

## Pantheon Report

Generated at 2018-12-11 10:54:59 (UTC).  
Data path: AWS Brazil 1 on `ens5` (*local*) → Brazil on `p4p1` (*remote*).  
Repeated the test of 19 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:

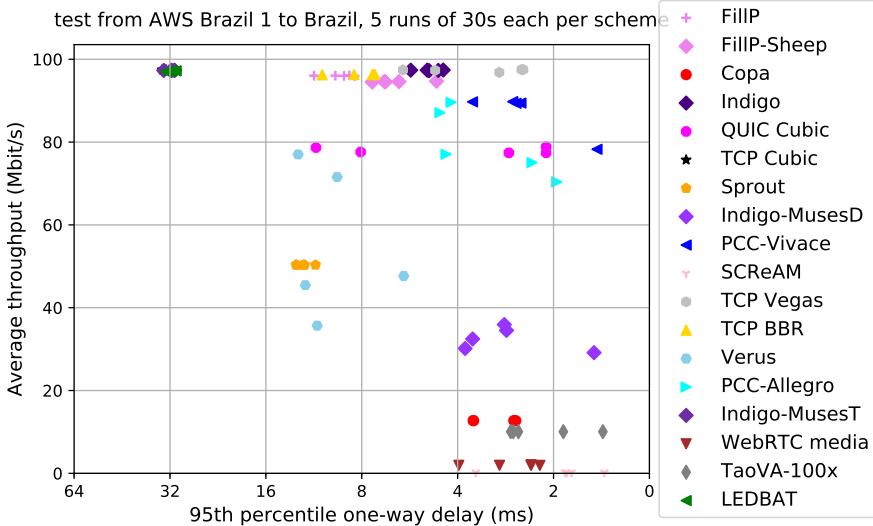
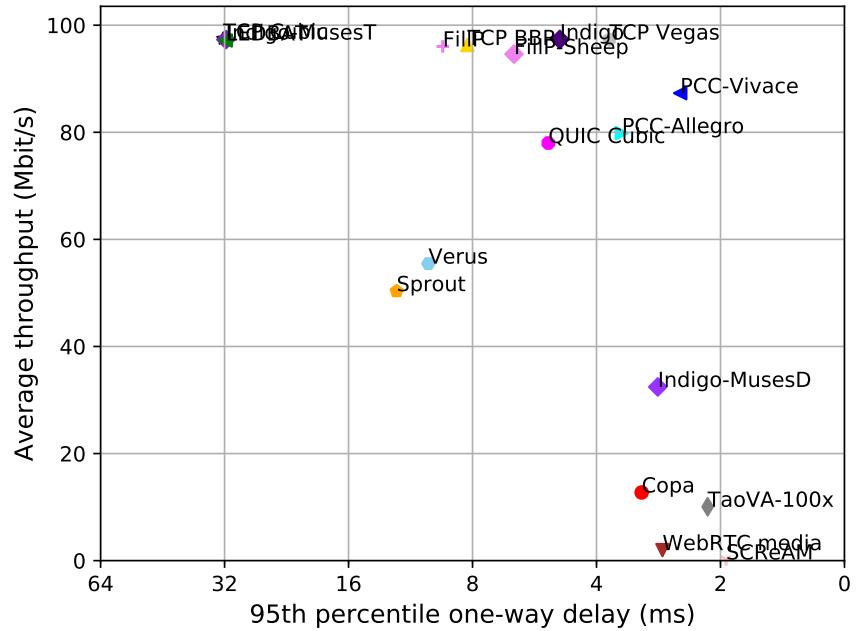
```
Linux 4.15.0-1029-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ c654af0b7d59d4ef4b914cfac404e1fc2e96dc68
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fc45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbfed0c6349ae986009b4fa8643c40a
third_party/muses-refactored @ 31f8f0ba8ef8b1da76c2bc0cd0a7850c33ff64fb
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

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

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



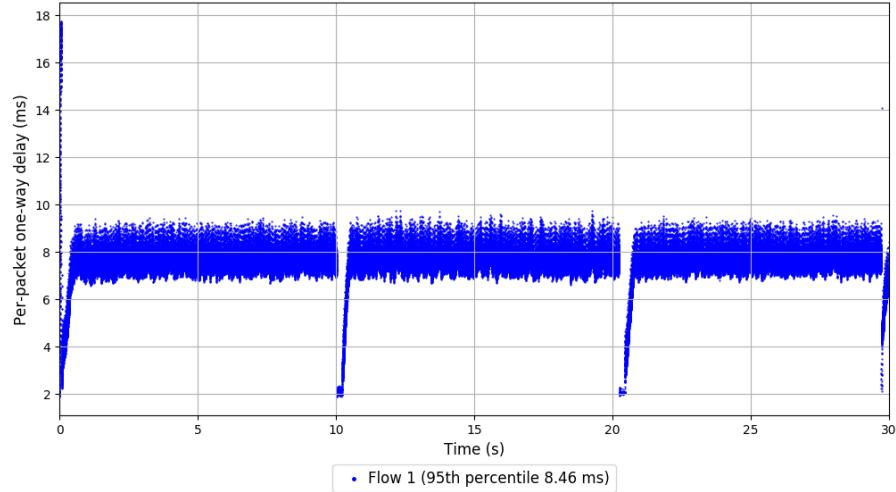
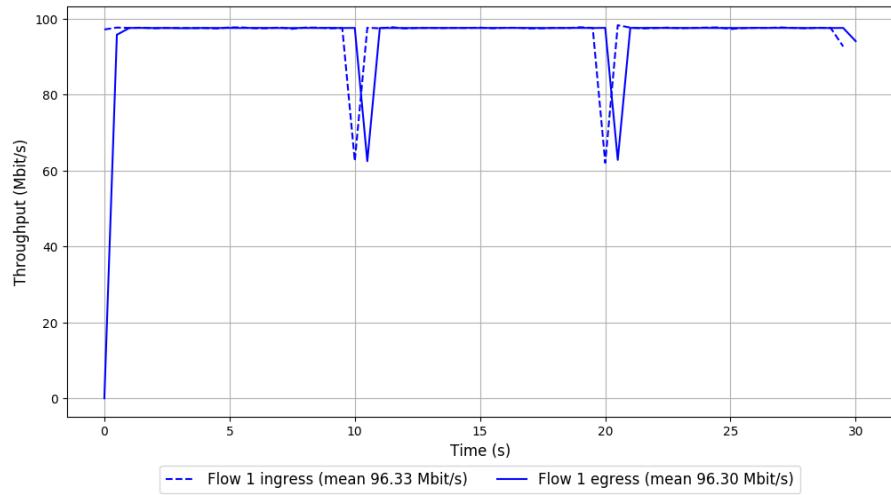
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	96.30	8.23	0.00
Copa	4	12.73	3.11	68.20
TCP Cubic	5	97.48	32.24	0.01
FillP	5	96.03	9.45	0.29
FillP-Sheep	5	94.60	6.34	0.08
Indigo	5	97.34	4.91	0.00
Indigo-MusesD	5	32.44	2.84	0.01
Indigo-MusesT	5	97.32	31.76	46.59
LEDBAT	5	97.14	31.80	0.01
PCC-Allegro	5	79.84	3.47	0.01
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	5	78.00	5.24	0.28
SCReAM	5	0.22	1.91	0.03
Sprout	5	50.33	12.23	0.00
TaoVA-100x	5	10.06	2.15	81.14
TCP Vegas	5	97.32	3.72	0.00
Verus	5	55.47	10.24	1.31
PCC-Vivace	5	87.31	2.51	0.01
WebRTC media	5	1.96	2.77	0.00

Run 1: Statistics of TCP BBR

```
Start at: 2018-12-11 09:00:11
End at: 2018-12-11 09:00:41
Local clock offset: -5.48 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2018-12-11 10:46:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.30 Mbit/s
95th percentile per-packet one-way delay: 8.458 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.30 Mbit/s
95th percentile per-packet one-way delay: 8.458 ms
Loss rate: 0.00%
```

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

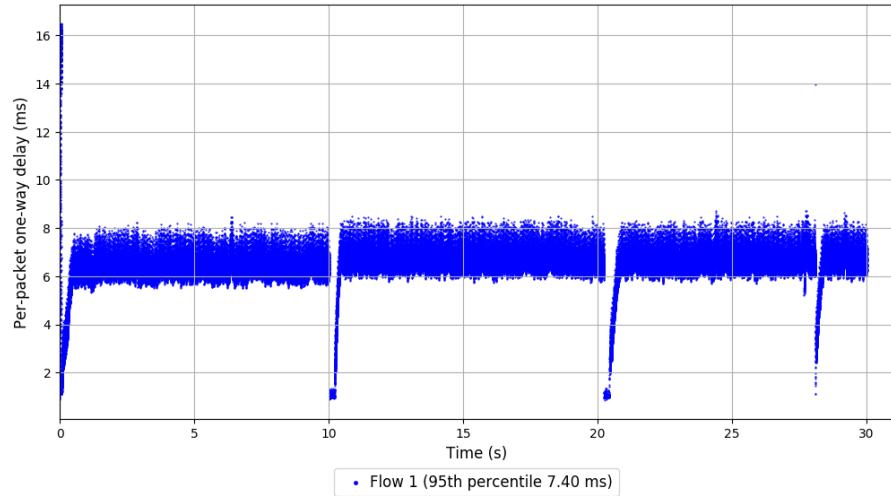
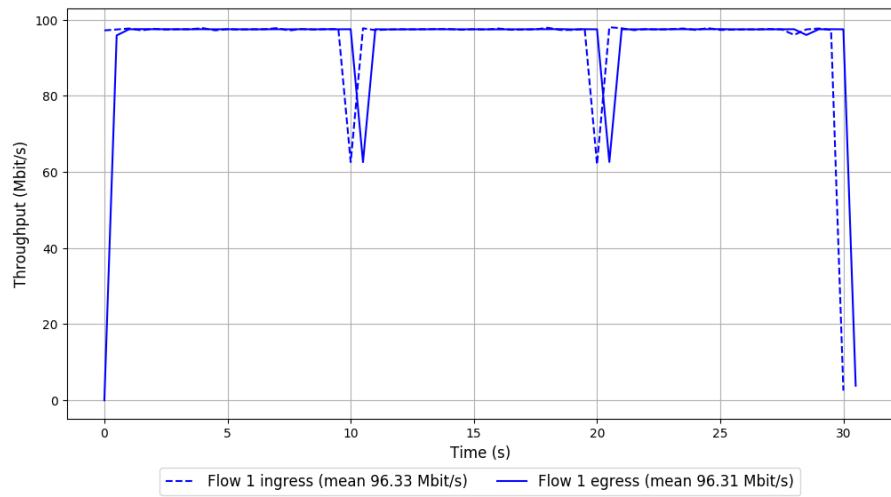


Run 2: Statistics of TCP BBR

```
Start at: 2018-12-11 09:21:23
End at: 2018-12-11 09:21:53
Local clock offset: -1.925 ms
Remote clock offset: 0.077 ms

# Below is generated by plot.py at 2018-12-11 10:46:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.31 Mbit/s
95th percentile per-packet one-way delay: 7.399 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.31 Mbit/s
95th percentile per-packet one-way delay: 7.399 ms
Loss rate: 0.00%
```

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

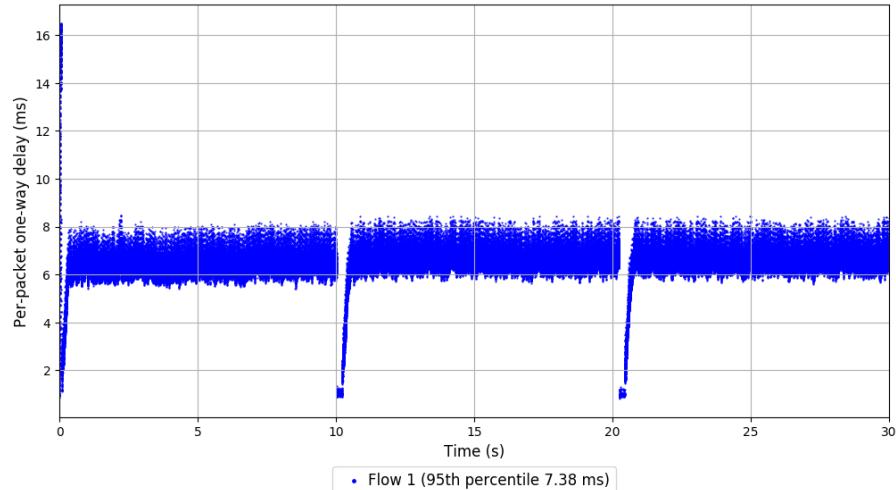
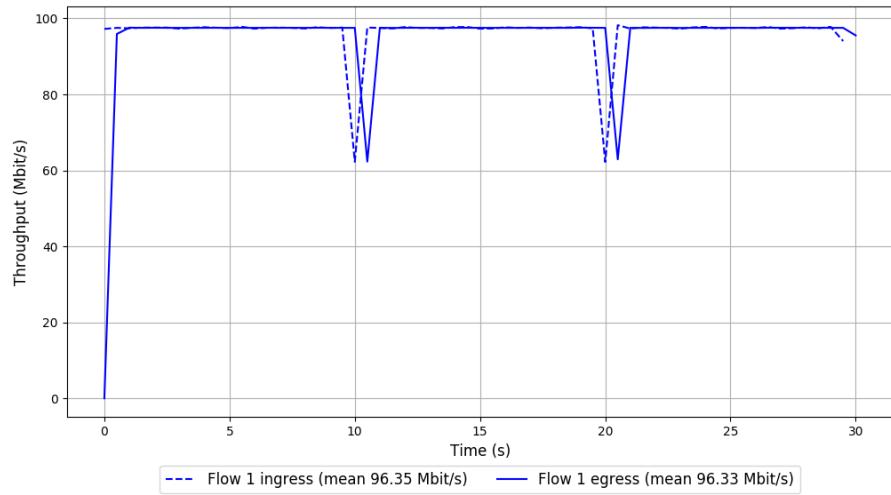


Run 3: Statistics of TCP BBR

```
Start at: 2018-12-11 09:42:36
End at: 2018-12-11 09:43:06
Local clock offset: -2.067 ms
Remote clock offset: 0.236 ms

# Below is generated by plot.py at 2018-12-11 10:46:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.33 Mbit/s
95th percentile per-packet one-way delay: 7.379 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.33 Mbit/s
95th percentile per-packet one-way delay: 7.379 ms
Loss rate: 0.00%
```

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

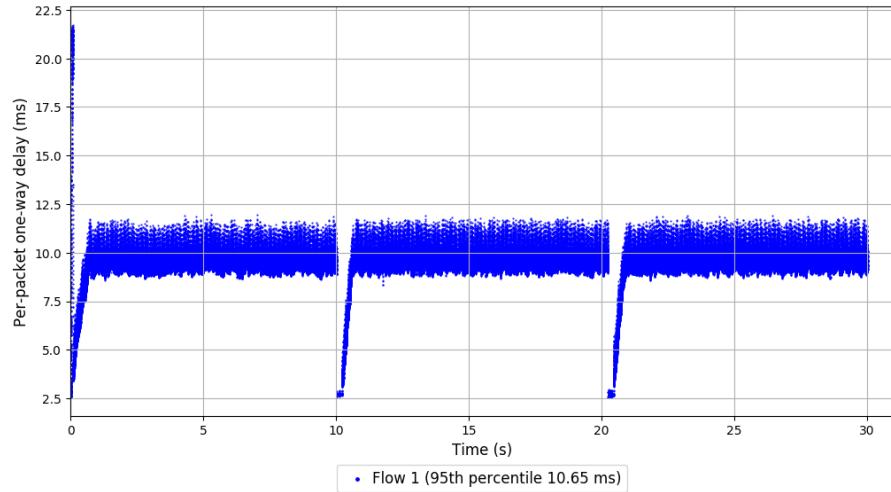
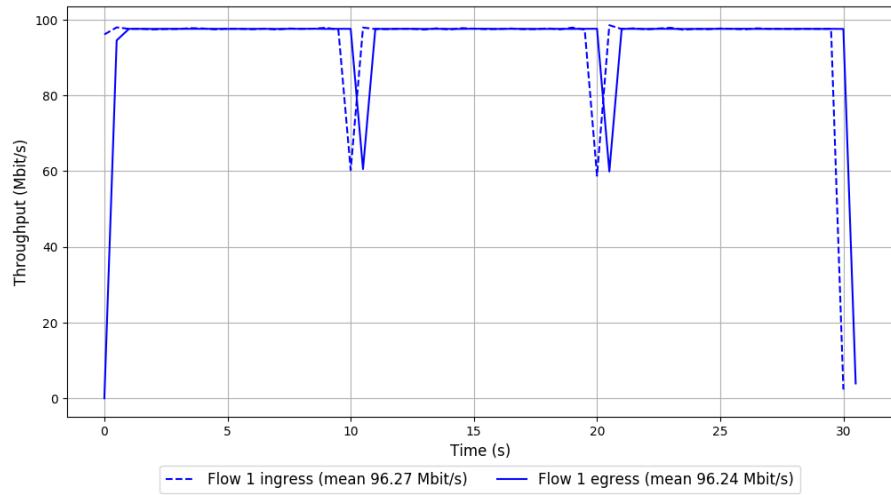


Run 4: Statistics of TCP BBR

```
Start at: 2018-12-11 10:03:46
End at: 2018-12-11 10:04:16
Local clock offset: -2.8 ms
Remote clock offset: 0.448 ms

# Below is generated by plot.py at 2018-12-11 10:46:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.24 Mbit/s
95th percentile per-packet one-way delay: 10.650 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 96.24 Mbit/s
95th percentile per-packet one-way delay: 10.650 ms
Loss rate: 0.01%
```

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

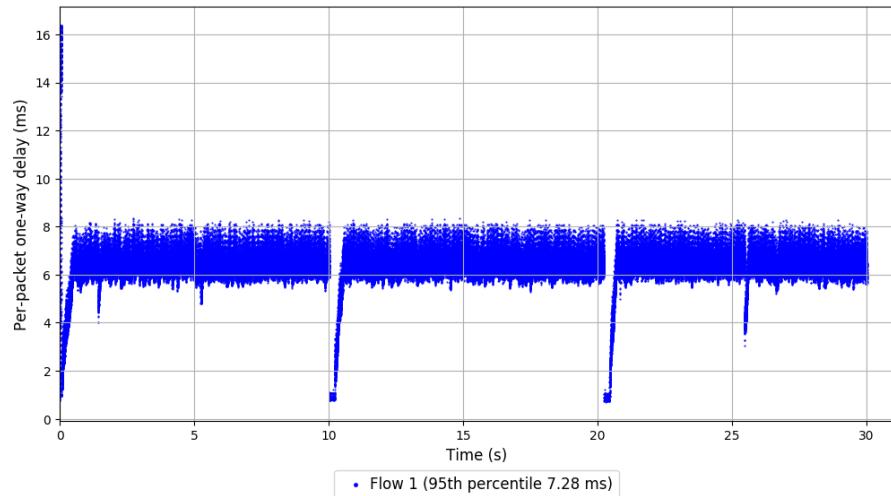
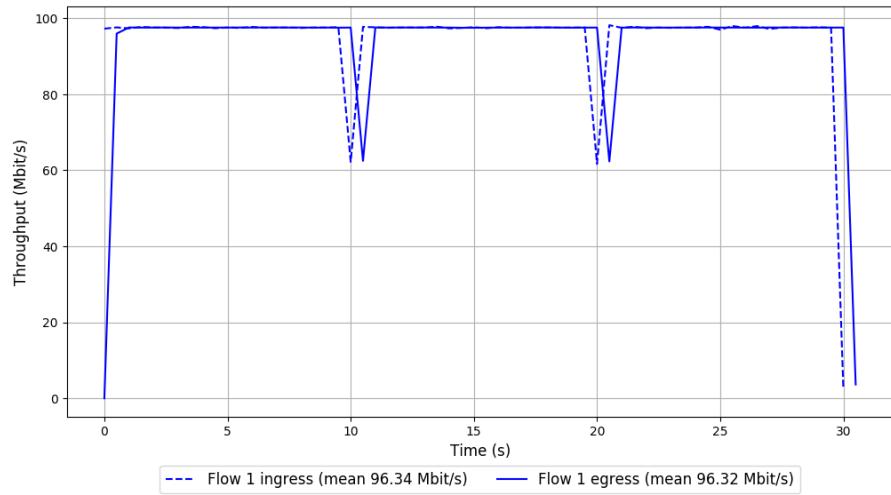


Run 5: Statistics of TCP BBR

```
Start at: 2018-12-11 10:24:57
End at: 2018-12-11 10:25:28
Local clock offset: -6.179 ms
Remote clock offset: 0.498 ms

# Below is generated by plot.py at 2018-12-11 10:46:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.32 Mbit/s
95th percentile per-packet one-way delay: 7.284 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.32 Mbit/s
95th percentile per-packet one-way delay: 7.284 ms
Loss rate: 0.00%
```

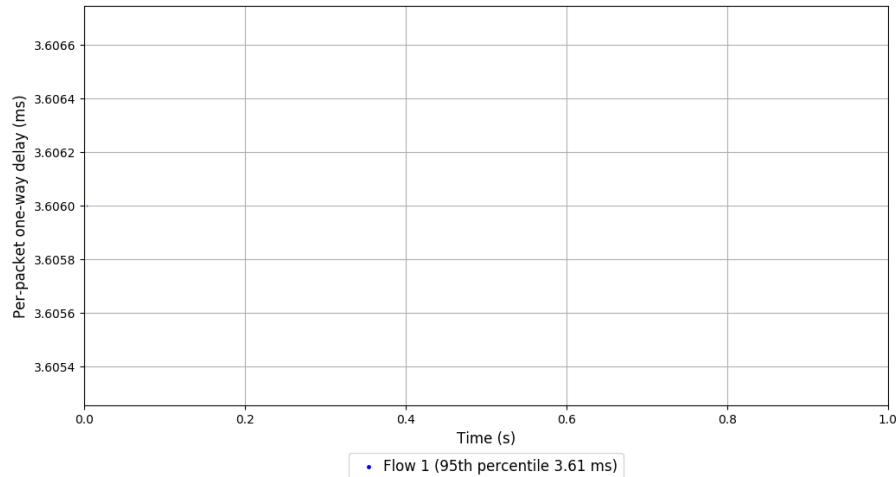
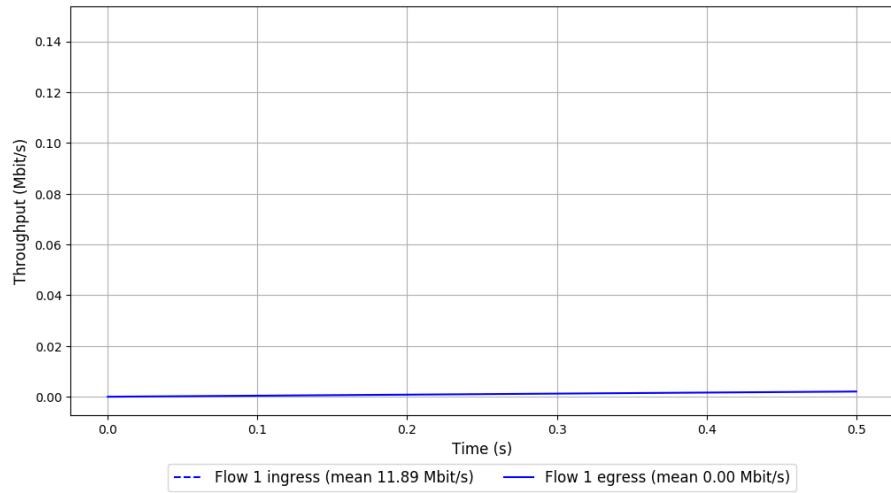
### Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-12-11 08:59:07  
End at: 2018-12-11 08:59:37  
Local clock offset: -5.867 ms  
Remote clock offset: -0.208 ms

## Run 1: Report of Copa — Data Link

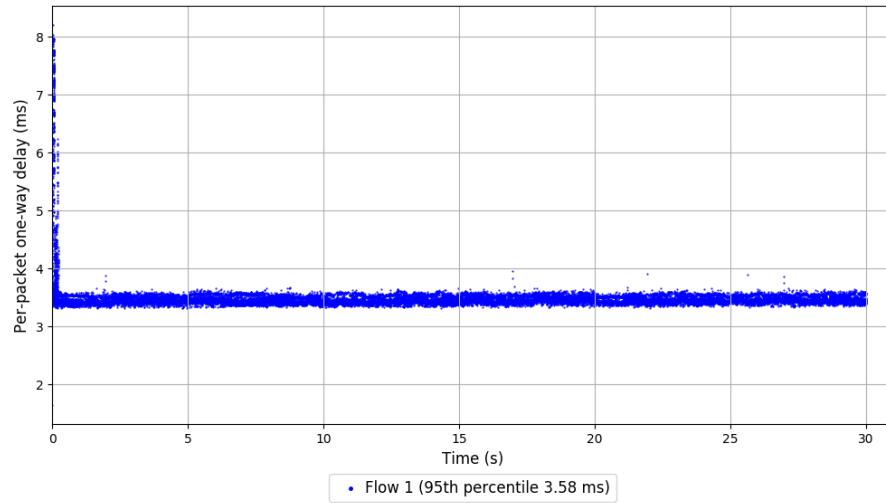
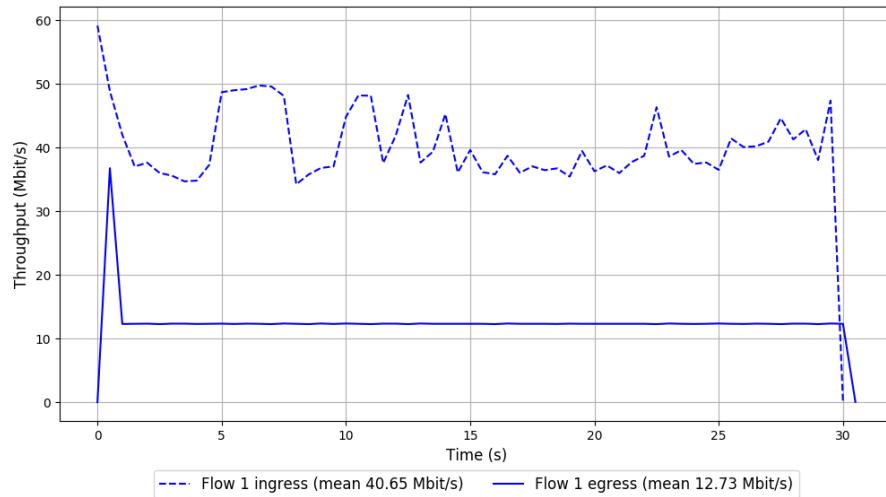


Run 2: Statistics of Copa

```
Start at: 2018-12-11 09:20:18
End at: 2018-12-11 09:20:48
Local clock offset: -2.811 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2018-12-11 10:46:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 3.575 ms
Loss rate: 68.69%
-- Flow 1:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 3.575 ms
Loss rate: 68.69%
```

## Run 2: Report of Copa — Data Link

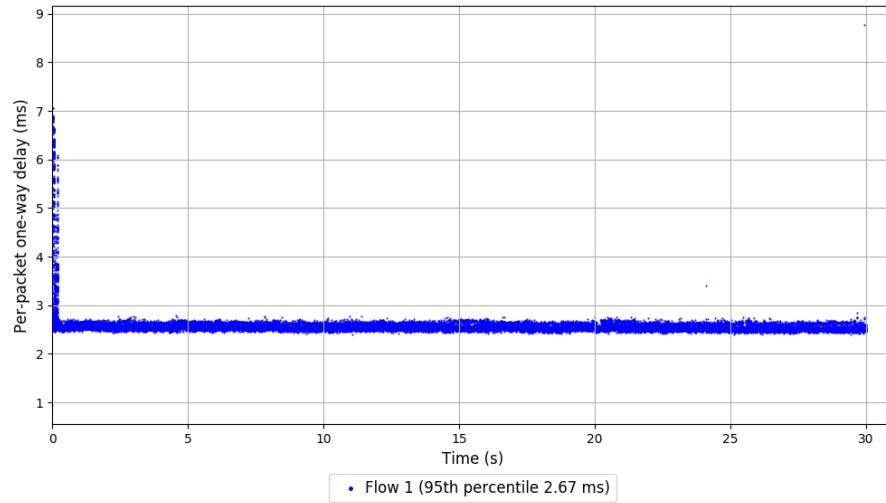
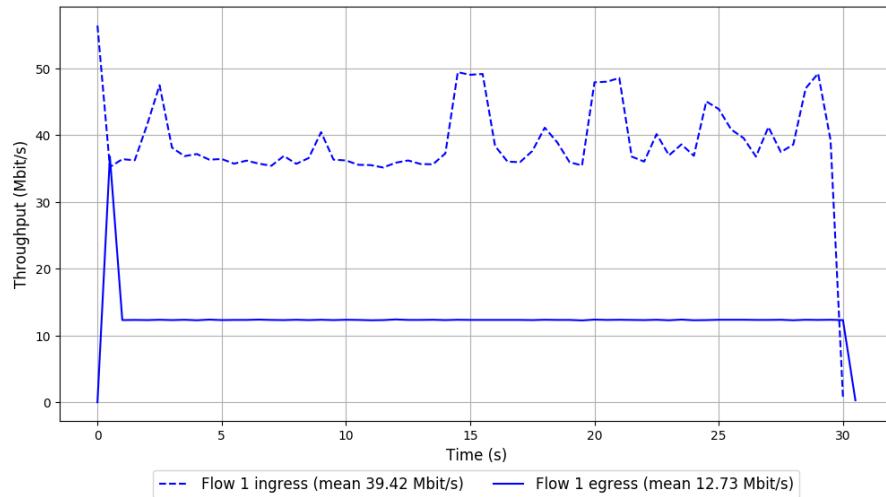


Run 3: Statistics of Copa

```
Start at: 2018-12-11 09:41:31
End at: 2018-12-11 09:42:01
Local clock offset: -1.959 ms
Remote clock offset: 0.176 ms

# Below is generated by plot.py at 2018-12-11 10:46:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 2.666 ms
Loss rate: 67.71%
-- Flow 1:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 2.666 ms
Loss rate: 67.71%
```

### Run 3: Report of Copa — Data Link

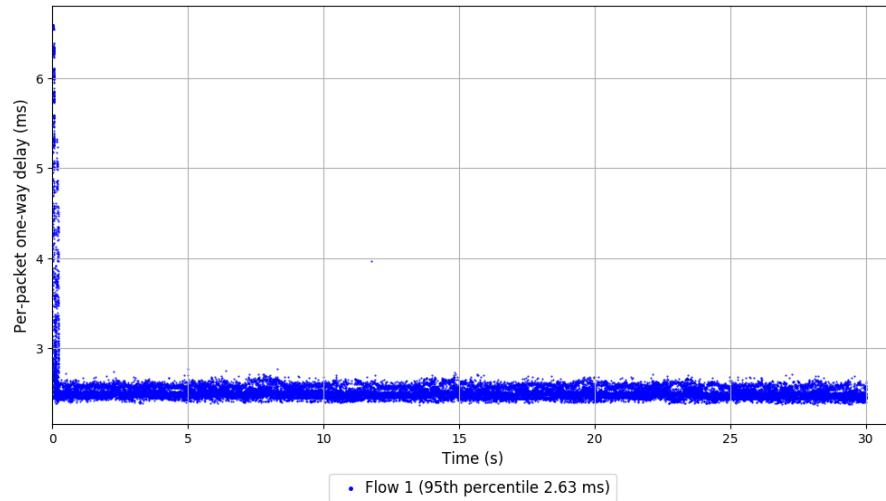
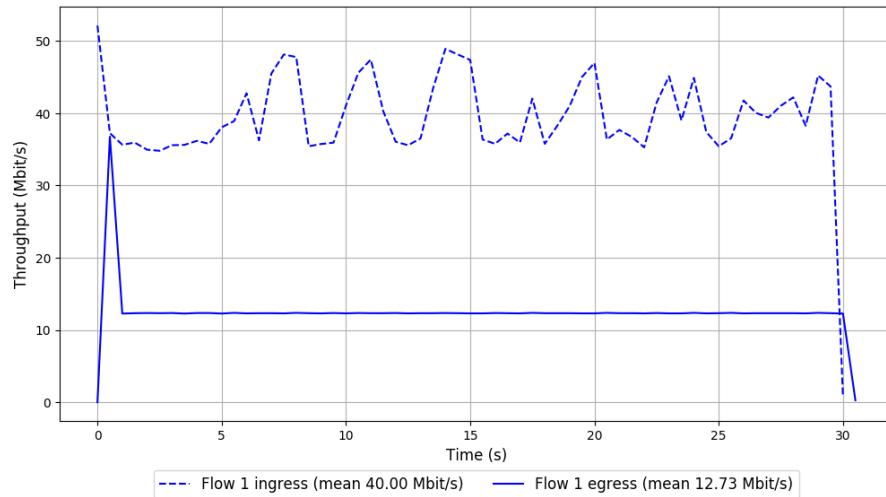


Run 4: Statistics of Copa

```
Start at: 2018-12-11 10:02:41
End at: 2018-12-11 10:03:11
Local clock offset: -2.782 ms
Remote clock offset: 0.311 ms

# Below is generated by plot.py at 2018-12-11 10:46:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 2.628 ms
Loss rate: 68.18%
-- Flow 1:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 2.628 ms
Loss rate: 68.18%
```

## Run 4: Report of Copa — Data Link

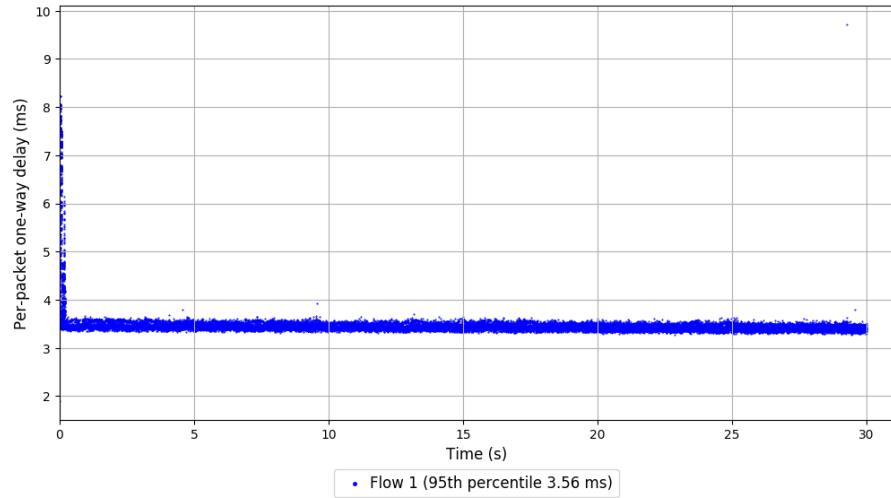
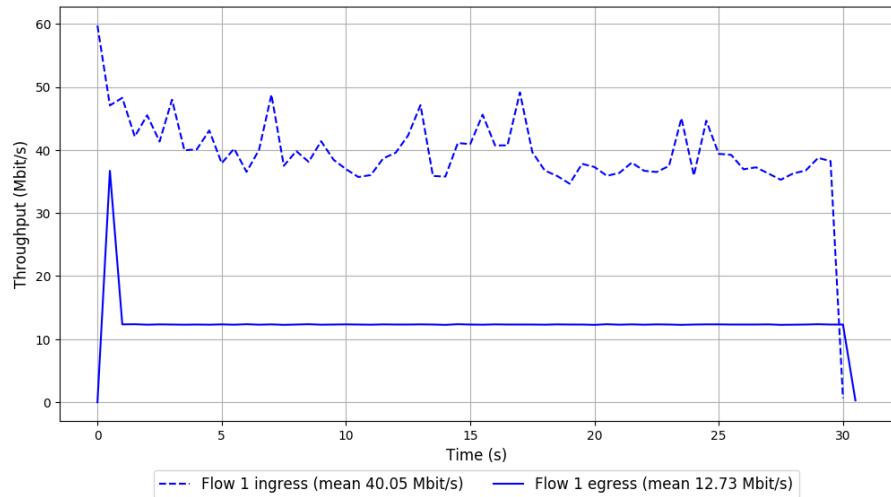


Run 5: Statistics of Copa

```
Start at: 2018-12-11 10:23:52
End at: 2018-12-11 10:24:22
Local clock offset: -6.936 ms
Remote clock offset: 0.54 ms

# Below is generated by plot.py at 2018-12-11 10:46:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 3.563 ms
Loss rate: 68.22%
-- Flow 1:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 3.563 ms
Loss rate: 68.22%
```

### Run 5: Report of Copa — Data Link

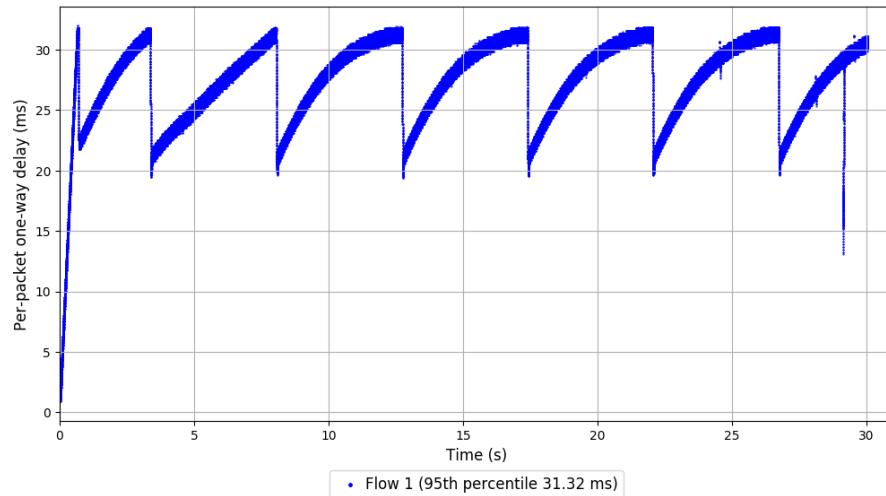
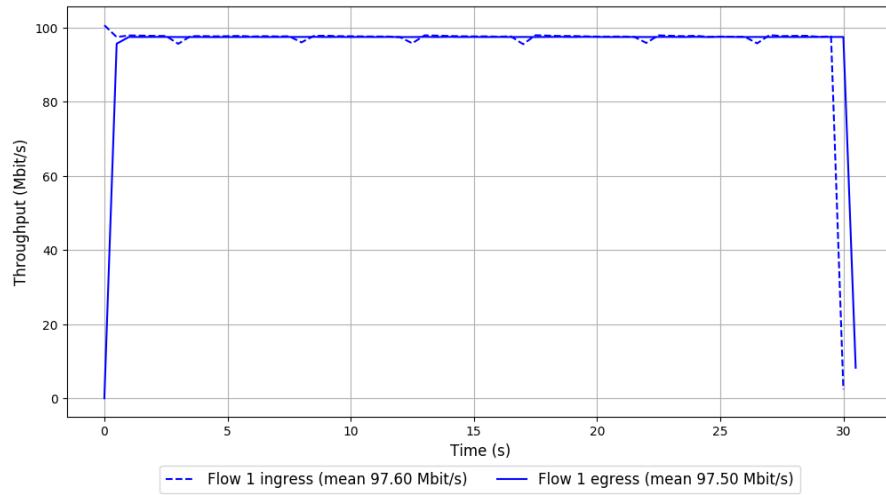


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-12-11 09:11:18
End at: 2018-12-11 09:11:48
Local clock offset: -3.12 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2018-12-11 10:47:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 31.322 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 31.322 ms
Loss rate: 0.01%
```

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

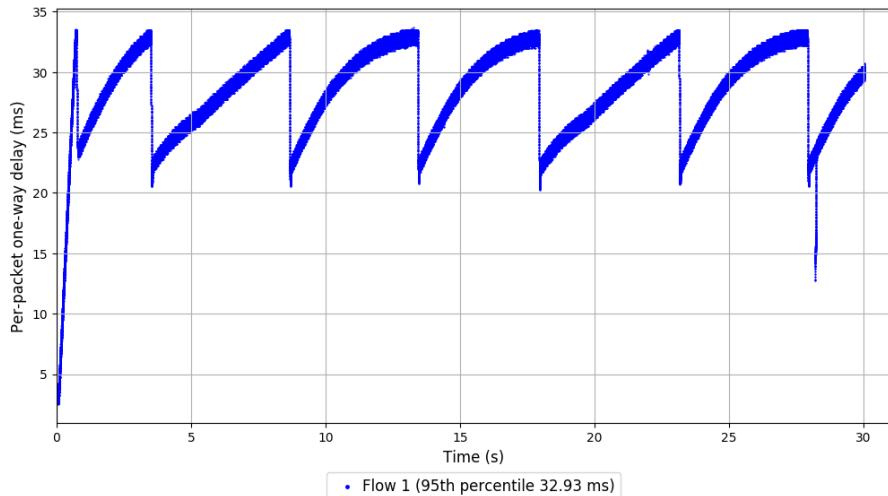
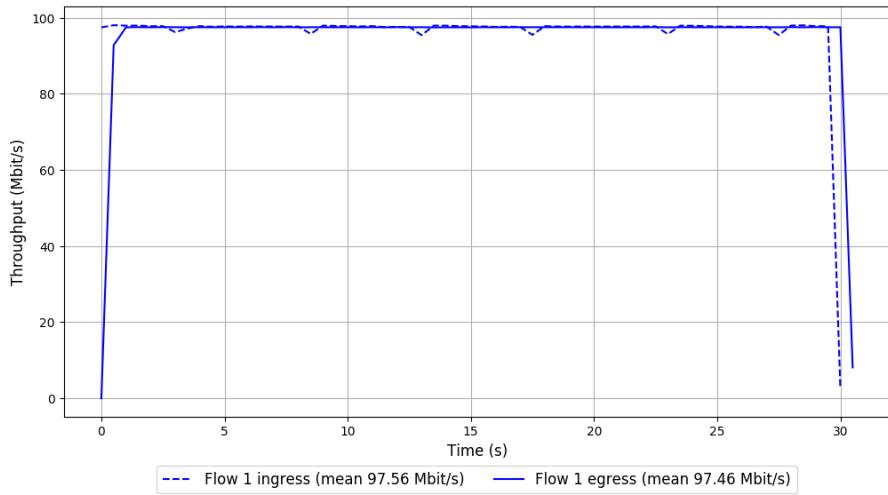


Run 2: Statistics of TCP Cubic

```
Start at: 2018-12-11 09:32:29
End at: 2018-12-11 09:32:59
Local clock offset: -1.701 ms
Remote clock offset: 0.16 ms

# Below is generated by plot.py at 2018-12-11 10:47:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 32.928 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 32.928 ms
Loss rate: 0.01%
```

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

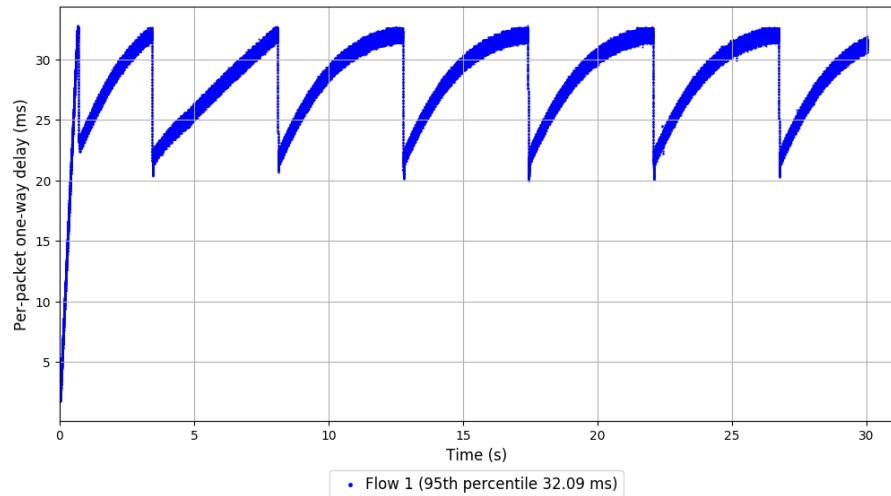
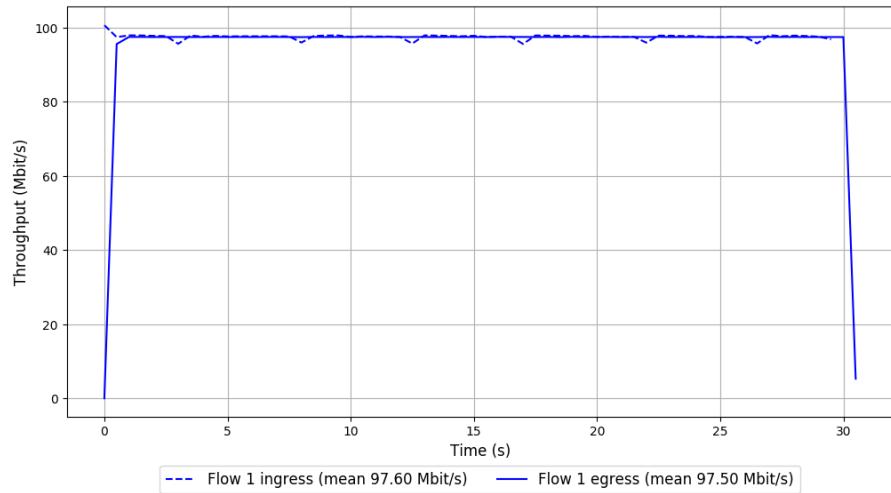


Run 3: Statistics of TCP Cubic

```
Start at: 2018-12-11 09:53:42
End at: 2018-12-11 09:54:12
Local clock offset: -3.4 ms
Remote clock offset: 0.298 ms

# Below is generated by plot.py at 2018-12-11 10:47:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 32.087 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 32.087 ms
Loss rate: 0.01%
```

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

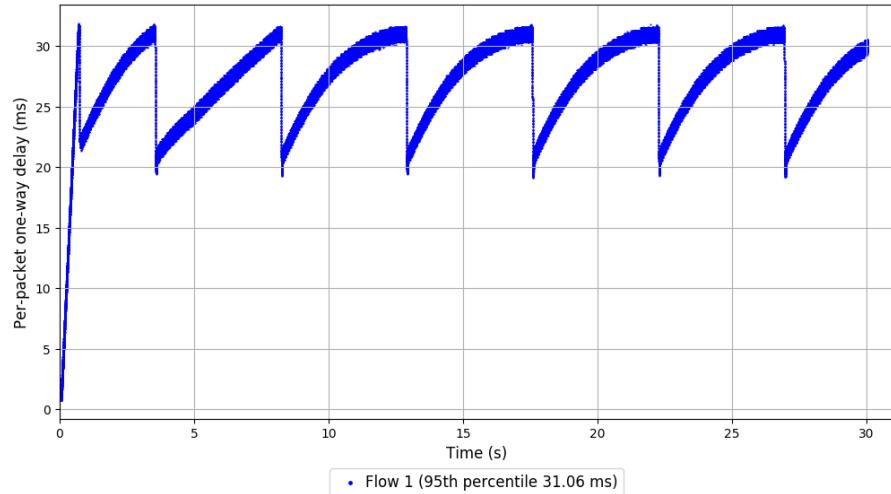
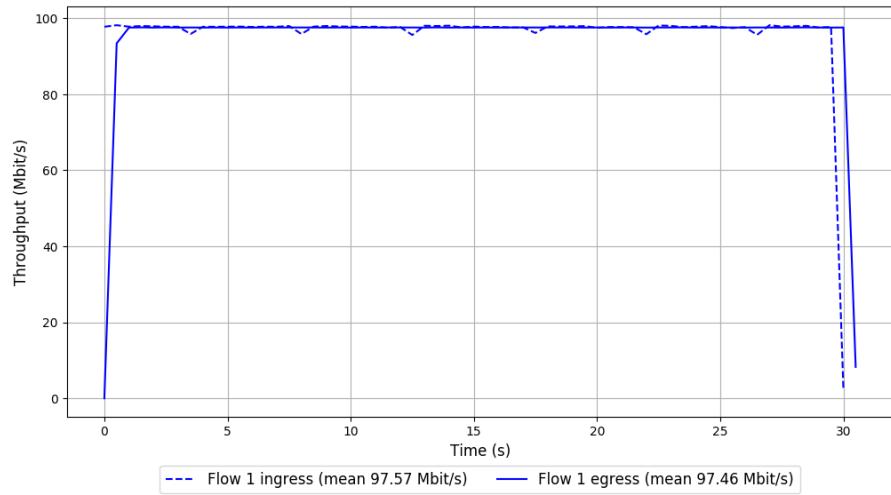


Run 4: Statistics of TCP Cubic

```
Start at: 2018-12-11 10:14:53
End at: 2018-12-11 10:15:23
Local clock offset: -4.678 ms
Remote clock offset: 0.48 ms

# Below is generated by plot.py at 2018-12-11 10:47:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 31.061 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 31.061 ms
Loss rate: 0.01%
```

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

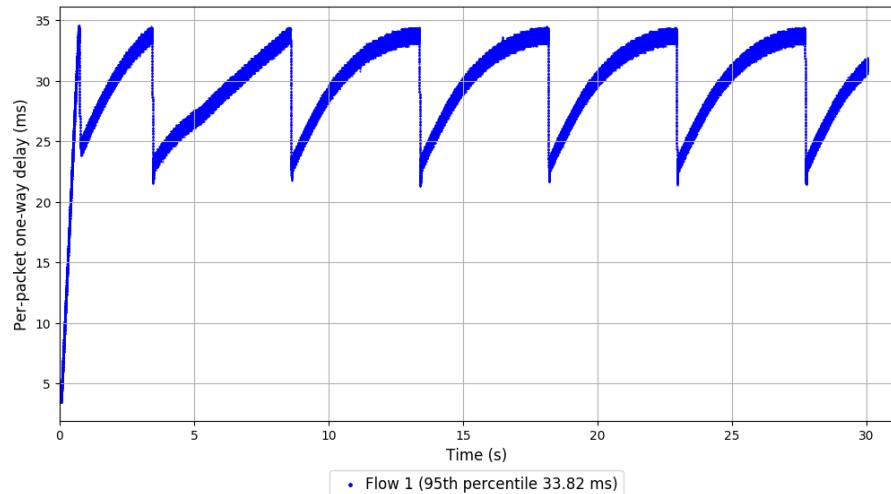
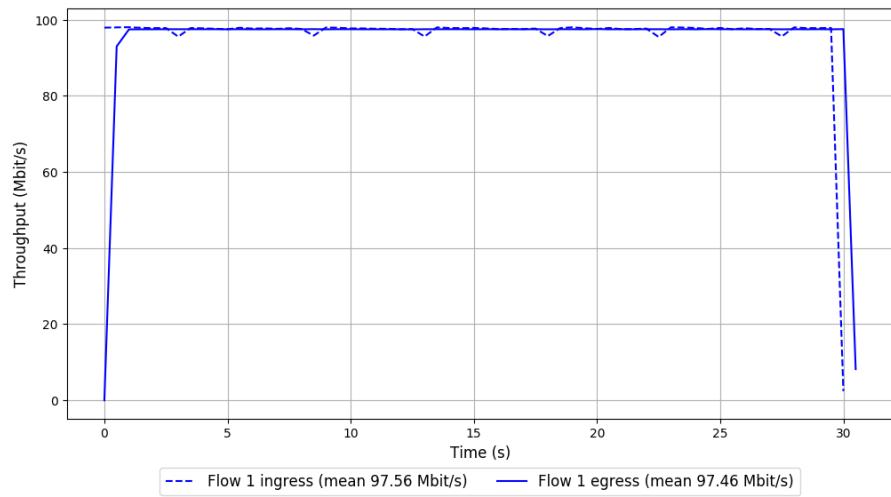


Run 5: Statistics of TCP Cubic

```
Start at: 2018-12-11 10:36:04
End at: 2018-12-11 10:36:34
Local clock offset: -8.09 ms
Remote clock offset: 0.619 ms

# Below is generated by plot.py at 2018-12-11 10:47:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 33.822 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 33.822 ms
Loss rate: 0.02%
```

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

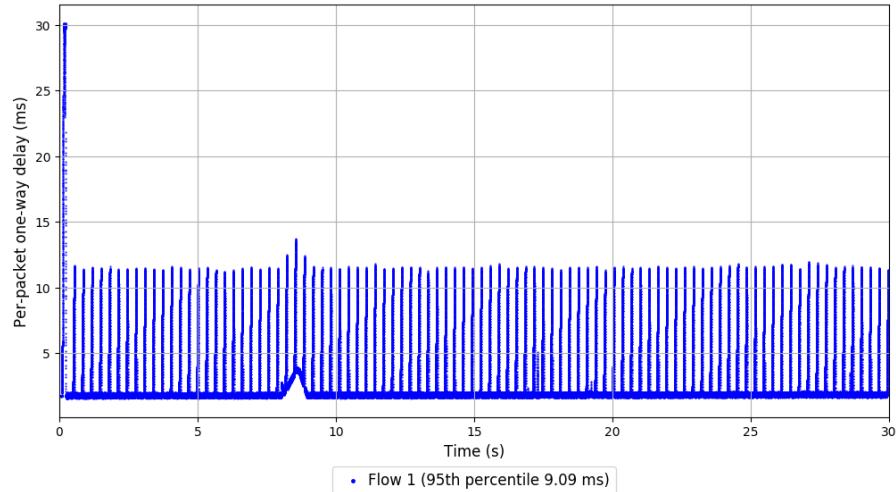
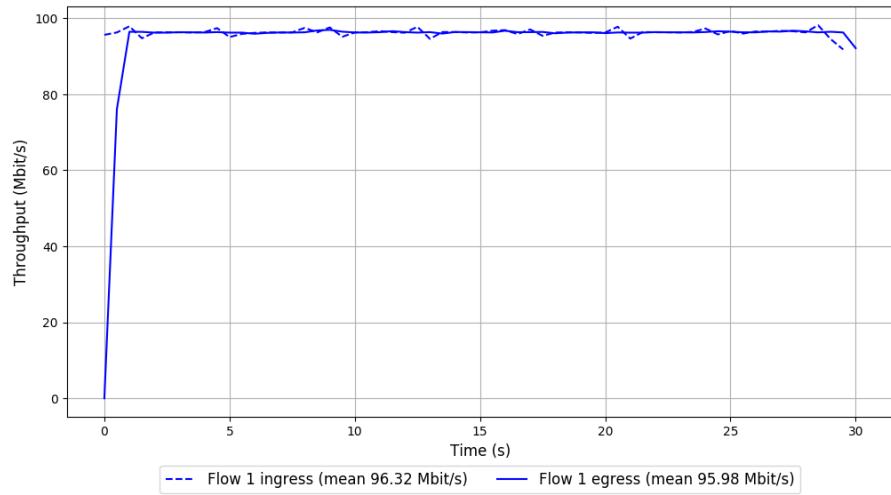


```
Run 1: Statistics of FillP

Start at: 2018-12-11 09:13:35
End at: 2018-12-11 09:14:05
Local clock offset: -3.513 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2018-12-11 10:48:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.98 Mbit/s
95th percentile per-packet one-way delay: 9.093 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 95.98 Mbit/s
95th percentile per-packet one-way delay: 9.093 ms
Loss rate: 0.33%
```

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

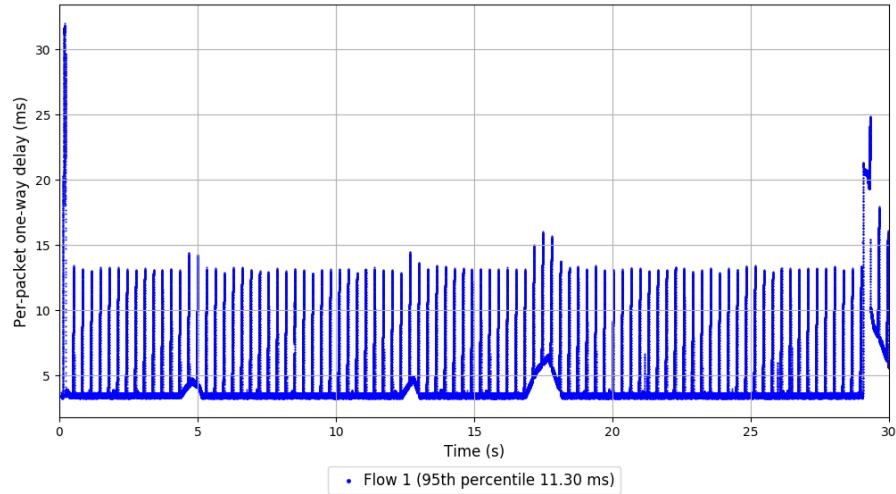
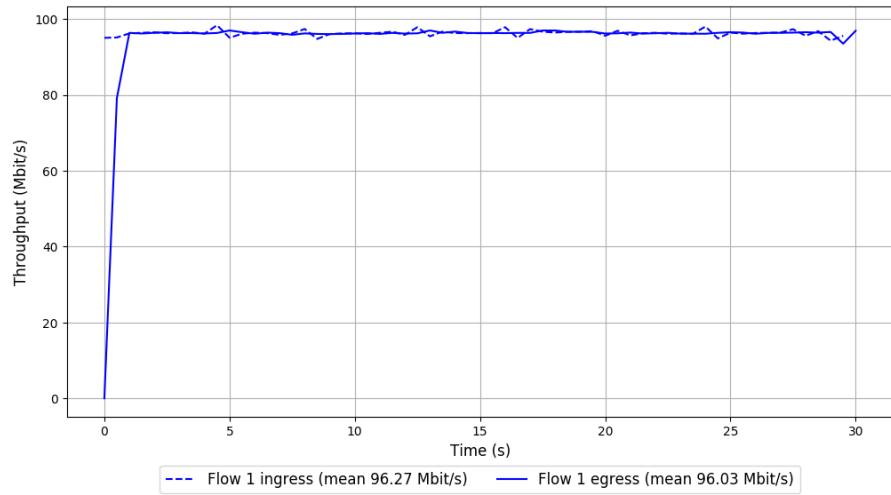


Run 2: Statistics of FillP

```
Start at: 2018-12-11 09:34:47
End at: 2018-12-11 09:35:17
Local clock offset: -2.651 ms
Remote clock offset: 0.055 ms

# Below is generated by plot.py at 2018-12-11 10:48:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.03 Mbit/s
95th percentile per-packet one-way delay: 11.298 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 96.03 Mbit/s
95th percentile per-packet one-way delay: 11.298 ms
Loss rate: 0.25%
```

## Run 2: Report of FillP — Data Link

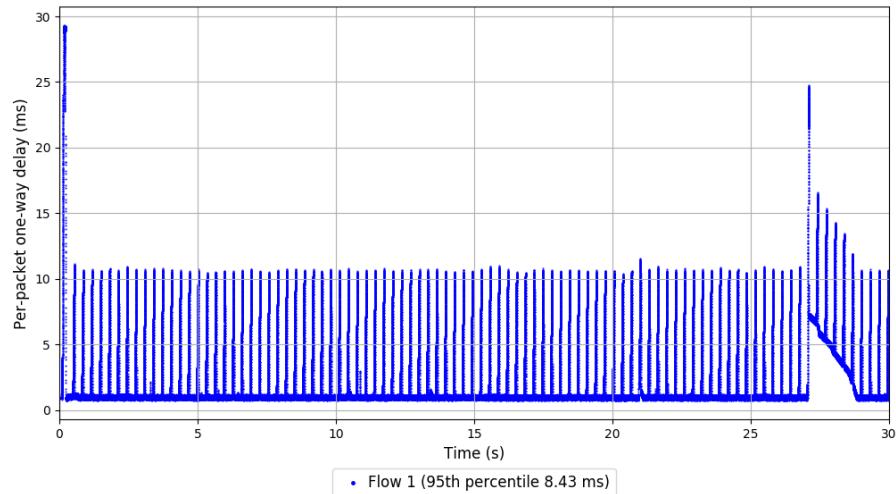
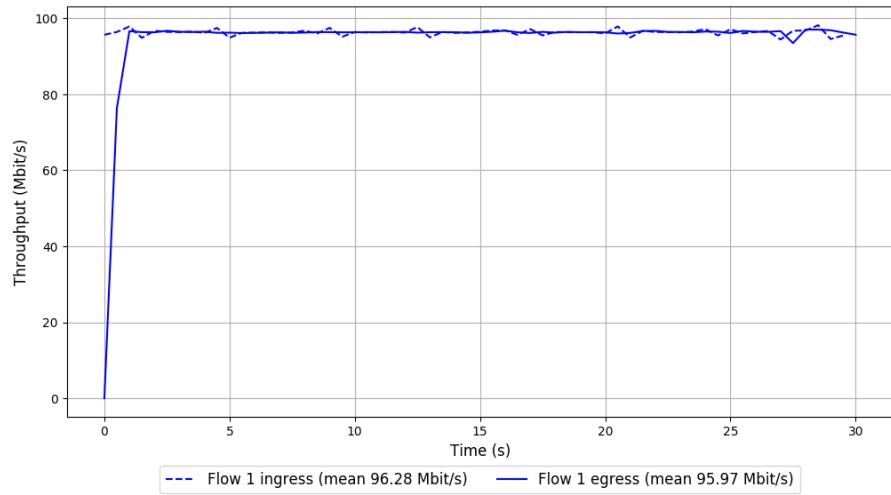


Run 3: Statistics of FillP

```
Start at: 2018-12-11 09:55:59
End at: 2018-12-11 09:56:29
Local clock offset: -2.622 ms
Remote clock offset: 0.355 ms

# Below is generated by plot.py at 2018-12-11 10:48:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.97 Mbit/s
95th percentile per-packet one-way delay: 8.426 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 95.97 Mbit/s
95th percentile per-packet one-way delay: 8.426 ms
Loss rate: 0.33%
```

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

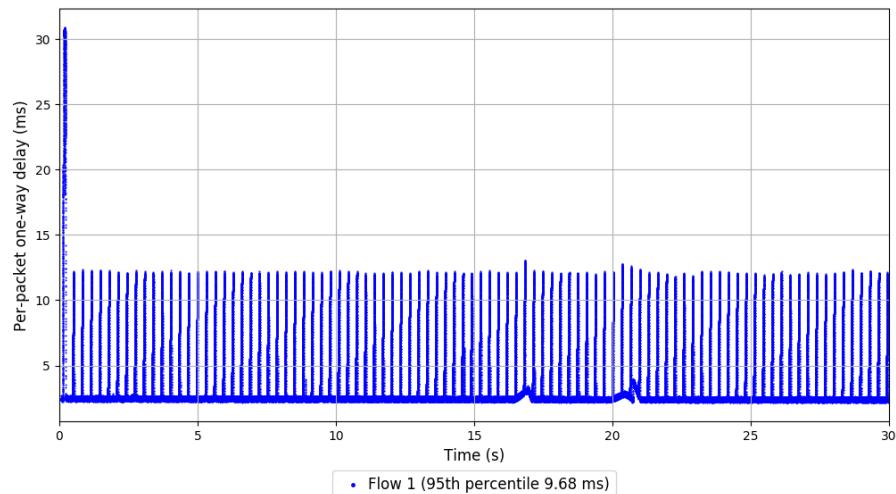
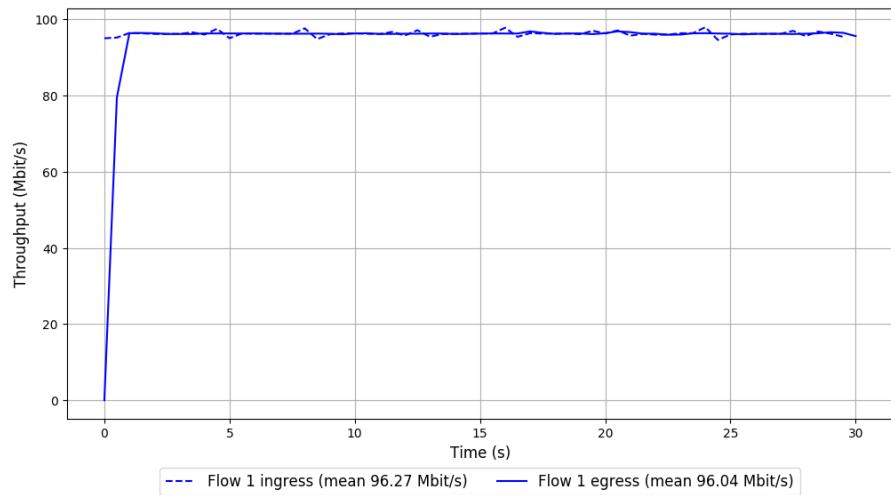


```
Run 4: Statistics of FillP
```

```
Start at: 2018-12-11 10:17:10
End at: 2018-12-11 10:17:40
Local clock offset: -5.091 ms
Remote clock offset: 0.448 ms

# Below is generated by plot.py at 2018-12-11 10:48:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.04 Mbit/s
95th percentile per-packet one-way delay: 9.682 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 96.04 Mbit/s
95th percentile per-packet one-way delay: 9.682 ms
Loss rate: 0.25%
```

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

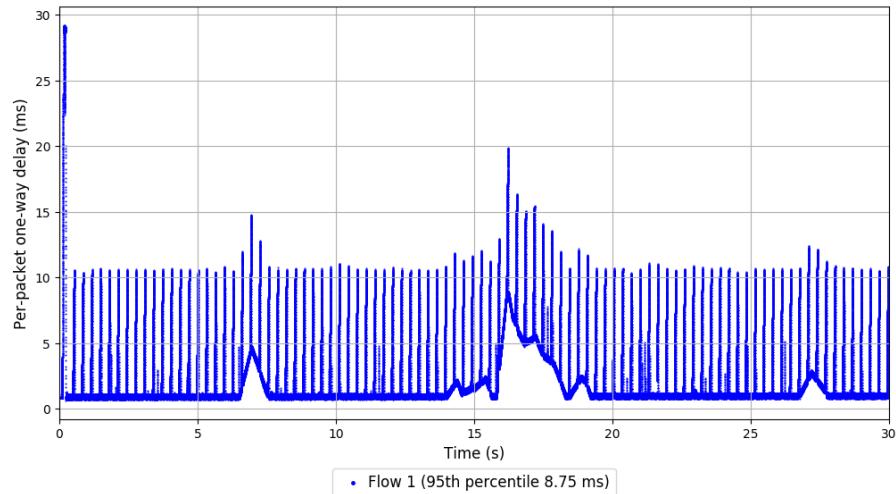
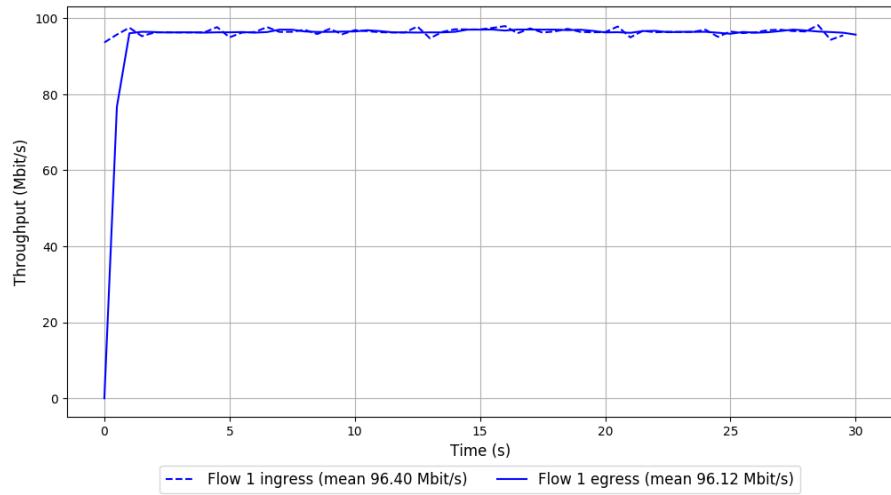


```
Run 5: Statistics of FillP
```

```
Start at: 2018-12-11 10:38:21
End at: 2018-12-11 10:38:51
Local clock offset: -7.363 ms
Remote clock offset: 0.587 ms

# Below is generated by plot.py at 2018-12-11 10:48:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.12 Mbit/s
95th percentile per-packet one-way delay: 8.751 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 96.12 Mbit/s
95th percentile per-packet one-way delay: 8.751 ms
Loss rate: 0.28%
```

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

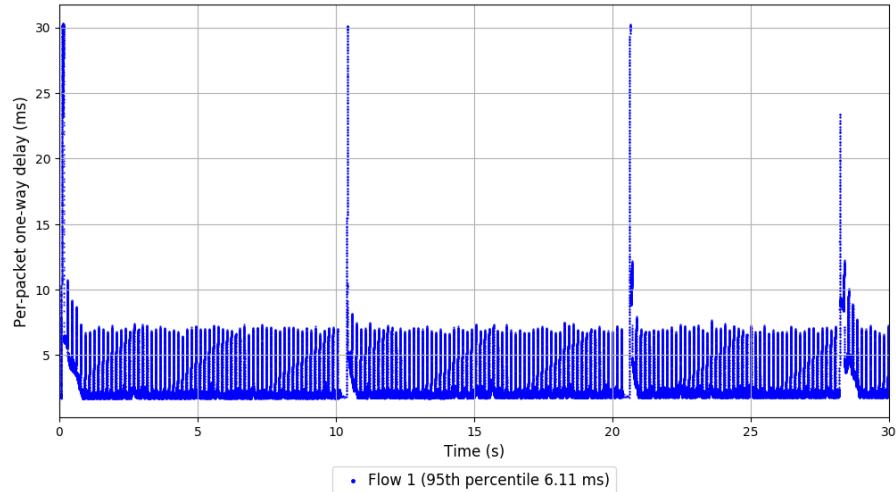
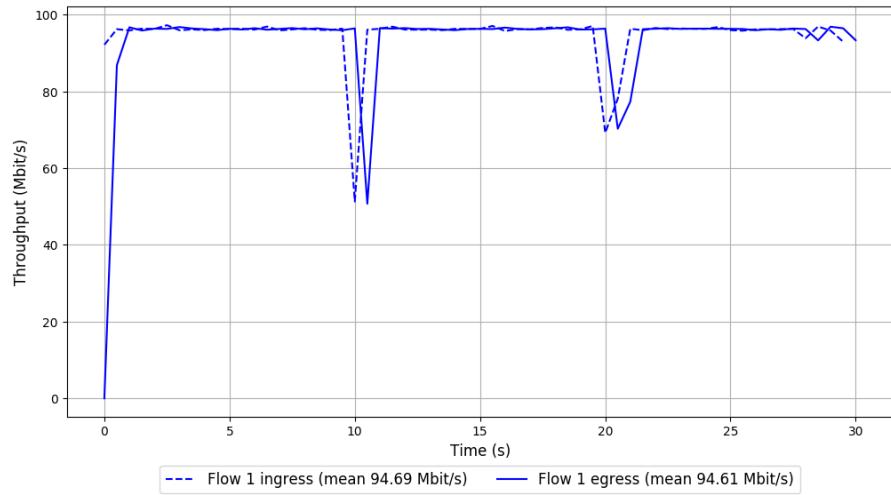


Run 1: Statistics of FillP-Sheep

```
Start at: 2018-12-11 09:01:19
End at: 2018-12-11 09:01:49
Local clock offset: -5.305 ms
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2018-12-11 10:48:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.61 Mbit/s
95th percentile per-packet one-way delay: 6.113 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 94.61 Mbit/s
95th percentile per-packet one-way delay: 6.113 ms
Loss rate: 0.08%
```

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

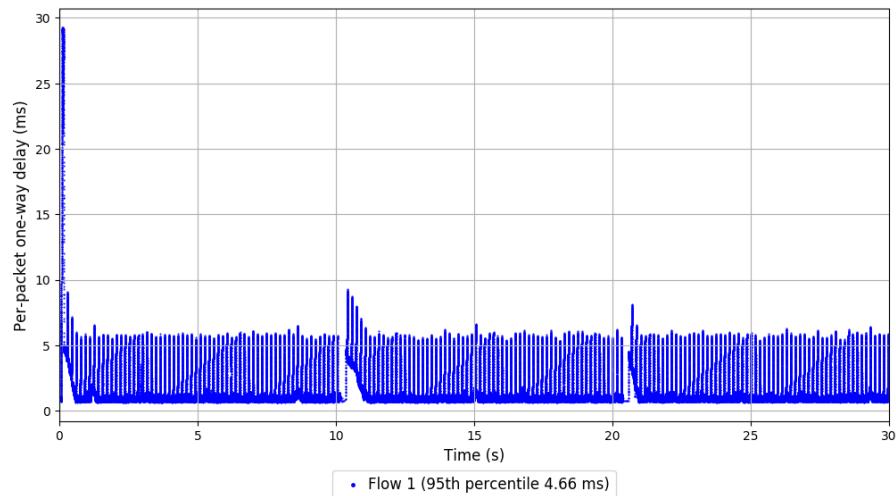
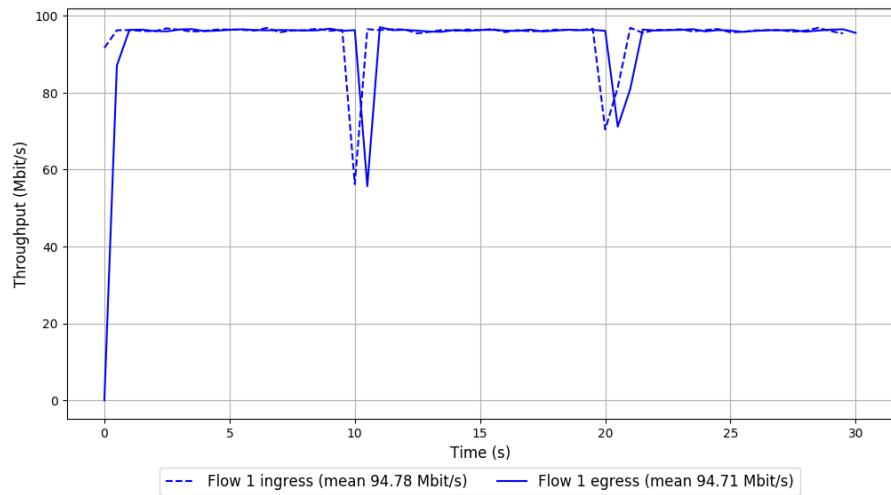


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-12-11 09:22:31
End at: 2018-12-11 09:23:01
Local clock offset: -1.86 ms
Remote clock offset: 0.013 ms

# Below is generated by plot.py at 2018-12-11 10:49:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.71 Mbit/s
95th percentile per-packet one-way delay: 4.660 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 94.71 Mbit/s
95th percentile per-packet one-way delay: 4.660 ms
Loss rate: 0.07%
```

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

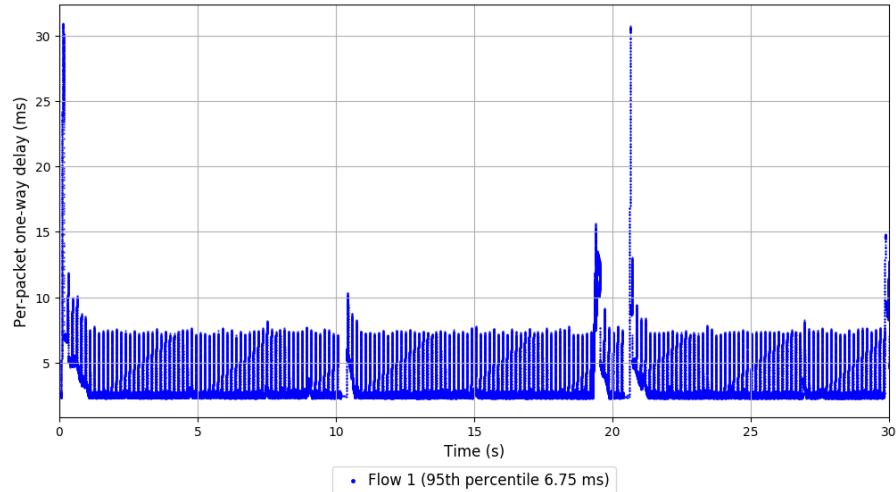
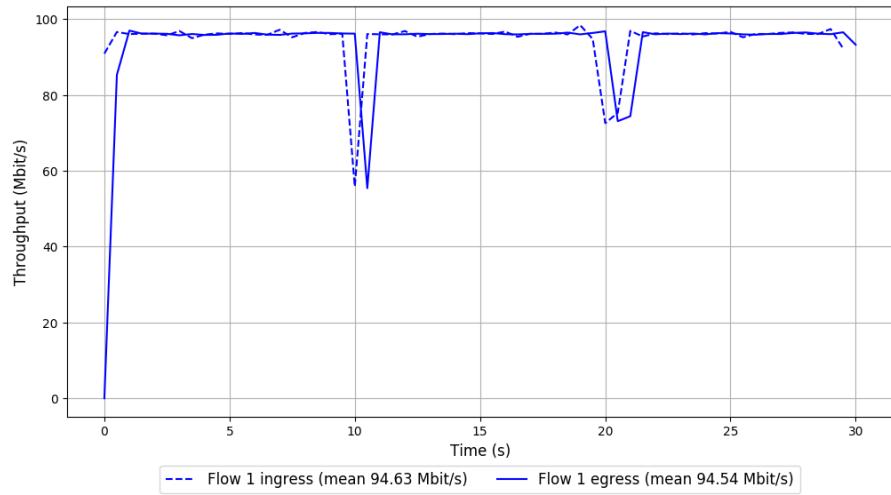


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-12-11 09:43:44
End at: 2018-12-11 09:44:14
Local clock offset: -2.073 ms
Remote clock offset: 0.182 ms

# Below is generated by plot.py at 2018-12-11 10:49:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.54 Mbit/s
95th percentile per-packet one-way delay: 6.746 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 94.54 Mbit/s
95th percentile per-packet one-way delay: 6.746 ms
Loss rate: 0.09%
```

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

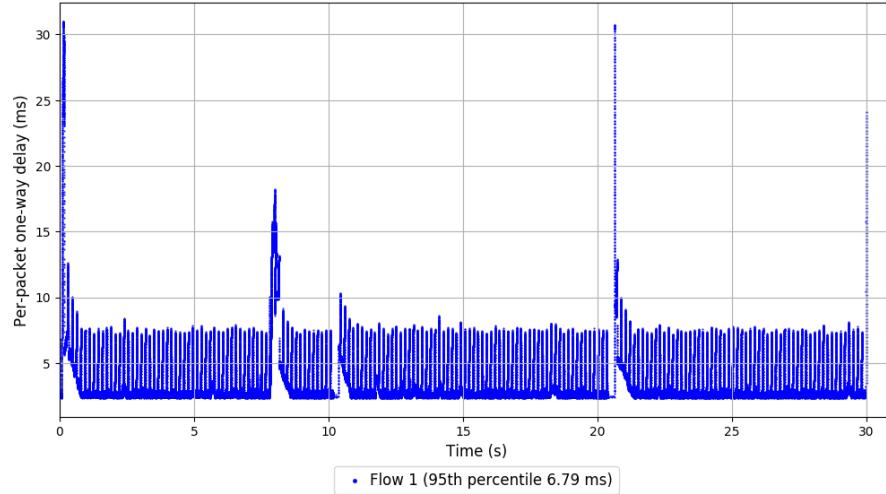
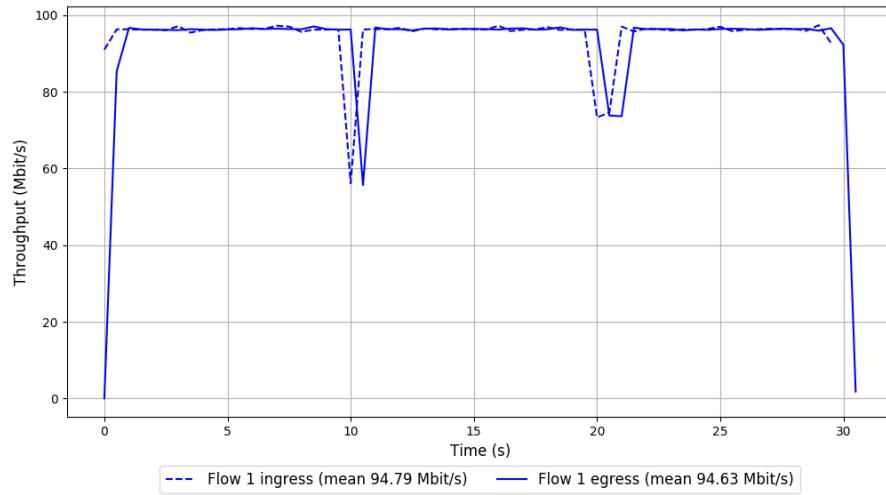


Run 4: Statistics of FillP-Sheep

```
Start at: 2018-12-11 10:04:54
End at: 2018-12-11 10:05:24
Local clock offset: -2.84 ms
Remote clock offset: 0.402 ms

# Below is generated by plot.py at 2018-12-11 10:49:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.63 Mbit/s
95th percentile per-packet one-way delay: 6.787 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 94.63 Mbit/s
95th percentile per-packet one-way delay: 6.787 ms
Loss rate: 0.09%
```

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

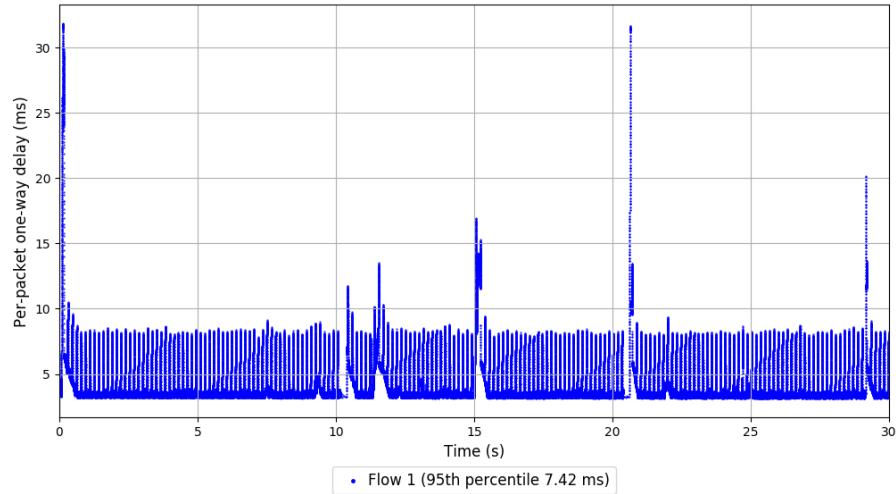
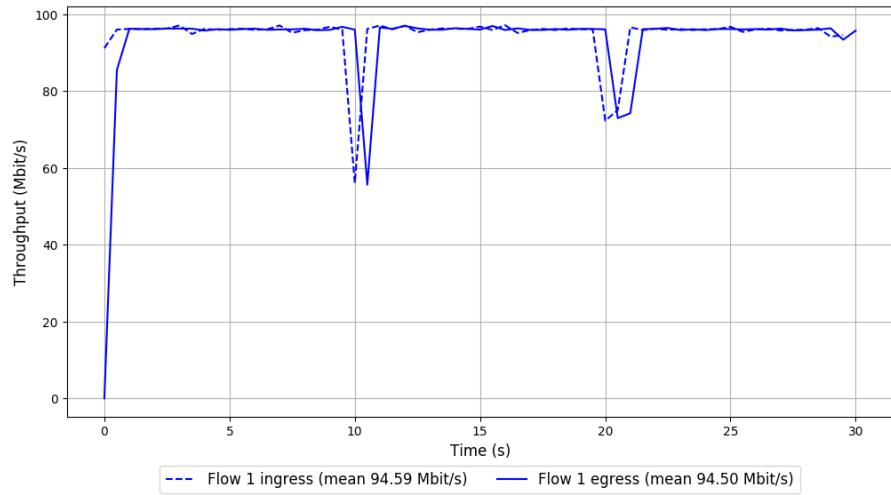


Run 5: Statistics of FillP-Sheep

```
Start at: 2018-12-11 10:26:05
End at: 2018-12-11 10:26:36
Local clock offset: -7.152 ms
Remote clock offset: 0.53 ms

# Below is generated by plot.py at 2018-12-11 10:49:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.50 Mbit/s
95th percentile per-packet one-way delay: 7.419 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 94.50 Mbit/s
95th percentile per-packet one-way delay: 7.419 ms
Loss rate: 0.09%
```

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

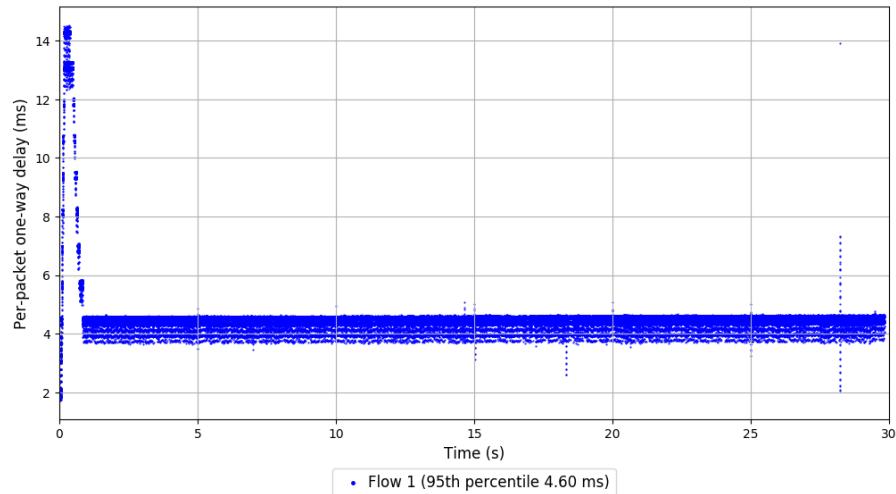
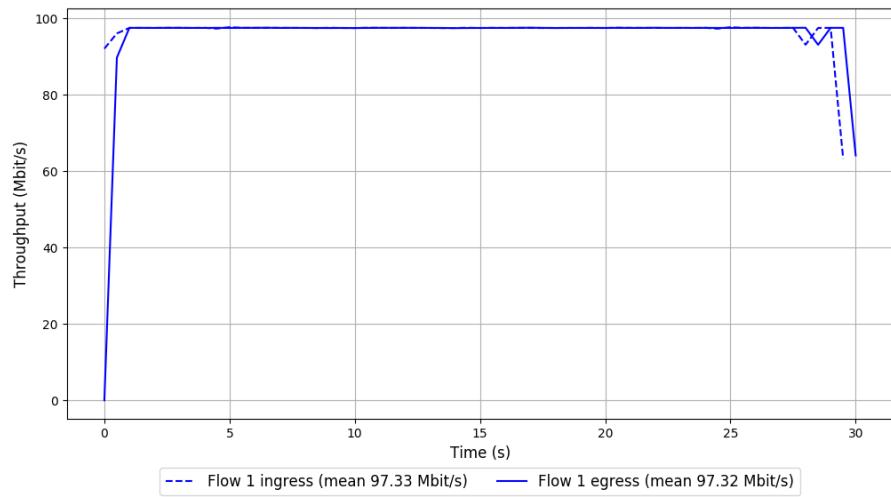


Run 1: Statistics of Indigo

```
Start at: 2018-12-11 09:15:50
End at: 2018-12-11 09:16:20
Local clock offset: -3.223 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2018-12-11 10:49:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.32 Mbit/s
95th percentile per-packet one-way delay: 4.601 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.32 Mbit/s
95th percentile per-packet one-way delay: 4.601 ms
Loss rate: 0.00%
```

## Run 1: Report of Indigo — Data Link

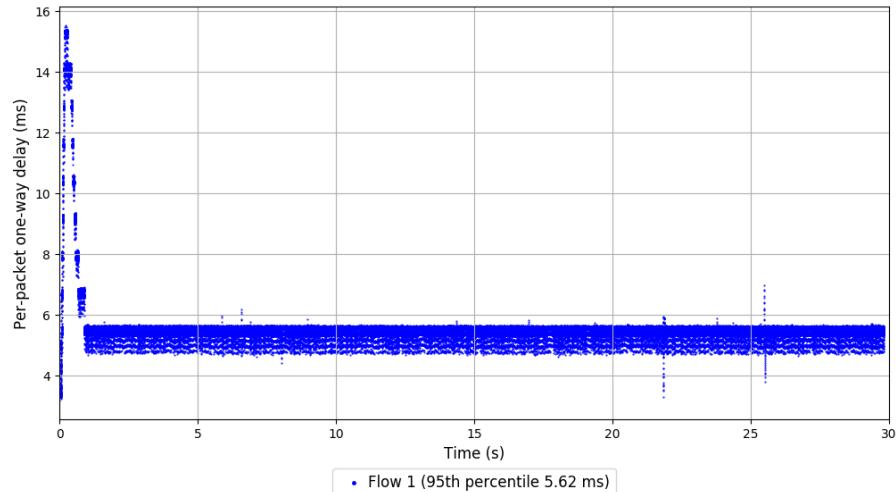
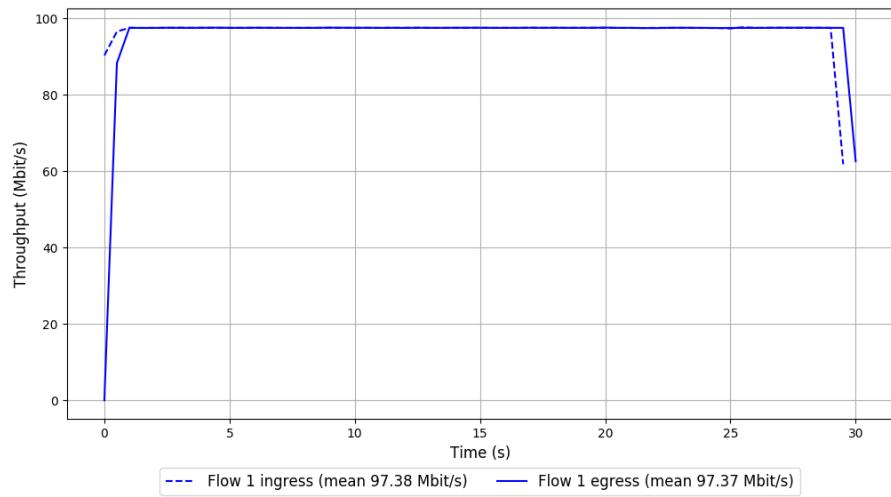


Run 2: Statistics of Indigo

```
Start at: 2018-12-11 09:37:02
End at: 2018-12-11 09:37:32
Local clock offset: -2.58 ms
Remote clock offset: 0.07 ms

# Below is generated by plot.py at 2018-12-11 10:49:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 5.616 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.37 Mbit/s
95th percentile per-packet one-way delay: 5.616 ms
Loss rate: 0.00%
```

## Run 2: Report of Indigo — Data Link

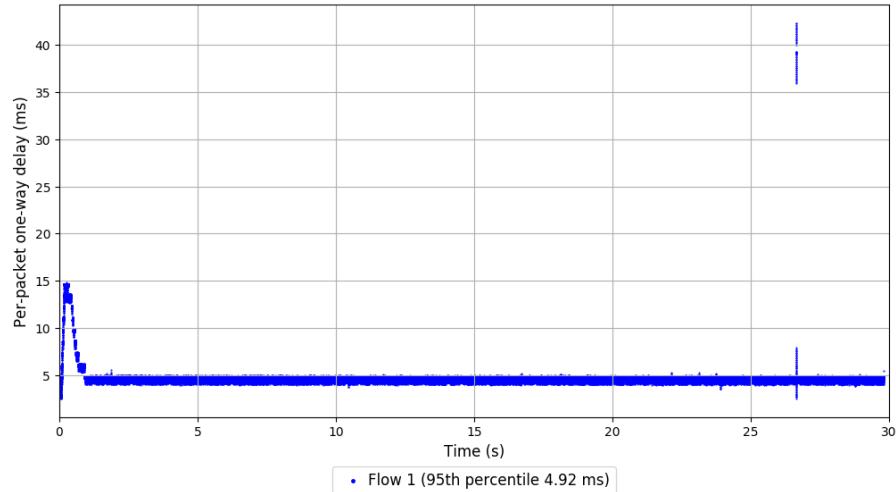
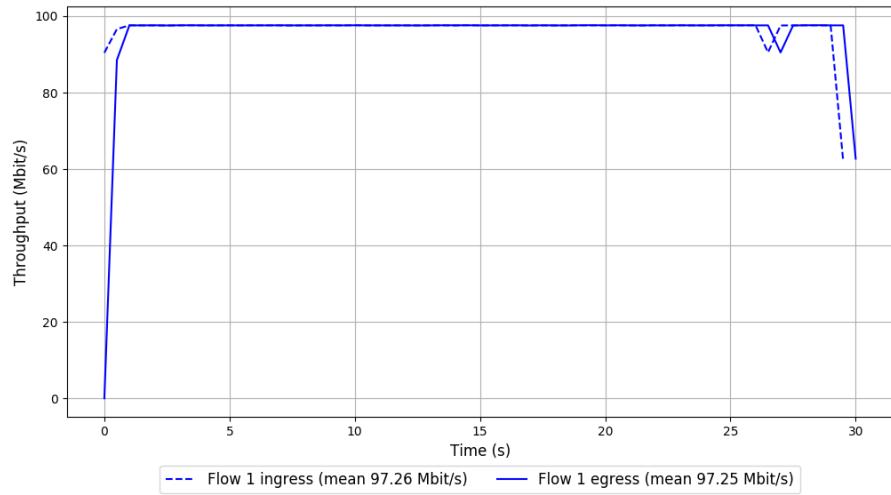


Run 3: Statistics of Indigo

```
Start at: 2018-12-11 09:58:13
End at: 2018-12-11 09:58:43
Local clock offset: -2.64 ms
Remote clock offset: 0.386 ms

# Below is generated by plot.py at 2018-12-11 10:49:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.25 Mbit/s
95th percentile per-packet one-way delay: 4.915 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.25 Mbit/s
95th percentile per-packet one-way delay: 4.915 ms
Loss rate: 0.01%
```

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

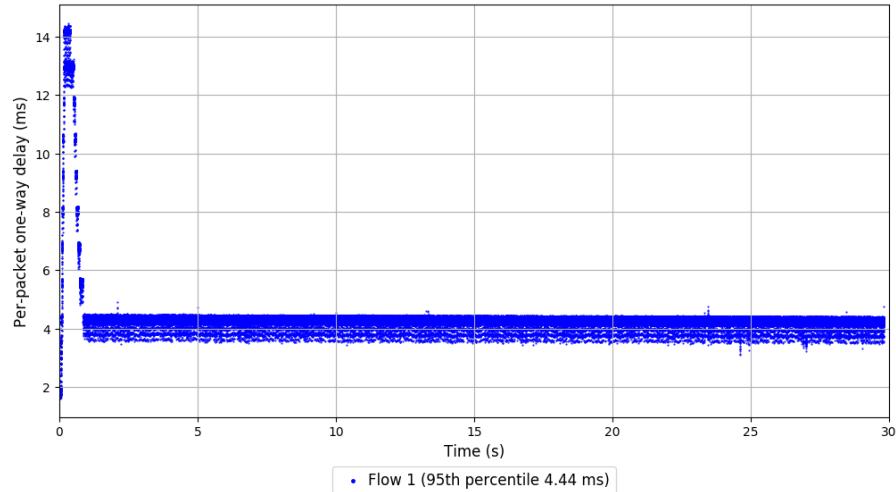
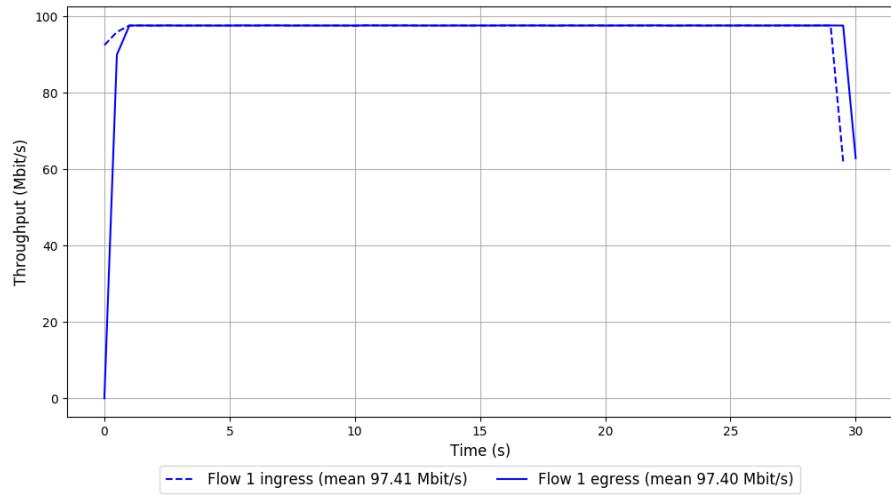


Run 4: Statistics of Indigo

```
Start at: 2018-12-11 10:19:24
End at: 2018-12-11 10:19:54
Local clock offset: -6.325 ms
Remote clock offset: 0.513 ms

# Below is generated by plot.py at 2018-12-11 10:49:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 4.439 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 4.439 ms
Loss rate: 0.00%
```

## Run 4: Report of Indigo — Data Link

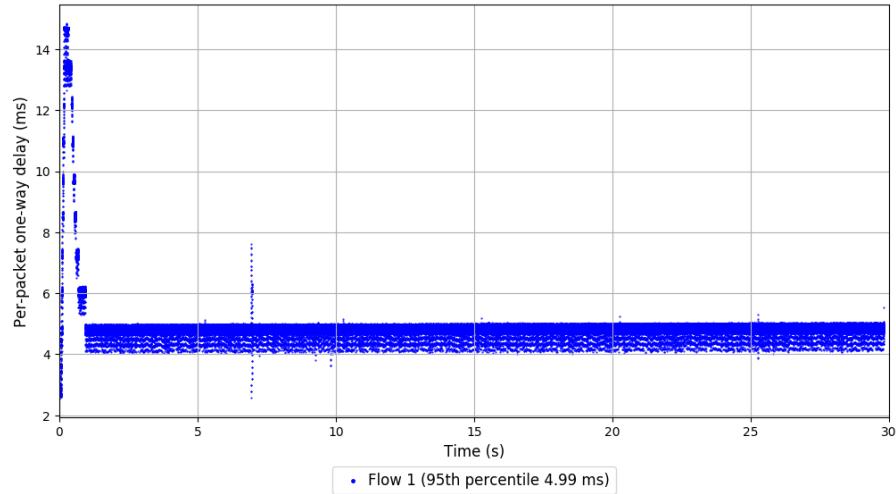
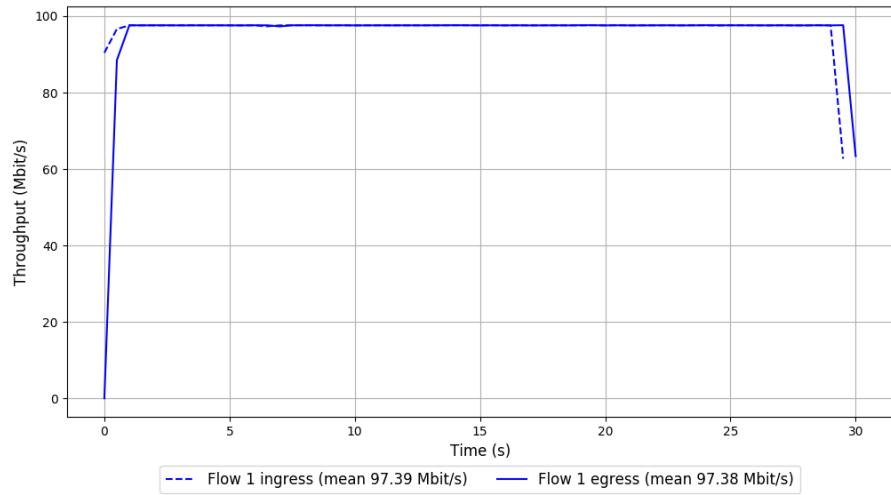


Run 5: Statistics of Indigo

```
Start at: 2018-12-11 10:40:35
End at: 2018-12-11 10:41:05
Local clock offset: -7.088 ms
Remote clock offset: 0.545 ms

# Below is generated by plot.py at 2018-12-11 10:50:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 4.985 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 4.985 ms
Loss rate: 0.00%
```

## Run 5: Report of Indigo — Data Link

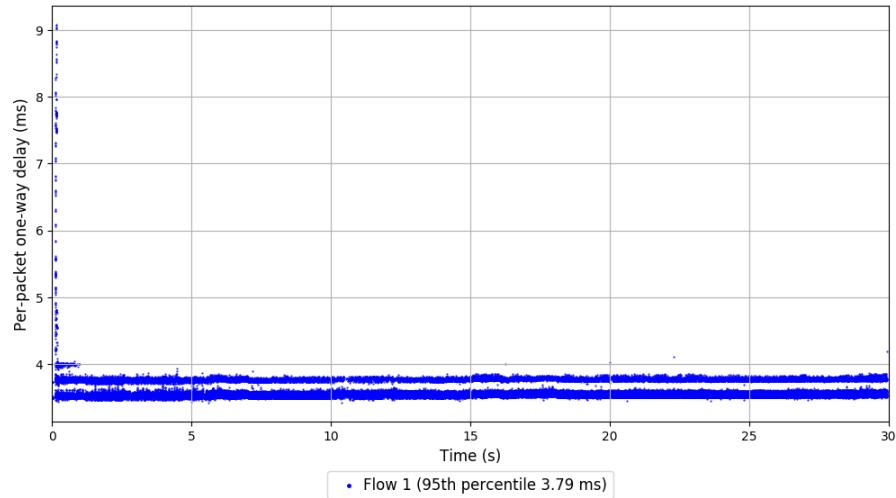
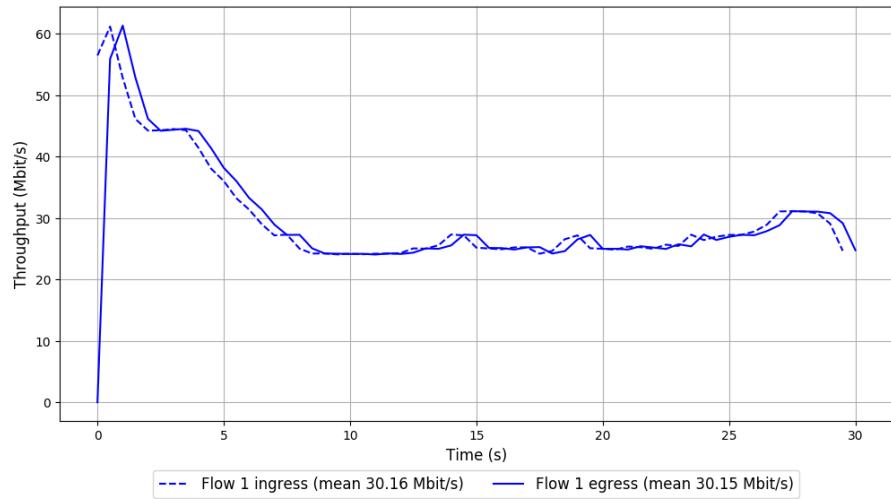


Run 1: Statistics of Indigo-MusesD

```
Start at: 2018-12-11 09:04:39
End at: 2018-12-11 09:05:09
Local clock offset: -4.76 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2018-12-11 10:50:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 30.15 Mbit/s
95th percentile per-packet one-way delay: 3.790 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 30.15 Mbit/s
95th percentile per-packet one-way delay: 3.790 ms
Loss rate: 0.01%
```

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

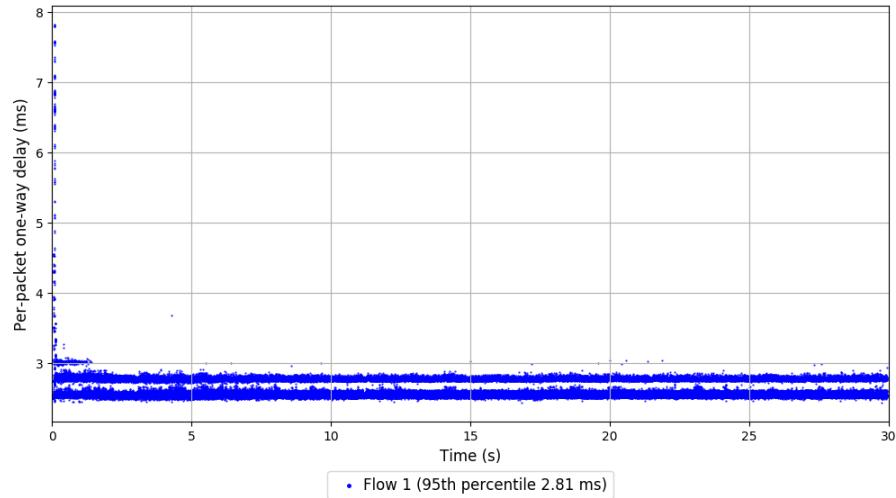
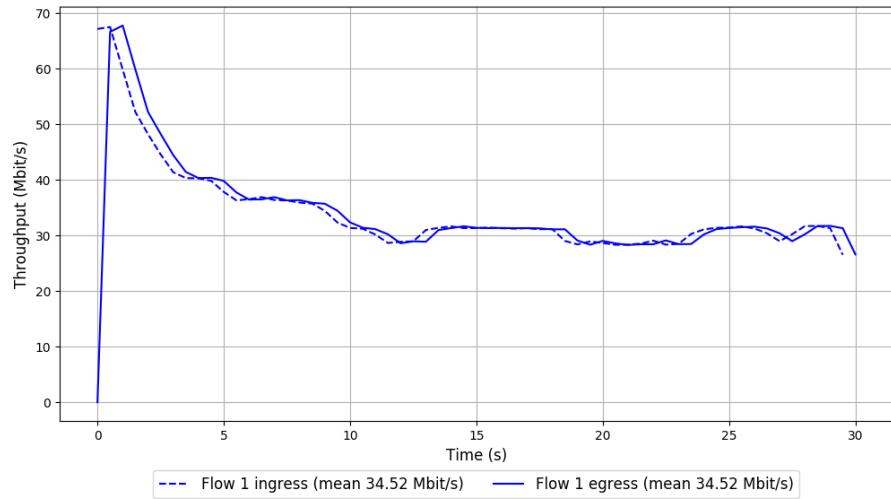


Run 2: Statistics of Indigo-MusesD

```
Start at: 2018-12-11 09:25:51
End at: 2018-12-11 09:26:21
Local clock offset: -1.769 ms
Remote clock offset: 0.027 ms

# Below is generated by plot.py at 2018-12-11 10:50:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.52 Mbit/s
95th percentile per-packet one-way delay: 2.810 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 34.52 Mbit/s
95th percentile per-packet one-way delay: 2.810 ms
Loss rate: 0.01%
```

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

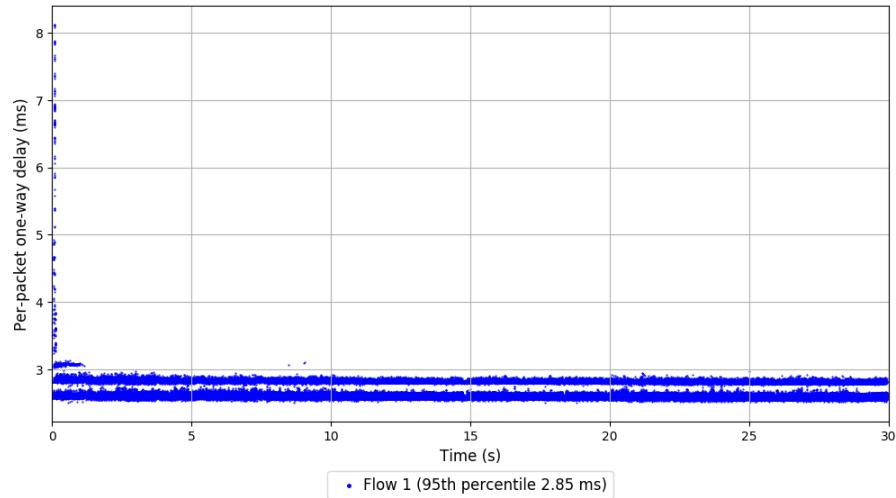
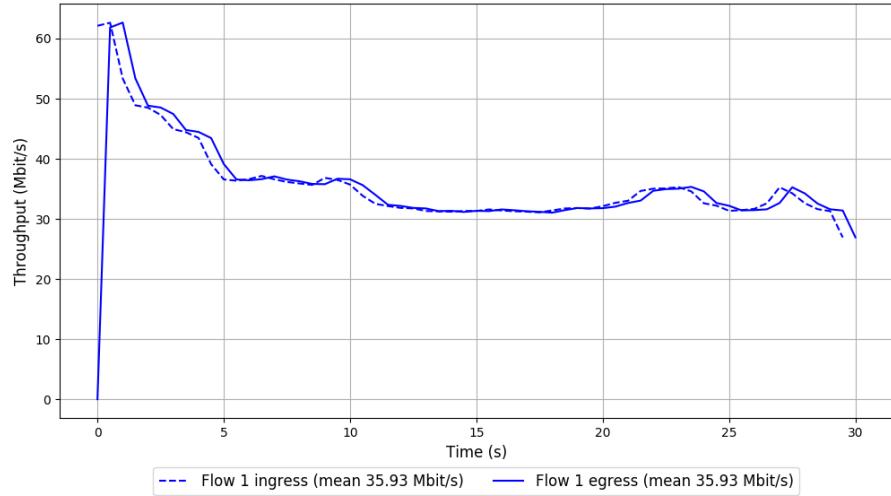


Run 3: Statistics of Indigo-MusesD

```
Start at: 2018-12-11 09:47:03
End at: 2018-12-11 09:47:33
Local clock offset: -2.236 ms
Remote clock offset: 0.299 ms

# Below is generated by plot.py at 2018-12-11 10:50:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.93 Mbit/s
95th percentile per-packet one-way delay: 2.855 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 35.93 Mbit/s
95th percentile per-packet one-way delay: 2.855 ms
Loss rate: 0.01%
```

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

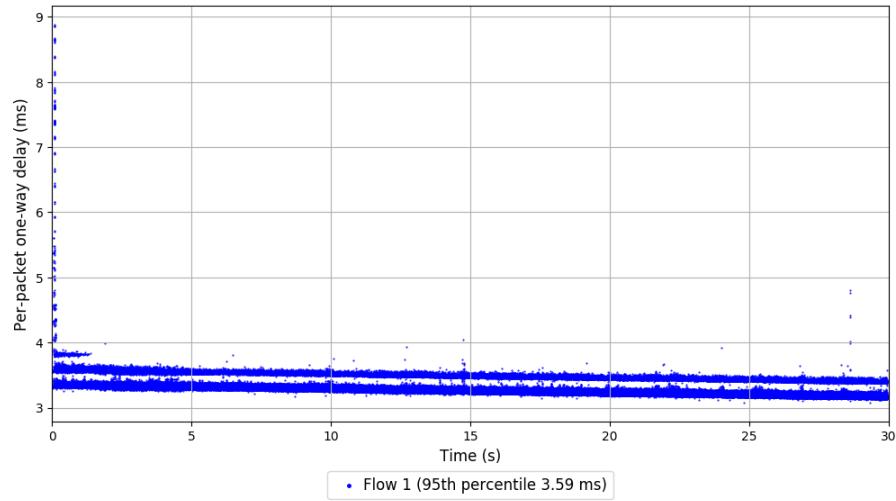
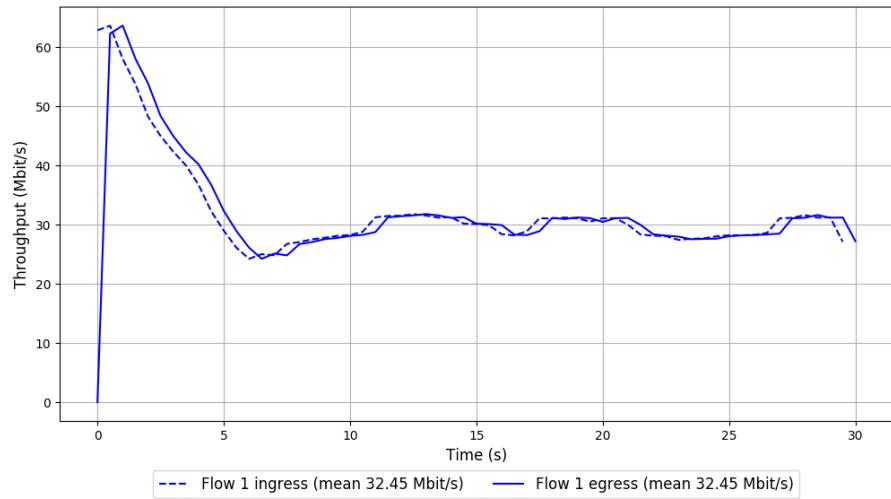


Run 4: Statistics of Indigo-MusesD

```
Start at: 2018-12-11 10:08:14
End at: 2018-12-11 10:08:44
Local clock offset: -3.778 ms
Remote clock offset: 0.401 ms

# Below is generated by plot.py at 2018-12-11 10:50:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.45 Mbit/s
95th percentile per-packet one-way delay: 3.589 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 32.45 Mbit/s
95th percentile per-packet one-way delay: 3.589 ms
Loss rate: 0.01%
```

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

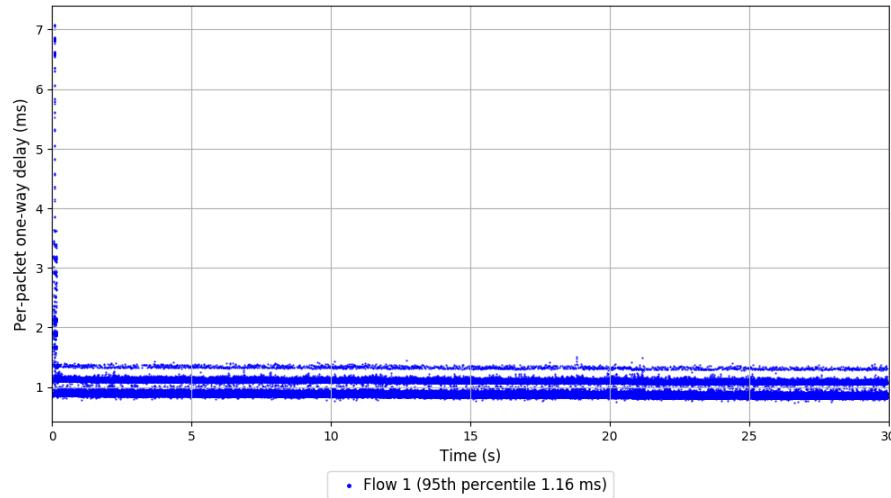
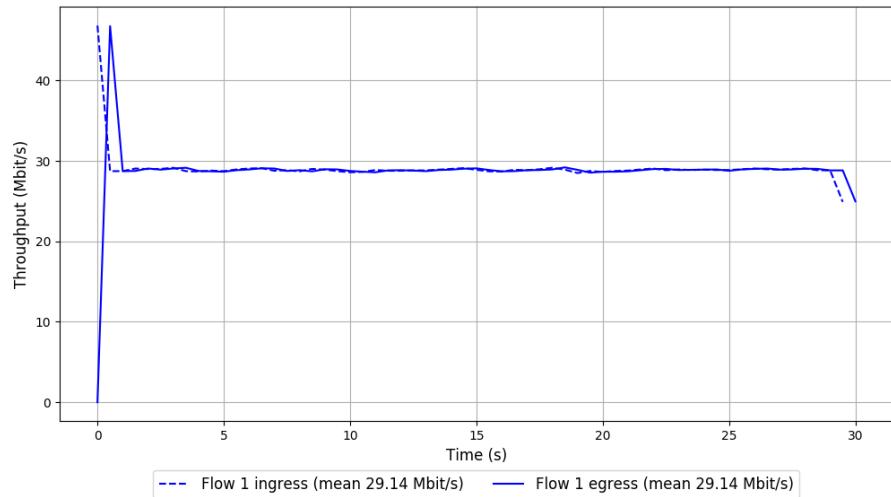


Run 5: Statistics of Indigo-MusesD

```
Start at: 2018-12-11 10:29:25
End at: 2018-12-11 10:29:55
Local clock offset: -6.656 ms
Remote clock offset: 0.572 ms

# Below is generated by plot.py at 2018-12-11 10:50:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 29.14 Mbit/s
95th percentile per-packet one-way delay: 1.155 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 29.14 Mbit/s
95th percentile per-packet one-way delay: 1.155 ms
Loss rate: 0.00%
```

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

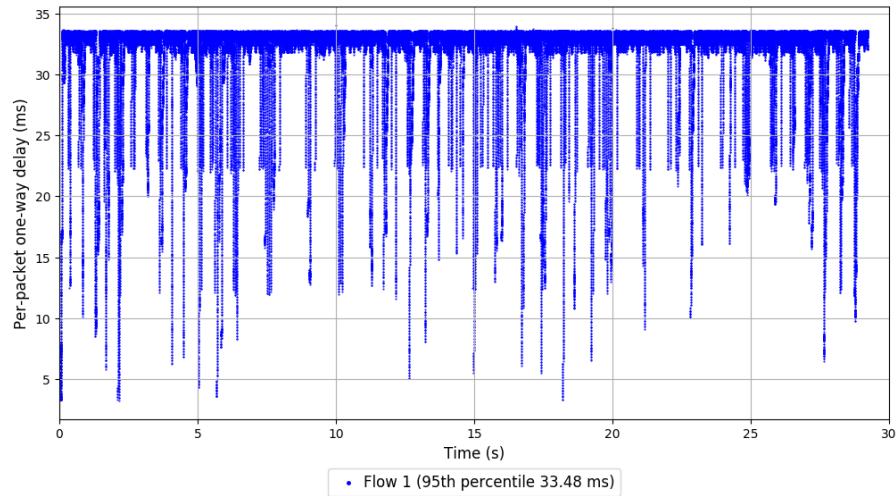
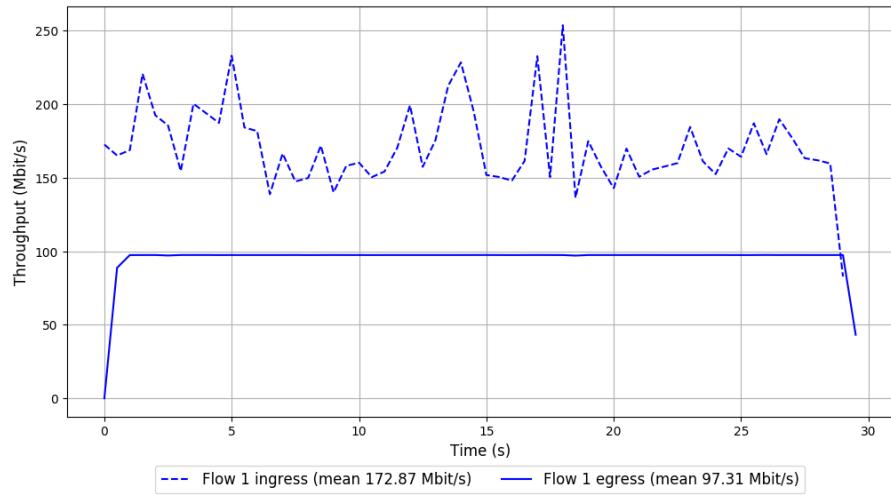


Run 1: Statistics of Indigo-MusesT

```
Start at: 2018-12-11 09:05:45
End at: 2018-12-11 09:06:15
Local clock offset: -4.683 ms
Remote clock offset: -0.171 ms

# Below is generated by plot.py at 2018-12-11 10:50:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 33.477 ms
Loss rate: 43.66%
-- Flow 1:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 33.477 ms
Loss rate: 43.66%
```

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

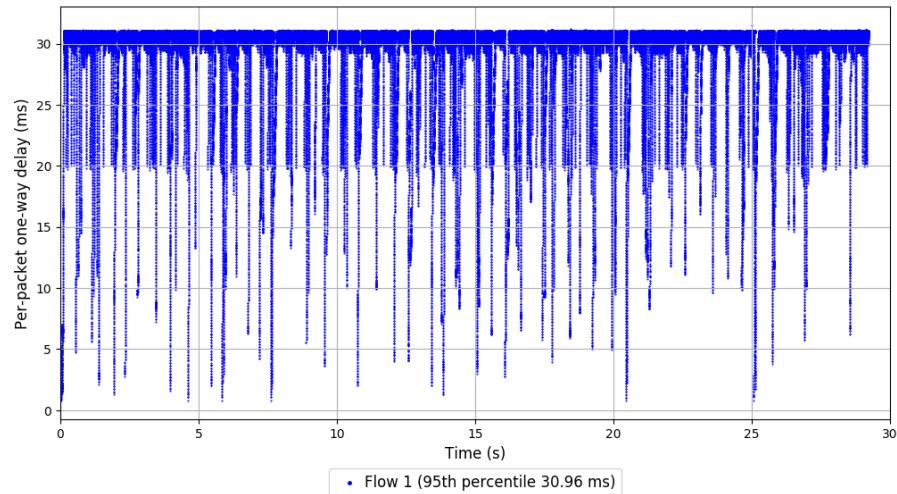
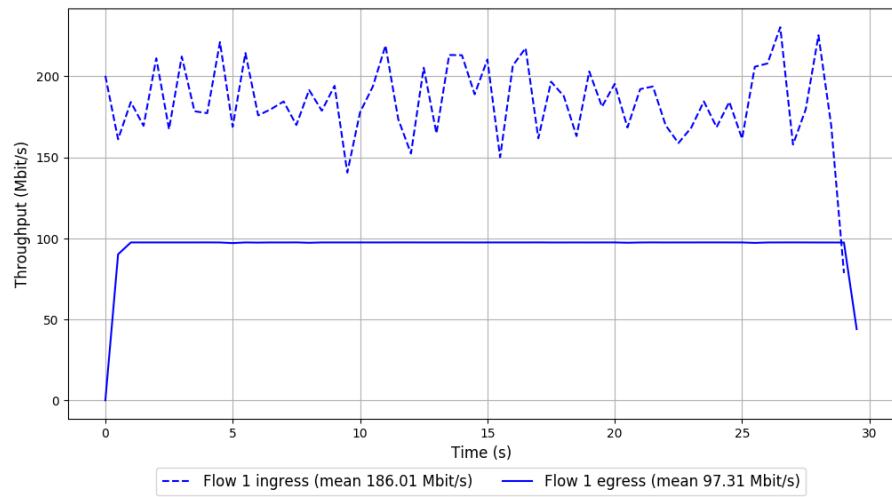


Run 2: Statistics of Indigo-MusesT

```
Start at: 2018-12-11 09:26:56
End at: 2018-12-11 09:27:26
Local clock offset: -1.737 ms
Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2018-12-11 10:50:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 30.963 ms
Loss rate: 47.63%
-- Flow 1:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 30.963 ms
Loss rate: 47.63%
```

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

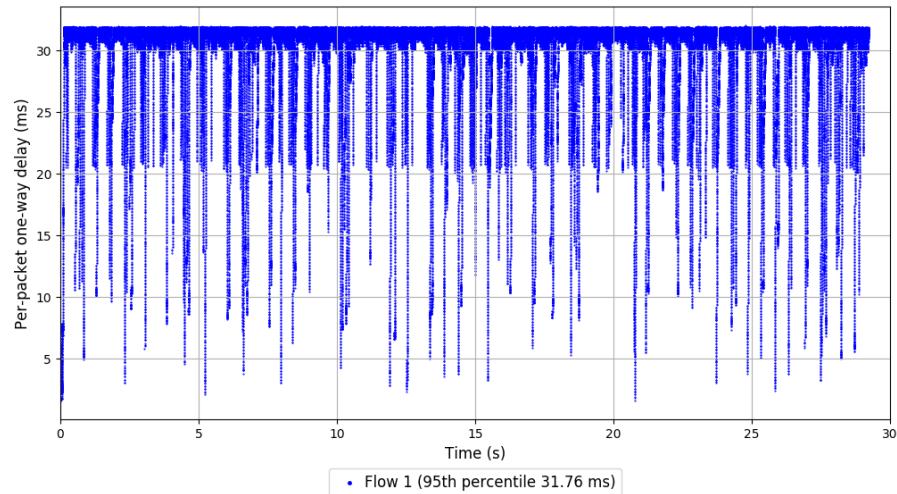
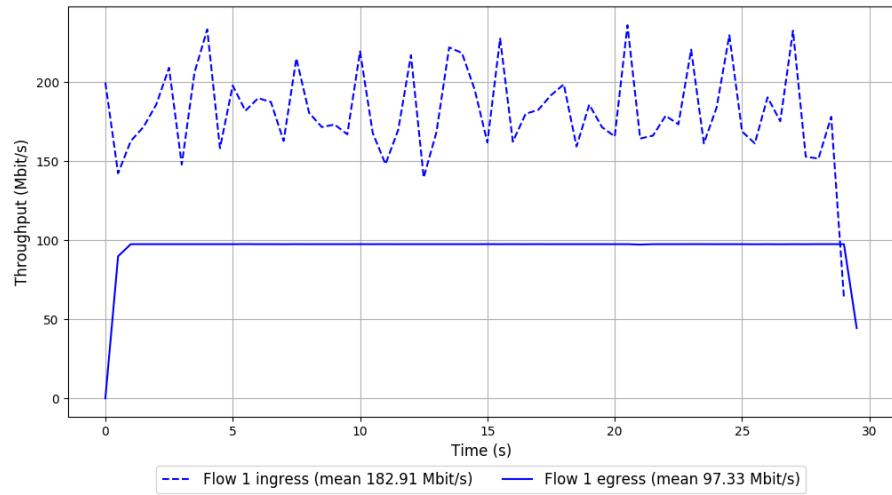


Run 3: Statistics of Indigo-MusesT

```
Start at: 2018-12-11 09:48:09
End at: 2018-12-11 09:48:39
Local clock offset: -3.128 ms
Remote clock offset: 0.198 ms

# Below is generated by plot.py at 2018-12-11 10:51:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 31.763 ms
Loss rate: 46.73%
-- Flow 1:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 31.763 ms
Loss rate: 46.73%
```

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

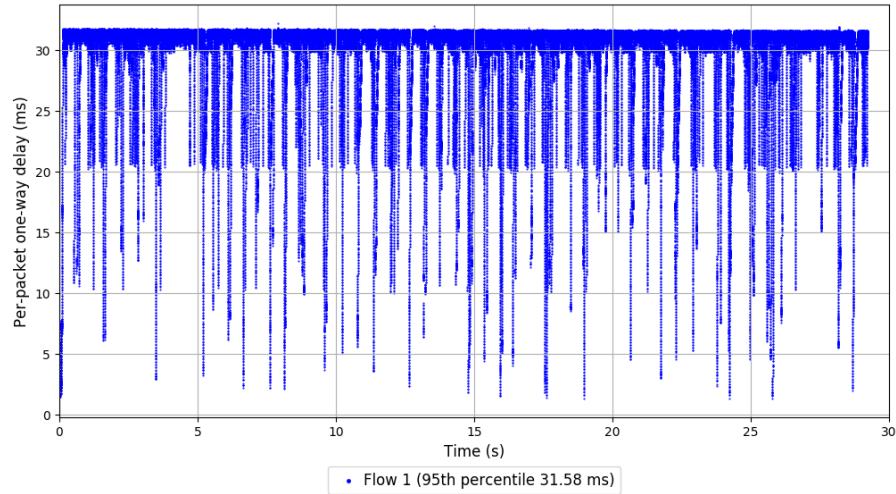
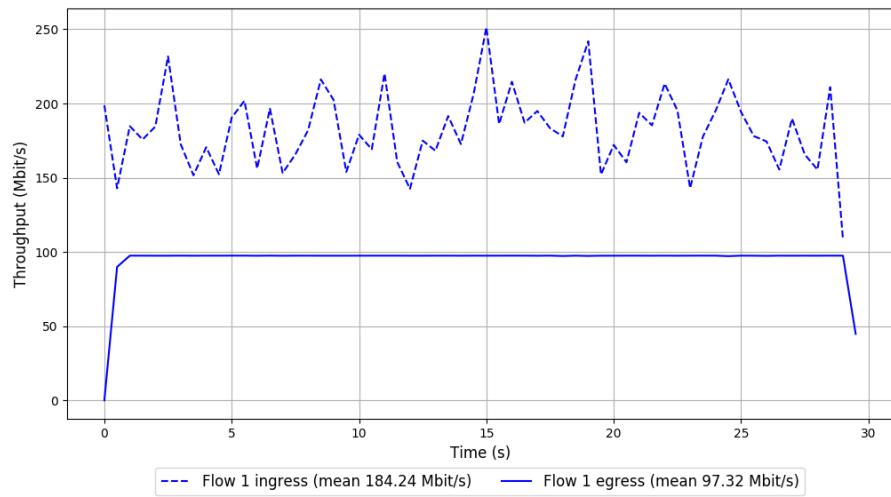


Run 4: Statistics of Indigo-MusesT

```
Start at: 2018-12-11 10:09:19
End at: 2018-12-11 10:09:50
Local clock offset: -4.043 ms
Remote clock offset: 0.381 ms

# Below is generated by plot.py at 2018-12-11 10:51:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.32 Mbit/s
95th percentile per-packet one-way delay: 31.582 ms
Loss rate: 47.13%
-- Flow 1:
Average throughput: 97.32 Mbit/s
95th percentile per-packet one-way delay: 31.582 ms
Loss rate: 47.13%
```

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

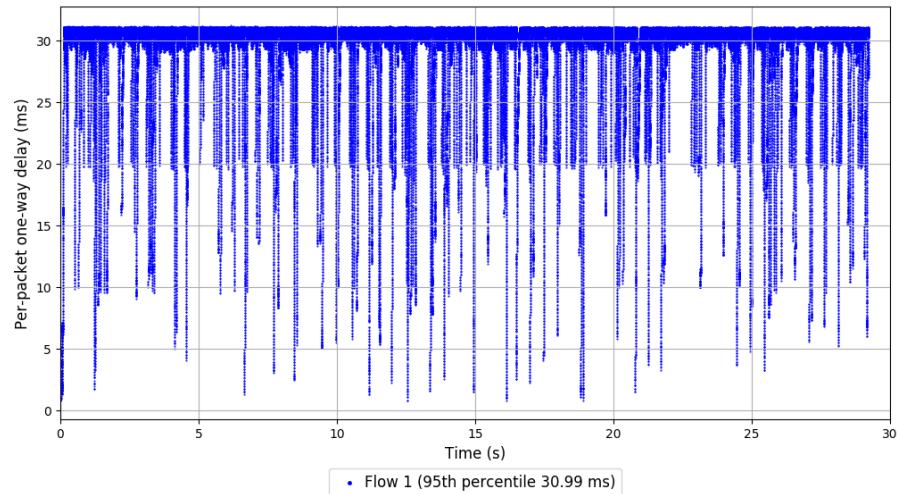
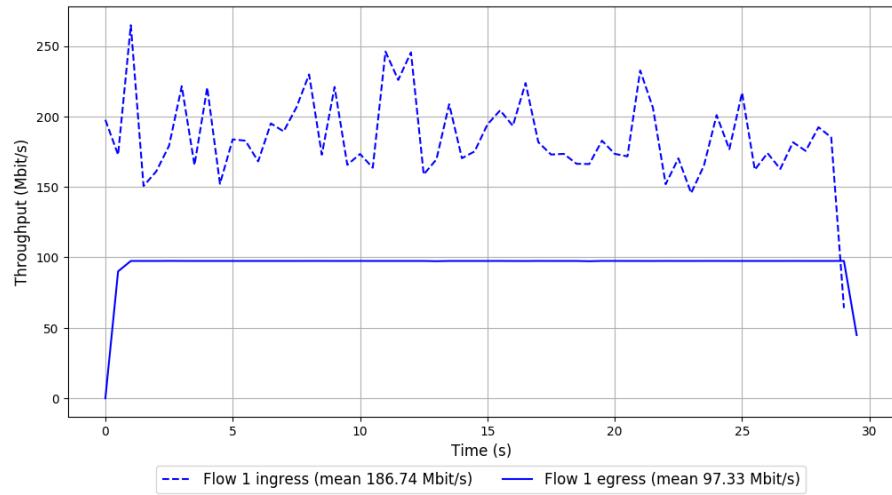


Run 5: Statistics of Indigo-MusesT

```
Start at: 2018-12-11 10:30:30
End at: 2018-12-11 10:31:00
Local clock offset: -6.744 ms
Remote clock offset: 0.568 ms

# Below is generated by plot.py at 2018-12-11 10:51:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 30.990 ms
Loss rate: 47.82%
-- Flow 1:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 30.990 ms
Loss rate: 47.82%
```

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

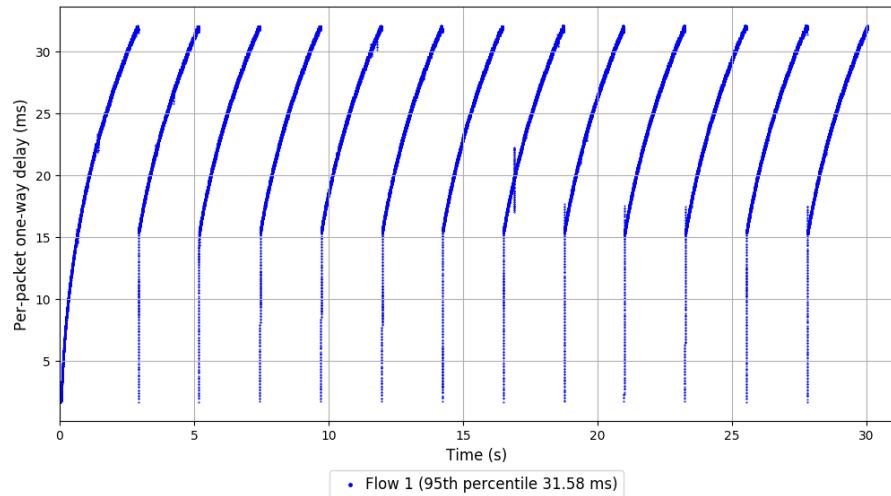
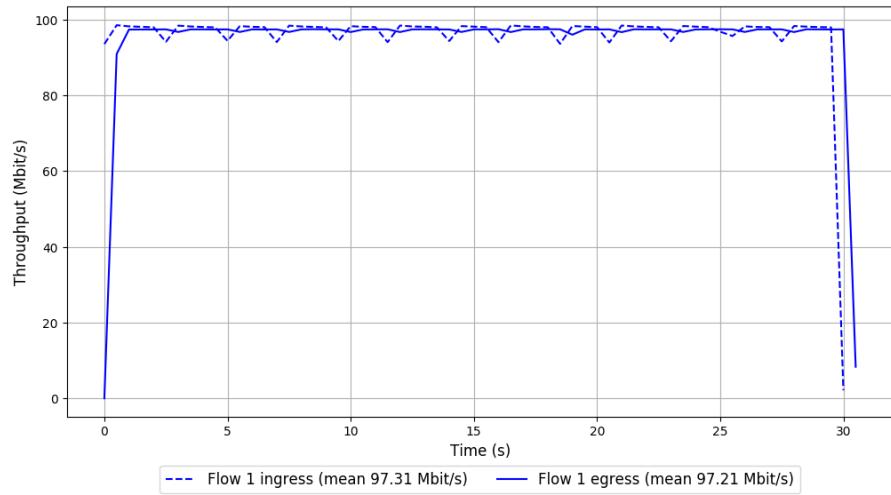


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-12-11 09:16:59
End at: 2018-12-11 09:17:29
Local clock offset: -3.108 ms
Remote clock offset: -0.009 ms

# Below is generated by plot.py at 2018-12-11 10:51:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.21 Mbit/s
95th percentile per-packet one-way delay: 31.576 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.21 Mbit/s
95th percentile per-packet one-way delay: 31.576 ms
Loss rate: 0.01%
```

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

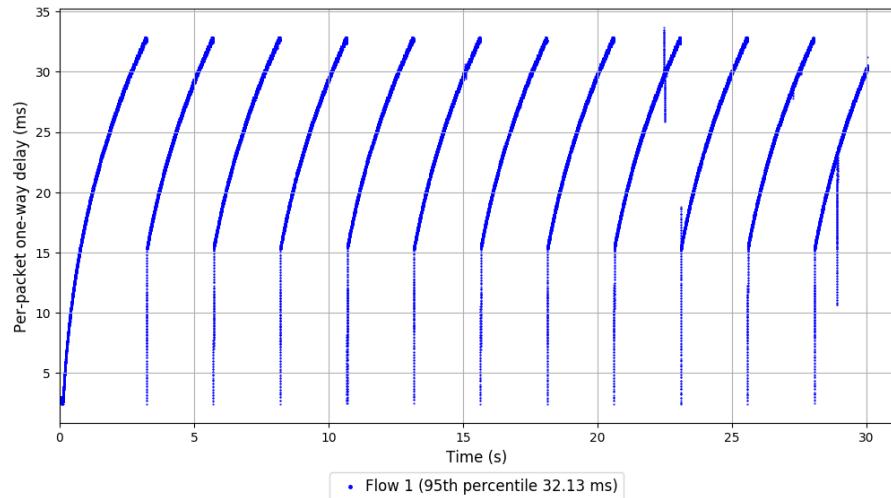
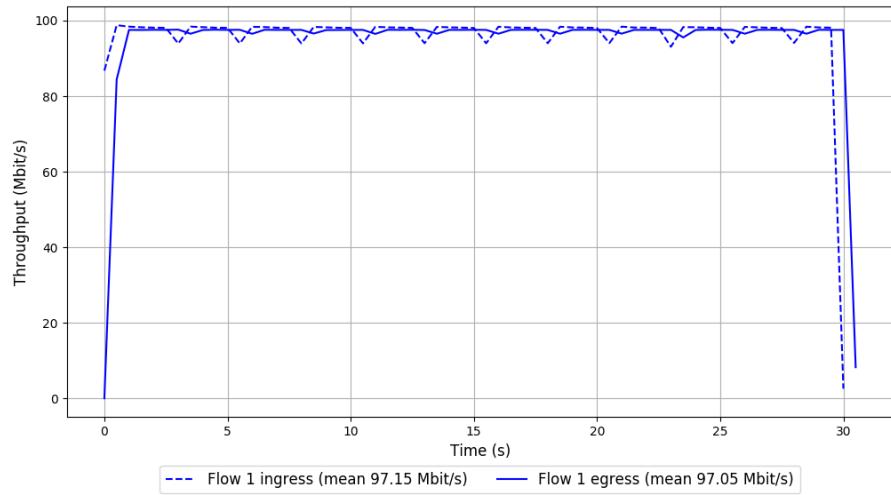


Run 2: Statistics of LEDBAT

```
Start at: 2018-12-11 09:38:12
End at: 2018-12-11 09:38:42
Local clock offset: -1.748 ms
Remote clock offset: 0.134 ms

# Below is generated by plot.py at 2018-12-11 10:51:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.05 Mbit/s
95th percentile per-packet one-way delay: 32.132 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.05 Mbit/s
95th percentile per-packet one-way delay: 32.132 ms
Loss rate: 0.01%
```

## Run 2: Report of LEDBAT — Data Link

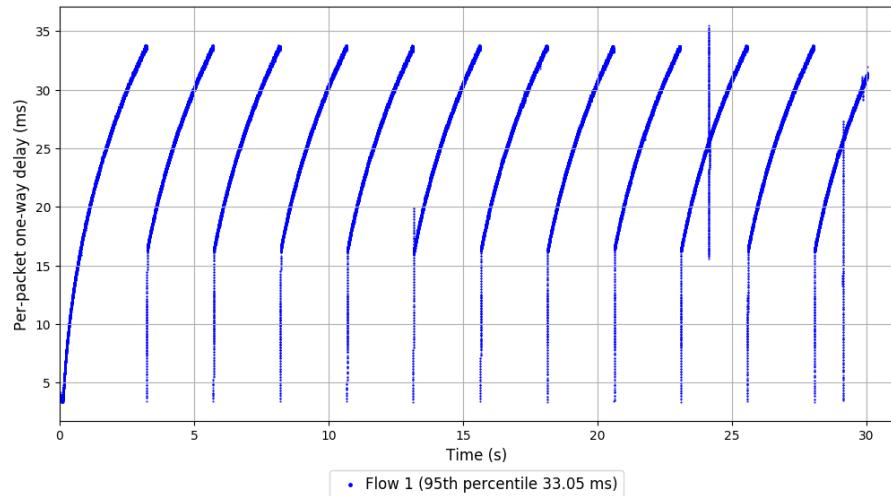
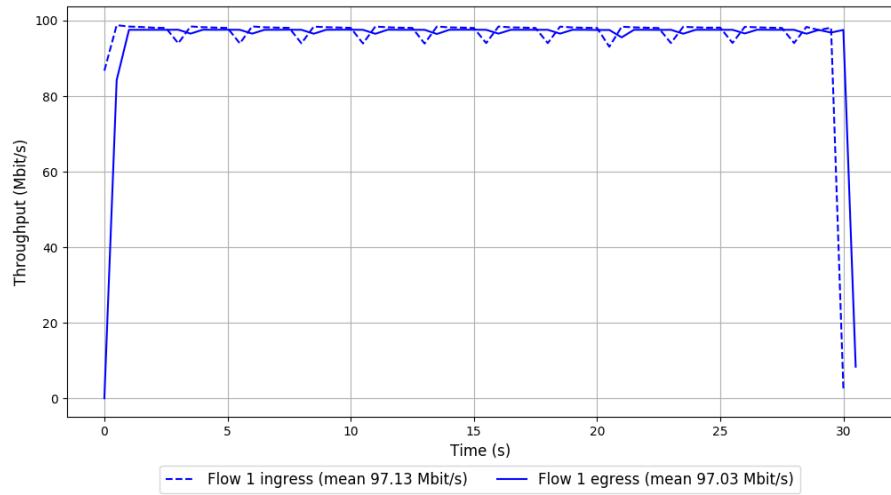


Run 3: Statistics of LEDBAT

```
Start at: 2018-12-11 09:59:22
End at: 2018-12-11 09:59:52
Local clock offset: -3.514 ms
Remote clock offset: 0.383 ms

# Below is generated by plot.py at 2018-12-11 10:51:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.03 Mbit/s
95th percentile per-packet one-way delay: 33.053 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.03 Mbit/s
95th percentile per-packet one-way delay: 33.053 ms
Loss rate: 0.01%
```

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

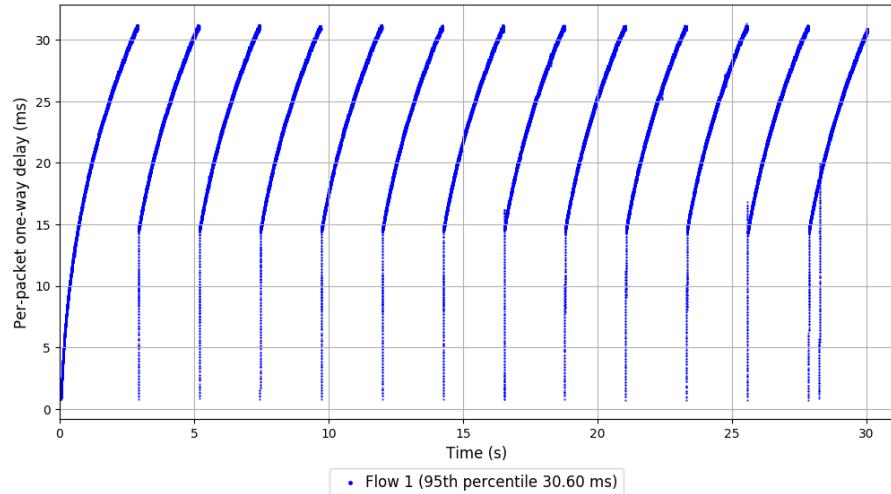
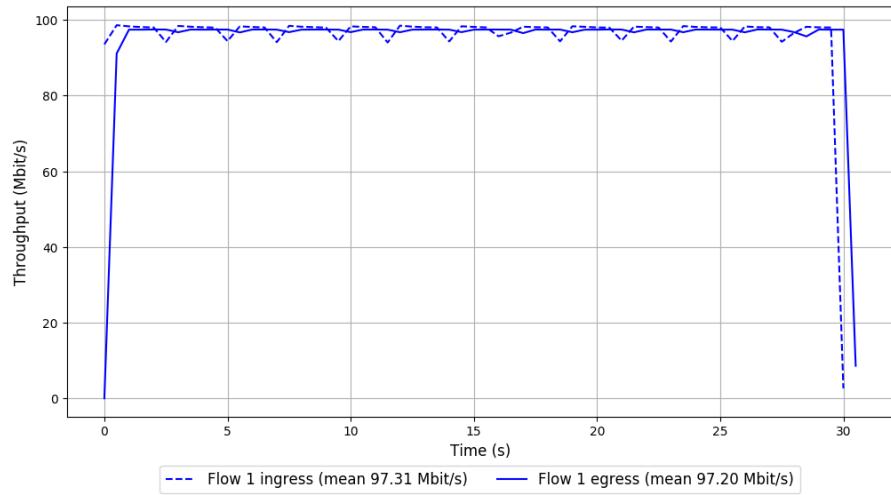


Run 4: Statistics of LEDBAT

```
Start at: 2018-12-11 10:20:33
End at: 2018-12-11 10:21:03
Local clock offset: -5.657 ms
Remote clock offset: 0.514 ms

# Below is generated by plot.py at 2018-12-11 10:52:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 30.601 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 30.601 ms
Loss rate: 0.01%
```

## Run 4: Report of LEDBAT — Data Link

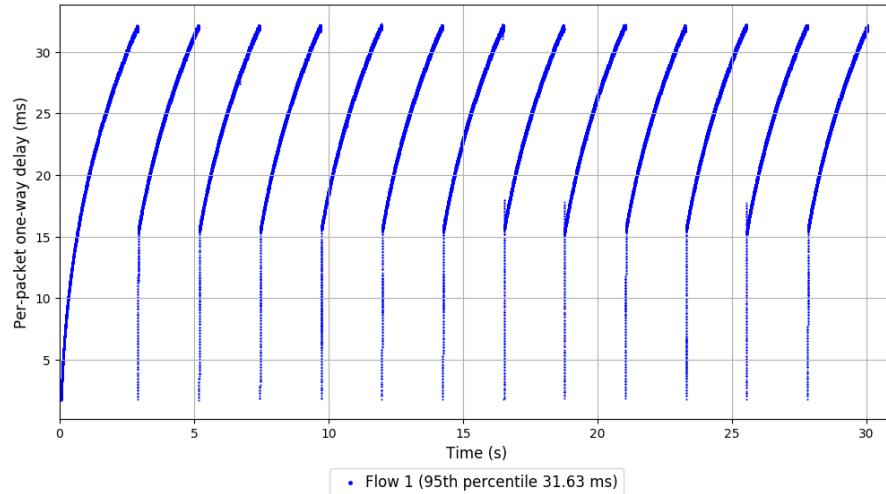
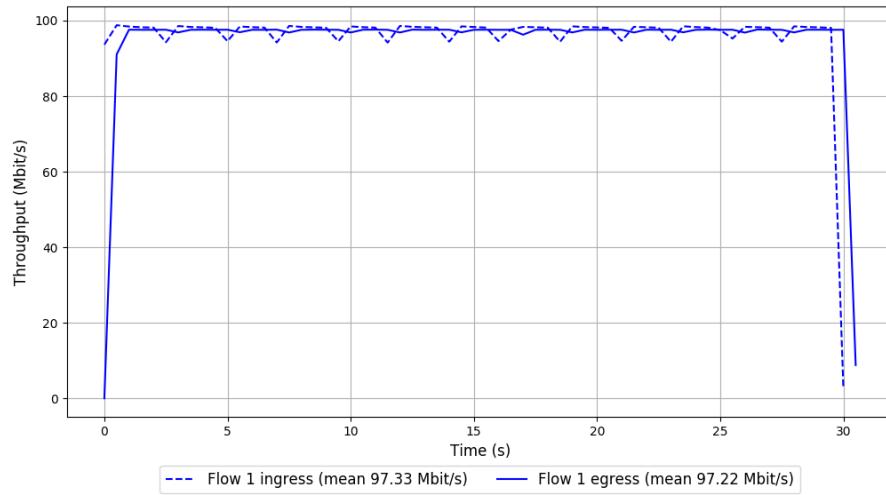


Run 5: Statistics of LEDBAT

```
Start at: 2018-12-11 10:41:44
End at: 2018-12-11 10:42:14
Local clock offset: -7.728 ms
Remote clock offset: 0.652 ms

# Below is generated by plot.py at 2018-12-11 10:52:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.22 Mbit/s
95th percentile per-packet one-way delay: 31.630 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.22 Mbit/s
95th percentile per-packet one-way delay: 31.630 ms
Loss rate: 0.01%
```

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

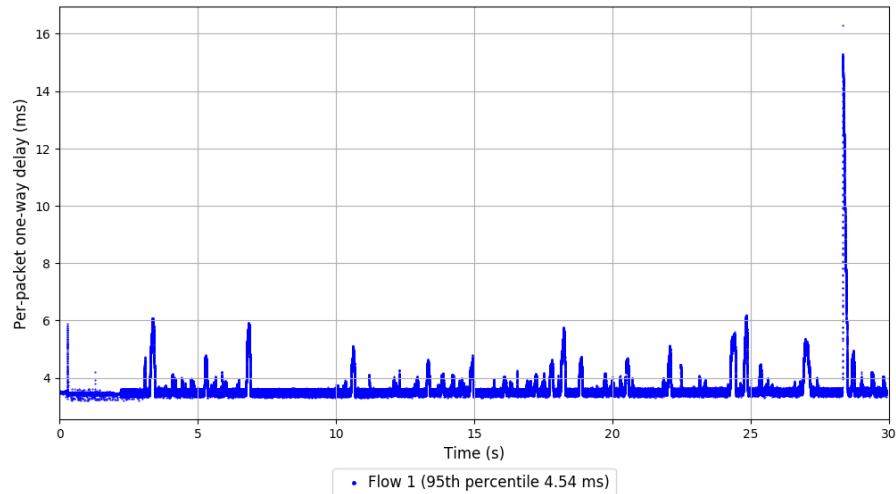
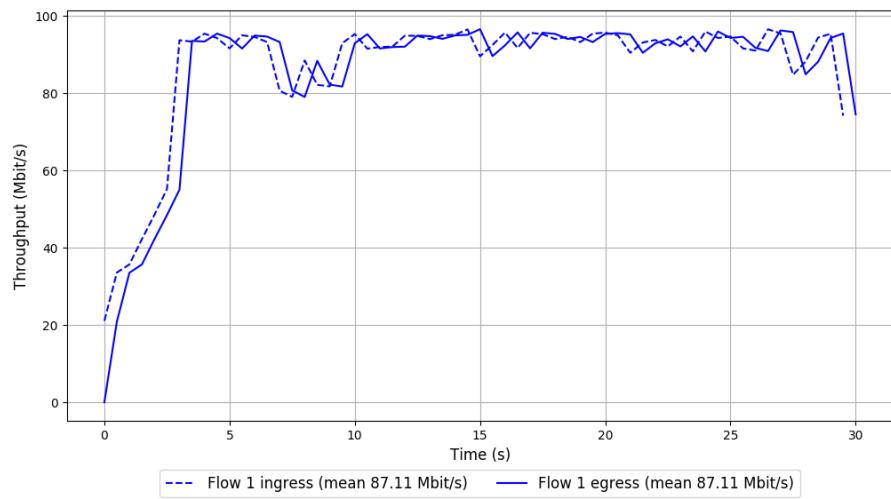


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-12-11 09:03:32
End at: 2018-12-11 09:04:02
Local clock offset: -4.853 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2018-12-11 10:52:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.11 Mbit/s
95th percentile per-packet one-way delay: 4.545 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 87.11 Mbit/s
95th percentile per-packet one-way delay: 4.545 ms
Loss rate: 0.01%
```

Run 1: Report of PCC-Allegro — Data Link

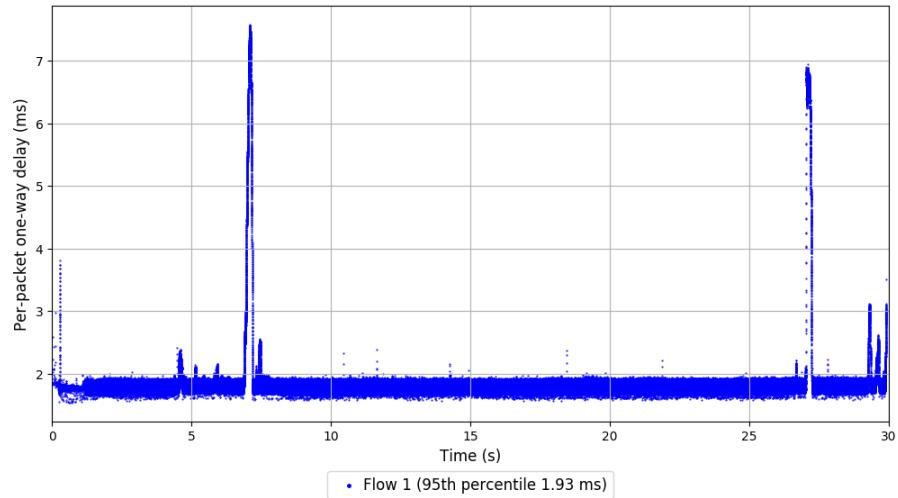
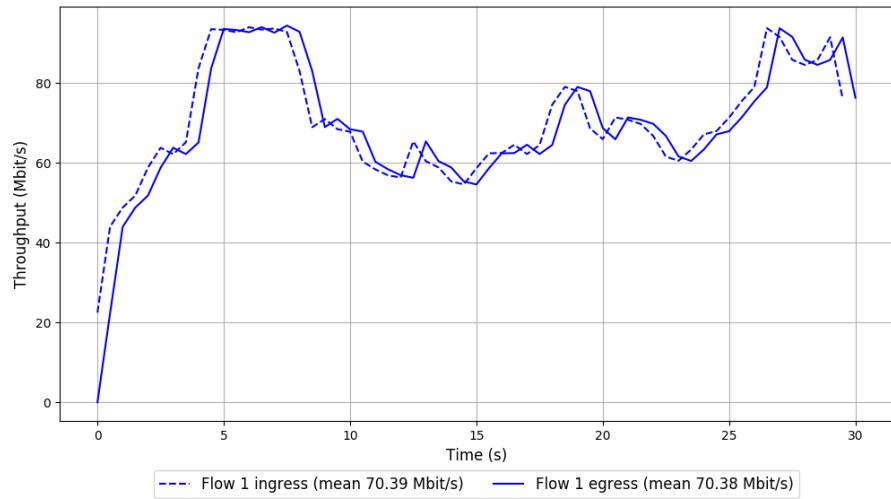


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-12-11 09:24:44
End at: 2018-12-11 09:25:14
Local clock offset: -2.639 ms
Remote clock offset: 0.094 ms

# Below is generated by plot.py at 2018-12-11 10:52:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.38 Mbit/s
95th percentile per-packet one-way delay: 1.933 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 70.38 Mbit/s
95th percentile per-packet one-way delay: 1.933 ms
Loss rate: 0.00%
```

Run 2: Report of PCC-Allegro — Data Link

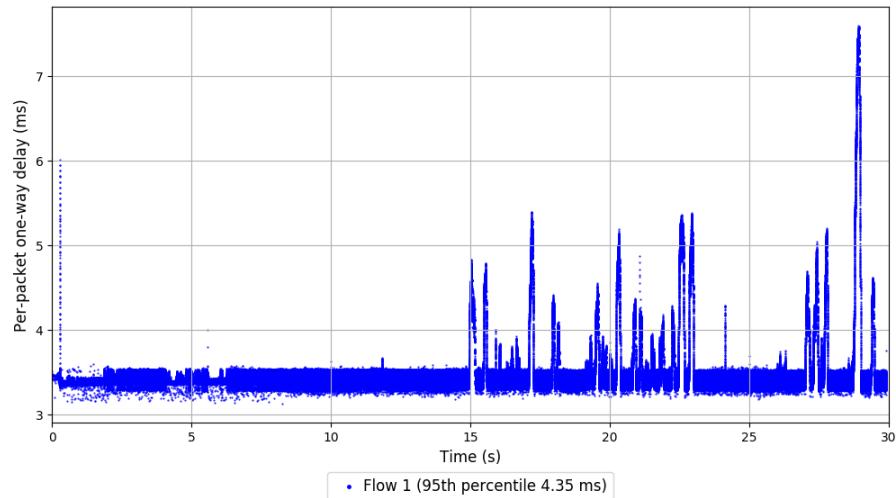
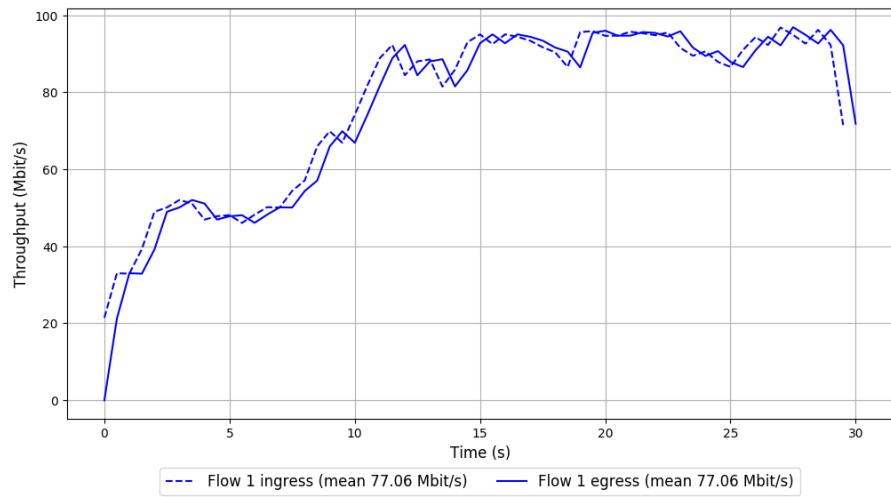


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-12-11 09:45:57
End at: 2018-12-11 09:46:27
Local clock offset: -3.053 ms
Remote clock offset: 0.208 ms

# Below is generated by plot.py at 2018-12-11 10:52:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.06 Mbit/s
95th percentile per-packet one-way delay: 4.351 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 77.06 Mbit/s
95th percentile per-packet one-way delay: 4.351 ms
Loss rate: 0.01%
```

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

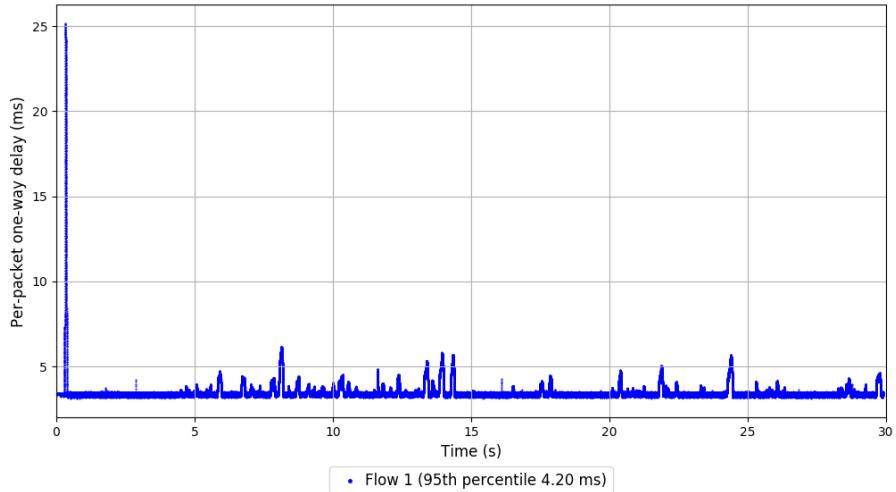
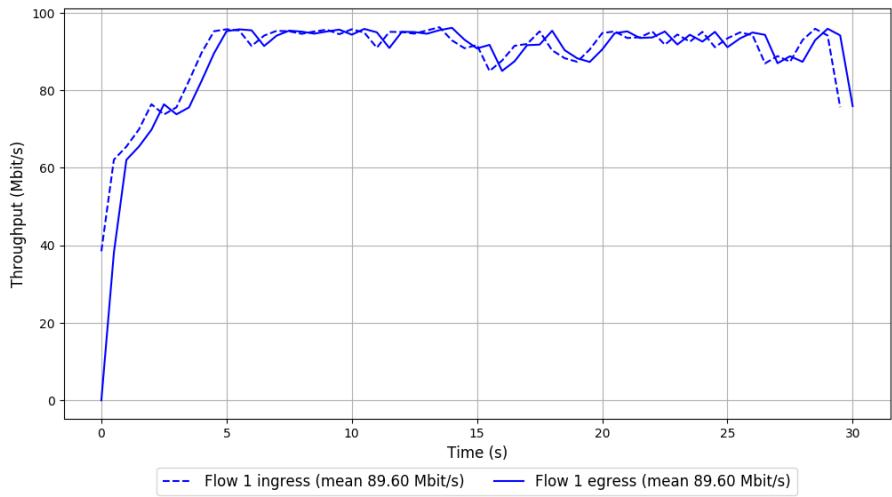


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-12-11 10:07:07
End at: 2018-12-11 10:07:37
Local clock offset: -3.754 ms
Remote clock offset: 0.313 ms

# Below is generated by plot.py at 2018-12-11 10:52:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.60 Mbit/s
95th percentile per-packet one-way delay: 4.195 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 89.60 Mbit/s
95th percentile per-packet one-way delay: 4.195 ms
Loss rate: 0.01%
```

Run 4: Report of PCC-Allegro — Data Link

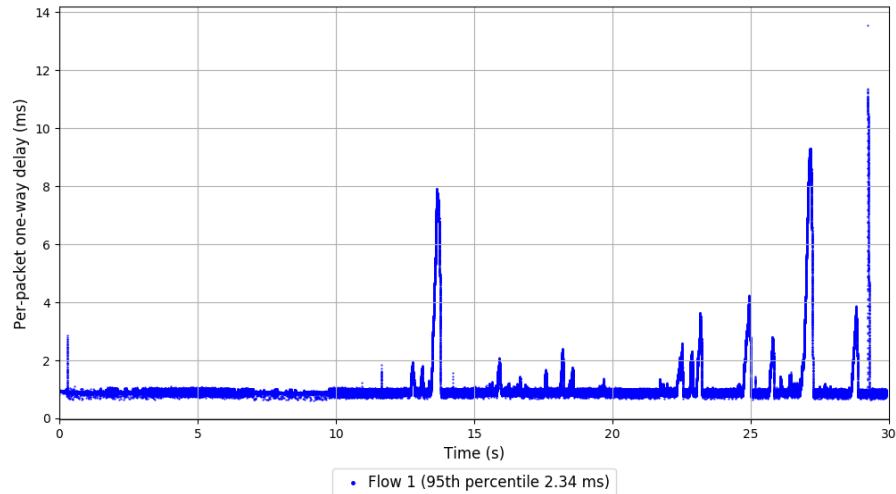
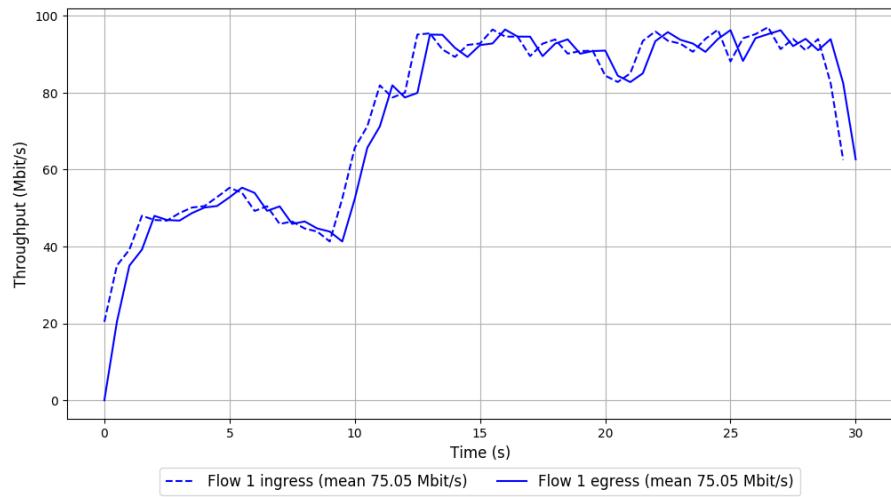


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-12-11 10:28:18
End at: 2018-12-11 10:28:48
Local clock offset: -6.584 ms
Remote clock offset: 0.516 ms

# Below is generated by plot.py at 2018-12-11 10:52:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.05 Mbit/s
95th percentile per-packet one-way delay: 2.336 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 75.05 Mbit/s
95th percentile per-packet one-way delay: 2.336 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

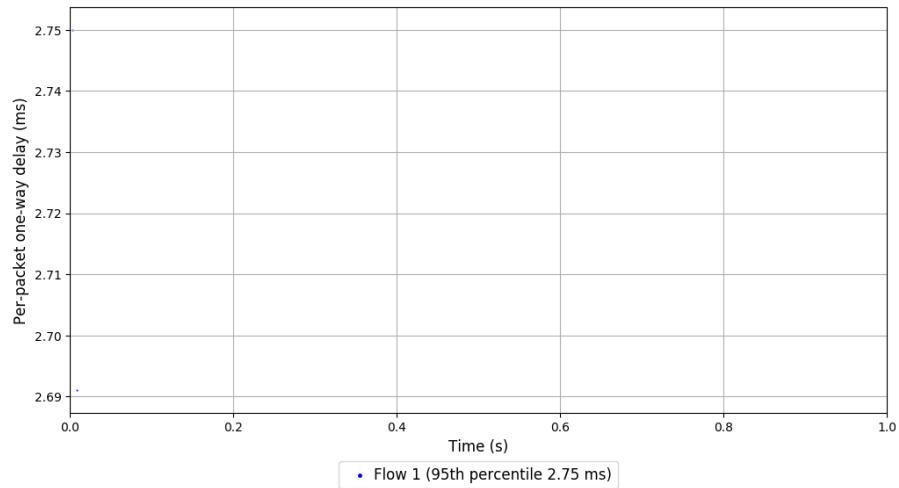
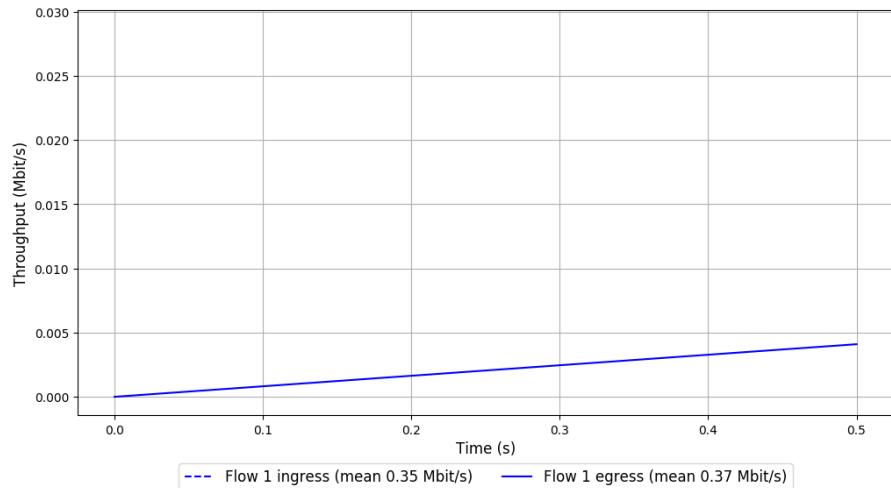
Start at: 2018-12-11 09:18:09

End at: 2018-12-11 09:18:39

Local clock offset: -2.121 ms

Remote clock offset: 0.063 ms

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

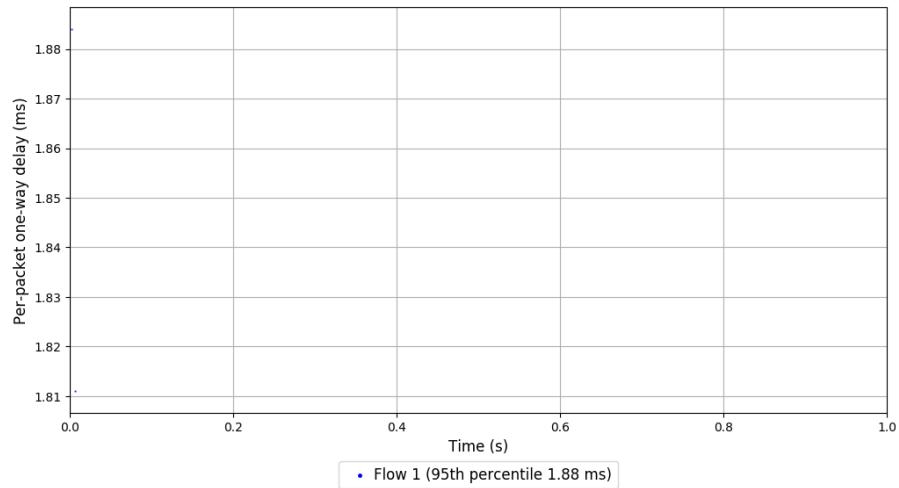
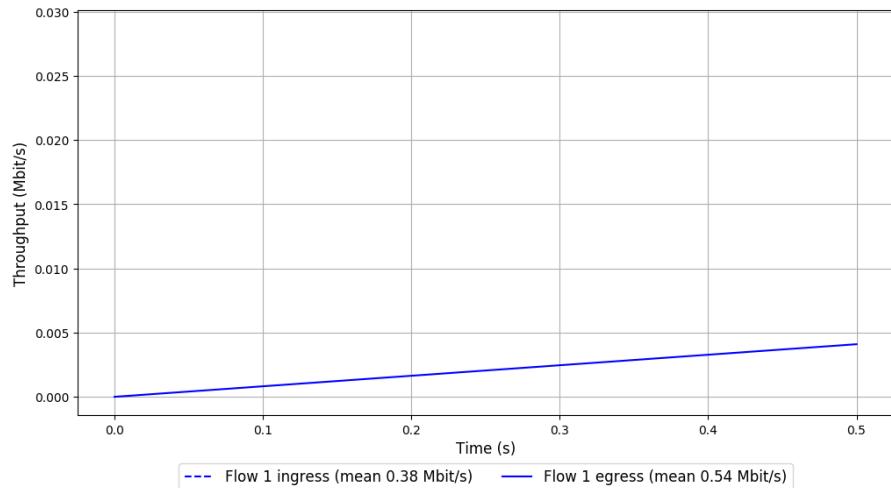
Start at: 2018-12-11 09:39:21

End at: 2018-12-11 09:39:51

Local clock offset: -2.748 ms

Remote clock offset: 0.187 ms

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



Run 3: Statistics of PCC-Expr

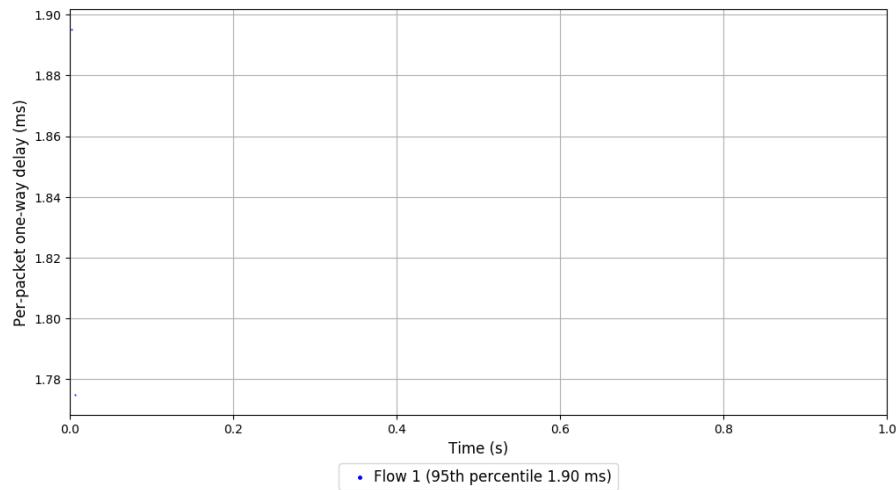
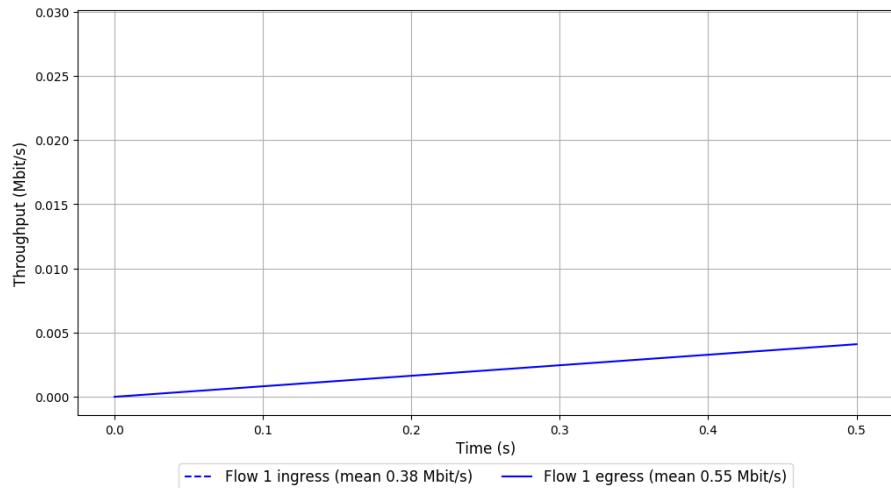
Start at: 2018-12-11 10:00:31

End at: 2018-12-11 10:01:01

Local clock offset: -3.628 ms

Remote clock offset: 0.34 ms

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



Run 4: Statistics of PCC-Expr

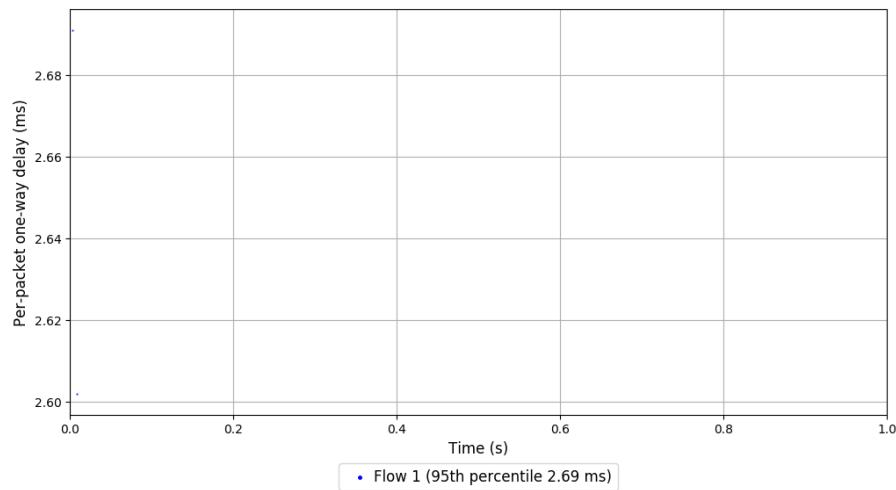
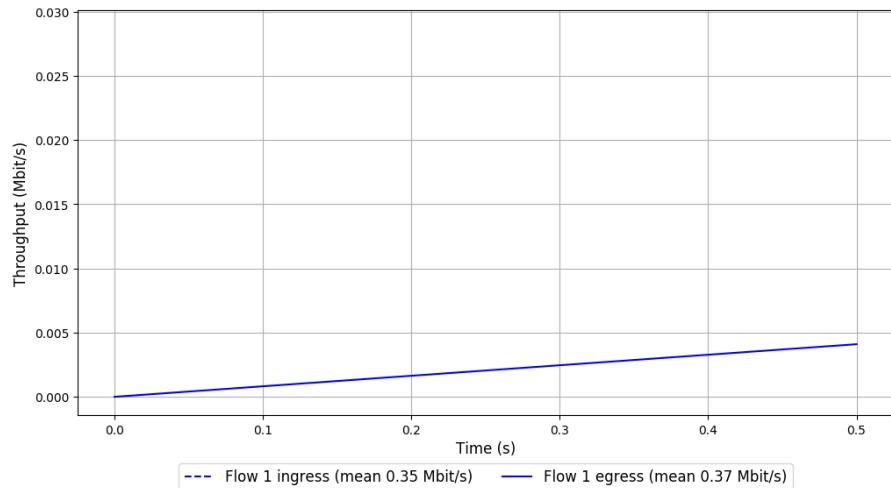
Start at: 2018-12-11 10:21:43

End at: 2018-12-11 10:22:13

Local clock offset: -5.795 ms

Remote clock offset: 0.513 ms

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

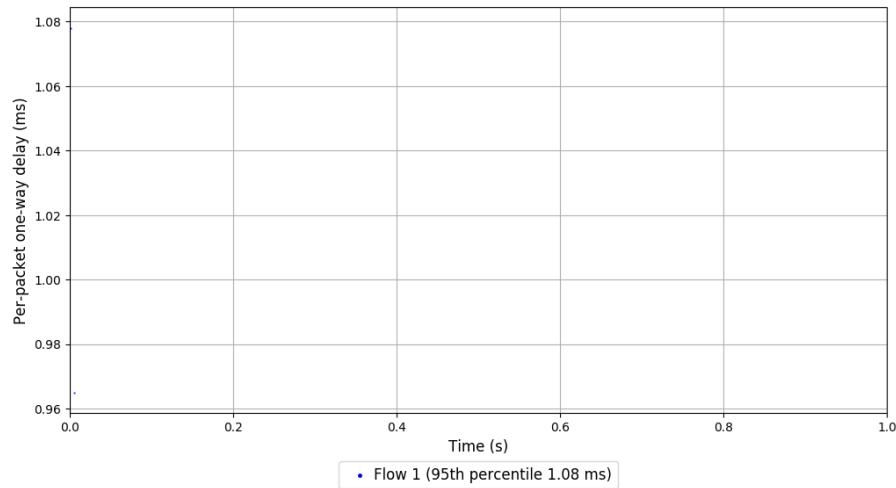
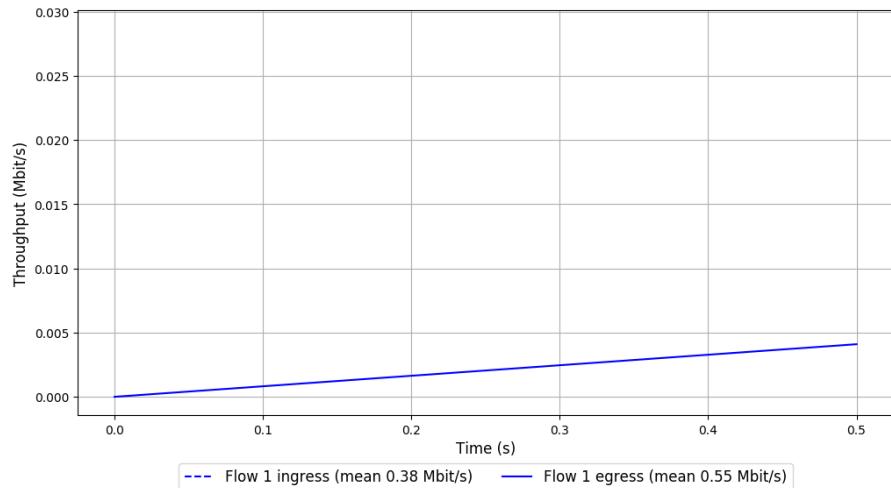
Start at: 2018-12-11 10:42:54

End at: 2018-12-11 10:43:24

Local clock offset: -6.724 ms

Remote clock offset: 0.661 ms

Run 5: Report of PCC-Expr — Data Link

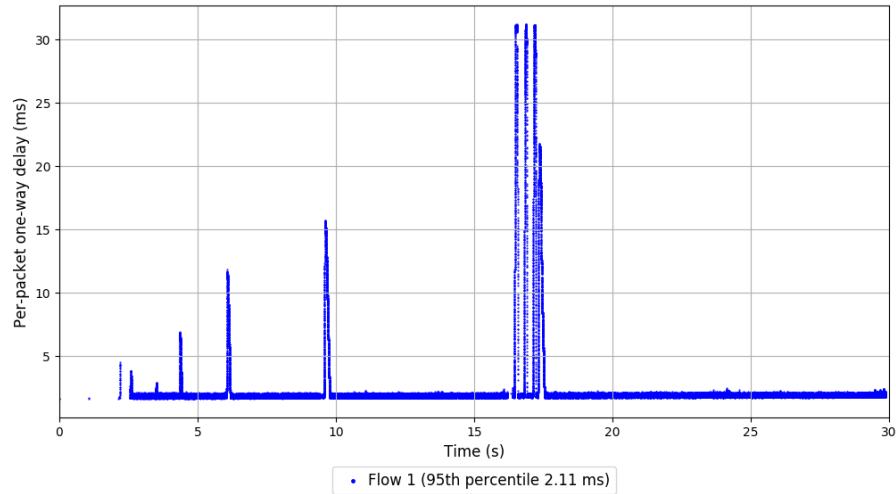
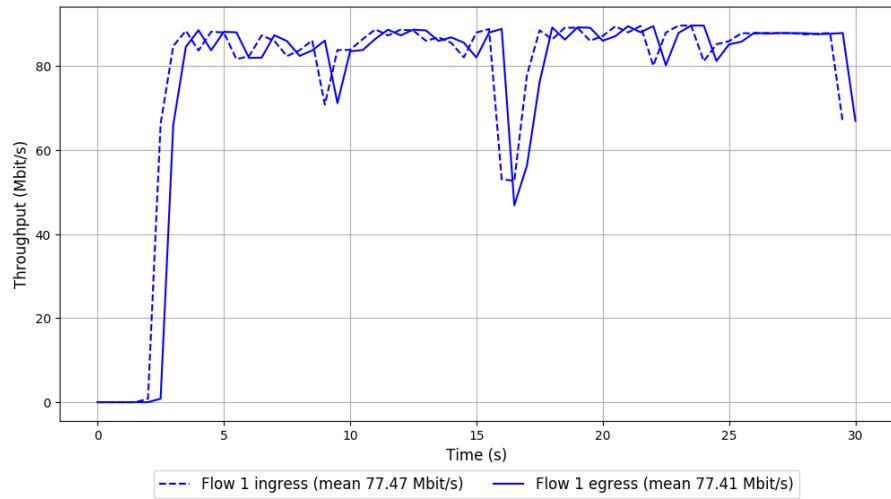


```
Run 1: Statistics of QUIC Cubic
```

```
Start at: 2018-12-11 09:10:10
End at: 2018-12-11 09:10:40
Local clock offset: -4.179 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2018-12-11 10:52:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.41 Mbit/s
95th percentile per-packet one-way delay: 2.110 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 77.41 Mbit/s
95th percentile per-packet one-way delay: 2.110 ms
Loss rate: 0.08%
```

Run 1: Report of QUIC Cubic — Data Link

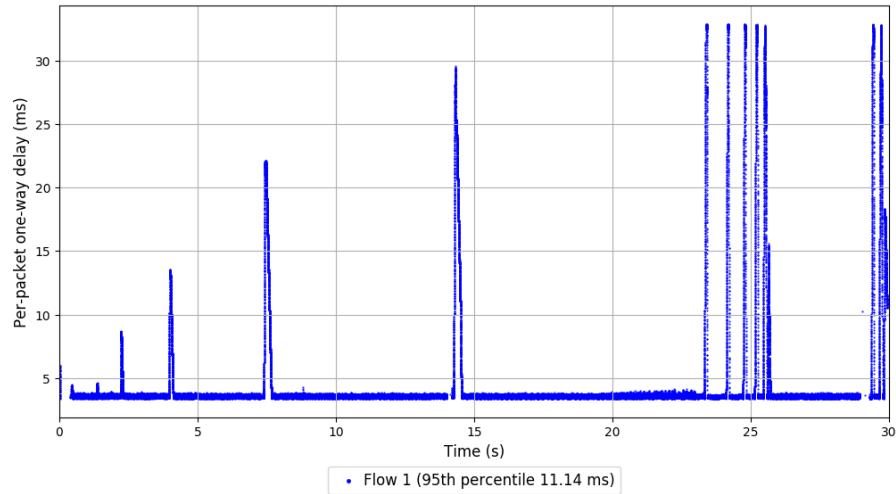
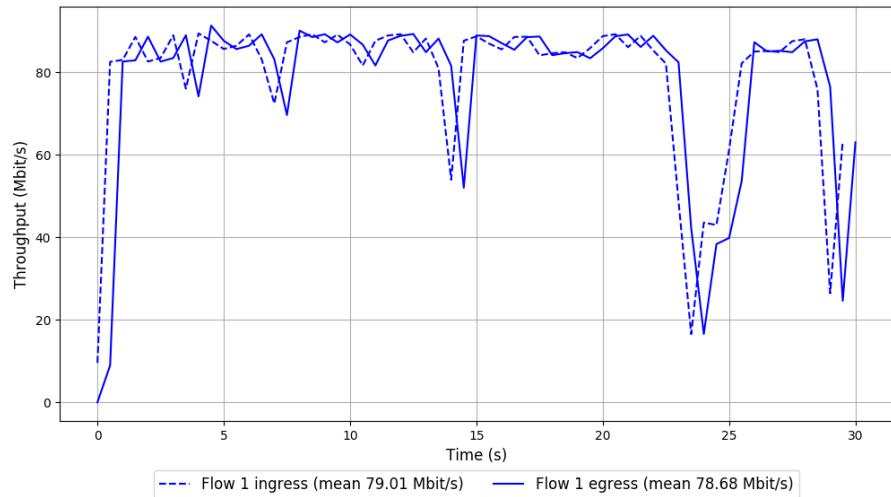


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-12-11 09:31:22
End at: 2018-12-11 09:31:52
Local clock offset: -2.611 ms
Remote clock offset: 0.152 ms

# Below is generated by plot.py at 2018-12-11 10:52:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.68 Mbit/s
95th percentile per-packet one-way delay: 11.136 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 78.68 Mbit/s
95th percentile per-packet one-way delay: 11.136 ms
Loss rate: 0.40%
```

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

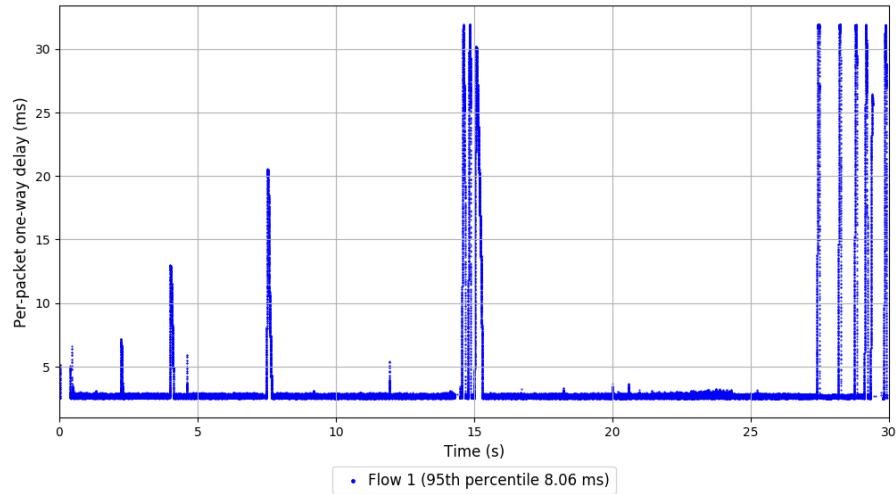
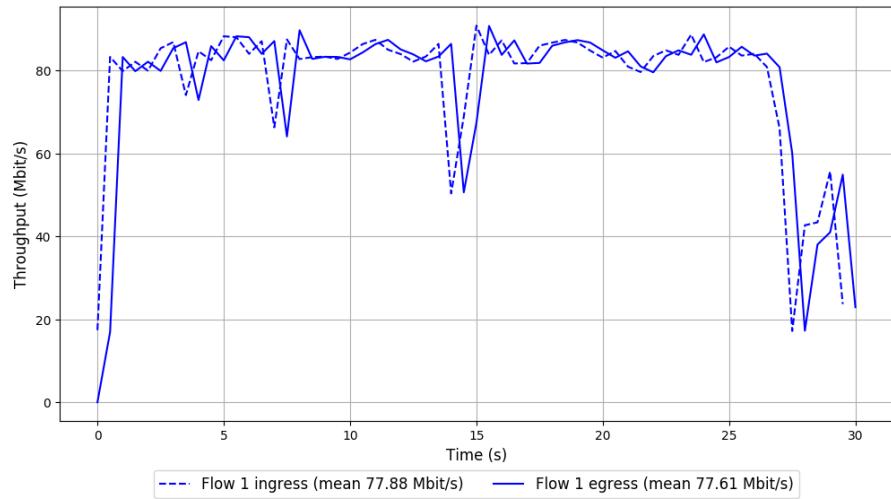


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-12-11 09:52:34
End at: 2018-12-11 09:53:04
Local clock offset: -2.497 ms
Remote clock offset: 0.287 ms

# Below is generated by plot.py at 2018-12-11 10:52:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.61 Mbit/s
95th percentile per-packet one-way delay: 8.064 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 77.61 Mbit/s
95th percentile per-packet one-way delay: 8.064 ms
Loss rate: 0.35%
```

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

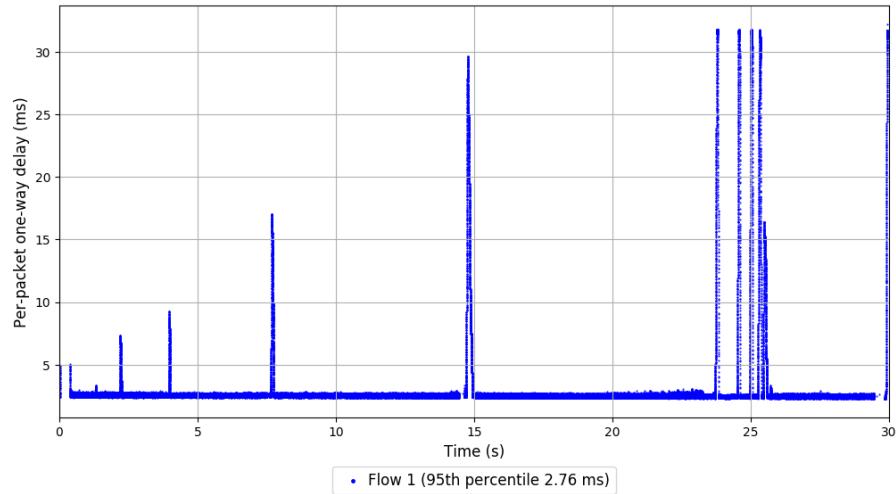
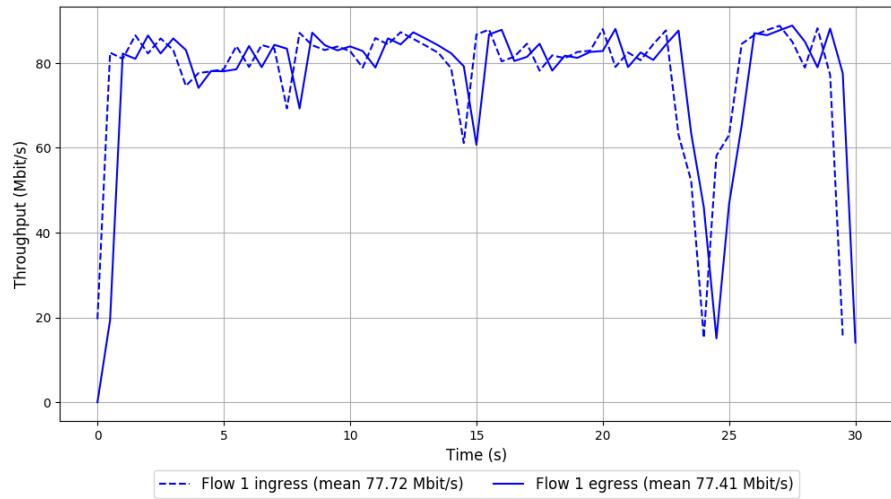


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-12-11 10:13:45
End at: 2018-12-11 10:14:15
Local clock offset: -4.439 ms
Remote clock offset: 0.481 ms

# Below is generated by plot.py at 2018-12-11 10:52:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.41 Mbit/s
95th percentile per-packet one-way delay: 2.763 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 77.41 Mbit/s
95th percentile per-packet one-way delay: 2.763 ms
Loss rate: 0.30%
```

Run 4: Report of QUIC Cubic — Data Link

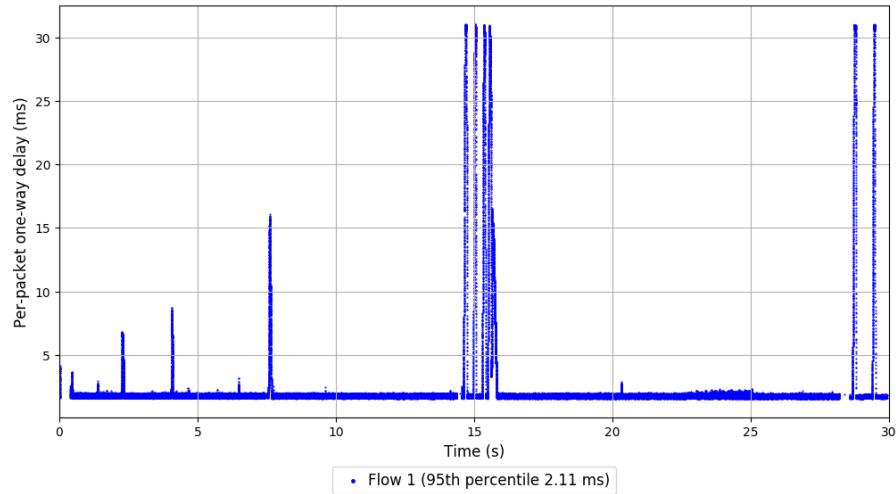
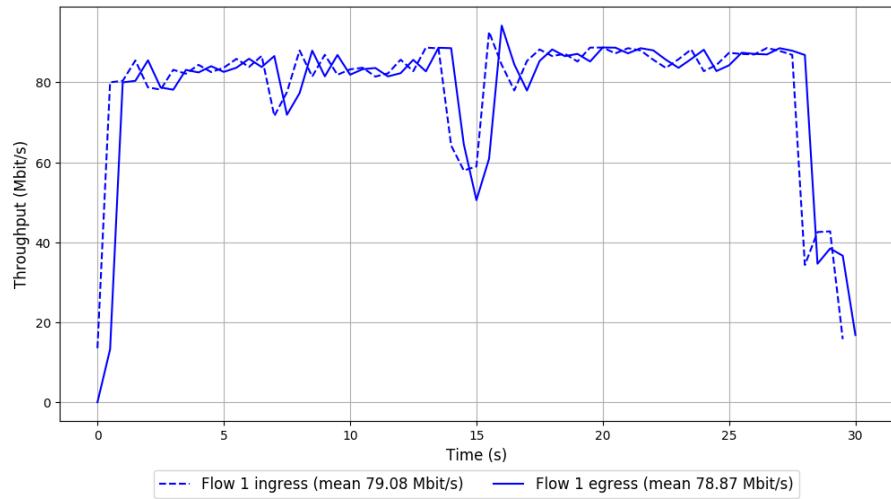


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-12-11 10:34:56
End at: 2018-12-11 10:35:26
Local clock offset: -7.951 ms
Remote clock offset: 0.594 ms

# Below is generated by plot.py at 2018-12-11 10:53:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.87 Mbit/s
95th percentile per-packet one-way delay: 2.109 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 78.87 Mbit/s
95th percentile per-packet one-way delay: 2.109 ms
Loss rate: 0.27%
```

Run 5: Report of QUIC Cubic — Data Link

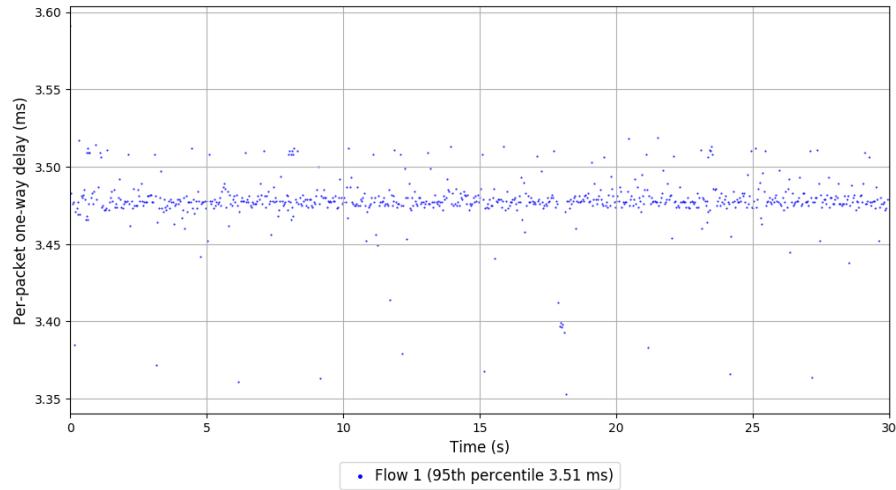
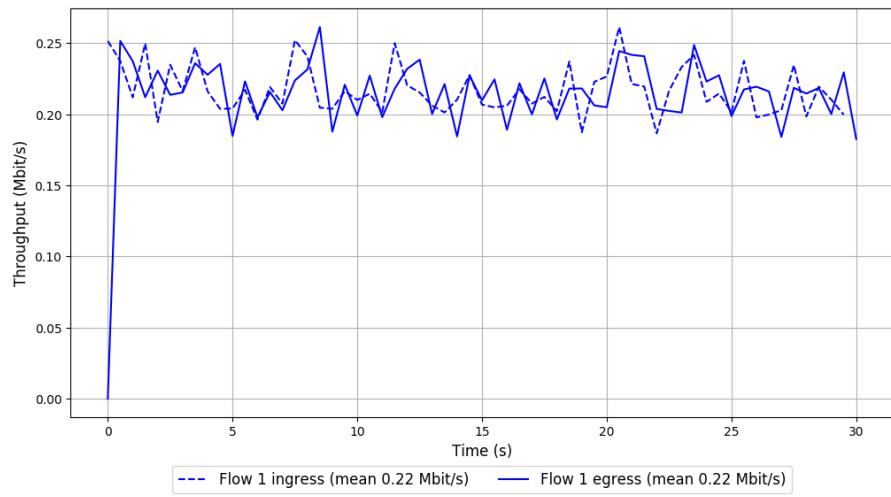


Run 1: Statistics of SCReAM

```
Start at: 2018-12-11 09:06:54
End at: 2018-12-11 09:07:24
Local clock offset: -4.647 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2018-12-11 10:53:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.508 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.508 ms
Loss rate: 0.13%
```

Run 1: Report of SCReAM — Data Link

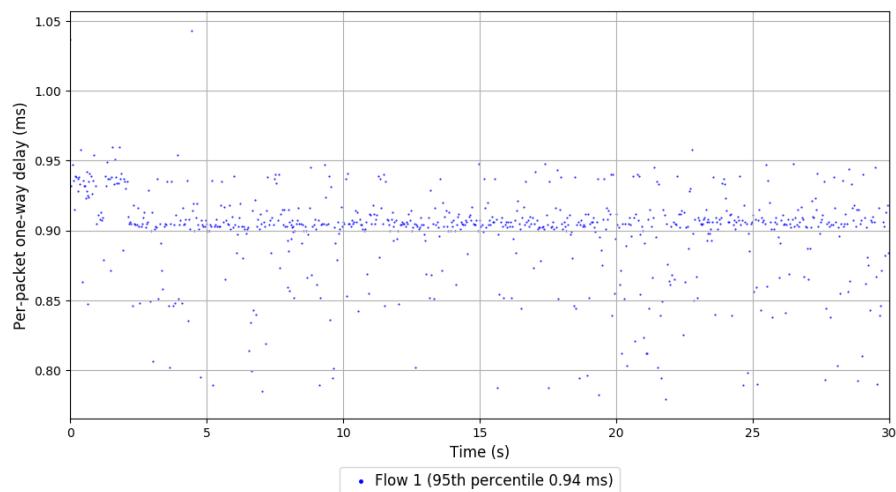
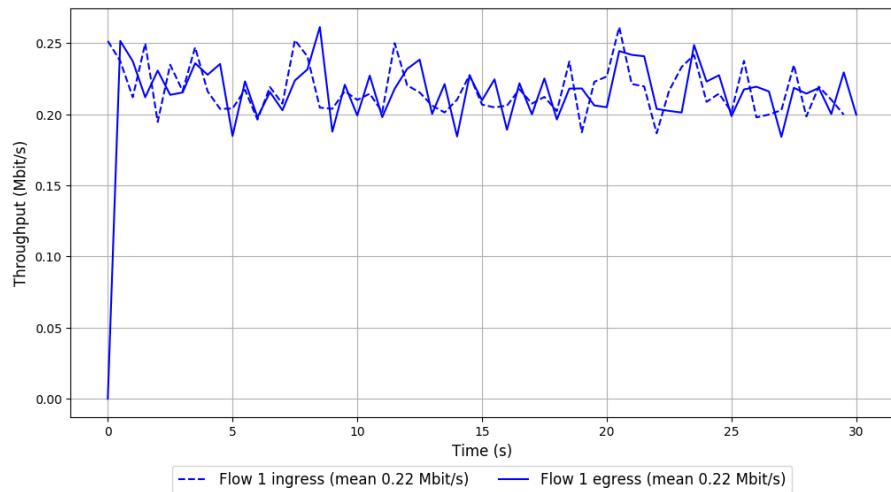


Run 2: Statistics of SCReAM

```
Start at: 2018-12-11 09:28:05
End at: 2018-12-11 09:28:35
Local clock offset: -1.725 ms
Remote clock offset: 0.088 ms

# Below is generated by plot.py at 2018-12-11 10:53:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.939 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.939 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

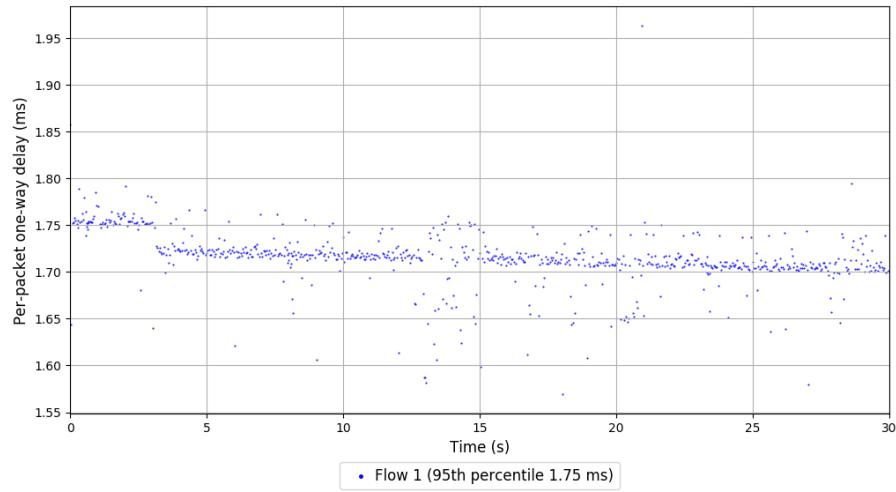
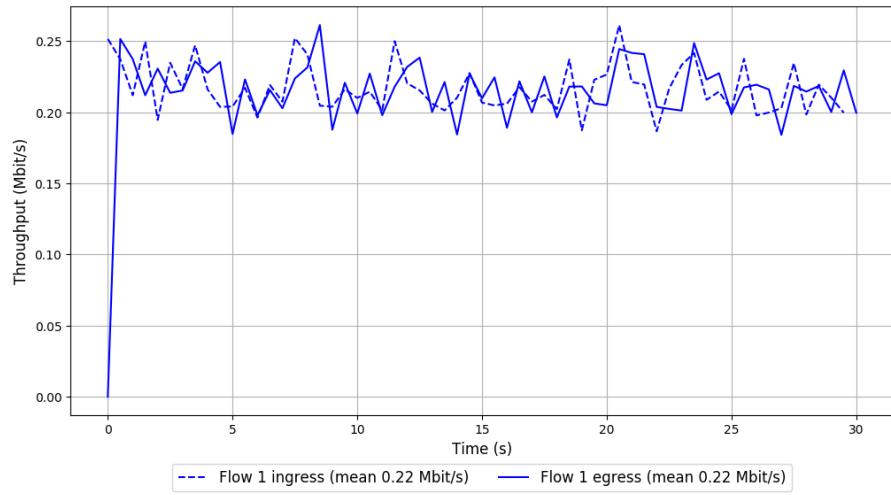


Run 3: Statistics of SCReAM

```
Start at: 2018-12-11 09:49:18
End at: 2018-12-11 09:49:48
Local clock offset: -3.173 ms
Remote clock offset: 0.25 ms

# Below is generated by plot.py at 2018-12-11 10:53:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.755 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.755 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

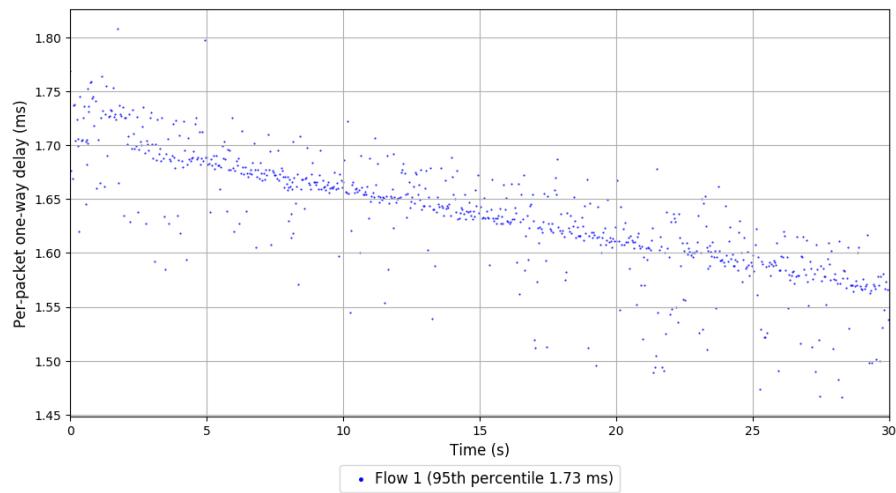
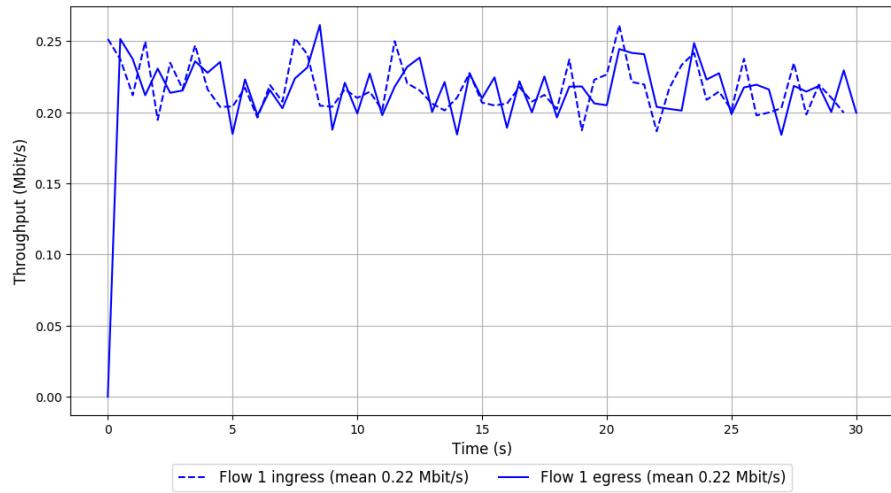


Run 4: Statistics of SCReAM

```
Start at: 2018-12-11 10:10:29
End at: 2018-12-11 10:10:59
Local clock offset: -4.526 ms
Remote clock offset: 0.415 ms

# Below is generated by plot.py at 2018-12-11 10:53:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.725 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.725 ms
Loss rate: 0.00%
```

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

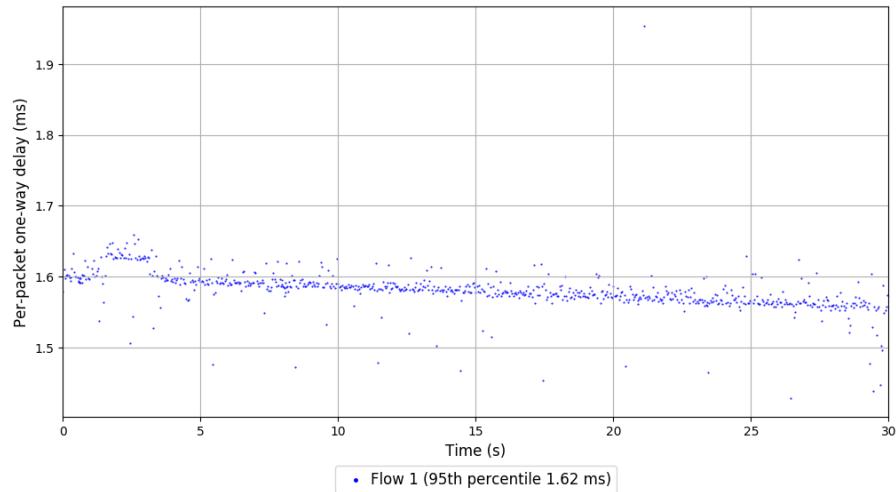
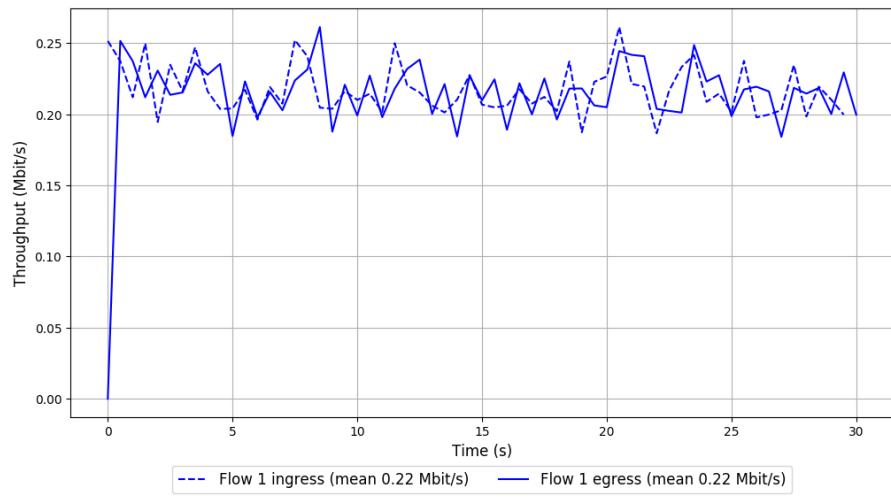


Run 5: Statistics of SCReAM

```
Start at: 2018-12-11 10:31:39
End at: 2018-12-11 10:32:09
Local clock offset: -7.671 ms
Remote clock offset: 0.437 ms

# Below is generated by plot.py at 2018-12-11 10:53:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.625 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.625 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

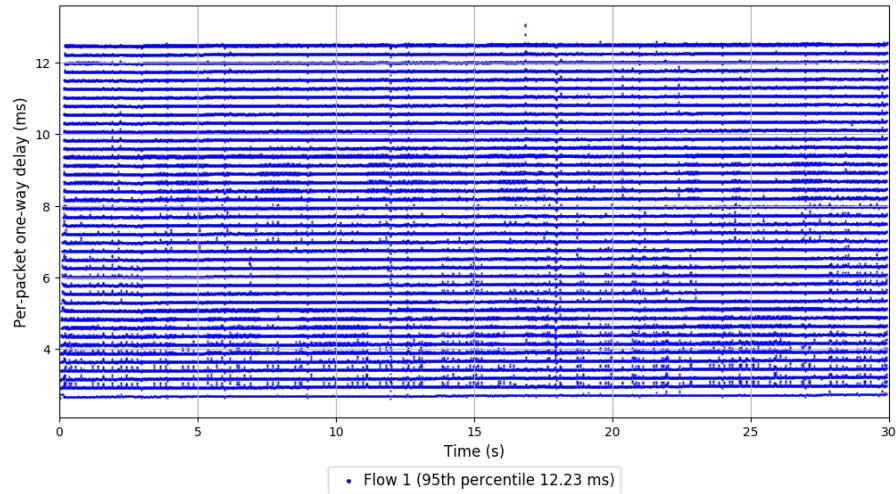
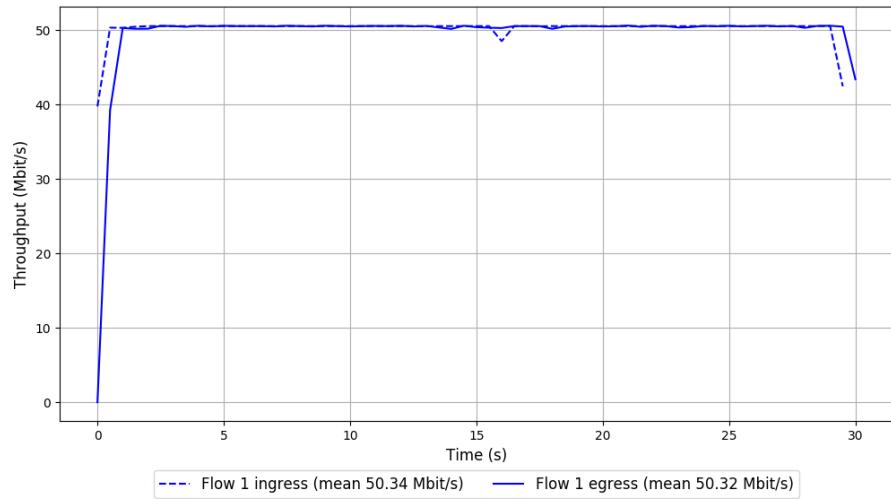


Run 1: Statistics of Sprout

```
Start at: 2018-12-11 09:02:27
End at: 2018-12-11 09:02:57
Local clock offset: -4.147 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2018-12-11 10:53:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.32 Mbit/s
95th percentile per-packet one-way delay: 12.234 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.32 Mbit/s
95th percentile per-packet one-way delay: 12.234 ms
Loss rate: 0.00%
```

## Run 1: Report of Sprout — Data Link

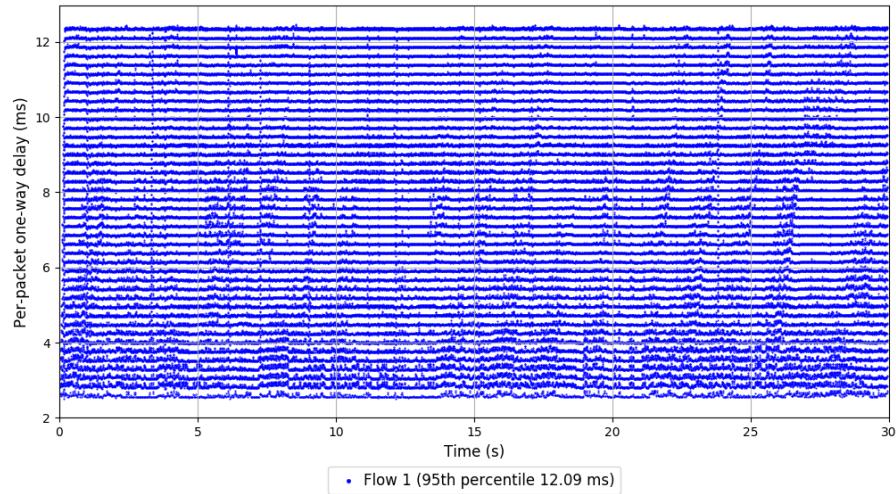
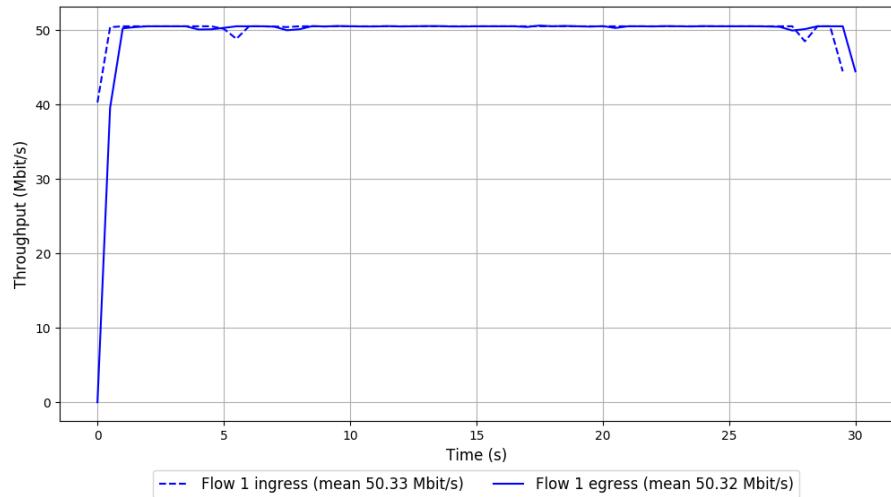


Run 2: Statistics of Sprout

```
Start at: 2018-12-11 09:23:39
End at: 2018-12-11 09:24:09
Local clock offset: -1.816 ms
Remote clock offset: 0.054 ms

# Below is generated by plot.py at 2018-12-11 10:53:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.32 Mbit/s
95th percentile per-packet one-way delay: 12.088 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.32 Mbit/s
95th percentile per-packet one-way delay: 12.088 ms
Loss rate: 0.00%
```

## Run 2: Report of Sprout — Data Link

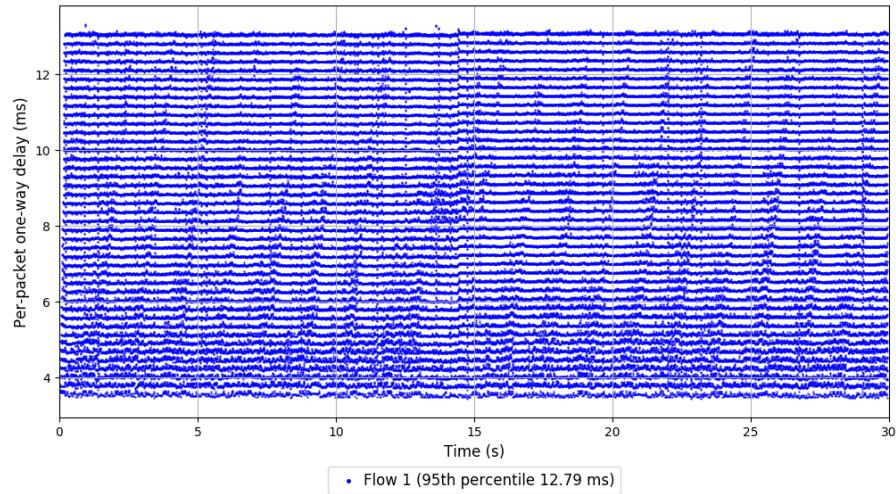
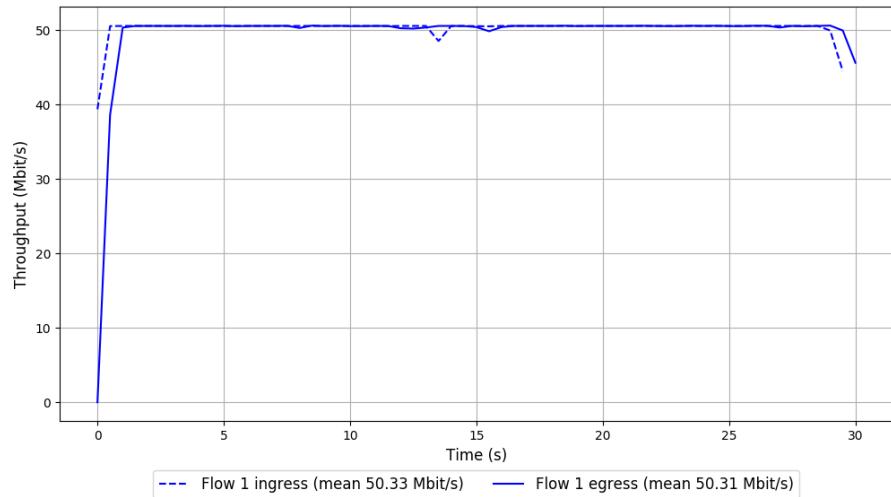


Run 3: Statistics of Sprout

```
Start at: 2018-12-11 09:44:51
End at: 2018-12-11 09:45:21
Local clock offset: -3.066 ms
Remote clock offset: 0.29 ms

# Below is generated by plot.py at 2018-12-11 10:53:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.31 Mbit/s
95th percentile per-packet one-way delay: 12.795 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.31 Mbit/s
95th percentile per-packet one-way delay: 12.795 ms
Loss rate: 0.00%
```

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

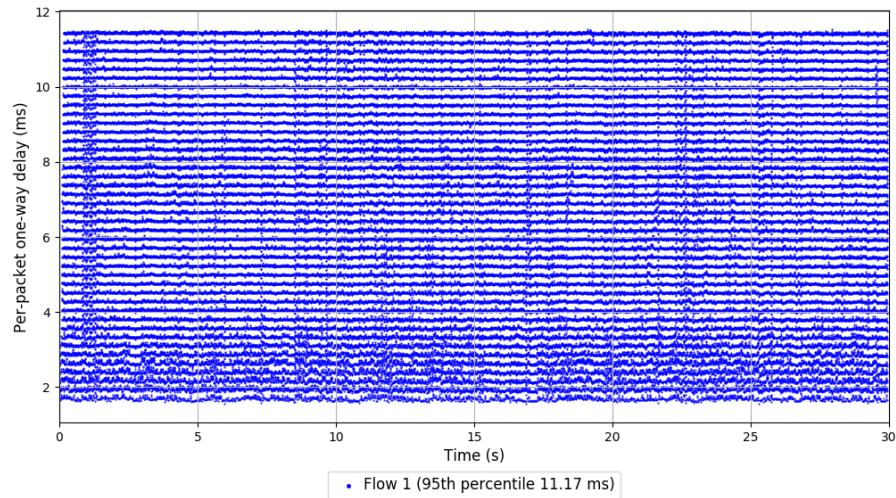
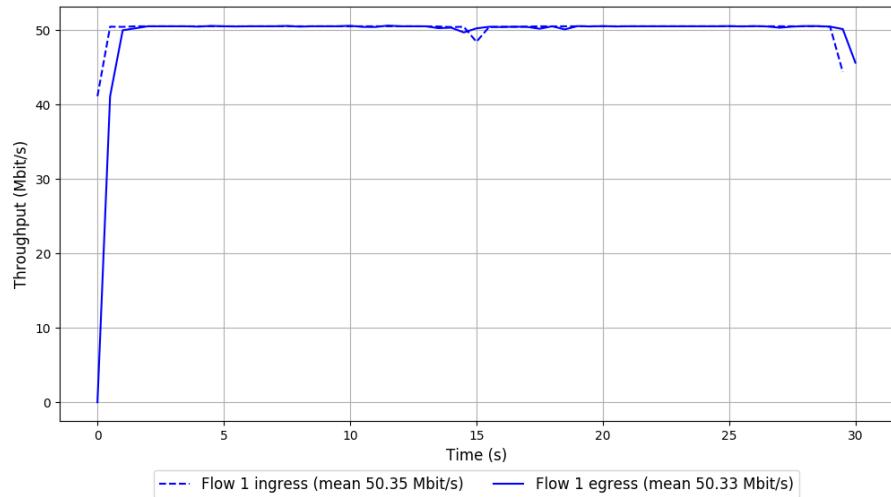


Run 4: Statistics of Sprout

```
Start at: 2018-12-11 10:06:01
End at: 2018-12-11 10:06:32
Local clock offset: -3.716 ms
Remote clock offset: 0.39 ms

# Below is generated by plot.py at 2018-12-11 10:53:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.33 Mbit/s
95th percentile per-packet one-way delay: 11.173 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.33 Mbit/s
95th percentile per-packet one-way delay: 11.173 ms
Loss rate: 0.00%
```

## Run 4: Report of Sprout — Data Link

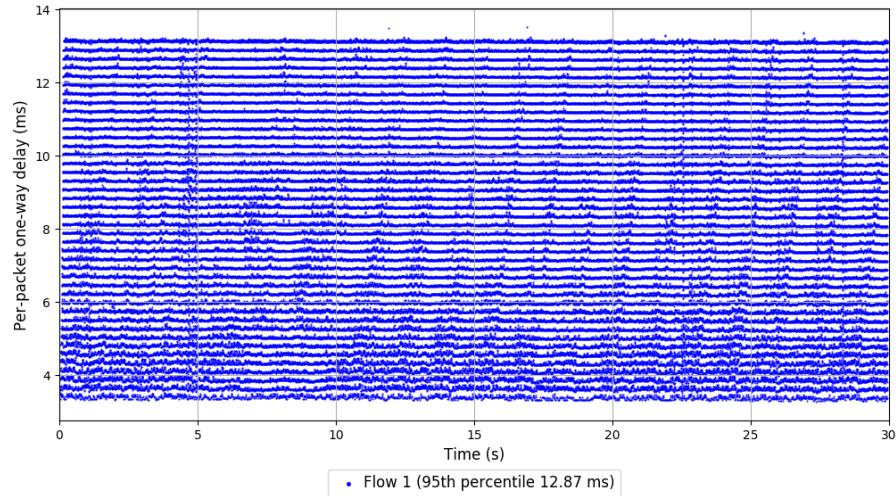
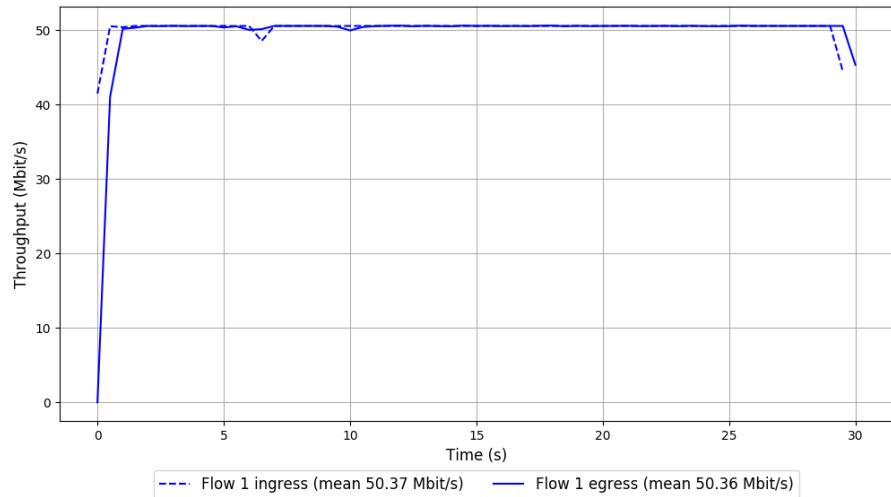


Run 5: Statistics of Sprout

```
Start at: 2018-12-11 10:27:13
End at: 2018-12-11 10:27:43
Local clock offset: -7.259 ms
Remote clock offset: 0.54 ms

# Below is generated by plot.py at 2018-12-11 10:53:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.36 Mbit/s
95th percentile per-packet one-way delay: 12.867 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.36 Mbit/s
95th percentile per-packet one-way delay: 12.867 ms
Loss rate: 0.00%
```

## Run 5: Report of Sprout — Data Link

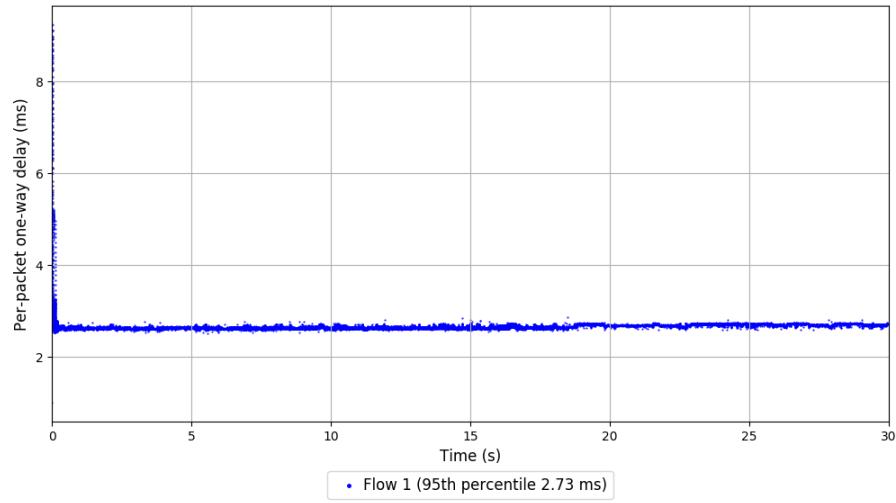
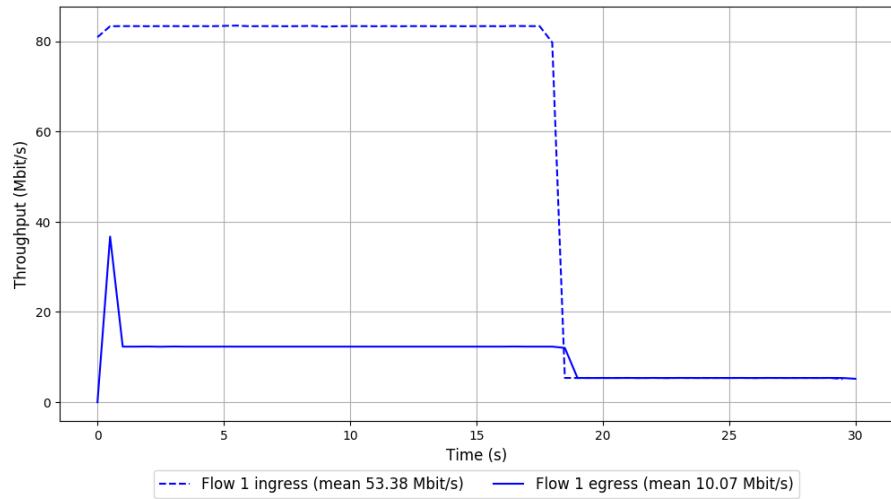


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-12-11 09:19:13
End at: 2018-12-11 09:19:43
Local clock offset: -2.059 ms
Remote clock offset: 0.027 ms

# Below is generated by plot.py at 2018-12-11 10:53:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.07 Mbit/s
95th percentile per-packet one-way delay: 2.725 ms
Loss rate: 81.14%
-- Flow 1:
Average throughput: 10.07 Mbit/s
95th percentile per-packet one-way delay: 2.725 ms
Loss rate: 81.14%
```

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

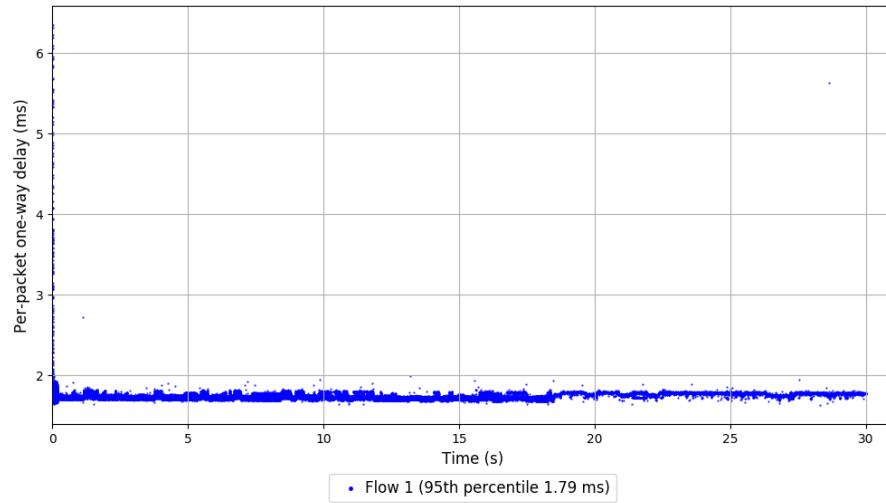
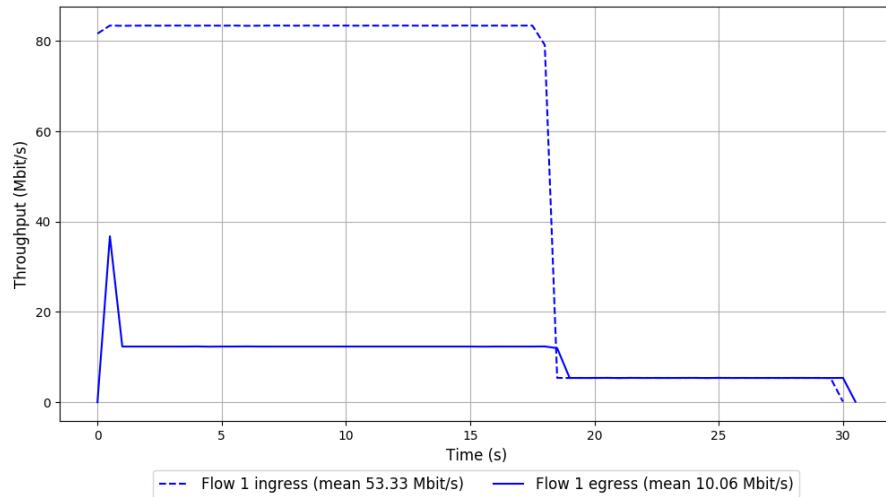


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-12-11 09:40:25
End at: 2018-12-11 09:40:55
Local clock offset: -2.731 ms
Remote clock offset: 0.233 ms

# Below is generated by plot.py at 2018-12-11 10:53:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 1.795 ms
Loss rate: 81.14%
-- Flow 1:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 1.795 ms
Loss rate: 81.14%
```

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

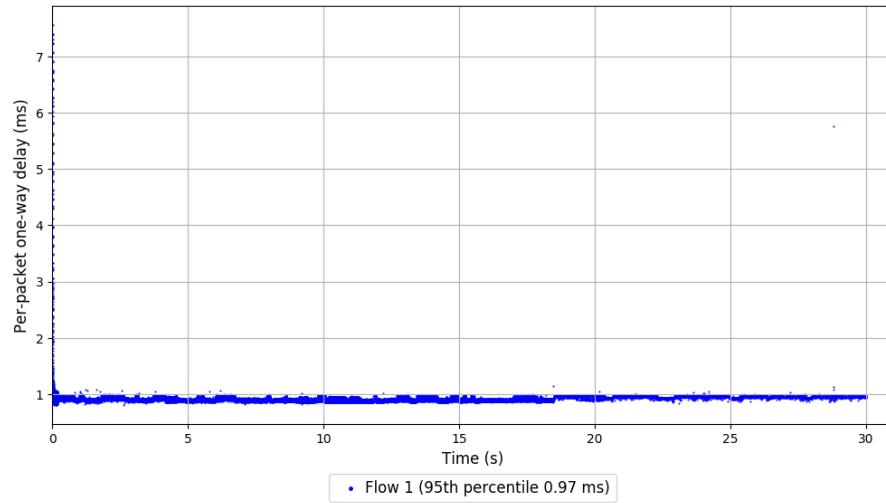
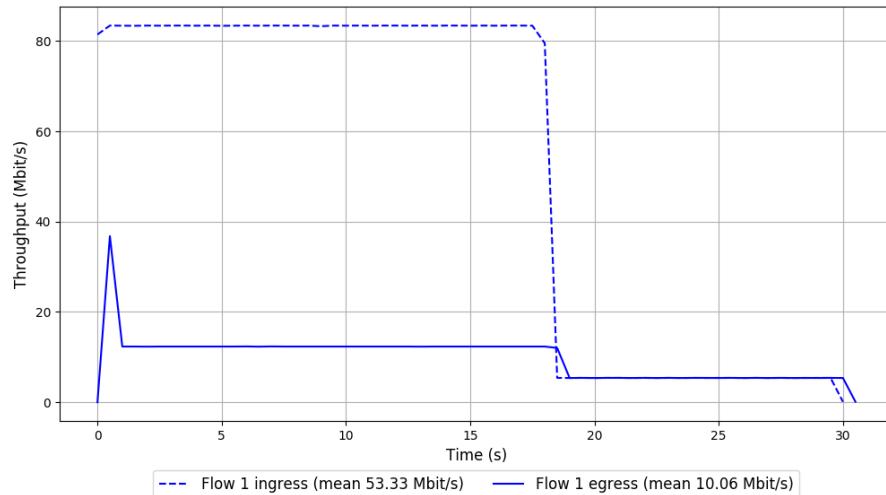


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-12-11 10:01:36
End at: 2018-12-11 10:02:06
Local clock offset: -2.728 ms
Remote clock offset: 0.427 ms

# Below is generated by plot.py at 2018-12-11 10:53:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 0.971 ms
Loss rate: 81.14%
-- Flow 1:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 0.971 ms
Loss rate: 81.14%
```

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

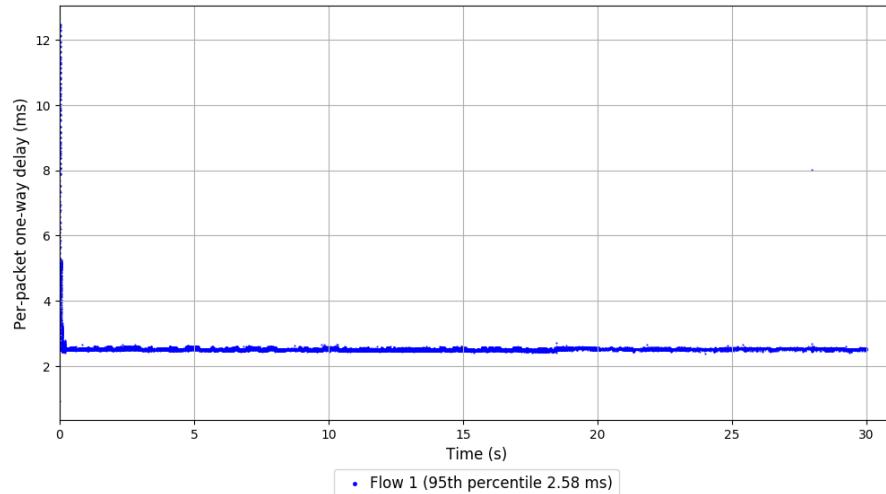
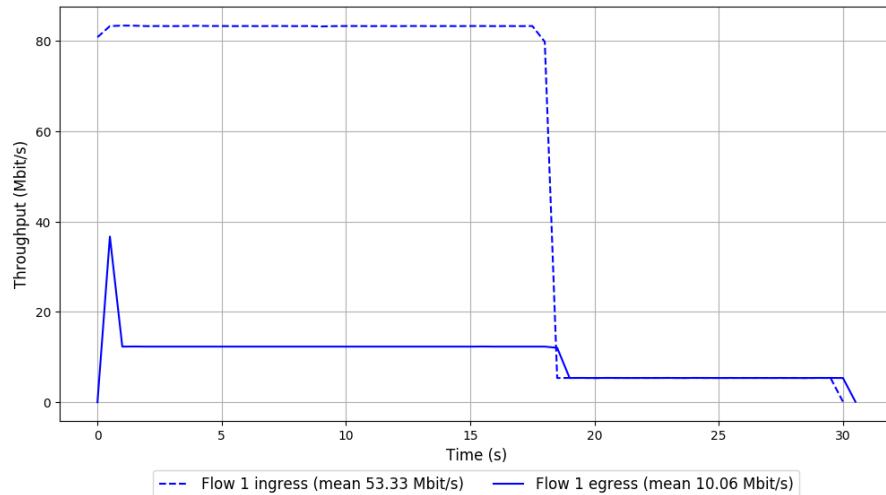


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-12-11 10:22:47
End at: 2018-12-11 10:23:17
Local clock offset: -5.946 ms
Remote clock offset: 0.478 ms

# Below is generated by plot.py at 2018-12-11 10:53:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 2.578 ms
Loss rate: 81.14%
-- Flow 1:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 2.578 ms
Loss rate: 81.14%
```

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

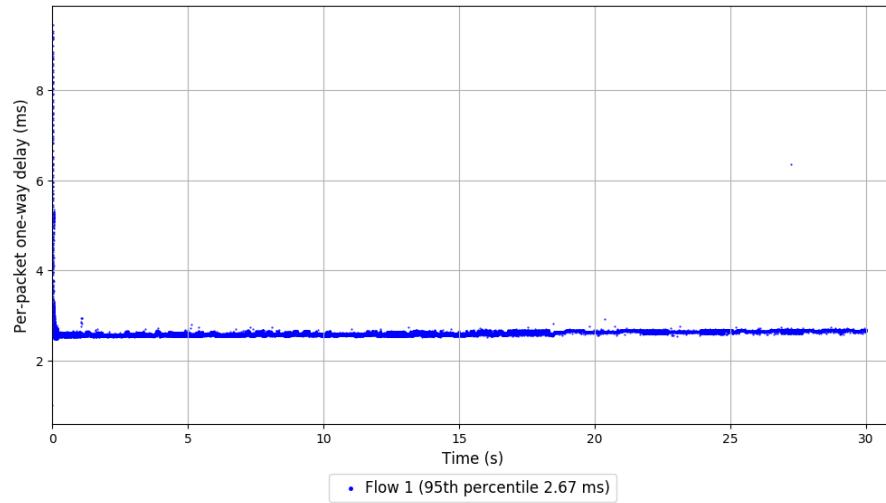
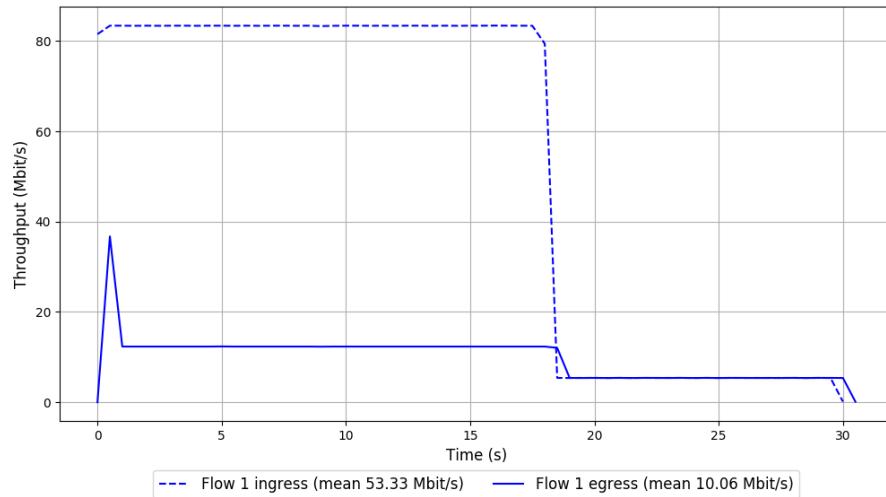


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-12-11 10:43:58
End at: 2018-12-11 10:44:28
Local clock offset: -6.629 ms
Remote clock offset: 0.578 ms

# Below is generated by plot.py at 2018-12-11 10:53:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 2.675 ms
Loss rate: 81.14%
-- Flow 1:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 2.675 ms
Loss rate: 81.14%
```

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

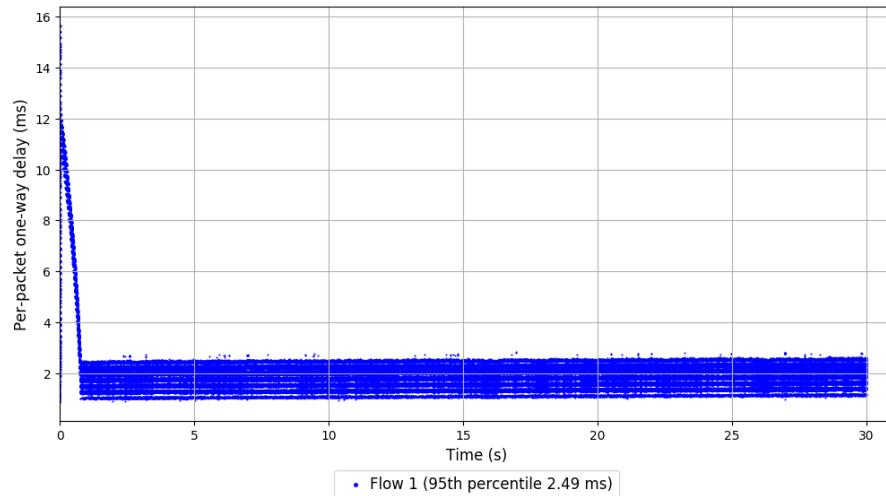
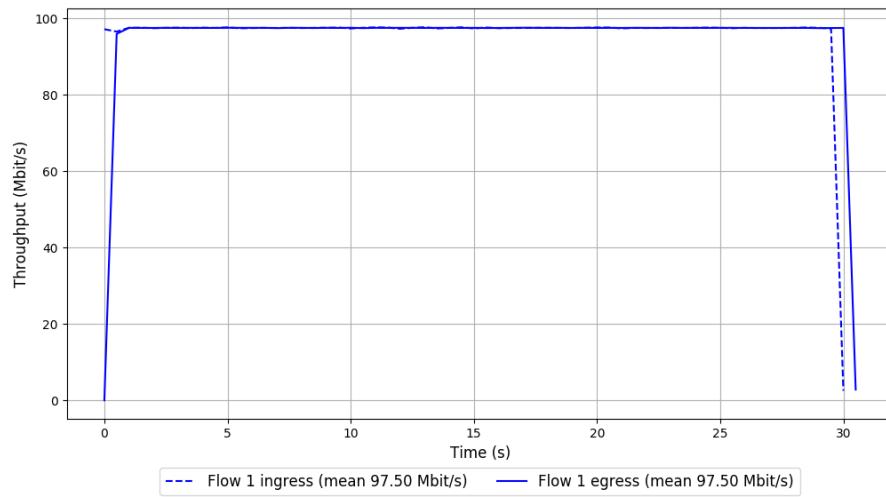


Run 1: Statistics of TCP Vegas

```
Start at: 2018-12-11 09:09:02
End at: 2018-12-11 09:09:32
Local clock offset: -3.663 ms
Remote clock offset: -0.139 ms

# Below is generated by plot.py at 2018-12-11 10:54:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 2.489 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 2.489 ms
Loss rate: 0.00%
```

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

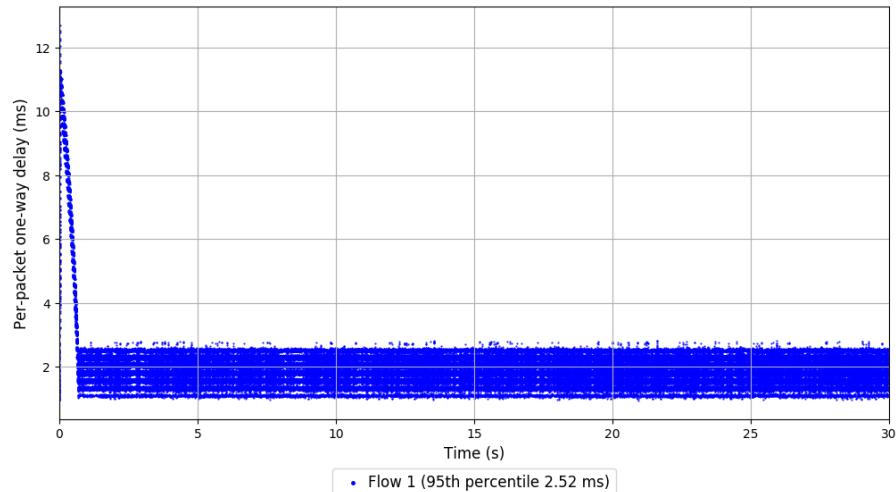
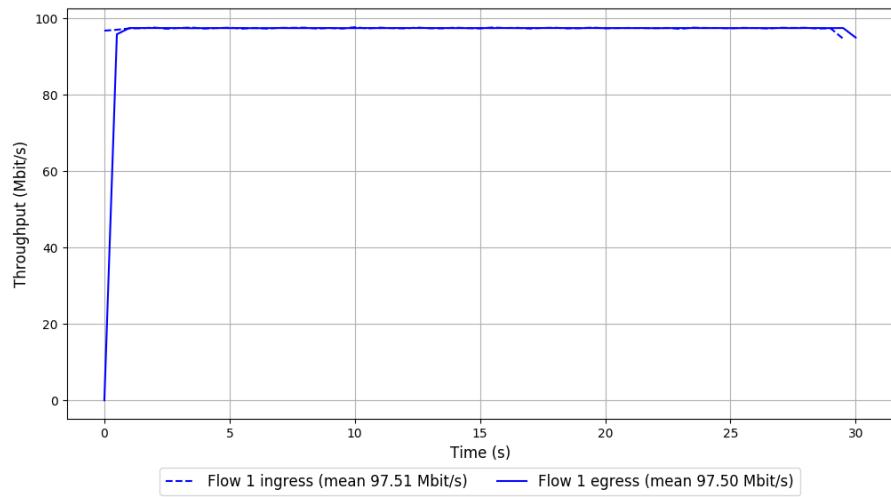


Run 2: Statistics of TCP Vegas

```
Start at: 2018-12-11 09:30:14
End at: 2018-12-11 09:30:44
Local clock offset: -1.771 ms
Remote clock offset: 0.149 ms

# Below is generated by plot.py at 2018-12-11 10:54:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 2.521 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 2.521 ms
Loss rate: 0.00%
```

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

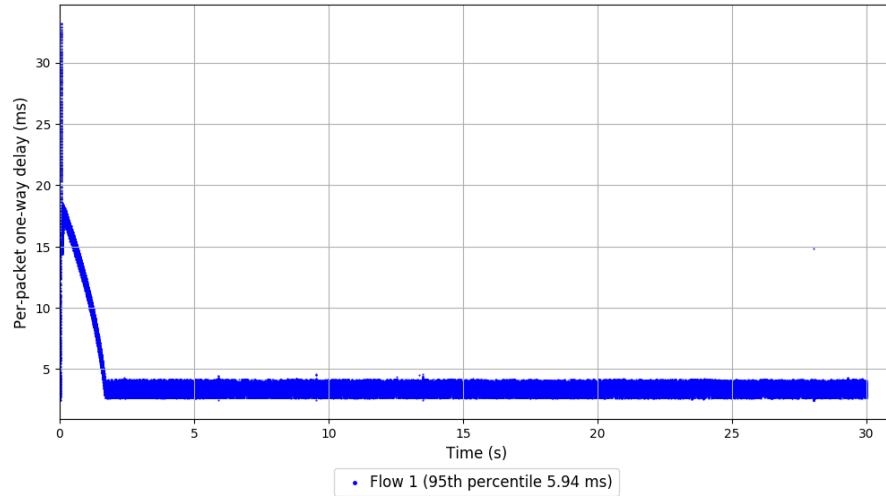
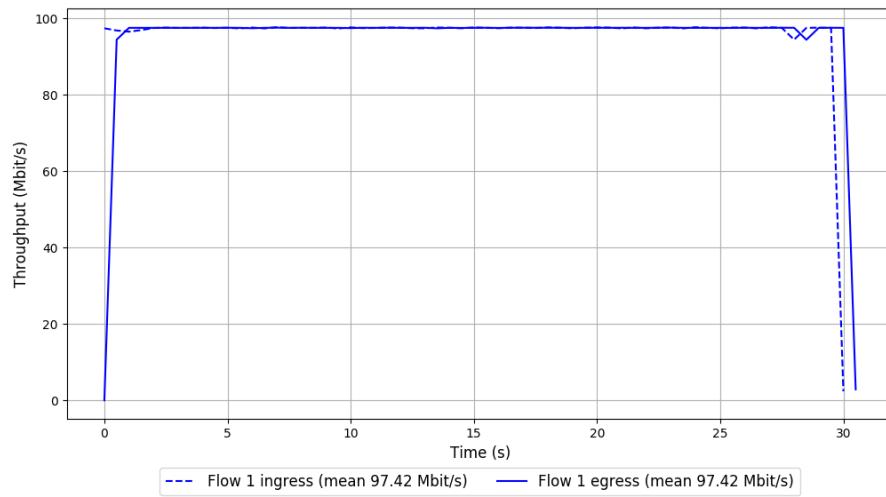


Run 3: Statistics of TCP Vegas

```
Start at: 2018-12-11 09:51:26
End at: 2018-12-11 09:51:56
Local clock offset: -2.403 ms
Remote clock offset: 0.257 ms

# Below is generated by plot.py at 2018-12-11 10:54:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 5.938 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 5.938 ms
Loss rate: 0.00%
```

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

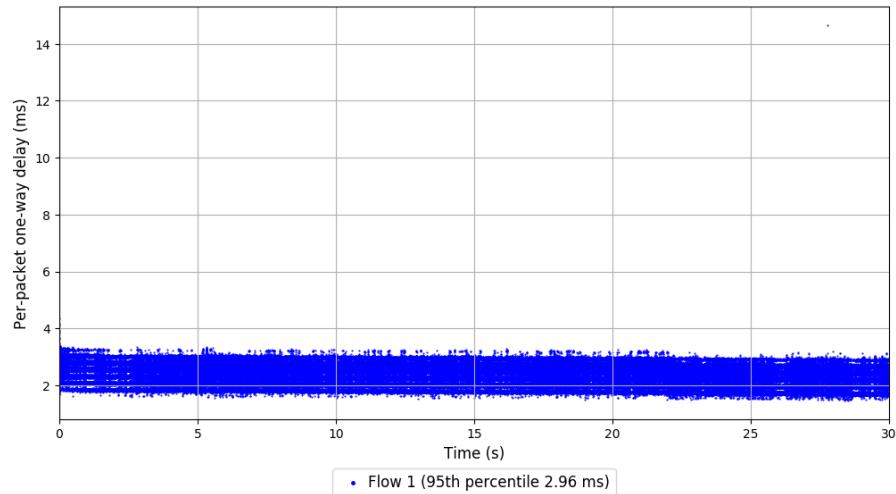
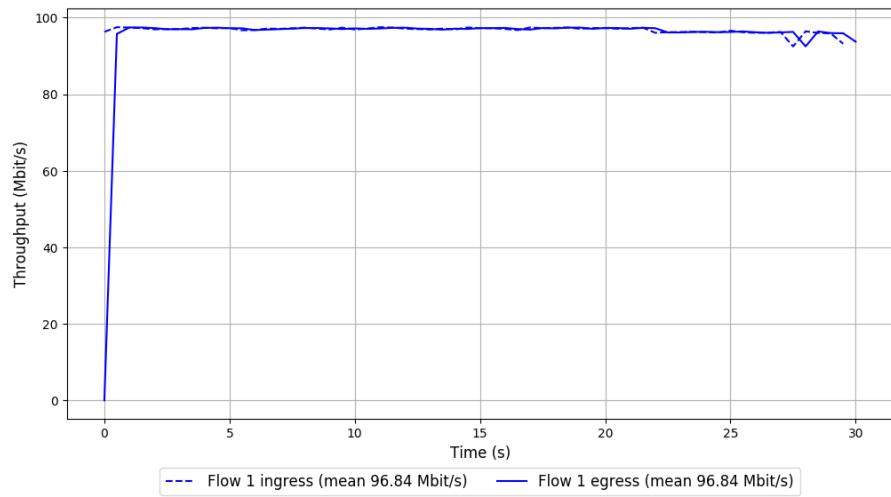


Run 4: Statistics of TCP Vegas

```
Start at: 2018-12-11 10:12:37
End at: 2018-12-11 10:13:07
Local clock offset: -5.072 ms
Remote clock offset: 0.483 ms

# Below is generated by plot.py at 2018-12-11 10:54:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.84 Mbit/s
95th percentile per-packet one-way delay: 2.961 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.84 Mbit/s
95th percentile per-packet one-way delay: 2.961 ms
Loss rate: 0.00%
```

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

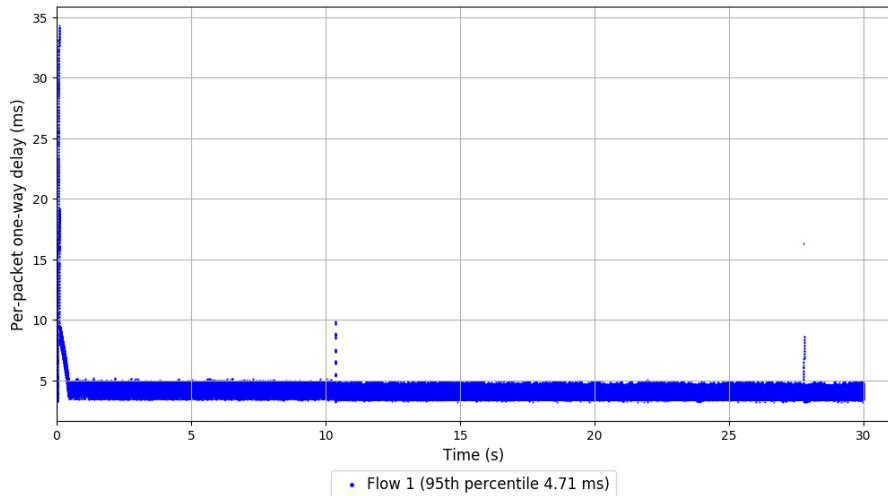
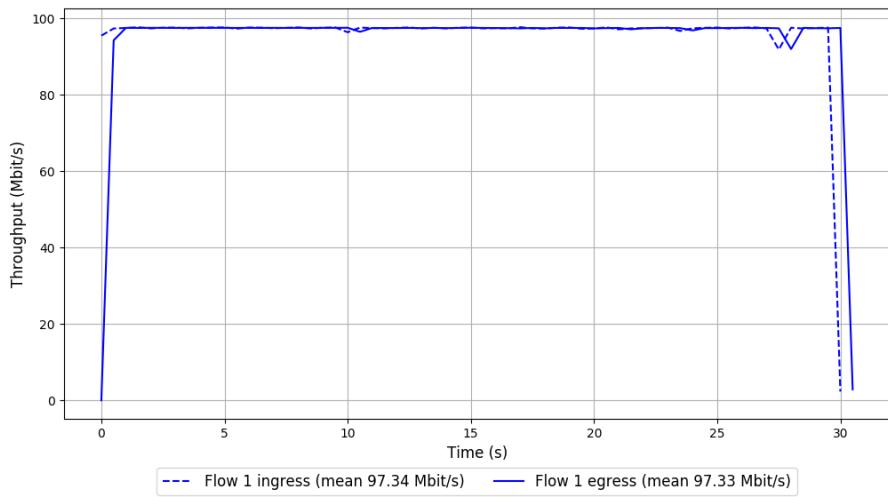


Run 5: Statistics of TCP Vegas

```
Start at: 2018-12-11 10:33:48
End at: 2018-12-11 10:34:18
Local clock offset: -7.849 ms
Remote clock offset: 0.506 ms

# Below is generated by plot.py at 2018-12-11 10:54:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 4.707 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 4.707 ms
Loss rate: 0.01%
```

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

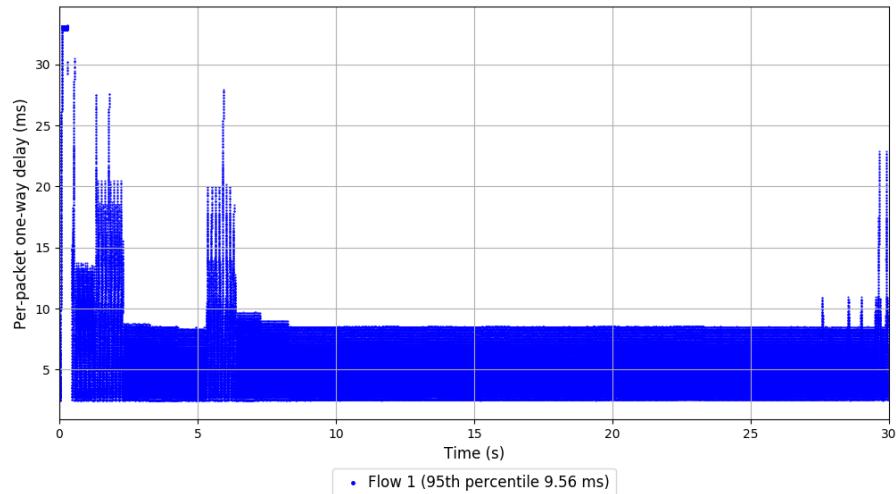
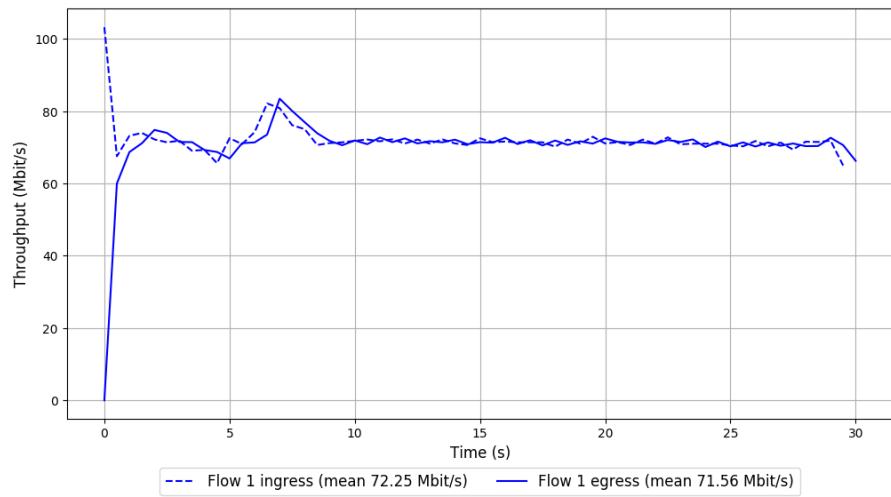


Run 1: Statistics of Verus

```
Start at: 2018-12-11 09:14:42
End at: 2018-12-11 09:15:12
Local clock offset: -2.513 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2018-12-11 10:54:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.56 Mbit/s
95th percentile per-packet one-way delay: 9.556 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 71.56 Mbit/s
95th percentile per-packet one-way delay: 9.556 ms
Loss rate: 0.95%
```

## Run 1: Report of Verus — Data Link

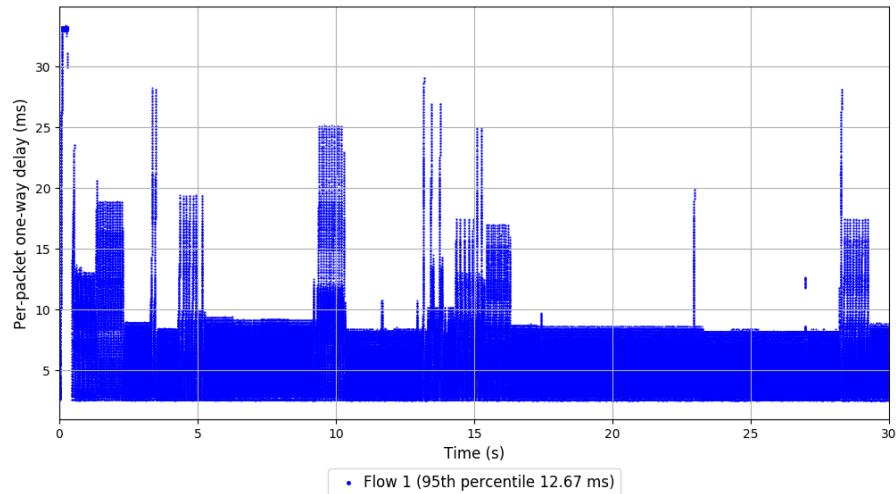
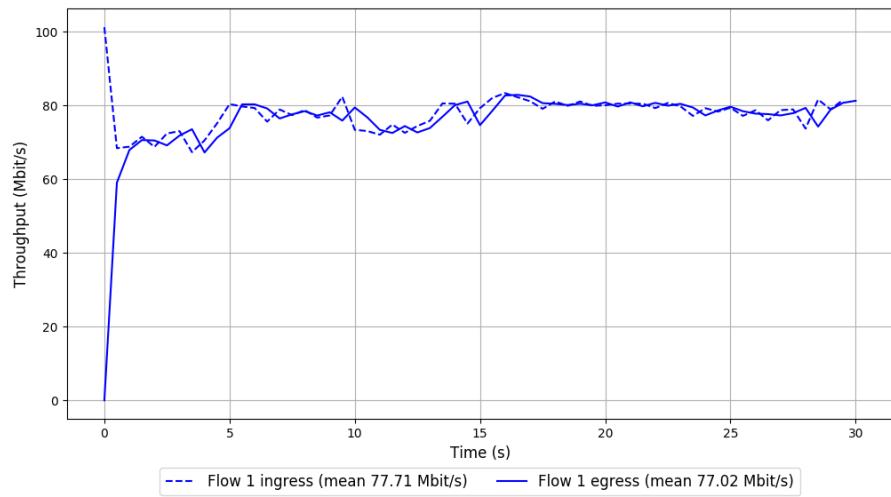


Run 2: Statistics of Verus

```
Start at: 2018-12-11 09:35:54
End at: 2018-12-11 09:36:24
Local clock offset: -1.799 ms
Remote clock offset: 0.17 ms

# Below is generated by plot.py at 2018-12-11 10:54:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.02 Mbit/s
95th percentile per-packet one-way delay: 12.672 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 77.02 Mbit/s
95th percentile per-packet one-way delay: 12.672 ms
Loss rate: 0.90%
```

## Run 2: Report of Verus — Data Link

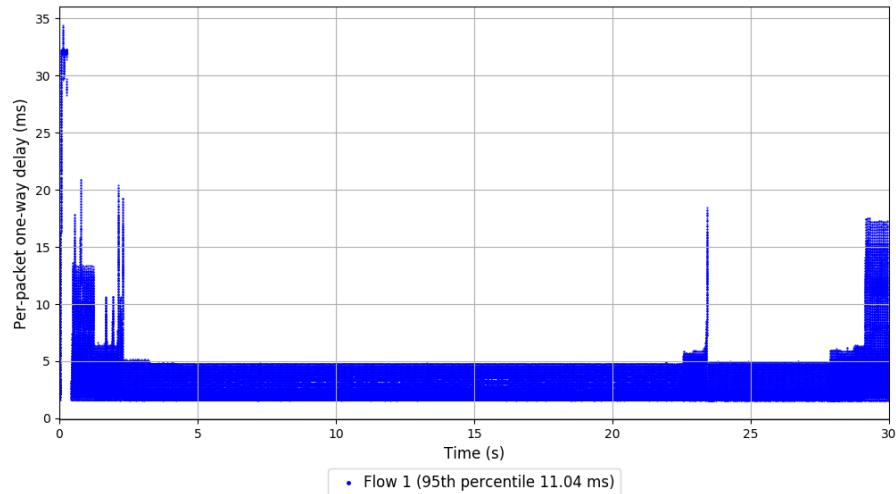
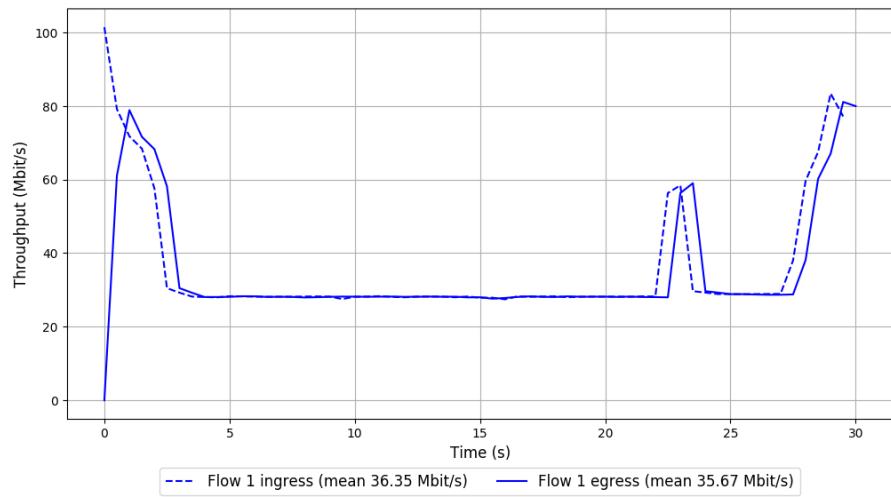


Run 3: Statistics of Verus

```
Start at: 2018-12-11 09:57:07
End at: 2018-12-11 09:57:37
Local clock offset: -3.436 ms
Remote clock offset: 0.303 ms

# Below is generated by plot.py at 2018-12-11 10:54:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.67 Mbit/s
95th percentile per-packet one-way delay: 11.039 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 35.67 Mbit/s
95th percentile per-packet one-way delay: 11.039 ms
Loss rate: 1.85%
```

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

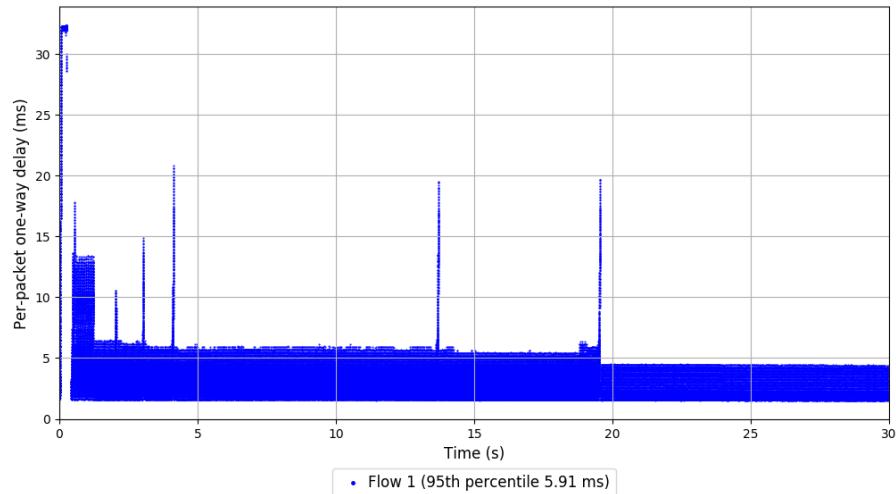
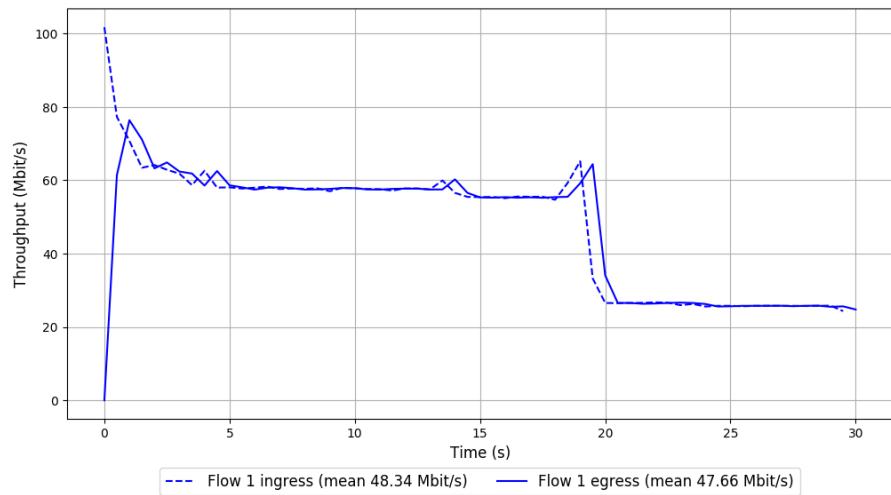


Run 4: Statistics of Verus

```
Start at: 2018-12-11 10:18:17
End at: 2018-12-11 10:18:47
Local clock offset: -6.171 ms
Remote clock offset: 0.498 ms

# Below is generated by plot.py at 2018-12-11 10:54:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 47.66 Mbit/s
95th percentile per-packet one-way delay: 5.906 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 47.66 Mbit/s
95th percentile per-packet one-way delay: 5.906 ms
Loss rate: 1.40%
```

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

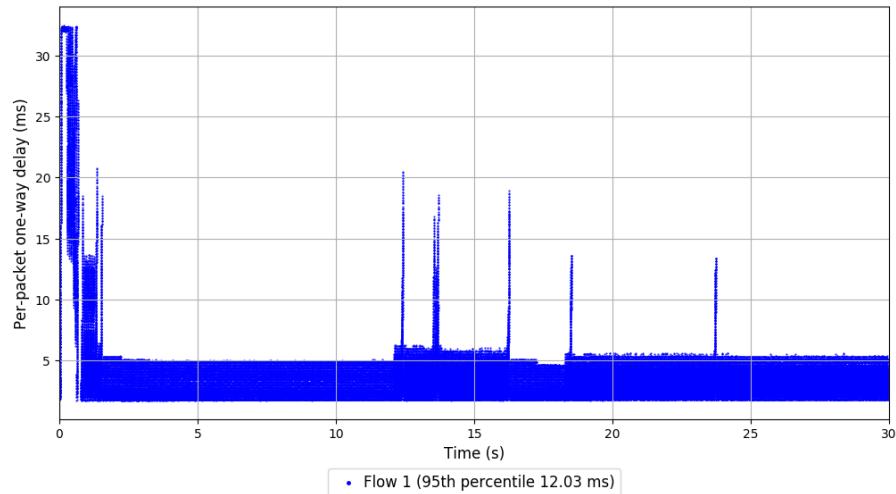
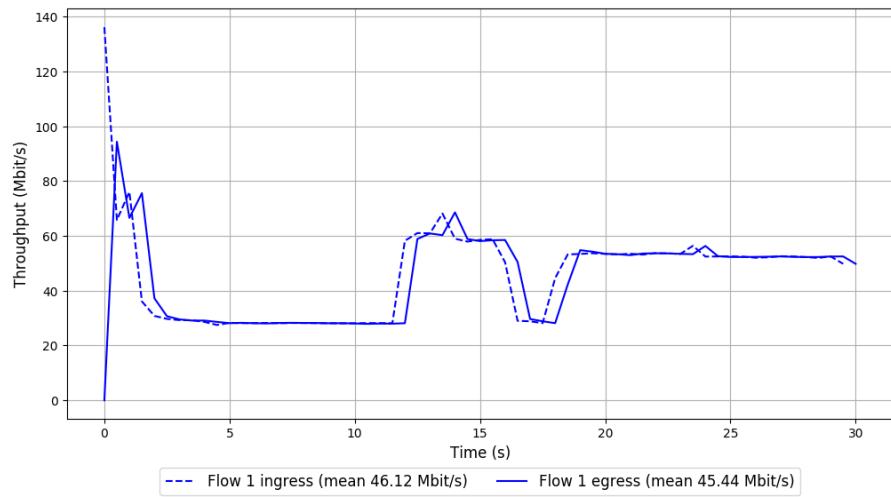


Run 5: Statistics of Verus

```
Start at: 2018-12-11 10:39:28
End at: 2018-12-11 10:39:58
Local clock offset: -8.055 ms
Remote clock offset: 0.625 ms

# Below is generated by plot.py at 2018-12-11 10:54:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 45.44 Mbit/s
95th percentile per-packet one-way delay: 12.031 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 45.44 Mbit/s
95th percentile per-packet one-way delay: 12.031 ms
Loss rate: 1.46%
```

## Run 5: Report of Verus — Data Link

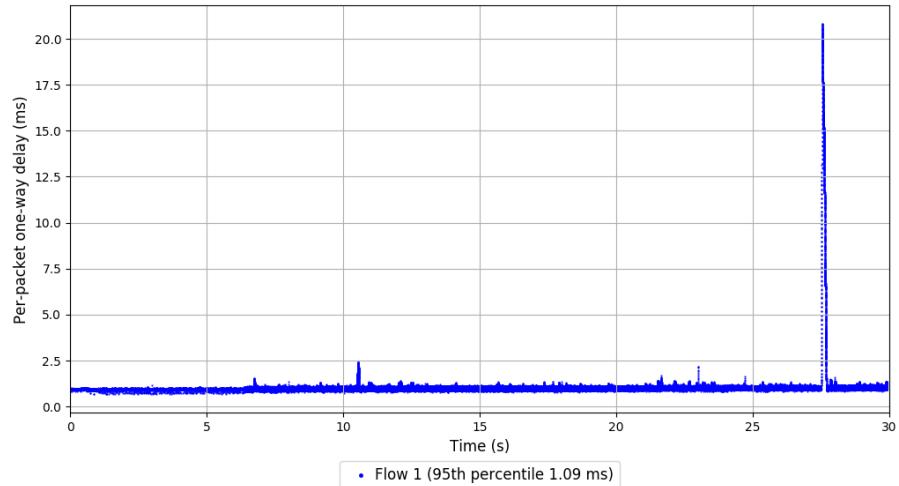
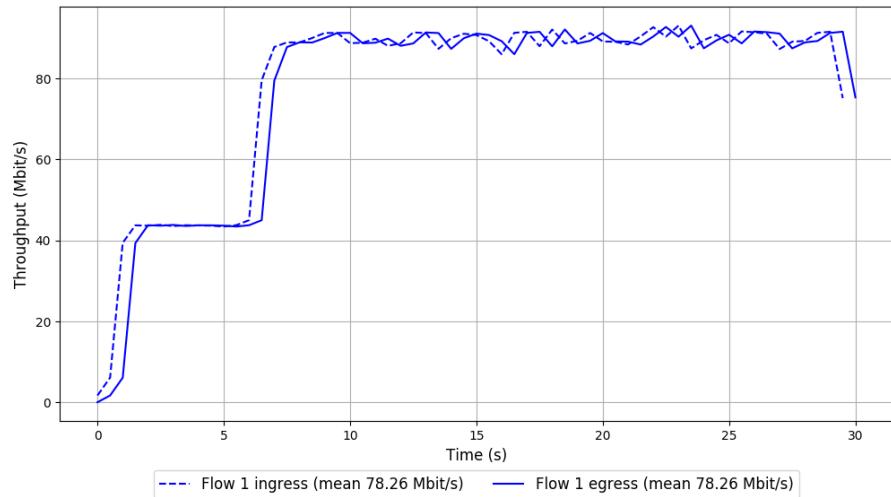


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-12-11 09:12:26
End at: 2018-12-11 09:12:56
Local clock offset: -2.849 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2018-12-11 10:54:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.26 Mbit/s
95th percentile per-packet one-way delay: 1.094 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 78.26 Mbit/s
95th percentile per-packet one-way delay: 1.094 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Vivace — Data Link

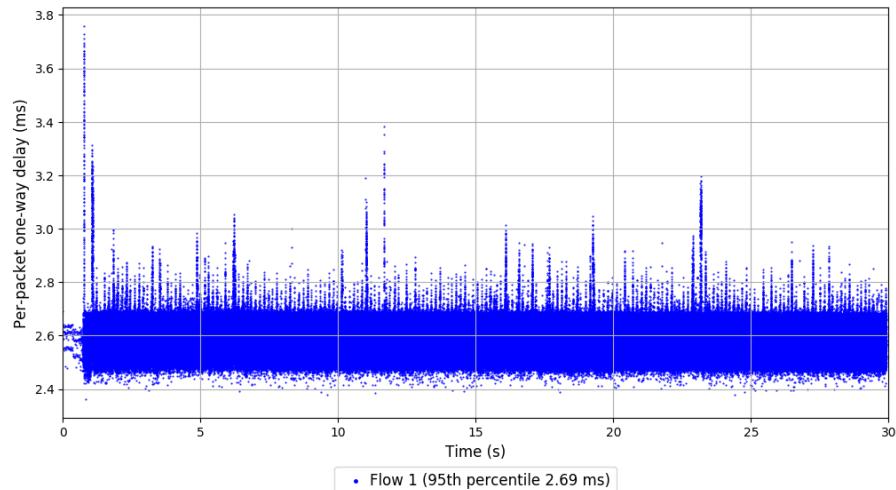
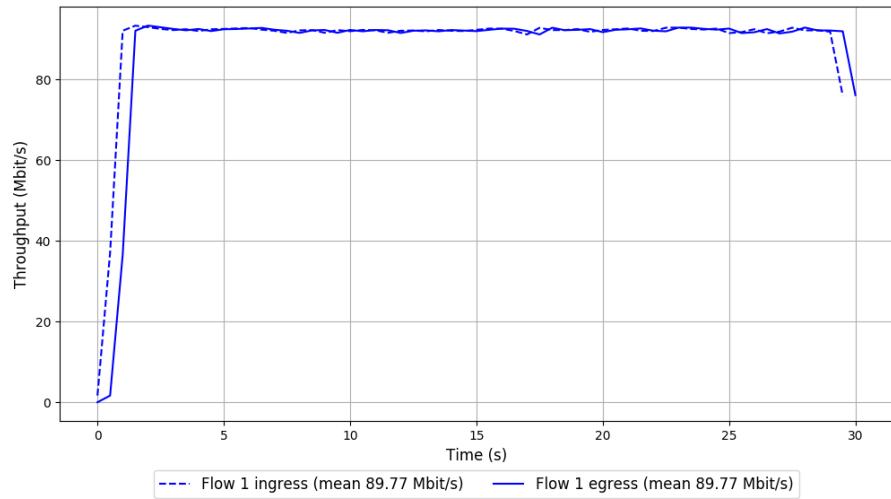


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-12-11 09:33:37
End at: 2018-12-11 09:34:07
Local clock offset: -1.711 ms
Remote clock offset: 0.108 ms

# Below is generated by plot.py at 2018-12-11 10:54:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.77 Mbit/s
95th percentile per-packet one-way delay: 2.686 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 89.77 Mbit/s
95th percentile per-packet one-way delay: 2.686 ms
Loss rate: 0.01%
```

Run 2: Report of PCC-Vivace — Data Link

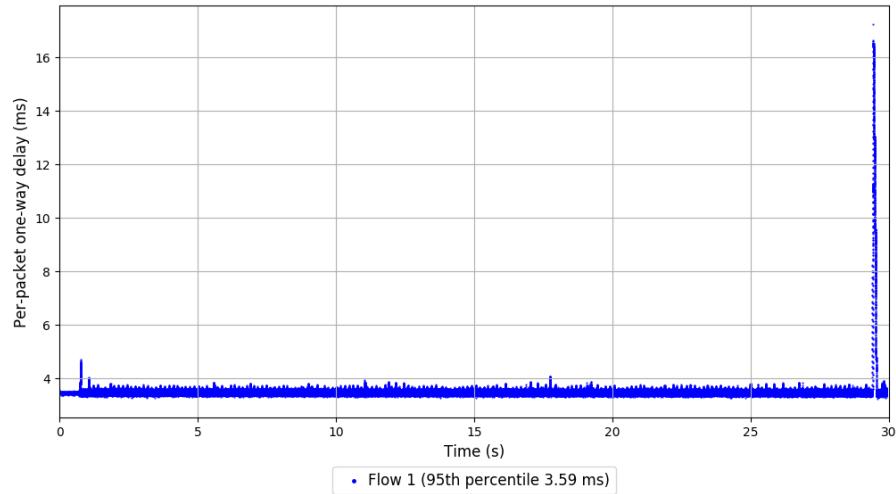
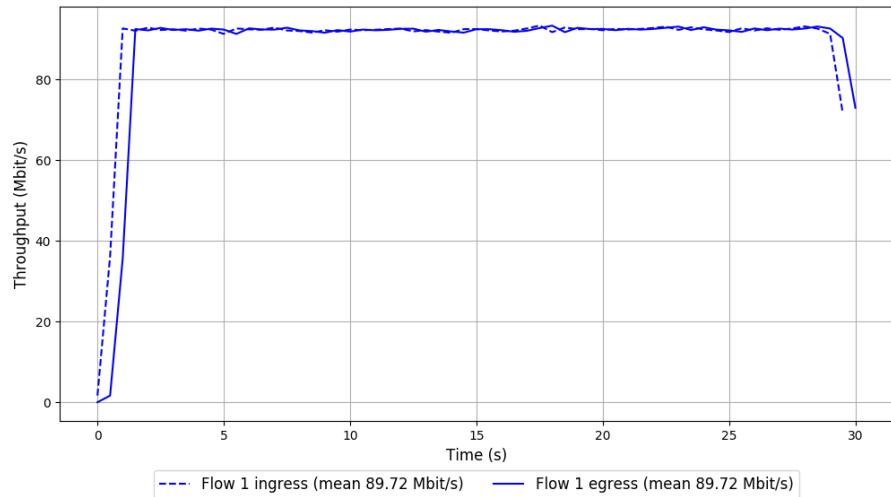


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-12-11 09:54:50
End at: 2018-12-11 09:55:20
Local clock offset: -3.437 ms
Remote clock offset: 0.289 ms

# Below is generated by plot.py at 2018-12-11 10:54:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.72 Mbit/s
95th percentile per-packet one-way delay: 3.593 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 89.72 Mbit/s
95th percentile per-packet one-way delay: 3.593 ms
Loss rate: 0.01%
```

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

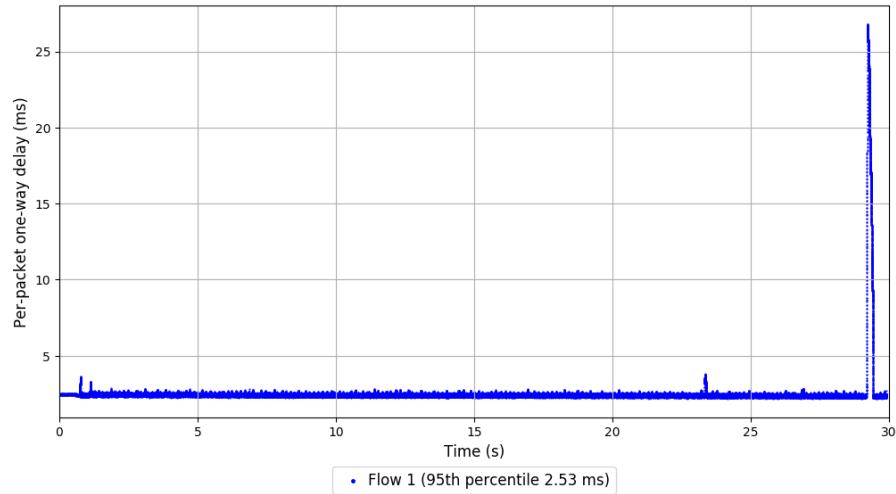
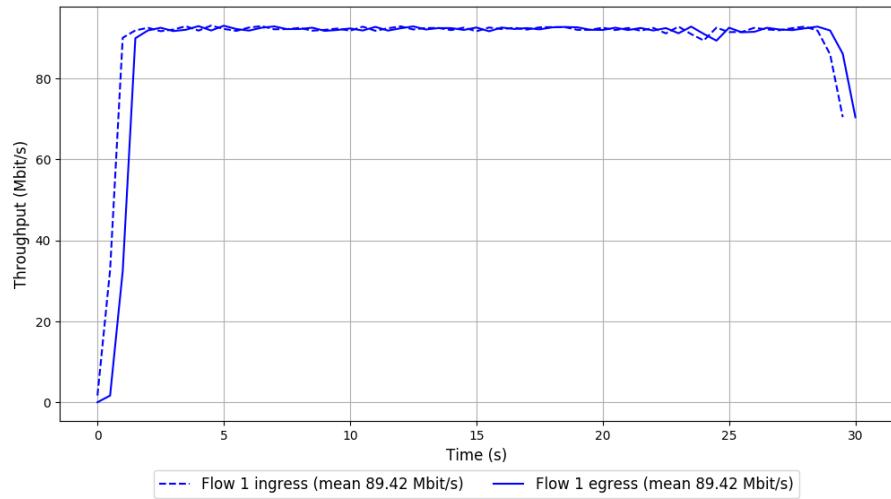


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-12-11 10:16:01
End at: 2018-12-11 10:16:31
Local clock offset: -4.885 ms
Remote clock offset: 0.395 ms

# Below is generated by plot.py at 2018-12-11 10:54:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.42 Mbit/s
95th percentile per-packet one-way delay: 2.532 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 89.42 Mbit/s
95th percentile per-packet one-way delay: 2.532 ms
Loss rate: 0.01%
```

Run 4: Report of PCC-Vivace — Data Link

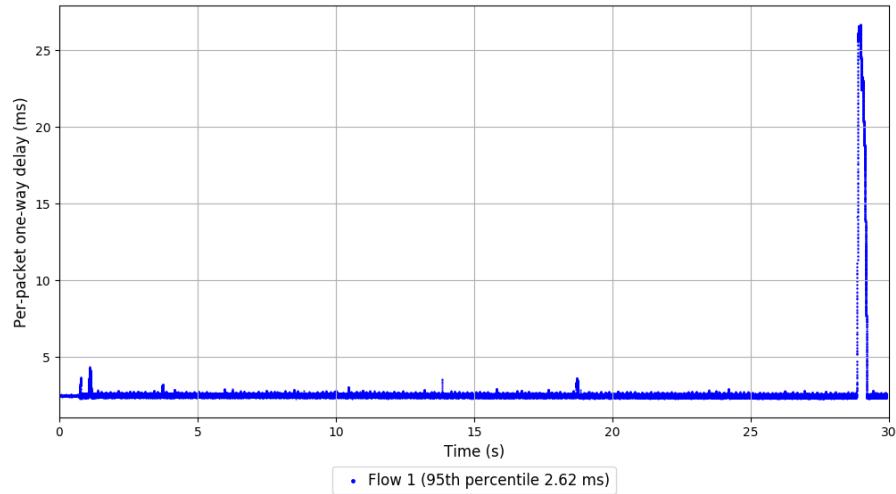
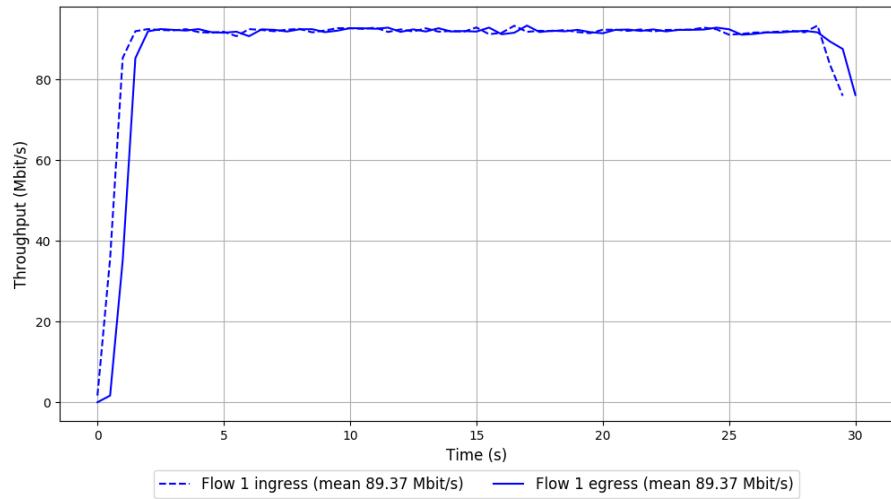


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-12-11 10:37:12
End at: 2018-12-11 10:37:42
Local clock offset: -7.277 ms
Remote clock offset: 0.514 ms

# Below is generated by plot.py at 2018-12-11 10:54:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.37 Mbit/s
95th percentile per-packet one-way delay: 2.622 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 89.37 Mbit/s
95th percentile per-packet one-way delay: 2.622 ms
Loss rate: 0.01%
```

Run 5: Report of PCC-Vivace — Data Link

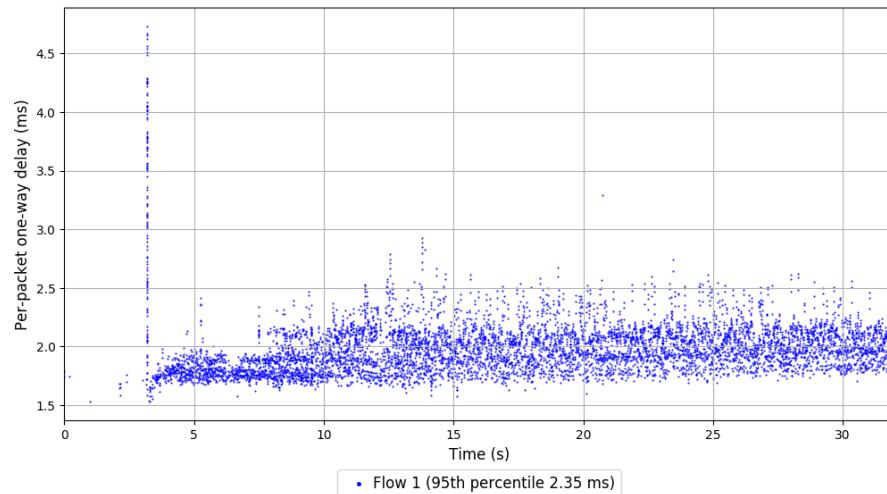
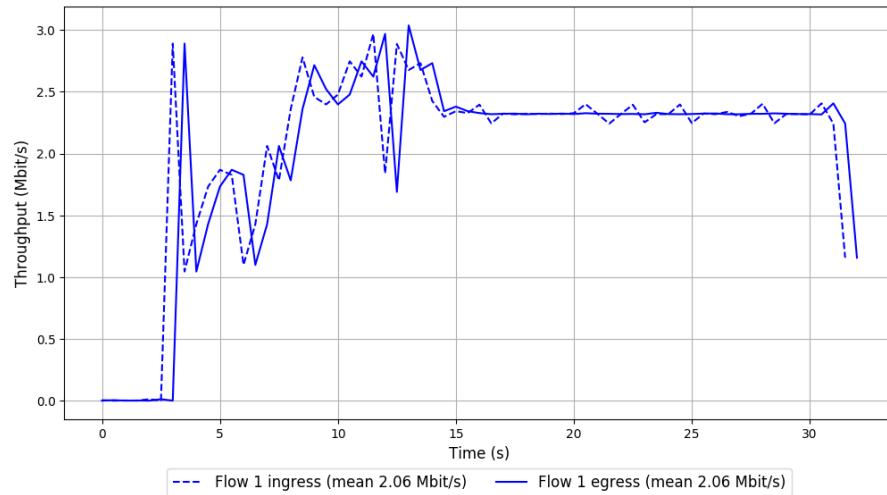


```
Run 1: Statistics of WebRTC media

Start at: 2018-12-11 09:07:58
End at: 2018-12-11 09:08:28
Local clock offset: -4.64 ms
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2018-12-11 10:54:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 2.353 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 2.353 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

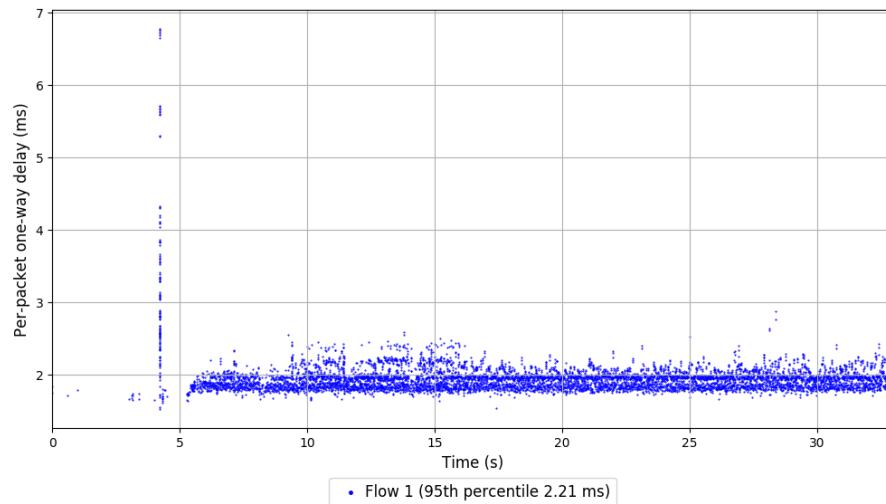
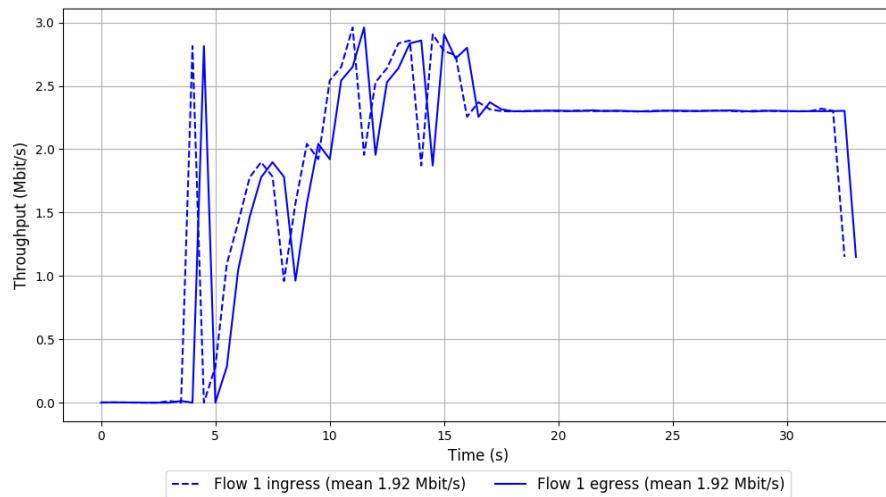


Run 2: Statistics of WebRTC media

```
Start at: 2018-12-11 09:29:09
End at: 2018-12-11 09:29:39
Local clock offset: -2.638 ms
Remote clock offset: 0.051 ms

# Below is generated by plot.py at 2018-12-11 10:54:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 2.208 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 2.208 ms
Loss rate: 0.02%
```

Run 2: Report of WebRTC media — Data Link

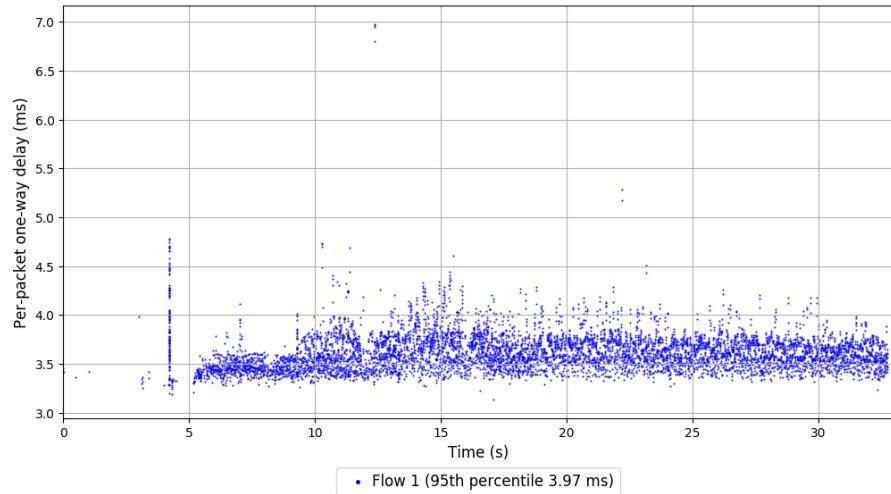
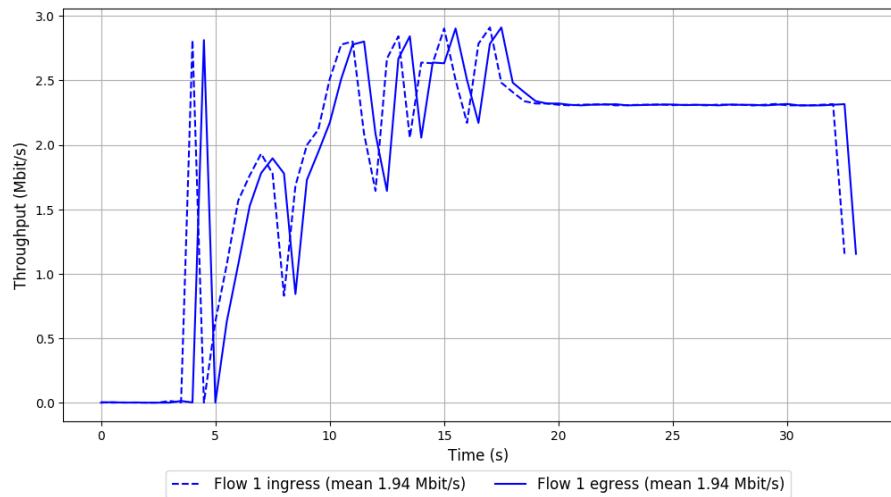


Run 3: Statistics of WebRTC media

```
Start at: 2018-12-11 09:50:22
End at: 2018-12-11 09:50:52
Local clock offset: -3.216 ms
Remote clock offset: 0.205 ms

# Below is generated by plot.py at 2018-12-11 10:54:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 3.966 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 3.966 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

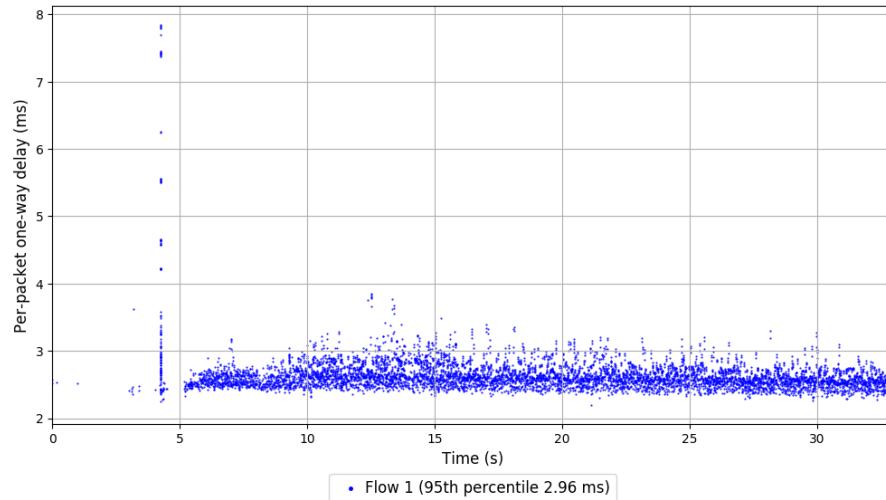
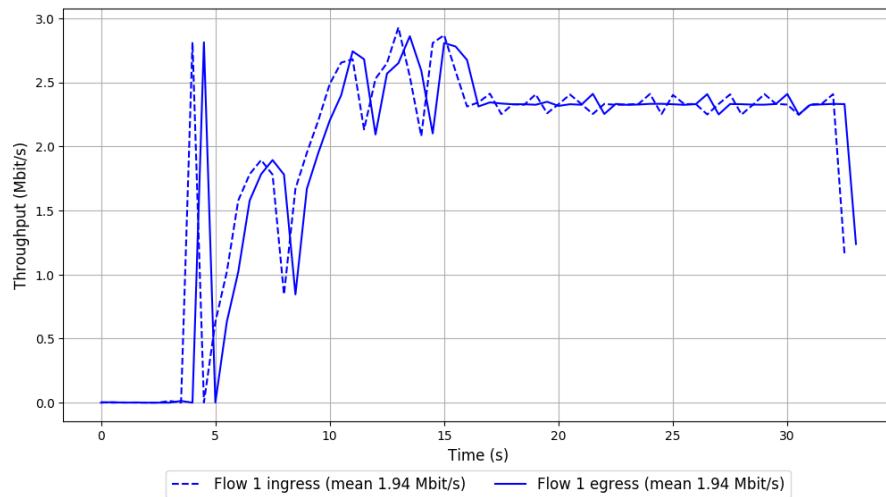


Run 4: Statistics of WebRTC media

```
Start at: 2018-12-11 10:11:33
End at: 2018-12-11 10:12:03
Local clock offset: -3.969 ms
Remote clock offset: 0.328 ms

# Below is generated by plot.py at 2018-12-11 10:54:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 2.955 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 2.955 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-12-11 10:32:44
End at: 2018-12-11 10:33:14
Local clock offset: -7.758 ms
Remote clock offset: 0.591 ms

# Below is generated by plot.py at 2018-12-11 10:54:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 2.353 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 2.353 ms
Loss rate: 0.00%
```

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

