

Pantheon Report

Generated at 2018-10-02 11:02:57 (UTC).
Data path: GCE Sydney on `ens4 (local)` → GCE Iowa on `ens4 (remote)`.
Repeated the test of 18 congestion control schemes 5 times.
Each test lasted for 30 seconds running 1 flow.
NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.

System info:

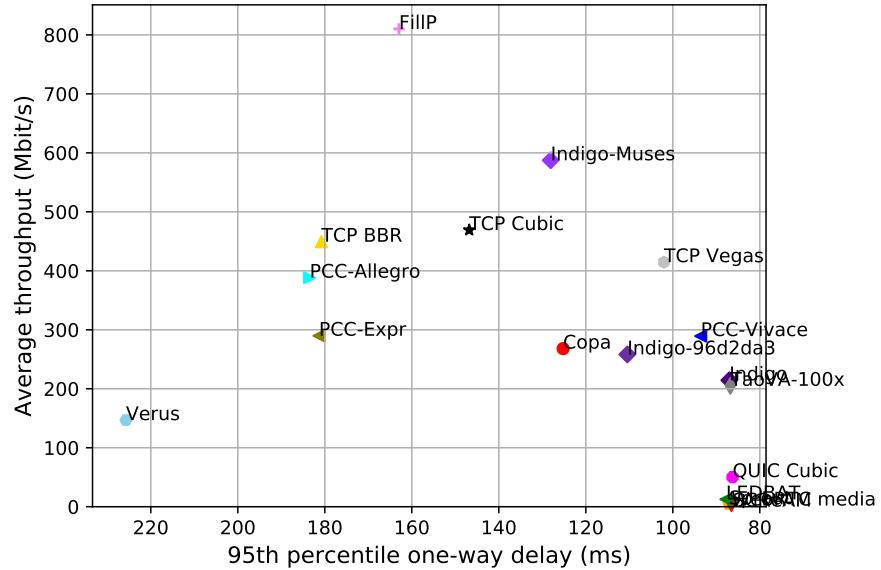
```
Linux 4.15.0-1019-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

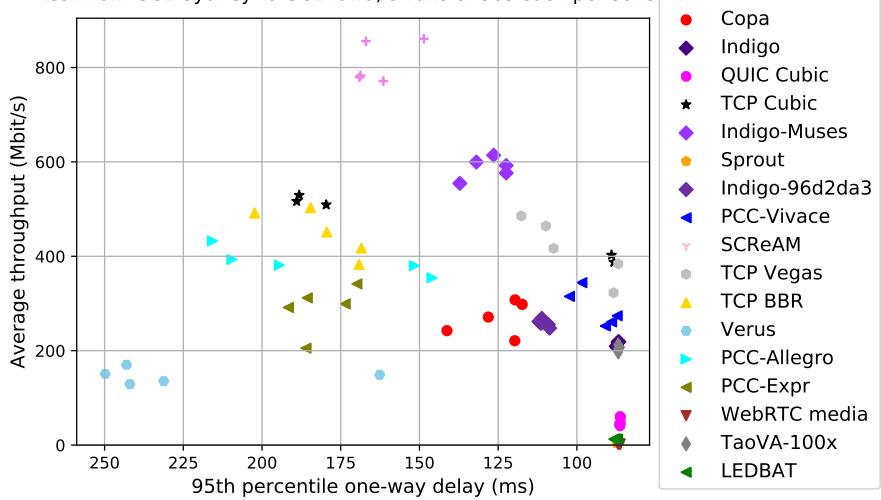
```
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95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

third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from GCE Sydney to GCE Iowa, 5 runs of 30s each per scheme
(mean of all runs by scheme)



test from GCE Sydney to GCE Iowa, 5 runs of 30s each per scheme



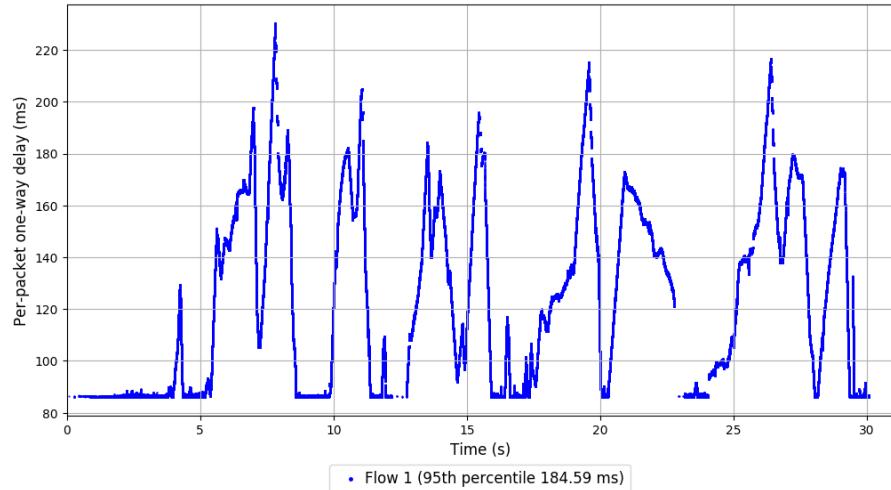
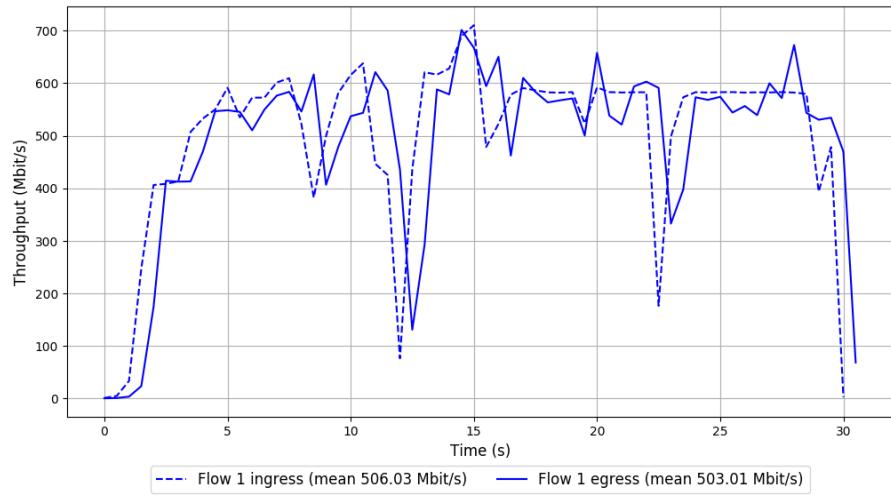
scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	449.28	180.79	0.88
Copa	5	268.07	125.22	0.01
TCP Cubic	5	469.10	146.80	0.11
FillP	5	810.08	162.96	4.86
Indigo	5	214.41	87.01	0.00
Indigo-96d2da3	5	258.26	110.46	0.00
LEDBAT	5	12.57	87.78	0.00
Indigo-Muses	5	587.40	128.08	0.04
PCC-Allegro	5	388.27	183.48	3.63
PCC-Expr	5	289.86	181.35	1.54
QUIC Cubic	5	50.23	86.27	0.00
SCReAM	5	0.22	86.29	0.00
Sprout	5	4.14	87.11	0.00
TaoVA-100x	5	205.00	86.78	0.00
TCP Vegas	5	414.62	102.03	0.00
Verus	5	146.83	225.73	5.60
PCC-Vivace	5	289.30	93.59	0.04
WebRTC media	5	2.05	86.55	0.00

Run 1: Statistics of TCP BBR

```
Start at: 2018-10-02 07:17:30
End at: 2018-10-02 07:18:00
Local clock offset: -0.399 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2018-10-02 09:38:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 503.01 Mbit/s
95th percentile per-packet one-way delay: 184.592 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 503.01 Mbit/s
95th percentile per-packet one-way delay: 184.592 ms
Loss rate: 0.60%
```

Run 1: Report of TCP BBR — Data Link

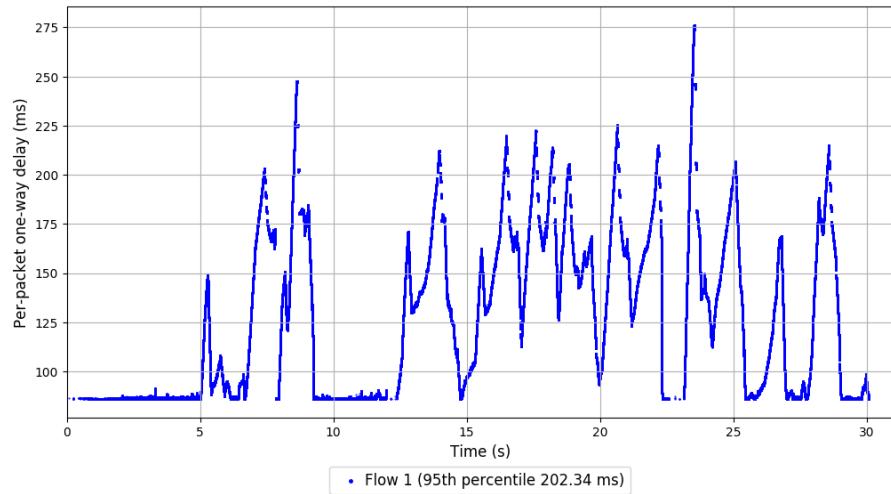
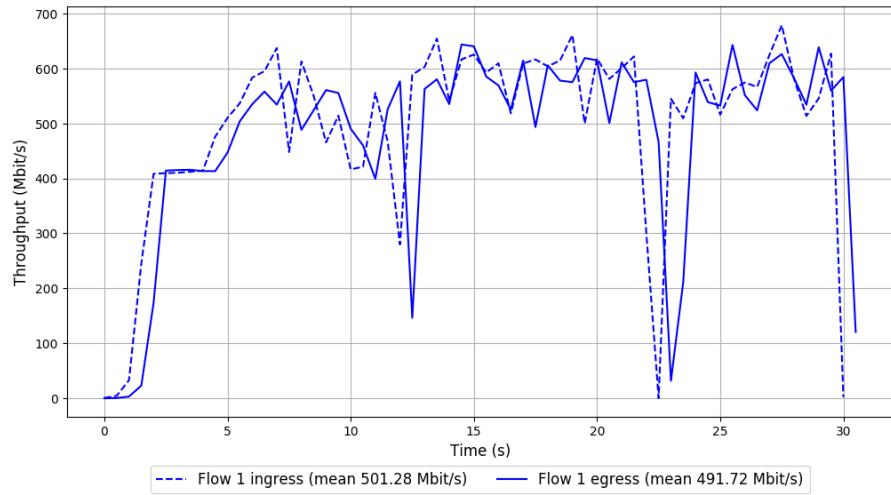


Run 2: Statistics of TCP BBR

```
Start at: 2018-10-02 07:43:06
End at: 2018-10-02 07:43:36
Local clock offset: -0.125 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2018-10-02 09:38:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 491.72 Mbit/s
95th percentile per-packet one-way delay: 202.343 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 491.72 Mbit/s
95th percentile per-packet one-way delay: 202.343 ms
Loss rate: 1.91%
```

Run 2: Report of TCP BBR — Data Link

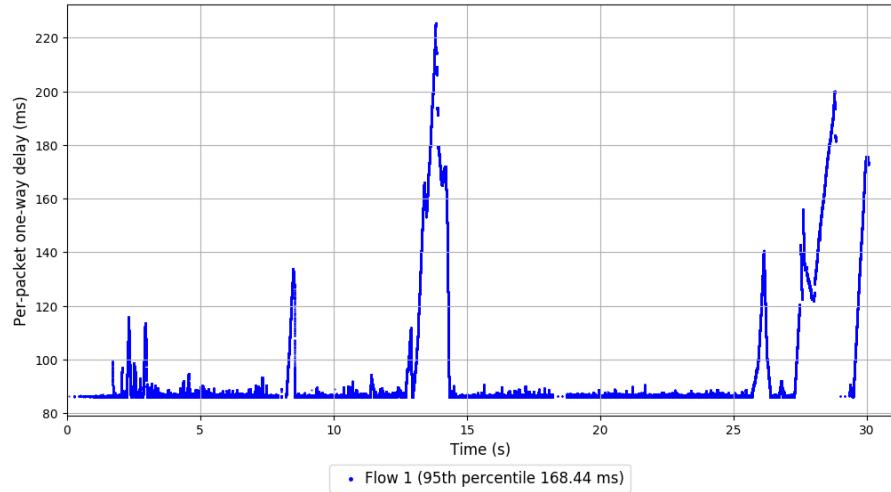
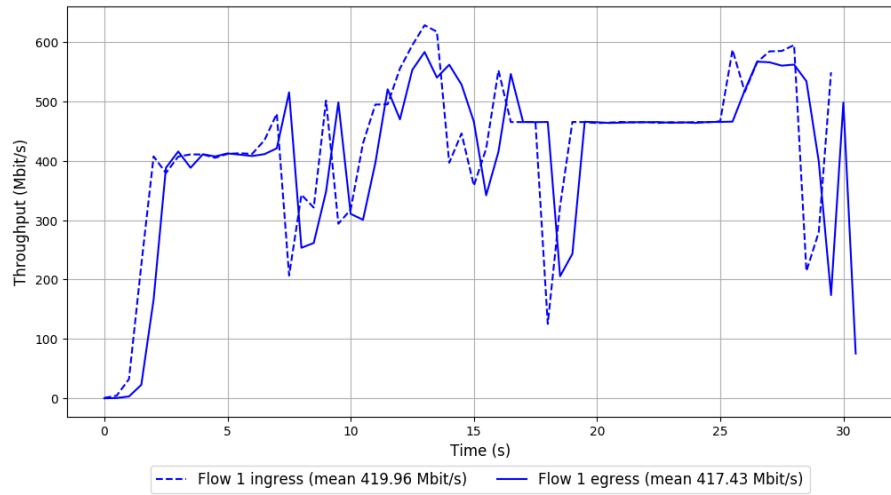


Run 3: Statistics of TCP BBR

```
Start at: 2018-10-02 08:08:38
End at: 2018-10-02 08:09:08
Local clock offset: -0.275 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-10-02 09:38:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 417.43 Mbit/s
95th percentile per-packet one-way delay: 168.441 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 417.43 Mbit/s
95th percentile per-packet one-way delay: 168.441 ms
Loss rate: 0.60%
```

Run 3: Report of TCP BBR — Data Link

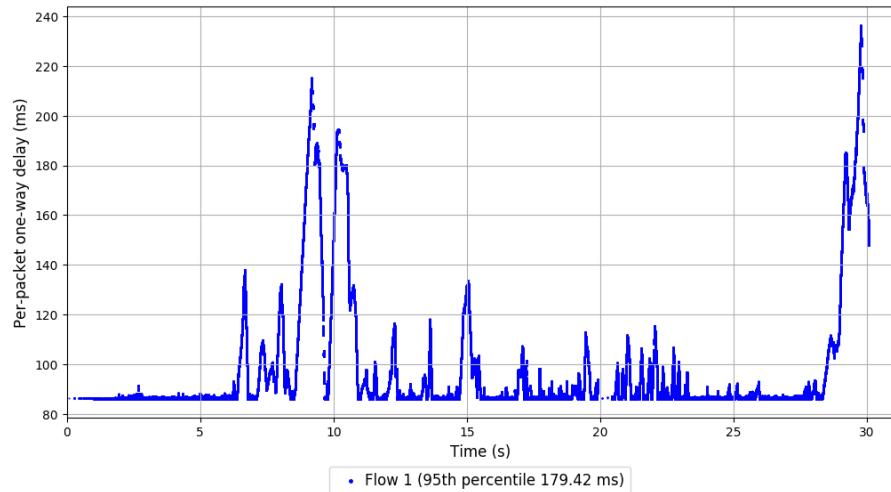
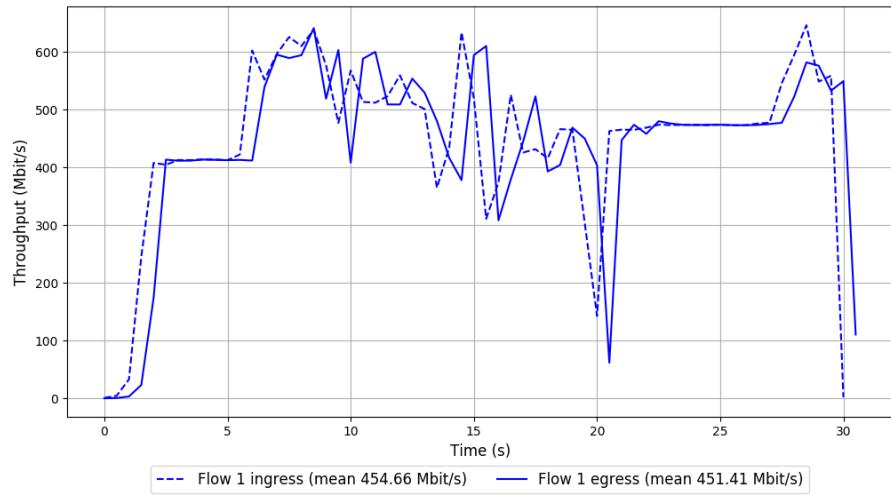


Run 4: Statistics of TCP BBR

```
Start at: 2018-10-02 08:34:23
End at: 2018-10-02 08:34:53
Local clock offset: -0.324 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-10-02 09:38:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 451.41 Mbit/s
95th percentile per-packet one-way delay: 179.423 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 451.41 Mbit/s
95th percentile per-packet one-way delay: 179.423 ms
Loss rate: 0.71%
```

Run 4: Report of TCP BBR — Data Link

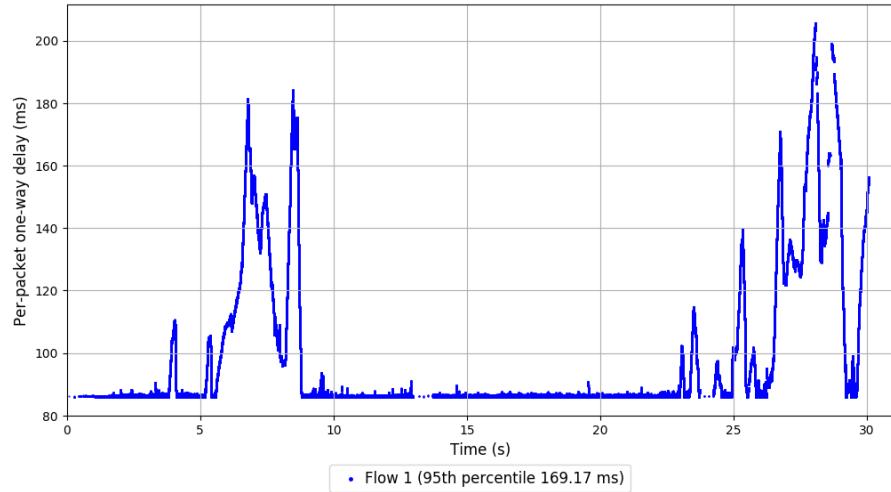
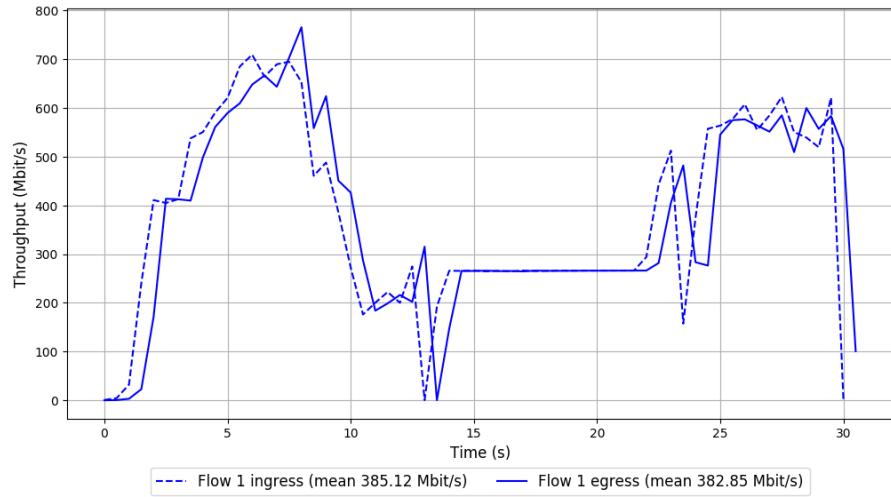


Run 5: Statistics of TCP BBR

```
Start at: 2018-10-02 09:00:24
End at: 2018-10-02 09:00:54
Local clock offset: -0.184 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2018-10-02 09:38:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 382.85 Mbit/s
95th percentile per-packet one-way delay: 169.166 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 382.85 Mbit/s
95th percentile per-packet one-way delay: 169.166 ms
Loss rate: 0.59%
```

Run 5: Report of TCP BBR — Data Link

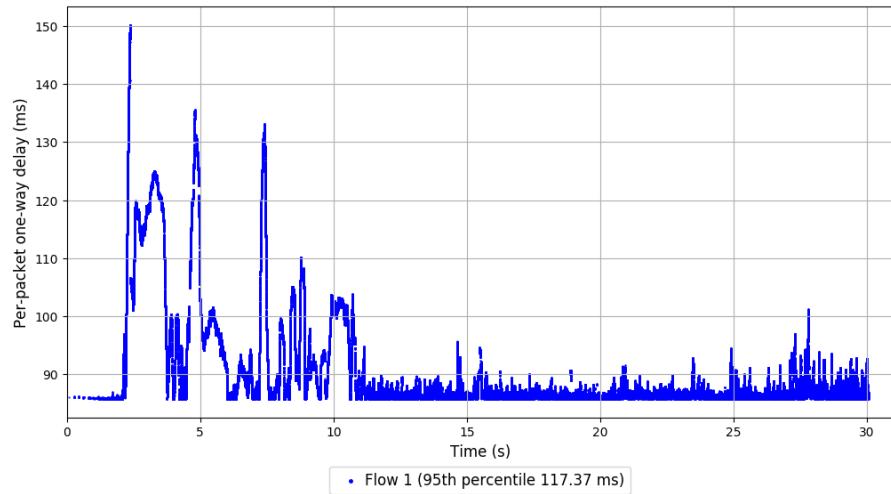
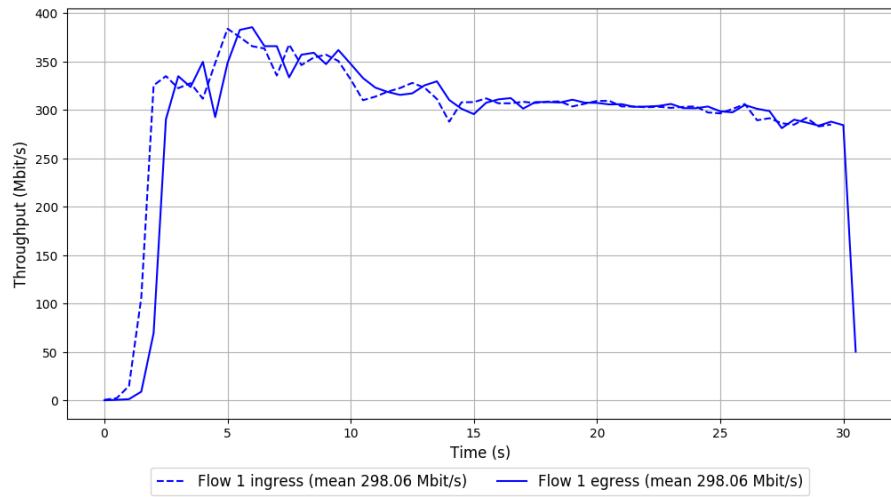


Run 1: Statistics of Copa

```
Start at: 2018-10-02 07:10:30
End at: 2018-10-02 07:11:00
Local clock offset: -0.15 ms
Remote clock offset: 0.01 ms

# Below is generated by plot.py at 2018-10-02 09:39:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 298.06 Mbit/s
95th percentile per-packet one-way delay: 117.369 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 298.06 Mbit/s
95th percentile per-packet one-way delay: 117.369 ms
Loss rate: 0.00%
```

Run 1: Report of Copa — Data Link

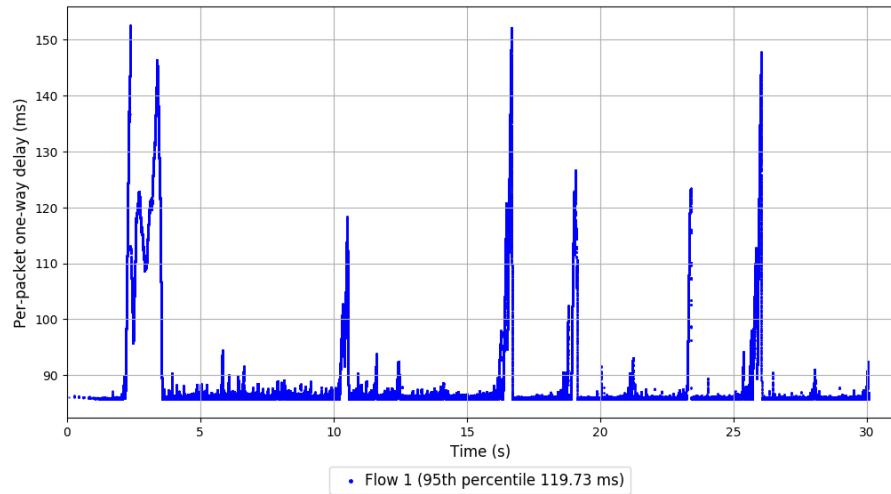
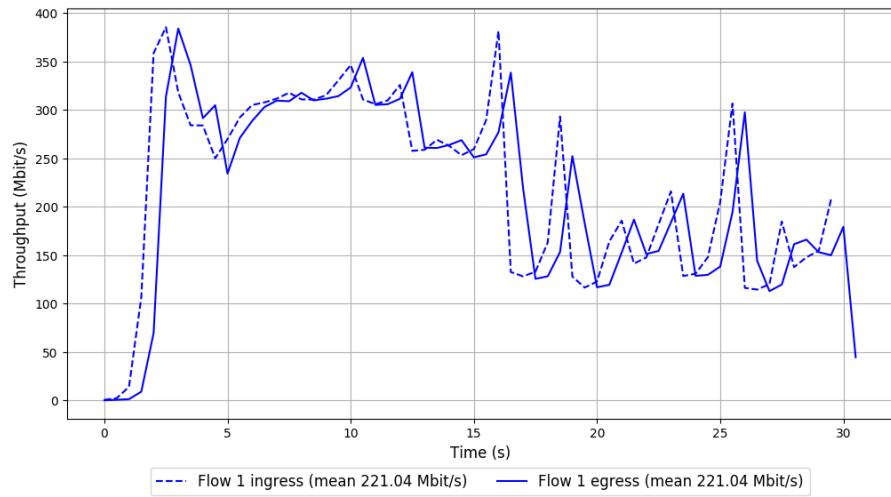


Run 2: Statistics of Copa

```
Start at: 2018-10-02 07:36:02
End at: 2018-10-02 07:36:33
Local clock offset: 0.017 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2018-10-02 09:39:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.04 Mbit/s
95th percentile per-packet one-way delay: 119.726 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.04 Mbit/s
95th percentile per-packet one-way delay: 119.726 ms
Loss rate: 0.00%
```

Run 2: Report of Copa — Data Link

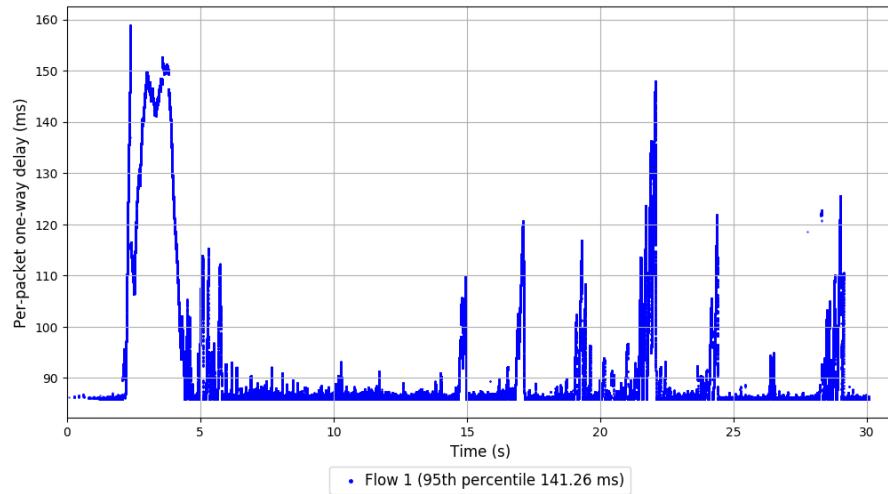
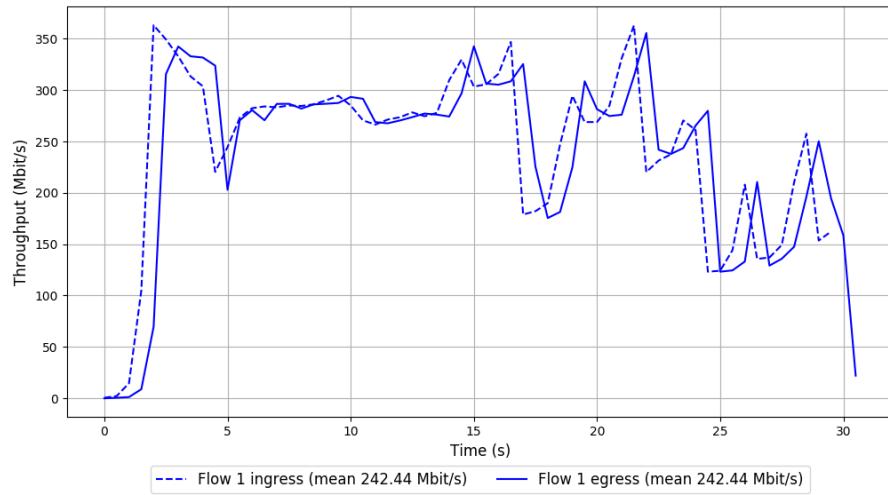


Run 3: Statistics of Copa

```
Start at: 2018-10-02 08:01:32
End at: 2018-10-02 08:02:02
Local clock offset: -0.005 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2018-10-02 09:39:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 242.44 Mbit/s
95th percentile per-packet one-way delay: 141.260 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 242.44 Mbit/s
95th percentile per-packet one-way delay: 141.260 ms
Loss rate: 0.00%
```

Run 3: Report of Copa — Data Link

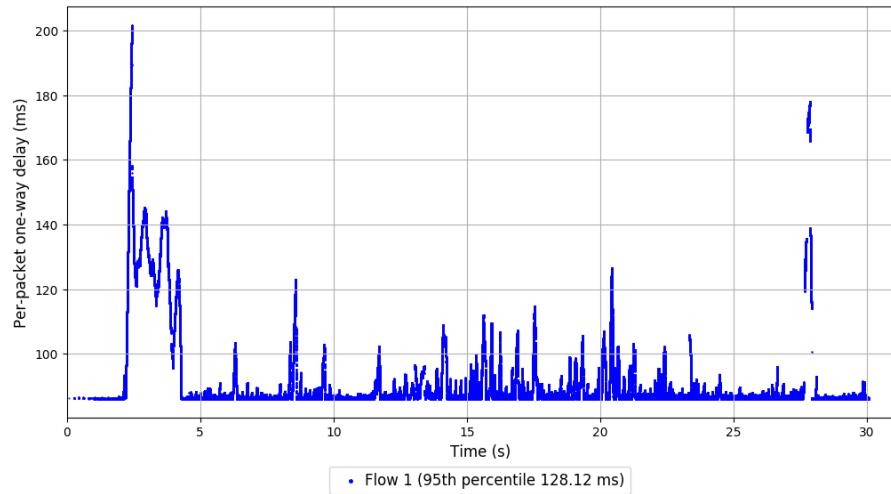
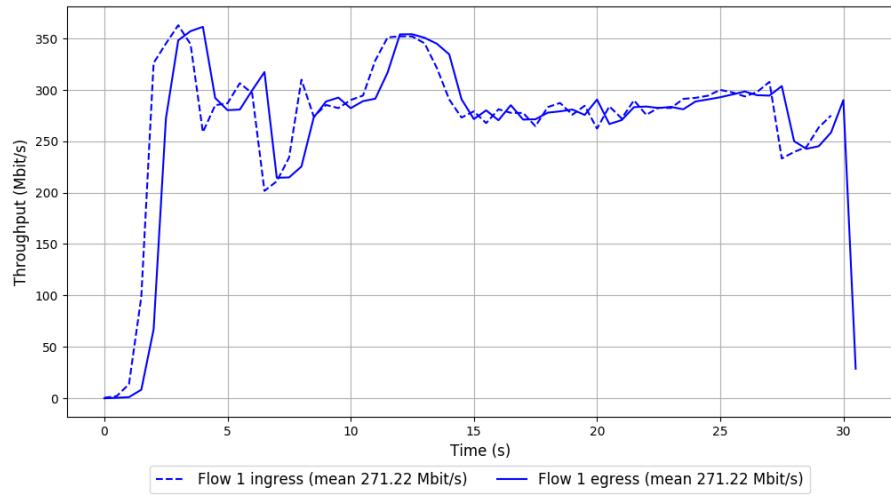


Run 4: Statistics of Copa

```
Start at: 2018-10-02 08:27:17
End at: 2018-10-02 08:27:47
Local clock offset: -0.23 ms
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2018-10-02 09:46:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 271.22 Mbit/s
95th percentile per-packet one-way delay: 128.125 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 271.22 Mbit/s
95th percentile per-packet one-way delay: 128.125 ms
Loss rate: 0.00%
```

Run 4: Report of Copa — Data Link

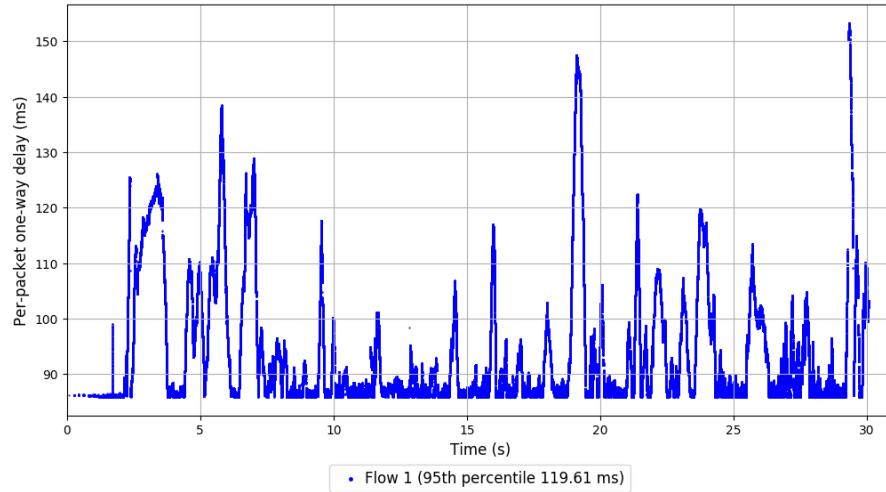
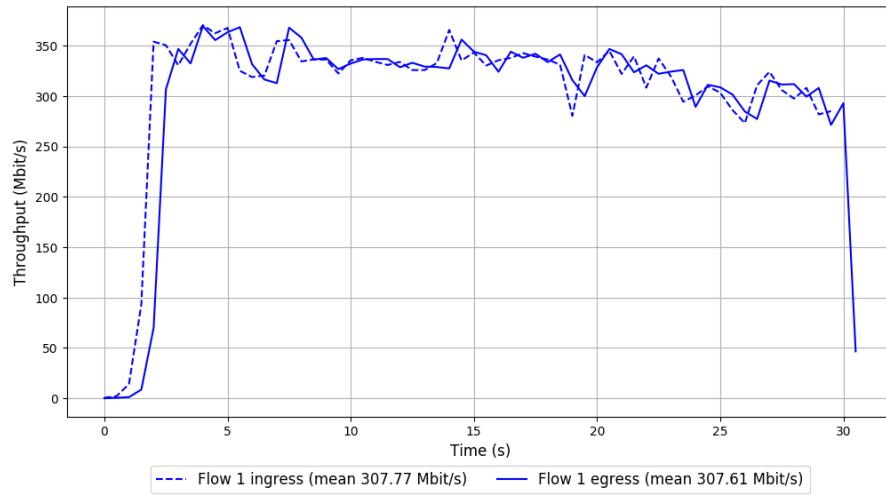


Run 5: Statistics of Copa

```
Start at: 2018-10-02 08:53:04
End at: 2018-10-02 08:53:34
Local clock offset: 0.005 ms
Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2018-10-02 09:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 307.61 Mbit/s
95th percentile per-packet one-way delay: 119.612 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 307.61 Mbit/s
95th percentile per-packet one-way delay: 119.612 ms
Loss rate: 0.05%
```

Run 5: Report of Copa — Data Link

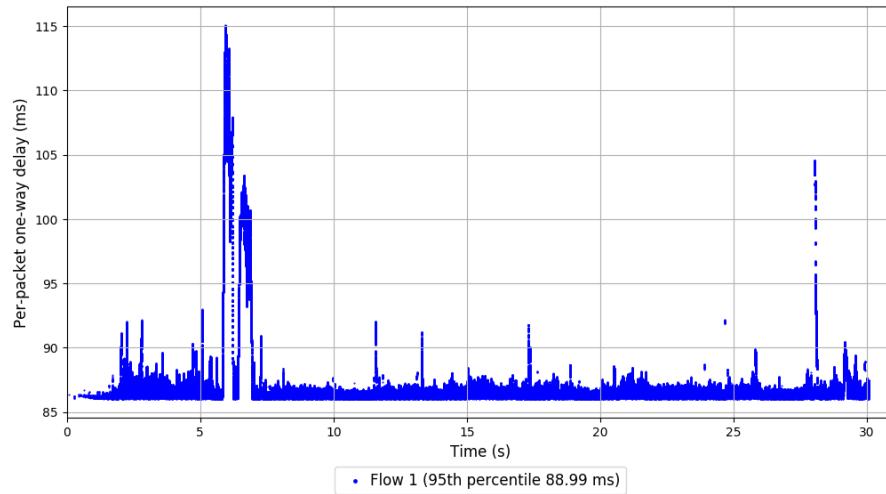
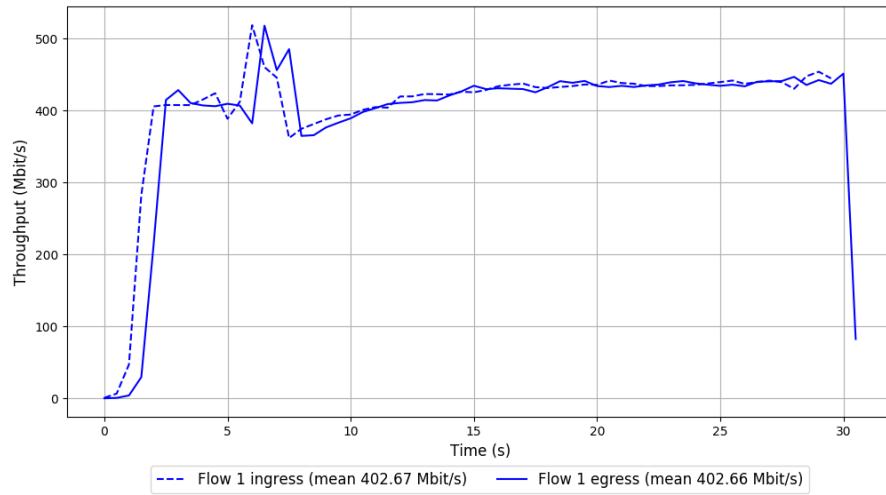


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-10-02 07:12:07
End at: 2018-10-02 07:12:37
Local clock offset: -0.172 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2018-10-02 09:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 402.66 Mbit/s
95th percentile per-packet one-way delay: 88.994 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 402.66 Mbit/s
95th percentile per-packet one-way delay: 88.994 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Cubic — Data Link

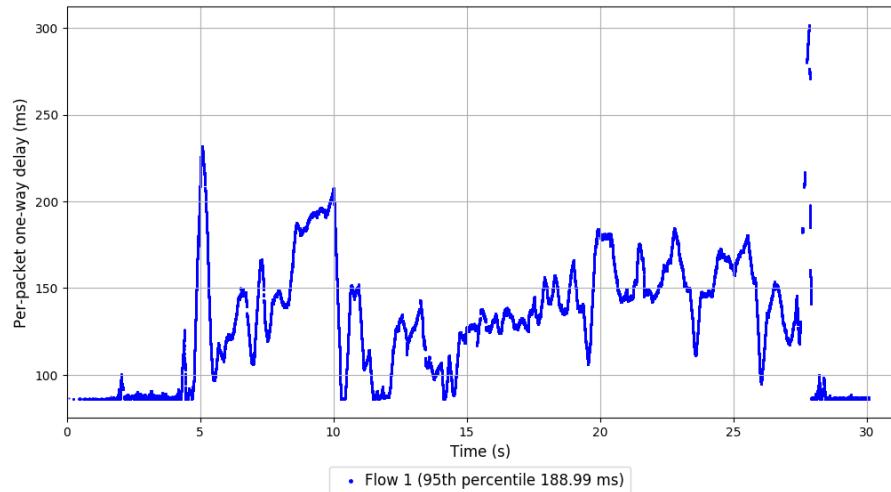
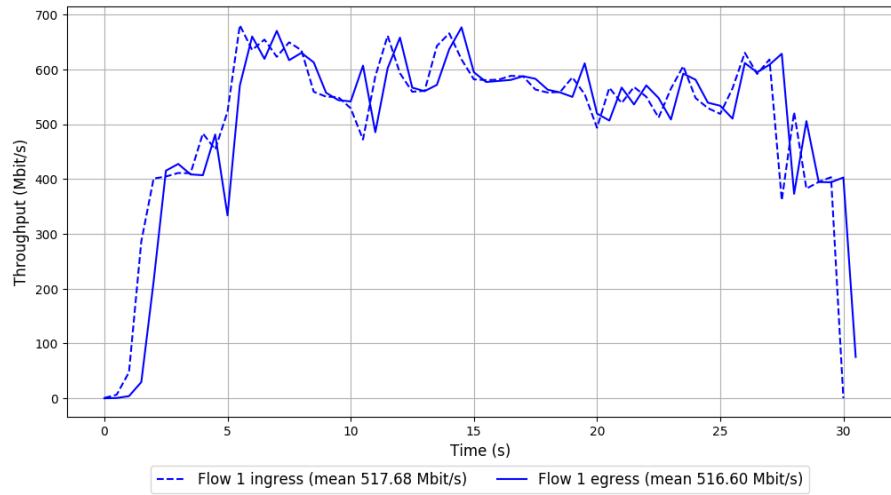


Run 2: Statistics of TCP Cubic

```
Start at: 2018-10-02 07:37:33
End at: 2018-10-02 07:38:03
Local clock offset: -0.249 ms
Remote clock offset: -0.106 ms

# Below is generated by plot.py at 2018-10-02 09:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 516.60 Mbit/s
95th percentile per-packet one-way delay: 188.994 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 516.60 Mbit/s
95th percentile per-packet one-way delay: 188.994 ms
Loss rate: 0.21%
```

Run 2: Report of TCP Cubic — Data Link

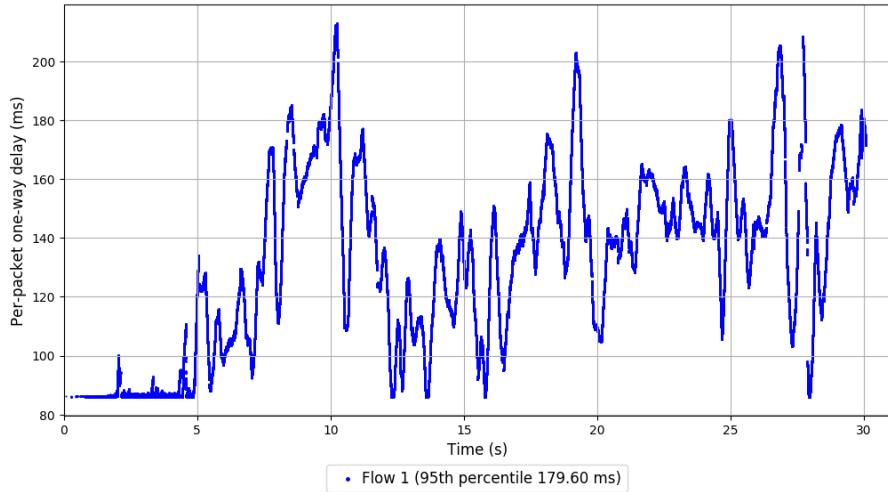
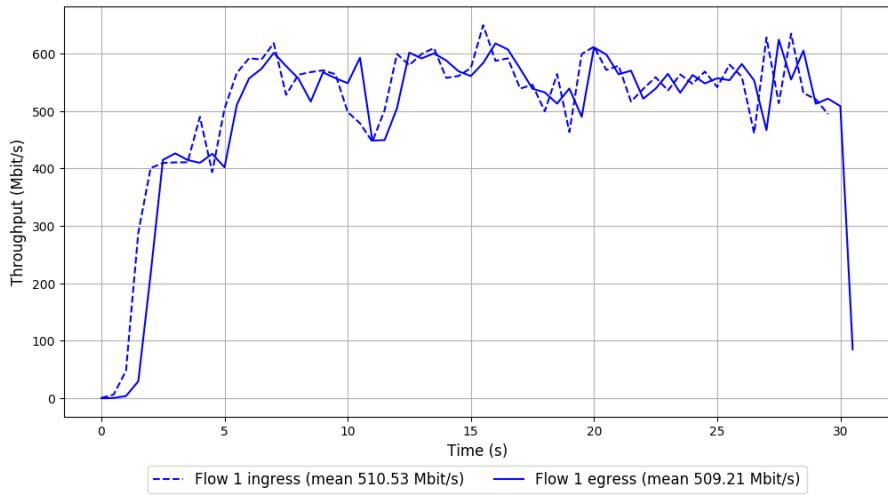


Run 3: Statistics of TCP Cubic

```
Start at: 2018-10-02 08:03:03
End at: 2018-10-02 08:03:33
Local clock offset: -0.26 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2018-10-02 09:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 509.21 Mbit/s
95th percentile per-packet one-way delay: 179.605 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 509.21 Mbit/s
95th percentile per-packet one-way delay: 179.605 ms
Loss rate: 0.26%
```

Run 3: Report of TCP Cubic — Data Link

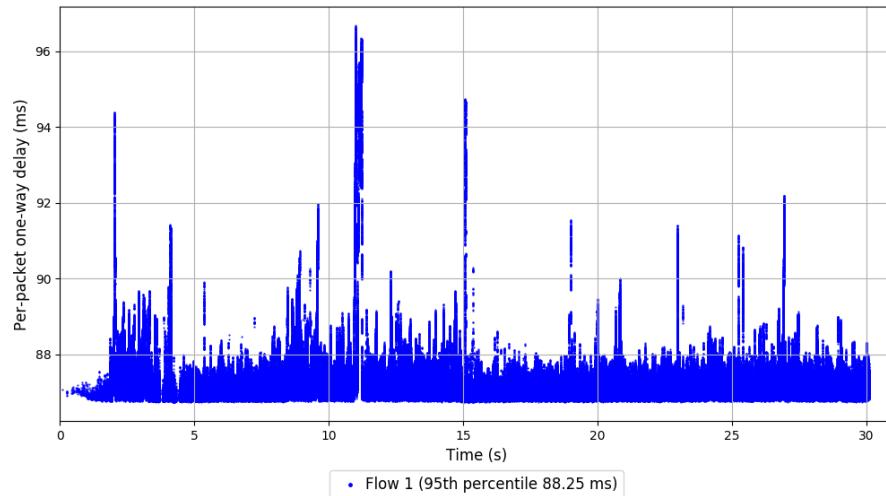
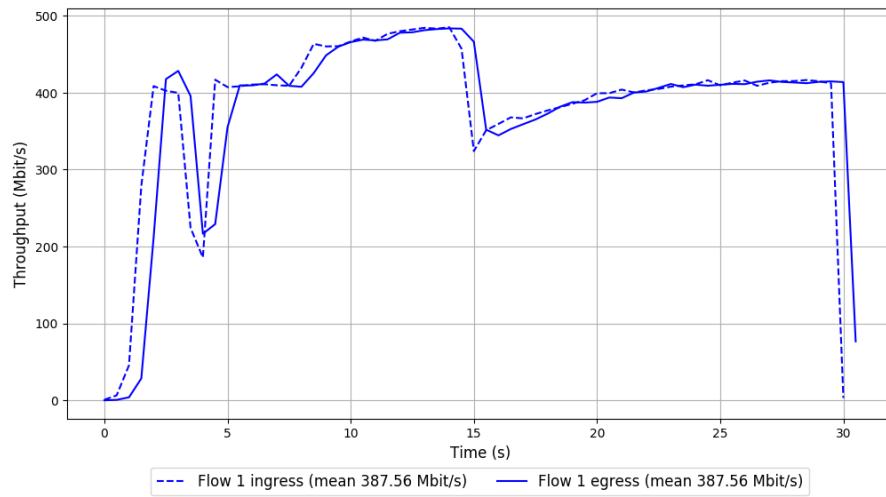


Run 4: Statistics of TCP Cubic

```
Start at: 2018-10-02 08:28:51
End at: 2018-10-02 08:29:21
Local clock offset: -0.386 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2018-10-02 09:49:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 387.56 Mbit/s
95th percentile per-packet one-way delay: 88.249 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 387.56 Mbit/s
95th percentile per-packet one-way delay: 88.249 ms
Loss rate: 0.00%
```

Run 4: Report of TCP Cubic — Data Link

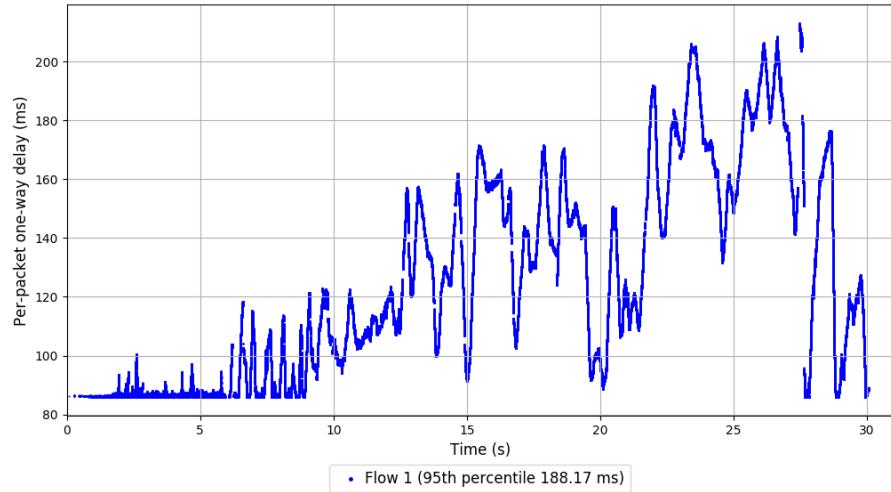
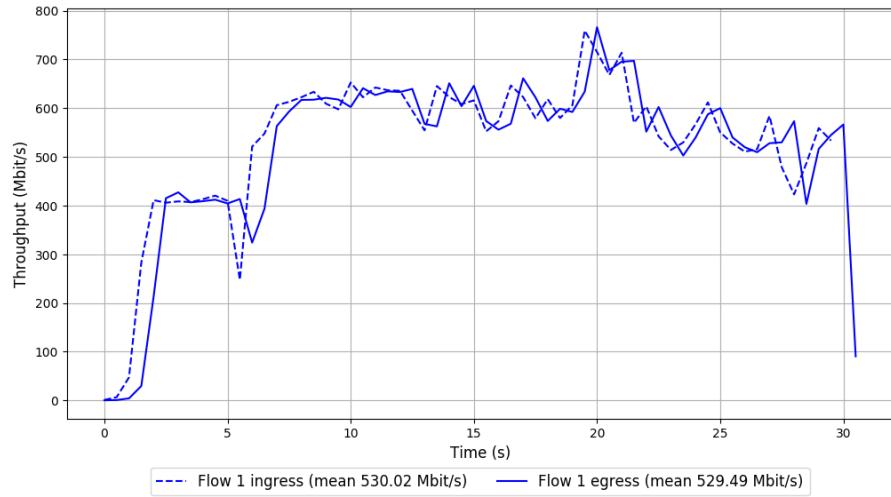


Run 5: Statistics of TCP Cubic

```
Start at: 2018-10-02 08:54:43
End at: 2018-10-02 08:55:13
Local clock offset: -0.228 ms
Remote clock offset: 0.025 ms

# Below is generated by plot.py at 2018-10-02 09:50:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 529.49 Mbit/s
95th percentile per-packet one-way delay: 188.172 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 529.49 Mbit/s
95th percentile per-packet one-way delay: 188.172 ms
Loss rate: 0.10%
```

Run 5: Report of TCP Cubic — Data Link

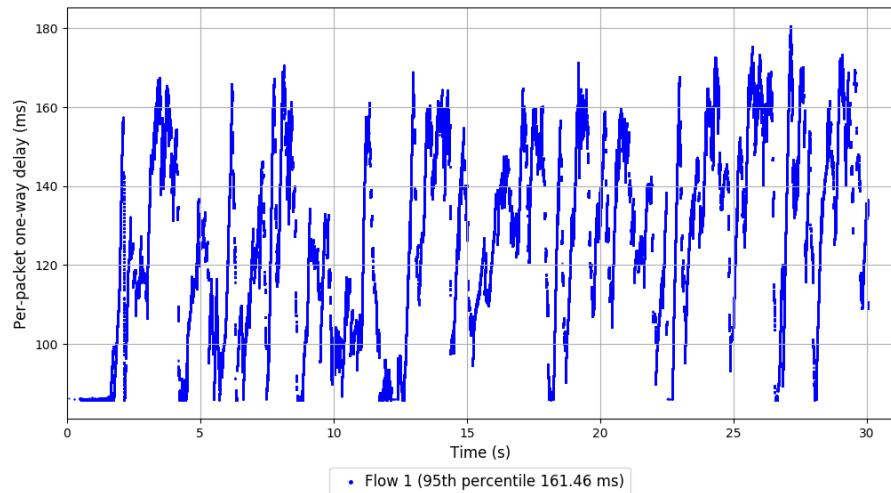
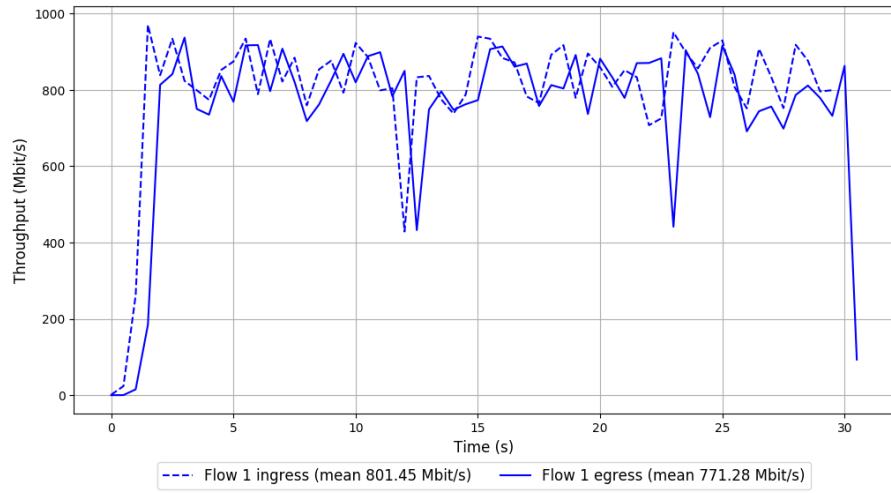


```
Run 1: Statistics of FillP
```

```
Start at: 2018-10-02 07:20:15
End at: 2018-10-02 07:20:45
Local clock offset: -0.097 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-10-02 09:59:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 771.28 Mbit/s
95th percentile per-packet one-way delay: 161.459 ms
Loss rate: 3.76%
-- Flow 1:
Average throughput: 771.28 Mbit/s
95th percentile per-packet one-way delay: 161.459 ms
Loss rate: 3.76%
```

Run 1: Report of FillP — Data Link

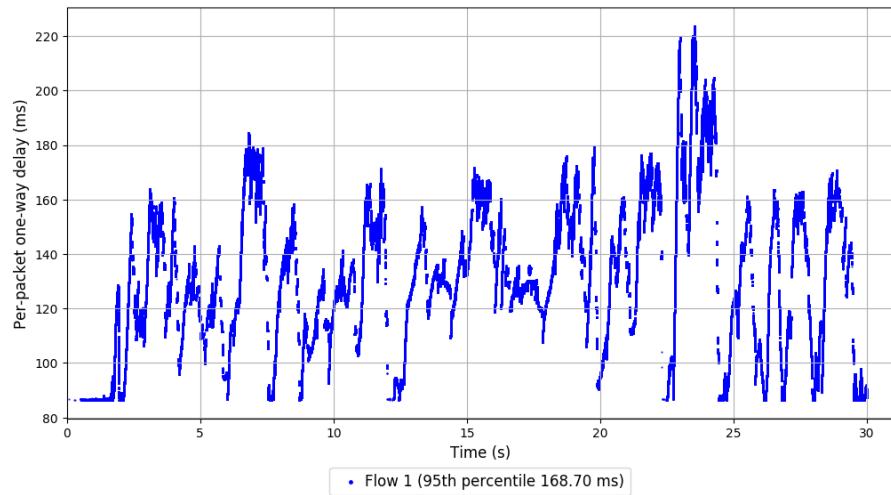
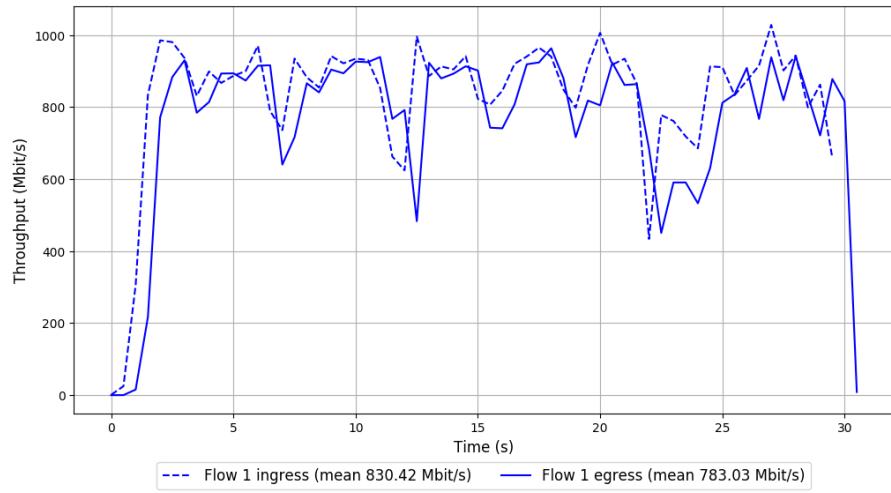


Run 2: Statistics of FillP

```
Start at: 2018-10-02 07:45:52
End at: 2018-10-02 07:46:22
Local clock offset: -0.168 ms
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2018-10-02 10:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 783.03 Mbit/s
95th percentile per-packet one-way delay: 168.704 ms
Loss rate: 5.71%
-- Flow 1:
Average throughput: 783.03 Mbit/s
95th percentile per-packet one-way delay: 168.704 ms
Loss rate: 5.71%
```

Run 2: Report of FillP — Data Link

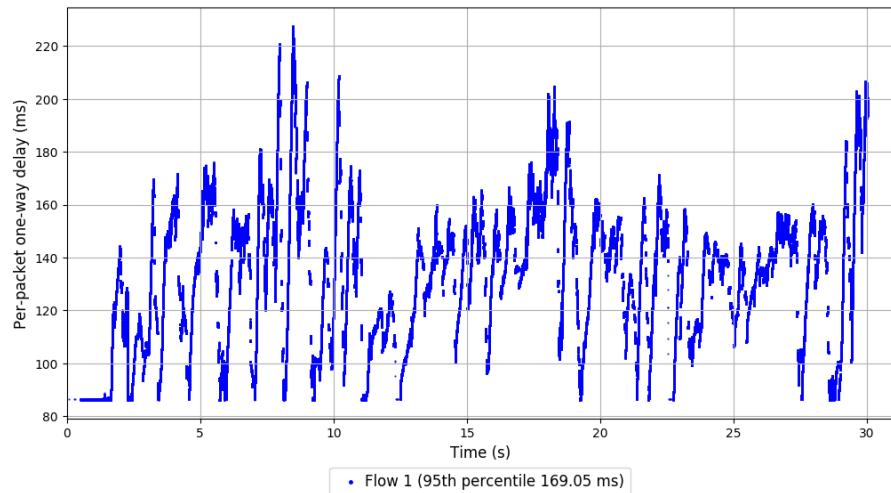
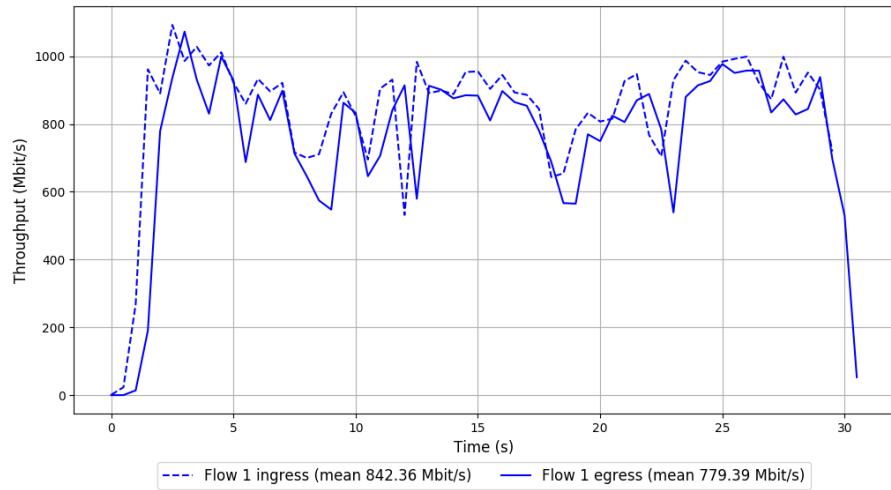


Run 3: Statistics of FillP

```
Start at: 2018-10-02 08:11:19
End at: 2018-10-02 08:11:49
Local clock offset: -0.019 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-10-02 10:10:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 779.39 Mbit/s
95th percentile per-packet one-way delay: 169.049 ms
Loss rate: 7.47%
-- Flow 1:
Average throughput: 779.39 Mbit/s
95th percentile per-packet one-way delay: 169.049 ms
Loss rate: 7.47%
```

Run 3: Report of FillP — Data Link

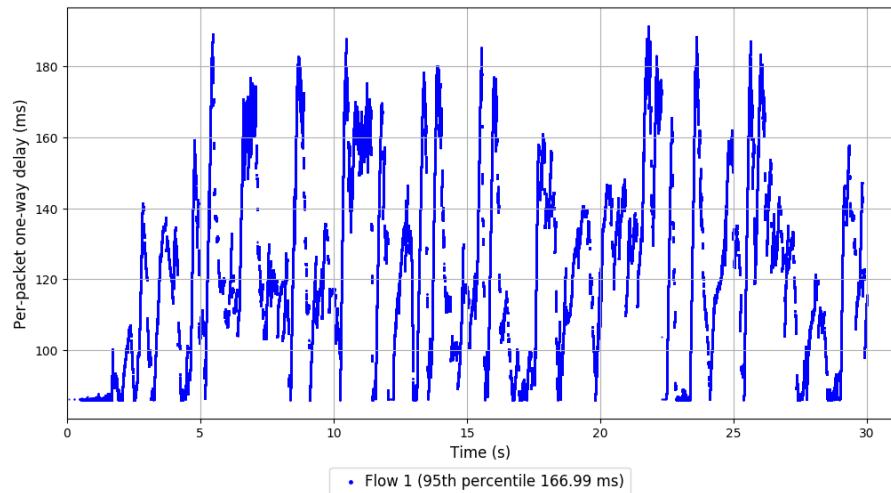
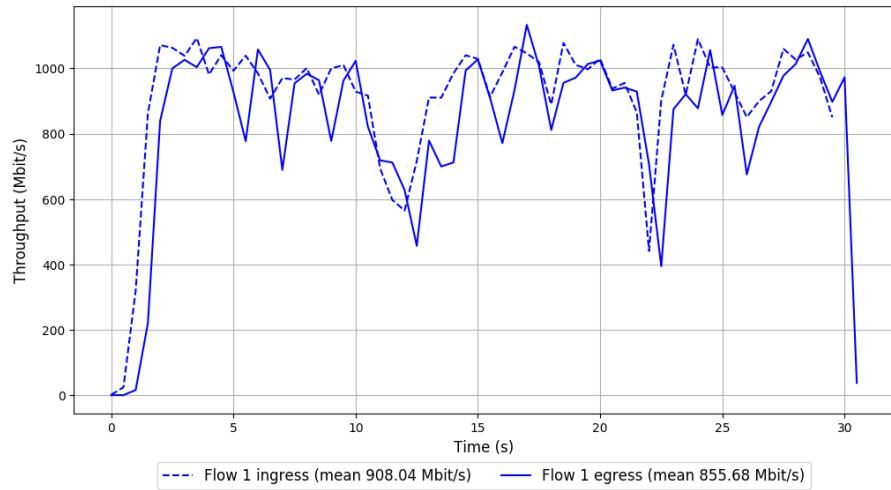


Run 4: Statistics of FillP

```
Start at: 2018-10-02 08:37:06
End at: 2018-10-02 08:37:36
Local clock offset: -0.131 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2018-10-02 10:12:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 855.68 Mbit/s
95th percentile per-packet one-way delay: 166.991 ms
Loss rate: 5.76%
-- Flow 1:
Average throughput: 855.68 Mbit/s
95th percentile per-packet one-way delay: 166.991 ms
Loss rate: 5.76%
```

Run 4: Report of FillP — Data Link

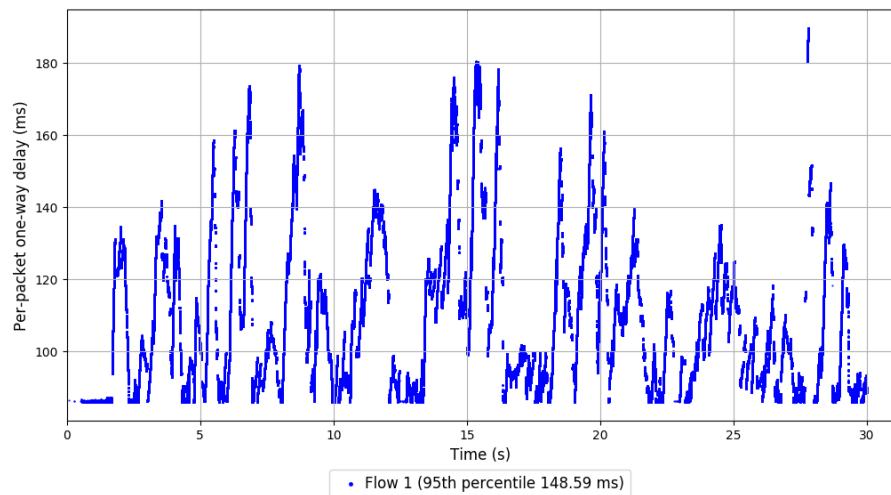
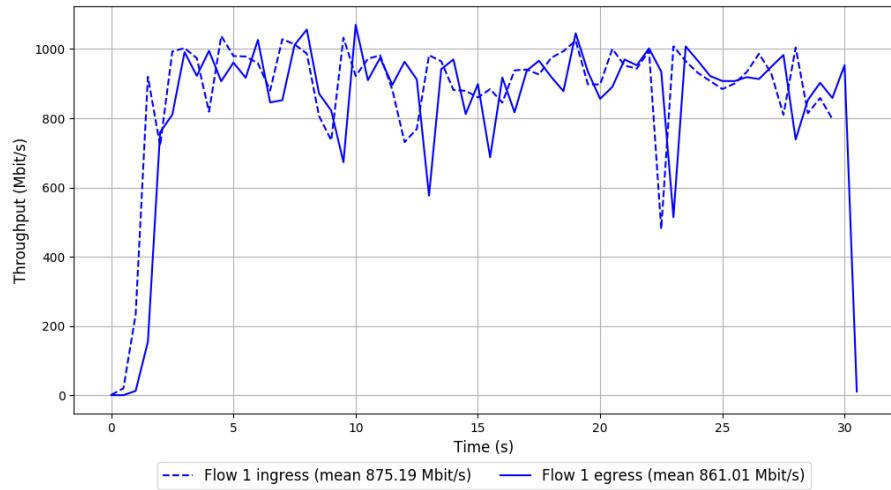


Run 5: Statistics of FillP

```
Start at: 2018-10-02 09:03:04
End at: 2018-10-02 09:03:34
Local clock offset: -0.294 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2018-10-02 10:13:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 861.01 Mbit/s
95th percentile per-packet one-way delay: 148.593 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 861.01 Mbit/s
95th percentile per-packet one-way delay: 148.593 ms
Loss rate: 1.62%
```

Run 5: Report of FillP — Data Link

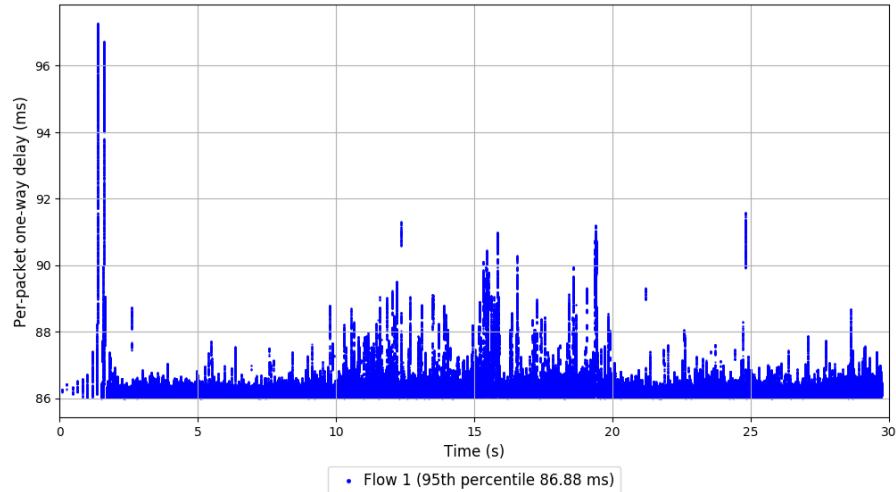
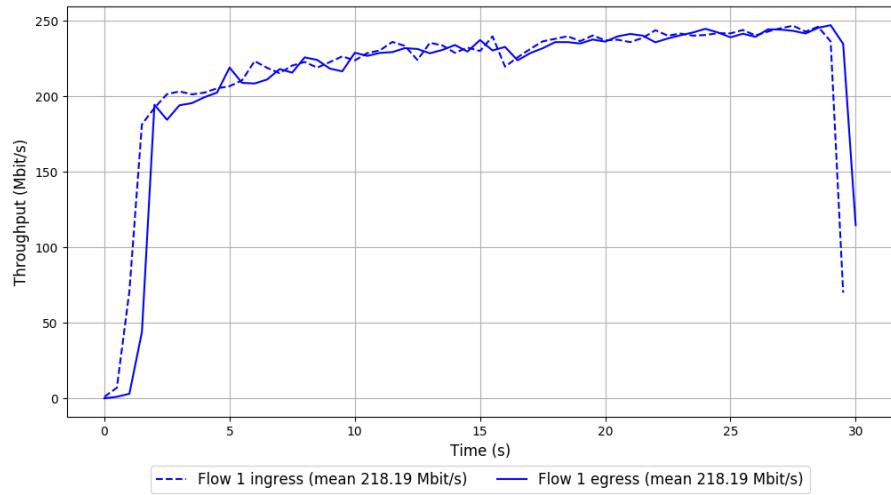


Run 1: Statistics of Indigo

```
Start at: 2018-10-02 07:25:46
End at: 2018-10-02 07:26:16
Local clock offset: -0.171 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2018-10-02 10:13:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 218.19 Mbit/s
95th percentile per-packet one-way delay: 86.881 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 218.19 Mbit/s
95th percentile per-packet one-way delay: 86.881 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link

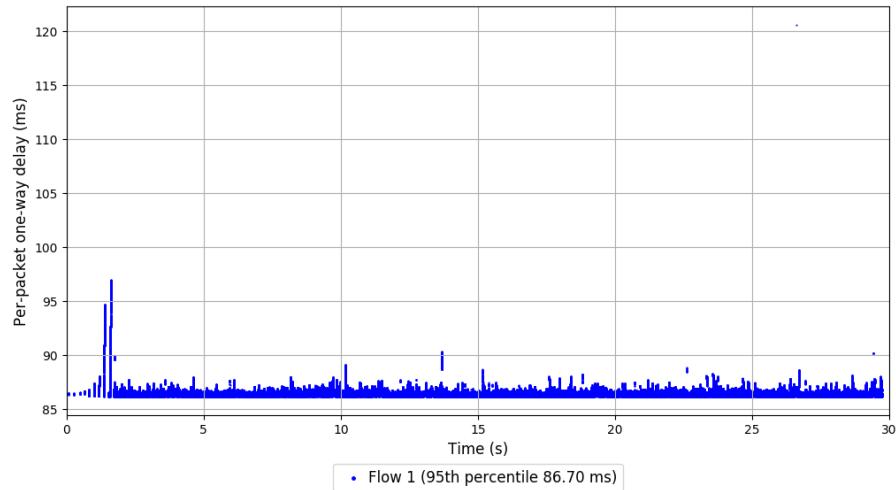
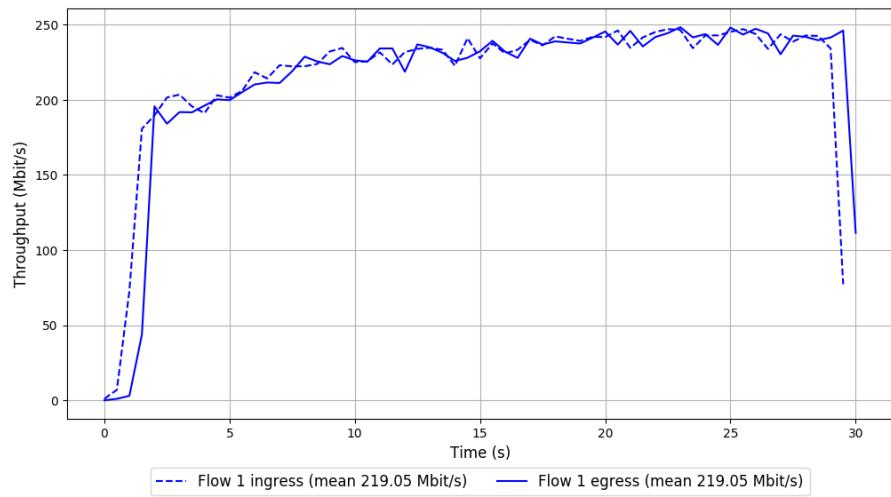


Run 2: Statistics of Indigo

```
Start at: 2018-10-02 07:51:23
End at: 2018-10-02 07:51:53
Local clock offset: 0.022 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2018-10-02 10:13:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 219.05 Mbit/s
95th percentile per-packet one-way delay: 86.698 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 219.05 Mbit/s
95th percentile per-packet one-way delay: 86.698 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo — Data Link

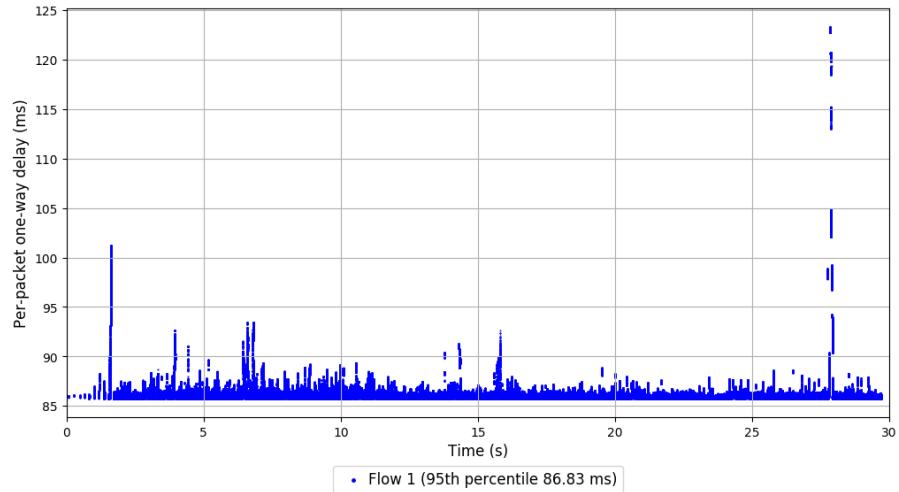
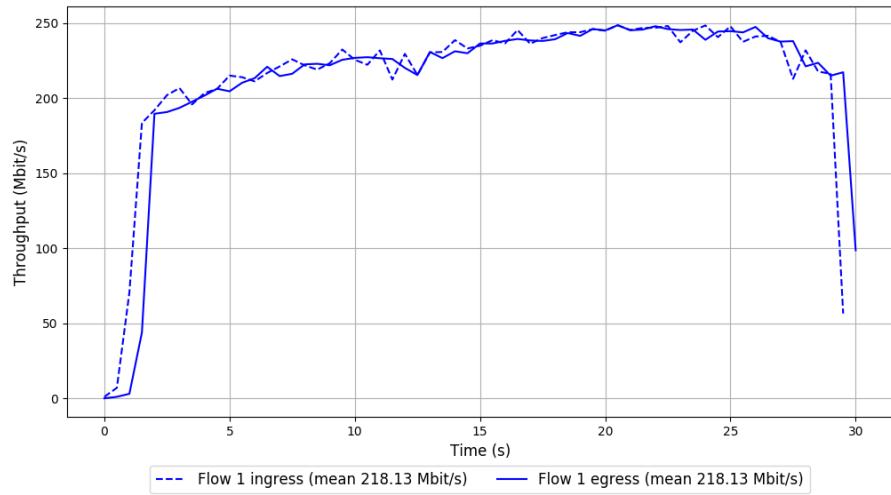


Run 3: Statistics of Indigo

```
Start at: 2018-10-02 08:16:50
End at: 2018-10-02 08:17:20
Local clock offset: -0.045 ms
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2018-10-02 10:13:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 218.13 Mbit/s
95th percentile per-packet one-way delay: 86.835 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 218.13 Mbit/s
95th percentile per-packet one-way delay: 86.835 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo — Data Link

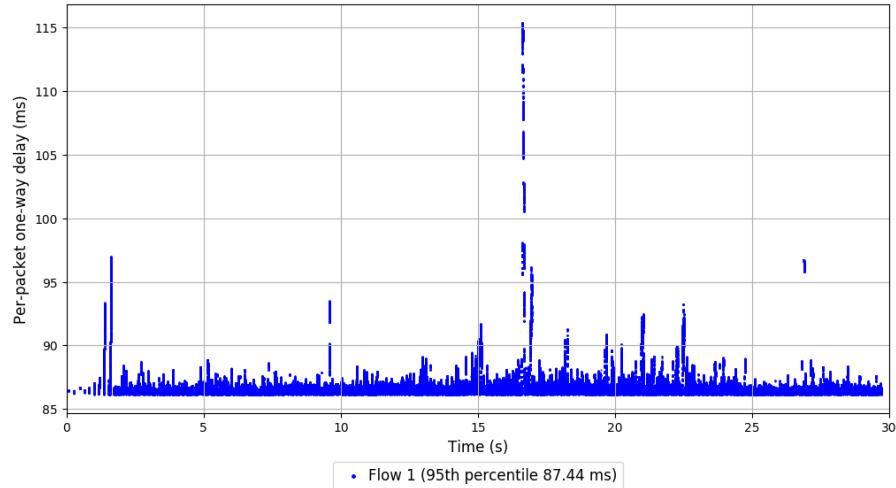
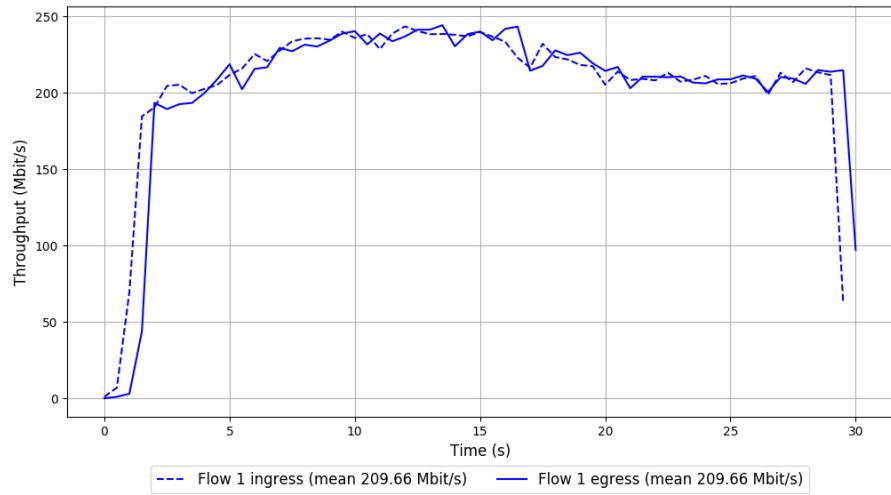


Run 4: Statistics of Indigo

```
Start at: 2018-10-02 08:42:39
End at: 2018-10-02 08:43:09
Local clock offset: -0.276 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2018-10-02 10:13:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 209.66 Mbit/s
95th percentile per-packet one-way delay: 87.442 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 209.66 Mbit/s
95th percentile per-packet one-way delay: 87.442 ms
Loss rate: 0.00%
```

Run 4: Report of Indigo — Data Link

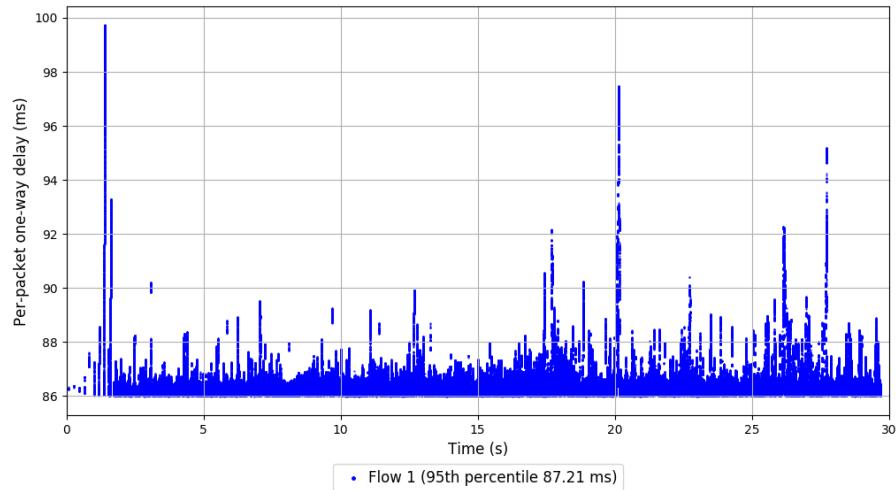
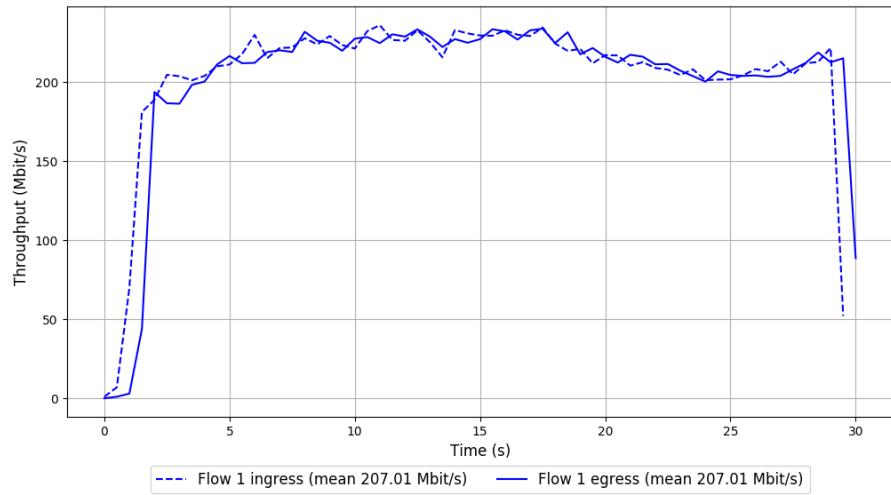


Run 5: Statistics of Indigo

```
Start at: 2018-10-02 09:08:38
End at: 2018-10-02 09:09:08
Local clock offset: -0.307 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2018-10-02 10:13:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 207.01 Mbit/s
95th percentile per-packet one-way delay: 87.211 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 207.01 Mbit/s
95th percentile per-packet one-way delay: 87.211 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo — Data Link

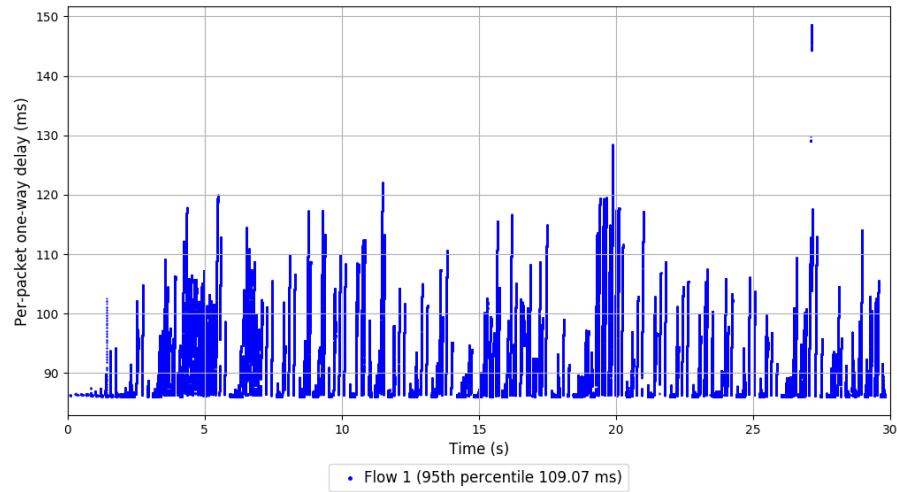
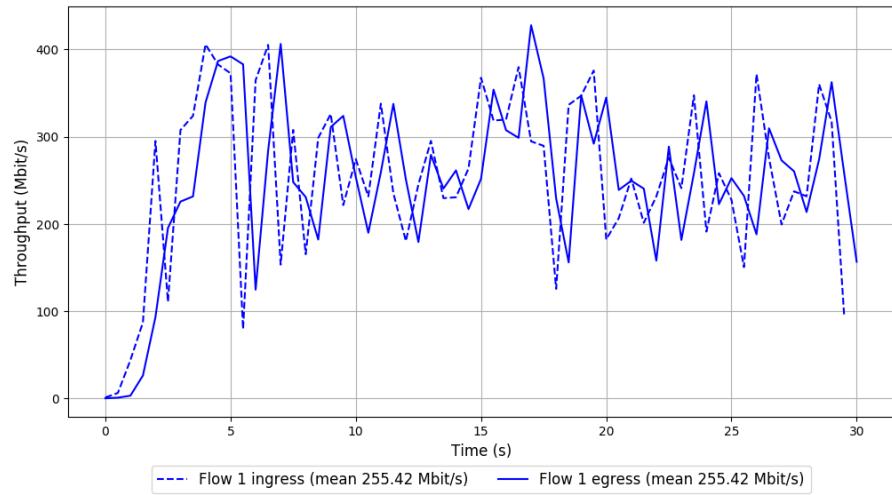


```
Run 1: Statistics of Indigo-96d2da3
```

```
Start at: 2018-10-02 07:13:36
End at: 2018-10-02 07:14:06
Local clock offset: -0.272 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-10-02 10:13:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 255.42 Mbit/s
95th percentile per-packet one-way delay: 109.070 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 255.42 Mbit/s
95th percentile per-packet one-way delay: 109.070 ms
Loss rate: 0.00%
```

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

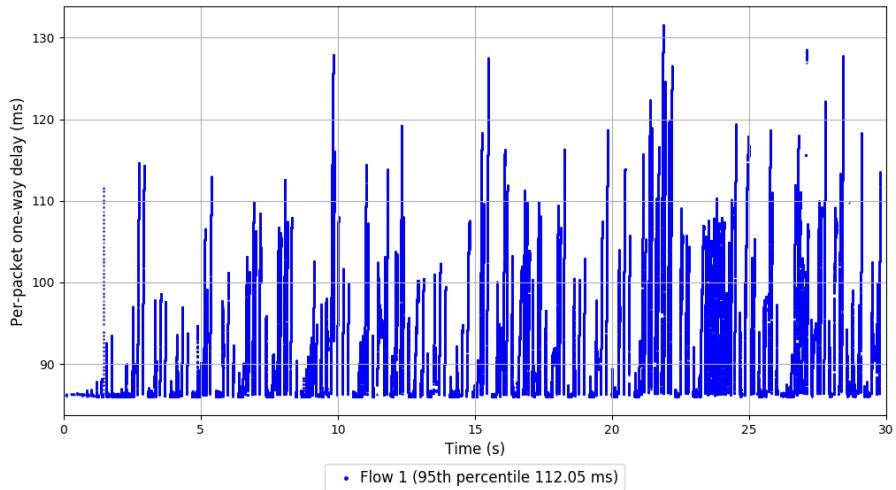
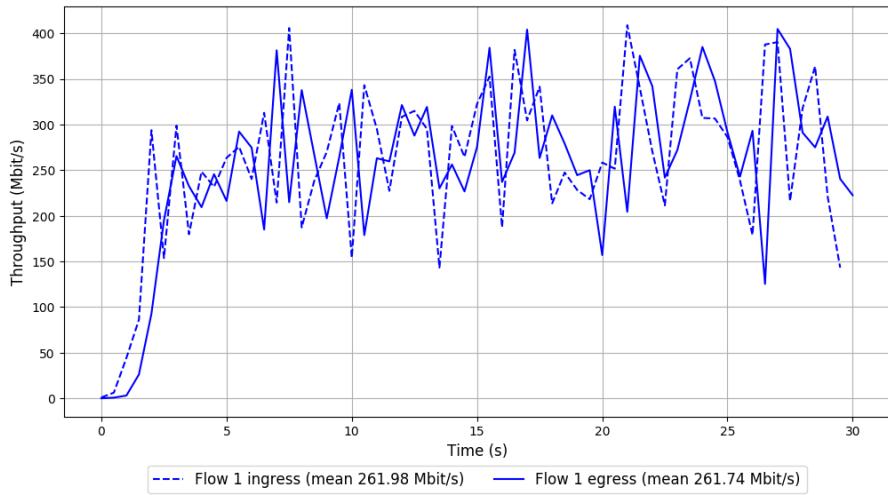


Run 2: Statistics of Indigo-96d2da3

```
Start at: 2018-10-02 07:39:08
End at: 2018-10-02 07:39:38
Local clock offset: -0.212 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2018-10-02 10:13:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 261.74 Mbit/s
95th percentile per-packet one-way delay: 112.046 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 261.74 Mbit/s
95th percentile per-packet one-way delay: 112.046 ms
Loss rate: 0.00%
```

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

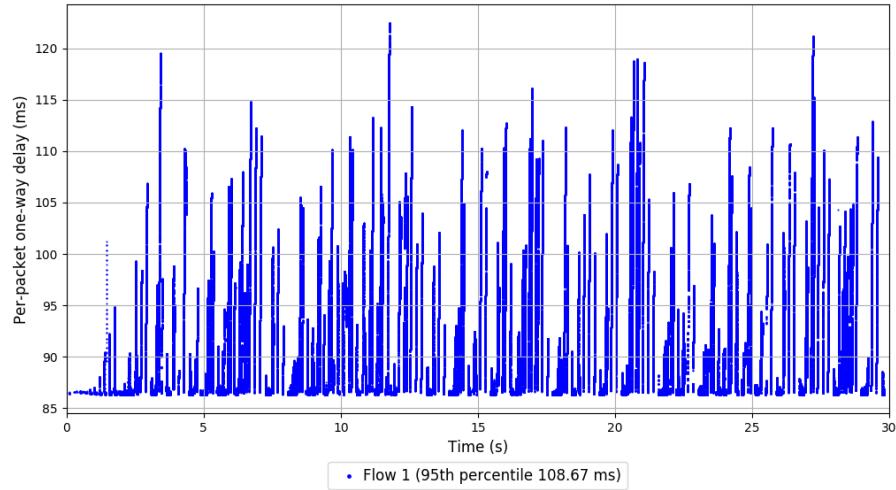
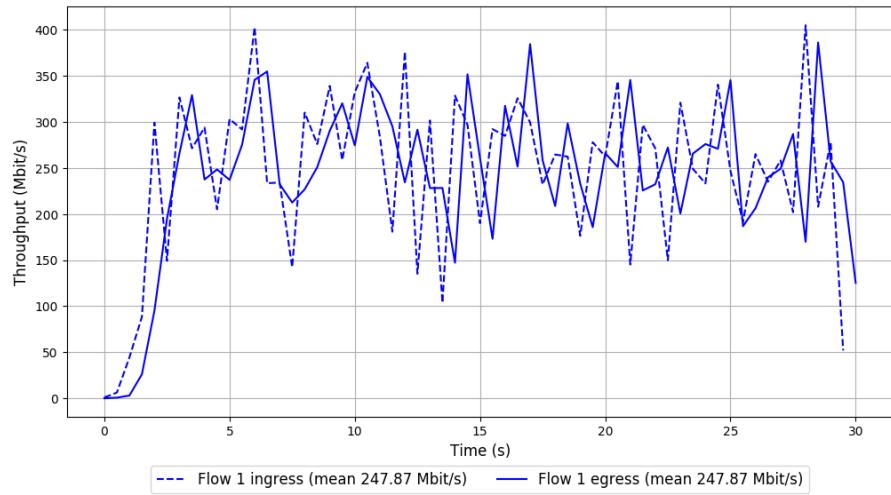


```
Run 3: Statistics of Indigo-96d2da3
```

```
Start at: 2018-10-02 08:04:38
End at: 2018-10-02 08:05:08
Local clock offset: -0.093 ms
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2018-10-02 10:13:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 247.87 Mbit/s
95th percentile per-packet one-way delay: 108.668 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 247.87 Mbit/s
95th percentile per-packet one-way delay: 108.668 ms
Loss rate: 0.00%
```

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

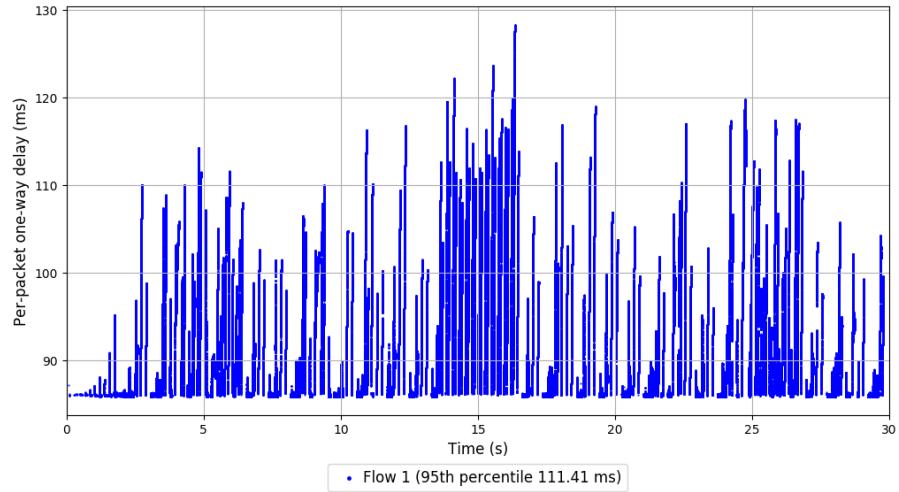
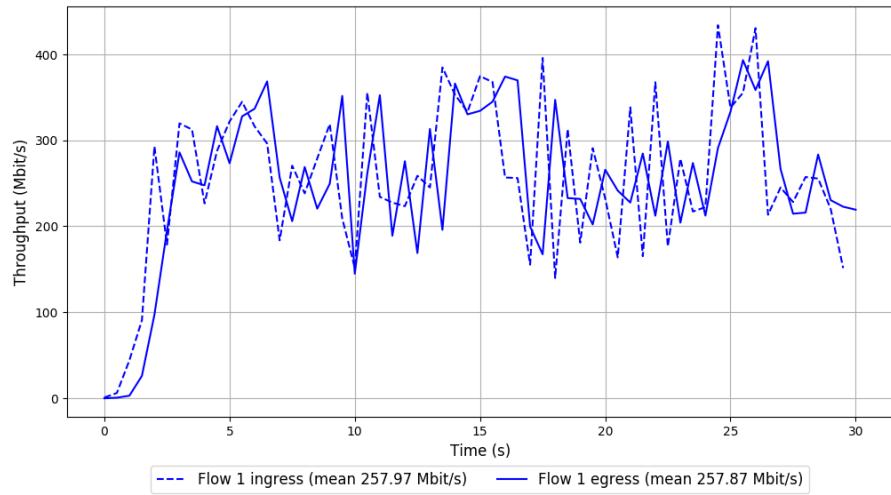


Run 4: Statistics of Indigo-96d2da3

```
Start at: 2018-10-02 08:30:20
End at: 2018-10-02 08:30:50
Local clock offset: -0.265 ms
Remote clock offset: -0.144 ms

# Below is generated by plot.py at 2018-10-02 10:13:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 257.87 Mbit/s
95th percentile per-packet one-way delay: 111.413 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 257.87 Mbit/s
95th percentile per-packet one-way delay: 111.413 ms
Loss rate: 0.00%
```

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

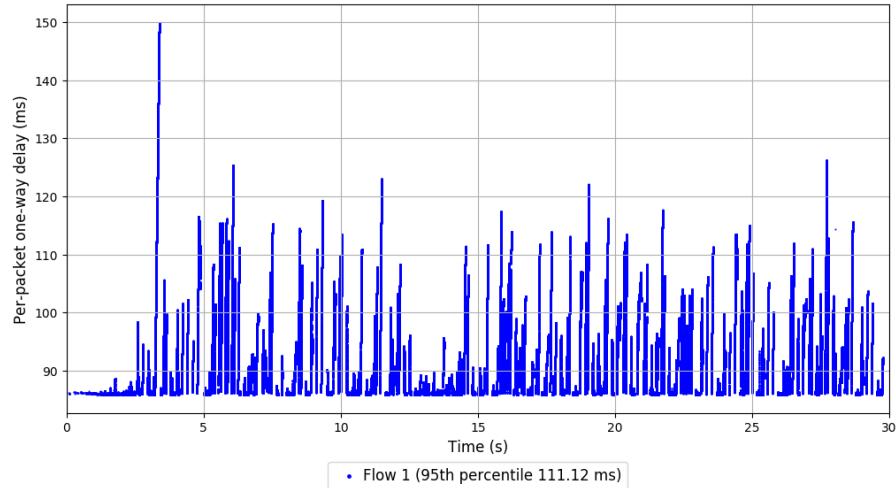
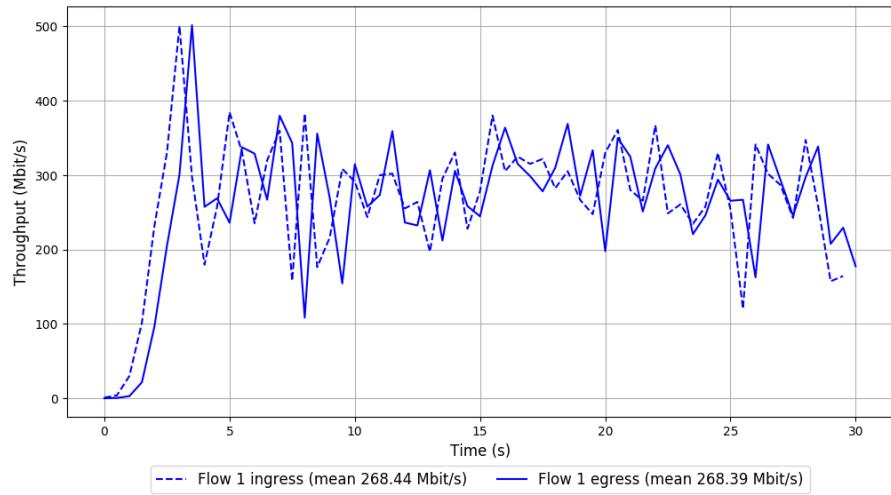


Run 5: Statistics of Indigo-96d2da3

```
Start at: 2018-10-02 08:56:20
End at: 2018-10-02 08:56:50
Local clock offset: -0.233 ms
Remote clock offset: 0.015 ms

# Below is generated by plot.py at 2018-10-02 10:14:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 268.39 Mbit/s
95th percentile per-packet one-way delay: 111.123 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 268.39 Mbit/s
95th percentile per-packet one-way delay: 111.123 ms
Loss rate: 0.00%
```

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

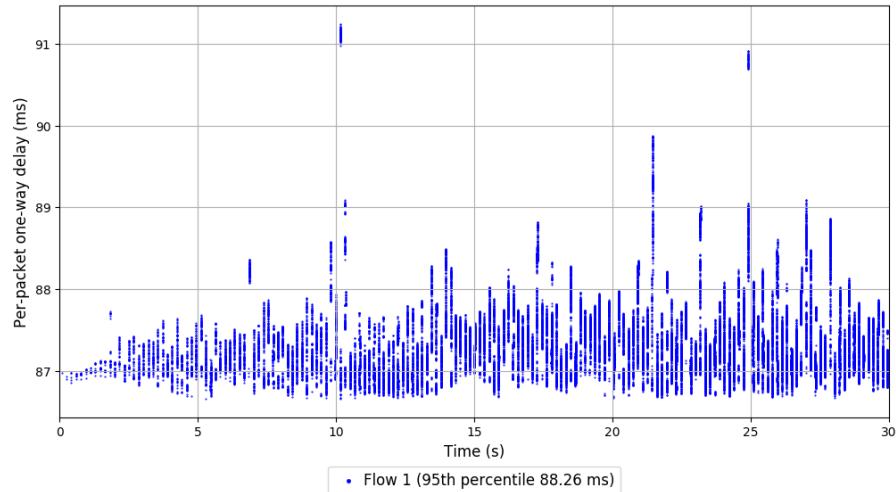
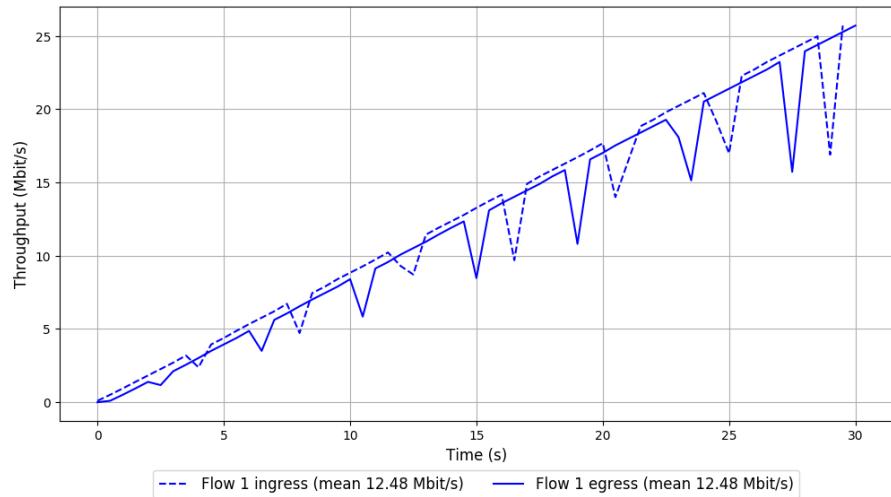


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-10-02 07:19:06
End at: 2018-10-02 07:19:36
Local clock offset: -0.265 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2018-10-02 10:14:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.48 Mbit/s
95th percentile per-packet one-way delay: 88.261 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.48 Mbit/s
95th percentile per-packet one-way delay: 88.261 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

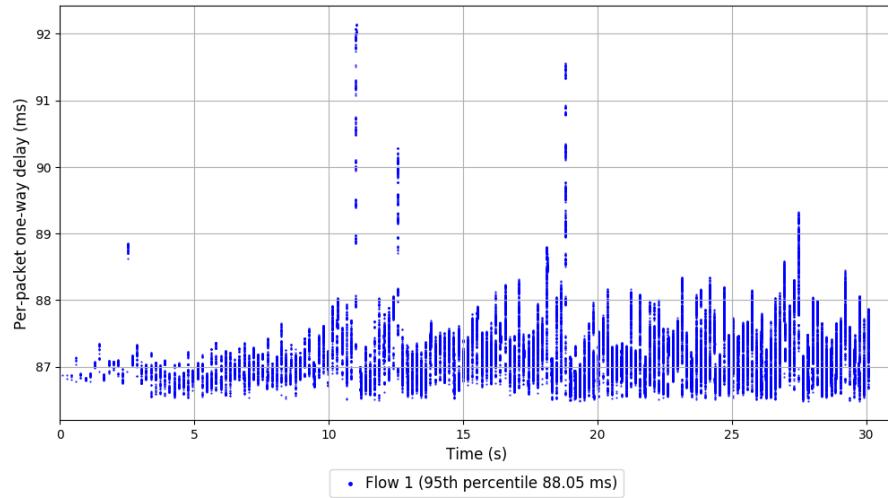
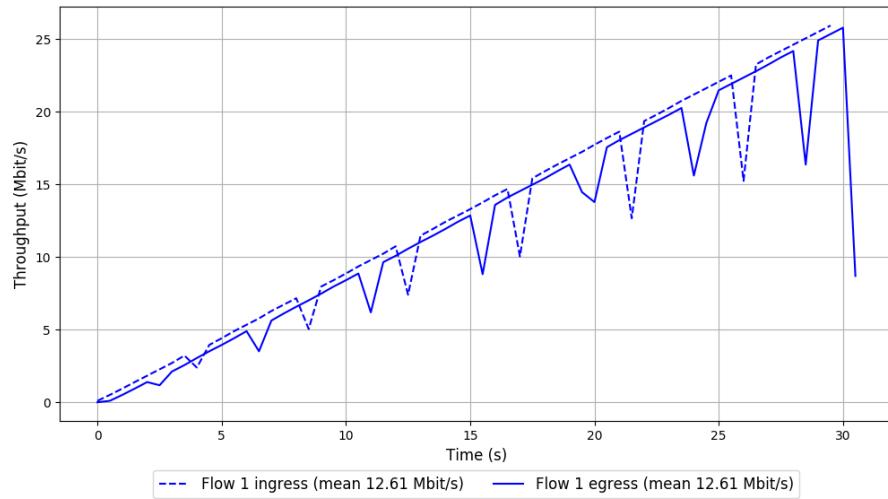


Run 2: Statistics of LEDBAT

```
Start at: 2018-10-02 07:44:43
End at: 2018-10-02 07:45:13
Local clock offset: -0.285 ms
Remote clock offset: -0.063 ms

# Below is generated by plot.py at 2018-10-02 10:14:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 88.052 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 88.052 ms
Loss rate: 0.00%
```

Run 2: Report of LEDBAT — Data Link

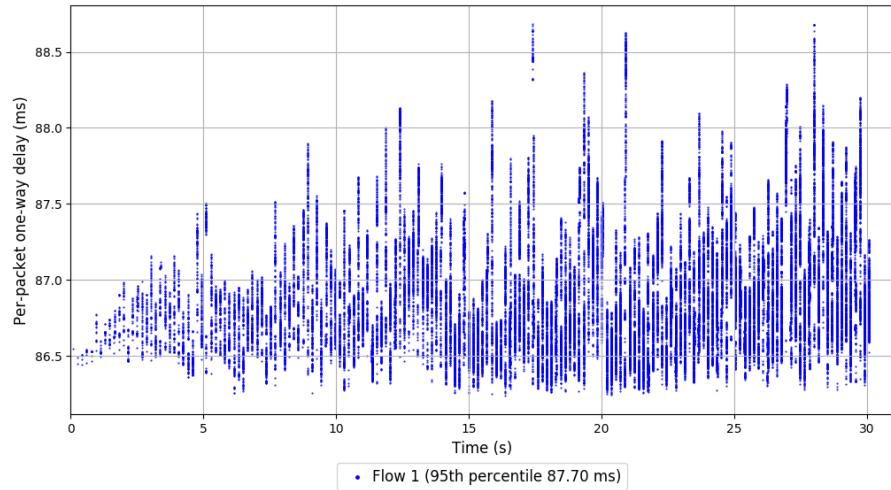
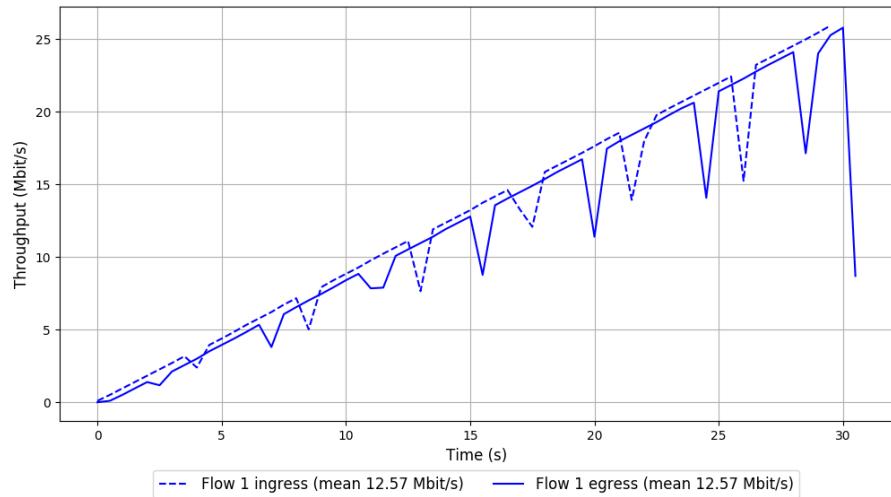


Run 3: Statistics of LEDBAT

```
Start at: 2018-10-02 08:10:10
End at: 2018-10-02 08:10:40
Local clock offset: -0.064 ms
Remote clock offset: -0.063 ms

# Below is generated by plot.py at 2018-10-02 10:14:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.57 Mbit/s
95th percentile per-packet one-way delay: 87.696 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.57 Mbit/s
95th percentile per-packet one-way delay: 87.696 ms
Loss rate: 0.00%
```

Run 3: Report of LEDBAT — Data Link

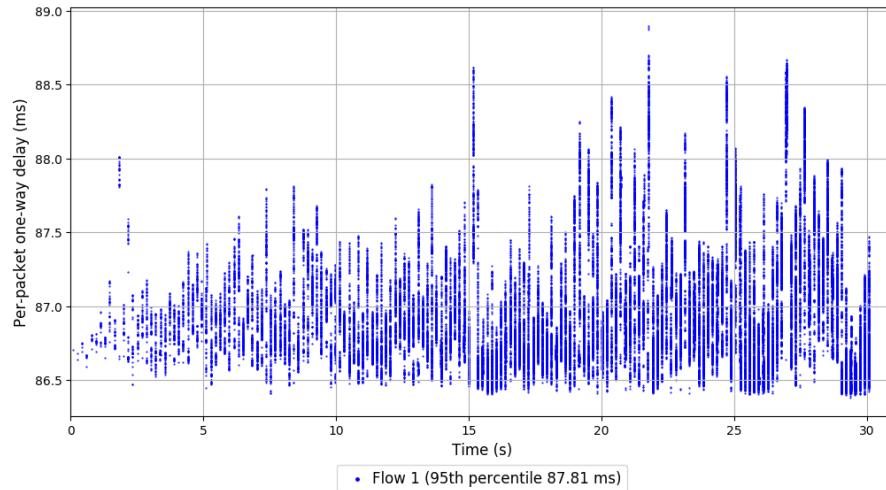
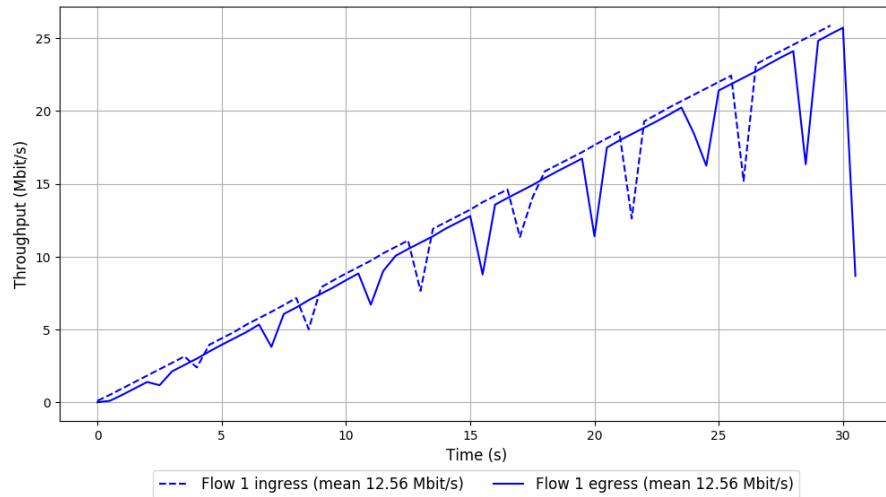


Run 4: Statistics of LEDBAT

```
Start at: 2018-10-02 08:35:57
End at: 2018-10-02 08:36:27
Local clock offset: -0.235 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2018-10-02 10:14:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.56 Mbit/s
95th percentile per-packet one-way delay: 87.808 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.56 Mbit/s
95th percentile per-packet one-way delay: 87.808 ms
Loss rate: 0.00%
```

Run 4: Report of LEDBAT — Data Link

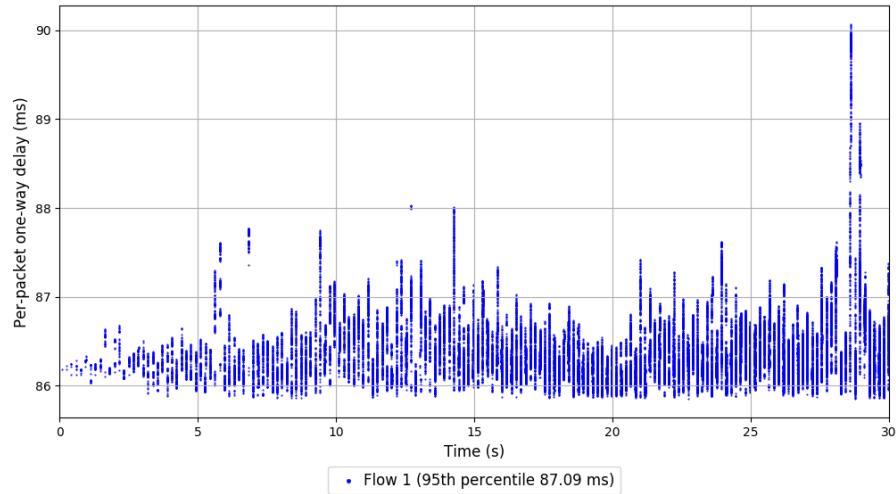
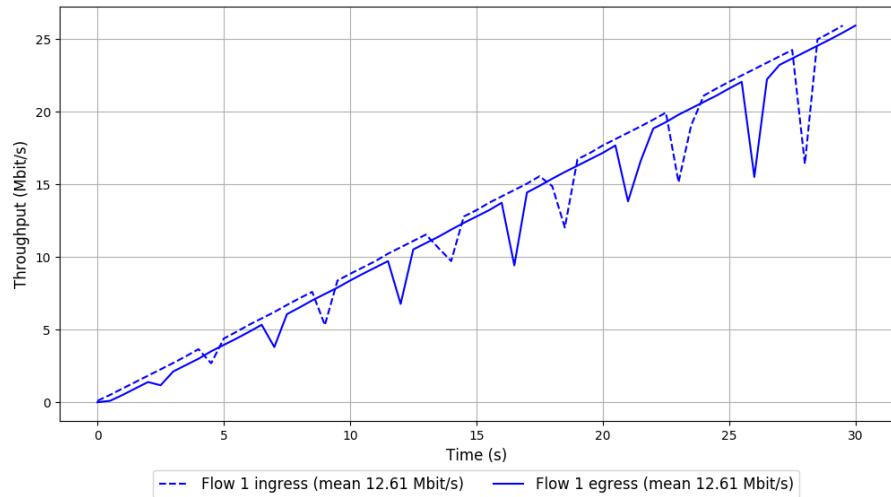


Run 5: Statistics of LEDBAT

```
Start at: 2018-10-02 09:01:54
End at: 2018-10-02 09:02:24
Local clock offset: -0.184 ms
Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2018-10-02 10:14:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 87.091 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 87.091 ms
Loss rate: 0.00%
```

Run 5: Report of LEDBAT — Data Link

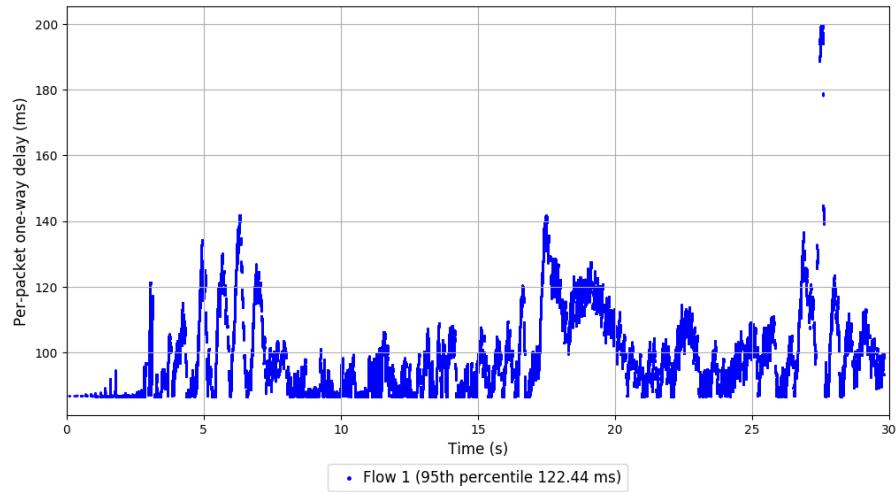
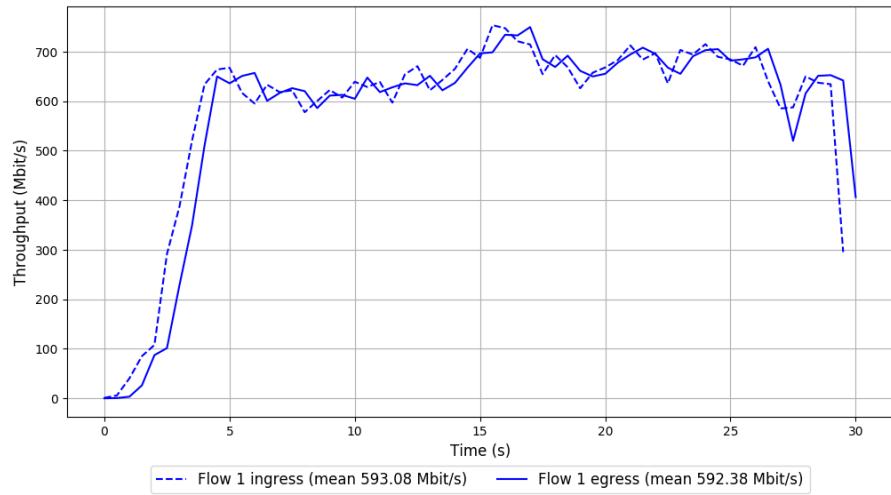


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-10-02 07:34:24
End at: 2018-10-02 07:34:54
Local clock offset: -0.245 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2018-10-02 10:23:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 592.38 Mbit/s
95th percentile per-packet one-way delay: 122.444 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 592.38 Mbit/s
95th percentile per-packet one-way delay: 122.444 ms
Loss rate: 0.12%
```

Run 1: Report of Indigo-Muses — Data Link

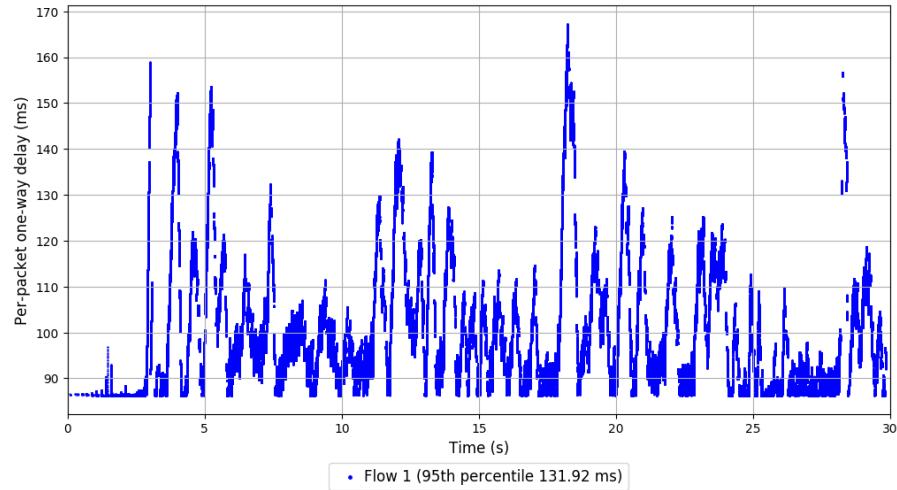
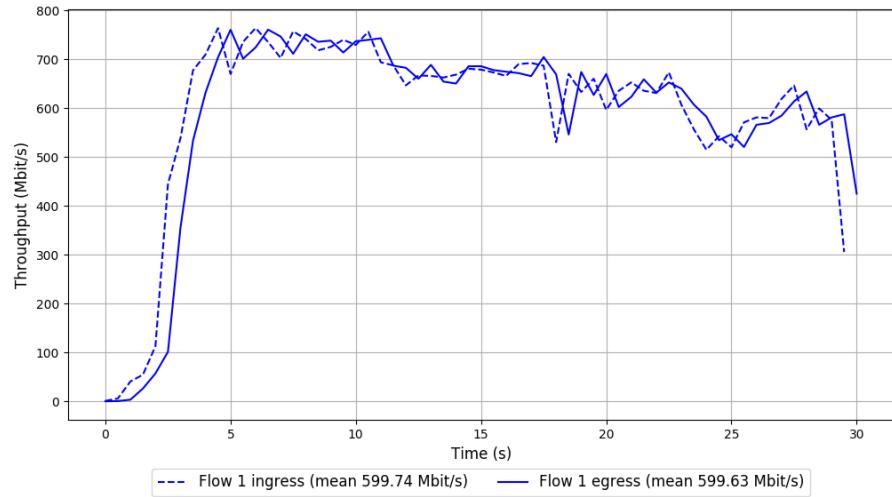


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-10-02 07:59:53
End at: 2018-10-02 08:00:23
Local clock offset: -0.021 ms
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2018-10-02 10:23:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 599.63 Mbit/s
95th percentile per-packet one-way delay: 131.919 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 599.63 Mbit/s
95th percentile per-packet one-way delay: 131.919 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo-Muses — Data Link

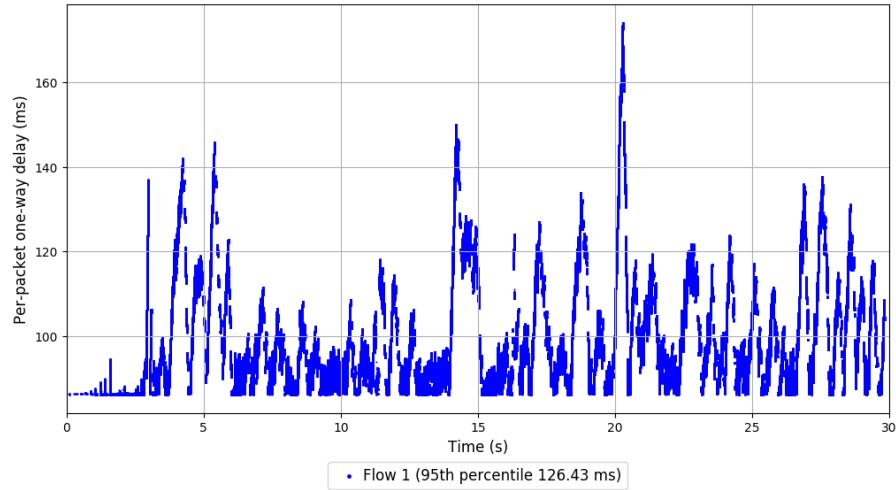
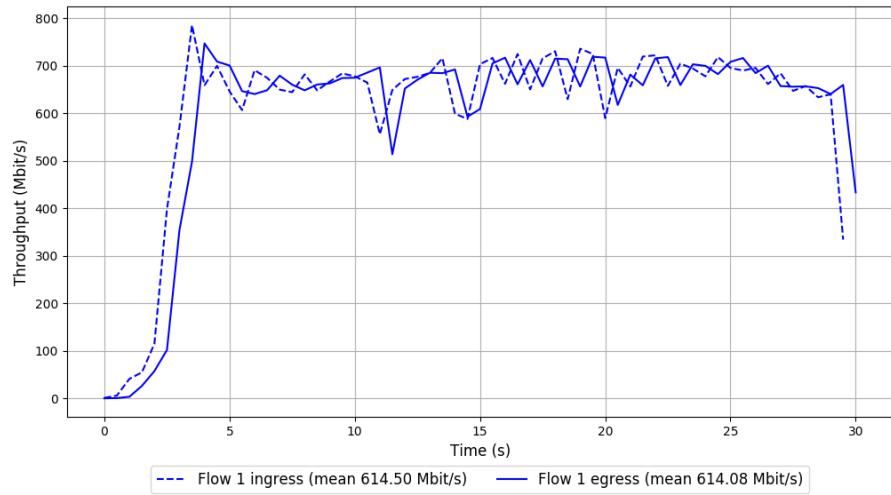


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-10-02 08:25:37
End at: 2018-10-02 08:26:07
Local clock offset: -0.377 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2018-10-02 10:24:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 614.08 Mbit/s
95th percentile per-packet one-way delay: 126.433 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 614.08 Mbit/s
95th percentile per-packet one-way delay: 126.433 ms
Loss rate: 0.07%
```

Run 3: Report of Indigo-Muses — Data Link

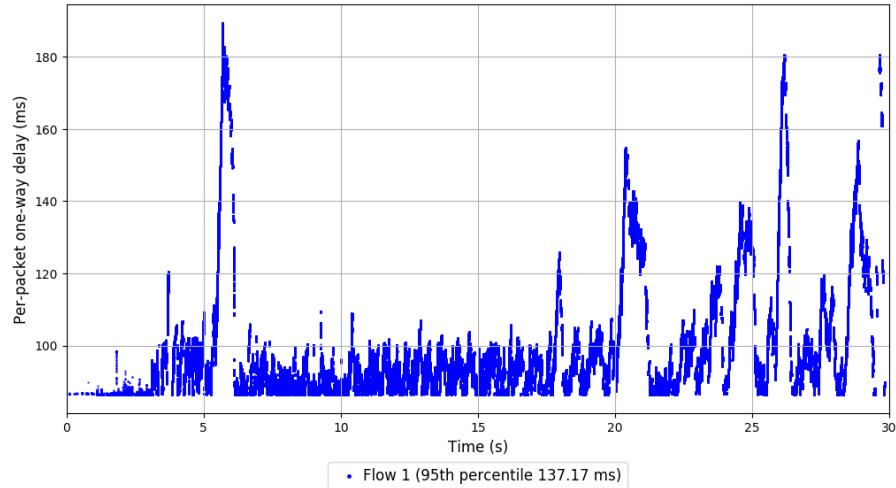
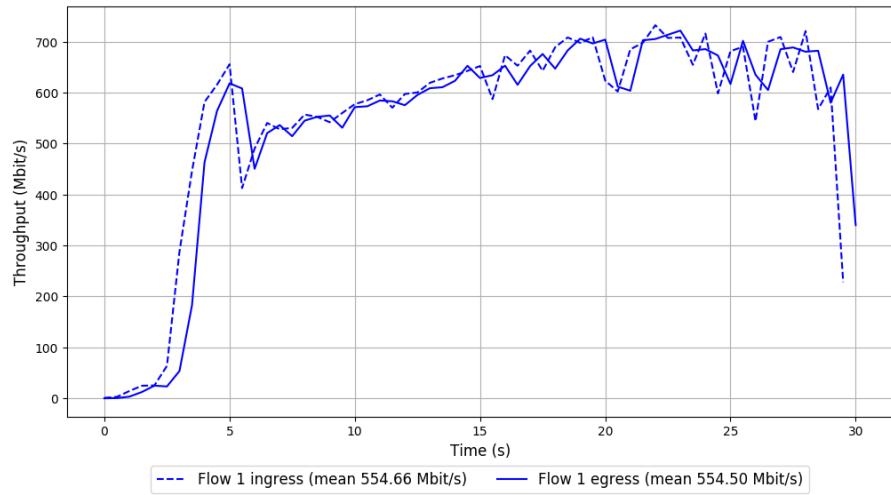


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-10-02 08:51:26
End at: 2018-10-02 08:51:56
Local clock offset: -0.231 ms
Remote clock offset: 0.047 ms

# Below is generated by plot.py at 2018-10-02 10:25:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 554.50 Mbit/s
95th percentile per-packet one-way delay: 137.172 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 554.50 Mbit/s
95th percentile per-packet one-way delay: 137.172 ms
Loss rate: 0.03%
```

Run 4: Report of Indigo-Muses — Data Link

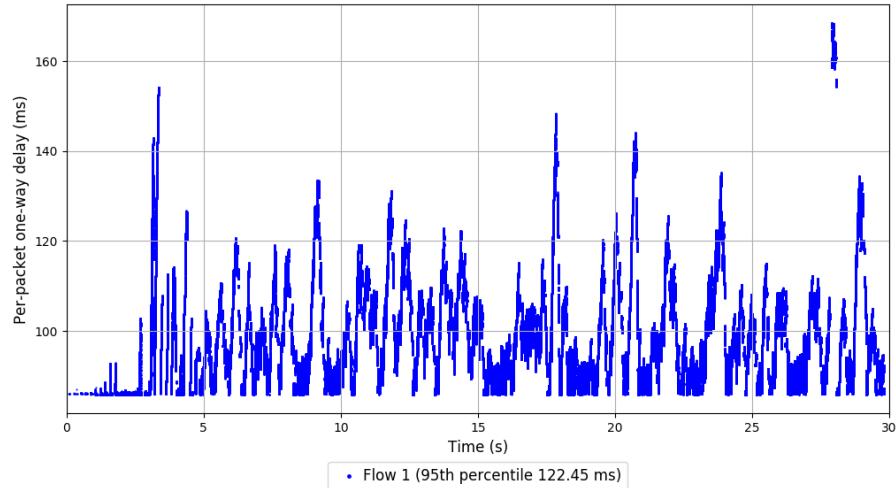
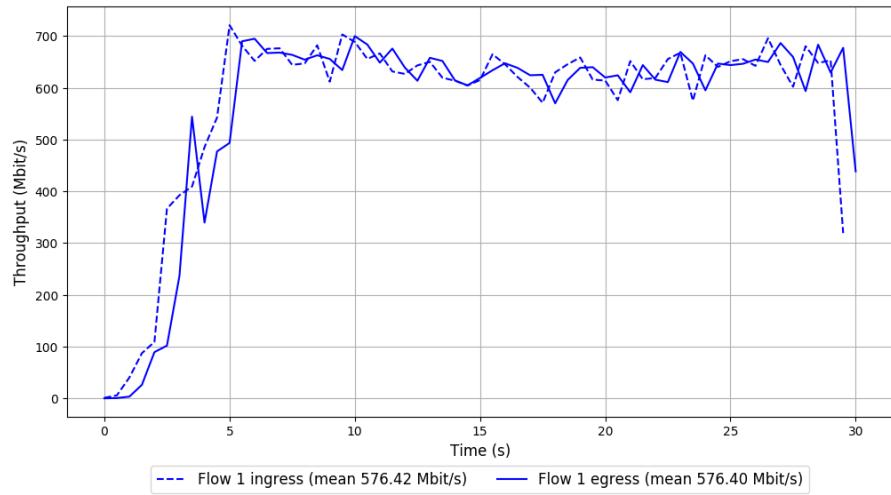


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-10-02 09:17:16
End at: 2018-10-02 09:17:46
Local clock offset: -0.196 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2018-10-02 10:26:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 576.40 Mbit/s
95th percentile per-packet one-way delay: 122.452 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 576.40 Mbit/s
95th percentile per-packet one-way delay: 122.452 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo-Muses — Data Link

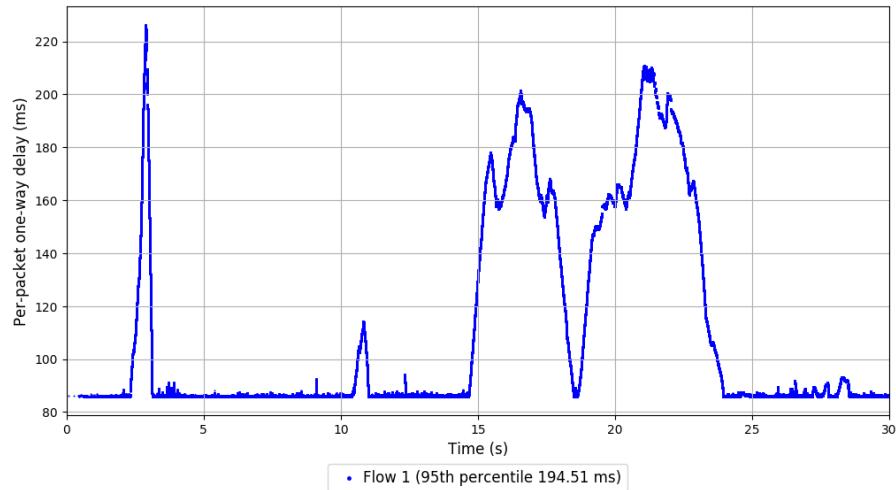
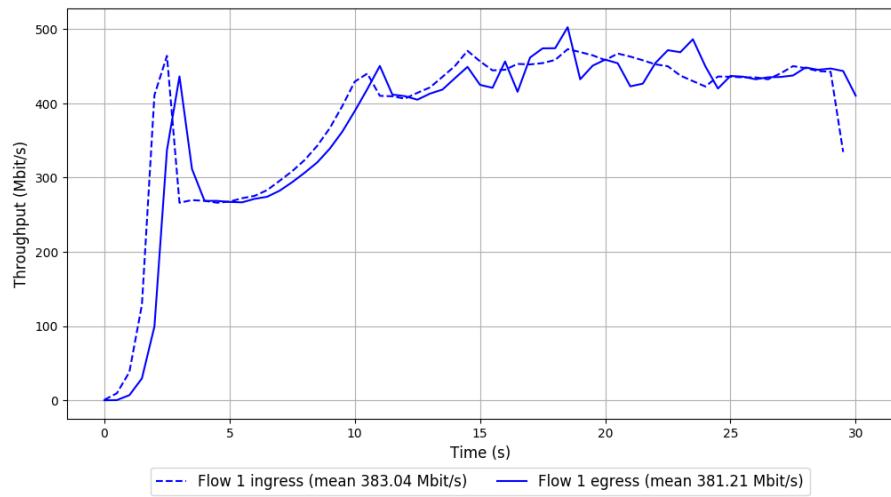


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-10-02 07:28:24
End at: 2018-10-02 07:28:54
Local clock offset: -0.03 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2018-10-02 10:29:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 381.21 Mbit/s
95th percentile per-packet one-way delay: 194.510 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 381.21 Mbit/s
95th percentile per-packet one-way delay: 194.510 ms
Loss rate: 0.48%
```

Run 1: Report of PCC-Allegro — Data Link

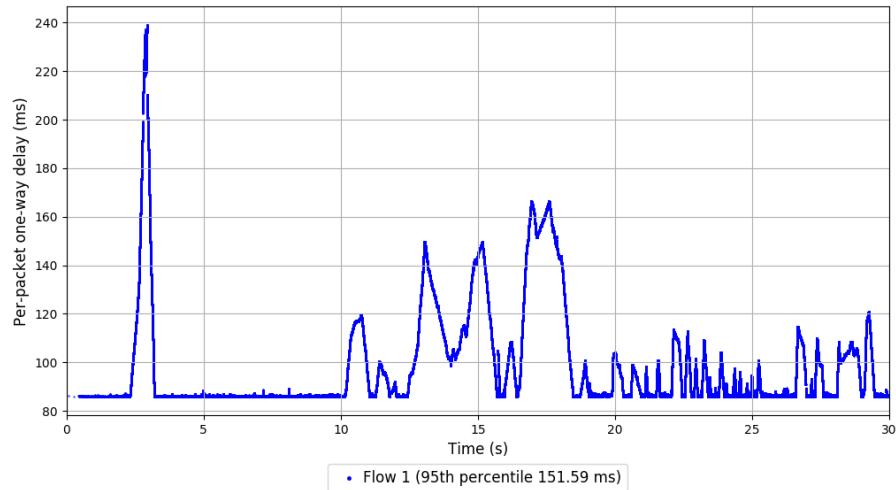
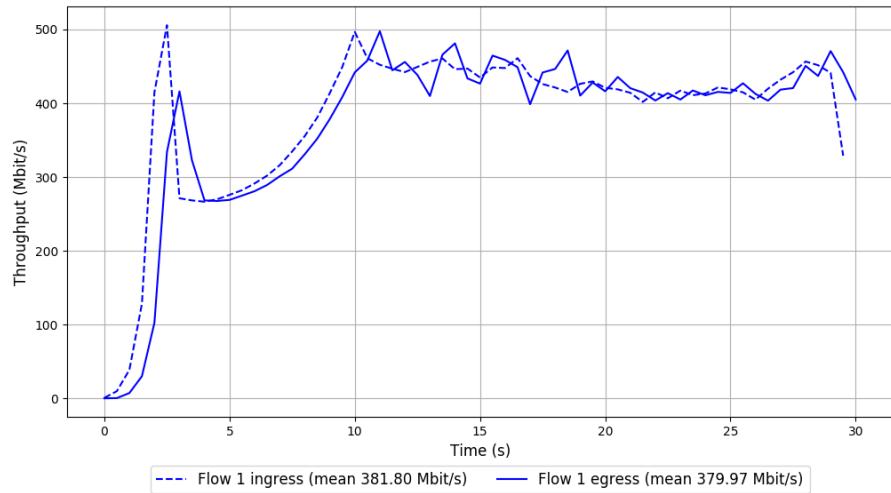


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-10-02 07:54:02
End at: 2018-10-02 07:54:32
Local clock offset: -0.148 ms
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2018-10-02 10:30:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 379.97 Mbit/s
95th percentile per-packet one-way delay: 151.589 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 379.97 Mbit/s
95th percentile per-packet one-way delay: 151.589 ms
Loss rate: 0.48%
```

Run 2: Report of PCC-Allegro — Data Link

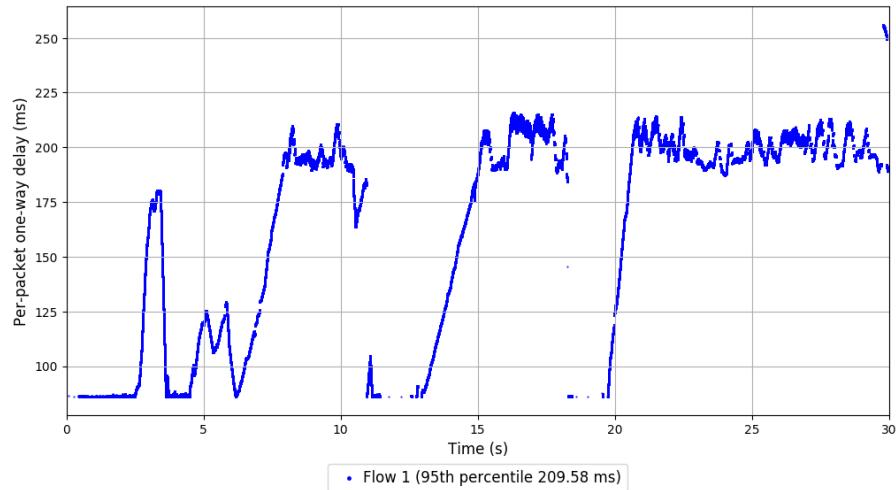
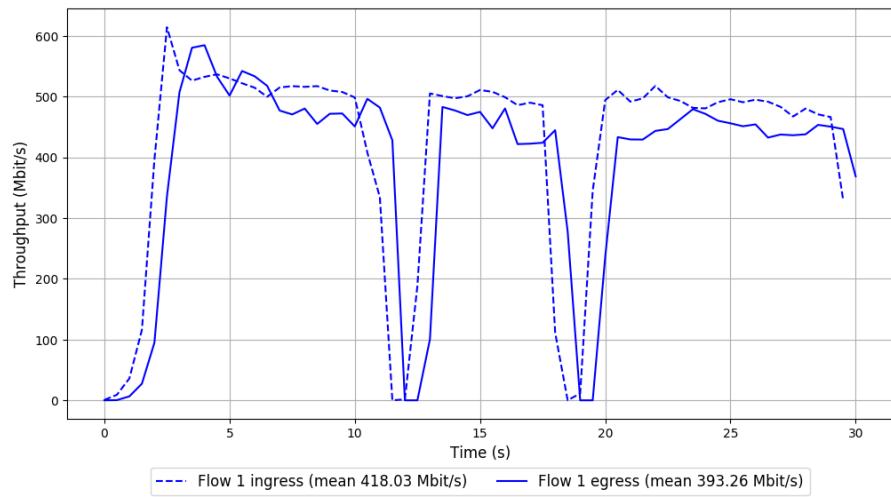


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-10-02 08:19:28
End at: 2018-10-02 08:19:58
Local clock offset: -0.181 ms
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2018-10-02 10:32:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 393.26 Mbit/s
95th percentile per-packet one-way delay: 209.576 ms
Loss rate: 5.92%
-- Flow 1:
Average throughput: 393.26 Mbit/s
95th percentile per-packet one-way delay: 209.576 ms
Loss rate: 5.92%
```

Run 3: Report of PCC-Allegro — Data Link

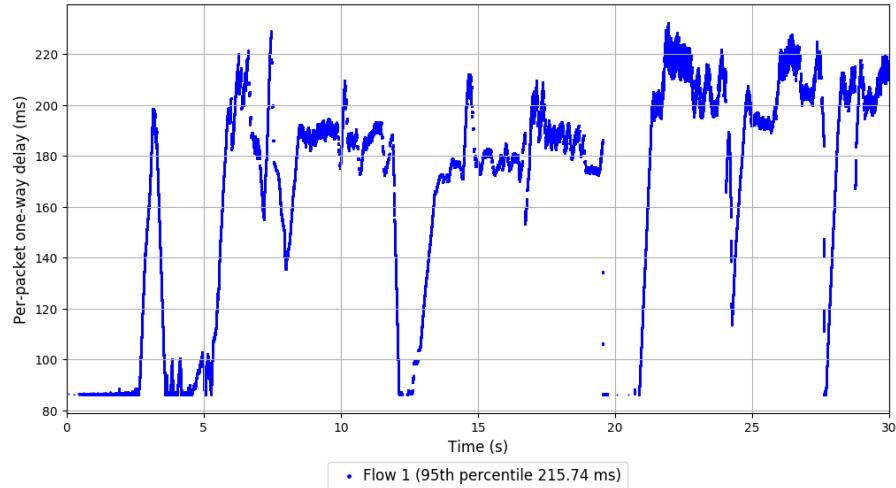
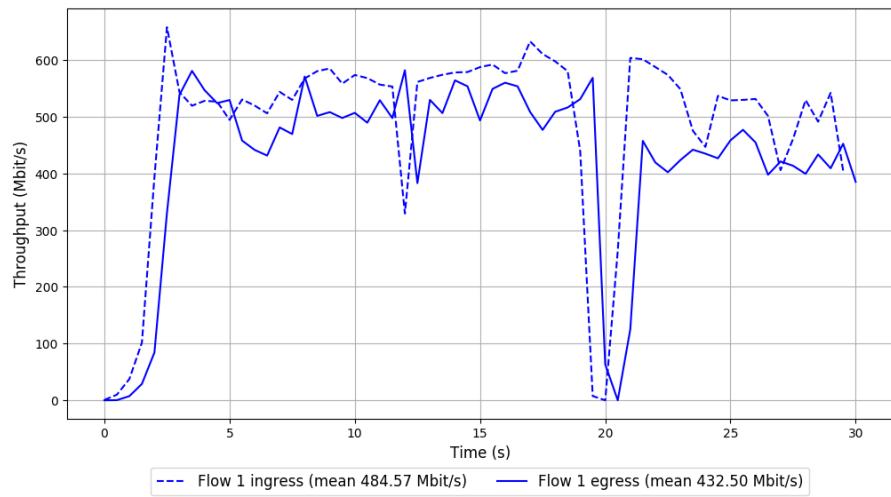


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-10-02 08:45:16
End at: 2018-10-02 08:45:46
Local clock offset: -0.219 ms
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2018-10-02 10:45:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 432.50 Mbit/s
95th percentile per-packet one-way delay: 215.740 ms
Loss rate: 10.74%
-- Flow 1:
Average throughput: 432.50 Mbit/s
95th percentile per-packet one-way delay: 215.740 ms
Loss rate: 10.74%
```

Run 4: Report of PCC-Allegro — Data Link

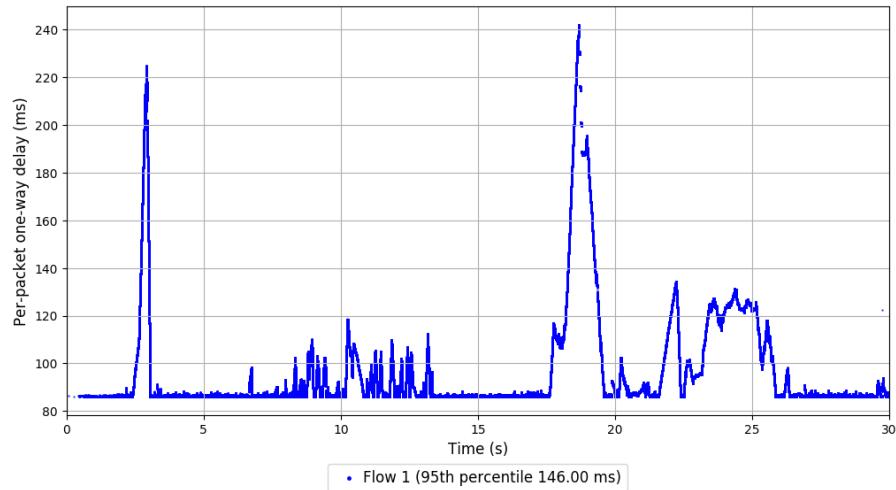
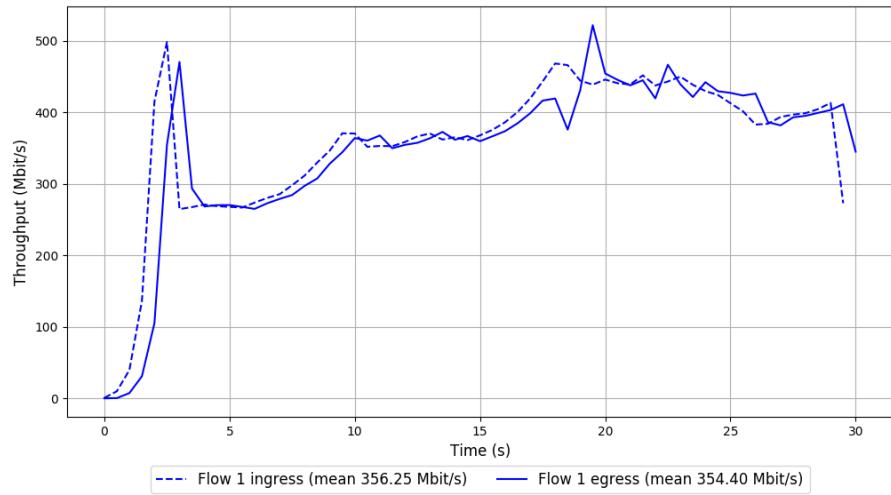


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-10-02 09:11:15
End at: 2018-10-02 09:11:45
Local clock offset: -0.212 ms
Remote clock offset: 0.013 ms

# Below is generated by plot.py at 2018-10-02 10:45:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 354.40 Mbit/s
95th percentile per-packet one-way delay: 146.001 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 354.40 Mbit/s
95th percentile per-packet one-way delay: 146.001 ms
Loss rate: 0.52%
```

Run 5: Report of PCC-Allegro — Data Link

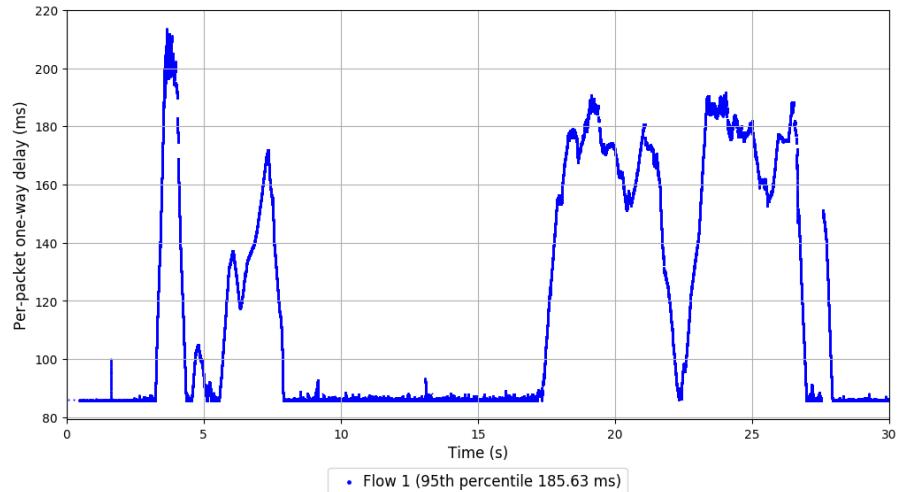
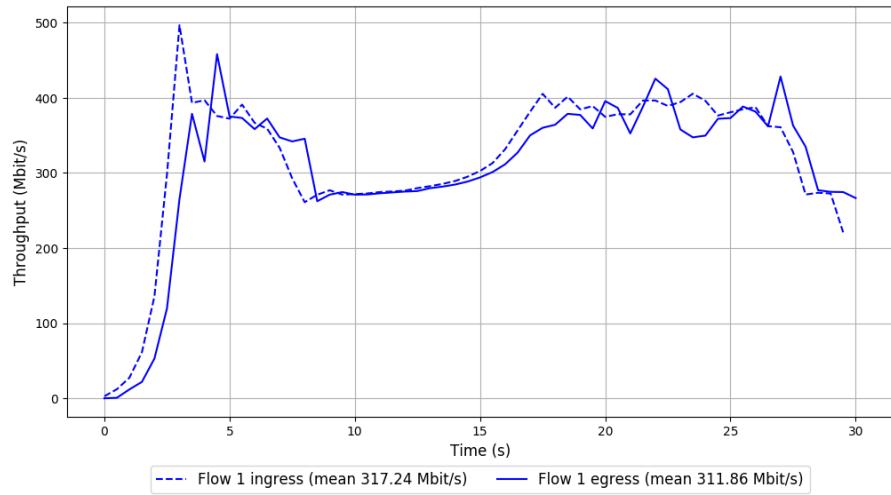


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-10-02 07:31:19
End at: 2018-10-02 07:31:49
Local clock offset: 0.004 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2018-10-02 10:45:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 311.86 Mbit/s
95th percentile per-packet one-way delay: 185.627 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 311.86 Mbit/s
95th percentile per-packet one-way delay: 185.627 ms
Loss rate: 1.70%
```

Run 1: Report of PCC-Expr — Data Link

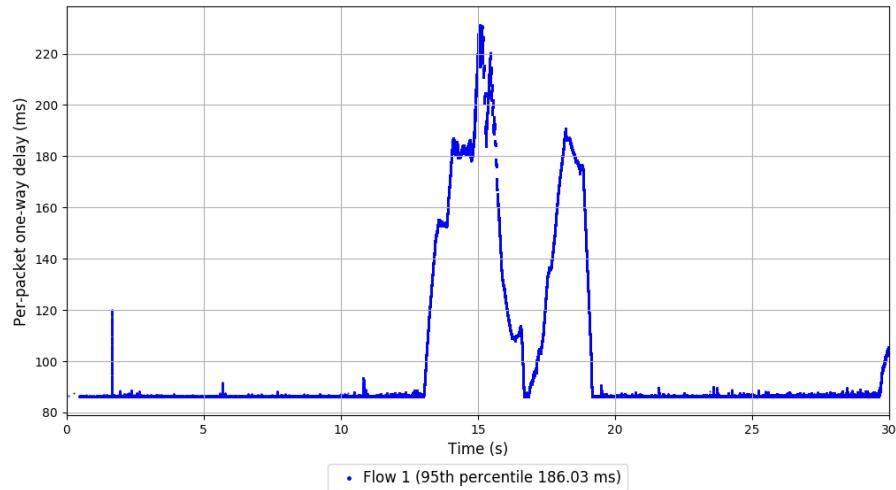
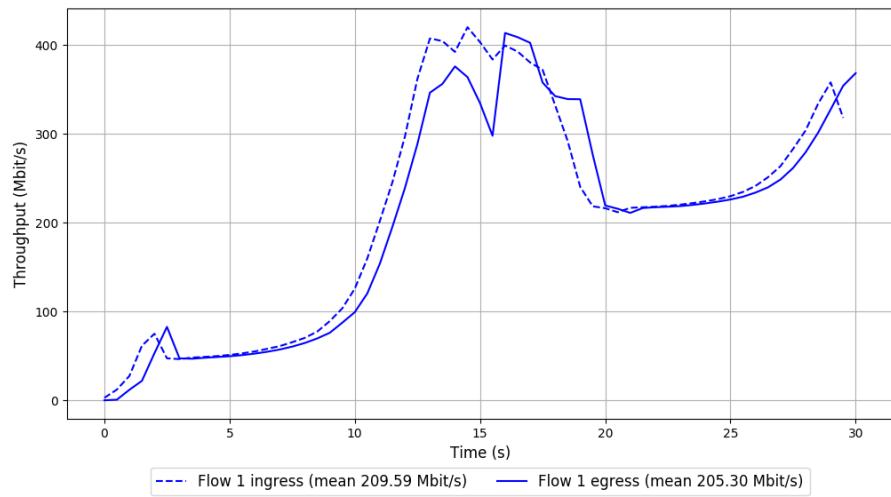


Run 2: Statistics of PCC-Expr

```
Start at: 2018-10-02 07:56:59
End at: 2018-10-02 07:57:29
Local clock offset: -0.27 ms
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2018-10-02 10:45:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 205.30 Mbit/s
95th percentile per-packet one-way delay: 186.027 ms
Loss rate: 2.04%
-- Flow 1:
Average throughput: 205.30 Mbit/s
95th percentile per-packet one-way delay: 186.027 ms
Loss rate: 2.04%
```

Run 2: Report of PCC-Expr — Data Link

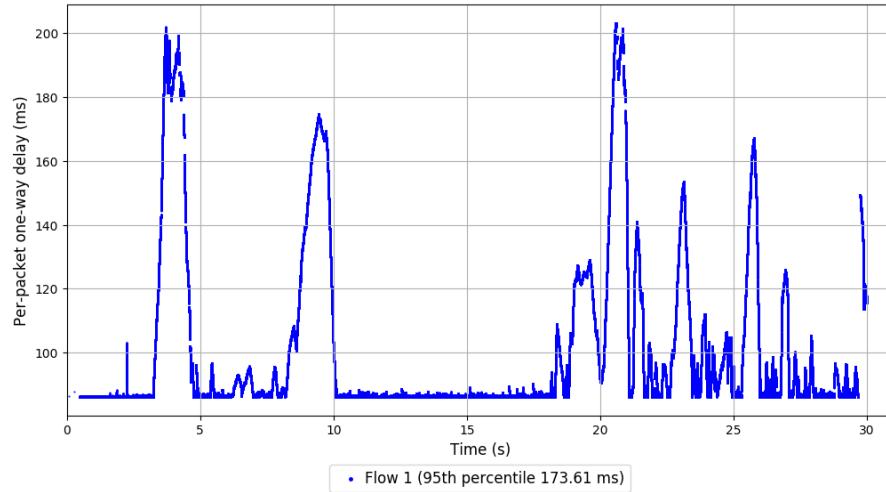
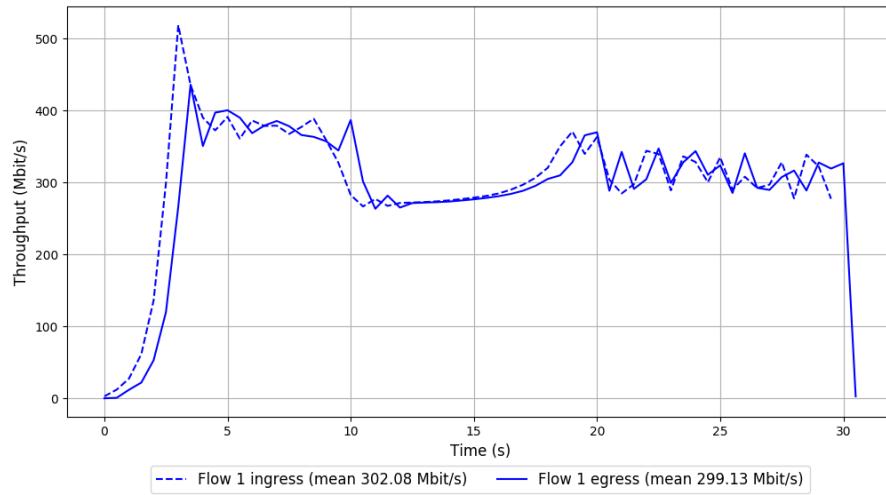


Run 3: Statistics of PCC-Expr

```
Start at: 2018-10-02 08:22:28
End at: 2018-10-02 08:22:58
Local clock offset: -0.379 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2018-10-02 10:45:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 299.13 Mbit/s
95th percentile per-packet one-way delay: 173.606 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 299.13 Mbit/s
95th percentile per-packet one-way delay: 173.606 ms
Loss rate: 0.93%
```

Run 3: Report of PCC-Expr — Data Link

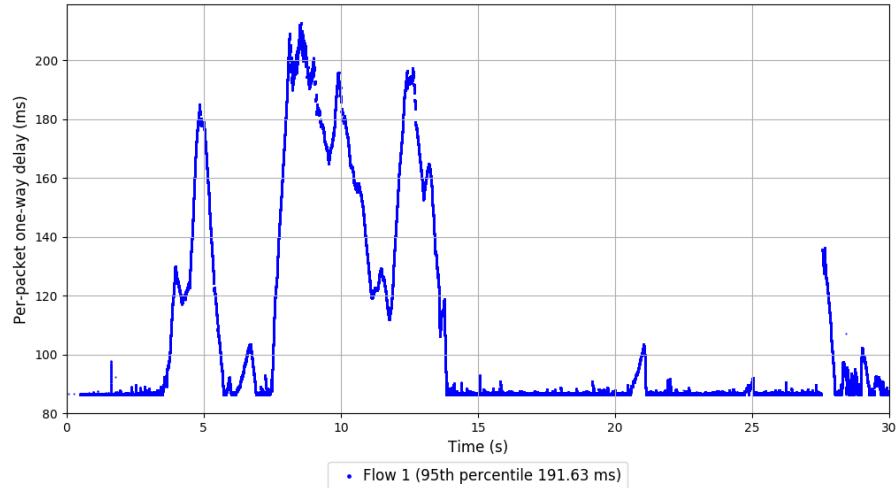
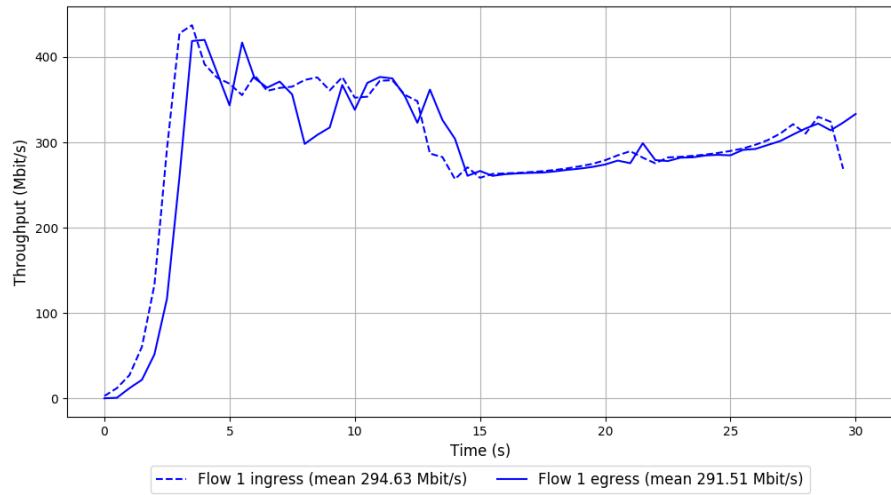


Run 4: Statistics of PCC-Expr

```
Start at: 2018-10-02 08:48:17
End at: 2018-10-02 08:48:47
Local clock offset: -0.25 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2018-10-02 10:45:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 291.51 Mbit/s
95th percentile per-packet one-way delay: 191.630 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 291.51 Mbit/s
95th percentile per-packet one-way delay: 191.630 ms
Loss rate: 1.06%
```

Run 4: Report of PCC-Expr — Data Link

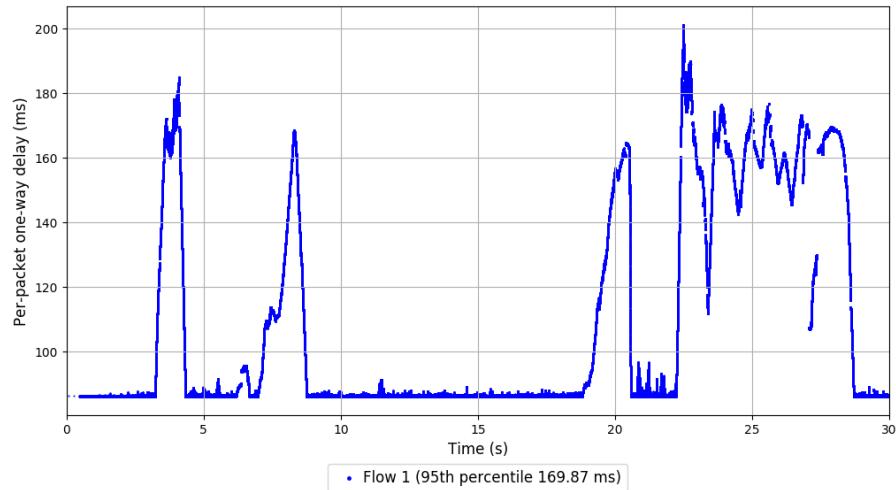
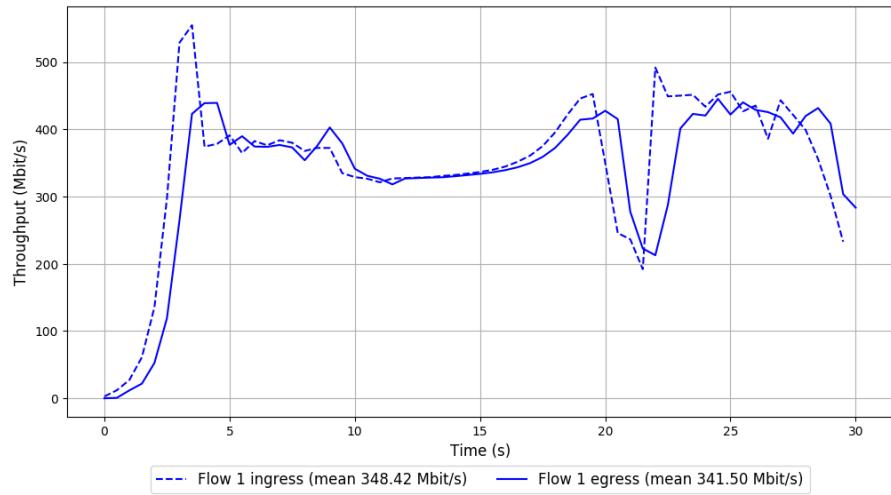


Run 5: Statistics of PCC-Expr

```
Start at: 2018-10-02 09:14:09
End at: 2018-10-02 09:14:39
Local clock offset: -0.141 ms
Remote clock offset: -0.002 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 341.50 Mbit/s
95th percentile per-packet one-way delay: 169.873 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 341.50 Mbit/s
95th percentile per-packet one-way delay: 169.873 ms
Loss rate: 1.99%
```

Run 5: Report of PCC-Expr — Data Link

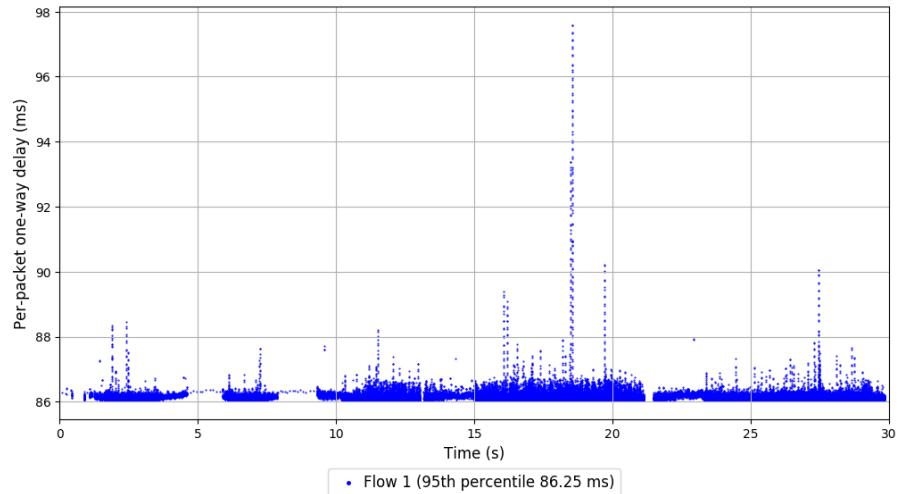
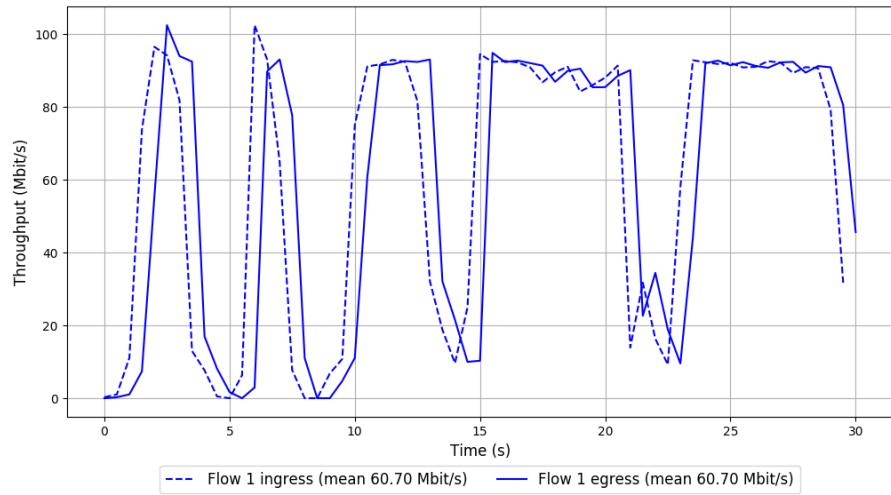


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-10-02 07:24:34
End at: 2018-10-02 07:25:04
Local clock offset: -0.205 ms
Remote clock offset: -0.063 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.70 Mbit/s
95th percentile per-packet one-way delay: 86.255 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.70 Mbit/s
95th percentile per-packet one-way delay: 86.255 ms
Loss rate: 0.00%
```

Run 1: Report of QUIC Cubic — Data Link

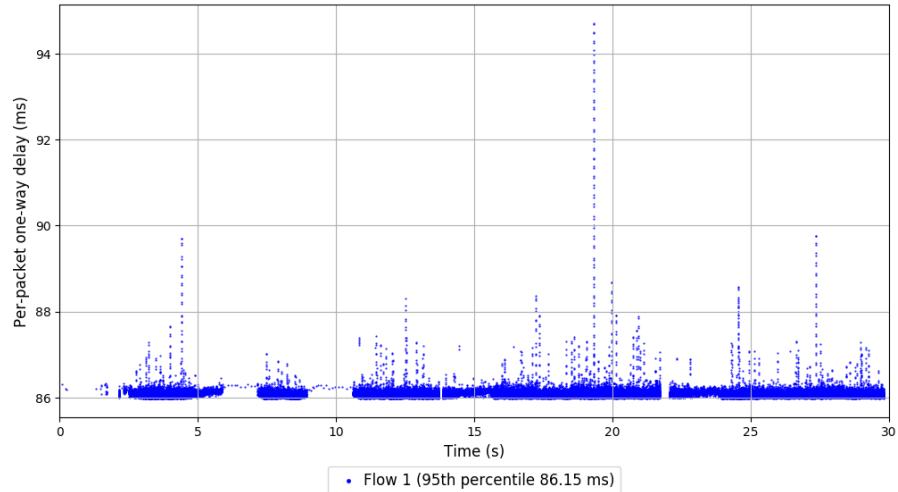
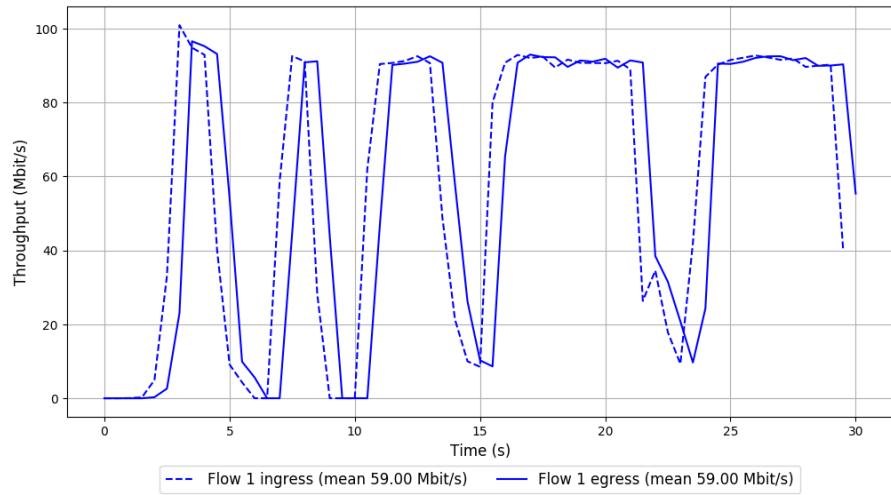


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-10-02 07:50:11
End at: 2018-10-02 07:50:41
Local clock offset: -0.262 ms
Remote clock offset: -0.122 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 59.00 Mbit/s
95th percentile per-packet one-way delay: 86.154 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.00 Mbit/s
95th percentile per-packet one-way delay: 86.154 ms
Loss rate: 0.00%
```

Run 2: Report of QUIC Cubic — Data Link

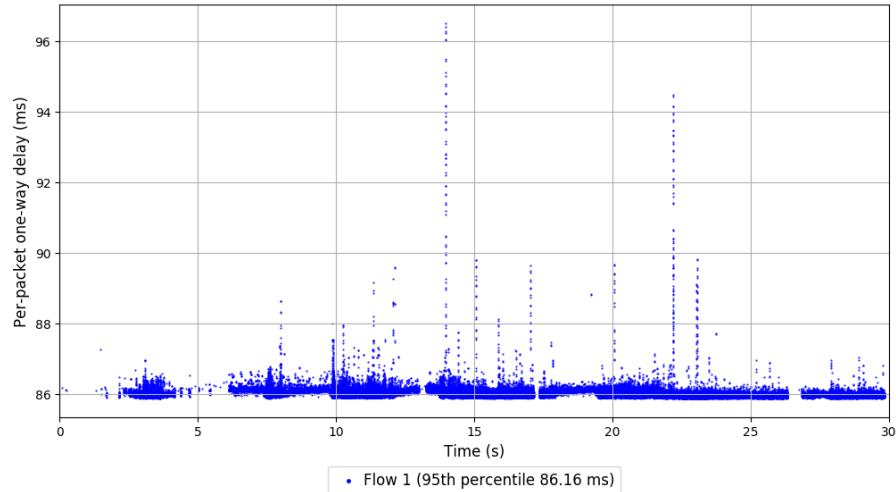
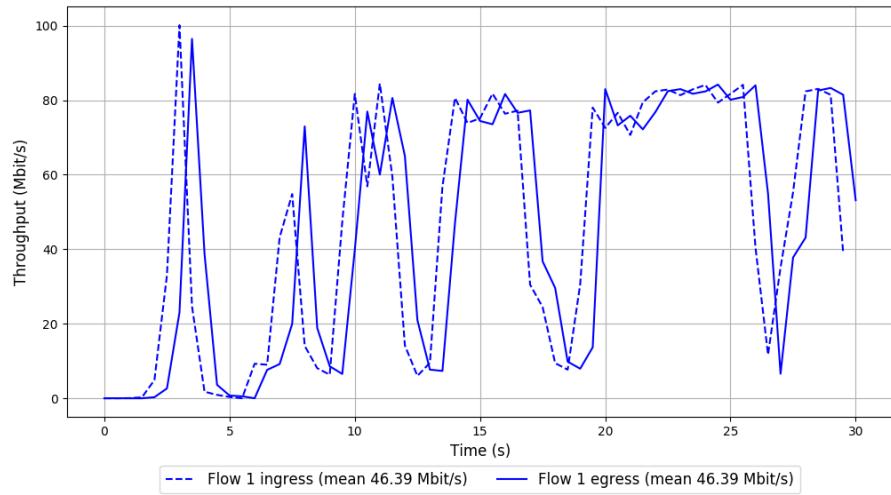


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-10-02 08:15:39
End at: 2018-10-02 08:16:09
Local clock offset: -0.073 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 46.39 Mbit/s
95th percentile per-packet one-way delay: 86.163 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.39 Mbit/s
95th percentile per-packet one-way delay: 86.163 ms
Loss rate: 0.00%
```

Run 3: Report of QUIC Cubic — Data Link

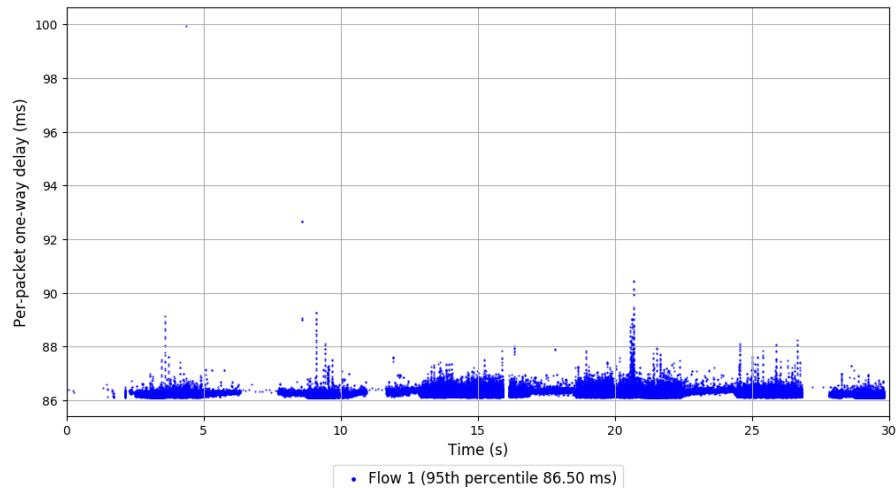
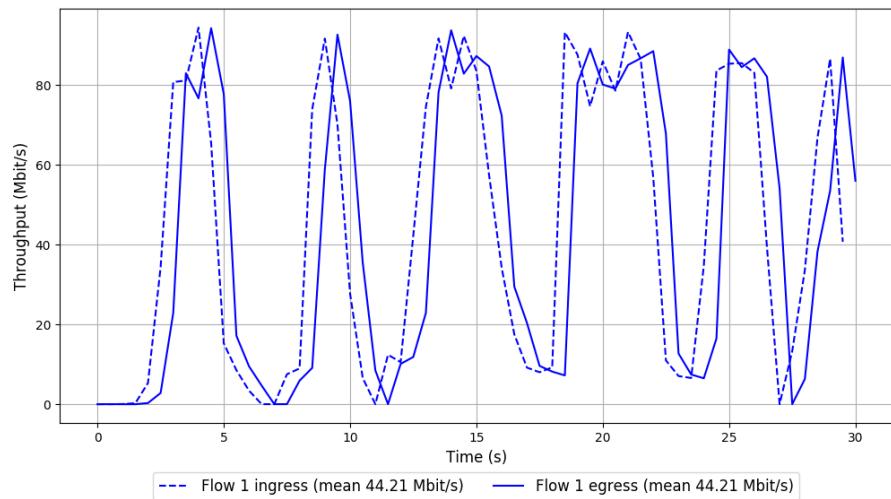


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-10-02 08:41:28
End at: 2018-10-02 08:41:58
Local clock offset: -0.241 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 44.21 Mbit/s
95th percentile per-packet one-way delay: 86.497 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.21 Mbit/s
95th percentile per-packet one-way delay: 86.497 ms
Loss rate: 0.00%
```

Run 4: Report of QUIC Cubic — Data Link

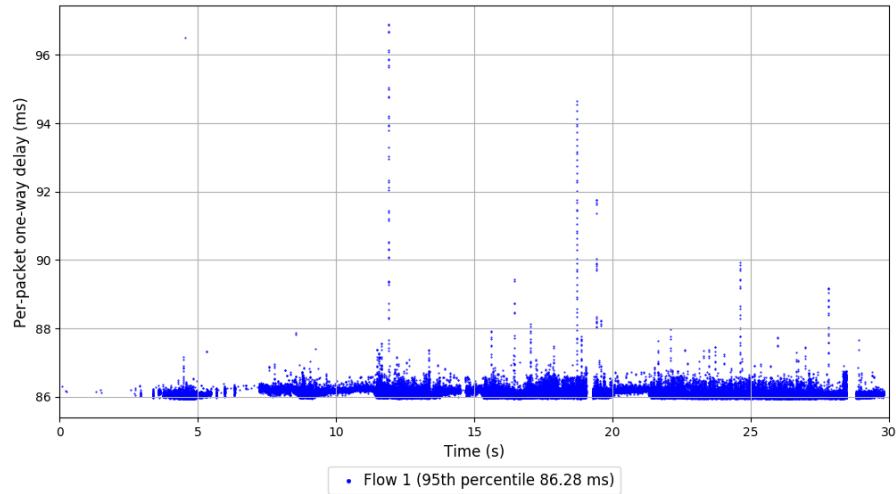
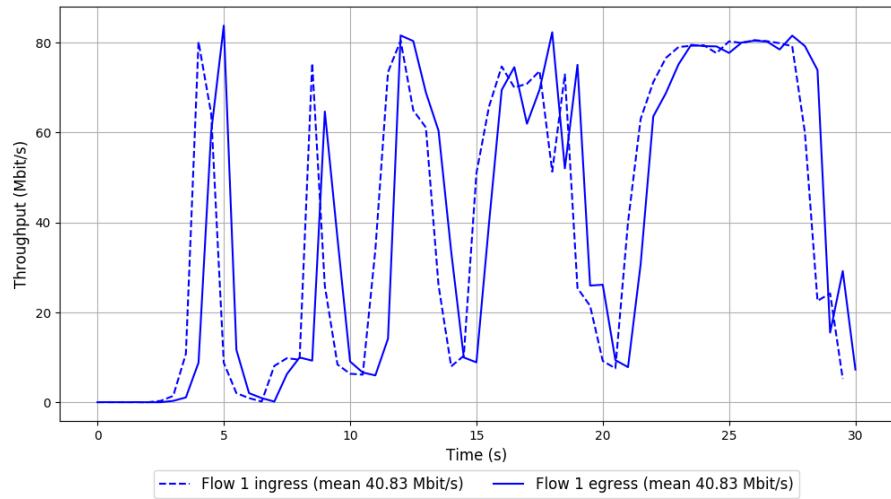


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-10-02 09:07:28
End at: 2018-10-02 09:07:58
Local clock offset: -0.327 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 40.83 Mbit/s
95th percentile per-packet one-way delay: 86.280 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.83 Mbit/s
95th percentile per-packet one-way delay: 86.280 ms
Loss rate: 0.00%
```

Run 5: Report of QUIC Cubic — Data Link

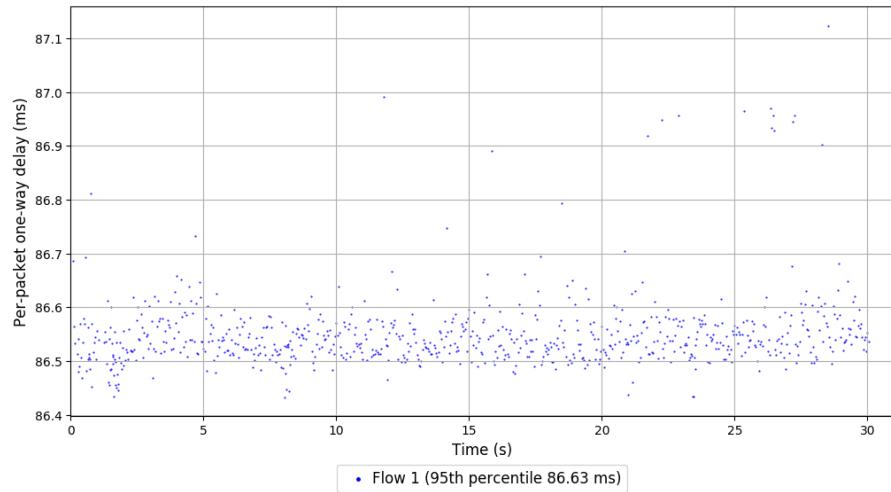
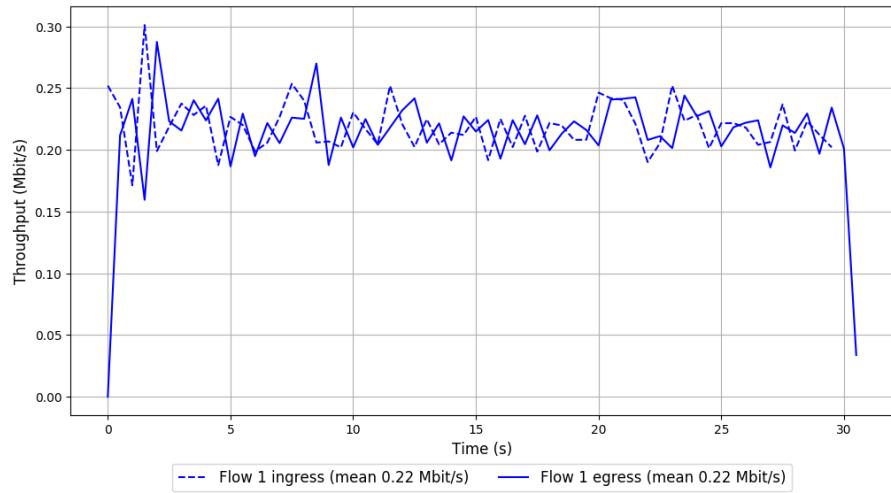


```
Run 1: Statistics of SCReAM

Start at: 2018-10-02 07:14:57
End at: 2018-10-02 07:15:27
Local clock offset: -0.062 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.631 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.631 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

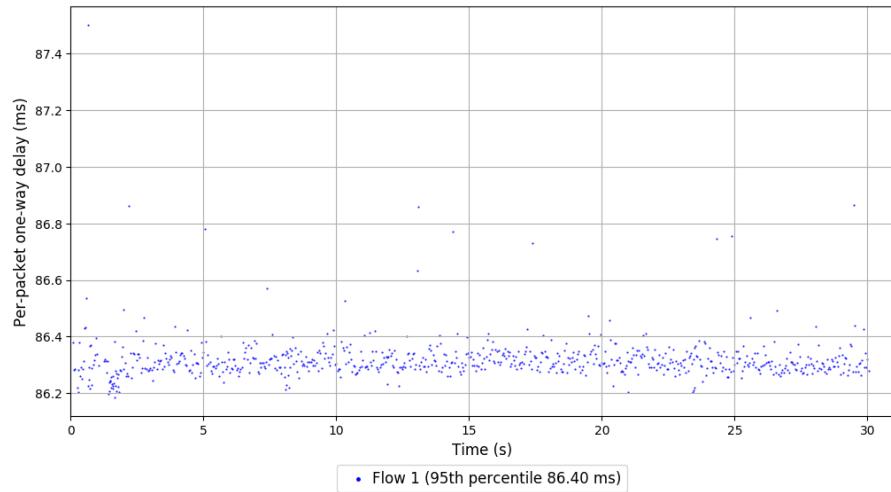
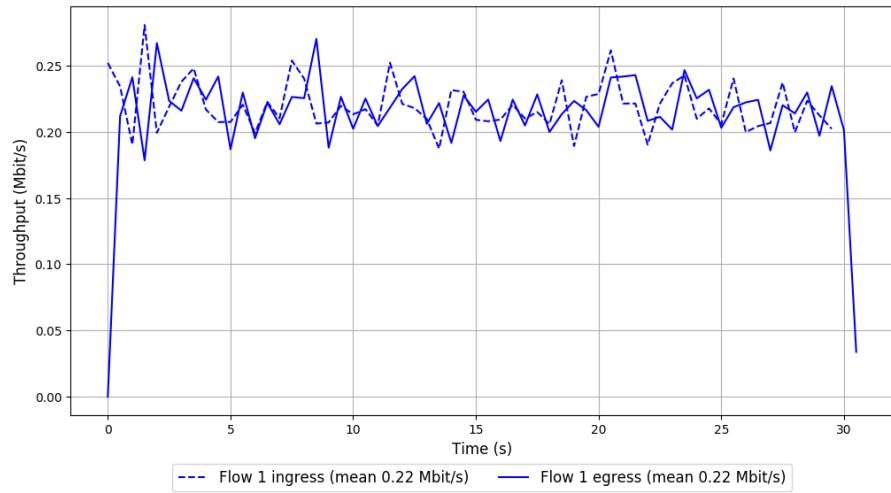


Run 2: Statistics of SCReAM

```
Start at: 2018-10-02 07:40:30
End at: 2018-10-02 07:41:00
Local clock offset: -0.22 ms
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.403 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.403 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link

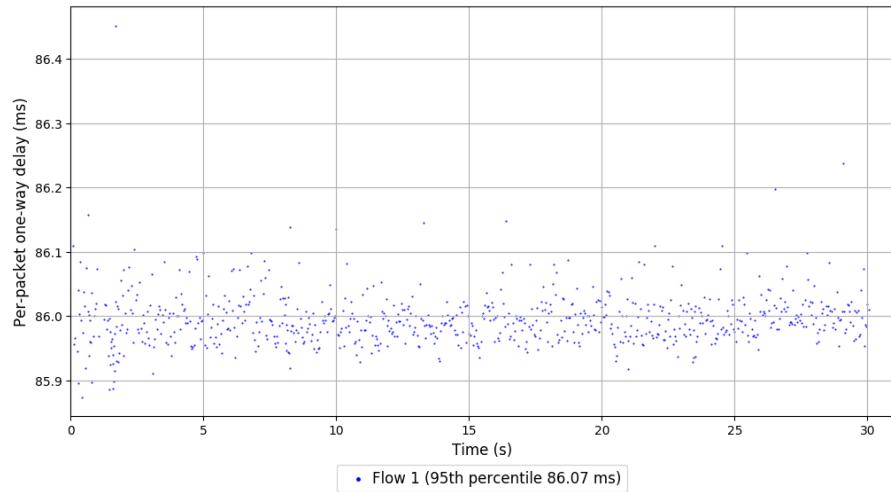
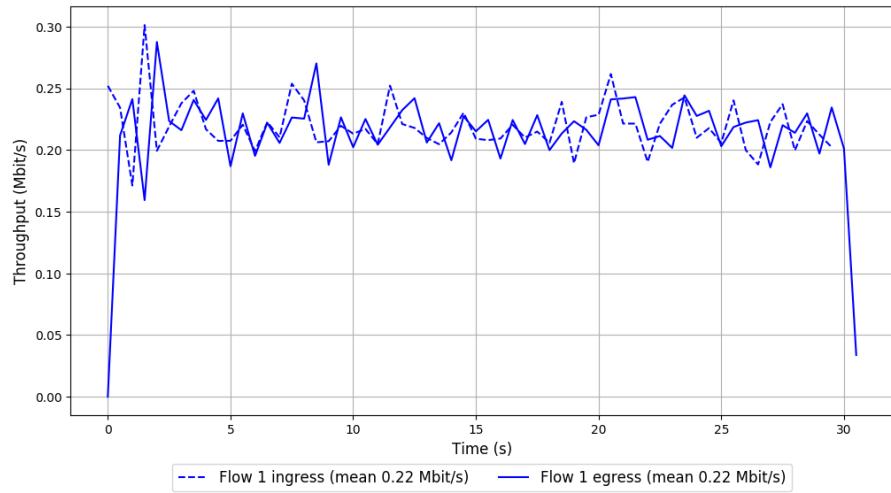


Run 3: Statistics of SCReAM

```
Start at: 2018-10-02 08:05:59
End at: 2018-10-02 08:06:29
Local clock offset: -0.062 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.072 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.072 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

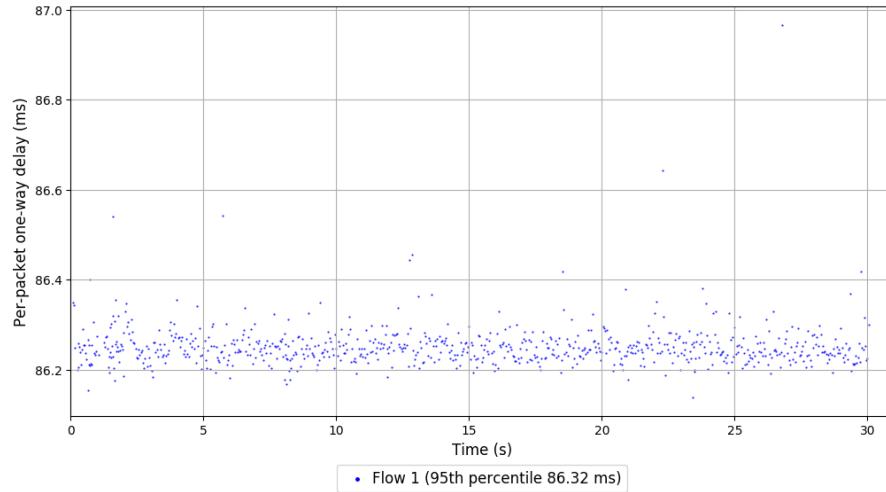
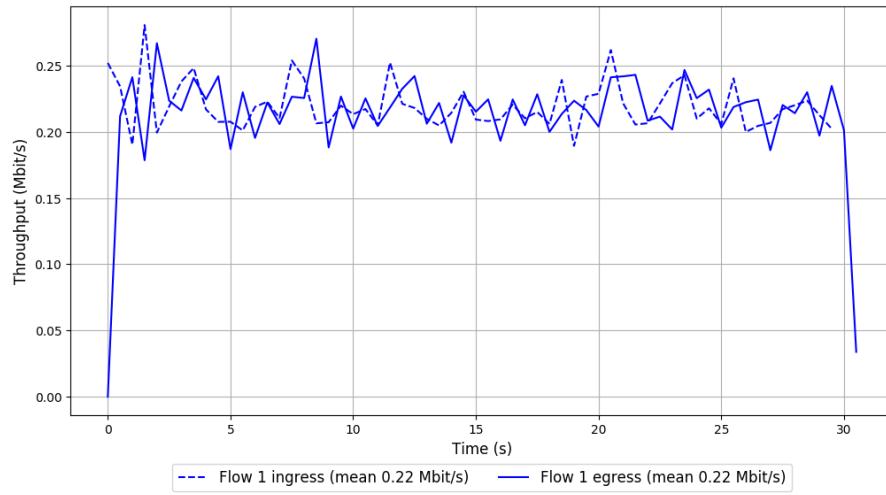


Run 4: Statistics of SCReAM

```
Start at: 2018-10-02 08:31:41
End at: 2018-10-02 08:32:11
Local clock offset: -0.356 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.318 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.318 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

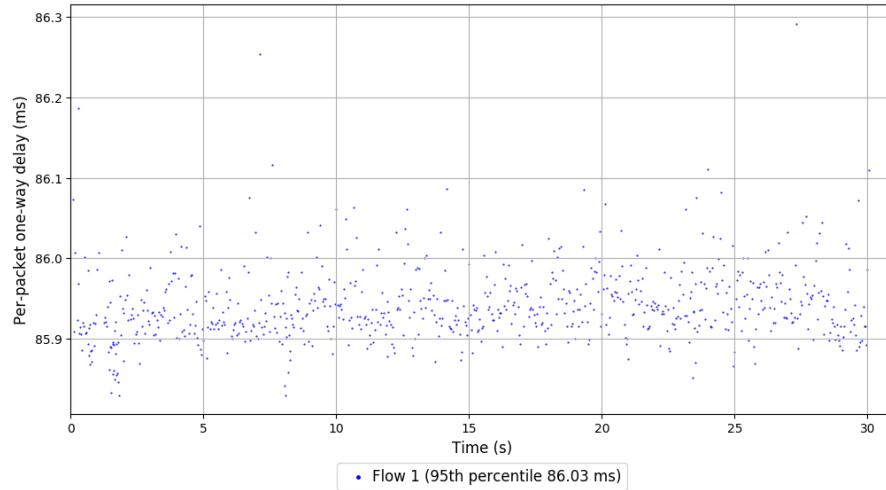
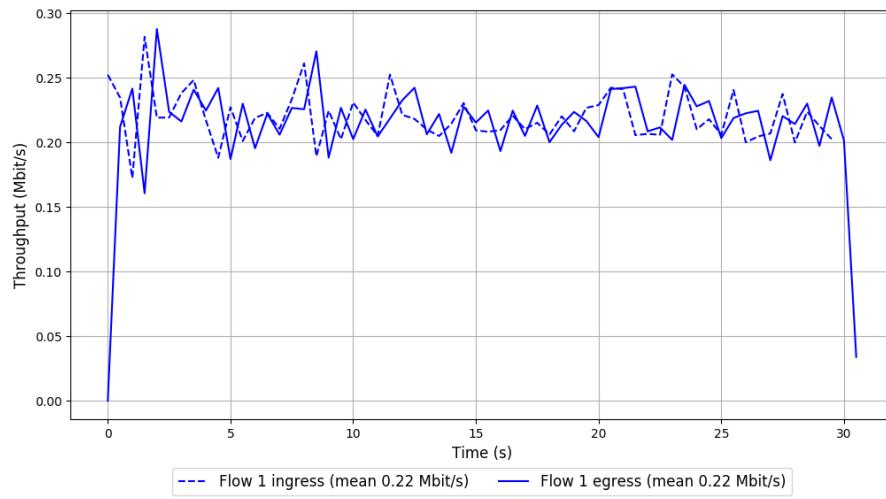


Run 5: Statistics of SCReAM

```
Start at: 2018-10-02 08:57:41
End at: 2018-10-02 08:58:11
Local clock offset: -0.069 ms
Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.025 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.025 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

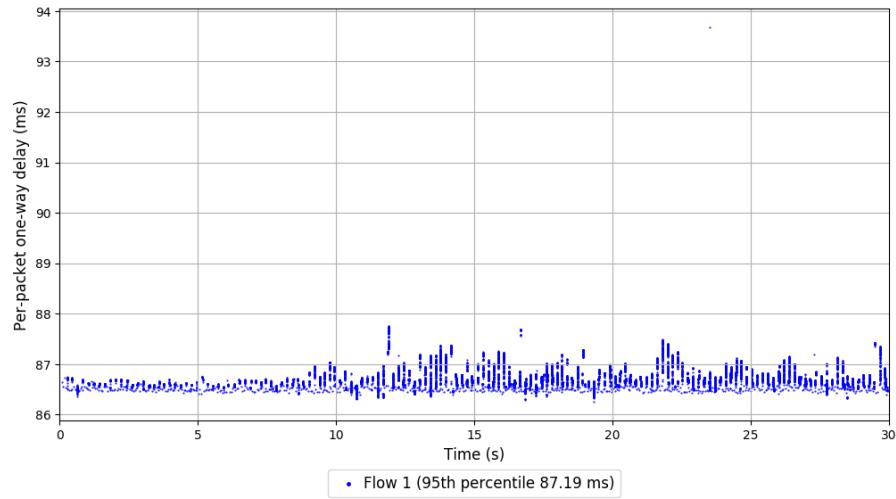
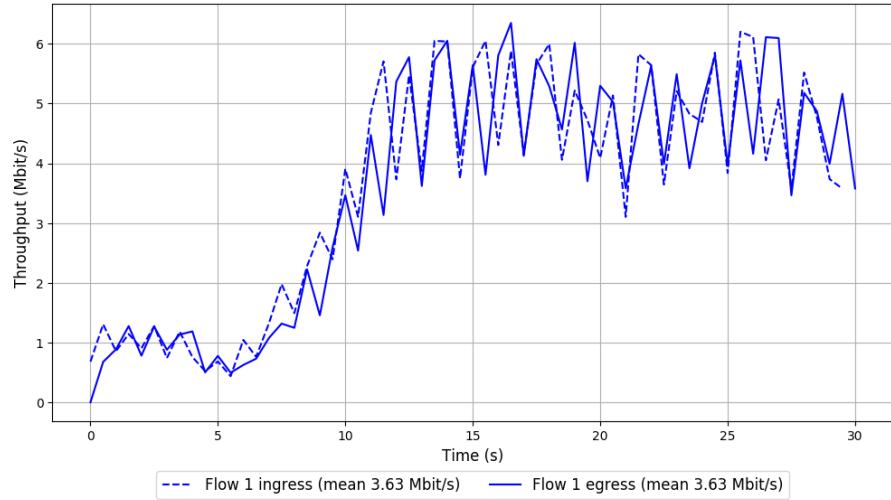


Run 1: Statistics of Sprout

```
Start at: 2018-10-02 07:27:15
End at: 2018-10-02 07:27:45
Local clock offset: -0.066 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.63 Mbit/s
95th percentile per-packet one-way delay: 87.189 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.63 Mbit/s
95th percentile per-packet one-way delay: 87.189 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

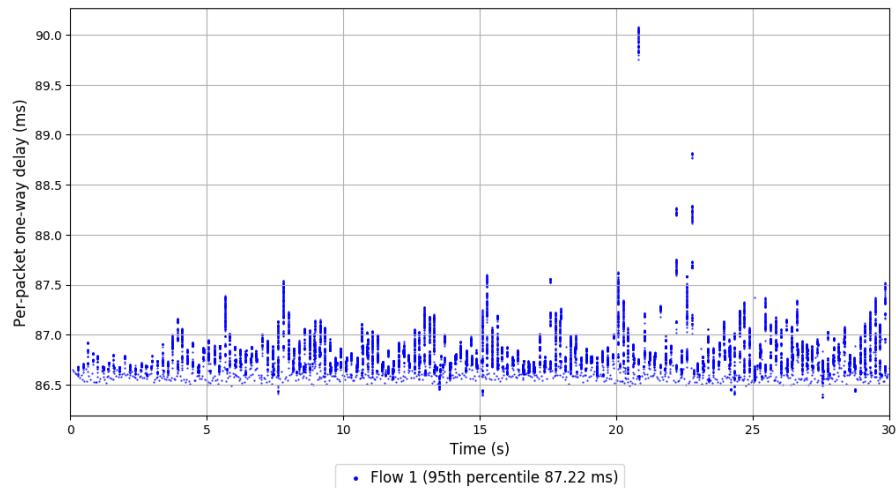
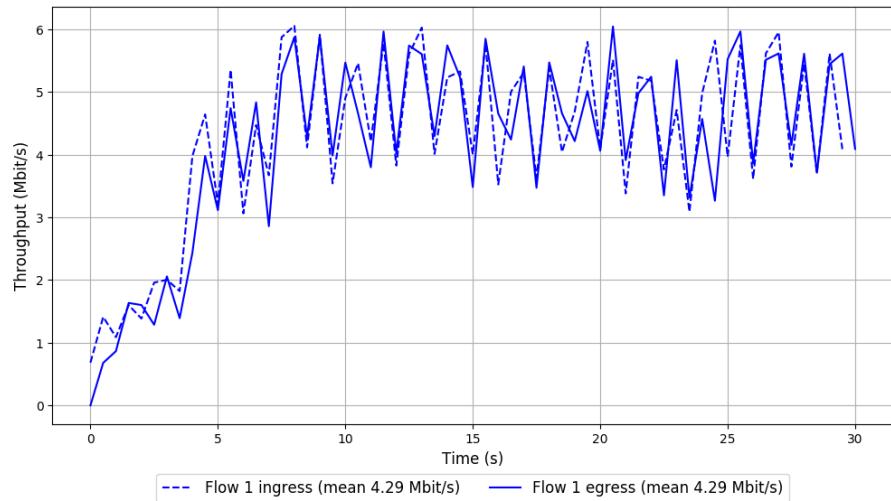


Run 2: Statistics of Sprout

```
Start at: 2018-10-02 07:52:53
End at: 2018-10-02 07:53:23
Local clock offset: -0.157 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.29 Mbit/s
95th percentile per-packet one-way delay: 87.215 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.29 Mbit/s
95th percentile per-packet one-way delay: 87.215 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

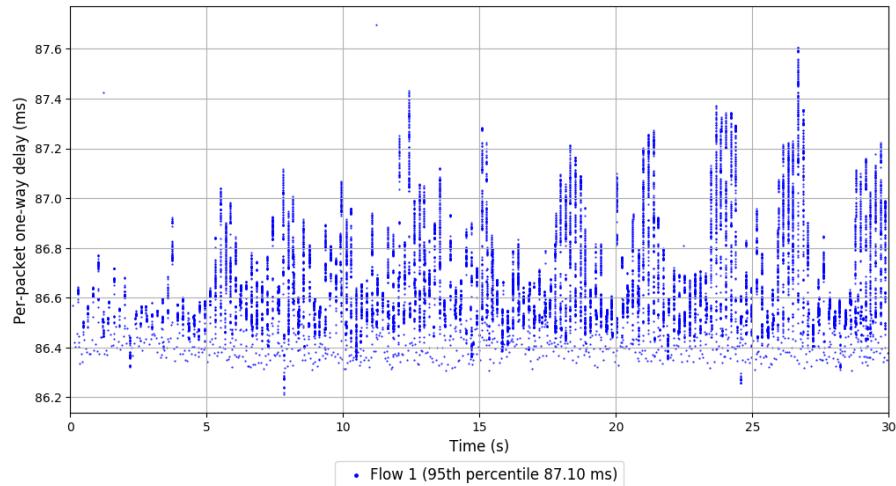
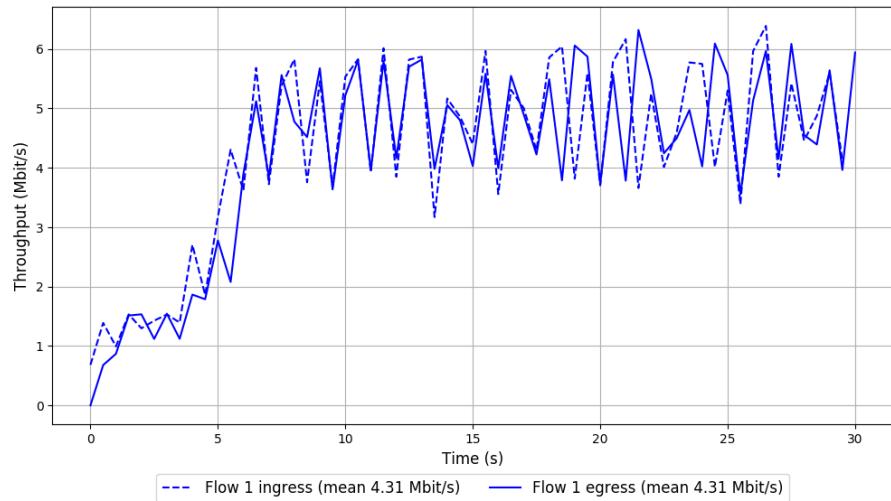


Run 3: Statistics of Sprout

```
Start at: 2018-10-02 08:18:19
End at: 2018-10-02 08:18:49
Local clock offset: -0.022 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 87.104 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 87.104 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

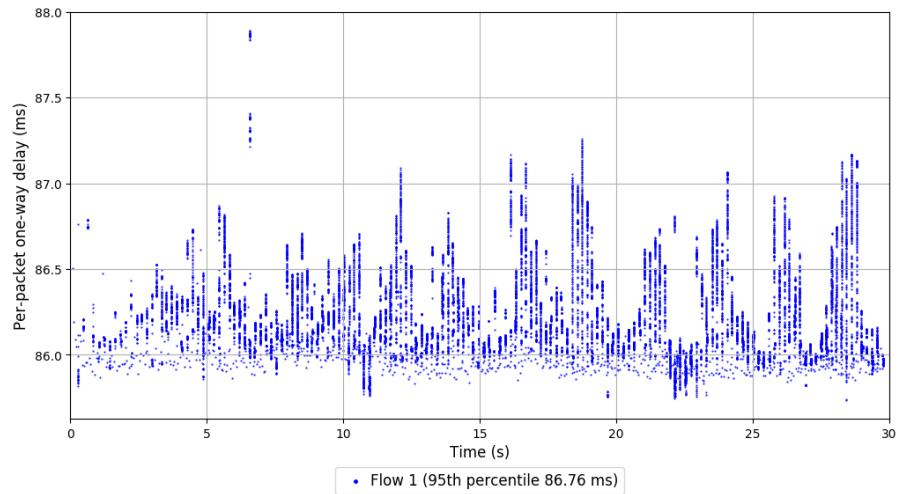
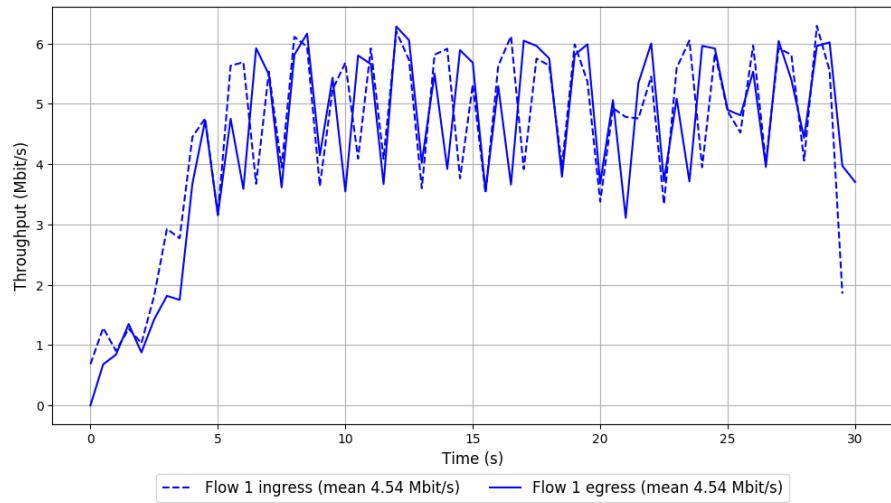


Run 4: Statistics of Sprout

```
Start at: 2018-10-02 08:44:07
End at: 2018-10-02 08:44:37
Local clock offset: -0.105 ms
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 86.760 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 86.760 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

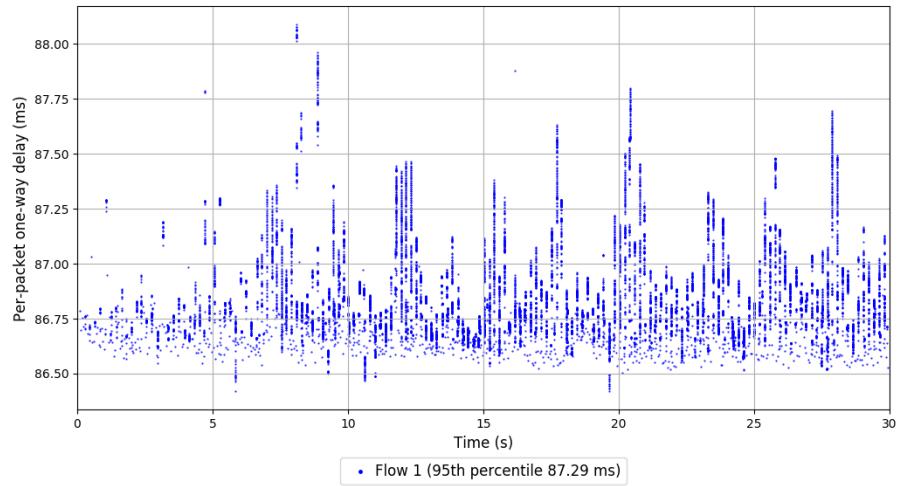
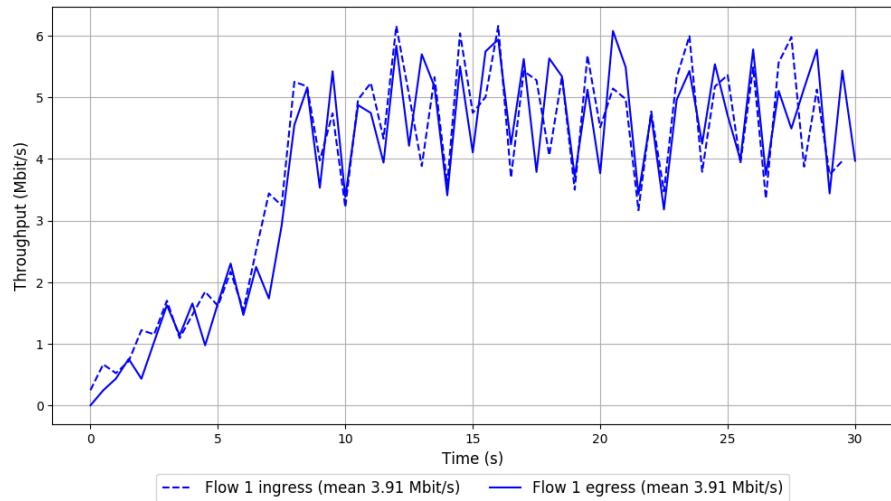


Run 5: Statistics of Sprout

```
Start at: 2018-10-02 09:10:06
End at: 2018-10-02 09:10:36
Local clock offset: -0.263 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2018-10-02 10:46:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 87.286 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 87.286 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

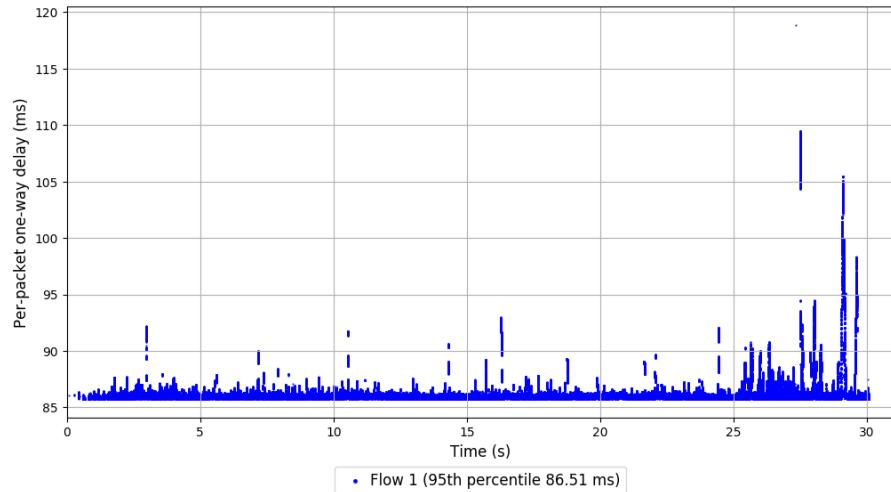
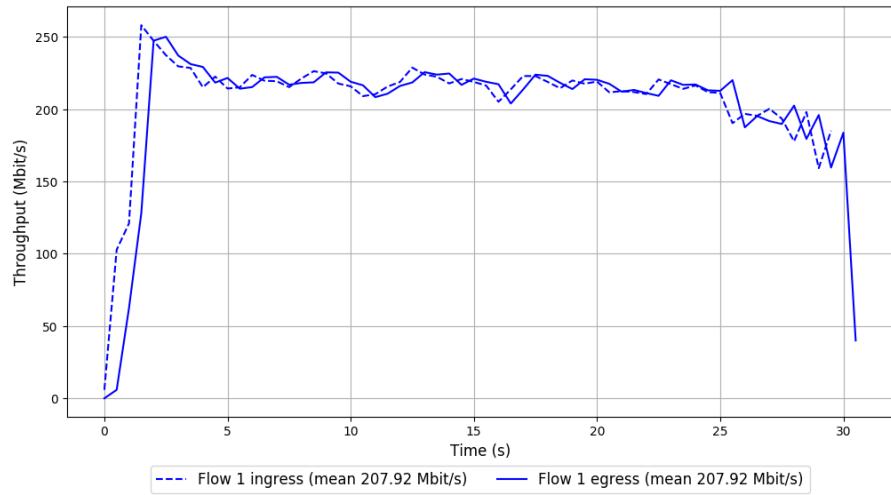


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-10-02 07:21:57
End at: 2018-10-02 07:22:27
Local clock offset: 0.008 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2018-10-02 10:47:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 207.92 Mbit/s
95th percentile per-packet one-way delay: 86.511 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 207.92 Mbit/s
95th percentile per-packet one-way delay: 86.511 ms
Loss rate: 0.00%
```

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

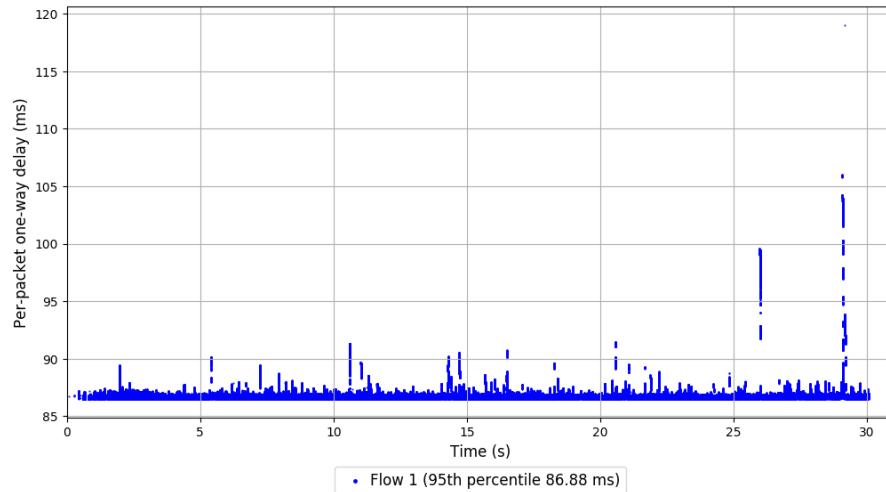
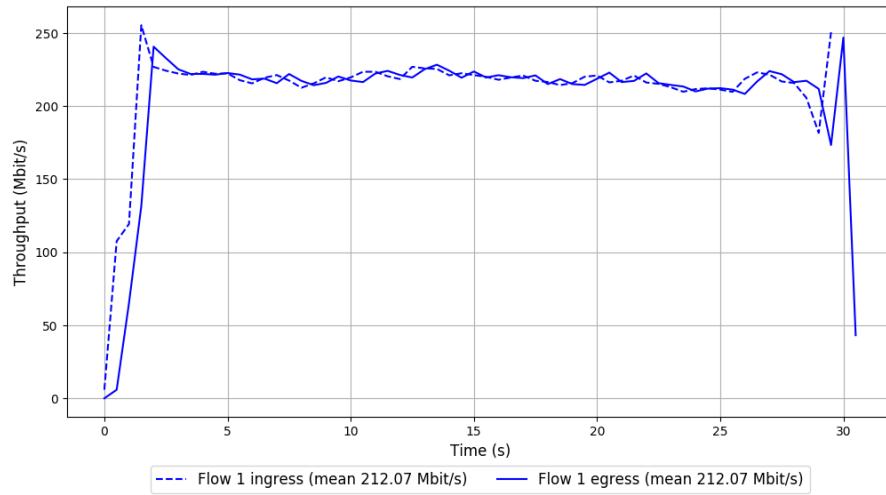


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-10-02 07:47:34
End at: 2018-10-02 07:48:04
Local clock offset: -0.301 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2018-10-02 10:47:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 212.07 Mbit/s
95th percentile per-packet one-way delay: 86.882 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 212.07 Mbit/s
95th percentile per-packet one-way delay: 86.882 ms
Loss rate: 0.00%
```

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

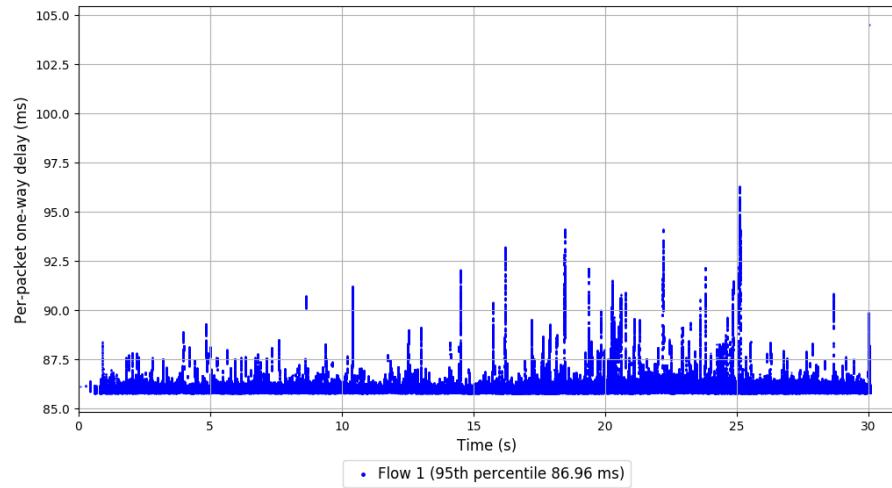
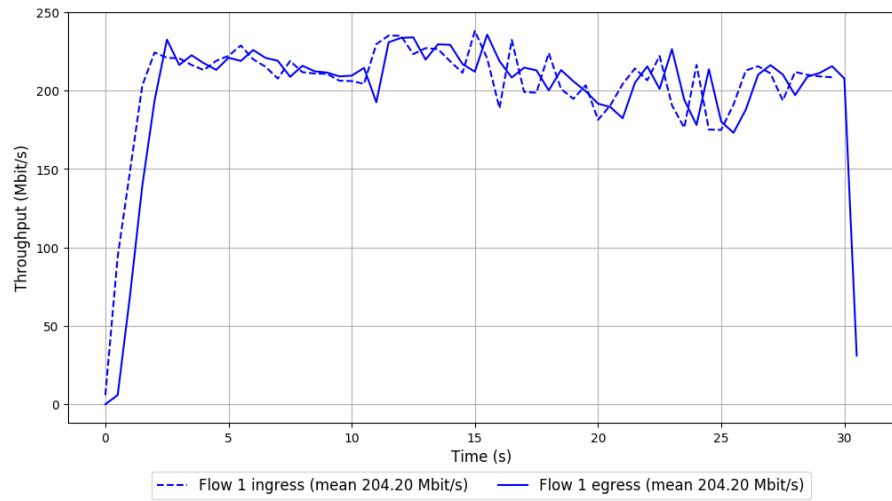


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-10-02 08:13:02
End at: 2018-10-02 08:13:32
Local clock offset: -0.115 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2018-10-02 10:48:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.20 Mbit/s
95th percentile per-packet one-way delay: 86.963 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 204.20 Mbit/s
95th percentile per-packet one-way delay: 86.963 ms
Loss rate: 0.00%
```

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

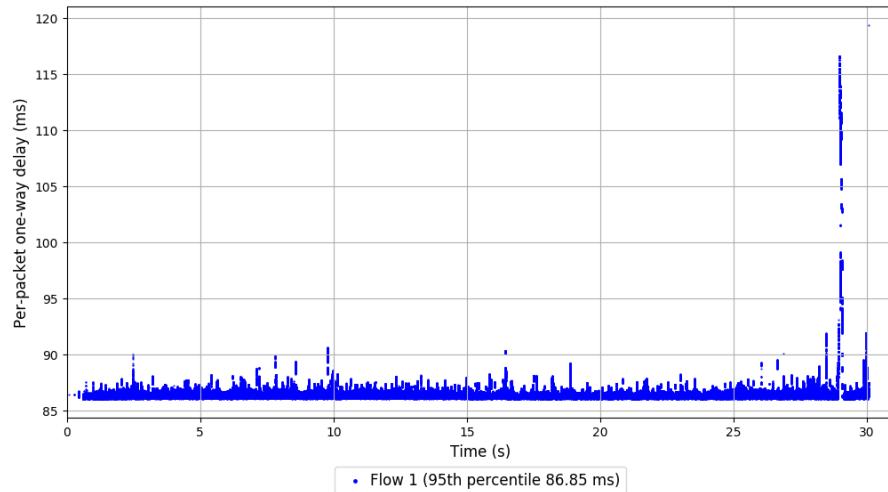
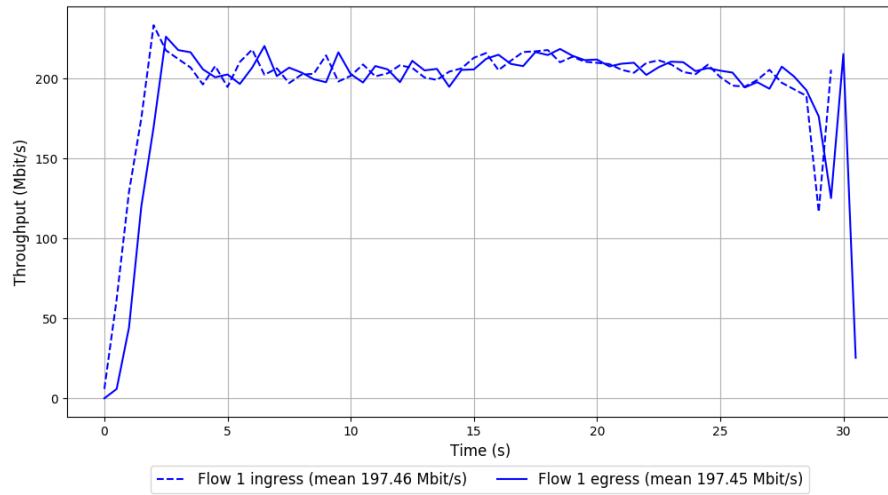


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-10-02 08:38:53
End at: 2018-10-02 08:39:23
Local clock offset: -0.042 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2018-10-02 10:49:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 197.45 Mbit/s
95th percentile per-packet one-way delay: 86.853 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 197.45 Mbit/s
95th percentile per-packet one-way delay: 86.853 ms
Loss rate: 0.00%
```

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

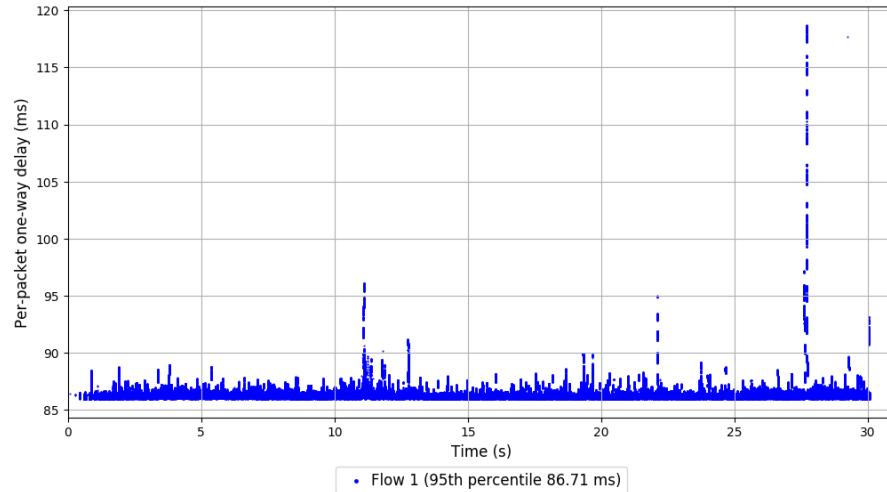
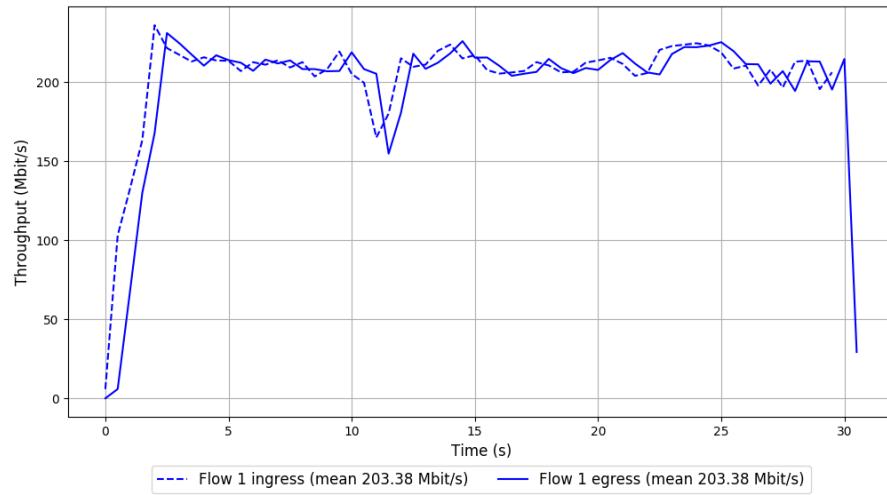


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-10-02 09:04:50
End at: 2018-10-02 09:05:20
Local clock offset: -0.142 ms
Remote clock offset: 0.095 ms

# Below is generated by plot.py at 2018-10-02 10:50:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 203.38 Mbit/s
95th percentile per-packet one-way delay: 86.710 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 203.38 Mbit/s
95th percentile per-packet one-way delay: 86.710 ms
Loss rate: 0.00%
```

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

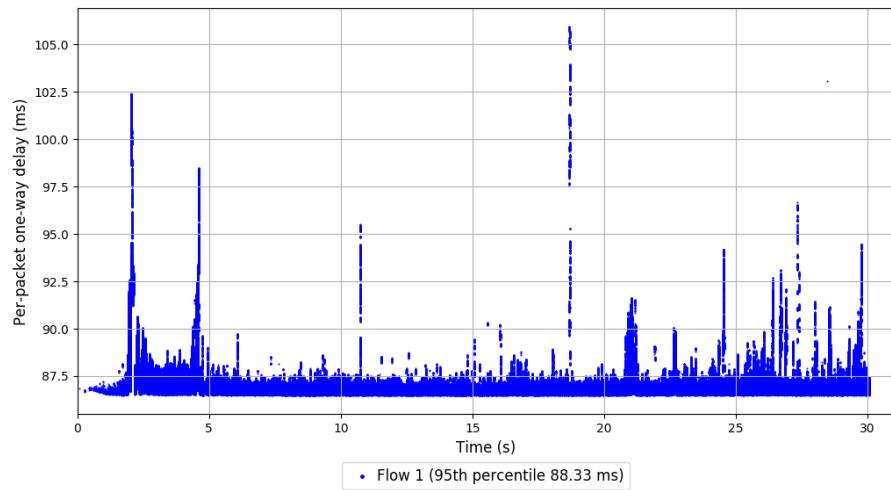
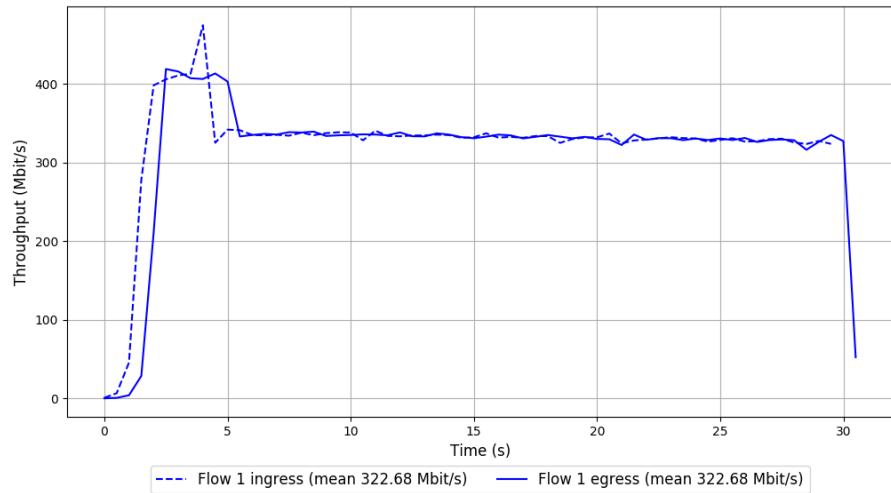


Run 1: Statistics of TCP Vegas

```
Start at: 2018-10-02 07:16:04
End at: 2018-10-02 07:16:34
Local clock offset: -0.064 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2018-10-02 10:50:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 322.68 Mbit/s
95th percentile per-packet one-way delay: 88.335 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 322.68 Mbit/s
95th percentile per-packet one-way delay: 88.335 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Vegas — Data Link

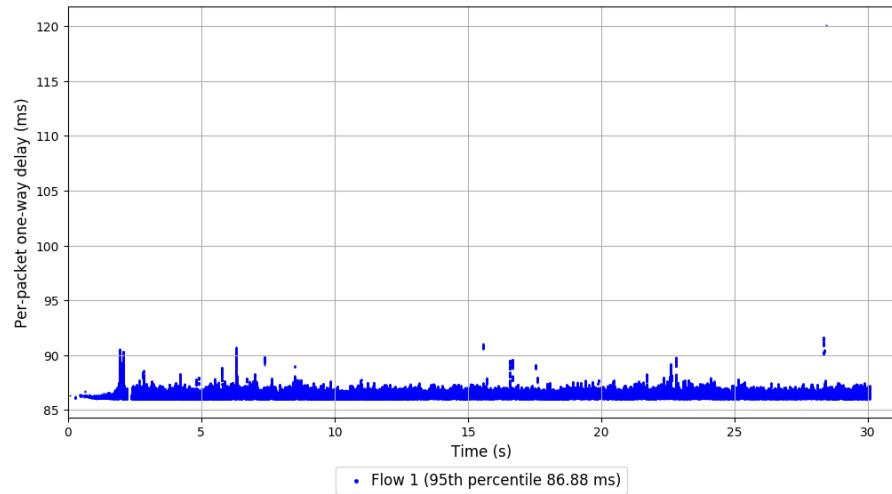
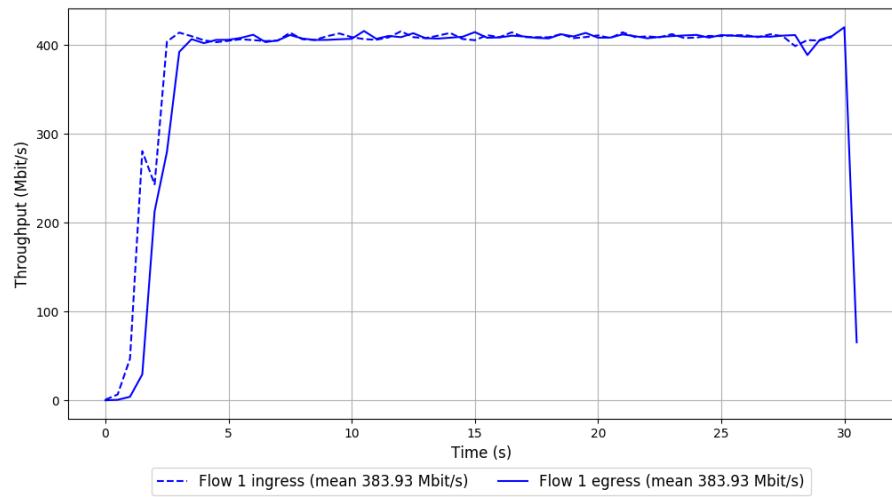


Run 2: Statistics of TCP Vegas

```
Start at: 2018-10-02 07:41:38
End at: 2018-10-02 07:42:08
Local clock offset: -0.281 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-10-02 10:54:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 383.93 Mbit/s
95th percentile per-packet one-way delay: 86.875 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 383.93 Mbit/s
95th percentile per-packet one-way delay: 86.875 ms
Loss rate: 0.00%
```

Run 2: Report of TCP Vegas — Data Link

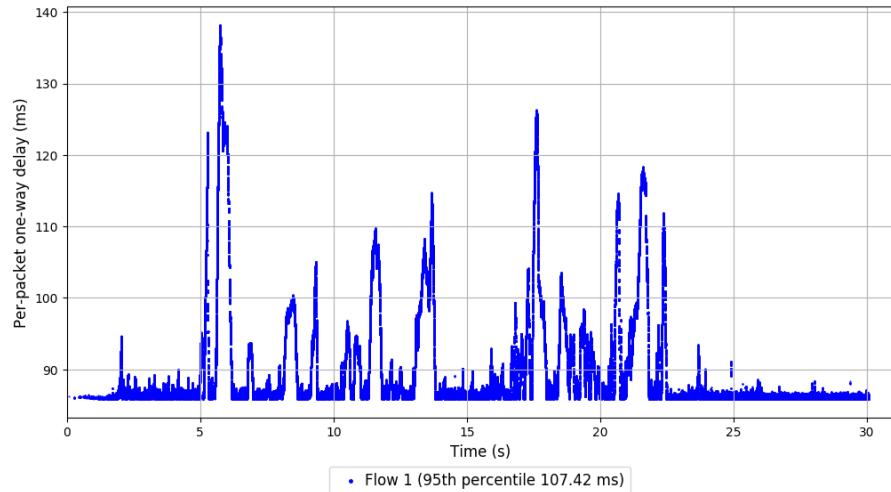
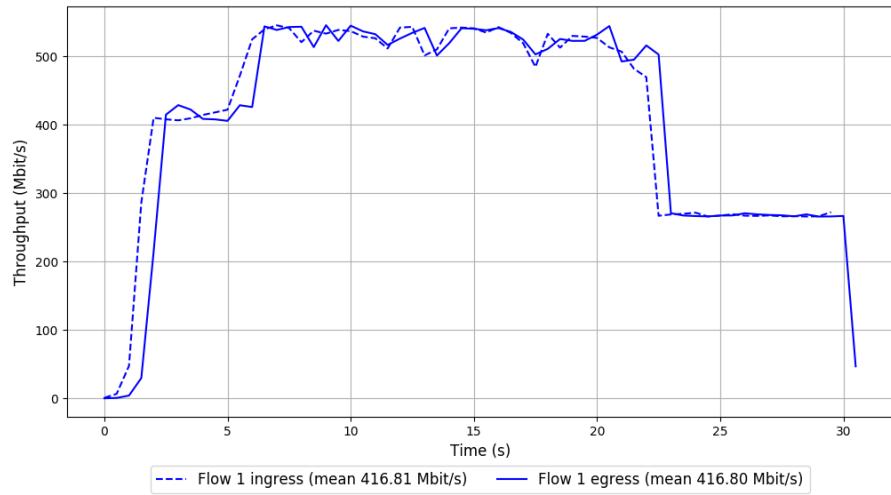


Run 3: Statistics of TCP Vegas

```
Start at: 2018-10-02 08:07:07
End at: 2018-10-02 08:07:37
Local clock offset: -0.153 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2018-10-02 10:56:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 416.80 Mbit/s
95th percentile per-packet one-way delay: 107.420 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 416.80 Mbit/s
95th percentile per-packet one-way delay: 107.420 ms
Loss rate: 0.00%
```

Run 3: Report of TCP Vegas — Data Link

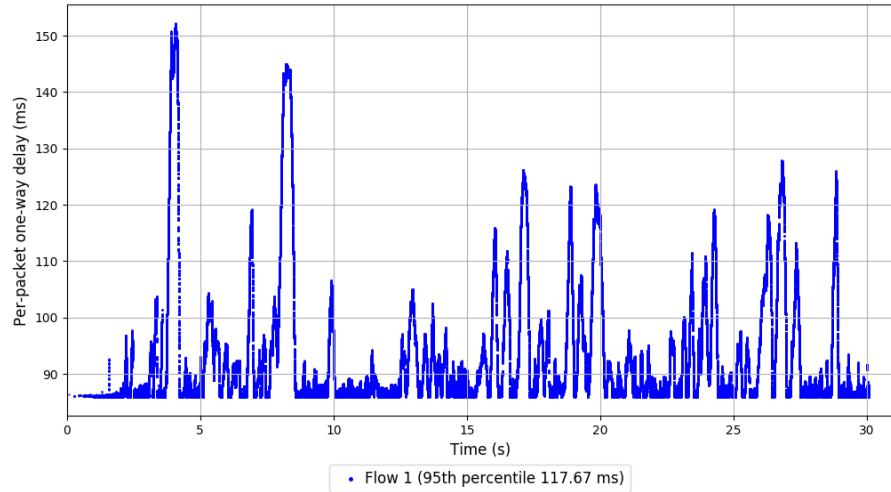
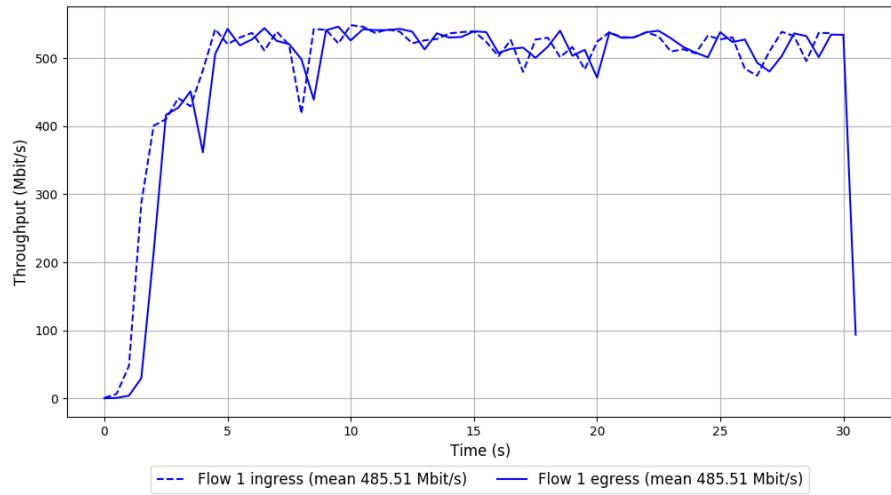


Run 4: Statistics of TCP Vegas

```
Start at: 2018-10-02 08:32:49
End at: 2018-10-02 08:33:19
Local clock offset: -0.252 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2018-10-02 10:59:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 485.51 Mbit/s
95th percentile per-packet one-way delay: 117.668 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 485.51 Mbit/s
95th percentile per-packet one-way delay: 117.668 ms
Loss rate: 0.00%
```

Run 4: Report of TCP Vegas — Data Link

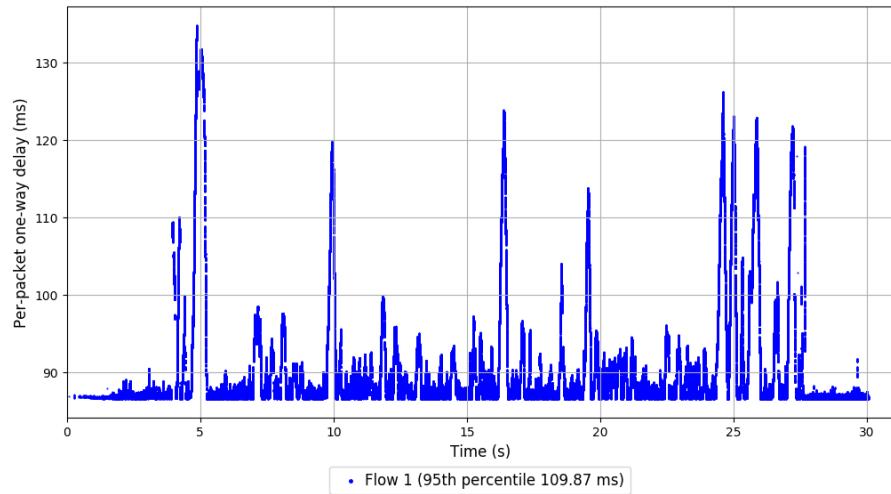
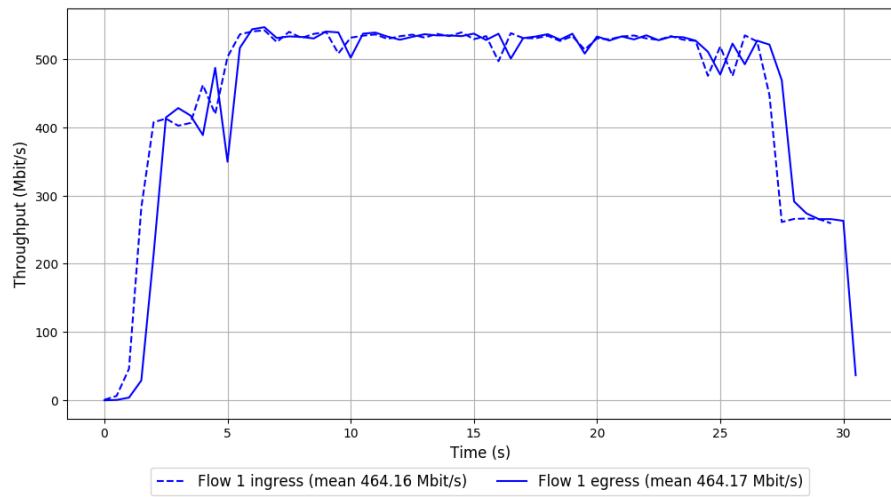


Run 5: Statistics of TCP Vegas

```
Start at: 2018-10-02 08:58:49
End at: 2018-10-02 08:59:19
Local clock offset: -0.476 ms
Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2018-10-02 10:59:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 464.17 Mbit/s
95th percentile per-packet one-way delay: 109.869 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 464.17 Mbit/s
95th percentile per-packet one-way delay: 109.869 ms
Loss rate: 0.00%
```

Run 5: Report of TCP Vegas — Data Link

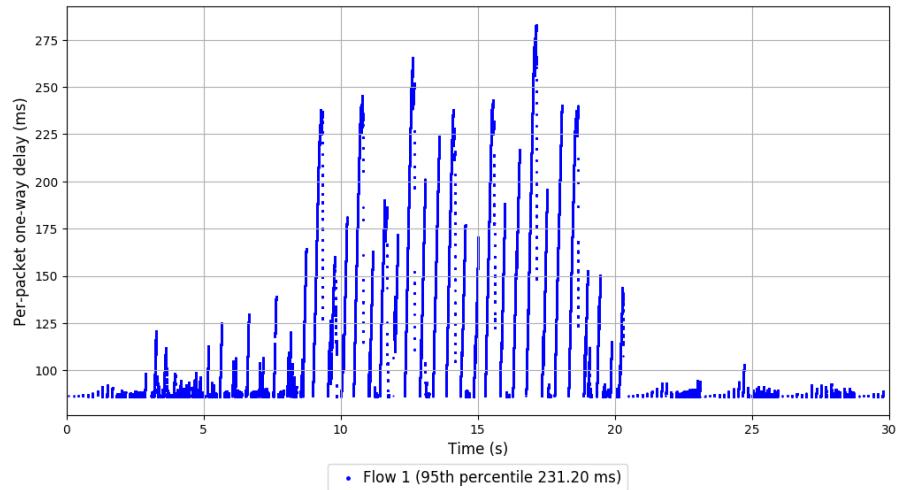
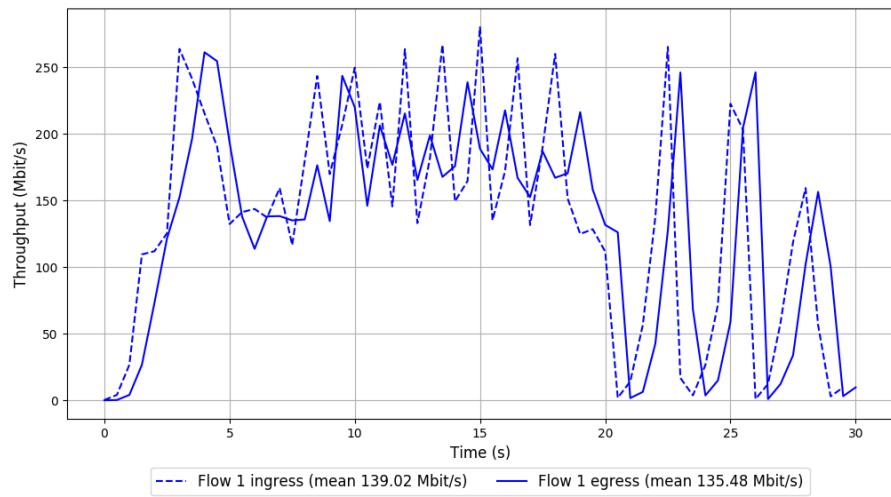


Run 1: Statistics of Verus

```
Start at: 2018-10-02 07:29:58
End at: 2018-10-02 07:30:28
Local clock offset: -0.256 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2018-10-02 10:59:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 135.48 Mbit/s
95th percentile per-packet one-way delay: 231.204 ms
Loss rate: 2.54%
-- Flow 1:
Average throughput: 135.48 Mbit/s
95th percentile per-packet one-way delay: 231.204 ms
Loss rate: 2.54%
```

Run 1: Report of Verus — Data Link

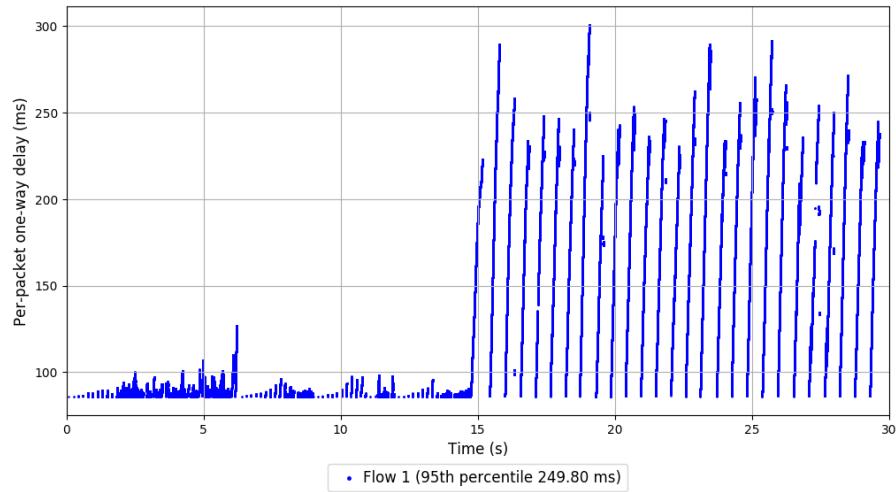
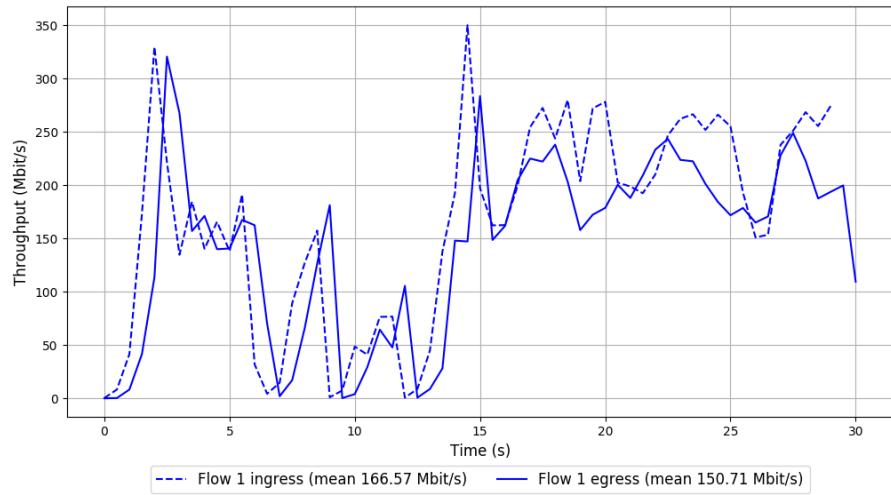


Run 2: Statistics of Verus

```
Start at: 2018-10-02 07:55:35
End at: 2018-10-02 07:56:05
Local clock offset: -0.037 ms
Remote clock offset: -0.126 ms

# Below is generated by plot.py at 2018-10-02 10:59:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 150.71 Mbit/s
95th percentile per-packet one-way delay: 249.801 ms
Loss rate: 9.06%
-- Flow 1:
Average throughput: 150.71 Mbit/s
95th percentile per-packet one-way delay: 249.801 ms
Loss rate: 9.06%
```

Run 2: Report of Verus — Data Link

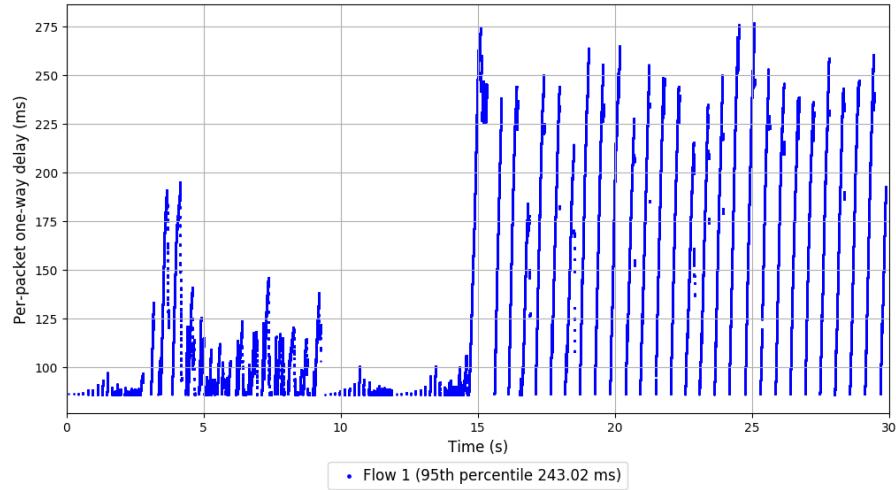
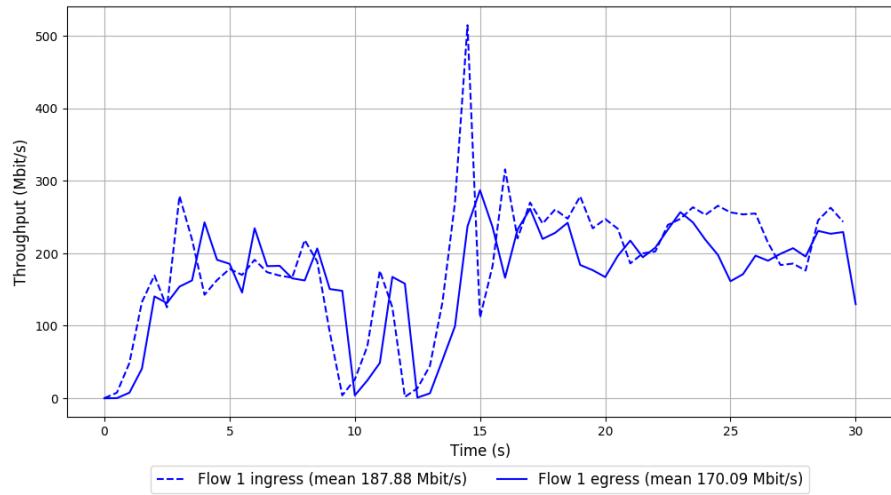


Run 3: Statistics of Verus

```
Start at: 2018-10-02 08:21:03
End at: 2018-10-02 08:21:33
Local clock offset: -0.084 ms
Remote clock offset: -0.114 ms

# Below is generated by plot.py at 2018-10-02 10:59:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 170.09 Mbit/s
95th percentile per-packet one-way delay: 243.019 ms
Loss rate: 9.41%
-- Flow 1:
Average throughput: 170.09 Mbit/s
95th percentile per-packet one-way delay: 243.019 ms
Loss rate: 9.41%
```

Run 3: Report of Verus — Data Link

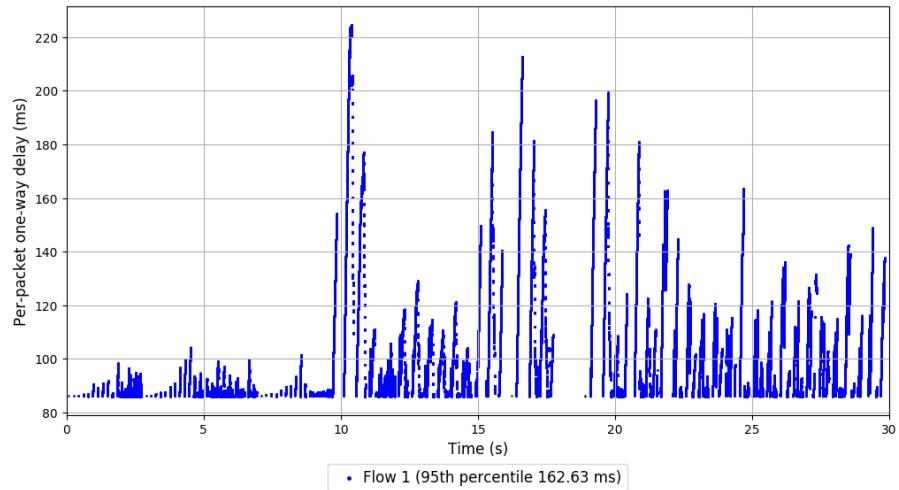
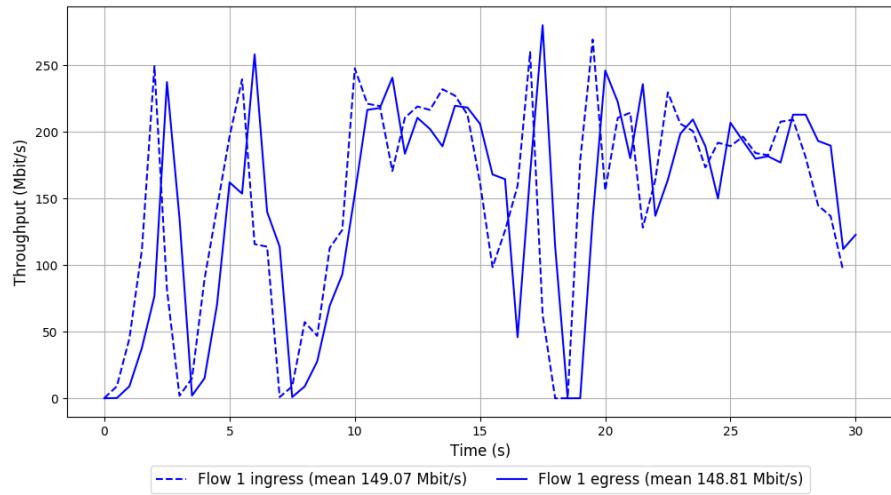


Run 4: Statistics of Verus

```
Start at: 2018-10-02 08:46:54
End at: 2018-10-02 08:47:24
Local clock offset: -0.216 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2018-10-02 10:59:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 148.81 Mbit/s
95th percentile per-packet one-way delay: 162.630 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 148.81 Mbit/s
95th percentile per-packet one-way delay: 162.630 ms
Loss rate: 0.00%
```

Run 4: Report of Verus — Data Link

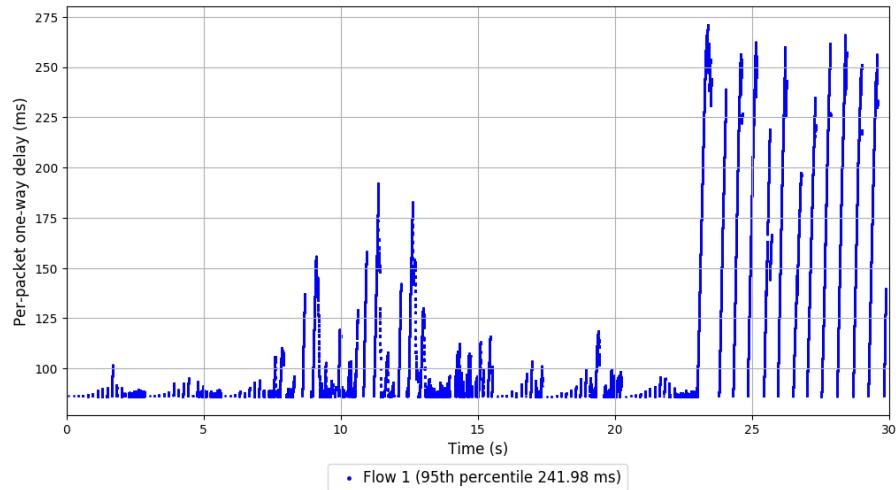
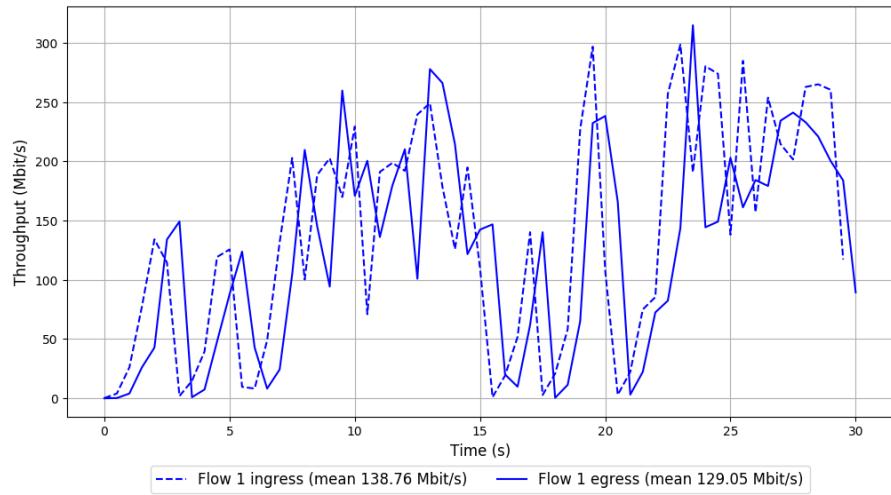


Run 5: Statistics of Verus

```
Start at: 2018-10-02 09:12:48
End at: 2018-10-02 09:13:18
Local clock offset: -0.377 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-10-02 11:00:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 129.05 Mbit/s
95th percentile per-packet one-way delay: 241.982 ms
Loss rate: 6.99%
-- Flow 1:
Average throughput: 129.05 Mbit/s
95th percentile per-packet one-way delay: 241.982 ms
Loss rate: 6.99%
```

Run 5: Report of Verus — Data Link

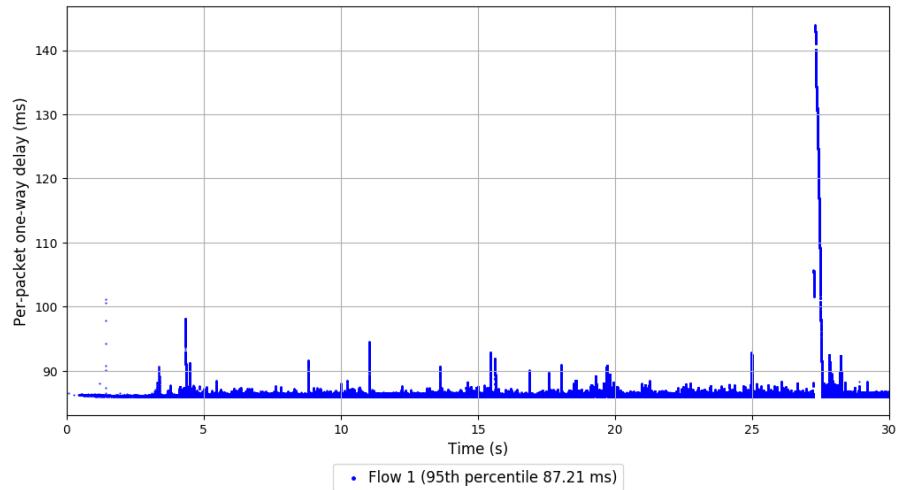
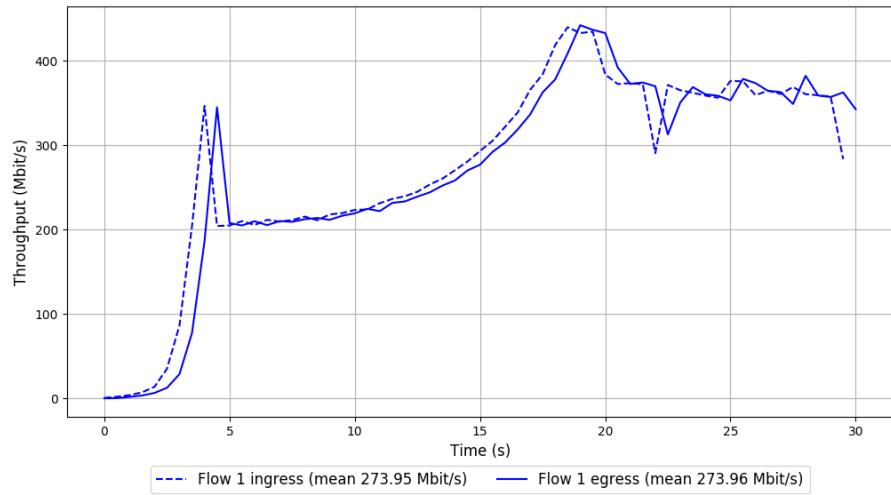


Run 1: Statistics of PCC-Vivace

```
Start at: 2018-10-02 07:32:57
End at: 2018-10-02 07:33:27
Local clock offset: -0.177 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2018-10-02 11:01:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 273.96 Mbit/s
95th percentile per-packet one-way delay: 87.211 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 273.96 Mbit/s
95th percentile per-packet one-way delay: 87.211 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Vivace — Data Link

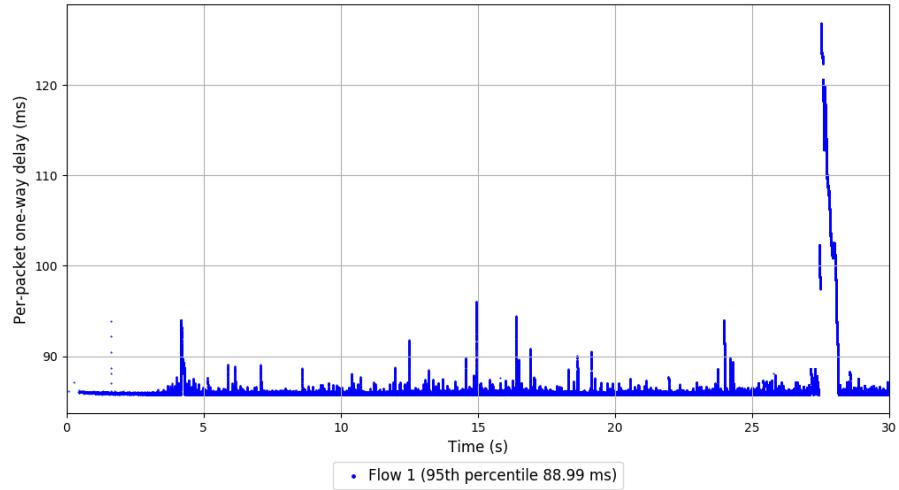
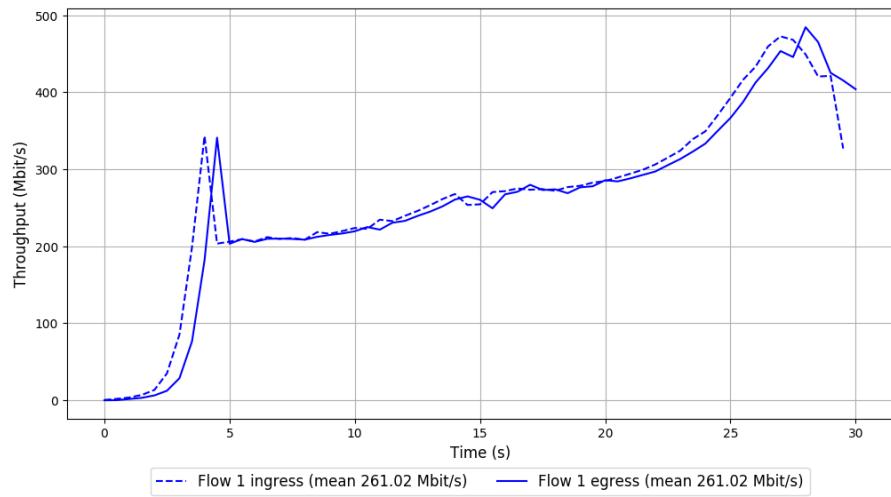


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-10-02 07:58:27
End at: 2018-10-02 07:58:57
Local clock offset: -0.071 ms
Remote clock offset: -0.109 ms

# Below is generated by plot.py at 2018-10-02 11:01:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 261.02 Mbit/s
95th percentile per-packet one-way delay: 88.988 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 261.02 Mbit/s
95th percentile per-packet one-way delay: 88.988 ms
Loss rate: 0.00%
```

Run 2: Report of PCC-Vivace — Data Link

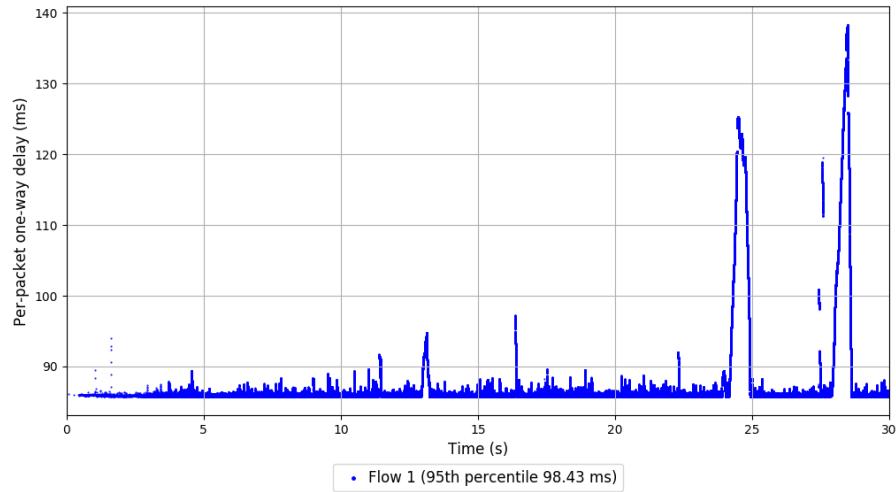
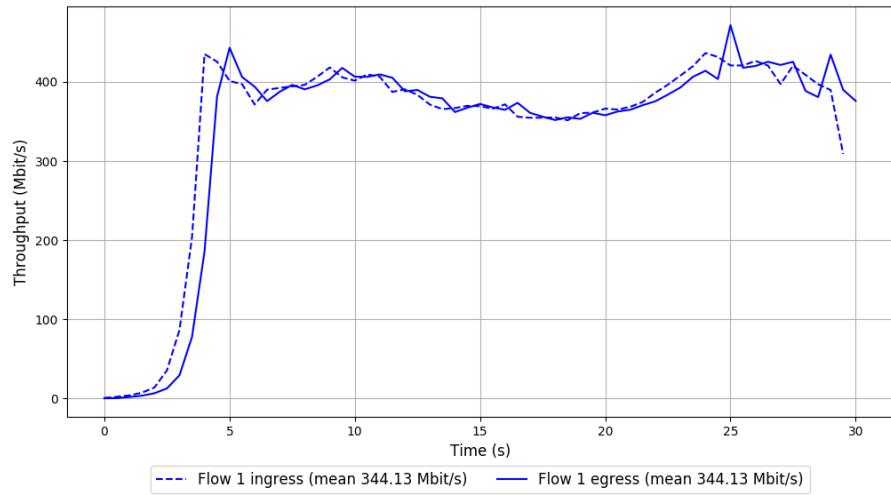


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-10-02 08:24:05
End at: 2018-10-02 08:24:35
Local clock offset: -0.059 ms
Remote clock offset: -0.119 ms

# Below is generated by plot.py at 2018-10-02 11:02:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 344.13 Mbit/s
95th percentile per-packet one-way delay: 98.426 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 344.13 Mbit/s
95th percentile per-packet one-way delay: 98.426 ms
Loss rate: 0.00%
```

Run 3: Report of PCC-Vivace — Data Link

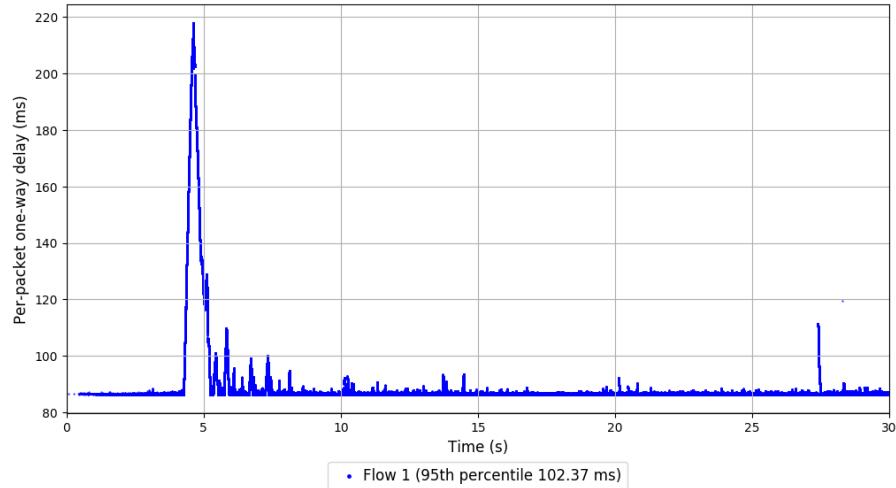
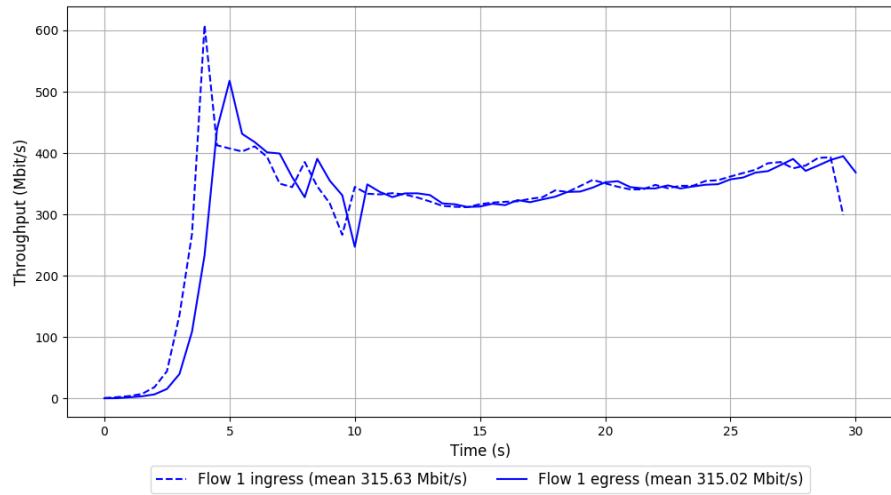


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-10-02 08:49:56
End at: 2018-10-02 08:50:26
Local clock offset: -0.345 ms
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2018-10-02 11:02:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 315.02 Mbit/s
95th percentile per-packet one-way delay: 102.368 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 315.02 Mbit/s
95th percentile per-packet one-way delay: 102.368 ms
Loss rate: 0.19%
```

Run 4: Report of PCC-Vivace — Data Link

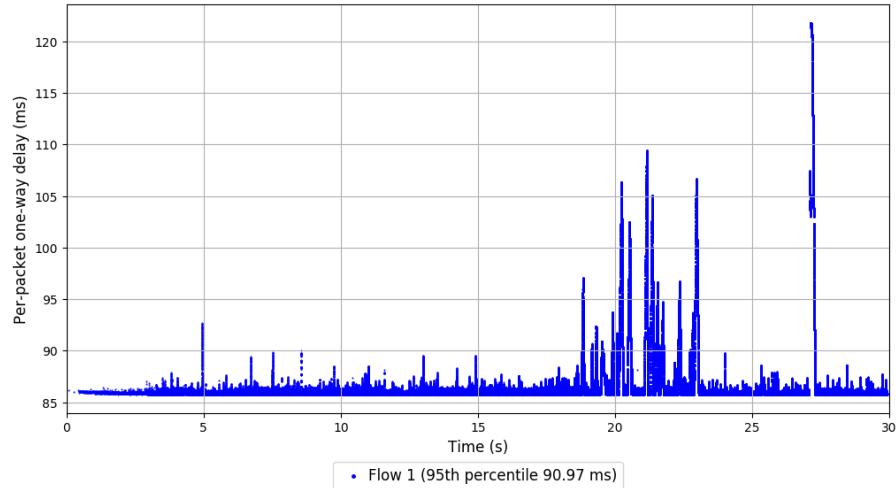
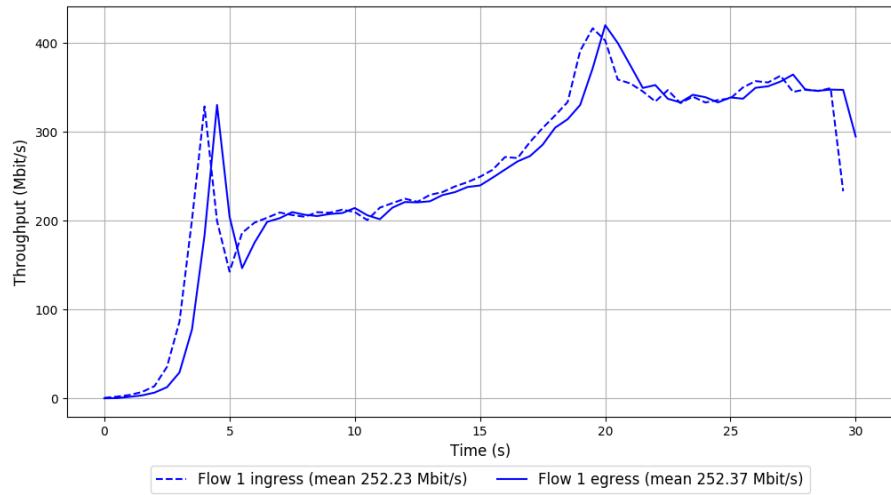


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-10-02 09:15:50
End at: 2018-10-02 09:16:20
Local clock offset: -0.185 ms
Remote clock offset: -0.073 ms

# Below is generated by plot.py at 2018-10-02 11:02:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 252.37 Mbit/s
95th percentile per-packet one-way delay: 90.966 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 252.37 Mbit/s
95th percentile per-packet one-way delay: 90.966 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Vivace — Data Link

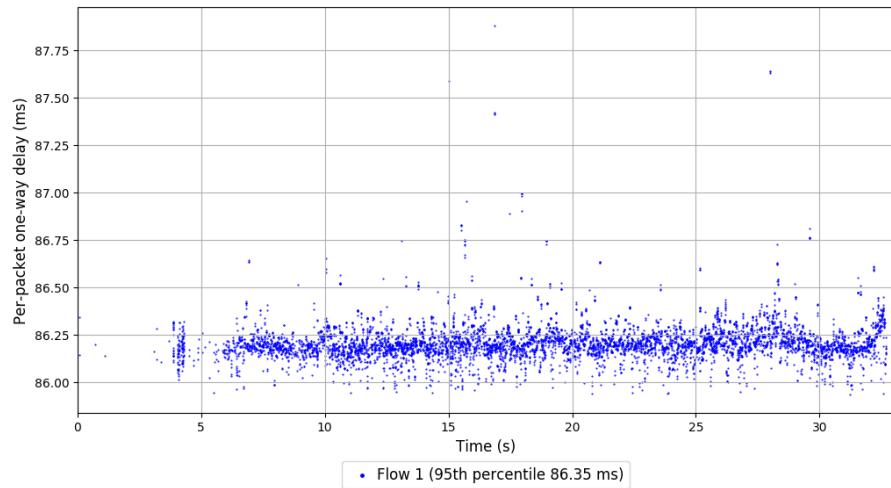
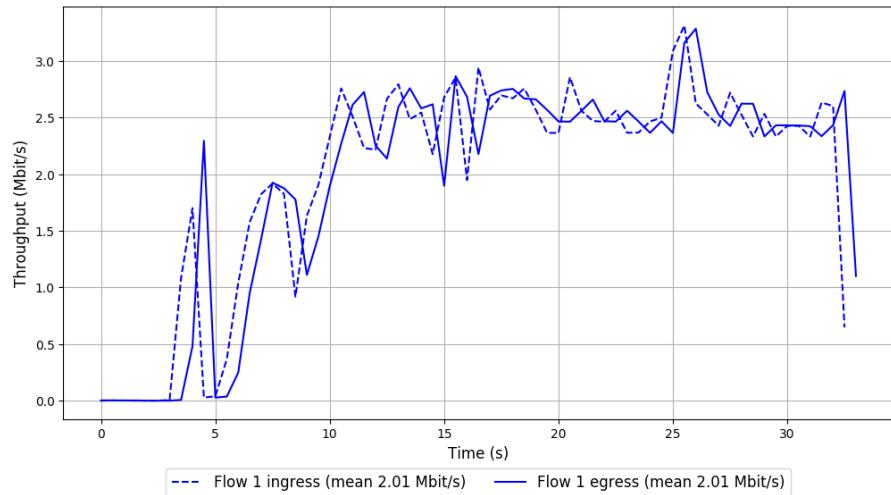


```
Run 1: Statistics of WebRTC media

Start at: 2018-10-02 07:23:25
End at: 2018-10-02 07:23:55
Local clock offset: -0.173 ms
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2018-10-02 11:02:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 86.349 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 86.349 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

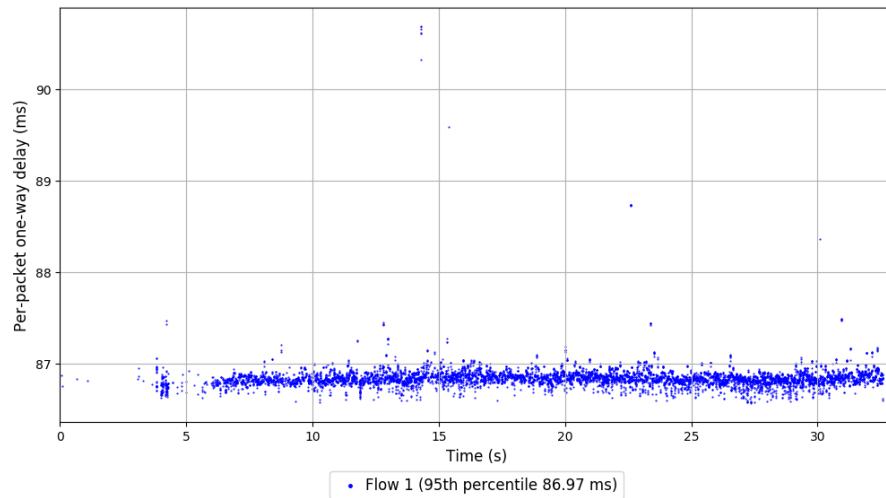
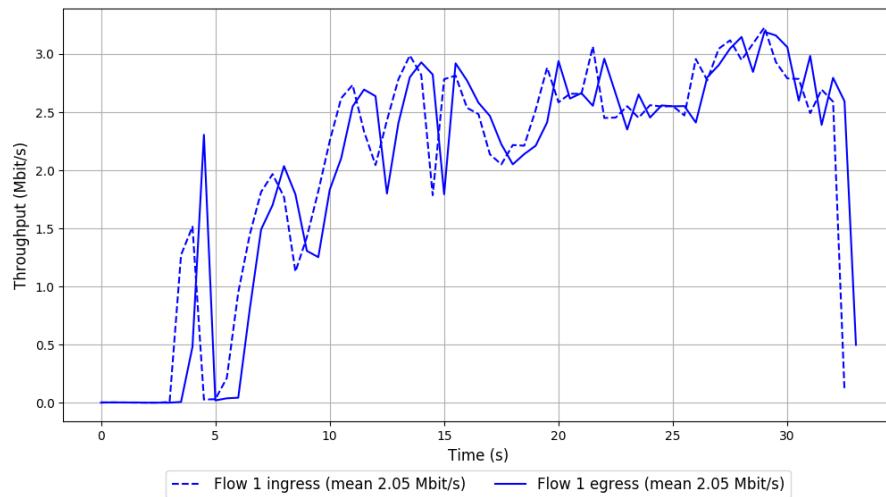


Run 2: Statistics of WebRTC media

```
Start at: 2018-10-02 07:49:03
End at: 2018-10-02 07:49:33
Local clock offset: -0.339 ms
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2018-10-02 11:02:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 86.972 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 86.972 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

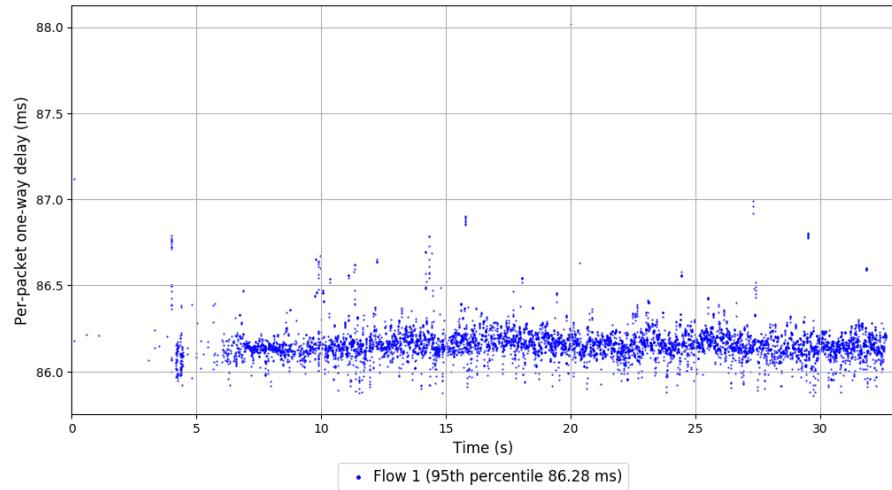
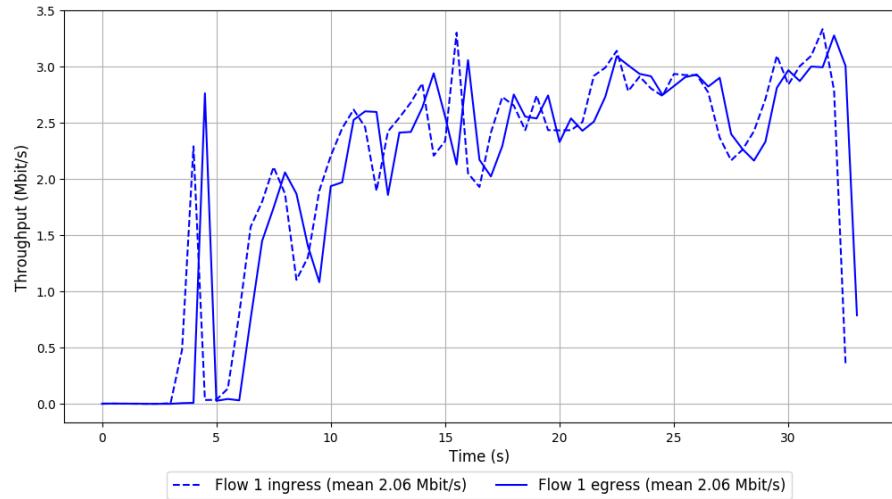


Run 3: Statistics of WebRTC media

```
Start at: 2018-10-02 08:14:31
End at: 2018-10-02 08:15:01
Local clock offset: -0.177 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2018-10-02 11:02:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 86.285 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 86.285 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

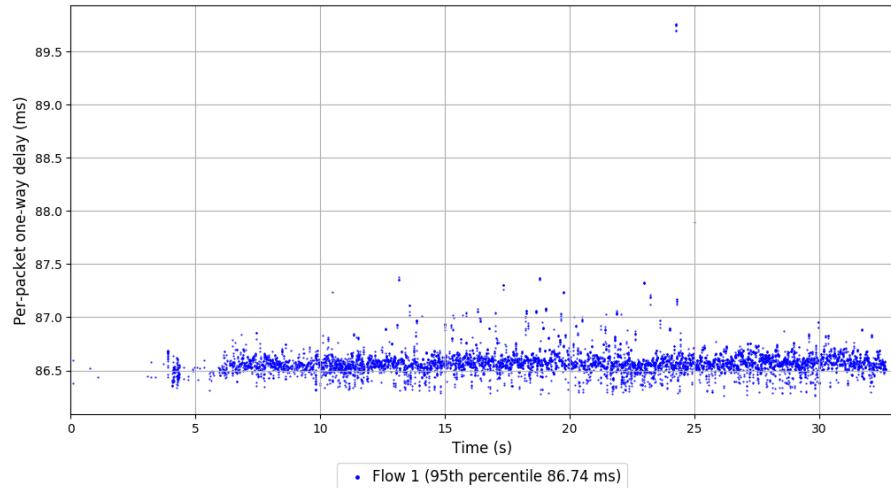
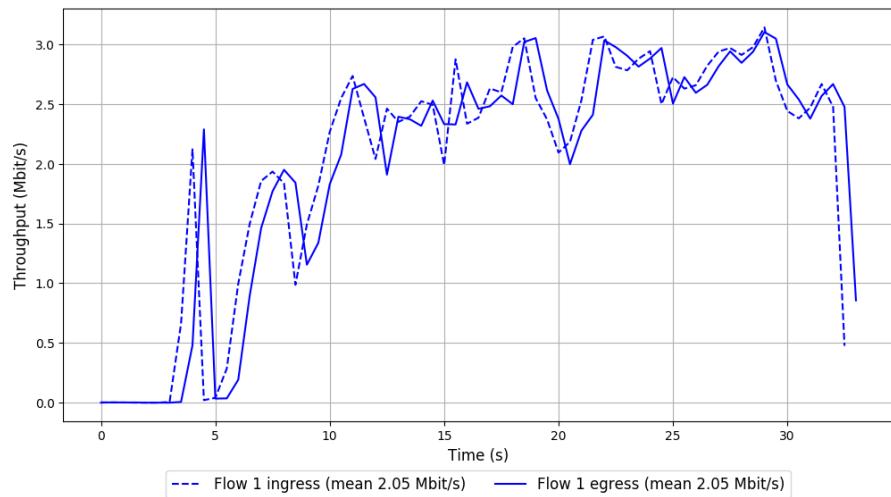


Run 4: Statistics of WebRTC media

```
Start at: 2018-10-02 08:40:20
End at: 2018-10-02 08:40:50
Local clock offset: -0.161 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2018-10-02 11:02:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 86.742 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 86.742 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-10-02 09:06:18
End at: 2018-10-02 09:06:48
Local clock offset: -0.185 ms
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2018-10-02 11:02:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 86.383 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 86.383 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

