

## Pantheon Report

Generated at 2019-01-02 21:23:27 (UTC).  
Data path: AWS Brazil 2 on `ens5` (*local*) → Colombia 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.

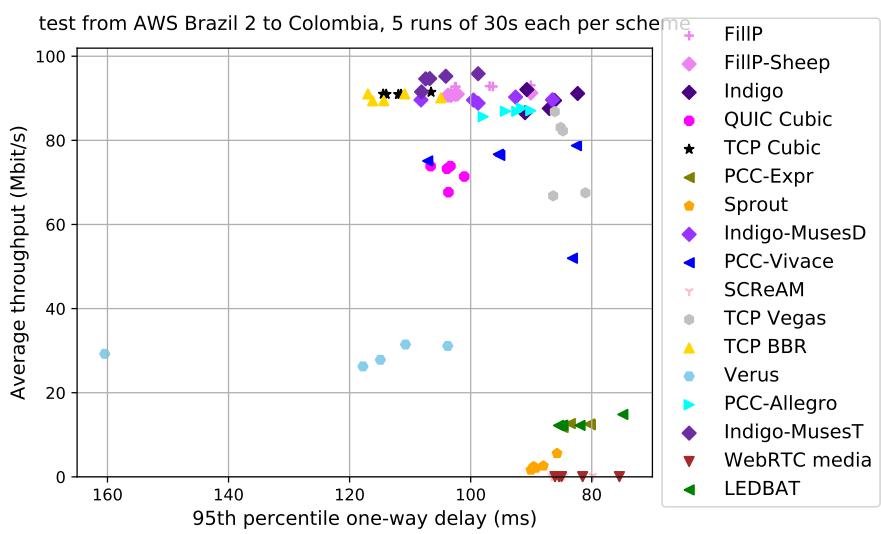
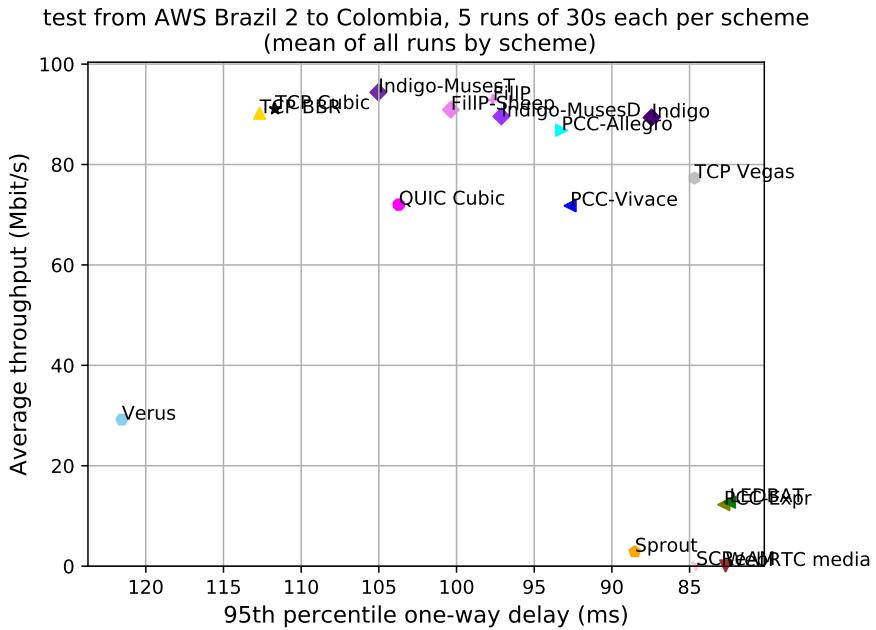
System info:

```
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



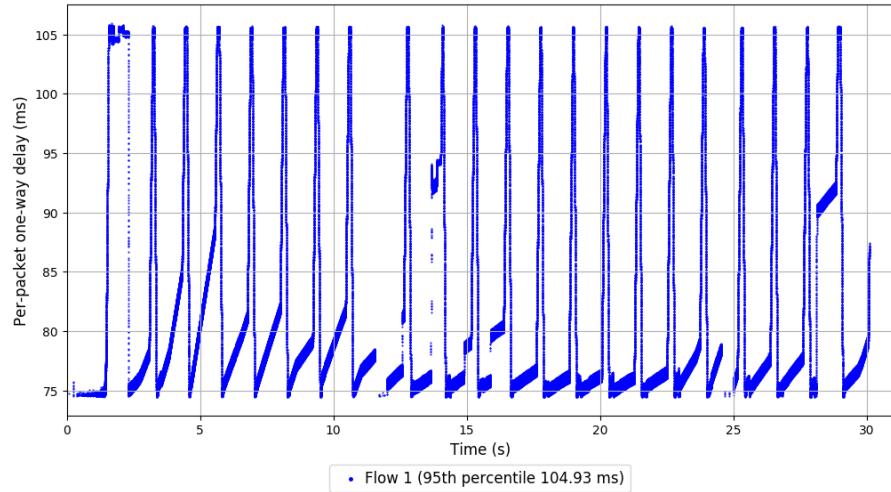
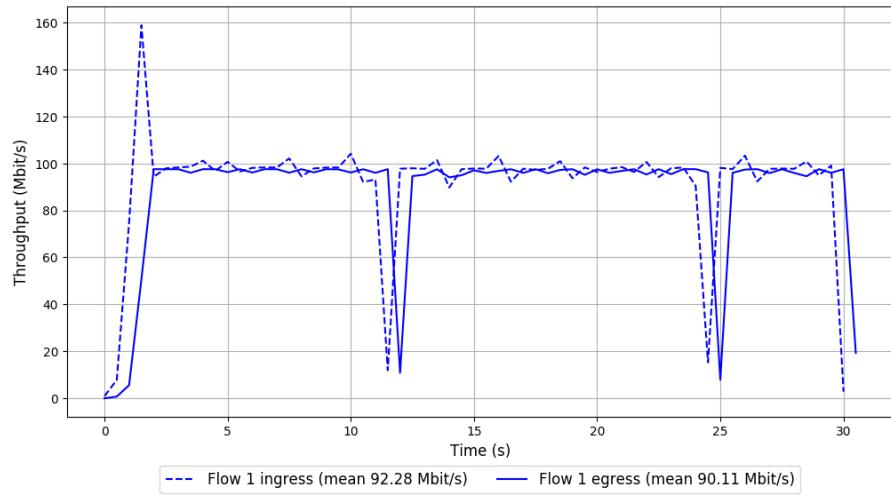
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	90.21	112.67	2.99
Copa	0	N/A	N/A	N/A
TCP Cubic	5	91.06	111.68	0.45
FillP	5	92.85	97.67	0.98
FillP-Sheep	5	90.92	100.37	1.00
Indigo	5	89.37	87.44	0.90
Indigo-MusesD	5	89.59	97.12	2.46
Indigo-MusesT	5	94.38	105.04	1.20
LEDBAT	5	12.75	82.43	0.00
PCC-Allegro	5	86.82	93.24	1.46
PCC-Expr	5	12.26	82.79	41.37
QUIC Cubic	5	72.01	103.72	0.37
SCReAM	5	0.21	84.58	0.22
Sprout	5	2.87	88.53	0.46
TaoVA-100x	0	N/A	N/A	N/A
TCP Vegas	5	77.29	84.68	0.47
Verus	5	29.18	121.54	21.15
PCC-Vivace	5	71.79	92.69	0.07
WebRTC media	5	0.05	82.68	0.00

Run 1: Statistics of TCP BBR

```
Start at: 2019-01-02 19:32:47
End at: 2019-01-02 19:33:17
Local clock offset: -4.362 ms
Remote clock offset: -11.946 ms

# Below is generated by plot.py at 2019-01-02 21:16:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.11 Mbit/s
95th percentile per-packet one-way delay: 104.932 ms
Loss rate: 2.31%
-- Flow 1:
Average throughput: 90.11 Mbit/s
95th percentile per-packet one-way delay: 104.932 ms
Loss rate: 2.31%
```

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

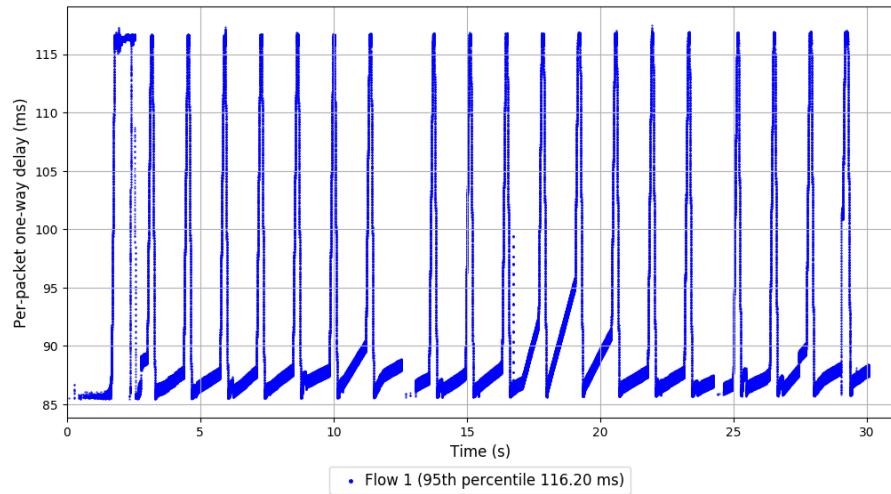
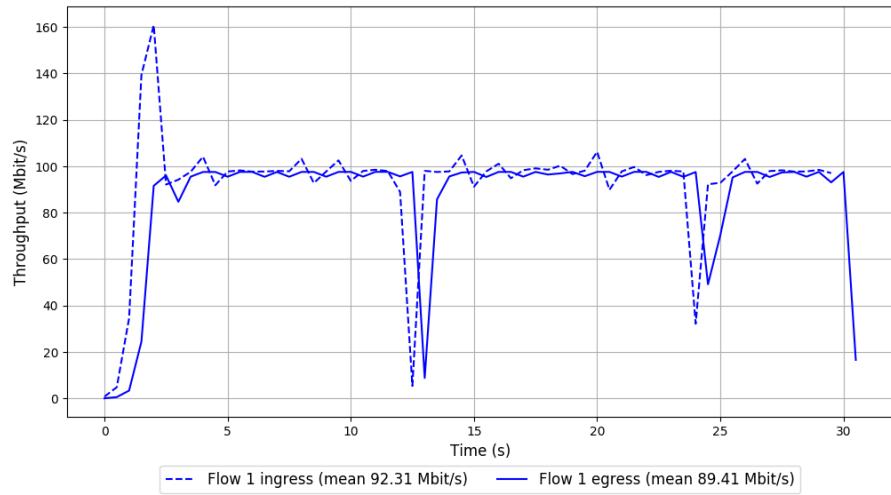


Run 2: Statistics of TCP BBR

```
Start at: 2019-01-02 19:55:29
End at: 2019-01-02 19:55:59
Local clock offset: -5.901 ms
Remote clock offset: -17.104 ms

# Below is generated by plot.py at 2019-01-02 21:16:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.41 Mbit/s
95th percentile per-packet one-way delay: 116.201 ms
Loss rate: 3.13%
-- Flow 1:
Average throughput: 89.41 Mbit/s
95th percentile per-packet one-way delay: 116.201 ms
Loss rate: 3.13%
```

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

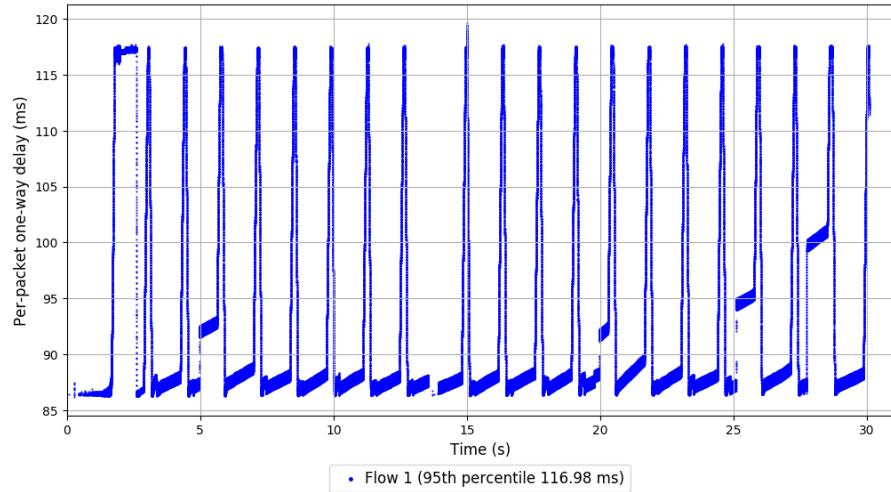
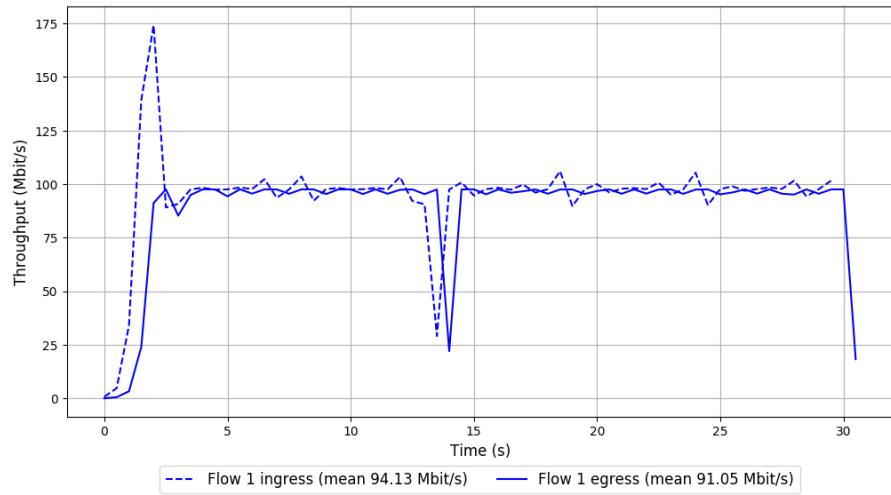


Run 3: Statistics of TCP BBR

```
Start at: 2019-01-02 20:17:51
End at: 2019-01-02 20:18:21
Local clock offset: -1.936 ms
Remote clock offset: -22.208 ms

# Below is generated by plot.py at 2019-01-02 21:16:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.05 Mbit/s
95th percentile per-packet one-way delay: 116.977 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 91.05 Mbit/s
95th percentile per-packet one-way delay: 116.977 ms
Loss rate: 3.19%
```

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

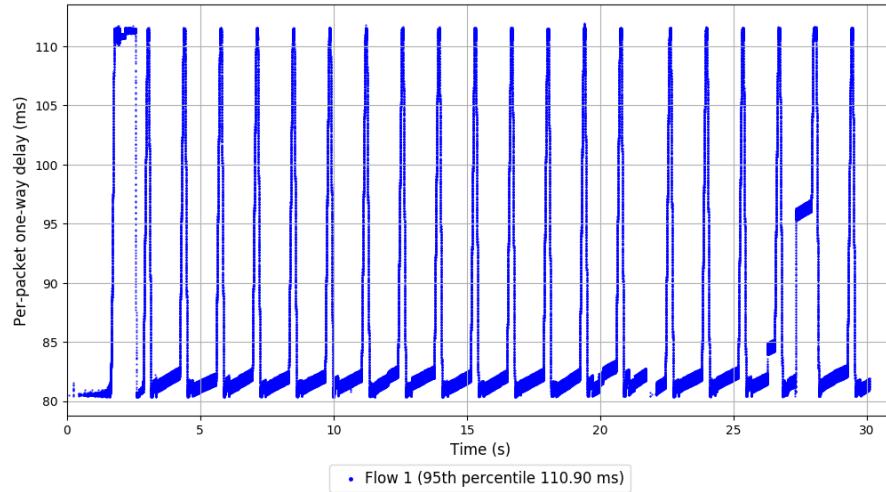
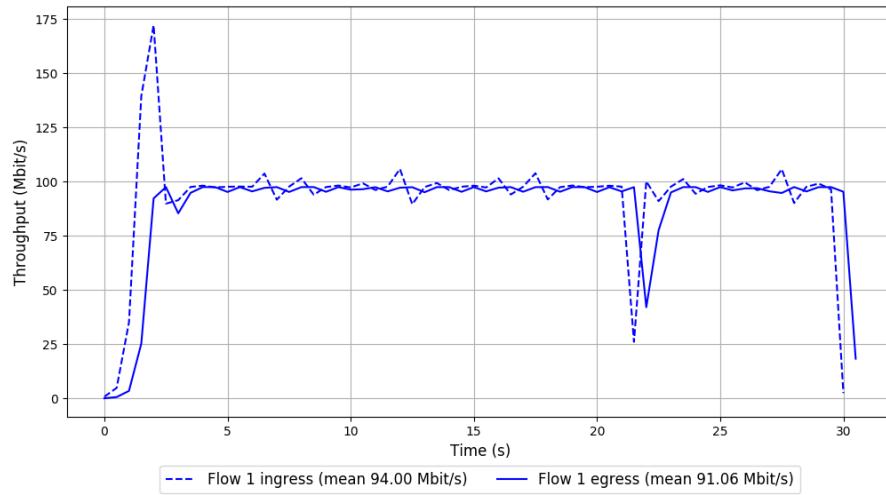


Run 4: Statistics of TCP BBR

```
Start at: 2019-01-02 20:40:03
End at: 2019-01-02 20:40:33
Local clock offset: -5.485 ms
Remote clock offset: -30.789 ms

# Below is generated by plot.py at 2019-01-02 21:16:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.06 Mbit/s
95th percentile per-packet one-way delay: 110.899 ms
Loss rate: 3.12%
-- Flow 1:
Average throughput: 91.06 Mbit/s
95th percentile per-packet one-way delay: 110.899 ms
Loss rate: 3.12%
```

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

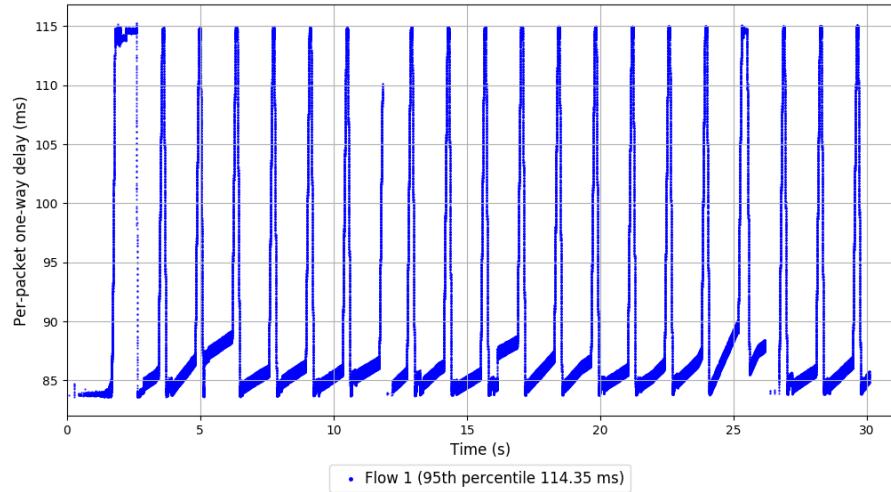
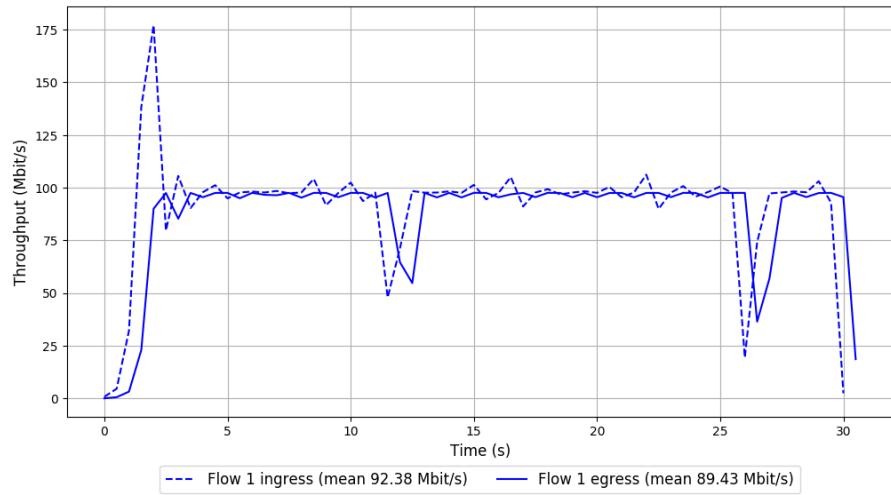


Run 5: Statistics of TCP BBR

```
Start at: 2019-01-02 21:02:16
End at: 2019-01-02 21:02:46
Local clock offset: -3.782 ms
Remote clock offset: -35.837 ms

# Below is generated by plot.py at 2019-01-02 21:16:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.43 Mbit/s
95th percentile per-packet one-way delay: 114.351 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 89.43 Mbit/s
95th percentile per-packet one-way delay: 114.351 ms
Loss rate: 3.19%
```

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



Run 1: Statistics of Copa

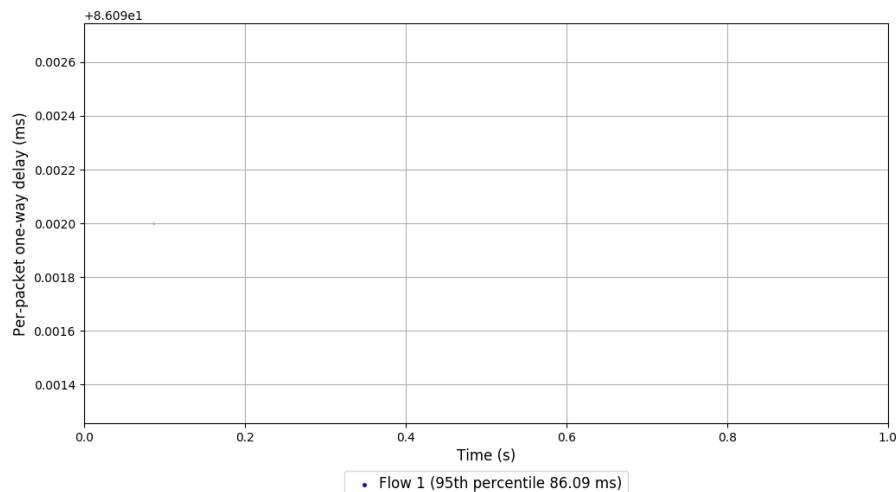
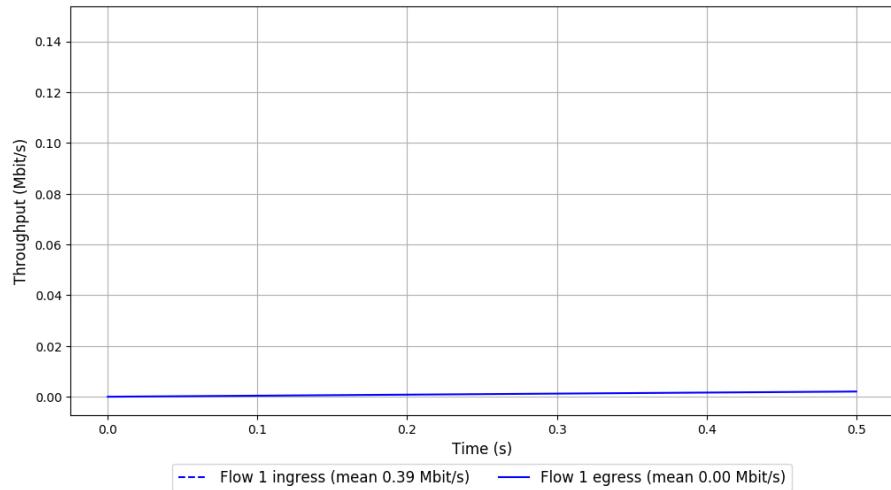
Start at: 2019-01-02 19:44:35

End at: 2019-01-02 19:45:05

Local clock offset: -5.953 ms

Remote clock offset: -14.97 ms

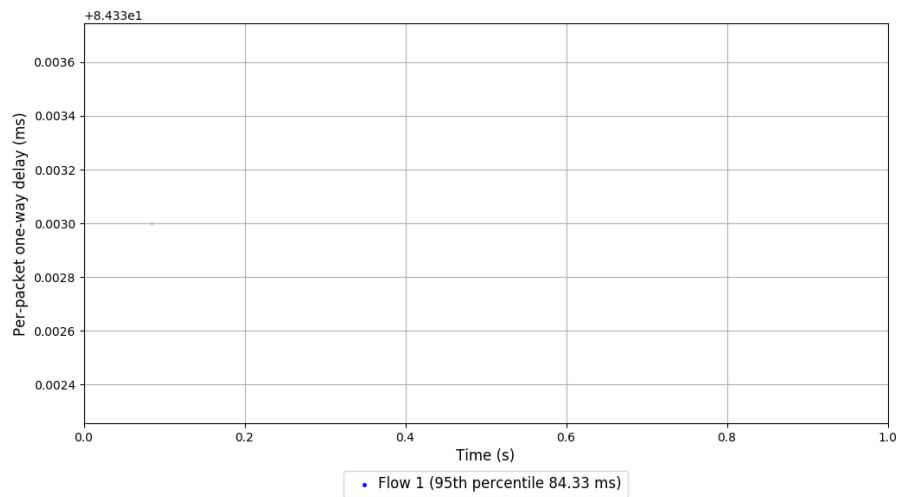
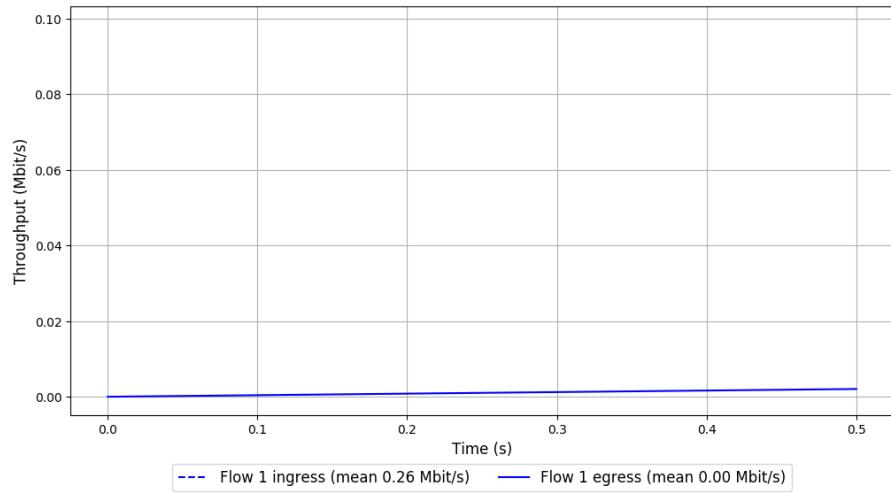
## Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-01-02 20:07:20  
End at: 2019-01-02 20:07:50  
Local clock offset: -2.224 ms  
Remote clock offset: -19.738 ms

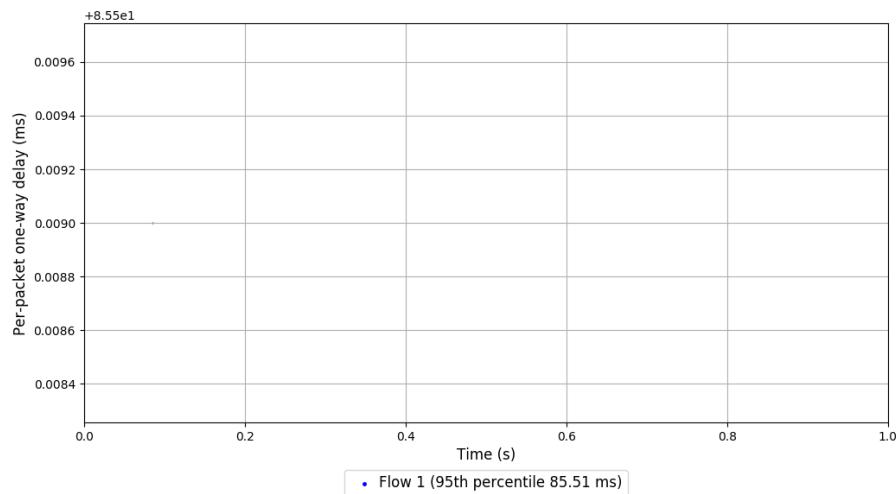
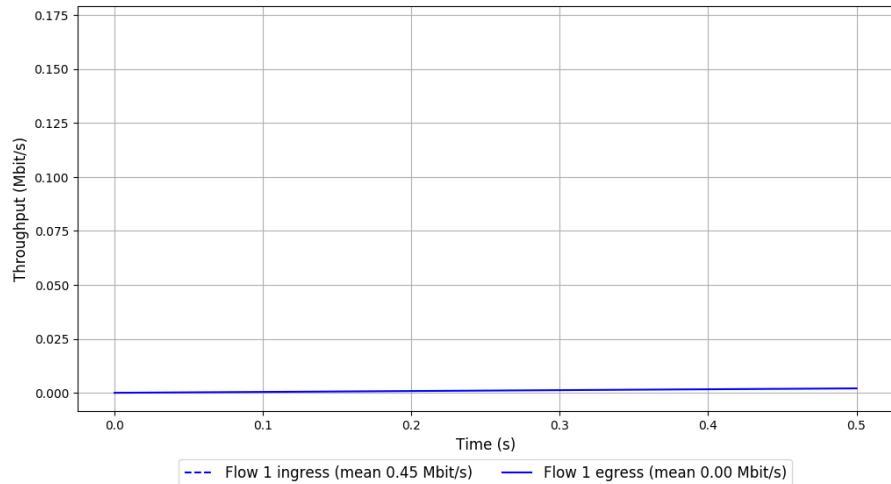
## Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-01-02 20:29:33  
End at: 2019-01-02 20:30:03  
Local clock offset: -3.175 ms  
Remote clock offset: -24.804 ms

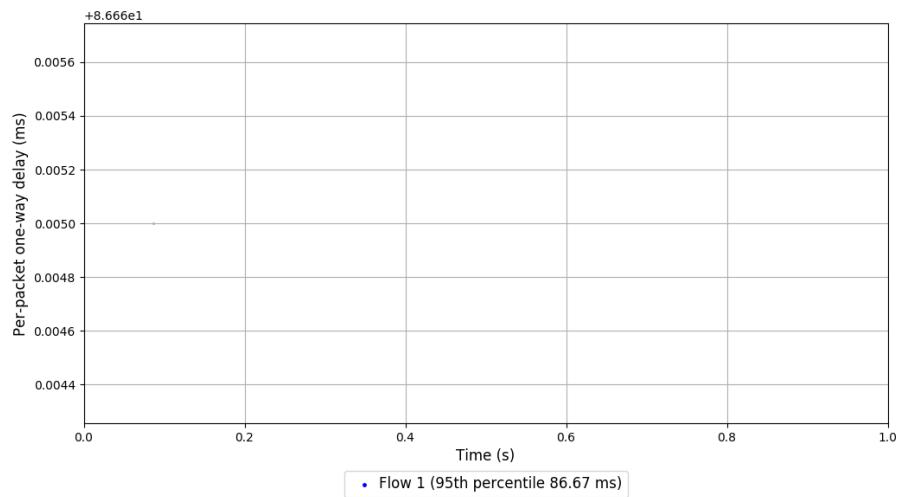
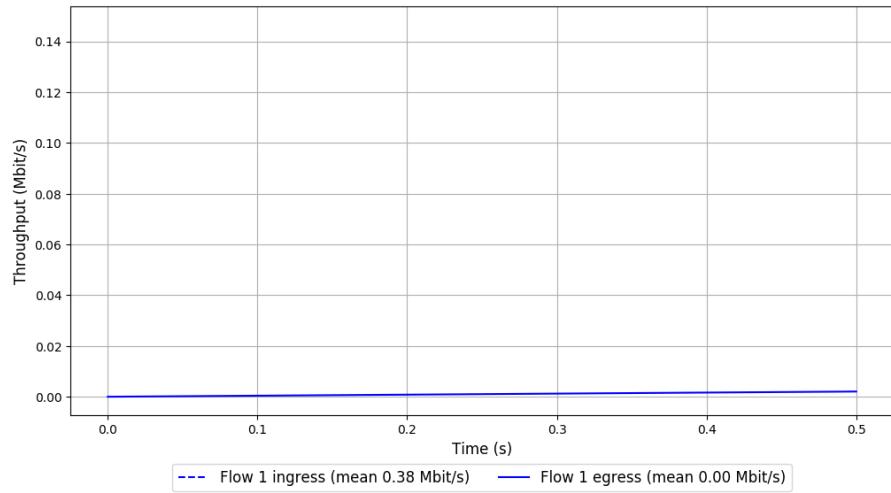
### Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-01-02 20:51:45  
End at: 2019-01-02 20:52:15  
Local clock offset: -7.171 ms  
Remote clock offset: -29.78 ms

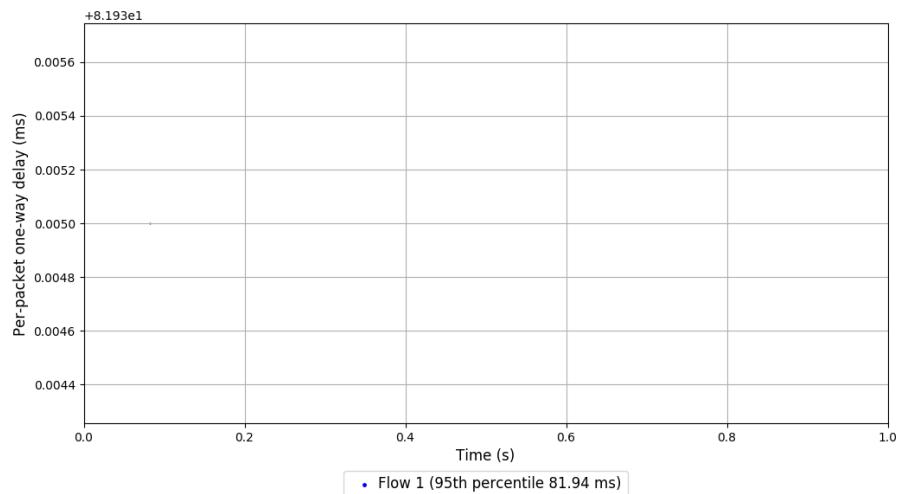
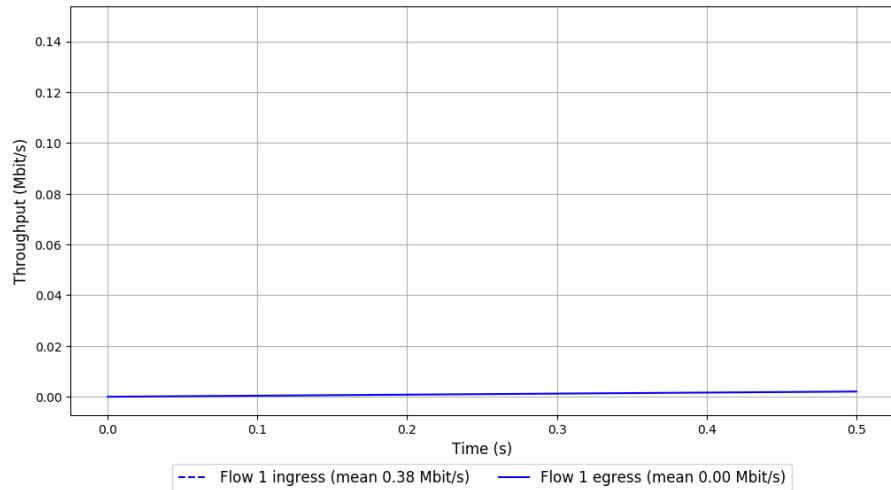
## Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-01-02 21:13:57  
End at: 2019-01-02 21:14:27  
Local clock offset: -0.763 ms  
Remote clock offset: -38.489 ms

## Run 5: Report of Copa — Data Link

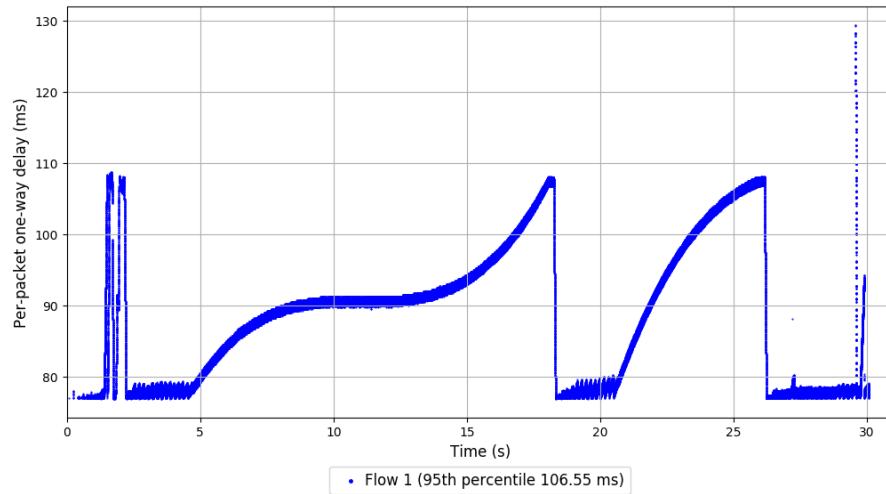
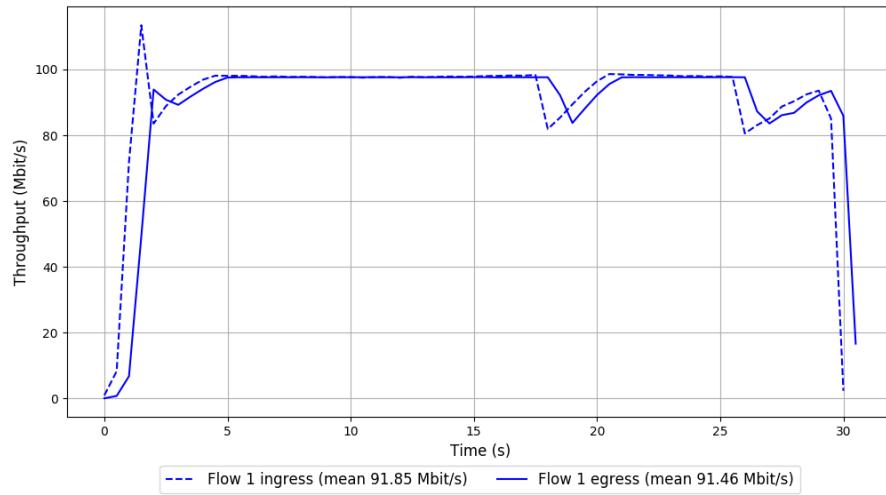


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2019-01-02 19:38:37
End at: 2019-01-02 19:39:07
Local clock offset: -4.608 ms
Remote clock offset: -12.275 ms

# Below is generated by plot.py at 2019-01-02 21:16:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.46 Mbit/s
95th percentile per-packet one-way delay: 106.550 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 91.46 Mbit/s
95th percentile per-packet one-way delay: 106.550 ms
Loss rate: 0.43%
```

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

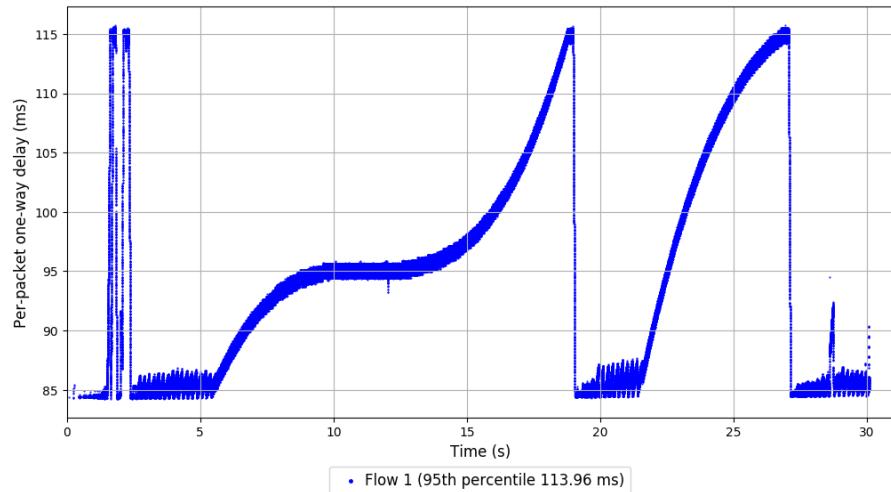
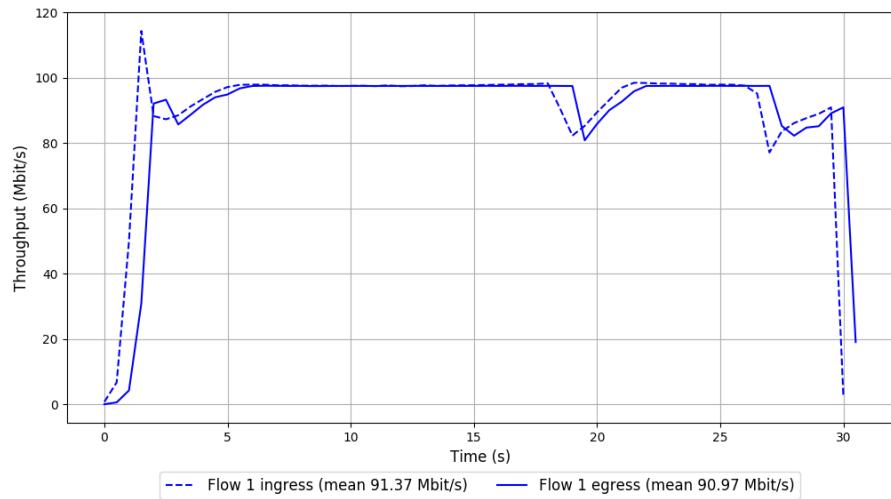


Run 2: Statistics of TCP Cubic

```
Start at: 2019-01-02 20:01:28
End at: 2019-01-02 20:01:58
Local clock offset: -3.267 ms
Remote clock offset: -18.533 ms

# Below is generated by plot.py at 2019-01-02 21:16:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.97 Mbit/s
95th percentile per-packet one-way delay: 113.958 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 90.97 Mbit/s
95th percentile per-packet one-way delay: 113.958 ms
Loss rate: 0.44%
```

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

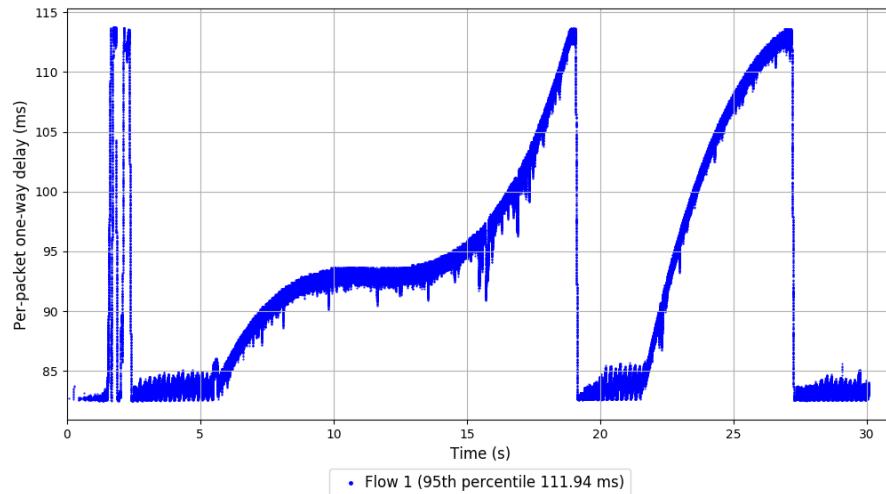
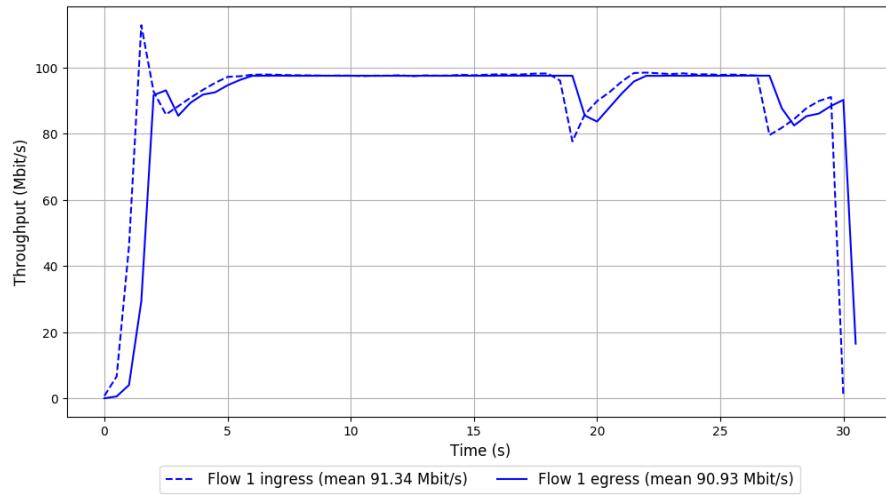


Run 3: Statistics of TCP Cubic

```
Start at: 2019-01-02 20:23:42
End at: 2019-01-02 20:24:12
Local clock offset: -1.526 ms
Remote clock offset: -27.345 ms

# Below is generated by plot.py at 2019-01-02 21:16:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.93 Mbit/s
95th percentile per-packet one-way delay: 111.938 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 90.93 Mbit/s
95th percentile per-packet one-way delay: 111.938 ms
Loss rate: 0.45%
```

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

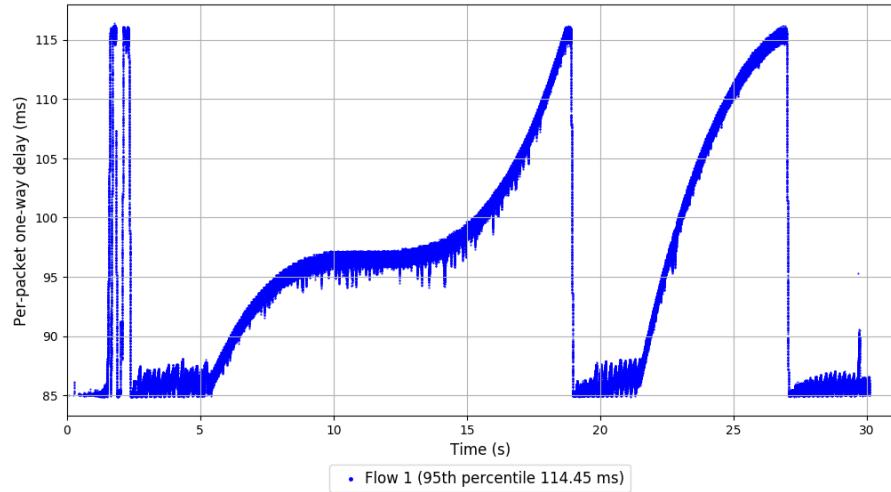
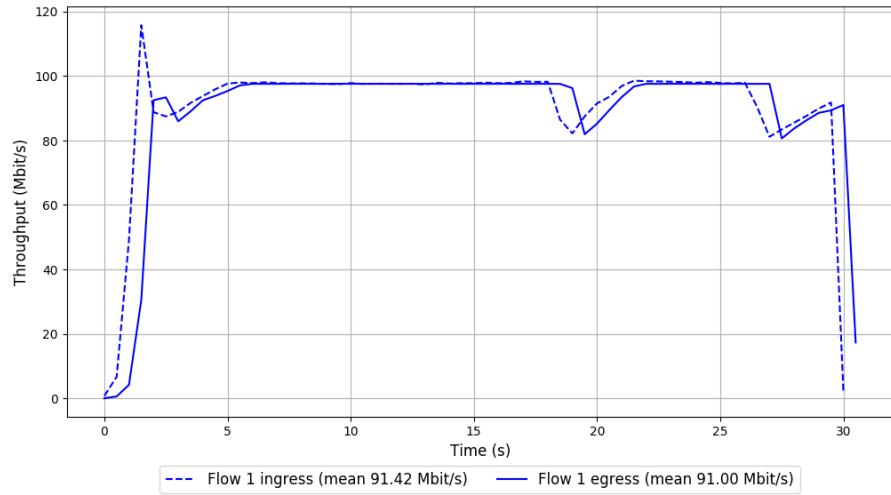


Run 4: Statistics of TCP Cubic

```
Start at: 2019-01-02 20:45:54
End at: 2019-01-02 20:46:24
Local clock offset: -6.808 ms
Remote clock offset: -28.553 ms

# Below is generated by plot.py at 2019-01-02 21:17:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.00 Mbit/s
95th percentile per-packet one-way delay: 114.447 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 91.00 Mbit/s
95th percentile per-packet one-way delay: 114.447 ms
Loss rate: 0.45%
```

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

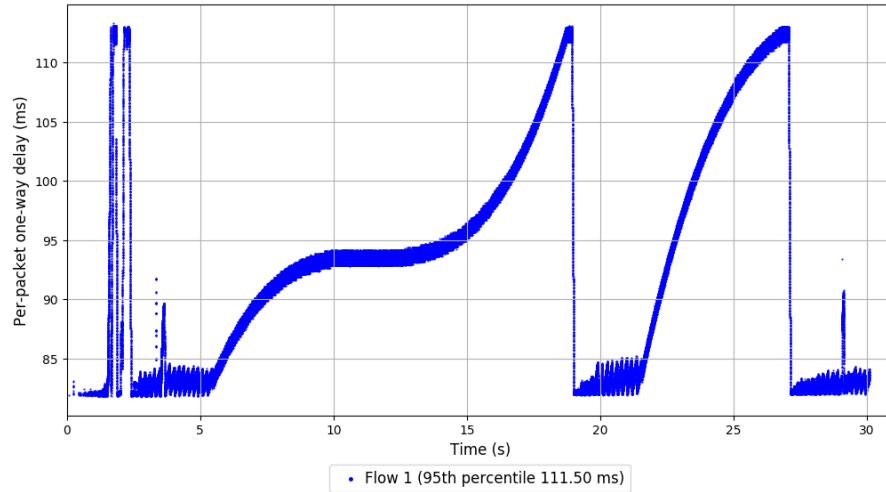
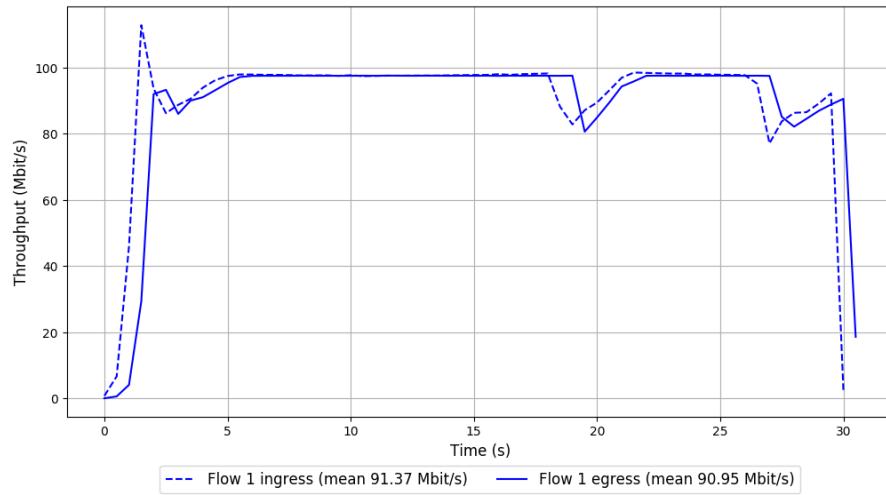


Run 5: Statistics of TCP Cubic

```
Start at: 2019-01-02 21:08:06
End at: 2019-01-02 21:08:36
Local clock offset: -1.569 ms
Remote clock offset: -37.38 ms

# Below is generated by plot.py at 2019-01-02 21:17:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.95 Mbit/s
95th percentile per-packet one-way delay: 111.499 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 90.95 Mbit/s
95th percentile per-packet one-way delay: 111.499 ms
Loss rate: 0.46%
```

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

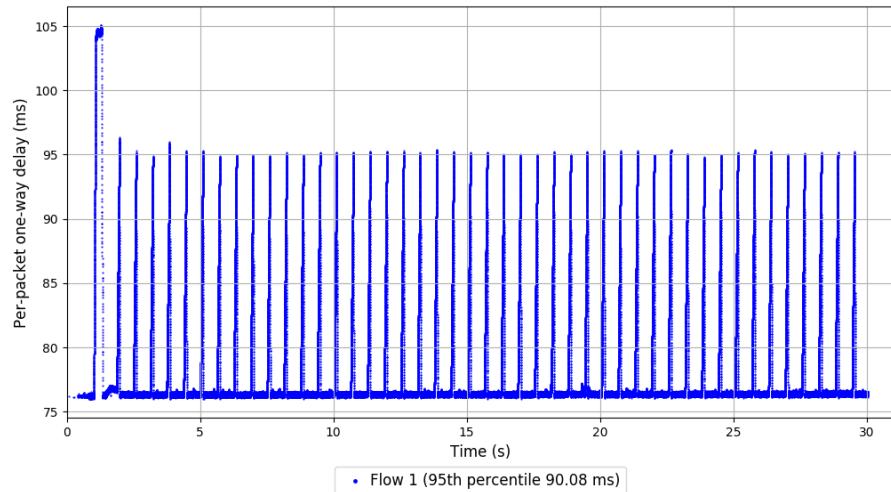
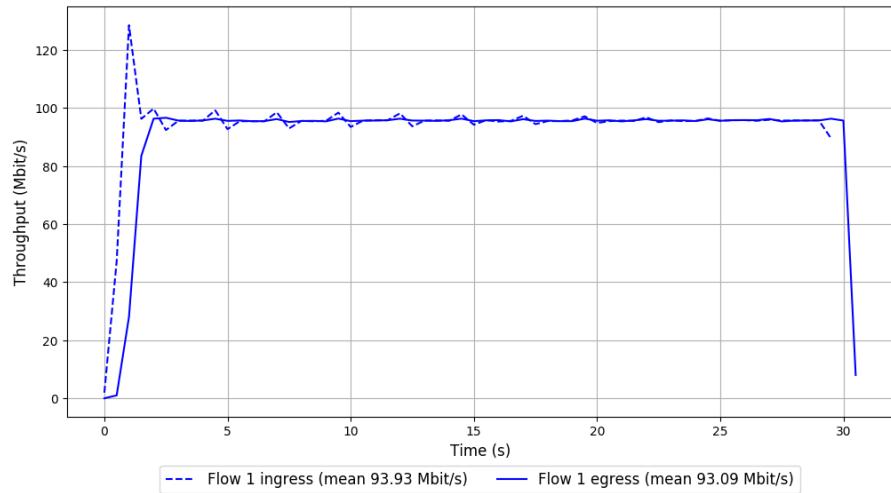


```
Run 1: Statistics of FillP

Start at: 2019-01-02 19:42:14
End at: 2019-01-02 19:42:44
Local clock offset: -4.99 ms
Remote clock offset: -14.238 ms

# Below is generated by plot.py at 2019-01-02 21:17:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.09 Mbit/s
95th percentile per-packet one-way delay: 90.081 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 93.09 Mbit/s
95th percentile per-packet one-way delay: 90.081 ms
Loss rate: 0.89%
```

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

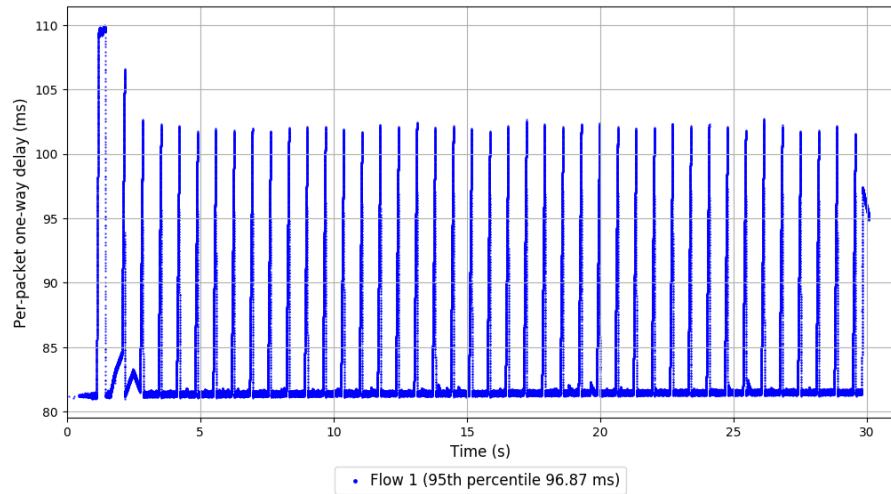
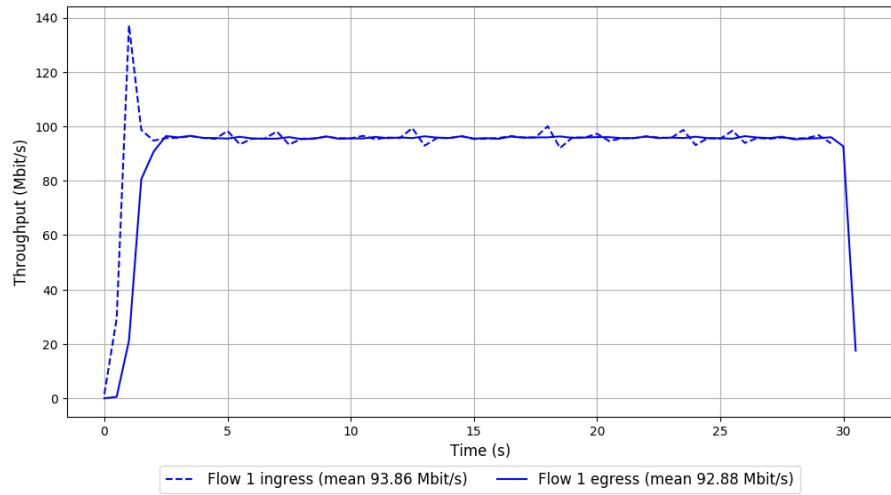


Run 2: Statistics of FillP

```
Start at: 2019-01-02 20:05:01
End at: 2019-01-02 20:05:31
Local clock offset: -3.344 ms
Remote clock offset: -23.035 ms

# Below is generated by plot.py at 2019-01-02 21:17:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.88 Mbit/s
95th percentile per-packet one-way delay: 96.870 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 92.88 Mbit/s
95th percentile per-packet one-way delay: 96.870 ms
Loss rate: 0.99%
```

## Run 2: Report of FillP — Data Link

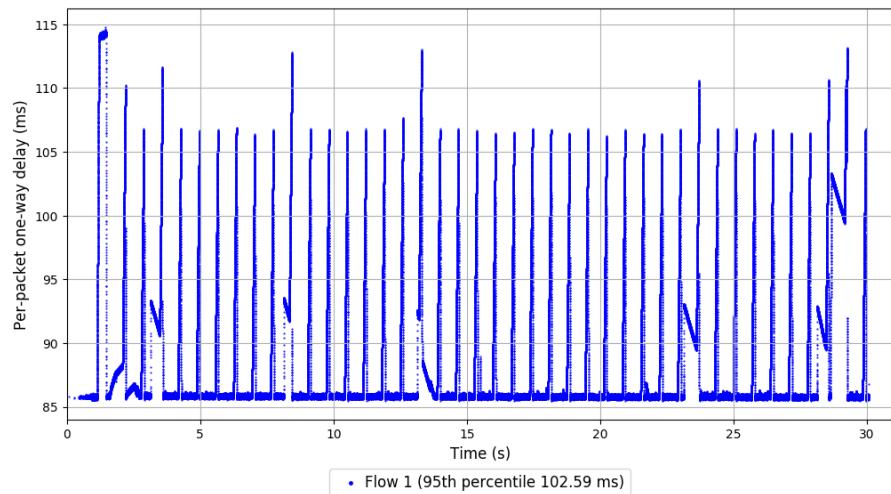
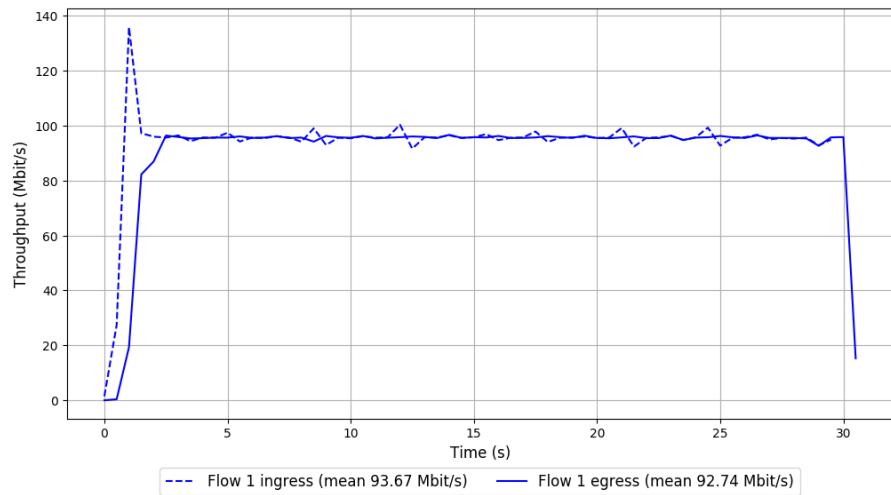


Run 3: Statistics of FillP

```
Start at: 2019-01-02 20:27:14
End at: 2019-01-02 20:27:44
Local clock offset: -2.169 ms
Remote clock offset: -24.48 ms

# Below is generated by plot.py at 2019-01-02 21:17:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.74 Mbit/s
95th percentile per-packet one-way delay: 102.588 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 92.74 Mbit/s
95th percentile per-packet one-way delay: 102.588 ms
Loss rate: 1.00%
```

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

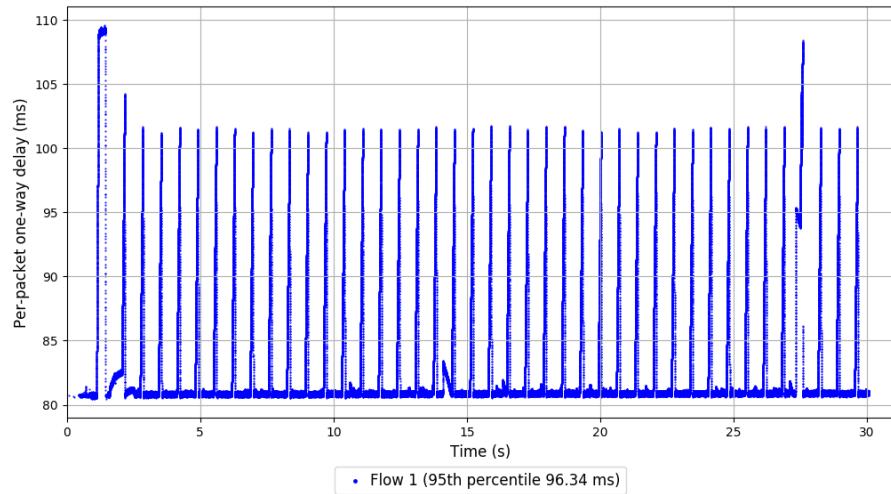
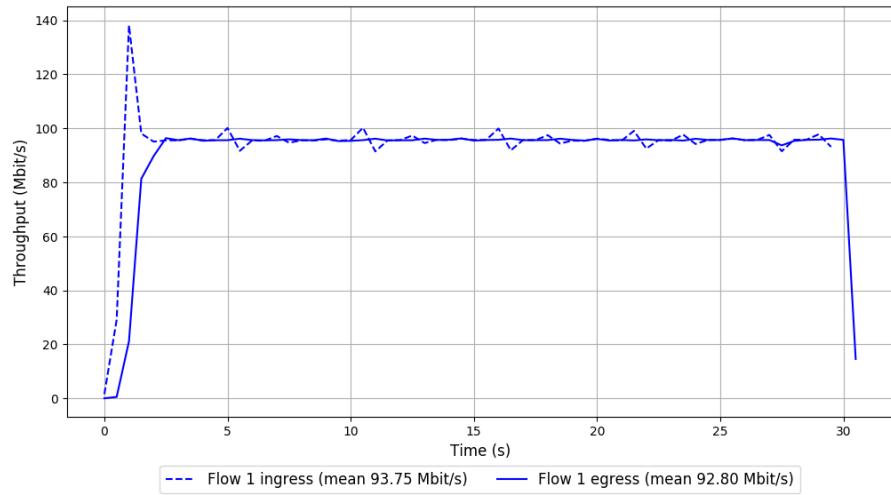


Run 4: Statistics of FillP

```
Start at: 2019-01-02 20:49:27
End at: 2019-01-02 20:49:57
Local clock offset: -7.066 ms
Remote clock offset: -33.192 ms

# Below is generated by plot.py at 2019-01-02 21:17:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.80 Mbit/s
95th percentile per-packet one-way delay: 96.337 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 92.80 Mbit/s
95th percentile per-packet one-way delay: 96.337 ms
Loss rate: 1.02%
```

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

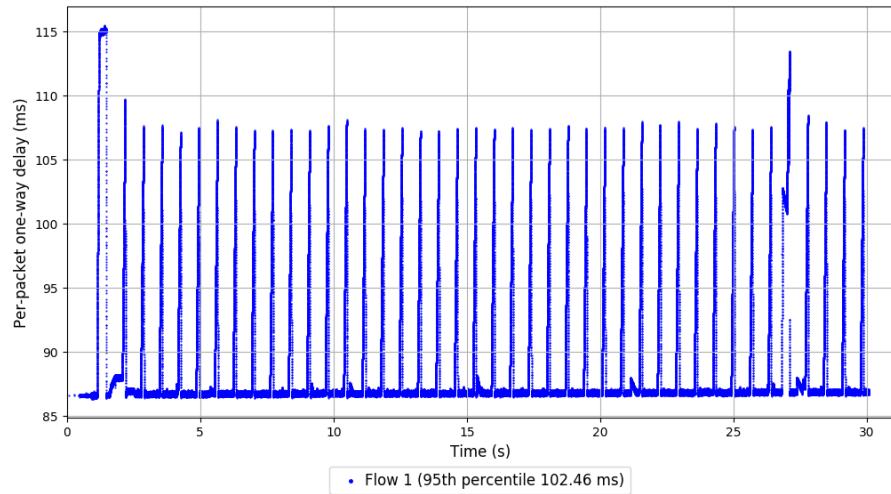
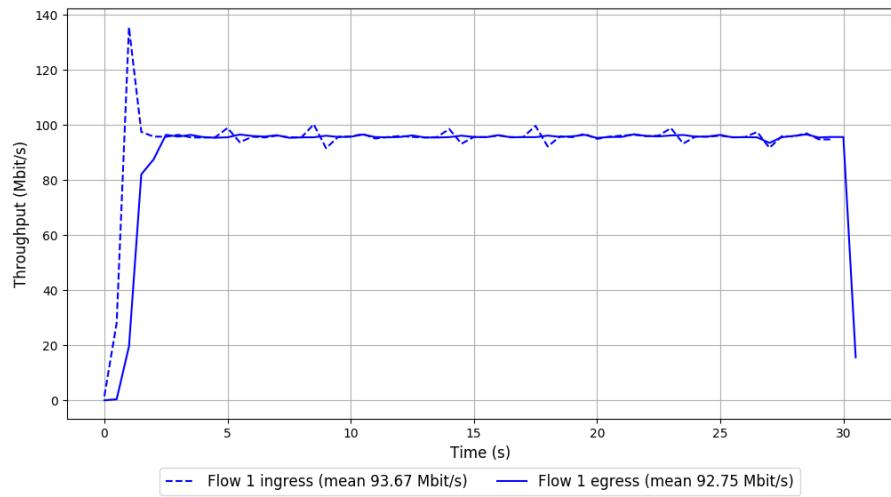


Run 5: Statistics of FillP

```
Start at: 2019-01-02 21:11:38
End at: 2019-01-02 21:12:08
Local clock offset: -1.906 ms
Remote clock offset: -34.162 ms

# Below is generated by plot.py at 2019-01-02 21:17:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.75 Mbit/s
95th percentile per-packet one-way delay: 102.460 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 92.75 Mbit/s
95th percentile per-packet one-way delay: 102.460 ms
Loss rate: 0.99%
```

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

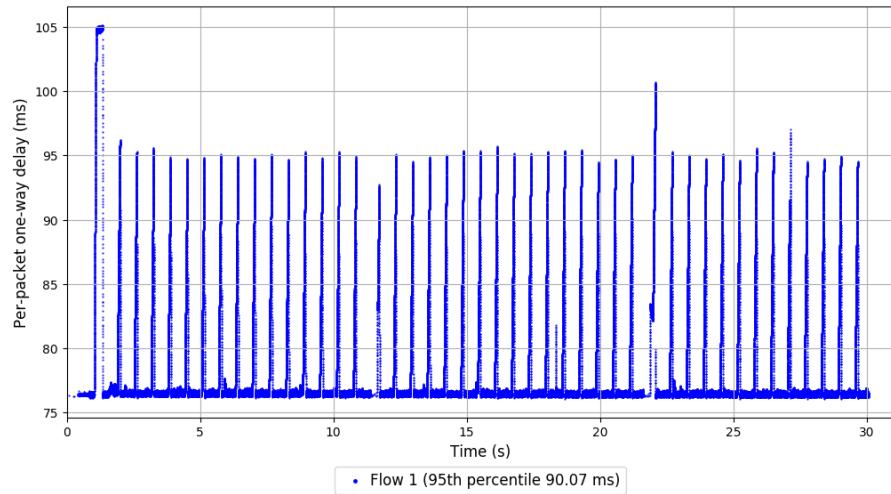
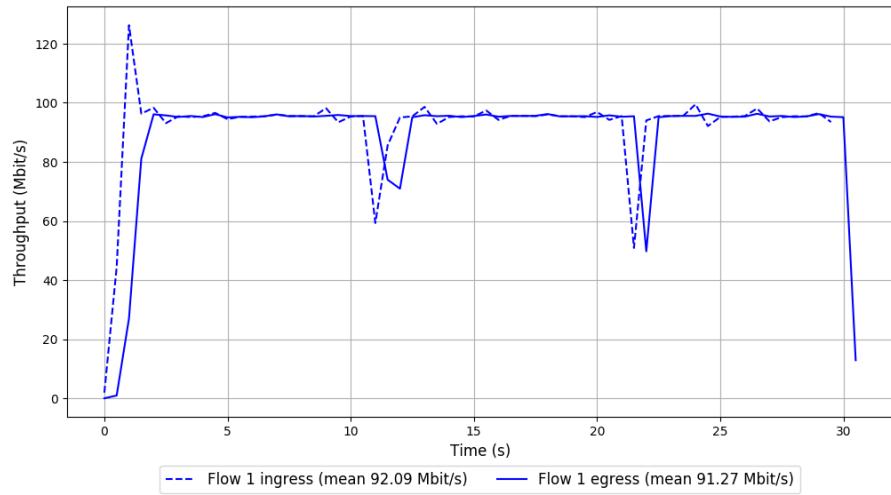


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2019-01-02 19:28:07
End at: 2019-01-02 19:28:37
Local clock offset: -1.888 ms
Remote clock offset: -12.127 ms

# Below is generated by plot.py at 2019-01-02 21:17:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.27 Mbit/s
95th percentile per-packet one-way delay: 90.071 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 91.27 Mbit/s
95th percentile per-packet one-way delay: 90.071 ms
Loss rate: 0.91%
```

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

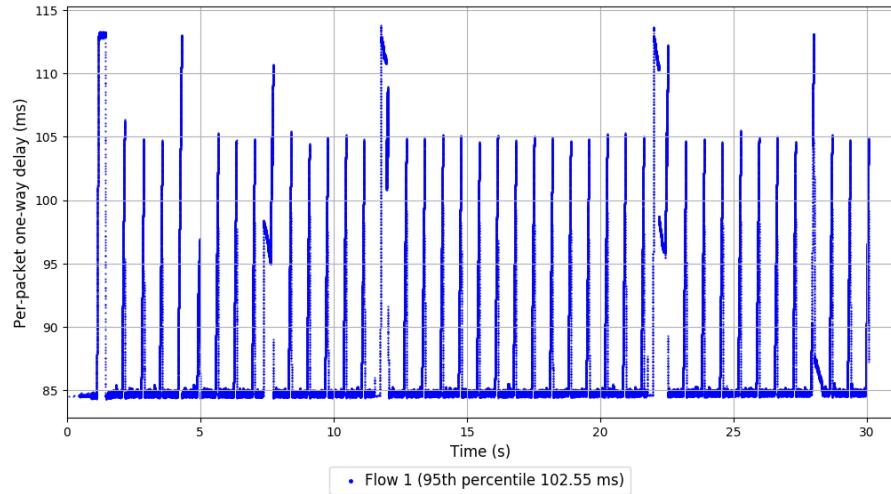
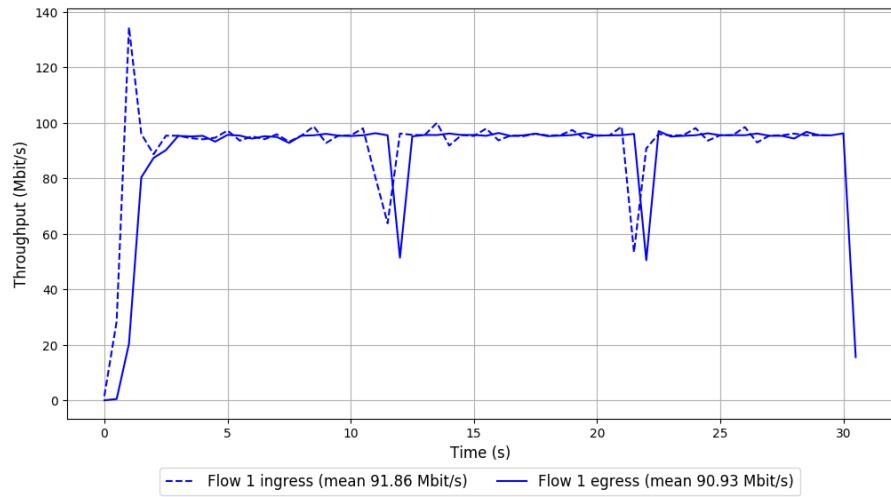


Run 2: Statistics of FillP-Sheep

```
Start at: 2019-01-02 19:50:28
End at: 2019-01-02 19:50:58
Local clock offset: -6.224 ms
Remote clock offset: -16.015 ms

# Below is generated by plot.py at 2019-01-02 21:18:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.93 Mbit/s
95th percentile per-packet one-way delay: 102.549 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 90.93 Mbit/s
95th percentile per-packet one-way delay: 102.549 ms
Loss rate: 1.00%
```

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

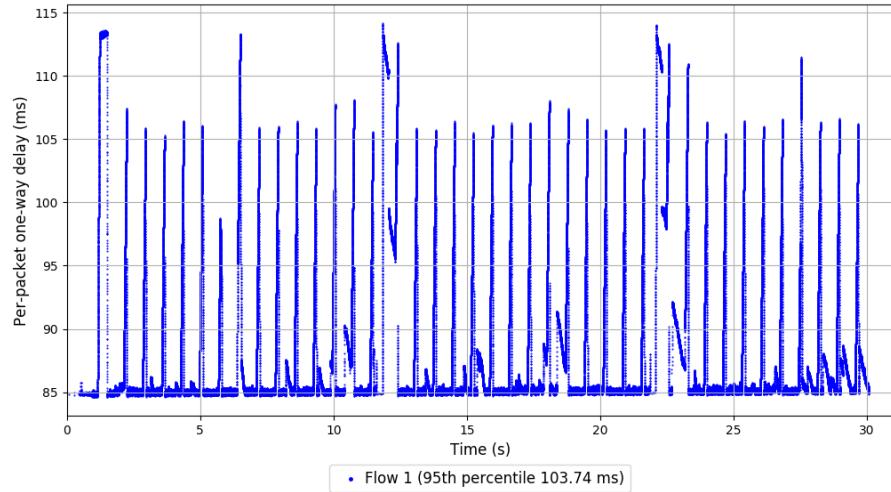
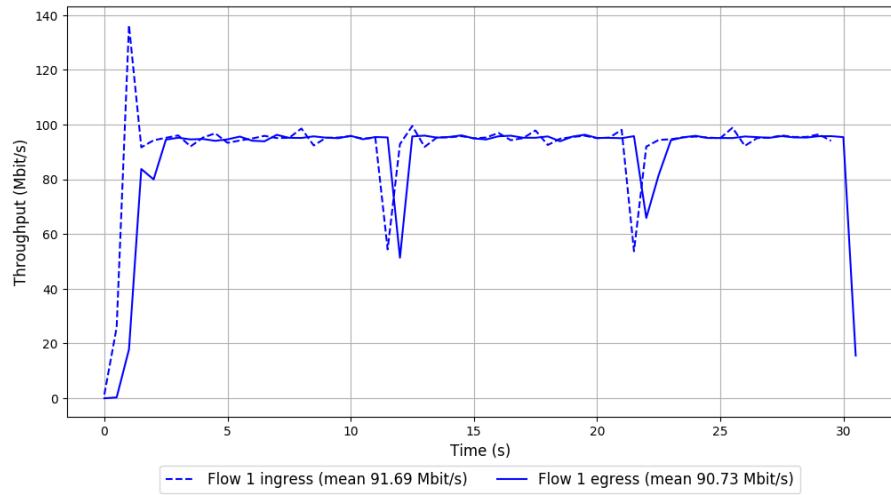


Run 3: Statistics of FillP-Sheep

```
Start at: 2019-01-02 20:13:10
End at: 2019-01-02 20:13:40
Local clock offset: -2.313 ms
Remote clock offset: -21.154 ms

# Below is generated by plot.py at 2019-01-02 21:18:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.73 Mbit/s
95th percentile per-packet one-way delay: 103.736 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 90.73 Mbit/s
95th percentile per-packet one-way delay: 103.736 ms
Loss rate: 1.05%
```

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

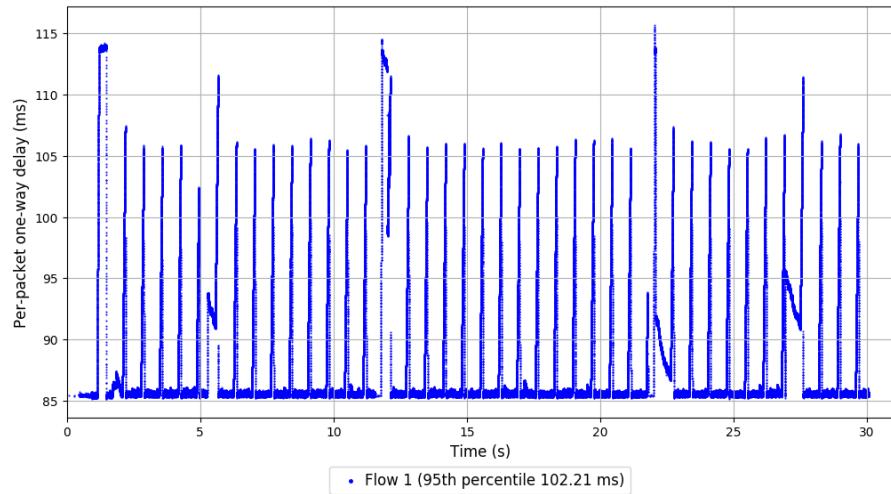
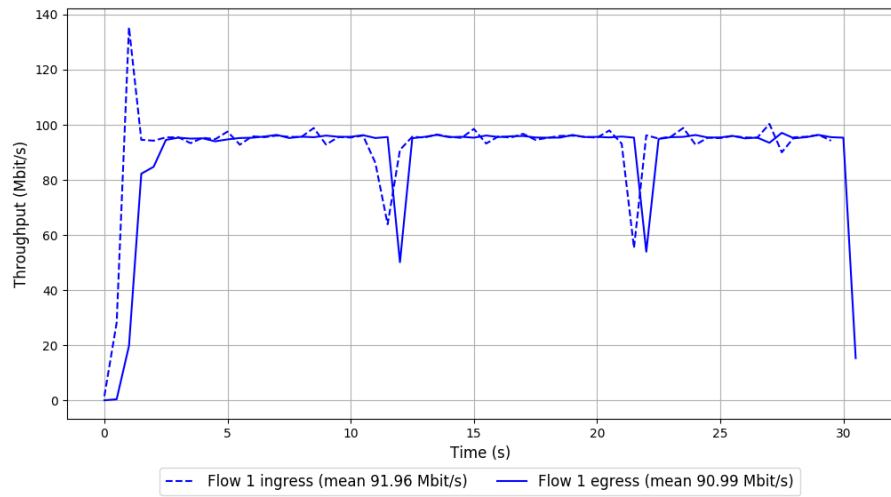


Run 4: Statistics of FillP-Sheep

```
Start at: 2019-01-02 20:35:22
End at: 2019-01-02 20:35:52
Local clock offset: -4.722 ms
Remote clock offset: -26.206 ms

# Below is generated by plot.py at 2019-01-02 21:19:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.99 Mbit/s
95th percentile per-packet one-way delay: 102.209 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 90.99 Mbit/s
95th percentile per-packet one-way delay: 102.209 ms
Loss rate: 1.06%
```

Run 4: Report of FillP-Sheep — Data Link

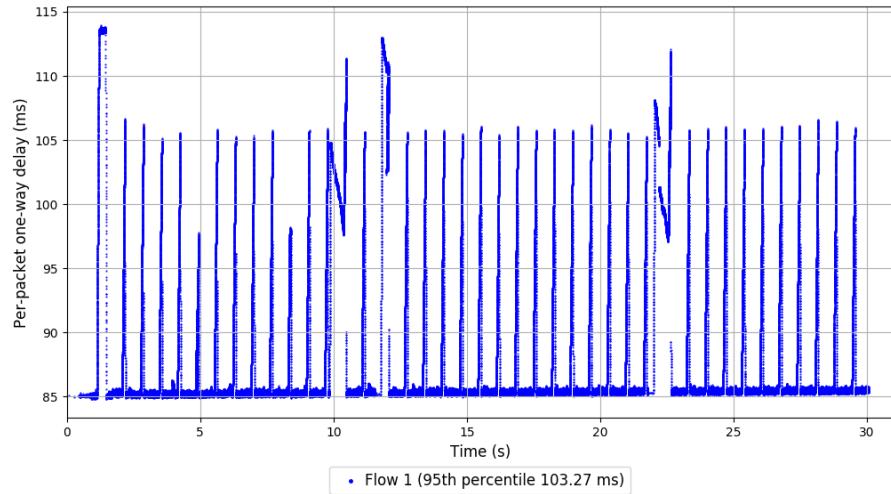
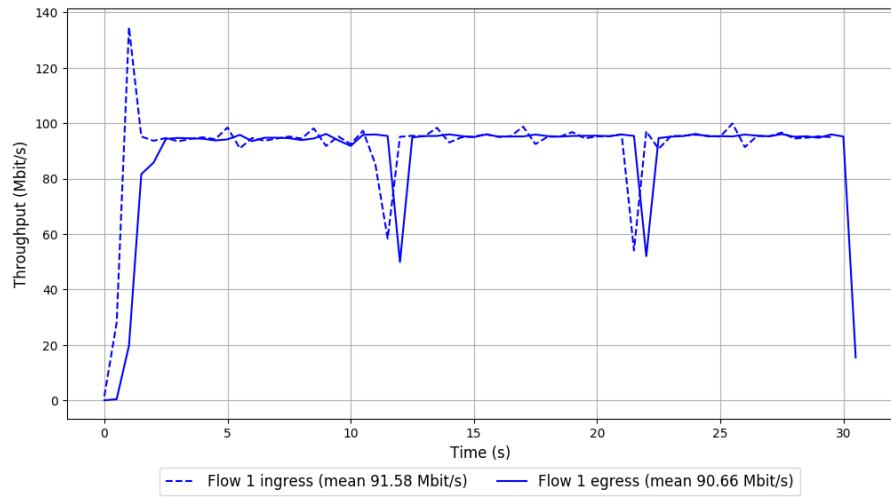


Run 5: Statistics of FillP-Sheep

```
Start at: 2019-01-02 20:57:35
End at: 2019-01-02 20:58:05
Local clock offset: -4.739 ms
Remote clock offset: -31.085 ms

# Below is generated by plot.py at 2019-01-02 21:19:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.66 Mbit/s
95th percentile per-packet one-way delay: 103.266 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 90.66 Mbit/s
95th percentile per-packet one-way delay: 103.266 ms
Loss rate: 1.00%
```

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

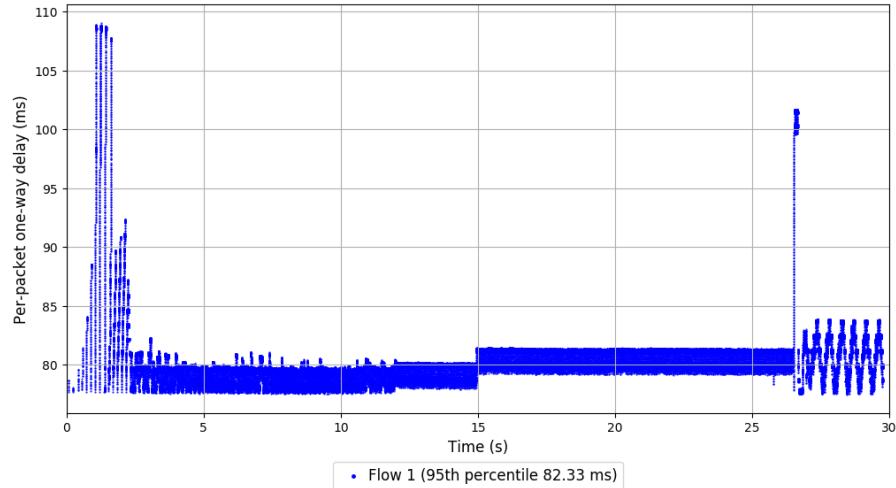
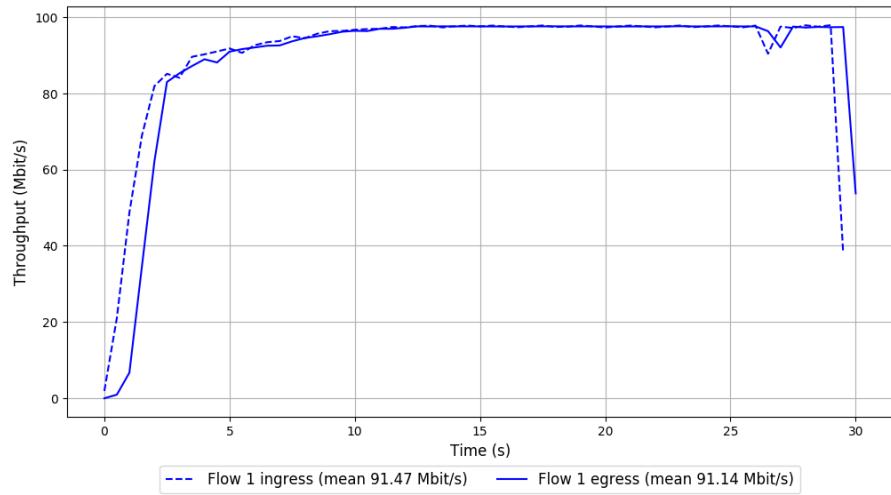


Run 1: Statistics of Indigo

```
Start at: 2019-01-02 19:25:44
End at: 2019-01-02 19:26:14
Local clock offset: -0.829 ms
Remote clock offset: -10.369 ms

# Below is generated by plot.py at 2019-01-02 21:19:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.14 Mbit/s
95th percentile per-packet one-way delay: 82.327 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 91.14 Mbit/s
95th percentile per-packet one-way delay: 82.327 ms
Loss rate: 0.37%
```

## Run 1: Report of Indigo — Data Link

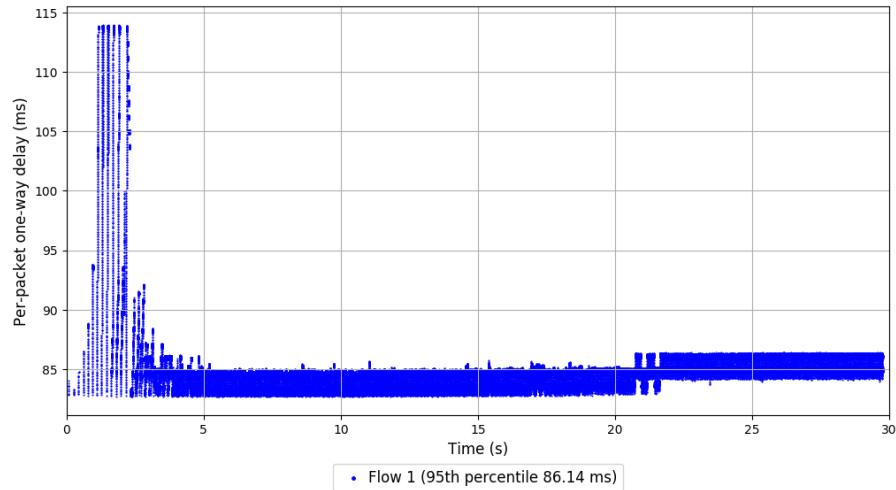
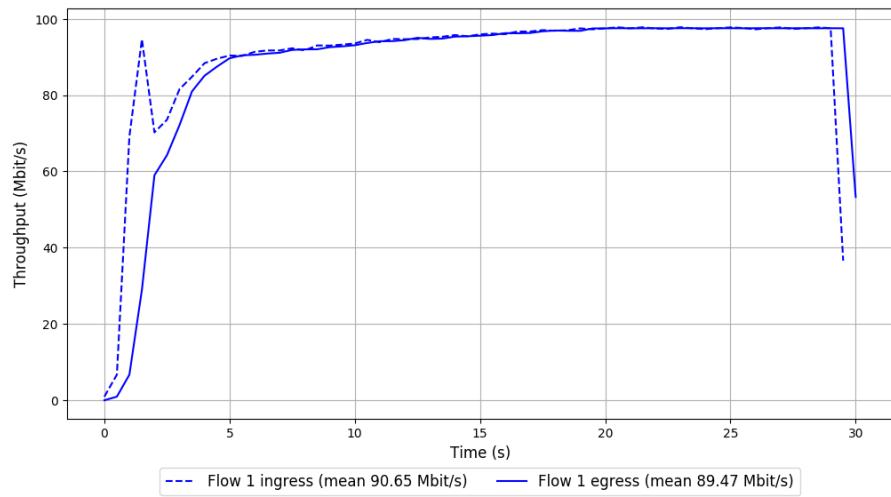


Run 2: Statistics of Indigo

```
Start at: 2019-01-02 19:48:02
End at: 2019-01-02 19:48:32
Local clock offset: -6.208 ms
Remote clock offset: -19.191 ms

# Below is generated by plot.py at 2019-01-02 21:19:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.47 Mbit/s
95th percentile per-packet one-way delay: 86.141 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 89.47 Mbit/s
95th percentile per-packet one-way delay: 86.141 ms
Loss rate: 1.30%
```

## Run 2: Report of Indigo — Data Link

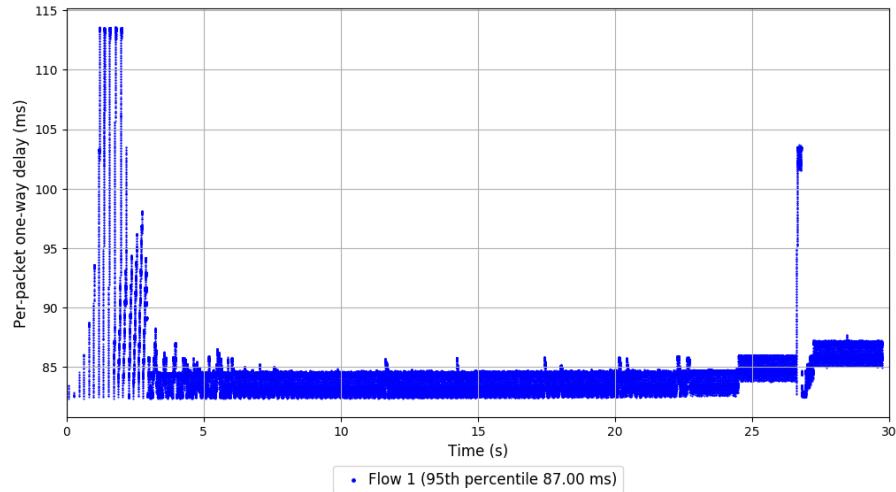
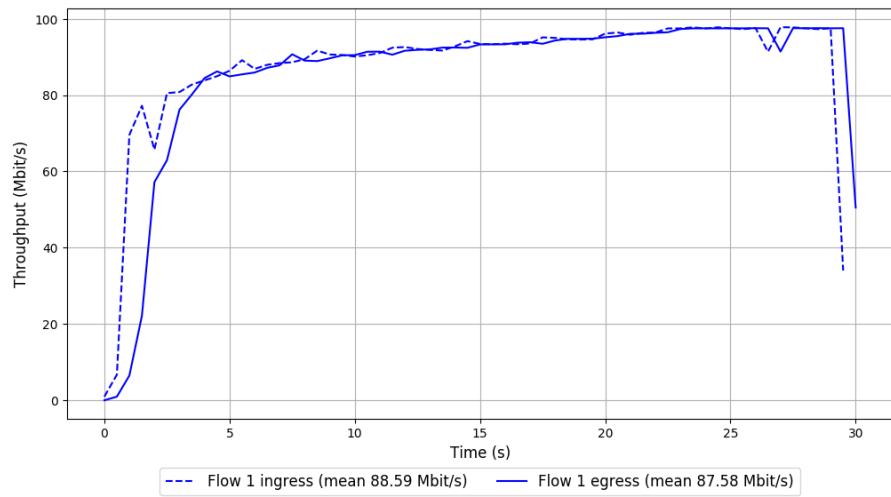


Run 3: Statistics of Indigo

```
Start at: 2019-01-02 20:10:47
End at: 2019-01-02 20:11:17
Local clock offset: -1.853 ms
Remote clock offset: -24.543 ms

# Below is generated by plot.py at 2019-01-02 21:19:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.58 Mbit/s
95th percentile per-packet one-way delay: 87.004 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 87.58 Mbit/s
95th percentile per-packet one-way delay: 87.004 ms
Loss rate: 1.13%
```

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

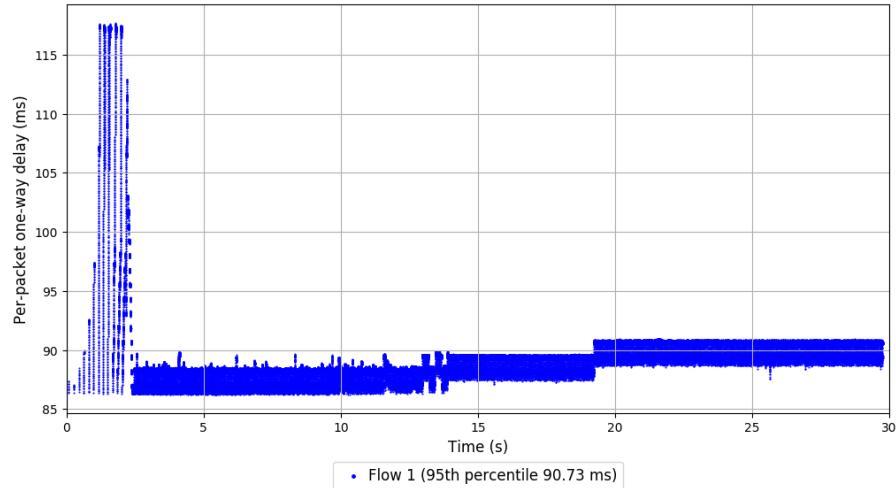
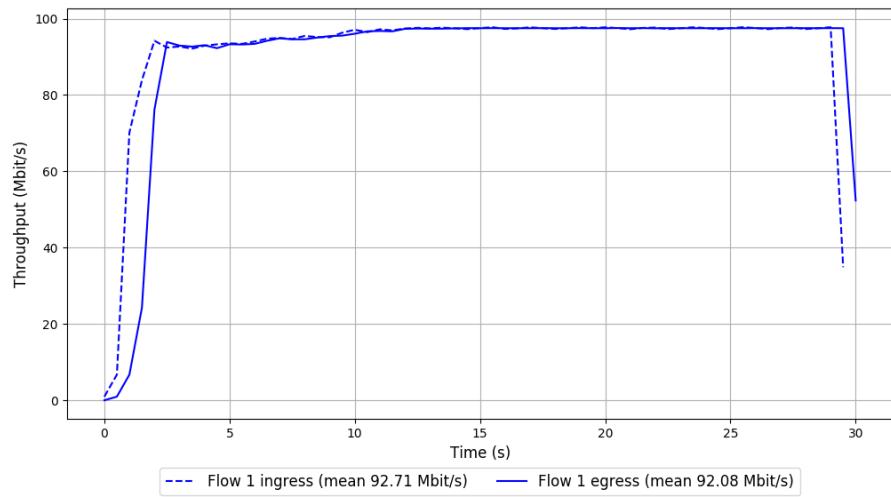


Run 4: Statistics of Indigo

```
Start at: 2019-01-02 20:32:59
End at: 2019-01-02 20:33:30
Local clock offset: -4.93 ms
Remote clock offset: -25.471 ms

# Below is generated by plot.py at 2019-01-02 21:19:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.08 Mbit/s
95th percentile per-packet one-way delay: 90.728 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 92.08 Mbit/s
95th percentile per-packet one-way delay: 90.728 ms
Loss rate: 0.67%
```

## Run 4: Report of Indigo — Data Link

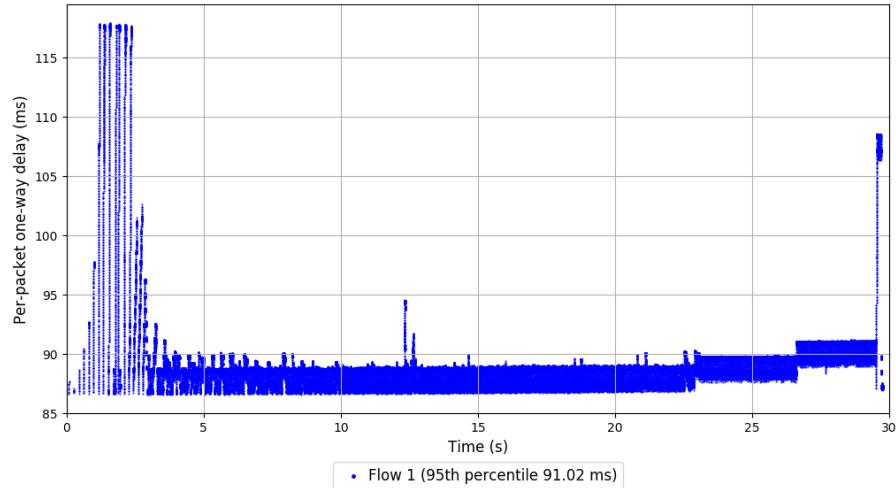
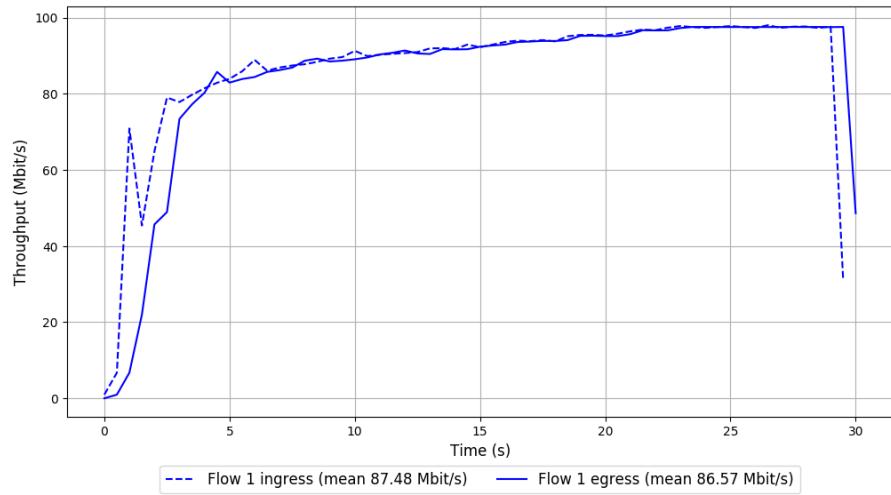


Run 5: Statistics of Indigo

```
Start at: 2019-01-02 20:55:12
End at: 2019-01-02 20:55:42
Local clock offset: -6.871 ms
Remote clock offset: -30.557 ms

# Below is generated by plot.py at 2019-01-02 21:19:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.57 Mbit/s
95th percentile per-packet one-way delay: 91.020 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 86.57 Mbit/s
95th percentile per-packet one-way delay: 91.020 ms
Loss rate: 1.03%
```

## Run 5: Report of Indigo — Data Link

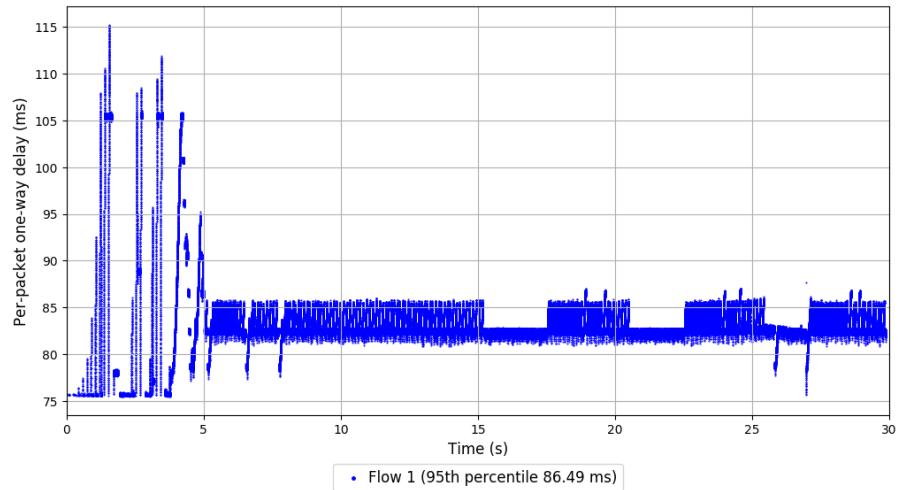
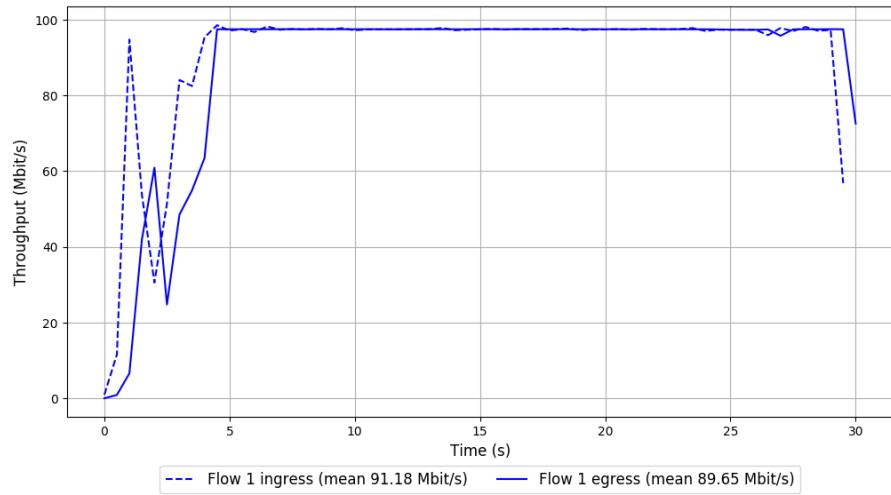


Run 1: Statistics of Indigo-MusesD

```
Start at: 2019-01-02 19:30:25
End at: 2019-01-02 19:30:55
Local clock offset: -3.585 ms
Remote clock offset: -12.586 ms

# Below is generated by plot.py at 2019-01-02 21:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.65 Mbit/s
95th percentile per-packet one-way delay: 86.494 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 89.65 Mbit/s
95th percentile per-packet one-way delay: 86.494 ms
Loss rate: 1.66%
```

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

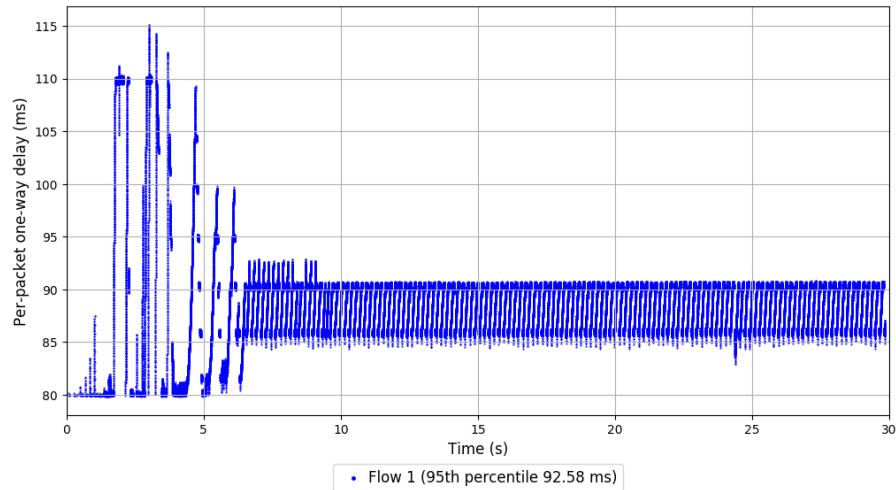
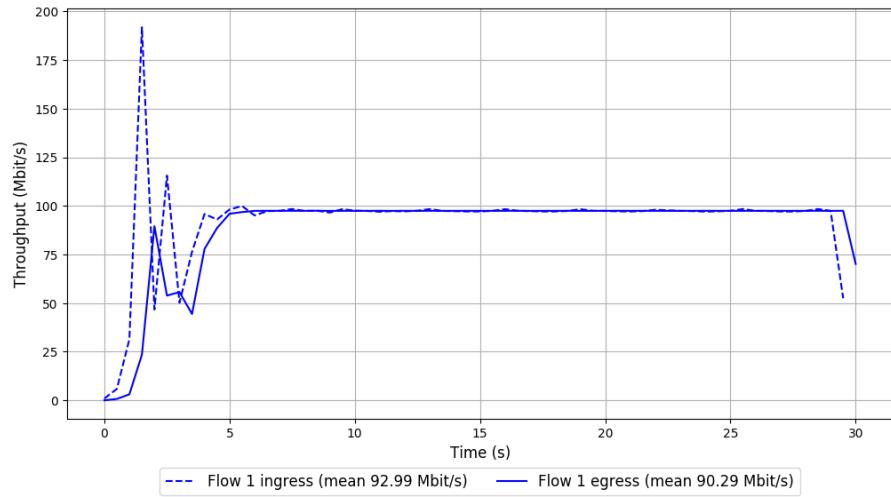


Run 2: Statistics of Indigo-MusesD

```
Start at: 2019-01-02 19:52:54
End at: 2019-01-02 19:53:24
Local clock offset: -5.538 ms
Remote clock offset: -20.533 ms

# Below is generated by plot.py at 2019-01-02 21:19:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.29 Mbit/s
95th percentile per-packet one-way delay: 92.575 ms
Loss rate: 2.88%
-- Flow 1:
Average throughput: 90.29 Mbit/s
95th percentile per-packet one-way delay: 92.575 ms
Loss rate: 2.88%
```

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

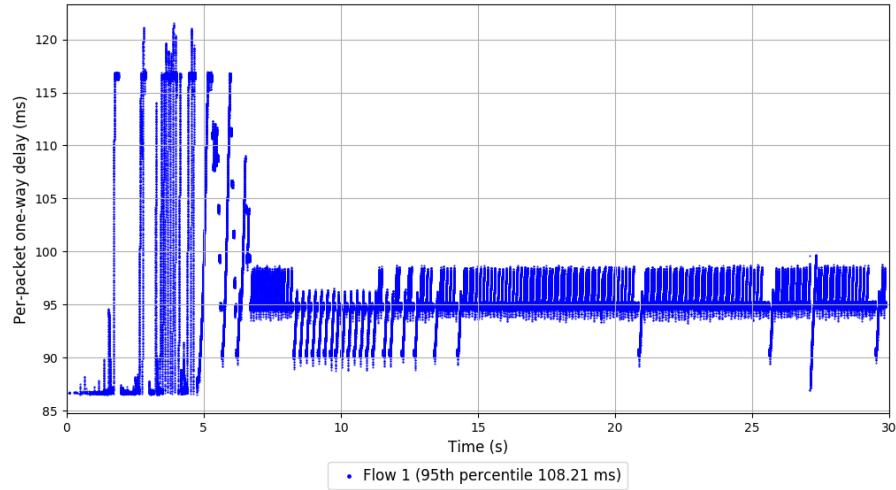
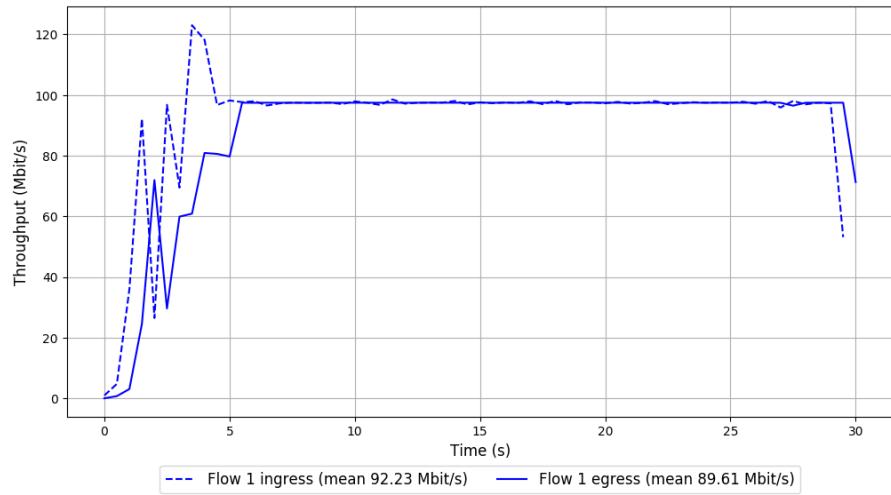


Run 3: Statistics of Indigo-MusesD

```
Start at: 2019-01-02 20:15:28
End at: 2019-01-02 20:15:59
Local clock offset: -2.162 ms
Remote clock offset: -21.493 ms

# Below is generated by plot.py at 2019-01-02 21:19:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.61 Mbit/s
95th percentile per-packet one-way delay: 108.208 ms
Loss rate: 2.81%
-- Flow 1:
Average throughput: 89.61 Mbit/s
95th percentile per-packet one-way delay: 108.208 ms
Loss rate: 2.81%
```

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

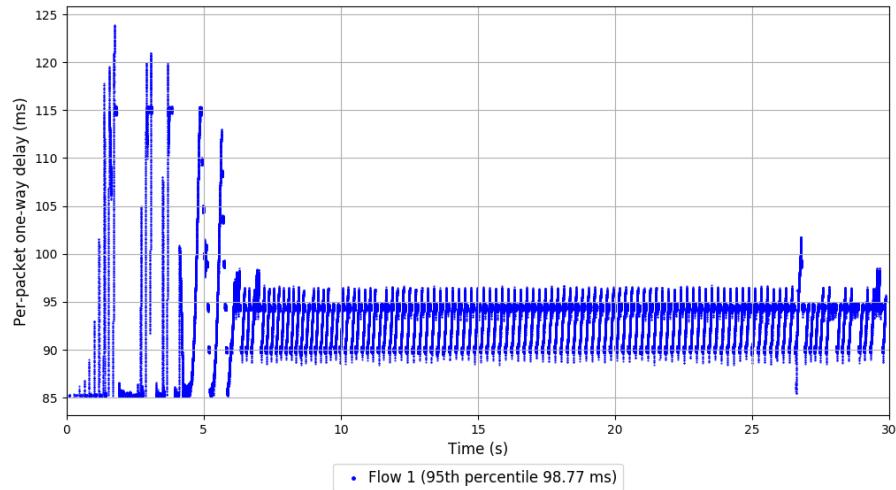
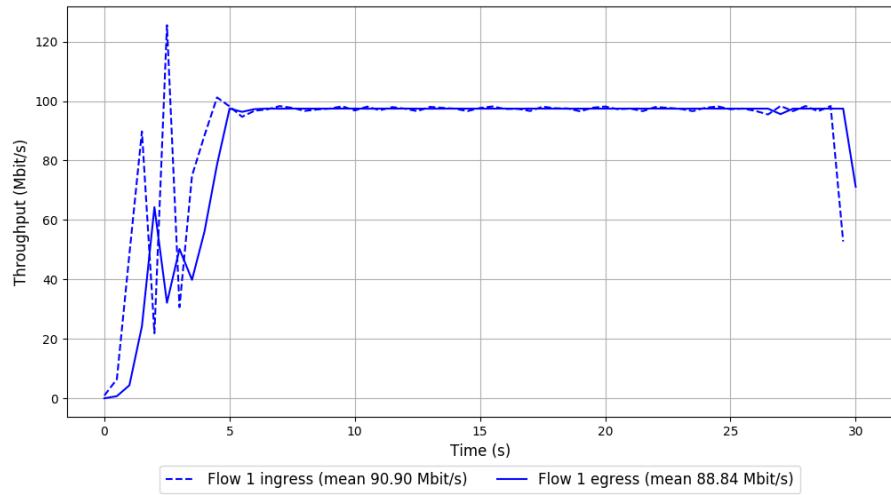


Run 4: Statistics of Indigo-MusesD

```
Start at: 2019-01-02 20:37:40
End at: 2019-01-02 20:38:10
Local clock offset: -5.856 ms
Remote clock offset: -26.628 ms

# Below is generated by plot.py at 2019-01-02 21:19:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.84 Mbit/s
95th percentile per-packet one-way delay: 98.773 ms
Loss rate: 2.23%
-- Flow 1:
Average throughput: 88.84 Mbit/s
95th percentile per-packet one-way delay: 98.773 ms
Loss rate: 2.23%
```

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

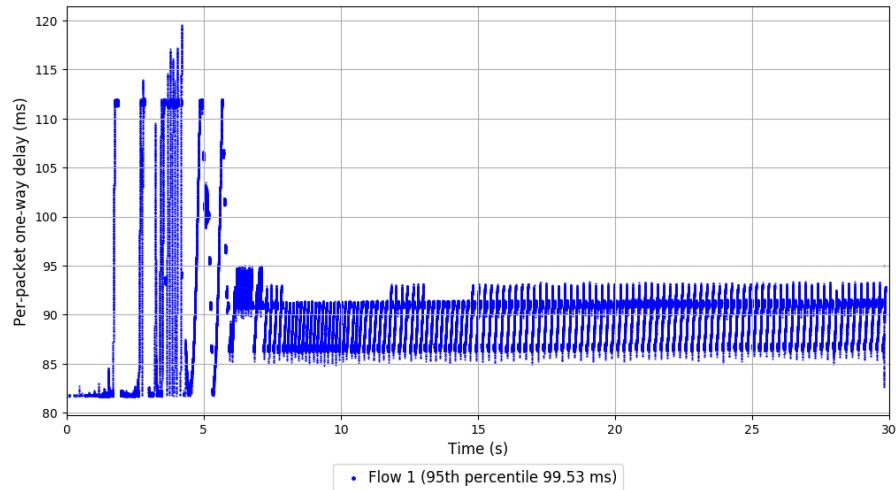
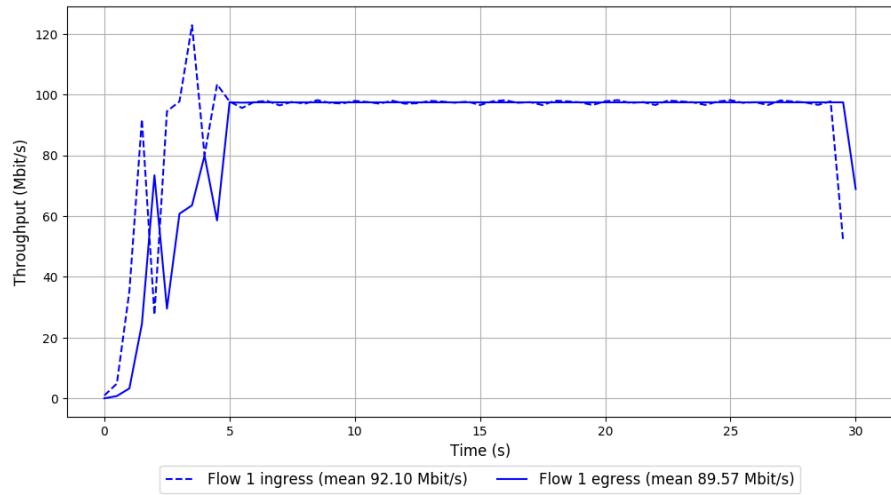


Run 5: Statistics of Indigo-MusesD

```
Start at: 2019-01-02 20:59:54
End at: 2019-01-02 21:00:24
Local clock offset: -4.46 ms
Remote clock offset: -35.267 ms

# Below is generated by plot.py at 2019-01-02 21:20:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.57 Mbit/s
95th percentile per-packet one-way delay: 99.535 ms
Loss rate: 2.70%
-- Flow 1:
Average throughput: 89.57 Mbit/s
95th percentile per-packet one-way delay: 99.535 ms
Loss rate: 2.70%
```

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

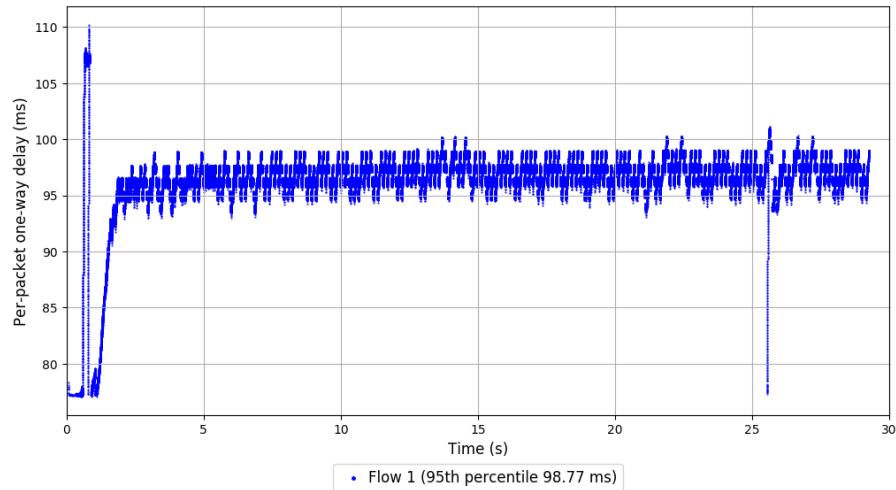
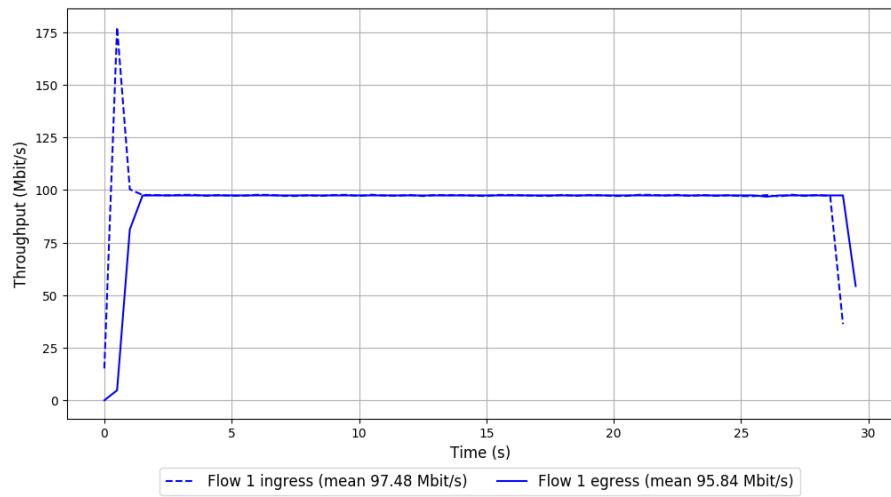


Run 1: Statistics of Indigo-MusesT

```
Start at: 2019-01-02 19:23:21
End at: 2019-01-02 19:23:51
Local clock offset: -0.036 ms
Remote clock offset: -10.961 ms

# Below is generated by plot.py at 2019-01-02 21:20:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.84 Mbit/s
95th percentile per-packet one-way delay: 98.769 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 95.84 Mbit/s
95th percentile per-packet one-way delay: 98.769 ms
Loss rate: 1.62%
```

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

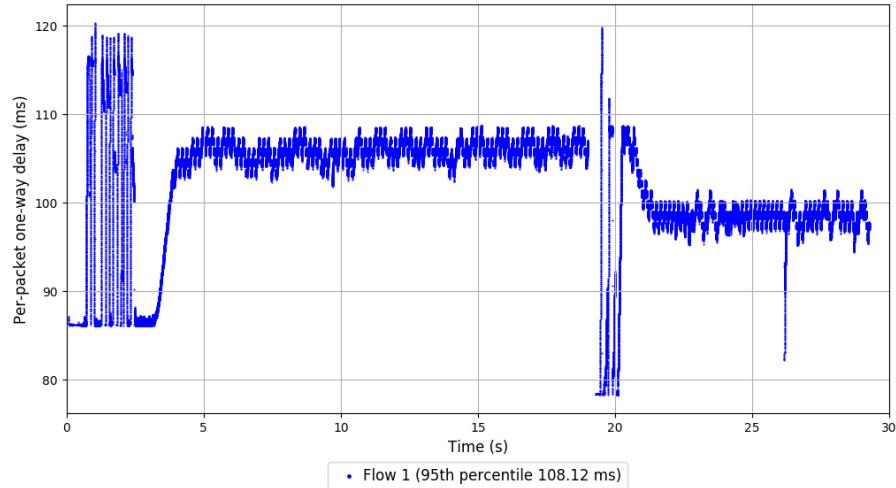
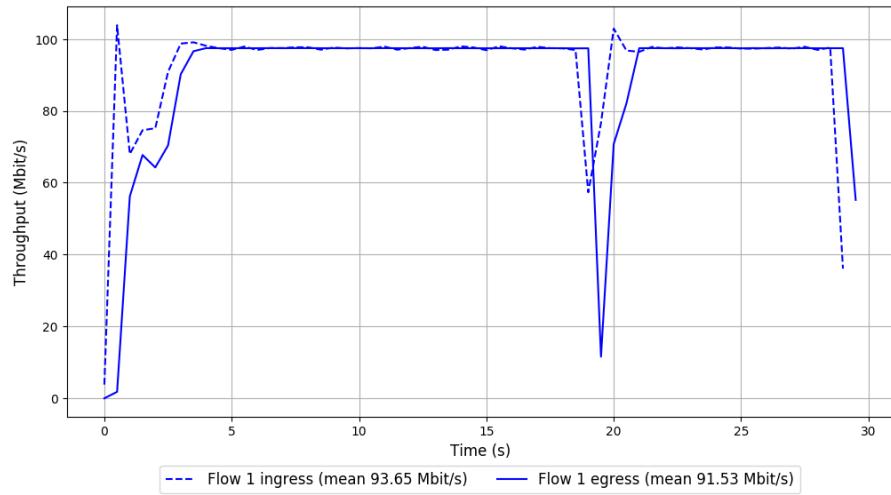


Run 2: Statistics of Indigo-MusesT

```
Start at: 2019-01-02 19:45:42
End at: 2019-01-02 19:46:12
Local clock offset: -5.239 ms
Remote clock offset: -14.833 ms

# Below is generated by plot.py at 2019-01-02 21:20:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.53 Mbit/s
95th percentile per-packet one-way delay: 108.116 ms
Loss rate: 2.23%
-- Flow 1:
Average throughput: 91.53 Mbit/s
95th percentile per-packet one-way delay: 108.116 ms
Loss rate: 2.23%
```

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

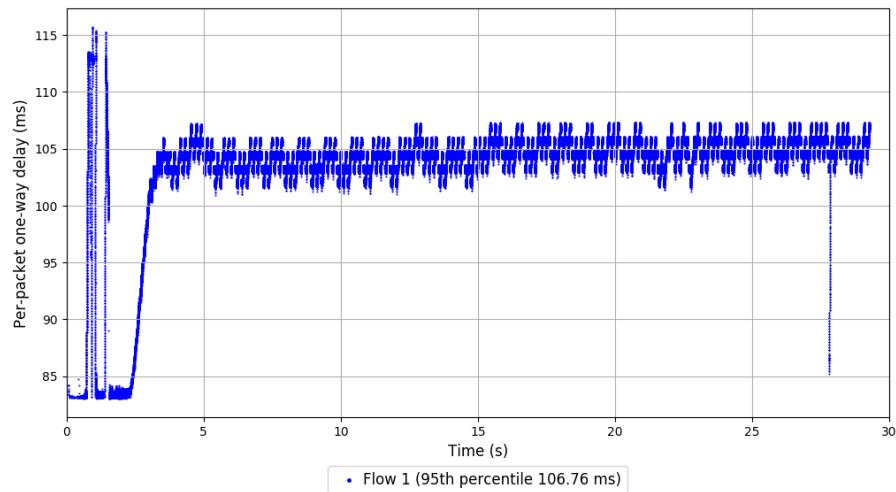
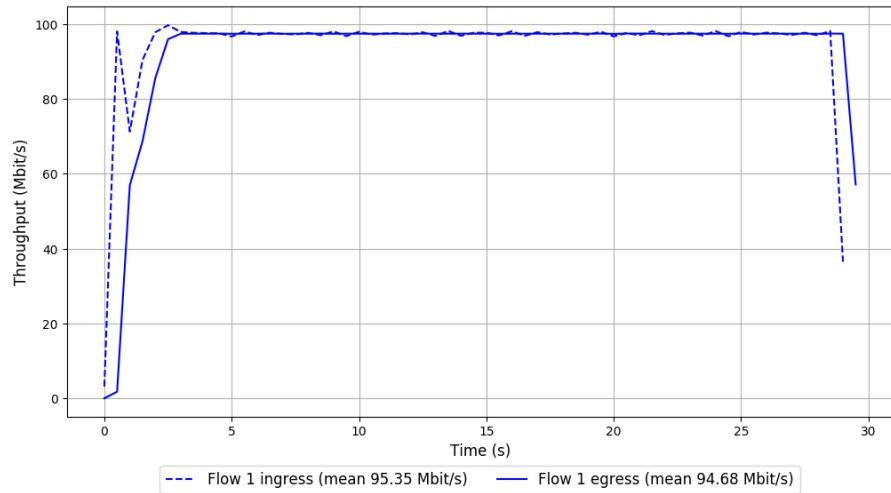


Run 3: Statistics of Indigo-MusesT

```
Start at: 2019-01-02 20:08:27
End at: 2019-01-02 20:08:57
Local clock offset: -2.849 ms
Remote clock offset: -23.853 ms

# Below is generated by plot.py at 2019-01-02 21:20:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.68 Mbit/s
95th percentile per-packet one-way delay: 106.763 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 94.68 Mbit/s
95th percentile per-packet one-way delay: 106.763 ms
Loss rate: 0.62%
```

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

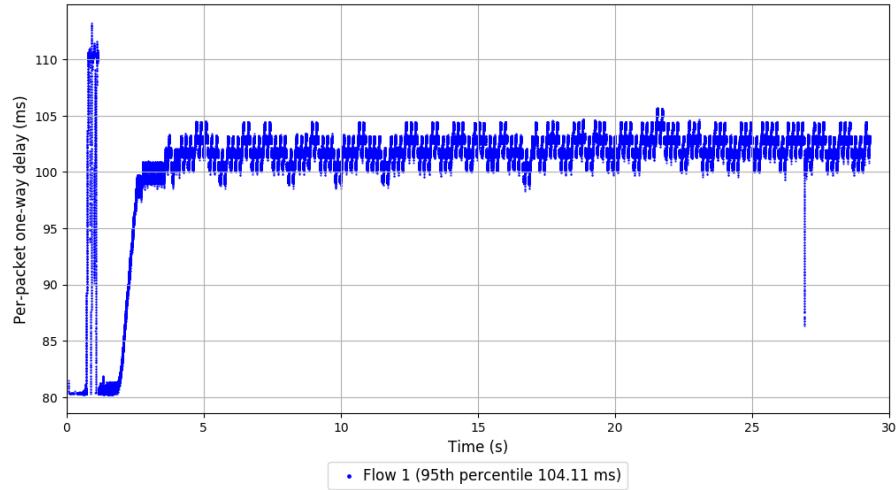
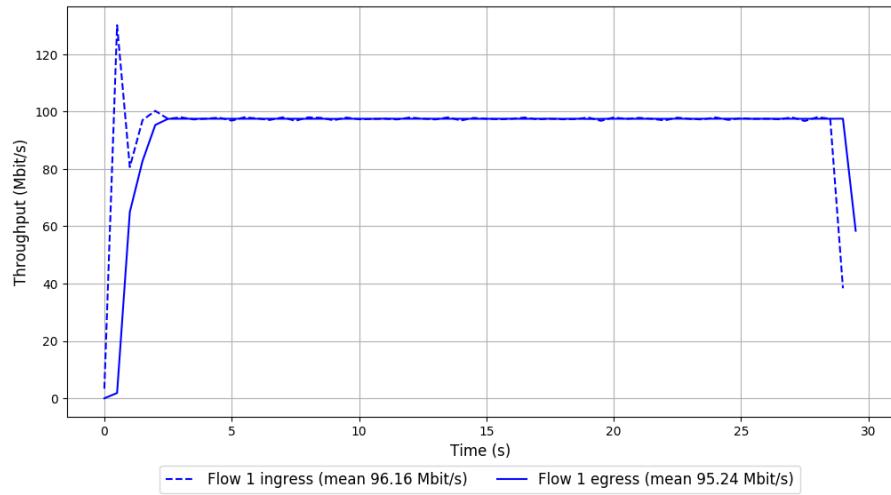


Run 4: Statistics of Indigo-MusesT

```
Start at: 2019-01-02 20:30:40
End at: 2019-01-02 20:31:10
Local clock offset: -3.583 ms
Remote clock offset: -28.729 ms

# Below is generated by plot.py at 2019-01-02 21:21:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.24 Mbit/s
95th percentile per-packet one-way delay: 104.106 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 95.24 Mbit/s
95th percentile per-packet one-way delay: 104.106 ms
Loss rate: 0.88%
```

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

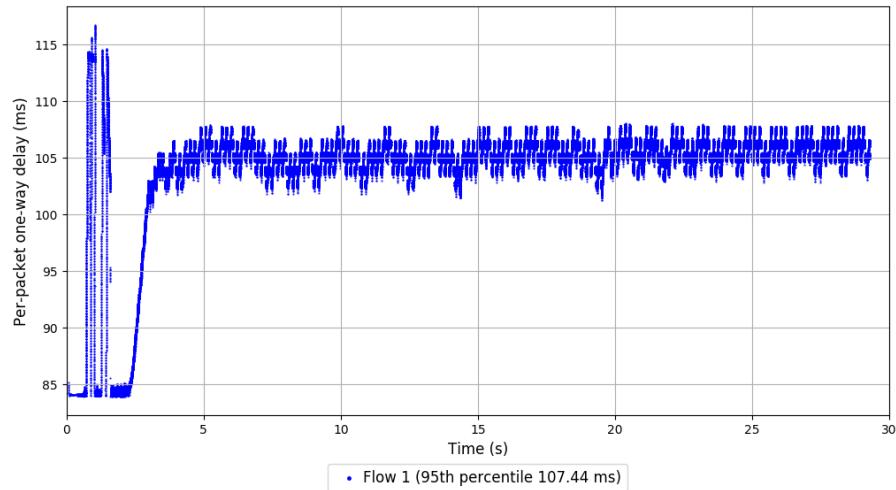
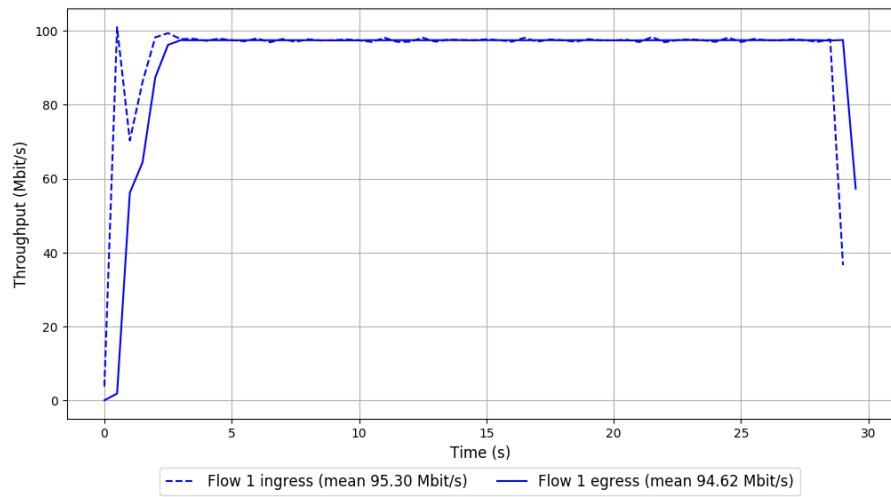


Run 5: Statistics of Indigo-MusesT

```
Start at: 2019-01-02 20:52:52
End at: 2019-01-02 20:53:22
Local clock offset: -6.414 ms
Remote clock offset: -29.856 ms

# Below is generated by plot.py at 2019-01-02 21:21:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.62 Mbit/s
95th percentile per-packet one-way delay: 107.435 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 94.62 Mbit/s
95th percentile per-packet one-way delay: 107.435 ms
Loss rate: 0.64%
```

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

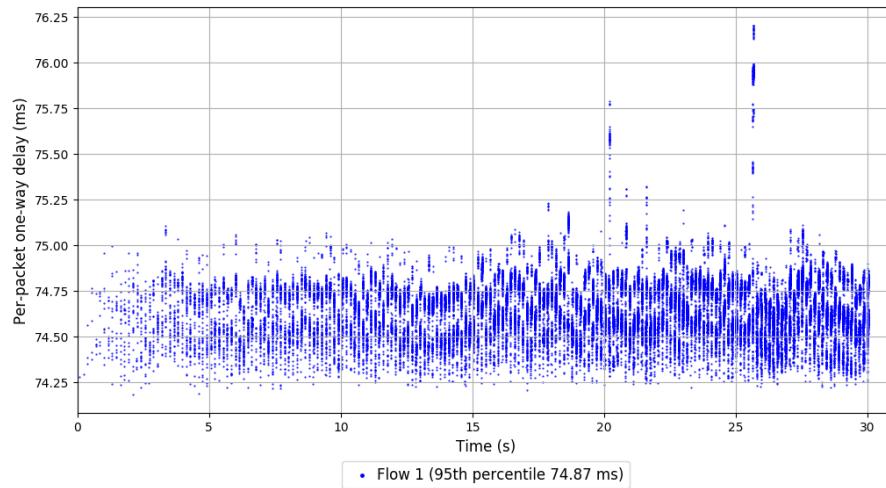
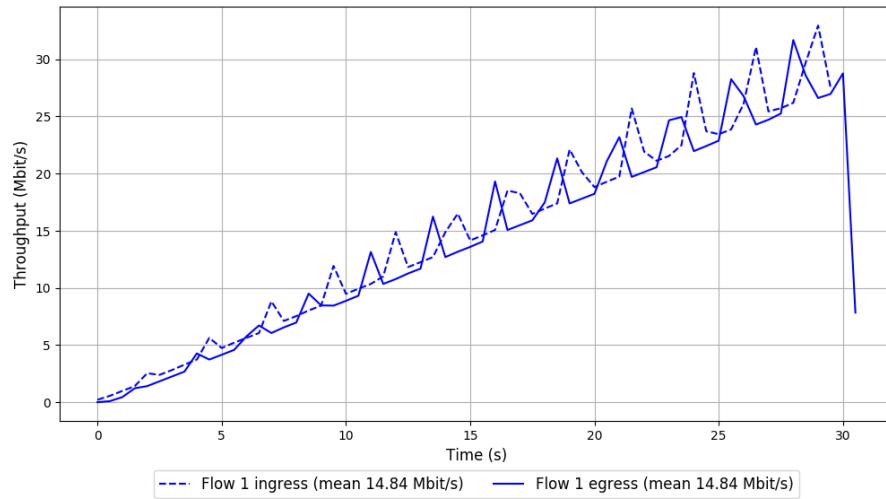


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2019-01-02 19:36:18
End at: 2019-01-02 19:36:48
Local clock offset: -4.254 ms
Remote clock offset: -13.873 ms

# Below is generated by plot.py at 2019-01-02 21:21:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 14.84 Mbit/s
95th percentile per-packet one-way delay: 74.867 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 14.84 Mbit/s
95th percentile per-packet one-way delay: 74.867 ms
Loss rate: 0.00%
```

## Run 1: Report of LEDBAT — Data Link

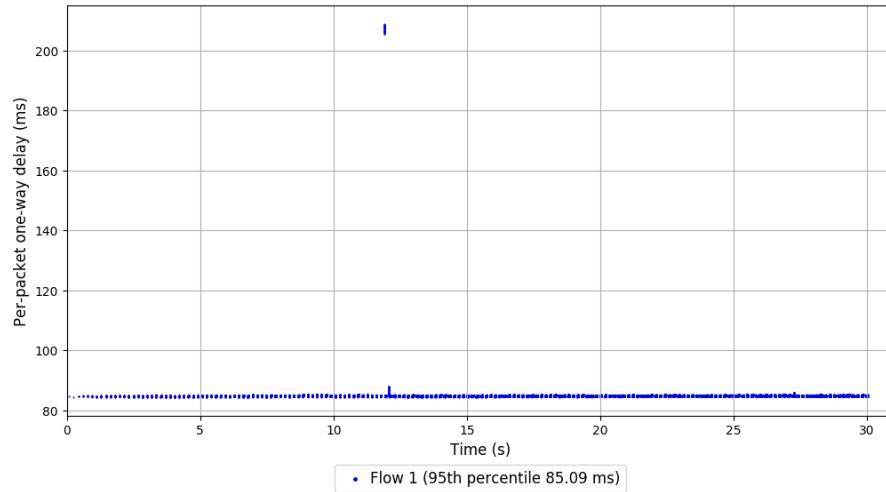
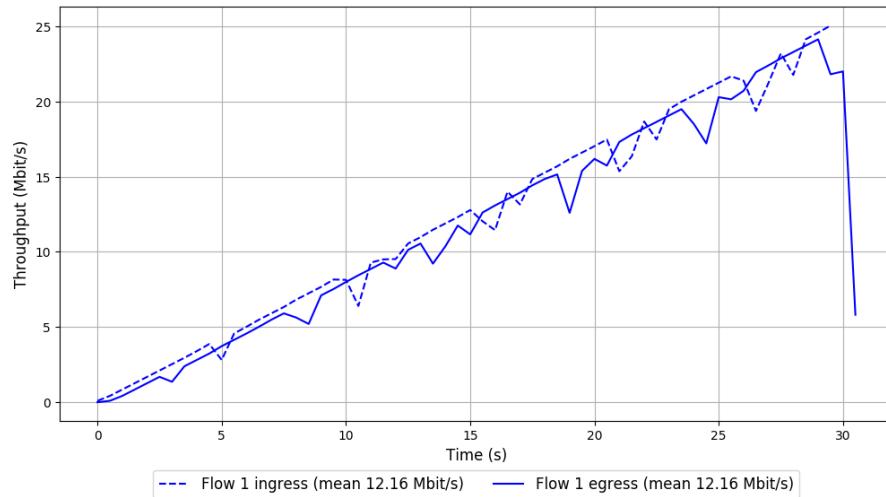


Run 2: Statistics of LEDBAT

```
Start at: 2019-01-02 19:59:07
End at: 2019-01-02 19:59:37
Local clock offset: -3.846 ms
Remote clock offset: -18.176 ms

# Below is generated by plot.py at 2019-01-02 21:21:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.16 Mbit/s
95th percentile per-packet one-way delay: 85.086 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.16 Mbit/s
95th percentile per-packet one-way delay: 85.086 ms
Loss rate: 0.00%
```

## Run 2: Report of LEDBAT — Data Link

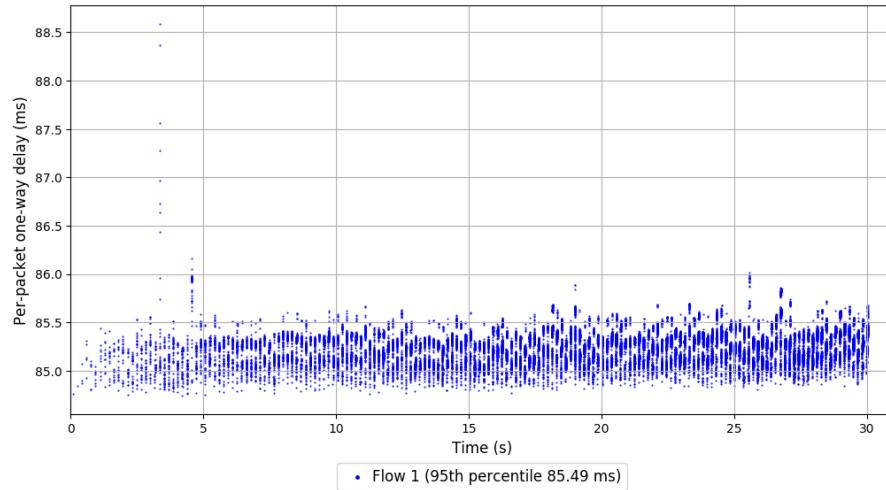
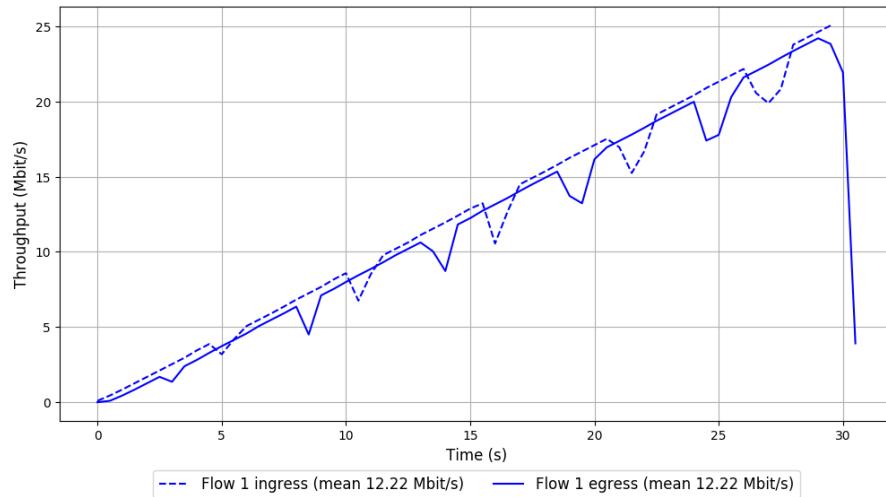


Run 3: Statistics of LEDBAT

```
Start at: 2019-01-02 20:21:23
End at: 2019-01-02 20:21:53
Local clock offset: -1.717 ms
Remote clock offset: -22.882 ms

# Below is generated by plot.py at 2019-01-02 21:21:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.22 Mbit/s
95th percentile per-packet one-way delay: 85.487 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.22 Mbit/s
95th percentile per-packet one-way delay: 85.487 ms
Loss rate: 0.00%
```

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

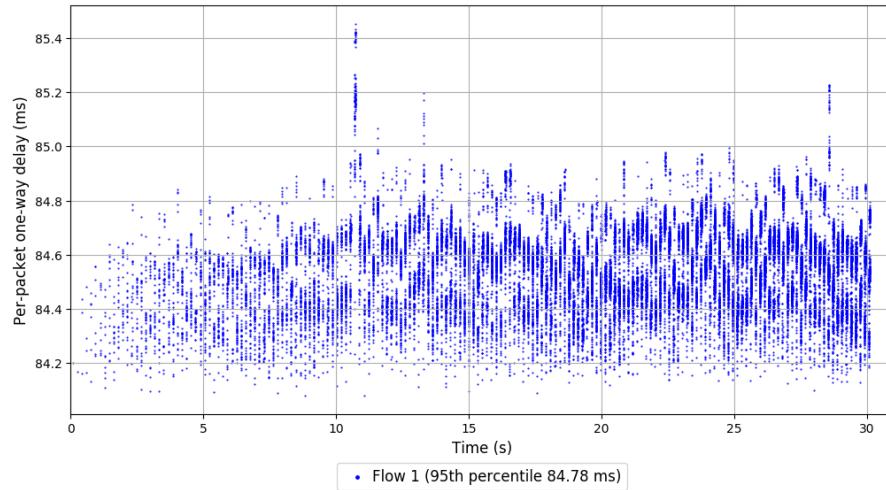
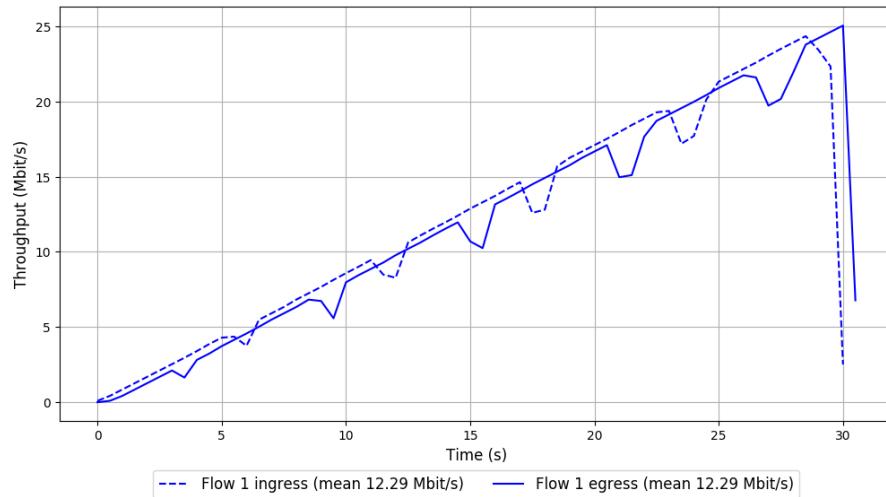


Run 4: Statistics of LEDBAT

```
Start at: 2019-01-02 20:43:35
End at: 2019-01-02 20:44:05
Local clock offset: -5.846 ms
Remote clock offset: -27.641 ms

# Below is generated by plot.py at 2019-01-02 21:21:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.29 Mbit/s
95th percentile per-packet one-way delay: 84.779 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.29 Mbit/s
95th percentile per-packet one-way delay: 84.779 ms
Loss rate: 0.00%
```

## Run 4: Report of LEDBAT — Data Link

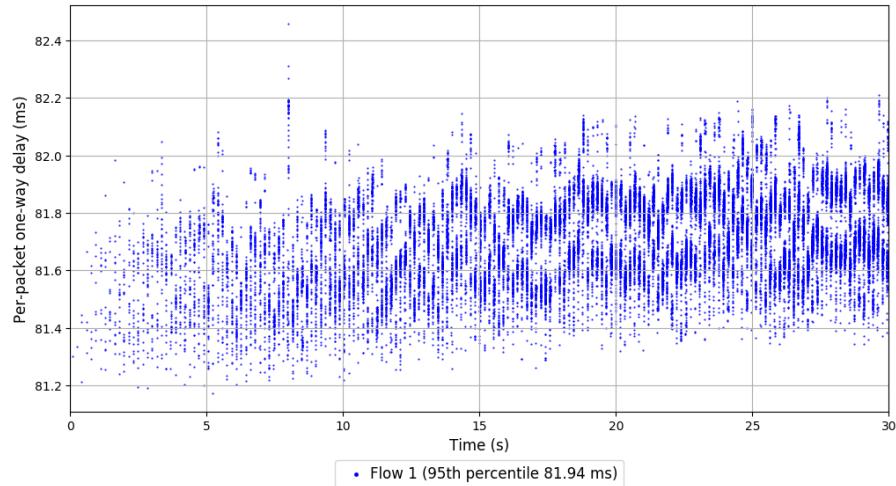
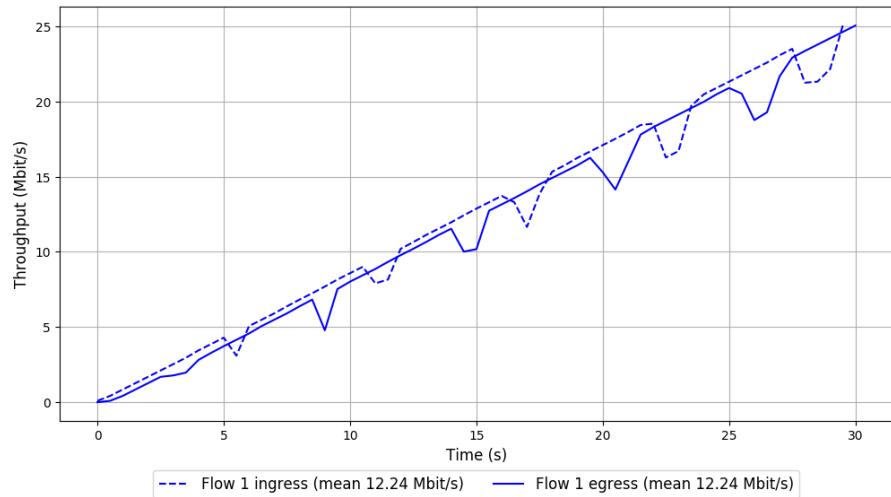


Run 5: Statistics of LEDBAT

```
Start at: 2019-01-02 21:05:47
End at: 2019-01-02 21:06:17
Local clock offset: -2.834 ms
Remote clock offset: -36.656 ms

# Below is generated by plot.py at 2019-01-02 21:21:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.24 Mbit/s
95th percentile per-packet one-way delay: 81.940 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.24 Mbit/s
95th percentile per-packet one-way delay: 81.940 ms
Loss rate: 0.00%
```

## Run 5: Report of LEDBAT — Data Link

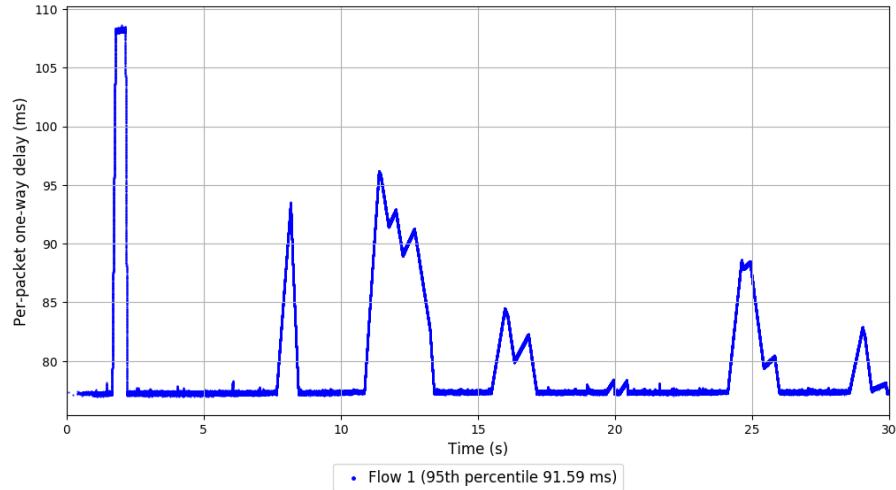
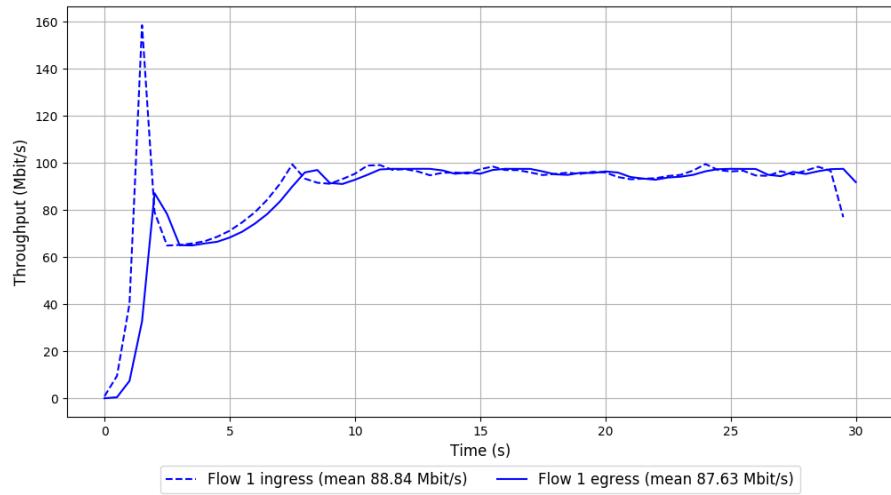


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2019-01-02 19:37:26
End at: 2019-01-02 19:37:56
Local clock offset: -5.24 ms
Remote clock offset: -12.91 ms

# Below is generated by plot.py at 2019-01-02 21:21:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.63 Mbit/s
95th percentile per-packet one-way delay: 91.592 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 87.63 Mbit/s
95th percentile per-packet one-way delay: 91.592 ms
Loss rate: 1.36%
```

Run 1: Report of PCC-Allegro — Data Link

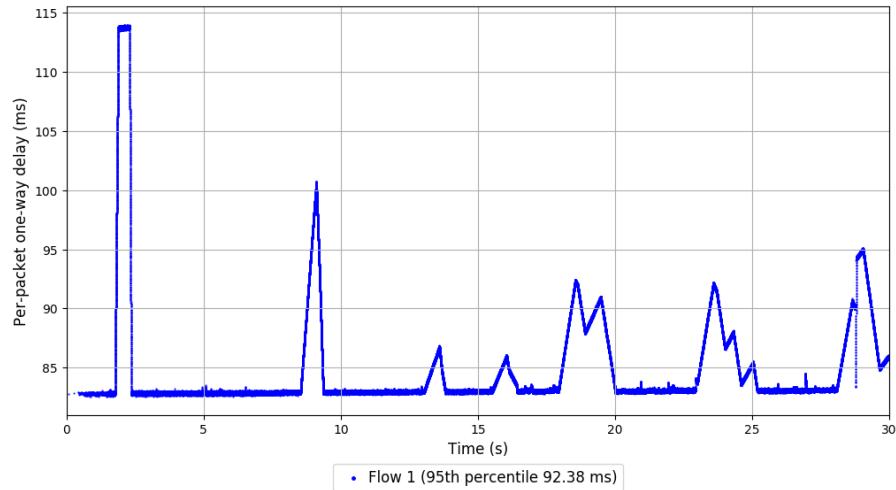
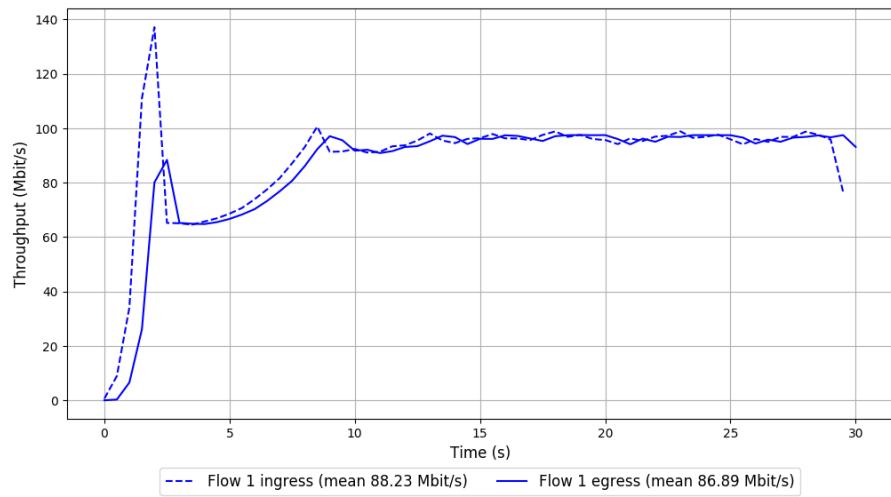


Run 2: Statistics of PCC-Allegro

```
Start at: 2019-01-02 20:00:16
End at: 2019-01-02 20:00:46
Local clock offset: -4.306 ms
Remote clock offset: -21.951 ms

# Below is generated by plot.py at 2019-01-02 21:21:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.89 Mbit/s
95th percentile per-packet one-way delay: 92.377 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 86.89 Mbit/s
95th percentile per-packet one-way delay: 92.377 ms
Loss rate: 1.51%
```

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

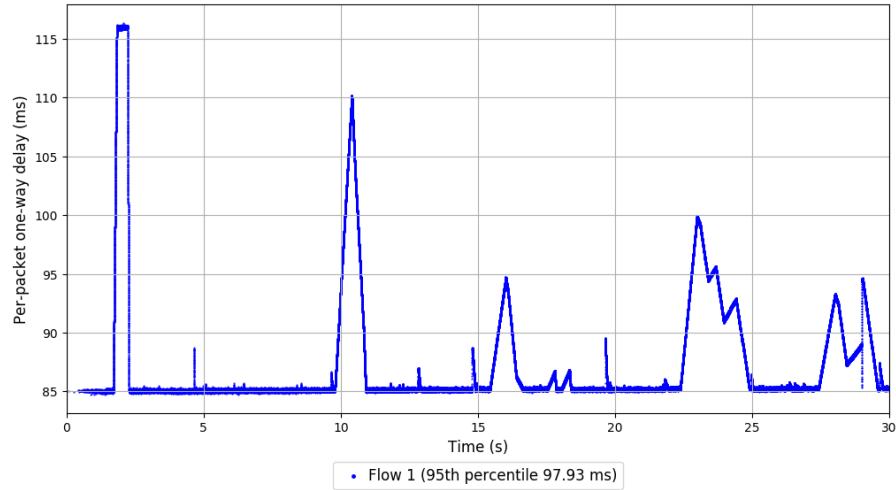
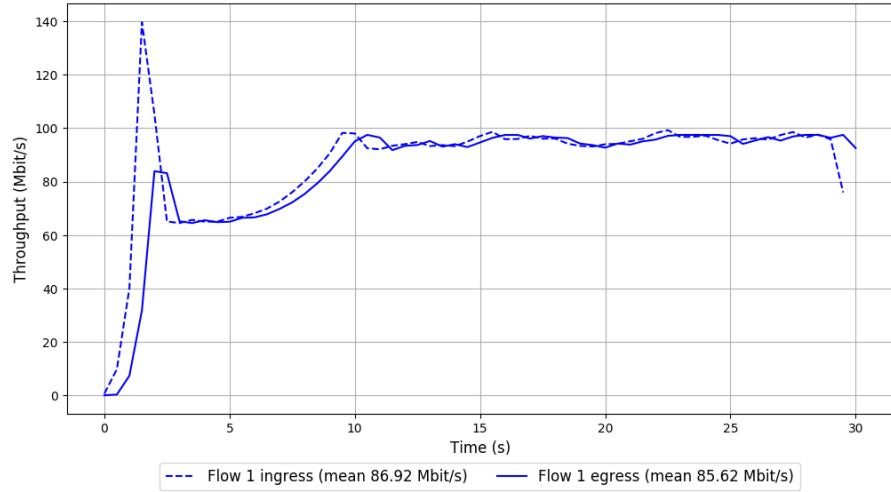


Run 3: Statistics of PCC-Allegro

```
Start at: 2019-01-02 20:22:32
End at: 2019-01-02 20:23:02
Local clock offset: -1.604 ms
Remote clock offset: -23.099 ms

# Below is generated by plot.py at 2019-01-02 21:21:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.62 Mbit/s
95th percentile per-packet one-way delay: 97.930 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 85.62 Mbit/s
95th percentile per-packet one-way delay: 97.930 ms
Loss rate: 1.50%
```

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

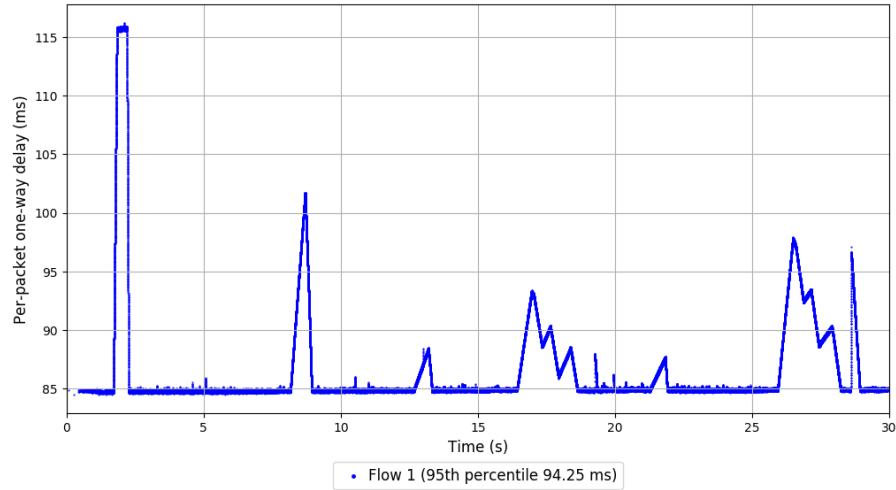
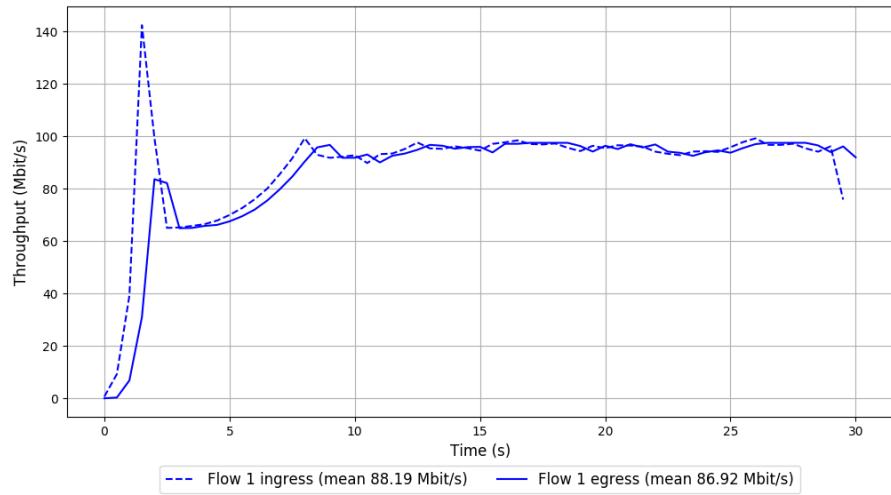


Run 4: Statistics of PCC-Allegro

```
Start at: 2019-01-02 20:44:44
End at: 2019-01-02 20:45:14
Local clock offset: -6.657 ms
Remote clock offset: -28.049 ms

# Below is generated by plot.py at 2019-01-02 21:21:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.92 Mbit/s
95th percentile per-packet one-way delay: 94.246 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 86.92 Mbit/s
95th percentile per-packet one-way delay: 94.246 ms
Loss rate: 1.44%
```

Run 4: Report of PCC-Allegro — Data Link

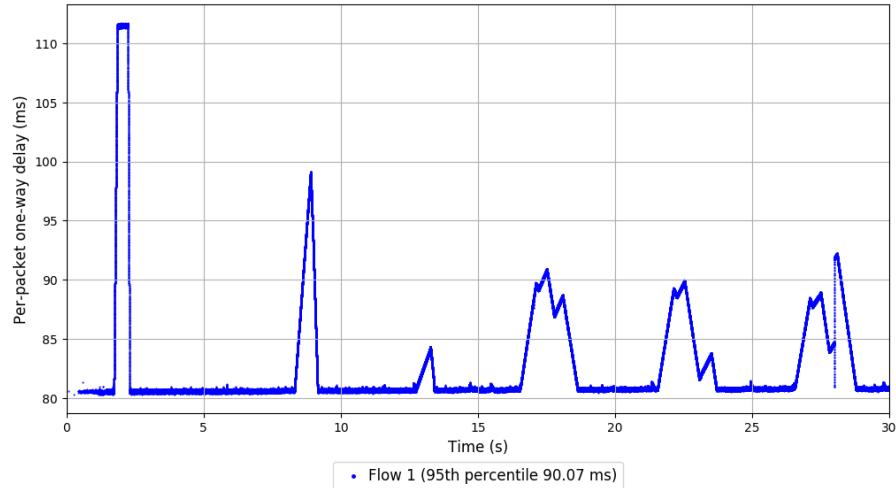
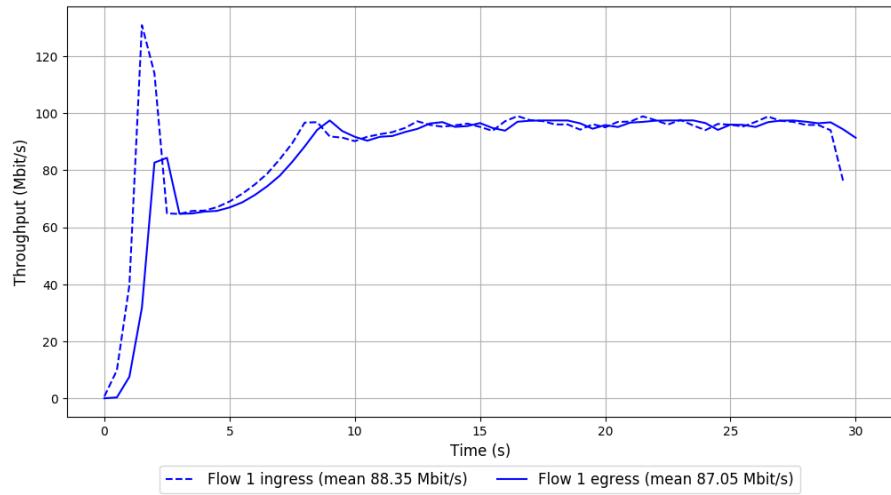


Run 5: Statistics of PCC-Allegro

```
Start at: 2019-01-02 21:06:55
End at: 2019-01-02 21:07:25
Local clock offset: -1.839 ms
Remote clock offset: -36.876 ms

# Below is generated by plot.py at 2019-01-02 21:21:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.05 Mbit/s
95th percentile per-packet one-way delay: 90.067 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 87.05 Mbit/s
95th percentile per-packet one-way delay: 90.067 ms
Loss rate: 1.48%
```

Run 5: Report of PCC-Allegro — Data Link

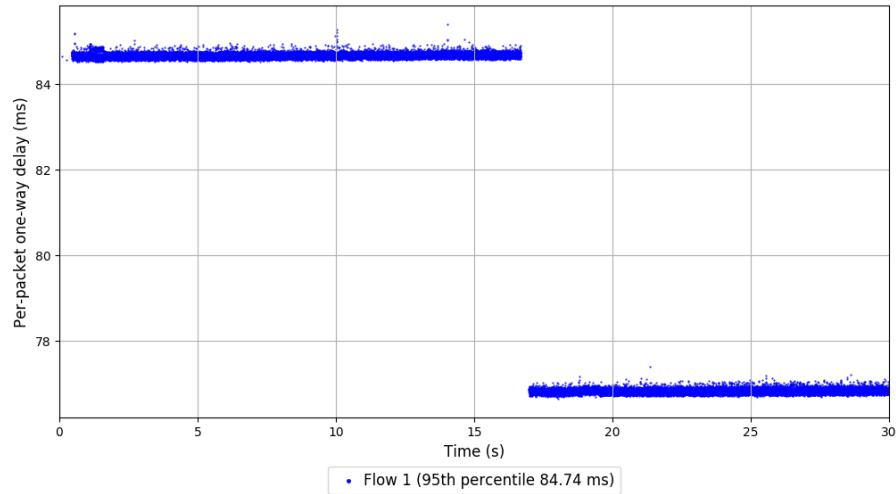
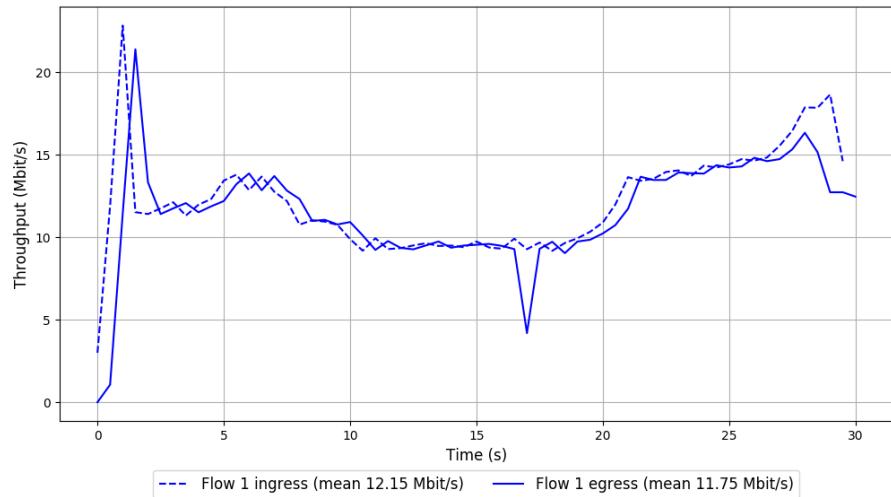


Run 1: Statistics of PCC-Expr

```
Start at: 2019-01-02 19:40:59
End at: 2019-01-02 19:41:30
Local clock offset: -5.636 ms
Remote clock offset: -13.909 ms

# Below is generated by plot.py at 2019-01-02 21:21:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 84.740 ms
Loss rate: 3.35%
-- Flow 1:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 84.740 ms
Loss rate: 3.35%
```

Run 1: Report of PCC-Expr — Data Link

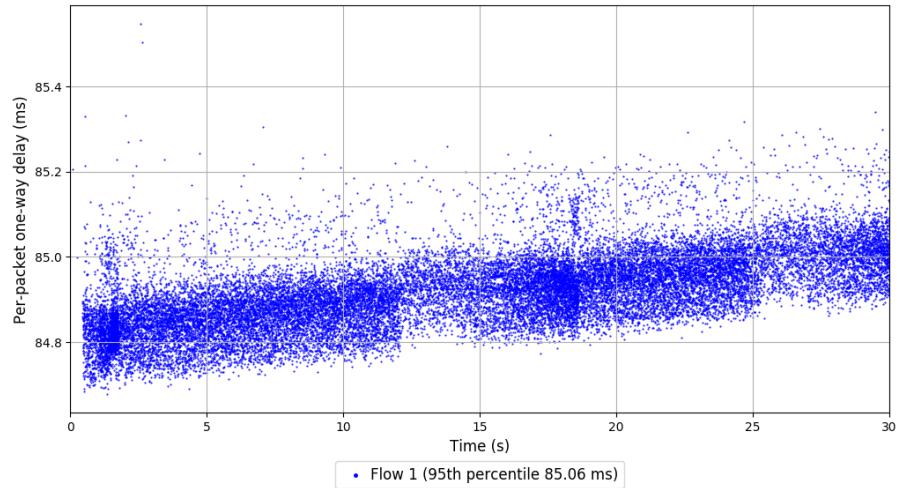
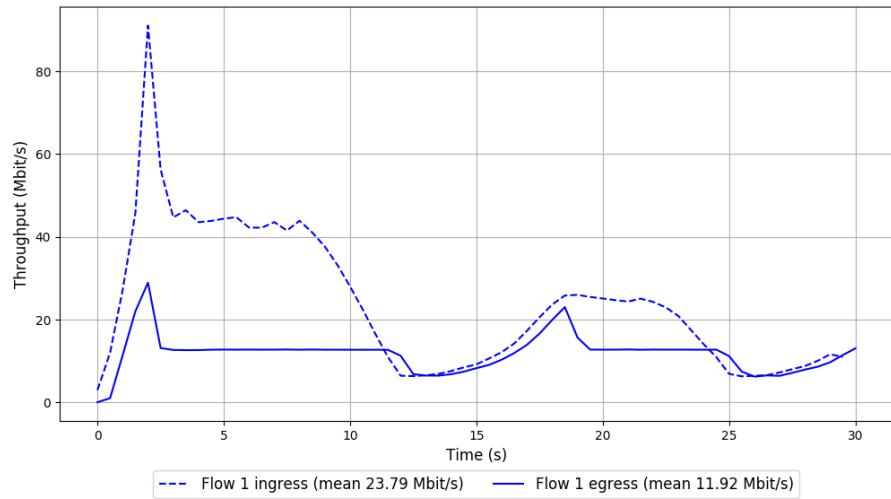


Run 2: Statistics of PCC-Expr

```
Start at: 2019-01-02 20:03:53
End at: 2019-01-02 20:04:23
Local clock offset: -3.557 ms
Remote clock offset: -19.023 ms

# Below is generated by plot.py at 2019-01-02 21:21:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.92 Mbit/s
95th percentile per-packet one-way delay: 85.058 ms
Loss rate: 49.91%
-- Flow 1:
Average throughput: 11.92 Mbit/s
95th percentile per-packet one-way delay: 85.058 ms
Loss rate: 49.91%
```

Run 2: Report of PCC-Expr — Data Link

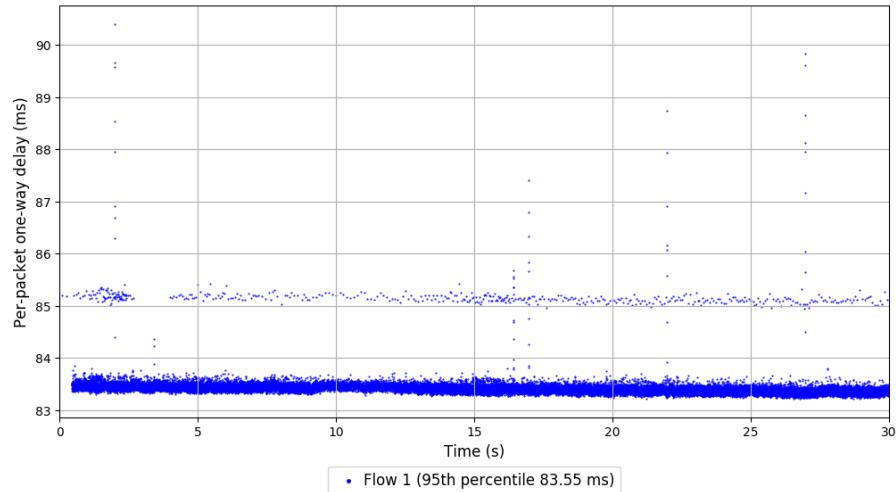
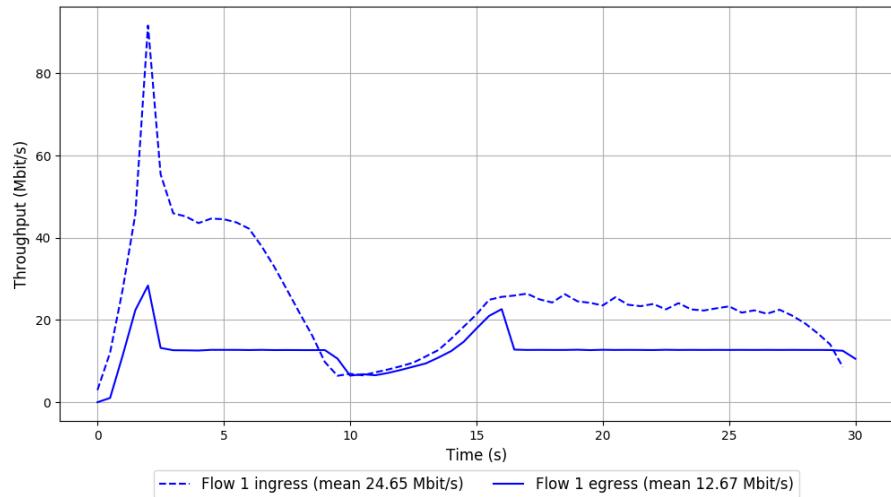


Run 3: Statistics of PCC-Expr

```
Start at: 2019-01-02 20:26:05
End at: 2019-01-02 20:26:35
Local clock offset: -1.597 ms
Remote clock offset: -24.175 ms

# Below is generated by plot.py at 2019-01-02 21:21:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.67 Mbit/s
95th percentile per-packet one-way delay: 83.551 ms
Loss rate: 48.63%
-- Flow 1:
Average throughput: 12.67 Mbit/s
95th percentile per-packet one-way delay: 83.551 ms
Loss rate: 48.63%
```

Run 3: Report of PCC-Expr — Data Link

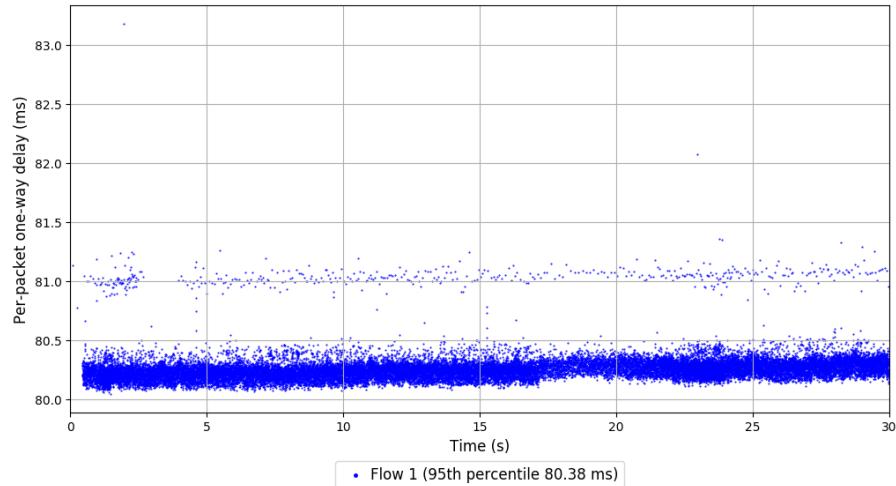
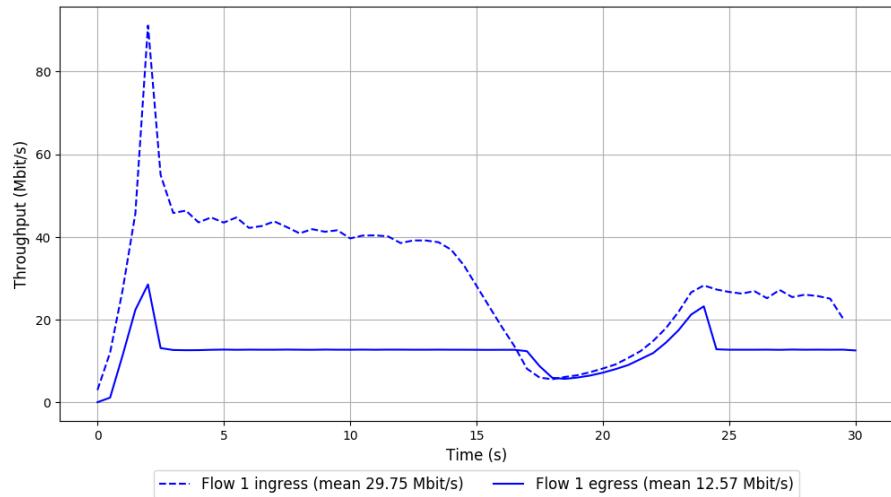


Run 4: Statistics of PCC-Expr

```
Start at: 2019-01-02 20:48:18
End at: 2019-01-02 20:48:48
Local clock offset: -6.146 ms
Remote clock offset: -32.648 ms

# Below is generated by plot.py at 2019-01-02 21:21:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.57 Mbit/s
95th percentile per-packet one-way delay: 80.381 ms
Loss rate: 57.73%
-- Flow 1:
Average throughput: 12.57 Mbit/s
95th percentile per-packet one-way delay: 80.381 ms
Loss rate: 57.73%
```

Run 4: Report of PCC-Expr — Data Link

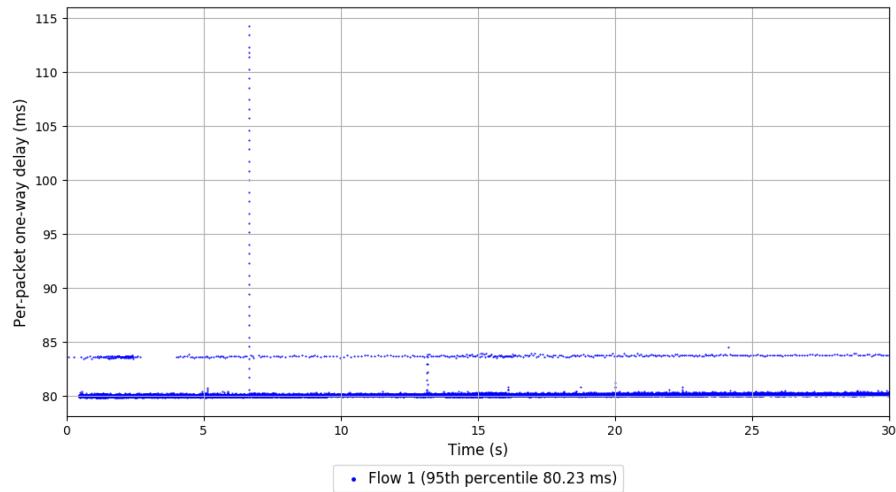
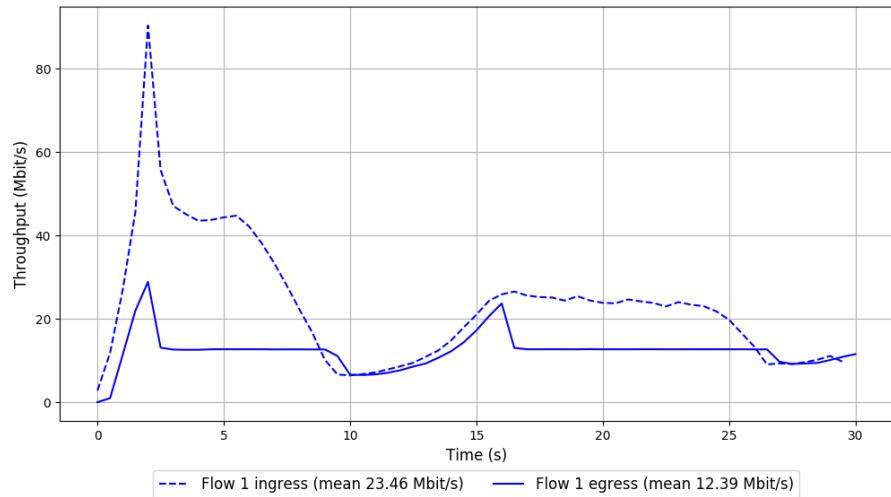


Run 5: Statistics of PCC-Expr

```
Start at: 2019-01-02 21:10:29
End at: 2019-01-02 21:10:59
Local clock offset: -1.218 ms
Remote clock offset: -37.97 ms

# Below is generated by plot.py at 2019-01-02 21:21:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.39 Mbit/s
95th percentile per-packet one-way delay: 80.229 ms
Loss rate: 47.21%
-- Flow 1:
Average throughput: 12.39 Mbit/s
95th percentile per-packet one-way delay: 80.229 ms
Loss rate: 47.21%
```

Run 5: Report of PCC-Expr — Data Link

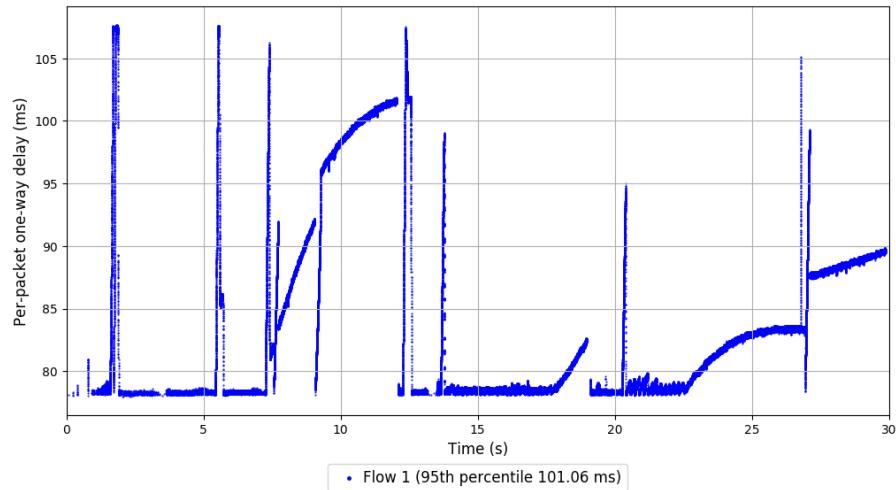
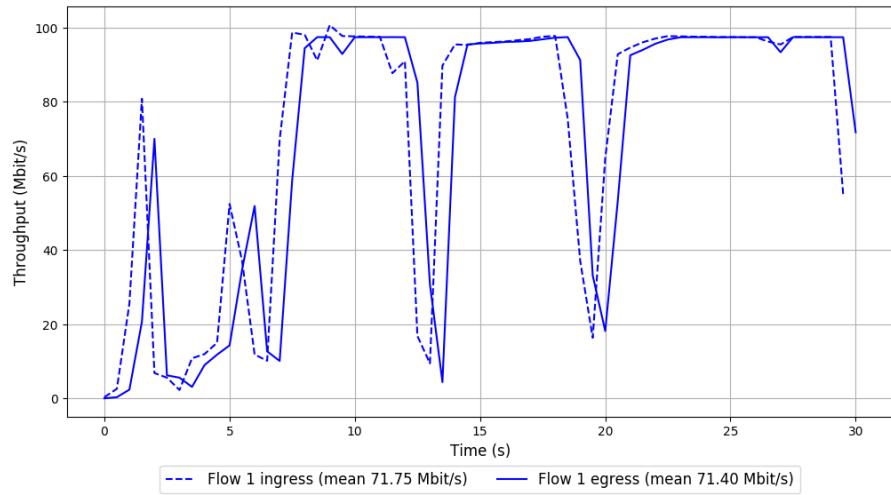


```
Run 1: Statistics of QUIC Cubic

Start at: 2019-01-02 19:31:37
End at: 2019-01-02 19:32:07
Local clock offset: -4.035 ms
Remote clock offset: -12.041 ms

# Below is generated by plot.py at 2019-01-02 21:22:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.40 Mbit/s
95th percentile per-packet one-way delay: 101.055 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 71.40 Mbit/s
95th percentile per-packet one-way delay: 101.055 ms
Loss rate: 0.46%
```

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

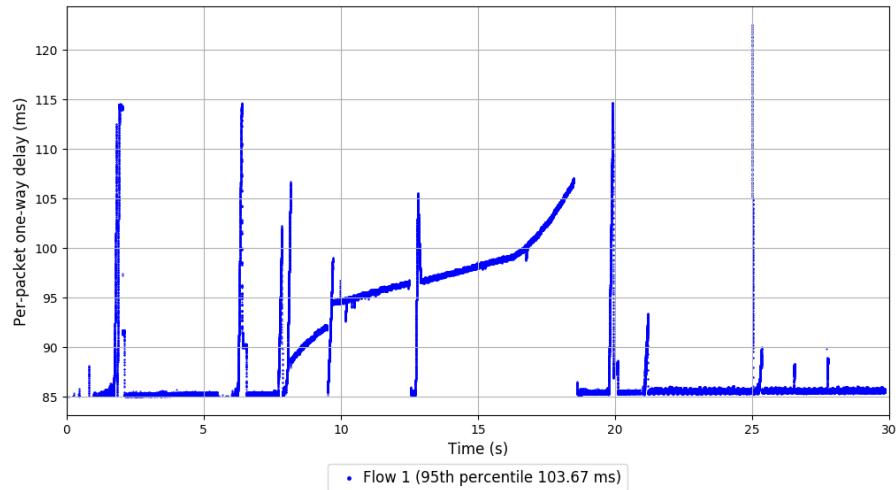
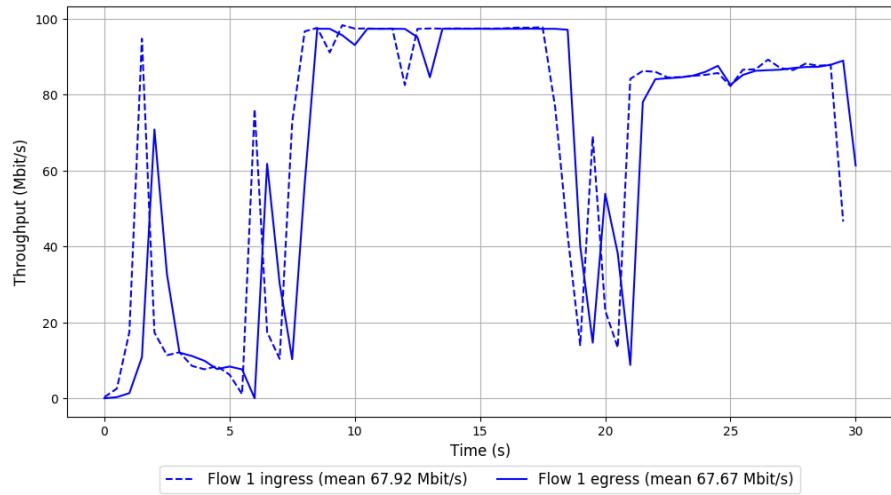


Run 2: Statistics of QUIC Cubic

```
Start at: 2019-01-02 19:54:08
End at: 2019-01-02 19:54:38
Local clock offset: -5.631 ms
Remote clock offset: -16.743 ms

# Below is generated by plot.py at 2019-01-02 21:22:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.67 Mbit/s
95th percentile per-packet one-way delay: 103.673 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 67.67 Mbit/s
95th percentile per-packet one-way delay: 103.673 ms
Loss rate: 0.37%
```

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

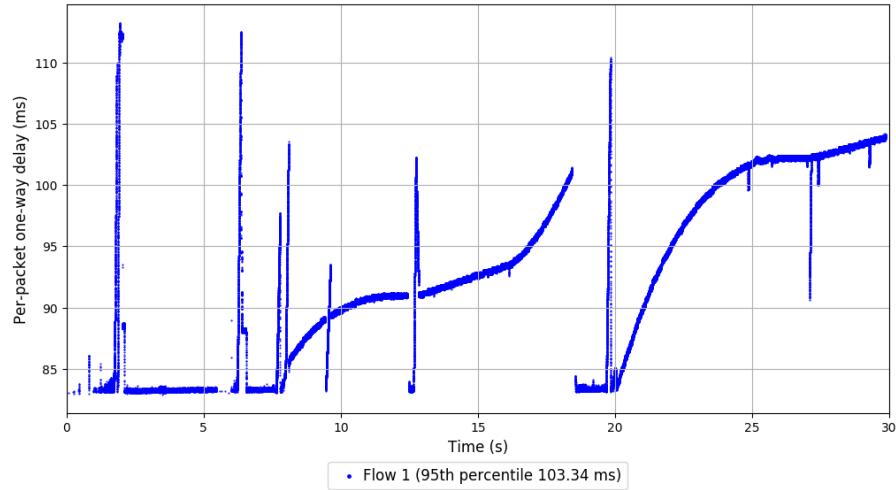
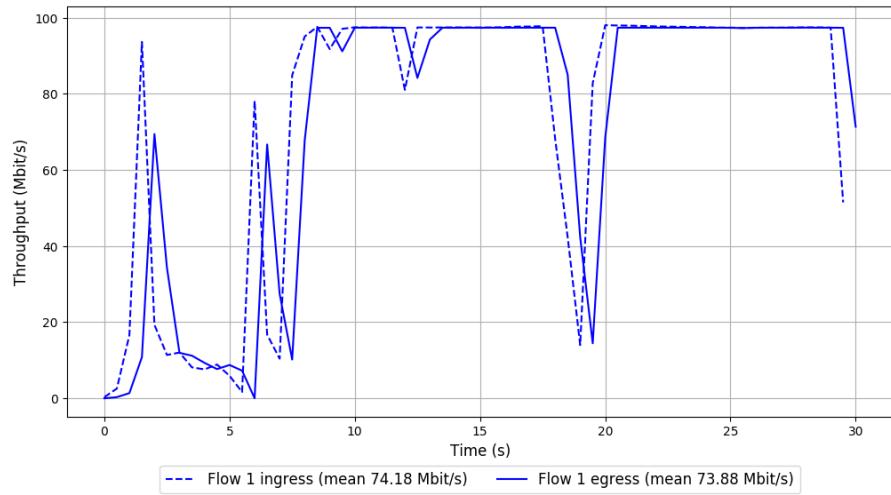


Run 3: Statistics of QUIC Cubic

```
Start at: 2019-01-02 20:16:40
End at: 2019-01-02 20:17:10
Local clock offset: -2.003 ms
Remote clock offset: -25.774 ms

# Below is generated by plot.py at 2019-01-02 21:22:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.88 Mbit/s
95th percentile per-packet one-way delay: 103.342 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 73.88 Mbit/s
95th percentile per-packet one-way delay: 103.342 ms
Loss rate: 0.34%
```

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

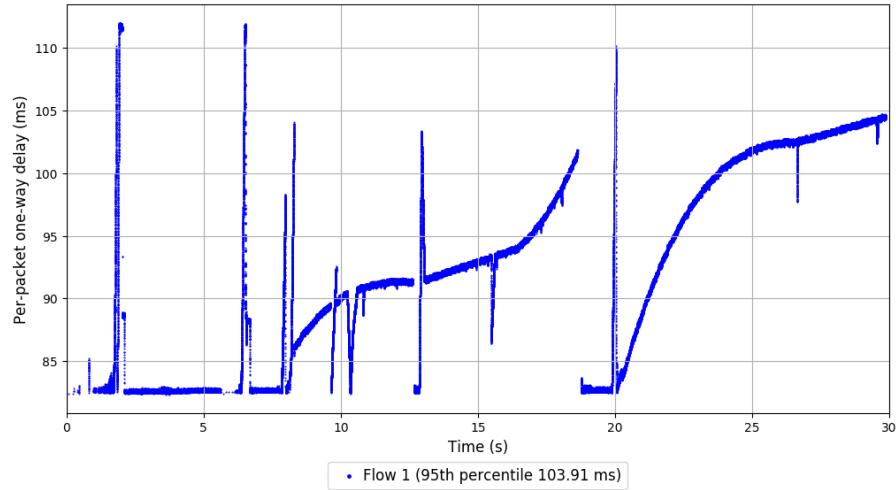
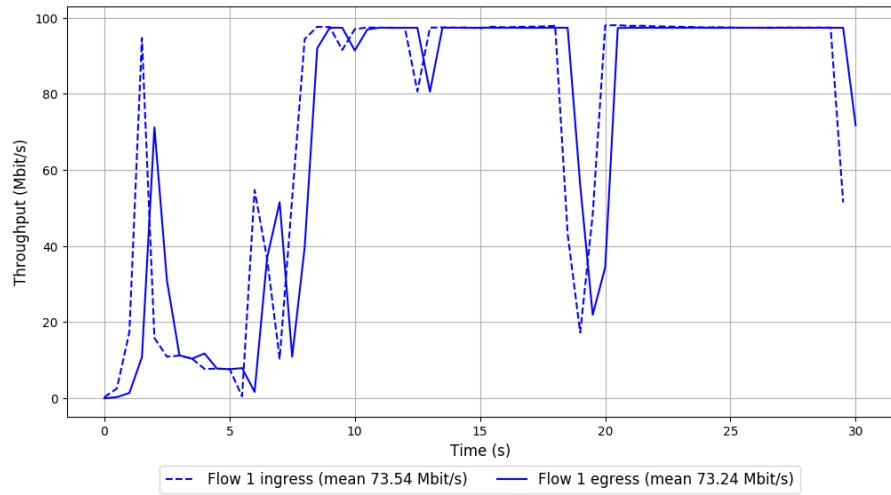


Run 4: Statistics of QUIC Cubic

```
Start at: 2019-01-02 20:38:52
End at: 2019-01-02 20:39:22
Local clock offset: -6.03 ms
Remote clock offset: -30.509 ms

# Below is generated by plot.py at 2019-01-02 21:22:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.24 Mbit/s
95th percentile per-packet one-way delay: 103.911 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 73.24 Mbit/s
95th percentile per-packet one-way delay: 103.911 ms
Loss rate: 0.34%
```

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

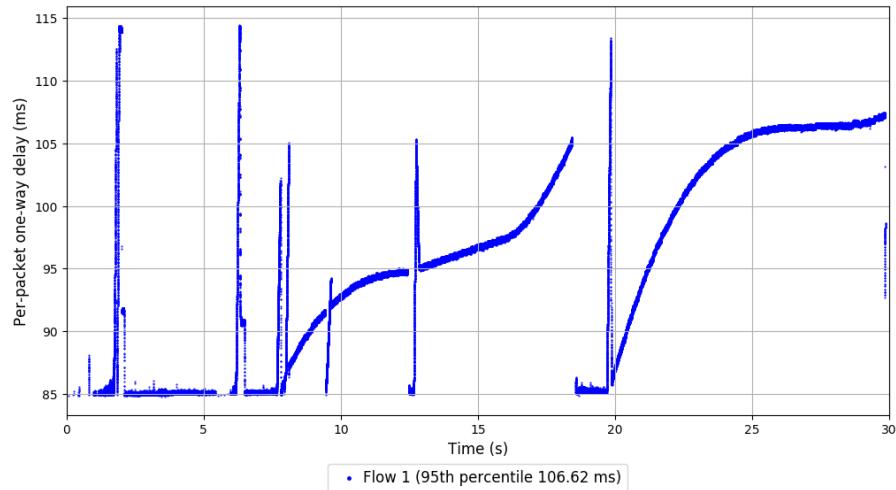
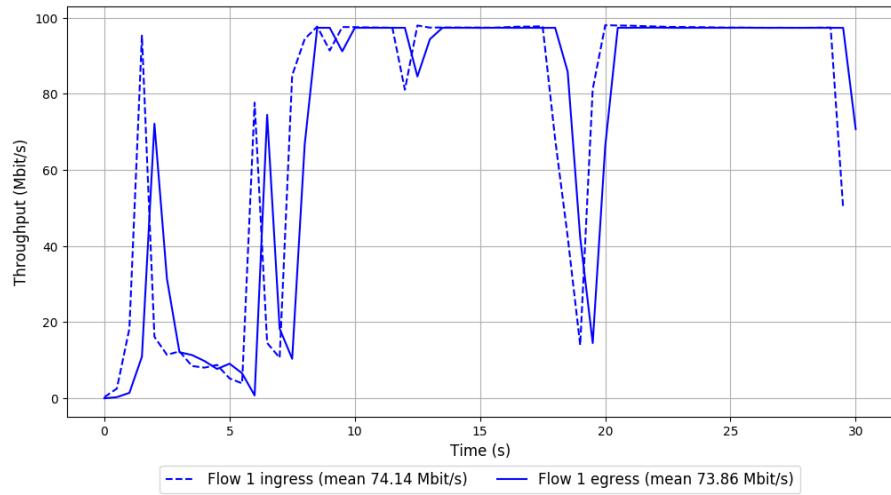


Run 5: Statistics of QUIC Cubic

```
Start at: 2019-01-02 21:01:05
End at: 2019-01-02 21:01:35
Local clock offset: -3.359 ms
Remote clock offset: -31.68 ms

# Below is generated by plot.py at 2019-01-02 21:22:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.86 Mbit/s
95th percentile per-packet one-way delay: 106.616 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 73.86 Mbit/s
95th percentile per-packet one-way delay: 106.616 ms
Loss rate: 0.34%
```

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

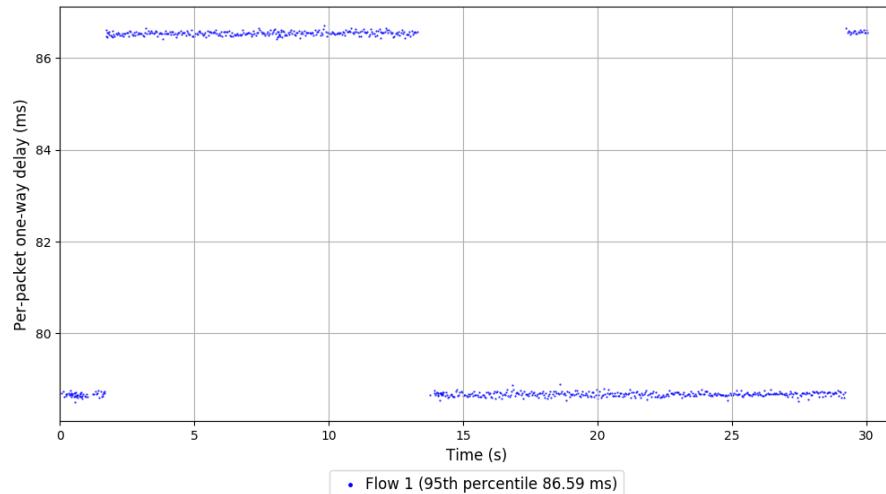
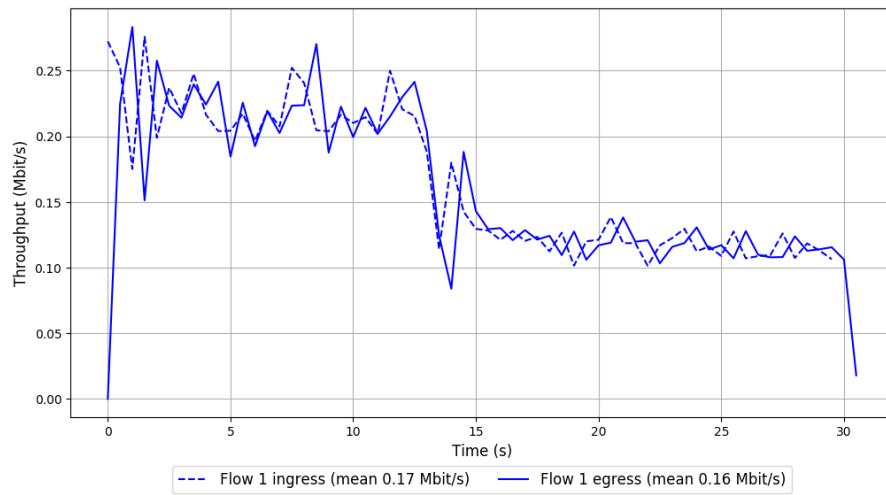


```
Run 1: Statistics of SCReAM

Start at: 2019-01-02 19:43:28
End at: 2019-01-02 19:43:58
Local clock offset: -5.884 ms
Remote clock offset: -14.312 ms

# Below is generated by plot.py at 2019-01-02 21:22:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 86.591 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 86.591 ms
Loss rate: 1.12%
```

Run 1: Report of SCReAM — Data Link

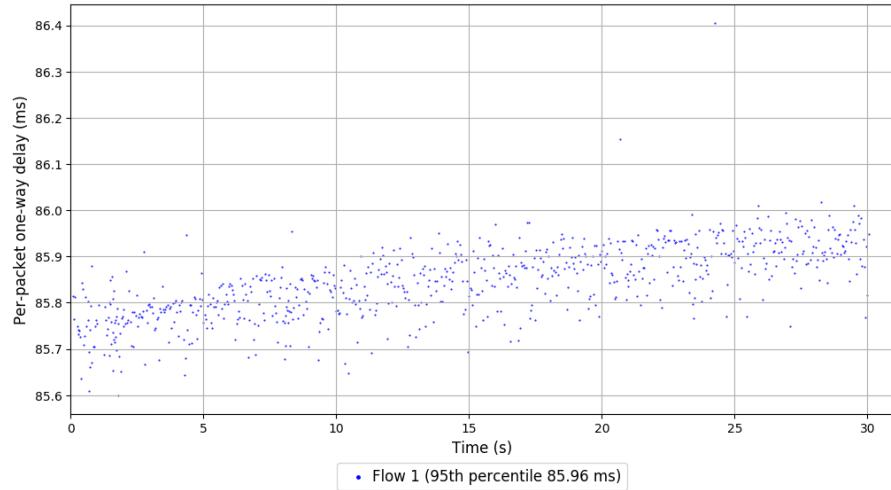
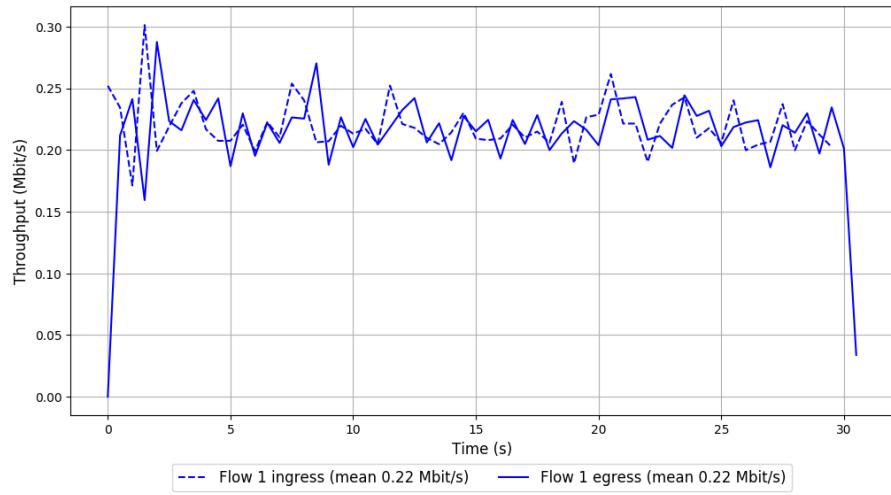


Run 2: Statistics of SCReAM

```
Start at: 2019-01-02 20:06:13
End at: 2019-01-02 20:06:43
Local clock offset: -2.396 ms
Remote clock offset: -19.573 ms

# Below is generated by plot.py at 2019-01-02 21:22:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.957 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.957 ms
Loss rate: 0.00%
```

## Run 2: Report of SCReAM — Data Link

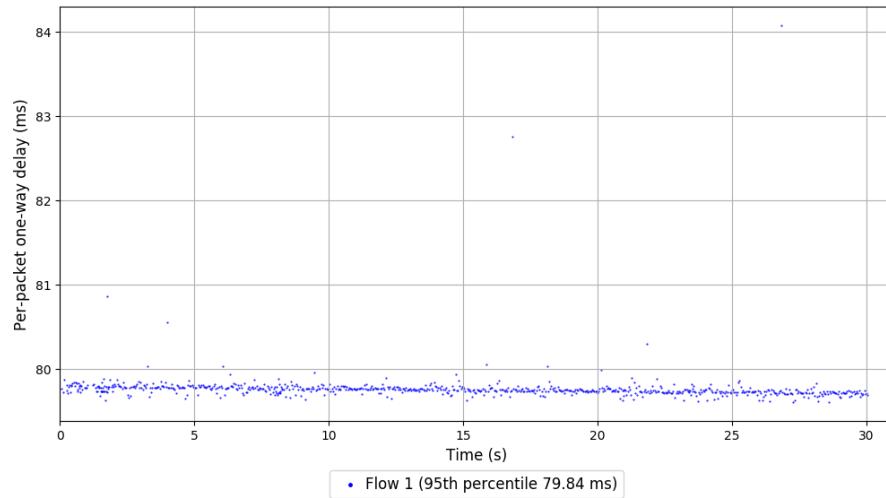
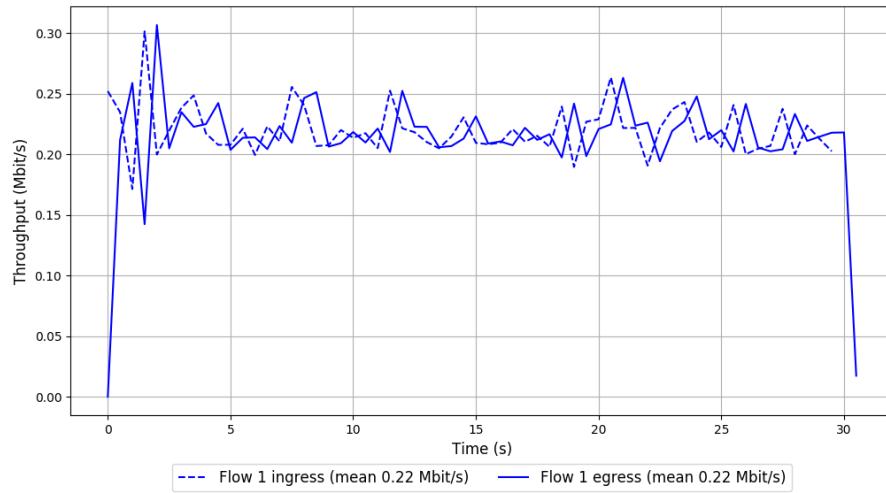


Run 3: Statistics of SCReAM

```
Start at: 2019-01-02 20:28:25
End at: 2019-01-02 20:28:55
Local clock offset: -2.685 ms
Remote clock offset: -28.395 ms

# Below is generated by plot.py at 2019-01-02 21:22:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.837 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.837 ms
Loss rate: 0.00%
```

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

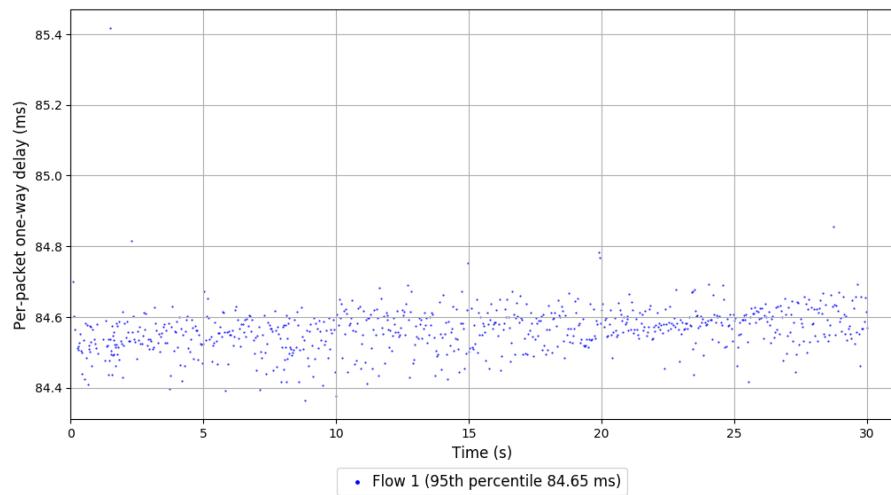
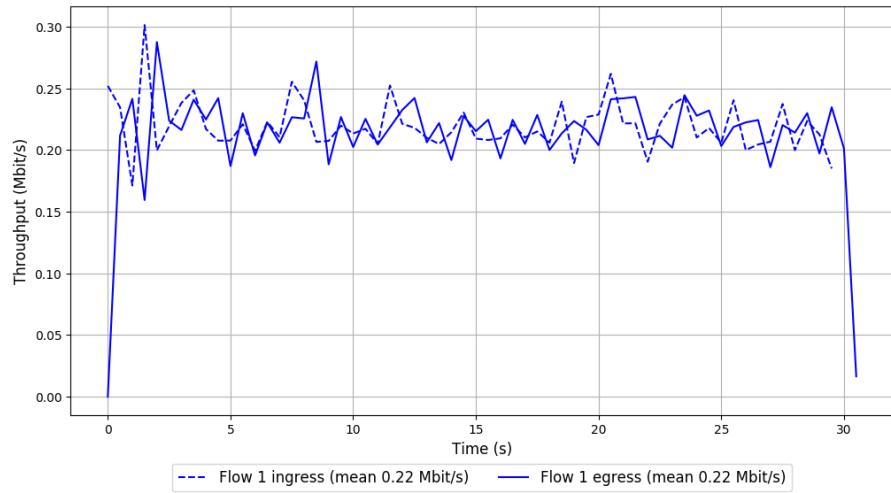


Run 4: Statistics of SCReAM

```
Start at: 2019-01-02 20:50:38
End at: 2019-01-02 20:51:08
Local clock offset: -6.289 ms
Remote clock offset: -29.284 ms

# Below is generated by plot.py at 2019-01-02 21:22:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.649 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.649 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

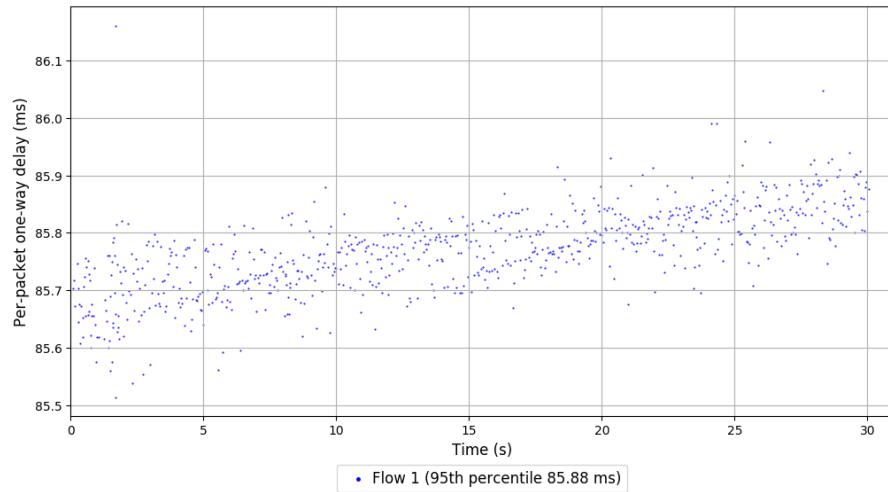
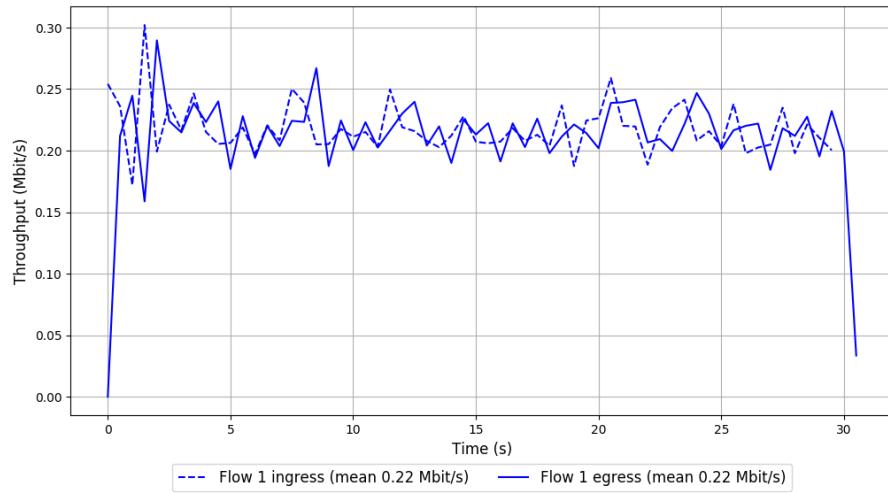


Run 5: Statistics of SCReAM

```
Start at: 2019-01-02 21:12:50
End at: 2019-01-02 21:13:20
Local clock offset: -0.916 ms
Remote clock offset: -34.519 ms

# Below is generated by plot.py at 2019-01-02 21:22:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.884 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.884 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

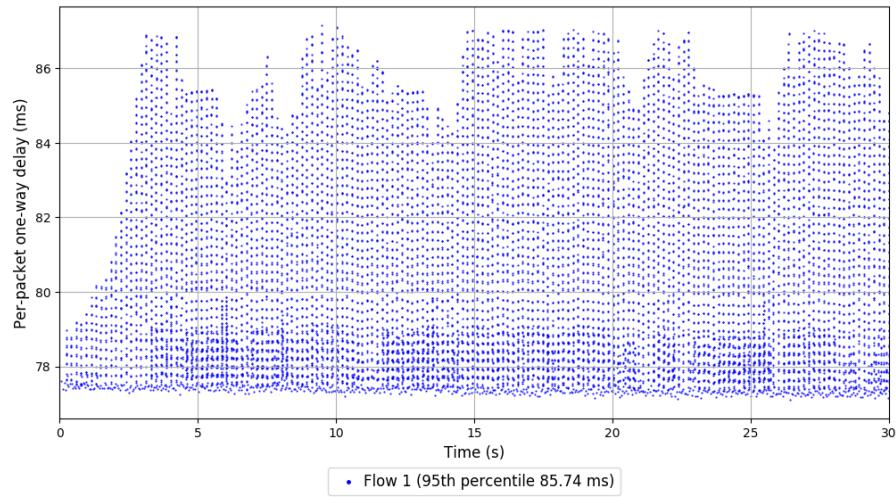
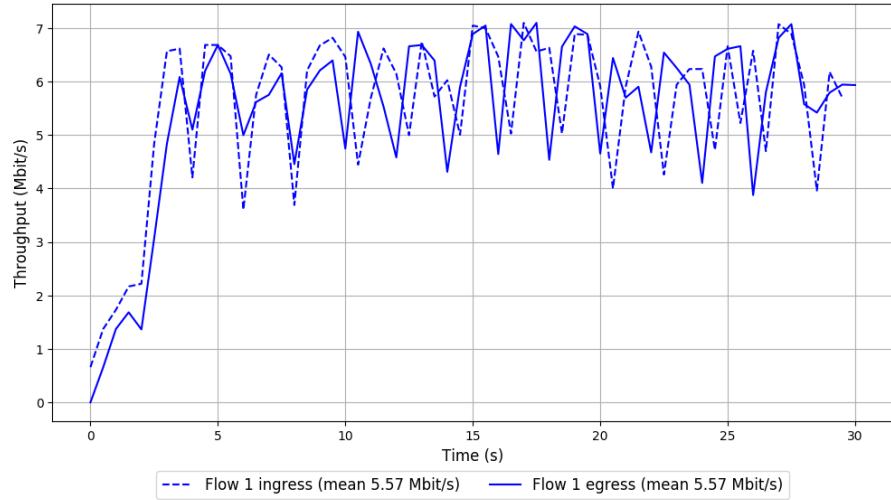


Run 1: Statistics of Sprout

```
Start at: 2019-01-02 19:24:36
End at: 2019-01-02 19:25:06
Local clock offset: -0.775 ms
Remote clock offset: -10.029 ms

# Below is generated by plot.py at 2019-01-02 21:22:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.57 Mbit/s
95th percentile per-packet one-way delay: 85.736 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.57 Mbit/s
95th percentile per-packet one-way delay: 85.736 ms
Loss rate: 0.00%
```

## Run 1: Report of Sprout — Data Link

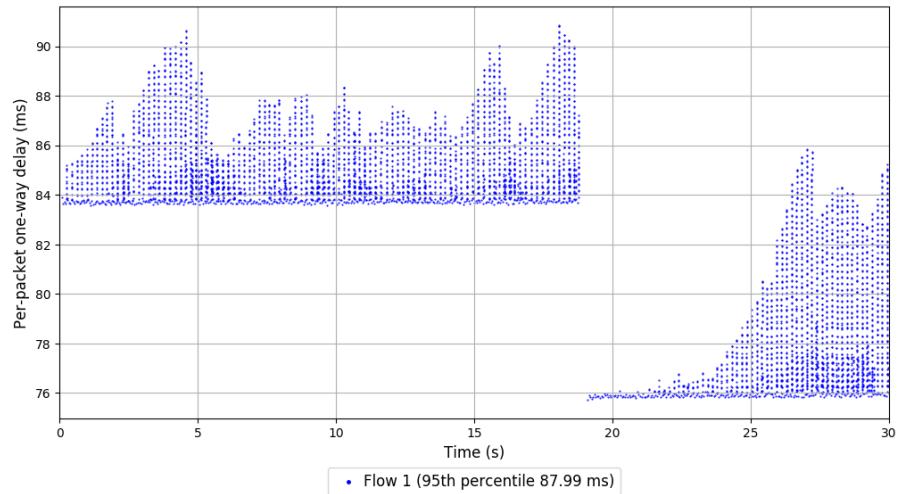
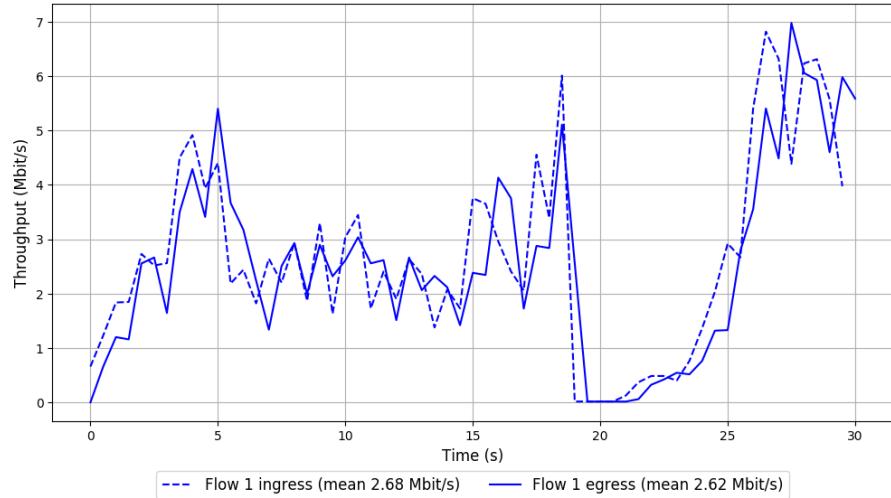


Run 2: Statistics of Sprout

```
Start at: 2019-01-02 19:46:54
End at: 2019-01-02 19:47:24
Local clock offset: -5.308 ms
Remote clock offset: -15.311 ms

# Below is generated by plot.py at 2019-01-02 21:22:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.62 Mbit/s
95th percentile per-packet one-way delay: 87.991 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 2.62 Mbit/s
95th percentile per-packet one-way delay: 87.991 ms
Loss rate: 2.15%
```

## Run 2: Report of Sprout — Data Link

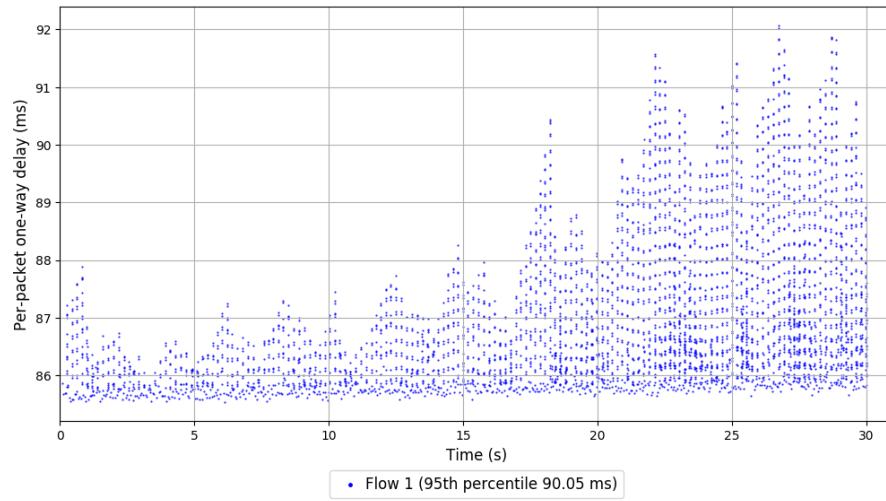
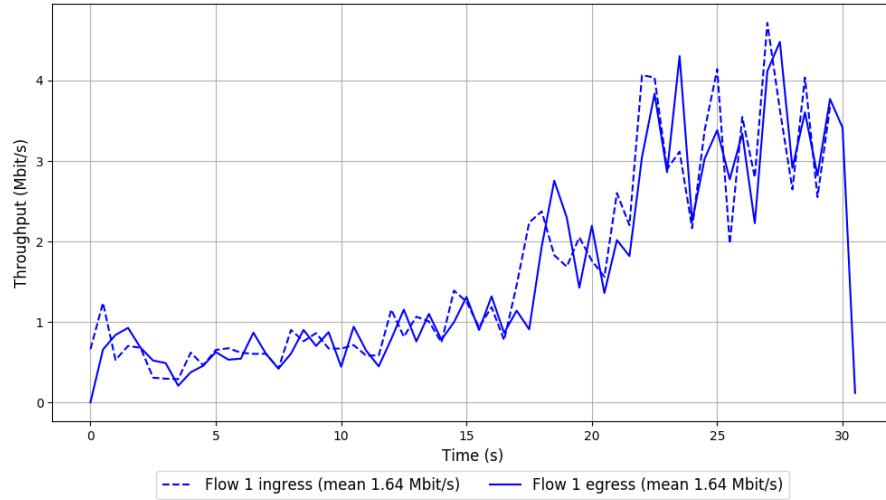


Run 3: Statistics of Sprout

```
Start at: 2019-01-02 20:09:40
End at: 2019-01-02 20:10:10
Local clock offset: -1.909 ms
Remote clock offset: -20.292 ms

# Below is generated by plot.py at 2019-01-02 21:22:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 90.053 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 90.053 ms
Loss rate: 0.14%
```

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

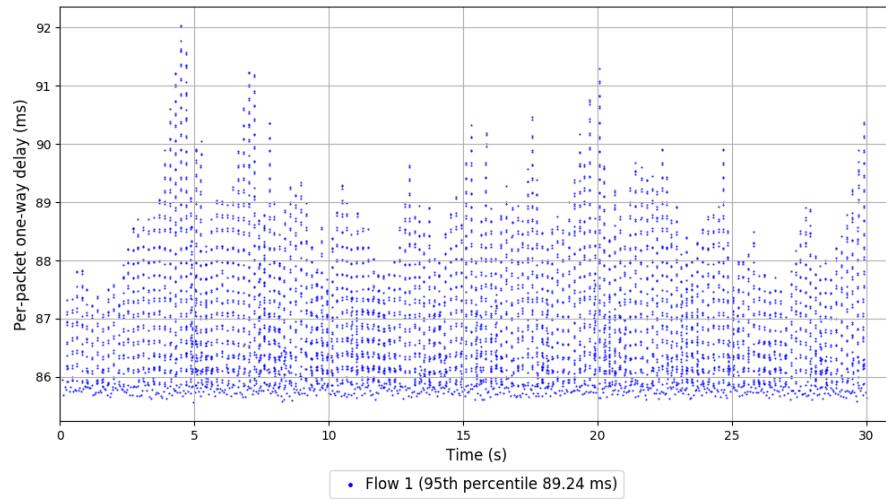
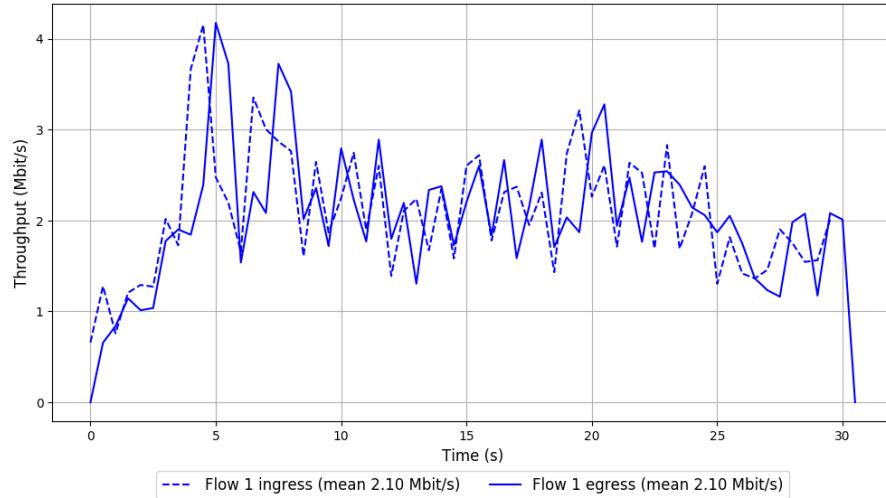


Run 4: Statistics of Sprout

```
Start at: 2019-01-02 20:31:52
End at: 2019-01-02 20:32:22
Local clock offset: -3.947 ms
Remote clock offset: -25.004 ms

# Below is generated by plot.py at 2019-01-02 21:22:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 89.242 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 89.242 ms
Loss rate: 0.00%
```

## Run 4: Report of Sprout — Data Link

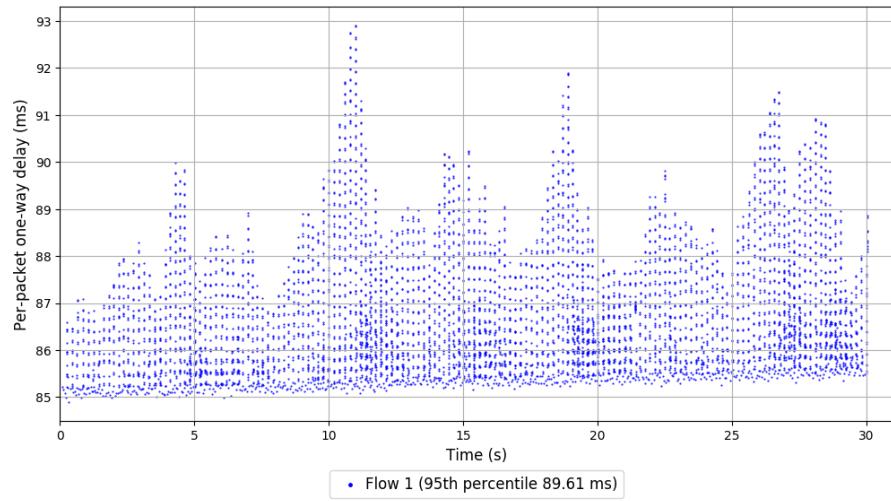
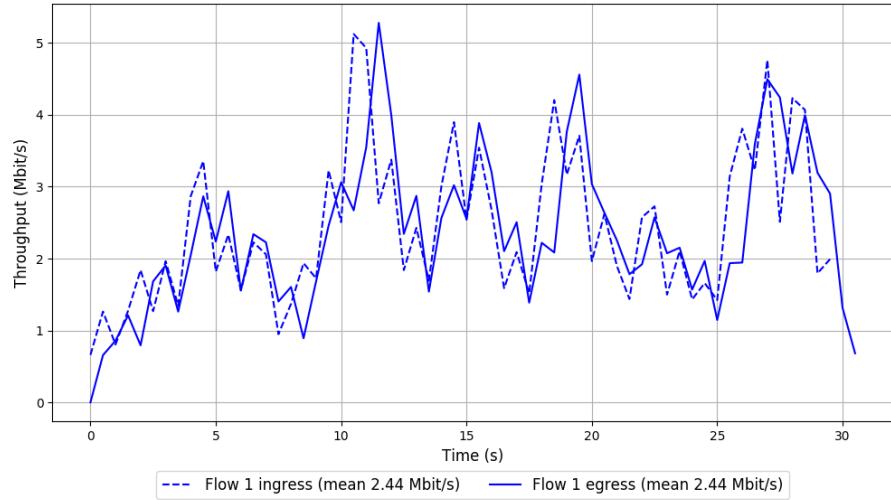


Run 5: Statistics of Sprout

```
Start at: 2019-01-02 20:54:04
End at: 2019-01-02 20:54:34
Local clock offset: -7.289 ms
Remote clock offset: -30.412 ms

# Below is generated by plot.py at 2019-01-02 21:22:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 89.608 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 89.608 ms
Loss rate: 0.00%
```

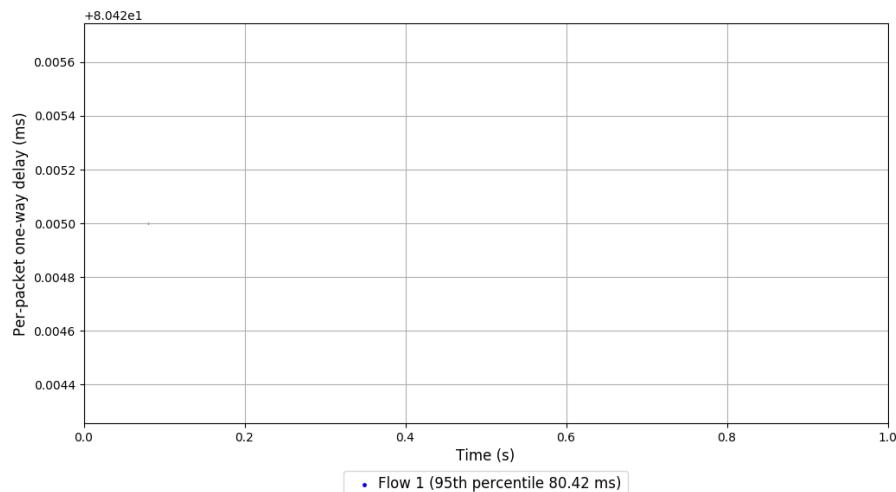
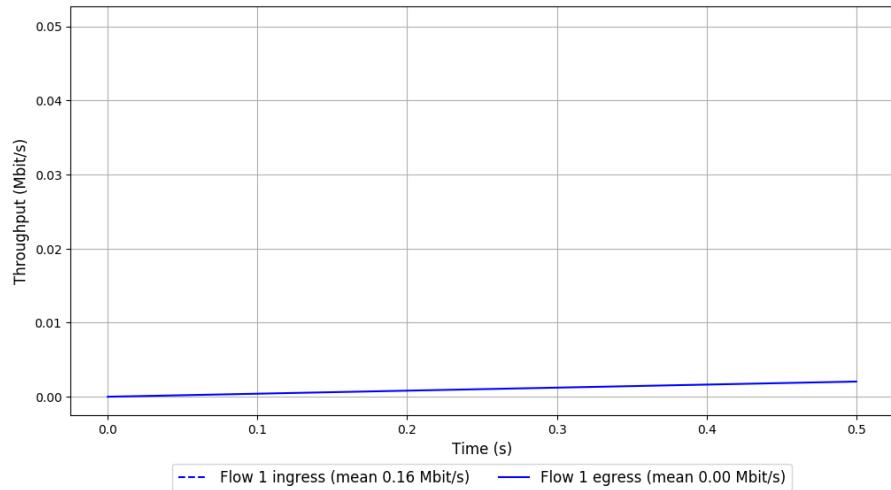
## Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-01-02 19:33:59  
End at: 2019-01-02 19:34:29  
Local clock offset: -4.609 ms  
Remote clock offset: -12.292 ms

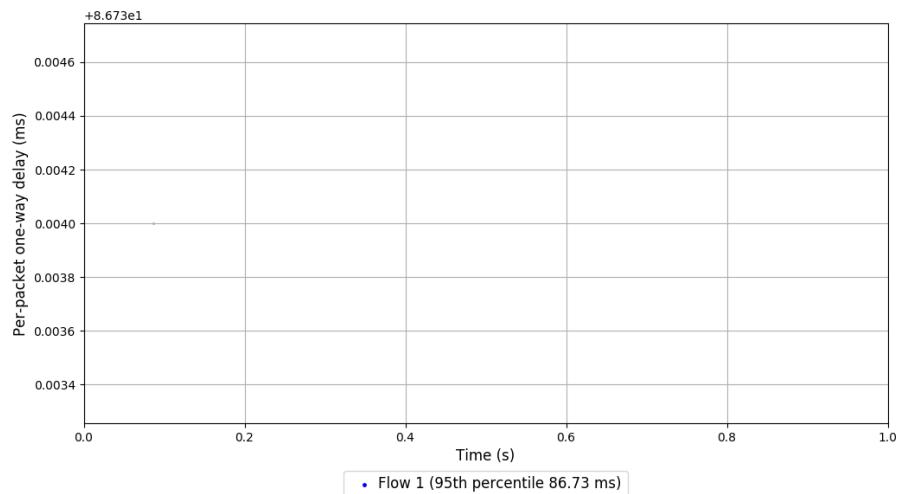
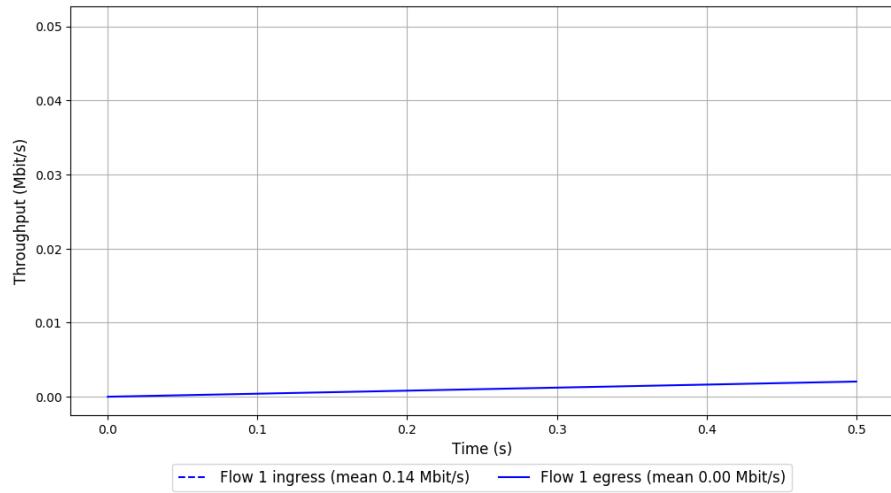
Run 1: Report of TaoVA-100x — Data Link



Run 2: Statistics of TaoVA-100x

Start at: 2019-01-02 19:56:44  
End at: 2019-01-02 19:57:14  
Local clock offset: -5.408 ms  
Remote clock offset: -17.738 ms

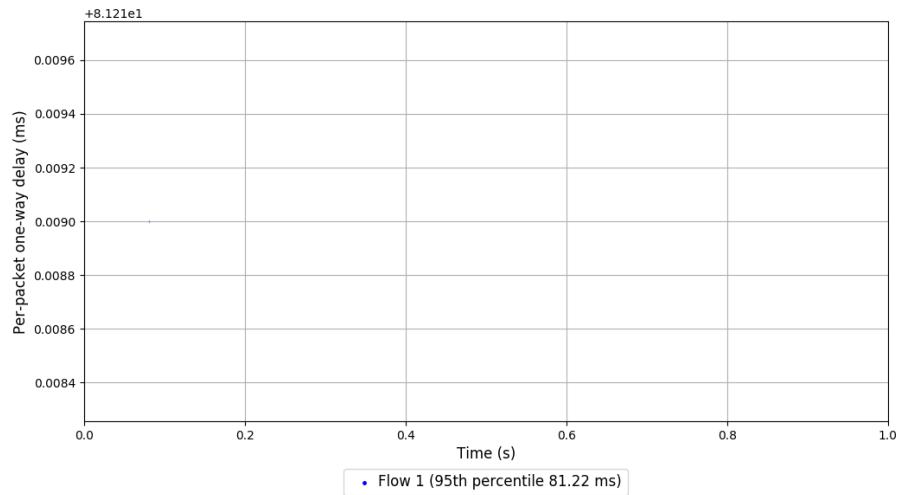
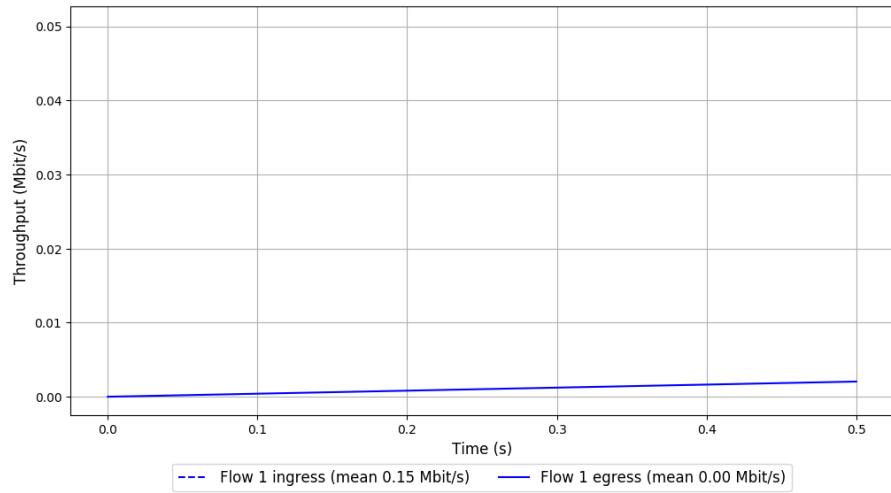
## Run 2: Report of TaoVA-100x — Data Link



Run 3: Statistics of TaoVA-100x

Start at: 2019-01-02 20:19:04  
End at: 2019-01-02 20:19:34  
Local clock offset: -1.821 ms  
Remote clock offset: -26.082 ms

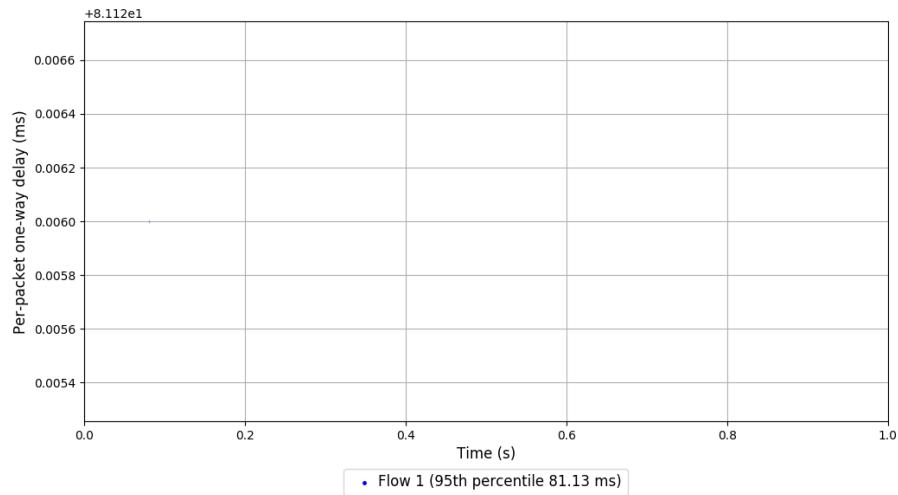
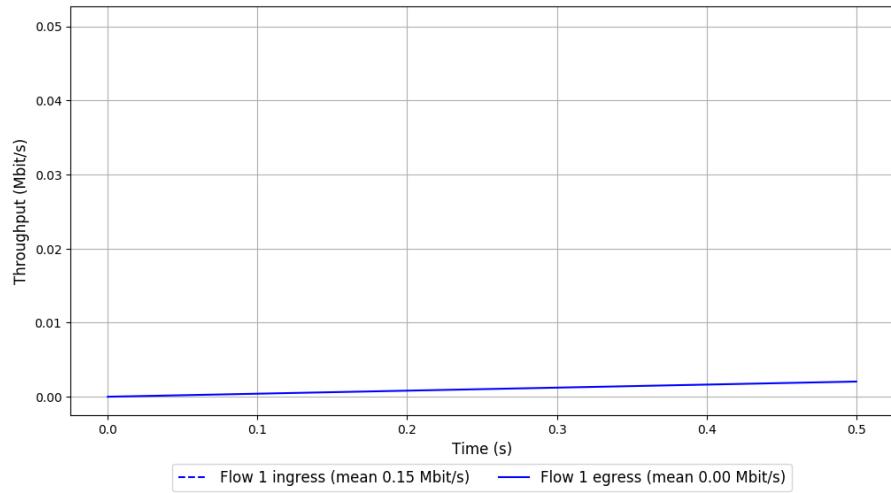
### Run 3: Report of TaoVA-100x — Data Link



Run 4: Statistics of TaoVA-100x

Start at: 2019-01-02 20:41:15  
End at: 2019-01-02 20:41:45  
Local clock offset: -6.329 ms  
Remote clock offset: -31.106 ms

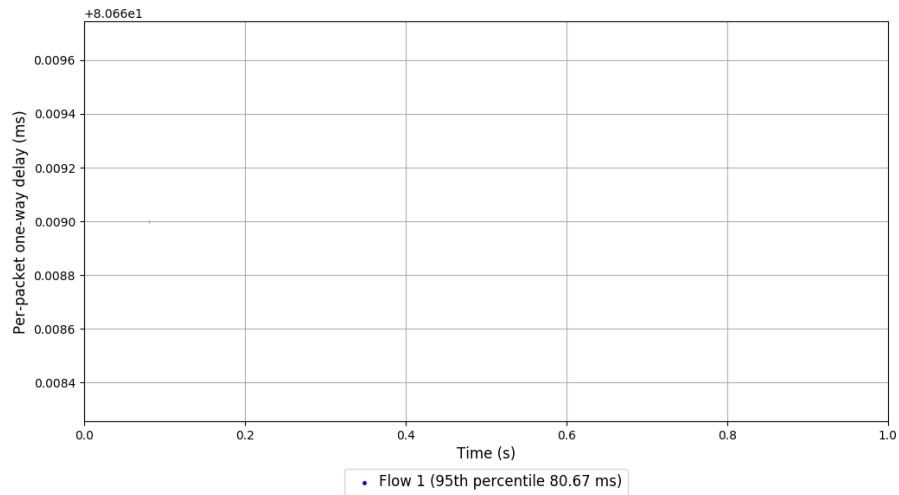
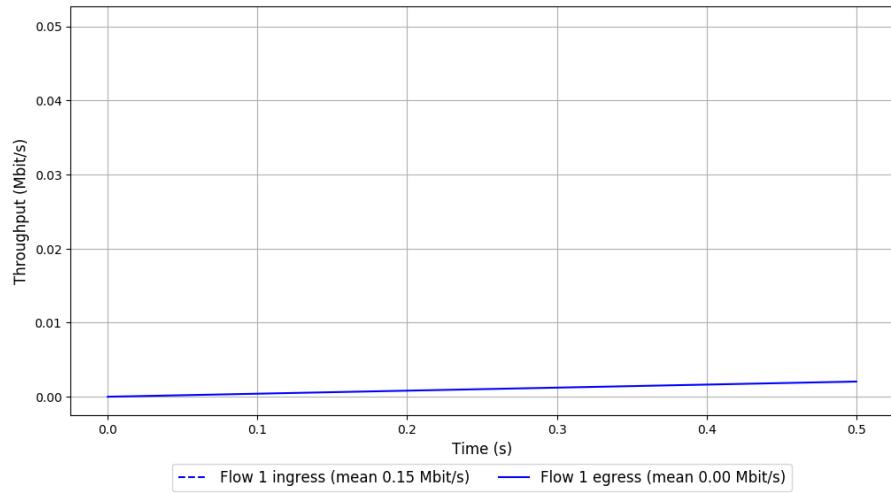
Run 4: Report of TaoVA-100x — Data Link



Run 5: Statistics of TaoVA-100x

Start at: 2019-01-02 21:03:28  
End at: 2019-01-02 21:03:59  
Local clock offset: -2.58 ms  
Remote clock offset: -36.066 ms

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

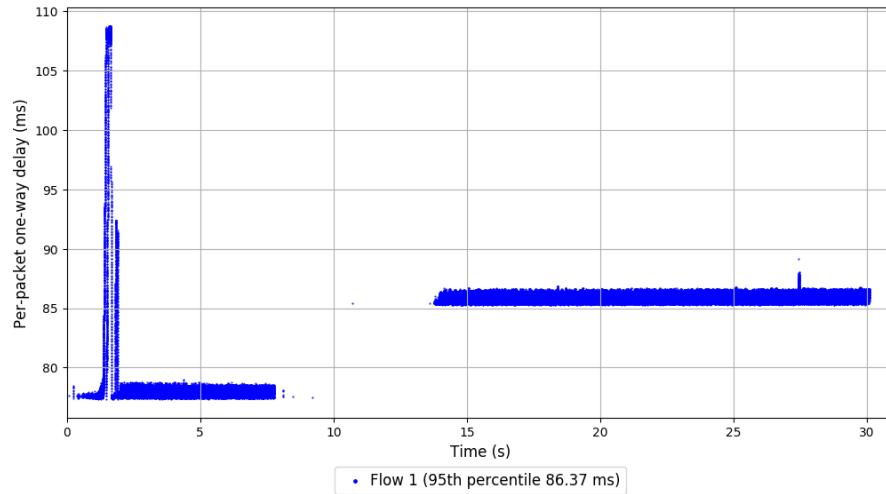
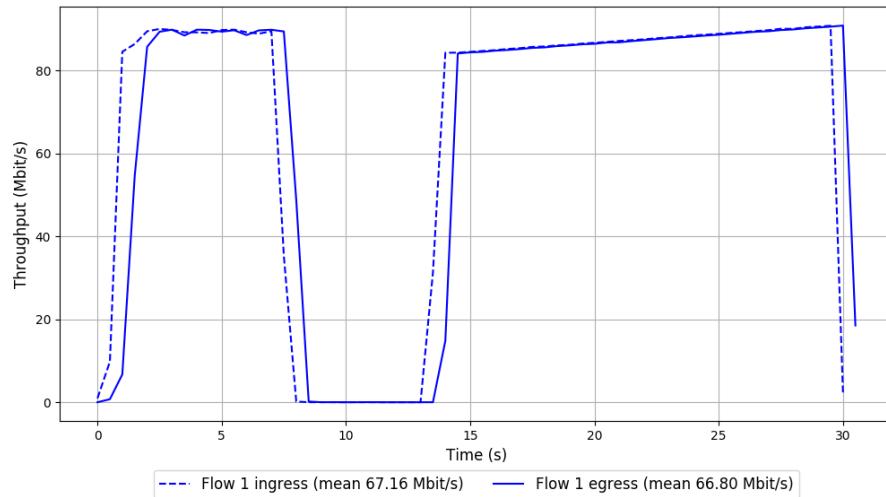


Run 1: Statistics of TCP Vegas

```
Start at: 2019-01-02 19:39:48
End at: 2019-01-02 19:40:18
Local clock offset: -5.621 ms
Remote clock offset: -14.772 ms

# Below is generated by plot.py at 2019-01-02 21:22:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.80 Mbit/s
95th percentile per-packet one-way delay: 86.374 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 66.80 Mbit/s
95th percentile per-packet one-way delay: 86.374 ms
Loss rate: 0.51%
```

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

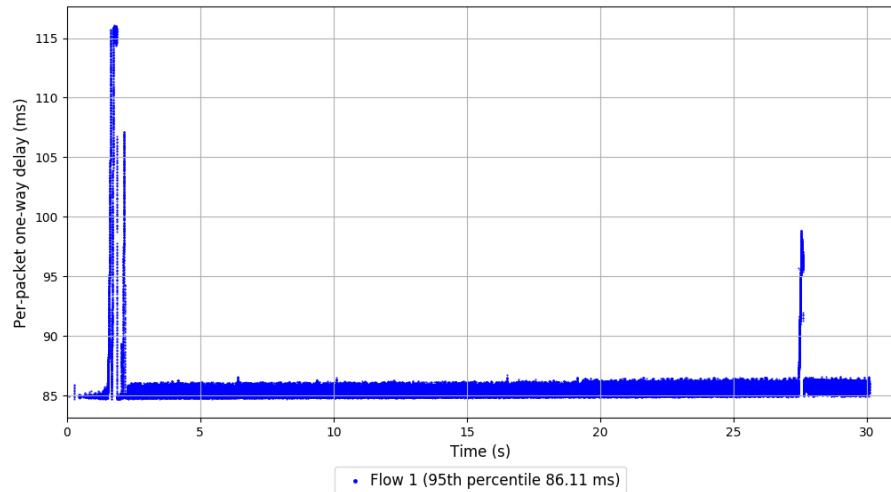
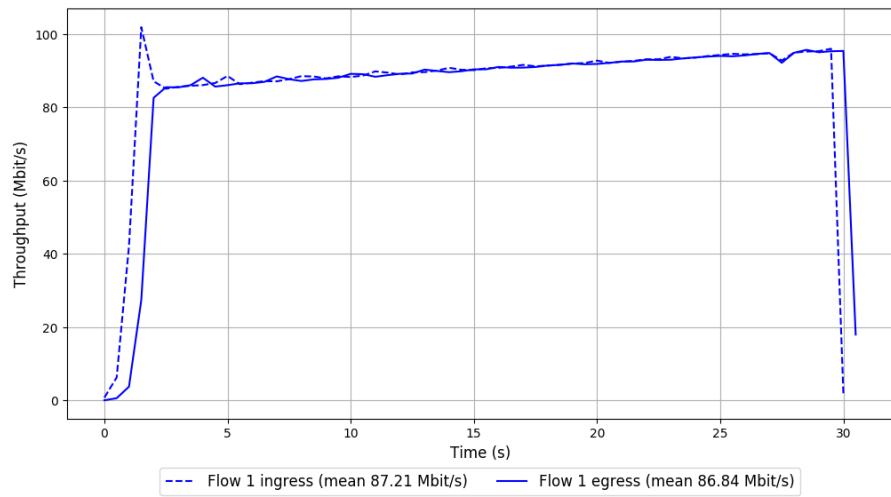


Run 2: Statistics of TCP Vegas

```
Start at: 2019-01-02 20:02:40
End at: 2019-01-02 20:03:10
Local clock offset: -3.764 ms
Remote clock offset: -22.402 ms

# Below is generated by plot.py at 2019-01-02 21:22:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.84 Mbit/s
95th percentile per-packet one-way delay: 86.106 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 86.84 Mbit/s
95th percentile per-packet one-way delay: 86.106 ms
Loss rate: 0.43%
```

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

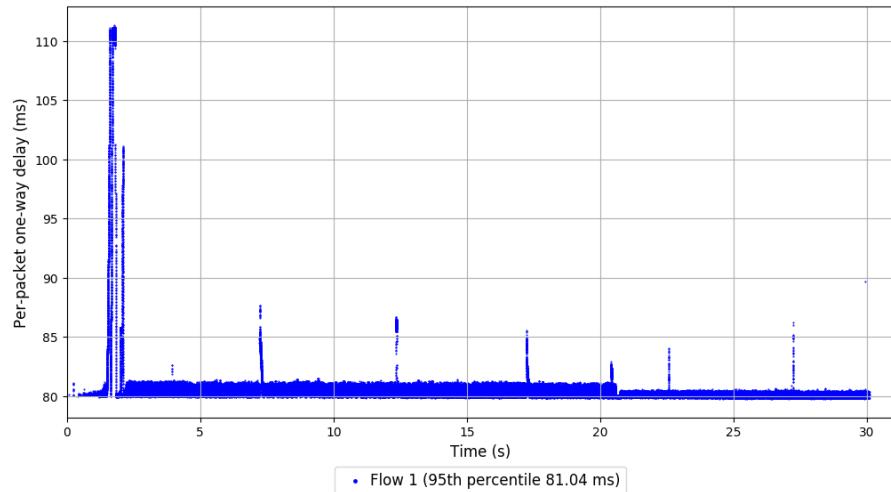
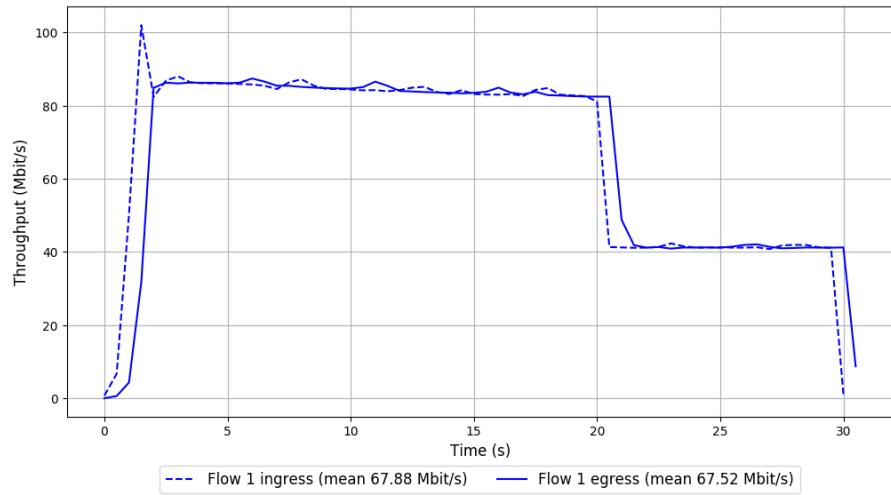


Run 3: Statistics of TCP Vegas

```
Start at: 2019-01-02 20:24:54
End at: 2019-01-02 20:25:24
Local clock offset: -0.986 ms
Remote clock offset: -27.556 ms

# Below is generated by plot.py at 2019-01-02 21:22:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.52 Mbit/s
95th percentile per-packet one-way delay: 81.041 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 67.52 Mbit/s
95th percentile per-packet one-way delay: 81.041 ms
Loss rate: 0.53%
```

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

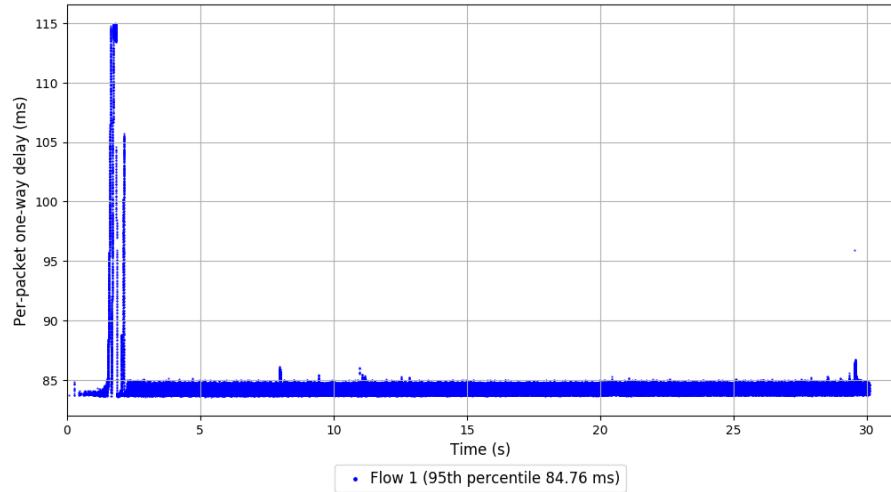
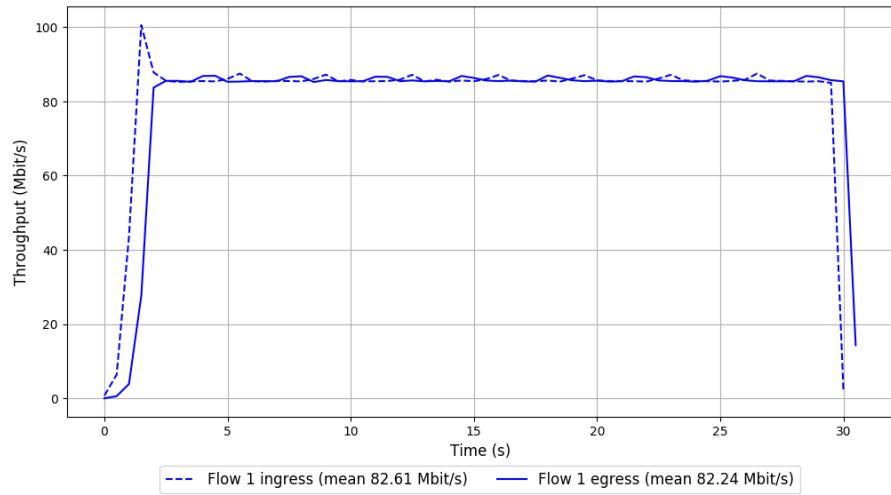


Run 4: Statistics of TCP Vegas

```
Start at: 2019-01-02 20:47:06
End at: 2019-01-02 20:47:36
Local clock offset: -6.069 ms
Remote clock offset: -32.464 ms

# Below is generated by plot.py at 2019-01-02 21:23:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.24 Mbit/s
95th percentile per-packet one-way delay: 84.759 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 82.24 Mbit/s
95th percentile per-packet one-way delay: 84.759 ms
Loss rate: 0.45%
```

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

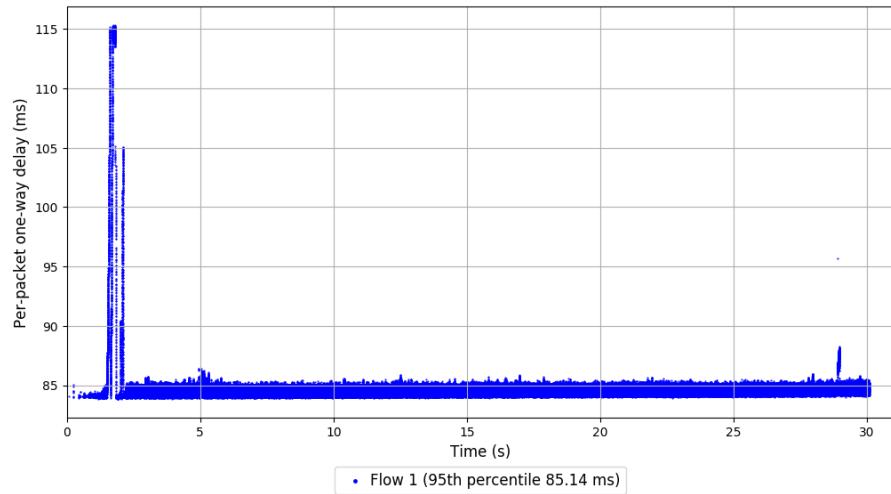
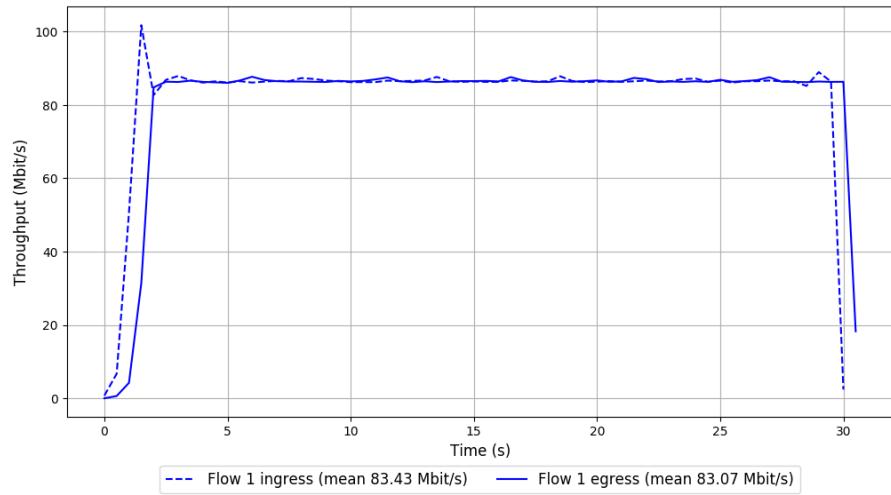


Run 5: Statistics of TCP Vegas

```
Start at: 2019-01-02 21:09:18
End at: 2019-01-02 21:09:48
Local clock offset: -1.389 ms
Remote clock offset: -33.687 ms

# Below is generated by plot.py at 2019-01-02 21:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.07 Mbit/s
95th percentile per-packet one-way delay: 85.142 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 83.07 Mbit/s
95th percentile per-packet one-way delay: 85.142 ms
Loss rate: 0.43%
```

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

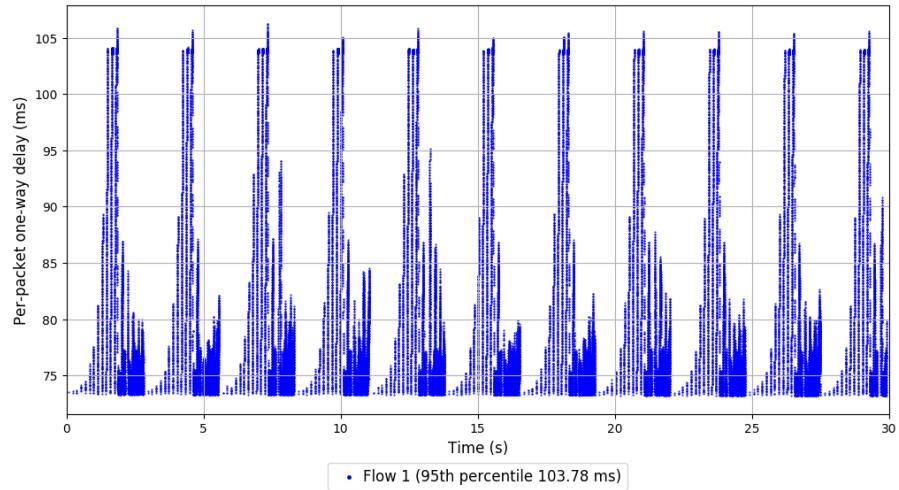
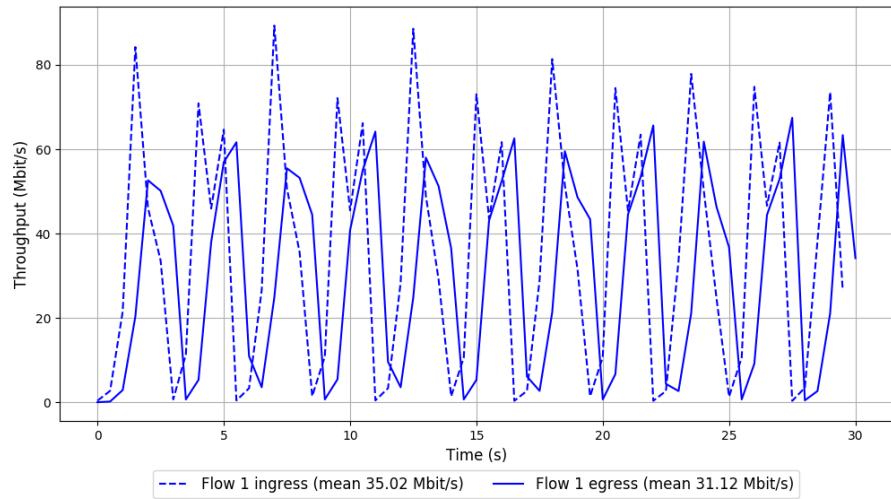


Run 1: Statistics of Verus

```
Start at: 2019-01-02 19:26:57
End at: 2019-01-02 19:27:27
Local clock offset: -2.146 ms
Remote clock offset: -11.798 ms

# Below is generated by plot.py at 2019-01-02 21:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 31.12 Mbit/s
95th percentile per-packet one-way delay: 103.785 ms
Loss rate: 11.11%
-- Flow 1:
Average throughput: 31.12 Mbit/s
95th percentile per-packet one-way delay: 103.785 ms
Loss rate: 11.11%
```

## Run 1: Report of Verus — Data Link

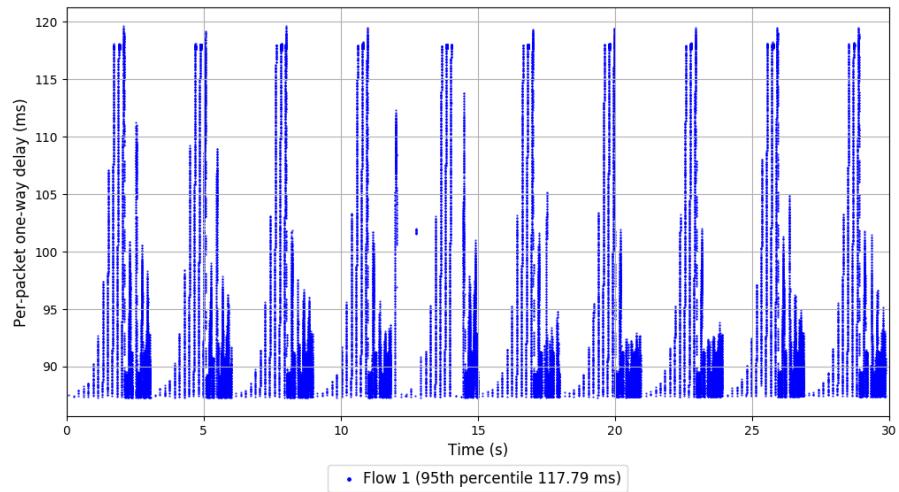
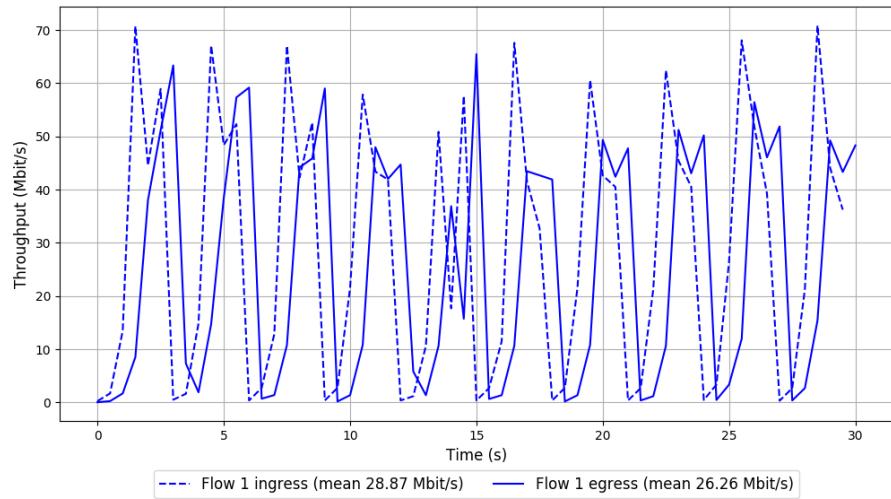


Run 2: Statistics of Verus

```
Start at: 2019-01-02 19:49:15
End at: 2019-01-02 19:49:45
Local clock offset: -5.432 ms
Remote clock offset: -15.957 ms

# Below is generated by plot.py at 2019-01-02 21:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.26 Mbit/s
95th percentile per-packet one-way delay: 117.794 ms
Loss rate: 9.03%
-- Flow 1:
Average throughput: 26.26 Mbit/s
95th percentile per-packet one-way delay: 117.794 ms
Loss rate: 9.03%
```

## Run 2: Report of Verus — Data Link

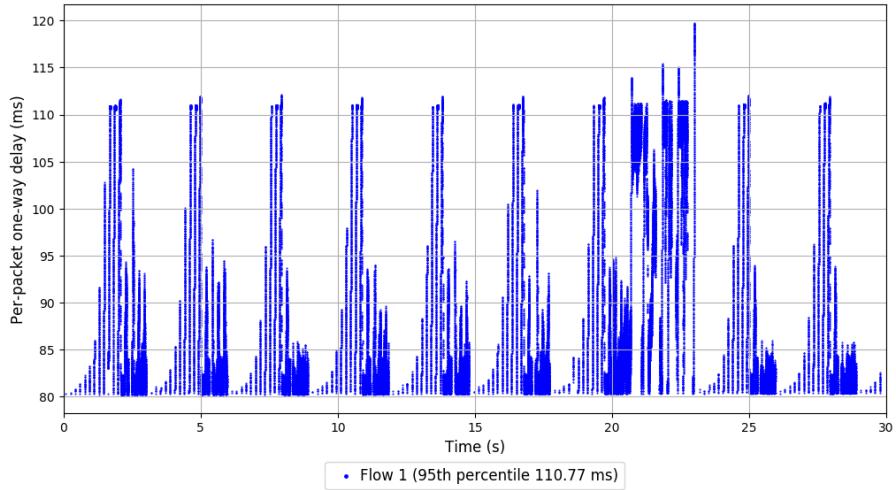
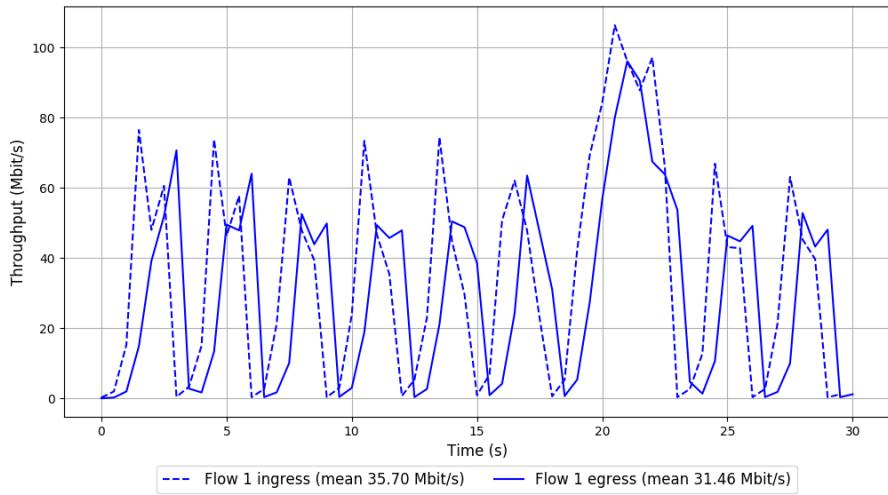


Run 3: Statistics of Verus

```
Start at: 2019-01-02 20:12:00
End at: 2019-01-02 20:12:30
Local clock offset: -1.658 ms
Remote clock offset: -24.75 ms

# Below is generated by plot.py at 2019-01-02 21:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 31.46 Mbit/s
95th percentile per-packet one-way delay: 110.768 ms
Loss rate: 11.86%
-- Flow 1:
Average throughput: 31.46 Mbit/s
95th percentile per-packet one-way delay: 110.768 ms
Loss rate: 11.86%
```

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

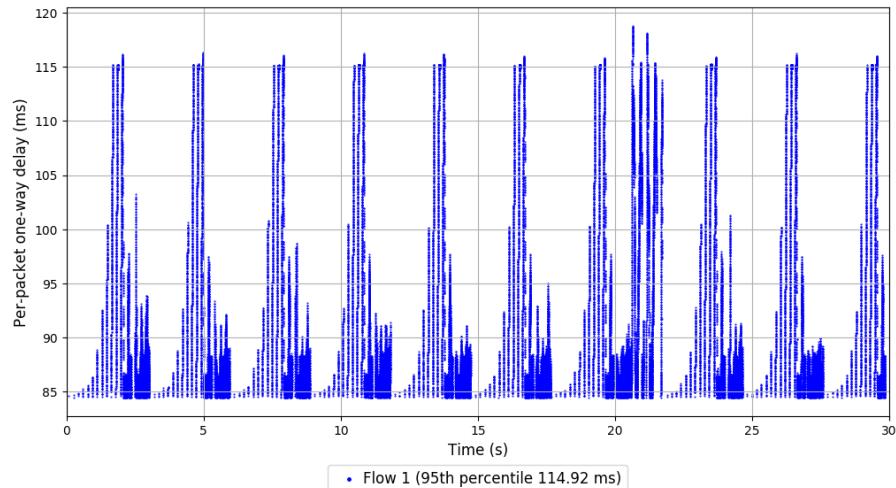
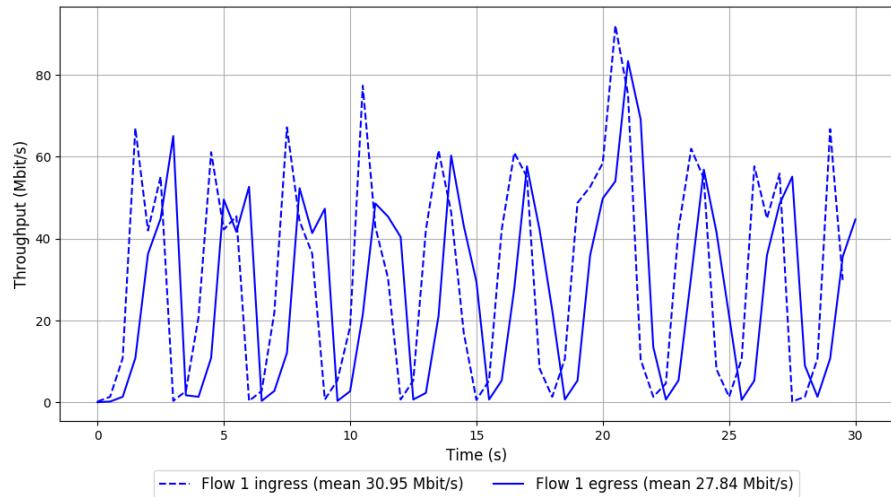


Run 4: Statistics of Verus

```
Start at: 2019-01-02 20:34:12
End at: 2019-01-02 20:34:42
Local clock offset: -5.228 ms
Remote clock offset: -25.696 ms

# Below is generated by plot.py at 2019-01-02 21:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 27.84 Mbit/s
95th percentile per-packet one-way delay: 114.920 ms
Loss rate: 10.04%
-- Flow 1:
Average throughput: 27.84 Mbit/s
95th percentile per-packet one-way delay: 114.920 ms
Loss rate: 10.04%
```

## Run 4: Report of Verus — Data Link

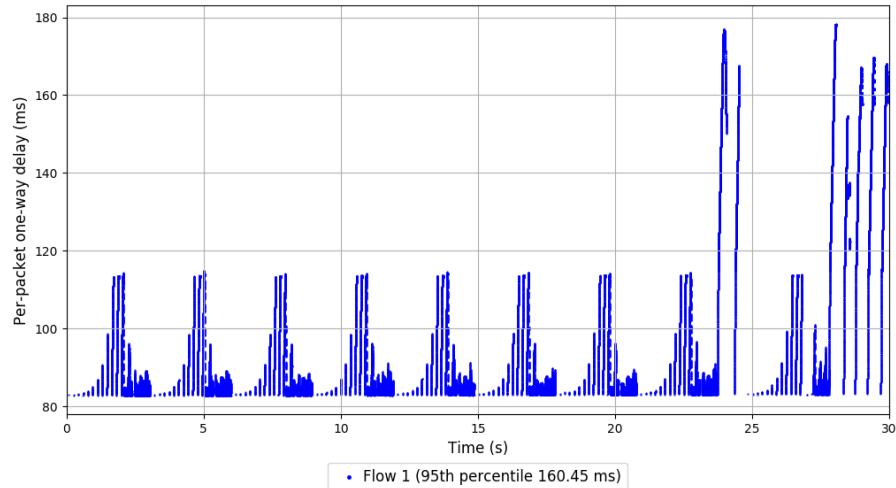
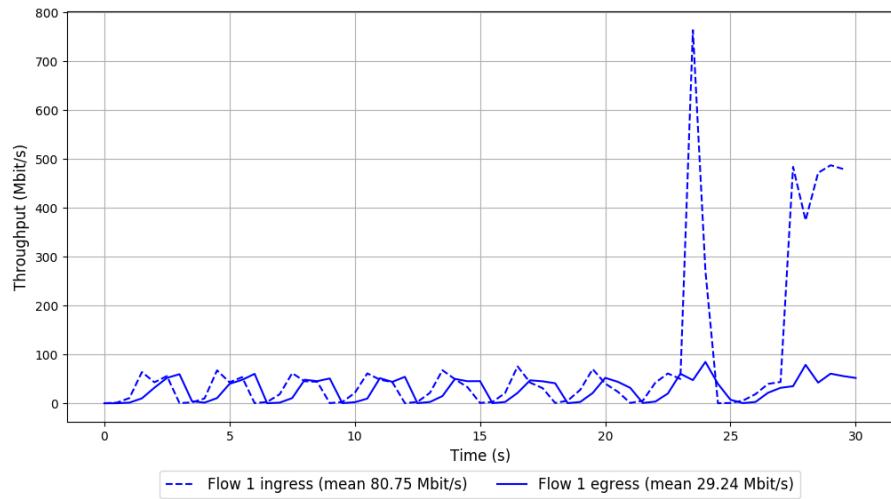


Run 5: Statistics of Verus

```
Start at: 2019-01-02 20:56:25
End at: 2019-01-02 20:56:55
Local clock offset: -6.103 ms
Remote clock offset: -34.7 ms

# Below is generated by plot.py at 2019-01-02 21:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 29.24 Mbit/s
95th percentile per-packet one-way delay: 160.449 ms
Loss rate: 63.69%
-- Flow 1:
Average throughput: 29.24 Mbit/s
95th percentile per-packet one-way delay: 160.449 ms
Loss rate: 63.69%
```

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

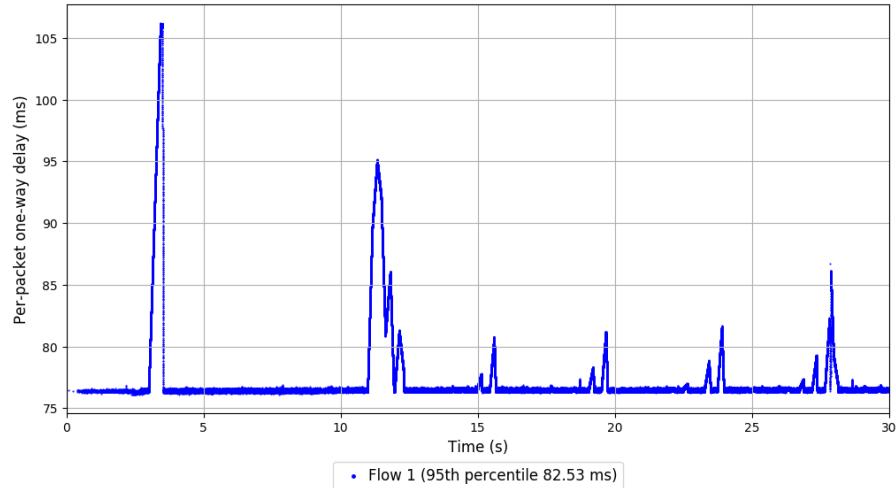
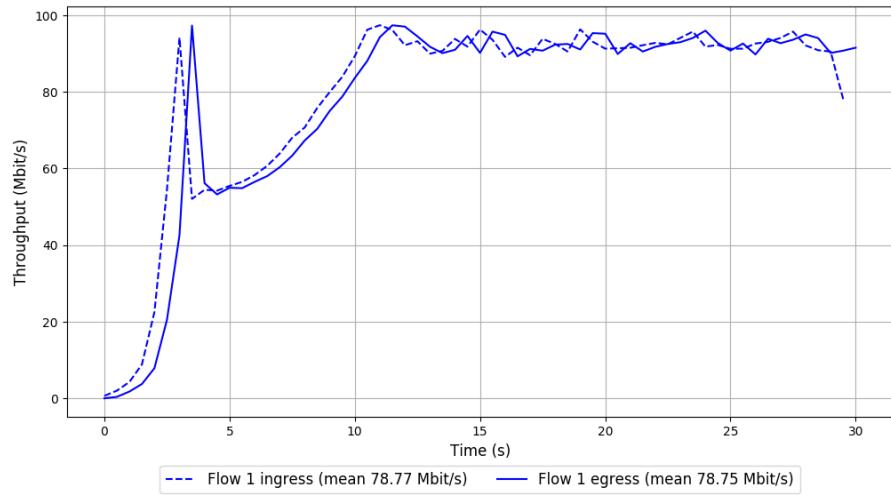


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2019-01-02 19:35:06
End at: 2019-01-02 19:35:36
Local clock offset: -4.126 ms
Remote clock offset: -12.438 ms

# Below is generated by plot.py at 2019-01-02 21:23:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.75 Mbit/s
95th percentile per-packet one-way delay: 82.530 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 78.75 Mbit/s
95th percentile per-packet one-way delay: 82.530 ms
Loss rate: 0.03%
```

Run 1: Report of PCC-Vivace — Data Link

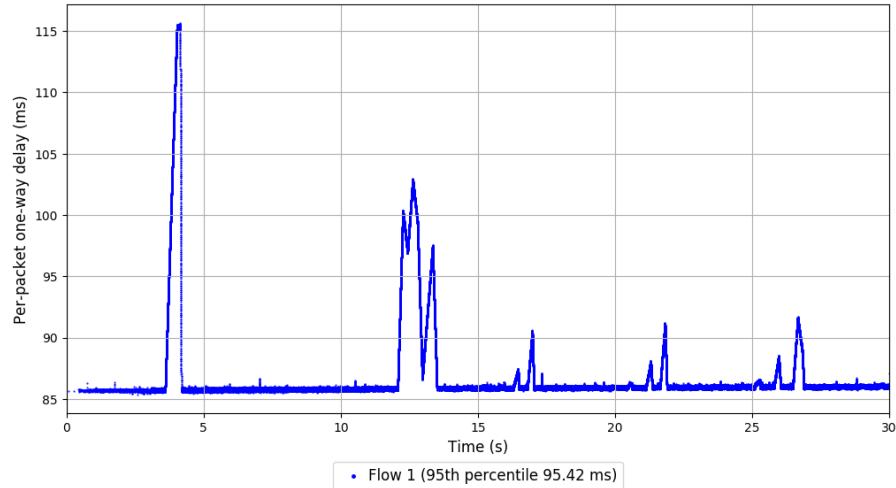
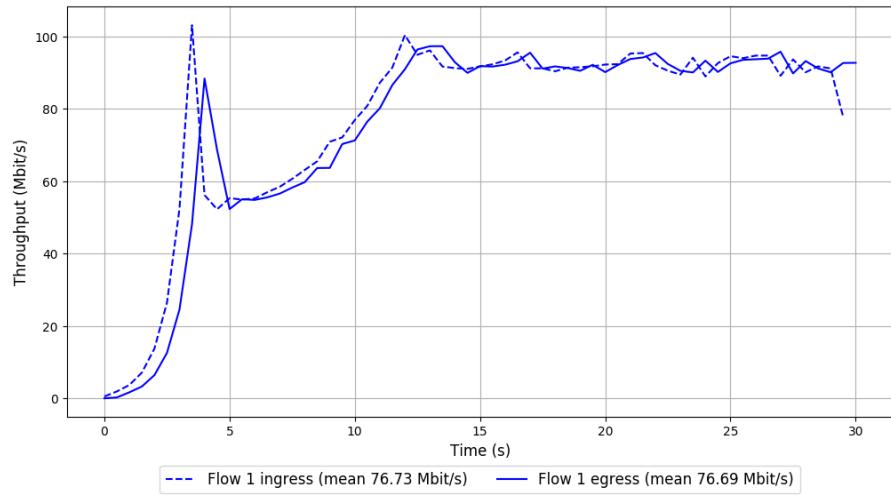


Run 2: Statistics of PCC-Vivace

```
Start at: 2019-01-02 19:57:51
End at: 2019-01-02 19:58:21
Local clock offset: -4.347 ms
Remote clock offset: -17.79 ms

# Below is generated by plot.py at 2019-01-02 21:23:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.69 Mbit/s
95th percentile per-packet one-way delay: 95.424 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 76.69 Mbit/s
95th percentile per-packet one-way delay: 95.424 ms
Loss rate: 0.04%
```

Run 2: Report of PCC-Vivace — Data Link

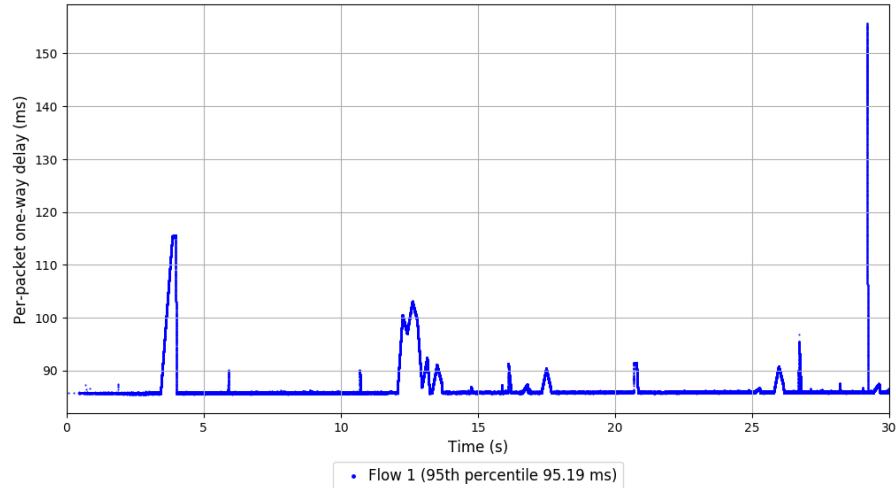
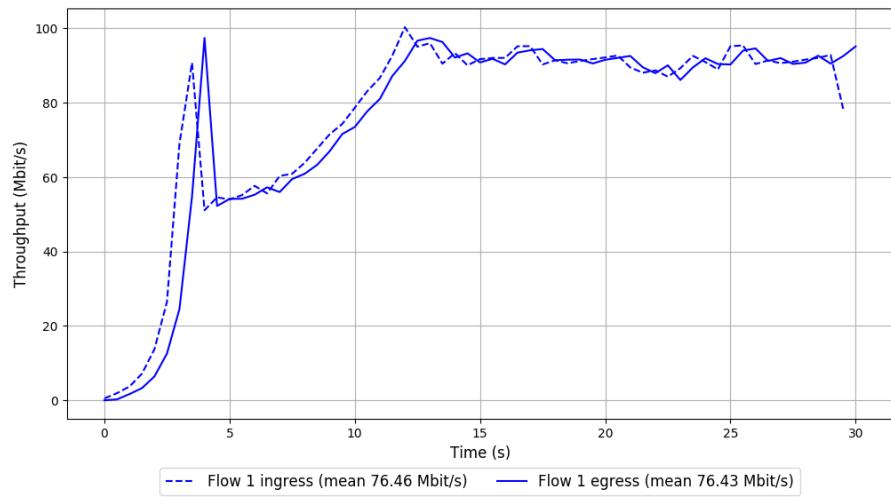


Run 3: Statistics of PCC-Vivace

```
Start at: 2019-01-02 20:20:11
End at: 2019-01-02 20:20:41
Local clock offset: -0.985 ms
Remote clock offset: -22.644 ms

# Below is generated by plot.py at 2019-01-02 21:23:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.43 Mbit/s
95th percentile per-packet one-way delay: 95.194 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 76.43 Mbit/s
95th percentile per-packet one-way delay: 95.194 ms
Loss rate: 0.04%
```

Run 3: Report of PCC-Vivace — Data Link

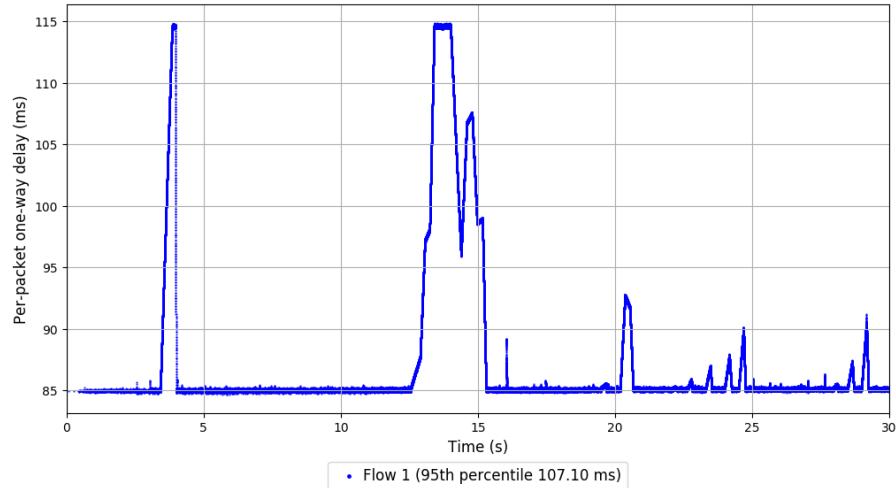
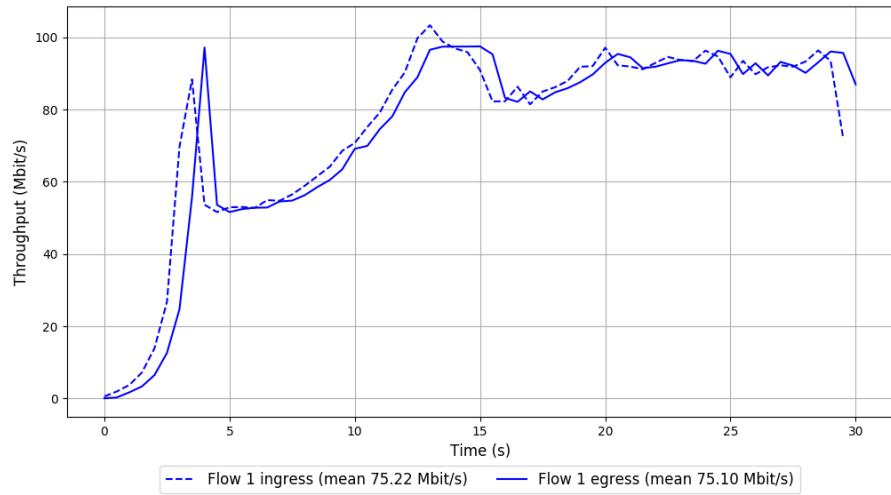


Run 4: Statistics of PCC-Vivace

```
Start at: 2019-01-02 20:42:22
End at: 2019-01-02 20:42:52
Local clock offset: -5.682 ms
Remote clock offset: -27.512 ms

# Below is generated by plot.py at 2019-01-02 21:23:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.10 Mbit/s
95th percentile per-packet one-way delay: 107.102 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 75.10 Mbit/s
95th percentile per-packet one-way delay: 107.102 ms
Loss rate: 0.16%
```

Run 4: Report of PCC-Vivace — Data Link

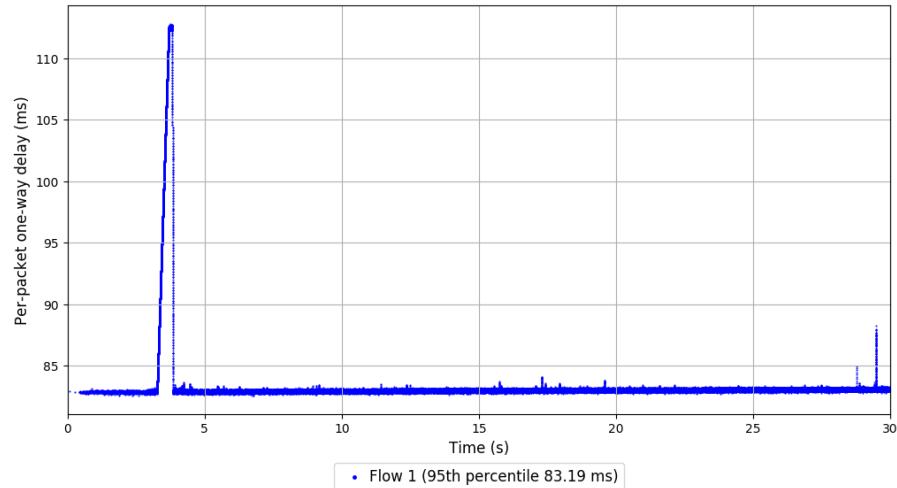
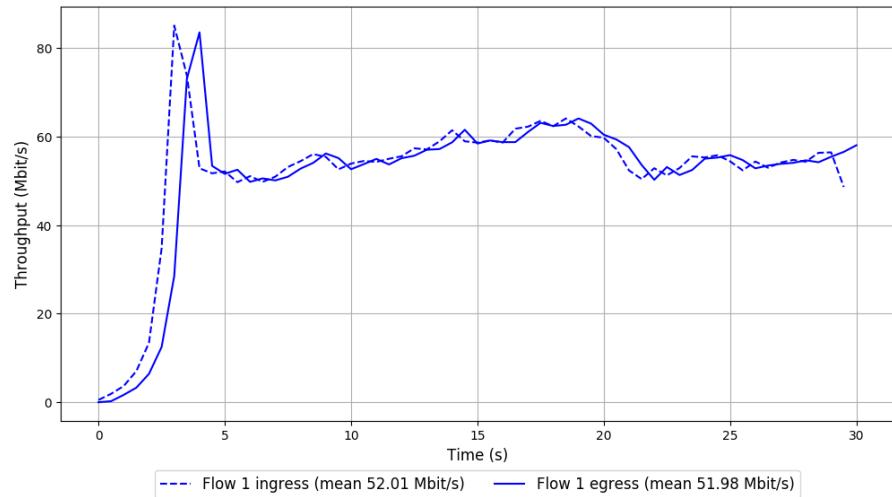


Run 5: Statistics of PCC-Vivace

```
Start at: 2019-01-02 21:04:36
End at: 2019-01-02 21:05:06
Local clock offset: -3.114 ms
Remote clock offset: -36.31 ms

# Below is generated by plot.py at 2019-01-02 21:23:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 51.98 Mbit/s
95th percentile per-packet one-way delay: 83.195 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 51.98 Mbit/s
95th percentile per-packet one-way delay: 83.195 ms
Loss rate: 0.06%
```

Run 5: Report of PCC-Vivace — Data Link

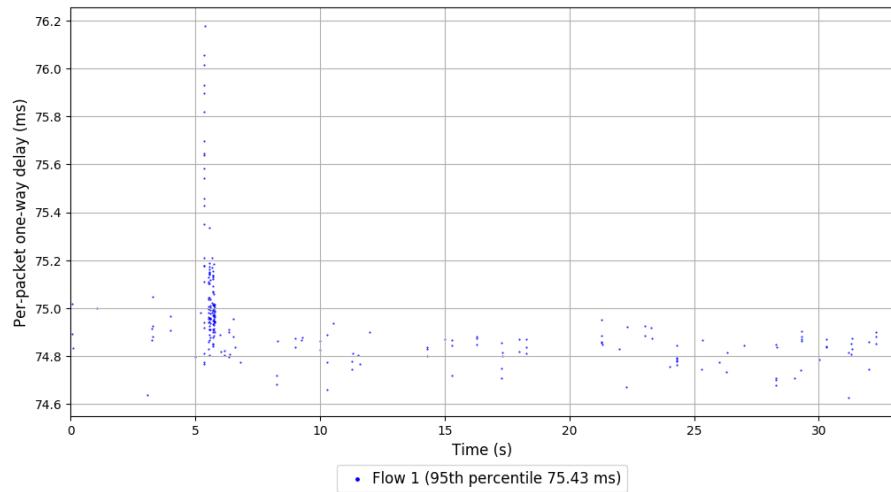
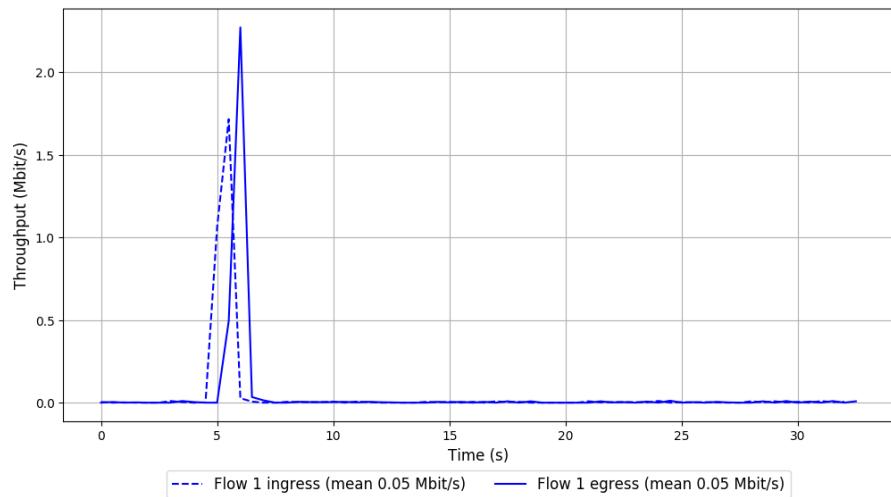


```
Run 1: Statistics of WebRTC media

Start at: 2019-01-02 19:29:18
End at: 2019-01-02 19:29:48
Local clock offset: -3.181 ms
Remote clock offset: -12.469 ms

# Below is generated by plot.py at 2019-01-02 21:23:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 75.429 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 75.429 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

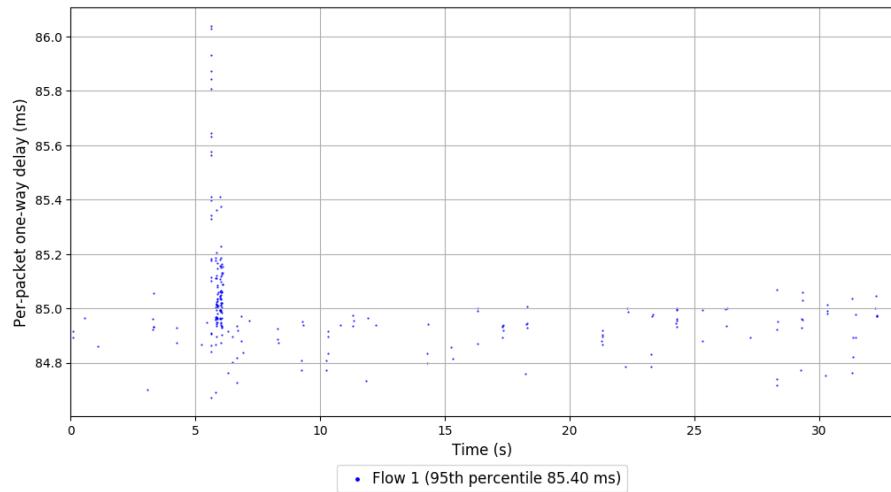
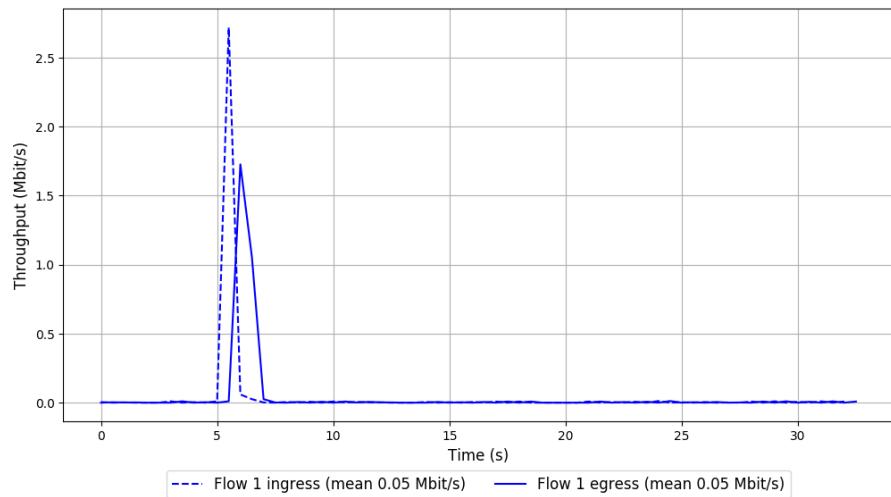


Run 2: Statistics of WebRTC media

```
Start at: 2019-01-02 19:51:47
End at: 2019-01-02 19:52:17
Local clock offset: -6.269 ms
Remote clock offset: -16.348 ms

# Below is generated by plot.py at 2019-01-02 21:23:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.398 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.398 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

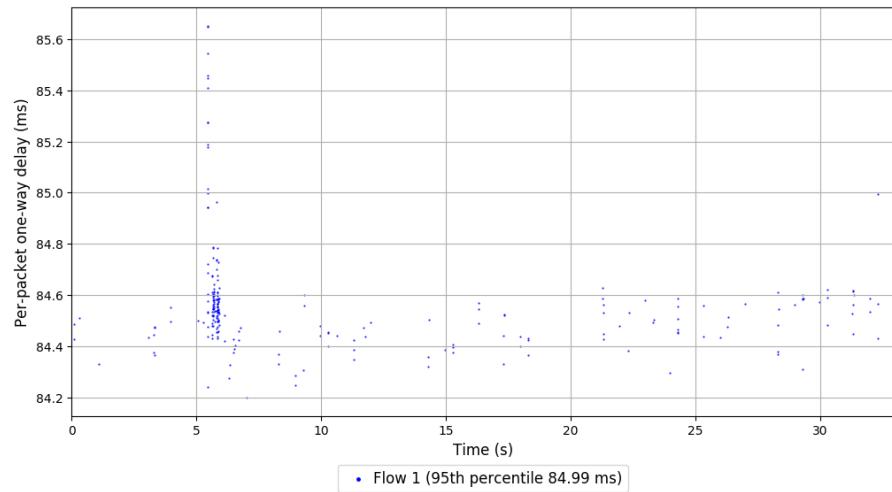
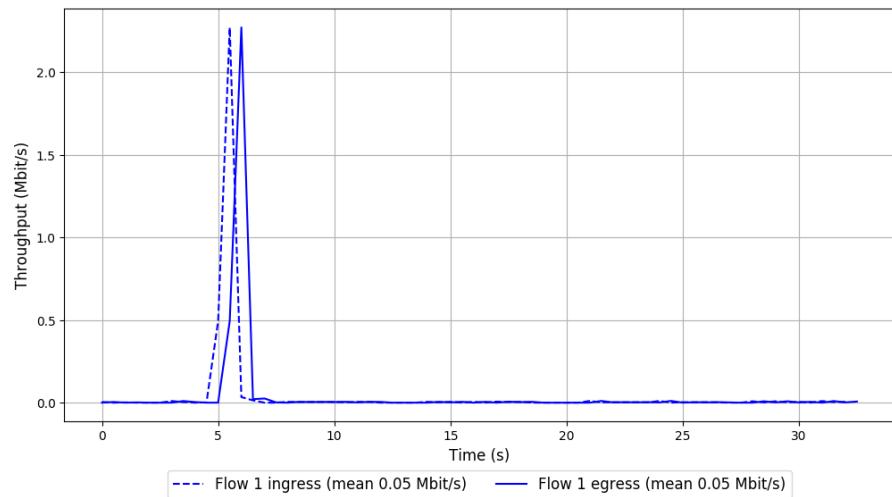


Run 3: Statistics of WebRTC media

```
Start at: 2019-01-02 20:14:21
End at: 2019-01-02 20:14:51
Local clock offset: -2.213 ms
Remote clock offset: -25.326 ms

# Below is generated by plot.py at 2019-01-02 21:23:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 84.994 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 84.994 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

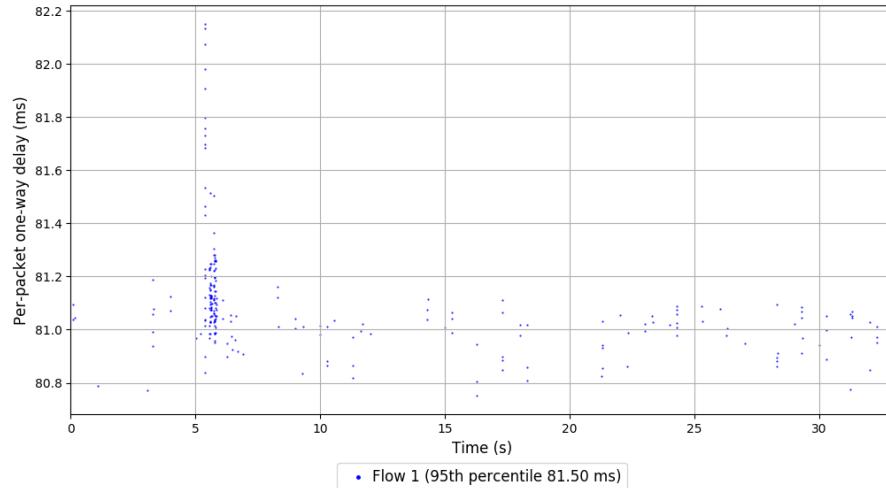
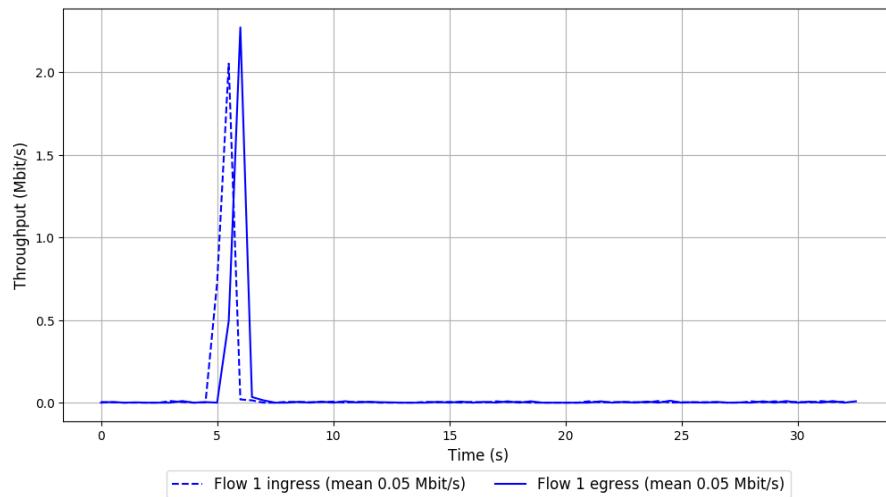


Run 4: Statistics of WebRTC media

```
Start at: 2019-01-02 20:36:33
End at: 2019-01-02 20:37:03
Local clock offset: -5.686 ms
Remote clock offset: -30.169 ms

# Below is generated by plot.py at 2019-01-02 21:23:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 81.504 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 81.504 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2019-01-02 20:58:46
End at: 2019-01-02 20:59:16
Local clock offset: -4.966 ms
Remote clock offset: -31.355 ms

# Below is generated by plot.py at 2019-01-02 21:23:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.079 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.079 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

