Pantheon Report

Generated at 2019-11-24 00:43:00 (UTC).

Data path: AWS Brazil 2 on `ens5` (*local*) →Colombia on `p4p1` (*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 `gps.ntp.br` and have been applied to correct the timestamps in logs.
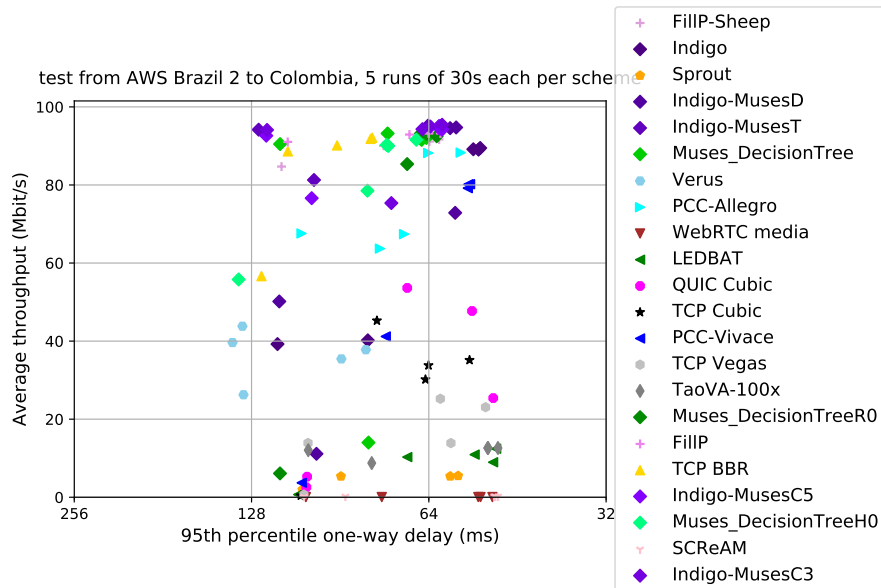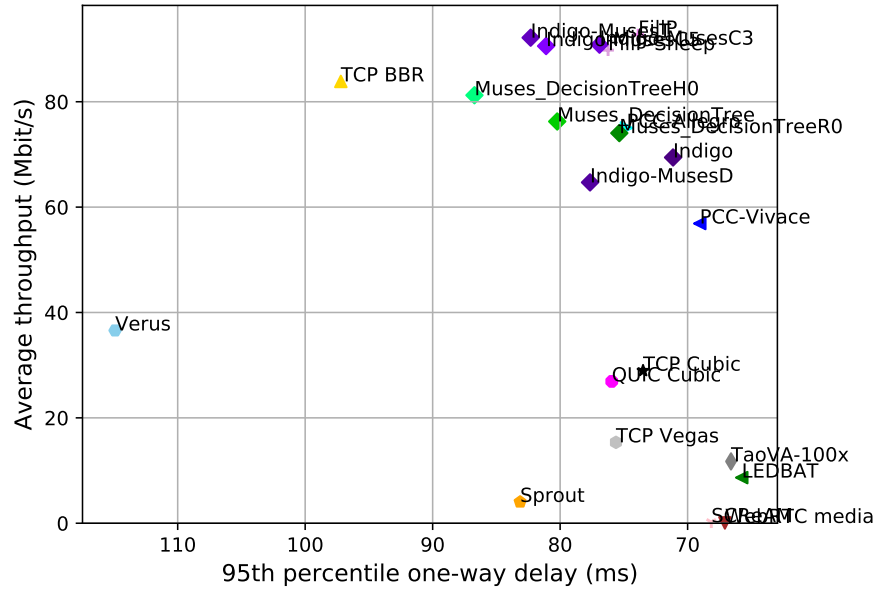
```
System info:
Linux 4.15.0-1051-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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 Brazil 2 to Colombia, 5 runs of 30s each per scheme
(mean of all runs by scheme)

test from AWS Brazil 2 to Colombia, 5 runs of 30s each per scheme

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scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	83.86	97.20	3.56
Copa	0	N/A	N/A	N/A
TCP Cubic	5	28.95	73.49	1.40
FillP	5	92.73	73.88	0.81
FillP-Sheep	5	89.79	76.24	0.97
Indigo	5	69.42	71.14	0.54
Indigo-MusesC3	5	90.83	76.91	1.50
Indigo-MusesC5	5	90.57	81.10	1.56
Indigo-MusesD	5	64.69	77.65	0.81
Indigo-MusesT	5	92.16	82.31	3.89
LEDBAT	5	8.66	65.76	0.61
Muses_DecisionTree	5	76.26	80.23	2.08
Muses_DecisionTreeH0	5	81.23	86.72	13.84
Muses_DecisionTreeR0	5	74.05	75.36	0.43
PCC-Allegro	5	75.04	74.79	1.63
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	5	26.92	75.95	0.57
SCReAM	5	0.19	68.14	0.26
Sprout	5	4.04	83.14	0.42
TaoVA-100x	5	11.73	66.60	12.04
TCP Vegas	5	15.35	75.62	1.31
Verus	5	36.59	114.91	61.76
PCC-Vivace	5	56.89	69.05	0.13
WebRTC media	5	0.05	67.08	0.63

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```
Run 1: Statistics of TCP BBR

Start at: 2019-11-23 22:38:32
End at: 2019-11-23 22:39:02
Local clock offset: -3.056 ms
Remote clock offset: -8.571 ms


# Below is generated by plot.py at 2019-11-24 00:33:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 56.64 Mbit/s
95th percentile per-packet one-way delay: 123.131 ms
Loss rate: 8.87%
-- Flow 1:
Average throughput: 56.64 Mbit/s
95th percentile per-packet one-way delay: 123.131 ms
Loss rate: 8.87%
```
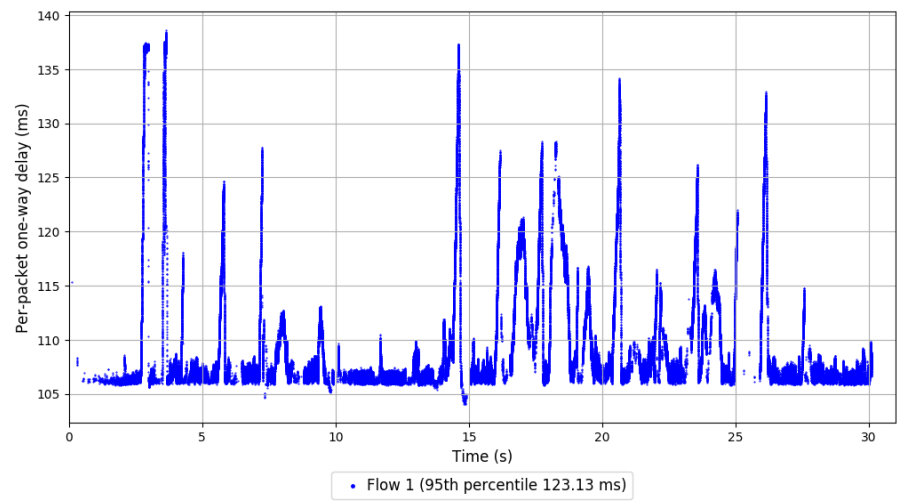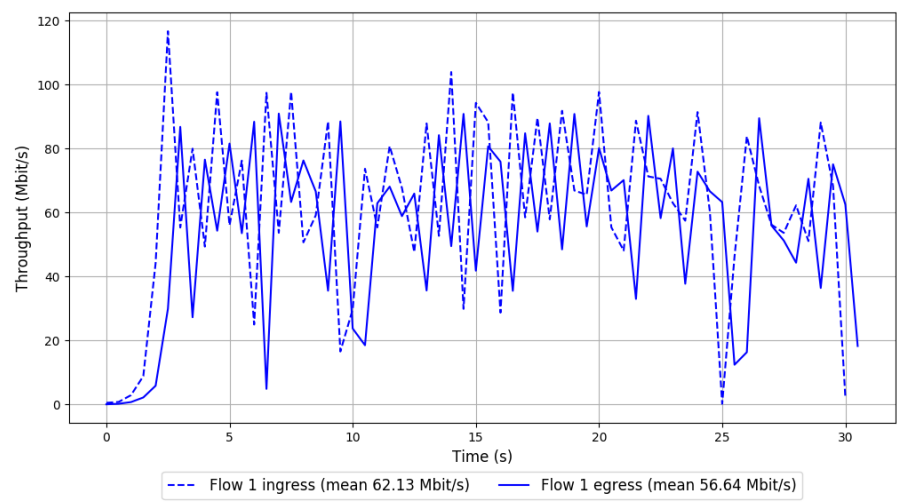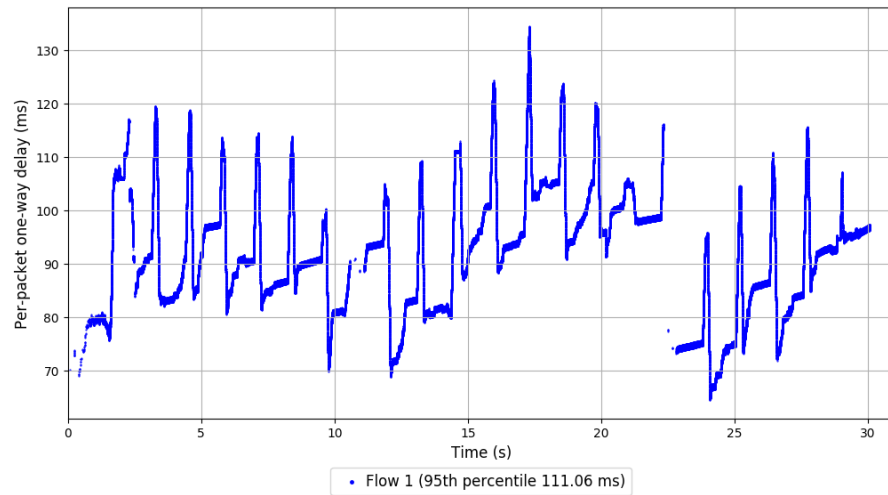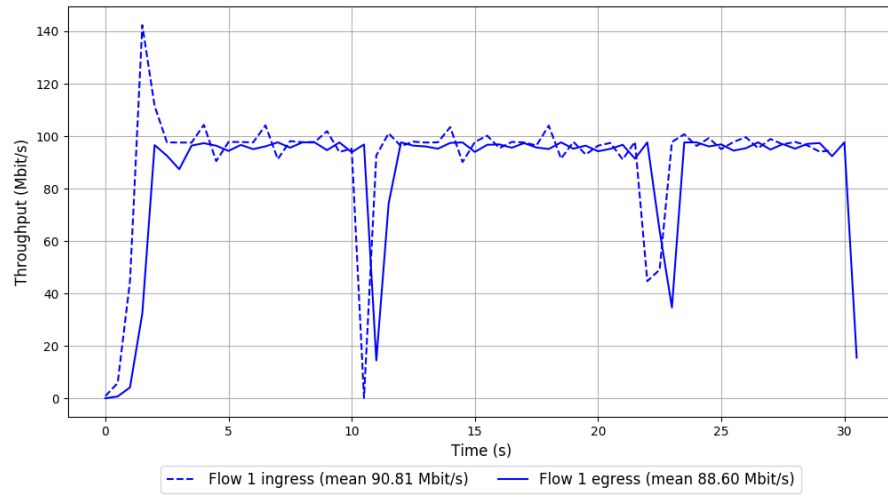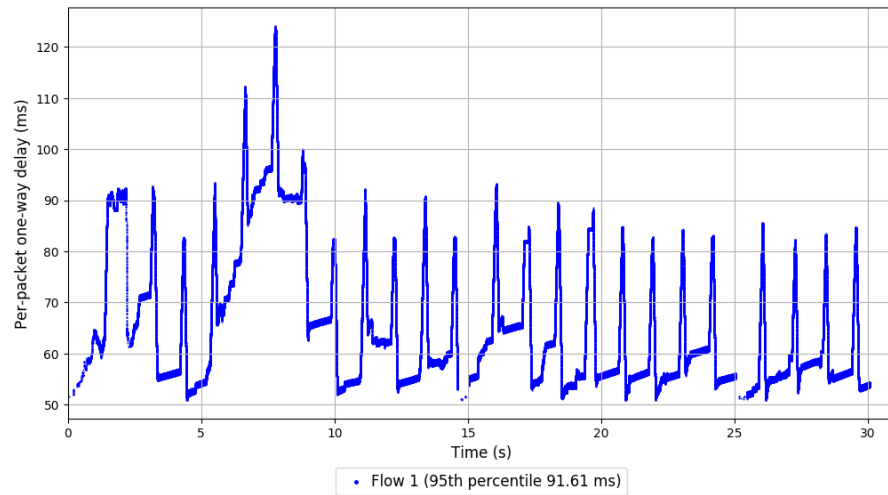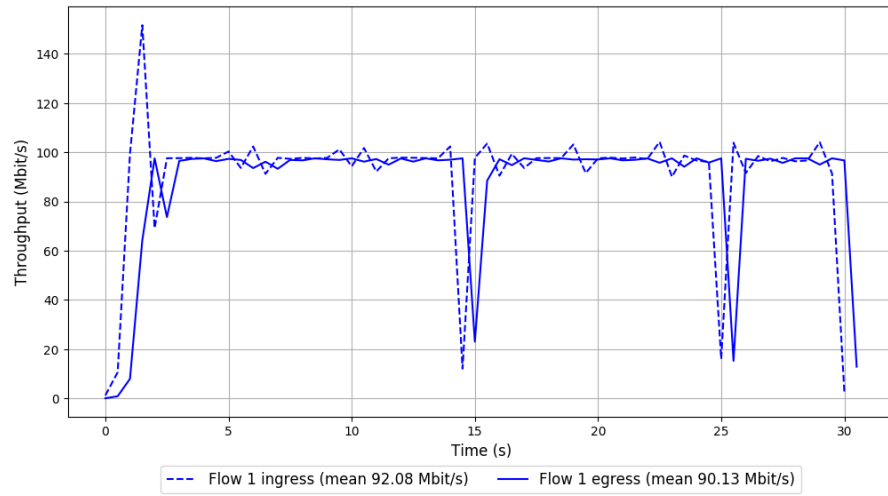
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-11-23 23:06:34
End at: 2019-11-23 23:07:04
Local clock offset: -2.832 ms
Remote clock offset: -9.226 ms


# Below is generated by plot.py at 2019-11-24 00:34:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.60 Mbit/s
95th percentile per-packet one-way delay: 111.064 ms
Loss rate: 2.35%
-- Flow 1:
Average throughput: 88.60 Mbit/s
95th percentile per-packet one-way delay: 111.064 ms
Loss rate: 2.35%
```
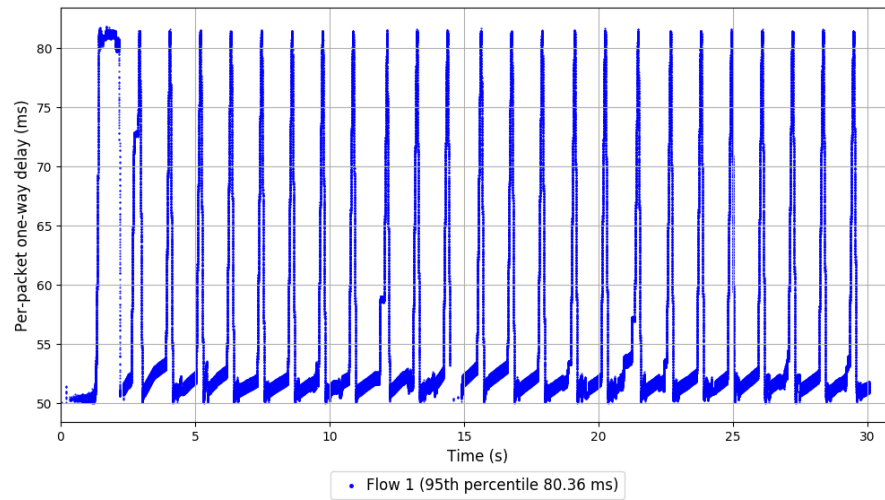
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-11-23 23:34:23
End at: 2019-11-23 23:34:53
Local clock offset: -1.53 ms
Remote clock offset: -7.793 ms


# Below is generated by plot.py at 2019-11-24 00:34:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.13 Mbit/s
95th percentile per-packet one-way delay: 91.610 ms
Loss rate: 2.11%
-- Flow 1:
Average throughput: 90.13 Mbit/s
95th percentile per-packet one-way delay: 91.610 ms
Loss rate: 2.11%
```
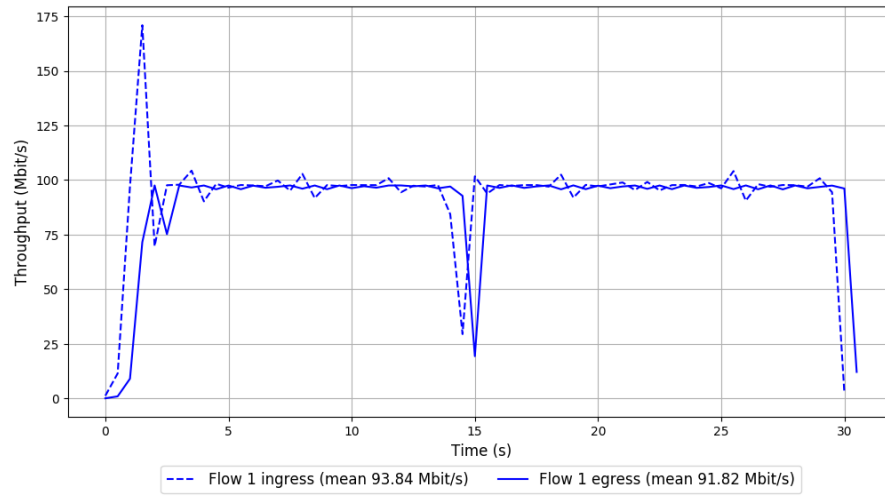
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 92.08 Mbit/s) --- Flow 1 egress (mean 90.13 Mbit/s)
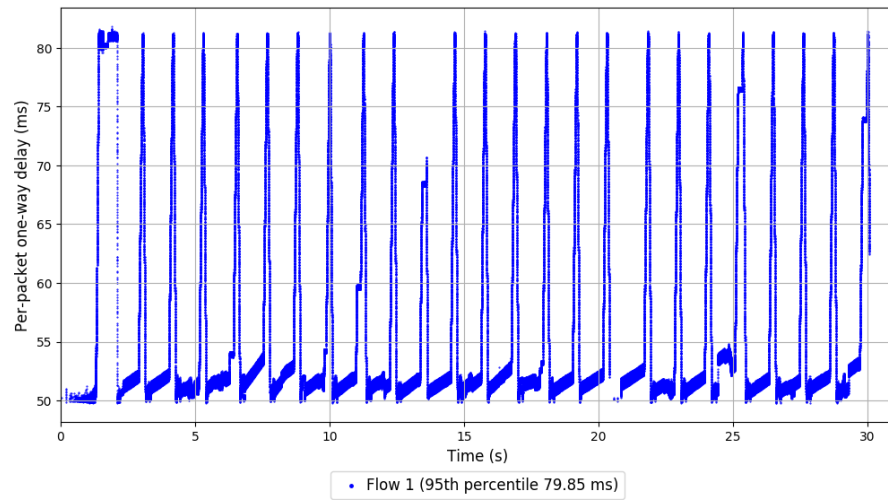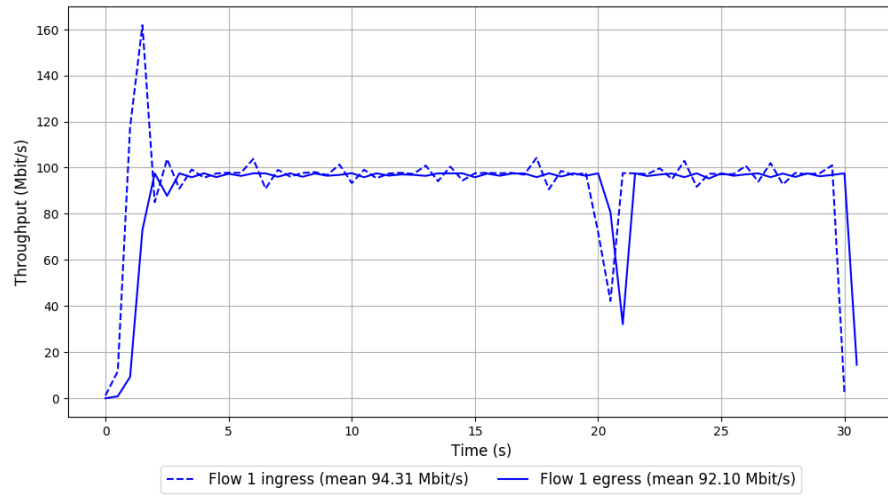

Flow 1 (95th percentile 91.61 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-11-24 00:02:14
End at: 2019-11-24 00:02:44
Local clock offset: -1.85 ms
Remote clock offset: -8.716 ms


# Below is generated by plot.py at 2019-11-24 00:34:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.82 Mbit/s
95th percentile per-packet one-way delay: 80.361 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 91.82 Mbit/s
95th percentile per-packet one-way delay: 80.361 ms
Loss rate: 2.15%
```

Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 93.84 Mbit/s)   Flow 1 egress (mean 91.82 Mbit/s)

Flow 1 (95th percentile 80.36 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2019-11-24 00:30:12
End at: 2019-11-24 00:30:42
Local clock offset: -1.325 ms
Remote clock offset: -8.418 ms


# Below is generated by plot.py at 2019-11-24 00:34:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.10 Mbit/s
95th percentile per-packet one-way delay: 79.847 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 92.10 Mbit/s
95th percentile per-packet one-way delay: 79.847 ms
Loss rate: 2.30%
```

Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 94.31 Mbit/s)   Flow 1 egress (mean 92.10 Mbit/s)

Flow 1 (95th percentile 79.85 ms)
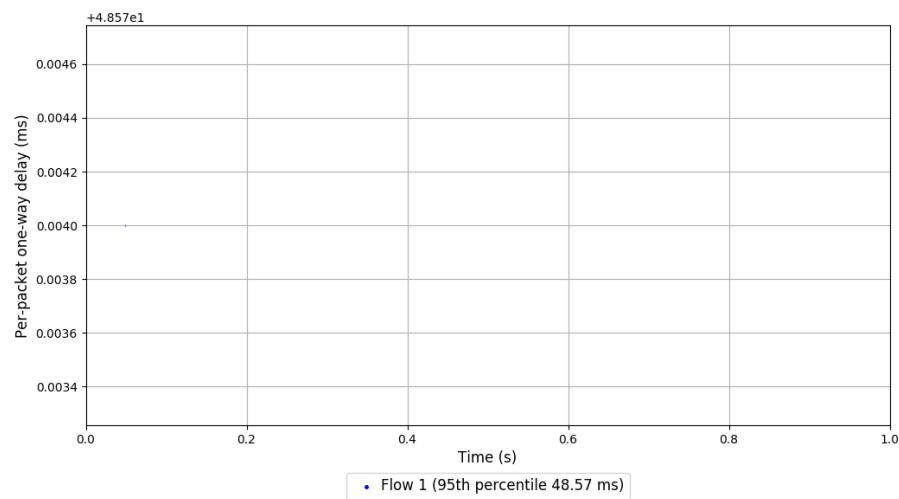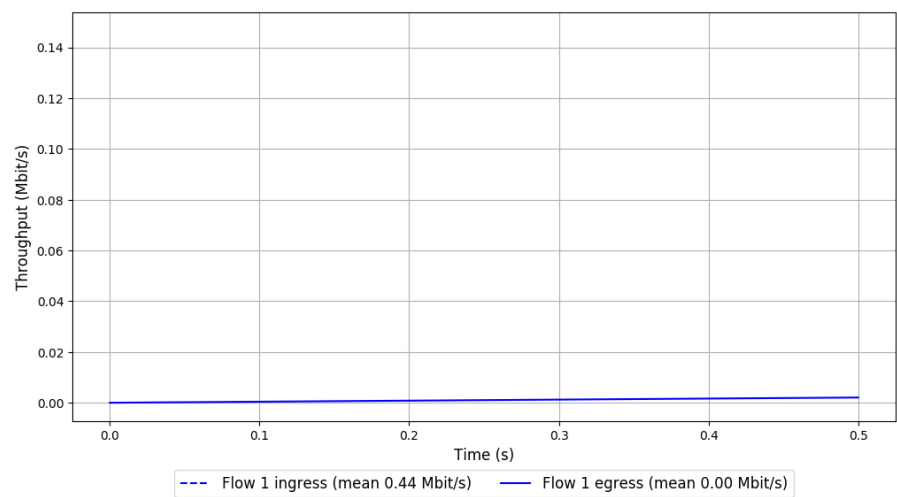
```
Run 1: Statistics of Copa

Start at: 2019-11-23 22:14:15
End at: 2019-11-23 22:14:46
Local clock offset: -1.467 ms
Remote clock offset: -9.439 ms
```

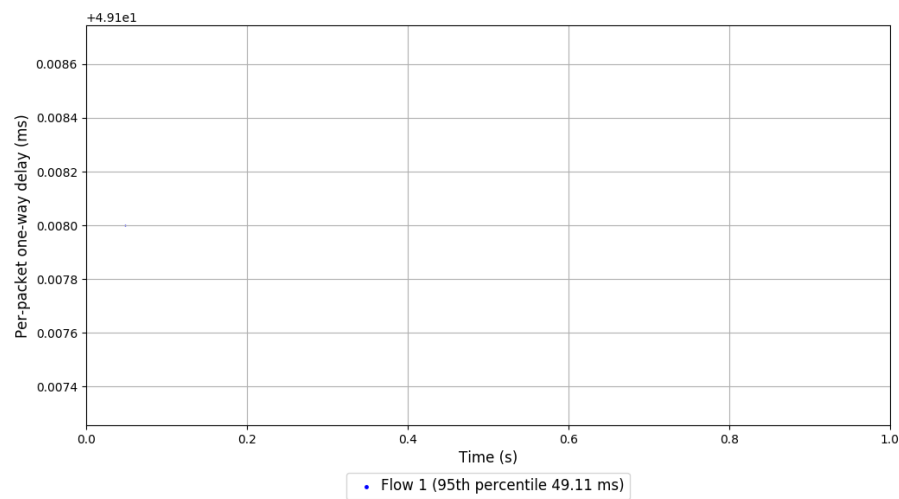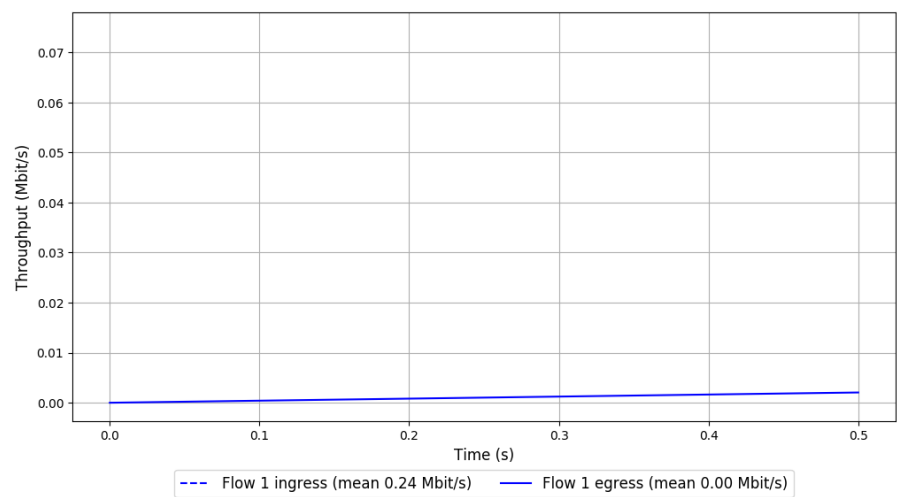# Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2019-11-23 22:42:10
End at: 2019-11-23 22:42:40
Local clock offset: -2.11 ms
Remote clock offset: -8.744 ms
```

Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 0.34 Mbit/s) —— Flow 1 egress (mean 0.00 Mbit/s)

Flow 1 (95th percentile 104.52 ms)

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```
Run 3: Statistics of Copa

Start at: 2019-11-23 23:10:05
End at: 2019-11-23 23:10:35
Local clock offset: -3.646 ms
Remote clock offset: -9.109 ms
```

Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 0.44 Mbit/s)   Flow 1 egress (mean 0.00 Mbit/s)
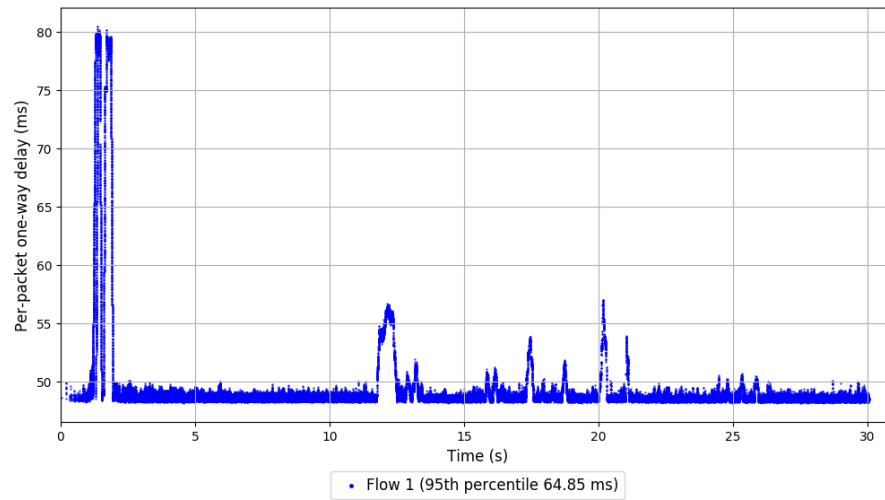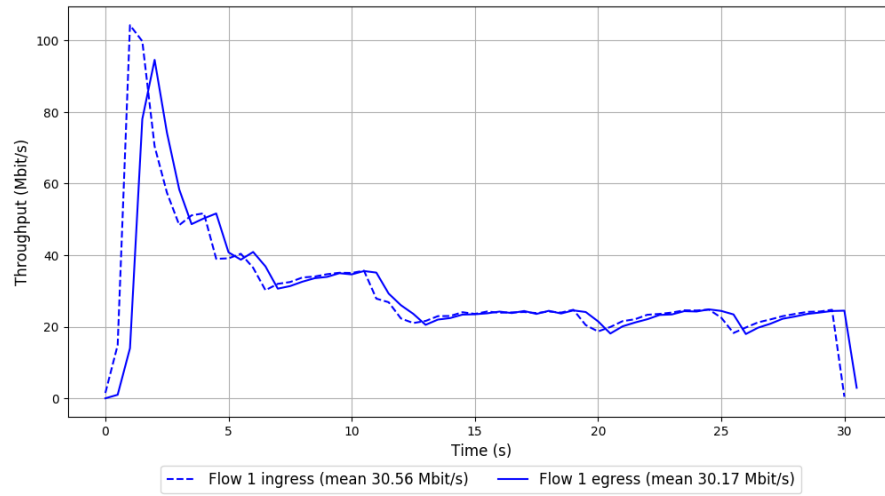

Flow 1 (95th percentile 48.57 ms)

Run 4: Statistics of Copa

Start at: 2019-11-23 23:37:56
End at: 2019-11-23 23:38:26
Local clock offset: -2.414 ms
Remote clock offset: -7.822 ms

Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 0.24 Mbit/s) — Flow 1 egress (mean 0.00 Mbit/s)

Flow 1 (95th percentile 49.11 ms)

```
Run 5: Statistics of Copa

Start at: 2019-11-24 00:05:48
End at: 2019-11-24 00:06:18
Local clock offset: -2.725 ms
Remote clock offset: -8.73 ms
```
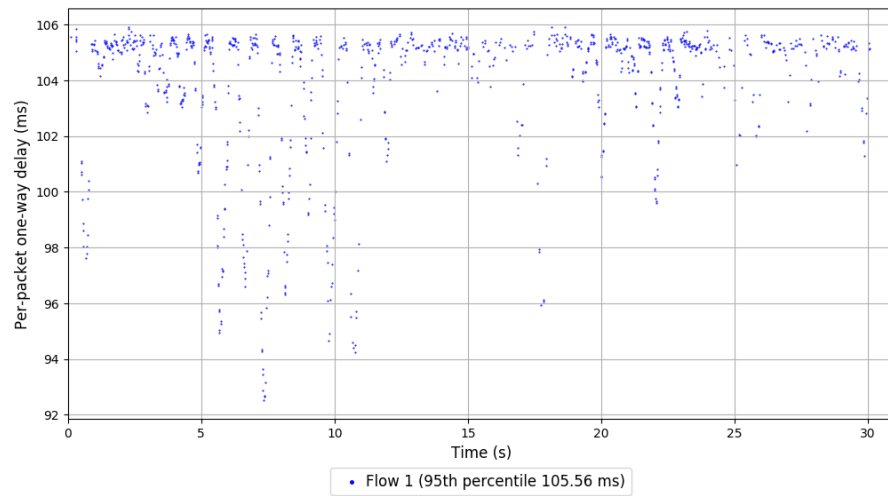
Run 5: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2019-11-23 22:25:48
End at: 2019-11-23 22:26:18
Local clock offset: -1.24 ms
Remote clock offset: -8.758 ms


# Below is generated by plot.py at 2019-11-24 00:34:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 30.17 Mbit/s
95th percentile per-packet one-way delay: 64.846 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 30.17 Mbit/s
95th percentile per-packet one-way delay: 64.846 ms
Loss rate: 1.27%
```
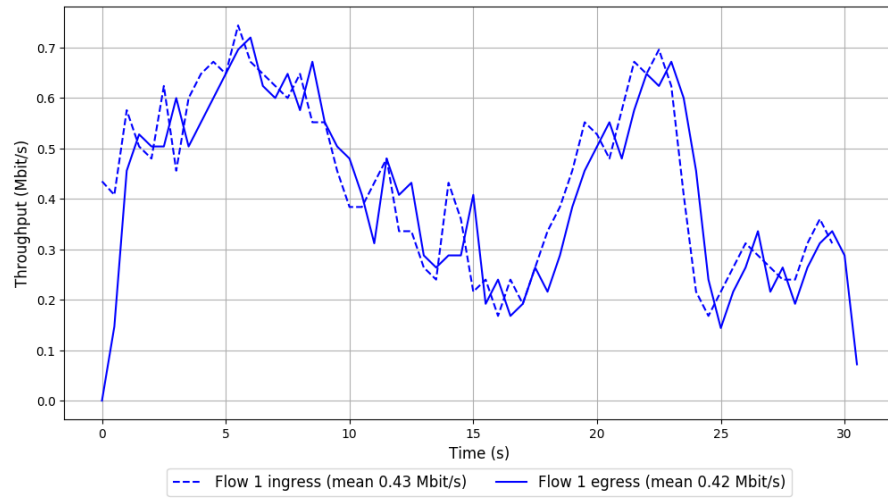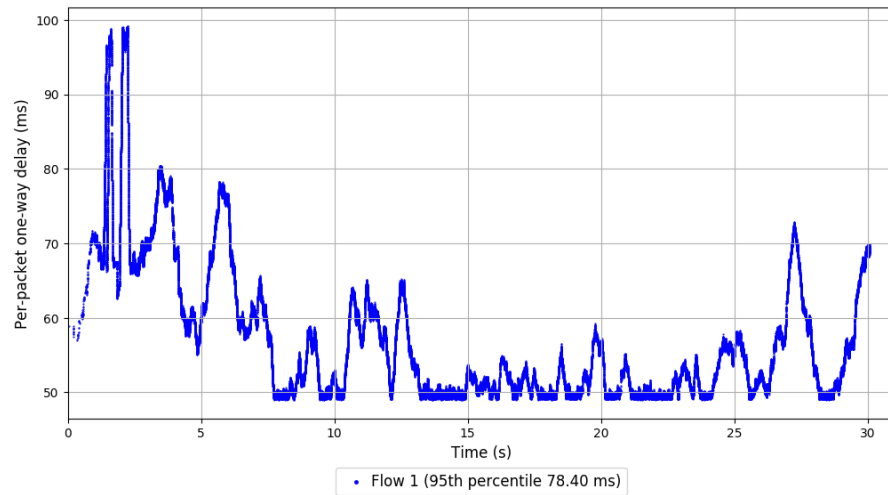
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-11-23 22:53:50
End at: 2019-11-23 22:54:20
Local clock offset: -2.667 ms
Remote clock offset: -8.487 ms


# Below is generated by plot.py at 2019-11-24 00:34:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 105.562 ms
Loss rate: 2.76%
-- Flow 1:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 105.562 ms
Loss rate: 2.76%
```

Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 0.43 Mbit/s) --- Flow 1 egress (mean 0.42 Mbit/s)

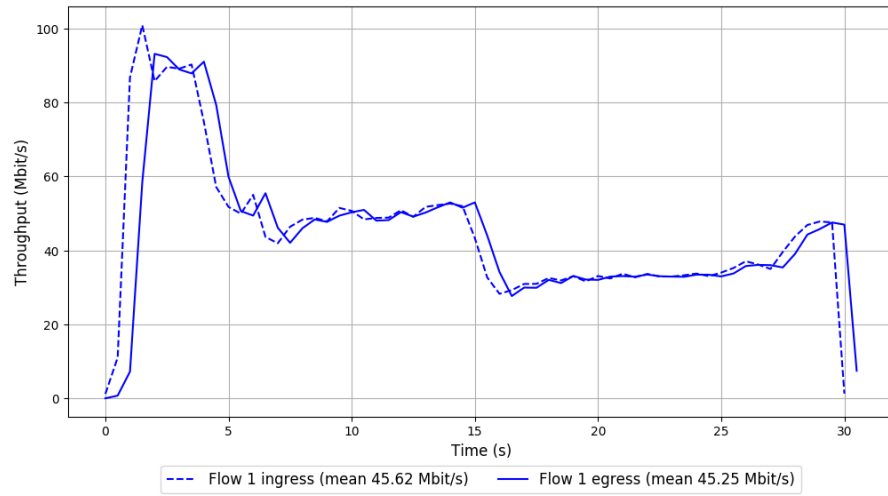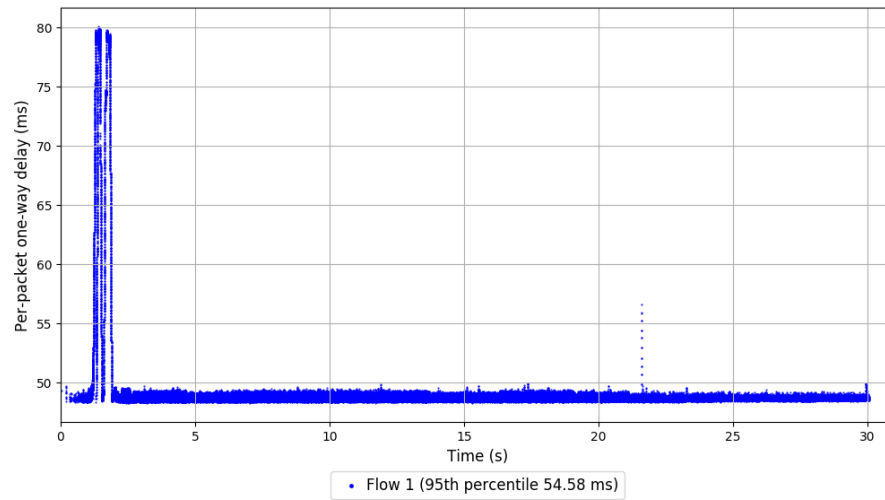Flow 1 (95th percentile 105.56 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2019-11-23 23:21:35
End at: 2019-11-23 23:22:05
Local clock offset: -2.192 ms
Remote clock offset: -8.044 ms


# Below is generated by plot.py at 2019-11-24 00:34:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 45.25 Mbit/s
95th percentile per-packet one-way delay: 78.400 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 45.25 Mbit/s
95th percentile per-packet one-way delay: 78.400 ms
Loss rate: 0.79%
```
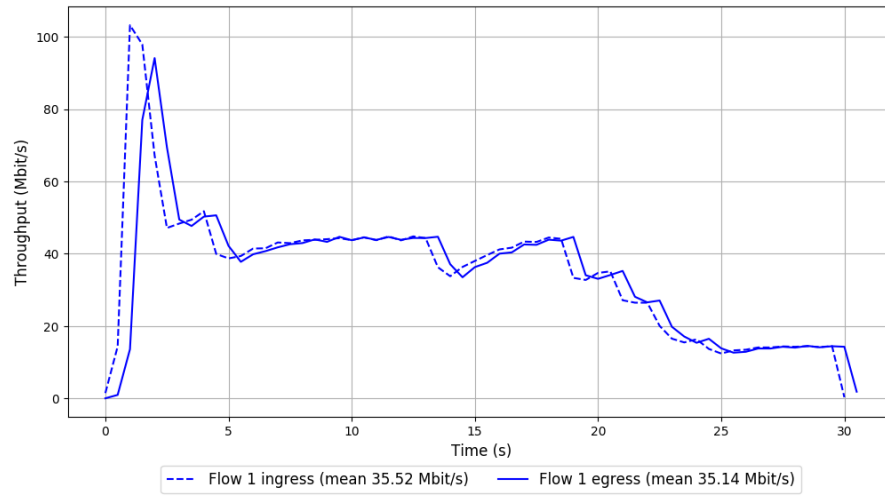
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2019-11-23 23:49:29
End at: 2019-11-23 23:49:59
Local clock offset: -1.555 ms
Remote clock offset: -8.521 ms


# Below is generated by plot.py at 2019-11-24 00:34:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.14 Mbit/s
95th percentile per-packet one-way delay: 54.582 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 35.14 Mbit/s
95th percentile per-packet one-way delay: 54.582 ms
Loss rate: 1.05%
```

Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 35.52 Mbit/s) --- Flow 1 egress (mean 35.14 Mbit/s)
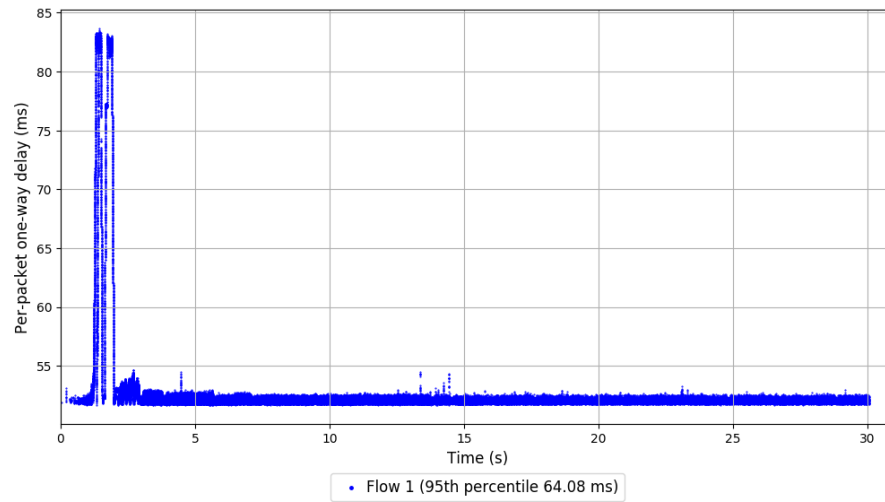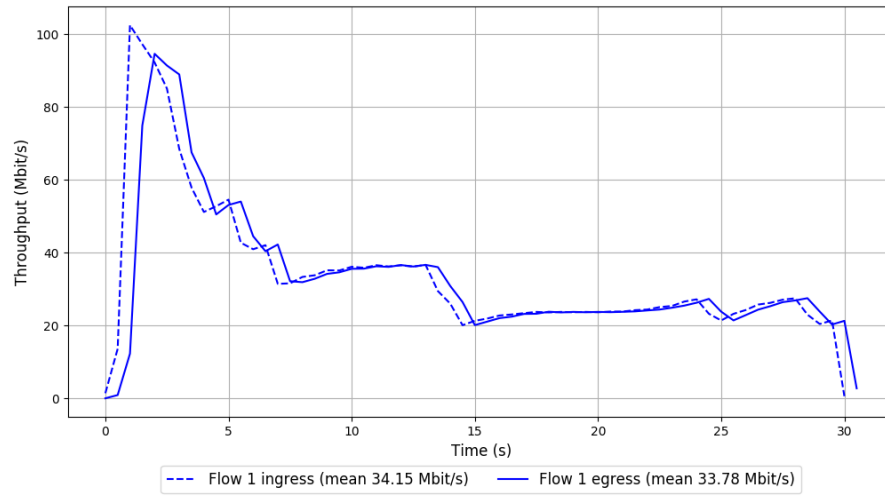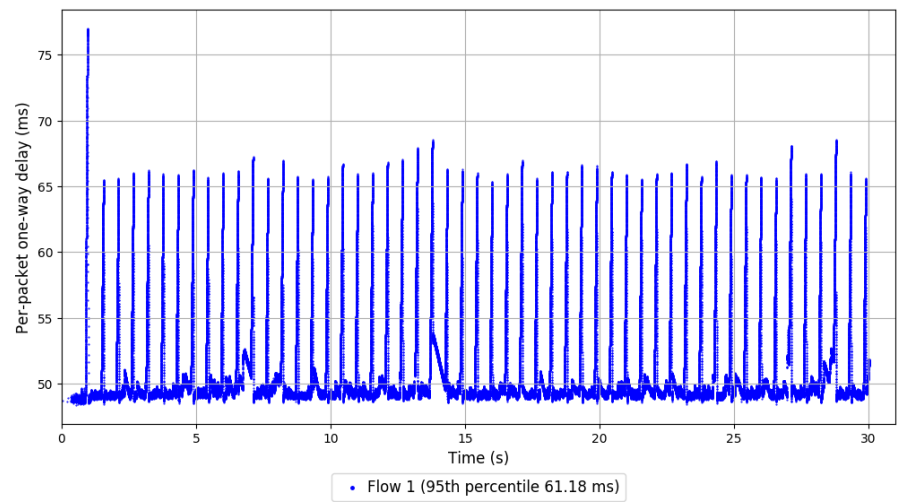

Flow 1 (95th percentile 54.58 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-11-24 00:17:25
End at: 2019-11-24 00:17:55
Local clock offset: -1.785 ms
Remote clock offset: -9.023 ms


# Below is generated by plot.py at 2019-11-24 00:34:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 33.78 Mbit/s
95th percentile per-packet one-way delay: 64.080 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 33.78 Mbit/s
95th percentile per-packet one-way delay: 64.080 ms
Loss rate: 1.11%
```

Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 34.15 Mbit/s)   Flow 1 egress (mean 33.78 Mbit/s)
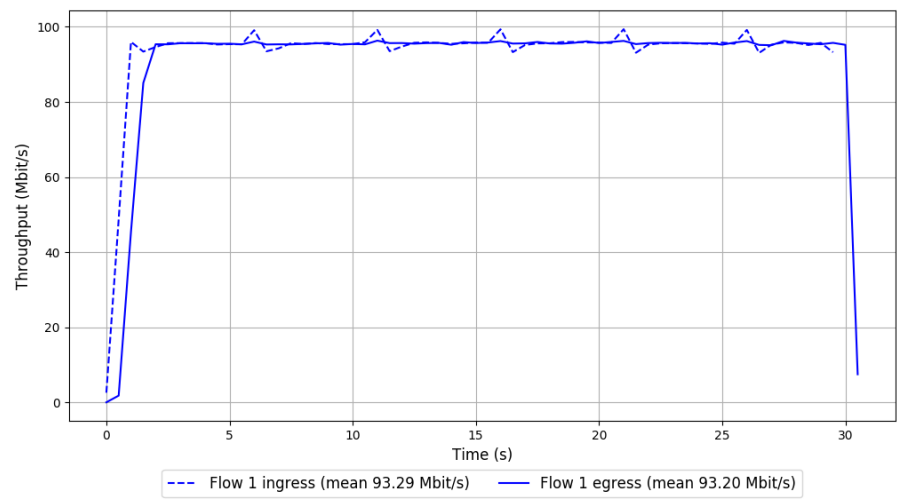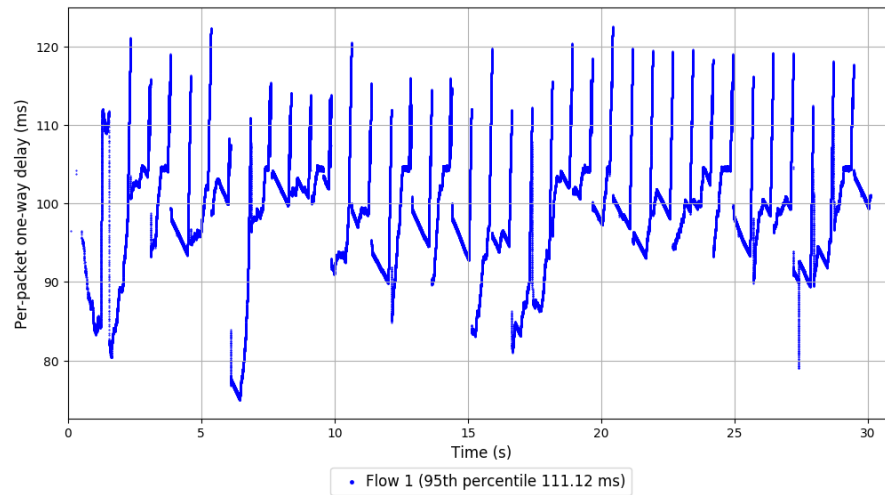

• Flow 1 (95th percentile 64.08 ms)

```
Run 1: Statistics of FillP

Start at: 2019-11-23 22:30:27
End at: 2019-11-23 22:30:57
Local clock offset: -1.55 ms
Remote clock offset: -9.226 ms


# Below is generated by plot.py at 2019-11-24 00:35:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.20 Mbit/s
95th percentile per-packet one-way delay: 61.181 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 93.20 Mbit/s
95th percentile per-packet one-way delay: 61.181 ms
Loss rate: 0.09%
```

Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 93.29 Mbit/s)   Flow 1 egress (mean 93.20 Mbit/s)

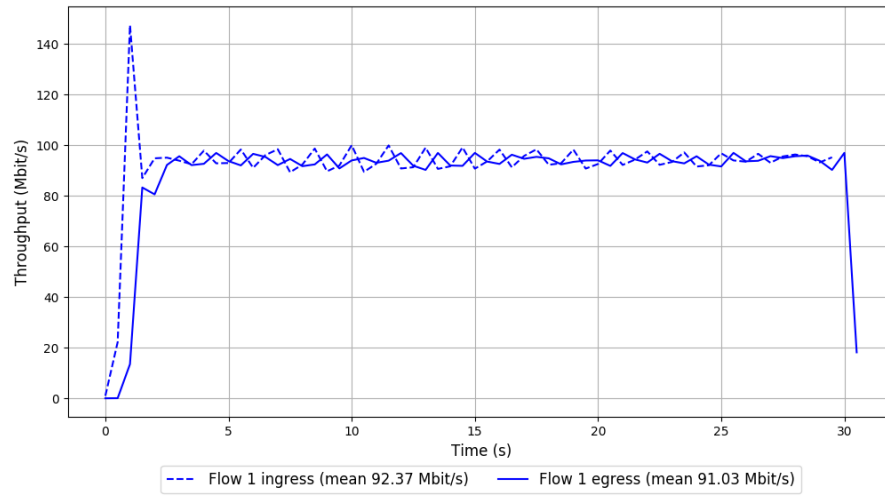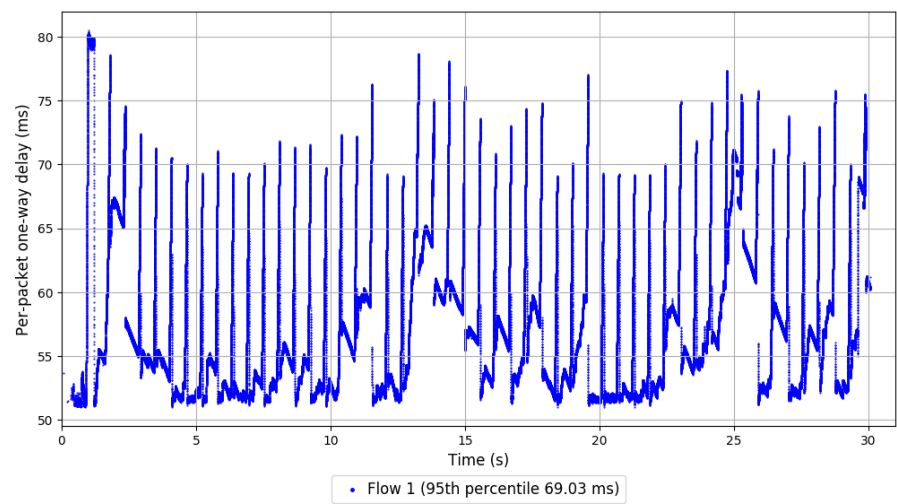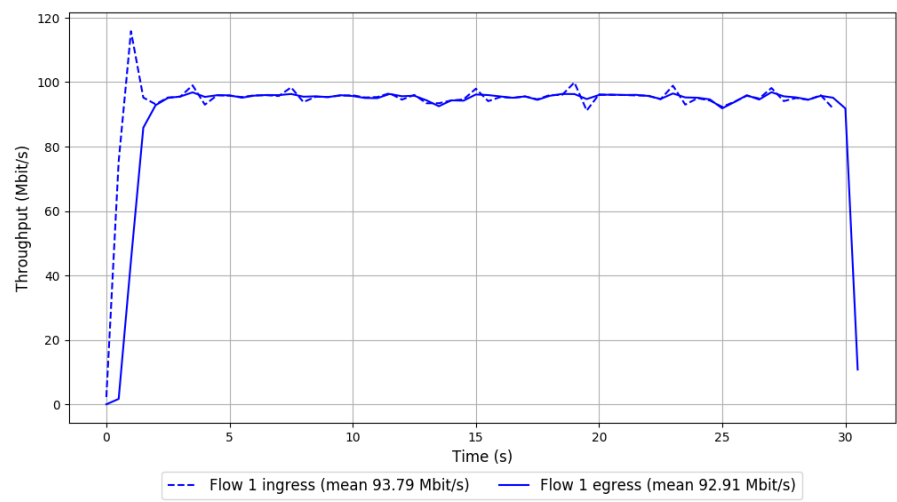Flow 1 (95th percentile 61.18 ms)

```
Run 2: Statistics of FillP

Start at: 2019-11-23 22:58:25
End at: 2019-11-23 22:58:55
Local clock offset: -2.172 ms
Remote clock offset: -8.562 ms


# Below is generated by plot.py at 2019-11-24 00:35:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.03 Mbit/s
95th percentile per-packet one-way delay: 111.116 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 91.03 Mbit/s
95th percentile per-packet one-way delay: 111.116 ms
Loss rate: 1.44%
```

Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 92.37 Mbit/s)   Flow 1 egress (mean 91.03 Mbit/s)

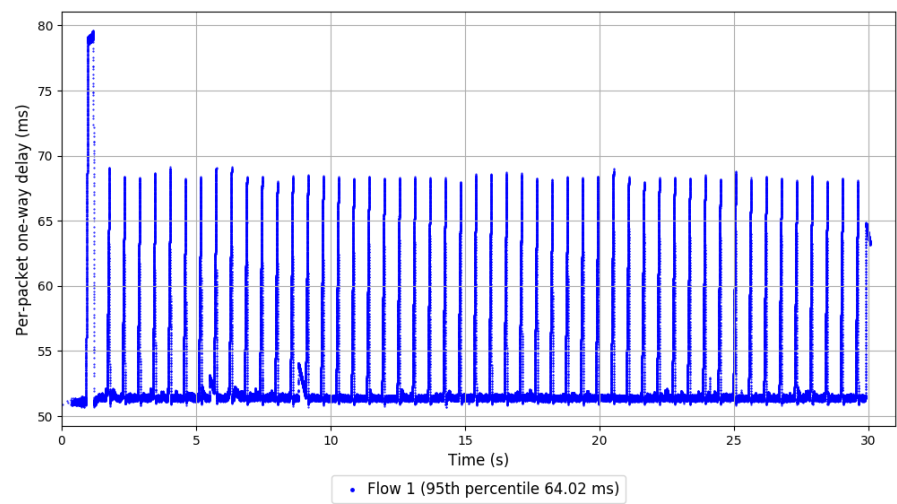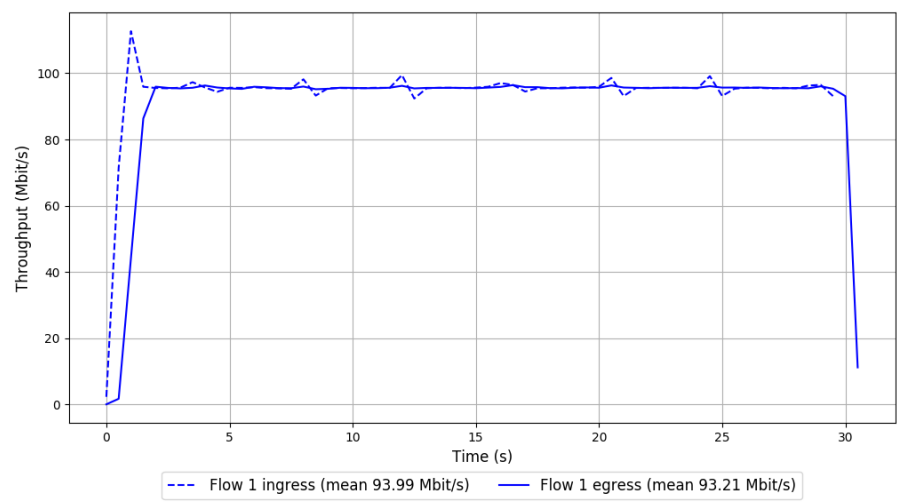Flow 1 (95th percentile 111.12 ms)

```
Run 3: Statistics of FillP

Start at: 2019-11-23 23:26:13
End at: 2019-11-23 23:26:43
Local clock offset: -2.126 ms
Remote clock offset: -8.598 ms


# Below is generated by plot.py at 2019-11-24 00:35:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.91 Mbit/s
95th percentile per-packet one-way delay: 69.035 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 92.91 Mbit/s
95th percentile per-packet one-way delay: 69.035 ms
Loss rate: 0.91%
```

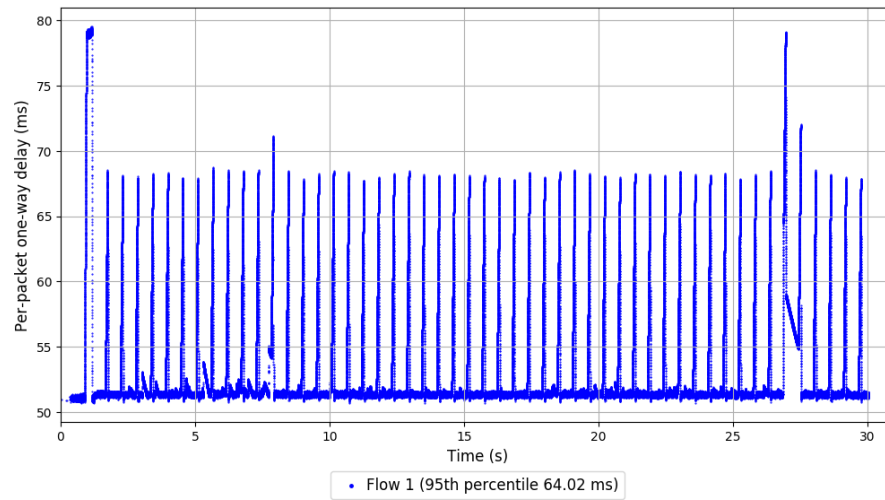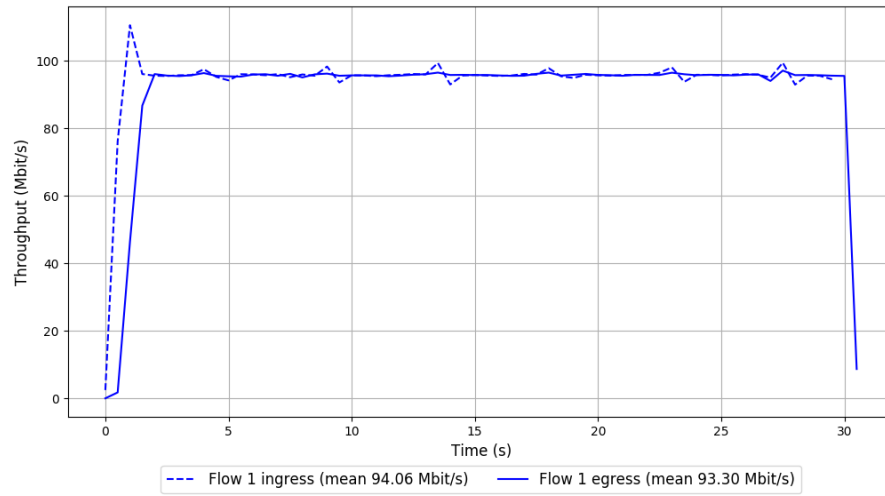## Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 93.79 Mbit/s)   Flow 1 egress (mean 92.91 Mbit/s)

Flow 1 (95th percentile 69.03 ms)

```
Run 4: Statistics of FillP

Start at: 2019-11-23 23:54:08
End at: 2019-11-23 23:54:38
Local clock offset: -2.329 ms
Remote clock offset: -8.212 ms


# Below is generated by plot.py at 2019-11-24 00:35:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.21 Mbit/s
95th percentile per-packet one-way delay: 64.023 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 93.21 Mbit/s
95th percentile per-packet one-way delay: 64.023 ms
Loss rate: 0.79%
```

Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2019-11-24 00:22:04
End at: 2019-11-24 00:22:34
Local clock offset: -1.515 ms
Remote clock offset: -9.042 ms


# Below is generated by plot.py at 2019-11-24 00:35:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.30 Mbit/s
95th percentile per-packet one-way delay: 64.023 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 93.30 Mbit/s
95th percentile per-packet one-way delay: 64.023 ms
Loss rate: 0.81%
```
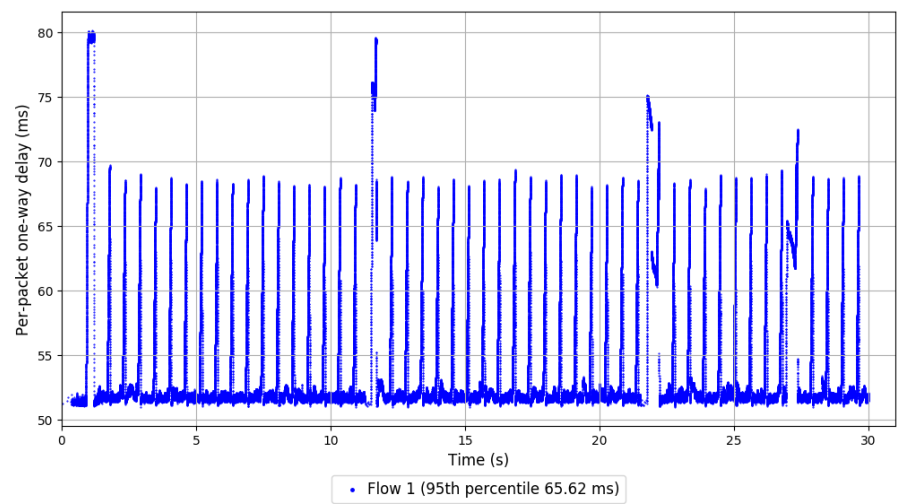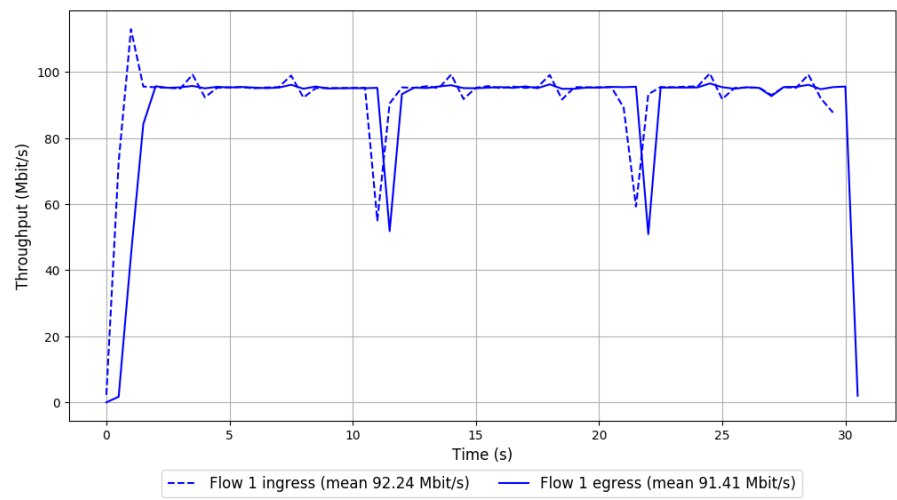
Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 94.06 Mbit/s) --- Flow 1 egress (mean 93.30 Mbit/s)
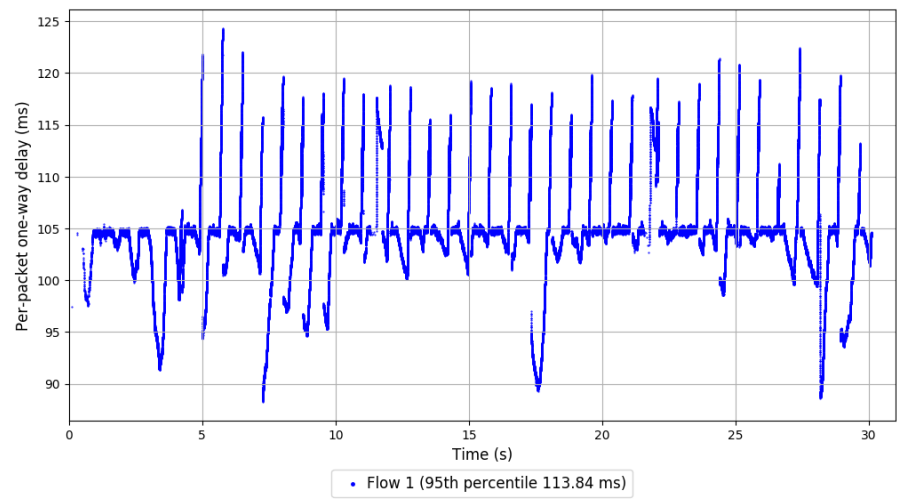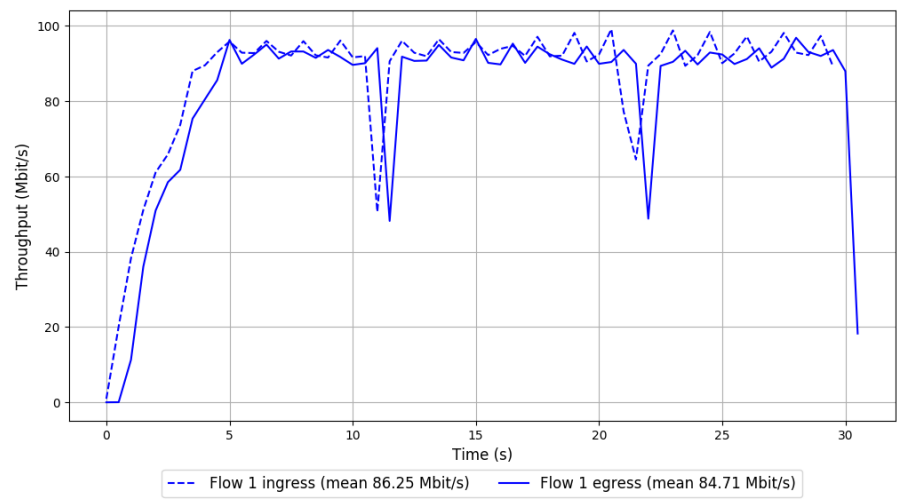

Flow 1 (95th percentile 64.02 ms)

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-11-23 22:24:38
End at: 2019-11-23 22:25:08
Local clock offset: -1.807 ms
Remote clock offset: -9.344 ms


# Below is generated by plot.py at 2019-11-24 00:35:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.41 Mbit/s
95th percentile per-packet one-way delay: 65.618 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 91.41 Mbit/s
95th percentile per-packet one-way delay: 65.618 ms
Loss rate: 0.90%
```
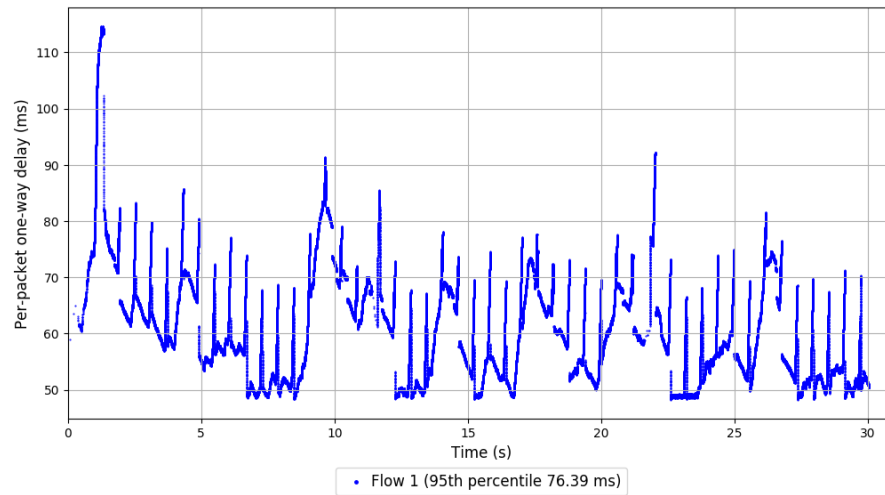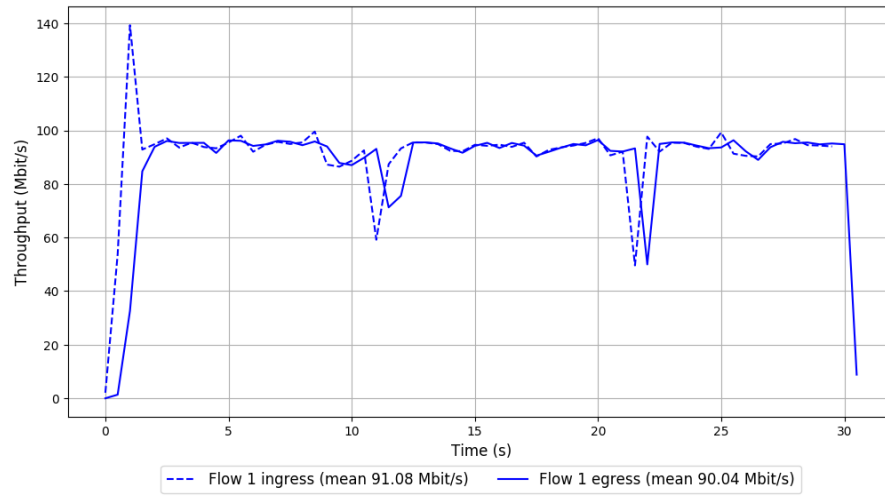
Run 1: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 92.24 Mbit/s)   Flow 1 egress (mean 91.41 Mbit/s)

• Flow 1 (95th percentile 65.62 ms)

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-11-23 22:52:38
End at: 2019-11-23 22:53:08
Local clock offset: -2.691 ms
Remote clock offset: -9.272 ms


# Below is generated by plot.py at 2019-11-24 00:35:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.71 Mbit/s
95th percentile per-packet one-way delay: 113.838 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 84.71 Mbit/s
95th percentile per-packet one-way delay: 113.838 ms
Loss rate: 1.76%
```
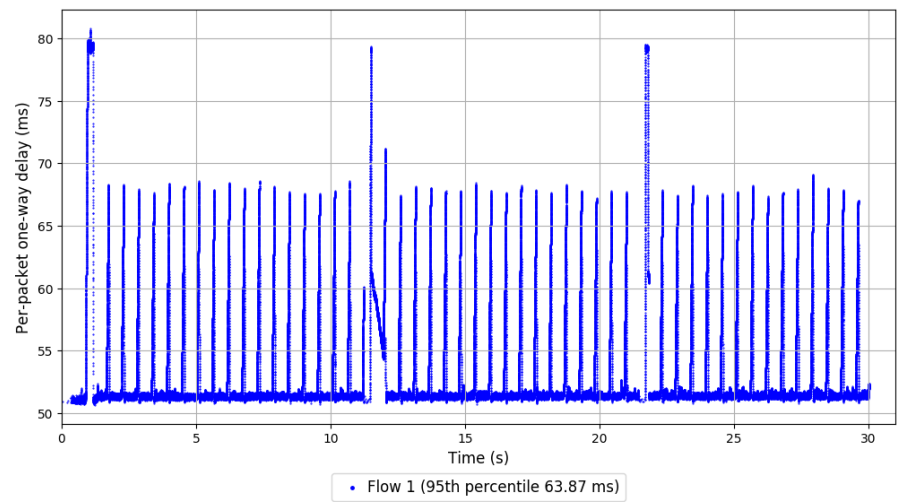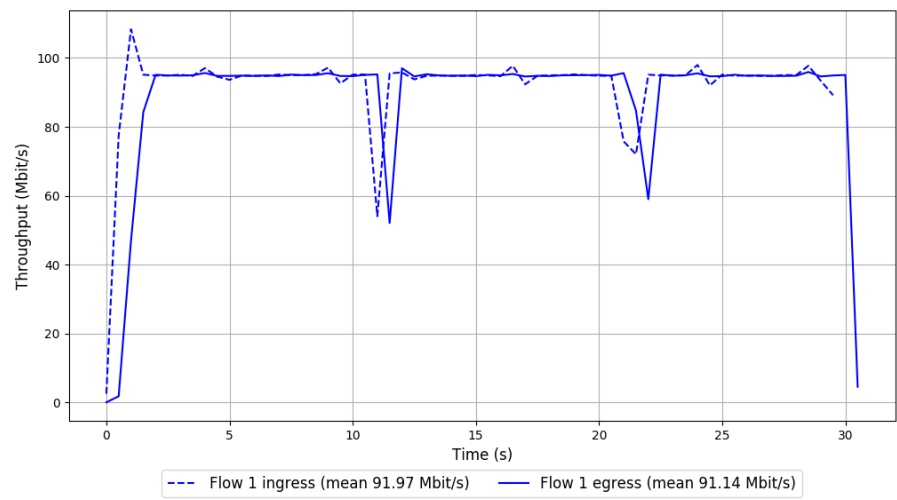
Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 86.25 Mbit/s)   Flow 1 egress (mean 84.71 Mbit/s)

Flow 1 (95th percentile 113.84 ms)

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-11-23 23:20:25
End at: 2019-11-23 23:20:55
Local clock offset: -1.532 ms
Remote clock offset: -8.132 ms


# Below is generated by plot.py at 2019-11-24 00:35:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.04 Mbit/s
95th percentile per-packet one-way delay: 76.395 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 90.04 Mbit/s
95th percentile per-packet one-way delay: 76.395 ms
Loss rate: 1.17%
```
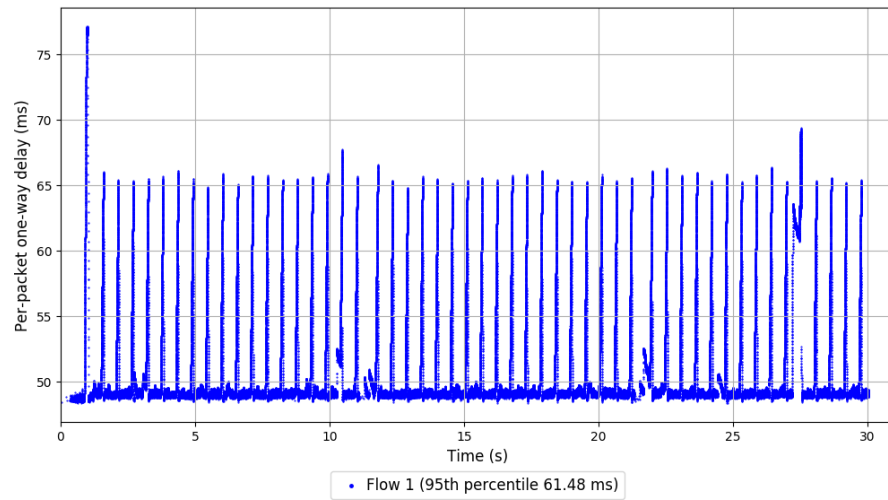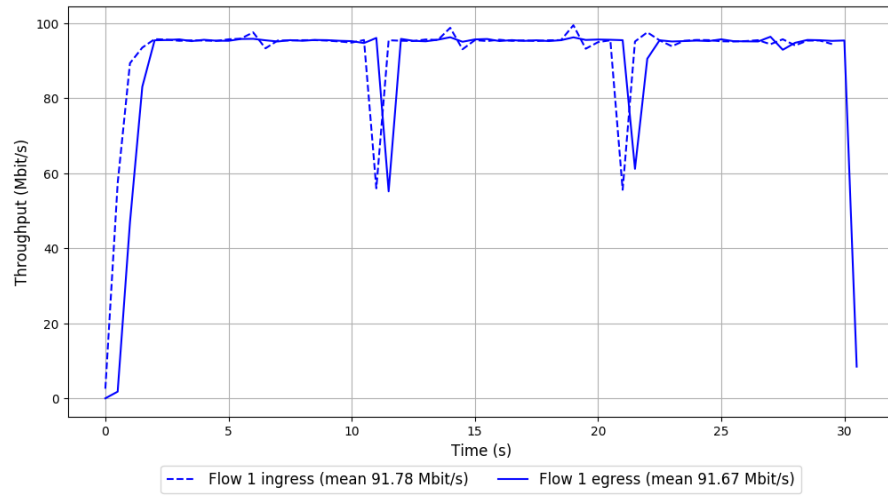
Run 3: Report of FillP-Sheep — Data Link

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-11-23 23:48:19
End at: 2019-11-23 23:48:49
Local clock offset: -2.3 ms
Remote clock offset: -7.642 ms


# Below is generated by plot.py at 2019-11-24 00:36:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.14 Mbit/s
95th percentile per-packet one-way delay: 63.868 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 91.14 Mbit/s
95th percentile per-packet one-way delay: 63.868 ms
Loss rate: 0.90%
```
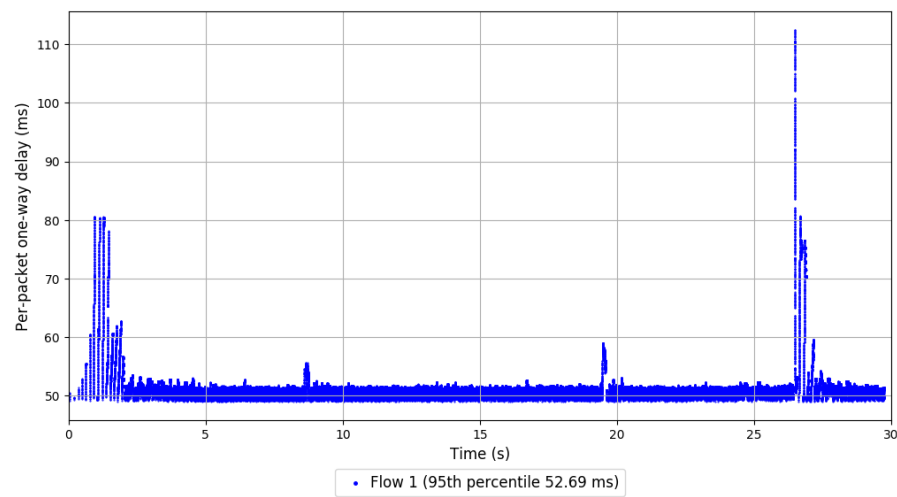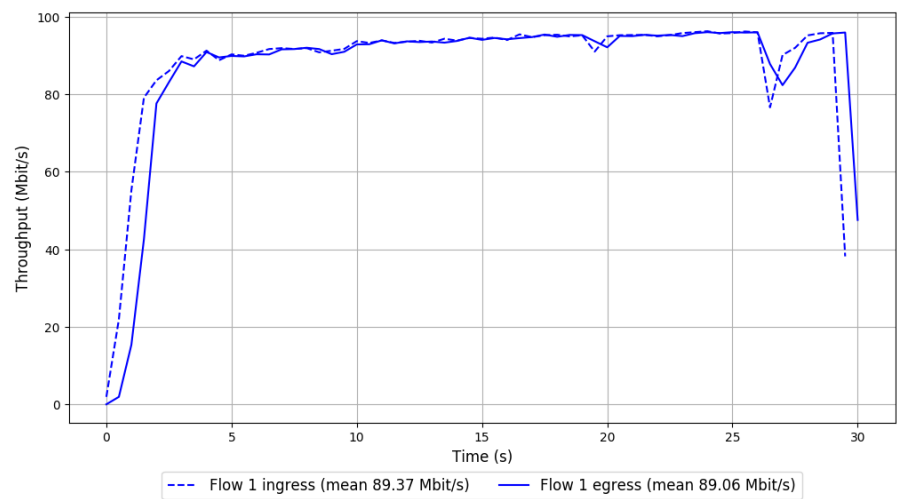
Run 4: Report of FillP-Sheep — Data Link

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-11-24 00:16:15
End at: 2019-11-24 00:16:45
Local clock offset: -1.081 ms
Remote clock offset: -9.522 ms


# Below is generated by plot.py at 2019-11-24 00:36:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.67 Mbit/s
95th percentile per-packet one-way delay: 61.475 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 91.67 Mbit/s
95th percentile per-packet one-way delay: 61.475 ms
Loss rate: 0.12%
```

Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 91.78 Mbit/s) --- Flow 1 egress (mean 91.67 Mbit/s)

Flow 1 (95th percentile 61.48 ms)

```
Run 1: Statistics of Indigo

Start at: 2019-11-23 22:22:19
End at: 2019-11-23 22:22:49
Local clock offset: -1.692 ms
Remote clock offset: -8.754 ms


# Below is generated by plot.py at 2019-11-24 00:36:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.06 Mbit/s
95th percentile per-packet one-way delay: 52.694 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 89.06 Mbit/s
95th percentile per-packet one-way delay: 52.694 ms
Loss rate: 0.35%
```

Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-11-23 22:50:19
End at: 2019-11-23 22:50:49
Local clock offset: -1.859 ms
Remote clock offset: 1.073 ms


# Below is generated by plot.py at 2019-11-24 00:36:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.24 Mbit/s
95th percentile per-packet one-way delay: 115.643 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 39.24 Mbit/s
95th percentile per-packet one-way delay: 115.643 ms
Loss rate: 1.48%
```
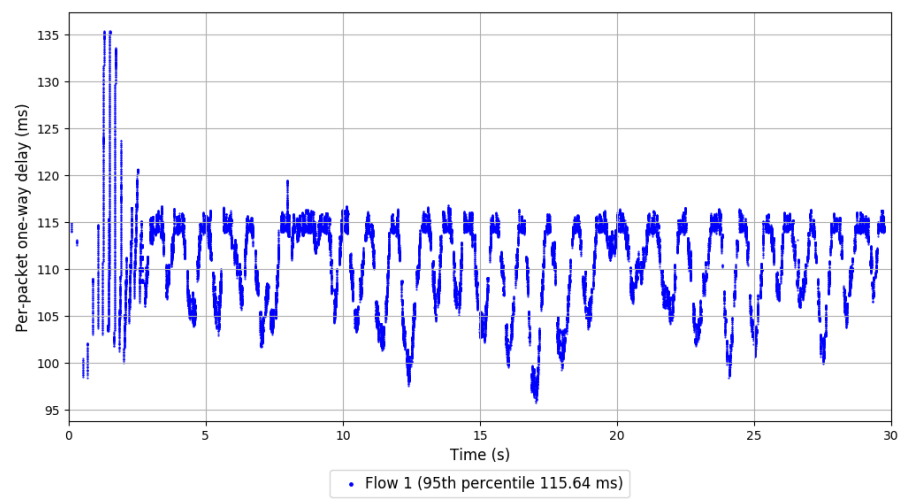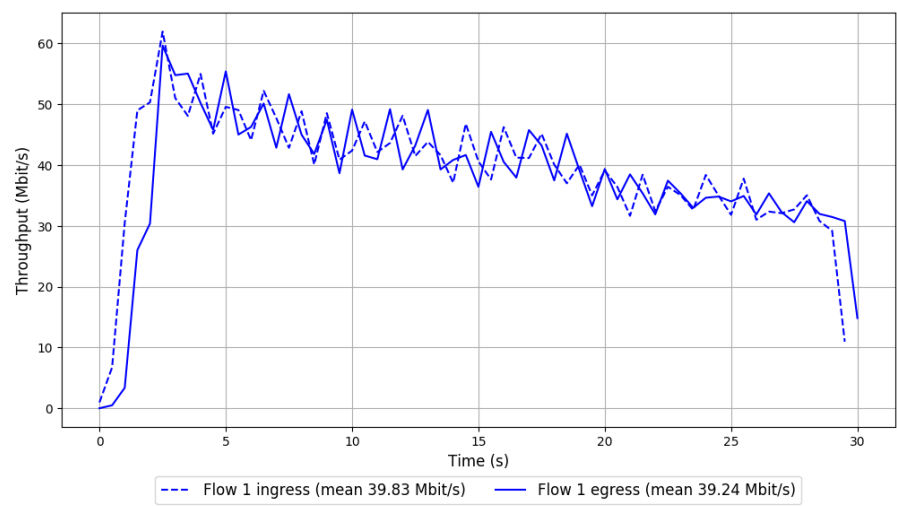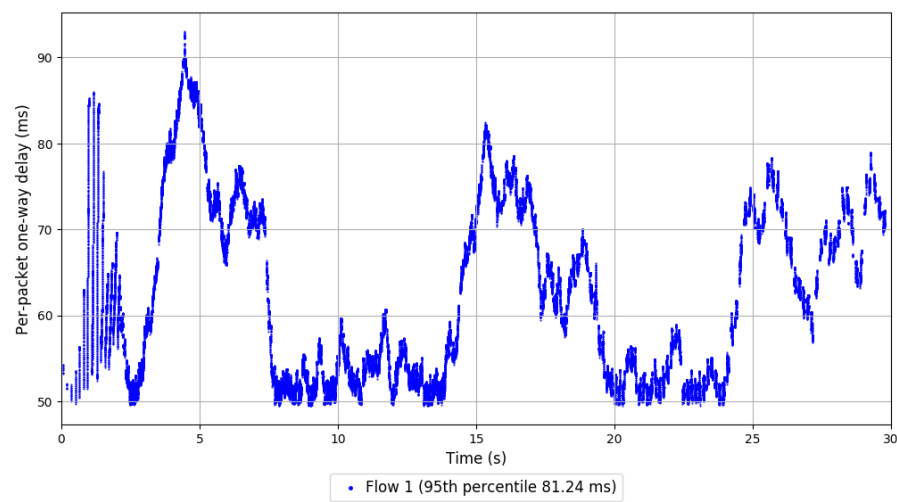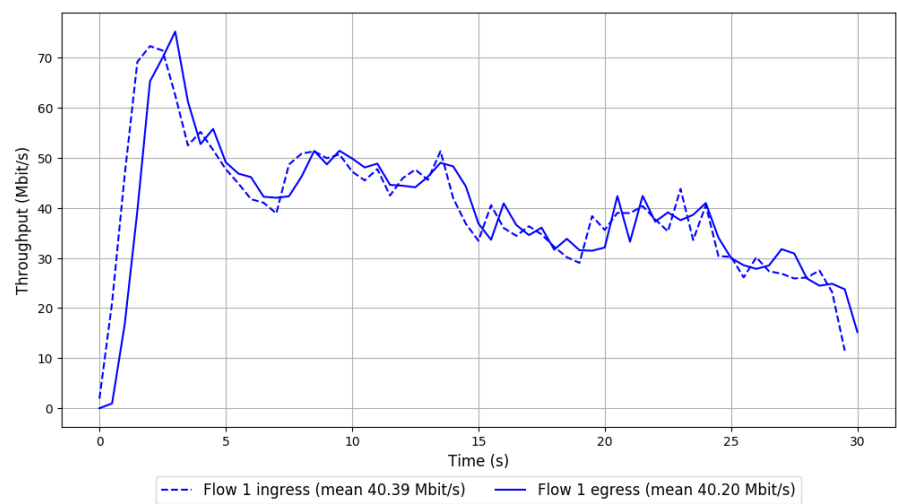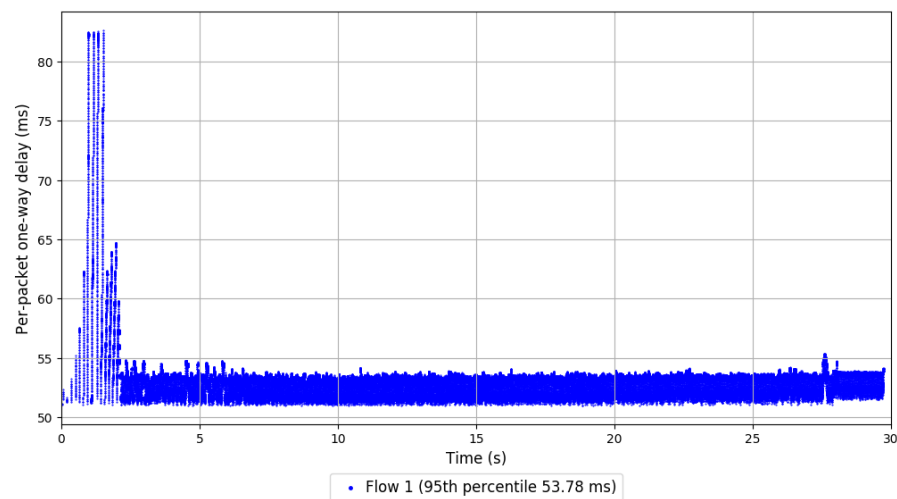
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-11-23 23:18:08
End at: 2019-11-23 23:18:38
Local clock offset: -1.617 ms
Remote clock offset: -8.888 ms


# Below is generated by plot.py at 2019-11-24 00:36:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 40.20 Mbit/s
95th percentile per-packet one-way delay: 81.236 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 40.20 Mbit/s
95th percentile per-packet one-way delay: 81.236 ms
Loss rate: 0.40%
```

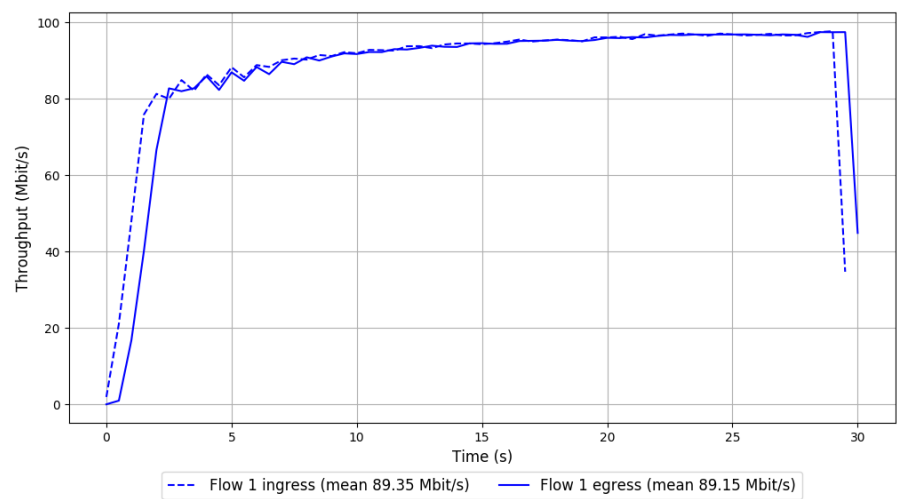Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-11-23 23:46:00
End at: 2019-11-23 23:46:30
Local clock offset: -2.277 ms
Remote clock offset: -8.268 ms


# Below is generated by plot.py at 2019-11-24 00:36:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.15 Mbit/s
95th percentile per-packet one-way delay: 53.779 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 89.15 Mbit/s
95th percentile per-packet one-way delay: 53.779 ms
Loss rate: 0.22%
```
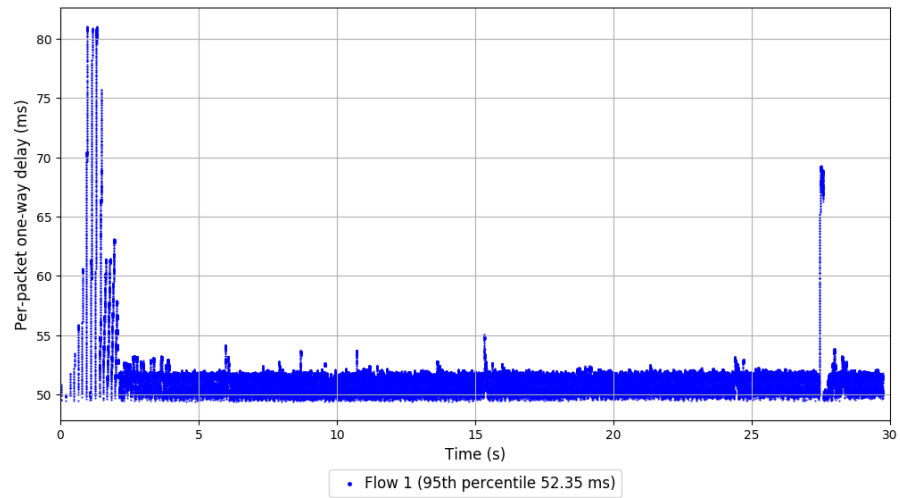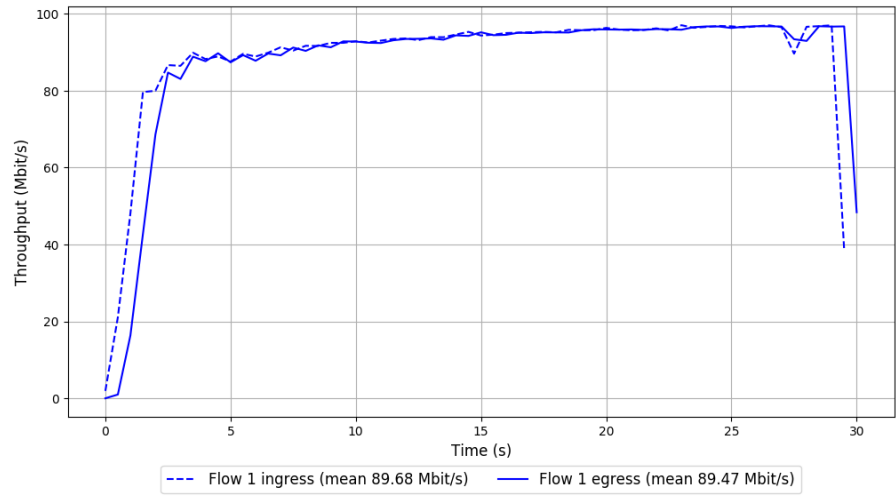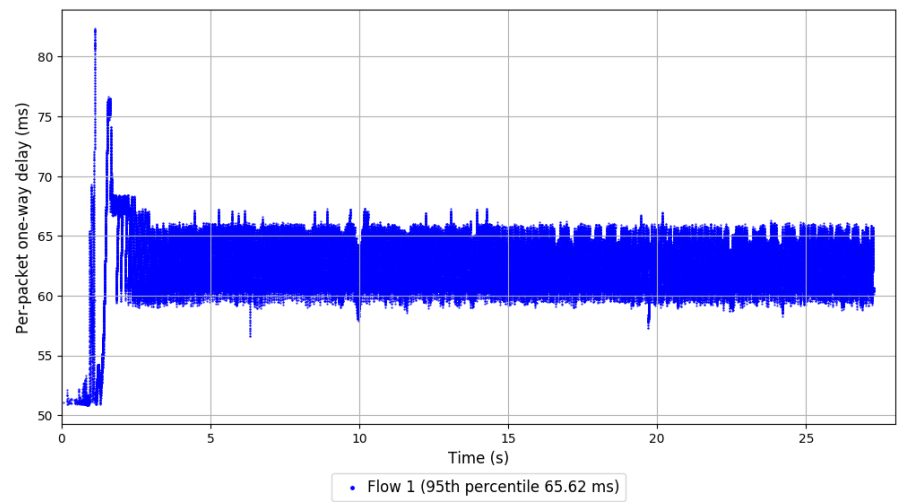
Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 89.35 Mbit/s) ---- Flow 1 egress (mean 89.15 Mbit/s) ——

Flow 1 (95th percentile 53.78 ms)

```
Run 5: Statistics of Indigo

Start at: 2019-11-24 00:13:56
End at: 2019-11-24 00:14:26
Local clock offset: -1.332 ms
Remote clock offset: -9.6 ms


# Below is generated by plot.py at 2019-11-24 00:36:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.47 Mbit/s
95th percentile per-packet one-way delay: 52.354 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 89.47 Mbit/s
95th percentile per-packet one-way delay: 52.354 ms
Loss rate: 0.23%
```

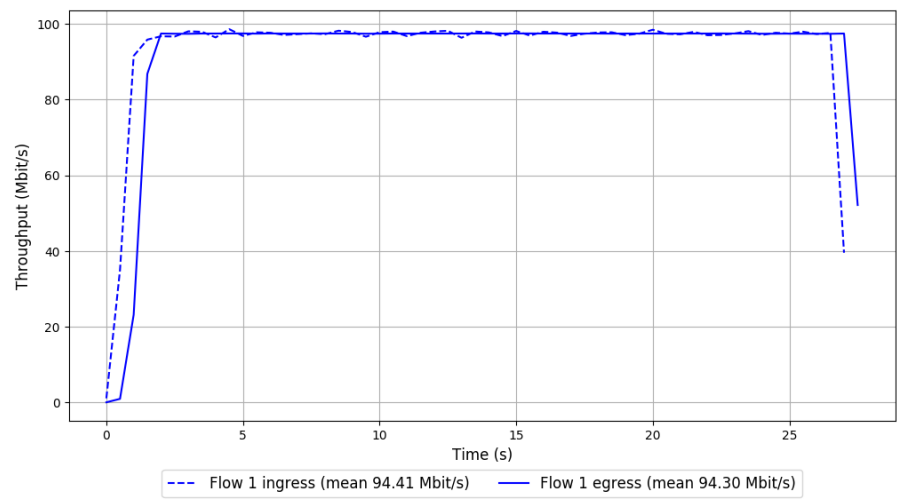## Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-11-23 22:15:22
End at: 2019-11-23 22:15:52
Local clock offset: -2.174 ms
Remote clock offset: -8.903 ms


# Below is generated by plot.py at 2019-11-24 00:36:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.30 Mbit/s
95th percentile per-packet one-way delay: 65.623 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 94.30 Mbit/s
95th percentile per-packet one-way delay: 65.623 ms
Loss rate: 0.09%
```
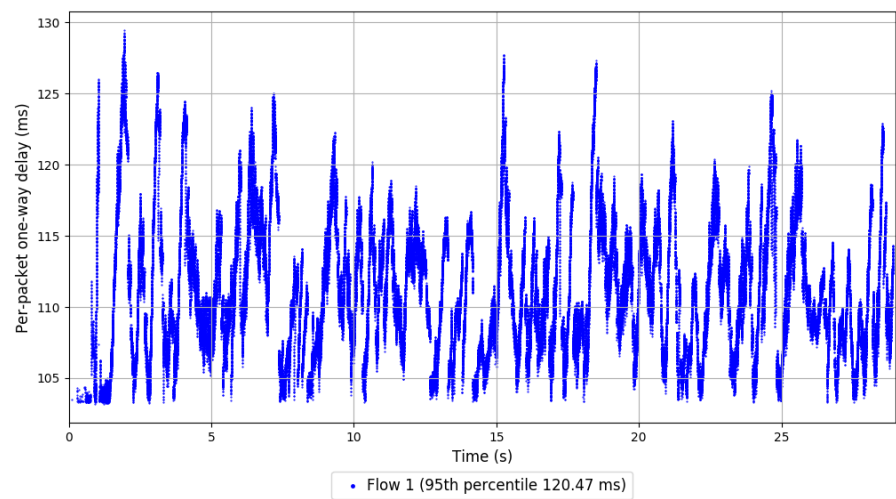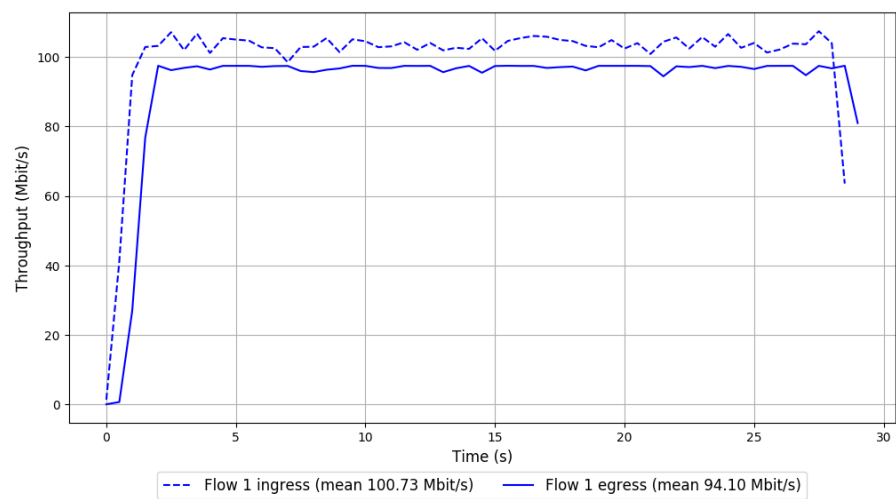
Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-11-23 22:43:18
End at: 2019-11-23 22:43:48
Local clock offset: -1.988 ms
Remote clock offset: -8.677 ms


# Below is generated by plot.py at 2019-11-24 00:36:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.10 Mbit/s
95th percentile per-packet one-way delay: 120.471 ms
Loss rate: 6.55%
-- Flow 1:
Average throughput: 94.10 Mbit/s
95th percentile per-packet one-way delay: 120.471 ms
Loss rate: 6.55%
```

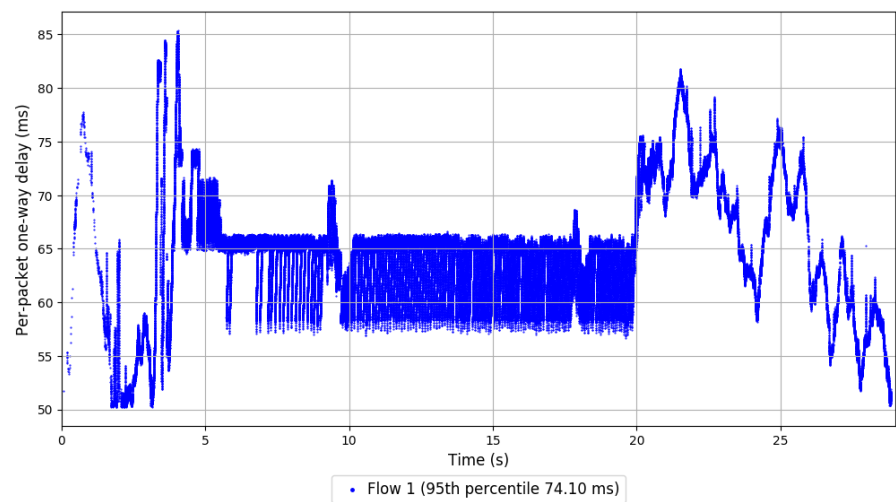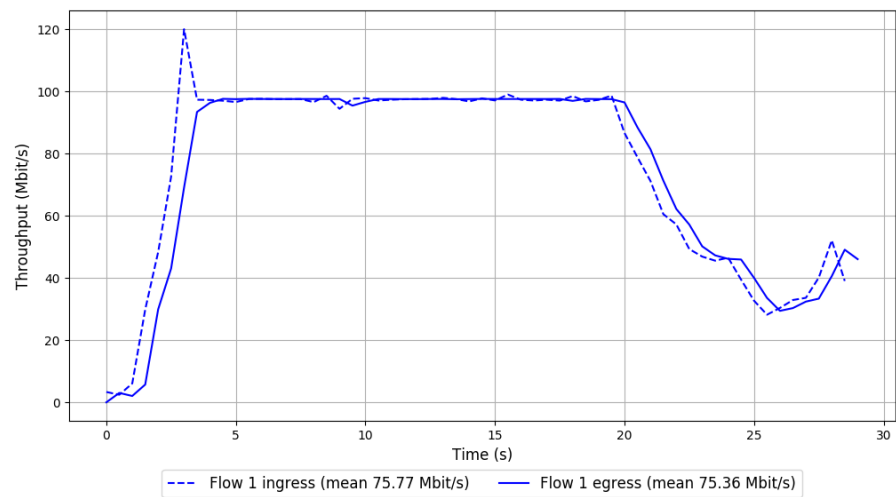# Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-11-23 23:11:12
End at: 2019-11-23 23:11:42
Local clock offset: -2.587 ms
Remote clock offset: -8.414 ms


# Below is generated by plot.py at 2019-11-24 00:36:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.36 Mbit/s
95th percentile per-packet one-way delay: 74.103 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 75.36 Mbit/s
95th percentile per-packet one-way delay: 74.103 ms
Loss rate: 0.53%
```

Run 3: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 75.77 Mbit/s)   Flow 1 egress (mean 75.36 Mbit/s)
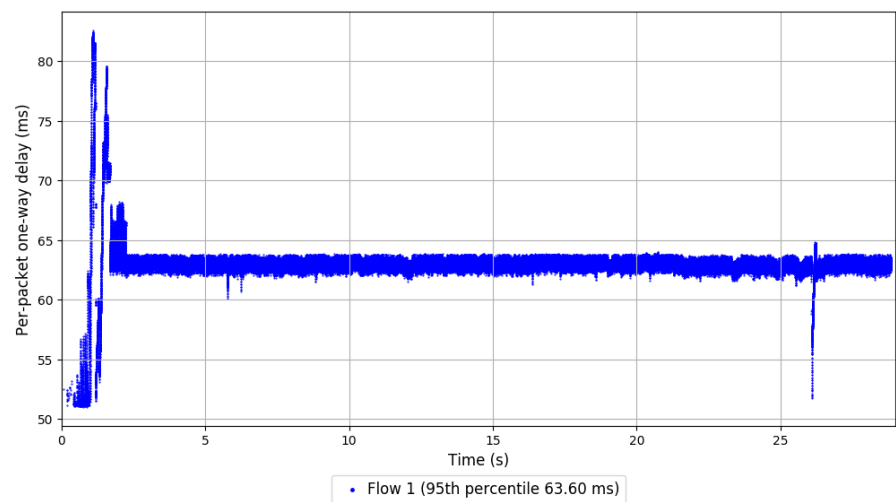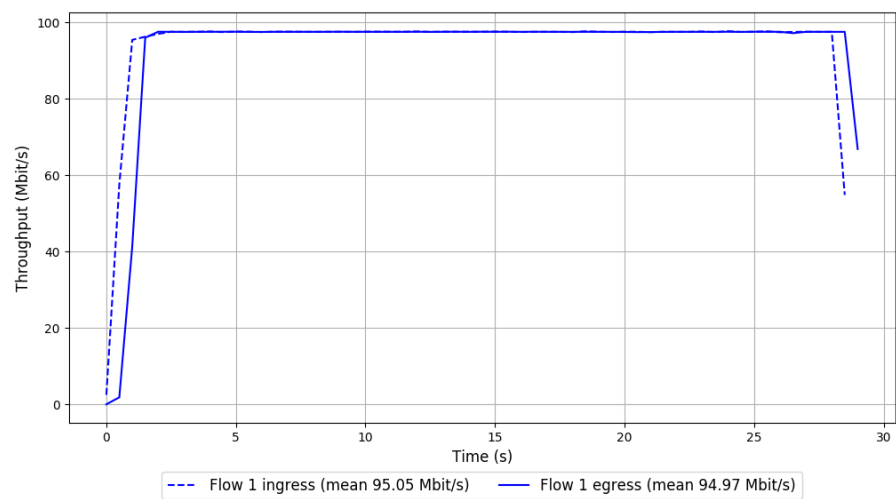

Flow 1 (95th percentile 74.10 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-11-23 23:39:03
End at: 2019-11-23 23:39:33
Local clock offset: -2.51 ms
Remote clock offset: -8.356 ms


# Below is generated by plot.py at 2019-11-24 00:37:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.97 Mbit/s
95th percentile per-packet one-way delay: 63.602 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 94.97 Mbit/s
95th percentile per-packet one-way delay: 63.602 ms
Loss rate: 0.07%
```

Run 4: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 95.05 Mbit/s)   Flow 1 egress (mean 94.97 Mbit/s)
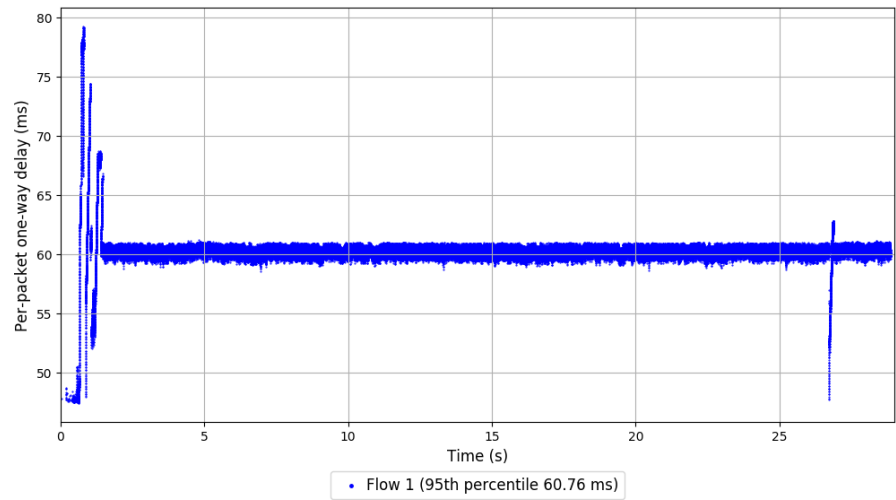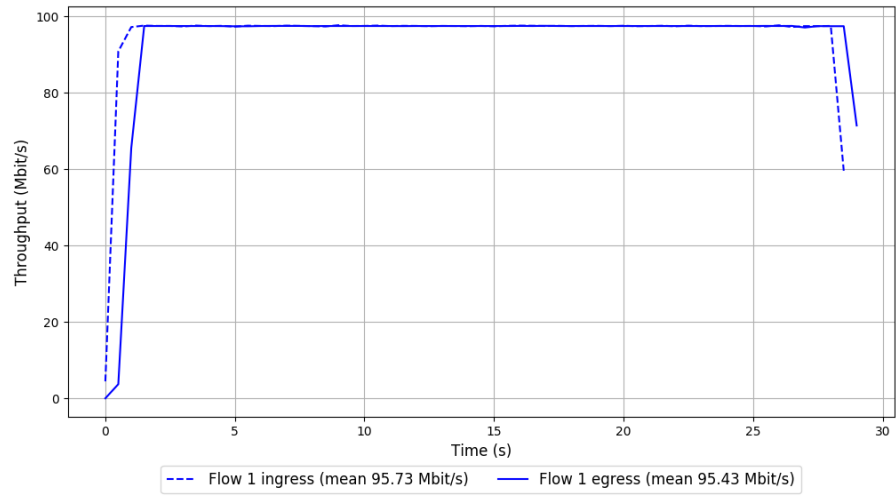

Flow 1 (95th percentile 63.60 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-11-24 00:06:55
End at: 2019-11-24 00:07:25
Local clock offset: -1.947 ms
Remote clock offset: -9.475 ms


# Below is generated by plot.py at 2019-11-24 00:37:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.43 Mbit/s
95th percentile per-packet one-way delay: 60.761 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 95.43 Mbit/s
95th percentile per-packet one-way delay: 60.761 ms
Loss rate: 0.27%
```
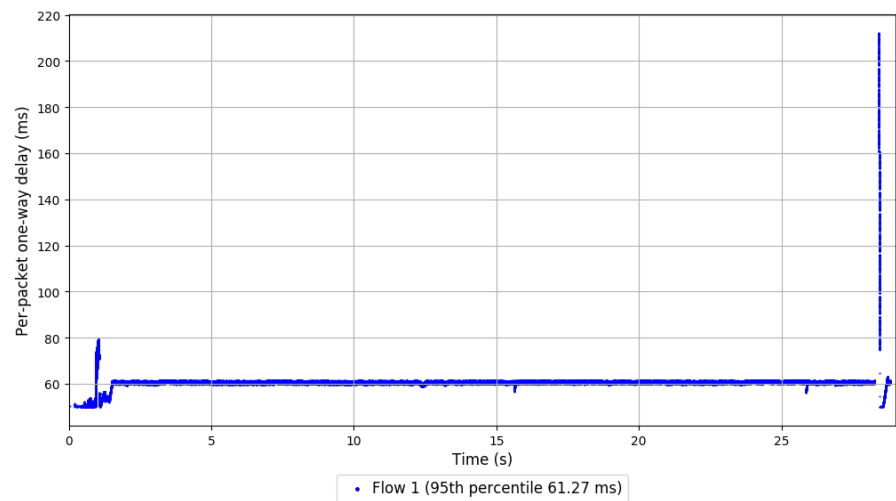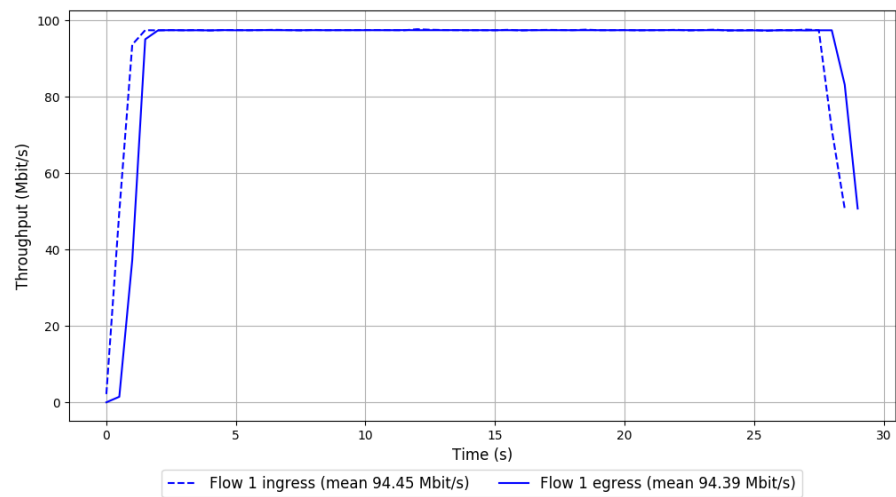
Run 5: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 95.73 Mbit/s) —— Flow 1 egress (mean 95.43 Mbit/s)

• Flow 1 (95th percentile 60.76 ms)

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-11-23 22:16:33
End at: 2019-11-23 22:17:03
Local clock offset: -1.506 ms
Remote clock offset: -8.925 ms


# Below is generated by plot.py at 2019-11-24 00:37:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.39 Mbit/s
95th percentile per-packet one-way delay: 61.275 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 94.39 Mbit/s
95th percentile per-packet one-way delay: 61.275 ms
Loss rate: 0.03%
```

Run 1: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 94.45 Mbit/s) --- Flow 1 egress (mean 94.39 Mbit/s)
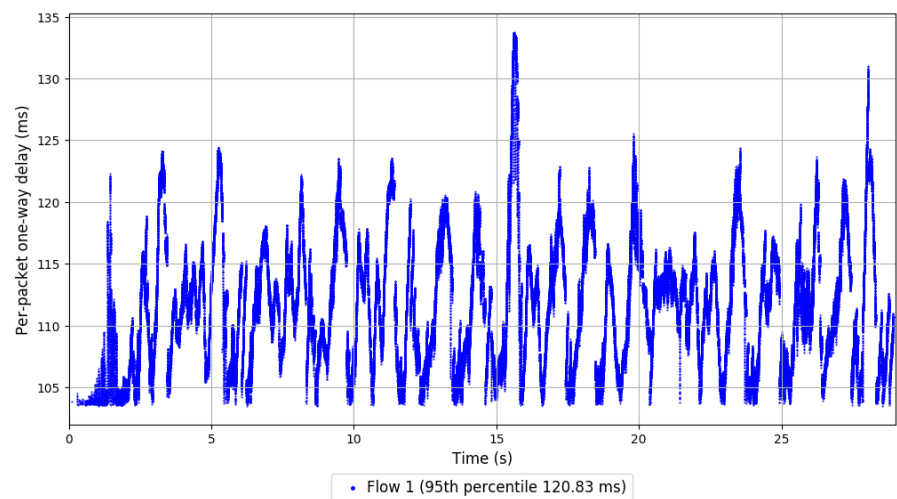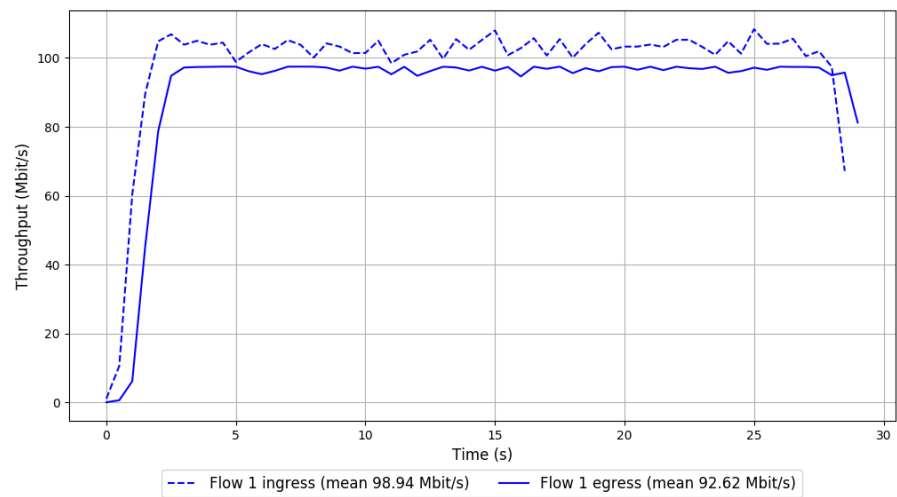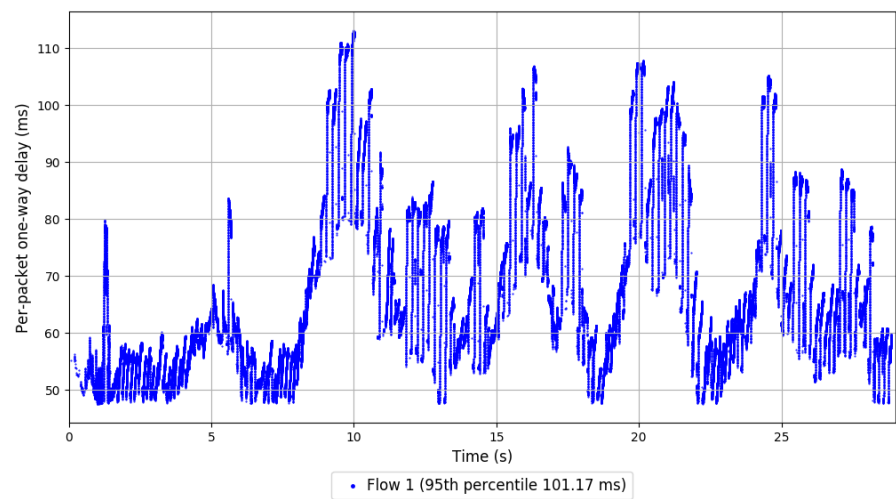

Flow 1 (95th percentile 61.27 ms)

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-11-23 22:44:31
End at: 2019-11-23 22:45:01
Local clock offset: -2.665 ms
Remote clock offset: -9.086 ms


# Below is generated by plot.py at 2019-11-24 00:37:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.62 Mbit/s
95th percentile per-packet one-way delay: 120.832 ms
Loss rate: 6.36%
-- Flow 1:
Average throughput: 92.62 Mbit/s
95th percentile per-packet one-way delay: 120.832 ms
Loss rate: 6.36%
```

Run 2: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 98.94 Mbit/s)   Flow 1 egress (mean 92.62 Mbit/s)
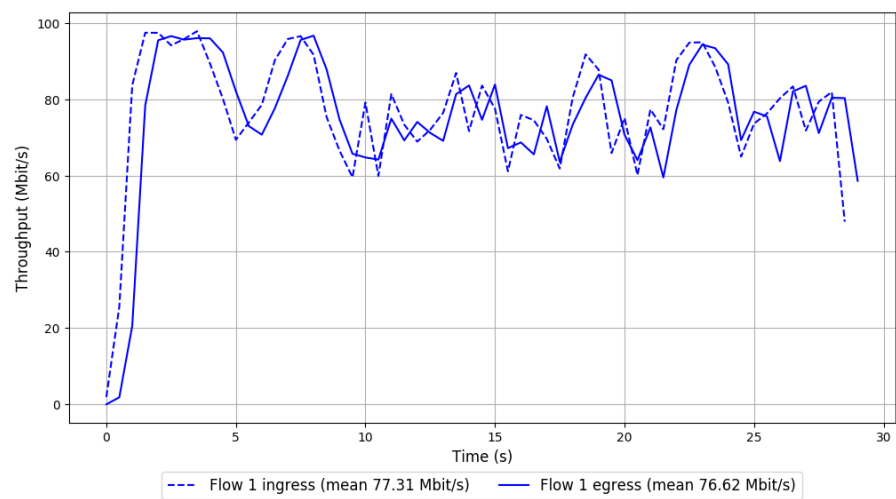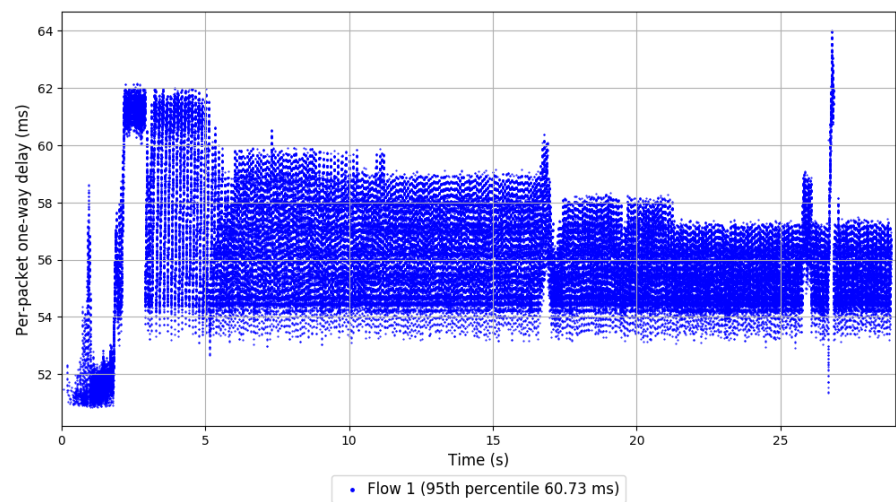

Flow 1 (95th percentile 120.83 ms)

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-11-23 23:12:23
End at: 2019-11-23 23:12:53
Local clock offset: -2.352 ms
Remote clock offset: -9.195 ms


# Below is generated by plot.py at 2019-11-24 00:37:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.62 Mbit/s
95th percentile per-packet one-way delay: 101.170 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 76.62 Mbit/s
95th percentile per-packet one-way delay: 101.170 ms
Loss rate: 0.88%
```

Run 3: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 77.31 Mbit/s)   Flow 1 egress (mean 76.62 Mbit/s)
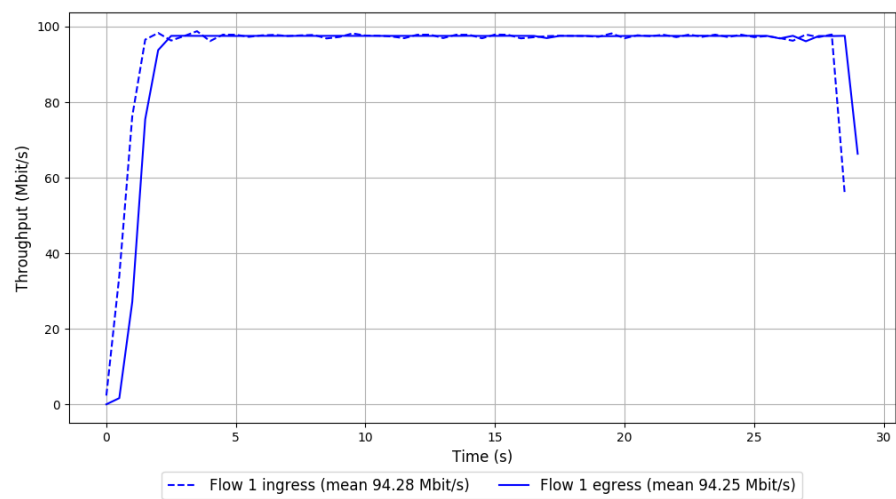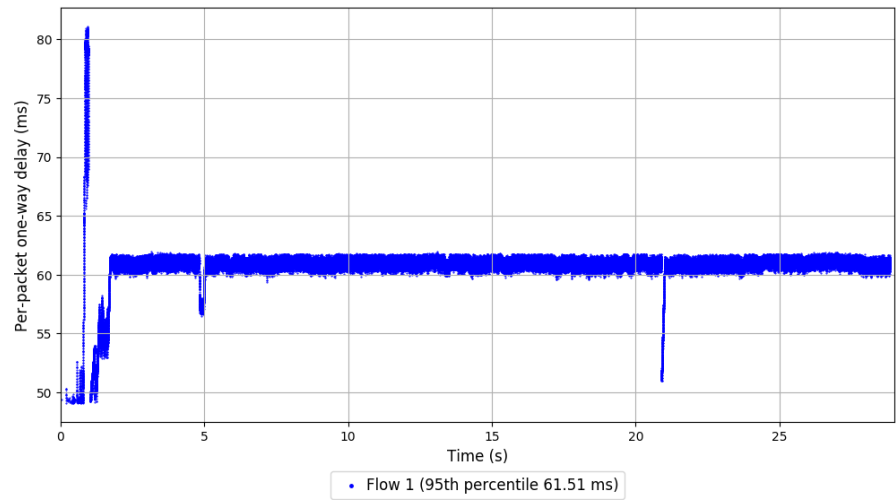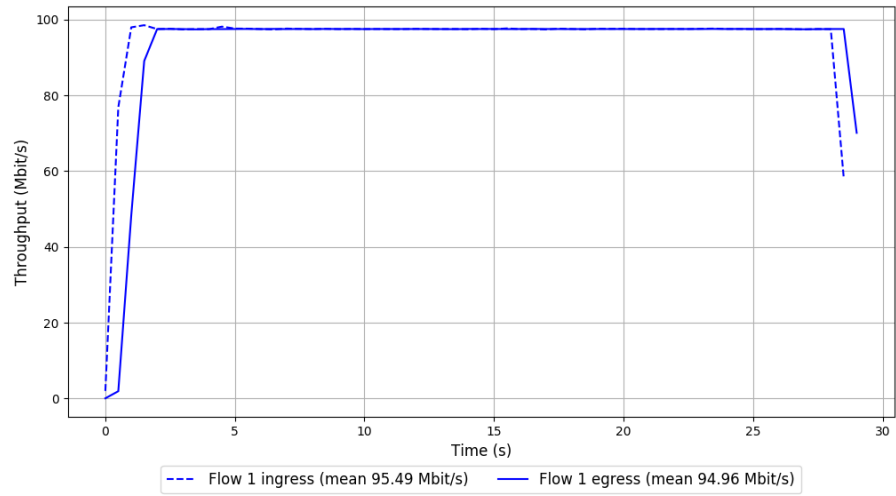

Flow 1 (95th percentile 101.17 ms)

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-11-23 23:40:14
End at: 2019-11-23 23:40:44
Local clock offset: -1.698 ms
Remote clock offset: -7.755 ms


# Below is generated by plot.py at 2019-11-24 00:37:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.25 Mbit/s
95th percentile per-packet one-way delay: 60.726 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 94.25 Mbit/s
95th percentile per-packet one-way delay: 60.726 ms
Loss rate: 0.01%
```

Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-11-24 00:08:06
End at: 2019-11-24 00:08:36
Local clock offset: -1.988 ms
Remote clock offset: -8.753 ms


# Below is generated by plot.py at 2019-11-24 00:38:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.96 Mbit/s
95th percentile per-packet one-way delay: 61.512 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 94.96 Mbit/s
95th percentile per-packet one-way delay: 61.512 ms
Loss rate: 0.51%
```

Run 5: Report of Indigo-MusesC5 — Data Link

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-11-23 22:37:21
End at: 2019-11-23 22:37:51
Local clock offset: -2.95 ms
Remote clock offset: -9.221 ms


# Below is generated by plot.py at 2019-11-24 00:38:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.16 Mbit/s
95th percentile per-packet one-way delay: 114.837 ms
Loss rate: 3.70%
-- Flow 1:
Average throughput: 50.16 Mbit/s
95th percentile per-packet one-way delay: 114.837 ms
Loss rate: 3.70%
```
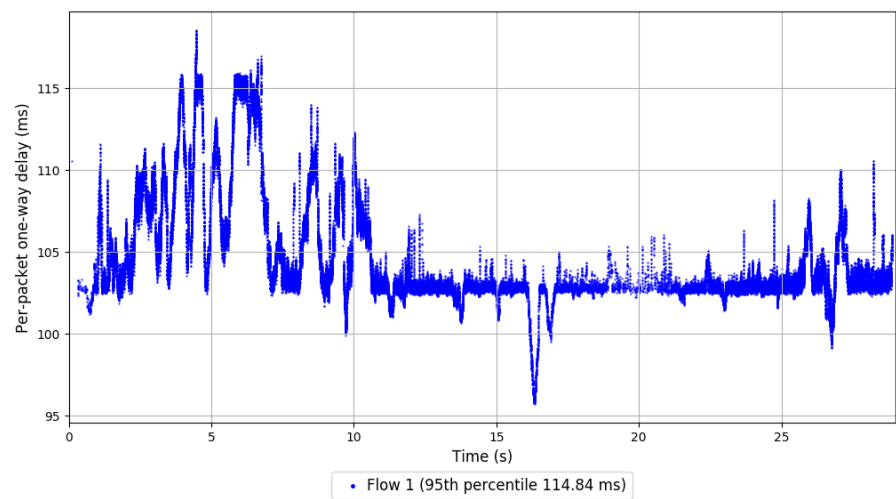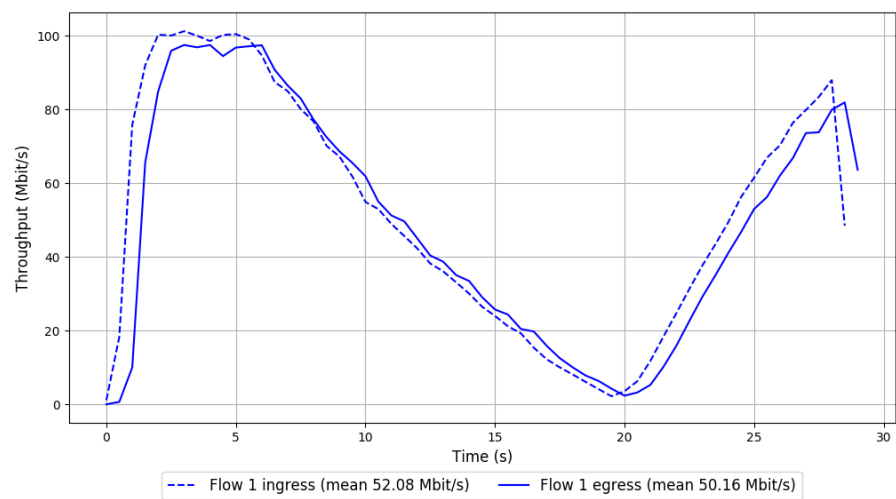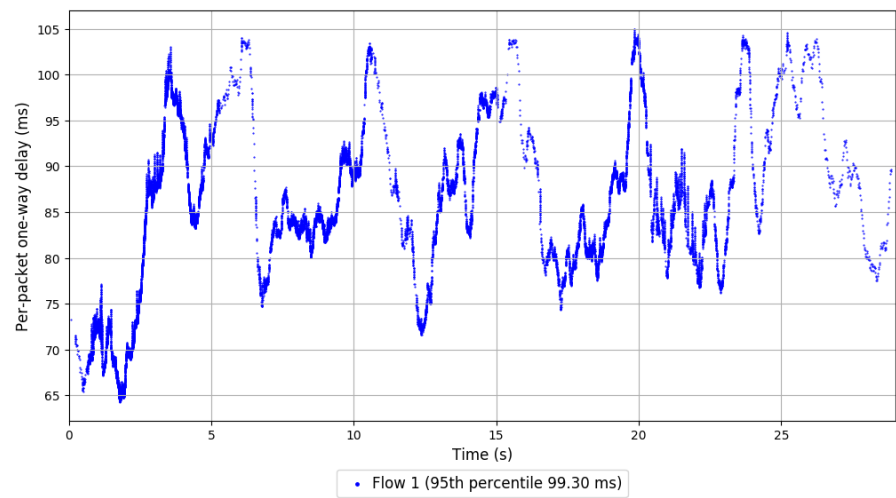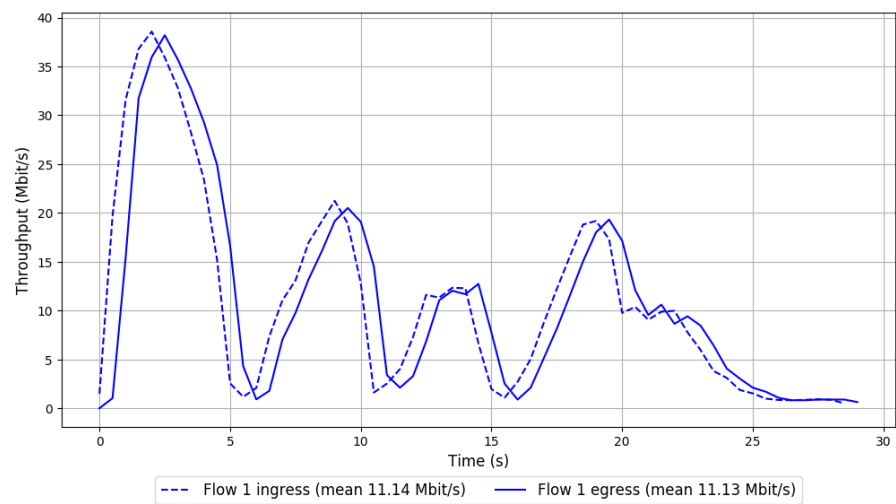
Run 1: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 52.08 Mbit/s) --- Flow 1 egress (mean 50.16 Mbit/s)

Flow 1 (95th percentile 114.84 ms)

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-11-23 23:05:25
End at: 2019-11-23 23:05:55
Local clock offset: -2.67 ms
Remote clock offset: -9.152 ms


# Below is generated by plot.py at 2019-11-24 00:38:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.13 Mbit/s
95th percentile per-packet one-way delay: 99.304 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 11.13 Mbit/s
95th percentile per-packet one-way delay: 99.304 ms
Loss rate: 0.07%
```
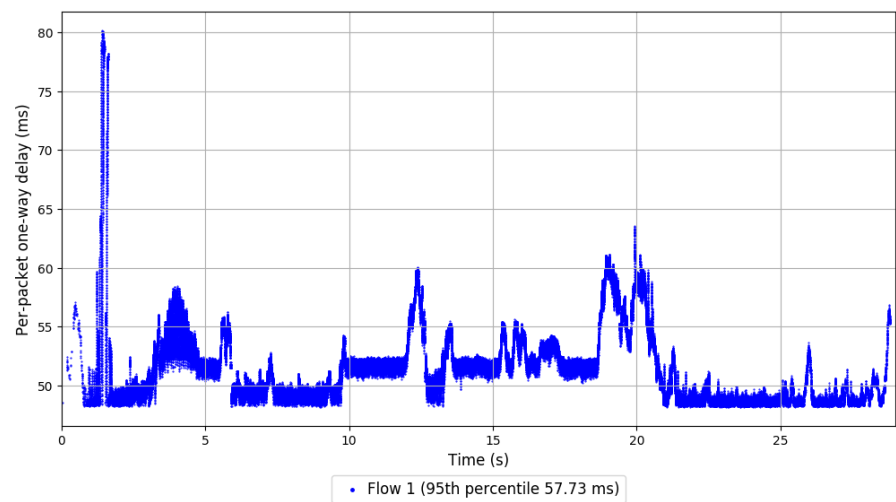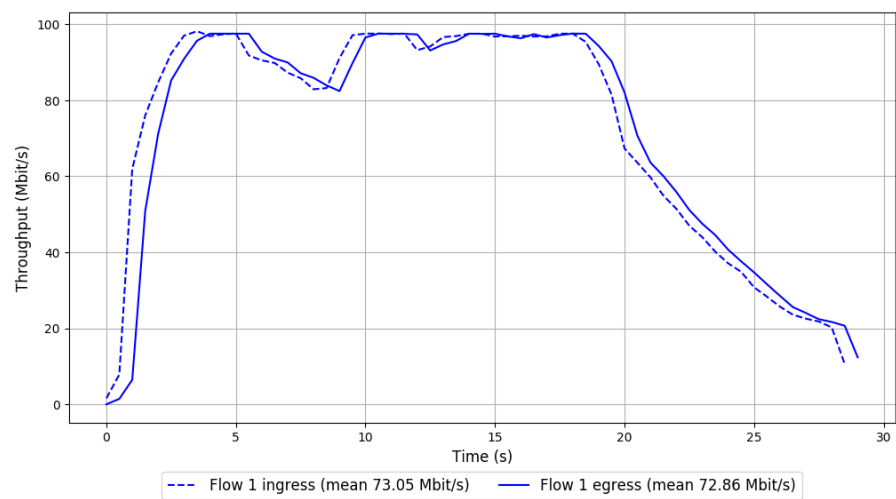
Run 2: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 11.14 Mbit/s)   Flow 1 egress (mean 11.13 Mbit/s)

· Flow 1 (95th percentile 99.30 ms)

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-11-23 23:33:12
End at: 2019-11-23 23:33:42
Local clock offset: -1.507 ms
Remote clock offset: -7.727 ms


# Below is generated by plot.py at 2019-11-24 00:38:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.86 Mbit/s
95th percentile per-packet one-way delay: 57.733 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 72.86 Mbit/s
95th percentile per-packet one-way delay: 57.733 ms
Loss rate: 0.23%
```

Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-11-24 00:01:03
End at: 2019-11-24 00:01:33
Local clock offset: -1.749 ms
Remote clock offset: -9.276 ms


# Below is generated by plot.py at 2019-11-24 00:38:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.74 Mbit/s
95th percentile per-packet one-way delay: 57.515 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 94.74 Mbit/s
95th percentile per-packet one-way delay: 57.515 ms
Loss rate: 0.02%
```
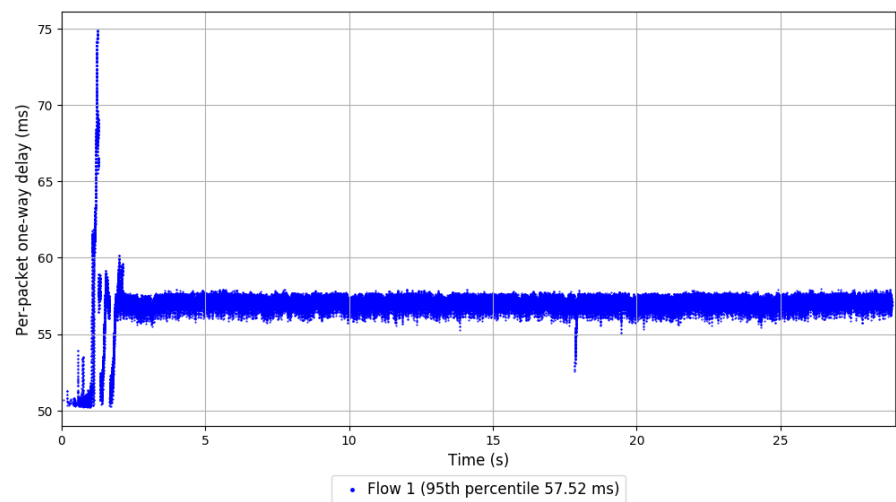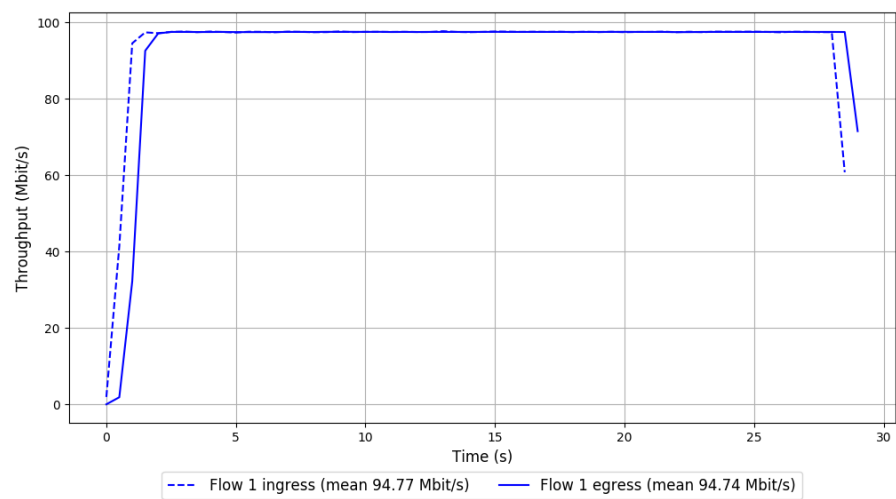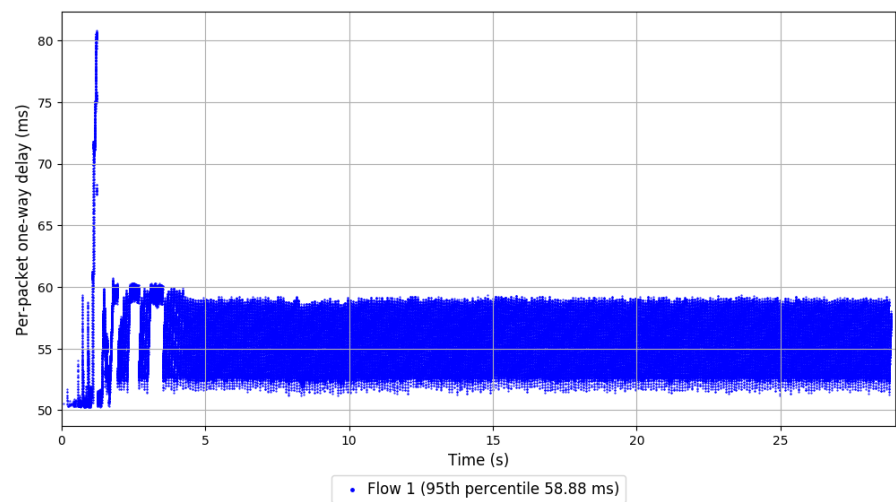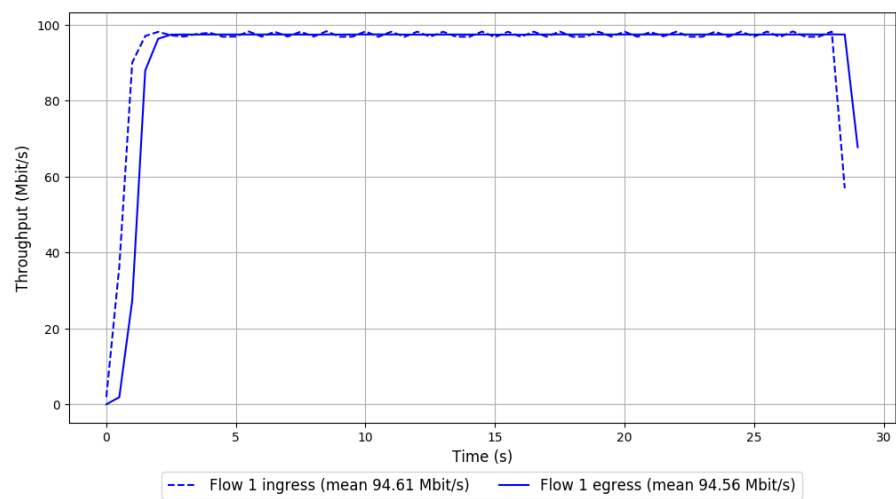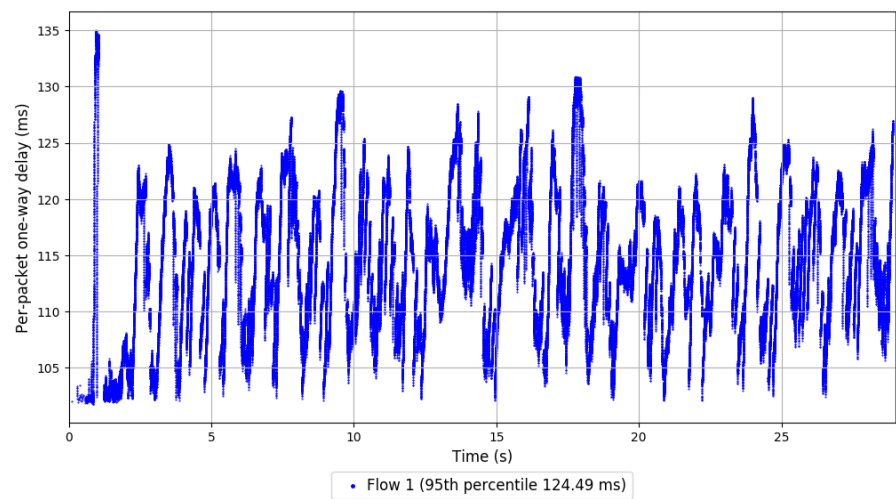
Run 4: Report of Indigo-MusesD — Data Link

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-11-24 00:29:01
End at: 2019-11-24 00:29:31
Local clock offset: -1.314 ms
Remote clock offset: -9.045 ms


# Below is generated by plot.py at 2019-11-24 00:38:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.56 Mbit/s
95th percentile per-packet one-way delay: 58.885 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 94.56 Mbit/s
95th percentile per-packet one-way delay: 58.885 ms
Loss rate: 0.03%
```
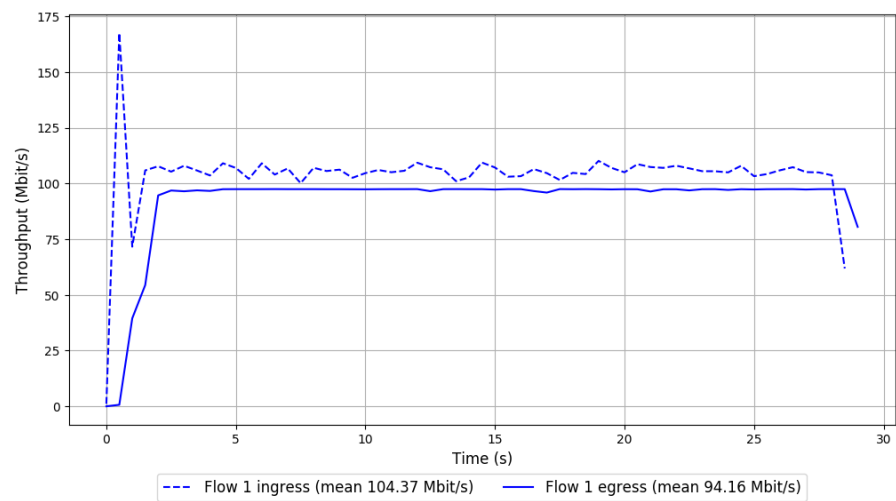
Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-11-23 22:39:44
End at: 2019-11-23 22:40:14
Local clock offset: -2.431 ms
Remote clock offset: -9.15 ms


# Below is generated by plot.py at 2019-11-24 00:38:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.16 Mbit/s
95th percentile per-packet one-way delay: 124.489 ms
Loss rate: 9.70%
-- Flow 1:
Average throughput: 94.16 Mbit/s
95th percentile per-packet one-way delay: 124.489 ms
Loss rate: 9.70%
```
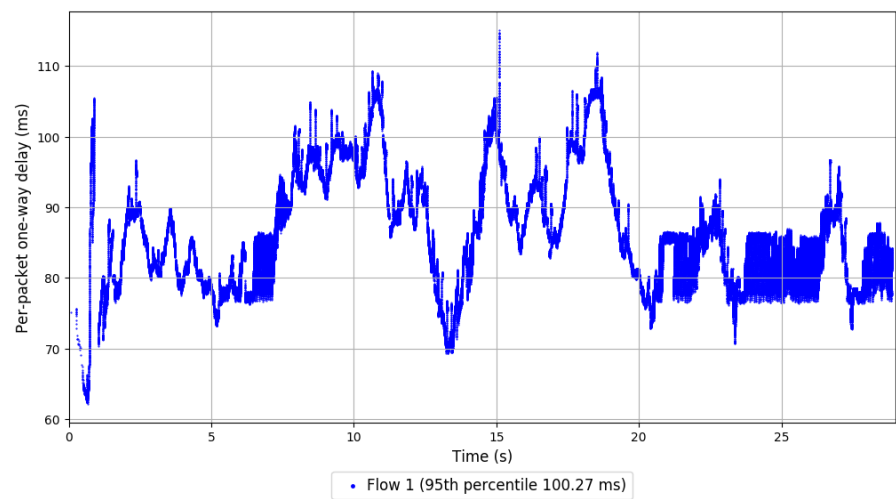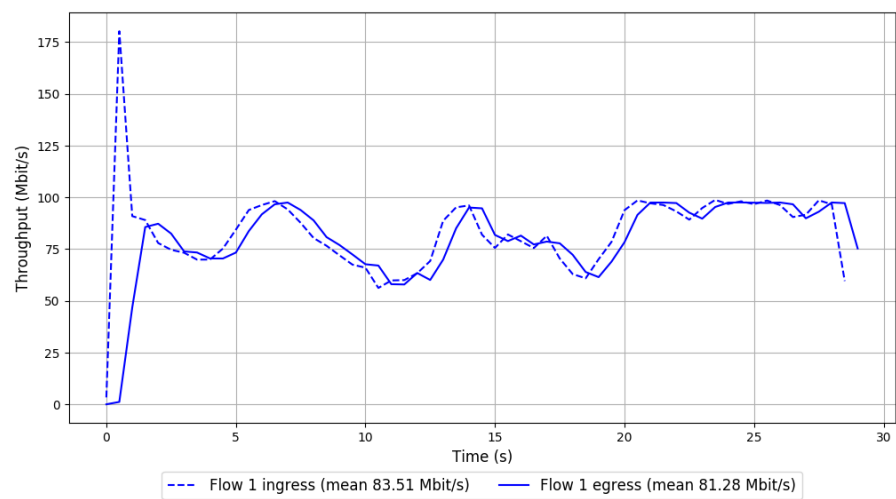
Run 1: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 104.37 Mbit/s)   Flow 1 egress (mean 94.16 Mbit/s)

Flow 1 (95th percentile 124.49 ms)

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-11-23 23:07:46
End at: 2019-11-23 23:08:16
Local clock offset: -3.622 ms
Remote clock offset: -8.472 ms


# Below is generated by plot.py at 2019-11-24 00:38:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.28 Mbit/s
95th percentile per-packet one-way delay: 100.273 ms
Loss rate: 2.66%
-- Flow 1:
Average throughput: 81.28 Mbit/s
95th percentile per-packet one-way delay: 100.273 ms
Loss rate: 2.66%
```
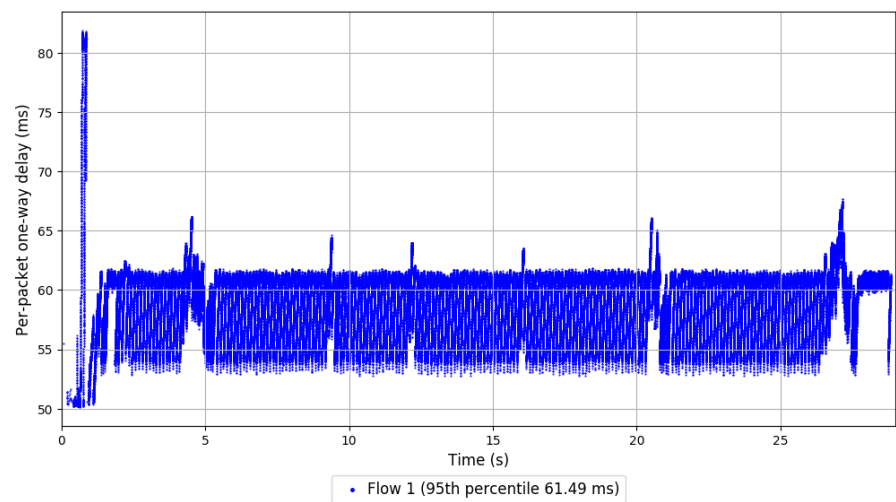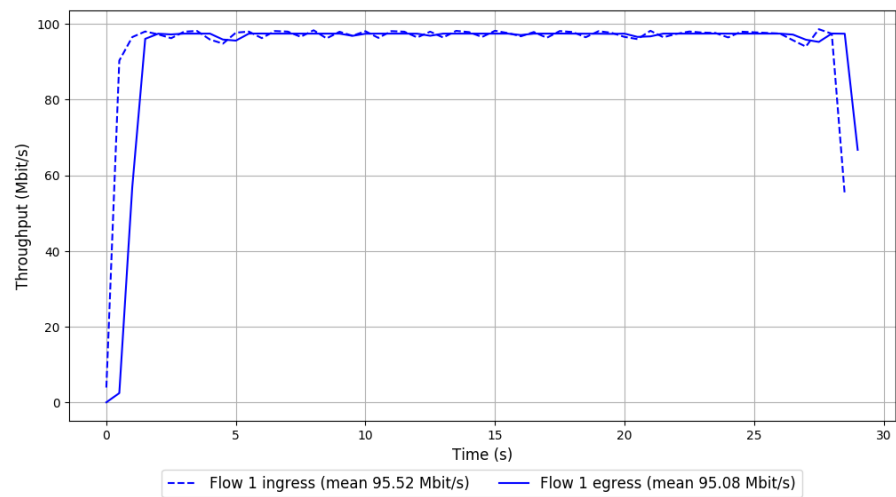
Run 2: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 83.51 Mbit/s) --- Flow 1 egress (mean 81.28 Mbit/s)
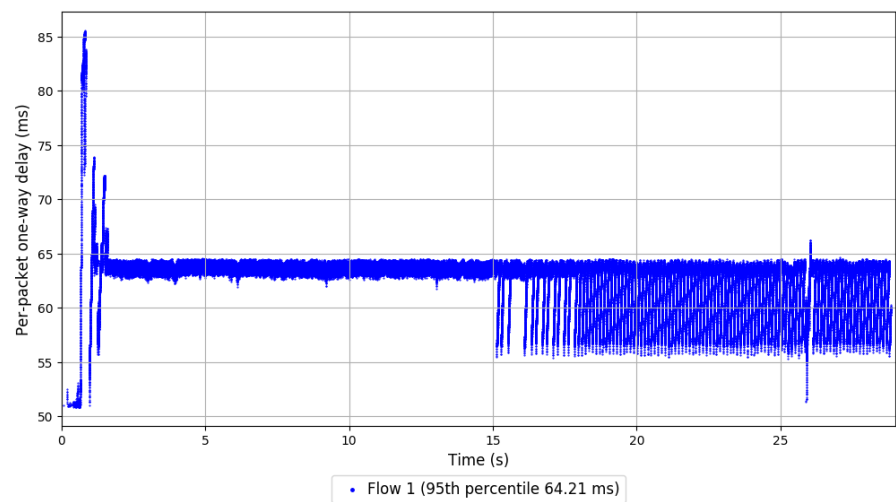

Flow 1 (95th percentile 100.27 ms)

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-11-23 23:35:34
End at: 2019-11-23 23:36:04
Local clock offset: -2.327 ms
Remote clock offset: -8.399 ms


# Below is generated by plot.py at 2019-11-24 00:38:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.08 Mbit/s
95th percentile per-packet one-way delay: 61.489 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 95.08 Mbit/s
95th percentile per-packet one-way delay: 61.489 ms
Loss rate: 0.45%
```

Run 3: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 95.52 Mbit/s) ----- Flow 1 egress (mean 95.08 Mbit/s) ——
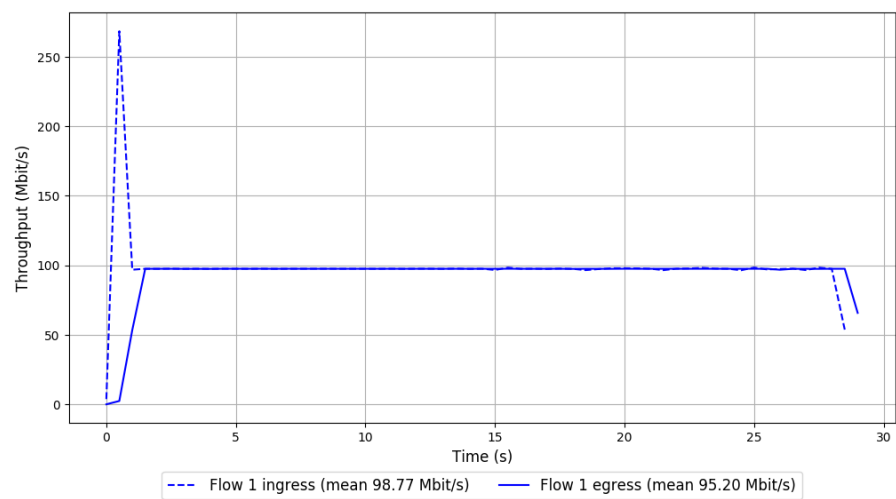

Flow 1 (95th percentile 61.49 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-11-24 00:03:26
End at: 2019-11-24 00:03:56
Local clock offset: -2.58 ms
Remote clock offset: -8.656 ms


# Below is generated by plot.py at 2019-11-24 00:39:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.20 Mbit/s
95th percentile per-packet one-way delay: 64.213 ms
Loss rate: 3.59%
-- Flow 1:
Average throughput: 95.20 Mbit/s
95th percentile per-packet one-way delay: 64.213 ms
Loss rate: 3.59%
```

Run 4: Report of Indigo-MusesT — Data Link

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-11-24 00:31:23
End at: 2019-11-24 00:31:53
Local clock offset: -1.32 ms
Remote clock offset: -8.285 ms


# Below is generated by plot.py at 2019-11-24 00:39:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.09 Mbit/s
95th percentile per-packet one-way delay: 61.100 ms
Loss rate: 3.04%
-- Flow 1:
Average throughput: 95.09 Mbit/s
95th percentile per-packet one-way delay: 61.100 ms
Loss rate: 3.04%
```
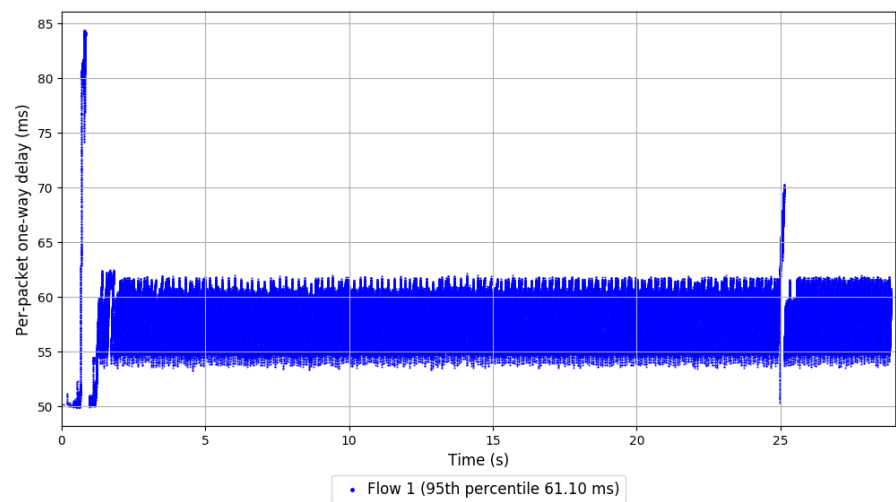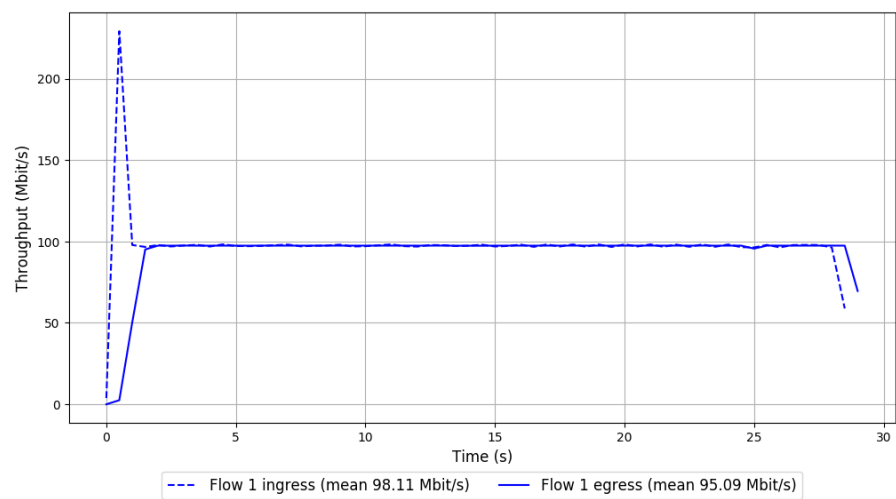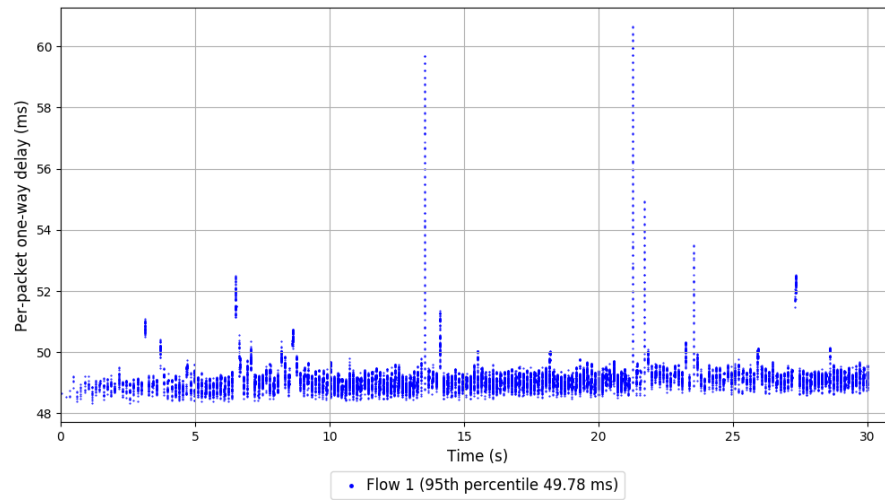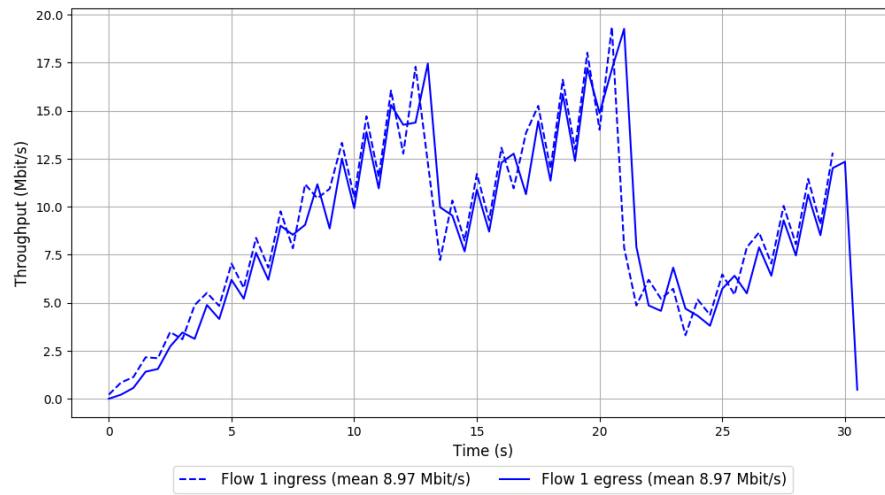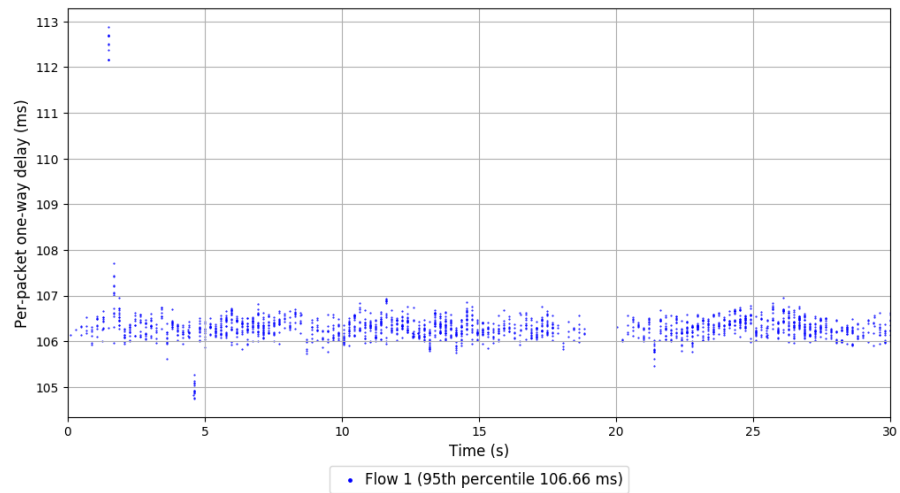
Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-11-23 22:17:44
End at: 2019-11-23 22:18:14
Local clock offset: -2.519 ms
Remote clock offset: -9.421 ms

# Below is generated by plot.py at 2019-11-24 00:39:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.97 Mbit/s
95th percentile per-packet one-way delay: 49.781 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 8.97 Mbit/s
95th percentile per-packet one-way delay: 49.781 ms
Loss rate: 0.02%
```

Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 8.97 Mbit/s)　　Flow 1 egress (mean 8.97 Mbit/s)
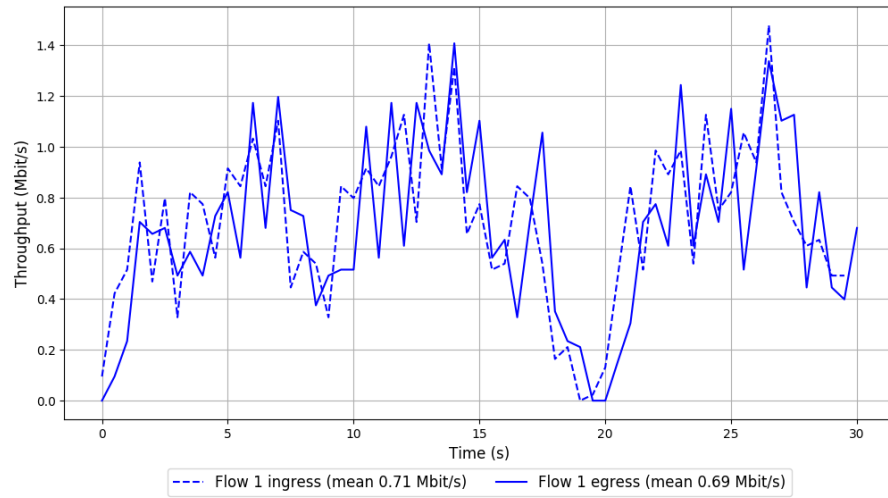

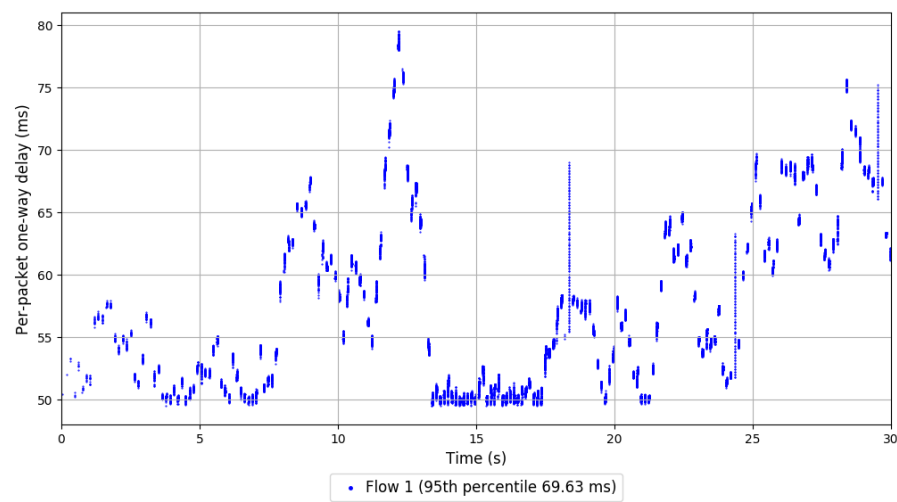Flow 1 (95th percentile 49.78 ms)

```
Run 2: Statistics of LEDBAT

Start at: 2019-11-23 22:45:43
End at: 2019-11-23 22:46:13
Local clock offset: -2.598 ms
Remote clock offset: -8.562 ms

# Below is generated by plot.py at 2019-11-24 00:39:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 106.662 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 106.662 ms
Loss rate: 2.98%
```

Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 0.71 Mbit/s)   Flow 1 egress (mean 0.69 Mbit/s)

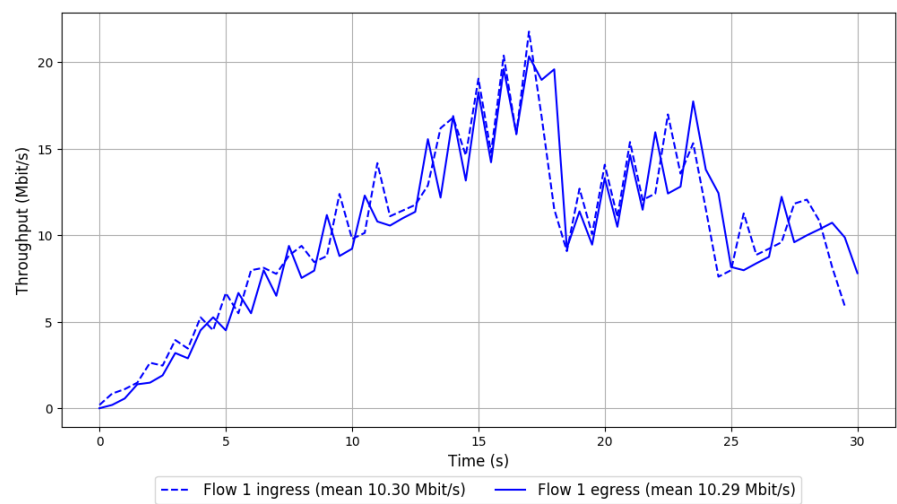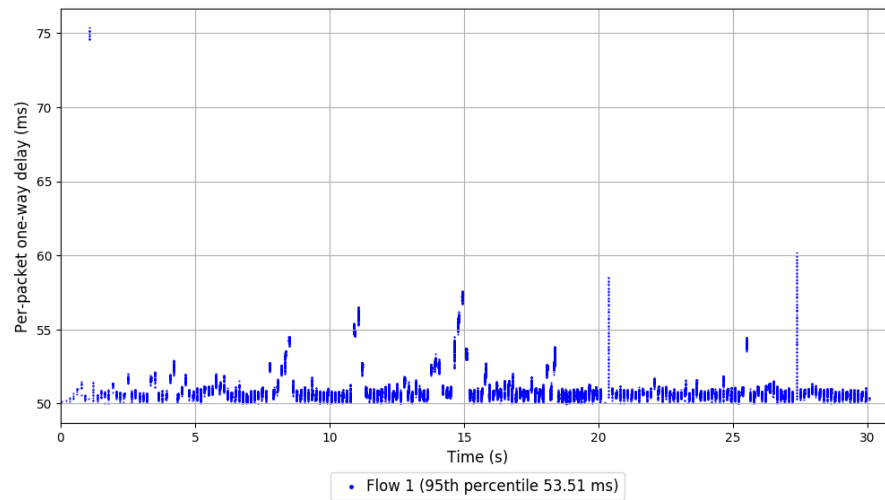Flow 1 (95th percentile 106.66 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2019-11-23 23:13:33
End at: 2019-11-23 23:14:03
Local clock offset: -2.176 ms
Remote clock offset: -9.157 ms

# Below is generated by plot.py at 2019-11-24 00:39:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.29 Mbit/s
95th percentile per-packet one-way delay: 69.631 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 10.29 Mbit/s
95th percentile per-packet one-way delay: 69.631 ms
Loss rate: 0.02%
```

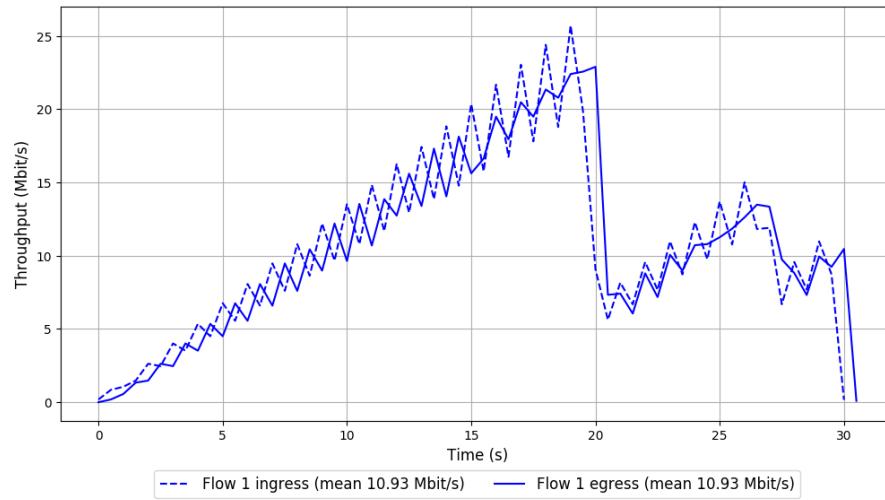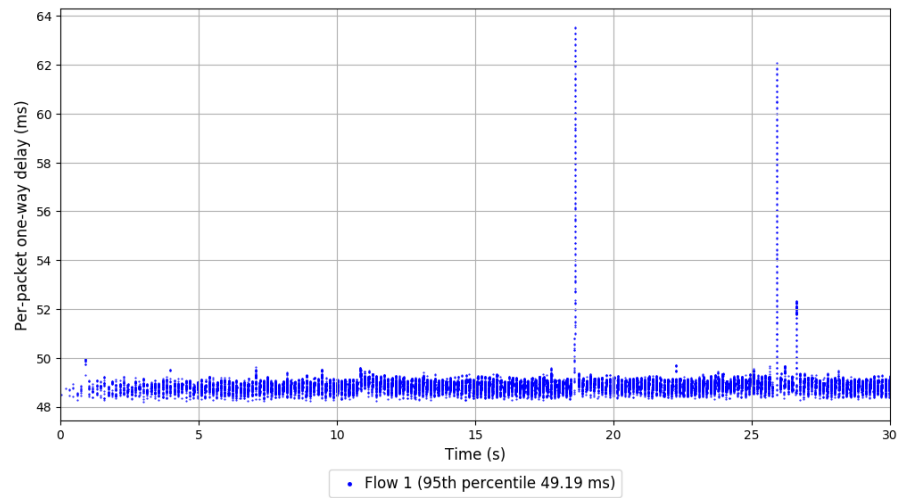Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-11-23 23:41:25
End at: 2019-11-23 23:41:55
Local clock offset: -1.629 ms
Remote clock offset: -7.742 ms


# Below is generated by plot.py at 2019-11-24 00:39:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.93 Mbit/s
95th percentile per-packet one-way delay: 53.513 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 10.93 Mbit/s
95th percentile per-packet one-way delay: 53.513 ms
Loss rate: 0.02%
```

Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 10.93 Mbit/s) — — —   Flow 1 egress (mean 10.93 Mbit/s) ———
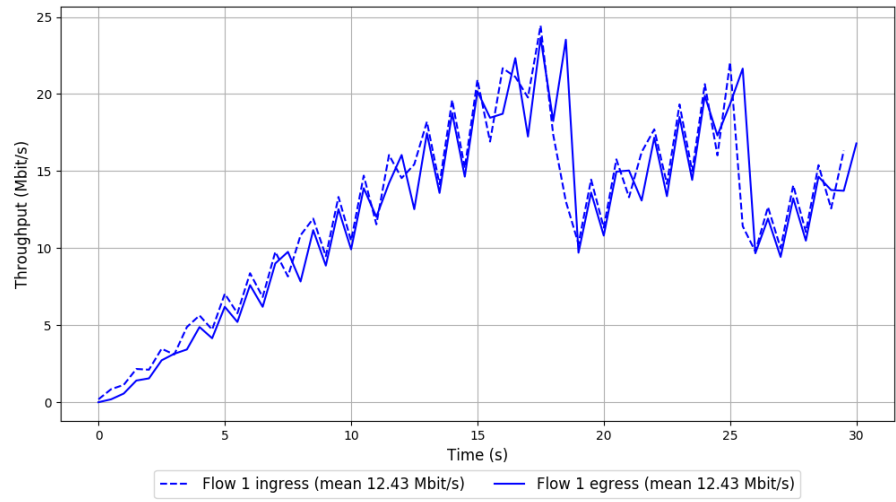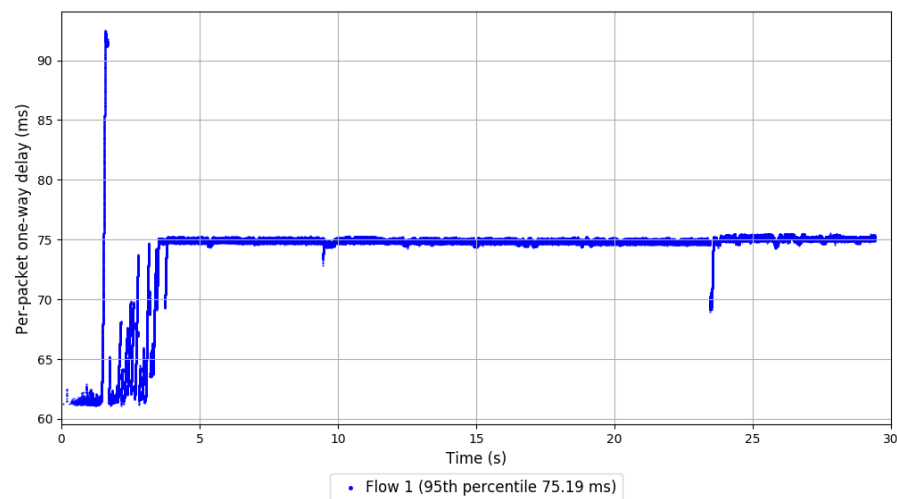

• Flow 1 (95th percentile 53.51 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-11-24 00:09:17
End at: 2019-11-24 00:09:47
Local clock offset: -2.04 ms
Remote clock offset: -8.795 ms

# Below is generated by plot.py at 2019-11-24 00:39:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.43 Mbit/s
95th percentile per-packet one-way delay: 49.192 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 12.43 Mbit/s
95th percentile per-packet one-way delay: 49.192 ms
Loss rate: 0.01%
```

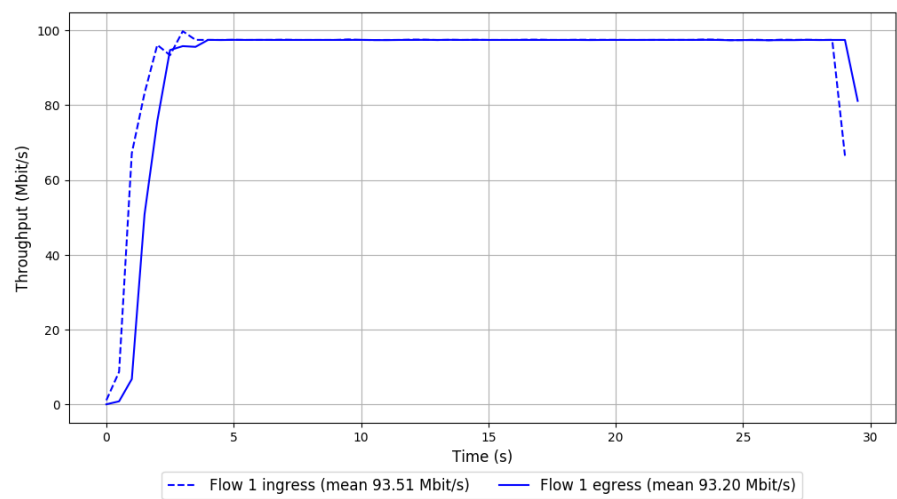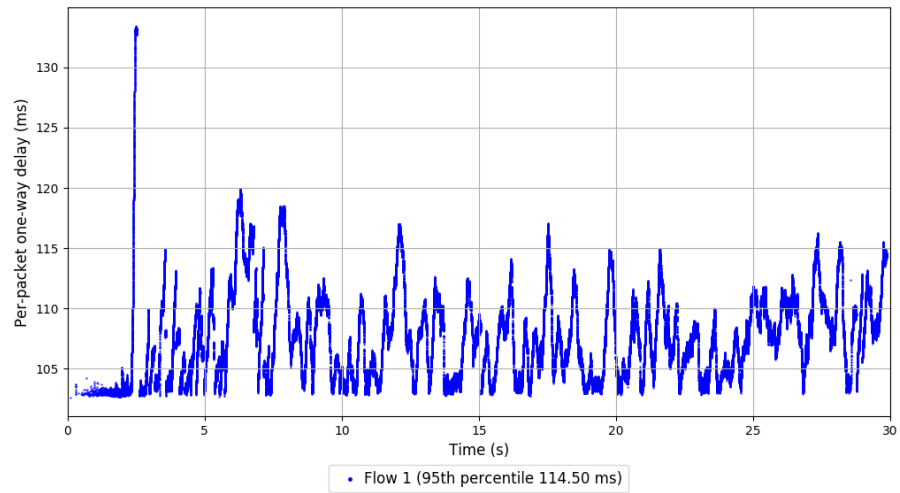# Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-11-23 22:13:04
End at: 2019-11-23 22:13:34
Local clock offset: -1.931 ms
Remote clock offset: 2.568 ms


# Below is generated by plot.py at 2019-11-24 00:39:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.20 Mbit/s
95th percentile per-packet one-way delay: 75.192 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 93.20 Mbit/s
95th percentile per-packet one-way delay: 75.192 ms
Loss rate: 0.29%
```
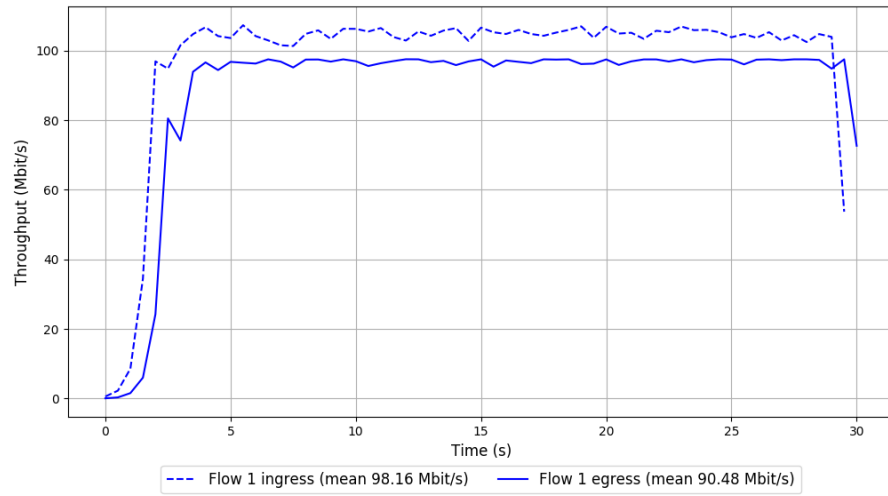
Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-11-23 22:40:57
End at: 2019-11-23 22:41:27
Local clock offset: -3.0 ms
Remote clock offset: -9.227 ms


# Below is generated by plot.py at 2019-11-24 00:39:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.48 Mbit/s
95th percentile per-packet one-way delay: 114.495 ms
Loss rate: 7.79%
-- Flow 1:
Average throughput: 90.48 Mbit/s
95th percentile per-packet one-way delay: 114.495 ms
Loss rate: 7.79%
```

Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-11-23 23:08:57
End at: 2019-11-23 23:09:27
Local clock offset: -3.727 ms
Remote clock offset: -9.2 ms


# Below is generated by plot.py at 2019-11-24 00:39:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 14.01 Mbit/s
95th percentile per-packet one-way delay: 81.028 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 14.01 Mbit/s
95th percentile per-packet one-way delay: 81.028 ms
Loss rate: 1.76%
```
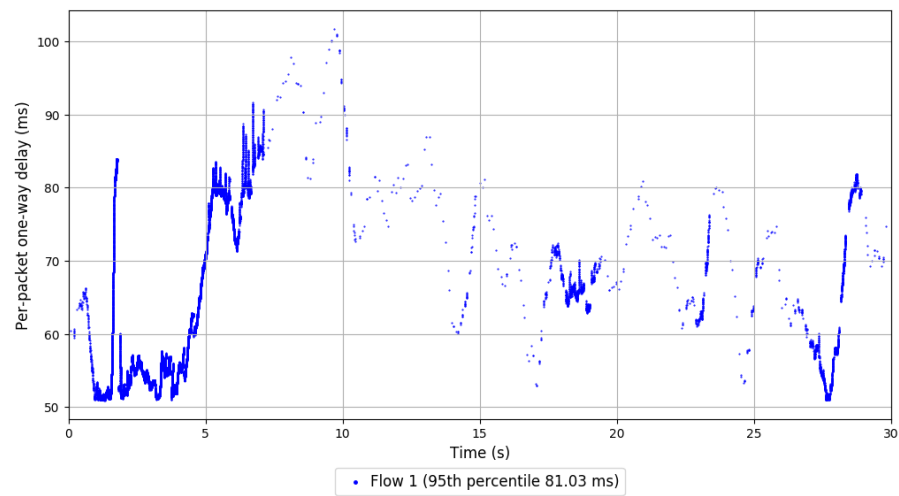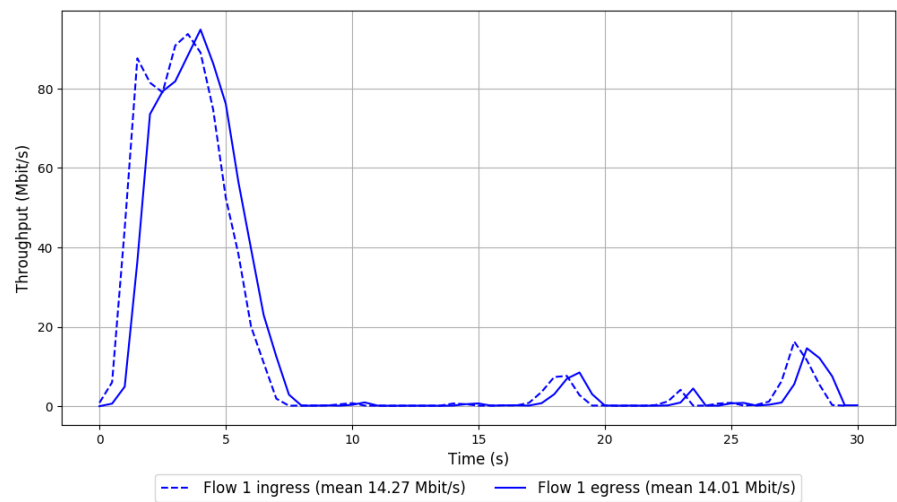
Run 3: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 14.27 Mbit/s) --- Flow 1 egress (mean 14.01 Mbit/s)
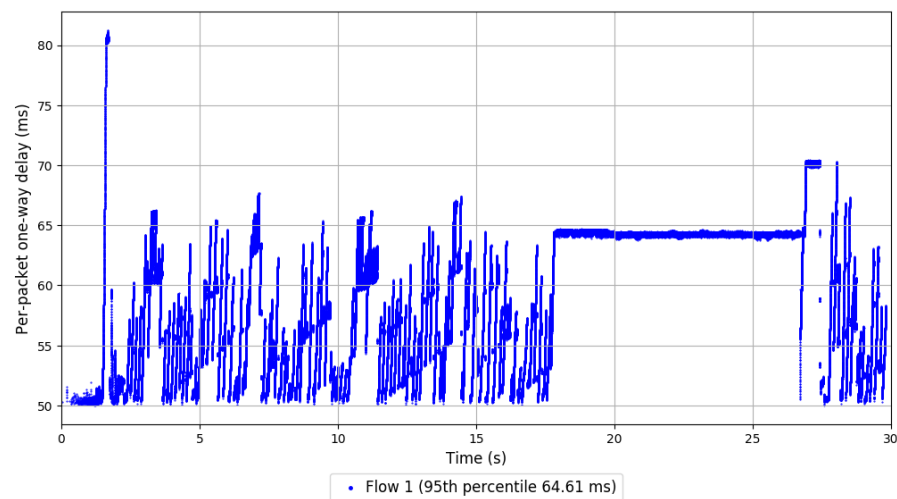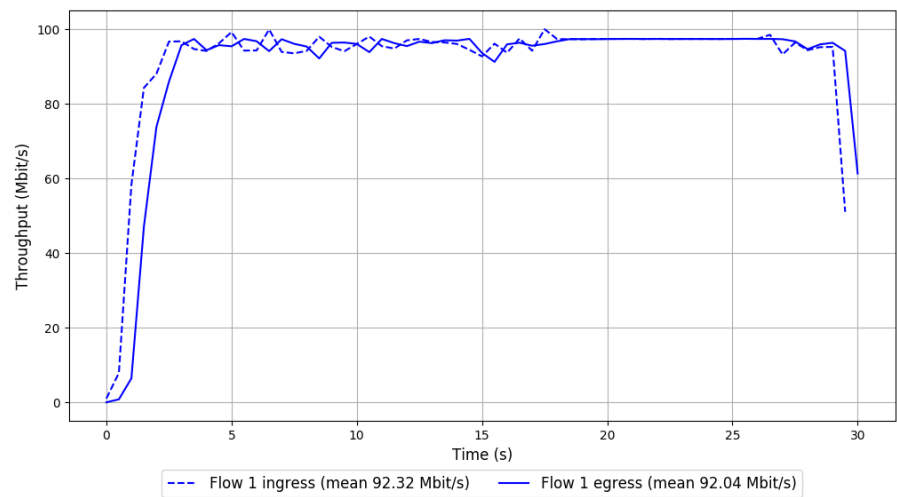

• Flow 1 (95th percentile 81.03 ms)

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-11-23 23:36:45
End at: 2019-11-23 23:37:15
Local clock offset: -1.62 ms
Remote clock offset: -7.711 ms


# Below is generated by plot.py at 2019-11-24 00:39:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.04 Mbit/s
95th percentile per-packet one-way delay: 64.613 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 92.04 Mbit/s
95th percentile per-packet one-way delay: 64.613 ms
Loss rate: 0.28%
```

Run 4: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 92.32 Mbit/s)   Flow 1 egress (mean 92.04 Mbit/s)
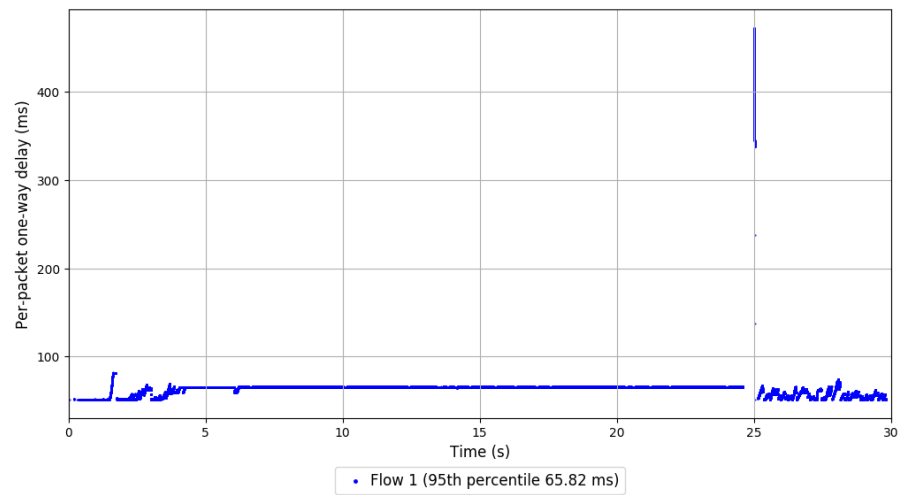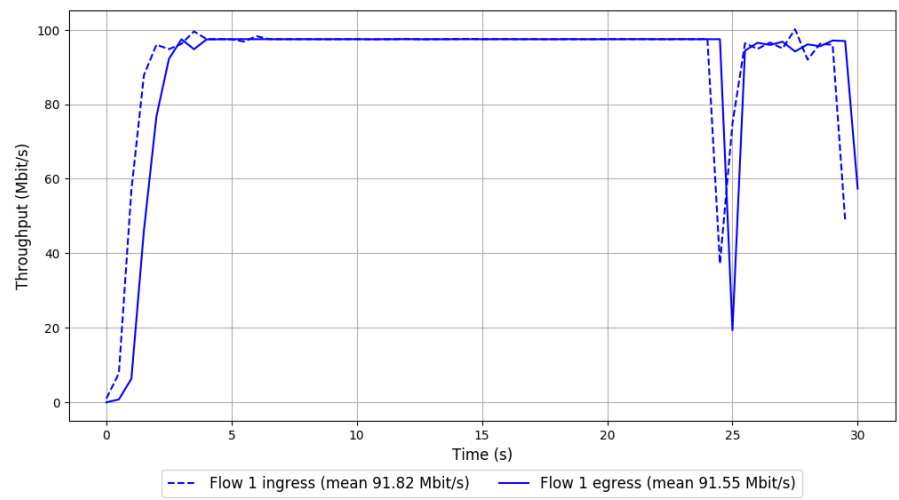

Flow 1 (95th percentile 64.61 ms)

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-11-24 00:04:37
End at: 2019-11-24 00:05:07
Local clock offset: -2.626 ms
Remote clock offset: -9.331 ms


# Below is generated by plot.py at 2019-11-24 00:39:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.55 Mbit/s
95th percentile per-packet one-way delay: 65.816 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 91.55 Mbit/s
95th percentile per-packet one-way delay: 65.816 ms
Loss rate: 0.30%
```
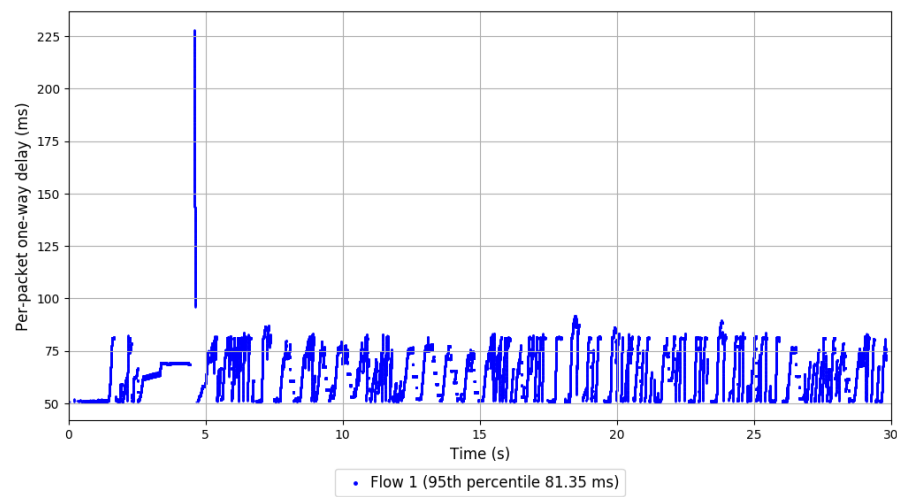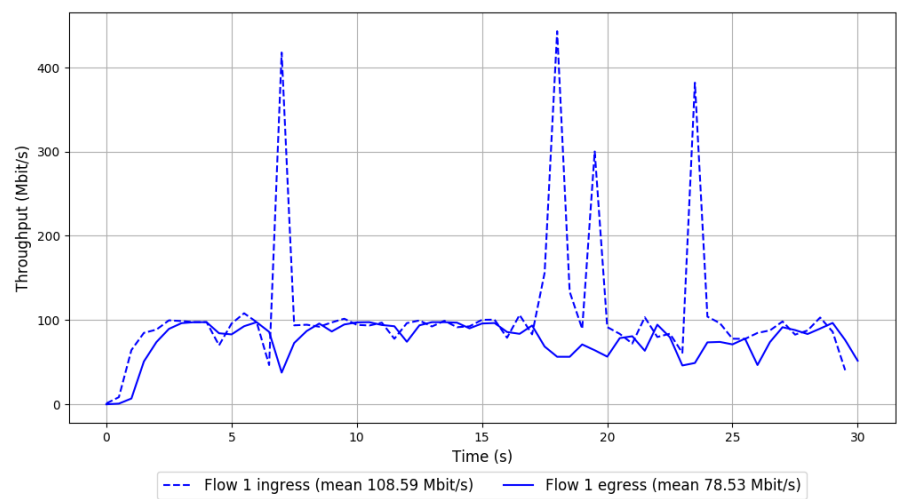
Run 5: Report of Muses_DecisionTree — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-23 22:26:57
End at: 2019-11-23 22:27:27
Local clock offset: -2.05 ms
Remote clock offset: -8.846 ms


# Below is generated by plot.py at 2019-11-24 00:39:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.53 Mbit/s
95th percentile per-packet one-way delay: 81.347 ms
Loss rate: 27.63%
-- Flow 1:
Average throughput: 78.53 Mbit/s
95th percentile per-packet one-way delay: 81.347 ms
Loss rate: 27.63%
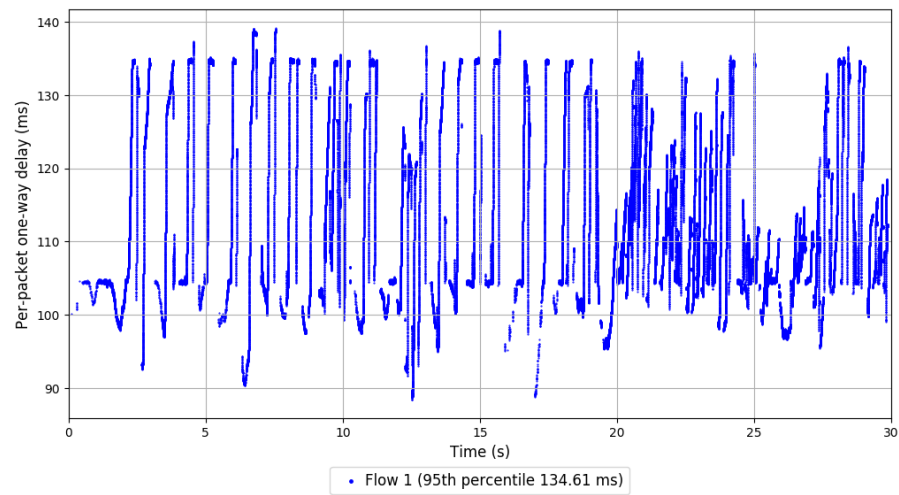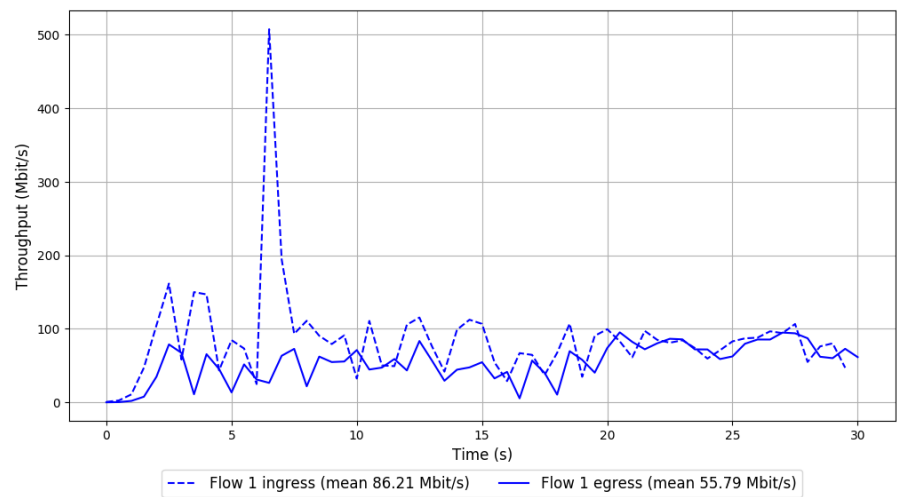```

Run 1: Report of Muses_DecisionTreeH0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-23 22:54:58
End at: 2019-11-23 22:55:28
Local clock offset: -1.96 ms
Remote clock offset: -8.508 ms


# Below is generated by plot.py at 2019-11-24 00:39:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 55.79 Mbit/s
95th percentile per-packet one-way delay: 134.611 ms
Loss rate: 35.25%
-- Flow 1:
Average throughput: 55.79 Mbit/s
95th percentile per-packet one-way delay: 134.611 ms
Loss rate: 35.25%
```

Run 2: Report of Muses_DecisionTreeH0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-23 23:22:45
End at: 2019-11-23 23:23:15
Local clock offset: -2.138 ms
Remote clock offset: -8.15 ms


# Below is generated by plot.py at 2019-11-24 00:40:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.25 Mbit/s
95th percentile per-packet one-way delay: 75.452 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 90.25 Mbit/s
95th percentile per-packet one-way delay: 75.452 ms
Loss rate: 0.78%
```
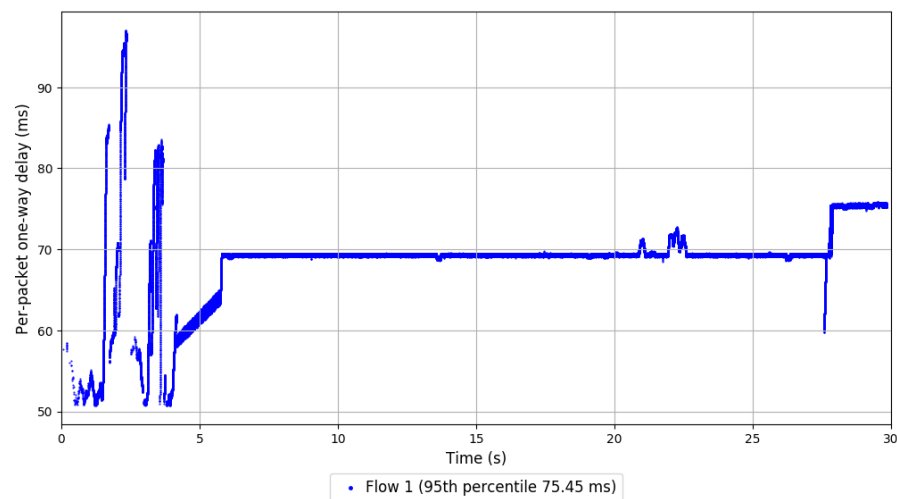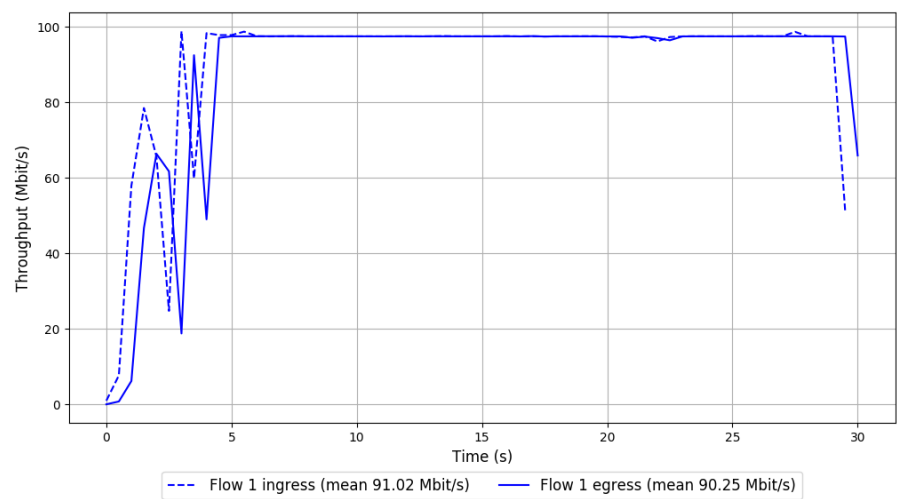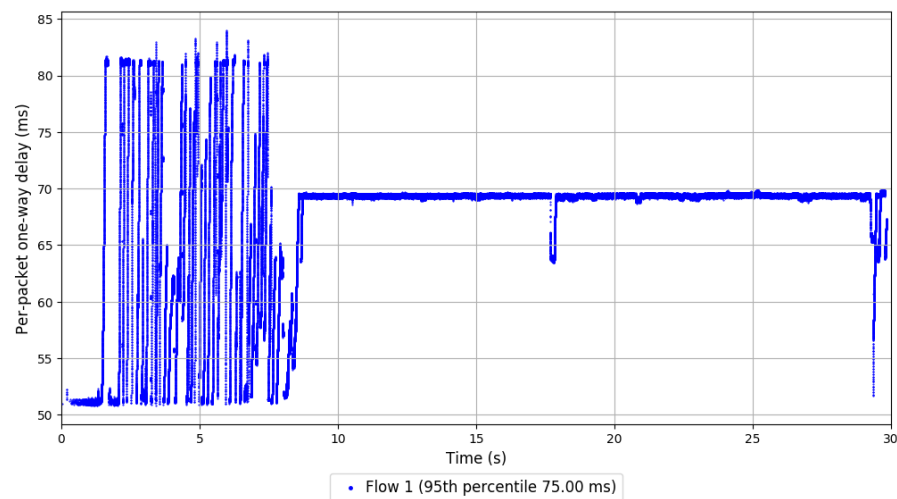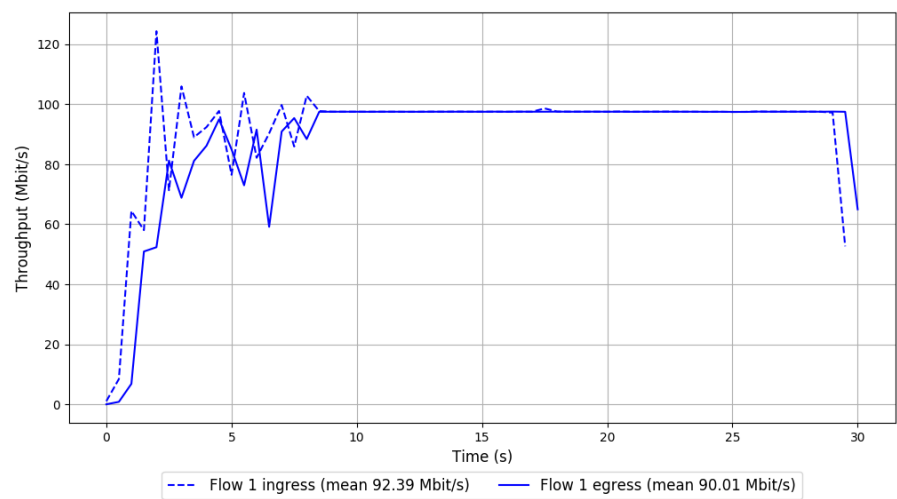
Run 3: Report of Muses_DecisionTreeH0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-23 23:50:38
End at: 2019-11-23 23:51:08
Local clock offset: -2.265 ms
Remote clock offset: -7.894 ms


# Below is generated by plot.py at 2019-11-24 00:40:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.01 Mbit/s
95th percentile per-packet one-way delay: 75.000 ms
Loss rate: 2.52%
-- Flow 1:
Average throughput: 90.01 Mbit/s
95th percentile per-packet one-way delay: 75.000 ms
Loss rate: 2.52%
```

Run 4: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 92.39 Mbit/s)   Flow 1 egress (mean 90.01 Mbit/s)
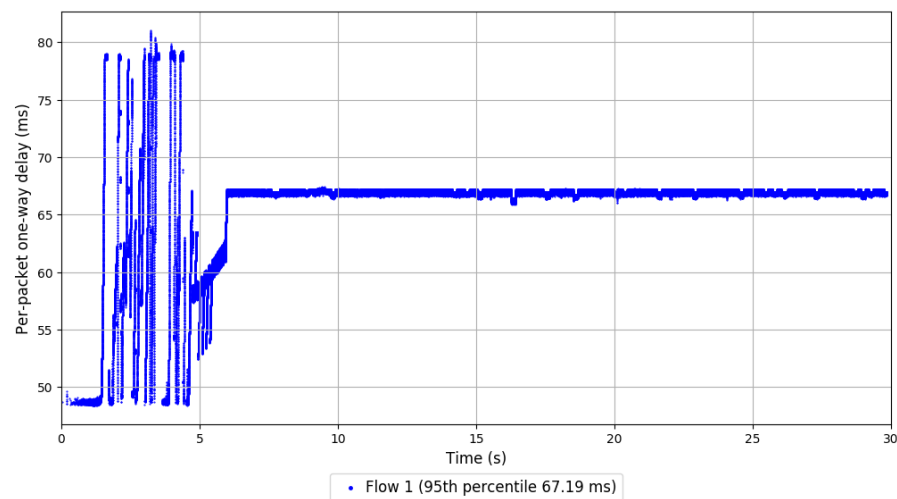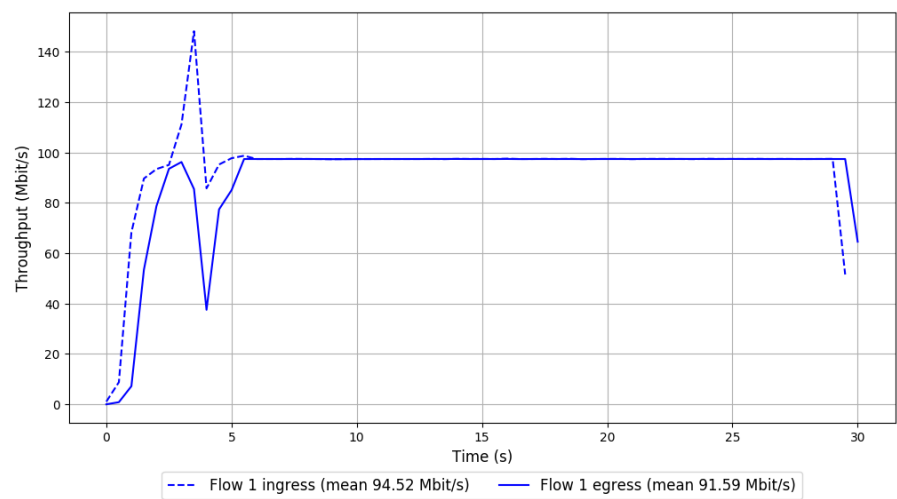

Flow 1 (95th percentile 75.00 ms)

```
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-24 00:18:34
End at: 2019-11-24 00:19:04
Local clock offset: -0.885 ms
Remote clock offset: -9.588 ms


# Below is generated by plot.py at 2019-11-24 00:40:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.59 Mbit/s
95th percentile per-packet one-way delay: 67.194 ms
Loss rate: 3.04%
-- Flow 1:
Average throughput: 91.59 Mbit/s
95th percentile per-packet one-way delay: 67.194 ms
Loss rate: 3.04%
```

Run 5: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 94.52 Mbit/s) — Flow 1 egress (mean 91.59 Mbit/s)

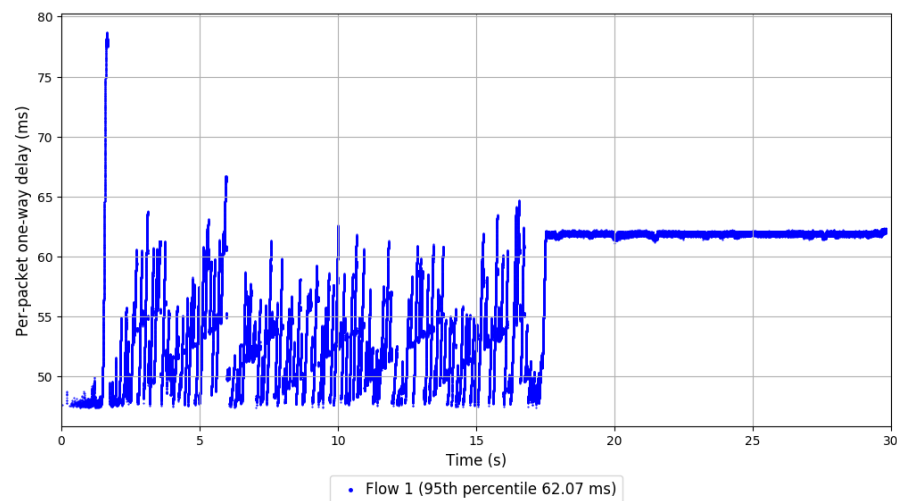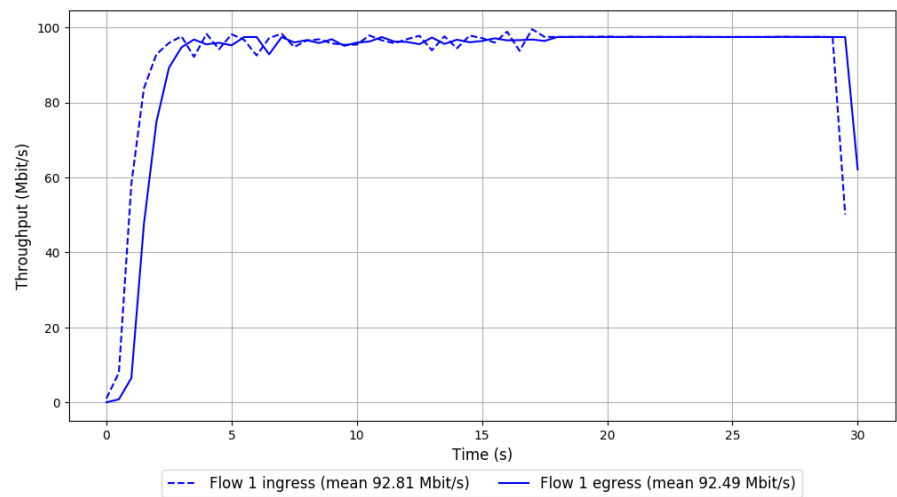• Flow 1 (95th percentile 67.19 ms)

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-23 22:21:07
End at: 2019-11-23 22:21:37
Local clock offset: -1.688 ms
Remote clock offset: -12.278 ms


# Below is generated by plot.py at 2019-11-24 00:40:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.49 Mbit/s
95th percentile per-packet one-way delay: 62.068 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 92.49 Mbit/s
95th percentile per-packet one-way delay: 62.068 ms
Loss rate: 0.30%
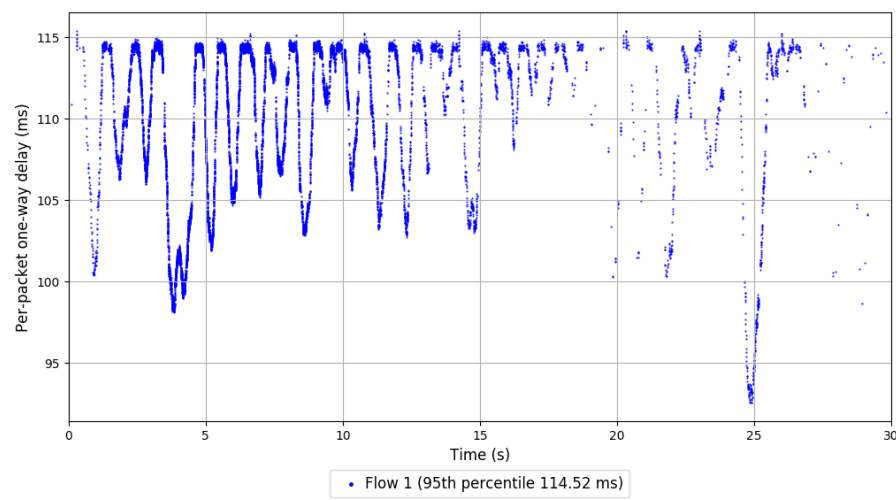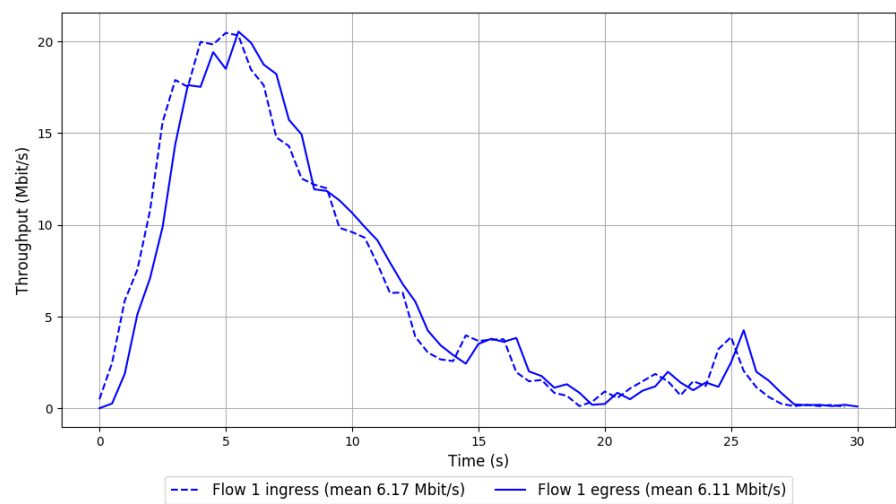```

Run 1: Report of Muses_DecisionTreeR0 — Data Link

```
Run 2: Statistics of Muses_DecisionTreeR0

Start at: 2019-11-23 22:49:09
End at: 2019-11-23 22:49:39
Local clock offset: -2.553 ms
Remote clock offset: -0.272 ms

Below is generated by plot.py at 2019-11-24 00:40:59
Datalink statistics
-- Total of 1 flow:
Average throughput: 6.11 Mbit/s
95th percentile per-packet one-way delay: 114.522 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 6.11 Mbit/s
95th percentile per-packet one-way delay: 114.522 ms
Loss rate: 1.08%
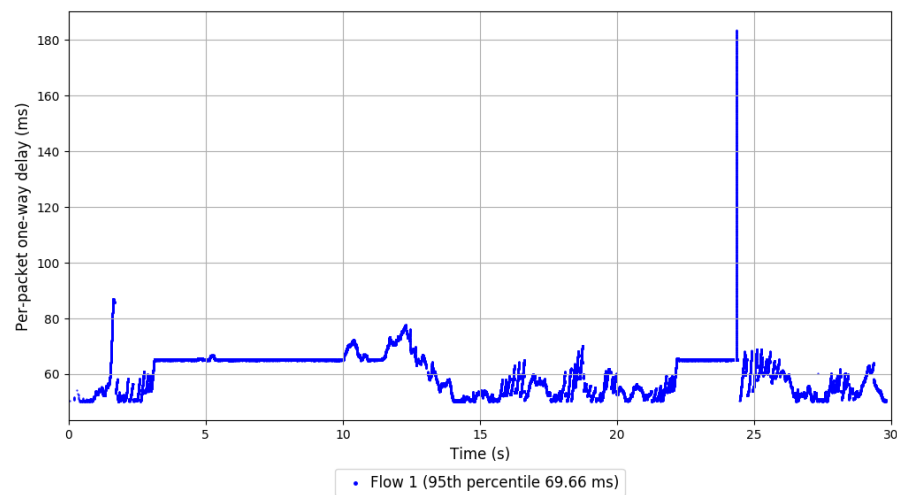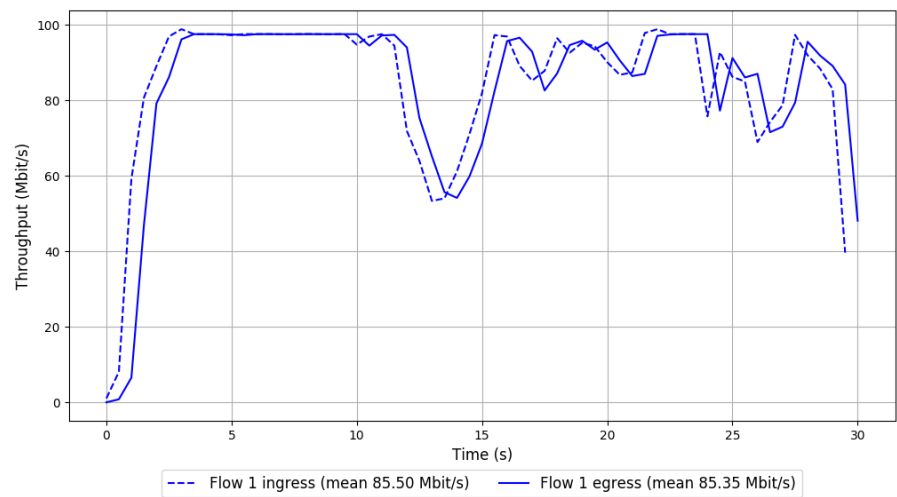```

Run 2: Report of Muses_DecisionTreeR0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-23 23:16:57
End at: 2019-11-23 23:17:27
Local clock offset: -2.527 ms
Remote clock offset: -8.249 ms


# Below is generated by plot.py at 2019-11-24 00:40:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.35 Mbit/s
95th percentile per-packet one-way delay: 69.657 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 85.35 Mbit/s
95th percentile per-packet one-way delay: 69.657 ms
Loss rate: 0.17%
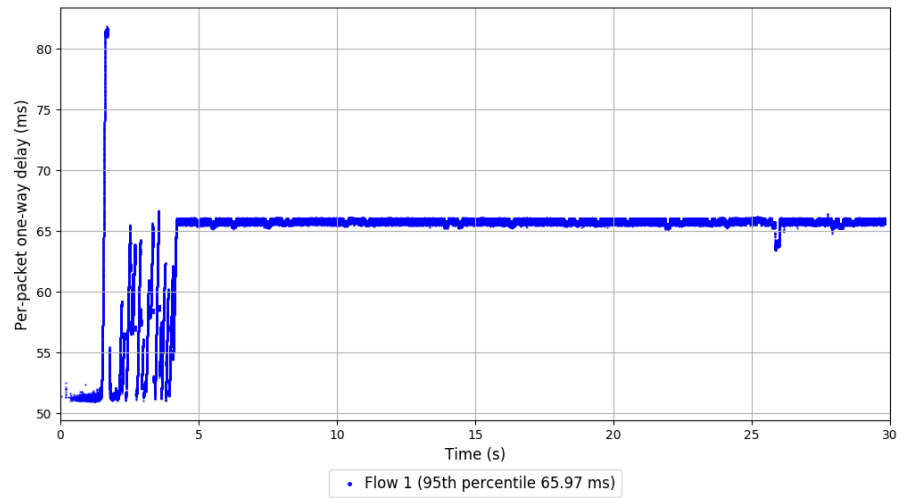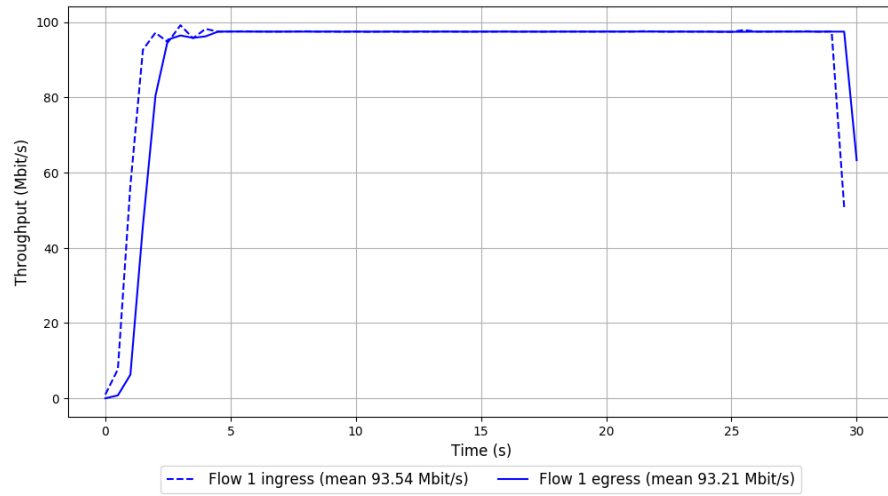```

Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-23 23:44:49
End at: 2019-11-23 23:45:19
Local clock offset: -1.522 ms
Remote clock offset: -7.555 ms


# Below is generated by plot.py at 2019-11-24 00:41:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.21 Mbit/s
95th percentile per-packet one-way delay: 65.974 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 93.21 Mbit/s
95th percentile per-packet one-way delay: 65.974 ms
Loss rate: 0.31%
```

Run 4: Report of Muses_DecisionTreeR0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-24 00:12:40
End at: 2019-11-24 00:13:10
Local clock offset: -2.239 ms
Remote clock offset: -9.49 ms


# Below is generated by plot.py at 2019-11-24 00:41:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.07 Mbit/s
95th percentile per-packet one-way delay: 64.567 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 93.07 Mbit/s
95th percentile per-packet one-way delay: 64.567 ms
Loss rate: 0.28%
```
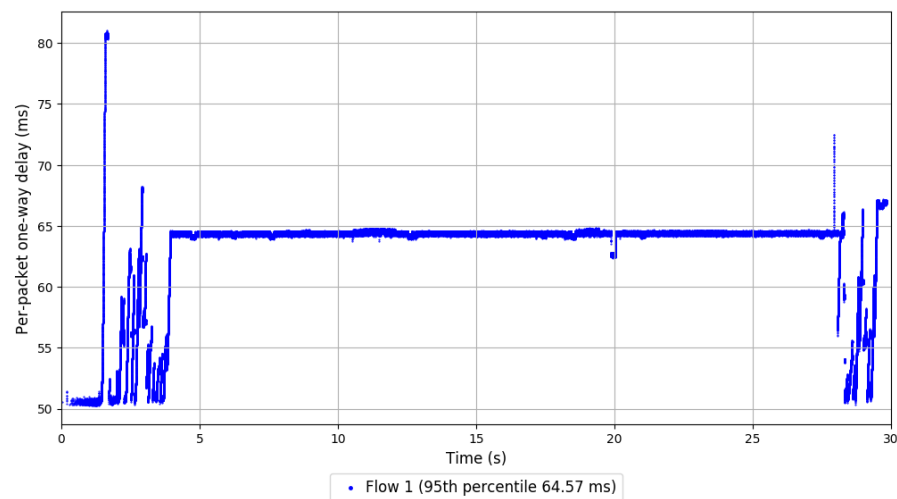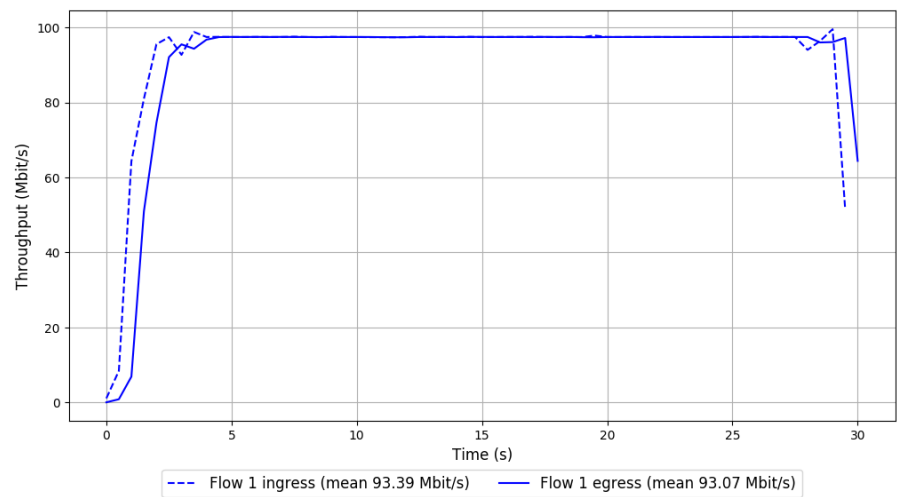
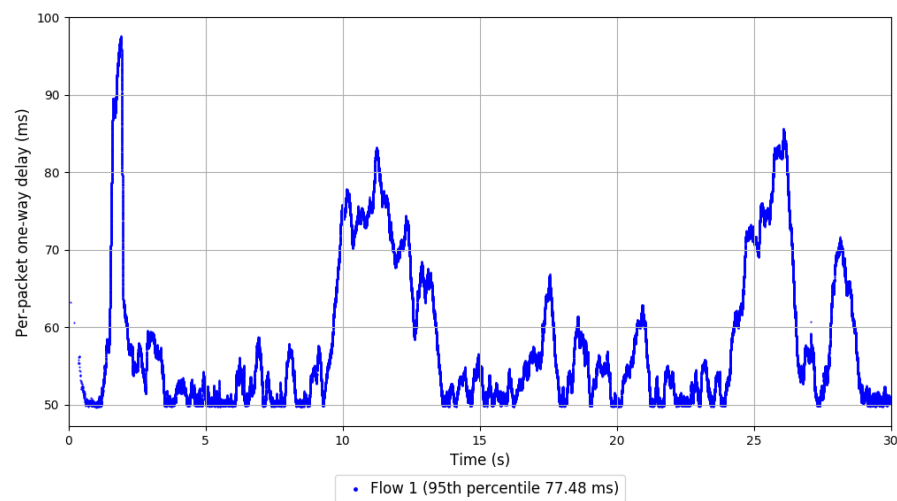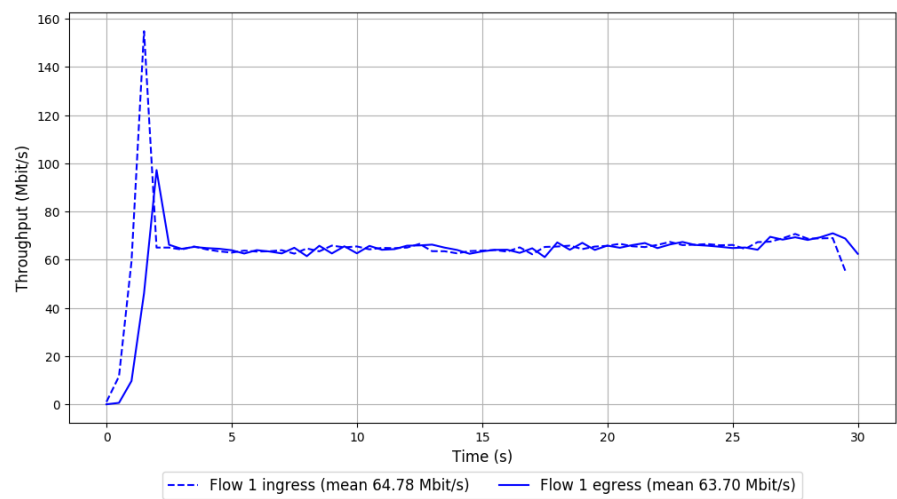Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-11-23 22:31:37
End at: 2019-11-23 22:32:07
Local clock offset: -2.352 ms
Remote clock offset: -8.751 ms


# Below is generated by plot.py at 2019-11-24 00:41:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.70 Mbit/s
95th percentile per-packet one-way delay: 77.482 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 63.70 Mbit/s
95th percentile per-packet one-way delay: 77.482 ms
Loss rate: 1.70%
```

Run 1: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 64.78 Mbit/s)   Flow 1 egress (mean 63.70 Mbit/s)

• Flow 1 (95th percentile 77.48 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-11-23 22:59:37
End at: 2019-11-23 23:00:07
Local clock offset: -2.253 ms
Remote clock offset: -8.568 ms


# Below is generated by plot.py at 2019-11-24 00:41:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.58 Mbit/s
95th percentile per-packet one-way delay: 105.279 ms
Loss rate: 2.37%
-- Flow 1:
Average throughput: 67.58 Mbit/s
95th percentile per-packet one-way delay: 105.279 ms
Loss rate: 2.37%
```
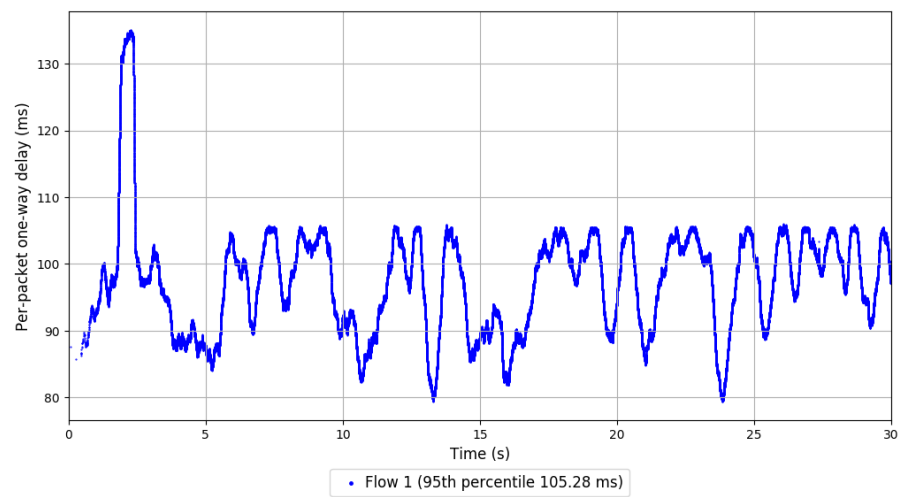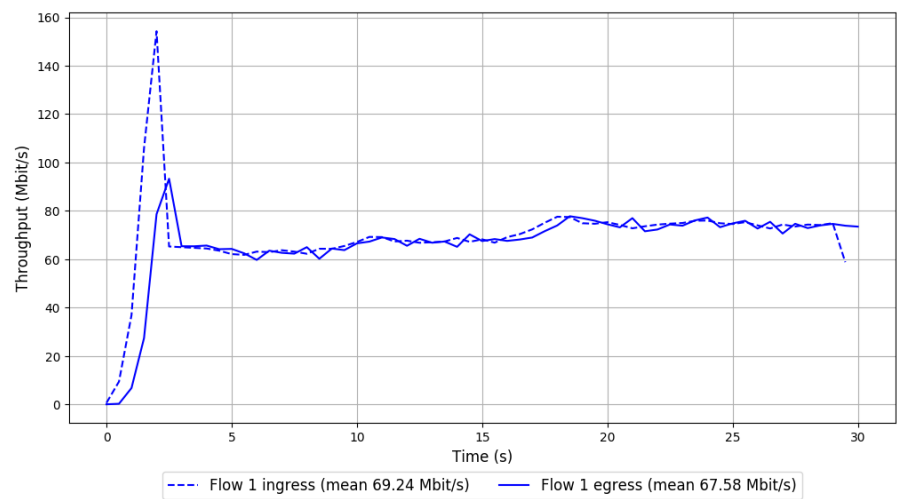
Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 69.24 Mbit/s)   Flow 1 egress (mean 67.58 Mbit/s)

Flow 1 (95th percentile 105.28 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-11-23 23:27:23
End at: 2019-11-23 23:27:53
Local clock offset: -2.126 ms
Remote clock offset: -8.594 ms


# Below is generated by plot.py at 2019-11-24 00:41:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.41 Mbit/s
95th percentile per-packet one-way delay: 70.504 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 67.41 Mbit/s
95th percentile per-packet one-way delay: 70.504 ms
Loss rate: 1.66%
```
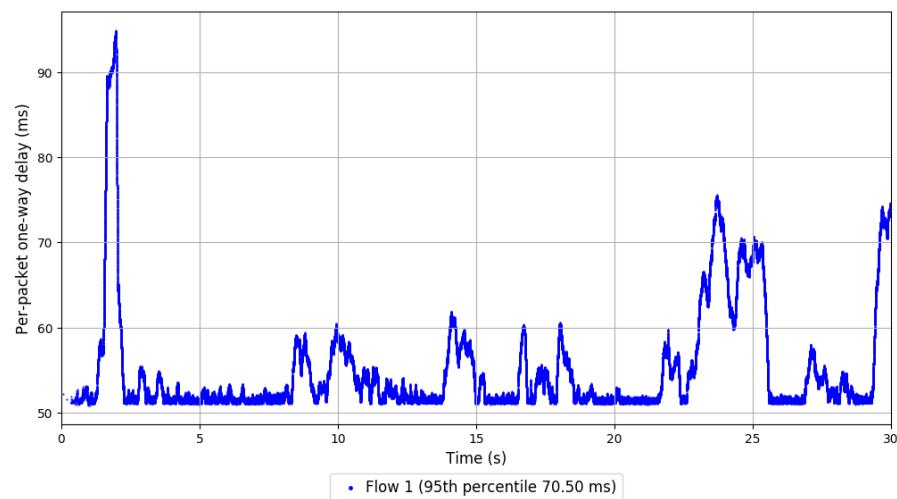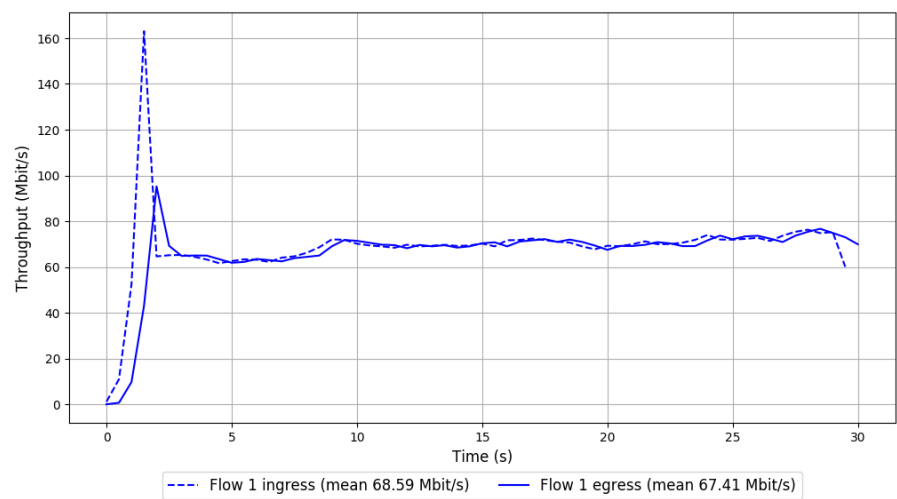
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 68.59 Mbit/s)   Flow 1 egress (mean 67.41 Mbit/s)

Flow 1 (95th percentile 70.50 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-11-23 23:55:18
End at: 2019-11-23 23:55:48
Local clock offset: -2.346 ms
Remote clock offset: -8.973 ms


# Below is generated by plot.py at 2019-11-24 00:42:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.29 Mbit/s
95th percentile per-packet one-way delay: 56.506 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 88.29 Mbit/s
95th percentile per-packet one-way delay: 56.506 ms
Loss rate: 1.21%
```
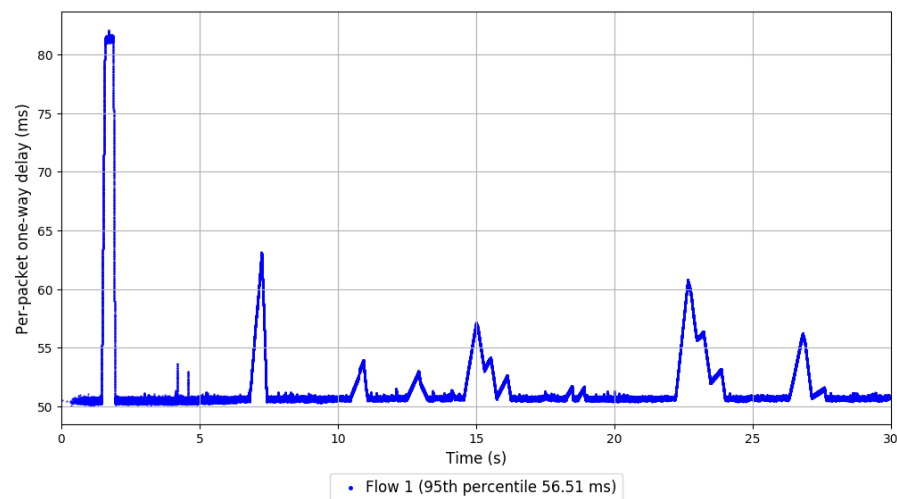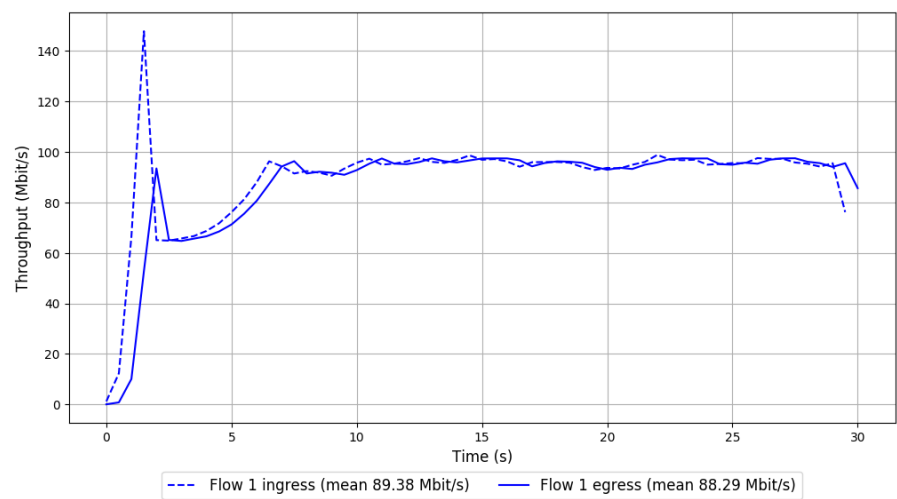
Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 89.38 Mbit/s)   Flow 1 egress (mean 88.29 Mbit/s)
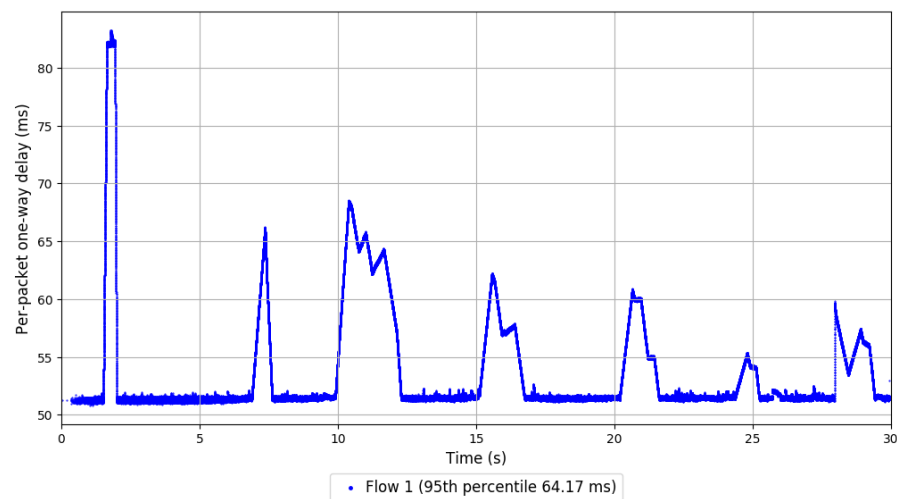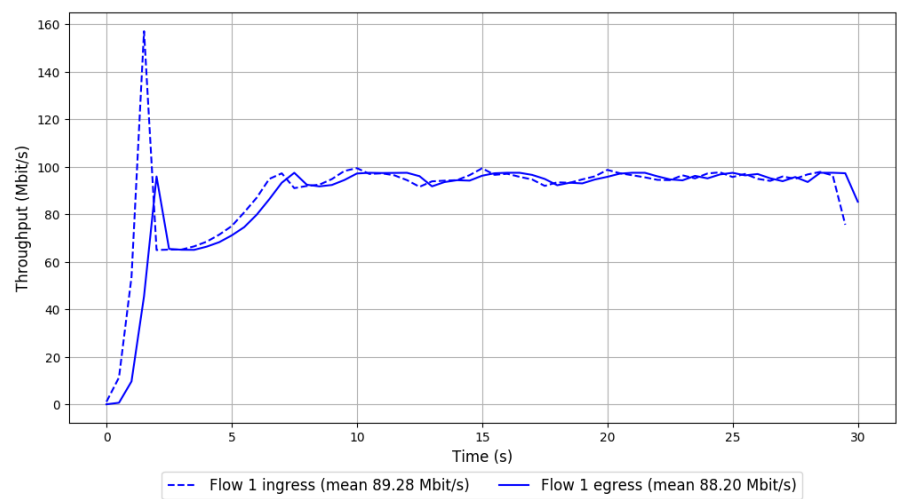

Flow 1 (95th percentile 56.51 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-11-24 00:23:15
End at: 2019-11-24 00:23:45
Local clock offset: -1.397 ms
Remote clock offset: -9.608 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.20 Mbit/s
95th percentile per-packet one-way delay: 64.165 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 88.20 Mbit/s
95th percentile per-packet one-way delay: 64.165 ms
Loss rate: 1.22%
```

Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 89.28 Mbit/s) — Flow 1 egress (mean 88.20 Mbit/s)

• Flow 1 (95th percentile 64.17 ms)
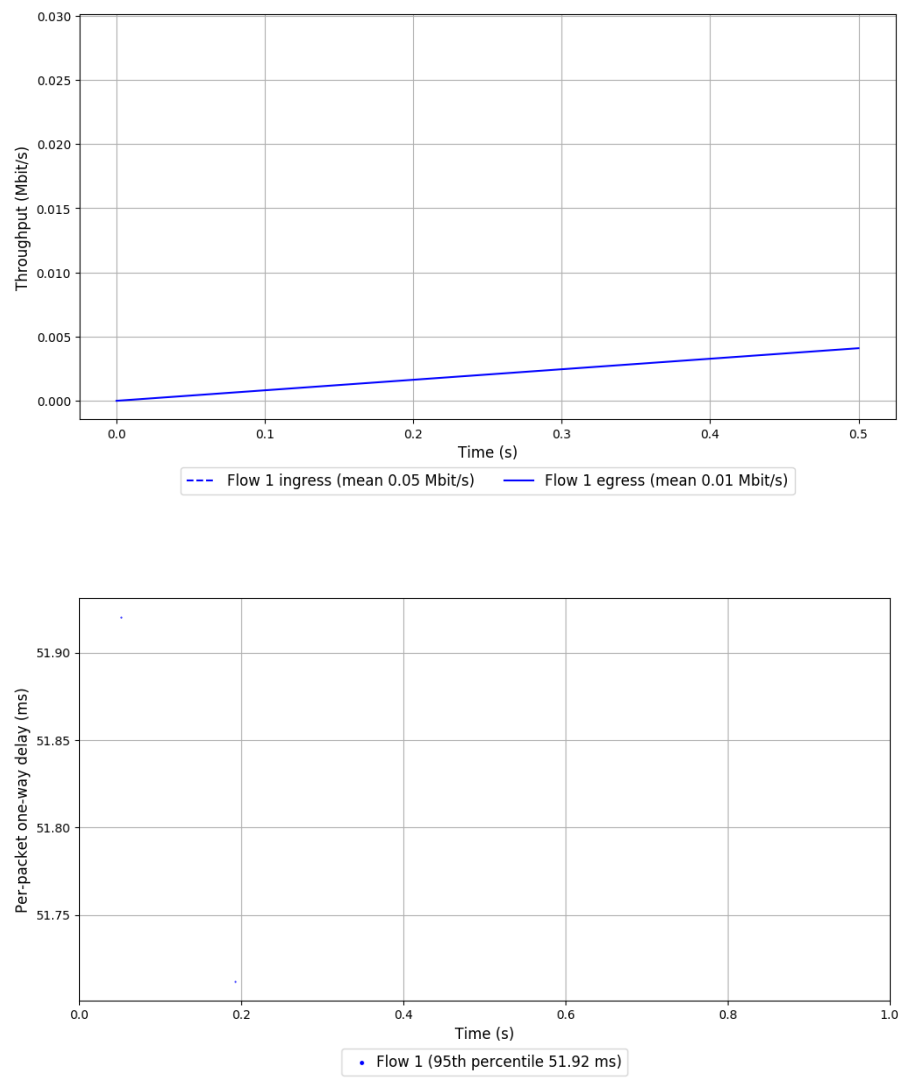
```
Run 1: Statistics of PCC-Expr

Start at: 2019-11-23 22:29:20
End at: 2019-11-23 22:29:50
Local clock offset: -2.151 ms
Remote clock offset: -8.751 ms
```
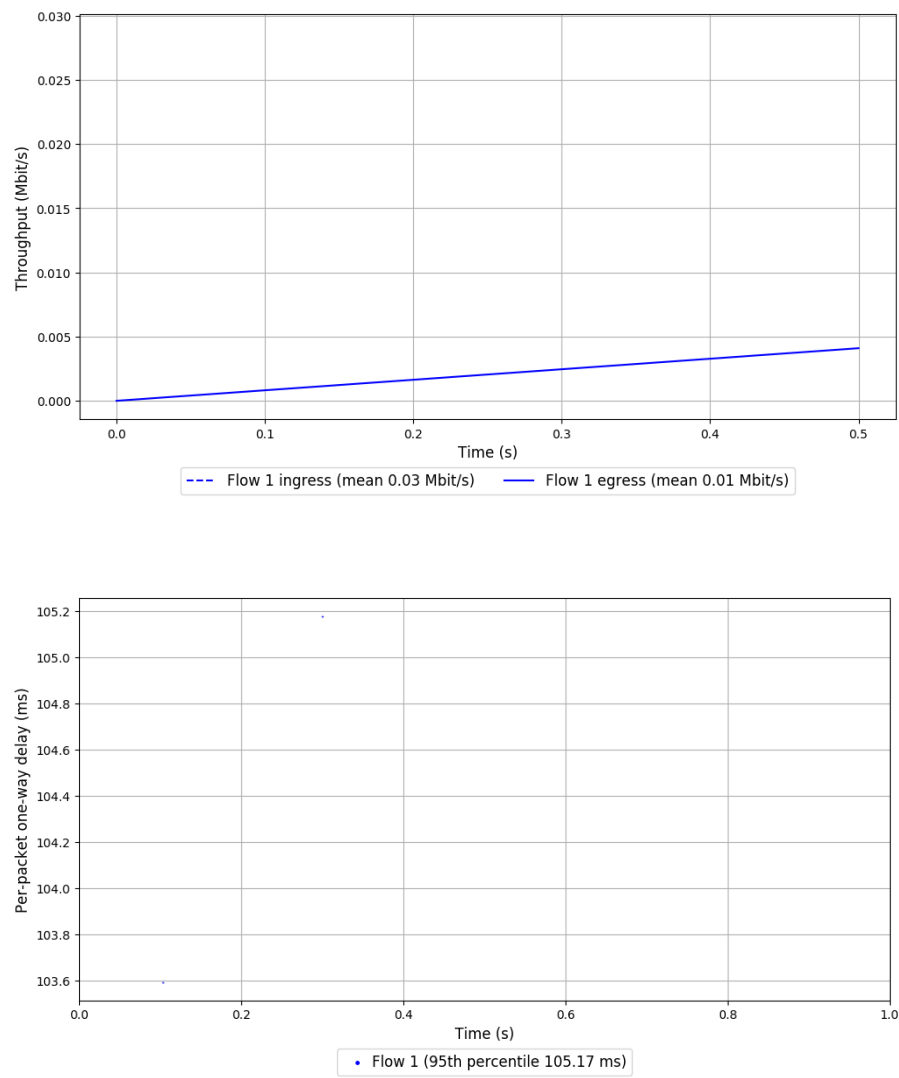
Run 1: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 0.05 Mbit/s)   Flow 1 egress (mean 0.01 Mbit/s)

Flow 1 (95th percentile 51.92 ms)

```
Run 2: Statistics of PCC-Expr

Start at: 2019-11-23 22:57:18
End at: 2019-11-23 22:57:48
Local clock offset: -2.844 ms
Remote clock offset: -8.59 ms
```

Run 2: Report of PCC-Expr — Data Link
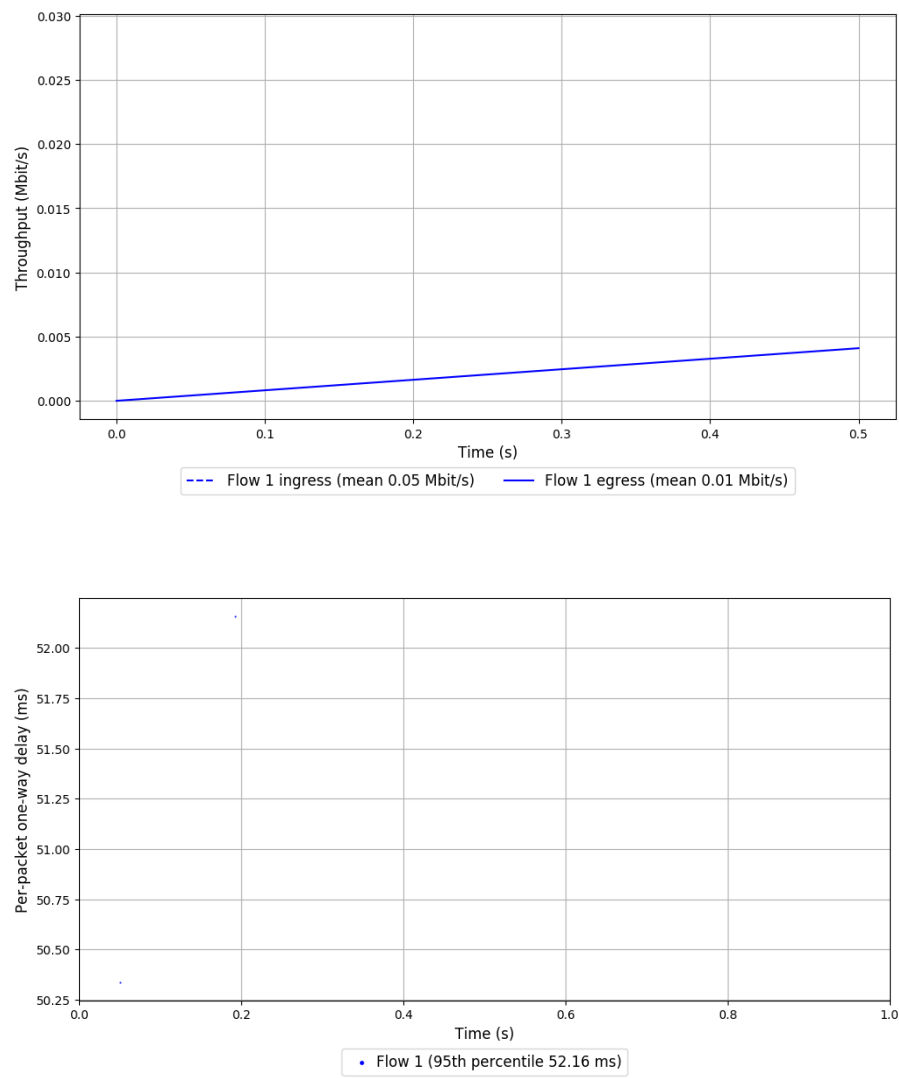
```
Run 3: Statistics of PCC-Expr

Start at: 2019-11-23 23:25:06
End at: 2019-11-23 23:25:36
Local clock offset: -2.127 ms
Remote clock offset: -8.634 ms
```

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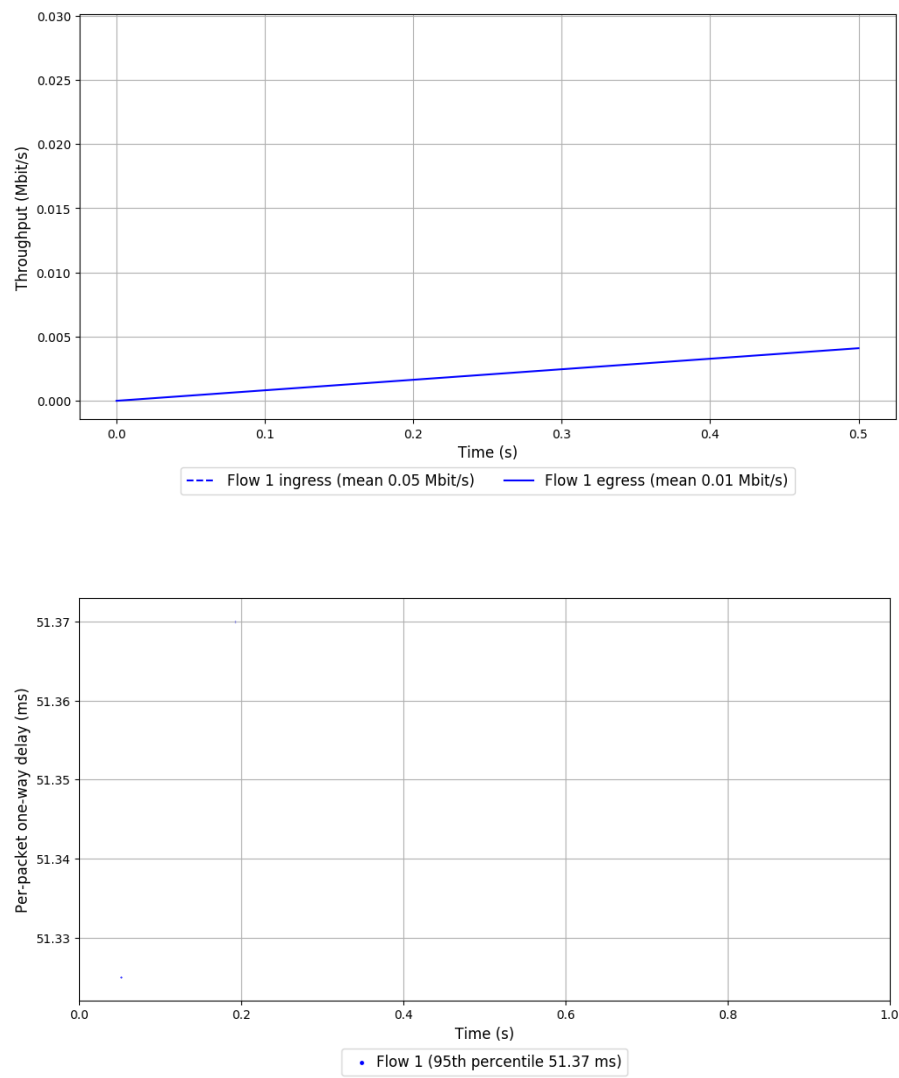
Run 4: Statistics of PCC-Expr

Start at: 2019-11-23 23:53:01
End at: 2019-11-23 23:53:31
Local clock offset: -2.301 ms
Remote clock offset: -8.723 ms

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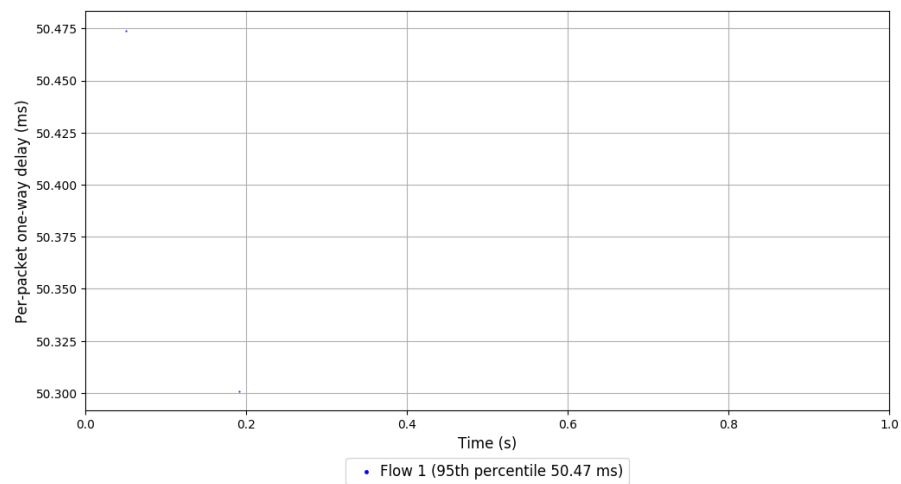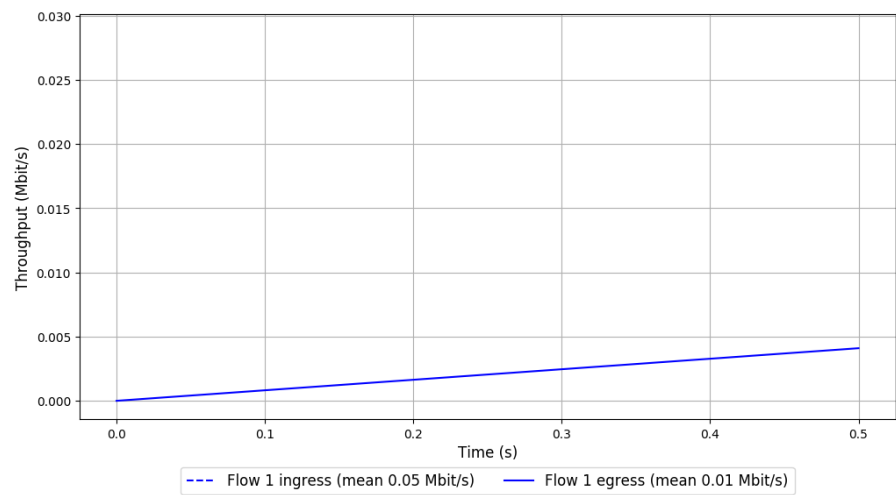
```
Run 5: Statistics of PCC-Expr

Start at: 2019-11-24 00:20:57
End at: 2019-11-24 00:21:27
Local clock offset: -1.505 ms
Remote clock offset: -9.586 ms
```

Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 0.05 Mbit/s)   Flow 1 egress (mean 0.01 Mbit/s)

Flow 1 (95th percentile 50.47 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-11-23 22:35:05
End at: 2019-11-23 22:35:35
Local clock offset: -2.662 ms
Remote clock offset: -8.672 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.57 Mbit/s
95th percentile per-packet one-way delay: 103.297 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 2.57 Mbit/s
95th percentile per-packet one-way delay: 103.297 ms
Loss rate: 0.53%
```
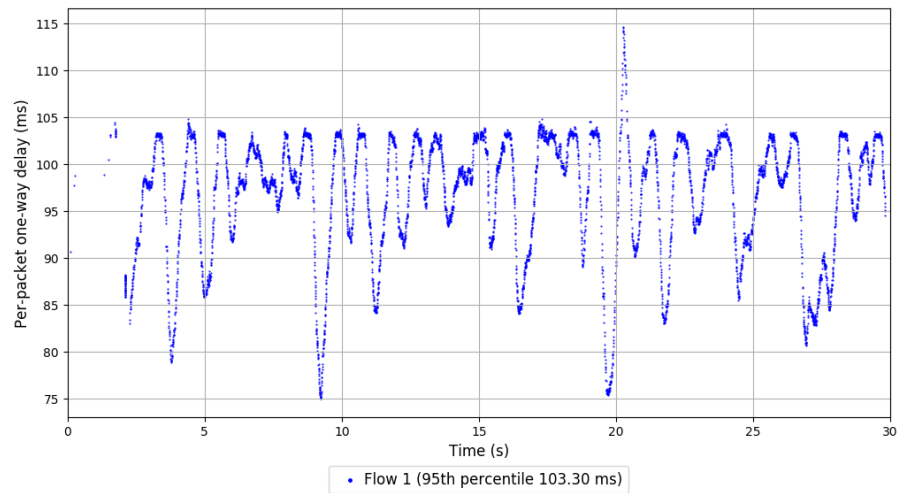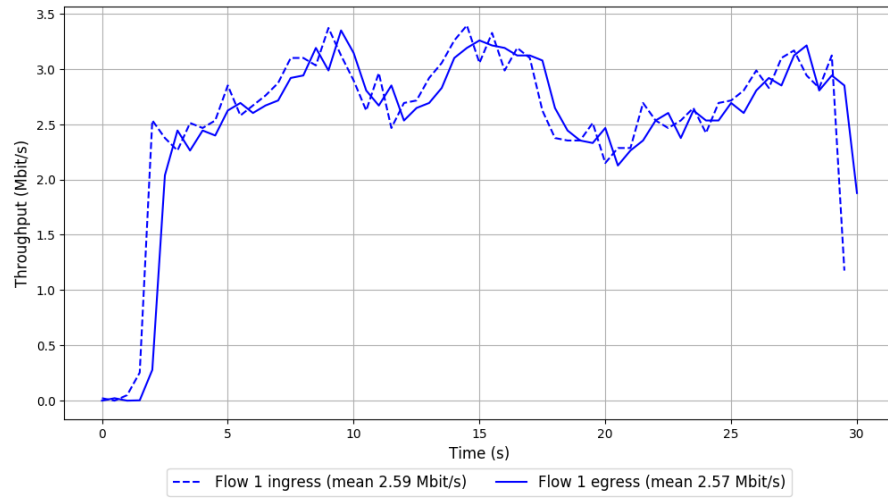
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-11-23 23:03:08
End at: 2019-11-23 23:03:38
Local clock offset: -3.316 ms
Remote clock offset: -8.547 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.27 Mbit/s
95th percentile per-packet one-way delay: 103.008 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 5.27 Mbit/s
95th percentile per-packet one-way delay: 103.008 ms
Loss rate: 0.26%
```
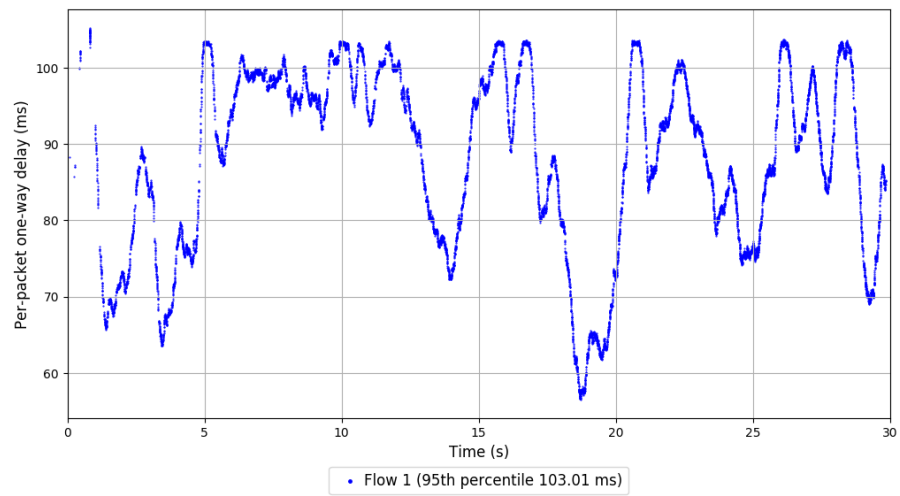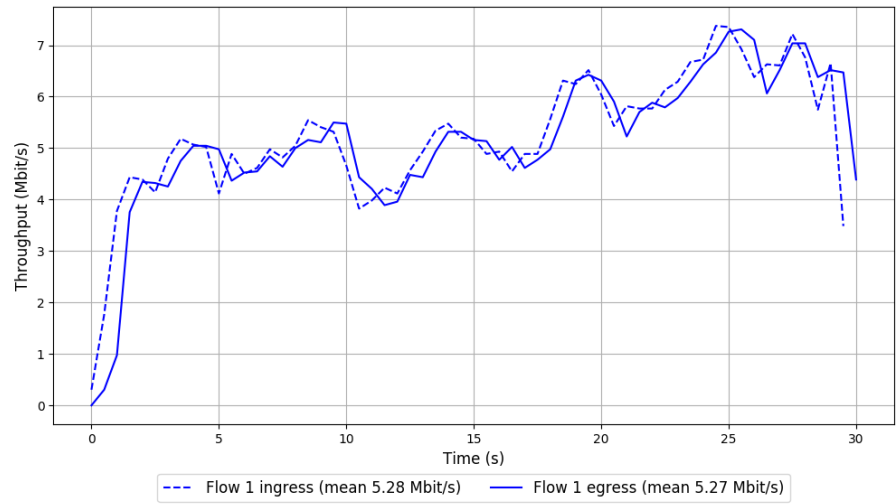
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-11-23 23:30:54
End at: 2019-11-23 23:31:24
Local clock offset: -2.197 ms
Remote clock offset: -7.863 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 53.62 Mbit/s
95th percentile per-packet one-way delay: 69.641 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 53.62 Mbit/s
95th percentile per-packet one-way delay: 69.641 ms
Loss rate: 0.95%
```
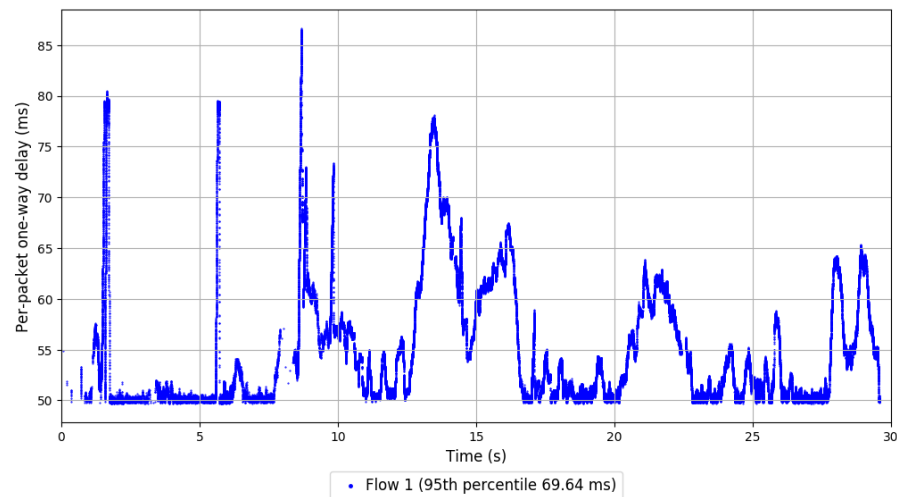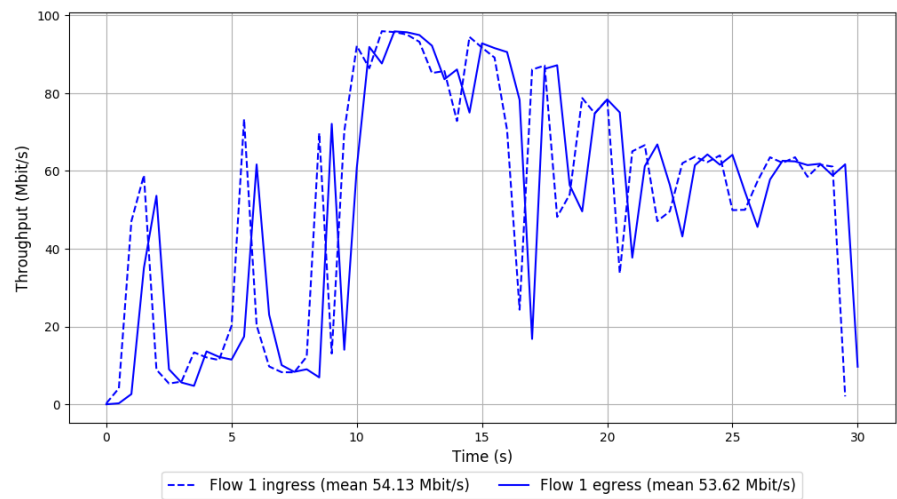
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 54.13 Mbit/s)   Flow 1 egress (mean 53.62 Mbit/s)

Flow 1 (95th percentile 69.64 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-11-23 23:58:45
End at: 2019-11-23 23:59:15
Local clock offset: -1.743 ms
Remote clock offset: -8.577 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 47.71 Mbit/s
95th percentile per-packet one-way delay: 54.055 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 47.71 Mbit/s
95th percentile per-packet one-way delay: 54.055 ms
Loss rate: 1.09%
```
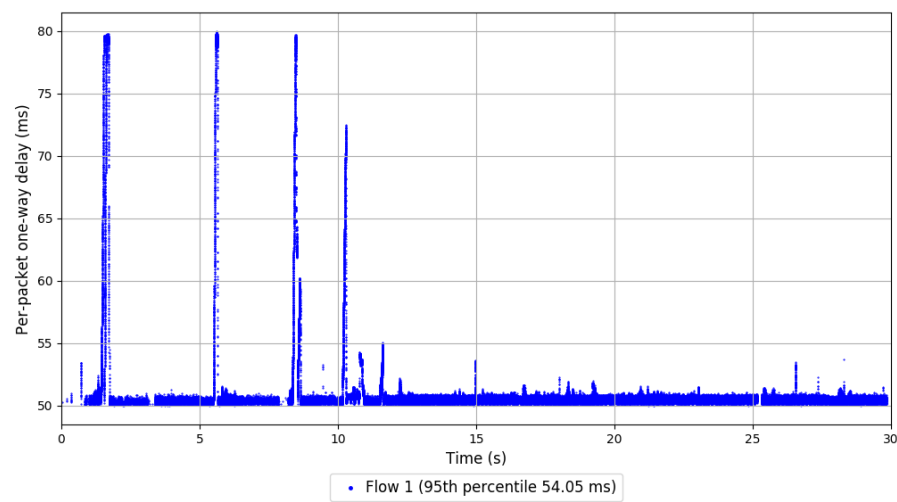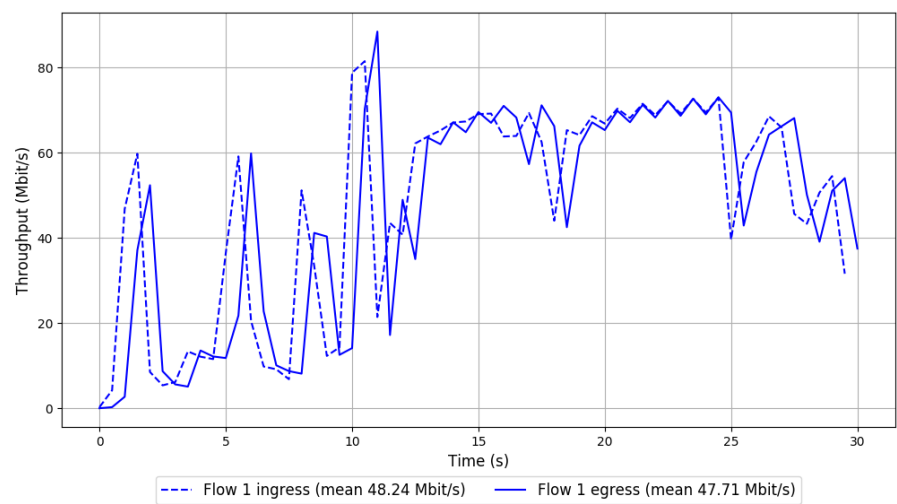
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-11-24 00:26:44
End at: 2019-11-24 00:27:14
Local clock offset: -1.297 ms
Remote clock offset: -9.251 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 25.41 Mbit/s
95th percentile per-packet one-way delay: 49.752 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 25.41 Mbit/s
95th percentile per-packet one-way delay: 49.752 ms
Loss rate: 0.01%
```
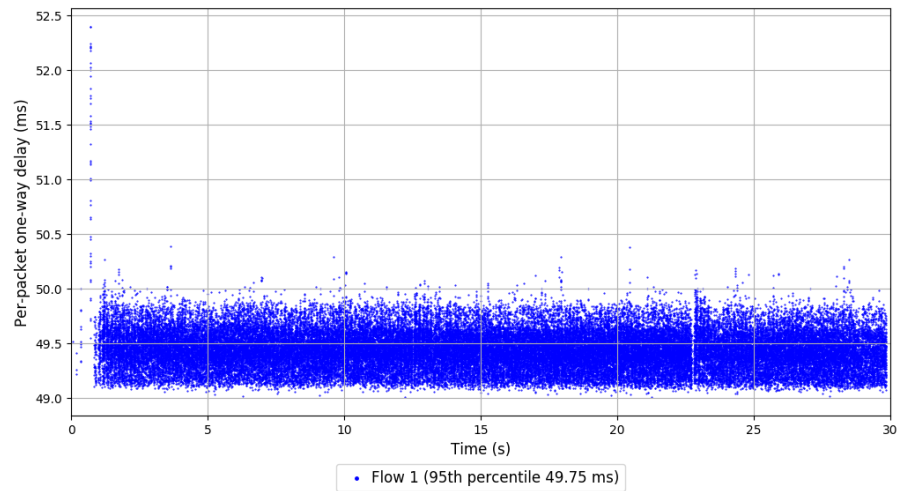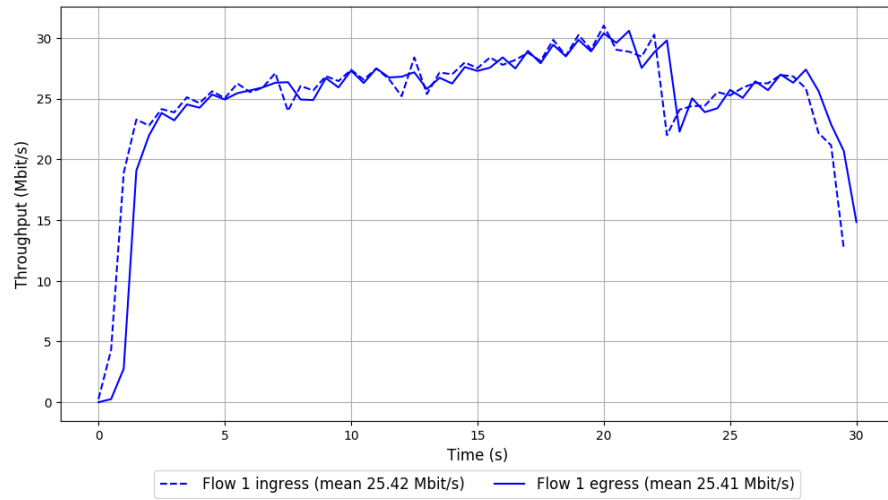
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 25.42 Mbit/s) —— Flow 1 egress (mean 25.41 Mbit/s)

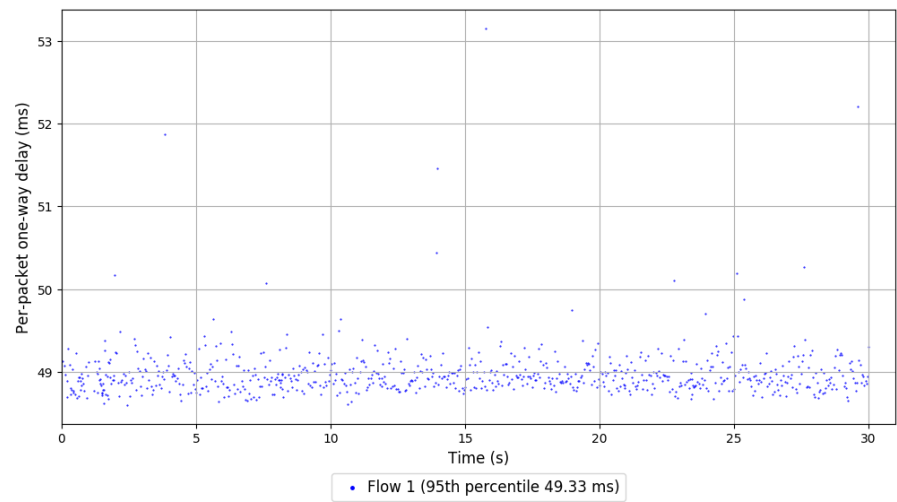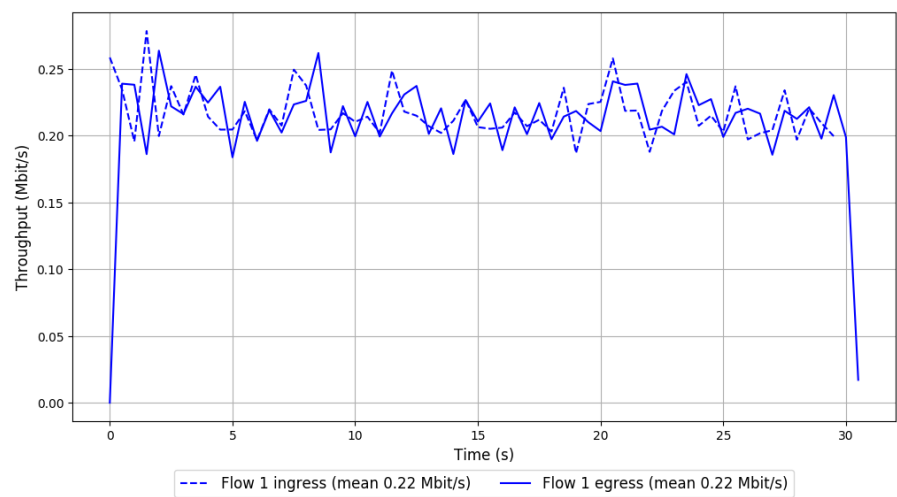

• Flow 1 (95th percentile 49.75 ms)

174

```
Run 1: Statistics of SCReAM

Start at: 2019-11-23 22:20:00
End at: 2019-11-23 22:20:31
Local clock offset: -1.182 ms
Remote clock offset: -10.452 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.331 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.331 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-11-23 22:48:01
End at: 2019-11-23 22:48:31
Local clock offset: -2.598 ms
Remote clock offset: -7.82 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 104.289 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 104.289 ms
Loss rate: 1.29%
```
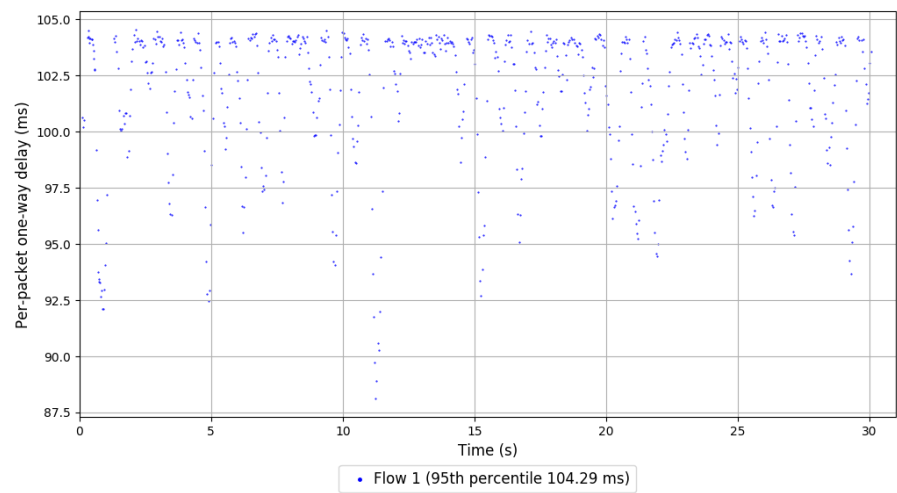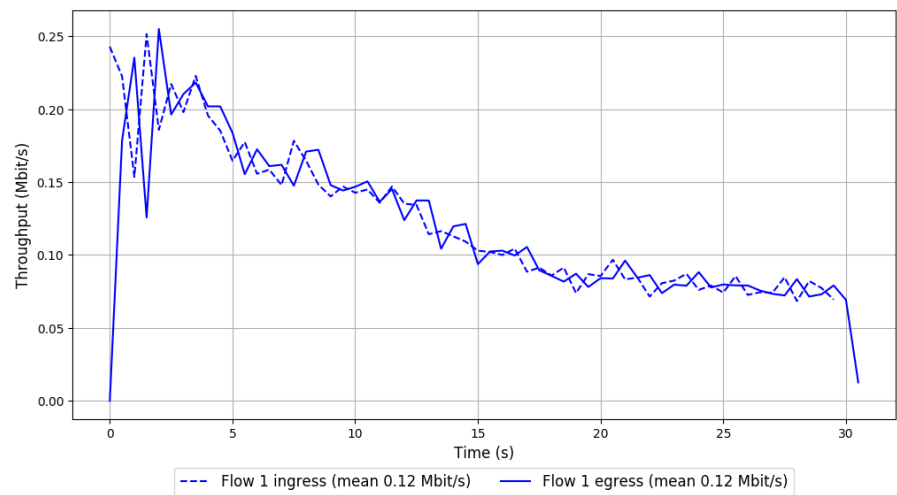
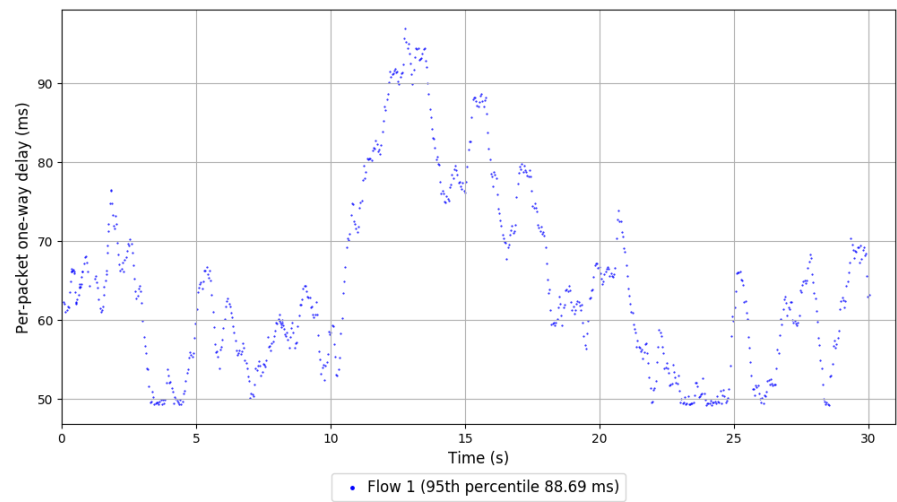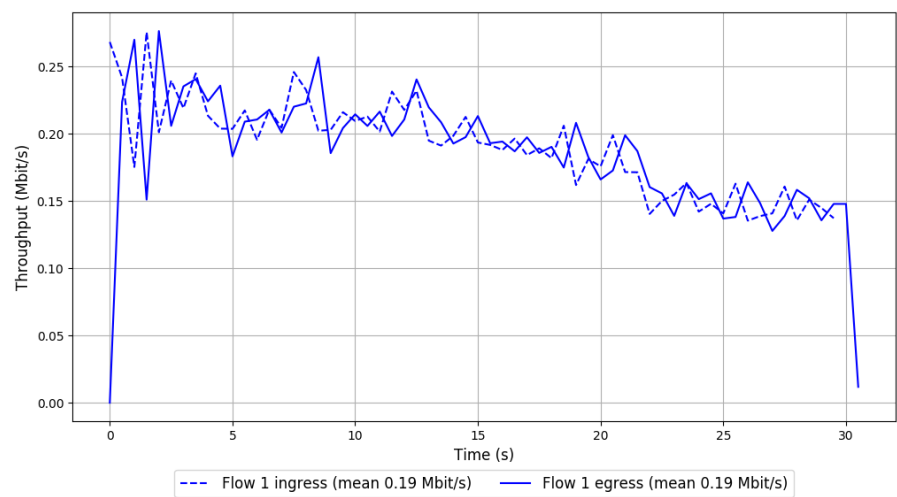## Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-11-23 23:15:50
End at: 2019-11-23 23:16:20
Local clock offset: -1.831 ms
Remote clock offset: -8.228 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 88.689 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 88.689 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.19 Mbit/s) --- Flow 1 egress (mean 0.19 Mbit/s)

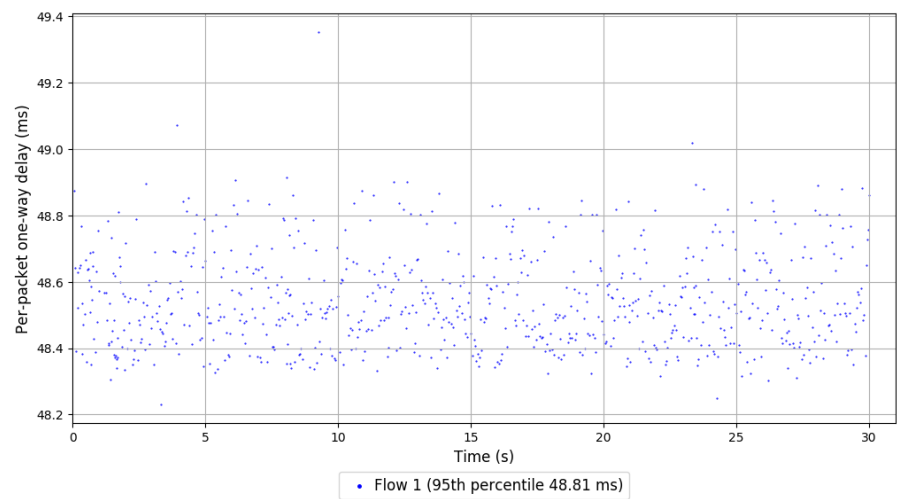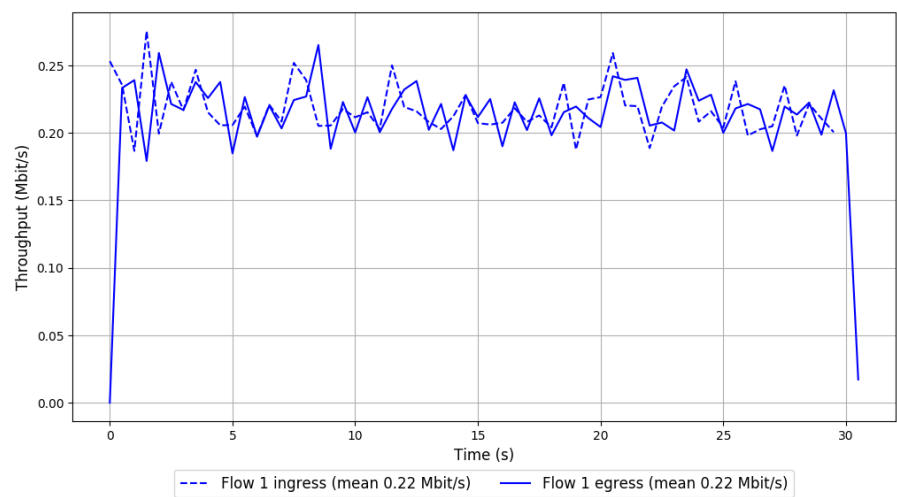Flow 1 (95th percentile 88.69 ms)

```
Run 4: Statistics of SCReAM

Start at: 2019-11-23 23:43:42
End at: 2019-11-23 23:44:12
Local clock offset: -2.309 ms
Remote clock offset: -8.276 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.812 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.812 ms
Loss rate: 0.00%
```

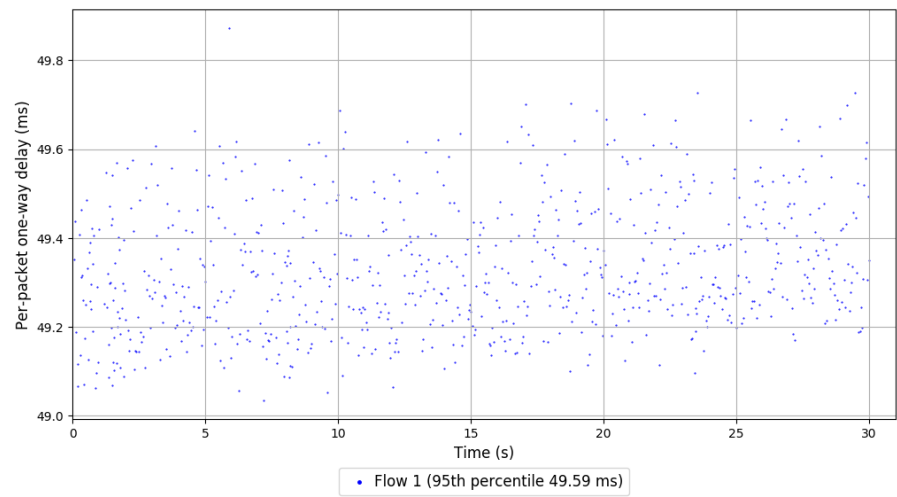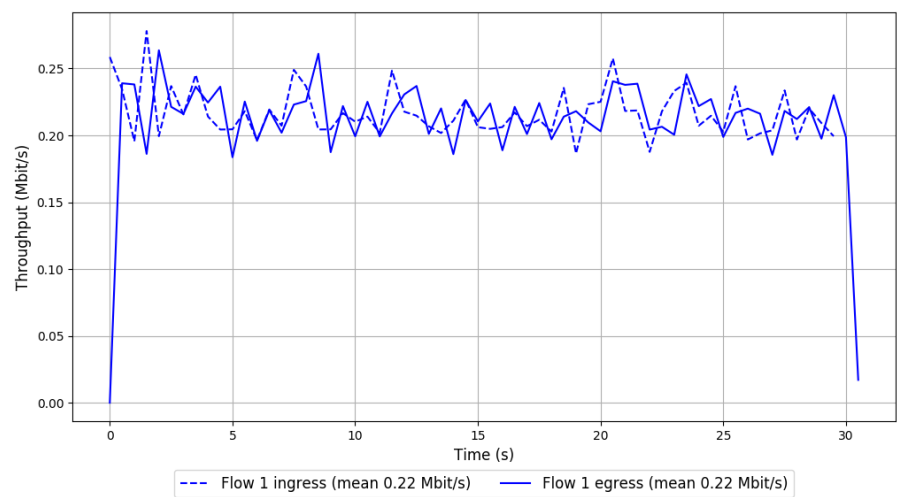Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-11-24 00:11:33
End at: 2019-11-24 00:12:03
Local clock offset: -1.666 ms
Remote clock offset: -8.911 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.593 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.593 ms
Loss rate: 0.00%
```
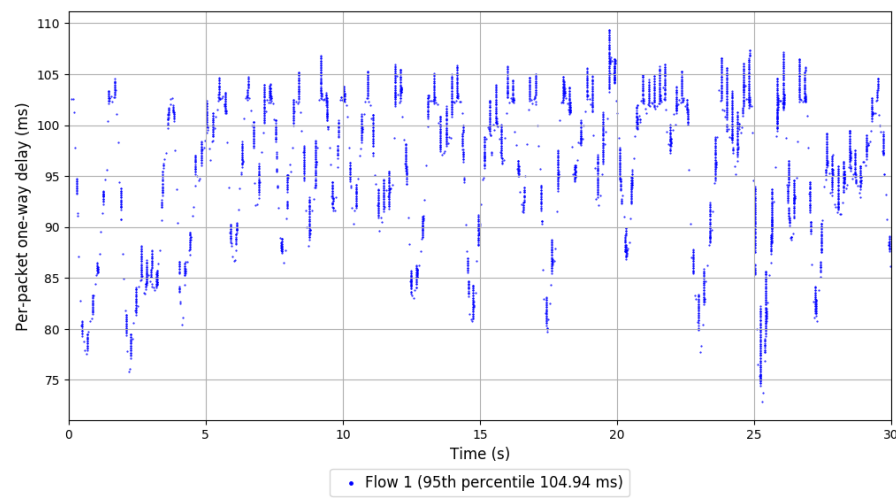
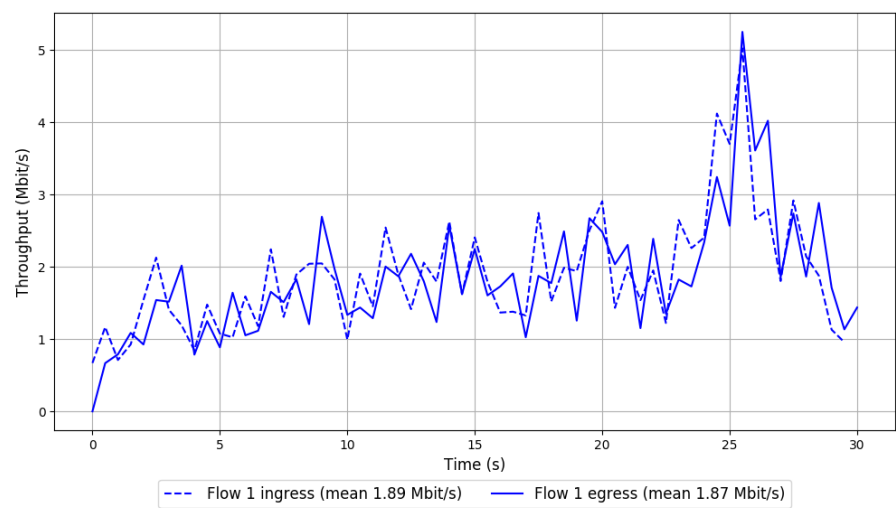# Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-11-23 22:33:57
End at: 2019-11-23 22:34:27
Local clock offset: -1.805 ms
Remote clock offset: -8.619 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 104.939 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 104.939 ms
Loss rate: 0.94%
```
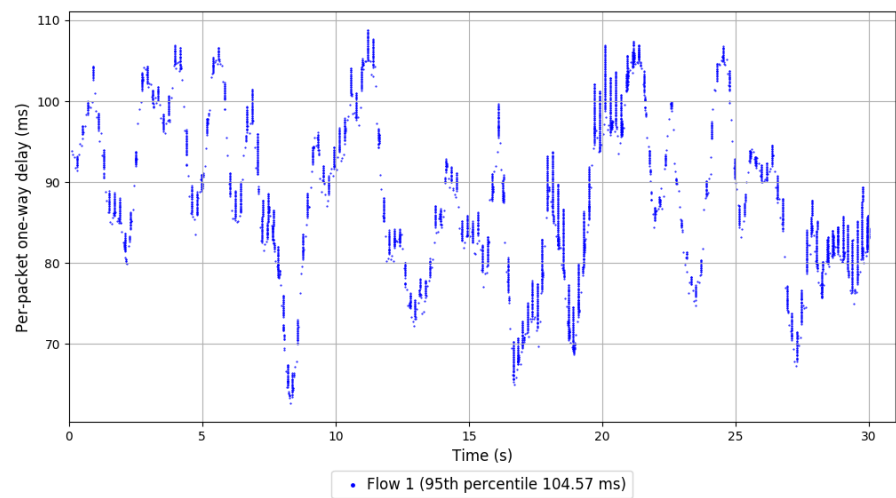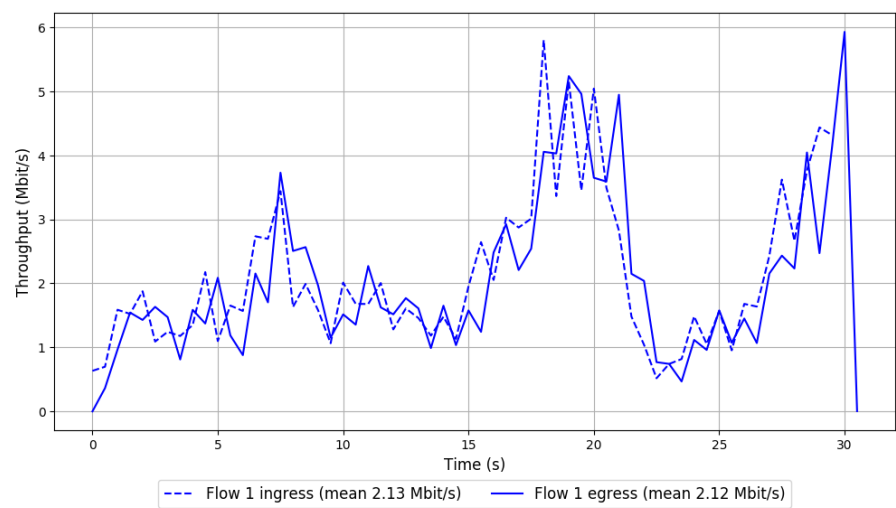
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-11-23 23:02:00
End at: 2019-11-23 23:02:30
Local clock offset: -2.43 ms
Remote clock offset: -8.593 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 104.568 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 104.568 ms
Loss rate: 0.43%
```
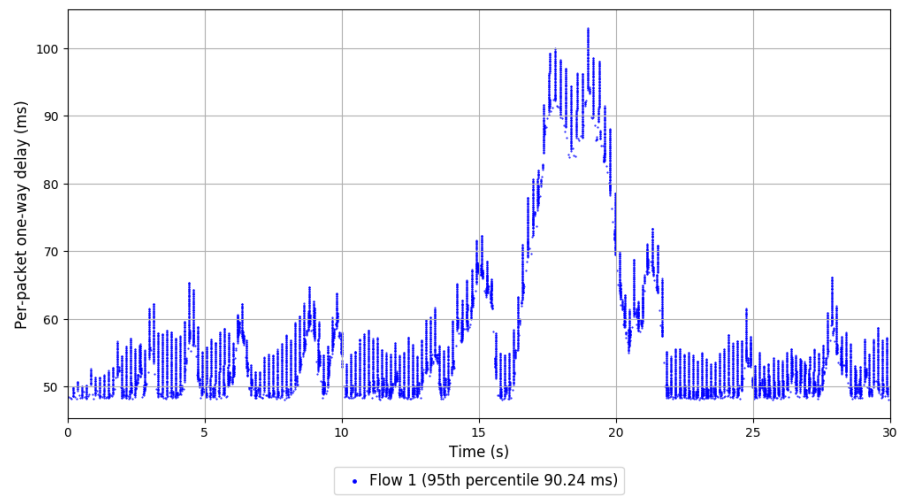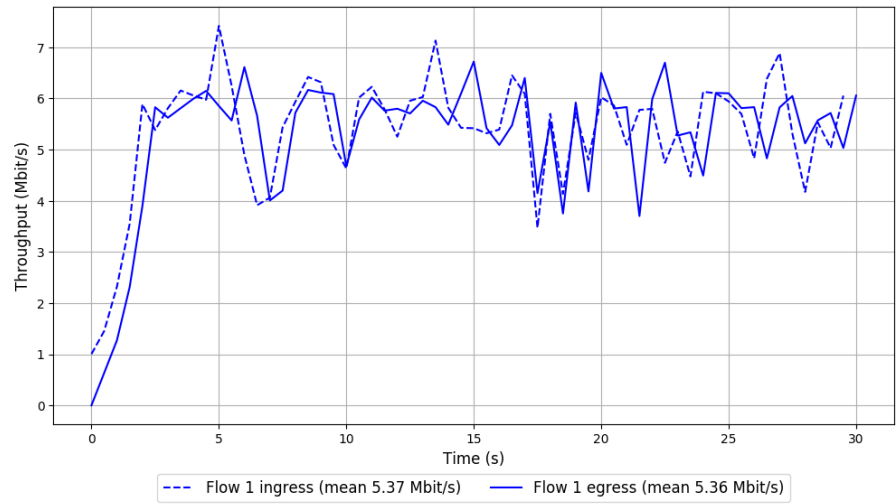
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-11-23 23:29:46
End at: 2019-11-23 23:30:16
Local clock offset: -2.226 ms
Remote clock offset: -8.594 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.36 Mbit/s
95th percentile per-packet one-way delay: 90.241 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 5.36 Mbit/s
95th percentile per-packet one-way delay: 90.241 ms
Loss rate: 0.17%
```
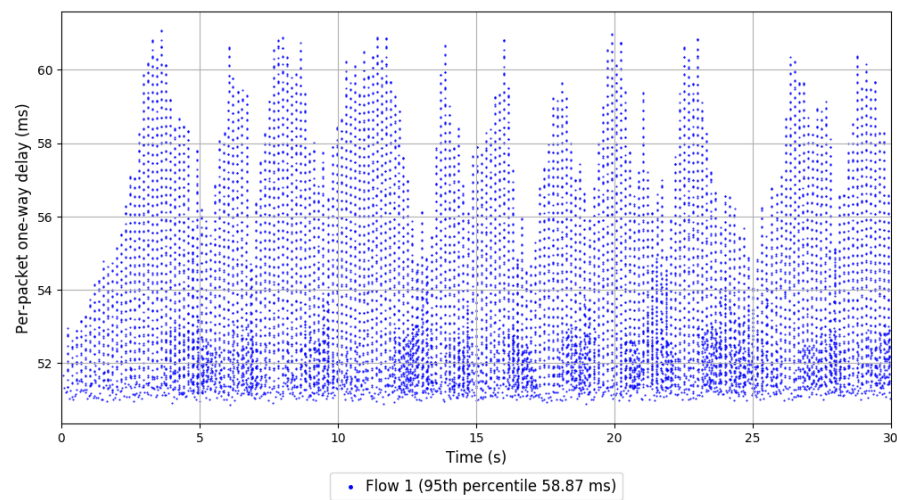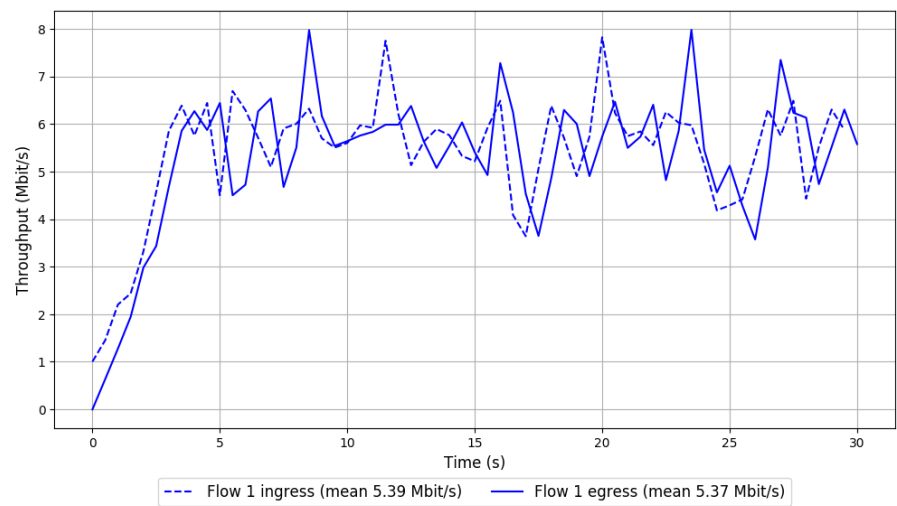
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-11-23 23:57:38
End at: 2019-11-23 23:58:08
Local clock offset: -2.404 ms
Remote clock offset: -9.112 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.37 Mbit/s
95th percentile per-packet one-way delay: 58.866 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 5.37 Mbit/s
95th percentile per-packet one-way delay: 58.866 ms
Loss rate: 0.41%
```

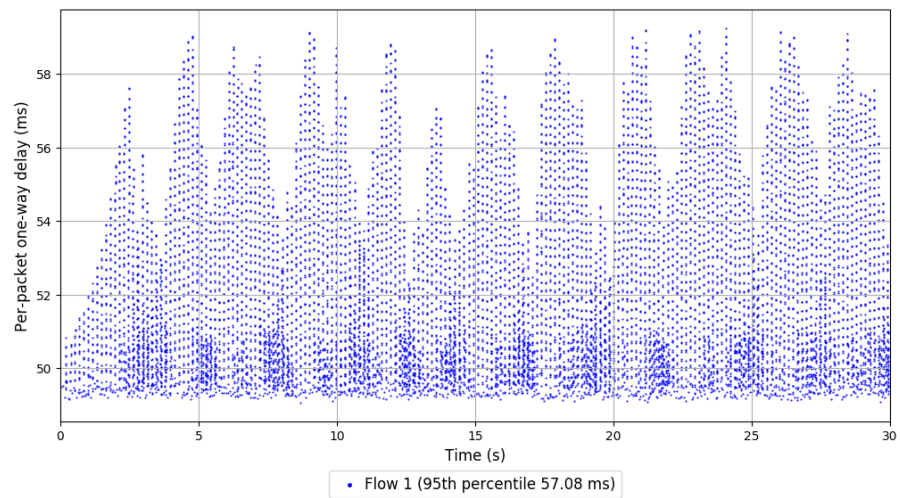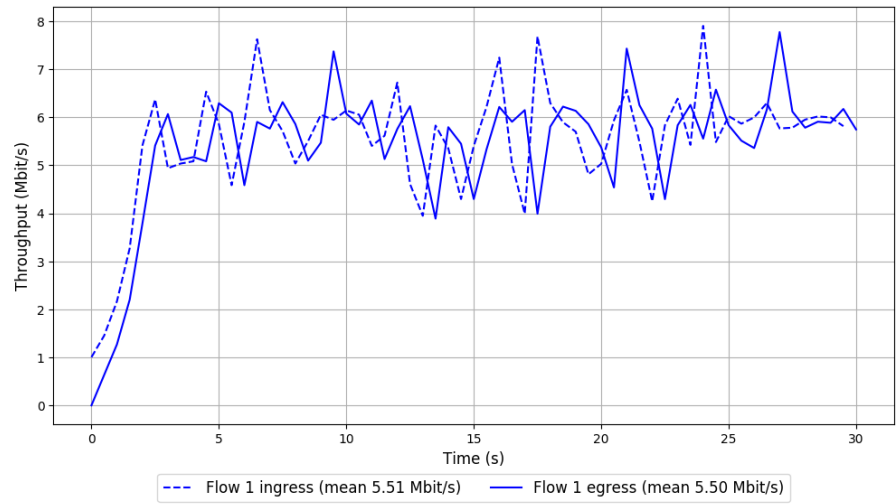# Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-11-24 00:25:36
End at: 2019-11-24 00:26:06
Local clock offset: -1.401 ms
Remote clock offset: -9.309 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.50 Mbit/s
95th percentile per-packet one-way delay: 57.080 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 5.50 Mbit/s
95th percentile per-packet one-way delay: 57.080 ms
Loss rate: 0.17%
```

Run 5: Report of Sprout — Data Link

Flow 1 ingress (mean 5.51 Mbit/s) ------- Flow 1 egress (mean 5.50 Mbit/s)

• Flow 1 (95th percentile 57.08 ms)

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

Start at: 2019-11-23 22:18:52
End at: 2019-11-23 22:19:22
Local clock offset: -2.323 ms
Remote clock offset: -8.851 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 50.836 ms
Loss rate: 6.72%
-- Flow 1:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 50.836 ms
Loss rate: 6.72%
```
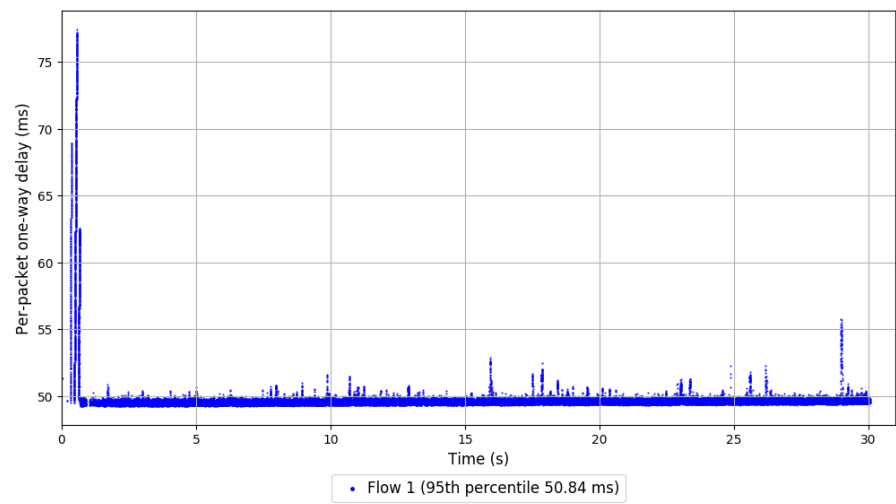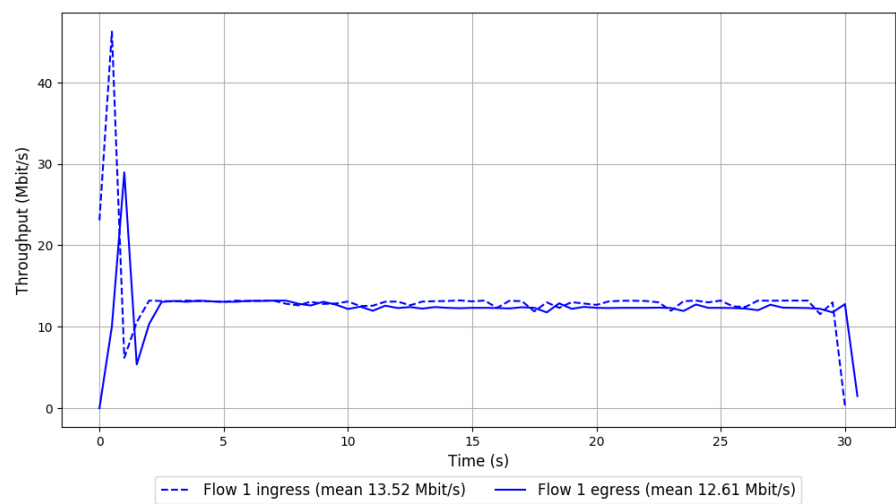
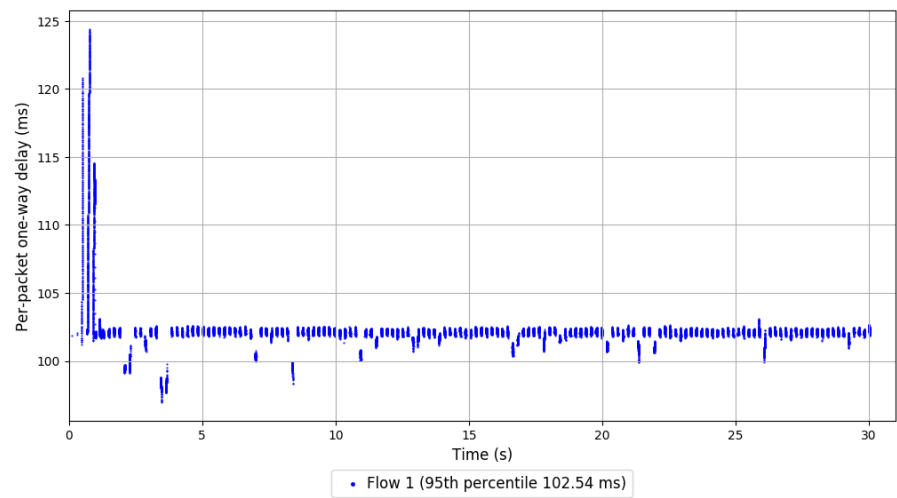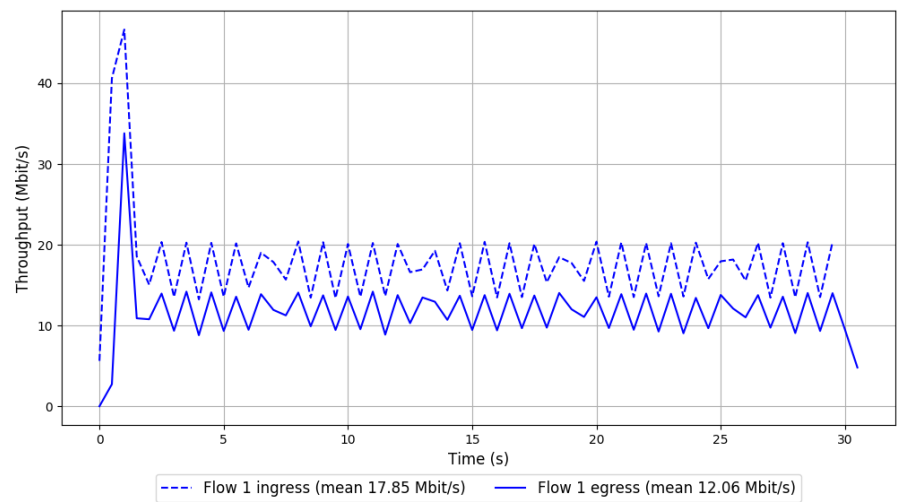## Run 1: Report of TaoVA-100x — Data Link

```
Run 2: Statistics of TaoVA-100x

Start at: 2019-11-23 22:46:51
End at: 2019-11-23 22:47:21
Local clock offset: -1.86 ms
Remote clock offset: -9.236 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.06 Mbit/s
95th percentile per-packet one-way delay: 102.542 ms
Loss rate: 32.43%
-- Flow 1:
Average throughput: 12.06 Mbit/s
95th percentile per-packet one-way delay: 102.542 ms
Loss rate: 32.43%
```

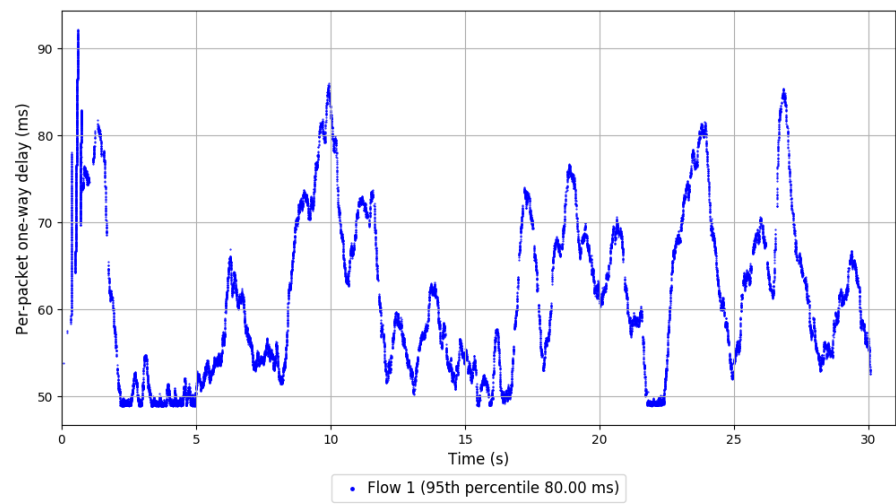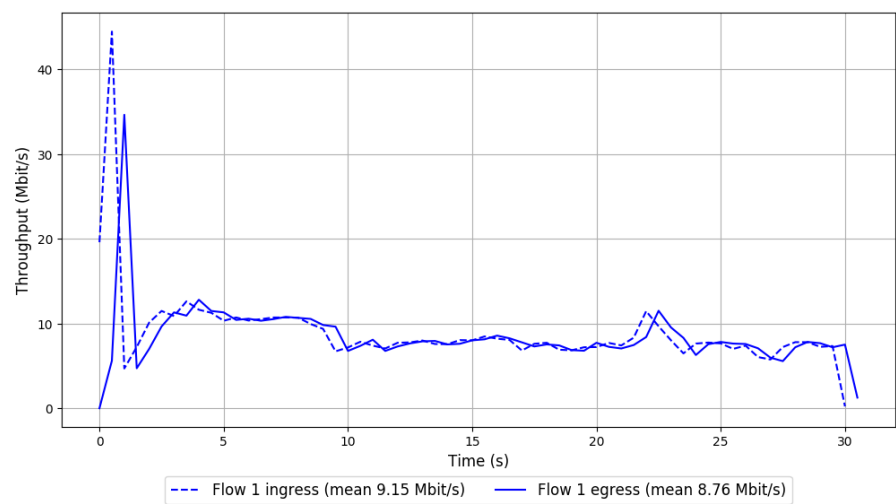Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2019-11-23 23:14:42
End at: 2019-11-23 23:15:12
Local clock offset: -2.723 ms
Remote clock offset: -8.492 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.76 Mbit/s
95th percentile per-packet one-way delay: 80.000 ms
Loss rate: 4.27%
-- Flow 1:
Average throughput: 8.76 Mbit/s
95th percentile per-packet one-way delay: 80.000 ms
Loss rate: 4.27%
```

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

```
Run 4: Statistics of TaoVA-100x

Start at: 2019-11-23 23:42:34
End at: 2019-11-23 23:43:04
Local clock offset: -1.591 ms
Remote clock offset: -7.636 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.62 Mbit/s
95th percentile per-packet one-way delay: 48.840 ms
Loss rate: 8.33%
-- Flow 1:
Average throughput: 12.62 Mbit/s
95th percentile per-packet one-way delay: 48.840 ms
Loss rate: 8.33%
```
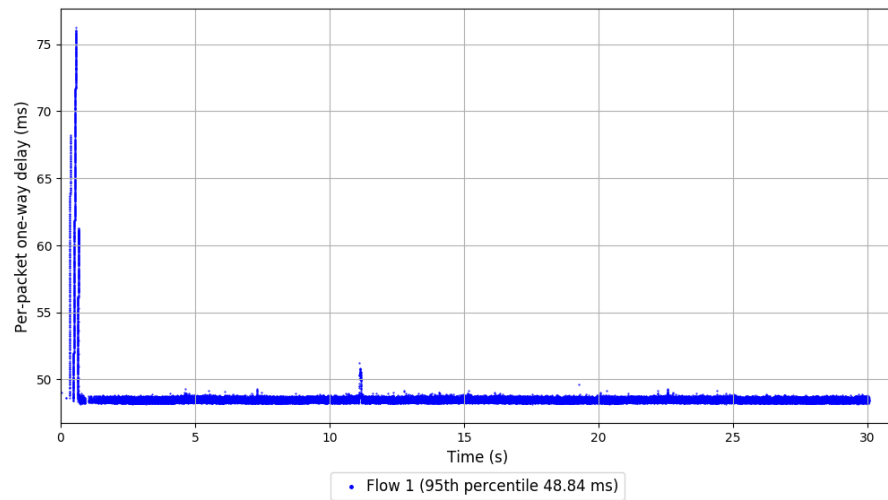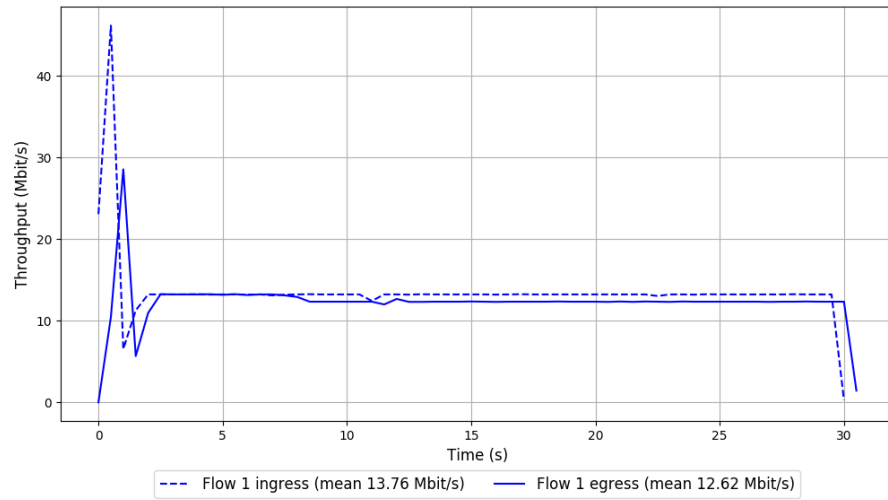
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 13.76 Mbit/s) --- Flow 1 egress (mean 12.62 Mbit/s)

Flow 1 (95th percentile 48.84 ms)

202

```
Run 5: Statistics of TaoVA-100x

Start at: 2019-11-24 00:10:25
End at: 2019-11-24 00:10:55
Local clock offset: -1.88 ms
Remote clock offset: -8.887 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 50.766 ms
Loss rate: 8.45%
-- Flow 1:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 50.766 ms
Loss rate: 8.45%
```
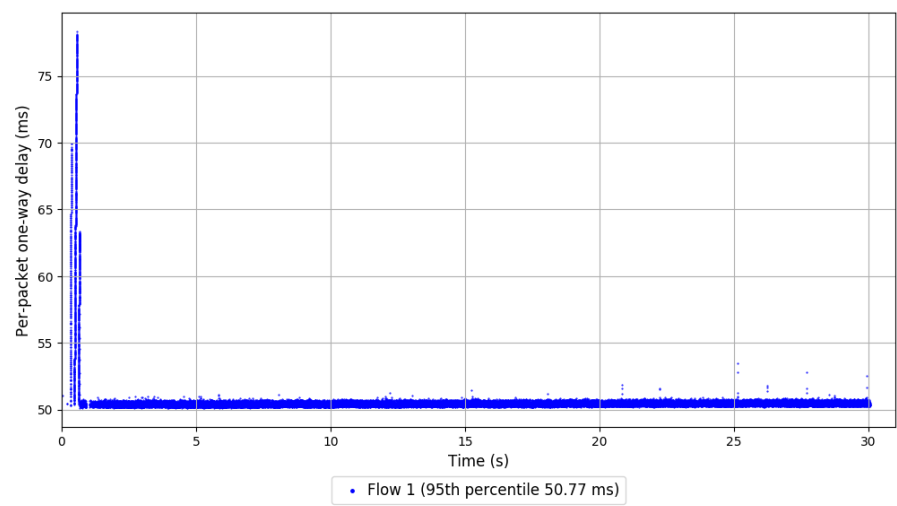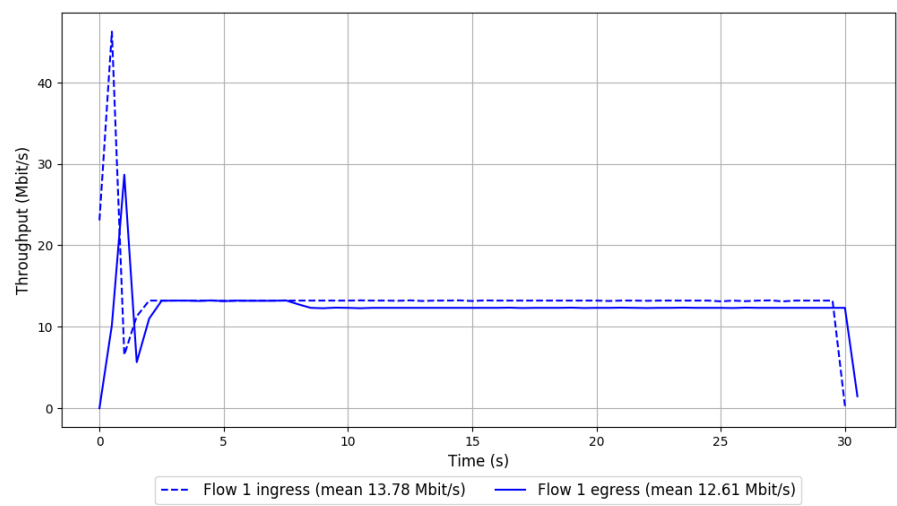
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 13.78 Mbit/s) --- Flow 1 egress (mean 12.61 Mbit/s)
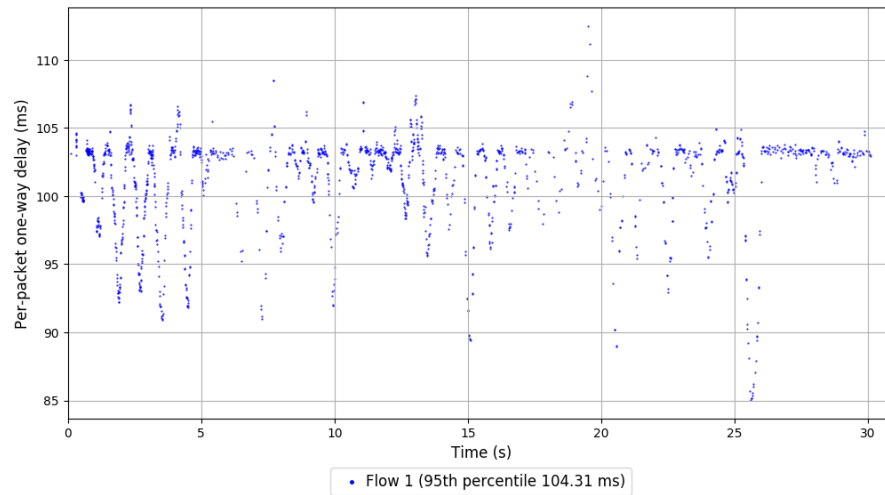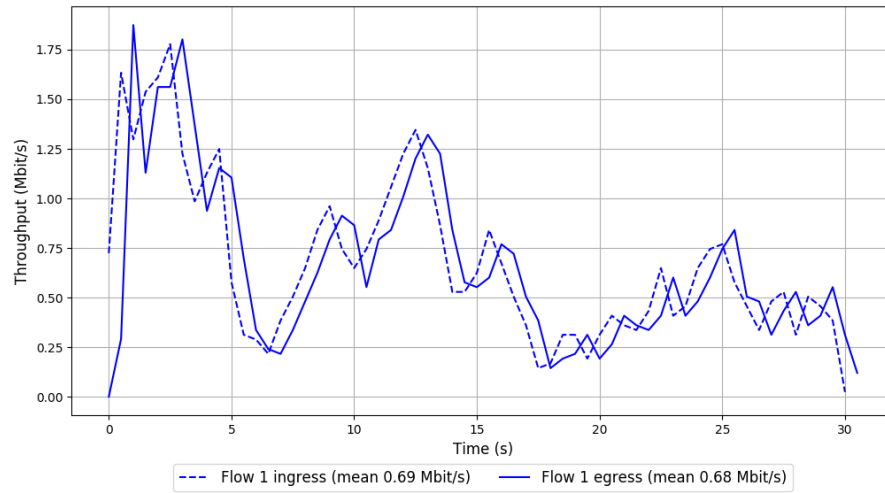

Flow 1 (95th percentile 50.77 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2019-11-23 22:36:13
End at: 2019-11-23 22:36:43
Local clock offset: -2.839 ms
Remote clock offset: -8.724 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 104.306 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 104.306 ms
Loss rate: 1.57%
```

Run 1: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 0.69 Mbit/s) —— Flow 1 egress (mean 0.68 Mbit/s)

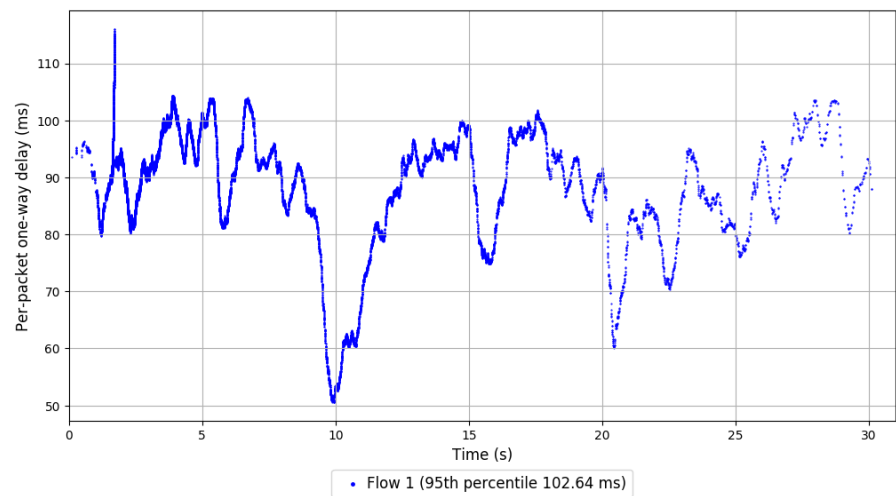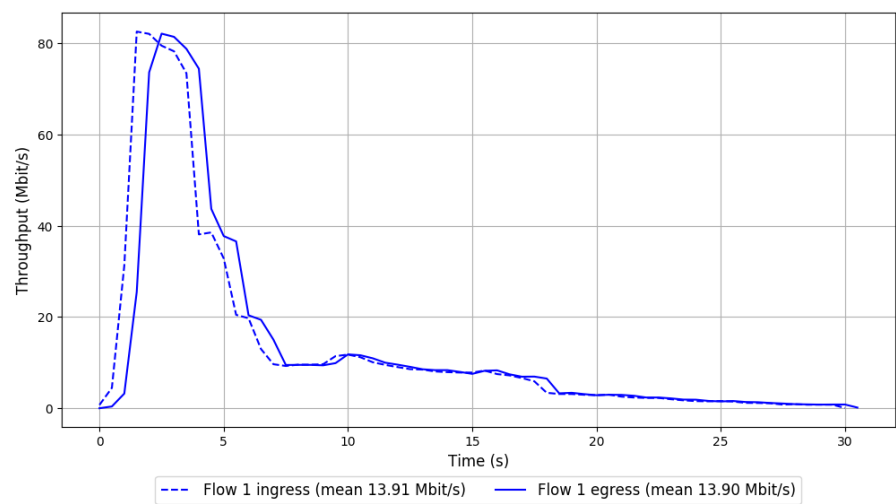
• Flow 1 (95th percentile 104.31 ms)

```
Run 2: Statistics of TCP Vegas

Start at: 2019-11-23 23:04:16
End at: 2019-11-23 23:04:46
Local clock offset: -3.348 ms
Remote clock offset: -9.177 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.90 Mbit/s
95th percentile per-packet one-way delay: 102.644 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 13.90 Mbit/s
95th percentile per-packet one-way delay: 102.644 ms
Loss rate: 0.12%
```

Run 2: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 13.91 Mbit/s) — Flow 1 egress (mean 13.90 Mbit/s)
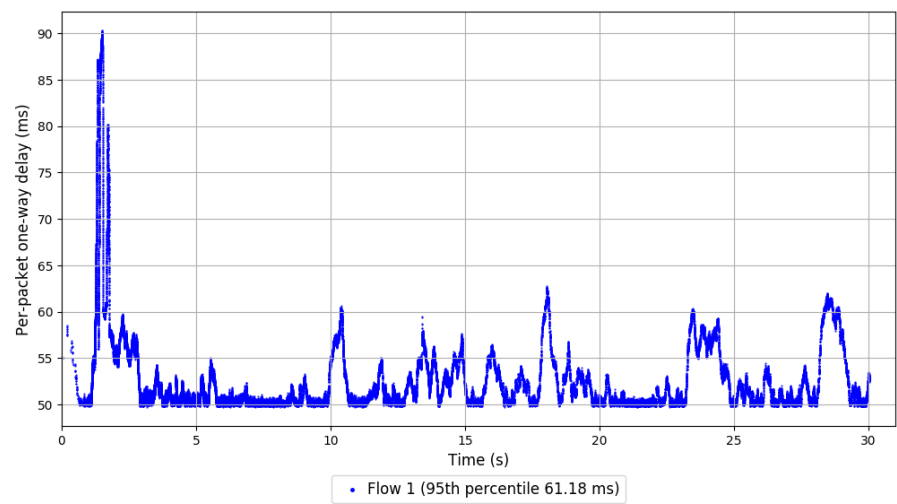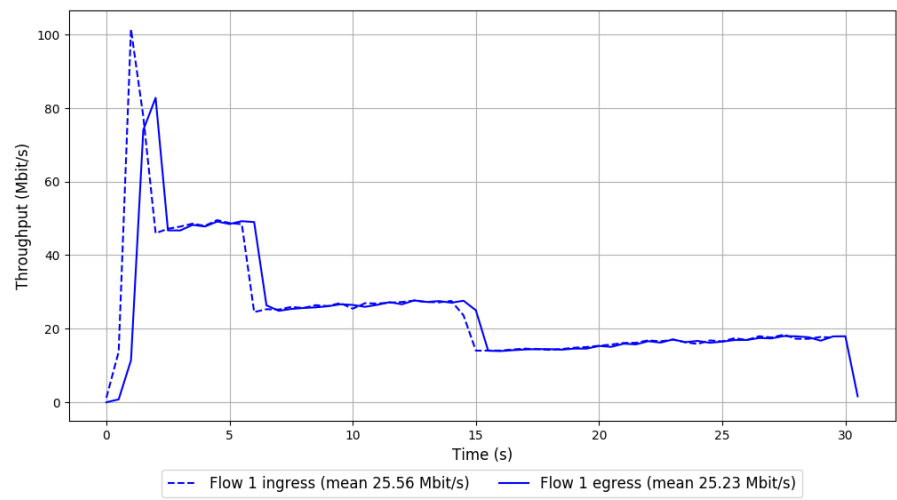

Flow 1 (95th percentile 102.64 ms)

```
Run 3: Statistics of TCP Vegas

Start at: 2019-11-23 23:32:04
End at: 2019-11-23 23:32:34
Local clock offset: -2.238 ms
Remote clock offset: -7.827 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 25.23 Mbit/s
95th percentile per-packet one-way delay: 61.184 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 25.23 Mbit/s
95th percentile per-packet one-way delay: 61.184 ms
Loss rate: 1.28%
```

Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 25.56 Mbit/s) — Flow 1 egress (mean 25.23 Mbit/s)
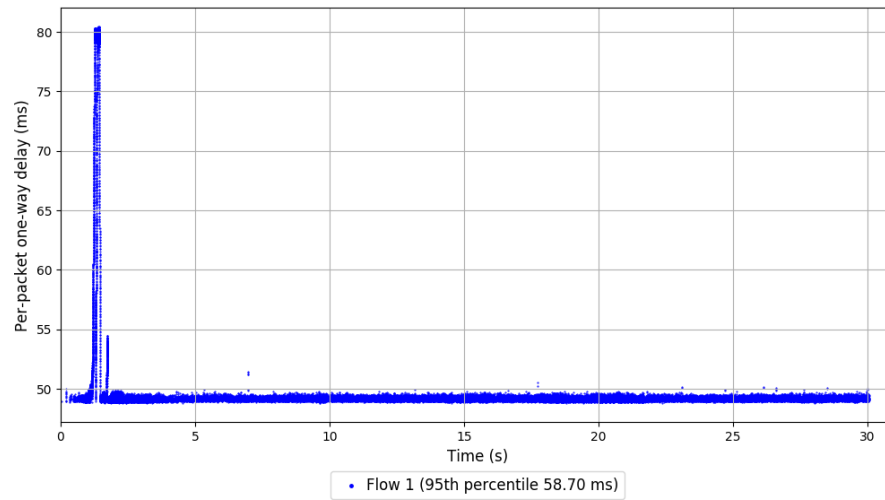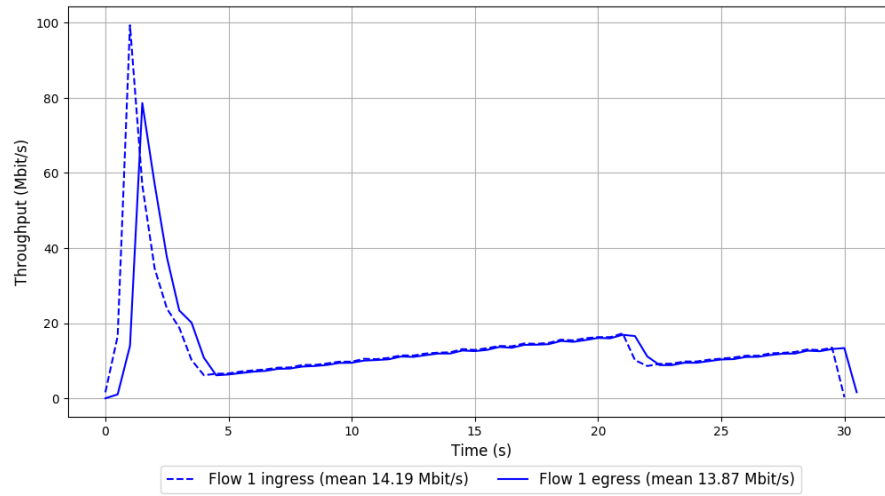

Flow 1 (95th percentile 61.18 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2019-11-23 23:59:55
End at: 2019-11-24 00:00:25
Local clock offset: -2.465 ms
Remote clock offset: -8.657 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.87 Mbit/s
95th percentile per-packet one-way delay: 58.704 ms
Loss rate: 2.19%
-- Flow 1:
Average throughput: 13.87 Mbit/s
95th percentile per-packet one-way delay: 58.704 ms
Loss rate: 2.19%
```

Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 14.19 Mbit/s) —— Flow 1 egress (mean 13.87 Mbit/s)

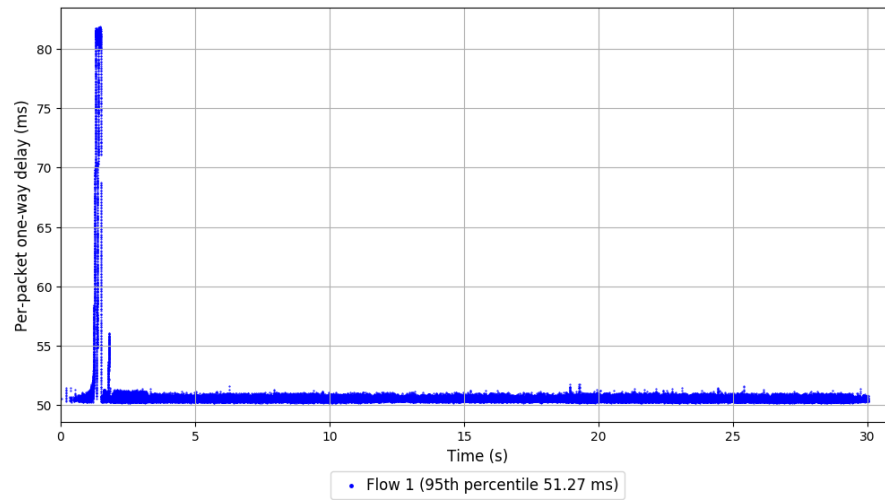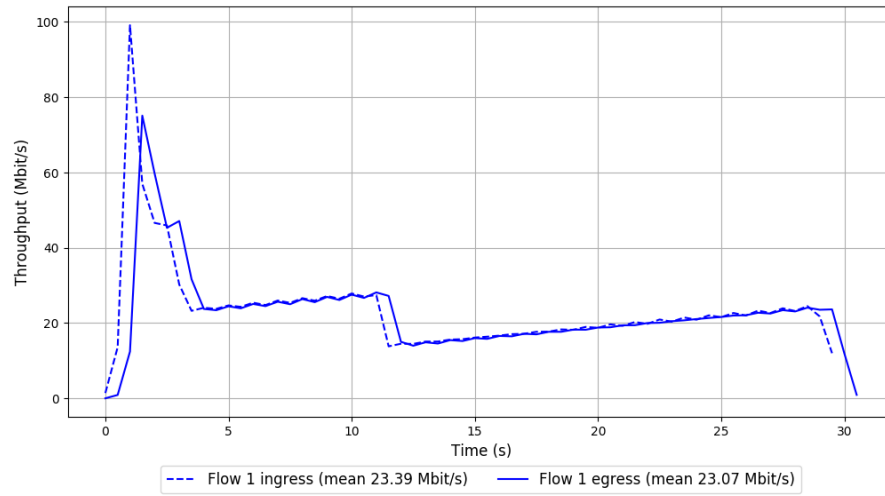

• Flow 1 (95th percentile 58.70 ms)

```
Run 5: Statistics of TCP Vegas

Start at: 2019-11-24 00:27:52
End at: 2019-11-24 00:28:22
Local clock offset: -0.533 ms
Remote clock offset: -9.208 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.07 Mbit/s
95th percentile per-packet one-way delay: 51.267 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 23.07 Mbit/s
95th percentile per-packet one-way delay: 51.267 ms
Loss rate: 1.37%
```

Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 23.39 Mbit/s)   Flow 1 egress (mean 23.07 Mbit/s)
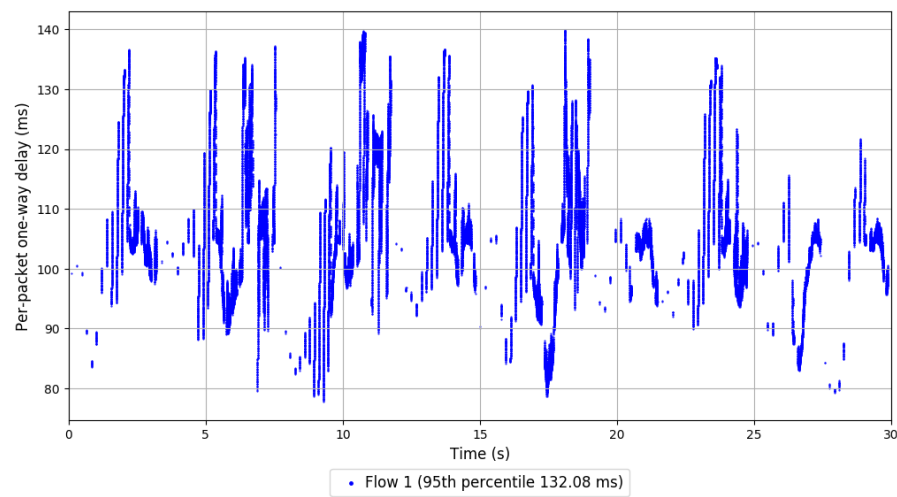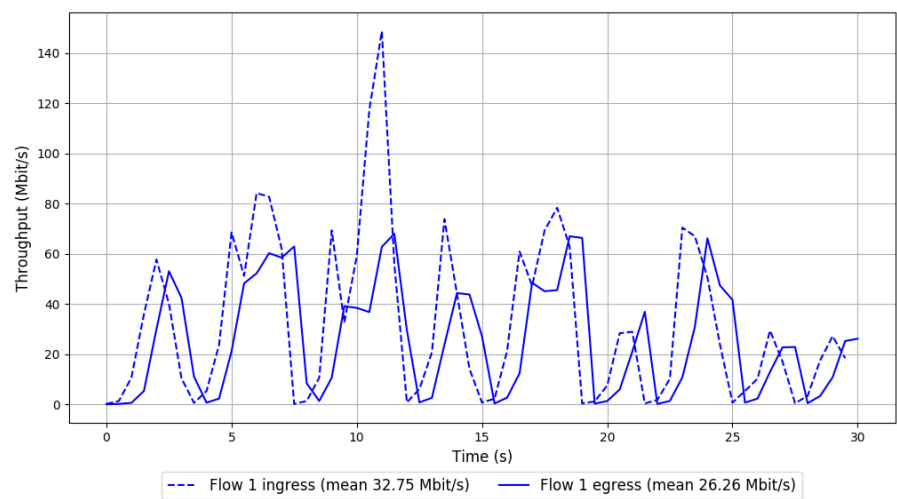

Flow 1 (95th percentile 51.27 ms)

```
Run 1: Statistics of Verus

Start at: 2019-11-23 22:32:47
End at: 2019-11-23 22:33:17
Local clock offset: -2.445 ms
Remote clock offset: -9.223 ms


# Below is generated by plot.py at 2019-11-24 00:42:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.26 Mbit/s
95th percentile per-packet one-way delay: 132.083 ms
Loss rate: 19.82%
-- Flow 1:
Average throughput: 26.26 Mbit/s
95th percentile per-packet one-way delay: 132.083 ms
Loss rate: 19.82%
```

Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 32.75 Mbit/s)   Flow 1 egress (mean 26.26 Mbit/s)
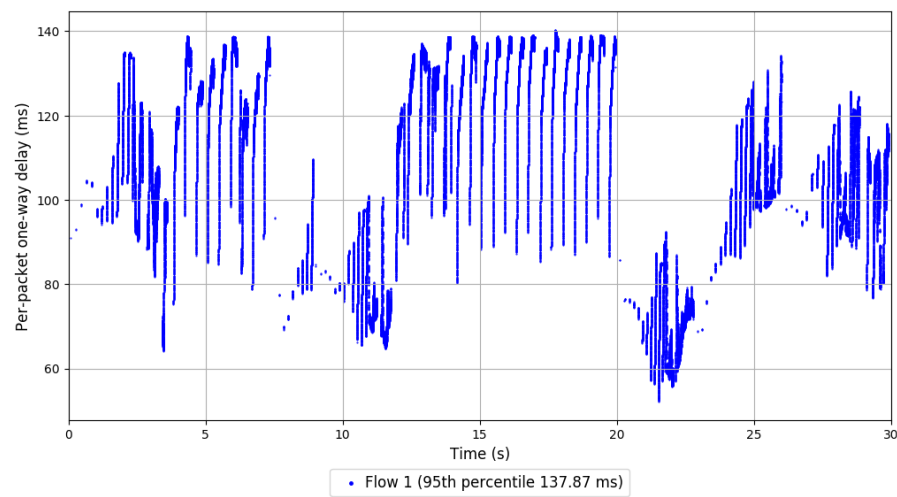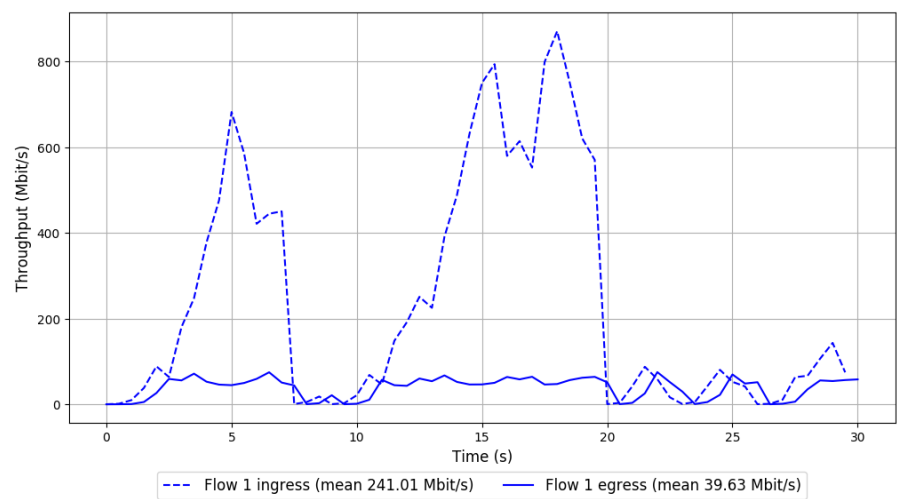

Flow 1 (95th percentile 132.08 ms)

```
Run 2: Statistics of Verus

Start at: 2019-11-23 23:00:47
End at: 2019-11-23 23:01:17
Local clock offset: -3.091 ms
Remote clock offset: -8.494 ms


# Below is generated by plot.py at 2019-11-24 00:42:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 39.63 Mbit/s
95th percentile per-packet one-way delay: 137.871 ms
Loss rate: 83.54%
-- Flow 1:
Average throughput: 39.63 Mbit/s
95th percentile per-packet one-way delay: 137.871 ms
Loss rate: 83.54%
```
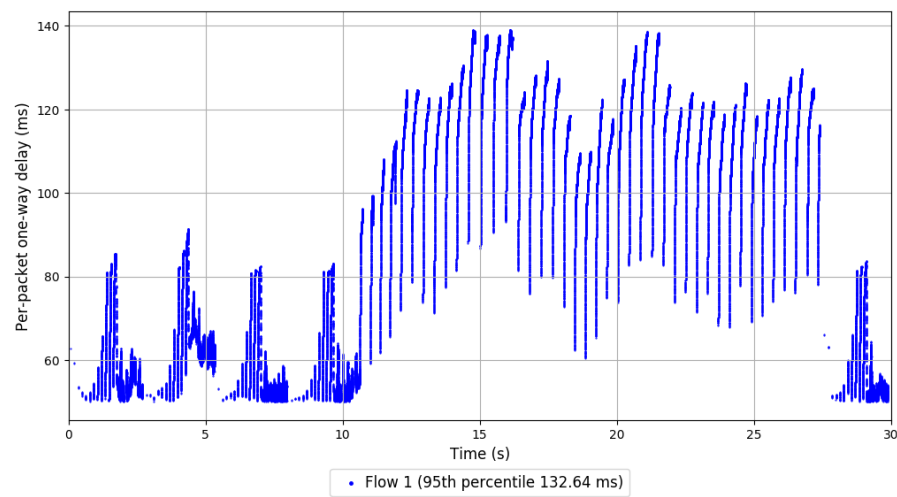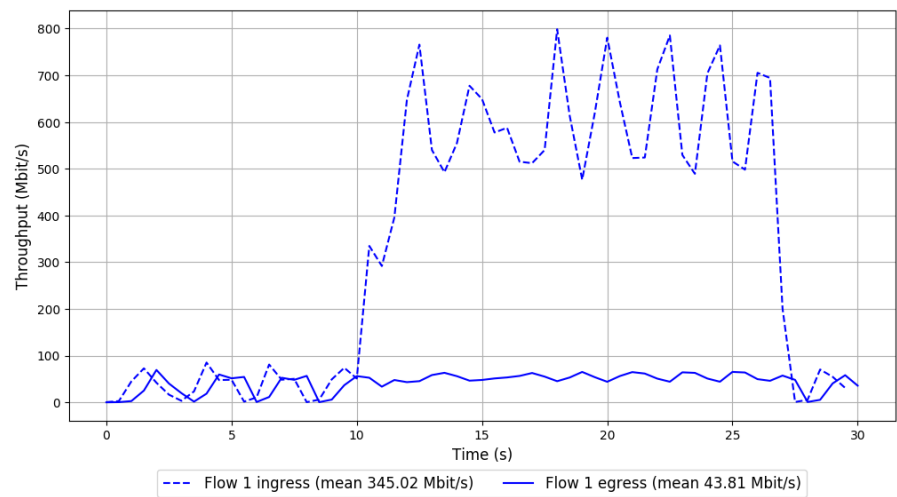
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-11-23 23:28:33
End at: 2019-11-23 23:29:03
Local clock offset: -1.393 ms
Remote clock offset: -7.921 ms


# Below is generated by plot.py at 2019-11-24 00:42:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 43.81 Mbit/s
95th percentile per-packet one-way delay: 132.641 ms
Loss rate: 87.31%
-- Flow 1:
Average throughput: 43.81 Mbit/s
95th percentile per-packet one-way delay: 132.641 ms
Loss rate: 87.31%
```

Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 345.02 Mbit/s) ----   Flow 1 egress (mean 43.81 Mbit/s) ——

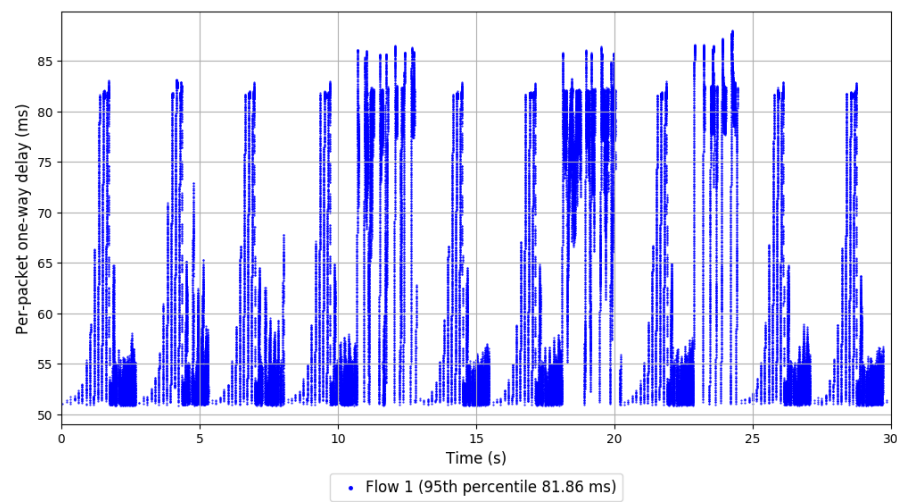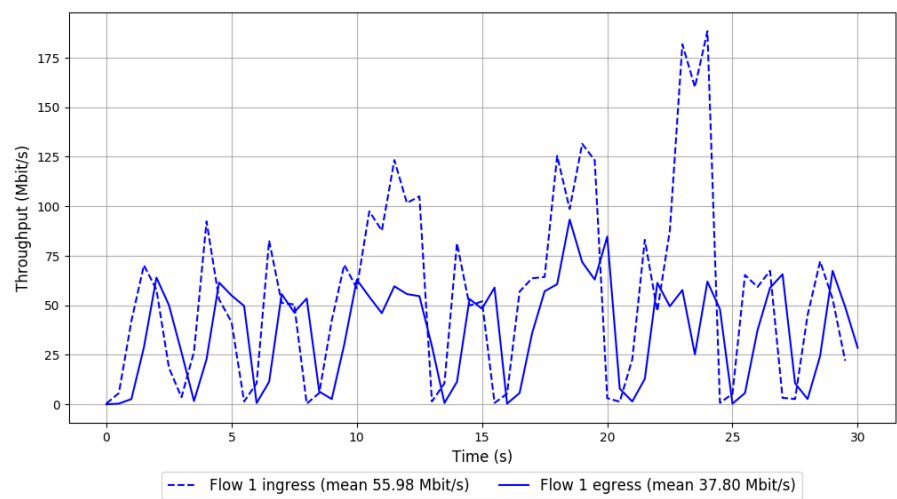
• Flow 1 (95th percentile 132.64 ms)

```
Run 4: Statistics of Verus

Start at: 2019-11-23 23:56:28
End at: 2019-11-23 23:56:58
Local clock offset: -1.615 ms
Remote clock offset: -8.394 ms


# Below is generated by plot.py at 2019-11-24 00:42:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 37.80 Mbit/s
95th percentile per-packet one-way delay: 81.862 ms
Loss rate: 32.49%
-- Flow 1:
Average throughput: 37.80 Mbit/s
95th percentile per-packet one-way delay: 81.862 ms
Loss rate: 32.49%
```

Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 55.98 Mbit/s) Flow 1 egress (mean 37.80 Mbit/s)

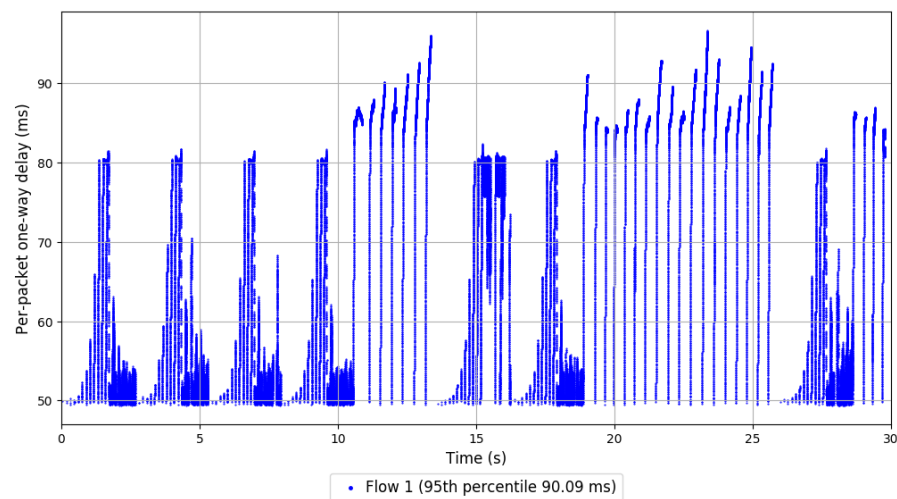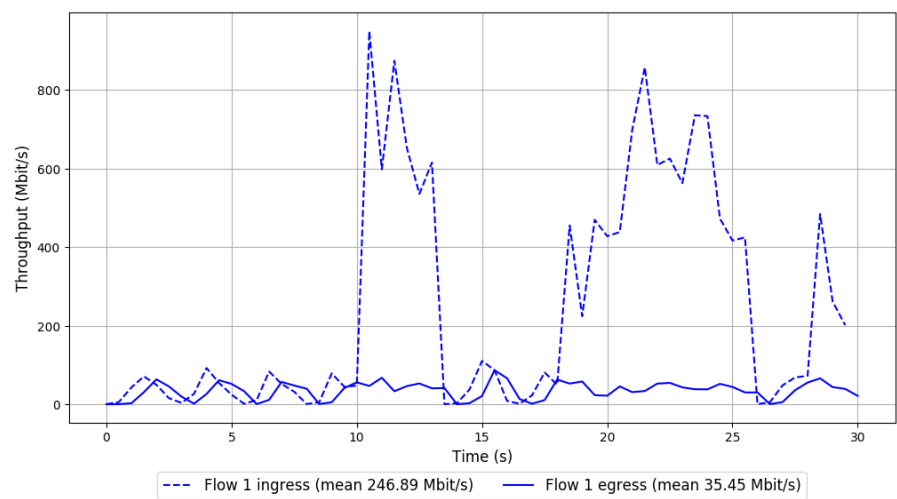Flow 1 (95th percentile 81.86 ms)

```
Run 5: Statistics of Verus

Start at: 2019-11-24 00:24:25
End at: 2019-11-24 00:24:55
Local clock offset: -0.679 ms
Remote clock offset: -9.421 ms


# Below is generated by plot.py at 2019-11-24 00:42:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 35.45 Mbit/s
95th percentile per-packet one-way delay: 90.086 ms
Loss rate: 85.63%
-- Flow 1:
Average throughput: 35.45 Mbit/s
95th percentile per-packet one-way delay: 90.086 ms
Loss rate: 85.63%
```

Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-11-23 22:28:08
End at: 2019-11-23 22:28:38
Local clock offset: -2.155 ms
Remote clock offset: -9.392 ms


# Below is generated by plot.py at 2019-11-24 00:42:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 79.18 Mbit/s
95th percentile per-packet one-way delay: 54.954 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 79.18 Mbit/s
95th percentile per-packet one-way delay: 54.954 ms
Loss rate: 0.04%
```
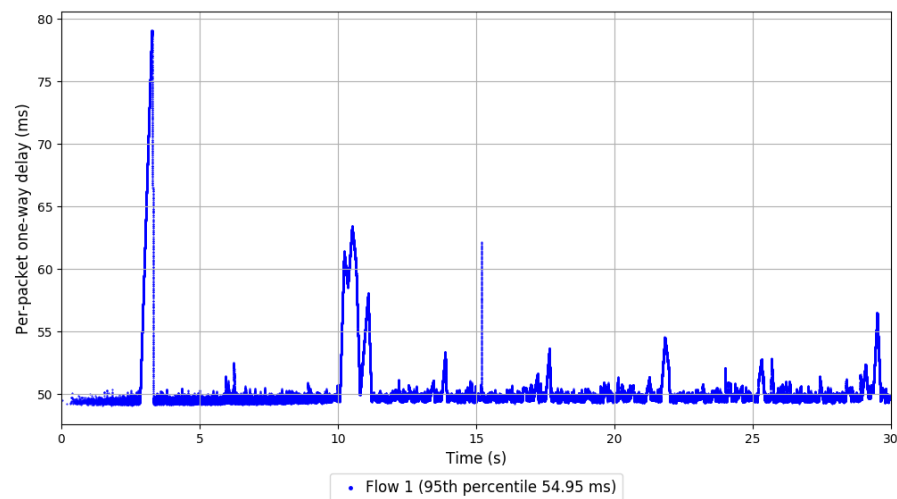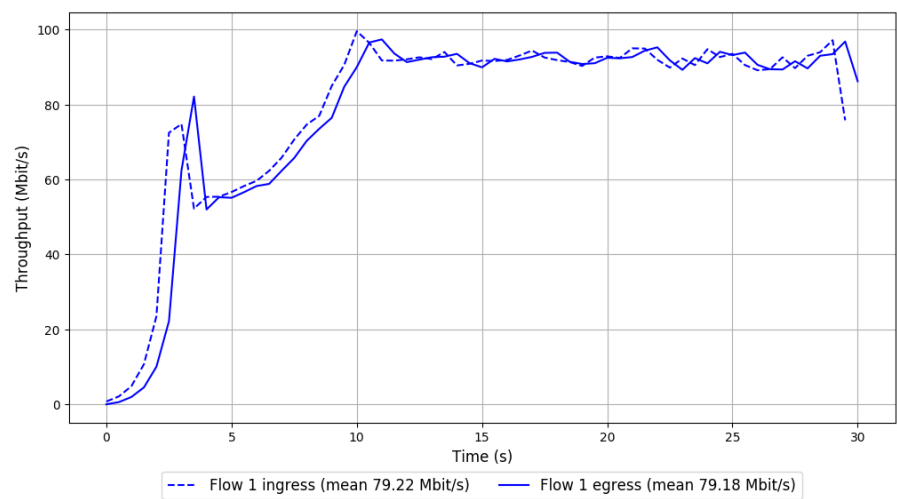
Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-11-23 22:56:09
End at: 2019-11-23 22:56:39
Local clock offset: -2.02 ms
Remote clock offset: -8.539 ms


# Below is generated by plot.py at 2019-11-24 00:42:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.70 Mbit/s
95th percentile per-packet one-way delay: 105.217 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 3.70 Mbit/s
95th percentile per-packet one-way delay: 105.217 ms
Loss rate: 0.45%
```
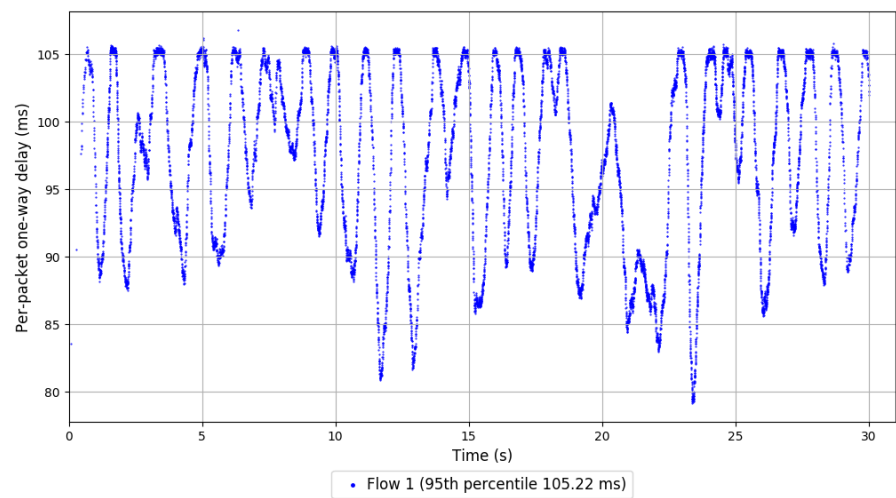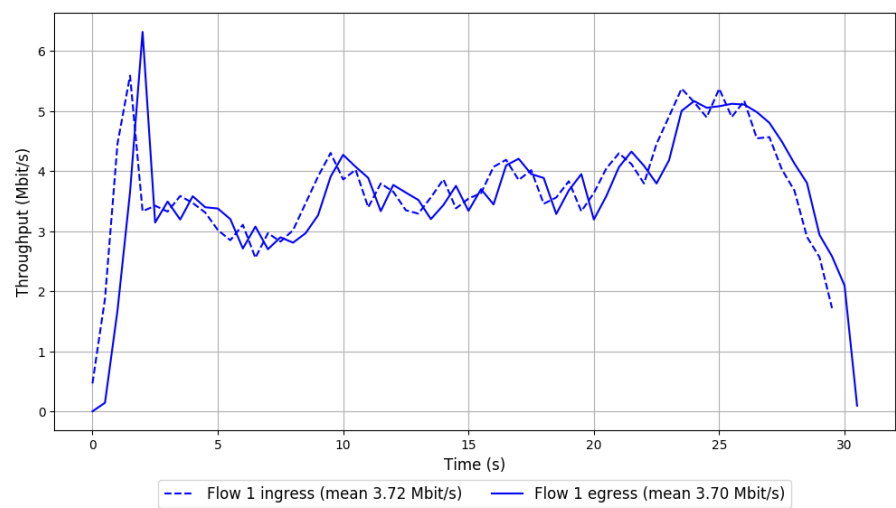
Run 2: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 3.72 Mbit/s)   Flow 1 egress (mean 3.70 Mbit/s)

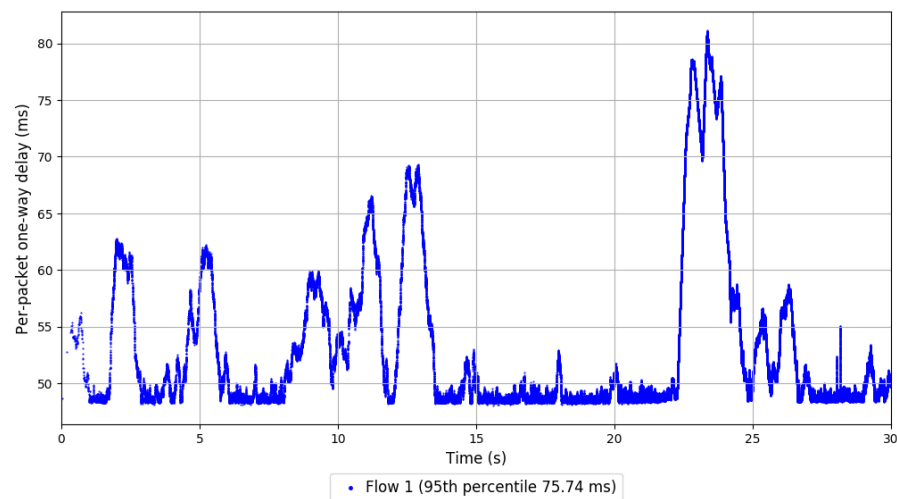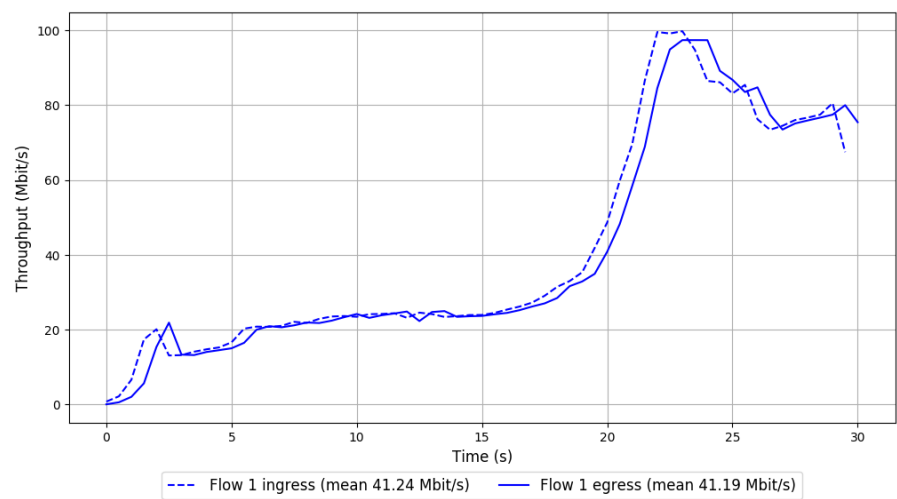
• Flow 1 (95th percentile 105.22 ms)

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-11-23 23:23:56
End at: 2019-11-23 23:24:26
Local clock offset: -1.388 ms
Remote clock offset: -7.971 ms


# Below is generated by plot.py at 2019-11-24 00:42:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 41.19 Mbit/s
95th percentile per-packet one-way delay: 75.744 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 41.19 Mbit/s
95th percentile per-packet one-way delay: 75.744 ms
Loss rate: 0.13%
```

Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 41.24 Mbit/s)   Flow 1 egress (mean 41.19 Mbit/s)

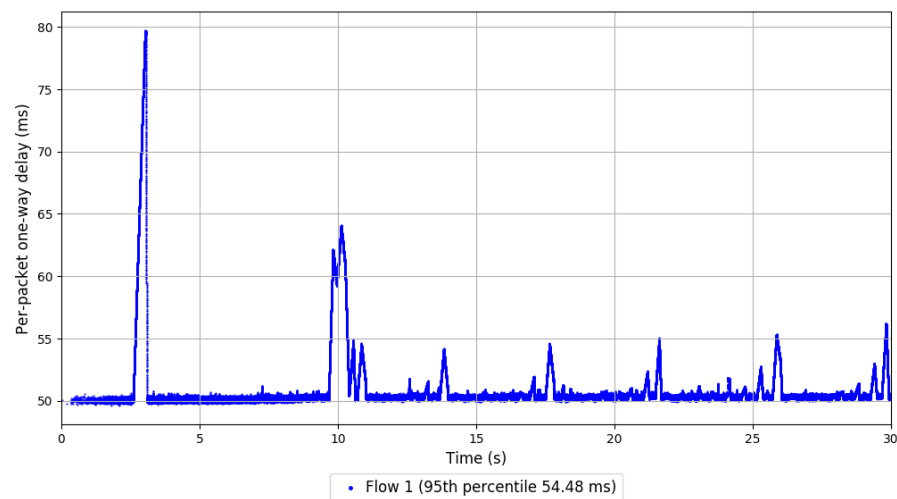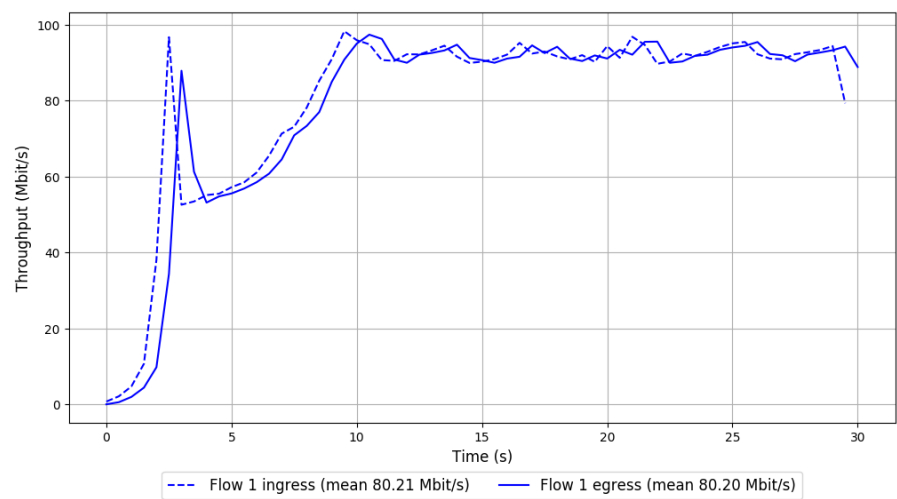

• Flow 1 (95th percentile 75.74 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-11-23 23:51:49
End at: 2019-11-23 23:52:19
Local clock offset: -2.276 ms
Remote clock offset: -8.028 ms

# Below is generated by plot.py at 2019-11-24 00:42:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.20 Mbit/s
95th percentile per-packet one-way delay: 54.476 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 80.20 Mbit/s
95th percentile per-packet one-way delay: 54.476 ms
Loss rate: 0.02%
```

Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 80.21 Mbit/s)   Flow 1 egress (mean 80.20 Mbit/s)
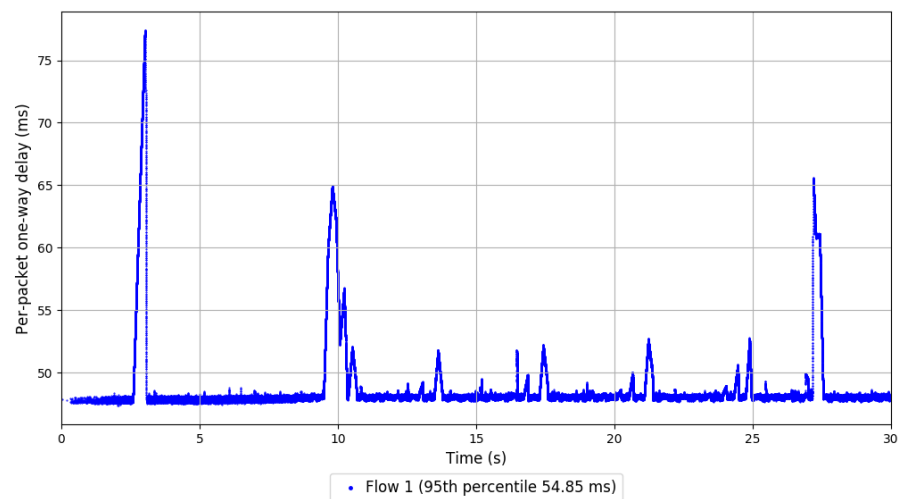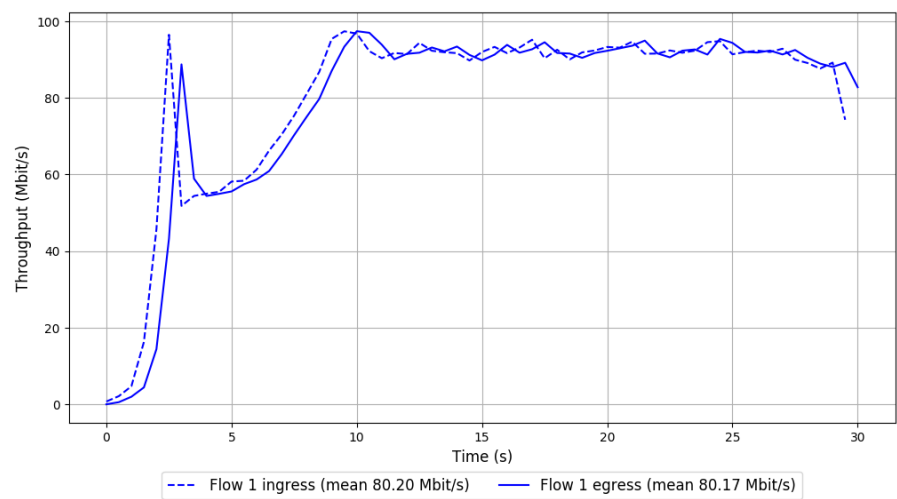

Flow 1 (95th percentile 54.48 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-11-24 00:19:45
End at: 2019-11-24 00:20:15
Local clock offset: -0.829 ms
Remote clock offset: -9.645 ms


# Below is generated by plot.py at 2019-11-24 00:42:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.17 Mbit/s
95th percentile per-packet one-way delay: 54.847 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 80.17 Mbit/s
95th percentile per-packet one-way delay: 54.847 ms
Loss rate: 0.03%
```

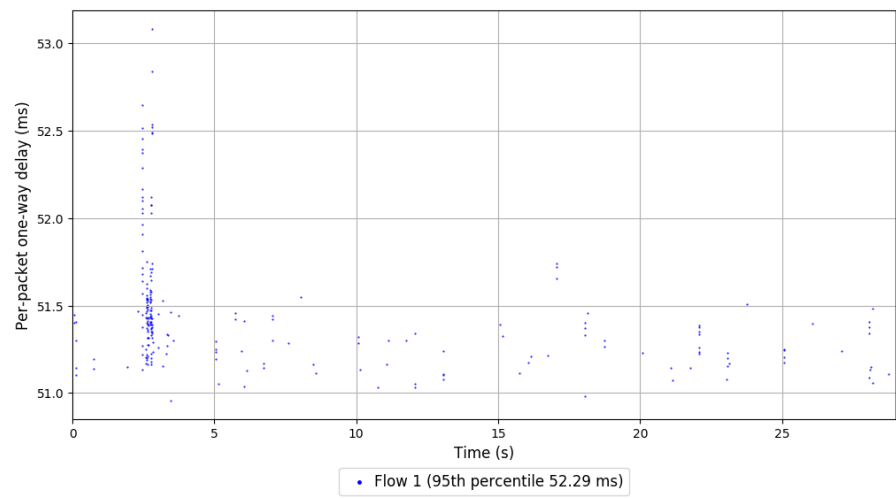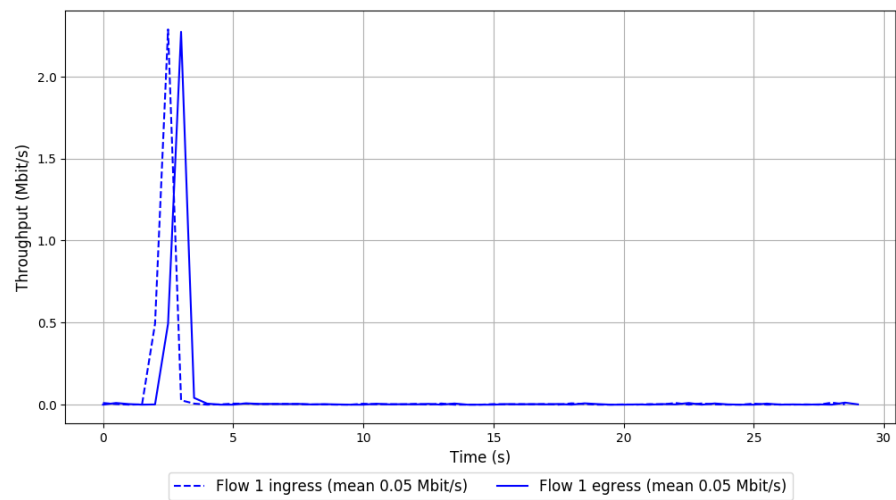# Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2019-11-23 22:23:31
End at: 2019-11-23 22:24:01
Local clock offset: -1.046 ms
Remote clock offset: -8.732 ms


# Below is generated by plot.py at 2019-11-24 00:42:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 52.288 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 52.288 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-11-23 22:51:31
End at: 2019-11-23 22:52:01
Local clock offset: -2.569 ms
Remote clock offset: -8.61 ms


# Below is generated by plot.py at 2019-11-24 00:42:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 103.517 ms
Loss rate: 3.14%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 103.517 ms
Loss rate: 3.14%
```
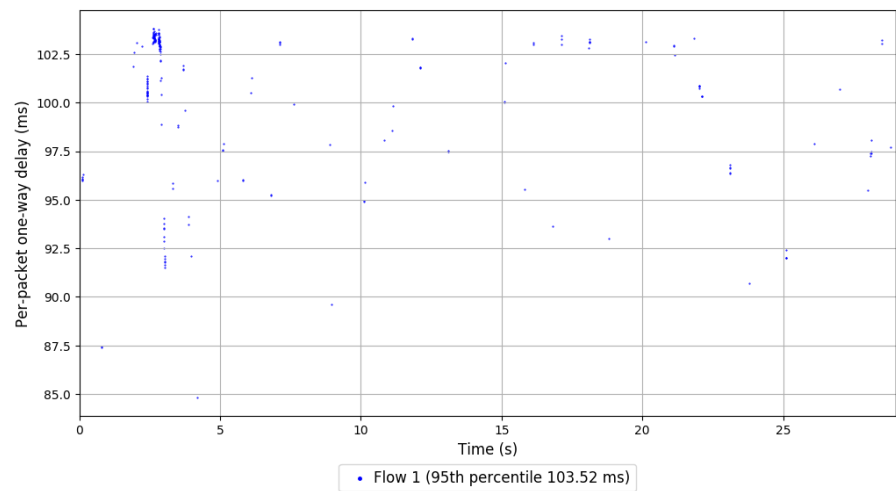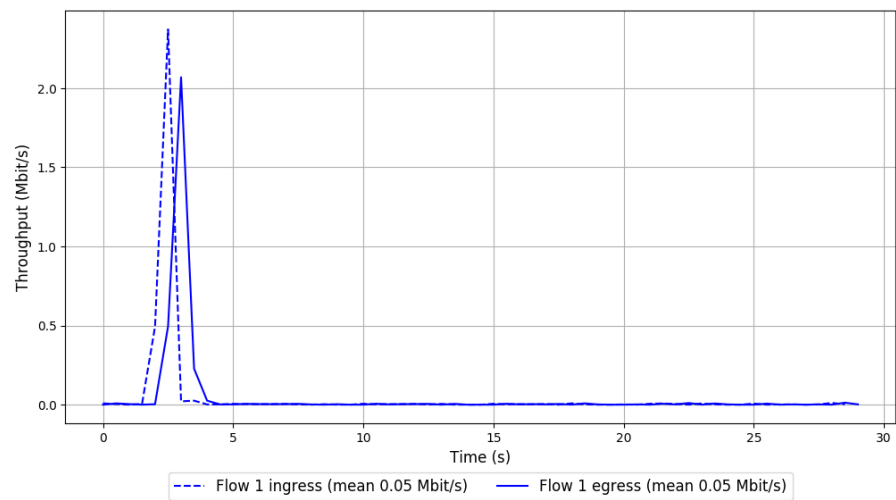
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-11-23 23:19:18
End at: 2019-11-23 23:19:48
Local clock offset: -1.551 ms
Remote clock offset: -8.78 ms


# Below is generated by plot.py at 2019-11-24 00:42:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 76.925 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 76.925 ms
Loss rate: 0.00%
```
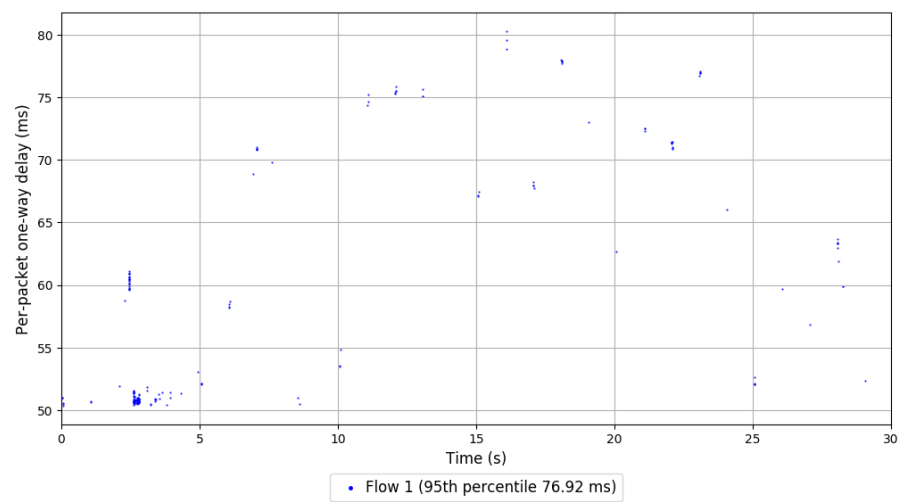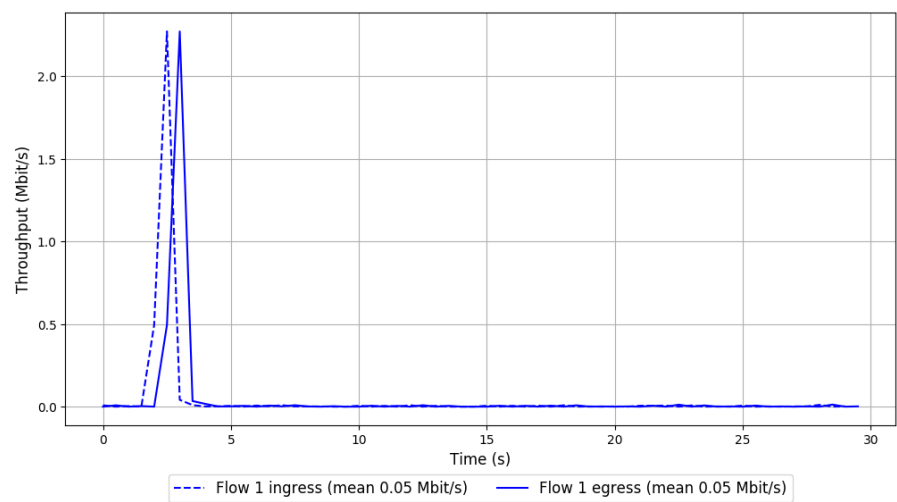
Run 3: Report of WebRTC media — Data Link

Flow 1 ingress (mean 0.05 Mbit/s) --- Flow 1 egress (mean 0.05 Mbit/s)

Flow 1 (95th percentile 76.92 ms)

240

```
Run 4: Statistics of WebRTC media

Start at: 2019-11-23 23:47:12
End at: 2019-11-23 23:47:42
Local clock offset: -2.256 ms
Remote clock offset: -7.6 ms


# Below is generated by plot.py at 2019-11-24 00:42:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 52.741 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 52.741 ms
Loss rate: 0.00%
```
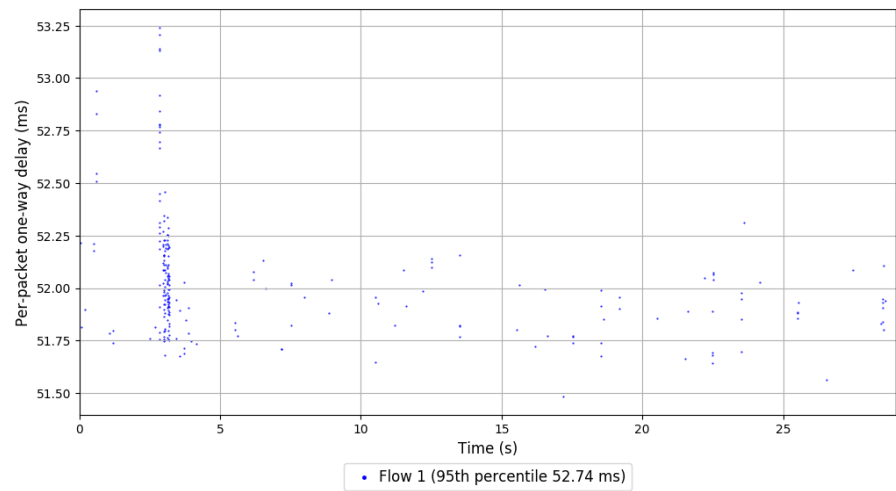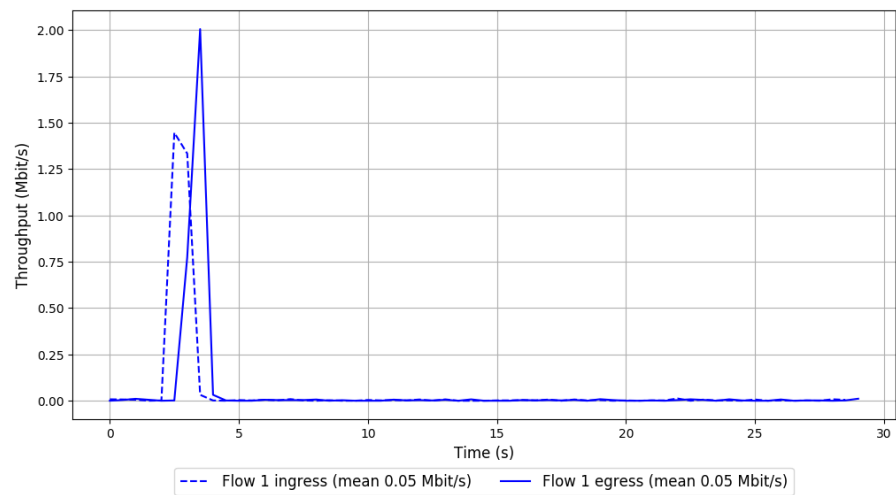
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-11-24 00:15:08
End at: 2019-11-24 00:15:38
Local clock offset: -1.935 ms
Remote clock offset: -9.616 ms


# Below is generated by plot.py at 2019-11-24 00:42:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 49.906 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 49.906 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link