Pantheon Report

Generated at 2019-12-11 13:18:05 (UTC).

Data path: Brazil on `p4p1` (*remote*) →AWS Brazil 1 on `ens5` (*local*).

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.
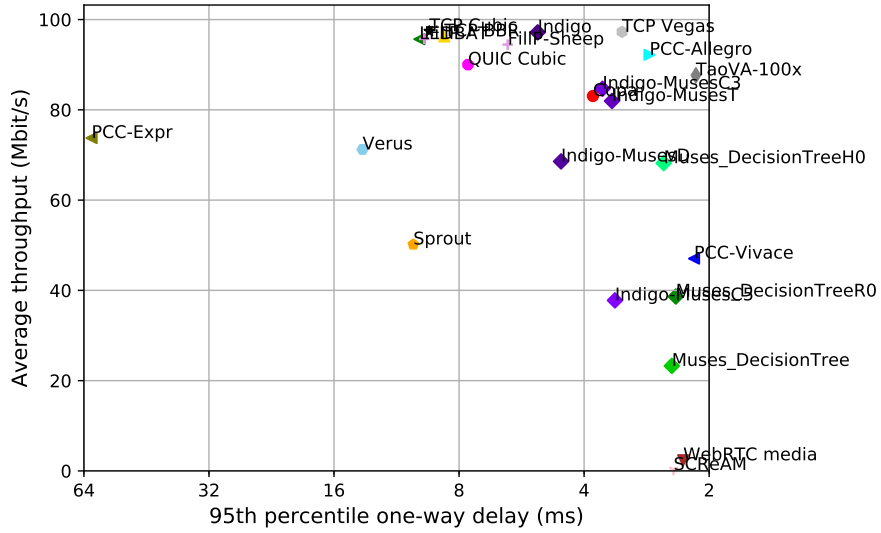
```
System info:
Linux 4.15.0-1054-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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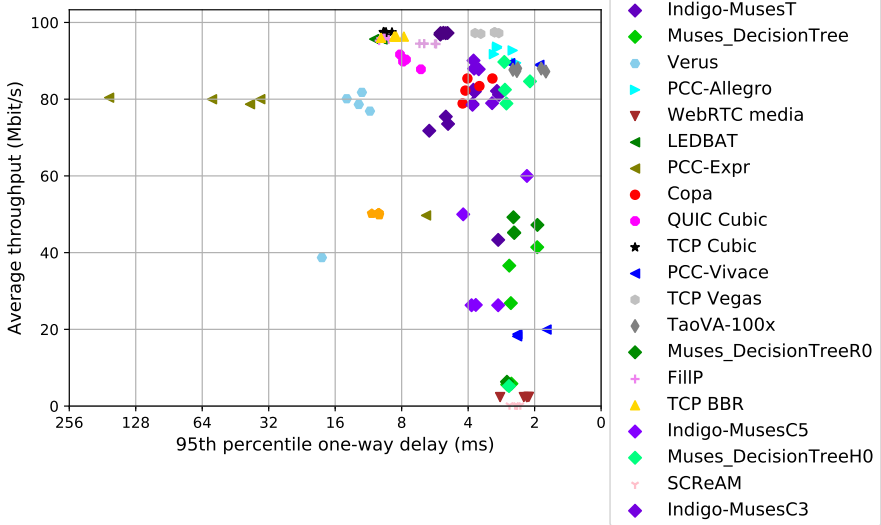
```
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from Brazil to AWS Brazil 1, 5 runs of 30s each per scheme
(mean of all runs by scheme)

test from Brazil to AWS Brazil 1, 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	96.26	8.68	0.05
Copa	5	83.06	3.81	0.01
TCP Cubic	5	97.42	9.43	0.05
FillP	5	95.72	9.70	0.04
FillP-Sheep	5	94.44	6.11	0.03
Indigo	5	97.17	5.17	0.02
Indigo-MusesC3	5	84.67	3.61	0.02
Indigo-MusesC5	5	37.78	3.37	0.01
Indigo-MusesD	5	68.57	4.55	0.01
Indigo-MusesT	5	81.96	3.43	0.02
LEDBAT	5	95.66	9.97	0.08
Muses_DecisionTree	5	23.27	2.46	0.01
Muses_DecisionTreeH0	5	68.18	2.57	0.01
Muses_DecisionTreeR0	5	38.64	2.41	0.01
PCC-Allegro	5	92.19	2.78	0.02
PCC-Expr	5	73.75	61.36	0.59
QUIC Cubic	5	90.01	7.61	0.02
SCReAM	5	0.21	2.44	0.08
Sprout	5	50.17	10.31	0.04
TaoVA-100x	5	87.64	2.15	0.02
TCP Vegas	5	97.27	3.24	0.02
Verus	5	71.22	13.66	0.03
PCC-Vivace	5	47.04	2.17	0.01
WebRTC media	5	2.36	2.31	0.02

```
Run 1: Statistics of TCP BBR

Start at: 2019-12-11 10:52:33
End at: 2019-12-11 10:53:03
Local clock offset: -6.135 ms
Remote clock offset: -0.067 ms


# Below is generated by plot.py at 2019-12-11 13:04:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.32 Mbit/s
95th percentile per-packet one-way delay: 7.820 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 96.32 Mbit/s
95th percentile per-packet one-way delay: 7.820 ms
Loss rate: 0.03%
```
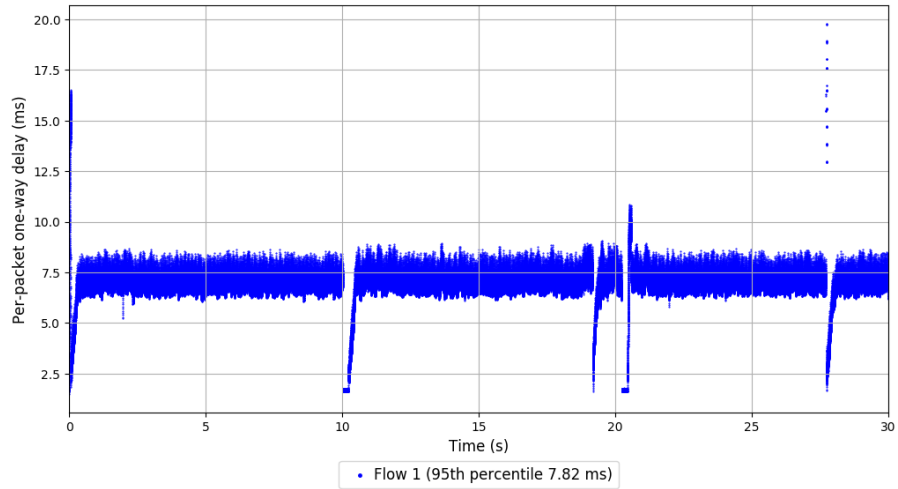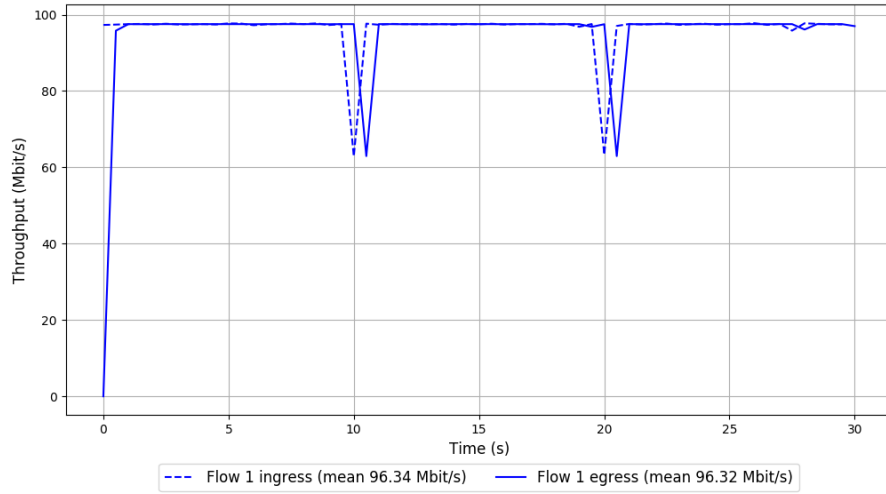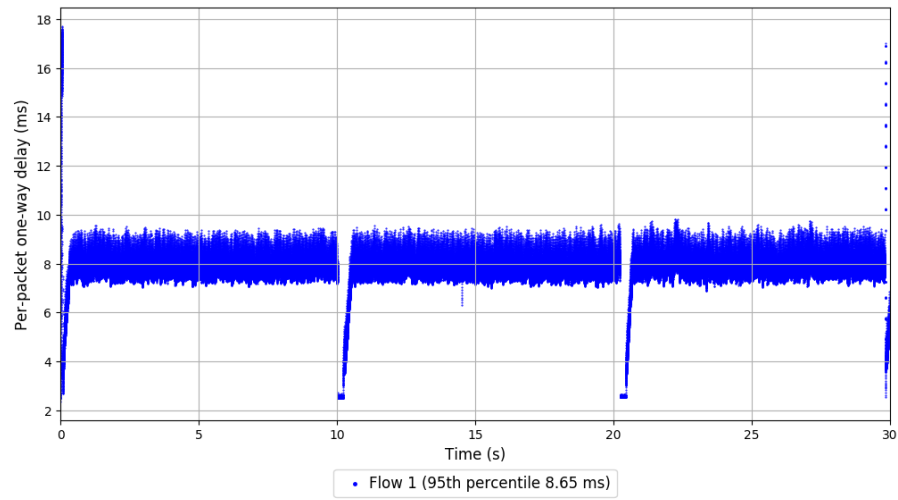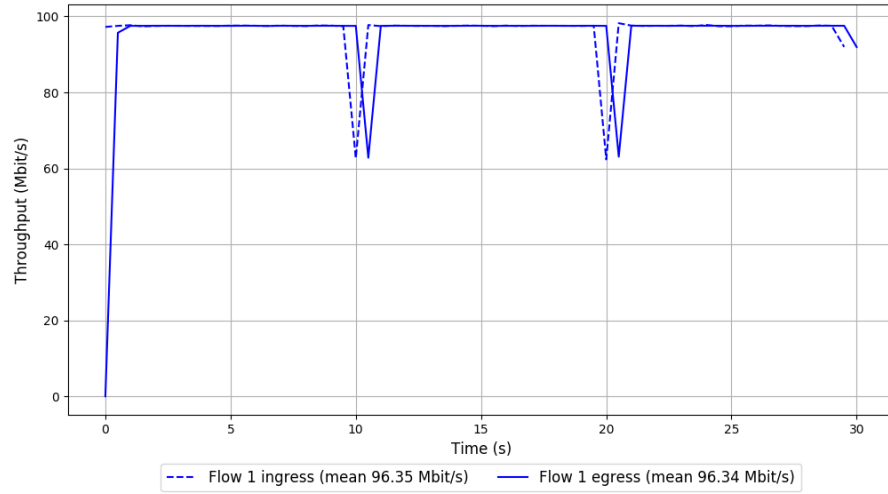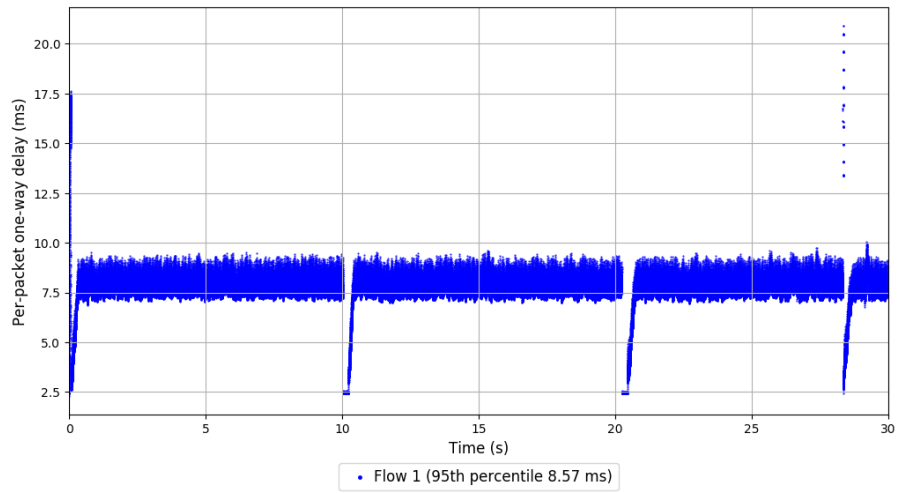
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-12-11 11:19:35
End at: 2019-12-11 11:20:05
Local clock offset: -6.202 ms
Remote clock offset: 0.163 ms


# Below is generated by plot.py at 2019-12-11 13:04:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.34 Mbit/s
95th percentile per-packet one-way delay: 8.646 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 96.34 Mbit/s
95th percentile per-packet one-way delay: 8.646 ms
Loss rate: 0.03%
```
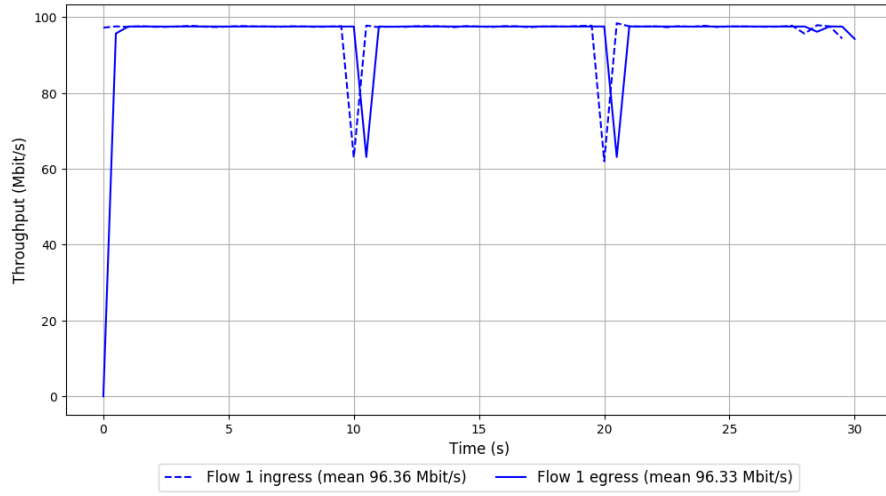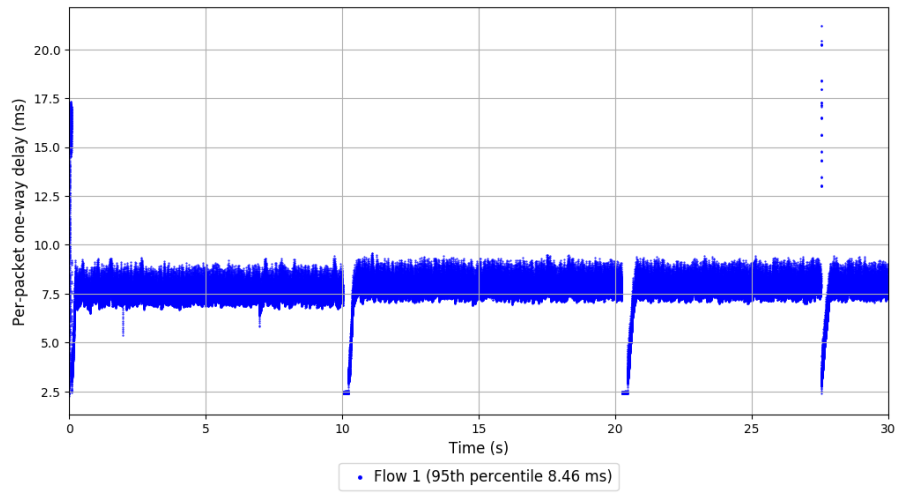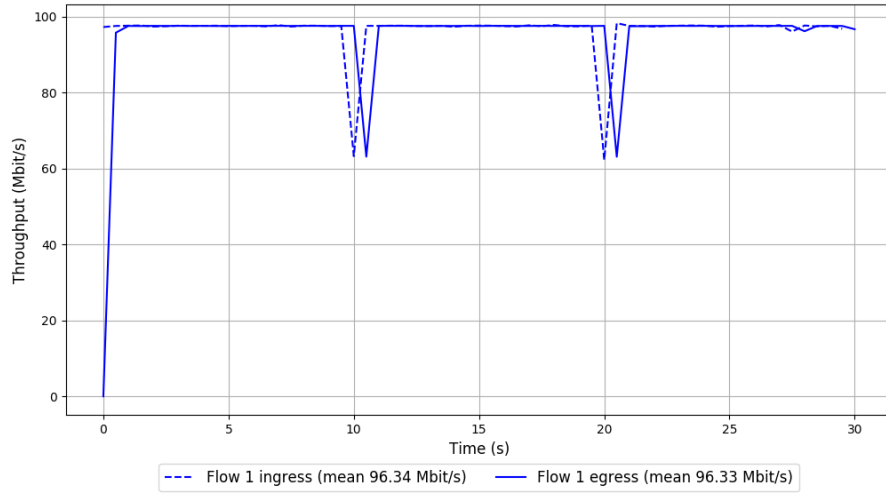
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 96.35 Mbit/s) —— Flow 1 egress (mean 96.34 Mbit/s)

• Flow 1 (95th percentile 8.65 ms)

```
Run 3: Statistics of TCP BBR

Start at: 2019-12-11 11:46:40
End at: 2019-12-11 11:47:10
Local clock offset: -5.892 ms
Remote clock offset: 0.406 ms


# Below is generated by plot.py at 2019-12-11 13:04:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.33 Mbit/s
95th percentile per-packet one-way delay: 8.570 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 96.33 Mbit/s
95th percentile per-packet one-way delay: 8.570 ms
Loss rate: 0.03%
```
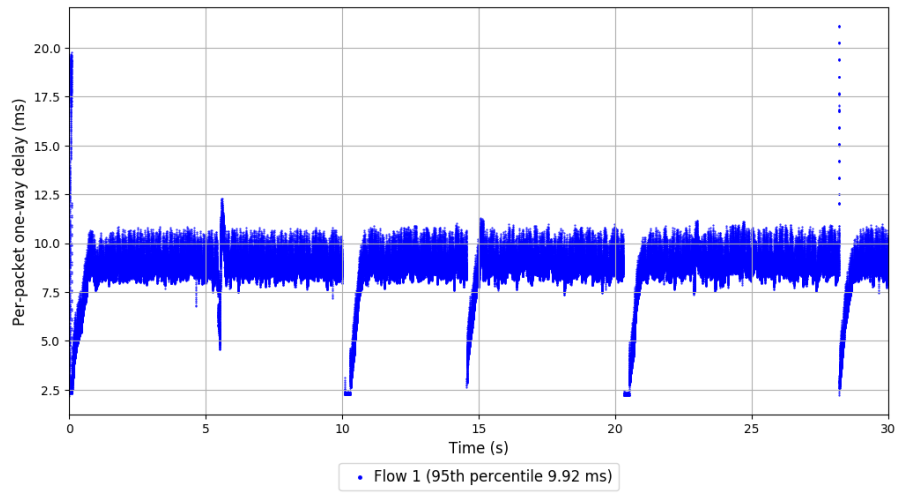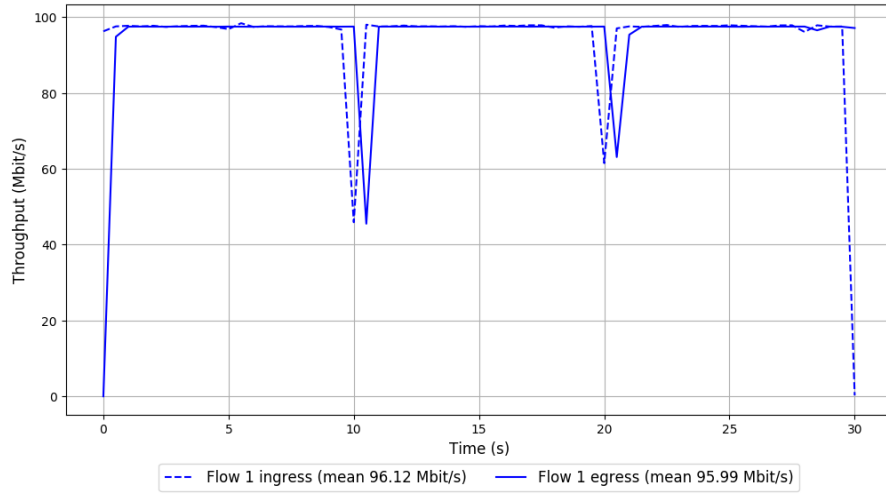
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 96.36 Mbit/s)   Flow 1 egress (mean 96.33 Mbit/s)

• Flow 1 (95th percentile 8.57 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-12-11 12:13:38
End at: 2019-12-11 12:14:08
Local clock offset: -5.441 ms
Remote clock offset: 0.611 ms


# Below is generated by plot.py at 2019-12-11 13:04:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.33 Mbit/s
95th percentile per-packet one-way delay: 8.464 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 96.33 Mbit/s
95th percentile per-packet one-way delay: 8.464 ms
Loss rate: 0.03%
```
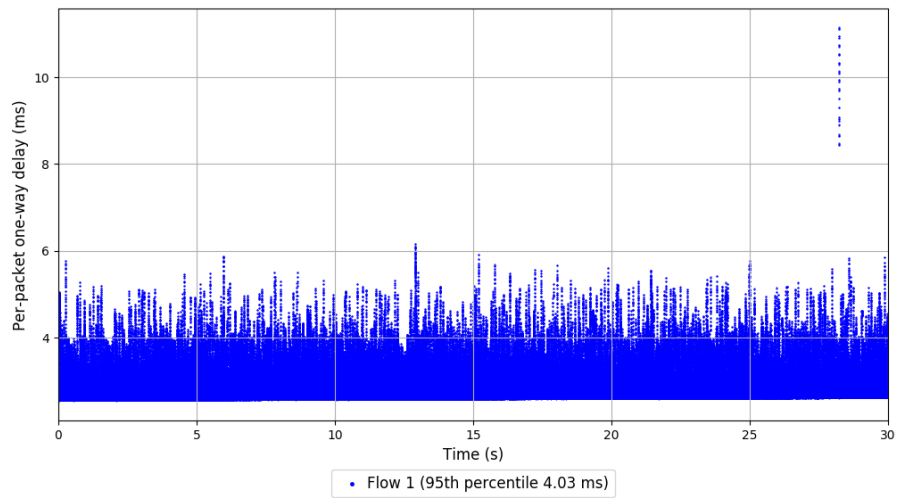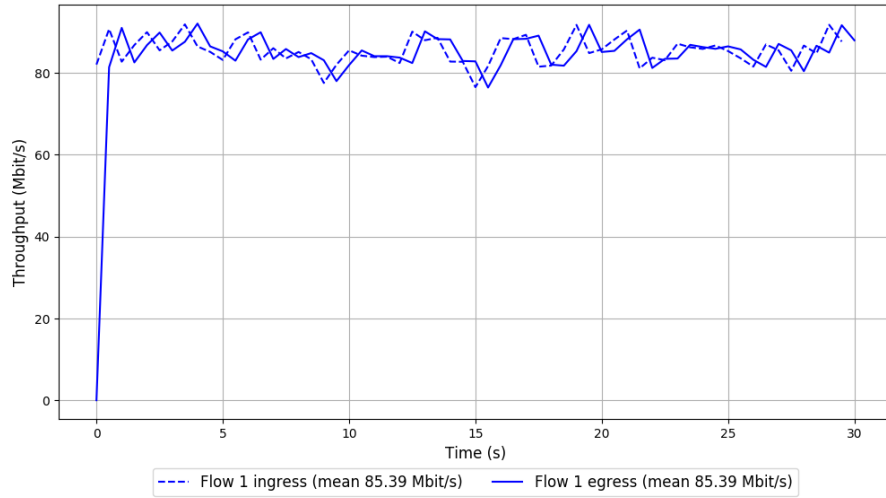
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 96.34 Mbit/s) ----   Flow 1 egress (mean 96.33 Mbit/s) ——

• Flow 1 (95th percentile 8.46 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2019-12-11 12:40:35
End at: 2019-12-11 12:41:05
Local clock offset: -4.682 ms
Remote clock offset: 0.741 ms


# Below is generated by plot.py at 2019-12-11 13:04:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 9.918 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 9.918 ms
Loss rate: 0.14%
```
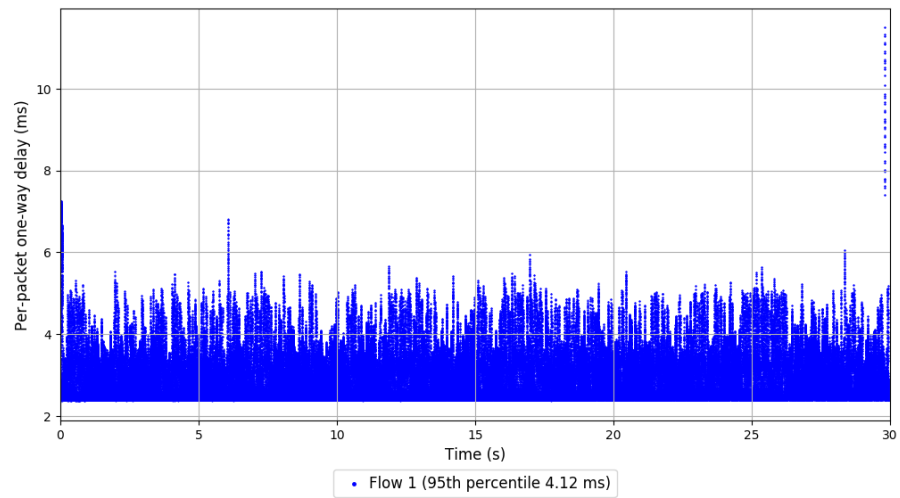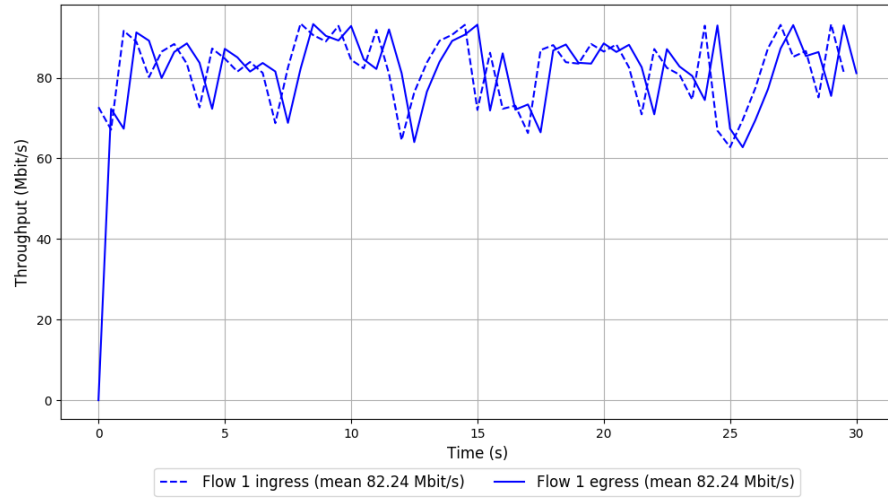
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 96.12 Mbit/s)   Flow 1 egress (mean 95.99 Mbit/s)

Flow 1 (95th percentile 9.92 ms)

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```
Run 1: Statistics of Copa

Start at: 2019-12-11 11:09:27
End at: 2019-12-11 11:09:57
Local clock offset: -5.47 ms
Remote clock offset: -0.014 ms


# Below is generated by plot.py at 2019-12-11 13:05:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.39 Mbit/s
95th percentile per-packet one-way delay: 4.031 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 85.39 Mbit/s
95th percentile per-packet one-way delay: 4.031 ms
Loss rate: 0.01%
```
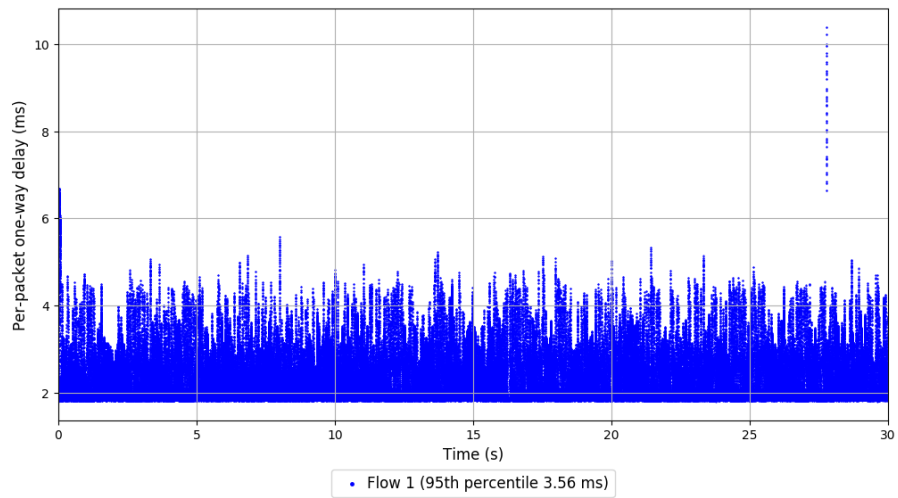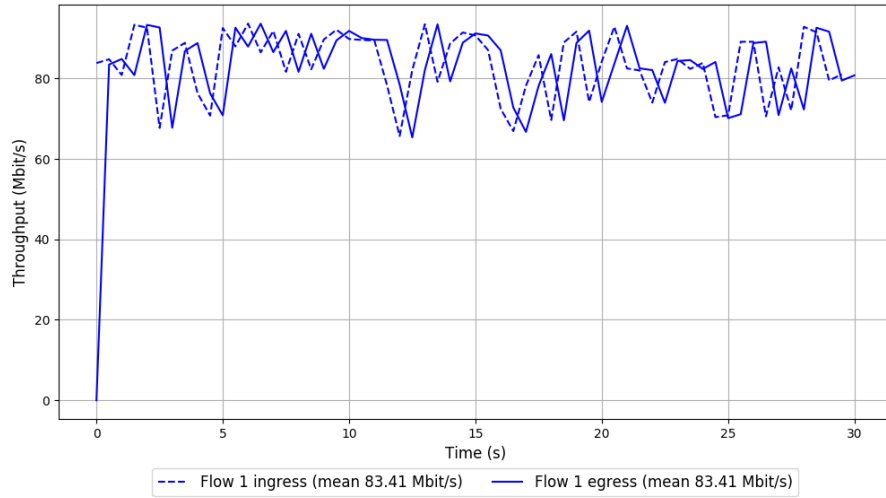
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2019-12-11 11:36:29
End at: 2019-12-11 11:36:59
Local clock offset: -6.69 ms
Remote clock offset: 0.38 ms


# Below is generated by plot.py at 2019-12-11 13:05:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.24 Mbit/s
95th percentile per-packet one-way delay: 4.116 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 82.24 Mbit/s
95th percentile per-packet one-way delay: 4.116 ms
Loss rate: 0.02%
```
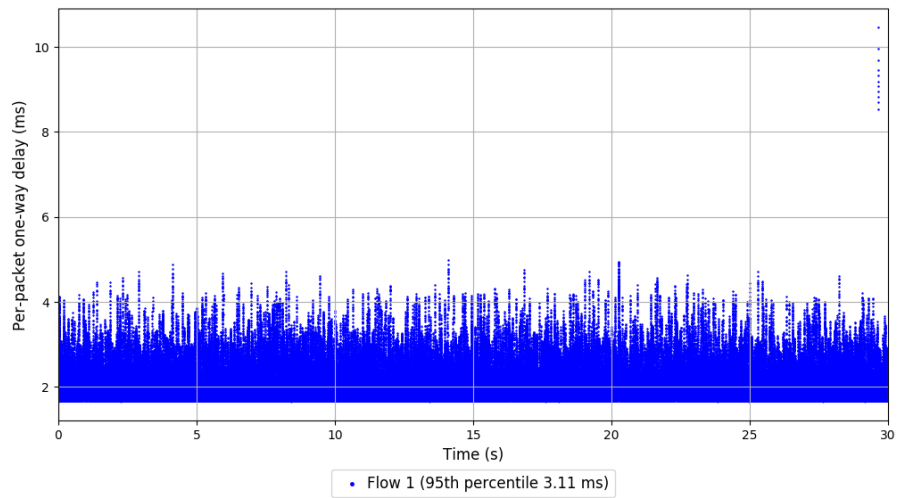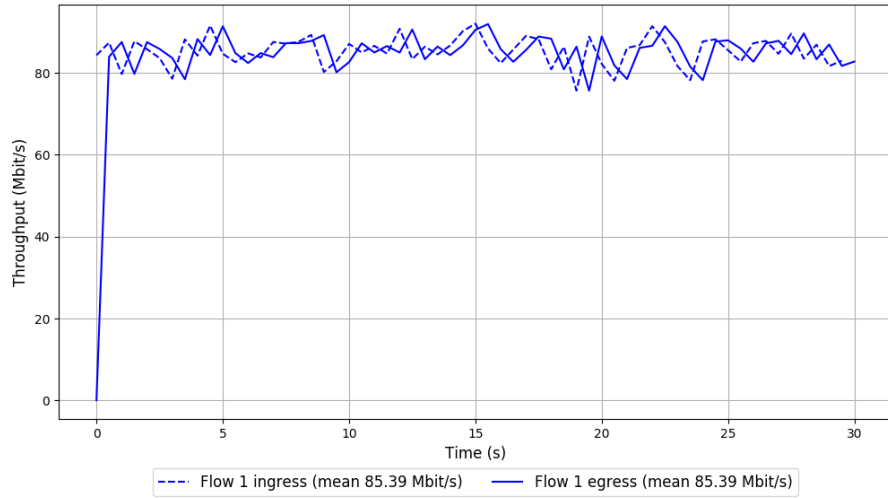
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2019-12-11 12:03:28
End at: 2019-12-11 12:03:58
Local clock offset: -6.107 ms
Remote clock offset: 0.436 ms


# Below is generated by plot.py at 2019-12-11 13:05:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 83.41 Mbit/s
95th percentile per-packet one-way delay: 3.557 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 83.41 Mbit/s
95th percentile per-packet one-way delay: 3.557 ms
Loss rate: 0.01%
```
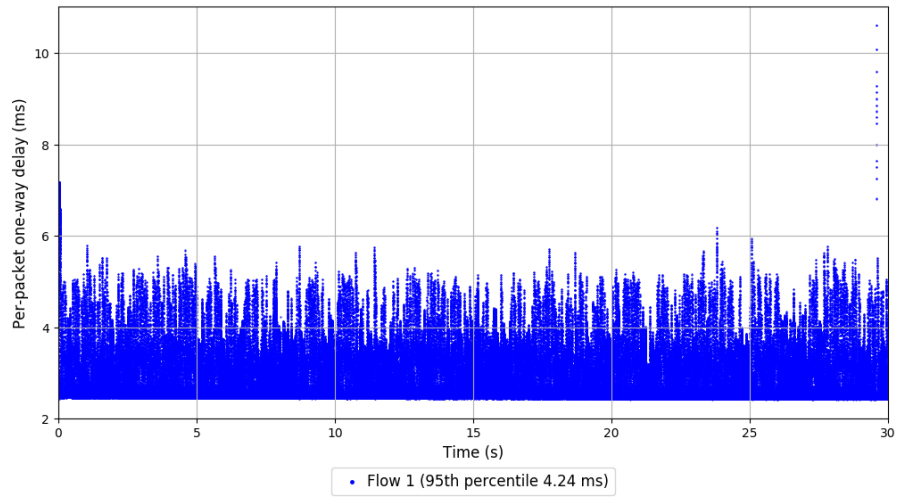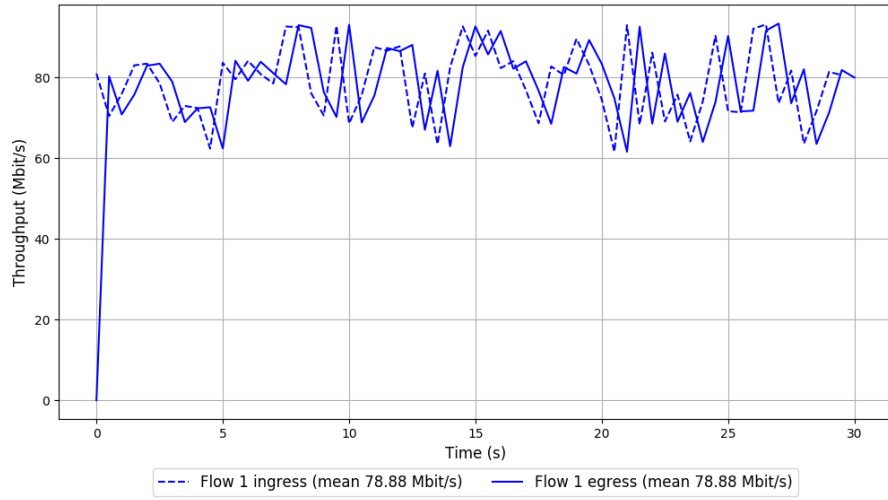
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 83.41 Mbit/s)   Flow 1 egress (mean 83.41 Mbit/s)

Flow 1 (95th percentile 3.56 ms)

```
Run 4: Statistics of Copa

Start at: 2019-12-11 12:30:24
End at: 2019-12-11 12:30:54
Local clock offset: -6.072 ms
Remote clock offset: 0.745 ms


# Below is generated by plot.py at 2019-12-11 13:06:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.39 Mbit/s
95th percentile per-packet one-way delay: 3.106 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 85.39 Mbit/s
95th percentile per-packet one-way delay: 3.106 ms
Loss rate: 0.01%
```
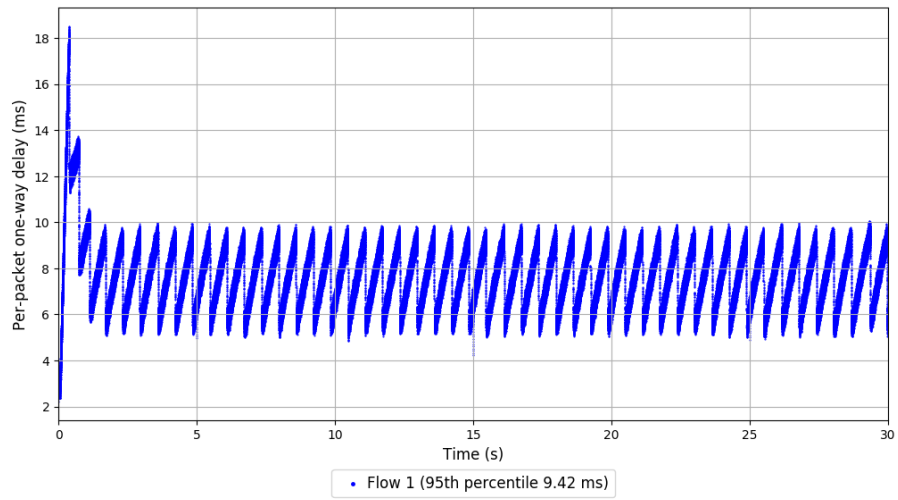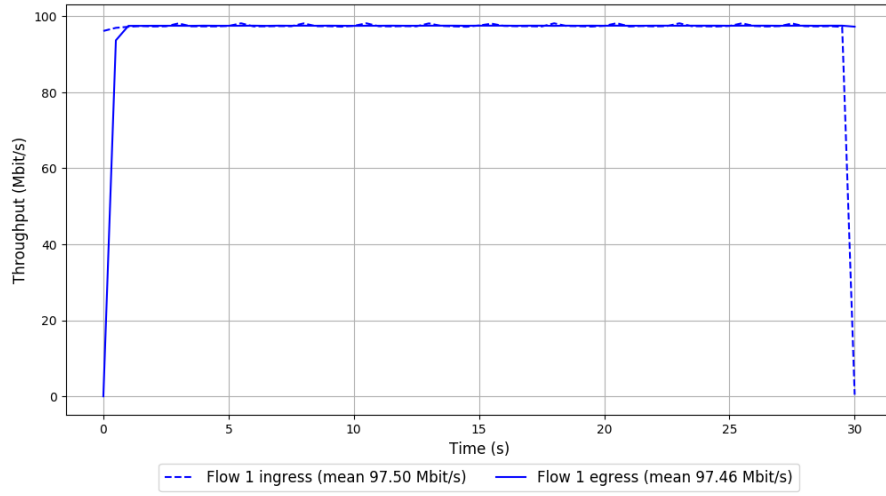
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 85.39 Mbit/s)   Flow 1 egress (mean 85.39 Mbit/s)

Flow 1 (95th percentile 3.11 ms)

```
Run 5: Statistics of Copa

Start at: 2019-12-11 12:57:25
End at: 2019-12-11 12:57:55
Local clock offset: -2.385 ms
Remote clock offset: 0.526 ms

# Below is generated by plot.py at 2019-12-11 13:06:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.88 Mbit/s
95th percentile per-packet one-way delay: 4.237 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 78.88 Mbit/s
95th percentile per-packet one-way delay: 4.237 ms
Loss rate: 0.02%
```
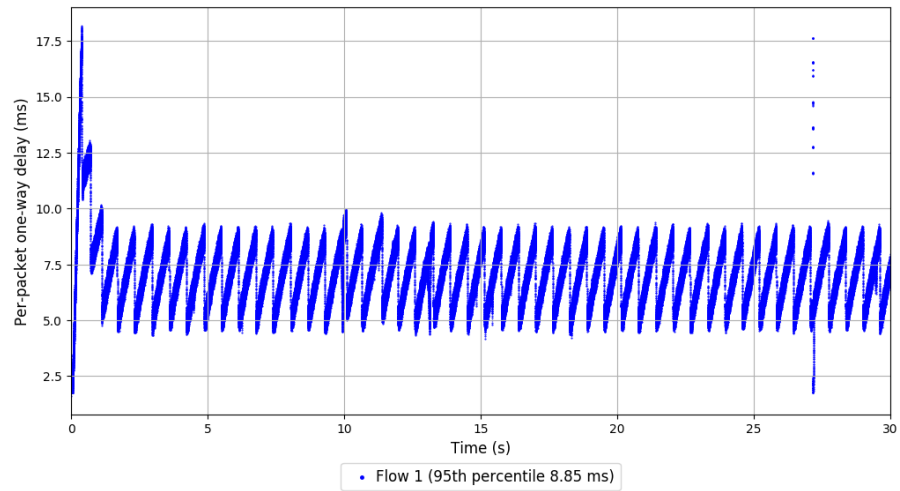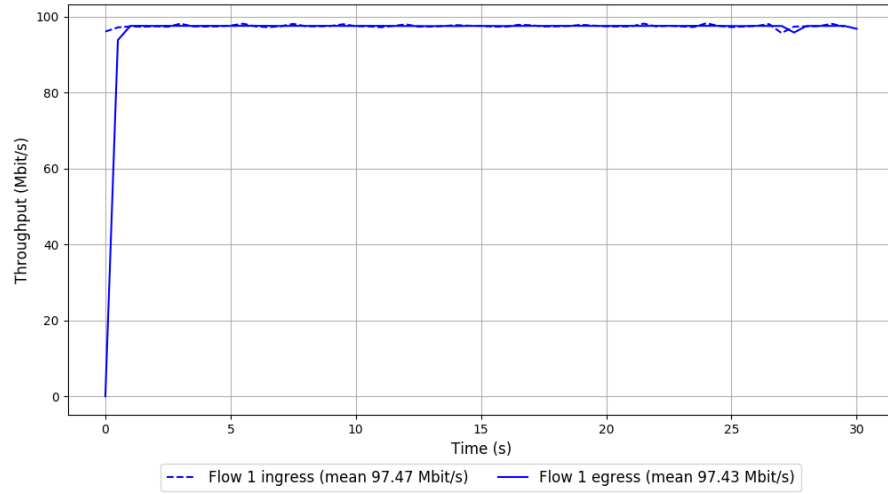
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 78.88 Mbit/s)   Flow 1 egress (mean 78.88 Mbit/s)

Flow 1 (95th percentile 4.24 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-12-11 10:58:14
End at: 2019-12-11 10:58:44
Local clock offset: -5.353 ms
Remote clock offset: -0.003 ms


# Below is generated by plot.py at 2019-12-11 13:06:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 9.418 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 9.418 ms
Loss rate: 0.05%
```
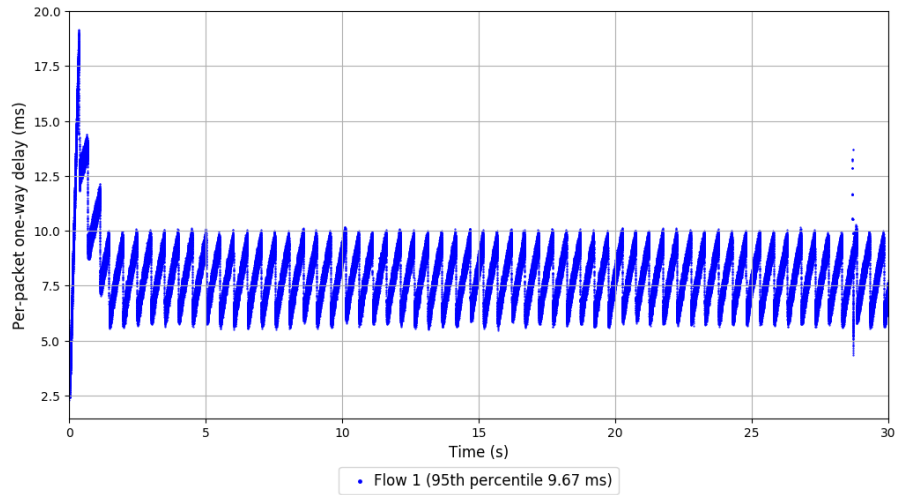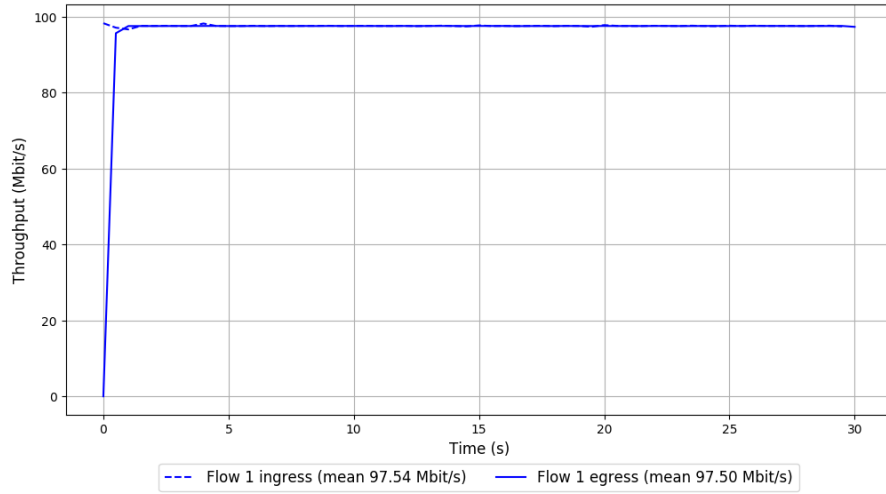
Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 97.50 Mbit/s) --- Flow 1 egress (mean 97.46 Mbit/s)

Flow 1 (95th percentile 9.42 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2019-12-11 11:25:15
End at: 2019-12-11 11:25:45
Local clock offset: -7.107 ms
Remote clock offset: 0.241 ms


# Below is generated by plot.py at 2019-12-11 13:06:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.43 Mbit/s
95th percentile per-packet one-way delay: 8.851 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 97.43 Mbit/s
95th percentile per-packet one-way delay: 8.851 ms
Loss rate: 0.06%
```
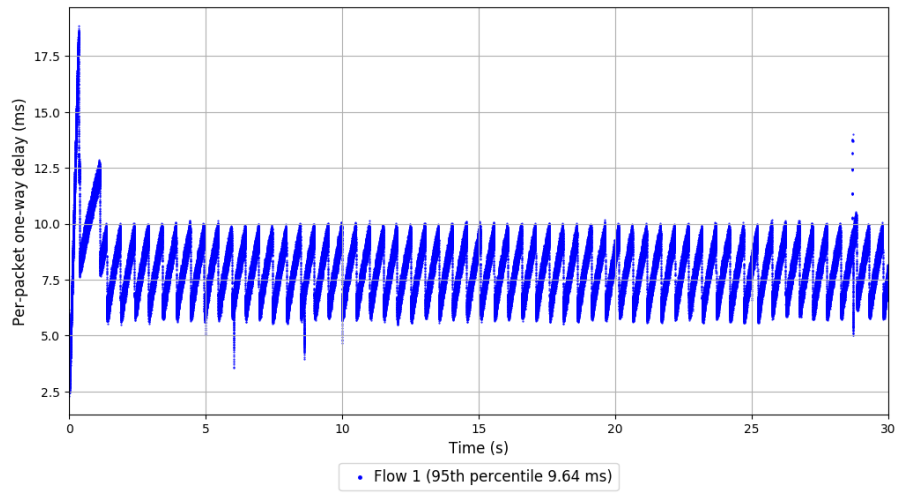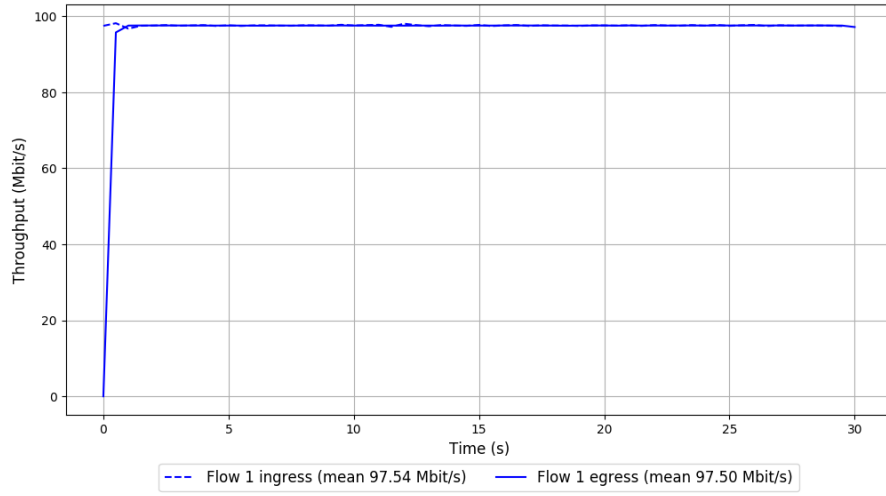
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-12-11 11:52:16
End at: 2019-12-11 11:52:47
Local clock offset: -5.622 ms
Remote clock offset: 0.487 ms


# Below is generated by plot.py at 2019-12-11 13:06:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 9.666 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 9.666 ms
Loss rate: 0.05%
```
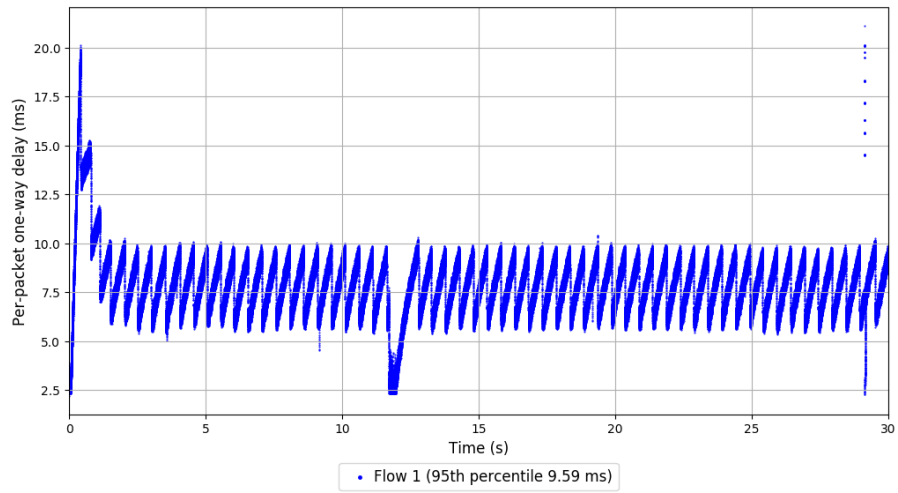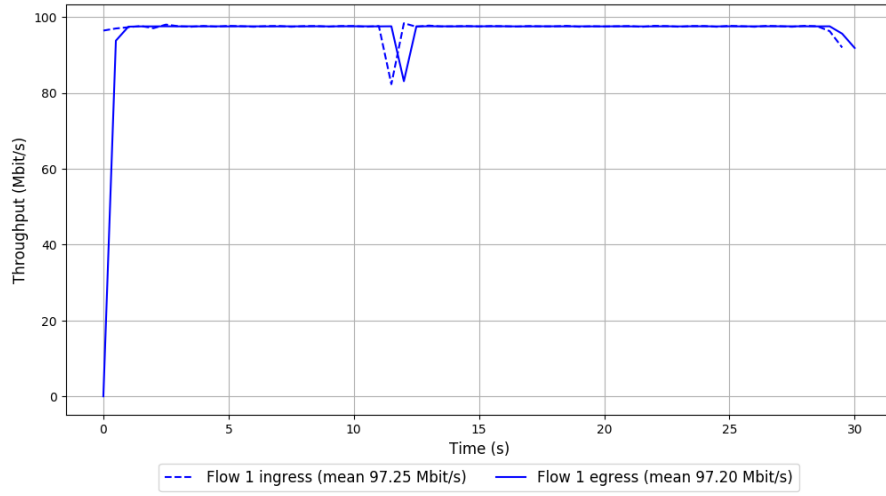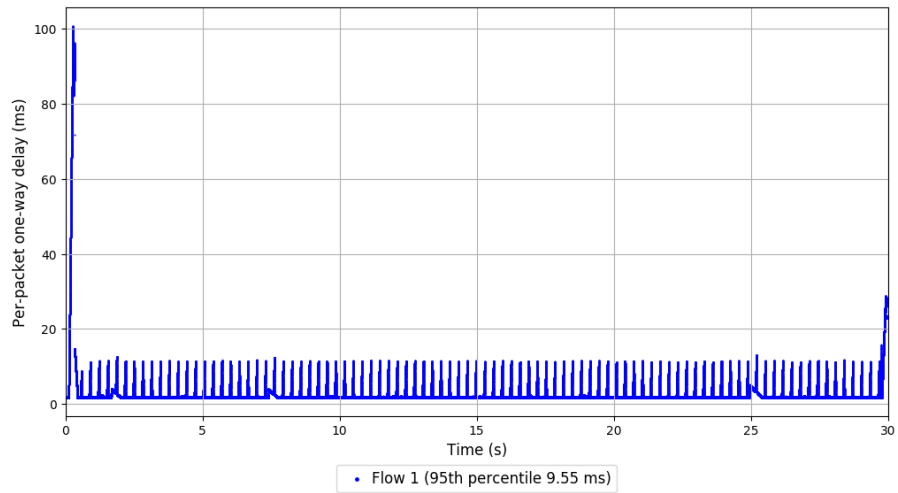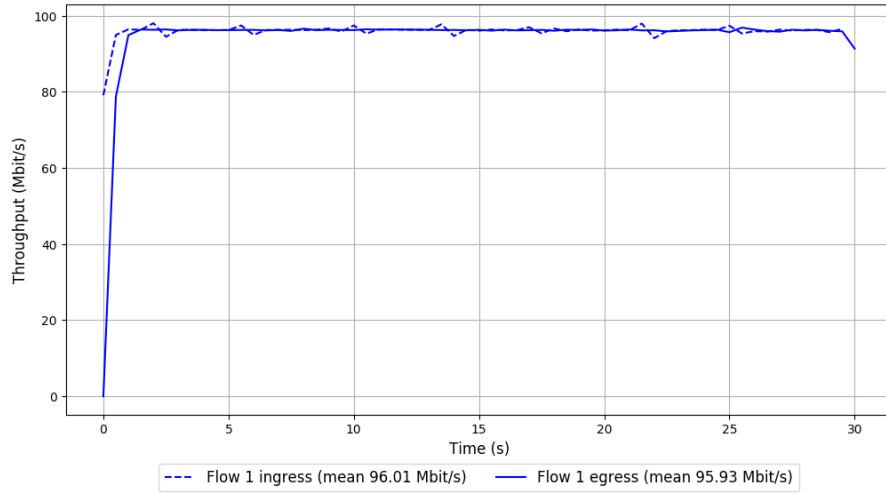
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 97.54 Mbit/s)   —— Flow 1 egress (mean 97.50 Mbit/s)

• Flow 1 (95th percentile 9.67 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-12-11 12:19:14
End at: 2019-12-11 12:19:44
Local clock offset: -5.372 ms
Remote clock offset: 0.67 ms


# Below is generated by plot.py at 2019-12-11 13:06:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 9.640 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 9.640 ms
Loss rate: 0.05%
```

Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 97.54 Mbit/s)   Flow 1 egress (mean 97.50 Mbit/s)

Flow 1 (95th percentile 9.64 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-12-11 12:46:12
End at: 2019-12-11 12:46:42
Local clock offset: -3.583 ms
Remote clock offset: 0.664 ms


# Below is generated by plot.py at 2019-12-11 13:06:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 9.590 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 9.590 ms
Loss rate: 0.06%
```
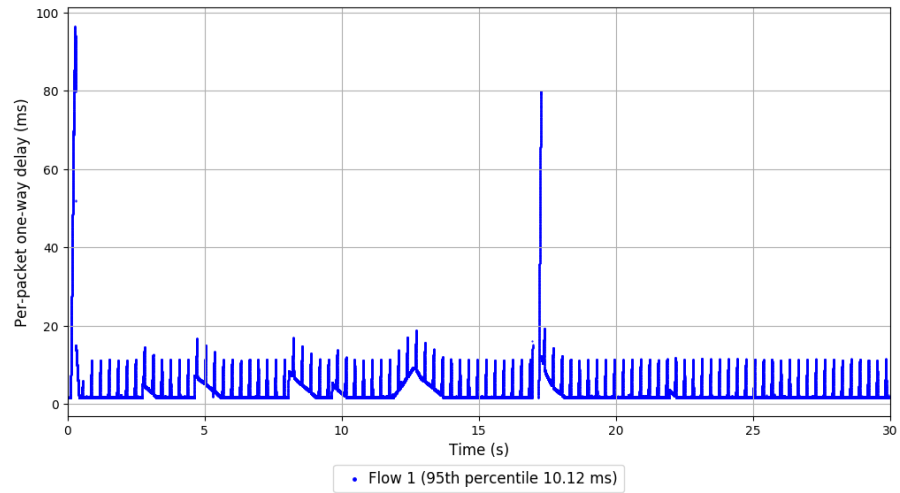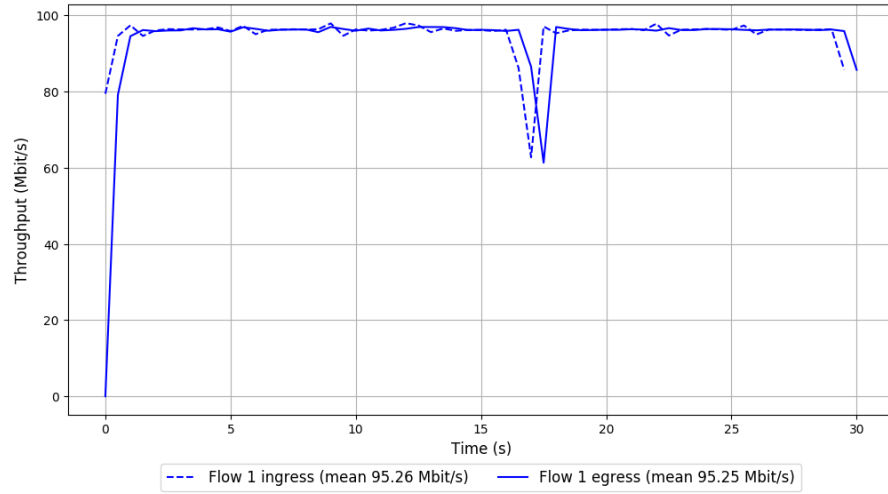
Run 5: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2019-12-11 11:02:46
End at: 2019-12-11 11:03:16
Local clock offset: -6.041 ms
Remote clock offset: -0.098 ms


# Below is generated by plot.py at 2019-12-11 13:06:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.93 Mbit/s
95th percentile per-packet one-way delay: 9.554 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 95.93 Mbit/s
95th percentile per-packet one-way delay: 9.554 ms
Loss rate: 0.10%
```
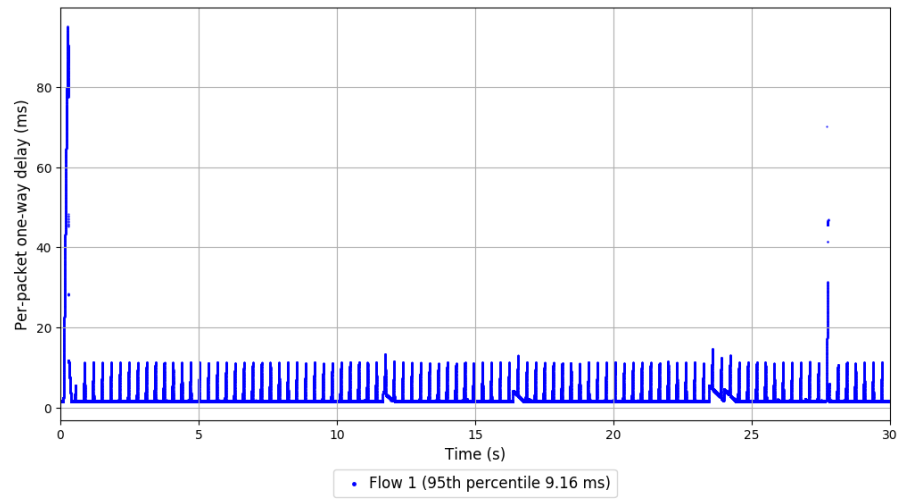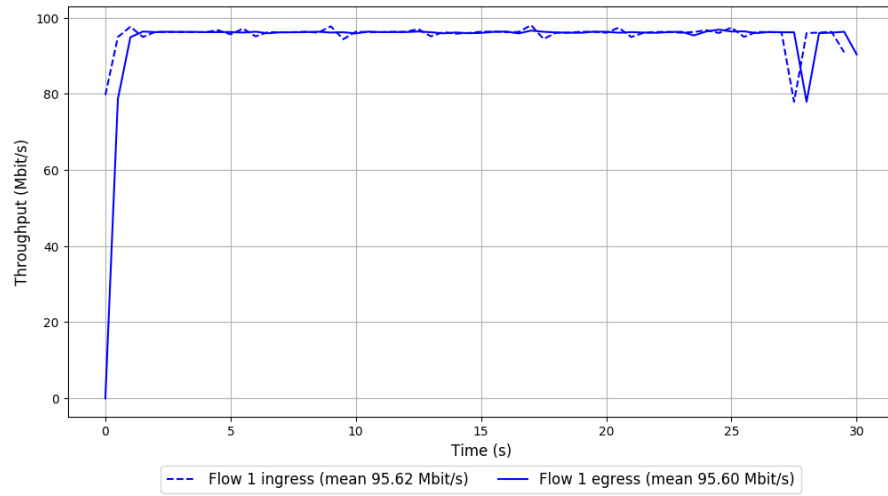
Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 96.01 Mbit/s)   Flow 1 egress (mean 95.93 Mbit/s)

Flow 1 (95th percentile 9.55 ms)

```
Run 2: Statistics of FillP

Start at: 2019-12-11 11:29:47
End at: 2019-12-11 11:30:17
Local clock offset: -7.23 ms
Remote clock offset: 0.279 ms


# Below is generated by plot.py at 2019-12-11 13:06:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.25 Mbit/s
95th percentile per-packet one-way delay: 10.117 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 95.25 Mbit/s
95th percentile per-packet one-way delay: 10.117 ms
Loss rate: 0.02%
```
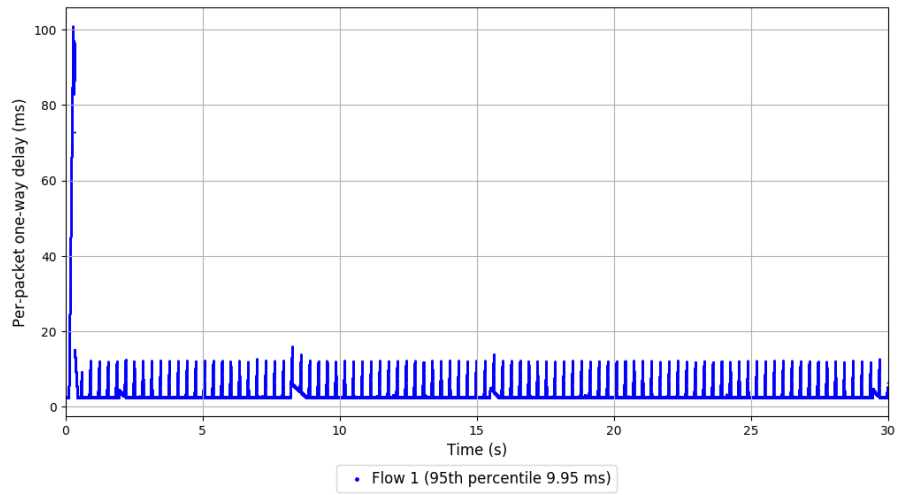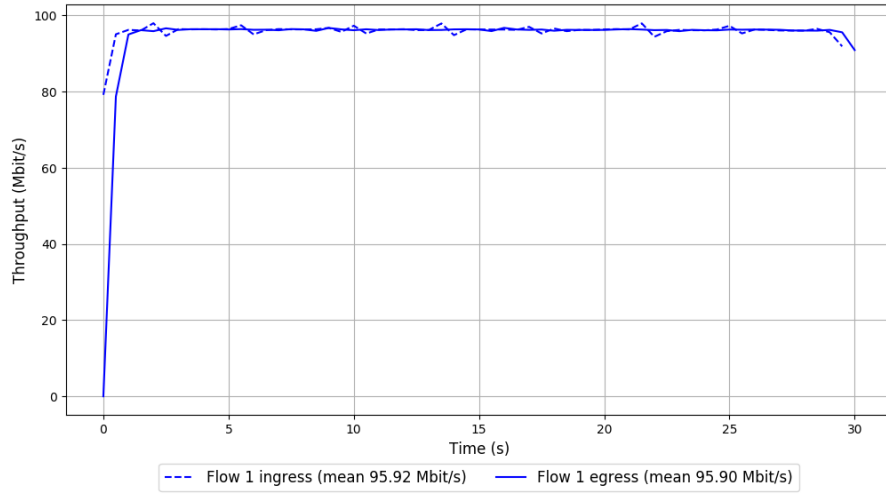
Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-12-11 11:56:49
End at: 2019-12-11 11:57:19
Local clock offset: -6.2 ms
Remote clock offset: 0.552 ms


# Below is generated by plot.py at 2019-12-11 13:07:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.60 Mbit/s
95th percentile per-packet one-way delay: 9.165 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 95.60 Mbit/s
95th percentile per-packet one-way delay: 9.165 ms
Loss rate: 0.03%
```
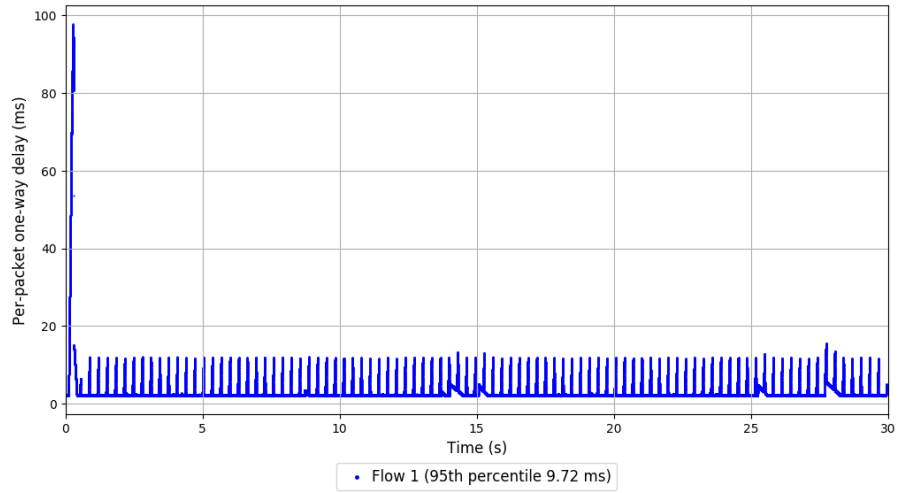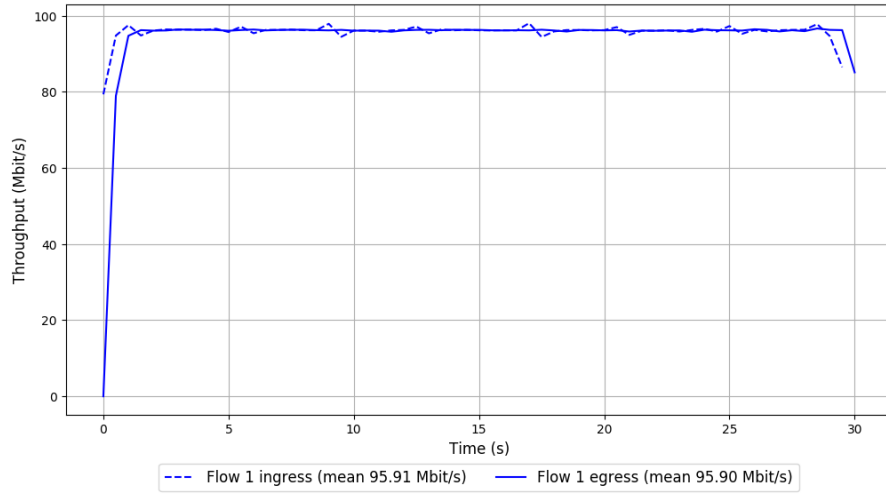
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 95.62 Mbit/s) --- Flow 1 egress (mean 95.60 Mbit/s)

Flow 1 (95th percentile 9.16 ms)

40

```
Run 4: Statistics of FillP

Start at: 2019-12-11 12:23:44
End at: 2019-12-11 12:24:14
Local clock offset: -5.373 ms
Remote clock offset: 0.641 ms


# Below is generated by plot.py at 2019-12-11 13:07:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.90 Mbit/s
95th percentile per-packet one-way delay: 9.951 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 95.90 Mbit/s
95th percentile per-packet one-way delay: 9.951 ms
Loss rate: 0.03%
```
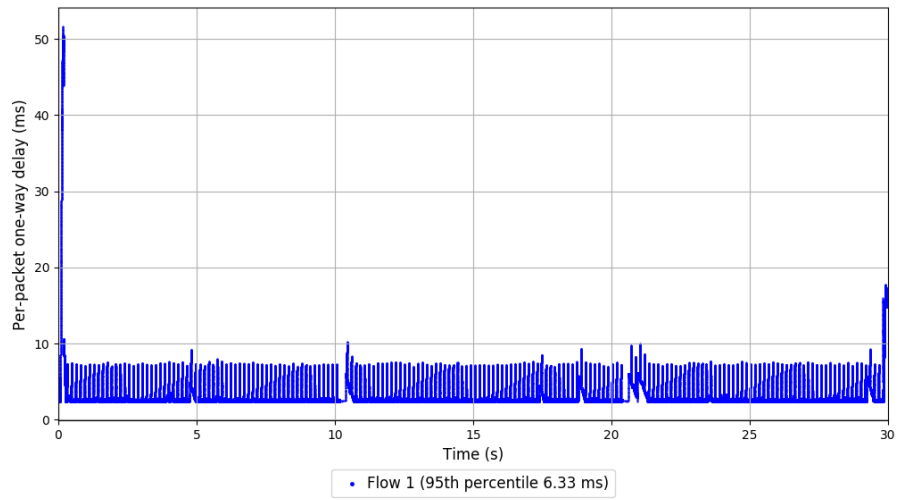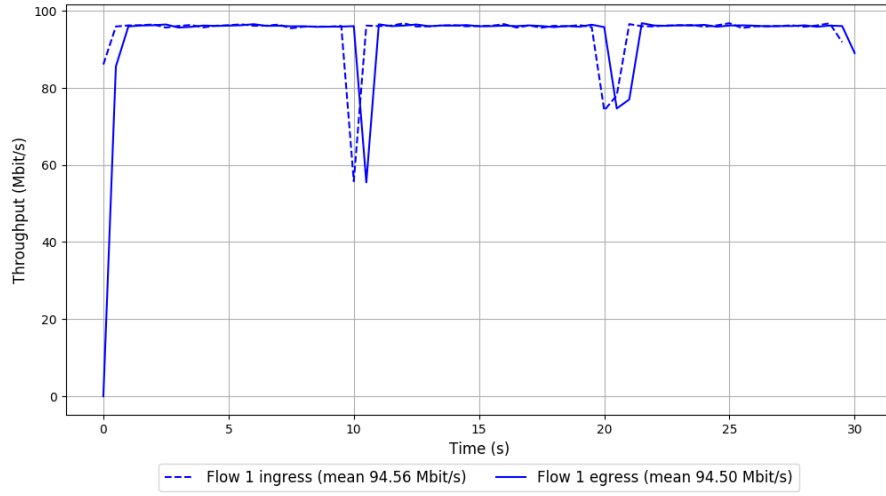
Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 95.92 Mbit/s)   Flow 1 egress (mean 95.90 Mbit/s)

Flow 1 (95th percentile 9.95 ms)

```
Run 5: Statistics of FillP

Start at: 2019-12-11 12:50:45
End at: 2019-12-11 12:51:15
Local clock offset: -3.025 ms
Remote clock offset: 0.687 ms


# Below is generated by plot.py at 2019-12-11 13:07:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.90 Mbit/s
95th percentile per-packet one-way delay: 9.722 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 95.90 Mbit/s
95th percentile per-packet one-way delay: 9.722 ms
Loss rate: 0.03%
```
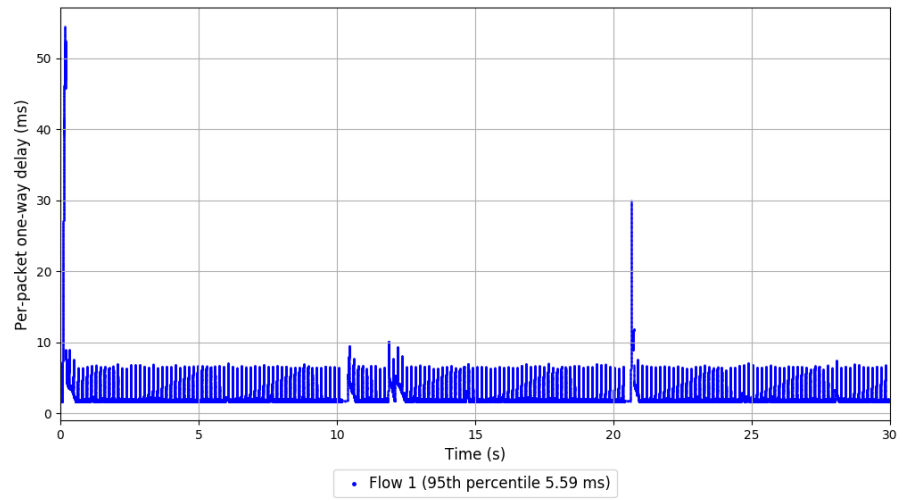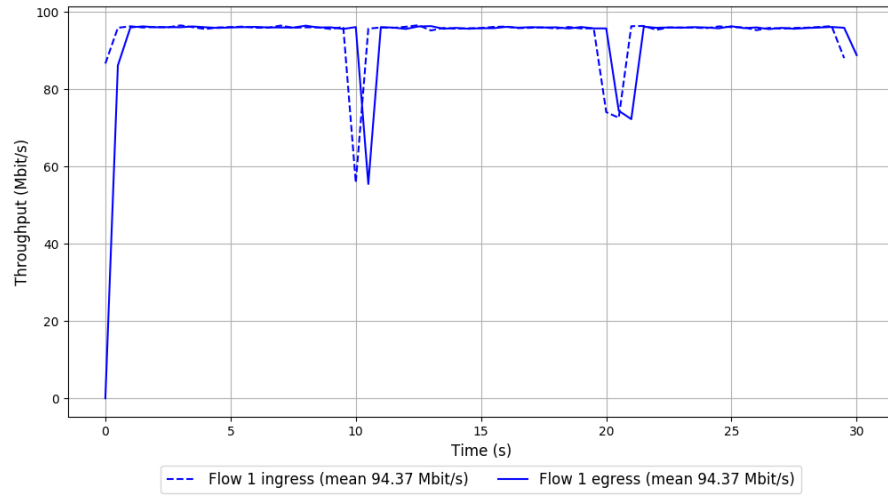
Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 95.91 Mbit/s)   Flow 1 egress (mean 95.90 Mbit/s)

Flow 1 (95th percentile 9.72 ms)

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-12-11 10:48:03
End at: 2019-12-11 10:48:33
Local clock offset: -5.434 ms
Remote clock offset: -0.186 ms


# Below is generated by plot.py at 2019-12-11 13:07:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.50 Mbit/s
95th percentile per-packet one-way delay: 6.329 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 94.50 Mbit/s
95th percentile per-packet one-way delay: 6.329 ms
Loss rate: 0.07%
```
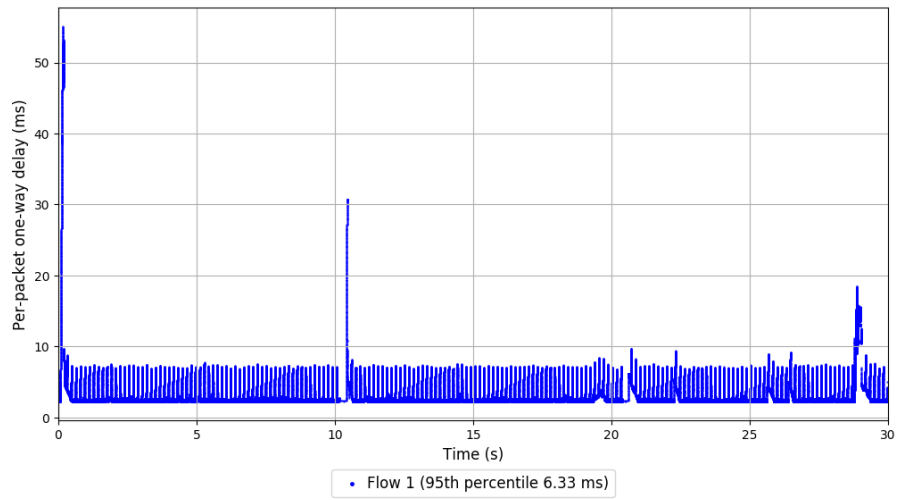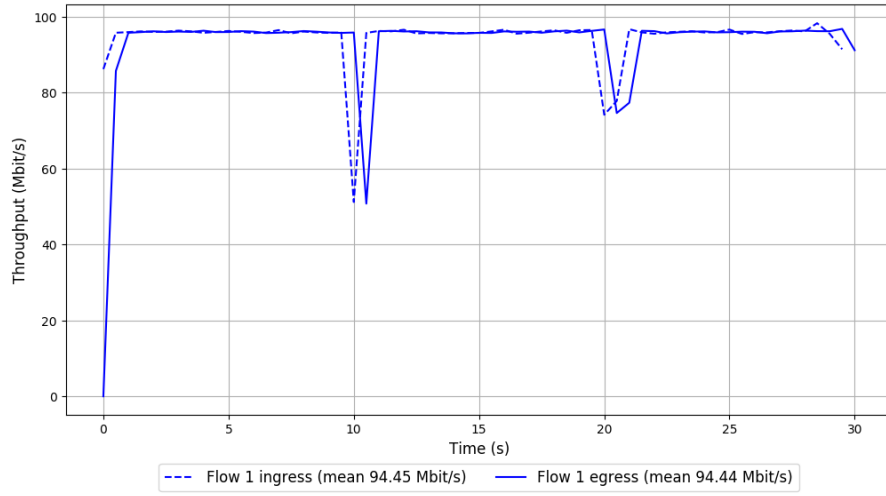
Run 1: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 94.56 Mbit/s)   Flow 1 egress (mean 94.50 Mbit/s)

Flow 1 (95th percentile 6.33 ms)

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-12-11 11:15:03
End at: 2019-12-11 11:15:33
Local clock offset: -6.66 ms
Remote clock offset: 0.156 ms


# Below is generated by plot.py at 2019-12-11 13:07:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.37 Mbit/s
95th percentile per-packet one-way delay: 5.586 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 94.37 Mbit/s
95th percentile per-packet one-way delay: 5.586 ms
Loss rate: 0.00%
```
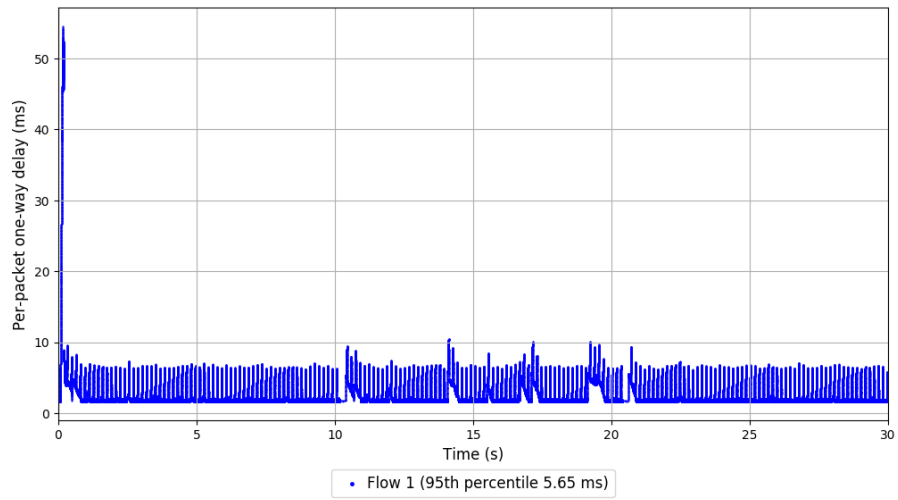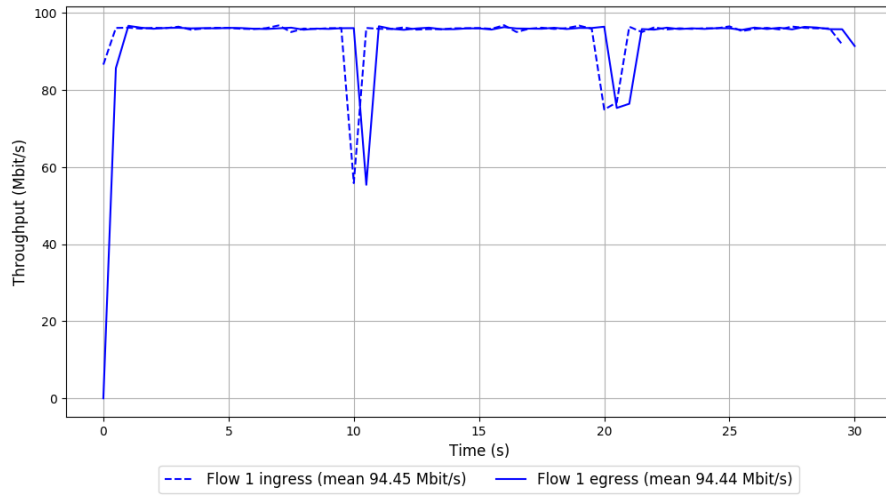
Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-12-11 11:42:08
End at: 2019-12-11 11:42:38
Local clock offset: -6.265 ms
Remote clock offset: 0.367 ms


# Below is generated by plot.py at 2019-12-11 13:07:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.44 Mbit/s
95th percentile per-packet one-way delay: 6.330 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 94.44 Mbit/s
95th percentile per-packet one-way delay: 6.330 ms
Loss rate: 0.03%
```
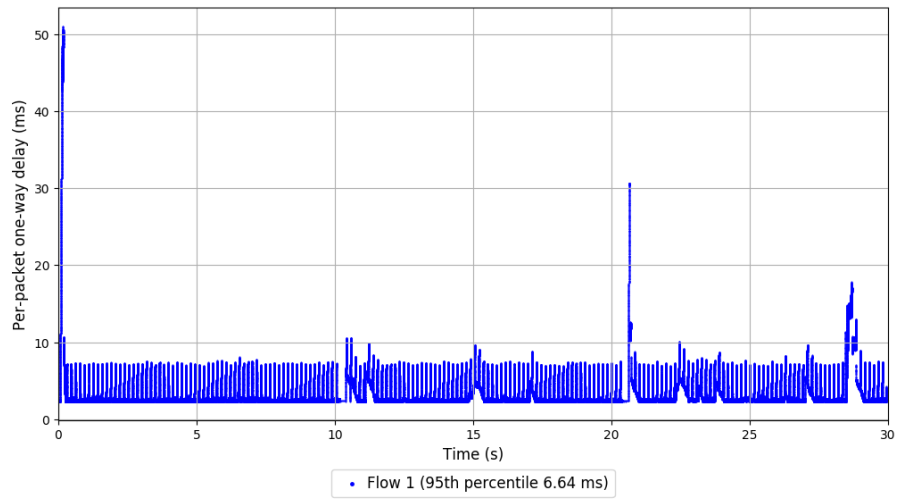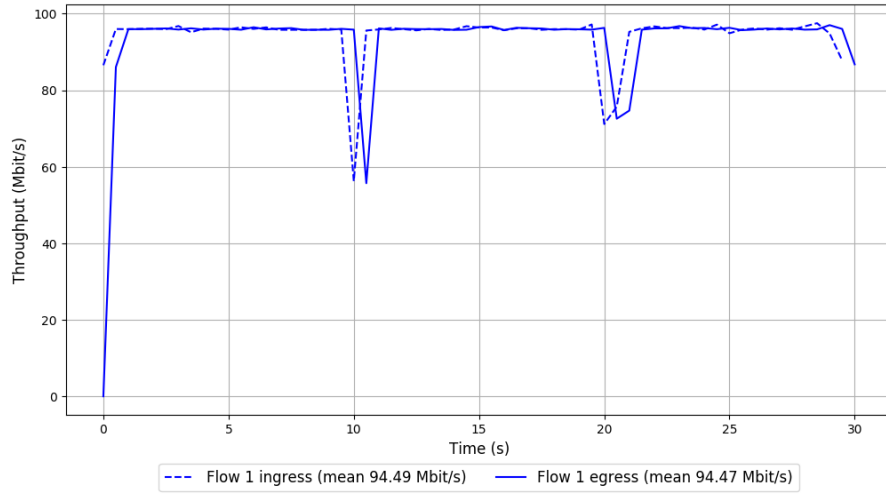
Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 94.45 Mbit/s) ----   Flow 1 egress (mean 94.44 Mbit/s) ——

• Flow 1 (95th percentile 6.33 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-12-11 12:09:07
End at: 2019-12-11 12:09:37
Local clock offset: -6.055 ms
Remote clock offset: 0.576 ms


# Below is generated by plot.py at 2019-12-11 13:08:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.44 Mbit/s
95th percentile per-packet one-way delay: 5.652 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 94.44 Mbit/s
95th percentile per-packet one-way delay: 5.652 ms
Loss rate: 0.02%
```
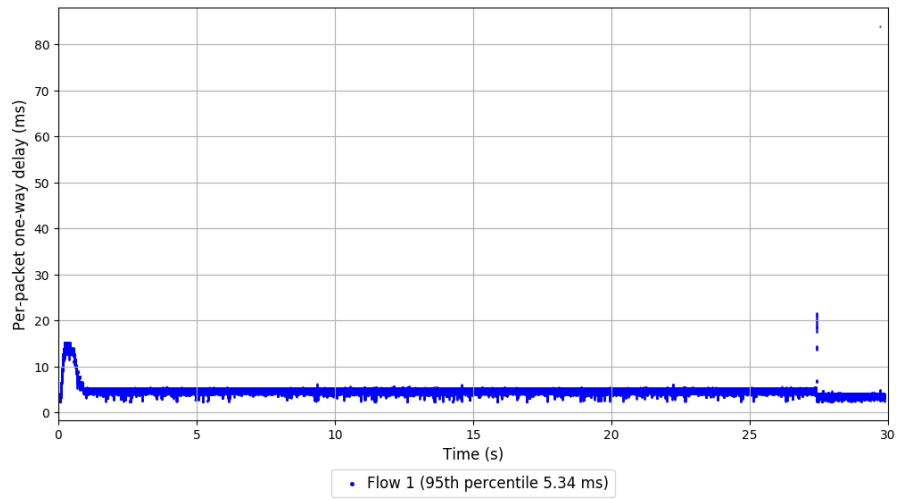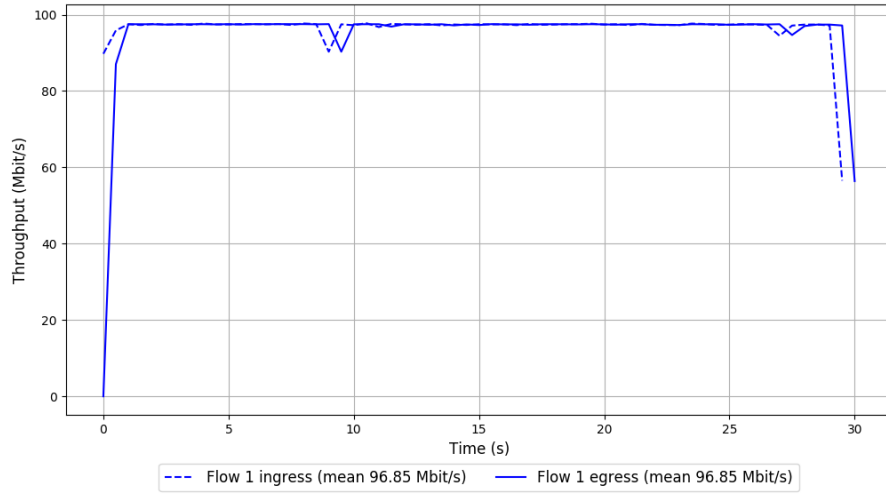
Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 94.45 Mbit/s) --- Flow 1 egress (mean 94.44 Mbit/s)

Flow 1 (95th percentile 5.65 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-12-11 12:36:04
End at: 2019-12-11 12:36:34
Local clock offset: -5.341 ms
Remote clock offset: 0.713 ms


# Below is generated by plot.py at 2019-12-11 13:08:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.47 Mbit/s
95th percentile per-packet one-way delay: 6.644 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 94.47 Mbit/s
95th percentile per-packet one-way delay: 6.644 ms
Loss rate: 0.03%
```
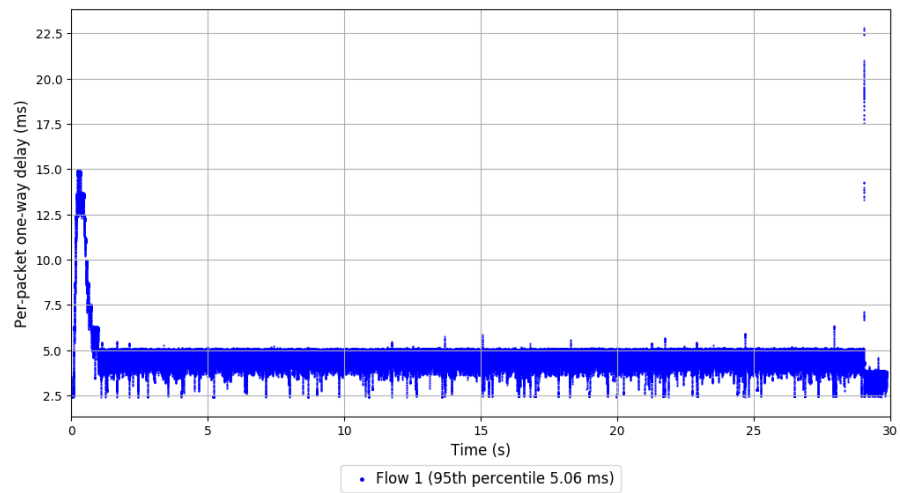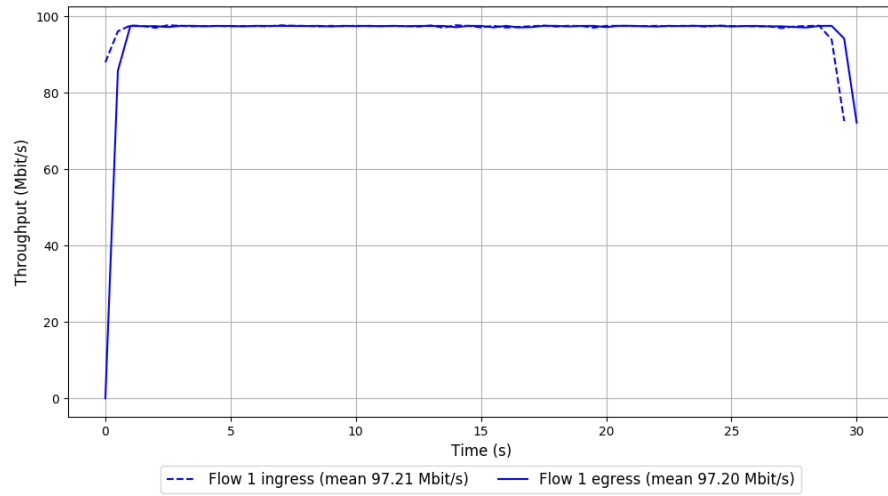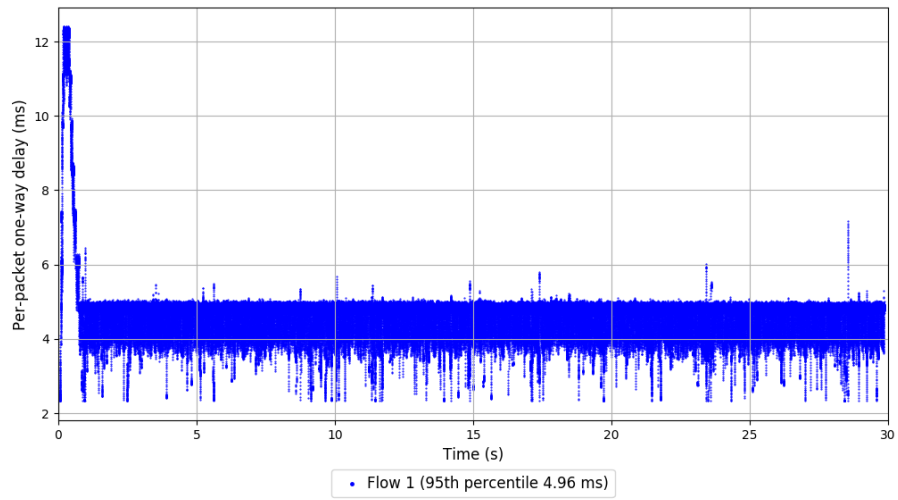
Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 94.49 Mbit/s) --- Flow 1 egress (mean 94.47 Mbit/s)

Flow 1 (95th percentile 6.64 ms)

```
Run 1: Statistics of Indigo

Start at: 2019-12-11 10:55:58
End at: 2019-12-11 10:56:28
Local clock offset: -5.352 ms
Remote clock offset: -0.091 ms


# Below is generated by plot.py at 2019-12-11 13:08:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.85 Mbit/s
95th percentile per-packet one-way delay: 5.342 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 96.85 Mbit/s
95th percentile per-packet one-way delay: 5.342 ms
Loss rate: 0.02%
```
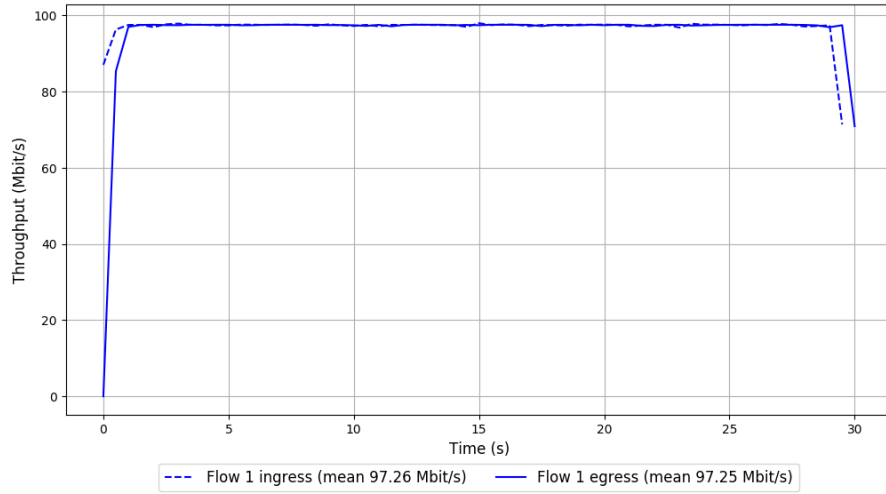
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-12-11 11:23:00
End at: 2019-12-11 11:23:30
Local clock offset: -6.335 ms
Remote clock offset: 0.266 ms


# Below is generated by plot.py at 2019-12-11 13:08:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 5.058 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 5.058 ms
Loss rate: 0.02%
```
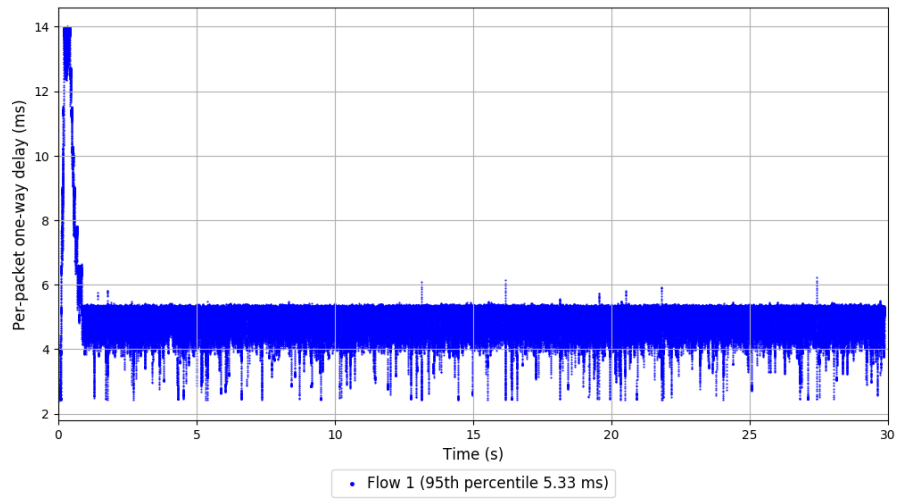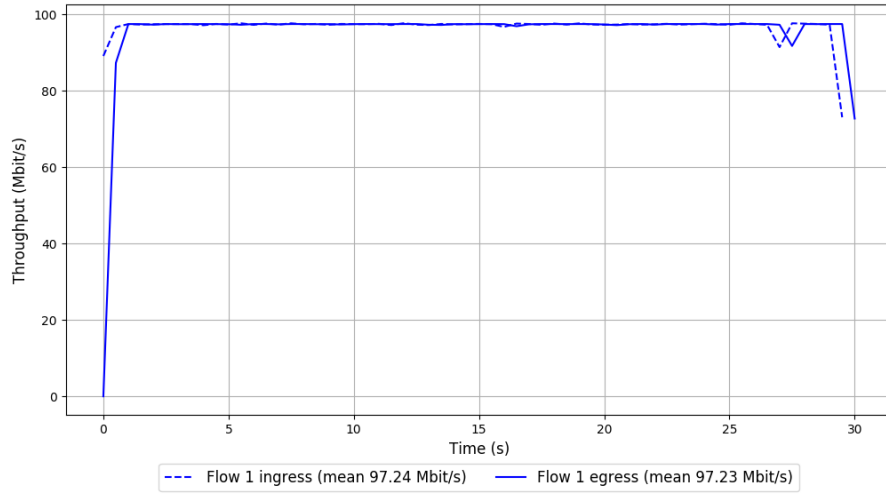
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-12-11 11:50:01
End at: 2019-12-11 11:50:31
Local clock offset: -5.776 ms
Remote clock offset: 0.495 ms


# Below is generated by plot.py at 2019-12-11 13:08:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.25 Mbit/s
95th percentile per-packet one-way delay: 4.959 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.25 Mbit/s
95th percentile per-packet one-way delay: 4.959 ms
Loss rate: 0.02%
```
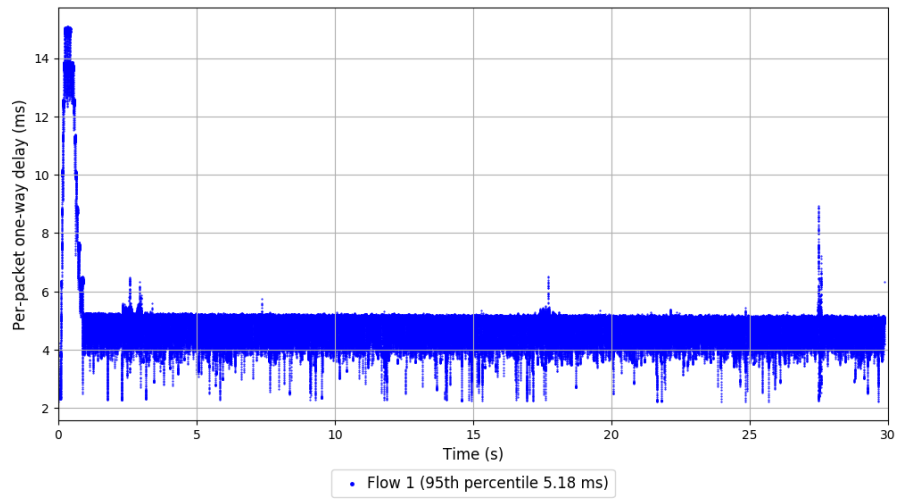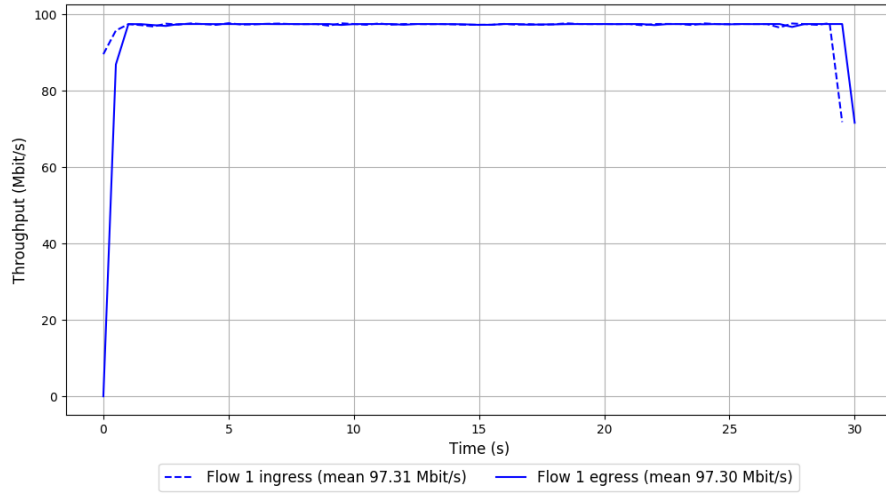
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-12-11 12:16:59
End at: 2019-12-11 12:17:29
Local clock offset: -5.383 ms
Remote clock offset: 0.628 ms


# Below is generated by plot.py at 2019-12-11 13:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.23 Mbit/s
95th percentile per-packet one-way delay: 5.333 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.23 Mbit/s
95th percentile per-packet one-way delay: 5.333 ms
Loss rate: 0.02%
```
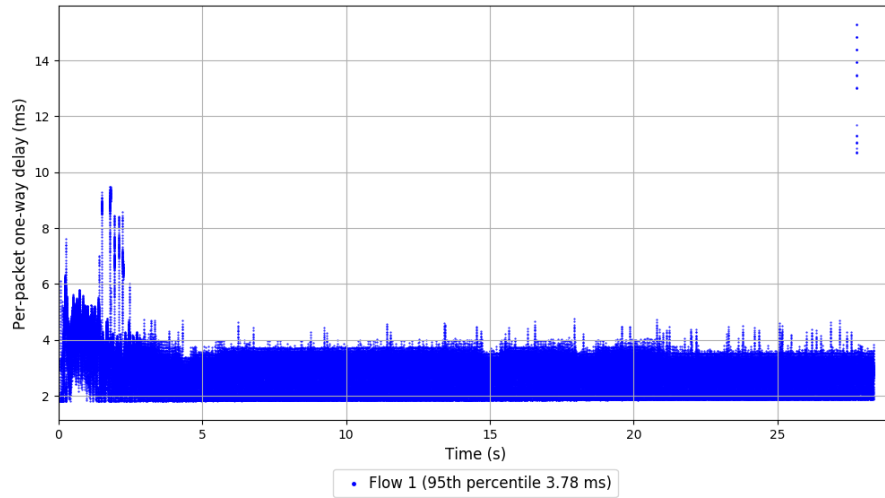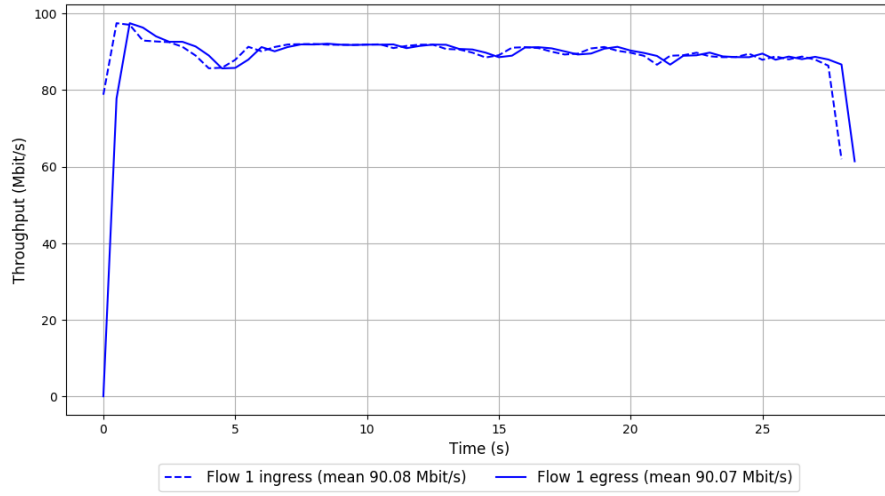
Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 97.24 Mbit/s)　　Flow 1 egress (mean 97.23 Mbit/s)

Flow 1 (95th percentile 5.33 ms)

```
Run 5: Statistics of Indigo

Start at: 2019-12-11 12:43:57
End at: 2019-12-11 12:44:27
Local clock offset: -3.932 ms
Remote clock offset: 0.762 ms


# Below is generated by plot.py at 2019-12-11 13:08:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.30 Mbit/s
95th percentile per-packet one-way delay: 5.179 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.30 Mbit/s
95th percentile per-packet one-way delay: 5.179 ms
Loss rate: 0.02%
```
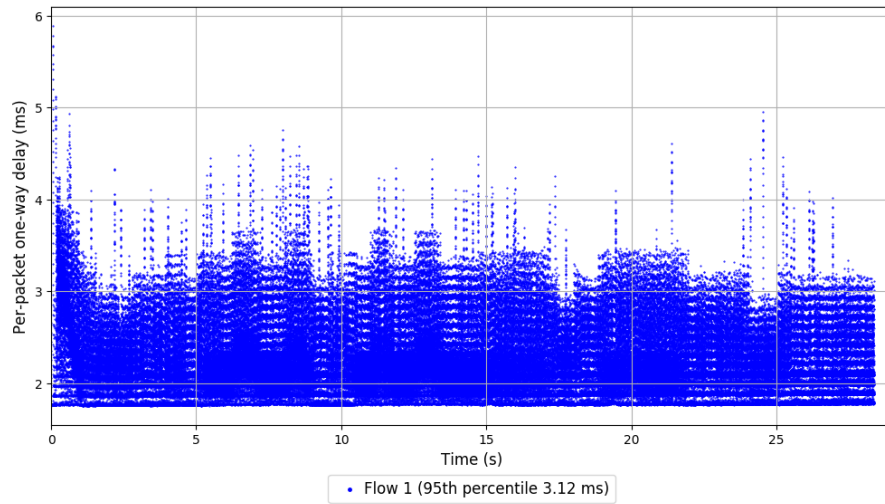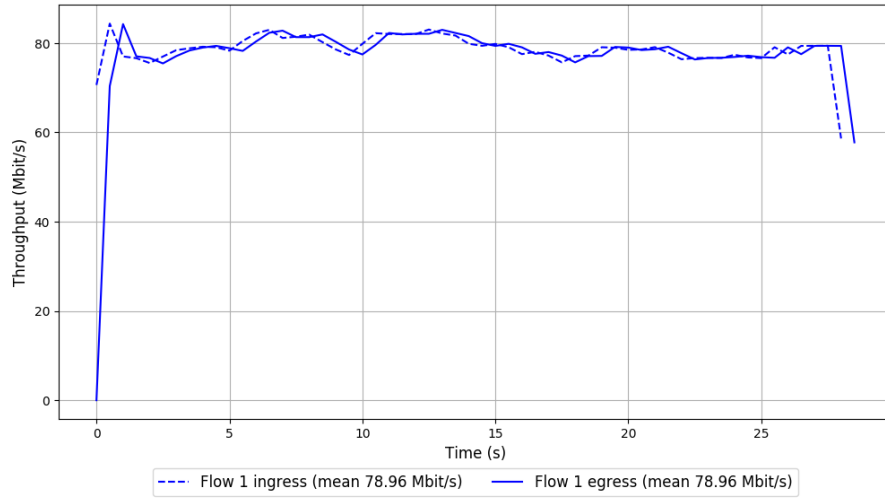
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-12-11 11:08:19
End at: 2019-12-11 11:08:49
Local clock offset: -6.043 ms
Remote clock offset: 0.016 ms


# Below is generated by plot.py at 2019-12-11 13:08:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.07 Mbit/s
95th percentile per-packet one-way delay: 3.781 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 90.07 Mbit/s
95th percentile per-packet one-way delay: 3.781 ms
Loss rate: 0.02%
```
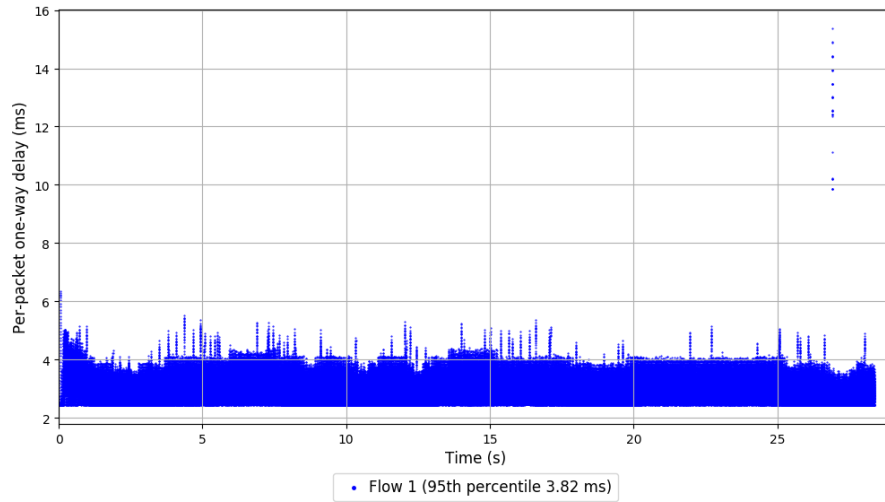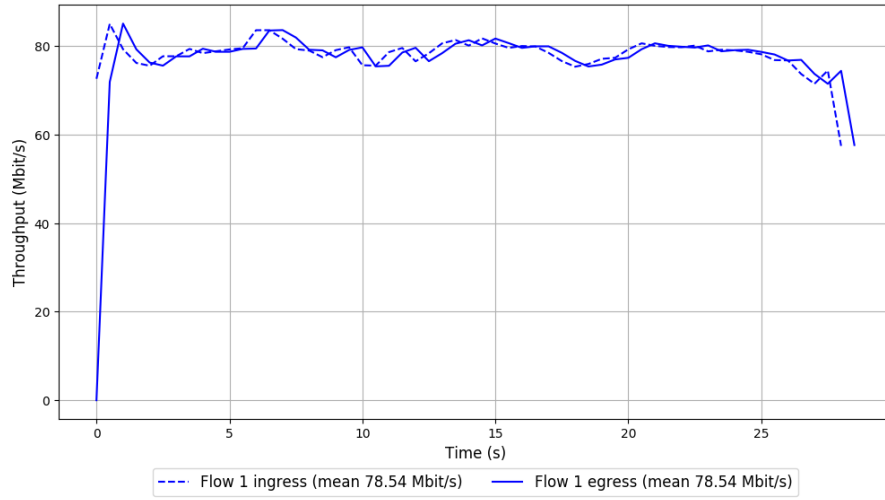
Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-12-11 11:35:21
End at: 2019-12-11 11:35:51
Local clock offset: -7.356 ms
Remote clock offset: 0.295 ms


# Below is generated by plot.py at 2019-12-11 13:09:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.96 Mbit/s
95th percentile per-packet one-way delay: 3.116 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 78.96 Mbit/s
95th percentile per-packet one-way delay: 3.116 ms
Loss rate: 0.02%
```
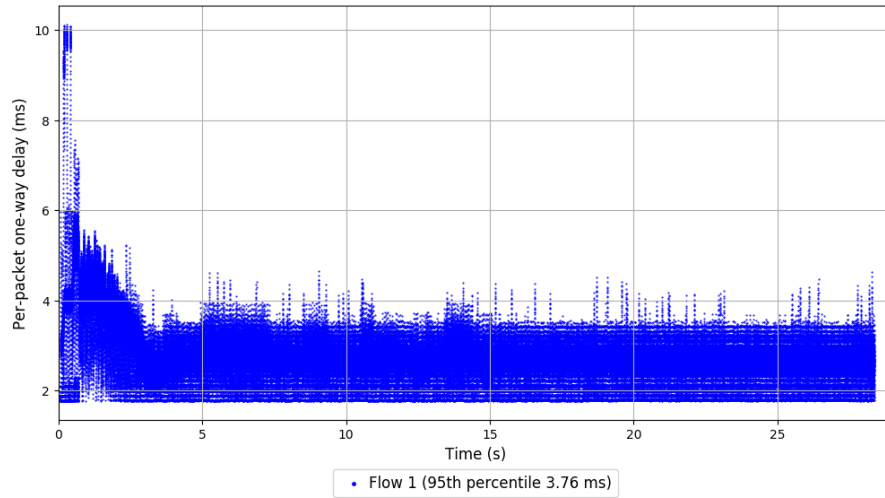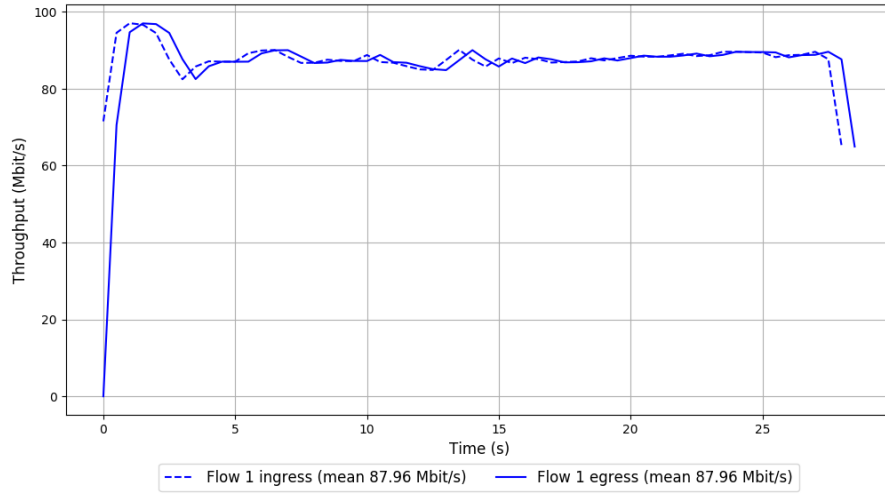
Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-12-11 12:02:21
End at: 2019-12-11 12:02:51
Local clock offset: -5.413 ms
Remote clock offset: 0.51 ms


# Below is generated by plot.py at 2019-12-11 13:09:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.54 Mbit/s
95th percentile per-packet one-way delay: 3.823 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 78.54 Mbit/s
95th percentile per-packet one-way delay: 3.823 ms
Loss rate: 0.01%
```
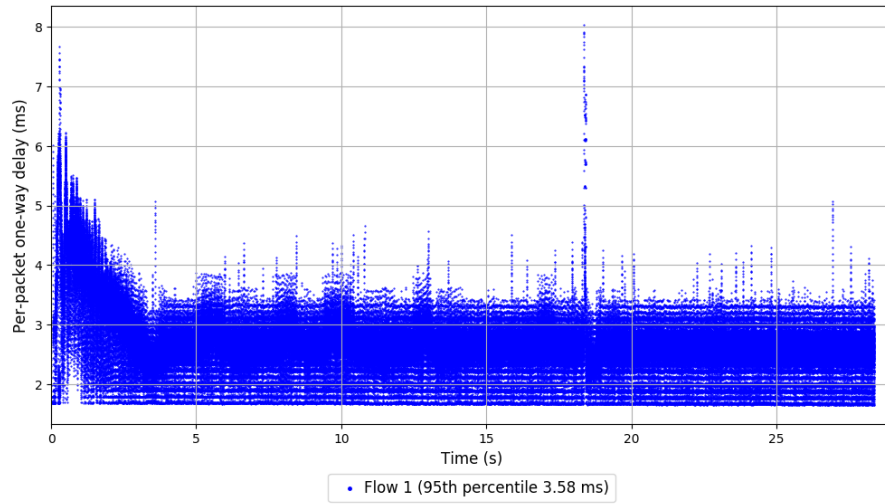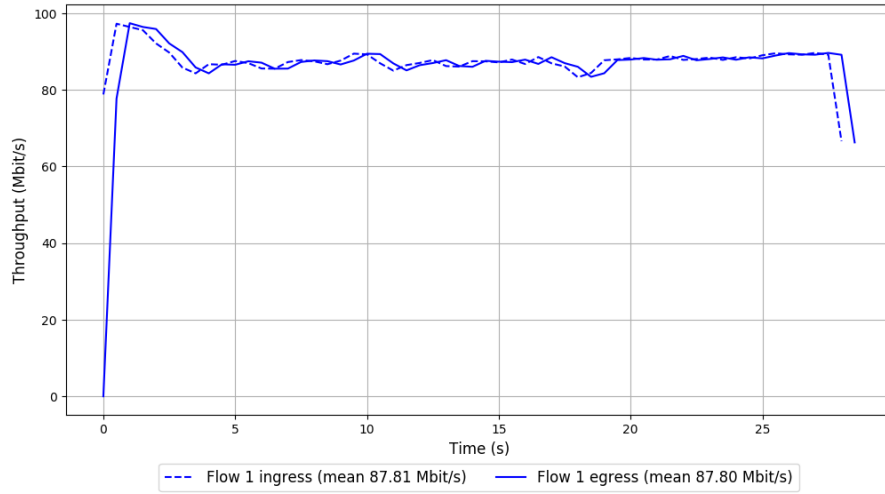
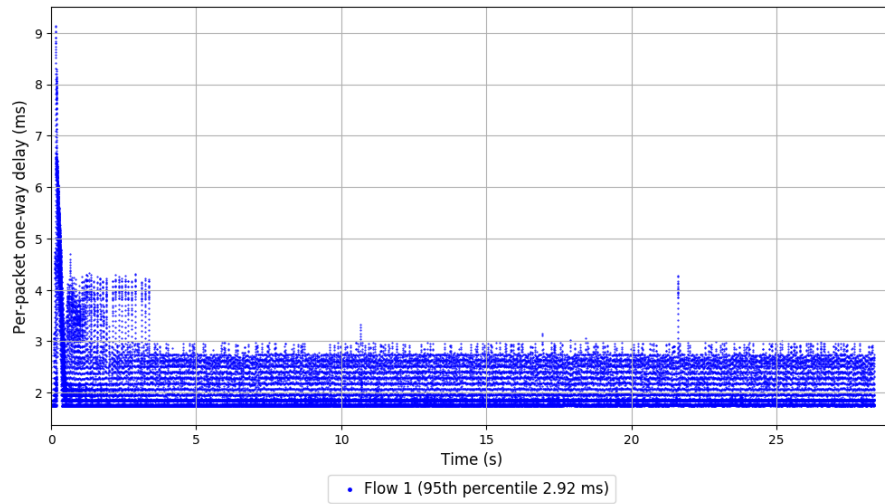Run 3: Report of Indigo-MusesC3 — Data Link

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-12-11 12:29:17
End at: 2019-12-11 12:29:47
Local clock offset: -6.052 ms
Remote clock offset: 0.668 ms


# Below is generated by plot.py at 2019-12-11 13:09:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.96 Mbit/s
95th percentile per-packet one-way delay: 3.759 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 87.96 Mbit/s
95th percentile per-packet one-way delay: 3.759 ms
Loss rate: 0.02%
```
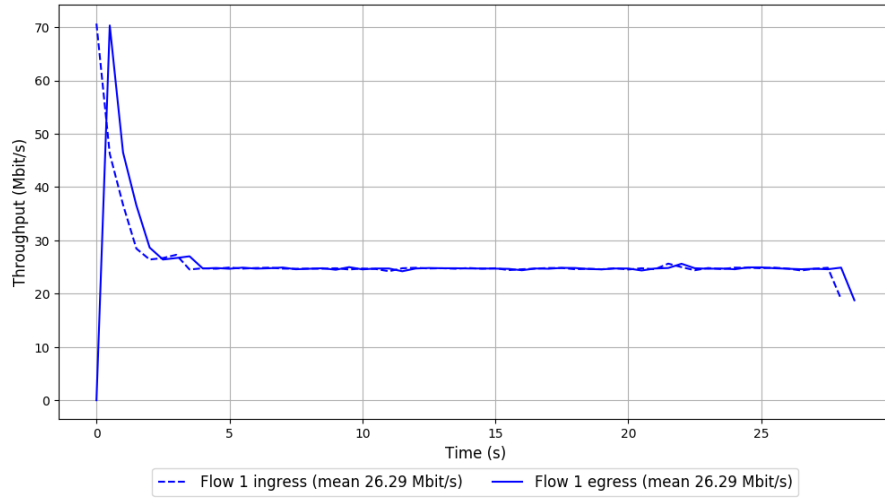
Run 4: Report of Indigo-MusesC3 — Data Link

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-12-11 12:56:18
End at: 2019-12-11 12:56:48
Local clock offset: -3.172 ms
Remote clock offset: 0.597 ms


# Below is generated by plot.py at 2019-12-11 13:09:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.80 Mbit/s
95th percentile per-packet one-way delay: 3.583 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 87.80 Mbit/s
95th percentile per-packet one-way delay: 3.583 ms
Loss rate: 0.02%
```
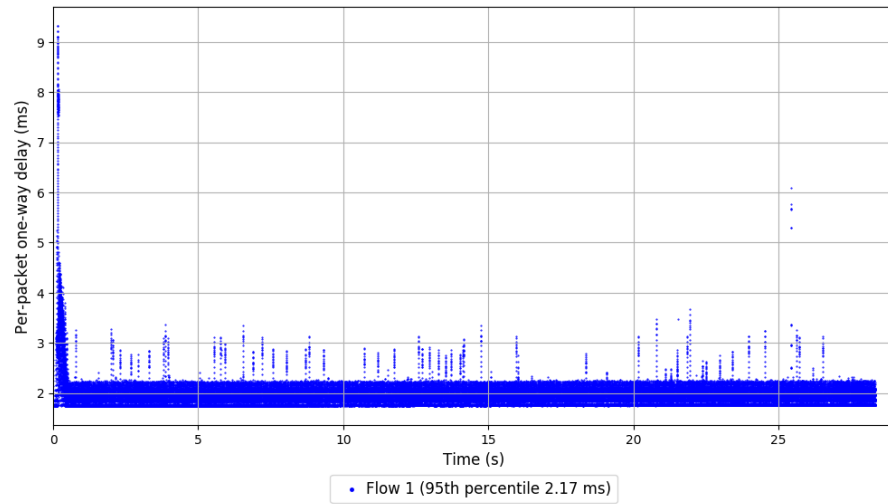
Run 5: Report of Indigo-MusesC3 — Data Link

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-12-11 11:04:59
End at: 2019-12-11 11:05:29
Local clock offset: -6.05 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2019-12-11 13:09:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.29 Mbit/s
95th percentile per-packet one-way delay: 2.925 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 26.29 Mbit/s
95th percentile per-packet one-way delay: 2.925 ms
Loss rate: 0.02%
```
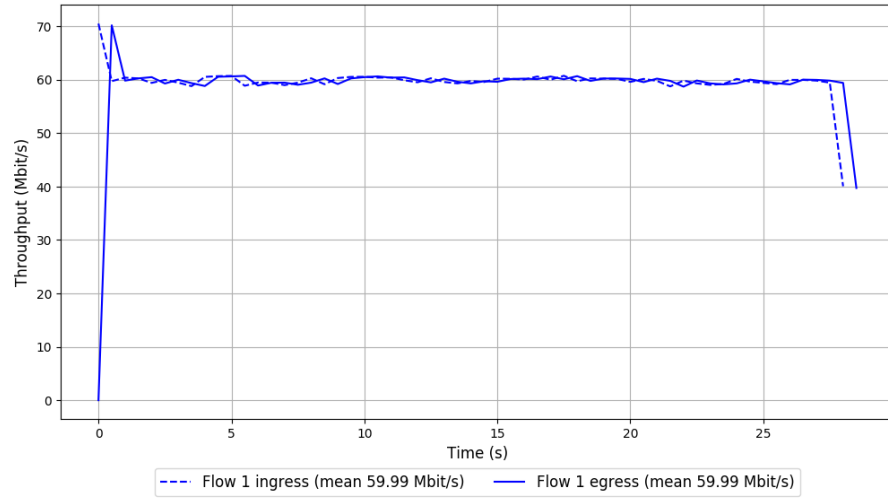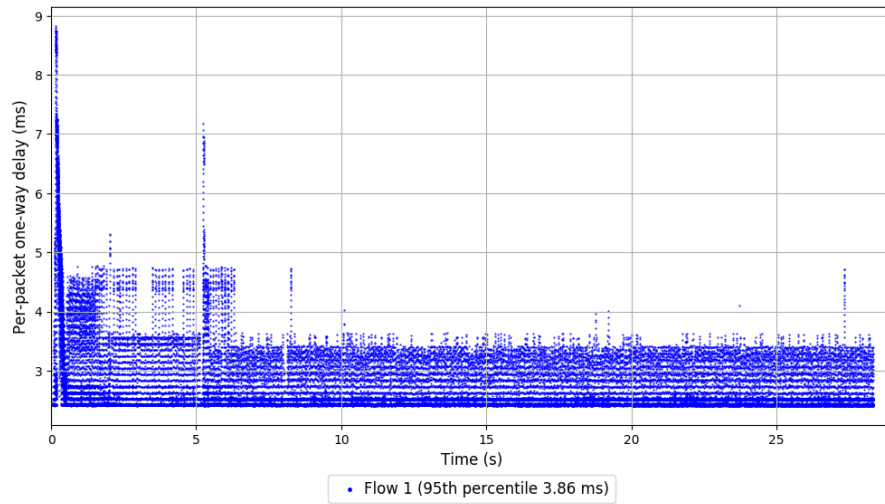
Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-12-11 11:32:00
End at: 2019-12-11 11:32:30
Local clock offset: -7.288 ms
Remote clock offset: 0.274 ms


# Below is generated by plot.py at 2019-12-11 13:09:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 59.99 Mbit/s
95th percentile per-packet one-way delay: 2.167 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 59.99 Mbit/s
95th percentile per-packet one-way delay: 2.167 ms
Loss rate: 0.02%
```
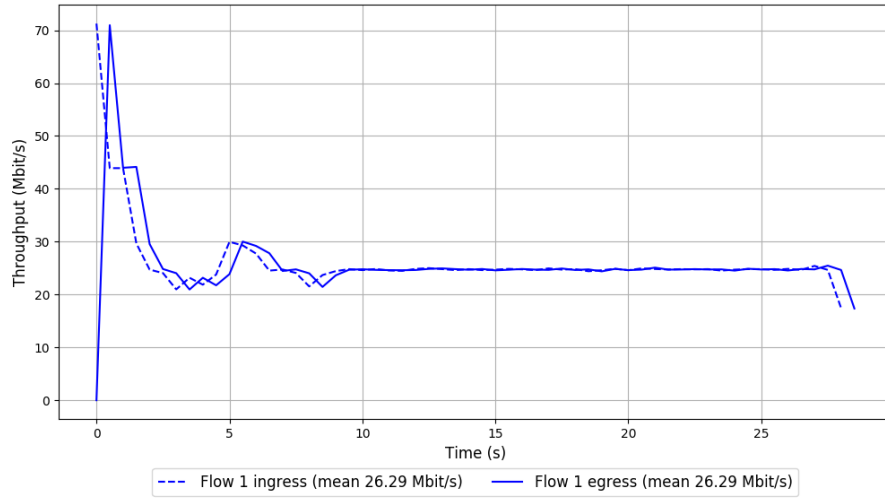
Run 2: Report of Indigo-MusesC5 — Data Link

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-12-11 11:59:01
End at: 2019-12-11 11:59:31
Local clock offset: -5.529 ms
Remote clock offset: 0.455 ms


# Below is generated by plot.py at 2019-12-11 13:09:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.29 Mbit/s
95th percentile per-packet one-way delay: 3.860 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 26.29 Mbit/s
95th percentile per-packet one-way delay: 3.860 ms
Loss rate: 0.01%
```
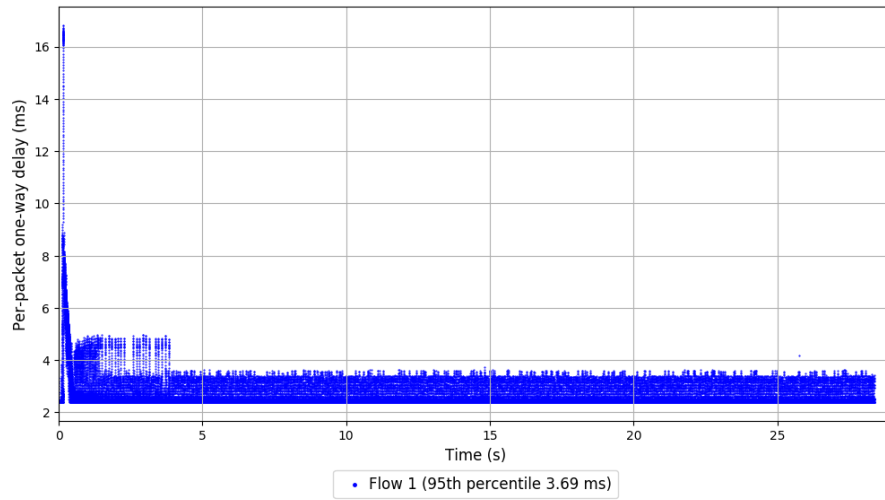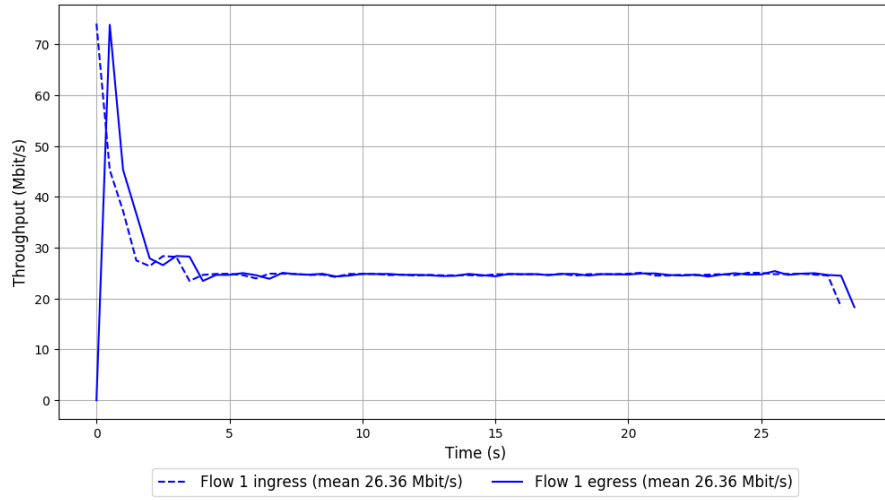
Run 3: Report of Indigo-MusesC5 — Data Link

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-12-11 12:25:58
End at: 2019-12-11 12:26:28
Local clock offset: -5.441 ms
Remote clock offset: 0.648 ms


# Below is generated by plot.py at 2019-12-11 13:09:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.36 Mbit/s
95th percentile per-packet one-way delay: 3.693 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 26.36 Mbit/s
95th percentile per-packet one-way delay: 3.693 ms
Loss rate: 0.01%
```
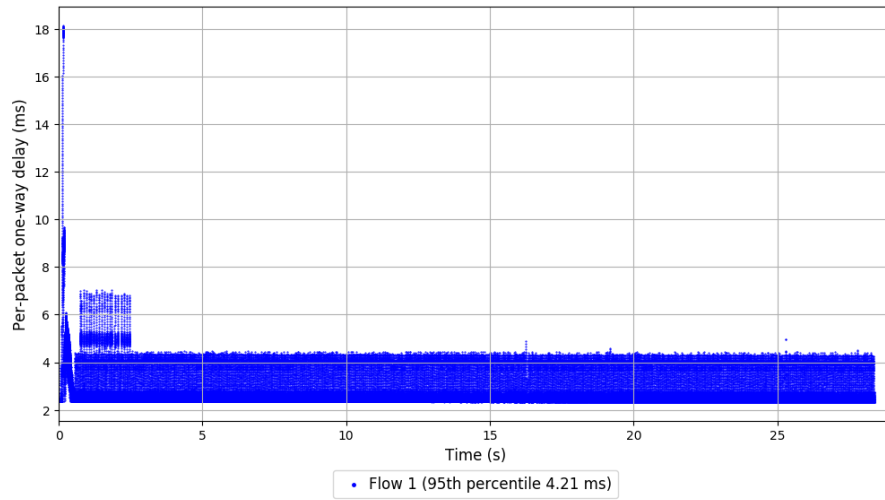
Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-12-11 12:52:57
End at: 2019-12-11 12:53:27
Local clock offset: -2.76 ms
Remote clock offset: 0.611 ms


# Below is generated by plot.py at 2019-12-11 13:09:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.98 Mbit/s
95th percentile per-packet one-way delay: 4.211 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 49.98 Mbit/s
95th percentile per-packet one-way delay: 4.211 ms
Loss rate: 0.01%
```
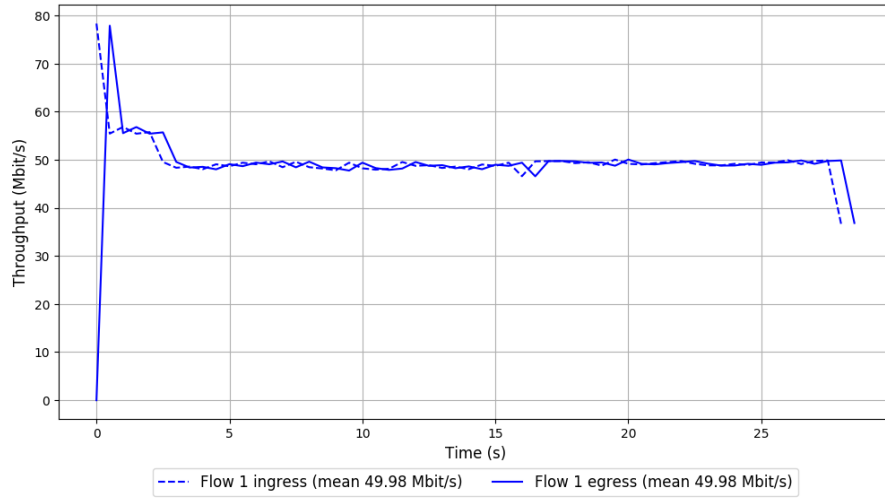
Run 5: Report of Indigo-MusesC5 — Data Link

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-12-11 11:06:04
End at: 2019-12-11 11:06:34
Local clock offset: -5.345 ms
Remote clock offset: 0.016 ms


# Below is generated by plot.py at 2019-12-11 13:09:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.78 Mbit/s
95th percentile per-packet one-way delay: 5.999 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 71.78 Mbit/s
95th percentile per-packet one-way delay: 5.999 ms
Loss rate: 0.00%
```
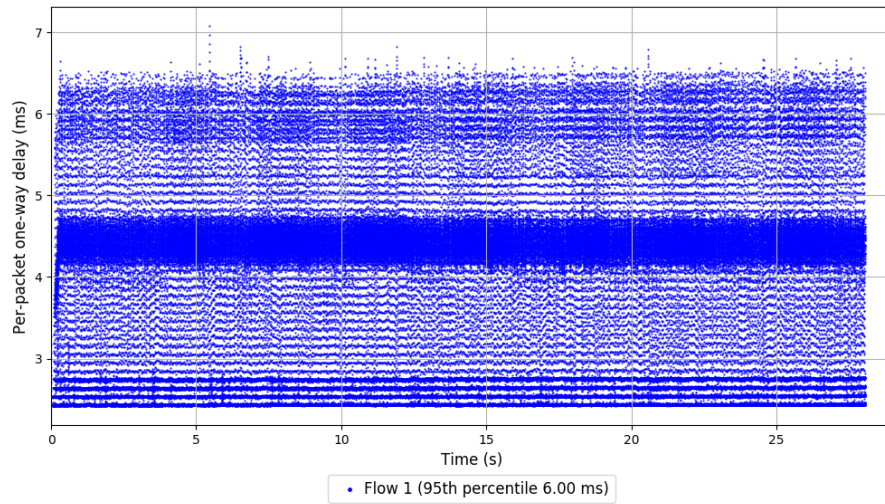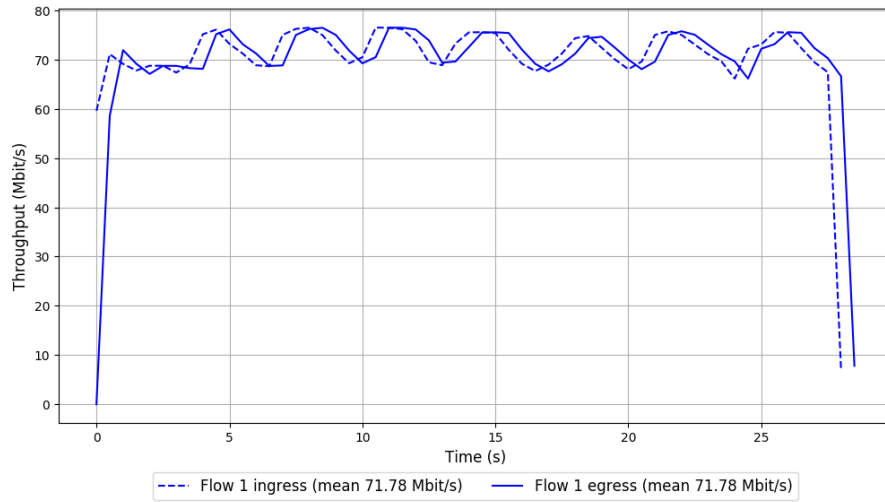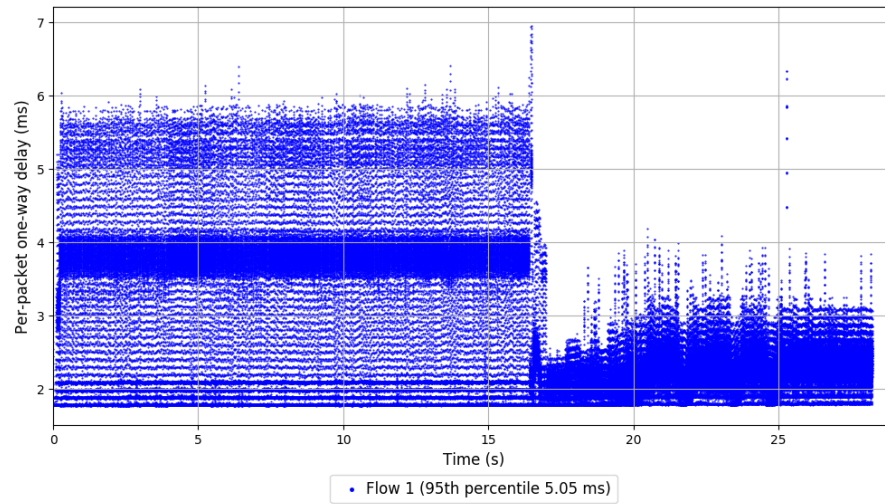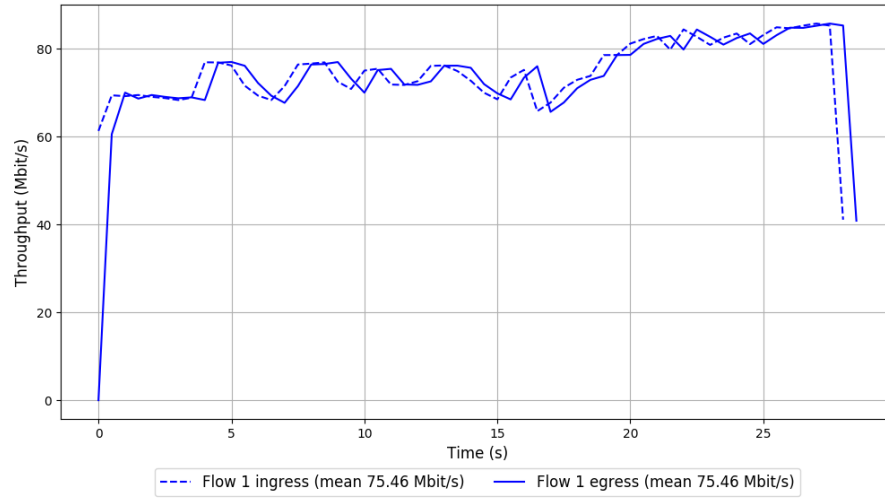
Run 1: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 71.78 Mbit/s)   Flow 1 egress (mean 71.78 Mbit/s)

Flow 1 (95th percentile 6.00 ms)

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-12-11 11:33:07
End at: 2019-12-11 11:33:37
Local clock offset: -7.317 ms
Remote clock offset: 0.254 ms


# Below is generated by plot.py at 2019-12-11 13:10:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.46 Mbit/s
95th percentile per-packet one-way delay: 5.049 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 75.46 Mbit/s
95th percentile per-packet one-way delay: 5.049 ms
Loss rate: 0.02%
```

Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-12-11 12:00:06
End at: 2019-12-11 12:00:36
Local clock offset: -6.144 ms
Remote clock offset: 0.534 ms


# Below is generated by plot.py at 2019-12-11 13:10:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.55 Mbit/s
95th percentile per-packet one-way delay: 4.932 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 73.55 Mbit/s
95th percentile per-packet one-way delay: 4.932 ms
Loss rate: 0.02%
```
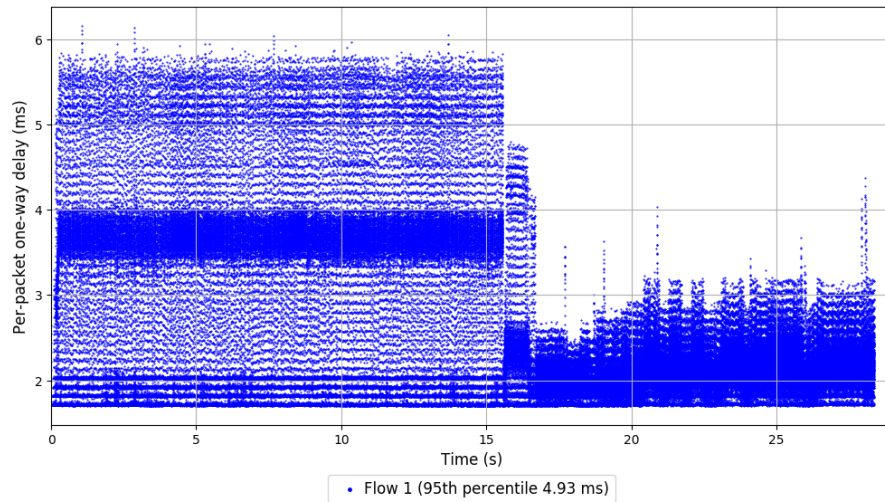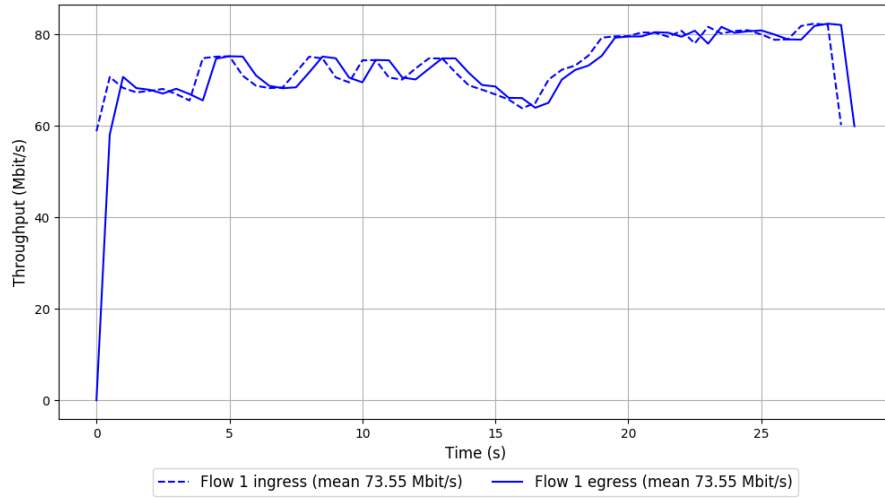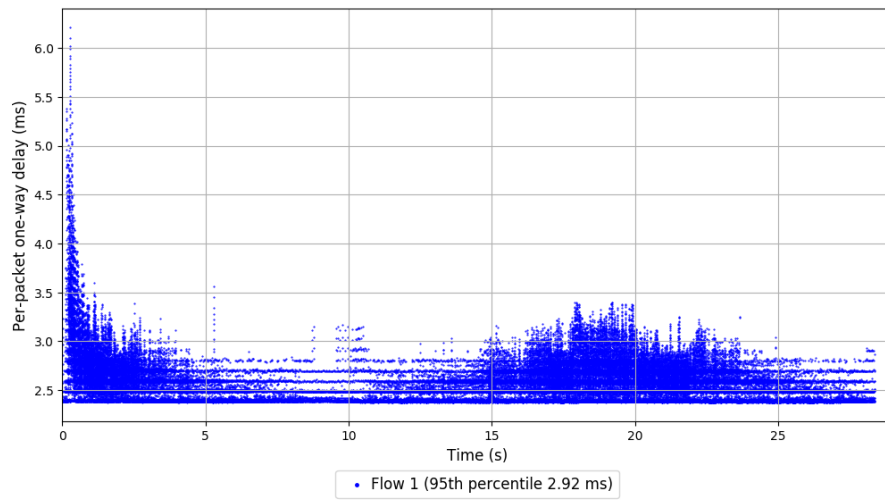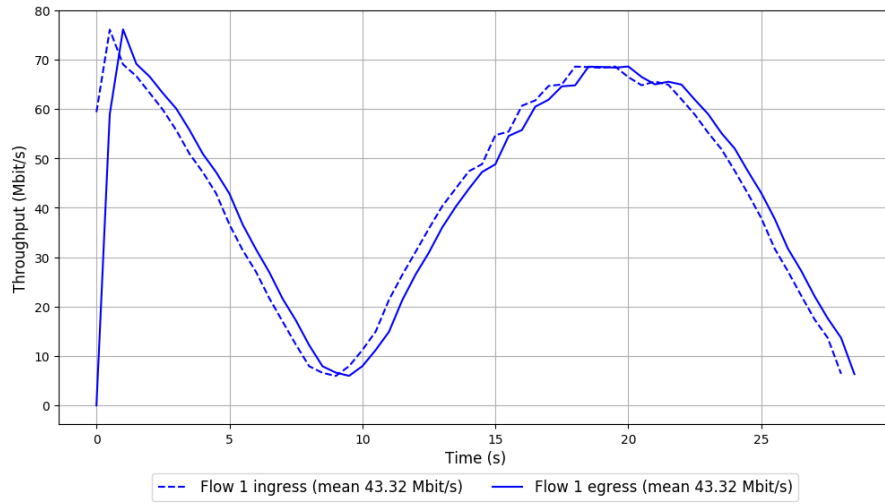
Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-12-11 12:27:03
End at: 2019-12-11 12:27:33
Local clock offset: -5.372 ms
Remote clock offset: 0.732 ms


# Below is generated by plot.py at 2019-12-11 13:10:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 43.32 Mbit/s
95th percentile per-packet one-way delay: 2.924 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.32 Mbit/s
95th percentile per-packet one-way delay: 2.924 ms
Loss rate: 0.00%
```
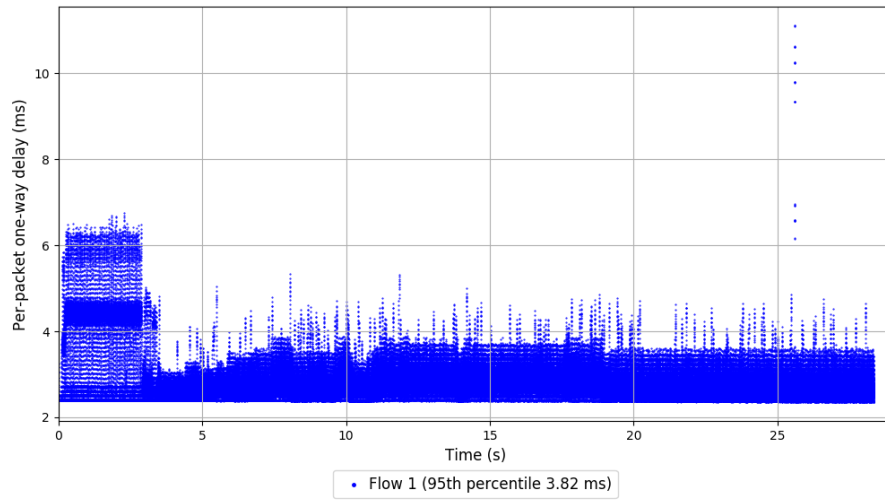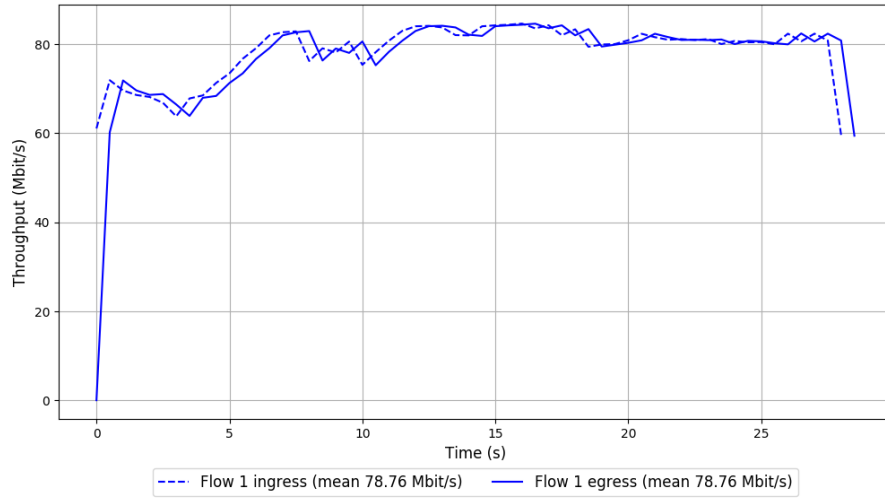
Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 43.32 Mbit/s) --- Flow 1 egress (mean 43.32 Mbit/s)

Flow 1 (95th percentile 2.92 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-12-11 12:54:03
End at: 2019-12-11 12:54:33
Local clock offset: -2.645 ms
Remote clock offset: 0.597 ms


# Below is generated by plot.py at 2019-12-11 13:10:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.76 Mbit/s
95th percentile per-packet one-way delay: 3.824 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 78.76 Mbit/s
95th percentile per-packet one-way delay: 3.824 ms
Loss rate: 0.02%
```

Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-12-11 11:07:11
End at: 2019-12-11 11:07:42
Local clock offset: -5.362 ms
Remote clock offset: 0.086 ms


# Below is generated by plot.py at 2019-12-11 13:10:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.46 Mbit/s
95th percentile per-packet one-way delay: 3.786 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 82.46 Mbit/s
95th percentile per-packet one-way delay: 3.786 ms
Loss rate: 0.02%
```
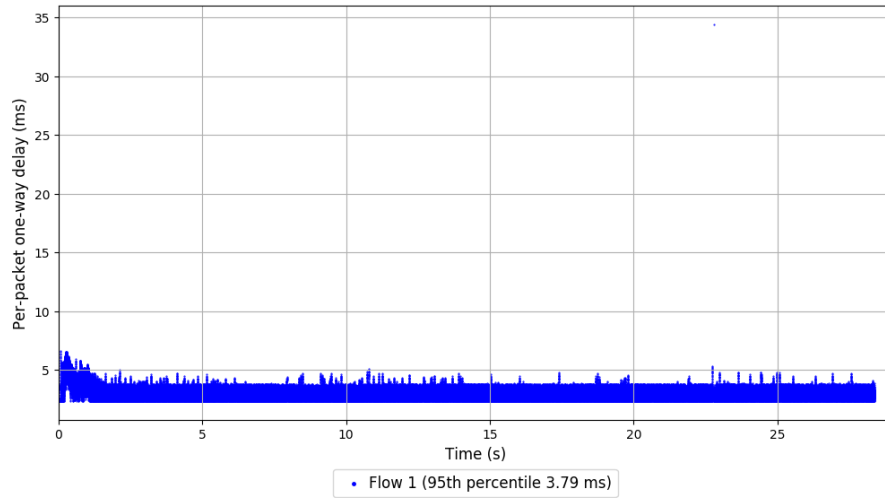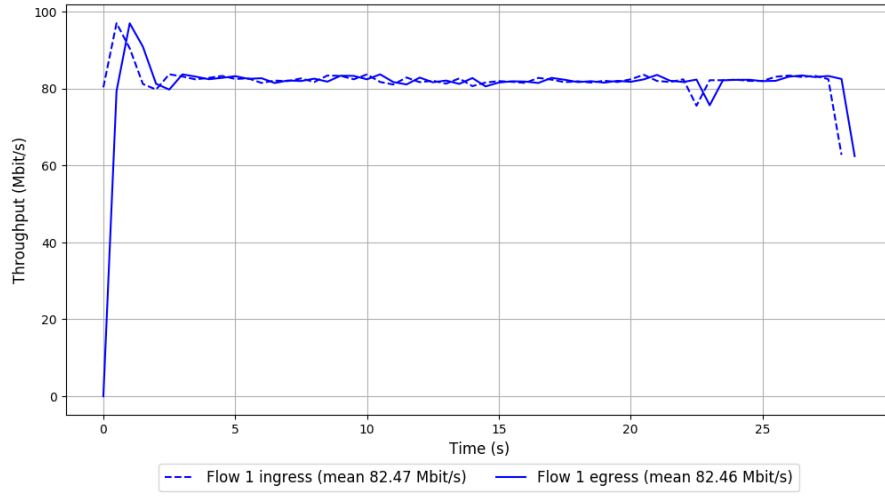
Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-12-11 11:34:14
End at: 2019-12-11 11:34:44
Local clock offset: -6.645 ms
Remote clock offset: 0.295 ms


# Below is generated by plot.py at 2019-12-11 13:10:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.01 Mbit/s
95th percentile per-packet one-way delay: 3.730 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 82.01 Mbit/s
95th percentile per-packet one-way delay: 3.730 ms
Loss rate: 0.01%
```
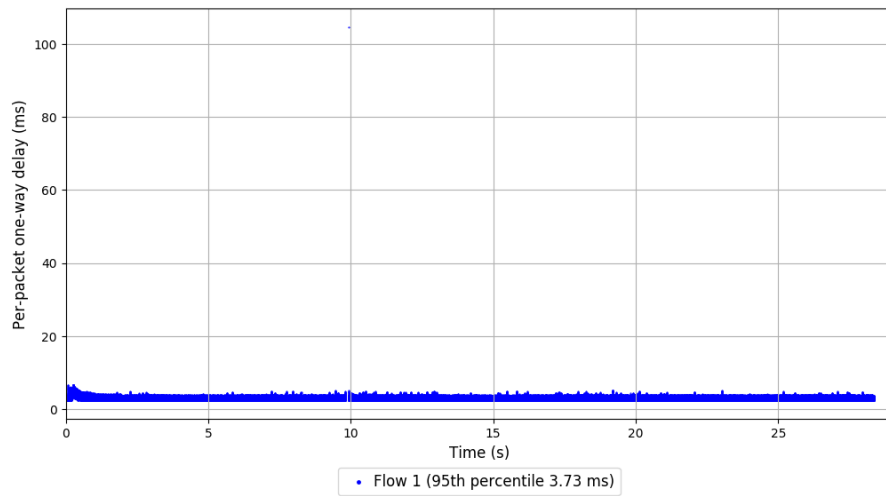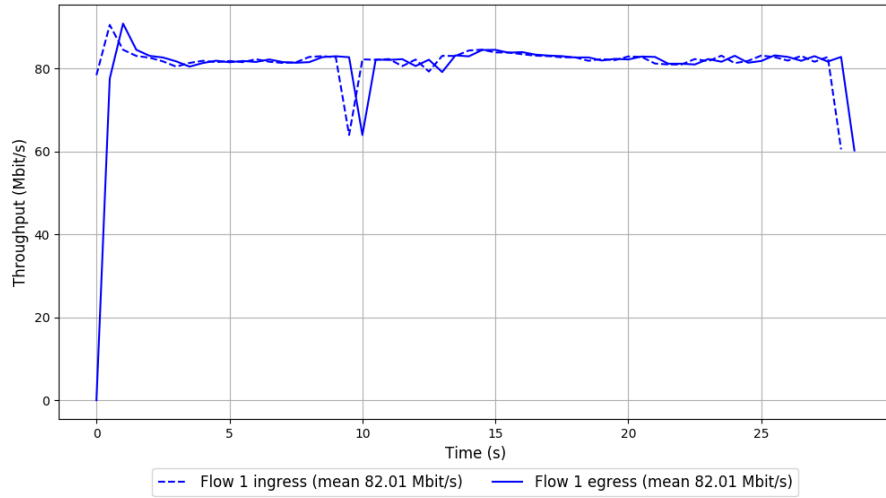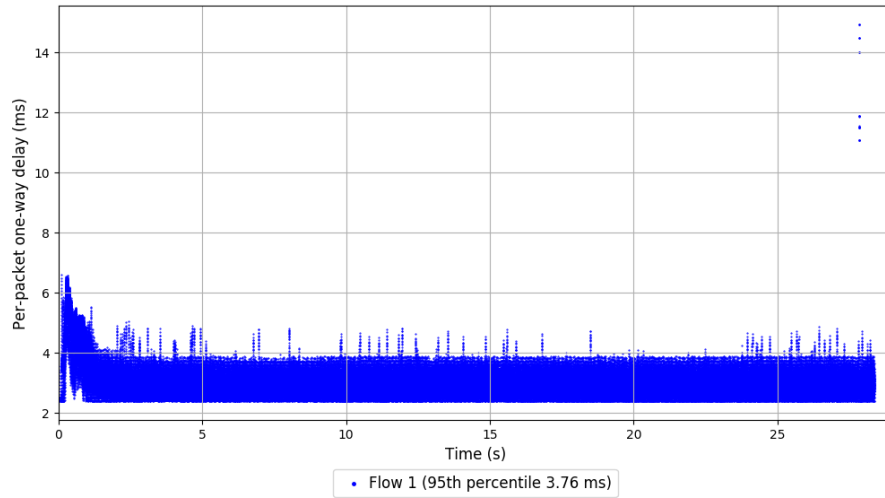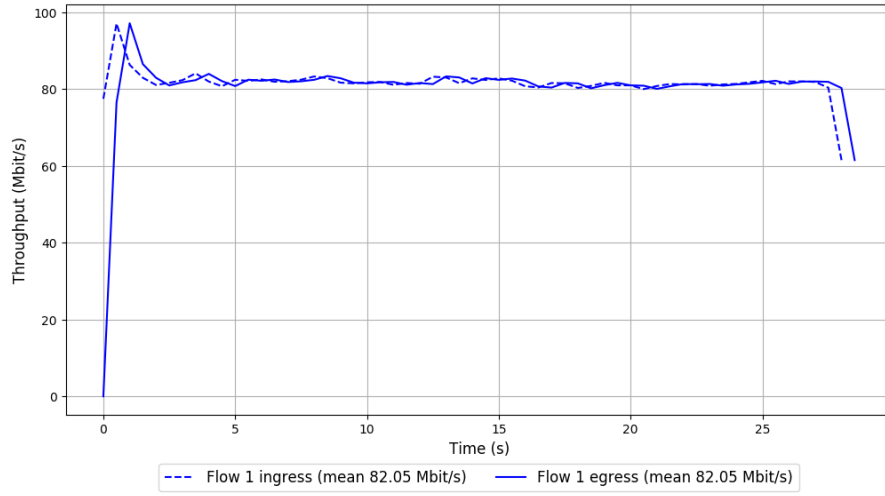
Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-12-11 12:01:13
End at: 2019-12-11 12:01:43
Local clock offset: -5.424 ms
Remote clock offset: 0.57 ms


# Below is generated by plot.py at 2019-12-11 13:10:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.05 Mbit/s
95th percentile per-packet one-way delay: 3.758 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 82.05 Mbit/s
95th percentile per-packet one-way delay: 3.758 ms
Loss rate: 0.02%
```
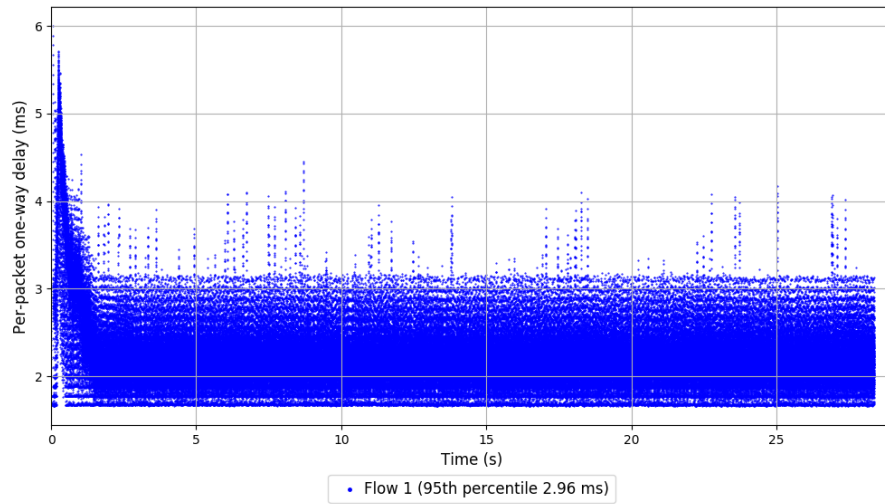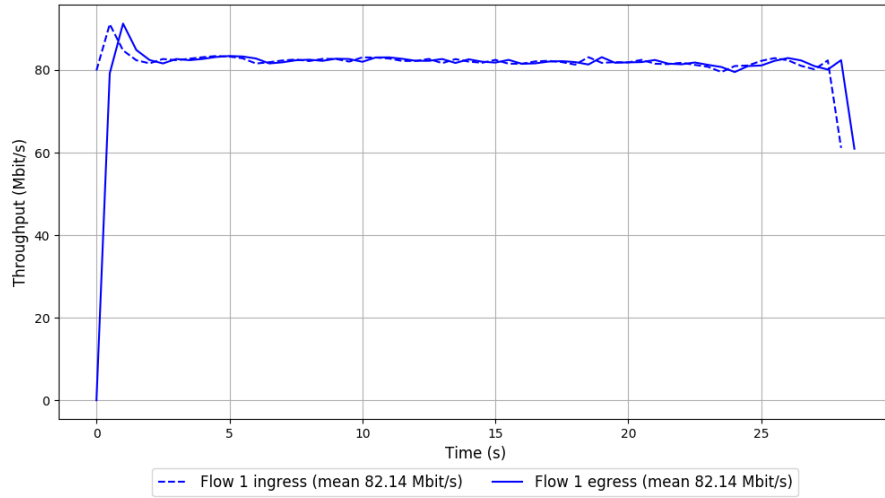
Run 3: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 82.05 Mbit/s) --- Flow 1 egress (mean 82.05 Mbit/s)

Flow 1 (95th percentile 3.76 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-12-11 12:28:09
End at: 2019-12-11 12:28:39
Local clock offset: -6.062 ms
Remote clock offset: 0.743 ms


# Below is generated by plot.py at 2019-12-11 13:10:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.14 Mbit/s
95th percentile per-packet one-way delay: 2.962 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 82.14 Mbit/s
95th percentile per-packet one-way delay: 2.962 ms
Loss rate: 0.02%
```
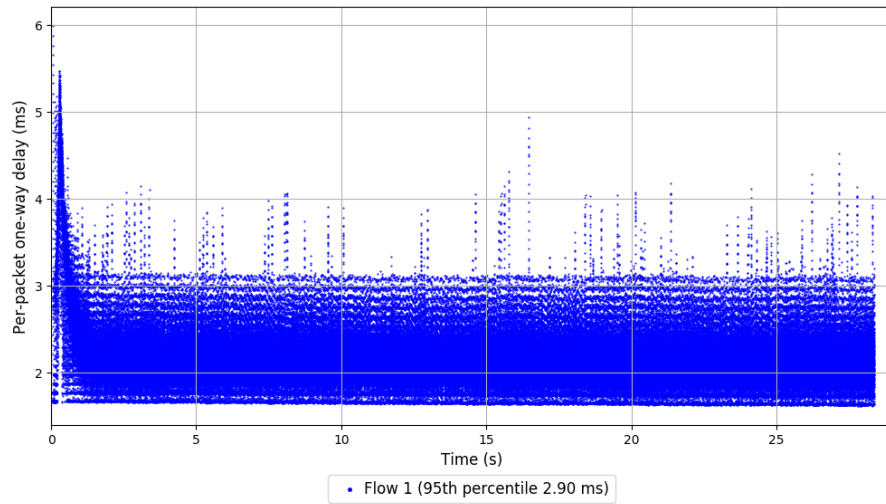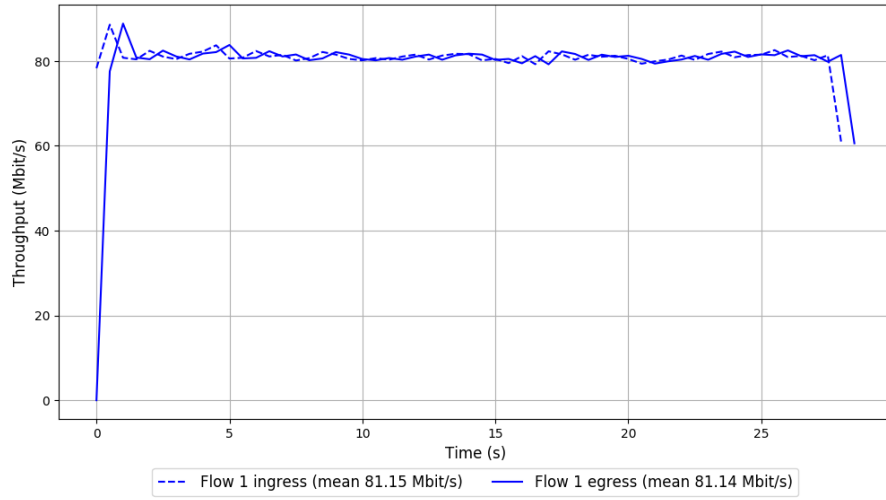
Run 4: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 82.14 Mbit/s) --- Flow 1 egress (mean 82.14 Mbit/s)

• Flow 1 (95th percentile 2.96 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-12-11 12:55:10
End at: 2019-12-11 12:55:40
Local clock offset: -3.229 ms
Remote clock offset: 0.653 ms


# Below is generated by plot.py at 2019-12-11 13:10:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.14 Mbit/s
95th percentile per-packet one-way delay: 2.901 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 81.14 Mbit/s
95th percentile per-packet one-way delay: 2.901 ms
Loss rate: 0.02%
```

Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-12-11 11:12:46
End at: 2019-12-11 11:13:16
Local clock offset: -6.548 ms
Remote clock offset: 0.231 ms


# Below is generated by plot.py at 2019-12-11 13:11:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.63 Mbit/s
95th percentile per-packet one-way delay: 9.719 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 95.63 Mbit/s
95th percentile per-packet one-way delay: 9.719 ms
Loss rate: 0.08%
```
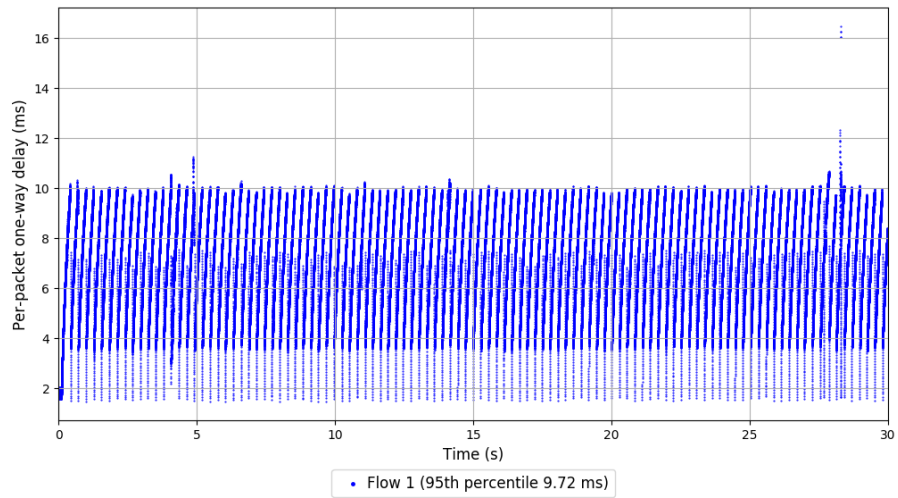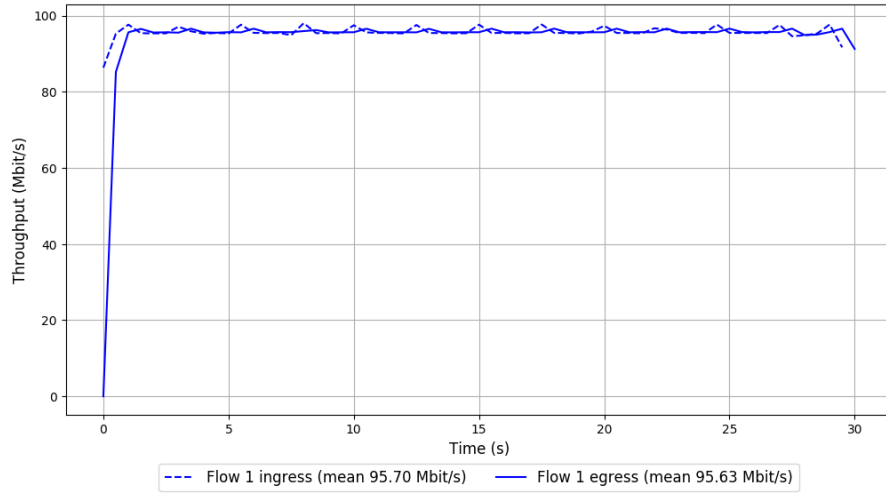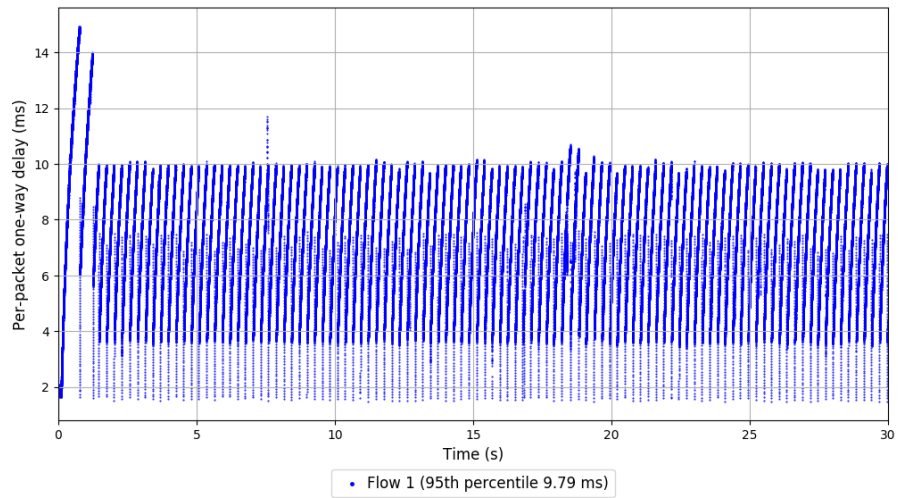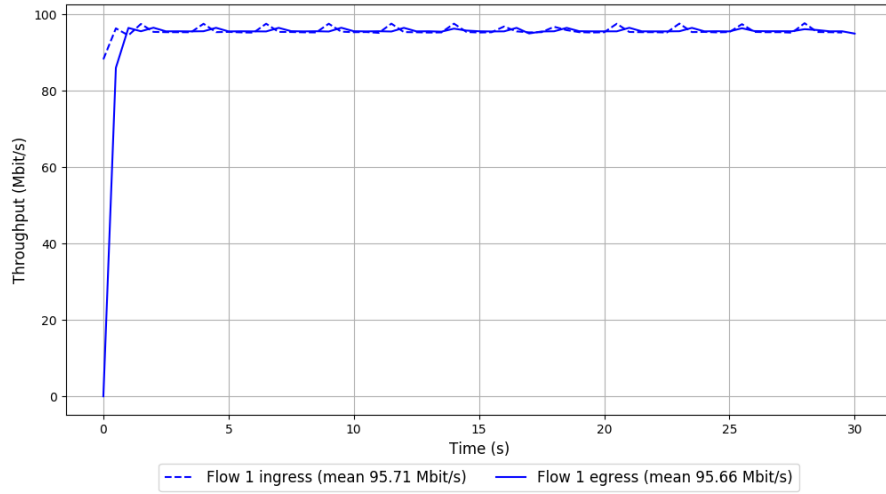
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 95.70 Mbit/s) --- Flow 1 egress (mean 95.63 Mbit/s)

Flow 1 (95th percentile 9.72 ms)

```
Run 2: Statistics of LEDBAT

Start at: 2019-12-11 11:39:51
End at: 2019-12-11 11:40:21
Local clock offset: -7.267 ms
Remote clock offset: 0.352 ms


# Below is generated by plot.py at 2019-12-11 13:11:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.66 Mbit/s
95th percentile per-packet one-way delay: 9.795 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 95.66 Mbit/s
95th percentile per-packet one-way delay: 9.795 ms
Loss rate: 0.07%
```
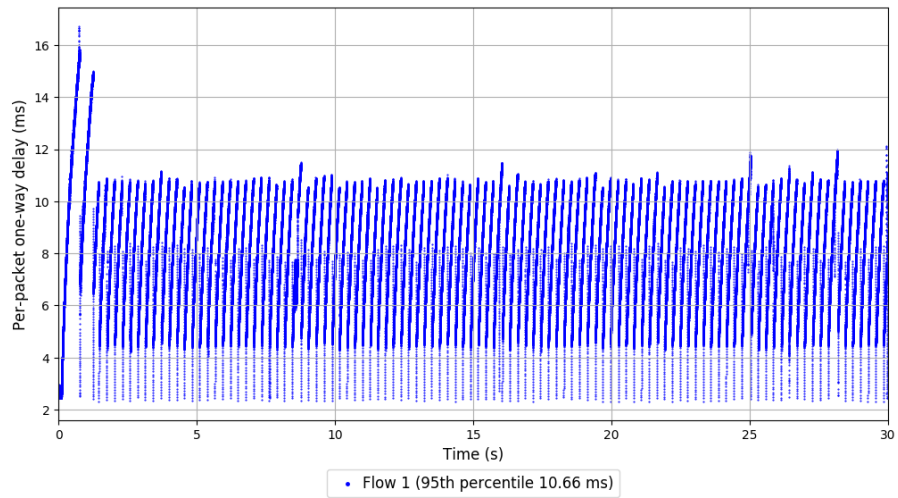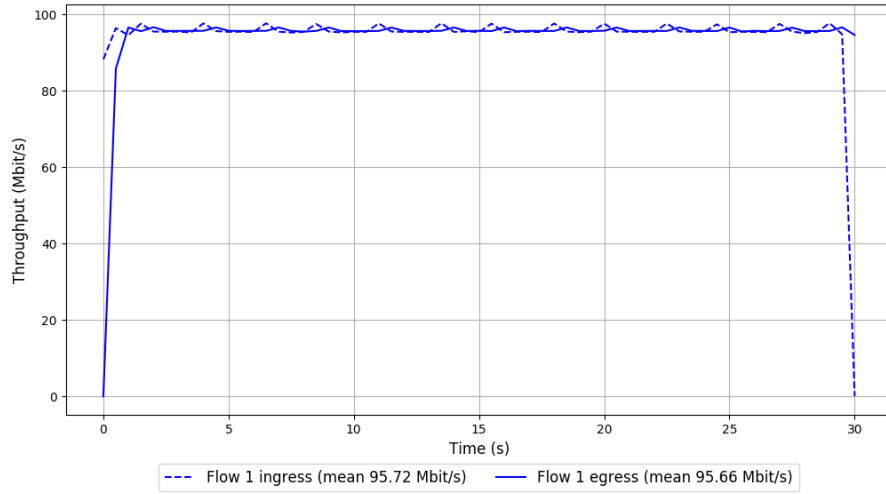
Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 95.71 Mbit/s)   Flow 1 egress (mean 95.66 Mbit/s)

Flow 1 (95th percentile 9.79 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2019-12-11 12:06:51
End at: 2019-12-11 12:07:21
Local clock offset: -5.376 ms
Remote clock offset: 0.543 ms


# Below is generated by plot.py at 2019-12-11 13:11:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.66 Mbit/s
95th percentile per-packet one-way delay: 10.659 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 95.66 Mbit/s
95th percentile per-packet one-way delay: 10.659 ms
Loss rate: 0.08%
```
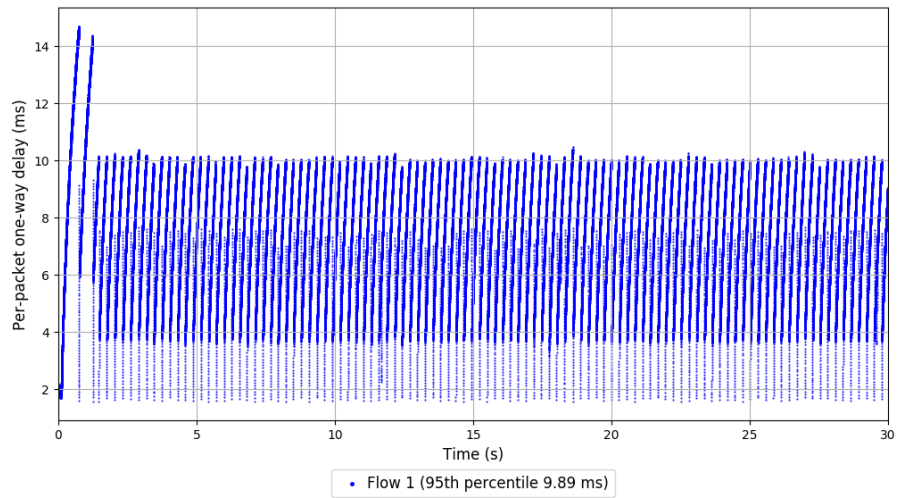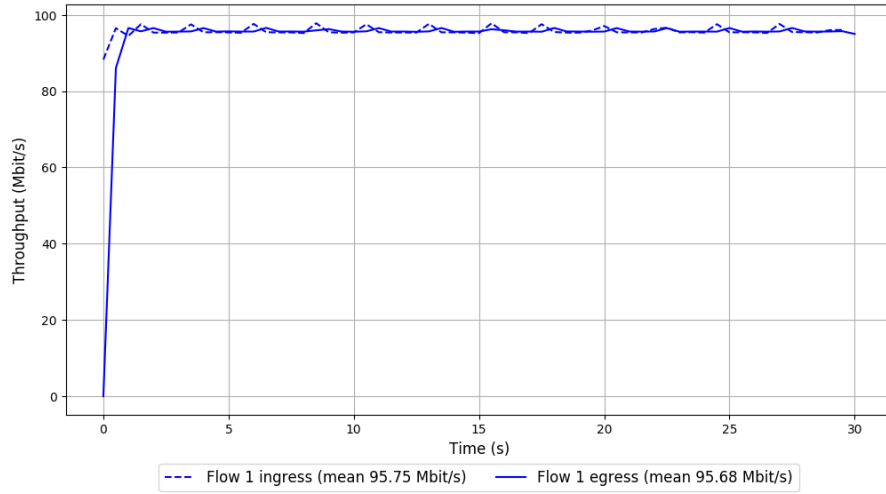
Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 95.72 Mbit/s)   Flow 1 egress (mean 95.66 Mbit/s)

Flow 1 (95th percentile 10.66 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2019-12-11 12:33:47
End at: 2019-12-11 12:34:17
Local clock offset: -6.056 ms
Remote clock offset: 0.74 ms


# Below is generated by plot.py at 2019-12-11 13:11:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.68 Mbit/s
95th percentile per-packet one-way delay: 9.888 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 95.68 Mbit/s
95th percentile per-packet one-way delay: 9.888 ms
Loss rate: 0.08%
```
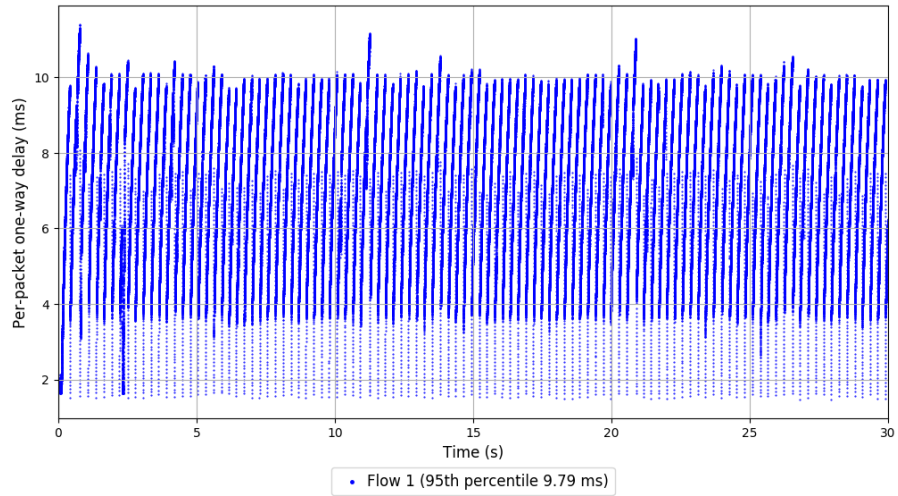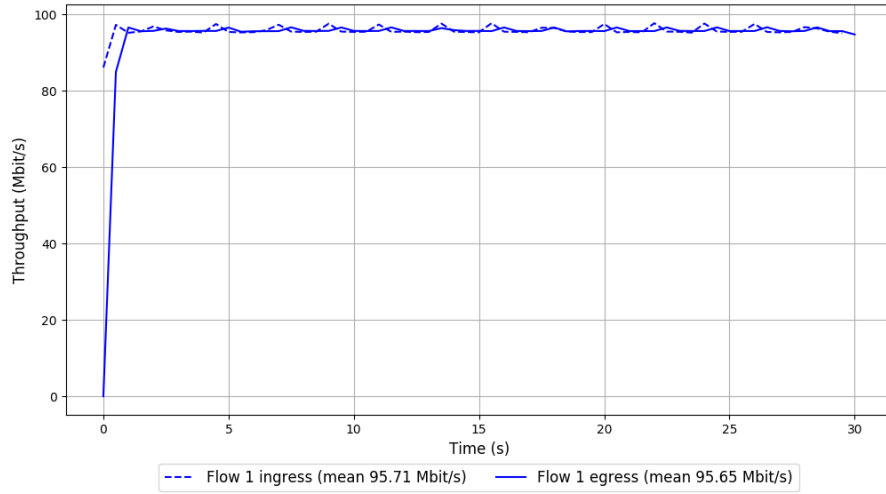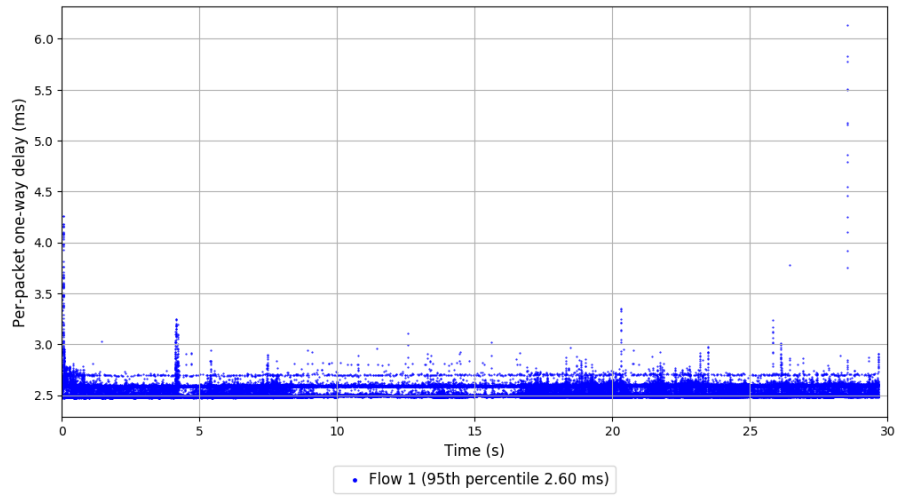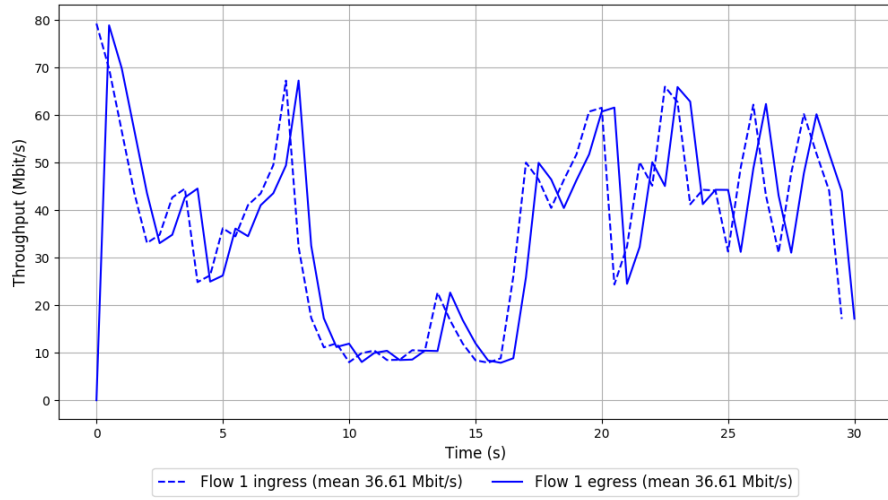
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 95.75 Mbit/s)   —— Flow 1 egress (mean 95.68 Mbit/s)

Flow 1 (95th percentile 9.89 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-12-11 13:00:48
End at: 2019-12-11 13:01:18
Local clock offset: -2.853 ms
Remote clock offset: 0.65 ms


# Below is generated by plot.py at 2019-12-11 13:11:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 9.790 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 9.790 ms
Loss rate: 0.07%
```

Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 95.71 Mbit/s)   Flow 1 egress (mean 95.65 Mbit/s)

Flow 1 (95th percentile 9.79 ms)

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 11:03:53
End at: 2019-12-11 11:04:23
Local clock offset: -5.35 ms
Remote clock offset: -0.066 ms


# Below is generated by plot.py at 2019-12-11 13:11:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.61 Mbit/s
95th percentile per-packet one-way delay: 2.605 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 36.61 Mbit/s
95th percentile per-packet one-way delay: 2.605 ms
Loss rate: 0.01%
```
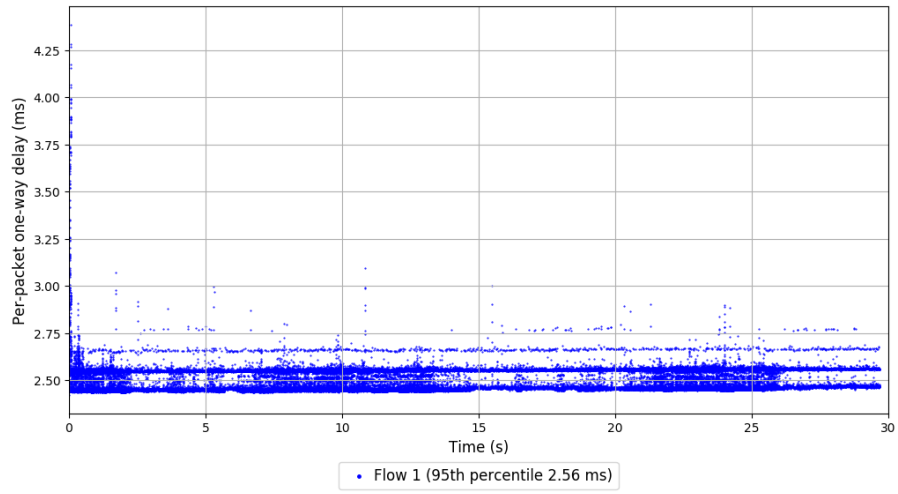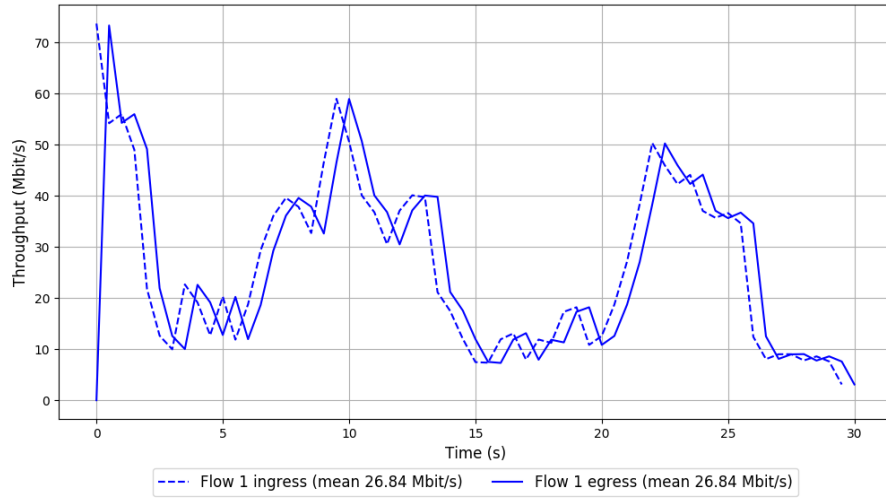
Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 11:30:55
End at: 2019-12-11 11:31:25
Local clock offset: -6.631 ms
Remote clock offset: 0.21 ms


# Below is generated by plot.py at 2019-12-11 13:11:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.84 Mbit/s
95th percentile per-packet one-way delay: 2.562 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 26.84 Mbit/s
95th percentile per-packet one-way delay: 2.562 ms
Loss rate: 0.00%
```
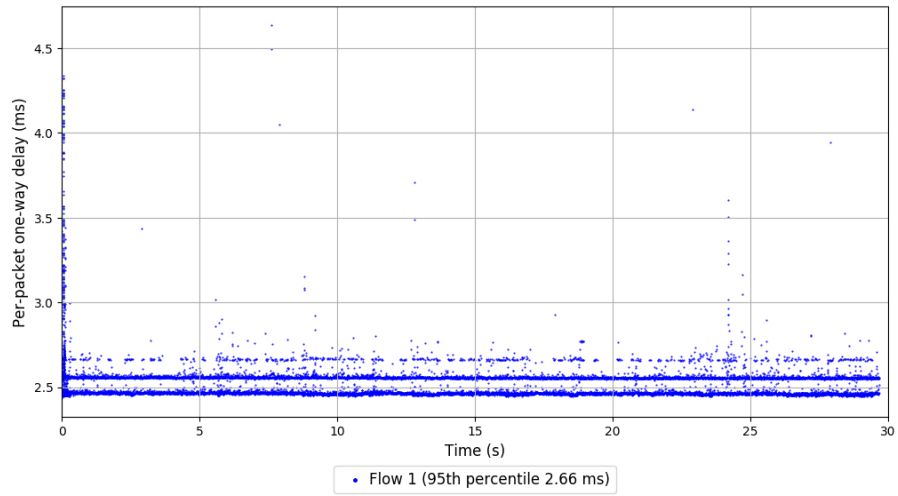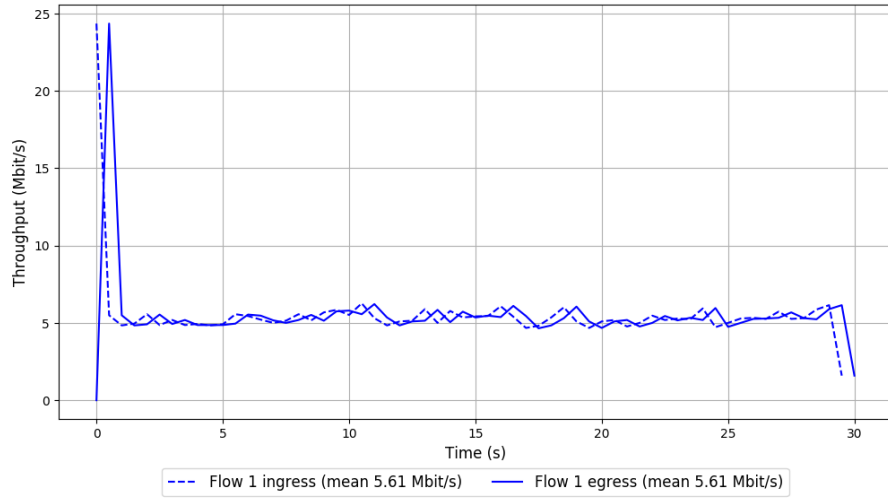
Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 11:57:56
End at: 2019-12-11 11:58:26
Local clock offset: -5.488 ms
Remote clock offset: 0.472 ms


# Below is generated by plot.py at 2019-12-11 13:11:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.61 Mbit/s
95th percentile per-packet one-way delay: 2.662 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 5.61 Mbit/s
95th percentile per-packet one-way delay: 2.662 ms
Loss rate: 0.01%
```

Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 12:24:52
End at: 2019-12-11 12:25:22
Local clock offset: -6.069 ms
Remote clock offset: 0.61 ms


# Below is generated by plot.py at 2019-12-11 13:11:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 41.42 Mbit/s
95th percentile per-packet one-way delay: 1.922 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.42 Mbit/s
95th percentile per-packet one-way delay: 1.922 ms
Loss rate: 0.00%
```
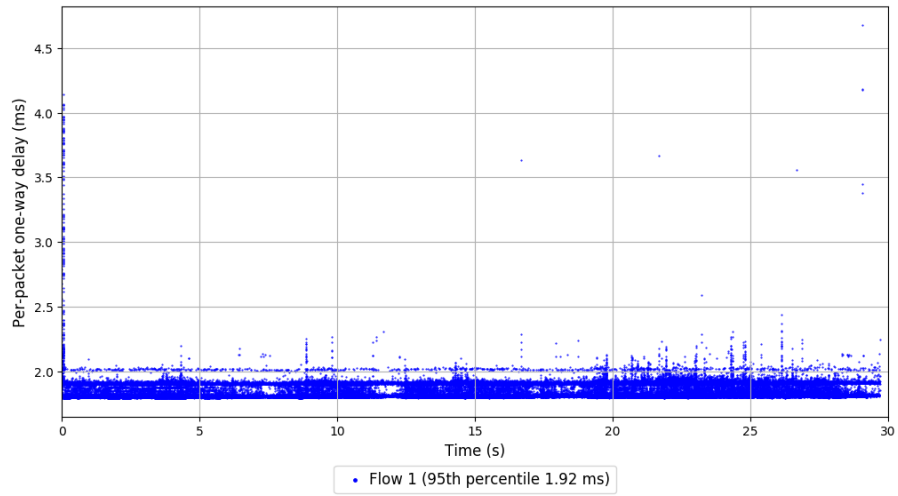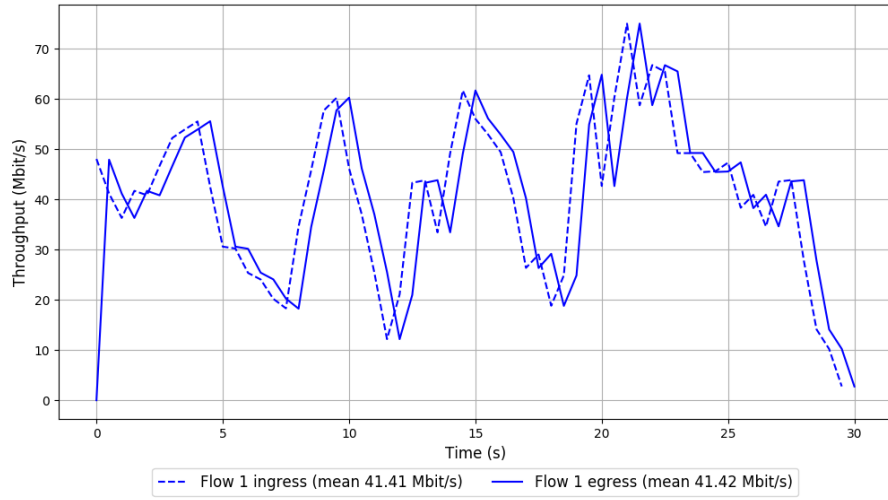
Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-12-11 12:51:52
End at: 2019-12-11 12:52:22
Local clock offset: -2.904 ms
Remote clock offset: 0.602 ms


# Below is generated by plot.py at 2019-12-11 13:11:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.85 Mbit/s
95th percentile per-packet one-way delay: 2.548 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 5.85 Mbit/s
95th percentile per-packet one-way delay: 2.548 ms
Loss rate: 0.02%
```
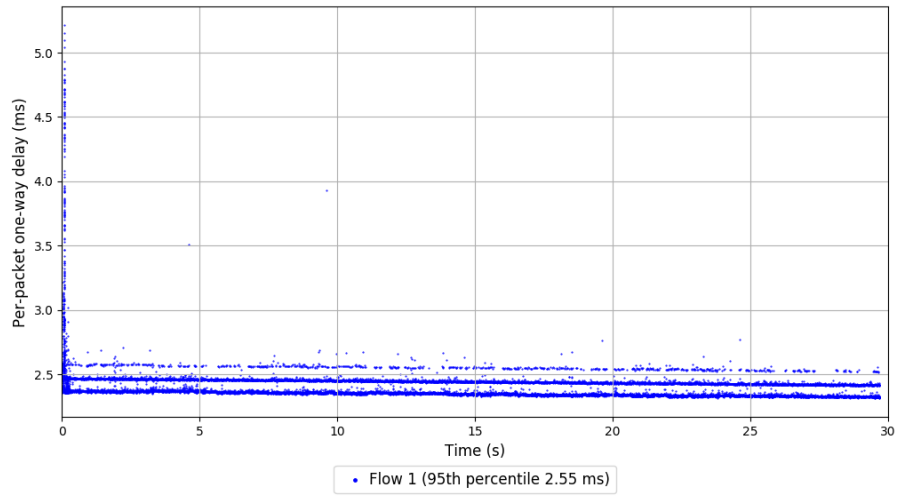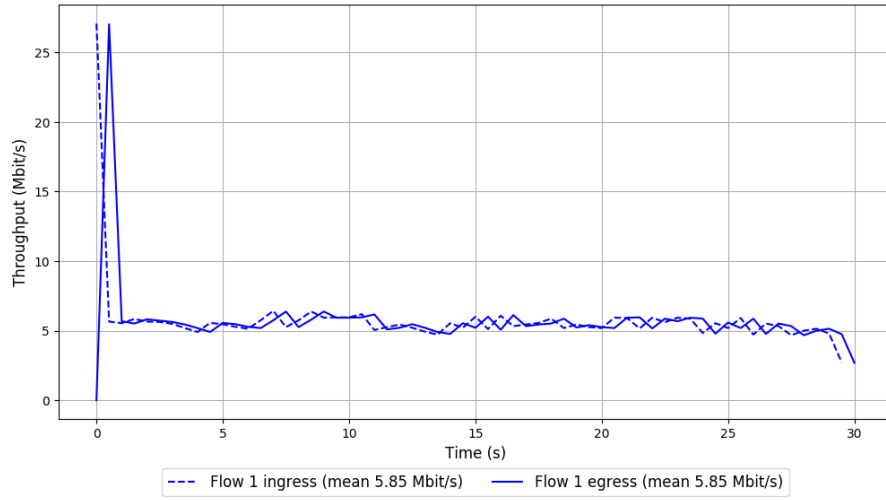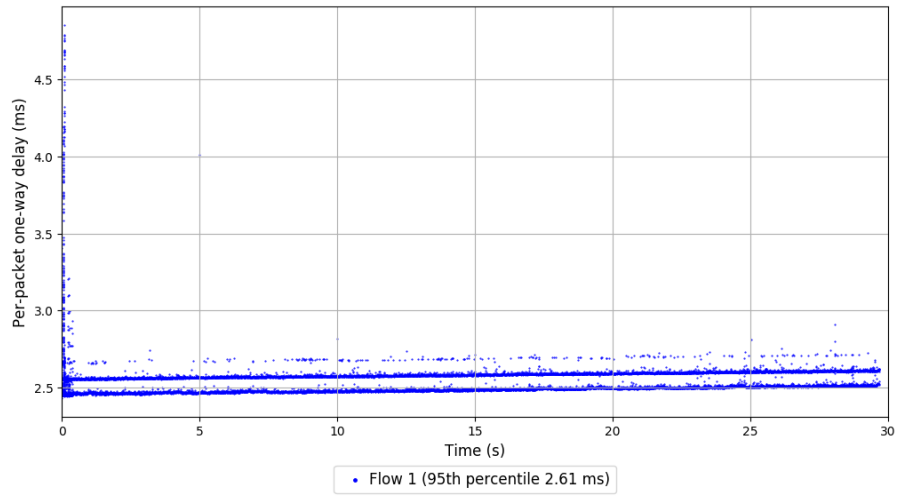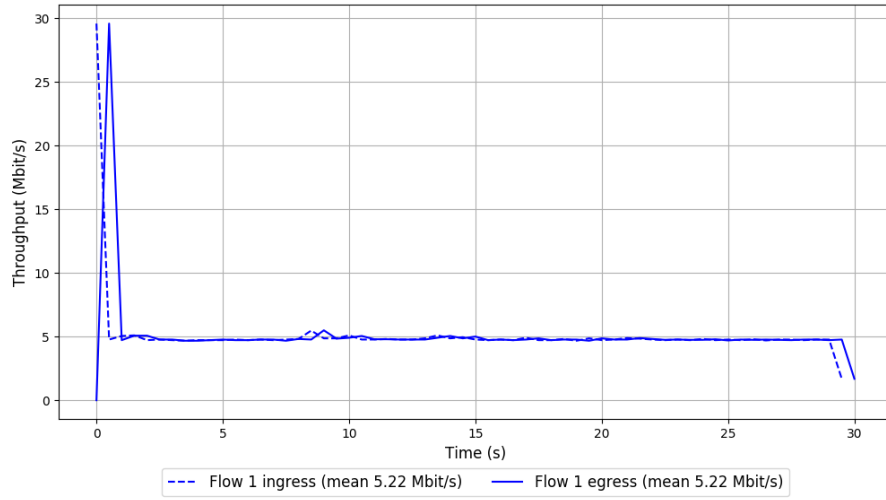
Run 5: Report of Muses_DecisionTree — Data Link

Run 1: Statistics of Muses_DecisionTreeH0

Start at: 2019-12-11 11:10:37
End at: 2019-12-11 11:11:07
Local clock offset: -5.596 ms
Remote clock offset: 0.105 ms

Below is generated by plot.py at 2019-12-11 13:11:41
Datalink statistics
-- Total of 1 flow:
Average throughput: 5.22 Mbit/s
95th percentile per-packet one-way delay: 2.613 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 5.22 Mbit/s
95th percentile per-packet one-way delay: 2.613 ms
Loss rate: 0.02%

Run 1: Report of Muses_DecisionTreeH0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 11:37:39
End at: 2019-12-11 11:38:09
Local clock offset: -7.421 ms
Remote clock offset: 0.253 ms


# Below is generated by plot.py at 2019-12-11 13:12:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.65 Mbit/s
95th percentile per-packet one-way delay: 2.099 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 84.65 Mbit/s
95th percentile per-packet one-way delay: 2.099 ms
Loss rate: 0.01%
```
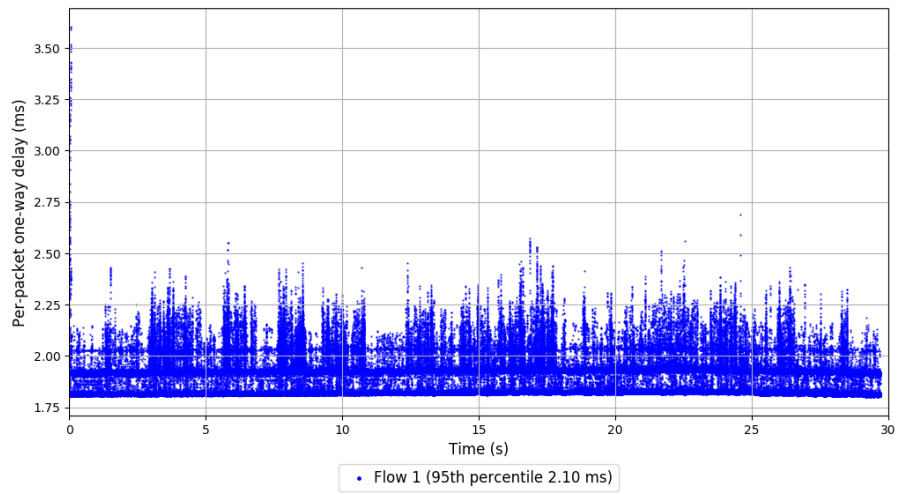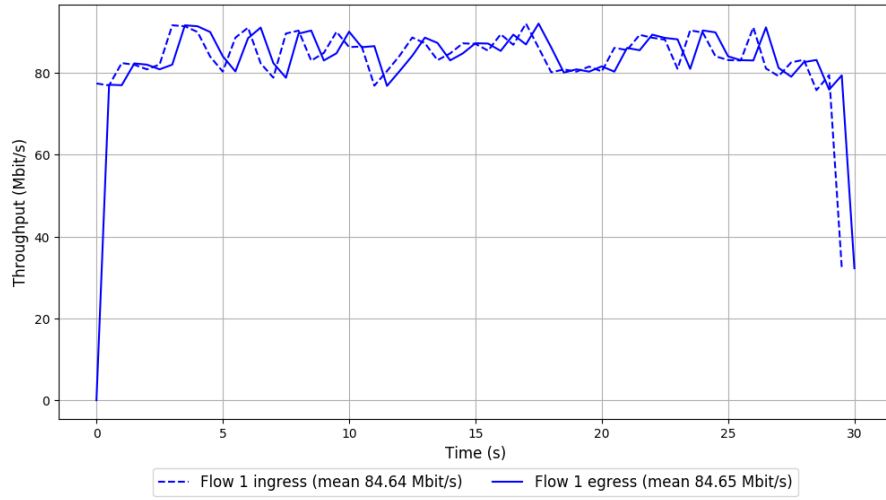
Run 2: Report of Muses_DecisionTreeH0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 12:04:39
End at: 2019-12-11 12:05:09
Local clock offset: -5.39 ms
Remote clock offset: 0.548 ms


# Below is generated by plot.py at 2019-12-11 13:12:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.47 Mbit/s
95th percentile per-packet one-way delay: 2.726 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 82.47 Mbit/s
95th percentile per-packet one-way delay: 2.726 ms
Loss rate: 0.01%
```
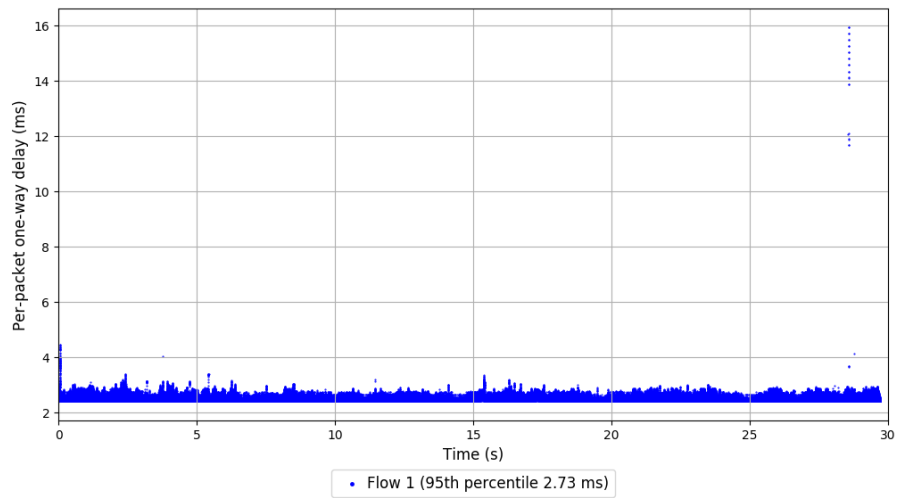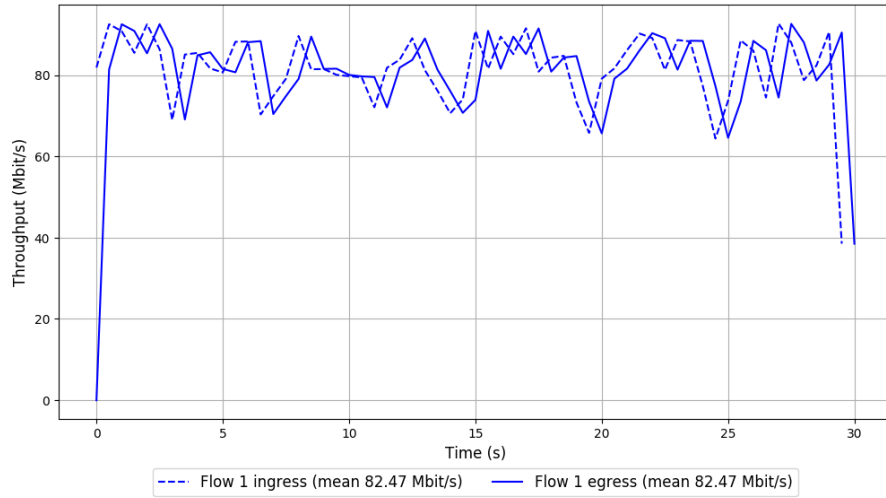
Run 3: Report of Muses_DecisionTreeH0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 12:31:35
End at: 2019-12-11 12:32:05
Local clock offset: -5.379 ms
Remote clock offset: 0.694 ms


# Below is generated by plot.py at 2019-12-11 13:12:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.87 Mbit/s
95th percentile per-packet one-way delay: 2.684 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 78.87 Mbit/s
95th percentile per-packet one-way delay: 2.684 ms
Loss rate: 0.01%
```
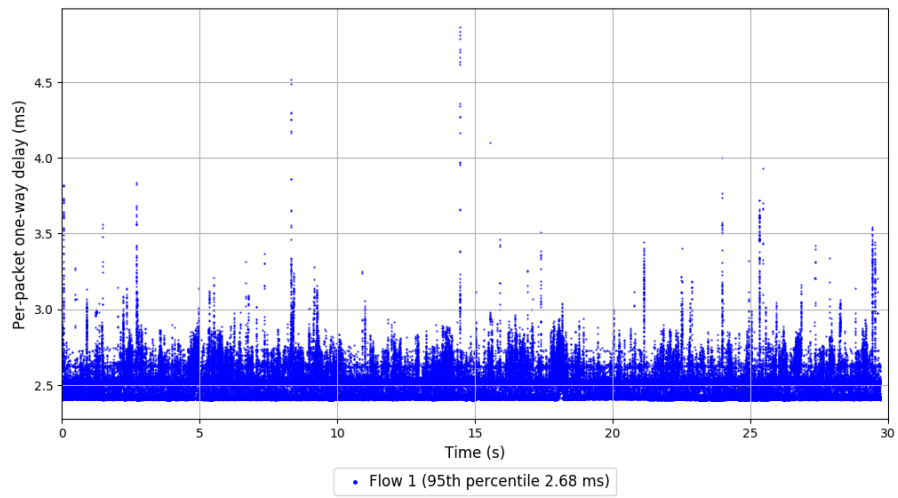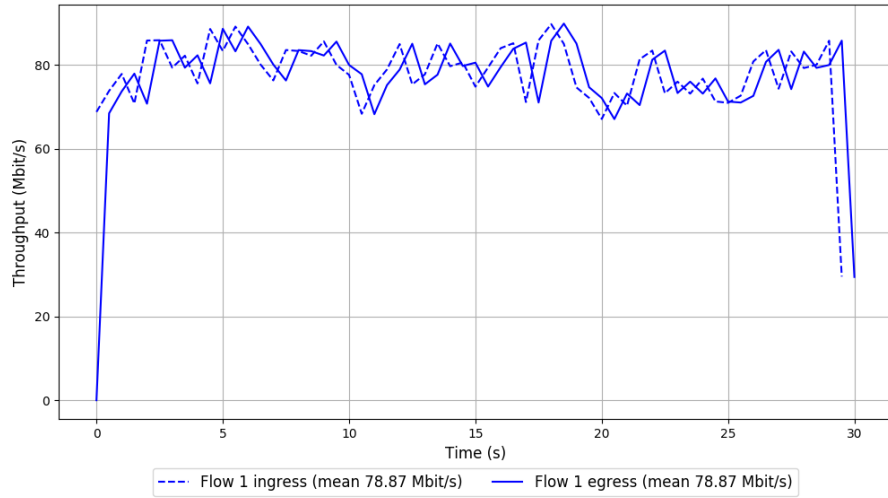
Run 4: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 78.87 Mbit/s)   Flow 1 egress (mean 78.87 Mbit/s)

Flow 1 (95th percentile 2.68 ms)

```
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-12-11 12:58:36
End at: 2019-12-11 12:59:06
Local clock offset: -2.3 ms
Remote clock offset: 0.58 ms


# Below is generated by plot.py at 2019-12-11 13:12:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.70 Mbit/s
95th percentile per-packet one-way delay: 2.743 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 89.70 Mbit/s
95th percentile per-packet one-way delay: 2.743 ms
Loss rate: 0.01%
```
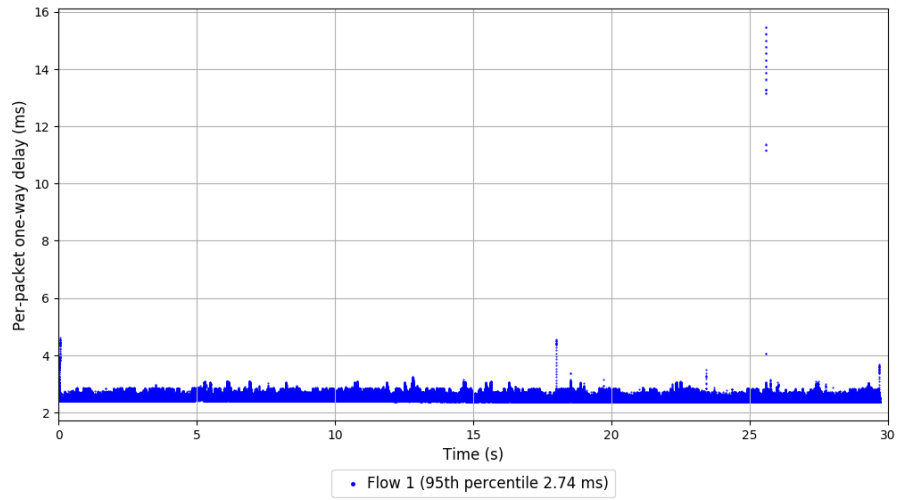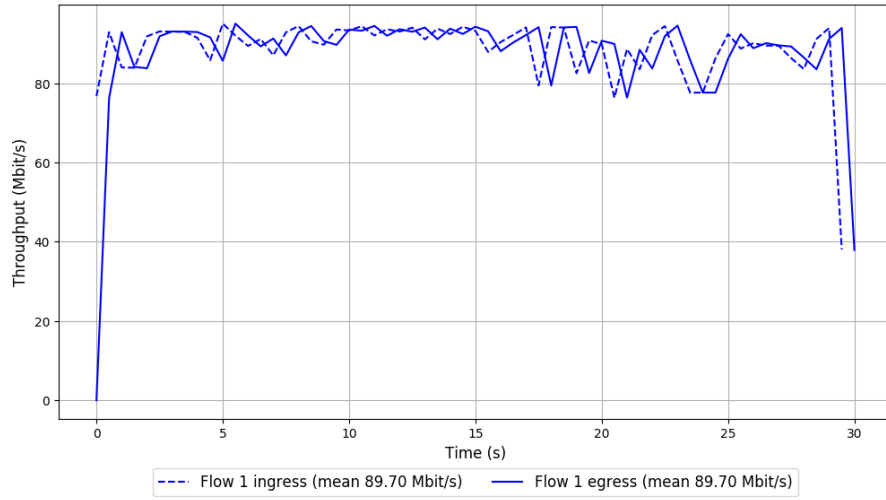
Run 5: Report of Muses_DecisionTreeH0 — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 10:49:10
End at: 2019-12-11 10:49:41
Local clock offset: -5.419 ms
Remote clock offset: -0.109 ms


# Below is generated by plot.py at 2019-12-11 13:12:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.23 Mbit/s
95th percentile per-packet one-way delay: 2.495 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 49.23 Mbit/s
95th percentile per-packet one-way delay: 2.495 ms
Loss rate: 0.01%
```
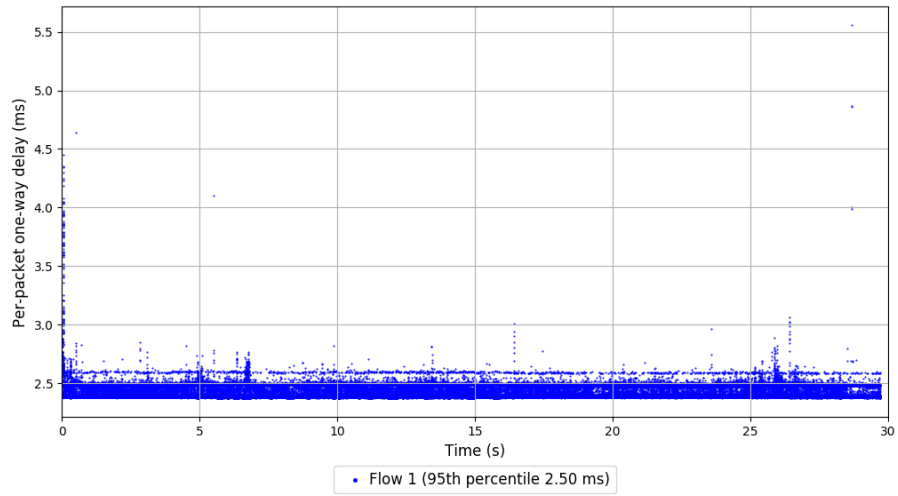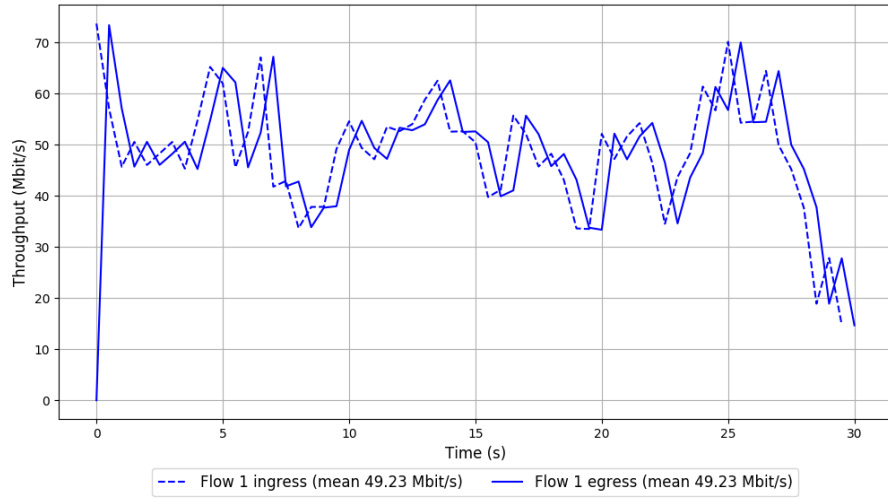
Run 1: Report of Muses_DecisionTreeR0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 11:16:10
End at: 2019-12-11 11:16:40
Local clock offset: -6.716 ms
Remote clock offset: 0.166 ms


# Below is generated by plot.py at 2019-12-11 13:12:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 47.22 Mbit/s
95th percentile per-packet one-way delay: 1.916 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 47.22 Mbit/s
95th percentile per-packet one-way delay: 1.916 ms
Loss rate: 0.01%
```
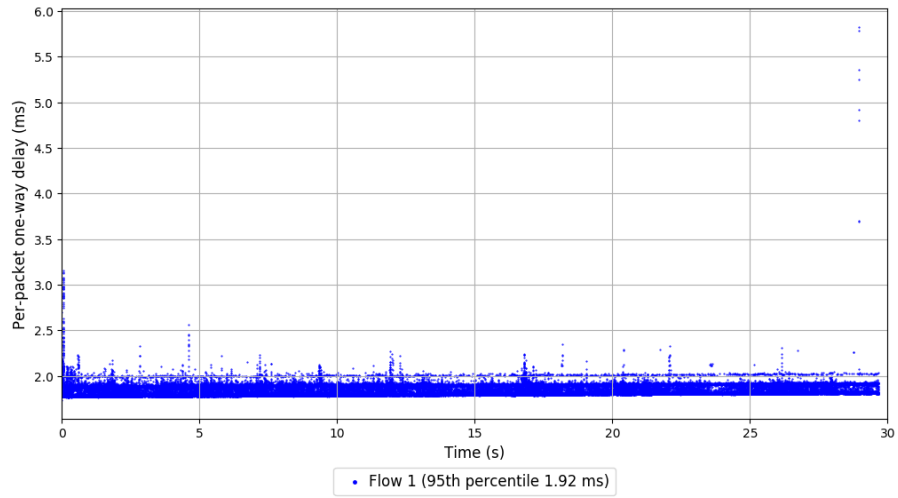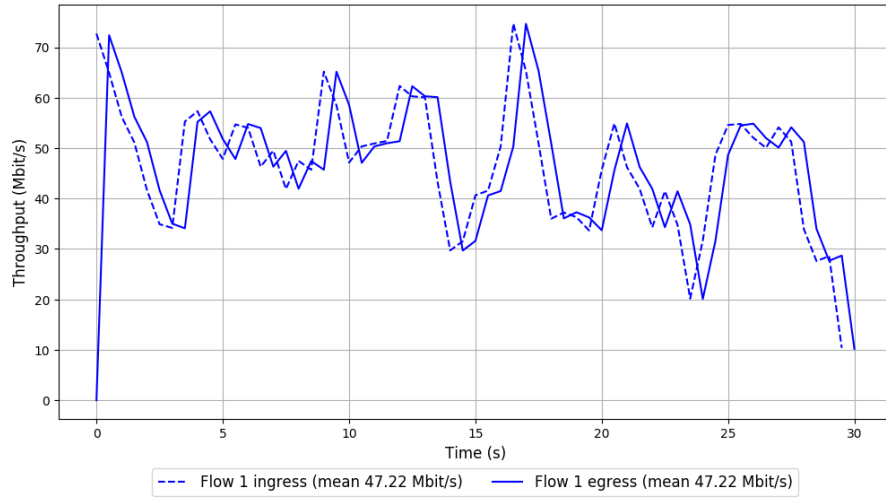
Run 2: Report of Muses_DecisionTreeR0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 11:43:15
End at: 2019-12-11 11:43:45
Local clock offset: -6.215 ms
Remote clock offset: 0.358 ms


# Below is generated by plot.py at 2019-12-11 13:12:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 45.25 Mbit/s
95th percentile per-packet one-way delay: 2.480 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 45.25 Mbit/s
95th percentile per-packet one-way delay: 2.480 ms
Loss rate: 0.01%
```
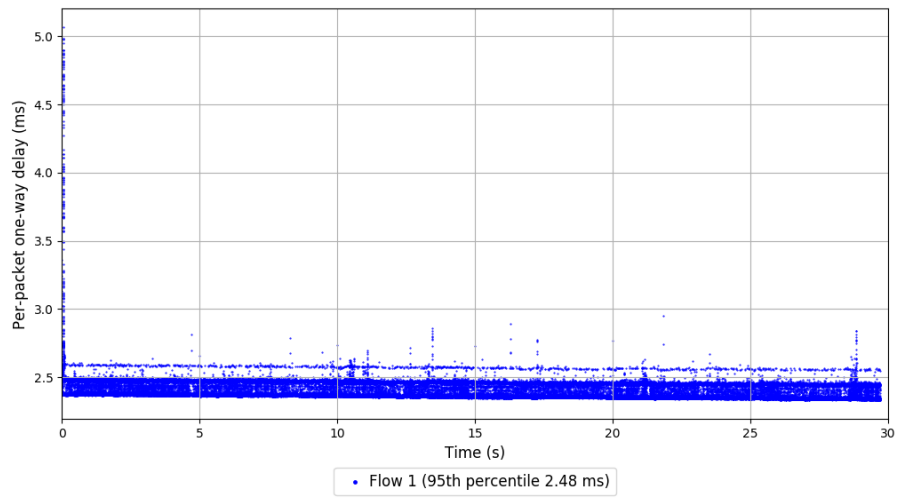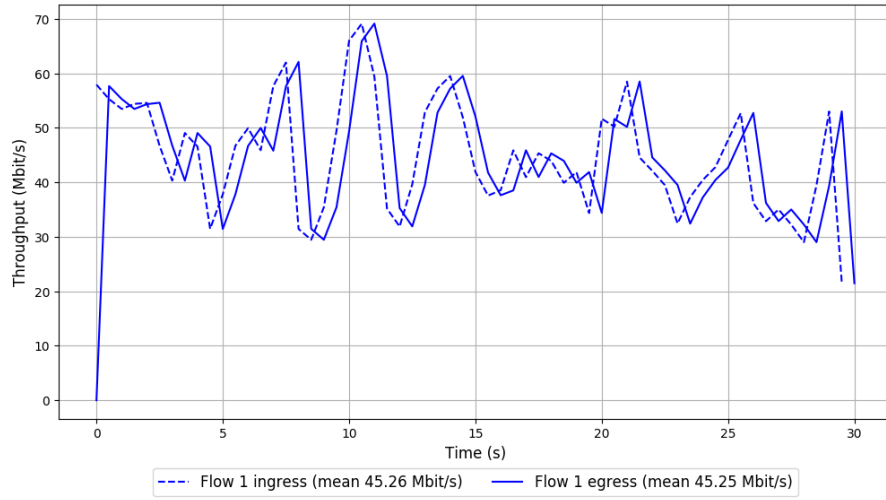
Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 12:10:15
End at: 2019-12-11 12:10:45
Local clock offset: -5.379 ms
Remote clock offset: 0.572 ms


# Below is generated by plot.py at 2019-12-11 13:12:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.34 Mbit/s
95th percentile per-packet one-way delay: 2.669 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 6.34 Mbit/s
95th percentile per-packet one-way delay: 2.669 ms
Loss rate: 0.02%
```
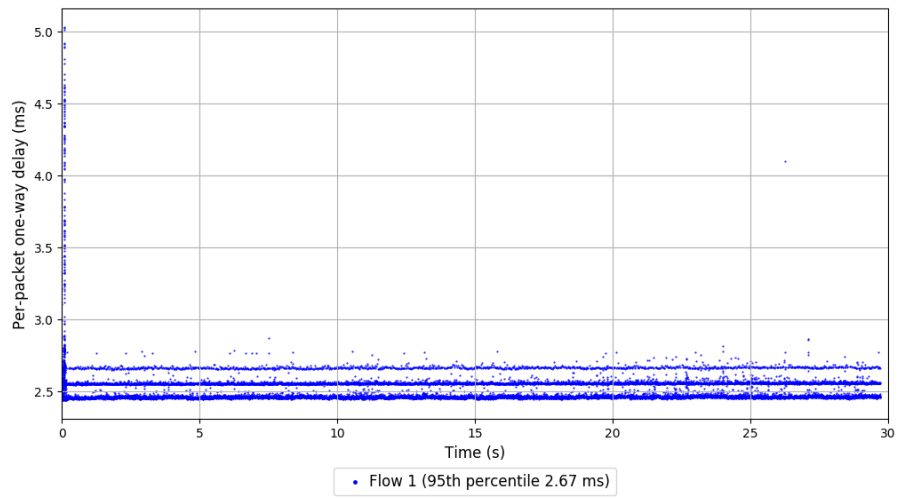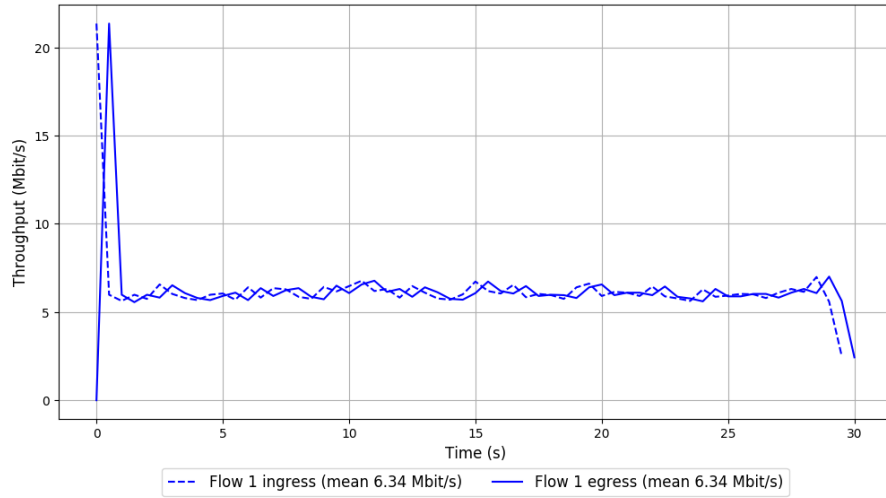
Run 4: Report of Muses_DecisionTreeR0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-12-11 12:37:11
End at: 2019-12-11 12:37:41
Local clock offset: -5.361 ms
Remote clock offset: 0.767 ms


# Below is generated by plot.py at 2019-12-11 13:12:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 45.14 Mbit/s
95th percentile per-packet one-way delay: 2.472 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.14 Mbit/s
95th percentile per-packet one-way delay: 2.472 ms
Loss rate: 0.00%
```
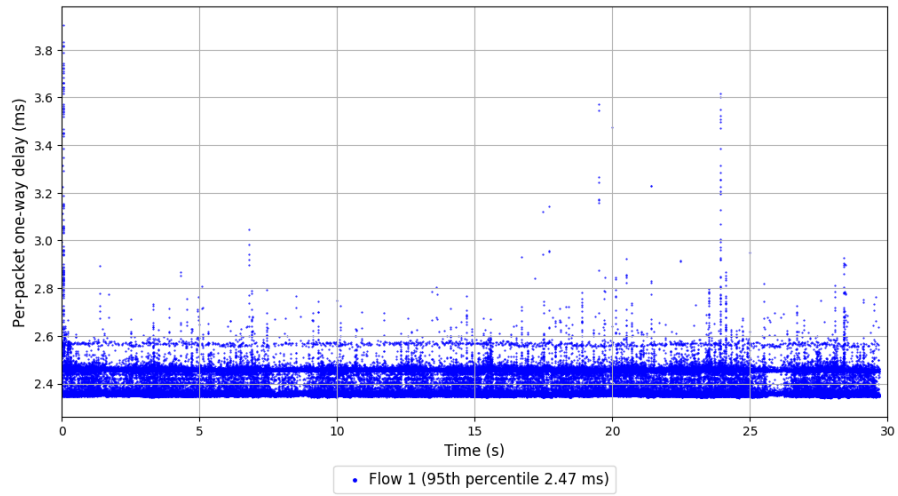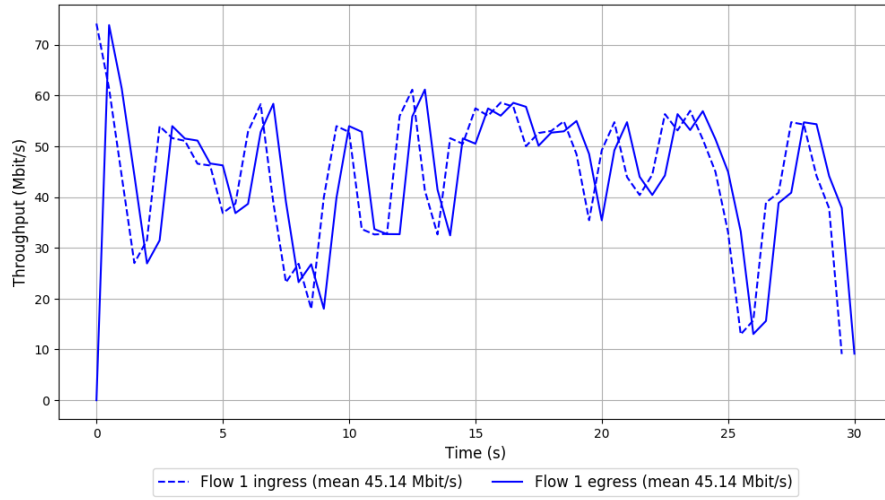
Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-12-11 10:46:56
End at: 2019-12-11 10:47:26
Local clock offset: -5.452 ms
Remote clock offset: -0.12 ms


# Below is generated by plot.py at 2019-12-11 13:13:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.69 Mbit/s
95th percentile per-packet one-way delay: 2.957 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 93.69 Mbit/s
95th percentile per-packet one-way delay: 2.957 ms
Loss rate: 0.02%
```
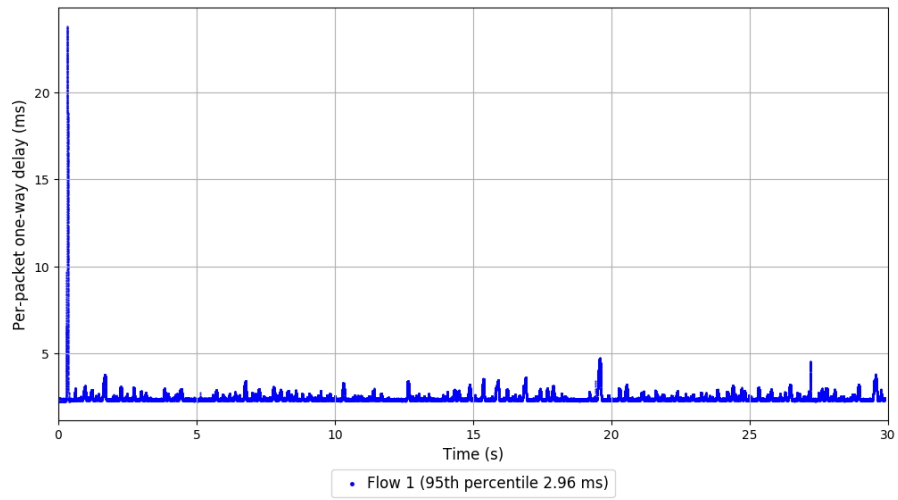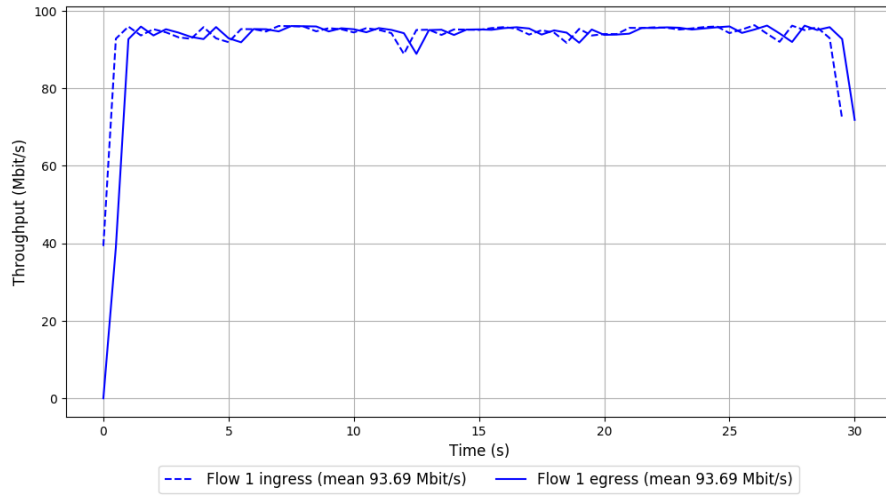
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-12-11 11:13:56
End at: 2019-12-11 11:14:26
Local clock offset: -5.944 ms
Remote clock offset: 0.084 ms


# Below is generated by plot.py at 2019-12-11 13:13:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.73 Mbit/s
95th percentile per-packet one-way delay: 3.058 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 91.73 Mbit/s
95th percentile per-packet one-way delay: 3.058 ms
Loss rate: 0.02%
```
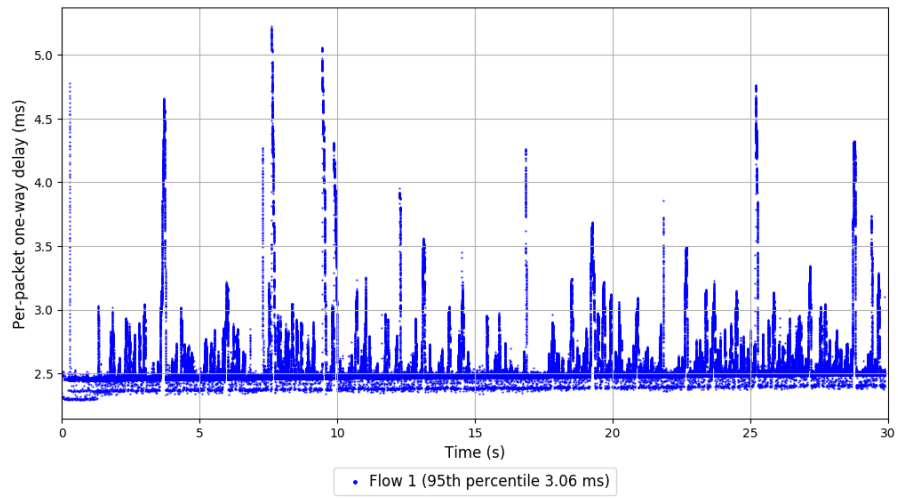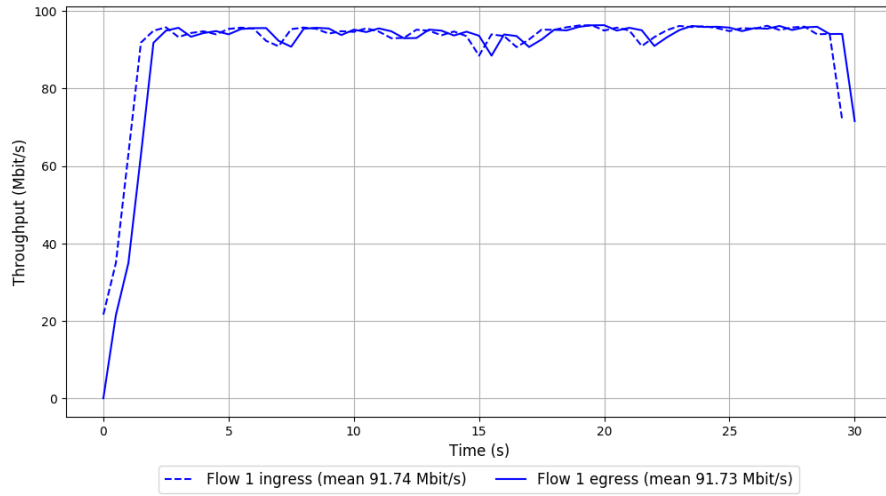
Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-12-11 11:41:01
End at: 2019-12-11 11:41:31
Local clock offset: -7.073 ms
Remote clock offset: 0.435 ms


# Below is generated by plot.py at 2019-12-11 13:13:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.48 Mbit/s
95th percentile per-packet one-way delay: 2.425 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 89.48 Mbit/s
95th percentile per-packet one-way delay: 2.425 ms
Loss rate: 0.02%
```
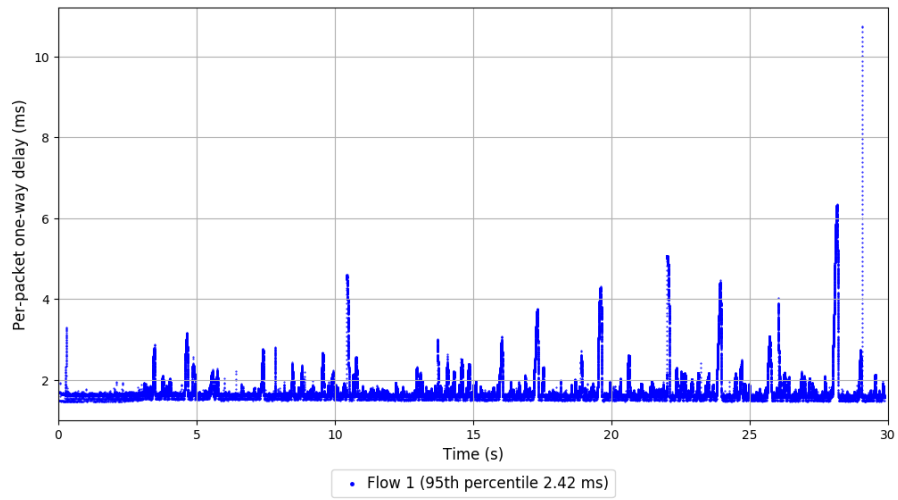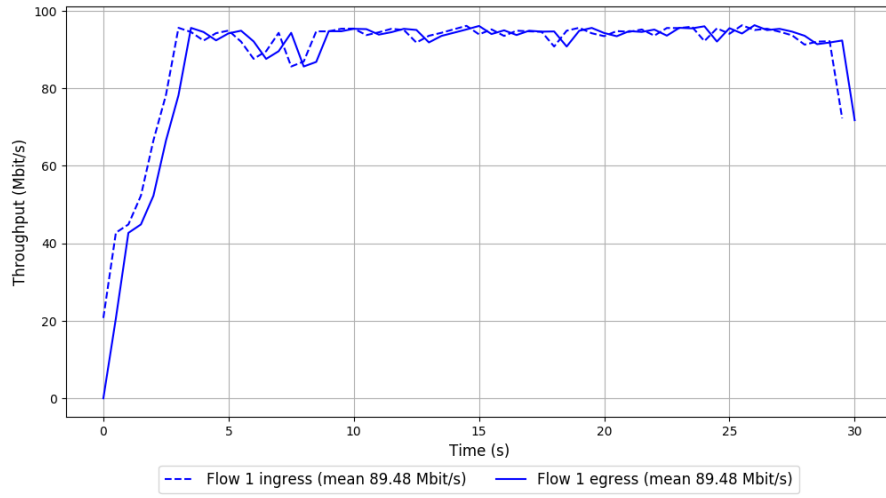
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 89.48 Mbit/s) — — — Flow 1 egress (mean 89.48 Mbit/s)

Flow 1 (95th percentile 2.42 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-12-11 12:08:00
End at: 2019-12-11 12:08:30
Local clock offset: -6.145 ms
Remote clock offset: 0.577 ms


# Below is generated by plot.py at 2019-12-11 13:13:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.71 Mbit/s
95th percentile per-packet one-way delay: 2.514 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 92.71 Mbit/s
95th percentile per-packet one-way delay: 2.514 ms
Loss rate: 0.03%
```
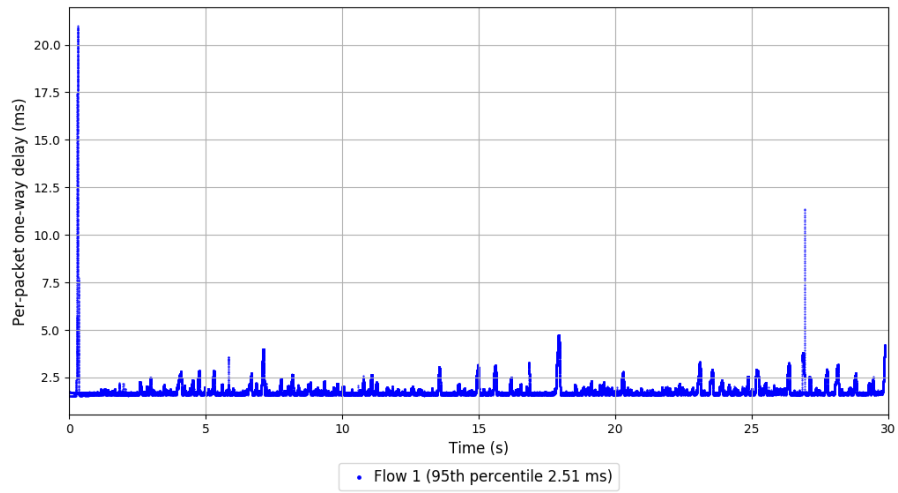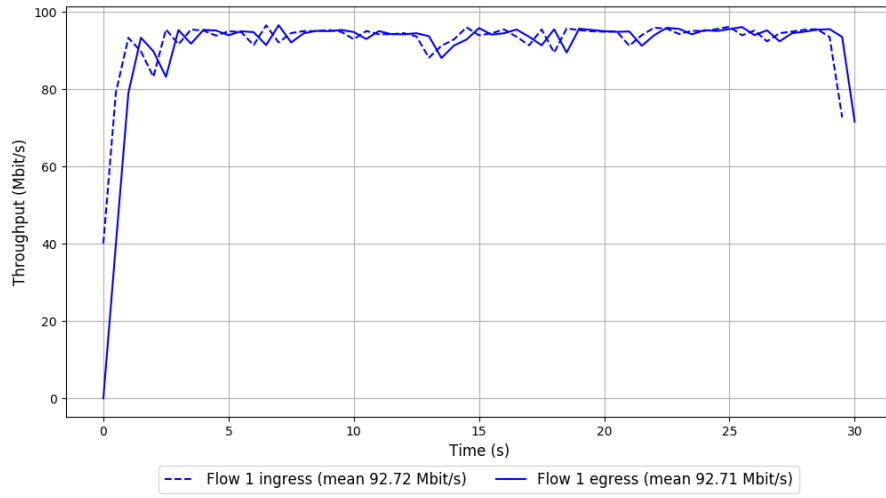
Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 92.72 Mbit/s)   Flow 1 egress (mean 92.71 Mbit/s)

Flow 1 (95th percentile 2.51 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-12-11 12:34:56
End at: 2019-12-11 12:35:26
Local clock offset: -5.356 ms
Remote clock offset: 0.691 ms


# Below is generated by plot.py at 2019-12-11 13:13:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.35 Mbit/s
95th percentile per-packet one-way delay: 2.963 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 93.35 Mbit/s
95th percentile per-packet one-way delay: 2.963 ms
Loss rate: 0.02%
```
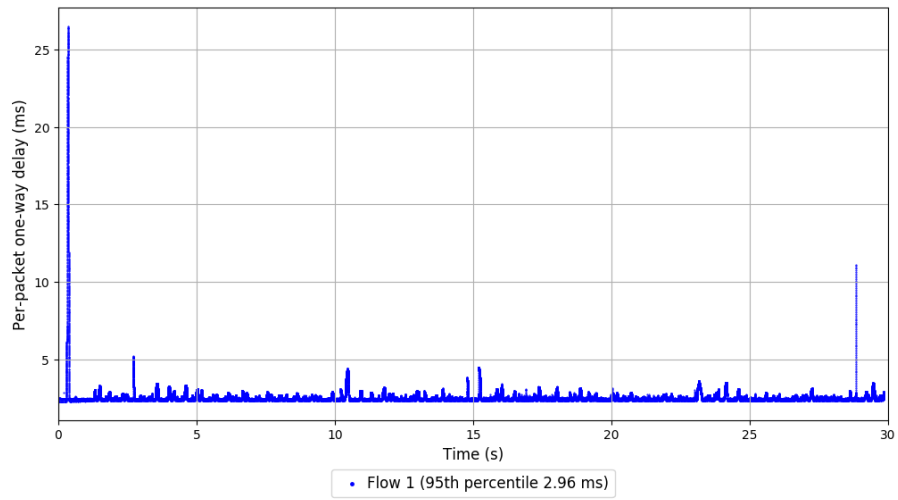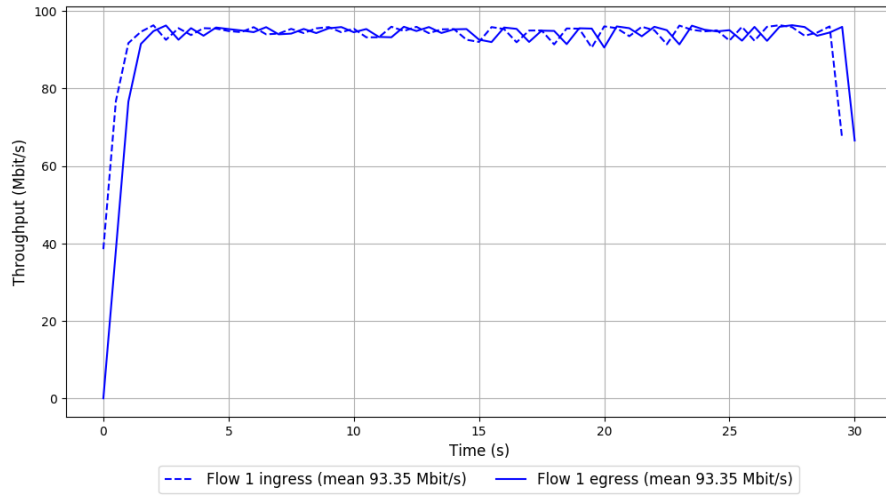
Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 93.35 Mbit/s) — — — Flow 1 egress (mean 93.35 Mbit/s)

Flow 1 (95th percentile 2.96 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2019-12-11 10:51:25
End at: 2019-12-11 10:51:55
Local clock offset: -6.09 ms
Remote clock offset: -0.157 ms


# Below is generated by plot.py at 2019-12-11 13:13:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.69 Mbit/s
95th percentile per-packet one-way delay: 6.204 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 49.69 Mbit/s
95th percentile per-packet one-way delay: 6.204 ms
Loss rate: 0.04%
```
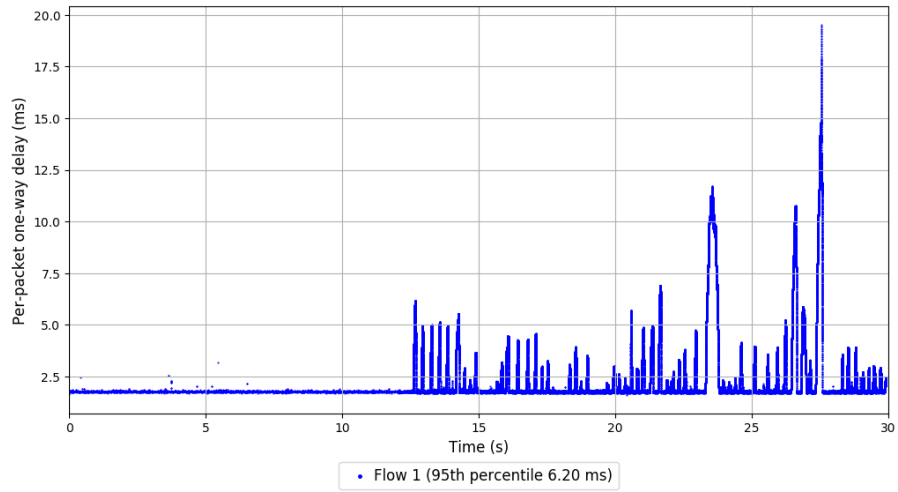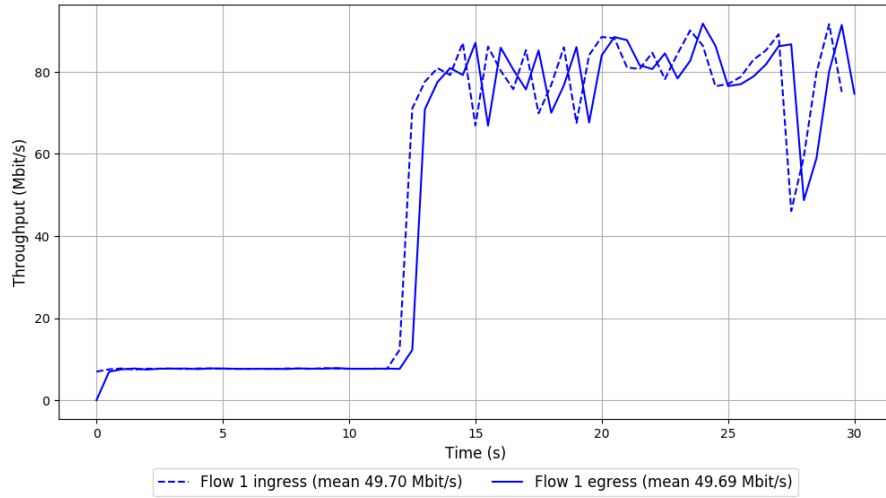
Run 1: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 49.70 Mbit/s) —— Flow 1 egress (mean 49.69 Mbit/s)

• Flow 1 (95th percentile 6.20 ms)

```
Run 2: Statistics of PCC-Expr

Start at: 2019-12-11 11:18:25
End at: 2019-12-11 11:18:55
Local clock offset: -6.148 ms
Remote clock offset: 0.163 ms


# Below is generated by plot.py at 2019-12-11 13:14:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.69 Mbit/s
95th percentile per-packet one-way delay: 38.883 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 78.69 Mbit/s
95th percentile per-packet one-way delay: 38.883 ms
Loss rate: 0.04%
```
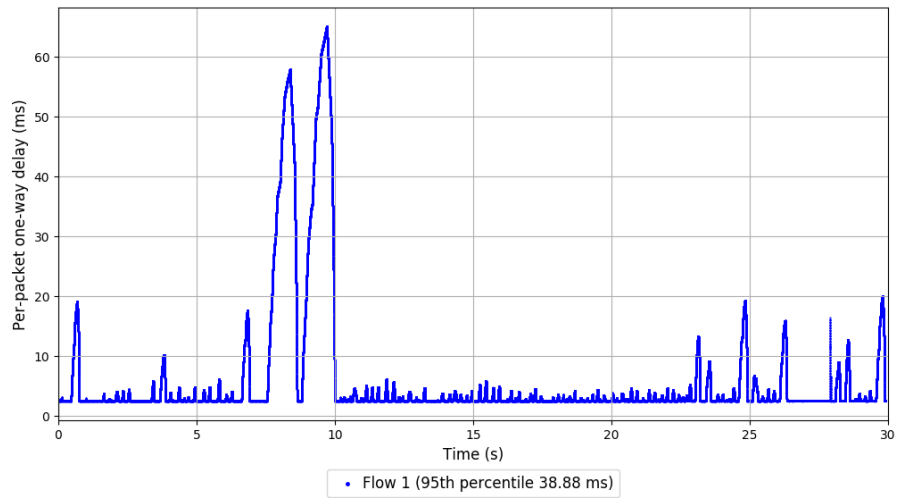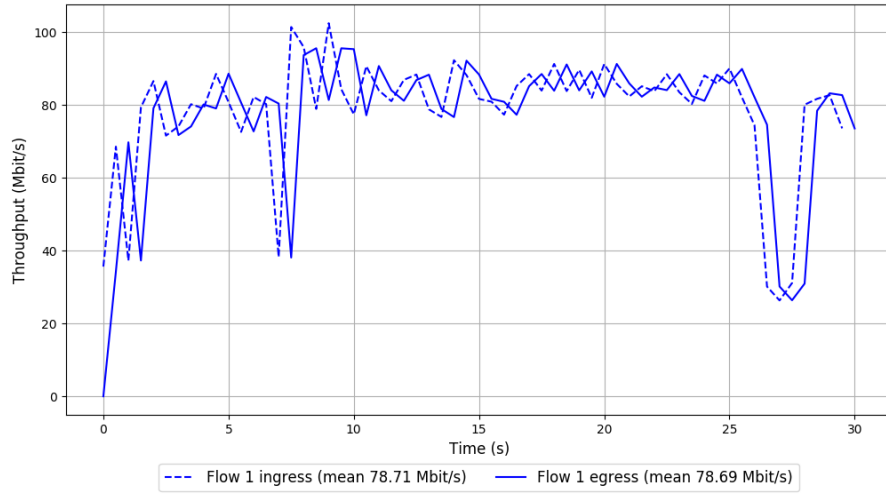
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-12-11 11:45:29
End at: 2019-12-11 11:45:59
Local clock offset: -5.972 ms
Remote clock offset: 0.363 ms


# Below is generated by plot.py at 2019-12-11 13:14:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 79.98 Mbit/s
95th percentile per-packet one-way delay: 57.784 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 79.98 Mbit/s
95th percentile per-packet one-way delay: 57.784 ms
Loss rate: 1.46%
```
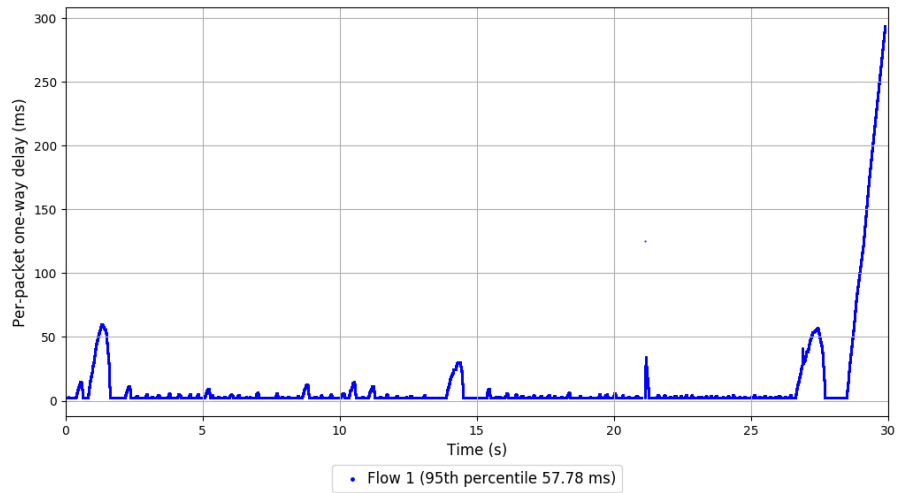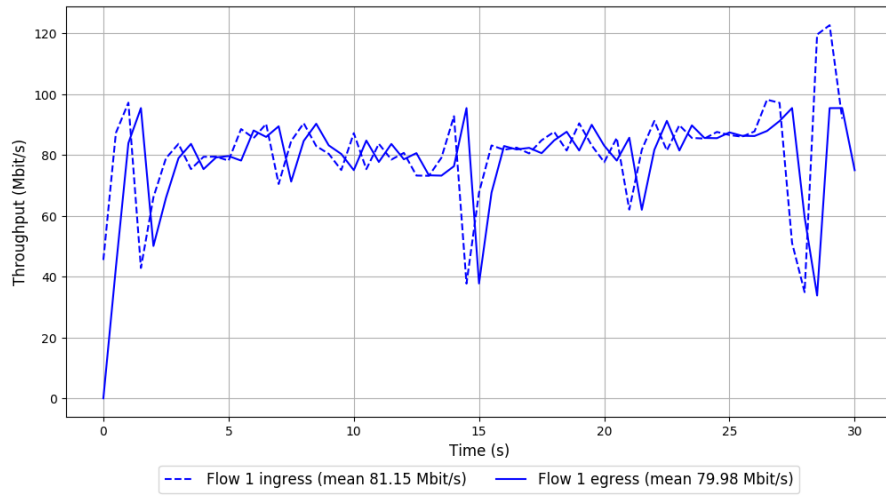
Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 81.15 Mbit/s)   Flow 1 egress (mean 79.98 Mbit/s)

Flow 1 (95th percentile 57.78 ms)

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```
Run 4: Statistics of PCC-Expr

Start at: 2019-12-11 12:12:27
End at: 2019-12-11 12:12:57
Local clock offset: -5.377 ms
Remote clock offset: 0.549 ms


# Below is generated by plot.py at 2019-12-11 13:15:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.39 Mbit/s
95th percentile per-packet one-way delay: 168.971 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 80.39 Mbit/s
95th percentile per-packet one-way delay: 168.971 ms
Loss rate: 1.19%
```
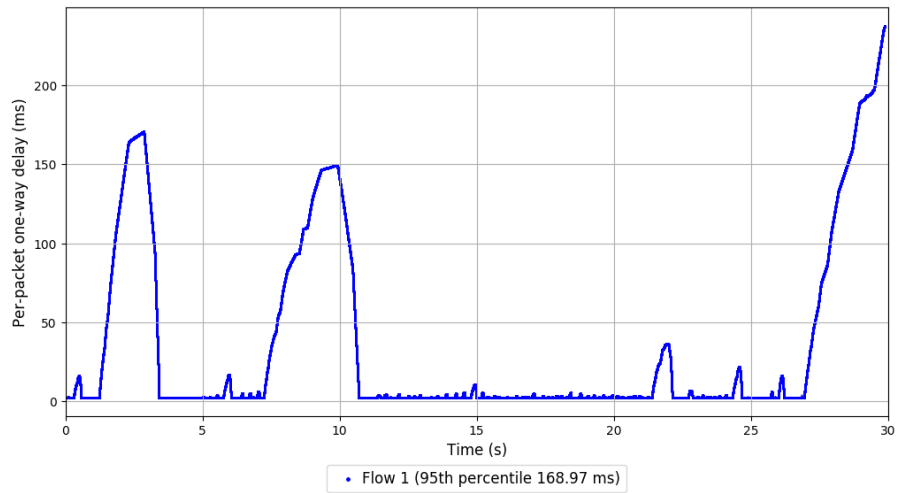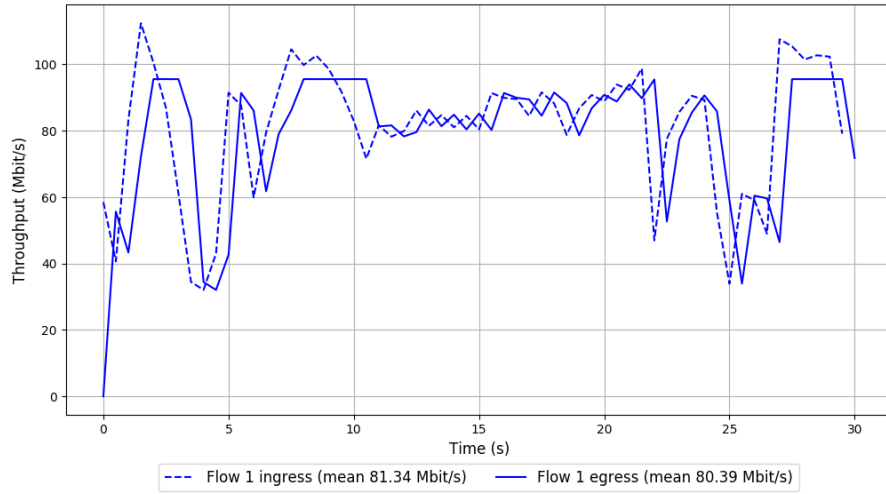
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-12-11 12:39:25
End at: 2019-12-11 12:39:55
Local clock offset: -5.039 ms
Remote clock offset: 0.639 ms


# Below is generated by plot.py at 2019-12-11 13:15:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.00 Mbit/s
95th percentile per-packet one-way delay: 34.938 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 80.00 Mbit/s
95th percentile per-packet one-way delay: 34.938 ms
Loss rate: 0.20%
```
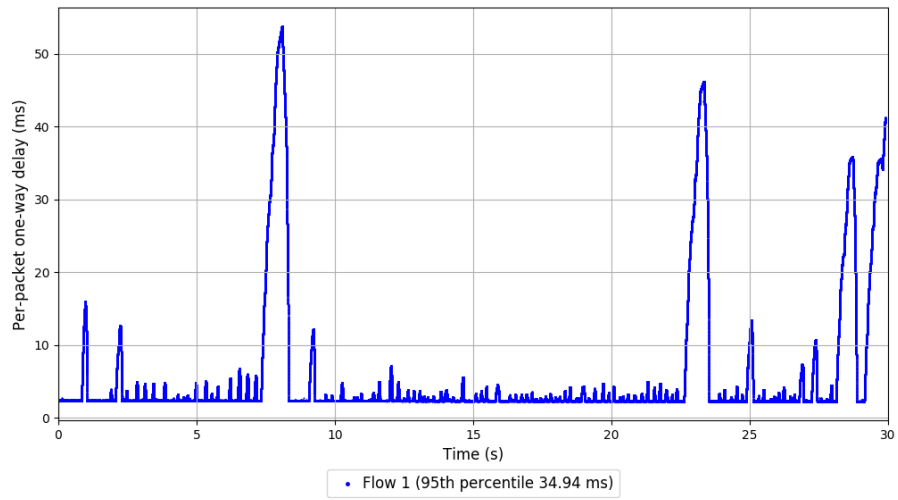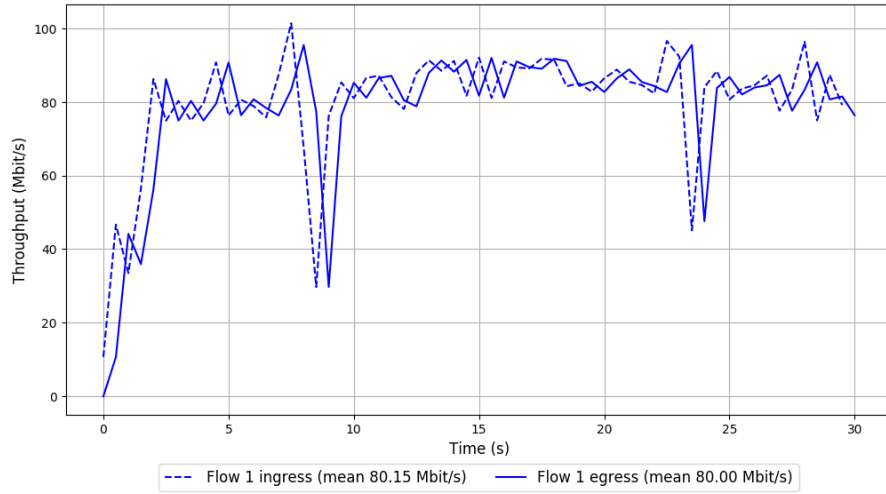
Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 80.15 Mbit/s)   Flow 1 egress (mean 80.00 Mbit/s)

• Flow 1 (95th percentile 34.94 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-12-11 10:50:17
End at: 2019-12-11 10:50:47
Local clock offset: -6.153 ms
Remote clock offset: -0.09 ms


# Below is generated by plot.py at 2019-12-11 13:15:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.32 Mbit/s
95th percentile per-packet one-way delay: 7.648 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 90.32 Mbit/s
95th percentile per-packet one-way delay: 7.648 ms
Loss rate: 0.02%
```
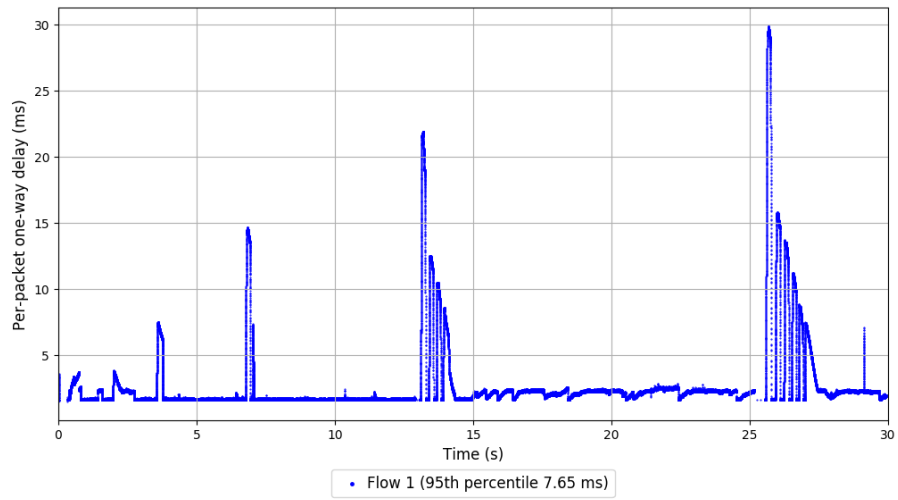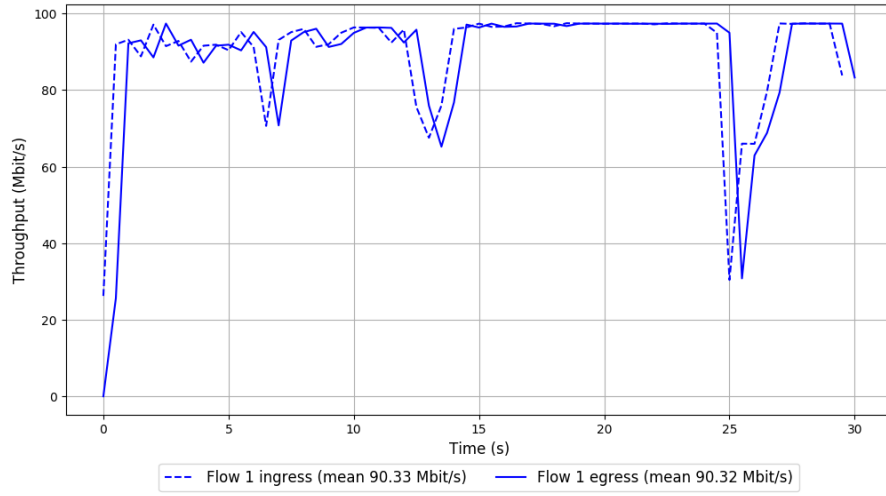
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-12-11 11:17:16
End at: 2019-12-11 11:17:46
Local clock offset: -6.86 ms
Remote clock offset: 0.169 ms


# Below is generated by plot.py at 2019-12-11 13:15:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.67 Mbit/s
95th percentile per-packet one-way delay: 8.139 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 91.67 Mbit/s
95th percentile per-packet one-way delay: 8.139 ms
Loss rate: 0.02%
```
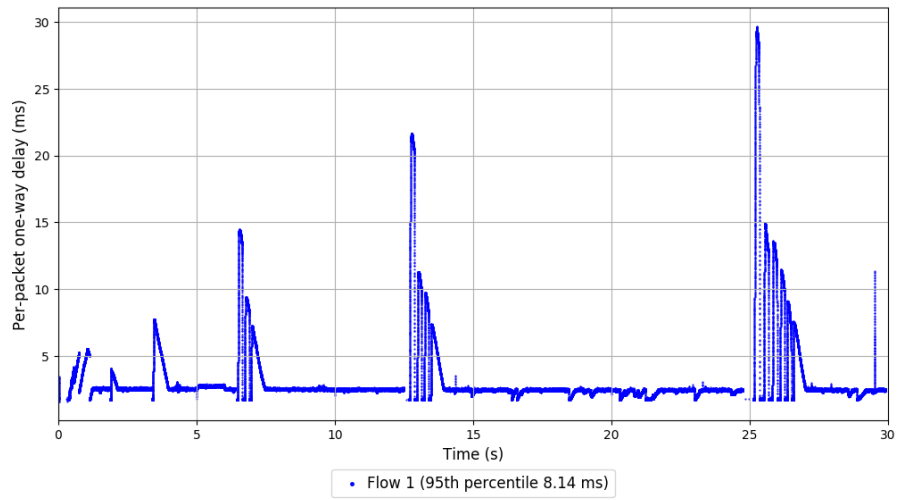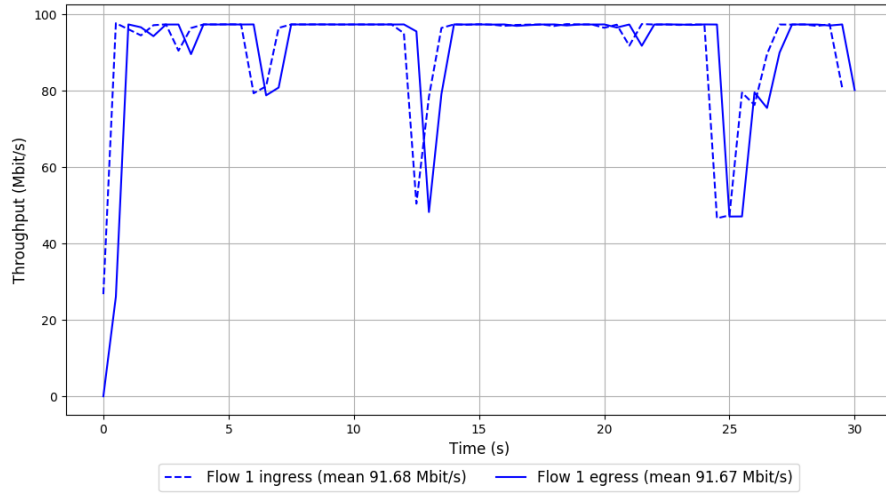
Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 91.68 Mbit/s)   Flow 1 egress (mean 91.67 Mbit/s)

Flow 1 (95th percentile 8.14 ms)

168

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-12-11 11:44:21
End at: 2019-12-11 11:44:51
Local clock offset: -6.74 ms
Remote clock offset: 0.385 ms


# Below is generated by plot.py at 2019-12-11 13:15:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.79 Mbit/s
95th percentile per-packet one-way delay: 6.545 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 87.79 Mbit/s
95th percentile per-packet one-way delay: 6.545 ms
Loss rate: 0.02%
```
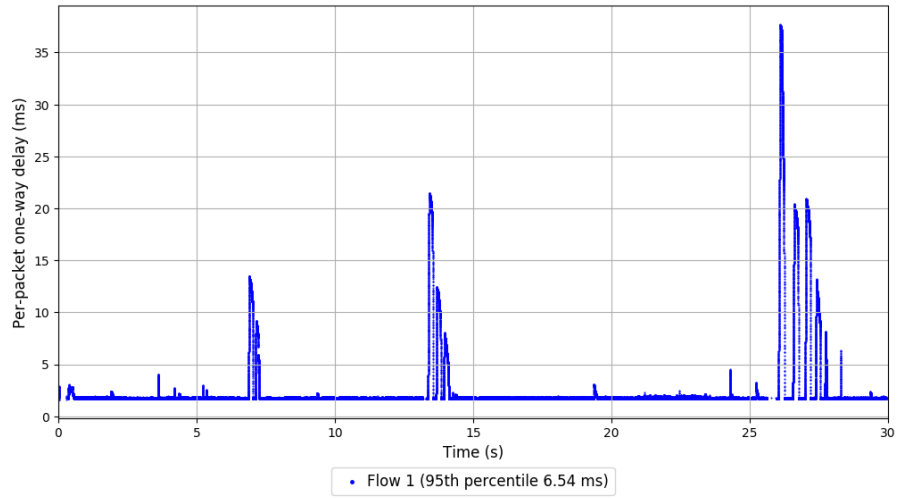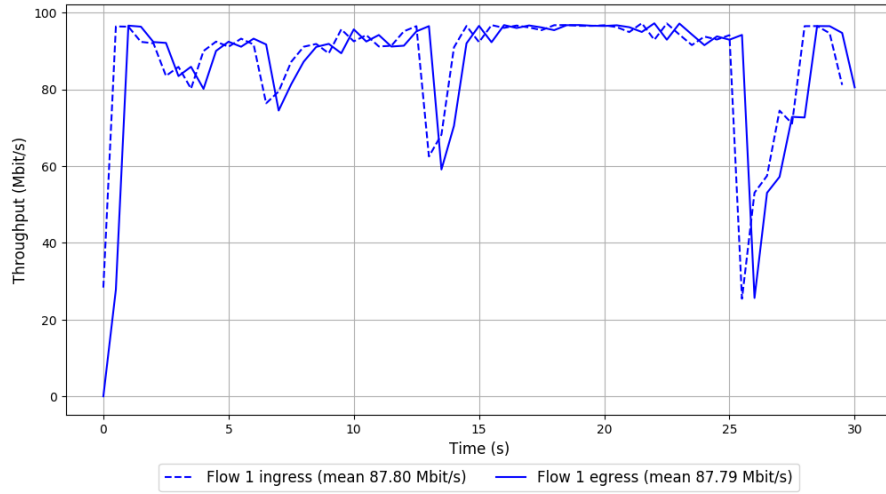
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 87.80 Mbit/s)   Flow 1 egress (mean 87.79 Mbit/s)

Flow 1 (95th percentile 6.54 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-12-11 12:11:19
End at: 2019-12-11 12:11:49
Local clock offset: -6.129 ms
Remote clock offset: 0.605 ms


# Below is generated by plot.py at 2019-12-11 13:15:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.47 Mbit/s
95th percentile per-packet one-way delay: 7.853 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 90.47 Mbit/s
95th percentile per-packet one-way delay: 7.853 ms
Loss rate: 0.02%
```
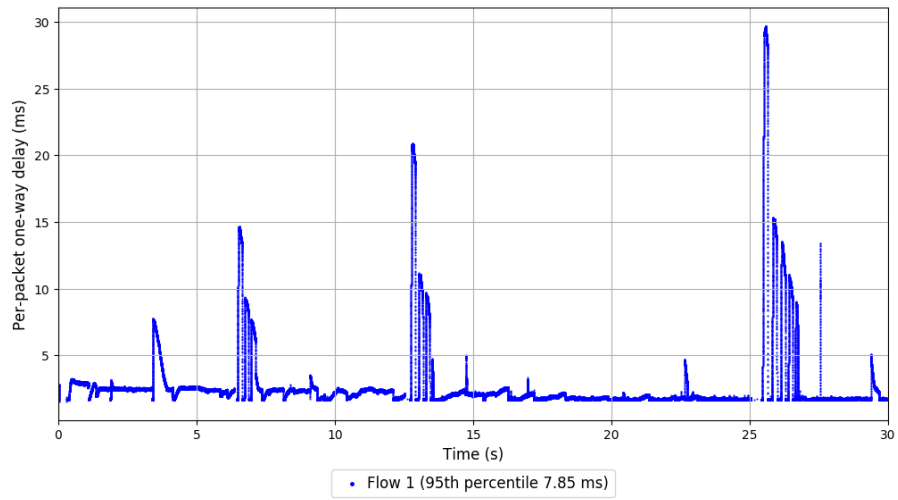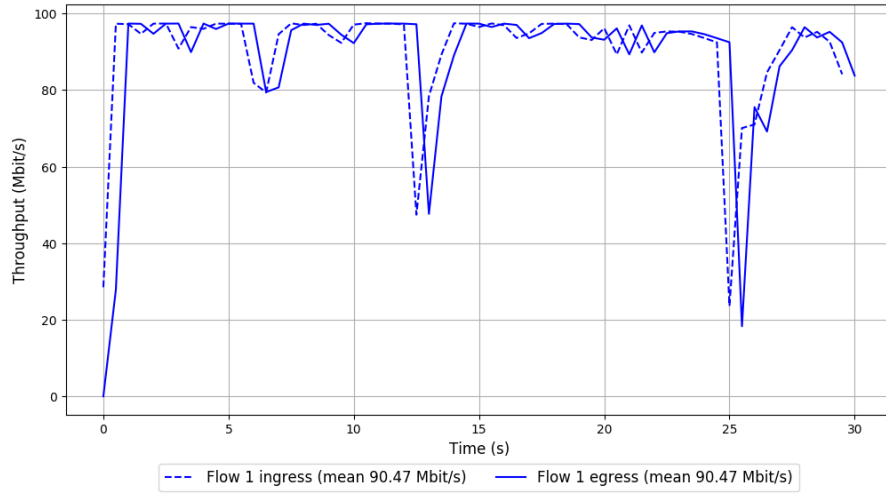
Run 4: Report of QUIC Cubic — Data Link

--- Flow 1 ingress (mean 90.47 Mbit/s)   —— Flow 1 egress (mean 90.47 Mbit/s)

• Flow 1 (95th percentile 7.85 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-12-11 12:38:17
End at: 2019-12-11 12:38:47
Local clock offset: -5.353 ms
Remote clock offset: 0.738 ms


# Below is generated by plot.py at 2019-12-11 13:15:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.79 Mbit/s
95th percentile per-packet one-way delay: 7.886 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 89.79 Mbit/s
95th percentile per-packet one-way delay: 7.886 ms
Loss rate: 0.02%
```
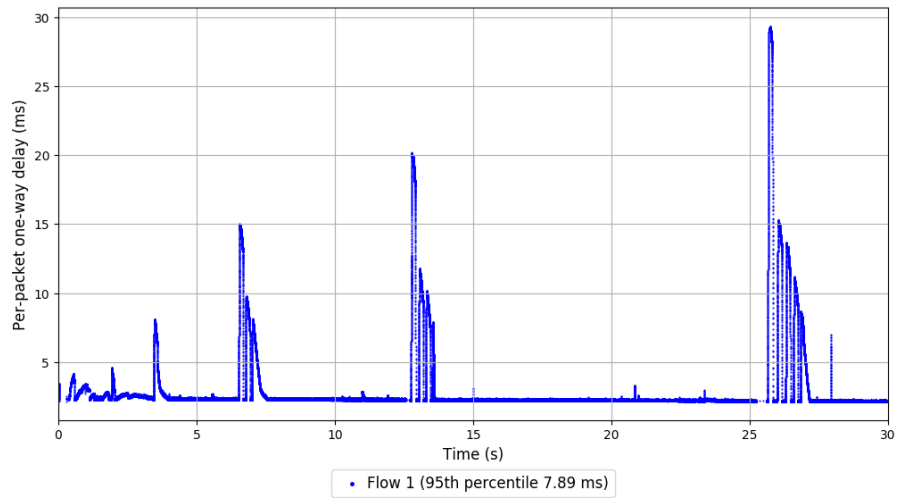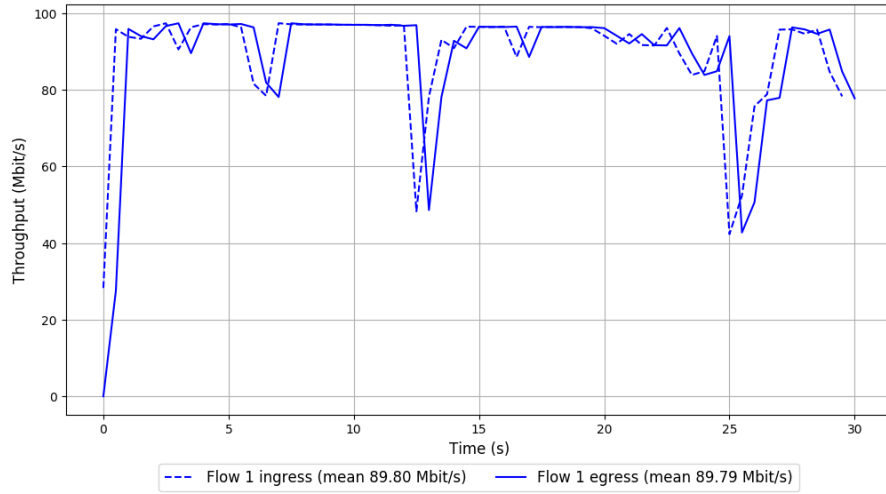
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 89.80 Mbit/s) ----- Flow 1 egress (mean 89.79 Mbit/s) ———

• Flow 1 (95th percentile 7.89 ms)

174

```
Run 1: Statistics of SCReAM

Start at: 2019-12-11 11:11:42
End at: 2019-12-11 11:12:12
Local clock offset: -5.679 ms
Remote clock offset: 0.051 ms


# Below is generated by plot.py at 2019-12-11 13:15:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.599 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.599 ms
Loss rate: 0.13%
```
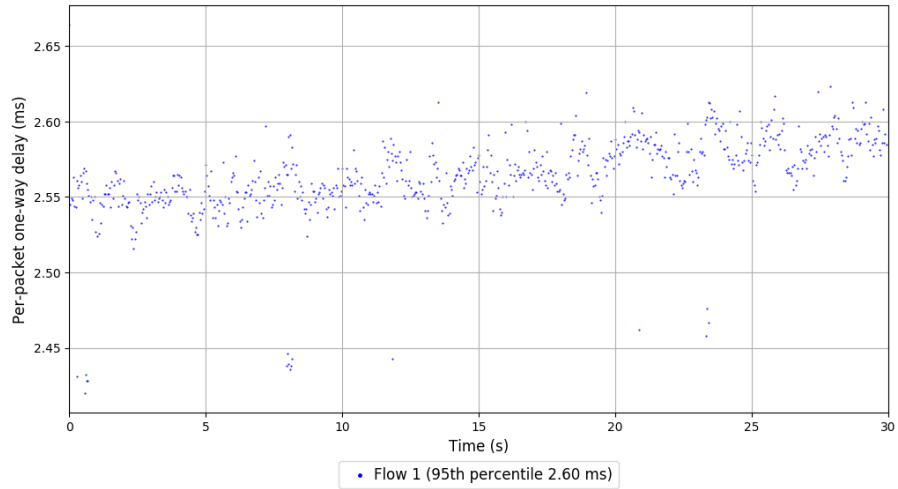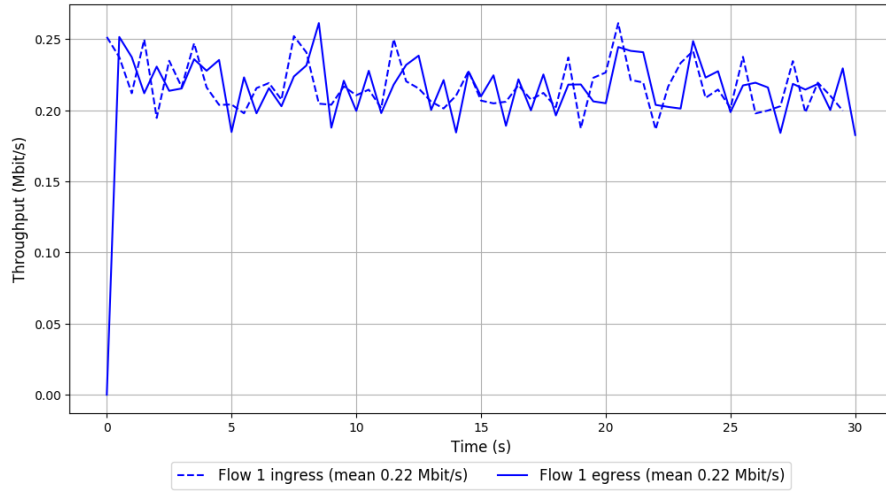
Run 1: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.22 Mbit/s) ——— Flow 1 egress (mean 0.22 Mbit/s)

· Flow 1 (95th percentile 2.60 ms)

```
Run 2: Statistics of SCReAM

Start at: 2019-12-11 11:38:47
End at: 2019-12-11 11:39:17
Local clock offset: -6.684 ms
Remote clock offset: 0.401 ms


# Below is generated by plot.py at 2019-12-11 13:15:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.321 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.321 ms
Loss rate: 0.00%
```
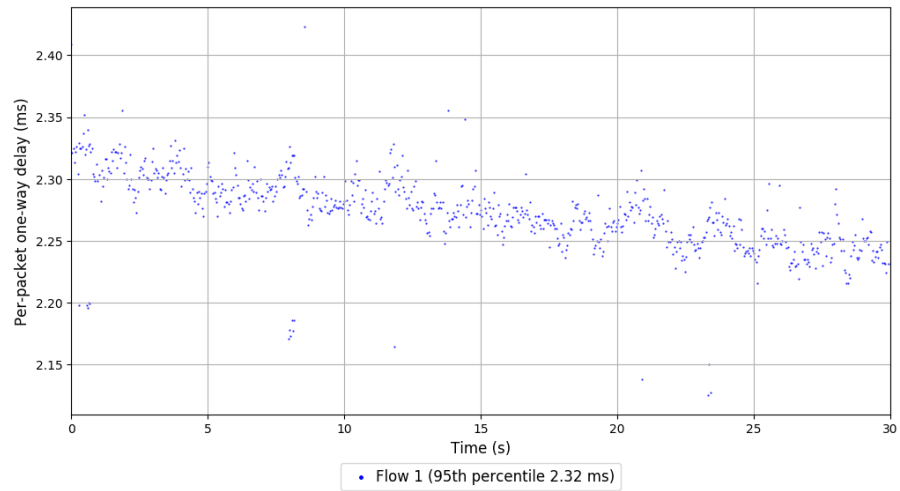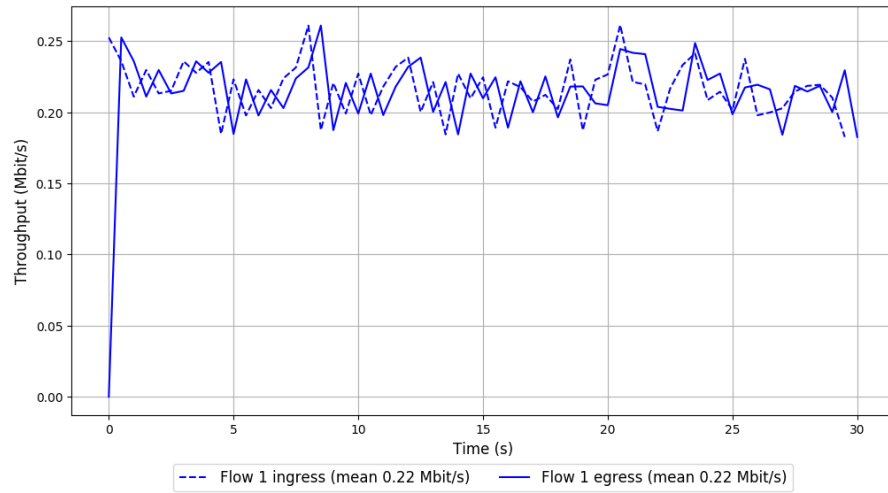
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-12-11 12:05:46
End at: 2019-12-11 12:06:16
Local clock offset: -5.448 ms
Remote clock offset: 0.531 ms


# Below is generated by plot.py at 2019-12-11 13:15:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 2.409 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 2.409 ms
Loss rate: 0.29%
```
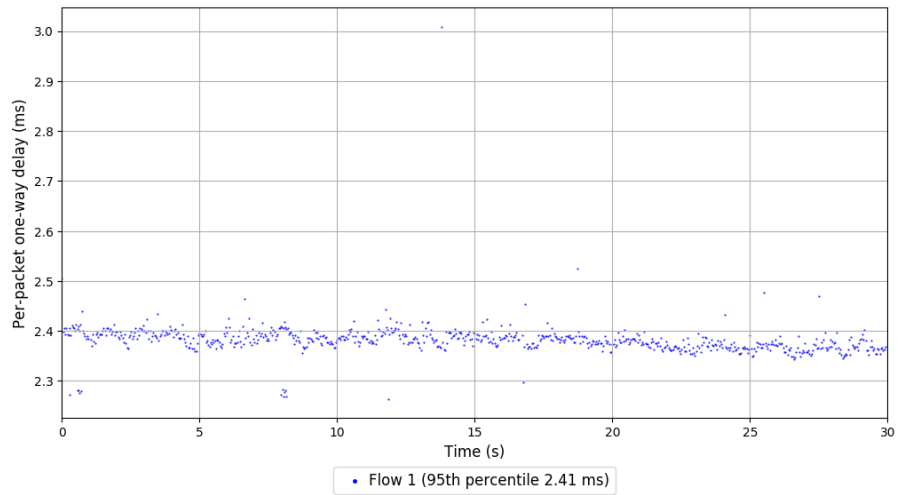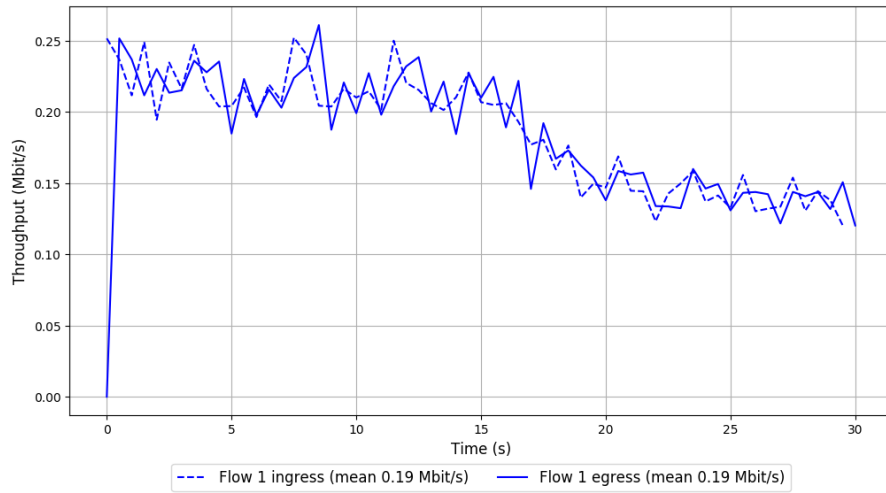
Run 3: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 2.41 ms)

```
Run 4: Statistics of SCReAM

Start at: 2019-12-11 12:32:43
End at: 2019-12-11 12:33:13
Local clock offset: -5.365 ms
Remote clock offset: 0.697 ms


# Below is generated by plot.py at 2019-12-11 13:15:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.451 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.451 ms
Loss rate: 0.00%
```
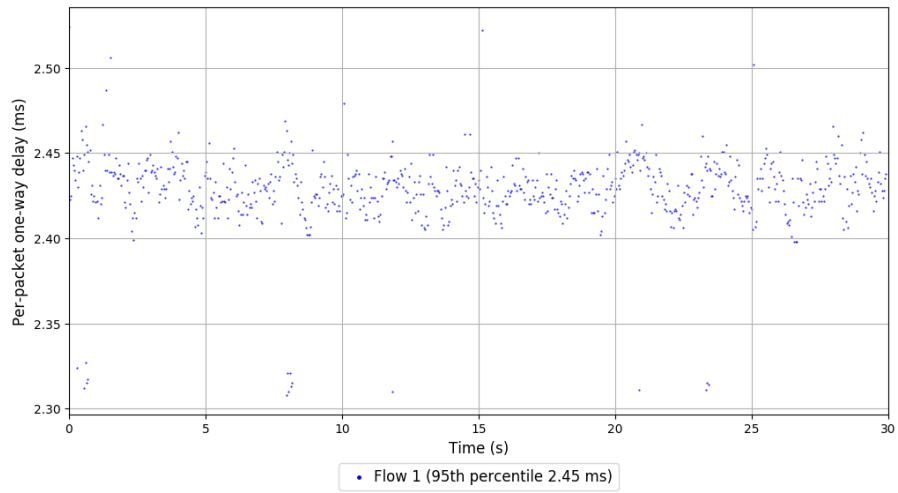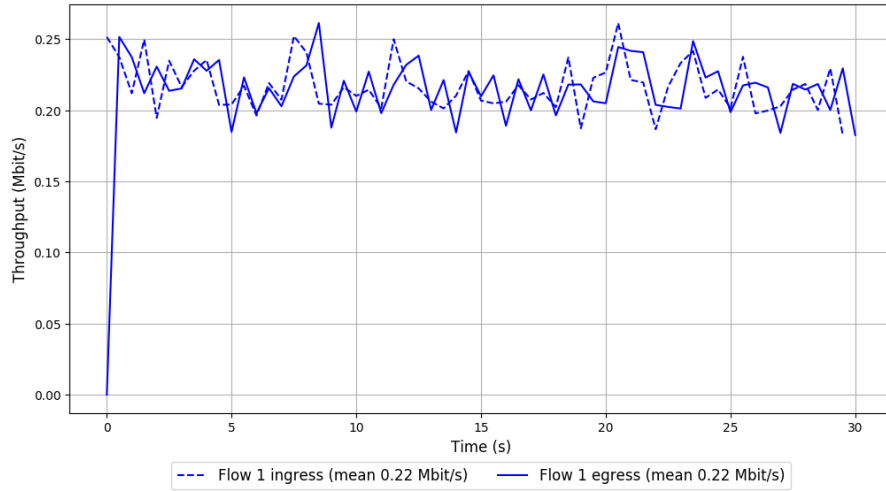
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-12-11 12:59:43
End at: 2019-12-11 13:00:13
Local clock offset: -2.221 ms
Remote clock offset: 0.609 ms


# Below is generated by plot.py at 2019-12-11 13:15:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.400 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.400 ms
Loss rate: 0.00%
```
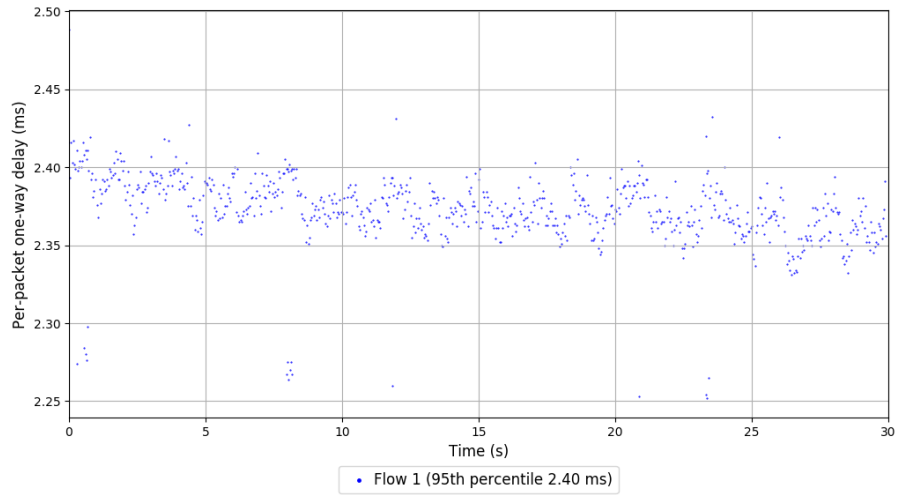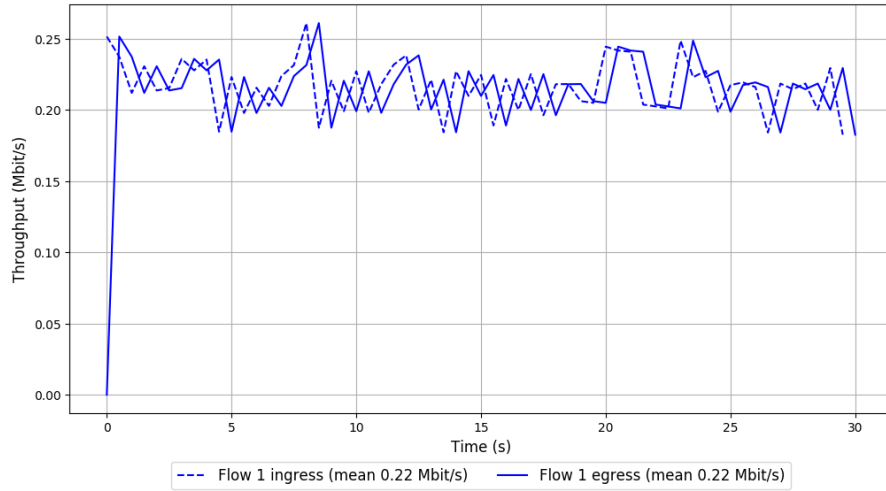
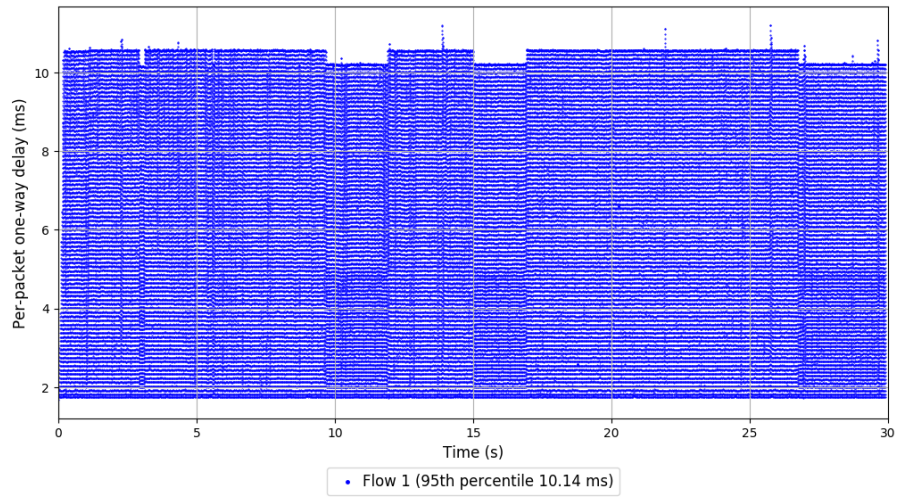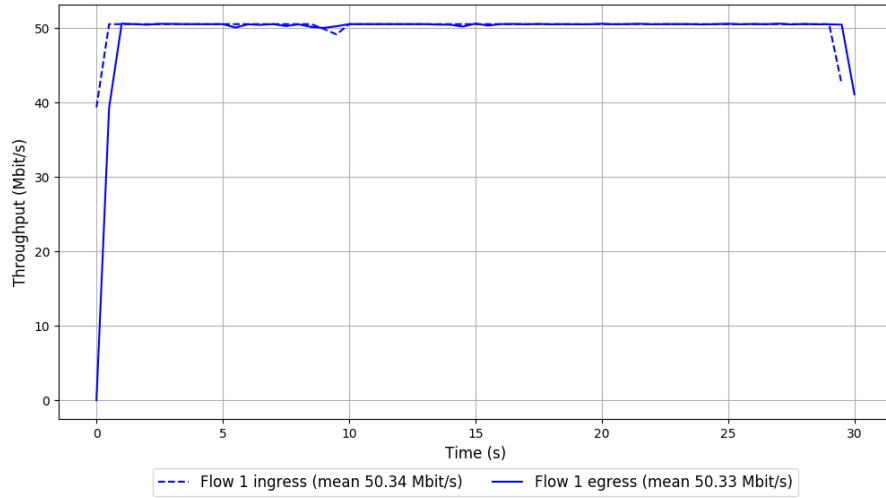Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-12-11 10:57:08
End at: 2019-12-11 10:57:38
Local clock offset: -6.066 ms
Remote clock offset: -0.067 ms


# Below is generated by plot.py at 2019-12-11 13:15:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.33 Mbit/s
95th percentile per-packet one-way delay: 10.144 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 50.33 Mbit/s
95th percentile per-packet one-way delay: 10.144 ms
Loss rate: 0.07%
```

Run 1: Report of Sprout — Data Link

Flow 1 ingress (mean 50.34 Mbit/s) ----- Flow 1 egress (mean 50.33 Mbit/s)

• Flow 1 (95th percentile 10.14 ms)

```
Run 2: Statistics of Sprout

Start at: 2019-12-11 11:24:10
End at: 2019-12-11 11:24:40
Local clock offset: -6.445 ms
Remote clock offset: 0.124 ms


# Below is generated by plot.py at 2019-12-11 13:15:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.18 Mbit/s
95th percentile per-packet one-way delay: 10.925 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.18 Mbit/s
95th percentile per-packet one-way delay: 10.925 ms
Loss rate: 0.00%
```
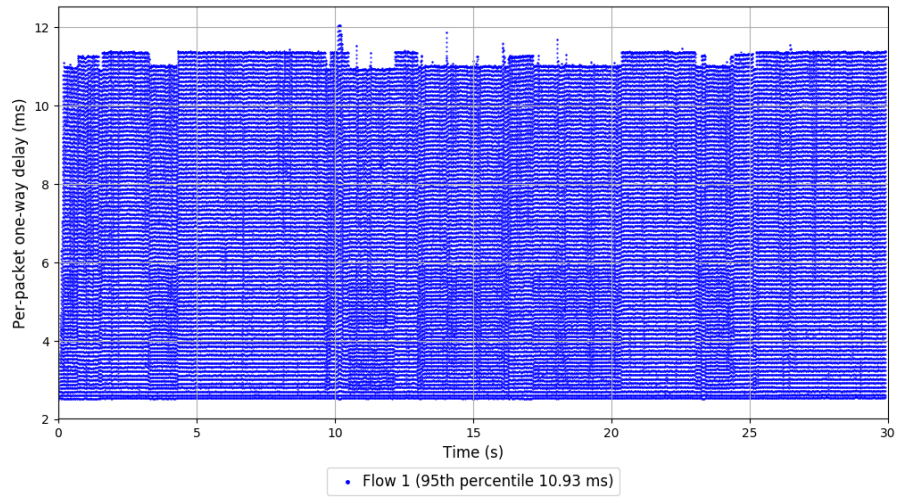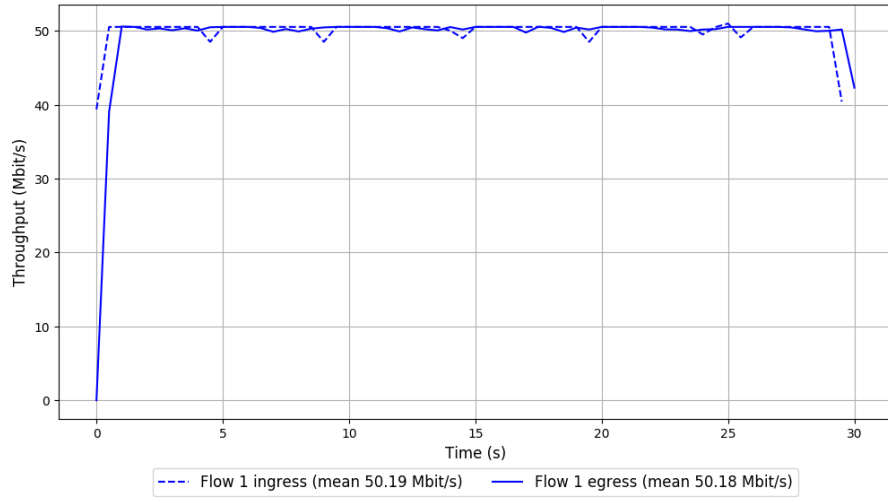
Run 2: Report of Sprout — Data Link

Flow 1 ingress (mean 50.19 Mbit/s)   Flow 1 egress (mean 50.18 Mbit/s)

Flow 1 (95th percentile 10.93 ms)

```
Run 3: Statistics of Sprout

Start at: 2019-12-11 11:51:11
End at: 2019-12-11 11:51:41
Local clock offset: -6.424 ms
Remote clock offset: 0.404 ms


# Below is generated by plot.py at 2019-12-11 13:15:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.29 Mbit/s
95th percentile per-packet one-way delay: 10.185 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 50.29 Mbit/s
95th percentile per-packet one-way delay: 10.185 ms
Loss rate: 0.07%
```
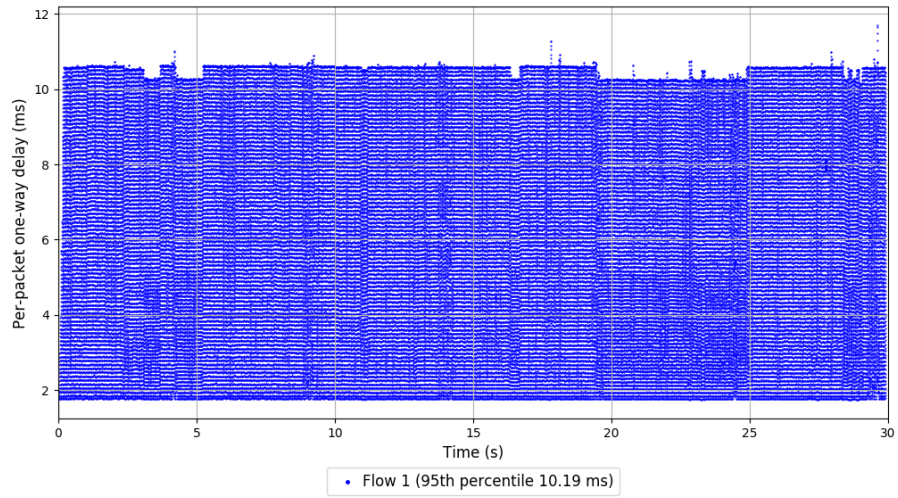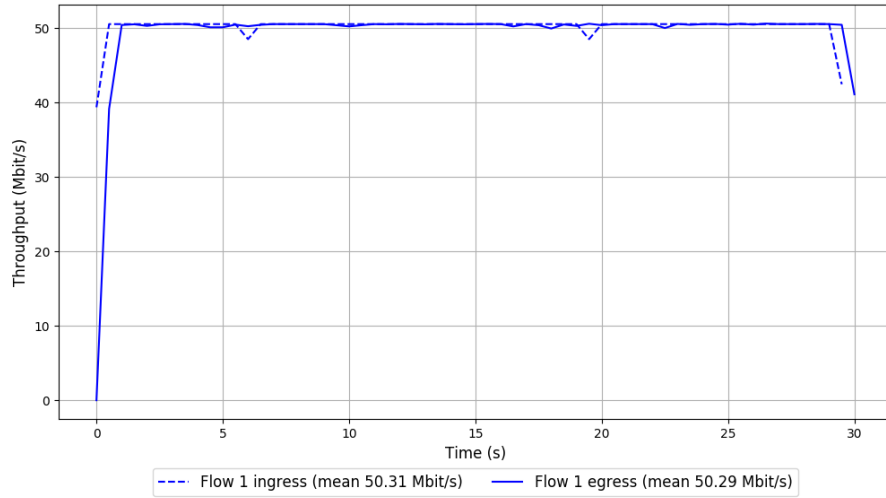
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-12-11 12:18:09
End at: 2019-12-11 12:18:39
Local clock offset: -6.068 ms
Remote clock offset: 0.639 ms


# Below is generated by plot.py at 2019-12-11 13:15:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.25 Mbit/s
95th percentile per-packet one-way delay: 10.186 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.25 Mbit/s
95th percentile per-packet one-way delay: 10.186 ms
Loss rate: 0.00%
```
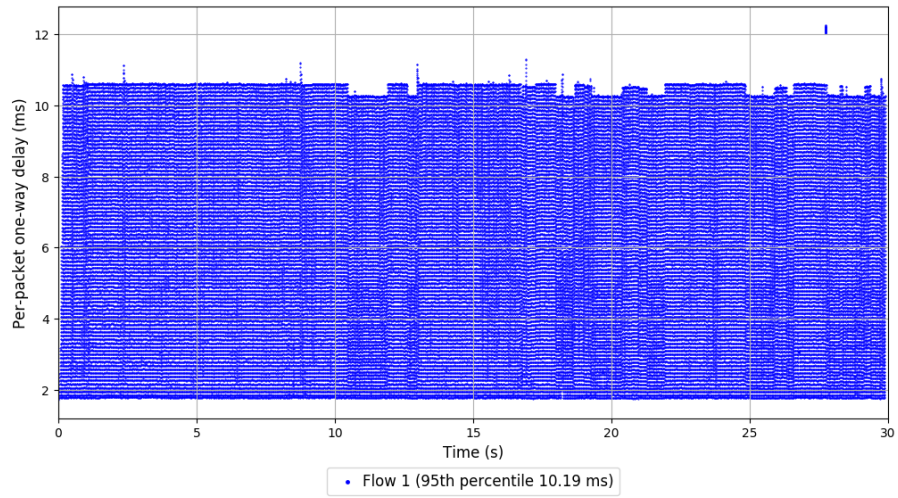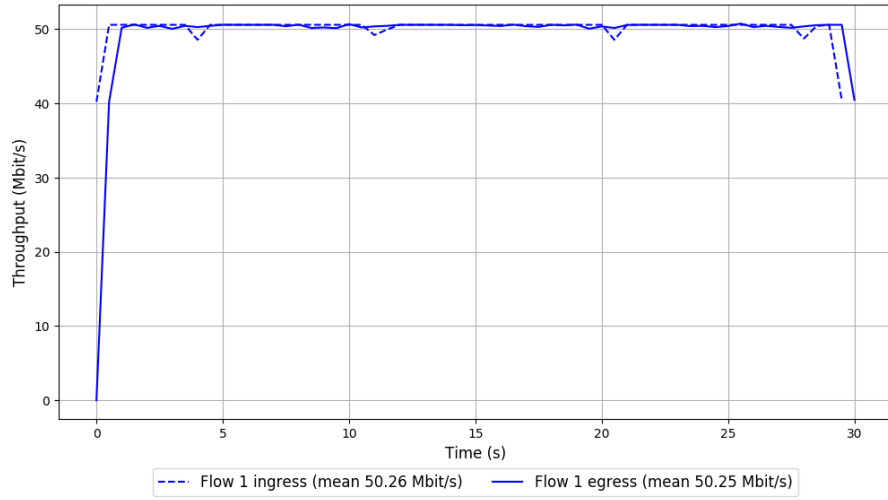
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-12-11 12:45:07
End at: 2019-12-11 12:45:37
Local clock offset: -4.443 ms
Remote clock offset: 0.681 ms


# Below is generated by plot.py at 2019-12-11 13:15:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.81 Mbit/s
95th percentile per-packet one-way delay: 10.102 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 49.81 Mbit/s
95th percentile per-packet one-way delay: 10.102 ms
Loss rate: 0.06%
```
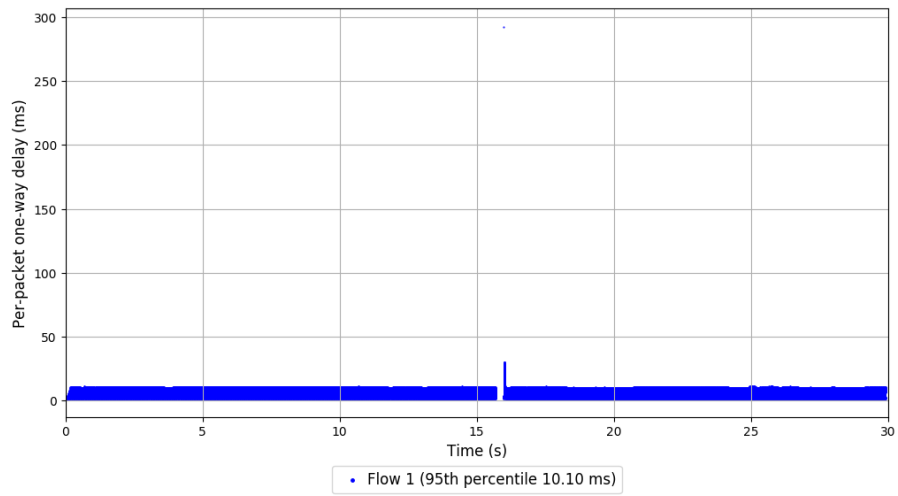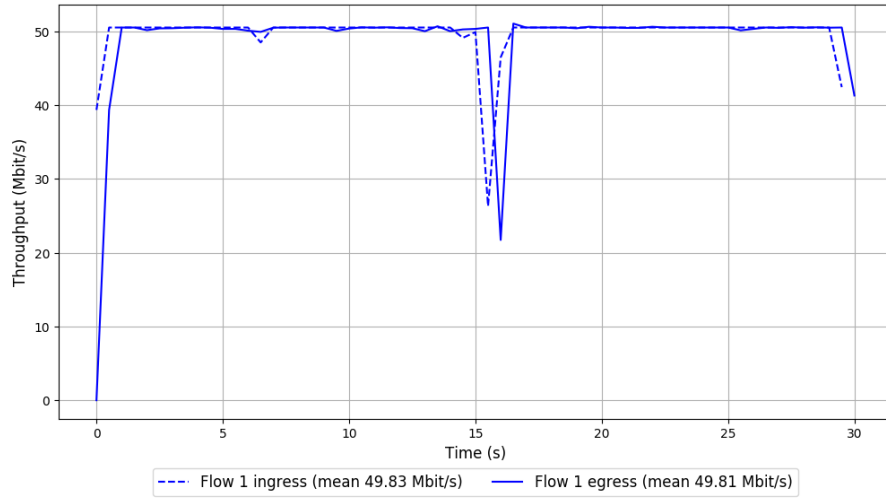
Run 5: Report of Sprout — Data Link

Flow 1 ingress (mean 49.83 Mbit/s) --- Flow 1 egress (mean 49.81 Mbit/s)

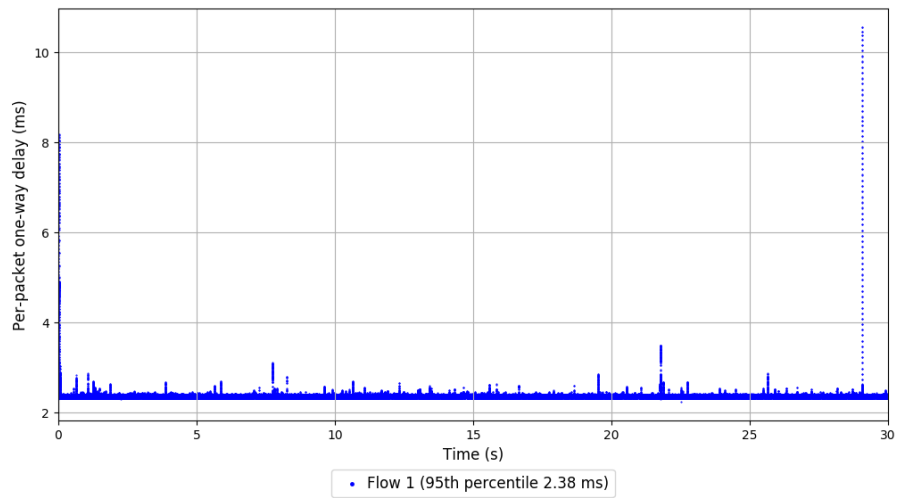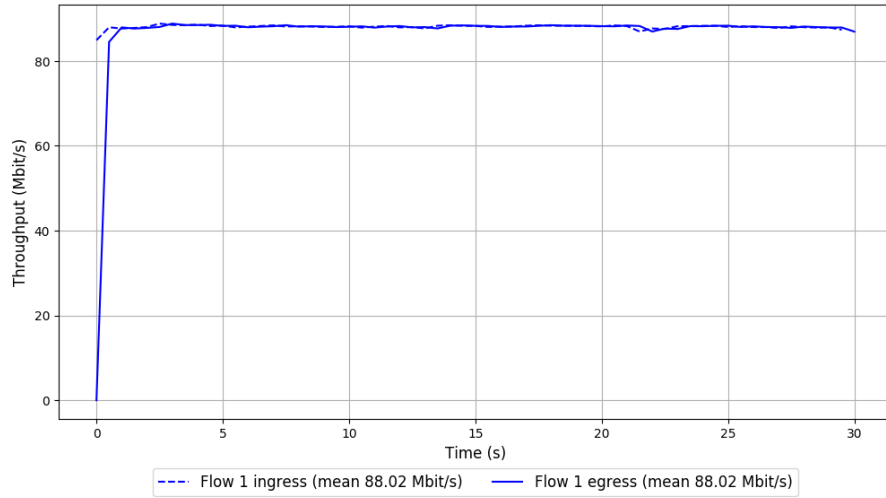Flow 1 (95th percentile 10.10 ms)

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

Start at: 2019-12-11 11:01:35
End at: 2019-12-11 11:02:05
Local clock offset: -5.406 ms
Remote clock offset: -0.005 ms


# Below is generated by plot.py at 2019-12-11 13:16:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.02 Mbit/s
95th percentile per-packet one-way delay: 2.385 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 88.02 Mbit/s
95th percentile per-packet one-way delay: 2.385 ms
Loss rate: 0.02%
```

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

Flow 1 ingress (mean 88.02 Mbit/s) ----- Flow 1 egress (mean 88.02 Mbit/s) ——

Flow 1 (95th percentile 2.38 ms)

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

Start at: 2019-12-11 11:28:36
End at: 2019-12-11 11:29:06
Local clock offset: -6.583 ms
Remote clock offset: 0.256 ms


# Below is generated by plot.py at 2019-12-11 13:16:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.34 Mbit/s
95th percentile per-packet one-way delay: 2.406 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 87.34 Mbit/s
95th percentile per-packet one-way delay: 2.406 ms
Loss rate: 0.02%
```
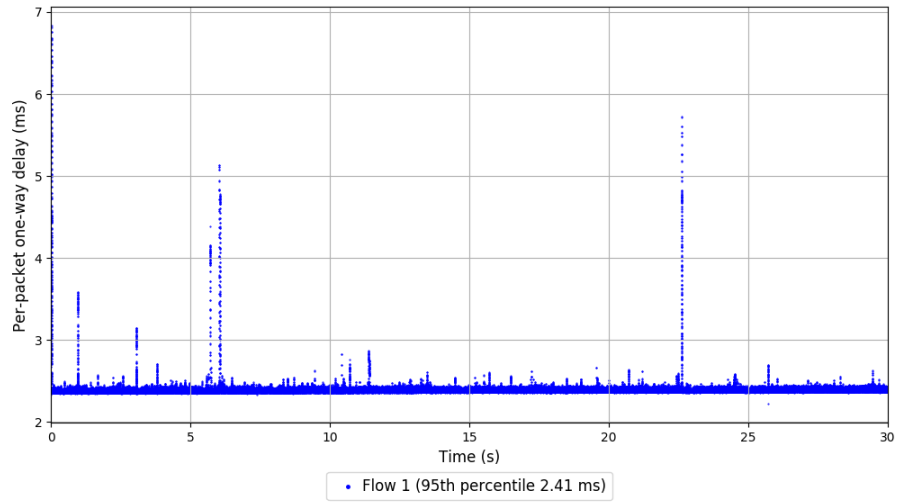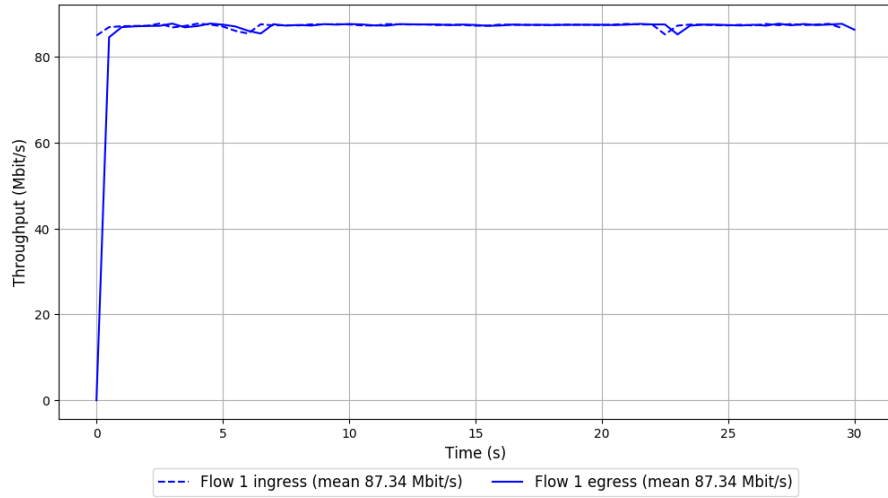
Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2019-12-11 11:55:38
End at: 2019-12-11 11:56:08
Local clock offset: -6.227 ms
Remote clock offset: 0.459 ms


# Below is generated by plot.py at 2019-12-11 13:16:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.99 Mbit/s
95th percentile per-packet one-way delay: 1.801 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 87.99 Mbit/s
95th percentile per-packet one-way delay: 1.801 ms
Loss rate: 0.02%
```
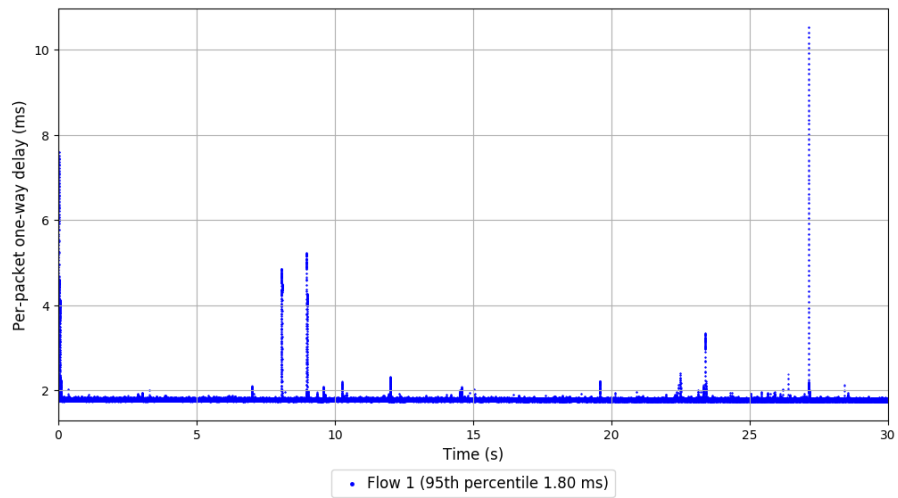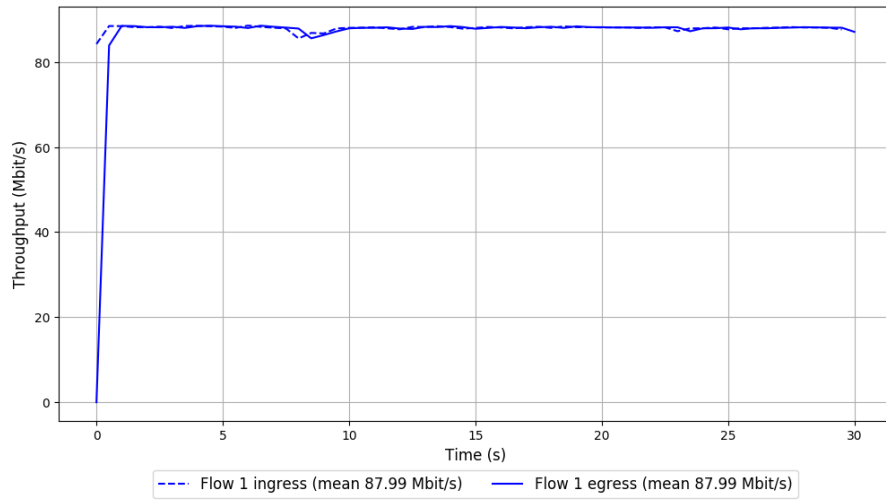
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 87.99 Mbit/s) --- Flow 1 egress (mean 87.99 Mbit/s)

Flow 1 (95th percentile 1.80 ms)

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

Start at: 2019-12-11 12:22:33
End at: 2019-12-11 12:23:04
Local clock offset: -5.374 ms
Remote clock offset: 0.647 ms

# Below is generated by plot.py at 2019-12-11 13:17:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.66 Mbit/s
95th percentile per-packet one-way delay: 2.509 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 87.66 Mbit/s
95th percentile per-packet one-way delay: 2.509 ms
Loss rate: 0.01%
```
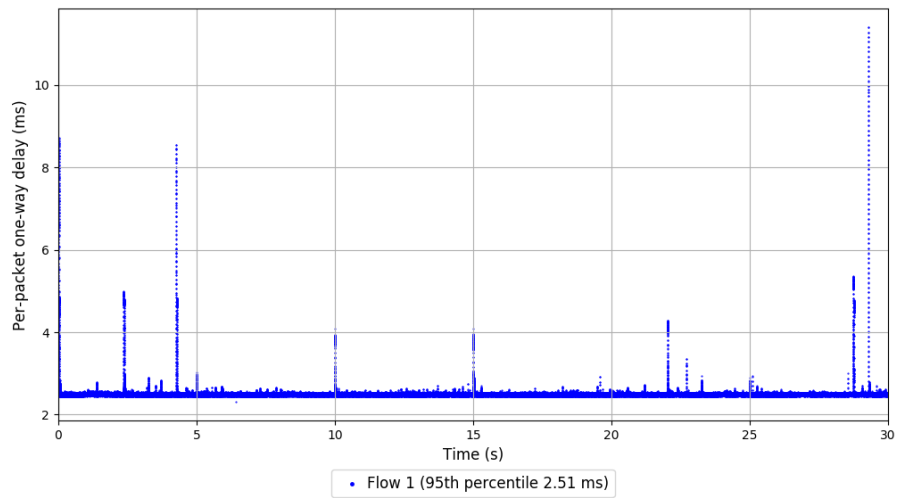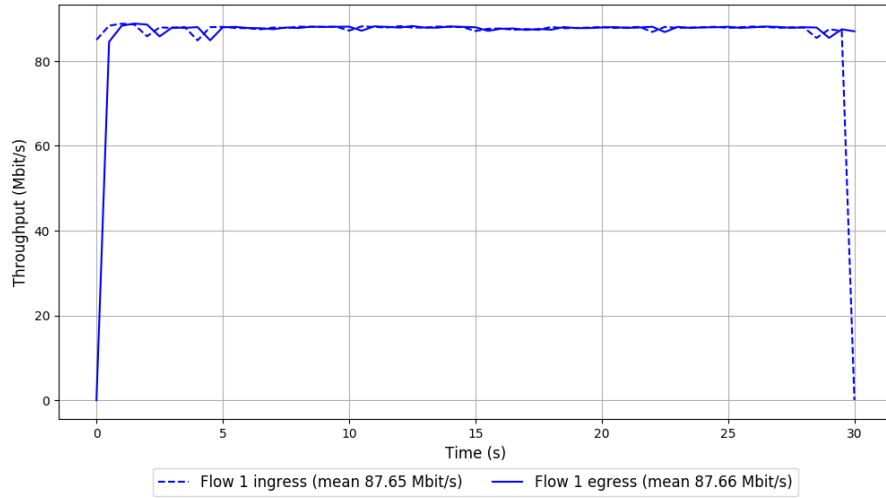
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 87.65 Mbit/s)   Flow 1 egress (mean 87.66 Mbit/s)

Flow 1 (95th percentile 2.51 ms)

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

Start at: 2019-12-11 12:49:34
End at: 2019-12-11 12:50:04
Local clock offset: -3.78 ms
Remote clock offset: 0.711 ms


# Below is generated by plot.py at 2019-12-11 13:17:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.20 Mbit/s
95th percentile per-packet one-way delay: 1.662 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 87.20 Mbit/s
95th percentile per-packet one-way delay: 1.662 ms
Loss rate: 0.02%
```
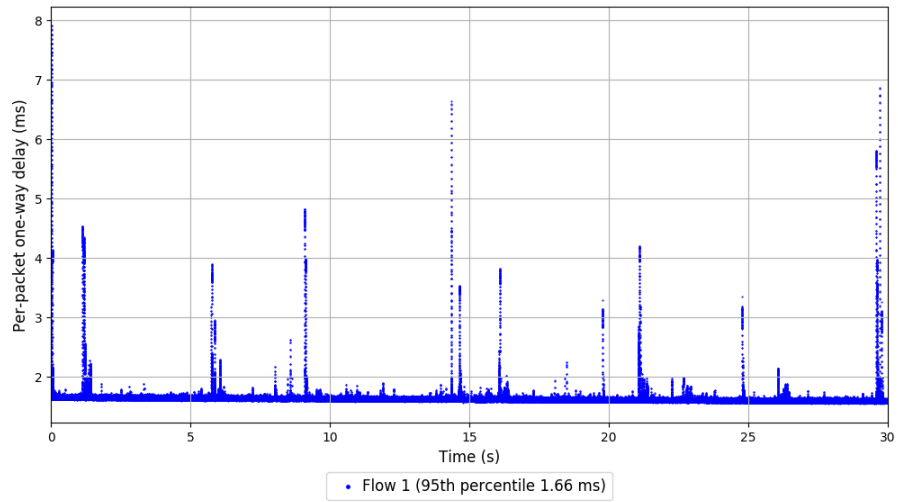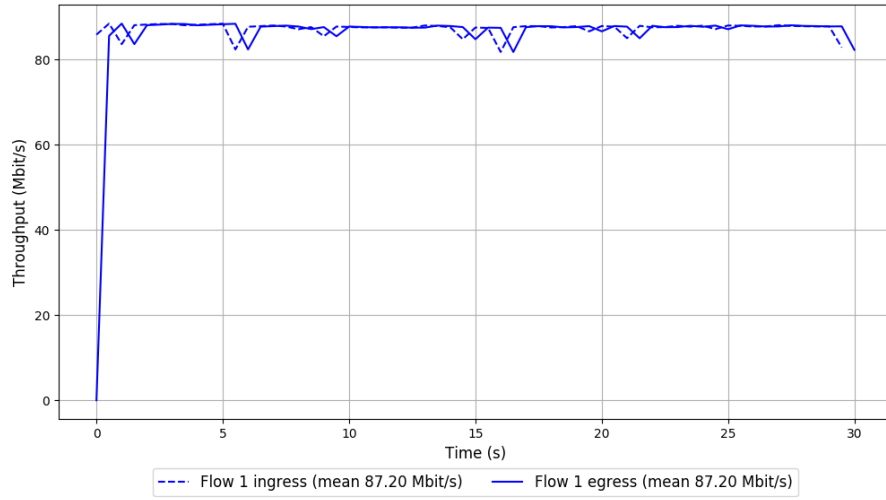
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 87.20 Mbit/s)   Flow 1 egress (mean 87.20 Mbit/s)

• Flow 1 (95th percentile 1.66 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2019-12-11 10:54:50
End at: 2019-12-11 10:55:20
Local clock offset: -5.367 ms
Remote clock offset: -0.045 ms


# Below is generated by plot.py at 2019-12-11 13:17:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.03 Mbit/s
95th percentile per-packet one-way delay: 3.506 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 97.03 Mbit/s
95th percentile per-packet one-way delay: 3.506 ms
Loss rate: 0.01%
```
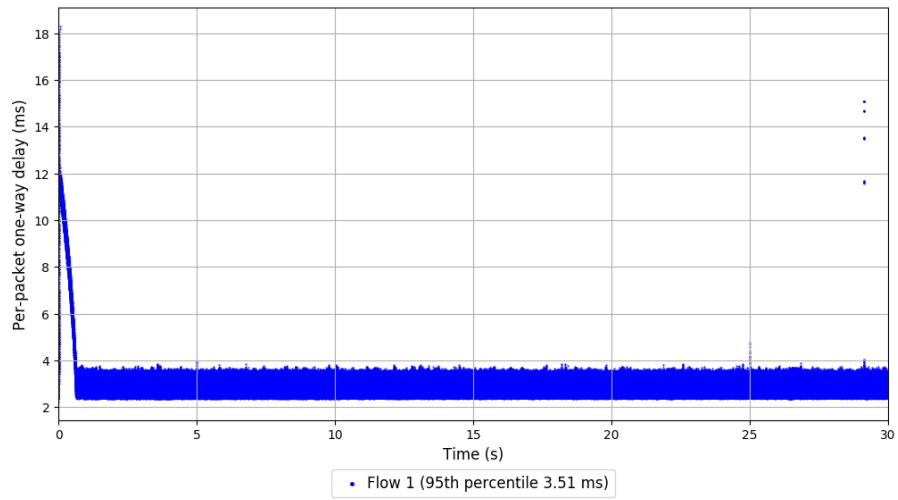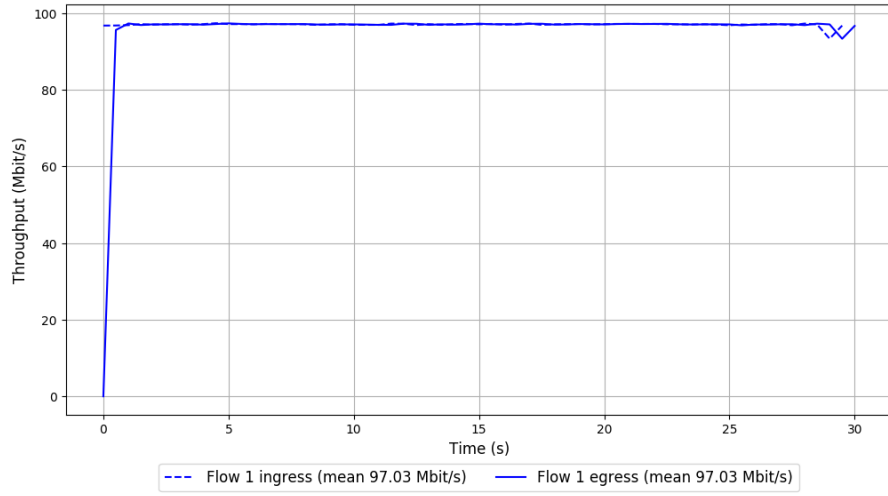
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-12-11 11:21:52
End at: 2019-12-11 11:22:22
Local clock offset: -6.995 ms
Remote clock offset: 0.249 ms


# Below is generated by plot.py at 2019-12-11 13:17:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 3.032 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 3.032 ms
Loss rate: 0.02%
```
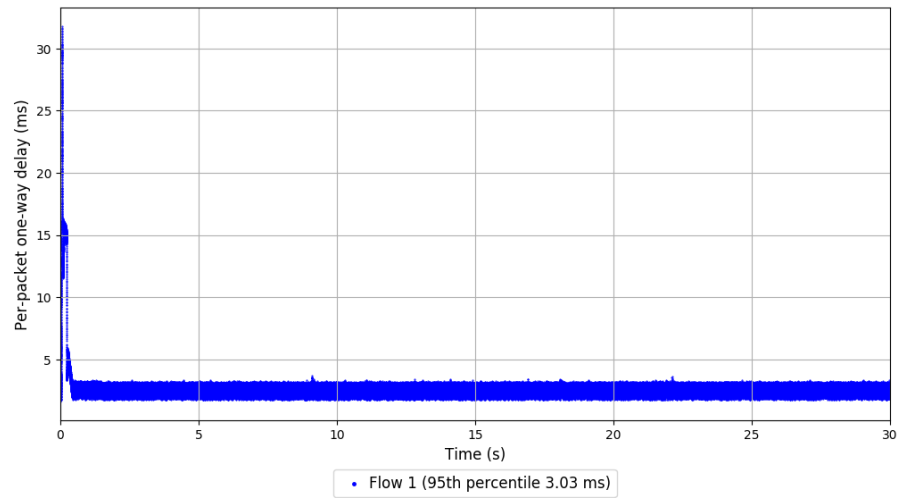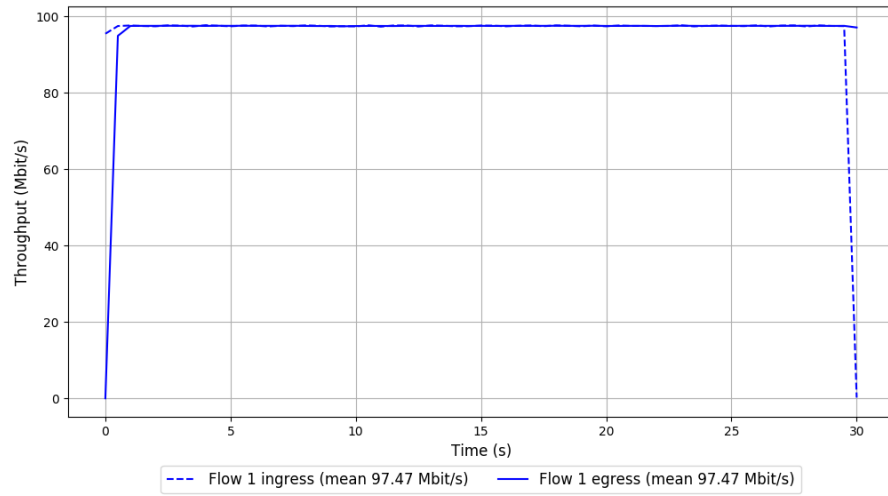
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-12-11 11:48:53
End at: 2019-12-11 11:49:23
Local clock offset: -6.456 ms
Remote clock offset: 0.503 ms


# Below is generated by plot.py at 2019-12-11 13:17:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 3.041 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.42 Mbit/s
95th percentile per-packet one-way delay: 3.041 ms
Loss rate: 0.02%
```
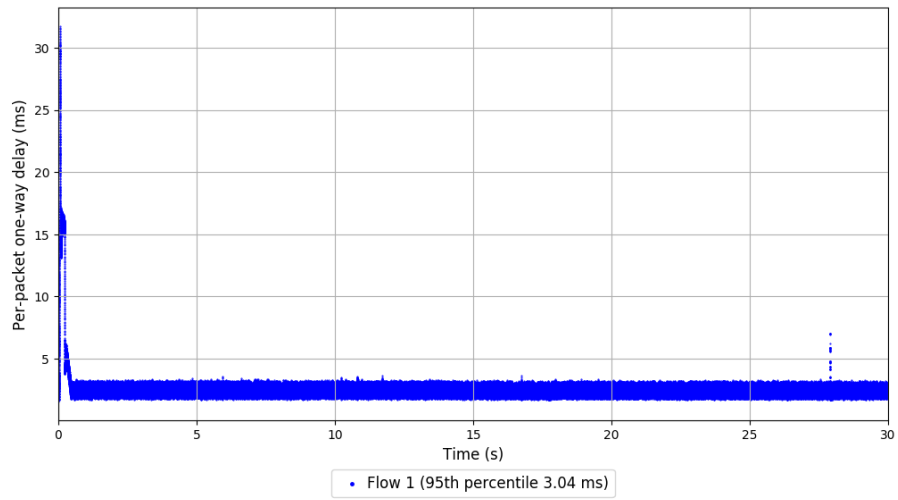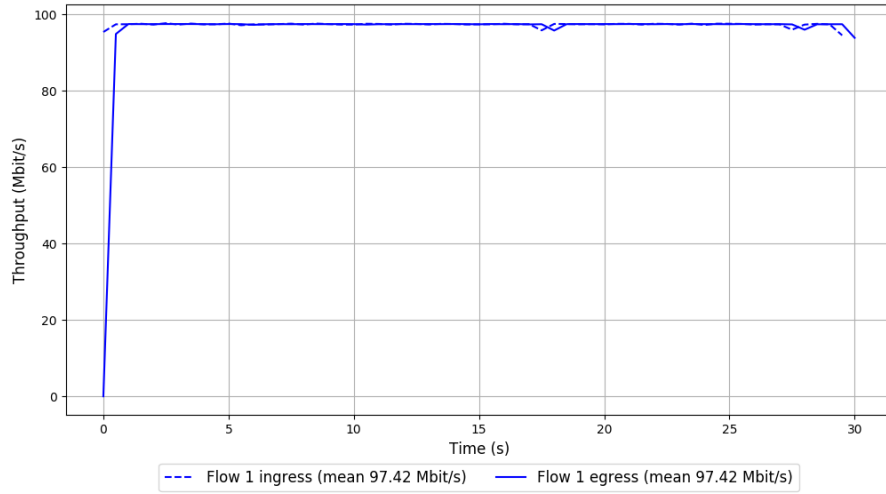
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-12-11 12:15:51
End at: 2019-12-11 12:16:21
Local clock offset: -5.389 ms
Remote clock offset: 0.665 ms

# Below is generated by plot.py at 2019-12-11 13:17:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.23 Mbit/s
95th percentile per-packet one-way delay: 3.721 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.23 Mbit/s
95th percentile per-packet one-way delay: 3.721 ms
Loss rate: 0.02%
```
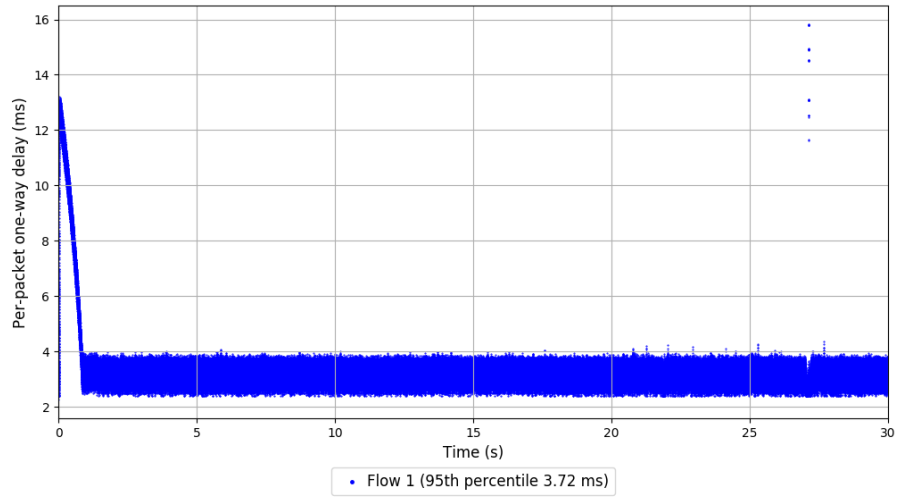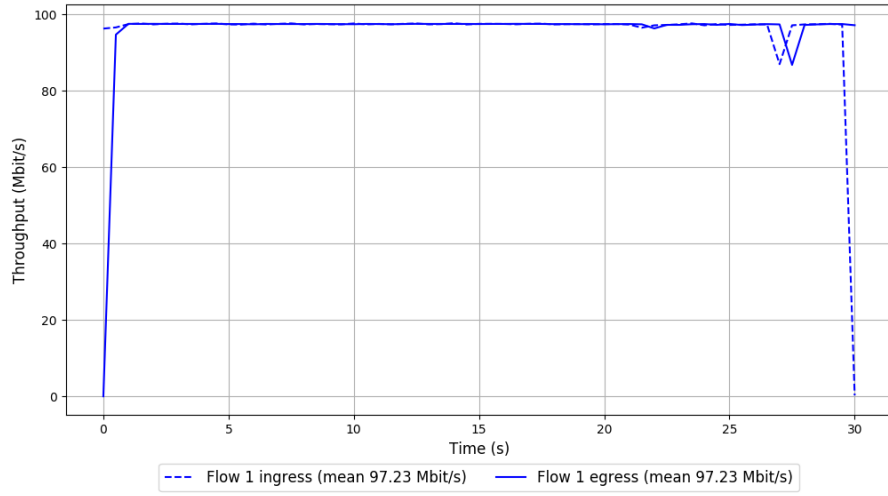
Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 97.23 Mbit/s)   Flow 1 egress (mean 97.23 Mbit/s)

Flow 1 (95th percentile 3.72 ms)

```
Run 5: Statistics of TCP Vegas

Start at: 2019-12-11 12:42:49
End at: 2019-12-11 12:43:19
Local clock offset: -4.926 ms
Remote clock offset: 0.63 ms


# Below is generated by plot.py at 2019-12-11 13:17:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 97.21 Mbit/s
95th percentile per-packet one-way delay: 2.906 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 97.21 Mbit/s
95th percentile per-packet one-way delay: 2.906 ms
Loss rate: 0.02%
```
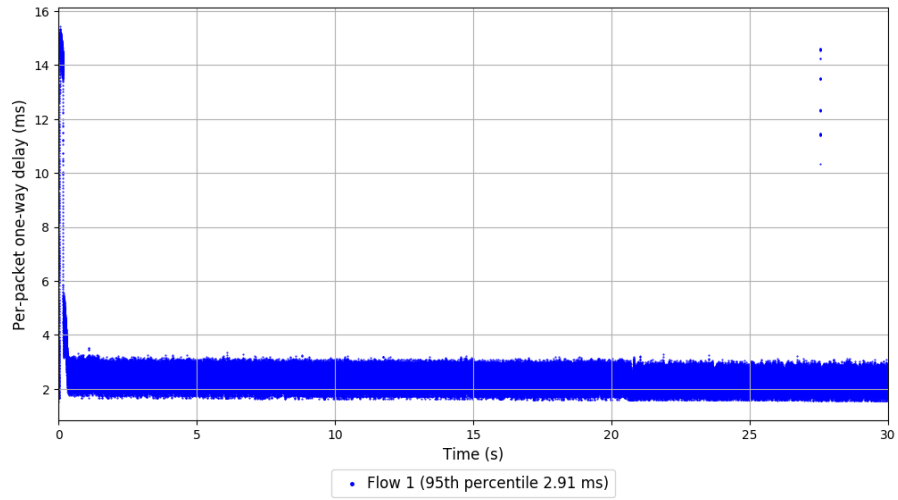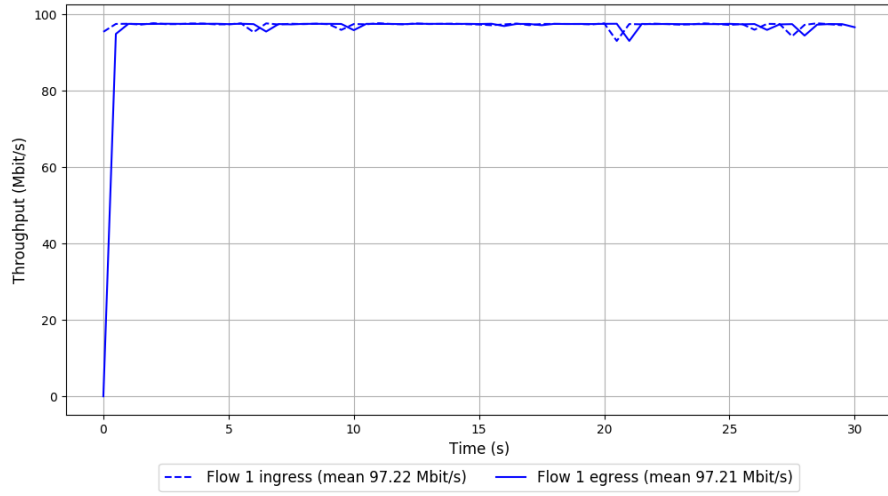
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 97.22 Mbit/s)   —— Flow 1 egress (mean 97.21 Mbit/s)

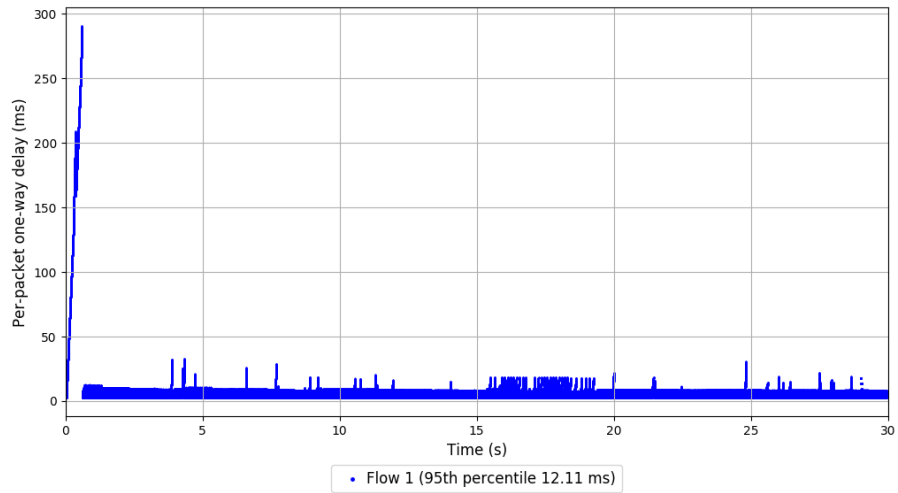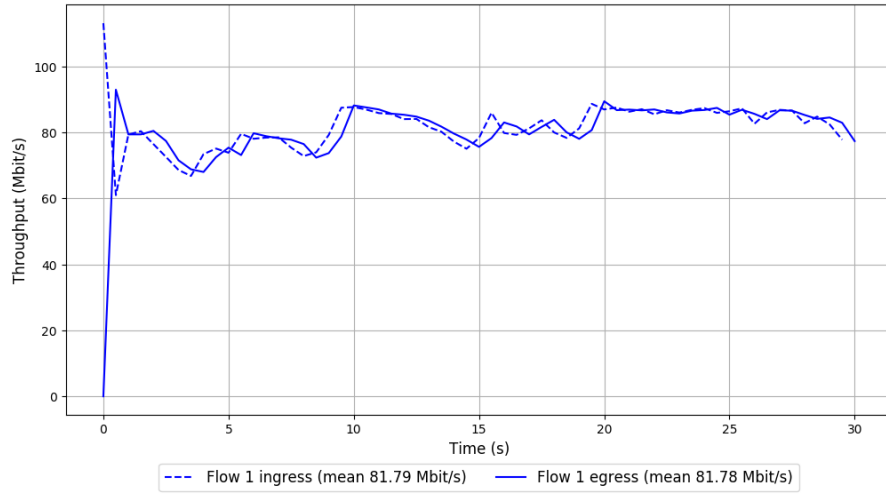

• Flow 1 (95th percentile 2.91 ms)

```
Run 1: Statistics of Verus

Start at: 2019-12-11 10:59:22
End at: 2019-12-11 10:59:52
Local clock offset: -5.346 ms
Remote clock offset: -0.022 ms


# Below is generated by plot.py at 2019-12-11 13:17:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.78 Mbit/s
95th percentile per-packet one-way delay: 12.108 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 81.78 Mbit/s
95th percentile per-packet one-way delay: 12.108 ms
Loss rate: 0.02%
```

Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-12-11 11:26:23
End at: 2019-12-11 11:26:53
Local clock offset: -6.517 ms
Remote clock offset: 0.198 ms


# Below is generated by plot.py at 2019-12-11 13:17:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.89 Mbit/s
95th percentile per-packet one-way delay: 11.136 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 76.89 Mbit/s
95th percentile per-packet one-way delay: 11.136 ms
Loss rate: 0.01%
```
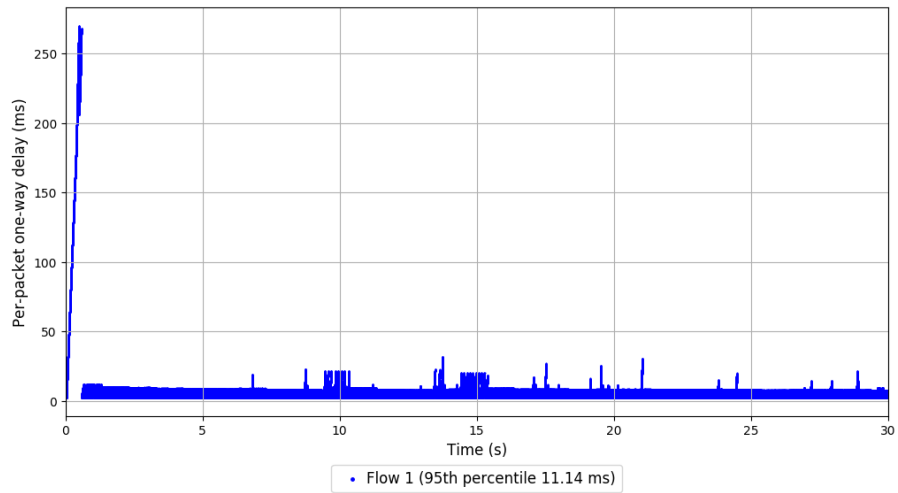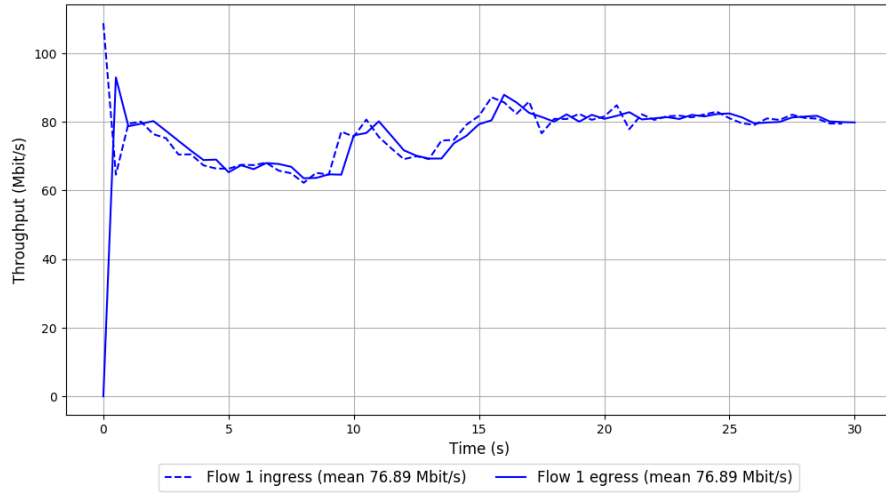
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-12-11 11:53:25
End at: 2019-12-11 11:53:55
Local clock offset: -5.59 ms
Remote clock offset: 0.496 ms


# Below is generated by plot.py at 2019-12-11 13:17:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.11 Mbit/s
95th percentile per-packet one-way delay: 14.183 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 80.11 Mbit/s
95th percentile per-packet one-way delay: 14.183 ms
Loss rate: 0.05%
```
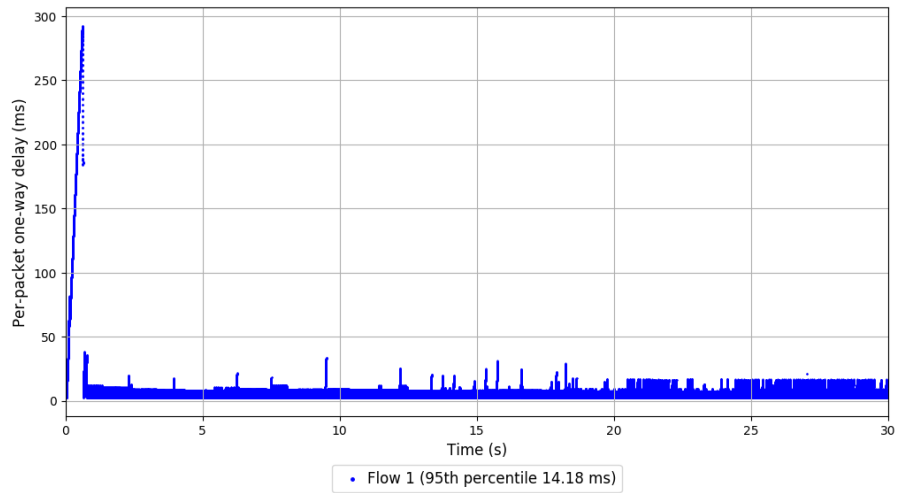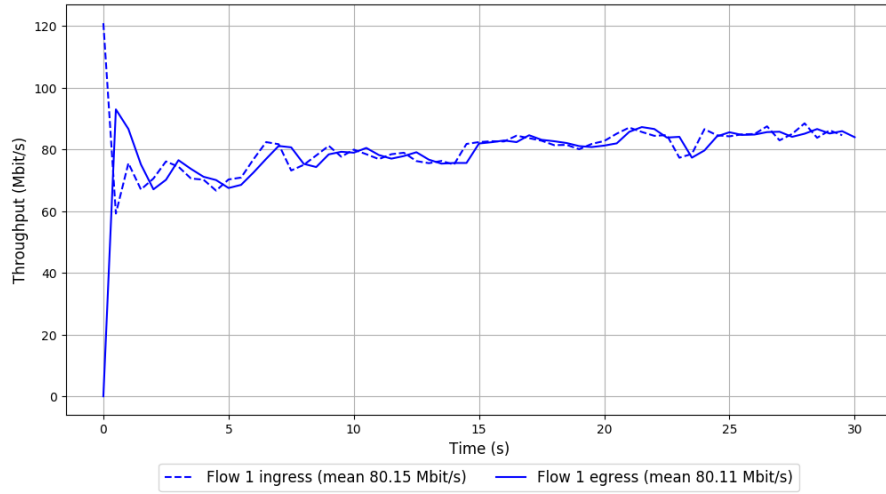
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-12-11 12:20:23
End at: 2019-12-11 12:20:53
Local clock offset: -6.078 ms
Remote clock offset: 0.658 ms


# Below is generated by plot.py at 2019-12-11 13:17:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.70 Mbit/s
95th percentile per-packet one-way delay: 18.377 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 38.70 Mbit/s
95th percentile per-packet one-way delay: 18.377 ms
Loss rate: 0.03%
```
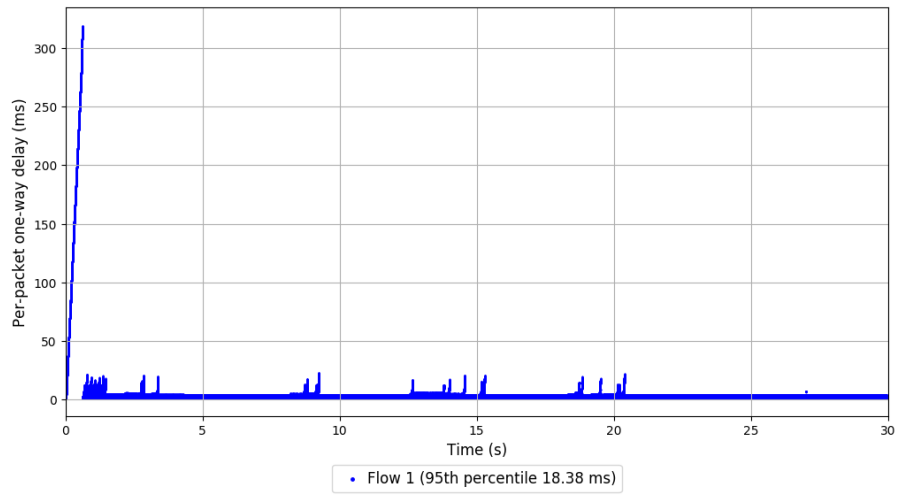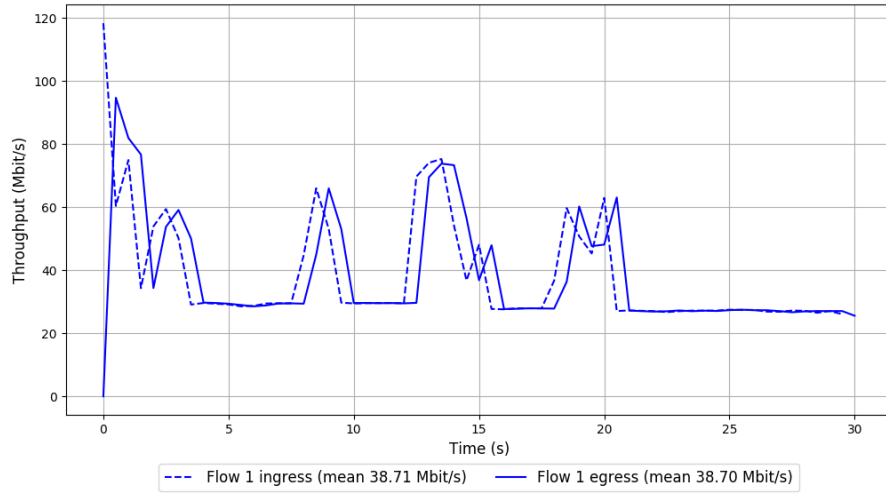
Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 38.71 Mbit/s)　　Flow 1 egress (mean 38.70 Mbit/s)

Flow 1 (95th percentile 18.38 ms)

```
Run 5: Statistics of Verus

Start at: 2019-12-11 12:47:21
End at: 2019-12-11 12:47:51
Local clock offset: -4.073 ms
Remote clock offset: 0.722 ms


# Below is generated by plot.py at 2019-12-11 13:17:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.62 Mbit/s
95th percentile per-packet one-way delay: 12.510 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 78.62 Mbit/s
95th percentile per-packet one-way delay: 12.510 ms
Loss rate: 0.04%
```
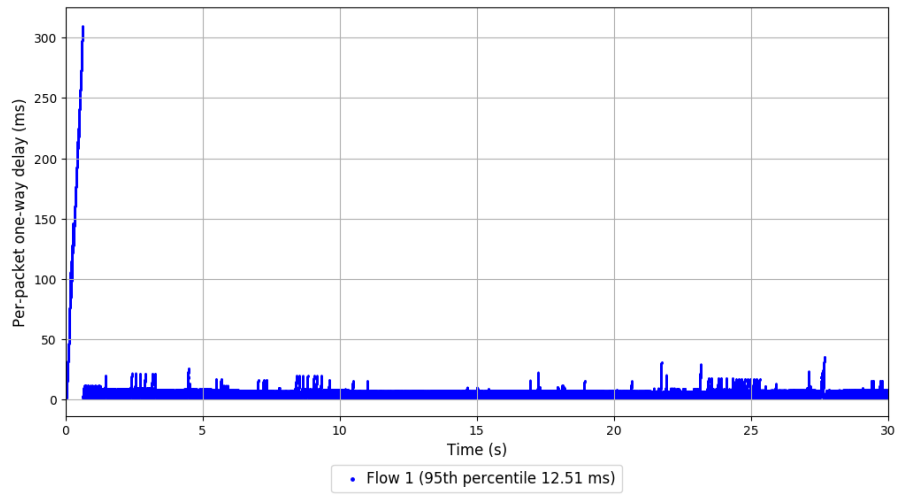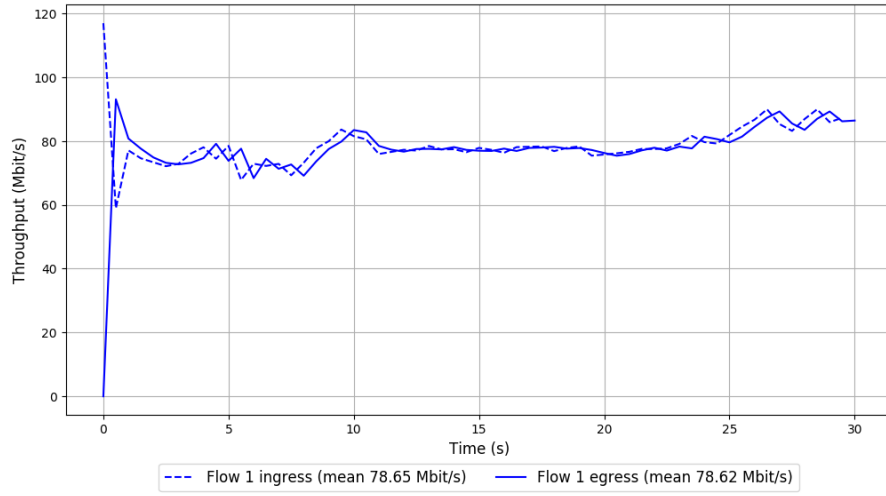
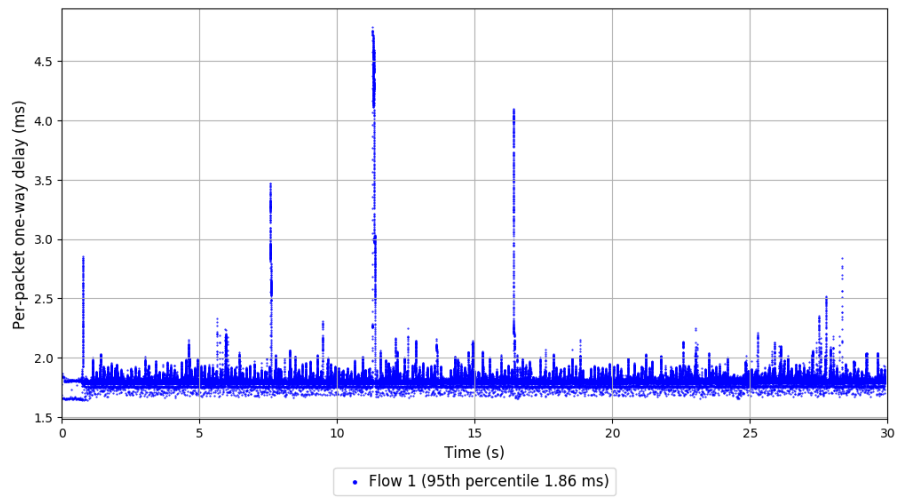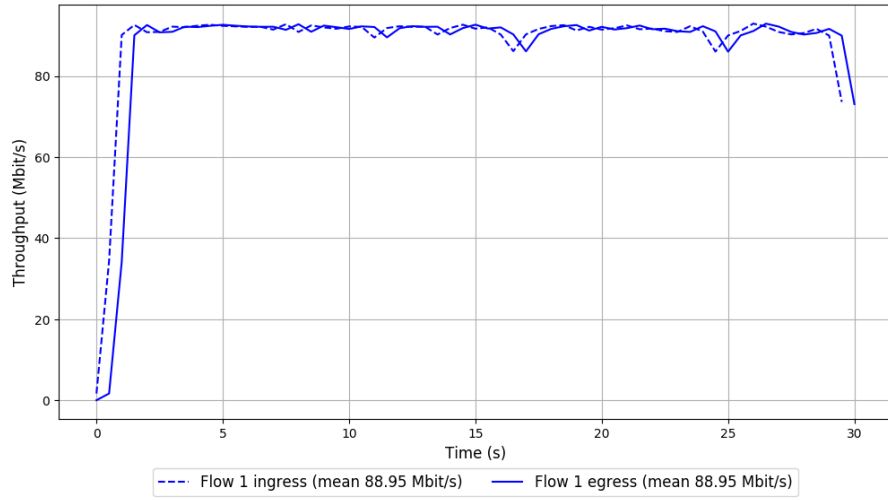## Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-12-11 10:53:41
End at: 2019-12-11 10:54:11
Local clock offset: -6.062 ms
Remote clock offset: -0.174 ms


# Below is generated by plot.py at 2019-12-11 13:18:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.95 Mbit/s
95th percentile per-packet one-way delay: 1.858 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 88.95 Mbit/s
95th percentile per-packet one-way delay: 1.858 ms
Loss rate: 0.02%
```

Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-12-11 11:20:43
End at: 2019-12-11 11:21:13
Local clock offset: -6.259 ms
Remote clock offset: 0.174 ms


# Below is generated by plot.py at 2019-12-11 13:18:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.38 Mbit/s
95th percentile per-packet one-way delay: 2.580 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 89.38 Mbit/s
95th percentile per-packet one-way delay: 2.580 ms
Loss rate: 0.02%
```
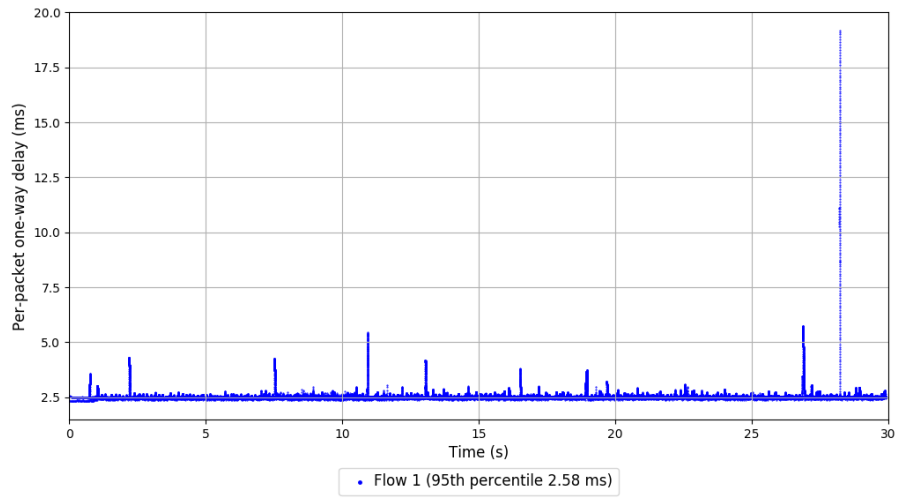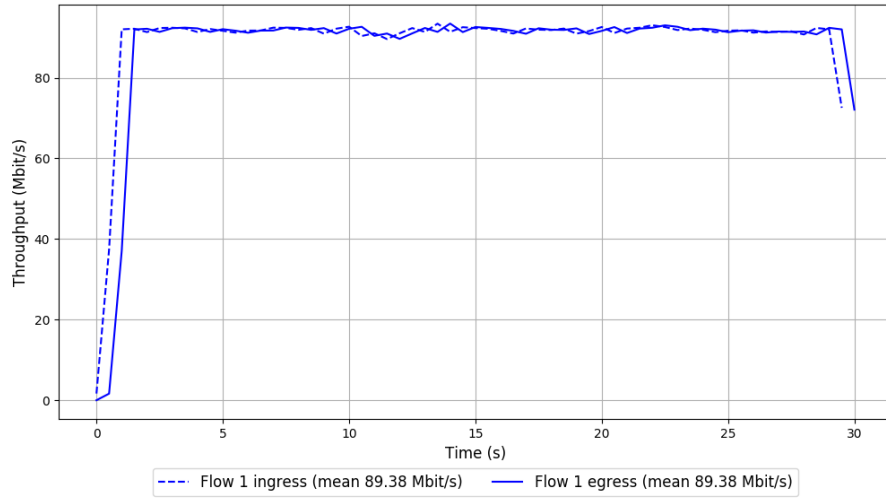
Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-12-11 11:47:48
End at: 2019-12-11 11:48:18
Local clock offset: -5.82 ms
Remote clock offset: 0.464 ms


# Below is generated by plot.py at 2019-12-11 13:18:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 18.75 Mbit/s
95th percentile per-packet one-way delay: 2.395 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 18.75 Mbit/s
95th percentile per-packet one-way delay: 2.395 ms
Loss rate: 0.01%
```
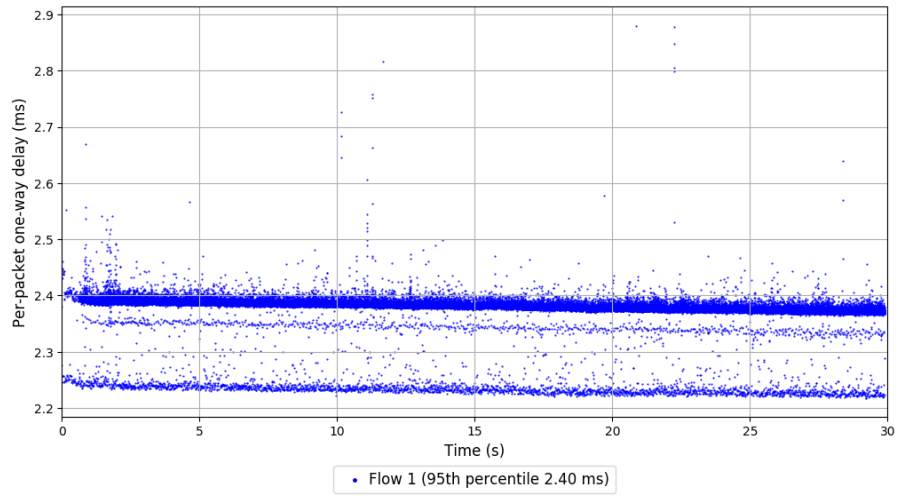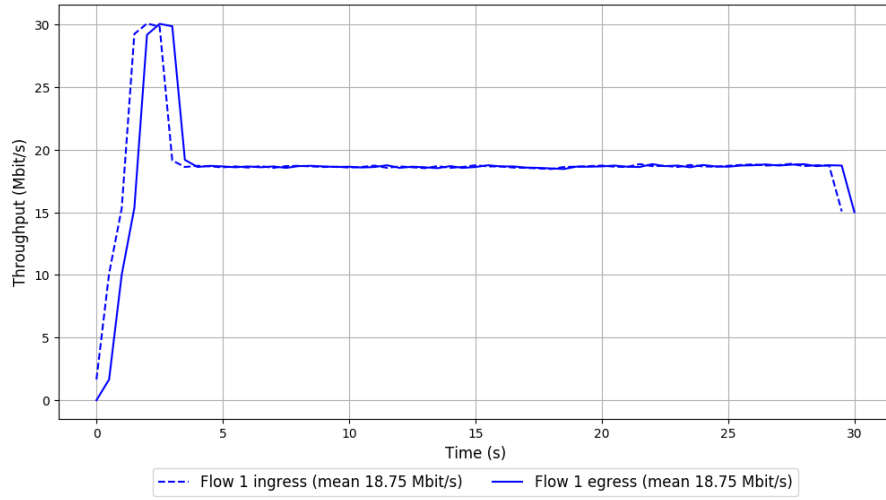
Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-12-11 12:14:46
End at: 2019-12-11 12:15:16
Local clock offset: -5.371 ms
Remote clock offset: 0.68 ms


# Below is generated by plot.py at 2019-12-11 13:18:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 18.19 Mbit/s
95th percentile per-packet one-way delay: 2.400 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 18.19 Mbit/s
95th percentile per-packet one-way delay: 2.400 ms
Loss rate: 0.01%
```
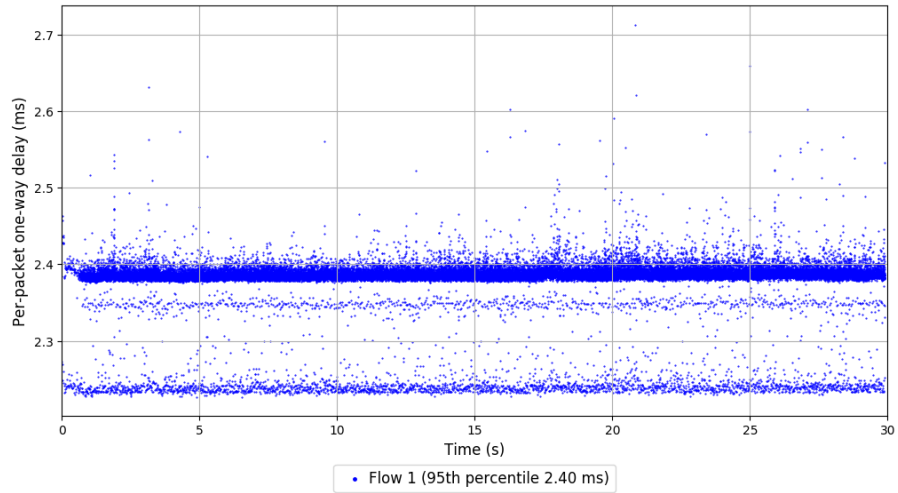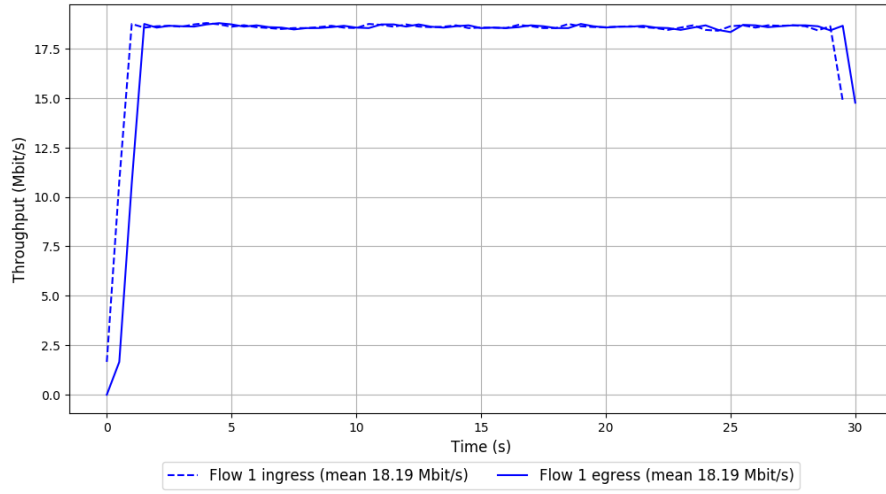
Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 18.19 Mbit/s) ---- Flow 1 egress (mean 18.19 Mbit/s) ——

• Flow 1 (95th percentile 2.40 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-12-11 12:41:44
End at: 2019-12-11 12:42:14
Local clock offset: -5.133 ms
Remote clock offset: 0.677 ms


# Below is generated by plot.py at 2019-12-11 13:18:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 19.94 Mbit/s
95th percentile per-packet one-way delay: 1.642 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 19.94 Mbit/s
95th percentile per-packet one-way delay: 1.642 ms
Loss rate: 0.01%
```
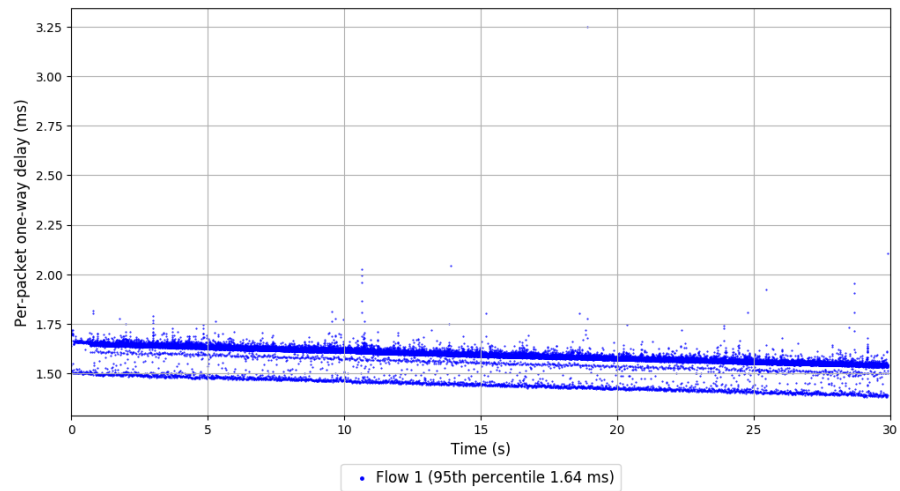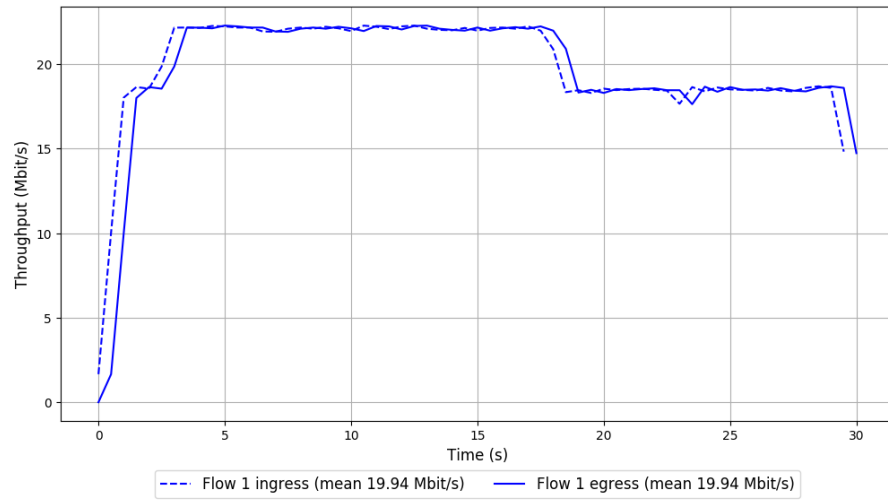
Run 5: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 19.94 Mbit/s)   Flow 1 egress (mean 19.94 Mbit/s)
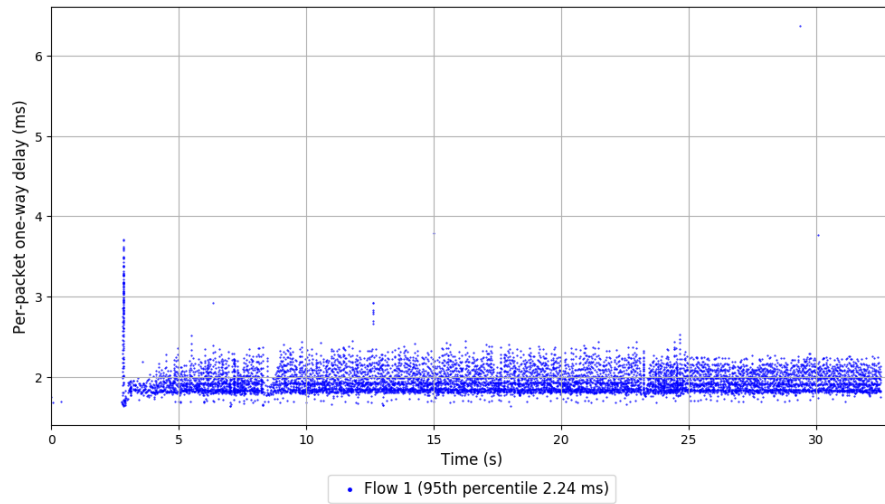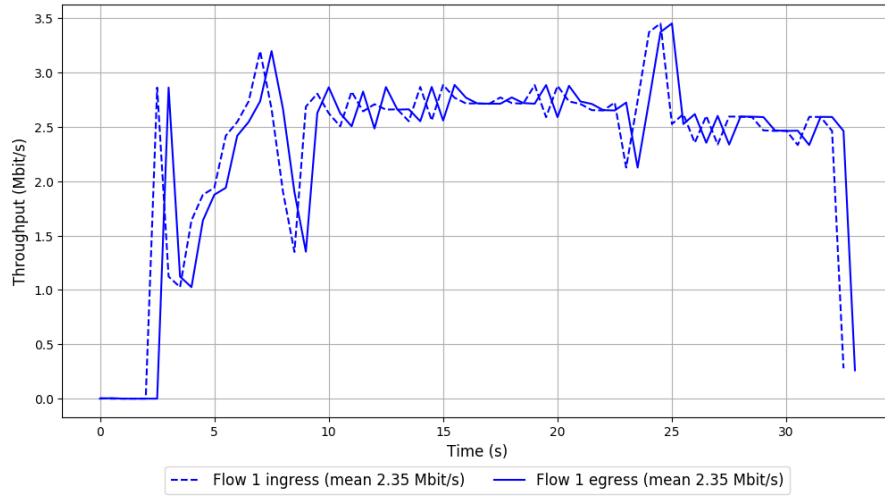

Flow 1 (95th percentile 1.64 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2019-12-11 11:00:30
End at: 2019-12-11 11:01:00
Local clock offset: -6.035 ms
Remote clock offset: -0.087 ms


# Below is generated by plot.py at 2019-12-11 13:18:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 2.238 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 2.238 ms
Loss rate: 0.01%
```

Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-12-11 11:27:32
End at: 2019-12-11 11:28:02
Local clock offset: -7.193 ms
Remote clock offset: 0.256 ms


# Below is generated by plot.py at 2019-12-11 13:18:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 2.174 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 2.174 ms
Loss rate: 0.00%
```
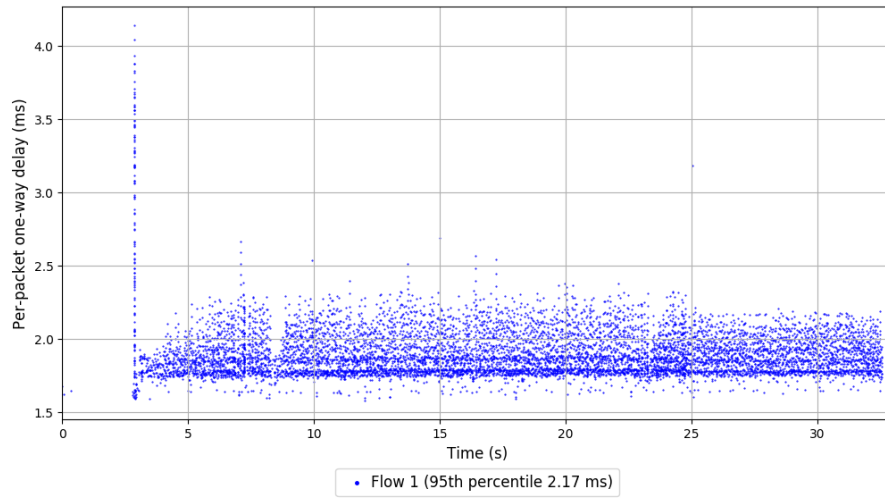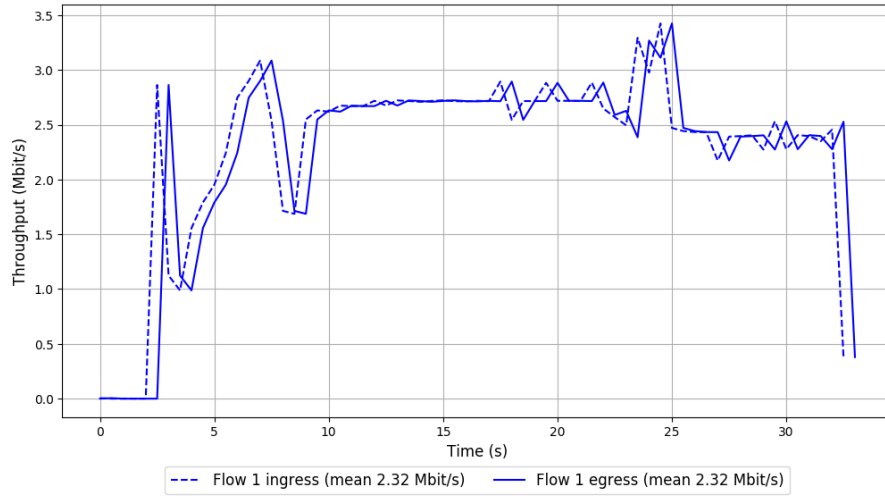
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-12-11 11:54:33
End at: 2019-12-11 11:55:03
Local clock offset: -6.252 ms
Remote clock offset: 0.56 ms


# Below is generated by plot.py at 2019-12-11 13:18:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 2.123 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 2.123 ms
Loss rate: 0.00%
```
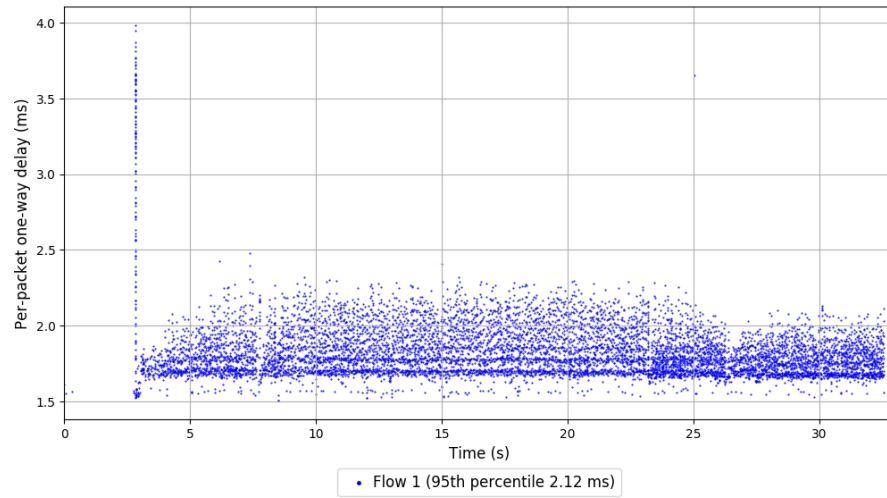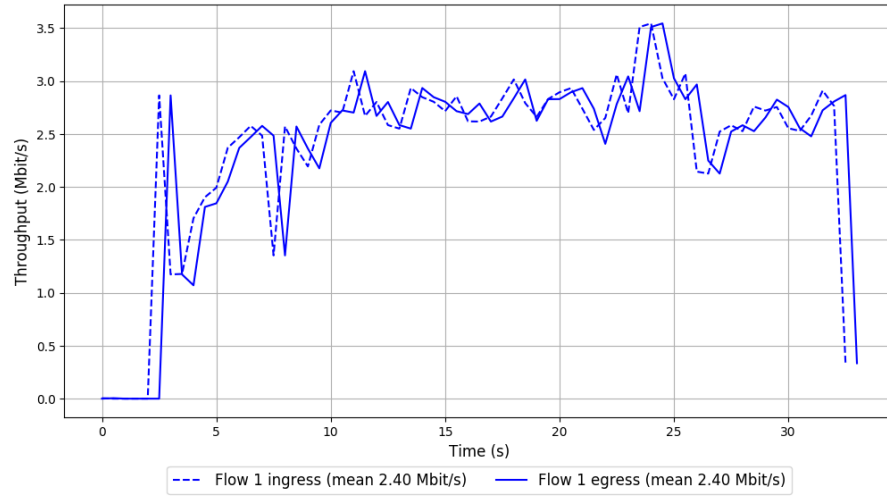
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-12-11 12:21:29
End at: 2019-12-11 12:21:59
Local clock offset: -6.075 ms
Remote clock offset: 0.686 ms


# Below is generated by plot.py at 2019-12-11 13:18:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 2.148 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 2.148 ms
Loss rate: 0.08%
```
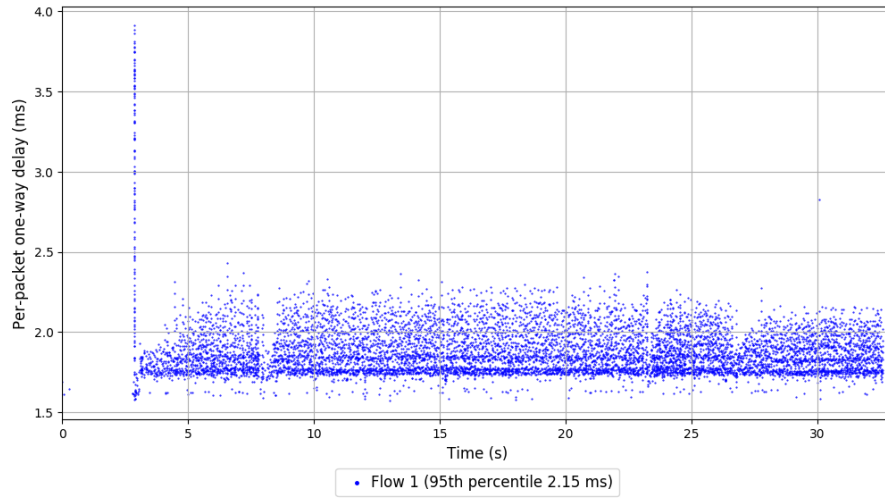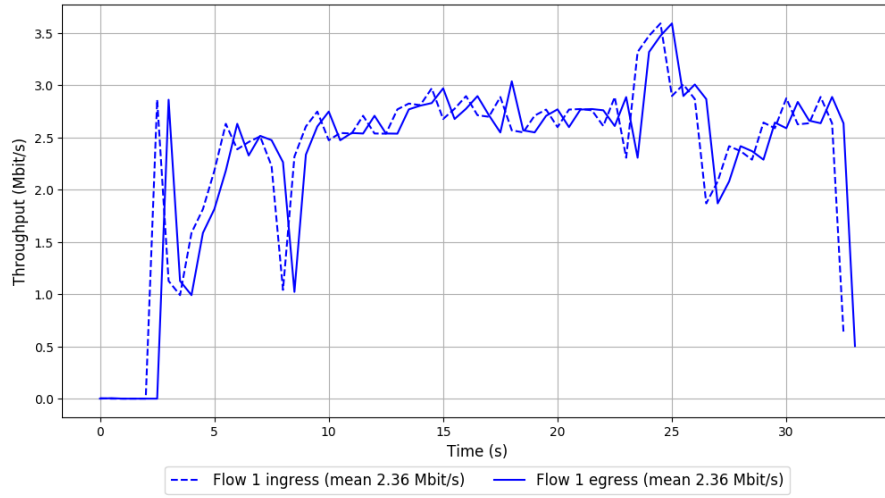
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-12-11 12:48:29
End at: 2019-12-11 12:48:59
Local clock offset: -3.207 ms
Remote clock offset: 0.666 ms


# Below is generated by plot.py at 2019-12-11 13:18:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 2.866 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 2.866 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.35 Mbit/s)   Flow 1 egress (mean 2.35 Mbit/s)

Flow 1 (95th percentile 2.87 ms)