

## Pantheon Report

Generated at 2019-01-03 07:10:01 (UTC).  
Data path: China on `eno1` (*remote*) → AWS Korea on `ens5` (*local*).  
Repeated the test of 19 congestion control schemes 5 times.  
Each test lasted for 30 seconds running 1 flow.  
NTP offsets were measured against `ntp.nict.jp` and have been applied to correct the timestamps in logs.

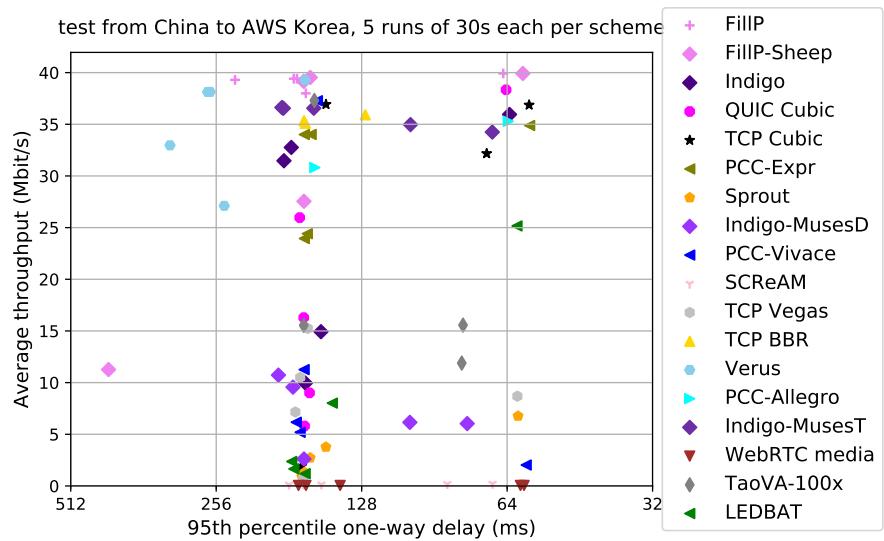
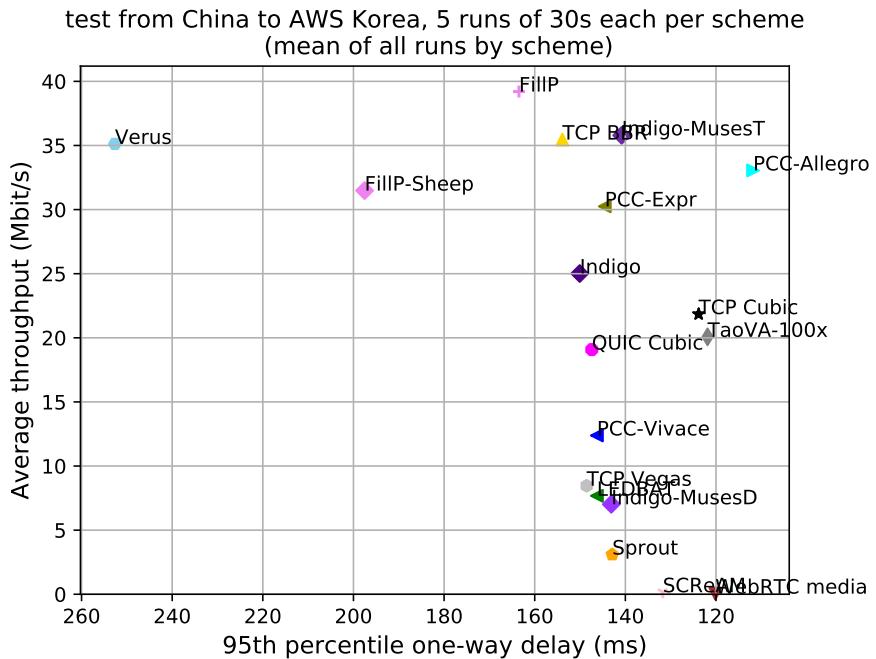
System info:

```
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



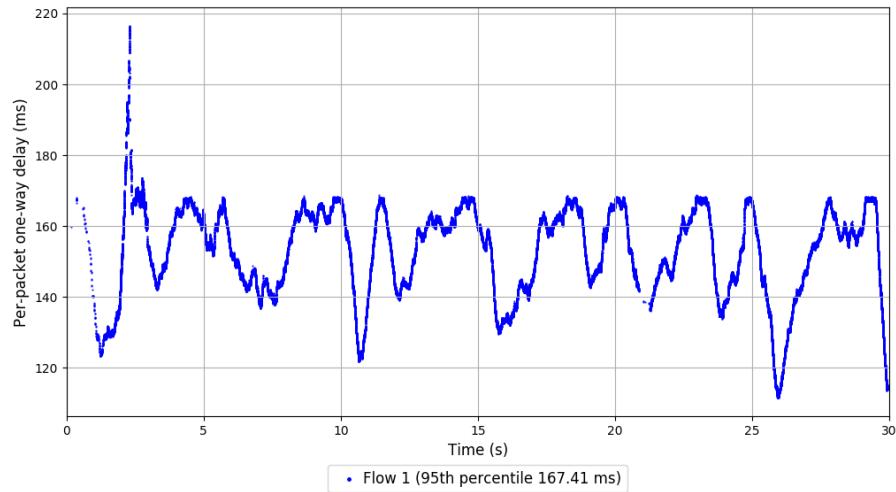
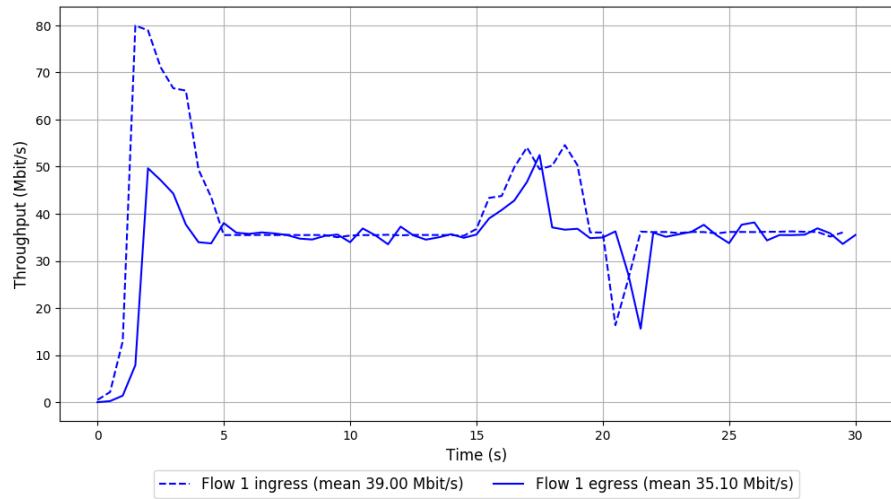
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	3	35.46	153.90	13.02
Copa	0	N/A	N/A	N/A
TCP Cubic	5	21.85	123.83	2.02
FillP	5	39.21	163.48	18.60
FillP-Sheep	5	31.48	197.54	21.81
Indigo	5	25.01	150.07	26.78
Indigo-MusesD	5	7.02	143.10	0.76
Indigo-MusesT	5	35.79	140.81	8.28
LEDBAT	5	7.68	146.29	1.31
PCC-Allegro	2	33.05	111.81	2.09
PCC-Expr	5	30.25	144.55	9.15
QUIC Cubic	5	19.08	147.41	1.13
SCReAM	5	0.16	131.74	0.48
Sprout	5	3.10	142.90	1.16
TaoVA-100x	4	20.07	121.86	10.03
TCP Vegas	5	8.46	148.54	2.12
Verus	5	35.12	252.64	31.13
PCC-Vivace	5	12.39	146.28	3.36
WebRTC media	5	0.05	120.16	0.02

Run 1: Statistics of TCP BBR

```
Start at: 2019-01-03 05:03:34
End at: 2019-01-03 05:04:04
Local clock offset: -1.176 ms
Remote clock offset: 23.389 ms

# Below is generated by plot.py at 2019-01-03 07:06:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.10 Mbit/s
95th percentile per-packet one-way delay: 167.414 ms
Loss rate: 10.63%
-- Flow 1:
Average throughput: 35.10 Mbit/s
95th percentile per-packet one-way delay: 167.414 ms
Loss rate: 10.63%
```

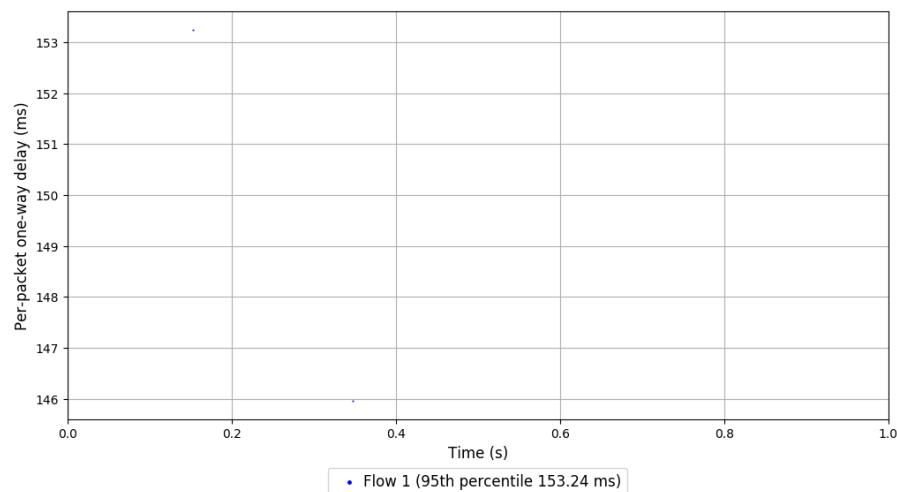
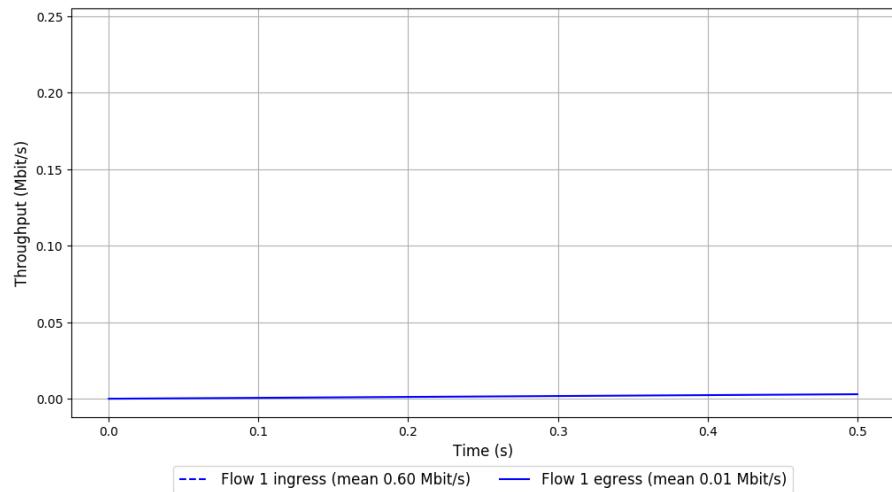
## Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-01-03 05:26:52  
End at: 2019-01-03 05:27:22  
Local clock offset: 0.626 ms  
Remote clock offset: 26.431 ms

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

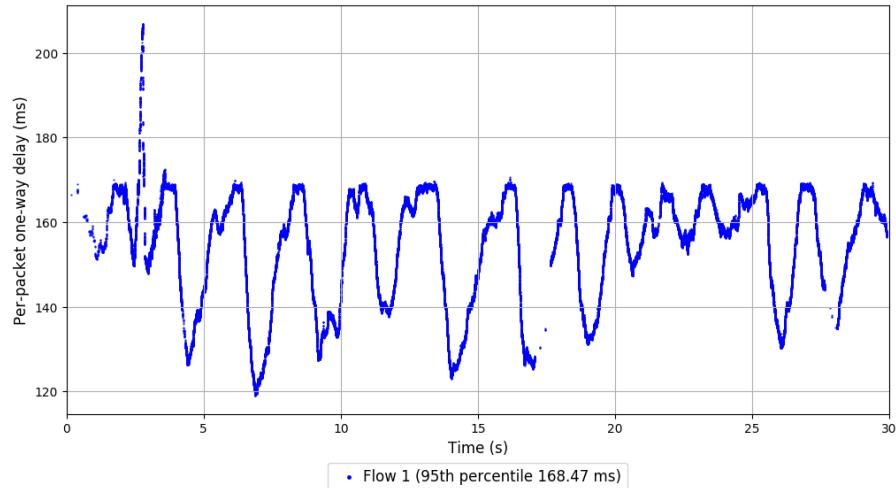
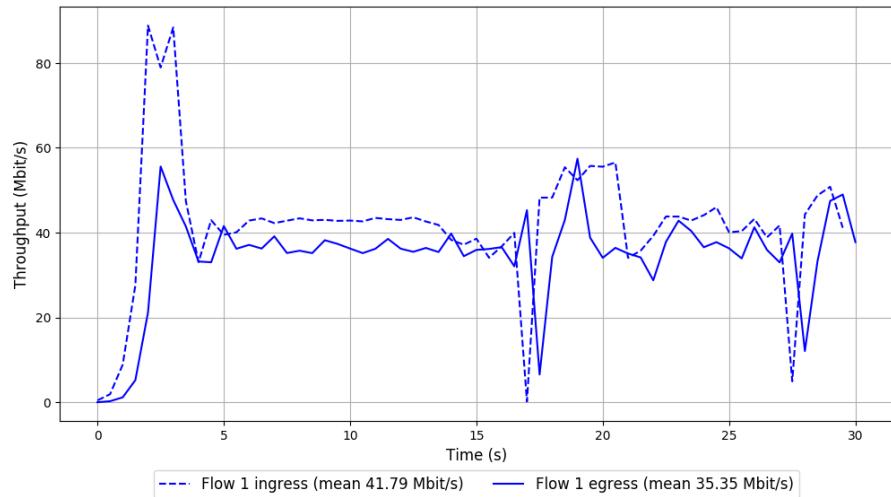


Run 3: Statistics of TCP BBR

```
Start at: 2019-01-03 05:51:09
End at: 2019-01-03 05:51:39
Local clock offset: 1.074 ms
Remote clock offset: 44.359 ms

# Below is generated by plot.py at 2019-01-03 07:06:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.35 Mbit/s
95th percentile per-packet one-way delay: 168.472 ms
Loss rate: 16.02%
-- Flow 1:
Average throughput: 35.35 Mbit/s
95th percentile per-packet one-way delay: 168.472 ms
Loss rate: 16.02%
```

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

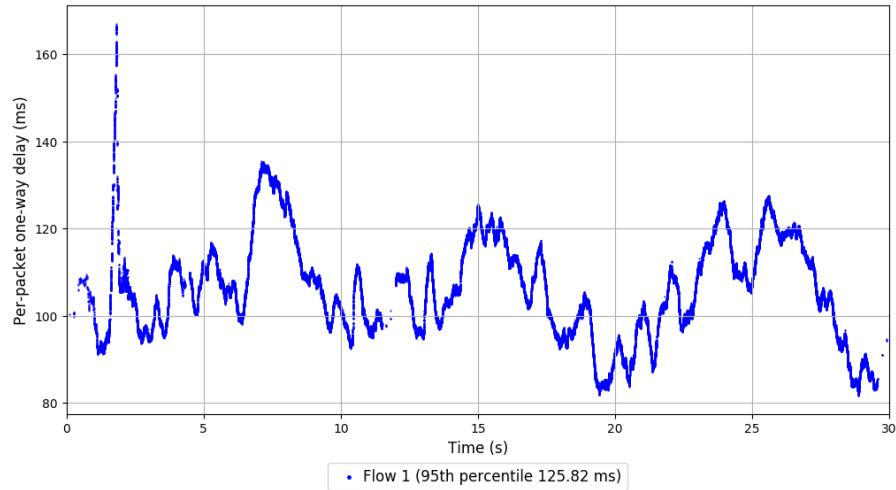
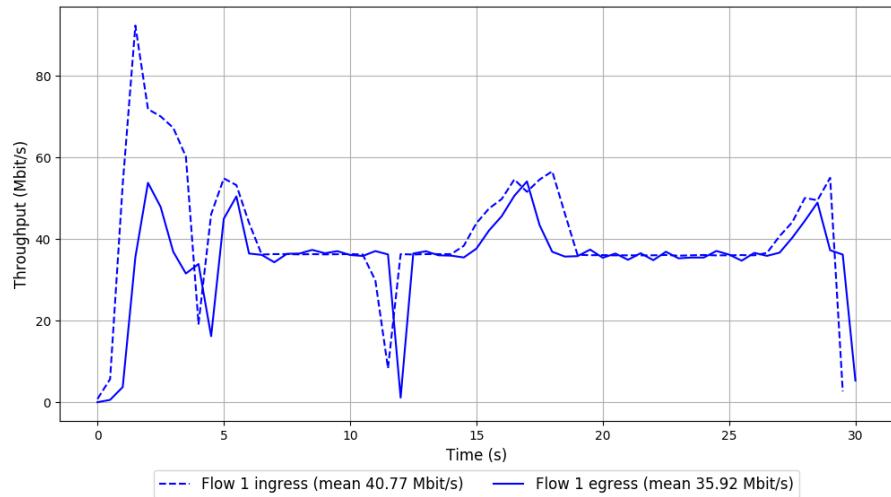


Run 4: Statistics of TCP BBR

```
Start at: 2019-01-03 06:36:16
End at: 2019-01-03 06:36:46
Local clock offset: 2.411 ms
Remote clock offset: 57.291 ms

# Below is generated by plot.py at 2019-01-03 07:06:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.92 Mbit/s
95th percentile per-packet one-way delay: 125.823 ms
Loss rate: 12.42%
-- Flow 1:
Average throughput: 35.92 Mbit/s
95th percentile per-packet one-way delay: 125.823 ms
Loss rate: 12.42%
```

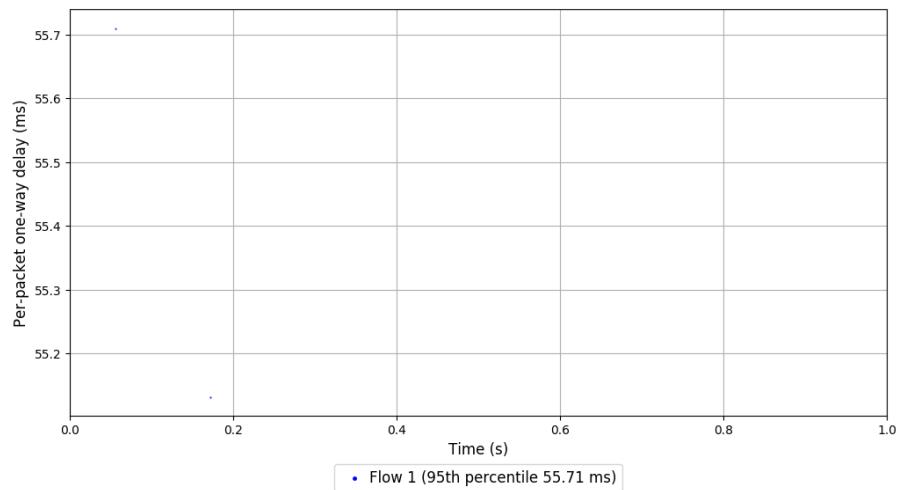
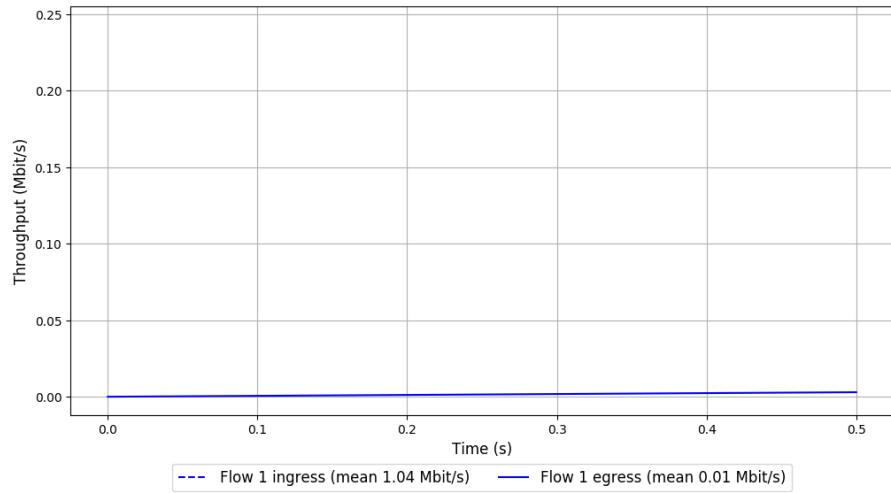
## Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2019-01-03 06:58:30  
End at: 2019-01-03 06:59:00  
Local clock offset: 2.835 ms  
Remote clock offset: 20.871 ms

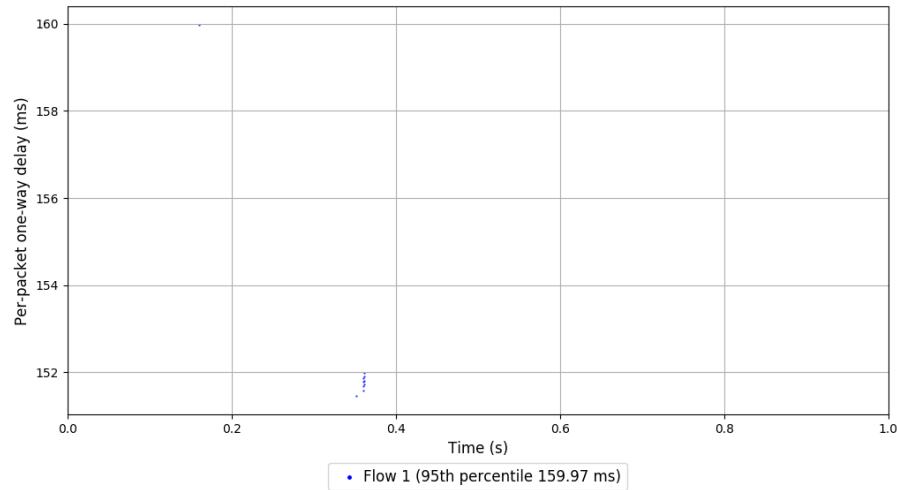
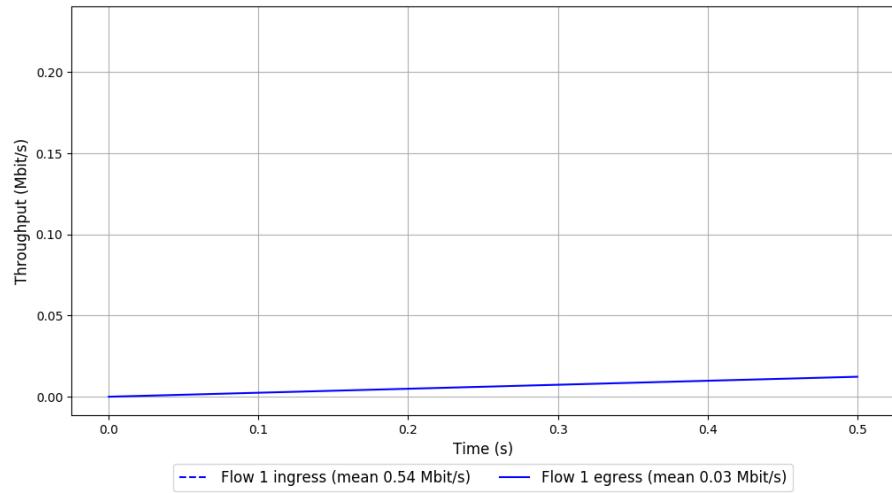
## Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-01-03 04:50:41  
End at: 2019-01-03 04:51:11  
Local clock offset: -3.636 ms  
Remote clock offset: 19.456 ms

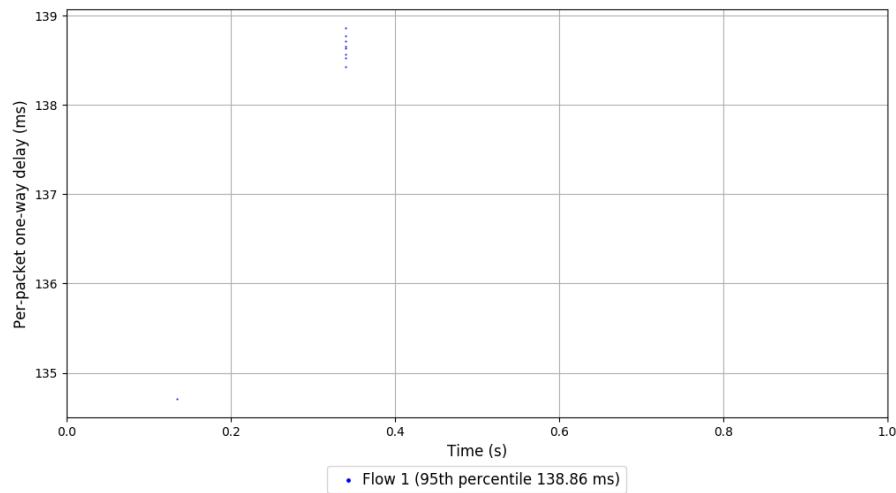
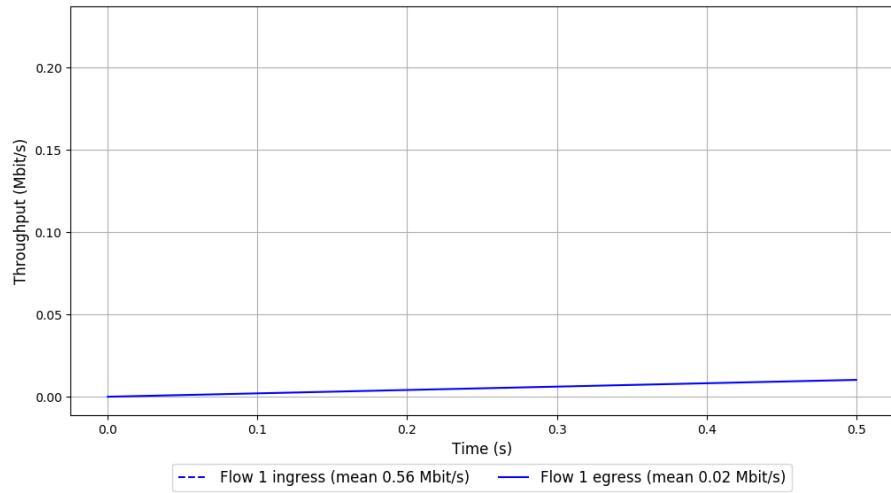
## Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-01-03 05:16:03  
End at: 2019-01-03 05:16:33  
Local clock offset: 0.568 ms  
Remote clock offset: 25.713 ms

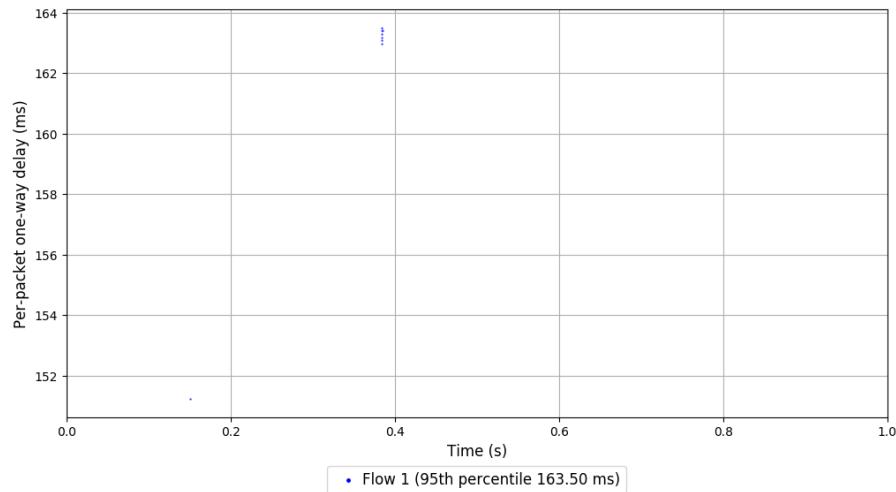
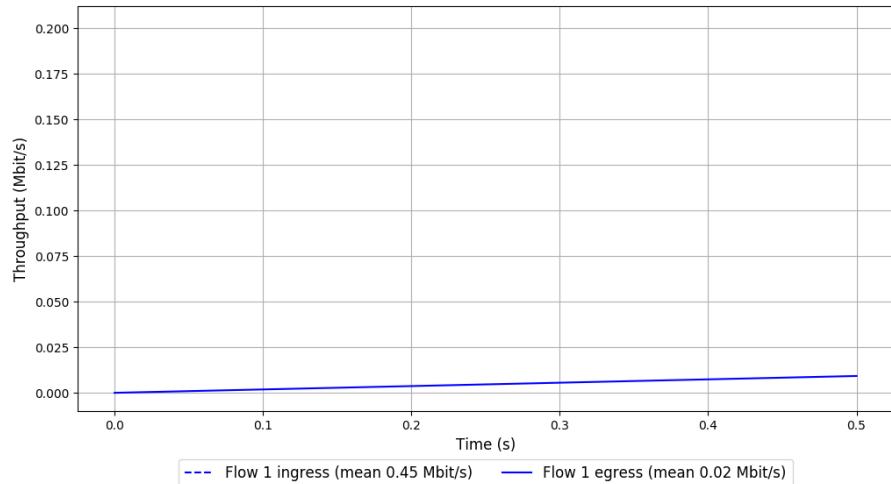
## Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-01-03 05:39:17  
End at: 2019-01-03 05:39:47  
Local clock offset: 0.683 ms  
Remote clock offset: 37.571 ms

### Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

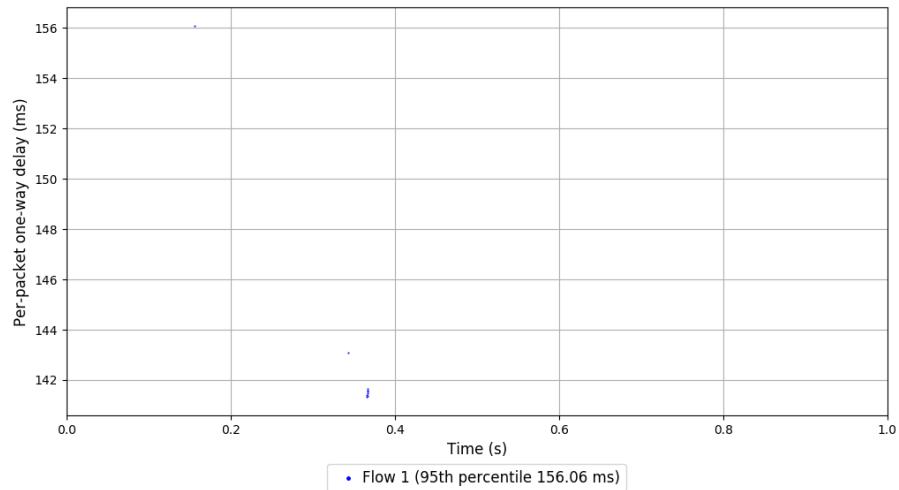
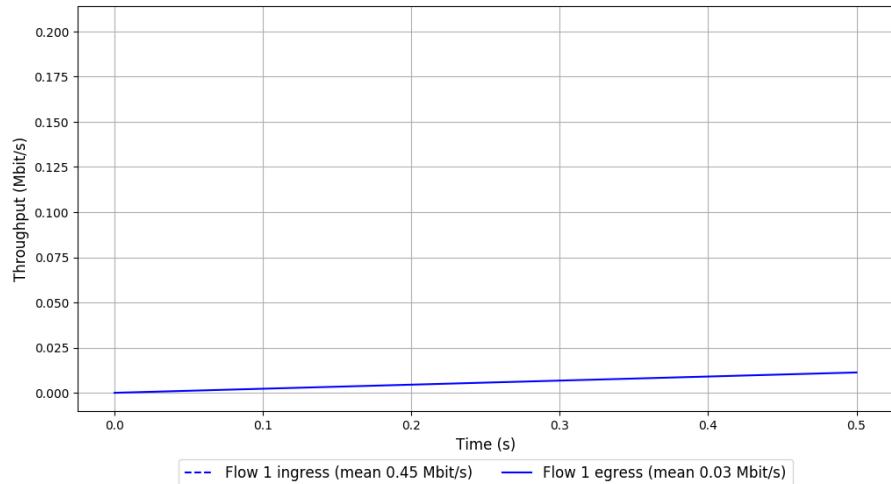
Start at: 2019-01-03 06:25:02

End at: 2019-01-03 06:25:32

Local clock offset: 0.586 ms

Remote clock offset: 55.3 ms

## Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

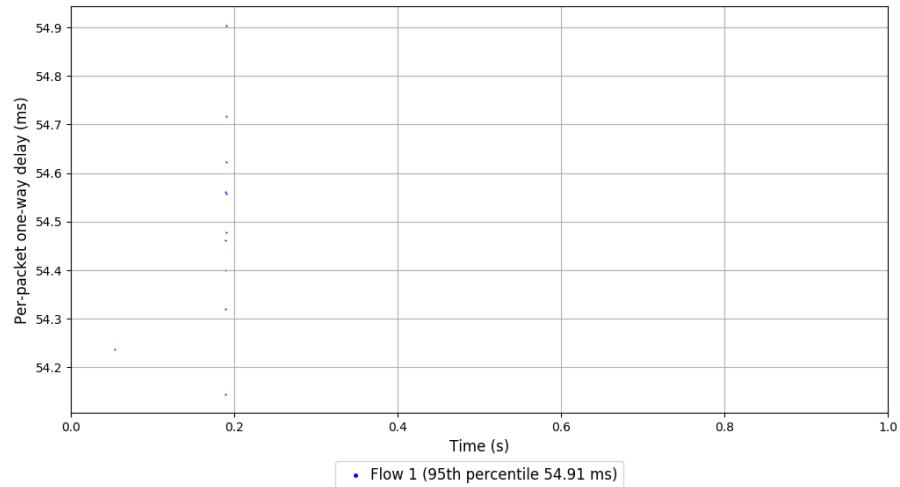
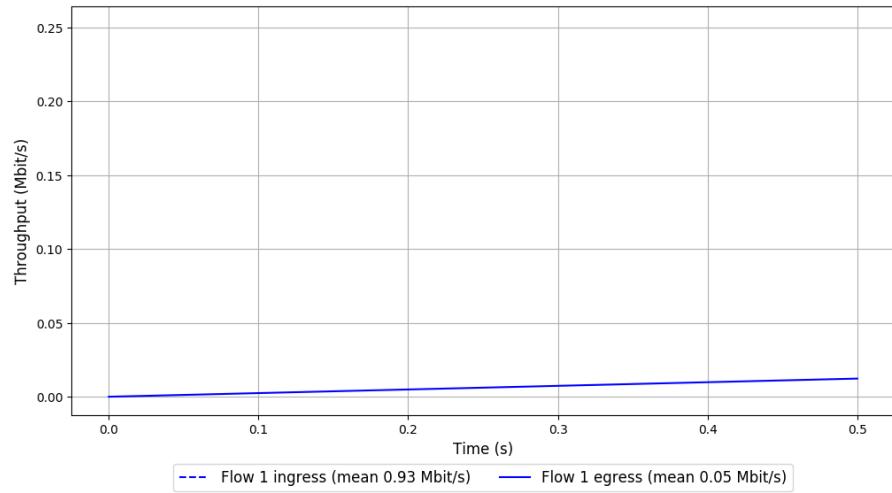
Start at: 2019-01-03 06:48:00

End at: 2019-01-03 06:48:30

Local clock offset: 3.289 ms

Remote clock offset: 36.13 ms

## Run 5: Report of Copa — Data Link

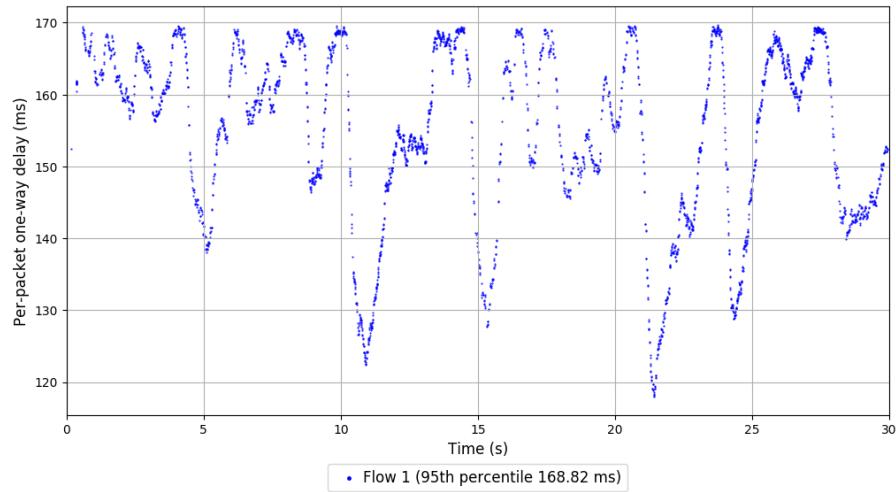
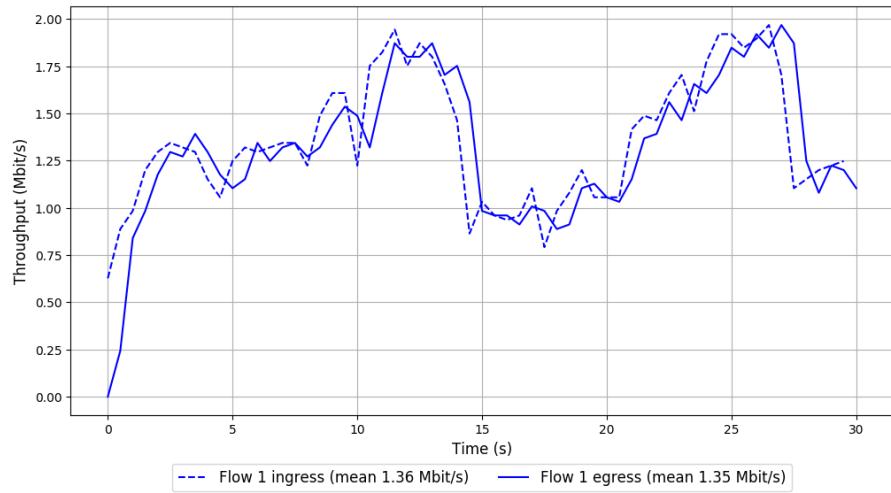


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2019-01-03 05:07:41
End at: 2019-01-03 05:08:11
Local clock offset: -0.364 ms
Remote clock offset: 24.139 ms

# Below is generated by plot.py at 2019-01-03 07:06:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 168.819 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 168.819 ms
Loss rate: 1.24%
```

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

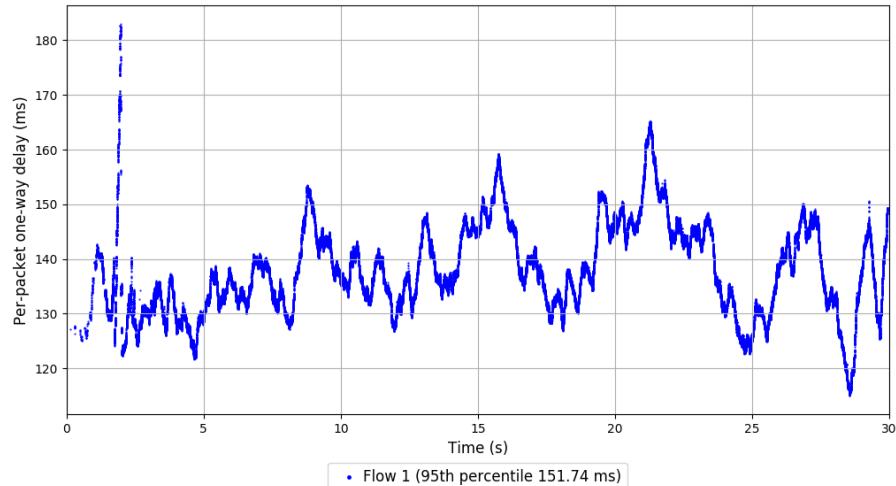
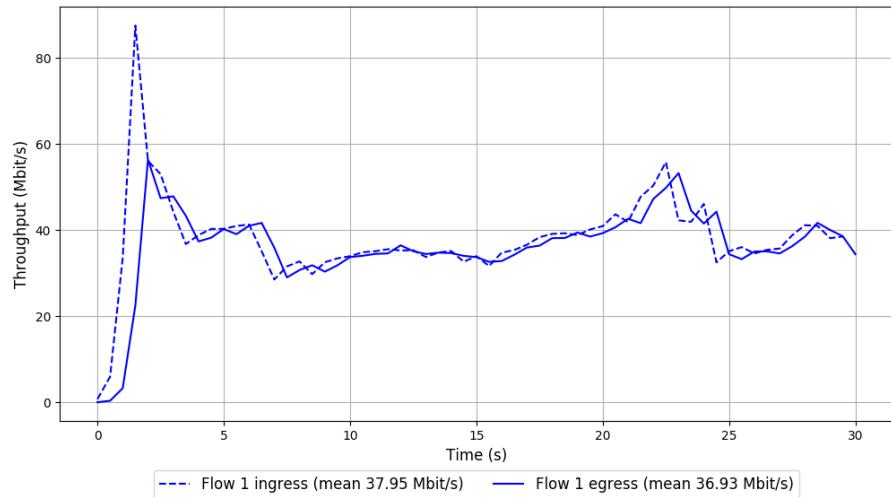


Run 2: Statistics of TCP Cubic

```
Start at: 2019-01-03 05:30:46
End at: 2019-01-03 05:31:16
Local clock offset: 0.904 ms
Remote clock offset: 27.079 ms

# Below is generated by plot.py at 2019-01-03 07:07:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.93 Mbit/s
95th percentile per-packet one-way delay: 151.736 ms
Loss rate: 3.26%
-- Flow 1:
Average throughput: 36.93 Mbit/s
95th percentile per-packet one-way delay: 151.736 ms
Loss rate: 3.26%
```

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

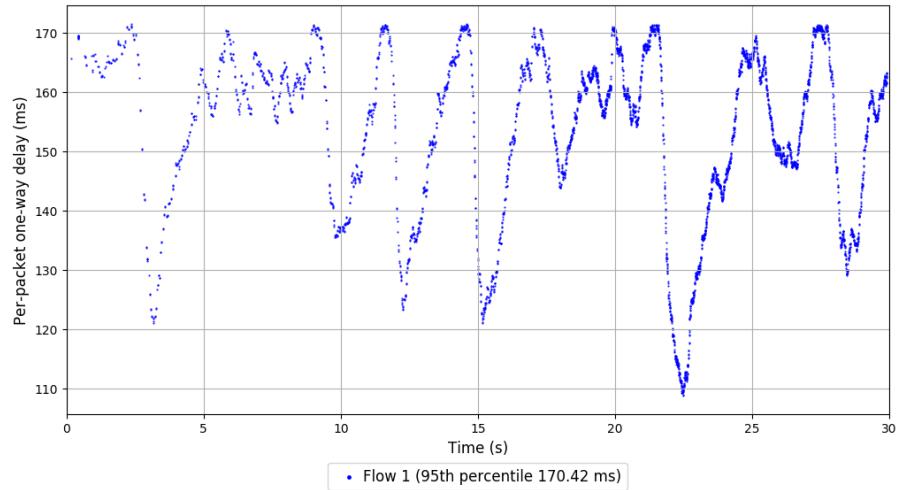
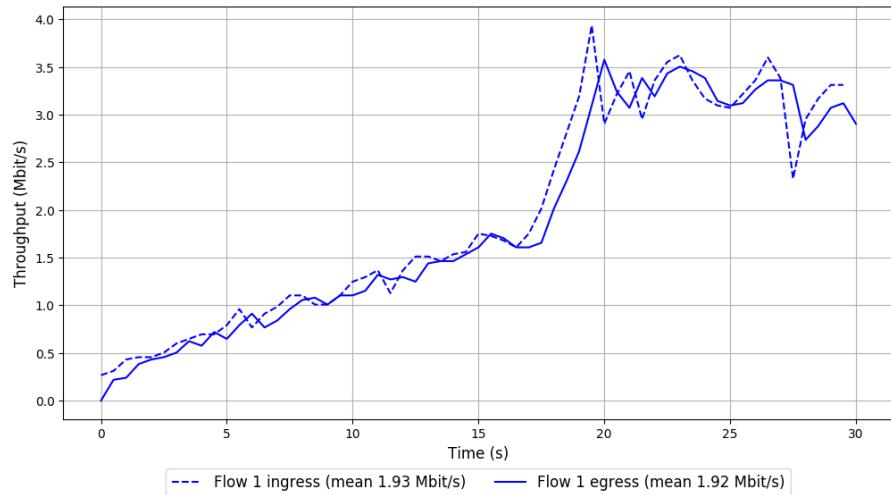


Run 3: Statistics of TCP Cubic

```
Start at: 2019-01-03 06:03:11
End at: 2019-01-03 06:03:41
Local clock offset: 0.579 ms
Remote clock offset: 46.239 ms

# Below is generated by plot.py at 2019-01-03 07:07:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 170.417 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 170.417 ms
Loss rate: 1.63%
```

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

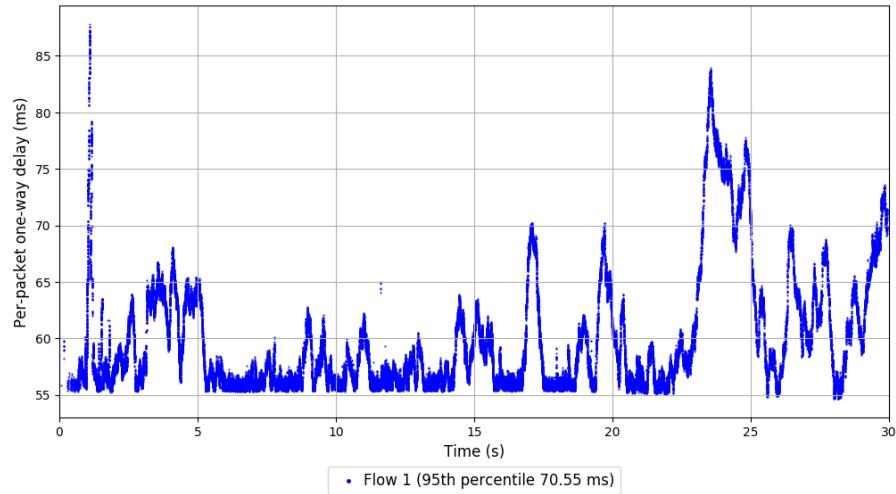
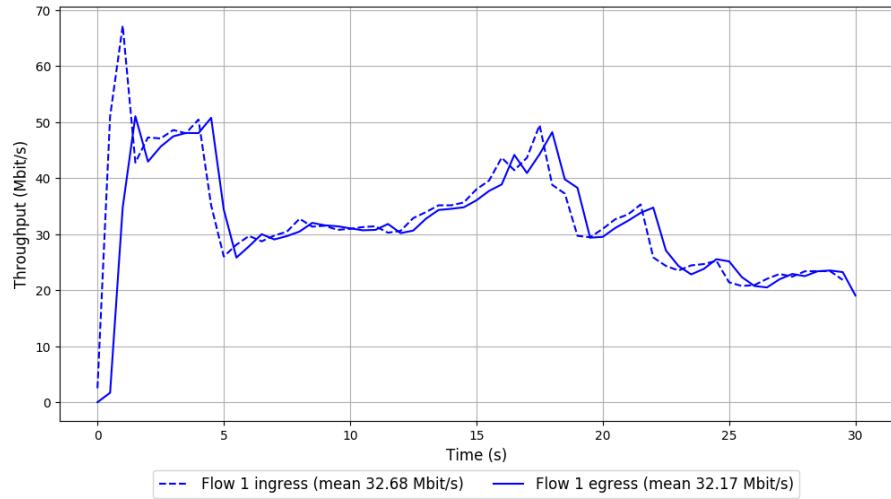


Run 4: Statistics of TCP Cubic

```
Start at: 2019-01-03 06:39:49
End at: 2019-01-03 06:40:19
Local clock offset: 2.889 ms
Remote clock offset: 60.546 ms

# Below is generated by plot.py at 2019-01-03 07:07:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.17 Mbit/s
95th percentile per-packet one-way delay: 70.551 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 32.17 Mbit/s
95th percentile per-packet one-way delay: 70.551 ms
Loss rate: 1.94%
```

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

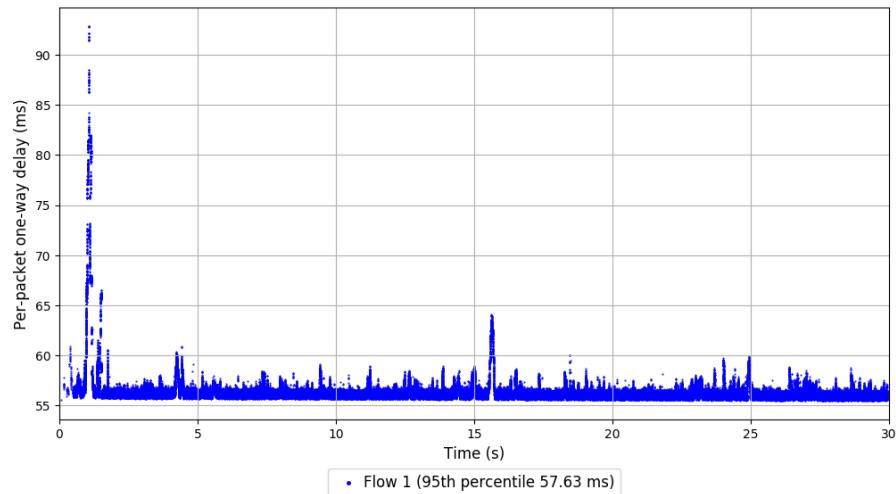
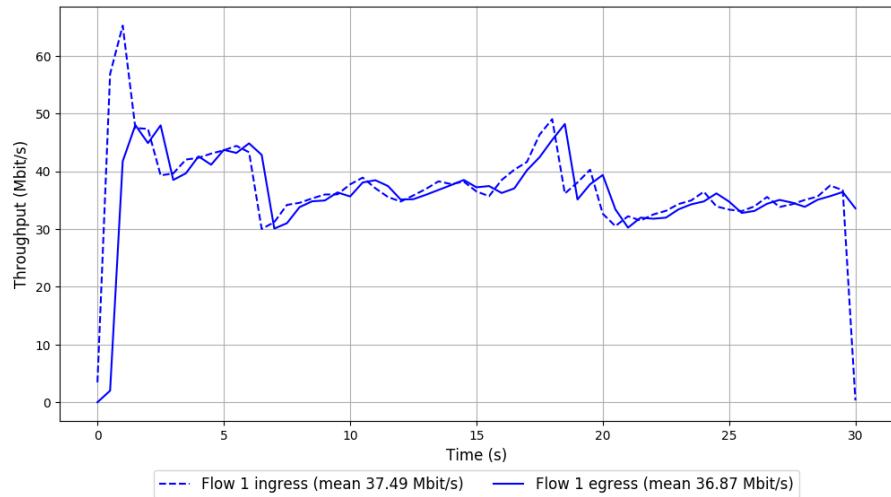


Run 5: Statistics of TCP Cubic

```
Start at: 2019-01-03 07:02:00
End at: 2019-01-03 07:02:30
Local clock offset: 2.476 ms
Remote clock offset: 18.505 ms

# Below is generated by plot.py at 2019-01-03 07:07:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.87 Mbit/s
95th percentile per-packet one-way delay: 57.629 ms
Loss rate: 2.04%
-- Flow 1:
Average throughput: 36.87 Mbit/s
95th percentile per-packet one-way delay: 57.629 ms
Loss rate: 2.04%
```

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

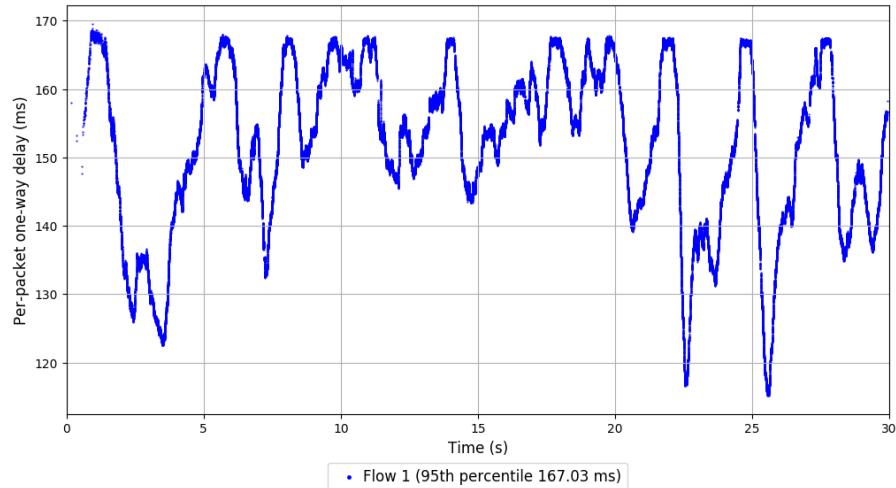
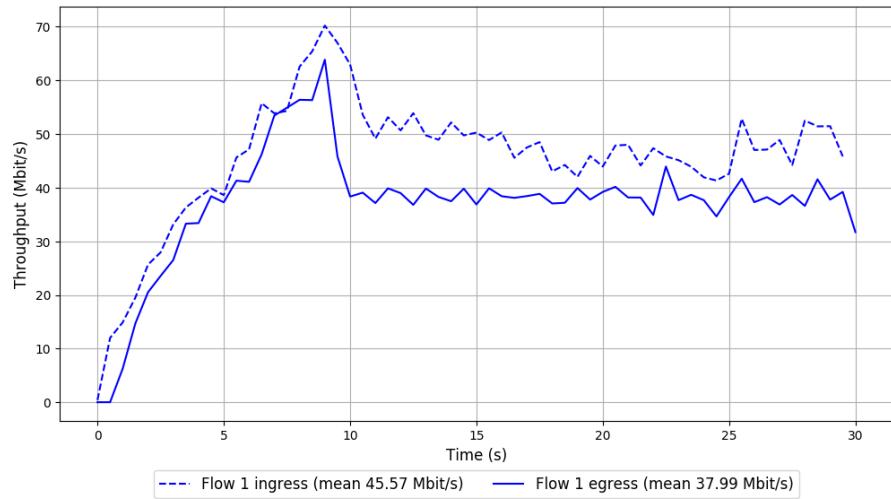


```
Run 1: Statistics of FillP
```

```
Start at: 2019-01-03 04:48:02
End at: 2019-01-03 04:48:32
Local clock offset: -3.511 ms
Remote clock offset: 19.912 ms

# Below is generated by plot.py at 2019-01-03 07:07:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 37.99 Mbit/s
95th percentile per-packet one-way delay: 167.033 ms
Loss rate: 17.19%
-- Flow 1:
Average throughput: 37.99 Mbit/s
95th percentile per-packet one-way delay: 167.033 ms
Loss rate: 17.19%
```

## Run 1: Report of FillP — Data Link

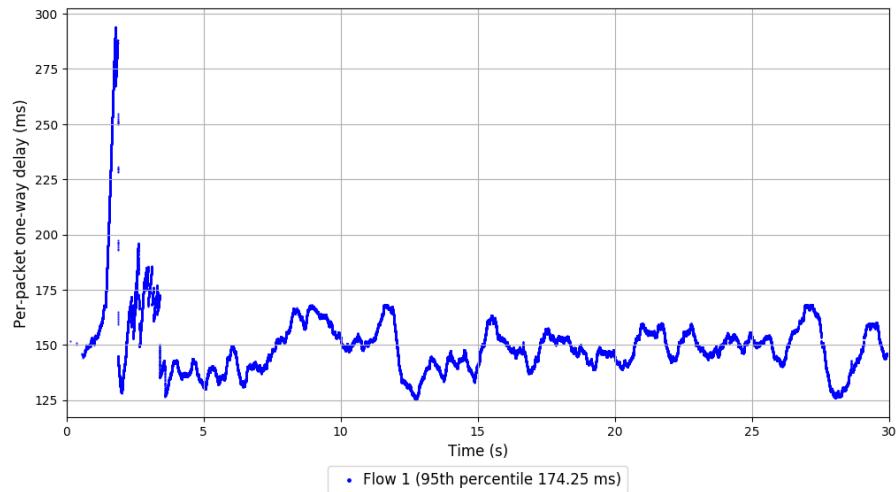
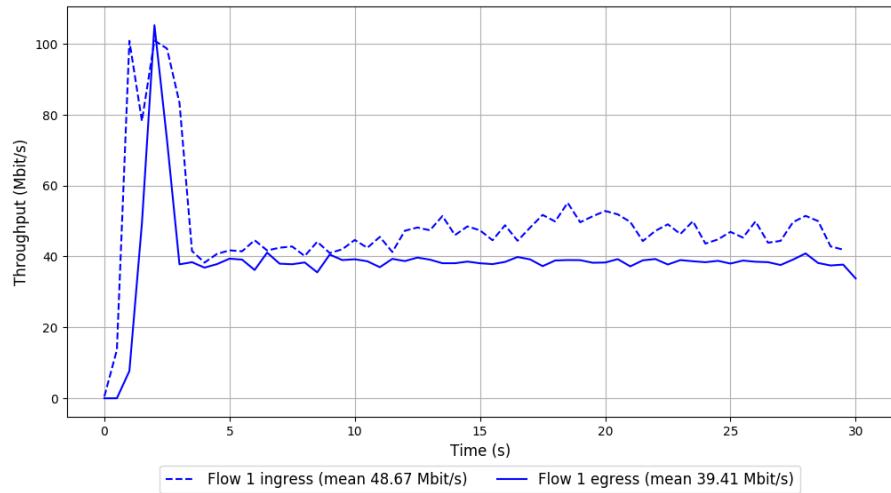


Run 2: Statistics of FillP

```
Start at: 2019-01-03 05:13:38
End at: 2019-01-03 05:14:08
Local clock offset: 0.266 ms
Remote clock offset: 25.484 ms

# Below is generated by plot.py at 2019-01-03 07:07:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.41 Mbit/s
95th percentile per-packet one-way delay: 174.250 ms
Loss rate: 19.57%
-- Flow 1:
Average throughput: 39.41 Mbit/s
95th percentile per-packet one-way delay: 174.250 ms
Loss rate: 19.57%
```

## Run 2: Report of FillP — Data Link

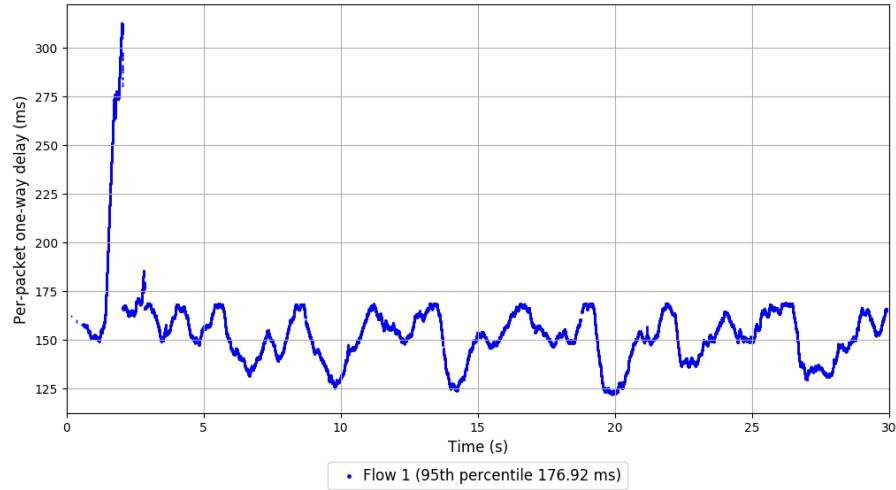
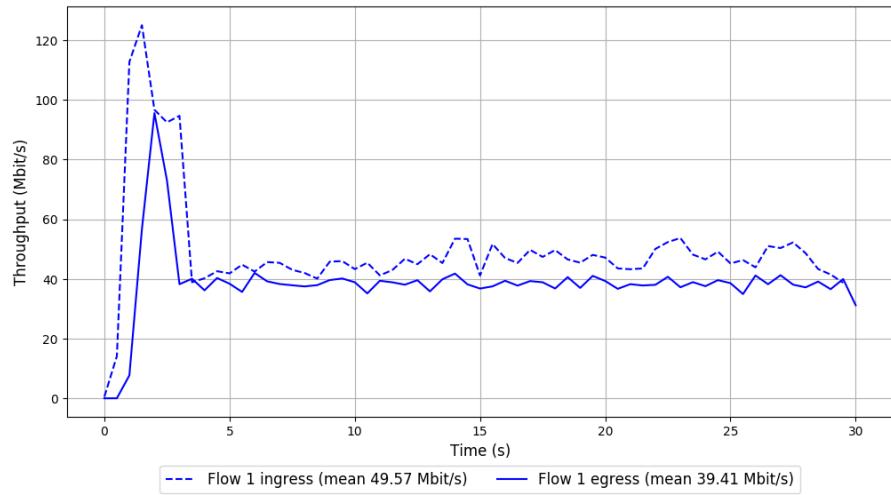


Run 3: Statistics of FillP

```
Start at: 2019-01-03 05:36:50
End at: 2019-01-03 05:37:20
Local clock offset: 0.78 ms
Remote clock offset: 34.218 ms

# Below is generated by plot.py at 2019-01-03 07:07:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.41 Mbit/s
95th percentile per-packet one-way delay: 176.919 ms
Loss rate: 21.05%
-- Flow 1:
Average throughput: 39.41 Mbit/s
95th percentile per-packet one-way delay: 176.919 ms
Loss rate: 21.05%
```

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

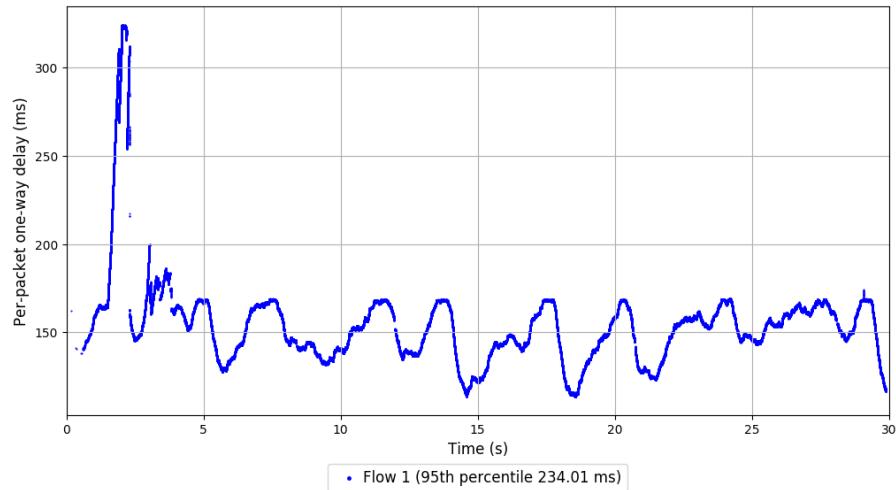
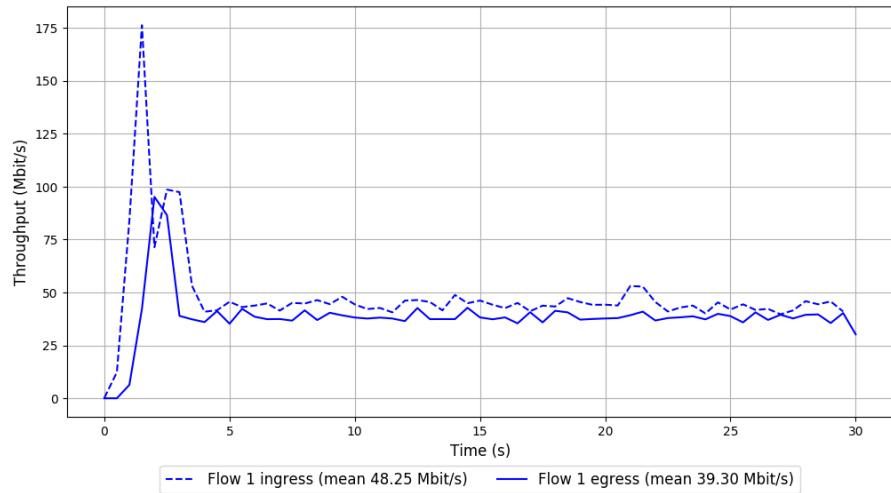


Run 4: Statistics of FillP

```
Start at: 2019-01-03 06:22:18
End at: 2019-01-03 06:22:48
Local clock offset: 0.417 ms
Remote clock offset: 55.815 ms

# Below is generated by plot.py at 2019-01-03 07:07:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.30 Mbit/s
95th percentile per-packet one-way delay: 234.010 ms
Loss rate: 19.17%
-- Flow 1:
Average throughput: 39.30 Mbit/s
95th percentile per-packet one-way delay: 234.010 ms
Loss rate: 19.17%
```

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

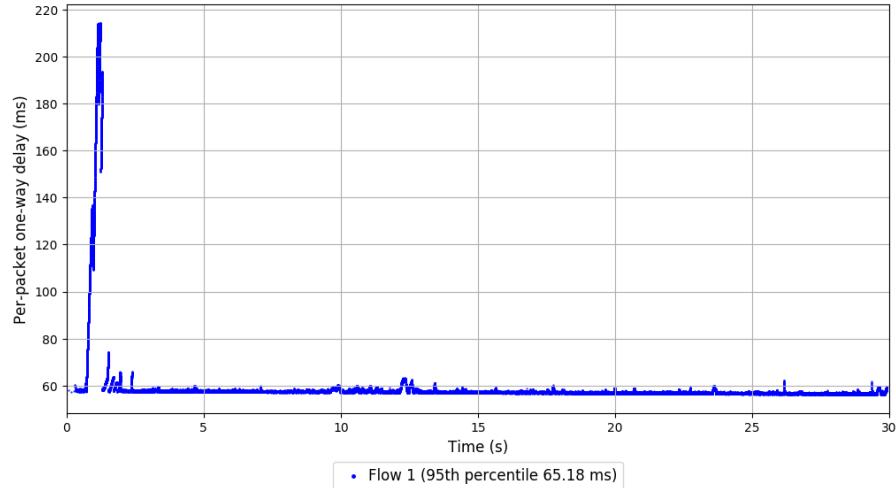
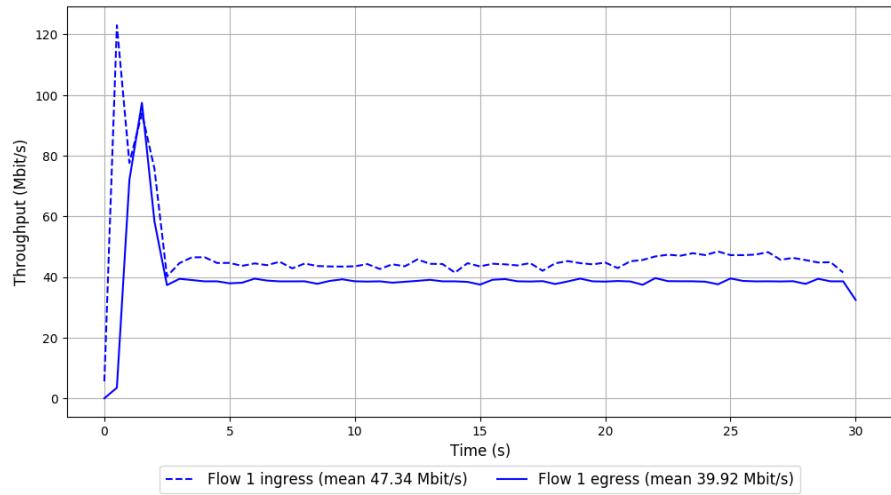


Run 5: Statistics of FillP

```
Start at: 2019-01-03 06:45:39
End at: 2019-01-03 06:46:09
Local clock offset: 3.027 ms
Remote clock offset: 38.15 ms

# Below is generated by plot.py at 2019-01-03 07:07:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.92 Mbit/s
95th percentile per-packet one-way delay: 65.183 ms
Loss rate: 16.00%
-- Flow 1:
Average throughput: 39.92 Mbit/s
95th percentile per-packet one-way delay: 65.183 ms
Loss rate: 16.00%
```

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

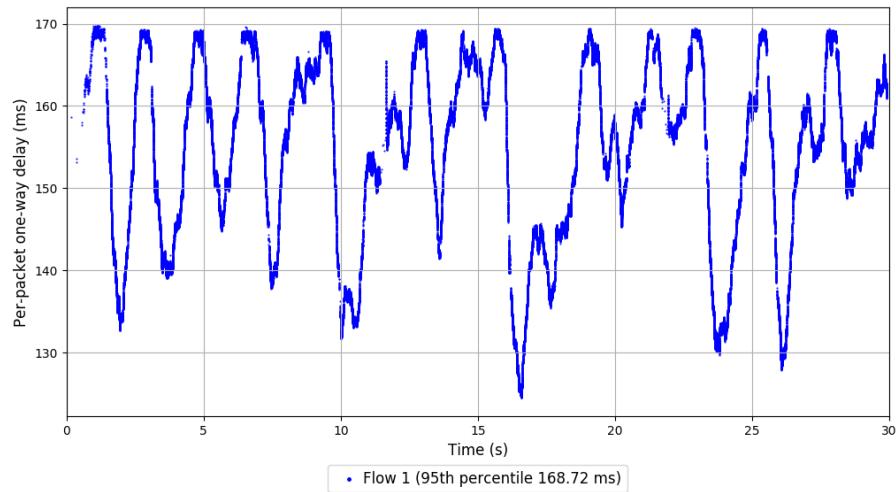
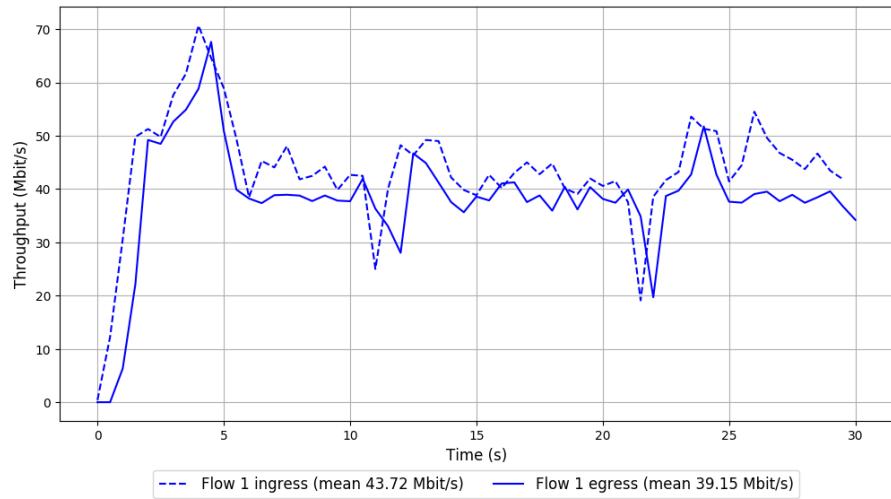


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2019-01-03 05:01:02
End at: 2019-01-03 05:01:32
Local clock offset: -1.356 ms
Remote clock offset: 20.208 ms

# Below is generated by plot.py at 2019-01-03 07:07:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.15 Mbit/s
95th percentile per-packet one-way delay: 168.718 ms
Loss rate: 11.05%
-- Flow 1:
Average throughput: 39.15 Mbit/s
95th percentile per-packet one-way delay: 168.718 ms
Loss rate: 11.05%
```

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

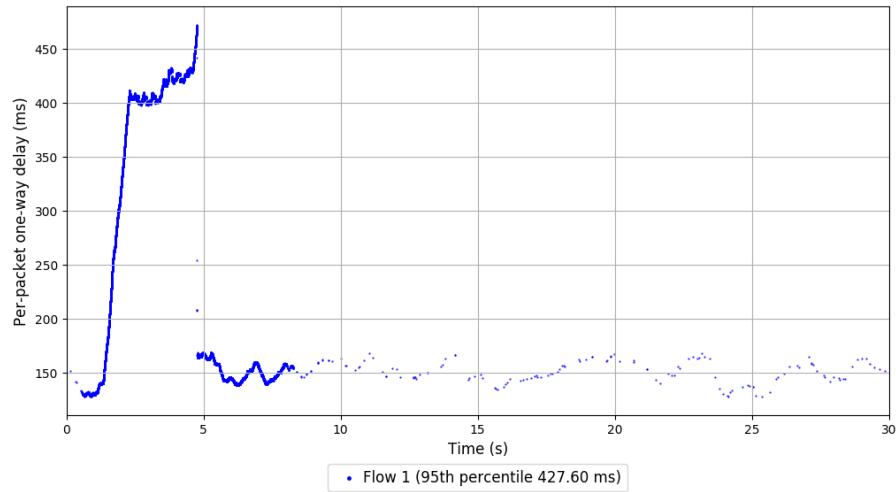
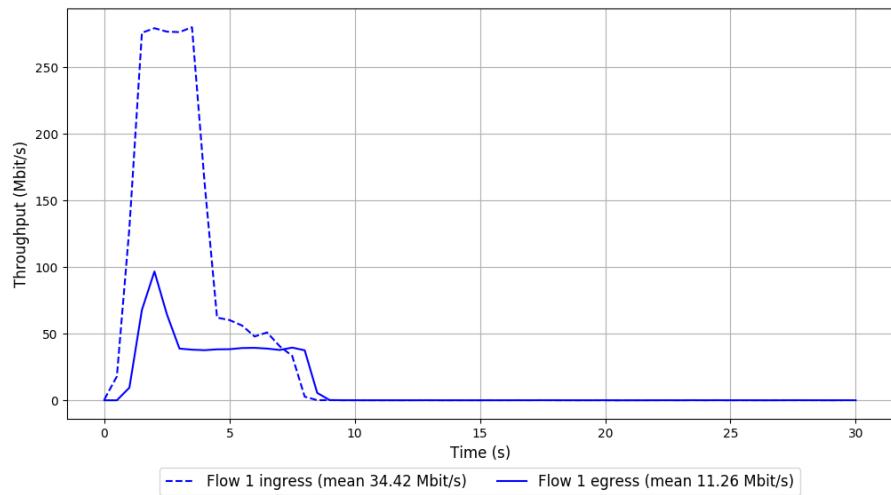


Run 2: Statistics of FillP-Sheep

```
Start at: 2019-01-03 05:24:27
End at: 2019-01-03 05:24:57
Local clock offset: 0.925 ms
Remote clock offset: 25.976 ms

# Below is generated by plot.py at 2019-01-03 07:07:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.26 Mbit/s
95th percentile per-packet one-way delay: 427.600 ms
Loss rate: 67.44%
-- Flow 1:
Average throughput: 11.26 Mbit/s
95th percentile per-packet one-way delay: 427.600 ms
Loss rate: 67.44%
```

Run 2: Report of FillP-Sheep — Data Link

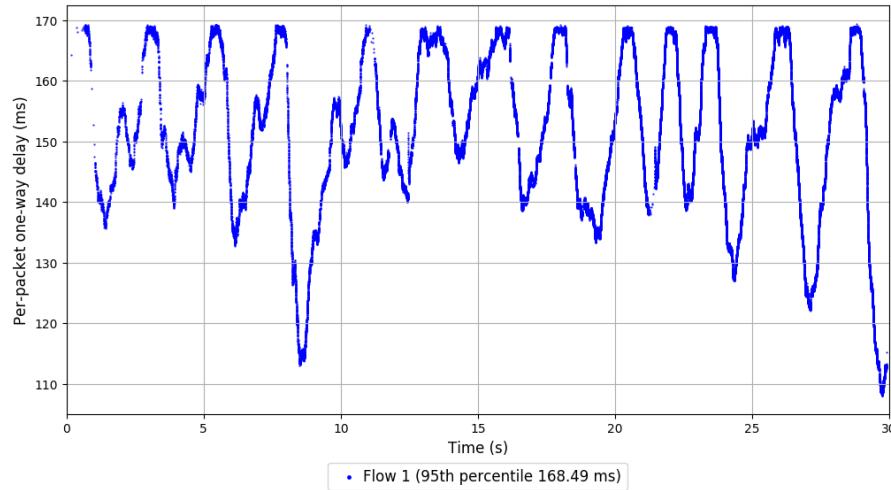
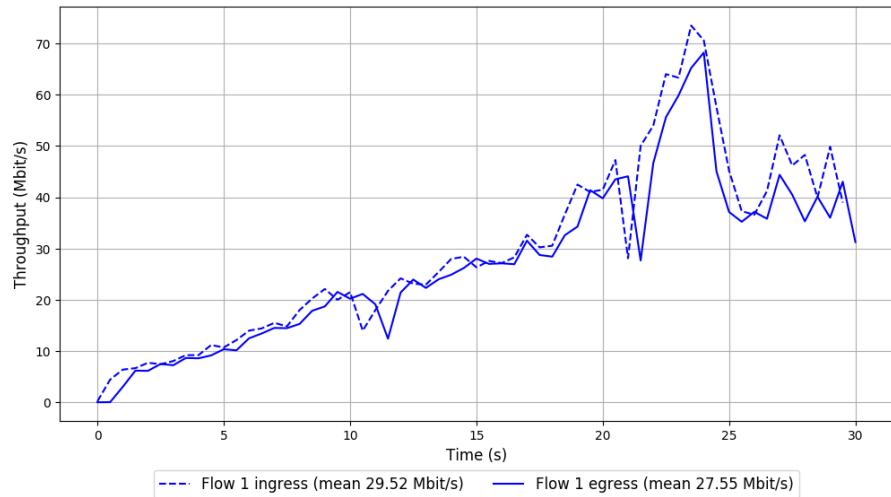


Run 3: Statistics of FillP-Sheep

```
Start at: 2019-01-03 05:48:32
End at: 2019-01-03 05:49:02
Local clock offset: 1.061 ms
Remote clock offset: 42.944 ms

# Below is generated by plot.py at 2019-01-03 07:07:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 27.55 Mbit/s
95th percentile per-packet one-way delay: 168.492 ms
Loss rate: 7.33%
-- Flow 1:
Average throughput: 27.55 Mbit/s
95th percentile per-packet one-way delay: 168.492 ms
Loss rate: 7.33%
```

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

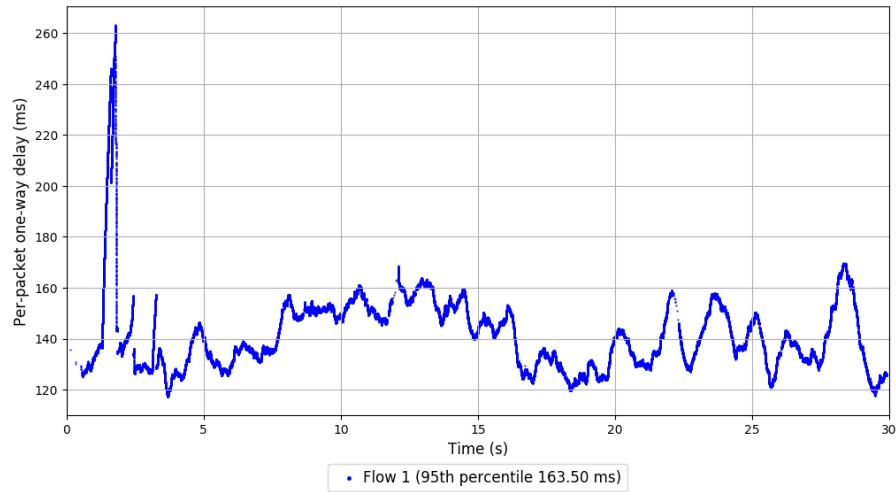
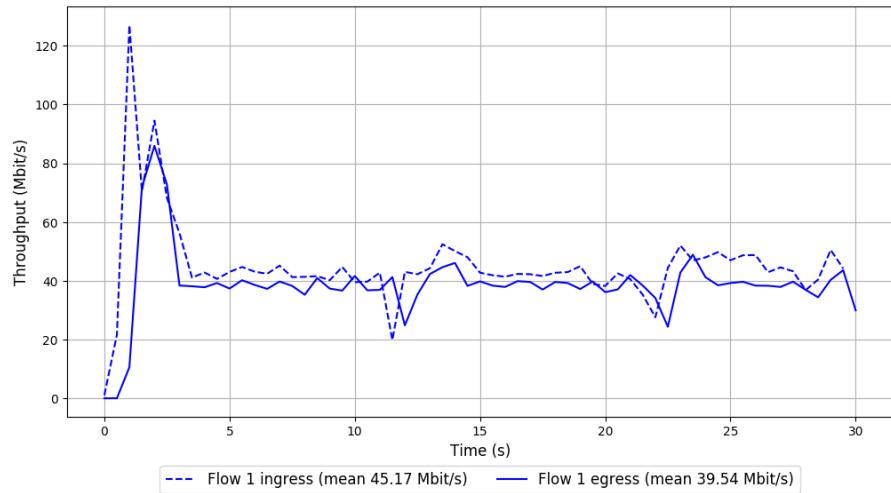


Run 4: Statistics of FillP-Sheep

```
Start at: 2019-01-03 06:33:53
End at: 2019-01-03 06:34:23
Local clock offset: 2.041 ms
Remote clock offset: 58.448 ms

# Below is generated by plot.py at 2019-01-03 07:07:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.54 Mbit/s
95th percentile per-packet one-way delay: 163.505 ms
Loss rate: 13.03%
-- Flow 1:
Average throughput: 39.54 Mbit/s
95th percentile per-packet one-way delay: 163.505 ms
Loss rate: 13.03%
```

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

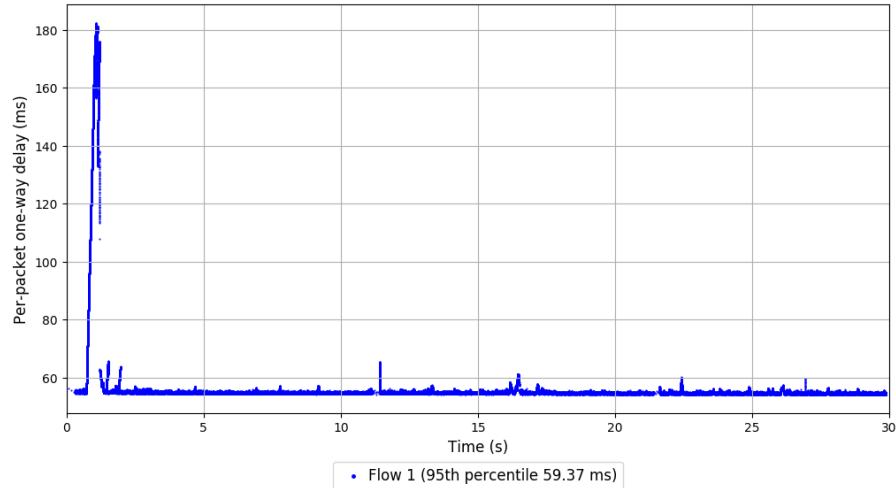
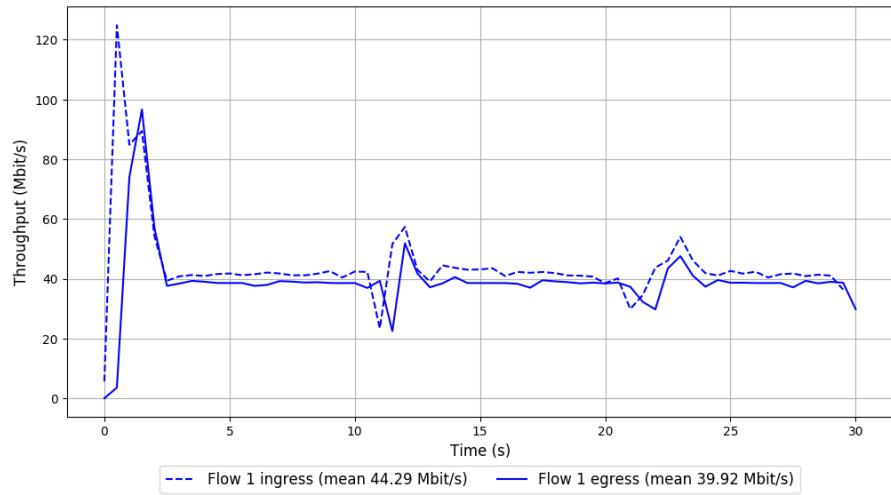


Run 5: Statistics of FillP-Sheep

```
Start at: 2019-01-03 06:56:09
End at: 2019-01-03 06:56:39
Local clock offset: 3.262 ms
Remote clock offset: 23.53 ms

# Below is generated by plot.py at 2019-01-03 07:07:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.92 Mbit/s
95th percentile per-packet one-way delay: 59.370 ms
Loss rate: 10.22%
-- Flow 1:
Average throughput: 39.92 Mbit/s
95th percentile per-packet one-way delay: 59.370 ms
Loss rate: 10.22%
```

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

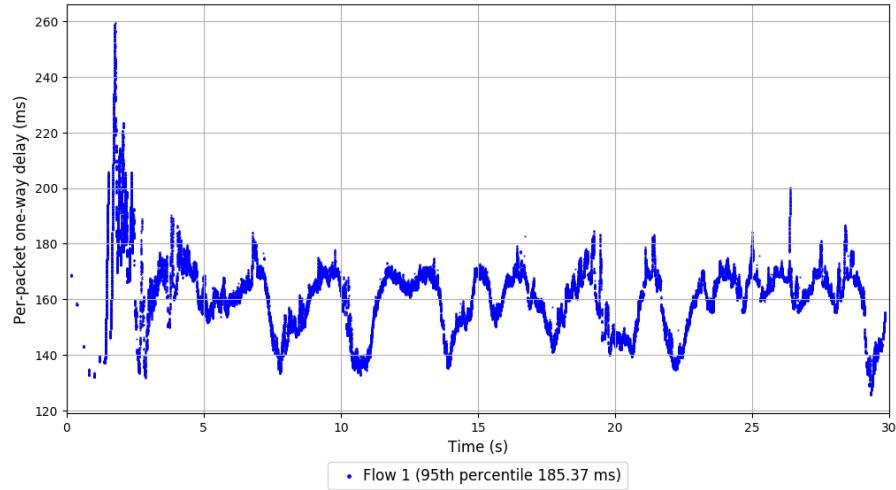
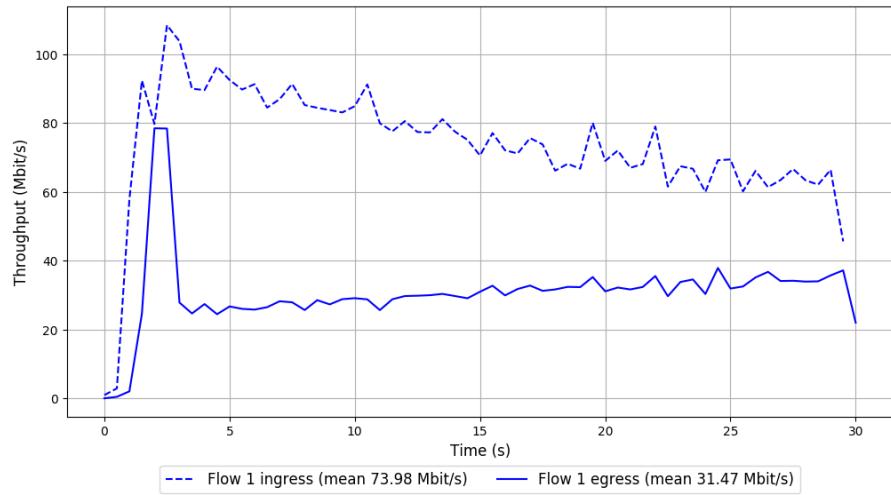


Run 1: Statistics of Indigo

```
Start at: 2019-01-03 04:53:02
End at: 2019-01-03 04:53:32
Local clock offset: -3.517 ms
Remote clock offset: 17.631 ms

# Below is generated by plot.py at 2019-01-03 07:07:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 31.47 Mbit/s
95th percentile per-packet one-way delay: 185.374 ms
Loss rate: 57.78%
-- Flow 1:
Average throughput: 31.47 Mbit/s
95th percentile per-packet one-way delay: 185.374 ms
Loss rate: 57.78%
```

## Run 1: Report of Indigo — Data Link

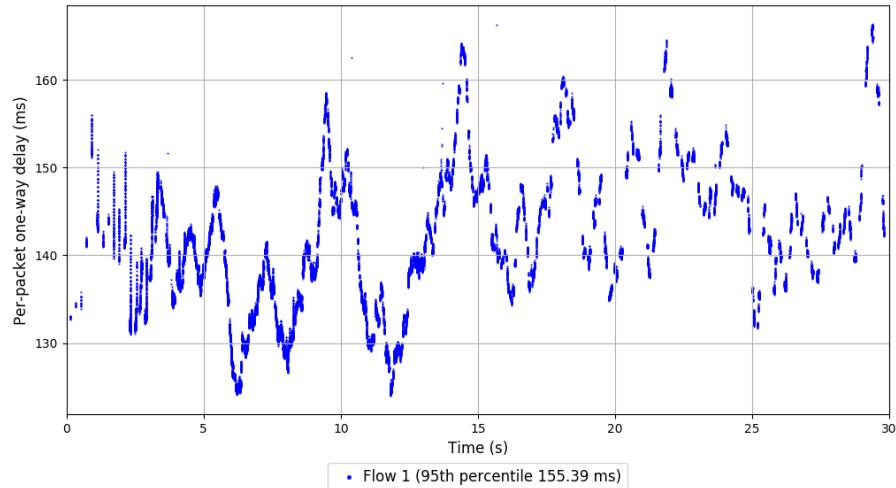
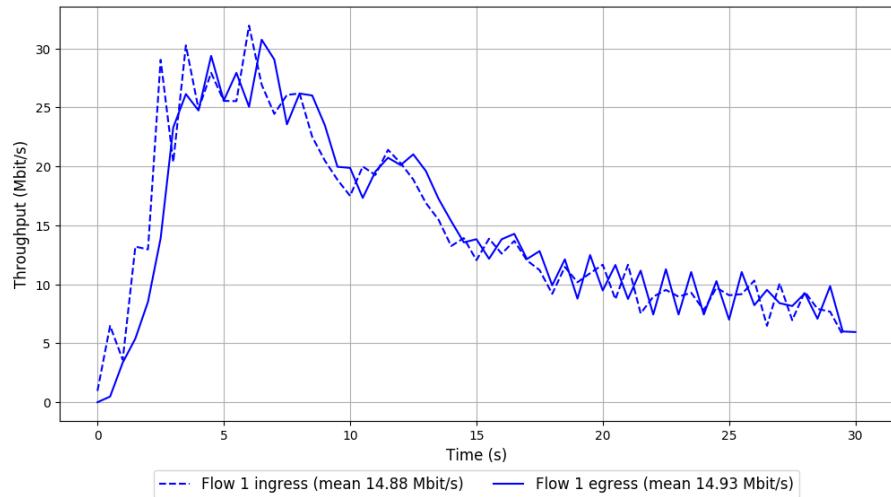


Run 2: Statistics of Indigo

```
Start at: 2019-01-03 05:18:25
End at: 2019-01-03 05:18:55
Local clock offset: 0.372 ms
Remote clock offset: 26.178 ms

# Below is generated by plot.py at 2019-01-03 07:07:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 14.93 Mbit/s
95th percentile per-packet one-way delay: 155.393 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 14.93 Mbit/s
95th percentile per-packet one-way delay: 155.393 ms
Loss rate: 0.32%
```

Run 2: Report of Indigo — Data Link

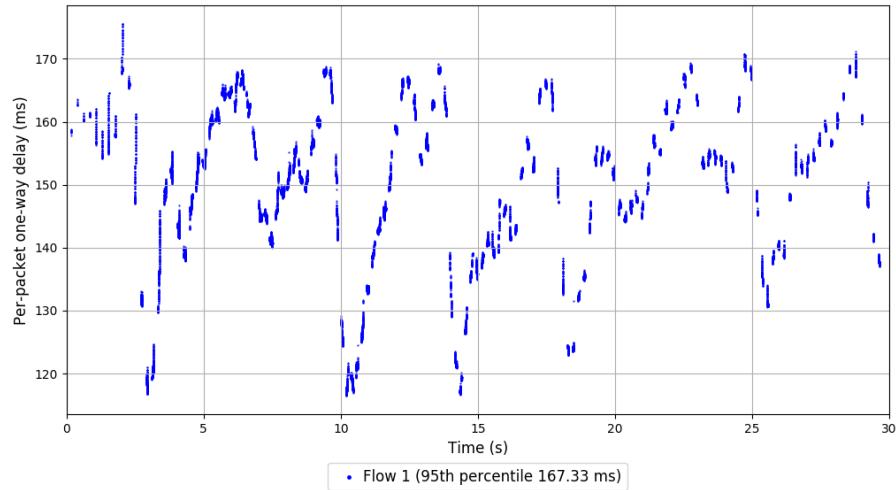
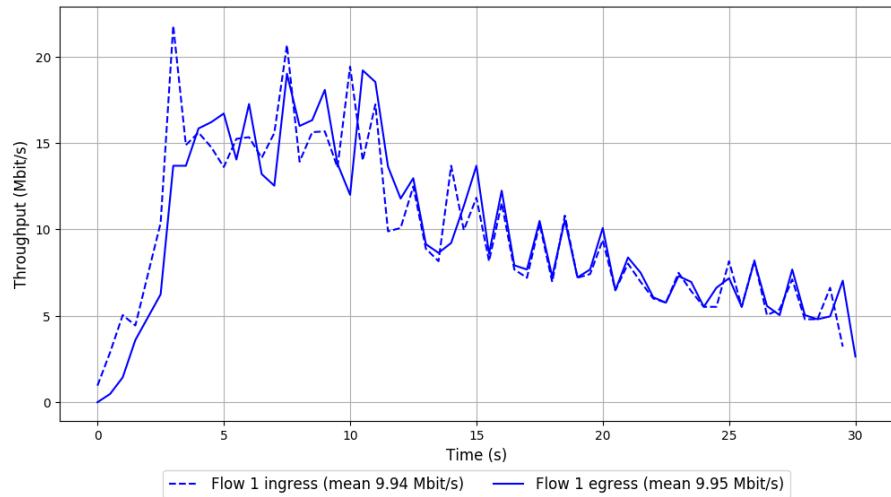


Run 3: Statistics of Indigo

```
Start at: 2019-01-03 05:41:39
End at: 2019-01-03 05:42:09
Local clock offset: 0.985 ms
Remote clock offset: 39.249 ms

# Below is generated by plot.py at 2019-01-03 07:07:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.95 Mbit/s
95th percentile per-packet one-way delay: 167.327 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 9.95 Mbit/s
95th percentile per-packet one-way delay: 167.327 ms
Loss rate: 0.63%
```

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

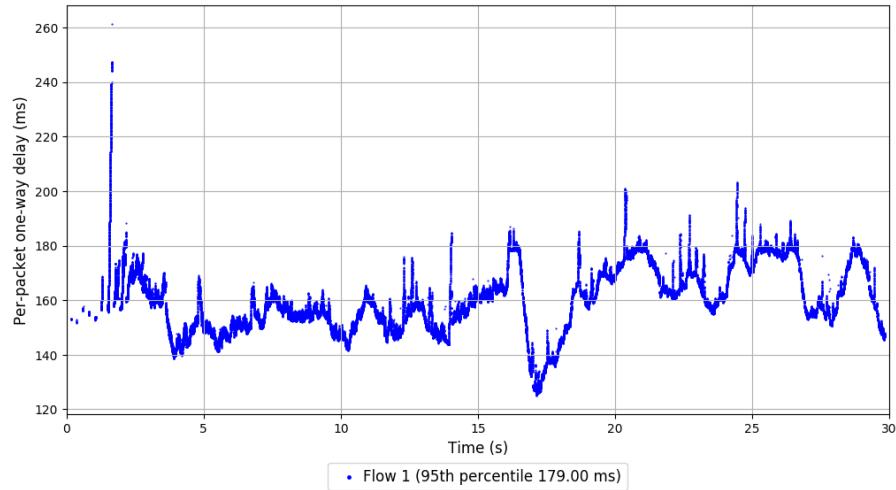
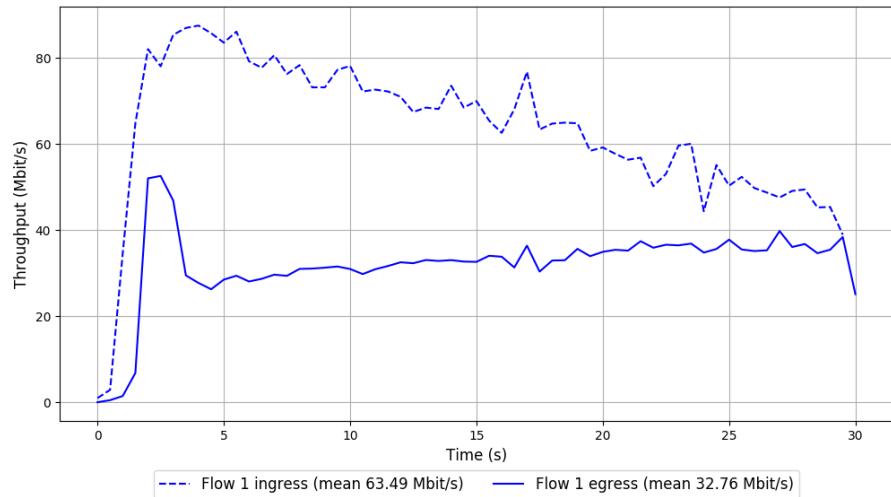


Run 4: Statistics of Indigo

```
Start at: 2019-01-03 06:27:26
End at: 2019-01-03 06:27:56
Local clock offset: 1.076 ms
Remote clock offset: 46.894 ms

# Below is generated by plot.py at 2019-01-03 07:08:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.76 Mbit/s
95th percentile per-packet one-way delay: 178.999 ms
Loss rate: 48.75%
-- Flow 1:
Average throughput: 32.76 Mbit/s
95th percentile per-packet one-way delay: 178.999 ms
Loss rate: 48.75%
```

## Run 4: Report of Indigo — Data Link

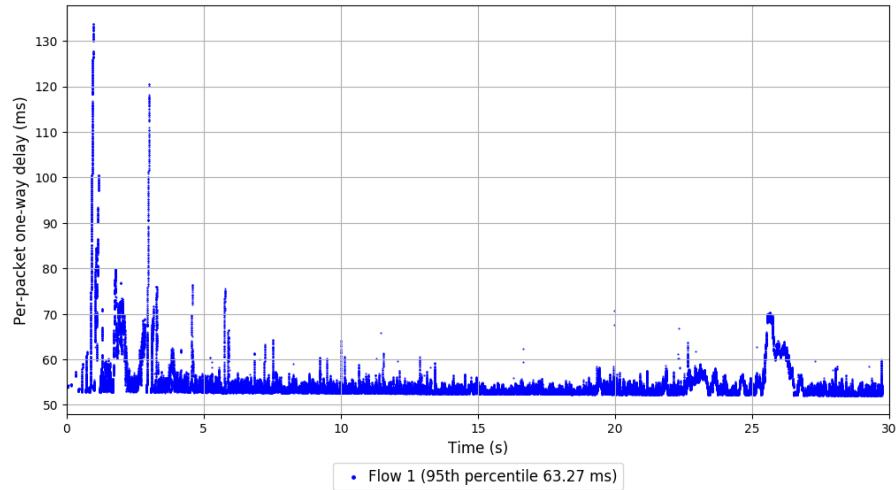
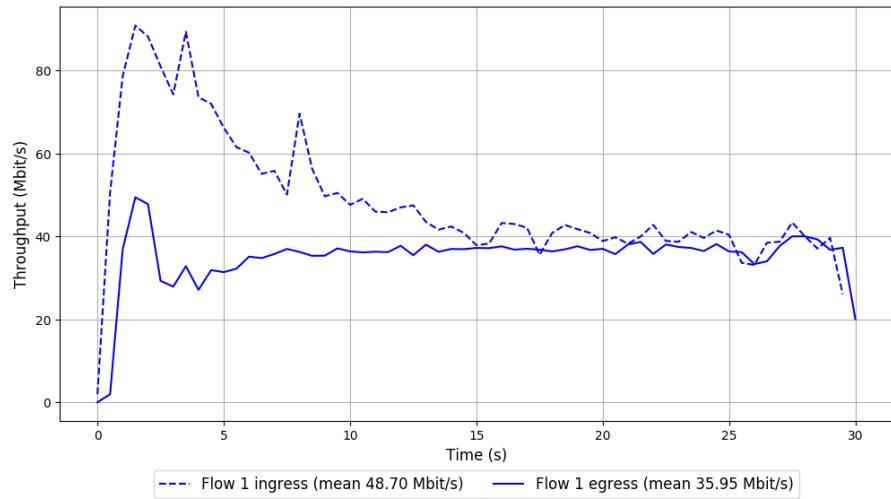


Run 5: Statistics of Indigo

```
Start at: 2019-01-03 06:50:18
End at: 2019-01-03 06:50:48
Local clock offset: 3.508 ms
Remote clock offset: 33.229 ms

# Below is generated by plot.py at 2019-01-03 07:08:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.95 Mbit/s
95th percentile per-packet one-way delay: 63.265 ms
Loss rate: 26.44%
-- Flow 1:
Average throughput: 35.95 Mbit/s
95th percentile per-packet one-way delay: 63.265 ms
Loss rate: 26.44%
```

## Run 5: Report of Indigo — Data Link

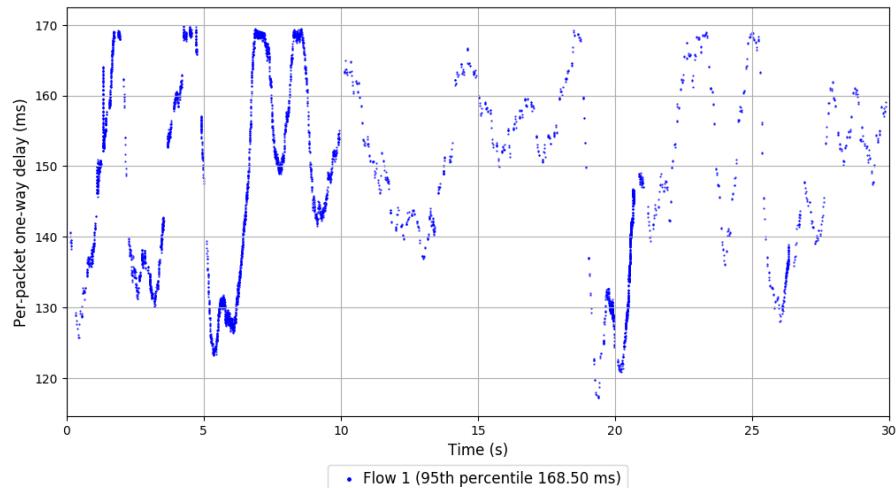
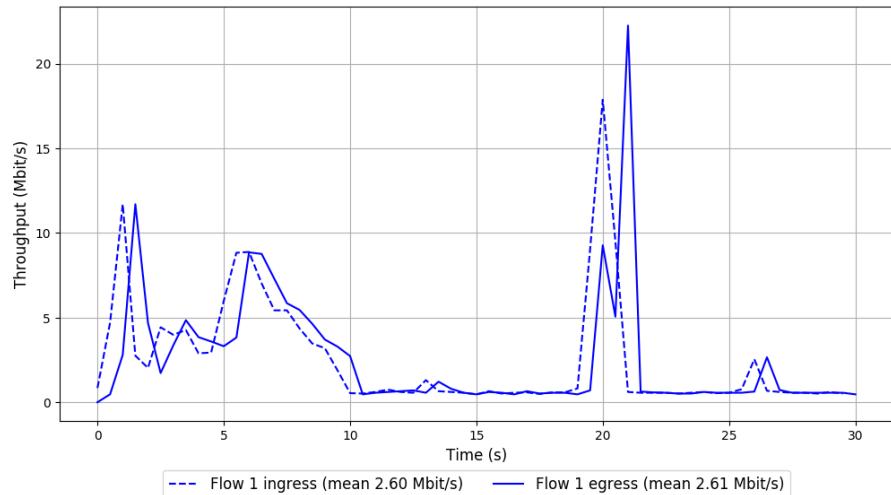


```
Run 1: Statistics of Indigo-MusesD
```

```
Start at: 2019-01-03 05:11:12
End at: 2019-01-03 05:11:42
Local clock offset: 0.178 ms
Remote clock offset: 25.038 ms

# Below is generated by plot.py at 2019-01-03 07:08:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.61 Mbit/s
95th percentile per-packet one-way delay: 168.497 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 2.61 Mbit/s
95th percentile per-packet one-way delay: 168.497 ms
Loss rate: 0.30%
```

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

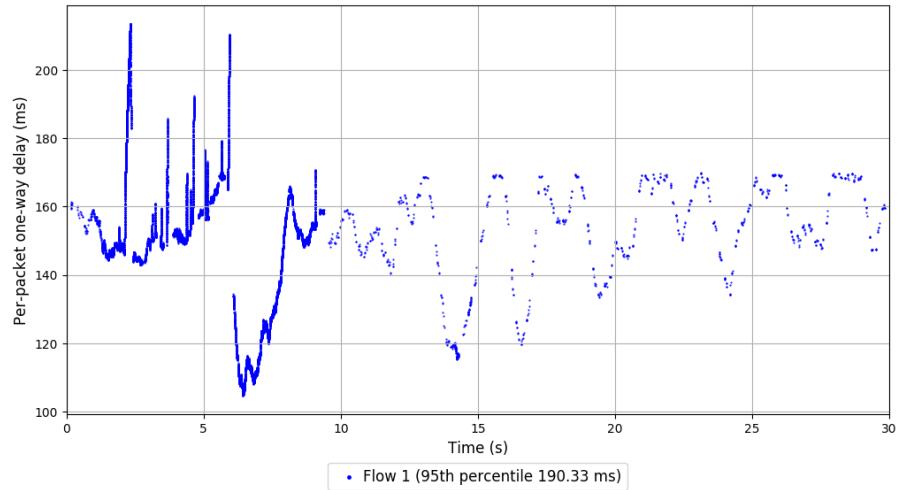
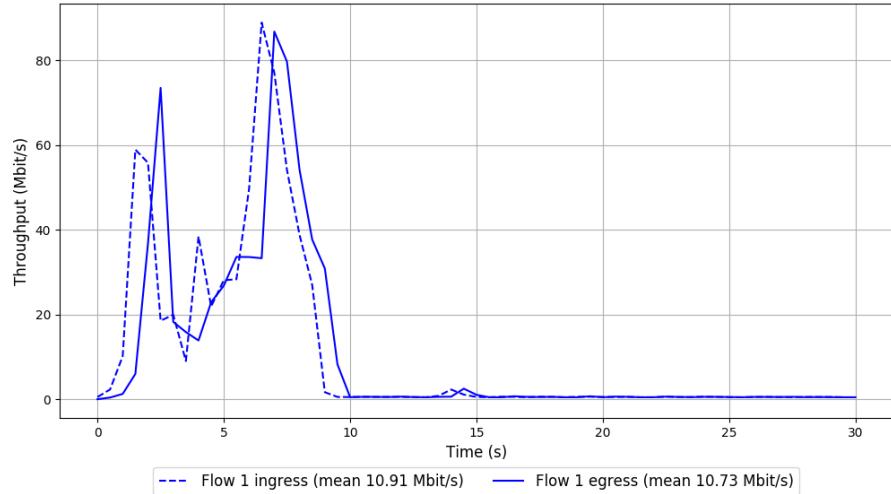


Run 2: Statistics of Indigo-MusesD

```
Start at: 2019-01-03 05:34:20
End at: 2019-01-03 05:34:50
Local clock offset: 0.696 ms
Remote clock offset: 30.611 ms

# Below is generated by plot.py at 2019-01-03 07:08:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.73 Mbit/s
95th percentile per-packet one-way delay: 190.329 ms
Loss rate: 2.42%
-- Flow 1:
Average throughput: 10.73 Mbit/s
95th percentile per-packet one-way delay: 190.329 ms
Loss rate: 2.42%
```

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

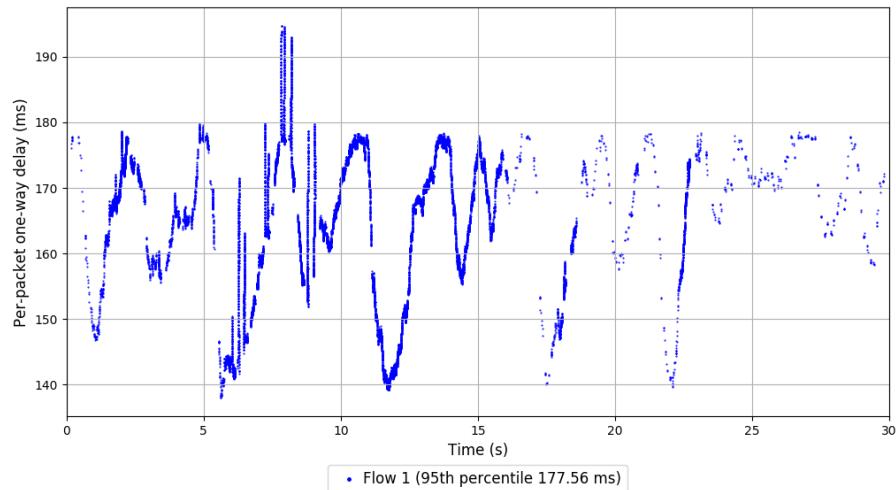
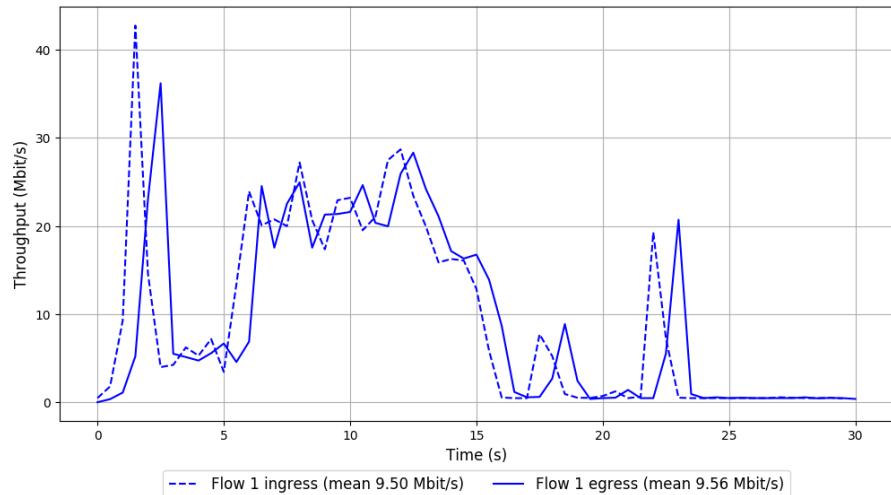


Run 3: Statistics of Indigo-MusesD

```
Start at: 2019-01-03 06:09:18
End at: 2019-01-03 06:09:48
Local clock offset: 0.563 ms
Remote clock offset: 42.036 ms

# Below is generated by plot.py at 2019-01-03 07:08:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 177.557 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 177.557 ms
Loss rate: 0.24%
```

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

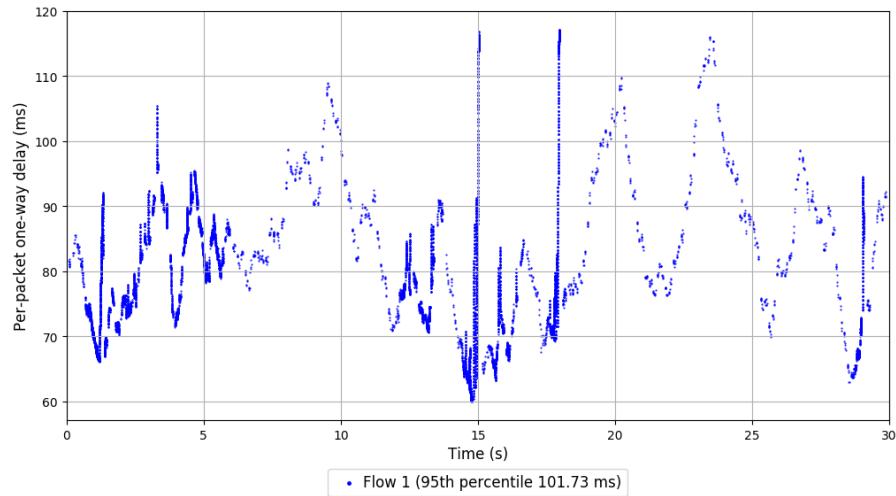
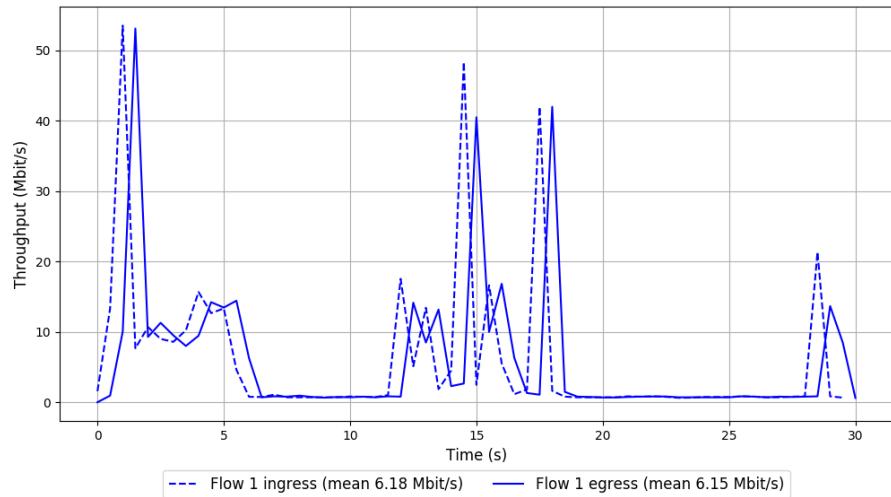


Run 4: Statistics of Indigo-MusesD

```
Start at: 2019-01-03 06:43:18
End at: 2019-01-03 06:43:48
Local clock offset: 2.948 ms
Remote clock offset: 46.956 ms

# Below is generated by plot.py at 2019-01-03 07:08:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.15 Mbit/s
95th percentile per-packet one-way delay: 101.734 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 6.15 Mbit/s
95th percentile per-packet one-way delay: 101.734 ms
Loss rate: 0.76%
```

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

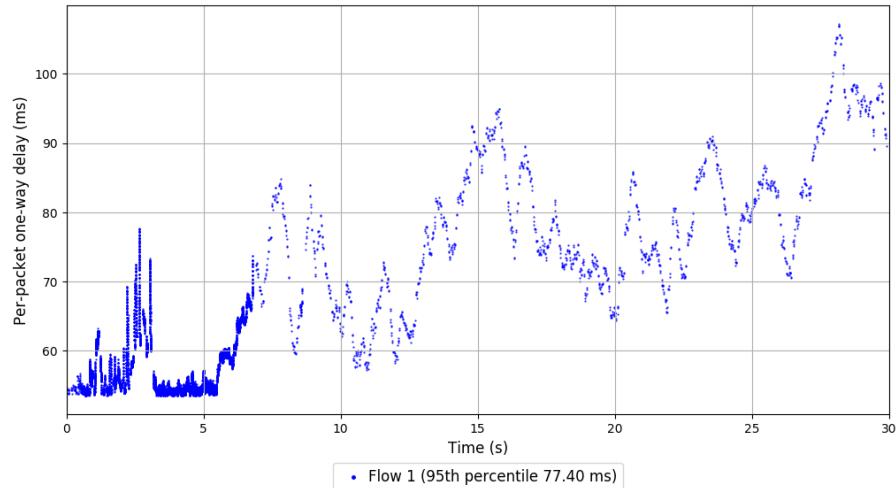
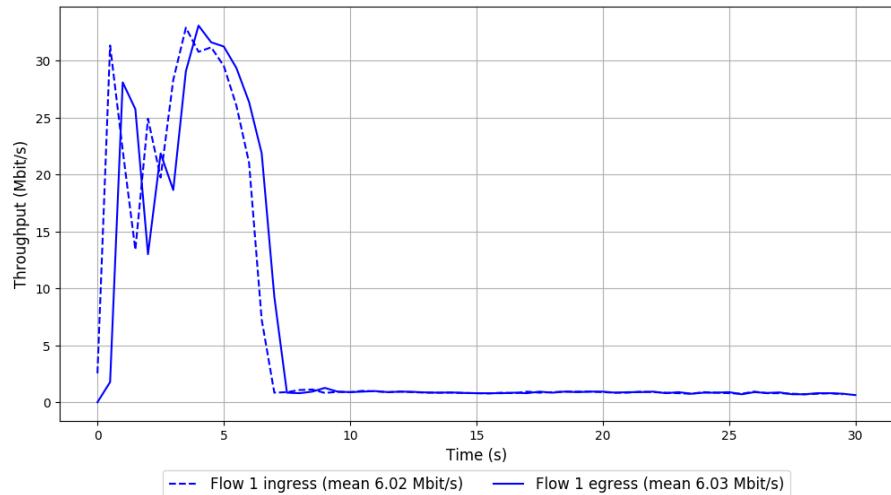


Run 5: Statistics of Indigo-MusesD

```
Start at: 2019-01-03 07:05:26
End at: 2019-01-03 07:05:56
Local clock offset: 2.272 ms
Remote clock offset: 18.73 ms

# Below is generated by plot.py at 2019-01-03 07:08:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.03 Mbit/s
95th percentile per-packet one-way delay: 77.404 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 6.03 Mbit/s
95th percentile per-packet one-way delay: 77.404 ms
Loss rate: 0.06%
```

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

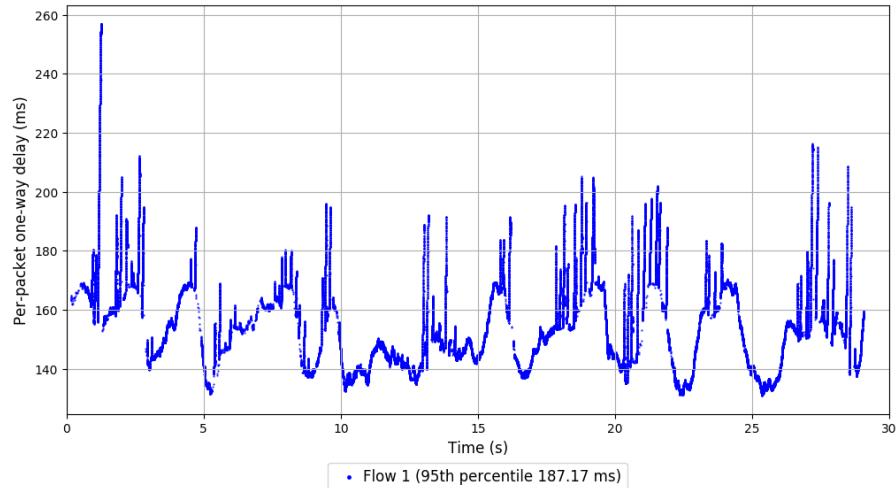
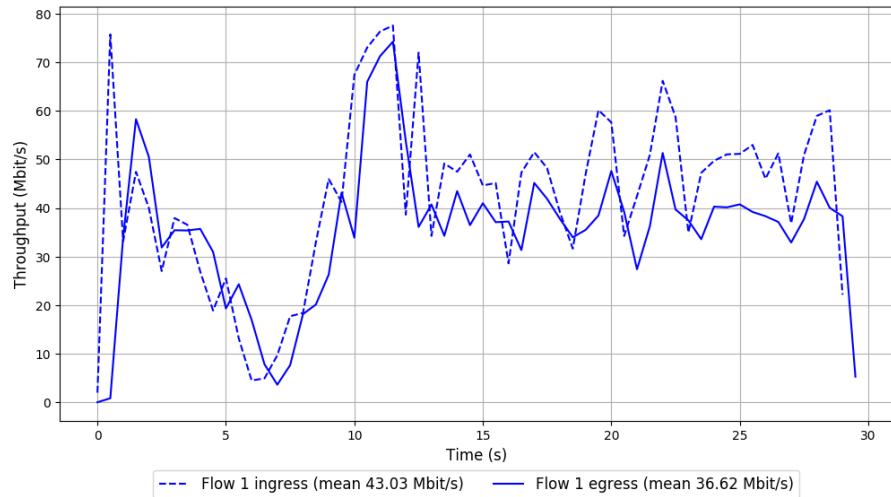


Run 1: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 05:04:50
End at: 2019-01-03 05:05:20
Local clock offset: -0.857 ms
Remote clock offset: 23.178 ms

# Below is generated by plot.py at 2019-01-03 07:08:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.62 Mbit/s
95th percentile per-packet one-way delay: 187.174 ms
Loss rate: 15.74%
-- Flow 1:
Average throughput: 36.62 Mbit/s
95th percentile per-packet one-way delay: 187.174 ms
Loss rate: 15.74%
```

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

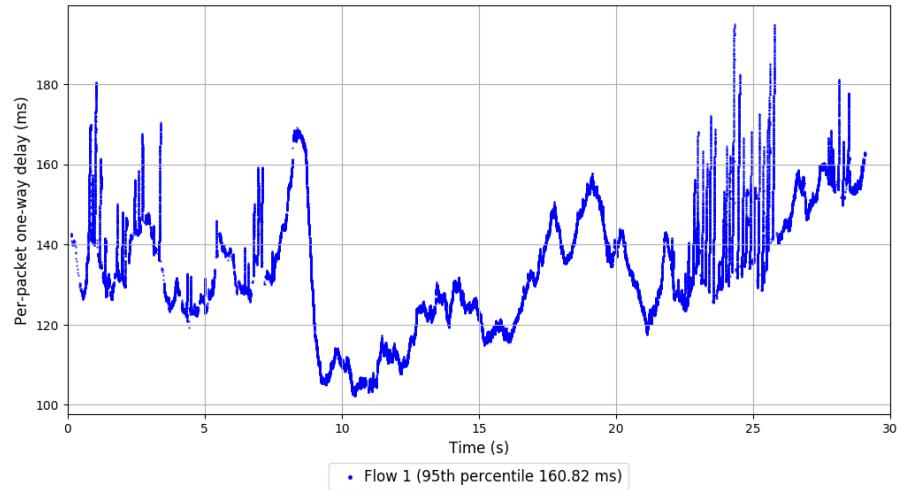
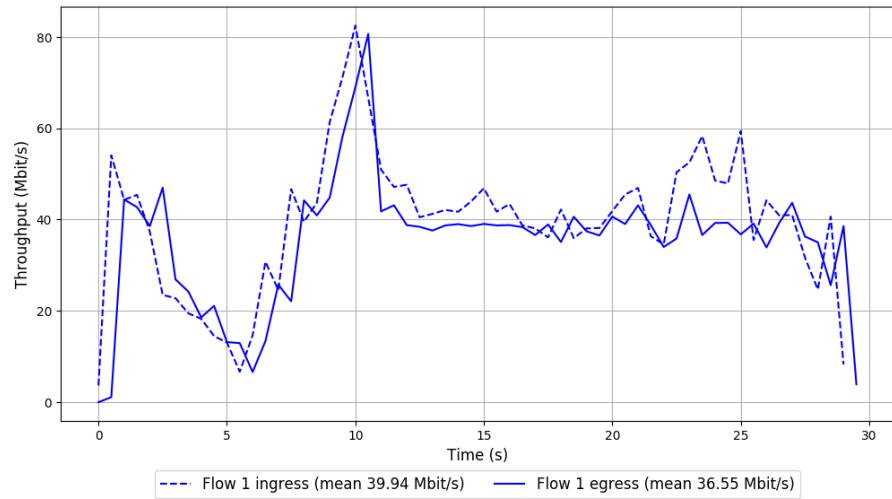


Run 2: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 05:28:01
End at: 2019-01-03 05:28:31
Local clock offset: 0.849 ms
Remote clock offset: 26.425 ms

# Below is generated by plot.py at 2019-01-03 07:08:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.55 Mbit/s
95th percentile per-packet one-way delay: 160.825 ms
Loss rate: 9.08%
-- Flow 1:
Average throughput: 36.55 Mbit/s
95th percentile per-packet one-way delay: 160.825 ms
Loss rate: 9.08%
```

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

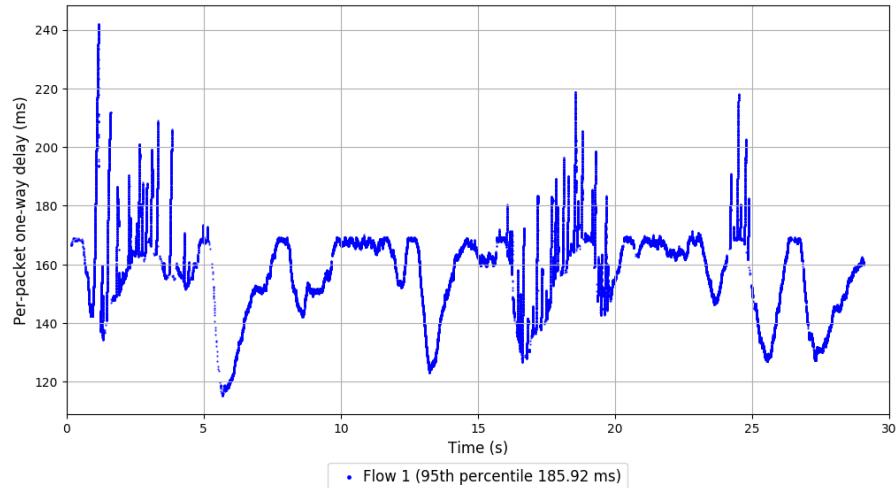
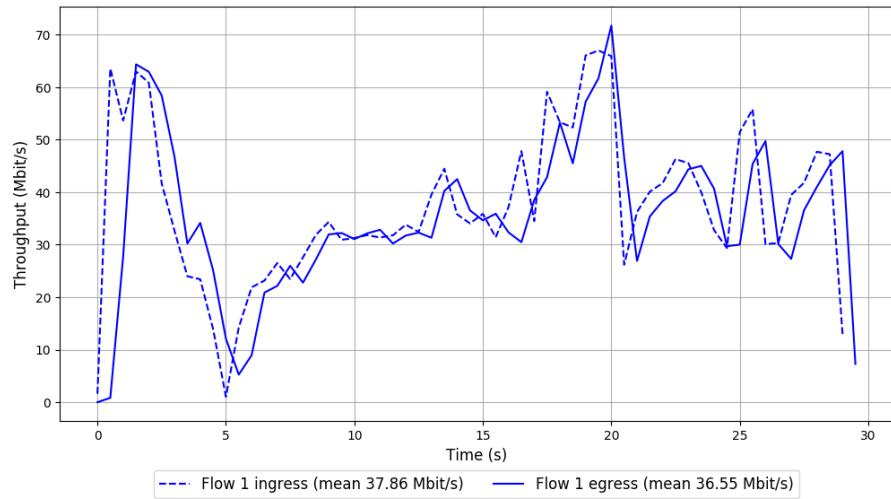


Run 3: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 05:52:42
End at: 2019-01-03 05:53:12
Local clock offset: 1.024 ms
Remote clock offset: 44.988 ms

# Below is generated by plot.py at 2019-01-03 07:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.55 Mbit/s
95th percentile per-packet one-way delay: 185.923 ms
Loss rate: 4.21%
-- Flow 1:
Average throughput: 36.55 Mbit/s
95th percentile per-packet one-way delay: 185.923 ms
Loss rate: 4.21%
```

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

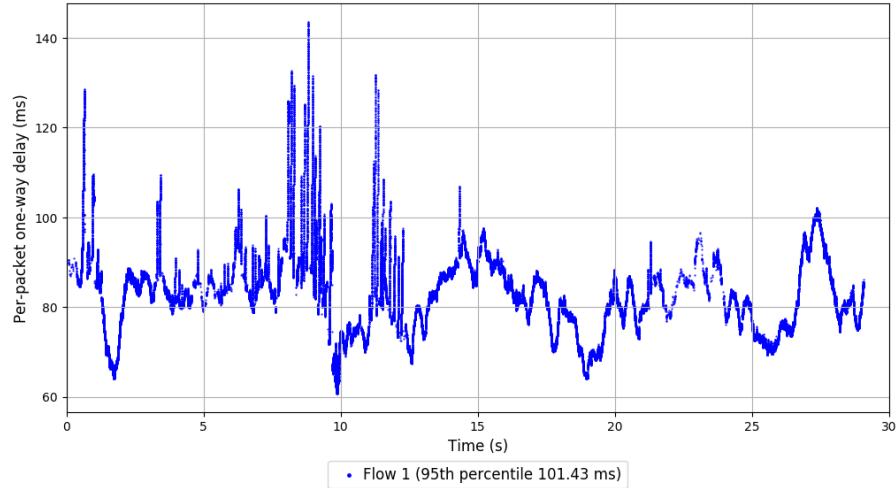
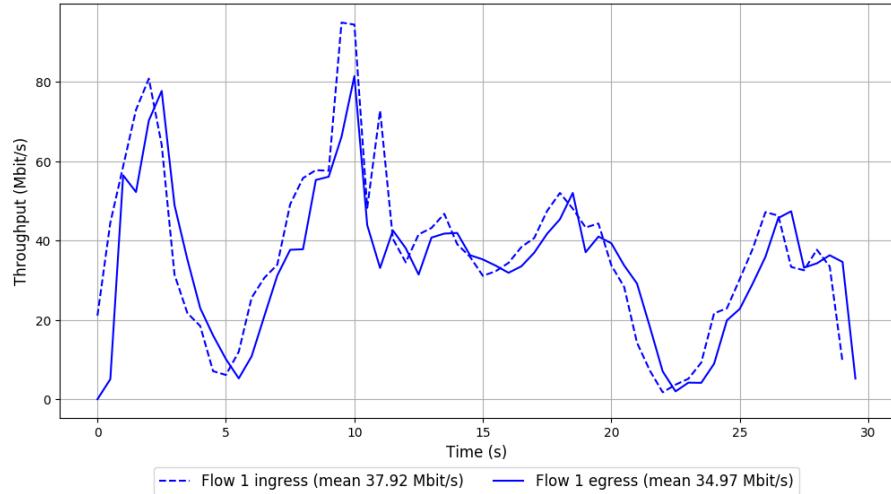


Run 4: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 06:37:28
End at: 2019-01-03 06:37:58
Local clock offset: 2.549 ms
Remote clock offset: 56.664 ms

# Below is generated by plot.py at 2019-01-03 07:08:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.97 Mbit/s
95th percentile per-packet one-way delay: 101.433 ms
Loss rate: 8.24%
-- Flow 1:
Average throughput: 34.97 Mbit/s
95th percentile per-packet one-way delay: 101.433 ms
Loss rate: 8.24%
```

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

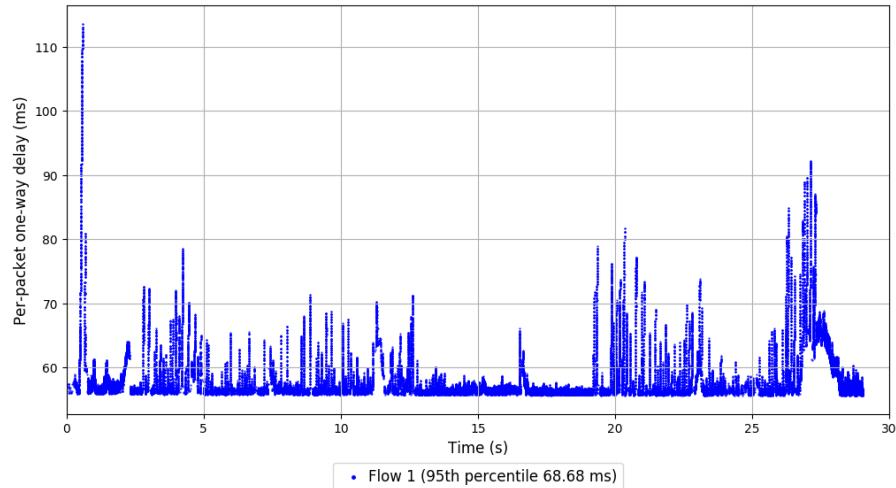
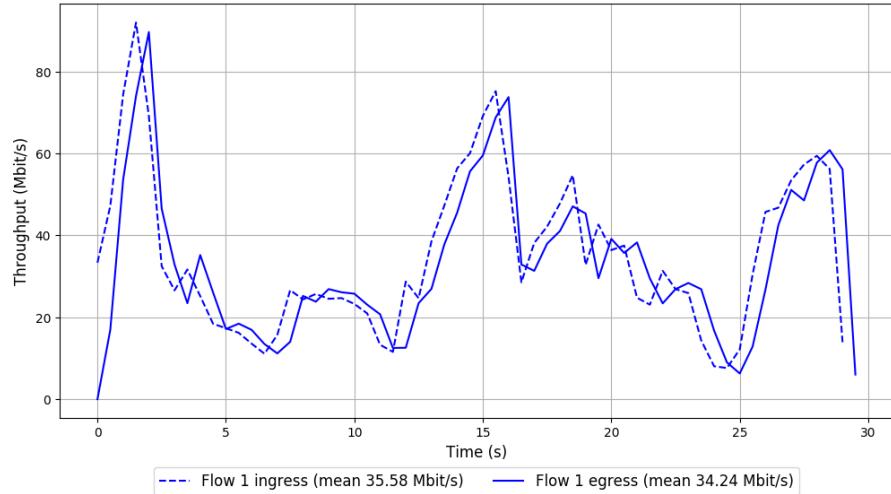


Run 5: Statistics of Indigo-MusesT

```
Start at: 2019-01-03 06:59:38
End at: 2019-01-03 07:00:08
Local clock offset: 2.846 ms
Remote clock offset: 19.842 ms

# Below is generated by plot.py at 2019-01-03 07:08:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.24 Mbit/s
95th percentile per-packet one-way delay: 68.682 ms
Loss rate: 4.15%
-- Flow 1:
Average throughput: 34.24 Mbit/s
95th percentile per-packet one-way delay: 68.682 ms
Loss rate: 4.15%
```

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

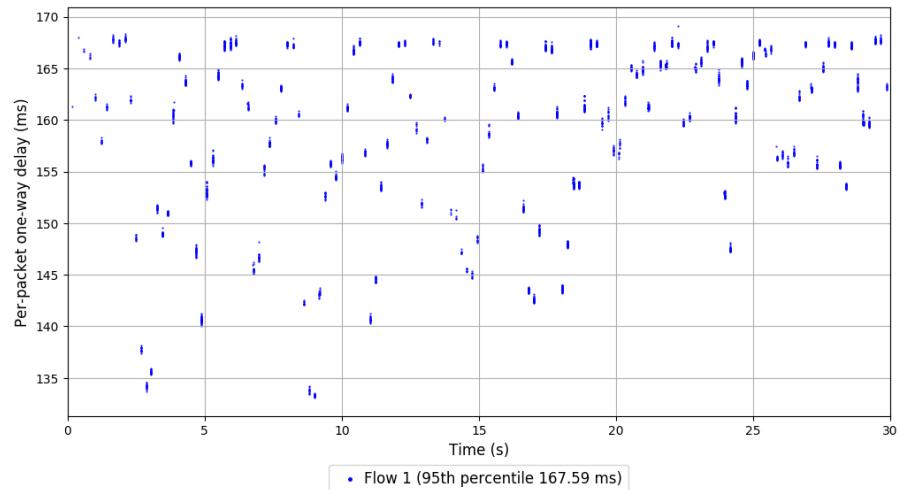
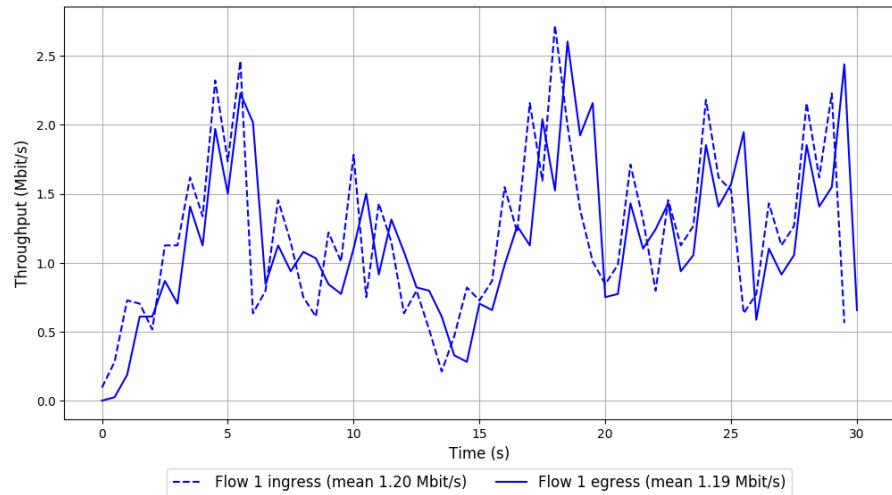


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2019-01-03 04:55:23
End at: 2019-01-03 04:55:53
Local clock offset: -3.186 ms
Remote clock offset: 17.836 ms

# Below is generated by plot.py at 2019-01-03 07:08:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 167.589 ms
Loss rate: 1.92%
-- Flow 1:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 167.589 ms
Loss rate: 1.92%
```

Run 1: Report of LEDBAT — Data Link

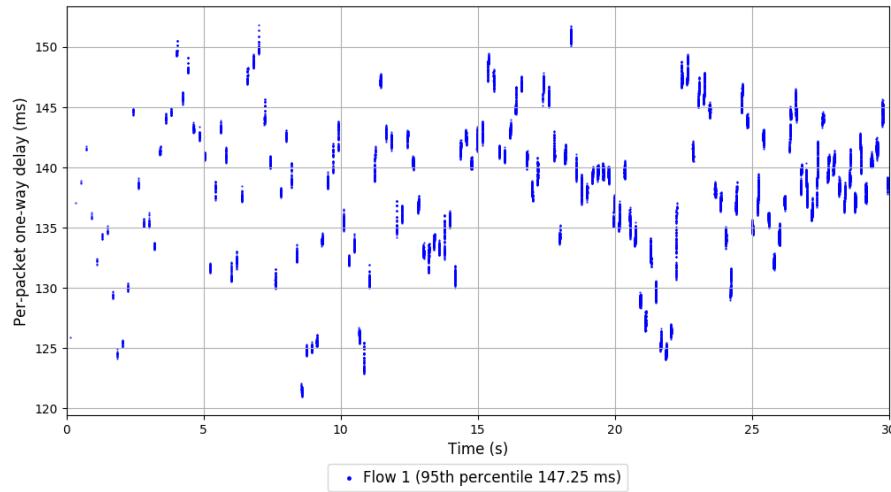
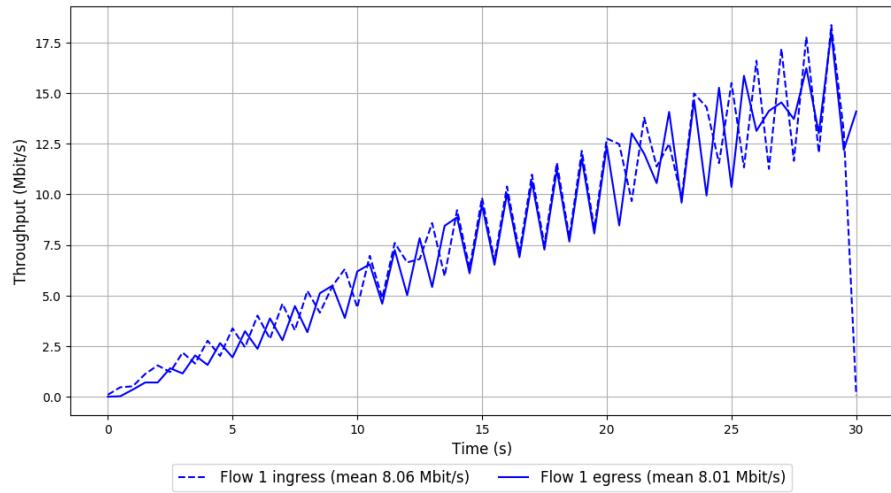


Run 2: Statistics of LEDBAT

```
Start at: 2019-01-03 05:19:37
End at: 2019-01-03 05:20:07
Local clock offset: 0.781 ms
Remote clock offset: 27.558 ms

# Below is generated by plot.py at 2019-01-03 07:08:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.01 Mbit/s
95th percentile per-packet one-way delay: 147.249 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 8.01 Mbit/s
95th percentile per-packet one-way delay: 147.249 ms
Loss rate: 1.09%
```

## Run 2: Report of LEDBAT — Data Link

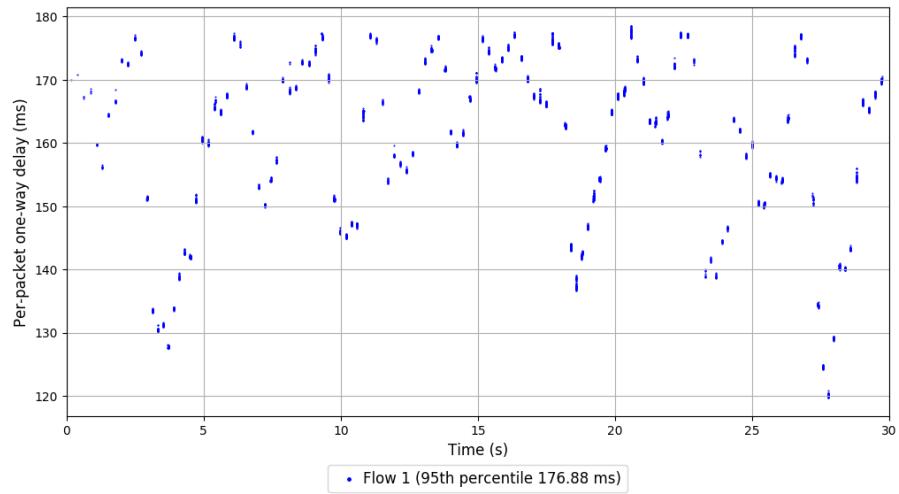
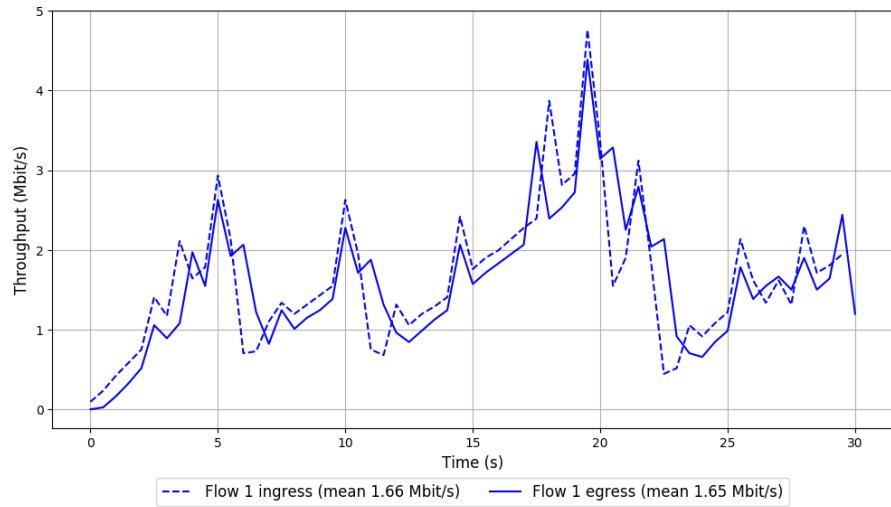


Run 3: Statistics of LEDBAT

```
Start at: 2019-01-03 05:42:52
End at: 2019-01-03 05:43:22
Local clock offset: 0.88 ms
Remote clock offset: 31.145 ms

# Below is generated by plot.py at 2019-01-03 07:08:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 176.881 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 176.881 ms
Loss rate: 1.47%
```

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

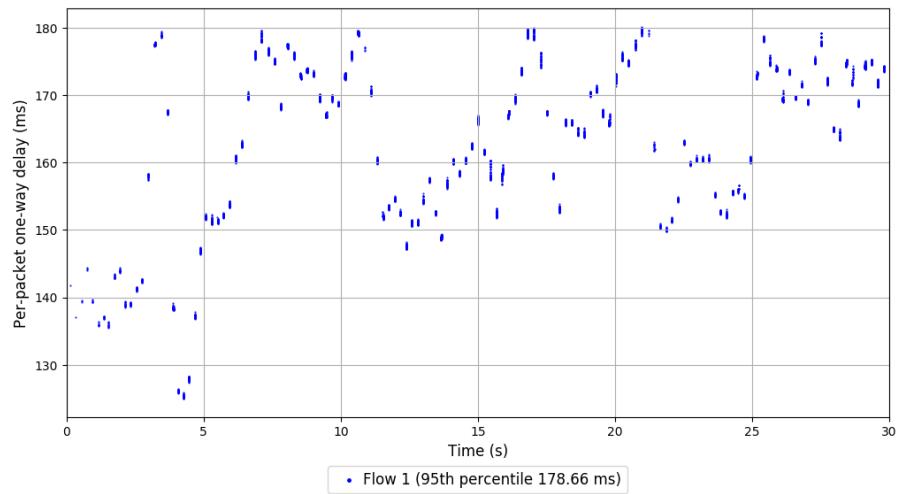
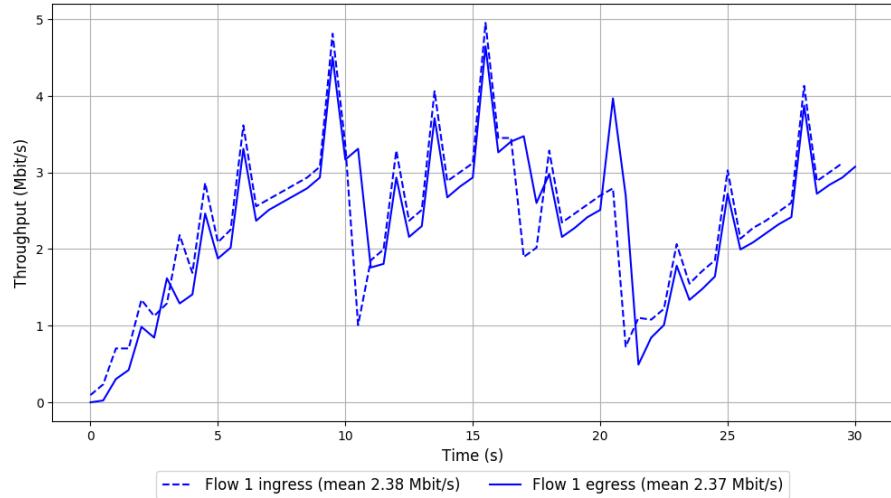


Run 4: Statistics of LEDBAT

```
Start at: 2019-01-03 06:28:43
End at: 2019-01-03 06:29:13
Local clock offset: 1.577 ms
Remote clock offset: 47.475 ms

# Below is generated by plot.py at 2019-01-03 07:08:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 178.658 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 178.658 ms
Loss rate: 1.27%
```

## Run 4: Report of LEDBAT — Data Link

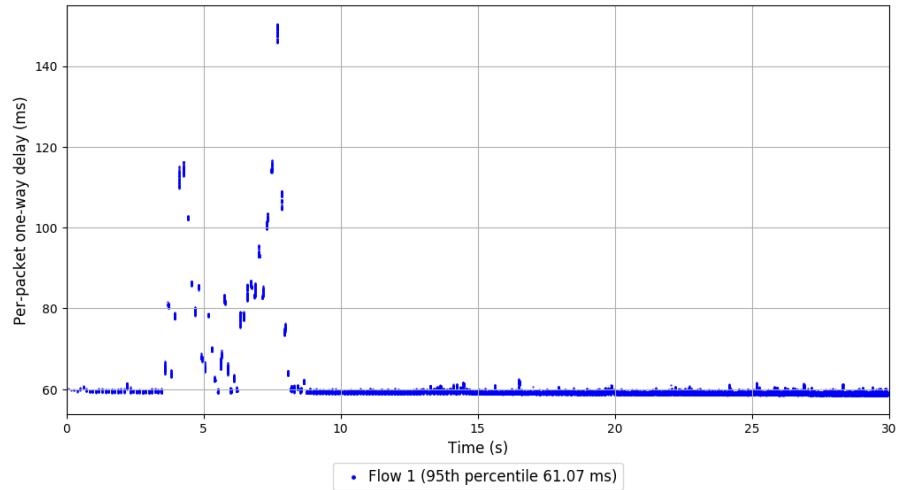
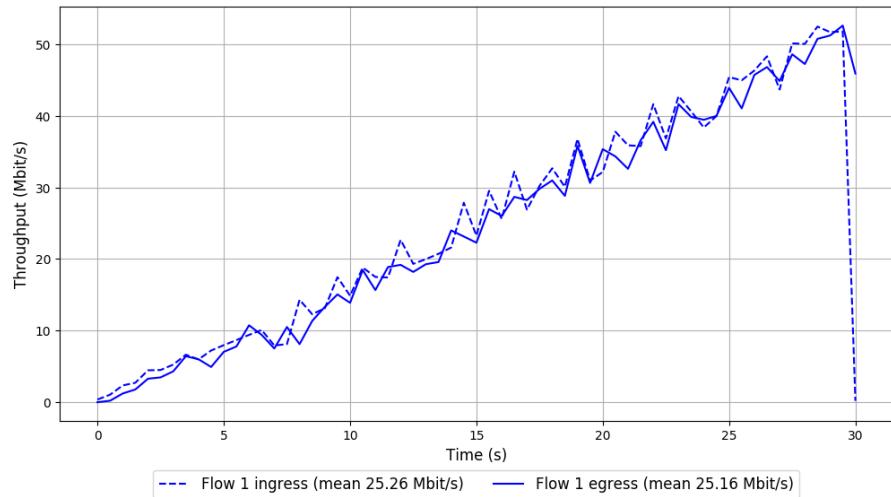


Run 5: Statistics of LEDBAT

```
Start at: 2019-01-03 06:51:29
End at: 2019-01-03 06:51:59
Local clock offset: 3.369 ms
Remote clock offset: 24.86 ms

# Below is generated by plot.py at 2019-01-03 07:08:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 25.16 Mbit/s
95th percentile per-packet one-way delay: 61.069 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 25.16 Mbit/s
95th percentile per-packet one-way delay: 61.069 ms
Loss rate: 0.79%
```

## Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

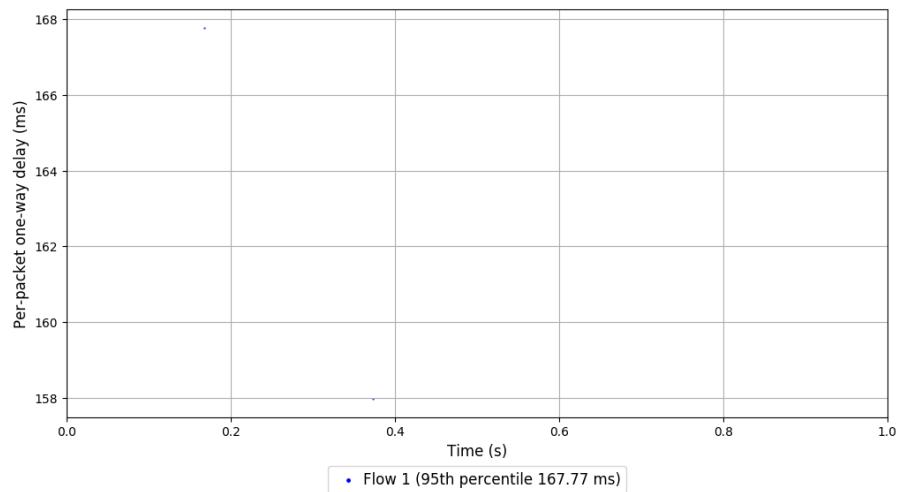
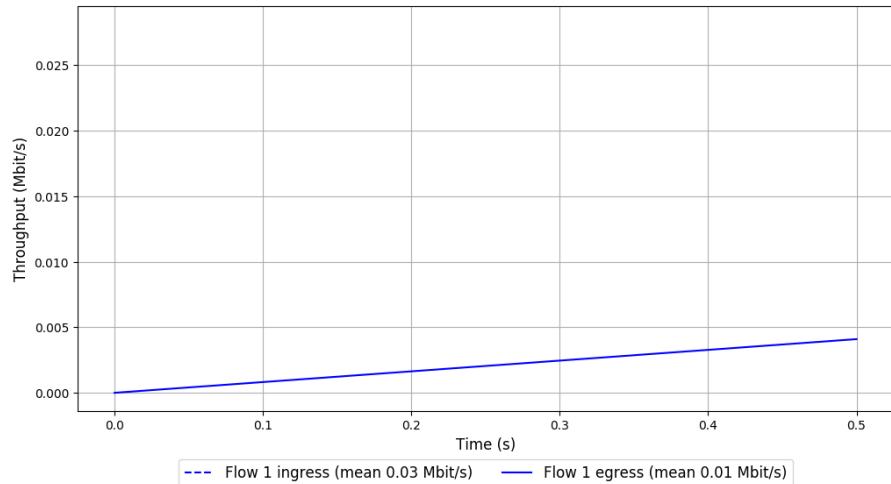
Start at: 2019-01-03 05:02:24

End at: 2019-01-03 05:02:54

Local clock offset: -1.052 ms

Remote clock offset: 21.314 ms

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

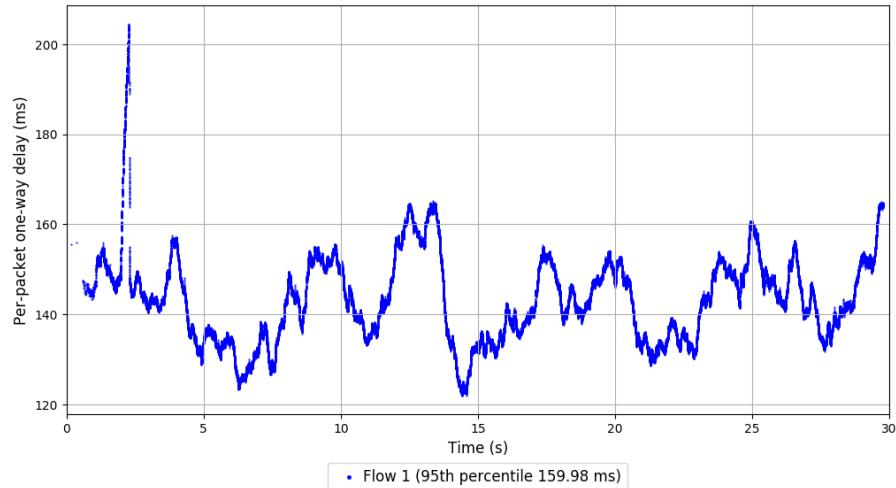
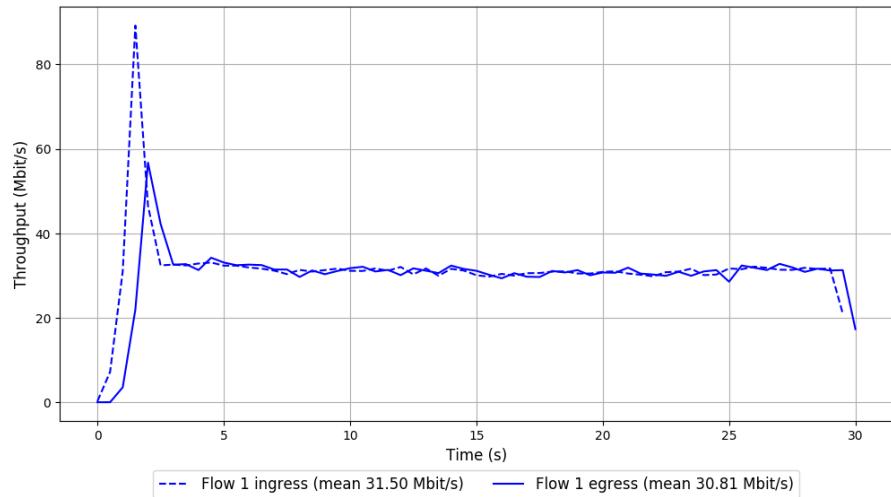


Run 2: Statistics of PCC-Allegro

```
Start at: 2019-01-03 05:25:40
End at: 2019-01-03 05:26:10
Local clock offset: 0.993 ms
Remote clock offset: 30.146 ms

# Below is generated by plot.py at 2019-01-03 07:08:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 30.81 Mbit/s
95th percentile per-packet one-way delay: 159.979 ms
Loss rate: 2.88%
-- Flow 1:
Average throughput: 30.81 Mbit/s
95th percentile per-packet one-way delay: 159.979 ms
Loss rate: 2.88%
```

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



Run 3: Statistics of PCC-Allegro

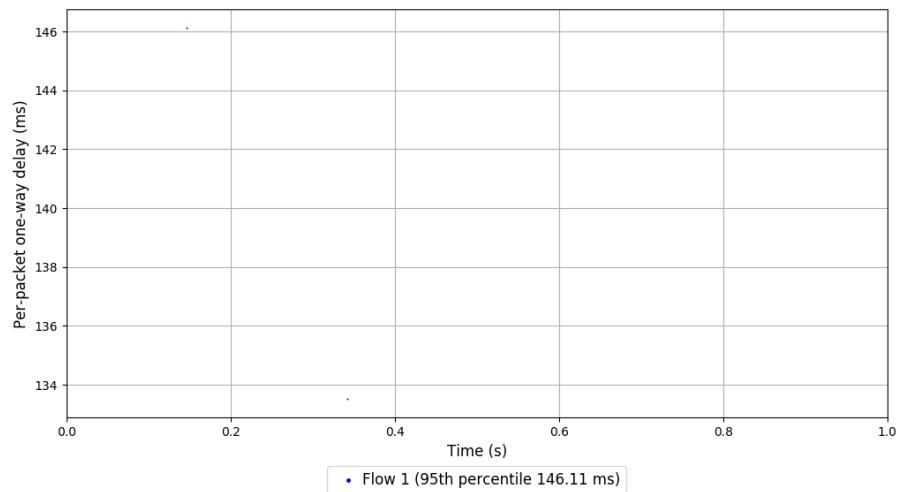
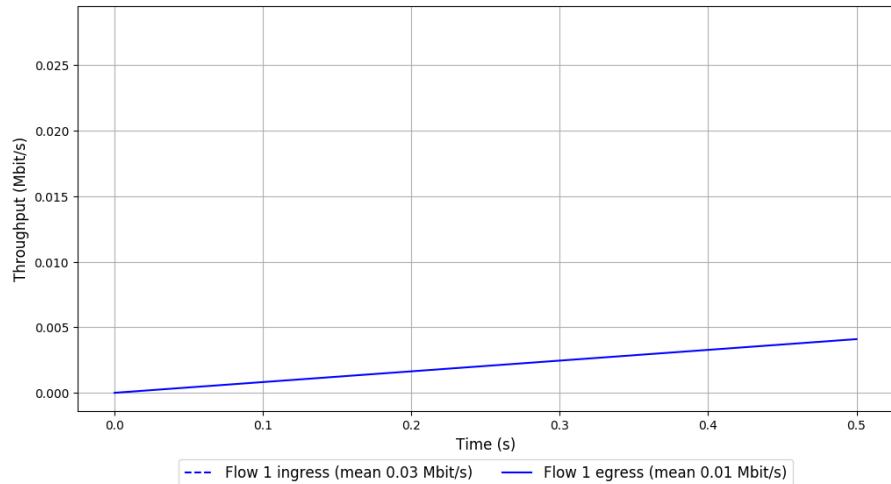
Start at: 2019-01-03 05:49:59

End at: 2019-01-03 05:50:29

Local clock offset: 1.196 ms

Remote clock offset: 43.425 ms

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



Run 4: Statistics of PCC-Allegro

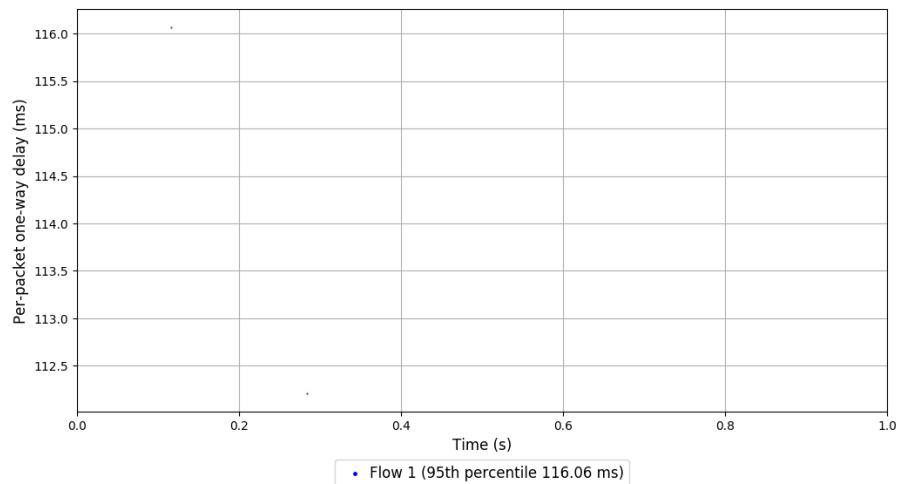
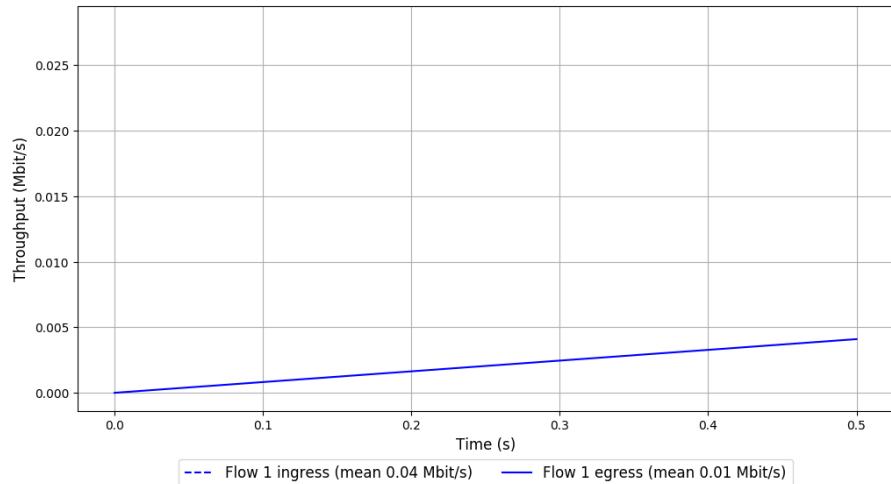
Start at: 2019-01-03 06:35:07

End at: 2019-01-03 06:35:37

Local clock offset: 2.318 ms

Remote clock offset: 57.952 ms

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

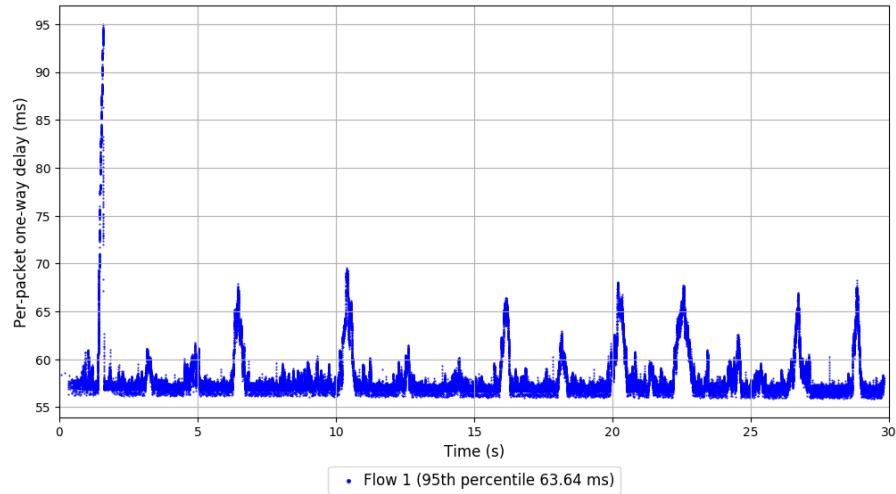
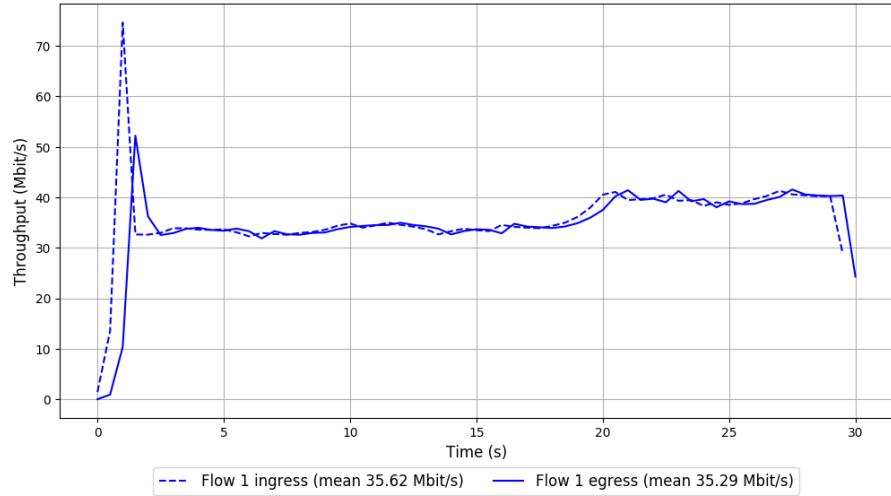


Run 5: Statistics of PCC-Allegro

```
Start at: 2019-01-03 06:57:20
End at: 2019-01-03 06:57:50
Local clock offset: 3.165 ms
Remote clock offset: 20.804 ms

# Below is generated by plot.py at 2019-01-03 07:08:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.29 Mbit/s
95th percentile per-packet one-way delay: 63.640 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 35.29 Mbit/s
95th percentile per-packet one-way delay: 63.640 ms
Loss rate: 1.31%
```

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

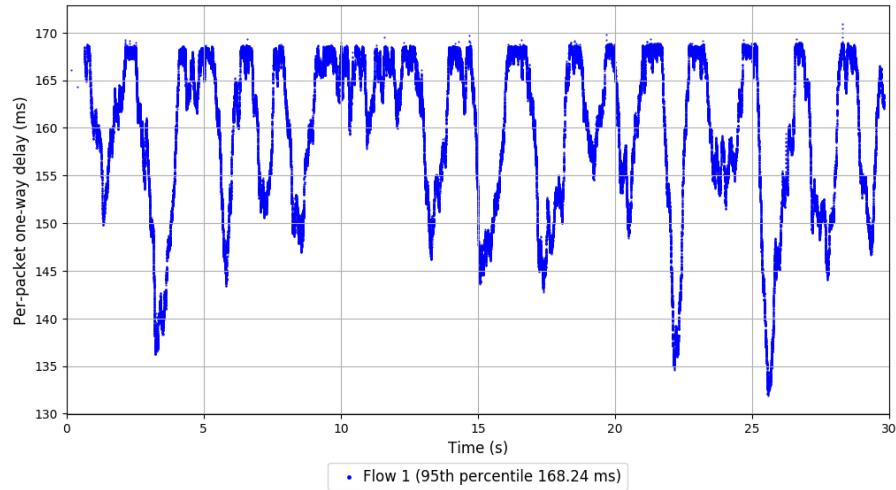
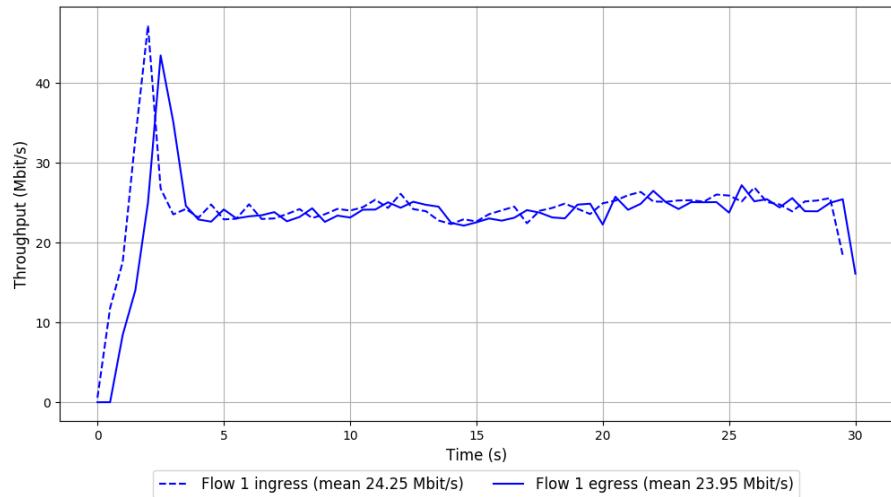


Run 1: Statistics of PCC-Expr

```
Start at: 2019-01-03 04:59:30
End at: 2019-01-03 05:00:00
Local clock offset: -2.068 ms
Remote clock offset: 19.239 ms

# Below is generated by plot.py at 2019-01-03 07:08:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.95 Mbit/s
95th percentile per-packet one-way delay: 168.239 ms
Loss rate: 1.96%
-- Flow 1:
Average throughput: 23.95 Mbit/s
95th percentile per-packet one-way delay: 168.239 ms
Loss rate: 1.96%
```

Run 1: Report of PCC-Expr — Data Link

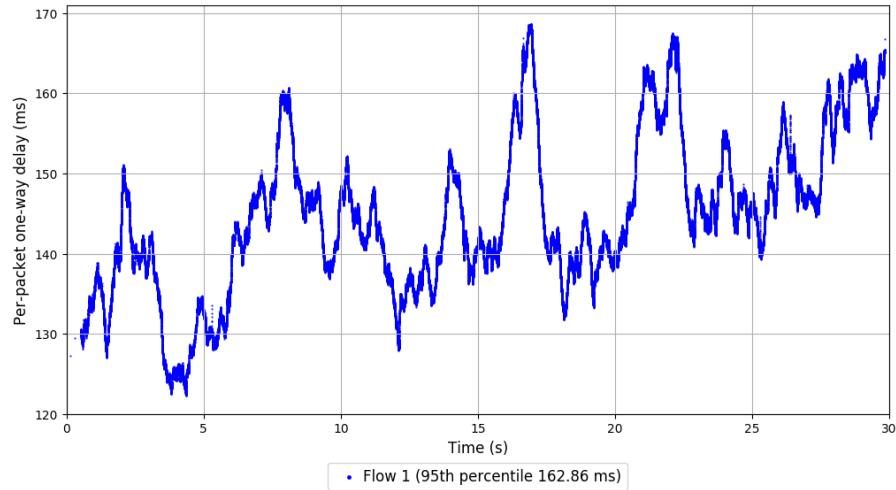
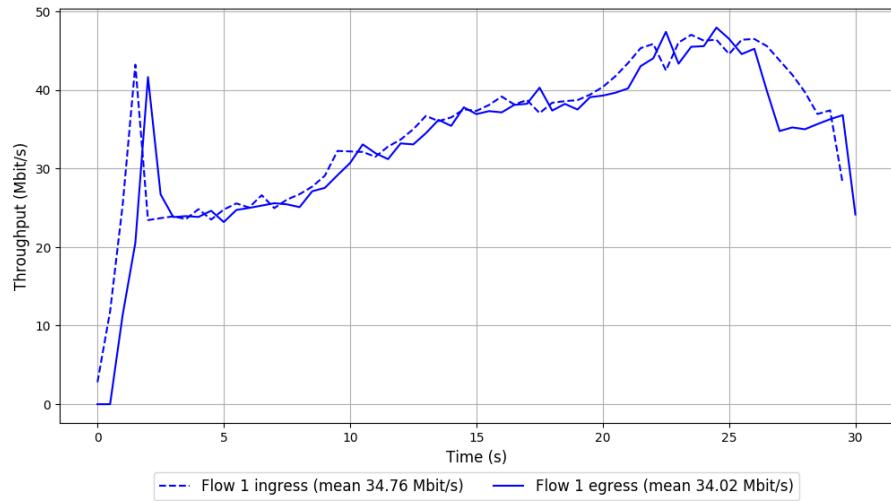


Run 2: Statistics of PCC-Expr

```
Start at: 2019-01-03 05:23:13
End at: 2019-01-03 05:23:43
Local clock offset: 0.823 ms
Remote clock offset: 26.058 ms

# Below is generated by plot.py at 2019-01-03 07:09:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.02 Mbit/s
95th percentile per-packet one-way delay: 162.861 ms
Loss rate: 2.71%
-- Flow 1:
Average throughput: 34.02 Mbit/s
95th percentile per-packet one-way delay: 162.861 ms
Loss rate: 2.71%
```

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

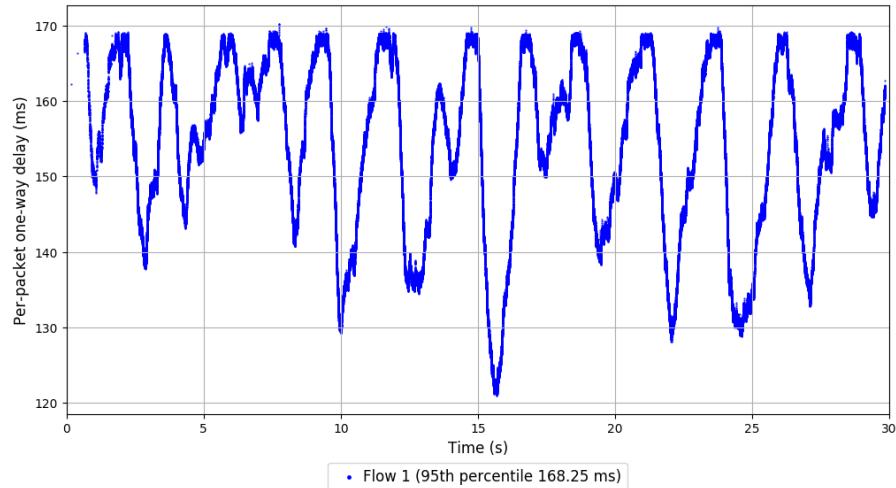
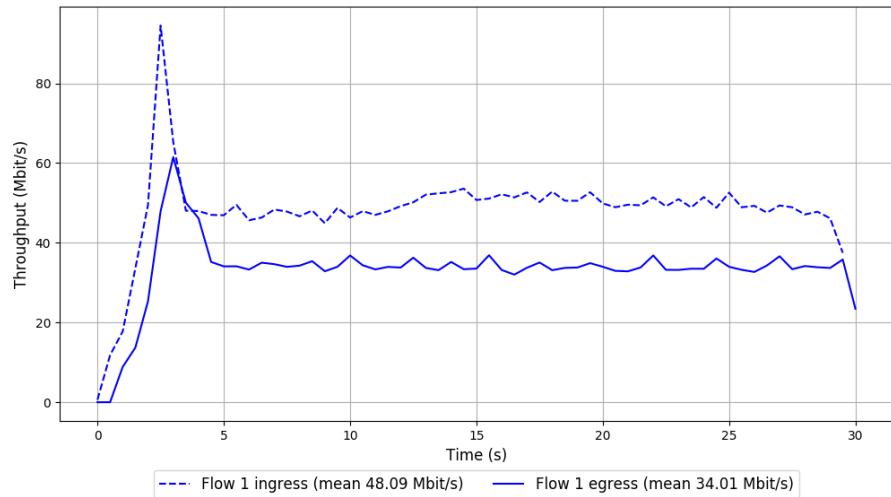


Run 3: Statistics of PCC-Expr

```
Start at: 2019-01-03 05:46:30
End at: 2019-01-03 05:47:00
Local clock offset: 0.881 ms
Remote clock offset: 41.886 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.01 Mbit/s
95th percentile per-packet one-way delay: 168.250 ms
Loss rate: 29.81%
-- Flow 1:
Average throughput: 34.01 Mbit/s
95th percentile per-packet one-way delay: 168.250 ms
Loss rate: 29.81%
```

Run 3: Report of PCC-Expr — Data Link

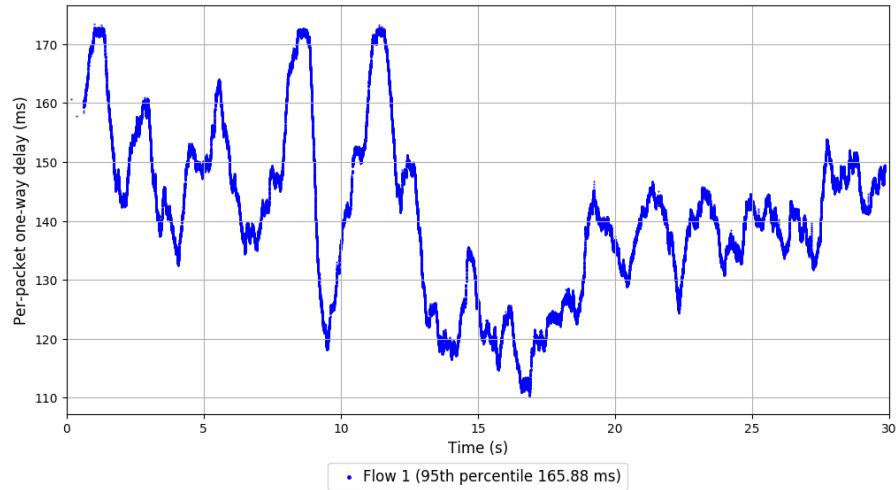
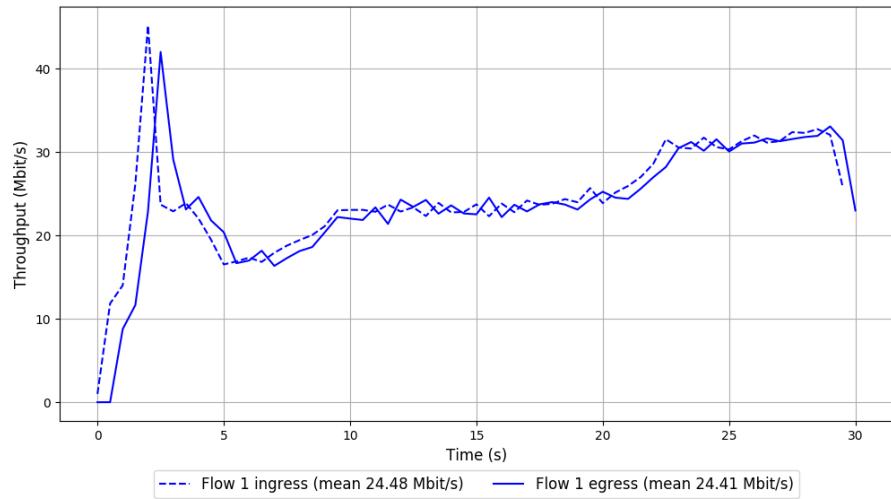


Run 4: Statistics of PCC-Expr

```
Start at: 2019-01-03 06:32:29
End at: 2019-01-03 06:32:59
Local clock offset: 1.951 ms
Remote clock offset: 55.131 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.41 Mbit/s
95th percentile per-packet one-way delay: 165.885 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 24.41 Mbit/s
95th percentile per-packet one-way delay: 165.885 ms
Loss rate: 0.98%
```

Run 4: Report of PCC-Expr — Data Link

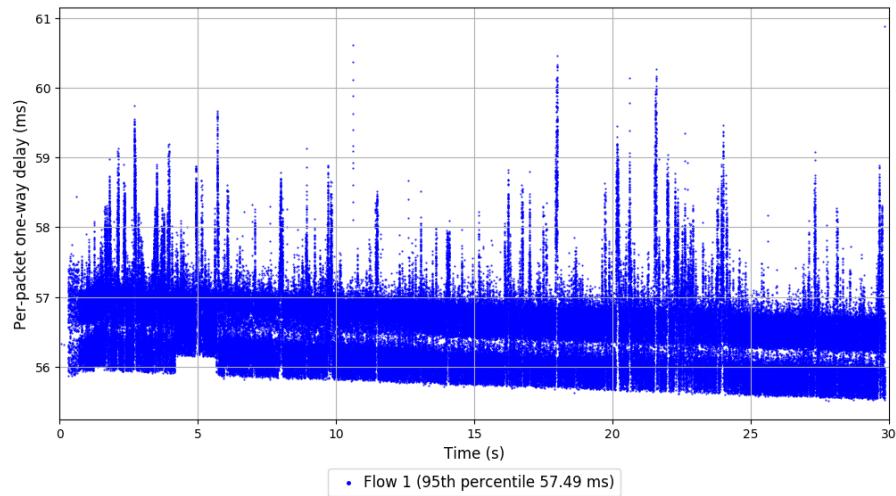
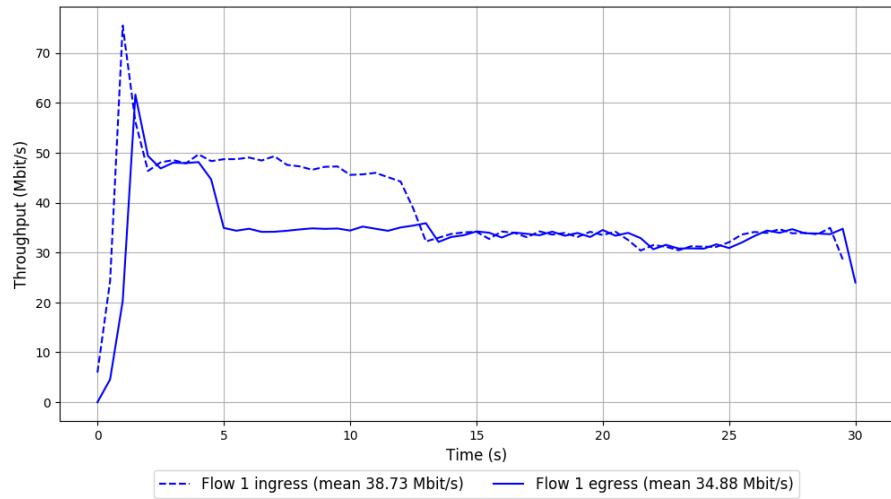


Run 5: Statistics of PCC-Expr

```
Start at: 2019-01-03 06:54:57
End at: 2019-01-03 06:55:27
Local clock offset: 3.523 ms
Remote clock offset: 23.256 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.88 Mbit/s
95th percentile per-packet one-way delay: 57.494 ms
Loss rate: 10.30%
-- Flow 1:
Average throughput: 34.88 Mbit/s
95th percentile per-packet one-way delay: 57.494 ms
Loss rate: 10.30%
```

Run 5: Report of PCC-Expr — Data Link

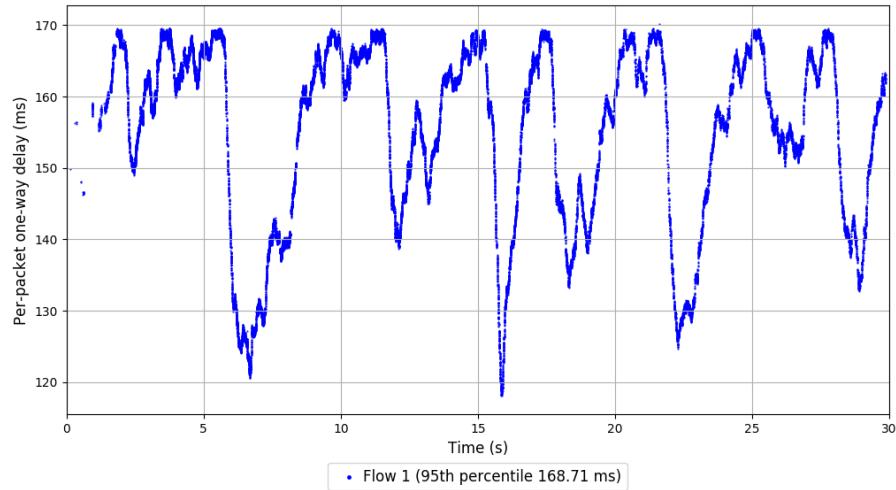
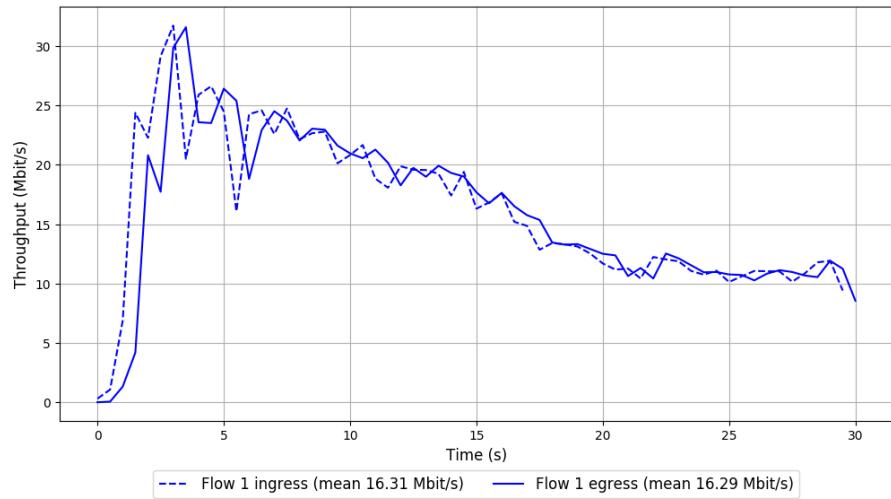


```
Run 1: Statistics of QUIC Cubic
```

```
Start at: 2019-01-03 04:49:25
End at: 2019-01-03 04:49:55
Local clock offset: -3.489 ms
Remote clock offset: 18.726 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 16.29 Mbit/s
95th percentile per-packet one-way delay: 168.706 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 16.29 Mbit/s
95th percentile per-packet one-way delay: 168.706 ms
Loss rate: 0.75%
```

Run 1: Report of QUIC Cubic — Data Link

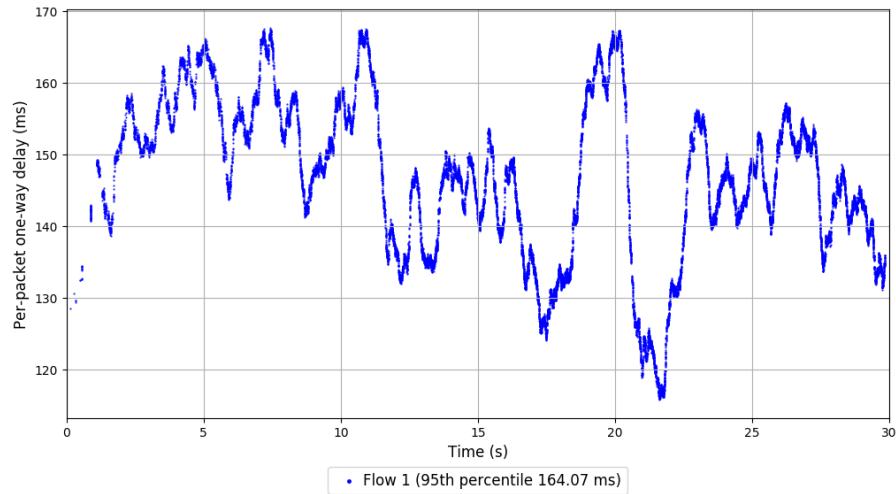
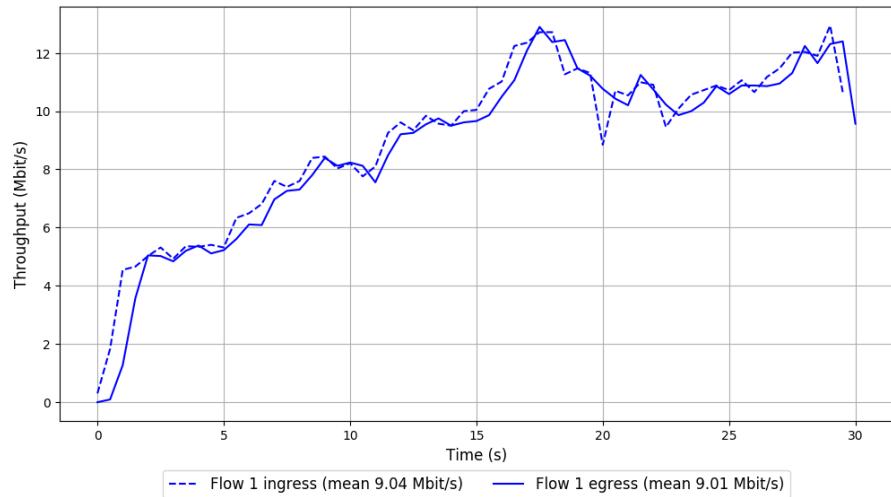


Run 2: Statistics of QUIC Cubic

```
Start at: 2019-01-03 05:14:51
End at: 2019-01-03 05:15:21
Local clock offset: 0.26 ms
Remote clock offset: 26.926 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.01 Mbit/s
95th percentile per-packet one-way delay: 164.071 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 9.01 Mbit/s
95th percentile per-packet one-way delay: 164.071 ms
Loss rate: 0.93%
```

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

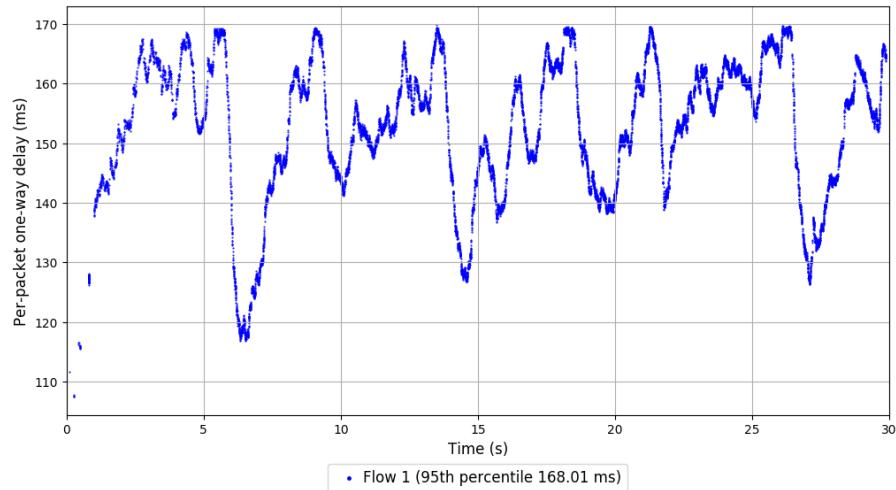
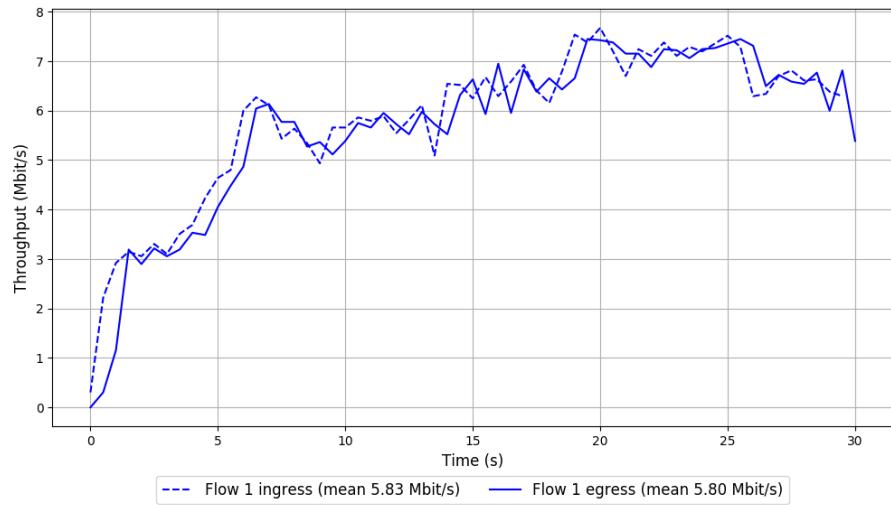


Run 3: Statistics of QUIC Cubic

```
Start at: 2019-01-03 05:38:06
End at: 2019-01-03 05:38:36
Local clock offset: 0.788 ms
Remote clock offset: 35.289 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.80 Mbit/s
95th percentile per-packet one-way delay: 168.013 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 5.80 Mbit/s
95th percentile per-packet one-way delay: 168.013 ms
Loss rate: 1.00%
```

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

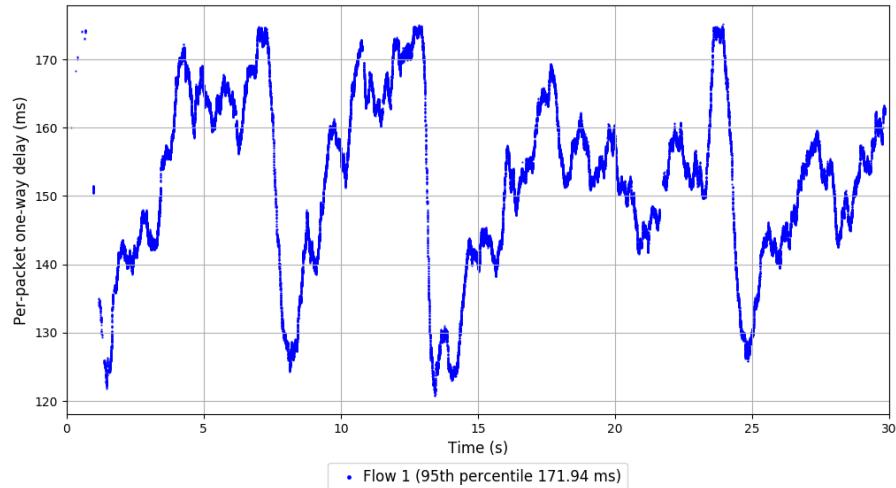
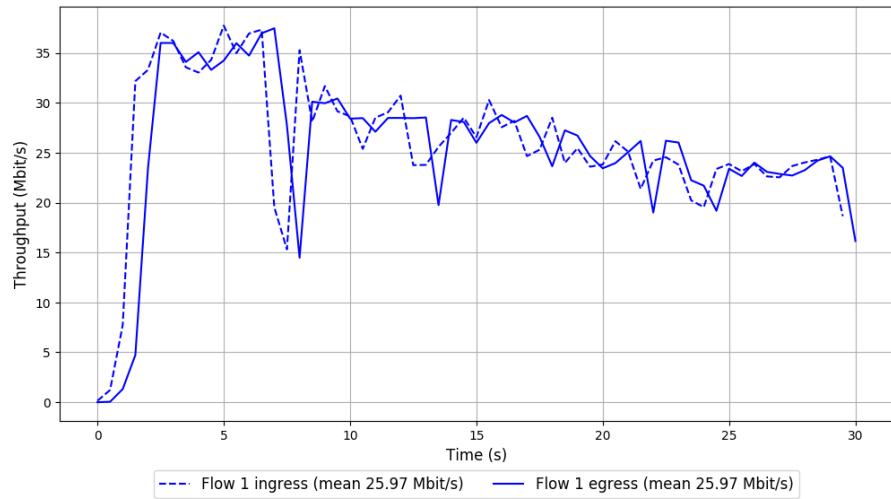


Run 4: Statistics of QUIC Cubic

```
Start at: 2019-01-03 06:23:45
End at: 2019-01-03 06:24:15
Local clock offset: 0.507 ms
Remote clock offset: 50.016 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 25.97 Mbit/s
95th percentile per-packet one-way delay: 171.937 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 25.97 Mbit/s
95th percentile per-packet one-way delay: 171.937 ms
Loss rate: 0.73%
```

Run 4: Report of QUIC Cubic — Data Link

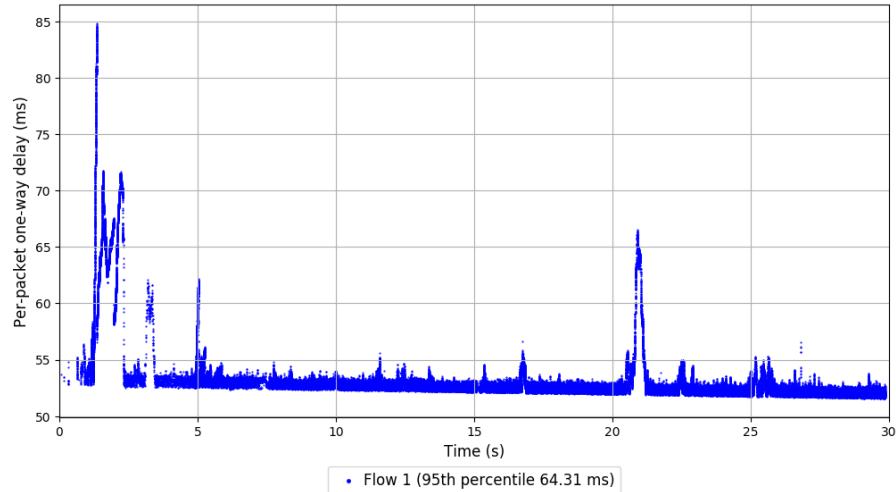
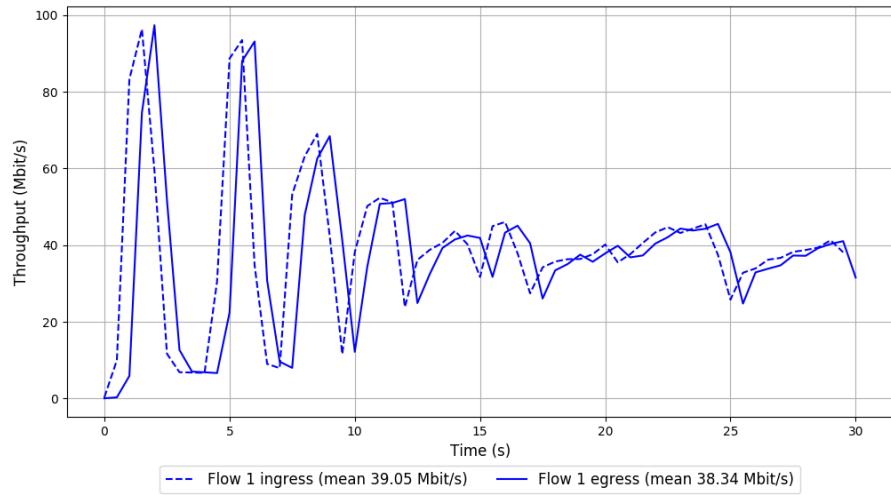


Run 5: Statistics of QUIC Cubic

```
Start at: 2019-01-03 06:46:50
End at: 2019-01-03 06:47:20
Local clock offset: 3.289 ms
Remote clock offset: 39.571 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.34 Mbit/s
95th percentile per-packet one-way delay: 64.309 ms
Loss rate: 2.24%
-- Flow 1:
Average throughput: 38.34 Mbit/s
95th percentile per-packet one-way delay: 64.309 ms
Loss rate: 2.24%
```

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

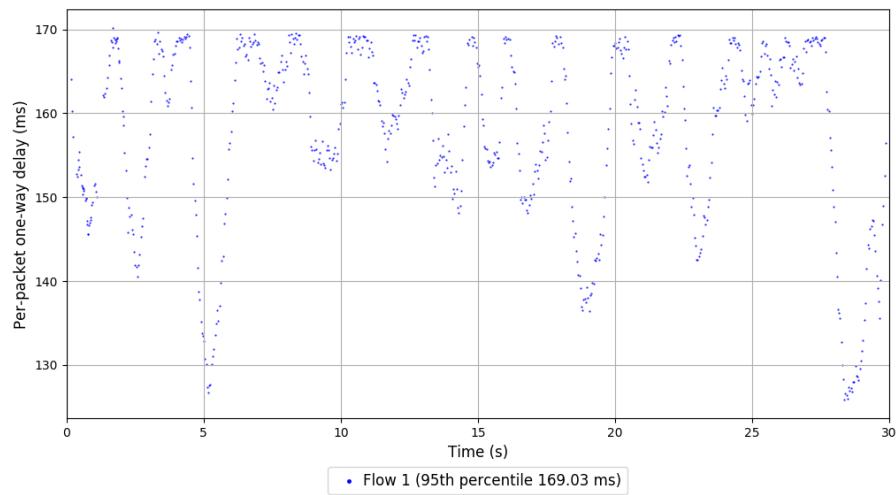
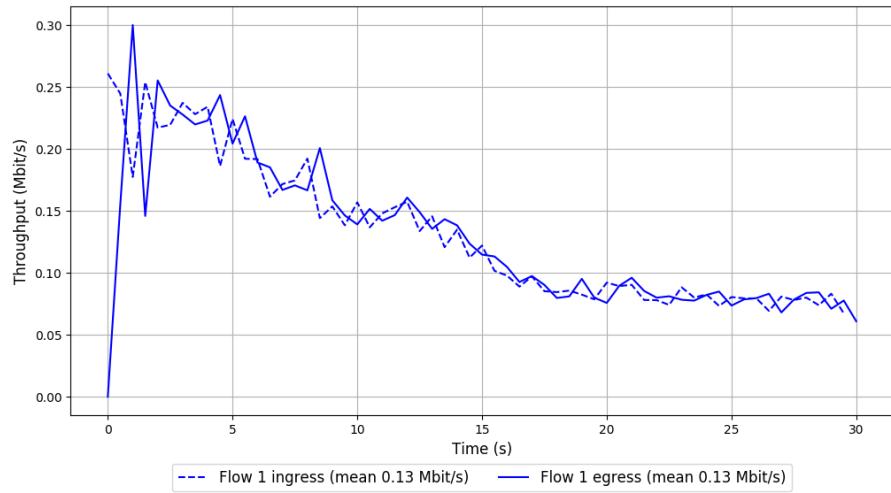


```
Run 1: Statistics of SCReAM
```

```
Start at: 2019-01-03 05:08:52
End at: 2019-01-03 05:09:22
Local clock offset: -0.19 ms
Remote clock offset: 24.564 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 169.034 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 169.034 ms
Loss rate: 0.72%
```

Run 1: Report of SCReAM — Data Link

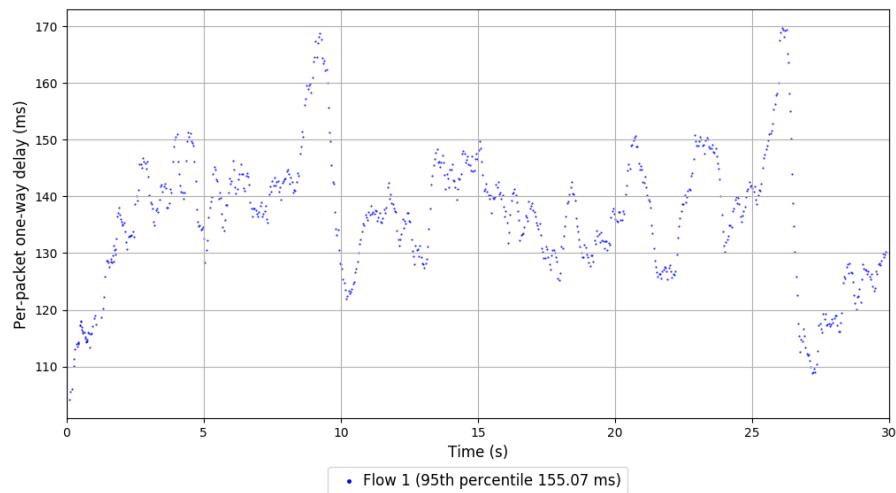
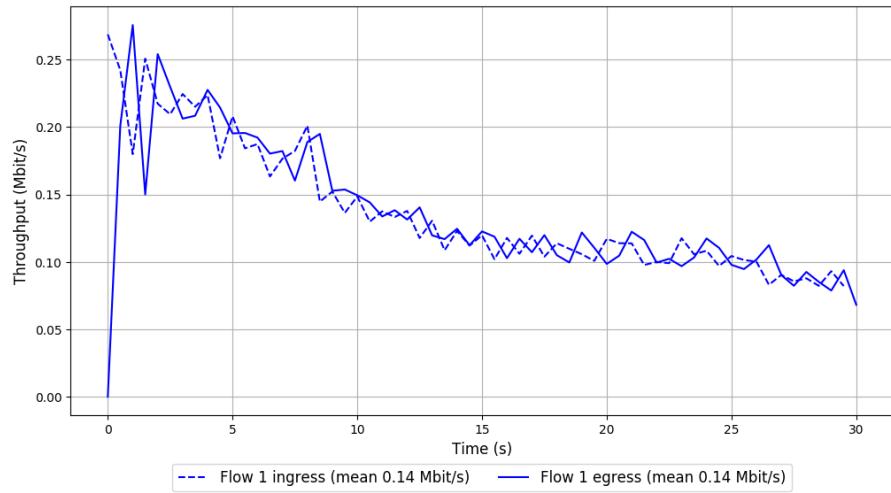


Run 2: Statistics of SCReAM

```
Start at: 2019-01-03 05:32:01
End at: 2019-01-03 05:32:31
Local clock offset: 0.633 ms
Remote clock offset: 27.108 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 155.069 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 155.069 ms
Loss rate: 0.41%
```

## Run 2: Report of SCReAM — Data Link

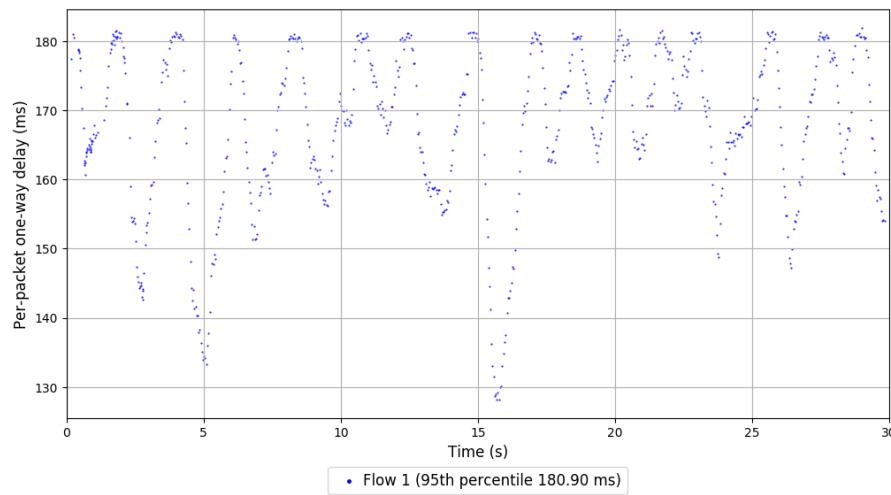
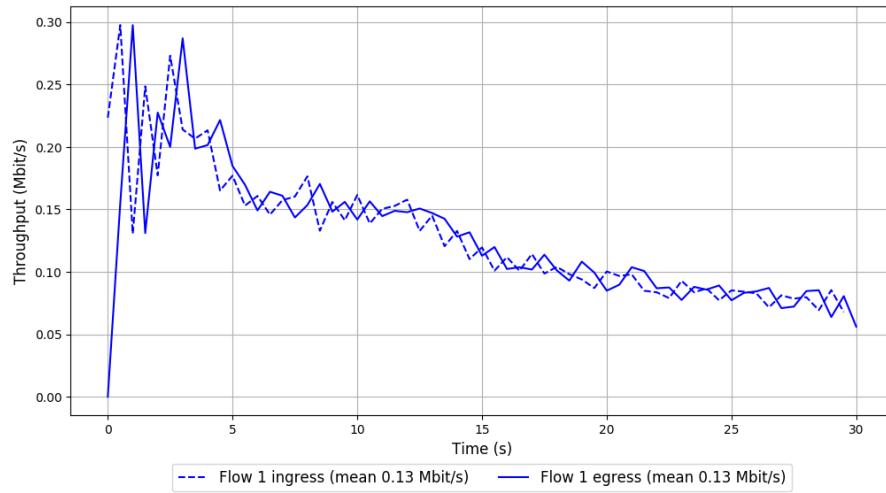


Run 3: Statistics of SCReAM

```
Start at: 2019-01-03 06:06:25
End at: 2019-01-03 06:06:55
Local clock offset: 0.621 ms
Remote clock offset: 37.544 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 180.902 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 180.902 ms
Loss rate: 0.71%
```

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

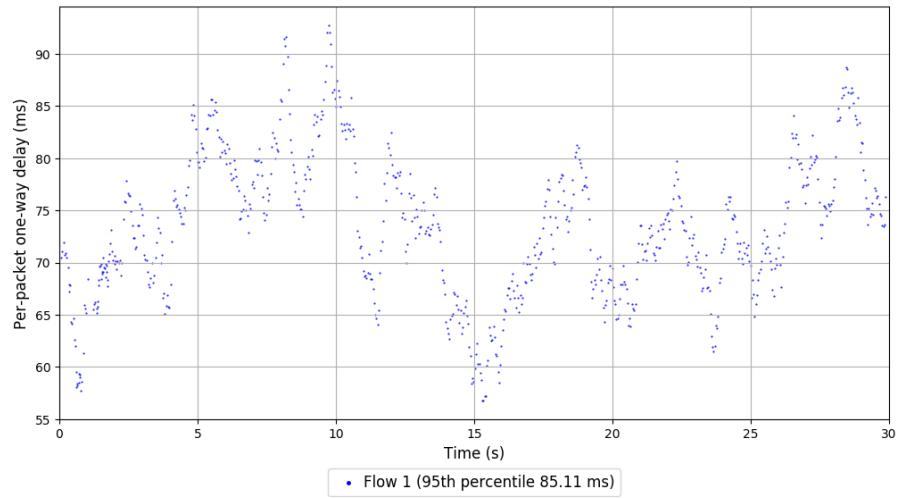
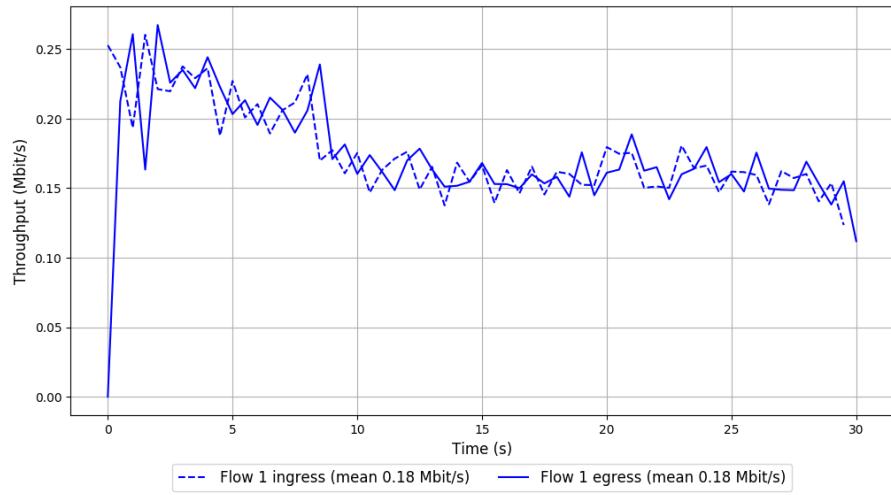


Run 4: Statistics of SCReAM

```
Start at: 2019-01-03 06:41:01
End at: 2019-01-03 06:41:31
Local clock offset: 2.9 ms
Remote clock offset: 53.635 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 85.106 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 85.106 ms
Loss rate: 0.32%
```

Run 4: Report of SCReAM — Data Link

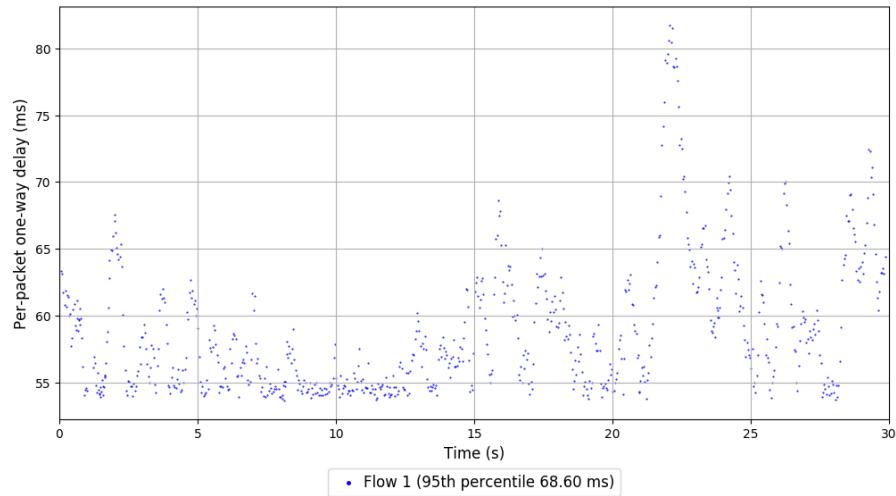
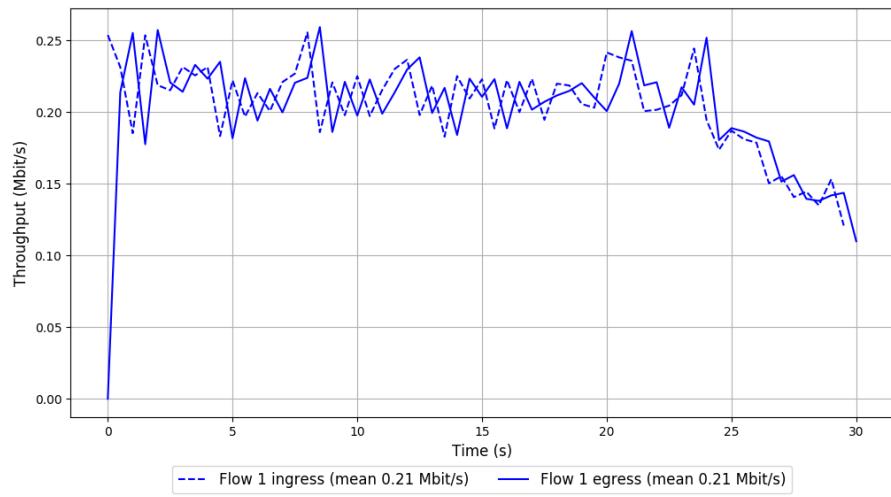


Run 5: Statistics of SCReAM

```
Start at: 2019-01-03 07:03:10
End at: 2019-01-03 07:03:40
Local clock offset: 2.48 ms
Remote clock offset: 19.747 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 68.600 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 68.600 ms
Loss rate: 0.26%
```

Run 5: Report of SCReAM — Data Link

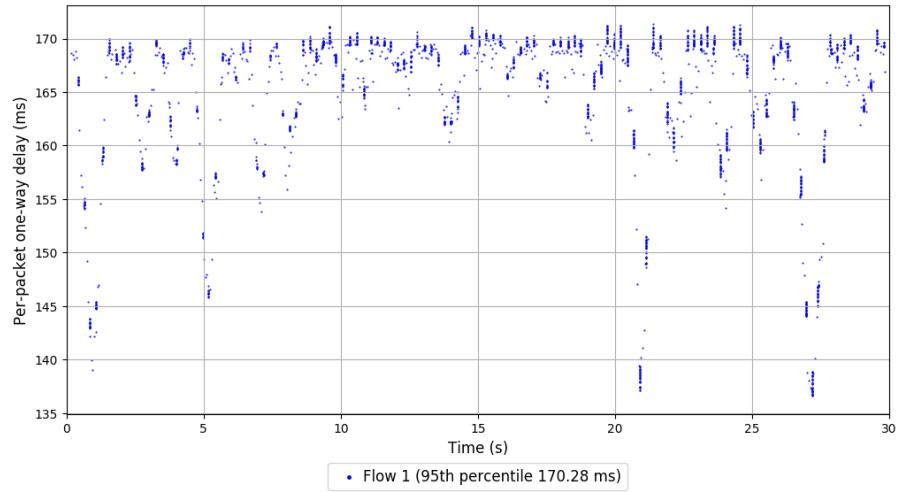
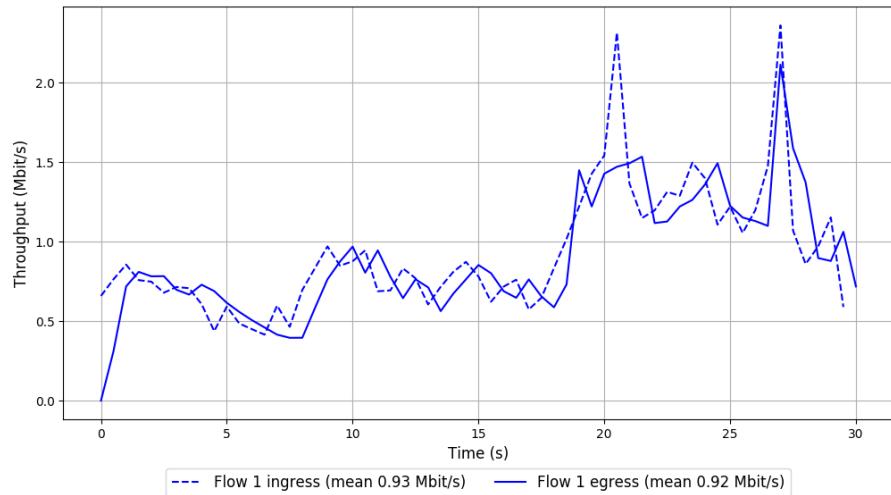


Run 1: Statistics of Sprout

```
Start at: 2019-01-03 04:58:17
End at: 2019-01-03 04:58:47
Local clock offset: -1.998 ms
Remote clock offset: 17.747 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 170.282 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 170.282 ms
Loss rate: 2.34%
```

Run 1: Report of Sprout — Data Link

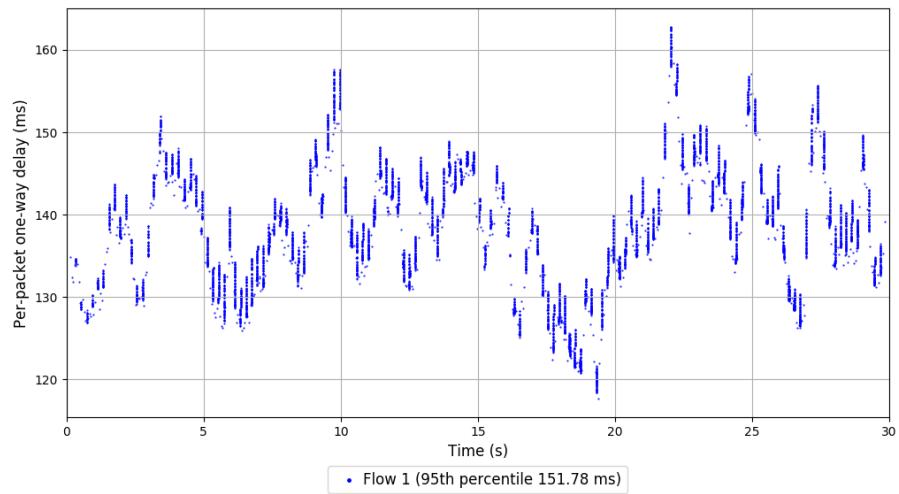
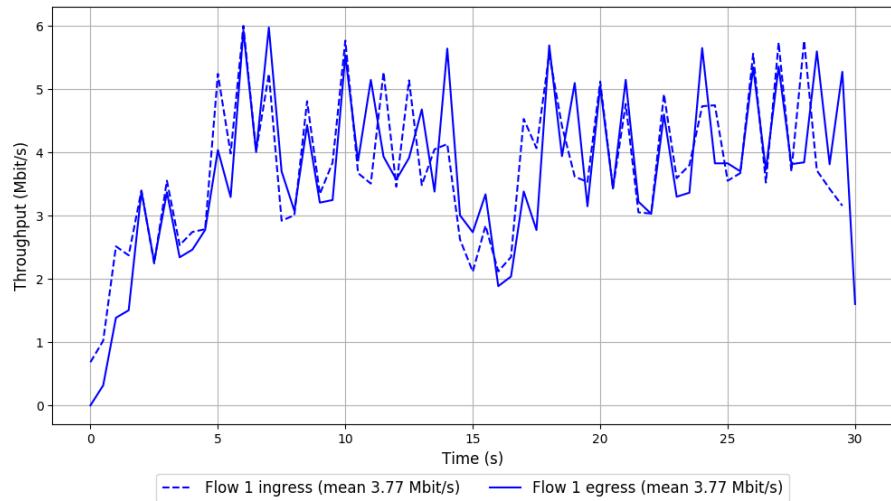


Run 2: Statistics of Sprout

```
Start at: 2019-01-03 05:22:02
End at: 2019-01-03 05:22:32
Local clock offset: 0.919 ms
Remote clock offset: 27.394 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 151.784 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 151.784 ms
Loss rate: 0.69%
```

## Run 2: Report of Sprout — Data Link

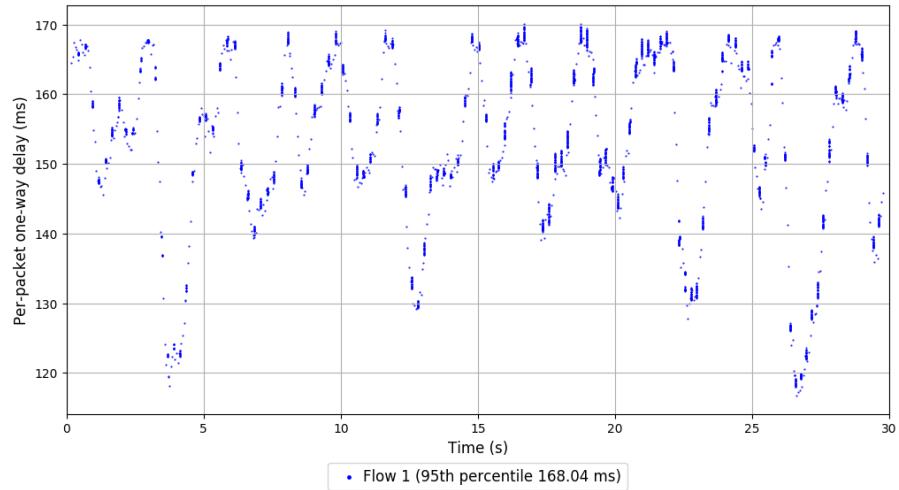
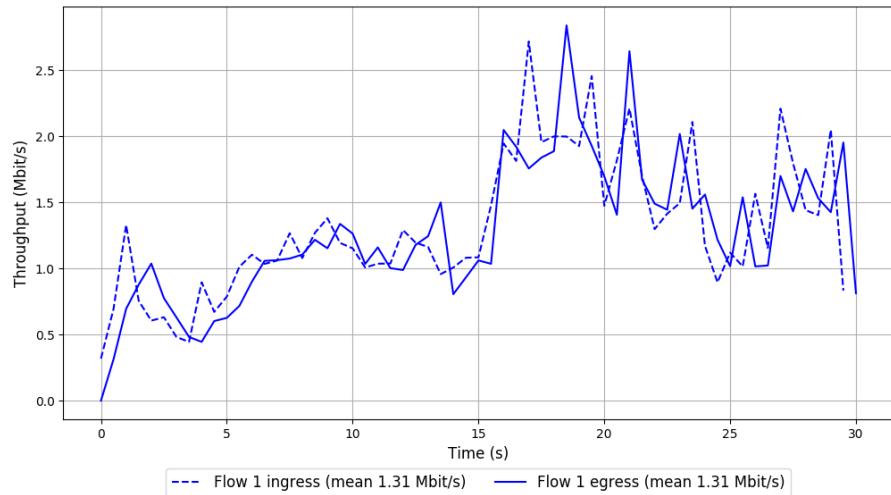


Run 3: Statistics of Sprout

```
Start at: 2019-01-03 05:45:19
End at: 2019-01-03 05:45:49
Local clock offset: 0.842 ms
Remote clock offset: 42.607 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 168.040 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 168.040 ms
Loss rate: 1.29%
```

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

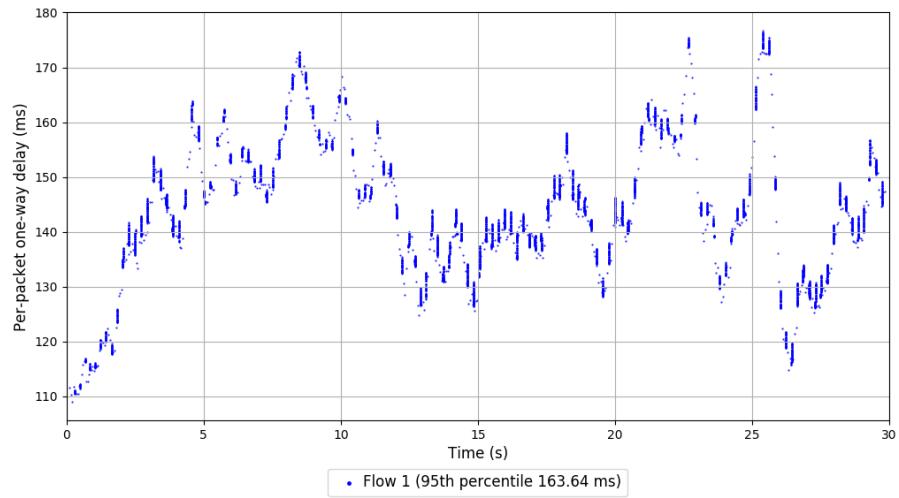
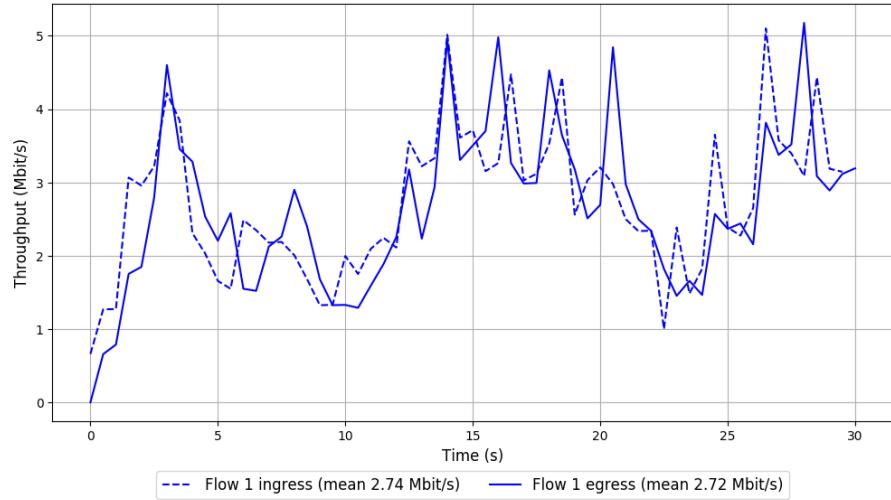


Run 4: Statistics of Sprout

```
Start at: 2019-01-03 06:31:17
End at: 2019-01-03 06:31:47
Local clock offset: 1.991 ms
Remote clock offset: 53.964 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.72 Mbit/s
95th percentile per-packet one-way delay: 163.636 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 2.72 Mbit/s
95th percentile per-packet one-way delay: 163.636 ms
Loss rate: 1.12%
```

## Run 4: Report of Sprout — Data Link

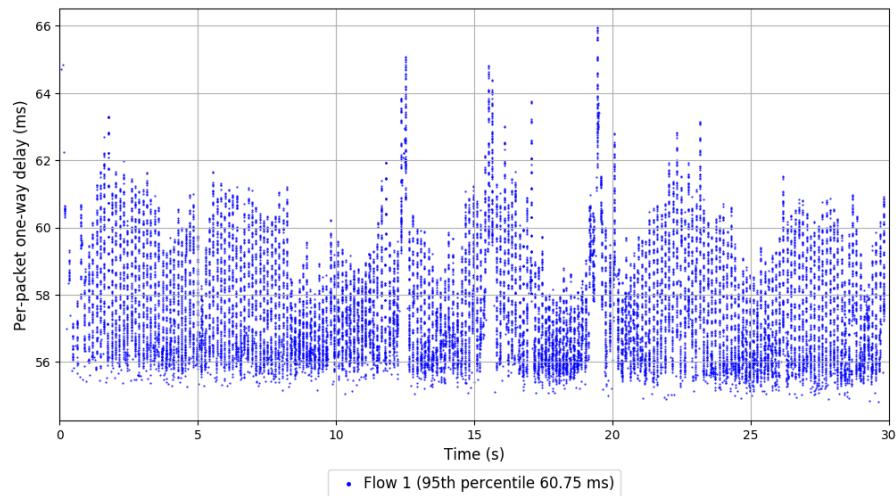
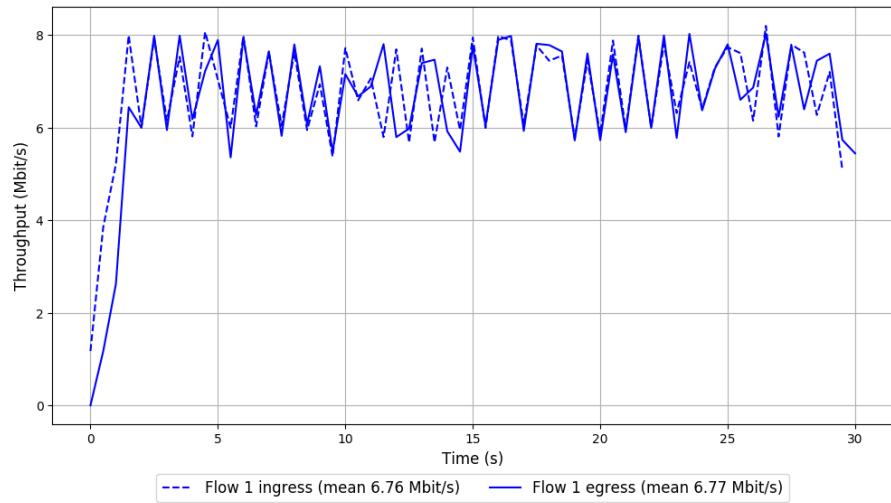


Run 5: Statistics of Sprout

```
Start at: 2019-01-03 06:53:48
End at: 2019-01-03 06:54:18
Local clock offset: 3.619 ms
Remote clock offset: 25.775 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.77 Mbit/s
95th percentile per-packet one-way delay: 60.752 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 6.77 Mbit/s
95th percentile per-packet one-way delay: 60.752 ms
Loss rate: 0.34%
```

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

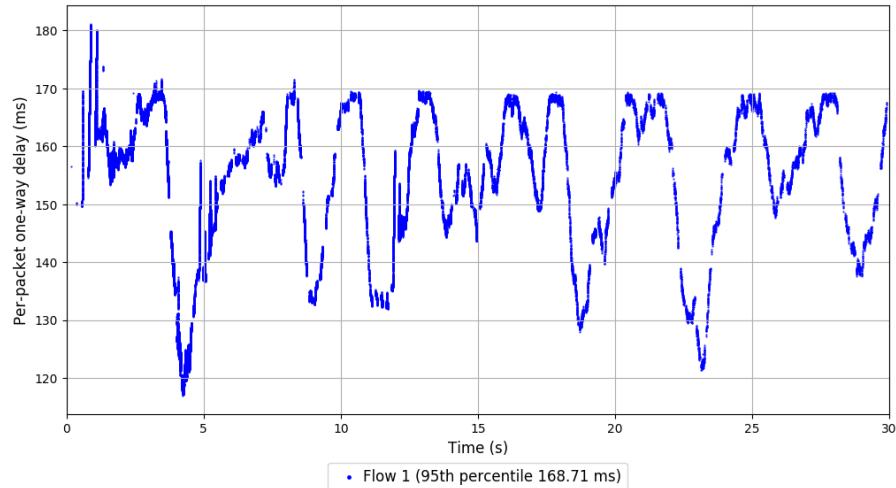
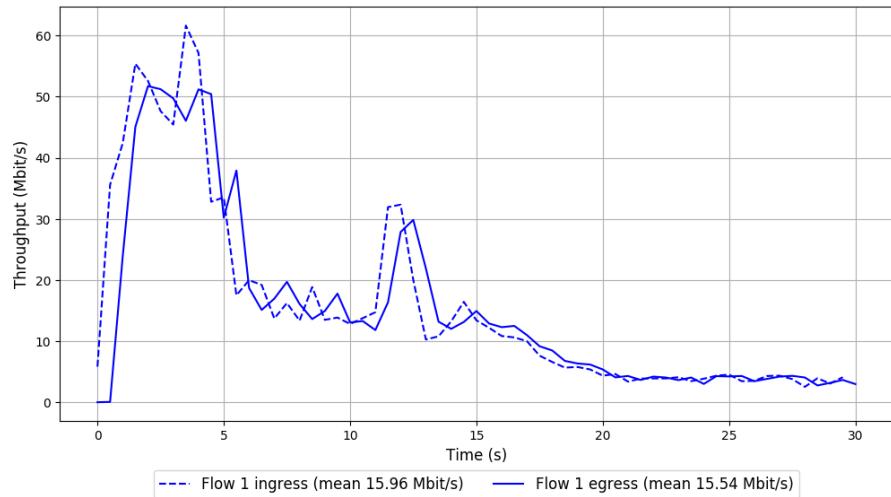


Run 1: Statistics of TaoVA-100x

```
Start at: 2019-01-03 05:06:25
End at: 2019-01-03 05:06:55
Local clock offset: -0.619 ms
Remote clock offset: 23.91 ms

# Below is generated by plot.py at 2019-01-03 07:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.54 Mbit/s
95th percentile per-packet one-way delay: 168.713 ms
Loss rate: 3.45%
-- Flow 1:
Average throughput: 15.54 Mbit/s
95th percentile per-packet one-way delay: 168.713 ms
Loss rate: 3.45%
```

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

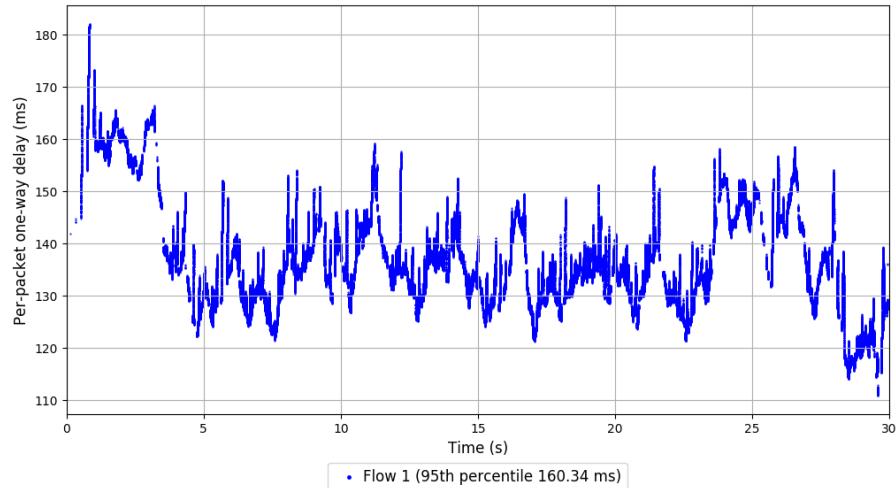
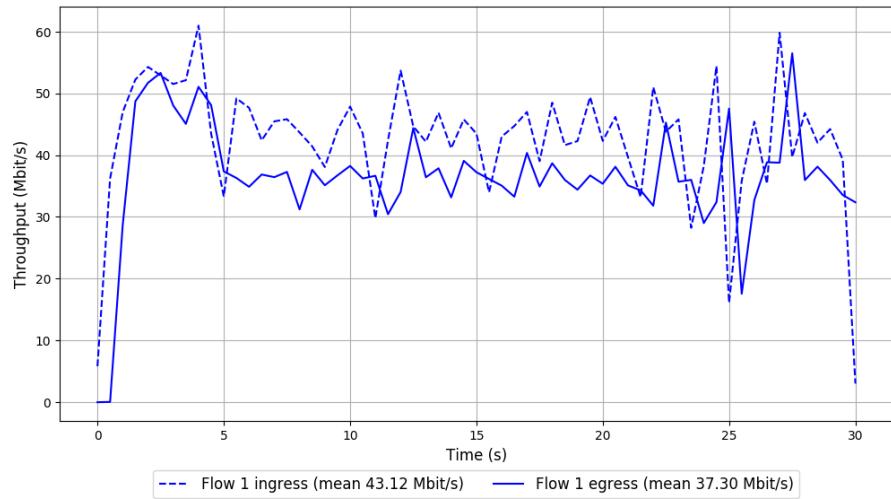


Run 2: Statistics of TaoVA-100x

```
Start at: 2019-01-03 05:29:25
End at: 2019-01-03 05:29:55
Local clock offset: 0.643 ms
Remote clock offset: 25.892 ms

# Below is generated by plot.py at 2019-01-03 07:09:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 37.30 Mbit/s
95th percentile per-packet one-way delay: 160.338 ms
Loss rate: 14.06%
-- Flow 1:
Average throughput: 37.30 Mbit/s
95th percentile per-packet one-way delay: 160.338 ms
Loss rate: 14.06%
```

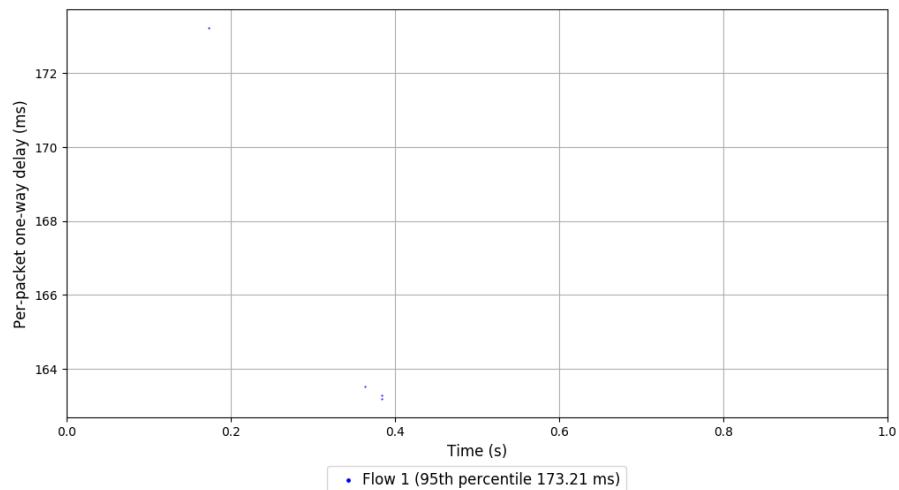
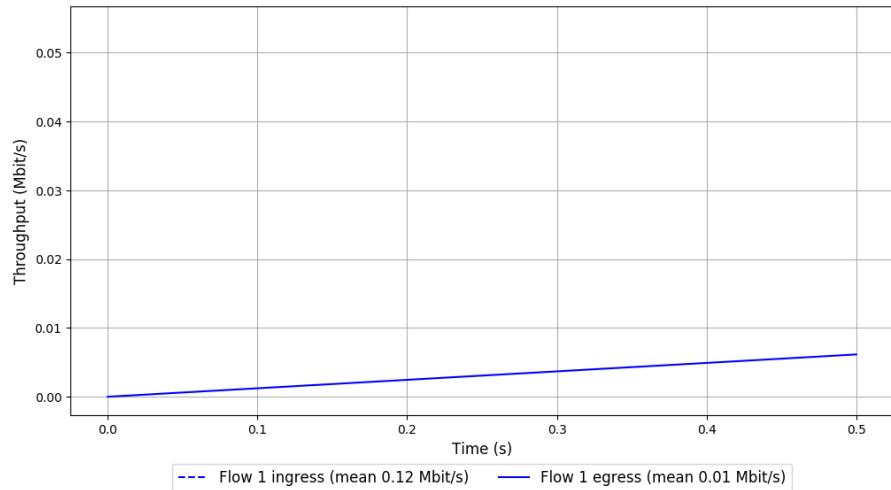
Run 2: Report of TaoVA-100x — Data Link



Run 3: Statistics of TaoVA-100x

Start at: 2019-01-03 06:01:58  
End at: 2019-01-03 06:02:28  
Local clock offset: 0.608 ms  
Remote clock offset: 37.504 ms

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

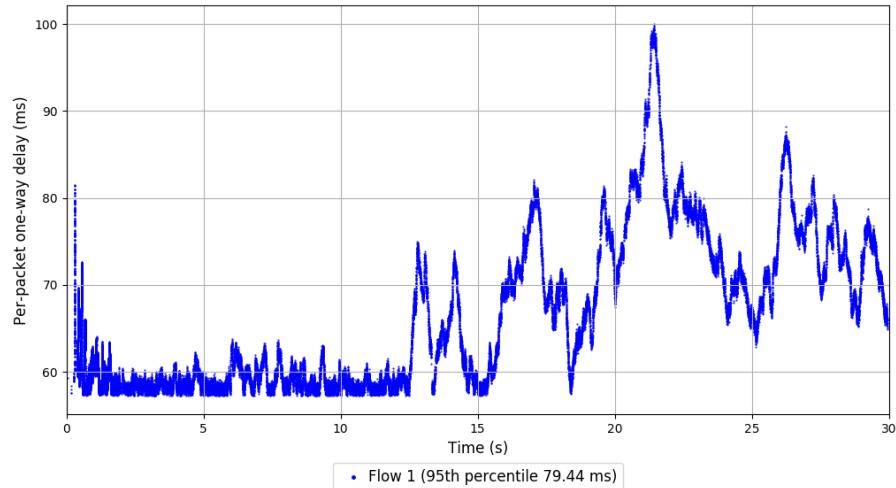
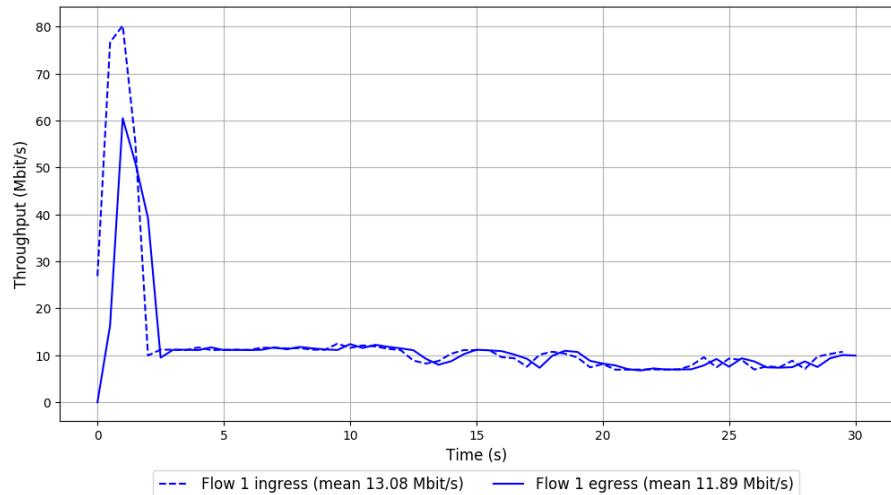


Run 4: Statistics of TaoVA-100x

```
Start at: 2019-01-03 06:38:39
End at: 2019-01-03 06:39:09
Local clock offset: 2.652 ms
Remote clock offset: 57.569 ms

# Below is generated by plot.py at 2019-01-03 07:09:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.89 Mbit/s
95th percentile per-packet one-way delay: 79.443 ms
Loss rate: 9.40%
-- Flow 1:
Average throughput: 11.89 Mbit/s
95th percentile per-packet one-way delay: 79.443 ms
Loss rate: 9.40%
```

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

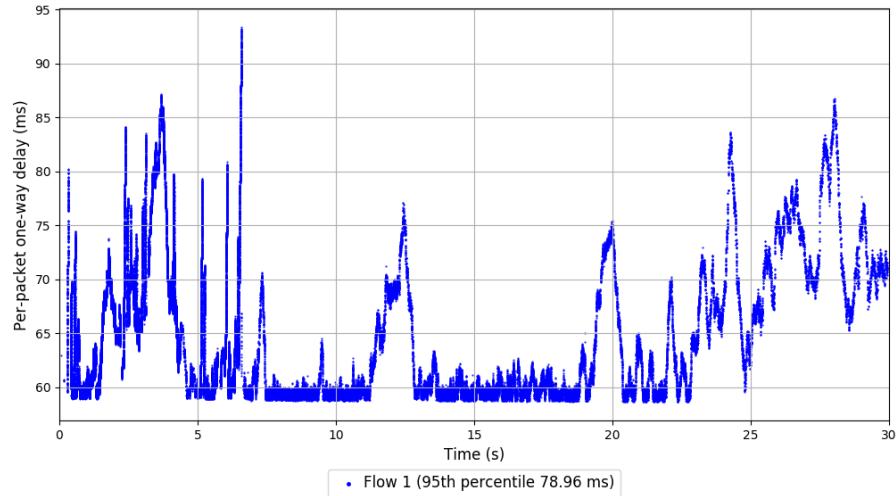
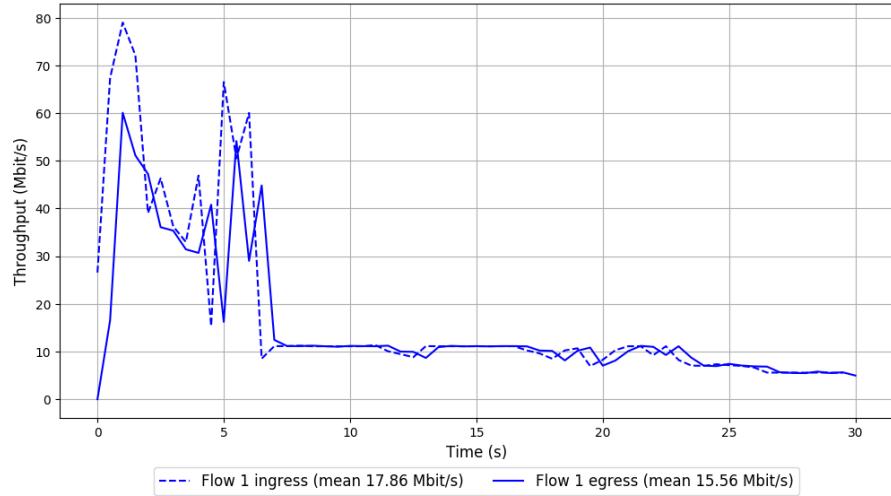


Run 5: Statistics of TaoVA-100x

```
Start at: 2019-01-03 07:00:49
End at: 2019-01-03 07:01:19
Local clock offset: 2.804 ms
Remote clock offset: 16.191 ms

# Below is generated by plot.py at 2019-01-03 07:09:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.56 Mbit/s
95th percentile per-packet one-way delay: 78.963 ms
Loss rate: 13.20%
-- Flow 1:
Average throughput: 15.56 Mbit/s
95th percentile per-packet one-way delay: 78.963 ms
Loss rate: 13.20%
```

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

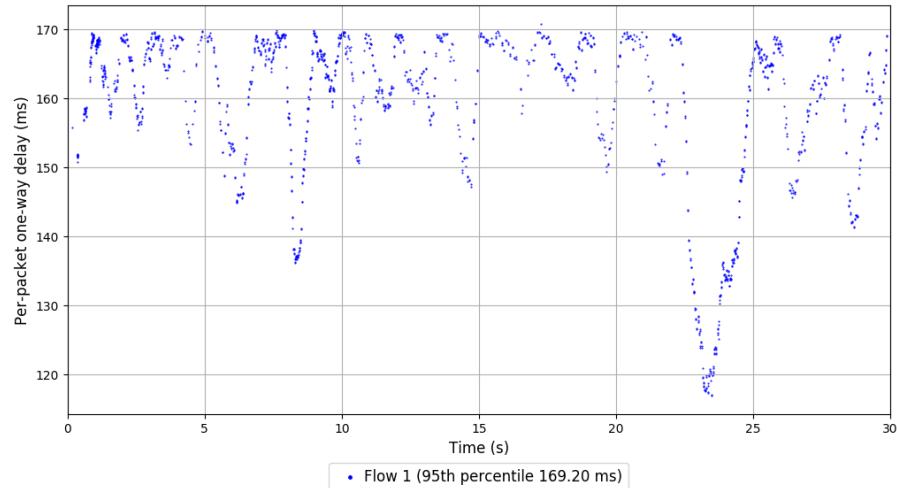
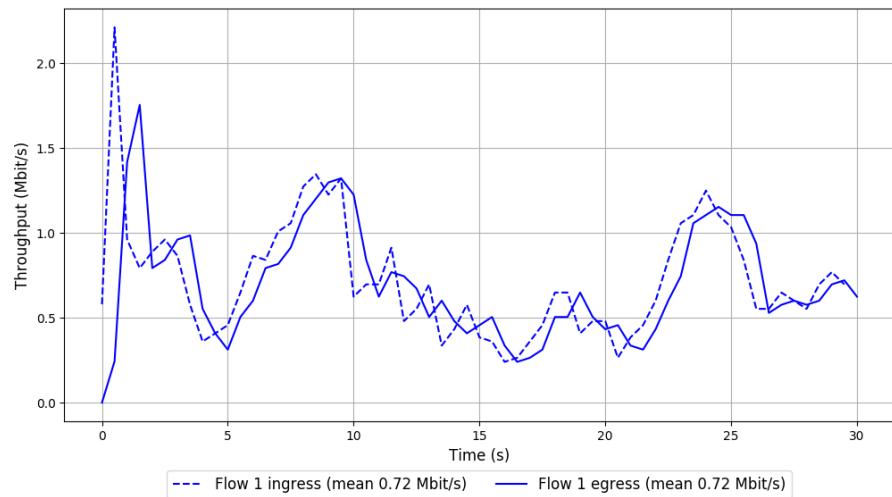


Run 1: Statistics of TCP Vegas

```
Start at: 2019-01-03 04:51:51
End at: 2019-01-03 04:52:21
Local clock offset: -3.524 ms
Remote clock offset: 17.868 ms

# Below is generated by plot.py at 2019-01-03 07:09:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 169.200 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 169.200 ms
Loss rate: 1.66%
```

Run 1: Report of TCP Vegas — Data Link

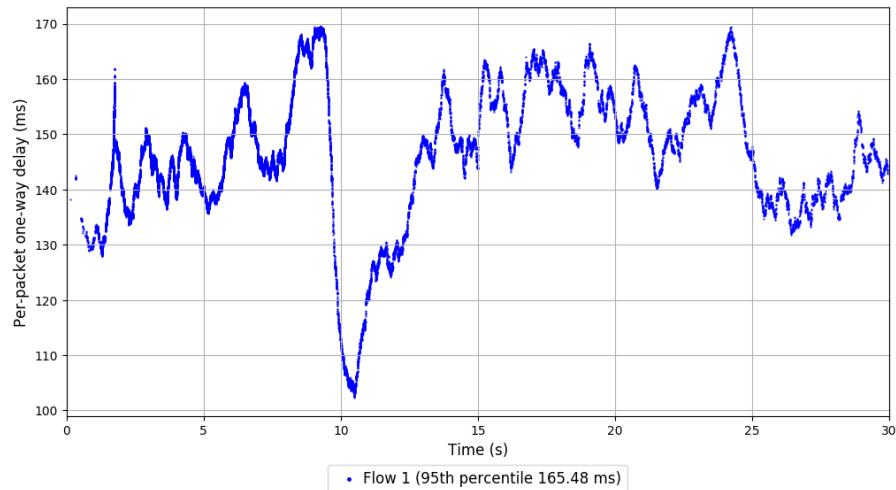
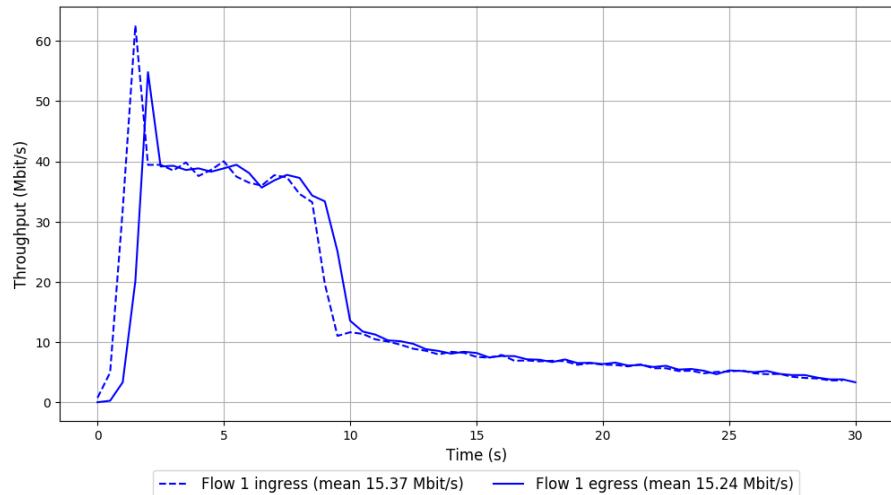


Run 2: Statistics of TCP Vegas

```
Start at: 2019-01-03 05:17:12
End at: 2019-01-03 05:17:42
Local clock offset: 0.641 ms
Remote clock offset: 25.822 ms

# Below is generated by plot.py at 2019-01-03 07:09:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.24 Mbit/s
95th percentile per-packet one-way delay: 165.481 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 15.24 Mbit/s
95th percentile per-packet one-way delay: 165.481 ms
Loss rate: 1.42%
```

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

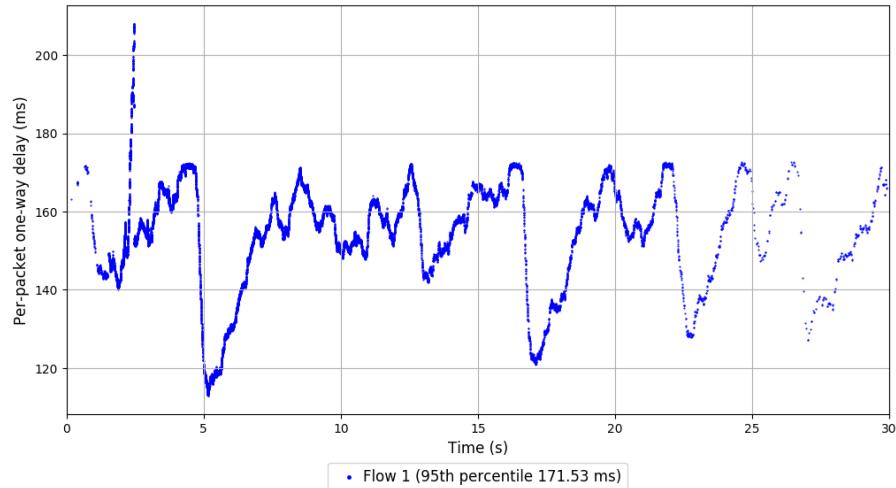
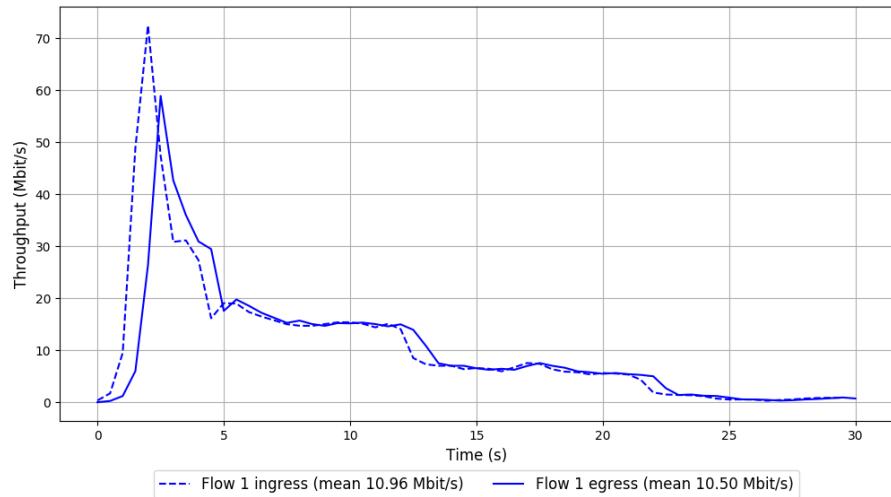


Run 3: Statistics of TCP Vegas

```
Start at: 2019-01-03 05:40:27
End at: 2019-01-03 05:40:57
Local clock offset: 0.871 ms
Remote clock offset: 34.729 ms

# Below is generated by plot.py at 2019-01-03 07:09:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.50 Mbit/s
95th percentile per-packet one-way delay: 171.534 ms
Loss rate: 4.88%
-- Flow 1:
Average throughput: 10.50 Mbit/s
95th percentile per-packet one-way delay: 171.534 ms
Loss rate: 4.88%
```

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

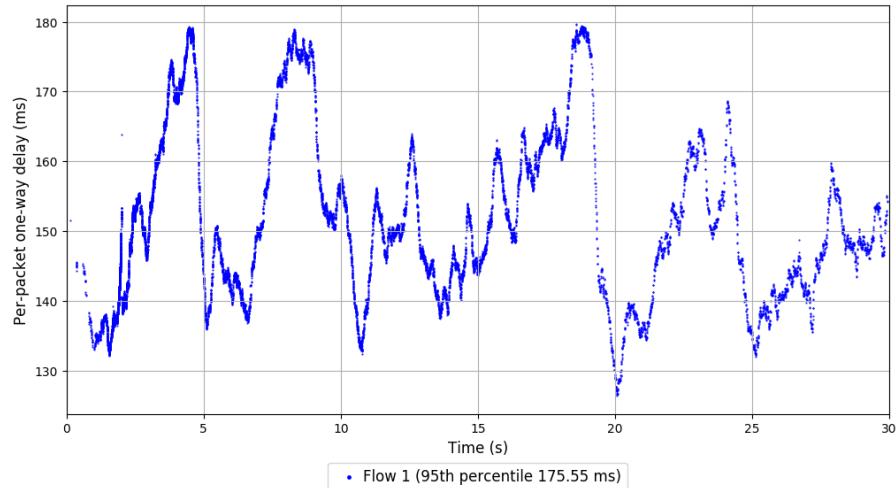
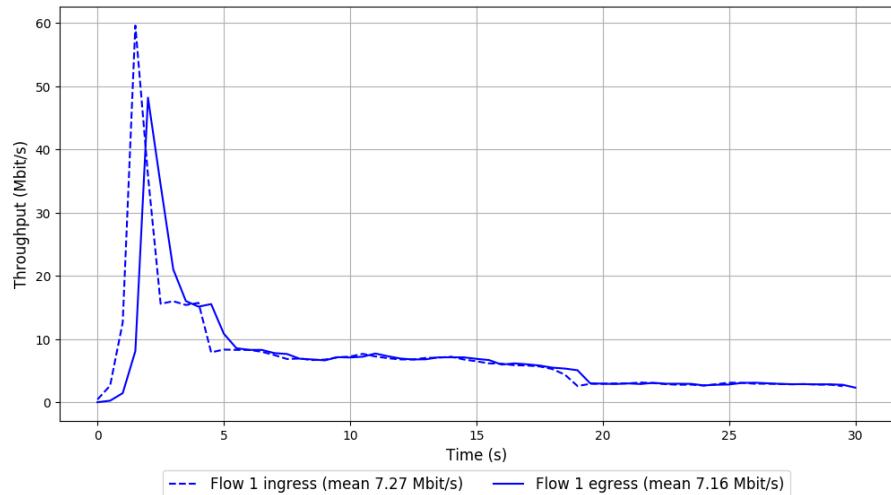


Run 4: Statistics of TCP Vegas

```
Start at: 2019-01-03 06:26:12
End at: 2019-01-03 06:26:43
Local clock offset: 0.794 ms
Remote clock offset: 46.467 ms

# Below is generated by plot.py at 2019-01-03 07:09:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.16 Mbit/s
95th percentile per-packet one-way delay: 175.551 ms
Loss rate: 2.16%
-- Flow 1:
Average throughput: 7.16 Mbit/s
95th percentile per-packet one-way delay: 175.551 ms
Loss rate: 2.16%
```

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

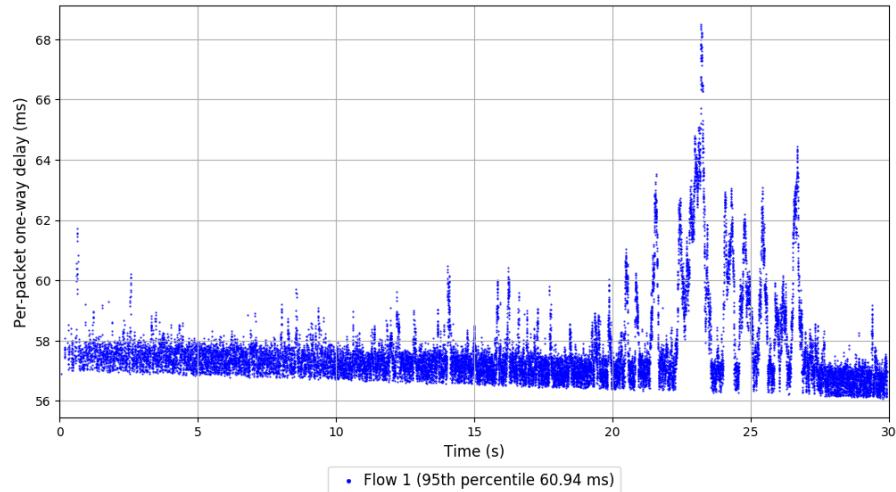
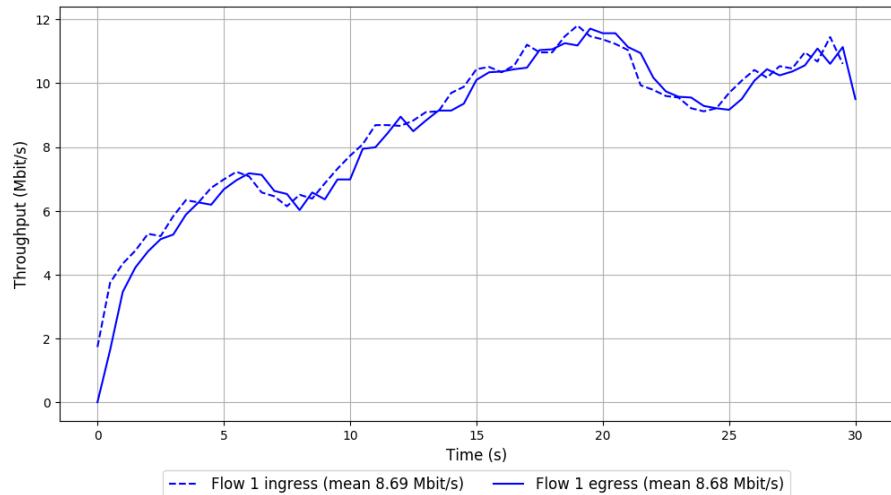


Run 5: Statistics of TCP Vegas

```
Start at: 2019-01-03 06:49:08
End at: 2019-01-03 06:49:38
Local clock offset: 3.444 ms
Remote clock offset: 31.096 ms

# Below is generated by plot.py at 2019-01-03 07:09:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.68 Mbit/s
95th percentile per-packet one-way delay: 60.938 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 8.68 Mbit/s
95th percentile per-packet one-way delay: 60.938 ms
Loss rate: 0.50%
```

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

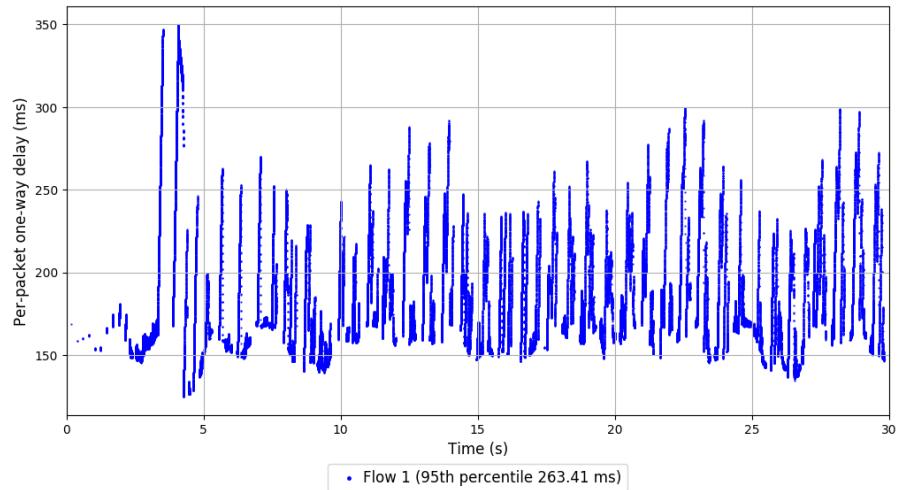
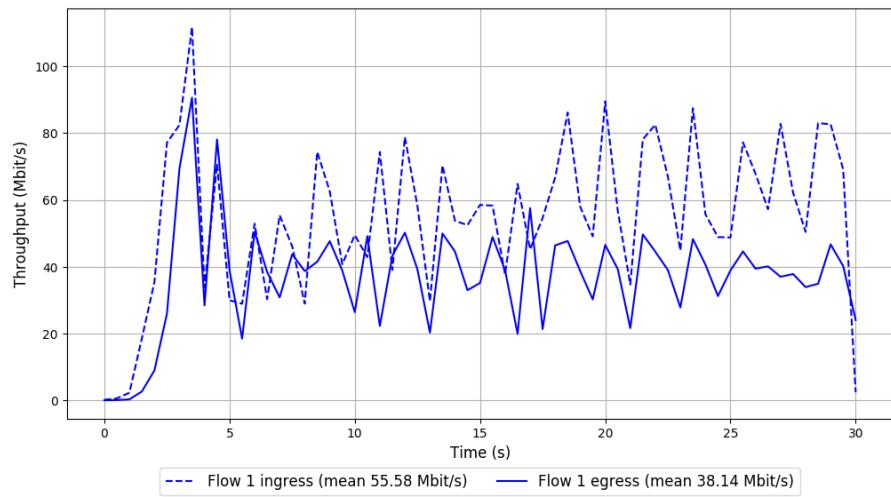


Run 1: Statistics of Verus

```
Start at: 2019-01-03 04:46:33
End at: 2019-01-03 04:47:03
Local clock offset: -3.629 ms
Remote clock offset: 19.869 ms

# Below is generated by plot.py at 2019-01-03 07:09:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.14 Mbit/s
95th percentile per-packet one-way delay: 263.412 ms
Loss rate: 32.31%
-- Flow 1:
Average throughput: 38.14 Mbit/s
95th percentile per-packet one-way delay: 263.412 ms
Loss rate: 32.31%
```

Run 1: Report of Verus — Data Link

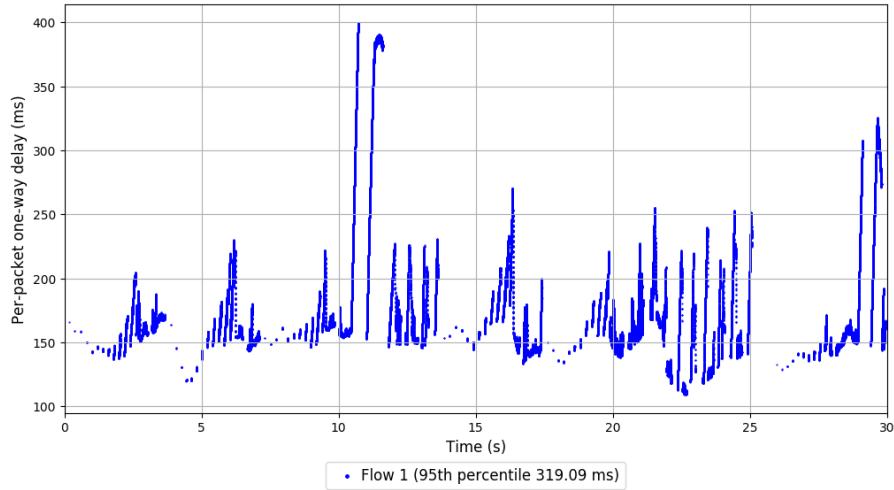
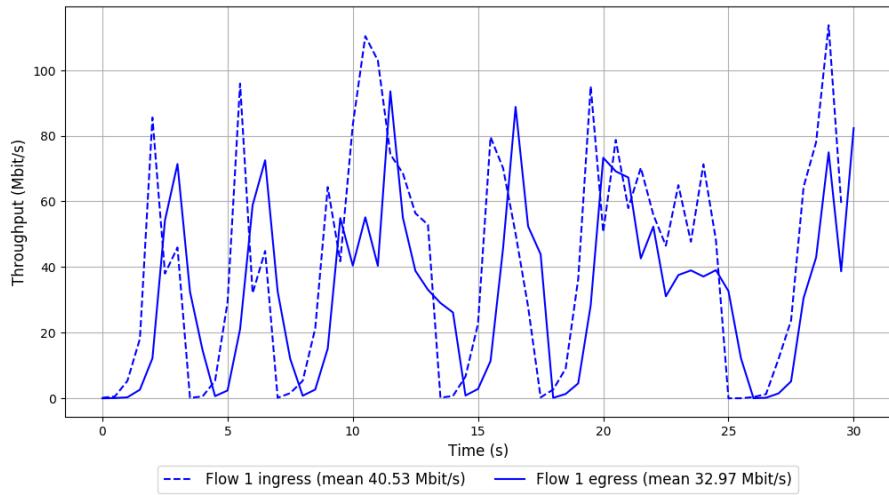


Run 2: Statistics of Verus

```
Start at: 2019-01-03 05:12:23
End at: 2019-01-03 05:12:54
Local clock offset: 0.325 ms
Remote clock offset: 25.348 ms

# Below is generated by plot.py at 2019-01-03 07:09:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.97 Mbit/s
95th percentile per-packet one-way delay: 319.088 ms
Loss rate: 19.27%
-- Flow 1:
Average throughput: 32.97 Mbit/s
95th percentile per-packet one-way delay: 319.088 ms
Loss rate: 19.27%
```

## Run 2: Report of Verus — Data Link

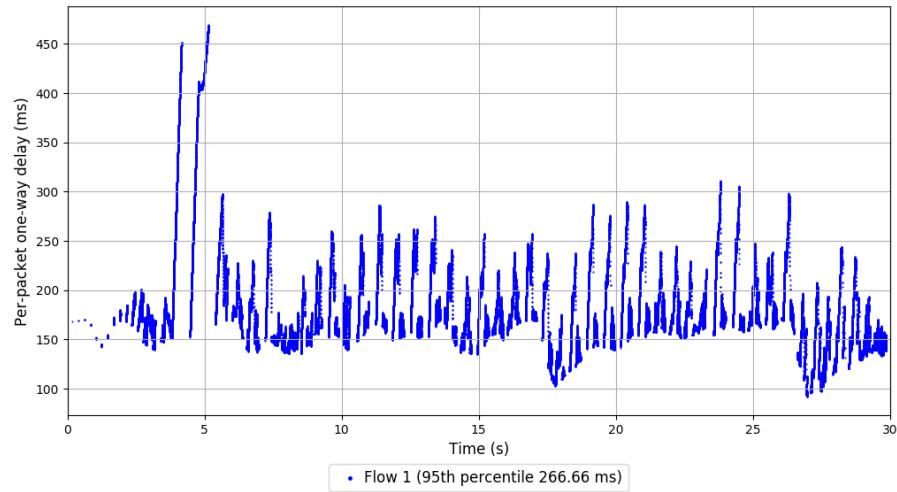
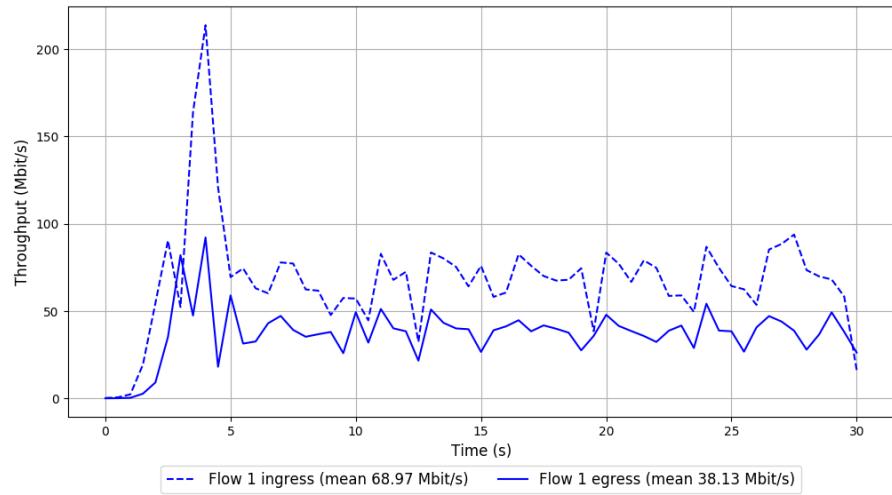


Run 3: Statistics of Verus

```
Start at: 2019-01-03 05:35:33
End at: 2019-01-03 05:36:03
Local clock offset: 0.771 ms
Remote clock offset: 32.453 ms

# Below is generated by plot.py at 2019-01-03 07:09:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.13 Mbit/s
95th percentile per-packet one-way delay: 266.664 ms
Loss rate: 45.35%
-- Flow 1:
Average throughput: 38.13 Mbit/s
95th percentile per-packet one-way delay: 266.664 ms
Loss rate: 45.35%
```

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

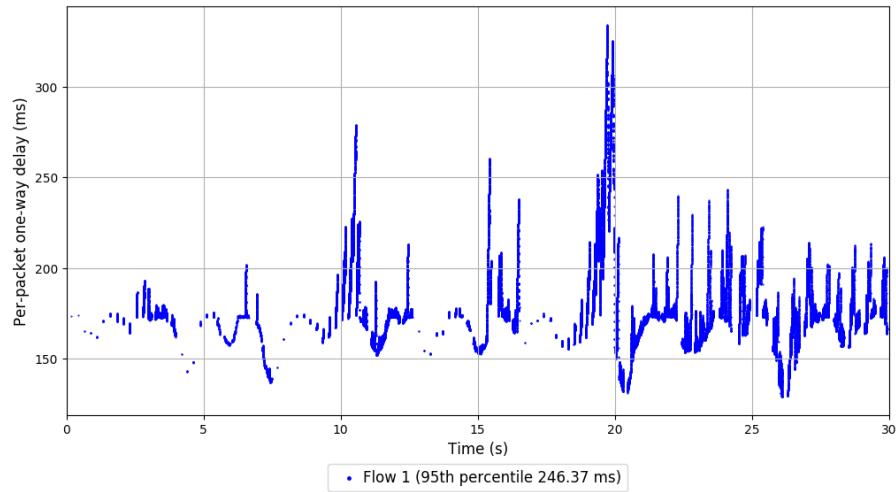
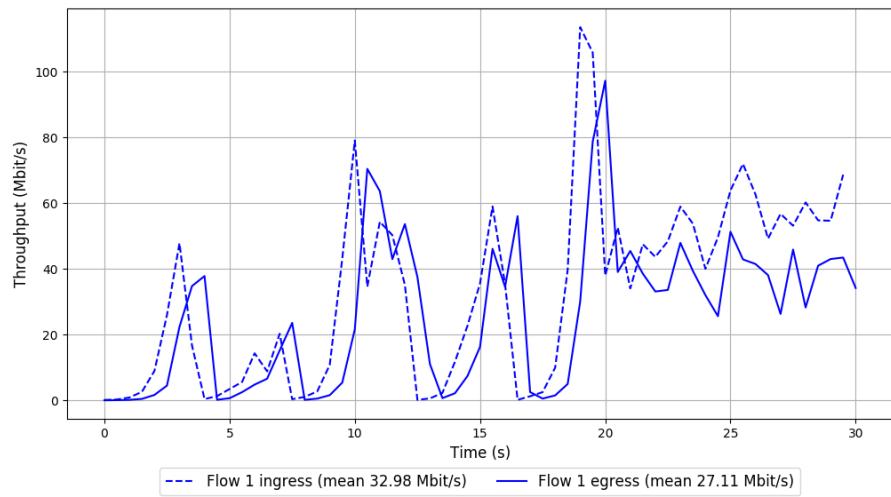


Run 4: Statistics of Verus

```
Start at: 2019-01-03 06:20:39
End at: 2019-01-03 06:21:09
Local clock offset: 0.356 ms
Remote clock offset: 50.913 ms

# Below is generated by plot.py at 2019-01-03 07:09:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 27.11 Mbit/s
95th percentile per-packet one-way delay: 246.371 ms
Loss rate: 18.19%
-- Flow 1:
Average throughput: 27.11 Mbit/s
95th percentile per-packet one-way delay: 246.371 ms
Loss rate: 18.19%
```

## Run 4: Report of Verus — Data Link

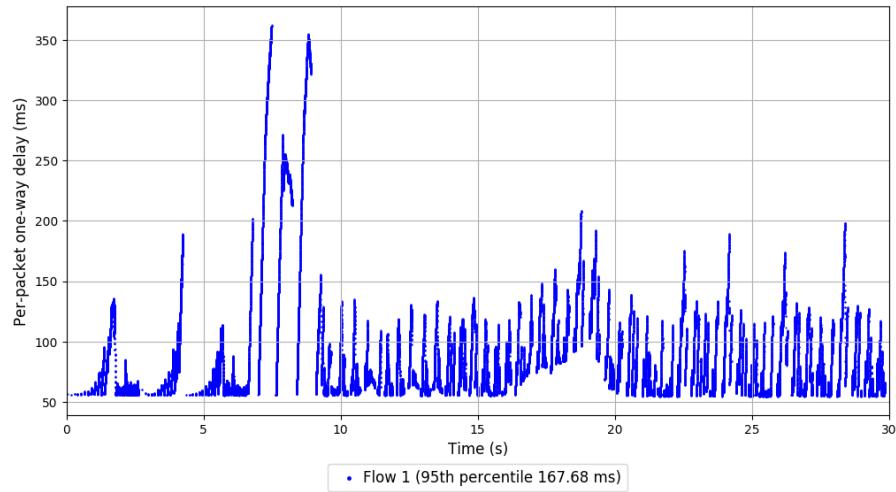
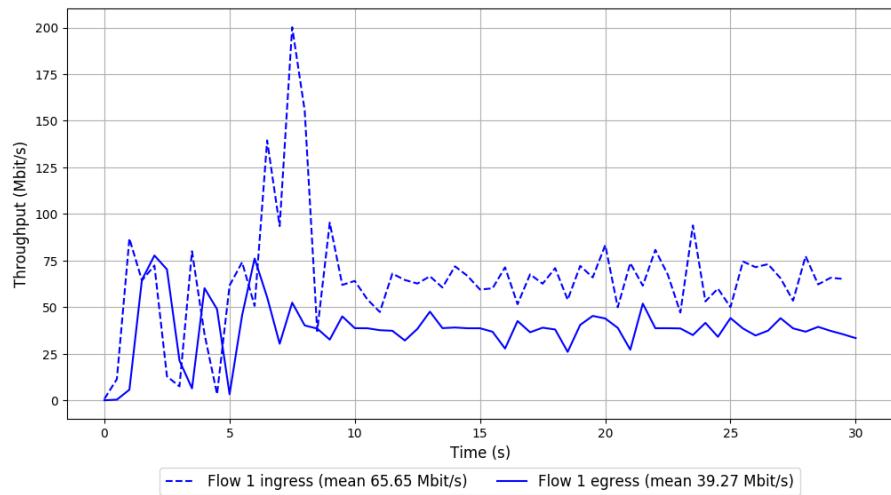


Run 5: Statistics of Verus

```
Start at: 2019-01-03 06:44:27
End at: 2019-01-03 06:44:57
Local clock offset: 3.207 ms
Remote clock offset: 43.376 ms

# Below is generated by plot.py at 2019-01-03 07:09:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.27 Mbit/s
95th percentile per-packet one-way delay: 167.681 ms
Loss rate: 40.52%
-- Flow 1:
Average throughput: 39.27 Mbit/s
95th percentile per-packet one-way delay: 167.681 ms
Loss rate: 40.52%
```

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

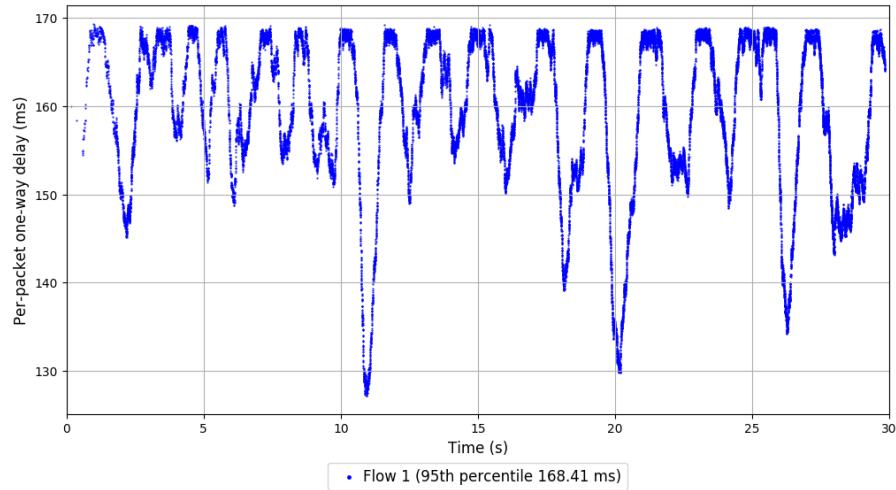
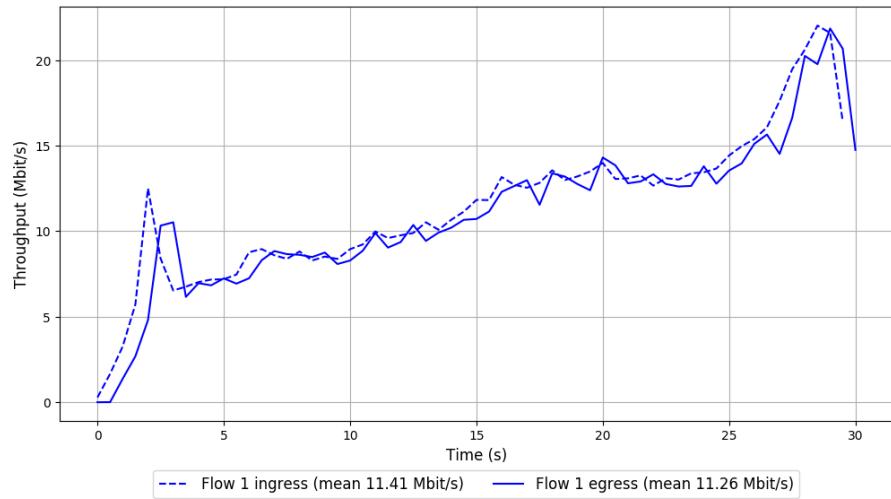


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2019-01-03 04:56:40
End at: 2019-01-03 04:57:10
Local clock offset: -2.569 ms
Remote clock offset: 16.358 ms

# Below is generated by plot.py at 2019-01-03 07:09:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.26 Mbit/s
95th percentile per-packet one-way delay: 168.408 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 11.26 Mbit/s
95th percentile per-packet one-way delay: 168.408 ms
Loss rate: 1.97%
```

Run 1: Report of PCC-Vivace — Data Link

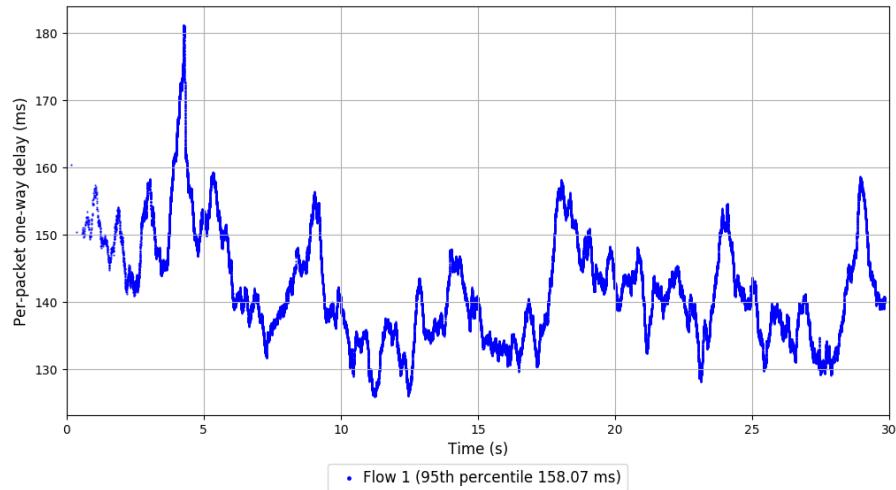
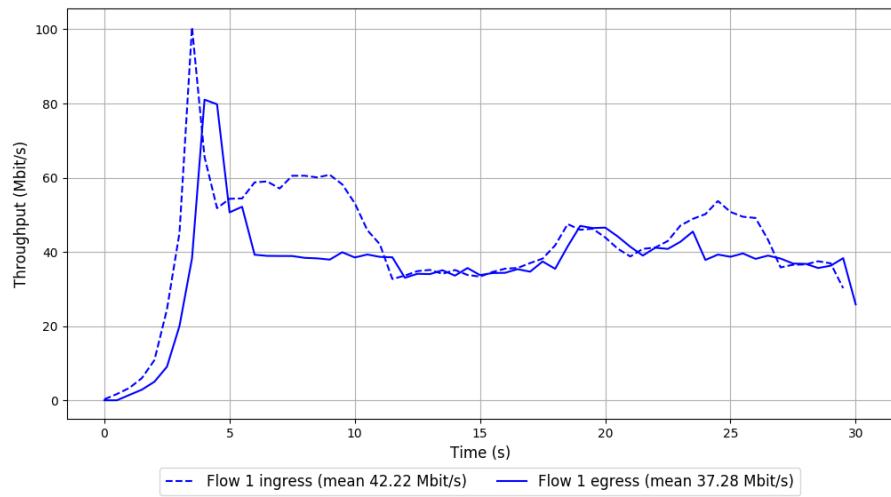


Run 2: Statistics of PCC-Vivace

```
Start at: 2019-01-03 05:20:48
End at: 2019-01-03 05:21:18
Local clock offset: 0.716 ms
Remote clock offset: 26.262 ms

# Below is generated by plot.py at 2019-01-03 07:10:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 37.28 Mbit/s
95th percentile per-packet one-way delay: 158.071 ms
Loss rate: 12.32%
-- Flow 1:
Average throughput: 37.28 Mbit/s
95th percentile per-packet one-way delay: 158.071 ms
Loss rate: 12.32%
```

Run 2: Report of PCC-Vivace — Data Link

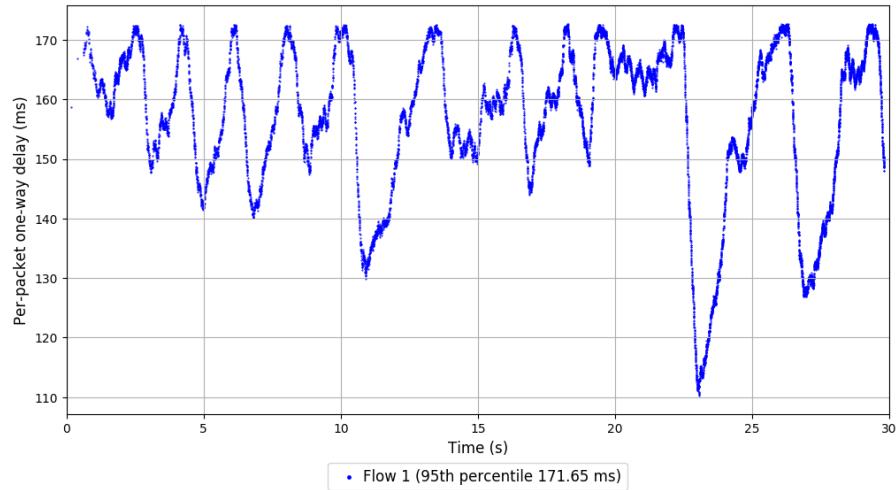
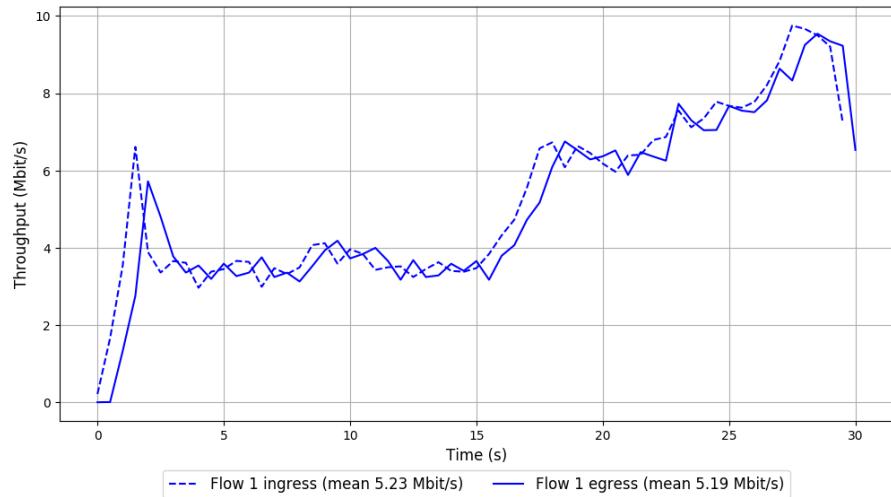


Run 3: Statistics of PCC-Vivace

```
Start at: 2019-01-03 05:44:05
End at: 2019-01-03 05:44:35
Local clock offset: 1.026 ms
Remote clock offset: 37.117 ms

# Below is generated by plot.py at 2019-01-03 07:10:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.19 Mbit/s
95th percentile per-packet one-way delay: 171.652 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 5.19 Mbit/s
95th percentile per-packet one-way delay: 171.652 ms
Loss rate: 1.37%
```

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

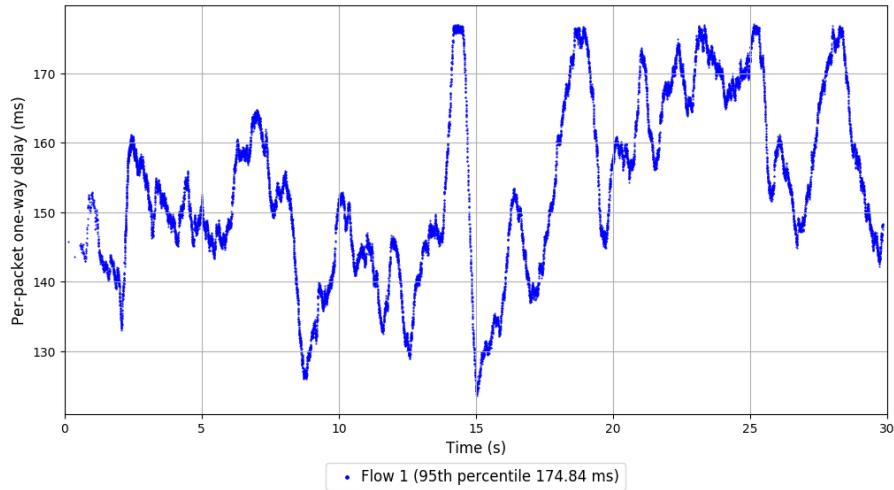
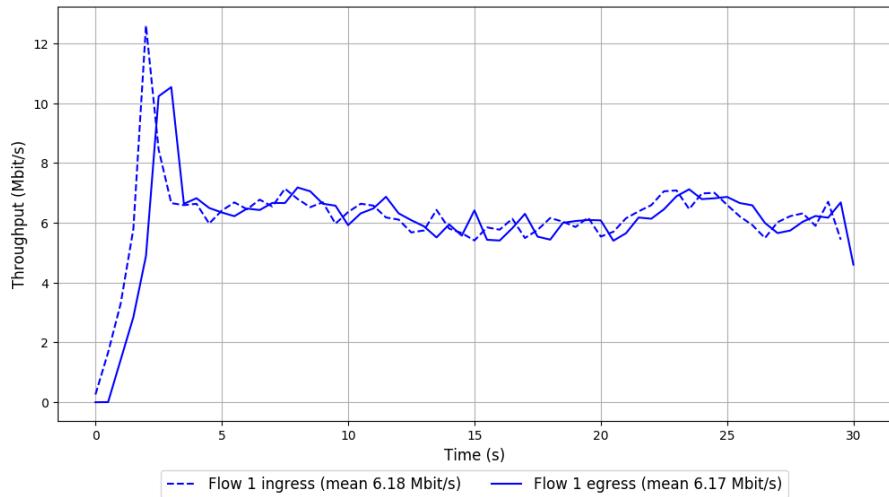


Run 4: Statistics of PCC-Vivace

```
Start at: 2019-01-03 06:29:59
End at: 2019-01-03 06:30:29
Local clock offset: 1.694 ms
Remote clock offset: 50.632 ms

# Below is generated by plot.py at 2019-01-03 07:10:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.17 Mbit/s
95th percentile per-packet one-way delay: 174.842 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 6.17 Mbit/s
95th percentile per-packet one-way delay: 174.842 ms
Loss rate: 0.87%
```

Run 4: Report of PCC-Vivace — Data Link

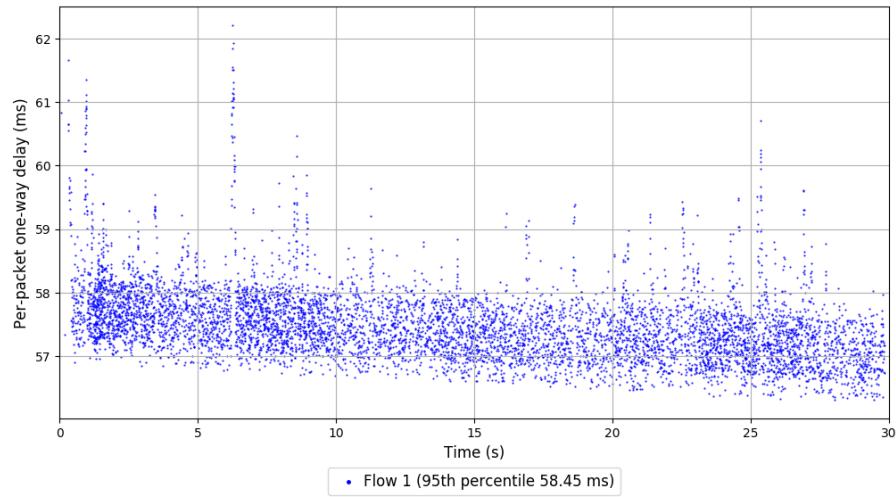
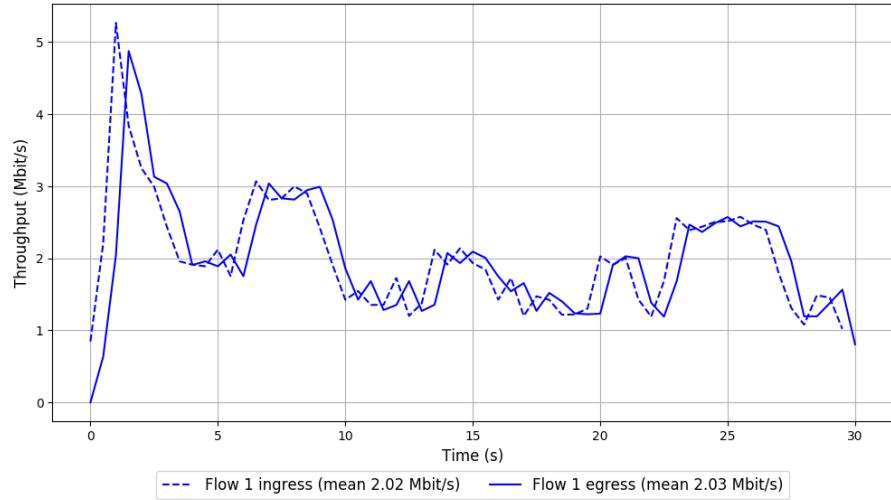


Run 5: Statistics of PCC-Vivace

```
Start at: 2019-01-03 06:52:39
End at: 2019-01-03 06:53:09
Local clock offset: 3.677 ms
Remote clock offset: 25.586 ms

# Below is generated by plot.py at 2019-01-03 07:10:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 58.445 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 58.445 ms
Loss rate: 0.26%
```

Run 5: Report of PCC-Vivace — Data Link

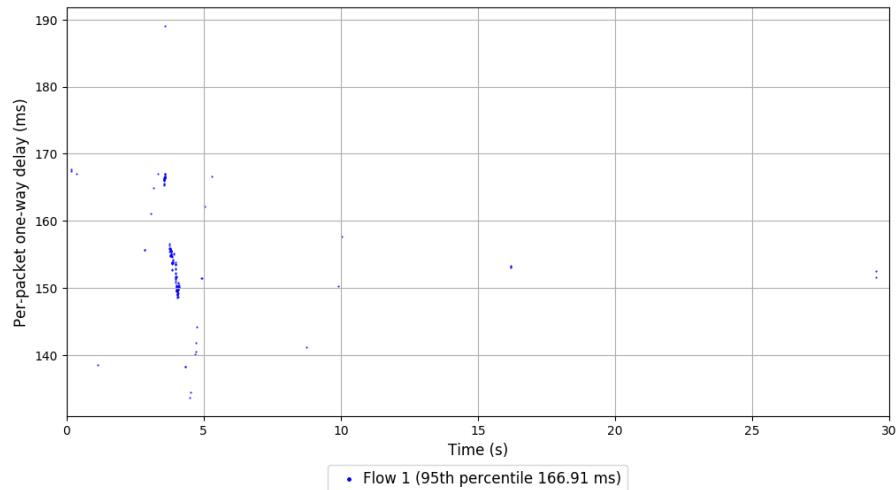
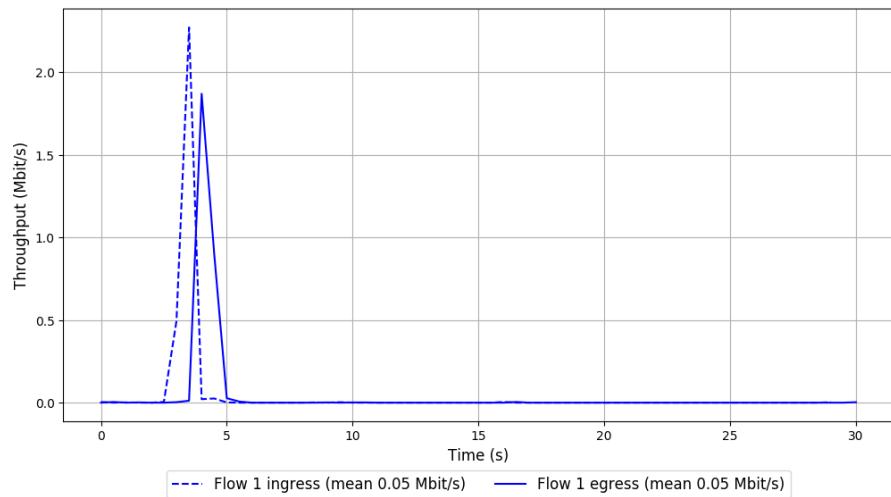


```
Run 1: Statistics of WebRTC media
```

```
Start at: 2019-01-03 05:10:02
End at: 2019-01-03 05:10:32
Local clock offset: -0.066 ms
Remote clock offset: 26.056 ms

# Below is generated by plot.py at 2019-01-03 07:10:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 166.914 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 166.914 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

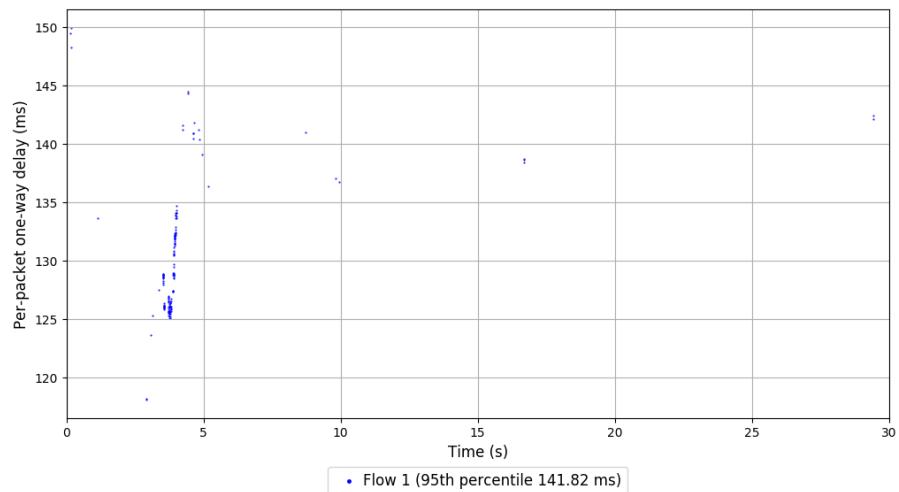
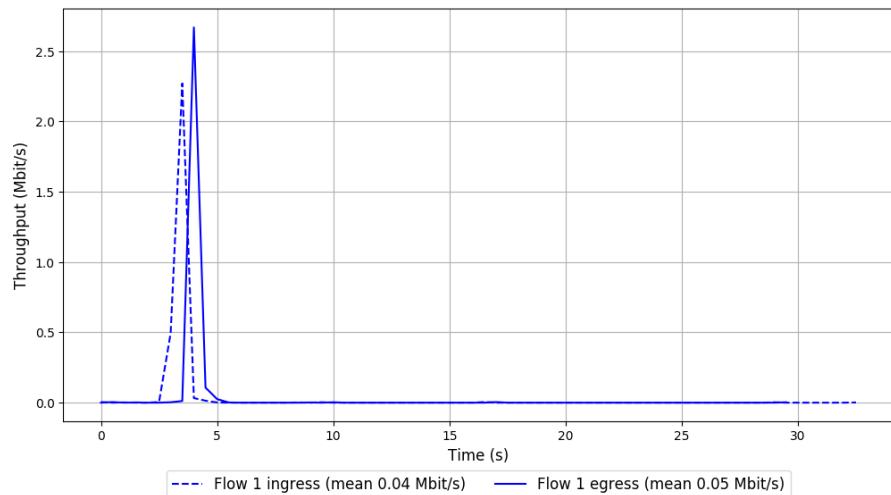


Run 2: Statistics of WebRTC media

```
Start at: 2019-01-03 05:33:10
End at: 2019-01-03 05:33:40
Local clock offset: 0.679 ms
Remote clock offset: 28.803 ms

# Below is generated by plot.py at 2019-01-03 07:10:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 141.824 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 141.824 ms
Loss rate: 0.05%
```

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

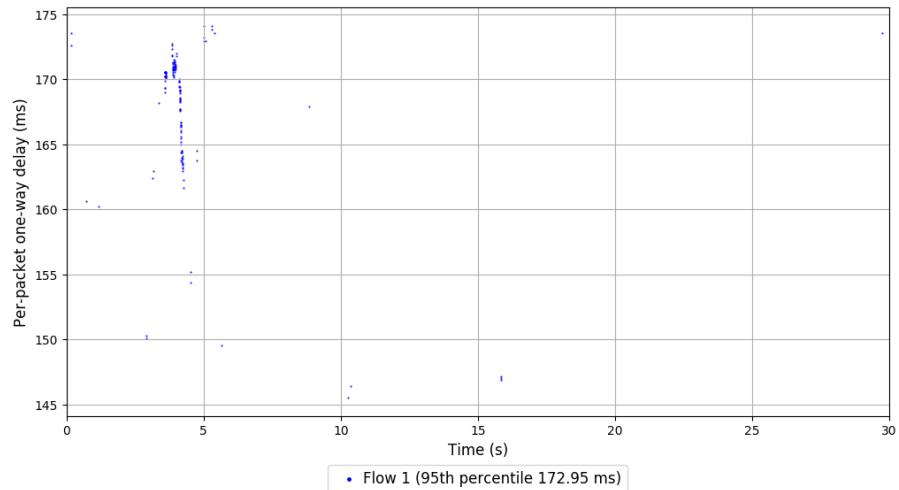
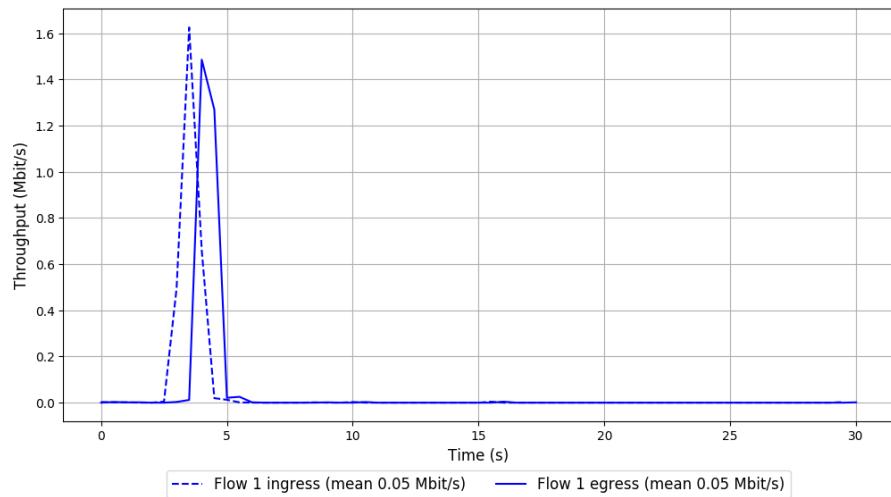


Run 3: Statistics of WebRTC media

```
Start at: 2019-01-03 06:08:01
End at: 2019-01-03 06:08:31
Local clock offset: 0.451 ms
Remote clock offset: 44.702 ms

# Below is generated by plot.py at 2019-01-03 07:10:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 172.947 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 172.947 ms
Loss rate: 0.05%
```

Run 3: Report of WebRTC media — Data Link

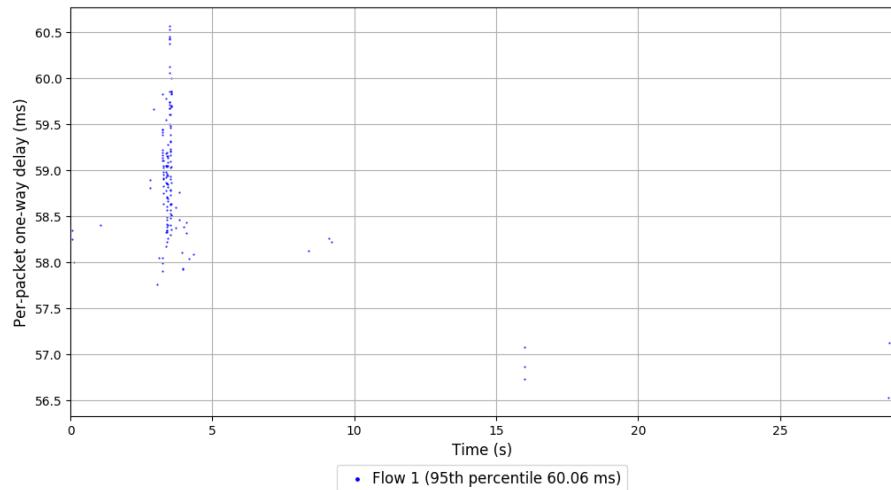
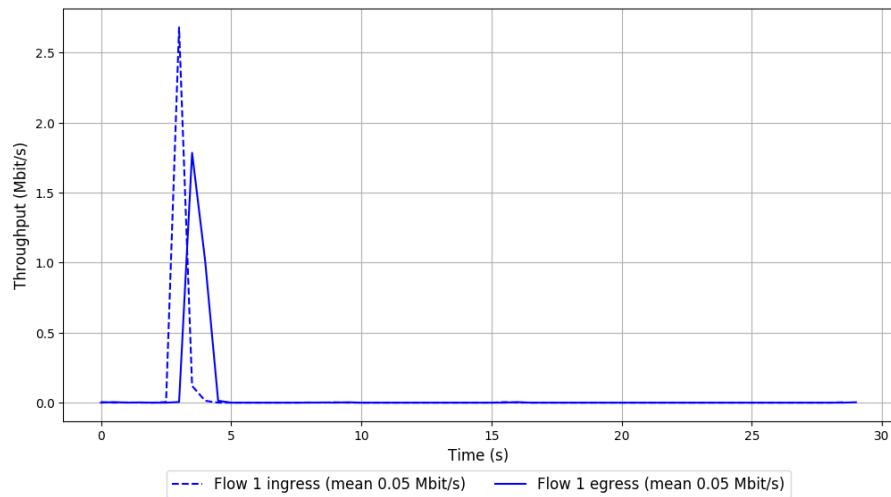


Run 4: Statistics of WebRTC media

```
Start at: 2019-01-03 06:42:10
End at: 2019-01-03 06:42:40
Local clock offset: 3.051 ms
Remote clock offset: 48.848 ms

# Below is generated by plot.py at 2019-01-03 07:10:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 60.058 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 60.058 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2019-01-03 07:04:18
End at: 2019-01-03 07:04:48
Local clock offset: 2.377 ms
Remote clock offset: 19.229 ms

# Below is generated by plot.py at 2019-01-03 07:10:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 59.039 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 59.039 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

