

Pantheon Report

Generated at 2018-10-26 01:23:38 (UTC).
Data path: AWS India 1 on `ens5` (*local*) → India on `em1` (*remote*).
Repeated the test of 18 congestion control schemes 5 times.
Each test lasted for 30 seconds running 1 flow.
NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

System info:

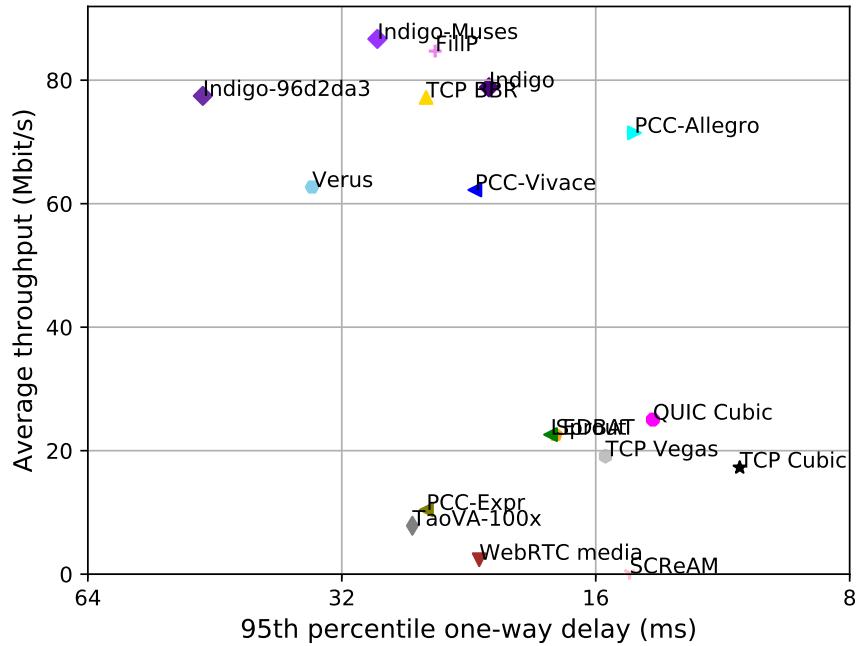
```
Linux 4.15.0-1023-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

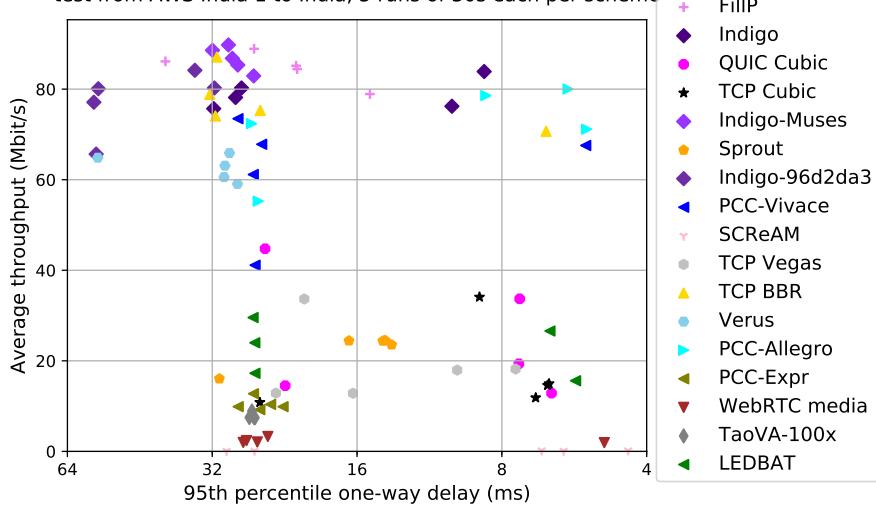
```
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95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

third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

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



test from AWS India 1 to India, 5 runs of 30s each per scheme



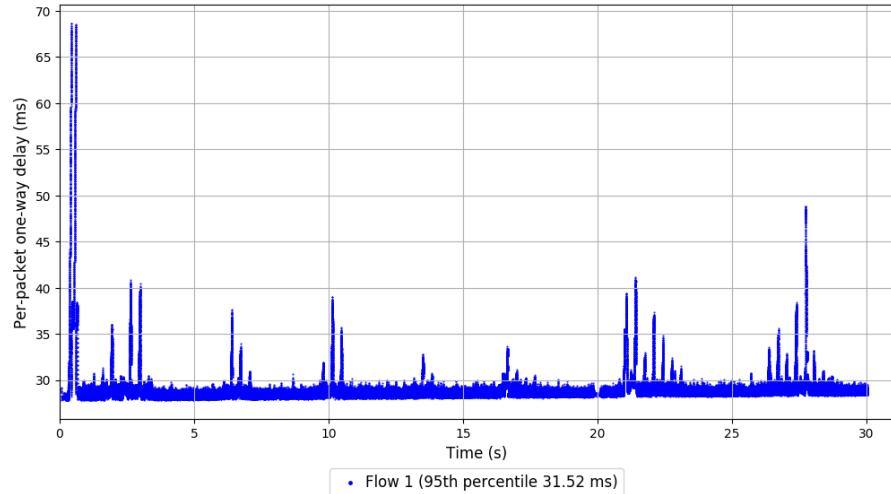
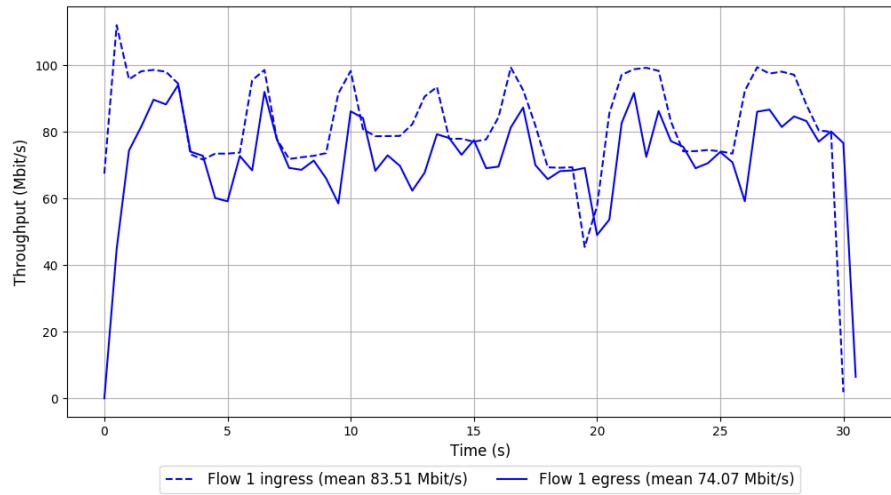
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	77.20	25.42	10.55
Copa	0	N/A	N/A	N/A
TCP Cubic	5	17.26	10.80	0.41
FillP	5	84.71	24.80	13.27
Indigo	5	78.84	21.42	8.89
Indigo-96d2da3	5	77.46	46.76	46.35
LEDBAT	5	22.60	18.10	0.29
Indigo-Muses	5	86.68	29.04	12.07
PCC-Allegro	5	71.48	14.40	10.10
PCC-Expr	5	10.42	25.40	45.27
QUIC Cubic	5	25.03	13.69	1.59
SCReAM	5	0.16	14.59	0.49
Sprout	5	22.59	17.85	0.65
TaoVA-100x	4	7.85	26.39	76.34
TCP Vegas	5	19.10	15.58	1.44
Verus	5	62.70	34.70	10.75
PCC-Vivace	5	62.22	22.25	7.01
WebRTC media	5	2.33	21.99	1.41

Run 1: Statistics of TCP BBR

```
Start at: 2018-10-25 23:49:53
End at: 2018-10-25 23:50:23
Local clock offset: -5.814 ms
Remote clock offset: -4.131 ms

# Below is generated by plot.py at 2018-10-26 01:18:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.07 Mbit/s
95th percentile per-packet one-way delay: 31.518 ms
Loss rate: 11.31%
-- Flow 1:
Average throughput: 74.07 Mbit/s
95th percentile per-packet one-way delay: 31.518 ms
Loss rate: 11.31%
```

Run 1: Report of TCP BBR — Data Link

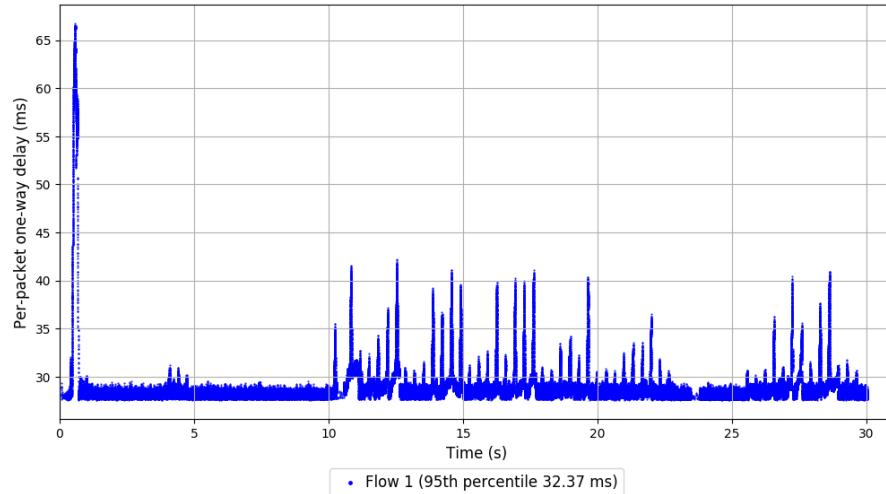
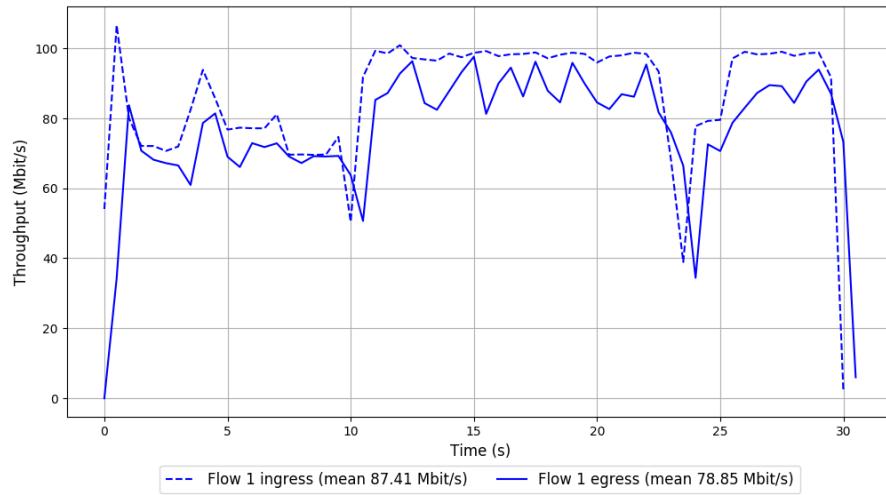


Run 2: Statistics of TCP BBR

```
Start at: 2018-10-26 00:10:43
End at: 2018-10-26 00:11:13
Local clock offset: -2.749 ms
Remote clock offset: -3.882 ms

# Below is generated by plot.py at 2018-10-26 01:18:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.85 Mbit/s
95th percentile per-packet one-way delay: 32.368 ms
Loss rate: 9.79%
-- Flow 1:
Average throughput: 78.85 Mbit/s
95th percentile per-packet one-way delay: 32.368 ms
Loss rate: 9.79%
```

Run 2: Report of TCP BBR — Data Link

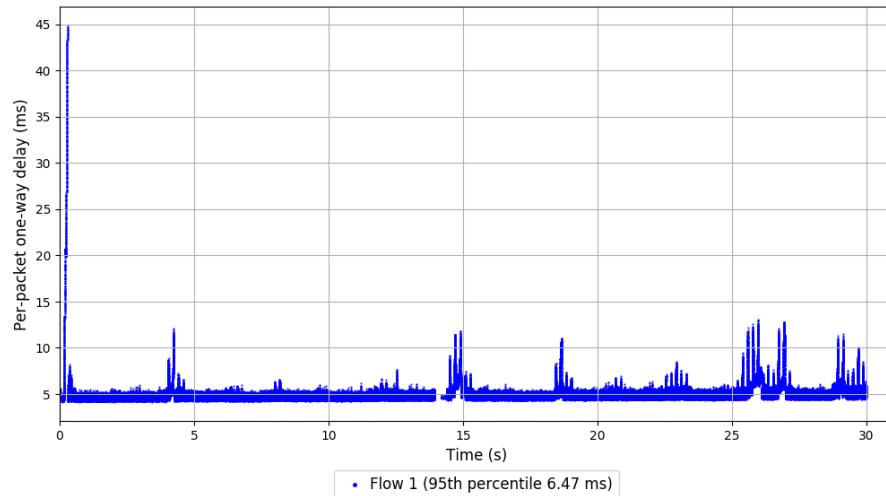
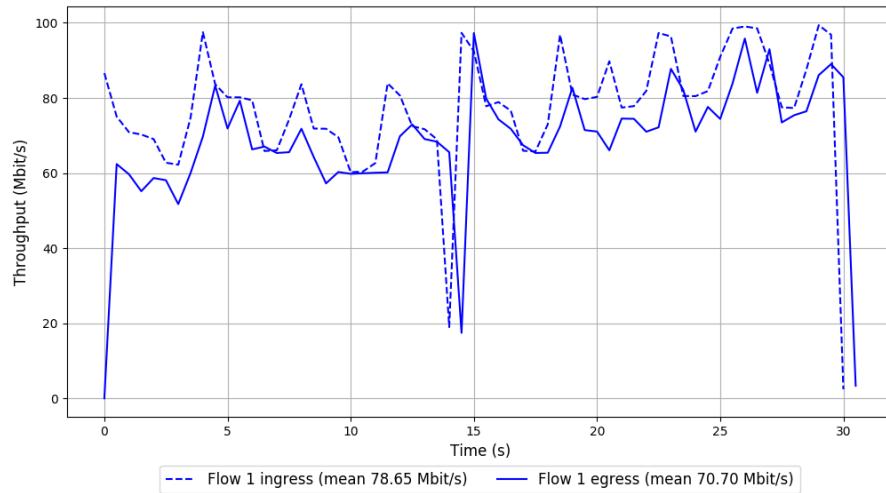


Run 3: Statistics of TCP BBR

```
Start at: 2018-10-26 00:31:30
End at: 2018-10-26 00:32:00
Local clock offset: -1.223 ms
Remote clock offset: -4.159 ms

# Below is generated by plot.py at 2018-10-26 01:18:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.70 Mbit/s
95th percentile per-packet one-way delay: 6.475 ms
Loss rate: 10.11%
-- Flow 1:
Average throughput: 70.70 Mbit/s
95th percentile per-packet one-way delay: 6.475 ms
Loss rate: 10.11%
```

Run 3: Report of TCP BBR — Data Link

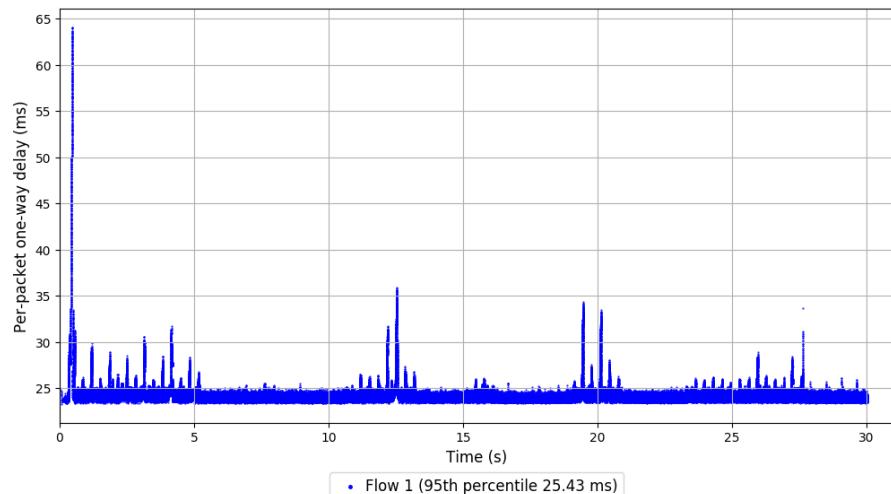
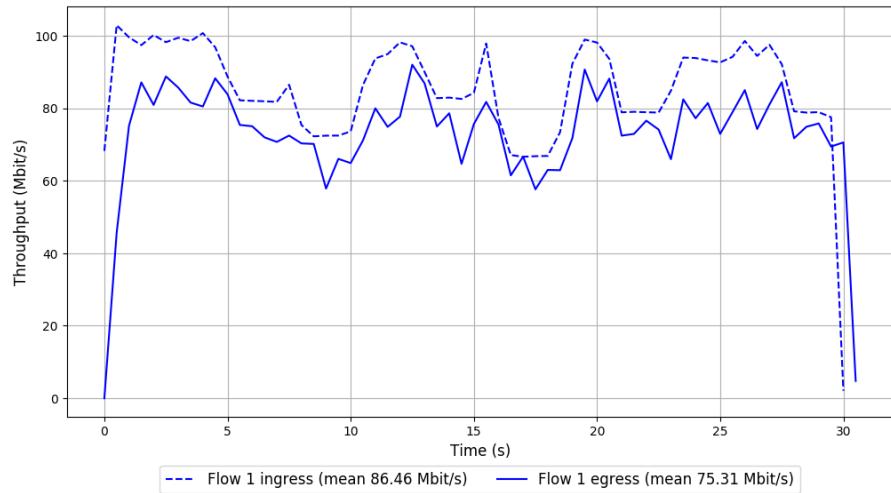


Run 4: Statistics of TCP BBR

```
Start at: 2018-10-26 00:52:30
End at: 2018-10-26 00:53:00
Local clock offset: 1.901 ms
Remote clock offset: -4.063 ms

# Below is generated by plot.py at 2018-10-26 01:18:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.31 Mbit/s
95th percentile per-packet one-way delay: 25.427 ms
Loss rate: 12.92%
-- Flow 1:
Average throughput: 75.31 Mbit/s
95th percentile per-packet one-way delay: 25.427 ms
Loss rate: 12.92%
```

Run 4: Report of TCP BBR — Data Link

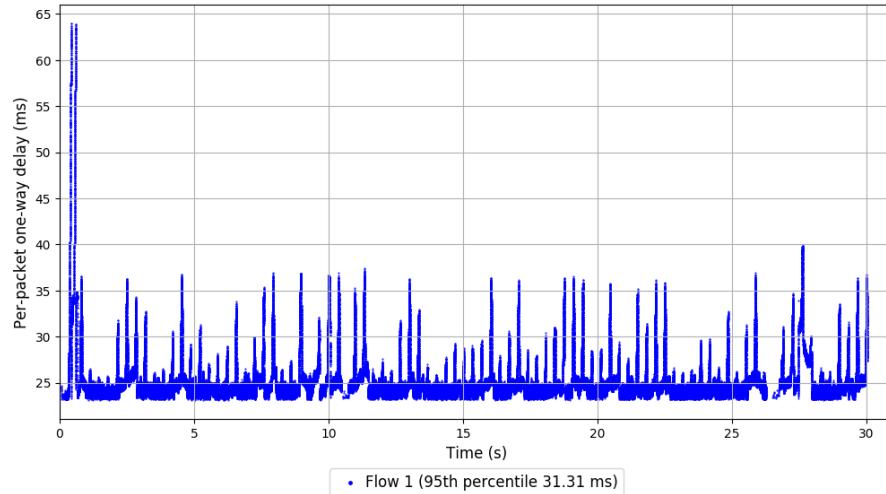
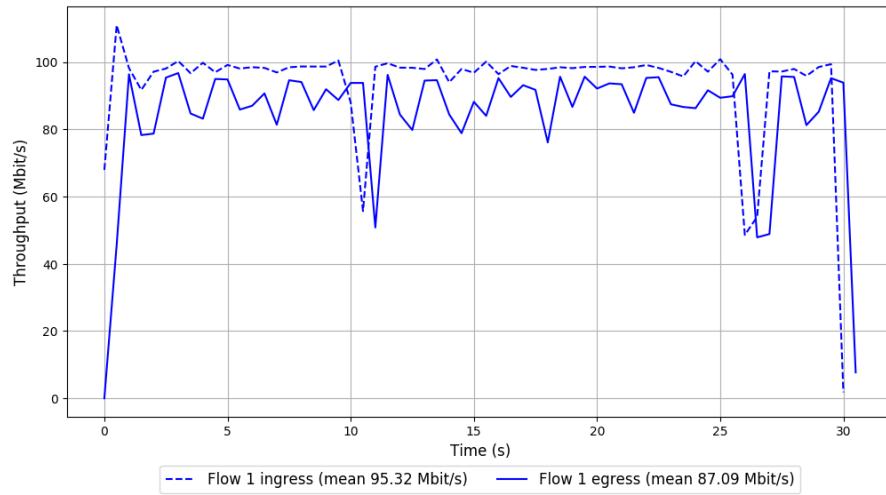


Run 5: Statistics of TCP BBR

```
Start at: 2018-10-26 01:13:22
End at: 2018-10-26 01:13:52
Local clock offset: 2.914 ms
Remote clock offset: -3.535 ms

# Below is generated by plot.py at 2018-10-26 01:18:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.09 Mbit/s
95th percentile per-packet one-way delay: 31.310 ms
Loss rate: 8.63%
-- Flow 1:
Average throughput: 87.09 Mbit/s
95th percentile per-packet one-way delay: 31.310 ms
Loss rate: 8.63%
```

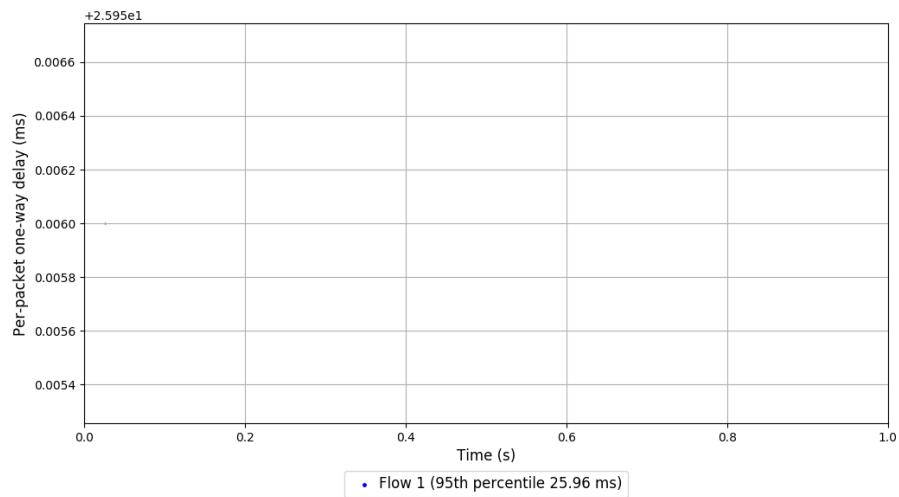
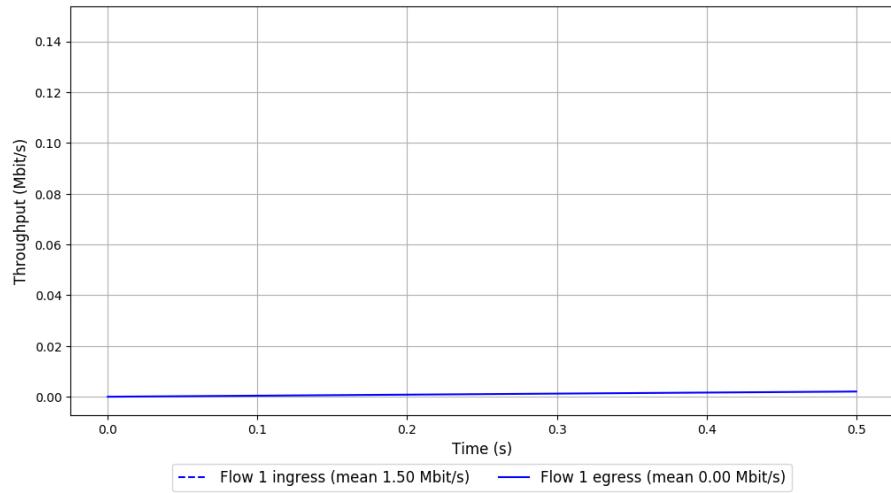
Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-10-25 23:52:16
End at: 2018-10-25 23:52:46
Local clock offset: -0.778 ms
Remote clock offset: -3.888 ms

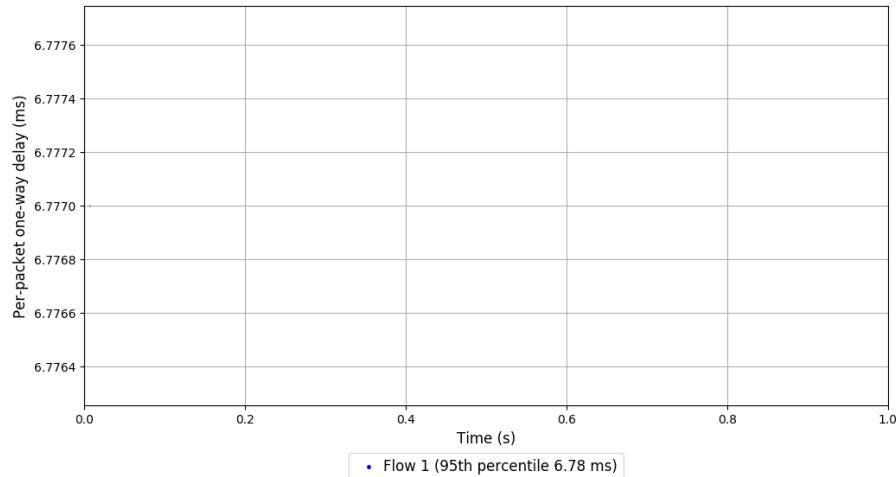
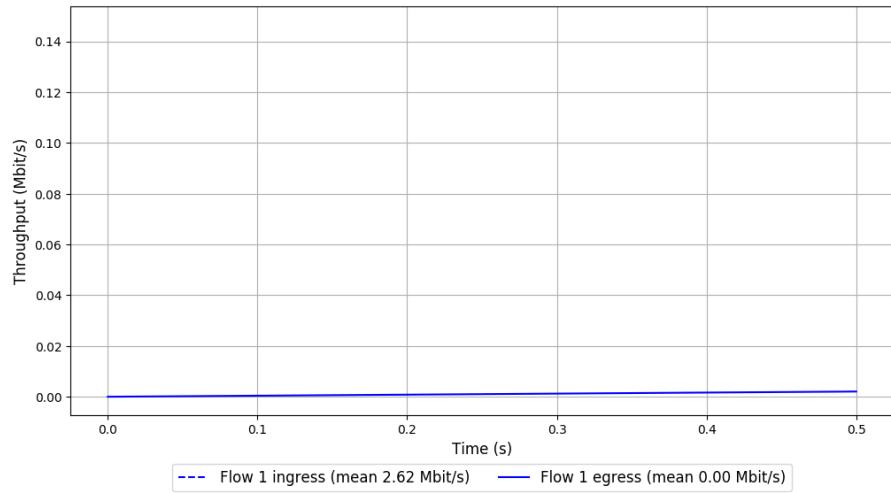
Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-10-26 00:13:12
End at: 2018-10-26 00:13:42
Local clock offset: 0.037 ms
Remote clock offset: -3.575 ms

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

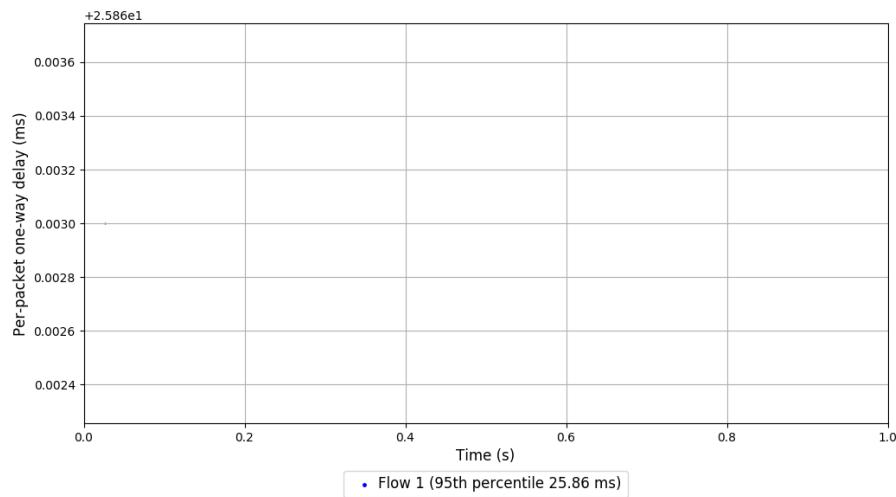
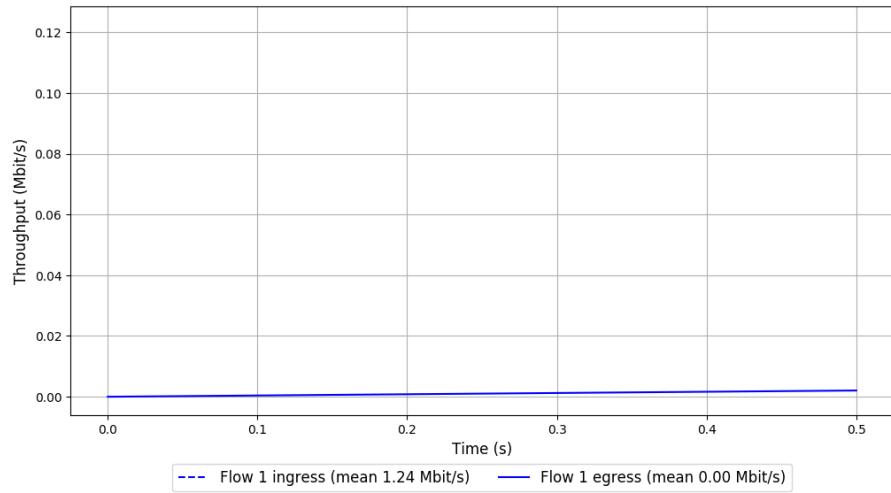
Start at: 2018-10-26 00:33:56

End at: 2018-10-26 00:34:26

Local clock offset: -0.855 ms

Remote clock offset: -3.484 ms

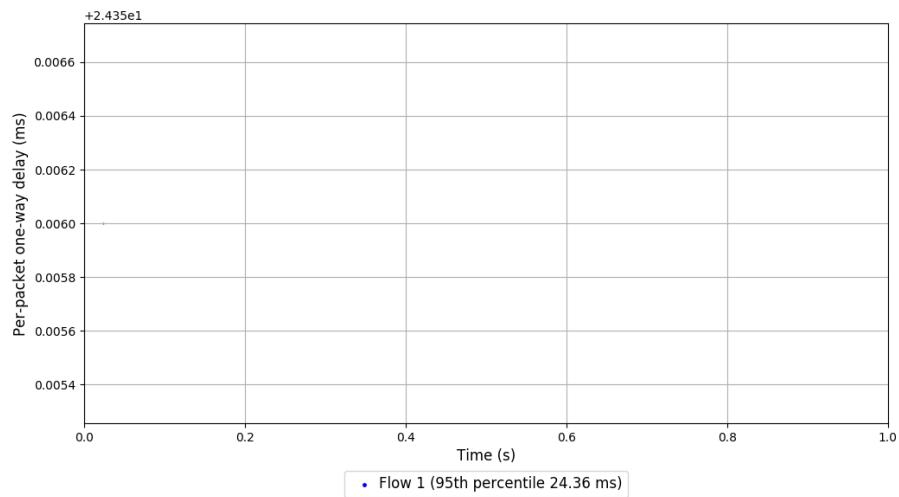
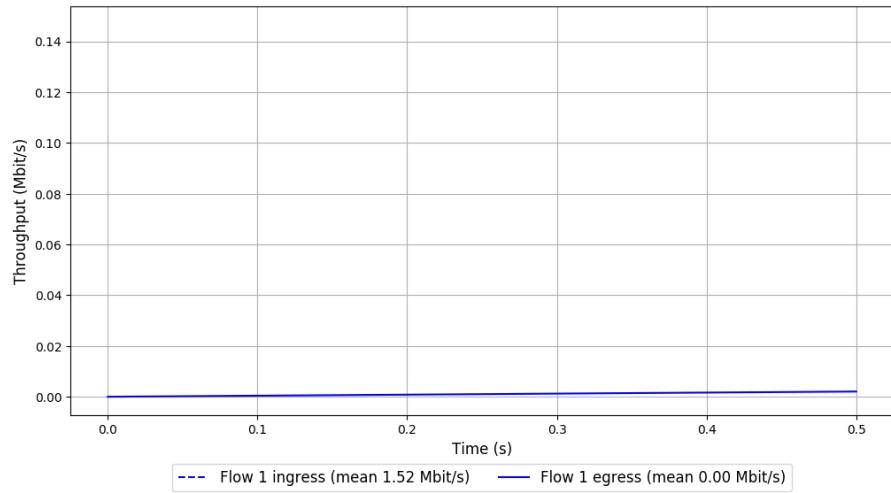
Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-10-26 00:54:57
End at: 2018-10-26 00:55:27
Local clock offset: 1.201 ms
Remote clock offset: -4.284 ms

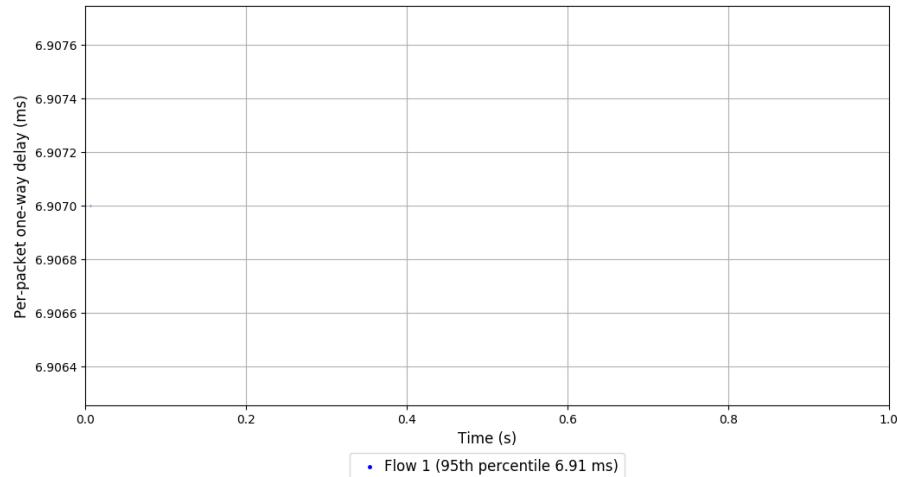
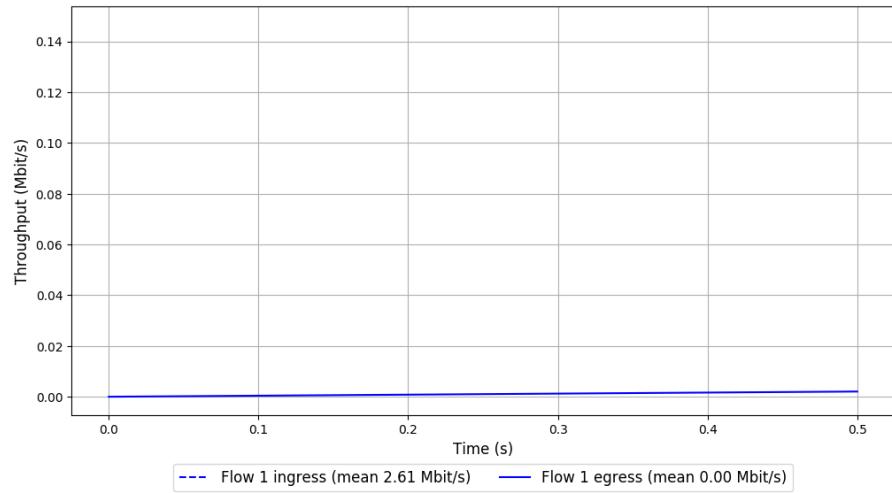
Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-10-26 01:15:42
End at: 2018-10-26 01:16:12
Local clock offset: 1.351 ms
Remote clock offset: -3.279 ms

Run 5: Report of Copa — Data Link

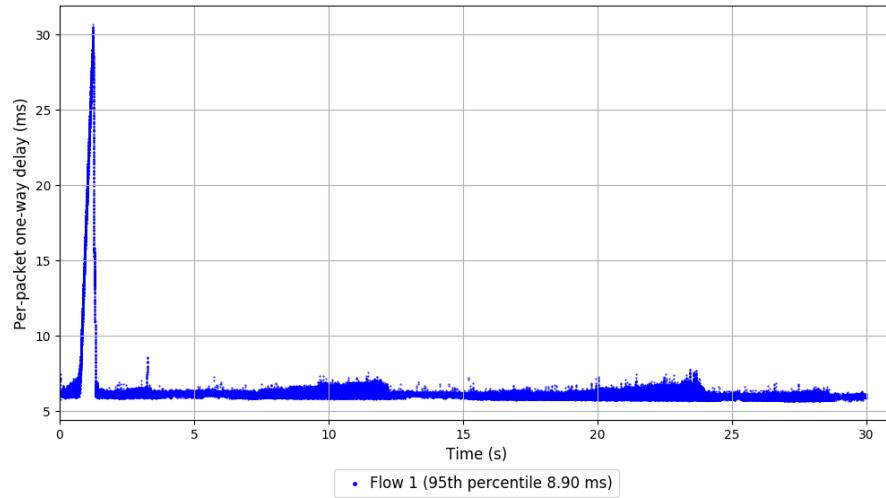
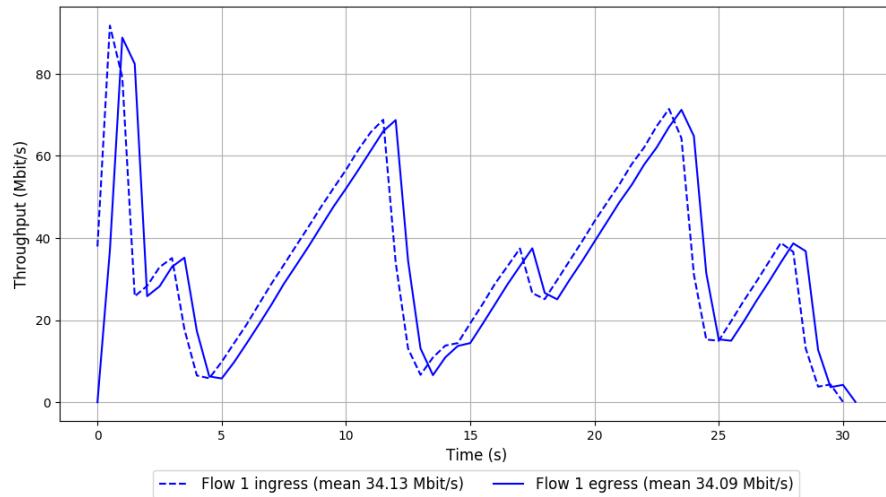


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-10-25 23:39:34
End at: 2018-10-25 23:40:04
Local clock offset: -0.969 ms
Remote clock offset: -4.814 ms

# Below is generated by plot.py at 2018-10-26 01:18:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.09 Mbit/s
95th percentile per-packet one-way delay: 8.905 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 34.09 Mbit/s
95th percentile per-packet one-way delay: 8.905 ms
Loss rate: 0.12%
```

Run 1: Report of TCP Cubic — Data Link

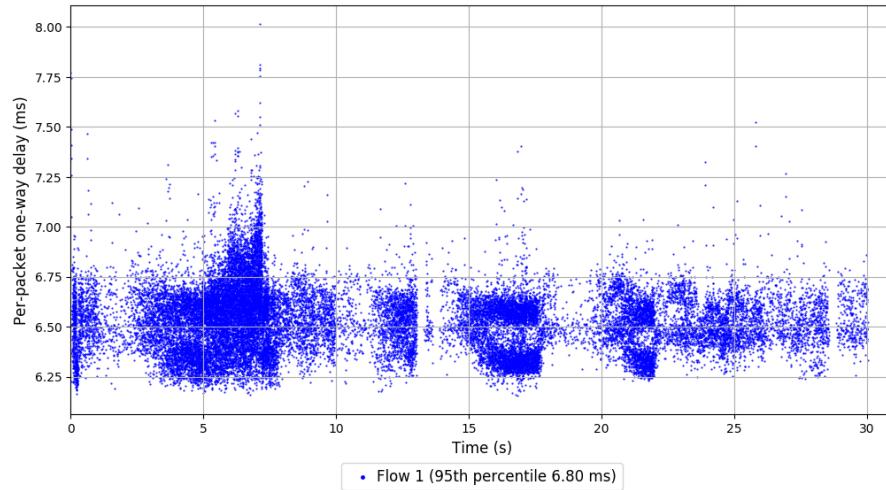
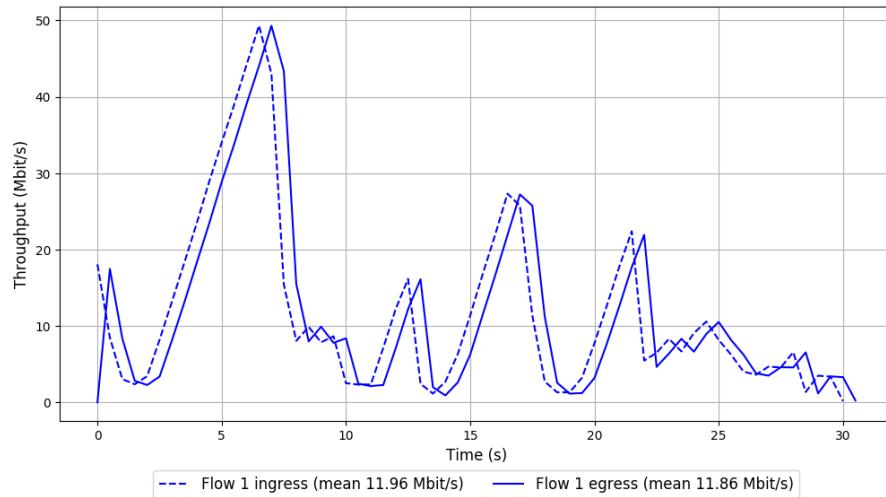


Run 2: Statistics of TCP Cubic

```
Start at: 2018-10-26 00:00:13
End at: 2018-10-26 00:00:43
Local clock offset: -0.916 ms
Remote clock offset: -5.011 ms

# Below is generated by plot.py at 2018-10-26 01:18:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.86 Mbit/s
95th percentile per-packet one-way delay: 6.804 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 11.86 Mbit/s
95th percentile per-packet one-way delay: 6.804 ms
Loss rate: 0.87%
```

Run 2: Report of TCP Cubic — Data Link

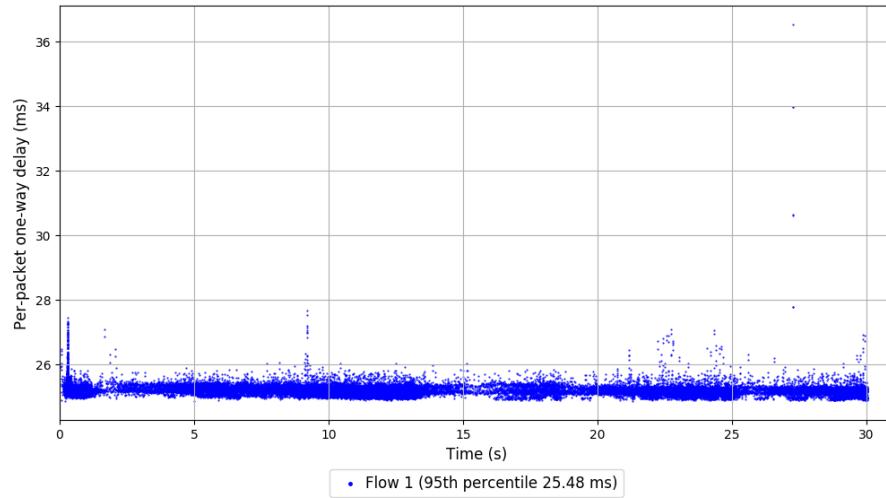
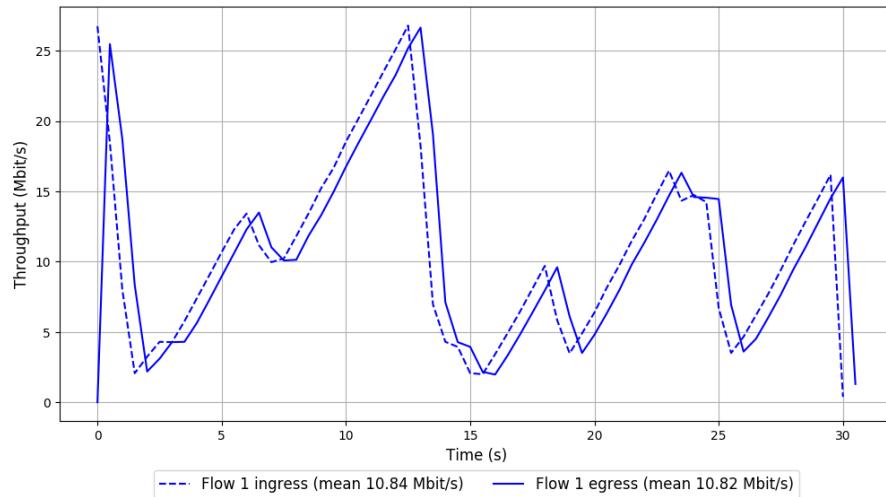


Run 3: Statistics of TCP Cubic

```
Start at: 2018-10-26 00:21:11
End at: 2018-10-26 00:21:41
Local clock offset: -2.088 ms
Remote clock offset: -4.612 ms

# Below is generated by plot.py at 2018-10-26 01:18:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.82 Mbit/s
95th percentile per-packet one-way delay: 25.479 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 10.82 Mbit/s
95th percentile per-packet one-way delay: 25.479 ms
Loss rate: 0.17%
```

Run 3: Report of TCP Cubic — Data Link

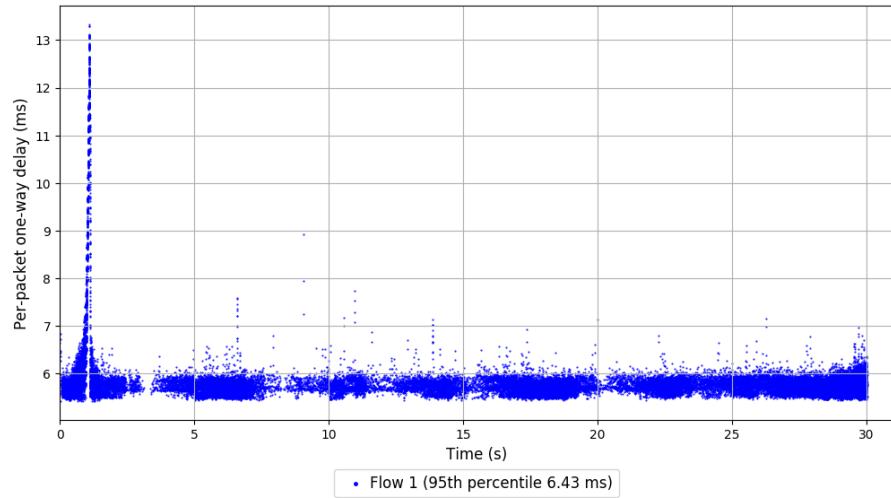
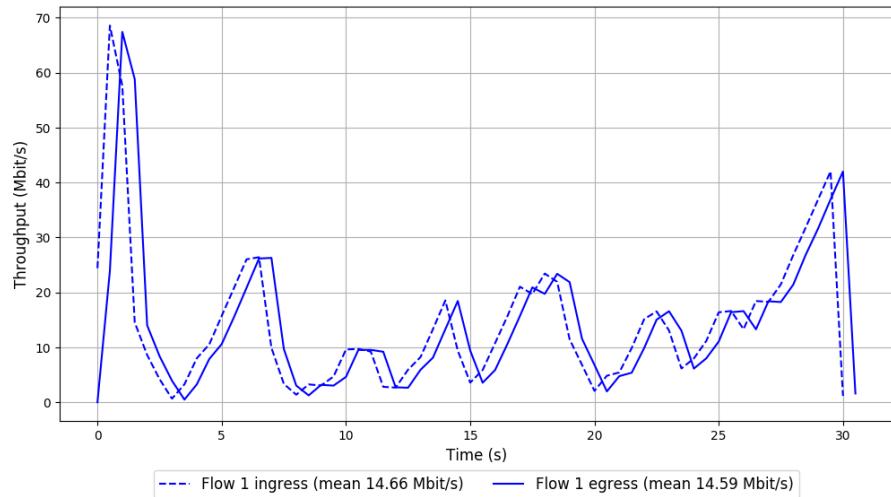


Run 4: Statistics of TCP Cubic

```
Start at: 2018-10-26 00:42:11
End at: 2018-10-26 00:42:41
Local clock offset: 0.333 ms
Remote clock offset: -4.26 ms

# Below is generated by plot.py at 2018-10-26 01:18:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 14.59 Mbit/s
95th percentile per-packet one-way delay: 6.430 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 14.59 Mbit/s
95th percentile per-packet one-way delay: 6.430 ms
Loss rate: 0.43%
```

Run 4: Report of TCP Cubic — Data Link

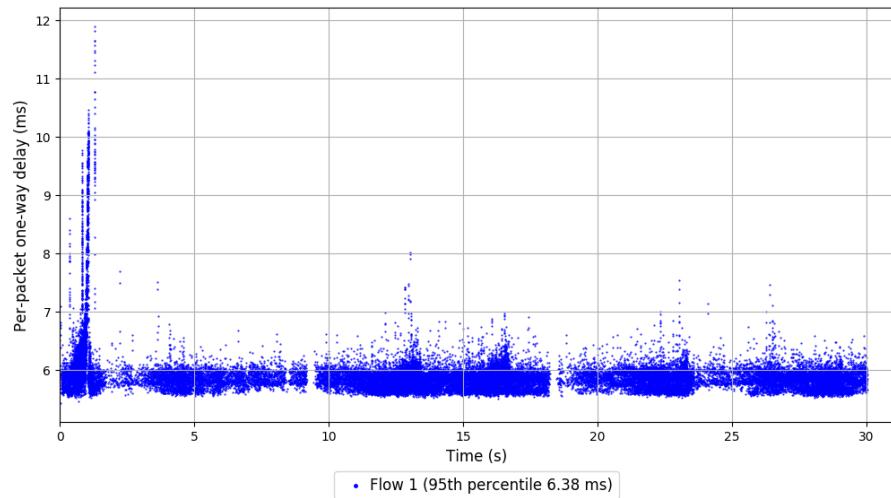
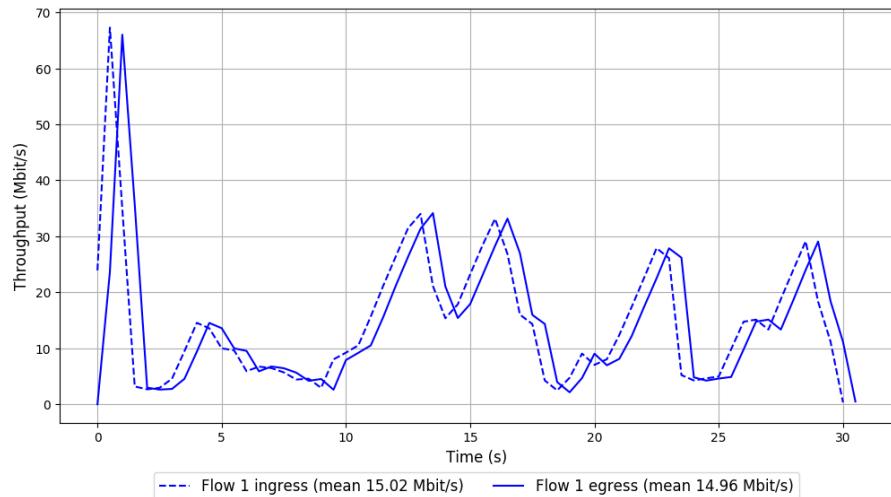


Run 5: Statistics of TCP Cubic

```
Start at: 2018-10-26 01:02:58
End at: 2018-10-26 01:03:28
Local clock offset: 0.669 ms
Remote clock offset: -4.088 ms

# Below is generated by plot.py at 2018-10-26 01:18:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 14.96 Mbit/s
95th percentile per-packet one-way delay: 6.382 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 14.96 Mbit/s
95th percentile per-packet one-way delay: 6.382 ms
Loss rate: 0.44%
```

Run 5: Report of TCP Cubic — Data Link

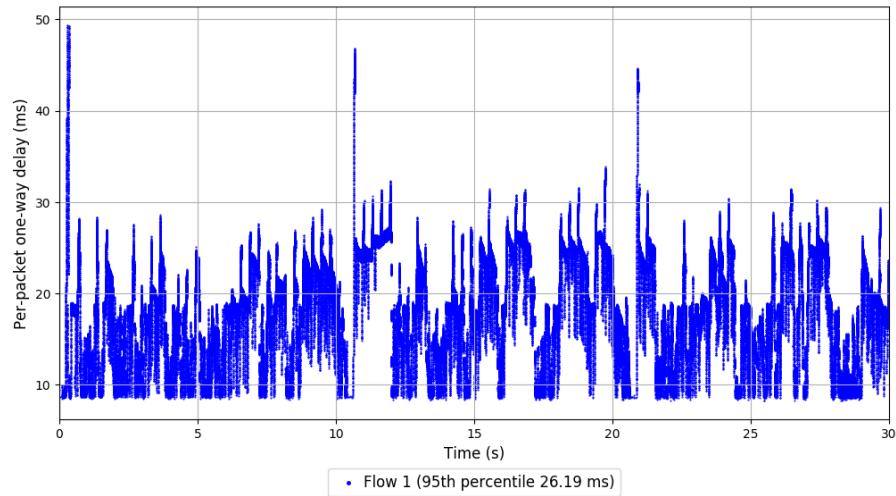
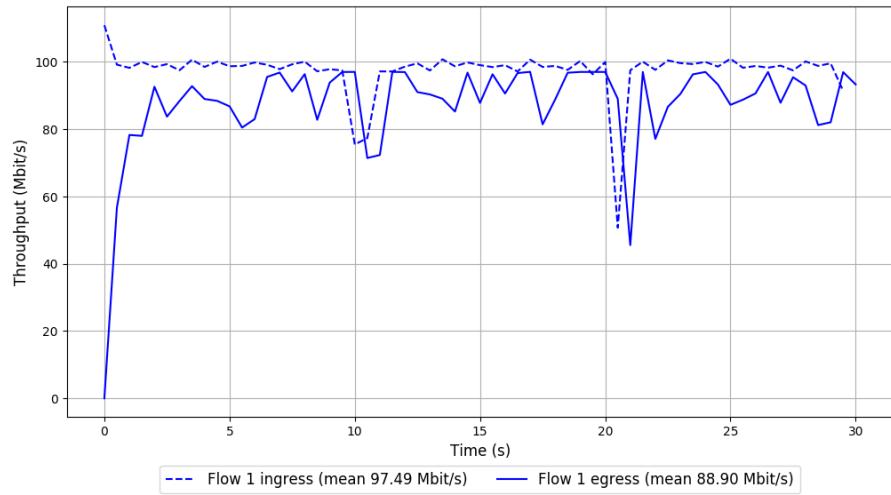


```
Run 1: Statistics of FillP
```

```
Start at: 2018-10-25 23:42:59
End at: 2018-10-25 23:43:29
Local clock offset: -4.946 ms
Remote clock offset: -4.577 ms

# Below is generated by plot.py at 2018-10-26 01:18:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.90 Mbit/s
95th percentile per-packet one-way delay: 26.188 ms
Loss rate: 8.77%
-- Flow 1:
Average throughput: 88.90 Mbit/s
95th percentile per-packet one-way delay: 26.188 ms
Loss rate: 8.77%
```

Run 1: Report of FillP — Data Link

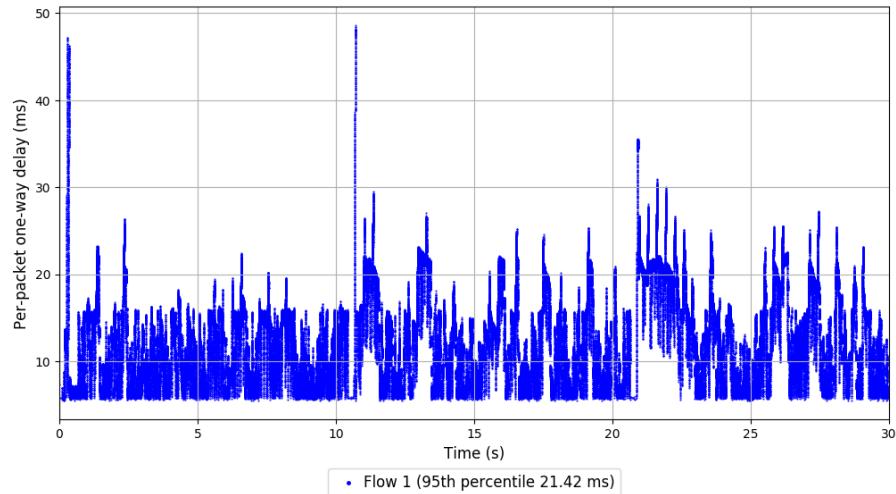
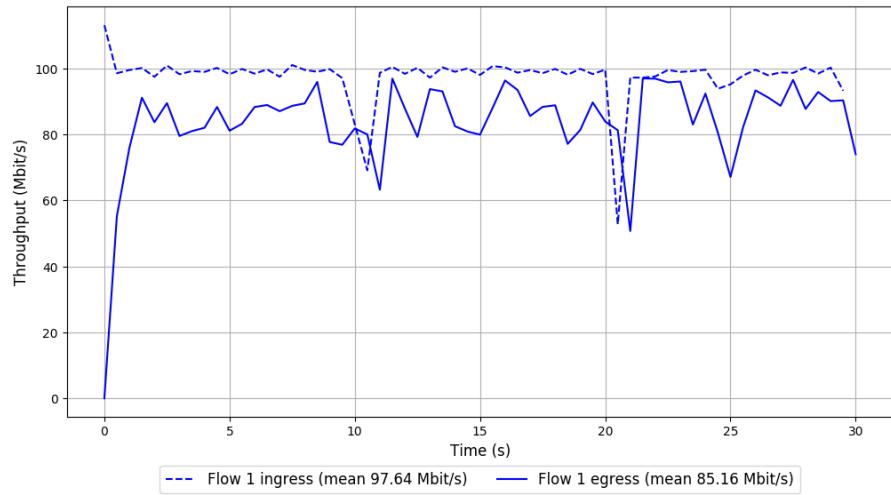


Run 2: Statistics of FillP

```
Start at: 2018-10-26 00:03:36
End at: 2018-10-26 00:04:06
Local clock offset: 0.425 ms
Remote clock offset: -4.069 ms

# Below is generated by plot.py at 2018-10-26 01:18:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.16 Mbit/s
95th percentile per-packet one-way delay: 21.418 ms
Loss rate: 12.78%
-- Flow 1:
Average throughput: 85.16 Mbit/s
95th percentile per-packet one-way delay: 21.418 ms
Loss rate: 12.78%
```

Run 2: Report of FillP — Data Link

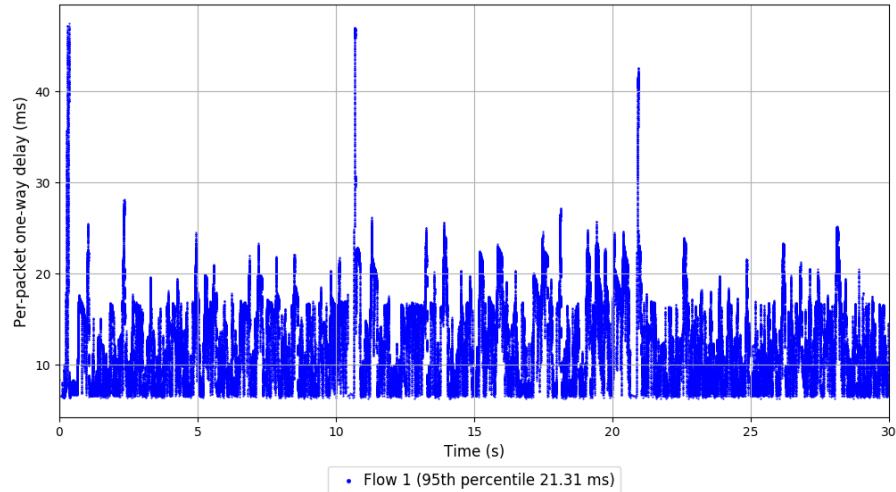
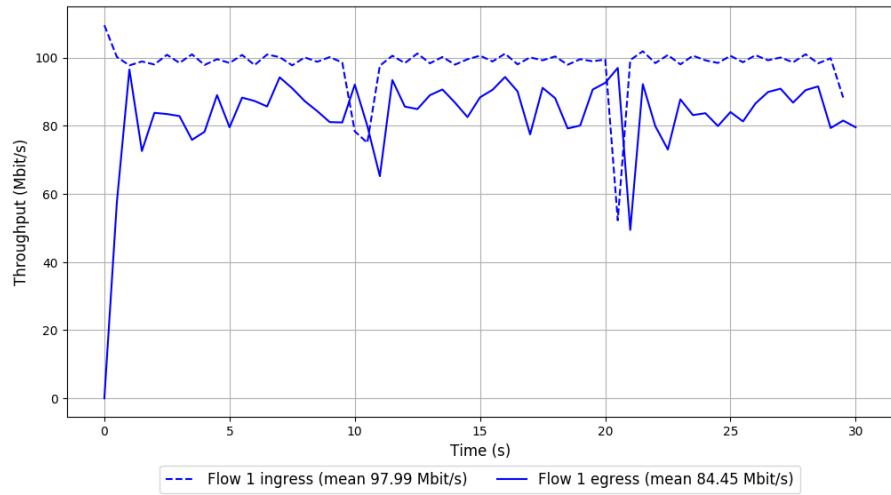


Run 3: Statistics of FillP

```
Start at: 2018-10-26 00:24:37
End at: 2018-10-26 00:25:07
Local clock offset: -2.922 ms
Remote clock offset: -4.298 ms

# Below is generated by plot.py at 2018-10-26 01:18:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.45 Mbit/s
95th percentile per-packet one-way delay: 21.309 ms
Loss rate: 13.81%
-- Flow 1:
Average throughput: 84.45 Mbit/s
95th percentile per-packet one-way delay: 21.309 ms
Loss rate: 13.81%
```

Run 3: Report of FillP — Data Link

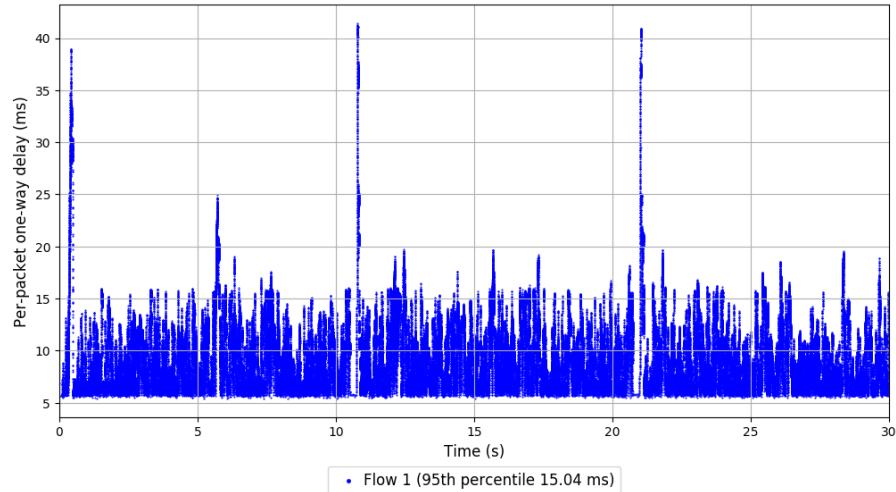
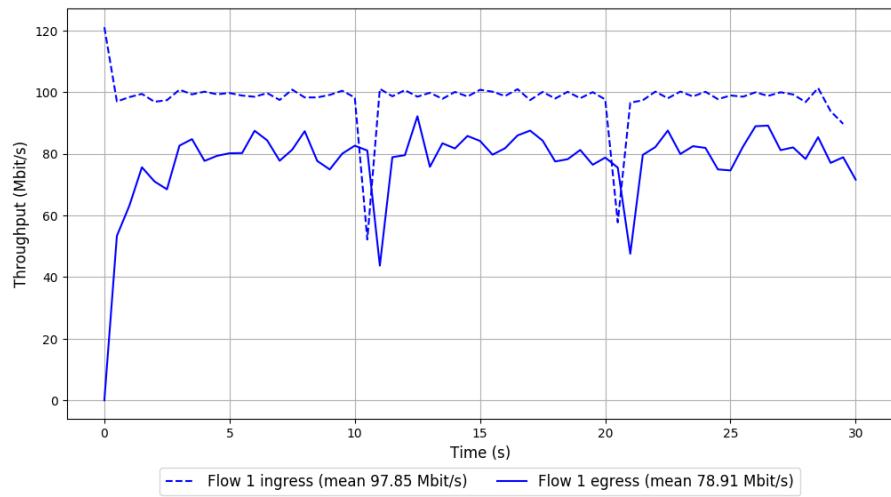


Run 4: Statistics of FillP

```
Start at: 2018-10-26 00:45:36
End at: 2018-10-26 00:46:06
Local clock offset: 1.365 ms
Remote clock offset: -3.258 ms

# Below is generated by plot.py at 2018-10-26 01:19:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.91 Mbit/s
95th percentile per-packet one-way delay: 15.044 ms
Loss rate: 19.33%
-- Flow 1:
Average throughput: 78.91 Mbit/s
95th percentile per-packet one-way delay: 15.044 ms
Loss rate: 19.33%
```

Run 4: Report of FillP — Data Link

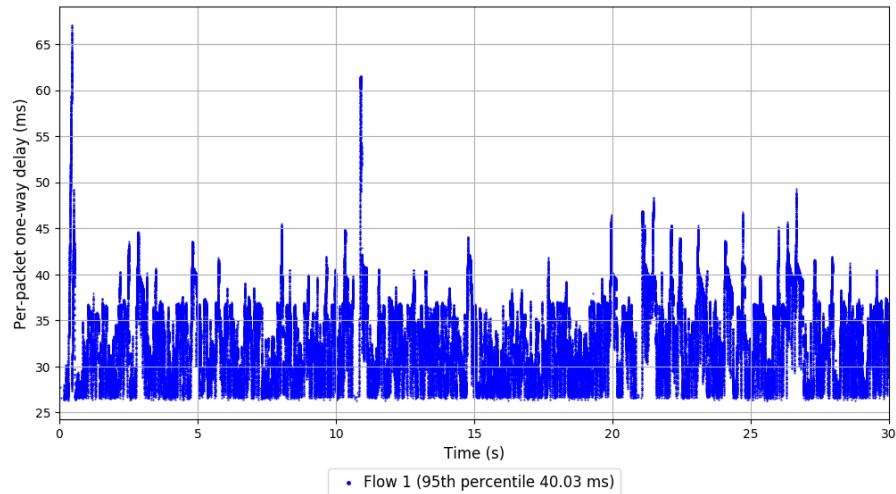
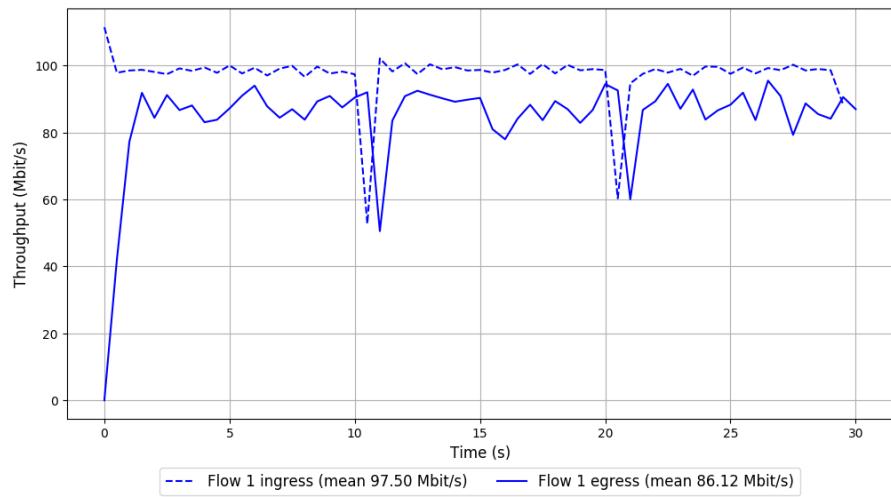


Run 5: Statistics of FillP

```
Start at: 2018-10-26 01:06:20
End at: 2018-10-26 01:06:50
Local clock offset: -0.109 ms
Remote clock offset: -3.043 ms

# Below is generated by plot.py at 2018-10-26 01:19:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.12 Mbit/s
95th percentile per-packet one-way delay: 40.030 ms
Loss rate: 11.66%
-- Flow 1:
Average throughput: 86.12 Mbit/s
95th percentile per-packet one-way delay: 40.030 ms
Loss rate: 11.66%
```

Run 5: Report of FillP — Data Link

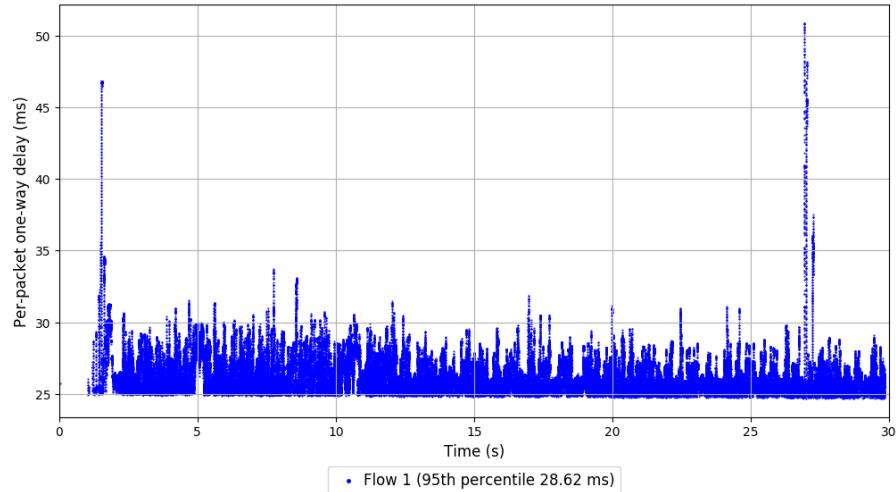
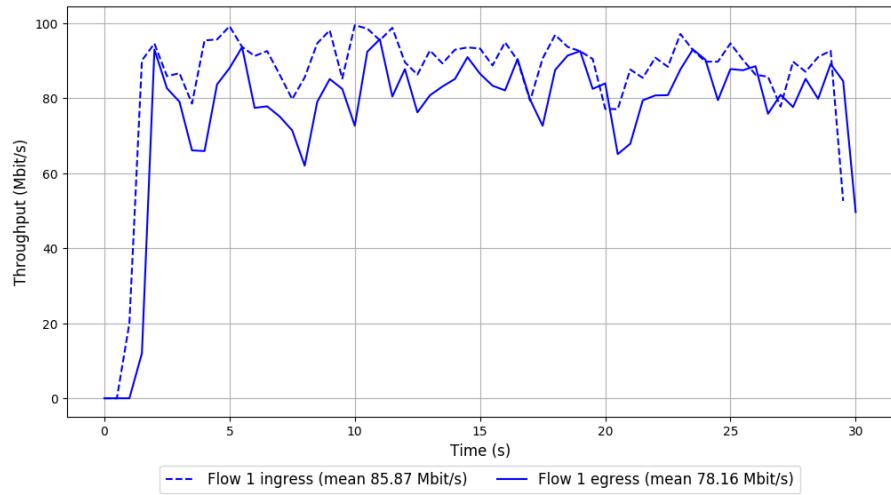


Run 1: Statistics of Indigo

```
Start at: 2018-10-25 23:38:21
End at: 2018-10-25 23:38:51
Local clock offset: -0.778 ms
Remote clock offset: -3.943 ms

# Below is generated by plot.py at 2018-10-26 01:19:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.16 Mbit/s
95th percentile per-packet one-way delay: 28.617 ms
Loss rate: 8.99%
-- Flow 1:
Average throughput: 78.16 Mbit/s
95th percentile per-packet one-way delay: 28.617 ms
Loss rate: 8.99%
```

Run 1: Report of Indigo — Data Link

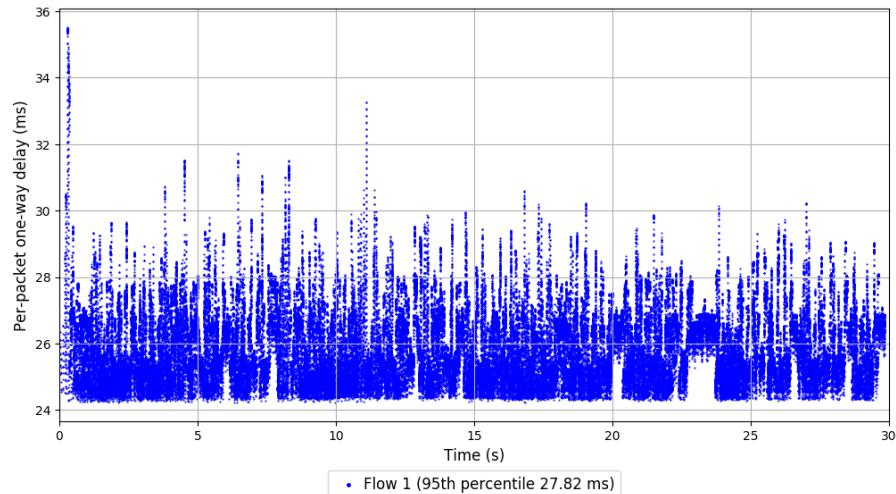
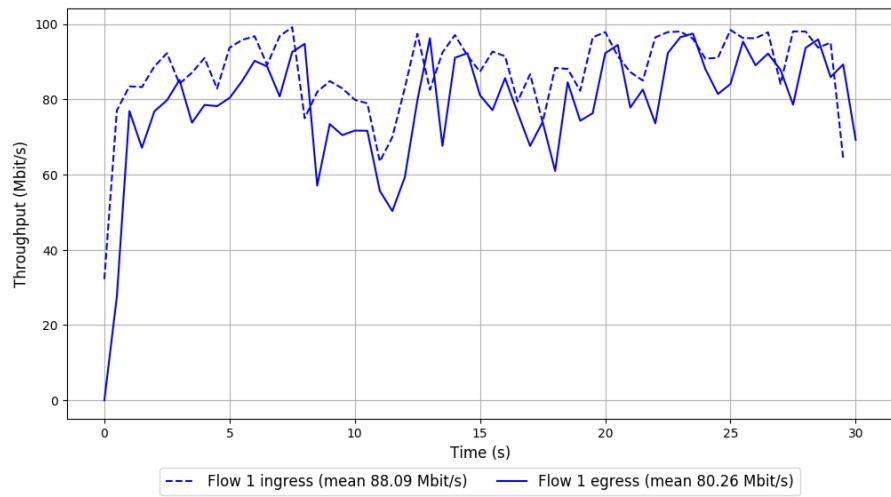


Run 2: Statistics of Indigo

```
Start at: 2018-10-25 23:59:00
End at: 2018-10-25 23:59:30
Local clock offset: 1.074 ms
Remote clock offset: -3.985 ms

# Below is generated by plot.py at 2018-10-26 01:19:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.26 Mbit/s
95th percentile per-packet one-way delay: 27.815 ms
Loss rate: 8.89%
-- Flow 1:
Average throughput: 80.26 Mbit/s
95th percentile per-packet one-way delay: 27.815 ms
Loss rate: 8.89%
```

Run 2: Report of Indigo — Data Link

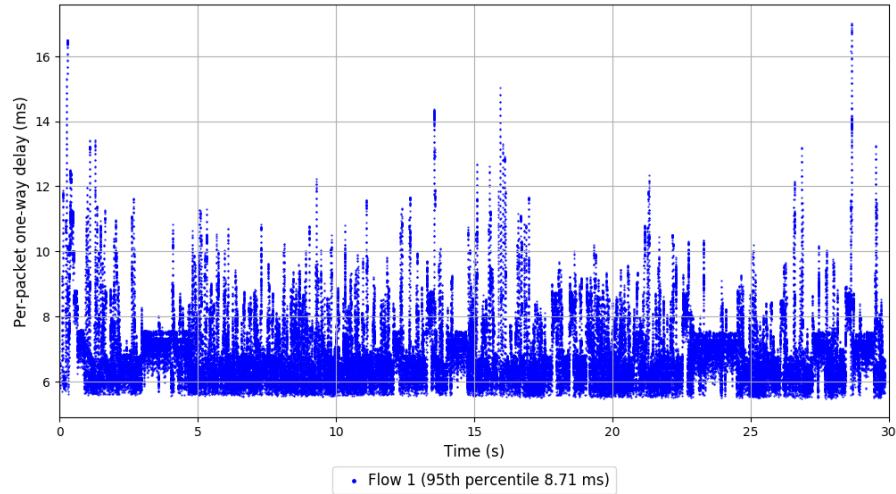
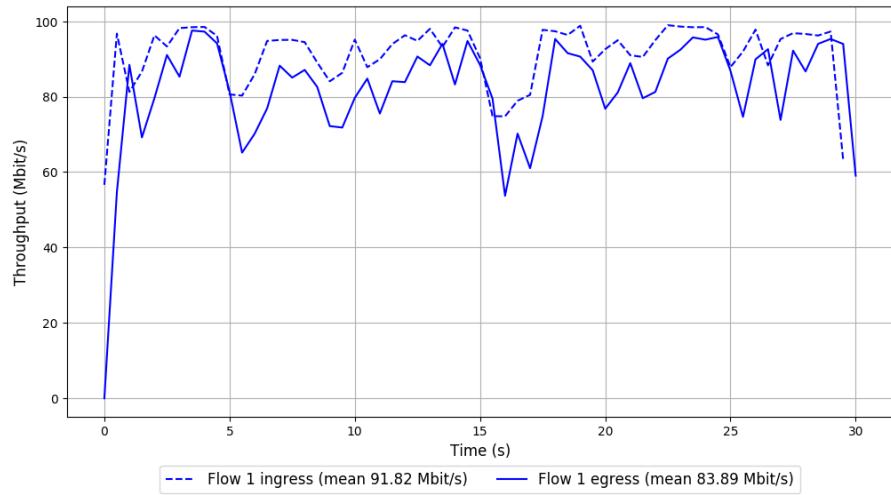


Run 3: Statistics of Indigo

```
Start at: 2018-10-26 00:19:56
End at: 2018-10-26 00:20:26
Local clock offset: -0.918 ms
Remote clock offset: -3.979 ms

# Below is generated by plot.py at 2018-10-26 01:19:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.89 Mbit/s
95th percentile per-packet one-way delay: 8.707 ms
Loss rate: 8.64%
-- Flow 1:
Average throughput: 83.89 Mbit/s
95th percentile per-packet one-way delay: 8.707 ms
Loss rate: 8.64%
```

Run 3: Report of Indigo — Data Link

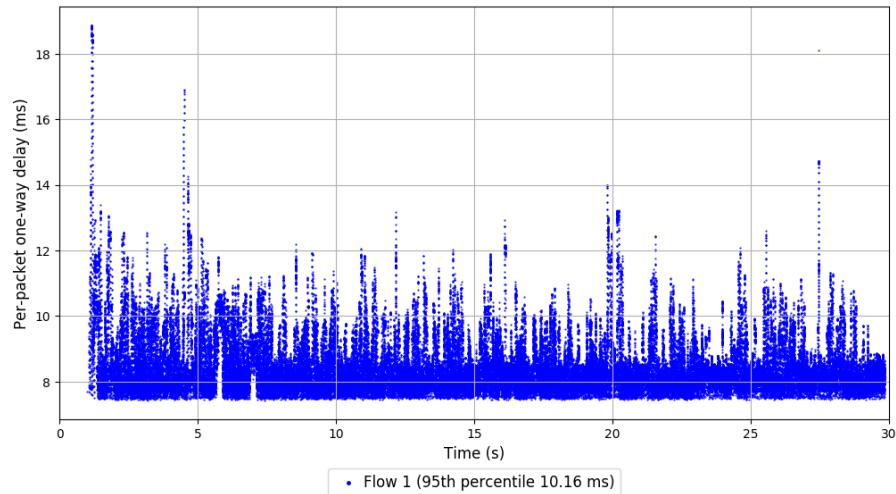
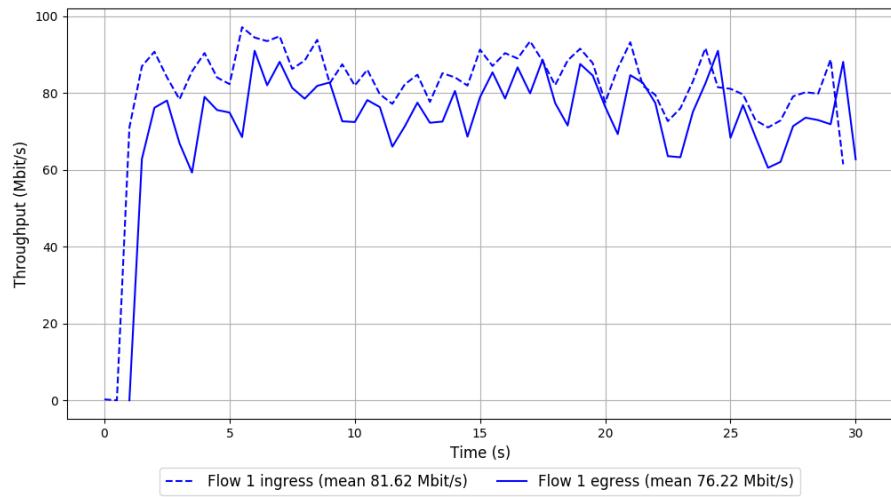


Run 4: Statistics of Indigo

```
Start at: 2018-10-26 00:40:53
End at: 2018-10-26 00:41:24
Local clock offset: -1.137 ms
Remote clock offset: -3.566 ms

# Below is generated by plot.py at 2018-10-26 01:19:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.22 Mbit/s
95th percentile per-packet one-way delay: 10.161 ms
Loss rate: 9.75%
-- Flow 1:
Average throughput: 76.22 Mbit/s
95th percentile per-packet one-way delay: 10.161 ms
Loss rate: 9.75%
```

Run 4: Report of Indigo — Data Link

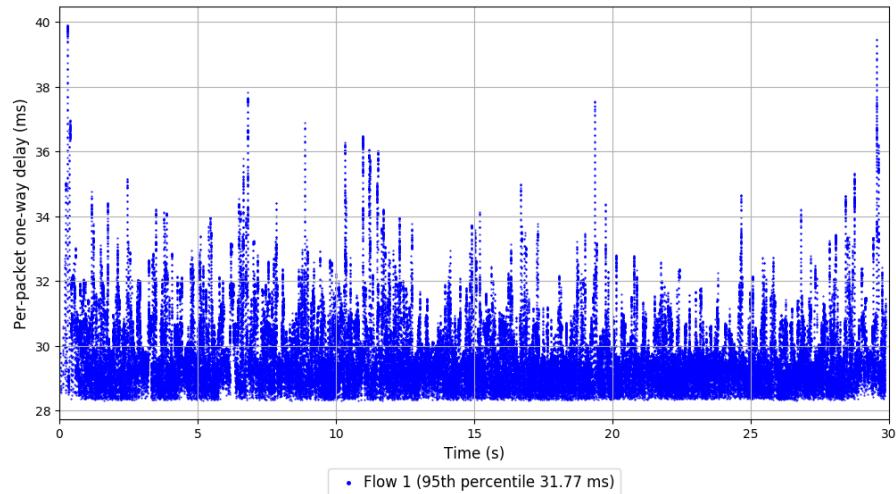
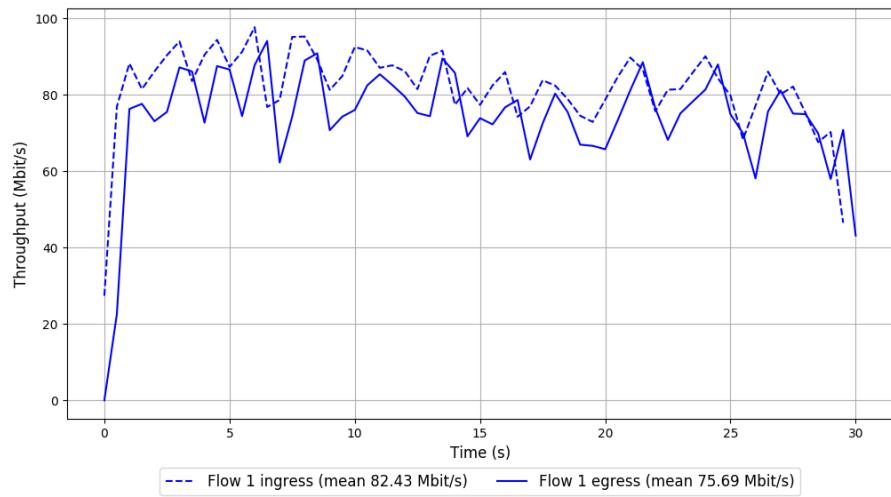


Run 5: Statistics of Indigo

```
Start at: 2018-10-26 01:01:44
End at: 2018-10-26 01:02:14
Local clock offset: -1.966 ms
Remote clock offset: -2.812 ms

# Below is generated by plot.py at 2018-10-26 01:19:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.69 Mbit/s
95th percentile per-packet one-way delay: 31.775 ms
Loss rate: 8.17%
-- Flow 1:
Average throughput: 75.69 Mbit/s
95th percentile per-packet one-way delay: 31.775 ms
Loss rate: 8.17%
```

Run 5: Report of Indigo — Data Link

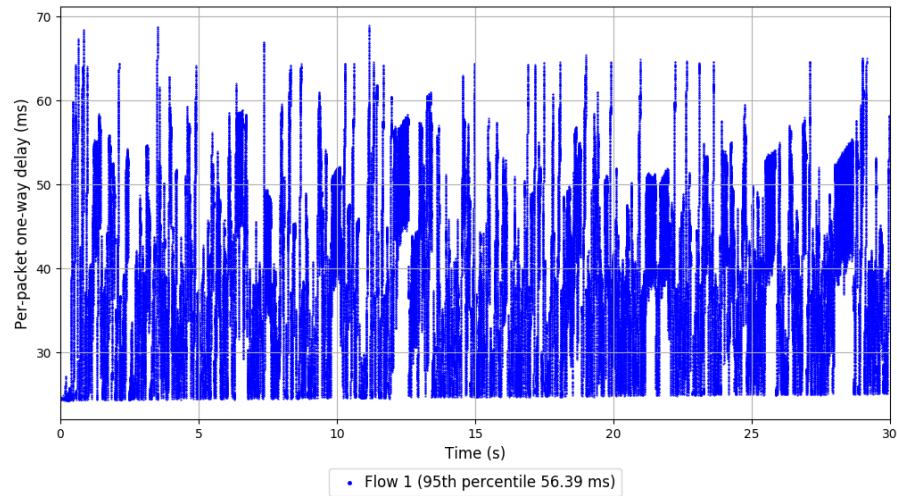
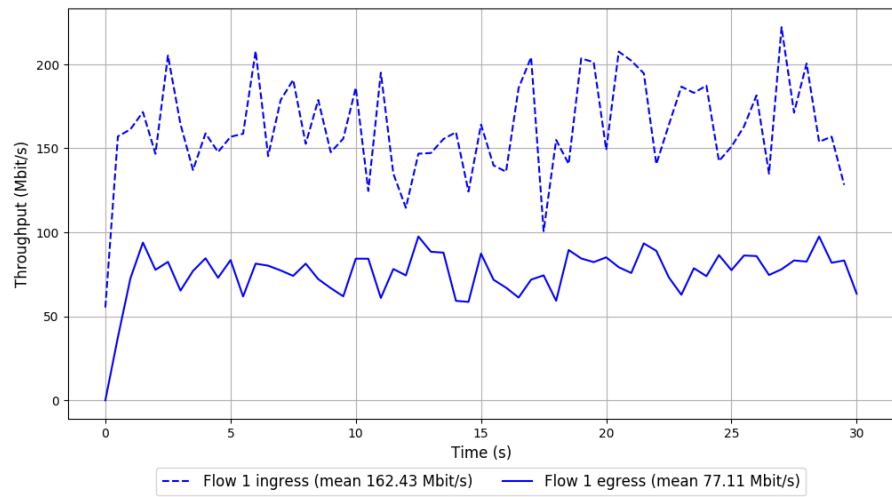


```
Run 1: Statistics of Indigo-96d2da3
```

```
Start at: 2018-10-25 23:48:41
End at: 2018-10-25 23:49:11
Local clock offset: -4.43 ms
Remote clock offset: -4.681 ms

# Below is generated by plot.py at 2018-10-26 01:20:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.11 Mbit/s
95th percentile per-packet one-way delay: 56.391 ms
Loss rate: 52.48%
-- Flow 1:
Average throughput: 77.11 Mbit/s
95th percentile per-packet one-way delay: 56.391 ms
Loss rate: 52.48%
```

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

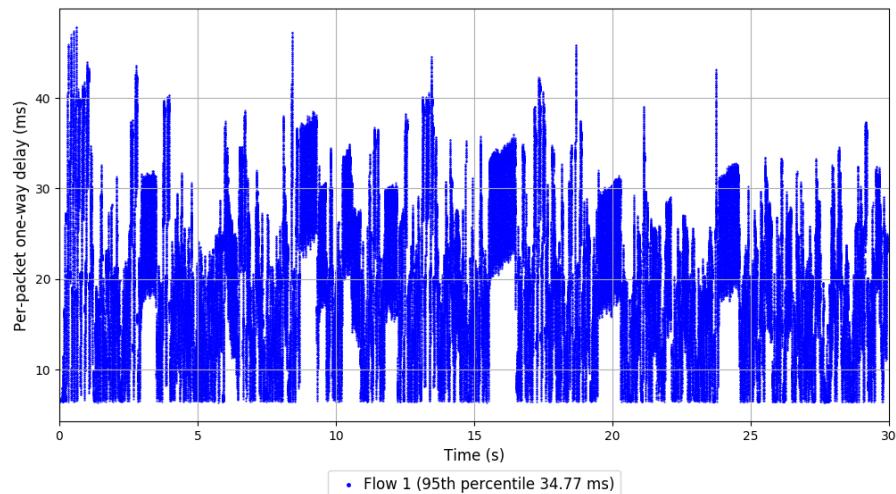
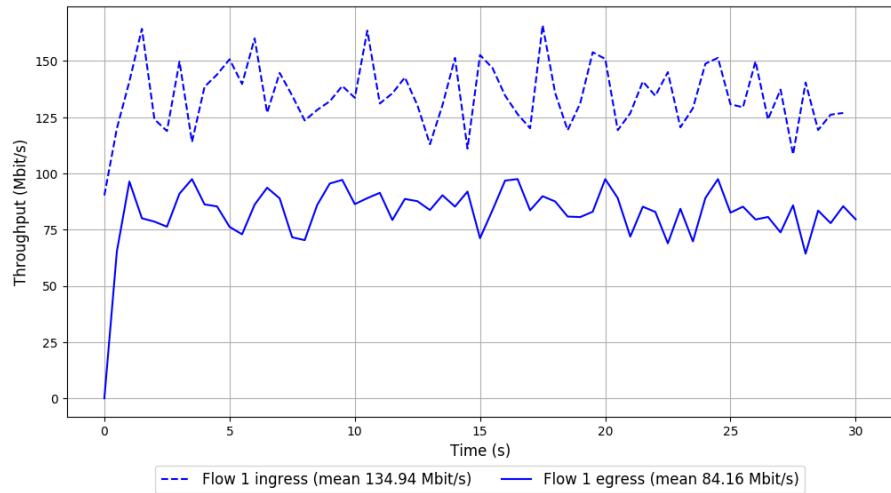


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 00:09:21
End at: 2018-10-26 00:09:51
Local clock offset: -0.45 ms
Remote clock offset: -3.922 ms

# Below is generated by plot.py at 2018-10-26 01:20:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.16 Mbit/s
95th percentile per-packet one-way delay: 34.772 ms
Loss rate: 37.60%
-- Flow 1:
Average throughput: 84.16 Mbit/s
95th percentile per-packet one-way delay: 34.772 ms
Loss rate: 37.60%
```

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

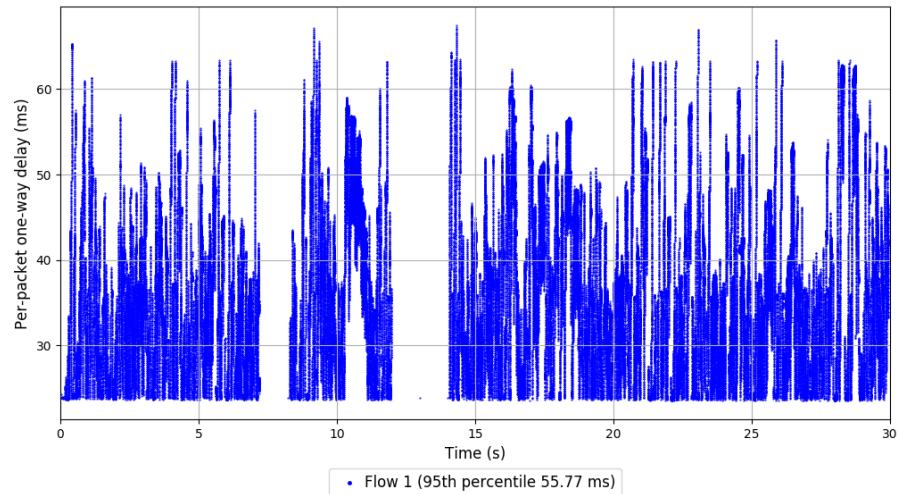
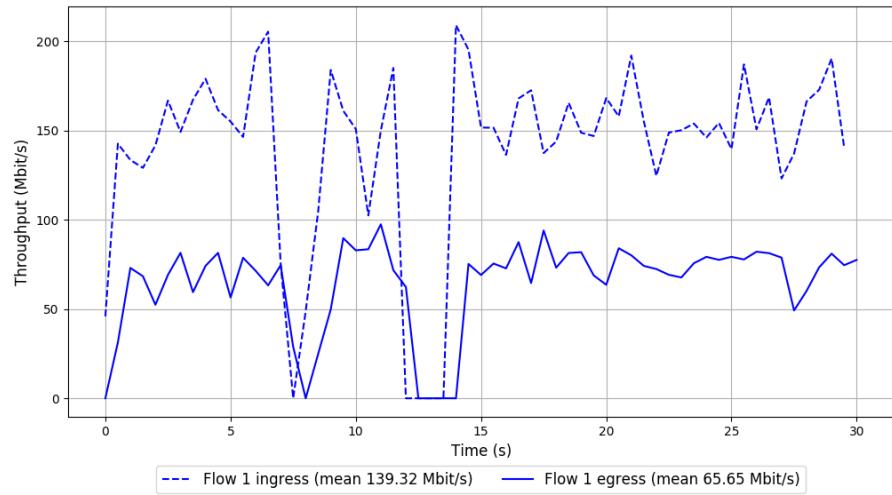


Run 3: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 00:30:19
End at: 2018-10-26 00:30:49
Local clock offset: -2.244 ms
Remote clock offset: -4.687 ms

# Below is generated by plot.py at 2018-10-26 01:20:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.65 Mbit/s
95th percentile per-packet one-way delay: 55.772 ms
Loss rate: 52.85%
-- Flow 1:
Average throughput: 65.65 Mbit/s
95th percentile per-packet one-way delay: 55.772 ms
Loss rate: 52.85%
```

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

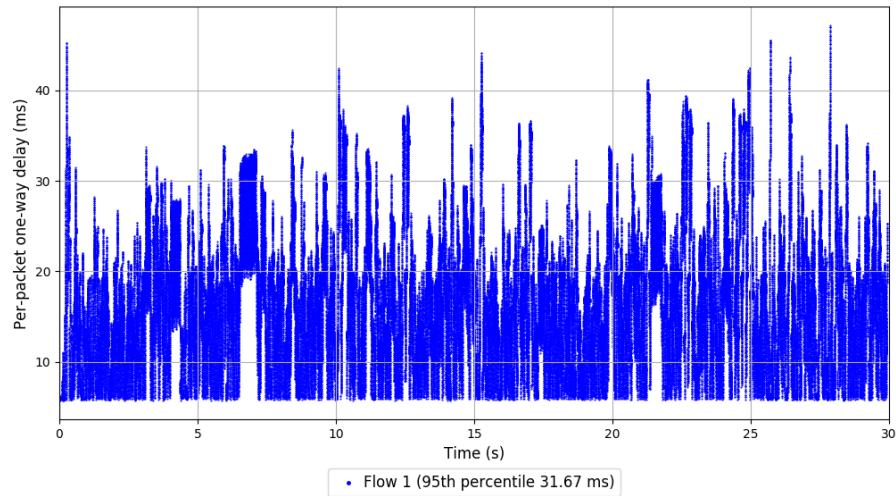
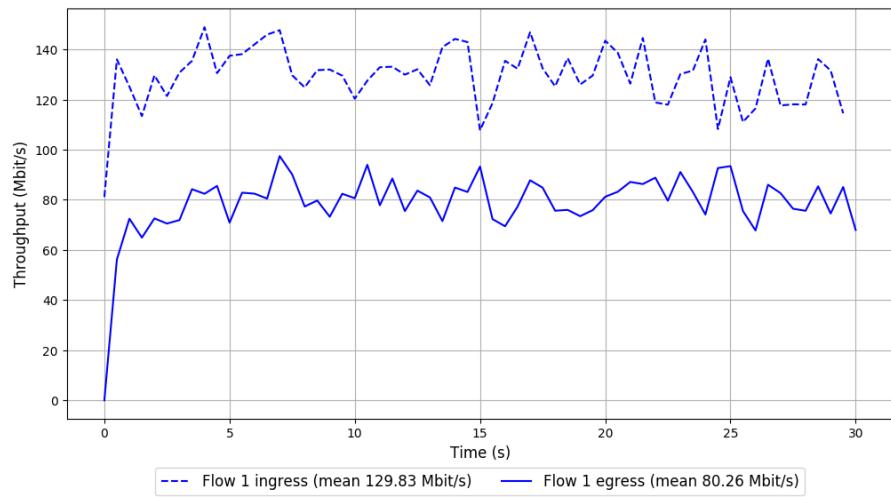


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 00:51:18
End at: 2018-10-26 00:51:48
Local clock offset: 1.625 ms
Remote clock offset: -2.988 ms

# Below is generated by plot.py at 2018-10-26 01:20:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.26 Mbit/s
95th percentile per-packet one-way delay: 31.667 ms
Loss rate: 38.16%
-- Flow 1:
Average throughput: 80.26 Mbit/s
95th percentile per-packet one-way delay: 31.667 ms
Loss rate: 38.16%
```

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

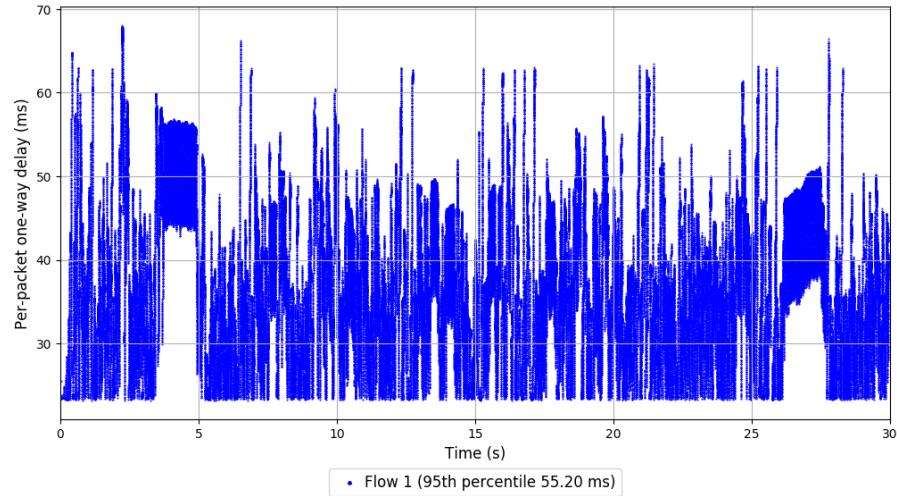
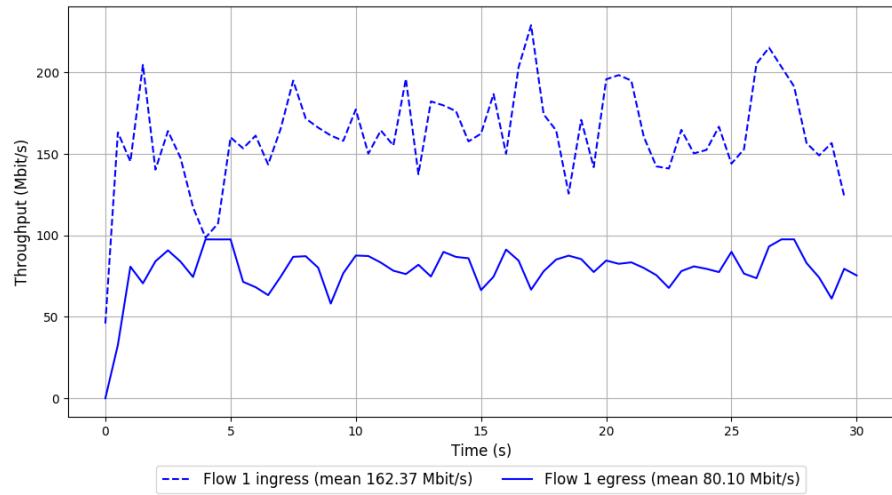


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-10-26 01:12:10
End at: 2018-10-26 01:12:40
Local clock offset: 2.667 ms
Remote clock offset: -3.684 ms

# Below is generated by plot.py at 2018-10-26 01:20:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.10 Mbit/s
95th percentile per-packet one-way delay: 55.198 ms
Loss rate: 50.65%
-- Flow 1:
Average throughput: 80.10 Mbit/s
95th percentile per-packet one-way delay: 55.198 ms
Loss rate: 50.65%
```

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

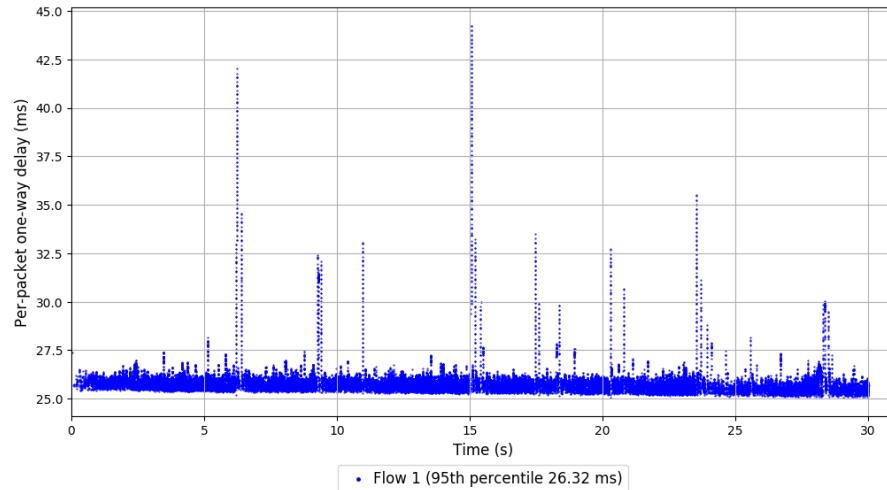
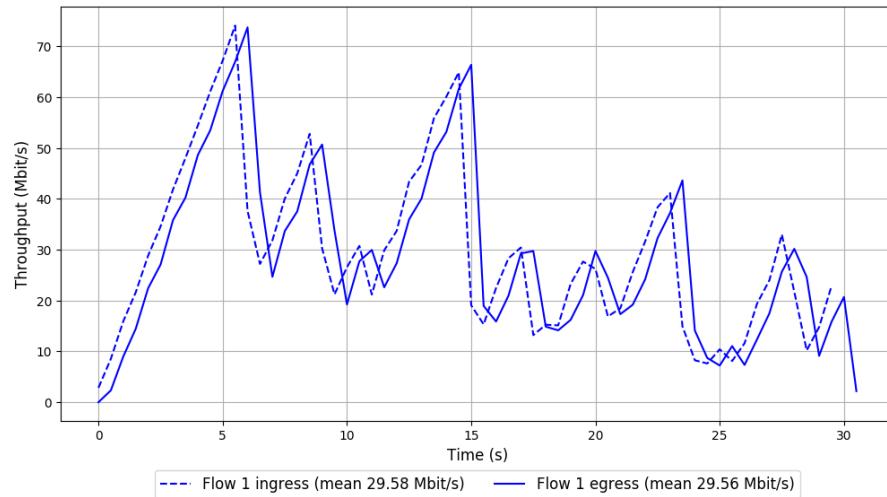


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-10-25 23:37:12
End at: 2018-10-25 23:37:42
Local clock offset: -1.755 ms
Remote clock offset: -5.092 ms

# Below is generated by plot.py at 2018-10-26 01:20:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 29.56 Mbit/s
95th percentile per-packet one-way delay: 26.324 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 29.56 Mbit/s
95th percentile per-packet one-way delay: 26.324 ms
Loss rate: 0.04%
```

Run 1: Report of LEDBAT — Data Link

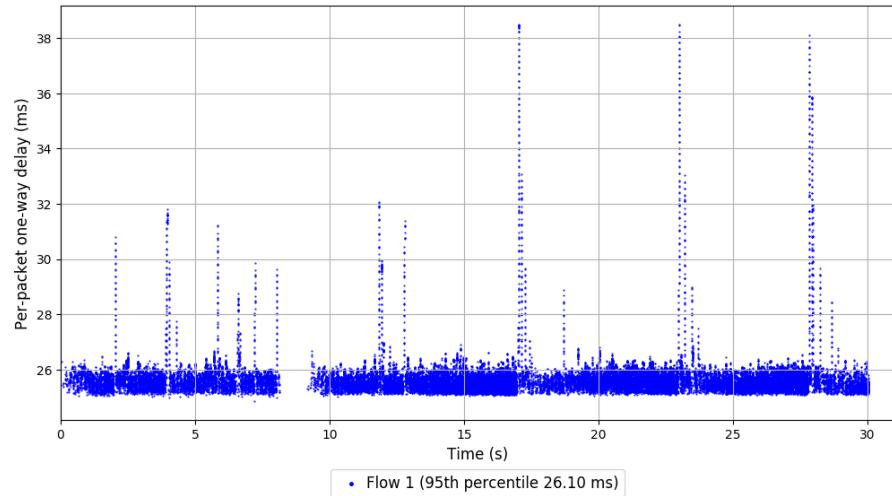
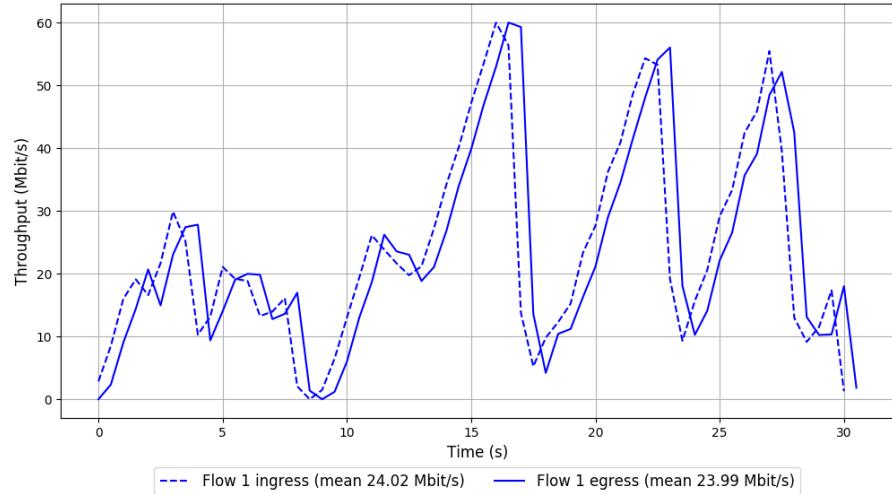


Run 2: Statistics of LEDBAT

```
Start at: 2018-10-25 23:57:51
End at: 2018-10-25 23:58:21
Local clock offset: -0.044 ms
Remote clock offset: -4.329 ms

# Below is generated by plot.py at 2018-10-26 01:20:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.99 Mbit/s
95th percentile per-packet one-way delay: 26.104 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 23.99 Mbit/s
95th percentile per-packet one-way delay: 26.104 ms
Loss rate: 0.15%
```

Run 2: Report of LEDBAT — Data Link

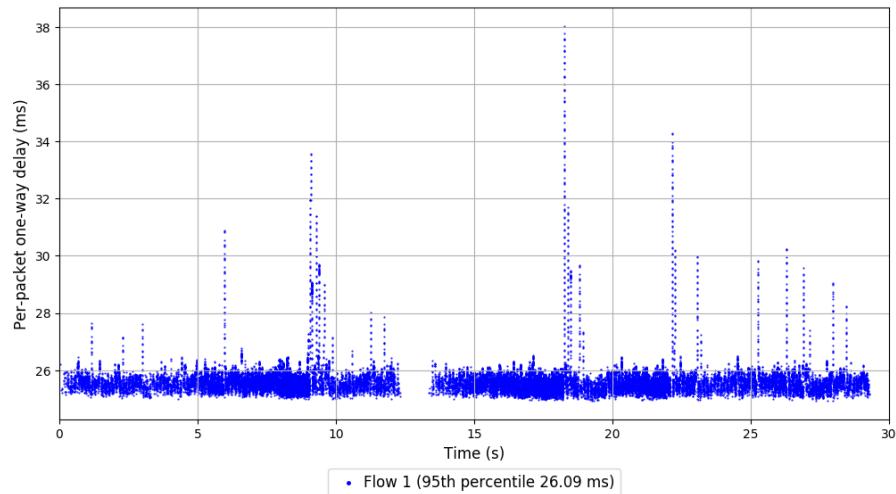
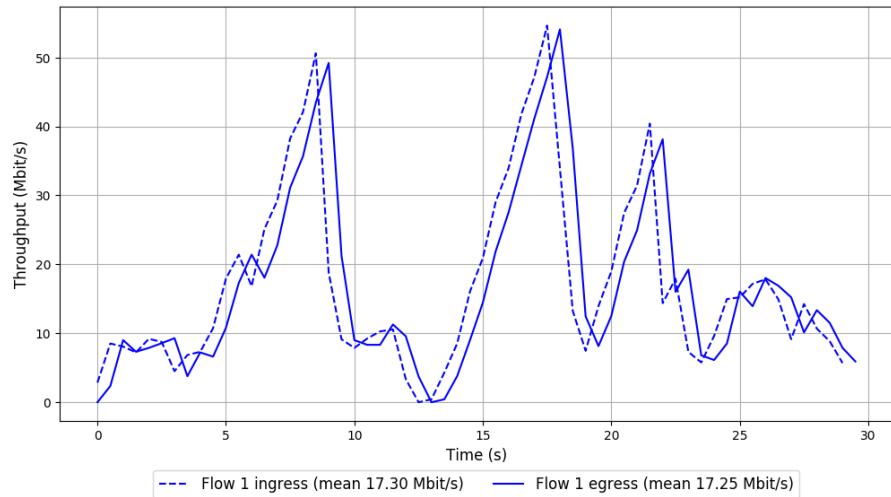


Run 3: Statistics of LEDBAT

```
Start at: 2018-10-26 00:18:49
End at: 2018-10-26 00:19:19
Local clock offset: -1.122 ms
Remote clock offset: -3.911 ms

# Below is generated by plot.py at 2018-10-26 01:20:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 17.25 Mbit/s
95th percentile per-packet one-way delay: 26.085 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 17.25 Mbit/s
95th percentile per-packet one-way delay: 26.085 ms
Loss rate: 0.28%
```

Run 3: Report of LEDBAT — Data Link

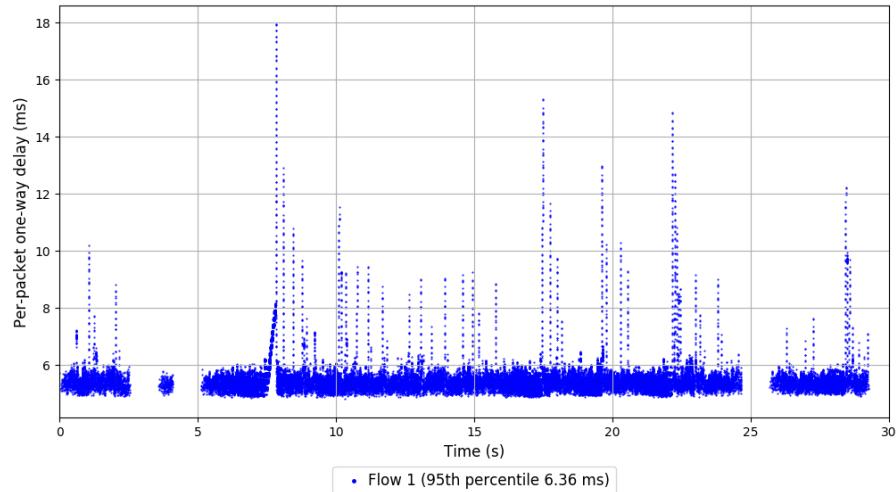
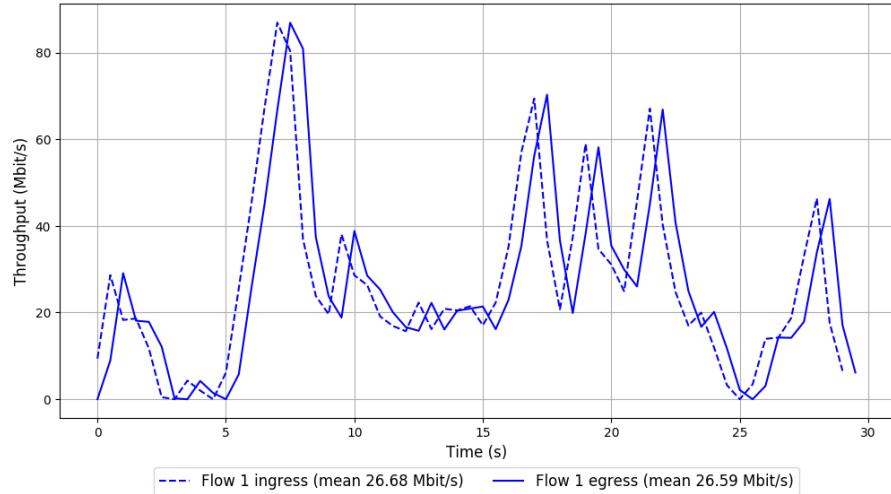


Run 4: Statistics of LEDBAT

```
Start at: 2018-10-26 00:39:38
End at: 2018-10-26 00:40:08
Local clock offset: 1.825 ms
Remote clock offset: -3.022 ms

# Below is generated by plot.py at 2018-10-26 01:20:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.59 Mbit/s
95th percentile per-packet one-way delay: 6.357 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 26.59 Mbit/s
95th percentile per-packet one-way delay: 6.357 ms
Loss rate: 0.34%
```

Run 4: Report of LEDBAT — Data Link

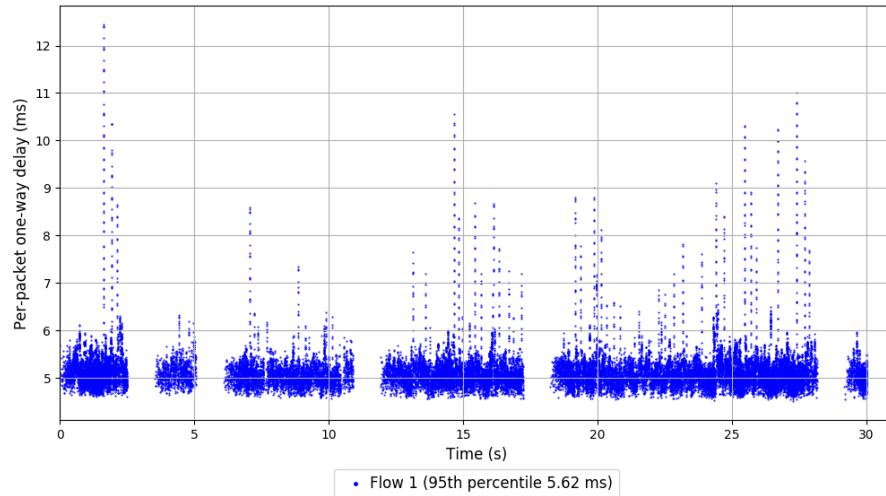
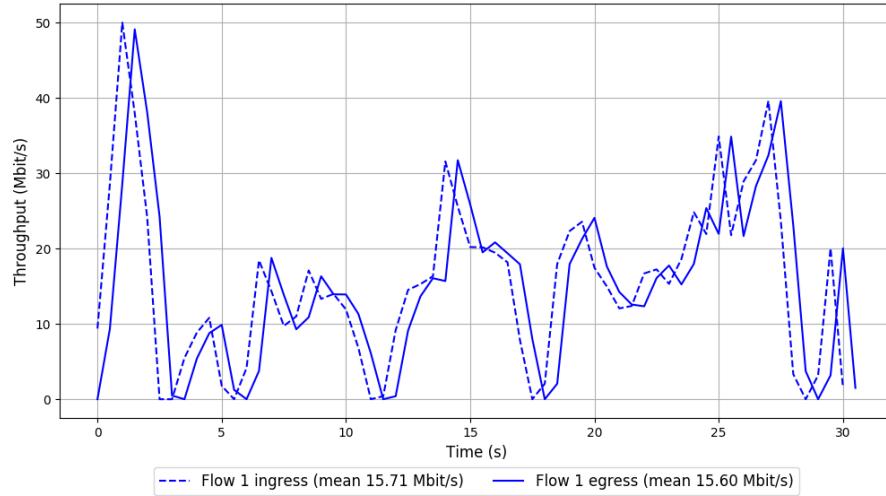


```
Run 5: Statistics of LEDBAT
```

```
Start at: 2018-10-26 01:00:37
End at: 2018-10-26 01:01:07
Local clock offset: -1.9 ms
Remote clock offset: -7.461 ms

# Below is generated by plot.py at 2018-10-26 01:20:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.60 Mbit/s
95th percentile per-packet one-way delay: 5.622 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 15.60 Mbit/s
95th percentile per-packet one-way delay: 5.622 ms
Loss rate: 0.66%
```

Run 5: Report of LEDBAT — Data Link

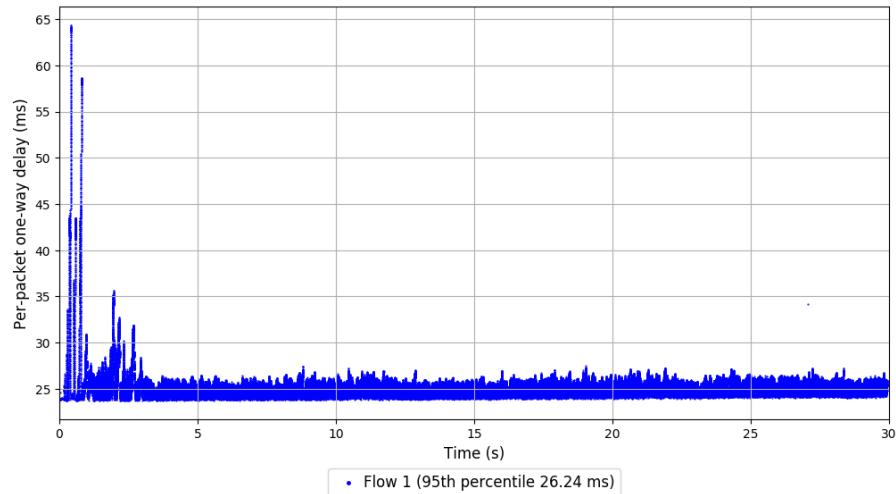
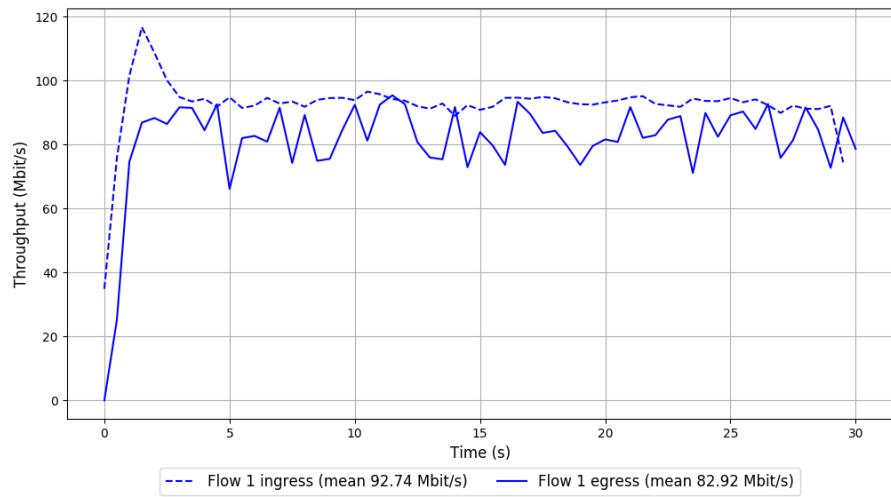


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-10-25 23:51:05
End at: 2018-10-25 23:51:35
Local clock offset: -1.527 ms
Remote clock offset: -5.028 ms

# Below is generated by plot.py at 2018-10-26 01:21:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.92 Mbit/s
95th percentile per-packet one-way delay: 26.242 ms
Loss rate: 10.58%
-- Flow 1:
Average throughput: 82.92 Mbit/s
95th percentile per-packet one-way delay: 26.242 ms
Loss rate: 10.58%
```

Run 1: Report of Indigo-Muses — Data Link

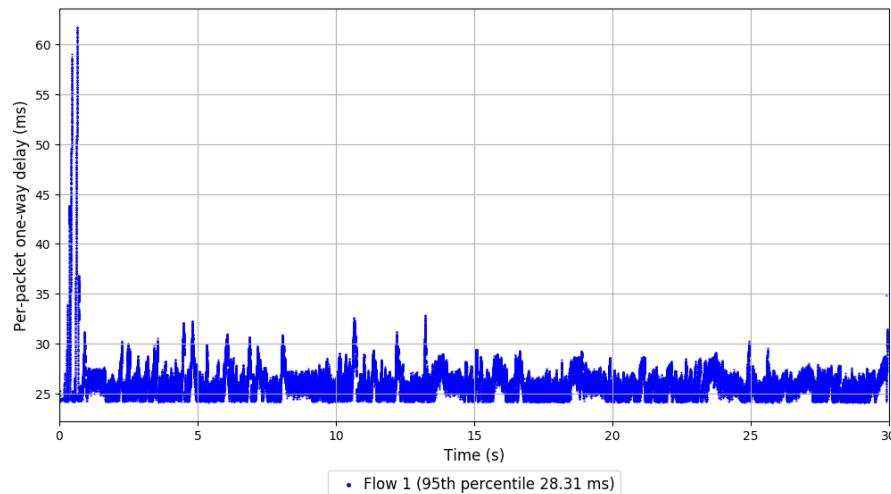
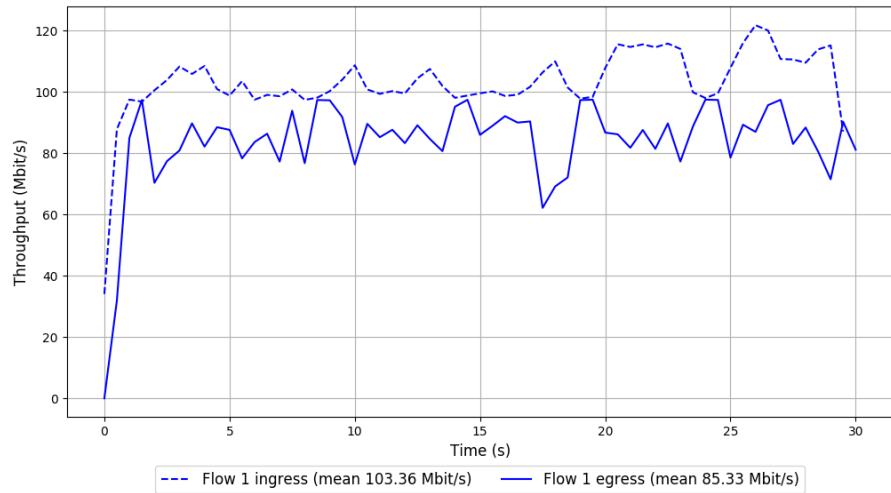


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-10-26 00:11:59
End at: 2018-10-26 00:12:29
Local clock offset: 0.089 ms
Remote clock offset: -4.375 ms

# Below is generated by plot.py at 2018-10-26 01:21:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.33 Mbit/s
95th percentile per-packet one-way delay: 28.314 ms
Loss rate: 17.43%
-- Flow 1:
Average throughput: 85.33 Mbit/s
95th percentile per-packet one-way delay: 28.314 ms
Loss rate: 17.43%
```

Run 2: Report of Indigo-Muses — Data Link

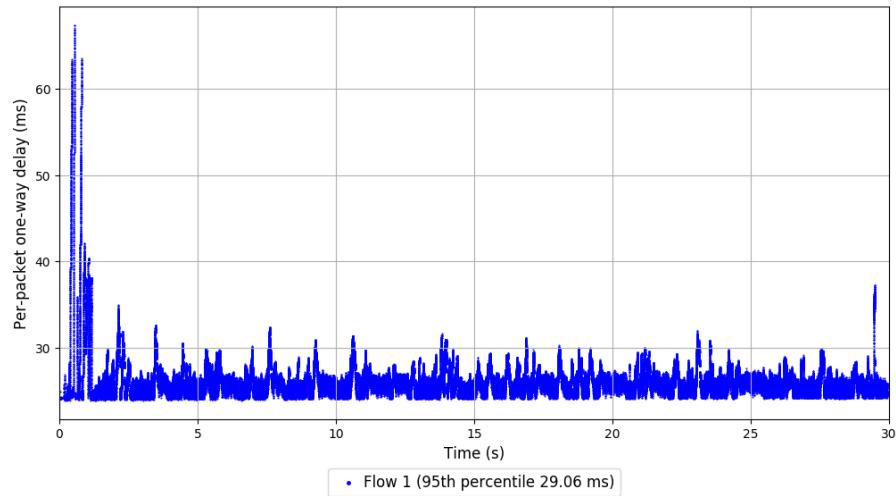
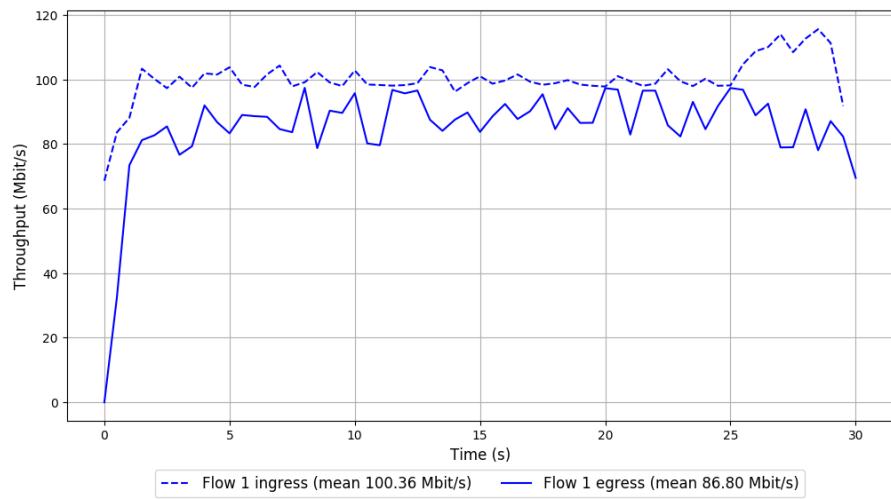


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-10-26 00:32:43
End at: 2018-10-26 00:33:13
Local clock offset: -0.822 ms
Remote clock offset: -3.597 ms

# Below is generated by plot.py at 2018-10-26 01:21:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.80 Mbit/s
95th percentile per-packet one-way delay: 29.062 ms
Loss rate: 13.51%
-- Flow 1:
Average throughput: 86.80 Mbit/s
95th percentile per-packet one-way delay: 29.062 ms
Loss rate: 13.51%
```

Run 3: Report of Indigo-Muses — Data Link

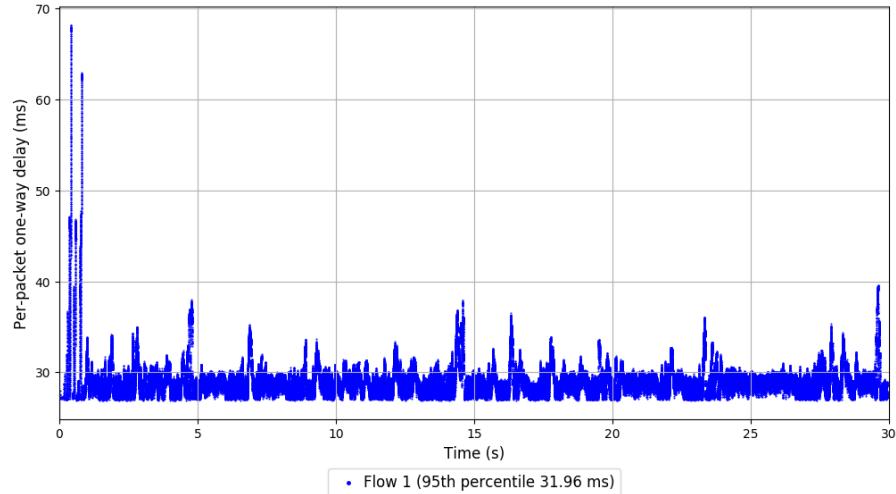
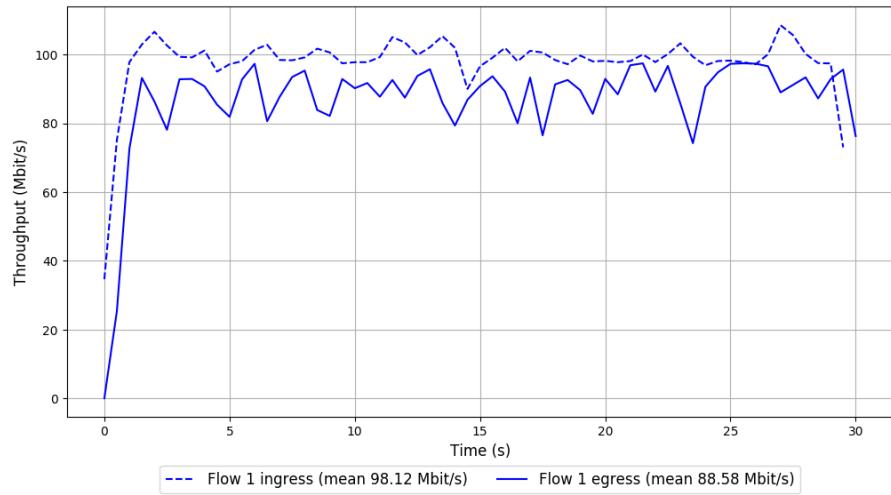


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-10-26 00:53:43
End at: 2018-10-26 00:54:13
Local clock offset: -1.5 ms
Remote clock offset: -3.901 ms

# Below is generated by plot.py at 2018-10-26 01:21:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.58 Mbit/s
95th percentile per-packet one-way delay: 31.963 ms
Loss rate: 9.72%
-- Flow 1:
Average throughput: 88.58 Mbit/s
95th percentile per-packet one-way delay: 31.963 ms
Loss rate: 9.72%
```

Run 4: Report of Indigo-Muses — Data Link

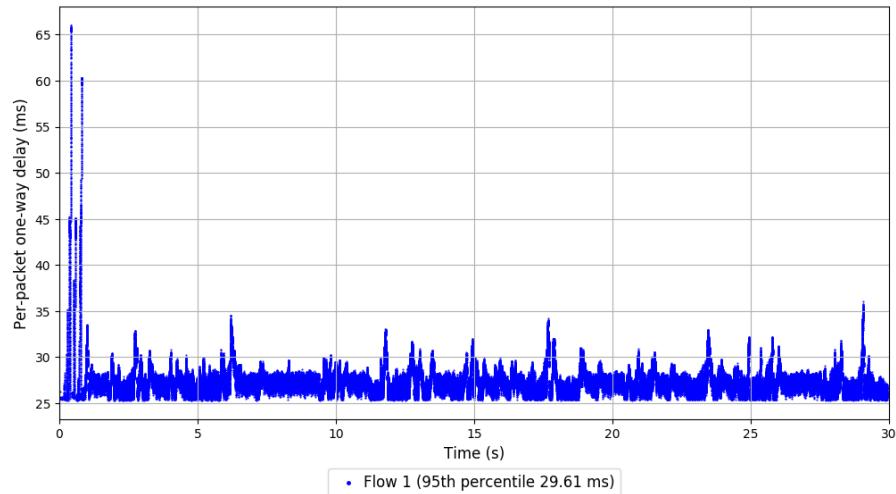
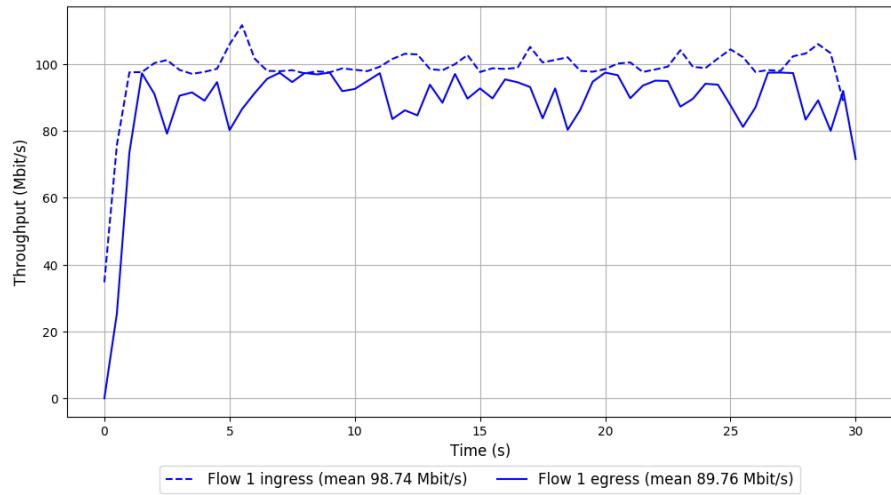


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-10-26 01:14:32
End at: 2018-10-26 01:15:02
Local clock offset: 1.56 ms
Remote clock offset: -2.678 ms

# Below is generated by plot.py at 2018-10-26 01:21:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.76 Mbit/s
95th percentile per-packet one-way delay: 29.614 ms
Loss rate: 9.09%
-- Flow 1:
Average throughput: 89.76 Mbit/s
95th percentile per-packet one-way delay: 29.614 ms
Loss rate: 9.09%
```

Run 5: Report of Indigo-Muses — Data Link

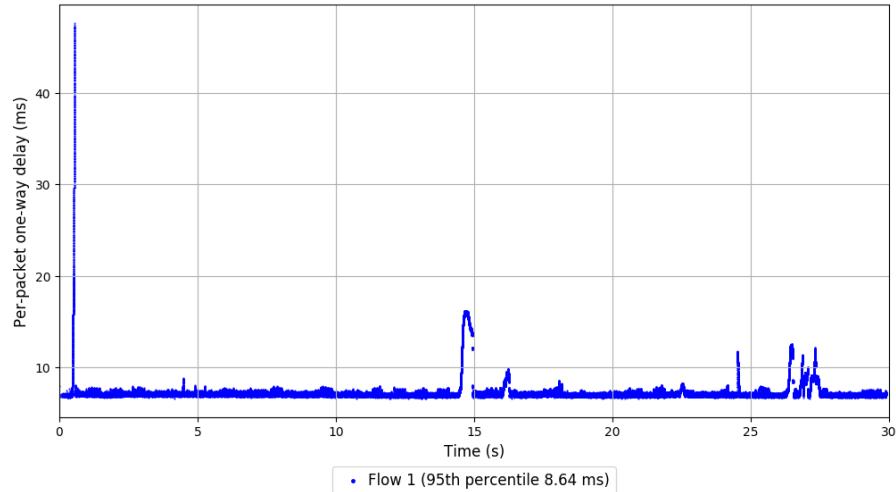
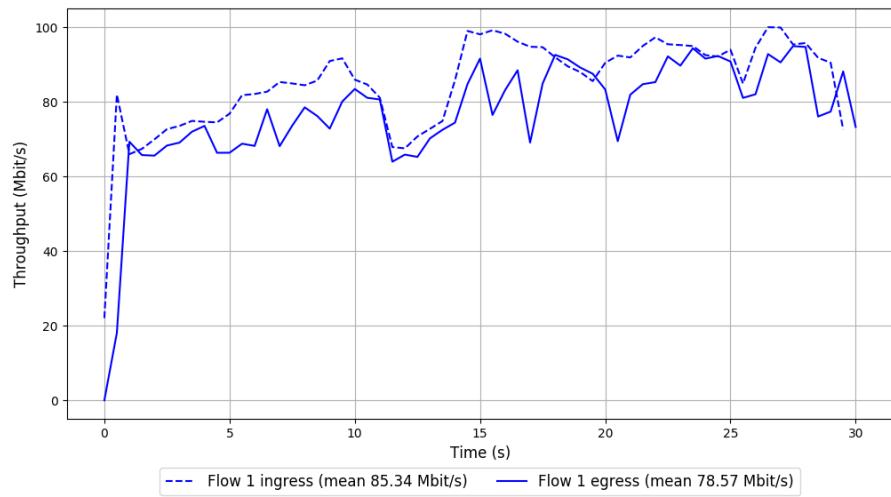


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-10-25 23:44:09
End at: 2018-10-25 23:44:39
Local clock offset: -3.762 ms
Remote clock offset: -4.81 ms

# Below is generated by plot.py at 2018-10-26 01:21:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.57 Mbit/s
95th percentile per-packet one-way delay: 8.637 ms
Loss rate: 7.93%
-- Flow 1:
Average throughput: 78.57 Mbit/s
95th percentile per-packet one-way delay: 8.637 ms
Loss rate: 7.93%
```

Run 1: Report of PCC-Allegro — Data Link

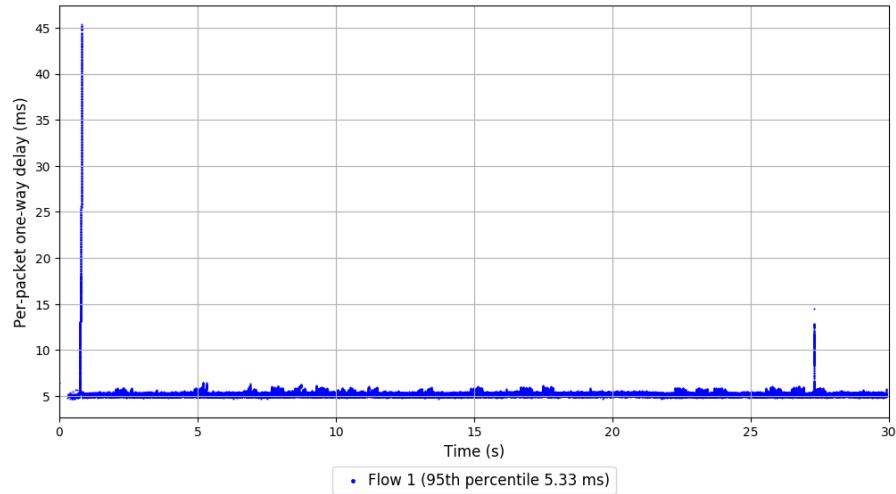
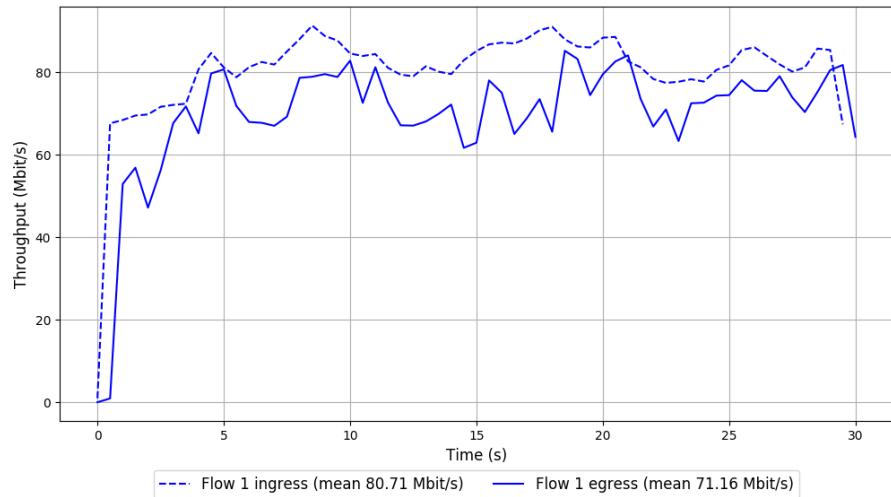


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-10-26 00:04:53
End at: 2018-10-26 00:05:23
Local clock offset: 1.309 ms
Remote clock offset: -4.01 ms

# Below is generated by plot.py at 2018-10-26 01:21:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.16 Mbit/s
95th percentile per-packet one-way delay: 5.332 ms
Loss rate: 11.83%
-- Flow 1:
Average throughput: 71.16 Mbit/s
95th percentile per-packet one-way delay: 5.332 ms
Loss rate: 11.83%
```

Run 2: Report of PCC-Allegro — Data Link

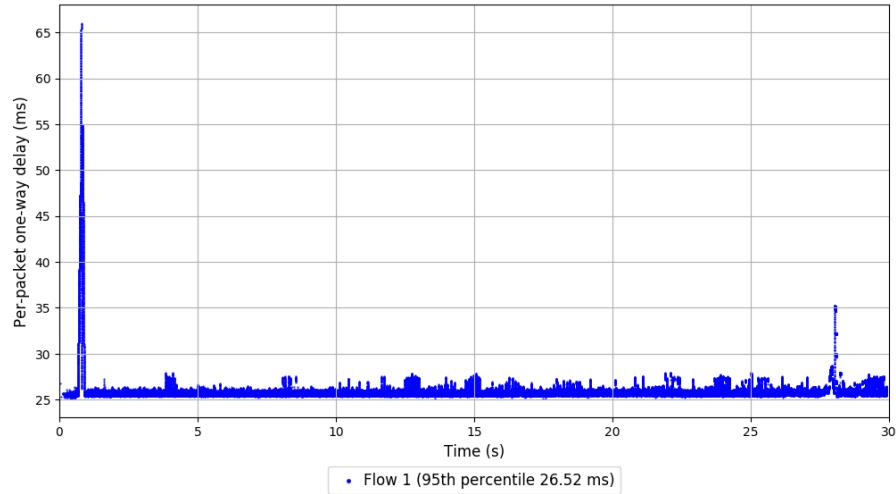
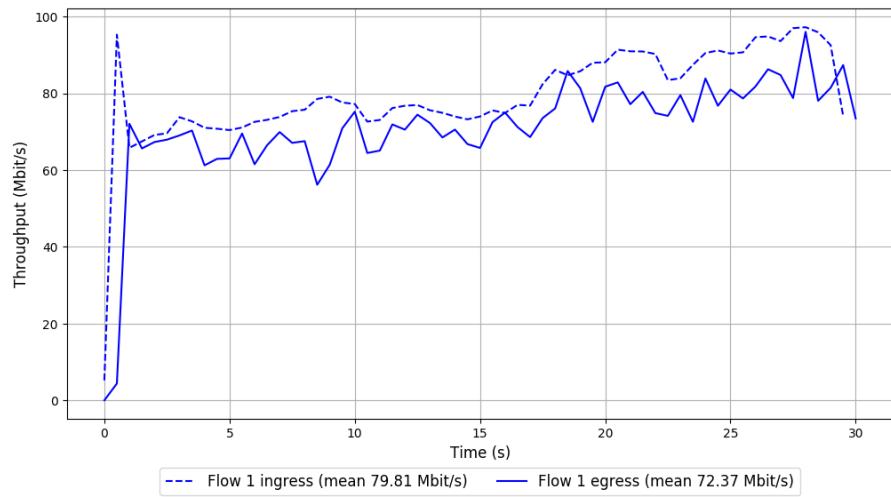


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-10-26 00:25:50
End at: 2018-10-26 00:26:20
Local clock offset: -2.802 ms
Remote clock offset: -4.23 ms

# Below is generated by plot.py at 2018-10-26 01:21:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.37 Mbit/s
95th percentile per-packet one-way delay: 26.515 ms
Loss rate: 9.32%
-- Flow 1:
Average throughput: 72.37 Mbit/s
95th percentile per-packet one-way delay: 26.515 ms
Loss rate: 9.32%
```

Run 3: Report of PCC-Allegro — Data Link

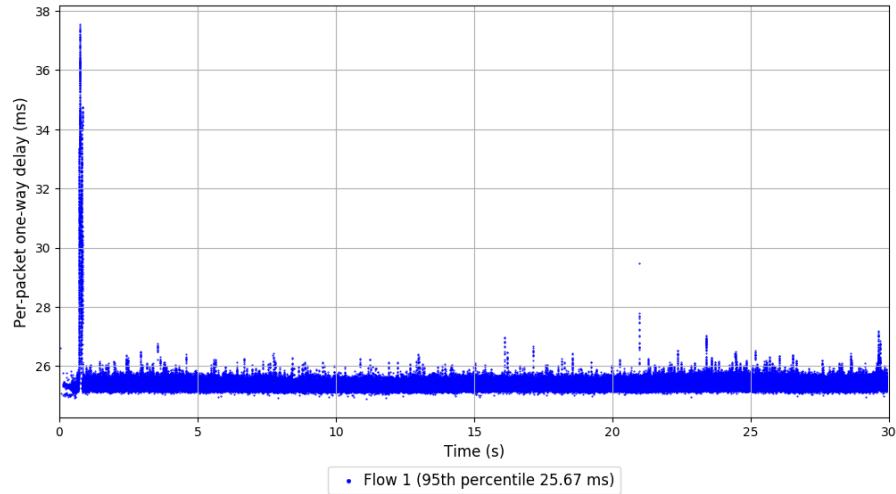
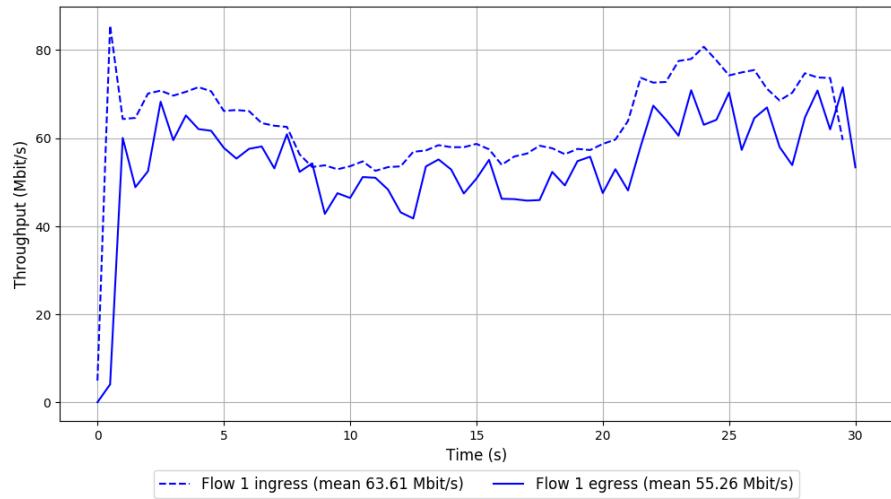


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-10-26 00:46:48
End at: 2018-10-26 00:47:18
Local clock offset: 0.574 ms
Remote clock offset: -3.703 ms

# Below is generated by plot.py at 2018-10-26 01:21:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 55.26 Mbit/s
95th percentile per-packet one-way delay: 25.666 ms
Loss rate: 13.13%
-- Flow 1:
Average throughput: 55.26 Mbit/s
95th percentile per-packet one-way delay: 25.666 ms
Loss rate: 13.13%
```

Run 4: Report of PCC-Allegro — Data Link

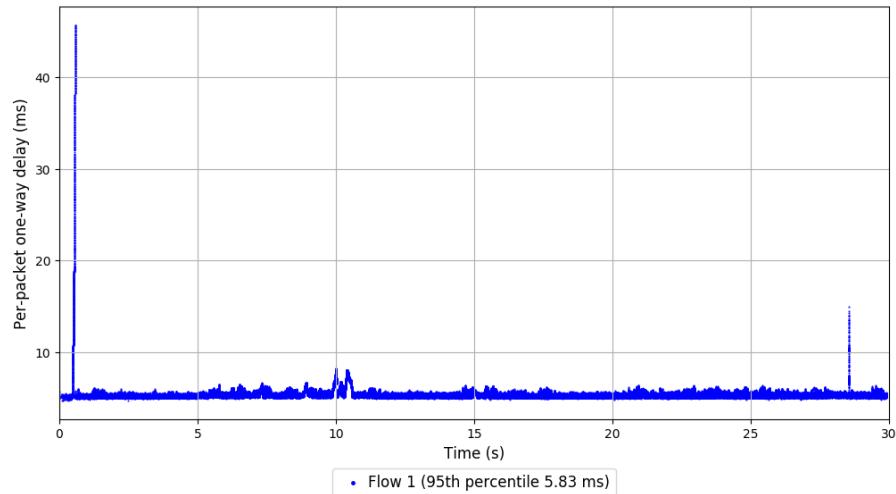
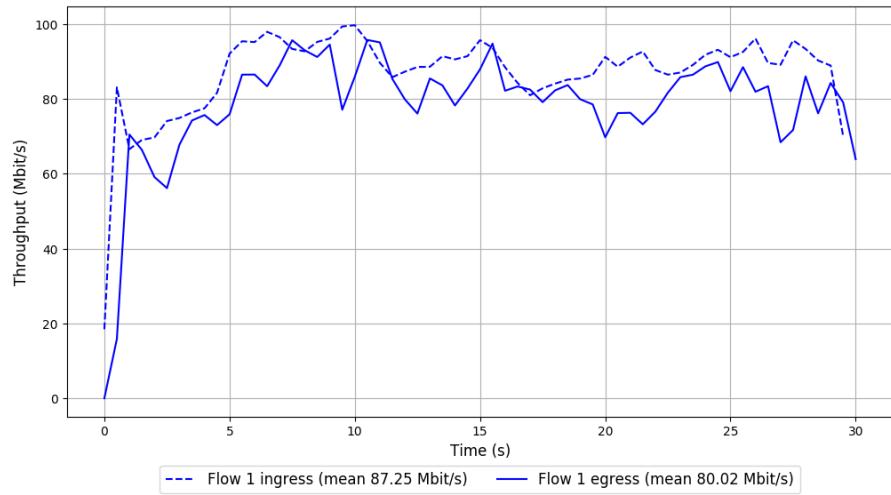


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-10-26 01:07:38
End at: 2018-10-26 01:08:08
Local clock offset: 2.936 ms
Remote clock offset: -2.652 ms

# Below is generated by plot.py at 2018-10-26 01:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.02 Mbit/s
95th percentile per-packet one-way delay: 5.827 ms
Loss rate: 8.29%
-- Flow 1:
Average throughput: 80.02 Mbit/s
95th percentile per-packet one-way delay: 5.827 ms
Loss rate: 8.29%
```

Run 5: Report of PCC-Allegro — Data Link

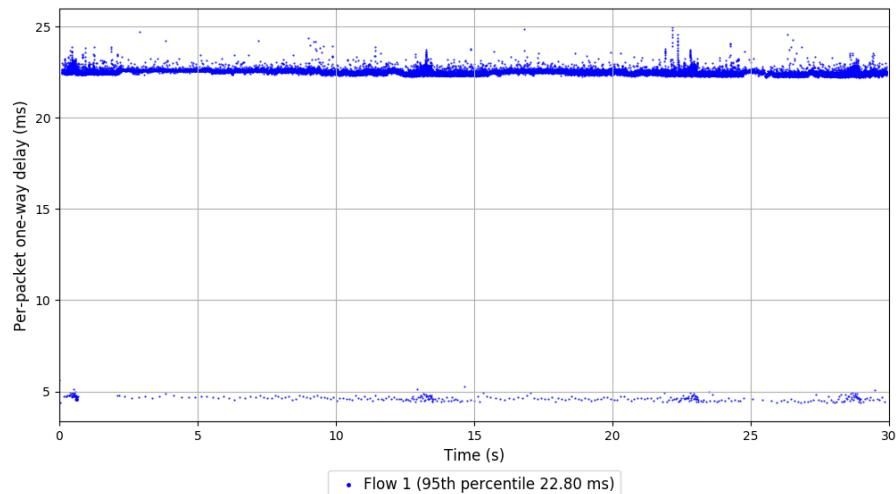
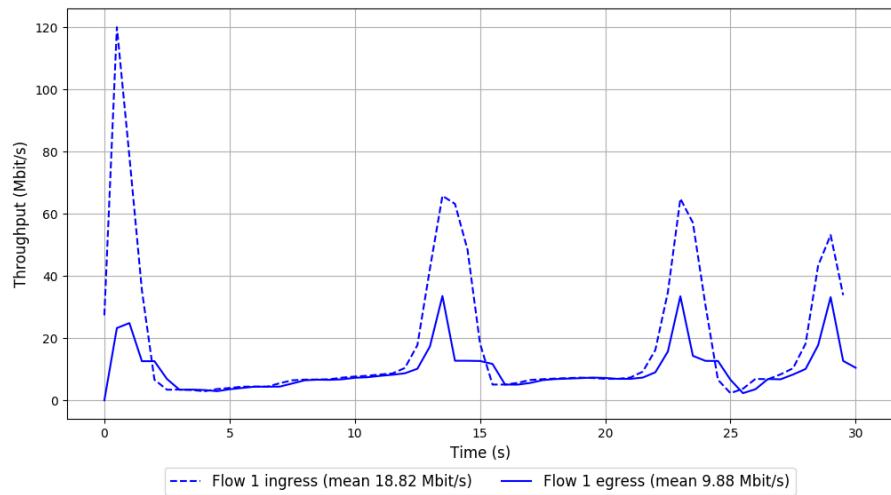


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-10-25 23:34:53
End at: 2018-10-25 23:35:23
Local clock offset: 3.589 ms
Remote clock offset: -5.019 ms

# Below is generated by plot.py at 2018-10-26 01:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.88 Mbit/s
95th percentile per-packet one-way delay: 22.800 ms
Loss rate: 47.46%
-- Flow 1:
Average throughput: 9.88 Mbit/s
95th percentile per-packet one-way delay: 22.800 ms
Loss rate: 47.46%
```

Run 1: Report of PCC-Expr — Data Link

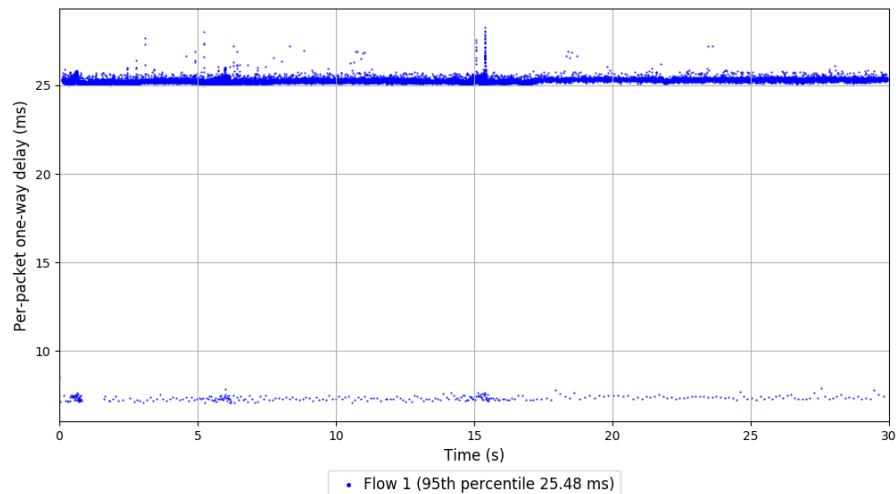
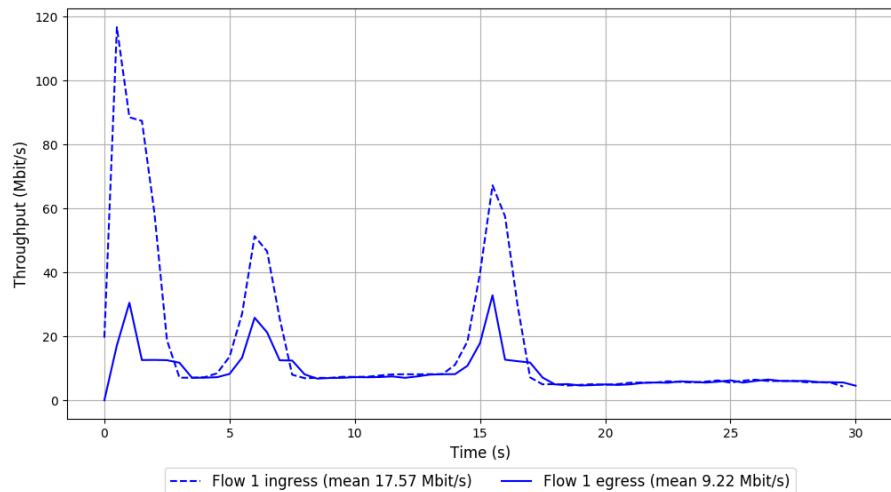


Run 2: Statistics of PCC-Expr

```
Start at: 2018-10-25 23:55:33
End at: 2018-10-25 23:56:03
Local clock offset: -0.269 ms
Remote clock offset: -4.423 ms

# Below is generated by plot.py at 2018-10-26 01:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.22 Mbit/s
95th percentile per-packet one-way delay: 25.480 ms
Loss rate: 47.51%
-- Flow 1:
Average throughput: 9.22 Mbit/s
95th percentile per-packet one-way delay: 25.480 ms
Loss rate: 47.51%
```

Run 2: Report of PCC-Expr — Data Link

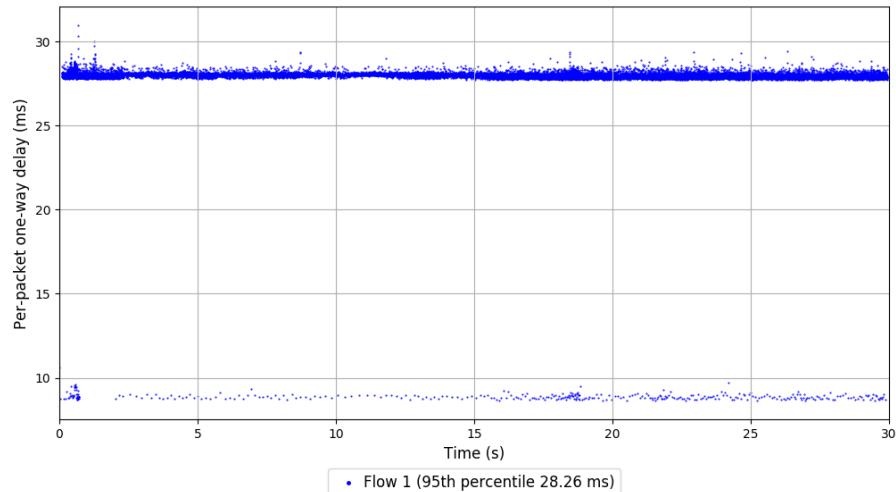
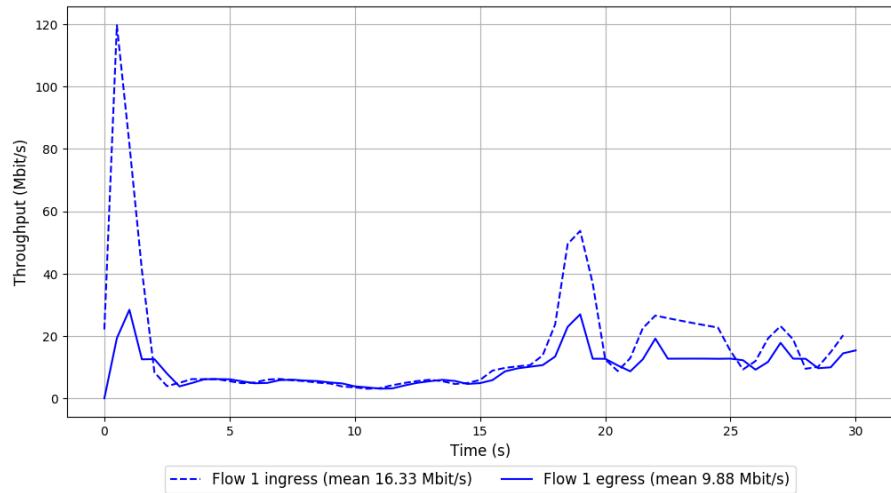


Run 3: Statistics of PCC-Expr

```
Start at: 2018-10-26 00:16:31
End at: 2018-10-26 00:17:01
Local clock offset: -3.473 ms
Remote clock offset: -3.79 ms

# Below is generated by plot.py at 2018-10-26 01:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.88 Mbit/s
95th percentile per-packet one-way delay: 28.263 ms
Loss rate: 39.48%
-- Flow 1:
Average throughput: 9.88 Mbit/s
95th percentile per-packet one-way delay: 28.263 ms
Loss rate: 39.48%
```

Run 3: Report of PCC-Expr — Data Link

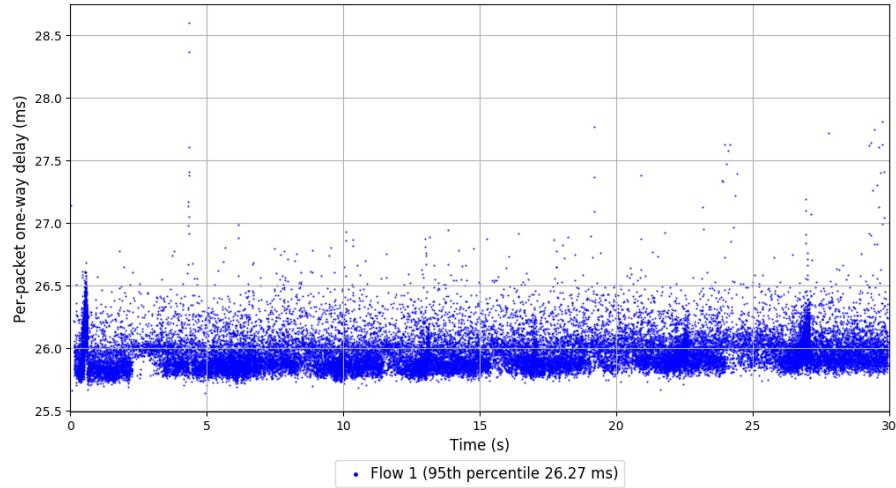
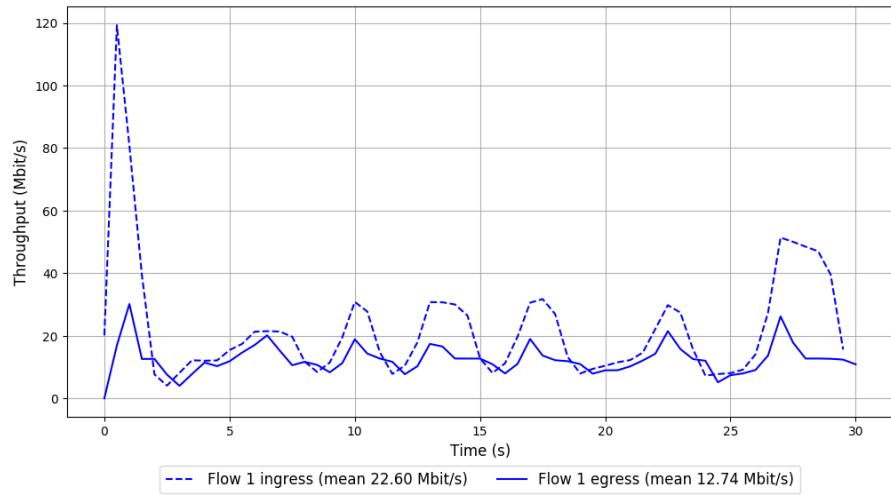


Run 4: Statistics of PCC-Expr

```
Start at: 2018-10-26 00:37:16
End at: 2018-10-26 00:37:46
Local clock offset: -1.28 ms
Remote clock offset: -3.816 ms

# Below is generated by plot.py at 2018-10-26 01:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.74 Mbit/s
95th percentile per-packet one-way delay: 26.270 ms
Loss rate: 43.62%
-- Flow 1:
Average throughput: 12.74 Mbit/s
95th percentile per-packet one-way delay: 26.270 ms
Loss rate: 43.62%
```

Run 4: Report of PCC-Expr — Data Link

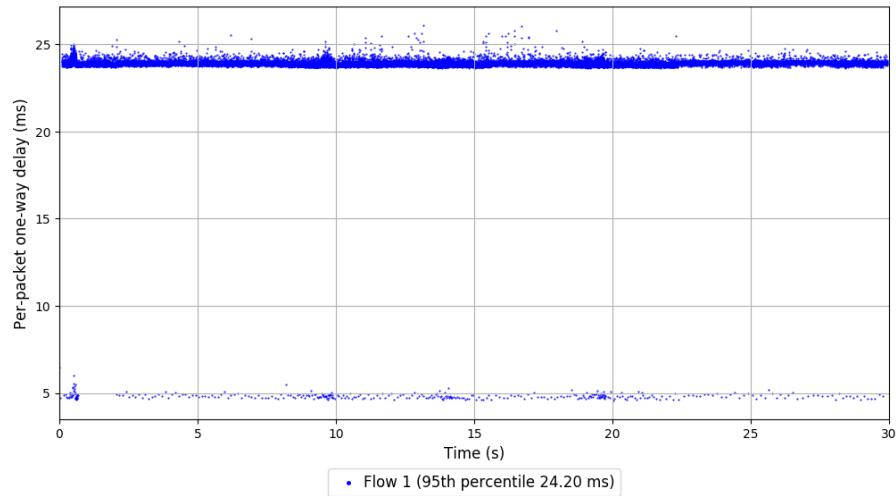
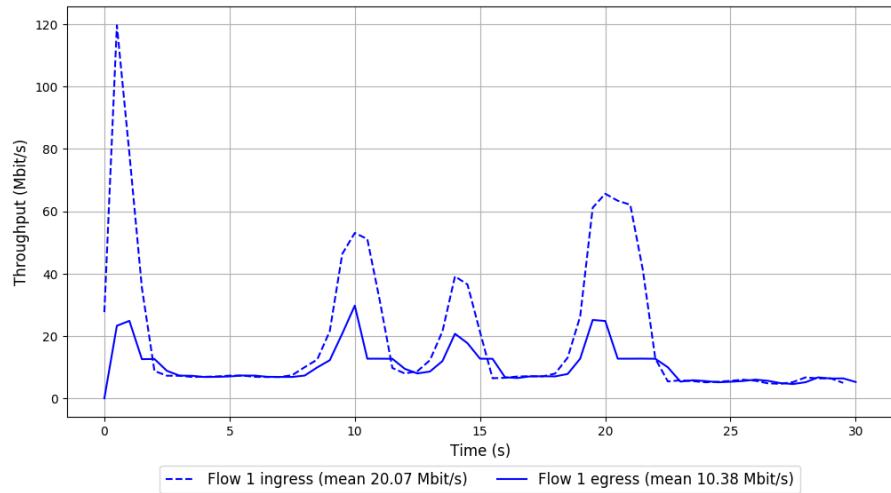


Run 5: Statistics of PCC-Expr

```
Start at: 2018-10-26 00:58:16
End at: 2018-10-26 00:58:46
Local clock offset: 1.862 ms
Remote clock offset: -3.693 ms

# Below is generated by plot.py at 2018-10-26 01:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.38 Mbit/s
95th percentile per-packet one-way delay: 24.200 ms
Loss rate: 48.27%
-- Flow 1:
Average throughput: 10.38 Mbit/s
95th percentile per-packet one-way delay: 24.200 ms
Loss rate: 48.27%
```

Run 5: Report of PCC-Expr — Data Link

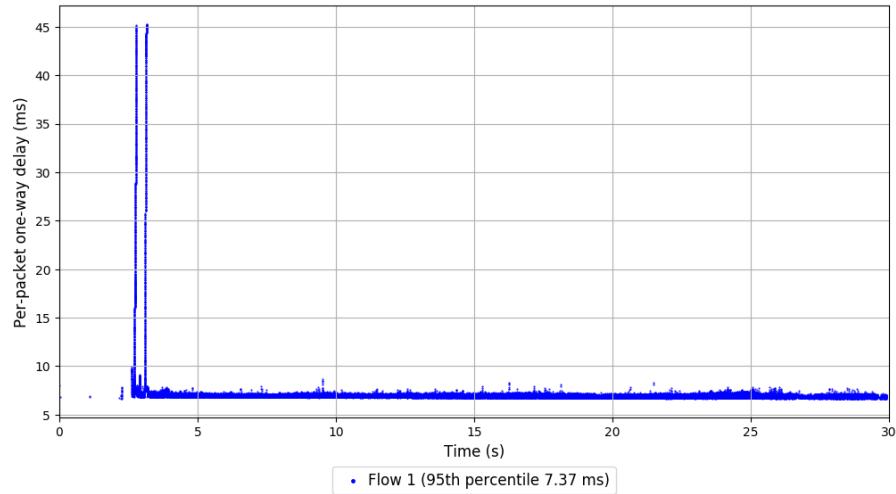
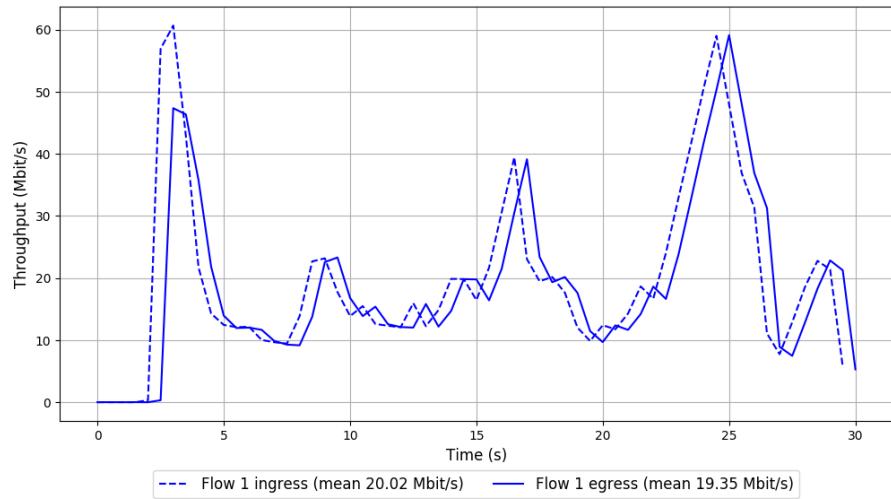


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-10-25 23:45:18
End at: 2018-10-25 23:45:48
Local clock offset: -4.106 ms
Remote clock offset: -4.641 ms

# Below is generated by plot.py at 2018-10-26 01:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 19.35 Mbit/s
95th percentile per-packet one-way delay: 7.374 ms
Loss rate: 3.36%
-- Flow 1:
Average throughput: 19.35 Mbit/s
95th percentile per-packet one-way delay: 7.374 ms
Loss rate: 3.36%
```

Run 1: Report of QUIC Cubic — Data Link

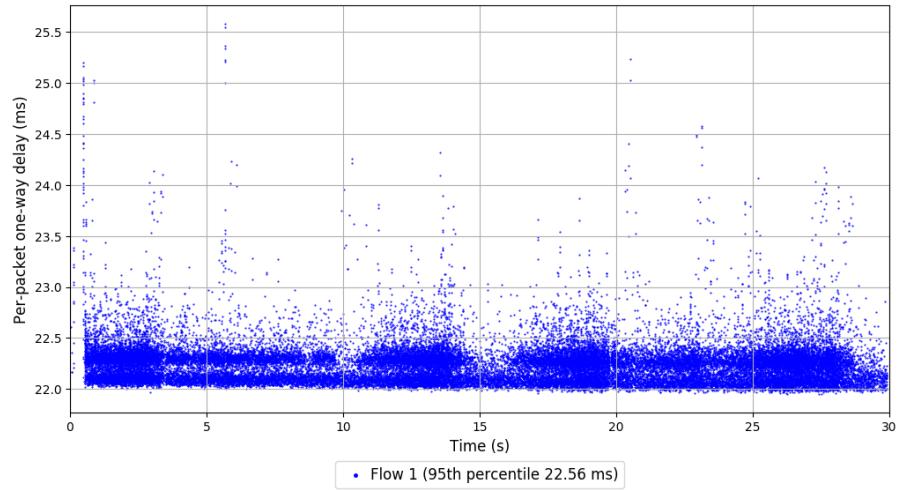
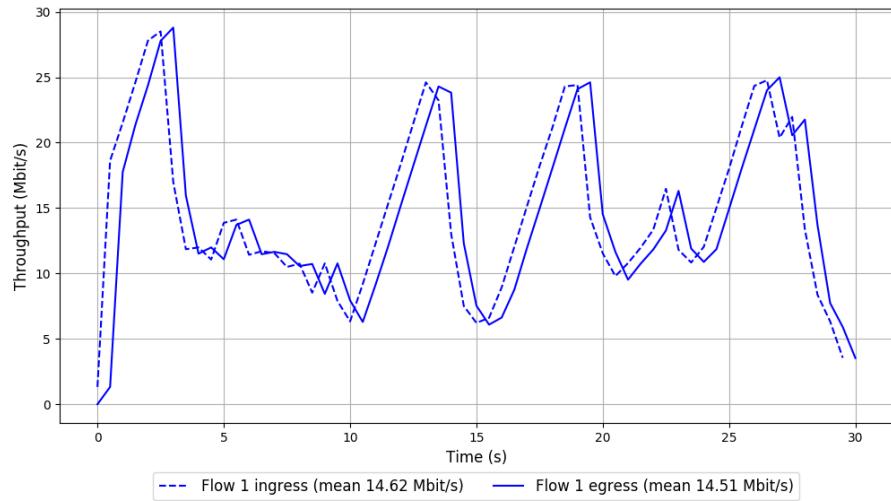


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-10-26 00:06:03
End at: 2018-10-26 00:06:33
Local clock offset: 2.419 ms
Remote clock offset: -4.655 ms

# Below is generated by plot.py at 2018-10-26 01:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 14.51 Mbit/s
95th percentile per-packet one-way delay: 22.564 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 14.51 Mbit/s
95th percentile per-packet one-way delay: 22.564 ms
Loss rate: 0.70%
```

Run 2: Report of QUIC Cubic — Data Link

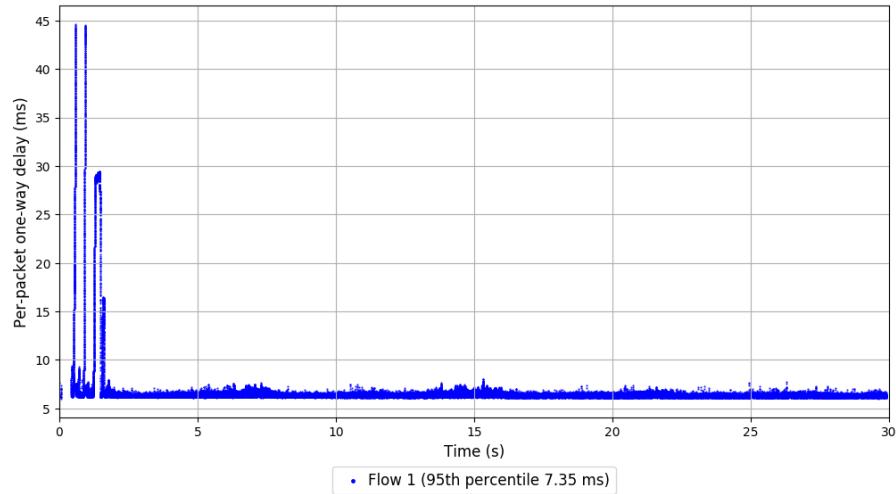
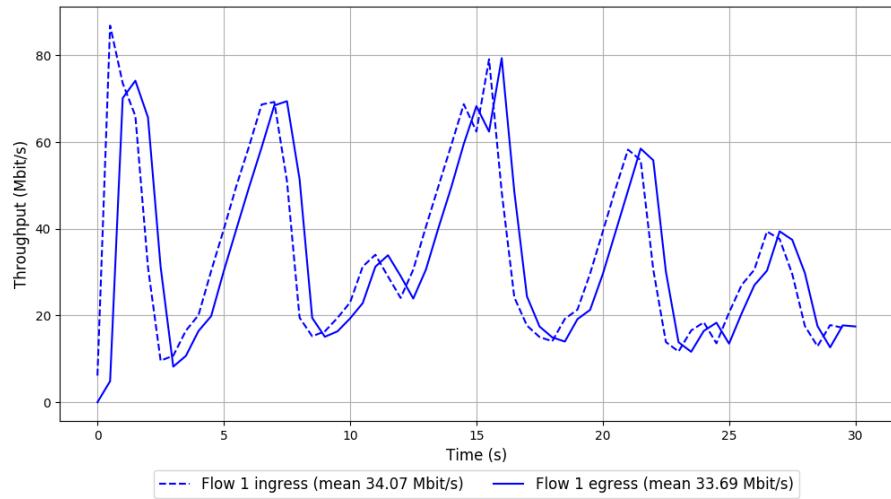


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-10-26 00:26:59
End at: 2018-10-26 00:27:29
Local clock offset: -2.153 ms
Remote clock offset: -3.544 ms

# Below is generated by plot.py at 2018-10-26 01:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 33.69 Mbit/s
95th percentile per-packet one-way delay: 7.346 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 33.69 Mbit/s
95th percentile per-packet one-way delay: 7.346 ms
Loss rate: 1.11%
```

Run 3: Report of QUIC Cubic — Data Link

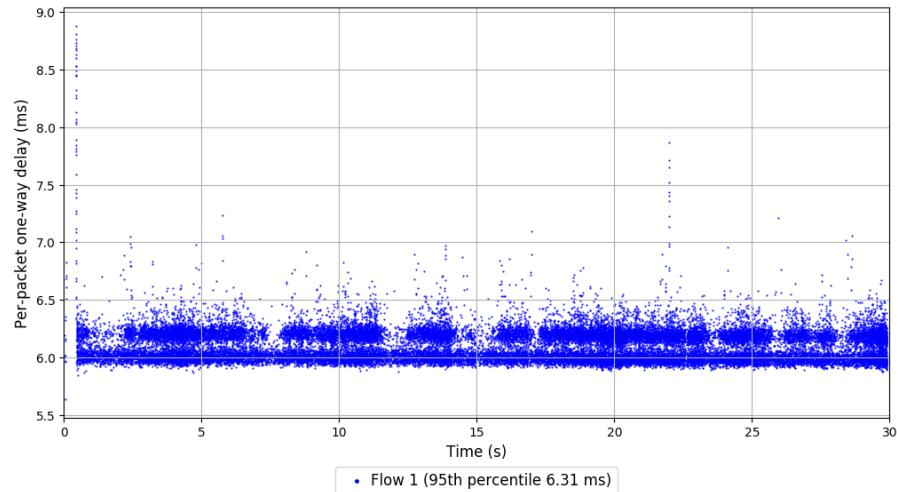
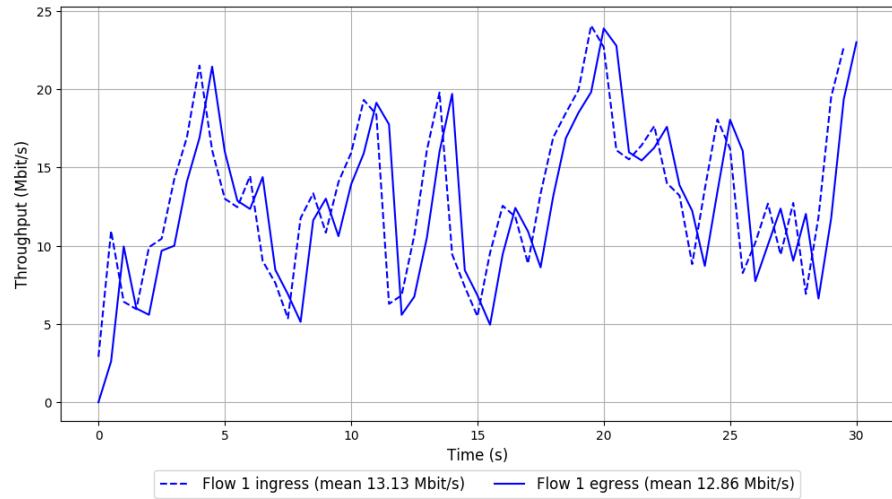


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-10-26 00:47:59
End at: 2018-10-26 00:48:29
Local clock offset: 1.652 ms
Remote clock offset: -2.781 ms

# Below is generated by plot.py at 2018-10-26 01:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.86 Mbit/s
95th percentile per-packet one-way delay: 6.307 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 12.86 Mbit/s
95th percentile per-packet one-way delay: 6.307 ms
Loss rate: 2.02%
```

Run 4: Report of QUIC Cubic — Data Link

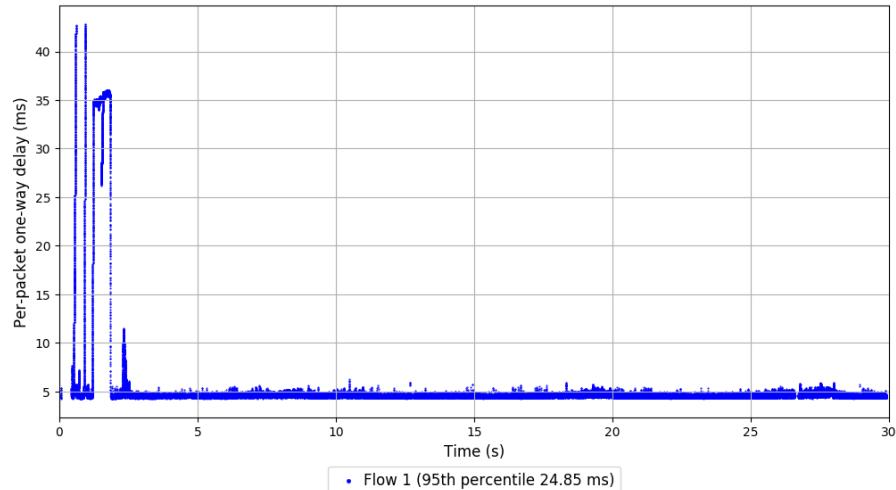
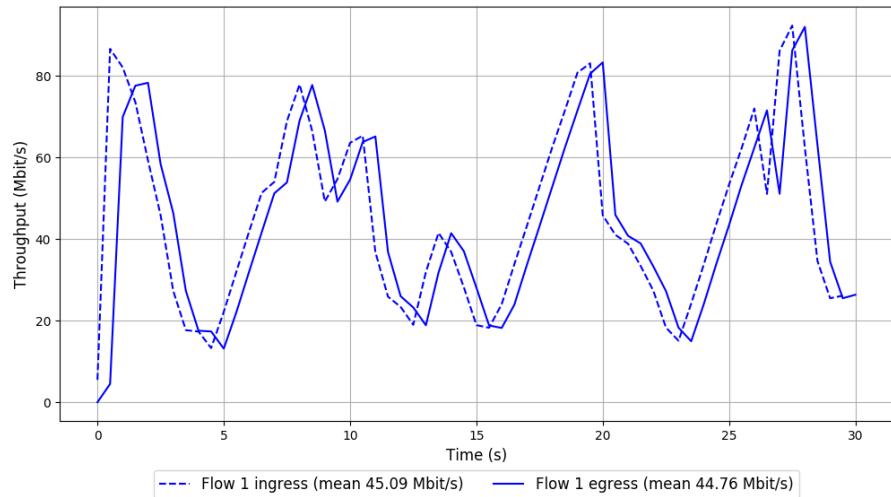


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-10-26 01:08:48
End at: 2018-10-26 01:09:18
Local clock offset: 3.108 ms
Remote clock offset: -3.111 ms

# Below is generated by plot.py at 2018-10-26 01:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 44.76 Mbit/s
95th percentile per-packet one-way delay: 24.850 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 44.76 Mbit/s
95th percentile per-packet one-way delay: 24.850 ms
Loss rate: 0.74%
```

Run 5: Report of QUIC Cubic — Data Link

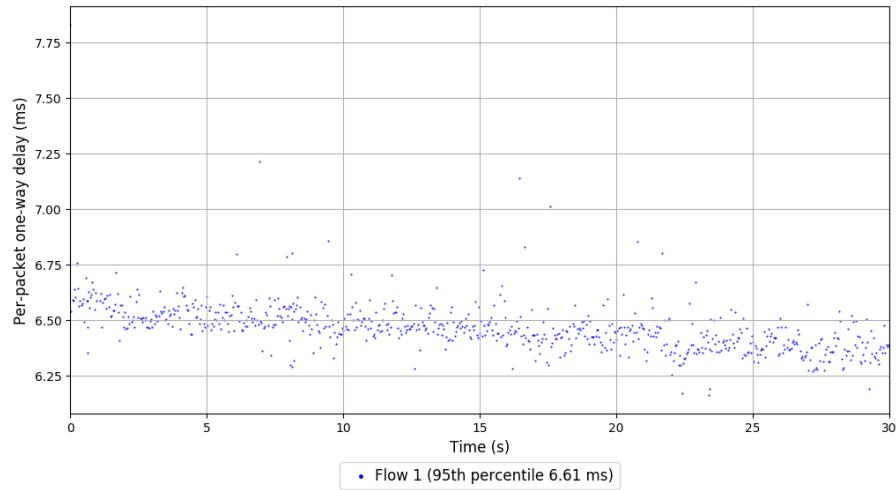
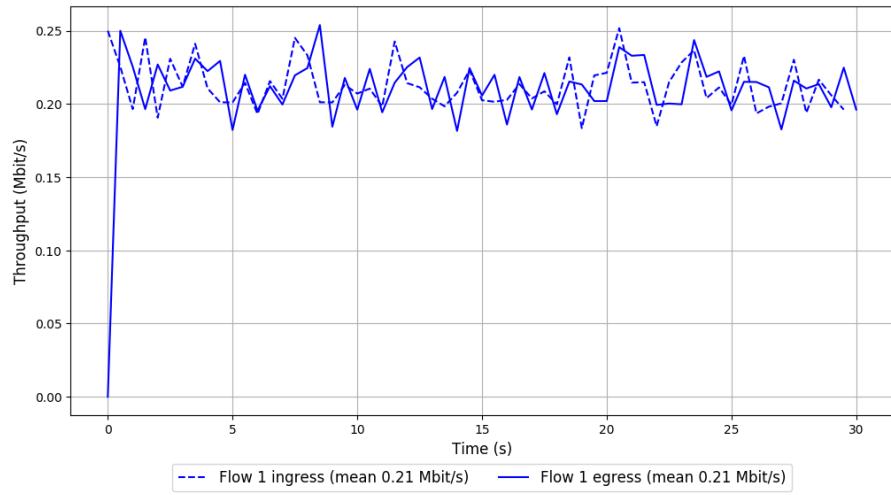


Run 1: Statistics of SCReAM

```
Start at: 2018-10-25 23:47:30
End at: 2018-10-25 23:48:00
Local clock offset: -4.213 ms
Remote clock offset: -4.412 ms

# Below is generated by plot.py at 2018-10-26 01:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 6.613 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 6.613 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

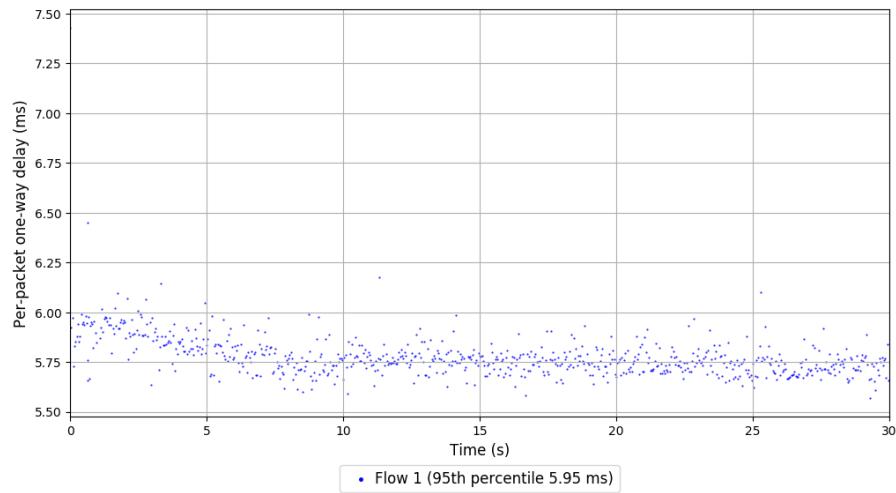
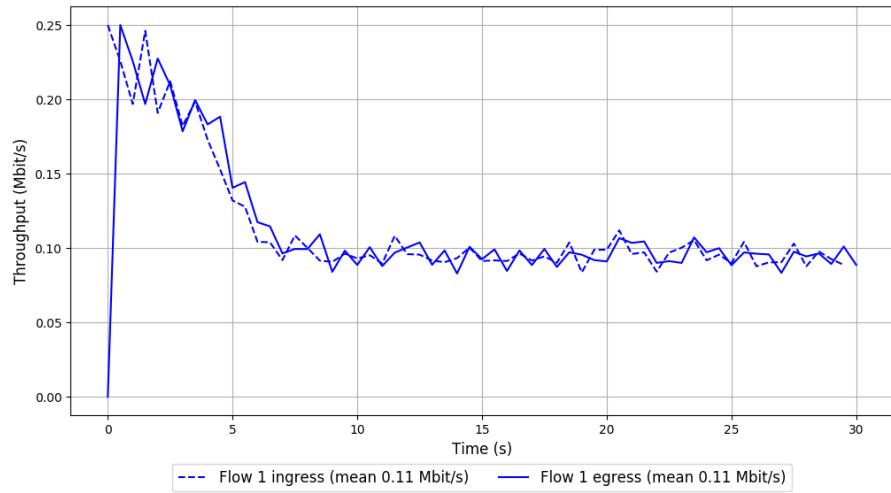


Run 2: Statistics of SCReAM

```
Start at: 2018-10-26 00:08:16
End at: 2018-10-26 00:08:46
Local clock offset: 0.595 ms
Remote clock offset: -3.713 ms

# Below is generated by plot.py at 2018-10-26 01:22:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 5.952 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 5.952 ms
Loss rate: 0.24%
```

Run 2: Report of SCReAM — Data Link

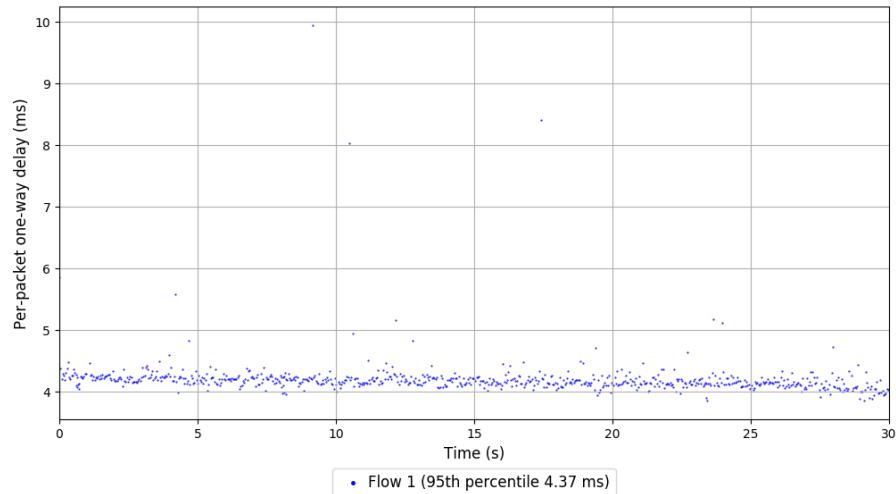
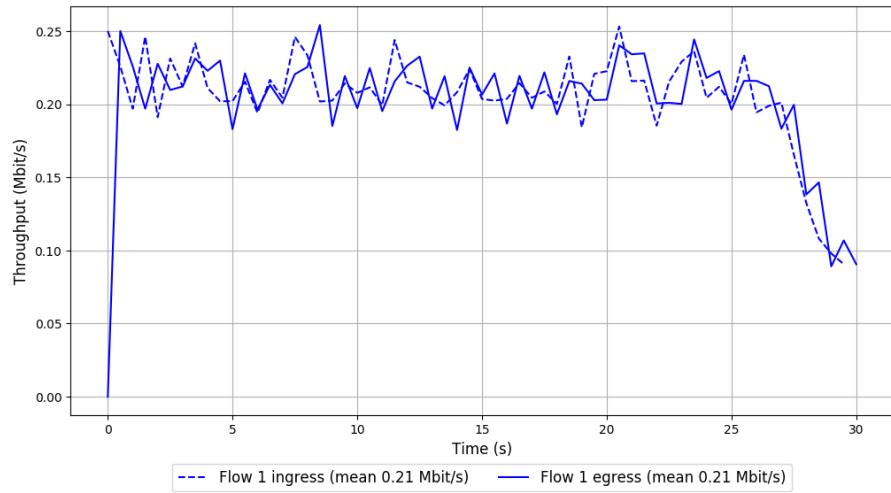


Run 3: Statistics of SCReAM

```
Start at: 2018-10-26 00:29:14
End at: 2018-10-26 00:29:44
Local clock offset: -1.109 ms
Remote clock offset: -4.339 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 4.370 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 4.370 ms
Loss rate: 0.33%
```

Run 3: Report of SCReAM — Data Link

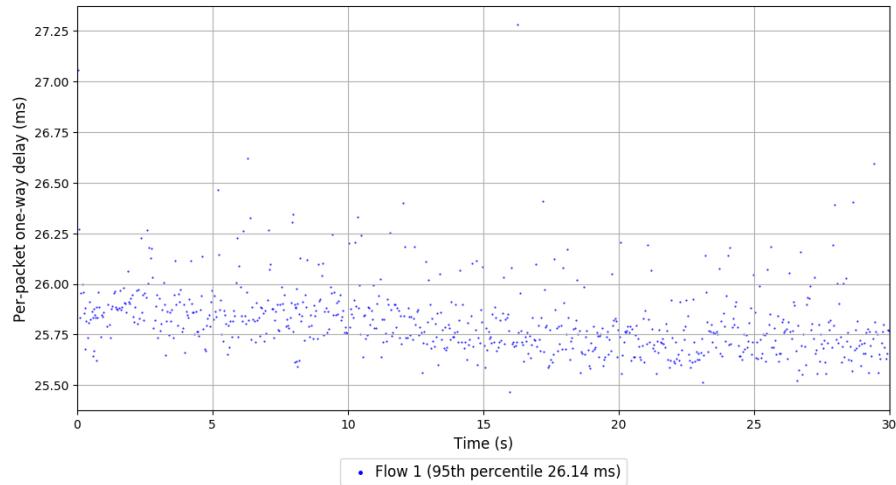
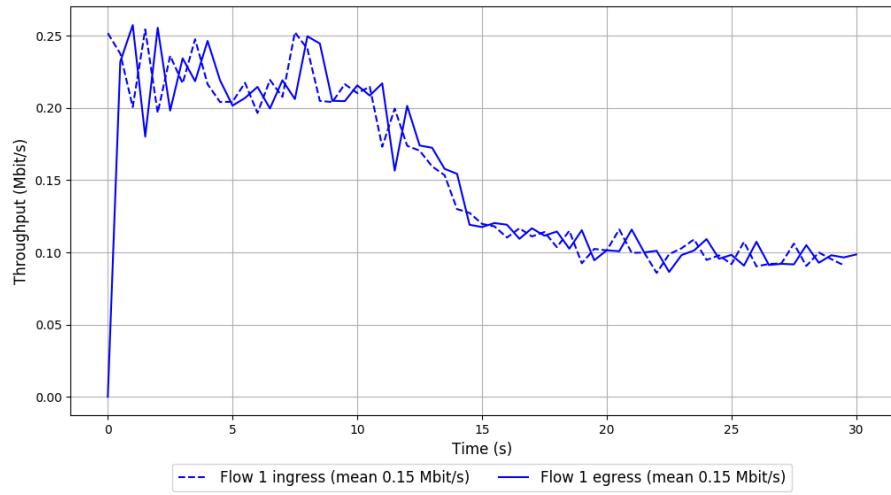


Run 4: Statistics of SCReAM

```
Start at: 2018-10-26 00:50:13
End at: 2018-10-26 00:50:43
Local clock offset: 0.172 ms
Remote clock offset: -3.591 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 26.138 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 26.138 ms
Loss rate: 0.43%
```

Run 4: Report of SCReAM — Data Link

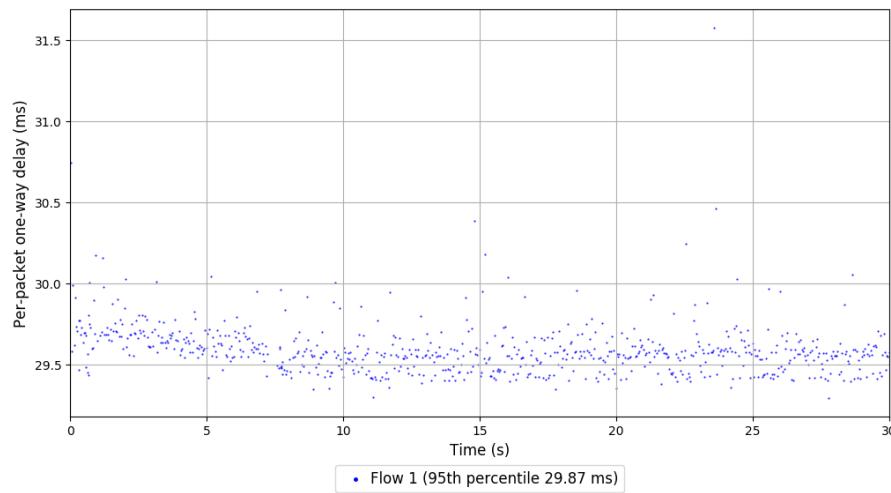
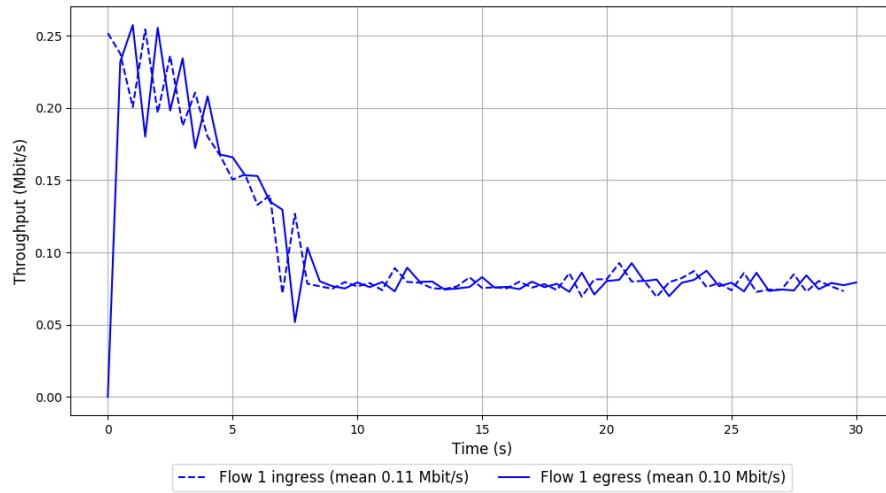


Run 5: Statistics of SCReAM

```
Start at: 2018-10-26 01:11:05
End at: 2018-10-26 01:11:35
Local clock offset: -3.424 ms
Remote clock offset: -3.545 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 29.870 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 29.870 ms
Loss rate: 1.46%
```

Run 5: Report of SCReAM — Data Link

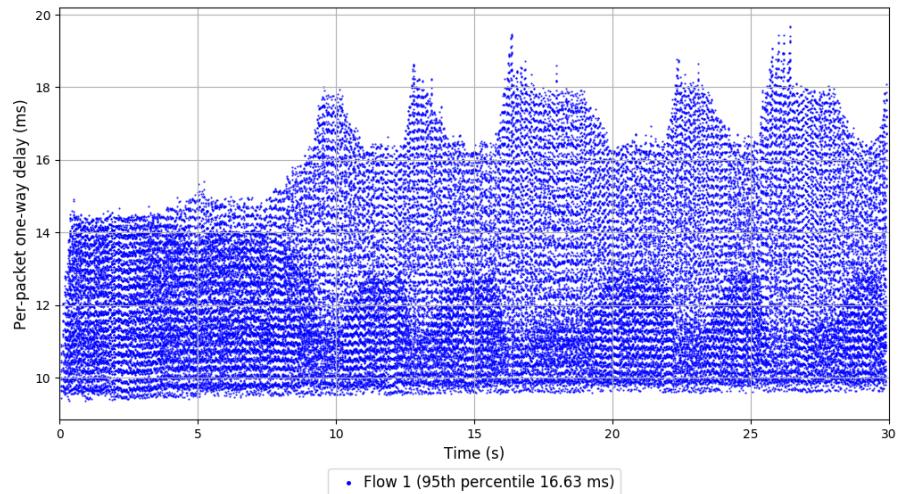
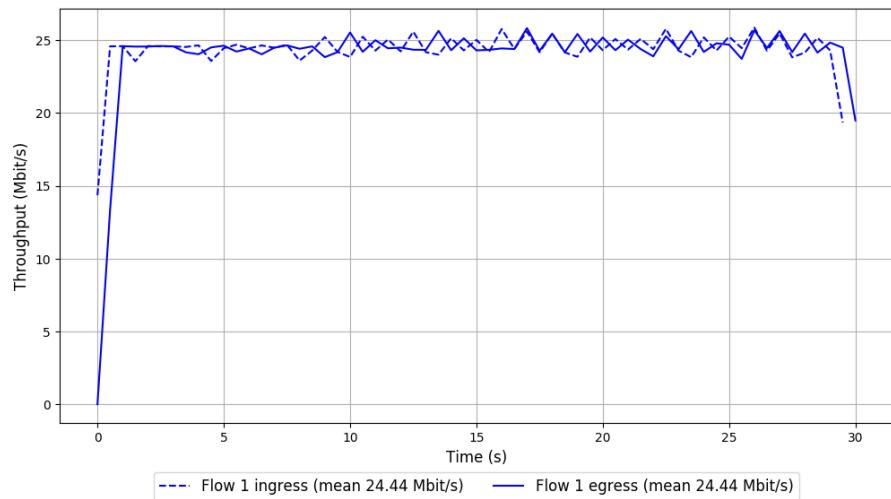


Run 1: Statistics of Sprout

```
Start at: 2018-10-25 23:32:42
End at: 2018-10-25 23:33:12
Local clock offset: -0.157 ms
Remote clock offset: -4.65 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.44 Mbit/s
95th percentile per-packet one-way delay: 16.629 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.44 Mbit/s
95th percentile per-packet one-way delay: 16.629 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

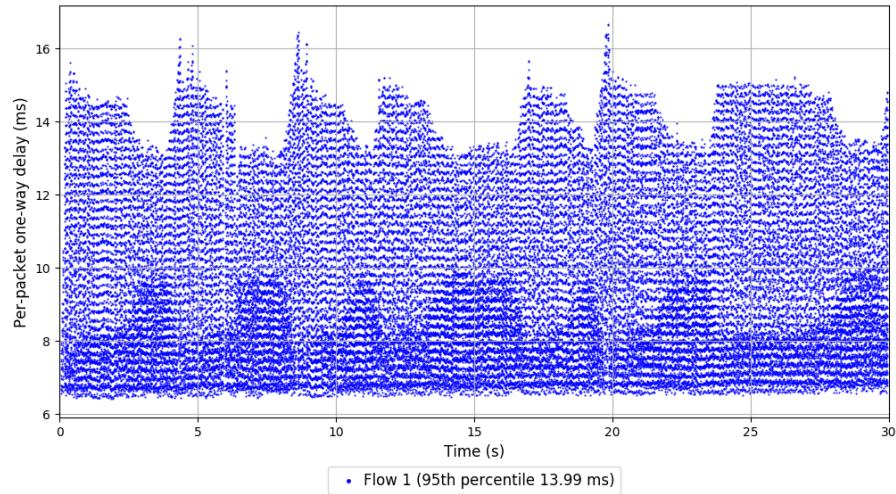
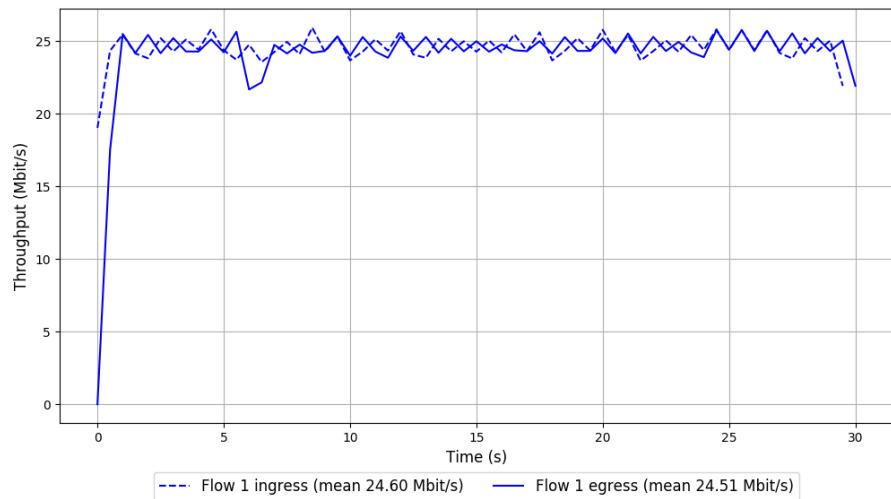


Run 2: Statistics of Sprout

```
Start at: 2018-10-25 23:53:21
End at: 2018-10-25 23:53:51
Local clock offset: -0.067 ms
Remote clock offset: -4.409 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.51 Mbit/s
95th percentile per-packet one-way delay: 13.991 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 24.51 Mbit/s
95th percentile per-packet one-way delay: 13.991 ms
Loss rate: 0.34%
```

Run 2: Report of Sprout — Data Link

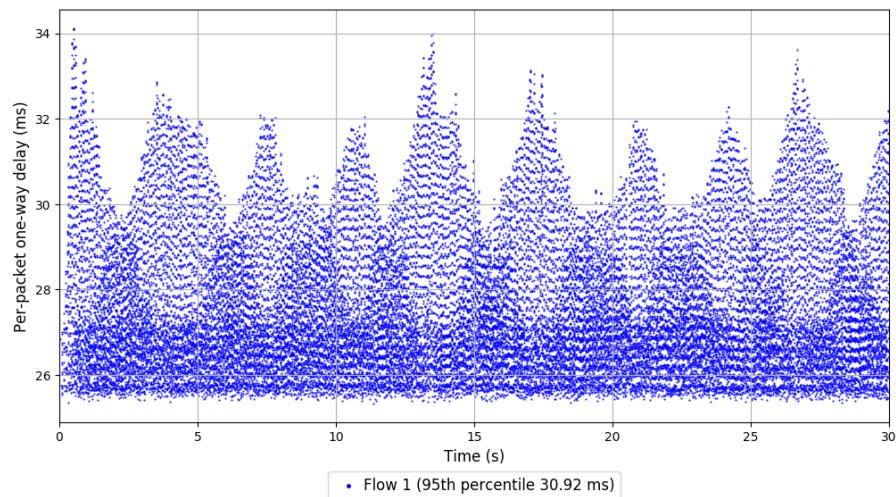
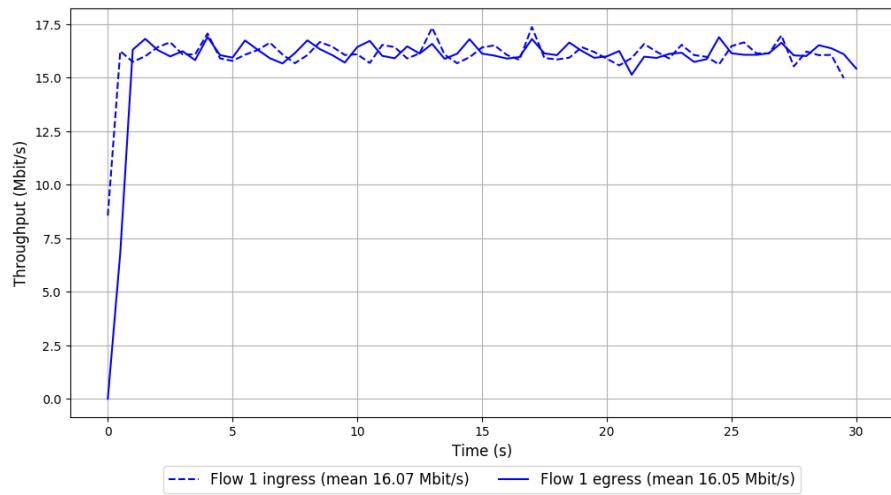


Run 3: Statistics of Sprout

```
Start at: 2018-10-26 00:14:17
End at: 2018-10-26 00:14:47
Local clock offset: -1.479 ms
Remote clock offset: -4.479 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 16.05 Mbit/s
95th percentile per-packet one-way delay: 30.919 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 16.05 Mbit/s
95th percentile per-packet one-way delay: 30.919 ms
Loss rate: 0.11%
```

Run 3: Report of Sprout — Data Link

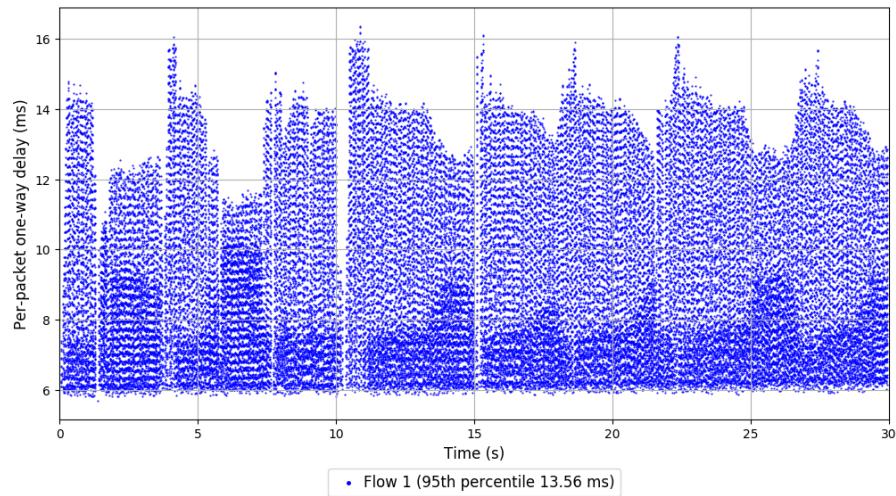
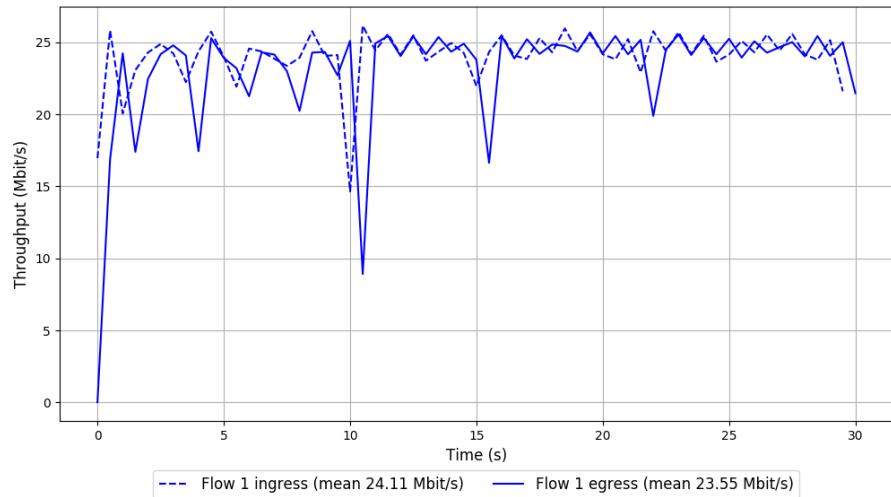


Run 4: Statistics of Sprout

```
Start at: 2018-10-26 00:35:01
End at: 2018-10-26 00:35:31
Local clock offset: -0.56 ms
Remote clock offset: -3.365 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.55 Mbit/s
95th percentile per-packet one-way delay: 13.558 ms
Loss rate: 2.31%
-- Flow 1:
Average throughput: 23.55 Mbit/s
95th percentile per-packet one-way delay: 13.558 ms
Loss rate: 2.31%
```

Run 4: Report of Sprout — Data Link

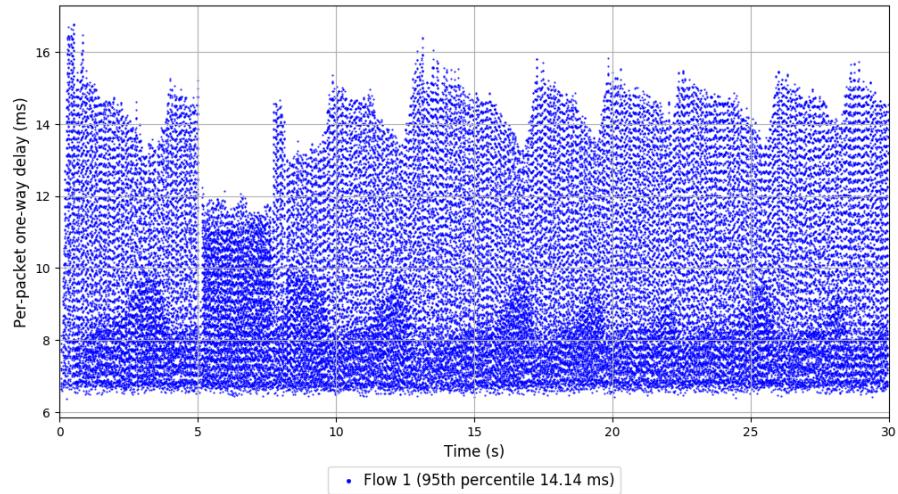
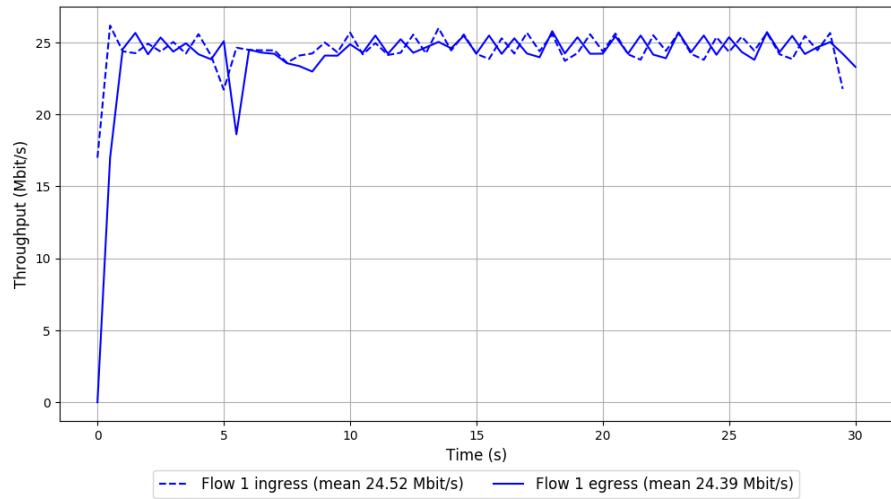


Run 5: Statistics of Sprout

```
Start at: 2018-10-26 00:56:03
End at: 2018-10-26 00:56:33
Local clock offset: -0.391 ms
Remote clock offset: -4.245 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.39 Mbit/s
95th percentile per-packet one-way delay: 14.140 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 24.39 Mbit/s
95th percentile per-packet one-way delay: 14.140 ms
Loss rate: 0.51%
```

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

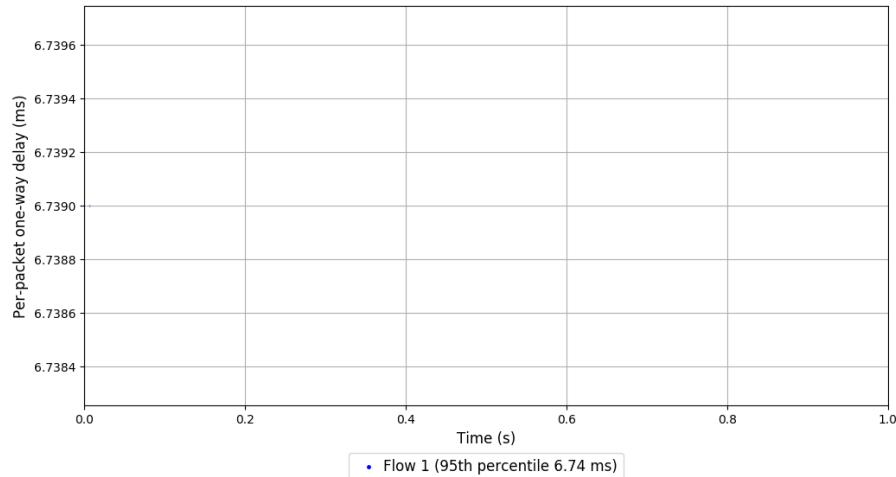
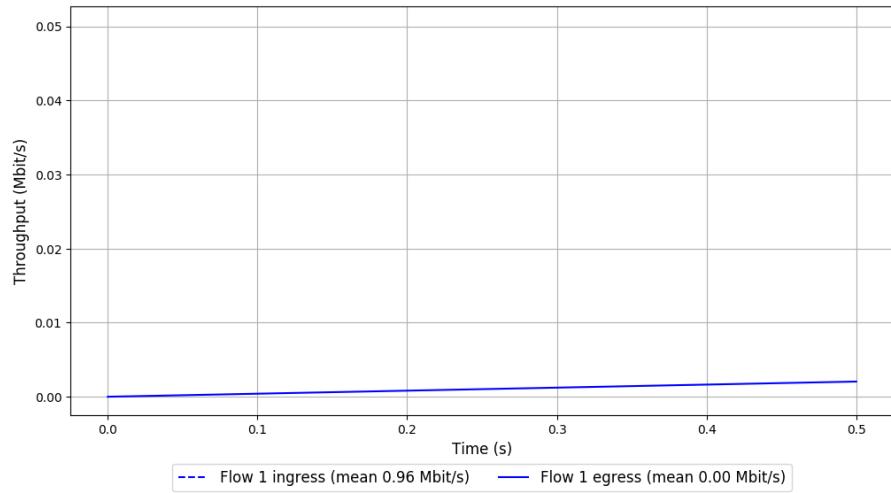
Start at: 2018-10-25 23:33:48

End at: 2018-10-25 23:34:18

Local clock offset: 3.034 ms

Remote clock offset: -4.509 ms

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

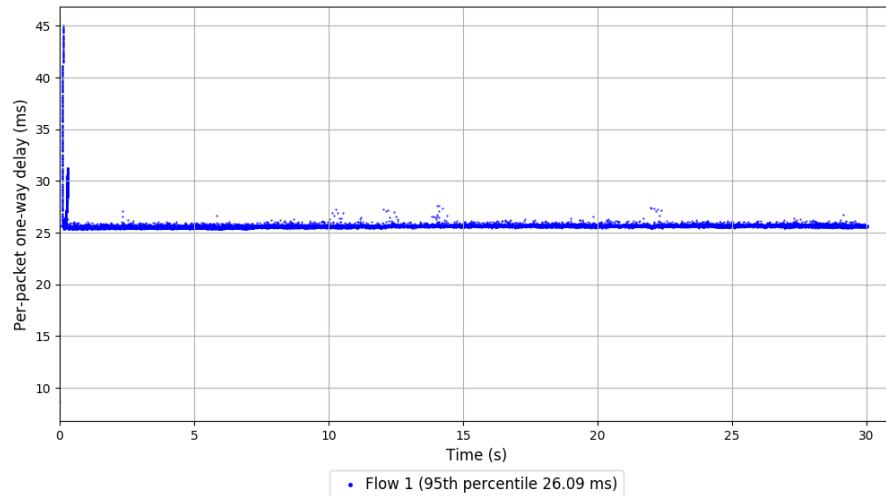
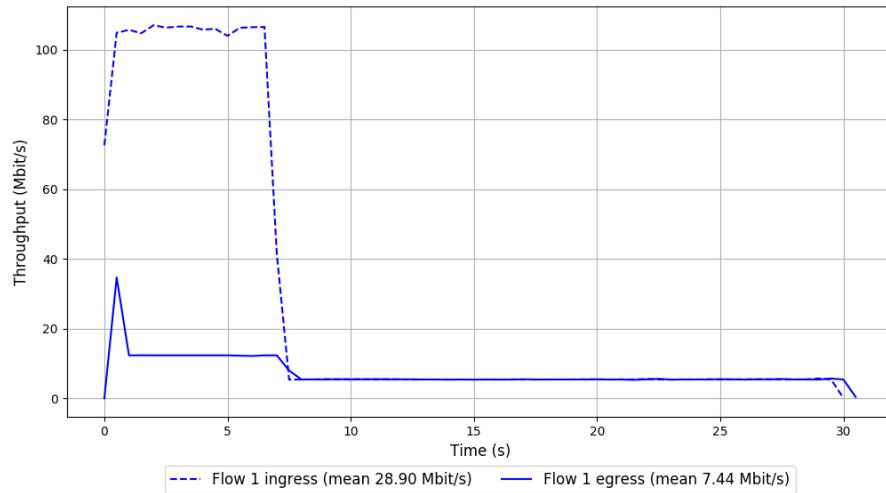


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-10-25 23:54:27
End at: 2018-10-25 23:54:57
Local clock offset: -1.609 ms
Remote clock offset: -5.195 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.44 Mbit/s
95th percentile per-packet one-way delay: 26.089 ms
Loss rate: 74.25%
-- Flow 1:
Average throughput: 7.44 Mbit/s
95th percentile per-packet one-way delay: 26.089 ms
Loss rate: 74.25%
```

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

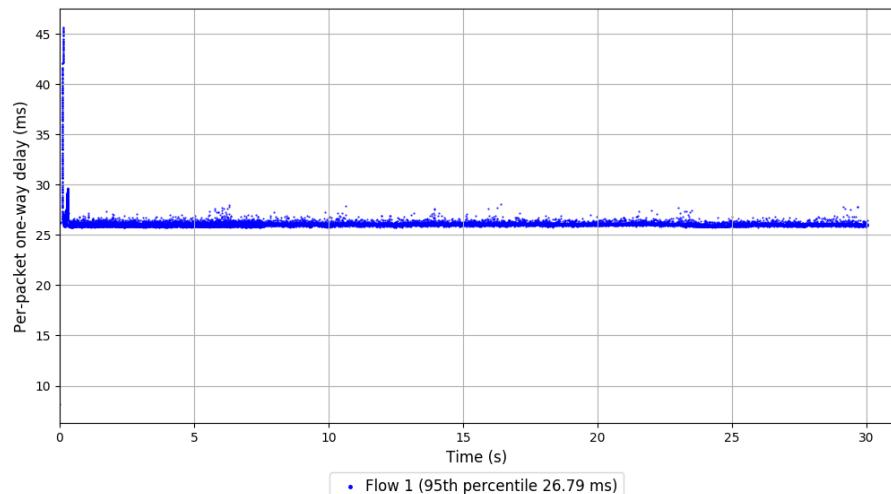
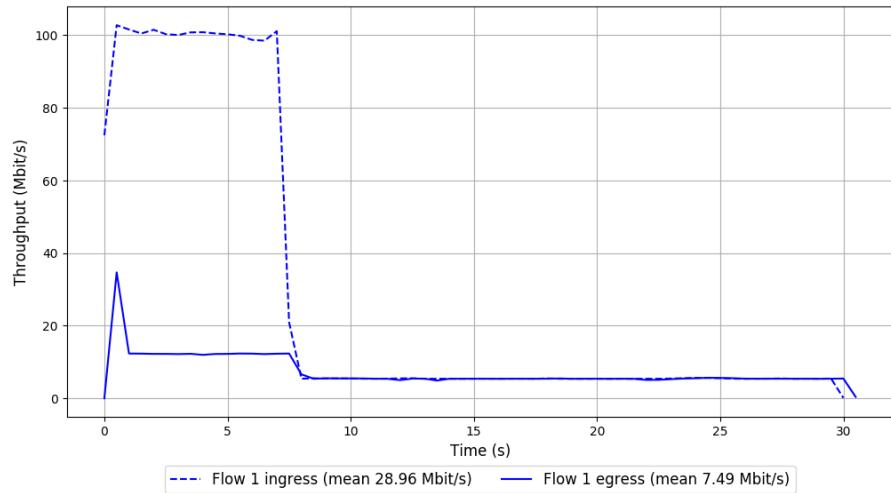


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-10-26 00:15:25
End at: 2018-10-26 00:15:55
Local clock offset: -2.116 ms
Remote clock offset: -4.547 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.49 Mbit/s
95th percentile per-packet one-way delay: 26.792 ms
Loss rate: 74.14%
-- Flow 1:
Average throughput: 7.49 Mbit/s
95th percentile per-packet one-way delay: 26.792 ms
Loss rate: 74.14%
```

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

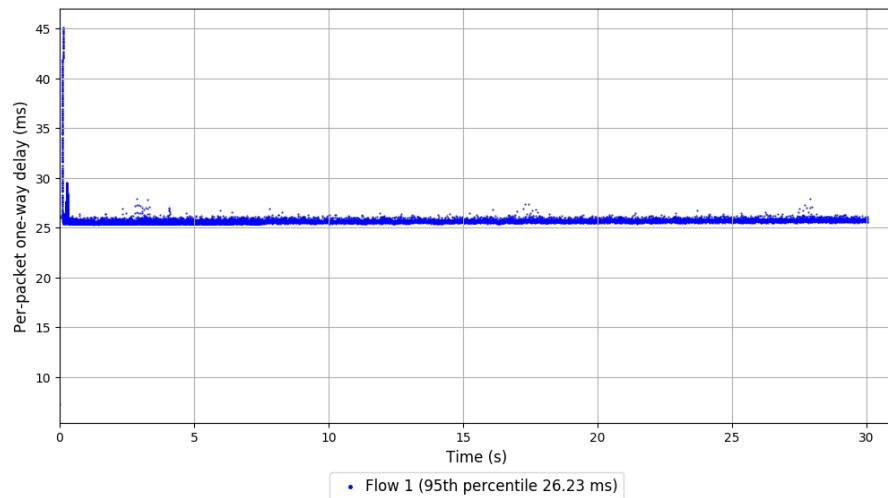
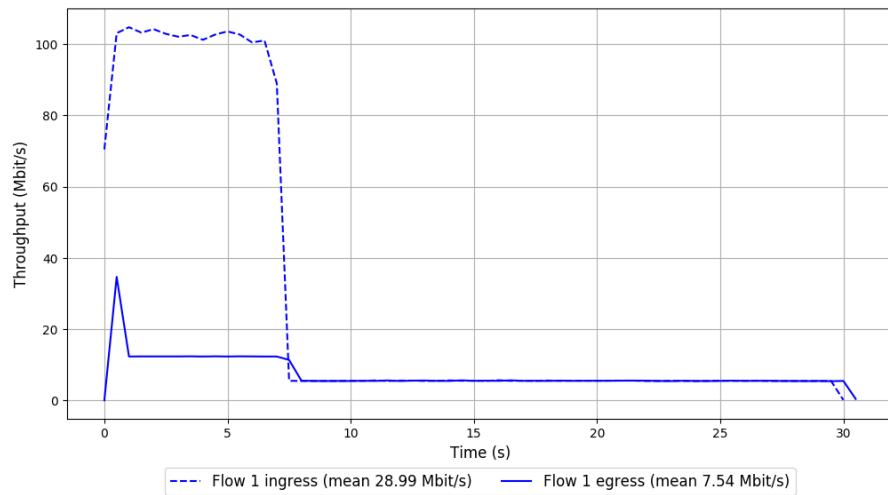


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-10-26 00:36:09
End at: 2018-10-26 00:36:39
Local clock offset: -1.098 ms
Remote clock offset: -3.694 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.54 Mbit/s
95th percentile per-packet one-way delay: 26.231 ms
Loss rate: 73.99%
-- Flow 1:
Average throughput: 7.54 Mbit/s
95th percentile per-packet one-way delay: 26.231 ms
Loss rate: 73.99%
```

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

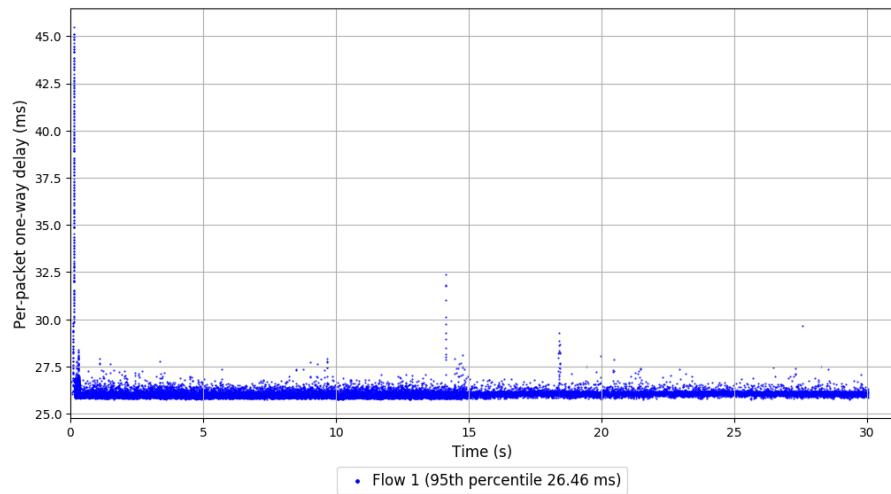
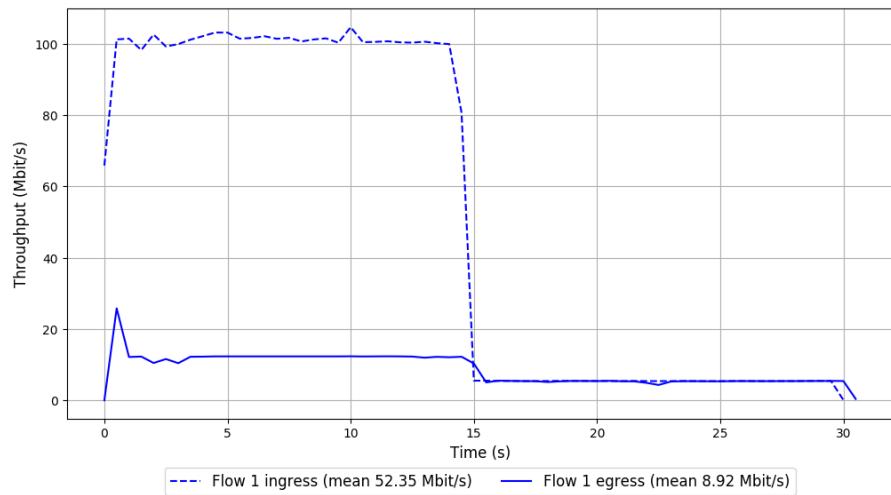


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-10-26 00:57:09
End at: 2018-10-26 00:57:39
Local clock offset: -0.14 ms
Remote clock offset: -3.622 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.92 Mbit/s
95th percentile per-packet one-way delay: 26.460 ms
Loss rate: 82.97%
-- Flow 1:
Average throughput: 8.92 Mbit/s
95th percentile per-packet one-way delay: 26.460 ms
Loss rate: 82.97%
```

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

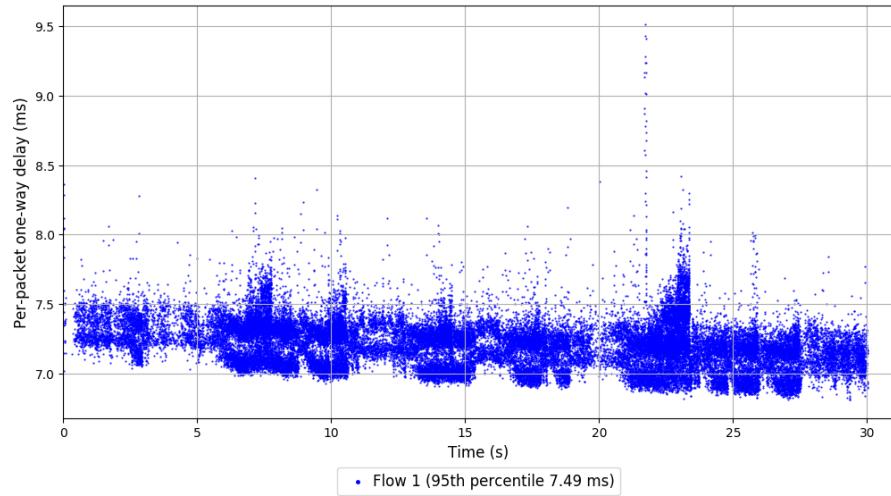
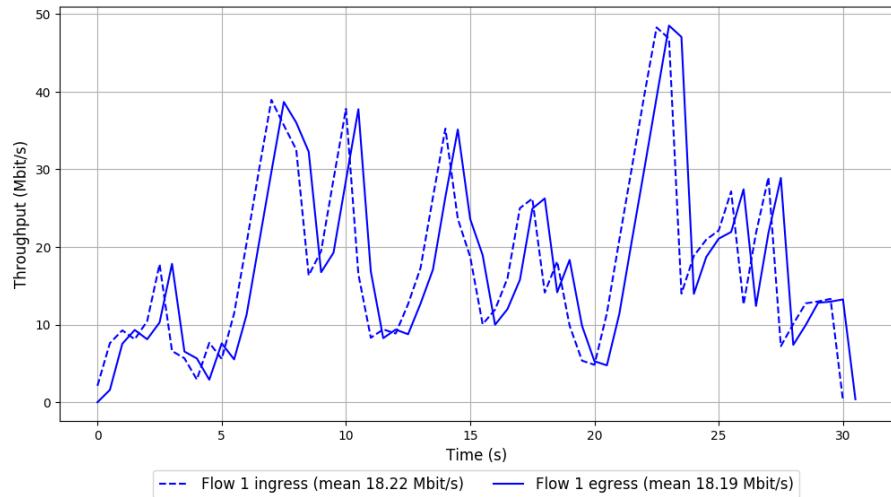


Run 1: Statistics of TCP Vegas

```
Start at: 2018-10-25 23:46:24
End at: 2018-10-25 23:46:54
Local clock offset: -6.637 ms
Remote clock offset: -6.628 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 18.19 Mbit/s
95th percentile per-packet one-way delay: 7.491 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 18.19 Mbit/s
95th percentile per-packet one-way delay: 7.491 ms
Loss rate: 0.17%
```

Run 1: Report of TCP Vegas — Data Link

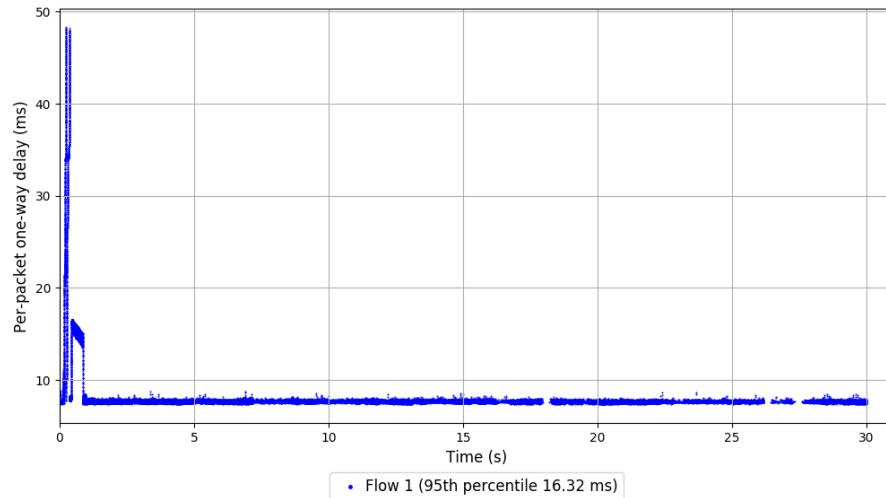
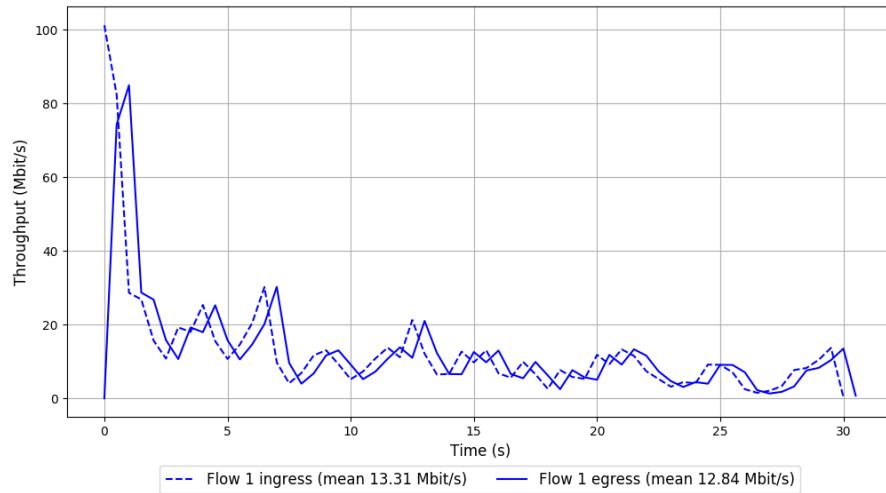


Run 2: Statistics of TCP Vegas

```
Start at: 2018-10-26 00:07:09
End at: 2018-10-26 00:07:39
Local clock offset: -1.951 ms
Remote clock offset: -4.635 ms

# Below is generated by plot.py at 2018-10-26 01:22:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.84 Mbit/s
95th percentile per-packet one-way delay: 16.315 ms
Loss rate: 3.54%
-- Flow 1:
Average throughput: 12.84 Mbit/s
95th percentile per-packet one-way delay: 16.315 ms
Loss rate: 3.54%
```

Run 2: Report of TCP Vegas — Data Link

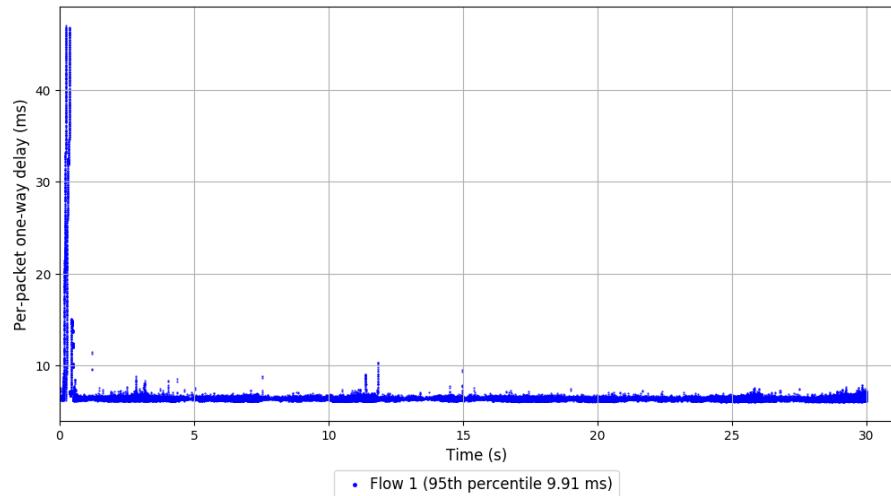
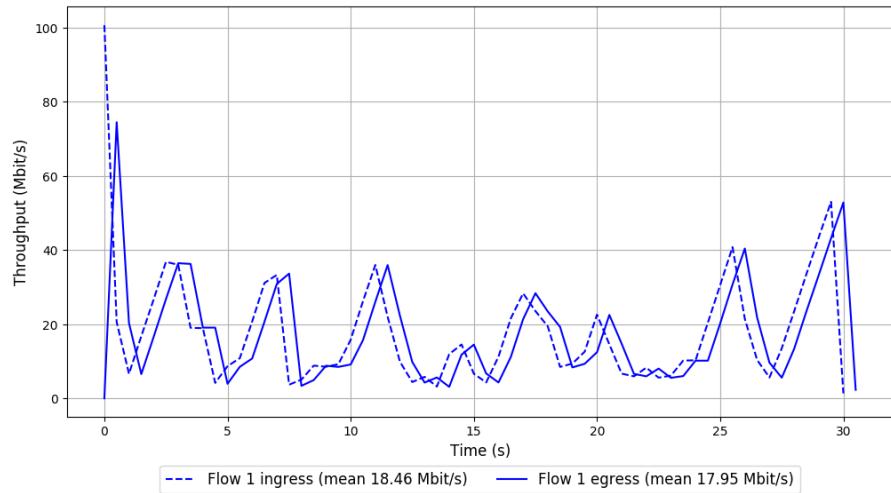


Run 3: Statistics of TCP Vegas

```
Start at: 2018-10-26 00:28:07
End at: 2018-10-26 00:28:37
Local clock offset: -2.943 ms
Remote clock offset: -4.229 ms

# Below is generated by plot.py at 2018-10-26 01:22:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 17.95 Mbit/s
95th percentile per-packet one-way delay: 9.908 ms
Loss rate: 2.74%
-- Flow 1:
Average throughput: 17.95 Mbit/s
95th percentile per-packet one-way delay: 9.908 ms
Loss rate: 2.74%
```

Run 3: Report of TCP Vegas — Data Link

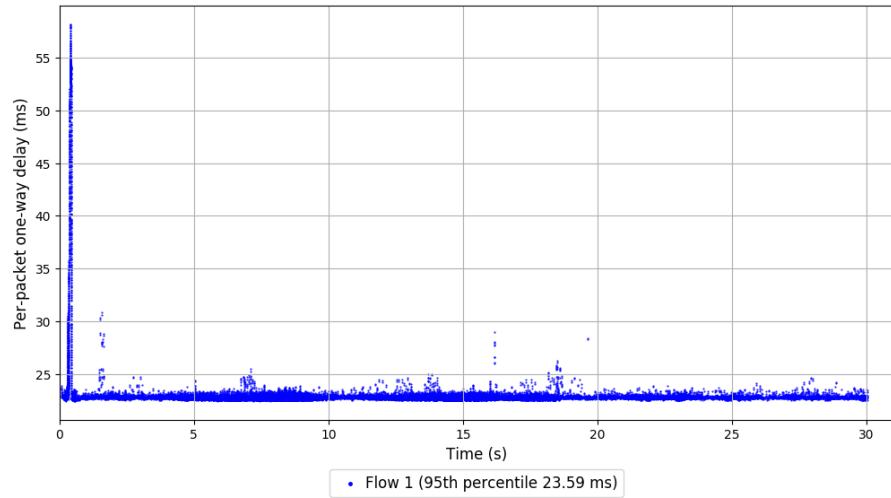
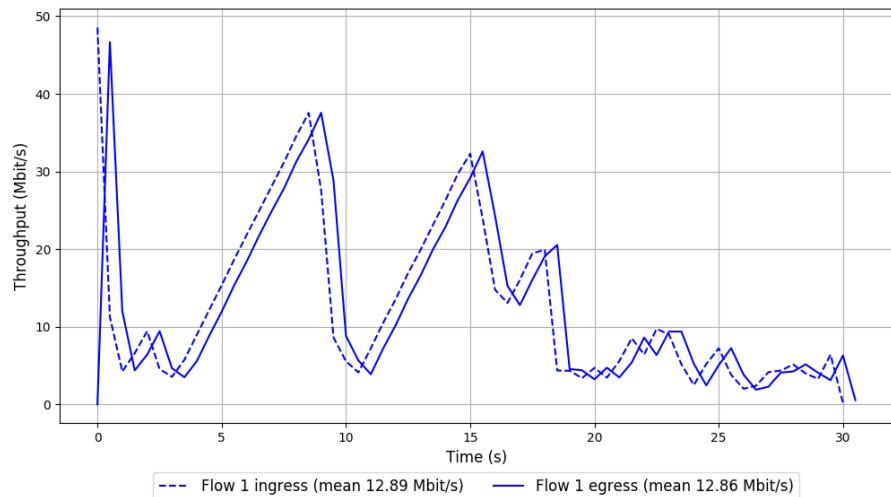


Run 4: Statistics of TCP Vegas

```
Start at: 2018-10-26 00:49:06
End at: 2018-10-26 00:49:36
Local clock offset: 3.308 ms
Remote clock offset: -3.613 ms

# Below is generated by plot.py at 2018-10-26 01:22:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.86 Mbit/s
95th percentile per-packet one-way delay: 23.594 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 12.86 Mbit/s
95th percentile per-packet one-way delay: 23.594 ms
Loss rate: 0.24%
```

Run 4: Report of TCP Vegas — Data Link

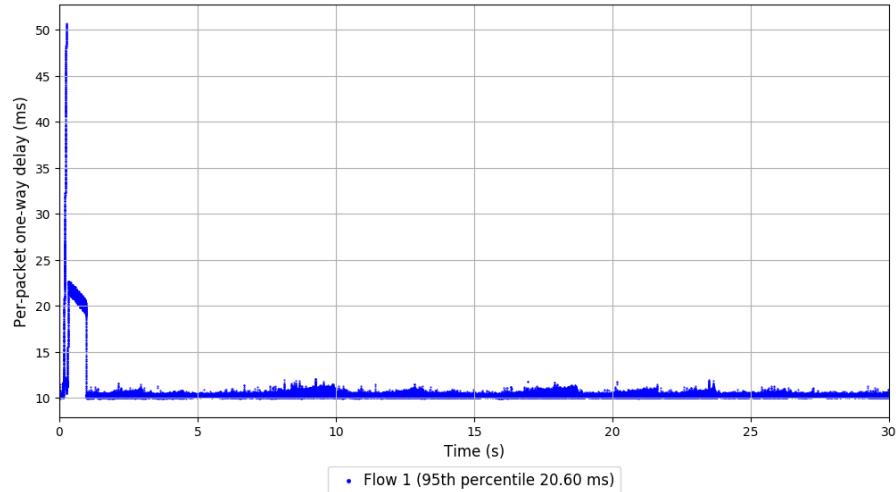
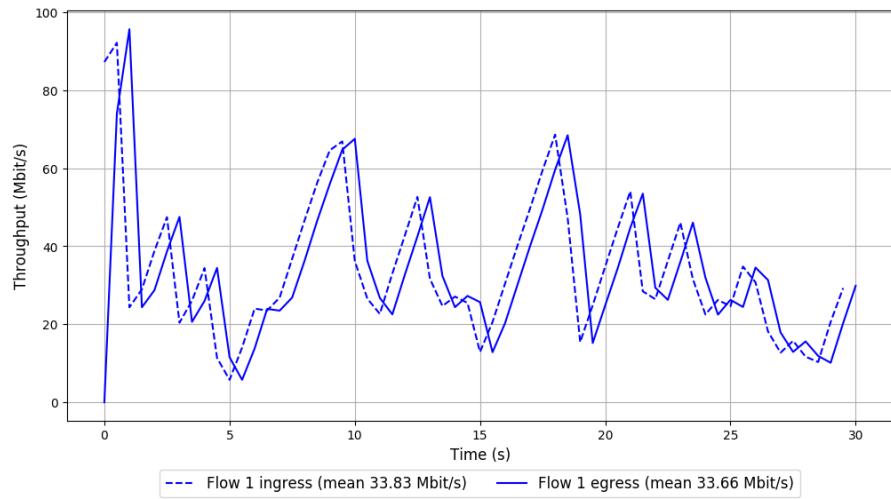


Run 5: Statistics of TCP Vegas

```
Start at: 2018-10-26 01:09:57
End at: 2018-10-26 01:10:27
Local clock offset: -1.978 ms
Remote clock offset: -2.568 ms

# Below is generated by plot.py at 2018-10-26 01:22:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 33.66 Mbit/s
95th percentile per-packet one-way delay: 20.597 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 33.66 Mbit/s
95th percentile per-packet one-way delay: 20.597 ms
Loss rate: 0.50%
```

Run 5: Report of TCP Vegas — Data Link

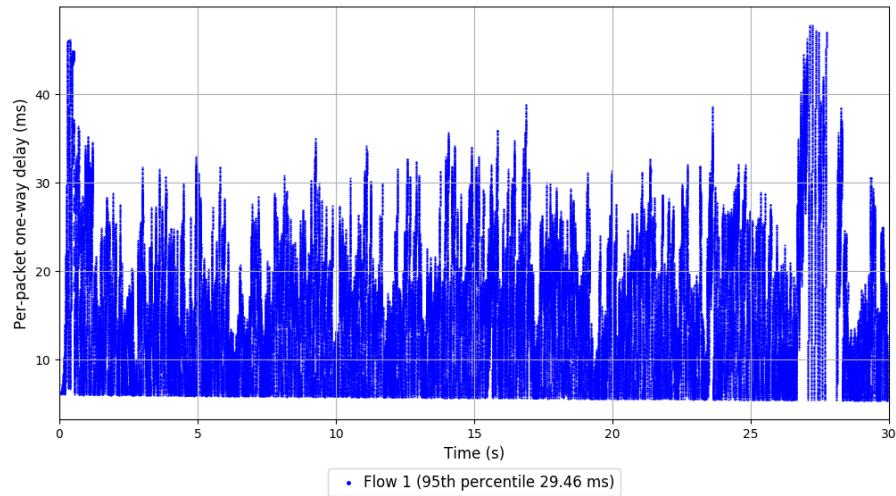
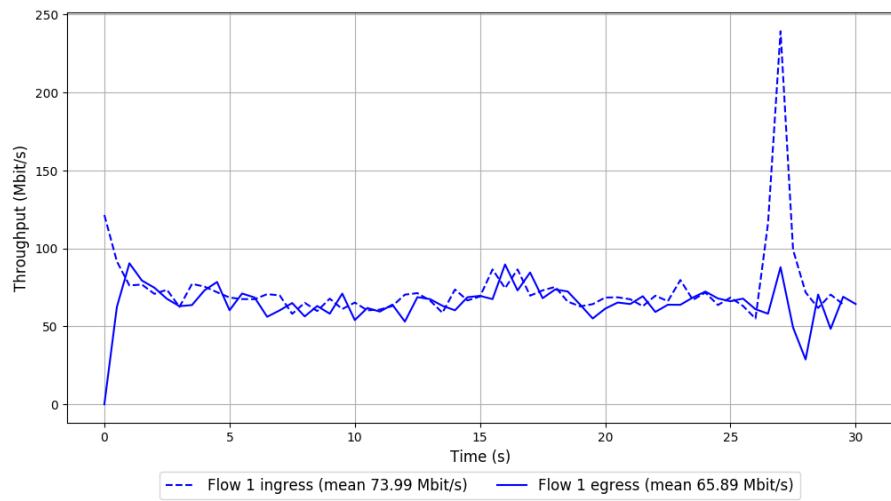


Run 1: Statistics of Verus

```
Start at: 2018-10-25 23:35:59
End at: 2018-10-25 23:36:29
Local clock offset: 1.356 ms
Remote clock offset: -4.83 ms

# Below is generated by plot.py at 2018-10-26 01:23:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.89 Mbit/s
95th percentile per-packet one-way delay: 29.463 ms
Loss rate: 10.93%
-- Flow 1:
Average throughput: 65.89 Mbit/s
95th percentile per-packet one-way delay: 29.463 ms
Loss rate: 10.93%
```

Run 1: Report of Verus — Data Link

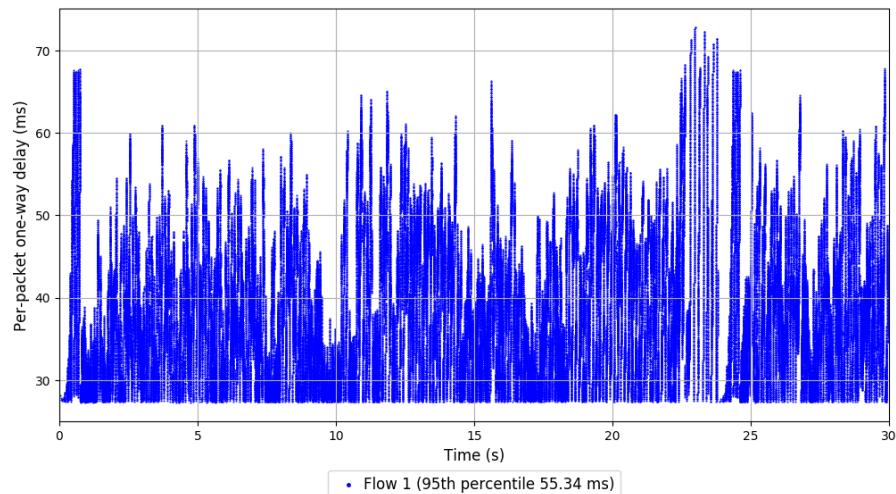
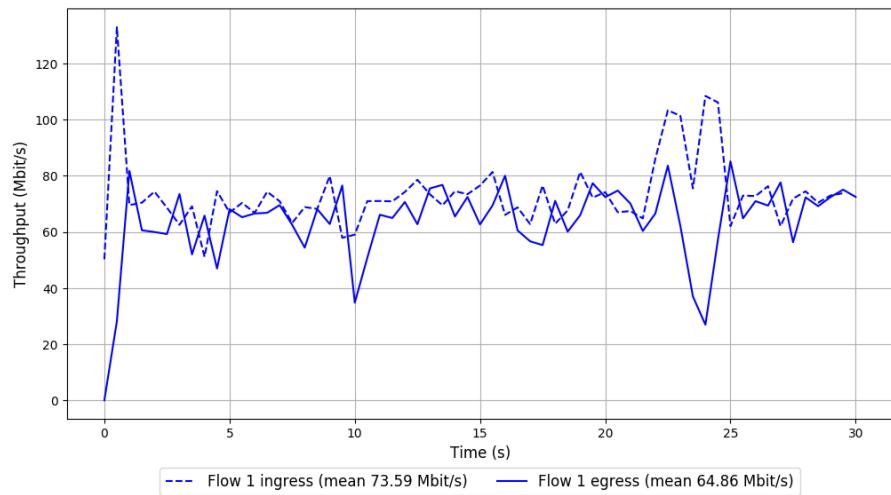


Run 2: Statistics of Verus

```
Start at: 2018-10-25 23:56:39
End at: 2018-10-25 23:57:09
Local clock offset: -2.591 ms
Remote clock offset: -4.552 ms

# Below is generated by plot.py at 2018-10-26 01:23:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.86 Mbit/s
95th percentile per-packet one-way delay: 55.342 ms
Loss rate: 11.84%
-- Flow 1:
Average throughput: 64.86 Mbit/s
95th percentile per-packet one-way delay: 55.342 ms
Loss rate: 11.84%
```

Run 2: Report of Verus — Data Link

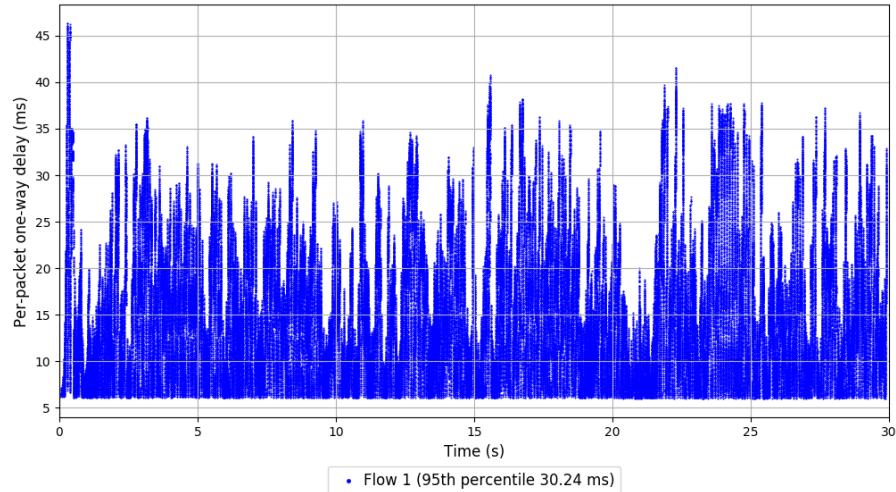
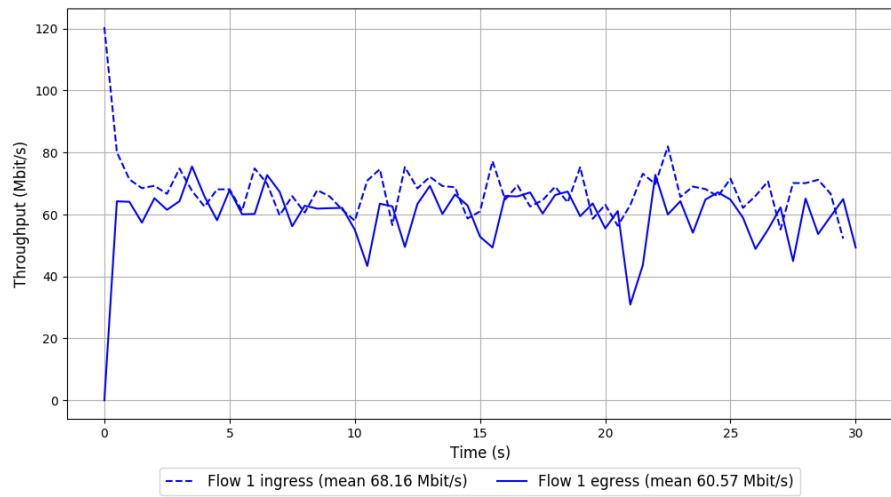


Run 3: Statistics of Verus

```
Start at: 2018-10-26 00:17:38
End at: 2018-10-26 00:18:08
Local clock offset: -1.769 ms
Remote clock offset: -4.635 ms

# Below is generated by plot.py at 2018-10-26 01:23:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.57 Mbit/s
95th percentile per-packet one-way delay: 30.237 ms
Loss rate: 11.05%
-- Flow 1:
Average throughput: 60.57 Mbit/s
95th percentile per-packet one-way delay: 30.237 ms
Loss rate: 11.05%
```

Run 3: Report of Verus — Data Link

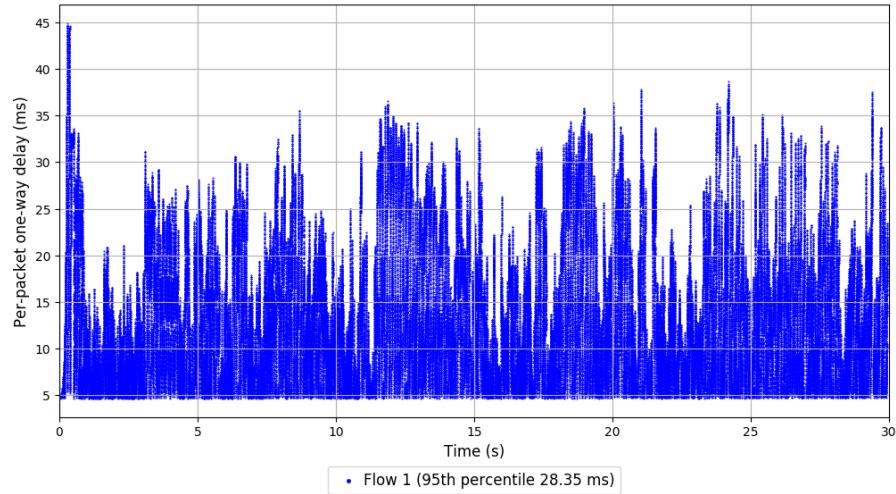
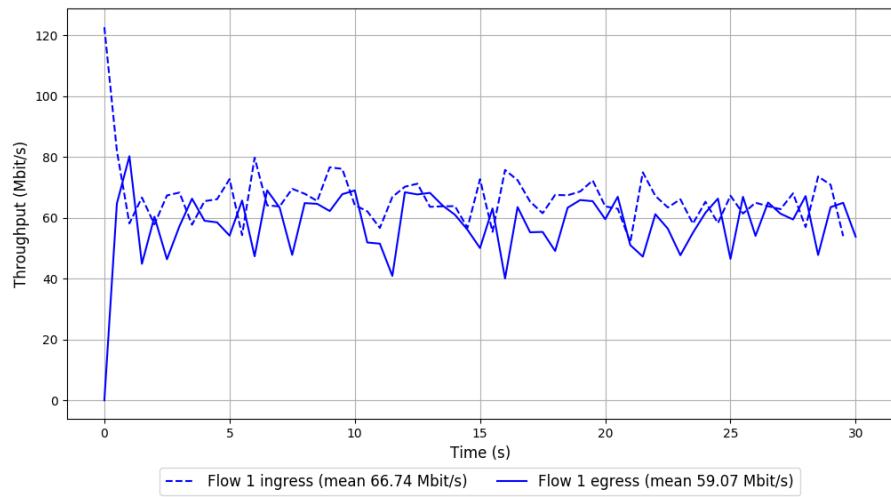


Run 4: Statistics of Verus

```
Start at: 2018-10-26 00:38:23
End at: 2018-10-26 00:38:53
Local clock offset: 0.653 ms
Remote clock offset: -4.156 ms

# Below is generated by plot.py at 2018-10-26 01:23:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 59.07 Mbit/s
95th percentile per-packet one-way delay: 28.353 ms
Loss rate: 11.48%
-- Flow 1:
Average throughput: 59.07 Mbit/s
95th percentile per-packet one-way delay: 28.353 ms
Loss rate: 11.48%
```

Run 4: Report of Verus — Data Link

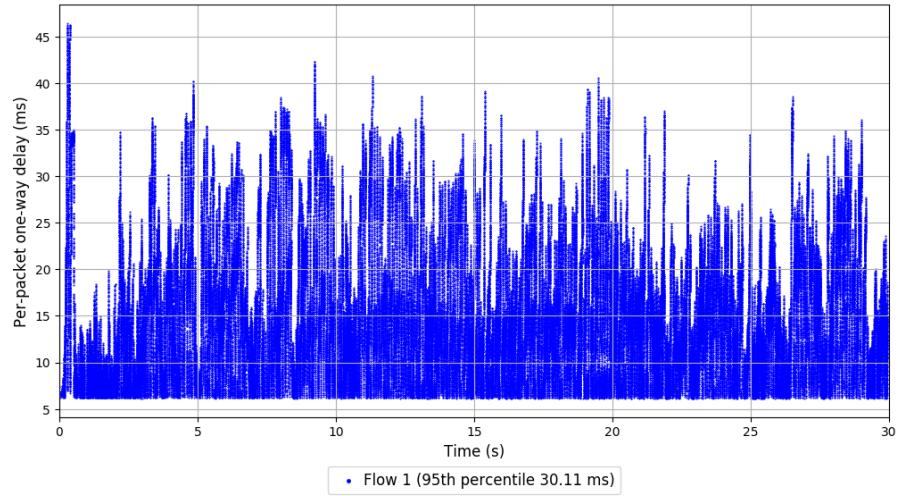
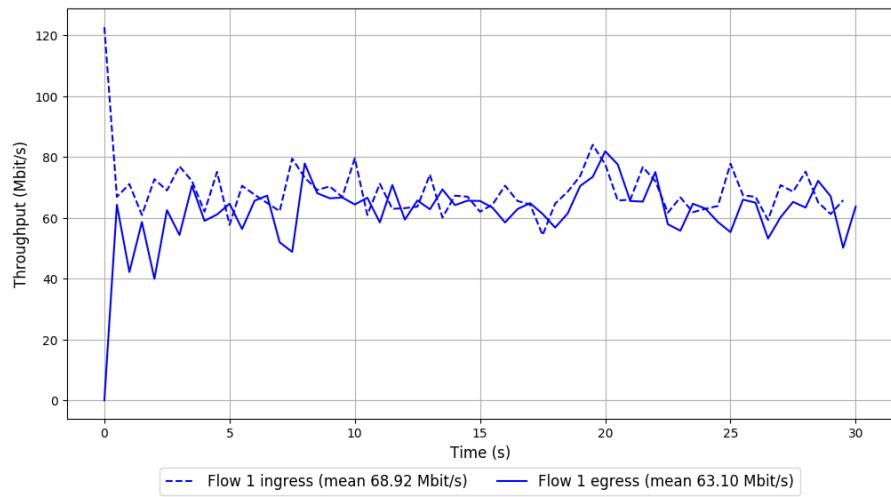


Run 5: Statistics of Verus

```
Start at: 2018-10-26 00:59:22
End at: 2018-10-26 00:59:53
Local clock offset: 0.097 ms
Remote clock offset: -3.901 ms

# Below is generated by plot.py at 2018-10-26 01:23:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.10 Mbit/s
95th percentile per-packet one-way delay: 30.109 ms
Loss rate: 8.43%
-- Flow 1:
Average throughput: 63.10 Mbit/s
95th percentile per-packet one-way delay: 30.109 ms
Loss rate: 8.43%
```

Run 5: Report of Verus — Data Link

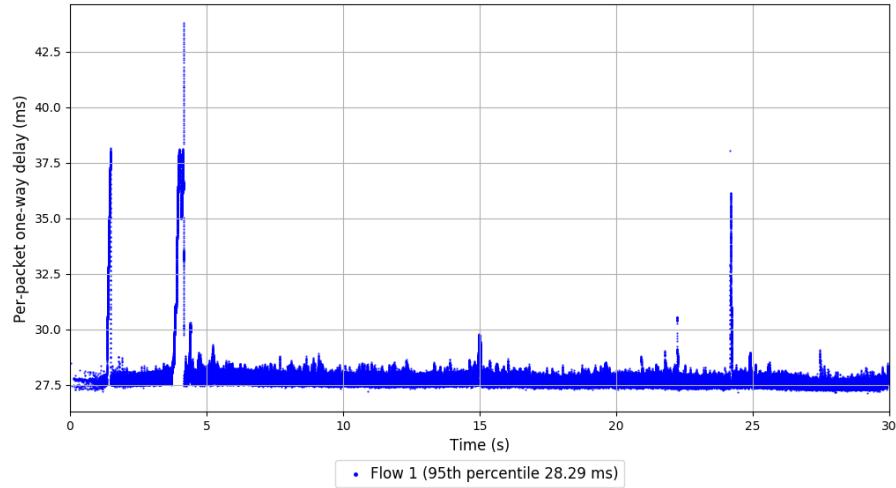
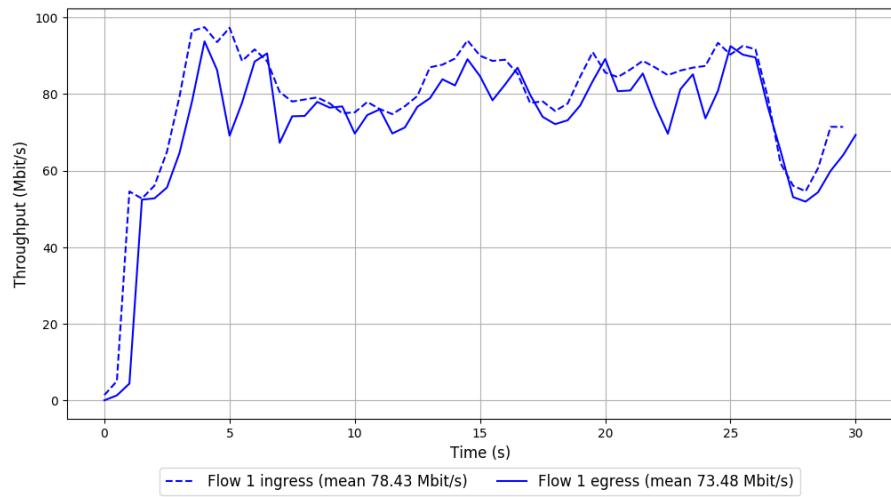


Run 1: Statistics of PCC-Vivace

```
Start at: 2018-10-25 23:40:42
End at: 2018-10-25 23:41:12
Local clock offset: -4.139 ms
Remote clock offset: -3.772 ms

# Below is generated by plot.py at 2018-10-26 01:23:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.48 Mbit/s
95th percentile per-packet one-way delay: 28.293 ms
Loss rate: 6.31%
-- Flow 1:
Average throughput: 73.48 Mbit/s
95th percentile per-packet one-way delay: 28.293 ms
Loss rate: 6.31%
```

Run 1: Report of PCC-Vivace — Data Link

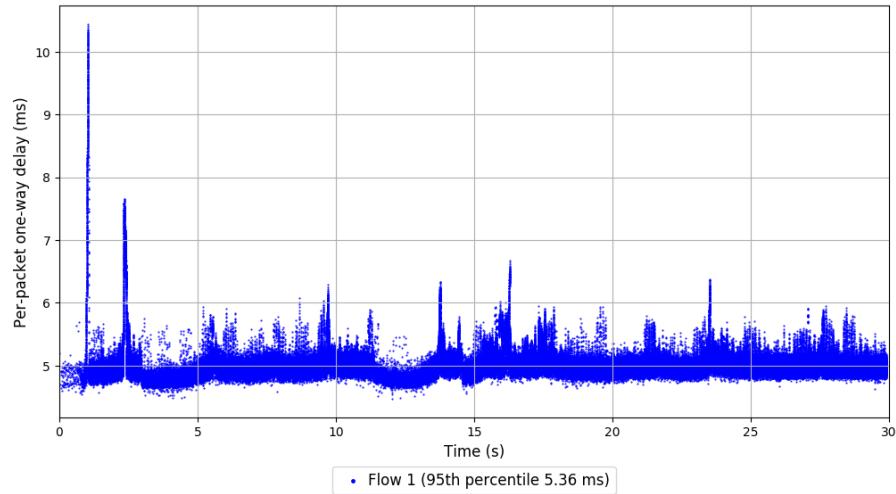
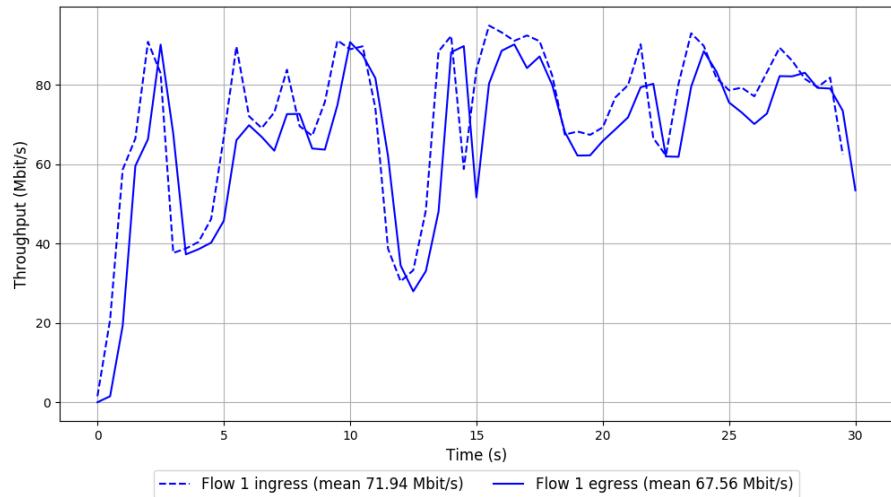


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-10-26 00:01:19
End at: 2018-10-26 00:01:49
Local clock offset: 1.618 ms
Remote clock offset: -3.911 ms

# Below is generated by plot.py at 2018-10-26 01:23:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.56 Mbit/s
95th percentile per-packet one-way delay: 5.356 ms
Loss rate: 6.09%
-- Flow 1:
Average throughput: 67.56 Mbit/s
95th percentile per-packet one-way delay: 5.356 ms
Loss rate: 6.09%
```

Run 2: Report of PCC-Vivace — Data Link

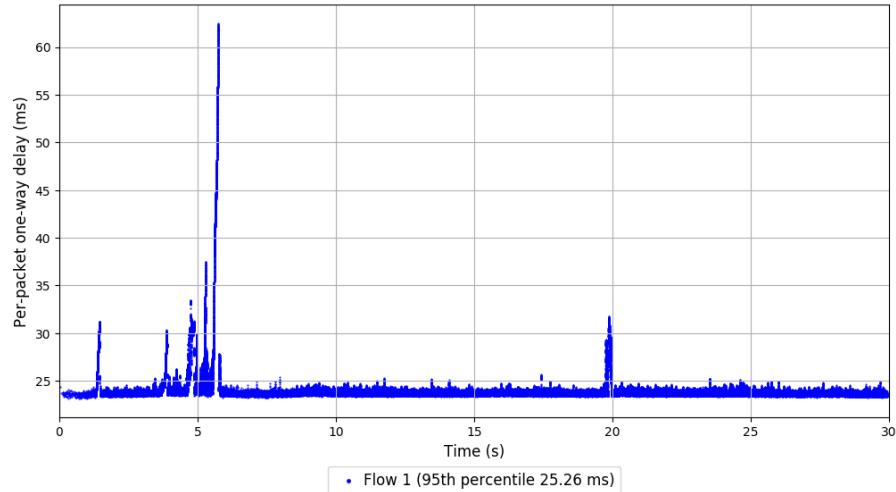
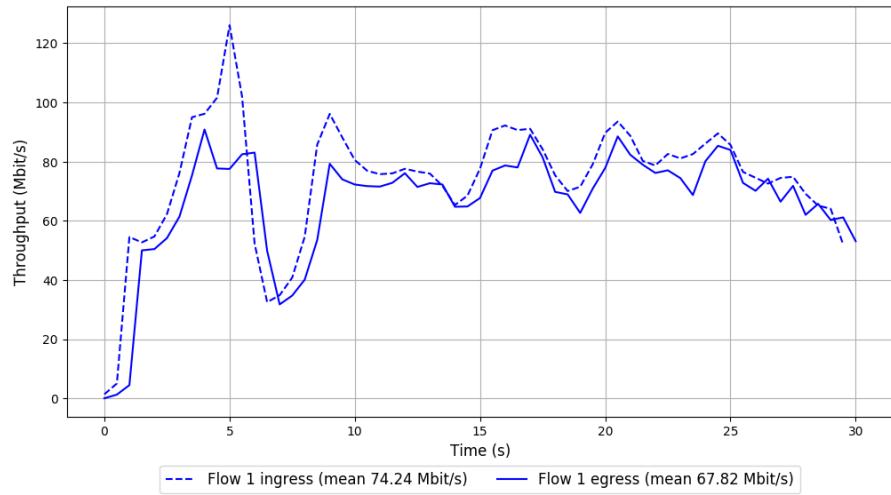


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-10-26 00:22:18
End at: 2018-10-26 00:22:48
Local clock offset: -0.756 ms
Remote clock offset: -4.656 ms

# Below is generated by plot.py at 2018-10-26 01:23:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.82 Mbit/s
95th percentile per-packet one-way delay: 25.259 ms
Loss rate: 8.65%
-- Flow 1:
Average throughput: 67.82 Mbit/s
95th percentile per-packet one-way delay: 25.259 ms
Loss rate: 8.65%
```

Run 3: Report of PCC-Vivace — Data Link

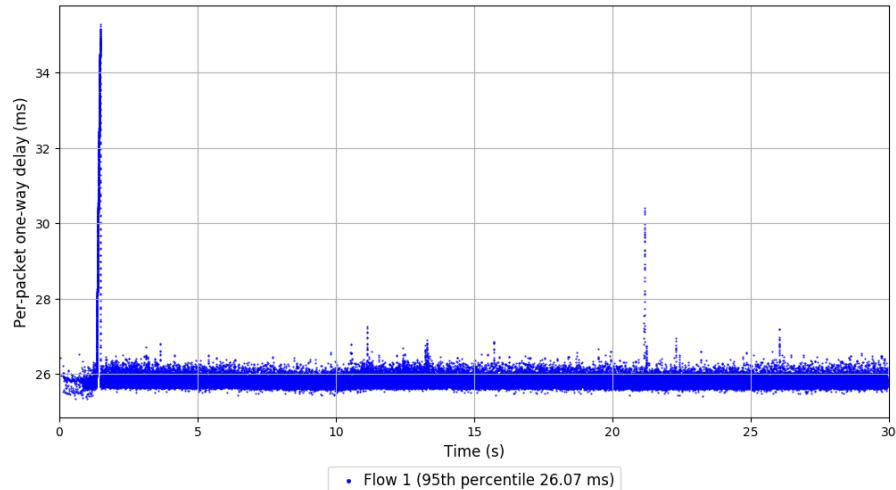
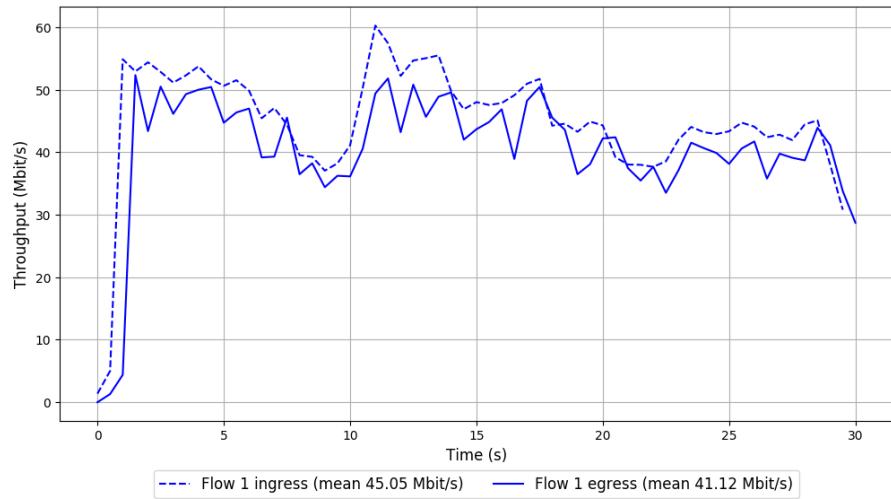


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-10-26 00:43:17
End at: 2018-10-26 00:43:47
Local clock offset: -0.524 ms
Remote clock offset: -4.076 ms

# Below is generated by plot.py at 2018-10-26 01:23:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 41.12 Mbit/s
95th percentile per-packet one-way delay: 26.068 ms
Loss rate: 8.73%
-- Flow 1:
Average throughput: 41.12 Mbit/s
95th percentile per-packet one-way delay: 26.068 ms
Loss rate: 8.73%
```

Run 4: Report of PCC-Vivace — Data Link

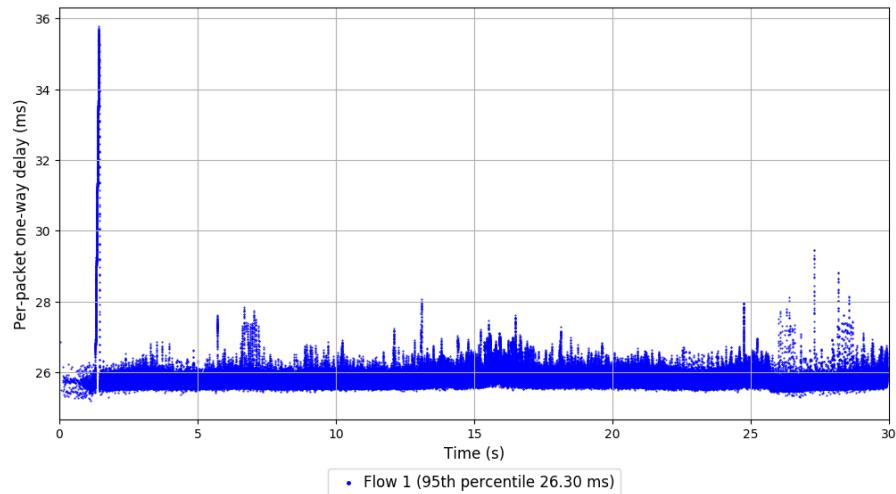
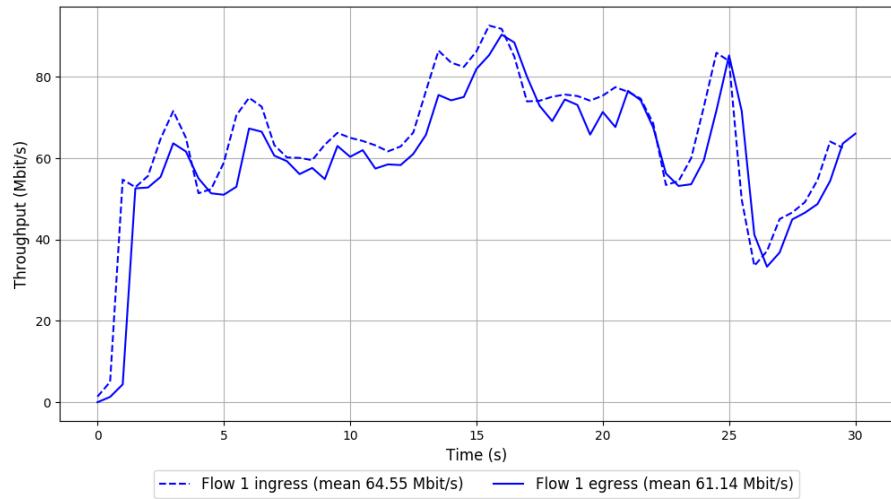


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-10-26 01:04:04
End at: 2018-10-26 01:04:34
Local clock offset: 0.376 ms
Remote clock offset: -3.507 ms

# Below is generated by plot.py at 2018-10-26 01:23:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.14 Mbit/s
95th percentile per-packet one-way delay: 26.296 ms
Loss rate: 5.29%
-- Flow 1:
Average throughput: 61.14 Mbit/s
95th percentile per-packet one-way delay: 26.296 ms
Loss rate: 5.29%
```

Run 5: Report of PCC-Vivace — Data Link

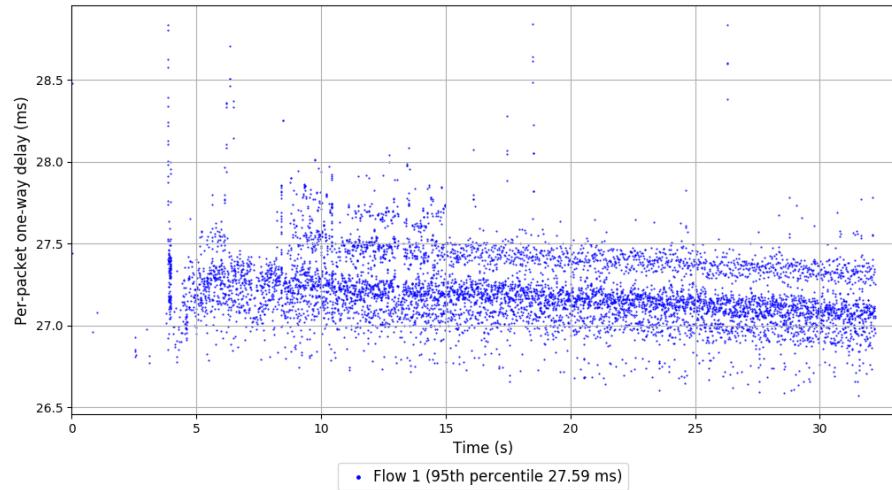
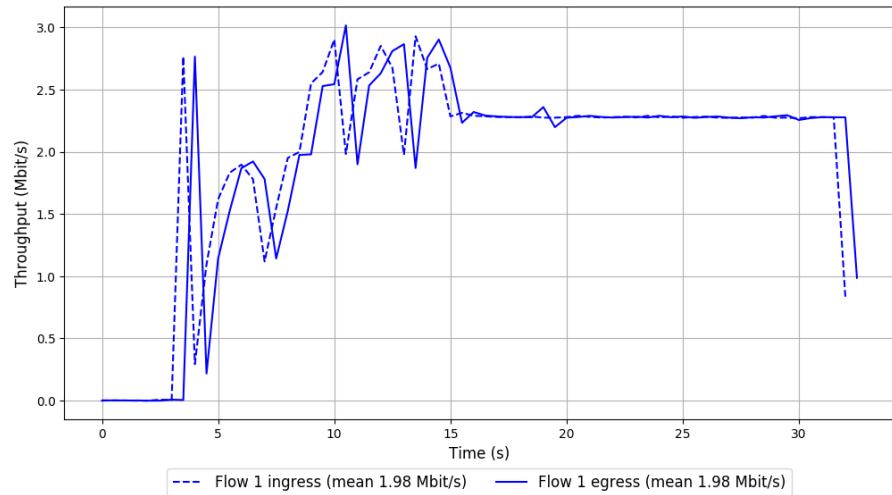


```
Run 1: Statistics of WebRTC media

Start at: 2018-10-25 23:41:54
End at: 2018-10-25 23:42:24
Local clock offset: -5.425 ms
Remote clock offset: -4.988 ms

# Below is generated by plot.py at 2018-10-26 01:23:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 27.586 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 27.586 ms
Loss rate: 0.02%
```

Run 1: Report of WebRTC media — Data Link

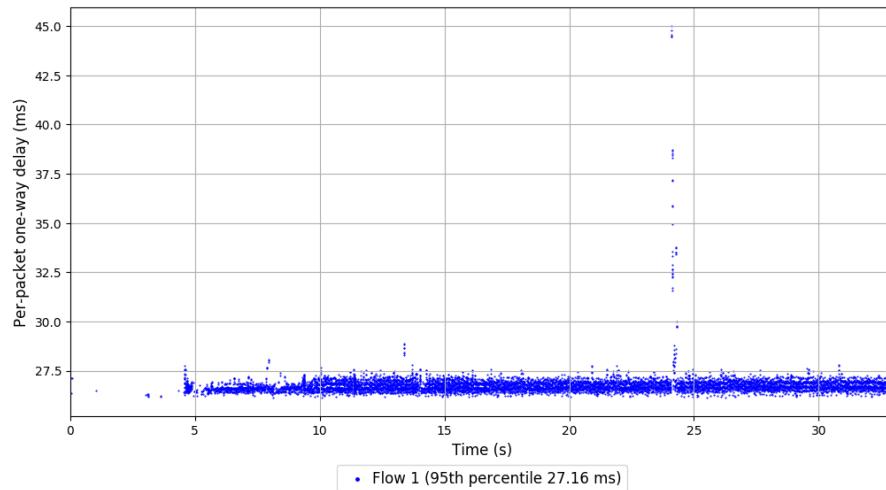
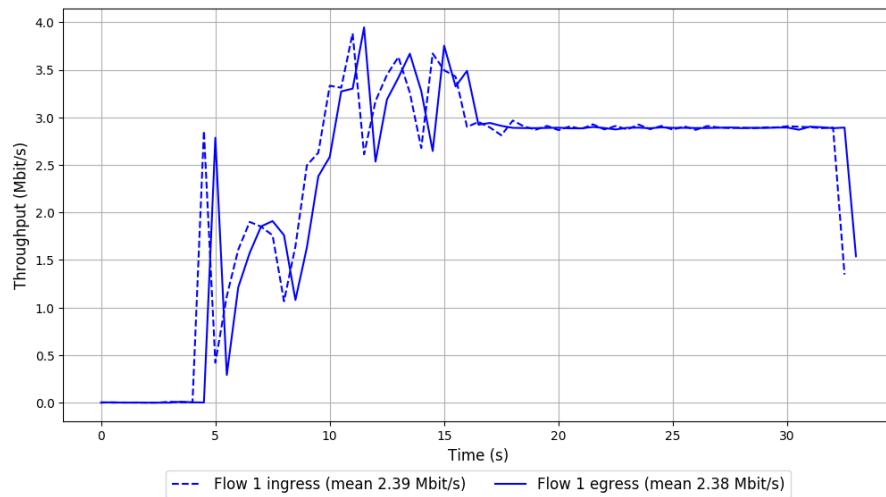


Run 2: Statistics of WebRTC media

```
Start at: 2018-10-26 00:02:31
End at: 2018-10-26 00:03:01
Local clock offset: -1.393 ms
Remote clock offset: -4.249 ms

# Below is generated by plot.py at 2018-10-26 01:23:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 27.158 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 27.158 ms
Loss rate: 0.18%
```

Run 2: Report of WebRTC media — Data Link

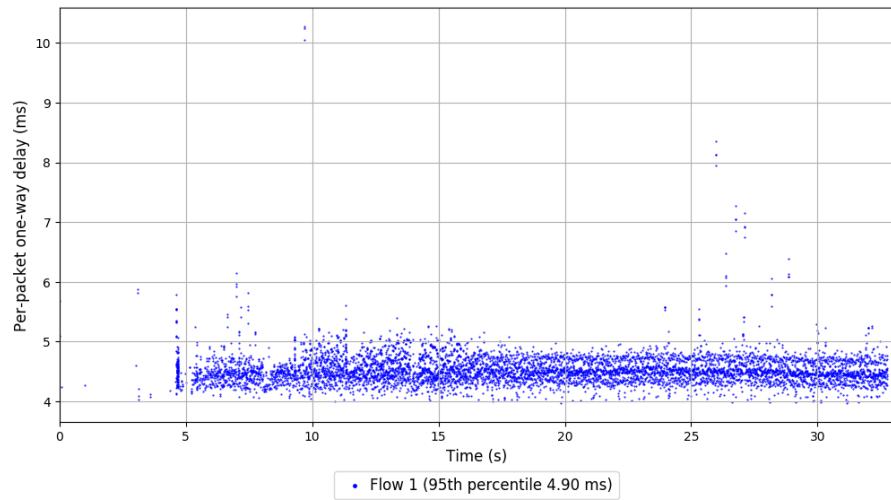
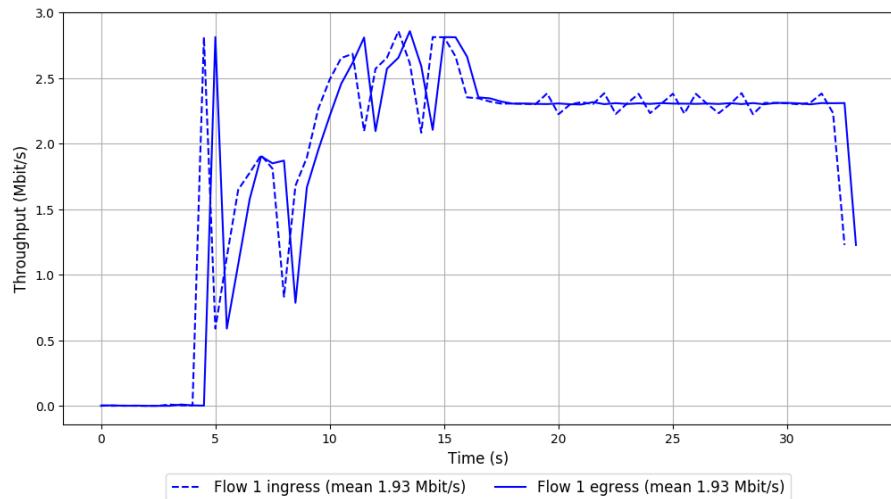


Run 3: Statistics of WebRTC media

```
Start at: 2018-10-26 00:23:31
End at: 2018-10-26 00:24:01
Local clock offset: -0.38 ms
Remote clock offset: -4.222 ms

# Below is generated by plot.py at 2018-10-26 01:23:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 4.899 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 4.899 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

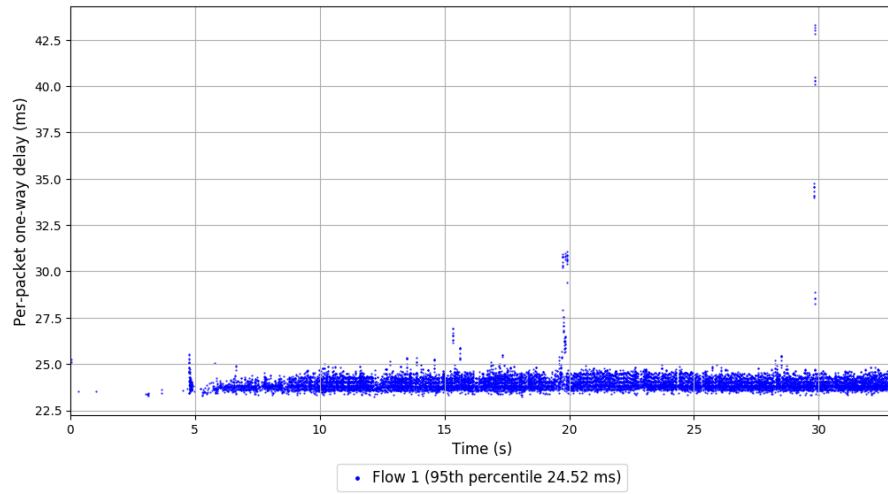
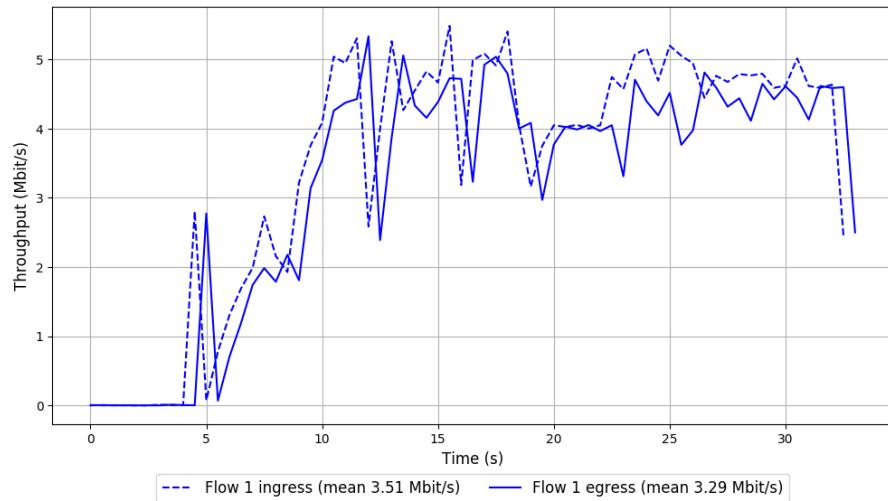


Run 4: Statistics of WebRTC media

```
Start at: 2018-10-26 00:44:30
End at: 2018-10-26 00:45:00
Local clock offset: 1.983 ms
Remote clock offset: -3.696 ms

# Below is generated by plot.py at 2018-10-26 01:23:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.29 Mbit/s
95th percentile per-packet one-way delay: 24.522 ms
Loss rate: 6.43%
-- Flow 1:
Average throughput: 3.29 Mbit/s
95th percentile per-packet one-way delay: 24.522 ms
Loss rate: 6.43%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-10-26 01:05:15
End at: 2018-10-26 01:05:45
Local clock offset: 1.164 ms
Remote clock offset: -3.344 ms

# Below is generated by plot.py at 2018-10-26 01:23:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 25.789 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 25.789 ms
Loss rate: 0.41%
```

Run 5: Report of WebRTC media — Data Link

