# Pantheon Report

Generated at 2019-10-02 22:36:47 (UTC).

Data path: AWS California 2 on `ens5` (*local*) →Mexico on `em1` (*remote*).

Repeated the test of 24 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.

```
System info:
Linux 4.15.0-1050-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ de42328552b3776a75a932a94dfafd722537b0ec
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/muses_dtree @ 387225f7b5f61ddbe92d708a8869ffbb84eb3200
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
```

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

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



test from AWS California 2 to Mexico, 5 runs of 30s each per scheme

3
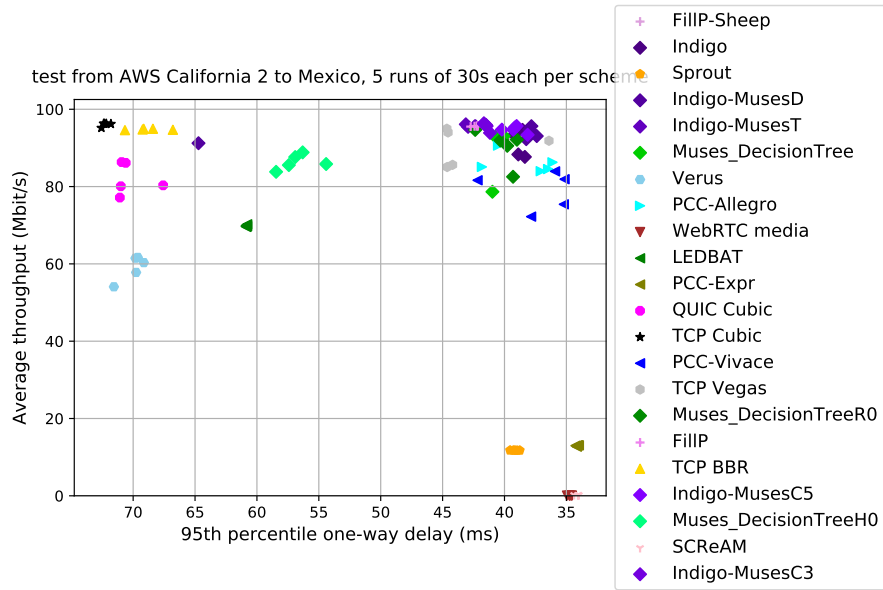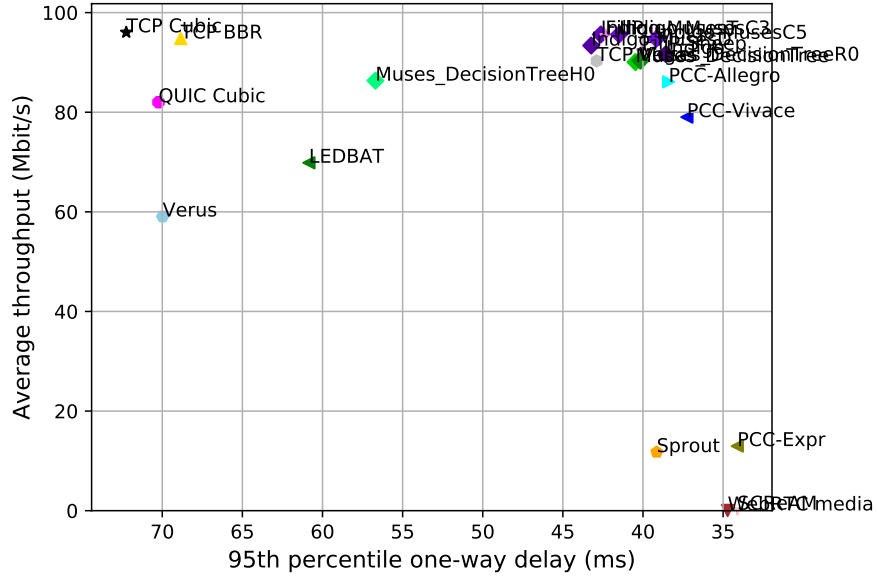
| scheme | # runs | mean avg tput (Mbit/s) flow 1 | mean 95th-%ile delay (ms) flow 1 | mean loss rate (%) flow 1 |
|---|---|---|---|---|
| TCP BBR | 5 | 94.79 | 68.85 | 4.90 |
| Copa | 0 | N/A | N/A | N/A |
| TCP Cubic | 5 | 96.04 | 72.25 | 0.58 |
| FillP | 5 | 95.62 | 42.35 | 0.65 |
| FillP-Sheep | 5 | 92.54 | 40.07 | 0.60 |
| Indigo | 5 | 91.67 | 38.57 | 0.02 |
| Indigo-MusesC3 | 5 | 95.62 | 41.49 | 0.00 |
| Indigo-MusesC5 | 5 | 94.75 | 39.16 | 0.00 |
| Indigo-MusesD | 5 | 93.39 | 43.23 | 0.21 |
| Indigo-MusesT | 5 | 95.61 | 42.63 | 1.04 |
| LEDBAT | 5 | 69.86 | 60.85 | 0.00 |
| Muses_DecisionTree | 5 | 90.07 | 40.47 | 0.07 |
| Muses_DecisionTreeH0 | 5 | 86.34 | 56.70 | 2.32 |
| Muses_DecisionTreeR0 | 5 | 90.35 | 40.16 | 0.05 |
| PCC-Allegro | 5 | 86.09 | 38.40 | 0.81 |
| PCC-Expr | 5 | 12.97 | 34.12 | 41.06 |
| QUIC Cubic | 5 | 82.01 | 70.24 | 1.48 |
| SCReAM | 5 | 0.21 | 34.10 | 0.00 |
| Sprout | 5 | 11.76 | 39.14 | 0.00 |
| TaoVA-100x | 0 | N/A | N/A | N/A |
| TCP Vegas | 5 | 90.30 | 42.89 | 0.36 |
| Verus | 5 | 59.07 | 69.98 | 31.06 |
| PCC-Vivace | 5 | 79.02 | 37.26 | 0.04 |
| WebRTC media | 5 | 0.05 | 34.72 | 0.00 |

```
Run 1: Statistics of TCP BBR

Start at: 2019-10-02 17:27:47
End at: 2019-10-02 17:28:17
Local clock offset: 0.901 ms
Remote clock offset: 7.614 ms

# Below is generated by plot.py at 2019-10-02 22:25:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.60 Mbit/s
95th percentile per-packet one-way delay: 70.663 ms
Loss rate: 6.72%
-- Flow 1:
Average throughput: 94.60 Mbit/s
95th percentile per-packet one-way delay: 70.663 ms
Loss rate: 6.72%
```
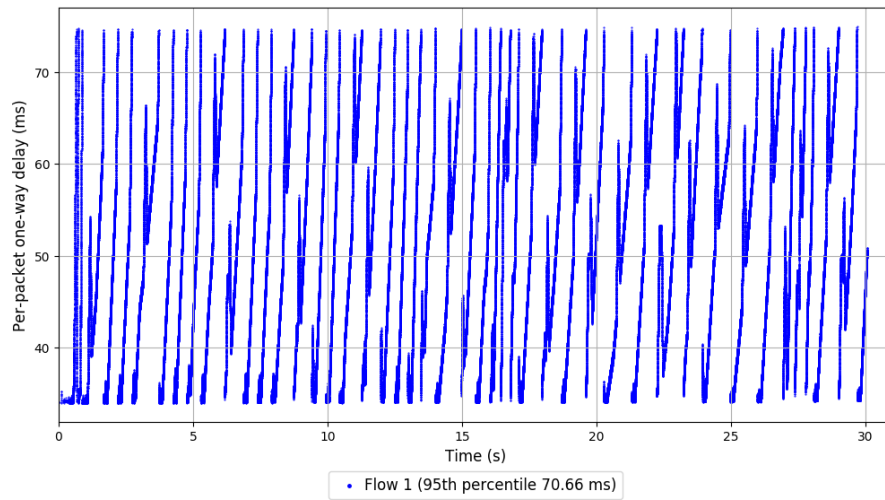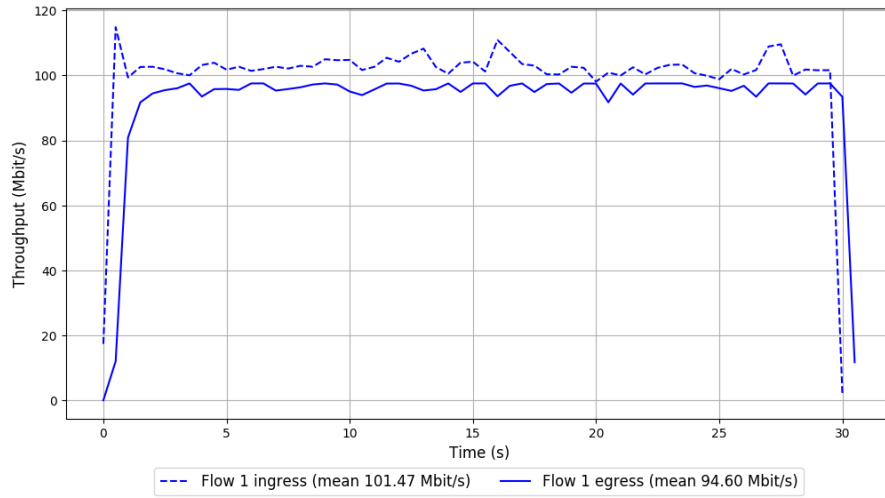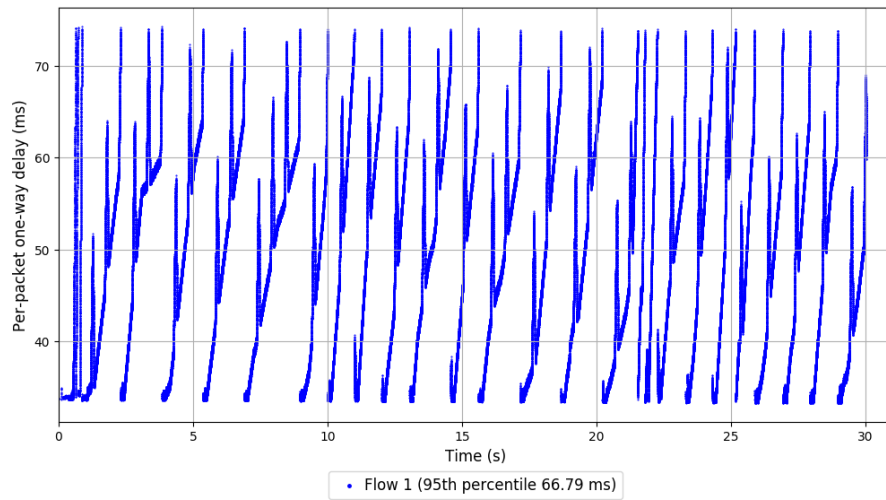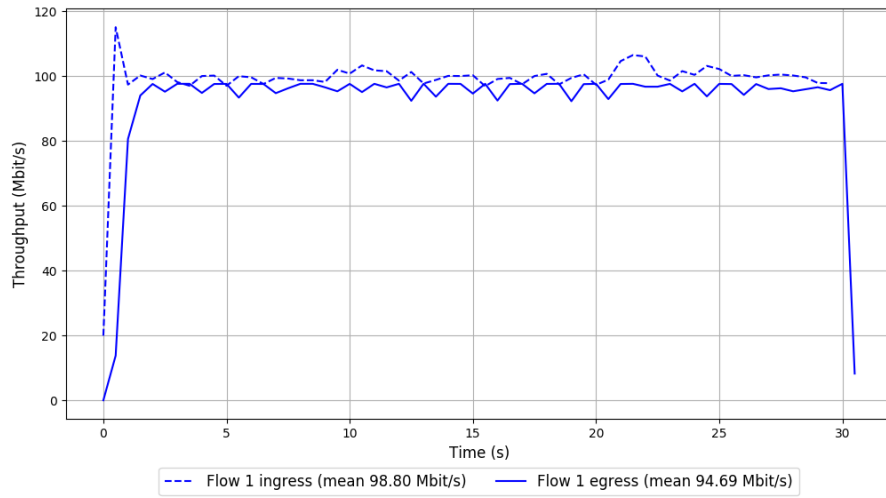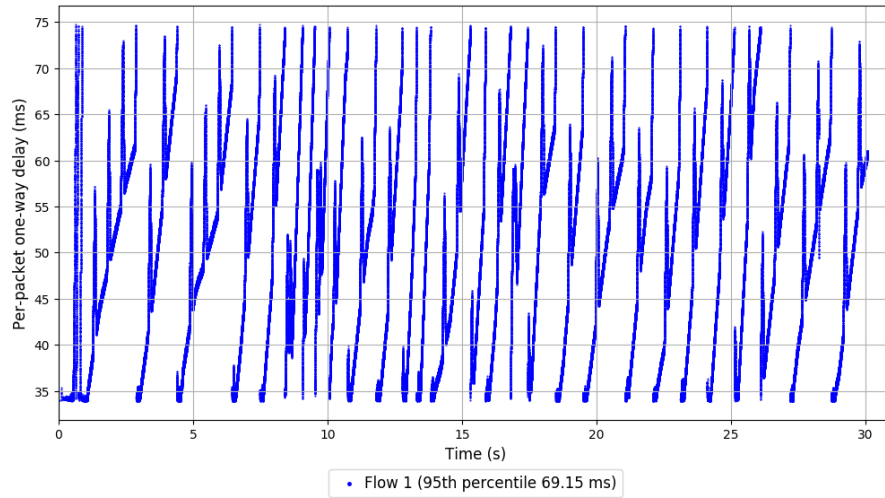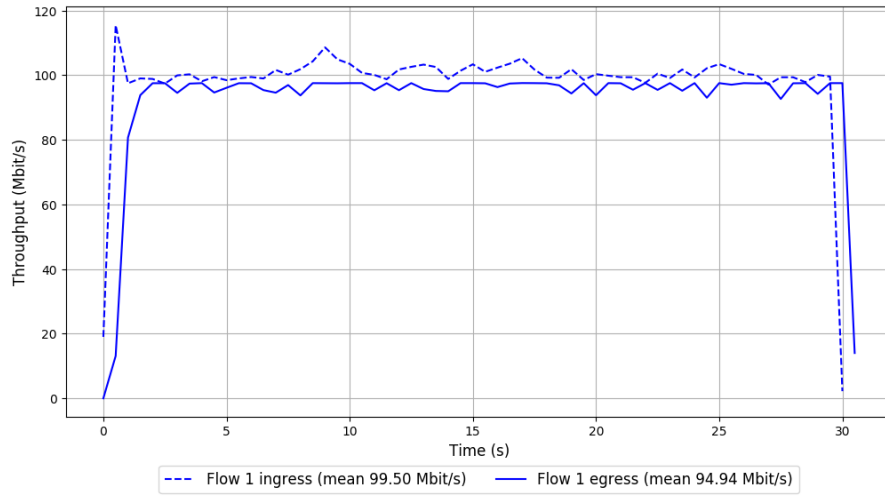
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-10-02 18:26:14
End at: 2019-10-02 18:26:44
Local clock offset: 11.754 ms
Remote clock offset: 7.698 ms


# Below is generated by plot.py at 2019-10-02 22:25:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.69 Mbit/s
95th percentile per-packet one-way delay: 66.791 ms
Loss rate: 4.08%
-- Flow 1:
Average throughput: 94.69 Mbit/s
95th percentile per-packet one-way delay: 66.791 ms
Loss rate: 4.08%
```
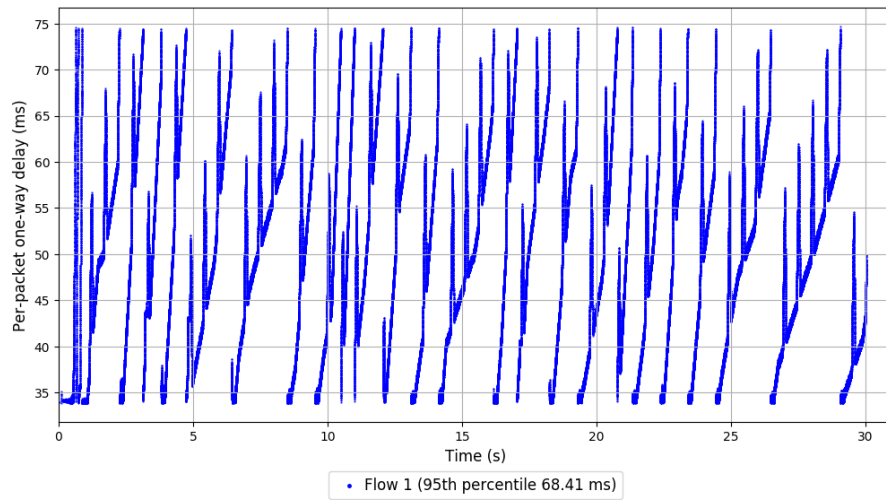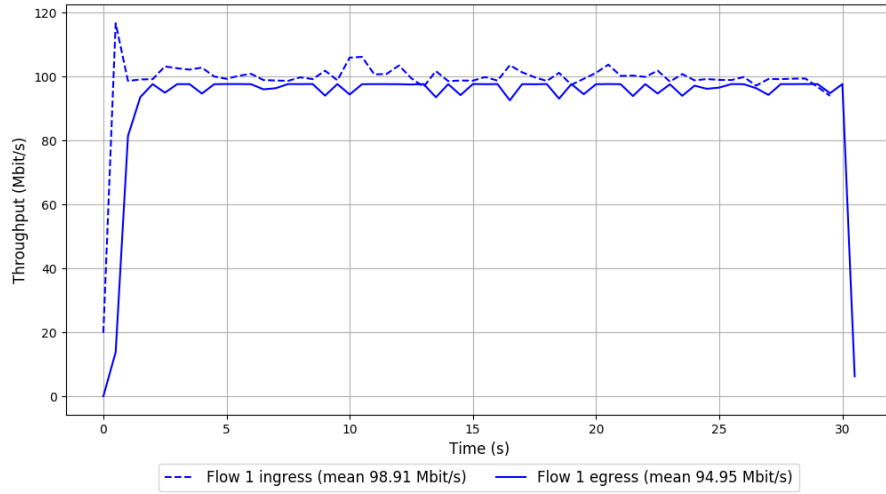
Run 2: Report of TCP BBR — Data Link



Flow 1 ingress (mean 98.80 Mbit/s) --- Flow 1 egress (mean 94.69 Mbit/s)



• Flow 1 (95th percentile 66.79 ms)

8

```
Run 3: Statistics of TCP BBR

Start at: 2019-10-02 19:31:19
End at: 2019-10-02 19:31:49
Local clock offset: 0.953 ms
Remote clock offset: 7.716 ms


# Below is generated by plot.py at 2019-10-02 22:25:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.94 Mbit/s
95th percentile per-packet one-way delay: 69.150 ms
Loss rate: 4.49%
-- Flow 1:
Average throughput: 94.94 Mbit/s
95th percentile per-packet one-way delay: 69.150 ms
Loss rate: 4.49%
```
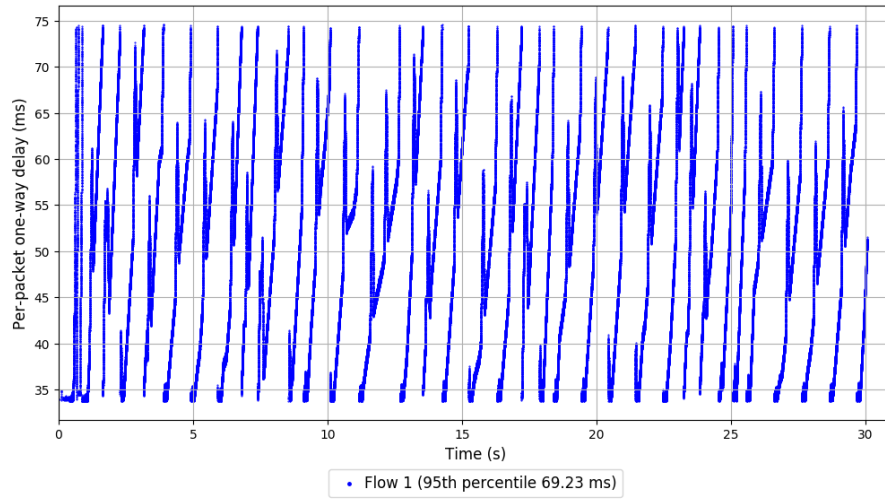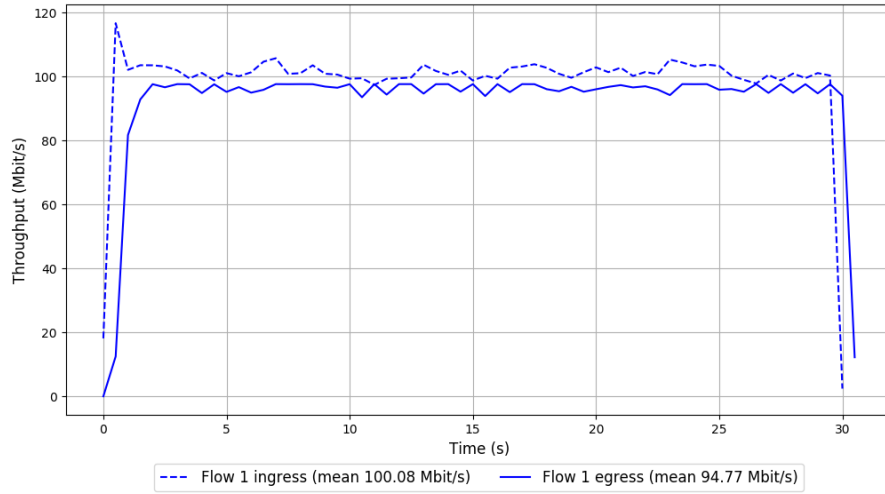
# Run 3: Report of TCP BBR — Data Link



Flow 1 ingress (mean 99.50 Mbit/s)    Flow 1 egress (mean 94.94 Mbit/s)



Flow 1 (95th percentile 69.15 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-10-02 20:28:49
End at: 2019-10-02 20:29:19
Local clock offset: -0.085 ms
Remote clock offset: 7.795 ms


# Below is generated by plot.py at 2019-10-02 22:25:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.95 Mbit/s
95th percentile per-packet one-way delay: 68.405 ms
Loss rate: 3.96%
-- Flow 1:
Average throughput: 94.95 Mbit/s
95th percentile per-packet one-way delay: 68.405 ms
Loss rate: 3.96%
```

Run 4: Report of TCP BBR — Data Link



Flow 1 ingress (mean 98.91 Mbit/s)          Flow 1 egress (mean 94.95 Mbit/s)



Flow 1 (95th percentile 68.41 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2019-10-02 21:26:14
End at: 2019-10-02 21:26:44
Local clock offset: -0.234 ms
Remote clock offset: 7.459 ms

# Below is generated by plot.py at 2019-10-02 22:25:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.77 Mbit/s
95th percentile per-packet one-way delay: 69.234 ms
Loss rate: 5.25%
-- Flow 1:
Average throughput: 94.77 Mbit/s
95th percentile per-packet one-way delay: 69.234 ms
Loss rate: 5.25%
```

# Run 5: Report of TCP BBR — Data Link



Flow 1 ingress (mean 100.08 Mbit/s) --- Flow 1 egress (mean 94.77 Mbit/s)



Flow 1 (95th percentile 69.23 ms)
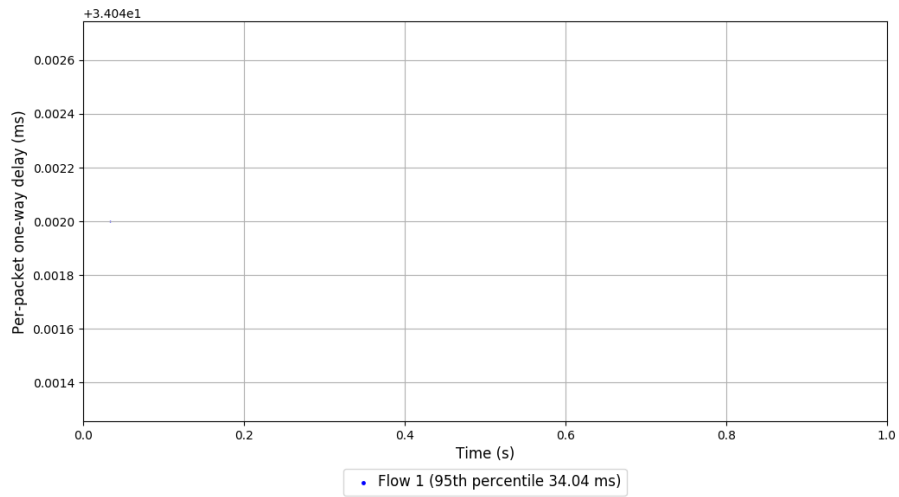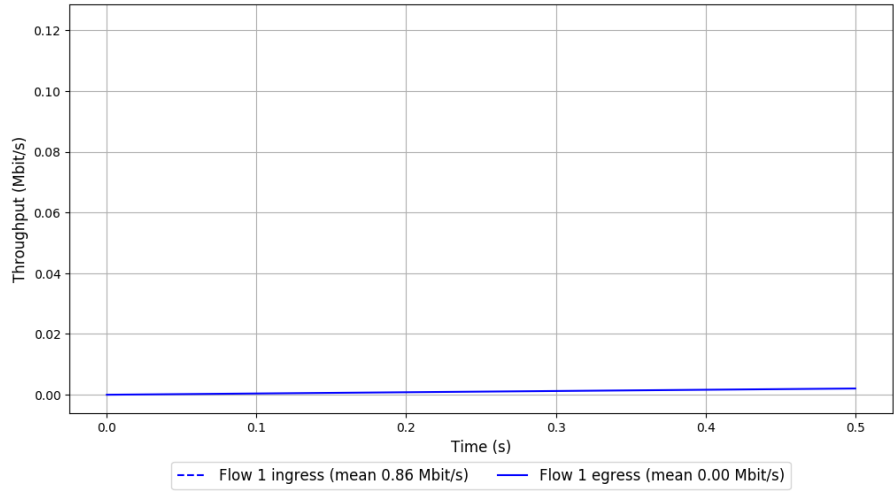
14

```
Run 1: Statistics of Copa

Start at: 2019-10-02 17:44:05
End at: 2019-10-02 17:44:35
Local clock offset: 8.409 ms
Remote clock offset: 7.844 ms
```

# Run 1: Report of Copa — Data Link



Flow 1 ingress (mean 0.86 Mbit/s)    Flow 1 egress (mean 0.00 Mbit/s)



Flow 1 (95th percentile 33.97 ms)
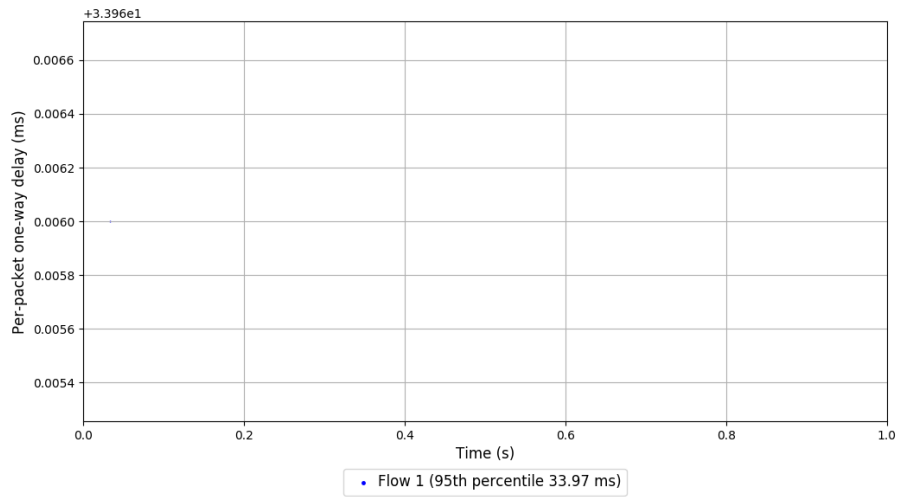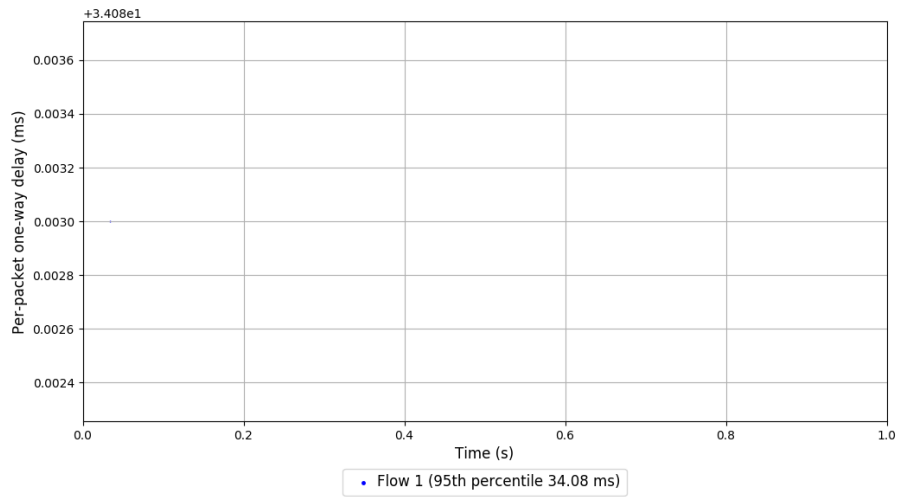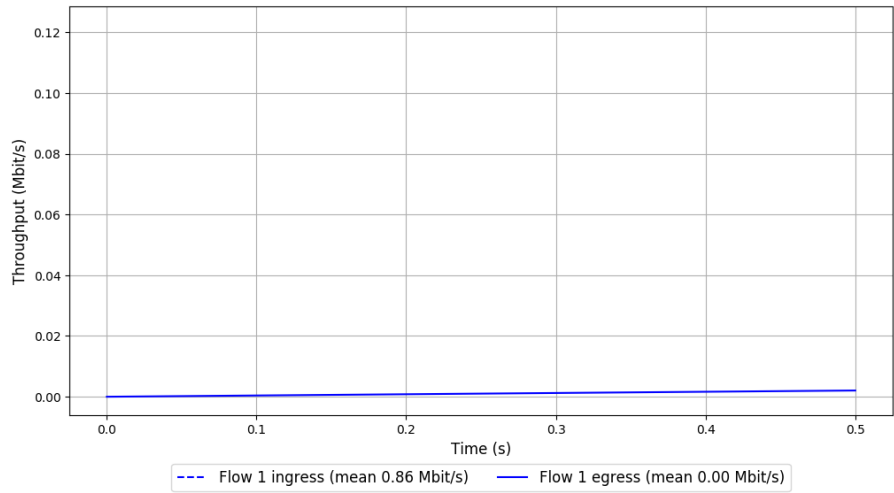
```
Run 2: Statistics of Copa

Start at: 2019-10-02 18:42:21
End at: 2019-10-02 18:42:51
Local clock offset: 7.495 ms
Remote clock offset: 7.61 ms
```

# Run 2: Report of Copa — Data Link



Flow 1 ingress (mean 0.69 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)



Flow 1 (95th percentile 33.91 ms)
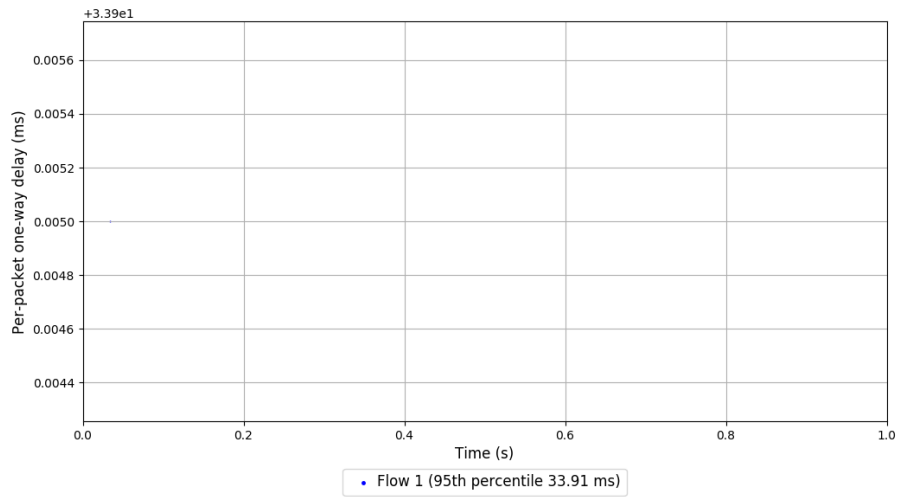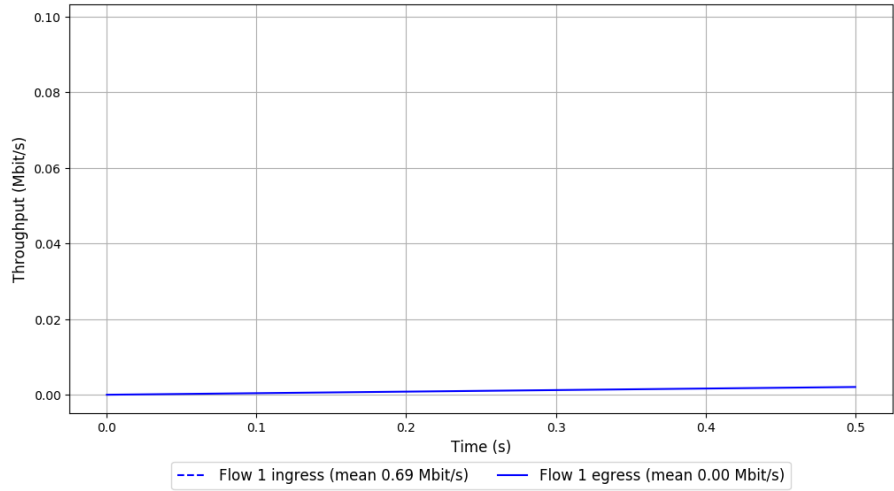
```
Run 3: Statistics of Copa

Start at: 2019-10-02 19:45:32
End at: 2019-10-02 19:46:02
Local clock offset: 0.666 ms
Remote clock offset: 7.728 ms
```

# Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-10-02 20:44:37
End at: 2019-10-02 20:45:07
Local clock offset: -0.311 ms
Remote clock offset: 7.766 ms
```

Run 4: Report of Copa — Data Link
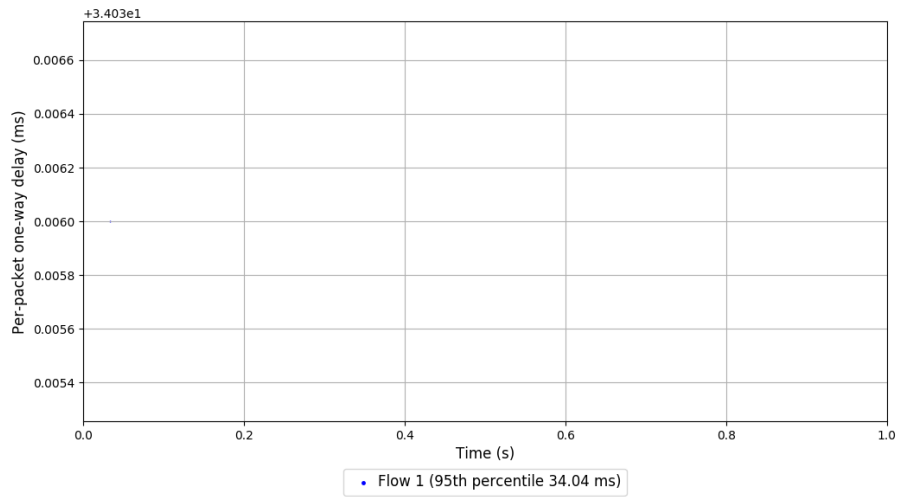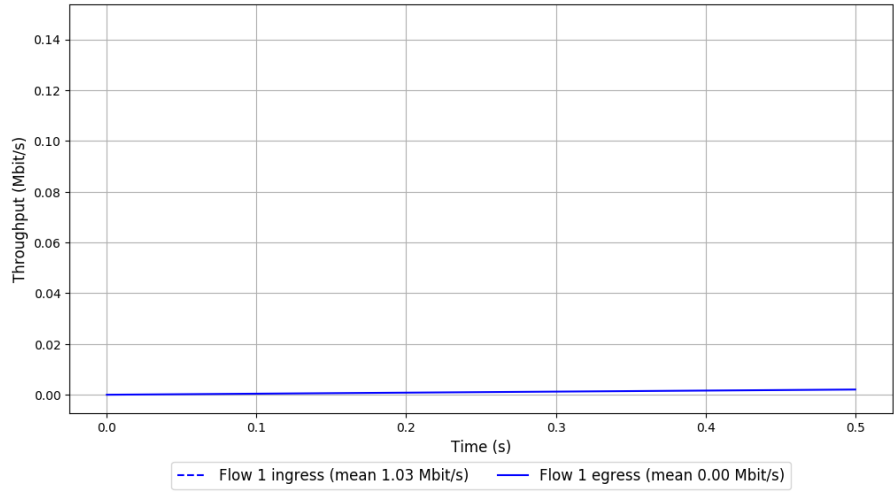
```
Run 5: Statistics of Copa

Start at: 2019-10-02 21:40:55
End at: 2019-10-02 21:41:25
Local clock offset: -0.241 ms
Remote clock offset: 7.393 ms
```

# Run 5: Report of Copa — Data Link



Flow 1 ingress (mean 0.86 Mbit/s) — — — Flow 1 egress (mean 0.00 Mbit/s)



• Flow 1 (95th percentile 34.08 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-10-02 17:38:59
End at: 2019-10-02 17:39:29
Local clock offset: 9.488 ms
Remote clock offset: 7.655 ms


# Below is generated by plot.py at 2019-10-02 22:25:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.19 Mbit/s
95th percentile per-packet one-way delay: 72.564 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 95.19 Mbit/s
95th percentile per-packet one-way delay: 72.564 ms
Loss rate: 0.54%
```

Run 1: Report of TCP Cubic — Data Link
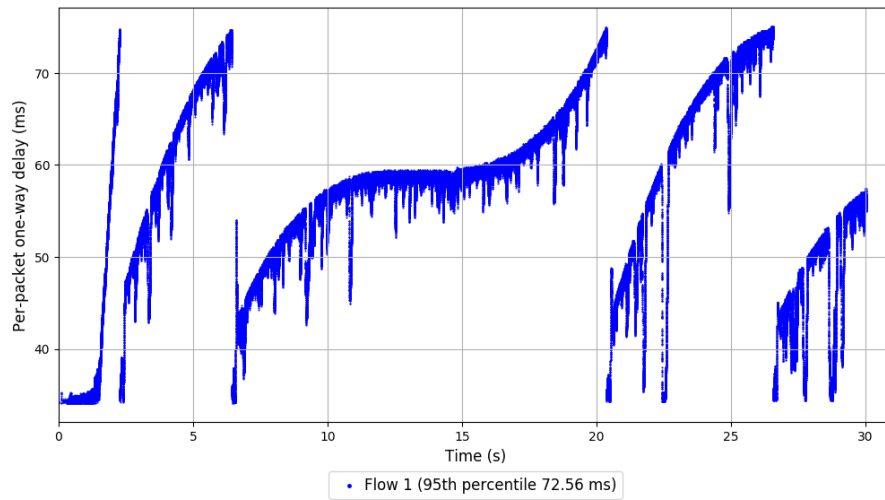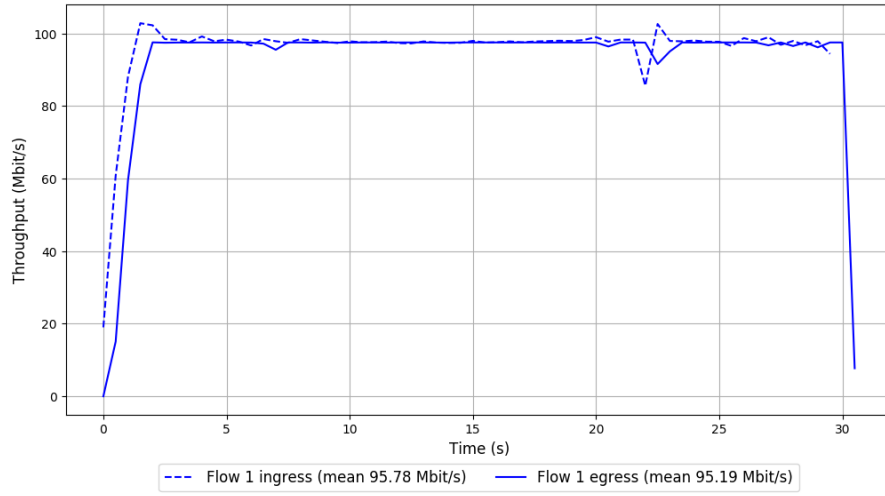
```
Run 2: Statistics of TCP Cubic

Start at: 2019-10-02 18:35:37
End at: 2019-10-02 18:36:07
Local clock offset: 7.824 ms
Remote clock offset: 7.591 ms


# Below is generated by plot.py at 2019-10-02 22:25:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.28 Mbit/s
95th percentile per-packet one-way delay: 72.170 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 96.28 Mbit/s
95th percentile per-packet one-way delay: 72.170 ms
Loss rate: 0.69%
```
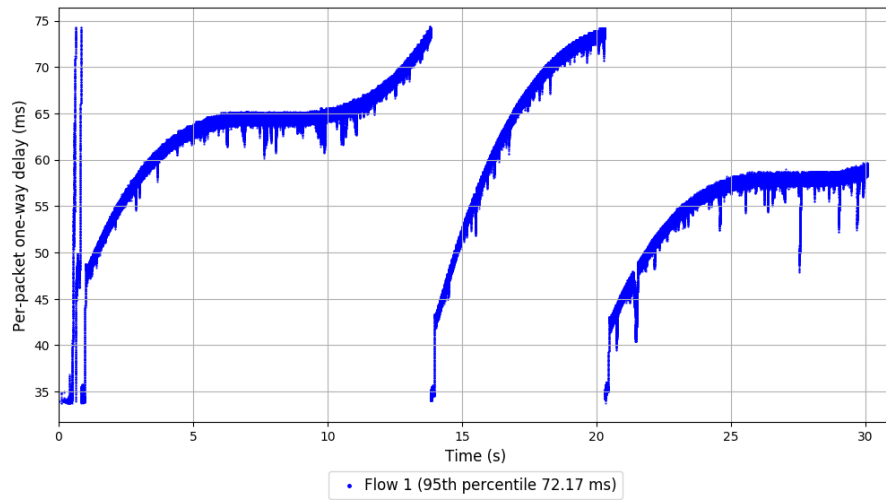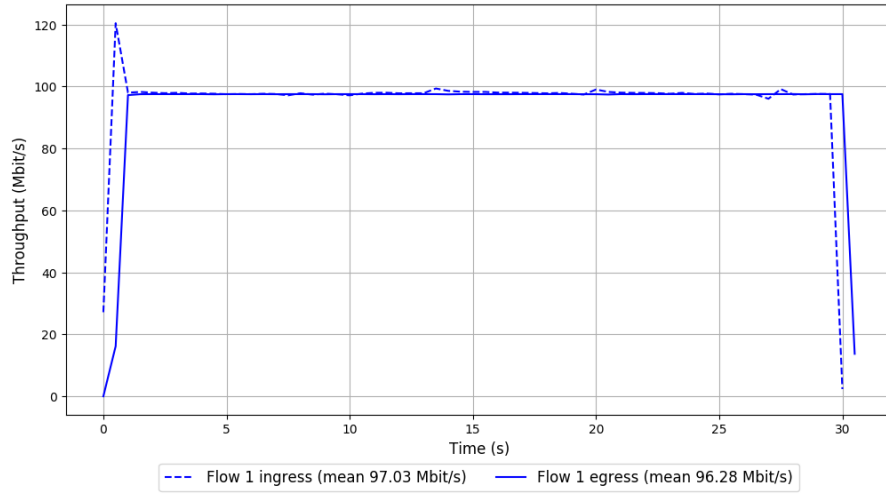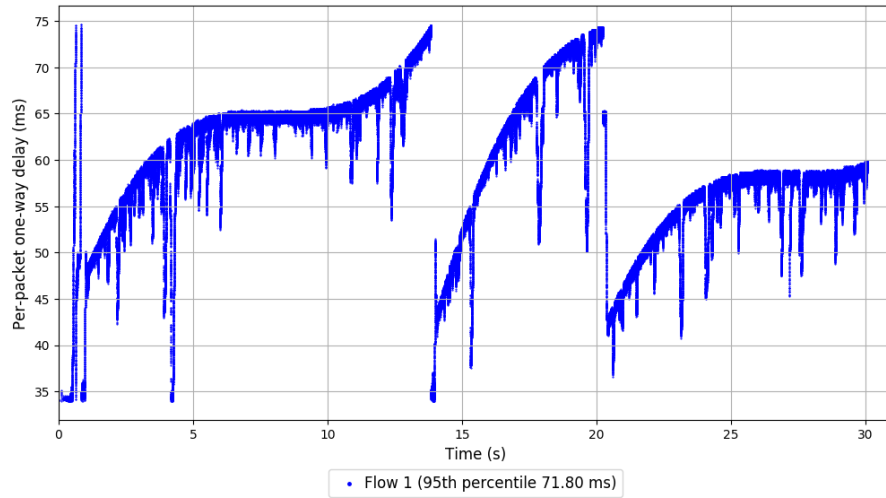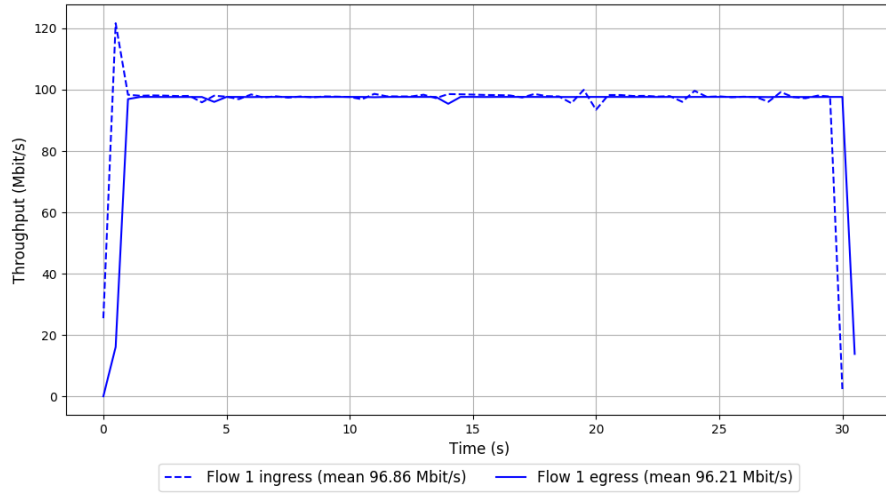
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-10-02 19:40:00
End at: 2019-10-02 19:40:30
Local clock offset: 0.661 ms
Remote clock offset: 7.732 ms


# Below is generated by plot.py at 2019-10-02 22:25:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.21 Mbit/s
95th percentile per-packet one-way delay: 71.799 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 96.21 Mbit/s
95th percentile per-packet one-way delay: 71.799 ms
Loss rate: 0.59%
```
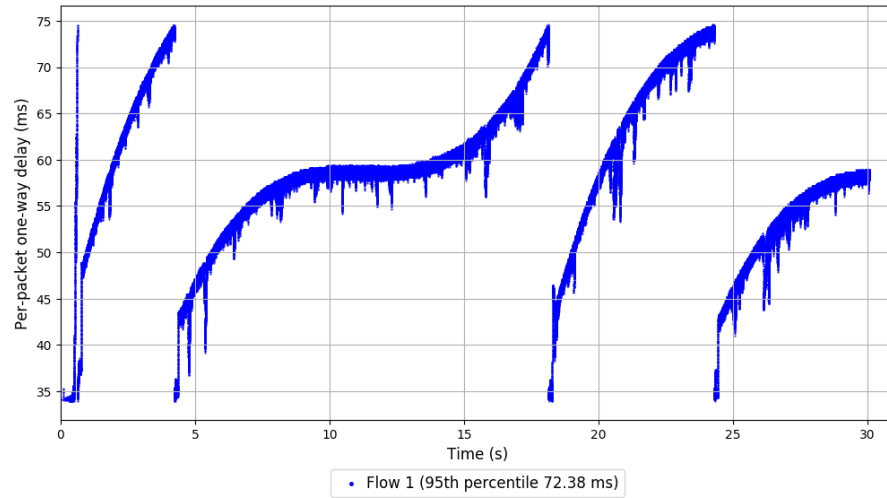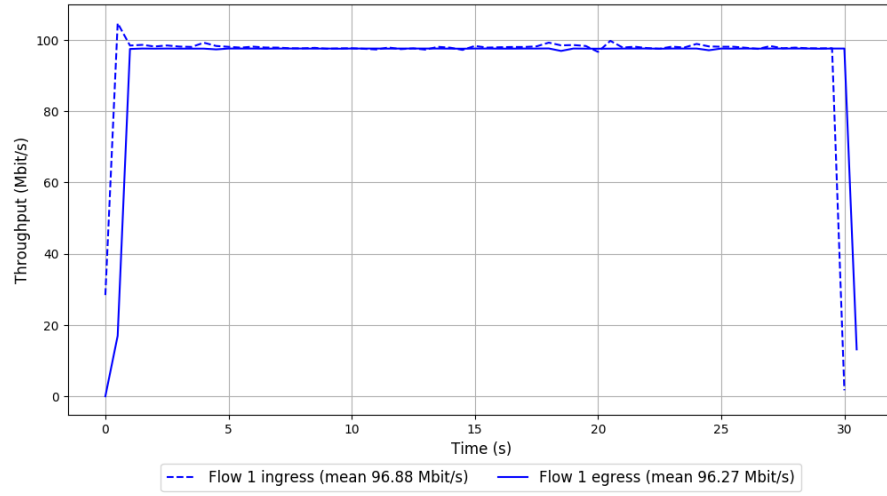
Run 3: Report of TCP Cubic — Data Link



Flow 1 ingress (mean 96.86 Mbit/s)    Flow 1 egress (mean 96.21 Mbit/s)



• Flow 1 (95th percentile 71.80 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-10-02 20:38:41
End at: 2019-10-02 20:39:11
Local clock offset: -0.248 ms
Remote clock offset: 7.746 ms


# Below is generated by plot.py at 2019-10-02 22:26:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 72.382 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 72.382 ms
Loss rate: 0.55%
```
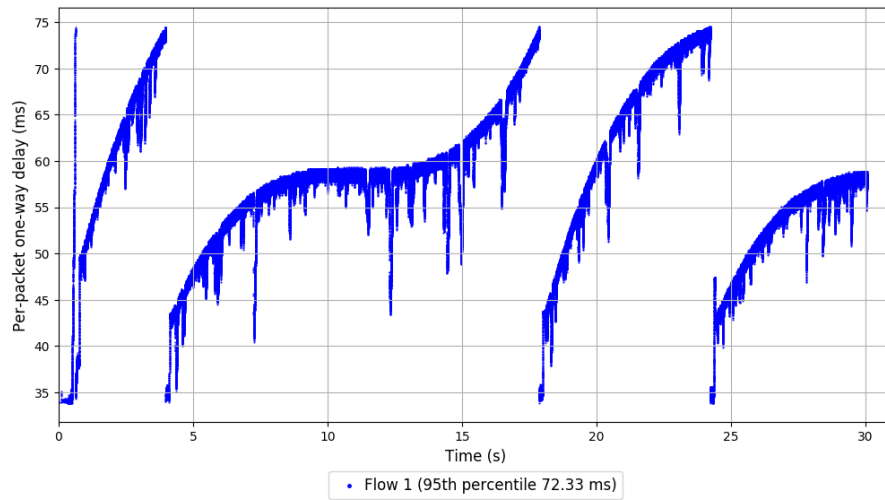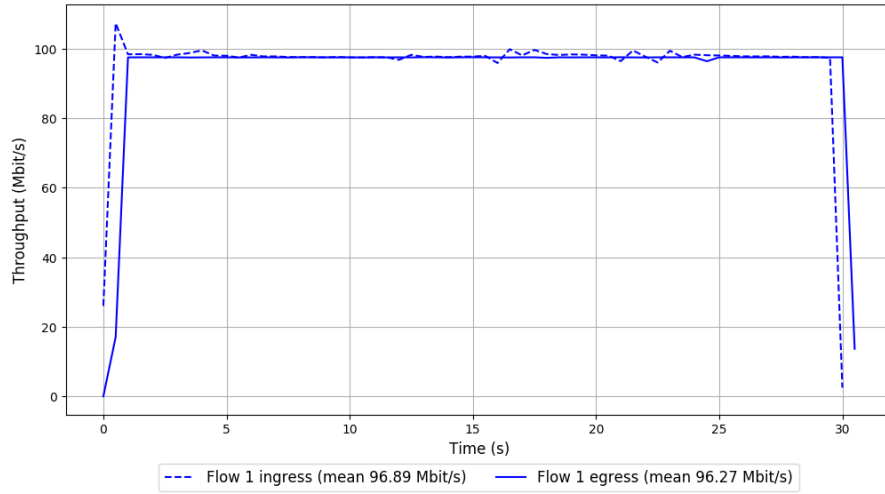
Run 4: Report of TCP Cubic — Data Link



Flow 1 ingress (mean 96.88 Mbit/s)    Flow 1 egress (mean 96.27 Mbit/s)



• Flow 1 (95th percentile 72.38 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-10-02 21:35:48
End at: 2019-10-02 21:36:18
Local clock offset: -0.251 ms
Remote clock offset: 7.455 ms


# Below is generated by plot.py at 2019-10-02 22:26:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 72.326 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 72.326 ms
Loss rate: 0.55%
```

Run 5: Report of TCP Cubic — Data Link



Flow 1 ingress (mean 96.89 Mbit/s)　　　Flow 1 egress (mean 96.27 Mbit/s)



Flow 1 (95th percentile 72.33 ms)

```
Run 1: Statistics of FillP

Start at: 2019-10-02 18:19:48
End at: 2019-10-02 18:20:18
Local clock offset: 11.463 ms
Remote clock offset: 7.62 ms


# Below is generated by plot.py at 2019-10-02 22:26:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 42.421 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 42.421 ms
Loss rate: 0.69%
```
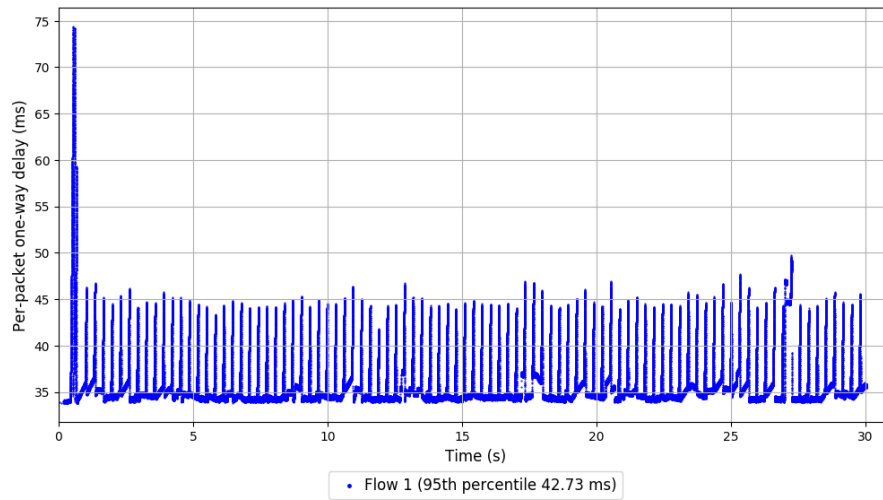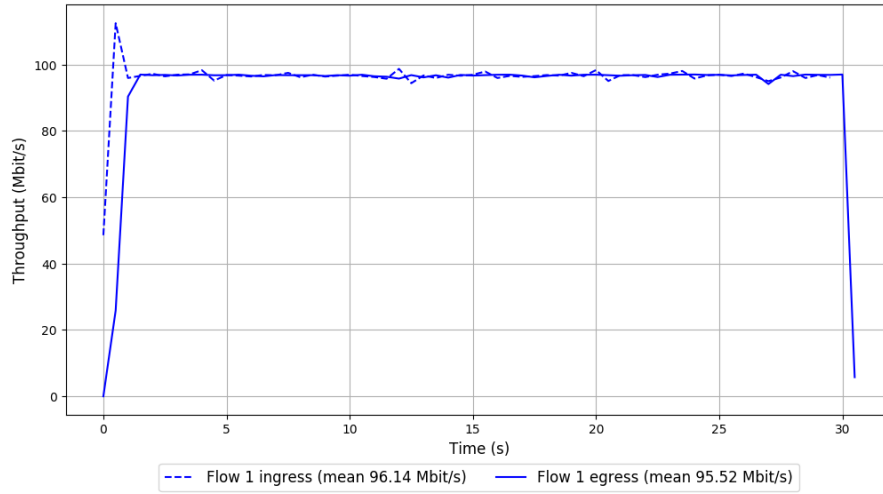
## Run 1: Report of FillP — Data Link
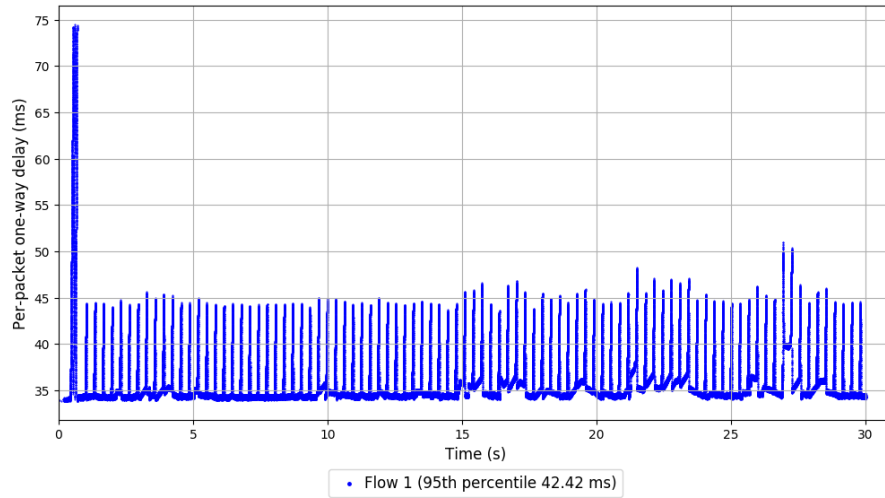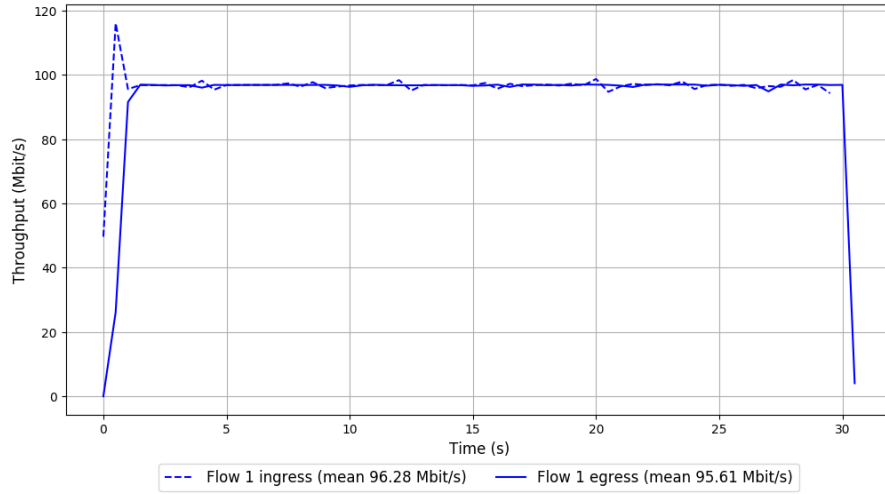
```
Run 2: Statistics of FillP

Start at: 2019-10-02 19:19:50
End at: 2019-10-02 19:20:20
Local clock offset: 1.67 ms
Remote clock offset: 7.622 ms


# Below is generated by plot.py at 2019-10-02 22:26:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 42.731 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 42.731 ms
Loss rate: 0.64%
```
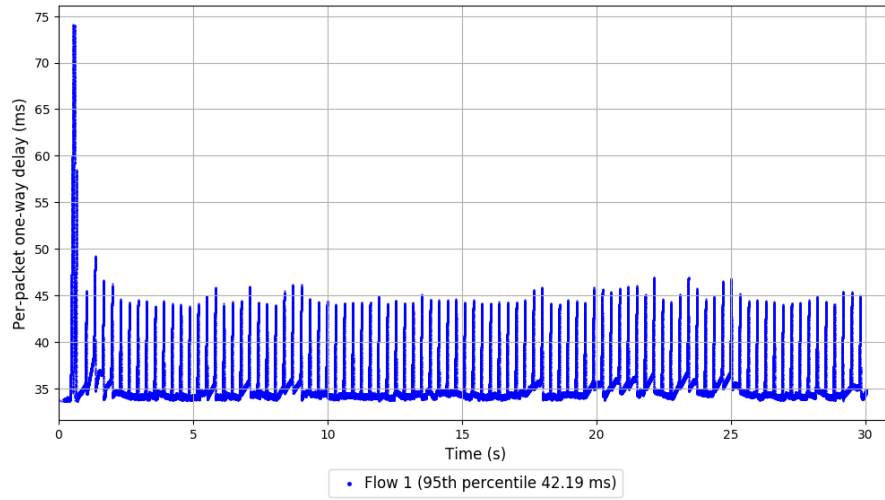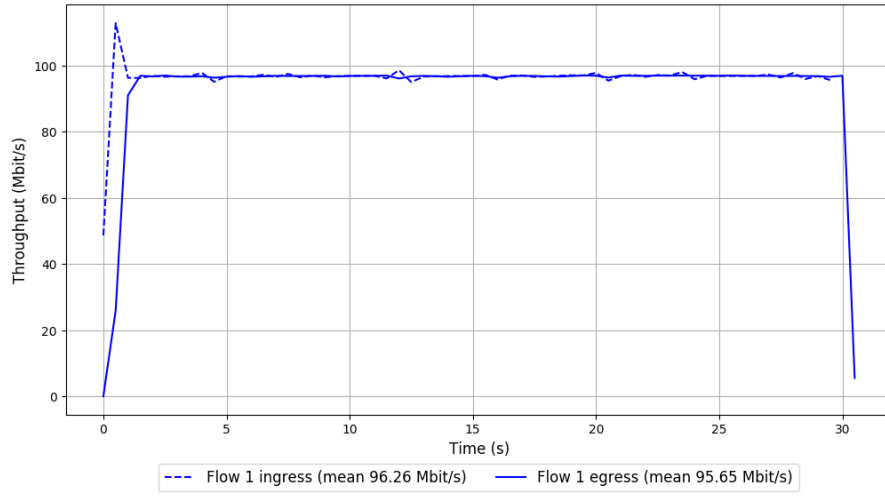
Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-10-02 20:22:16
End at: 2019-10-02 20:22:46
Local clock offset: -0.016 ms
Remote clock offset: 7.773 ms


# Below is generated by plot.py at 2019-10-02 22:26:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 42.193 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 42.193 ms
Loss rate: 0.64%
```
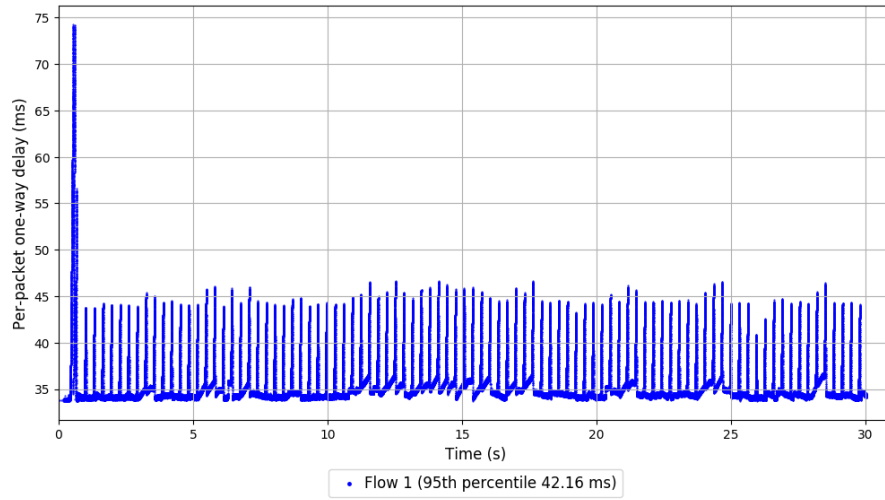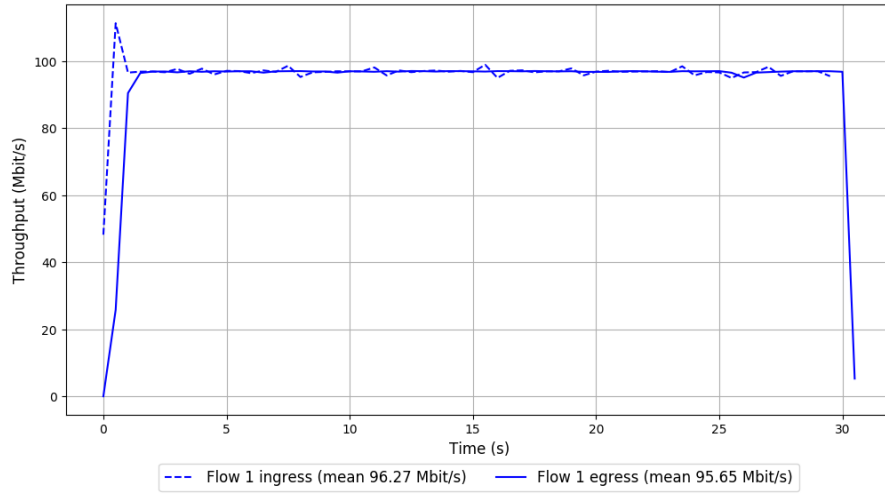
## Run 3: Report of FillP — Data Link



Flow 1 ingress (mean 96.26 Mbit/s)    Flow 1 egress (mean 95.65 Mbit/s)



Flow 1 (95th percentile 42.19 ms)

```
Run 4: Statistics of FillP

Start at: 2019-10-02 21:21:06
End at: 2019-10-02 21:21:36
Local clock offset: -0.249 ms
Remote clock offset: 7.528 ms


# Below is generated by plot.py at 2019-10-02 22:26:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 42.157 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 42.157 ms
Loss rate: 0.64%
```

## Run 4: Report of FillP — Data Link



Flow 1 ingress (mean 96.27 Mbit/s) --- Flow 1 egress (mean 95.65 Mbit/s)



Flow 1 (95th percentile 42.16 ms)

```
Run 5: Statistics of FillP

Start at: 2019-10-02 22:16:09
End at: 2019-10-02 22:16:39
Local clock offset: 0.08 ms
Remote clock offset: 7.192 ms


# Below is generated by plot.py at 2019-10-02 22:26:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 42.241 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 42.241 ms
Loss rate: 0.65%
```
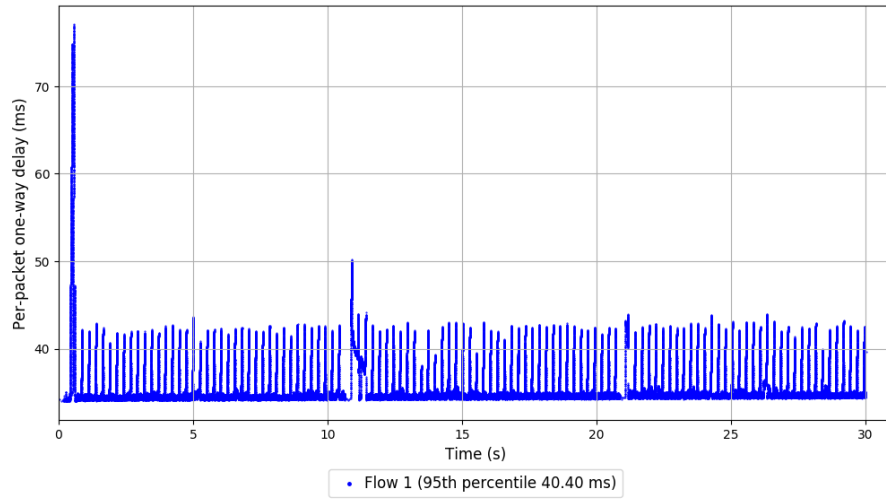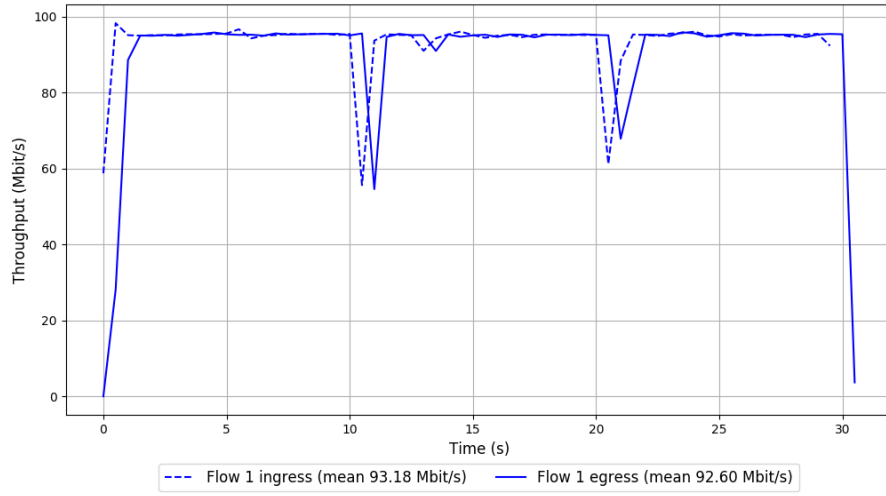
# Run 5: Report of FillP — Data Link
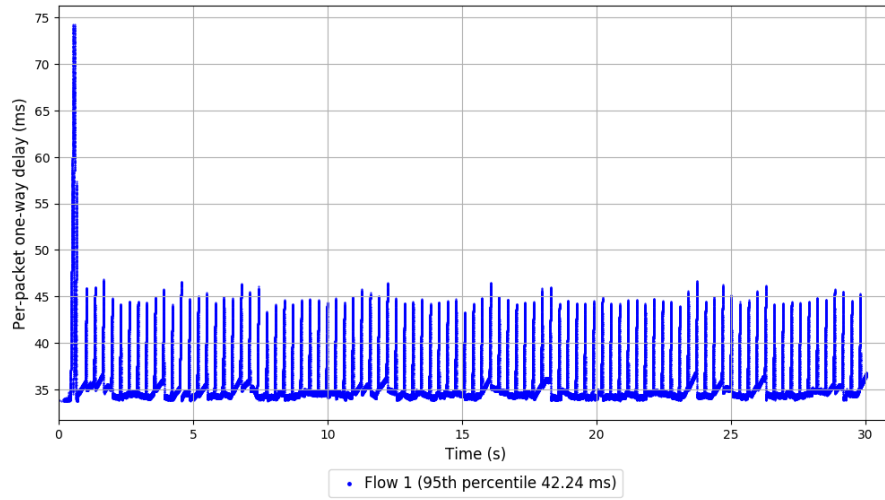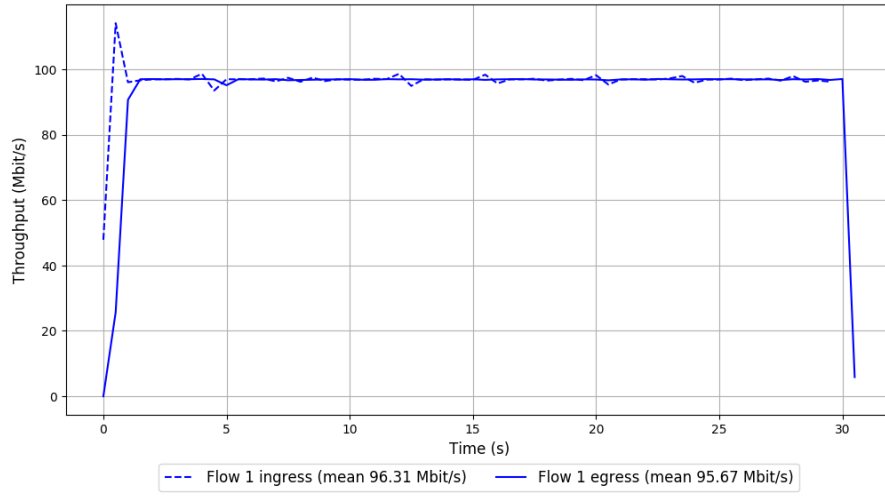
```
Run 1: Statistics of FillP-Sheep

Start at: 2019-10-02 17:32:15
End at: 2019-10-02 17:32:45
Local clock offset: 5.278 ms
Remote clock offset: 7.635 ms


# Below is generated by plot.py at 2019-10-02 22:26:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.60 Mbit/s
95th percentile per-packet one-way delay: 40.398 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 92.60 Mbit/s
95th percentile per-packet one-way delay: 40.398 ms
Loss rate: 0.60%
```

Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-10-02 18:28:36
End at: 2019-10-02 18:29:06
Local clock offset: 10.095 ms
Remote clock offset: 7.681 ms


# Below is generated by plot.py at 2019-10-02 22:27:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.33 Mbit/s
95th percentile per-packet one-way delay: 39.721 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 92.33 Mbit/s
95th percentile per-packet one-way delay: 39.721 ms
Loss rate: 0.58%
```
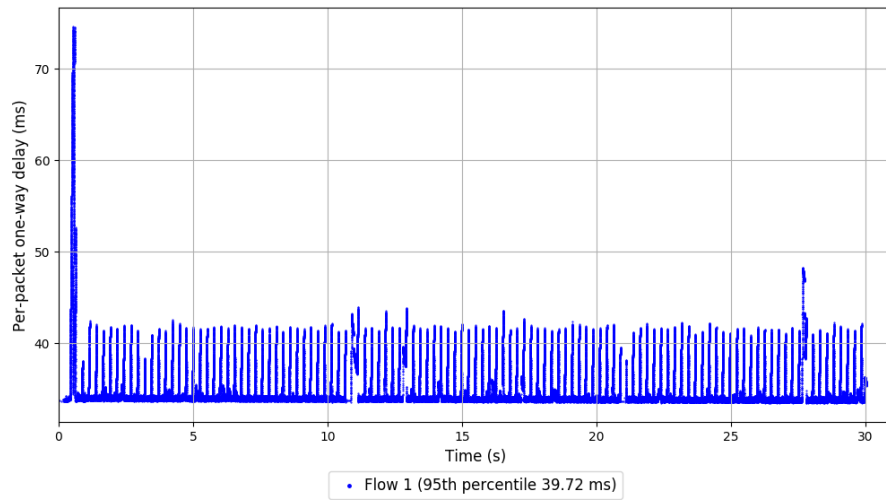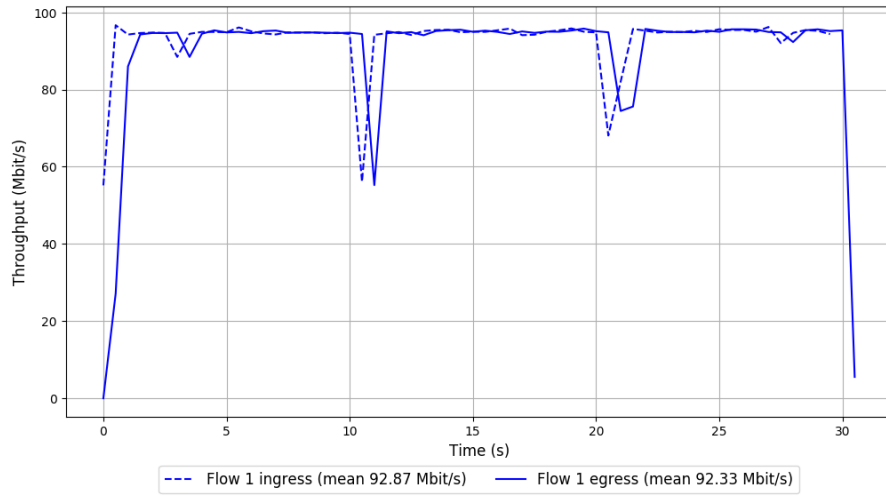
Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-10-02 19:33:52
End at: 2019-10-02 19:34:22
Local clock offset: 0.827 ms
Remote clock offset: 7.609 ms


# Below is generated by plot.py at 2019-10-02 22:27:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.11 Mbit/s
95th percentile per-packet one-way delay: 40.047 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 92.11 Mbit/s
95th percentile per-packet one-way delay: 40.047 ms
Loss rate: 0.62%
```
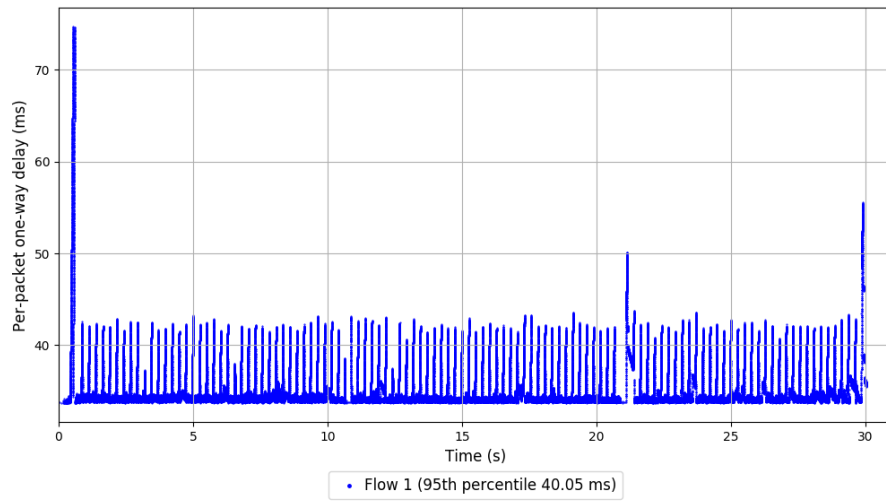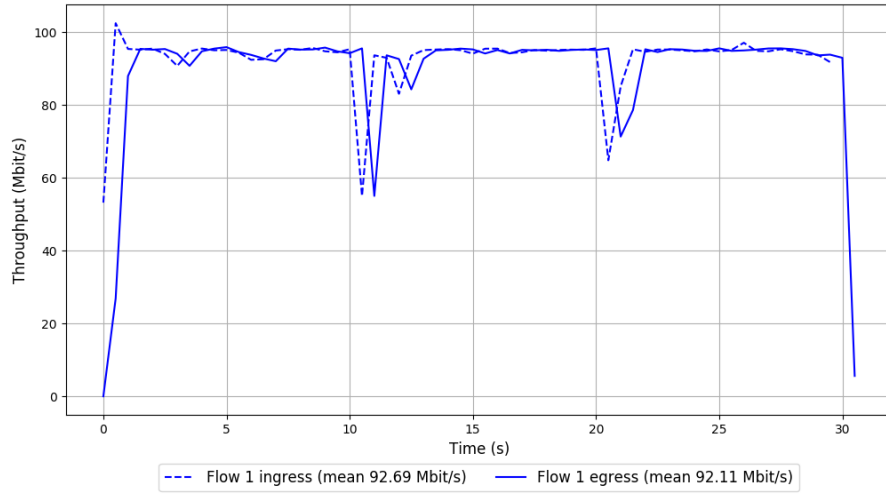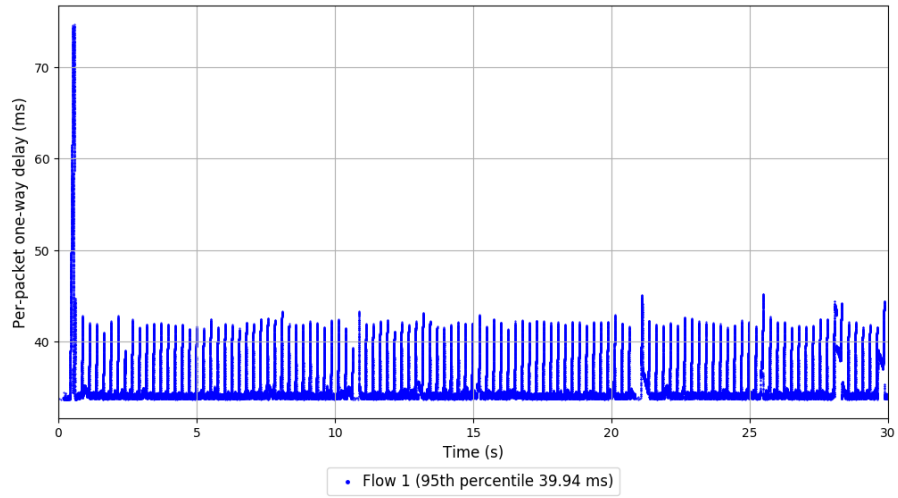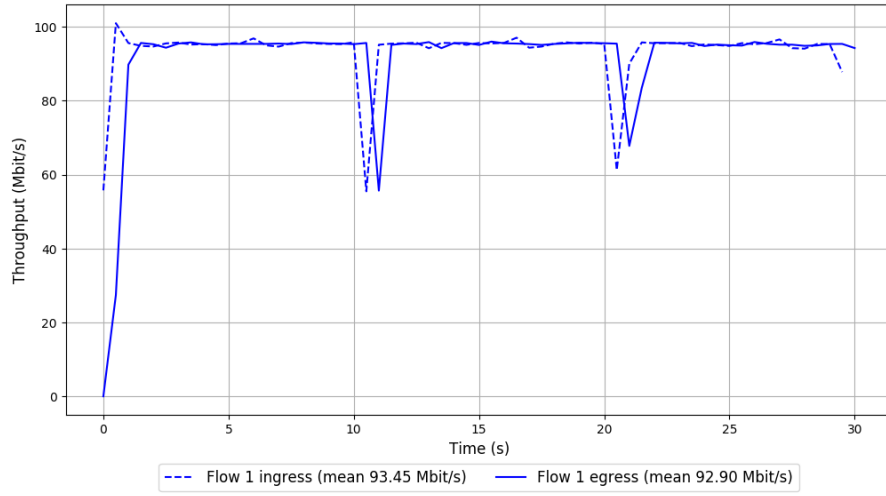
## Run 3: Report of FillP-Sheep — Data Link



Flow 1 ingress (mean 92.69 Mbit/s)    Flow 1 egress (mean 92.11 Mbit/s)



• Flow 1 (95th percentile 40.05 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-10-02 20:31:15
End at: 2019-10-02 20:31:45
Local clock offset: -0.109 ms
Remote clock offset: 7.712 ms


# Below is generated by plot.py at 2019-10-02 22:27:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.90 Mbit/s
95th percentile per-packet one-way delay: 39.935 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 92.90 Mbit/s
95th percentile per-packet one-way delay: 39.935 ms
Loss rate: 0.59%
```
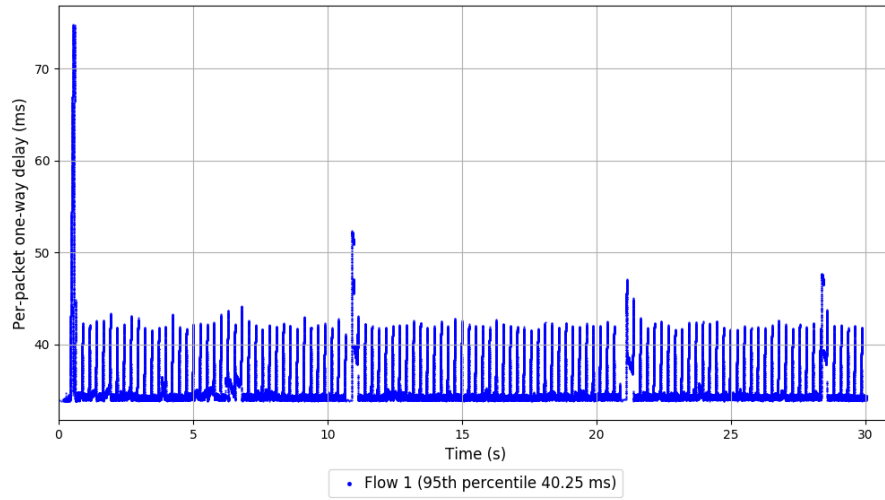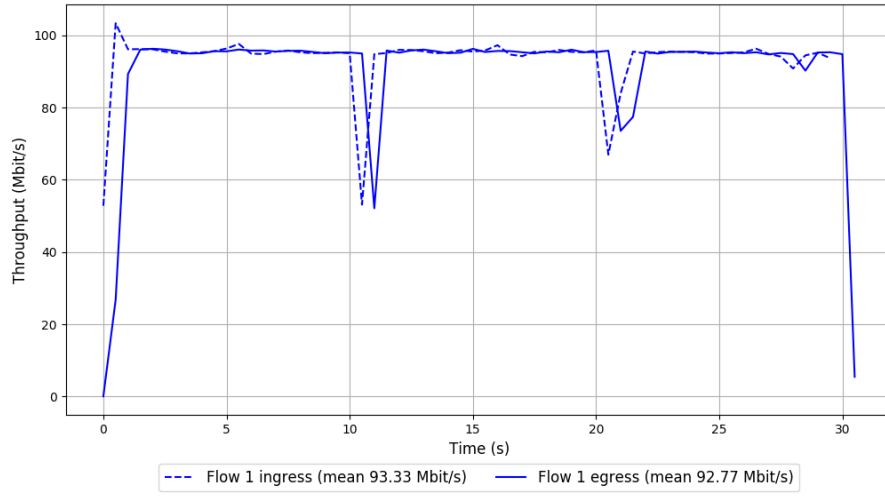
Run 4: Report of FillP-Sheep — Data Link



Flow 1 ingress (mean 93.45 Mbit/s) — — — Flow 1 egress (mean 92.90 Mbit/s)



• Flow 1 (95th percentile 39.94 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-10-02 21:28:51
End at: 2019-10-02 21:29:21
Local clock offset: -0.198 ms
Remote clock offset: 7.629 ms


# Below is generated by plot.py at 2019-10-02 22:27:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.77 Mbit/s
95th percentile per-packet one-way delay: 40.252 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 92.77 Mbit/s
95th percentile per-packet one-way delay: 40.252 ms
Loss rate: 0.60%
```

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



Flow 1 ingress (mean 93.33 Mbit/s)    Flow 1 egress (mean 92.77 Mbit/s)



Flow 1 (95th percentile 40.25 ms)

```
Run 1: Statistics of Indigo

Start at: 2019-10-02 18:01:12
End at: 2019-10-02 18:01:42
Local clock offset: 7.853 ms
Remote clock offset: 7.797 ms


# Below is generated by plot.py at 2019-10-02 22:27:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.27 Mbit/s
95th percentile per-packet one-way delay: 37.846 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 94.27 Mbit/s
95th percentile per-packet one-way delay: 37.846 ms
Loss rate: 0.00%
```
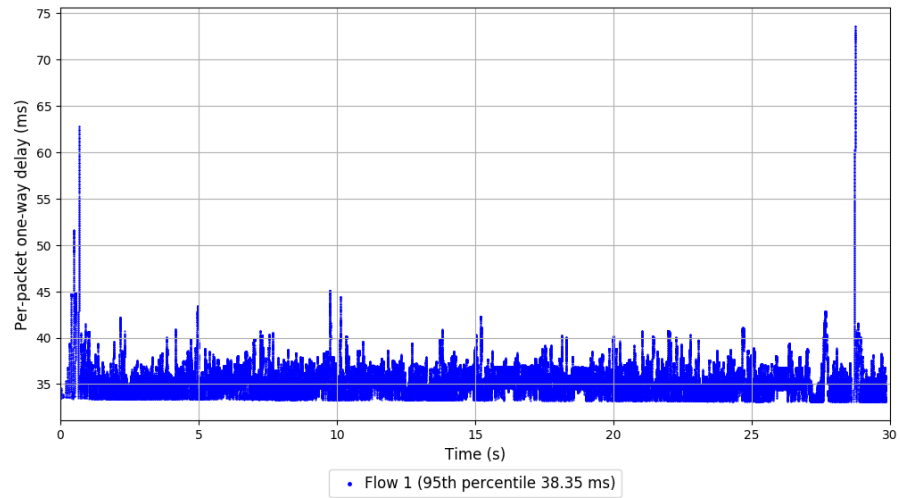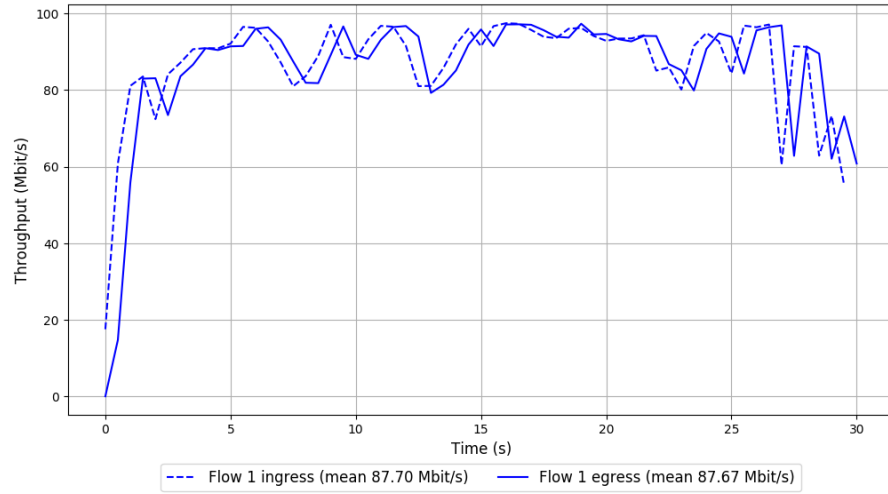
Run 1: Report of Indigo — Data Link
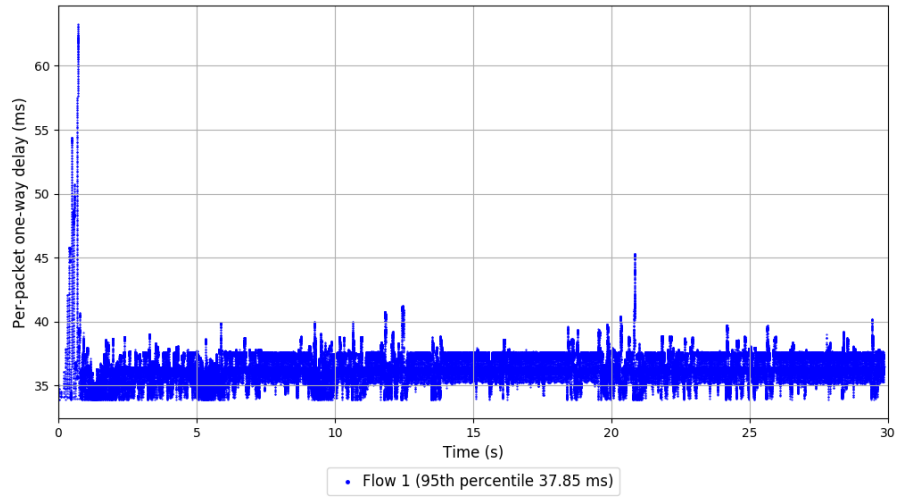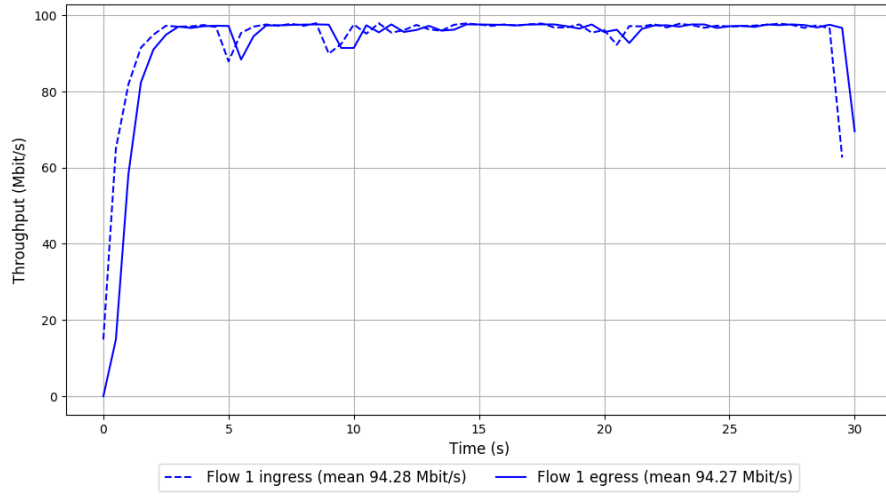
```
Run 2: Statistics of Indigo

Start at: 2019-10-02 18:57:19
End at: 2019-10-02 18:57:49
Local clock offset: 6.87 ms
Remote clock offset: 7.551 ms


# Below is generated by plot.py at 2019-10-02 22:27:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.67 Mbit/s
95th percentile per-packet one-way delay: 38.354 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 87.67 Mbit/s
95th percentile per-packet one-way delay: 38.354 ms
Loss rate: 0.04%
```
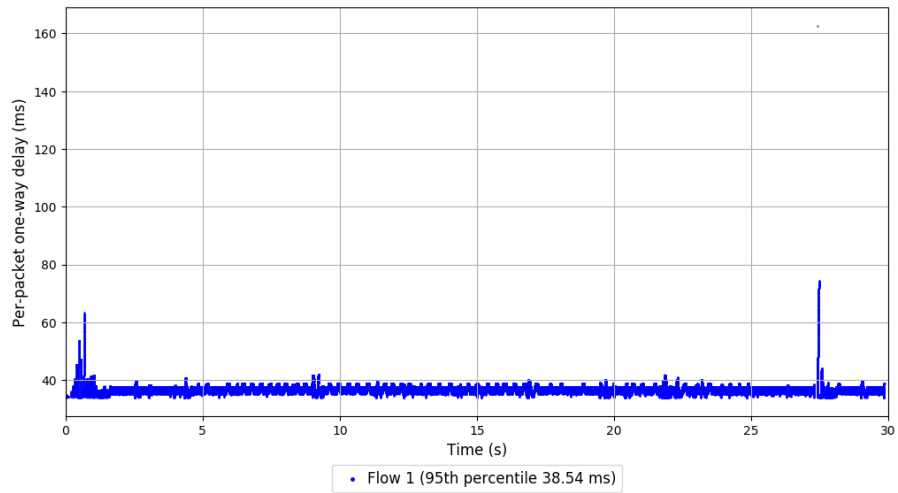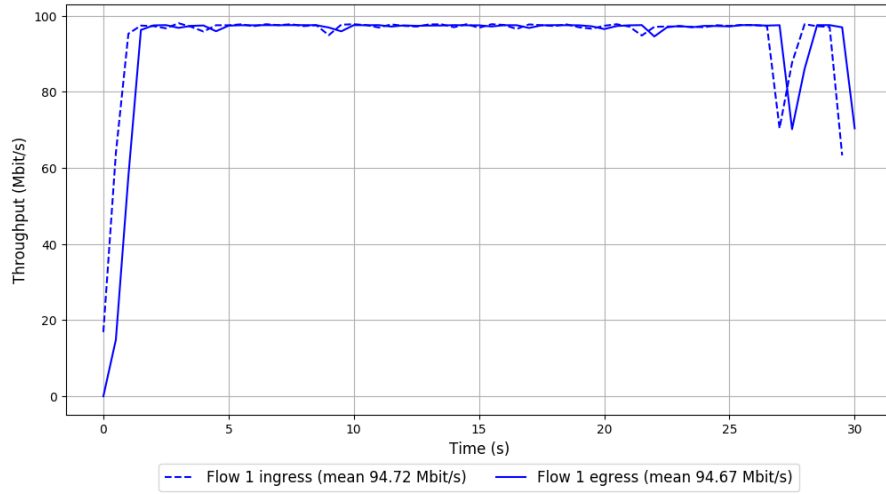
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-10-02 19:58:04
End at: 2019-10-02 19:58:34
Local clock offset: 0.569 ms
Remote clock offset: 7.898 ms


# Below is generated by plot.py at 2019-10-02 22:27:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.67 Mbit/s
95th percentile per-packet one-way delay: 38.544 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 94.67 Mbit/s
95th percentile per-packet one-way delay: 38.544 ms
Loss rate: 0.03%
```
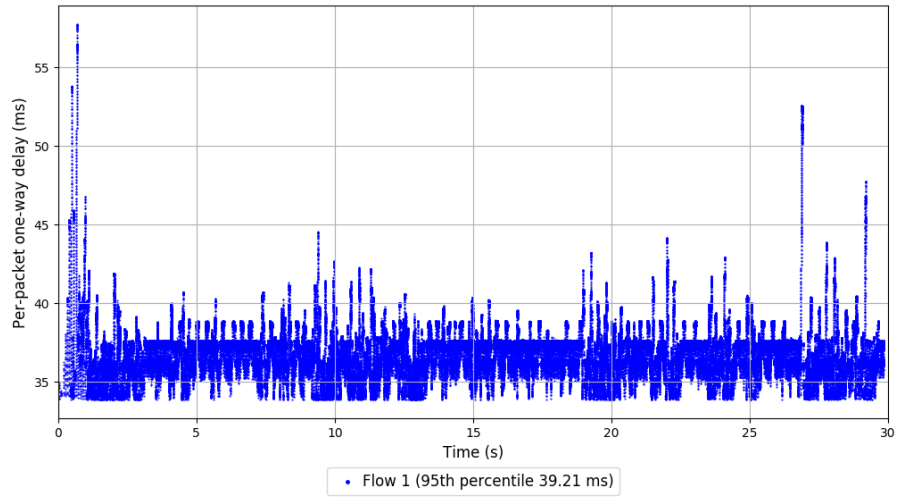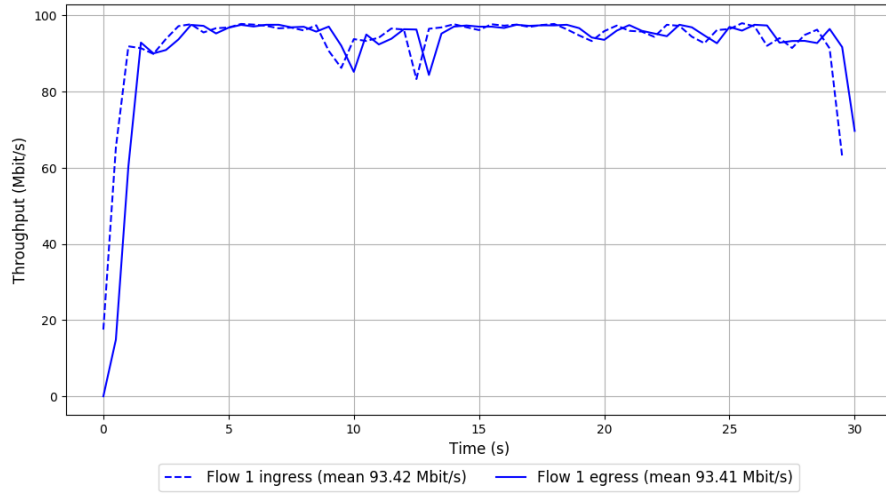
Run 3: Report of Indigo — Data Link



Flow 1 ingress (mean 94.72 Mbit/s)    Flow 1 egress (mean 94.67 Mbit/s)



Flow 1 (95th percentile 38.54 ms)

```
Run 4: Statistics of Indigo

Start at: 2019-10-02 21:00:19
End at: 2019-10-02 21:00:49
Local clock offset: -0.343 ms
Remote clock offset: 7.686 ms


# Below is generated by plot.py at 2019-10-02 22:27:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.41 Mbit/s
95th percentile per-packet one-way delay: 39.213 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 93.41 Mbit/s
95th percentile per-packet one-way delay: 39.213 ms
Loss rate: 0.00%
```
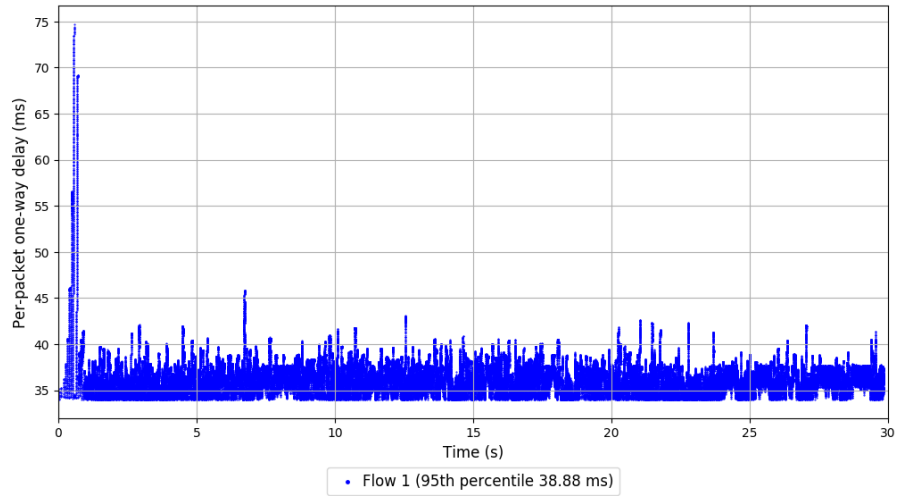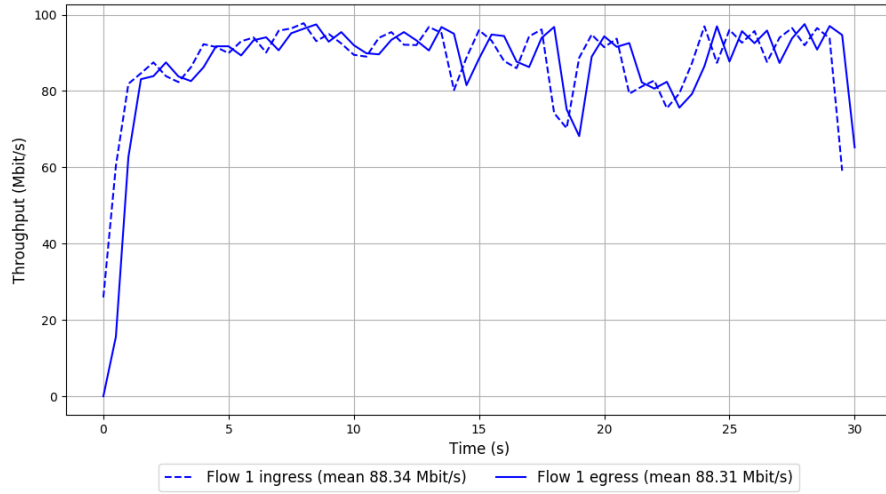
Run 4: Report of Indigo — Data Link



Flow 1 ingress (mean 93.42 Mbit/s)    Flow 1 egress (mean 93.41 Mbit/s)



Flow 1 (95th percentile 39.21 ms)

```
Run 5: Statistics of Indigo

Start at: 2019-10-02 21:53:57
End at: 2019-10-02 21:54:27
Local clock offset: -0.253 ms
Remote clock offset: 7.388 ms


# Below is generated by plot.py at 2019-10-02 22:28:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.31 Mbit/s
95th percentile per-packet one-way delay: 38.884 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 88.31 Mbit/s
95th percentile per-packet one-way delay: 38.884 ms
Loss rate: 0.02%
```
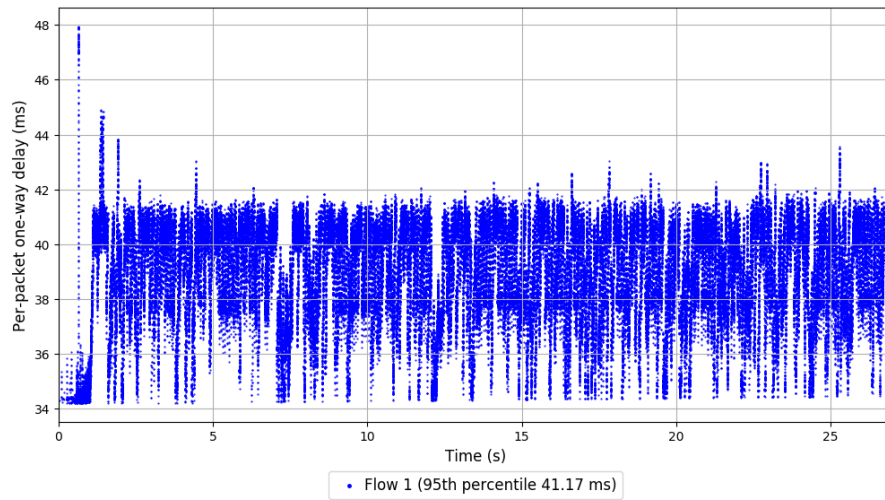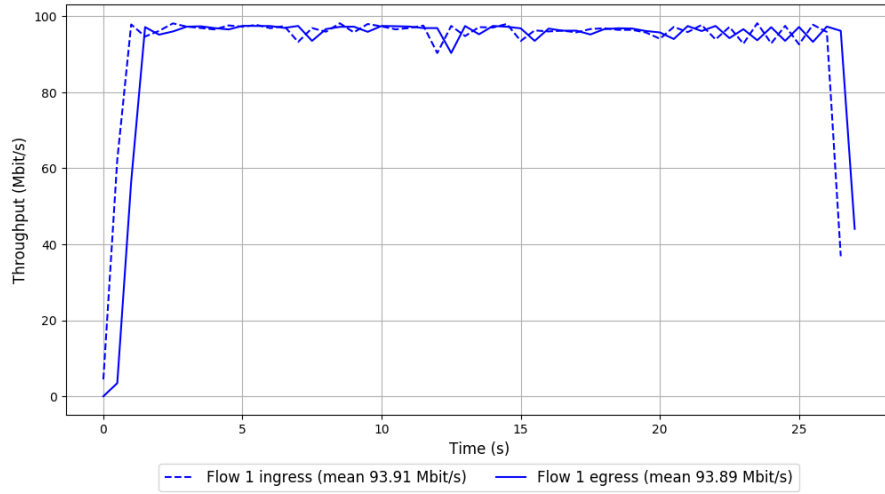
Run 5: Report of Indigo — Data Link



Flow 1 ingress (mean 88.34 Mbit/s)　Flow 1 egress (mean 88.31 Mbit/s)



Flow 1 (95th percentile 38.88 ms)

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-10-02 17:36:40
End at: 2019-10-02 17:37:10
Local clock offset: 7.975 ms
Remote clock offset: 7.645 ms


# Below is generated by plot.py at 2019-10-02 22:28:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.89 Mbit/s
95th percentile per-packet one-way delay: 41.171 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 93.89 Mbit/s
95th percentile per-packet one-way delay: 41.171 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-MusesC3 — Data Link



- - - Flow 1 ingress (mean 93.91 Mbit/s)  —— Flow 1 egress (mean 93.89 Mbit/s)



· Flow 1 (95th percentile 41.17 ms)

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-10-02 18:32:56
End at: 2019-10-02 18:33:26
Local clock offset: 8.415 ms
Remote clock offset: 7.699 ms


# Below is generated by plot.py at 2019-10-02 22:28:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.37 Mbit/s
95th percentile per-packet one-way delay: 41.662 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.37 Mbit/s
95th percentile per-packet one-way delay: 41.662 ms
Loss rate: 0.00%
```
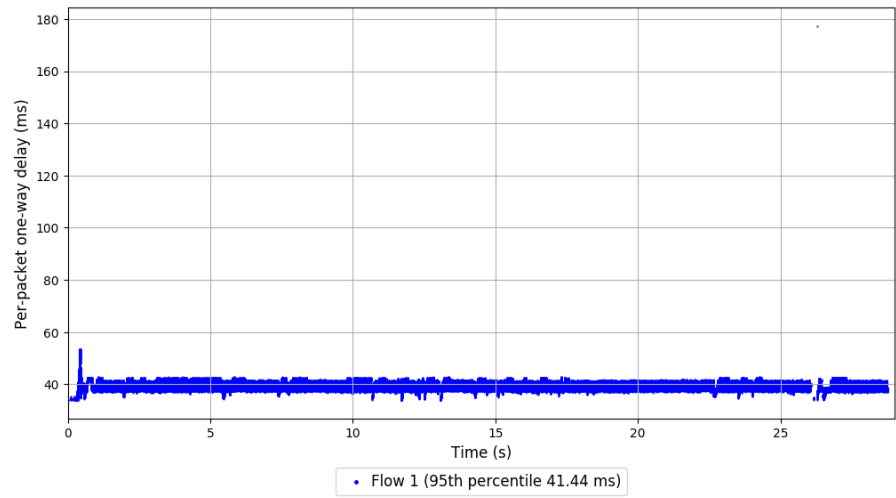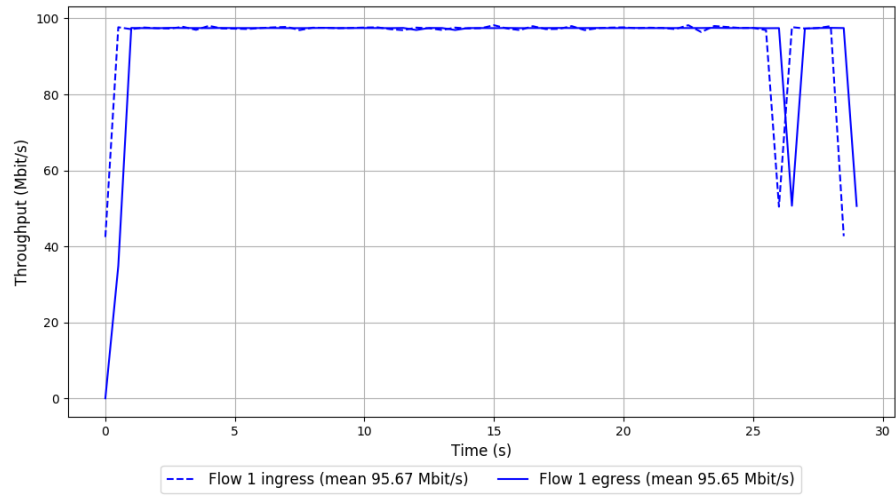
Run 2: Report of Indigo-MusesC3 — Data Link
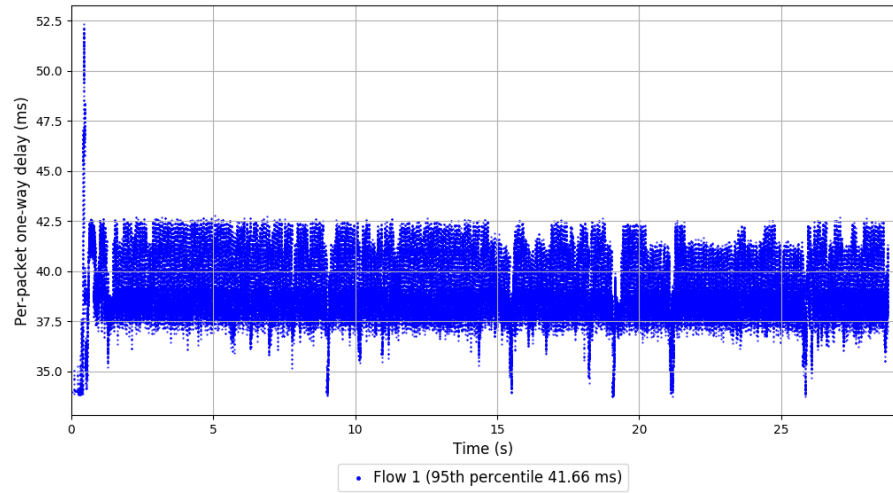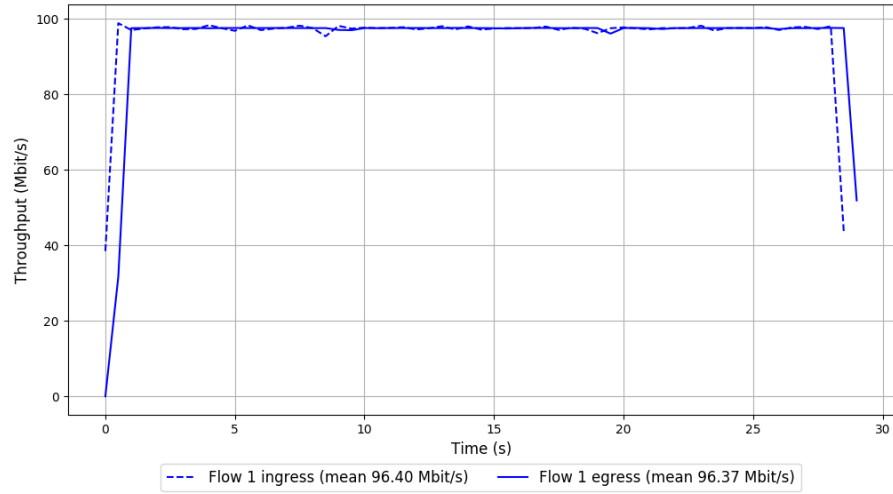
```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-10-02 19:38:06
End at: 2019-10-02 19:38:36
Local clock offset: 0.69 ms
Remote clock offset: 7.687 ms


# Below is generated by plot.py at 2019-10-02 22:28:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 41.441 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 41.441 ms
Loss rate: 0.00%
```
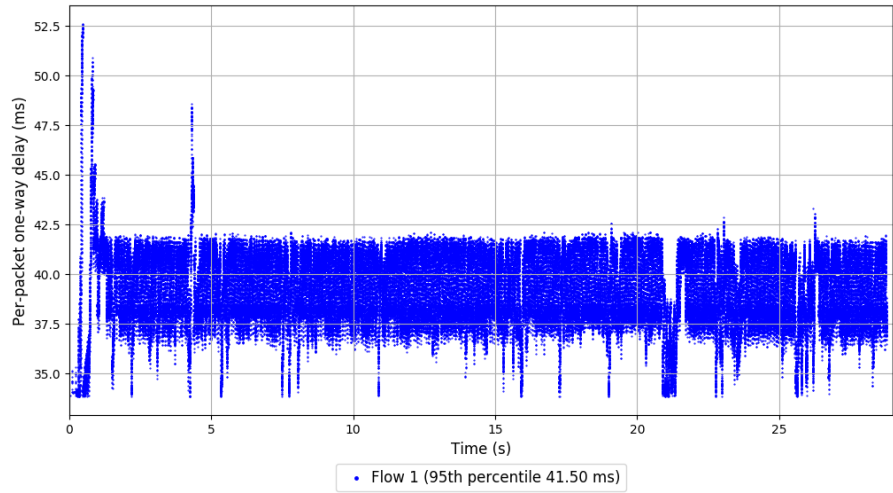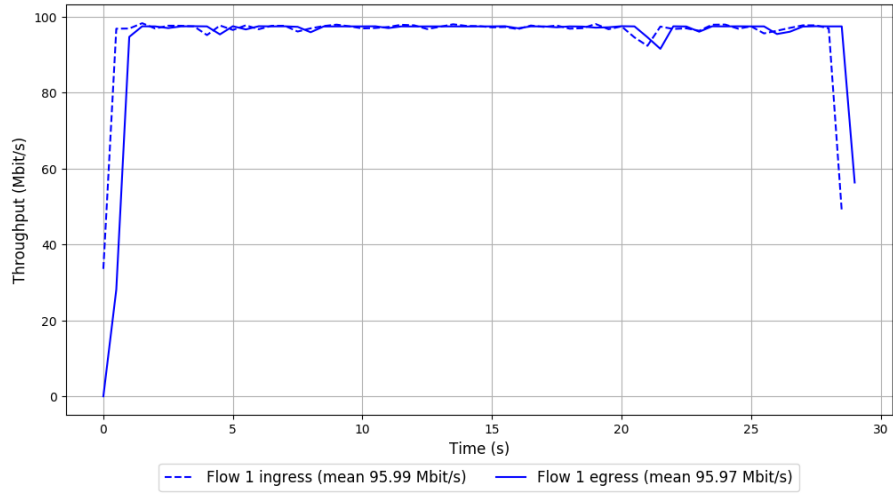
Run 3: Report of Indigo-MusesC3 — Data Link



Flow 1 ingress (mean 95.67 Mbit/s) ---- Flow 1 egress (mean 95.65 Mbit/s) ——



Flow 1 (95th percentile 41.44 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-10-02 20:35:58
End at: 2019-10-02 20:36:29
Local clock offset: -0.19 ms
Remote clock offset: 7.763 ms


# Below is generated by plot.py at 2019-10-02 22:28:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.97 Mbit/s
95th percentile per-packet one-way delay: 41.500 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 95.97 Mbit/s
95th percentile per-packet one-way delay: 41.500 ms
Loss rate: 0.00%
```
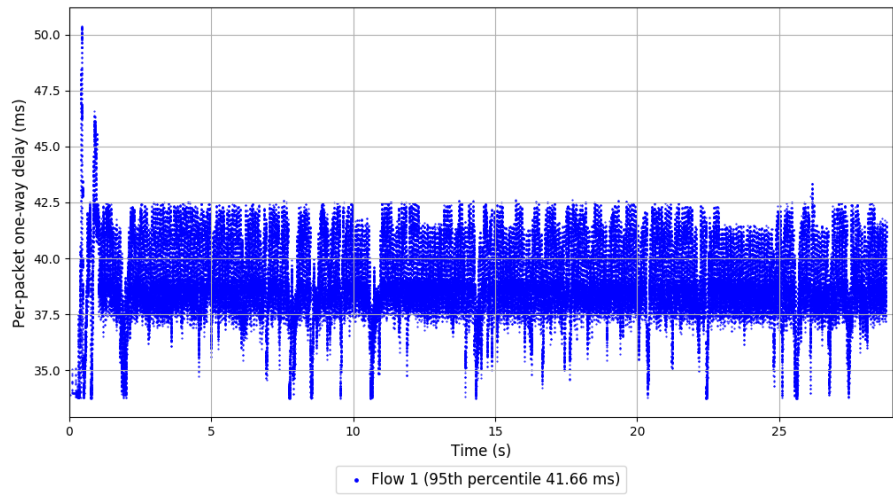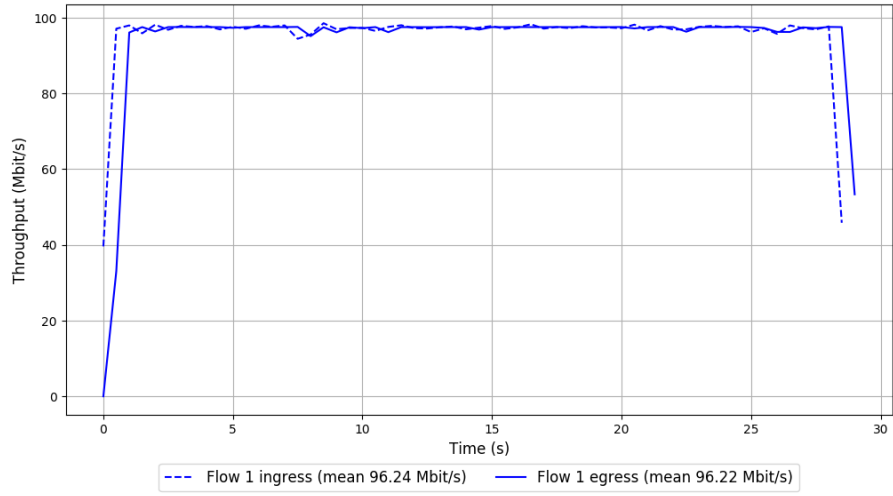
Run 4: Report of Indigo-MusesC3 — Data Link



Flow 1 ingress (mean 95.99 Mbit/s) --- Flow 1 egress (mean 95.97 Mbit/s)



Flow 1 (95th percentile 41.50 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-10-02 21:33:25
End at: 2019-10-02 21:33:55
Local clock offset: -0.25 ms
Remote clock offset: 7.432 ms


# Below is generated by plot.py at 2019-10-02 22:28:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.22 Mbit/s
95th percentile per-packet one-way delay: 41.658 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.22 Mbit/s
95th percentile per-packet one-way delay: 41.658 ms
Loss rate: 0.00%
```
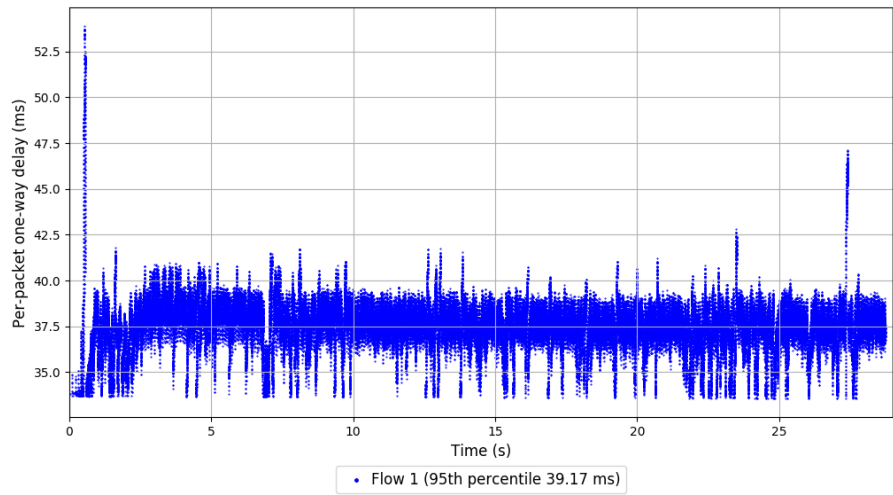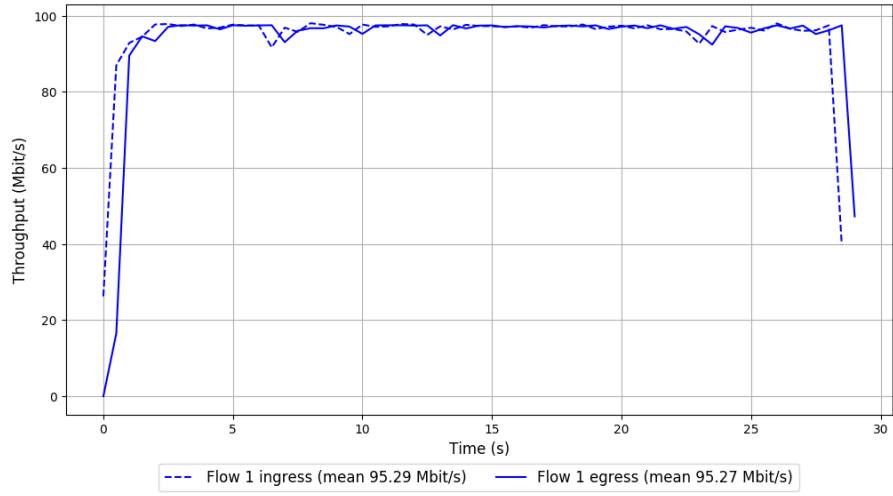
# Run 5: Report of Indigo-MusesC3 — Data Link



Flow 1 ingress (mean 96.24 Mbit/s) --- Flow 1 egress (mean 96.22 Mbit/s)



• Flow 1 (95th percentile 41.66 ms)

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-10-02 17:45:12
End at: 2019-10-02 17:45:42
Local clock offset: 7.844 ms
Remote clock offset: 7.657 ms


# Below is generated by plot.py at 2019-10-02 22:28:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.27 Mbit/s
95th percentile per-packet one-way delay: 39.169 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 95.27 Mbit/s
95th percentile per-packet one-way delay: 39.169 ms
Loss rate: 0.01%
```
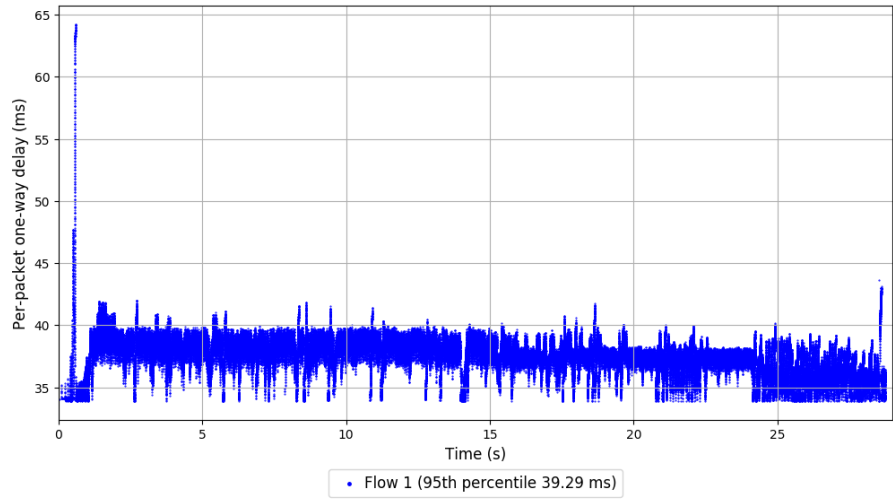
Run 1: Report of Indigo-MusesC5 — Data Link



Flow 1 ingress (mean 95.29 Mbit/s) --- Flow 1 egress (mean 95.27 Mbit/s)



• Flow 1 (95th percentile 39.17 ms)

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-10-02 18:43:33
End at: 2019-10-02 18:44:03
Local clock offset: 7.52 ms
Remote clock offset: 7.703 ms


# Below is generated by plot.py at 2019-10-02 22:29:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.73 Mbit/s
95th percentile per-packet one-way delay: 40.212 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 94.73 Mbit/s
95th percentile per-packet one-way delay: 40.212 ms
Loss rate: 0.00%
```
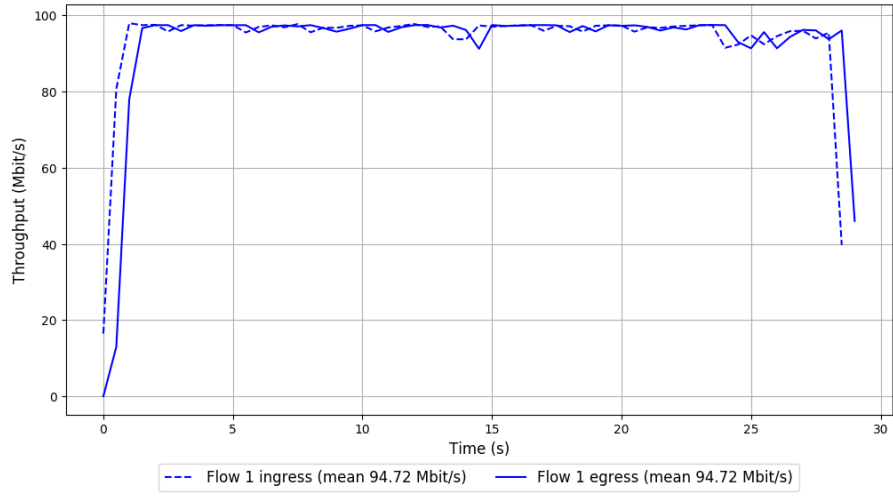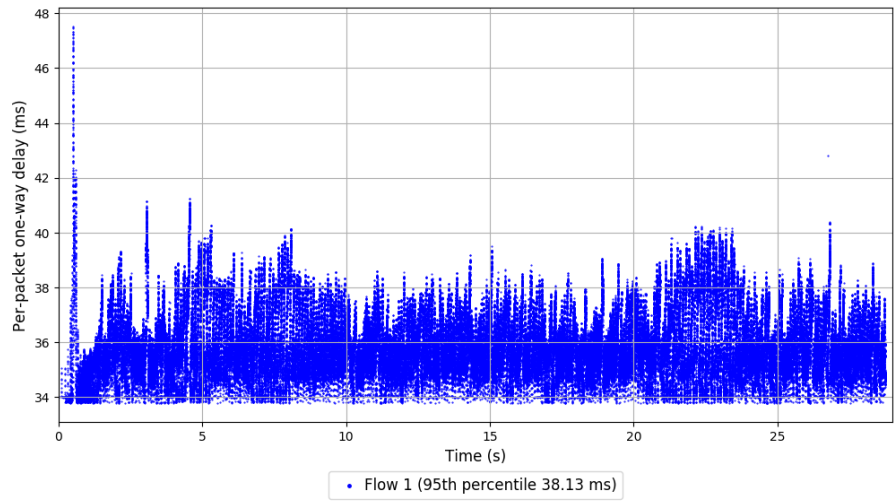
Run 2: Report of Indigo-MusesC5 — Data Link
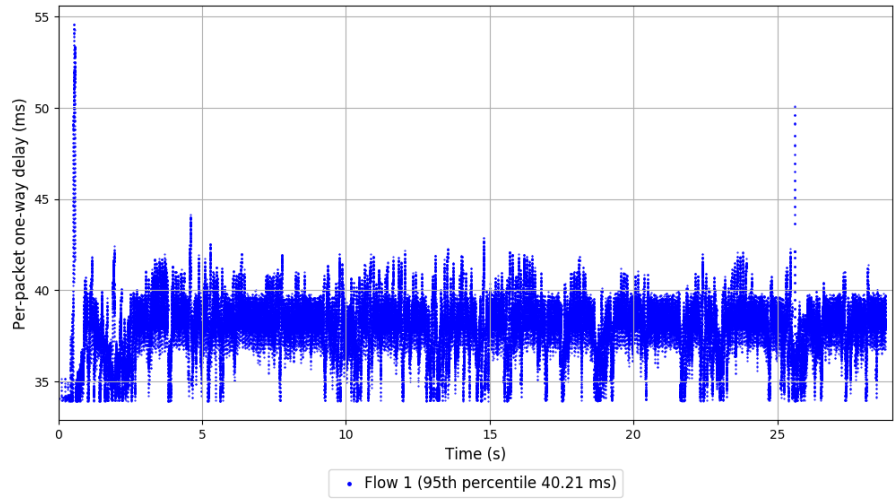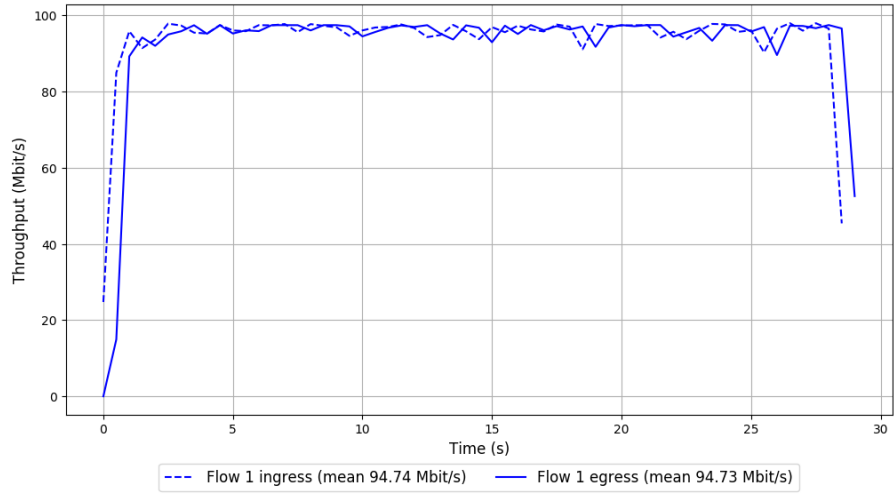
```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-10-02 19:46:38
End at: 2019-10-02 19:47:08
Local clock offset: 0.643 ms
Remote clock offset: 7.771 ms


# Below is generated by plot.py at 2019-10-02 22:29:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.72 Mbit/s
95th percentile per-packet one-way delay: 39.292 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 94.72 Mbit/s
95th percentile per-packet one-way delay: 39.292 ms
Loss rate: 0.00%
```
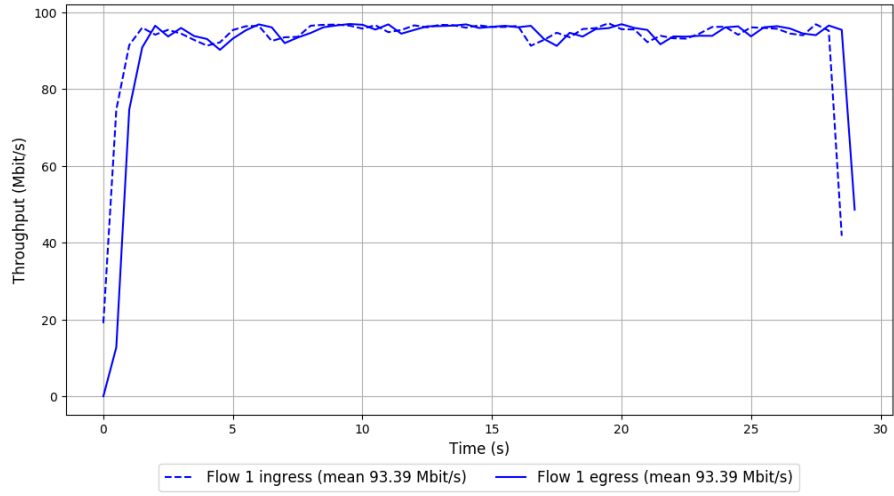
Run 3: Report of Indigo-MusesC5 — Data Link



Flow 1 ingress (mean 94.72 Mbit/s)    Flow 1 egress (mean 94.72 Mbit/s)



• Flow 1 (95th percentile 39.29 ms)

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-10-02 20:45:44
End at: 2019-10-02 20:46:14
Local clock offset: -0.323 ms
Remote clock offset: 7.686 ms


# Below is generated by plot.py at 2019-10-02 22:29:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.39 Mbit/s
95th percentile per-packet one-way delay: 38.131 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 93.39 Mbit/s
95th percentile per-packet one-way delay: 38.131 ms
Loss rate: 0.00%
```

Run 4: Report of Indigo-MusesC5 — Data Link



Flow 1 ingress (mean 93.39 Mbit/s) --- Flow 1 egress (mean 93.39 Mbit/s)



Flow 1 (95th percentile 38.13 ms)

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-10-02 21:42:01
End at: 2019-10-02 21:42:31
Local clock offset: -0.235 ms
Remote clock offset: 7.407 ms


# Below is generated by plot.py at 2019-10-02 22:29:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.66 Mbit/s
95th percentile per-packet one-way delay: 39.020 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 95.66 Mbit/s
95th percentile per-packet one-way delay: 39.020 ms
Loss rate: 0.00%
```
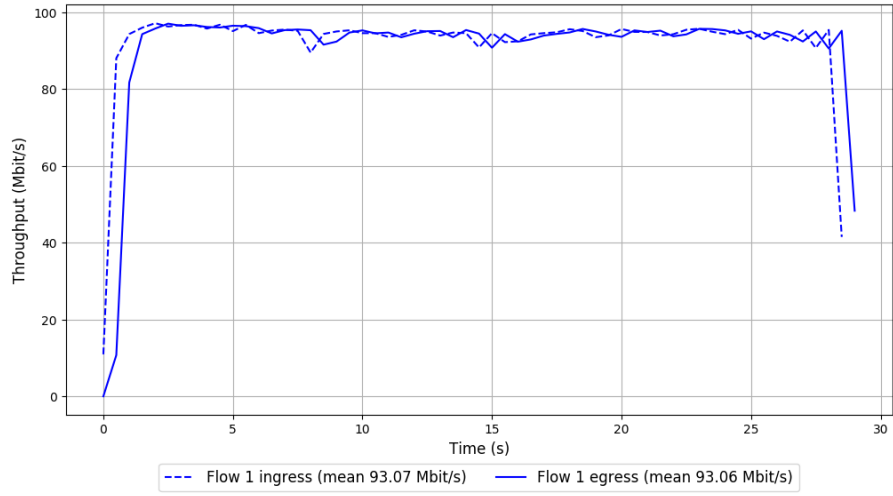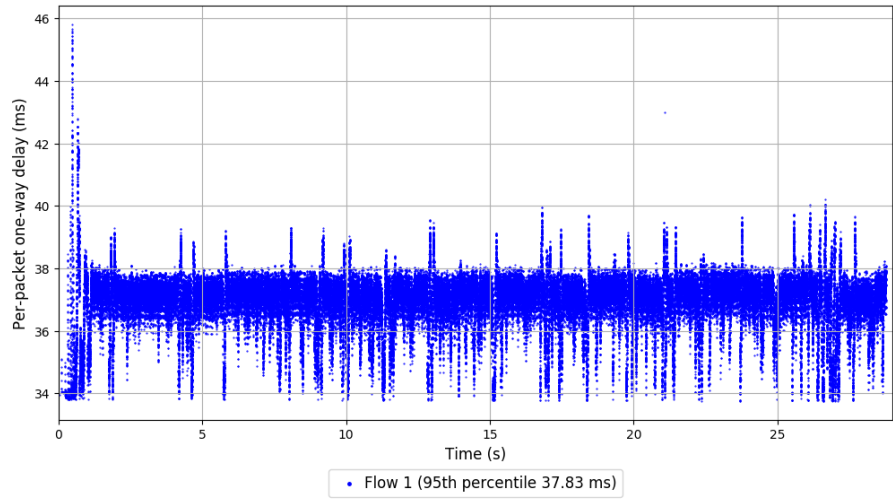
Run 5: Report of Indigo-MusesC5 — Data Link
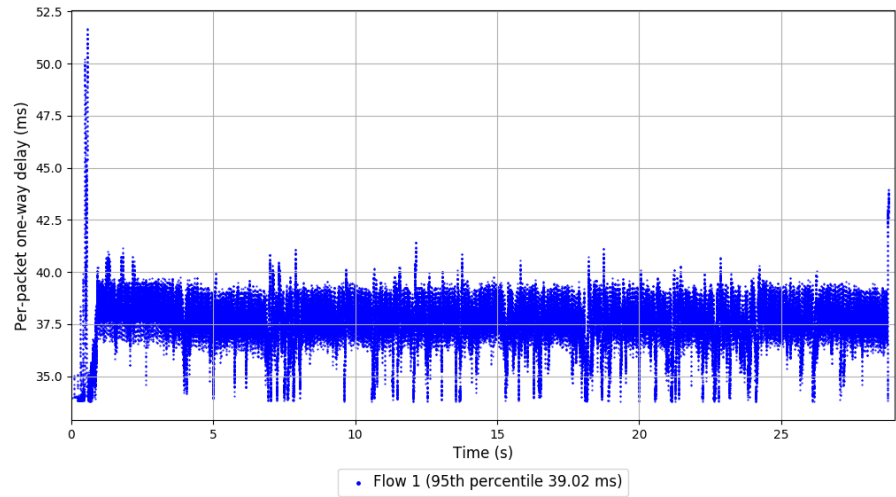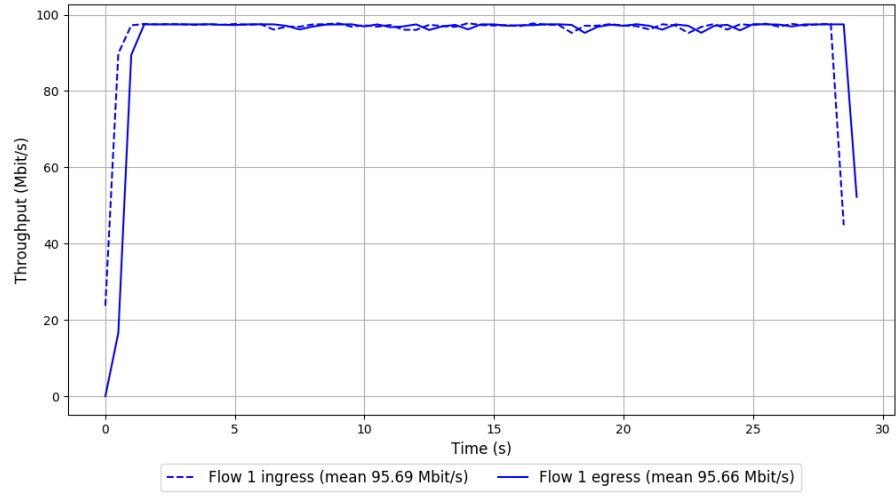
```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-10-02 18:11:30
End at: 2019-10-02 18:12:00
Local clock offset: 9.241 ms
Remote clock offset: 7.868 ms


# Below is generated by plot.py at 2019-10-02 22:29:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.06 Mbit/s
95th percentile per-packet one-way delay: 37.393 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 93.06 Mbit/s
95th percentile per-packet one-way delay: 37.393 ms
Loss rate: 0.00%
```
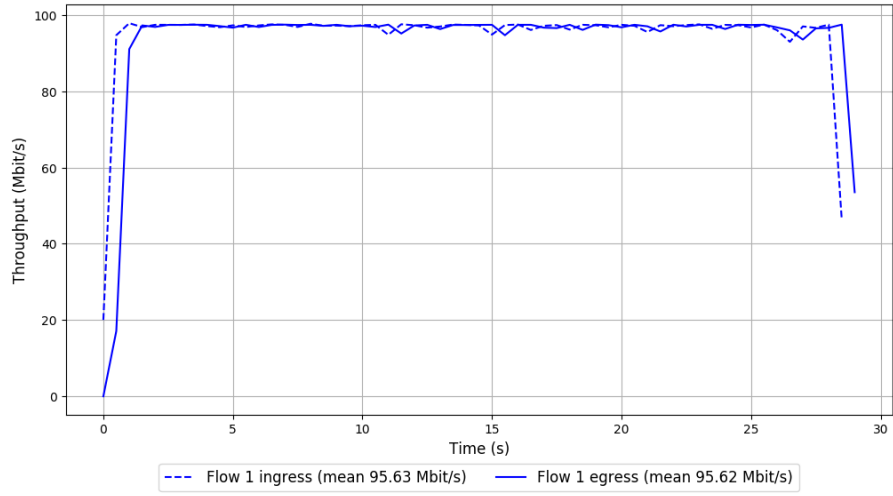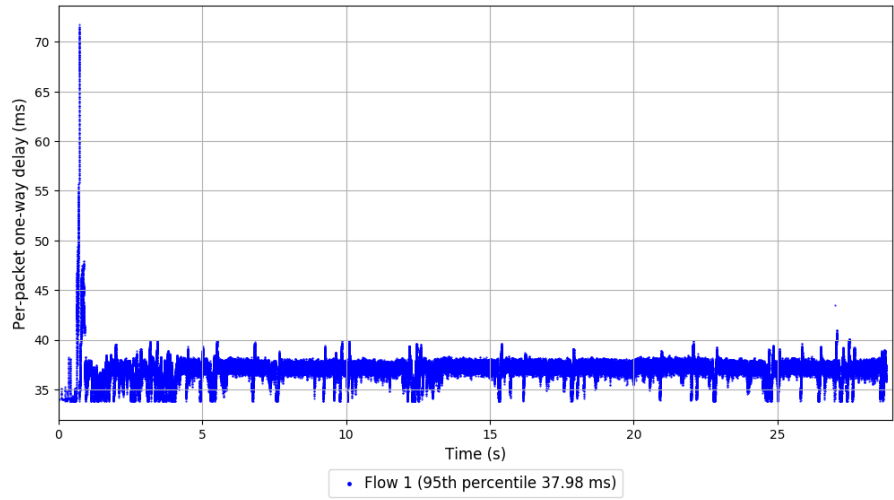
Run 1: Report of Indigo-MusesD — Data Link
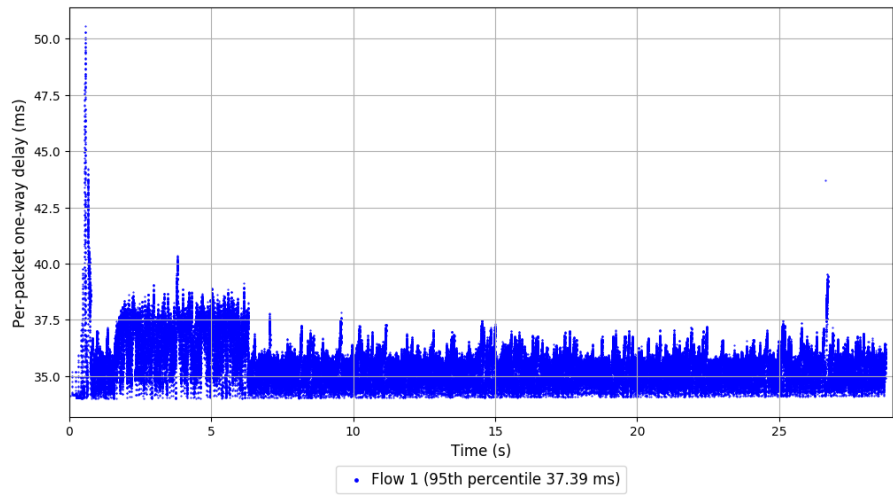
```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-10-02 19:08:50
End at: 2019-10-02 19:09:20
Local clock offset: 2.428 ms
Remote clock offset: 7.676 ms


# Below is generated by plot.py at 2019-10-02 22:29:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.62 Mbit/s
95th percentile per-packet one-way delay: 37.826 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 95.62 Mbit/s
95th percentile per-packet one-way delay: 37.826 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo-MusesD — Data Link



Flow 1 ingress (mean 95.63 Mbit/s)    Flow 1 egress (mean 95.62 Mbit/s)



• Flow 1 (95th percentile 37.83 ms)

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-10-02 20:11:23
End at: 2019-10-02 20:11:53
Local clock offset: 0.205 ms
Remote clock offset: 7.79 ms


# Below is generated by plot.py at 2019-10-02 22:29:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.77 Mbit/s
95th percentile per-packet one-way delay: 37.983 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 94.77 Mbit/s
95th percentile per-packet one-way delay: 37.983 ms
Loss rate: 0.00%
```
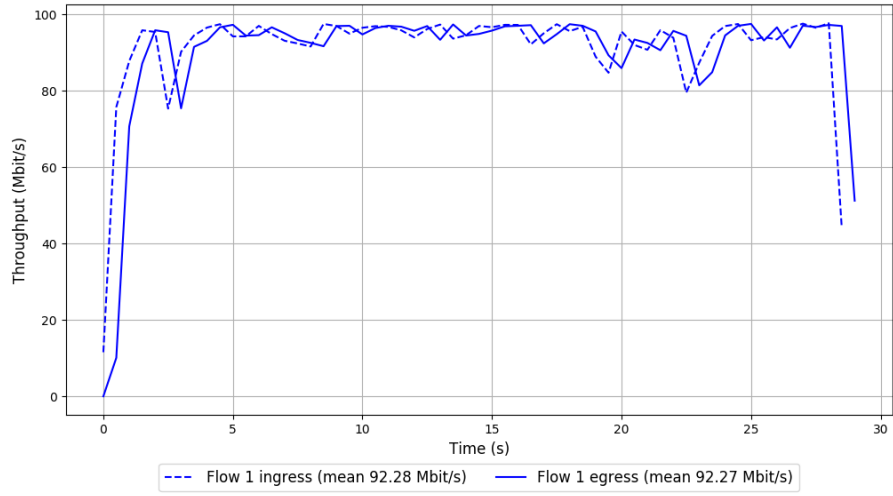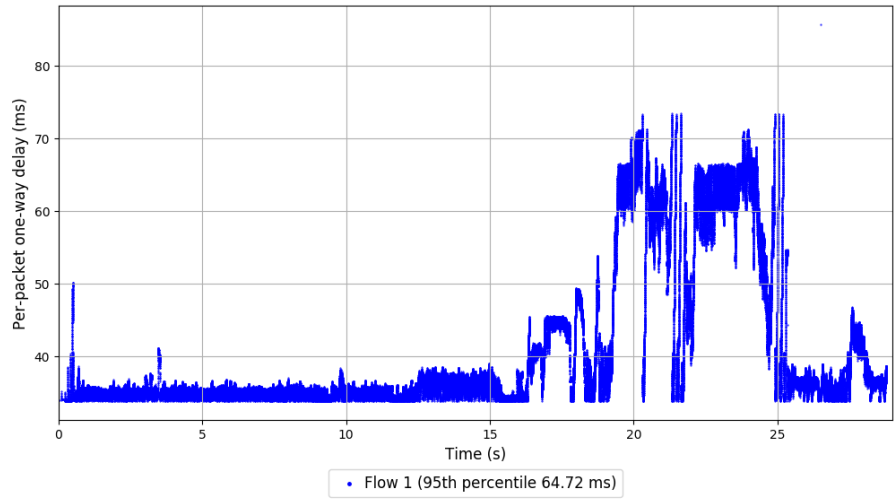
Run 3: Report of Indigo-MusesD — Data Link
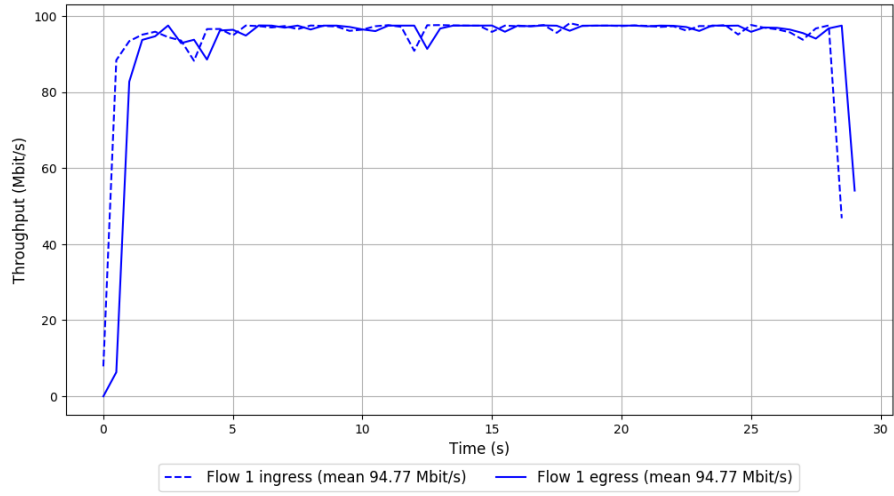
```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-10-02 21:12:00
End at: 2019-10-02 21:12:30
Local clock offset: -0.274 ms
Remote clock offset: 7.726 ms


# Below is generated by plot.py at 2019-10-02 22:30:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.27 Mbit/s
95th percentile per-packet one-way delay: 38.243 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.27 Mbit/s
95th percentile per-packet one-way delay: 38.243 ms
Loss rate: 0.00%
```
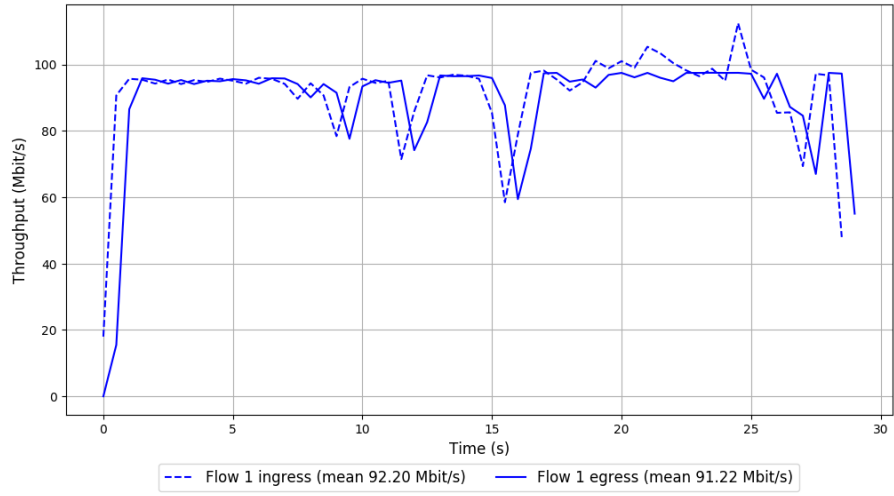
Run 4: Report of Indigo-MusesD — Data Link
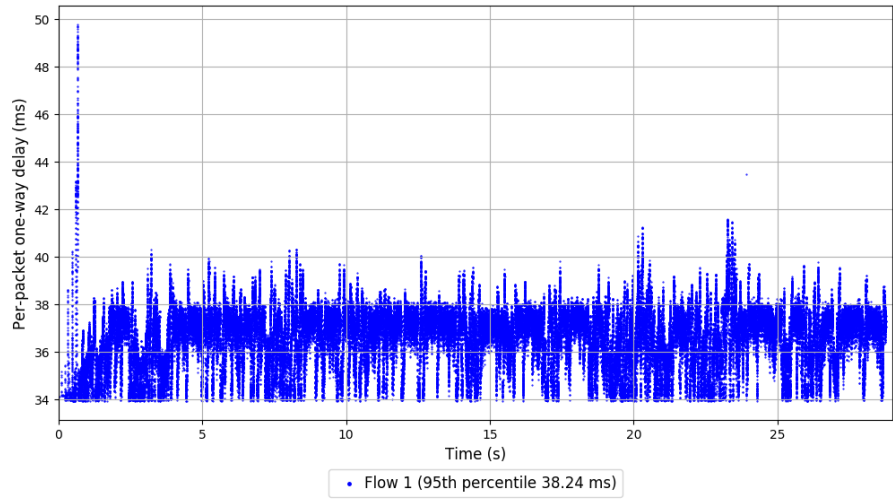
```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-10-02 22:05:31
End at: 2019-10-02 22:06:01
Local clock offset: -0.006 ms
Remote clock offset: 7.129 ms


# Below is generated by plot.py at 2019-10-02 22:30:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.22 Mbit/s
95th percentile per-packet one-way delay: 64.721 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 91.22 Mbit/s
95th percentile per-packet one-way delay: 64.721 ms
Loss rate: 1.05%
```
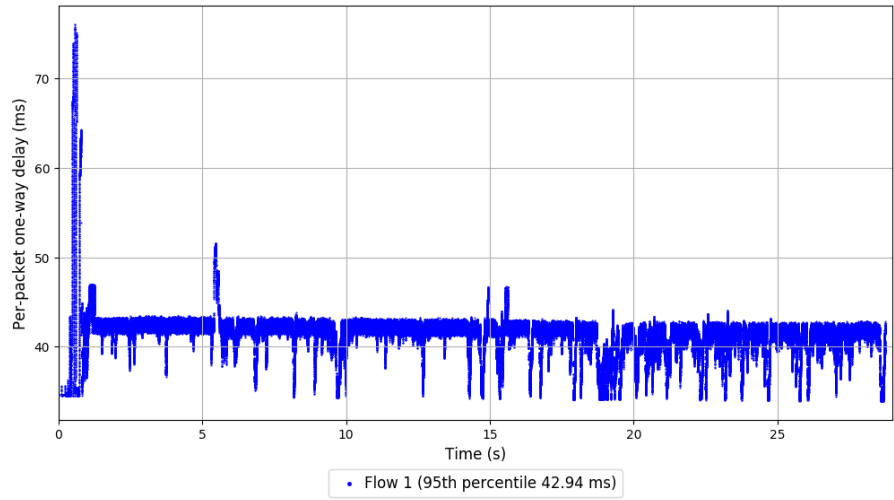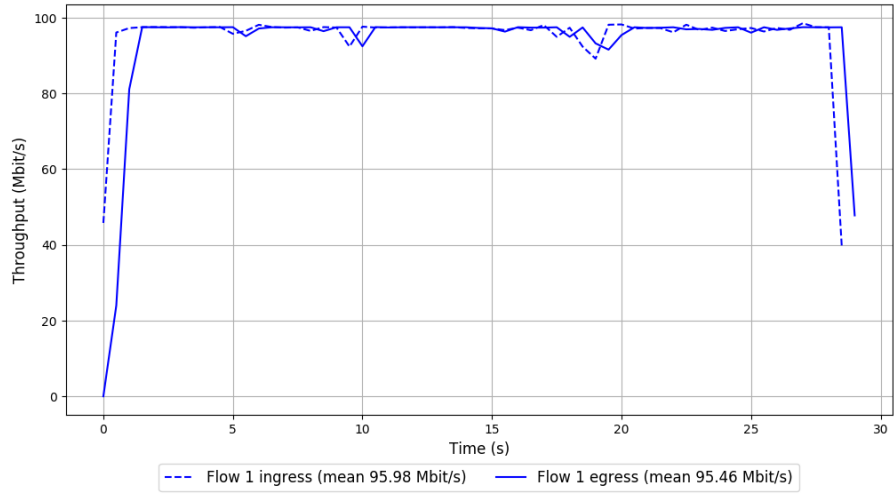
Run 5: Report of Indigo-MusesD — Data Link



Flow 1 ingress (mean 92.20 Mbit/s) — Flow 1 egress (mean 91.22 Mbit/s)



• Flow 1 (95th percentile 64.72 ms)

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-10-02 17:40:58
End at: 2019-10-02 17:41:28
Local clock offset: 10.618 ms
Remote clock offset: 7.894 ms


# Below is generated by plot.py at 2019-10-02 22:30:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.46 Mbit/s
95th percentile per-packet one-way delay: 42.942 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 95.46 Mbit/s
95th percentile per-packet one-way delay: 42.942 ms
Loss rate: 0.53%
```

Run 1: Report of Indigo-MusesT — Data Link



Flow 1 ingress (mean 95.98 Mbit/s)    Flow 1 egress (mean 95.46 Mbit/s)



• Flow 1 (95th percentile 42.94 ms)

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-10-02 18:38:15
End at: 2019-10-02 18:38:45
Local clock offset: 7.547 ms
Remote clock offset: 7.729 ms


# Below is generated by plot.py at 2019-10-02 22:30:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.58 Mbit/s
95th percentile per-packet one-way delay: 42.404 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 95.58 Mbit/s
95th percentile per-packet one-way delay: 42.404 ms
Loss rate: 1.70%
```
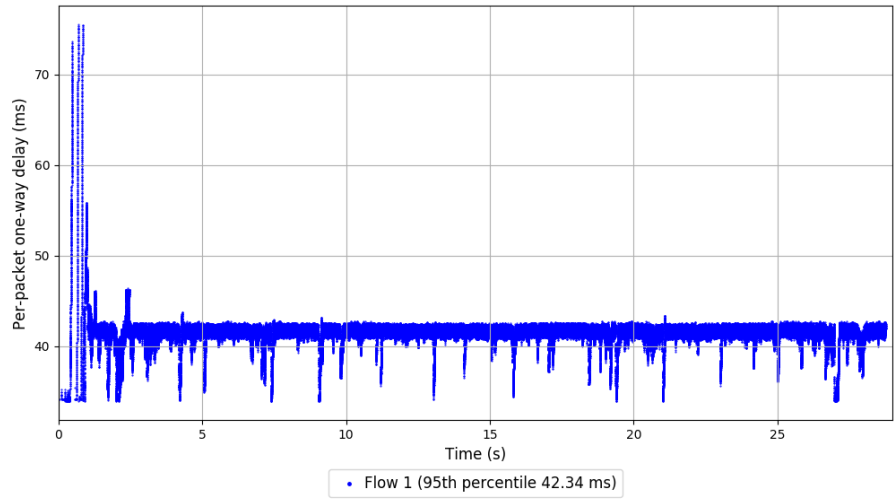
Run 2: Report of Indigo-MusesT — Data Link
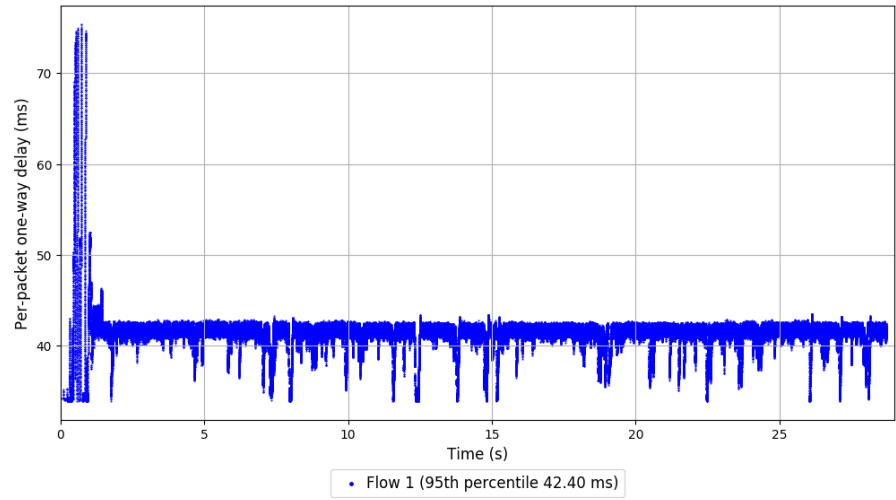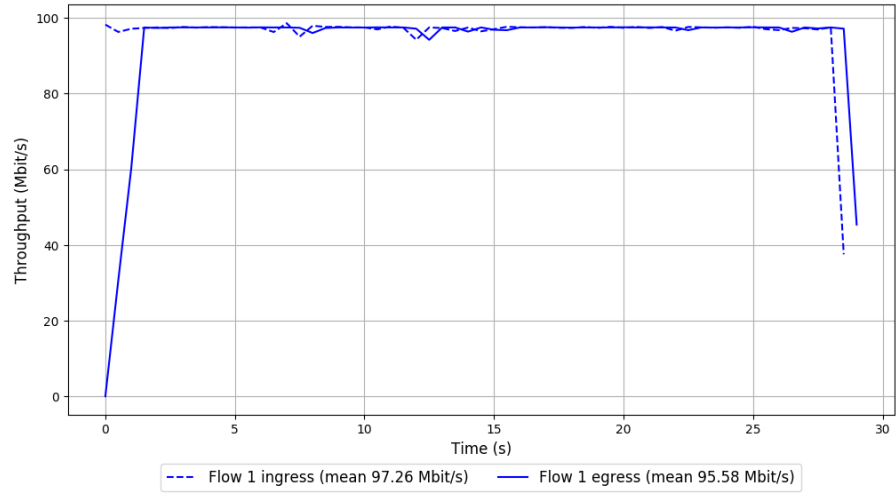
```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-10-02 19:42:54
End at: 2019-10-02 19:43:24
Local clock offset: 0.685 ms
Remote clock offset: 7.708 ms

# Below is generated by plot.py at 2019-10-02 22:31:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.11 Mbit/s
95th percentile per-packet one-way delay: 43.125 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 96.11 Mbit/s
95th percentile per-packet one-way delay: 43.125 ms
Loss rate: 0.51%
```

Run 3: Report of Indigo-MusesT — Data Link
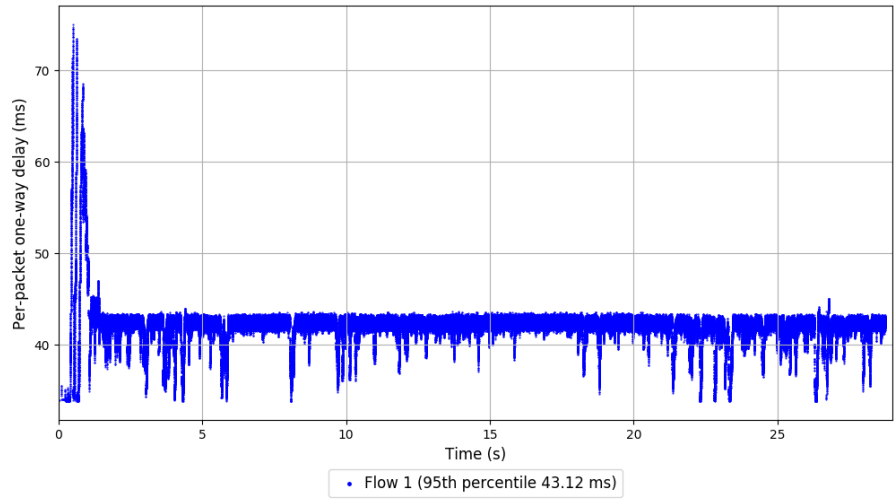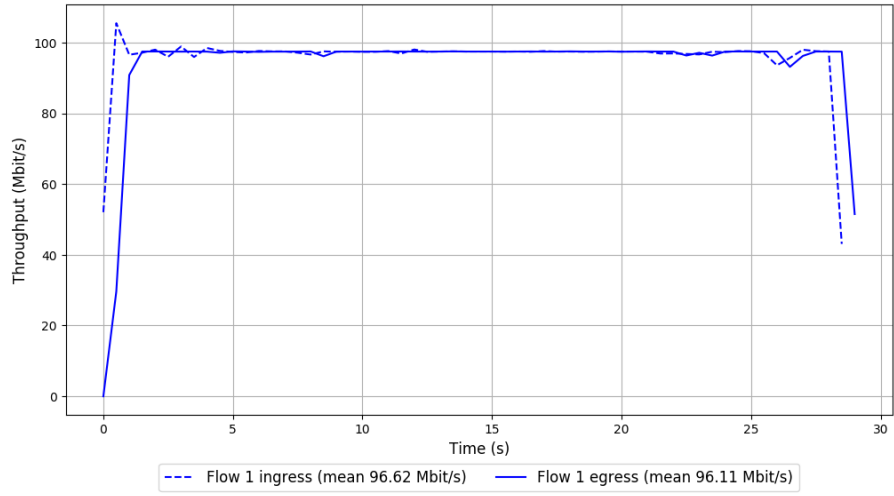
```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-10-02 20:41:50
End at: 2019-10-02 20:42:21
Local clock offset: -0.3 ms
Remote clock offset: 7.66 ms


# Below is generated by plot.py at 2019-10-02 22:31:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.31 Mbit/s
95th percentile per-packet one-way delay: 42.343 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 95.31 Mbit/s
95th percentile per-packet one-way delay: 42.343 ms
Loss rate: 1.23%
```
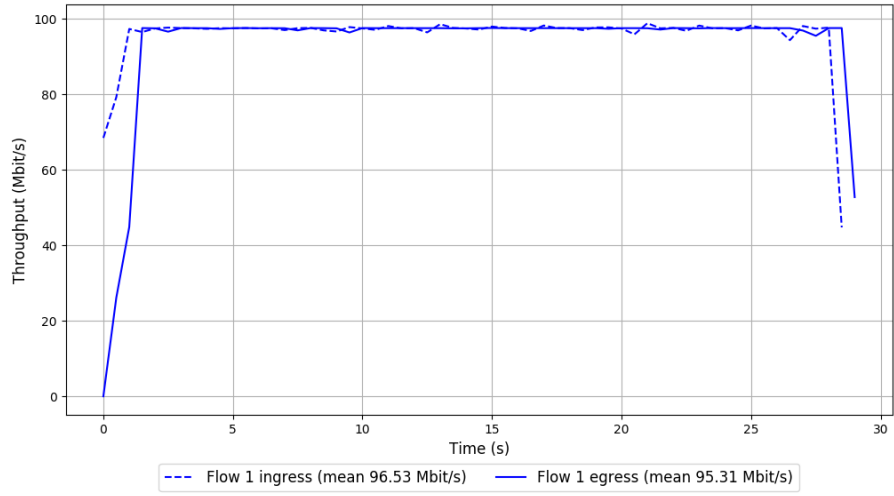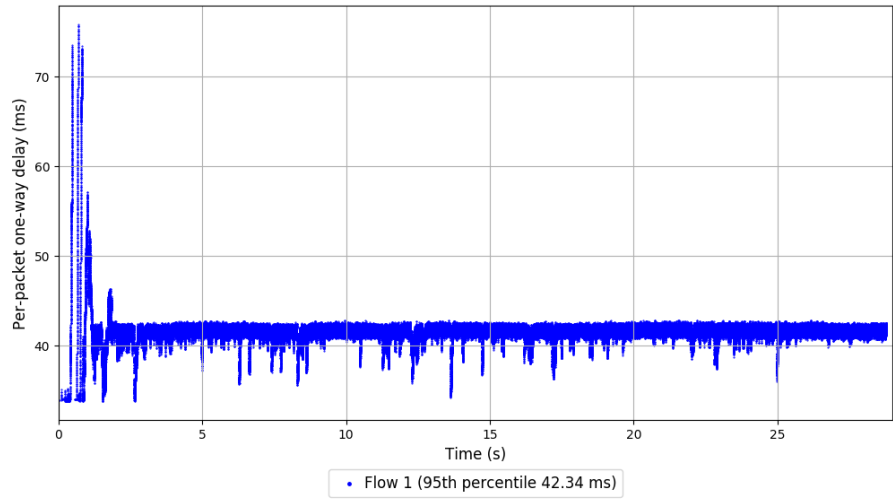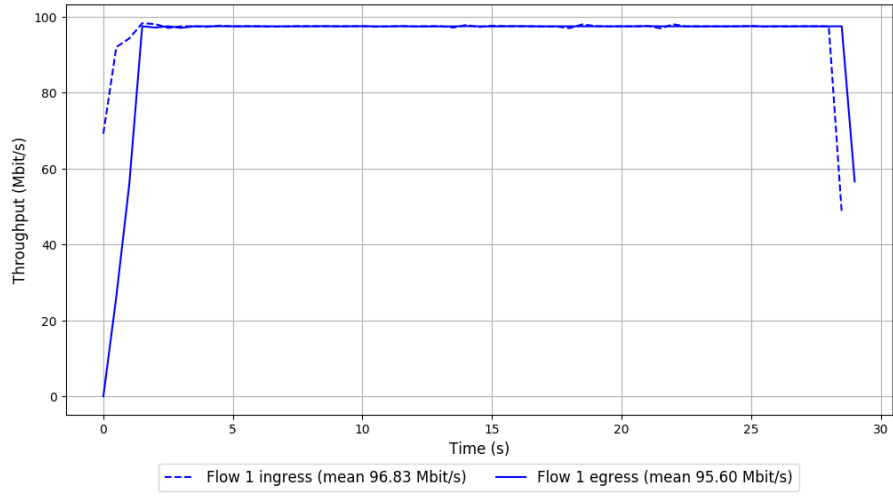
Run 4: Report of Indigo-MusesT — Data Link

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-10-02 21:38:19
End at: 2019-10-02 21:38:49
Local clock offset: -0.243 ms
Remote clock offset: 7.396 ms


# Below is generated by plot.py at 2019-10-02 22:31:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.60 Mbit/s
95th percentile per-packet one-way delay: 42.337 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 95.60 Mbit/s
95th percentile per-packet one-way delay: 42.337 ms
Loss rate: 1.25%
```

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



Flow 1 ingress (mean 96.83 Mbit/s) --- Flow 1 egress (mean 95.60 Mbit/s)



• Flow 1 (95th percentile 42.34 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2019-10-02 17:55:47
End at: 2019-10-02 17:56:17
Local clock offset: 8.35 ms
Remote clock offset: 7.724 ms


# Below is generated by plot.py at 2019-10-02 22:31:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 69.76 Mbit/s
95th percentile per-packet one-way delay: 60.793 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.76 Mbit/s
95th percentile per-packet one-way delay: 60.793 ms
Loss rate: 0.00%
```
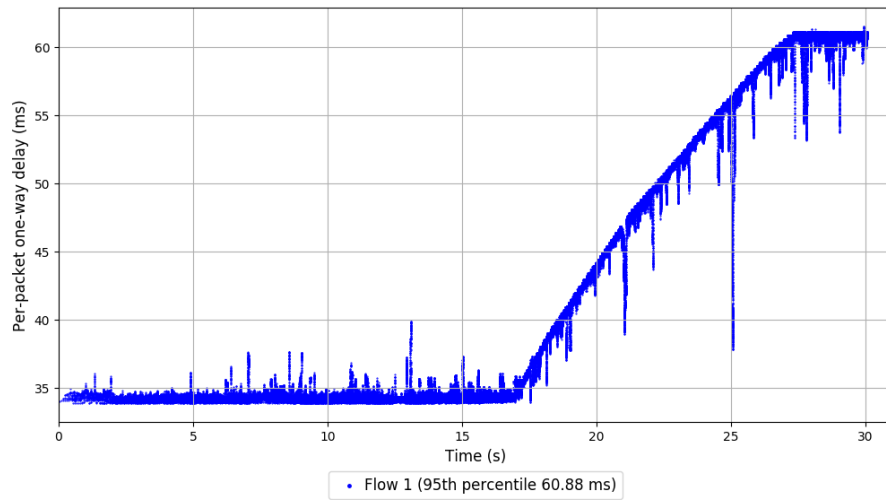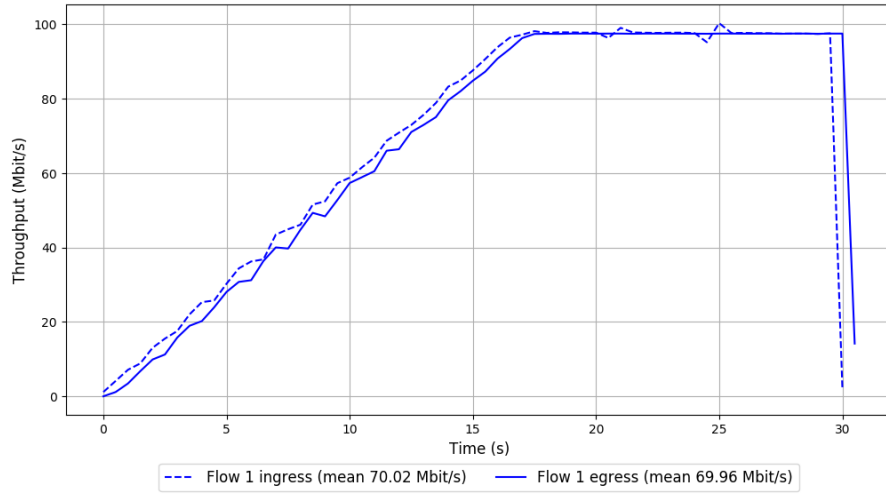
Run 1: Report of LEDBAT — Data Link
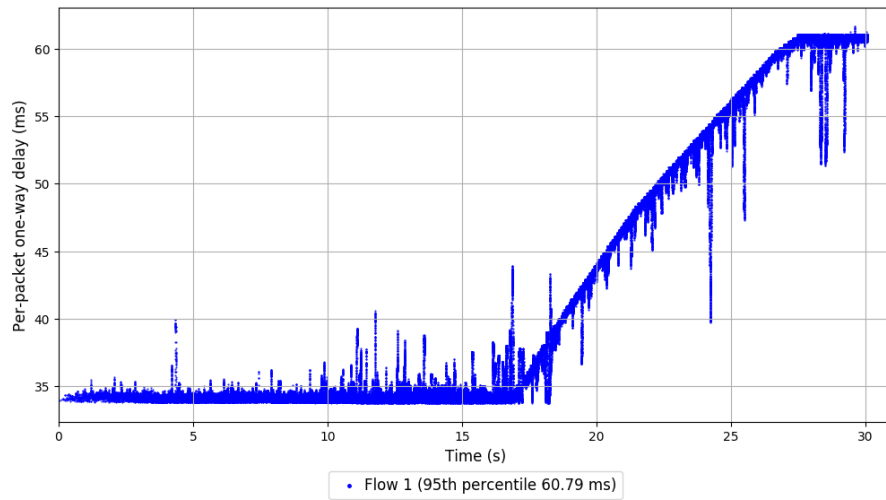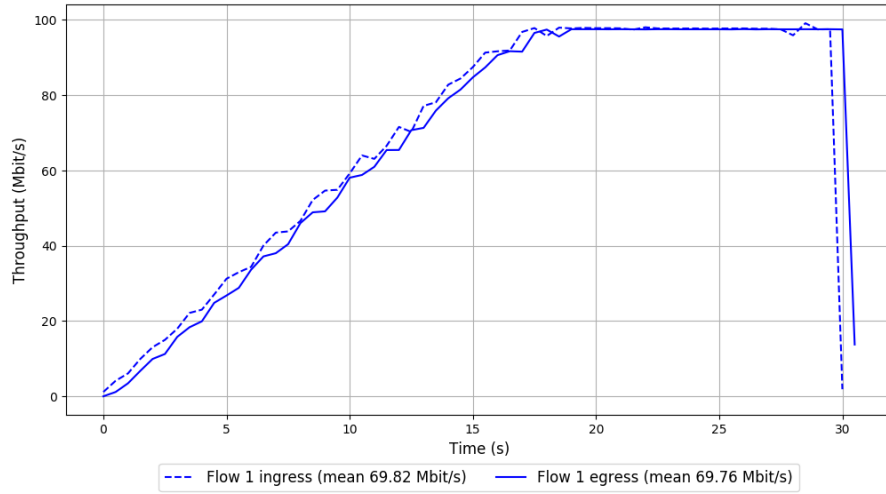
```
Run 2: Statistics of LEDBAT

Start at: 2019-10-02 18:50:30
End at: 2019-10-02 18:51:00
Local clock offset: 8.144 ms
Remote clock offset: 7.698 ms


# Below is generated by plot.py at 2019-10-02 22:31:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 69.96 Mbit/s
95th percentile per-packet one-way delay: 60.885 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.96 Mbit/s
95th percentile per-packet one-way delay: 60.885 ms
Loss rate: 0.00%
```
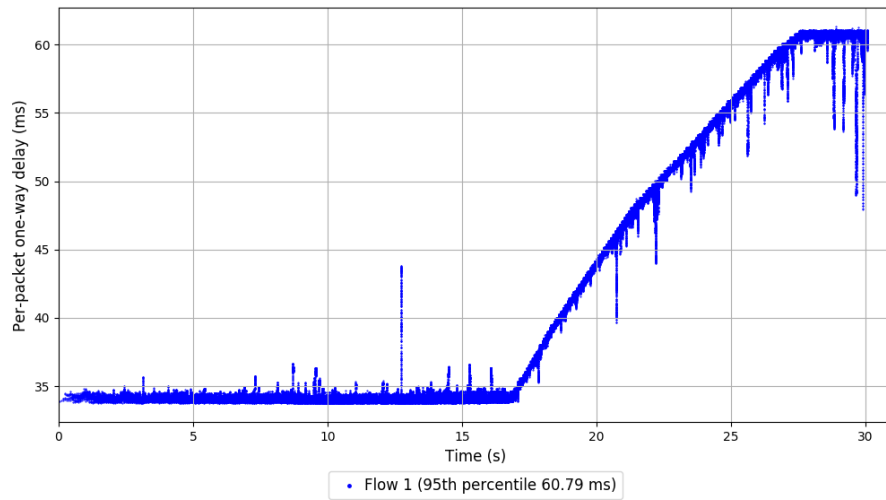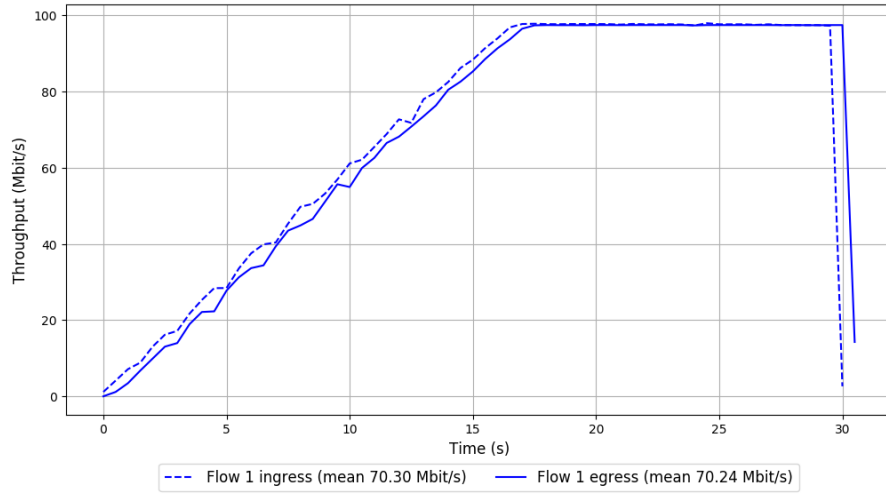
Run 2: Report of LEDBAT — Data Link



Flow 1 ingress (mean 70.02 Mbit/s)      Flow 1 egress (mean 69.96 Mbit/s)



Flow 1 (95th percentile 60.88 ms)

Run 3: Statistics of LEDBAT

Start at: 2019-10-02 19:52:44
End at: 2019-10-02 19:53:14
Local clock offset: 0.742 ms
Remote clock offset: 7.706 ms


# Below is generated by plot.py at 2019-10-02 22:31:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.24 Mbit/s
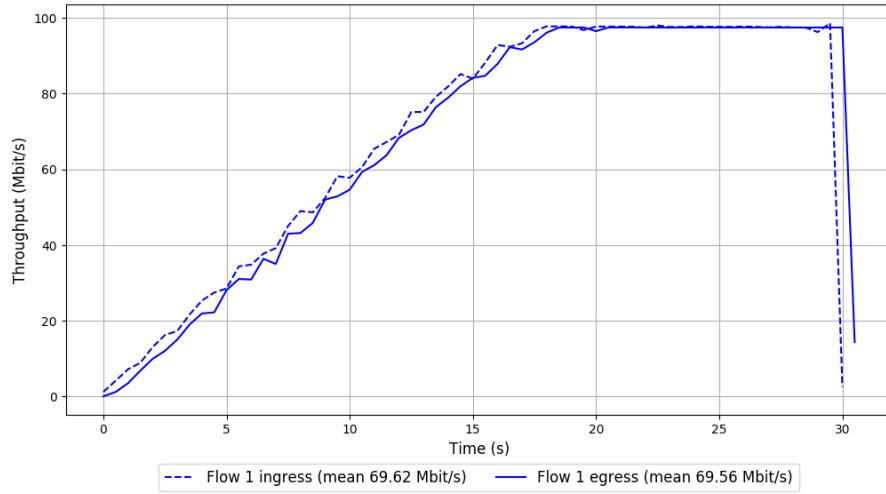95th percentile per-packet one-way delay: 60.788 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 70.24 Mbit/s
95th percentile per-packet one-way delay: 60.788 ms
Loss rate: 0.00%

## Run 3: Report of LEDBAT — Data Link



Flow 1 ingress (mean 70.30 Mbit/s) --- Flow 1 egress (mean 70.24 Mbit/s)



Flow 1 (95th percentile 60.79 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2019-10-02 20:52:02
End at: 2019-10-02 20:52:32
Local clock offset: -0.427 ms
Remote clock offset: 7.68 ms


# Below is generated by plot.py at 2019-10-02 22:31:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 69.56 Mbit/s
95th percentile per-packet one-way delay: 60.854 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.56 Mbit/s
95th percentile per-packet one-way delay: 60.854 ms
Loss rate: 0.00%
```
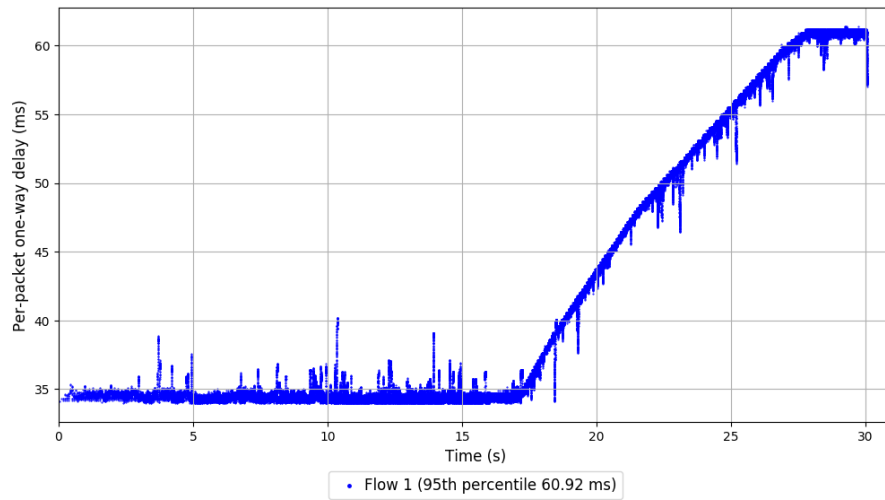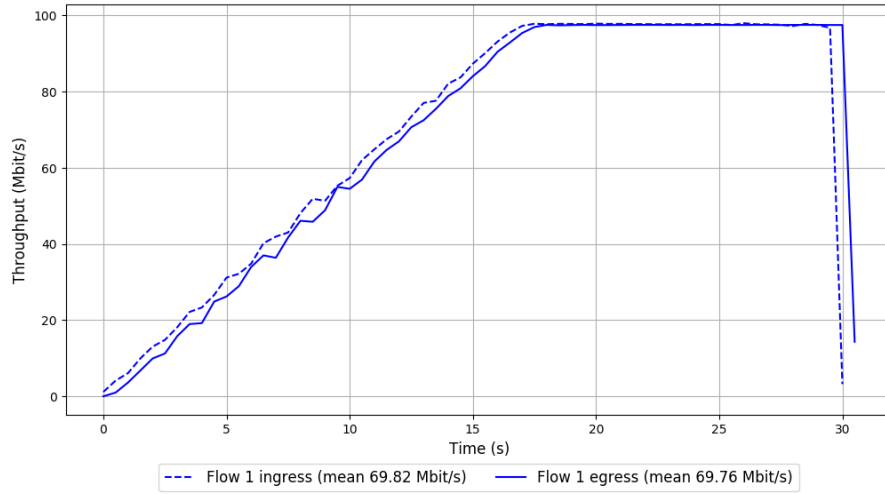
# Run 4: Report of LEDBAT — Data Link
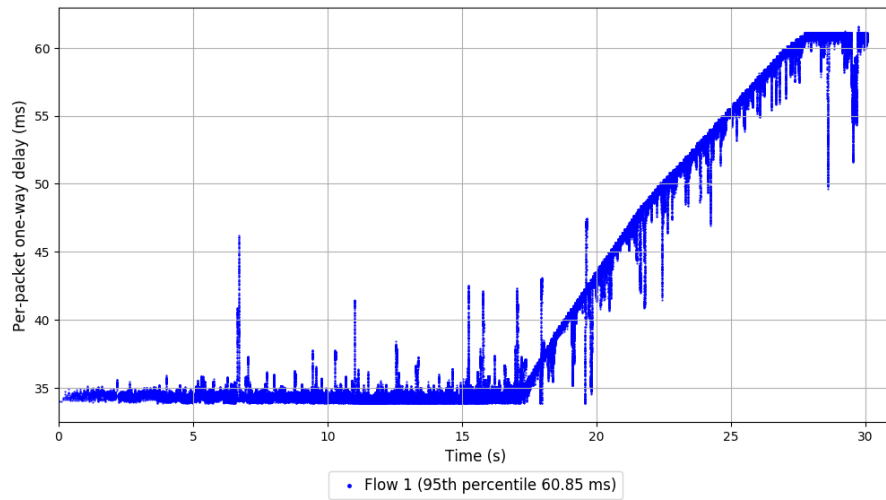
```
Run 5: Statistics of LEDBAT

Start at: 2019-10-02 21:48:30
End at: 2019-10-02 21:49:00
Local clock offset: -0.241 ms
Remote clock offset: 7.534 ms


# Below is generated by plot.py at 2019-10-02 22:31:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 69.76 Mbit/s
95th percentile per-packet one-way delay: 60.918 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.76 Mbit/s
95th percentile per-packet one-way delay: 60.918 ms
Loss rate: 0.00%
```
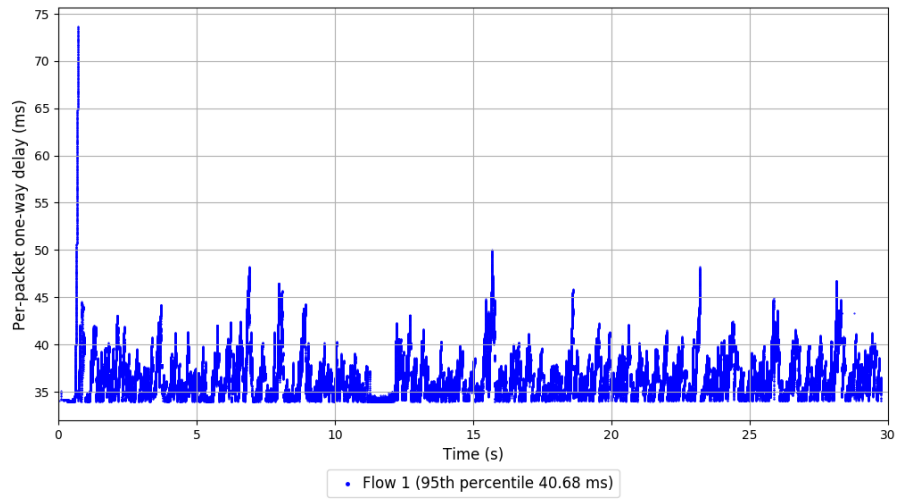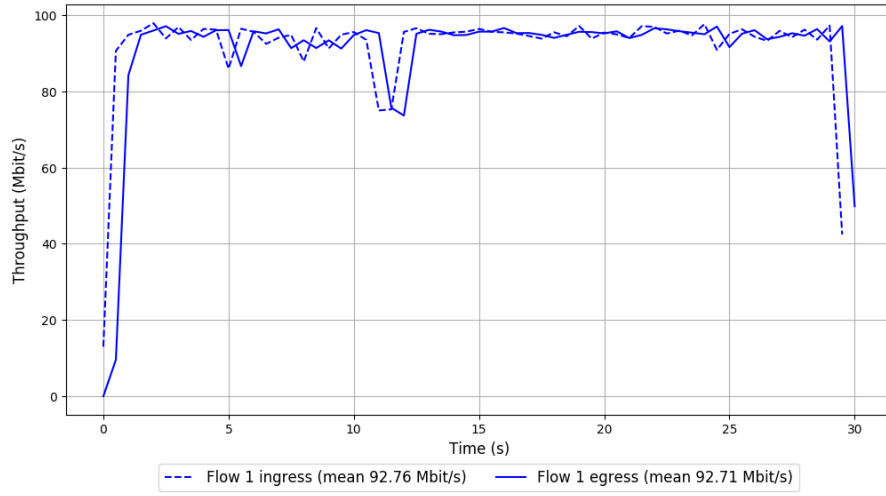
## Run 5: Report of LEDBAT — Data Link



Flow 1 ingress (mean 69.82 Mbit/s) --- Flow 1 egress (mean 69.76 Mbit/s)



Flow 1 (95th percentile 60.92 ms)

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-10-02 18:09:05
End at: 2019-10-02 18:09:35
Local clock offset: 8.72 ms
Remote clock offset: 7.756 ms


# Below is generated by plot.py at 2019-10-02 22:32:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.71 Mbit/s
95th percentile per-packet one-way delay: 40.679 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 92.71 Mbit/s
95th percentile per-packet one-way delay: 40.679 ms
Loss rate: 0.06%
```
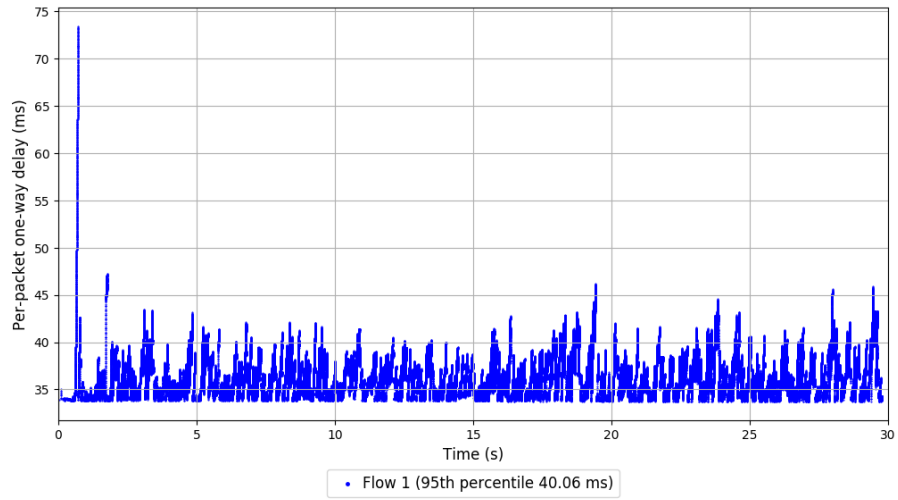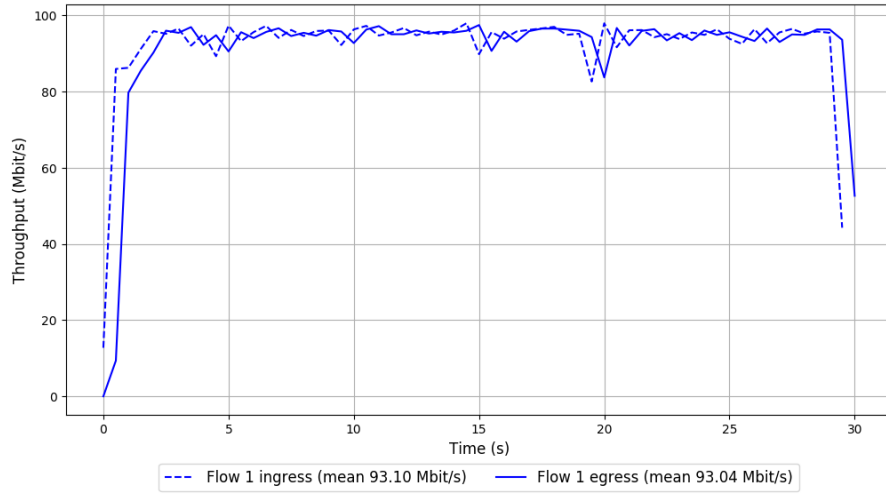
Run 1: Report of Muses_DecisionTree — Data Link



Flow 1 ingress (mean 92.76 Mbit/s) — — —    Flow 1 egress (mean 92.71 Mbit/s) ———



• Flow 1 (95th percentile 40.68 ms)

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-10-02 19:05:30
End at: 2019-10-02 19:06:00
Local clock offset: 3.054 ms
Remote clock offset: 7.668 ms


# Below is generated by plot.py at 2019-10-02 22:32:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.04 Mbit/s
95th percentile per-packet one-way delay: 40.061 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 93.04 Mbit/s
95th percentile per-packet one-way delay: 40.061 ms
Loss rate: 0.07%
```
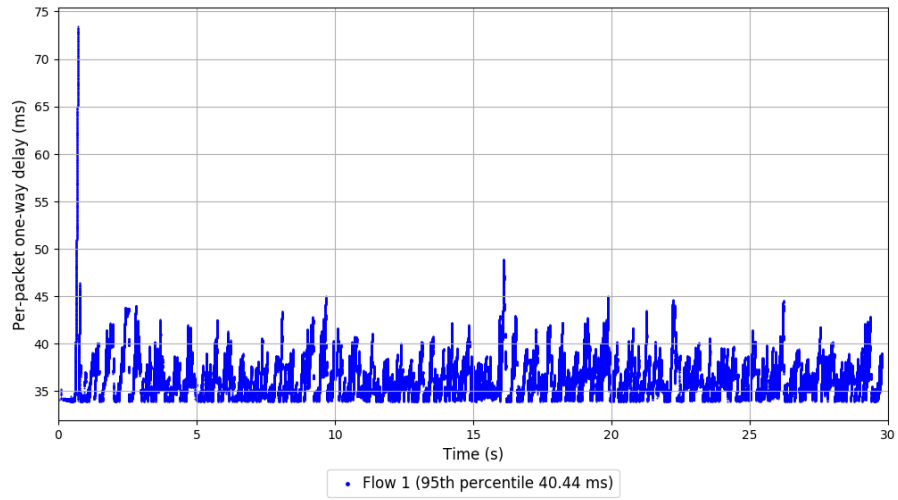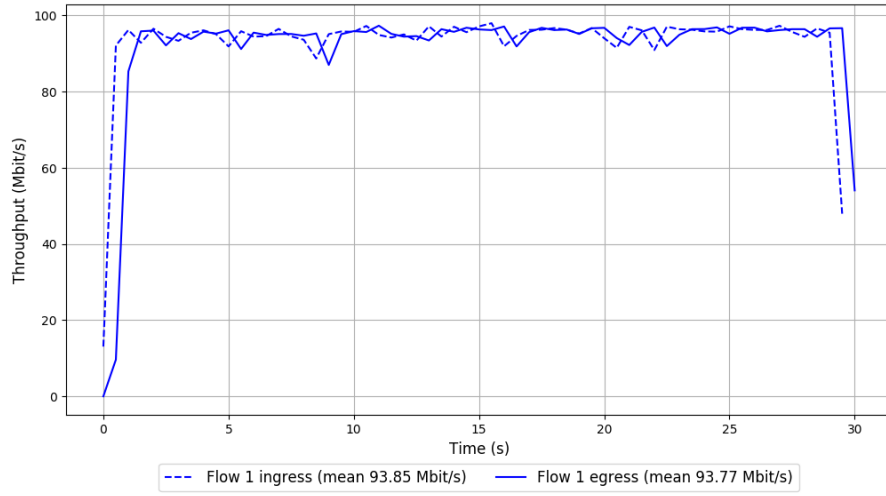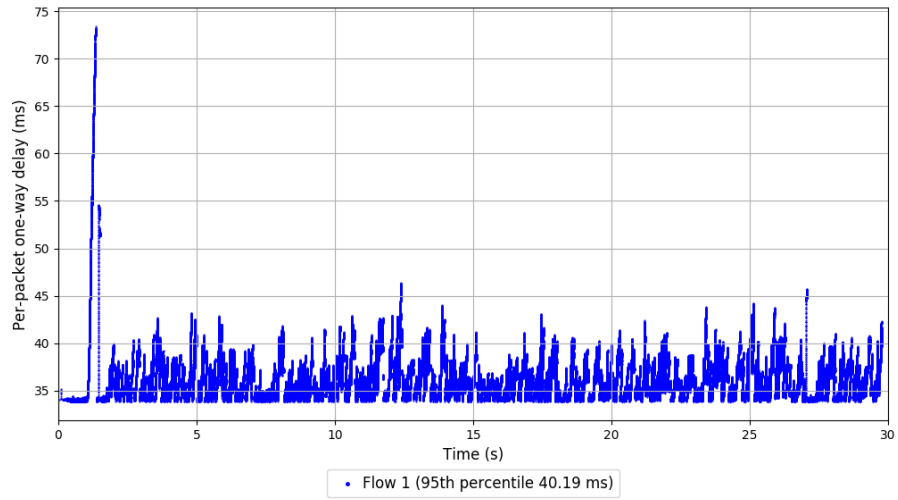
Run 2: Report of Muses_DecisionTree — Data Link



Flow 1 ingress (mean 93.10 Mbit/s) --- Flow 1 egress (mean 93.04 Mbit/s)



• Flow 1 (95th percentile 40.06 ms)

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-10-02 20:06:46
End at: 2019-10-02 20:07:16
Local clock offset: 0.323 ms
Remote clock offset: 7.82 ms


# Below is generated by plot.py at 2019-10-02 22:32:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.77 Mbit/s
95th percentile per-packet one-way delay: 40.438 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 93.77 Mbit/s
95th percentile per-packet one-way delay: 40.438 ms
Loss rate: 0.07%
```
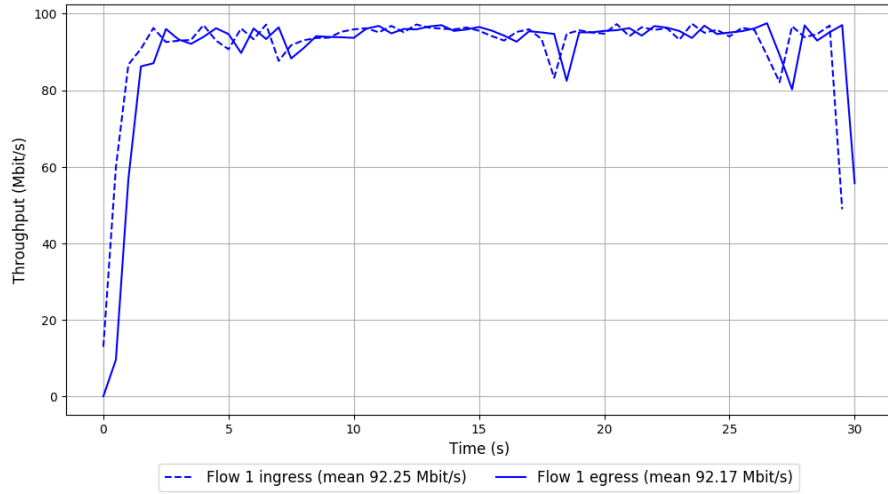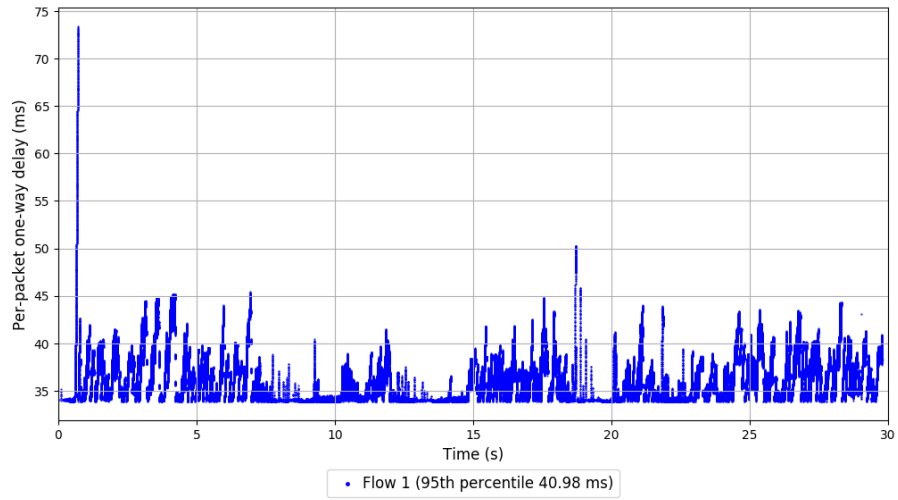
Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-10-02 21:08:52
End at: 2019-10-02 21:09:22
Local clock offset: -0.287 ms
Remote clock offset: 7.695 ms


# Below is generated by plot.py at 2019-10-02 22:32:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.17 Mbit/s
95th percentile per-packet one-way delay: 40.187 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 92.17 Mbit/s
95th percentile per-packet one-way delay: 40.187 ms
Loss rate: 0.07%
```
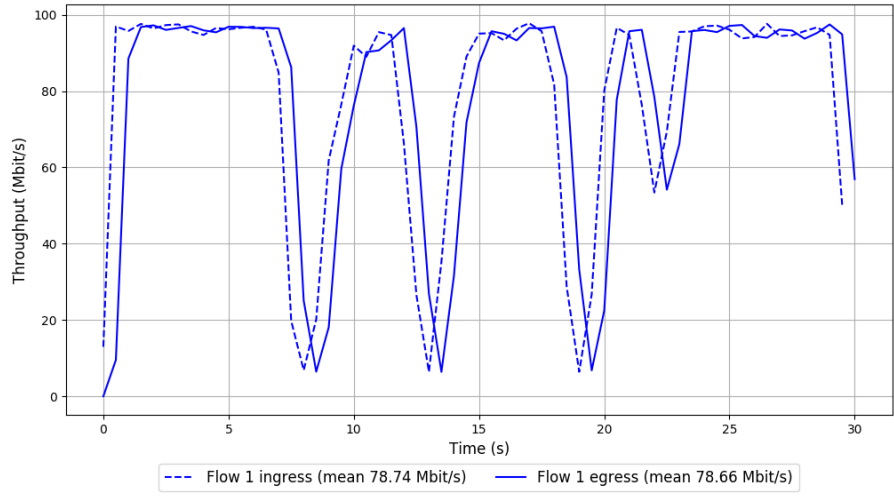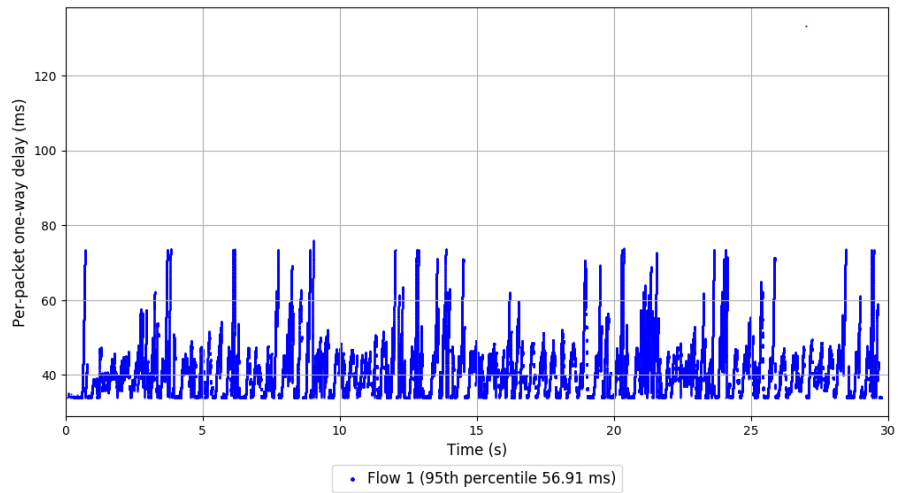
Run 4: Report of Muses_DecisionTree — Data Link



Flow 1 ingress (mean 92.25 Mbit/s)    Flow 1 egress (mean 92.17 Mbit/s)



Flow 1 (95th percentile 40.19 ms)

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-10-02 22:02:56
End at: 2019-10-02 22:03:26
Local clock offset: -0.061 ms
Remote clock offset: 7.245 ms


# Below is generated by plot.py at 2019-10-02 22:32:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.66 Mbit/s
95th percentile per-packet one-way delay: 40.975 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 78.66 Mbit/s
95th percentile per-packet one-way delay: 40.975 ms
Loss rate: 0.09%
```
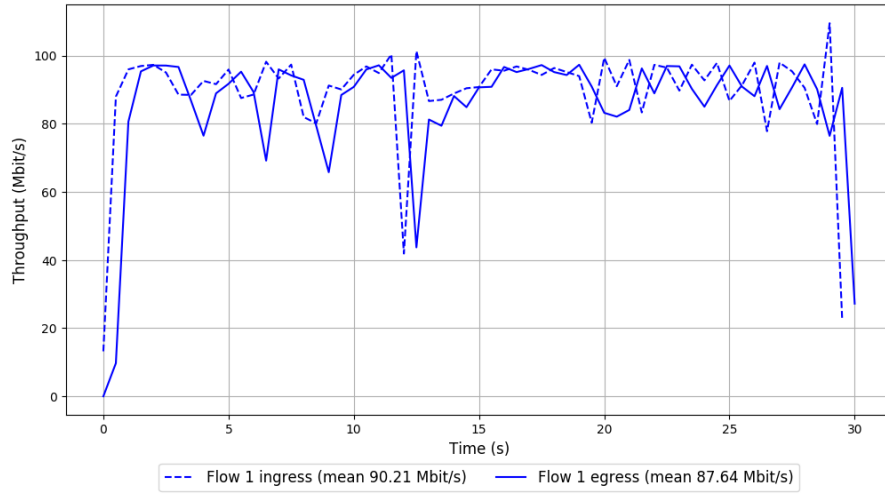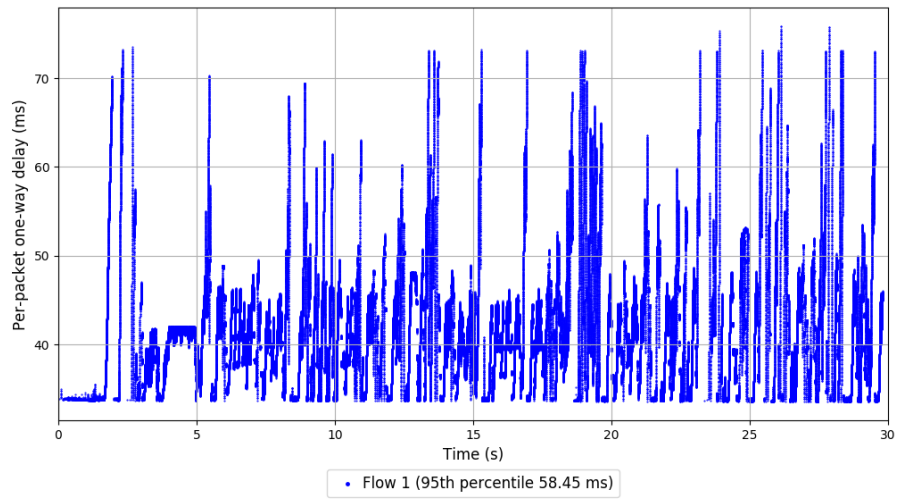
Run 5: Report of Muses_DecisionTree — Data Link



Flow 1 ingress (mean 78.74 Mbit/s)     Flow 1 egress (mean 78.66 Mbit/s)



Flow 1 (95th percentile 40.98 ms)

```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-02 18:06:54
End at: 2019-10-02 18:07:24
Local clock offset: 8.353 ms
Remote clock offset: 7.706 ms


# Below is generated by plot.py at 2019-10-02 22:32:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.64 Mbit/s
95th percentile per-packet one-way delay: 56.909 ms
Loss rate: 2.85%
-- Flow 1:
Average throughput: 87.64 Mbit/s
95th percentile per-packet one-way delay: 56.909 ms
Loss rate: 2.85%
```
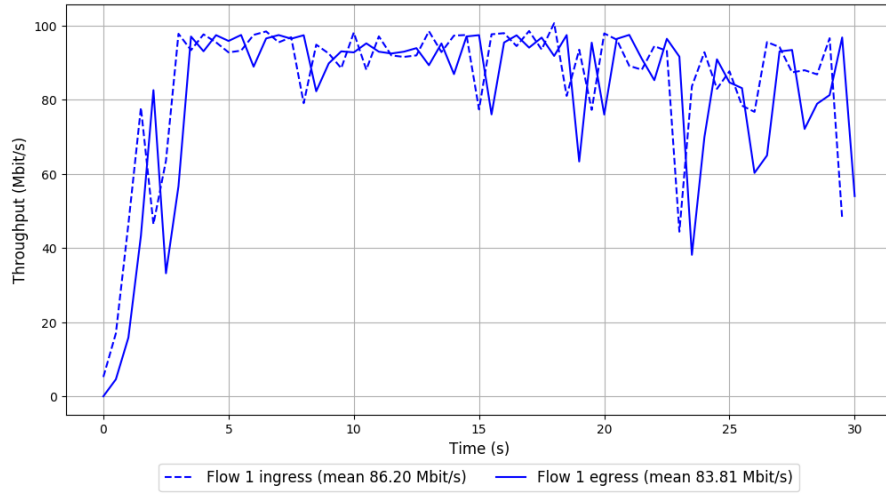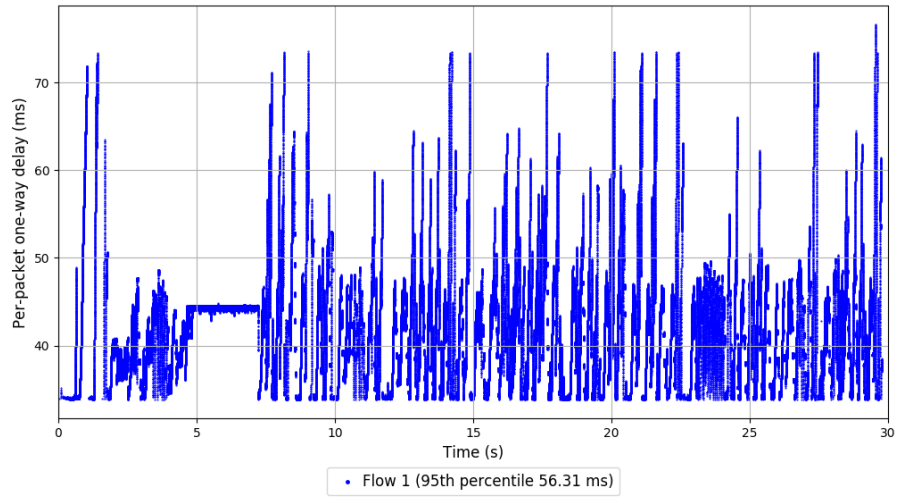
Run 1: Report of Muses_DecisionTreeH0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-02 19:02:58
End at: 2019-10-02 19:03:28
Local clock offset: 3.873 ms
Remote clock offset: 7.638 ms


# Below is generated by plot.py at 2019-10-02 22:32:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.81 Mbit/s
95th percentile per-packet one-way delay: 58.452 ms
Loss rate: 2.73%
-- Flow 1:
Average throughput: 83.81 Mbit/s
95th percentile per-packet one-way delay: 58.452 ms
Loss rate: 2.73%
```
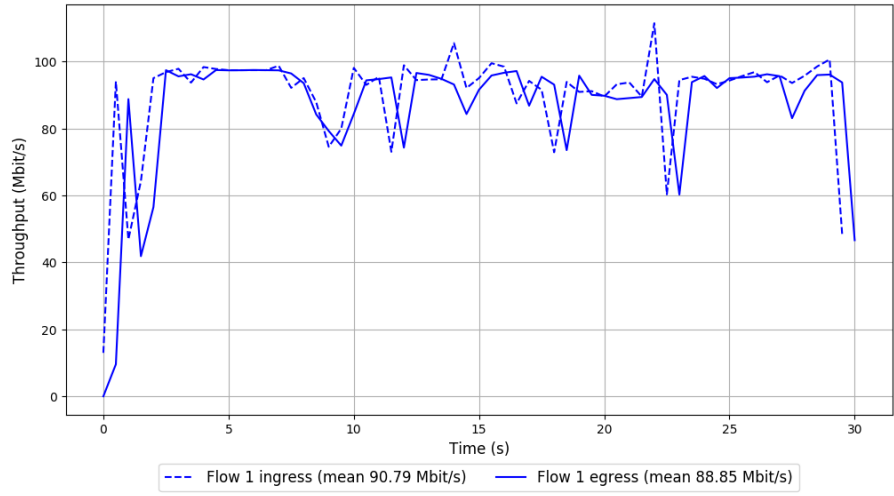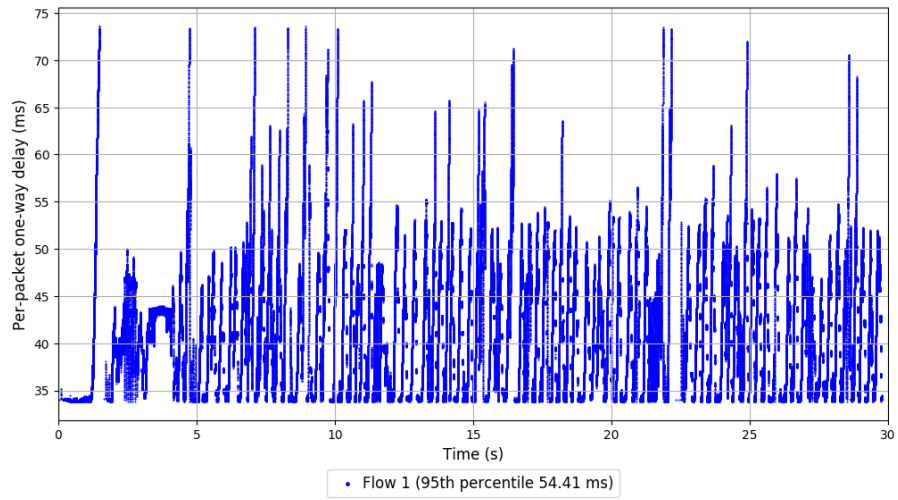
Run 2: Report of Muses_DecisionTreeH0 — Data Link



Flow 1 ingress (mean 86.20 Mbit/s)    Flow 1 egress (mean 83.81 Mbit/s)



Flow 1 (95th percentile 58.45 ms)

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-02 20:03:38
End at: 2019-10-02 20:04:08
Local clock offset: 0.438 ms
Remote clock offset: 7.721 ms


# Below is generated by plot.py at 2019-10-02 22:32:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.85 Mbit/s
95th percentile per-packet one-way delay: 56.306 ms
Loss rate: 2.12%
-- Flow 1:
Average throughput: 88.85 Mbit/s
95th percentile per-packet one-way delay: 56.306 ms
Loss rate: 2.12%
```
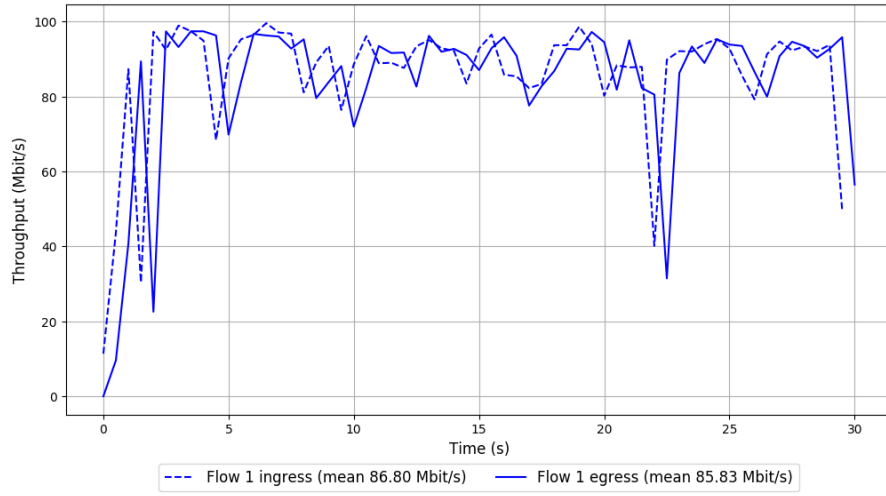
Run 3: Report of Muses_DecisionTreeH0 — Data Link



130

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-02 21:05:52
End at: 2019-10-02 21:06:22
Local clock offset: -0.268 ms
Remote clock offset: 7.639 ms


# Below is generated by plot.py at 2019-10-02 22:33:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.83 Mbit/s
95th percentile per-packet one-way delay: 54.410 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 85.83 Mbit/s
95th percentile per-packet one-way delay: 54.410 ms
Loss rate: 1.12%
```
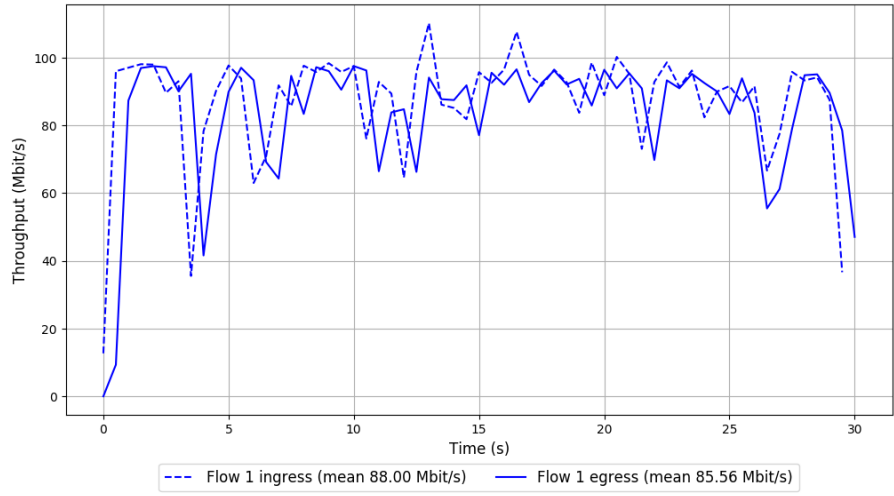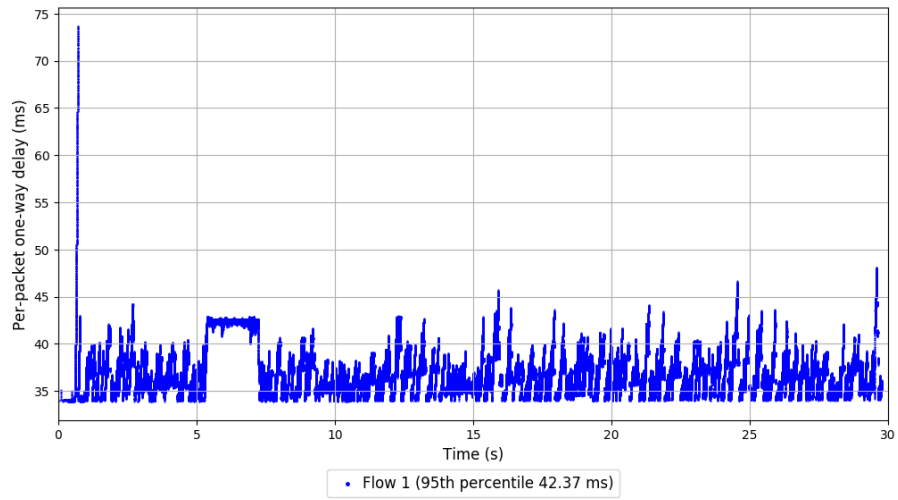
Run 4: Report of Muses_DecisionTreeH0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeHO

Start at: 2019-10-02 22:00:29
End at: 2019-10-02 22:00:59
Local clock offset: -0.095 ms
Remote clock offset: 7.323 ms


# Below is generated by plot.py at 2019-10-02 22:33:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.56 Mbit/s
95th percentile per-packet one-way delay: 57.421 ms
Loss rate: 2.77%
-- Flow 1:
Average throughput: 85.56 Mbit/s
95th percentile per-packet one-way delay: 57.421 ms
Loss rate: 2.77%
```
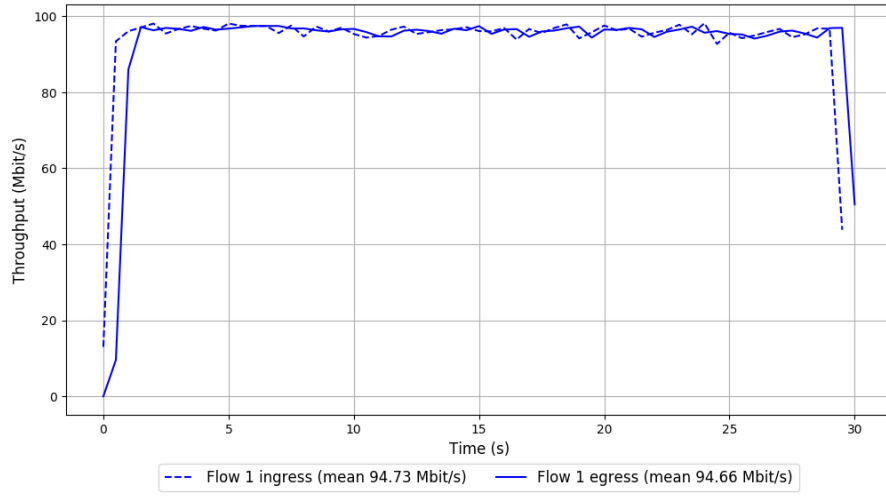
Run 5: Report of Muses_DecisionTreeH0 — Data Link
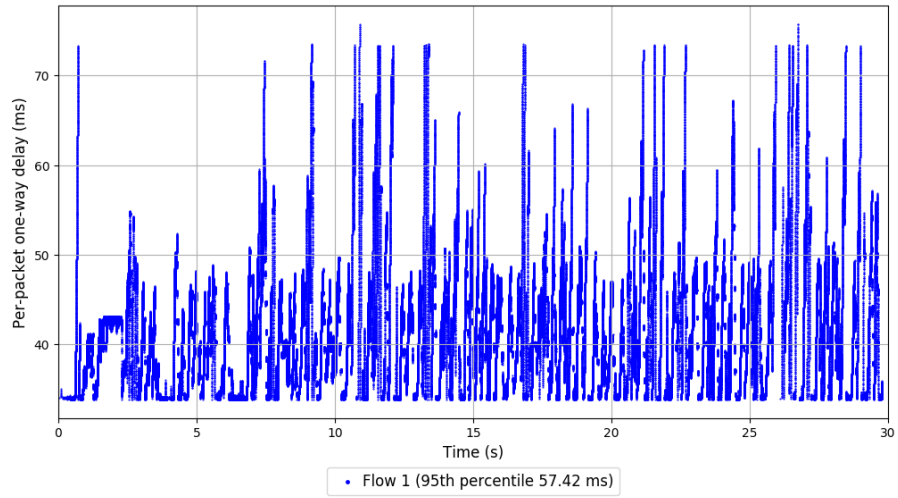
```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-02 18:14:38
End at: 2019-10-02 18:15:08
Local clock offset: 10.037 ms
Remote clock offset: 7.723 ms


# Below is generated by plot.py at 2019-10-02 22:33:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.66 Mbit/s
95th percentile per-packet one-way delay: 42.367 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 94.66 Mbit/s
95th percentile per-packet one-way delay: 42.367 ms
Loss rate: 0.07%
```
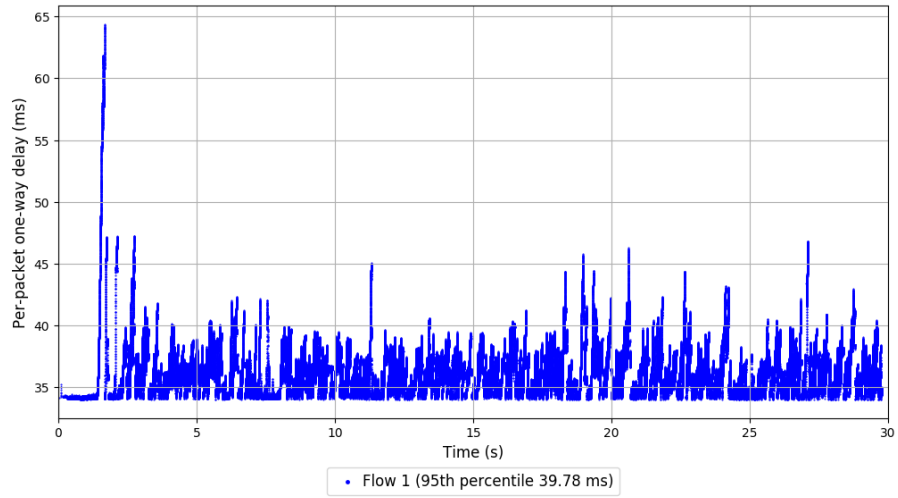
Run 1: Report of Muses_DecisionTreeR0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-02 19:13:19
End at: 2019-10-02 19:13:49
Local clock offset: 1.917 ms
Remote clock offset: 7.762 ms


# Below is generated by plot.py at 2019-10-02 22:33:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.54 Mbit/s
95th percentile per-packet one-way delay: 39.777 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 90.54 Mbit/s
95th percentile per-packet one-way delay: 39.777 ms
Loss rate: 0.00%
```
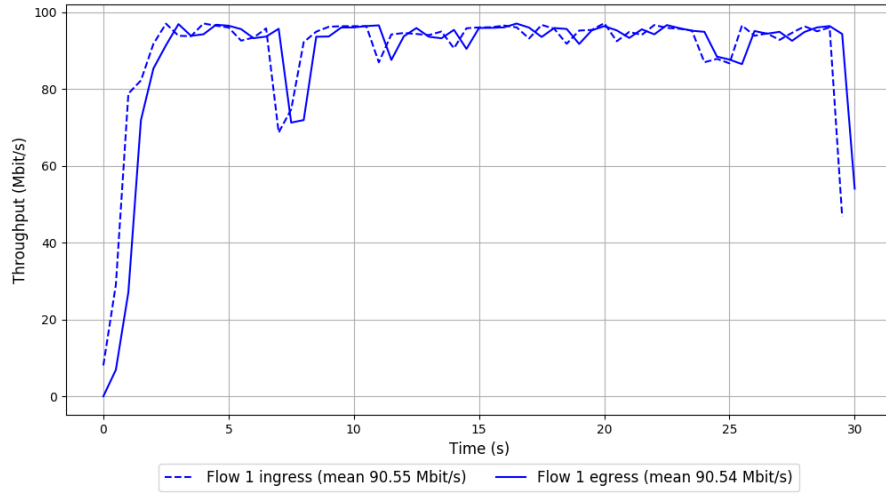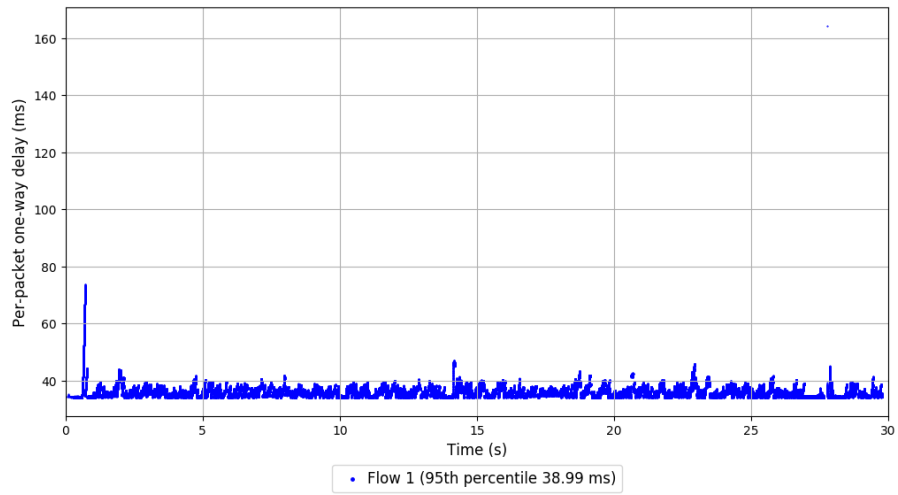
Run 2: Report of Muses_DecisionTreeR0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-02 20:15:24
End at: 2019-10-02 20:15:54
Local clock offset: 0.129 ms
Remote clock offset: 7.823 ms


# Below is generated by plot.py at 2019-10-02 22:33:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.12 Mbit/s
95th percentile per-packet one-way delay: 38.995 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 92.12 Mbit/s
95th percentile per-packet one-way delay: 38.995 ms
Loss rate: 0.03%
```
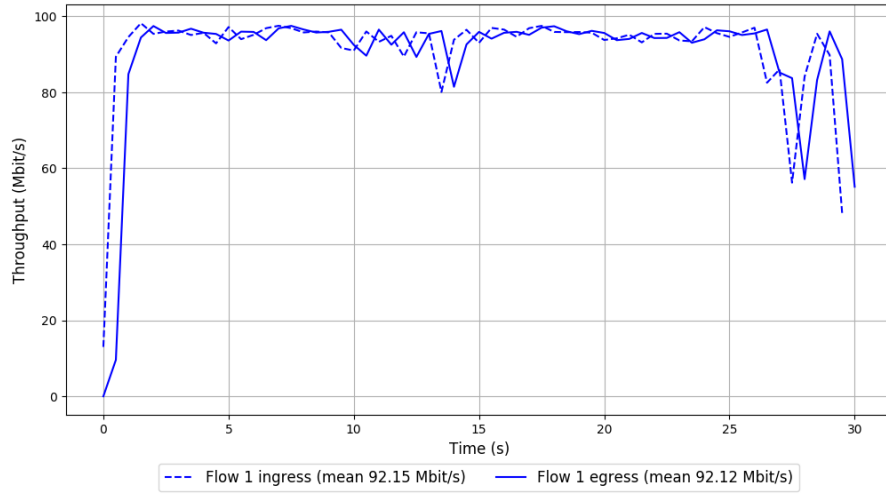
Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-02 21:16:06
End at: 2019-10-02 21:16:37
Local clock offset: -0.247 ms
Remote clock offset: 7.635 ms


# Below is generated by plot.py at 2019-10-02 22:33:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.53 Mbit/s
95th percentile per-packet one-way delay: 39.308 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 82.53 Mbit/s
95th percentile per-packet one-way delay: 39.308 ms
Loss rate: 0.14%
```
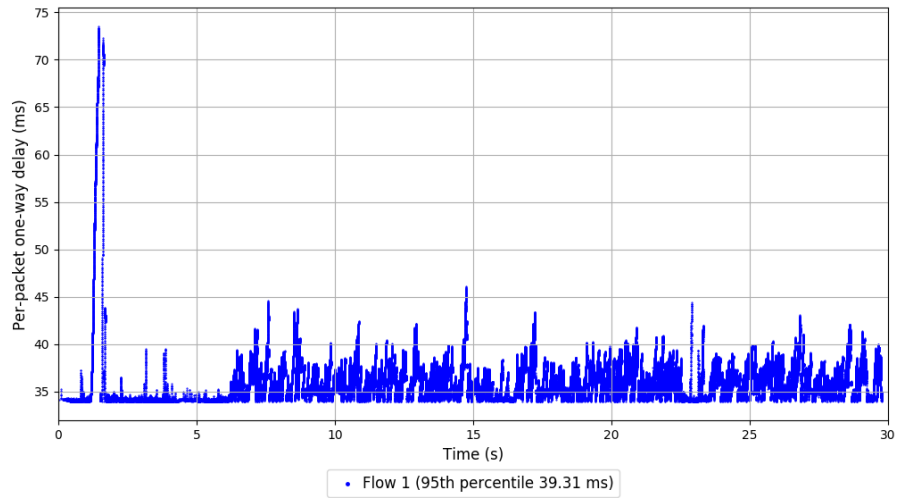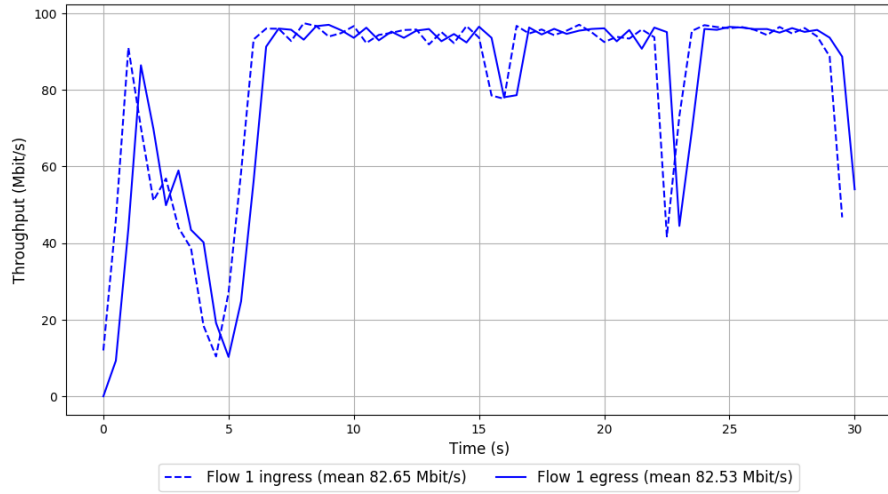
Run 4: Report of Muses_DecisionTreeR0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-02 22:10:20
End at: 2019-10-02 22:10:50
Local clock offset: 0.043 ms
Remote clock offset: 7.237 ms


# Below is generated by plot.py at 2019-10-02 22:33:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.92 Mbit/s
95th percentile per-packet one-way delay: 40.332 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 91.92 Mbit/s
95th percentile per-packet one-way delay: 40.332 ms
Loss rate: 0.00%
```
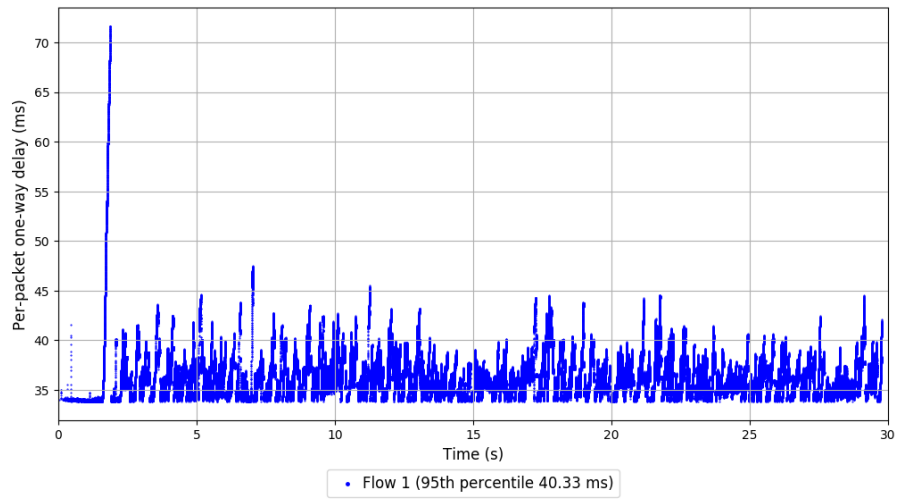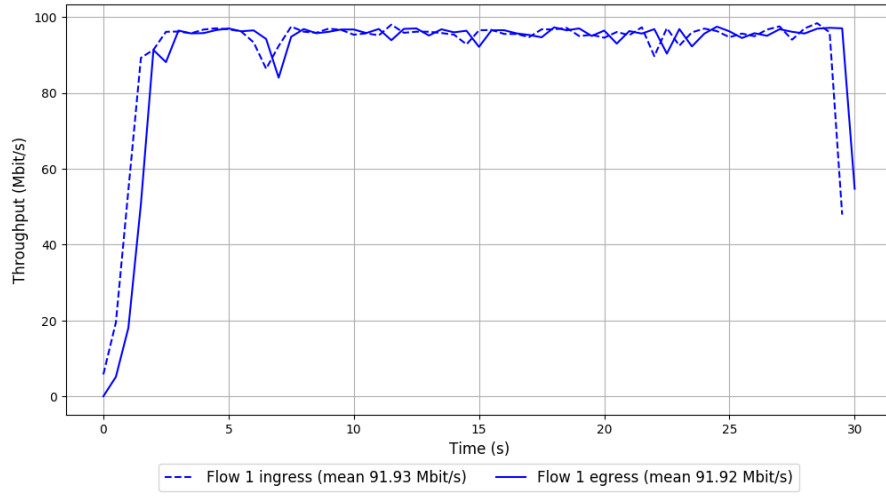
Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-10-02 17:34:45
End at: 2019-10-02 17:35:15
Local clock offset: 6.89 ms
Remote clock offset: 7.626 ms


# Below is generated by plot.py at 2019-10-02 22:33:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.60 Mbit/s
95th percentile per-packet one-way delay: 40.519 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 90.60 Mbit/s
95th percentile per-packet one-way delay: 40.519 ms
Loss rate: 0.71%
```
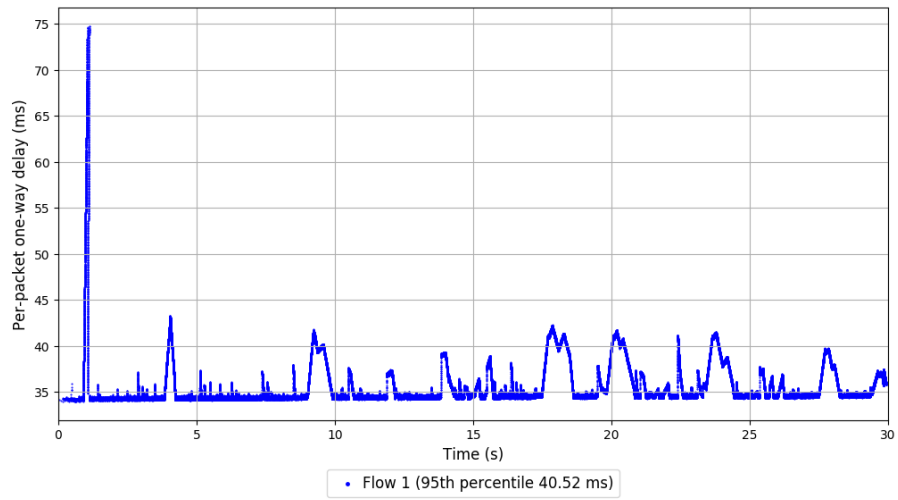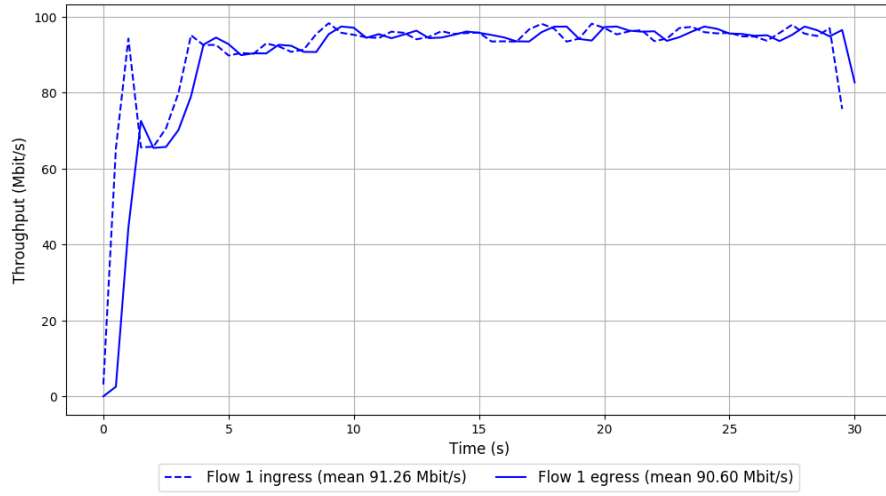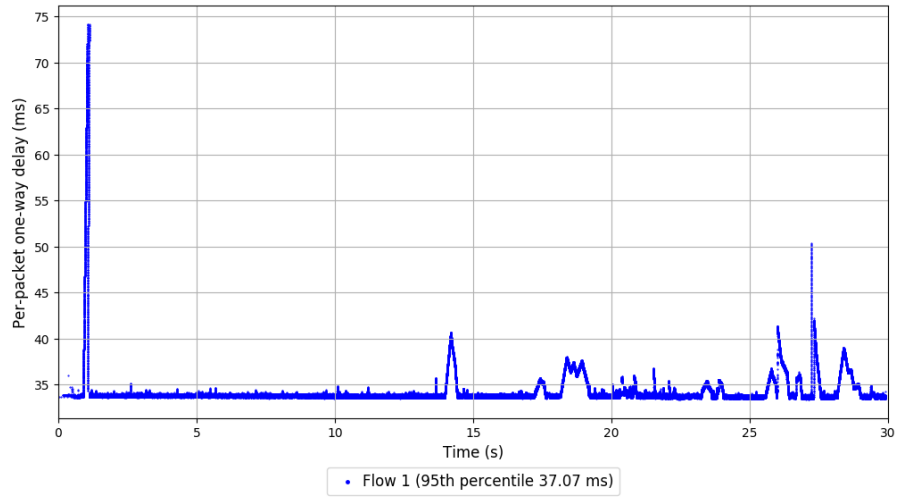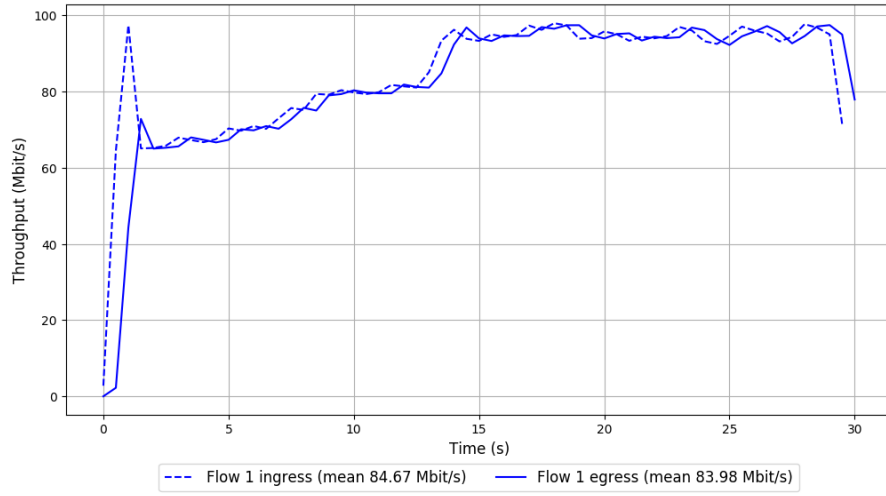
Run 1: Report of PCC-Allegro — Data Link



Flow 1 ingress (mean 91.26 Mbit/s) — Flow 1 egress (mean 90.60 Mbit/s)



· Flow 1 (95th percentile 40.52 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-10-02 18:30:45
End at: 2019-10-02 18:31:15
Local clock offset: 9.171 ms
Remote clock offset: 7.603 ms


# Below is generated by plot.py at 2019-10-02 22:34:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.98 Mbit/s
95th percentile per-packet one-way delay: 37.071 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 83.98 Mbit/s
95th percentile per-packet one-way delay: 37.071 ms
Loss rate: 0.82%
```

Run 2: Report of PCC-Allegro — Data Link



Flow 1 ingress (mean 84.67 Mbit/s) --- Flow 1 egress (mean 83.98 Mbit/s)



• Flow 1 (95th percentile 37.07 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-10-02 19:36:11
End at: 2019-10-02 19:36:41
Local clock offset: 0.724 ms
Remote clock offset: 7.714 ms


# Below is generated by plot.py at 2019-10-02 22:34:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.27 Mbit/s
95th percentile per-packet one-way delay: 36.120 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 86.27 Mbit/s
95th percentile per-packet one-way delay: 36.120 ms
Loss rate: 1.00%
```

Run 3: Report of PCC-Allegro — Data Link
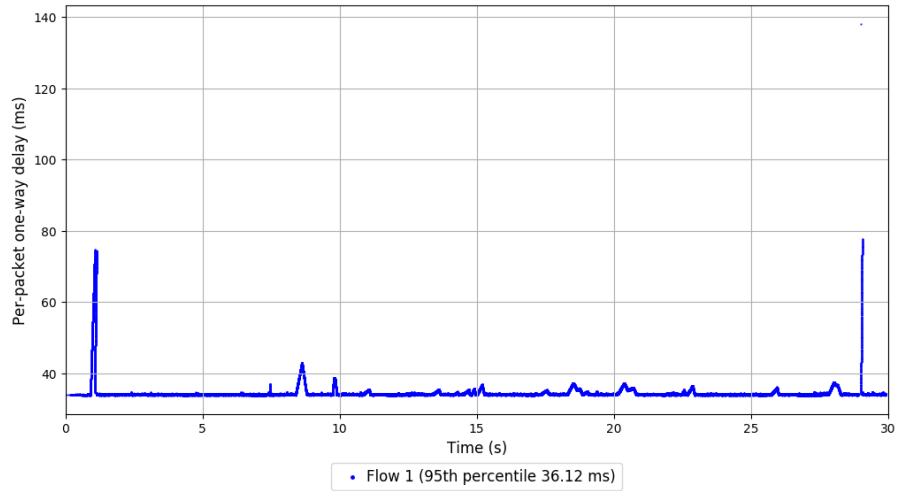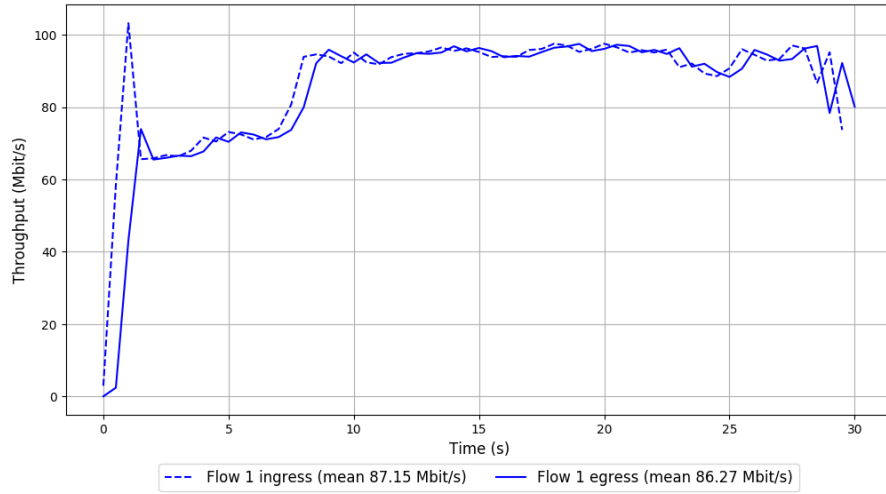
```
Run 4: Statistics of PCC-Allegro

Start at: 2019-10-02 20:33:49
End at: 2019-10-02 20:34:19
Local clock offset: -0.177 ms
Remote clock offset: 7.697 ms


# Below is generated by plot.py at 2019-10-02 22:34:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.53 Mbit/s
95th percentile per-packet one-way delay: 36.476 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 84.53 Mbit/s
95th percentile per-packet one-way delay: 36.476 ms
Loss rate: 0.76%
```
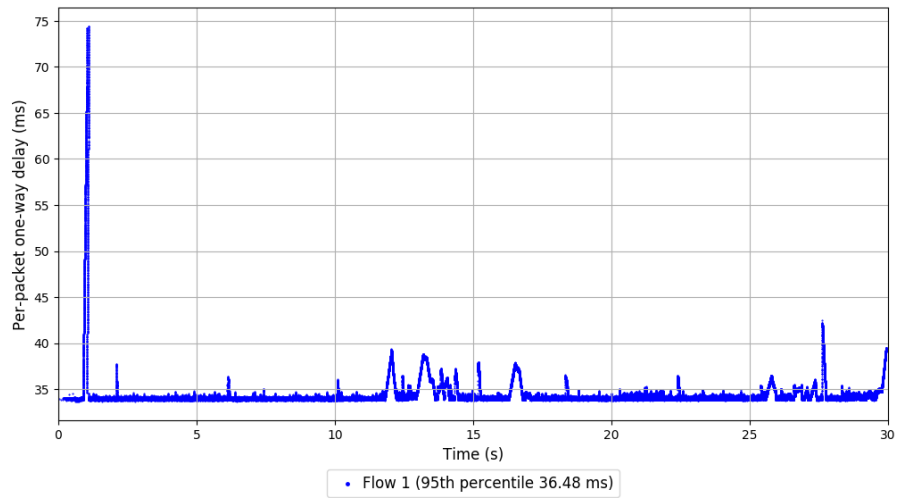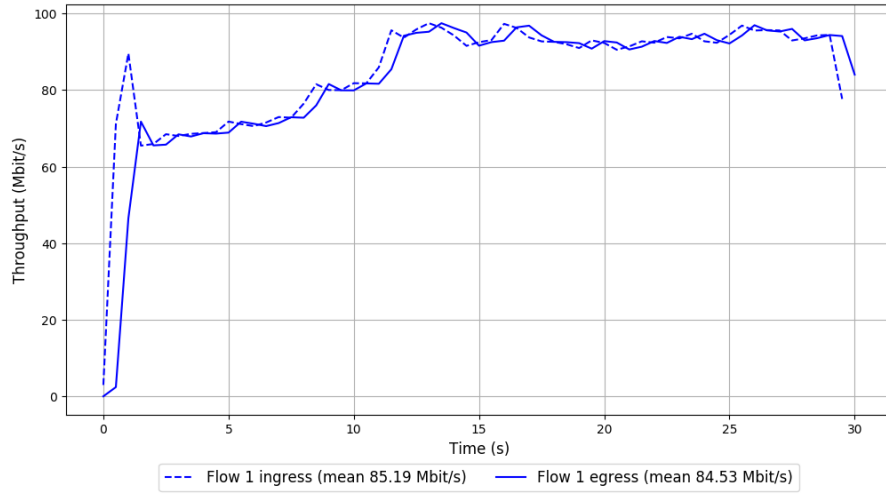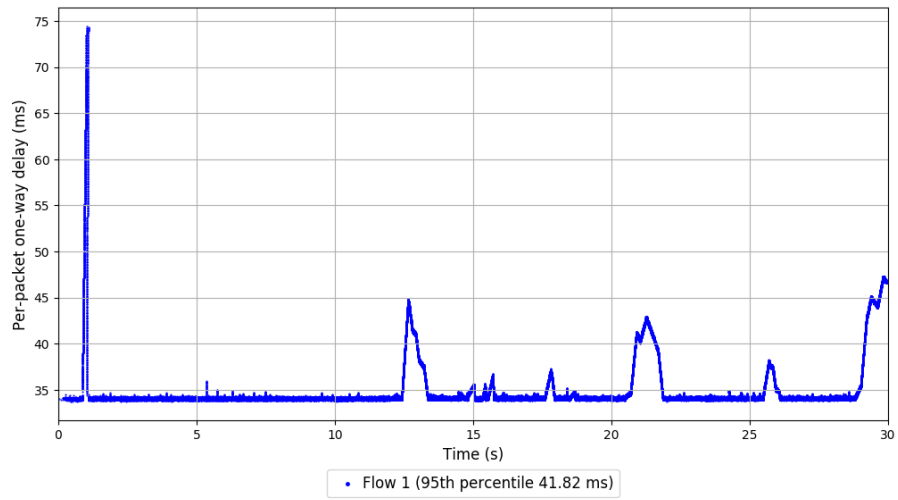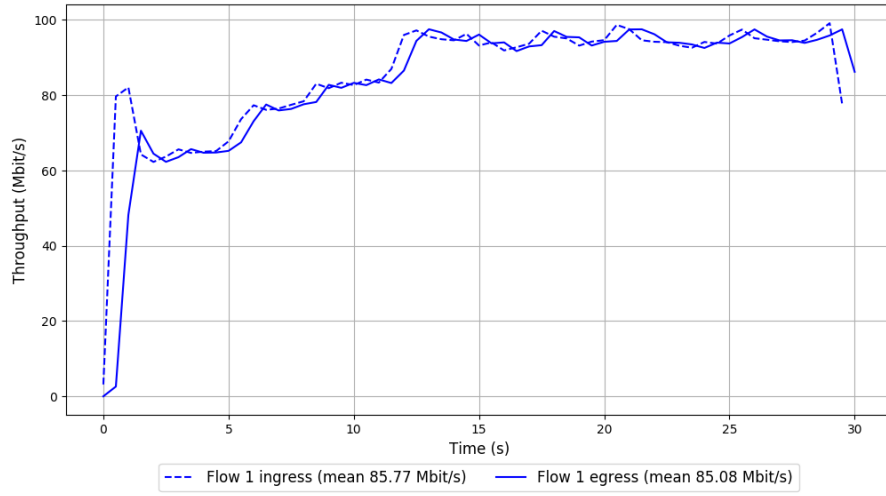
Run 4: Report of PCC-Allegro — Data Link



Flow 1 ingress (mean 85.19 Mbit/s) — Flow 1 egress (mean 84.53 Mbit/s)



• Flow 1 (95th percentile 36.48 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-10-02 21:31:17
End at: 2019-10-02 21:31:47
Local clock offset: -0.251 ms
Remote clock offset: 7.41 ms


# Below is generated by plot.py at 2019-10-02 22:34:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.08 Mbit/s
95th percentile per-packet one-way delay: 41.824 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 85.08 Mbit/s
95th percentile per-packet one-way delay: 41.824 ms
Loss rate: 0.76%
```

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



Flow 1 ingress (mean 85.77 Mbit/s)          Flow 1 egress (mean 85.08 Mbit/s)



Flow 1 (95th percentile 41.82 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2019-10-02 18:18:14
End at: 2019-10-02 18:18:44
Local clock offset: 11.029 ms
Remote clock offset: 7.67 ms


# Below is generated by plot.py at 2019-10-02 22:34:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.97 Mbit/s
95th percentile per-packet one-way delay: 34.265 ms
Loss rate: 44.42%
-- Flow 1:
Average throughput: 12.97 Mbit/s
95th percentile per-packet one-way delay: 34.265 ms
Loss rate: 44.42%
```

Run 1: Report of PCC-Expr — Data Link
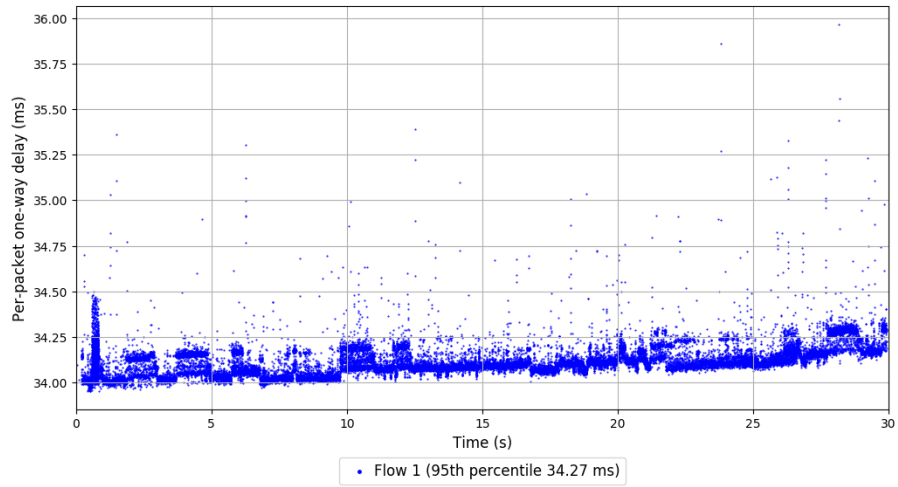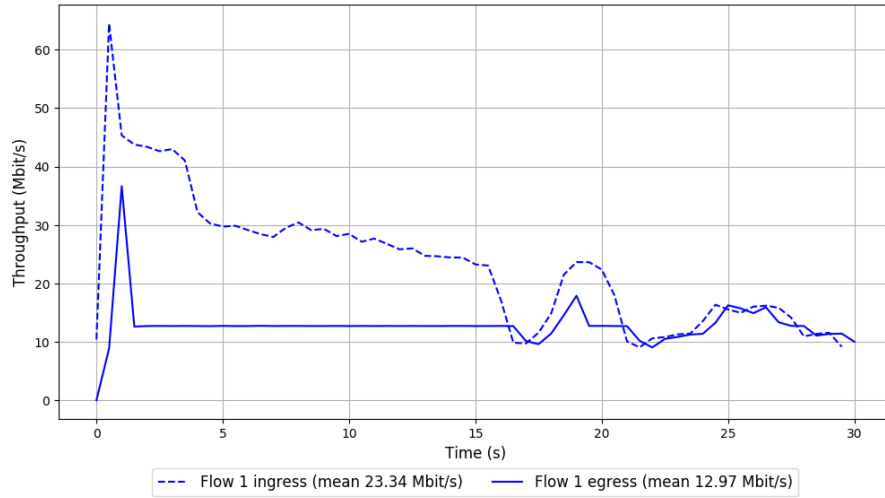
```
Run 2: Statistics of PCC-Expr

Start at: 2019-10-02 19:18:28
End at: 2019-10-02 19:18:58
Local clock offset: 1.69 ms
Remote clock offset: 7.65 ms


# Below is generated by plot.py at 2019-10-02 22:34:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 34.091 ms
Loss rate: 31.61%
-- Flow 1:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 34.091 ms
Loss rate: 31.61%
```
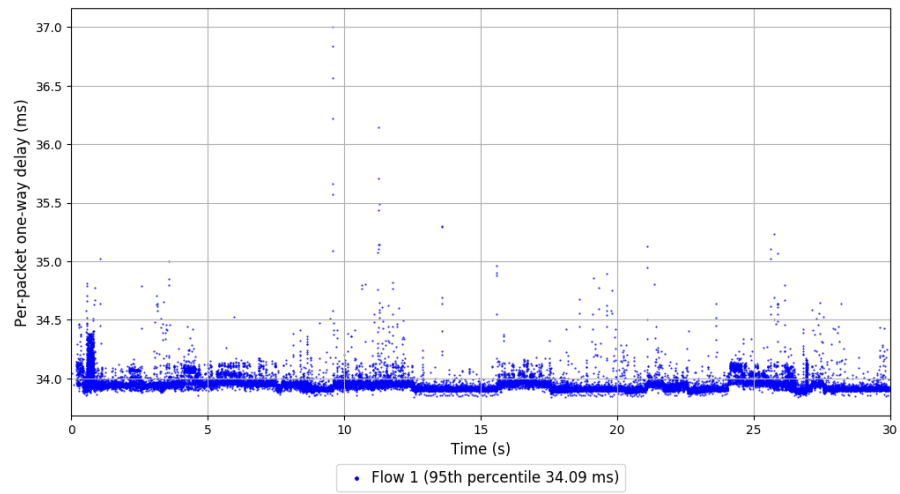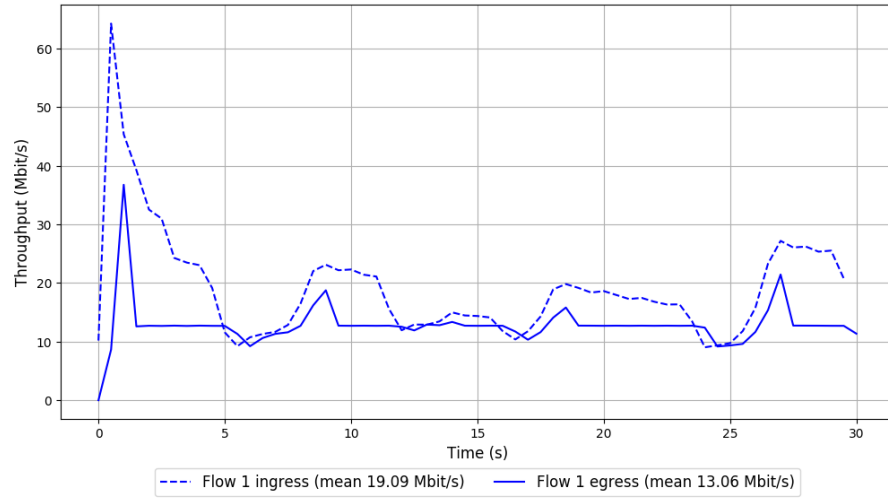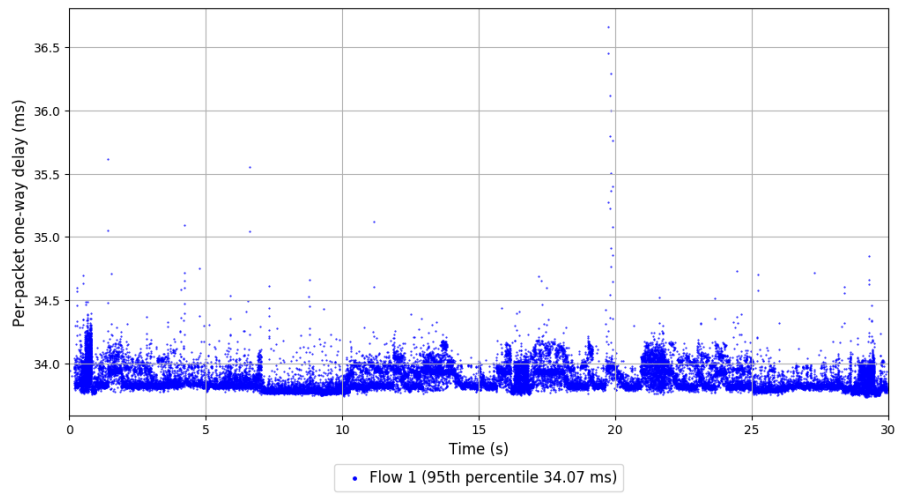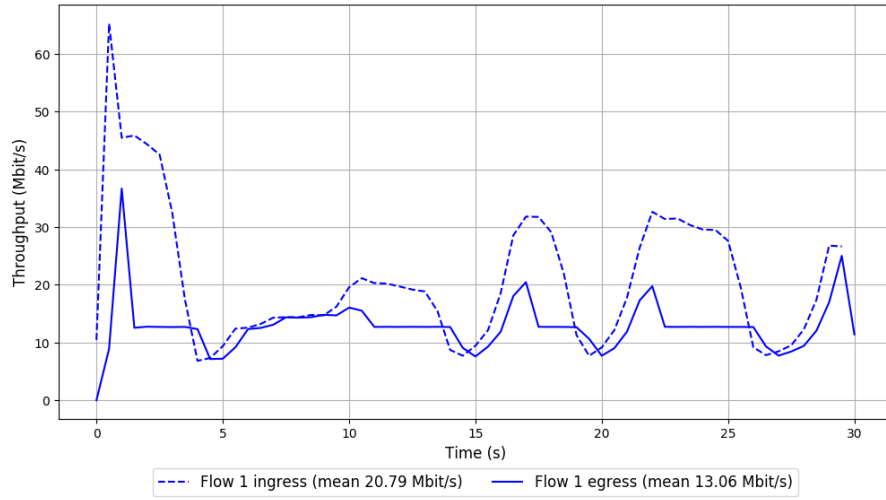
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-10-02 20:20:25
End at: 2019-10-02 20:20:55
Local clock offset: 0.02 ms
Remote clock offset: 7.751 ms


# Below is generated by plot.py at 2019-10-02 22:34:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 34.071 ms
Loss rate: 37.16%
-- Flow 1:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 34.071 ms
Loss rate: 37.16%
```

Run 3: Report of PCC-Expr — Data Link



Flow 1 ingress (mean 20.79 Mbit/s)    Flow 1 egress (mean 13.06 Mbit/s)



Flow 1 (95th percentile 34.07 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2019-10-02 21:19:49
End at: 2019-10-02 21:20:19
Local clock offset: -0.26 ms
Remote clock offset: 7.644 ms


# Below is generated by plot.py at 2019-10-02 22:34:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.70 Mbit/s
95th percentile per-packet one-way delay: 34.156 ms
Loss rate: 45.89%
-- Flow 1:
Average throughput: 12.70 Mbit/s
95th percentile per-packet one-way delay: 34.156 ms
Loss rate: 45.89%
```

# Run 4: Report of PCC-Expr — Data Link
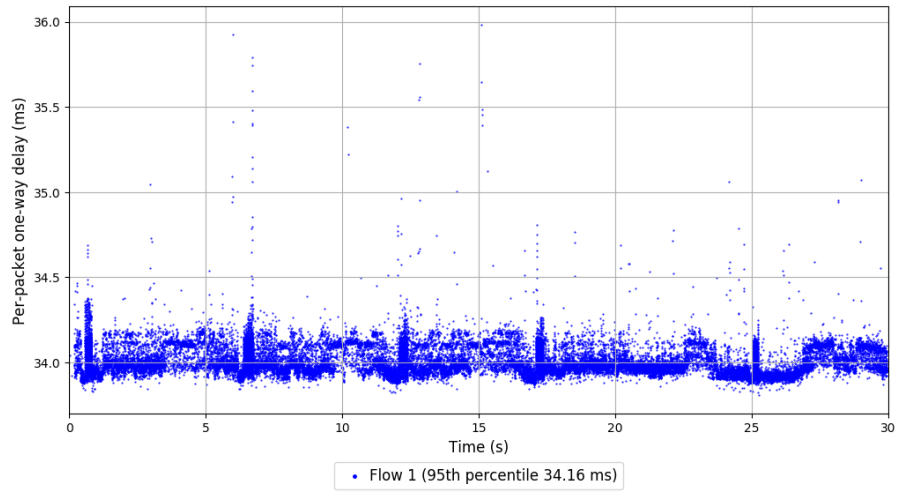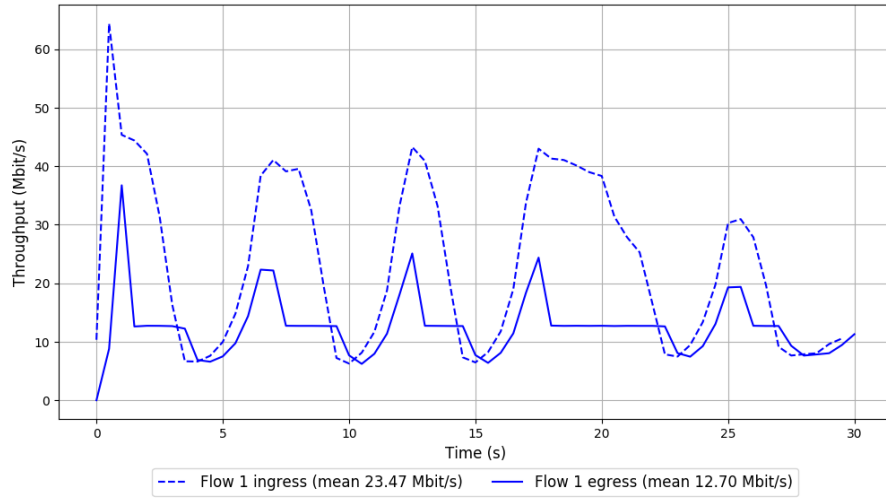
```
Run 5: Statistics of PCC-Expr

Start at: 2019-10-02 22:14:35
End at: 2019-10-02 22:15:05
Local clock offset: 0.117 ms
Remote clock offset: 7.167 ms


# Below is generated by plot.py at 2019-10-02 22:34:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 33.993 ms
Loss rate: 46.20%
-- Flow 1:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 33.993 ms
Loss rate: 46.20%
```
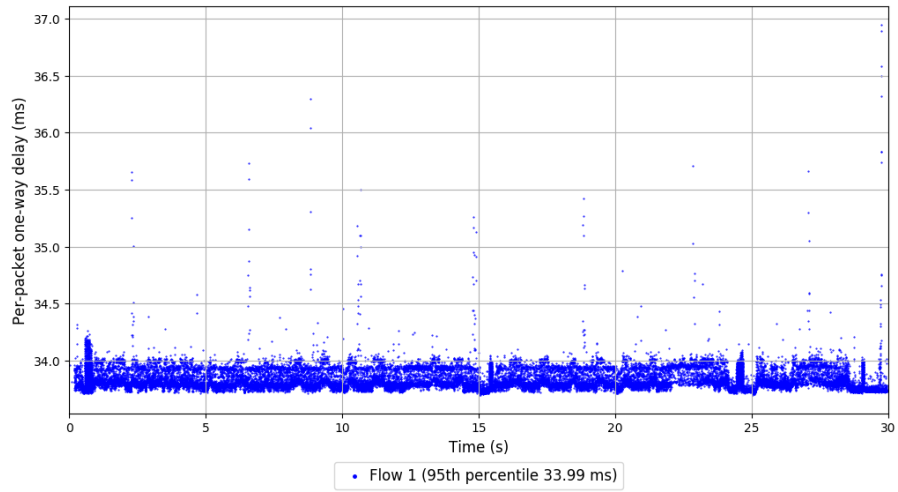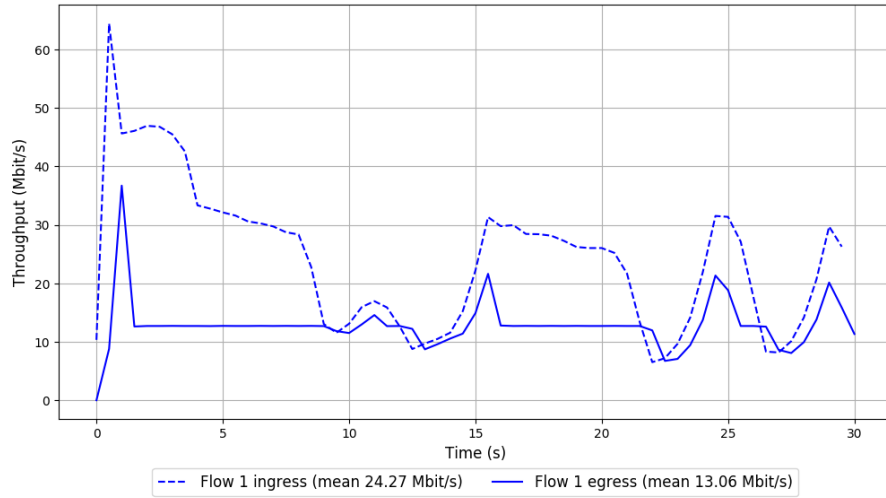
Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-10-02 18:04:18
End at: 2019-10-02 18:04:48
Local clock offset: 7.985 ms
Remote clock offset: 7.684 ms


# Below is generated by plot.py at 2019-10-02 22:34:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.16 Mbit/s
95th percentile per-packet one-way delay: 71.074 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 77.16 Mbit/s
95th percentile per-packet one-way delay: 71.074 ms
Loss rate: 1.94%
```
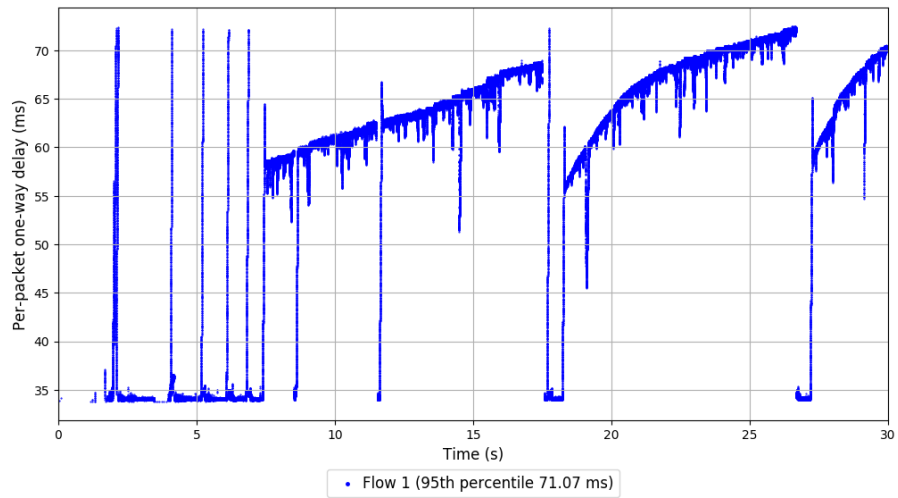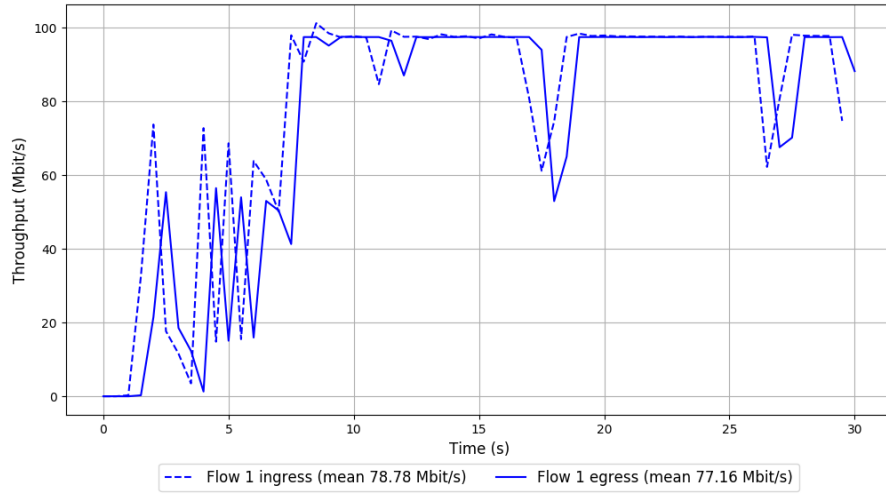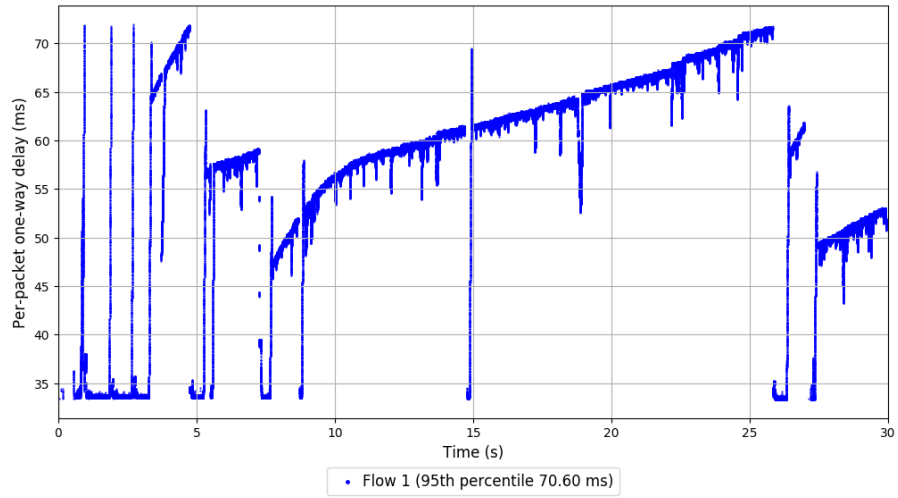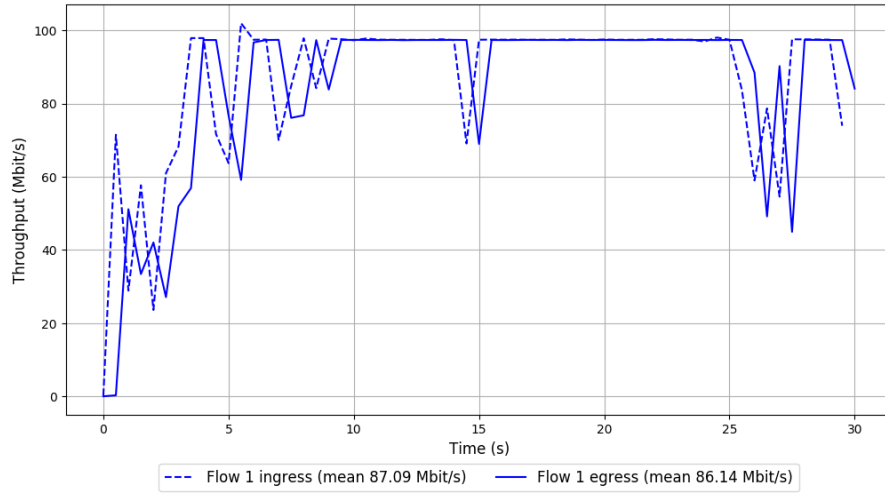
Run 1: Report of QUIC Cubic — Data Link



Flow 1 ingress (mean 78.78 Mbit/s) --- Flow 1 egress (mean 77.16 Mbit/s)



Flow 1 (95th percentile 71.07 ms)

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-10-02 19:00:22
End at: 2019-10-02 19:00:52
Local clock offset: 5.072 ms
Remote clock offset: 7.576 ms


# Below is generated by plot.py at 2019-10-02 22:35:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.14 Mbit/s
95th percentile per-packet one-way delay: 70.599 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 86.14 Mbit/s
95th percentile per-packet one-way delay: 70.599 ms
Loss rate: 1.04%
```

Run 2: Report of QUIC Cubic — Data Link



Flow 1 ingress (mean 87.09 Mbit/s) ----- Flow 1 egress (mean 86.14 Mbit/s)



· Flow 1 (95th percentile 70.60 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-10-02 20:00:47
End at: 2019-10-02 20:01:17
Local clock offset: 0.463 ms
Remote clock offset: 7.752 ms


# Below is generated by plot.py at 2019-10-02 22:35:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.32 Mbit/s
95th percentile per-packet one-way delay: 67.577 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 80.32 Mbit/s
95th percentile per-packet one-way delay: 67.577 ms
Loss rate: 1.74%
```

Run 3: Report of QUIC Cubic — Data Link
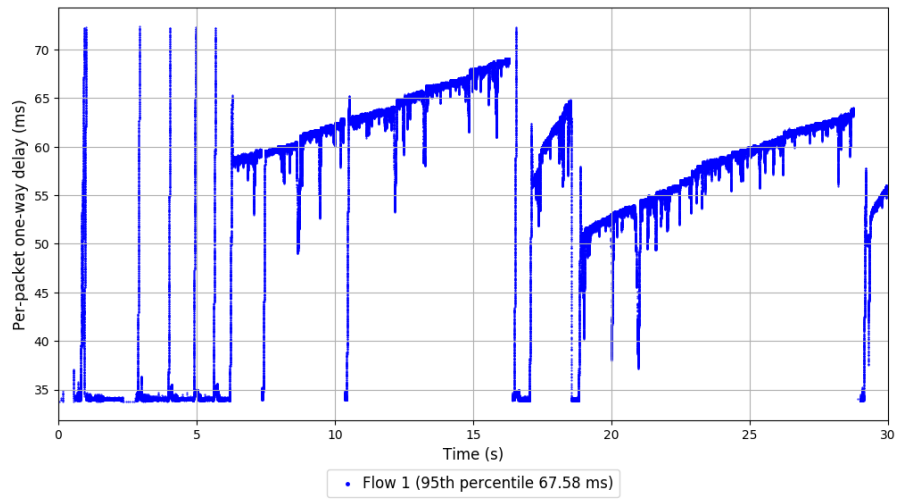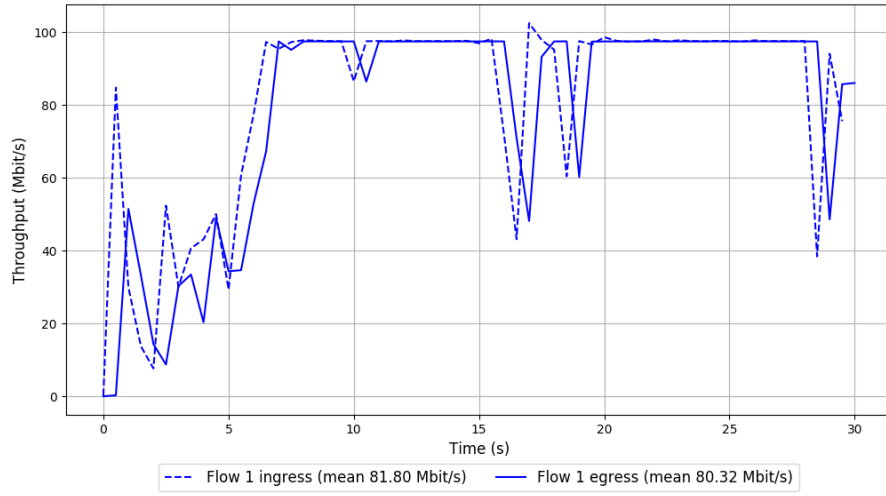
```
Run 4: Statistics of QUIC Cubic

Start at: 2019-10-02 21:03:14
End at: 2019-10-02 21:03:44
Local clock offset: -0.284 ms
Remote clock offset: 7.488 ms


# Below is generated by plot.py at 2019-10-02 22:35:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.08 Mbit/s
95th percentile per-packet one-way delay: 70.996 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 80.08 Mbit/s
95th percentile per-packet one-way delay: 70.996 ms
Loss rate: 1.89%
```
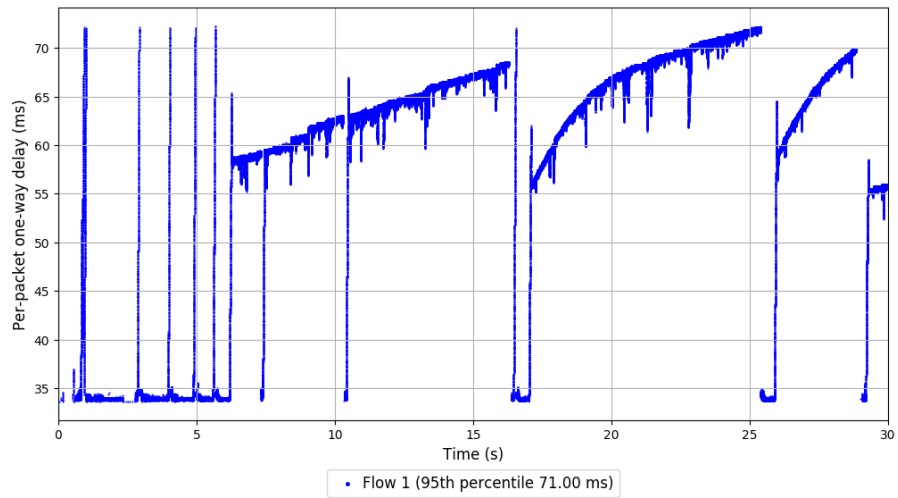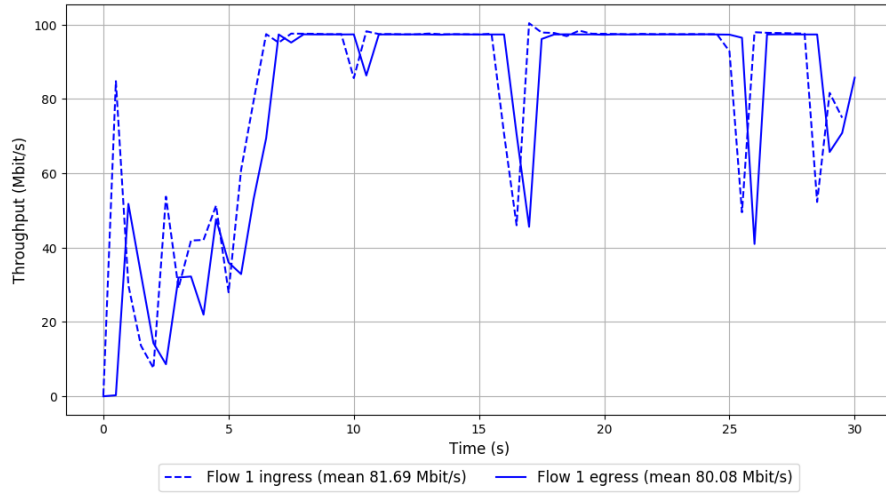
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-10-02 21:57:29
End at: 2019-10-02 21:57:59
Local clock offset: -0.186 ms
Remote clock offset: 7.381 ms


# Below is generated by plot.py at 2019-10-02 22:35:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.34 Mbit/s
95th percentile per-packet one-way delay: 70.931 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 86.34 Mbit/s
95th percentile per-packet one-way delay: 70.931 ms
Loss rate: 0.80%
```
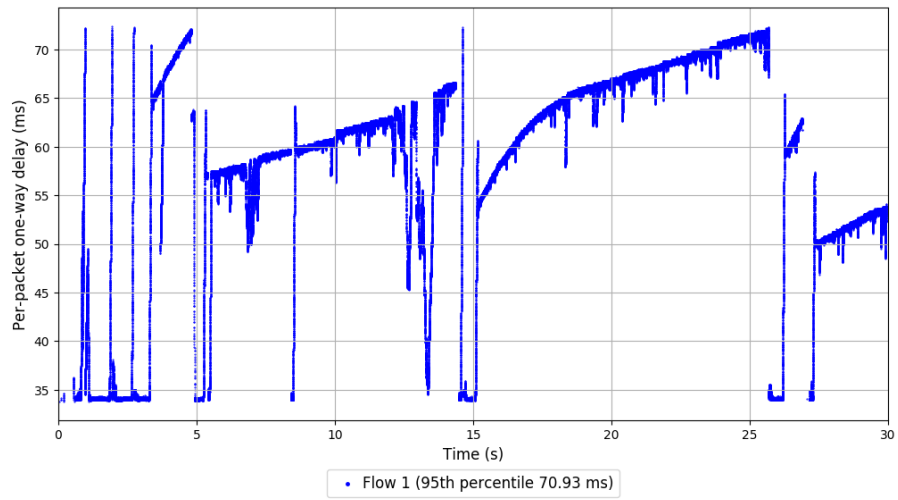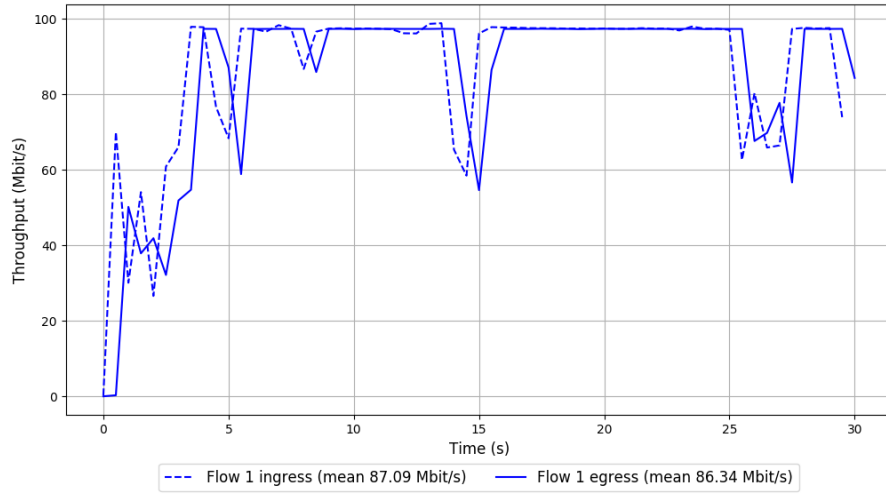
Run 5: Report of QUIC Cubic — Data Link



Flow 1 ingress (mean 87.09 Mbit/s)    Flow 1 egress (mean 86.34 Mbit/s)



Flow 1 (95th percentile 70.93 ms)

```
Run 1: Statistics of SCReAM

Start at: 2019-10-02 18:17:06
End at: 2019-10-02 18:17:36
Local clock offset: 10.696 ms
Remote clock offset: 7.732 ms


# Below is generated by plot.py at 2019-10-02 22:35:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.376 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.376 ms
Loss rate: 0.00%
```
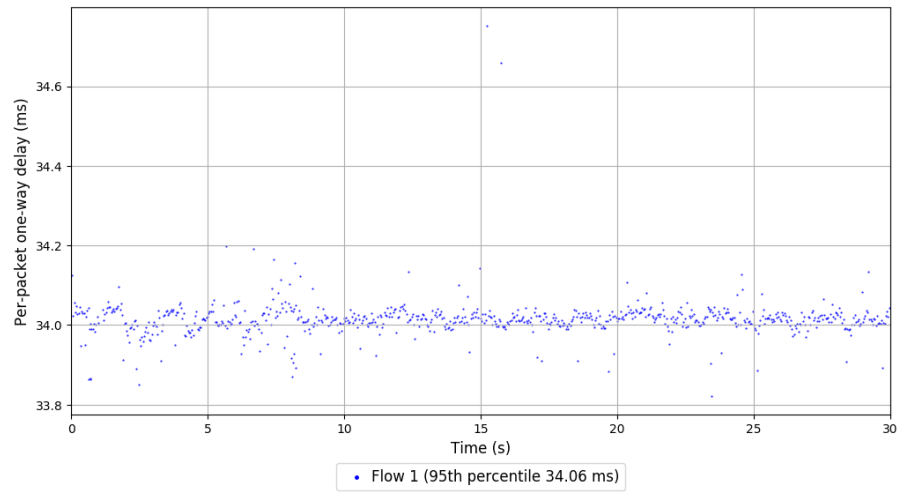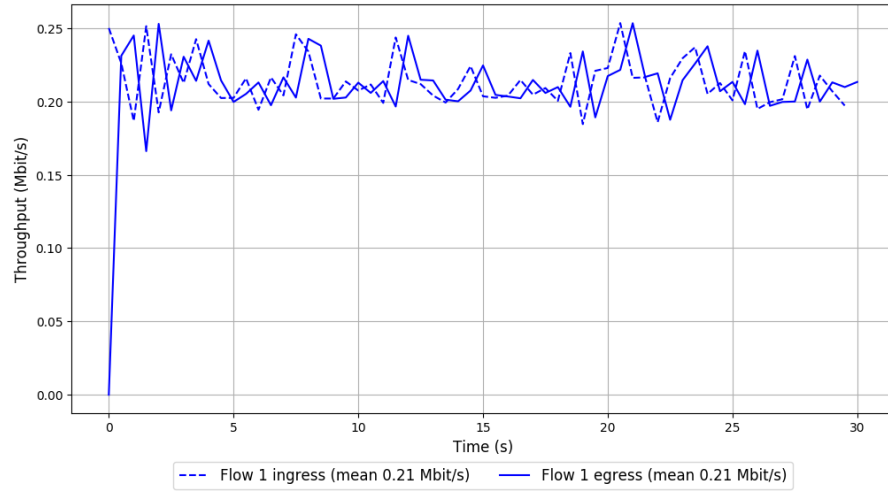
Run 1: Report of SCReAM — Data Link
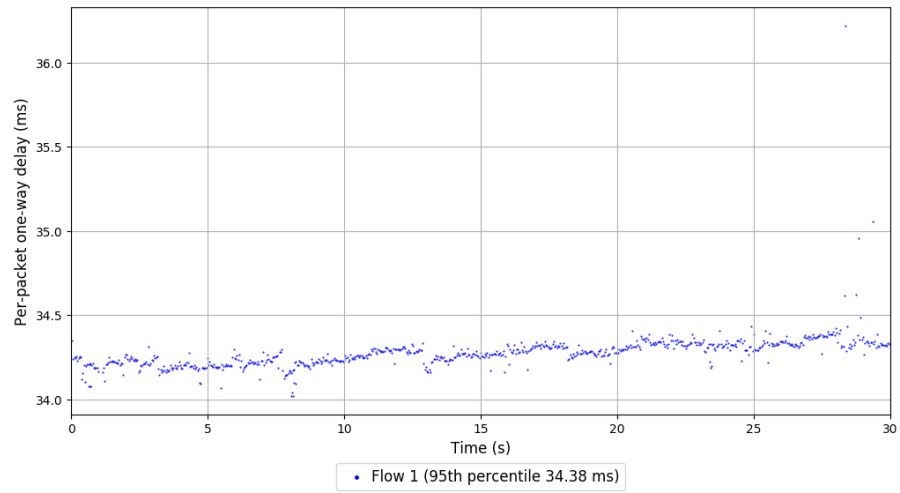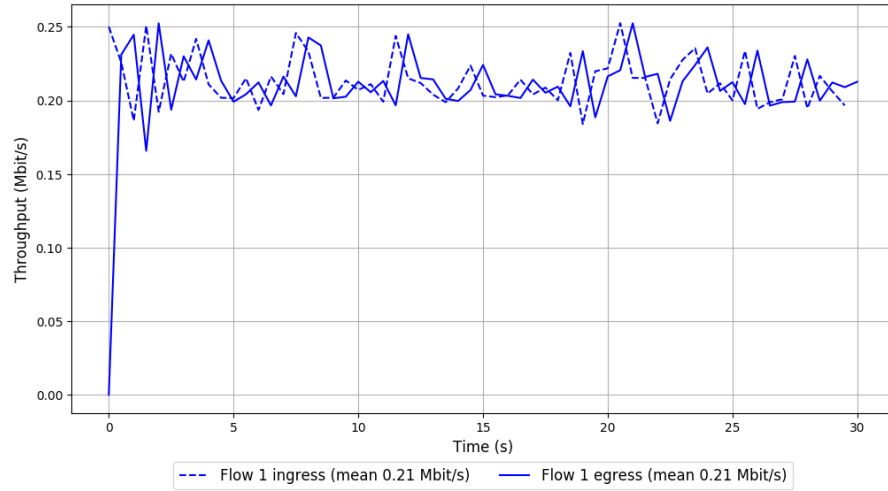
```
Run 2: Statistics of SCReAM

Start at: 2019-10-02 19:17:20
End at: 2019-10-02 19:17:50
Local clock offset: 1.693 ms
Remote clock offset: 7.536 ms


# Below is generated by plot.py at 2019-10-02 22:35:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.056 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.056 ms
Loss rate: 0.00%
```

Run 2: Report of SCReAM — Data Link



Flow 1 ingress (mean 0.21 Mbit/s) — — — Flow 1 egress (mean 0.21 Mbit/s) ———



Flow 1 (95th percentile 34.06 ms)

```
Run 3: Statistics of SCReAM

Start at: 2019-10-02 20:19:17
End at: 2019-10-02 20:19:47
Local clock offset: 0.085 ms
Remote clock offset: 7.723 ms


# Below is generated by plot.py at 2019-10-02 22:35:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.001 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.001 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link



Flow 1 ingress (mean 0.21 Mbit/s)    Flow 1 egress (mean 0.21 Mbit/s)



Flow 1 (95th percentile 34.00 ms)
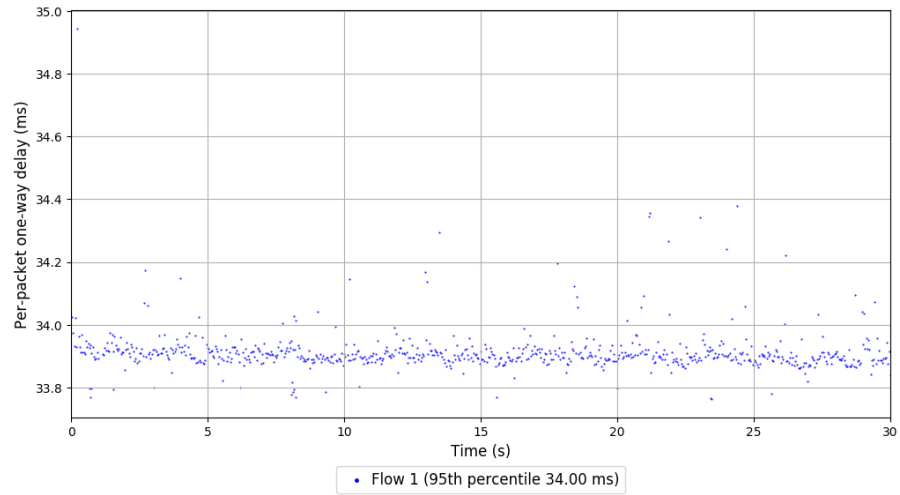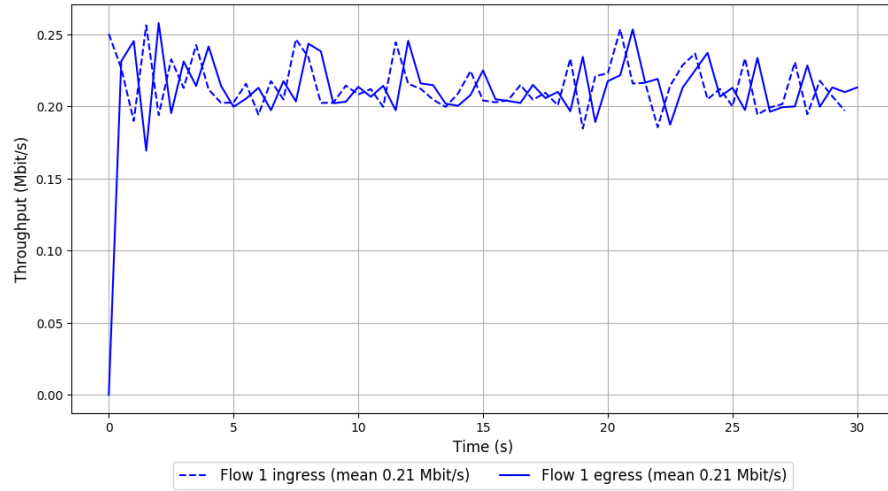
```
Run 4: Statistics of SCReAM

Start at: 2019-10-02 21:18:42
End at: 2019-10-02 21:19:12
Local clock offset: -0.237 ms
Remote clock offset: 7.549 ms


# Below is generated by plot.py at 2019-10-02 22:35:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.029 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.029 ms
Loss rate: 0.00%
```
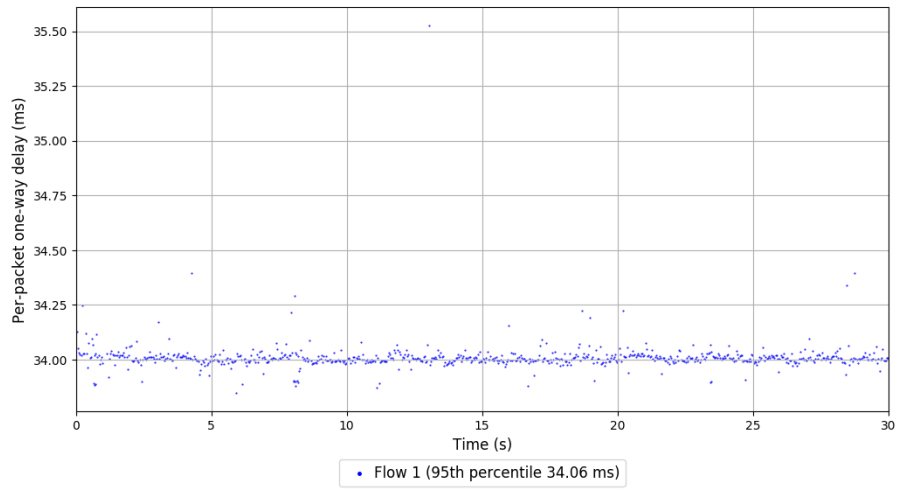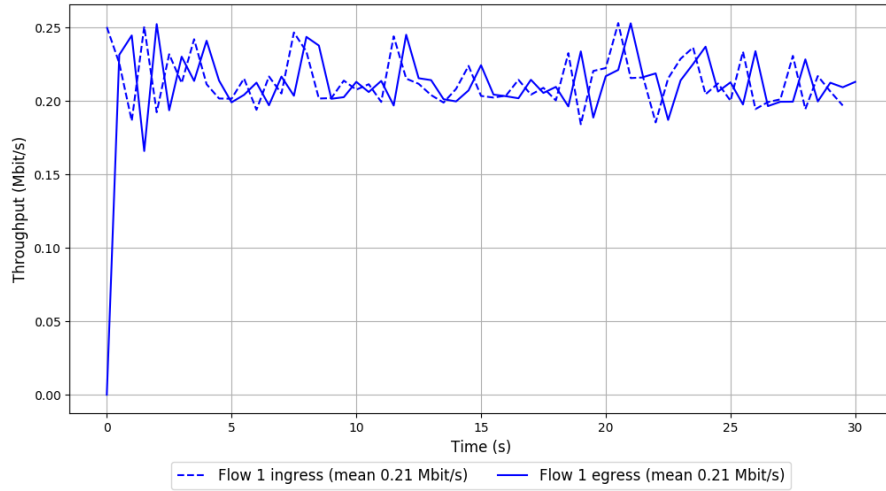
# Run 4: Report of SCReAM — Data Link
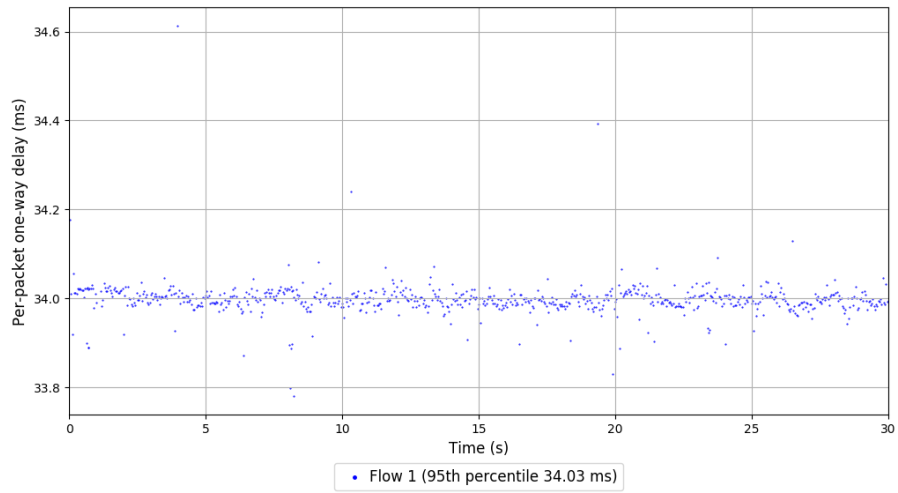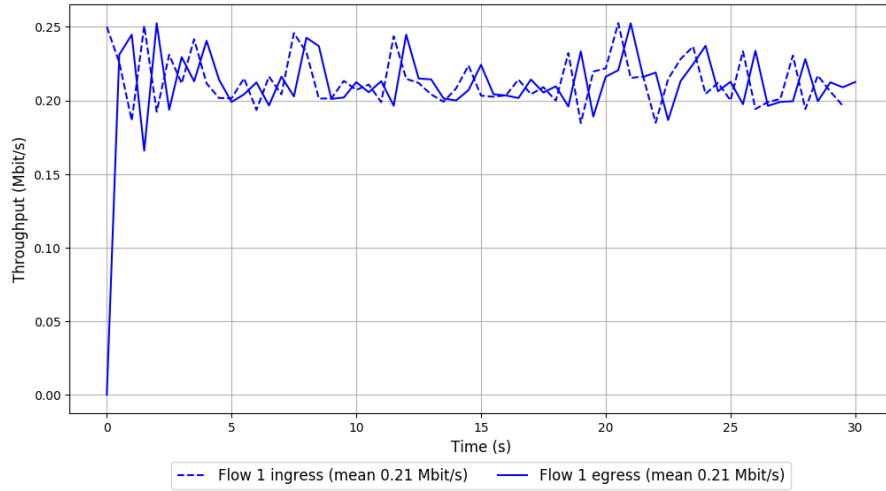
```
Run 5: Statistics of SCReAM

Start at: 2019-10-02 22:13:27
End at: 2019-10-02 22:13:57
Local clock offset: 0.071 ms
Remote clock offset: 7.207 ms


# Below is generated by plot.py at 2019-10-02 22:35:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.060 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 34.060 ms
Loss rate: 0.00%
```

# Run 5: Report of SCReAM — Data Link



Flow 1 ingress (mean 0.21 Mbit/s) — — — Flow 1 egress (mean 0.21 Mbit/s)



Flow 1 (95th percentile 34.06 ms)

```
Run 1: Statistics of Sprout

Start at: 2019-10-02 17:26:31
End at: 2019-10-02 17:27:01
Local clock offset: 1.472 ms
Remote clock offset: 7.617 ms


# Below is generated by plot.py at 2019-10-02 22:35:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 38.770 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 38.770 ms
Loss rate: 0.00%
```
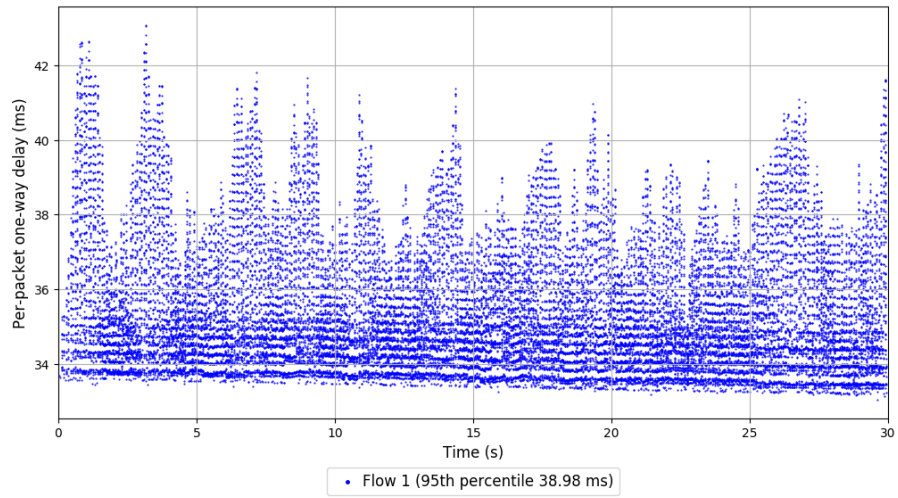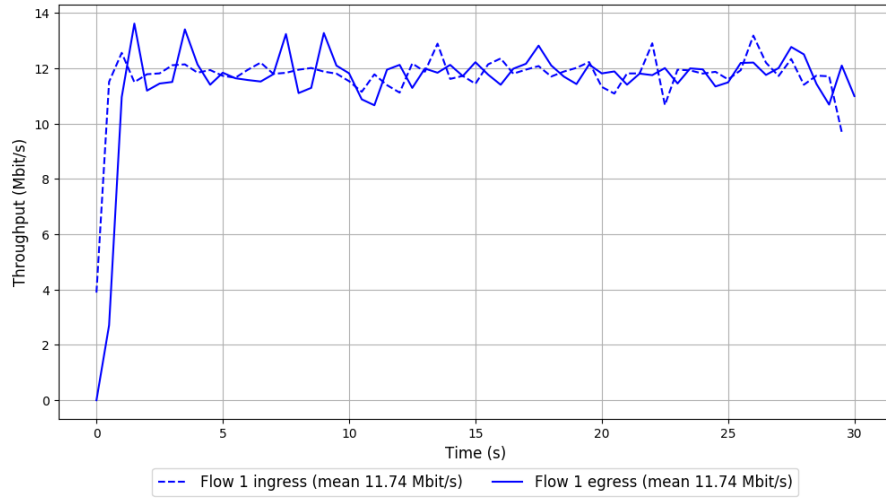
Run 1: Report of Sprout — Data Link
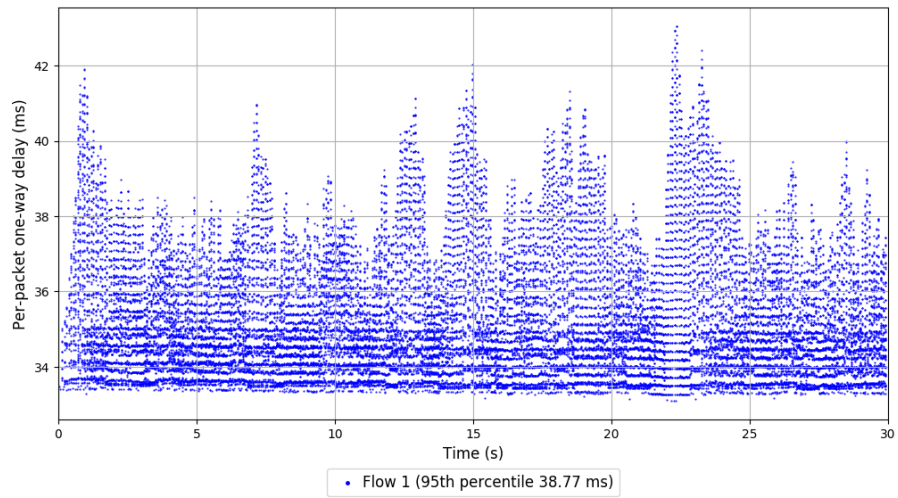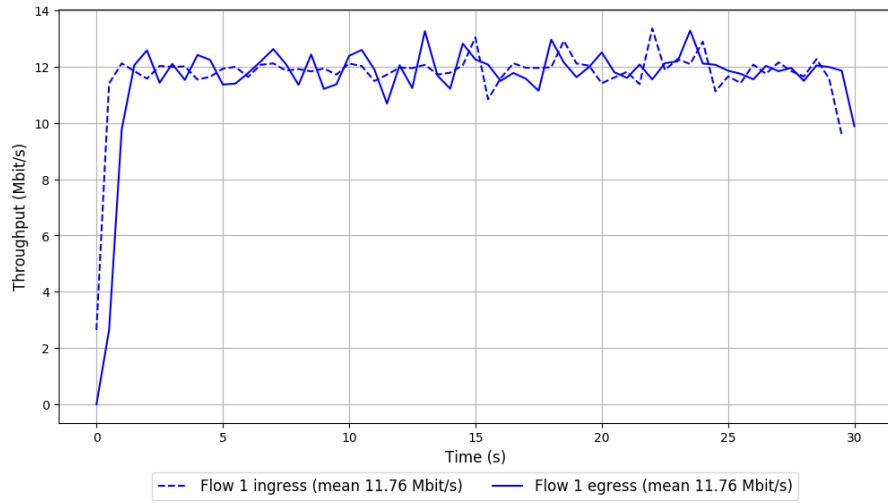
```
Run 2: Statistics of Sprout

Start at: 2019-10-02 18:24:59
End at: 2019-10-02 18:25:30
Local clock offset: 12.752 ms
Remote clock offset: 7.684 ms


# Below is generated by plot.py at 2019-10-02 22:35:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 38.980 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 38.980 ms
Loss rate: 0.00%
```
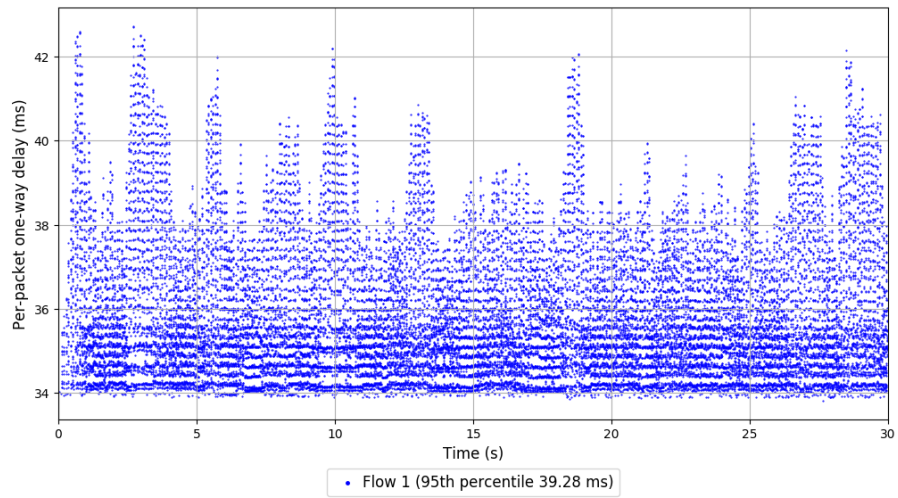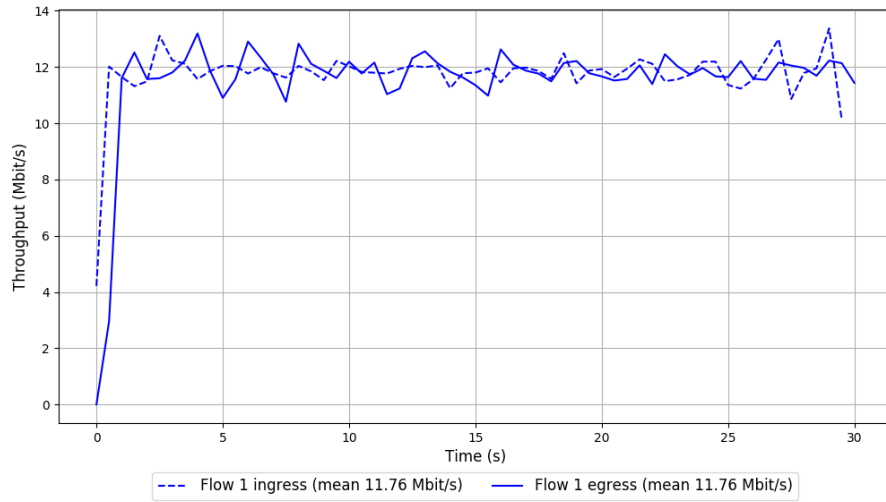
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-10-02 19:30:00
End at: 2019-10-02 19:30:30
Local clock offset: 1.026 ms
Remote clock offset: 7.773 ms


# Below is generated by plot.py at 2019-10-02 22:35:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 39.278 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 39.278 ms
Loss rate: 0.00%
```
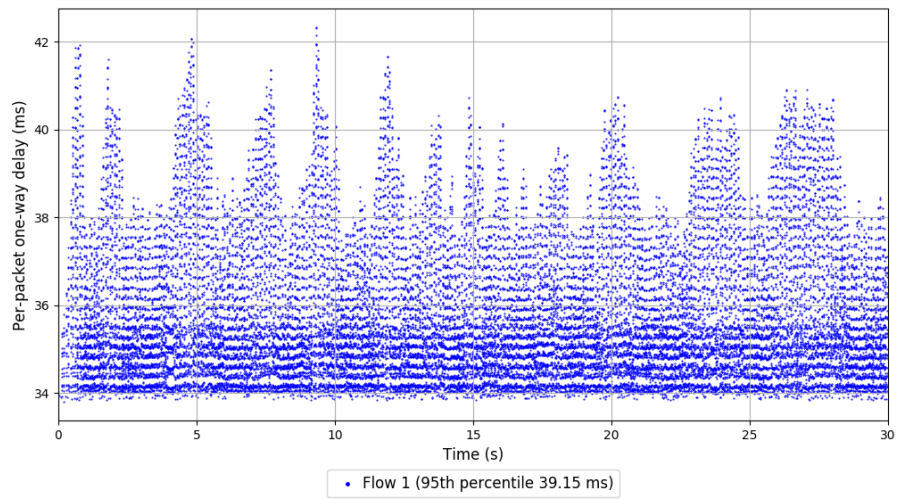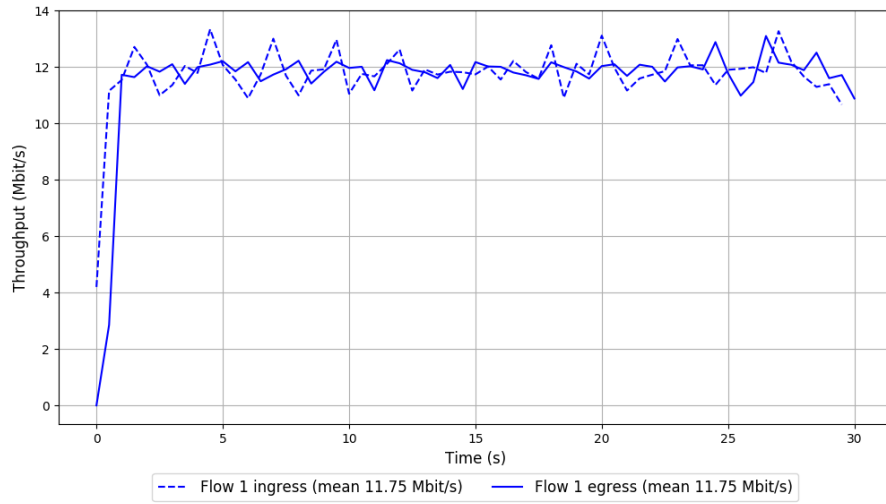
## Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-10-02 20:27:35
End at: 2019-10-02 20:28:05
Local clock offset: -0.074 ms
Remote clock offset: 7.791 ms


# Below is generated by plot.py at 2019-10-02 22:35:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 39.149 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 39.149 ms
Loss rate: 0.00%
```
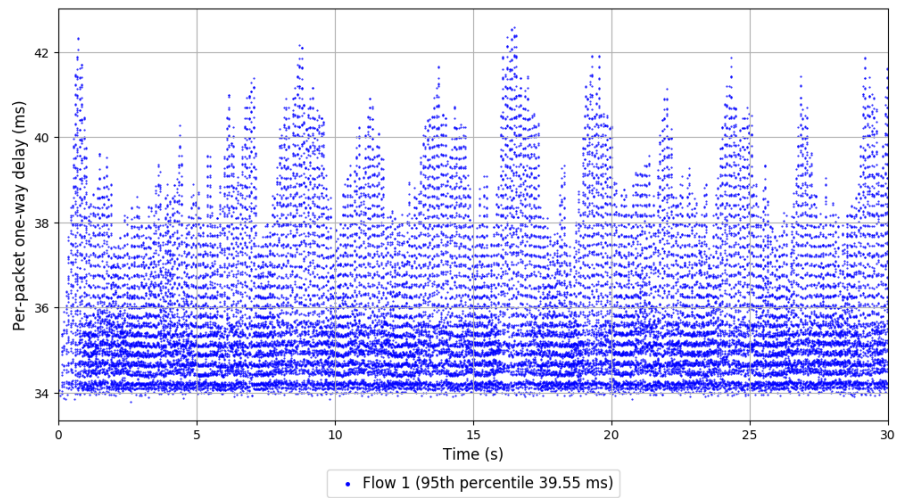
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-10-02 21:25:03
End at: 2019-10-02 21:25:33
Local clock offset: -0.22 ms
Remote clock offset: 7.599 ms


# Below is generated by plot.py at 2019-10-02 22:35:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 39.548 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 39.548 ms
Loss rate: 0.00%
```
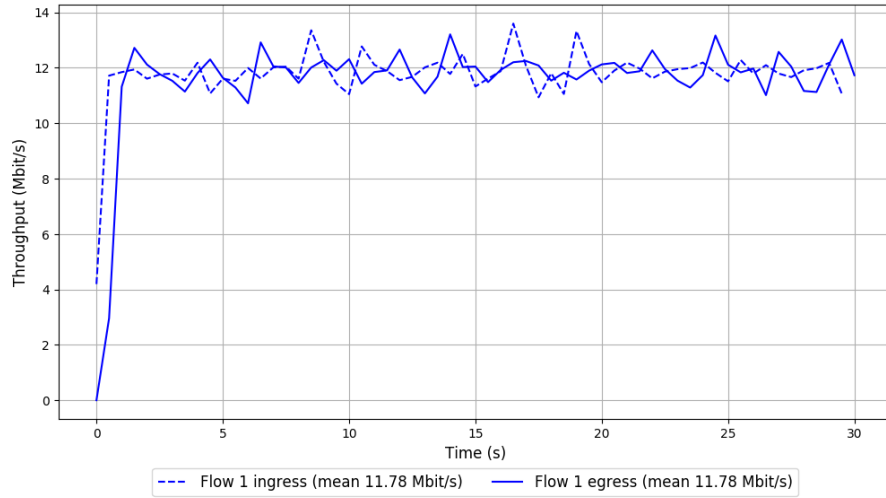
Run 5: Report of Sprout — Data Link



Flow 1 ingress (mean 11.78 Mbit/s)     Flow 1 egress (mean 11.78 Mbit/s)



• Flow 1 (95th percentile 39.55 ms)

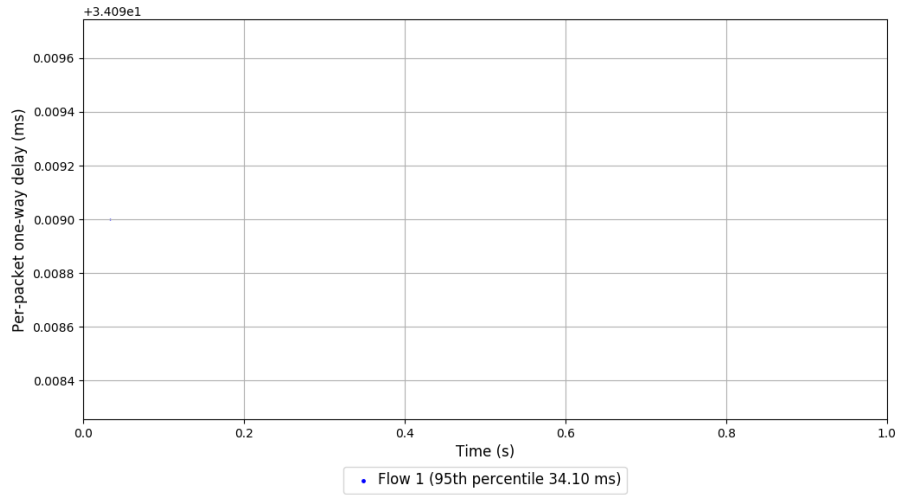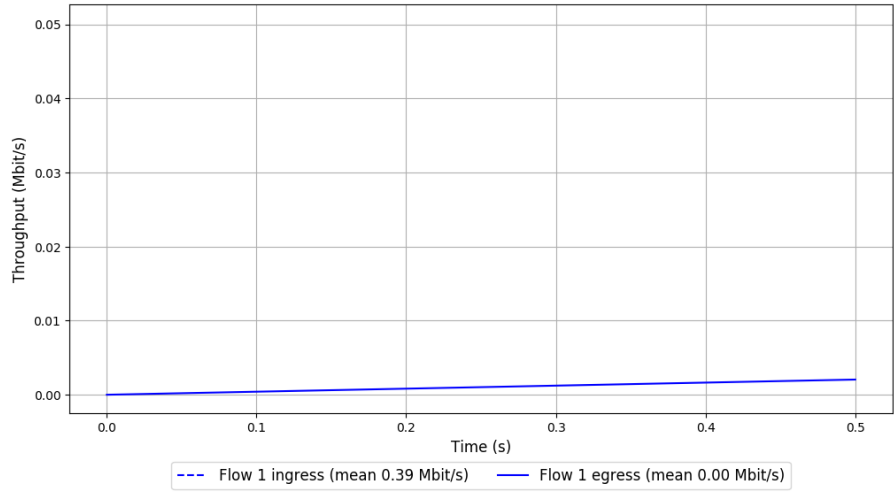```
Run 1: Statistics of TaoVA-100x

Start at: 2019-10-02 18:13:31
End at: 2019-10-02 18:14:01
Local clock offset: 9.783 ms
Remote clock offset: 7.847 ms
```

# Run 1: Report of TaoVA-100x — Data Link
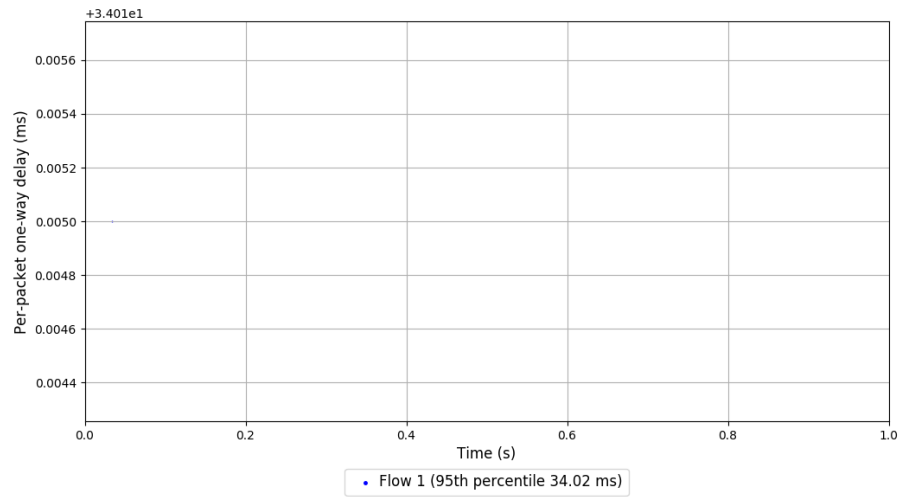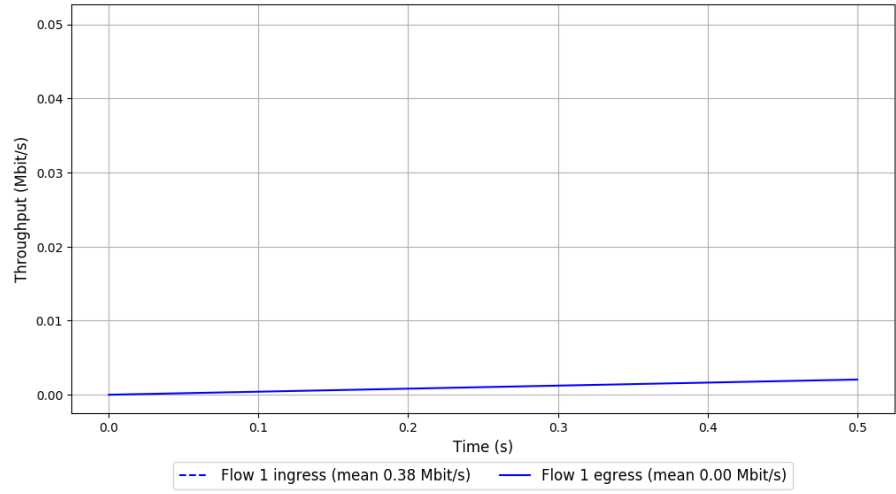
```
Run 2: Statistics of TaoVA-100x

Start at: 2019-10-02 19:12:12
End at: 2019-10-02 19:12:42
Local clock offset: 1.993 ms
Remote clock offset: 7.59 ms
```

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

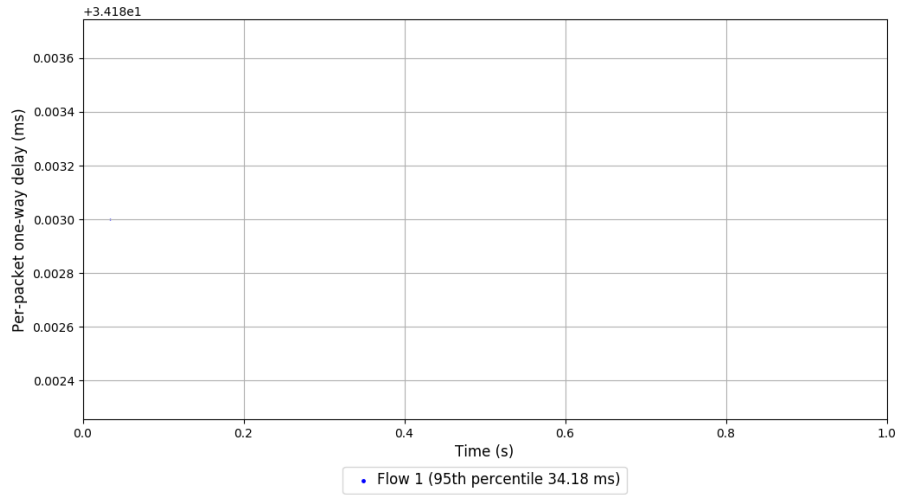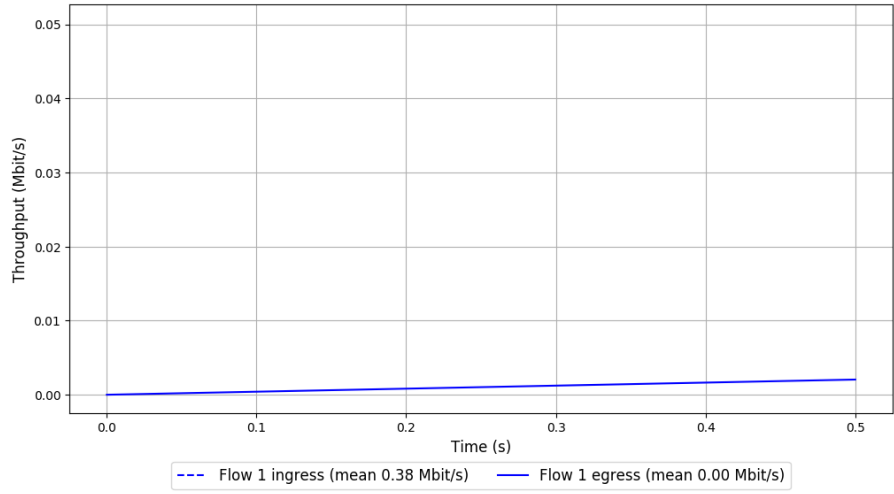```
Run 3: Statistics of TaoVA-100x

Start at: 2019-10-02 20:14:18
End at: 2019-10-02 20:14:48
Local clock offset: 0.172 ms
Remote clock offset: 8.001 ms
```

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



Flow 1 ingress (mean 0.38 Mbit/s)    Flow 1 egress (mean 0.00 Mbit/s)



Flow 1 (95th percentile 34.18 ms)
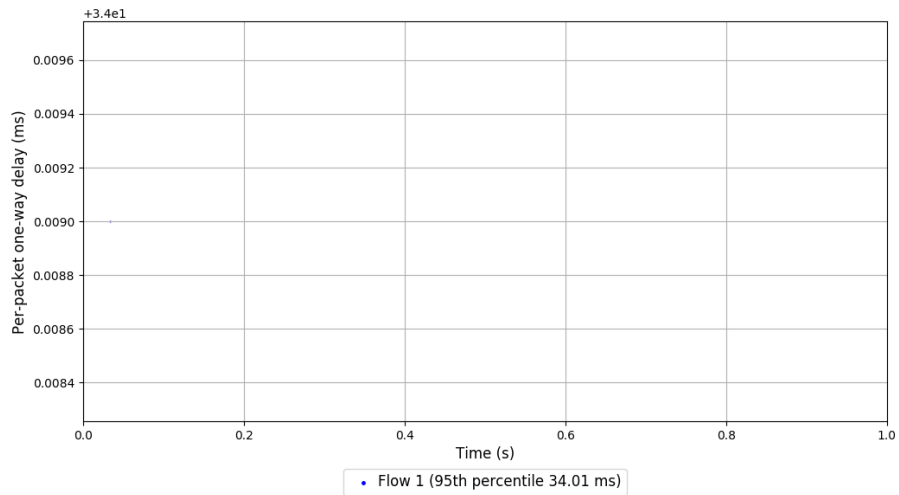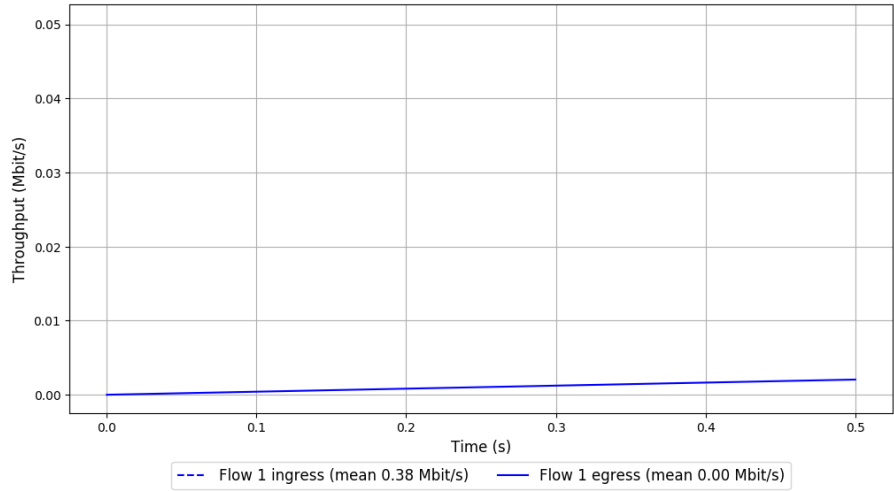
```
Run 4: Statistics of TaoVA-100x

Start at: 2019-10-02 21:15:00
End at: 2019-10-02 21:15:30
Local clock offset: -0.248 ms
Remote clock offset: 7.636 ms
```

## Run 4: Report of TaoVA-100x — Data Link
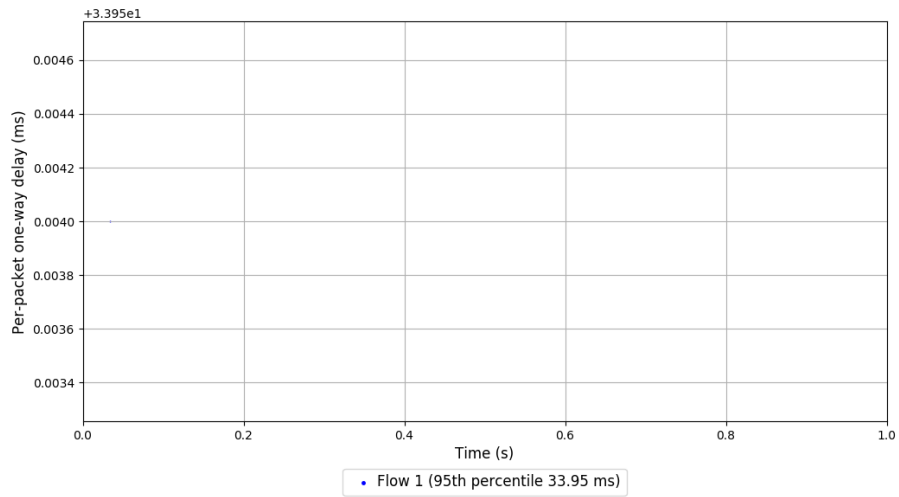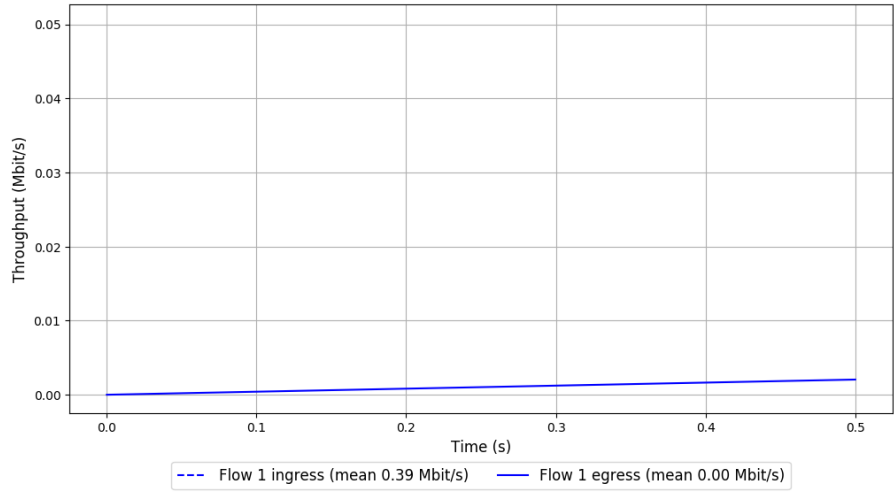
```
Run 5: Statistics of TaoVA-100x

Start at: 2019-10-02 22:09:13
End at: 2019-10-02 22:09:43
Local clock offset: 0.03 ms
Remote clock offset: 7.164 ms
```

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



Flow 1 ingress (mean 0.39 Mbit/s) — Flow 1 egress (mean 0.00 Mbit/s)



Flow 1 (95th percentile 33.95 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2019-10-02 18:22:52
End at: 2019-10-02 18:23:22
Local clock offset: 12.323 ms
Remote clock offset: 7.719 ms


# Below is generated by plot.py at 2019-10-02 22:35:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.01 Mbit/s
95th percentile per-packet one-way delay: 44.561 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 94.01 Mbit/s
95th percentile per-packet one-way delay: 44.561 ms
Loss rate: 0.28%
```
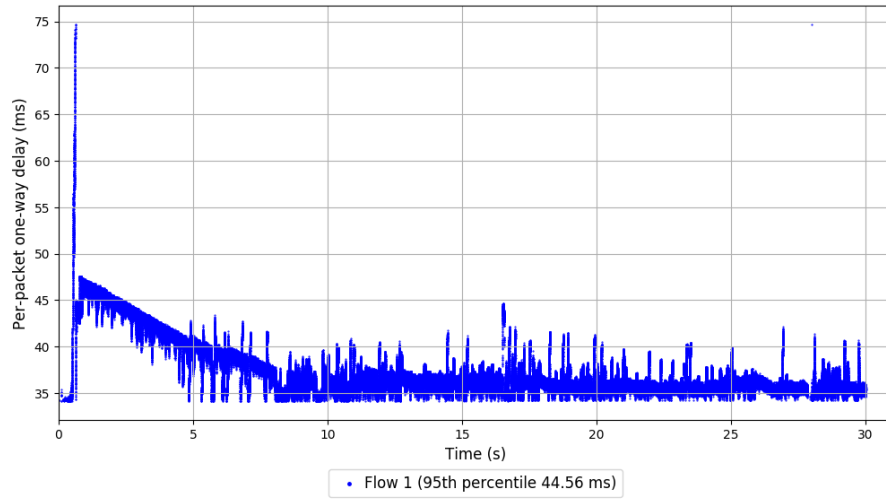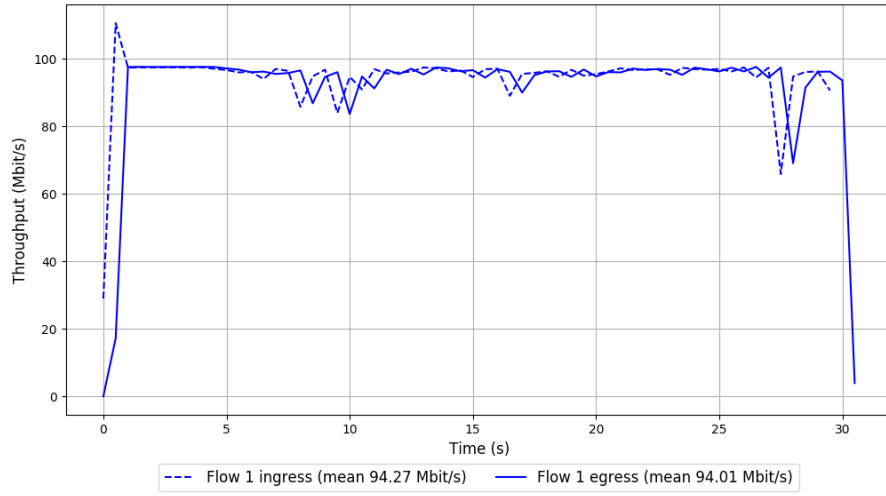
Run 1: Report of TCP Vegas — Data Link



Flow 1 ingress (mean 94.27 Mbit/s)    Flow 1 egress (mean 94.01 Mbit/s)



Flow 1 (95th percentile 44.56 ms)

```
Run 2: Statistics of TCP Vegas

Start at: 2019-10-02 19:22:02
End at: 2019-10-02 19:22:32
Local clock offset: 1.626 ms
Remote clock offset: 7.639 ms


# Below is generated by plot.py at 2019-10-02 22:35:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.96 Mbit/s
95th percentile per-packet one-way delay: 44.657 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 94.96 Mbit/s
95th percentile per-packet one-way delay: 44.657 ms
Loss rate: 0.27%
```
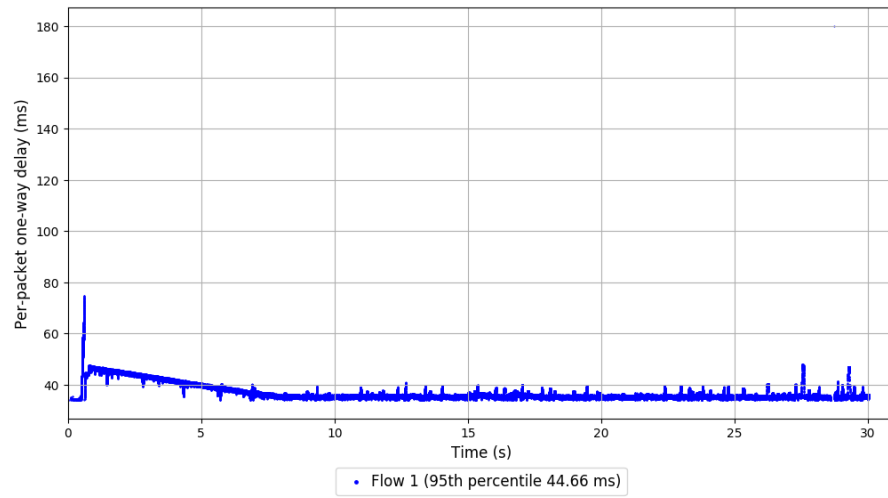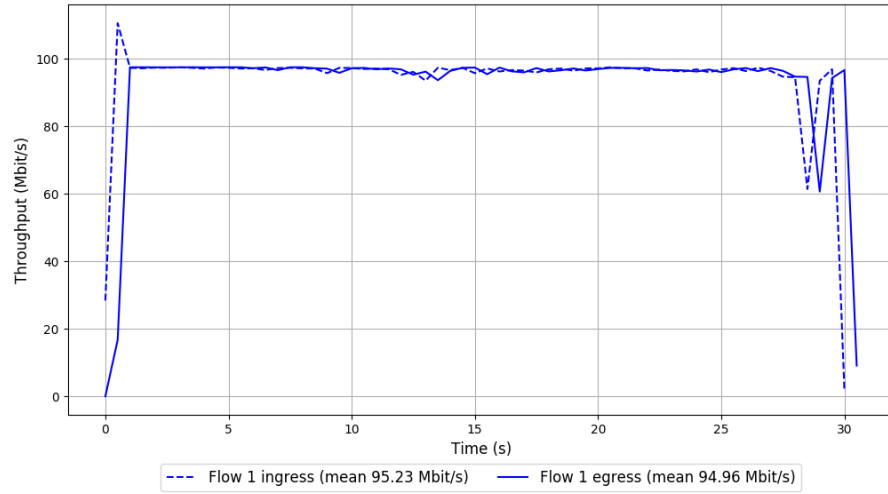
## Run 2: Report of TCP Vegas — Data Link



Flow 1 ingress (mean 95.23 Mbit/s)  — Flow 1 egress (mean 94.96 Mbit/s)



Flow 1 (95th percentile 44.66 ms)

```
Run 3: Statistics of TCP Vegas

Start at: 2019-10-02 20:24:55
End at: 2019-10-02 20:25:25
Local clock offset: -0.042 ms
Remote clock offset: 7.755 ms


# Below is generated by plot.py at 2019-10-02 22:35:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.62 Mbit/s
95th percentile per-packet one-way delay: 44.196 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 85.62 Mbit/s
95th percentile per-packet one-way delay: 44.196 ms
Loss rate: 0.32%
```
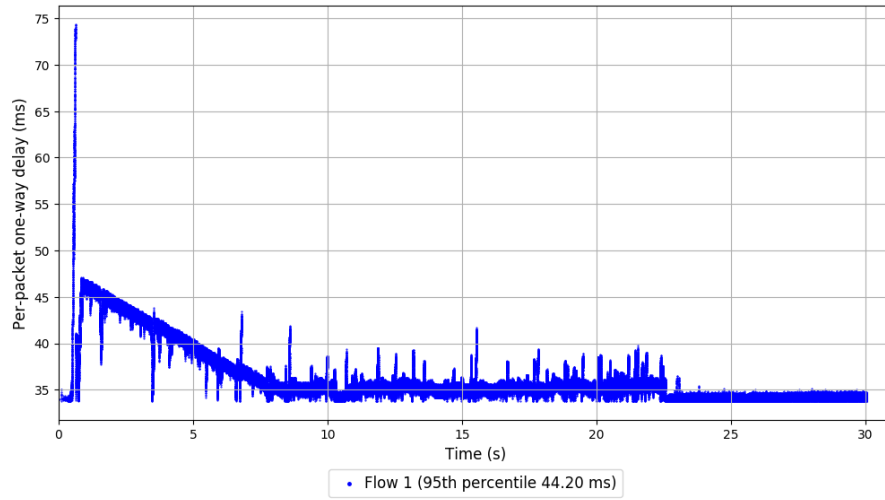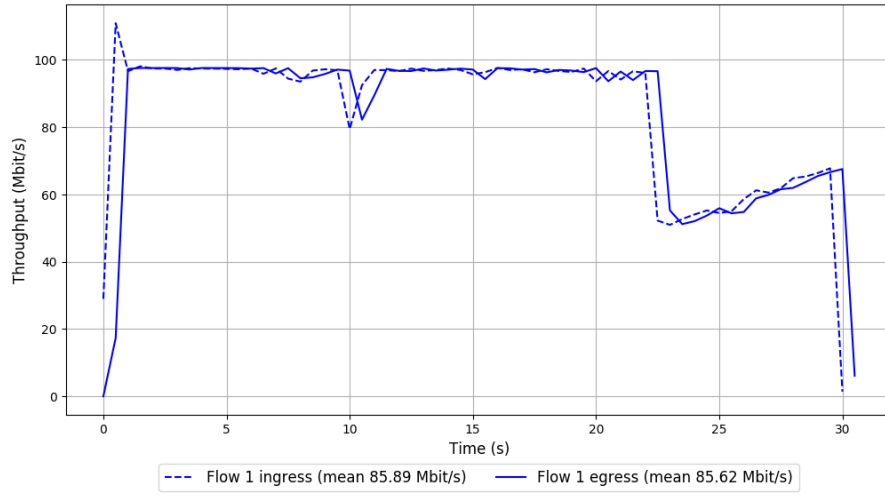
Run 3: Report of TCP Vegas — Data Link



Flow 1 ingress (mean 85.89 Mbit/s)    Flow 1 egress (mean 85.62 Mbit/s)



Flow 1 (95th percentile 44.20 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2019-10-02 21:23:09
End at: 2019-10-02 21:23:39
Local clock offset: -0.222 ms
Remote clock offset: 7.605 ms


# Below is generated by plot.py at 2019-10-02 22:35:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.85 Mbit/s
95th percentile per-packet one-way delay: 36.407 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 91.85 Mbit/s
95th percentile per-packet one-way delay: 36.407 ms
Loss rate: 0.63%
```
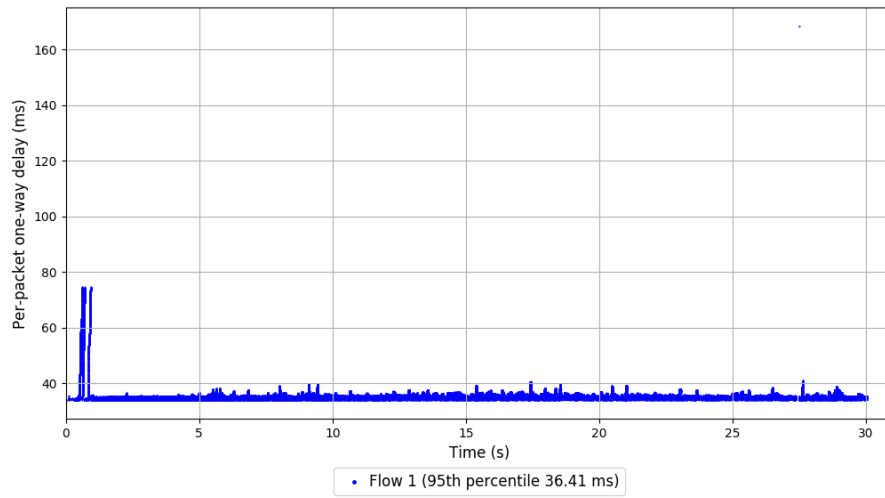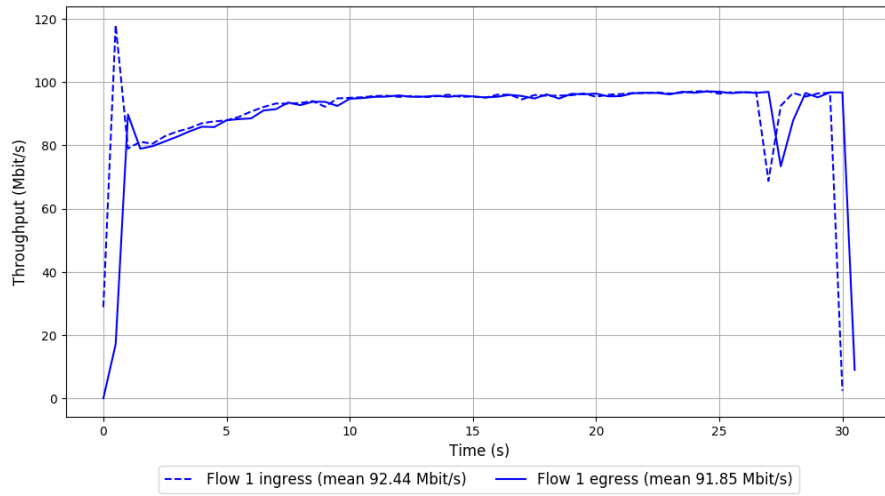
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-10-02 22:19:32
End at: 2019-10-02 22:20:02
Local clock offset: 0.134 ms
Remote clock offset: 7.212 ms


# Below is generated by plot.py at 2019-10-02 22:36:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.06 Mbit/s
95th percentile per-packet one-way delay: 44.629 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 85.06 Mbit/s
95th percentile per-packet one-way delay: 44.629 ms
Loss rate: 0.31%
```
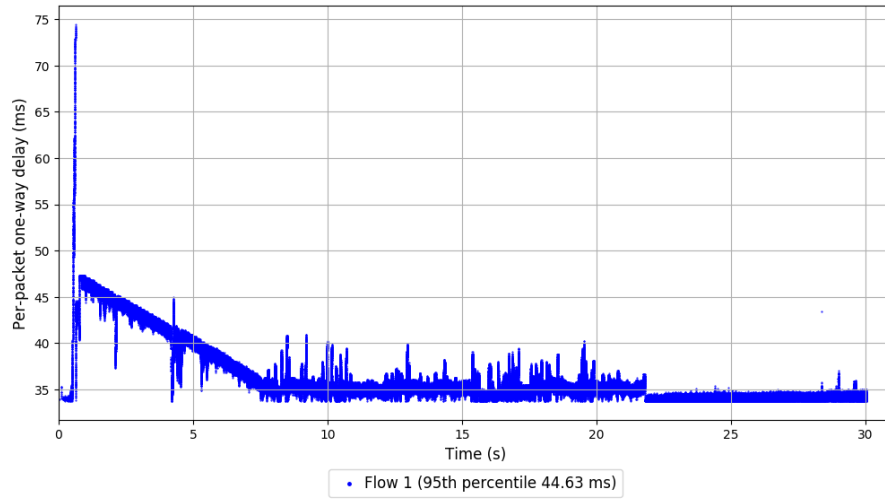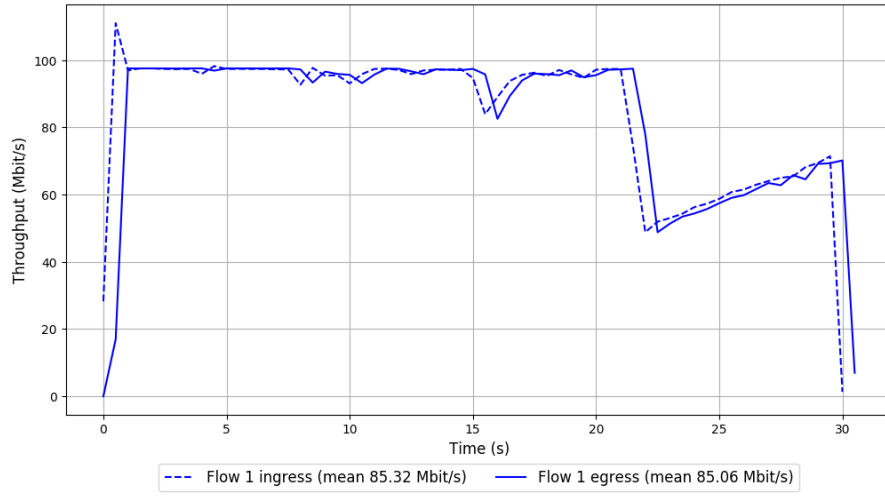
Run 5: Report of TCP Vegas — Data Link



Flow 1 ingress (mean 85.32 Mbit/s) — — — Flow 1 egress (mean 85.06 Mbit/s)



• Flow 1 (95th percentile 44.63 ms)

```
Run 1: Statistics of Verus

Start at: 2019-10-02 17:51:48
End at: 2019-10-02 17:52:18
Local clock offset: 7.8 ms
Remote clock offset: 7.651 ms


# Below is generated by plot.py at 2019-10-02 22:36:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.48 Mbit/s
95th percentile per-packet one-way delay: 69.815 ms
Loss rate: 28.10%
-- Flow 1:
Average throughput: 61.48 Mbit/s
95th percentile per-packet one-way delay: 69.815 ms
Loss rate: 28.10%
```
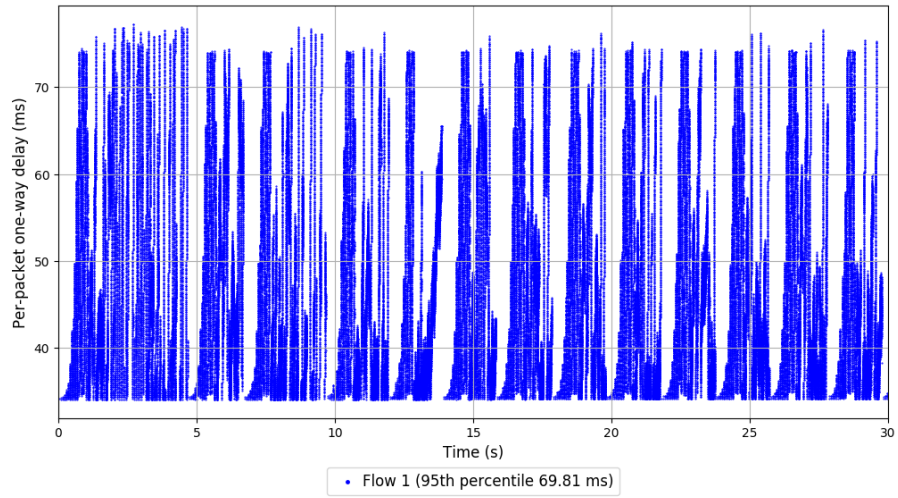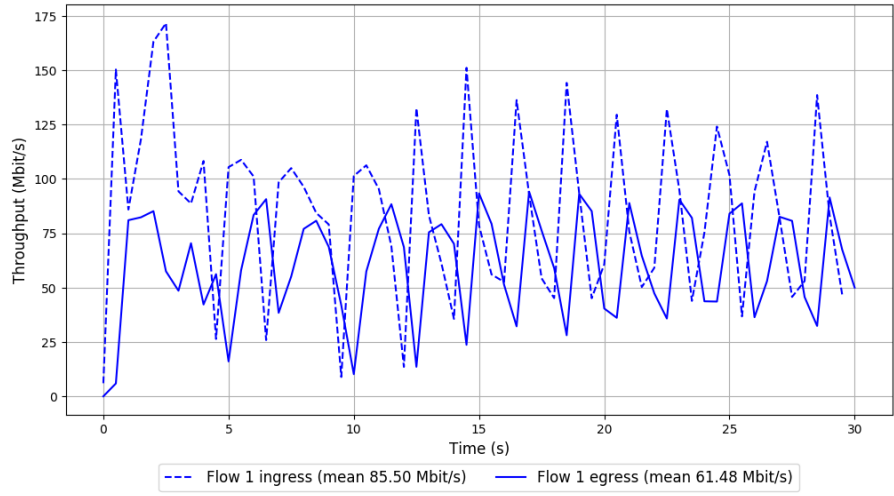
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-10-02 18:46:15
End at: 2019-10-02 18:46:45
Local clock offset: 7.708 ms
Remote clock offset: 7.829 ms


# Below is generated by plot.py at 2019-10-02 22:36:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.67 Mbit/s
95th percentile per-packet one-way delay: 69.623 ms
Loss rate: 21.82%
-- Flow 1:
Average throughput: 61.67 Mbit/s
95th percentile per-packet one-way delay: 69.623 ms
Loss rate: 21.82%
```
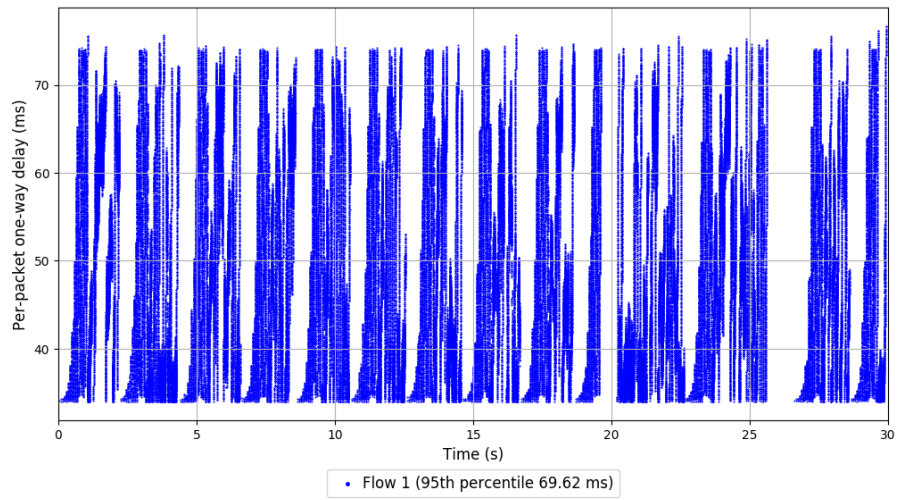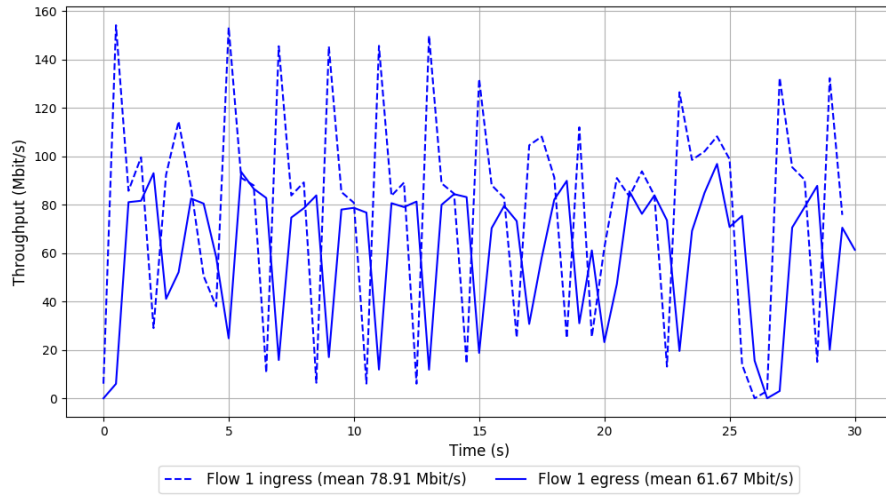
Run 2: Report of Verus — Data Link



Flow 1 ingress (mean 78.91 Mbit/s)    Flow 1 egress (mean 61.67 Mbit/s)



Flow 1 (95th percentile 69.62 ms)

```
Run 3: Statistics of Verus

Start at: 2019-10-02 19:49:22
End at: 2019-10-02 19:49:52
Local clock offset: 0.724 ms
Remote clock offset: 7.621 ms


# Below is generated by plot.py at 2019-10-02 22:36:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.33 Mbit/s
95th percentile per-packet one-way delay: 69.138 ms
Loss rate: 21.62%
-- Flow 1:
Average throughput: 60.33 Mbit/s
95th percentile per-packet one-way delay: 69.138 ms
Loss rate: 21.62%
```
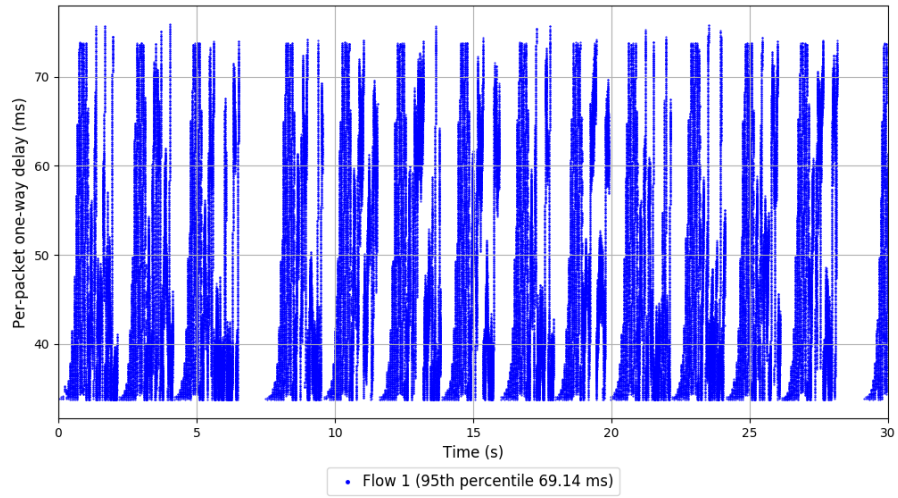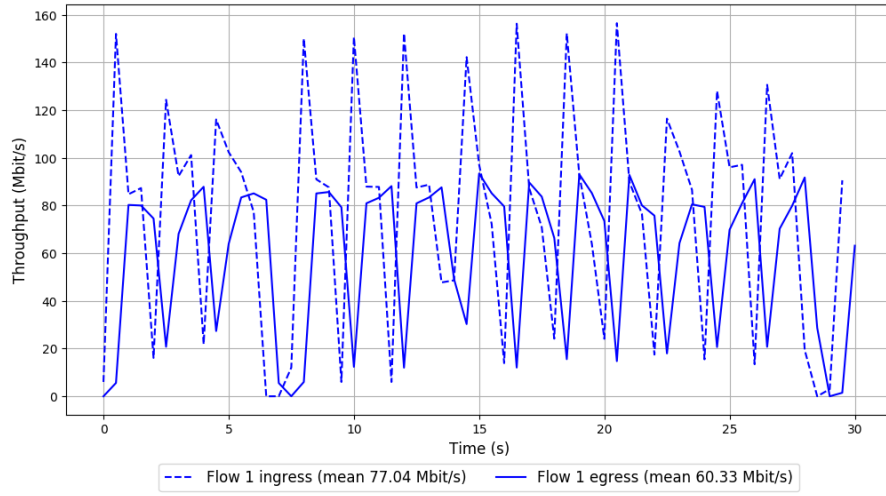
Run 3: Report of Verus — Data Link



Flow 1 ingress (mean 77.04 Mbit/s)    Flow 1 egress (mean 60.33 Mbit/s)



Flow 1 (95th percentile 69.14 ms)

```
Run 4: Statistics of Verus

Start at: 2019-10-02 20:48:23
End at: 2019-10-02 20:48:53
Local clock offset: -0.373 ms
Remote clock offset: 7.621 ms


# Below is generated by plot.py at 2019-10-02 22:36:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 57.79 Mbit/s
95th percentile per-packet one-way delay: 69.761 ms
Loss rate: 34.95%
-- Flow 1:
Average throughput: 57.79 Mbit/s
95th percentile per-packet one-way delay: 69.761 ms
Loss rate: 34.95%
```
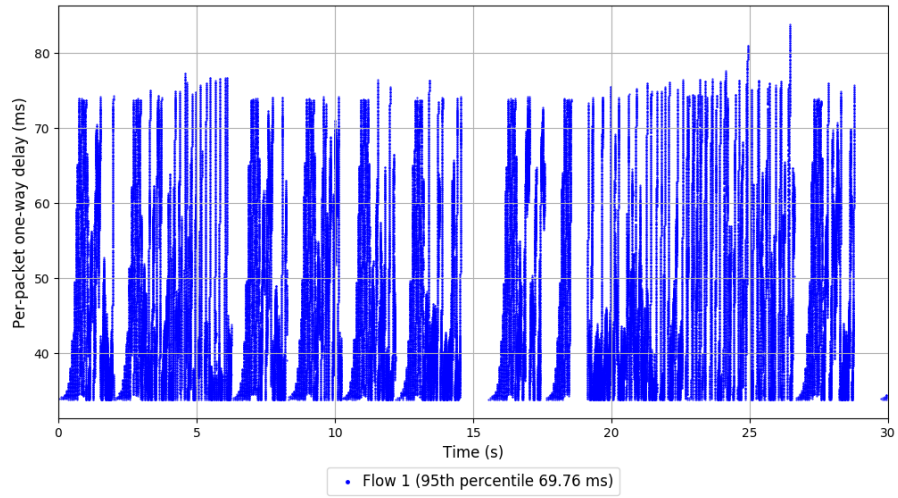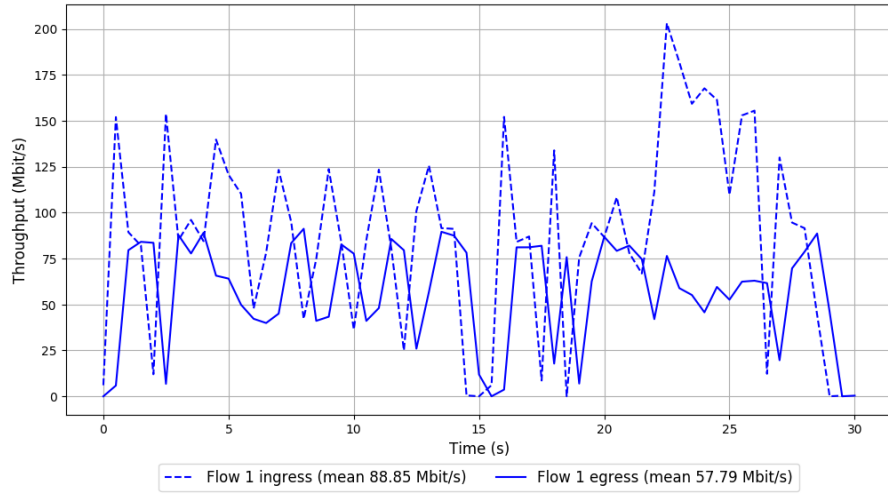
Run 4: Report of Verus — Data Link



Flow 1 ingress (mean 88.85 Mbit/s)    Flow 1 egress (mean 57.79 Mbit/s)



Flow 1 (95th percentile 69.76 ms)

```
Run 5: Statistics of Verus

Start at: 2019-10-02 21:44:10
End at: 2019-10-02 21:44:40
Local clock offset: -0.228 ms
Remote clock offset: 7.459 ms


# Below is generated by plot.py at 2019-10-02 22:36:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 54.08 Mbit/s
95th percentile per-packet one-way delay: 71.555 ms
Loss rate: 48.80%
-- Flow 1:
Average throughput: 54.08 Mbit/s
95th percentile per-packet one-way delay: 71.555 ms
Loss rate: 48.80%
```
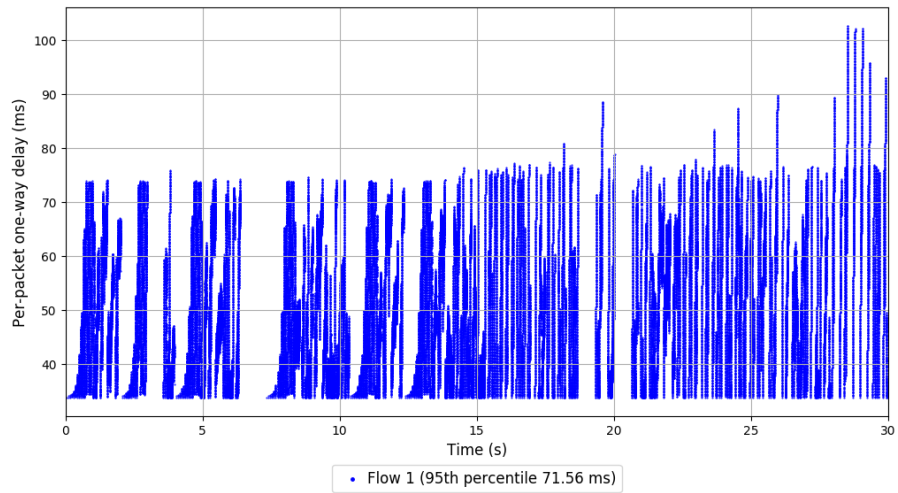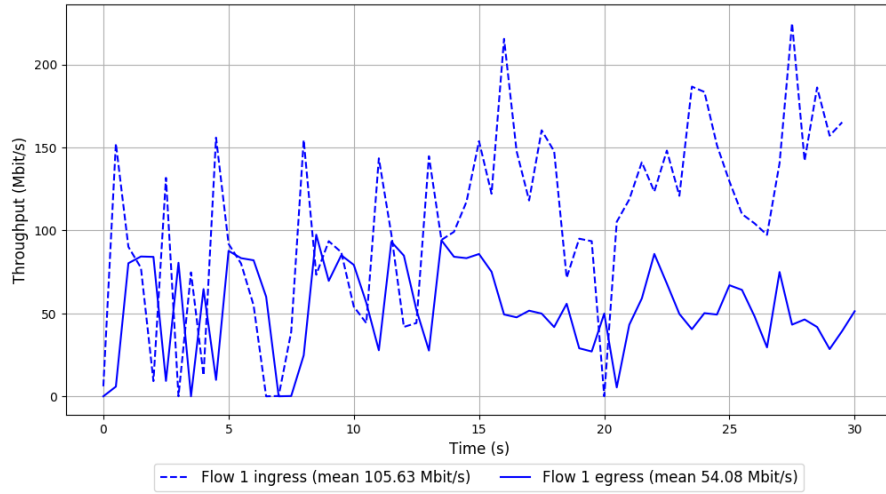
Run 5: Report of Verus — Data Link



Flow 1 ingress (mean 105.63 Mbit/s)    Flow 1 egress (mean 54.08 Mbit/s)



Flow 1 (95th percentile 71.56 ms)

224

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-10-02 17:58:41
End at: 2019-10-02 17:59:11
Local clock offset: 7.906 ms
Remote clock offset: 7.924 ms


# Below is generated by plot.py at 2019-10-02 22:36:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.41 Mbit/s
95th percentile per-packet one-way delay: 35.208 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 75.41 Mbit/s
95th percentile per-packet one-way delay: 35.208 ms
Loss rate: 0.00%
```
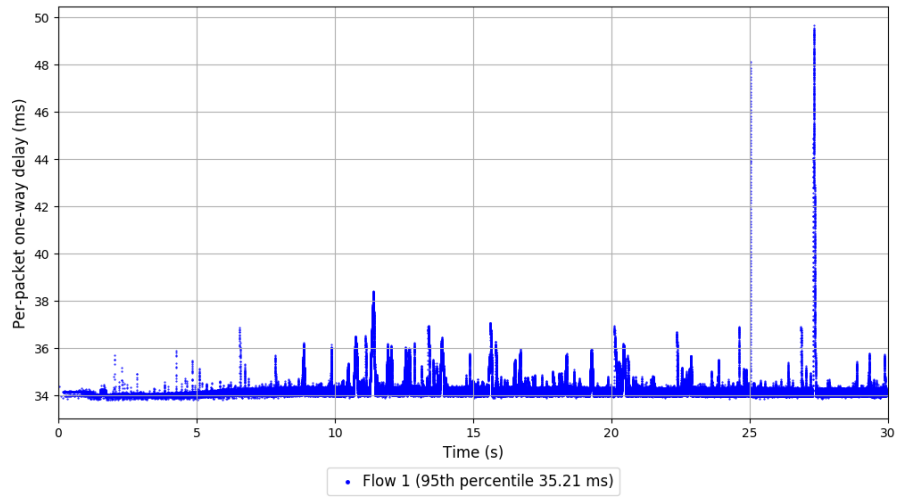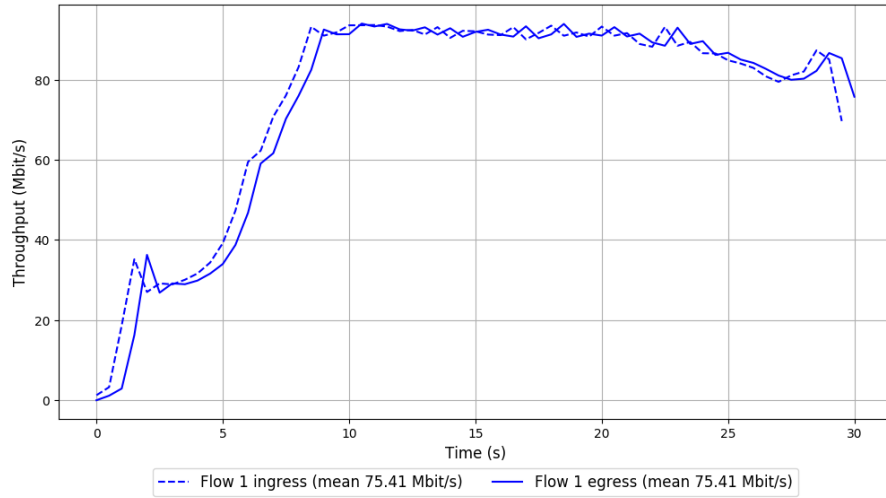
Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-10-02 18:53:41
End at: 2019-10-02 18:54:11
Local clock offset: 8.556 ms
Remote clock offset: 7.648 ms


# Below is generated by plot.py at 2019-10-02 22:36:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.63 Mbit/s
95th percentile per-packet one-way delay: 42.177 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 81.63 Mbit/s
95th percentile per-packet one-way delay: 42.177 ms
Loss rate: 0.00%
```
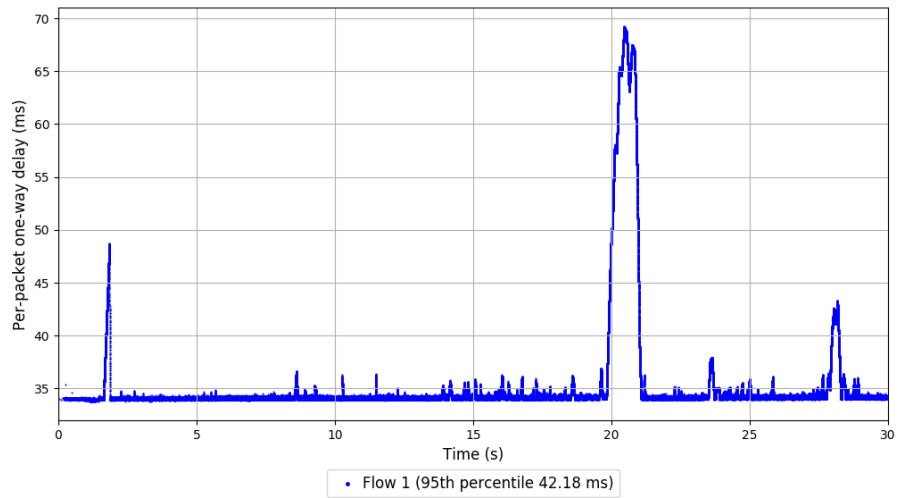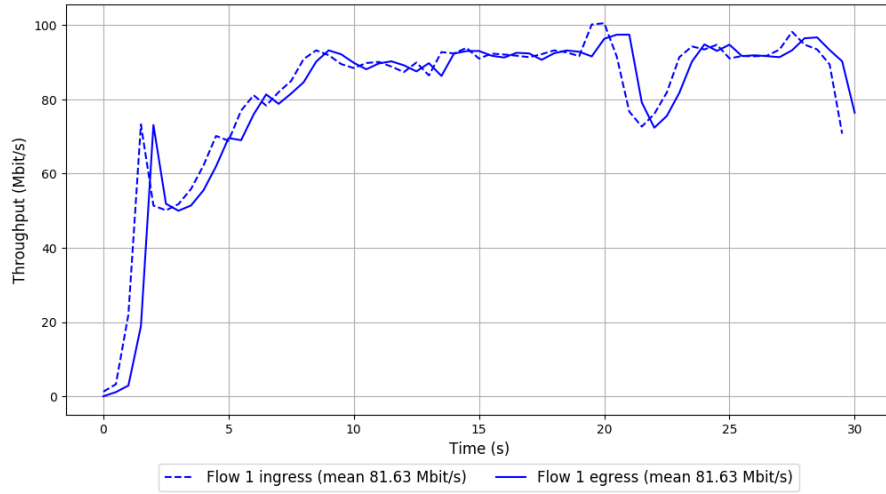
## Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-10-02 19:55:24
End at: 2019-10-02 19:55:54
Local clock offset: 0.767 ms
Remote clock offset: 7.763 ms


# Below is generated by plot.py at 2019-10-02 22:36:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.90 Mbit/s
95th percentile per-packet one-way delay: 35.148 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 81.90 Mbit/s
95th percentile per-packet one-way delay: 35.148 ms
Loss rate: 0.00%
```
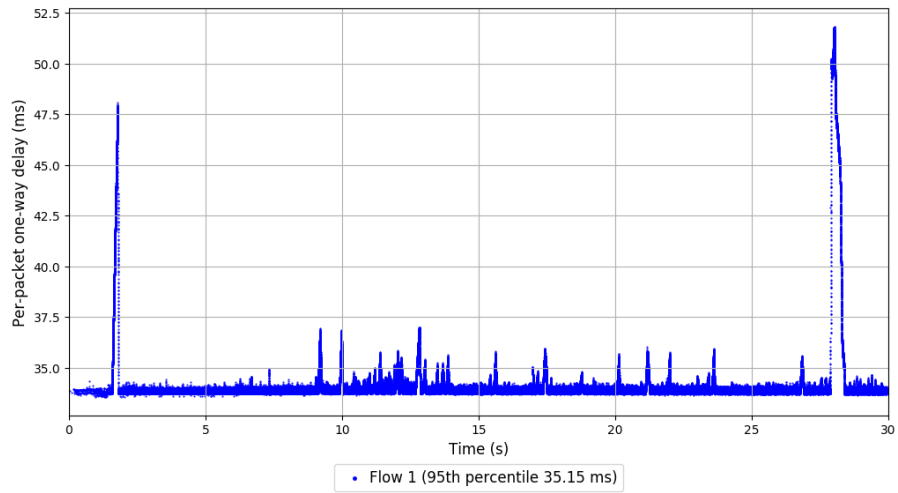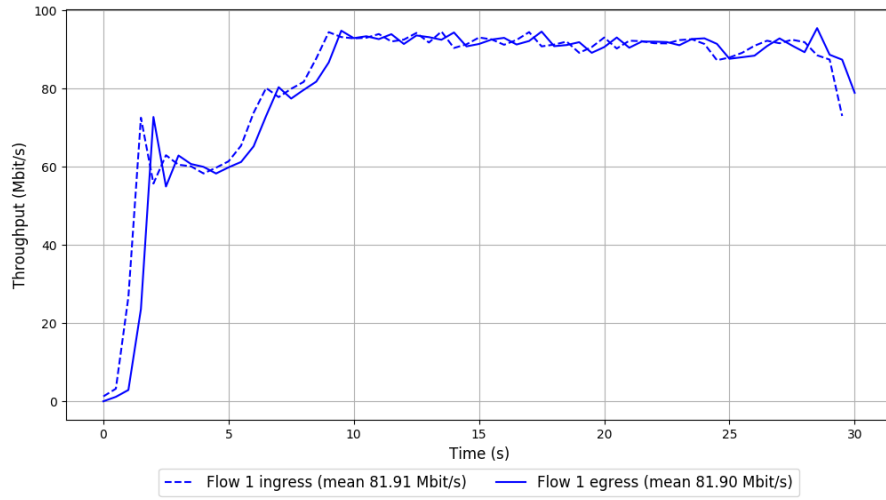
Run 3: Report of PCC-Vivace — Data Link



Flow 1 ingress (mean 81.91 Mbit/s)  ——— Flow 1 egress (mean 81.90 Mbit/s)



• Flow 1 (95th percentile 35.15 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-10-02 20:55:03
End at: 2019-10-02 20:55:33
Local clock offset: -0.465 ms
Remote clock offset: 7.576 ms


# Below is generated by plot.py at 2019-10-02 22:36:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.94 Mbit/s
95th percentile per-packet one-way delay: 35.915 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 83.94 Mbit/s
95th percentile per-packet one-way delay: 35.915 ms
Loss rate: 0.00%
```
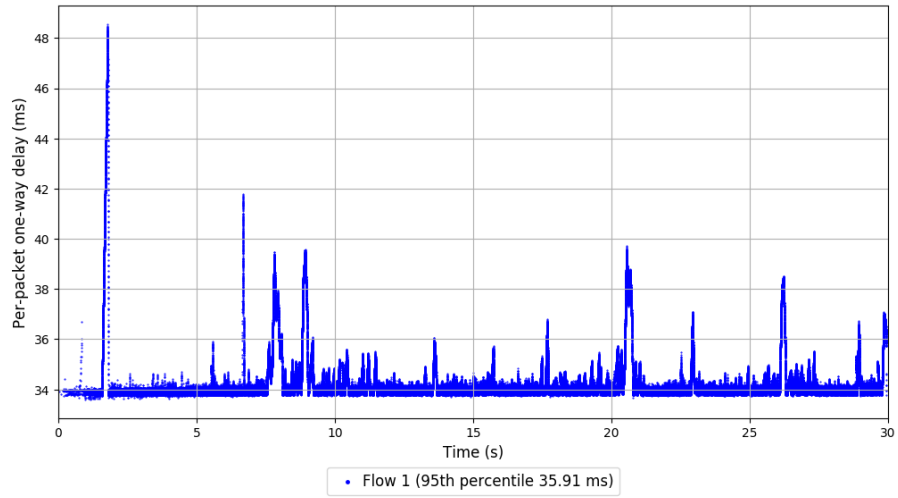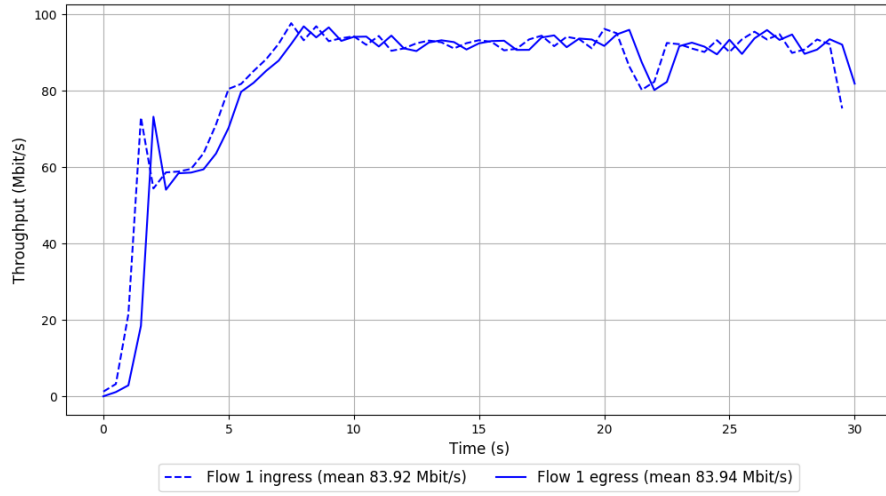
# Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-10-02 21:50:29
End at: 2019-10-02 21:50:59
Local clock offset: -0.249 ms
Remote clock offset: 7.373 ms


# Below is generated by plot.py at 2019-10-02 22:36:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.22 Mbit/s
95th percentile per-packet one-way delay: 37.851 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 72.22 Mbit/s
95th percentile per-packet one-way delay: 37.851 ms
Loss rate: 0.18%
```
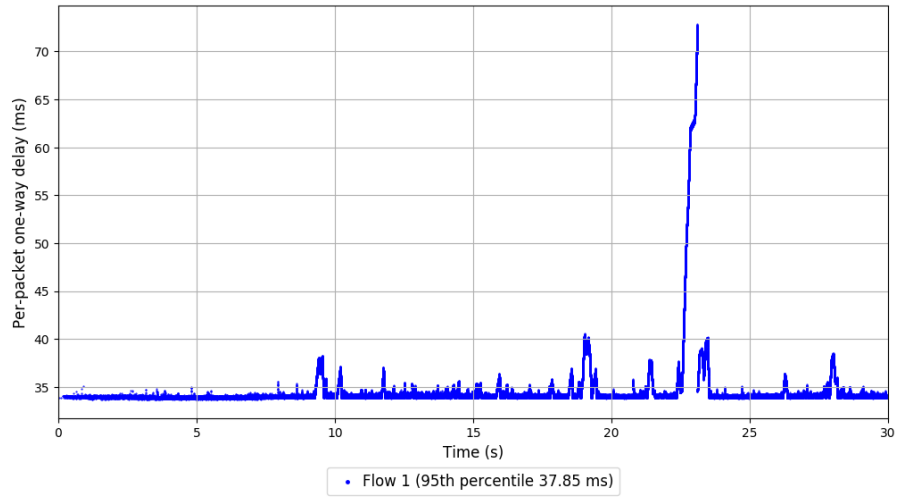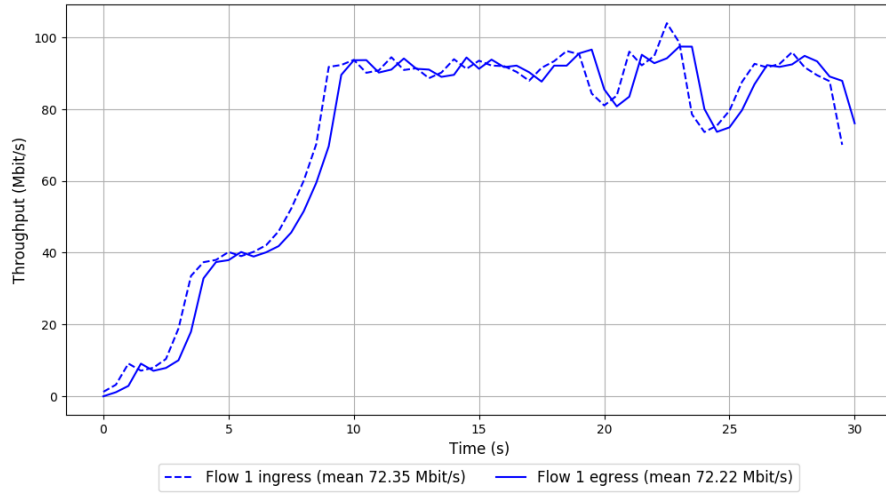
## Run 5: Report of PCC-Vivace — Data Link



Flow 1 ingress (mean 72.35 Mbit/s)  Flow 1 egress (mean 72.22 Mbit/s)



Flow 1 (95th percentile 37.85 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2019-10-02 17:54:41
End at: 2019-10-02 17:55:11
Local clock offset: 8.644 ms
Remote clock offset: 7.611 ms


# Below is generated by plot.py at 2019-10-02 22:36:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 34.551 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 34.551 ms
Loss rate: 0.00%
```
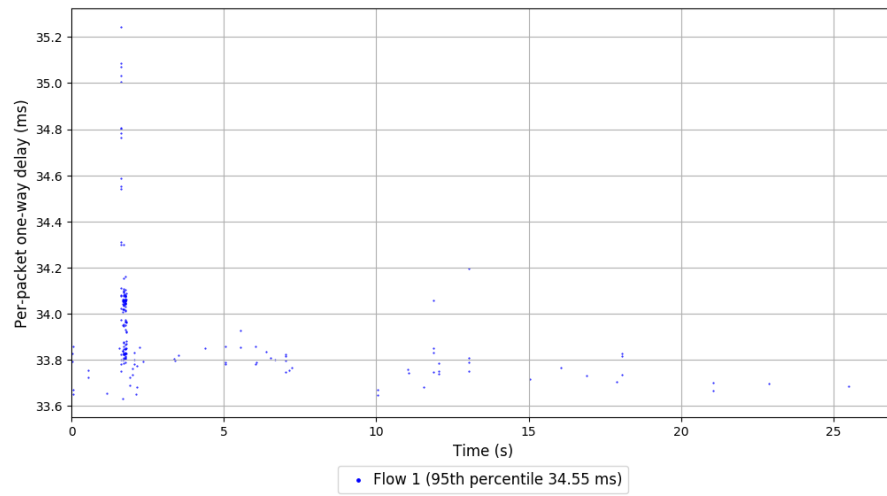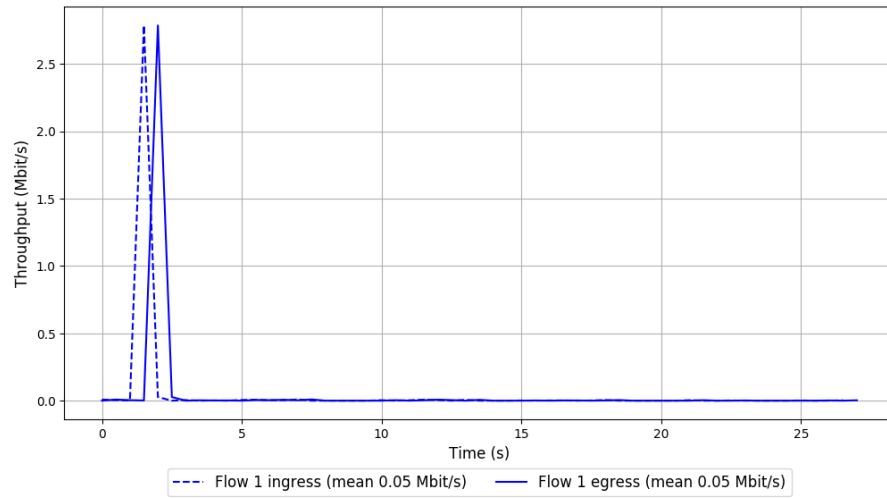
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-10-02 18:49:23
End at: 2019-10-02 18:49:53
Local clock offset: 8.03 ms
Remote clock offset: 7.792 ms


# Below is generated by plot.py at 2019-10-02 22:36:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 34.740 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 34.740 ms
Loss rate: 0.00%
```
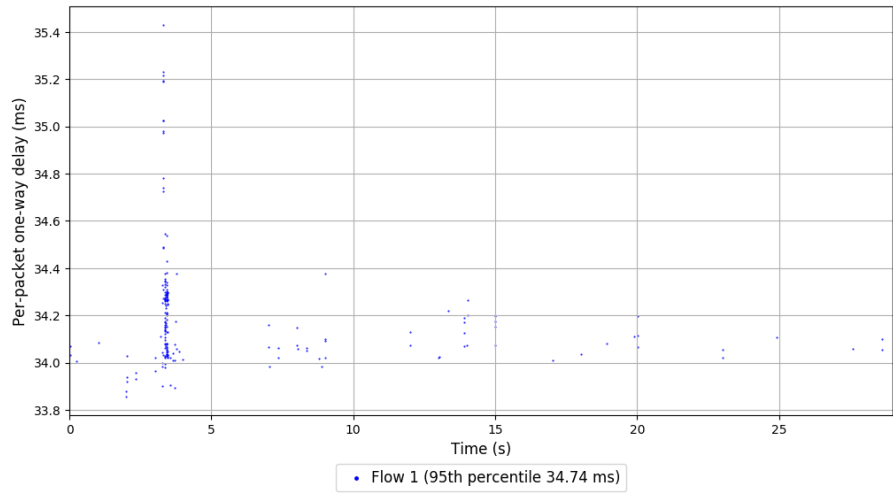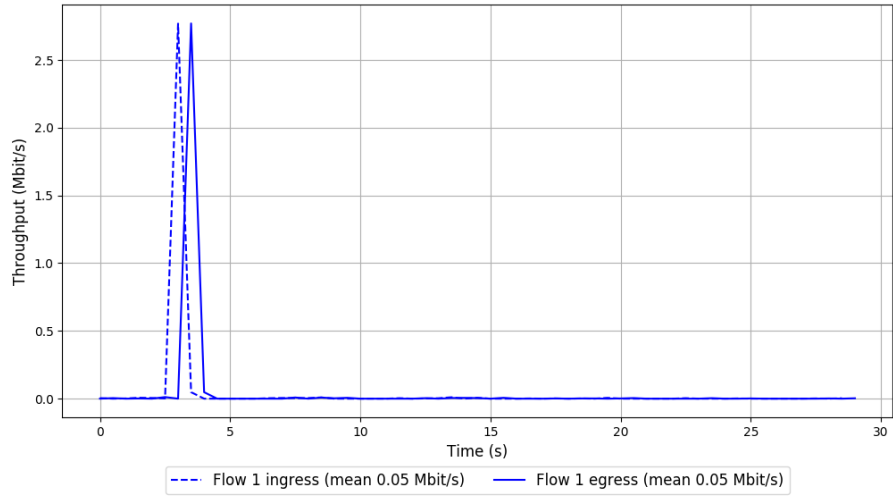
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-10-02 19:51:37
End at: 2019-10-02 19:52:07
Local clock offset: 0.718 ms
Remote clock offset: 7.826 ms


# Below is generated by plot.py at 2019-10-02 22:36:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 34.744 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 34.744 ms
Loss rate: 0.00%
```
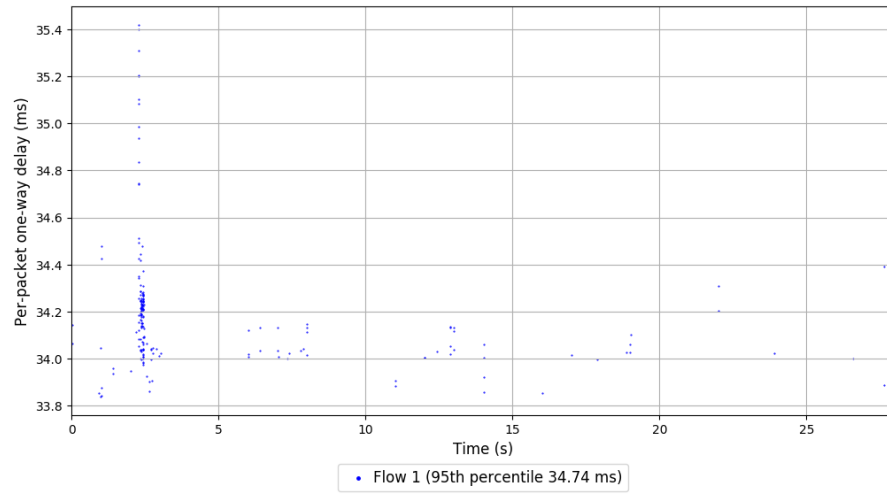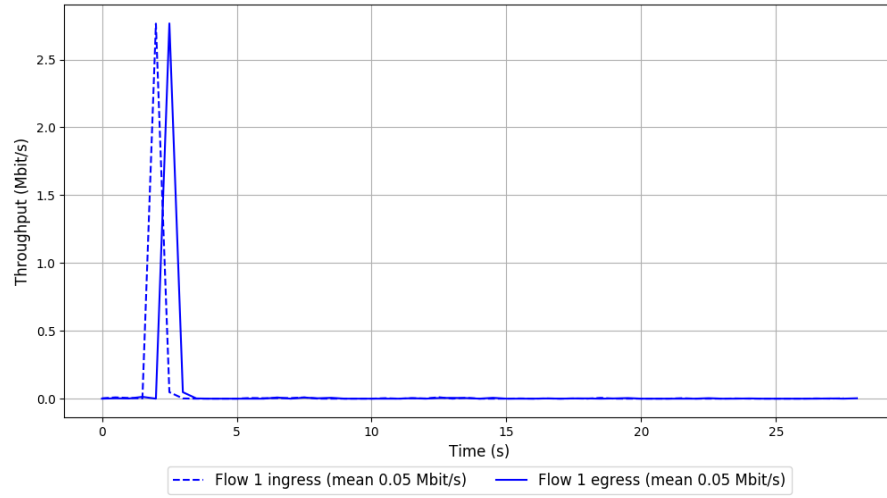
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-10-02 20:50:55
End at: 2019-10-02 20:51:25
Local clock offset: -0.408 ms
Remote clock offset: 7.601 ms


# Below is generated by plot.py at 2019-10-02 22:36:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 34.619 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 34.619 ms
Loss rate: 0.00%
```
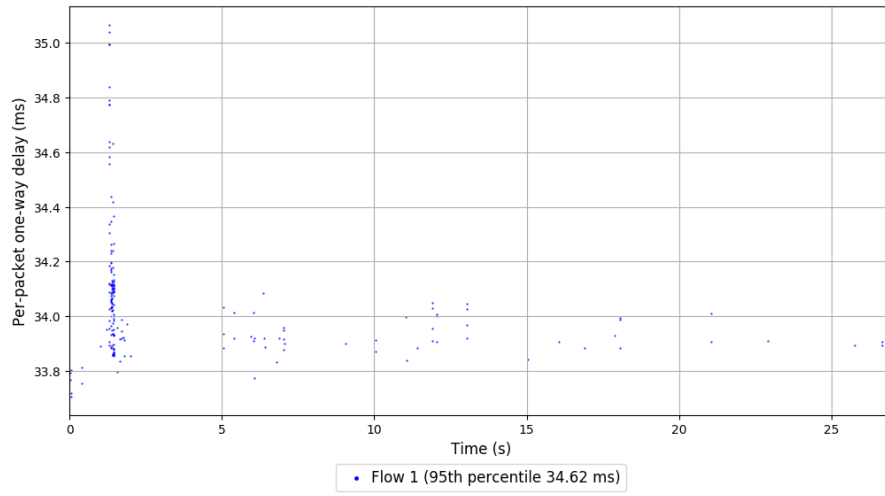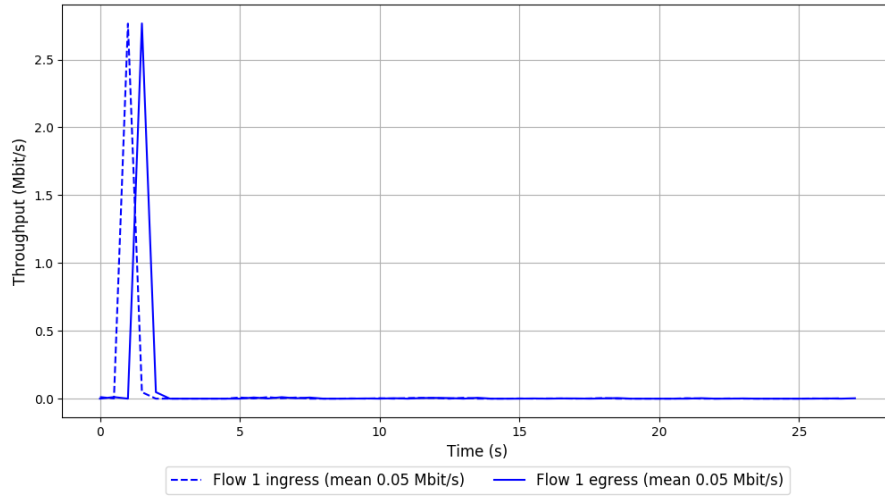
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-10-02 21:47:23
End at: 2019-10-02 21:47:53
Local clock offset: -0.259 ms
Remote clock offset: 7.479 ms


# Below is generated by plot.py at 2019-10-02 22:36:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 34.948 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 34.948 ms
Loss rate: 0.00%
```

# Run 5: Report of WebRTC media — Data Link





244