

Pantheon Report

Generated at 2018-09-08 07:16:32 (UTC).
Data path: GCE Tokyo on `ens4` (*remote*) → GCE Sydney on `ens4` (*local*).
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:

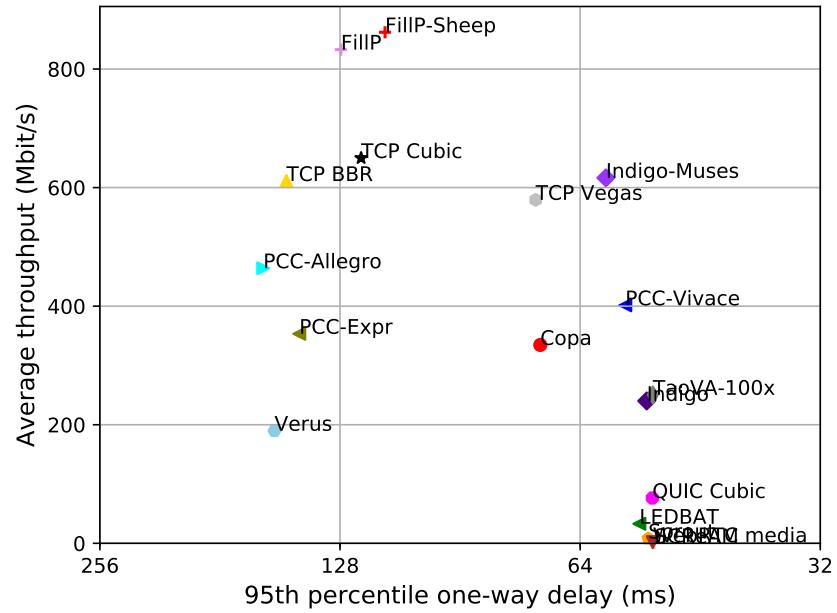
```
Linux 4.15.0-1018-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 190986 254651 381972
```

Git summary:

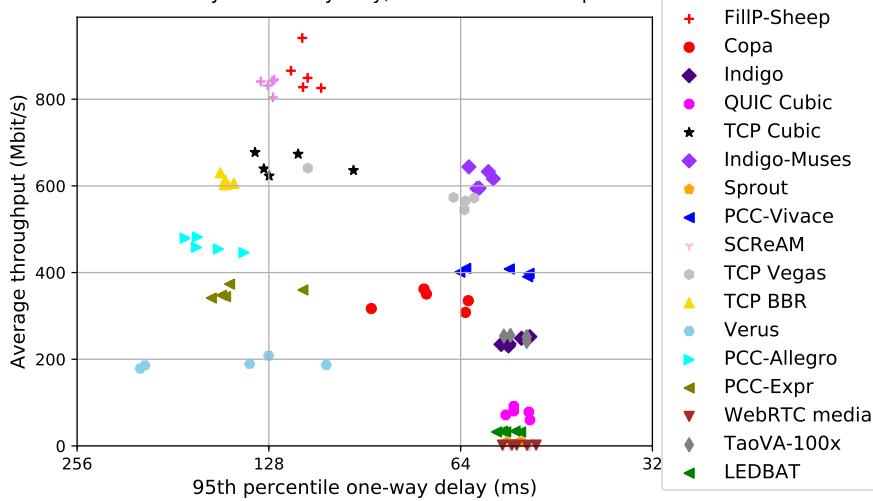
```
branch: muses @ e0a9b05ad97d268013b7cc9a9c95637b593a1b4c
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 7631aea3923a3598767c87765ae5103aca0678d3
third_party/pantheon-tunnel @ cbfce6db5ff5740dafe1771f813cd646339e1952
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 Tokyo to GCE Sydney, 5 runs of 30s each per scheme
(mean of all runs by scheme)



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



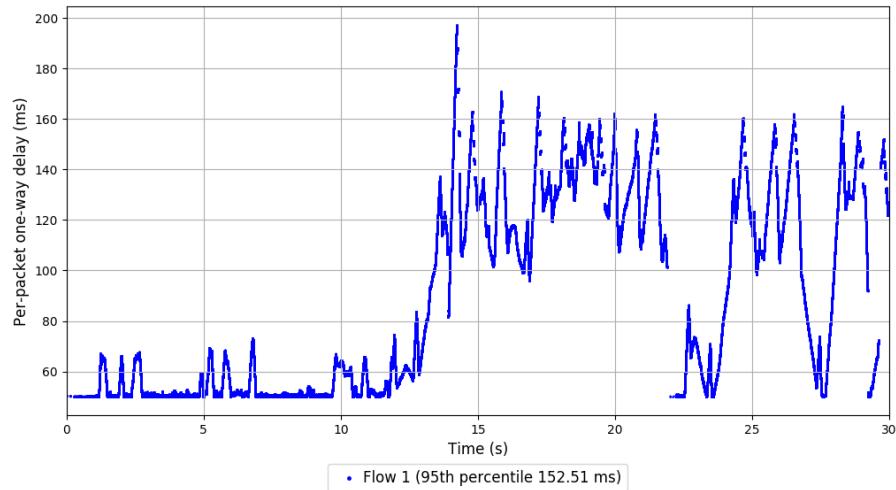
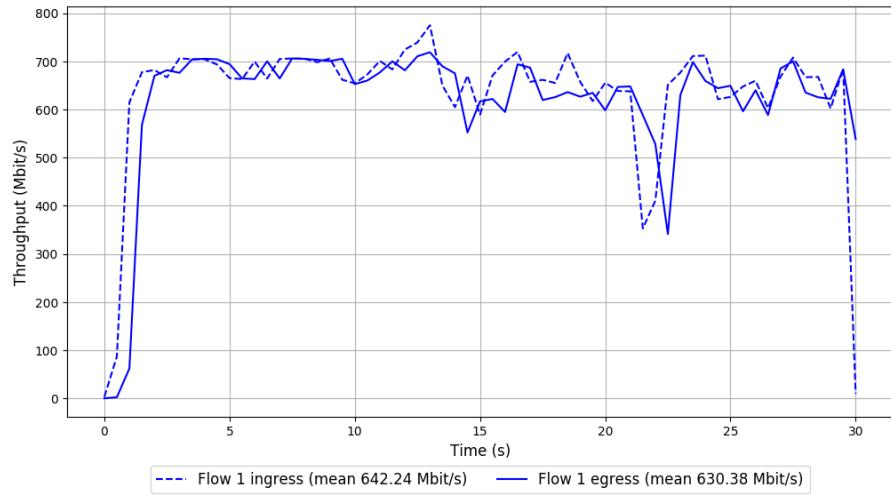
| scheme | # runs | mean avg tput (Mbit/s) flow 1 | mean 95th-%ile delay (ms) flow 1 | mean loss rate (%) flow 1 |
|--------------|--------|----------------------------------|-------------------------------------|------------------------------|
| TCP BBR | 5 | 611.08 | 149.41 | 1.52 |
| Copa | 5 | 334.56 | 71.81 | 0.37 |
| TCP Cubic | 5 | 649.82 | 120.44 | 0.56 |
| FillP | 5 | 832.76 | 127.68 | 5.09 |
| FillP-Sheep | 5 | 862.00 | 112.40 | 0.90 |
| Indigo | 5 | 240.13 | 52.81 | 0.36 |
| LEDBAT | 5 | 32.97 | 53.95 | 0.57 |
| Indigo-Muses | 5 | 616.41 | 59.42 | 0.38 |
| PCC-Allegro | 5 | 463.94 | 159.75 | 2.73 |
| PCC-Expr | 5 | 353.37 | 143.99 | 4.07 |
| QUIC Cubic | 5 | 76.39 | 51.96 | 0.43 |
| SCReAM | 5 | 0.21 | 51.68 | 0.36 |
| Sprout | 5 | 8.15 | 52.58 | 0.33 |
| TaoVA-100x | 5 | 250.47 | 51.88 | 0.36 |
| TCP Vegas | 5 | 579.31 | 72.77 | 0.37 |
| Verus | 5 | 189.84 | 154.67 | 3.13 |
| PCC-Vivace | 5 | 401.46 | 56.19 | 0.39 |
| WebRTC media | 5 | 1.84 | 51.91 | 0.41 |

Run 1: Statistics of TCP BBR

```
Start at: 2018-09-08 03:43:31
End at: 2018-09-08 03:44:01
Local clock offset: -0.053 ms
Remote clock offset: -0.215 ms

# Below is generated by plot.py at 2018-09-08 06:04:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 630.38 Mbit/s
95th percentile per-packet one-way delay: 152.508 ms
Loss rate: 2.19%
-- Flow 1:
Average throughput: 630.38 Mbit/s
95th percentile per-packet one-way delay: 152.508 ms
Loss rate: 2.19%
```

Run 1: Report of TCP BBR — Data Link

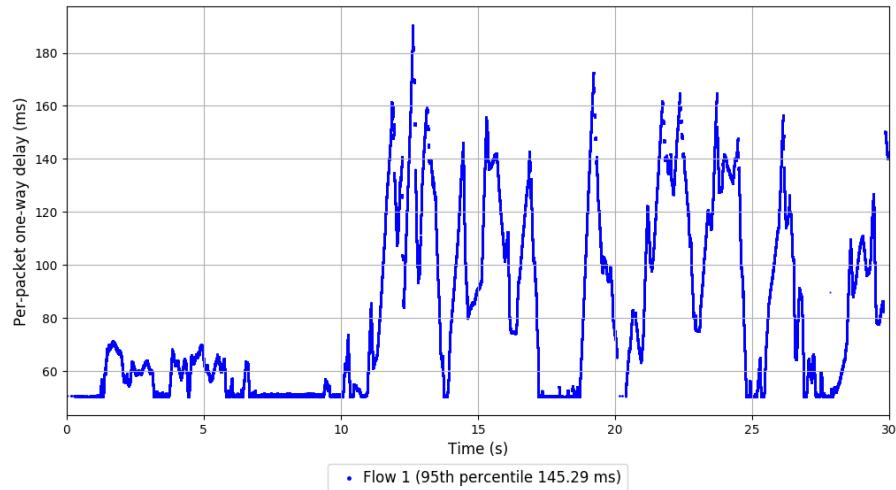
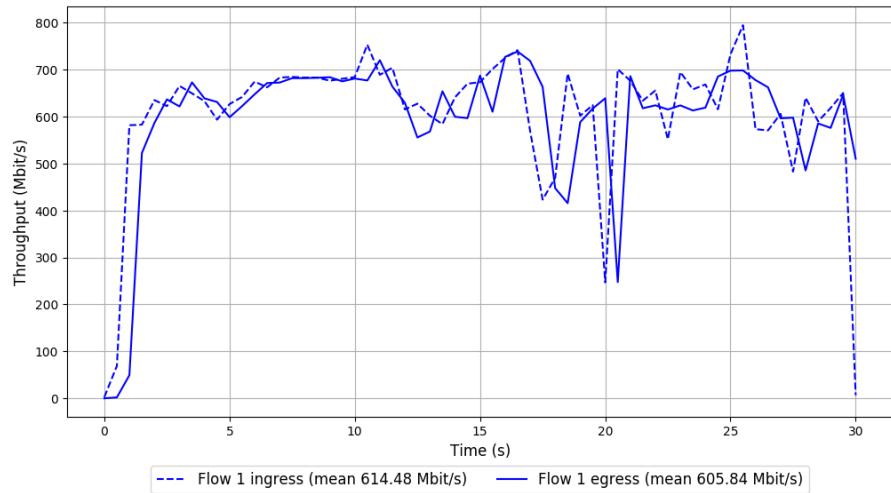


Run 2: Statistics of TCP BBR

```
Start at: 2018-09-08 04:09:32
End at: 2018-09-08 04:10:02
Local clock offset: 0.022 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2018-09-08 06:04:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 605.84 Mbit/s
95th percentile per-packet one-way delay: 145.289 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 605.84 Mbit/s
95th percentile per-packet one-way delay: 145.289 ms
Loss rate: 1.75%
```

Run 2: Report of TCP BBR — Data Link

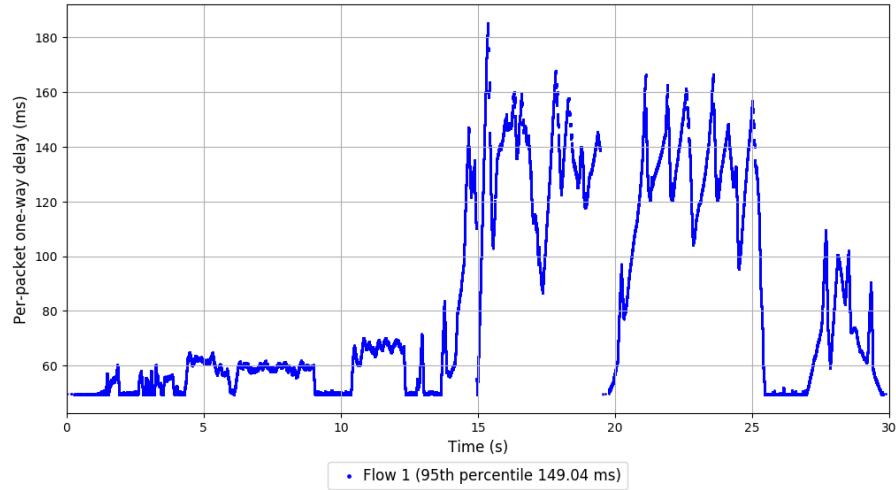
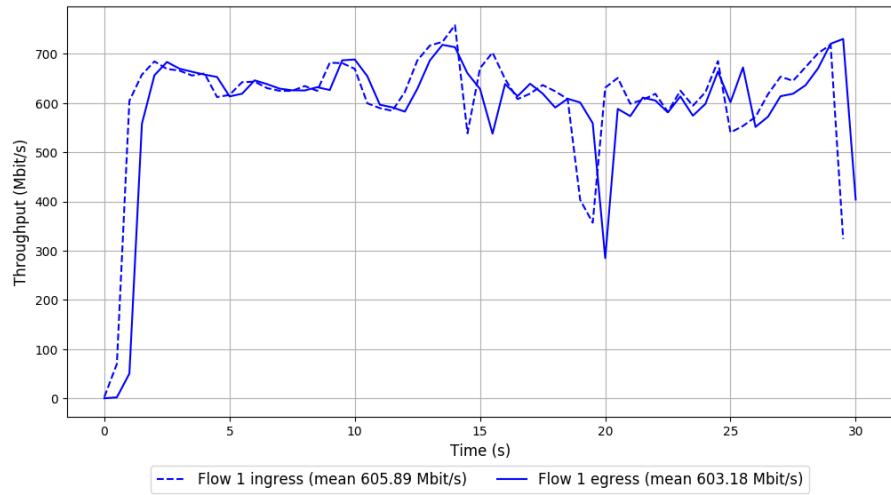


Run 3: Statistics of TCP BBR

```
Start at: 2018-09-08 04:35:26
End at: 2018-09-08 04:35:56
Local clock offset: 0.064 ms
Remote clock offset: 0.299 ms

# Below is generated by plot.py at 2018-09-08 06:04:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 603.18 Mbit/s
95th percentile per-packet one-way delay: 149.037 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 603.18 Mbit/s
95th percentile per-packet one-way delay: 149.037 ms
Loss rate: 0.79%
```

Run 3: Report of TCP BBR — Data Link

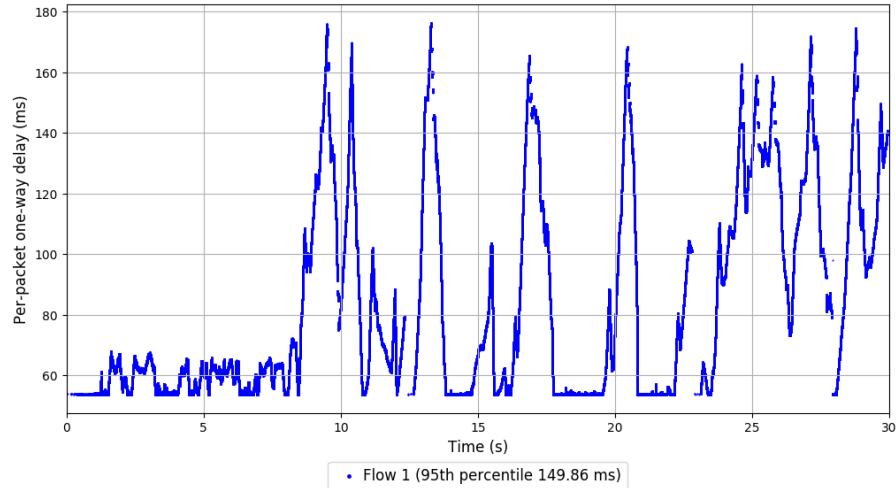
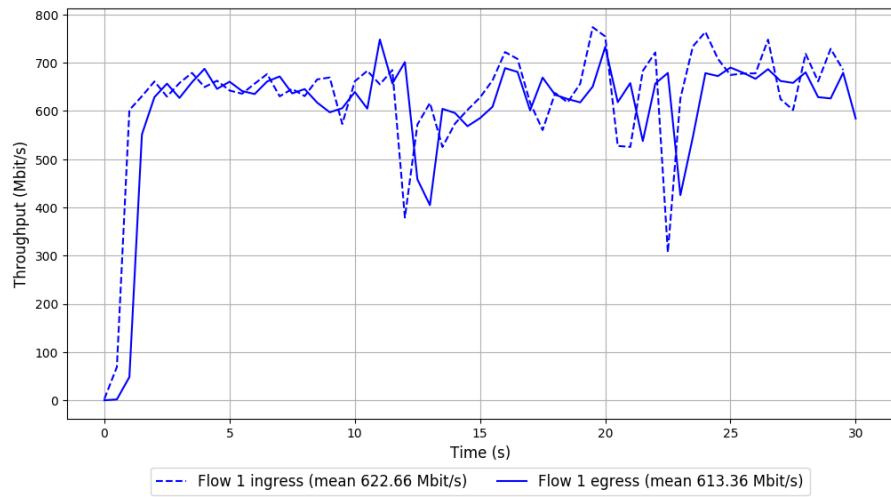


Run 4: Statistics of TCP BBR

```
Start at: 2018-09-08 05:01:32
End at: 2018-09-08 05:02:02
Local clock offset: 0.063 ms
Remote clock offset: -0.27 ms

# Below is generated by plot.py at 2018-09-08 06:04:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 613.36 Mbit/s
95th percentile per-packet one-way delay: 149.859 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 613.36 Mbit/s
95th percentile per-packet one-way delay: 149.859 ms
Loss rate: 1.85%
```

Run 4: Report of TCP BBR — Data Link

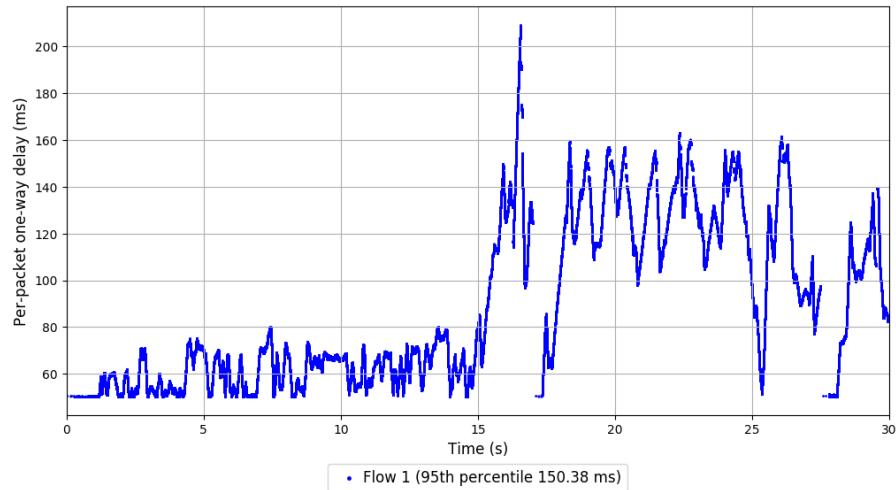
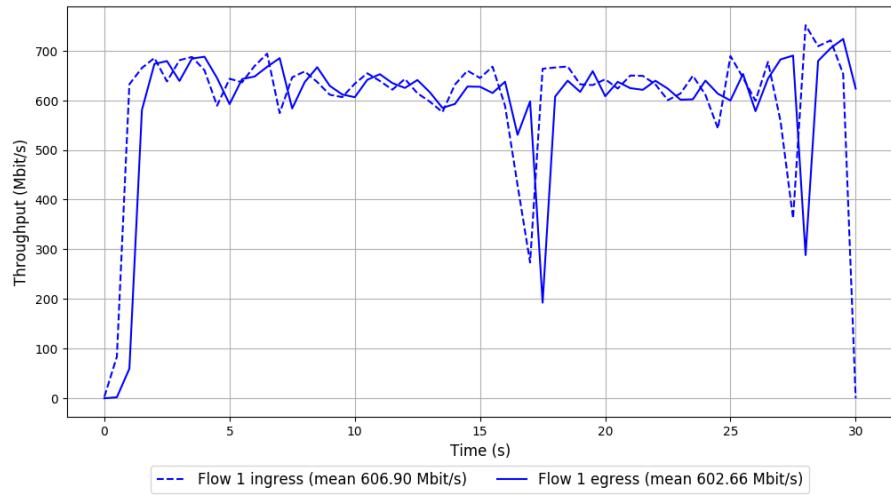


Run 5: Statistics of TCP BBR

```
Start at: 2018-09-08 05:27:40
End at: 2018-09-08 05:28:10
Local clock offset: -0.077 ms
Remote clock offset: -0.388 ms

# Below is generated by plot.py at 2018-09-08 06:04:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 602.66 Mbit/s
95th percentile per-packet one-way delay: 150.381 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 602.66 Mbit/s
95th percentile per-packet one-way delay: 150.381 ms
Loss rate: 1.04%
```

Run 5: Report of TCP BBR — Data Link

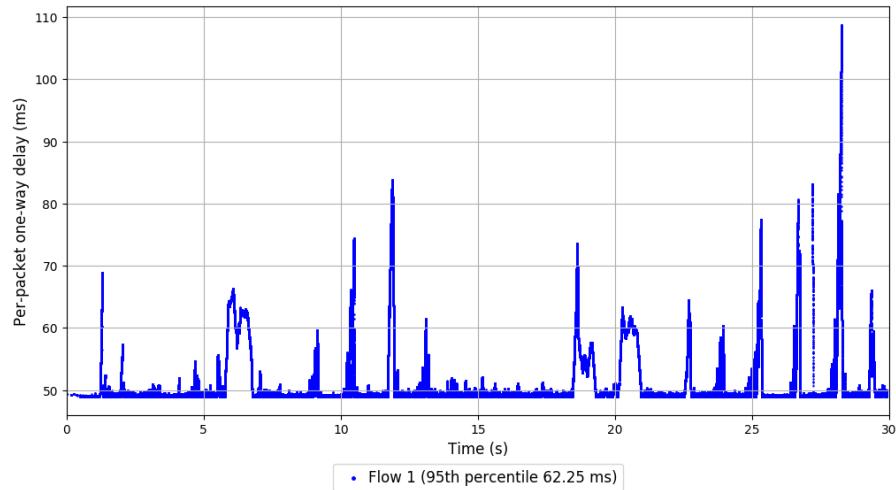
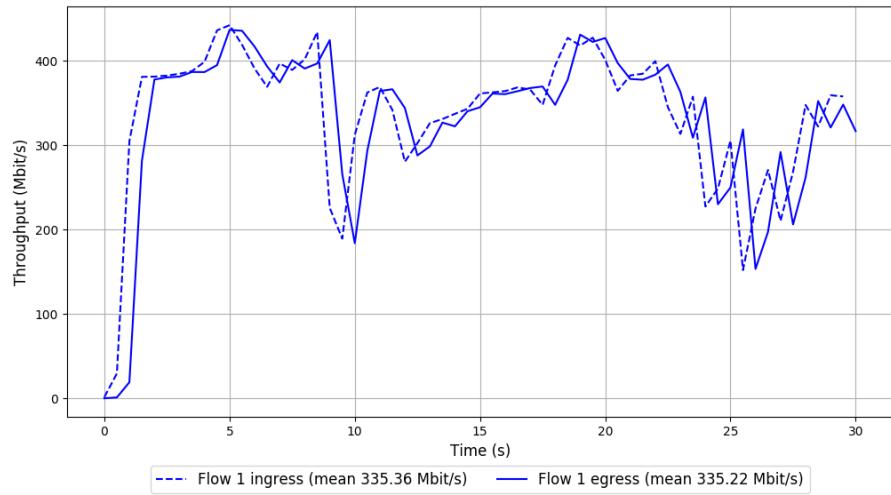


Run 1: Statistics of Copa

```
Start at: 2018-09-08 03:47:59
End at: 2018-09-08 03:48:29
Local clock offset: 0.147 ms
Remote clock offset: 1.085 ms

# Below is generated by plot.py at 2018-09-08 06:04:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 335.22 Mbit/s
95th percentile per-packet one-way delay: 62.254 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 335.22 Mbit/s
95th percentile per-packet one-way delay: 62.254 ms
Loss rate: 0.39%
```

Run 1: Report of Copa — Data Link

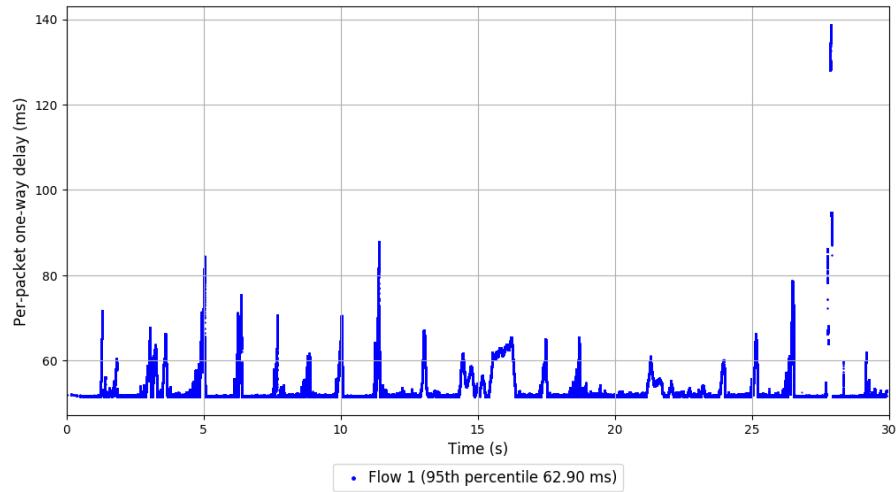
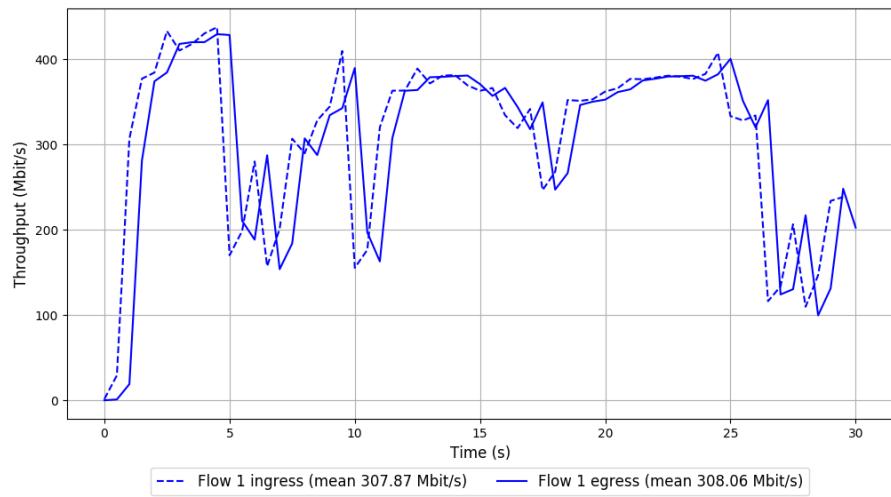


Run 2: Statistics of Copa

```
Start at: 2018-09-08 04:13:58
End at: 2018-09-08 04:14:28
Local clock offset: 0.11 ms
Remote clock offset: -1.316 ms

# Below is generated by plot.py at 2018-09-08 06:04:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 308.06 Mbit/s
95th percentile per-packet one-way delay: 62.903 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 308.06 Mbit/s
95th percentile per-packet one-way delay: 62.903 ms
Loss rate: 0.29%
```

Run 2: Report of Copa — Data Link

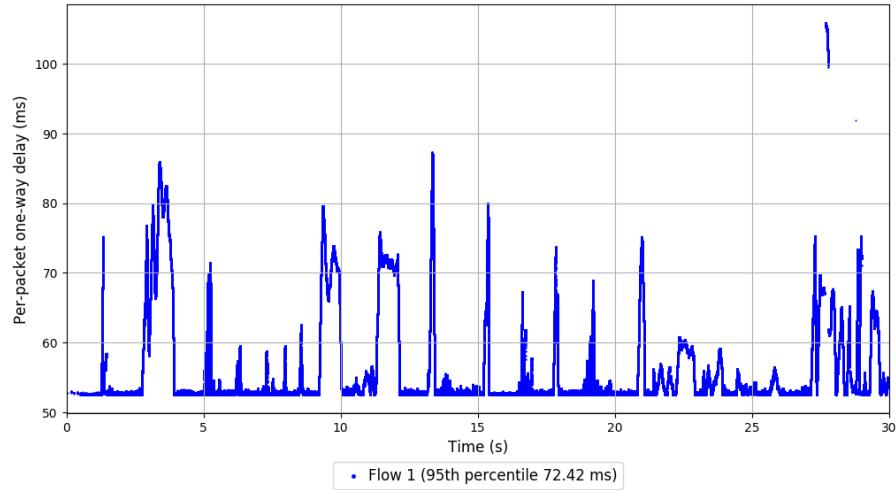
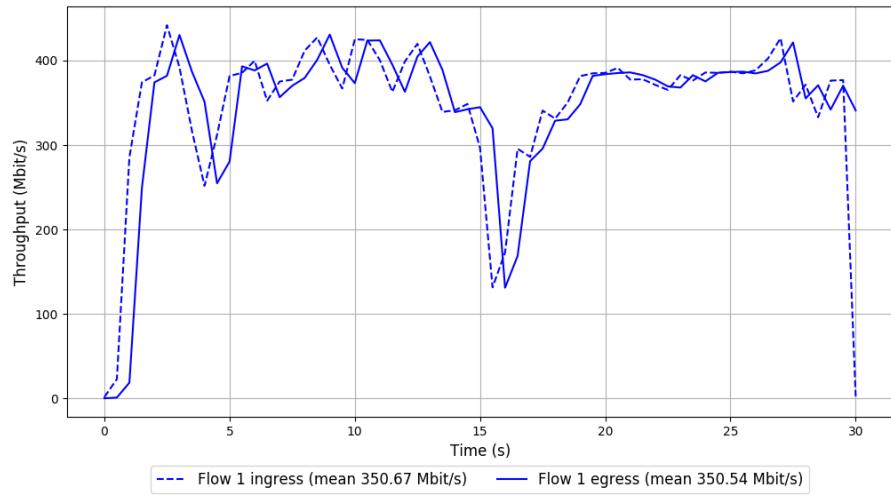


Run 3: Statistics of Copa

```
Start at: 2018-09-08 04:39:54
End at: 2018-09-08 04:40:24
Local clock offset: -0.214 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2018-09-08 06:04:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 350.54 Mbit/s
95th percentile per-packet one-way delay: 72.422 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 350.54 Mbit/s
95th percentile per-packet one-way delay: 72.422 ms
Loss rate: 0.39%
```

Run 3: Report of Copa — Data Link

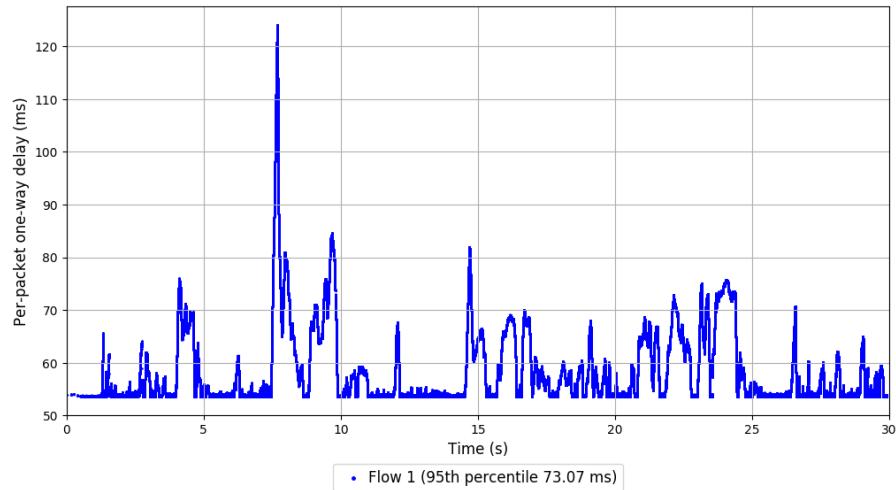
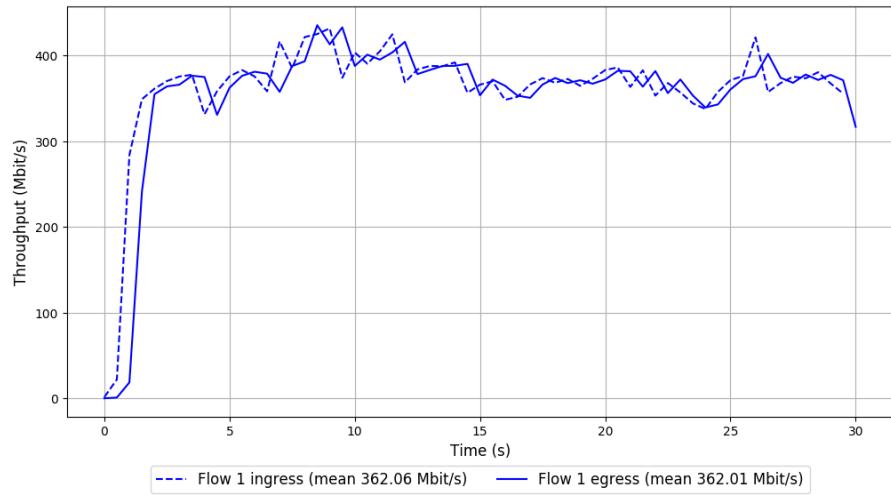


Run 4: Statistics of Copa

```
Start at: 2018-09-08 05:05:58
End at: 2018-09-08 05:06:28
Local clock offset: 0.084 ms
Remote clock offset: -0.25 ms

# Below is generated by plot.py at 2018-09-08 06:13:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 362.01 Mbit/s
95th percentile per-packet one-way delay: 73.069 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 362.01 Mbit/s
95th percentile per-packet one-way delay: 73.069 ms
Loss rate: 0.37%
```

Run 4: Report of Copa — Data Link

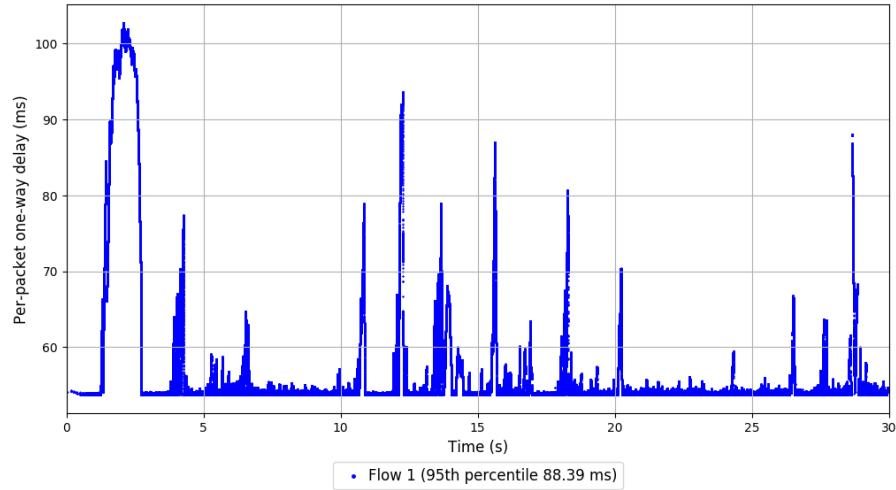
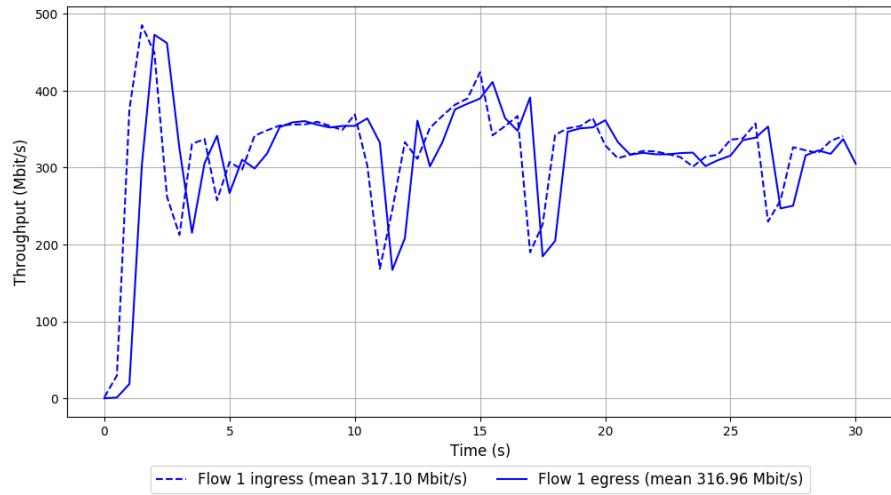


Run 5: Statistics of Copa

```
Start at: 2018-09-08 05:32:05
End at: 2018-09-08 05:32:35
Local clock offset: -0.067 ms
Remote clock offset: -0.377 ms

# Below is generated by plot.py at 2018-09-08 06:13:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 316.96 Mbit/s
95th percentile per-packet one-way delay: 88.394 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 316.96 Mbit/s
95th percentile per-packet one-way delay: 88.394 ms
Loss rate: 0.39%
```

Run 5: Report of Copa — Data Link

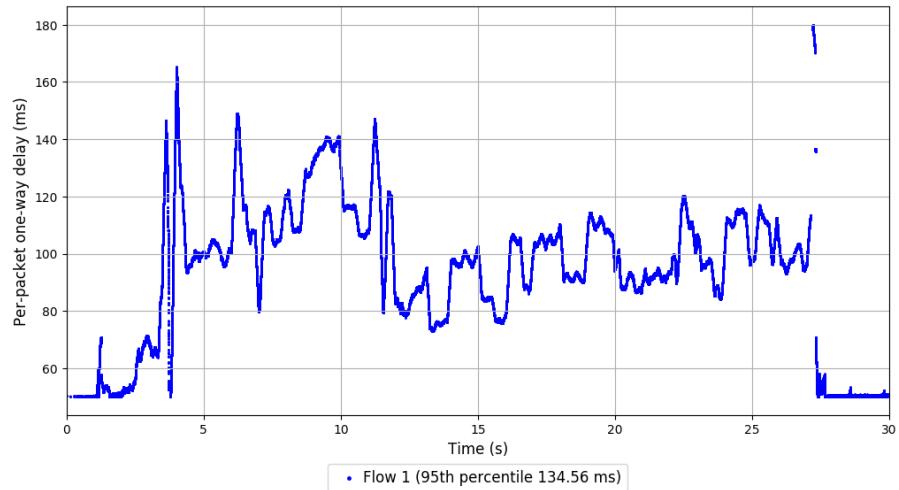
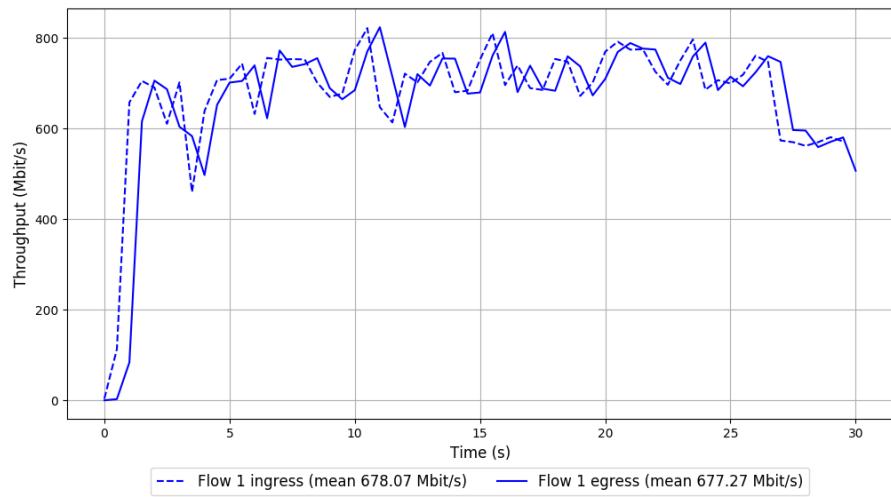


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-09-08 03:40:15
End at: 2018-09-08 03:40:45
Local clock offset: 0.076 ms
Remote clock offset: -0.125 ms

# Below is generated by plot.py at 2018-09-08 06:14:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 677.27 Mbit/s
95th percentile per-packet one-way delay: 134.562 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 677.27 Mbit/s
95th percentile per-packet one-way delay: 134.562 ms
Loss rate: 0.45%
```

Run 1: Report of TCP Cubic — Data Link

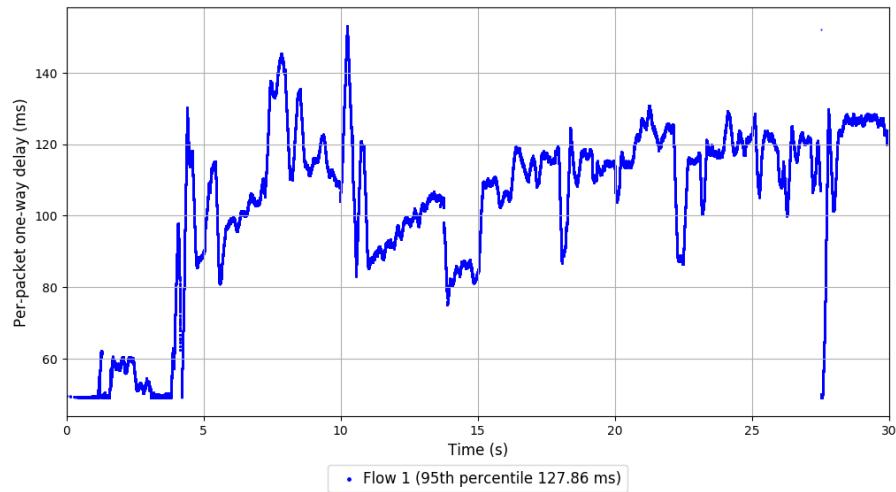
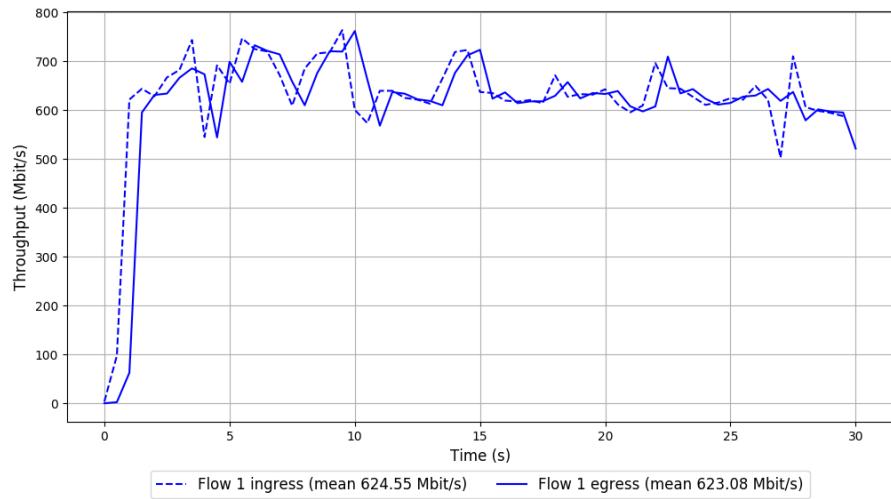


Run 2: Statistics of TCP Cubic

```
Start at: 2018-09-08 04:06:19
End at: 2018-09-08 04:06:49
Local clock offset: 0.165 ms
Remote clock offset: 0.988 ms

# Below is generated by plot.py at 2018-09-08 06:14:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 623.08 Mbit/s
95th percentile per-packet one-way delay: 127.864 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 623.08 Mbit/s
95th percentile per-packet one-way delay: 127.864 ms
Loss rate: 0.58%
```

Run 2: Report of TCP Cubic — Data Link

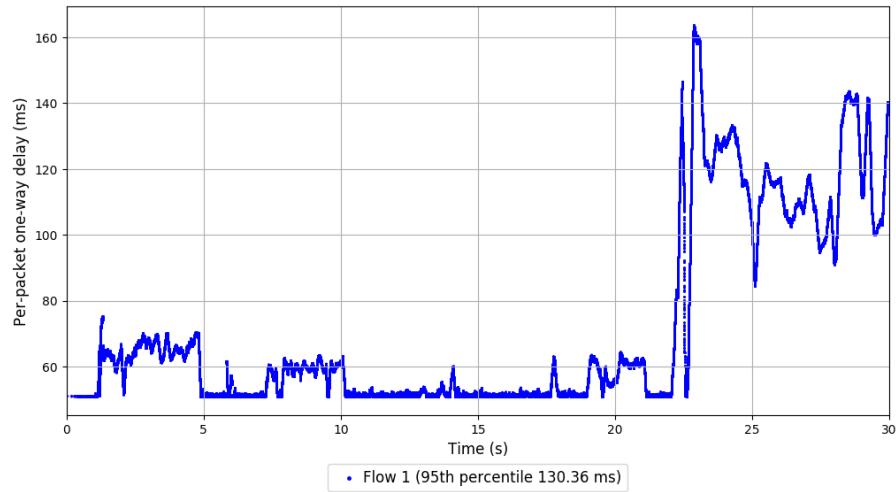
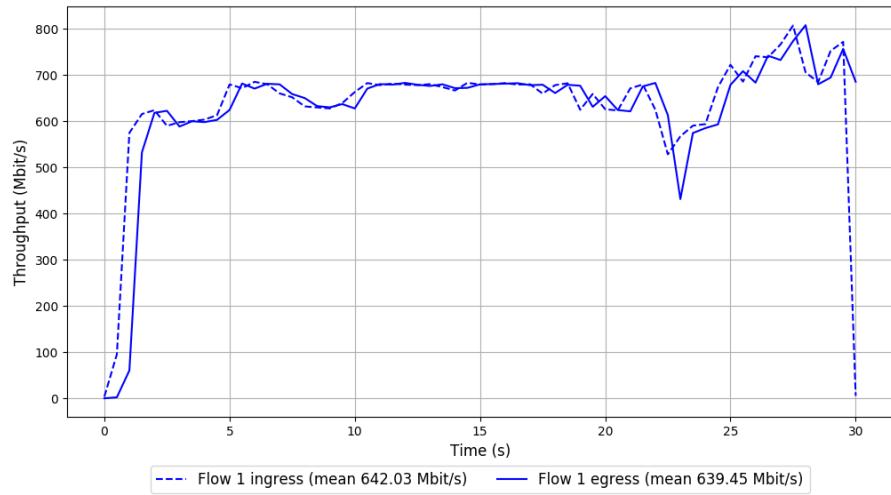


Run 3: Statistics of TCP Cubic

```
Start at: 2018-09-08 04:32:13
End at: 2018-09-08 04:32:43
Local clock offset: 0.092 ms
Remote clock offset: -0.675 ms

# Below is generated by plot.py at 2018-09-08 06:14:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 639.45 Mbit/s
95th percentile per-packet one-way delay: 130.357 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 639.45 Mbit/s
95th percentile per-packet one-way delay: 130.357 ms
Loss rate: 0.75%
```

Run 3: Report of TCP Cubic — Data Link

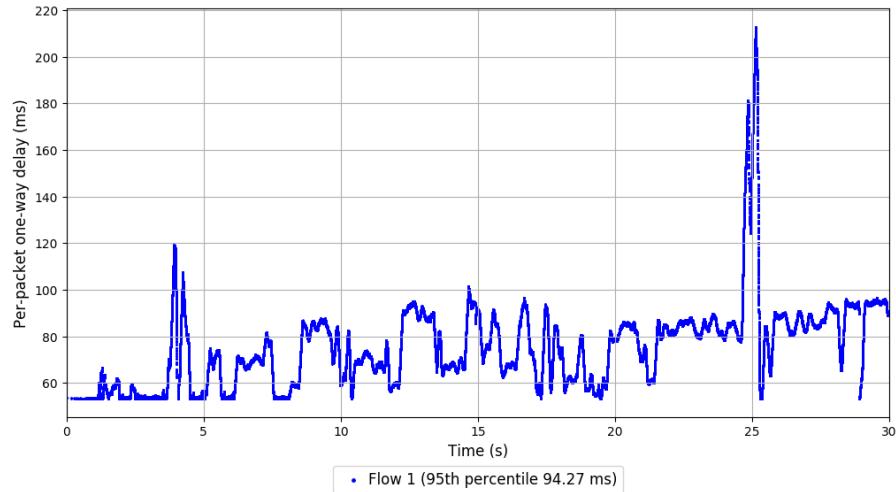
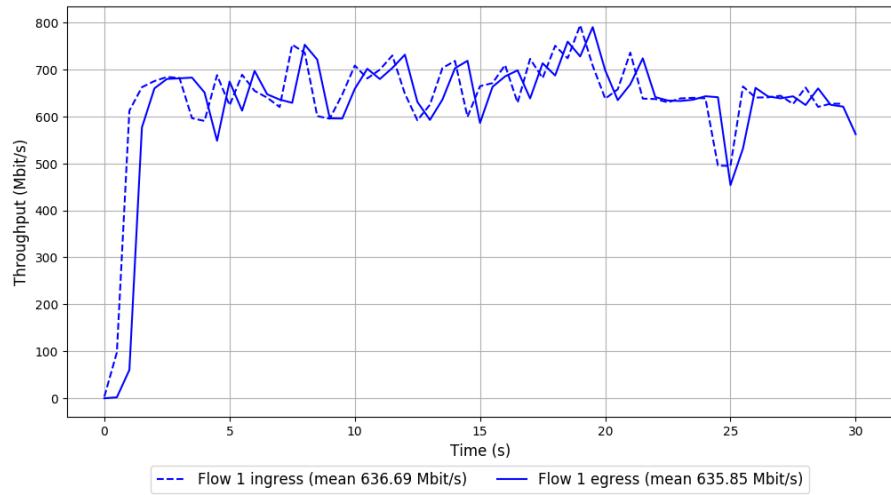


Run 4: Statistics of TCP Cubic

```
Start at: 2018-09-08 04:58:18
End at: 2018-09-08 04:58:48
Local clock offset: -0.101 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2018-09-08 06:14:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 635.85 Mbit/s
95th percentile per-packet one-way delay: 94.269 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 635.85 Mbit/s
95th percentile per-packet one-way delay: 94.269 ms
Loss rate: 0.48%
```

Run 4: Report of TCP Cubic — Data Link

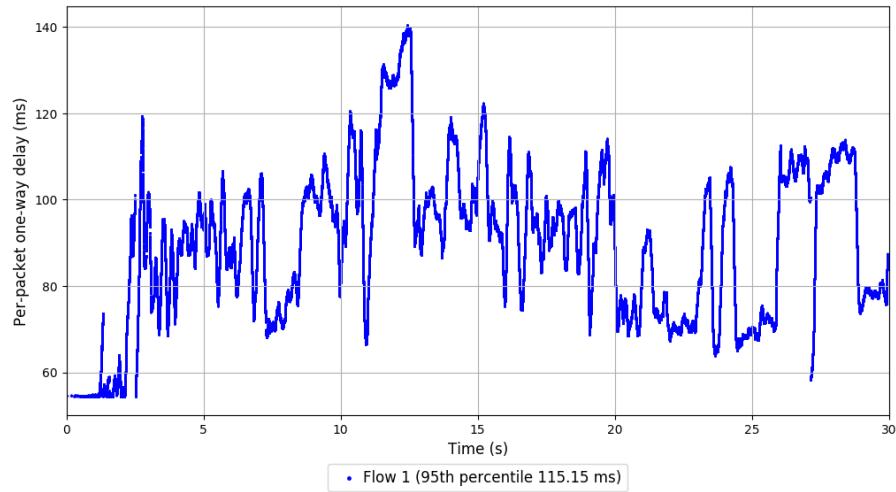
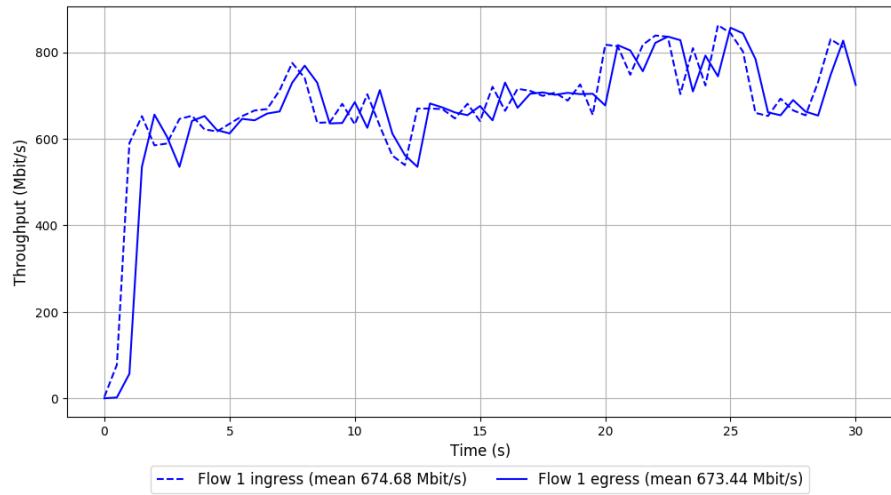


Run 5: Statistics of TCP Cubic

```
Start at: 2018-09-08 05:24:24
End at: 2018-09-08 05:24:54
Local clock offset: 0.044 ms
Remote clock offset: -1.629 ms

# Below is generated by plot.py at 2018-09-08 06:14:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 673.44 Mbit/s
95th percentile per-packet one-way delay: 115.153 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 673.44 Mbit/s
95th percentile per-packet one-way delay: 115.153 ms
Loss rate: 0.54%
```

Run 5: Report of TCP Cubic — Data Link

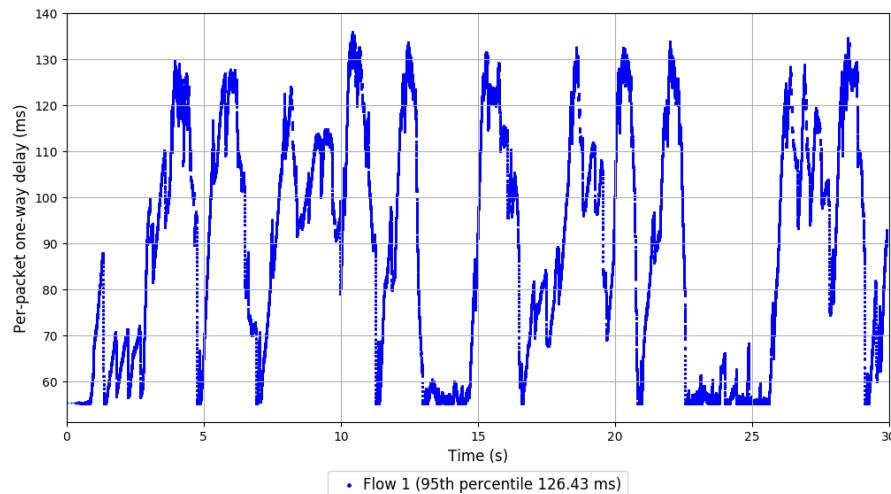
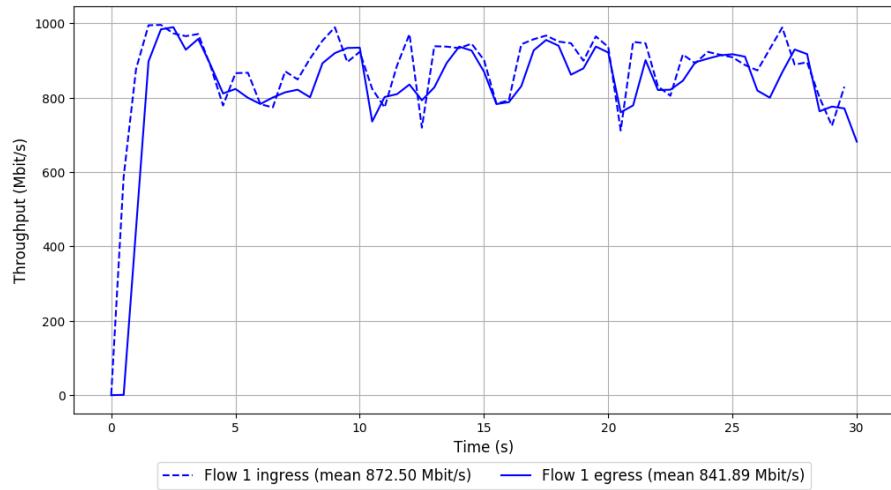


```
Run 1: Statistics of FillP

Start at: 2018-09-08 03:56:45
End at: 2018-09-08 03:57:15
Local clock offset: 0.146 ms
Remote clock offset: -1.658 ms

# Below is generated by plot.py at 2018-09-08 06:19:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 841.89 Mbit/s
95th percentile per-packet one-way delay: 126.427 ms
Loss rate: 3.86%
-- Flow 1:
Average throughput: 841.89 Mbit/s
95th percentile per-packet one-way delay: 126.427 ms
Loss rate: 3.86%
```

Run 1: Report of FillP — Data Link

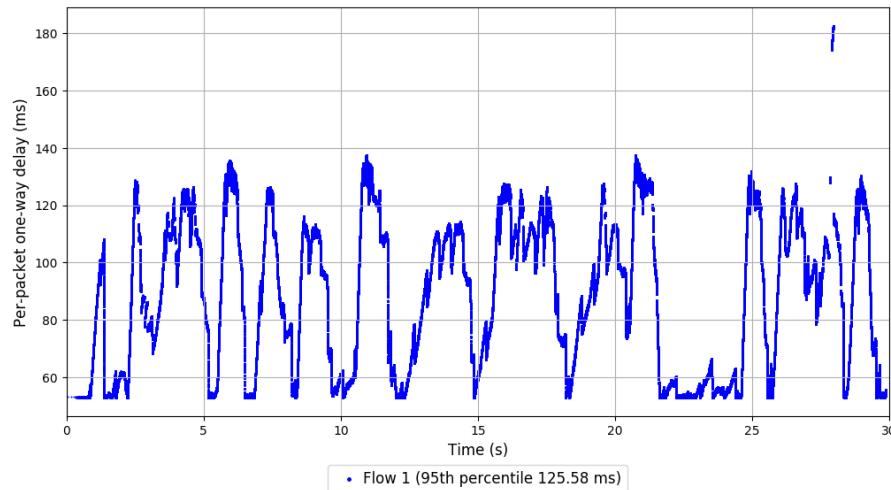
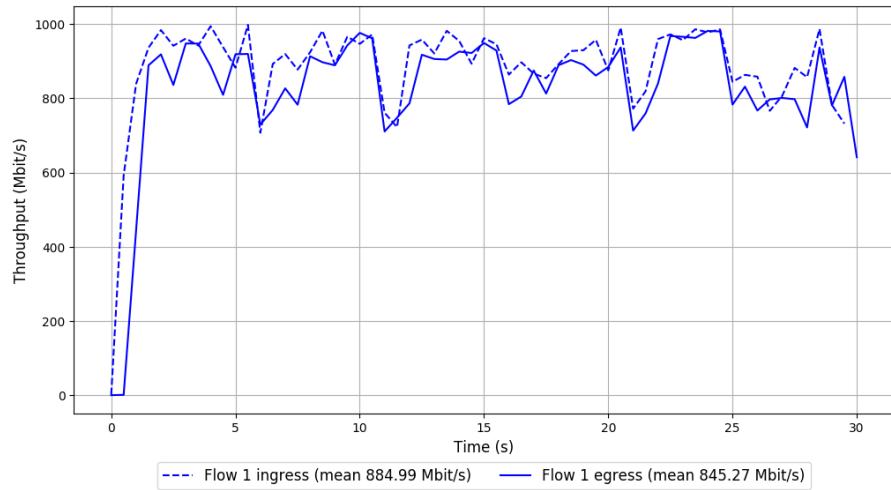


Run 2: Statistics of FillP

```
Start at: 2018-09-08 04:22:42
End at: 2018-09-08 04:23:12
Local clock offset: -0.283 ms
Remote clock offset: -0.188 ms

# Below is generated by plot.py at 2018-09-08 06:28:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 845.27 Mbit/s
95th percentile per-packet one-way delay: 125.575 ms
Loss rate: 4.83%
-- Flow 1:
Average throughput: 845.27 Mbit/s
95th percentile per-packet one-way delay: 125.575 ms
Loss rate: 4.83%
```

Run 2: Report of FillP — Data Link

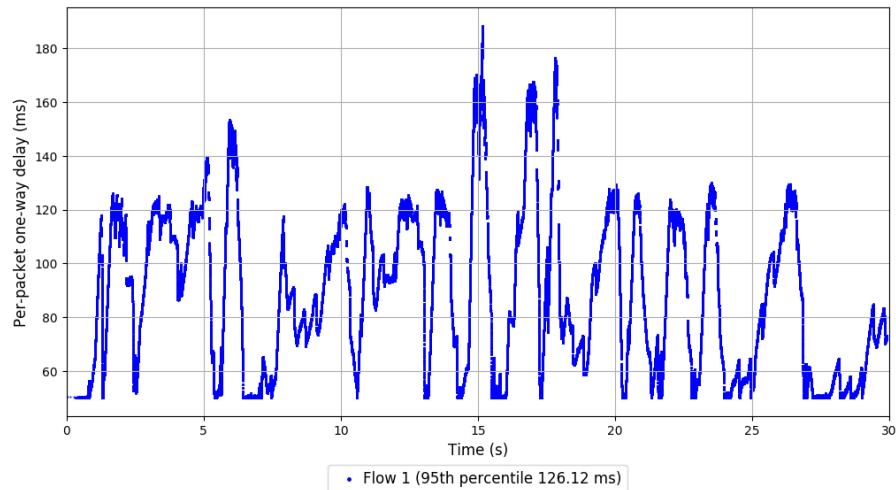
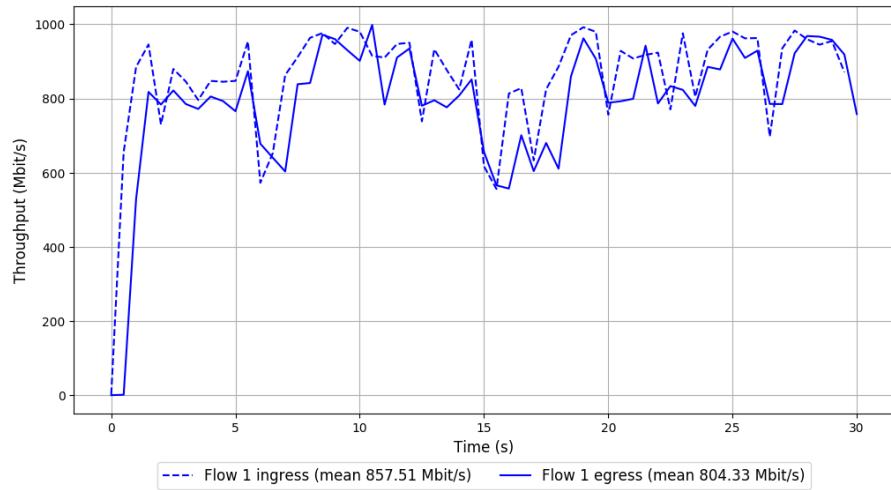


```
Run 3: Statistics of FillP
```

```
Start at: 2018-09-08 04:48:44
End at: 2018-09-08 04:49:14
Local clock offset: -0.012 ms
Remote clock offset: -0.559 ms

# Below is generated by plot.py at 2018-09-08 06:28:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 804.33 Mbit/s
95th percentile per-packet one-way delay: 126.124 ms
Loss rate: 6.53%
-- Flow 1:
Average throughput: 804.33 Mbit/s
95th percentile per-packet one-way delay: 126.124 ms
Loss rate: 6.53%
```

Run 3: Report of FillP — Data Link

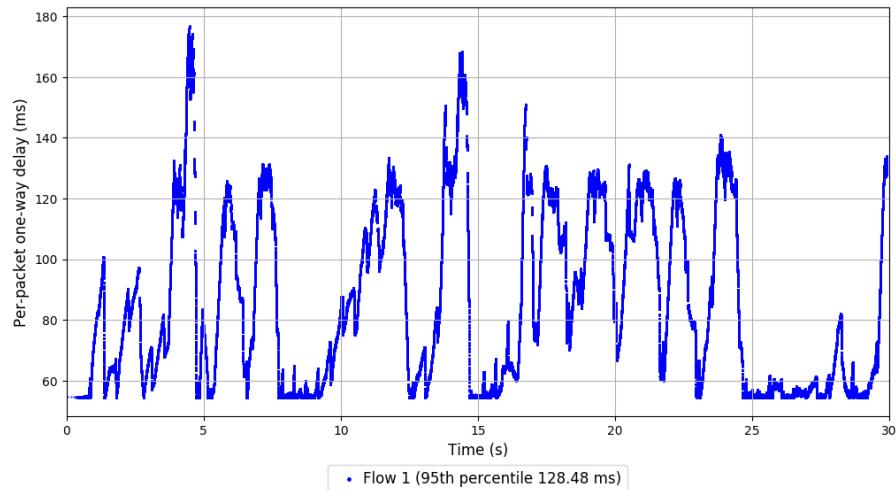
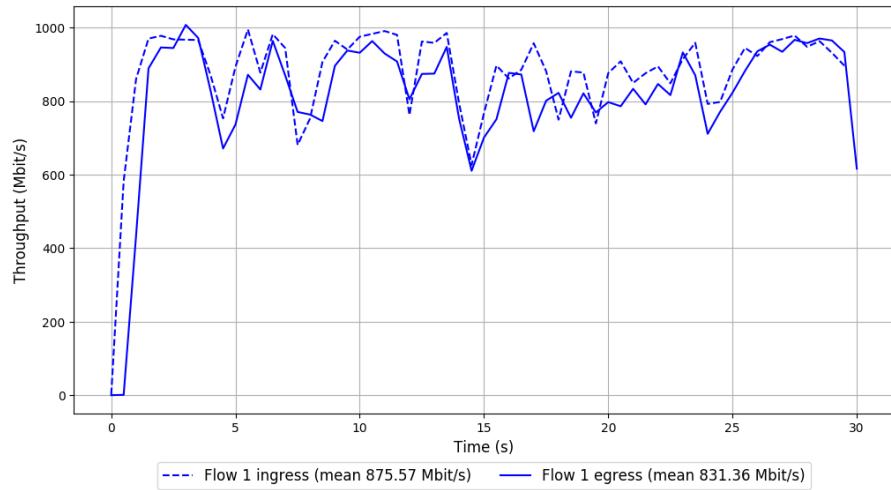


Run 4: Statistics of FillP

```
Start at: 2018-09-08 05:14:51
End at: 2018-09-08 05:15:21
Local clock offset: -0.112 ms
Remote clock offset: -1.267 ms

# Below is generated by plot.py at 2018-09-08 06:29:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 831.36 Mbit/s
95th percentile per-packet one-way delay: 128.477 ms
Loss rate: 5.39%
-- Flow 1:
Average throughput: 831.36 Mbit/s
95th percentile per-packet one-way delay: 128.477 ms
Loss rate: 5.39%
```

Run 4: Report of FillP — Data Link

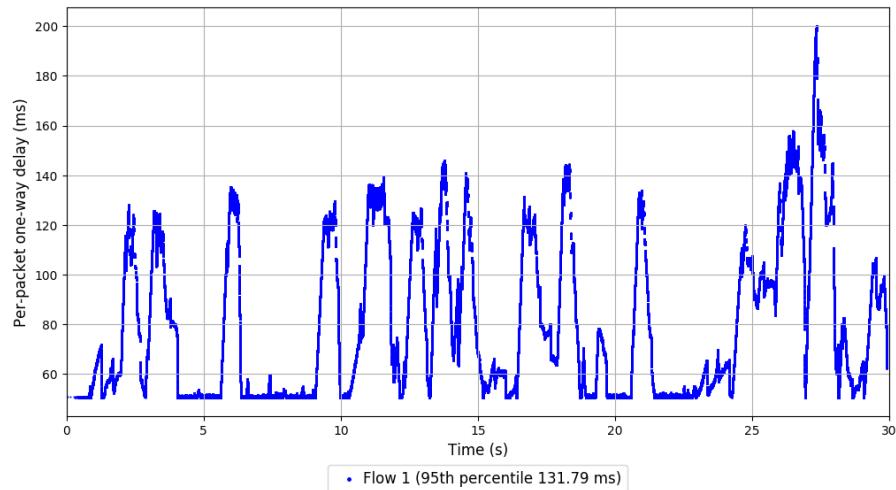
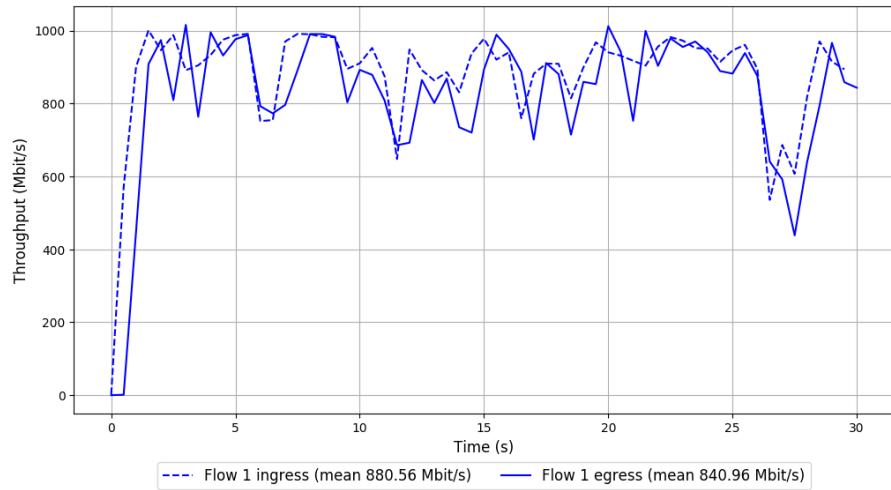


Run 5: Statistics of FillP

```
Start at: 2018-09-08 05:40:51
End at: 2018-09-08 05:41:21
Local clock offset: 0.025 ms
Remote clock offset: -0.549 ms

# Below is generated by plot.py at 2018-09-08 06:29:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 840.96 Mbit/s
95th percentile per-packet one-way delay: 131.788 ms
Loss rate: 4.83%
-- Flow 1:
Average throughput: 840.96 Mbit/s
95th percentile per-packet one-way delay: 131.788 ms
Loss rate: 4.83%
```

Run 5: Report of FillP — Data Link

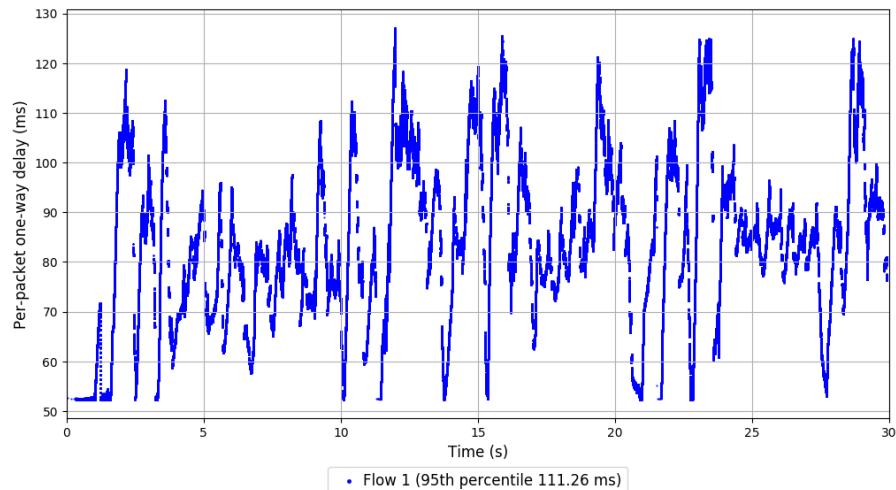
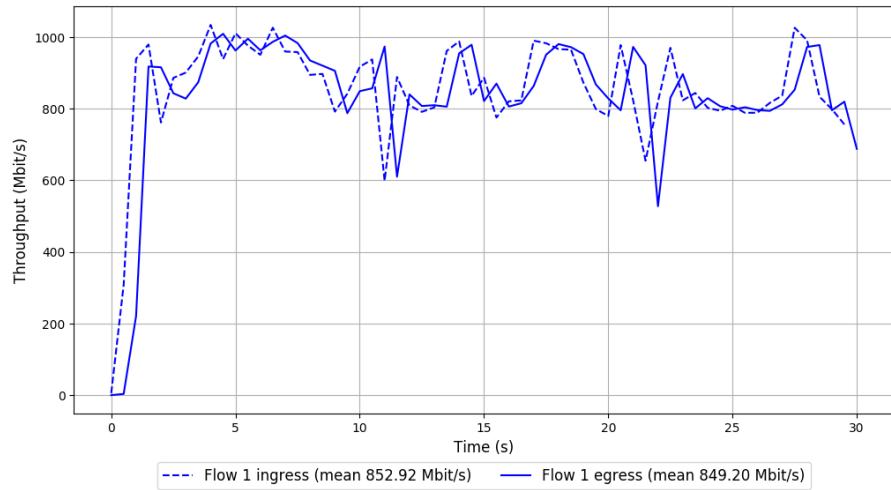


Run 1: Statistics of FillP-Sheep

```
Start at: 2018-09-08 03:46:19
End at: 2018-09-08 03:46:49
Local clock offset: 0.181 ms
Remote clock offset: 1.138 ms

# Below is generated by plot.py at 2018-09-08 06:29:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 849.20 Mbit/s
95th percentile per-packet one-way delay: 111.263 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 849.20 Mbit/s
95th percentile per-packet one-way delay: 111.263 ms
Loss rate: 0.80%
```

Run 1: Report of FillP-Sheep — Data Link

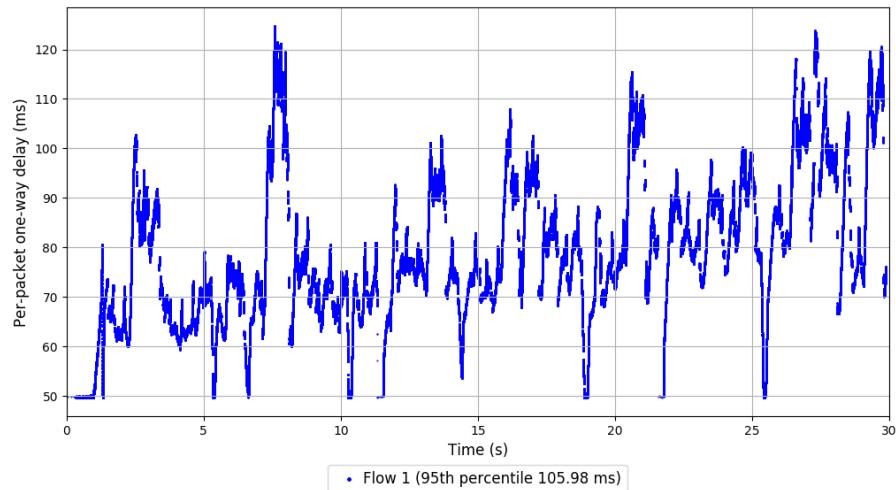
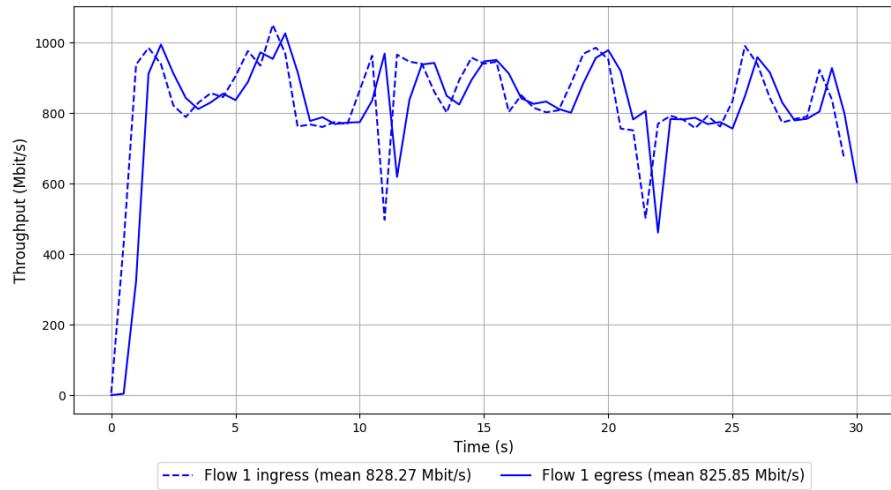


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-09-08 04:12:20
End at: 2018-09-08 04:12:50
Local clock offset: -0.092 ms
Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2018-09-08 06:29:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 825.85 Mbit/s
95th percentile per-packet one-way delay: 105.984 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 825.85 Mbit/s
95th percentile per-packet one-way delay: 105.984 ms
Loss rate: 0.64%
```

Run 2: Report of FillP-Sheep — Data Link

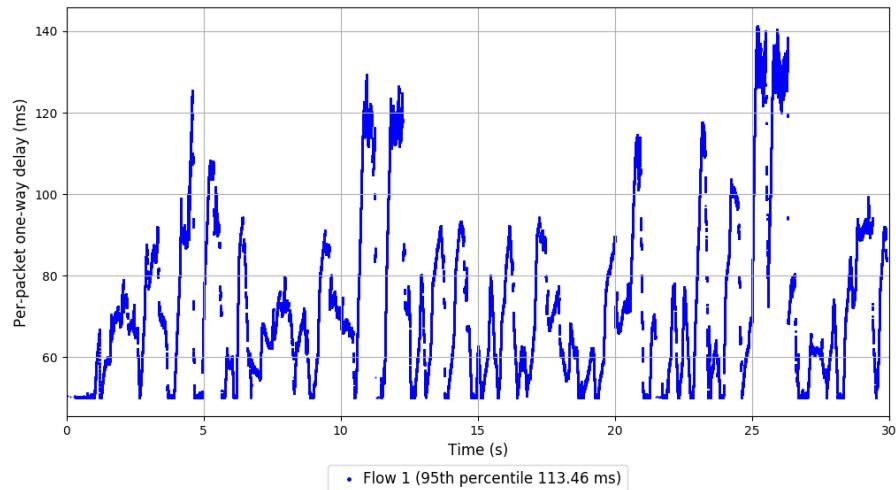
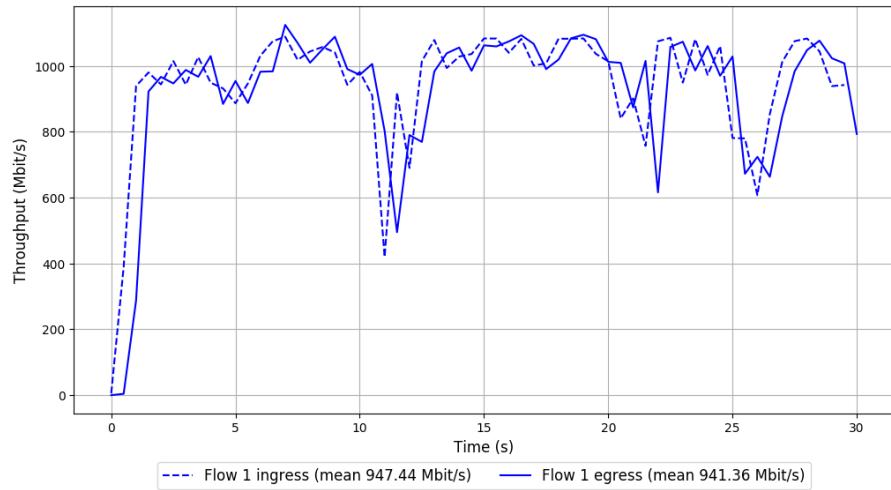


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-09-08 04:38:11
End at: 2018-09-08 04:38:41
Local clock offset: 0.088 ms
Remote clock offset: -0.333 ms

# Below is generated by plot.py at 2018-09-08 06:32:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 941.36 Mbit/s
95th percentile per-packet one-way delay: 113.462 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 941.36 Mbit/s
95th percentile per-packet one-way delay: 113.462 ms
Loss rate: 0.99%
```

Run 3: Report of FillP-Sheep — Data Link

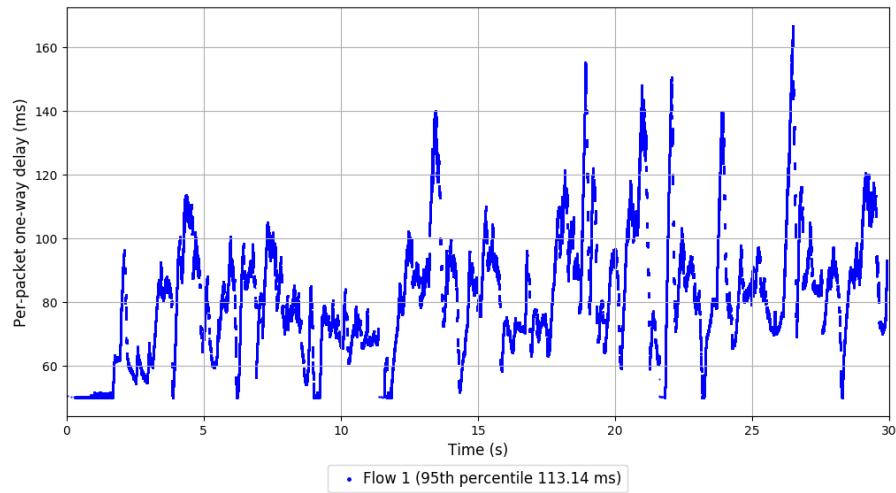
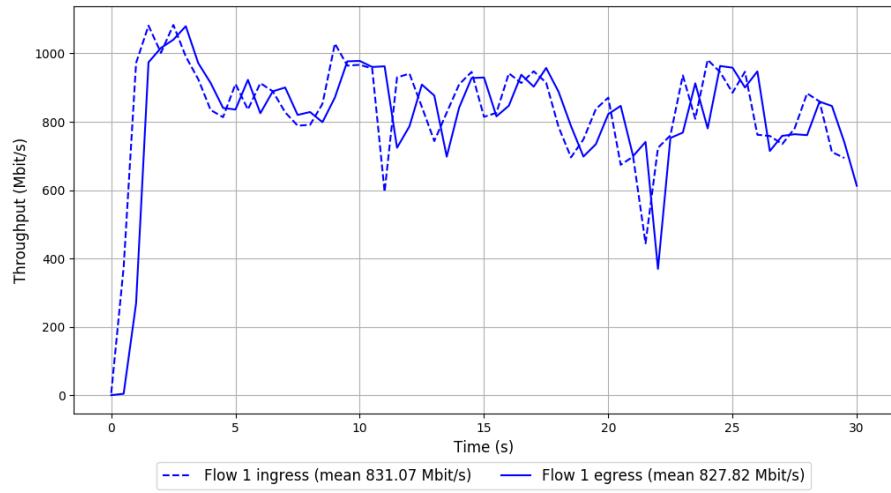


Run 4: Statistics of FillP-Sheep

```
Start at: 2018-09-08 05:04:20
End at: 2018-09-08 05:04:50
Local clock offset: -0.148 ms
Remote clock offset: -0.265 ms

# Below is generated by plot.py at 2018-09-08 06:36:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 827.82 Mbit/s
95th percentile per-packet one-way delay: 113.144 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 827.82 Mbit/s
95th percentile per-packet one-way delay: 113.144 ms
Loss rate: 0.73%
```

Run 4: Report of FillP-Sheep — Data Link

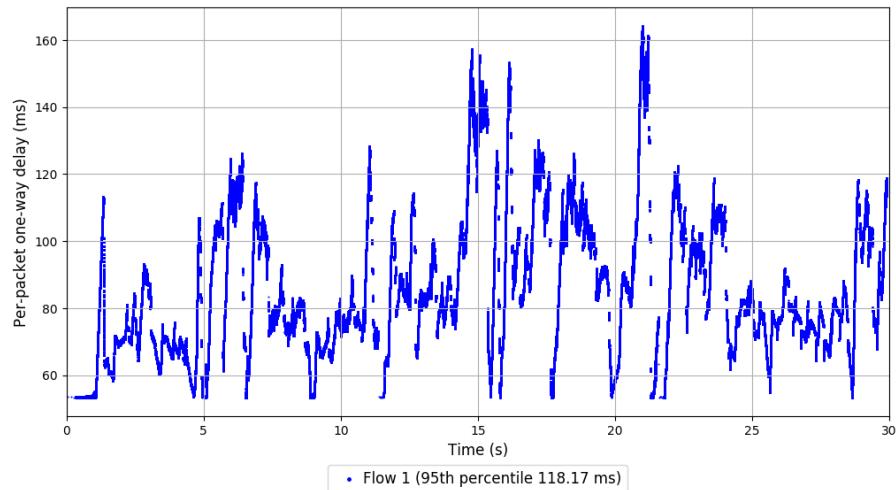
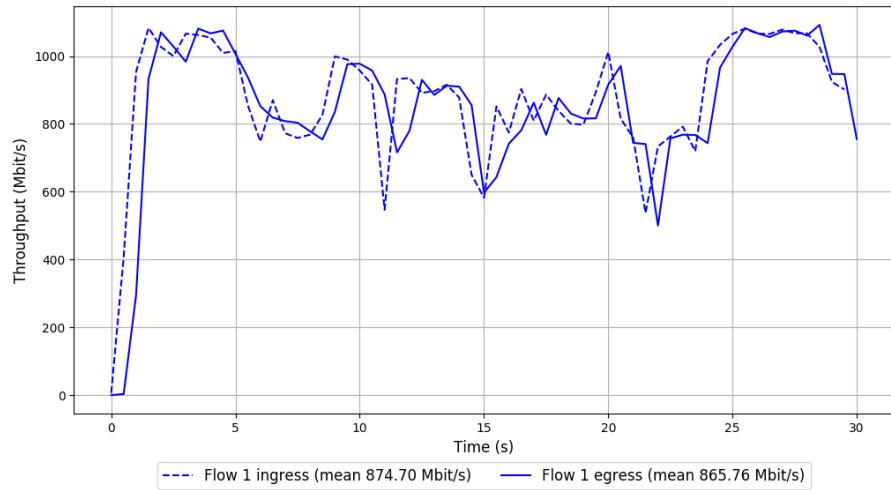


Run 5: Statistics of FillP-Sheep

```
Start at: 2018-09-08 05:30:26
End at: 2018-09-08 05:30:56
Local clock offset: 0.075 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2018-09-08 06:44:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 865.76 Mbit/s
95th percentile per-packet one-way delay: 118.170 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 865.76 Mbit/s
95th percentile per-packet one-way delay: 118.170 ms
Loss rate: 1.36%
```

Run 5: Report of FillP-Sheep — Data Link

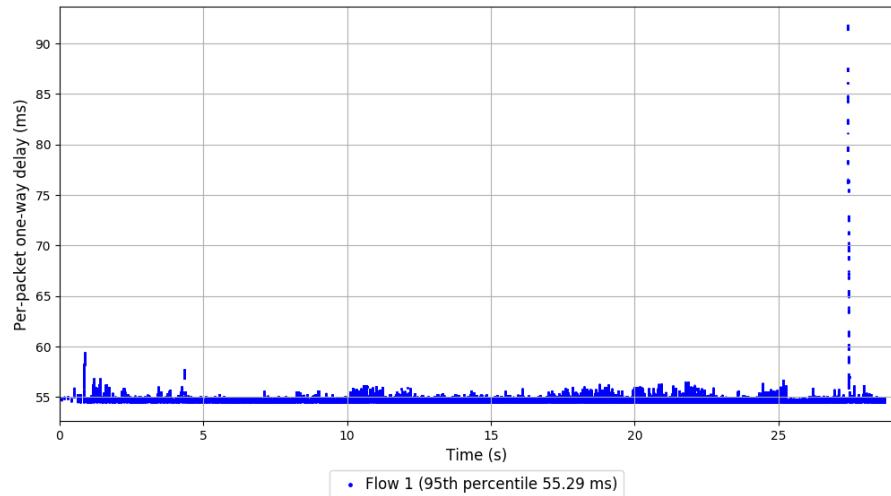
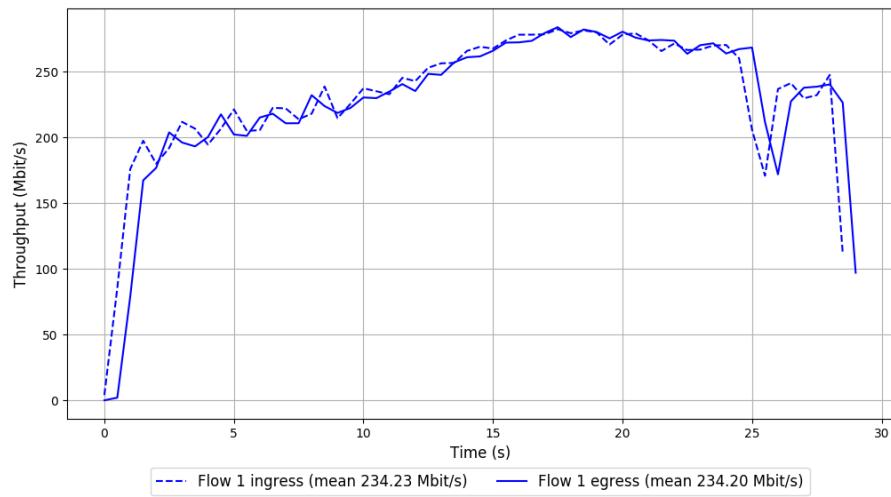


Run 1: Statistics of Indigo

```
Start at: 2018-09-08 03:34:37
End at: 2018-09-08 03:35:07
Local clock offset: 0.022 ms
Remote clock offset: -1.231 ms

# Below is generated by plot.py at 2018-09-08 06:44:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 234.20 Mbit/s
95th percentile per-packet one-way delay: 55.291 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 234.20 Mbit/s
95th percentile per-packet one-way delay: 55.291 ms
Loss rate: 0.38%
```

Run 1: Report of Indigo — Data Link

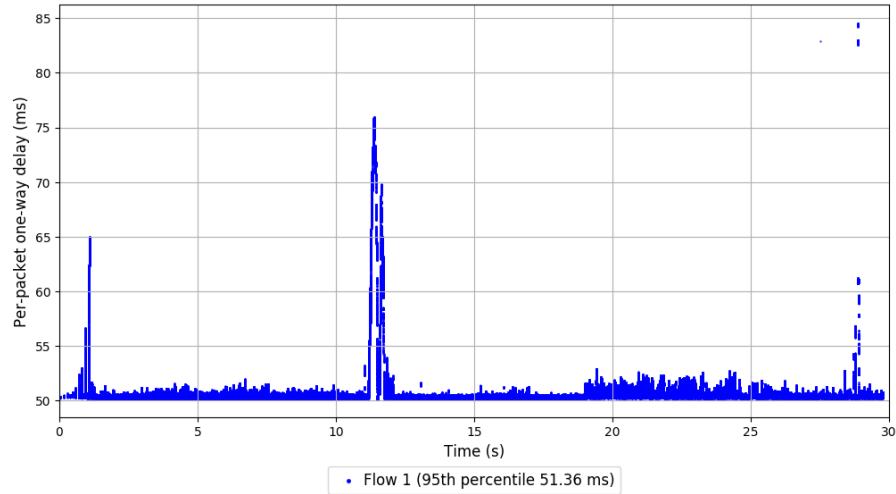
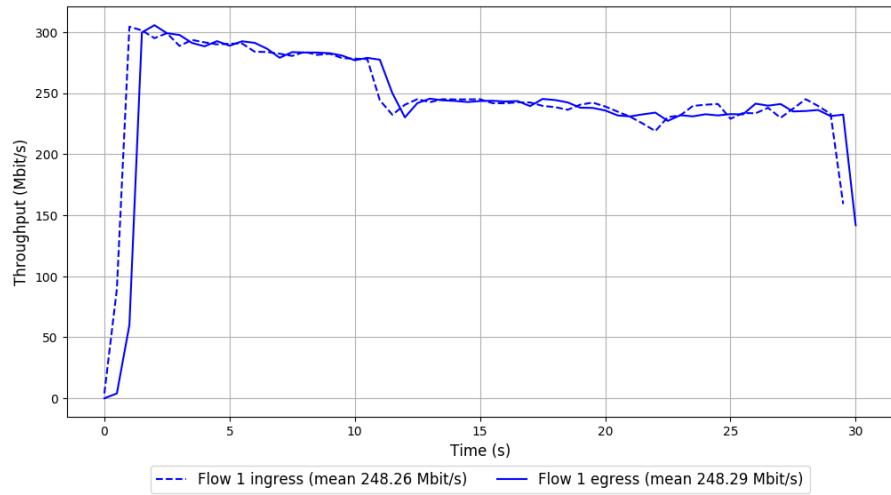


Run 2: Statistics of Indigo

```
Start at: 2018-09-08 04:00:39
End at: 2018-09-08 04:01:09
Local clock offset: 0.152 ms
Remote clock offset: -0.275 ms

# Below is generated by plot.py at 2018-09-08 06:44:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 248.29 Mbit/s
95th percentile per-packet one-way delay: 51.360 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 248.29 Mbit/s
95th percentile per-packet one-way delay: 51.360 ms
Loss rate: 0.33%
```

Run 2: Report of Indigo — Data Link

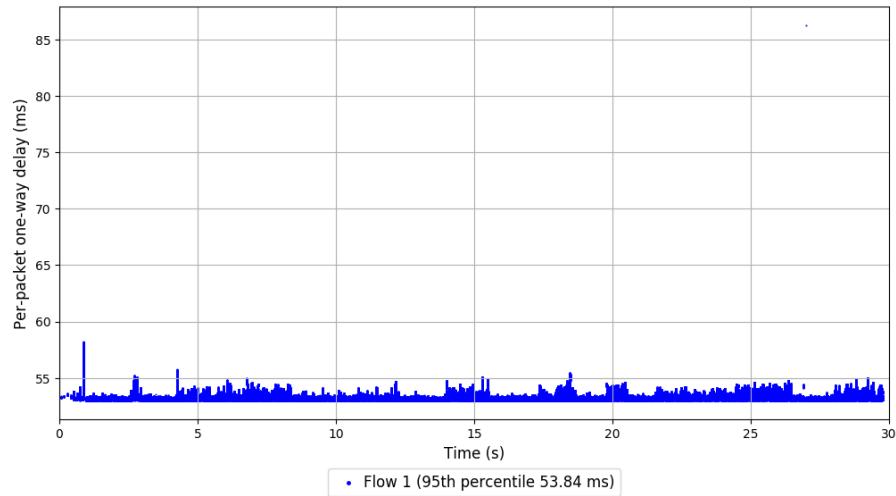
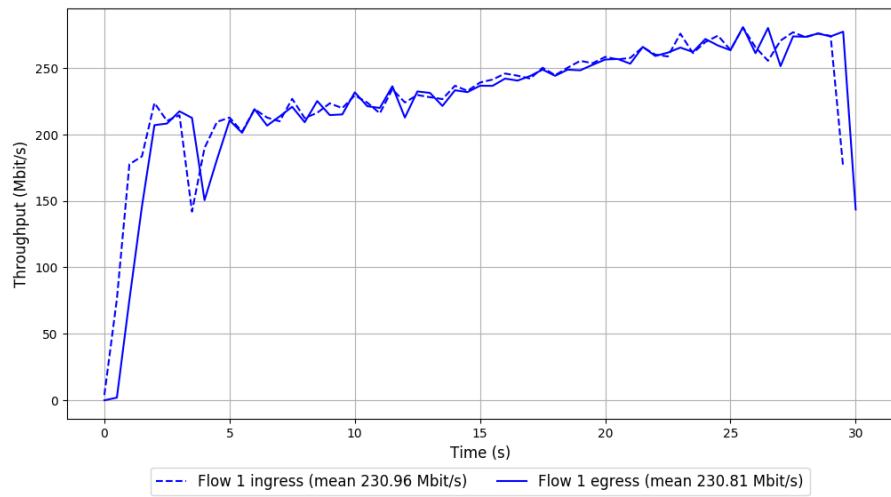


Run 3: Statistics of Indigo

```
Start at: 2018-09-08 04:26:37
End at: 2018-09-08 04:27:07
Local clock offset: 0.081 ms
Remote clock offset: -0.252 ms

# Below is generated by plot.py at 2018-09-08 06:44:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 230.81 Mbit/s
95th percentile per-packet one-way delay: 53.839 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 230.81 Mbit/s
95th percentile per-packet one-way delay: 53.839 ms
Loss rate: 0.42%
```

Run 3: Report of Indigo — Data Link

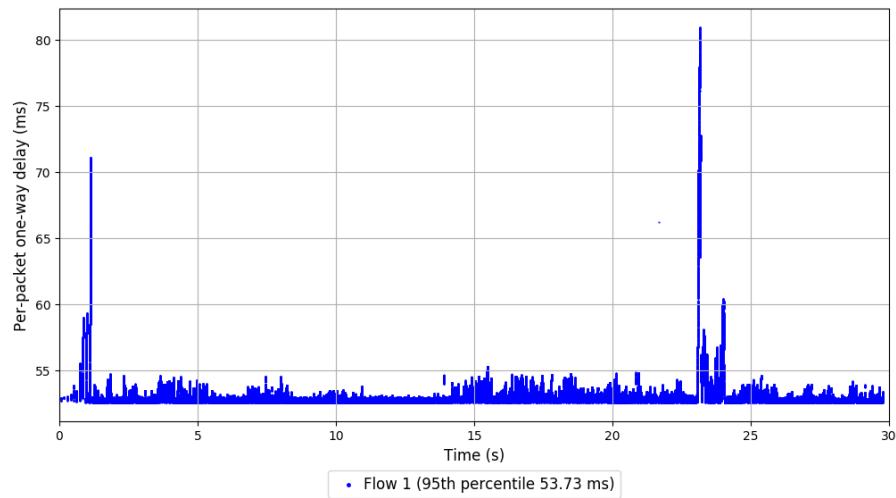
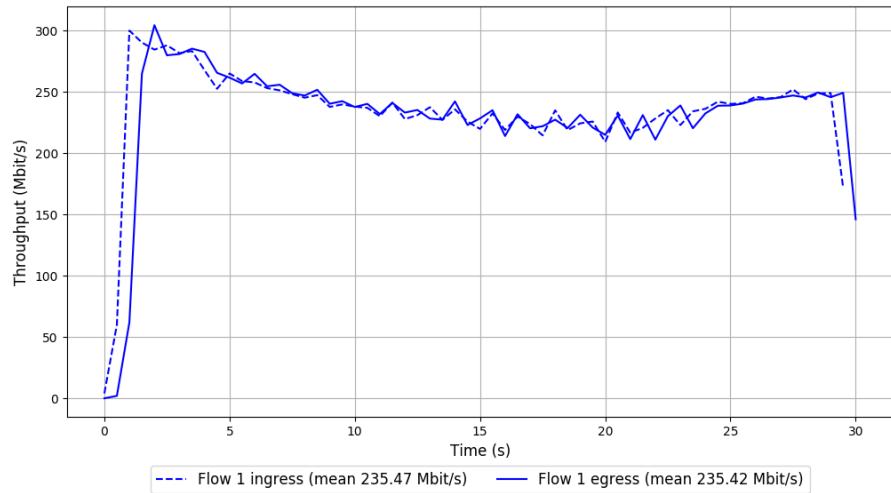


Run 4: Statistics of Indigo

```
Start at: 2018-09-08 04:52:36
End at: 2018-09-08 04:53:06
Local clock offset: -0.105 ms
Remote clock offset: 0.104 ms

# Below is generated by plot.py at 2018-09-08 06:44:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 235.42 Mbit/s
95th percentile per-packet one-way delay: 53.727 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 235.42 Mbit/s
95th percentile per-packet one-way delay: 53.727 ms
Loss rate: 0.38%
```

Run 4: Report of Indigo — Data Link

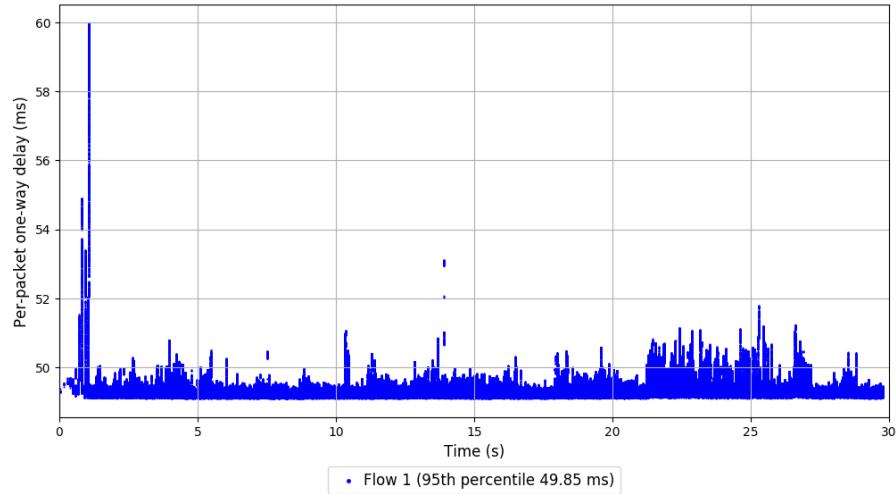
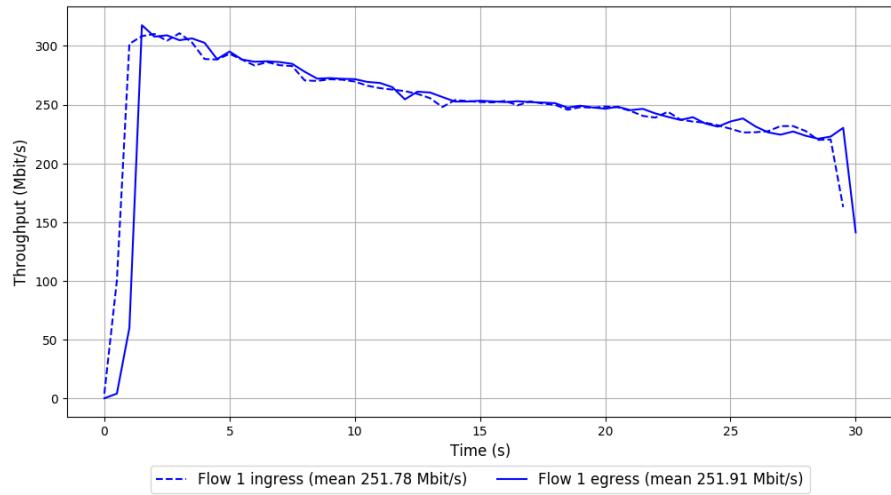


Run 5: Statistics of Indigo

```
Start at: 2018-09-08 05:18:44
End at: 2018-09-08 05:19:14
Local clock offset: -0.183 ms
Remote clock offset: 0.948 ms

# Below is generated by plot.py at 2018-09-08 06:44:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 251.91 Mbit/s
95th percentile per-packet one-way delay: 49.846 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 251.91 Mbit/s
95th percentile per-packet one-way delay: 49.846 ms
Loss rate: 0.30%
```

Run 5: Report of Indigo — Data Link

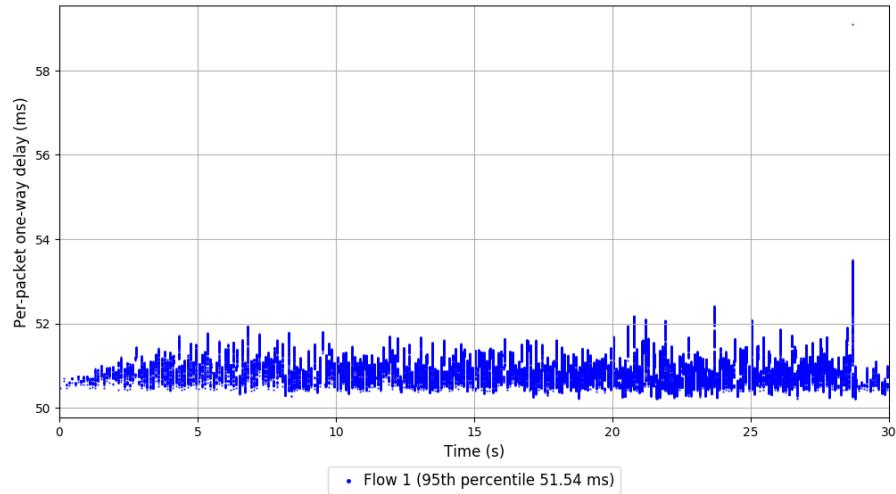
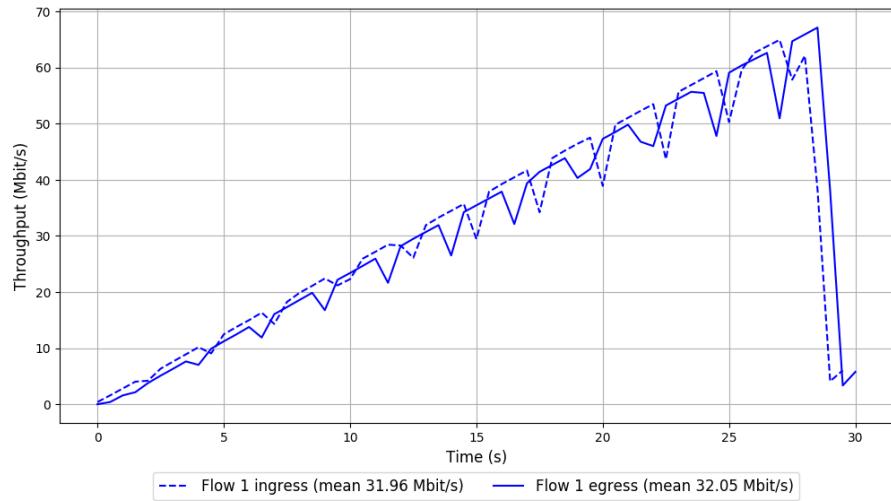


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-09-08 03:37:32
End at: 2018-09-08 03:38:03
Local clock offset: 0.195 ms
Remote clock offset: -0.389 ms

# Below is generated by plot.py at 2018-09-08 06:44:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.05 Mbit/s
95th percentile per-packet one-way delay: 51.537 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 32.05 Mbit/s
95th percentile per-packet one-way delay: 51.537 ms
Loss rate: 0.07%
```

Run 1: Report of LEDBAT — Data Link

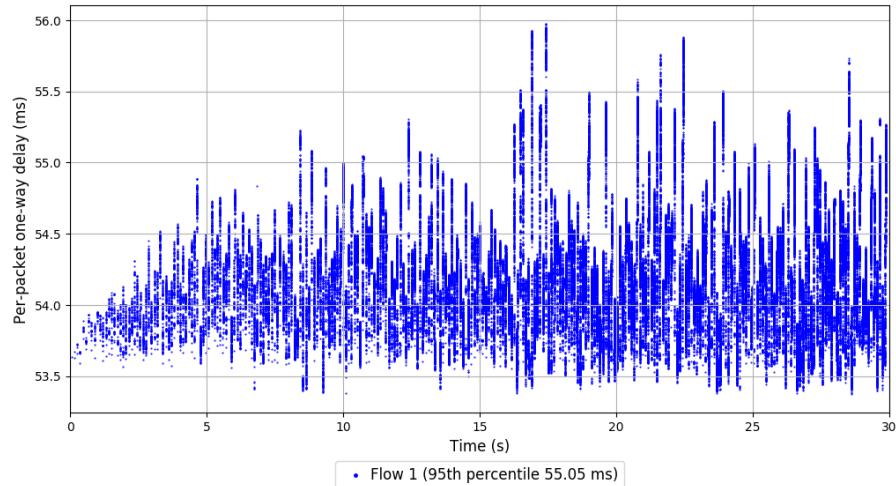
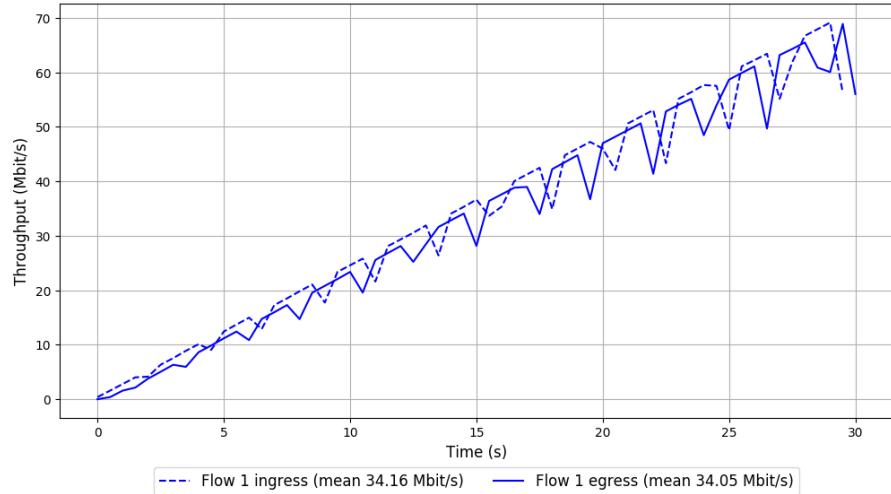


Run 2: Statistics of LEDBAT

```
Start at: 2018-09-08 04:03:37
End at: 2018-09-08 04:04:07
Local clock offset: -0.083 ms
Remote clock offset: -0.217 ms

# Below is generated by plot.py at 2018-09-08 06:44:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.05 Mbit/s
95th percentile per-packet one-way delay: 55.055 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 34.05 Mbit/s
95th percentile per-packet one-way delay: 55.055 ms
Loss rate: 0.69%
```

Run 2: Report of LEDBAT — Data Link

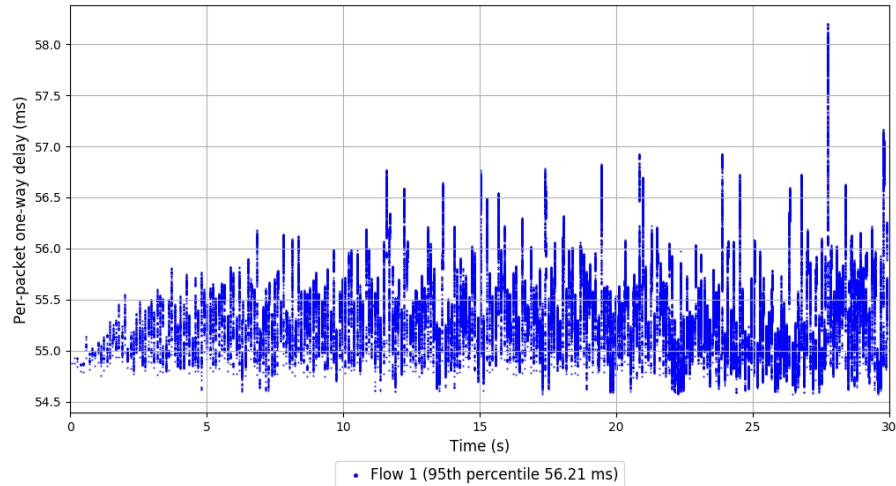
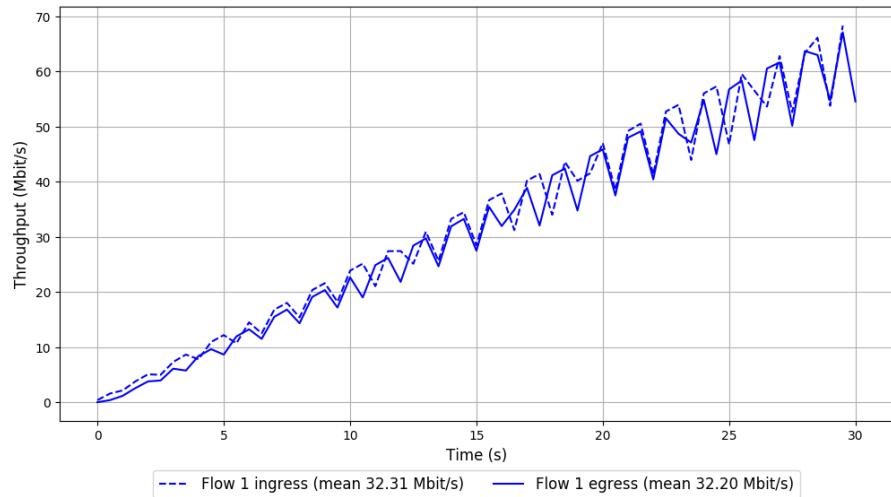


Run 3: Statistics of LEDBAT

```
Start at: 2018-09-08 04:29:31
End at: 2018-09-08 04:30:01
Local clock offset: 0.06 ms
Remote clock offset: -1.265 ms

# Below is generated by plot.py at 2018-09-08 06:44:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.20 Mbit/s
95th percentile per-packet one-way delay: 56.212 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 32.20 Mbit/s
95th percentile per-packet one-way delay: 56.212 ms
Loss rate: 0.71%
```

Run 3: Report of LEDBAT — Data Link

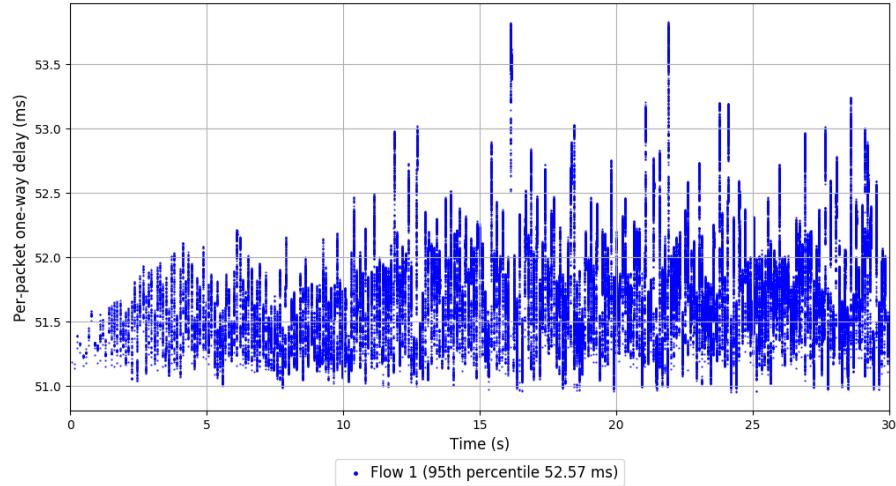
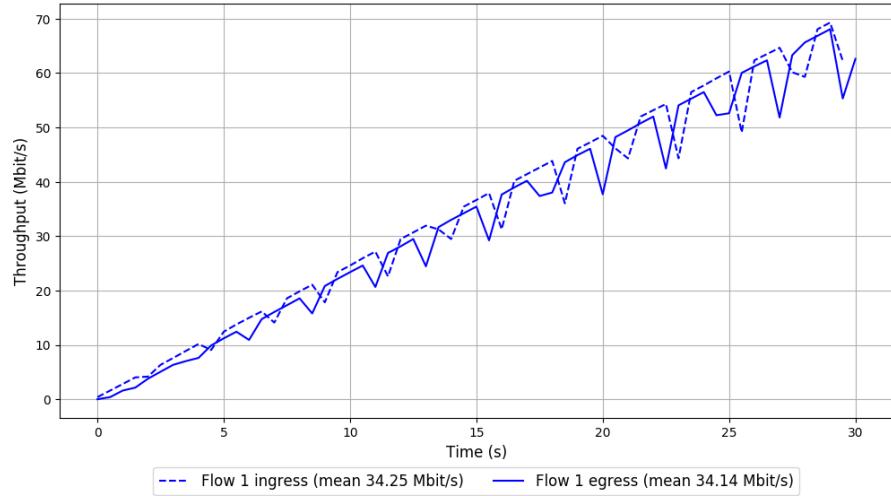


Run 4: Statistics of LEDBAT

```
Start at: 2018-09-08 04:55:32
End at: 2018-09-08 04:56:02
Local clock offset: -0.014 ms
Remote clock offset: -0.756 ms

# Below is generated by plot.py at 2018-09-08 06:44:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.14 Mbit/s
95th percentile per-packet one-way delay: 52.568 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 34.14 Mbit/s
95th percentile per-packet one-way delay: 52.568 ms
Loss rate: 0.66%
```

Run 4: Report of LEDBAT — Data Link

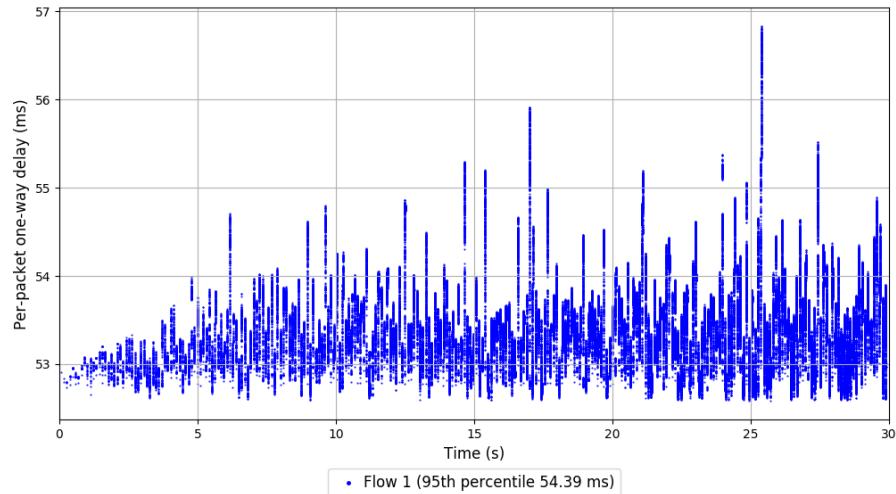
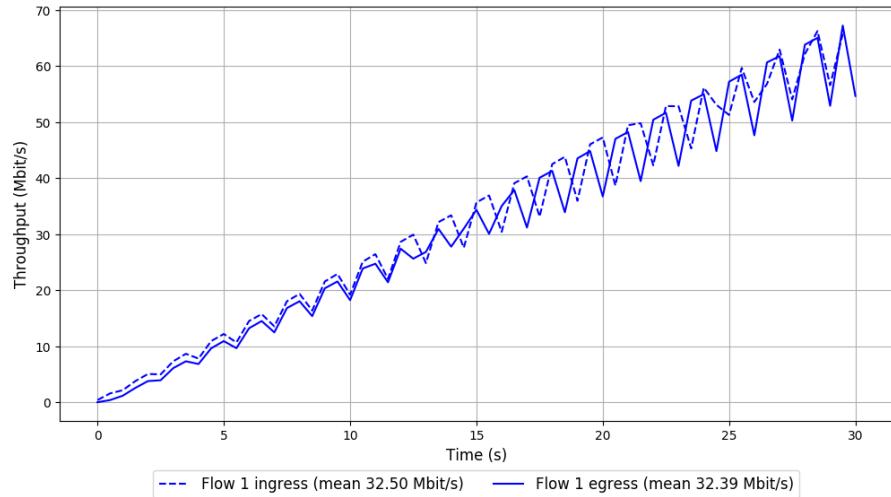


Run 5: Statistics of LEDBAT

```
Start at: 2018-09-08 05:21:41
End at: 2018-09-08 05:22:11
Local clock offset: -0.024 ms
Remote clock offset: 0.596 ms

# Below is generated by plot.py at 2018-09-08 06:44:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.39 Mbit/s
95th percentile per-packet one-way delay: 54.386 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 32.39 Mbit/s
95th percentile per-packet one-way delay: 54.386 ms
Loss rate: 0.71%
```

Run 5: Report of LEDBAT — Data Link

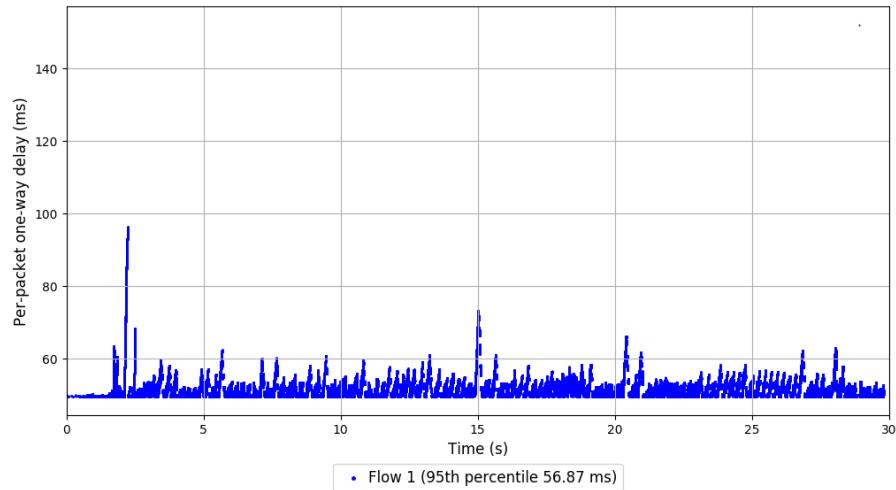
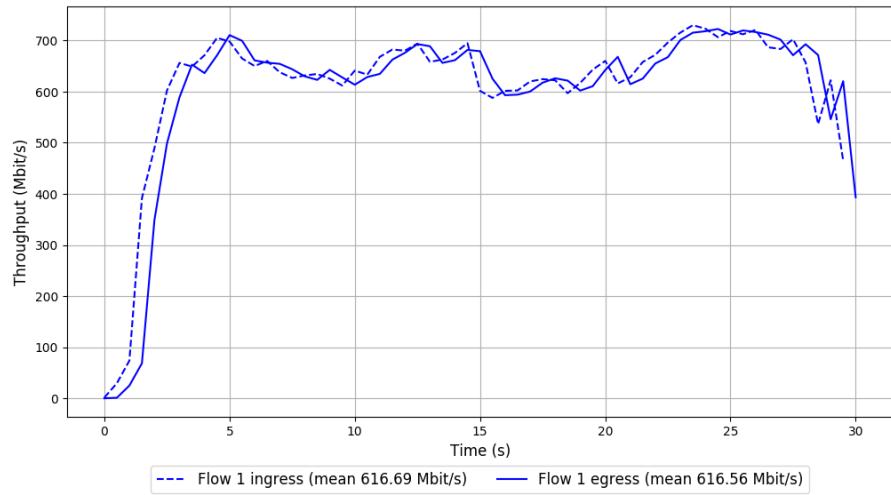


Run 1: Statistics of Indigo-Muses

```
Start at: 2018-09-08 03:52:04
End at: 2018-09-08 03:52:34
Local clock offset: 0.012 ms
Remote clock offset: 0.454 ms

# Below is generated by plot.py at 2018-09-08 06:44:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 616.56 Mbit/s
95th percentile per-packet one-way delay: 56.873 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 616.56 Mbit/s
95th percentile per-packet one-way delay: 56.873 ms
Loss rate: 0.37%
```

Run 1: Report of Indigo-Muses — Data Link

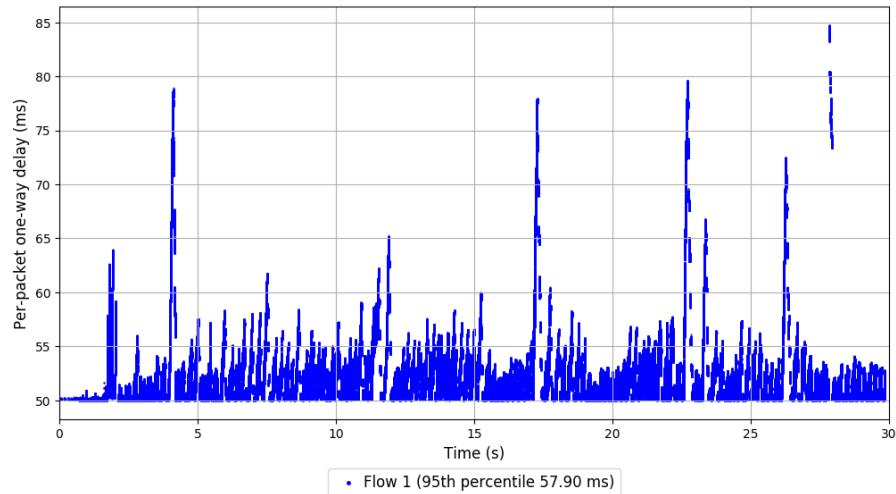
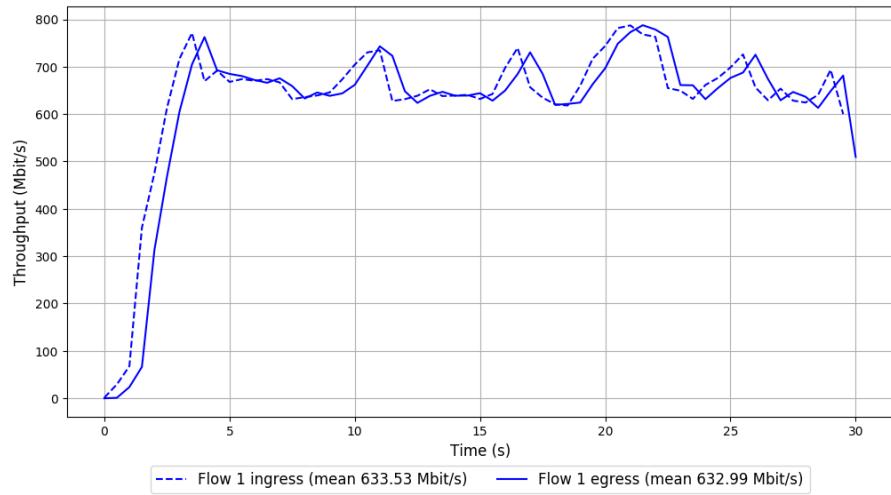


Run 2: Statistics of Indigo-Muses

```
Start at: 2018-09-08 04:18:01
End at: 2018-09-08 04:18:31
Local clock offset: -0.058 ms
Remote clock offset: -0.193 ms

# Below is generated by plot.py at 2018-09-08 06:44:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 632.99 Mbit/s
95th percentile per-packet one-way delay: 57.901 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 632.99 Mbit/s
95th percentile per-packet one-way delay: 57.901 ms
Loss rate: 0.43%
```

Run 2: Report of Indigo-Muses — Data Link

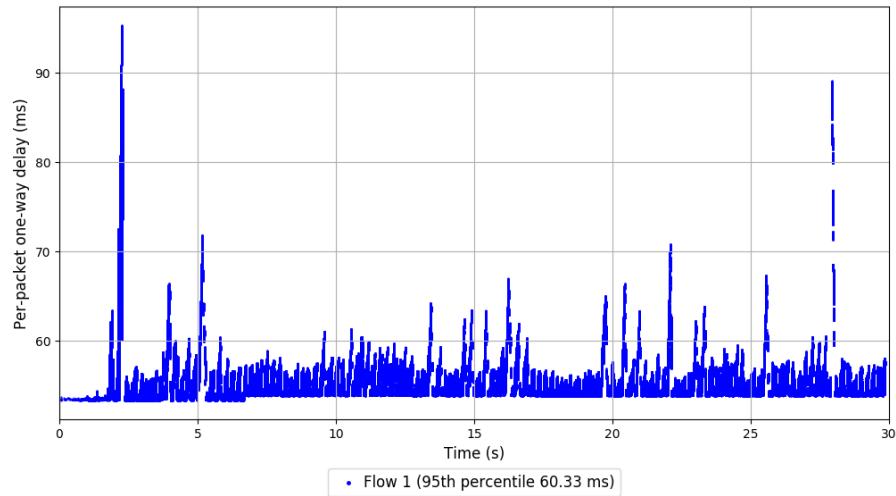
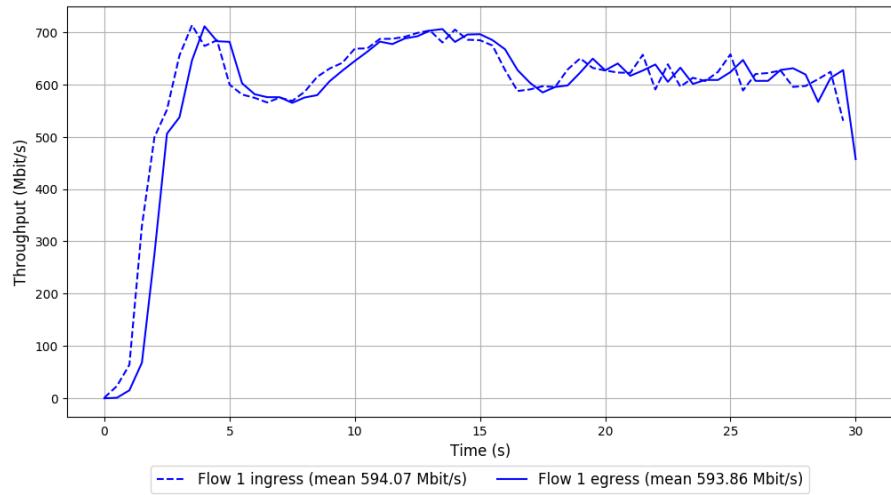


Run 3: Statistics of Indigo-Muses

```
Start at: 2018-09-08 04:44:02
End at: 2018-09-08 04:44:32
Local clock offset: -0.019 ms
Remote clock offset: -0.307 ms

# Below is generated by plot.py at 2018-09-08 06:44:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 593.86 Mbit/s
95th percentile per-packet one-way delay: 60.332 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 593.86 Mbit/s
95th percentile per-packet one-way delay: 60.332 ms
Loss rate: 0.39%
```

Run 3: Report of Indigo-Muses — Data Link

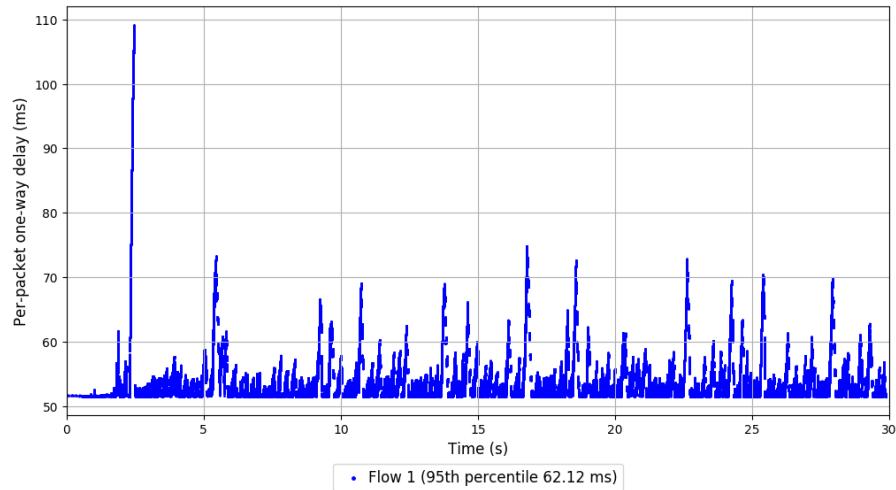
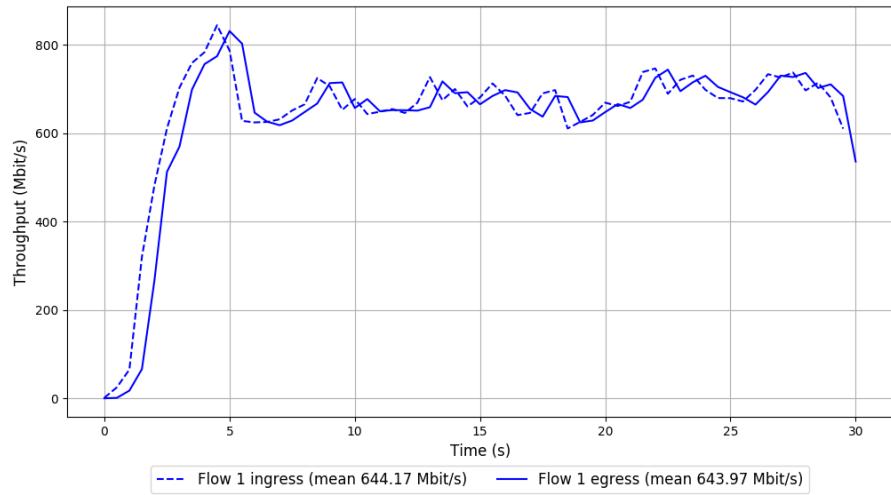


Run 4: Statistics of Indigo-Muses

```
Start at: 2018-09-08 05:10:05
End at: 2018-09-08 05:10:35
Local clock offset: 0.006 ms
Remote clock offset: -1.083 ms

# Below is generated by plot.py at 2018-09-08 06:45:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 643.97 Mbit/s
95th percentile per-packet one-way delay: 62.116 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 643.97 Mbit/s
95th percentile per-packet one-way delay: 62.116 ms
Loss rate: 0.38%
```

Run 4: Report of Indigo-Muses — Data Link

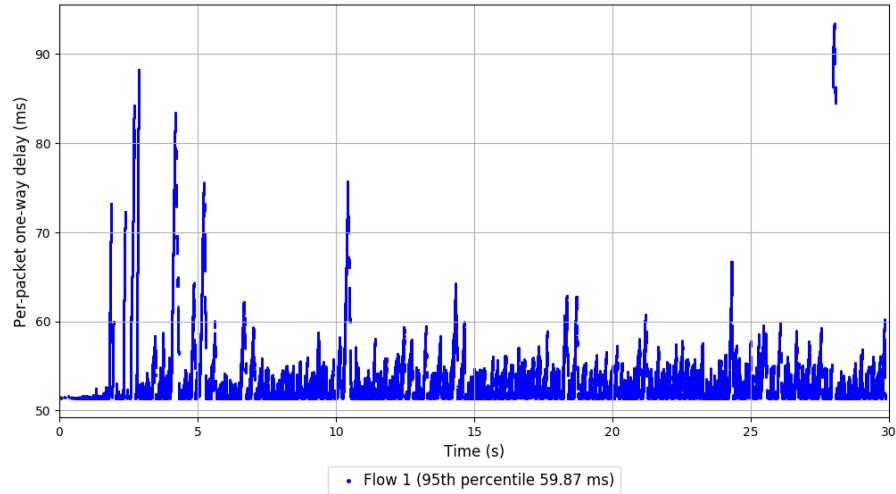
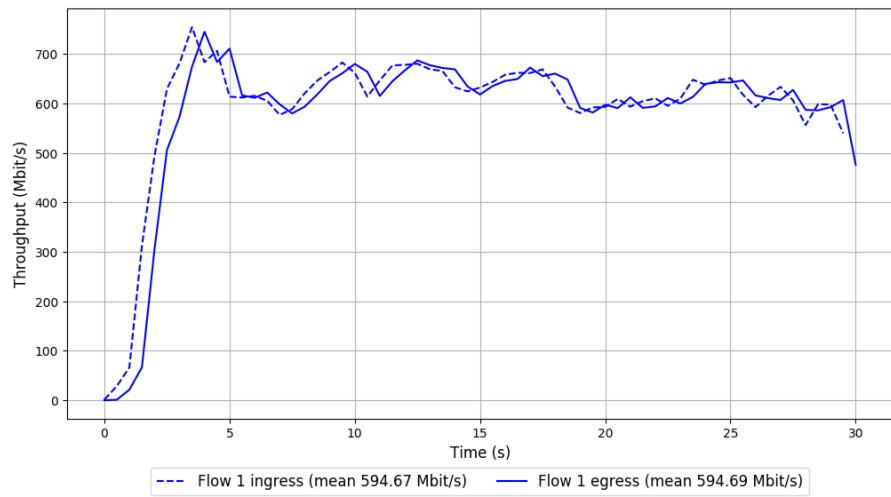


Run 5: Statistics of Indigo-Muses

```
Start at: 2018-09-08 05:36:09
End at: 2018-09-08 05:36:39
Local clock offset: 0.104 ms
Remote clock offset: -1.399 ms

# Below is generated by plot.py at 2018-09-08 06:45:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 594.69 Mbit/s
95th percentile per-packet one-way delay: 59.869 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 594.69 Mbit/s
95th percentile per-packet one-way delay: 59.869 ms
Loss rate: 0.34%
```

Run 5: Report of Indigo-Muses — Data Link

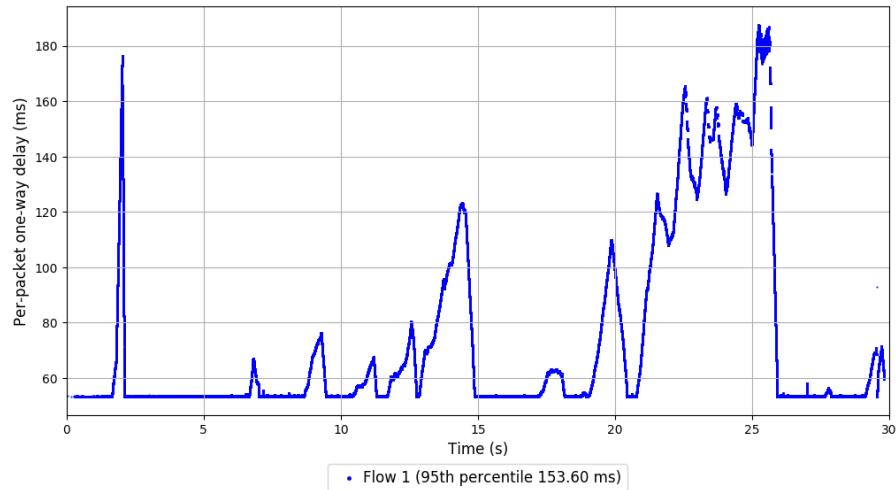
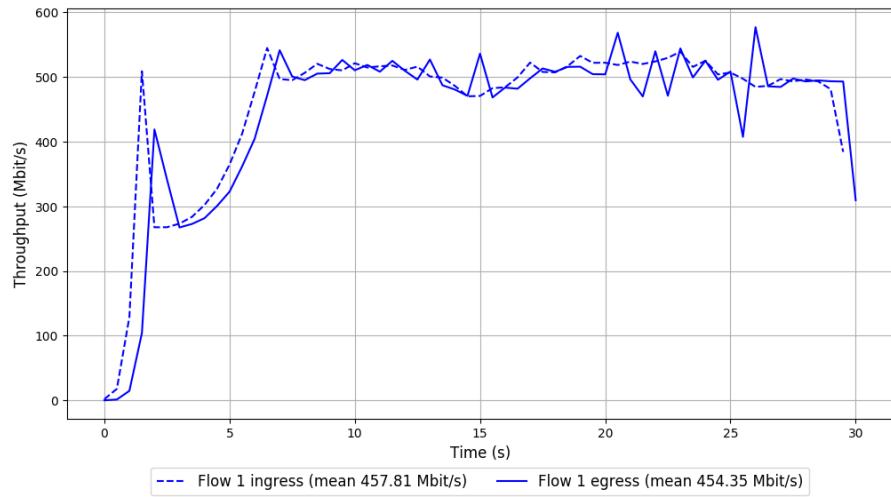


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-09-08 03:55:11
End at: 2018-09-08 03:55:41
Local clock offset: -0.048 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2018-09-08 06:49:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 454.35 Mbit/s
95th percentile per-packet one-way delay: 153.600 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 454.35 Mbit/s
95th percentile per-packet one-way delay: 153.600 ms
Loss rate: 1.11%
```

Run 1: Report of PCC-Allegro — Data Link

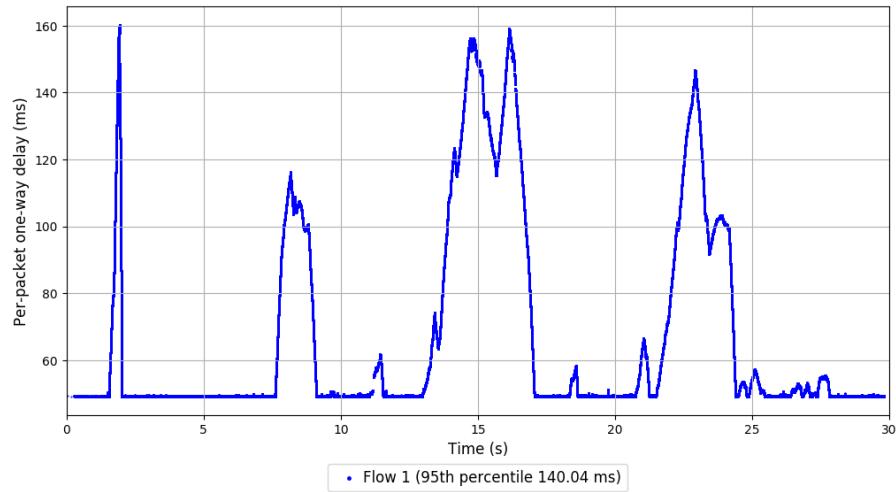
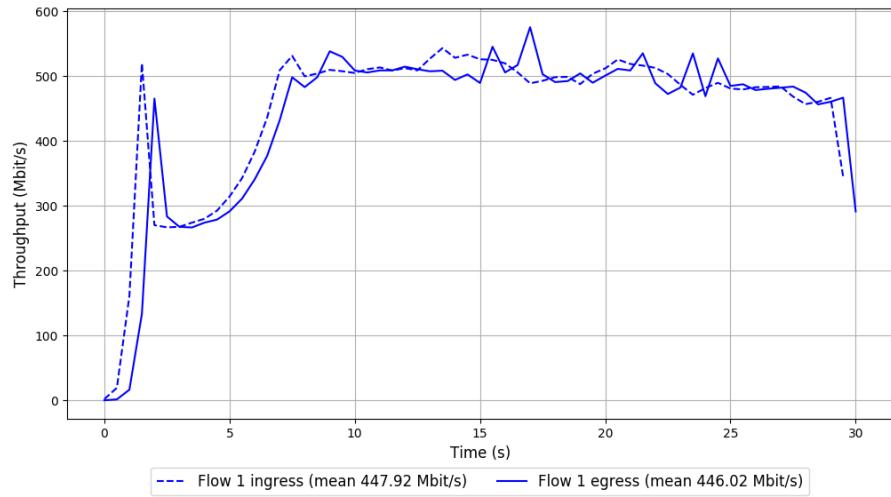


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-09-08 04:21:09
End at: 2018-09-08 04:21:39
Local clock offset: 0.085 ms
Remote clock offset: 0.604 ms

# Below is generated by plot.py at 2018-09-08 06:49:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 446.02 Mbit/s
95th percentile per-packet one-way delay: 140.037 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 446.02 Mbit/s
95th percentile per-packet one-way delay: 140.037 ms
Loss rate: 0.77%
```

Run 2: Report of PCC-Allegro — Data Link

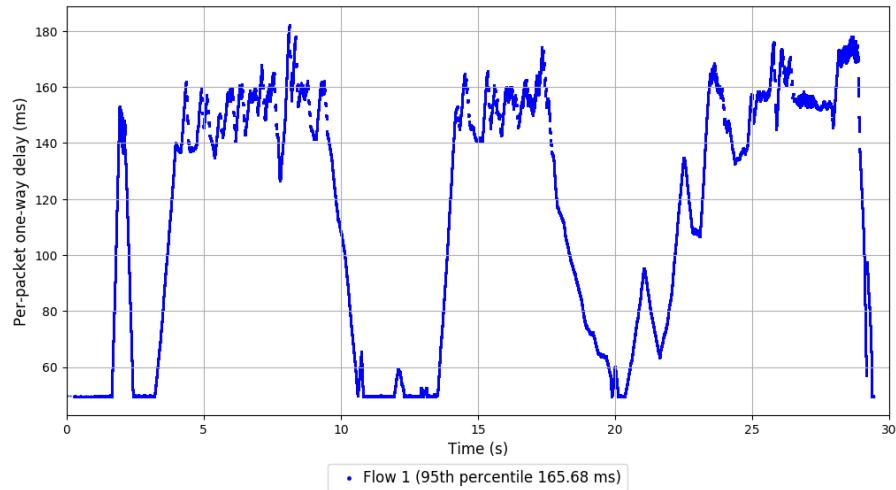
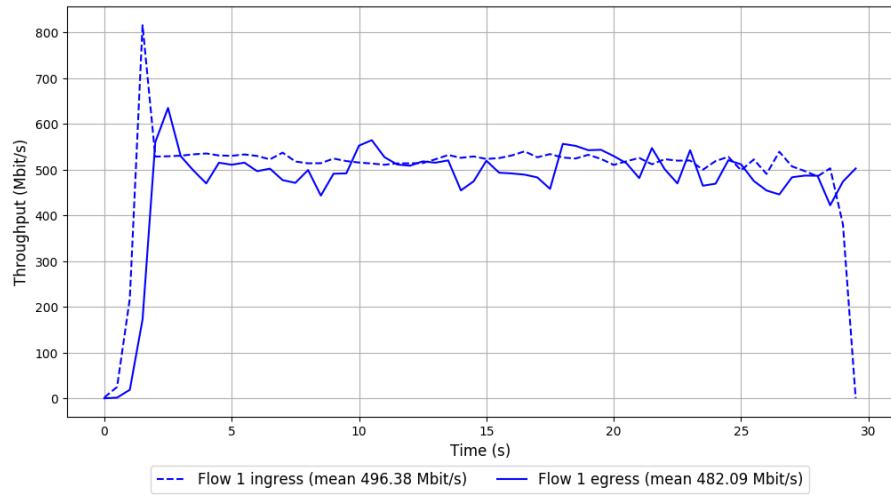


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-09-08 04:47:08
End at: 2018-09-08 04:47:38
Local clock offset: 0.006 ms
Remote clock offset: 0.233 ms

# Below is generated by plot.py at 2018-09-08 06:59:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 482.09 Mbit/s
95th percentile per-packet one-way delay: 165.683 ms
Loss rate: 4.09%
-- Flow 1:
Average throughput: 482.09 Mbit/s
95th percentile per-packet one-way delay: 165.683 ms
Loss rate: 4.09%
```

Run 3: Report of PCC-Allegro — Data Link

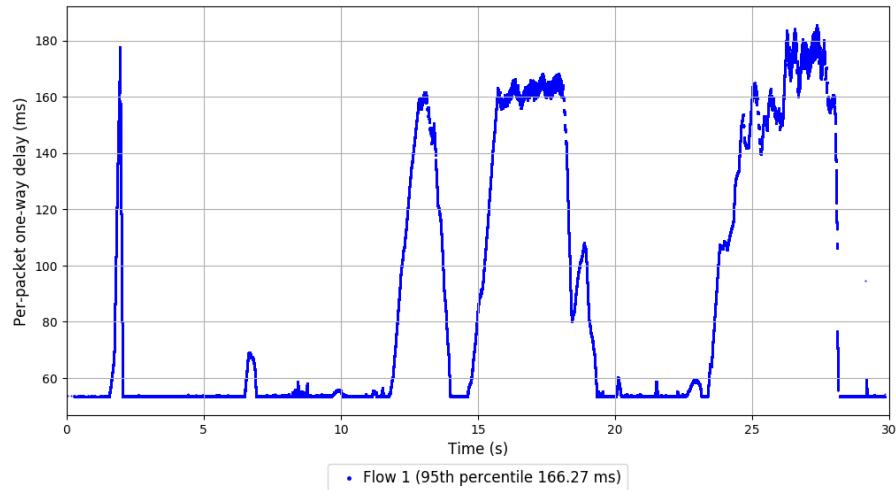
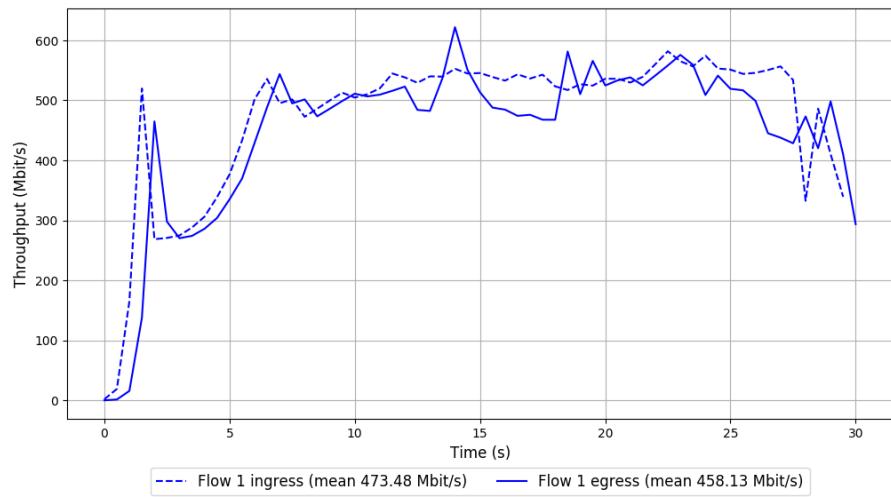


Run 4: Statistics of PCC-Allegro

```
Start at: 2018-09-08 05:13:15
End at: 2018-09-08 05:13:45
Local clock offset: 0.044 ms
Remote clock offset: -0.605 ms

# Below is generated by plot.py at 2018-09-08 06:59:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 458.13 Mbit/s
95th percentile per-packet one-way delay: 166.268 ms
Loss rate: 3.59%
-- Flow 1:
Average throughput: 458.13 Mbit/s
95th percentile per-packet one-way delay: 166.268 ms
Loss rate: 3.59%
```

Run 4: Report of PCC-Allegro — Data Link

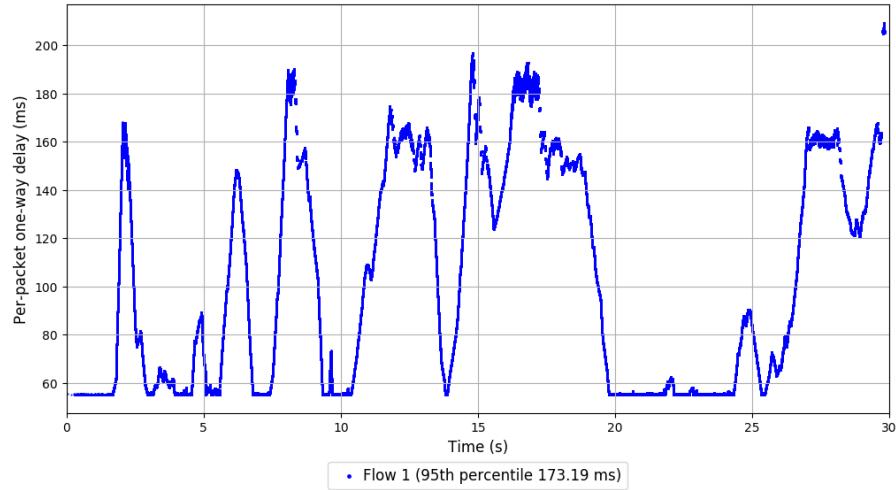
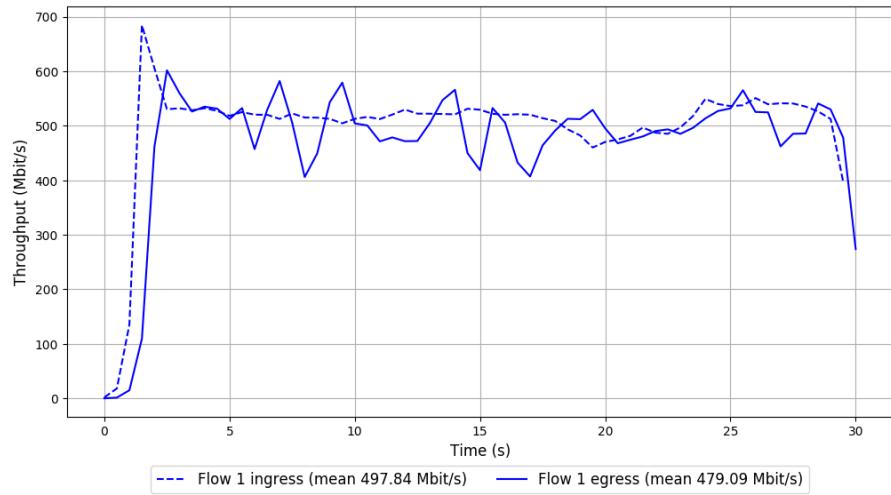


Run 5: Statistics of PCC-Allegro

```
Start at: 2018-09-08 05:39:15
End at: 2018-09-08 05:39:45
Local clock offset: 0.232 ms
Remote clock offset: -1.439 ms

# Below is generated by plot.py at 2018-09-08 06:59:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 479.09 Mbit/s
95th percentile per-packet one-way delay: 173.187 ms
Loss rate: 4.11%
-- Flow 1:
Average throughput: 479.09 Mbit/s
95th percentile per-packet one-way delay: 173.187 ms
Loss rate: 4.11%
```

Run 5: Report of PCC-Allegro — Data Link

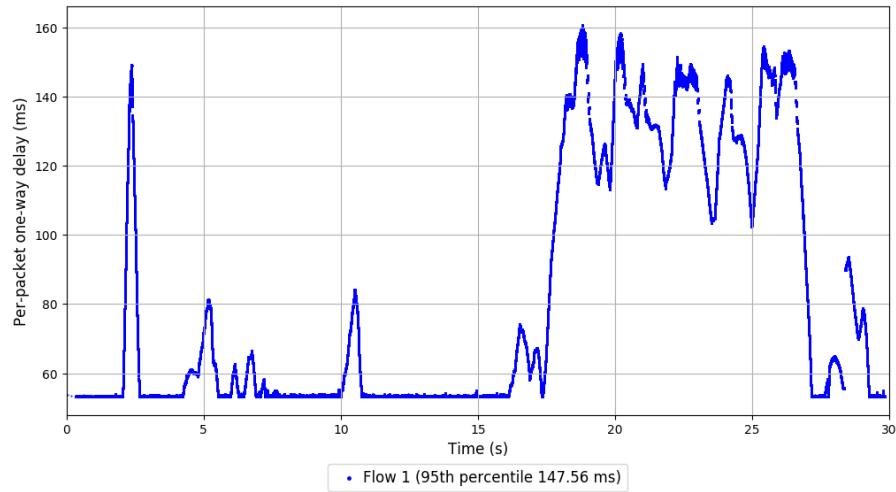
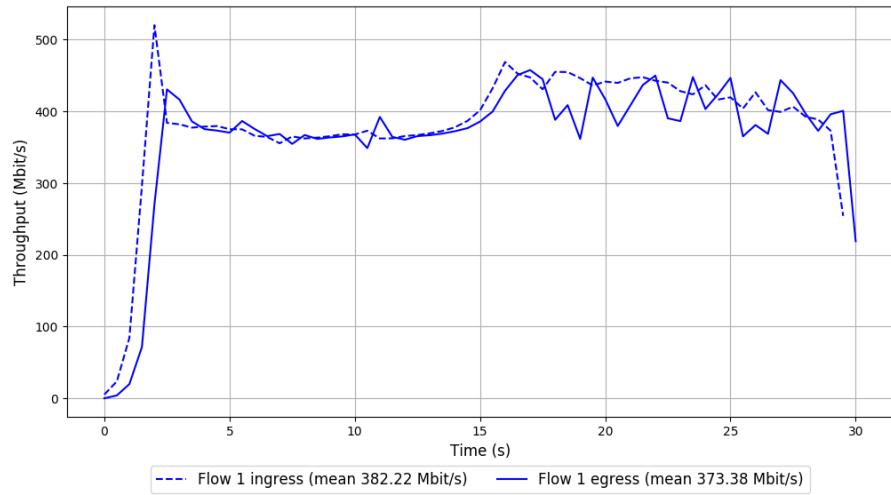


```
Run 1: Statistics of PCC-Expr
```

```
Start at: 2018-09-08 03:41:53
End at: 2018-09-08 03:42:23
Local clock offset: 0.046 ms
Remote clock offset: 0.034 ms

# Below is generated by plot.py at 2018-09-08 06:59:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 373.38 Mbit/s
95th percentile per-packet one-way delay: 147.564 ms
Loss rate: 2.67%
-- Flow 1:
Average throughput: 373.38 Mbit/s
95th percentile per-packet one-way delay: 147.564 ms
Loss rate: 2.67%
```

Run 1: Report of PCC-Expr — Data Link

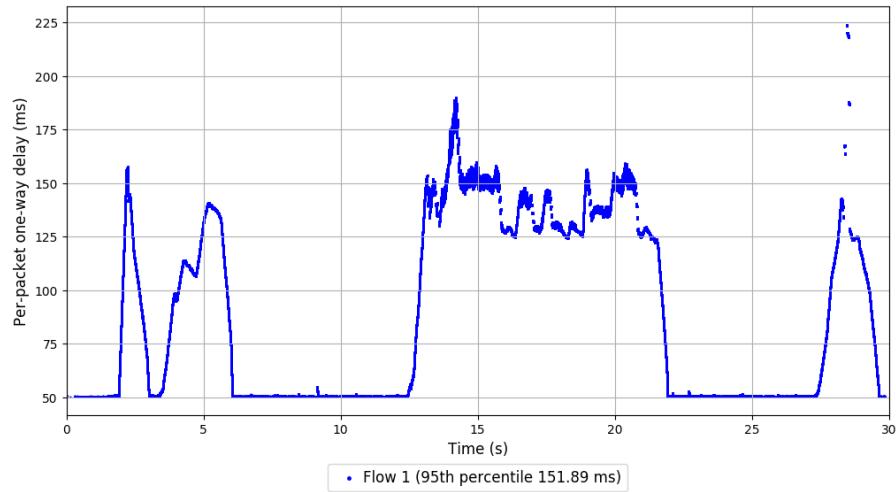
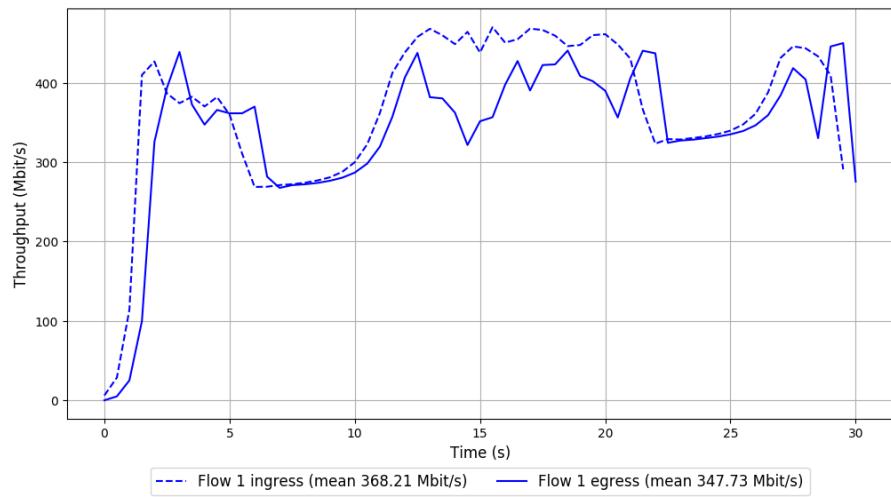


Run 2: Statistics of PCC-Expr

```
Start at: 2018-09-08 04:07:54
End at: 2018-09-08 04:08:24
Local clock offset: 0.16 ms
Remote clock offset: -0.23 ms

# Below is generated by plot.py at 2018-09-08 06:59:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 347.73 Mbit/s
95th percentile per-packet one-way delay: 151.888 ms
Loss rate: 5.91%
-- Flow 1:
Average throughput: 347.73 Mbit/s
95th percentile per-packet one-way delay: 151.888 ms
Loss rate: 5.91%
```

Run 2: Report of PCC-Expr — Data Link

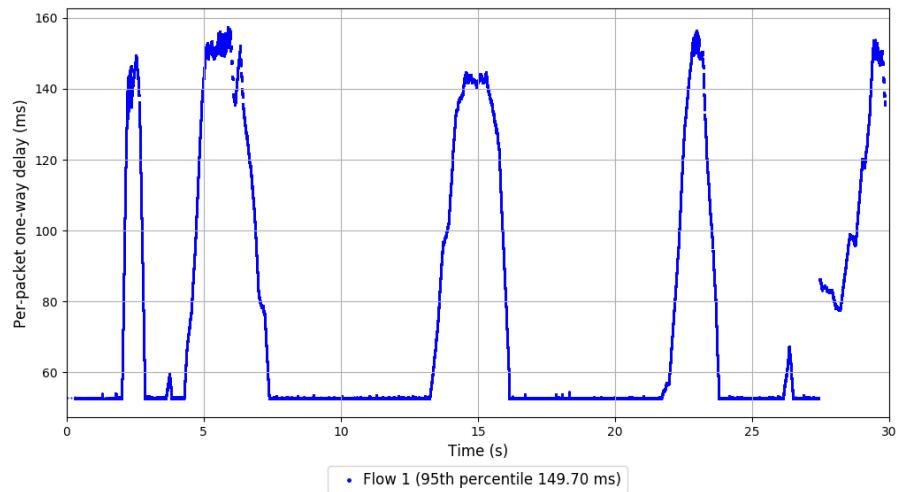
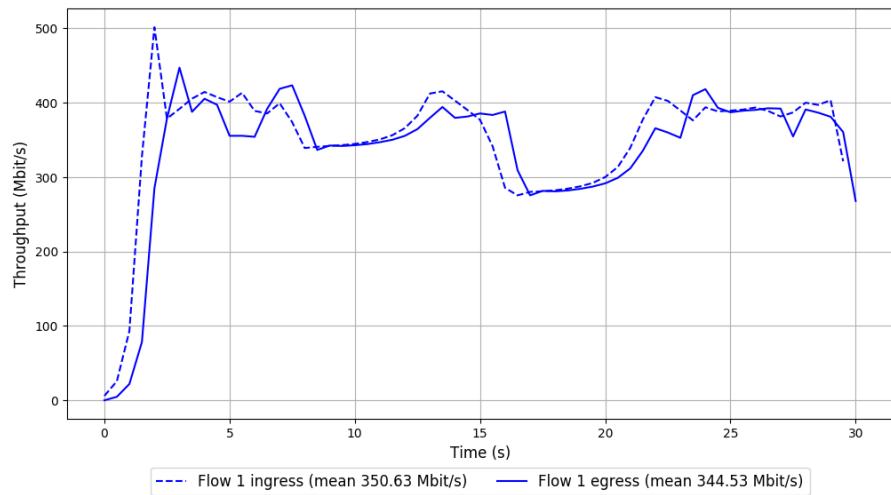


Run 3: Statistics of PCC-Expr

```
Start at: 2018-09-08 04:33:50
End at: 2018-09-08 04:34:20
Local clock offset: -0.048 ms
Remote clock offset: 0.16 ms

# Below is generated by plot.py at 2018-09-08 06:59:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 344.53 Mbit/s
95th percentile per-packet one-way delay: 149.702 ms
Loss rate: 2.09%
-- Flow 1:
Average throughput: 344.53 Mbit/s
95th percentile per-packet one-way delay: 149.702 ms
Loss rate: 2.09%
```

Run 3: Report of PCC-Expr — Data Link

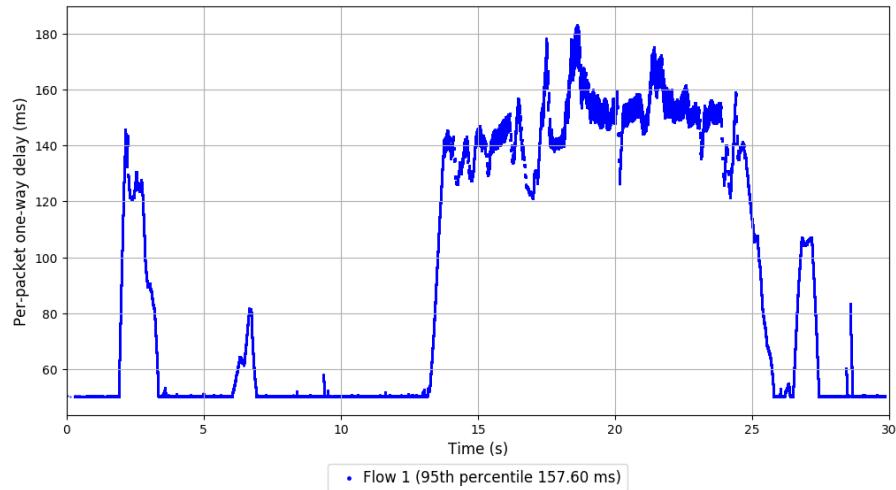
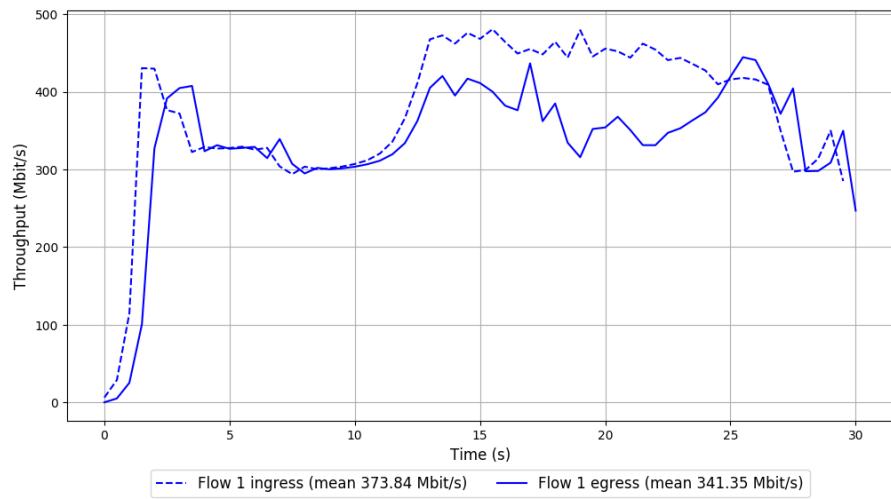


Run 4: Statistics of PCC-Expr

```
Start at: 2018-09-08 04:59:55
End at: 2018-09-08 05:00:25
Local clock offset: 0.065 ms
Remote clock offset: -0.168 ms

# Below is generated by plot.py at 2018-09-08 07:00:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 341.35 Mbit/s
95th percentile per-packet one-way delay: 157.602 ms
Loss rate: 9.01%
-- Flow 1:
Average throughput: 341.35 Mbit/s
95th percentile per-packet one-way delay: 157.602 ms
Loss rate: 9.01%
```

Run 4: Report of PCC-Expr — Data Link

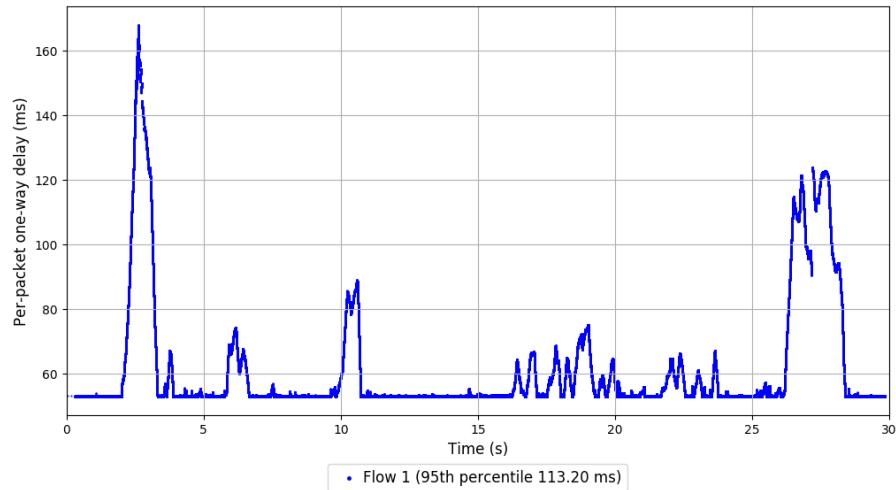
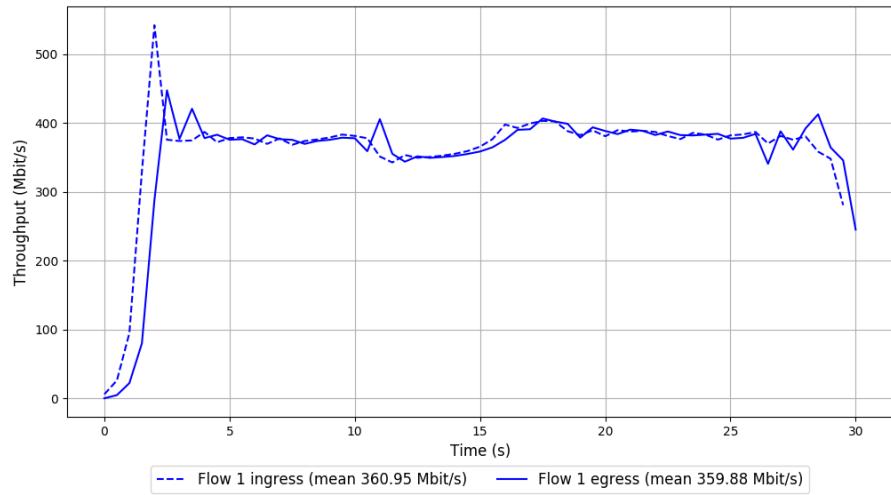


Run 5: Statistics of PCC-Expr

```
Start at: 2018-09-08 05:26:03
End at: 2018-09-08 05:26:33
Local clock offset: 0.028 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 359.88 Mbit/s
95th percentile per-packet one-way delay: 113.196 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 359.88 Mbit/s
95th percentile per-packet one-way delay: 113.196 ms
Loss rate: 0.65%
```

Run 5: Report of PCC-Expr — Data Link

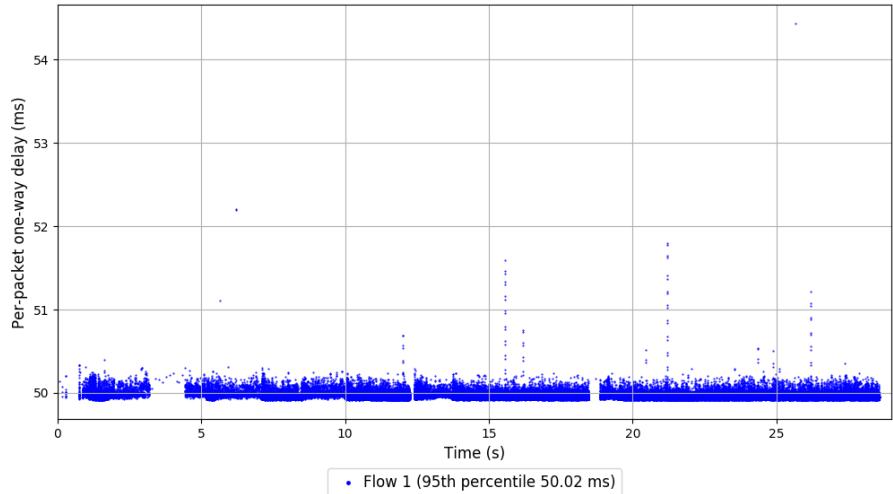
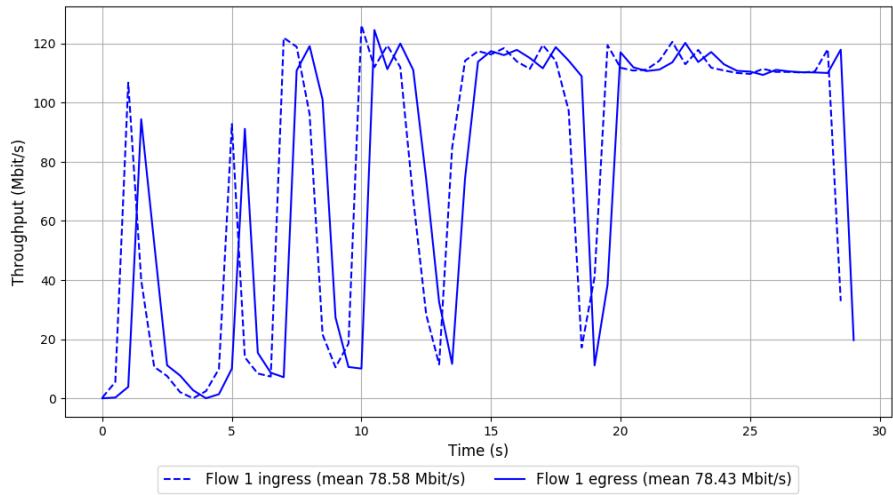


Run 1: Statistics of QUIC Cubic

```
Start at: 2018-09-08 03:45:09
End at: 2018-09-08 03:45:39
Local clock offset: 0.058 ms
Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.43 Mbit/s
95th percentile per-packet one-way delay: 50.017 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 78.43 Mbit/s
95th percentile per-packet one-way delay: 50.017 ms
Loss rate: 0.55%
```

Run 1: Report of QUIC Cubic — Data Link

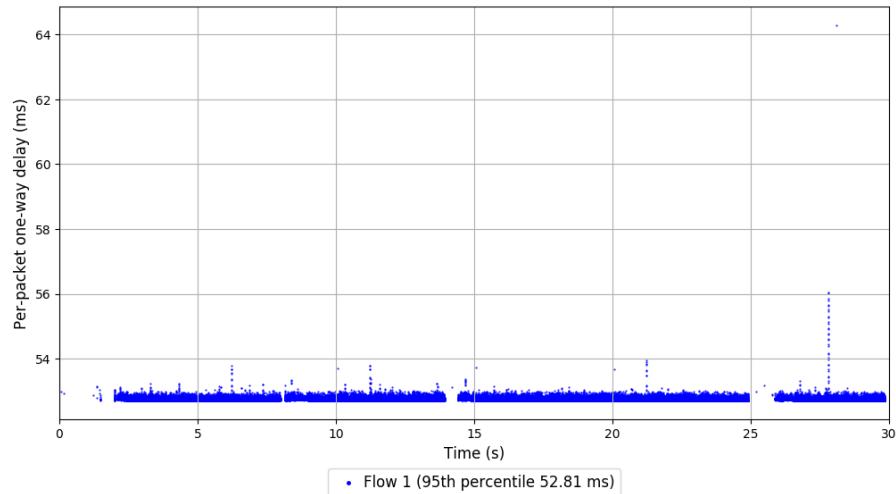
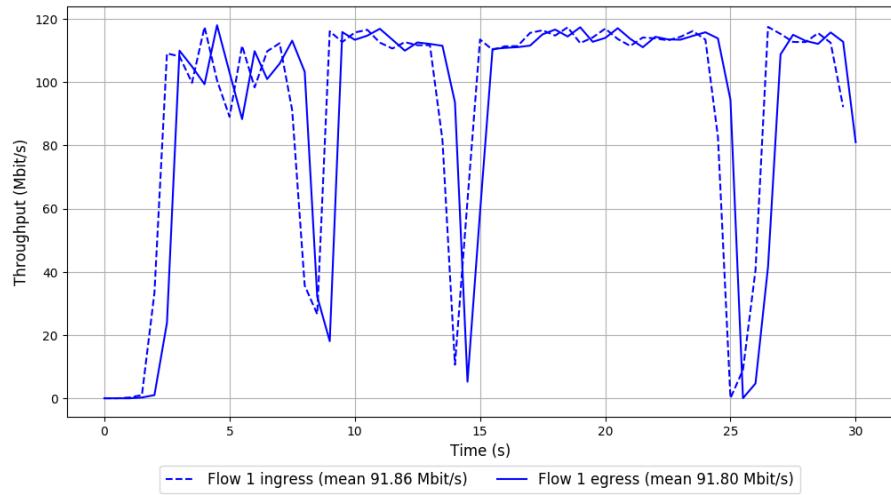


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-09-08 04:11:08
End at: 2018-09-08 04:11:39
Local clock offset: 0.189 ms
Remote clock offset: 0.146 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.80 Mbit/s
95th percentile per-packet one-way delay: 52.808 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 91.80 Mbit/s
95th percentile per-packet one-way delay: 52.808 ms
Loss rate: 0.42%
```

Run 2: Report of QUIC Cubic — Data Link

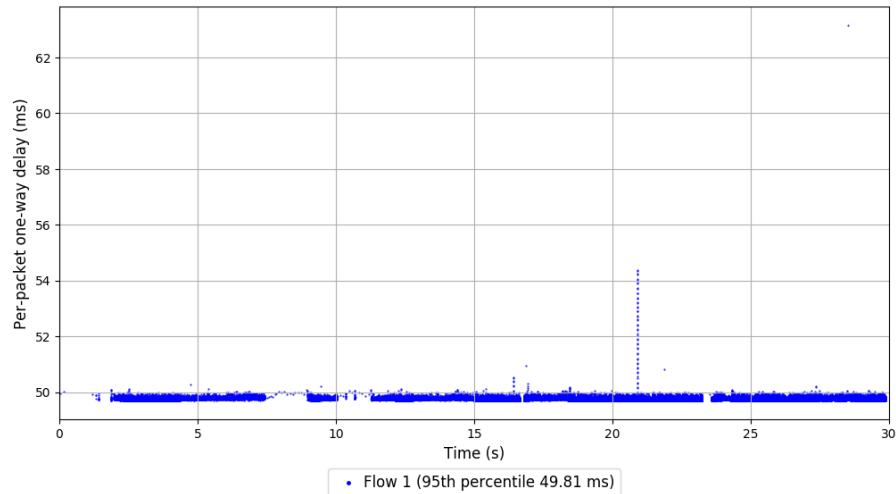
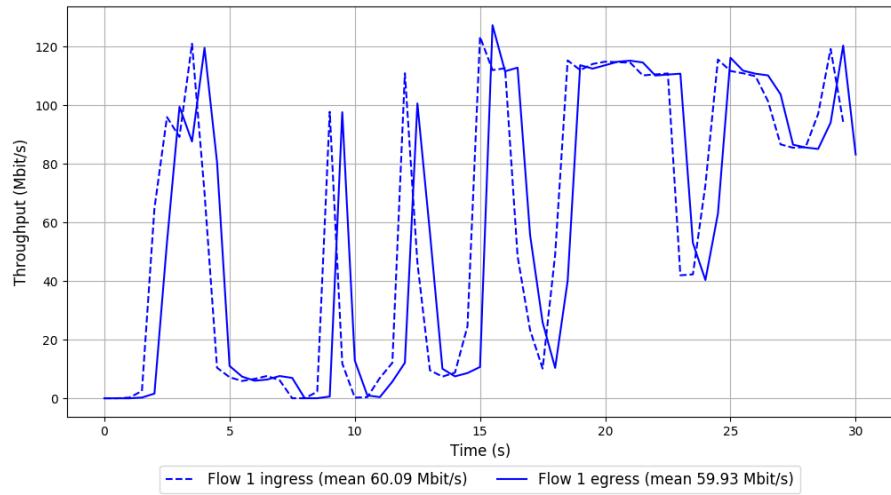


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-09-08 04:37:01
End at: 2018-09-08 04:37:32
Local clock offset: -0.04 ms
Remote clock offset: -0.109 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 59.93 Mbit/s
95th percentile per-packet one-way delay: 49.809 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 59.93 Mbit/s
95th percentile per-packet one-way delay: 49.809 ms
Loss rate: 0.61%
```

Run 3: Report of QUIC Cubic — Data Link

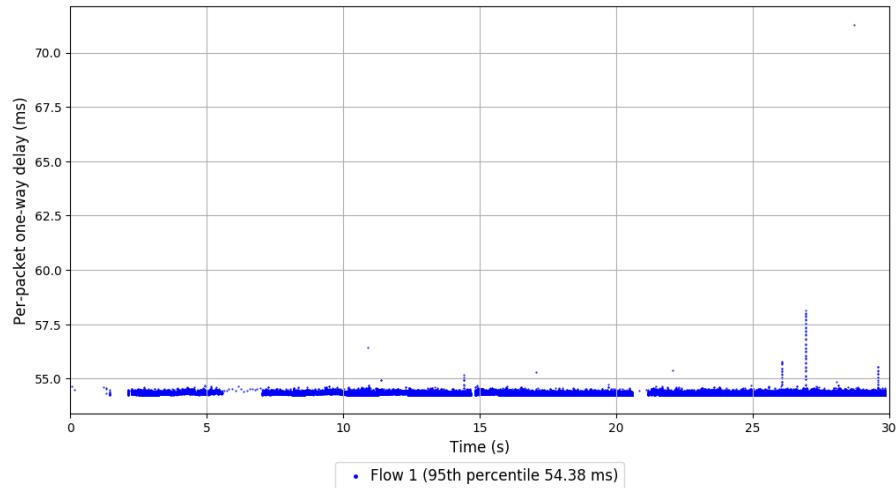
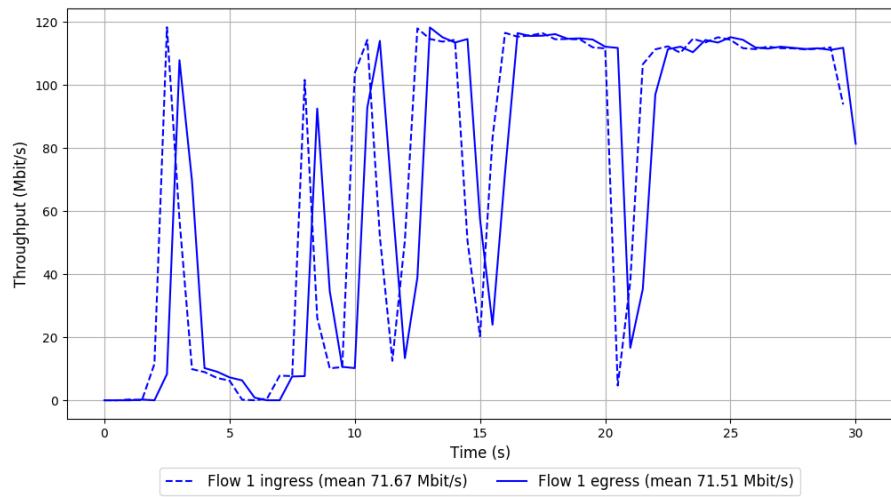


Run 4: Statistics of QUIC Cubic

```
Start at: 2018-09-08 05:03:10
End at: 2018-09-08 05:03:40
Local clock offset: -0.022 ms
Remote clock offset: -0.985 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.51 Mbit/s
95th percentile per-packet one-way delay: 54.375 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 71.51 Mbit/s
95th percentile per-packet one-way delay: 54.375 ms
Loss rate: 0.57%
```

Run 4: Report of QUIC Cubic — Data Link

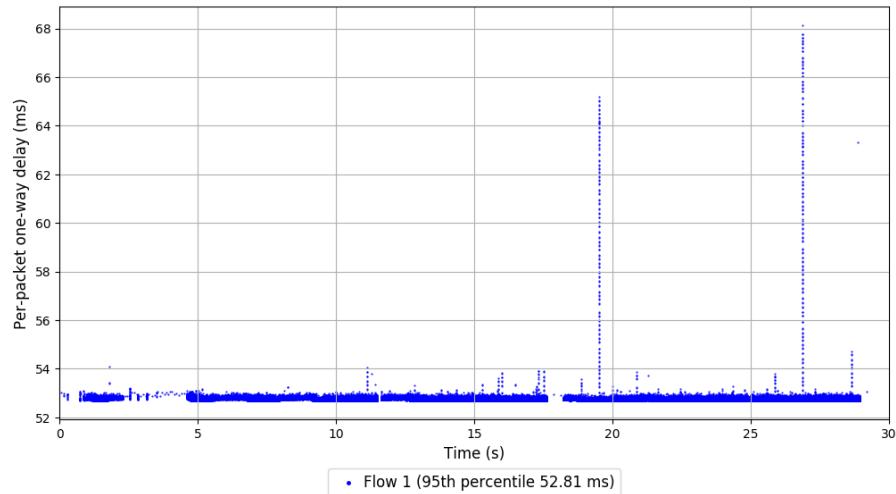
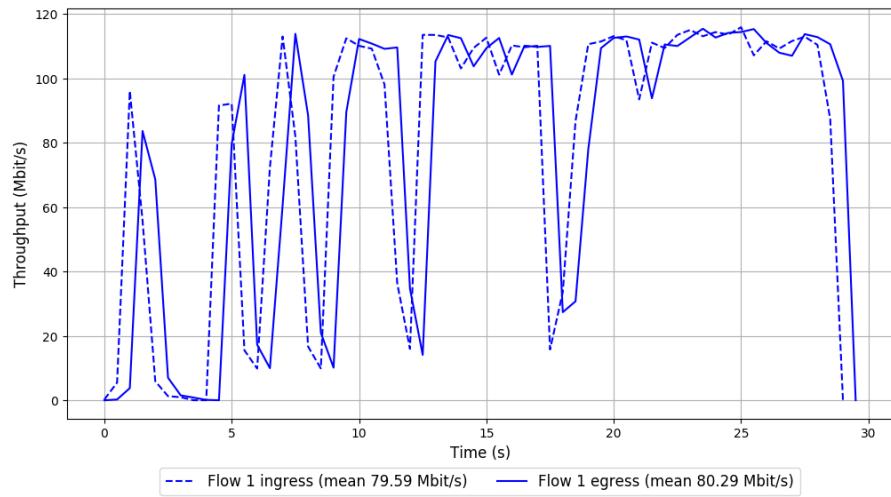


Run 5: Statistics of QUIC Cubic

```
Start at: 2018-09-08 05:29:15
End at: 2018-09-08 05:29:45
Local clock offset: 0.304 ms
Remote clock offset: 0.444 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.29 Mbit/s
95th percentile per-packet one-way delay: 52.815 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 80.29 Mbit/s
95th percentile per-packet one-way delay: 52.815 ms
Loss rate: 0.00%
```

Run 5: Report of QUIC Cubic — Data Link

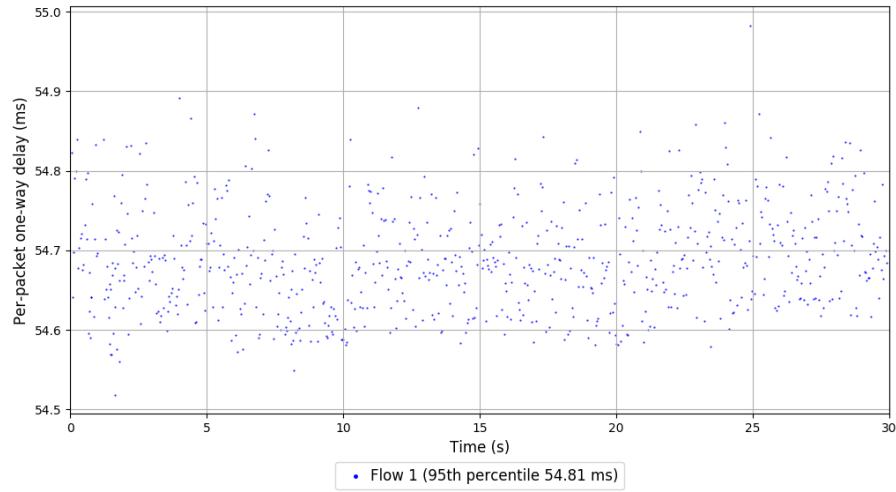
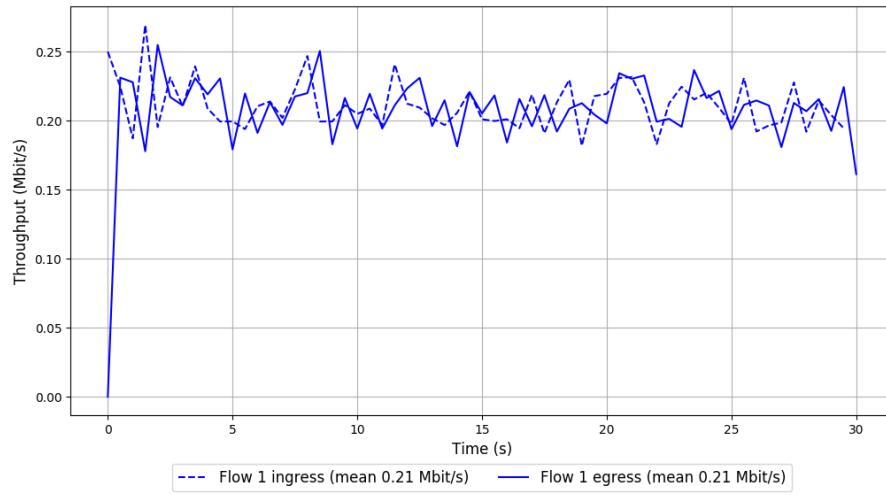


Run 1: Statistics of SCReAM

```
Start at: 2018-09-08 03:49:34
End at: 2018-09-08 03:50:04
Local clock offset: 0.184 ms
Remote clock offset: -0.901 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 54.808 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 54.808 ms
Loss rate: 0.39%
```

Run 1: Report of SCReAM — Data Link

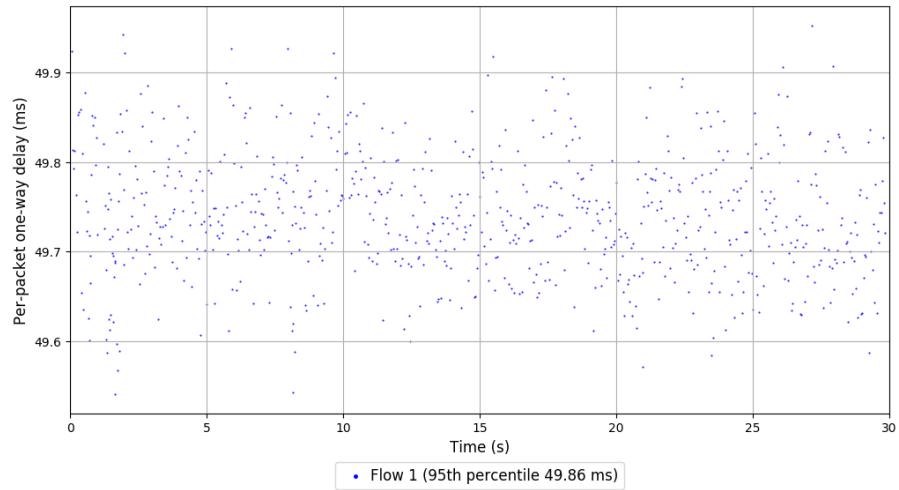
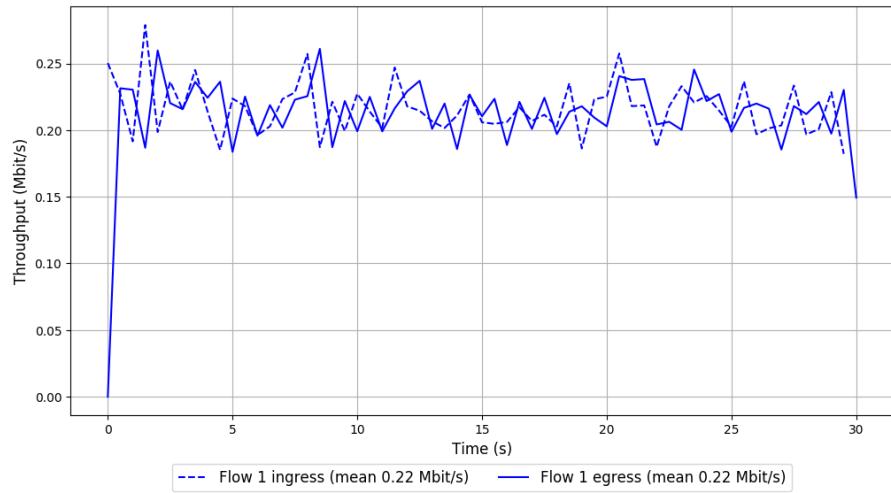


Run 2: Statistics of SCReAM

```
Start at: 2018-09-08 04:15:31
End at: 2018-09-08 04:16:01
Local clock offset: -0.085 ms
Remote clock offset: 0.195 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.856 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.856 ms
Loss rate: 0.38%
```

Run 2: Report of SCReAM — Data Link

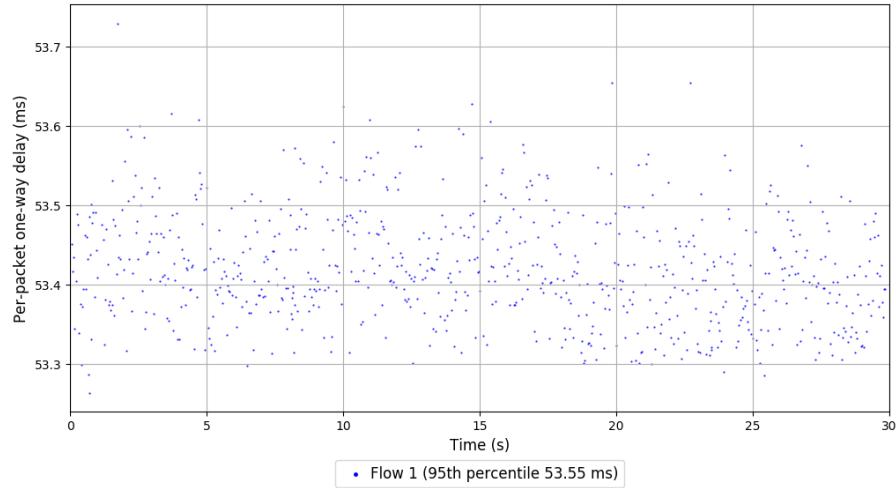
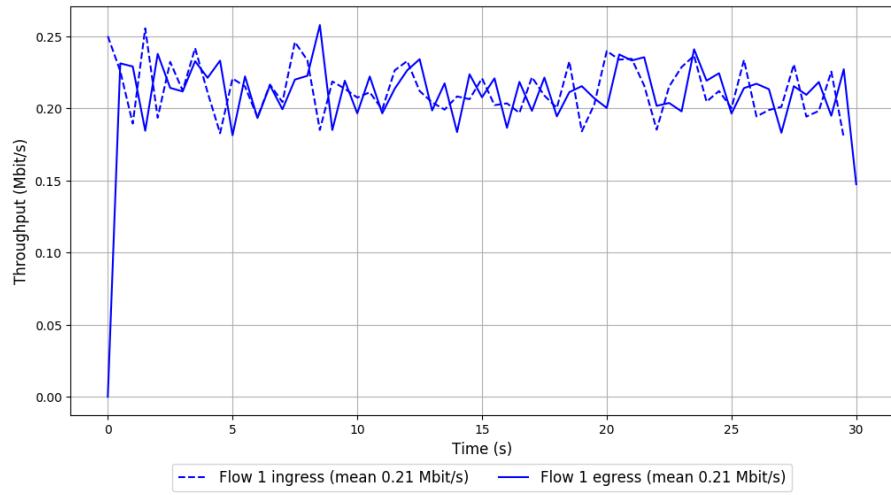


Run 3: Statistics of SCReAM

```
Start at: 2018-09-08 04:41:30
End at: 2018-09-08 04:42:00
Local clock offset: -0.089 ms
Remote clock offset: 0.156 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.545 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.545 ms
Loss rate: 0.38%
```

Run 3: Report of SCReAM — Data Link

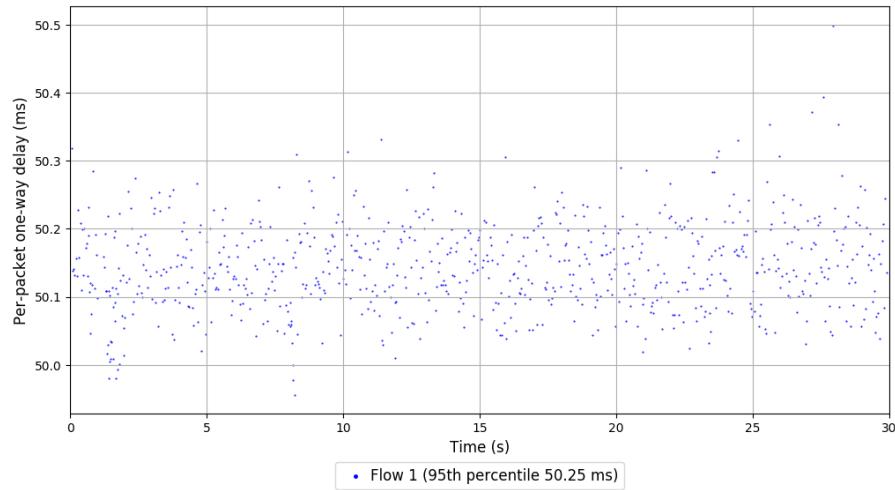
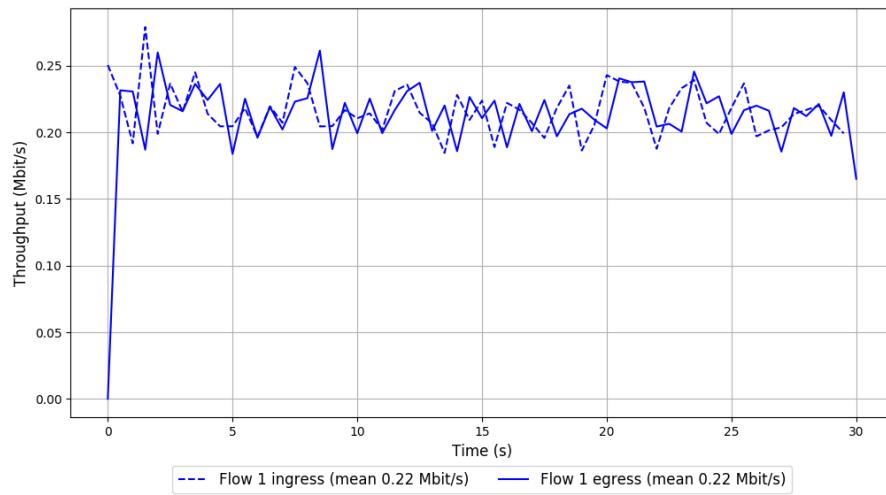


Run 4: Statistics of SCReAM

```
Start at: 2018-09-08 05:07:36
End at: 2018-09-08 05:08:06
Local clock offset: 0.044 ms
Remote clock offset: -0.297 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.253 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.253 ms
Loss rate: 0.39%
```

Run 4: Report of SCReAM — Data Link

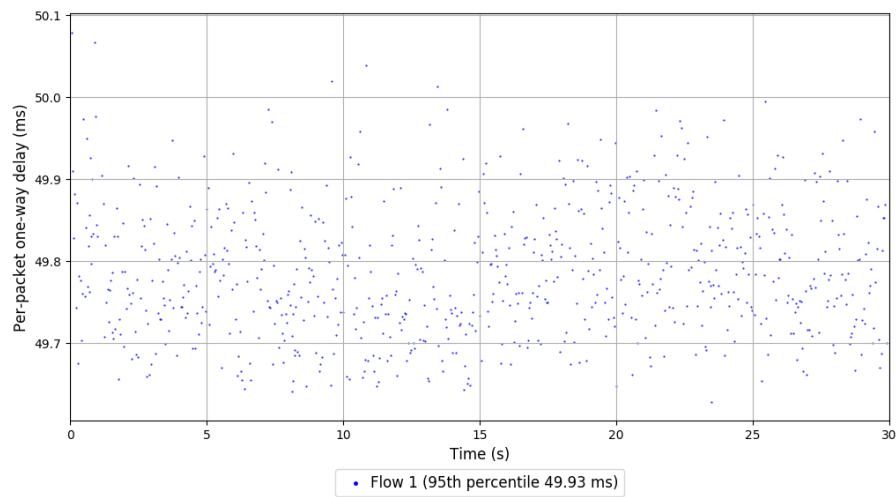
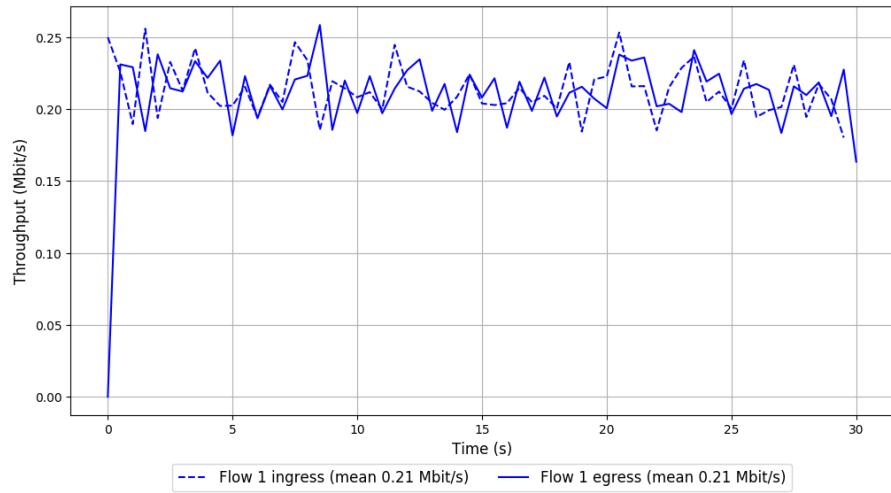


Run 5: Statistics of SCReAM

```
Start at: 2018-09-08 05:33:39
End at: 2018-09-08 05:34:09
Local clock offset: -0.116 ms
Remote clock offset: 0.194 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 49.926 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 49.926 ms
Loss rate: 0.26%
```

Run 5: Report of SCReAM — Data Link

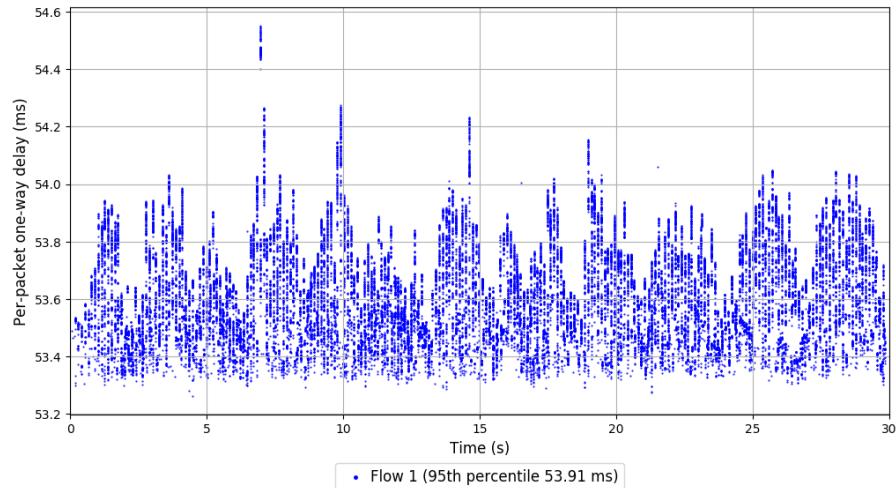
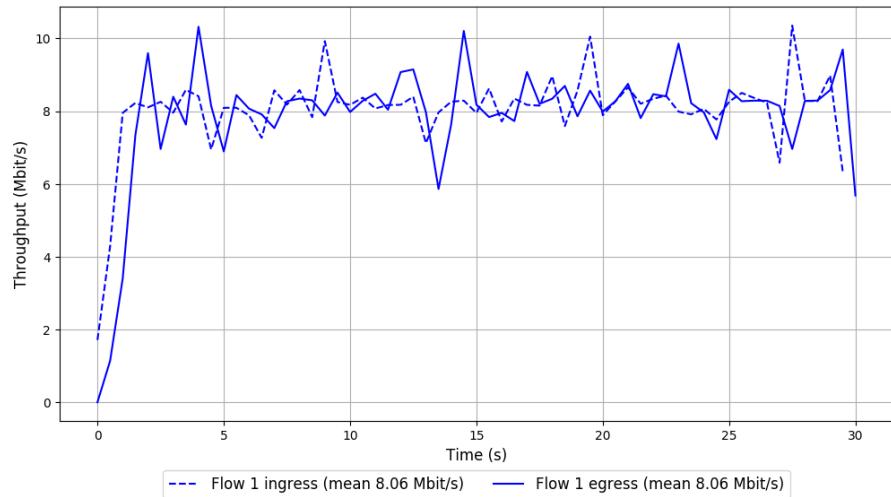


Run 1: Statistics of Sprout

```
Start at: 2018-09-08 03:58:25
End at: 2018-09-08 03:58:55
Local clock offset: -0.102 ms
Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.06 Mbit/s
95th percentile per-packet one-way delay: 53.911 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 8.06 Mbit/s
95th percentile per-packet one-way delay: 53.911 ms
Loss rate: 0.35%
```

Run 1: Report of Sprout — Data Link

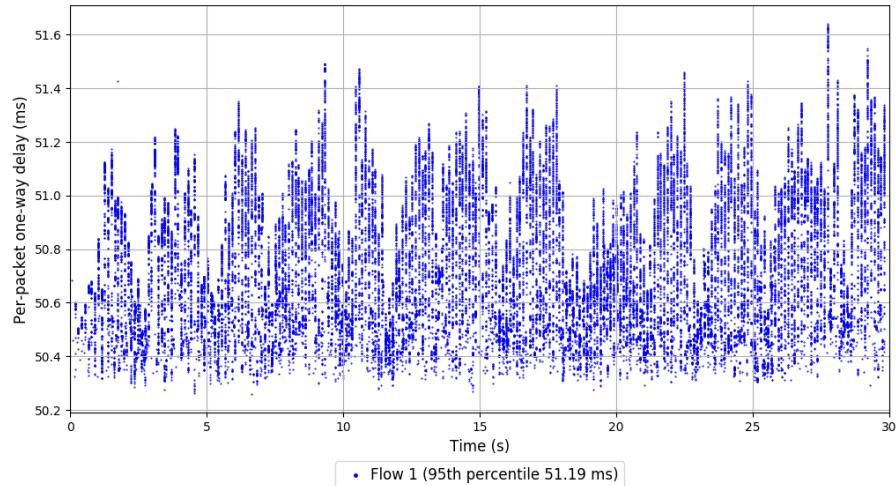
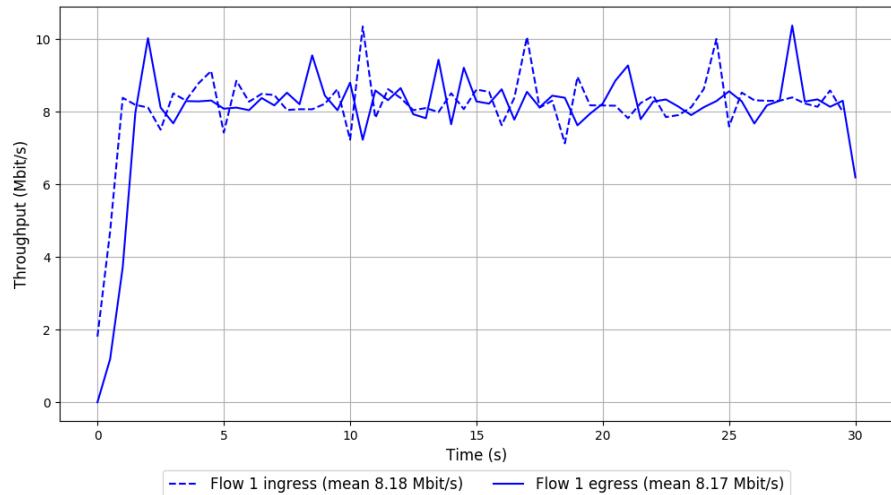


Run 2: Statistics of Sprout

```
Start at: 2018-09-08 04:24:23
End at: 2018-09-08 04:24:53
Local clock offset: -0.297 ms
Remote clock offset: -0.974 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 51.189 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 51.189 ms
Loss rate: 0.43%
```

Run 2: Report of Sprout — Data Link

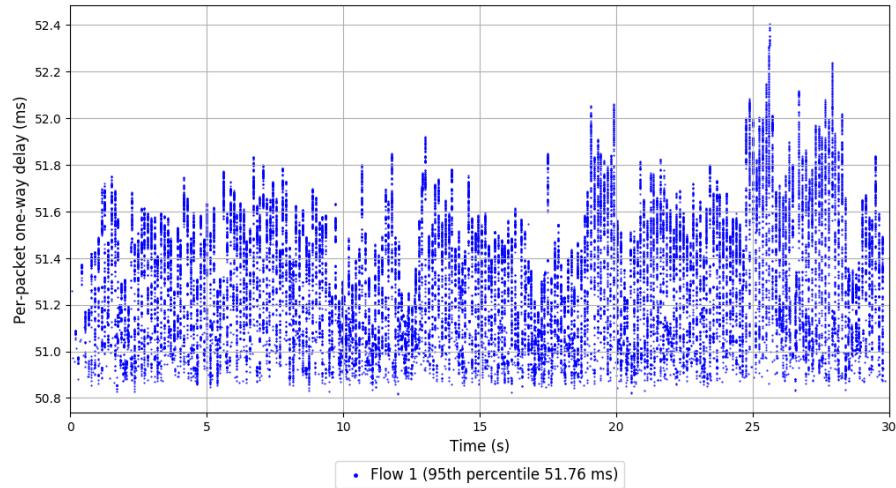
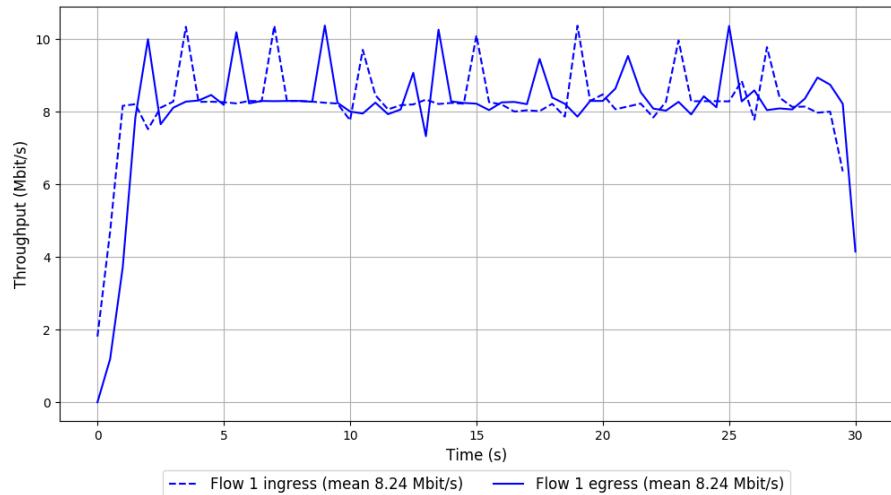


Run 3: Statistics of Sprout

```
Start at: 2018-09-08 04:50:22
End at: 2018-09-08 04:50:52
Local clock offset: 0.116 ms
Remote clock offset: -0.351 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 51.755 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 51.755 ms
Loss rate: 0.45%
```

Run 3: Report of Sprout — Data Link

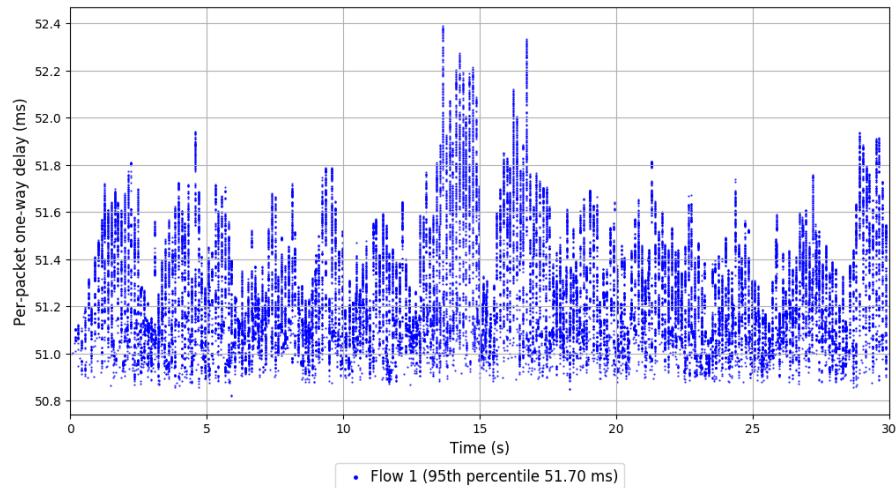
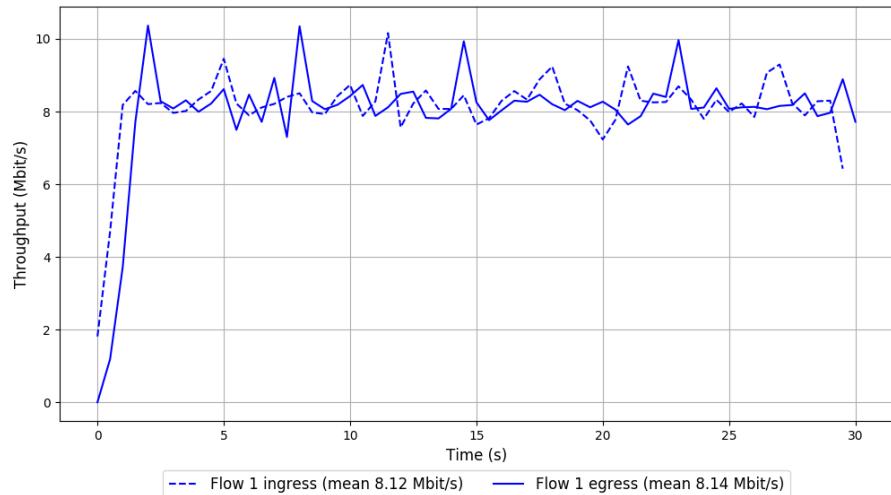


Run 4: Statistics of Sprout

```
Start at: 2018-09-08 05:16:30
End at: 2018-09-08 05:17:00
Local clock offset: -0.174 ms
Remote clock offset: -1.381 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 51.703 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 51.703 ms
Loss rate: 0.04%
```

Run 4: Report of Sprout — Data Link

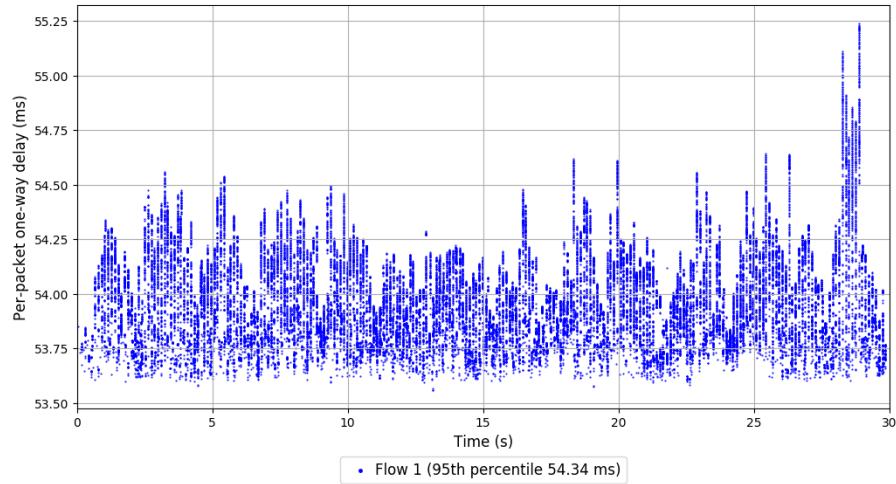
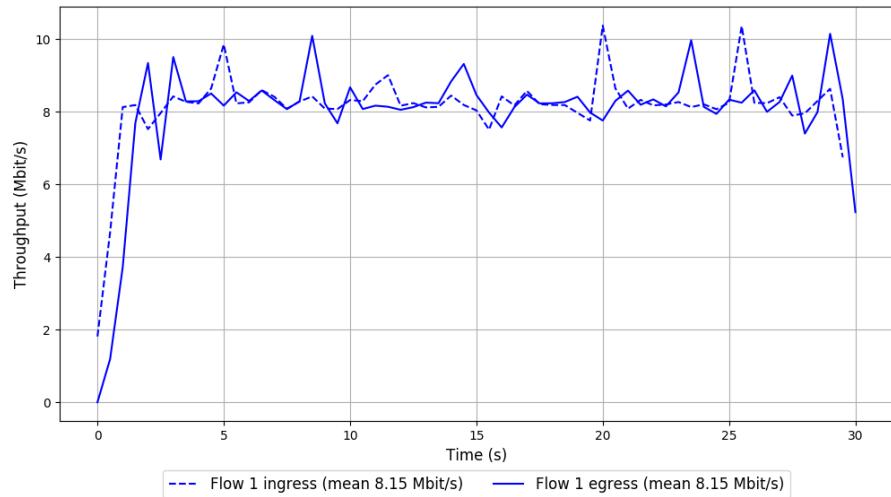


Run 5: Statistics of Sprout

```
Start at: 2018-09-08 05:42:31
End at: 2018-09-08 05:43:01
Local clock offset: -0.001 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2018-09-08 07:00:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.15 Mbit/s
95th percentile per-packet one-way delay: 54.338 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 8.15 Mbit/s
95th percentile per-packet one-way delay: 54.338 ms
Loss rate: 0.37%
```

Run 5: Report of Sprout — Data Link

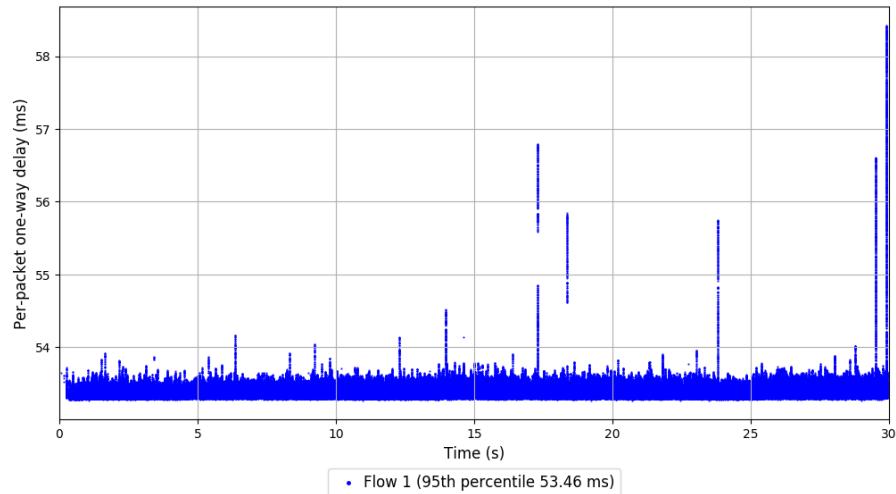
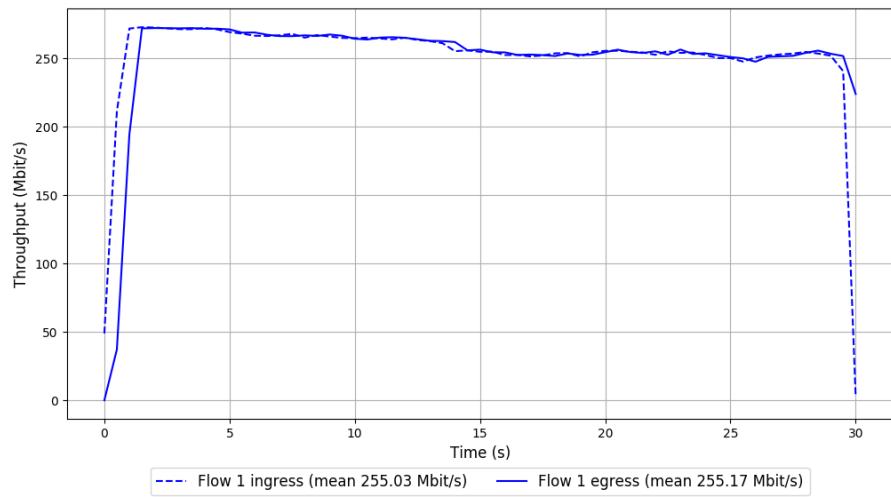


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-09-08 03:36:04
End at: 2018-09-08 03:36:34
Local clock offset: -0.011 ms
Remote clock offset: -0.624 ms

# Below is generated by plot.py at 2018-09-08 07:04:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 255.17 Mbit/s
95th percentile per-packet one-way delay: 53.460 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 255.17 Mbit/s
95th percentile per-packet one-way delay: 53.460 ms
Loss rate: 0.30%
```

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

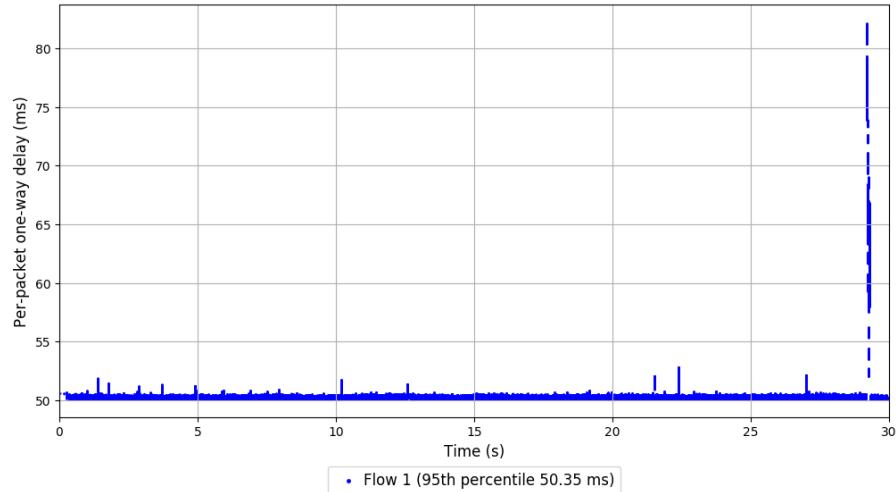
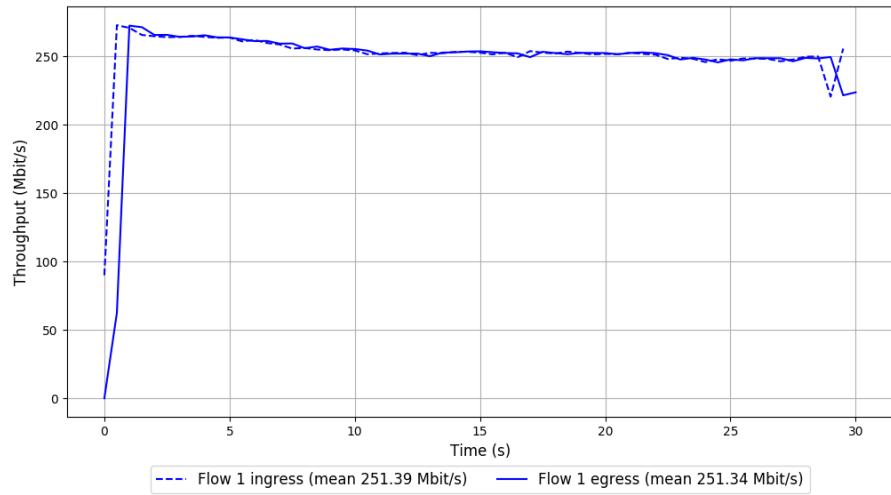


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-09-08 04:02:07
End at: 2018-09-08 04:02:37
Local clock offset: -0.094 ms
Remote clock offset: -0.227 ms

# Below is generated by plot.py at 2018-09-08 07:05:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 251.34 Mbit/s
95th percentile per-packet one-way delay: 50.355 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 251.34 Mbit/s
95th percentile per-packet one-way delay: 50.355 ms
Loss rate: 0.37%
```

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

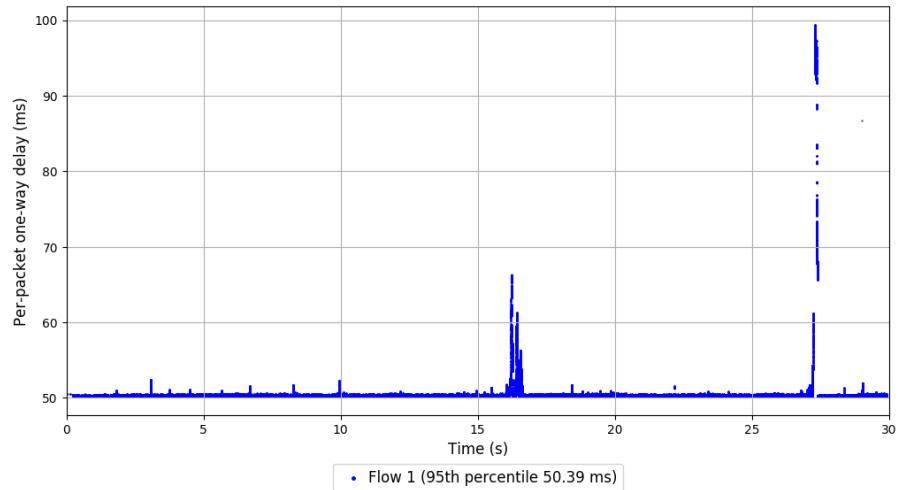
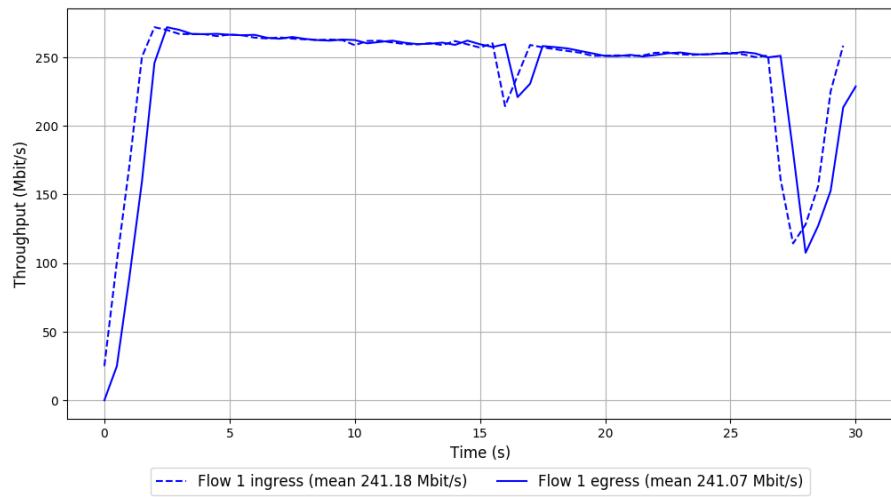


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-09-08 04:28:03
End at: 2018-09-08 04:28:33
Local clock offset: 0.185 ms
Remote clock offset: -0.354 ms

# Below is generated by plot.py at 2018-09-08 07:05:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 241.07 Mbit/s
95th percentile per-packet one-way delay: 50.388 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 241.07 Mbit/s
95th percentile per-packet one-way delay: 50.388 ms
Loss rate: 0.39%
```

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

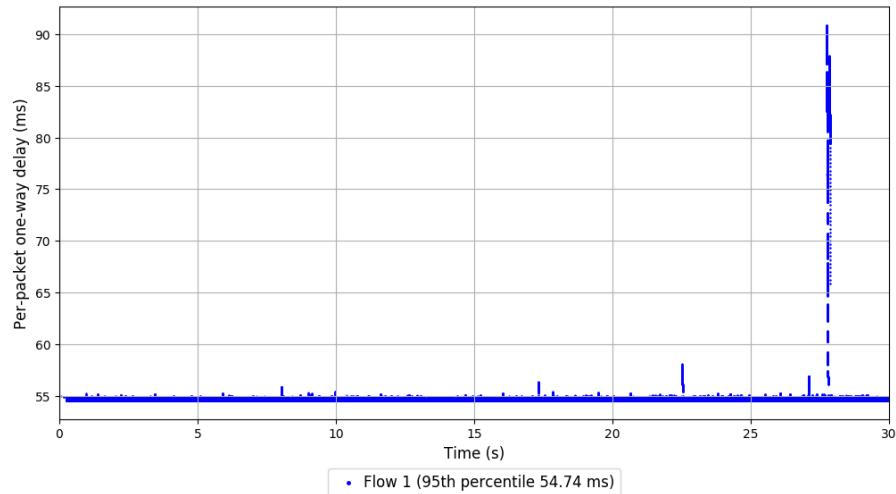
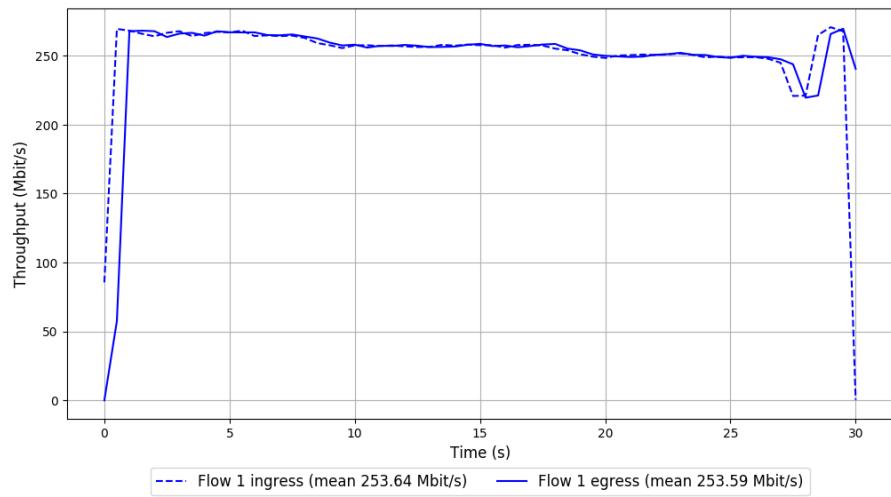


Run 4: Statistics of TaoVA-100x

```
Start at: 2018-09-08 04:54:03
End at: 2018-09-08 04:54:33
Local clock offset: 0.063 ms
Remote clock offset: -1.69 ms

# Below is generated by plot.py at 2018-09-08 07:05:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 253.59 Mbit/s
95th percentile per-packet one-way delay: 54.743 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 253.59 Mbit/s
95th percentile per-packet one-way delay: 54.743 ms
Loss rate: 0.38%
```

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

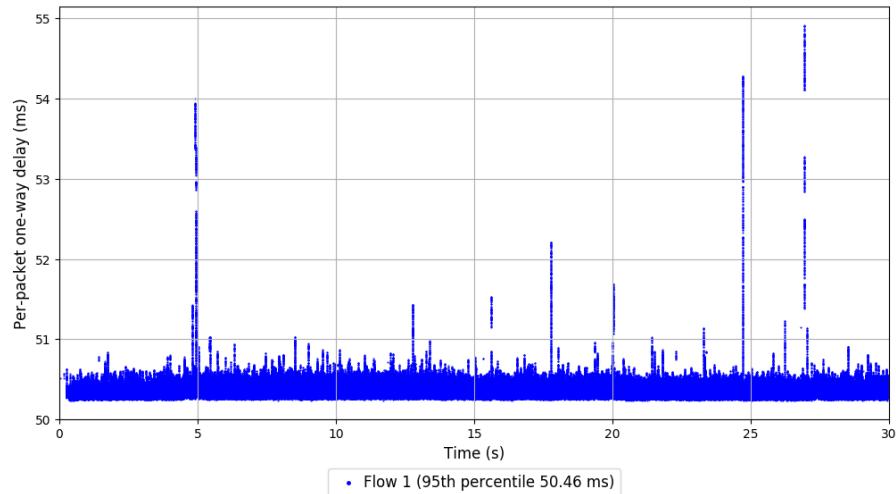
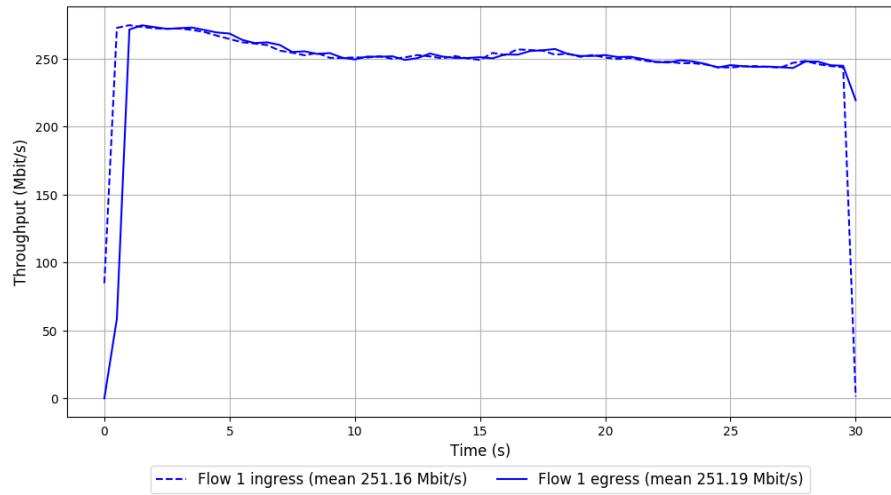


Run 5: Statistics of TaoVA-100x

```
Start at: 2018-09-08 05:20:12
End at: 2018-09-08 05:20:43
Local clock offset: 0.067 ms
Remote clock offset: -0.147 ms

# Below is generated by plot.py at 2018-09-08 07:05:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 251.19 Mbit/s
95th percentile per-packet one-way delay: 50.456 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 251.19 Mbit/s
95th percentile per-packet one-way delay: 50.456 ms
Loss rate: 0.34%
```

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

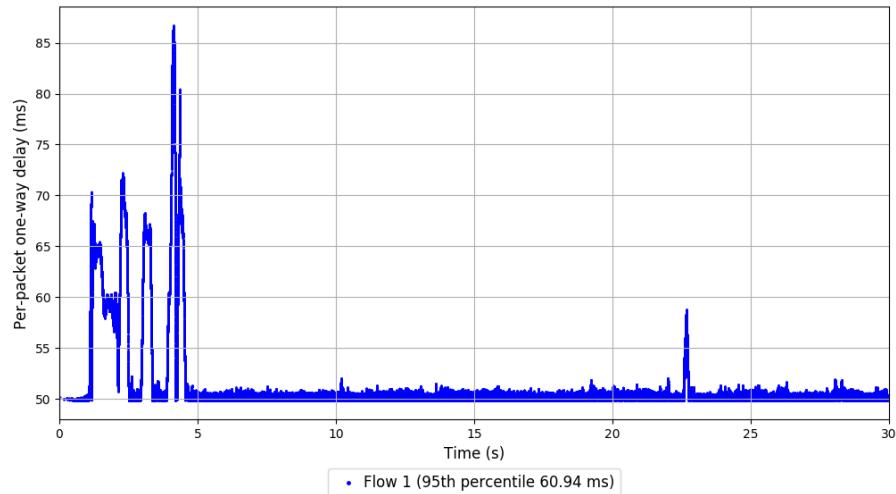
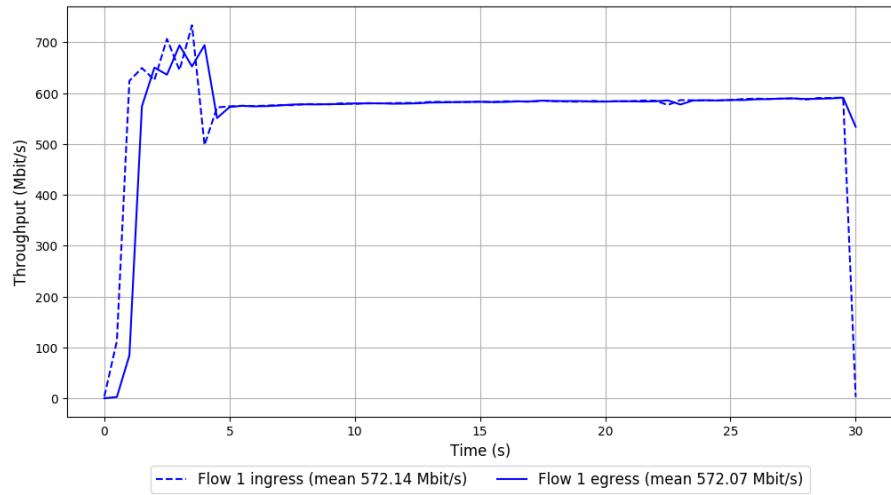


Run 1: Statistics of TCP Vegas

```
Start at: 2018-09-08 03:38:42
End at: 2018-09-08 03:39:12
Local clock offset: 0.078 ms
Remote clock offset: -0.126 ms

# Below is generated by plot.py at 2018-09-08 07:07:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 572.07 Mbit/s
95th percentile per-packet one-way delay: 60.941 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 572.07 Mbit/s
95th percentile per-packet one-way delay: 60.941 ms
Loss rate: 0.35%
```

Run 1: Report of TCP Vegas — Data Link

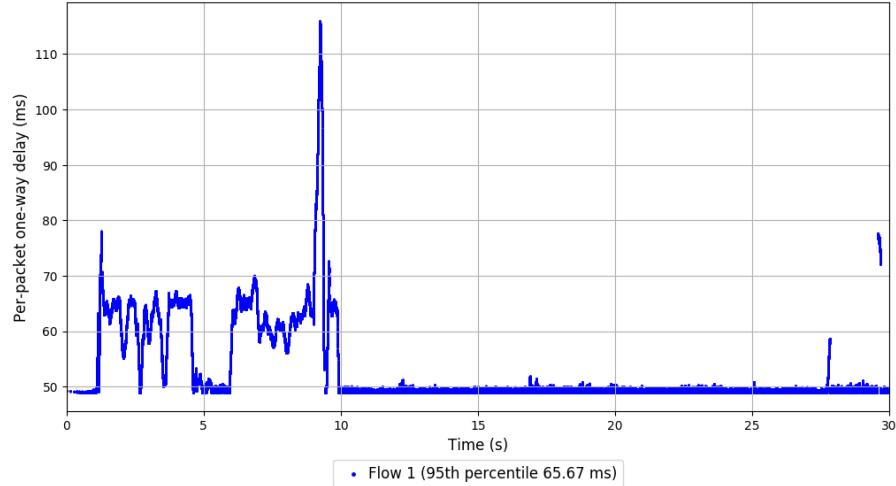
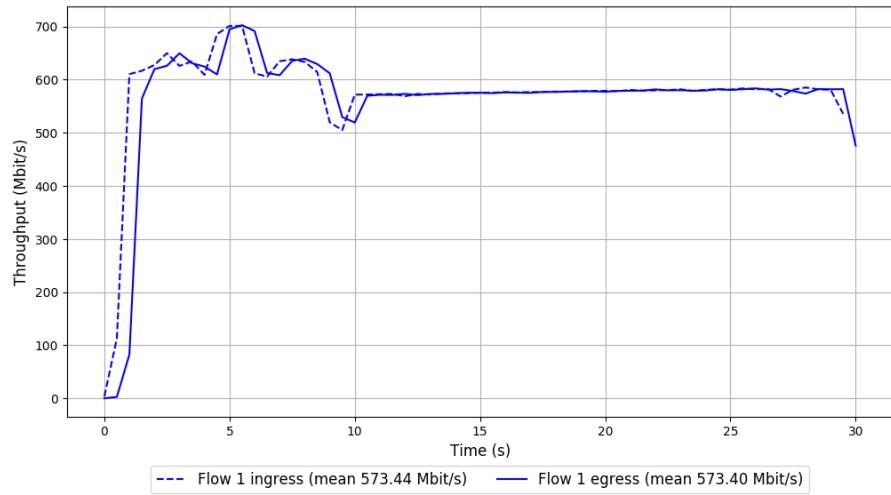


Run 2: Statistics of TCP Vegas

```
Start at: 2018-09-08 04:04:46
End at: 2018-09-08 04:05:16
Local clock offset: -0.164 ms
Remote clock offset: 1.101 ms

# Below is generated by plot.py at 2018-09-08 07:08:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 573.40 Mbit/s
95th percentile per-packet one-way delay: 65.674 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 573.40 Mbit/s
95th percentile per-packet one-way delay: 65.674 ms
Loss rate: 0.34%
```

Run 2: Report of TCP Vegas — Data Link

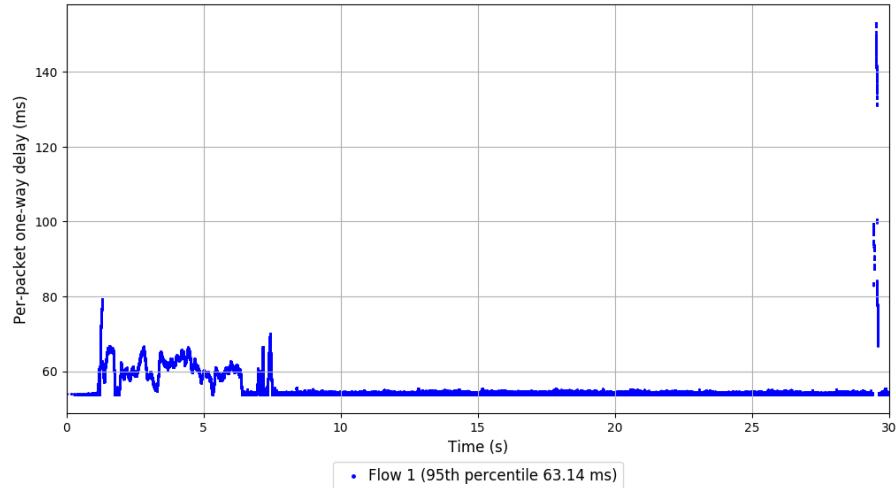
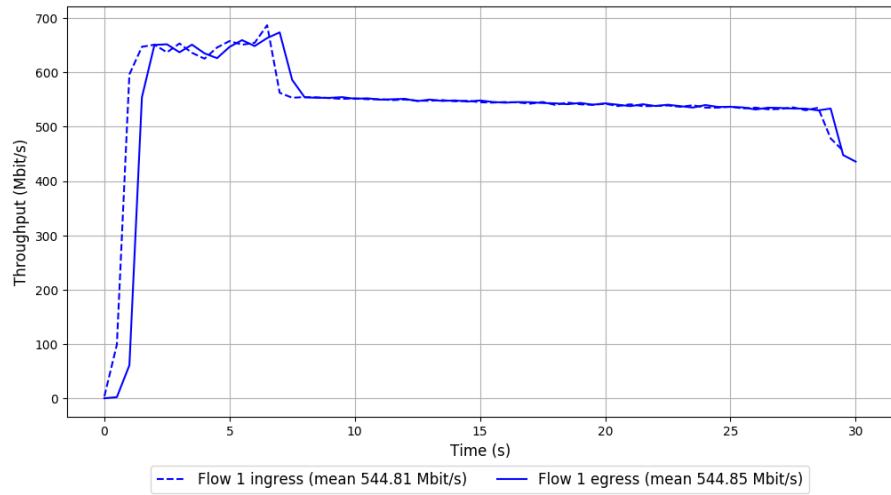


Run 3: Statistics of TCP Vegas

```
Start at: 2018-09-08 04:30:41
End at: 2018-09-08 04:31:11
Local clock offset: 0.148 ms
Remote clock offset: -0.282 ms

# Below is generated by plot.py at 2018-09-08 07:09:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 544.85 Mbit/s
95th percentile per-packet one-way delay: 63.144 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 544.85 Mbit/s
95th percentile per-packet one-way delay: 63.144 ms
Loss rate: 0.34%
```

Run 3: Report of TCP Vegas — Data Link

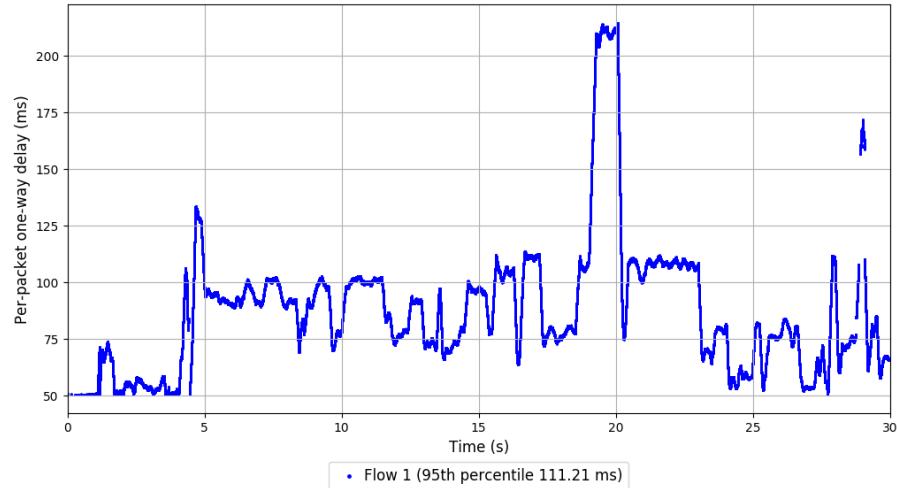
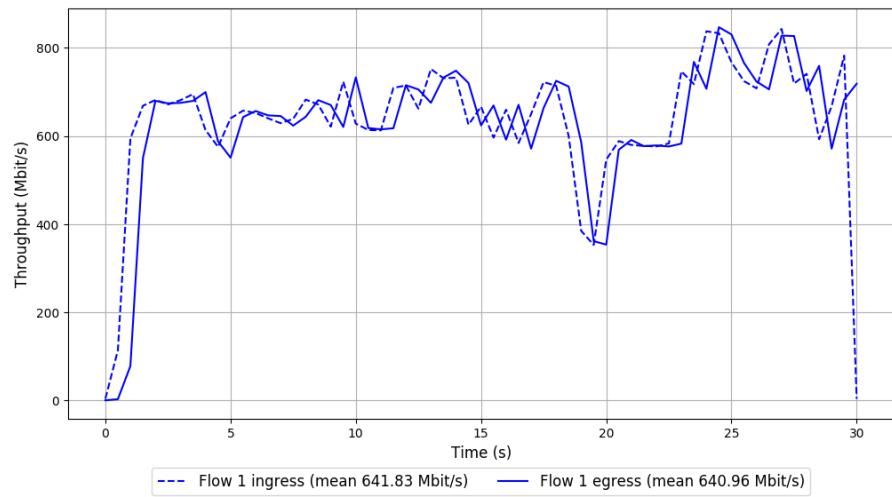


Run 4: Statistics of TCP Vegas

```
Start at: 2018-09-08 04:56:42
End at: 2018-09-08 04:57:12
Local clock offset: -0.326 ms
Remote clock offset: -0.488 ms

# Below is generated by plot.py at 2018-09-08 07:14:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 640.96 Mbit/s
95th percentile per-packet one-way delay: 111.208 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 640.96 Mbit/s
95th percentile per-packet one-way delay: 111.208 ms
Loss rate: 0.47%
```

Run 4: Report of TCP Vegas — Data Link

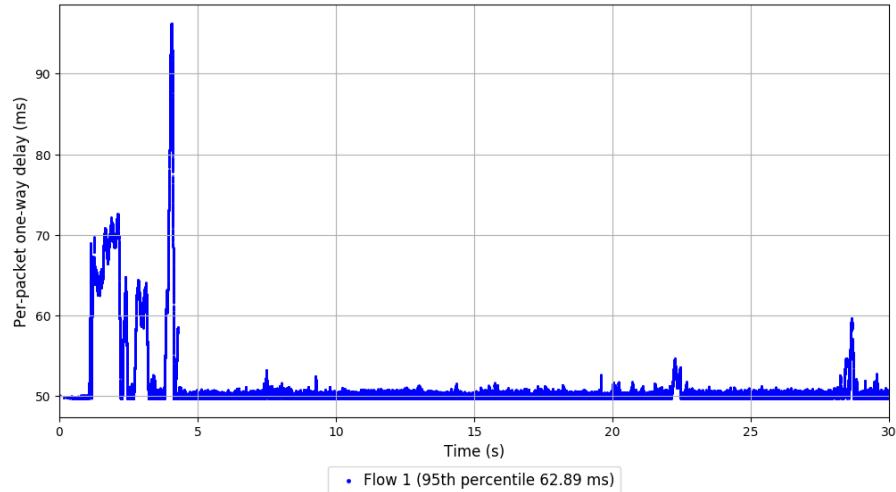
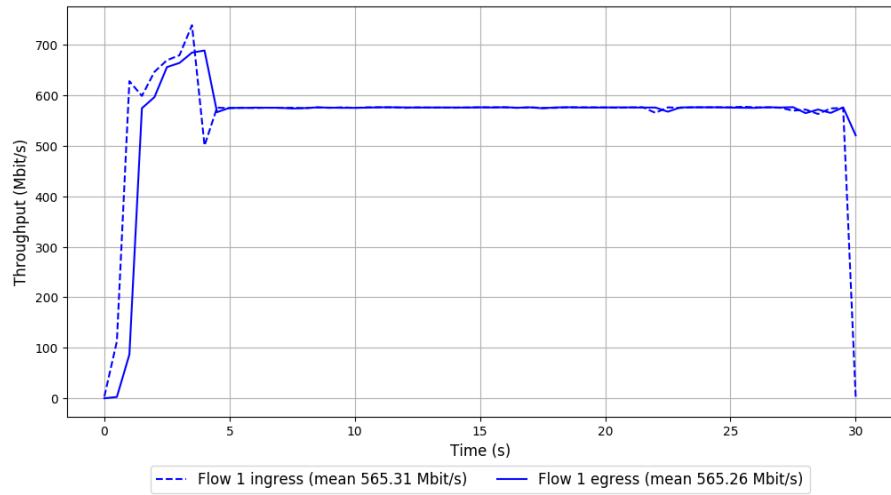


Run 5: Statistics of TCP Vegas

```
Start at: 2018-09-08 05:22:51
End at: 2018-09-08 05:23:21
Local clock offset: 0.286 ms
Remote clock offset: 0.224 ms

# Below is generated by plot.py at 2018-09-08 07:14:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 565.26 Mbit/s
95th percentile per-packet one-way delay: 62.886 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 565.26 Mbit/s
95th percentile per-packet one-way delay: 62.886 ms
Loss rate: 0.34%
```

Run 5: Report of TCP Vegas — Data Link

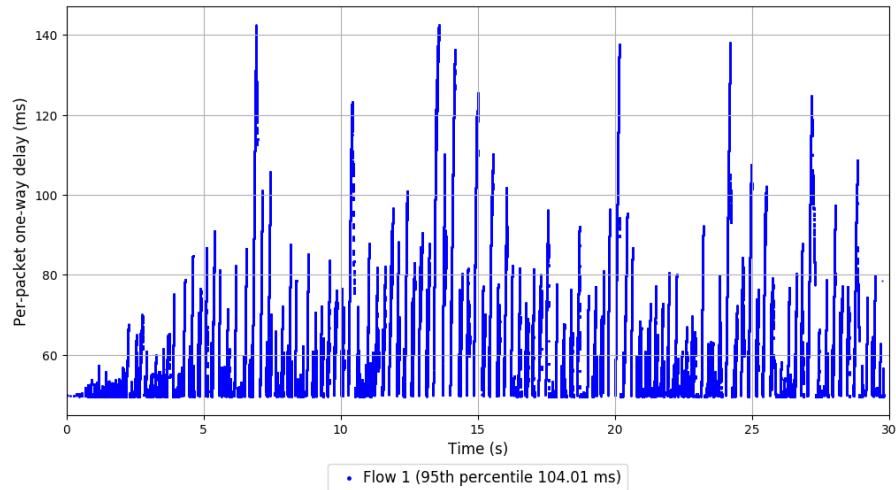
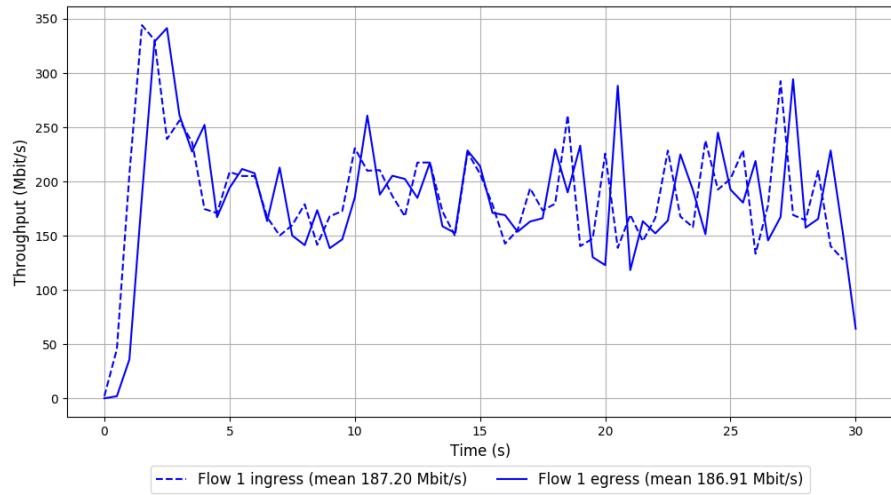


Run 1: Statistics of Verus

```
Start at: 2018-09-08 03:50:41
End at: 2018-09-08 03:51:11
Local clock offset: -0.175 ms
Remote clock offset: -0.138 ms

# Below is generated by plot.py at 2018-09-08 07:14:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.91 Mbit/s
95th percentile per-packet one-way delay: 104.014 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 186.91 Mbit/s
95th percentile per-packet one-way delay: 104.014 ms
Loss rate: 0.66%
```

Run 1: Report of Verus — Data Link

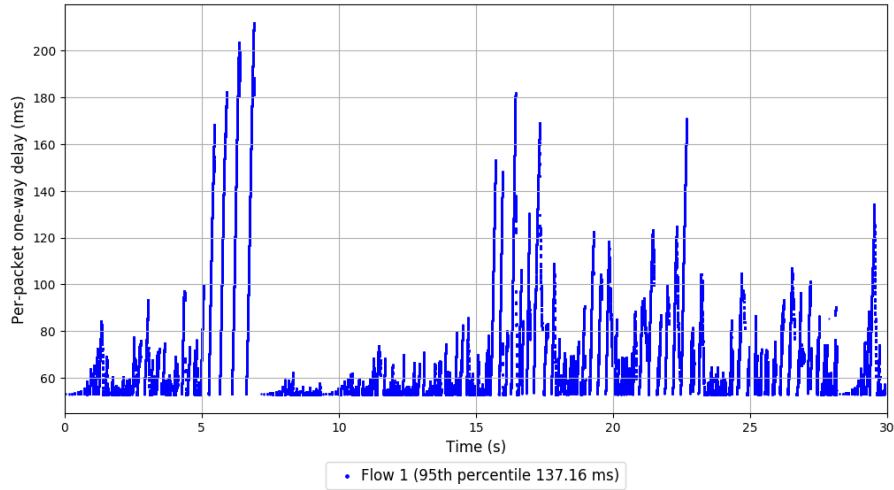
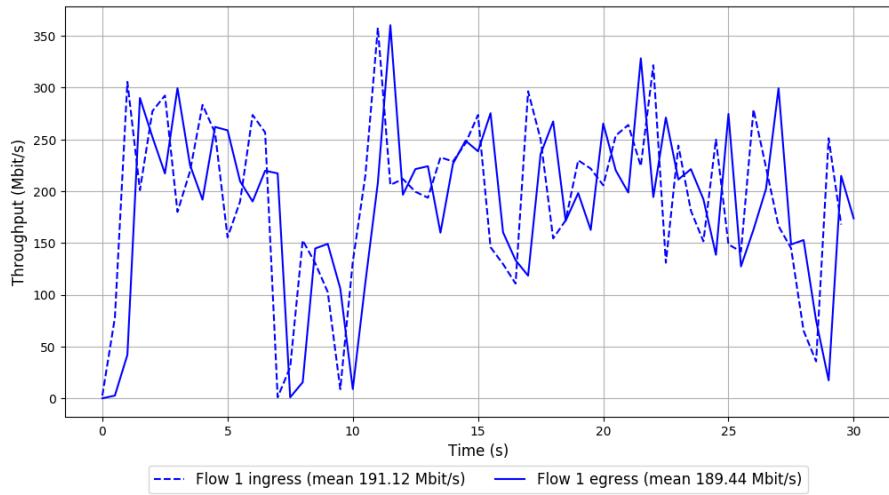


Run 2: Statistics of Verus

```
Start at: 2018-09-08 04:16:38
End at: 2018-09-08 04:17:08
Local clock offset: -0.31 ms
Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2018-09-08 07:14:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 189.44 Mbit/s
95th percentile per-packet one-way delay: 137.164 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 189.44 Mbit/s
95th percentile per-packet one-way delay: 137.164 ms
Loss rate: 1.24%
```

Run 2: Report of Verus — Data Link

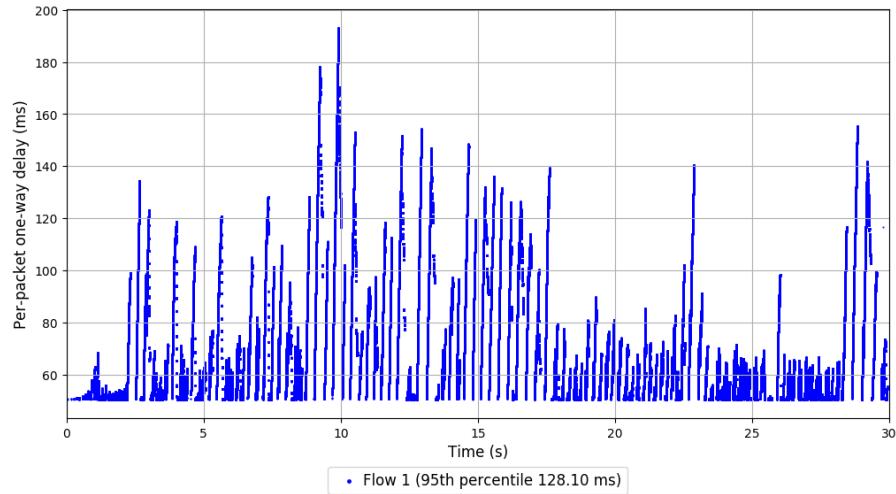
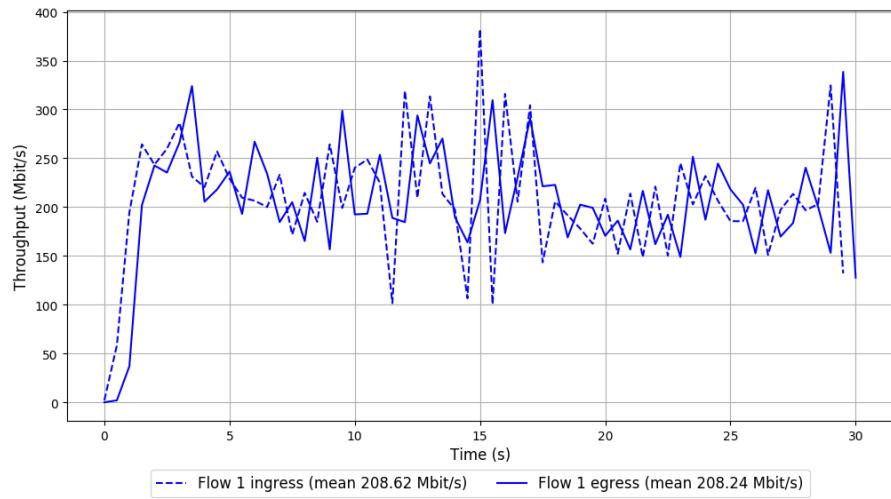


Run 3: Statistics of Verus

```
Start at: 2018-09-08 04:42:37
End at: 2018-09-08 04:43:07
Local clock offset: 0.079 ms
Remote clock offset: -0.221 ms

# Below is generated by plot.py at 2018-09-08 07:14:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 208.24 Mbit/s
95th percentile per-packet one-way delay: 128.097 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 208.24 Mbit/s
95th percentile per-packet one-way delay: 128.097 ms
Loss rate: 0.32%
```

Run 3: Report of Verus — Data Link

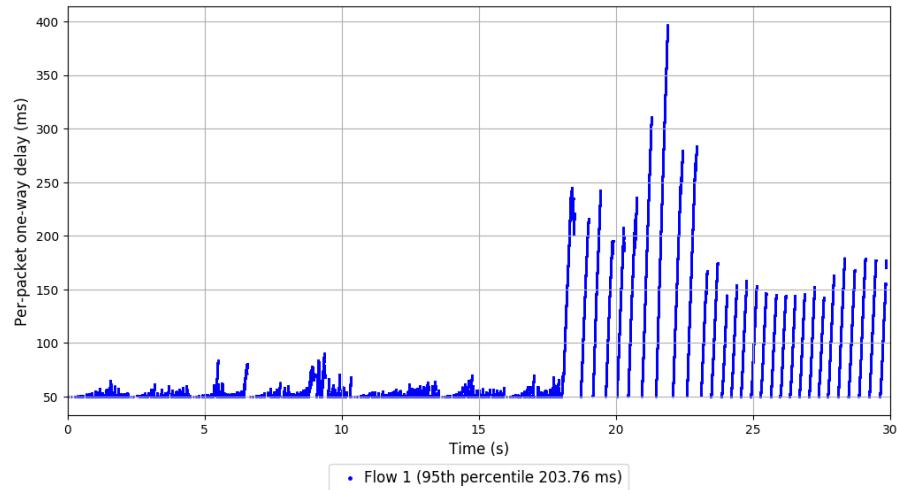
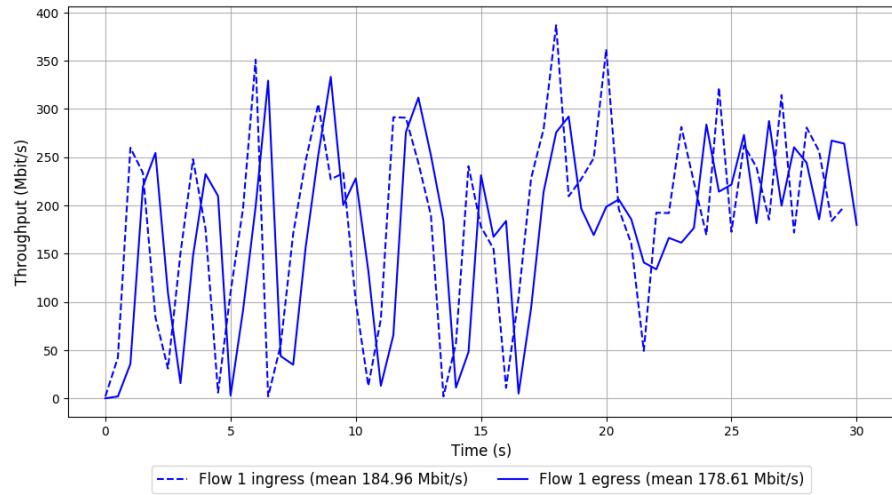


Run 4: Statistics of Verus

```
Start at: 2018-09-08 05:08:43
End at: 2018-09-08 05:09:13
Local clock offset: 0.096 ms
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2018-09-08 07:14:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 178.61 Mbit/s
95th percentile per-packet one-way delay: 203.759 ms
Loss rate: 3.90%
-- Flow 1:
Average throughput: 178.61 Mbit/s
95th percentile per-packet one-way delay: 203.759 ms
Loss rate: 3.90%
```

Run 4: Report of Verus — Data Link

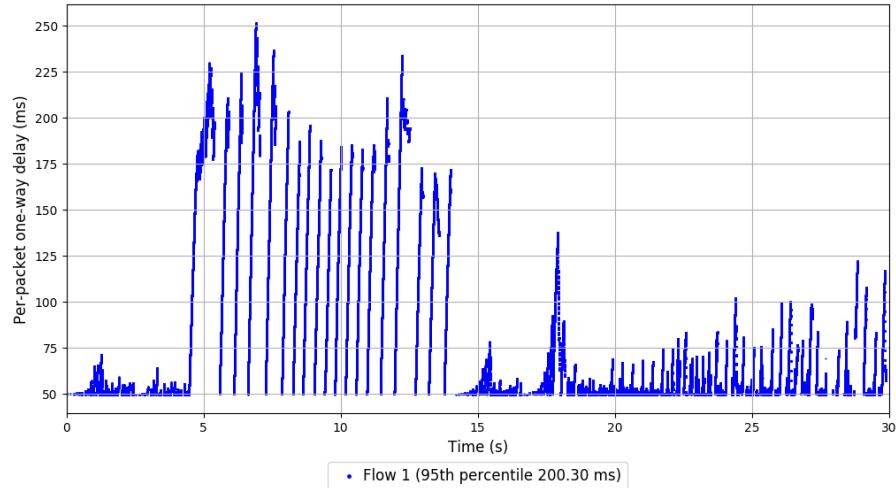
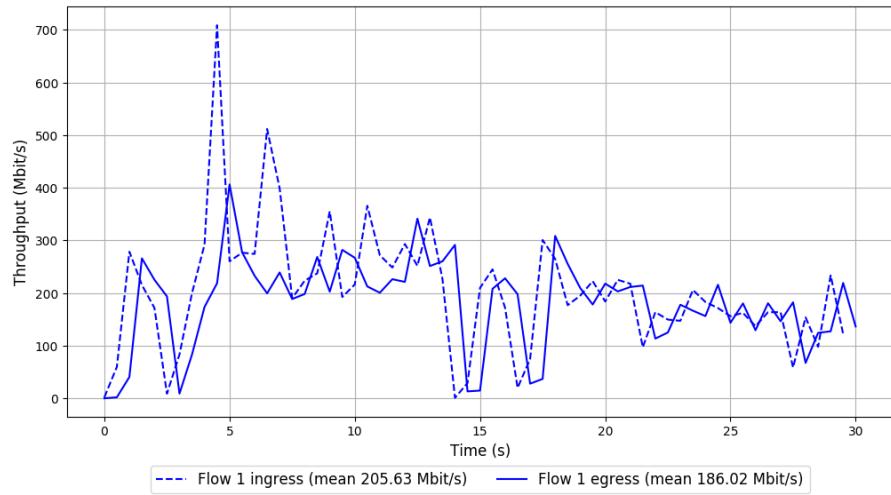


Run 5: Statistics of Verus

```
Start at: 2018-09-08 05:34:45
End at: 2018-09-08 05:35:15
Local clock offset: -0.135 ms
Remote clock offset: 0.106 ms

# Below is generated by plot.py at 2018-09-08 07:14:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.02 Mbit/s
95th percentile per-packet one-way delay: 200.298 ms
Loss rate: 9.51%
-- Flow 1:
Average throughput: 186.02 Mbit/s
95th percentile per-packet one-way delay: 200.298 ms
Loss rate: 9.51%
```

Run 5: Report of Verus — Data Link

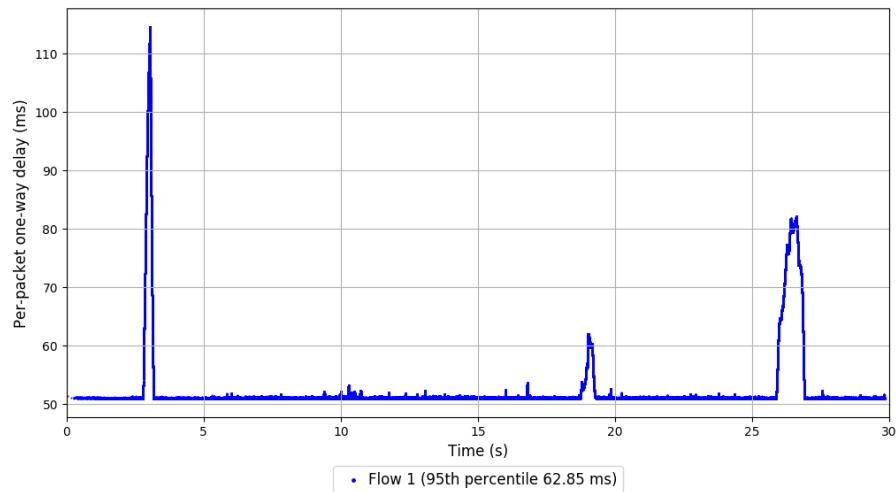
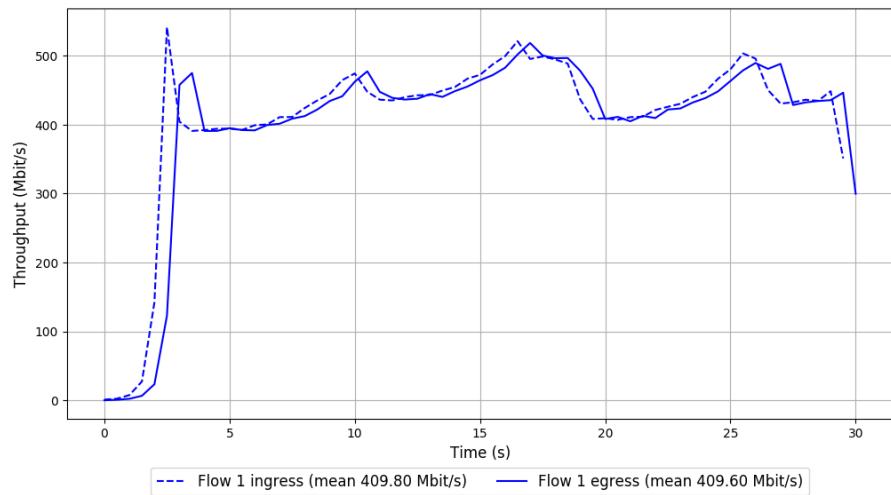


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-09-08 03:53:39
End at: 2018-09-08 03:54:09
Local clock offset: 0.137 ms
Remote clock offset: -0.914 ms

# Below is generated by plot.py at 2018-09-08 07:15:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 409.60 Mbit/s
95th percentile per-packet one-way delay: 62.847 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 409.60 Mbit/s
95th percentile per-packet one-way delay: 62.847 ms
Loss rate: 0.40%
```

Run 1: Report of PCC-Vivace — Data Link

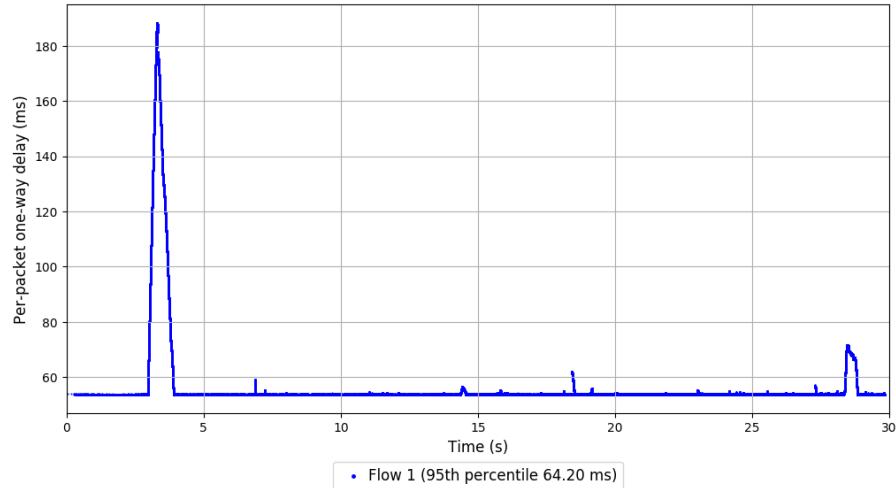
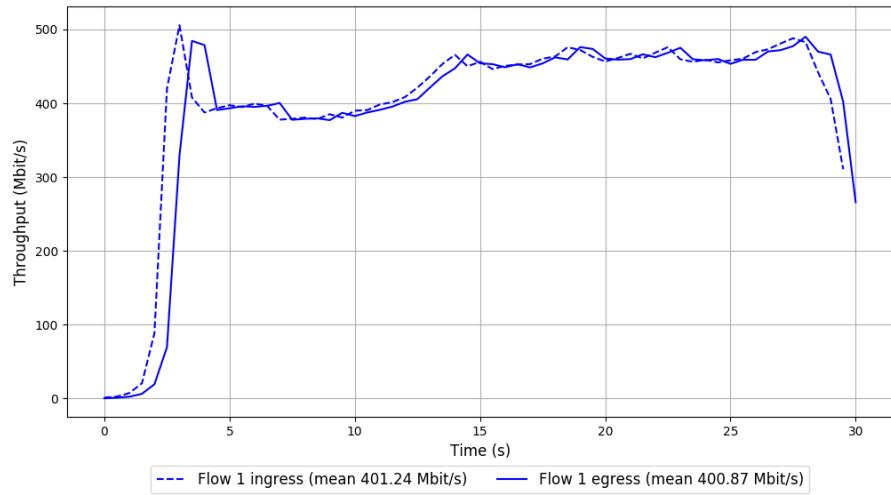


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-09-08 04:19:37
End at: 2018-09-08 04:20:07
Local clock offset: -0.044 ms
Remote clock offset: -0.725 ms

# Below is generated by plot.py at 2018-09-08 07:16:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 400.87 Mbit/s
95th percentile per-packet one-way delay: 64.196 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 400.87 Mbit/s
95th percentile per-packet one-way delay: 64.196 ms
Loss rate: 0.45%
```

Run 2: Report of PCC-Vivace — Data Link

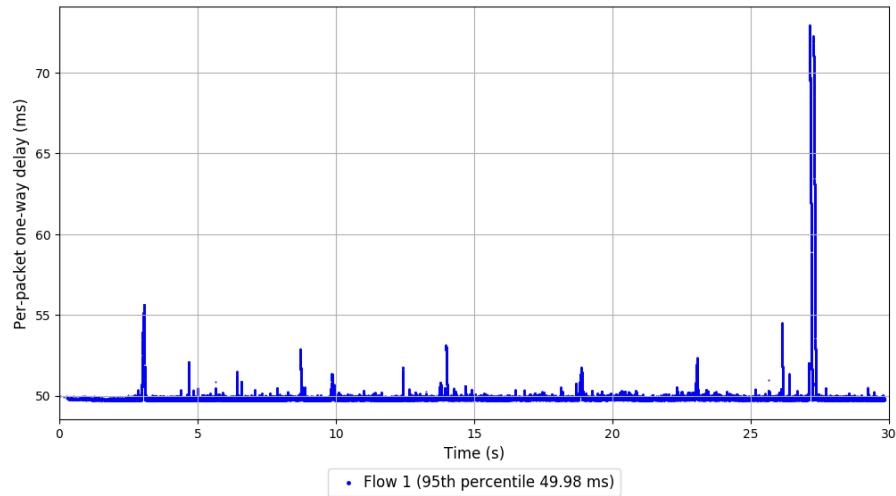
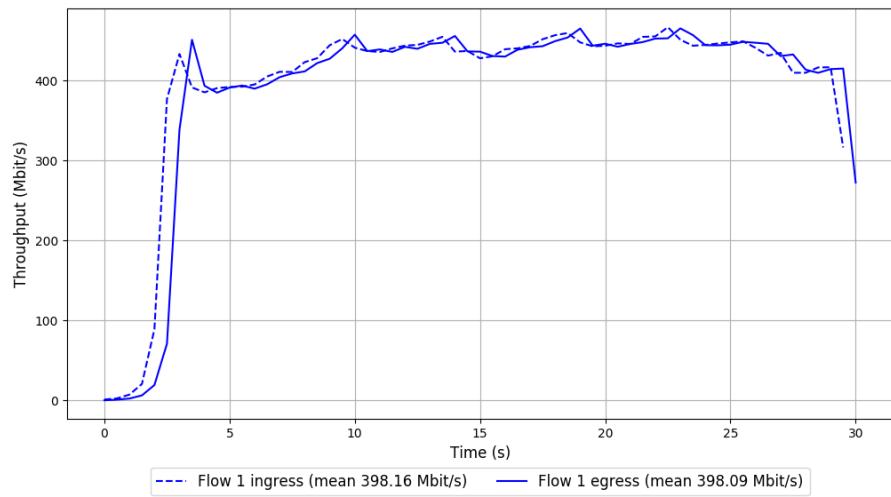


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-09-08 04:45:36
End at: 2018-09-08 04:46:06
Local clock offset: -0.125 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2018-09-08 07:16:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 398.09 Mbit/s
95th percentile per-packet one-way delay: 49.981 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 398.09 Mbit/s
95th percentile per-packet one-way delay: 49.981 ms
Loss rate: 0.37%
```

Run 3: Report of PCC-Vivace — Data Link

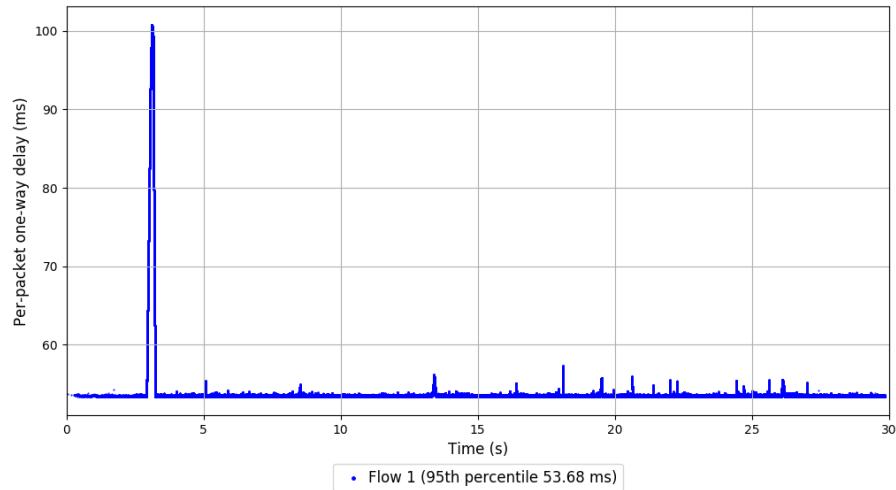
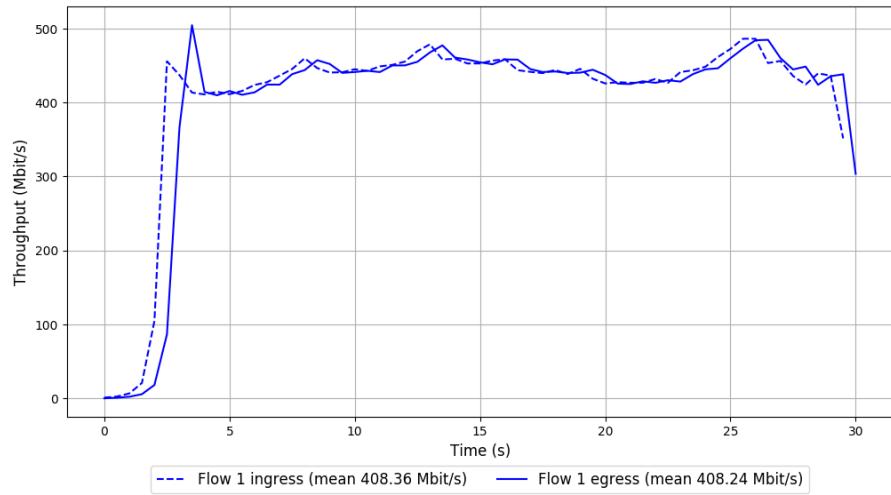


Run 4: Statistics of PCC-Vivace

```
Start at: 2018-09-08 05:11:43
End at: 2018-09-08 05:12:13
Local clock offset: 0.165 ms
Remote clock offset: 0.071 ms

# Below is generated by plot.py at 2018-09-08 07:16:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 408.24 Mbit/s
95th percentile per-packet one-way delay: 53.683 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 408.24 Mbit/s
95th percentile per-packet one-way delay: 53.683 ms
Loss rate: 0.39%
```

Run 4: Report of PCC-Vivace — Data Link

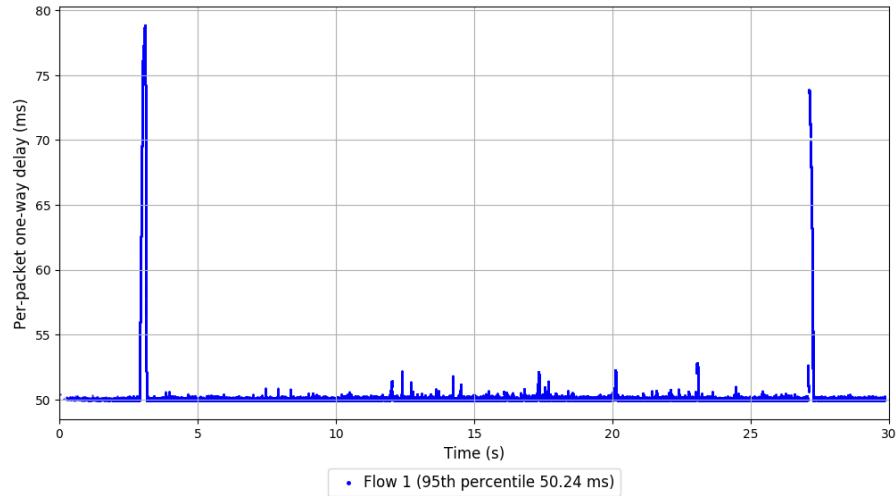
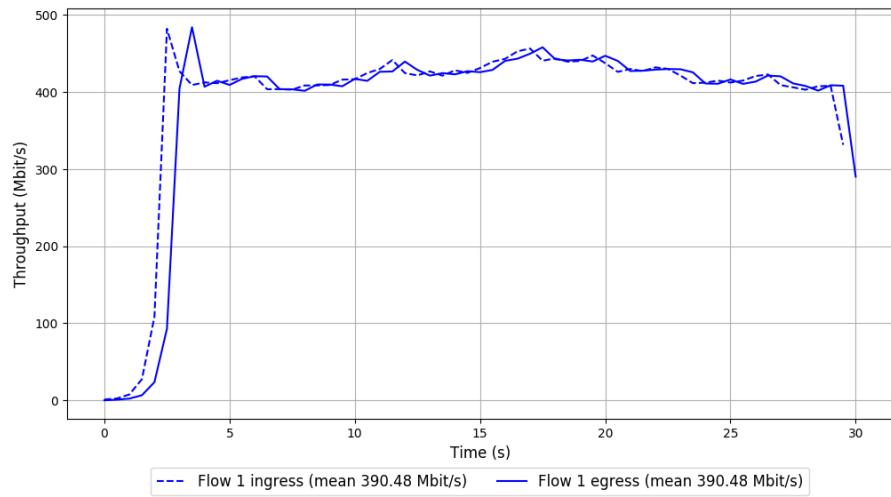


Run 5: Statistics of PCC-Vivace

```
Start at: 2018-09-08 05:37:43
End at: 2018-09-08 05:38:13
Local clock offset: -0.074 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2018-09-08 07:16:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 390.48 Mbit/s
95th percentile per-packet one-way delay: 50.241 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 390.48 Mbit/s
95th percentile per-packet one-way delay: 50.241 ms
Loss rate: 0.35%
```

Run 5: Report of PCC-Vivace — Data Link

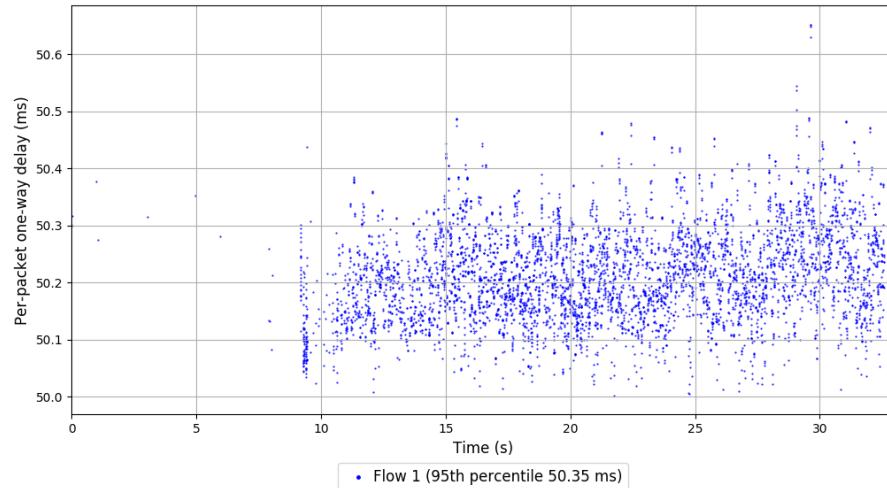
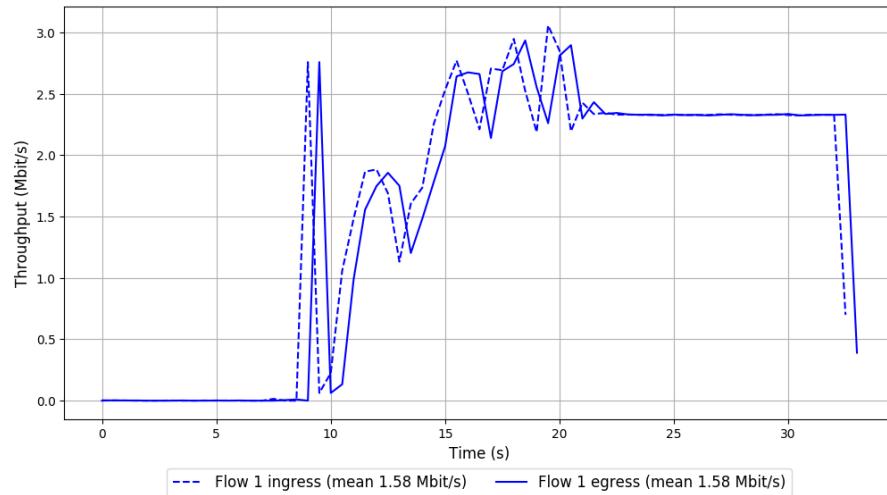


Run 1: Statistics of WebRTC media

```
Start at: 2018-09-08 03:59:32
End at: 2018-09-08 04:00:02
Local clock offset: -0.045 ms
Remote clock offset: -0.166 ms

# Below is generated by plot.py at 2018-09-08 07:16:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 50.349 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 50.349 ms
Loss rate: 0.52%
```

Run 1: Report of WebRTC media — Data Link

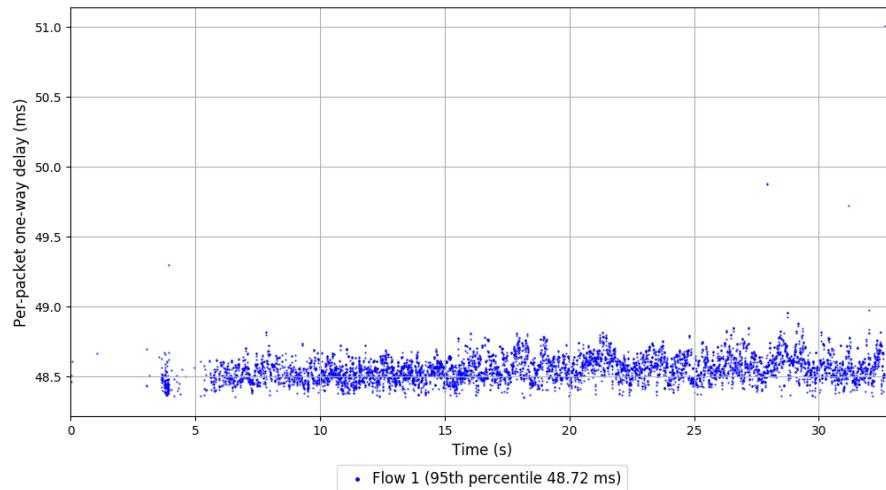
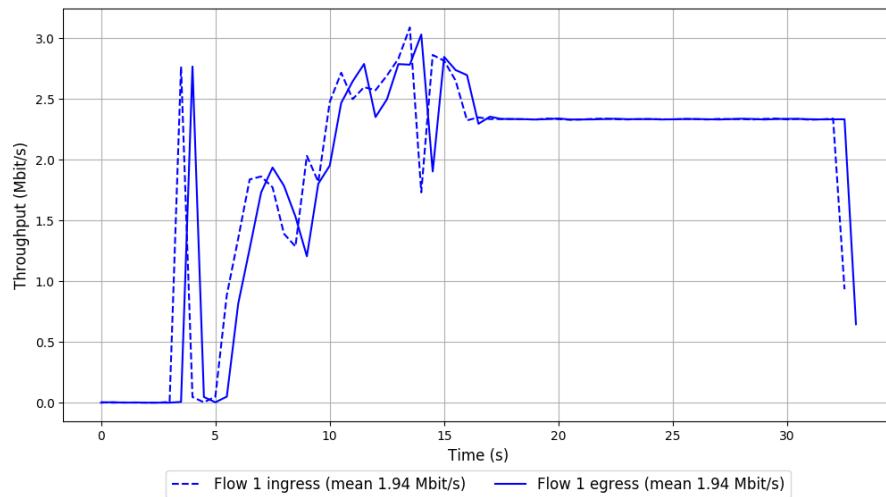


Run 2: Statistics of WebRTC media

```
Start at: 2018-09-08 04:25:30
End at: 2018-09-08 04:26:00
Local clock offset: 0.071 ms
Remote clock offset: 1.346 ms

# Below is generated by plot.py at 2018-09-08 07:16:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 48.715 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 48.715 ms
Loss rate: 0.41%
```

Run 2: Report of WebRTC media — Data Link

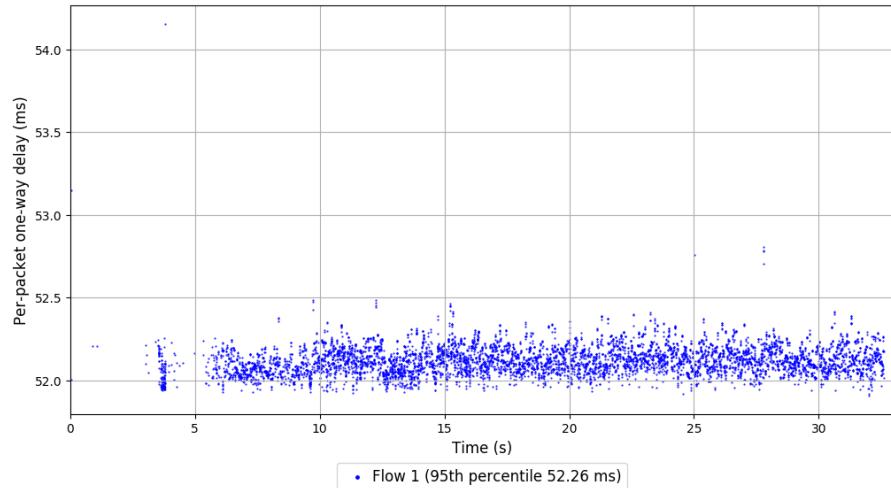
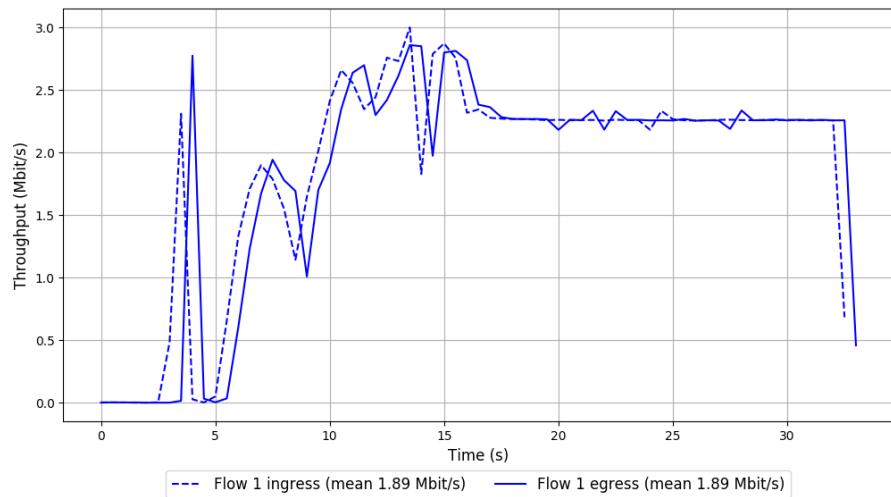


Run 3: Statistics of WebRTC media

```
Start at: 2018-09-08 04:51:30
End at: 2018-09-08 04:52:00
Local clock offset: -0.059 ms
Remote clock offset: -1.646 ms

# Below is generated by plot.py at 2018-09-08 07:16:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 52.262 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 52.262 ms
Loss rate: 0.37%
```

Run 3: Report of WebRTC media — Data Link

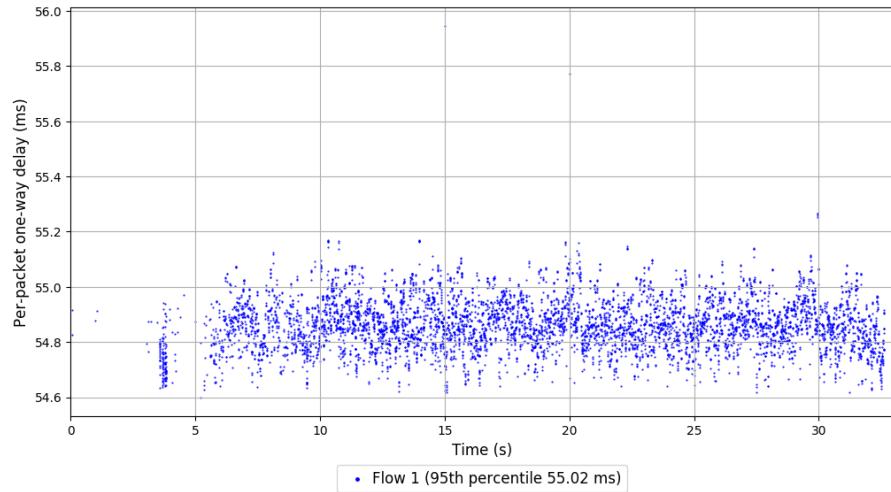
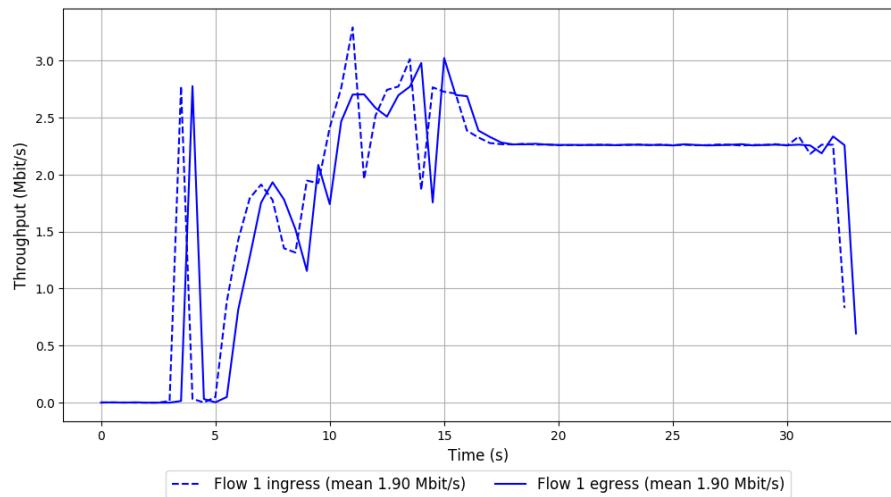


Run 4: Statistics of WebRTC media

```
Start at: 2018-09-08 05:17:37
End at: 2018-09-08 05:18:07
Local clock offset: -0.051 ms
Remote clock offset: -1.387 ms

# Below is generated by plot.py at 2018-09-08 07:16:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 55.023 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 55.023 ms
Loss rate: 0.36%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

```
Start at: 2018-09-08 05:43:38
End at: 2018-09-08 05:44:08
Local clock offset: 0.064 ms
Remote clock offset: 0.015 ms

# Below is generated by plot.py at 2018-09-08 07:16:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 53.187 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 53.187 ms
Loss rate: 0.37%
```

Run 5: Report of WebRTC media — Data Link

