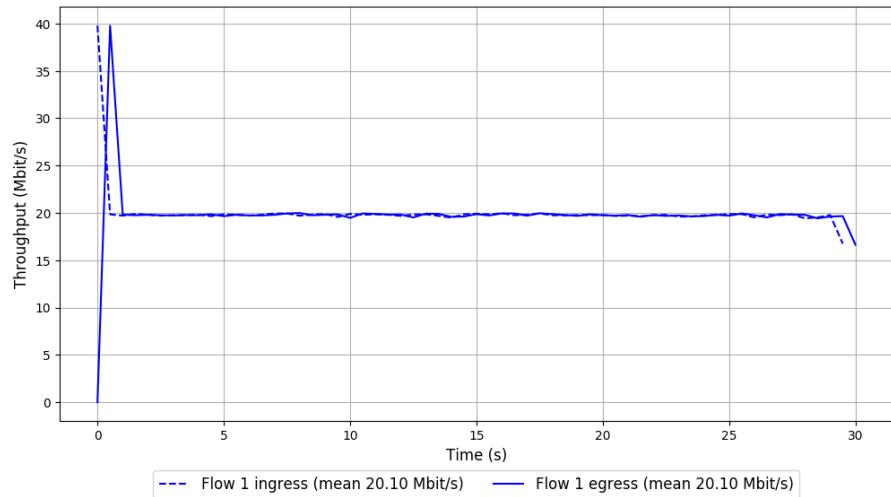


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-10-02 13:26:30
End at: 2018-10-02 13:27:00
Local clock offset: -7.384 ms
Remote clock offset: -0.557 ms

# Below is generated by plot.py at 2018-10-02 15:12:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 20.10 Mbit/s
95th percentile per-packet one-way delay: 2.692 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 20.10 Mbit/s
95th percentile per-packet one-way delay: 2.692 ms
Loss rate: 0.02%
```

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

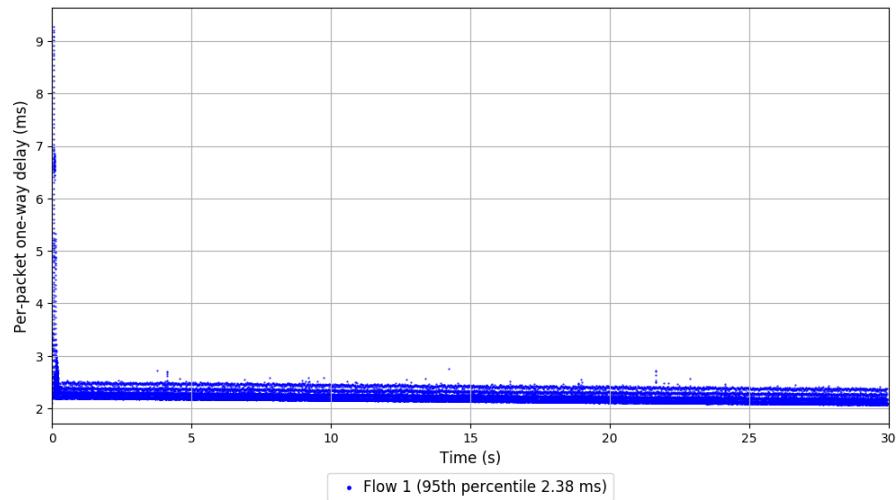
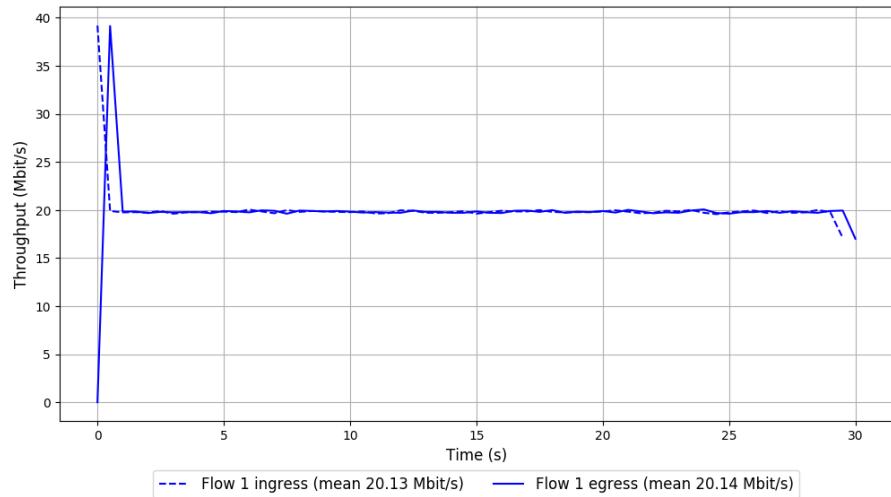


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-10-02 13:46:52
End at: 2018-10-02 13:47:22
Local clock offset: -9.209 ms
Remote clock offset: -0.361 ms

# Below is generated by plot.py at 2018-10-02 15:12:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 20.14 Mbit/s
95th percentile per-packet one-way delay: 2.383 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 20.14 Mbit/s
95th percentile per-packet one-way delay: 2.383 ms
Loss rate: 0.01%
```

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

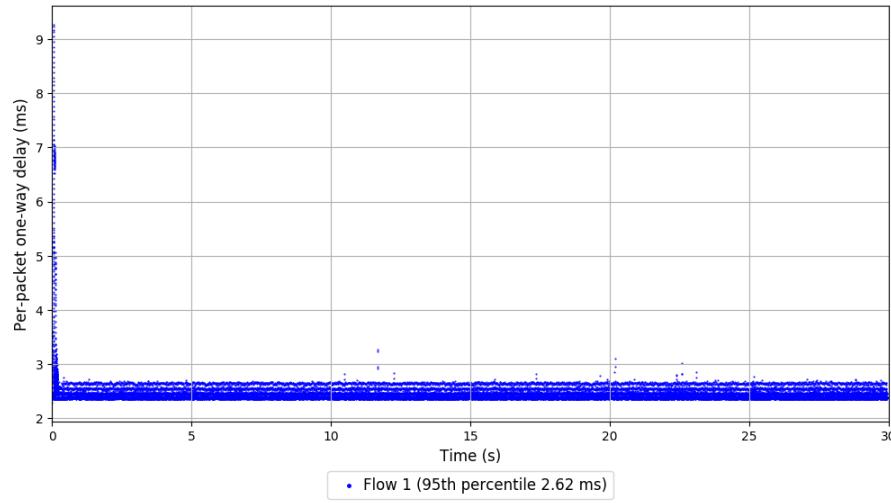
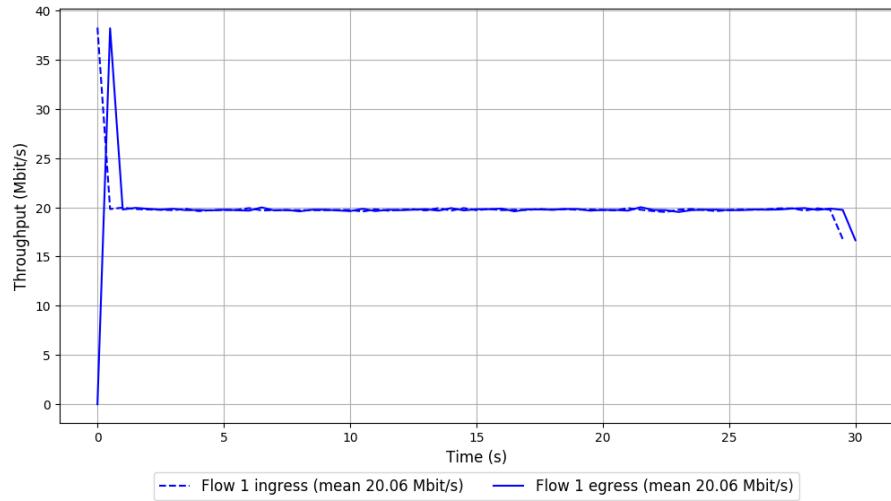


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-10-02 14:07:14
End at: 2018-10-02 14:07:44
Local clock offset: -7.163 ms
Remote clock offset: -0.153 ms

# Below is generated by plot.py at 2018-10-02 15:12:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 20.06 Mbit/s
95th percentile per-packet one-way delay: 2.615 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 20.06 Mbit/s
95th percentile per-packet one-way delay: 2.615 ms
Loss rate: 0.02%
```

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

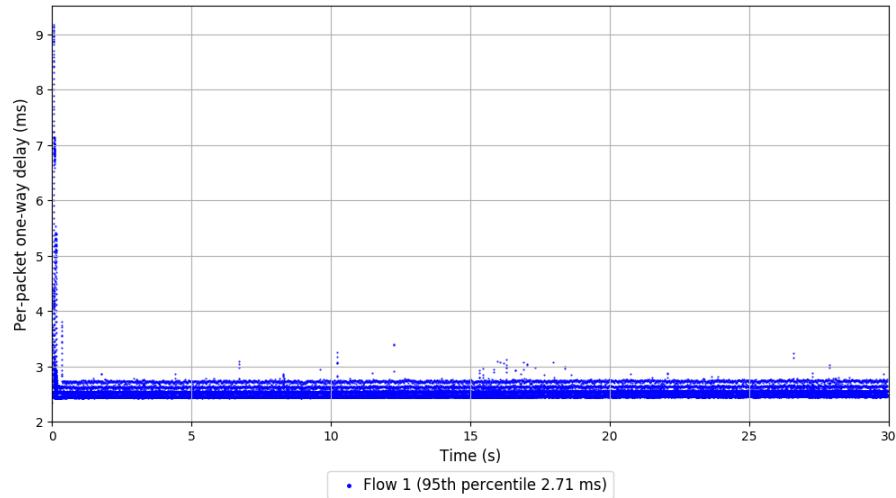
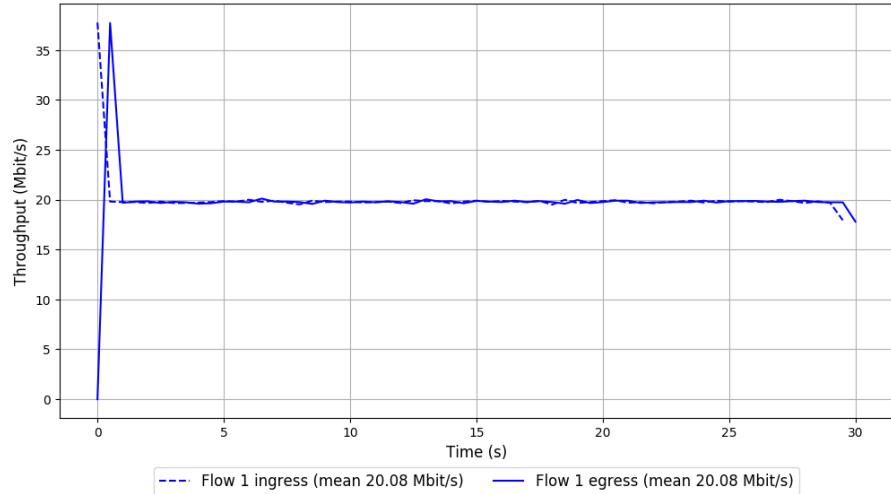


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-10-02 14:27:37
End at: 2018-10-02 14:28:07
Local clock offset: -7.677 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2018-10-02 15:12:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 20.08 Mbit/s
95th percentile per-packet one-way delay: 2.706 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 20.08 Mbit/s
95th percentile per-packet one-way delay: 2.706 ms
Loss rate: 0.02%
```

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

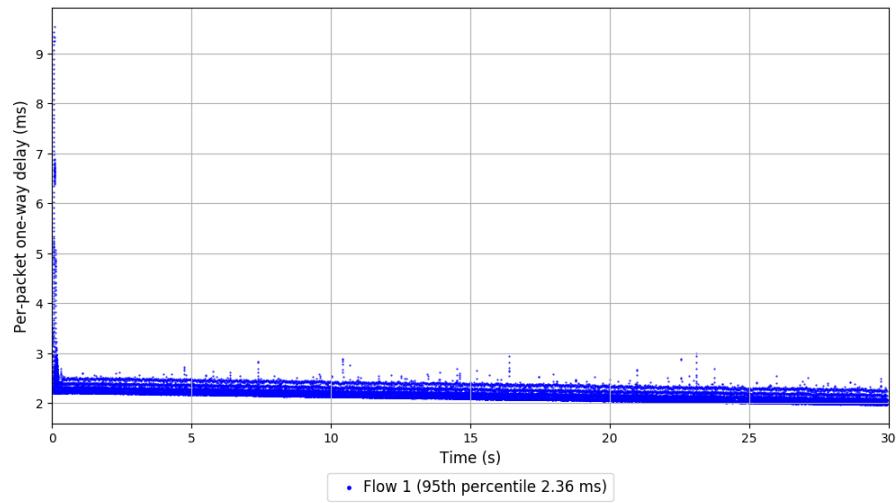
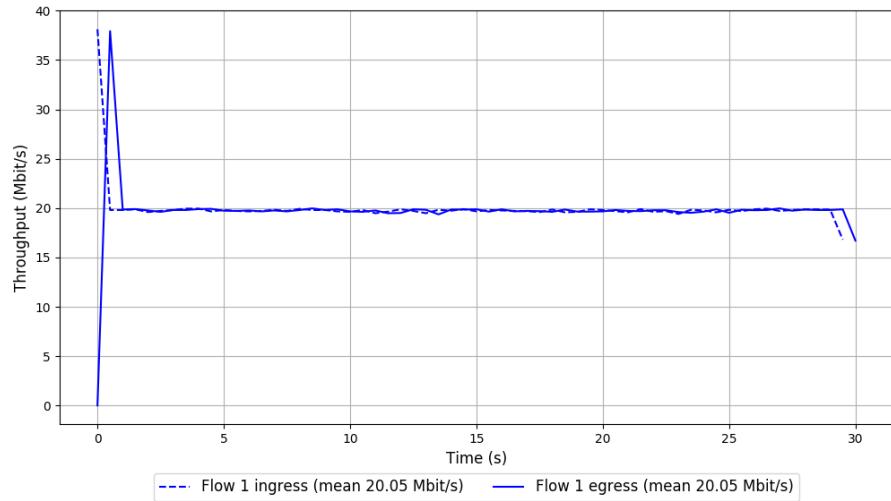


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-10-02 14:47:59
End at: 2018-10-02 14:48:29
Local clock offset: -6.85 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2018-10-02 15:12:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 20.05 Mbit/s
95th percentile per-packet one-way delay: 2.364 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 20.05 Mbit/s
95th percentile per-packet one-way delay: 2.364 ms
Loss rate: 0.02%
```

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

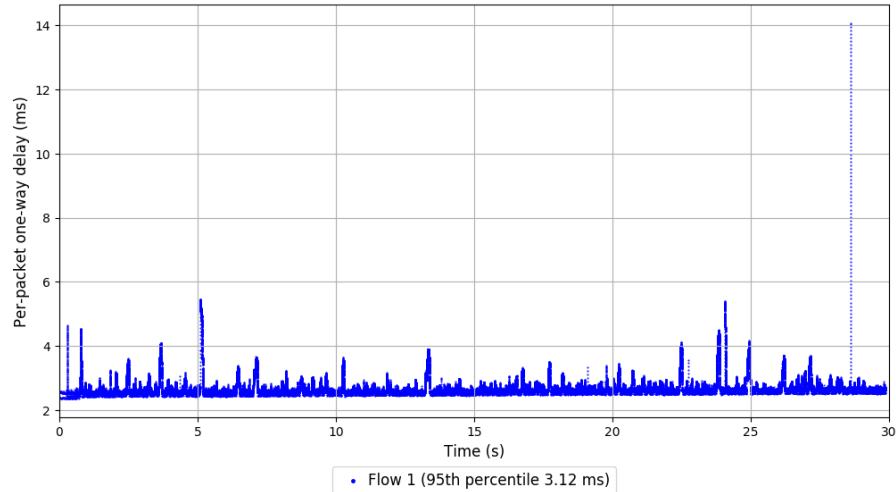
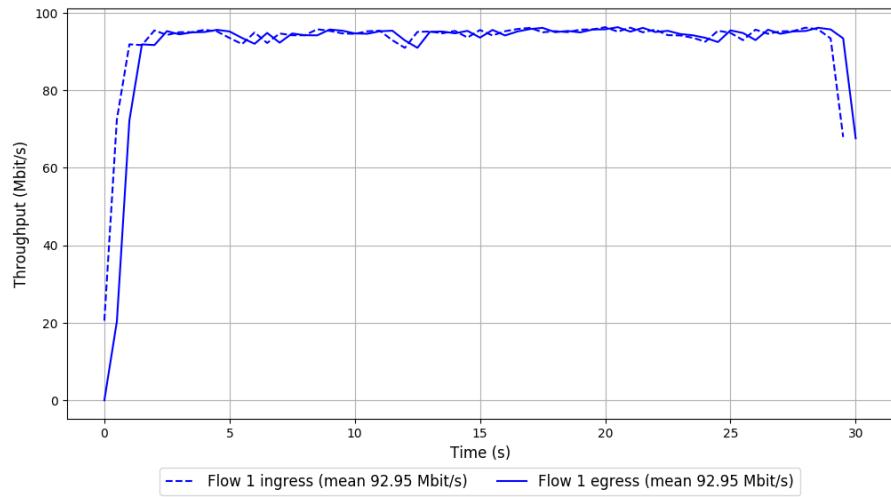


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-10-02 13:24:14
End at: 2018-10-02 13:24:44
Local clock offset: -6.822 ms
Remote clock offset: -0.597 ms

# Below is generated by plot.py at 2018-10-02 15:12:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.95 Mbit/s
95th percentile per-packet one-way delay: 3.116 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 92.95 Mbit/s
95th percentile per-packet one-way delay: 3.116 ms
Loss rate: 0.02%
```

Run 1: Report of PCC-Allegro — Data Link

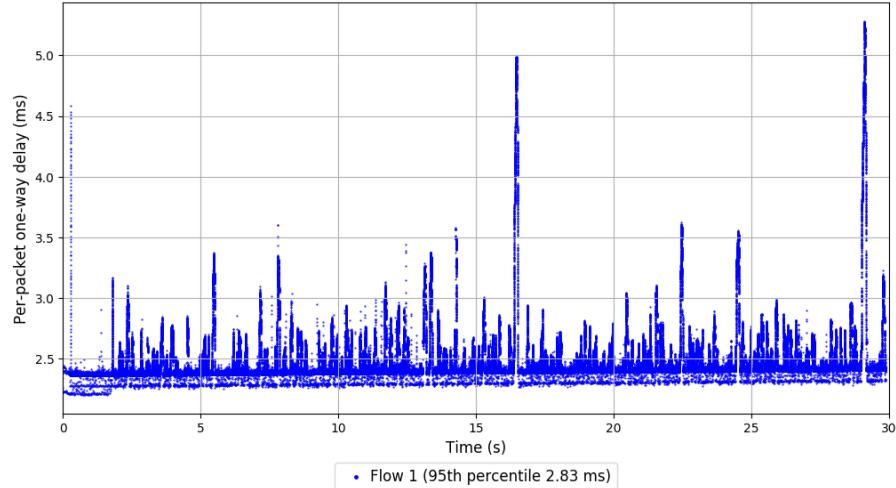
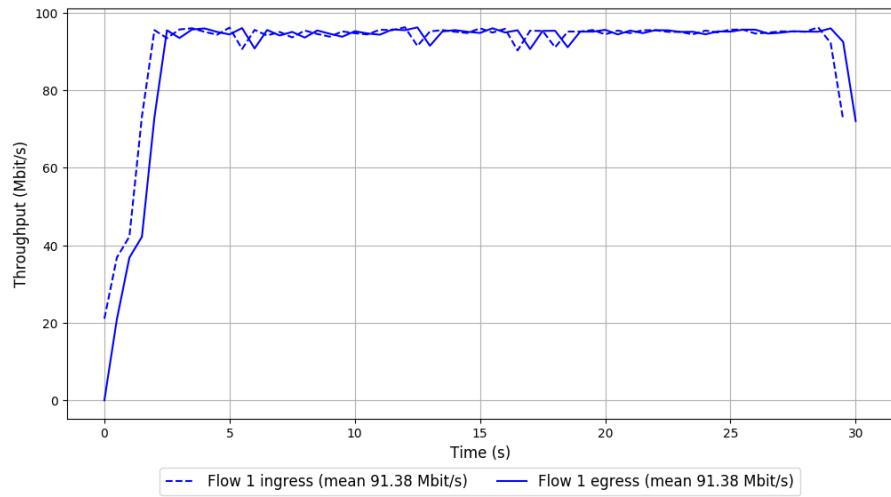


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-10-02 13:44:36
End at: 2018-10-02 13:45:06
Local clock offset: -9.474 ms
Remote clock offset: -0.386 ms

# Below is generated by plot.py at 2018-10-02 15:12:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.38 Mbit/s
95th percentile per-packet one-way delay: 2.830 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 91.38 Mbit/s
95th percentile per-packet one-way delay: 2.830 ms
Loss rate: 0.01%
```

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

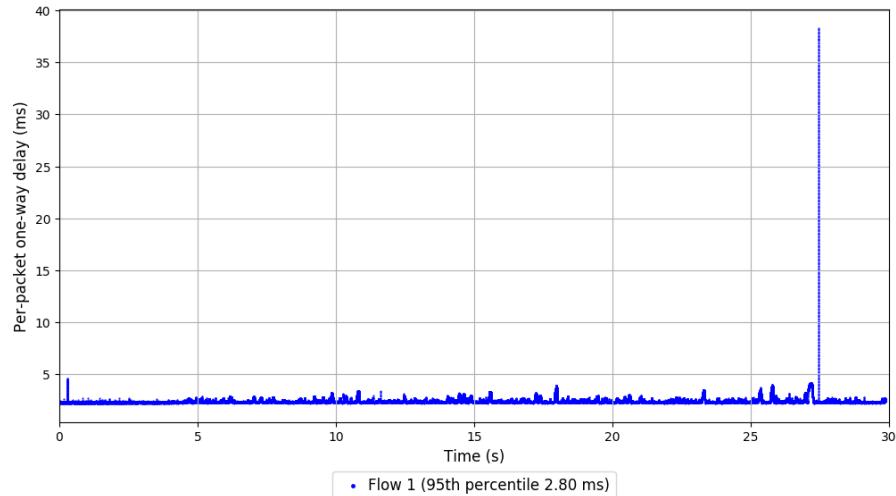
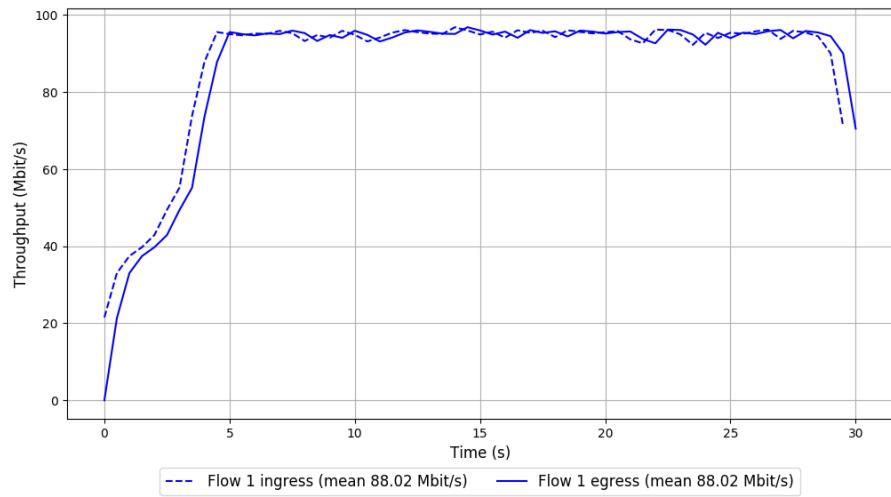


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-10-02 14:04:58
End at: 2018-10-02 14:05:28
Local clock offset: -7.192 ms
Remote clock offset: -0.159 ms

# Below is generated by plot.py at 2018-10-02 15:12:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.02 Mbit/s
95th percentile per-packet one-way delay: 2.800 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 88.02 Mbit/s
95th percentile per-packet one-way delay: 2.800 ms
Loss rate: 0.02%
```

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

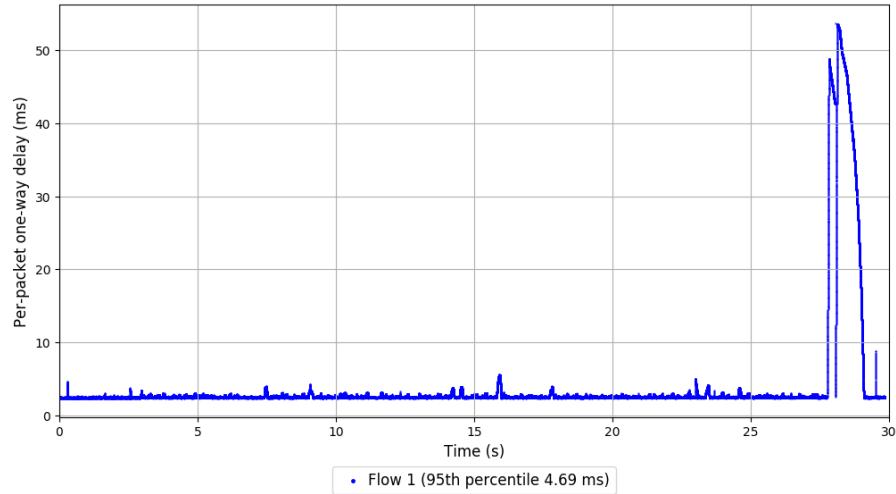
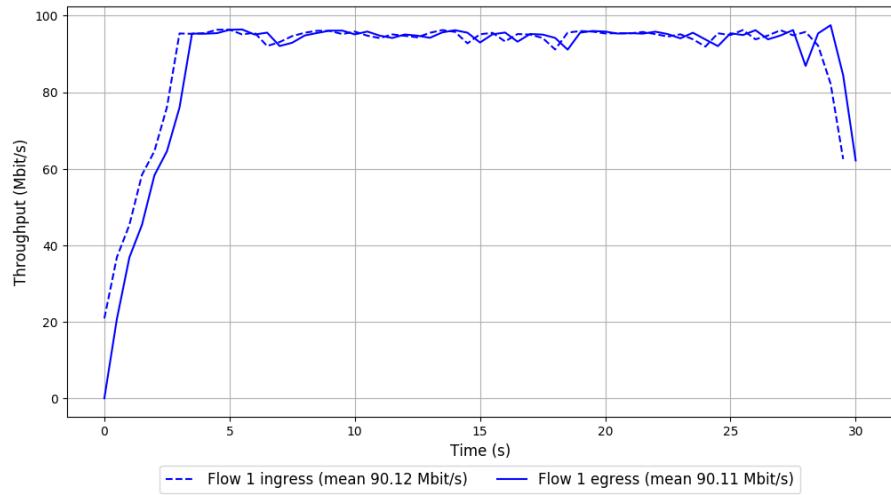


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-10-02 14:25:20
End at: 2018-10-02 14:25:50
Local clock offset: -7.605 ms
Remote clock offset: -0.149 ms

# Below is generated by plot.py at 2018-10-02 15:12:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.11 Mbit/s
95th percentile per-packet one-way delay: 4.686 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 90.11 Mbit/s
95th percentile per-packet one-way delay: 4.686 ms
Loss rate: 0.03%
```

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

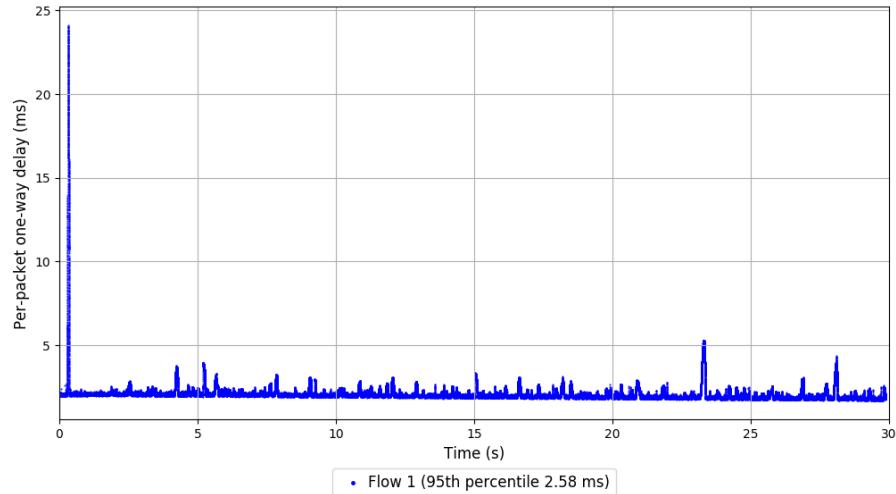
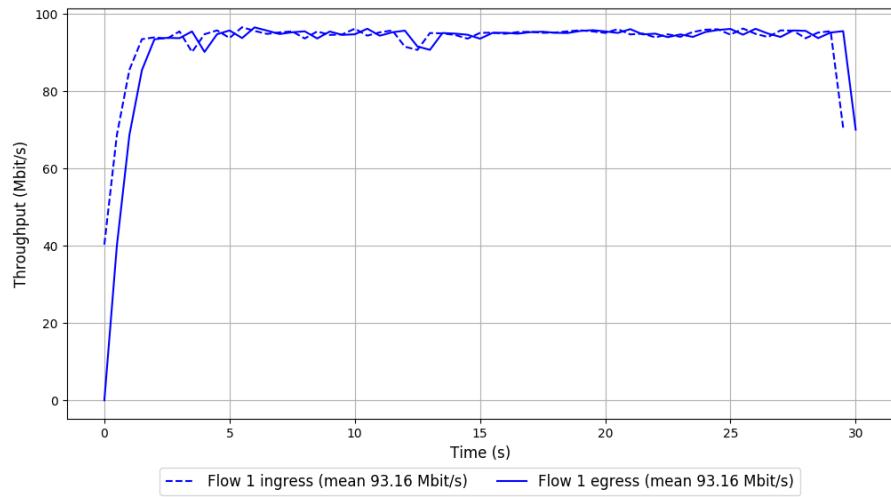


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-10-02 14:45:43
End at: 2018-10-02 14:46:13
Local clock offset: -8.171 ms
Remote clock offset: 0.027 ms

# Below is generated by plot.py at 2018-10-02 15:12:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.16 Mbit/s
95th percentile per-packet one-way delay: 2.579 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 93.16 Mbit/s
95th percentile per-packet one-way delay: 2.579 ms
Loss rate: 0.02%
```

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

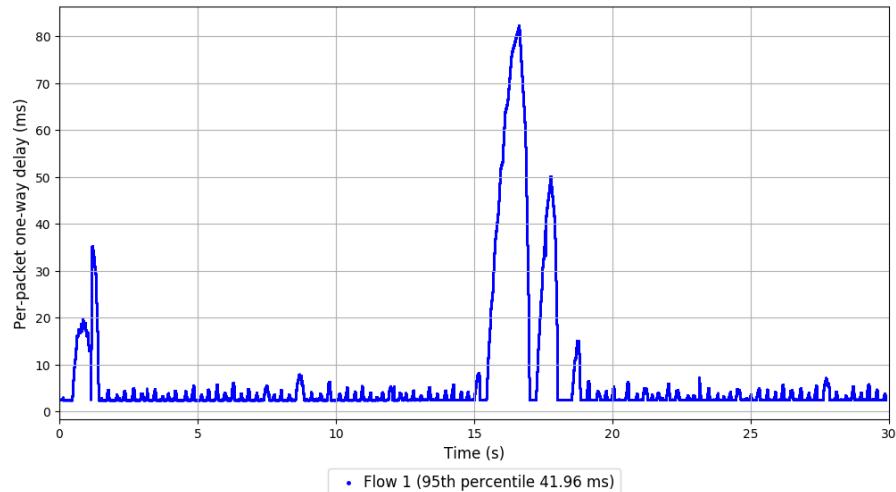
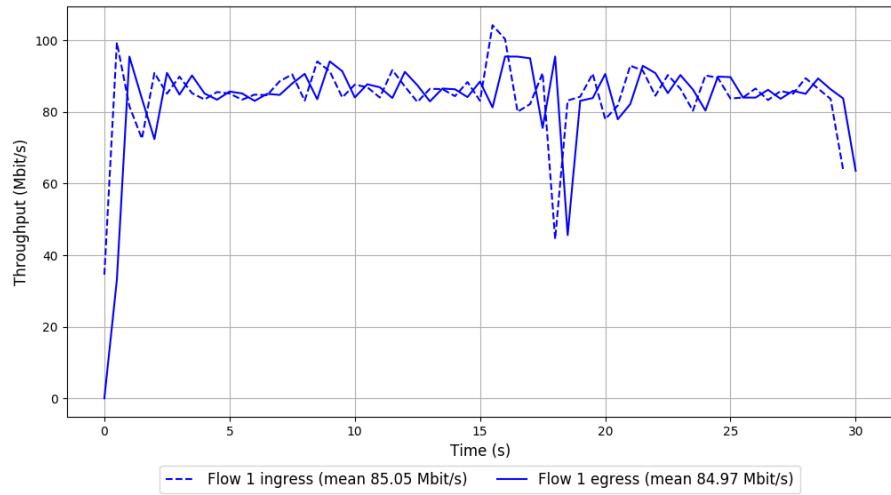


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-10-02 13:33:09
End at: 2018-10-02 13:33:39
Local clock offset: -8.365 ms
Remote clock offset: -0.577 ms

# Below is generated by plot.py at 2018-10-02 15:13:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.97 Mbit/s
95th percentile per-packet one-way delay: 41.958 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 84.97 Mbit/s
95th percentile per-packet one-way delay: 41.958 ms
Loss rate: 0.11%
```

Run 1: Report of PCC-Expr — Data Link

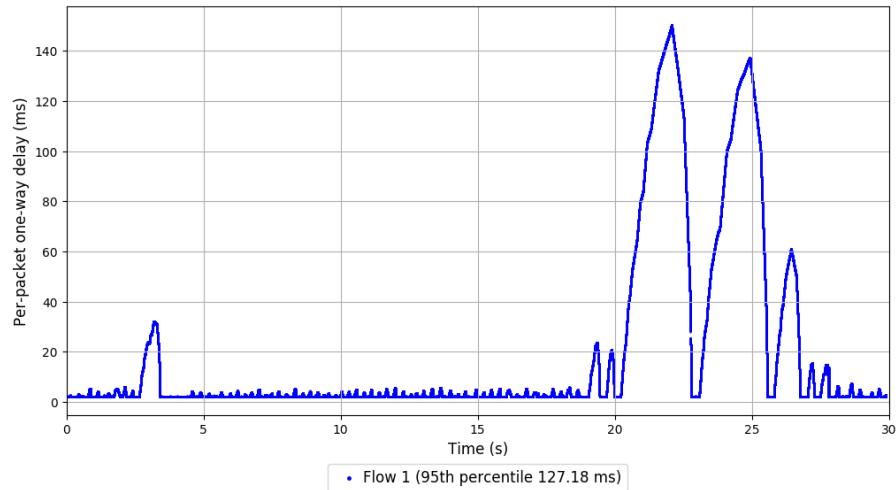
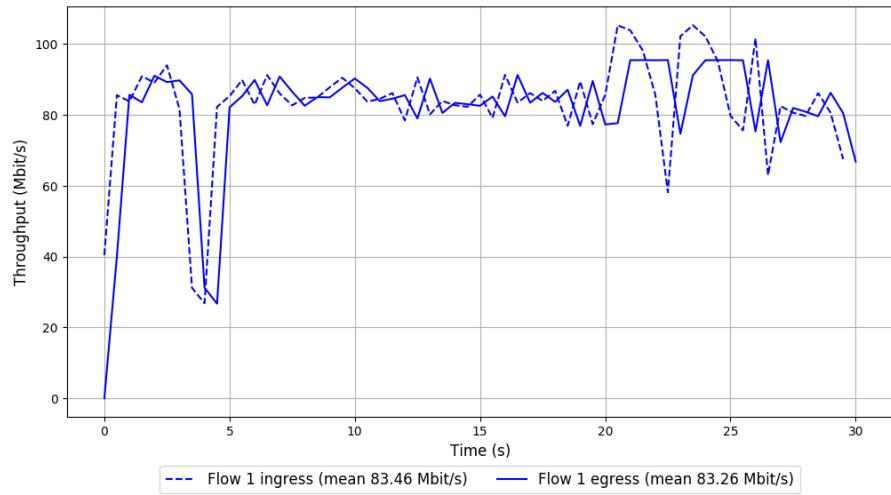


Run 2: Statistics of PCC-Expr

```
Start at: 2018-10-02 13:53:31
End at: 2018-10-02 13:54:01
Local clock offset: -7.97 ms
Remote clock offset: -0.31 ms

# Below is generated by plot.py at 2018-10-02 15:13:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.26 Mbit/s
95th percentile per-packet one-way delay: 127.182 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 83.26 Mbit/s
95th percentile per-packet one-way delay: 127.182 ms
Loss rate: 0.26%
```

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

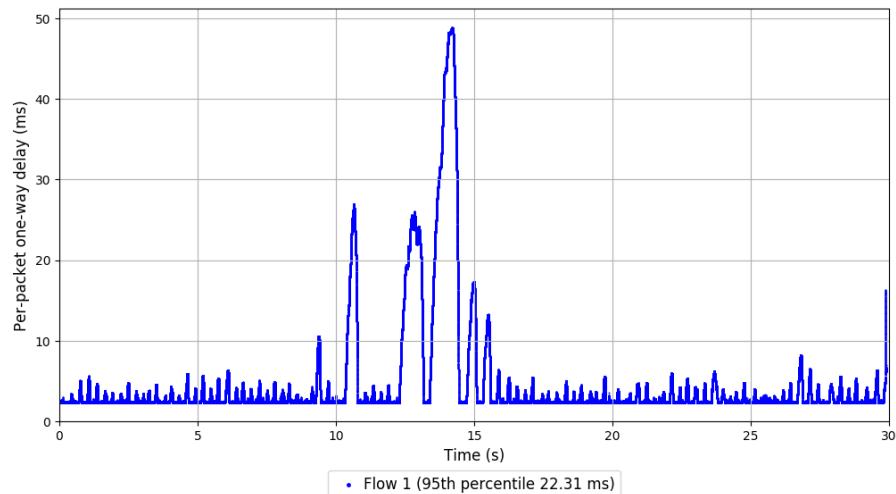
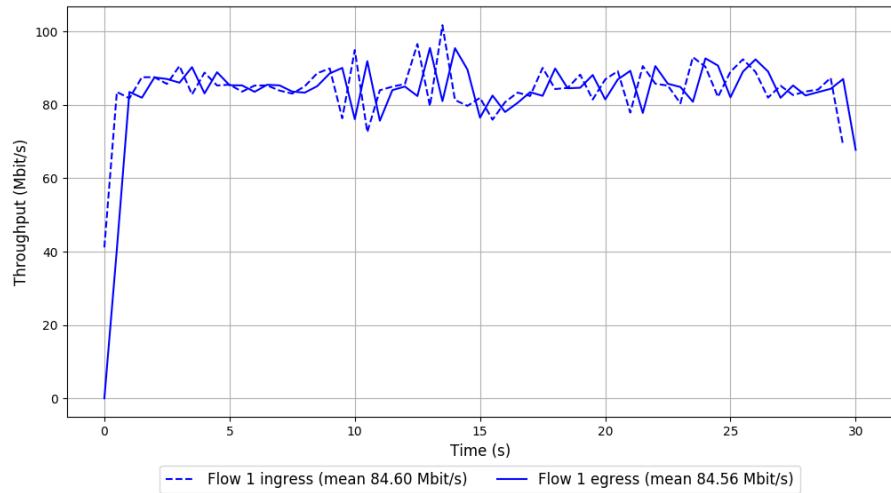


Run 3: Statistics of PCC-Expr

```
Start at: 2018-10-02 14:13:53
End at: 2018-10-02 14:14:23
Local clock offset: -7.132 ms
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2018-10-02 15:14:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.56 Mbit/s
95th percentile per-packet one-way delay: 22.313 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 84.56 Mbit/s
95th percentile per-packet one-way delay: 22.313 ms
Loss rate: 0.07%
```

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

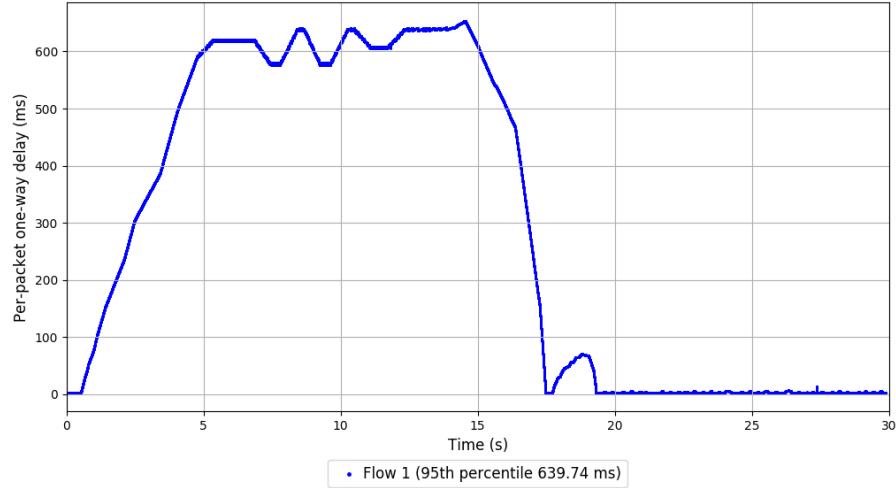
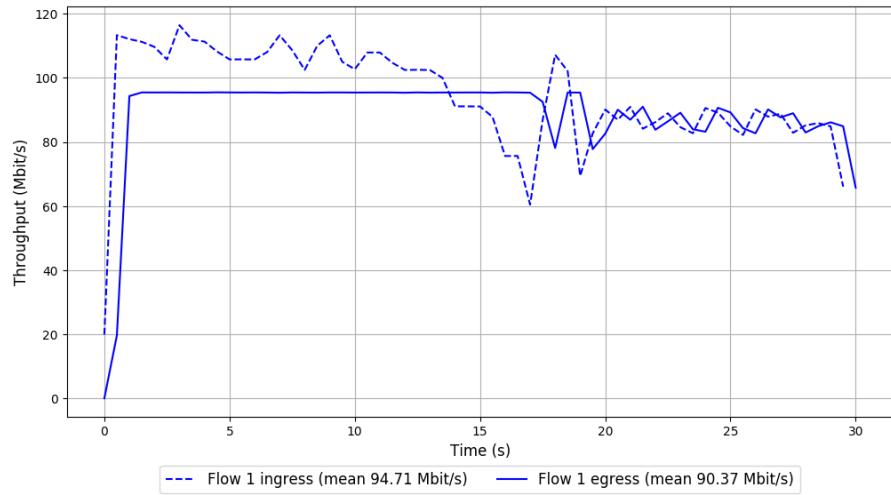


Run 4: Statistics of PCC-Expr

```
Start at: 2018-10-02 14:34:16
End at: 2018-10-02 14:34:46
Local clock offset: -7.876 ms
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2018-10-02 15:14:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.37 Mbit/s
95th percentile per-packet one-way delay: 639.742 ms
Loss rate: 4.60%
-- Flow 1:
Average throughput: 90.37 Mbit/s
95th percentile per-packet one-way delay: 639.742 ms
Loss rate: 4.60%
```

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

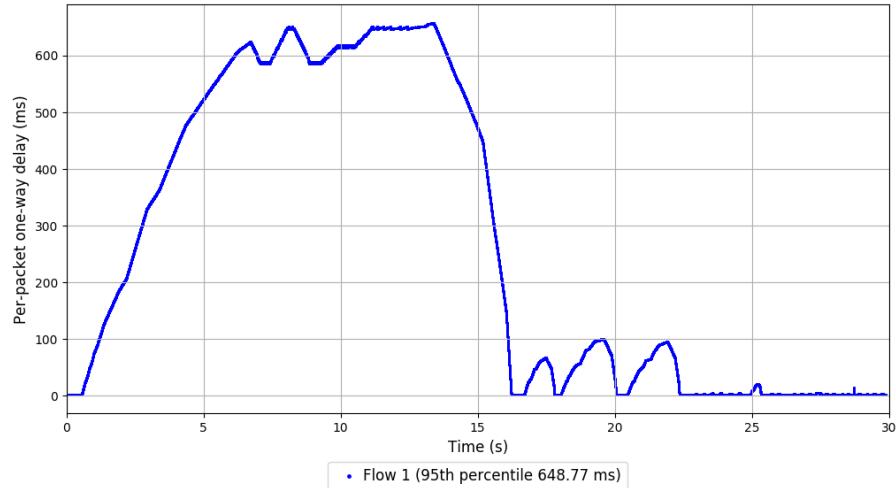
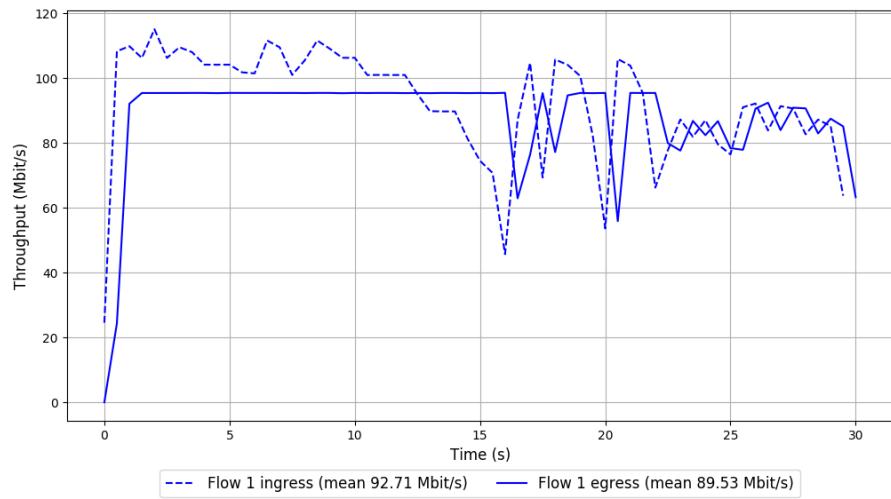


Run 5: Statistics of PCC-Expr

```
Start at: 2018-10-02 14:54:38
End at: 2018-10-02 14:55:08
Local clock offset: -4.31 ms
Remote clock offset: 0.083 ms

# Below is generated by plot.py at 2018-10-02 15:14:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.53 Mbit/s
95th percentile per-packet one-way delay: 648.770 ms
Loss rate: 3.44%
-- Flow 1:
Average throughput: 89.53 Mbit/s
95th percentile per-packet one-way delay: 648.770 ms
Loss rate: 3.44%
```

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

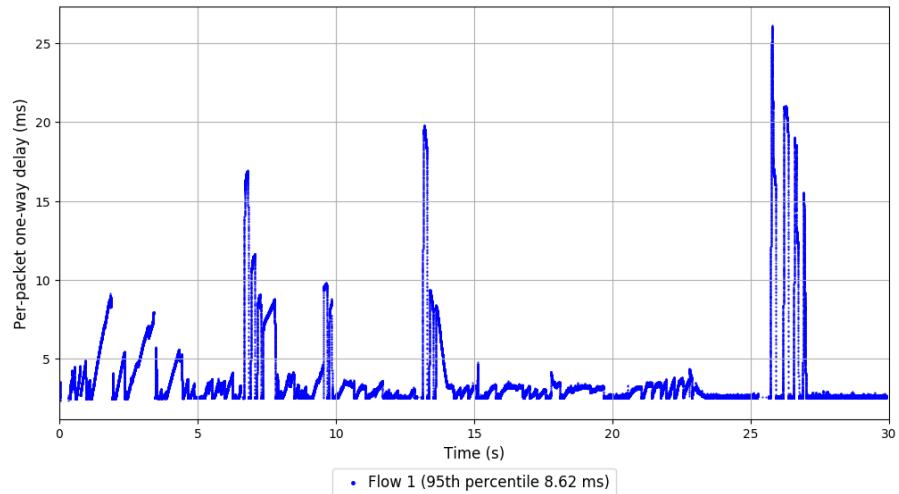
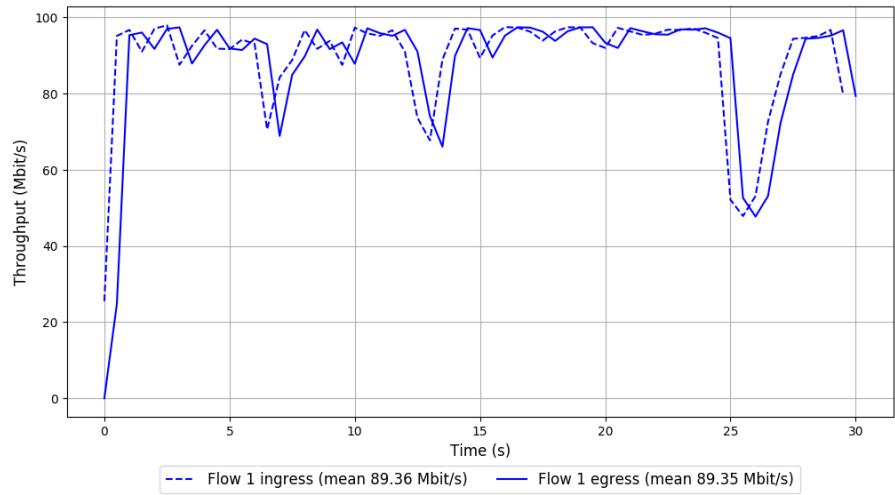


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-10-02 13:29:49
End at: 2018-10-02 13:30:19
Local clock offset: -7.899 ms
Remote clock offset: -0.591 ms

# Below is generated by plot.py at 2018-10-02 15:14:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.35 Mbit/s
95th percentile per-packet one-way delay: 8.616 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 89.35 Mbit/s
95th percentile per-packet one-way delay: 8.616 ms
Loss rate: 0.02%
```

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

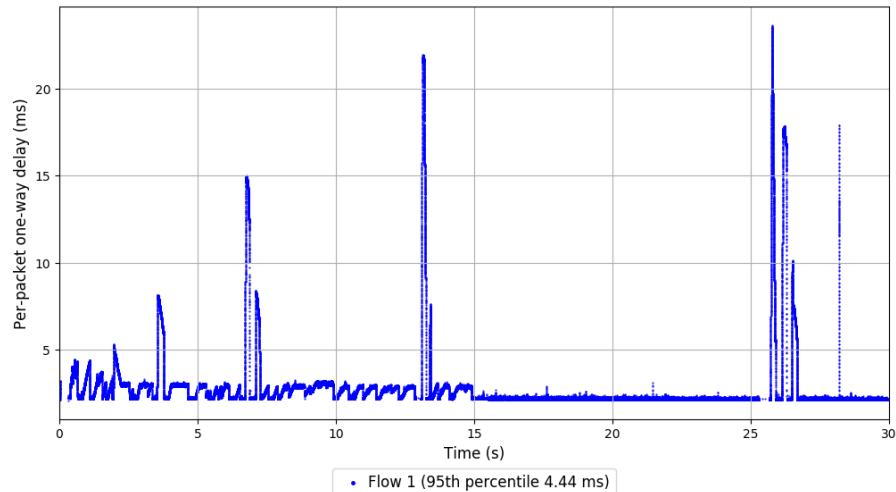
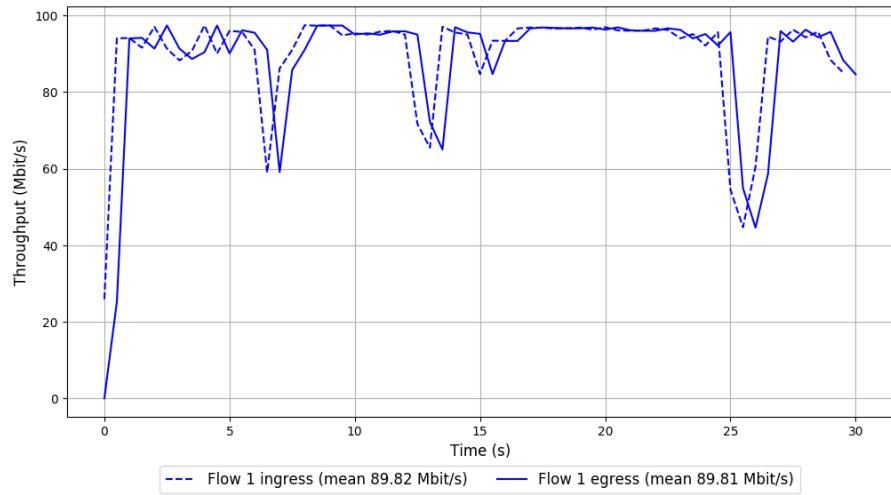


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-10-02 13:50:11
End at: 2018-10-02 13:50:41
Local clock offset: -8.485 ms
Remote clock offset: -0.342 ms

# Below is generated by plot.py at 2018-10-02 15:14:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.81 Mbit/s
95th percentile per-packet one-way delay: 4.441 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 89.81 Mbit/s
95th percentile per-packet one-way delay: 4.441 ms
Loss rate: 0.02%
```

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

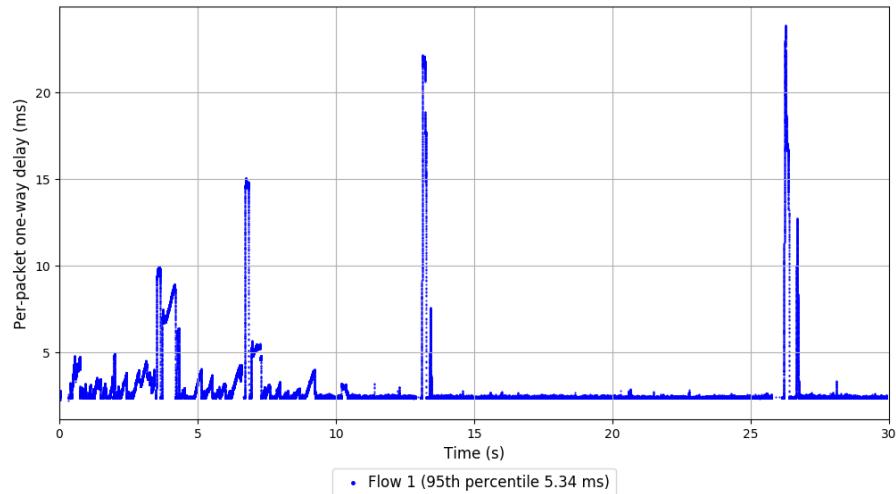
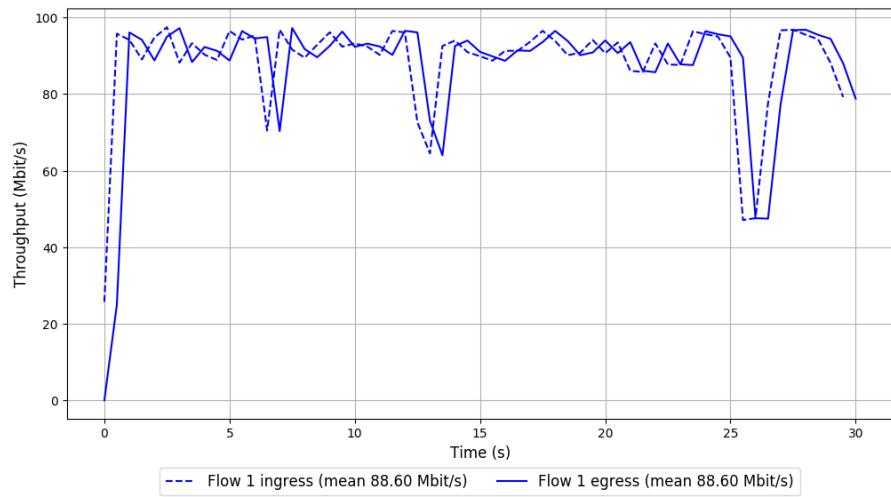


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-10-02 14:10:33
End at: 2018-10-02 14:11:03
Local clock offset: -7.132 ms
Remote clock offset: -0.152 ms

# Below is generated by plot.py at 2018-10-02 15:14:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.60 Mbit/s
95th percentile per-packet one-way delay: 5.345 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 88.60 Mbit/s
95th percentile per-packet one-way delay: 5.345 ms
Loss rate: 0.02%
```

Run 3: Report of QUIC Cubic — Data Link

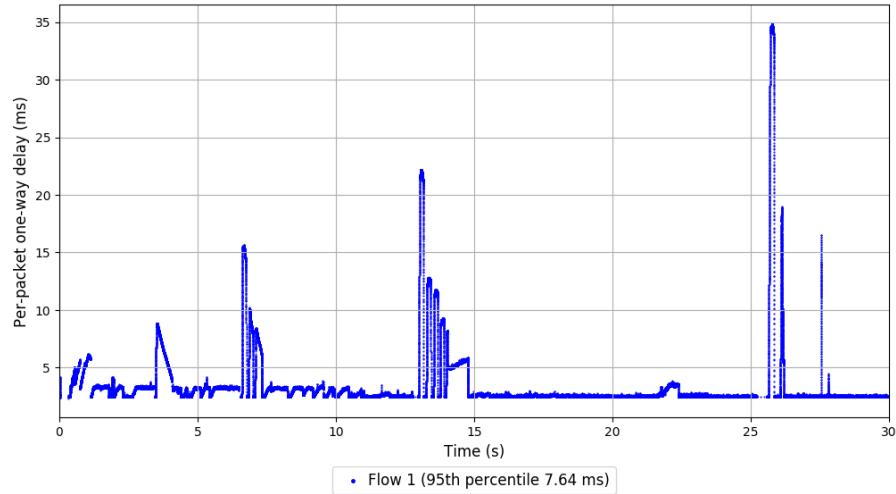
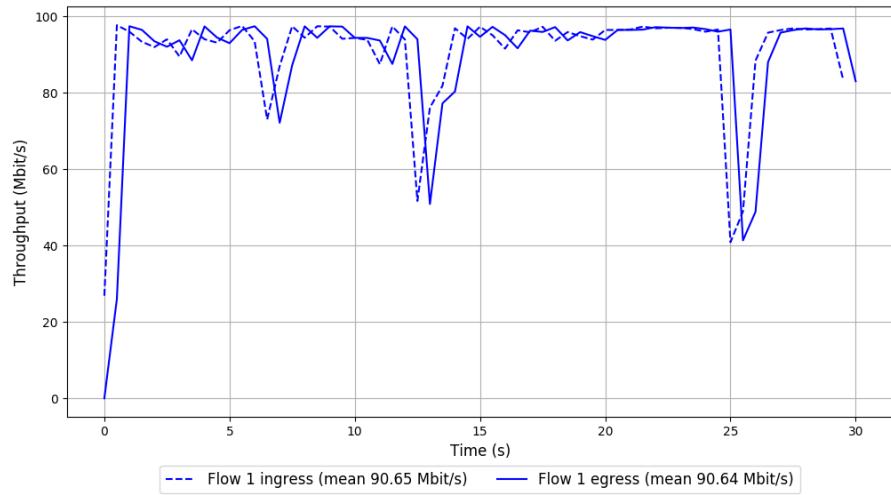


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-10-02 14:30:56
End at: 2018-10-02 14:31:26
Local clock offset: -7.783 ms
Remote clock offset: -0.148 ms

# Below is generated by plot.py at 2018-10-02 15:15:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.64 Mbit/s
95th percentile per-packet one-way delay: 7.639 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 90.64 Mbit/s
95th percentile per-packet one-way delay: 7.639 ms
Loss rate: 0.02%
```

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

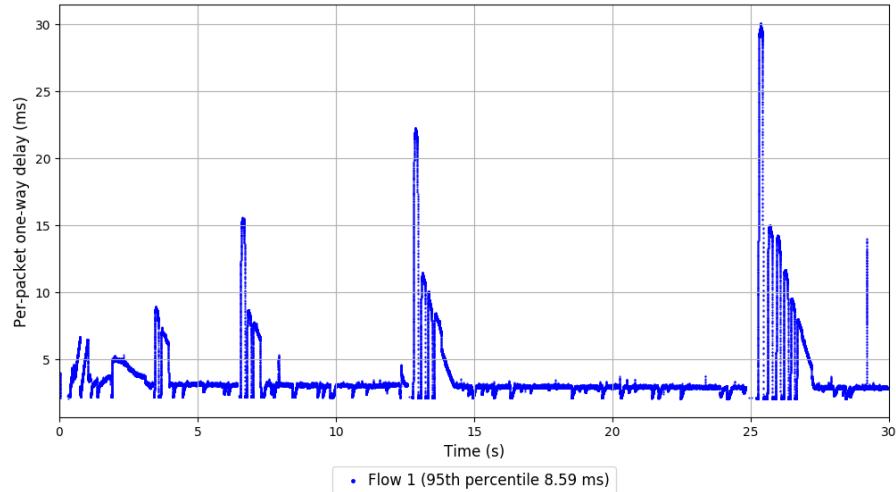
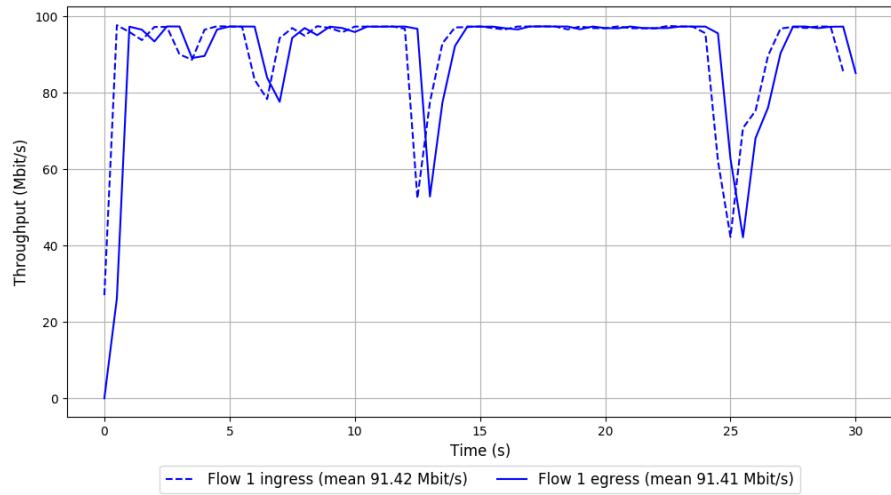


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-10-02 14:51:18
End at: 2018-10-02 14:51:48
Local clock offset: -5.294 ms
Remote clock offset: 0.076 ms

# Below is generated by plot.py at 2018-10-02 15:15:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.41 Mbit/s
95th percentile per-packet one-way delay: 8.591 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 91.41 Mbit/s
95th percentile per-packet one-way delay: 8.591 ms
Loss rate: 0.03%
```

Run 5: Report of QUIC Cubic — Data Link

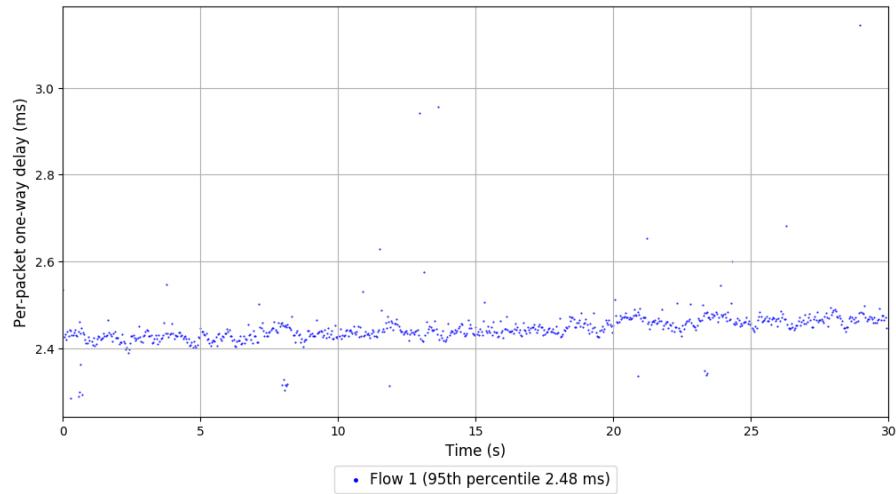
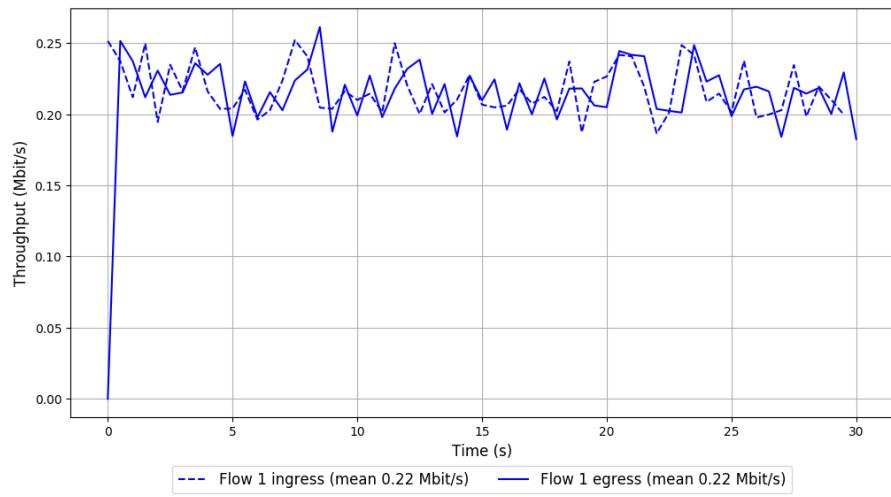


Run 1: Statistics of SCReAM

```
Start at: 2018-10-02 13:36:38
End at: 2018-10-02 13:37:08
Local clock offset: -8.795 ms
Remote clock offset: -0.549 ms

# Below is generated by plot.py at 2018-10-02 15:15:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.482 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.482 ms
Loss rate: 0.13%
```

Run 1: Report of SCReAM — Data Link

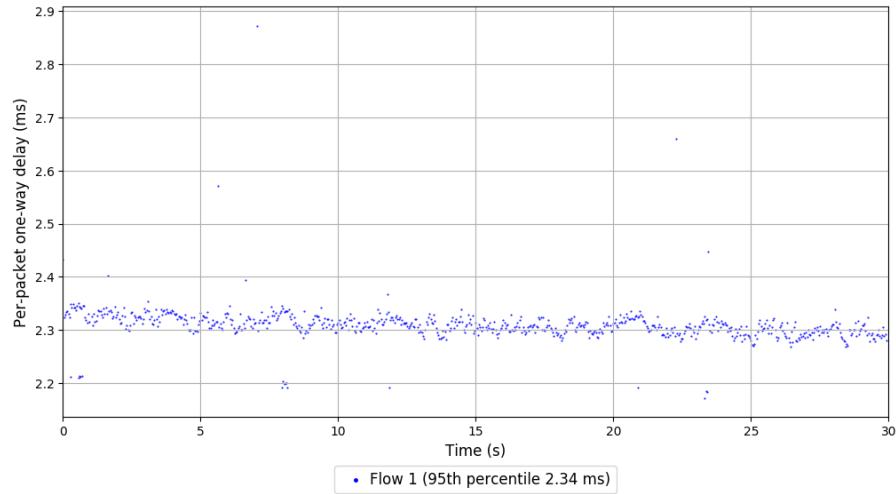
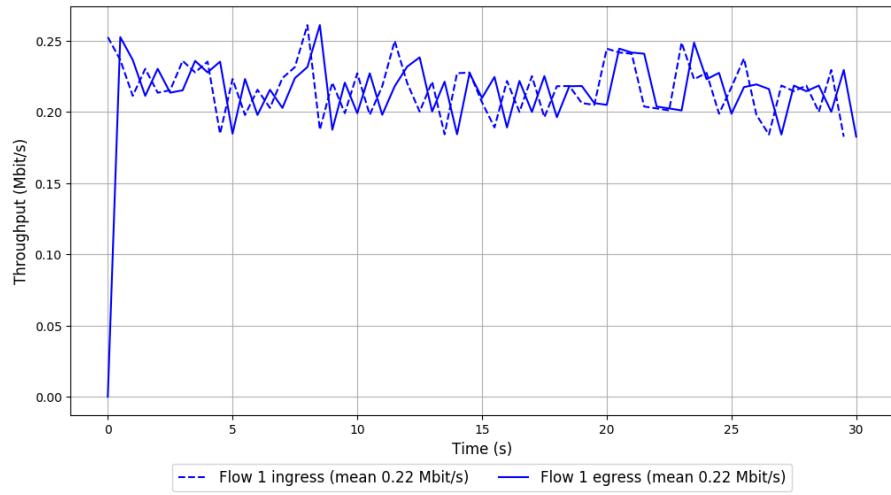


Run 2: Statistics of SCReAM

```
Start at: 2018-10-02 13:57:00
End at: 2018-10-02 13:57:30
Local clock offset: -7.55 ms
Remote clock offset: -0.251 ms

# Below is generated by plot.py at 2018-10-02 15:15:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.337 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.337 ms
Loss rate: 0.00%
```

## Run 2: Report of SCReAM — Data Link

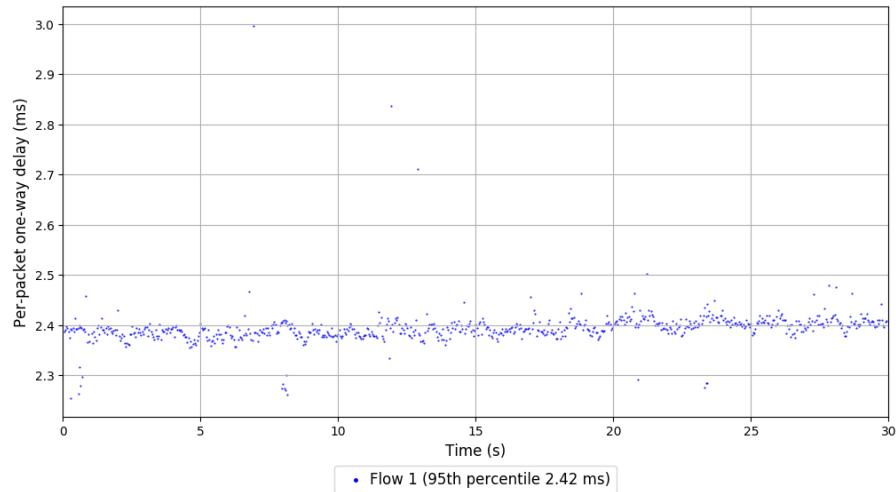
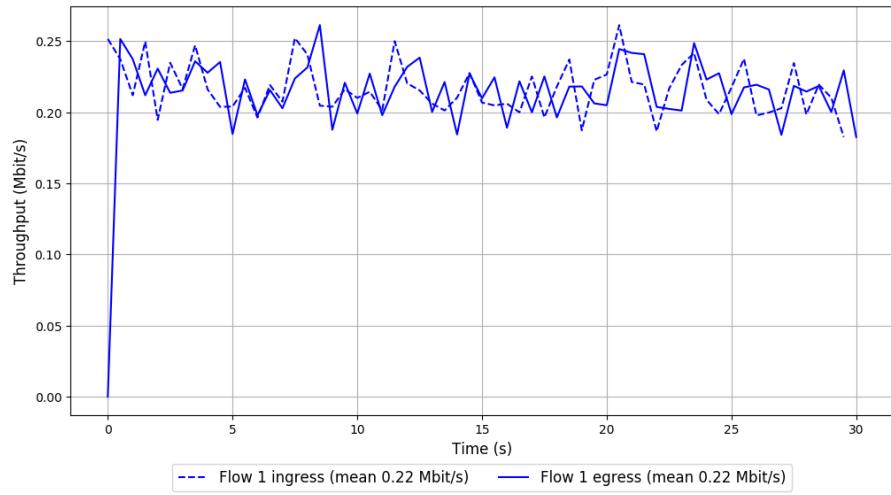


Run 3: Statistics of SCReAM

```
Start at: 2018-10-02 14:17:22
End at: 2018-10-02 14:17:52
Local clock offset: -7.266 ms
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2018-10-02 15:15:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.422 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.422 ms
Loss rate: 0.00%
```

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

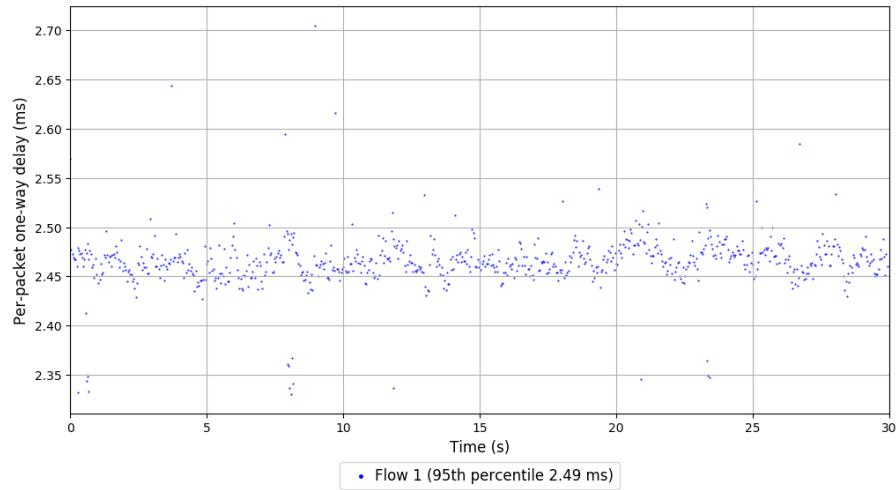
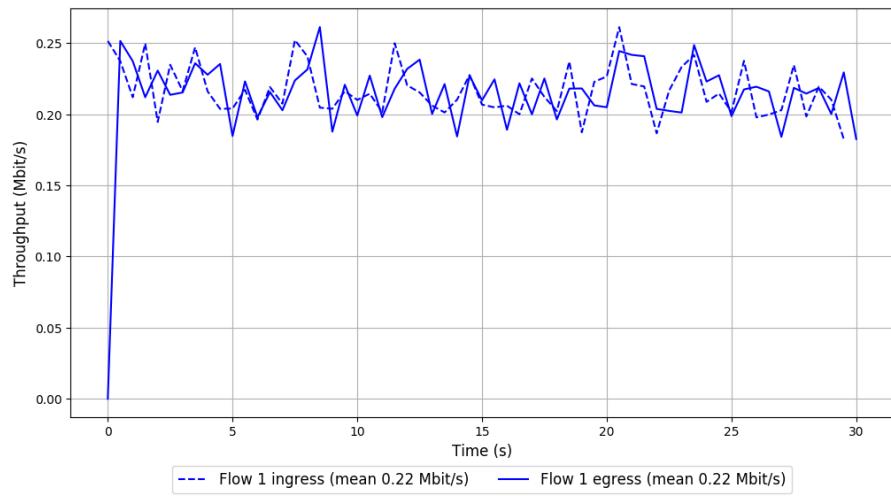


Run 4: Statistics of SCReAM

```
Start at: 2018-10-02 14:37:45
End at: 2018-10-02 14:38:15
Local clock offset: -7.955 ms
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2018-10-02 15:15:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.494 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.494 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

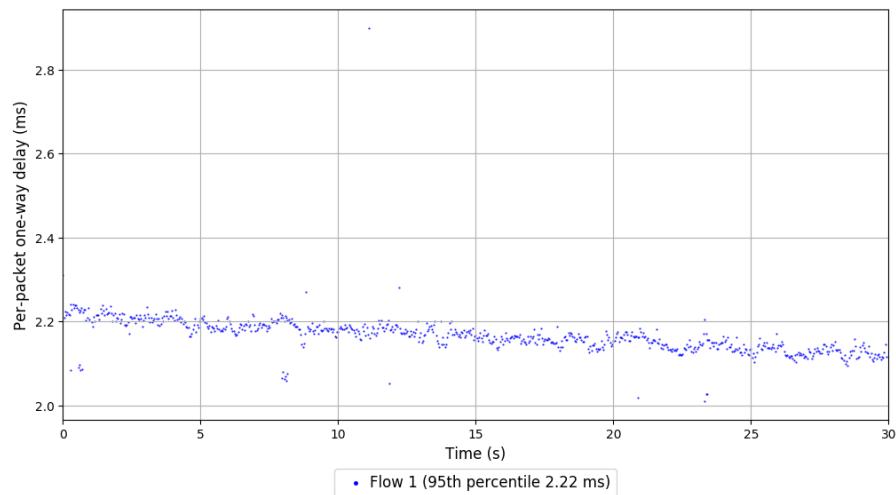
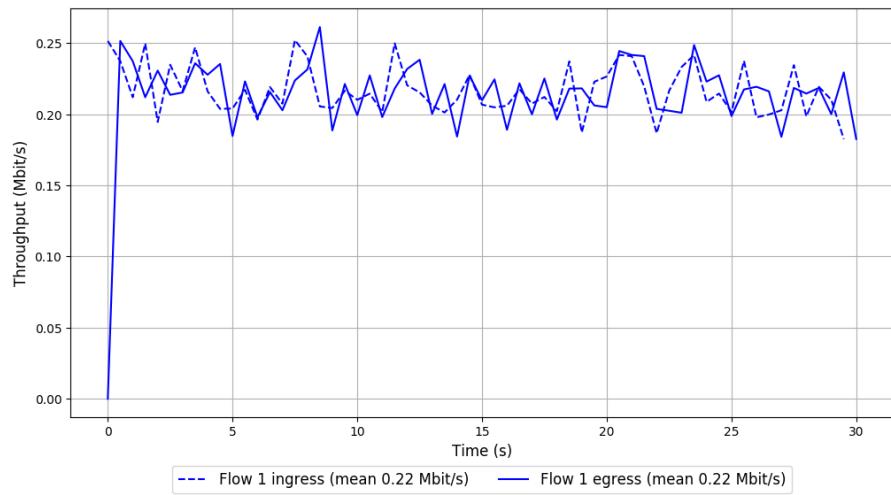


Run 5: Statistics of SCReAM

```
Start at: 2018-10-02 14:58:08
End at: 2018-10-02 14:58:38
Local clock offset: -3.538 ms
Remote clock offset: 0.118 ms

# Below is generated by plot.py at 2018-10-02 15:15:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.218 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.218 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

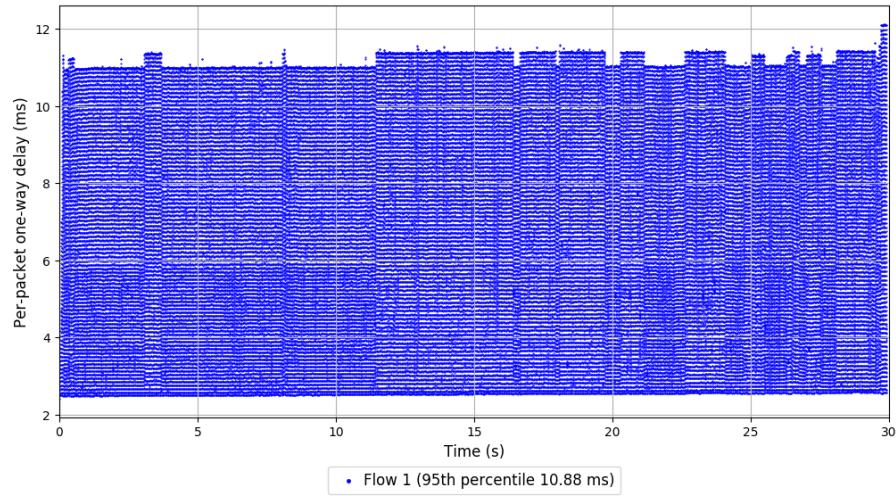
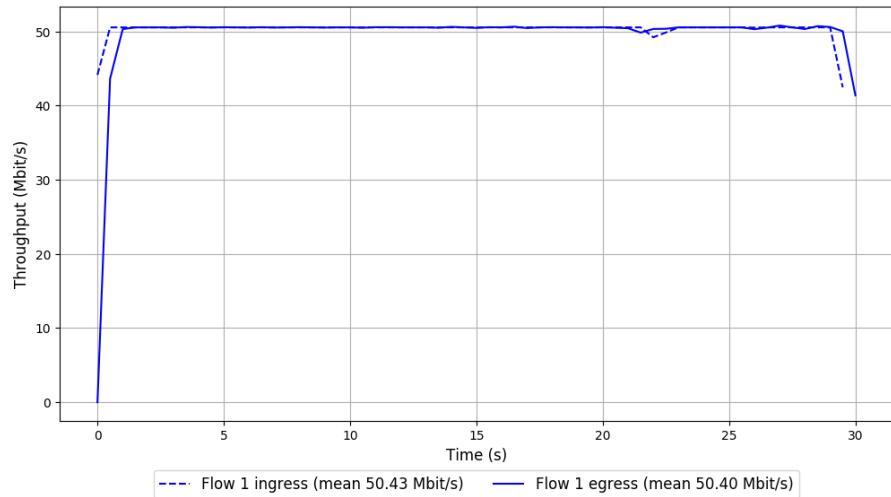


Run 1: Statistics of Sprout

```
Start at: 2018-10-02 13:27:35
End at: 2018-10-02 13:28:05
Local clock offset: -7.606 ms
Remote clock offset: -0.647 ms

# Below is generated by plot.py at 2018-10-02 15:15:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.40 Mbit/s
95th percentile per-packet one-way delay: 10.883 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 50.40 Mbit/s
95th percentile per-packet one-way delay: 10.883 ms
Loss rate: 0.05%
```

## Run 1: Report of Sprout — Data Link

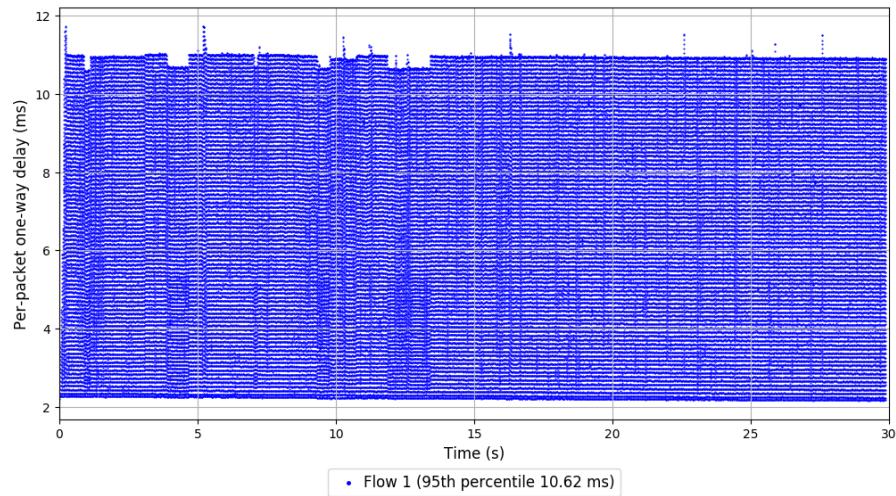
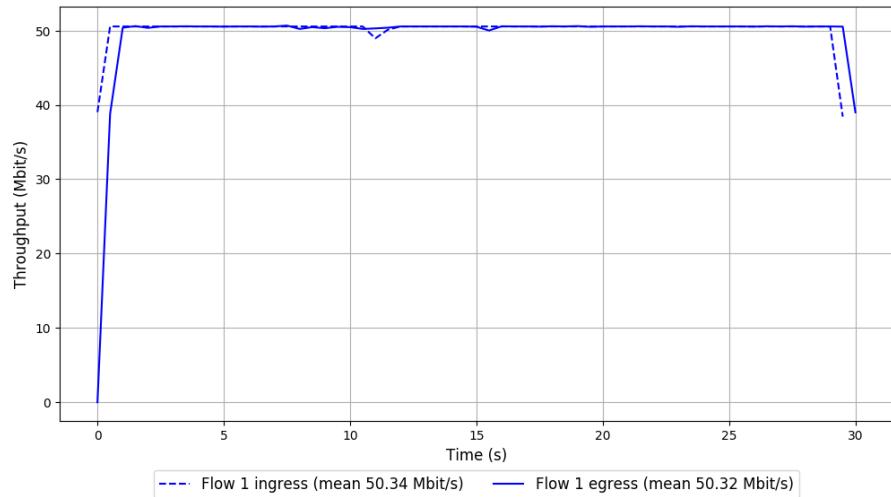


Run 2: Statistics of Sprout

```
Start at: 2018-10-02 13:47:57
End at: 2018-10-02 13:48:27
Local clock offset: -8.964 ms
Remote clock offset: -0.415 ms

# Below is generated by plot.py at 2018-10-02 15:15:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.32 Mbit/s
95th percentile per-packet one-way delay: 10.620 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.32 Mbit/s
95th percentile per-packet one-way delay: 10.620 ms
Loss rate: 0.00%
```

## Run 2: Report of Sprout — Data Link

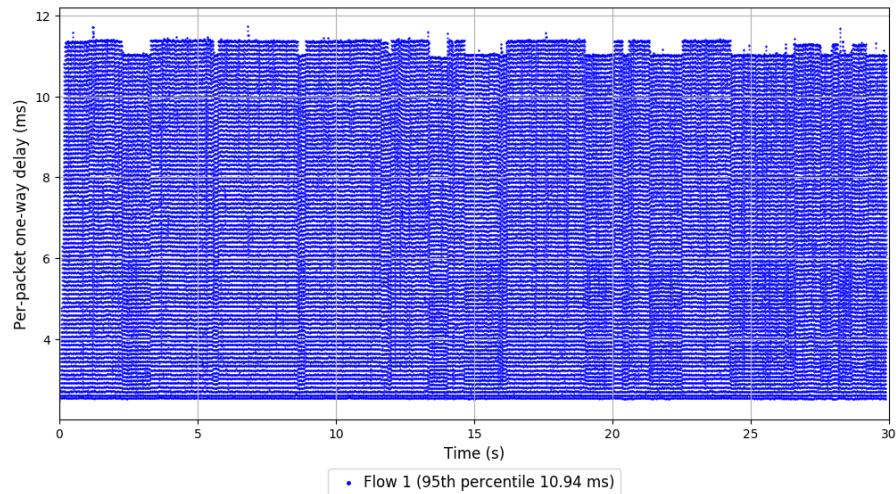
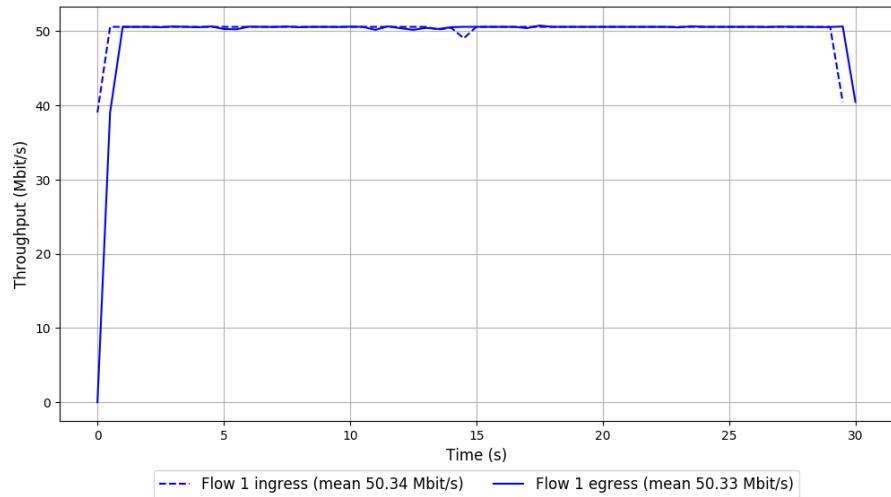


Run 3: Statistics of Sprout

```
Start at: 2018-10-02 14:08:19
End at: 2018-10-02 14:08:50
Local clock offset: -7.148 ms
Remote clock offset: -0.294 ms

# Below is generated by plot.py at 2018-10-02 15:15:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.33 Mbit/s
95th percentile per-packet one-way delay: 10.941 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.33 Mbit/s
95th percentile per-packet one-way delay: 10.941 ms
Loss rate: 0.00%
```

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

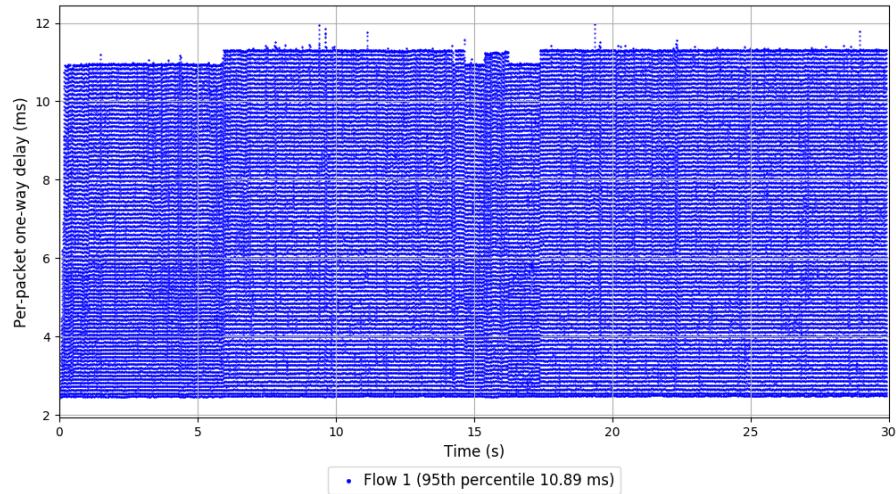
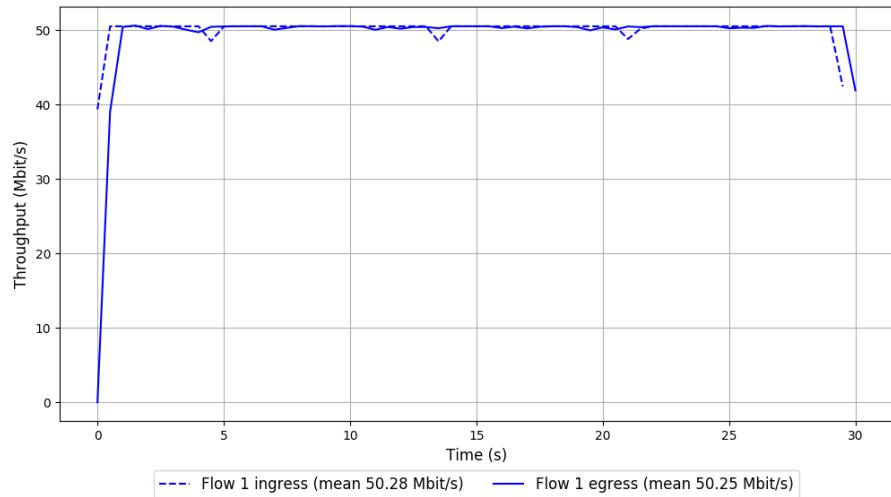


Run 4: Statistics of Sprout

```
Start at: 2018-10-02 14:28:42
End at: 2018-10-02 14:29:12
Local clock offset: -7.722 ms
Remote clock offset: -0.143 ms

# Below is generated by plot.py at 2018-10-02 15:15:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.25 Mbit/s
95th percentile per-packet one-way delay: 10.889 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 50.25 Mbit/s
95th percentile per-packet one-way delay: 10.889 ms
Loss rate: 0.04%
```

## Run 4: Report of Sprout — Data Link

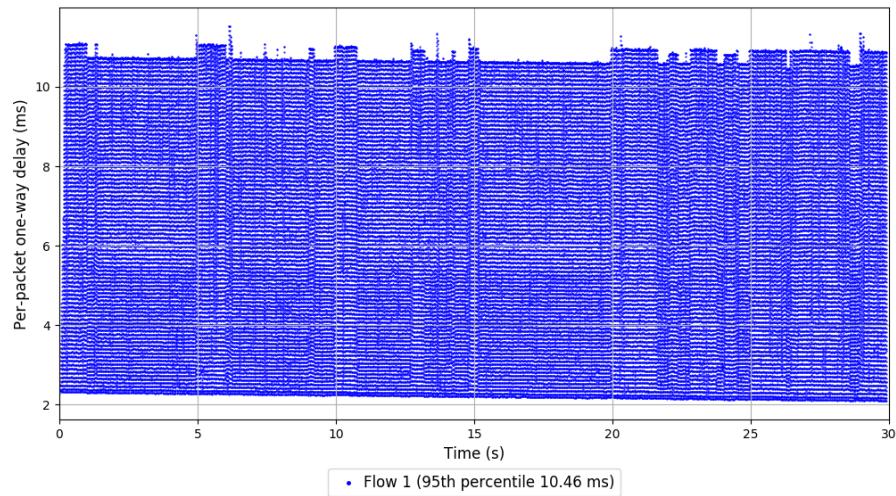
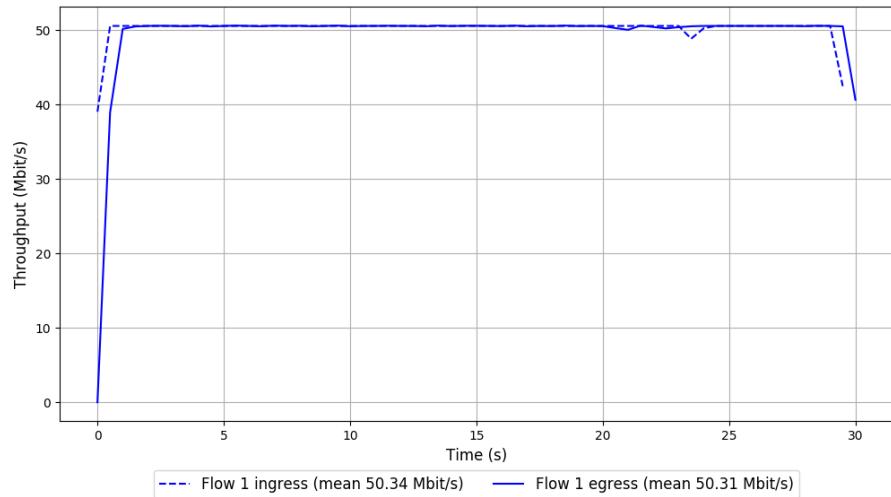


Run 5: Statistics of Sprout

```
Start at: 2018-10-02 14:49:04
End at: 2018-10-02 14:49:34
Local clock offset: -6.233 ms
Remote clock offset: 0.0 ms

# Below is generated by plot.py at 2018-10-02 15:15:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.31 Mbit/s
95th percentile per-packet one-way delay: 10.465 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 50.31 Mbit/s
95th percentile per-packet one-way delay: 10.465 ms
Loss rate: 0.06%
```

## Run 5: Report of Sprout — Data Link

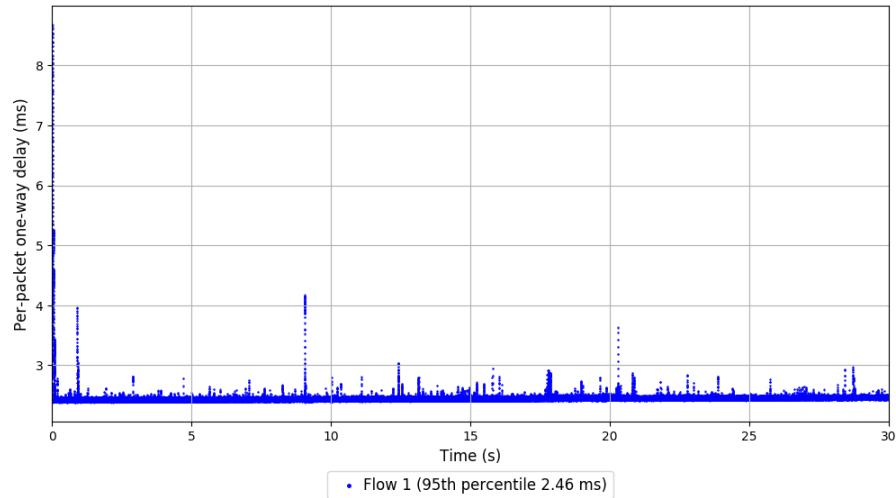
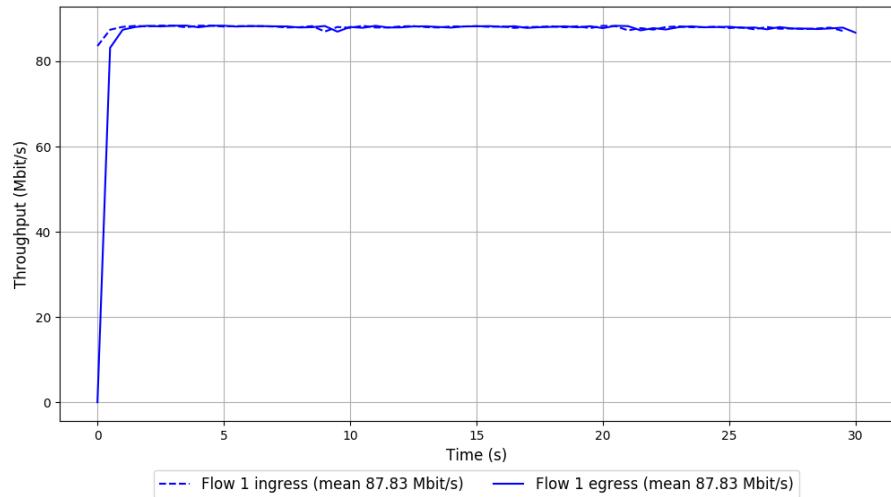


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-10-02 13:42:17
End at: 2018-10-02 13:42:47
Local clock offset: -9.342 ms
Remote clock offset: -0.493 ms

# Below is generated by plot.py at 2018-10-02 15:16:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.83 Mbit/s
95th percentile per-packet one-way delay: 2.464 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 87.83 Mbit/s
95th percentile per-packet one-way delay: 2.464 ms
Loss rate: 0.02%
```

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

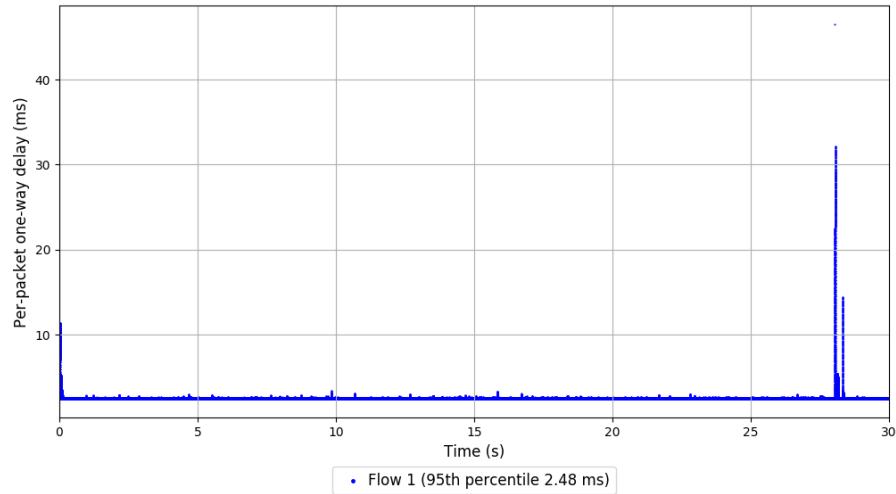
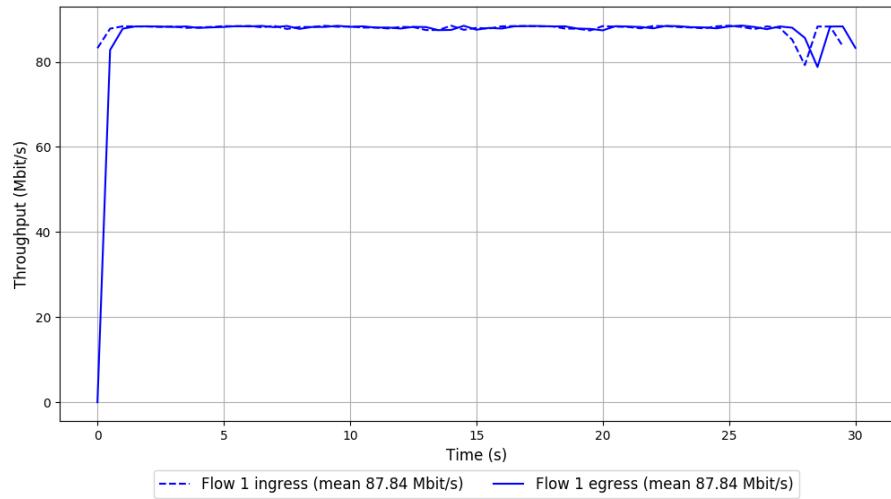


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-10-02 14:02:39
End at: 2018-10-02 14:03:09
Local clock offset: -7.276 ms
Remote clock offset: -0.304 ms

# Below is generated by plot.py at 2018-10-02 15:16:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.84 Mbit/s
95th percentile per-packet one-way delay: 2.476 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 87.84 Mbit/s
95th percentile per-packet one-way delay: 2.476 ms
Loss rate: 0.02%
```

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

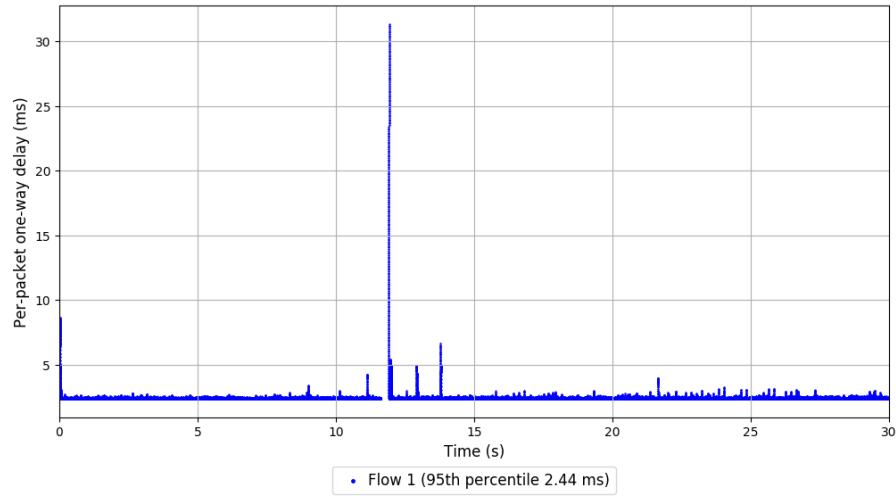
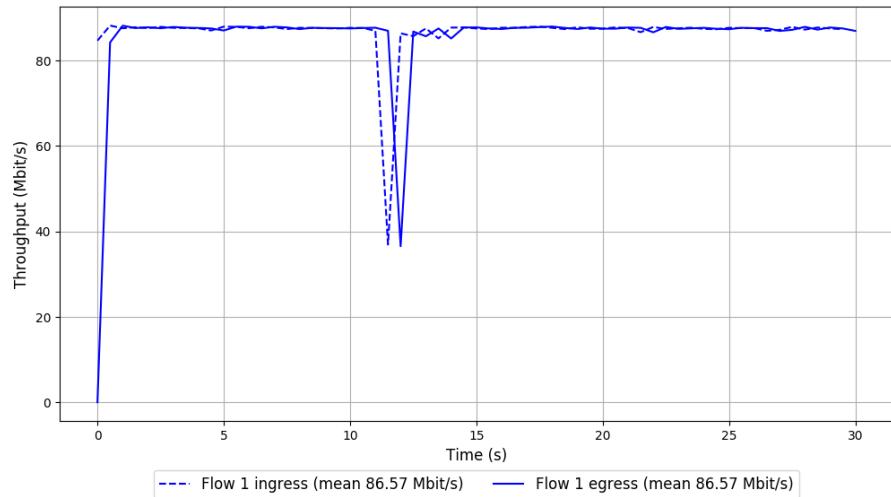


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-10-02 14:23:01
End at: 2018-10-02 14:23:31
Local clock offset: -7.508 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-10-02 15:16:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.57 Mbit/s
95th percentile per-packet one-way delay: 2.445 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 86.57 Mbit/s
95th percentile per-packet one-way delay: 2.445 ms
Loss rate: 0.02%
```

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

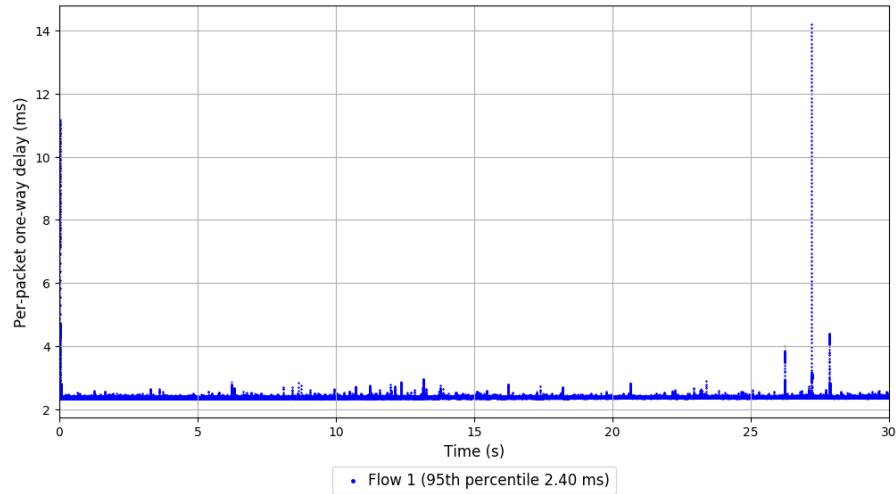
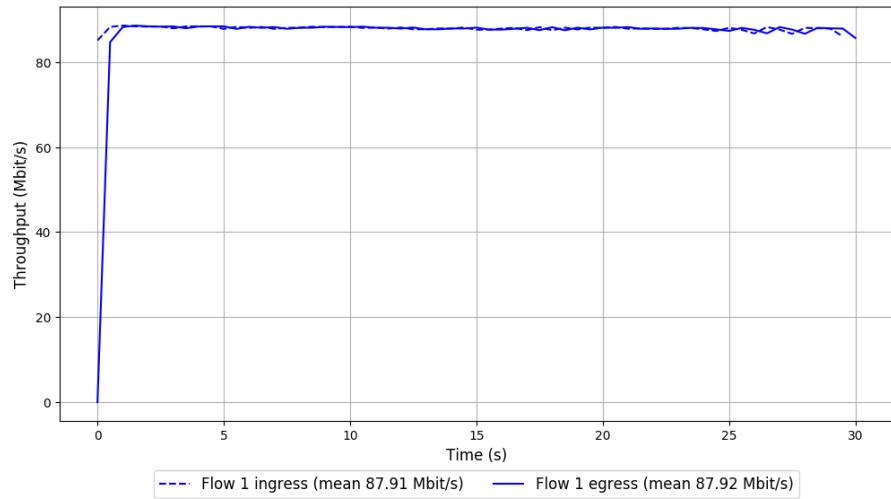


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-10-02 14:43:24
End at: 2018-10-02 14:43:54
Local clock offset: -8.113 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2018-10-02 15:16:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.92 Mbit/s
95th percentile per-packet one-way delay: 2.405 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 87.92 Mbit/s
95th percentile per-packet one-way delay: 2.405 ms
Loss rate: 0.02%
```

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

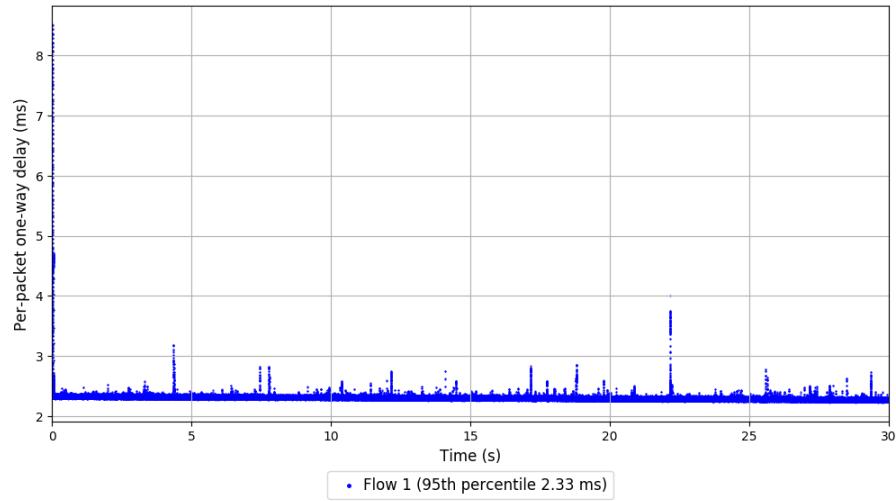
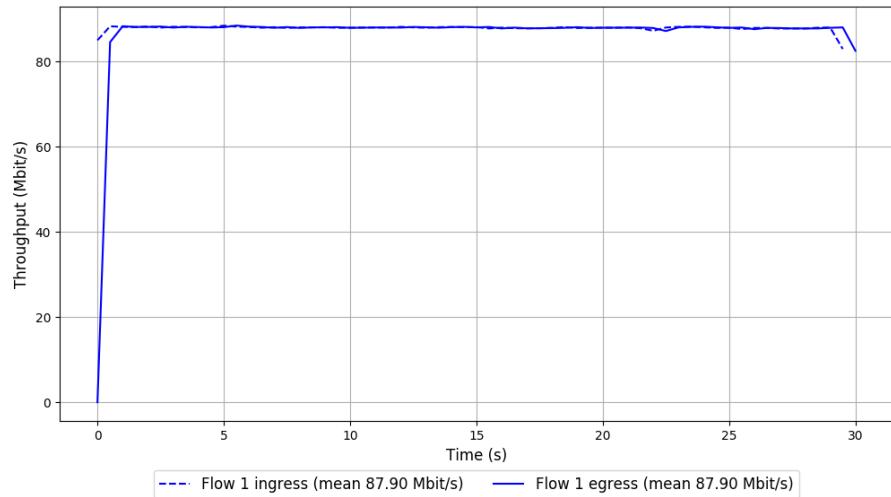


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-10-02 15:03:47
End at: 2018-10-02 15:04:17
Local clock offset: -2.568 ms
Remote clock offset: 0.141 ms

# Below is generated by plot.py at 2018-10-02 15:16:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.90 Mbit/s
95th percentile per-packet one-way delay: 2.327 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 87.90 Mbit/s
95th percentile per-packet one-way delay: 2.327 ms
Loss rate: 0.02%
```

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

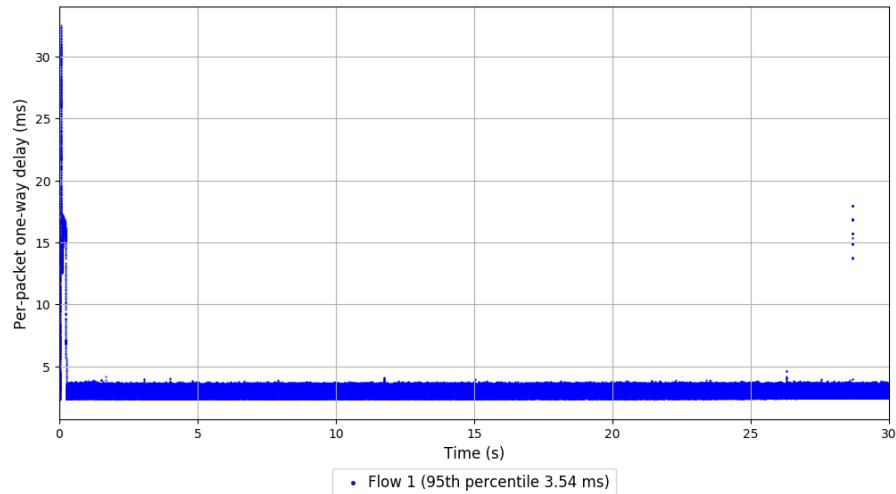
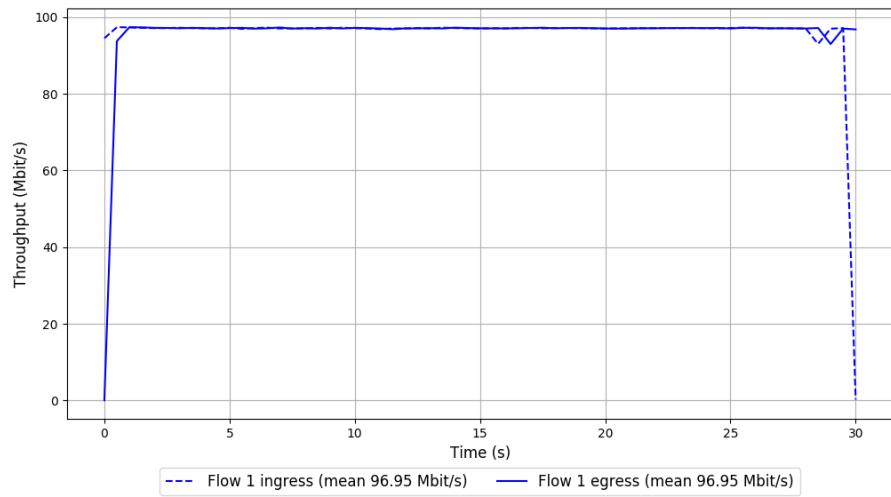


Run 1: Statistics of TCP Vegas

```
Start at: 2018-10-02 13:35:30
End at: 2018-10-02 13:36:00
Local clock offset: -8.635 ms
Remote clock offset: -0.484 ms

# Below is generated by plot.py at 2018-10-02 15:16:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.95 Mbit/s
95th percentile per-packet one-way delay: 3.540 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 96.95 Mbit/s
95th percentile per-packet one-way delay: 3.540 ms
Loss rate: 0.02%
```

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

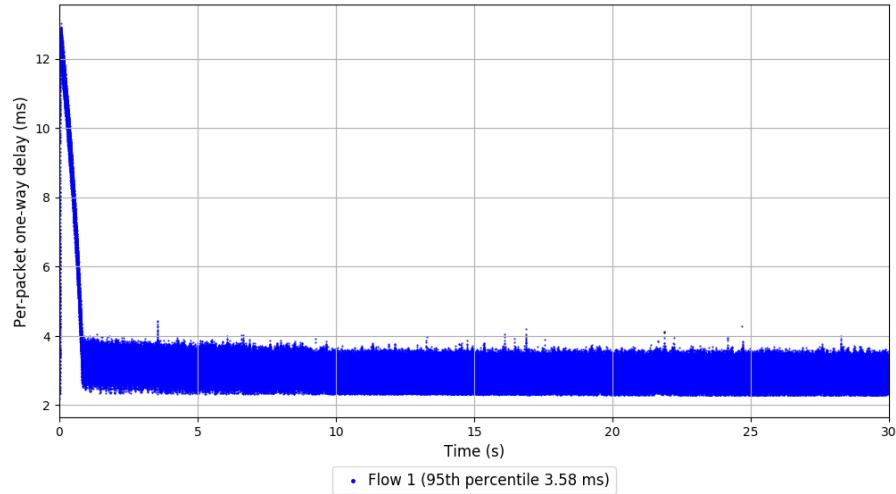
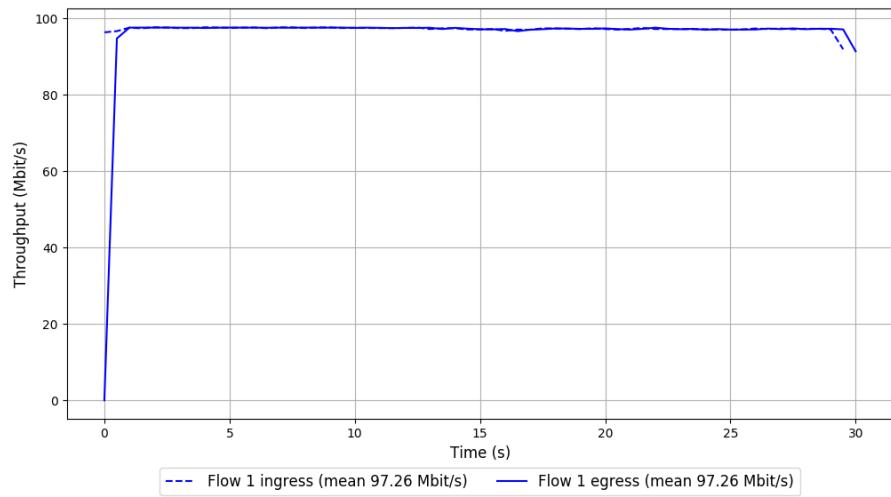


Run 2: Statistics of TCP Vegas

```
Start at: 2018-10-02 13:55:52
End at: 2018-10-02 13:56:22
Local clock offset: -7.629 ms
Remote clock offset: -0.246 ms

# Below is generated by plot.py at 2018-10-02 15:16:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.26 Mbit/s
95th percentile per-packet one-way delay: 3.579 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.26 Mbit/s
95th percentile per-packet one-way delay: 3.579 ms
Loss rate: 0.02%
```

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

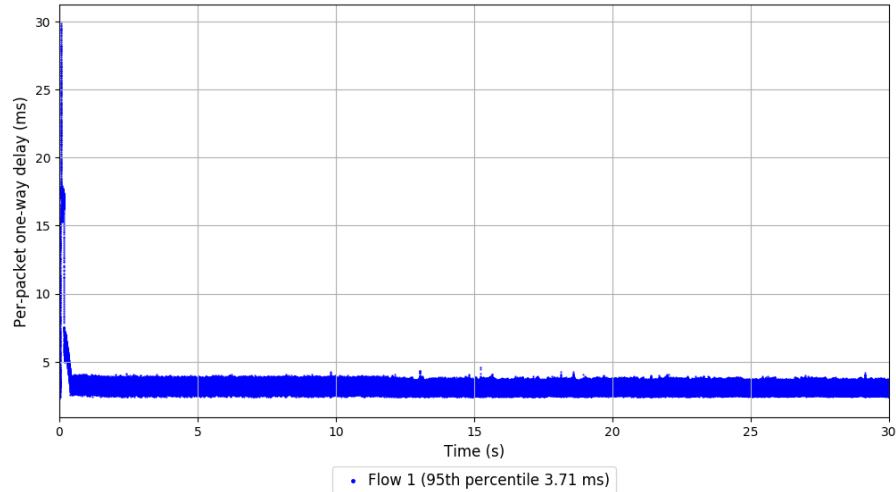
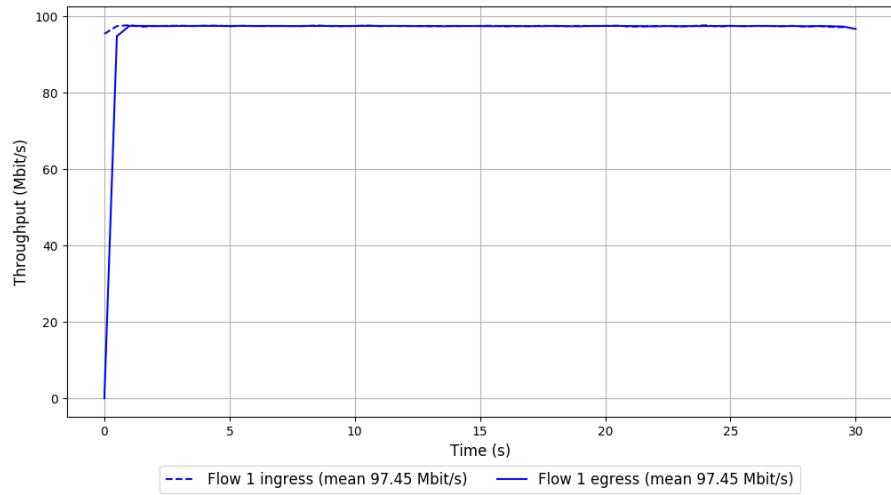


Run 3: Statistics of TCP Vegas

```
Start at: 2018-10-02 14:16:14
End at: 2018-10-02 14:16:44
Local clock offset: -7.181 ms
Remote clock offset: -0.133 ms

# Below is generated by plot.py at 2018-10-02 15:16:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 3.711 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 3.711 ms
Loss rate: 0.02%
```

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

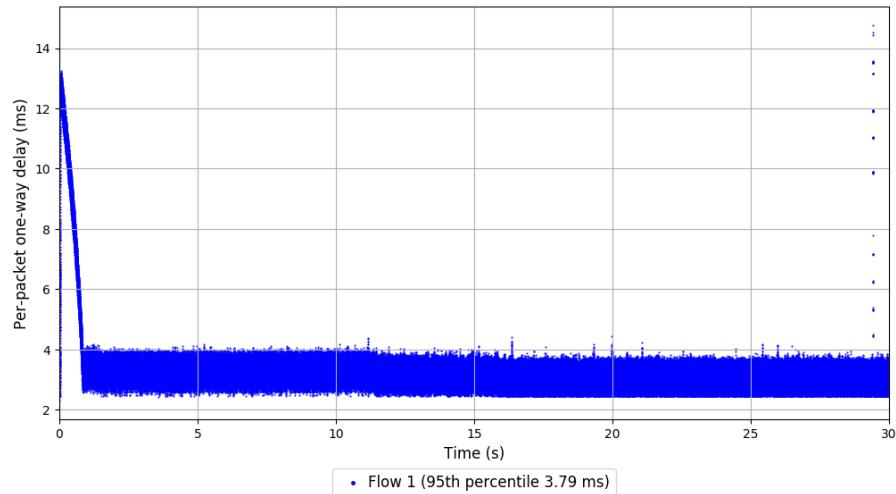
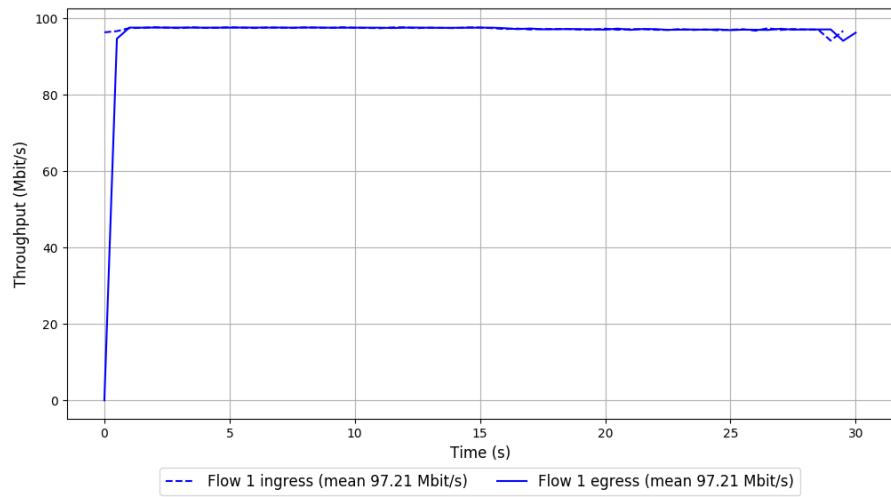


Run 4: Statistics of TCP Vegas

```
Start at: 2018-10-02 14:36:37
End at: 2018-10-02 14:37:07
Local clock offset: -7.99 ms
Remote clock offset: -0.162 ms

# Below is generated by plot.py at 2018-10-02 15:17:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.21 Mbit/s
95th percentile per-packet one-way delay: 3.785 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.21 Mbit/s
95th percentile per-packet one-way delay: 3.785 ms
Loss rate: 0.02%
```

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

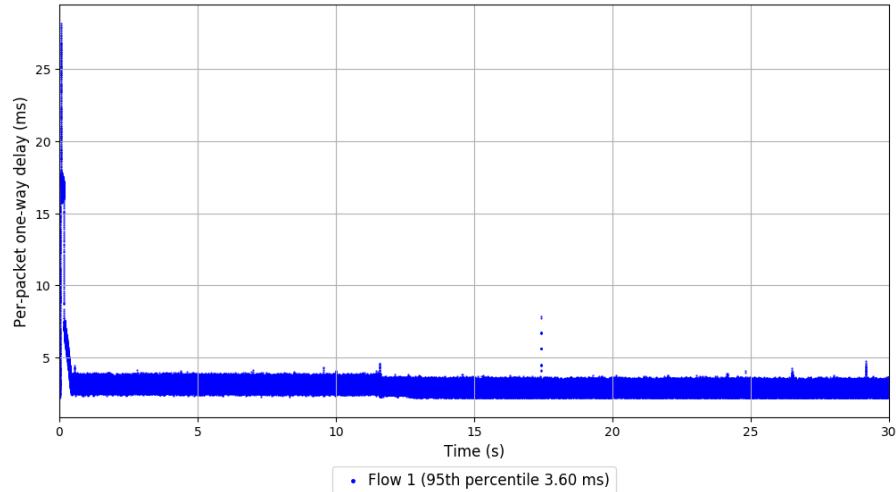
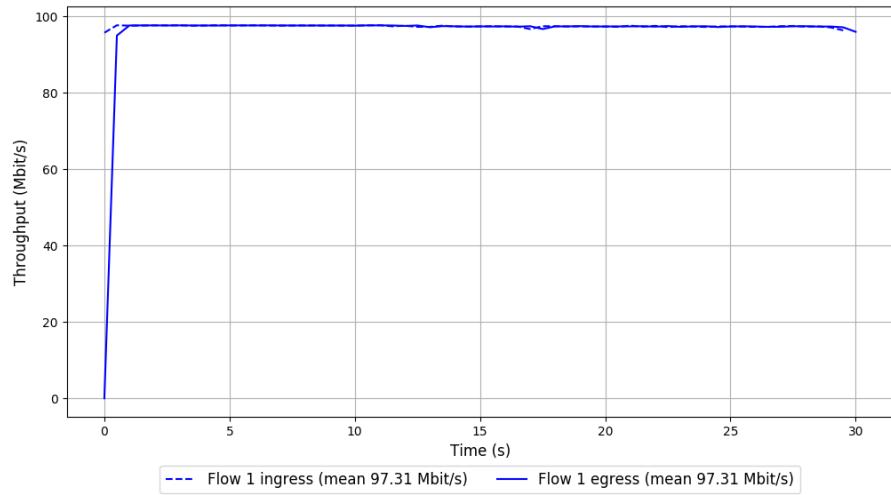


Run 5: Statistics of TCP Vegas

```
Start at: 2018-10-02 14:57:00
End at: 2018-10-02 14:57:30
Local clock offset: -3.709 ms
Remote clock offset: 0.093 ms

# Below is generated by plot.py at 2018-10-02 15:17:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 3.602 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 3.602 ms
Loss rate: 0.02%
```

Run 5: Report of TCP Vegas — Data Link

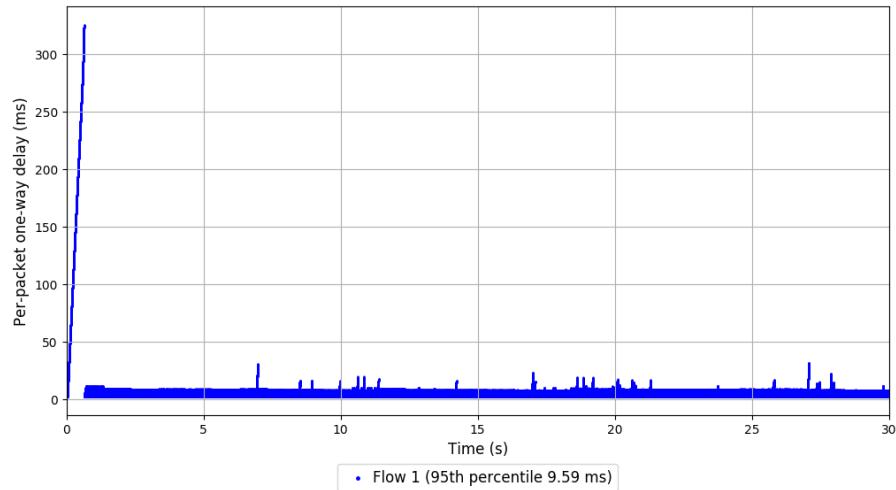
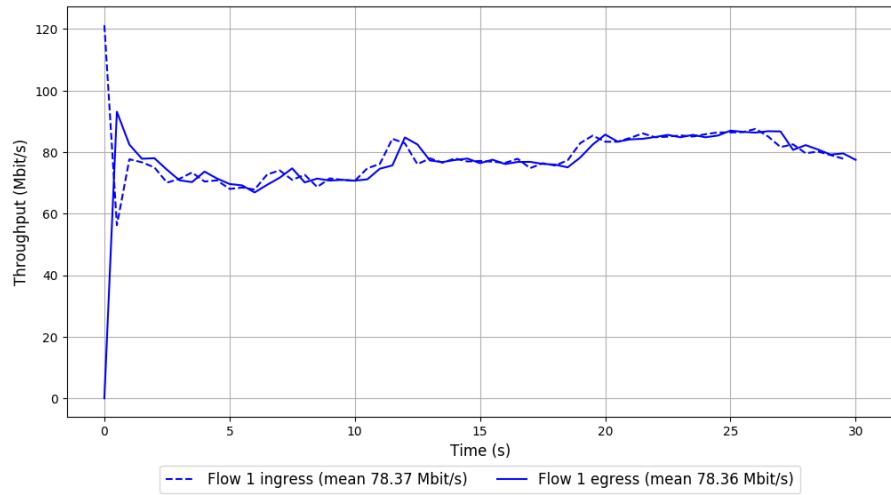


Run 1: Statistics of Verus

```
Start at: 2018-10-02 13:38:51
End at: 2018-10-02 13:39:22
Local clock offset: -8.979 ms
Remote clock offset: -0.528 ms

# Below is generated by plot.py at 2018-10-02 15:17:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.36 Mbit/s
95th percentile per-packet one-way delay: 9.590 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 78.36 Mbit/s
95th percentile per-packet one-way delay: 9.590 ms
Loss rate: 0.02%
```

## Run 1: Report of Verus — Data Link

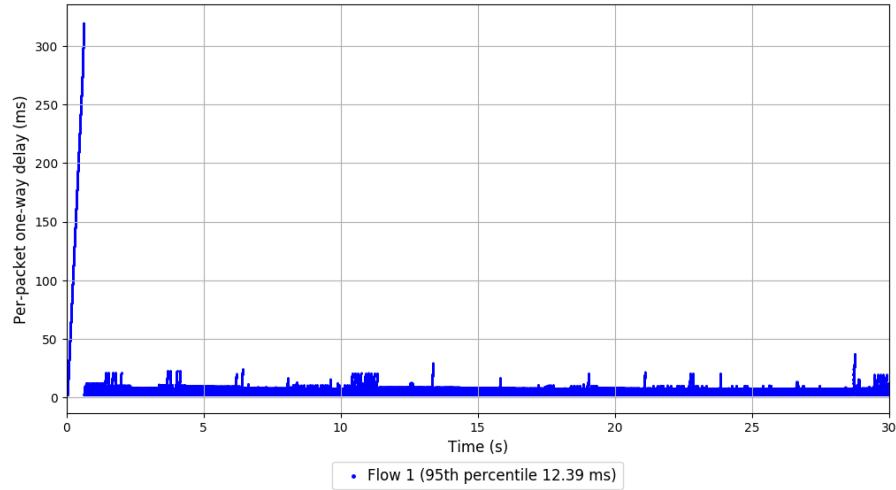
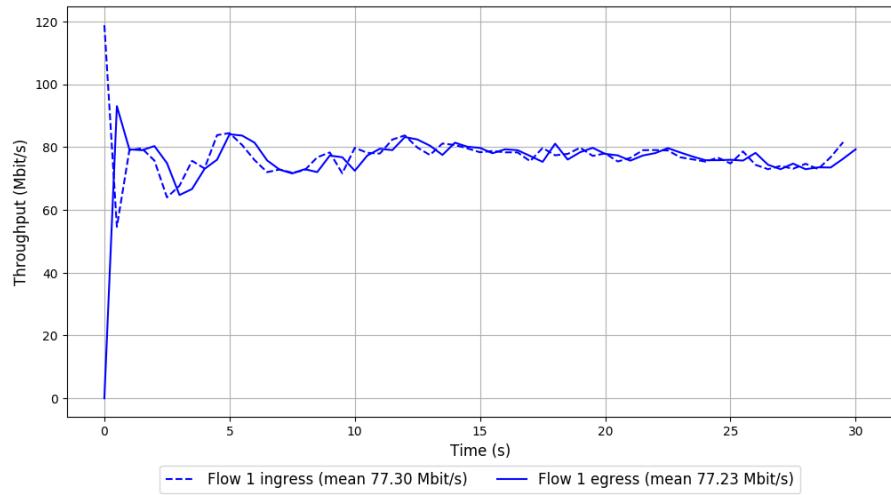


Run 2: Statistics of Verus

```
Start at: 2018-10-02 13:59:14
End at: 2018-10-02 13:59:44
Local clock offset: -7.382 ms
Remote clock offset: -0.283 ms

# Below is generated by plot.py at 2018-10-02 15:17:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.23 Mbit/s
95th percentile per-packet one-way delay: 12.393 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 77.23 Mbit/s
95th percentile per-packet one-way delay: 12.393 ms
Loss rate: 0.08%
```

## Run 2: Report of Verus — Data Link

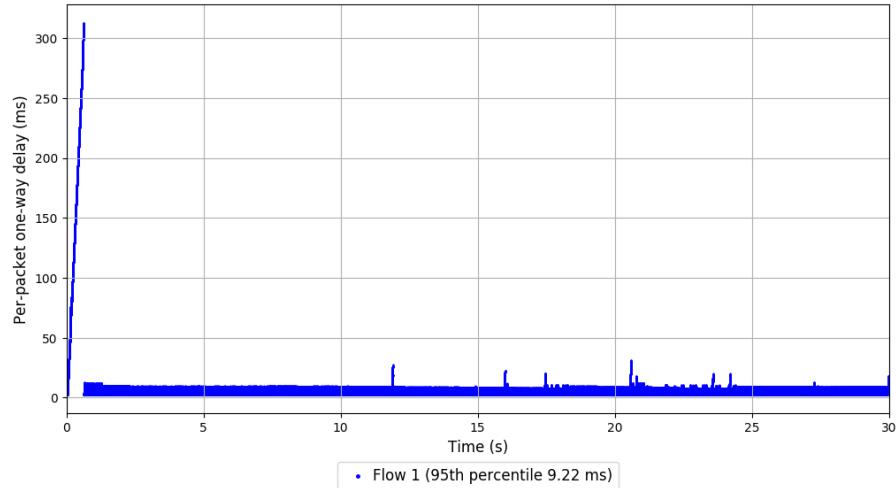
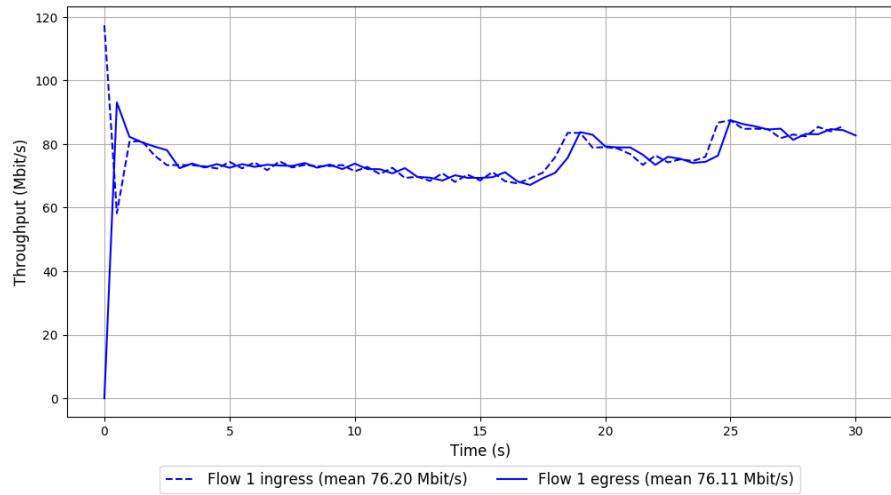


Run 3: Statistics of Verus

```
Start at: 2018-10-02 14:19:36
End at: 2018-10-02 14:20:06
Local clock offset: -7.364 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2018-10-02 15:17:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.11 Mbit/s
95th percentile per-packet one-way delay: 9.219 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 76.11 Mbit/s
95th percentile per-packet one-way delay: 9.219 ms
Loss rate: 0.09%
```

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

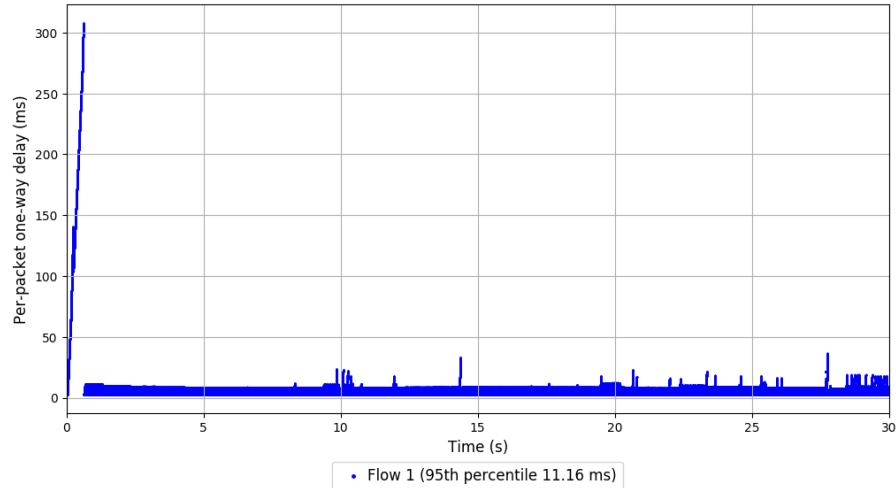
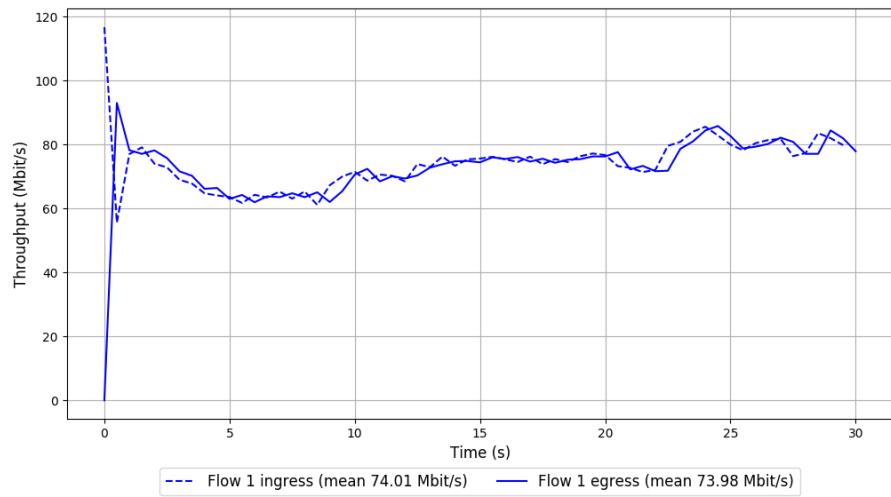


Run 4: Statistics of Verus

```
Start at: 2018-10-02 14:39:59
End at: 2018-10-02 14:40:29
Local clock offset: -8.04 ms
Remote clock offset: -0.159 ms

# Below is generated by plot.py at 2018-10-02 15:17:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.98 Mbit/s
95th percentile per-packet one-way delay: 11.160 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 73.98 Mbit/s
95th percentile per-packet one-way delay: 11.160 ms
Loss rate: 0.05%
```

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

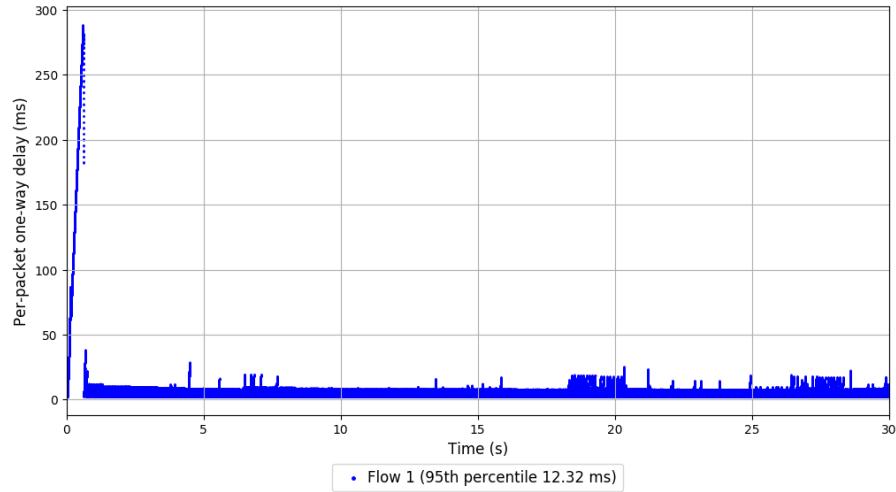
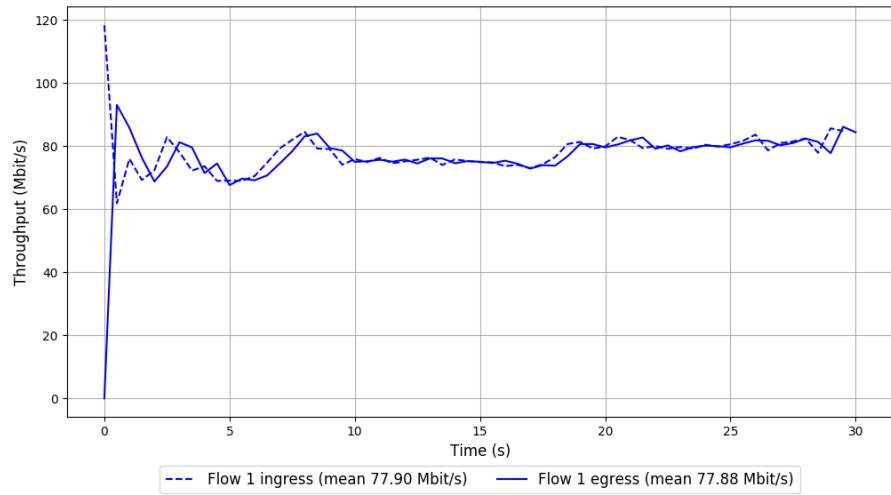


Run 5: Statistics of Verus

```
Start at: 2018-10-02 15:00:22
End at: 2018-10-02 15:00:52
Local clock offset: -3.077 ms
Remote clock offset: 0.071 ms

# Below is generated by plot.py at 2018-10-02 15:17:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.88 Mbit/s
95th percentile per-packet one-way delay: 12.325 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 77.88 Mbit/s
95th percentile per-packet one-way delay: 12.325 ms
Loss rate: 0.03%
```

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

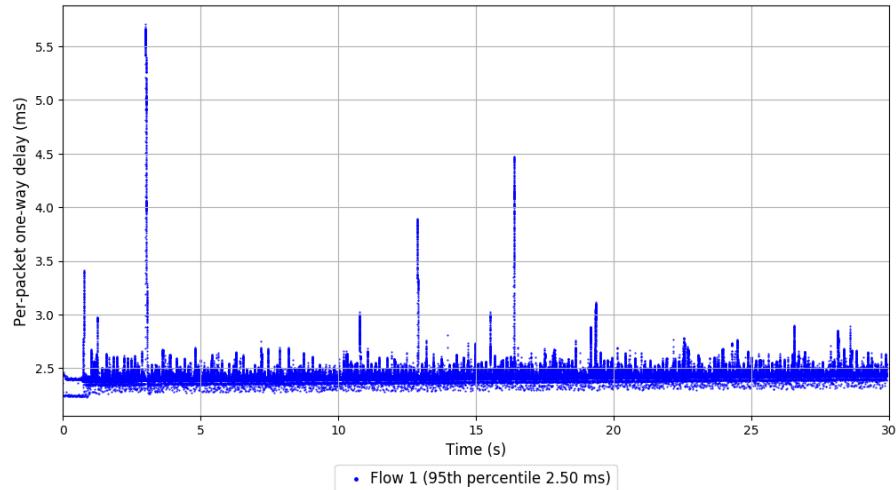
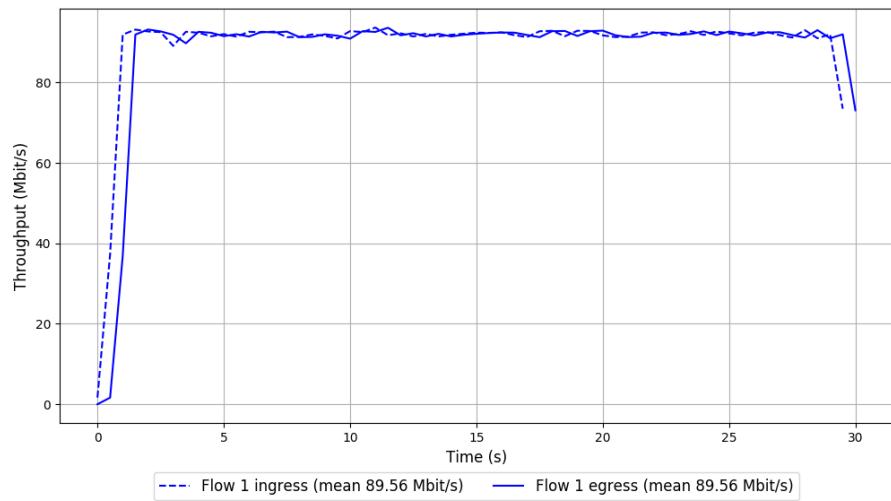


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-10-02 13:40:00
End at: 2018-10-02 13:40:30
Local clock offset: -9.092 ms
Remote clock offset: -0.464 ms

# Below is generated by plot.py at 2018-10-02 15:18:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.56 Mbit/s
95th percentile per-packet one-way delay: 2.495 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 89.56 Mbit/s
95th percentile per-packet one-way delay: 2.495 ms
Loss rate: 0.02%
```

Run 1: Report of PCC-Vivace — Data Link

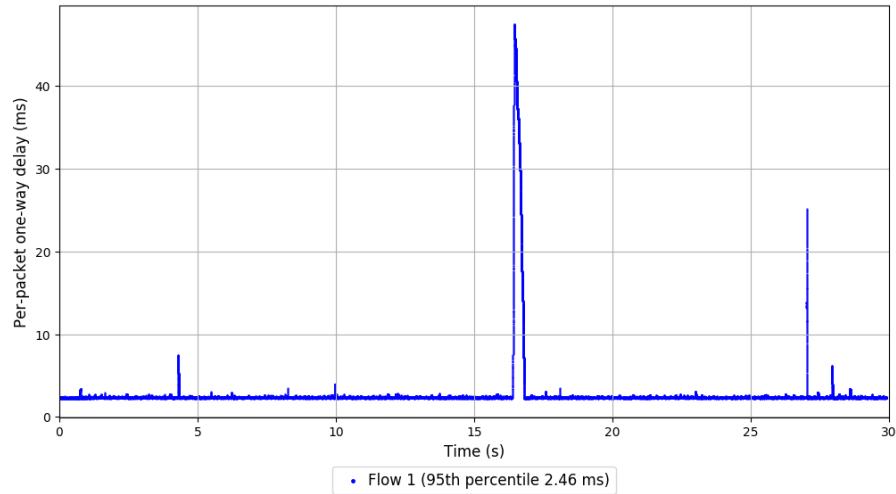
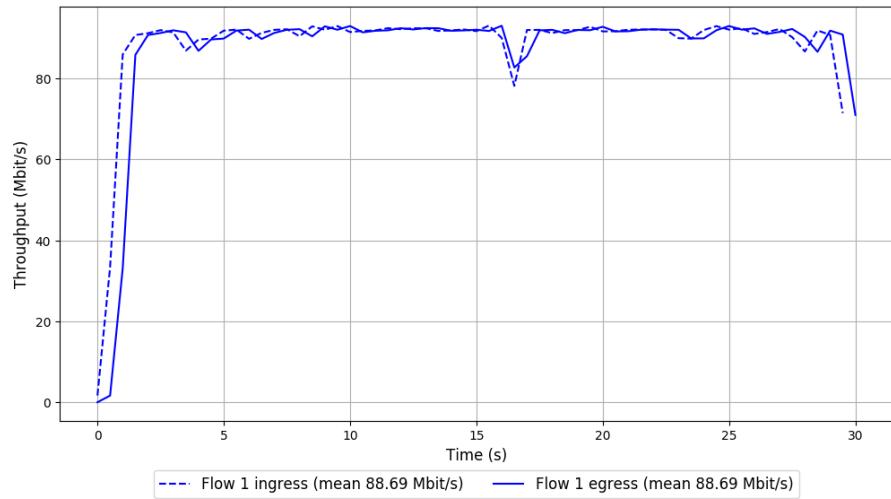


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-10-02 14:00:22
End at: 2018-10-02 14:00:52
Local clock offset: -7.337 ms
Remote clock offset: -0.23 ms

# Below is generated by plot.py at 2018-10-02 15:18:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.69 Mbit/s
95th percentile per-packet one-way delay: 2.461 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 88.69 Mbit/s
95th percentile per-packet one-way delay: 2.461 ms
Loss rate: 0.02%
```

Run 2: Report of PCC-Vivace — Data Link

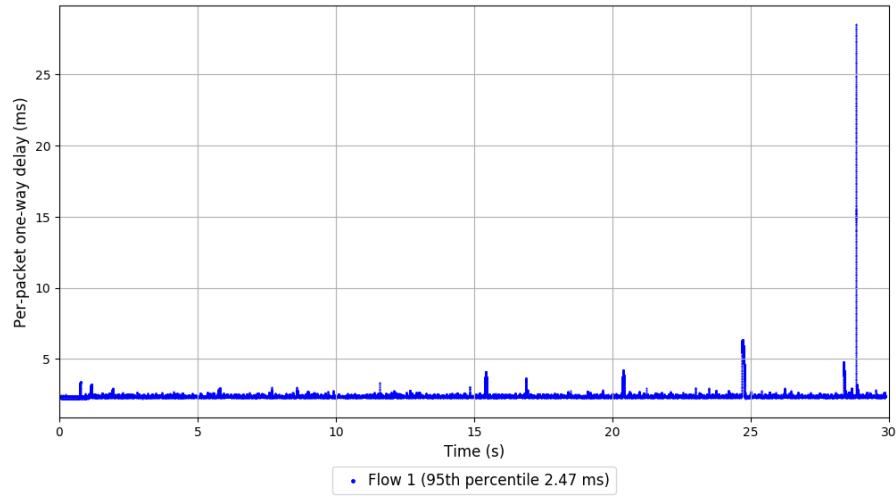
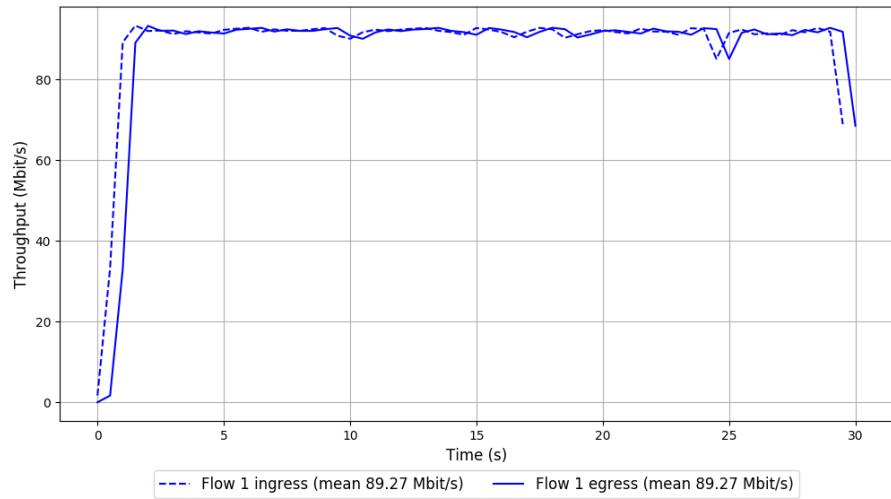


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-10-02 14:20:44
End at: 2018-10-02 14:21:14
Local clock offset: -7.426 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-10-02 15:18:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.27 Mbit/s
95th percentile per-packet one-way delay: 2.469 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 89.27 Mbit/s
95th percentile per-packet one-way delay: 2.469 ms
Loss rate: 0.02%
```

Run 3: Report of PCC-Vivace — Data Link

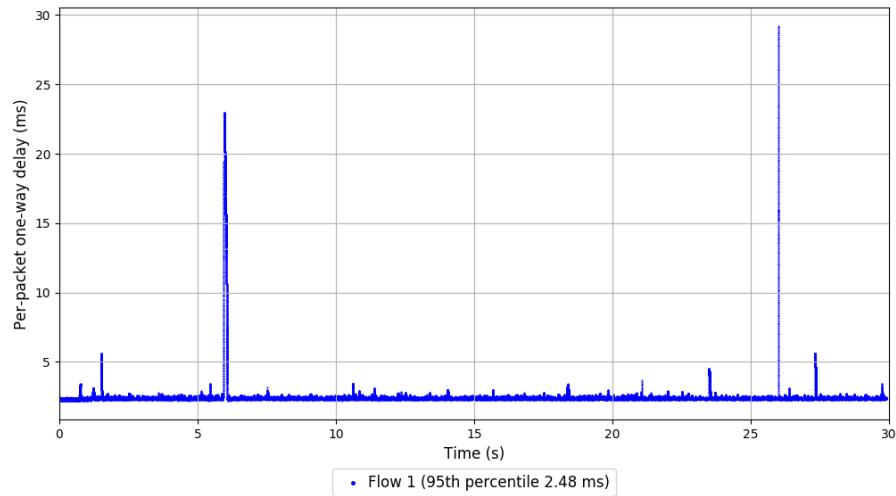
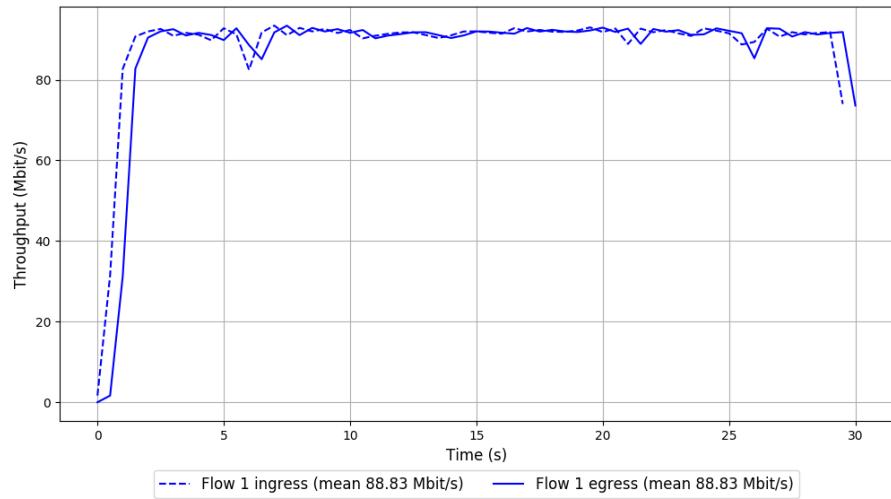


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-10-02 14:41:07
End at: 2018-10-02 14:41:37
Local clock offset: -8.045 ms
Remote clock offset: 0.011 ms

# Below is generated by plot.py at 2018-10-02 15:18:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.83 Mbit/s
95th percentile per-packet one-way delay: 2.483 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 88.83 Mbit/s
95th percentile per-packet one-way delay: 2.483 ms
Loss rate: 0.02%
```

Run 4: Report of PCC-Vivace — Data Link

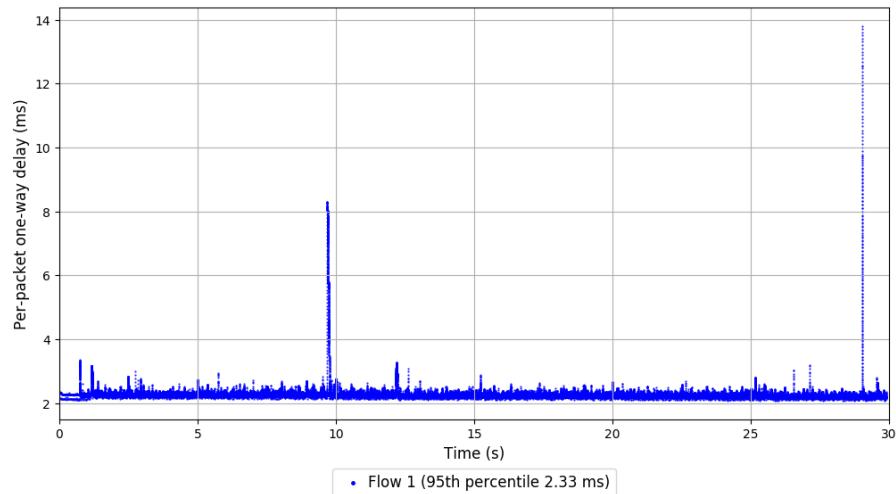
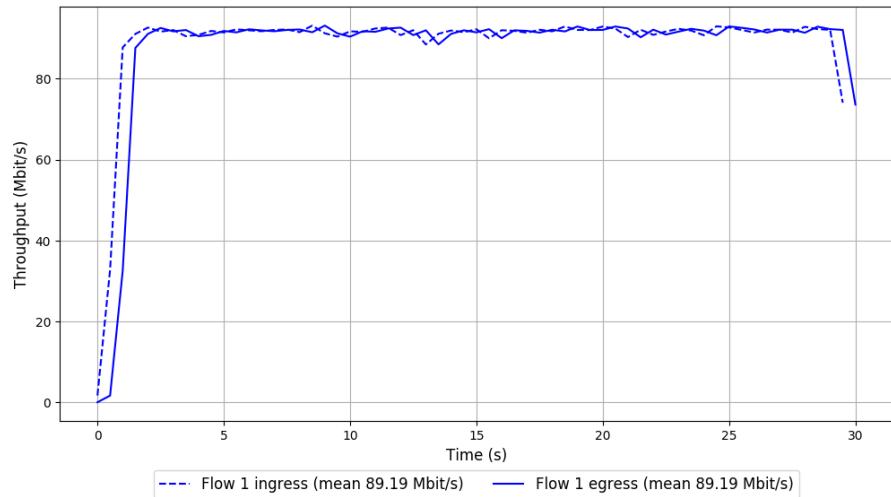


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-10-02 15:01:30
End at: 2018-10-02 15:02:00
Local clock offset: -2.96 ms
Remote clock offset: 0.069 ms

# Below is generated by plot.py at 2018-10-02 15:18:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.19 Mbit/s
95th percentile per-packet one-way delay: 2.335 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 89.19 Mbit/s
95th percentile per-packet one-way delay: 2.335 ms
Loss rate: 0.02%
```

Run 5: Report of PCC-Vivace — Data Link

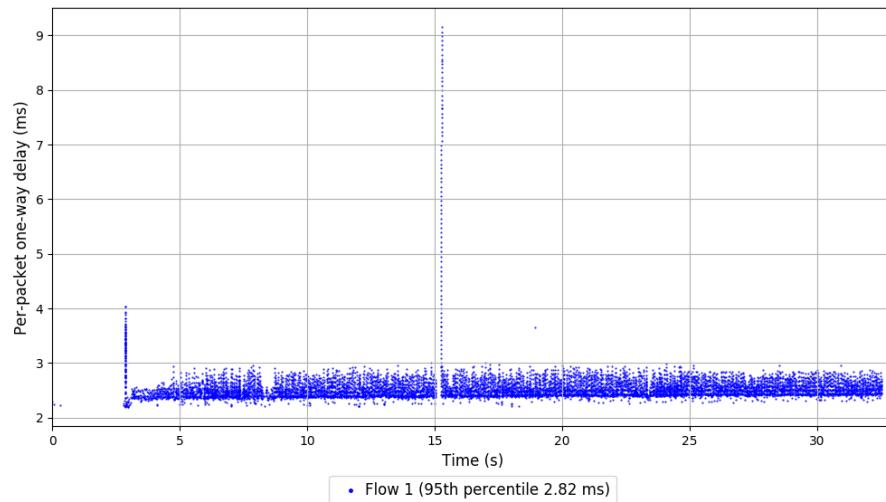
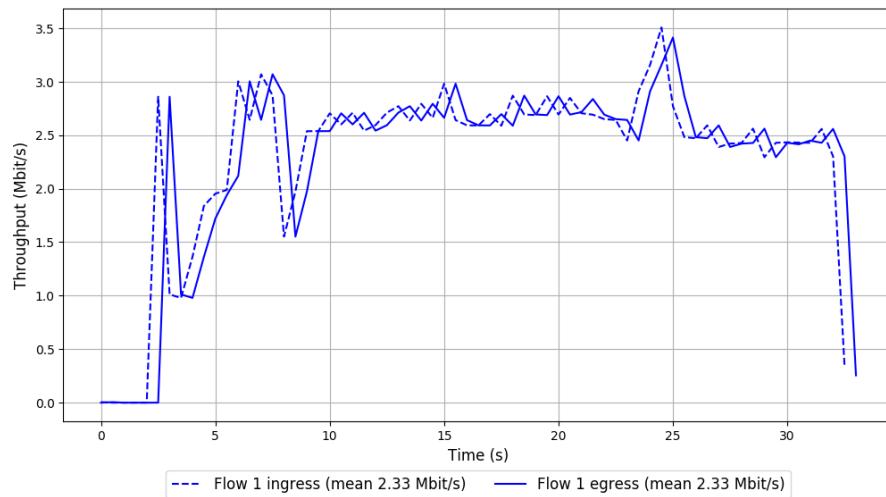


```
Run 1: Statistics of WebRTC media

Start at: 2018-10-02 13:32:04
End at: 2018-10-02 13:32:34
Local clock offset: -8.301 ms
Remote clock offset: -0.523 ms

# Below is generated by plot.py at 2018-10-02 15:18:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 2.816 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 2.816 ms
Loss rate: 0.06%
```

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

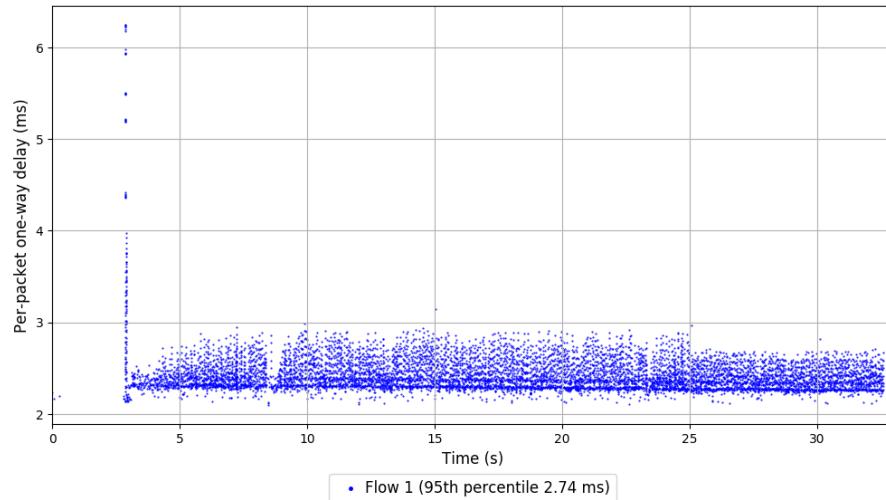
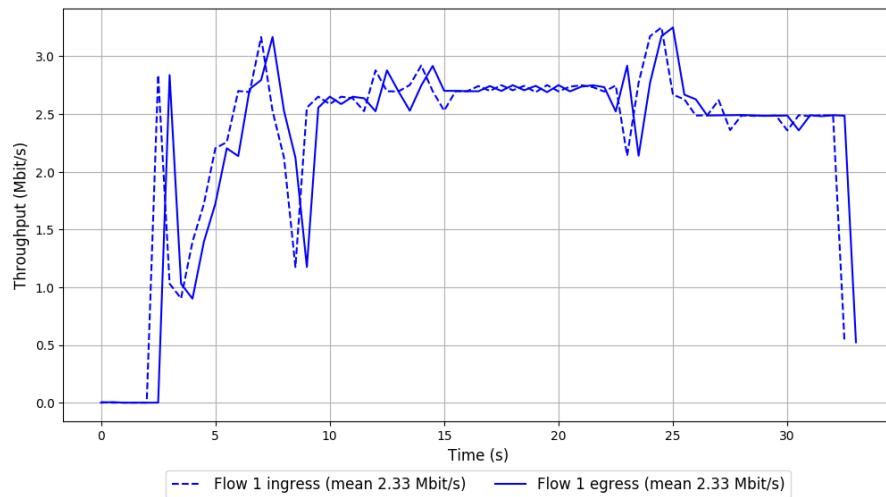


Run 2: Statistics of WebRTC media

```
Start at: 2018-10-02 13:52:27
End at: 2018-10-02 13:52:57
Local clock offset: -8.102 ms
Remote clock offset: -0.355 ms

# Below is generated by plot.py at 2018-10-02 15:18:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 2.736 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 2.736 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

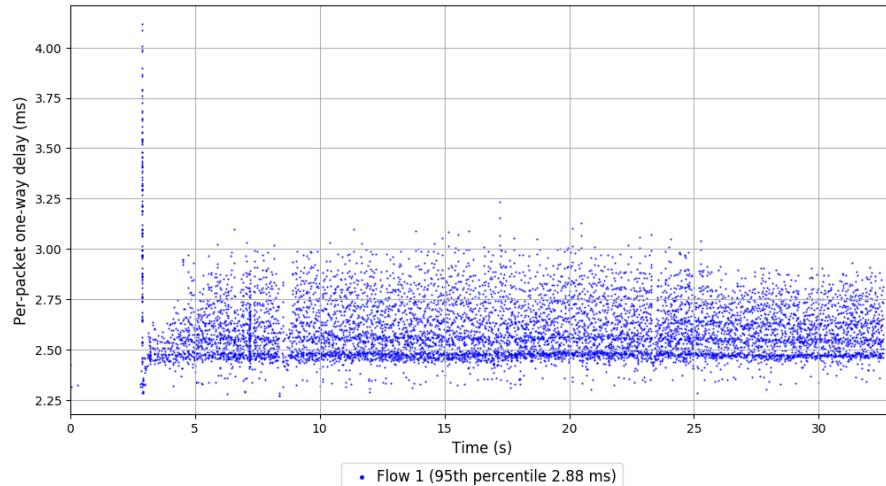
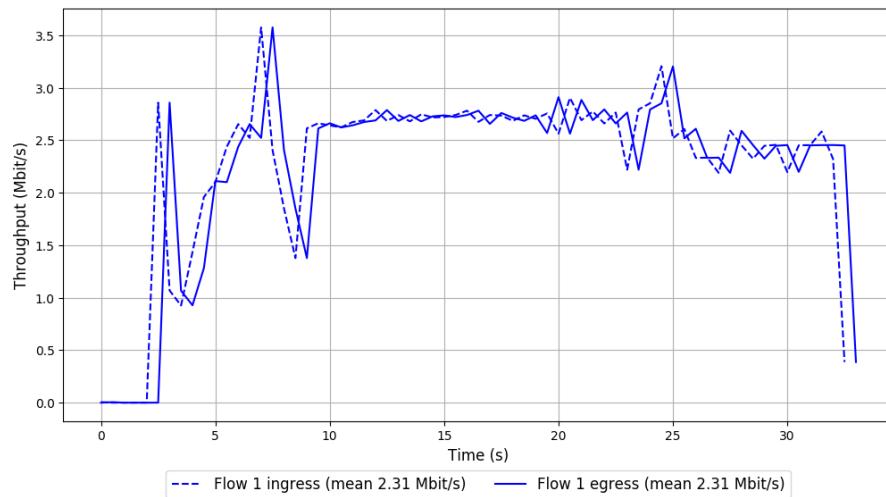


Run 3: Statistics of WebRTC media

```
Start at: 2018-10-02 14:12:49
End at: 2018-10-02 14:13:19
Local clock offset: -7.131 ms
Remote clock offset: -0.184 ms

# Below is generated by plot.py at 2018-10-02 15:18:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 2.877 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 2.877 ms
Loss rate: 0.00%
```

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

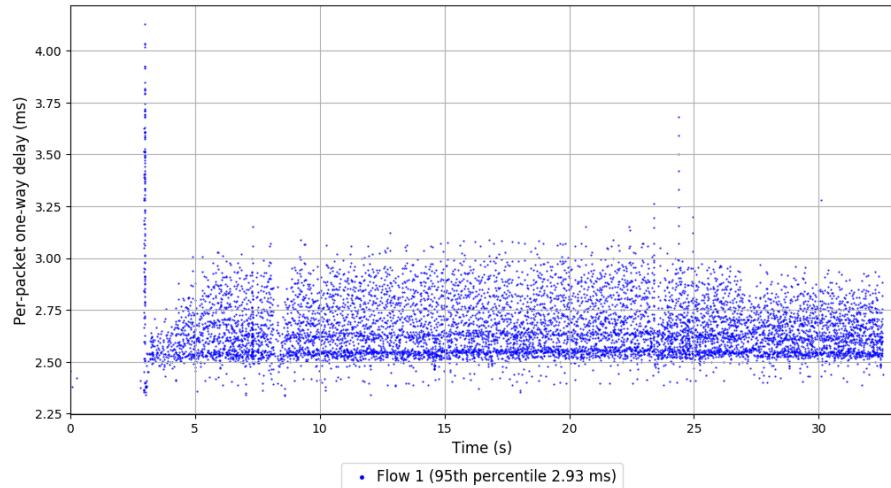
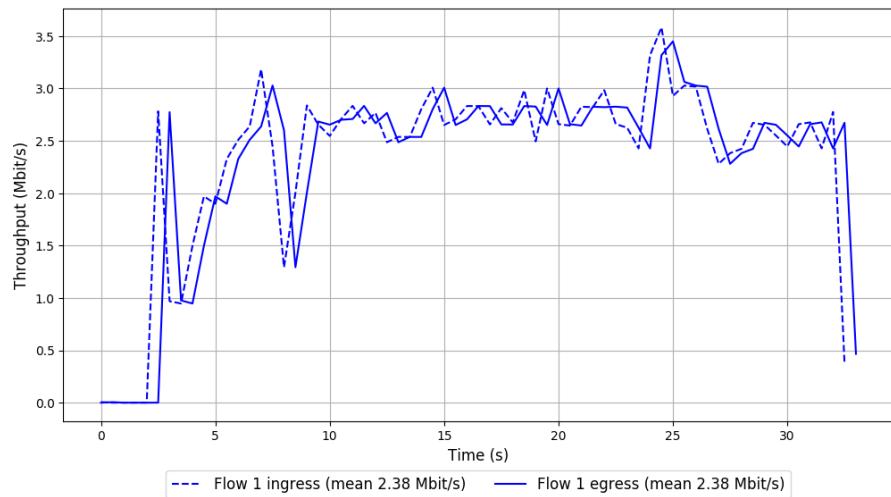


Run 4: Statistics of WebRTC media

```
Start at: 2018-10-02 14:33:11
End at: 2018-10-02 14:33:41
Local clock offset: -7.832 ms
Remote clock offset: -0.174 ms

# Below is generated by plot.py at 2018-10-02 15:18:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 2.931 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 2.931 ms
Loss rate: 0.01%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-10-02 14:53:34
End at: 2018-10-02 14:54:04
Local clock offset: -4.592 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2018-10-02 15:18:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 2.685 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 2.685 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

