

Pantheon Report

Generated at 2018-12-11 00:26:44 (UTC).
Data path: AWS India 2 on `ens5` (*local*) → Stanford on `eno1` (*remote*).
Repeated the test of 19 congestion control schemes 5 times.
Each test lasted for 30 seconds running 1 flow.
NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.

System info:

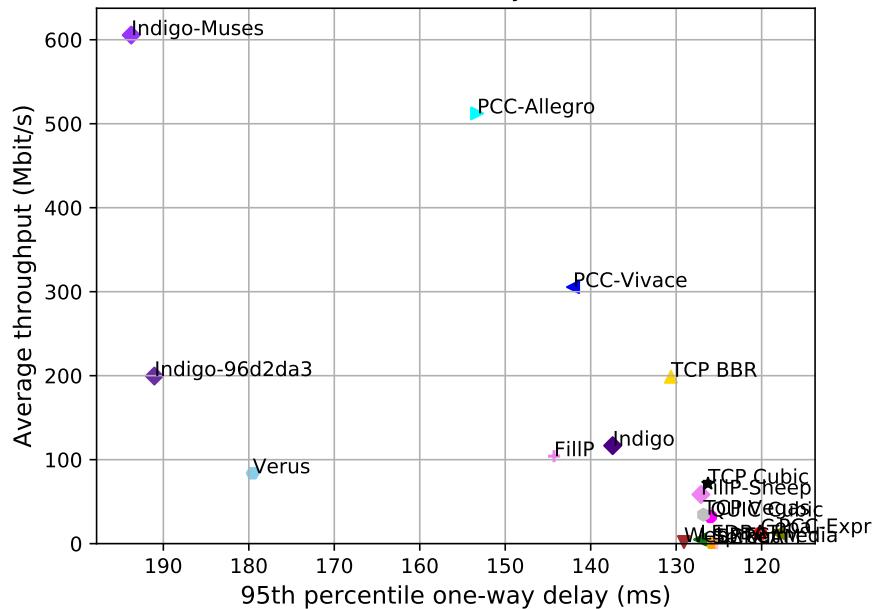
```
Linux 4.15.0-1029-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

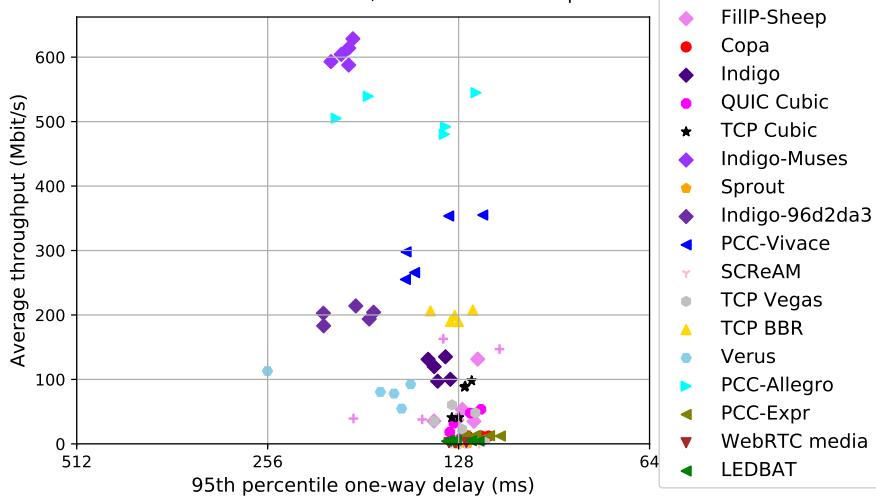
```
branch: muses @ c6268d7c473682290bfe9901ef81a6b6a1e51d3c
third_party/fillp @ d6da1459332fce56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fc45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from AWS India 2 to Stanford, 5 runs of 30s each per scheme
(mean of all runs by scheme)



test from AWS India 2 to Stanford, 5 runs of 30s each per scheme



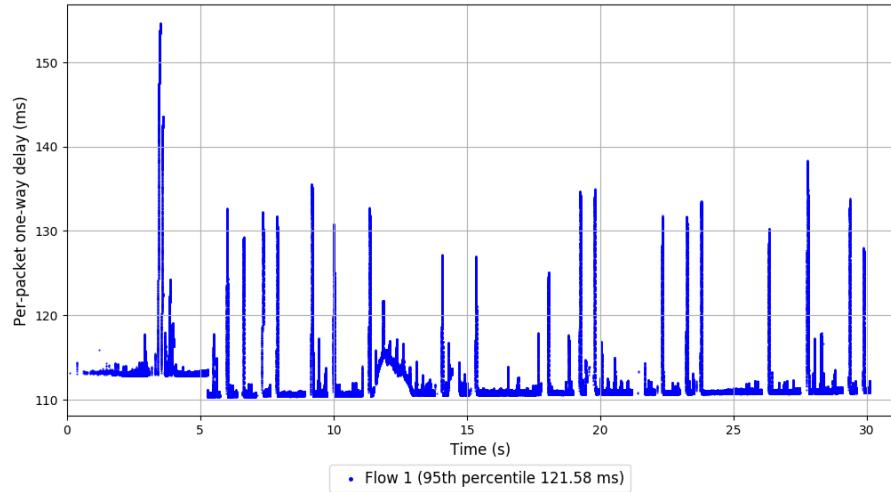
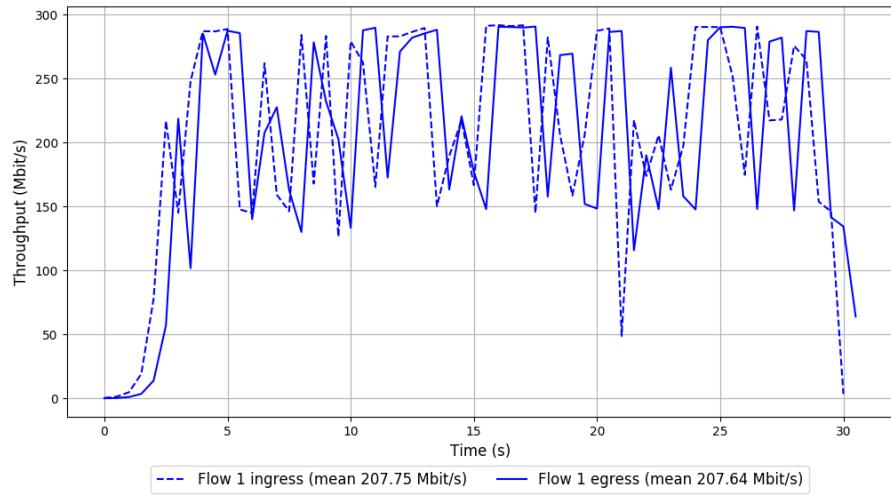
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	198.69	130.61	0.12
Copa	4	12.07	120.15	67.83
TCP Cubic	5	71.46	126.27	0.03
FillP	5	104.11	144.29	2.25
FillP-Sheep	5	58.53	127.10	3.06
Indigo	5	116.70	137.43	0.06
Indigo-96d2da3	5	199.57	191.05	10.81
LEDBAT	5	4.96	127.21	0.01
Indigo-Muses	5	605.54	193.76	1.73
PCC-Allegro	5	512.26	153.29	2.98
PCC-Expr	5	12.48	118.06	30.74
QUIC Cubic	5	32.32	125.99	0.02
SCReAM	5	0.21	125.26	0.00
Sprout	5	0.67	125.79	0.08
TaoVA-100x	0	N/A	N/A	N/A
TCP Vegas	5	34.49	126.81	0.08
Verus	5	83.78	179.54	8.94
PCC-Vivace	5	305.50	142.07	0.37
WebRTC media	5	1.89	129.09	0.01

Run 1: Statistics of TCP BBR

```
Start at: 2018-12-10 22:01:06
End at: 2018-12-10 22:01:36
Local clock offset: -9.239 ms
Remote clock offset: 2.697 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 207.64 Mbit/s
95th percentile per-packet one-way delay: 121.584 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 207.64 Mbit/s
95th percentile per-packet one-way delay: 121.584 ms
Loss rate: 0.06%
```

Run 1: Report of TCP BBR — Data Link

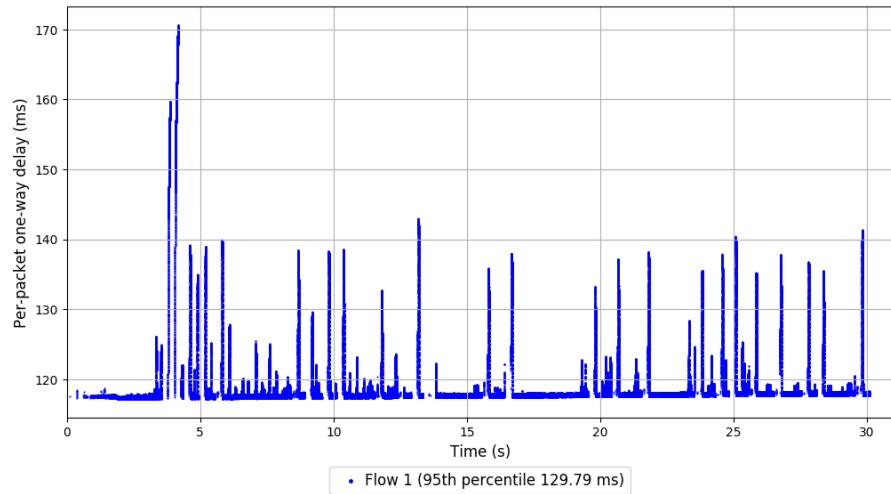
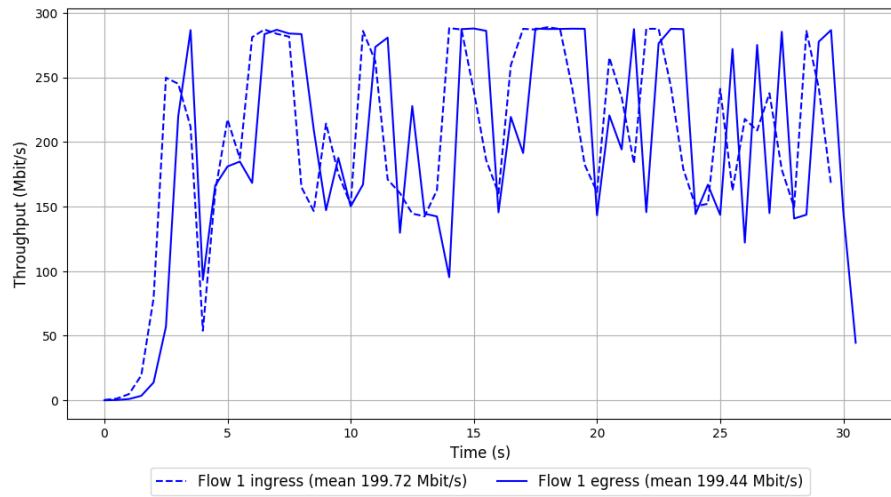


Run 2: Statistics of TCP BBR

```
Start at: 2018-12-10 22:27:46
End at: 2018-12-10 22:28:16
Local clock offset: -9.205 ms
Remote clock offset: 4.24 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 199.44 Mbit/s
95th percentile per-packet one-way delay: 129.792 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 199.44 Mbit/s
95th percentile per-packet one-way delay: 129.792 ms
Loss rate: 0.14%
```

Run 2: Report of TCP BBR — Data Link

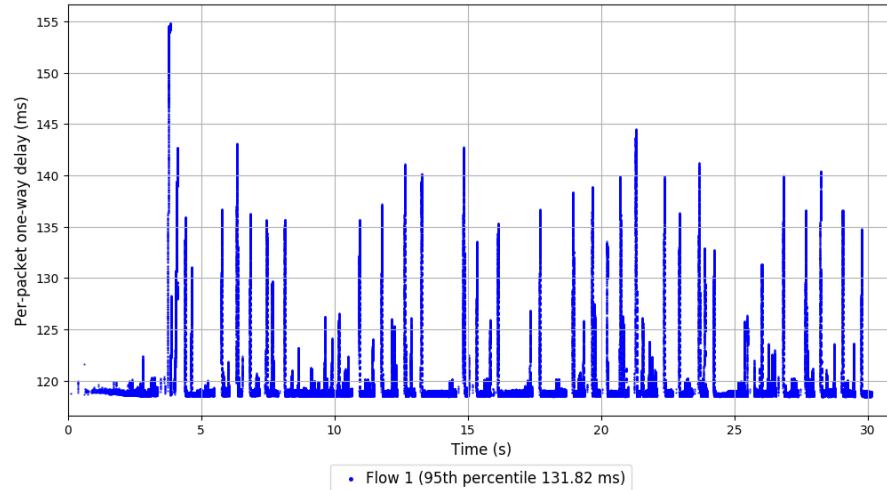
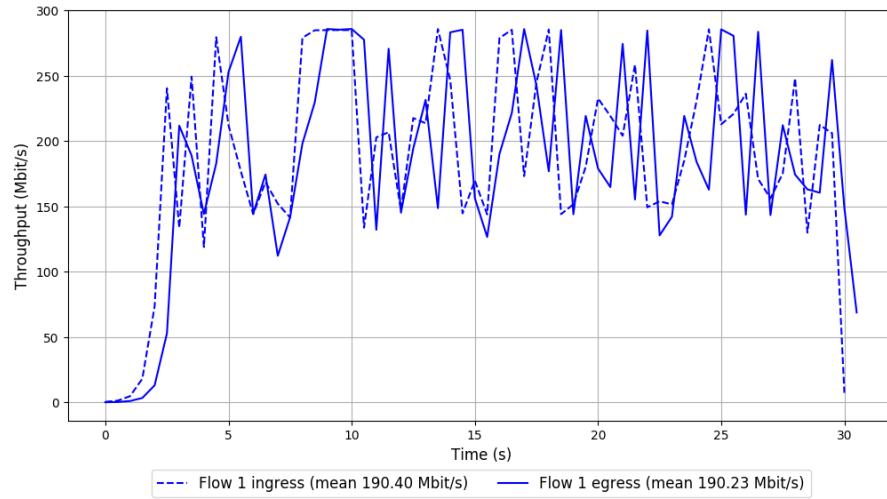


Run 3: Statistics of TCP BBR

```
Start at: 2018-12-10 22:54:34
End at: 2018-12-10 22:55:04
Local clock offset: -3.524 ms
Remote clock offset: 3.704 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 190.23 Mbit/s
95th percentile per-packet one-way delay: 131.822 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 190.23 Mbit/s
95th percentile per-packet one-way delay: 131.822 ms
Loss rate: 0.09%
```

Run 3: Report of TCP BBR — Data Link

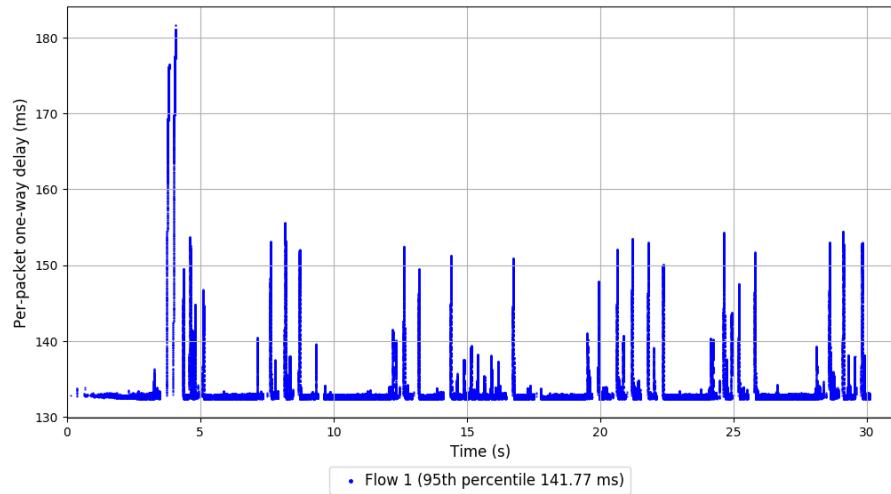
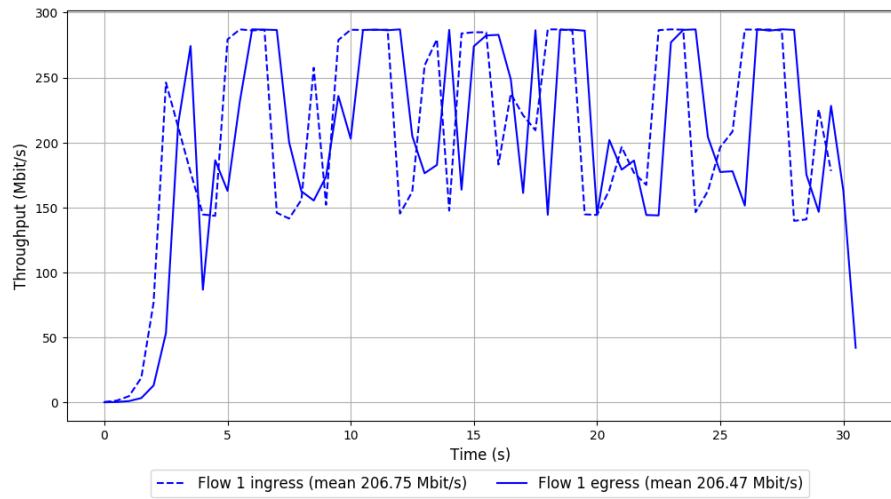


Run 4: Statistics of TCP BBR

```
Start at: 2018-12-10 23:21:11
End at: 2018-12-10 23:21:41
Local clock offset: -15.12 ms
Remote clock offset: 0.076 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.47 Mbit/s
95th percentile per-packet one-way delay: 141.769 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 206.47 Mbit/s
95th percentile per-packet one-way delay: 141.769 ms
Loss rate: 0.14%
```

Run 4: Report of TCP BBR — Data Link

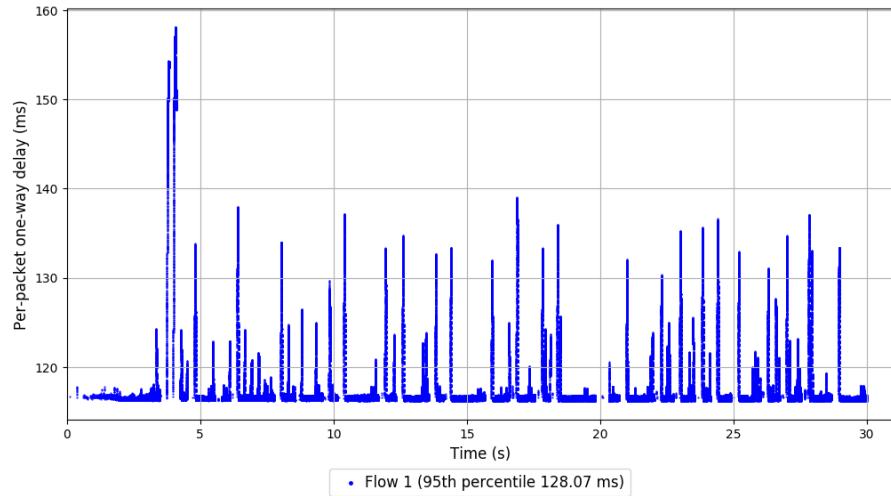
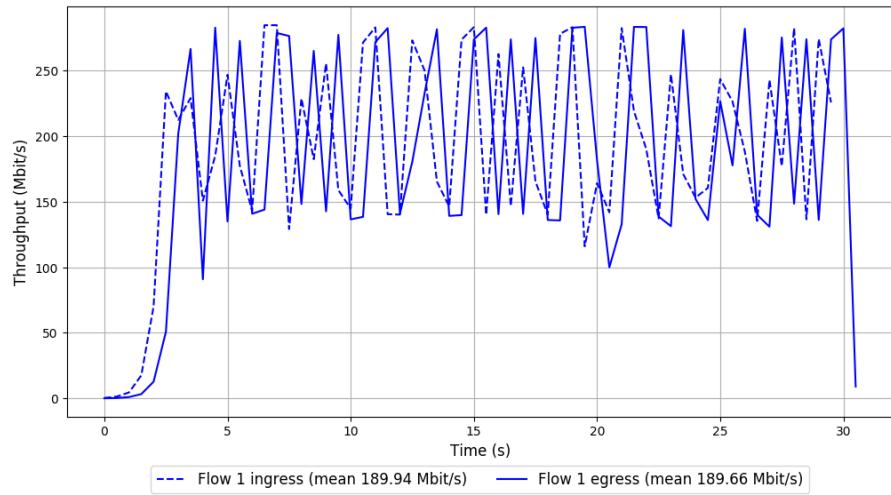


Run 5: Statistics of TCP BBR

```
Start at: 2018-12-10 23:47:53
End at: 2018-12-10 23:48:23
Local clock offset: 6.034 ms
Remote clock offset: 2.758 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 189.66 Mbit/s
95th percentile per-packet one-way delay: 128.067 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 189.66 Mbit/s
95th percentile per-packet one-way delay: 128.067 ms
Loss rate: 0.15%
```

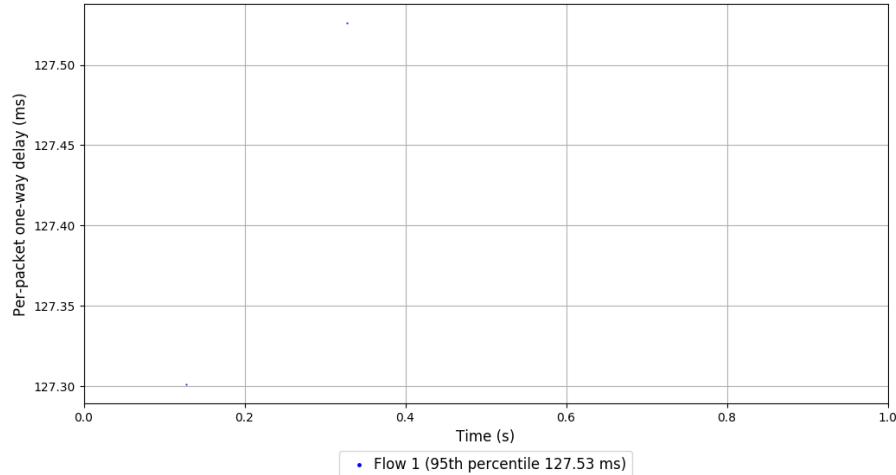
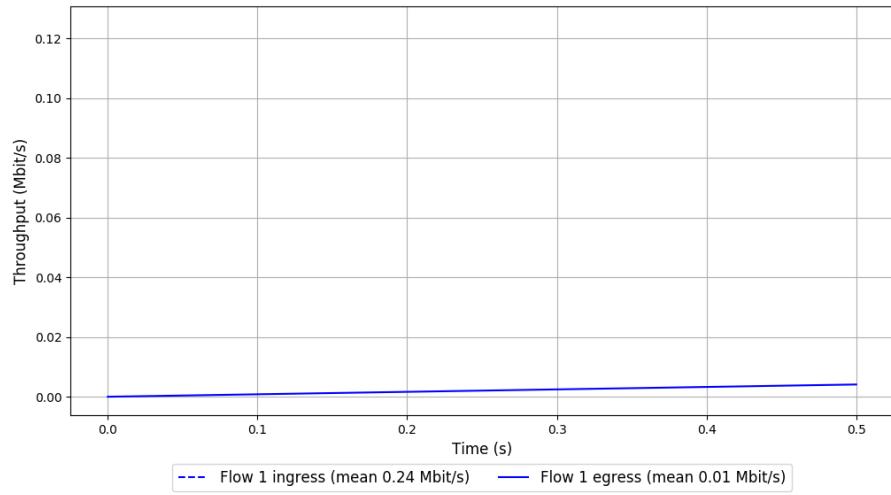
Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-12-10 21:54:26
End at: 2018-12-10 21:54:56
Local clock offset: -18.702 ms
Remote clock offset: 1.491 ms

Run 1: Report of Copa — Data Link

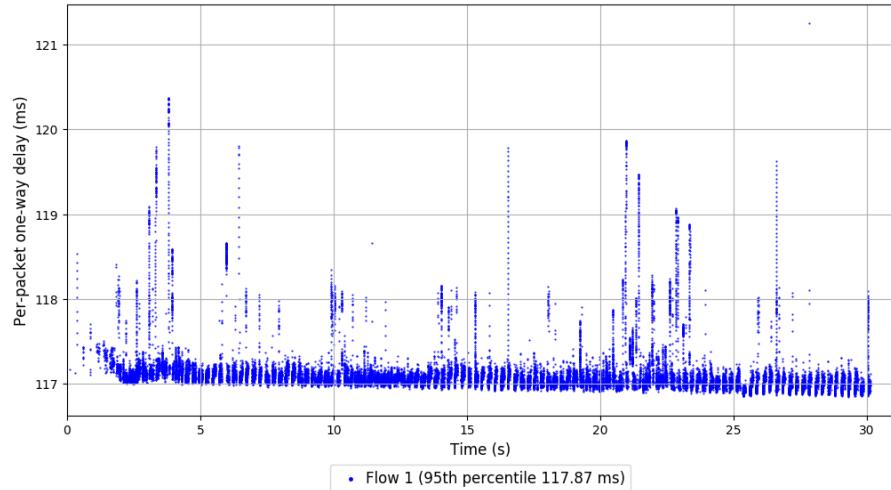
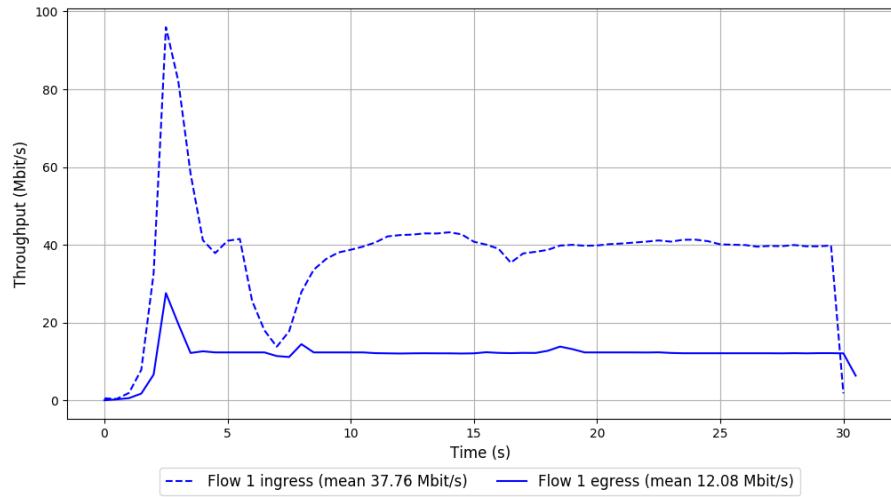


Run 2: Statistics of Copa

```
Start at: 2018-12-10 22:21:03
End at: 2018-12-10 22:21:33
Local clock offset: -10.925 ms
Remote clock offset: 4.585 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.08 Mbit/s
95th percentile per-packet one-way delay: 117.866 ms
Loss rate: 68.01%
-- Flow 1:
Average throughput: 12.08 Mbit/s
95th percentile per-packet one-way delay: 117.866 ms
Loss rate: 68.01%
```

Run 2: Report of Copa — Data Link

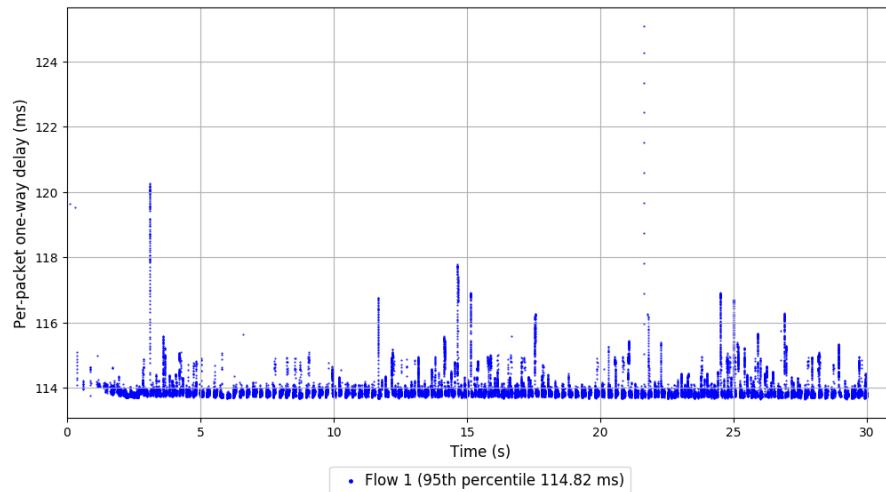
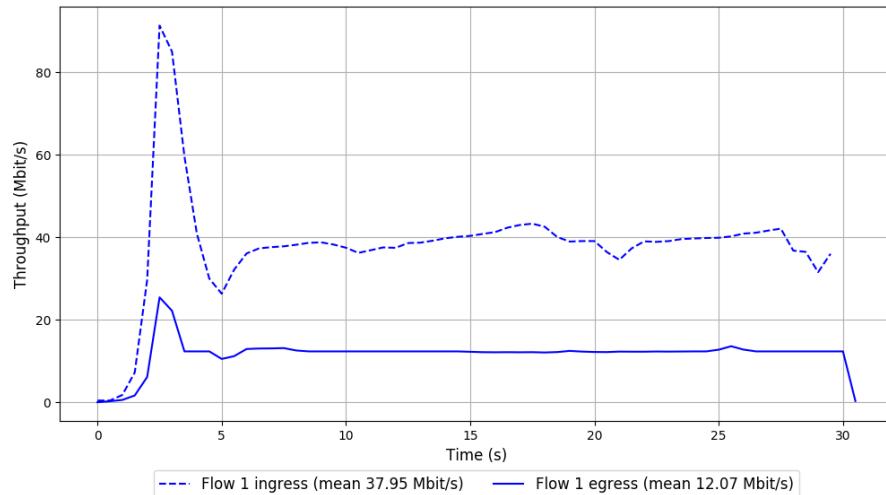


Run 3: Statistics of Copa

```
Start at: 2018-12-10 22:47:53
End at: 2018-12-10 22:48:23
Local clock offset: -2.585 ms
Remote clock offset: 3.456 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.07 Mbit/s
95th percentile per-packet one-way delay: 114.819 ms
Loss rate: 68.20%
-- Flow 1:
Average throughput: 12.07 Mbit/s
95th percentile per-packet one-way delay: 114.819 ms
Loss rate: 68.20%
```

Run 3: Report of Copa — Data Link

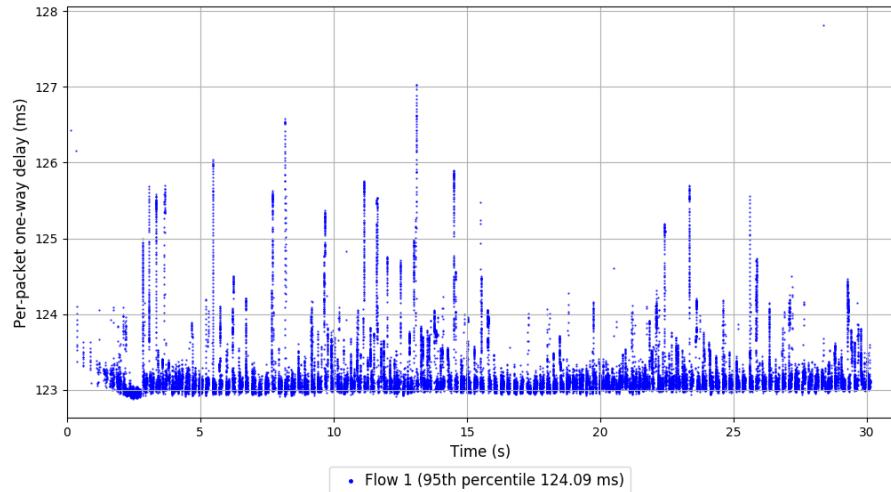
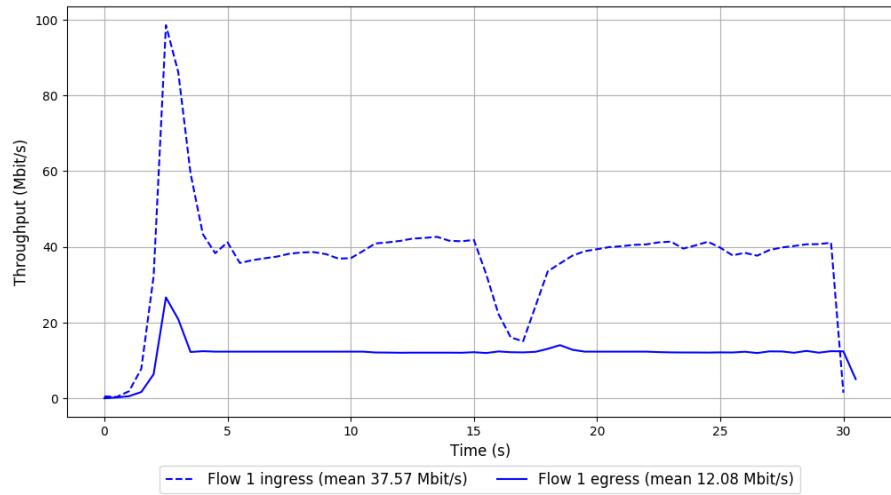


Run 4: Statistics of Copa

```
Start at: 2018-12-10 23:14:26
End at: 2018-12-10 23:14:56
Local clock offset: -8.506 ms
Remote clock offset: 0.555 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.08 Mbit/s
95th percentile per-packet one-way delay: 124.095 ms
Loss rate: 67.85%
-- Flow 1:
Average throughput: 12.08 Mbit/s
95th percentile per-packet one-way delay: 124.095 ms
Loss rate: 67.85%
```

Run 4: Report of Copa — Data Link

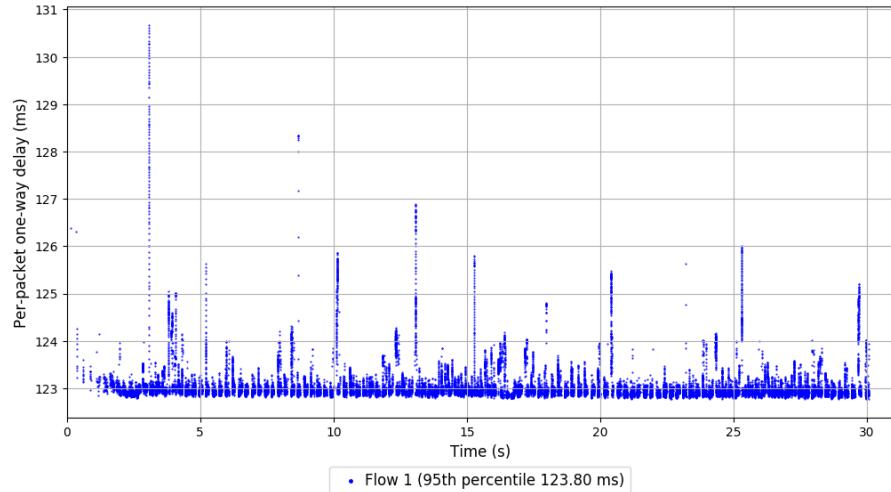
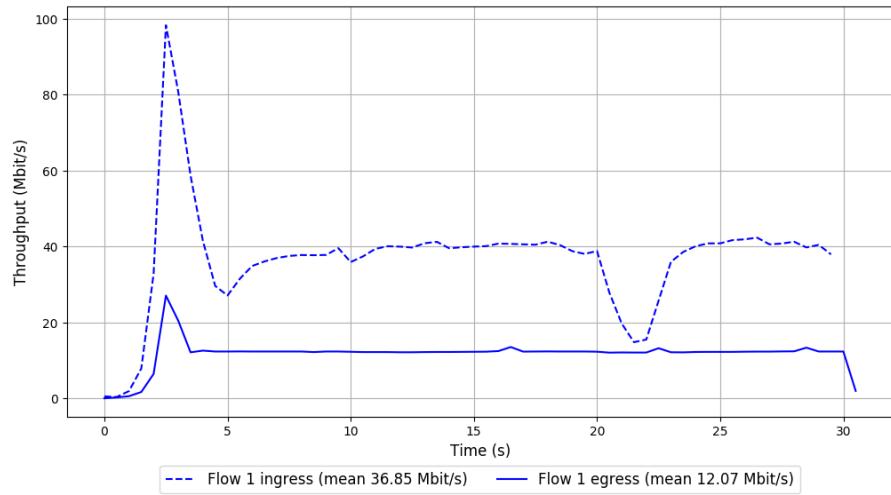


Run 5: Statistics of Copa

```
Start at: 2018-12-10 23:41:12
End at: 2018-12-10 23:41:42
Local clock offset: -5.614 ms
Remote clock offset: 2.049 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.07 Mbit/s
95th percentile per-packet one-way delay: 123.802 ms
Loss rate: 67.24%
-- Flow 1:
Average throughput: 12.07 Mbit/s
95th percentile per-packet one-way delay: 123.802 ms
Loss rate: 67.24%
```

Run 5: Report of Copa — Data Link

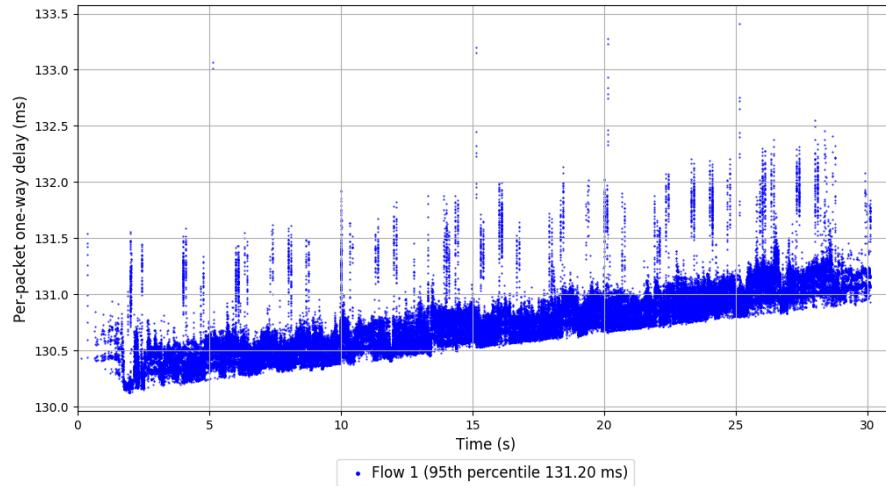
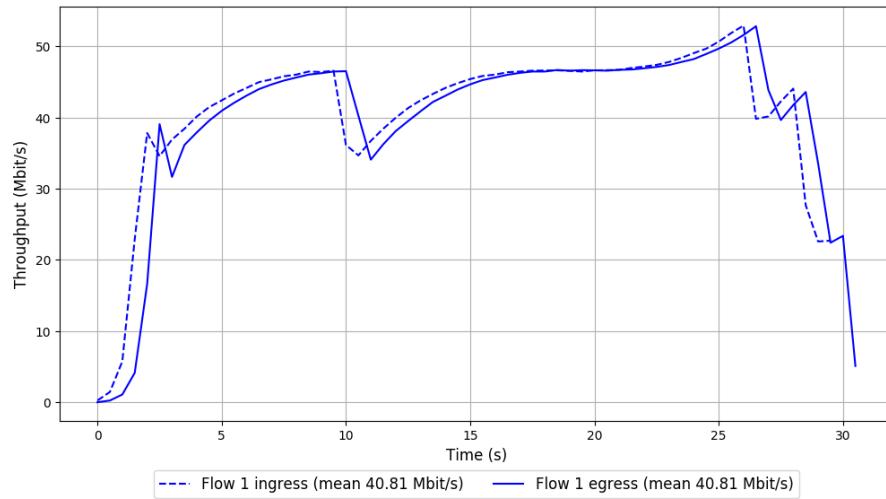


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-12-10 21:58:27
End at: 2018-12-10 21:58:57
Local clock offset: -26.989 ms
Remote clock offset: 2.296 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 40.81 Mbit/s
95th percentile per-packet one-way delay: 131.197 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 40.81 Mbit/s
95th percentile per-packet one-way delay: 131.197 ms
Loss rate: 0.01%
```

Run 1: Report of TCP Cubic — Data Link

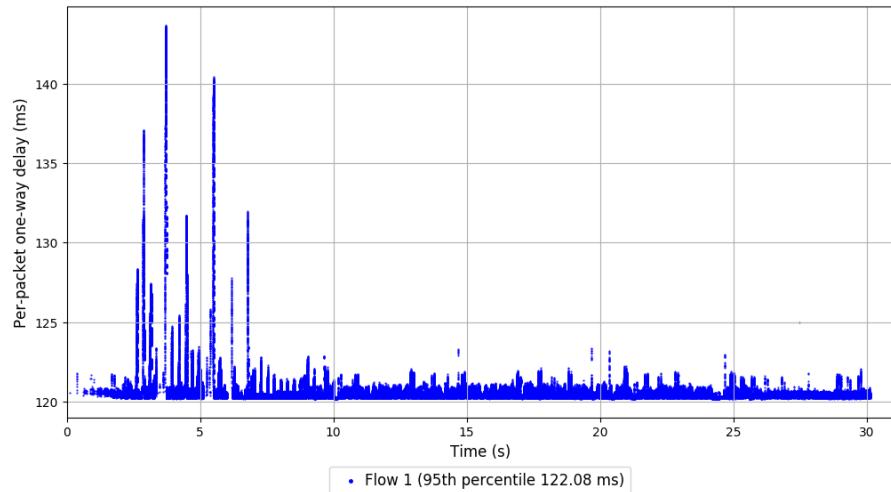
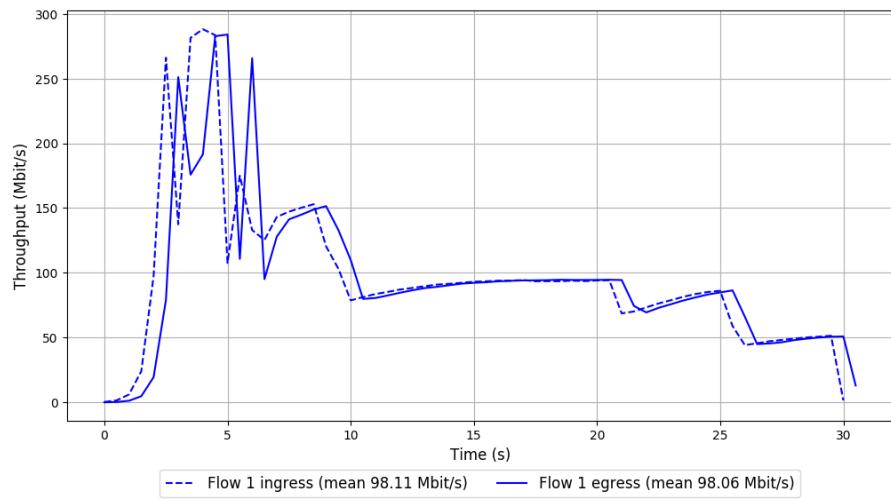


Run 2: Statistics of TCP Cubic

```
Start at: 2018-12-10 22:25:04
End at: 2018-12-10 22:25:34
Local clock offset: -12.607 ms
Remote clock offset: 4.674 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 98.06 Mbit/s
95th percentile per-packet one-way delay: 122.078 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 98.06 Mbit/s
95th percentile per-packet one-way delay: 122.078 ms
Loss rate: 0.05%
```

Run 2: Report of TCP Cubic — Data Link

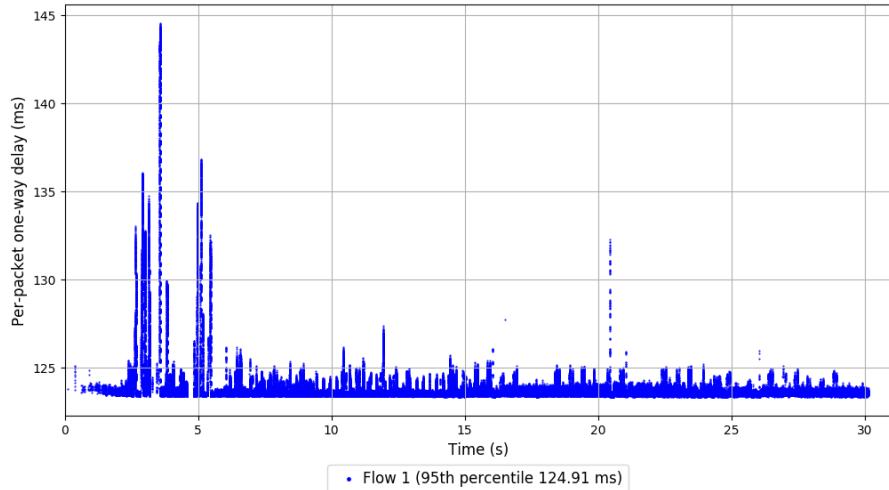
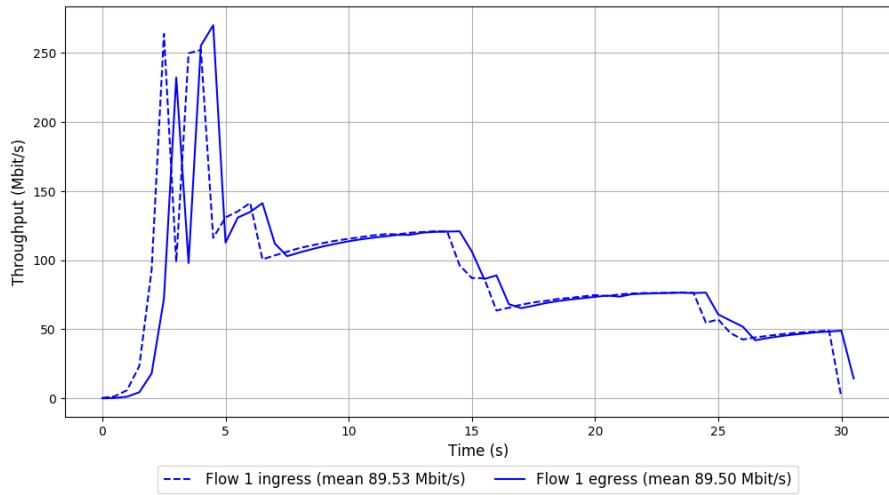


Run 3: Statistics of TCP Cubic

```
Start at: 2018-12-10 22:51:53
End at: 2018-12-10 22:52:23
Local clock offset: -9.925 ms
Remote clock offset: 3.573 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.50 Mbit/s
95th percentile per-packet one-way delay: 124.911 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 89.50 Mbit/s
95th percentile per-packet one-way delay: 124.911 ms
Loss rate: 0.03%
```

Run 3: Report of TCP Cubic — Data Link

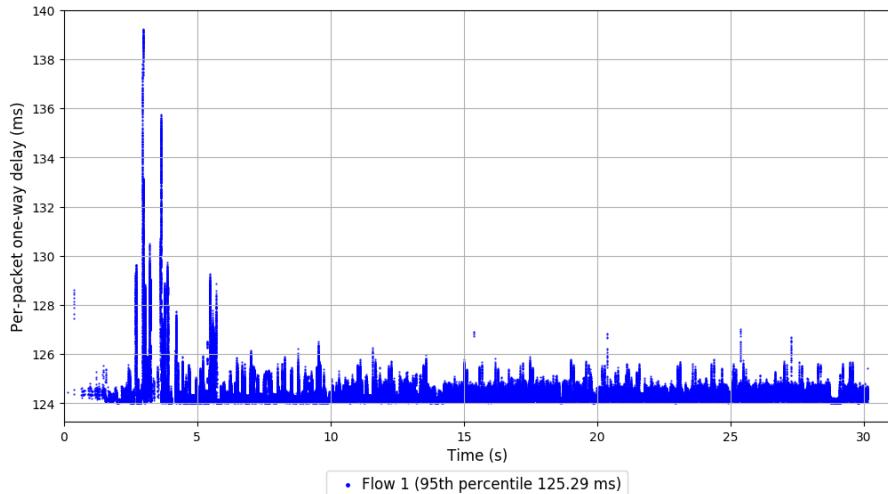
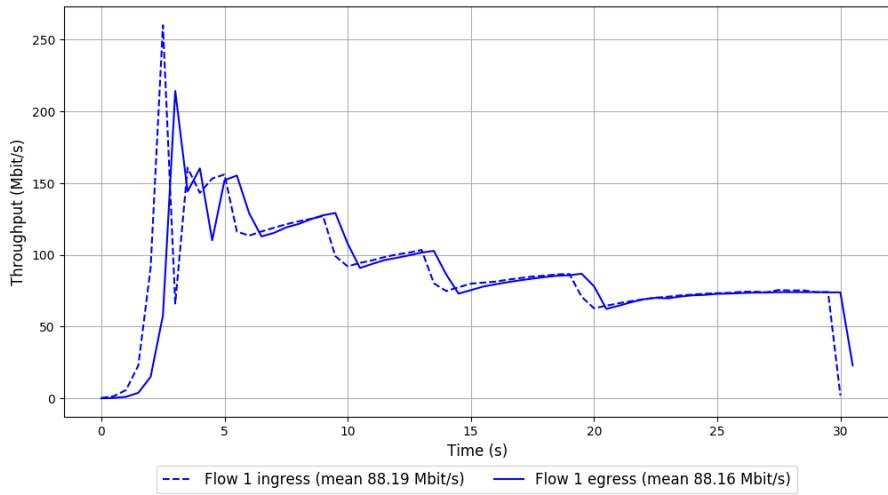


Run 4: Statistics of TCP Cubic

```
Start at: 2018-12-10 23:18:30
End at: 2018-12-10 23:19:00
Local clock offset: 0.584 ms
Remote clock offset: 0.264 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.16 Mbit/s
95th percentile per-packet one-way delay: 125.287 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 88.16 Mbit/s
95th percentile per-packet one-way delay: 125.287 ms
Loss rate: 0.04%
```

Run 4: Report of TCP Cubic — Data Link

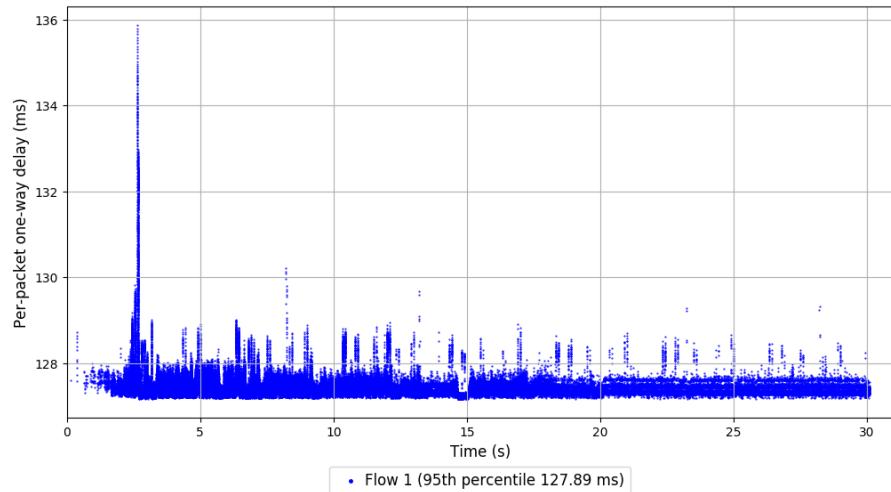
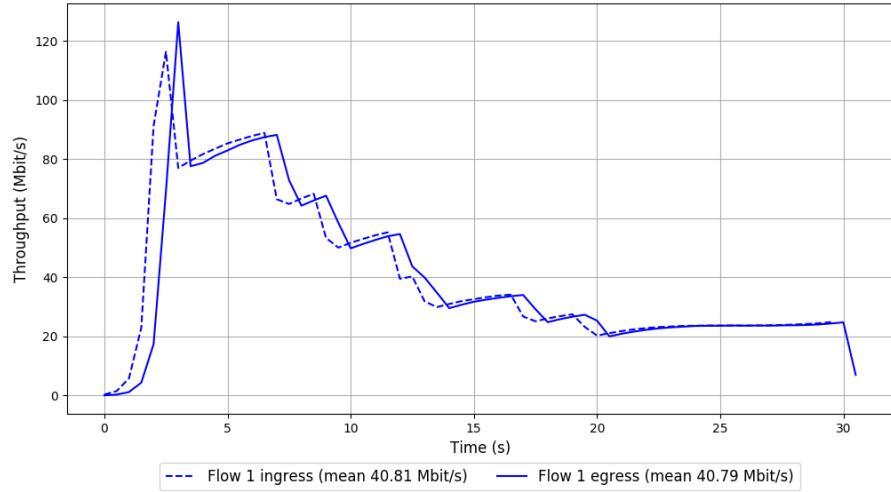


Run 5: Statistics of TCP Cubic

```
Start at: 2018-12-10 23:45:14
End at: 2018-12-10 23:45:44
Local clock offset: -4.382 ms
Remote clock offset: 2.515 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 40.79 Mbit/s
95th percentile per-packet one-way delay: 127.895 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 40.79 Mbit/s
95th percentile per-packet one-way delay: 127.895 ms
Loss rate: 0.04%
```

Run 5: Report of TCP Cubic — Data Link

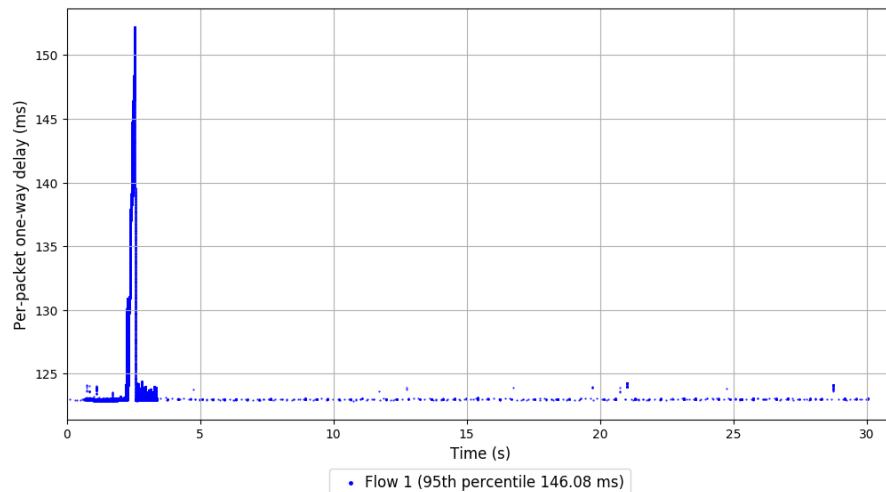
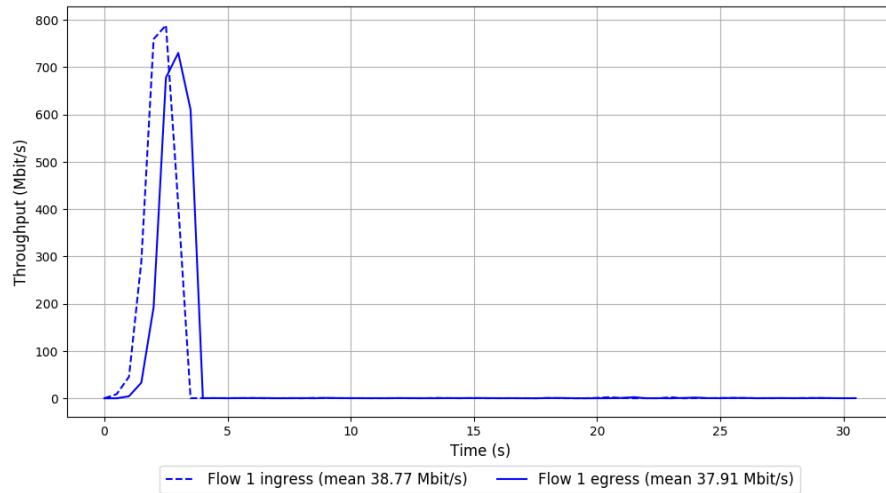


```
Run 1: Statistics of FillP

Start at: 2018-12-10 22:10:01
End at: 2018-12-10 22:10:31
Local clock offset: -16.438 ms
Remote clock offset: 3.648 ms

# Below is generated by plot.py at 2018-12-11 00:11:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 37.91 Mbit/s
95th percentile per-packet one-way delay: 146.080 ms
Loss rate: 2.23%
-- Flow 1:
Average throughput: 37.91 Mbit/s
95th percentile per-packet one-way delay: 146.080 ms
Loss rate: 2.23%
```

Run 1: Report of FillP — Data Link

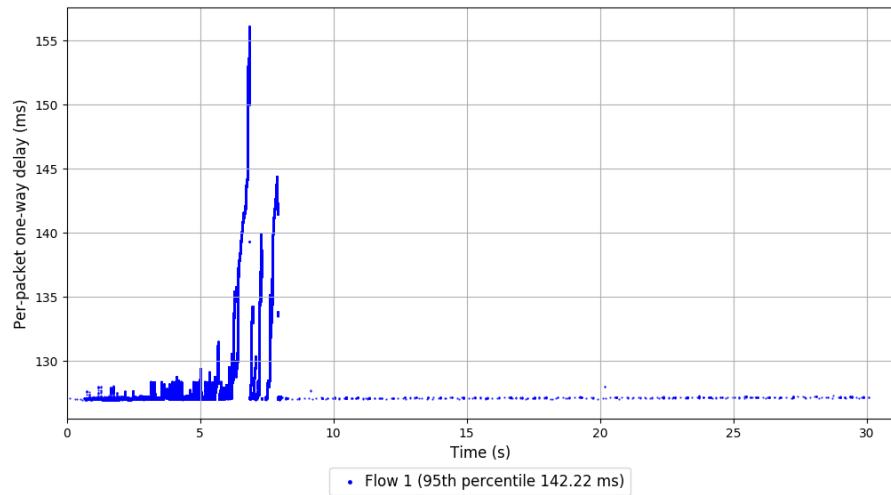
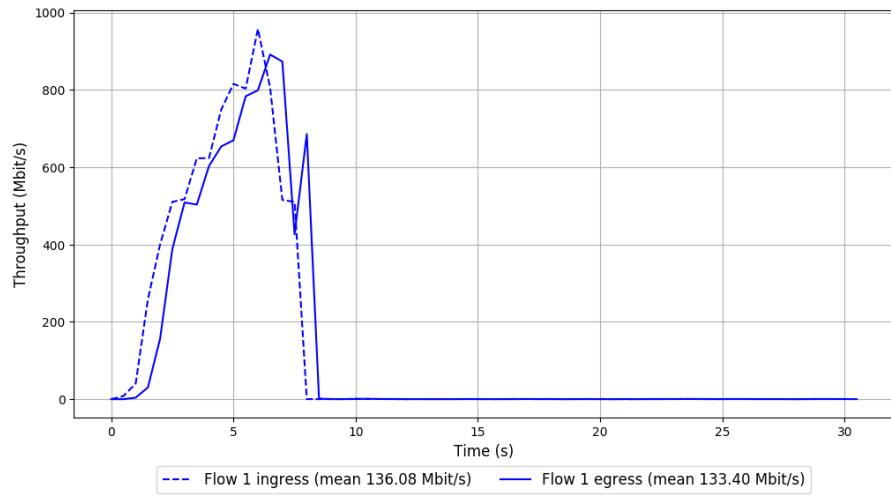


Run 2: Statistics of FillP

```
Start at: 2018-12-10 22:36:45
End at: 2018-12-10 22:37:15
Local clock offset: -9.879 ms
Remote clock offset: 3.464 ms

# Below is generated by plot.py at 2018-12-11 00:12:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 133.40 Mbit/s
95th percentile per-packet one-way delay: 142.220 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 133.40 Mbit/s
95th percentile per-packet one-way delay: 142.220 ms
Loss rate: 1.97%
```

Run 2: Report of FillP — Data Link

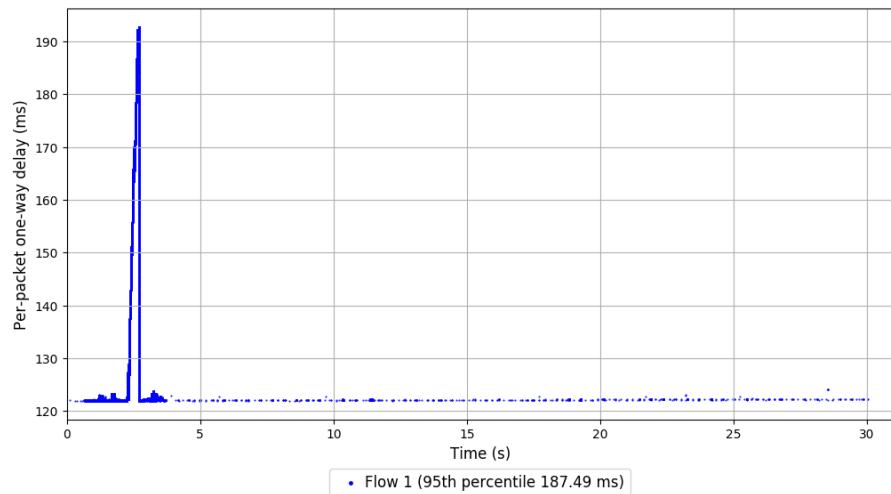
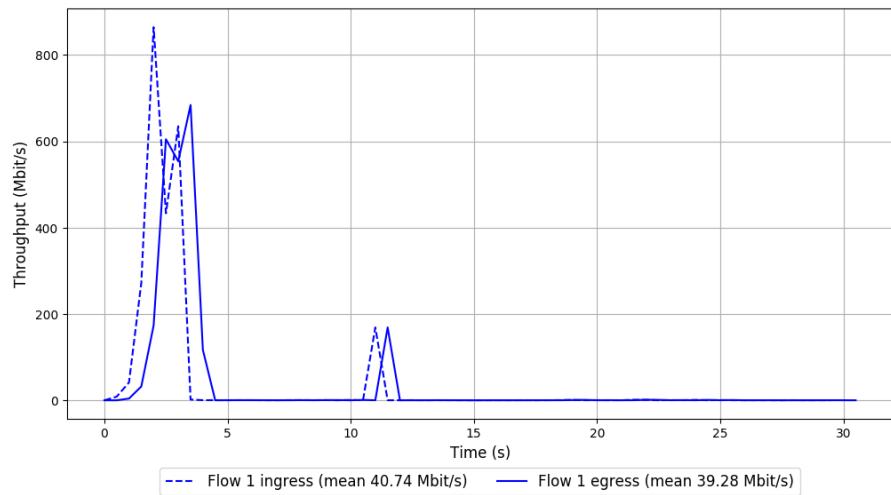


Run 3: Statistics of FillP

```
Start at: 2018-12-10 23:03:26
End at: 2018-12-10 23:03:56
Local clock offset: -2.244 ms
Remote clock offset: 2.046 ms

# Below is generated by plot.py at 2018-12-11 00:12:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.28 Mbit/s
95th percentile per-packet one-way delay: 187.494 ms
Loss rate: 3.58%
-- Flow 1:
Average throughput: 39.28 Mbit/s
95th percentile per-packet one-way delay: 187.494 ms
Loss rate: 3.58%
```

Run 3: Report of FillP — Data Link

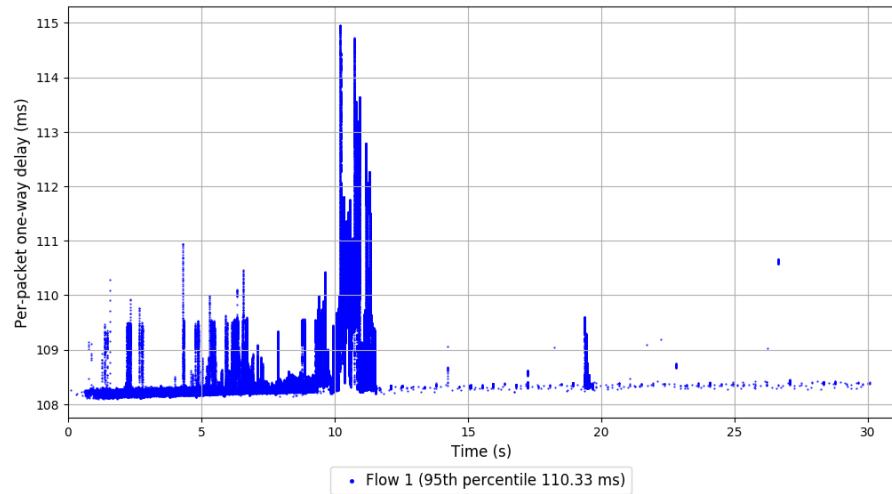
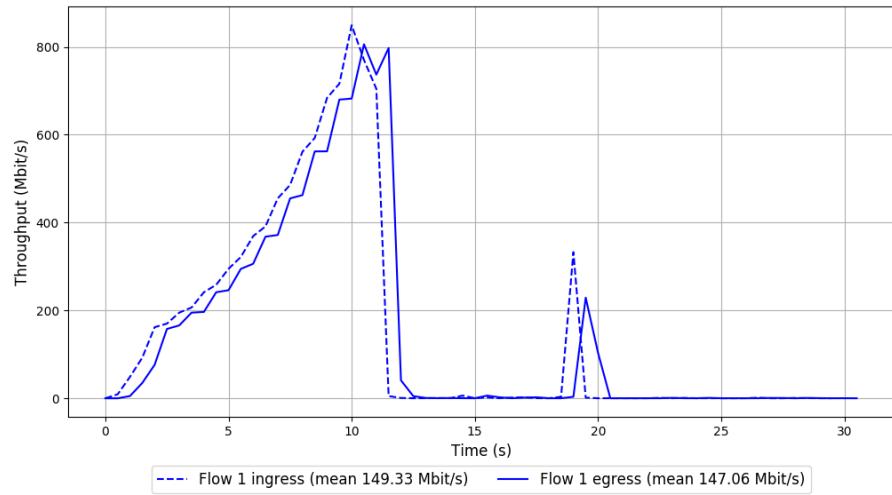


Run 4: Statistics of FillP

```
Start at: 2018-12-10 23:30:09
End at: 2018-12-10 23:30:39
Local clock offset: 7.121 ms
Remote clock offset: -0.219 ms

# Below is generated by plot.py at 2018-12-11 00:13:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 147.06 Mbit/s
95th percentile per-packet one-way delay: 110.331 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 147.06 Mbit/s
95th percentile per-packet one-way delay: 110.331 ms
Loss rate: 1.52%
```

Run 4: Report of FillP — Data Link

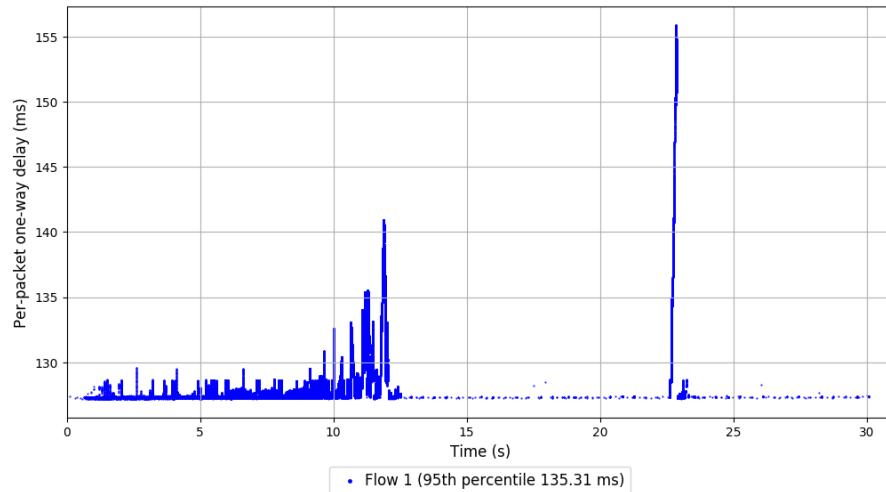
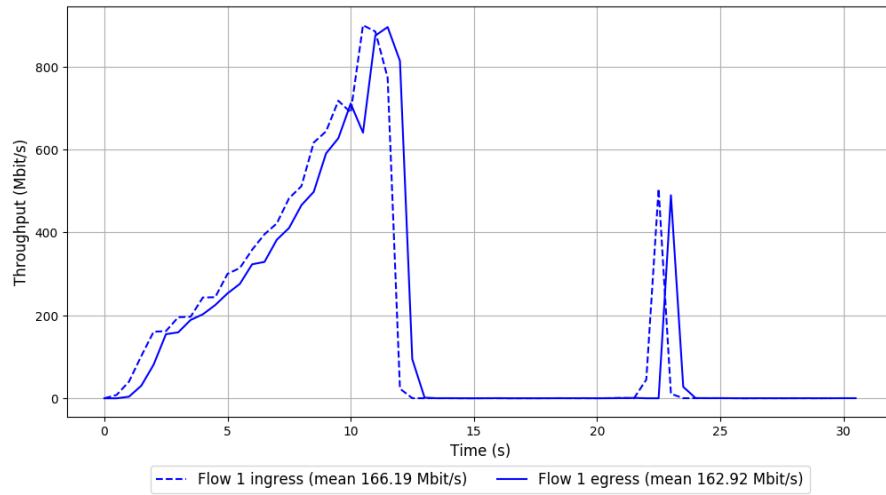


Run 5: Statistics of FillP

```
Start at: 2018-12-10 23:56:46
End at: 2018-12-10 23:57:16
Local clock offset: -4.902 ms
Remote clock offset: 3.439 ms

# Below is generated by plot.py at 2018-12-11 00:13:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 162.92 Mbit/s
95th percentile per-packet one-way delay: 135.313 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 162.92 Mbit/s
95th percentile per-packet one-way delay: 135.313 ms
Loss rate: 1.97%
```

Run 5: Report of FillP — Data Link

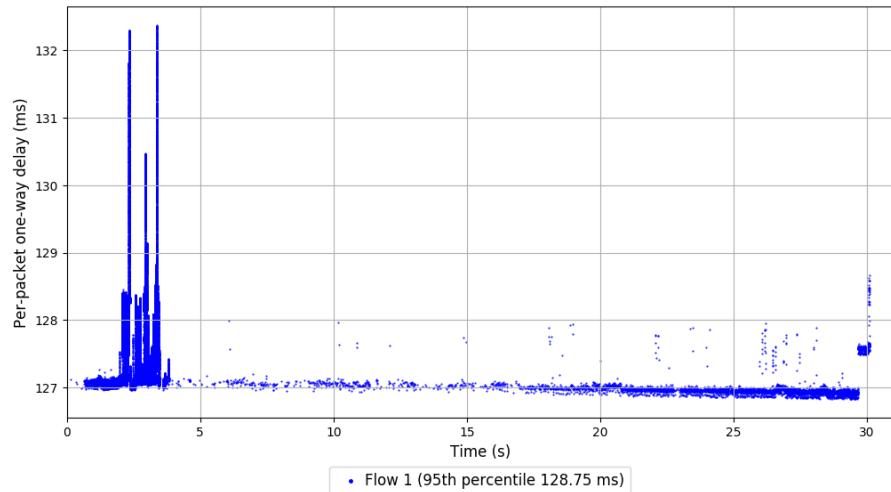
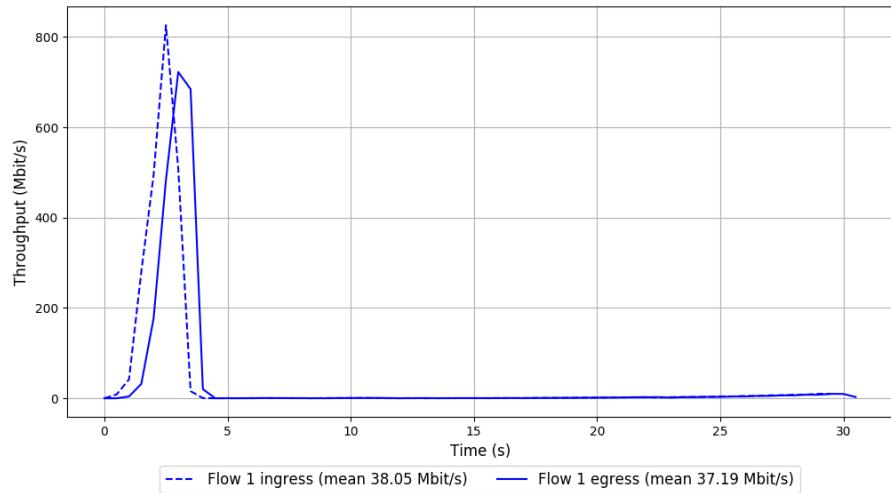


```
Run 1: Statistics of FillP-Sheep
```

```
Start at: 2018-12-10 22:19:43
End at: 2018-12-10 22:20:13
Local clock offset: -16.507 ms
Remote clock offset: 4.589 ms

# Below is generated by plot.py at 2018-12-11 00:13:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 37.19 Mbit/s
95th percentile per-packet one-way delay: 128.745 ms
Loss rate: 2.26%
-- Flow 1:
Average throughput: 37.19 Mbit/s
95th percentile per-packet one-way delay: 128.745 ms
Loss rate: 2.26%
```

Run 1: Report of FillP-Sheep — Data Link

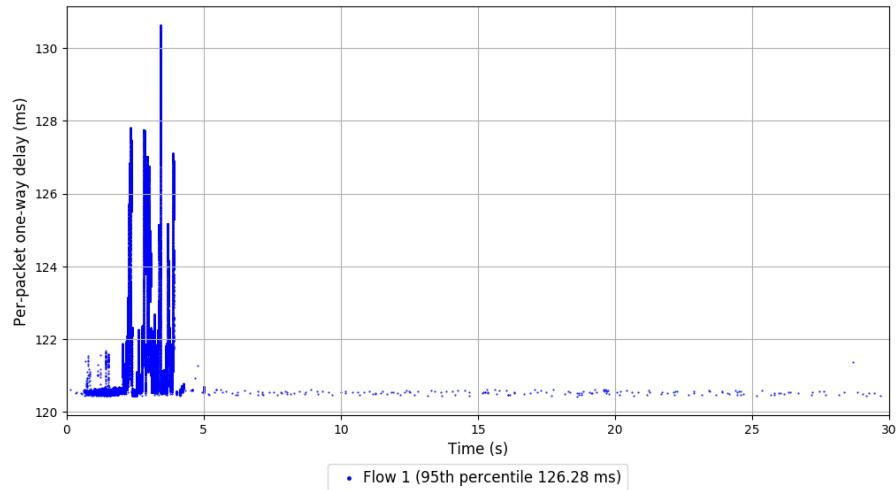
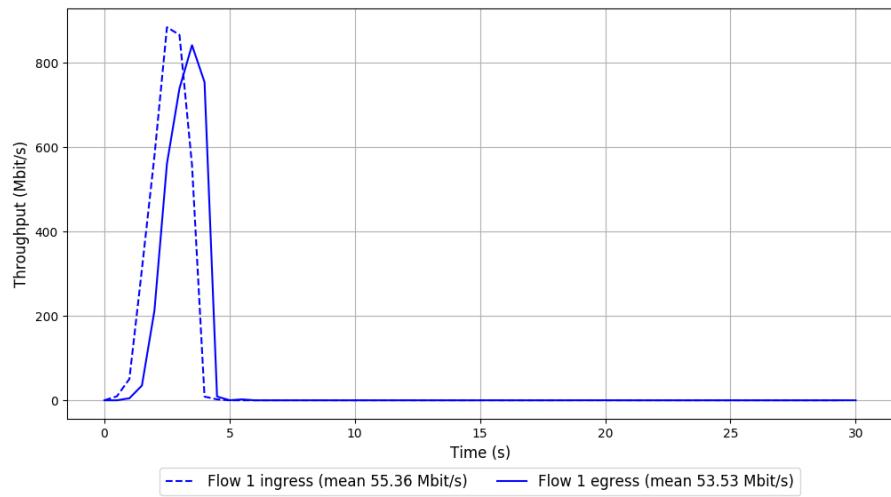


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-12-10 22:46:32
End at: 2018-12-10 22:47:02
Local clock offset: -9.535 ms
Remote clock offset: 3.502 ms

# Below is generated by plot.py at 2018-12-11 00:13:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 53.53 Mbit/s
95th percentile per-packet one-way delay: 126.279 ms
Loss rate: 3.31%
-- Flow 1:
Average throughput: 53.53 Mbit/s
95th percentile per-packet one-way delay: 126.279 ms
Loss rate: 3.31%
```

Run 2: Report of FillP-Sheep — Data Link

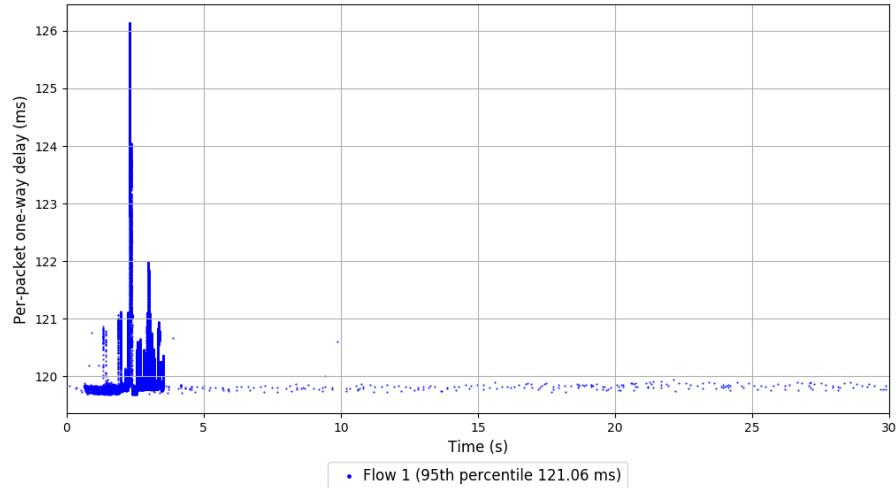
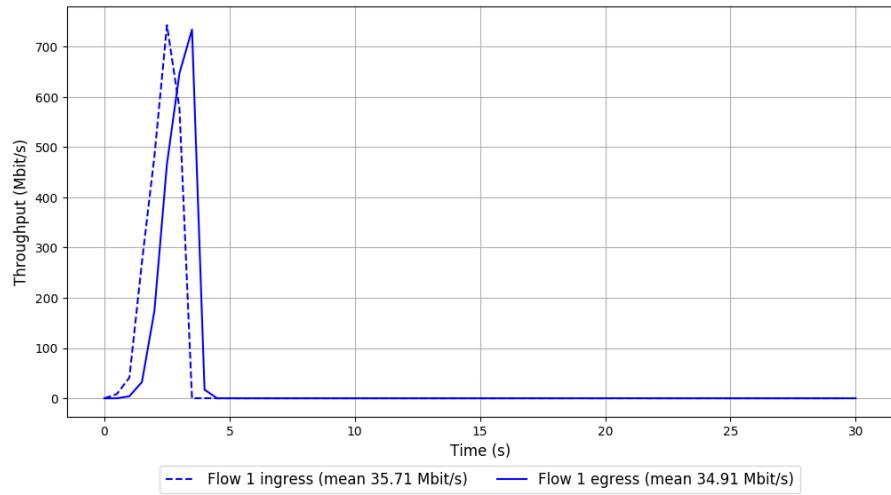


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-12-10 23:13:06
End at: 2018-12-10 23:13:36
Local clock offset: 0.485 ms
Remote clock offset: 0.596 ms

# Below is generated by plot.py at 2018-12-11 00:13:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.91 Mbit/s
95th percentile per-packet one-way delay: 121.064 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 34.91 Mbit/s
95th percentile per-packet one-way delay: 121.064 ms
Loss rate: 2.22%
```

Run 3: Report of FillP-Sheep — Data Link

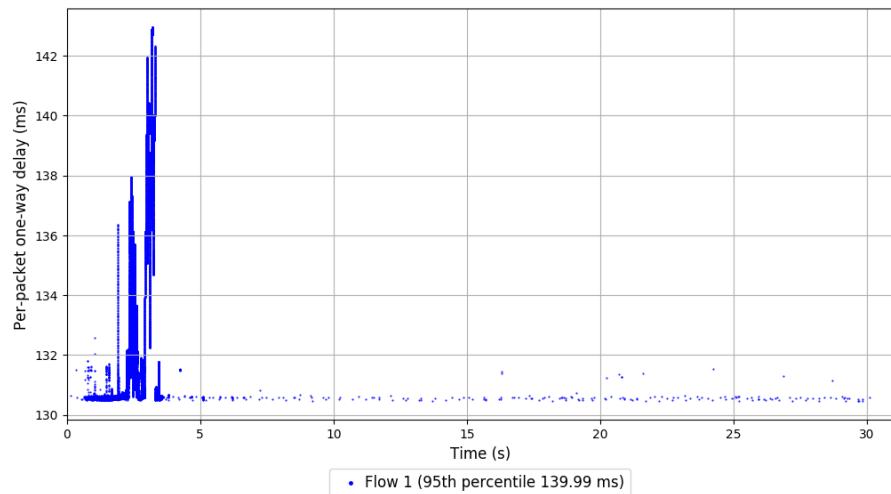
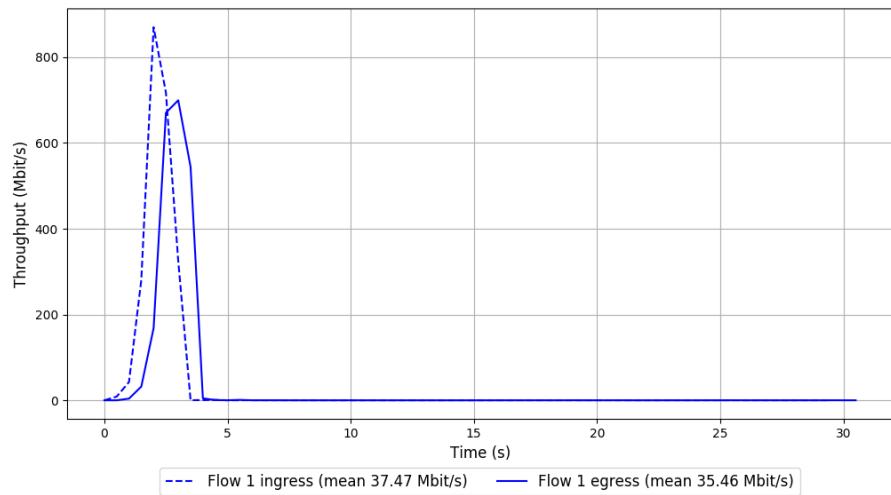


Run 4: Statistics of FillP-Sheep

```
Start at: 2018-12-10 23:39:52
End at: 2018-12-10 23:40:22
Local clock offset: -7.112 ms
Remote clock offset: 1.817 ms

# Below is generated by plot.py at 2018-12-11 00:13:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.46 Mbit/s
95th percentile per-packet one-way delay: 139.985 ms
Loss rate: 5.36%
-- Flow 1:
Average throughput: 35.46 Mbit/s
95th percentile per-packet one-way delay: 139.985 ms
Loss rate: 5.36%
```

Run 4: Report of FillP-Sheep — Data Link

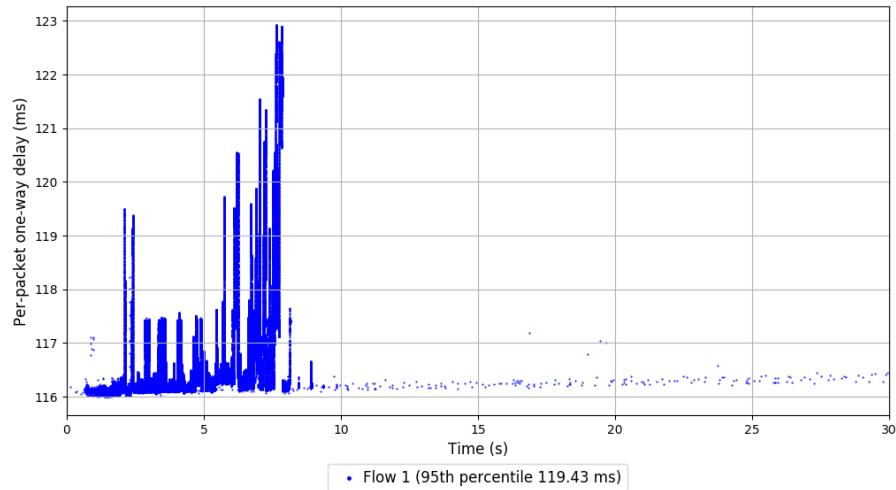
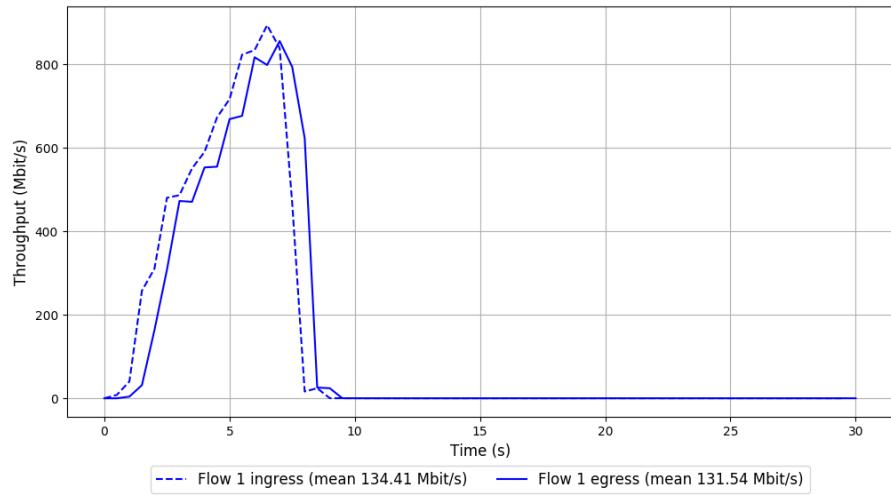


Run 5: Statistics of FillP-Sheep

```
Start at: 2018-12-11 00:06:26
End at: 2018-12-11 00:06:56
Local clock offset: 8.352 ms
Remote clock offset: 3.838 ms

# Below is generated by plot.py at 2018-12-11 00:13:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 131.54 Mbit/s
95th percentile per-packet one-way delay: 119.432 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 131.54 Mbit/s
95th percentile per-packet one-way delay: 119.432 ms
Loss rate: 2.14%
```

Run 5: Report of FillP-Sheep — Data Link

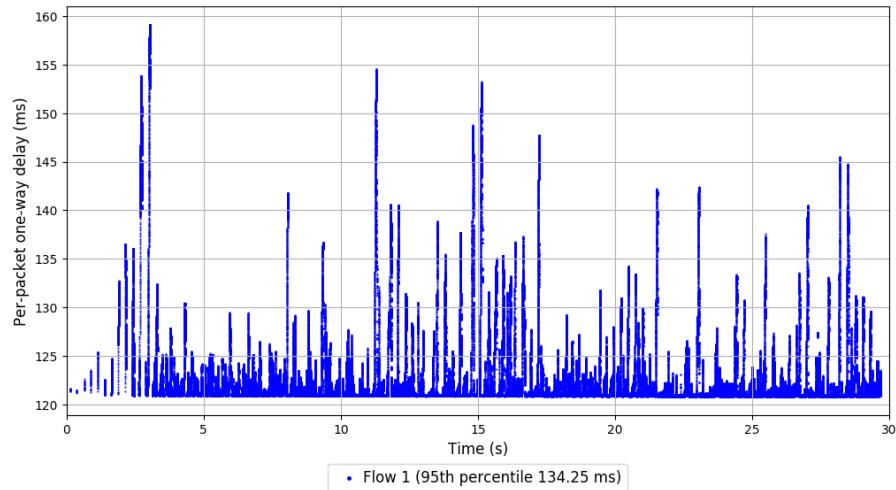
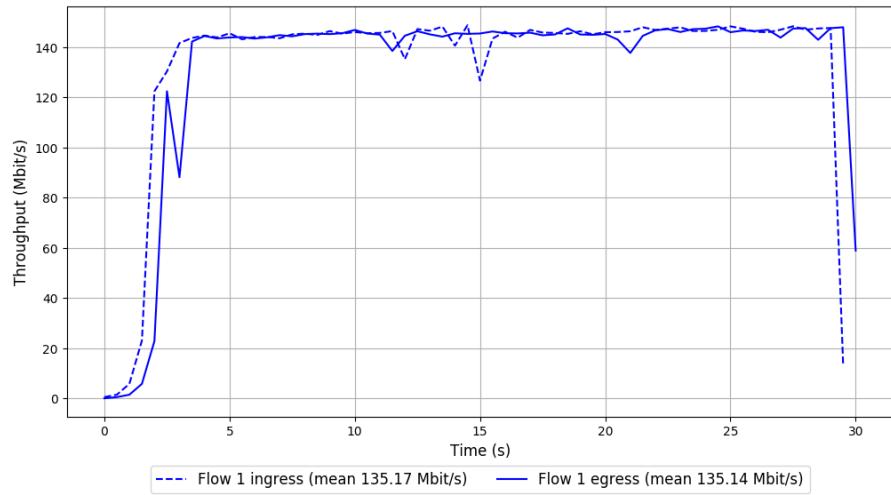


Run 1: Statistics of Indigo

```
Start at: 2018-12-10 22:16:57
End at: 2018-12-10 22:17:27
Local clock offset: -11.528 ms
Remote clock offset: 4.257 ms

# Below is generated by plot.py at 2018-12-11 00:13:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 135.14 Mbit/s
95th percentile per-packet one-way delay: 134.253 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 135.14 Mbit/s
95th percentile per-packet one-way delay: 134.253 ms
Loss rate: 0.02%
```

Run 1: Report of Indigo — Data Link

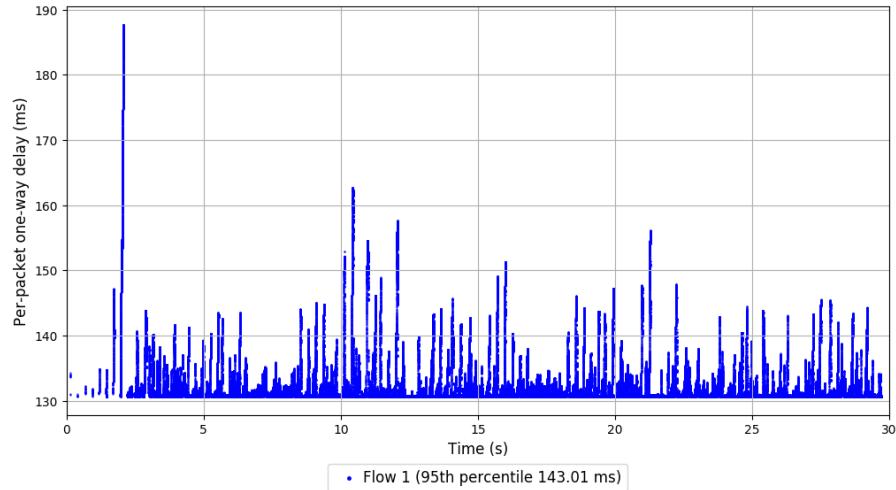
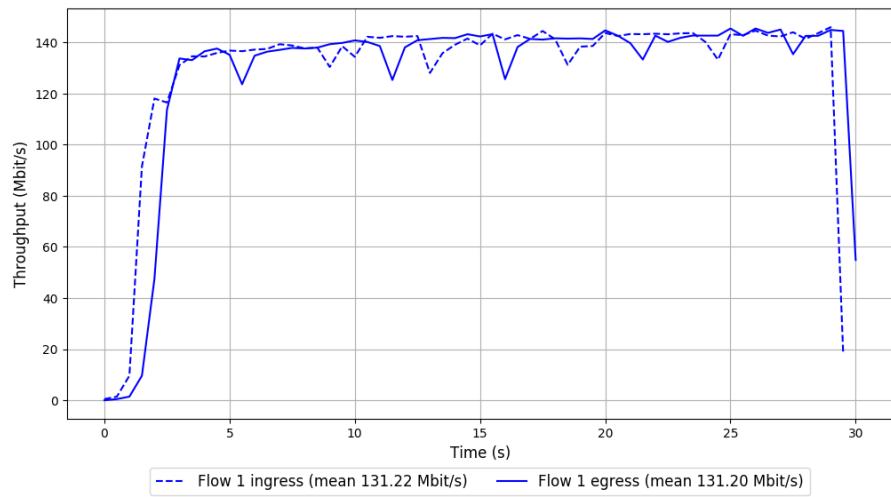


Run 2: Statistics of Indigo

```
Start at: 2018-12-10 22:43:46
End at: 2018-12-10 22:44:16
Local clock offset: -9.175 ms
Remote clock offset: 3.416 ms

# Below is generated by plot.py at 2018-12-11 00:13:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 131.20 Mbit/s
95th percentile per-packet one-way delay: 143.007 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 131.20 Mbit/s
95th percentile per-packet one-way delay: 143.007 ms
Loss rate: 0.03%
```

Run 2: Report of Indigo — Data Link

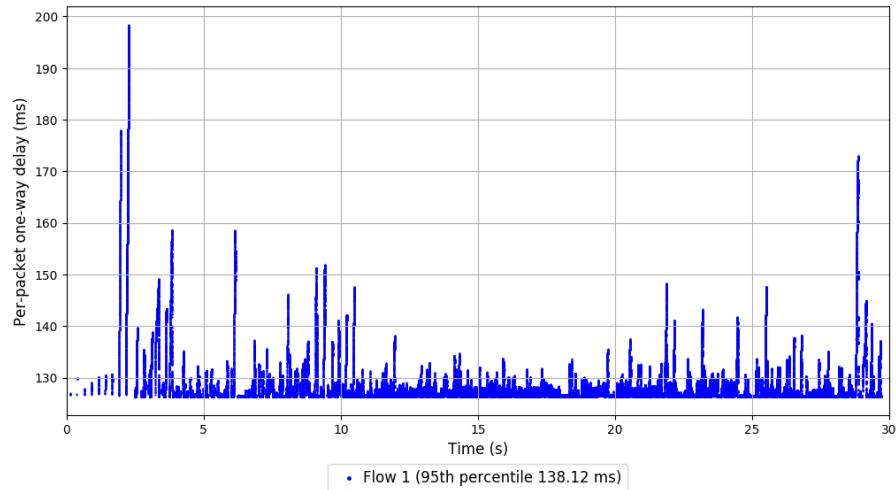
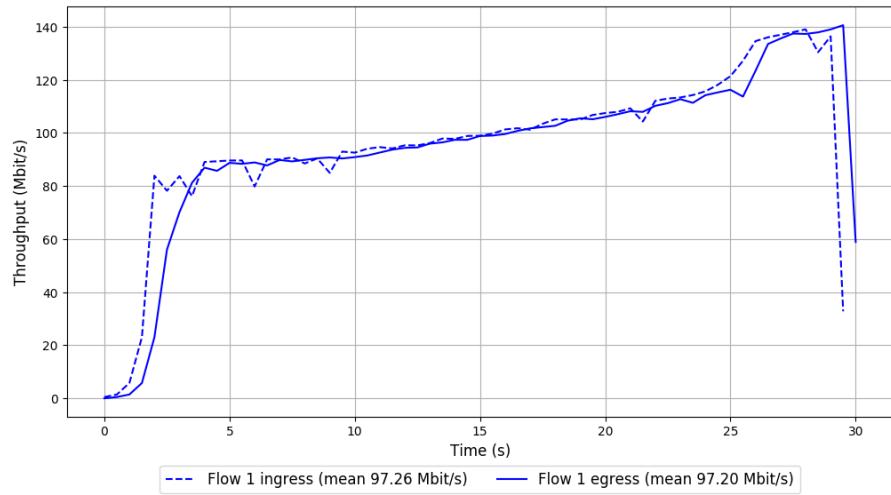


Run 3: Statistics of Indigo

```
Start at: 2018-12-10 23:10:22
End at: 2018-12-10 23:10:52
Local clock offset: -7.095 ms
Remote clock offset: 0.927 ms

# Below is generated by plot.py at 2018-12-11 00:13:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 138.121 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 138.121 ms
Loss rate: 0.06%
```

Run 3: Report of Indigo — Data Link

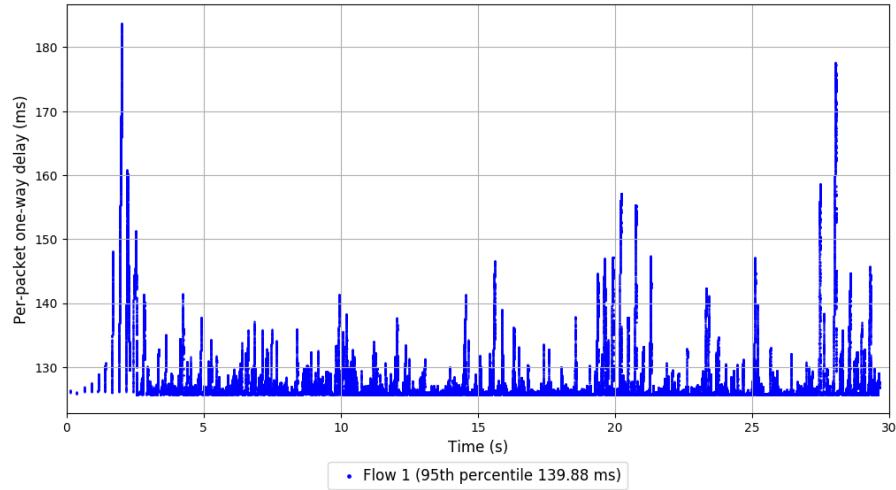
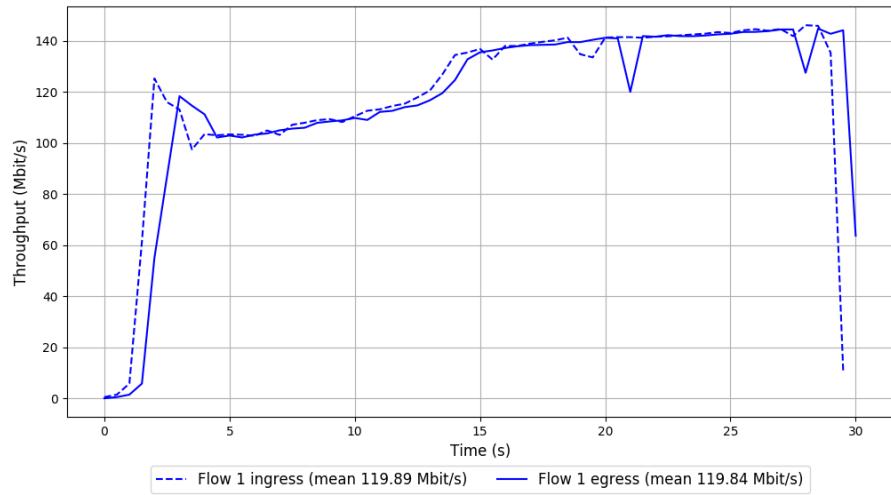


Run 4: Statistics of Indigo

```
Start at: 2018-12-10 23:37:07
End at: 2018-12-10 23:37:37
Local clock offset: -6.132 ms
Remote clock offset: 1.216 ms

# Below is generated by plot.py at 2018-12-11 00:13:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 119.84 Mbit/s
95th percentile per-packet one-way delay: 139.876 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 119.84 Mbit/s
95th percentile per-packet one-way delay: 139.876 ms
Loss rate: 0.04%
```

Run 4: Report of Indigo — Data Link

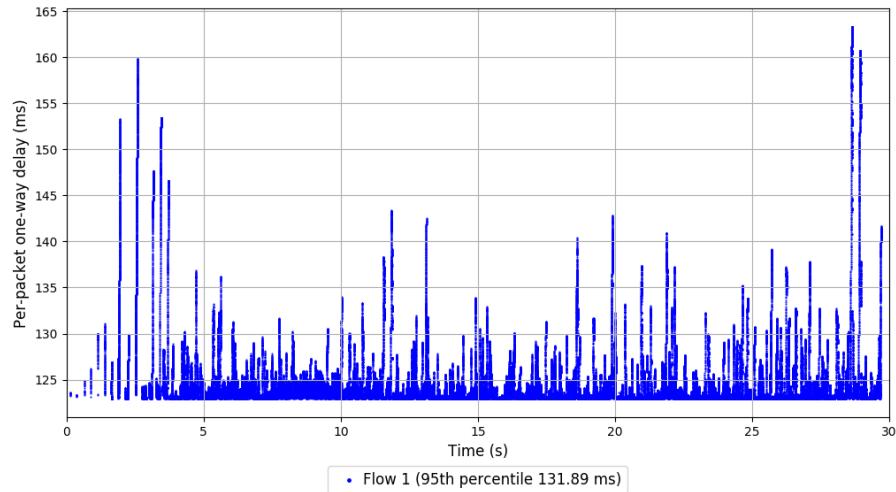
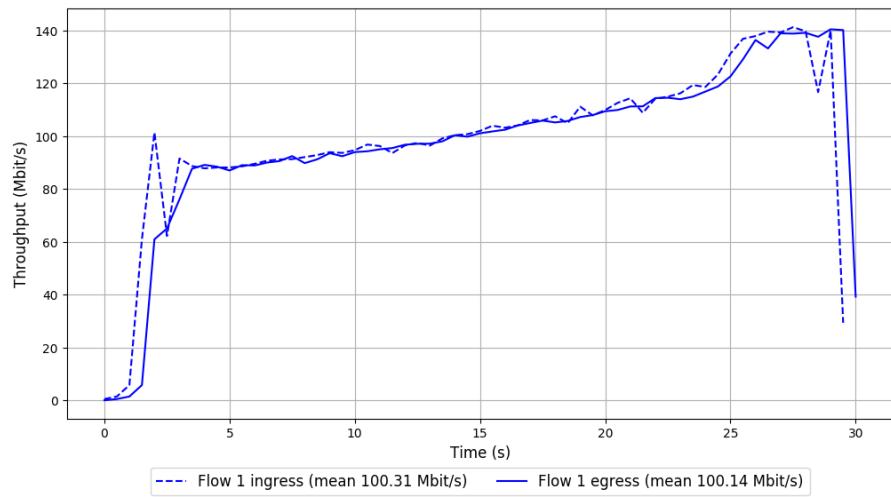


Run 5: Statistics of Indigo

```
Start at: 2018-12-11 00:03:43
End at: 2018-12-11 00:04:13
Local clock offset: -5.083 ms
Remote clock offset: 3.73 ms

# Below is generated by plot.py at 2018-12-11 00:14:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 100.14 Mbit/s
95th percentile per-packet one-way delay: 131.894 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 100.14 Mbit/s
95th percentile per-packet one-way delay: 131.894 ms
Loss rate: 0.13%
```

Run 5: Report of Indigo — Data Link

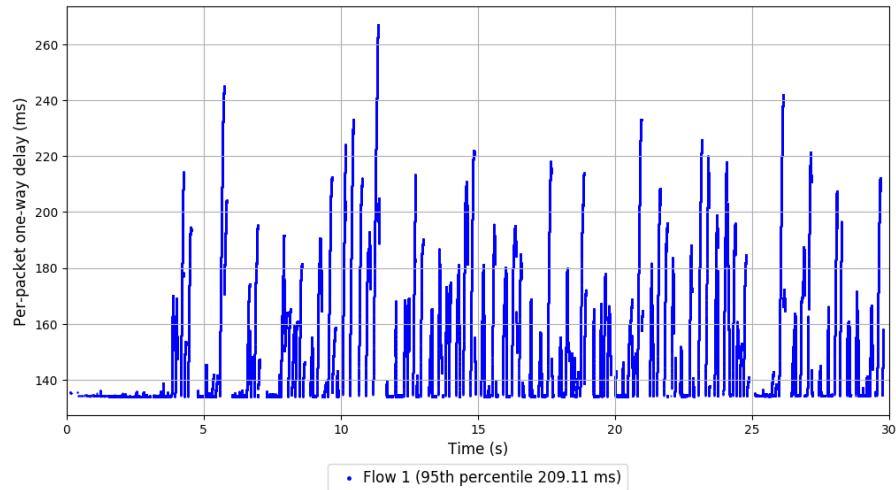
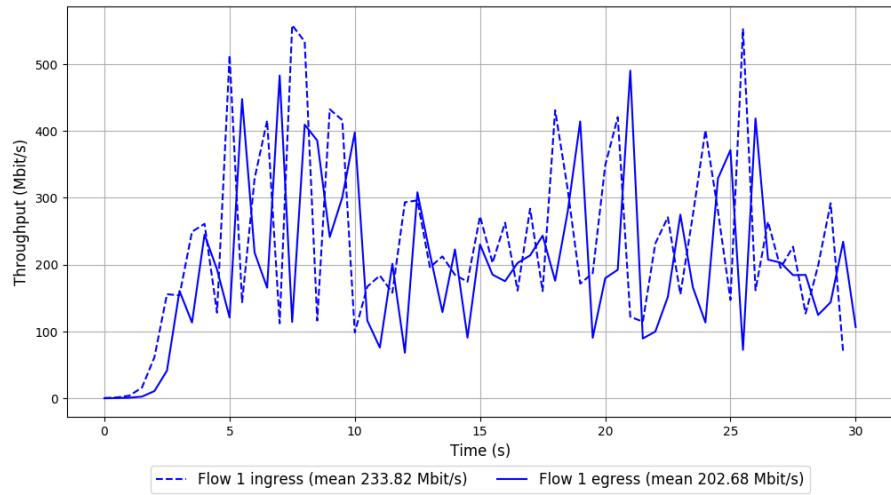


Run 1: Statistics of Indigo-96d2da3

```
Start at: 2018-12-10 22:05:29
End at: 2018-12-10 22:06:00
Local clock offset: -16.484 ms
Remote clock offset: 3.215 ms

# Below is generated by plot.py at 2018-12-11 00:15:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 202.68 Mbit/s
95th percentile per-packet one-way delay: 209.111 ms
Loss rate: 13.25%
-- Flow 1:
Average throughput: 202.68 Mbit/s
95th percentile per-packet one-way delay: 209.111 ms
Loss rate: 13.25%
```

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

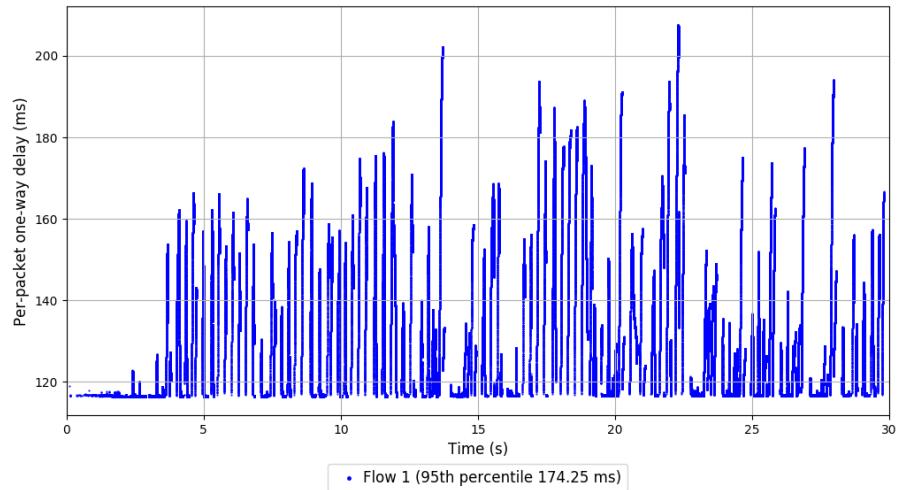
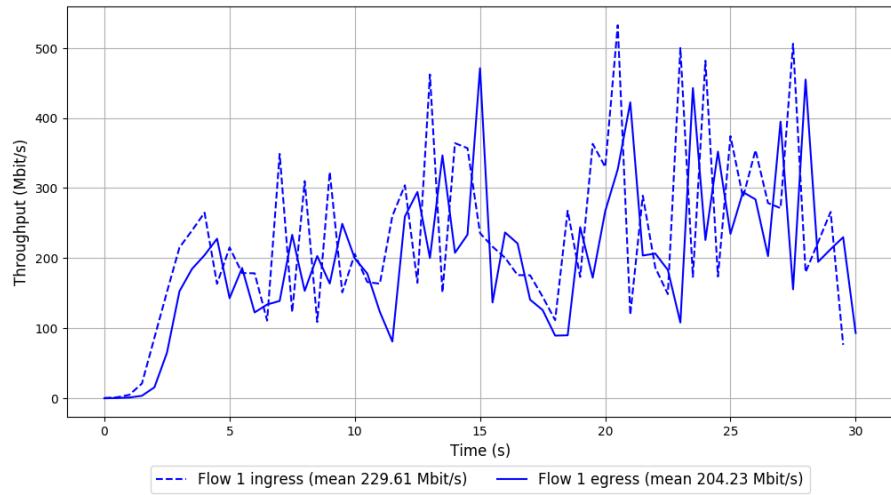


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-12-10 22:32:12
End at: 2018-12-10 22:32:42
Local clock offset: -7.325 ms
Remote clock offset: 3.726 ms

# Below is generated by plot.py at 2018-12-11 00:15:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.23 Mbit/s
95th percentile per-packet one-way delay: 174.255 ms
Loss rate: 10.93%
-- Flow 1:
Average throughput: 204.23 Mbit/s
95th percentile per-packet one-way delay: 174.255 ms
Loss rate: 10.93%
```

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

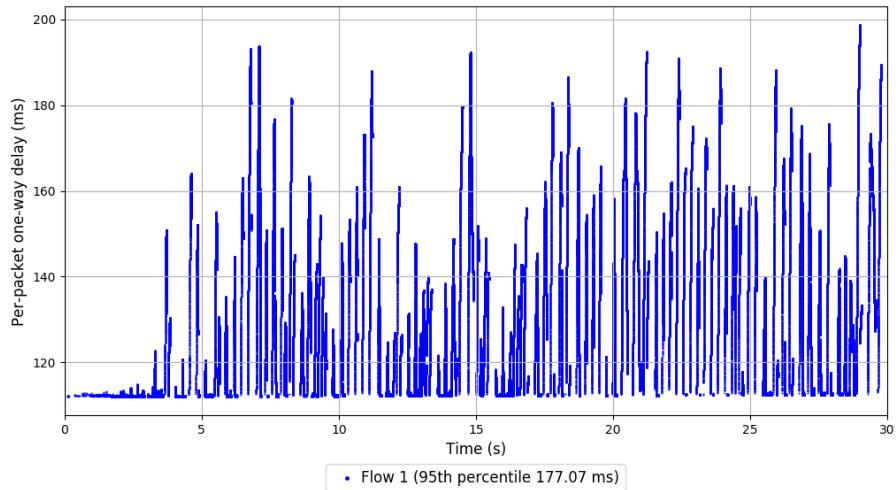
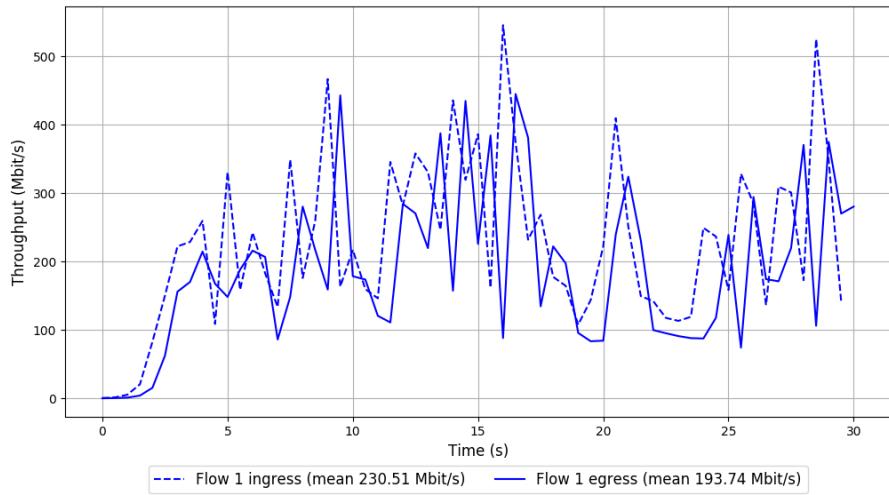


Run 3: Statistics of Indigo-96d2da3

```
Start at: 2018-12-10 22:58:54
End at: 2018-12-10 22:59:24
Local clock offset: 1.492 ms
Remote clock offset: 3.618 ms

# Below is generated by plot.py at 2018-12-11 00:15:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 193.74 Mbit/s
95th percentile per-packet one-way delay: 177.068 ms
Loss rate: 15.74%
-- Flow 1:
Average throughput: 193.74 Mbit/s
95th percentile per-packet one-way delay: 177.068 ms
Loss rate: 15.74%
```

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

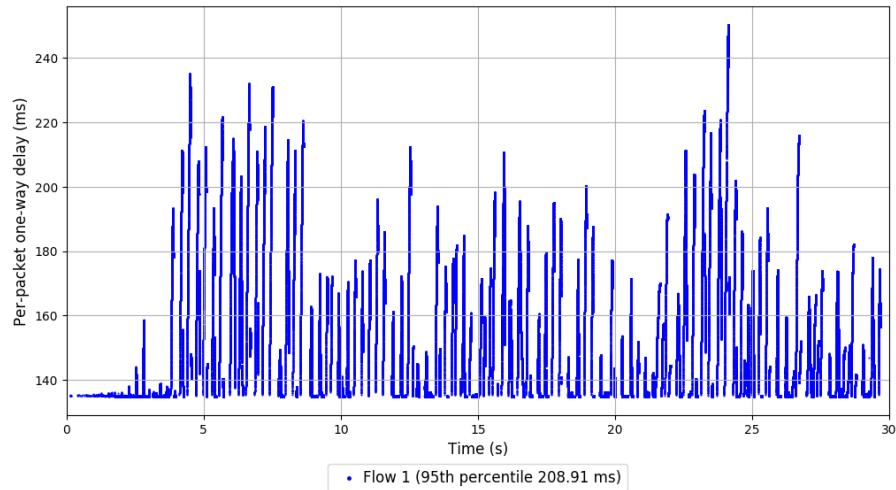
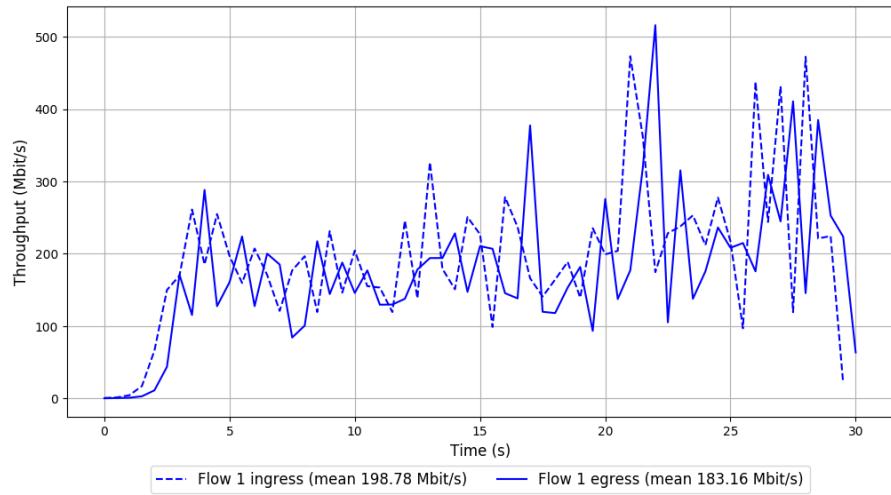


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-12-10 23:25:37
End at: 2018-12-10 23:26:07
Local clock offset: -12.637 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2018-12-11 00:15:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 183.16 Mbit/s
95th percentile per-packet one-way delay: 208.915 ms
Loss rate: 7.79%
-- Flow 1:
Average throughput: 183.16 Mbit/s
95th percentile per-packet one-way delay: 208.915 ms
Loss rate: 7.79%
```

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

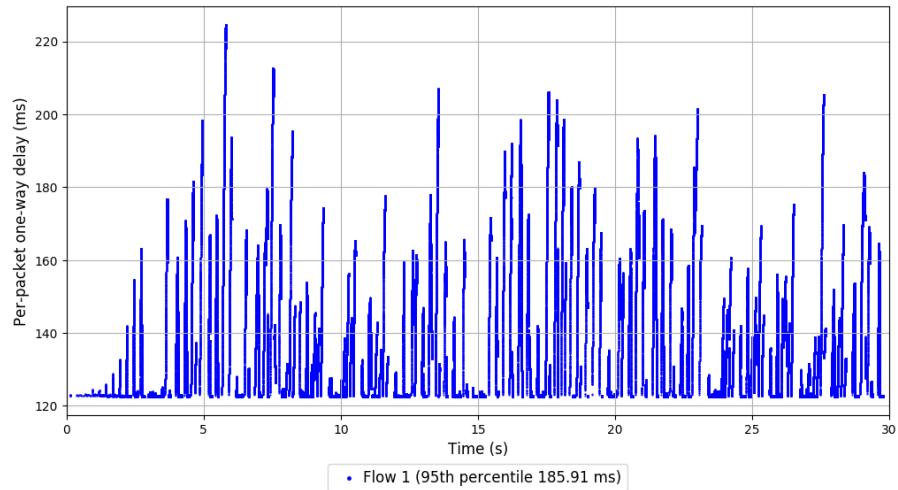
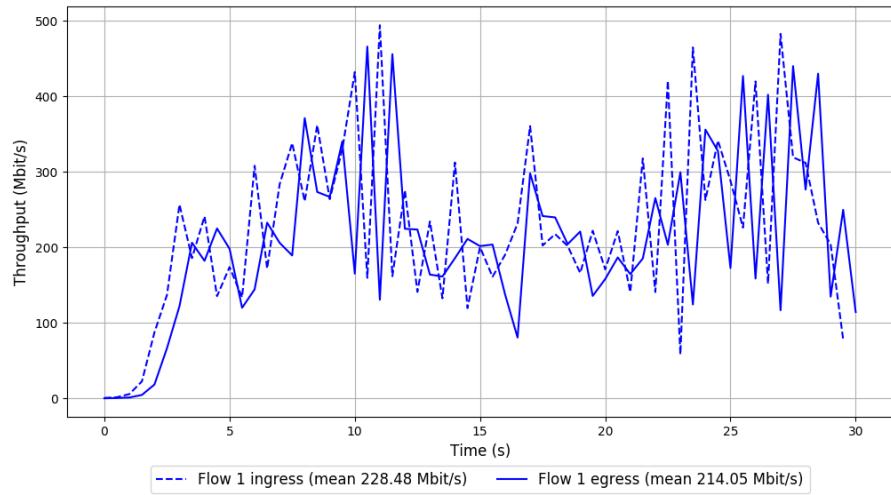


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-12-10 23:52:13
End at: 2018-12-10 23:52:43
Local clock offset: -5.13 ms
Remote clock offset: 3.096 ms

# Below is generated by plot.py at 2018-12-11 00:15:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 214.05 Mbit/s
95th percentile per-packet one-way delay: 185.914 ms
Loss rate: 6.32%
-- Flow 1:
Average throughput: 214.05 Mbit/s
95th percentile per-packet one-way delay: 185.914 ms
Loss rate: 6.32%
```

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

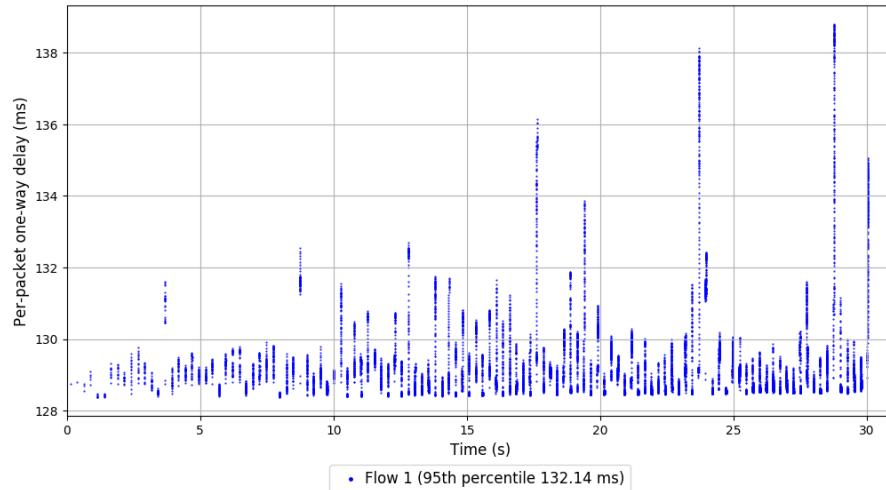
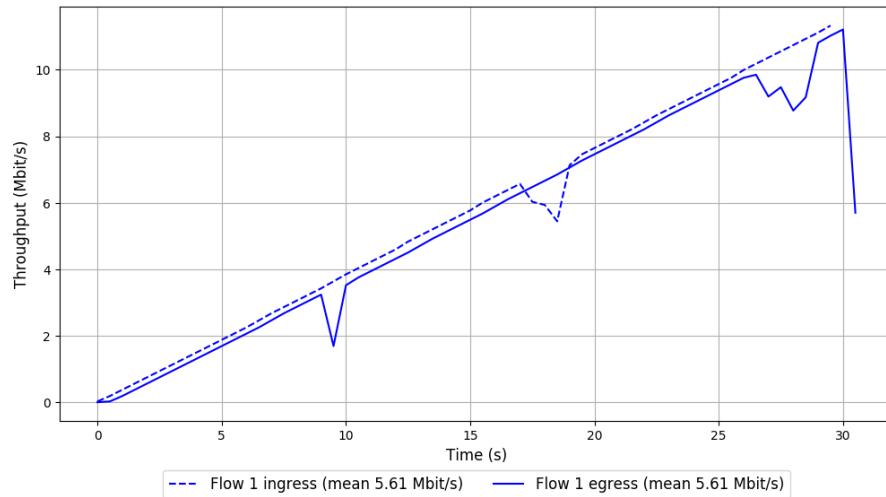


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-12-10 22:06:57
End at: 2018-12-10 22:07:28
Local clock offset: -16.238 ms
Remote clock offset: 3.312 ms

# Below is generated by plot.py at 2018-12-11 00:15:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.61 Mbit/s
95th percentile per-packet one-way delay: 132.136 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.61 Mbit/s
95th percentile per-packet one-way delay: 132.136 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

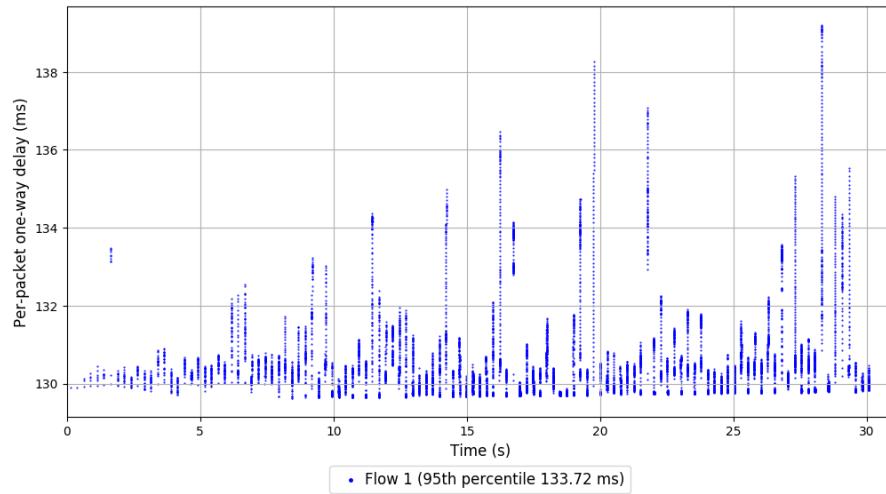
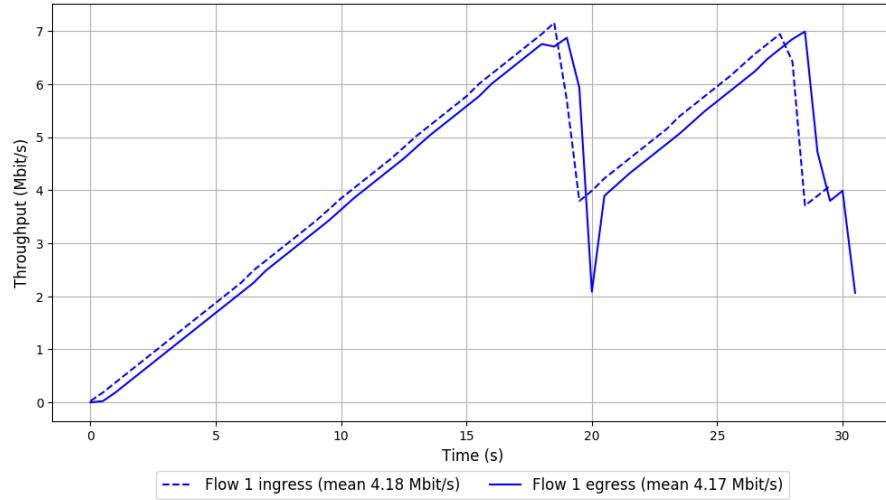


Run 2: Statistics of LEDBAT

```
Start at: 2018-12-10 22:33:40
End at: 2018-12-10 22:34:10
Local clock offset: -13.338 ms
Remote clock offset: 3.57 ms

# Below is generated by plot.py at 2018-12-11 00:15:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.17 Mbit/s
95th percentile per-packet one-way delay: 133.720 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 4.17 Mbit/s
95th percentile per-packet one-way delay: 133.720 ms
Loss rate: 0.05%
```

Run 2: Report of LEDBAT — Data Link

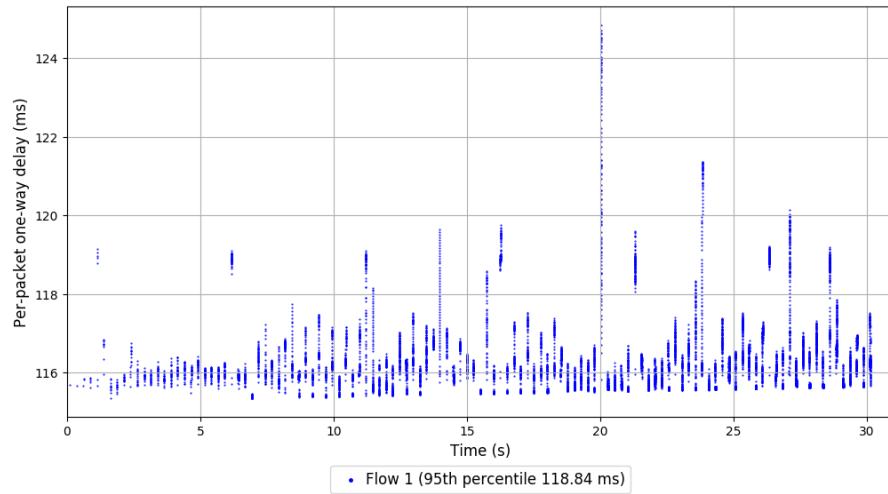
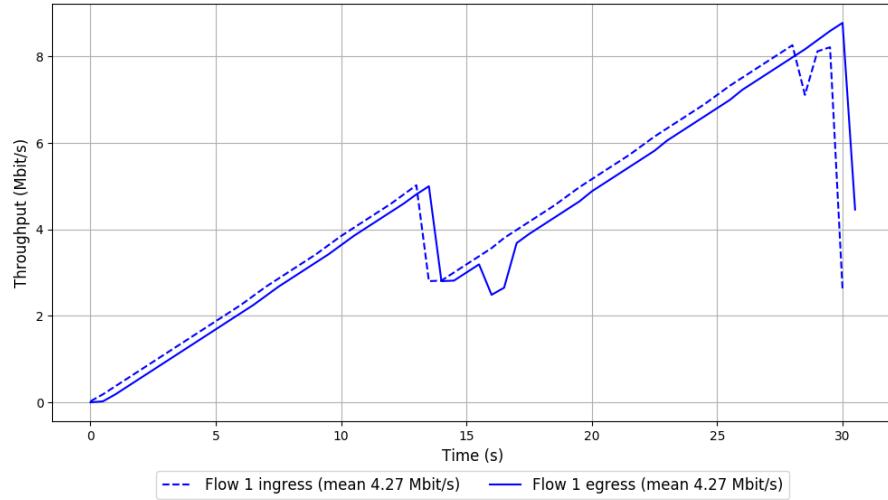


Run 3: Statistics of LEDBAT

```
Start at: 2018-12-10 23:00:22
End at: 2018-12-10 23:00:52
Local clock offset: 2.495 ms
Remote clock offset: 2.91 ms

# Below is generated by plot.py at 2018-12-11 00:15:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 118.843 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 118.843 ms
Loss rate: 0.01%
```

Run 3: Report of LEDBAT — Data Link

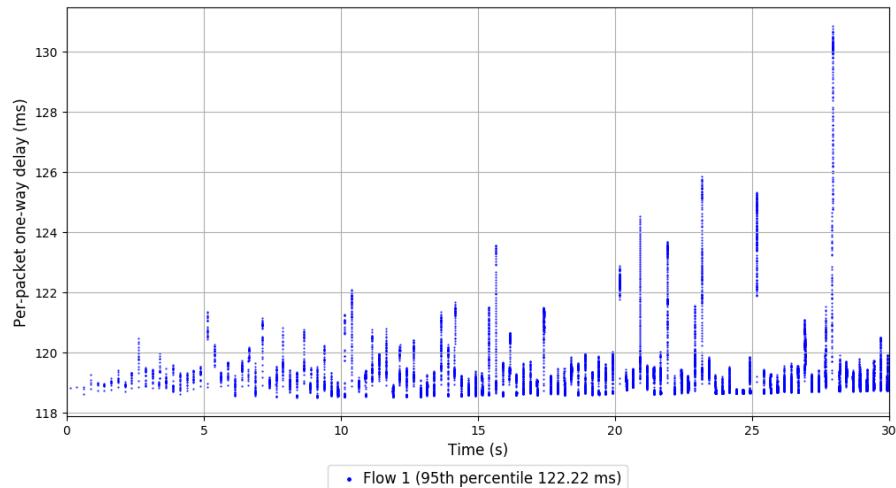
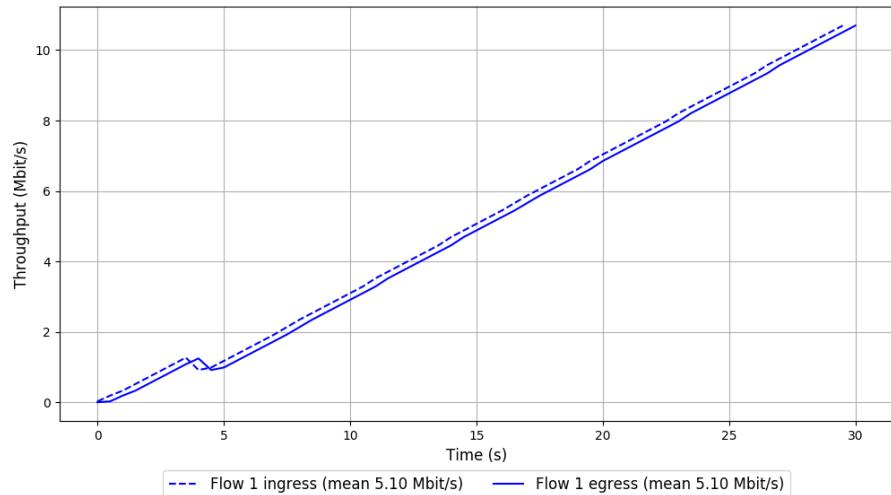


Run 4: Statistics of LEDBAT

```
Start at: 2018-12-10 23:27:04
End at: 2018-12-10 23:27:34
Local clock offset: 0.158 ms
Remote clock offset: -0.188 ms

# Below is generated by plot.py at 2018-12-11 00:15:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.10 Mbit/s
95th percentile per-packet one-way delay: 122.224 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 5.10 Mbit/s
95th percentile per-packet one-way delay: 122.224 ms
Loss rate: 0.01%
```

Run 4: Report of LEDBAT — Data Link

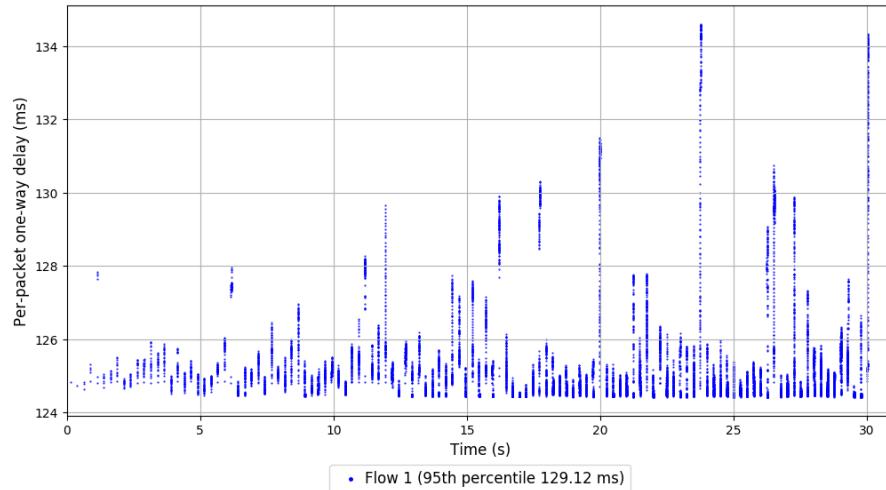
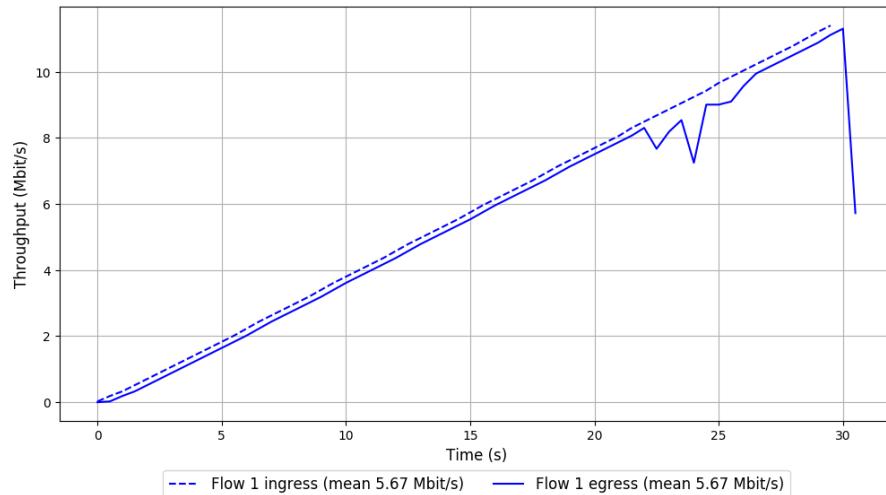


Run 5: Statistics of LEDBAT

```
Start at: 2018-12-10 23:53:42
End at: 2018-12-10 23:54:12
Local clock offset: -1.098 ms
Remote clock offset: 3.277 ms

# Below is generated by plot.py at 2018-12-11 00:15:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.67 Mbit/s
95th percentile per-packet one-way delay: 129.121 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.67 Mbit/s
95th percentile per-packet one-way delay: 129.121 ms
Loss rate: 0.00%
```

Run 5: Report of LEDBAT — Data Link

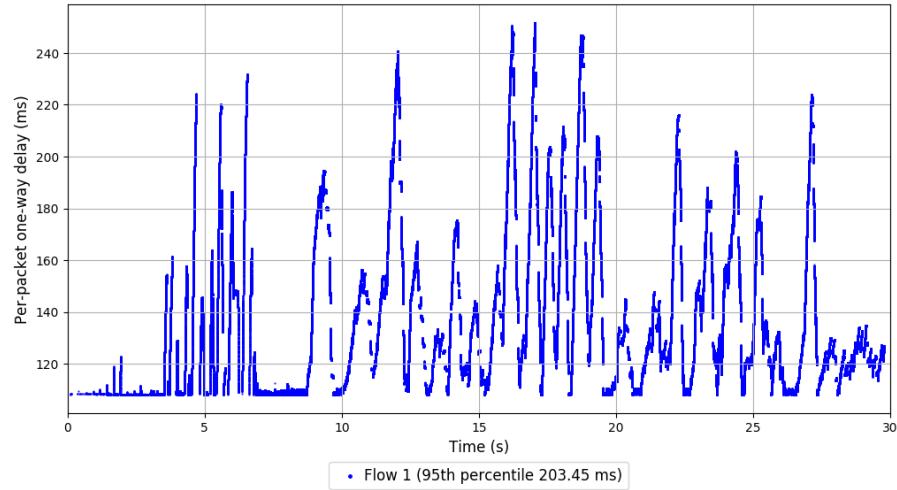
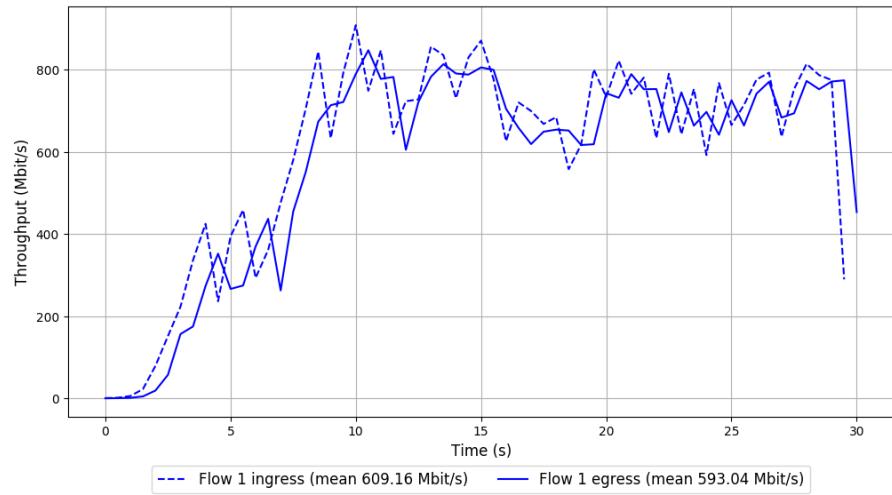


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-12-10 22:08:17
End at: 2018-12-10 22:08:47
Local clock offset: -1.866 ms
Remote clock offset: 3.531 ms

# Below is generated by plot.py at 2018-12-11 00:20:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 593.04 Mbit/s
95th percentile per-packet one-way delay: 203.448 ms
Loss rate: 2.62%
-- Flow 1:
Average throughput: 593.04 Mbit/s
95th percentile per-packet one-way delay: 203.448 ms
Loss rate: 2.62%
```

Run 1: Report of Indigo-Muses — Data Link

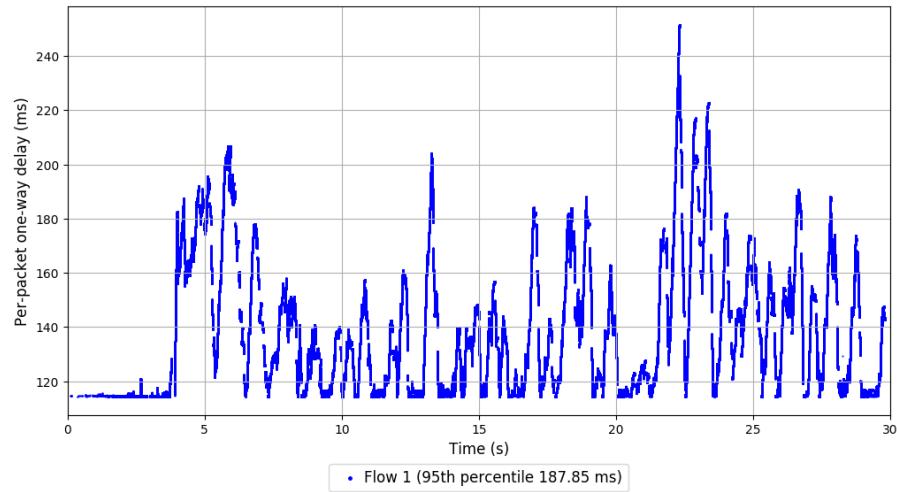
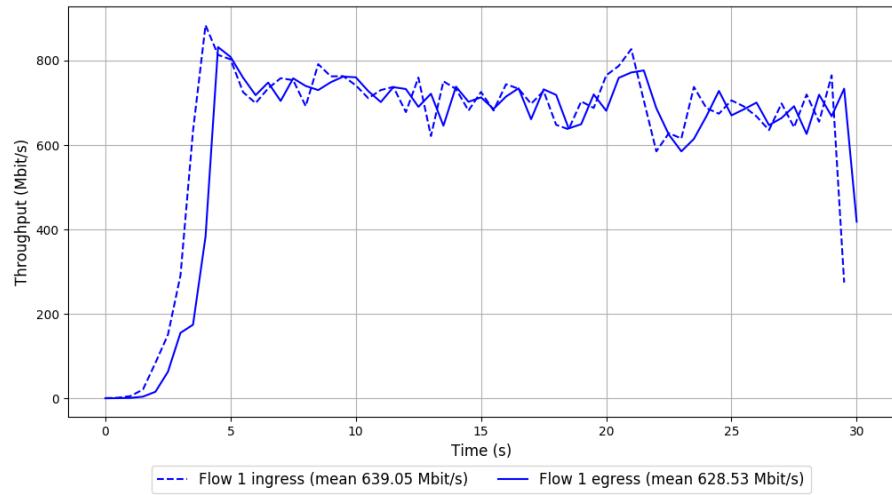


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-12-10 22:34:59
End at: 2018-12-10 22:35:29
Local clock offset: -3.751 ms
Remote clock offset: 3.605 ms

# Below is generated by plot.py at 2018-12-11 00:21:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 628.53 Mbit/s
95th percentile per-packet one-way delay: 187.854 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 628.53 Mbit/s
95th percentile per-packet one-way delay: 187.854 ms
Loss rate: 1.62%
```

Run 2: Report of Indigo-Muses — Data Link

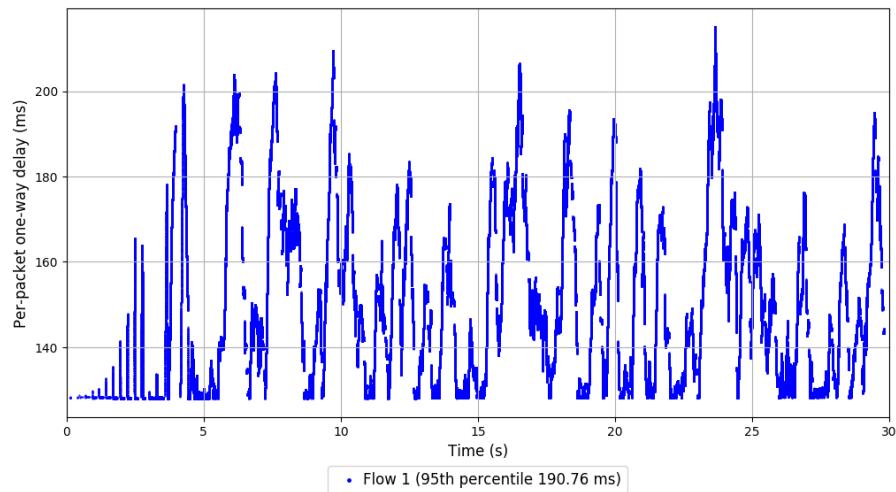
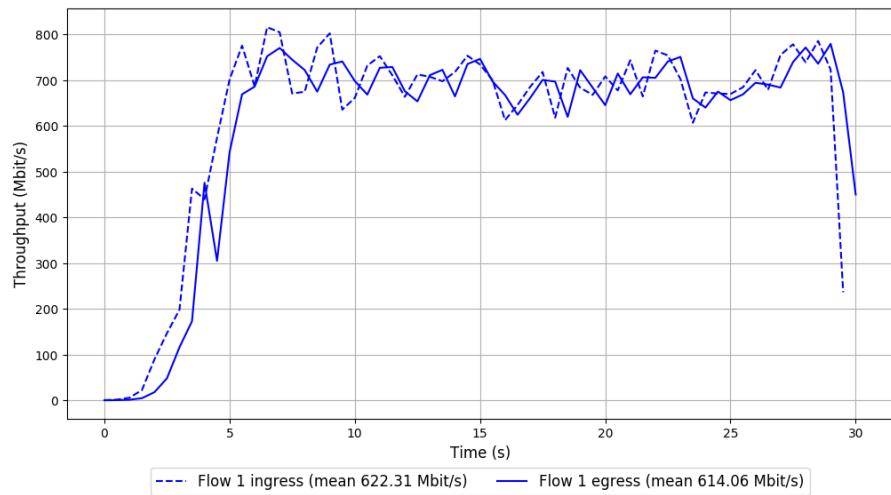


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-12-10 23:01:41
End at: 2018-12-10 23:02:11
Local clock offset: -8.945 ms
Remote clock offset: 2.652 ms

# Below is generated by plot.py at 2018-12-11 00:21:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 614.06 Mbit/s
95th percentile per-packet one-way delay: 190.757 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 614.06 Mbit/s
95th percentile per-packet one-way delay: 190.757 ms
Loss rate: 1.32%
```

Run 3: Report of Indigo-Muses — Data Link

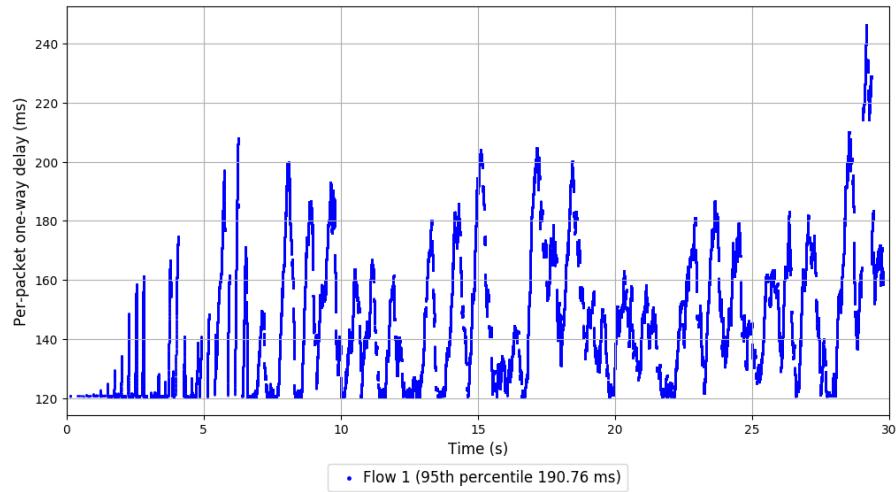
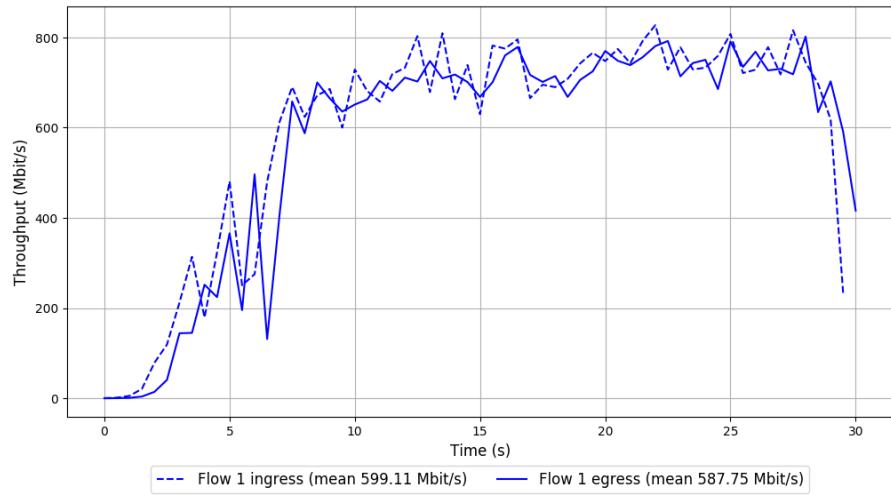


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-12-10 23:28:23
End at: 2018-12-10 23:28:53
Local clock offset: 0.492 ms
Remote clock offset: -0.16 ms

# Below is generated by plot.py at 2018-12-11 00:22:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 587.75 Mbit/s
95th percentile per-packet one-way delay: 190.762 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 587.75 Mbit/s
95th percentile per-packet one-way delay: 190.762 ms
Loss rate: 1.88%
```

Run 4: Report of Indigo-Muses — Data Link

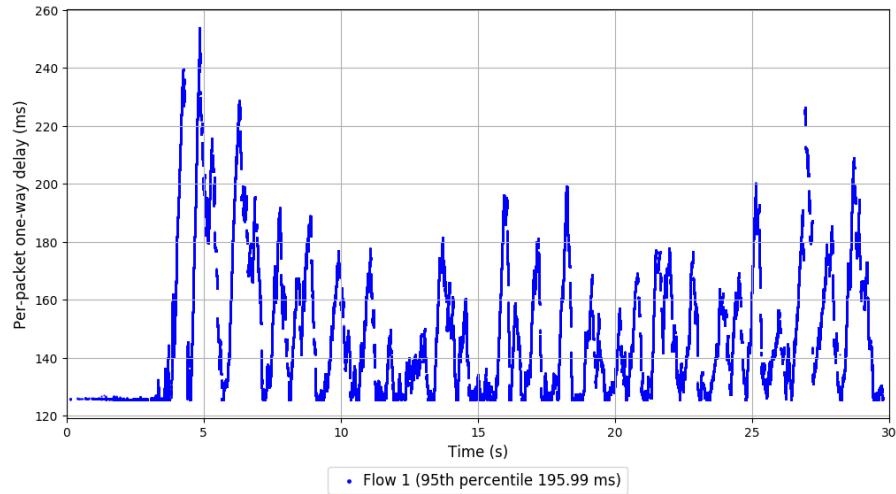
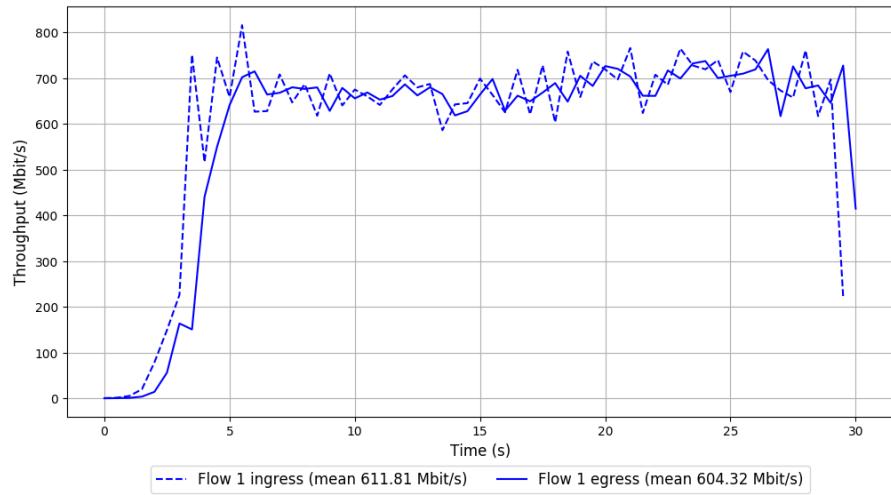


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-12-10 23:55:01
End at: 2018-12-10 23:55:31
Local clock offset: -3.205 ms
Remote clock offset: 3.363 ms

# Below is generated by plot.py at 2018-12-11 00:22:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 604.32 Mbit/s
95th percentile per-packet one-way delay: 195.988 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 604.32 Mbit/s
95th percentile per-packet one-way delay: 195.988 ms
Loss rate: 1.23%
```

Run 5: Report of Indigo-Muses — Data Link

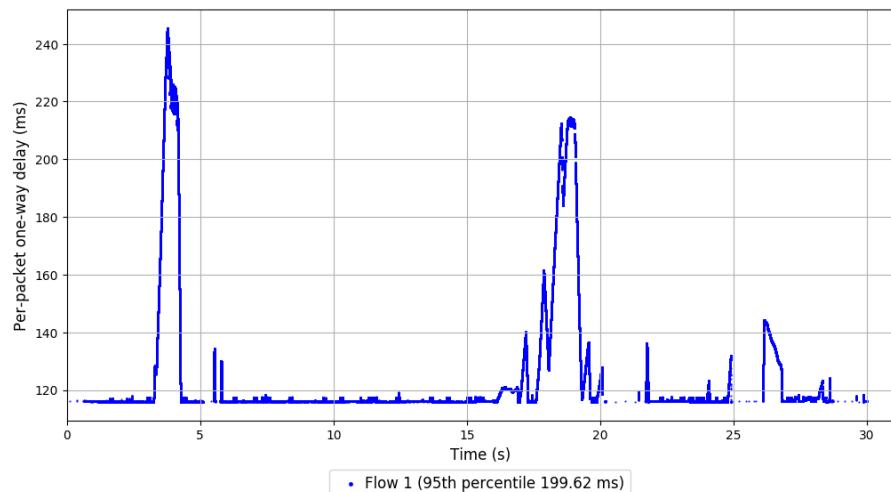
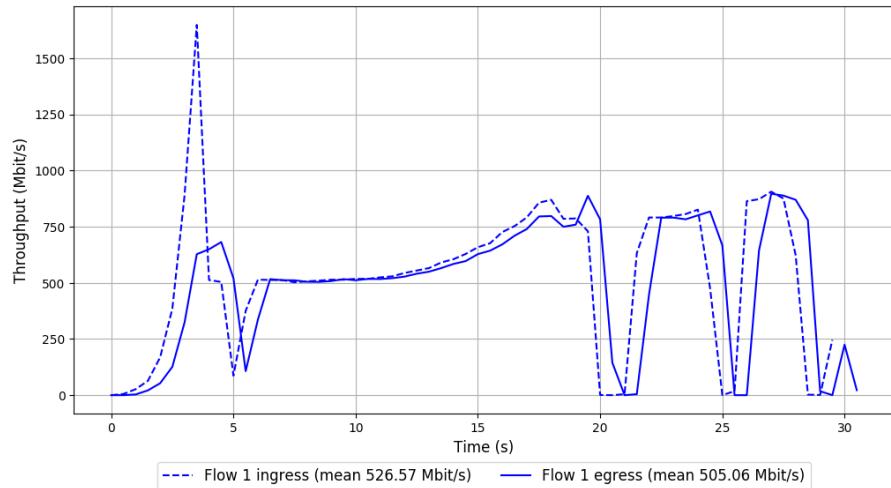


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-12-10 22:11:22
End at: 2018-12-10 22:11:52
Local clock offset: -2.638 ms
Remote clock offset: 3.763 ms

# Below is generated by plot.py at 2018-12-11 00:22:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 505.06 Mbit/s
95th percentile per-packet one-way delay: 199.616 ms
Loss rate: 4.09%
-- Flow 1:
Average throughput: 505.06 Mbit/s
95th percentile per-packet one-way delay: 199.616 ms
Loss rate: 4.09%
```

Run 1: Report of PCC-Allegro — Data Link

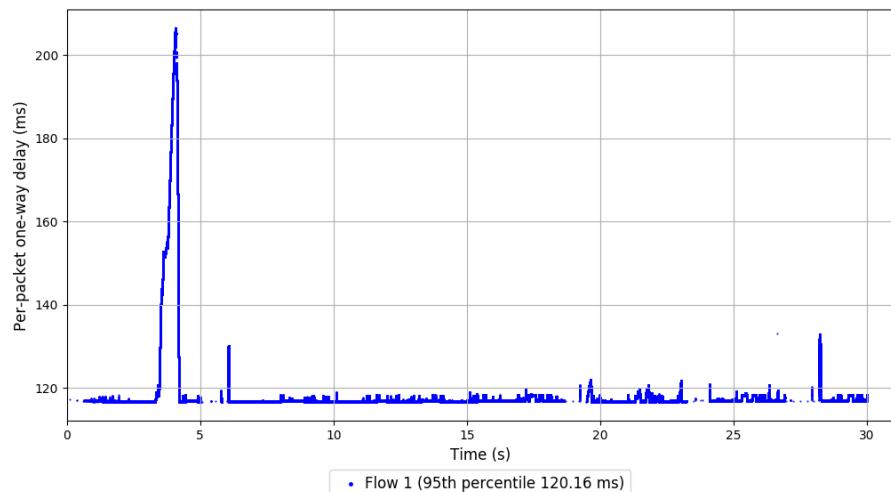
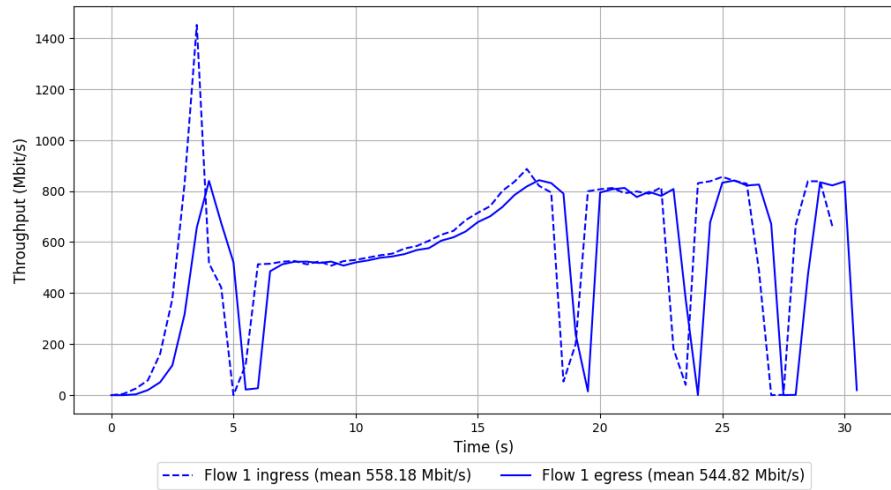


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-12-10 22:38:09
End at: 2018-12-10 22:38:39
Local clock offset: -2.946 ms
Remote clock offset: 3.422 ms

# Below is generated by plot.py at 2018-12-11 00:22:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 544.82 Mbit/s
95th percentile per-packet one-way delay: 120.159 ms
Loss rate: 2.39%
-- Flow 1:
Average throughput: 544.82 Mbit/s
95th percentile per-packet one-way delay: 120.159 ms
Loss rate: 2.39%
```

Run 2: Report of PCC-Allegro — Data Link

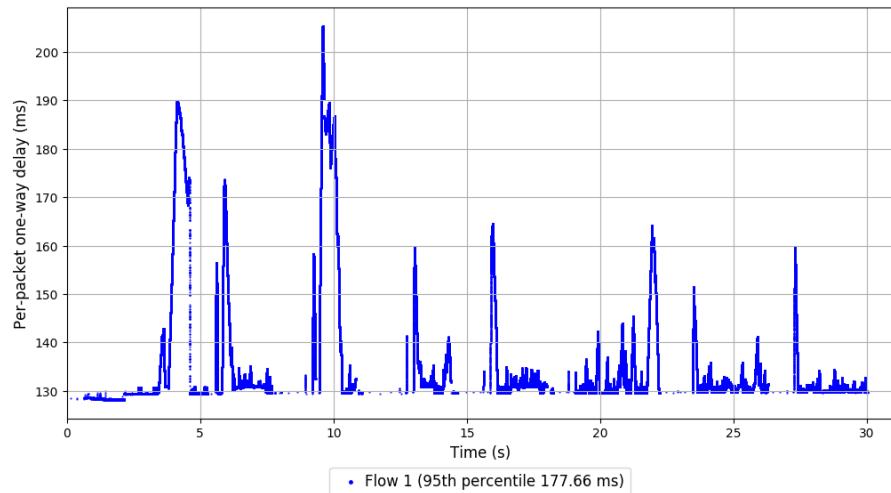
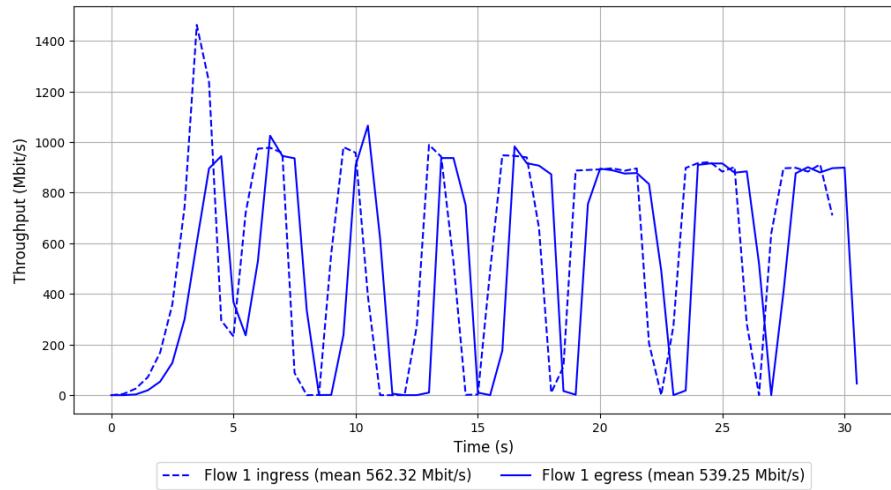


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-12-10 23:04:47
End at: 2018-12-10 23:05:17
Local clock offset: -9.777 ms
Remote clock offset: 1.824 ms

# Below is generated by plot.py at 2018-12-11 00:22:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 539.25 Mbit/s
95th percentile per-packet one-way delay: 177.658 ms
Loss rate: 4.10%
-- Flow 1:
Average throughput: 539.25 Mbit/s
95th percentile per-packet one-way delay: 177.658 ms
Loss rate: 4.10%
```

Run 3: Report of PCC-Allegro — Data Link

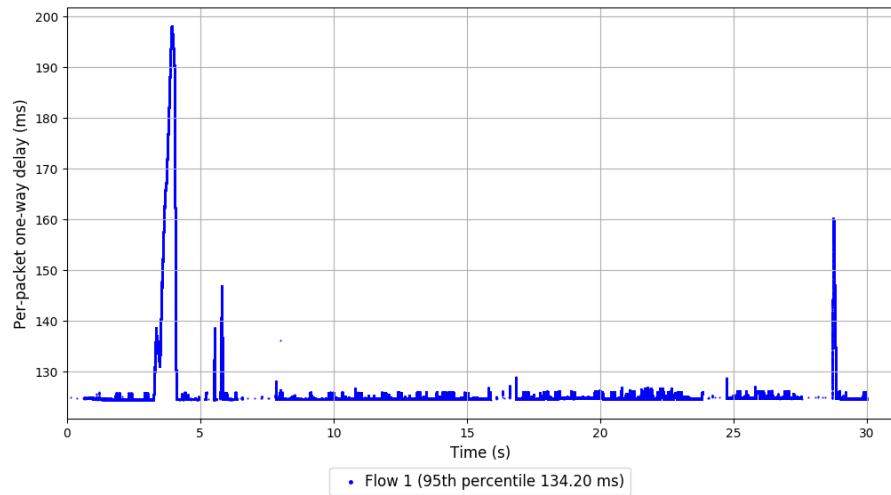
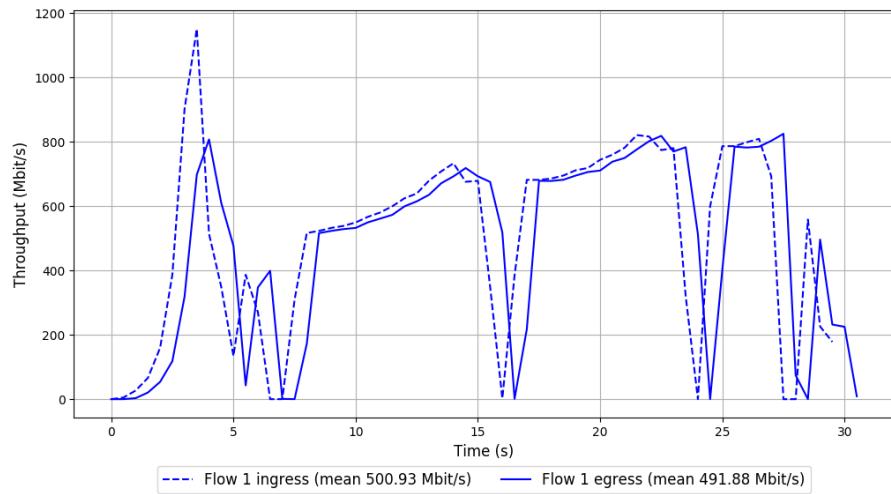


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-12-10 23:31:33
End at: 2018-12-10 23:32:03
Local clock offset: -7.501 ms
Remote clock offset: -0.204 ms

# Below is generated by plot.py at 2018-12-11 00:26:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 491.88 Mbit/s
95th percentile per-packet one-way delay: 134.202 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 491.88 Mbit/s
95th percentile per-packet one-way delay: 134.202 ms
Loss rate: 1.81%
```

Run 4: Report of PCC-Allegro — Data Link

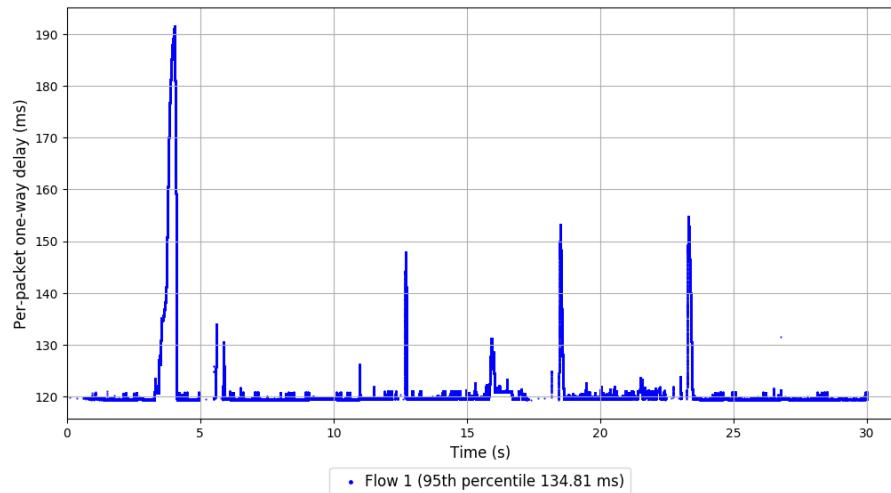
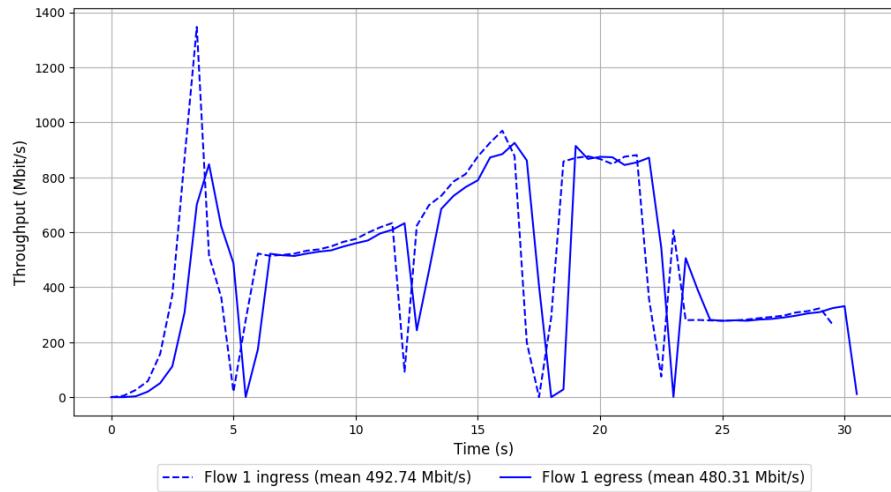


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-12-10 23:58:11
End at: 2018-12-10 23:58:41
Local clock offset: -0.962 ms
Remote clock offset: 3.428 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 480.31 Mbit/s
95th percentile per-packet one-way delay: 134.808 ms
Loss rate: 2.52%
-- Flow 1:
Average throughput: 480.31 Mbit/s
95th percentile per-packet one-way delay: 134.808 ms
Loss rate: 2.52%
```

Run 5: Report of PCC-Allegro — Data Link

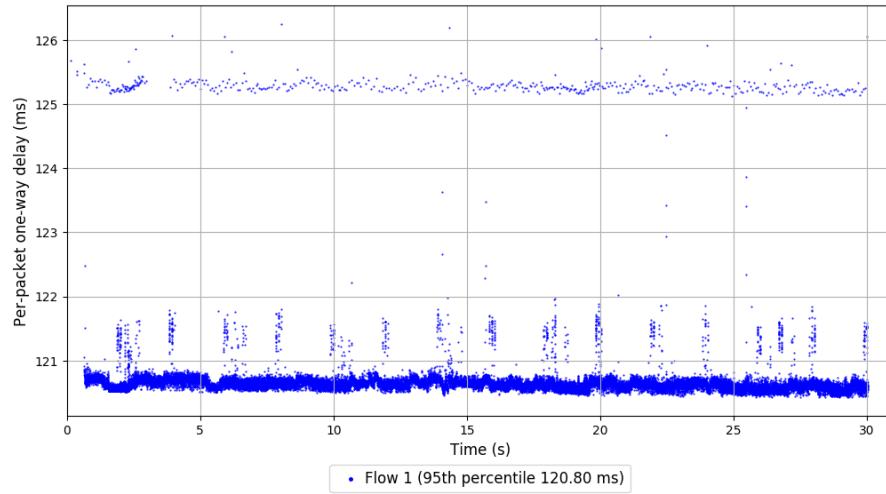
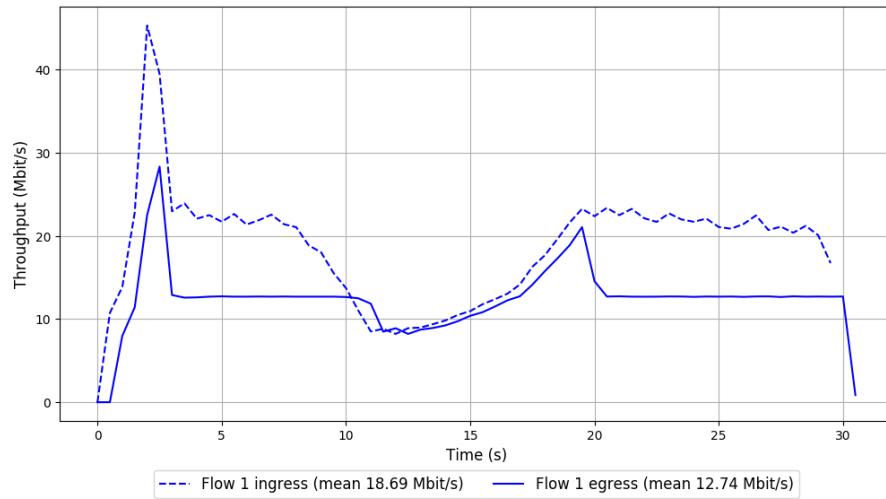


Run 1: Statistics of PCC-Expr

```
Start at: 2018-12-10 22:18:23
End at: 2018-12-10 22:18:53
Local clock offset: -13.827 ms
Remote clock offset: 4.398 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.74 Mbit/s
95th percentile per-packet one-way delay: 120.799 ms
Loss rate: 31.83%
-- Flow 1:
Average throughput: 12.74 Mbit/s
95th percentile per-packet one-way delay: 120.799 ms
Loss rate: 31.83%
```

Run 1: Report of PCC-Expr — Data Link

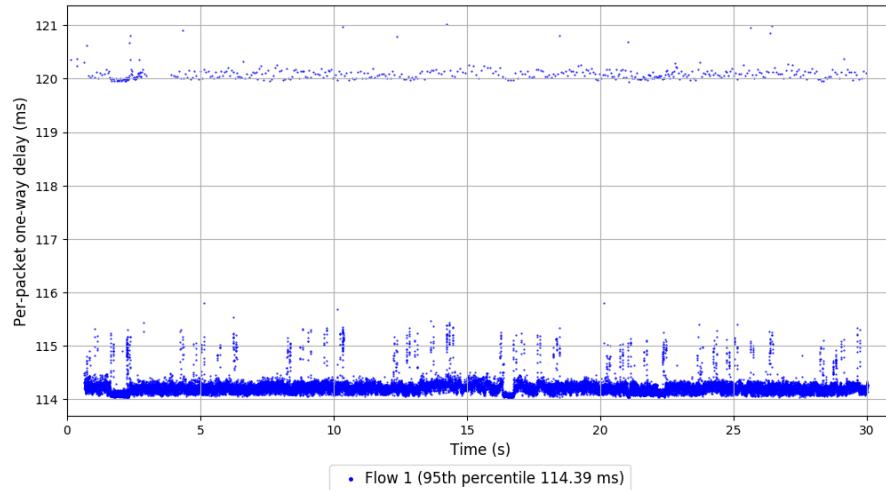
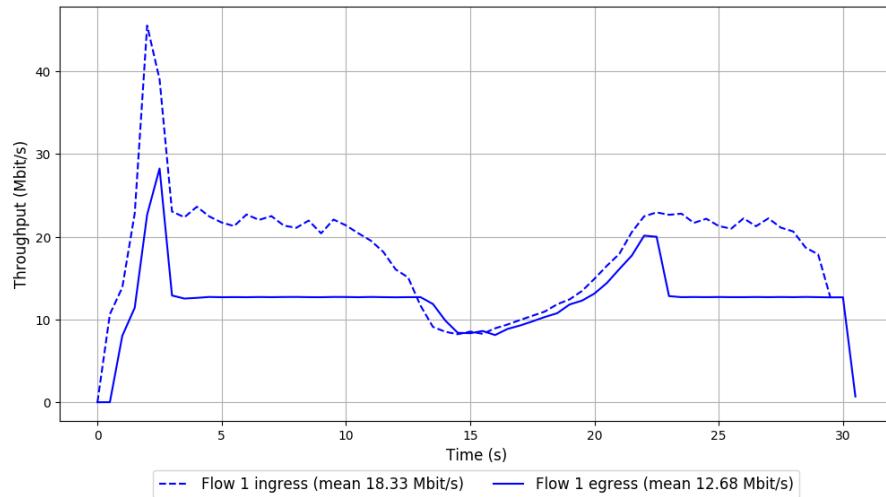


Run 2: Statistics of PCC-Expr

```
Start at: 2018-12-10 22:45:12
End at: 2018-12-10 22:45:42
Local clock offset: -2.711 ms
Remote clock offset: 3.491 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 114.392 ms
Loss rate: 30.84%
-- Flow 1:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 114.392 ms
Loss rate: 30.84%
```

Run 2: Report of PCC-Expr — Data Link

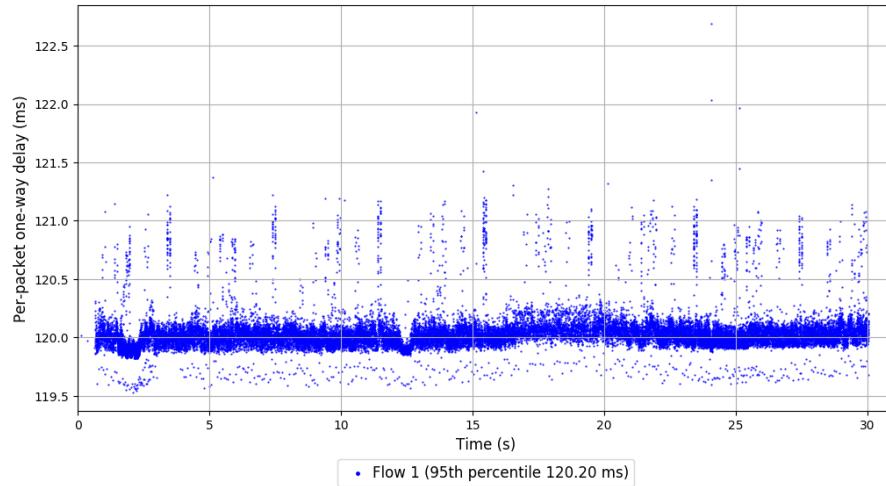
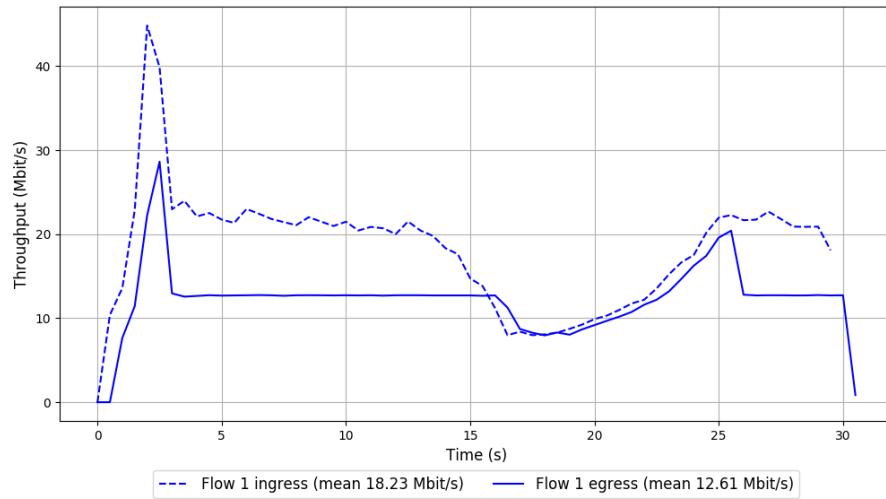


Run 3: Statistics of PCC-Expr

```
Start at: 2018-12-10 23:11:46
End at: 2018-12-10 23:12:16
Local clock offset: -5.433 ms
Remote clock offset: 0.768 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 120.205 ms
Loss rate: 30.79%
-- Flow 1:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 120.205 ms
Loss rate: 30.79%
```

Run 3: Report of PCC-Expr — Data Link

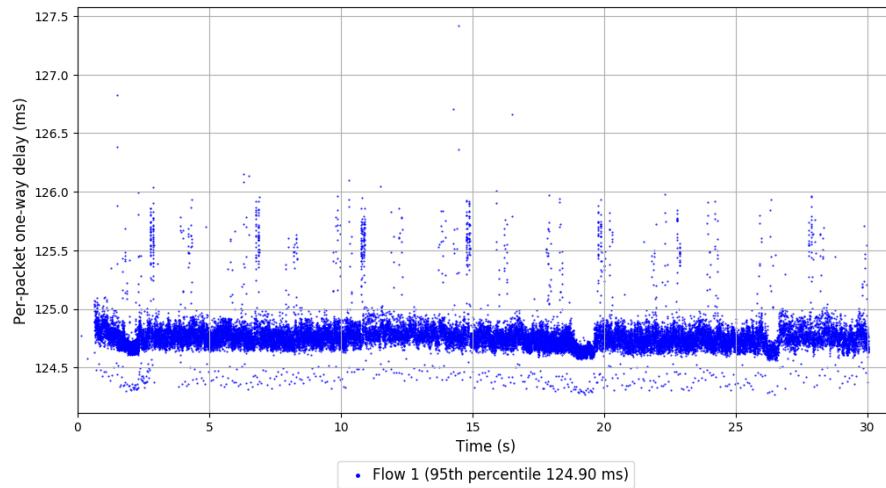
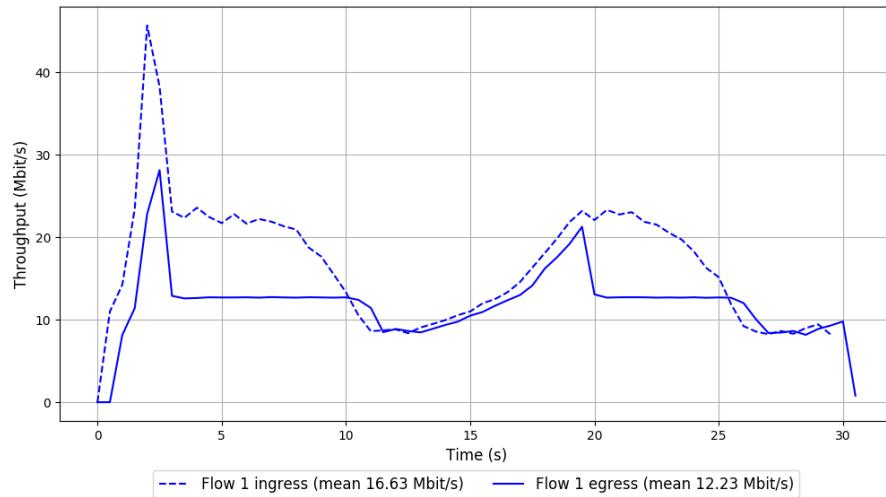


Run 4: Statistics of PCC-Expr

```
Start at: 2018-12-10 23:38:32
End at: 2018-12-10 23:39:02
Local clock offset: -7.639 ms
Remote clock offset: 1.504 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.23 Mbit/s
95th percentile per-packet one-way delay: 124.904 ms
Loss rate: 26.46%
-- Flow 1:
Average throughput: 12.23 Mbit/s
95th percentile per-packet one-way delay: 124.904 ms
Loss rate: 26.46%
```

Run 4: Report of PCC-Expr — Data Link

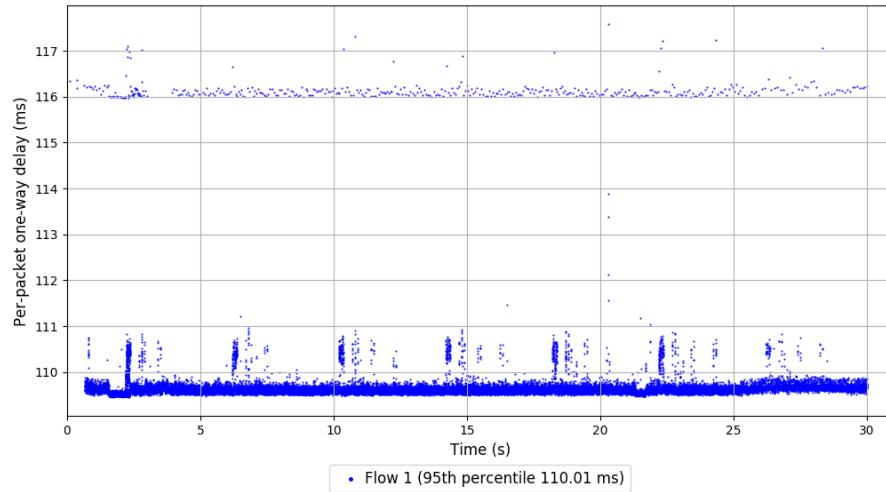
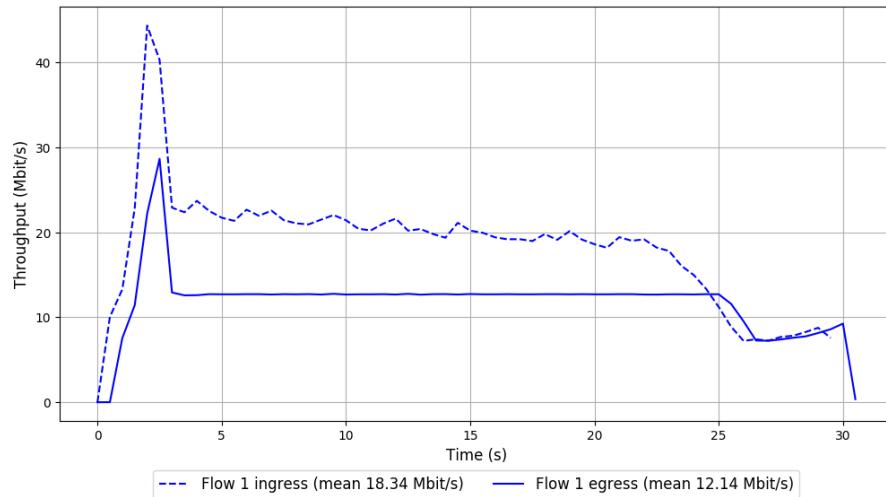


Run 5: Statistics of PCC-Expr

```
Start at: 2018-12-11 00:05:07
End at: 2018-12-11 00:05:37
Local clock offset: 8.435 ms
Remote clock offset: 3.847 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.14 Mbit/s
95th percentile per-packet one-way delay: 110.007 ms
Loss rate: 33.79%
-- Flow 1:
Average throughput: 12.14 Mbit/s
95th percentile per-packet one-way delay: 110.007 ms
Loss rate: 33.79%
```

Run 5: Report of PCC-Expr — Data Link

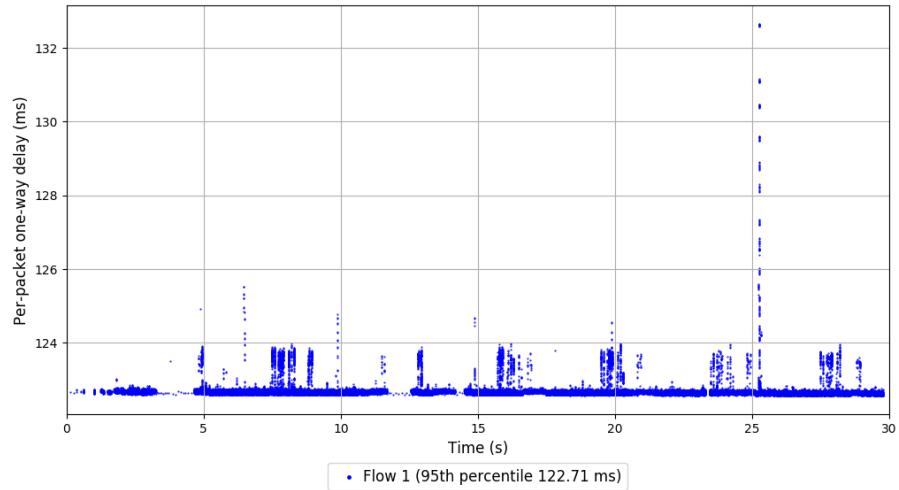
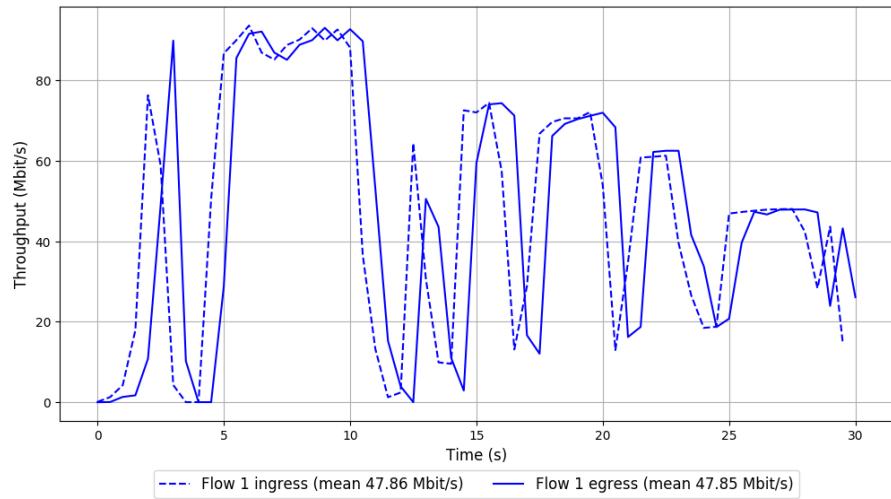


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-12-10 22:12:57
End at: 2018-12-10 22:13:27
Local clock offset: -16.015 ms
Remote clock offset: 3.917 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 47.85 Mbit/s
95th percentile per-packet one-way delay: 122.707 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 47.85 Mbit/s
95th percentile per-packet one-way delay: 122.707 ms
Loss rate: 0.01%
```

Run 1: Report of QUIC Cubic — Data Link

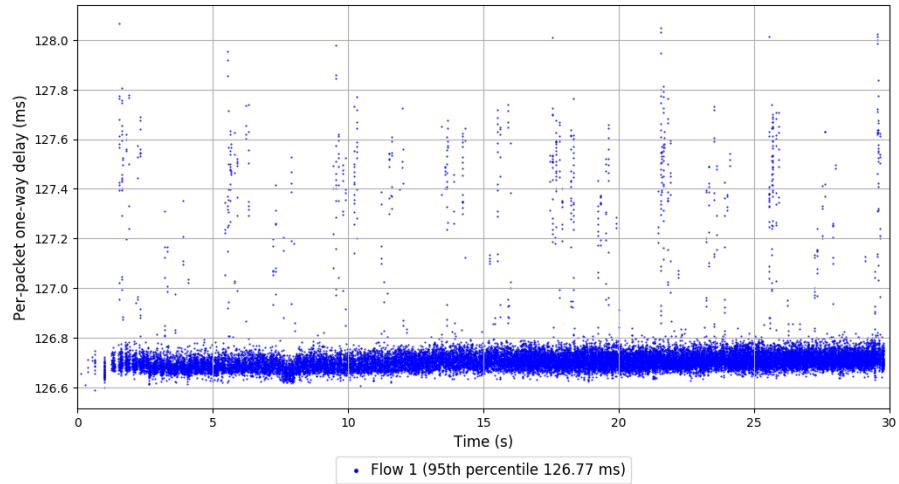
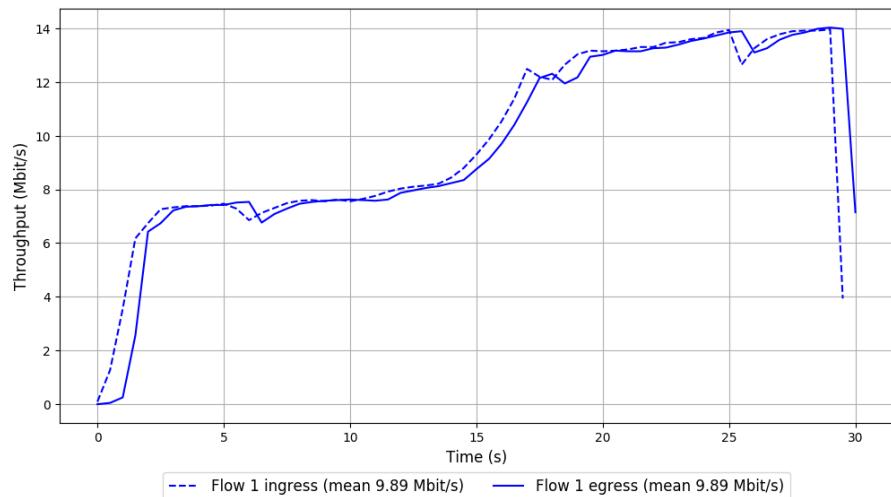


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-12-10 22:39:51
End at: 2018-12-10 22:40:21
Local clock offset: -11.63 ms
Remote clock offset: 3.382 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.89 Mbit/s
95th percentile per-packet one-way delay: 126.772 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 9.89 Mbit/s
95th percentile per-packet one-way delay: 126.772 ms
Loss rate: 0.02%
```

Run 2: Report of QUIC Cubic — Data Link

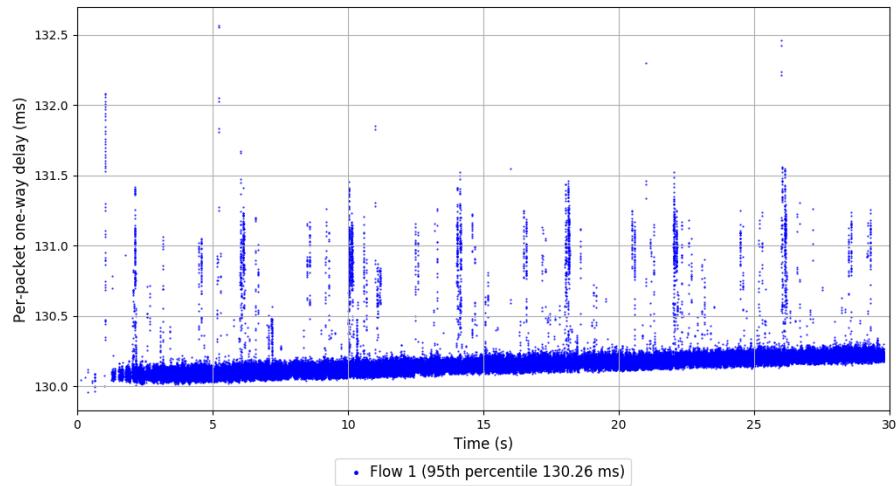
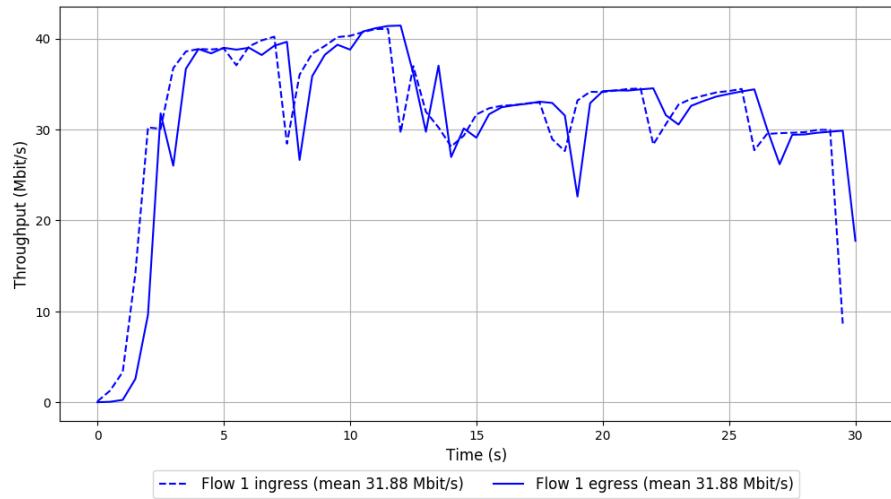


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-12-10 23:06:23
End at: 2018-12-10 23:06:53
Local clock offset: -9.531 ms
Remote clock offset: 1.546 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 31.88 Mbit/s
95th percentile per-packet one-way delay: 130.256 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 31.88 Mbit/s
95th percentile per-packet one-way delay: 130.256 ms
Loss rate: 0.01%
```

Run 3: Report of QUIC Cubic — Data Link

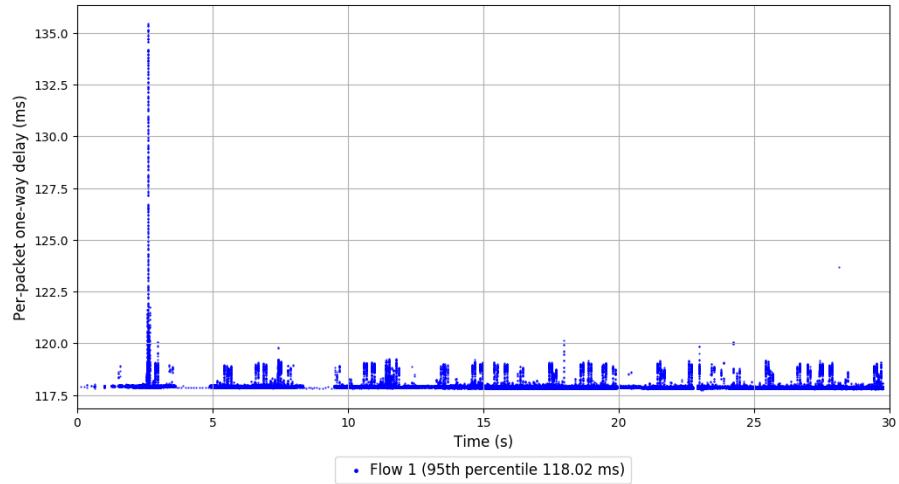
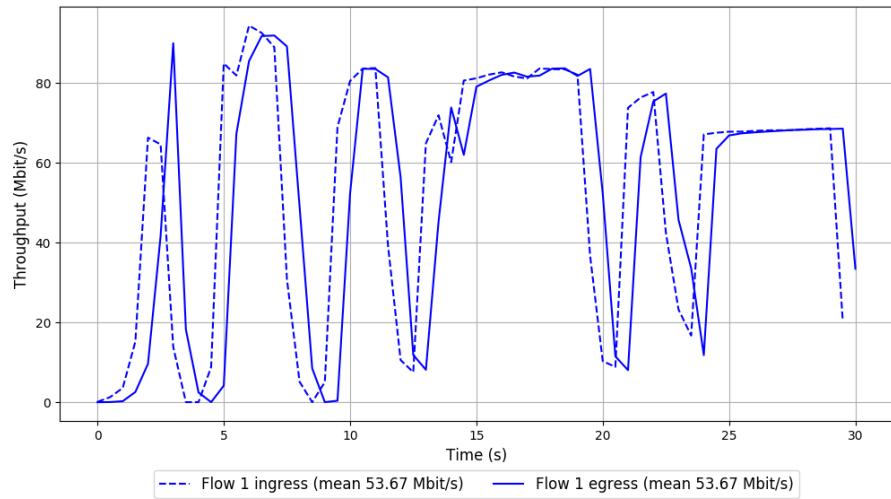


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-12-10 23:33:07
End at: 2018-12-10 23:33:37
Local clock offset: 2.118 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 53.67 Mbit/s
95th percentile per-packet one-way delay: 118.015 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 53.67 Mbit/s
95th percentile per-packet one-way delay: 118.015 ms
Loss rate: 0.01%
```

Run 4: Report of QUIC Cubic — Data Link

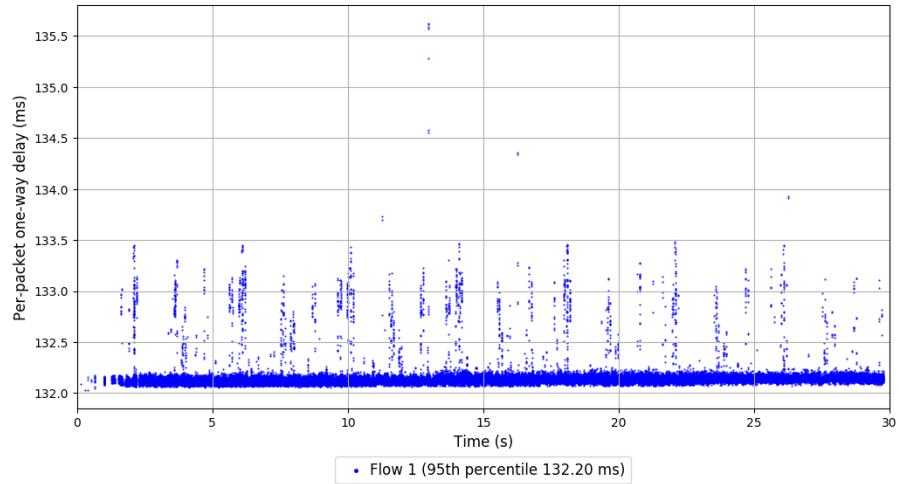
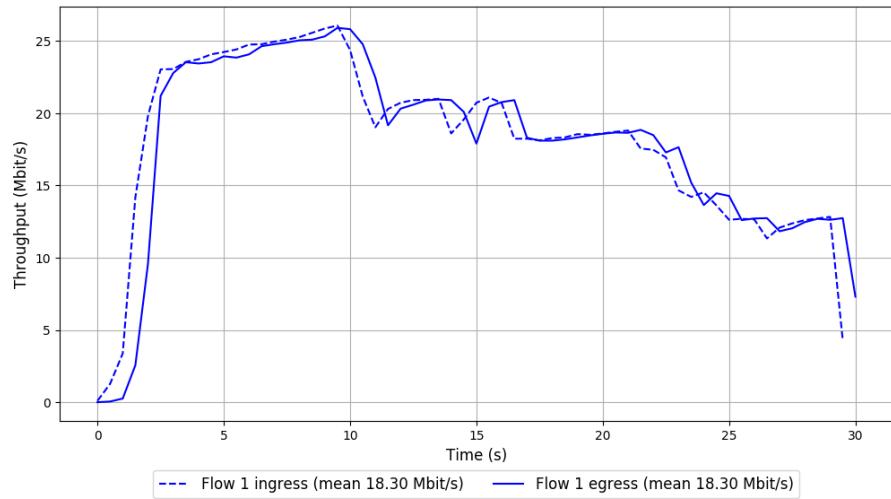


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-12-10 23:59:45
End at: 2018-12-11 00:00:15
Local clock offset: -8.463 ms
Remote clock offset: 3.521 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 18.30 Mbit/s
95th percentile per-packet one-way delay: 132.202 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 18.30 Mbit/s
95th percentile per-packet one-way delay: 132.202 ms
Loss rate: 0.04%
```

Run 5: Report of QUIC Cubic — Data Link

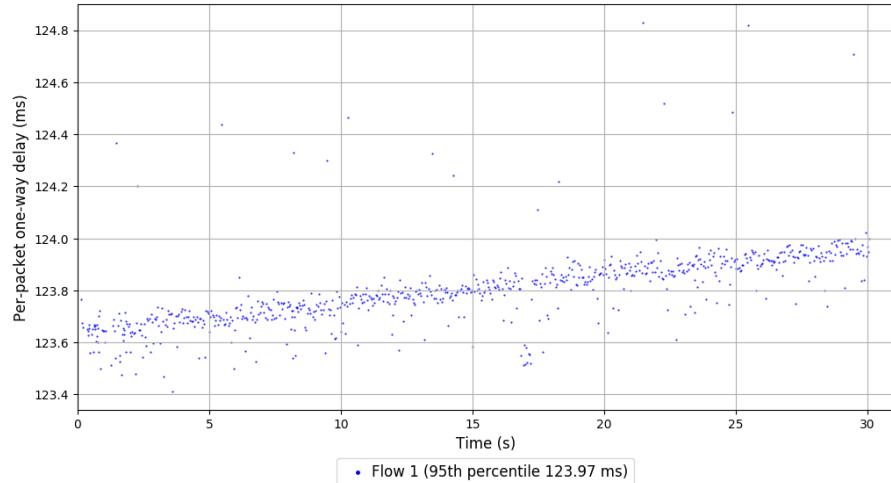
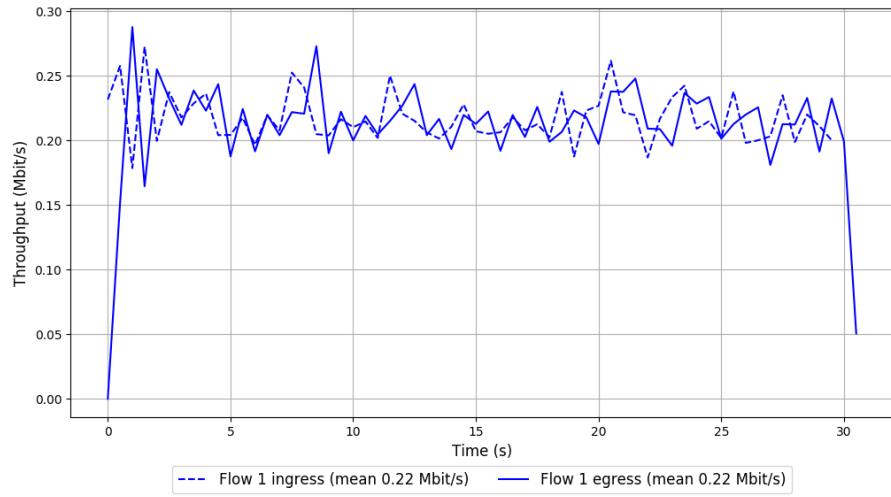


Run 1: Statistics of SCReAM

```
Start at: 2018-12-10 22:04:12
End at: 2018-12-10 22:04:42
Local clock offset: -16.113 ms
Remote clock offset: 3.028 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 123.967 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 123.967 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

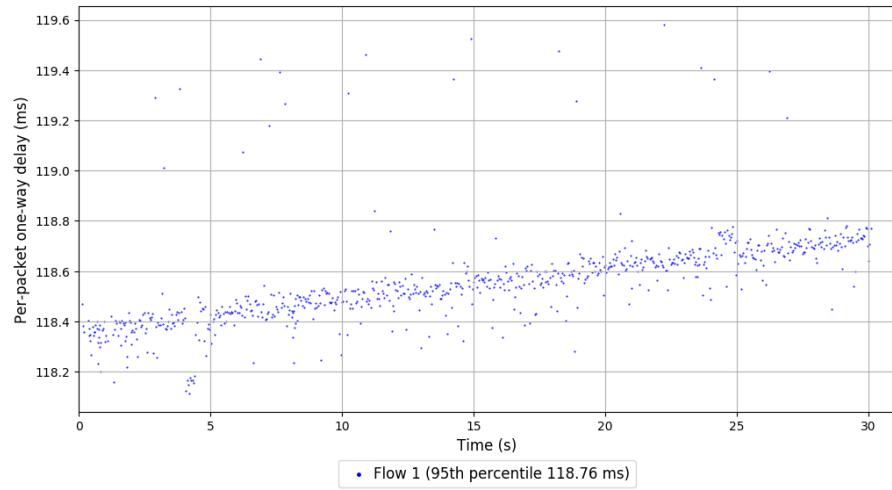
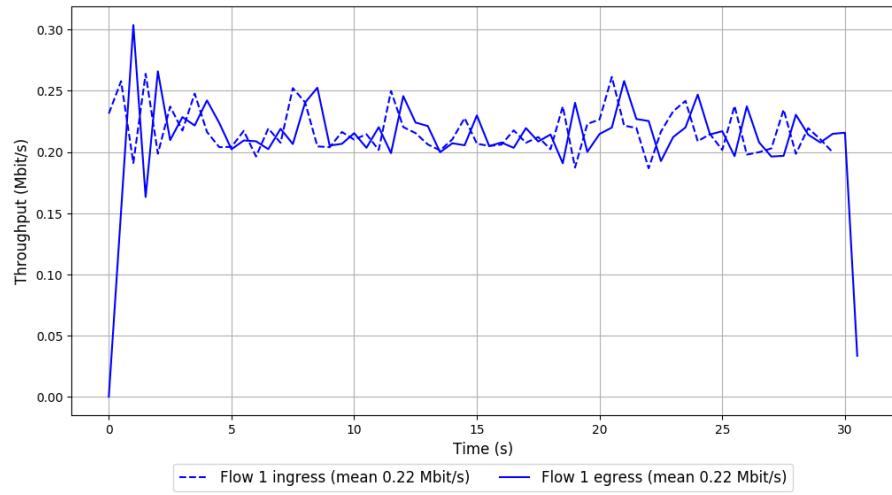


Run 2: Statistics of SCReAM

```
Start at: 2018-12-10 22:30:54
End at: 2018-12-10 22:31:24
Local clock offset: -9.593 ms
Remote clock offset: 3.843 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 118.756 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 118.756 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

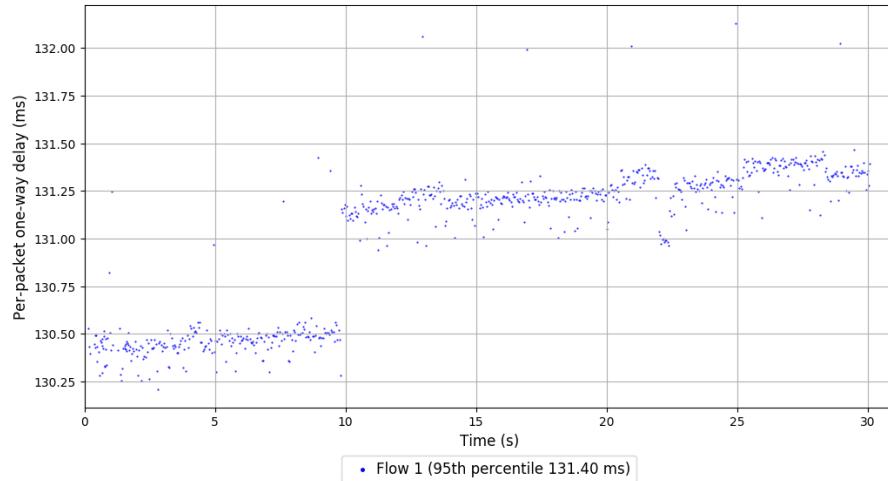
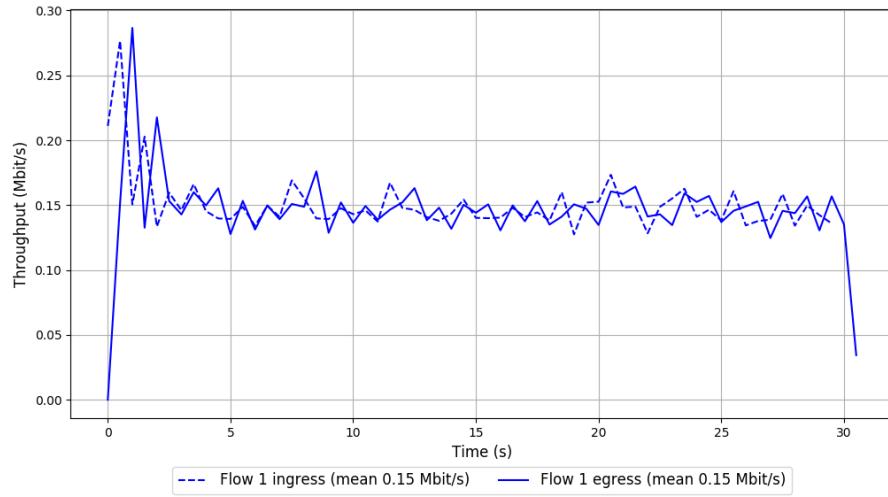


Run 3: Statistics of SCReAM

```
Start at: 2018-12-10 22:57:36
End at: 2018-12-10 22:58:07
Local clock offset: -13.221 ms
Remote clock offset: 3.729 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 131.400 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 131.400 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

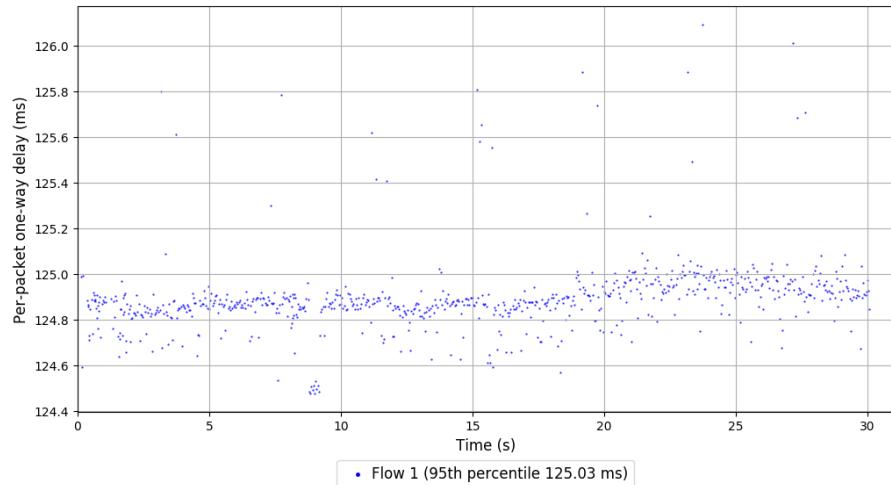
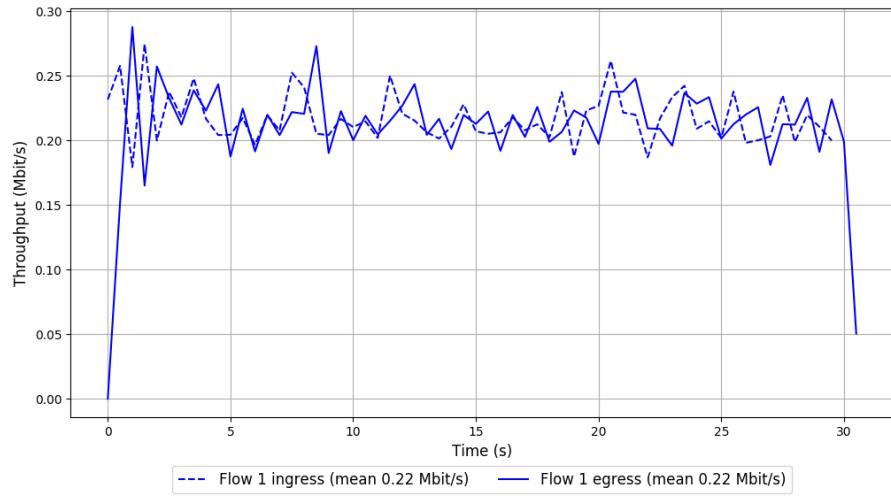


Run 4: Statistics of SCReAM

```
Start at: 2018-12-10 23:24:20
End at: 2018-12-10 23:24:50
Local clock offset: -7.861 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 125.027 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 125.027 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

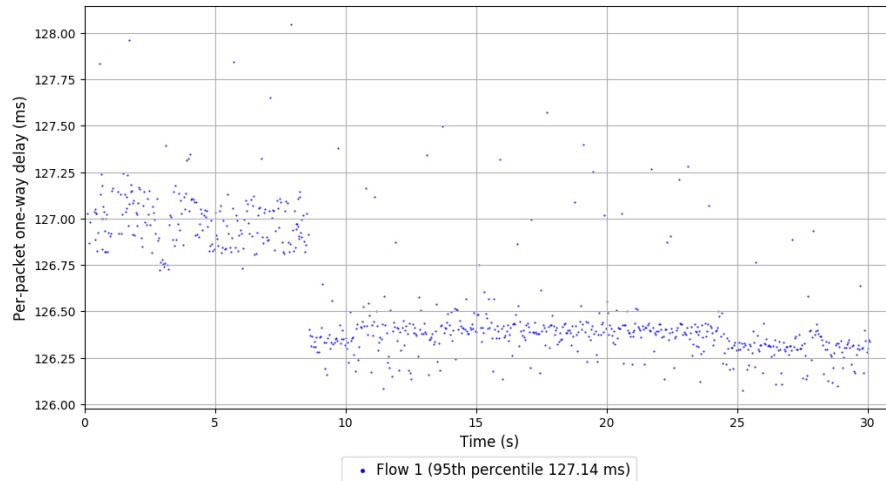
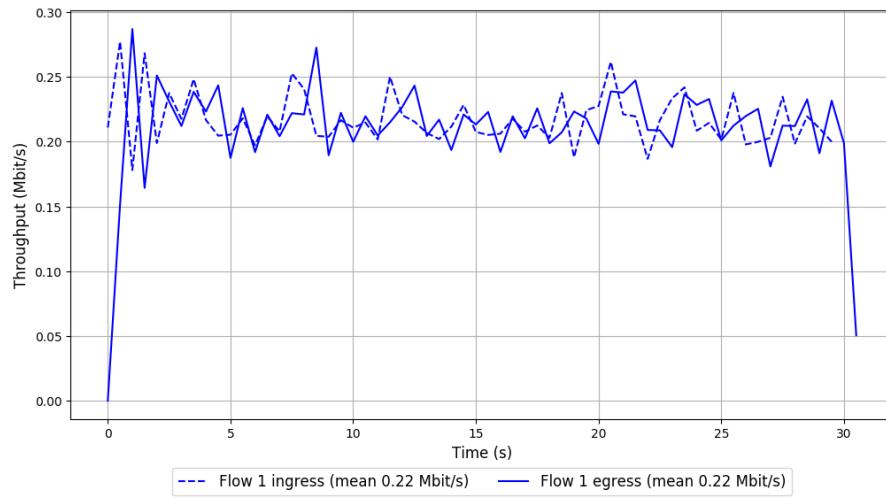


Run 5: Statistics of SCReAM

```
Start at: 2018-12-10 23:50:56
End at: 2018-12-10 23:51:26
Local clock offset: -3.541 ms
Remote clock offset: 3.019 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 127.137 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 127.137 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

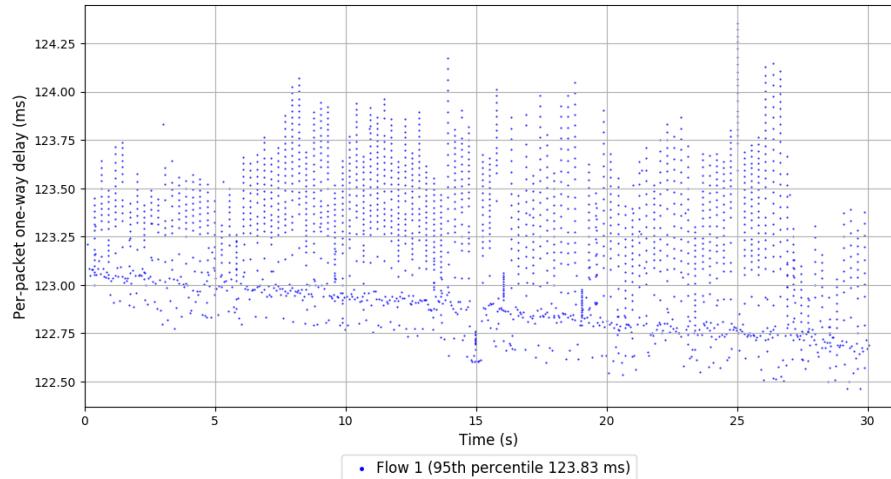
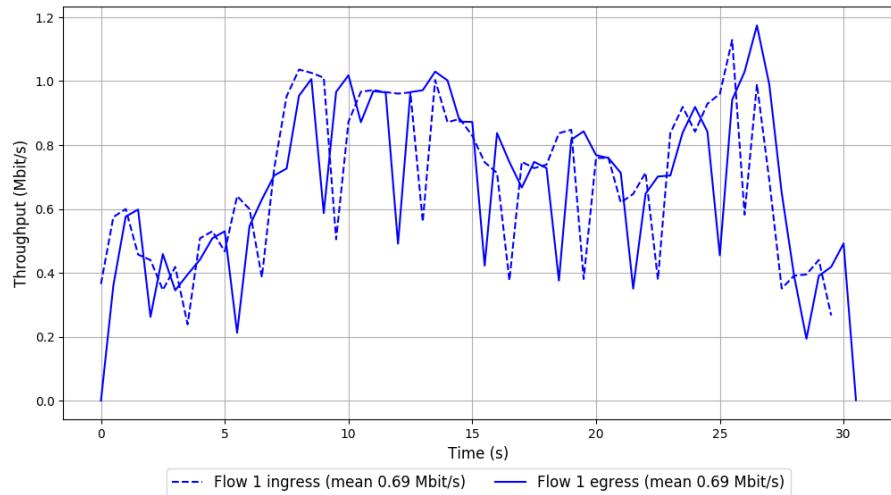


Run 1: Statistics of Sprout

```
Start at: 2018-12-10 21:55:44
End at: 2018-12-10 21:56:14
Local clock offset: -26.933 ms
Remote clock offset: 1.723 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 123.830 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 123.830 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

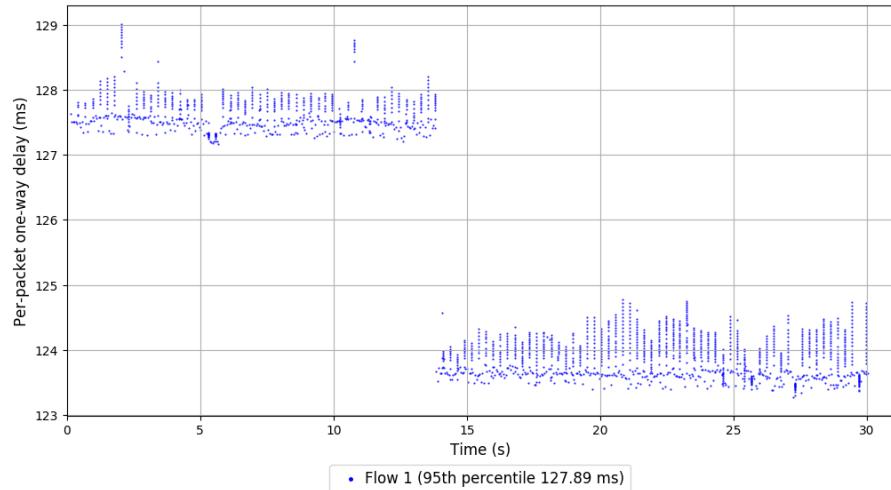
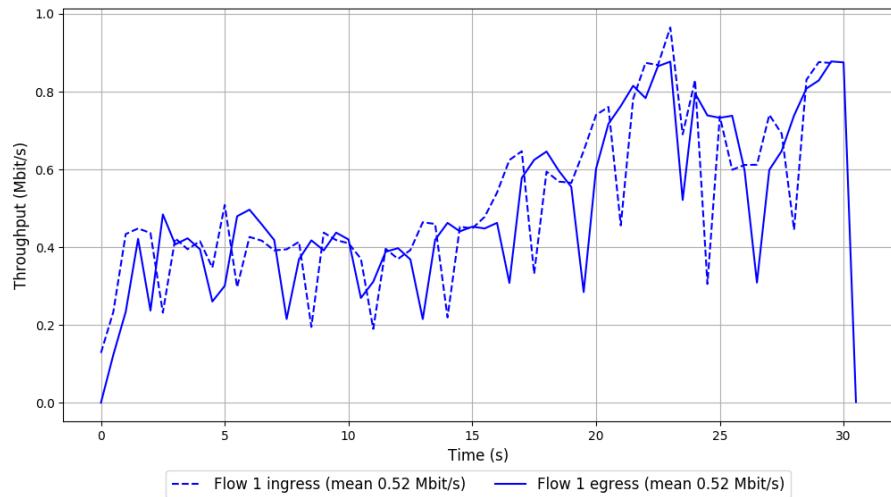


Run 2: Statistics of Sprout

```
Start at: 2018-12-10 22:22:23
End at: 2018-12-10 22:22:53
Local clock offset: -15.433 ms
Remote clock offset: 4.729 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 127.895 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 127.895 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

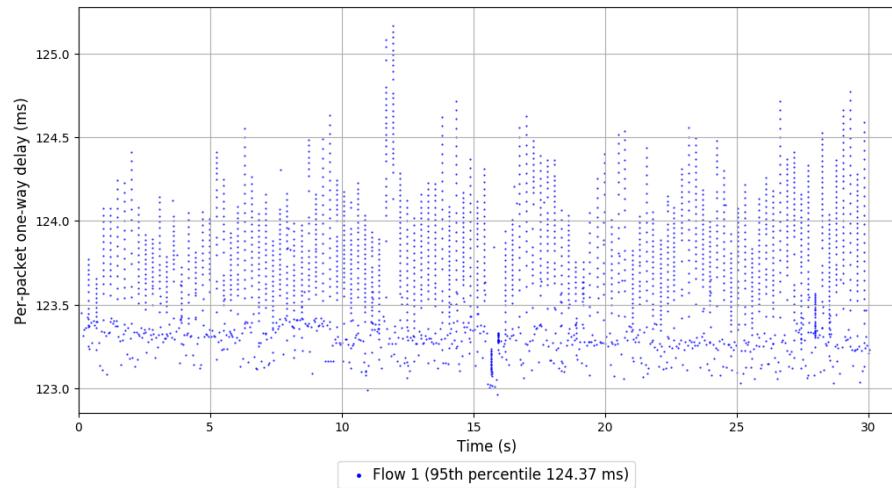
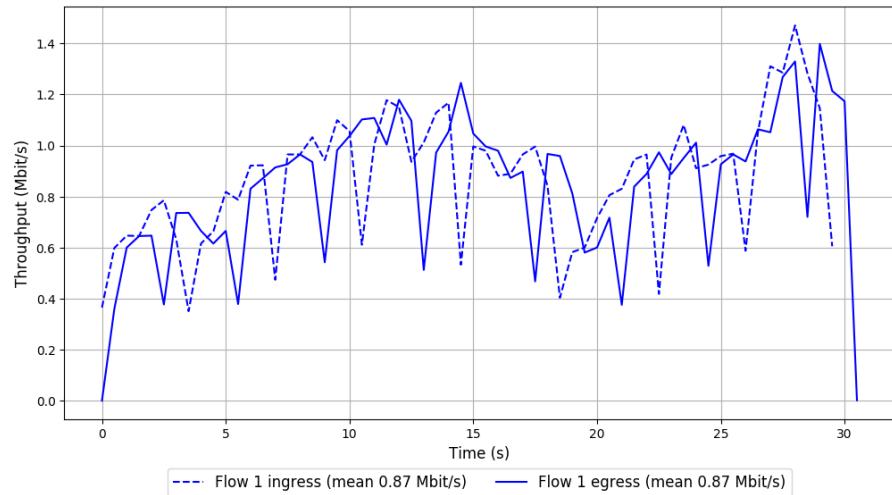


Run 3: Statistics of Sprout

```
Start at: 2018-12-10 22:49:13
End at: 2018-12-10 22:49:43
Local clock offset: -12.1 ms
Remote clock offset: 3.63 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 124.368 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 124.368 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

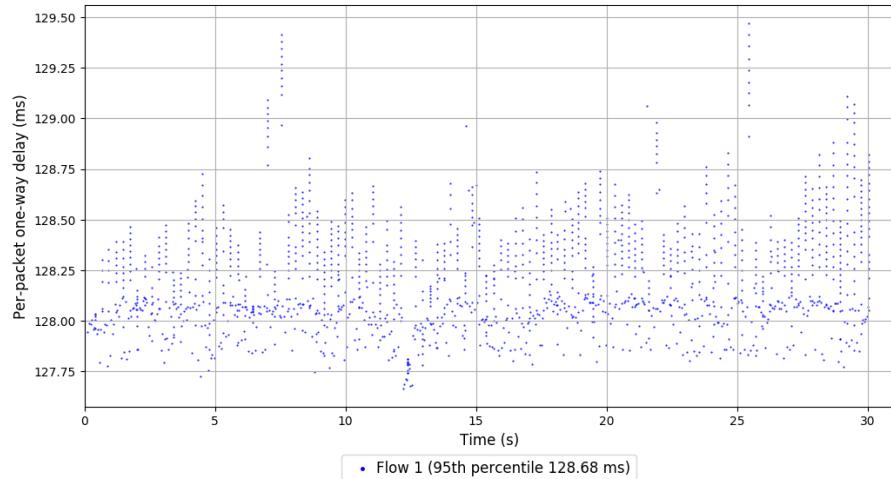
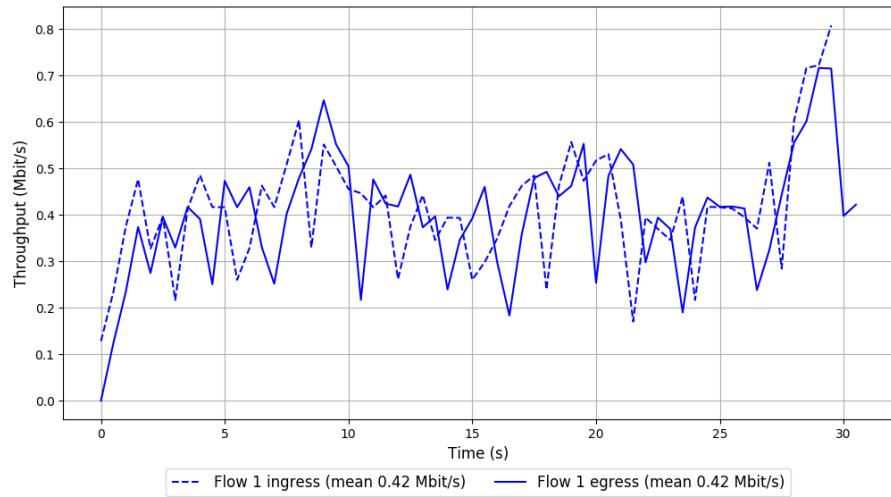


Run 4: Statistics of Sprout

```
Start at: 2018-12-10 23:15:46
End at: 2018-12-10 23:16:16
Local clock offset: -8.502 ms
Remote clock offset: 0.472 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 128.679 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 128.679 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

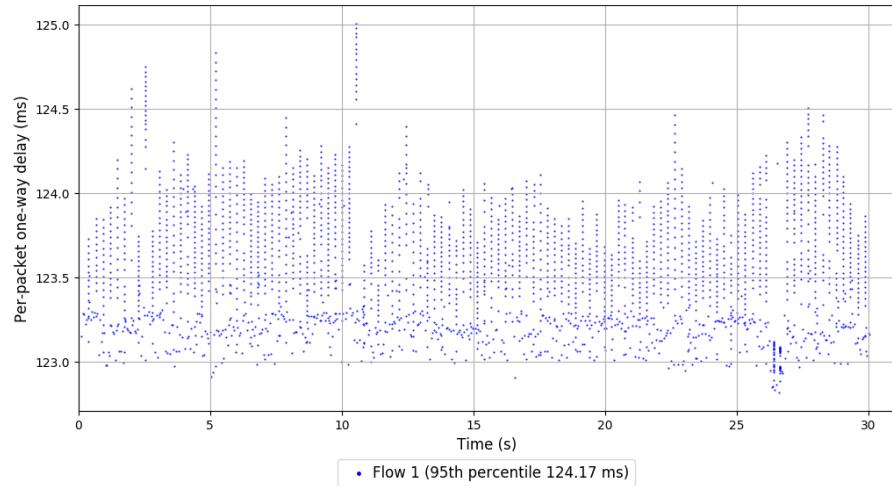
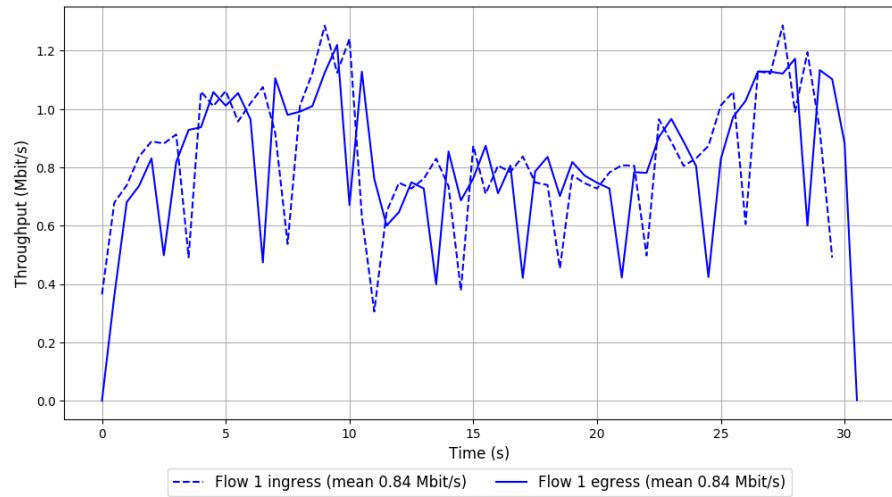


Run 5: Statistics of Sprout

```
Start at: 2018-12-10 23:42:32
End at: 2018-12-10 23:43:02
Local clock offset: -5.816 ms
Remote clock offset: 2.19 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 124.165 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 124.165 ms
Loss rate: 0.41%
```

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

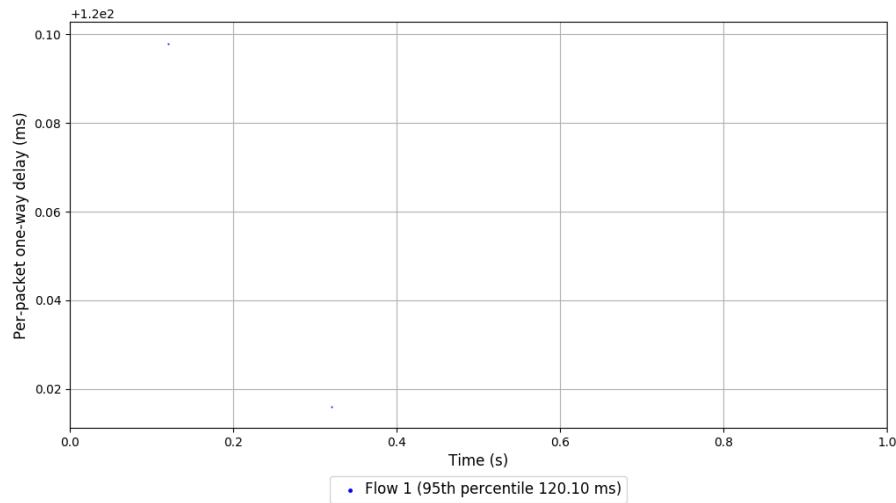
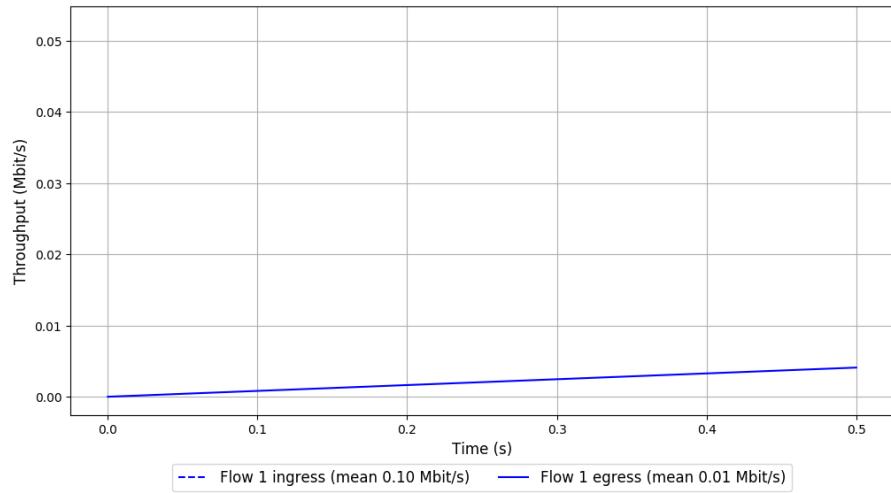
Start at: 2018-12-10 22:14:18

End at: 2018-12-10 22:14:48

Local clock offset: -6.684 ms

Remote clock offset: 4.008 ms

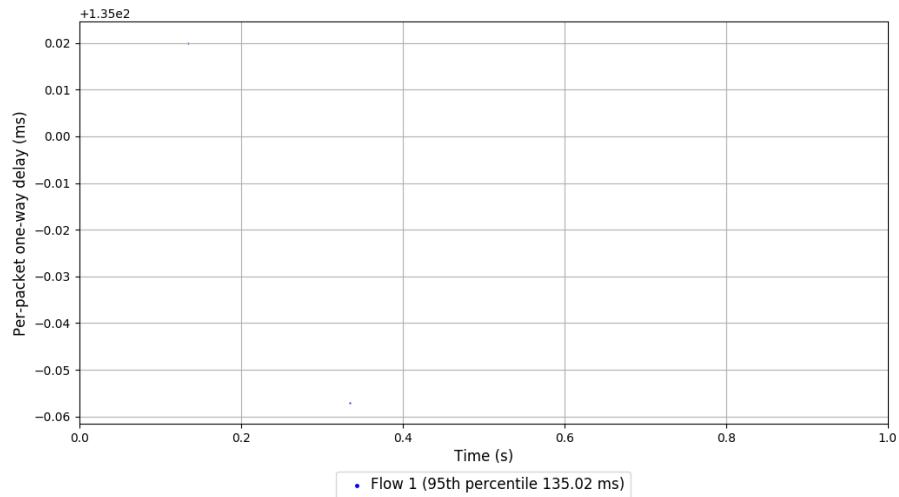
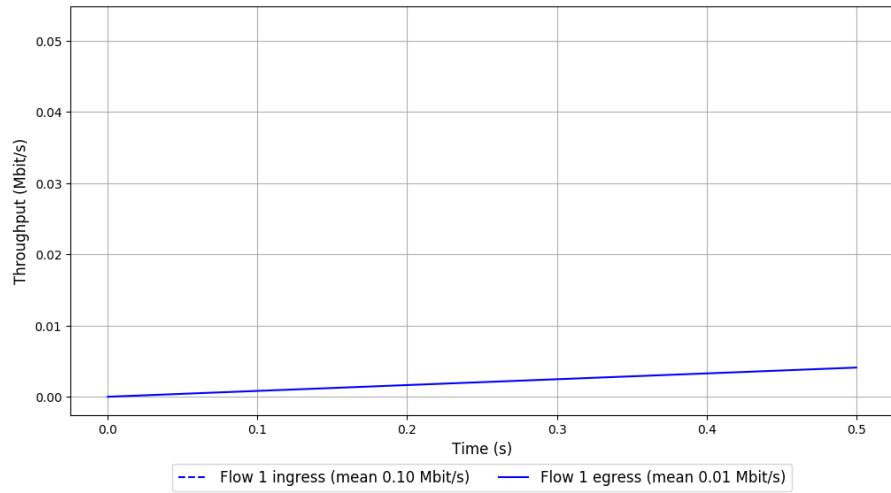
Run 1: Report of TaoVA-100x — Data Link



Run 2: Statistics of TaoVA-100x

Start at: 2018-12-10 22:41:10
End at: 2018-12-10 22:41:40
Local clock offset: -18.197 ms
Remote clock offset: 3.427 ms

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



Run 3: Statistics of TaoVA-100x

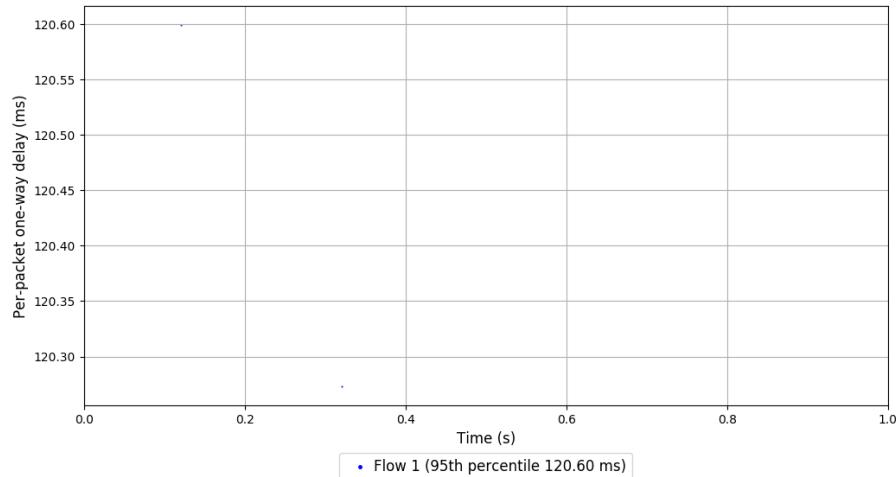
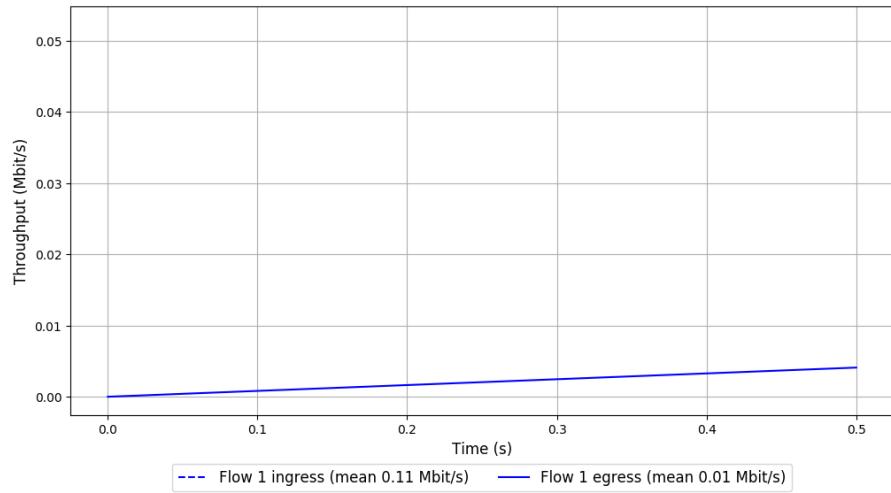
Start at: 2018-12-10 23:07:44

End at: 2018-12-10 23:08:14

Local clock offset: -4.861 ms

Remote clock offset: 1.31 ms

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



Run 4: Statistics of TaoVA-100x

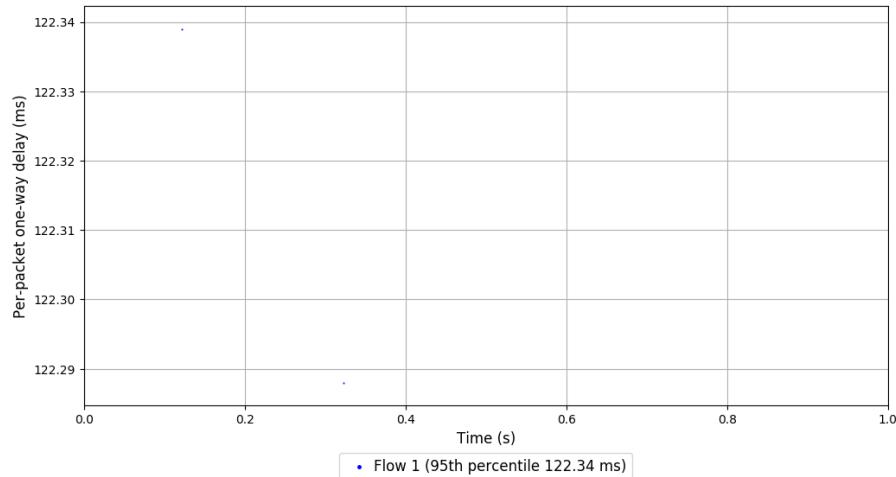
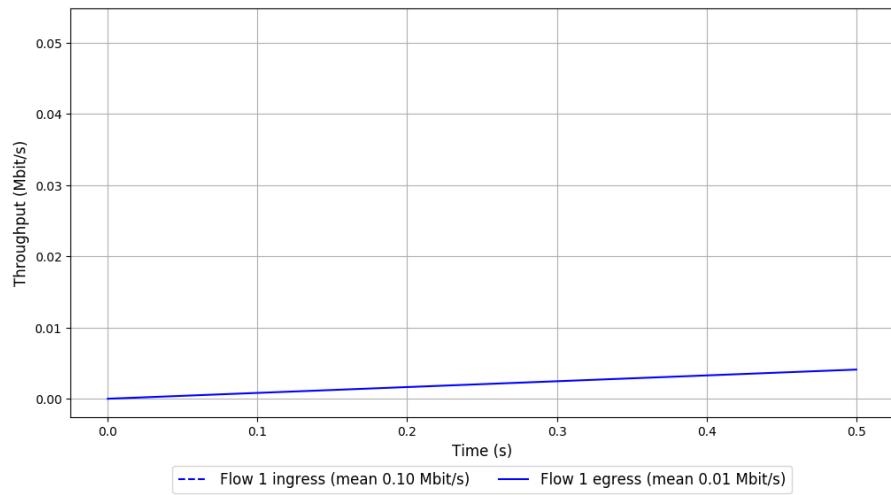
Start at: 2018-12-10 23:34:28

End at: 2018-12-10 23:34:58

Local clock offset: -1.92 ms

Remote clock offset: 0.34 ms

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



Run 5: Statistics of TaoVA-100x

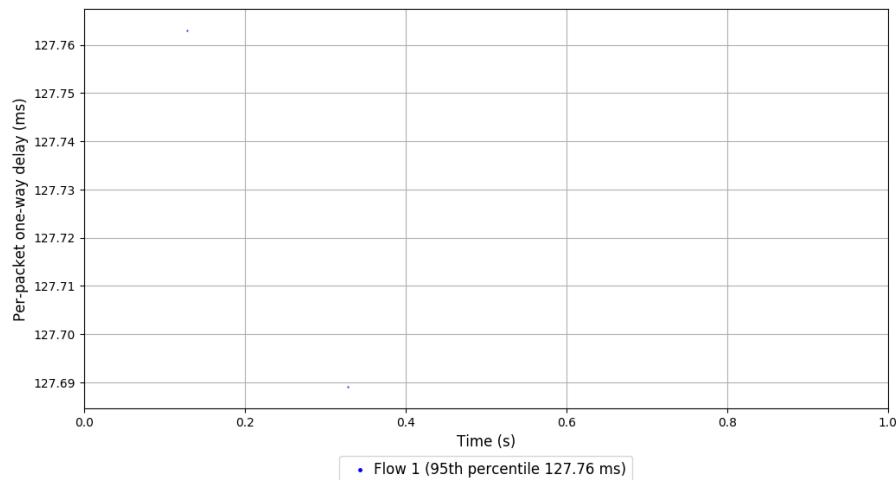
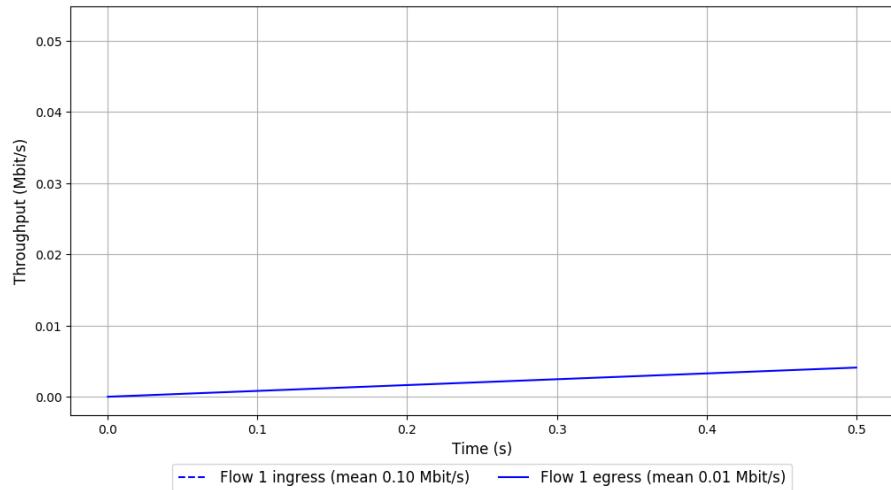
Start at: 2018-12-11 00:01:05

End at: 2018-12-11 00:01:35

Local clock offset: -4.074 ms

Remote clock offset: 3.595 ms

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

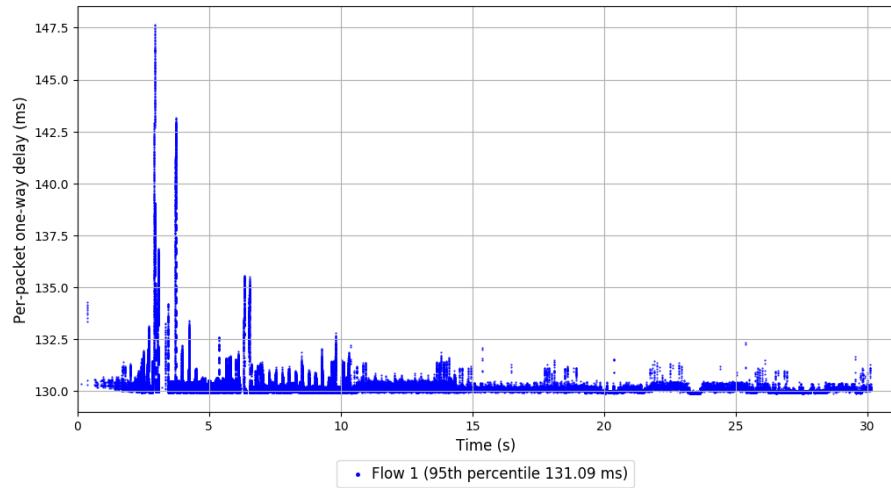
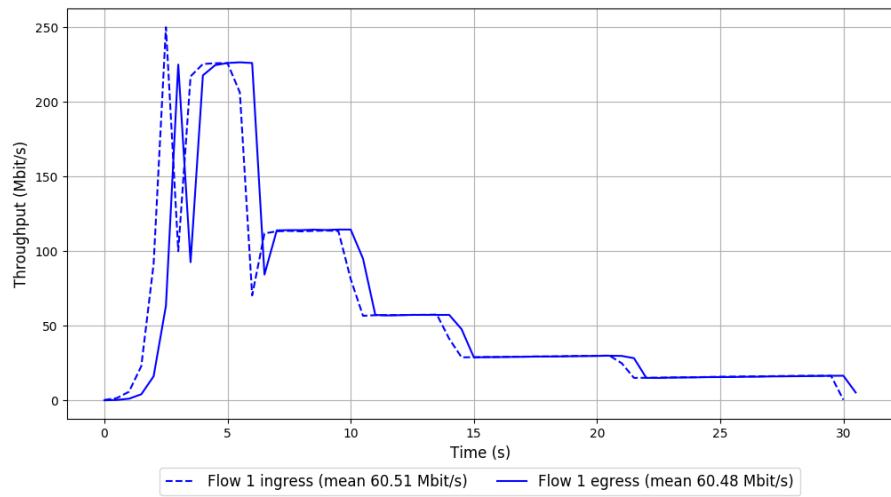


Run 1: Statistics of TCP Vegas

```
Start at: 2018-12-10 22:15:35
End at: 2018-12-10 22:16:05
Local clock offset: -15.924 ms
Remote clock offset: 4.21 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.48 Mbit/s
95th percentile per-packet one-way delay: 131.086 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 60.48 Mbit/s
95th percentile per-packet one-way delay: 131.086 ms
Loss rate: 0.04%
```

Run 1: Report of TCP Vegas — Data Link

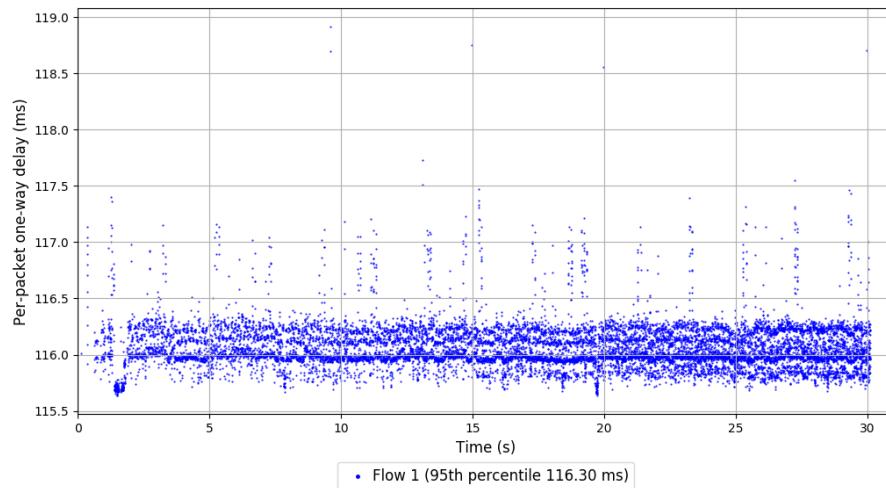
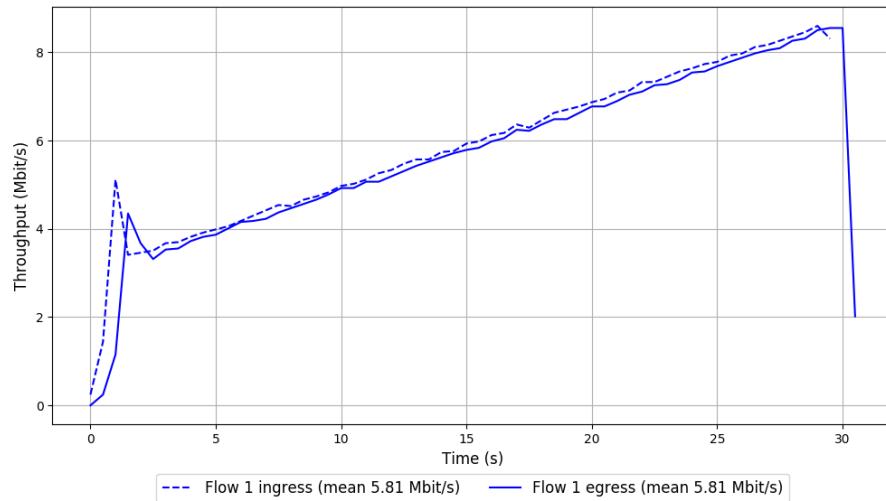


Run 2: Statistics of TCP Vegas

```
Start at: 2018-12-10 22:42:27
End at: 2018-12-10 22:42:57
Local clock offset: 1.994 ms
Remote clock offset: 3.444 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.81 Mbit/s
95th percentile per-packet one-way delay: 116.296 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 5.81 Mbit/s
95th percentile per-packet one-way delay: 116.296 ms
Loss rate: 0.01%
```

Run 2: Report of TCP Vegas — Data Link

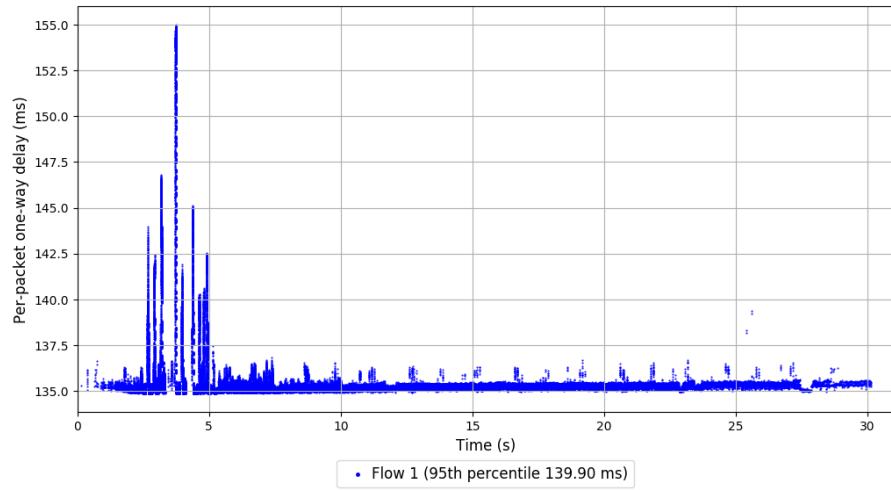
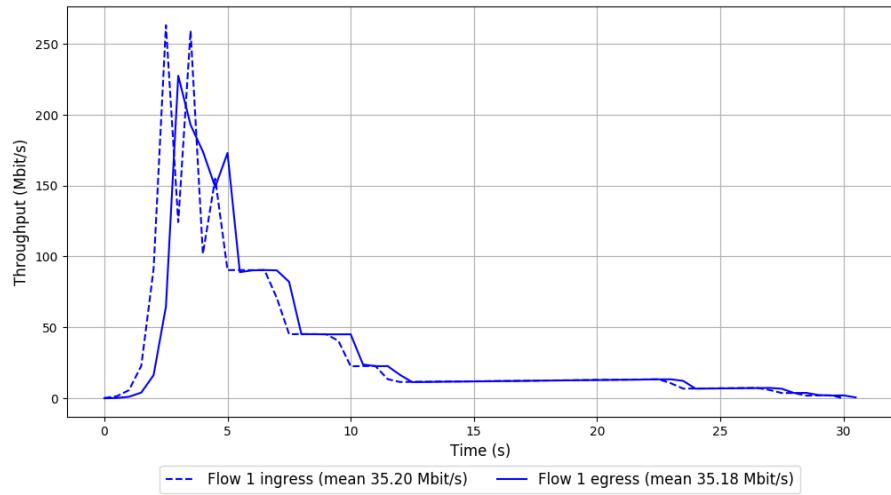


Run 3: Statistics of TCP Vegas

```
Start at: 2018-12-10 23:09:01
End at: 2018-12-10 23:09:31
Local clock offset: -14.161 ms
Remote clock offset: 1.055 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.18 Mbit/s
95th percentile per-packet one-way delay: 139.897 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 35.18 Mbit/s
95th percentile per-packet one-way delay: 139.897 ms
Loss rate: 0.07%
```

Run 3: Report of TCP Vegas — Data Link

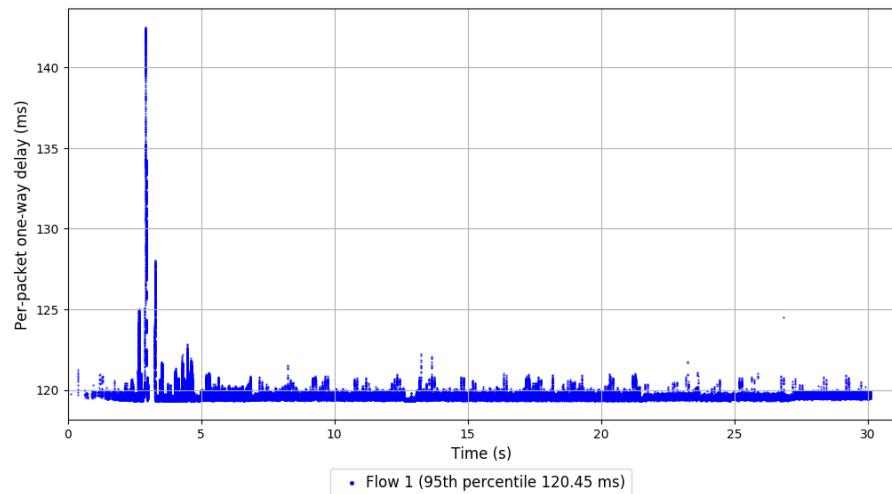
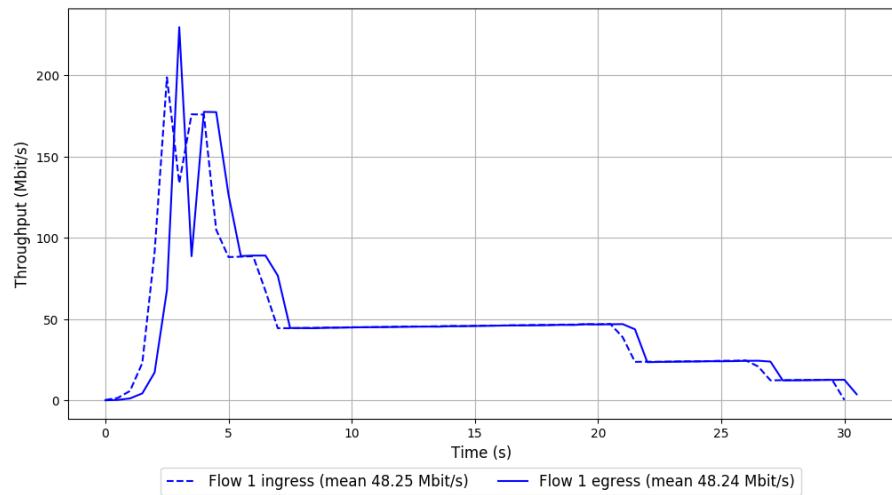


Run 4: Statistics of TCP Vegas

```
Start at: 2018-12-10 23:35:46
End at: 2018-12-10 23:36:16
Local clock offset: 2.642 ms
Remote clock offset: 0.799 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 48.24 Mbit/s
95th percentile per-packet one-way delay: 120.453 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 48.24 Mbit/s
95th percentile per-packet one-way delay: 120.453 ms
Loss rate: 0.02%
```

Run 4: Report of TCP Vegas — Data Link

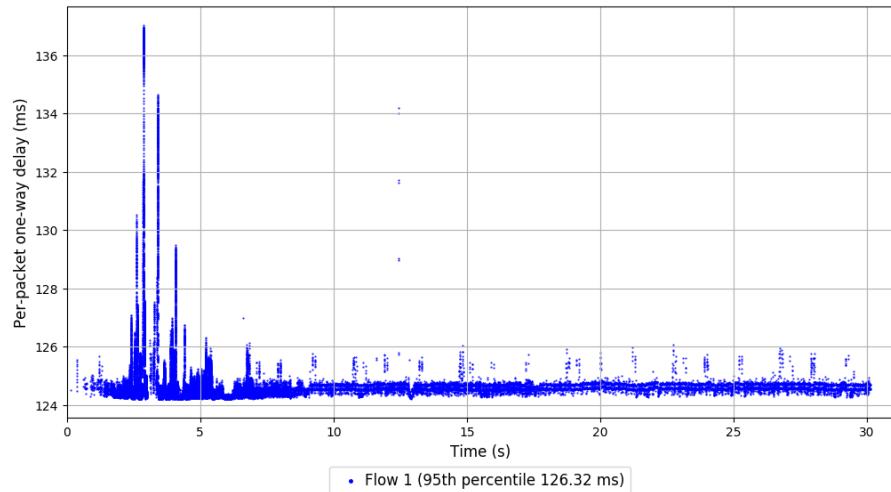
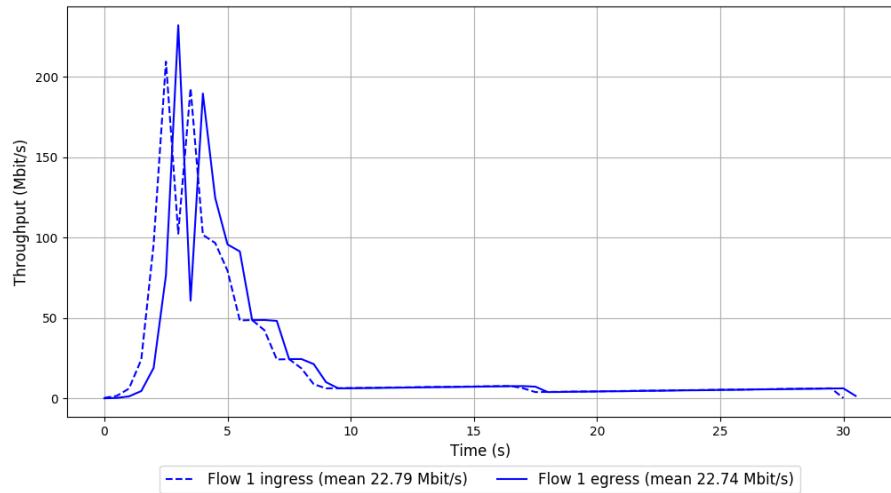


Run 5: Statistics of TCP Vegas

```
Start at: 2018-12-11 00:02:23
End at: 2018-12-11 00:02:53
Local clock offset: -3.967 ms
Remote clock offset: 3.669 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.74 Mbit/s
95th percentile per-packet one-way delay: 126.323 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 22.74 Mbit/s
95th percentile per-packet one-way delay: 126.323 ms
Loss rate: 0.24%
```

Run 5: Report of TCP Vegas — Data Link

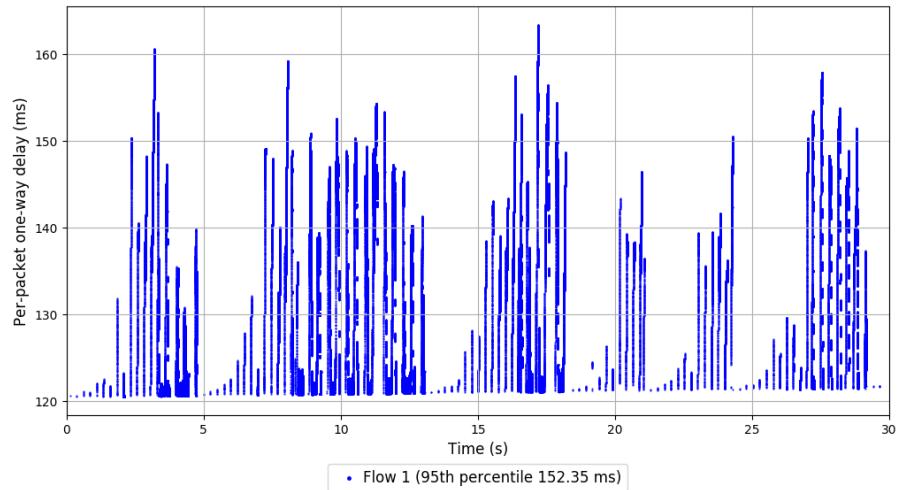
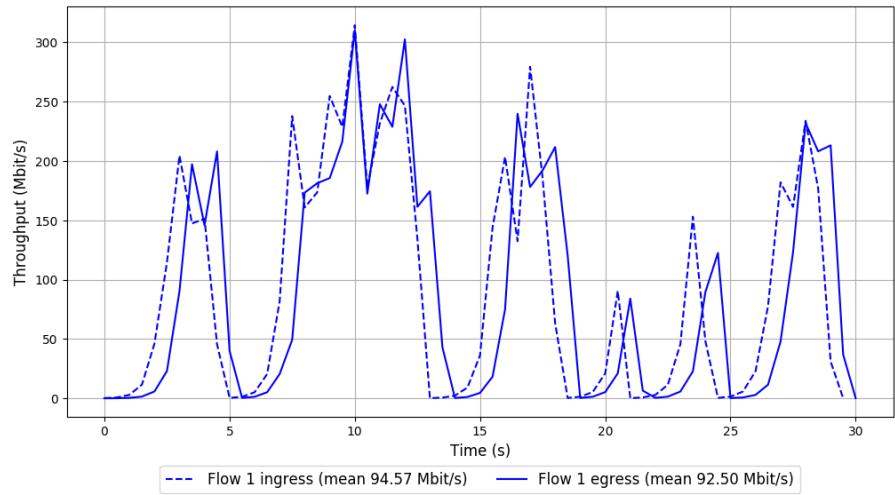


Run 1: Statistics of Verus

```
Start at: 2018-12-10 21:57:02
End at: 2018-12-10 21:57:32
Local clock offset: -27.144 ms
Remote clock offset: 2.003 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.50 Mbit/s
95th percentile per-packet one-way delay: 152.346 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 92.50 Mbit/s
95th percentile per-packet one-way delay: 152.346 ms
Loss rate: 2.18%
```

Run 1: Report of Verus — Data Link

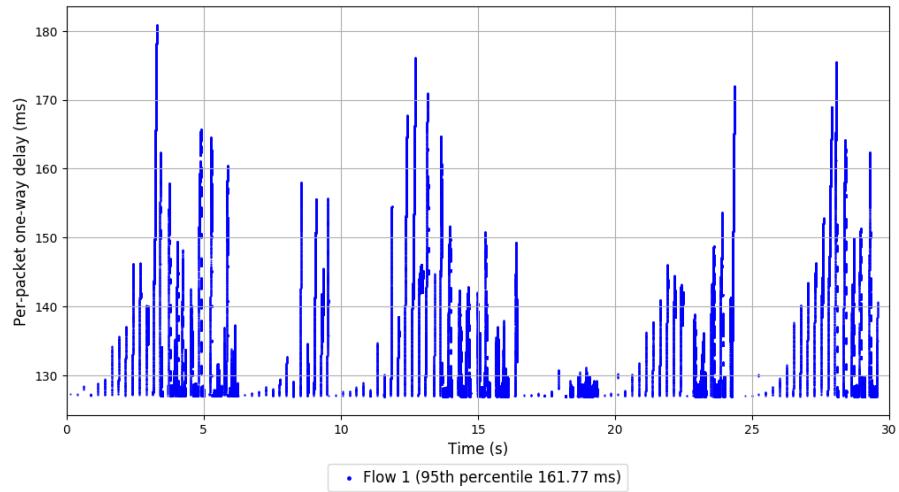
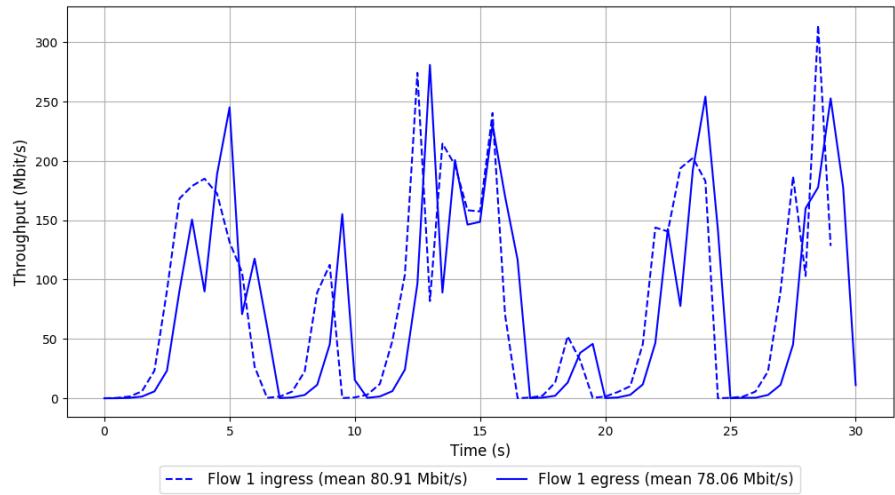


Run 2: Statistics of Verus

```
Start at: 2018-12-10 22:23:41
End at: 2018-12-10 22:24:11
Local clock offset: -14.691 ms
Remote clock offset: 4.835 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.06 Mbit/s
95th percentile per-packet one-way delay: 161.772 ms
Loss rate: 3.49%
-- Flow 1:
Average throughput: 78.06 Mbit/s
95th percentile per-packet one-way delay: 161.772 ms
Loss rate: 3.49%
```

Run 2: Report of Verus — Data Link

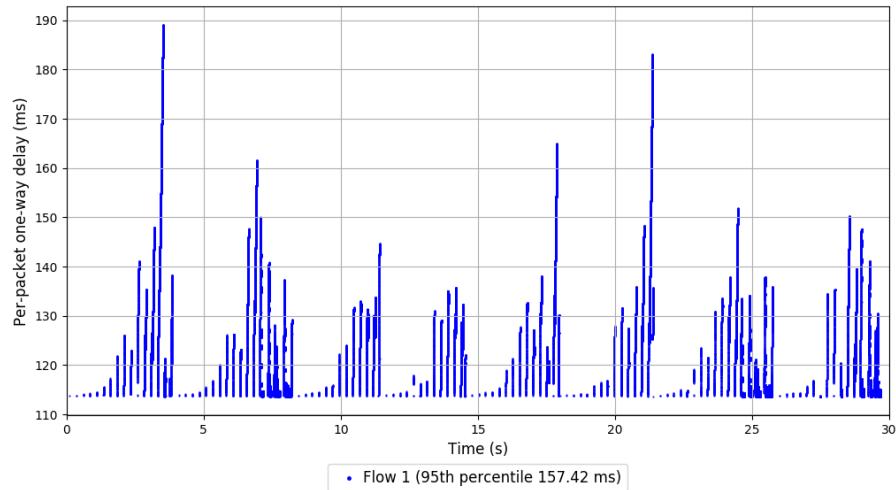
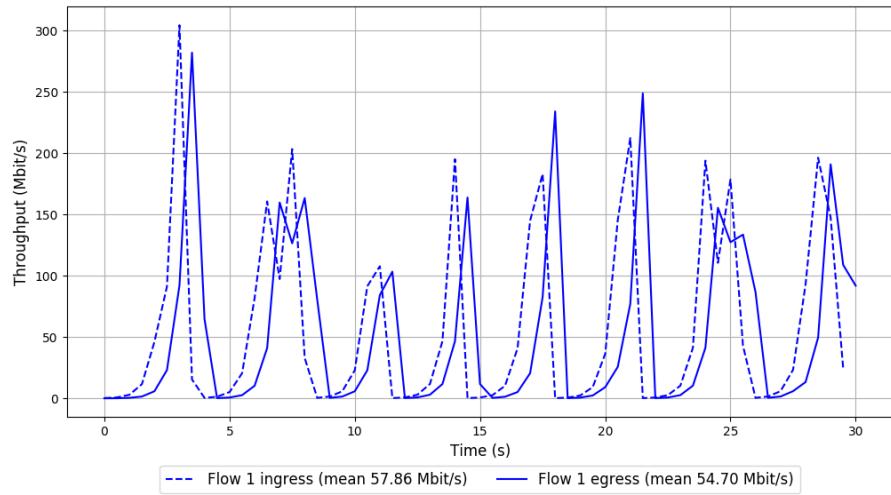


Run 3: Statistics of Verus

```
Start at: 2018-12-10 22:50:31
End at: 2018-12-10 22:51:01
Local clock offset: -2.974 ms
Remote clock offset: 3.532 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 54.70 Mbit/s
95th percentile per-packet one-way delay: 157.418 ms
Loss rate: 5.46%
-- Flow 1:
Average throughput: 54.70 Mbit/s
95th percentile per-packet one-way delay: 157.418 ms
Loss rate: 5.46%
```

Run 3: Report of Verus — Data Link

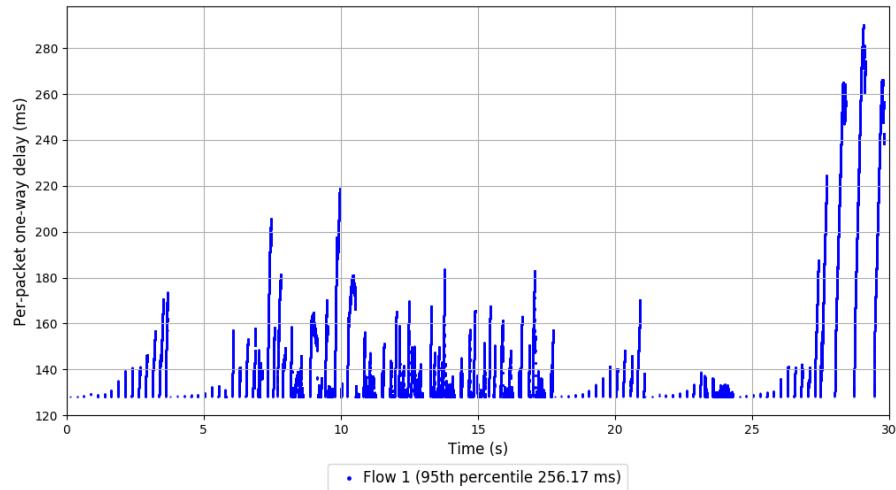
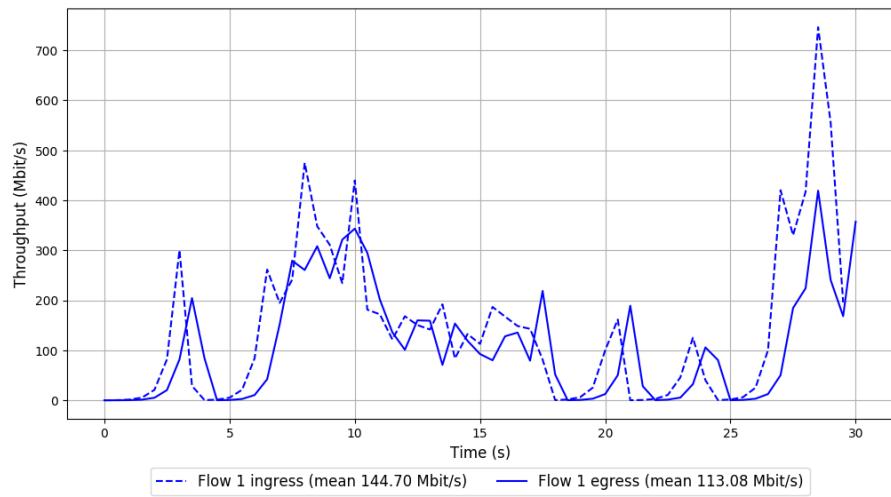


Run 4: Statistics of Verus

```
Start at: 2018-12-10 23:17:04
End at: 2018-12-10 23:17:34
Local clock offset: -8.462 ms
Remote clock offset: 0.333 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 113.08 Mbit/s
95th percentile per-packet one-way delay: 256.165 ms
Loss rate: 21.56%
-- Flow 1:
Average throughput: 113.08 Mbit/s
95th percentile per-packet one-way delay: 256.165 ms
Loss rate: 21.56%
```

Run 4: Report of Verus — Data Link

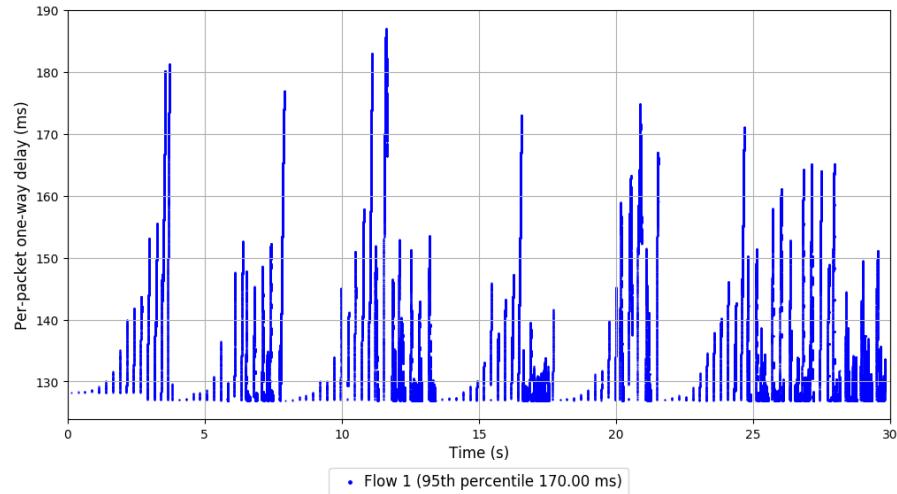
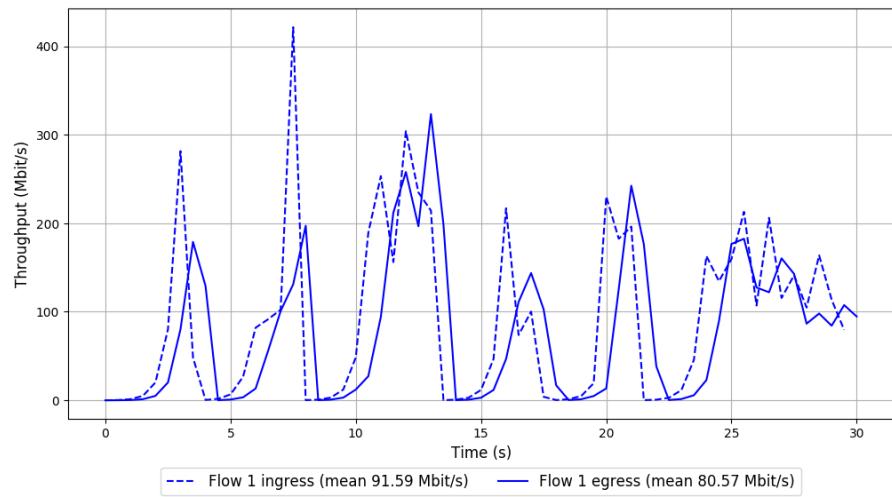


Run 5: Statistics of Verus

```
Start at: 2018-12-10 23:43:50
End at: 2018-12-10 23:44:20
Local clock offset: -4.753 ms
Remote clock offset: 2.451 ms

# Below is generated by plot.py at 2018-12-11 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.57 Mbit/s
95th percentile per-packet one-way delay: 170.005 ms
Loss rate: 12.02%
-- Flow 1:
Average throughput: 80.57 Mbit/s
95th percentile per-packet one-way delay: 170.005 ms
Loss rate: 12.02%
```

Run 5: Report of Verus — Data Link

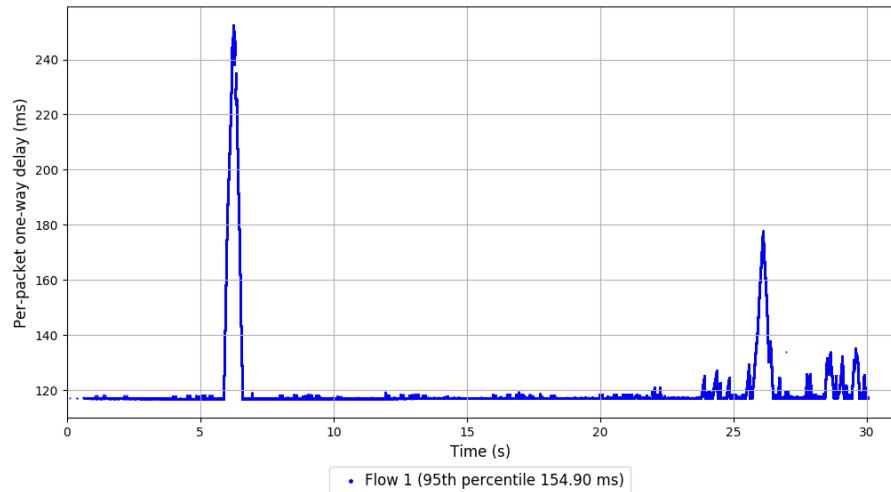
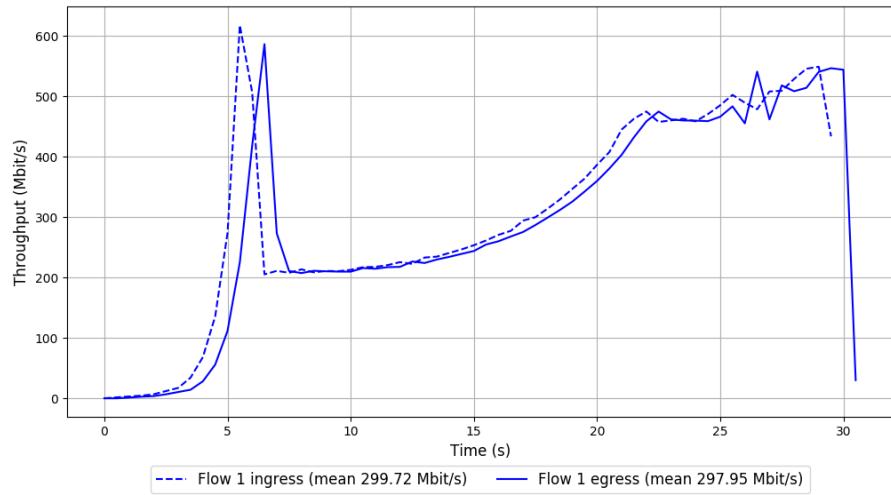


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-12-10 22:02:35
End at: 2018-12-10 22:03:05
Local clock offset: -7.461 ms
Remote clock offset: 2.8 ms

# Below is generated by plot.py at 2018-12-11 00:26:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 297.95 Mbit/s
95th percentile per-packet one-way delay: 154.899 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 297.95 Mbit/s
95th percentile per-packet one-way delay: 154.899 ms
Loss rate: 0.59%
```

Run 1: Report of PCC-Vivace — Data Link

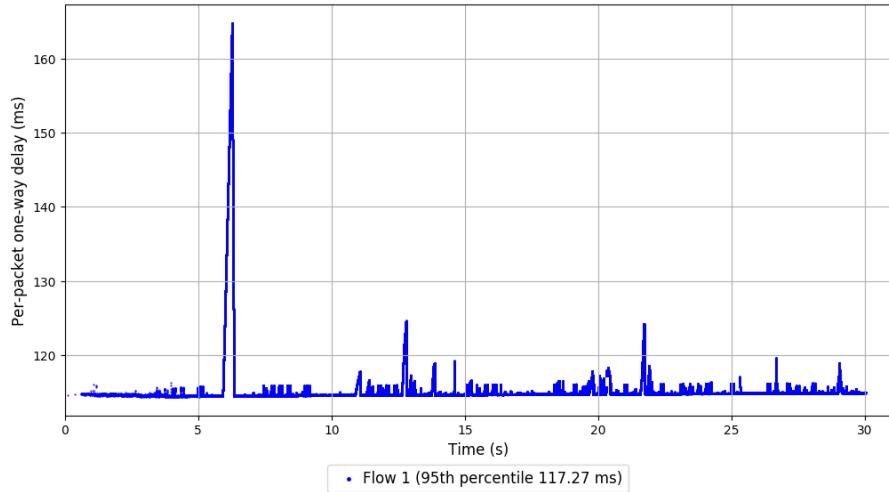
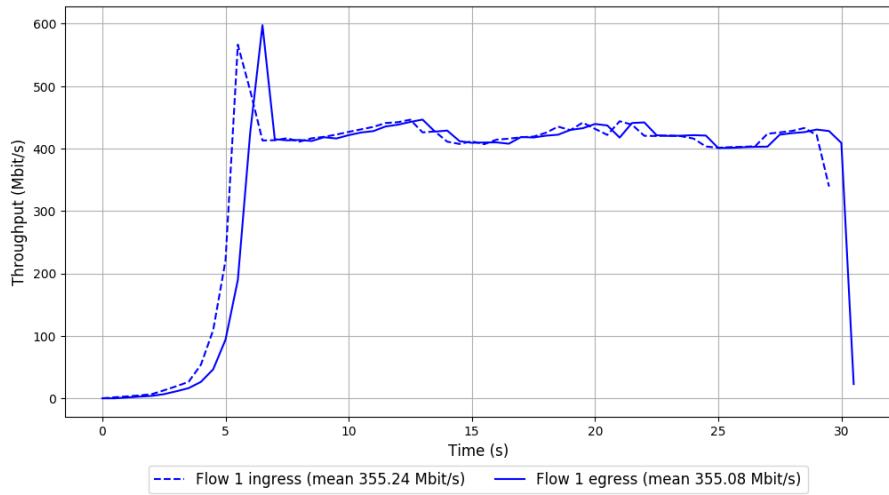


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-12-10 22:29:14
End at: 2018-12-10 22:29:44
Local clock offset: -7.323 ms
Remote clock offset: 3.976 ms

# Below is generated by plot.py at 2018-12-11 00:26:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 355.08 Mbit/s
95th percentile per-packet one-way delay: 117.274 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 355.08 Mbit/s
95th percentile per-packet one-way delay: 117.274 ms
Loss rate: 0.04%
```

Run 2: Report of PCC-Vivace — Data Link

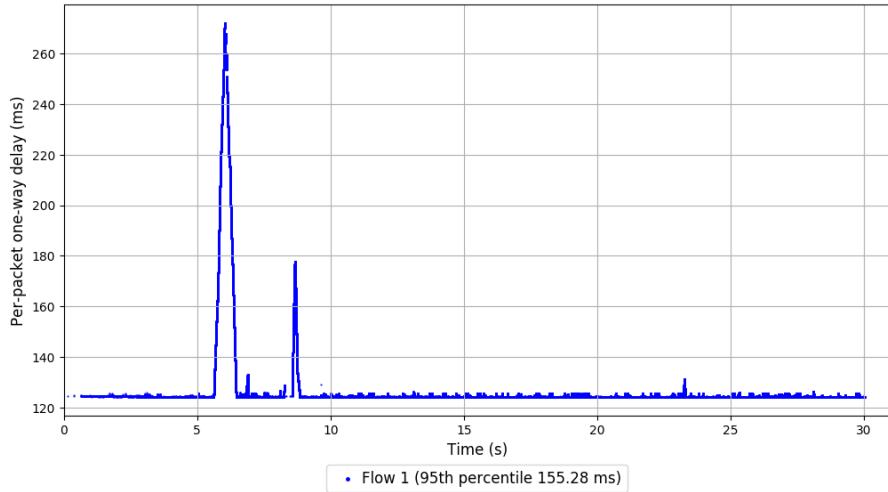
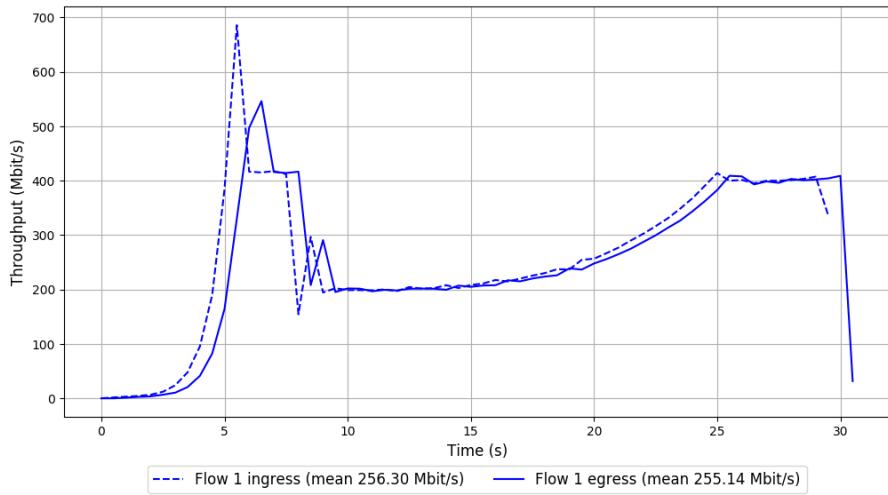


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-12-10 22:56:02
End at: 2018-12-10 22:56:32
Local clock offset: -8.907 ms
Remote clock offset: 3.667 ms

# Below is generated by plot.py at 2018-12-11 00:26:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 255.14 Mbit/s
95th percentile per-packet one-way delay: 155.279 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 255.14 Mbit/s
95th percentile per-packet one-way delay: 155.279 ms
Loss rate: 0.46%
```

Run 3: Report of PCC-Vivace — Data Link

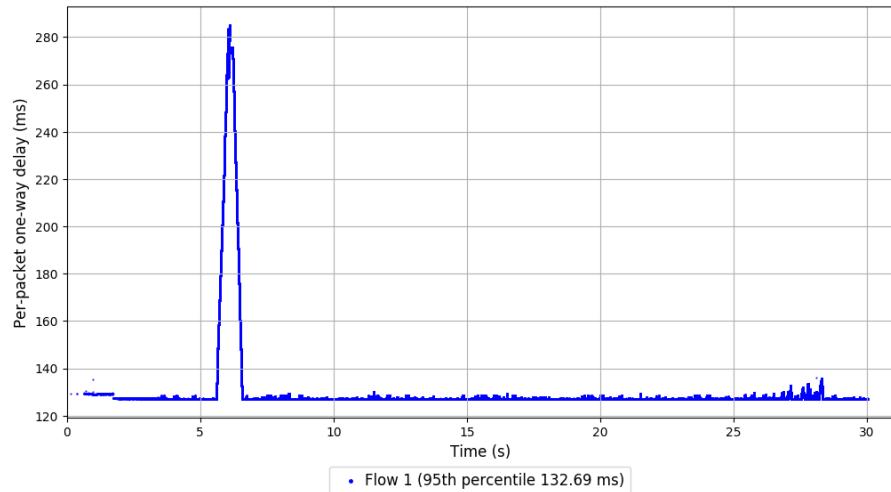
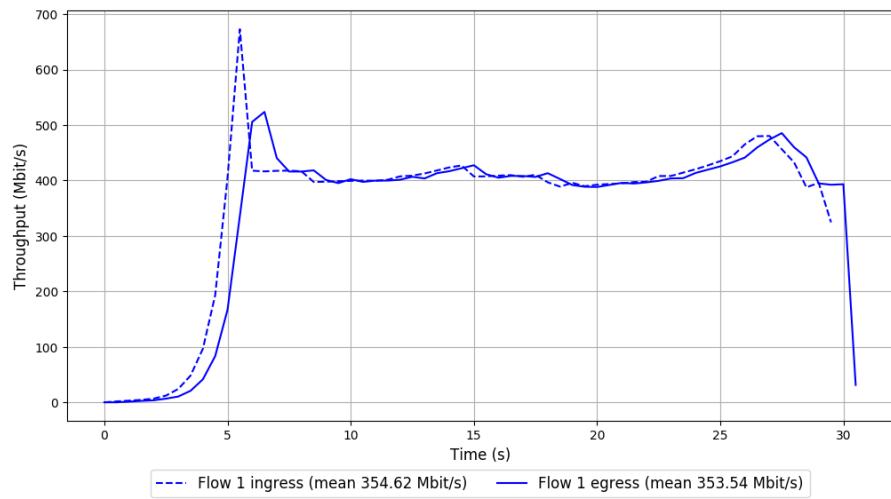


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-12-10 23:22:39
End at: 2018-12-10 23:23:09
Local clock offset: -8.807 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2018-12-11 00:26:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 353.54 Mbit/s
95th percentile per-packet one-way delay: 132.693 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 353.54 Mbit/s
95th percentile per-packet one-way delay: 132.693 ms
Loss rate: 0.31%
```

Run 4: Report of PCC-Vivace — Data Link

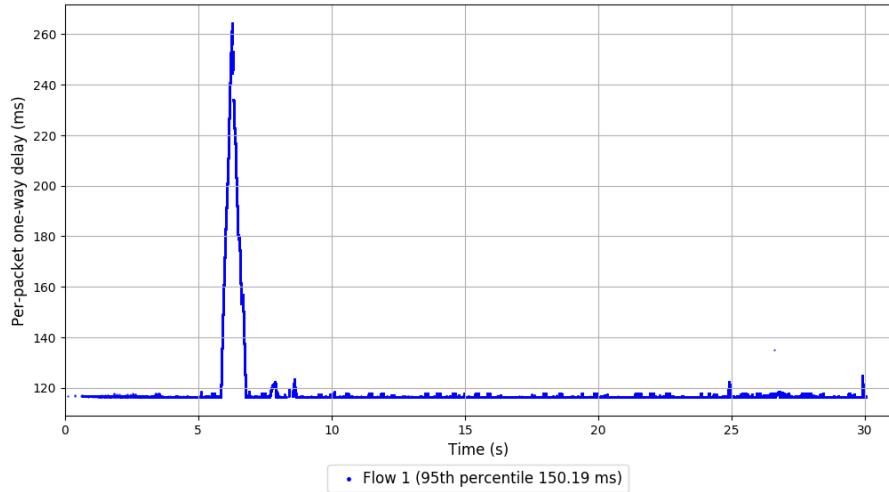
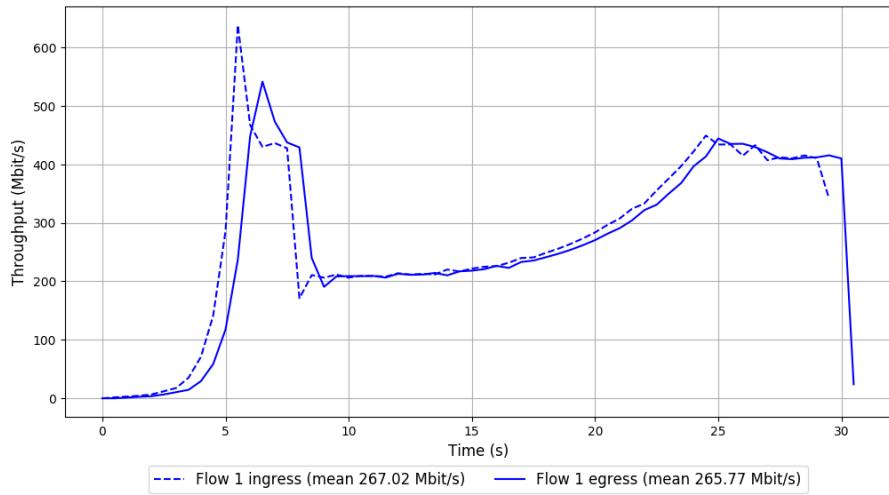


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-12-10 23:49:21
End at: 2018-12-10 23:49:51
Local clock offset: 3.463 ms
Remote clock offset: 2.873 ms

# Below is generated by plot.py at 2018-12-11 00:26:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 265.77 Mbit/s
95th percentile per-packet one-way delay: 150.187 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 265.77 Mbit/s
95th percentile per-packet one-way delay: 150.187 ms
Loss rate: 0.47%
```

Run 5: Report of PCC-Vivace — Data Link

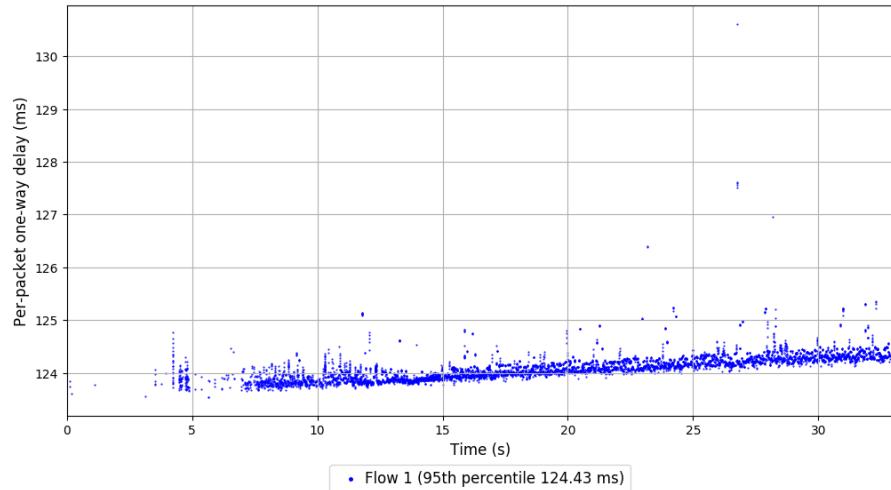
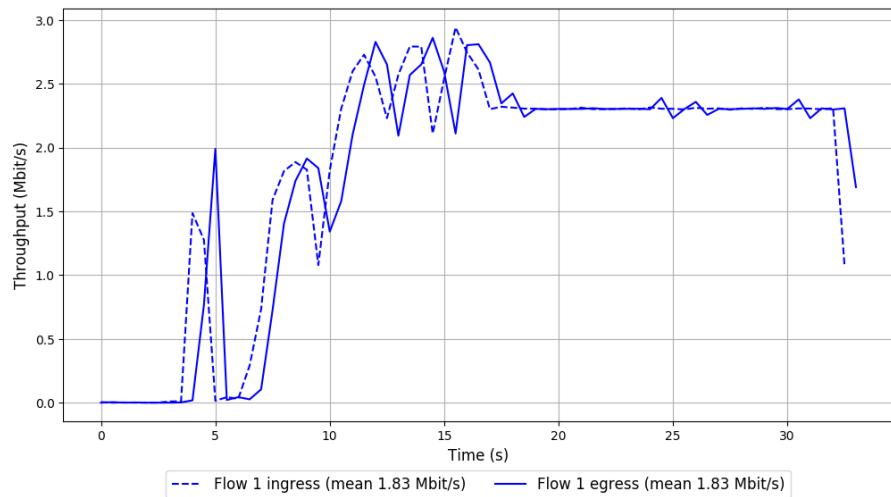


```
Run 1: Statistics of WebRTC media

Start at: 2018-12-10 21:59:48
End at: 2018-12-10 22:00:18
Local clock offset: -19.63 ms
Remote clock offset: 2.43 ms

# Below is generated by plot.py at 2018-12-11 00:26:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 124.434 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 124.434 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

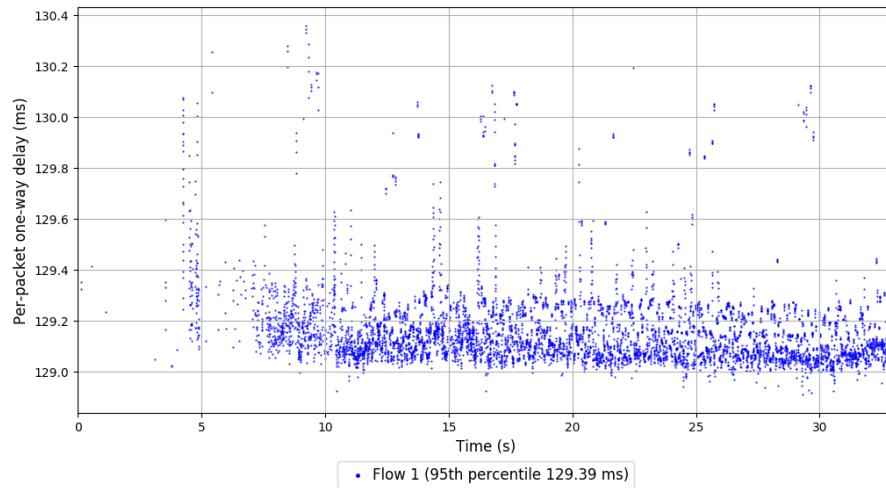
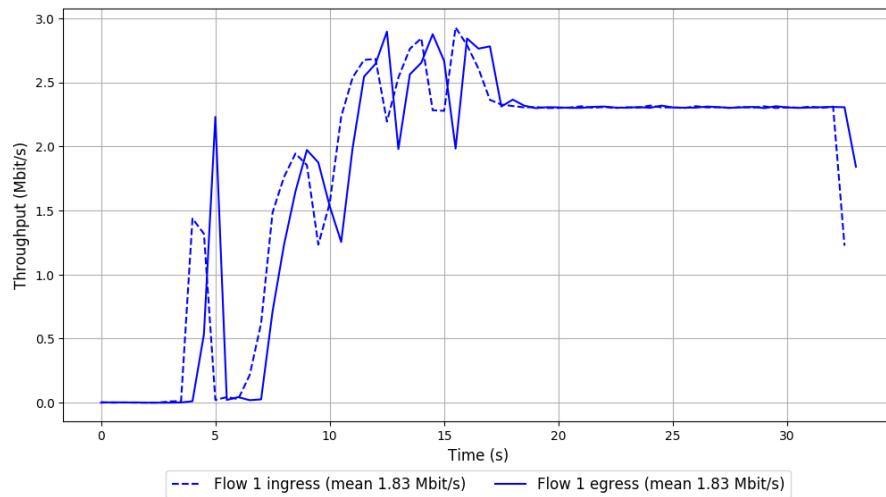


Run 2: Statistics of WebRTC media

```
Start at: 2018-12-10 22:26:28
End at: 2018-12-10 22:26:58
Local clock offset: -18.097 ms
Remote clock offset: 4.316 ms

# Below is generated by plot.py at 2018-12-11 00:26:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 129.394 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 129.394 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

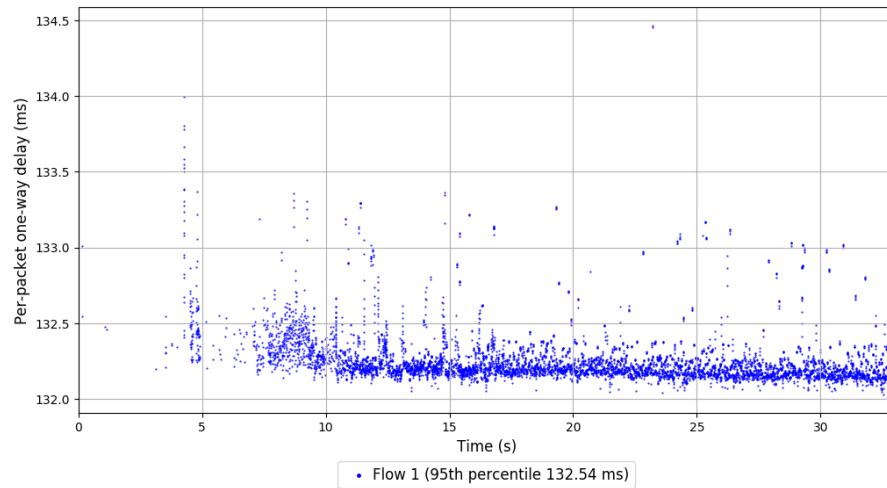
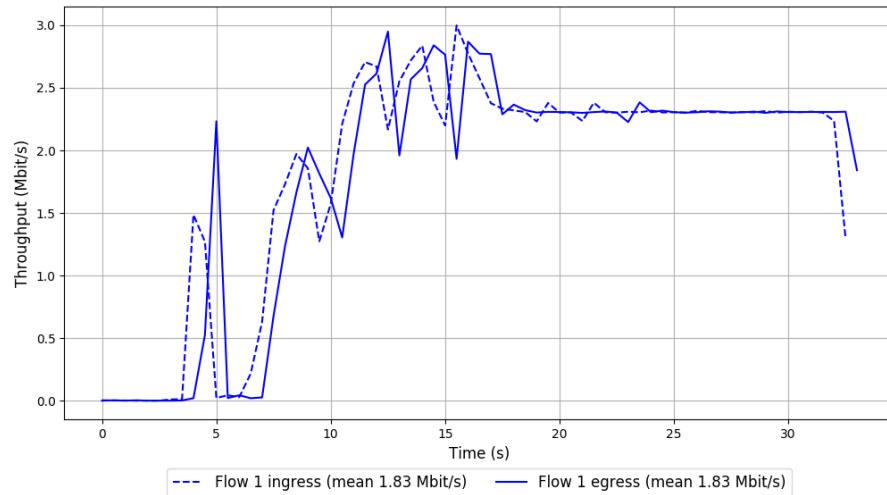


Run 3: Statistics of WebRTC media

```
Start at: 2018-12-10 22:53:16
End at: 2018-12-10 22:53:46
Local clock offset: -16.652 ms
Remote clock offset: 3.586 ms

# Below is generated by plot.py at 2018-12-11 00:26:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 132.545 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 132.545 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

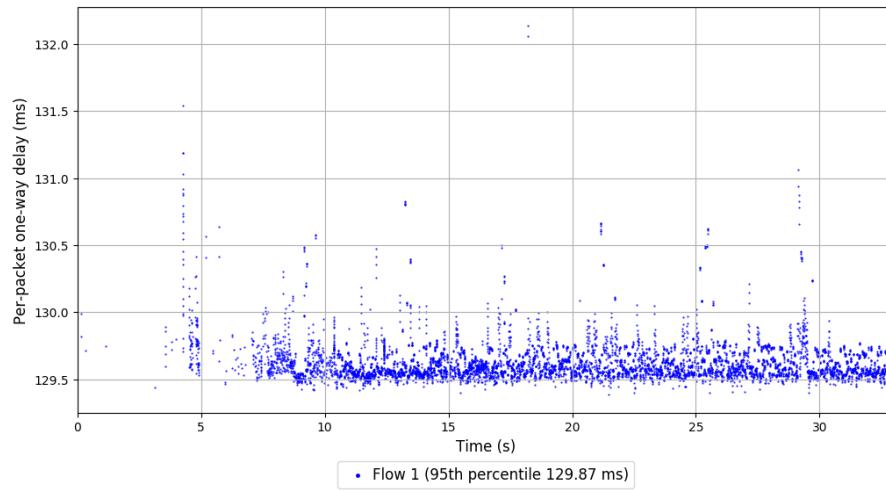
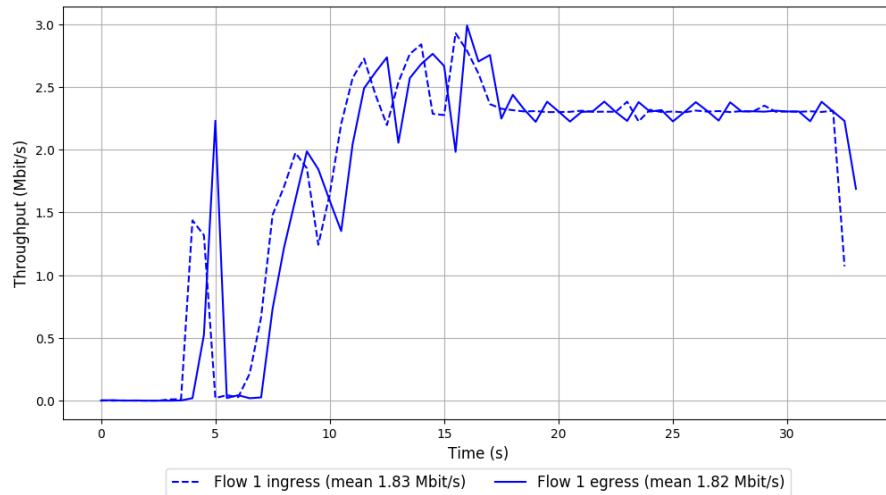


Run 4: Statistics of WebRTC media

```
Start at: 2018-12-10 23:19:52
End at: 2018-12-10 23:20:22
Local clock offset: -8.617 ms
Remote clock offset: 0.157 ms

# Below is generated by plot.py at 2018-12-11 00:26:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.82 Mbit/s
95th percentile per-packet one-way delay: 129.868 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 1.82 Mbit/s
95th percentile per-packet one-way delay: 129.868 ms
Loss rate: 0.03%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-12-10 23:46:35
End at: 2018-12-10 23:47:05
Local clock offset: -5.541 ms
Remote clock offset: 2.675 ms

# Below is generated by plot.py at 2018-12-11 00:26:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 129.219 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 129.219 ms
Loss rate: 0.04%
```

Run 5: Report of WebRTC media — Data Link

