Pantheon Report

Generated at 2019-10-02 20:02:18 (UTC).

Data path: AWS India 1 on `ens5` (*local*) →India on `em1` (*remote*).

Repeated the test of 24 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

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

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

```
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```
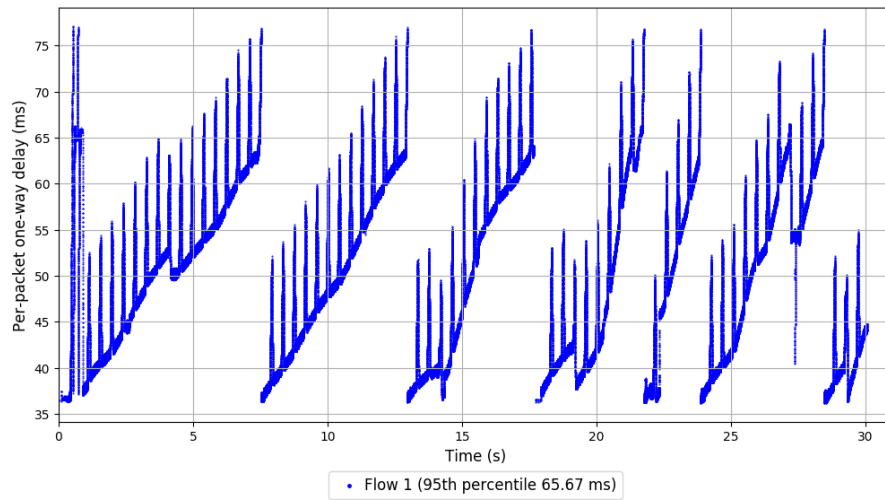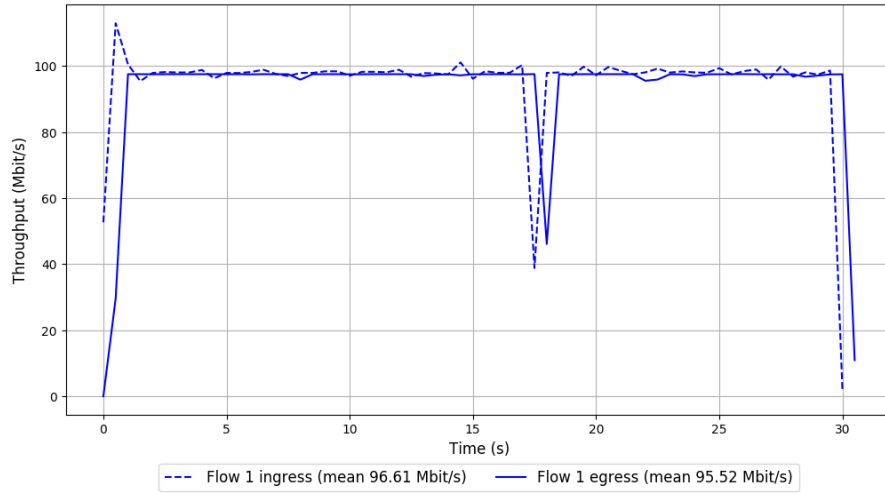
test from AWS India 1 to India, 5 runs of 30s each per scheme
(mean of all runs by scheme)

test from AWS India 1 to India, 5 runs of 30s each per scheme

Legend:
- FillP-Sheep
- Indigo
- Sprout
- Indigo-MusesD
- Indigo-MusesT
- Muses_DecisionTree
- Verus
- PCC-Allegro
- WebRTC media
- LEDBAT
- Copa
- QUIC Cubic
- TCP Cubic
- PCC-Vivace
- TCP Vegas
- TaoVA-100x
- Muses_DecisionTreeR0
- FillP
- TCP BBR
- Indigo-MusesC5
- Muses_DecisionTreeH0
- SCReAM
- Indigo-MusesC3

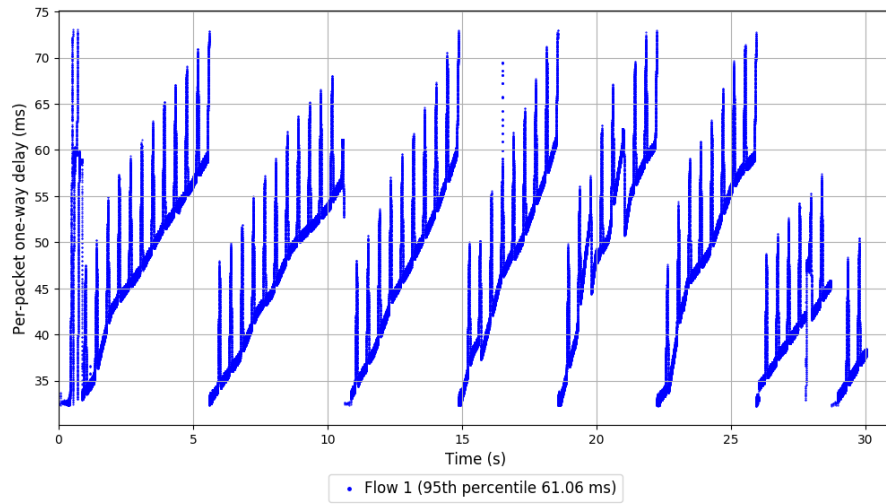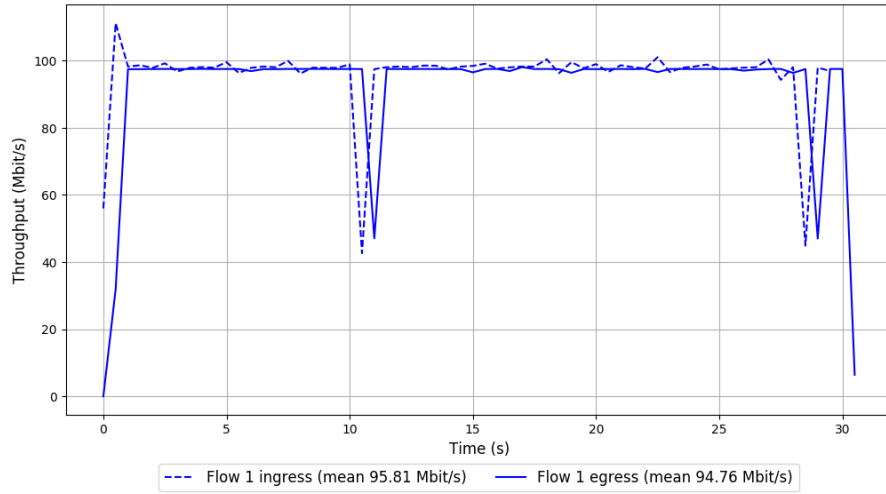| scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	95.74	60.47	1.16
Copa	5	12.64	31.53	72.02
TCP Cubic	5	73.32	58.82	0.35
FillP	5	95.89	41.07	0.54
FillP-Sheep	5	93.07	37.74	0.45
Indigo	5	95.37	35.55	0.01
Indigo-MusesC3	5	96.51	36.73	0.04
Indigo-MusesC5	5	96.08	35.21	0.12
Indigo-MusesD	5	96.15	34.21	0.06
Indigo-MusesT	5	96.43	39.44	0.34
LEDBAT	5	36.35	34.53	0.09
Muses_DecisionTree	5	94.96	37.06	0.03
Muses_DecisionTreeH0	5	95.67	40.31	0.06
Muses_DecisionTreeR0	5	95.89	37.57	0.03
PCC-Allegro	5	90.72	37.96	0.55
PCC-Expr	0	N/A	N/A	N/A
QUIC Cubic	5	77.83	63.87	0.93
SCReAM	5	0.22	31.27	0.00
Sprout	5	15.92	35.73	0.04
TaoVA-100x	5	11.94	32.24	70.11
TCP Vegas	5	55.30	41.64	0.31
Verus	5	64.35	60.77	21.74
PCC-Vivace	5	85.52	32.59	0.02
WebRTC media	5	0.05	34.80	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-10-02 17:51:16
End at: 2019-10-02 17:51:46
Local clock offset: -4.347 ms
Remote clock offset: -1.095 ms


# Below is generated by plot.py at 2019-10-02 19:50:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 65.666 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 65.666 ms
Loss rate: 1.10%
```
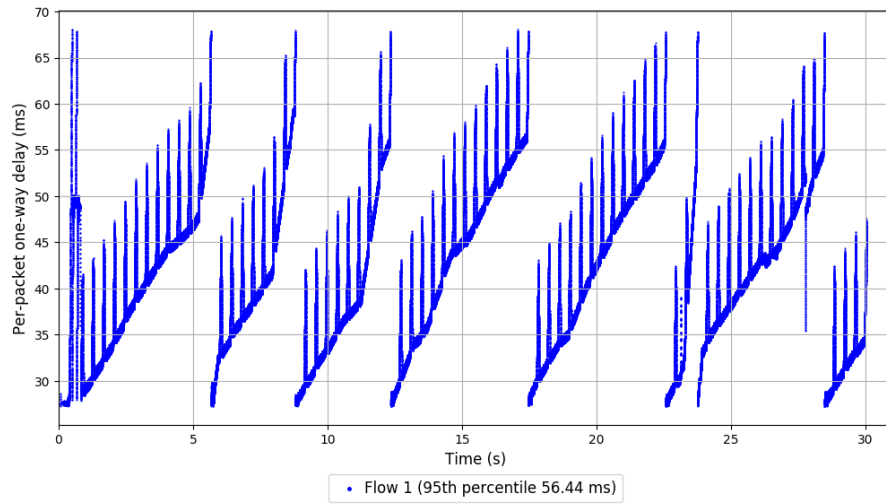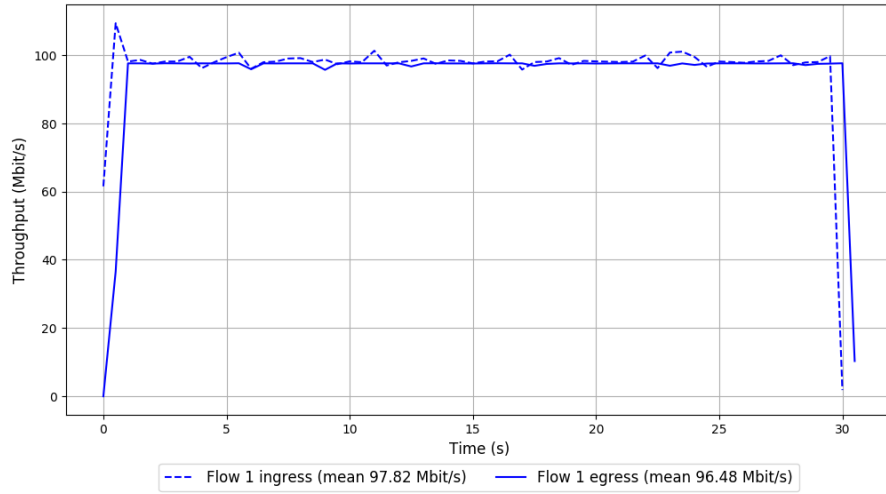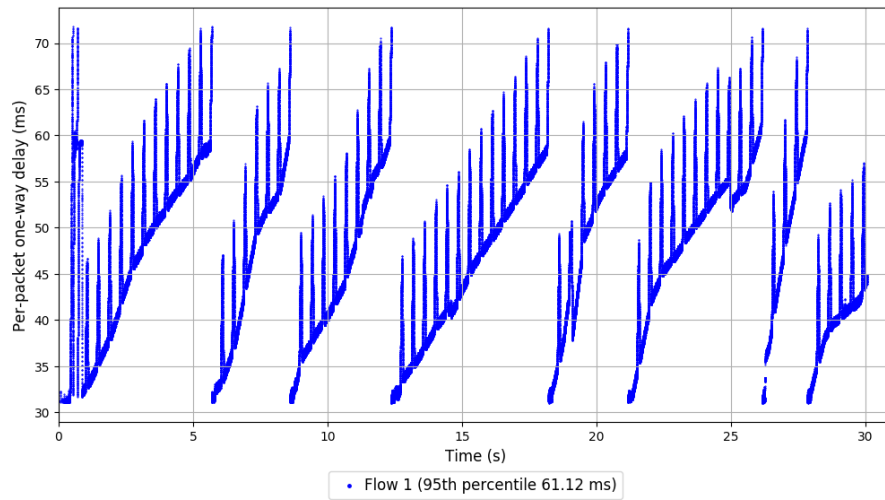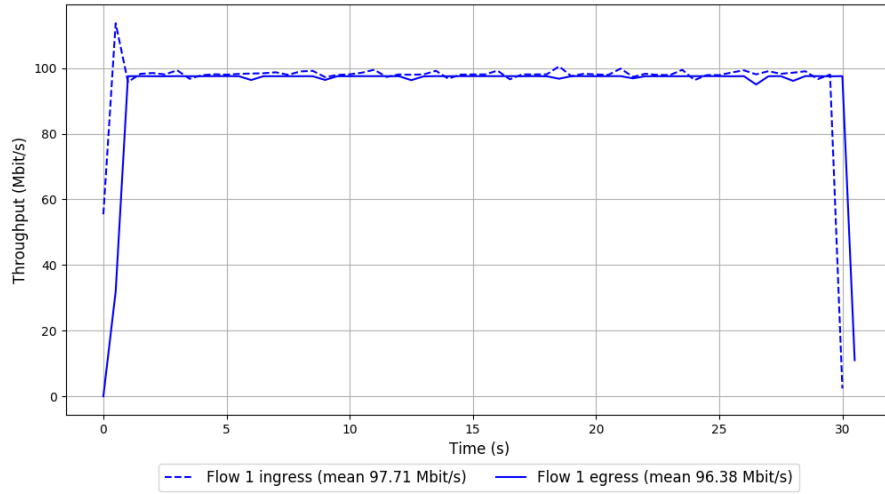
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-10-02 18:19:39
End at: 2019-10-02 18:20:09
Local clock offset: -6.738 ms
Remote clock offset: -1.486 ms

# Below is generated by plot.py at 2019-10-02 19:50:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.76 Mbit/s
95th percentile per-packet one-way delay: 61.062 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 94.76 Mbit/s
95th percentile per-packet one-way delay: 61.062 ms
Loss rate: 1.08%
```
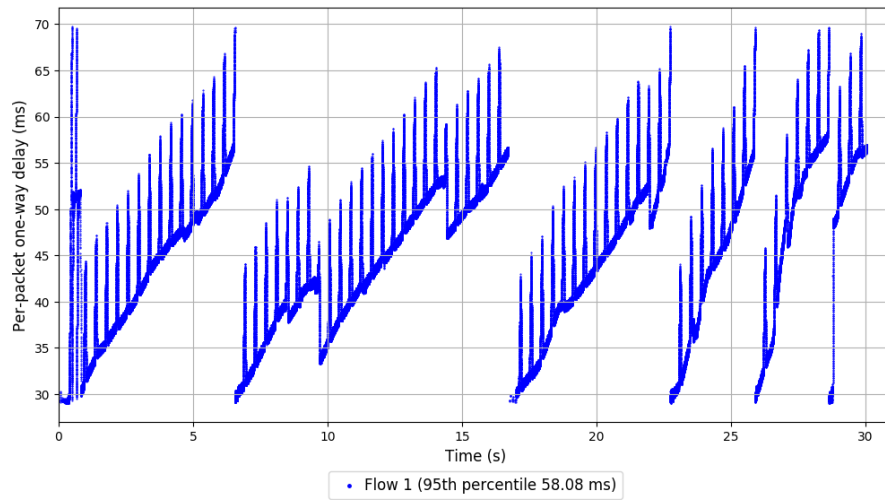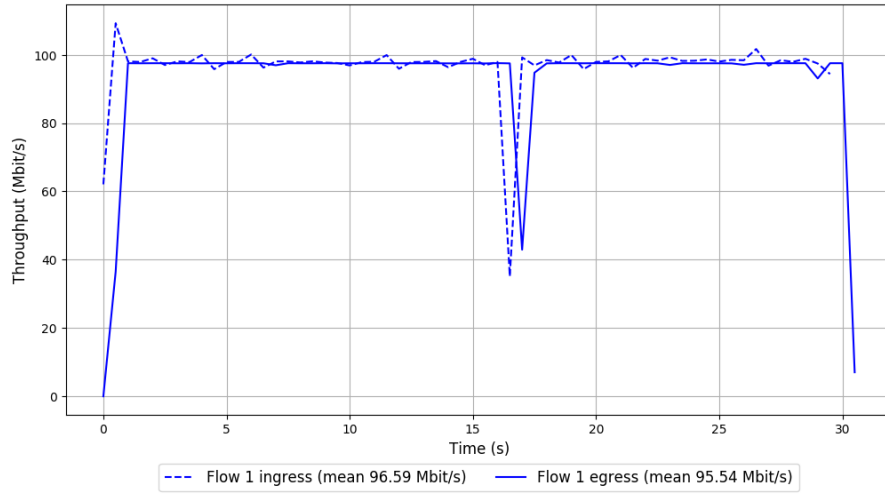
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 95.81 Mbit/s)   Flow 1 egress (mean 94.76 Mbit/s)

Flow 1 (95th percentile 61.06 ms)

```
Run 3: Statistics of TCP BBR

Start at: 2019-10-02 18:48:00
End at: 2019-10-02 18:48:30
Local clock offset: -1.665 ms
Remote clock offset: -1.552 ms


# Below is generated by plot.py at 2019-10-02 19:50:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.48 Mbit/s
95th percentile per-packet one-way delay: 56.436 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 96.48 Mbit/s
95th percentile per-packet one-way delay: 56.436 ms
Loss rate: 1.32%
```
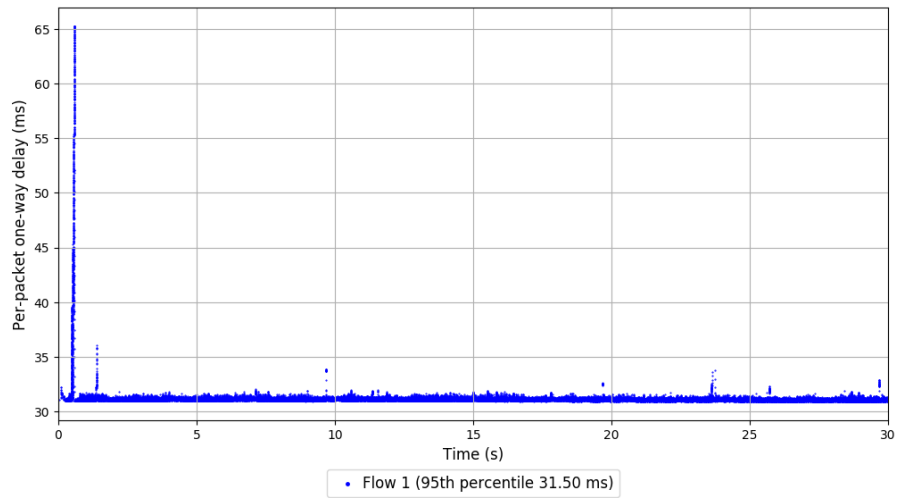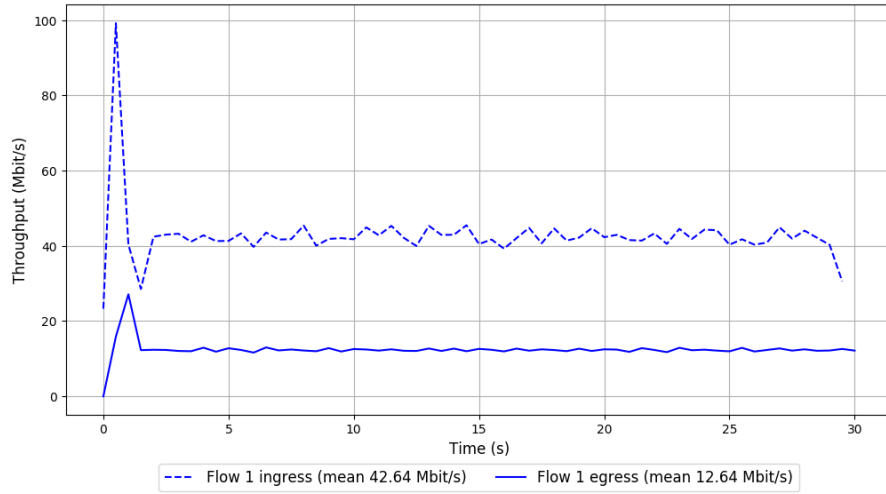
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 97.82 Mbit/s) — — —   Flow 1 egress (mean 96.48 Mbit/s) ———

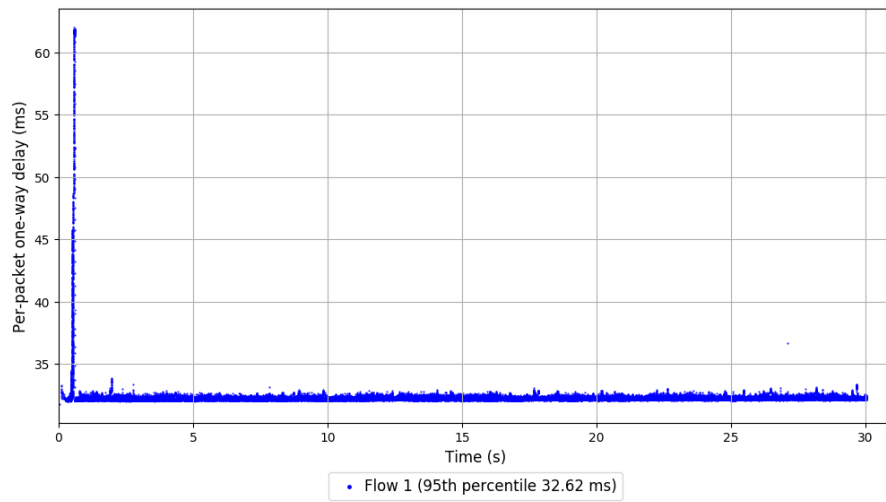• Flow 1 (95th percentile 56.44 ms)

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```
Run 4: Statistics of TCP BBR

Start at: 2019-10-02 19:16:19
End at: 2019-10-02 19:16:49
Local clock offset: -3.122 ms
Remote clock offset: -1.881 ms


# Below is generated by plot.py at 2019-10-02 19:50:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.38 Mbit/s
95th percentile per-packet one-way delay: 61.119 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 96.38 Mbit/s
95th percentile per-packet one-way delay: 61.119 ms
Loss rate: 1.32%
```
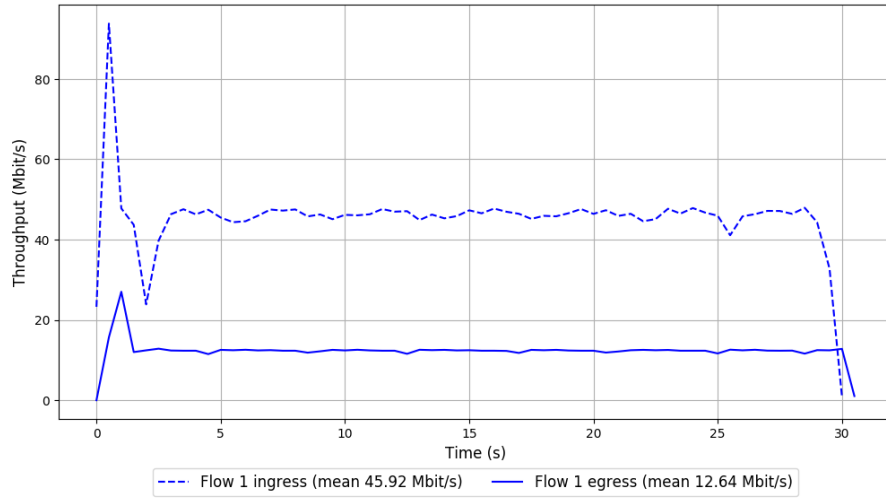
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 97.71 Mbit/s)   Flow 1 egress (mean 96.38 Mbit/s)
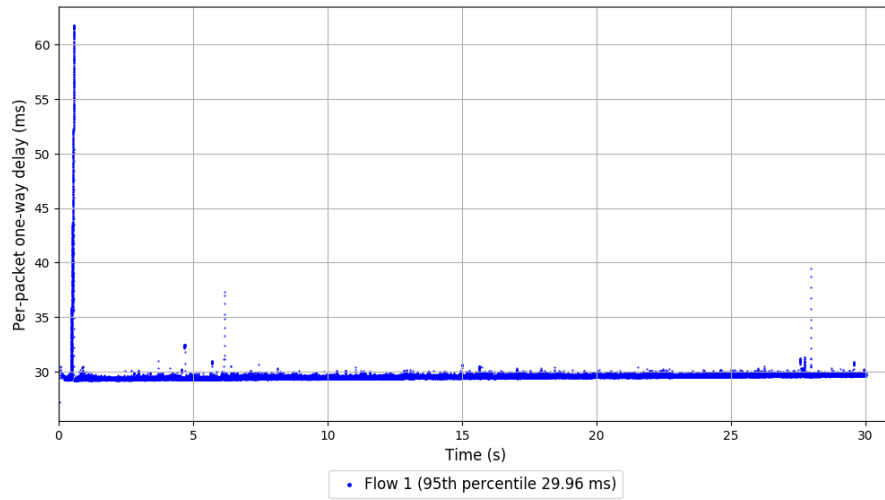

• Flow 1 (95th percentile 61.12 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2019-10-02 19:44:41
End at: 2019-10-02 19:45:11
Local clock offset: 2.252 ms
Remote clock offset: -1.775 ms


# Below is generated by plot.py at 2019-10-02 19:50:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.54 Mbit/s
95th percentile per-packet one-way delay: 58.084 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 95.54 Mbit/s
95th percentile per-packet one-way delay: 58.084 ms
Loss rate: 1.00%
```
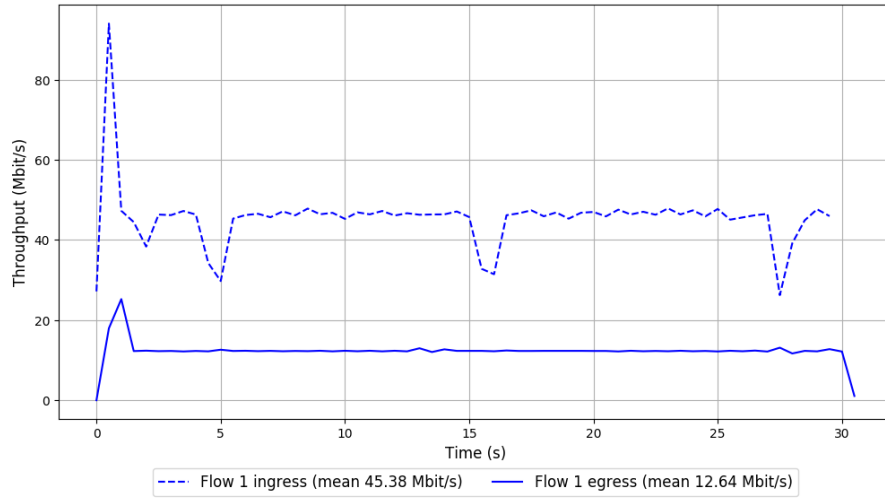
Run 5: Report of TCP BBR — Data Link

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```
Run 1: Statistics of Copa

Start at: 2019-10-02 17:29:56
End at: 2019-10-02 17:30:26
Local clock offset: 5.13 ms
Remote clock offset: -2.34 ms

# Below is generated by plot.py at 2019-10-02 19:50:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.64 Mbit/s
95th percentile per-packet one-way delay: 31.501 ms
Loss rate: 70.37%
-- Flow 1:
Average throughput: 12.64 Mbit/s
95th percentile per-packet one-way delay: 31.501 ms
Loss rate: 70.37%
```
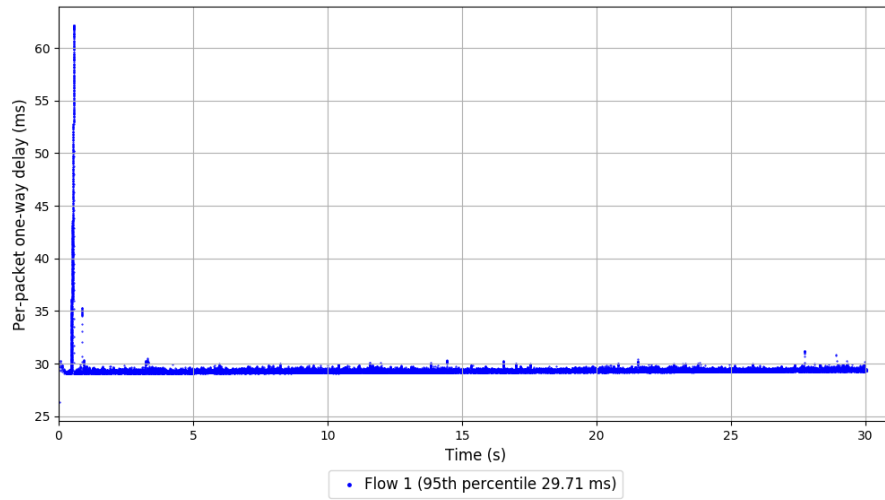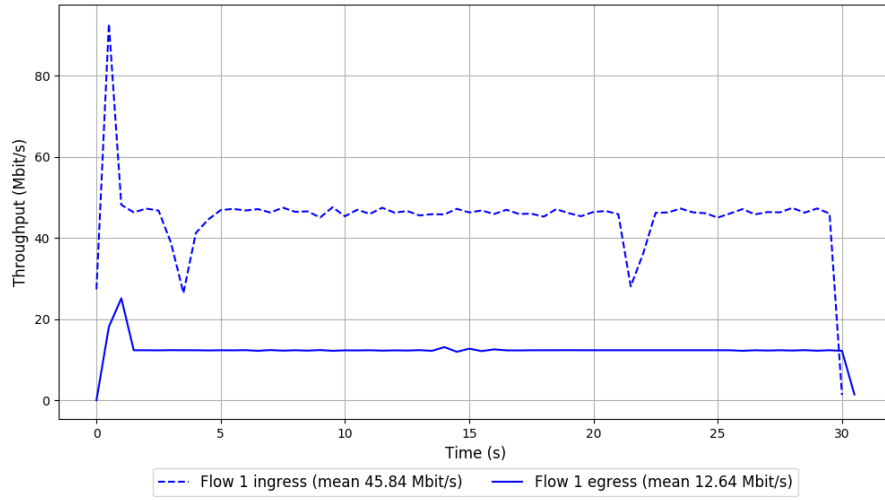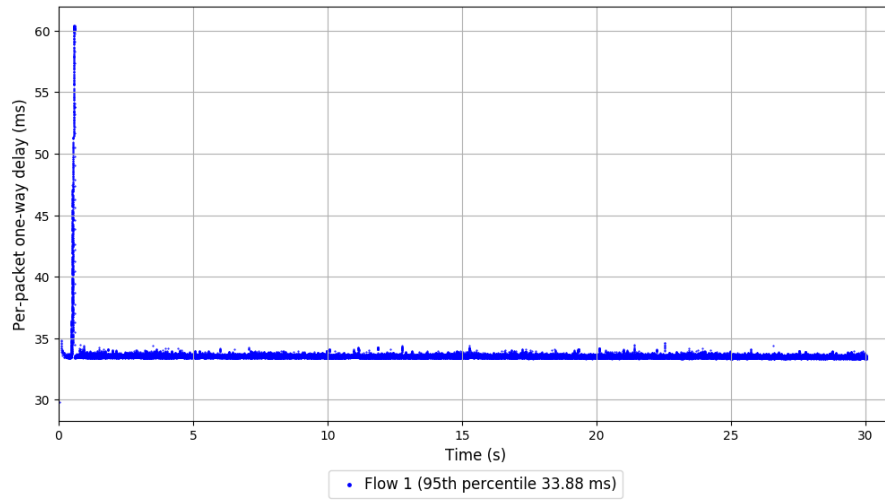
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 42.64 Mbit/s)   Flow 1 egress (mean 12.64 Mbit/s)

• Flow 1 (95th percentile 31.50 ms)

```
Run 2: Statistics of Copa

Start at: 2019-10-02 17:58:16
End at: 2019-10-02 17:58:46
Local clock offset: -2.348 ms
Remote clock offset: -3.108 ms


# Below is generated by plot.py at 2019-10-02 19:50:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.64 Mbit/s
95th percentile per-packet one-way delay: 32.625 ms
Loss rate: 72.48%
-- Flow 1:
Average throughput: 12.64 Mbit/s
95th percentile per-packet one-way delay: 32.625 ms
Loss rate: 72.48%
```

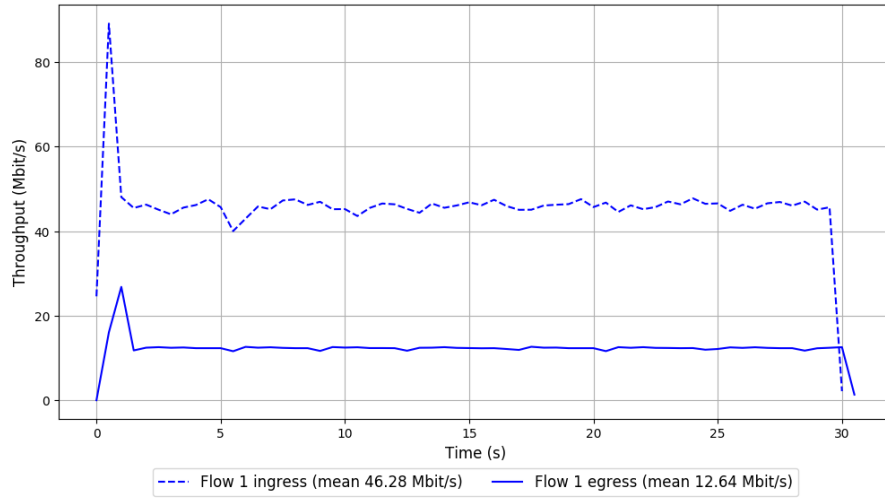Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2019-10-02 18:26:51
End at: 2019-10-02 18:27:21
Local clock offset: -4.296 ms
Remote clock offset: -2.504 ms


# Below is generated by plot.py at 2019-10-02 19:50:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.64 Mbit/s
95th percentile per-packet one-way delay: 29.960 ms
Loss rate: 72.14%
-- Flow 1:
Average throughput: 12.64 Mbit/s
95th percentile per-packet one-way delay: 29.960 ms
Loss rate: 72.14%
```
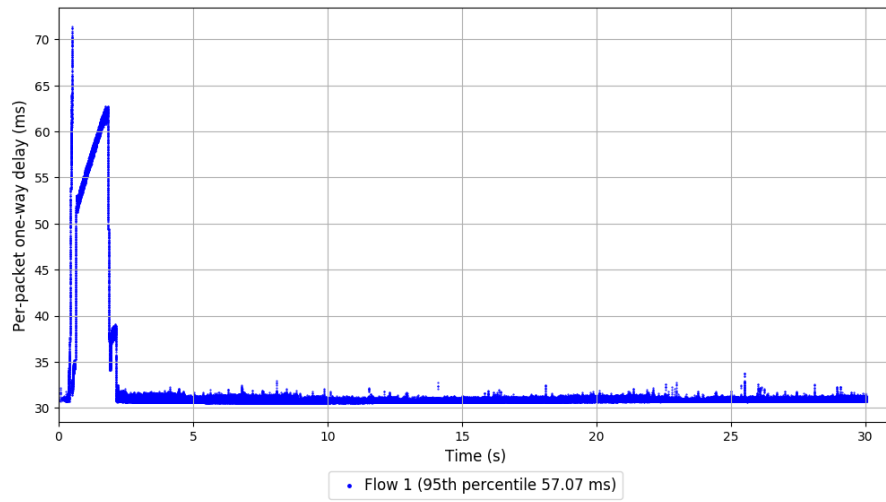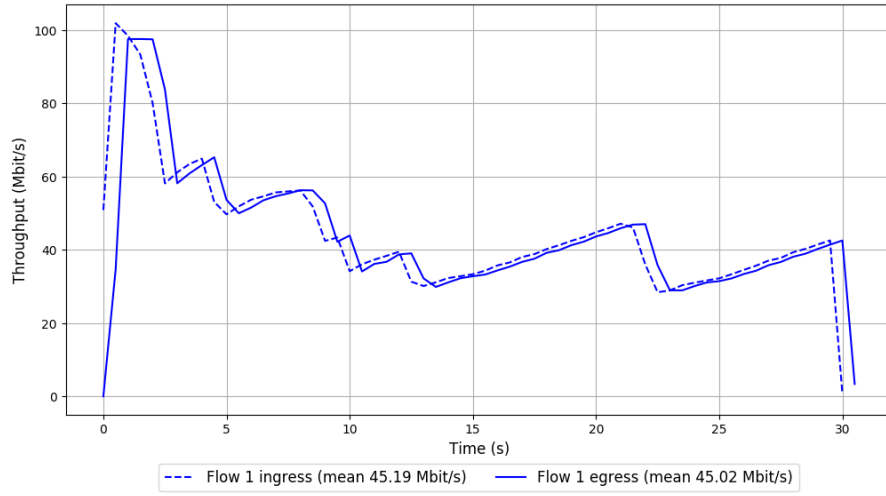
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 45.38 Mbit/s)   Flow 1 egress (mean 12.64 Mbit/s)

Flow 1 (95th percentile 29.96 ms)

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```
Run 4: Statistics of Copa

Start at: 2019-10-02 18:54:57
End at: 2019-10-02 18:55:27
Local clock offset: -2.249 ms
Remote clock offset: -1.972 ms


# Below is generated by plot.py at 2019-10-02 19:50:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.64 Mbit/s
95th percentile per-packet one-way delay: 29.708 ms
Loss rate: 72.42%
-- Flow 1:
Average throughput: 12.64 Mbit/s
95th percentile per-packet one-way delay: 29.708 ms
Loss rate: 72.42%
```
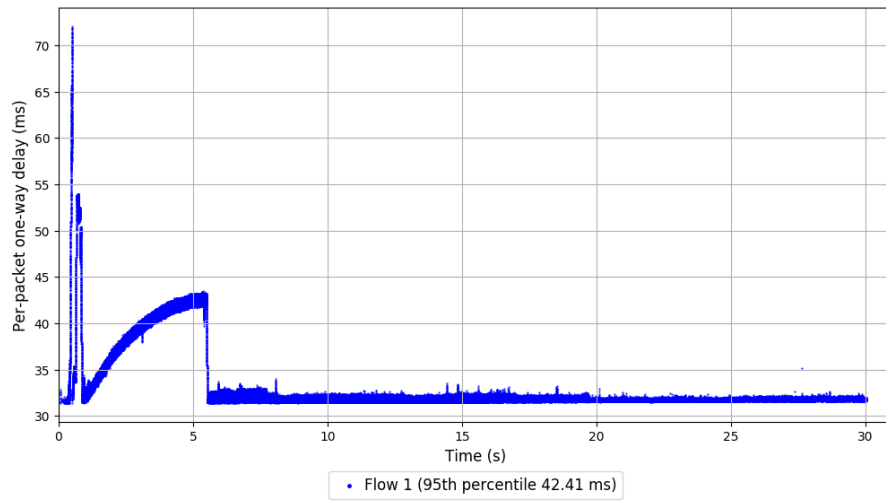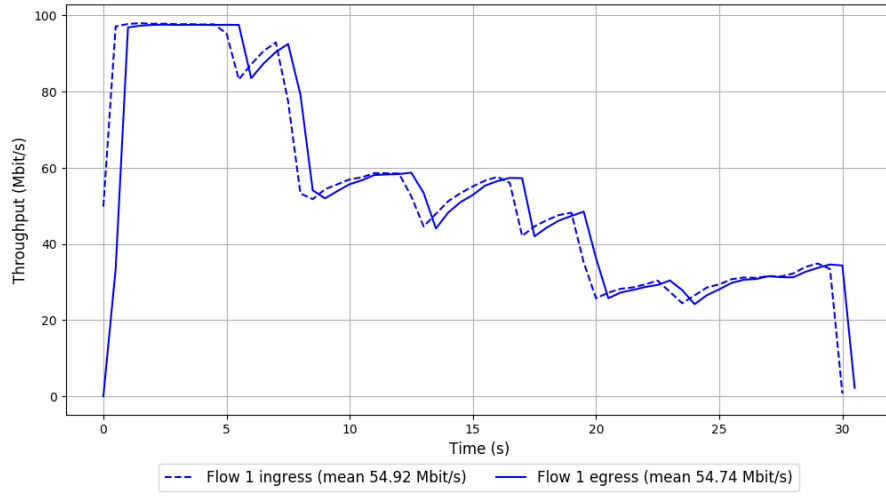
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 45.84 Mbit/s)   Flow 1 egress (mean 12.64 Mbit/s)

Flow 1 (95th percentile 29.71 ms)

```
Run 5: Statistics of Copa

Start at: 2019-10-02 19:23:29
End at: 2019-10-02 19:23:59
Local clock offset: -4.605 ms
Remote clock offset: -0.935 ms


# Below is generated by plot.py at 2019-10-02 19:50:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.64 Mbit/s
95th percentile per-packet one-way delay: 33.875 ms
Loss rate: 72.69%
-- Flow 1:
Average throughput: 12.64 Mbit/s
95th percentile per-packet one-way delay: 33.875 ms
Loss rate: 72.69%
```
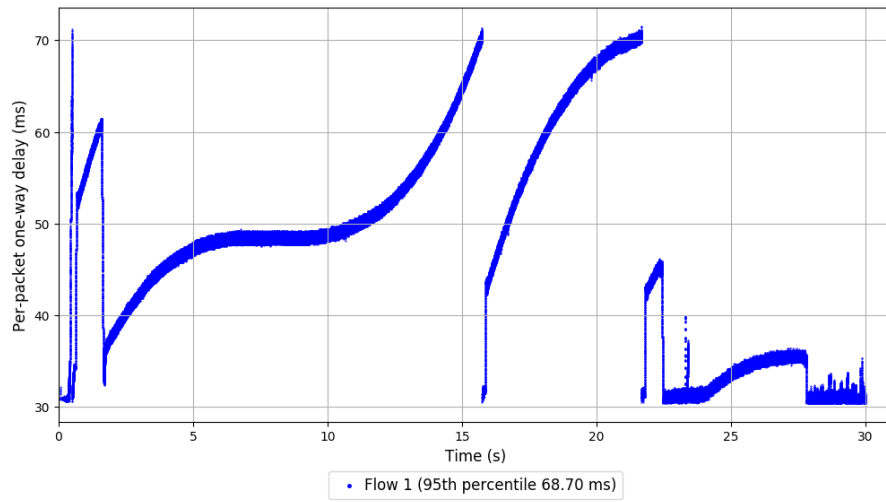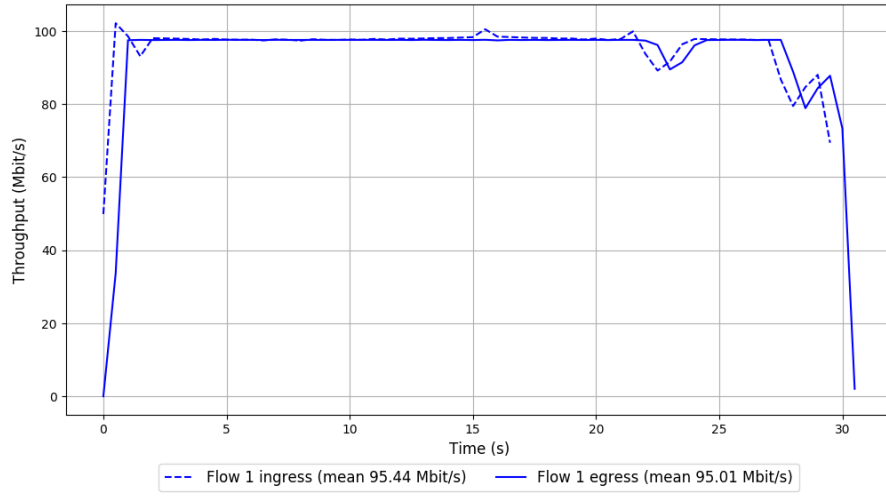
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 46.28 Mbit/s)   Flow 1 egress (mean 12.64 Mbit/s)
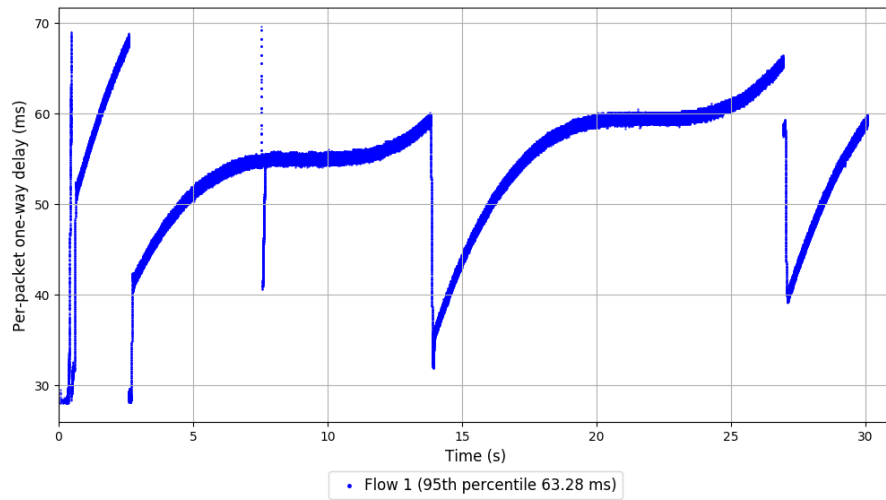

Flow 1 (95th percentile 33.88 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-10-02 17:26:32
End at: 2019-10-02 17:27:02
Local clock offset: 4.354 ms
Remote clock offset: -3.189 ms


# Below is generated by plot.py at 2019-10-02 19:50:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 45.02 Mbit/s
95th percentile per-packet one-way delay: 57.072 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 45.02 Mbit/s
95th percentile per-packet one-way delay: 57.072 ms
Loss rate: 0.38%
```
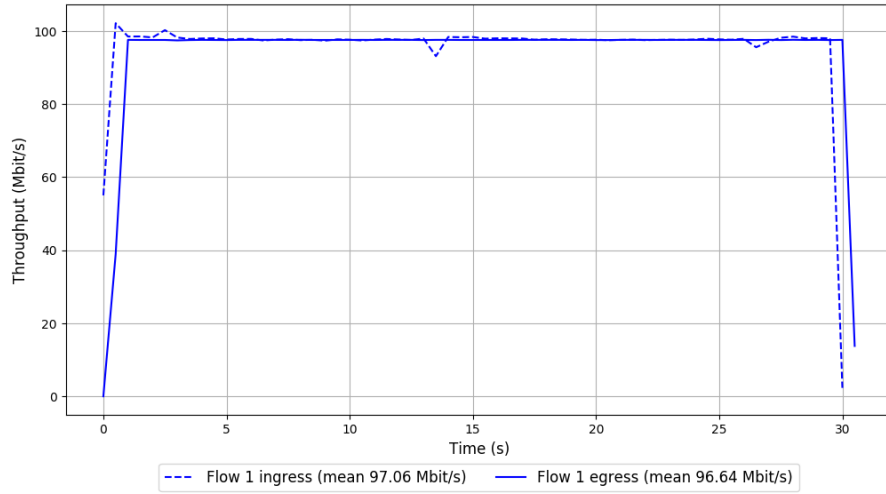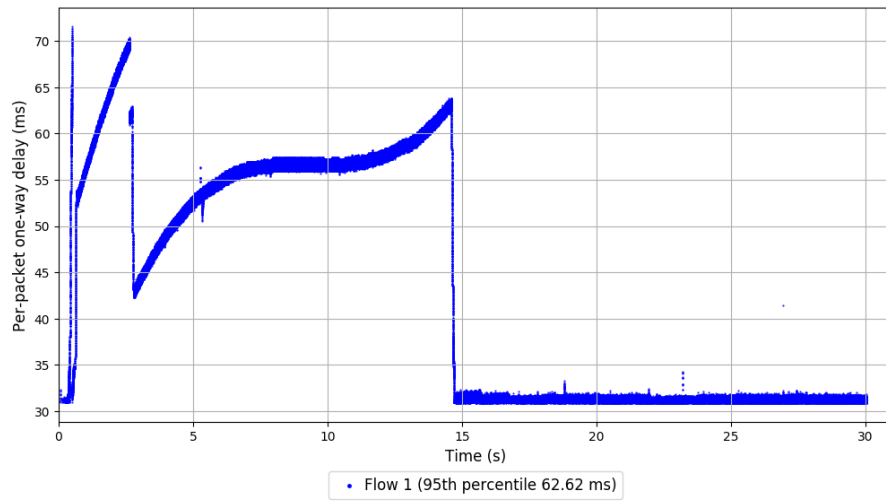
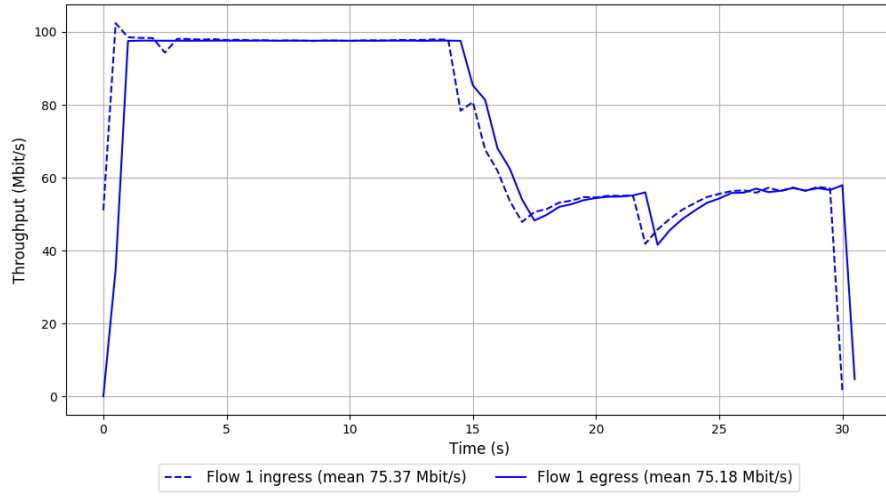Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-10-02 17:54:51
End at: 2019-10-02 17:55:21
Local clock offset: -1.176 ms
Remote clock offset: -1.514 ms


# Below is generated by plot.py at 2019-10-02 19:50:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 54.74 Mbit/s
95th percentile per-packet one-way delay: 42.410 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 54.74 Mbit/s
95th percentile per-packet one-way delay: 42.410 ms
Loss rate: 0.33%
```

Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-10-02 18:23:20
End at: 2019-10-02 18:23:50
Local clock offset: -6.654 ms
Remote clock offset: -2.46 ms


# Below is generated by plot.py at 2019-10-02 19:51:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 68.703 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 68.703 ms
Loss rate: 0.45%
```
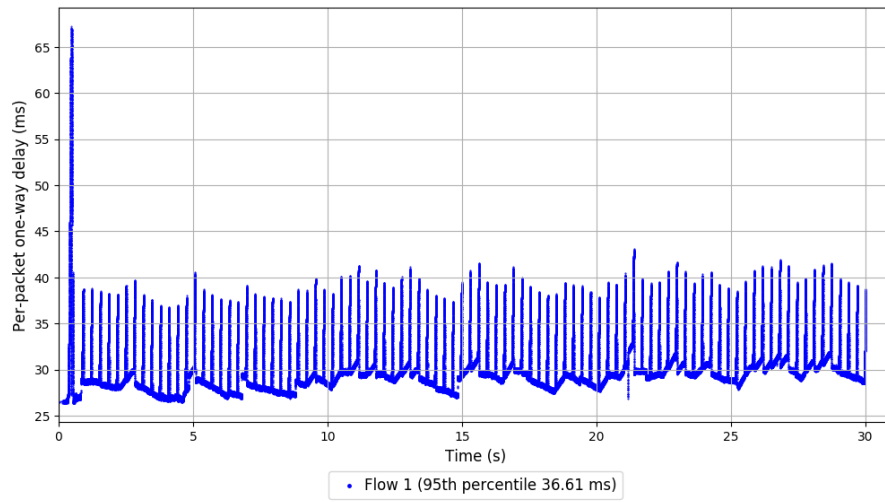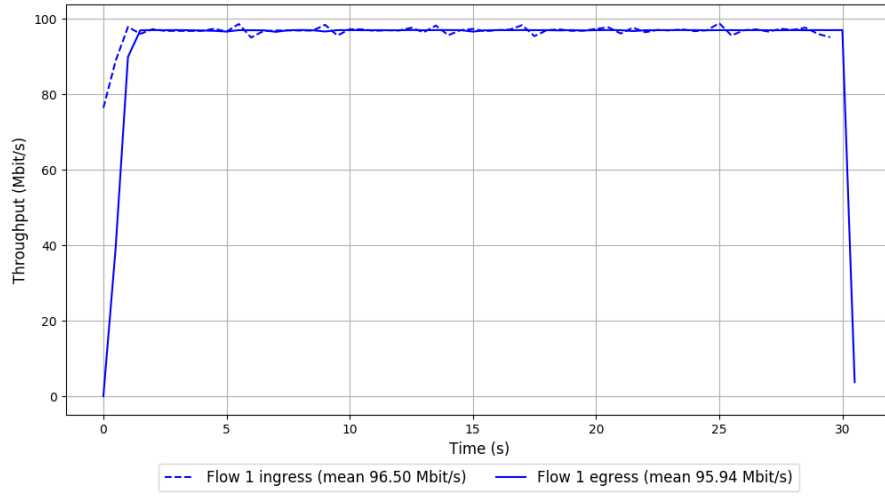
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2019-10-02 18:51:30
End at: 2019-10-02 18:52:01
Local clock offset: -2.002 ms
Remote clock offset: -0.421 ms


# Below is generated by plot.py at 2019-10-02 19:51:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.64 Mbit/s
95th percentile per-packet one-way delay: 63.285 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 96.64 Mbit/s
95th percentile per-packet one-way delay: 63.285 ms
Loss rate: 0.33%
```
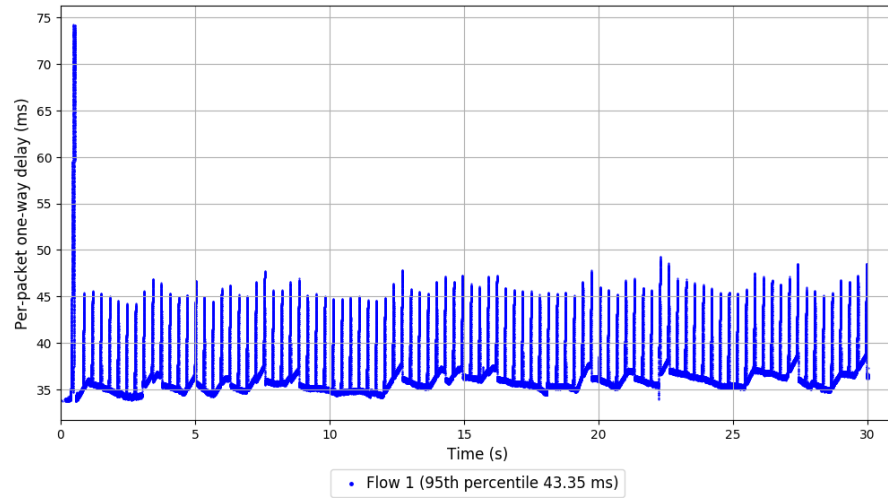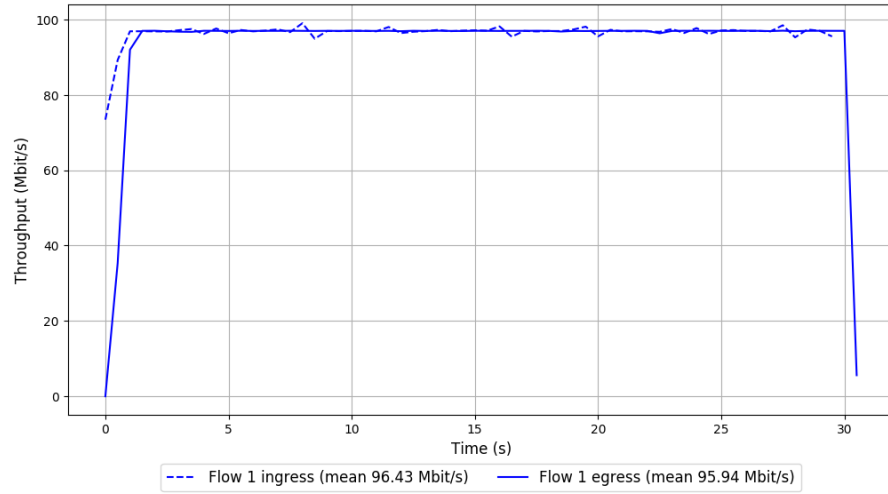
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 97.06 Mbit/s) ----   Flow 1 egress (mean 96.64 Mbit/s) ——

Flow 1 (95th percentile 63.28 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-10-02 19:19:58
End at: 2019-10-02 19:20:28
Local clock offset: -1.763 ms
Remote clock offset: -0.186 ms


# Below is generated by plot.py at 2019-10-02 19:51:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.18 Mbit/s
95th percentile per-packet one-way delay: 62.625 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 75.18 Mbit/s
95th percentile per-packet one-way delay: 62.625 ms
Loss rate: 0.26%
```

Run 5: Report of TCP Cubic — Data Link
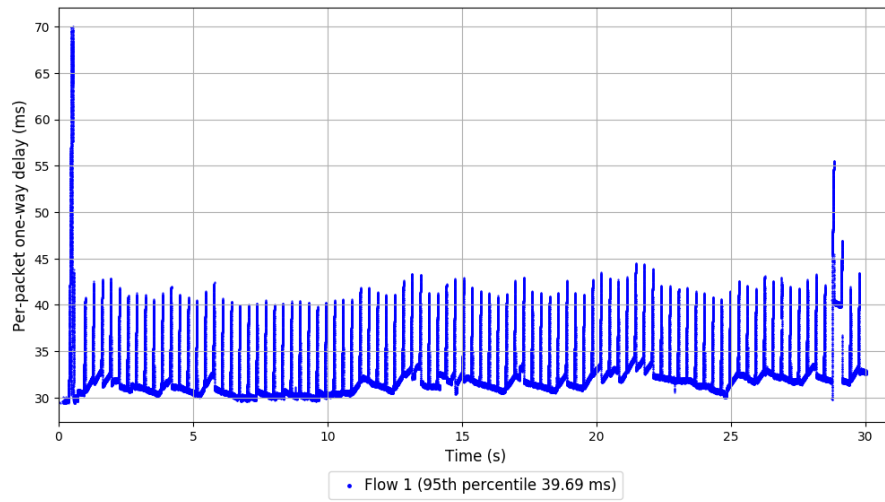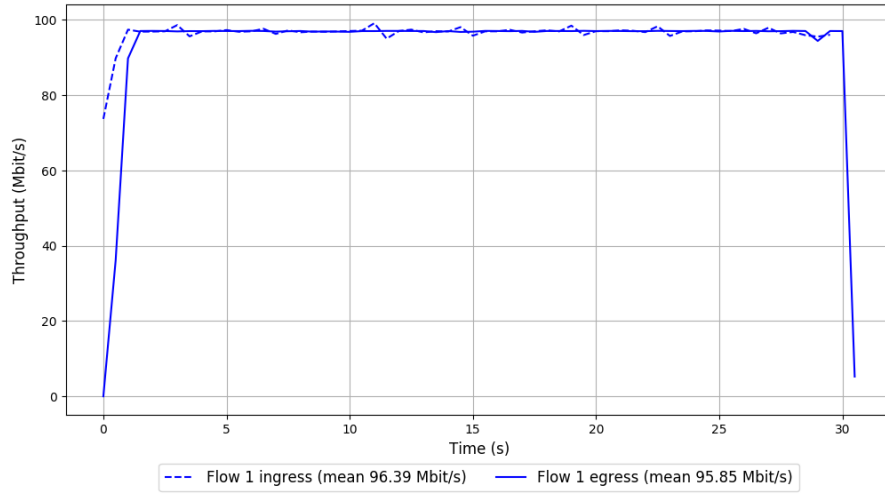

Flow 1 ingress (mean 75.37 Mbit/s)   Flow 1 egress (mean 75.18 Mbit/s)
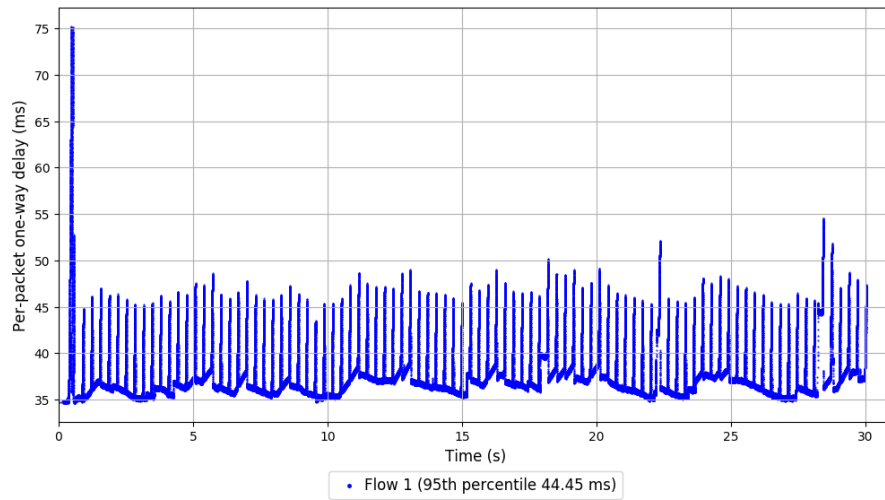

Flow 1 (95th percentile 62.62 ms)

```
Run 1: Statistics of FillP

Start at: 2019-10-02 17:41:27
End at: 2019-10-02 17:41:57
Local clock offset: 1.378 ms
Remote clock offset: -3.358 ms


# Below is generated by plot.py at 2019-10-02 19:51:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.94 Mbit/s
95th percentile per-packet one-way delay: 36.609 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 95.94 Mbit/s
95th percentile per-packet one-way delay: 36.609 ms
Loss rate: 0.54%
```
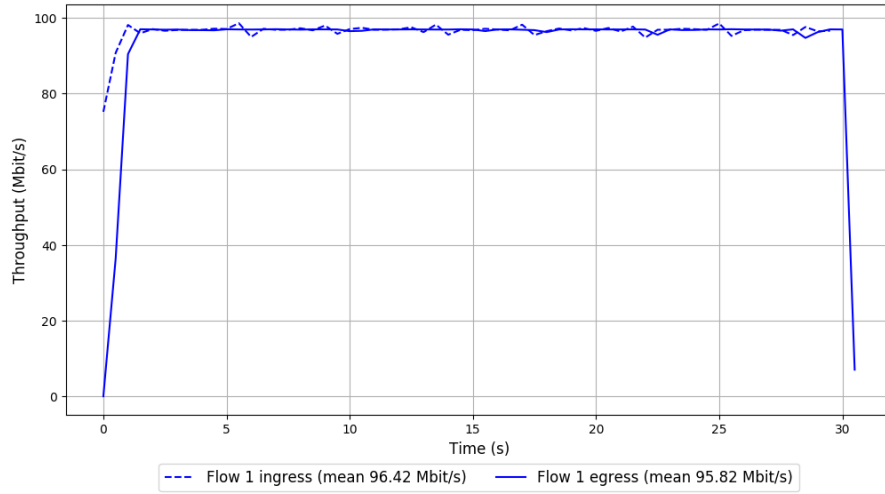
Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2019-10-02 18:09:51
End at: 2019-10-02 18:10:21
Local clock offset: -5.784 ms
Remote clock offset: -2.447 ms


# Below is generated by plot.py at 2019-10-02 19:51:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.94 Mbit/s
95th percentile per-packet one-way delay: 43.353 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 95.94 Mbit/s
95th percentile per-packet one-way delay: 43.353 ms
Loss rate: 0.50%
```
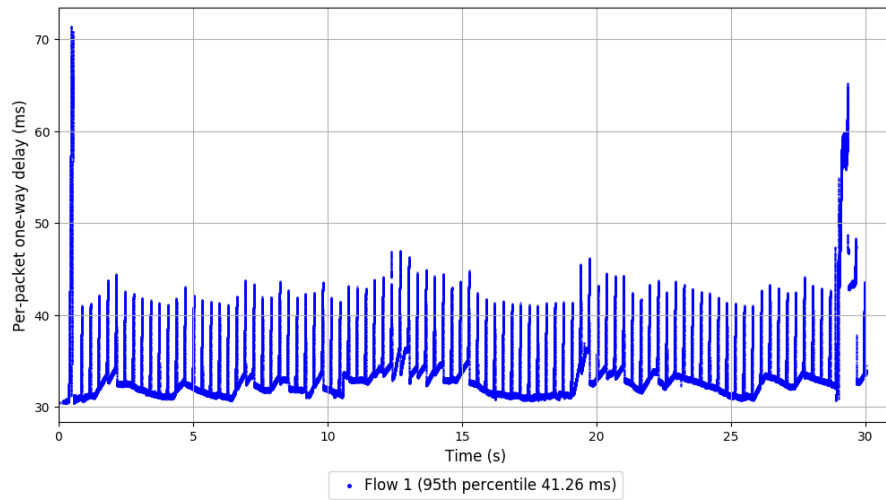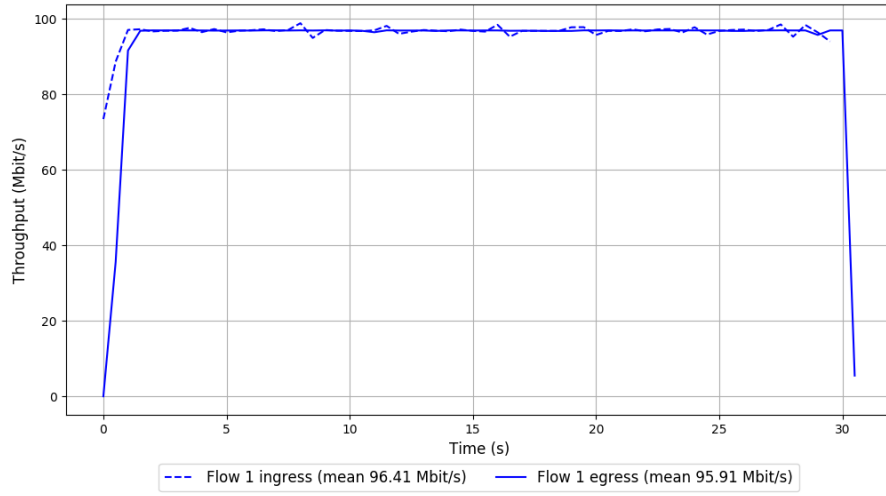
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 96.43 Mbit/s)   Flow 1 egress (mean 95.94 Mbit/s)

Flow 1 (95th percentile 43.35 ms)

```
Run 3: Statistics of FillP

Start at: 2019-10-02 18:38:10
End at: 2019-10-02 18:38:40
Local clock offset: -0.565 ms
Remote clock offset: -2.004 ms


# Below is generated by plot.py at 2019-10-02 19:51:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.85 Mbit/s
95th percentile per-packet one-way delay: 39.693 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 95.85 Mbit/s
95th percentile per-packet one-way delay: 39.693 ms
Loss rate: 0.55%
```
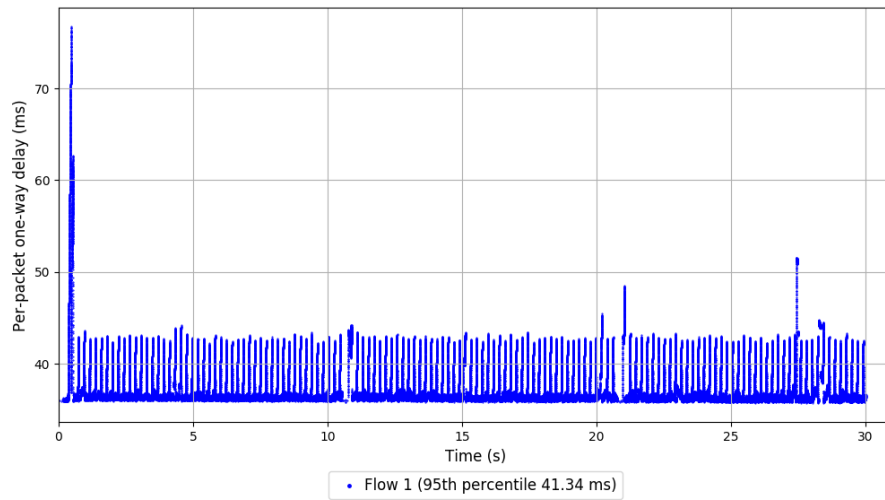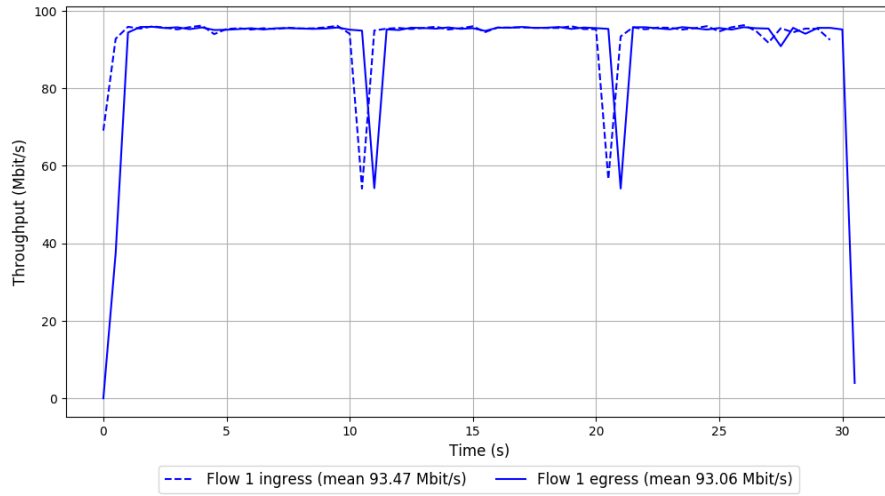
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-10-02 19:06:15
End at: 2019-10-02 19:06:45
Local clock offset: -4.532 ms
Remote clock offset: -0.225 ms


# Below is generated by plot.py at 2019-10-02 19:51:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.82 Mbit/s
95th percentile per-packet one-way delay: 44.451 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 95.82 Mbit/s
95th percentile per-packet one-way delay: 44.451 ms
Loss rate: 0.60%
```
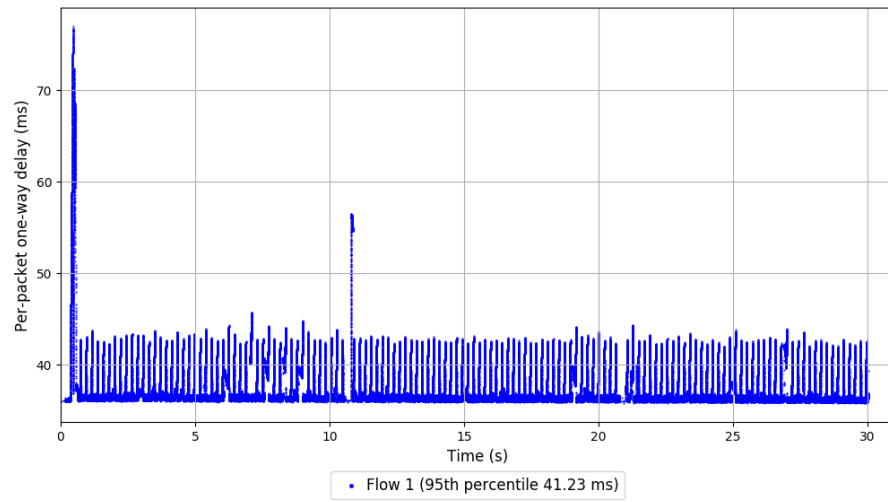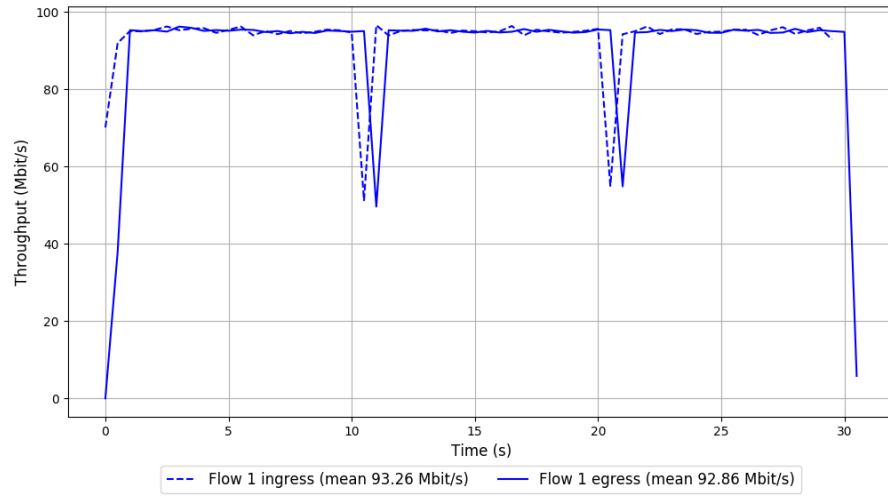
Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 96.42 Mbit/s) — Flow 1 egress (mean 95.82 Mbit/s)

Flow 1 (95th percentile 44.45 ms)

```
Run 5: Statistics of FillP

Start at: 2019-10-02 19:34:52
End at: 2019-10-02 19:35:22
Local clock offset: 3.32 ms
Remote clock offset: -0.589 ms


# Below is generated by plot.py at 2019-10-02 19:52:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.91 Mbit/s
95th percentile per-packet one-way delay: 41.263 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 95.91 Mbit/s
95th percentile per-packet one-way delay: 41.263 ms
Loss rate: 0.51%
```
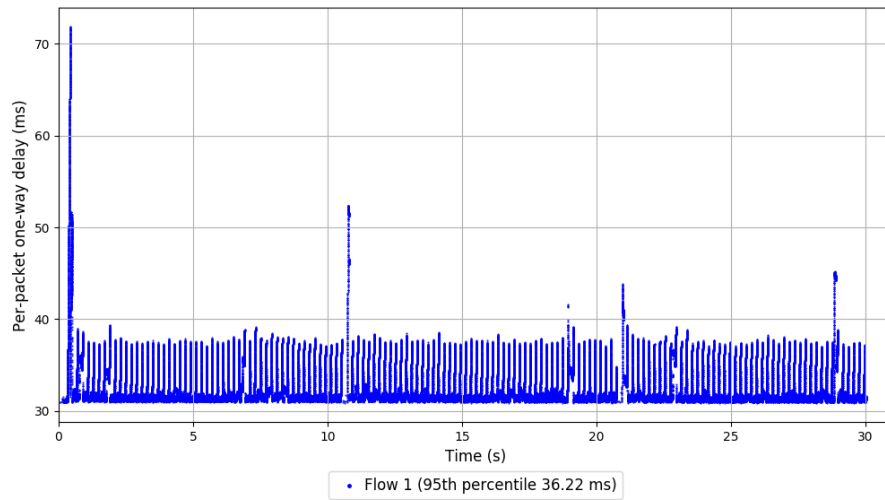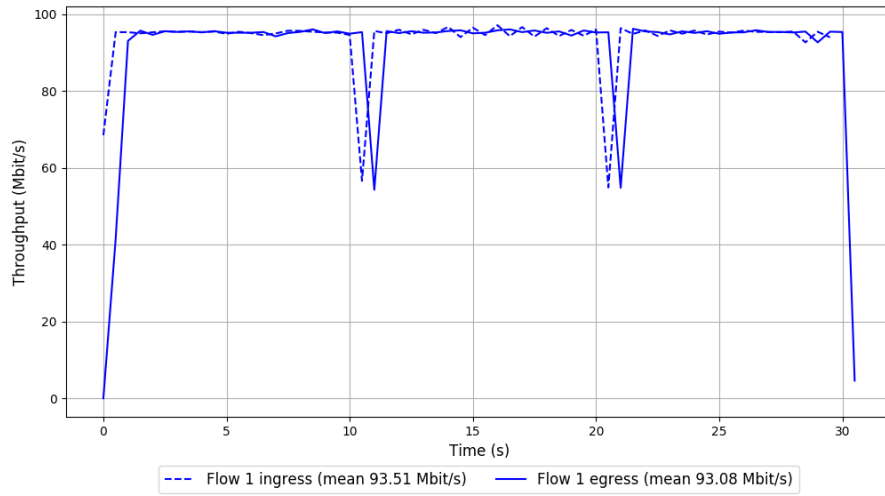
Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 96.41 Mbit/s) — Flow 1 egress (mean 95.91 Mbit/s)

• Flow 1 (95th percentile 41.26 ms)

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-10-02 17:52:28
End at: 2019-10-02 17:52:58
Local clock offset: -4.986 ms
Remote clock offset: -1.538 ms


# Below is generated by plot.py at 2019-10-02 19:52:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.06 Mbit/s
95th percentile per-packet one-way delay: 41.339 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 93.06 Mbit/s
95th percentile per-packet one-way delay: 41.339 ms
Loss rate: 0.44%
```
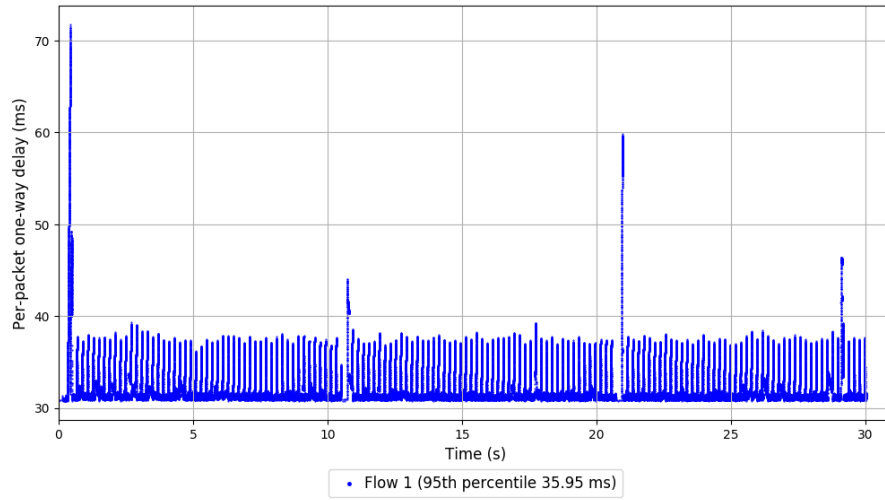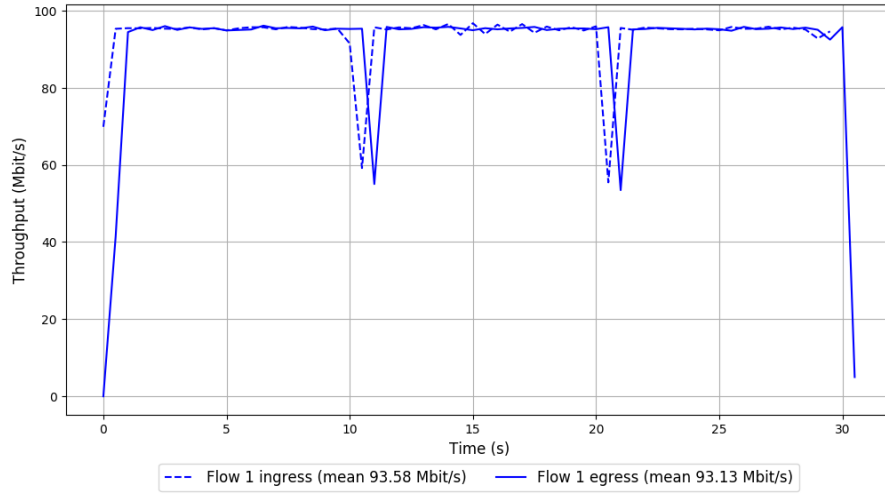
Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-10-02 18:20:52
End at: 2019-10-02 18:21:23
Local clock offset: -9.531 ms
Remote clock offset: -0.839 ms


# Below is generated by plot.py at 2019-10-02 19:52:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.86 Mbit/s
95th percentile per-packet one-way delay: 41.229 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 92.86 Mbit/s
95th percentile per-packet one-way delay: 41.229 ms
Loss rate: 0.43%
```
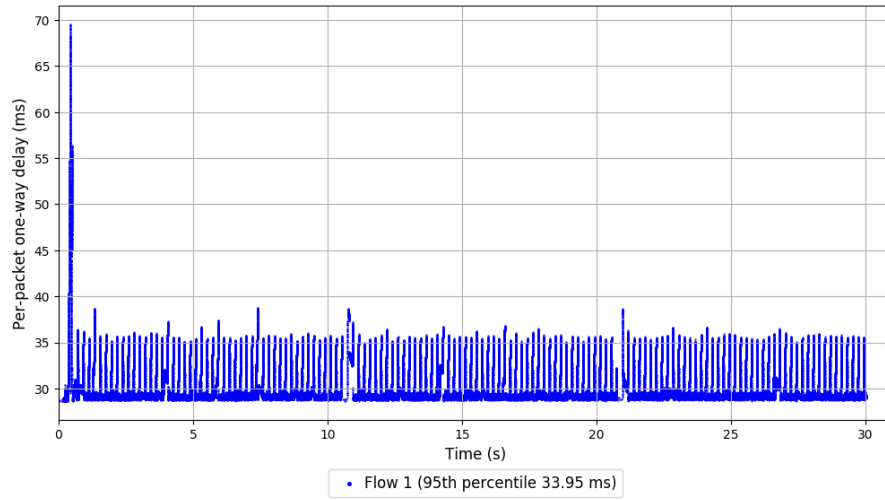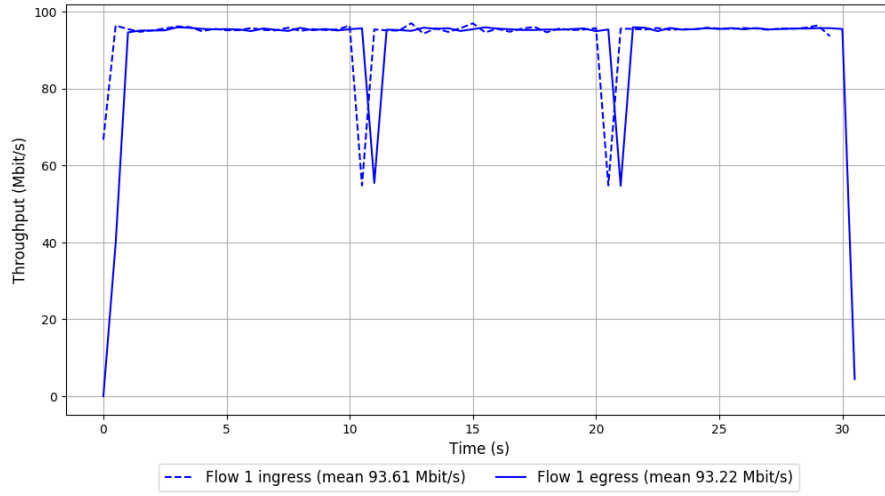
Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-10-02 18:49:10
End at: 2019-10-02 18:49:40
Local clock offset: -3.238 ms
Remote clock offset: 0.015 ms


# Below is generated by plot.py at 2019-10-02 19:52:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.08 Mbit/s
95th percentile per-packet one-way delay: 36.221 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 93.08 Mbit/s
95th percentile per-packet one-way delay: 36.221 ms
Loss rate: 0.46%
```
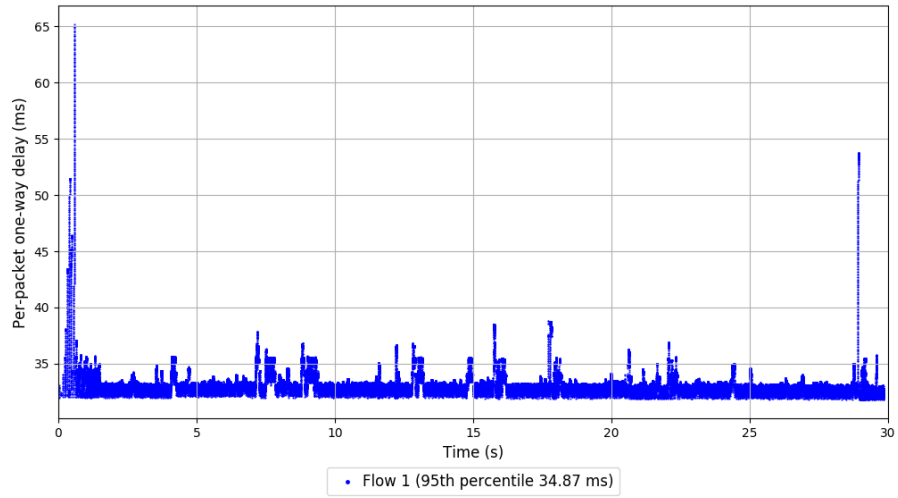
Run 3: Report of FillP-Sheep — Data Link

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-10-02 19:17:32
End at: 2019-10-02 19:18:02
Local clock offset: -5.367 ms
Remote clock offset: -2.085 ms


# Below is generated by plot.py at 2019-10-02 19:53:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.13 Mbit/s
95th percentile per-packet one-way delay: 35.953 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 93.13 Mbit/s
95th percentile per-packet one-way delay: 35.953 ms
Loss rate: 0.48%
```
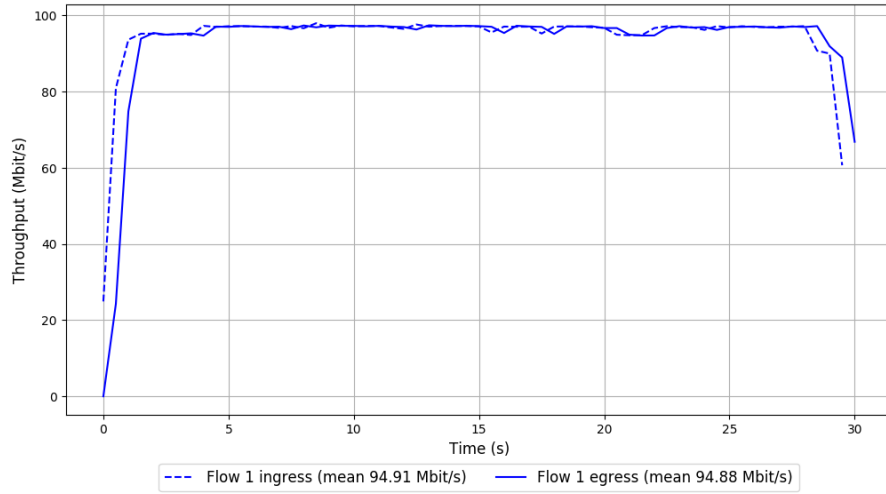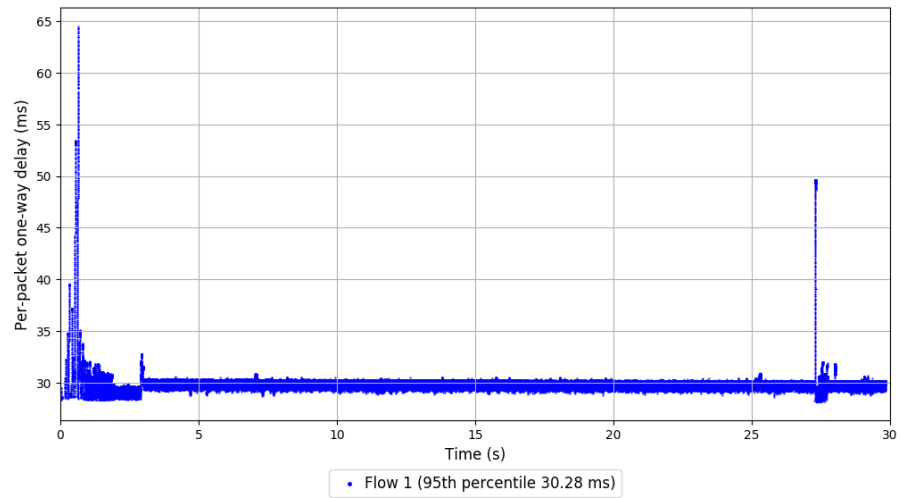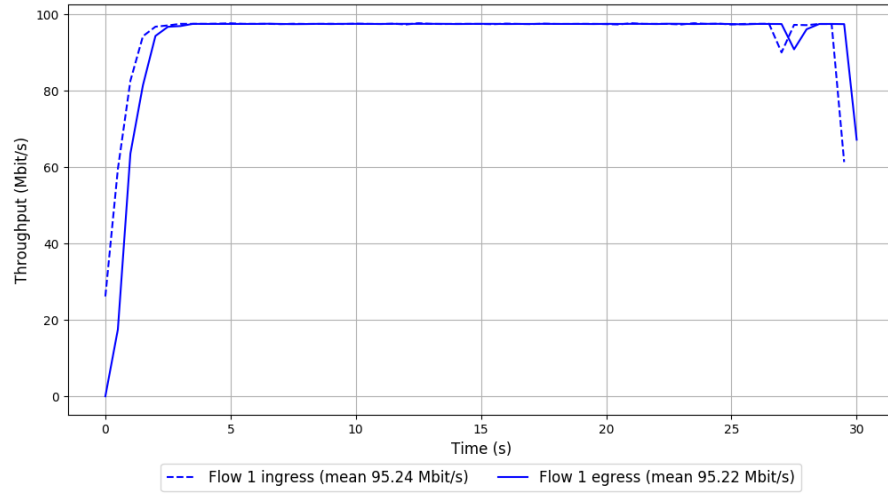
Run 4: Report of FillP-Sheep — Data Link

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-10-02 19:45:55
End at: 2019-10-02 19:46:25
Local clock offset: 4.309 ms
Remote clock offset: -2.833 ms


# Below is generated by plot.py at 2019-10-02 19:53:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.22 Mbit/s
95th percentile per-packet one-way delay: 33.952 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 93.22 Mbit/s
95th percentile per-packet one-way delay: 33.952 ms
Loss rate: 0.42%
```

Run 5: Report of FillP-Sheep — Data Link

```
Run 1: Statistics of Indigo

Start at: 2019-10-02 17:50:02
End at: 2019-10-02 17:50:32
Local clock offset: -1.215 ms
Remote clock offset: -2.04 ms


# Below is generated by plot.py at 2019-10-02 19:53:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.88 Mbit/s
95th percentile per-packet one-way delay: 34.865 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 94.88 Mbit/s
95th percentile per-packet one-way delay: 34.865 ms
Loss rate: 0.03%
```
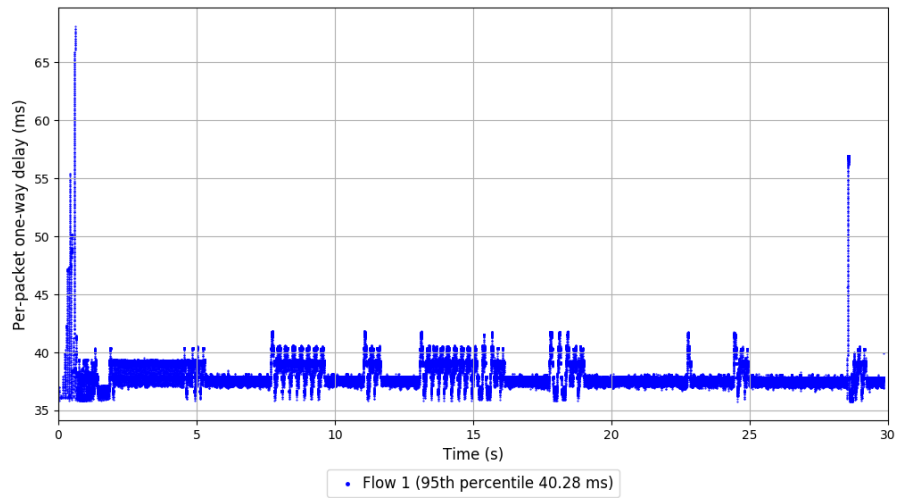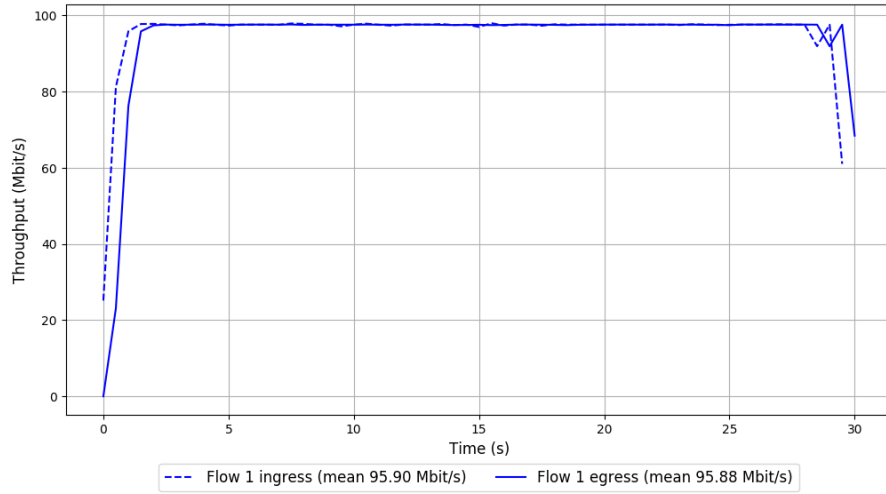
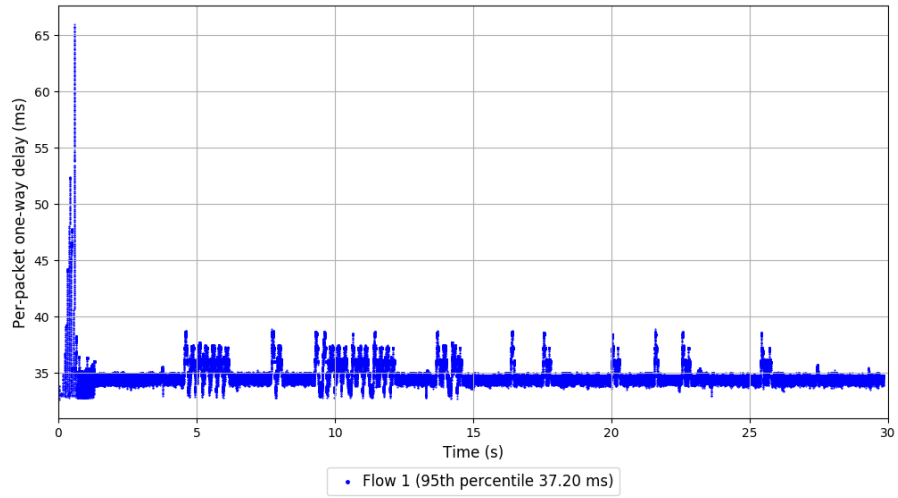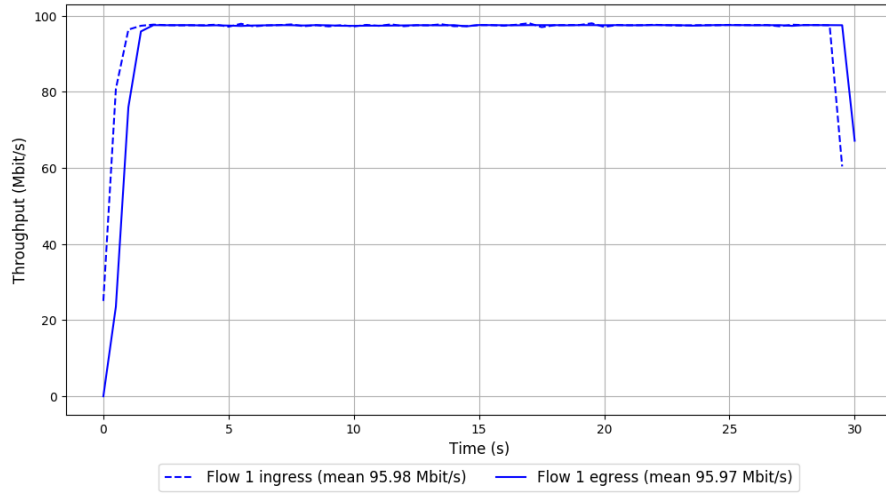Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-10-02 18:18:22
End at: 2019-10-02 18:18:52
Local clock offset: -6.007 ms
Remote clock offset: -2.433 ms


# Below is generated by plot.py at 2019-10-02 19:53:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.22 Mbit/s
95th percentile per-packet one-way delay: 30.284 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 95.22 Mbit/s
95th percentile per-packet one-way delay: 30.284 ms
Loss rate: 0.01%
```

Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-10-02 18:46:47
End at: 2019-10-02 18:47:17
Local clock offset: -5.736 ms
Remote clock offset: -0.17 ms


# Below is generated by plot.py at 2019-10-02 19:53:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.88 Mbit/s
95th percentile per-packet one-way delay: 40.278 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 95.88 Mbit/s
95th percentile per-packet one-way delay: 40.278 ms
Loss rate: 0.00%
```
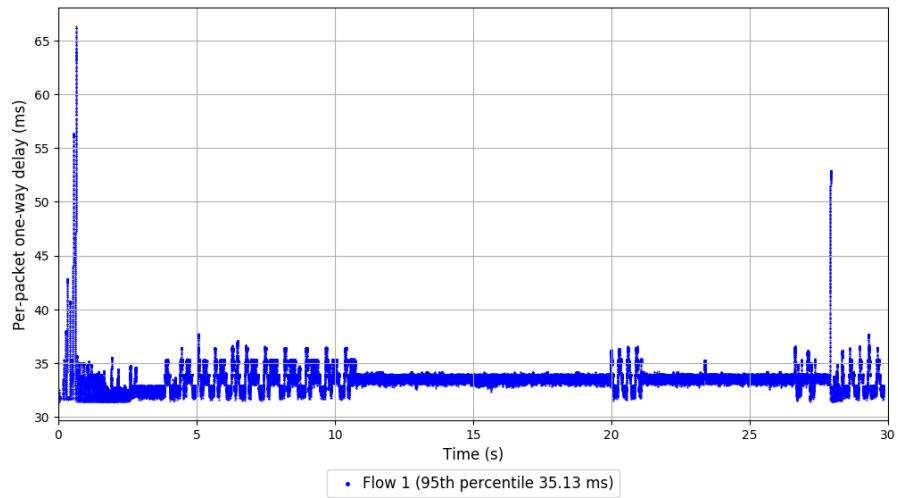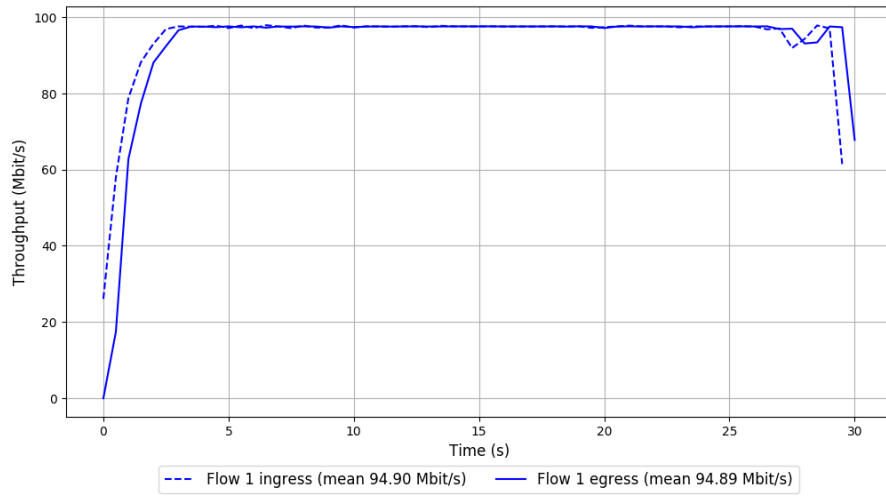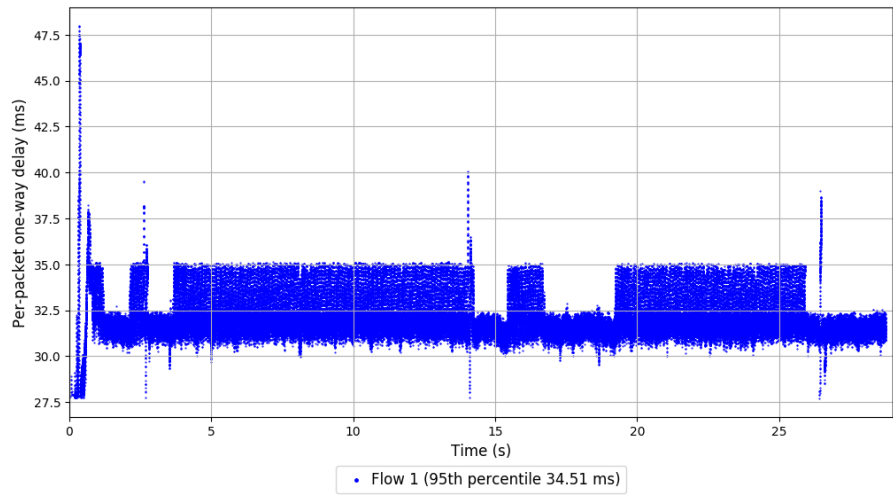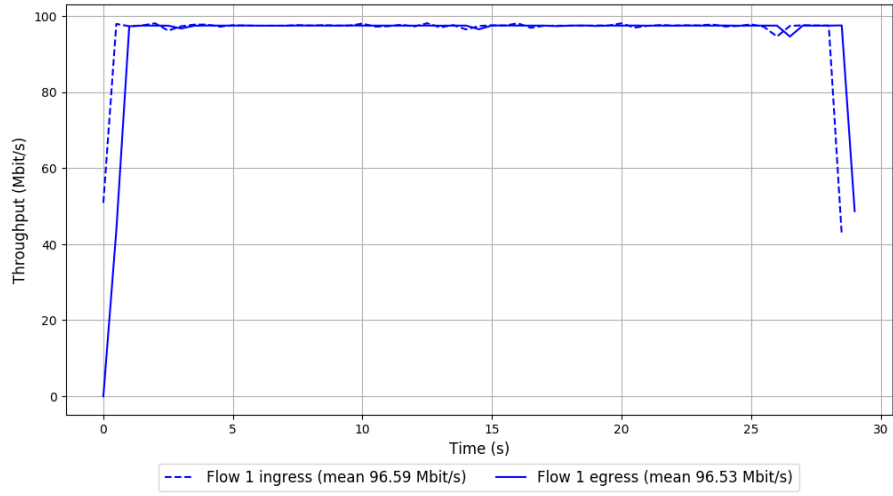
Run 3: Report of Indigo — Data Link

Flow 1 ingress (mean 95.90 Mbit/s)   Flow 1 egress (mean 95.88 Mbit/s)

• Flow 1 (95th percentile 40.28 ms)

```
Run 4: Statistics of Indigo

Start at: 2019-10-02 19:15:02
End at: 2019-10-02 19:15:32
Local clock offset: -5.143 ms
Remote clock offset: -2.305 ms


# Below is generated by plot.py at 2019-10-02 19:53:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.97 Mbit/s
95th percentile per-packet one-way delay: 37.196 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 95.97 Mbit/s
95th percentile per-packet one-way delay: 37.196 ms
Loss rate: 0.01%
```
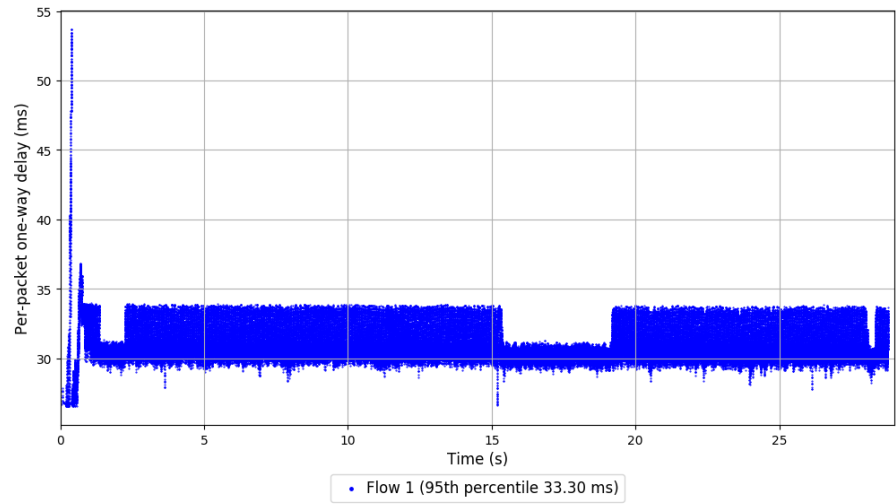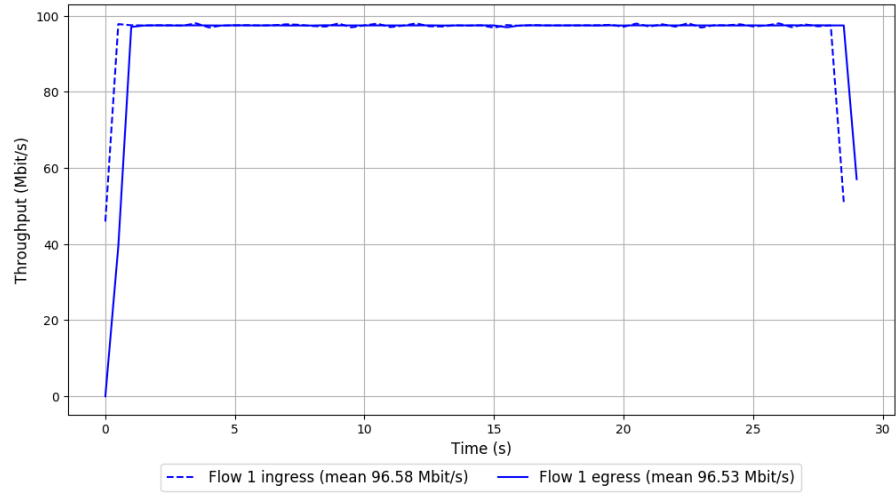
Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 95.98 Mbit/s)   Flow 1 egress (mean 95.97 Mbit/s)

Flow 1 (95th percentile 37.20 ms)

```
Run 5: Statistics of Indigo

Start at: 2019-10-02 19:43:25
End at: 2019-10-02 19:43:55
Local clock offset: 0.519 ms
Remote clock offset: -1.047 ms


# Below is generated by plot.py at 2019-10-02 19:54:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.89 Mbit/s
95th percentile per-packet one-way delay: 35.133 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 94.89 Mbit/s
95th percentile per-packet one-way delay: 35.133 ms
Loss rate: 0.01%
```

Run 5: Report of Indigo — Data Link

Flow 1 ingress (mean 94.90 Mbit/s)   Flow 1 egress (mean 94.89 Mbit/s)
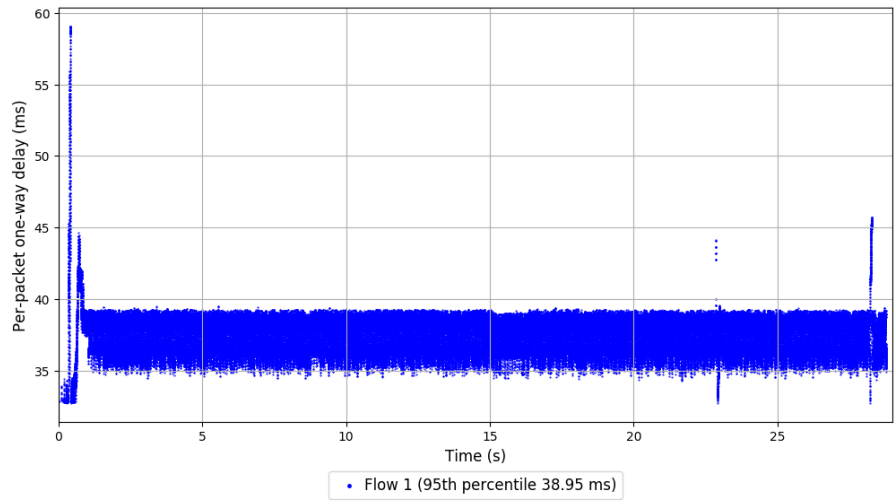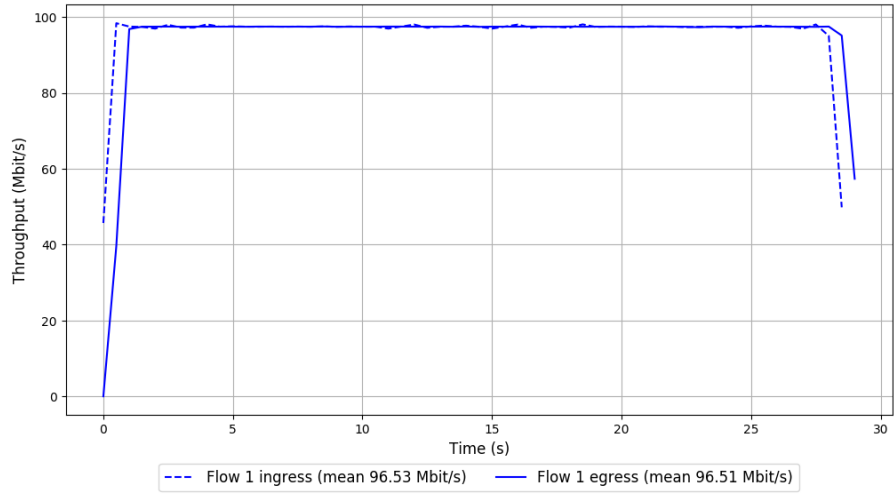

• Flow 1 (95th percentile 35.13 ms)

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-10-02 17:45:17
End at: 2019-10-02 17:45:47
Local clock offset: -0.317 ms
Remote clock offset: -3.987 ms


# Below is generated by plot.py at 2019-10-02 19:54:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.53 Mbit/s
95th percentile per-packet one-way delay: 34.506 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 96.53 Mbit/s
95th percentile per-packet one-way delay: 34.506 ms
Loss rate: 0.05%
```
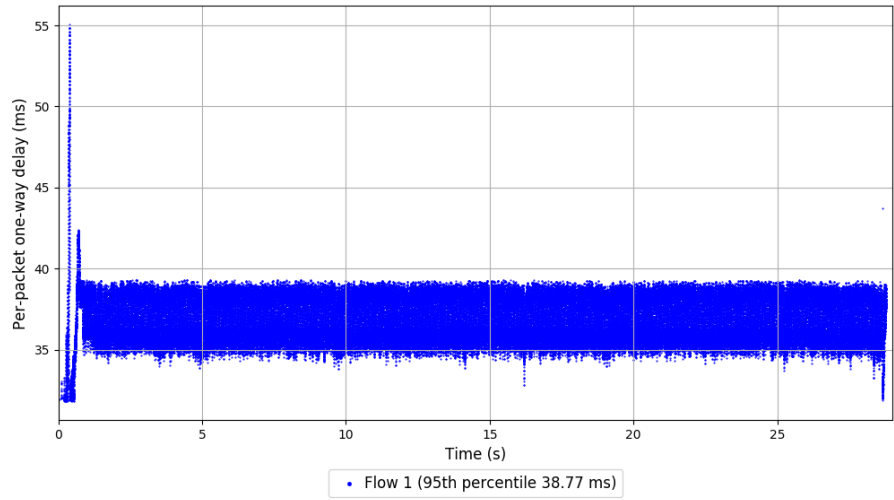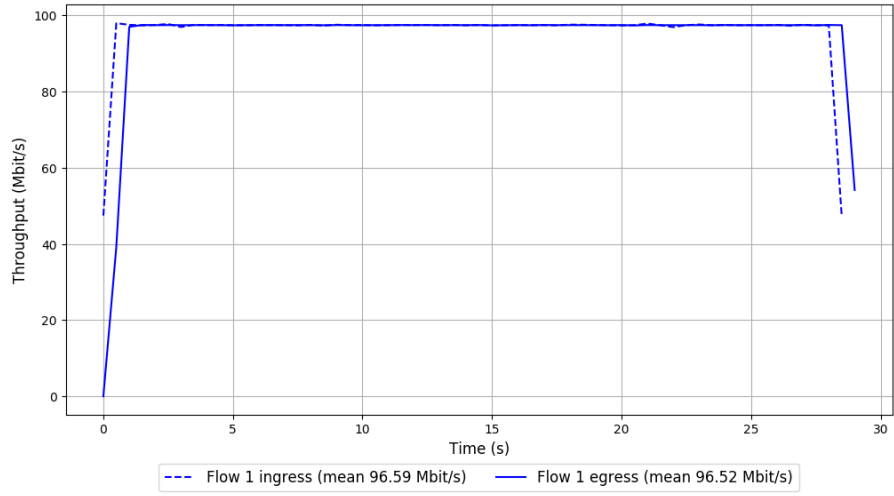
Run 1: Report of Indigo-MusesC3 — Data Link

- - - Flow 1 ingress (mean 96.59 Mbit/s) ——— Flow 1 egress (mean 96.53 Mbit/s)

• Flow 1 (95th percentile 34.51 ms)

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-10-02 18:13:26
End at: 2019-10-02 18:13:56
Local clock offset: -1.779 ms
Remote clock offset: -1.782 ms


# Below is generated by plot.py at 2019-10-02 19:54:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.53 Mbit/s
95th percentile per-packet one-way delay: 33.296 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 96.53 Mbit/s
95th percentile per-packet one-way delay: 33.296 ms
Loss rate: 0.03%
```
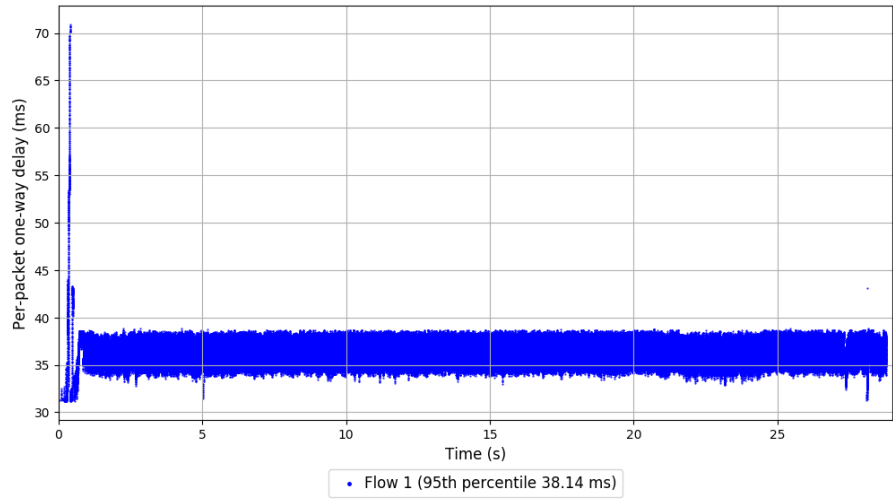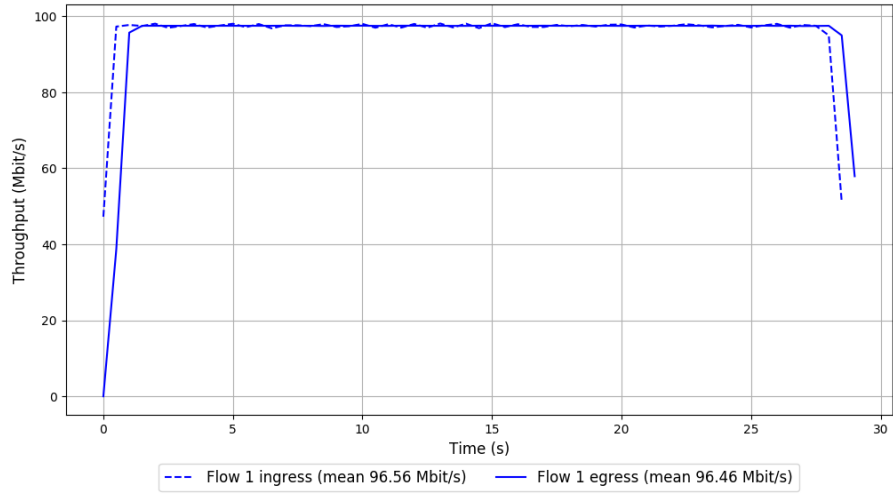
Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-10-02 18:42:00
End at: 2019-10-02 18:42:30
Local clock offset: -4.803 ms
Remote clock offset: -0.918 ms


# Below is generated by plot.py at 2019-10-02 19:54:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.51 Mbit/s
95th percentile per-packet one-way delay: 38.949 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.51 Mbit/s
95th percentile per-packet one-way delay: 38.949 ms
Loss rate: 0.00%
```
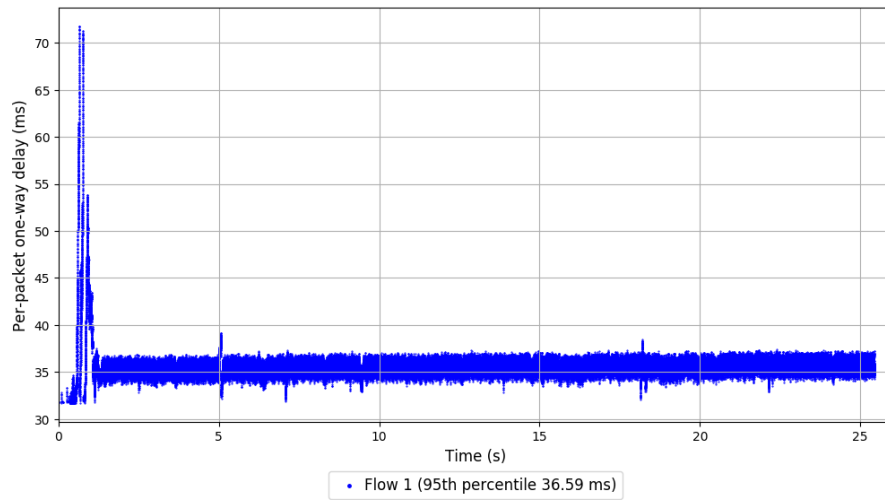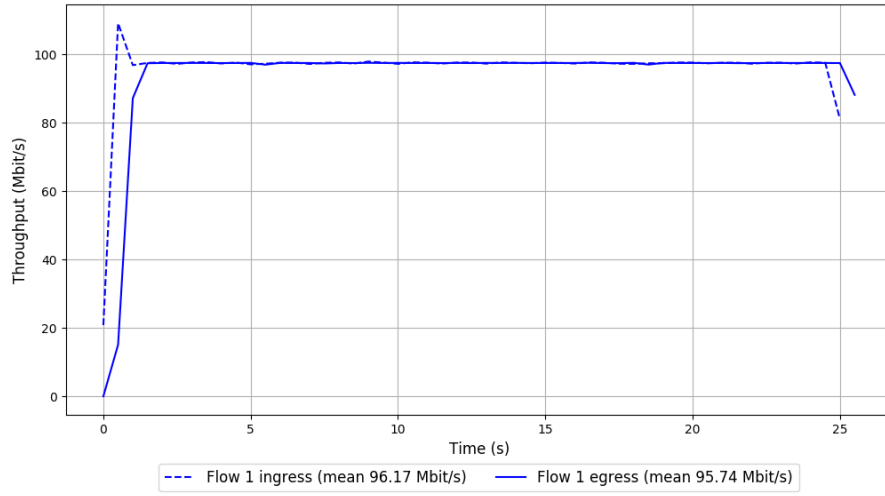
Run 3: Report of Indigo-MusesC3 — Data Link

70

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-10-02 19:10:01
End at: 2019-10-02 19:10:31
Local clock offset: -2.699 ms
Remote clock offset: -1.247 ms


# Below is generated by plot.py at 2019-10-02 19:54:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.52 Mbit/s
95th percentile per-packet one-way delay: 38.771 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 96.52 Mbit/s
95th percentile per-packet one-way delay: 38.771 ms
Loss rate: 0.05%
```

Run 4: Report of Indigo-MusesC3 — Data Link

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-10-02 19:38:32
End at: 2019-10-02 19:39:02
Local clock offset: 1.601 ms
Remote clock offset: -2.501 ms


# Below is generated by plot.py at 2019-10-02 19:54:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.46 Mbit/s
95th percentile per-packet one-way delay: 38.142 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 96.46 Mbit/s
95th percentile per-packet one-way delay: 38.142 ms
Loss rate: 0.08%
```
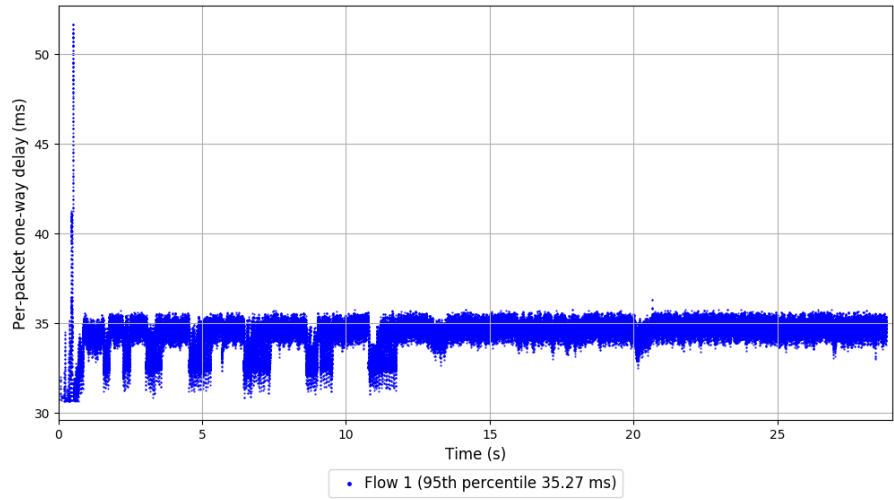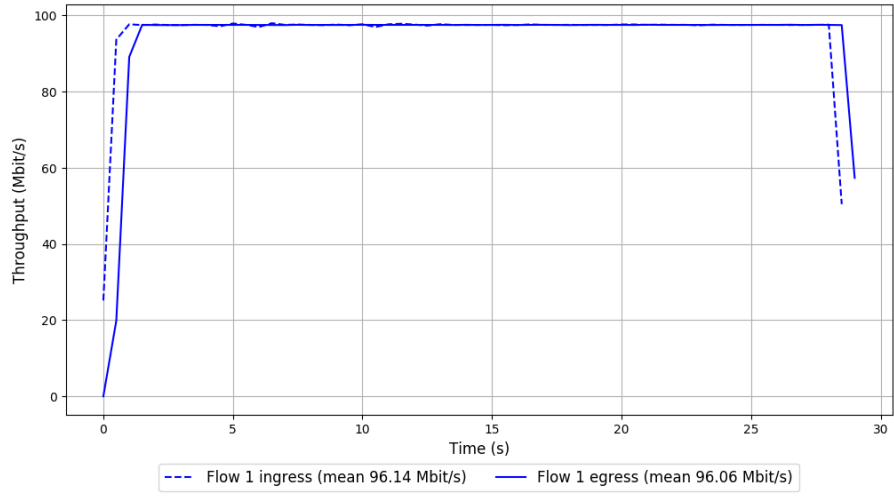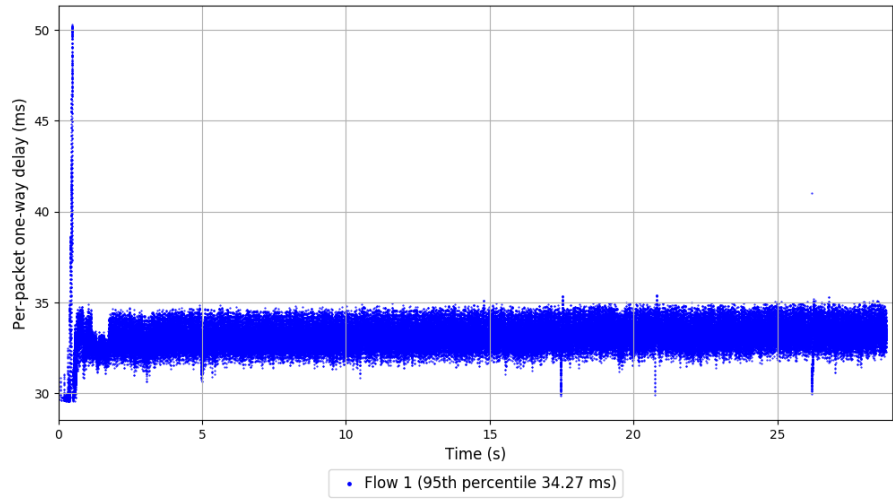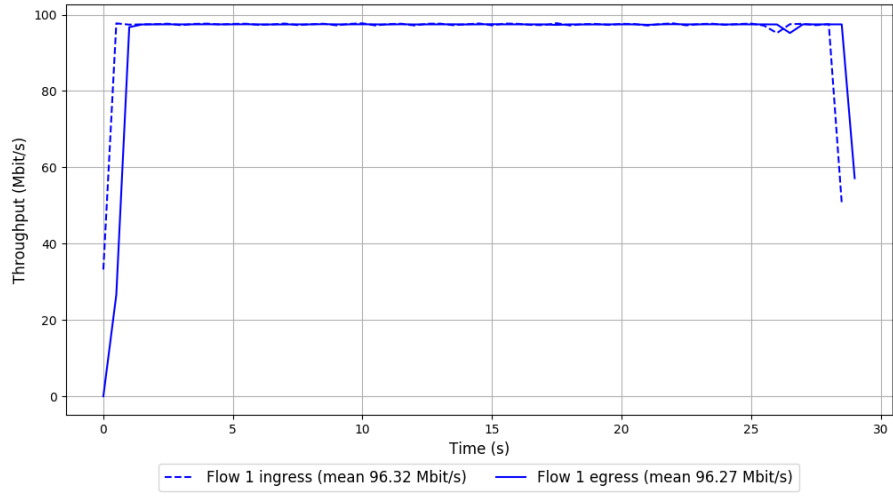
Run 5: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 96.56 Mbit/s) — — — Flow 1 egress (mean 96.46 Mbit/s)

• Flow 1 (95th percentile 38.14 ms)

74

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-10-02 17:28:45
End at: 2019-10-02 17:29:15
Local clock offset: 0.393 ms
Remote clock offset: -2.673 ms

# Below is generated by plot.py at 2019-10-02 19:54:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.74 Mbit/s
95th percentile per-packet one-way delay: 36.594 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 95.74 Mbit/s
95th percentile per-packet one-way delay: 36.594 ms
Loss rate: 0.44%
```
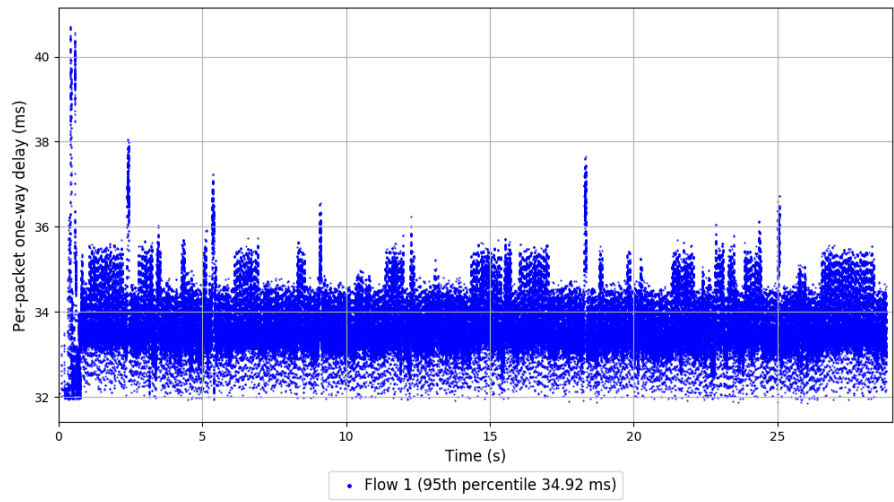
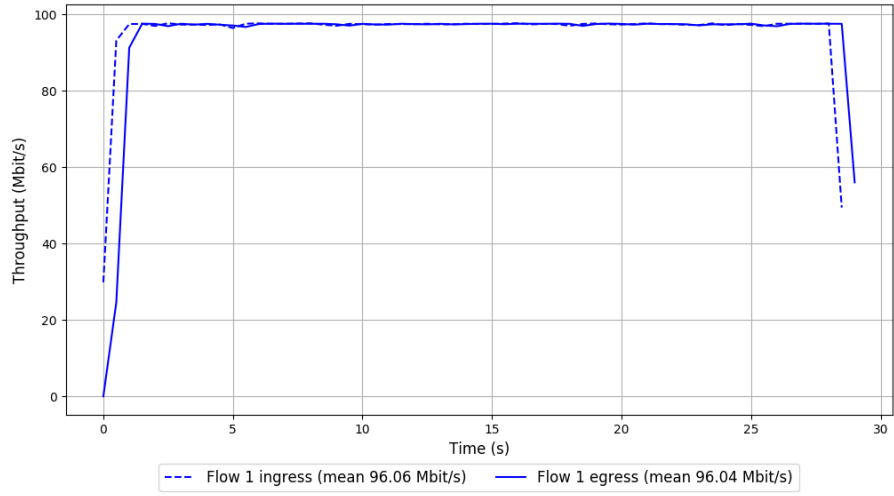Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-10-02 17:57:05
End at: 2019-10-02 17:57:35
Local clock offset: -3.34 ms
Remote clock offset: -1.509 ms


# Below is generated by plot.py at 2019-10-02 19:54:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.06 Mbit/s
95th percentile per-packet one-way delay: 35.269 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 96.06 Mbit/s
95th percentile per-packet one-way delay: 35.269 ms
Loss rate: 0.07%
```

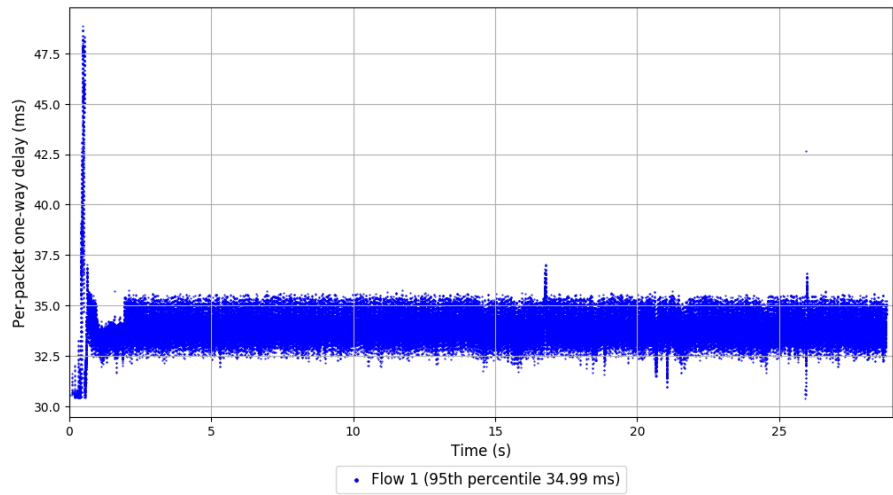Run 2: Report of Indigo-MusesC5 — Data Link

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-10-02 18:25:38
End at: 2019-10-02 18:26:08
Local clock offset: -8.294 ms
Remote clock offset: -3.055 ms


# Below is generated by plot.py at 2019-10-02 19:55:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 34.269 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 34.269 ms
Loss rate: 0.04%
```
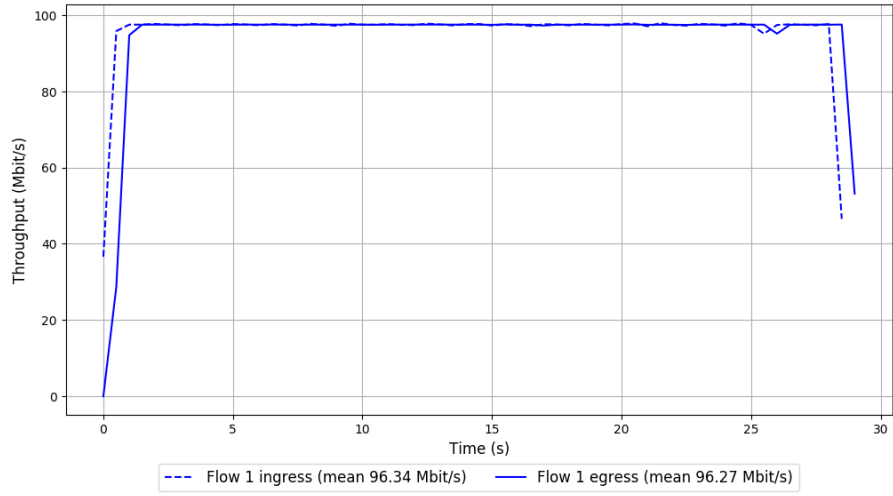
Run 3: Report of Indigo-MusesC5 — Data Link

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-10-02 18:53:47
End at: 2019-10-02 18:54:17
Local clock offset: -4.388 ms
Remote clock offset: -1.247 ms


# Below is generated by plot.py at 2019-10-02 19:55:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.04 Mbit/s
95th percentile per-packet one-way delay: 34.921 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 96.04 Mbit/s
95th percentile per-packet one-way delay: 34.921 ms
Loss rate: 0.01%
```
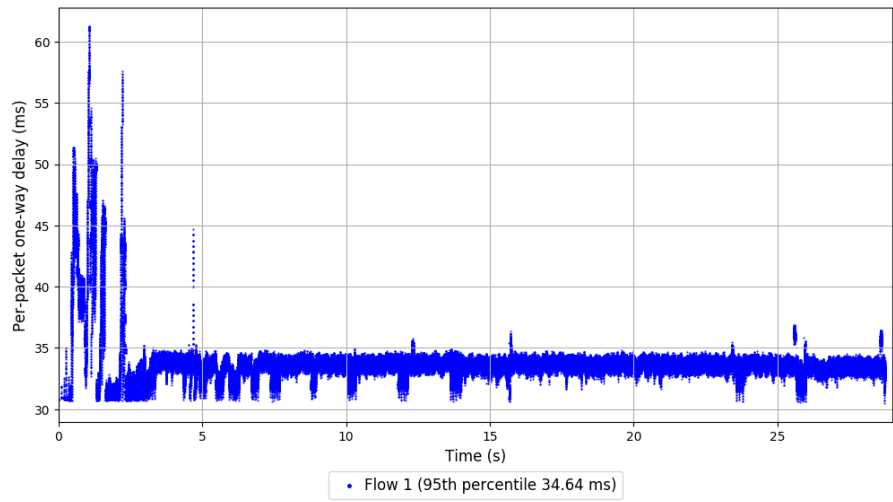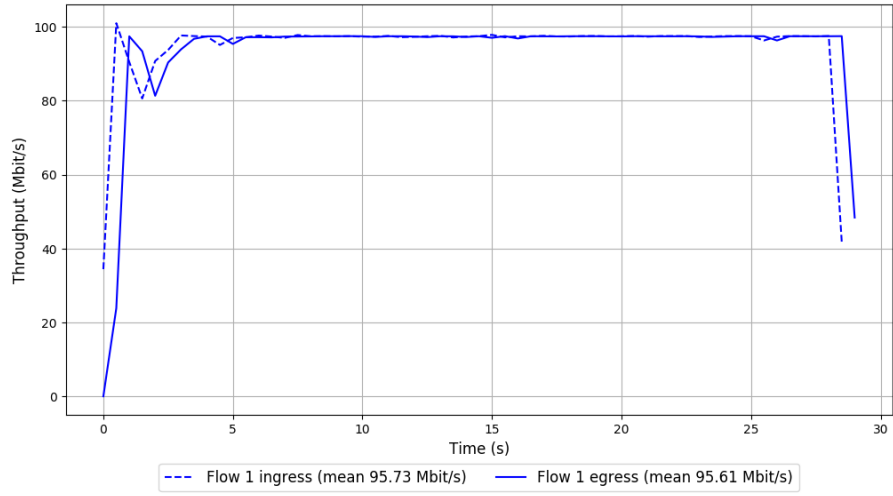
Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-10-02 19:22:16
End at: 2019-10-02 19:22:46
Local clock offset: -4.359 ms
Remote clock offset: -0.972 ms


# Below is generated by plot.py at 2019-10-02 19:55:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 34.988 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 34.988 ms
Loss rate: 0.06%
```
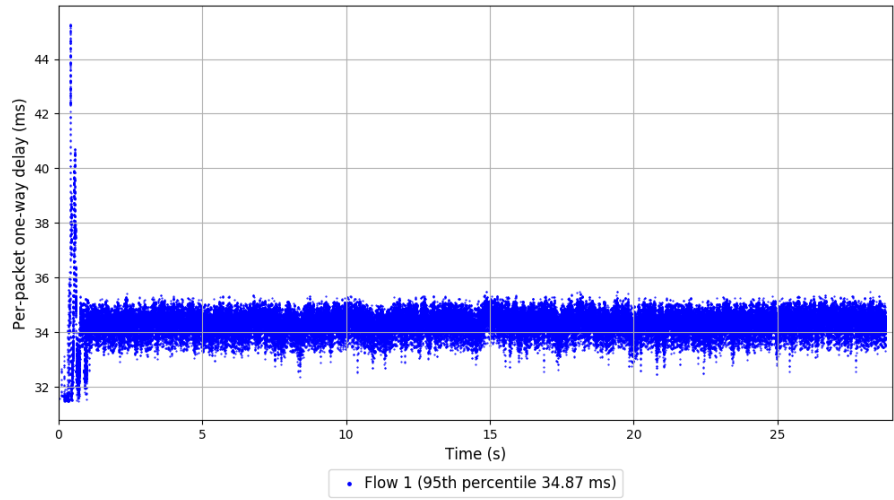
Run 5: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 96.34 Mbit/s) — Flow 1 egress (mean 96.27 Mbit/s)

Flow 1 (95th percentile 34.99 ms)

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-10-02 17:31:05
End at: 2019-10-02 17:31:35
Local clock offset: 1.507 ms
Remote clock offset: -2.087 ms


# Below is generated by plot.py at 2019-10-02 19:55:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 34.639 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 34.639 ms
Loss rate: 0.12%
```
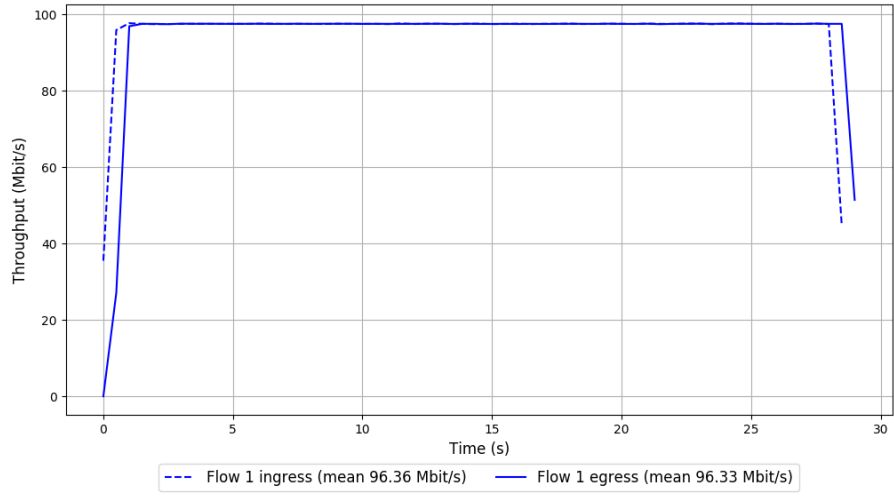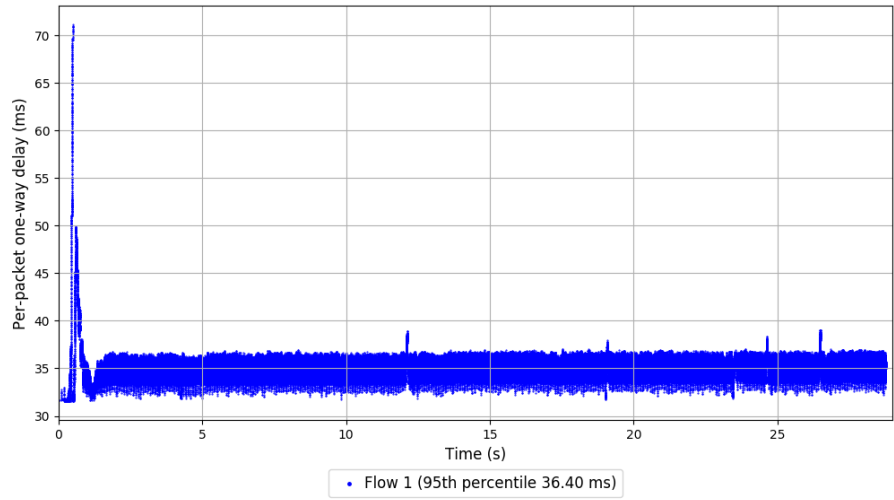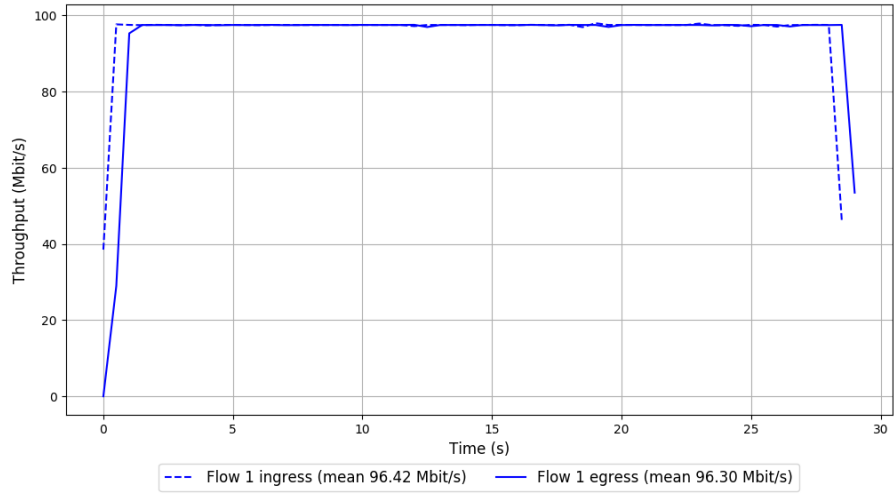
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-10-02 17:59:23
End at: 2019-10-02 17:59:53
Local clock offset: -2.68 ms
Remote clock offset: -1.272 ms


# Below is generated by plot.py at 2019-10-02 19:55:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.33 Mbit/s
95th percentile per-packet one-way delay: 34.872 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 96.33 Mbit/s
95th percentile per-packet one-way delay: 34.872 ms
Loss rate: 0.02%
```
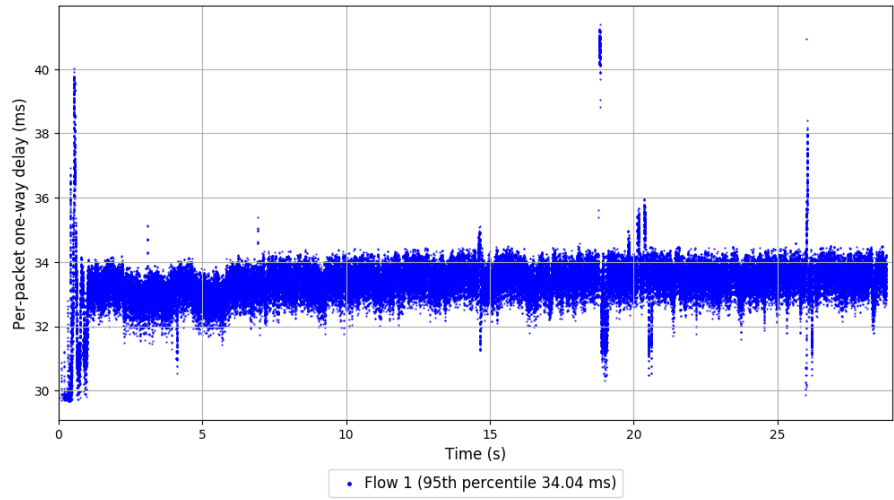
Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-10-02 18:27:57
End at: 2019-10-02 18:28:27
Local clock offset: -5.355 ms
Remote clock offset: -1.985 ms


# Below is generated by plot.py at 2019-10-02 19:55:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.30 Mbit/s
95th percentile per-packet one-way delay: 36.404 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 96.30 Mbit/s
95th percentile per-packet one-way delay: 36.404 ms
Loss rate: 0.11%
```
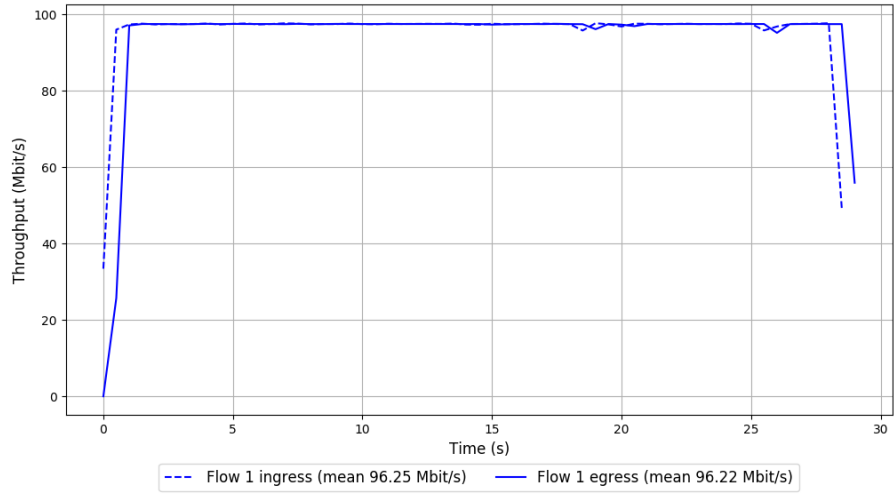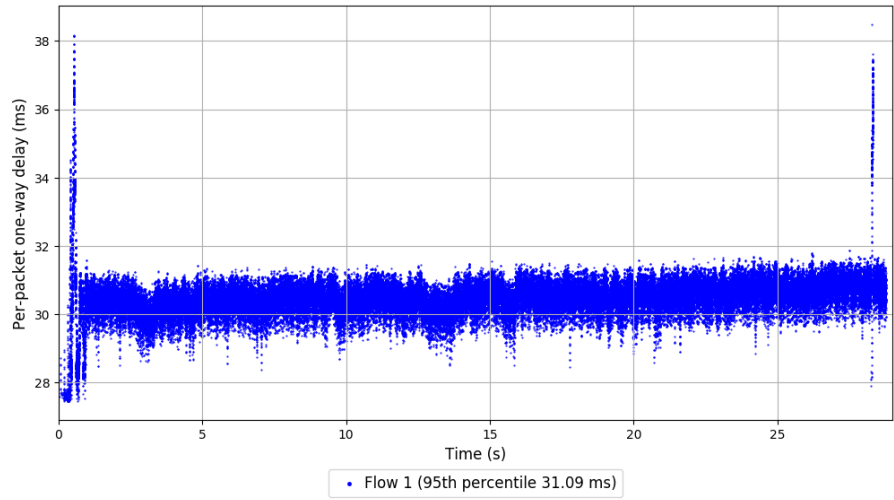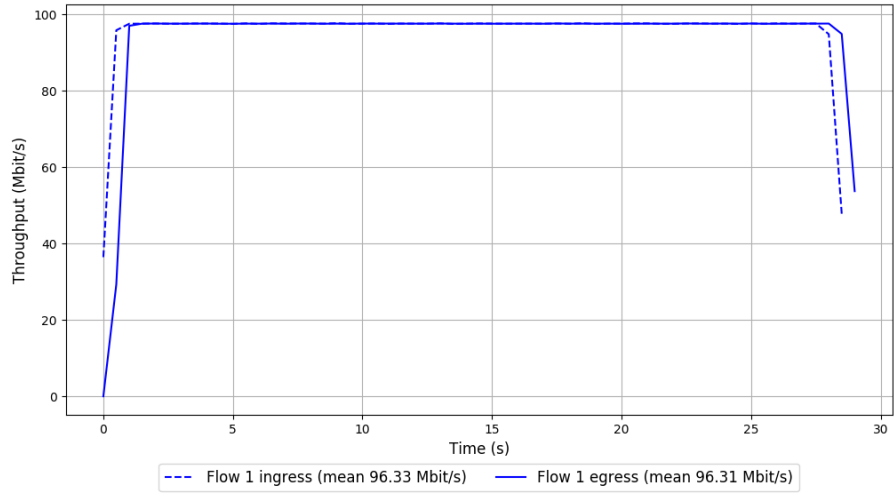
Run 3: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 96.42 Mbit/s) —— Flow 1 egress (mean 96.30 Mbit/s)

• Flow 1 (95th percentile 36.40 ms)

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-10-02 18:56:04
End at: 2019-10-02 18:56:34
Local clock offset: -2.187 ms
Remote clock offset: -1.671 ms


# Below is generated by plot.py at 2019-10-02 19:55:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.22 Mbit/s
95th percentile per-packet one-way delay: 34.044 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 96.22 Mbit/s
95th percentile per-packet one-way delay: 34.044 ms
Loss rate: 0.02%
```
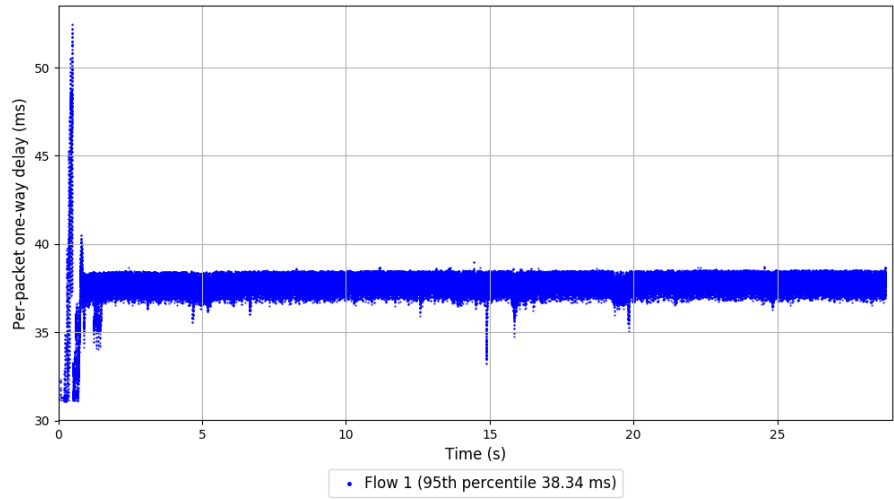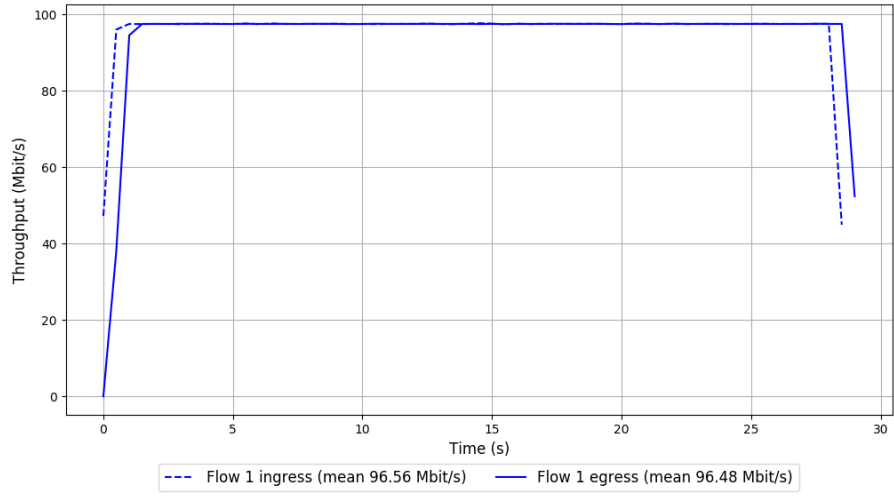
Run 4: Report of Indigo-MusesD — Data Link

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-10-02 19:24:37
End at: 2019-10-02 19:25:07
Local clock offset: -2.105 ms
Remote clock offset: -1.501 ms


# Below is generated by plot.py at 2019-10-02 19:56:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.31 Mbit/s
95th percentile per-packet one-way delay: 31.092 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 96.31 Mbit/s
95th percentile per-packet one-way delay: 31.092 ms
Loss rate: 0.01%
```
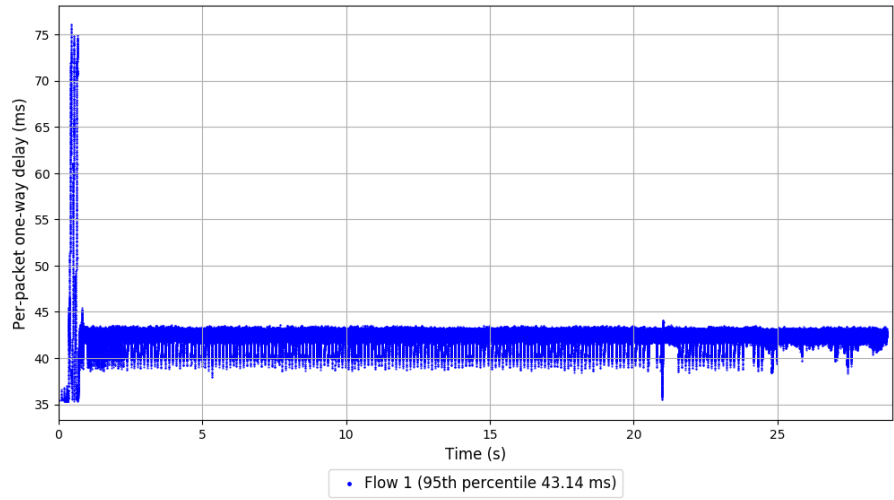
Run 5: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 96.33 Mbit/s) — — — Flow 1 egress (mean 96.31 Mbit/s)

Flow 1 (95th percentile 31.09 ms)

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-10-02 17:34:35
End at: 2019-10-02 17:35:05
Local clock offset: 1.185 ms
Remote clock offset: -1.629 ms


# Below is generated by plot.py at 2019-10-02 19:56:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.48 Mbit/s
95th percentile per-packet one-way delay: 38.338 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 96.48 Mbit/s
95th percentile per-packet one-way delay: 38.338 ms
Loss rate: 0.06%
```
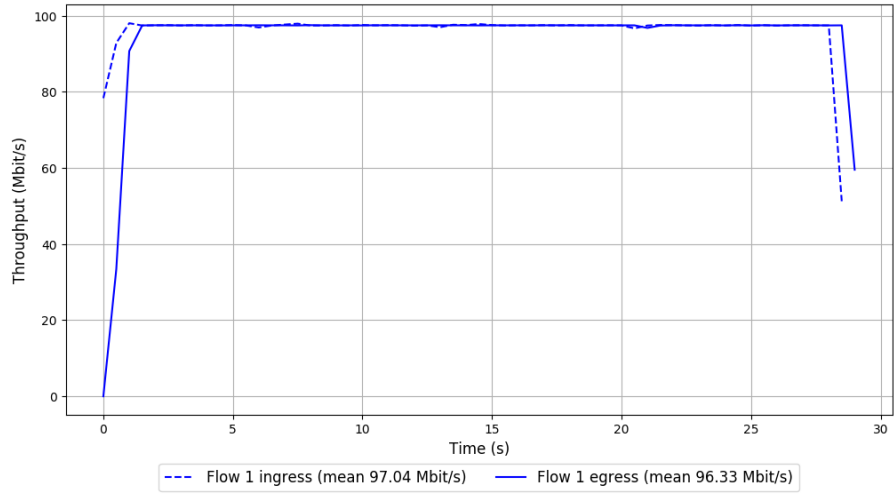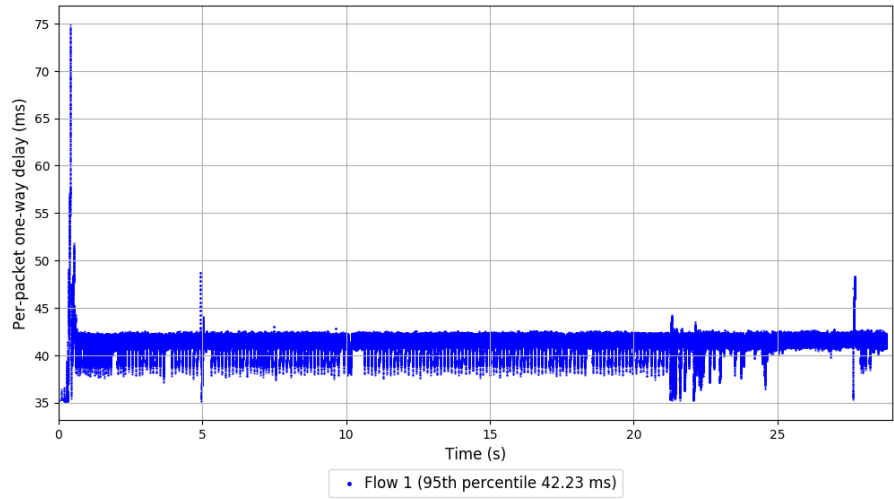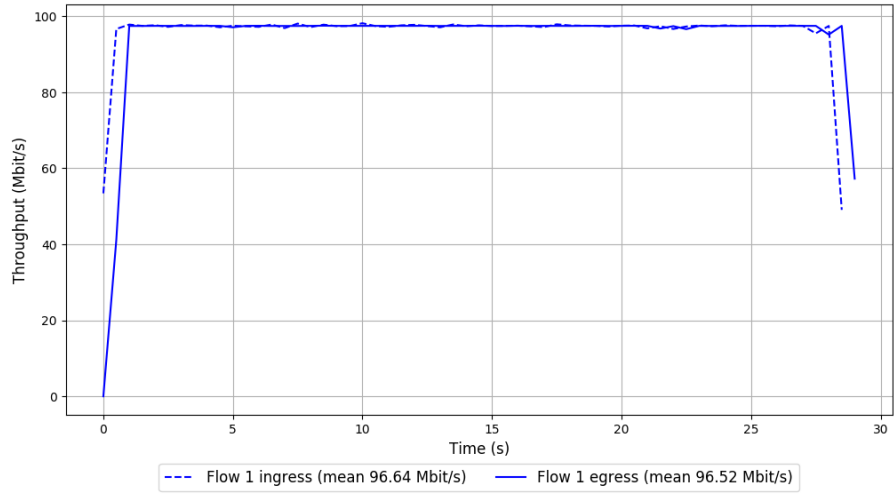
Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-10-02 18:02:54
End at: 2019-10-02 18:03:24
Local clock offset: -4.678 ms
Remote clock offset: -1.318 ms


# Below is generated by plot.py at 2019-10-02 19:56:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.33 Mbit/s
95th percentile per-packet one-way delay: 43.141 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 96.33 Mbit/s
95th percentile per-packet one-way delay: 43.141 ms
Loss rate: 0.70%
```

Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-10-02 18:31:25
End at: 2019-10-02 18:31:55
Local clock offset: -6.295 ms
Remote clock offset: -1.923 ms


# Below is generated by plot.py at 2019-10-02 19:56:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.52 Mbit/s
95th percentile per-packet one-way delay: 42.230 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 96.52 Mbit/s
95th percentile per-packet one-way delay: 42.230 ms
Loss rate: 0.10%
```
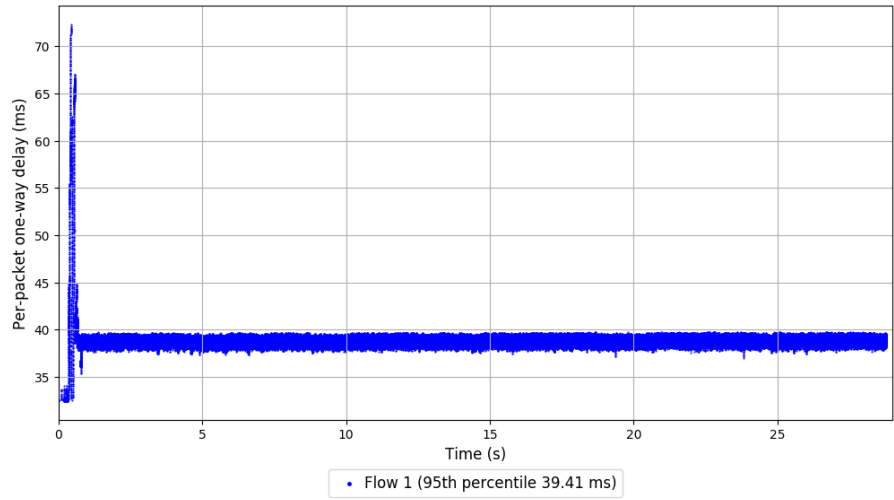
Run 3: Report of Indigo-MusesT — Data Link

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-10-02 18:59:30
End at: 2019-10-02 19:00:00
Local clock offset: -5.223 ms
Remote clock offset: -0.86 ms


# Below is generated by plot.py at 2019-10-02 19:56:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.46 Mbit/s
95th percentile per-packet one-way delay: 39.413 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 96.46 Mbit/s
95th percentile per-packet one-way delay: 39.413 ms
Loss rate: 0.36%
```
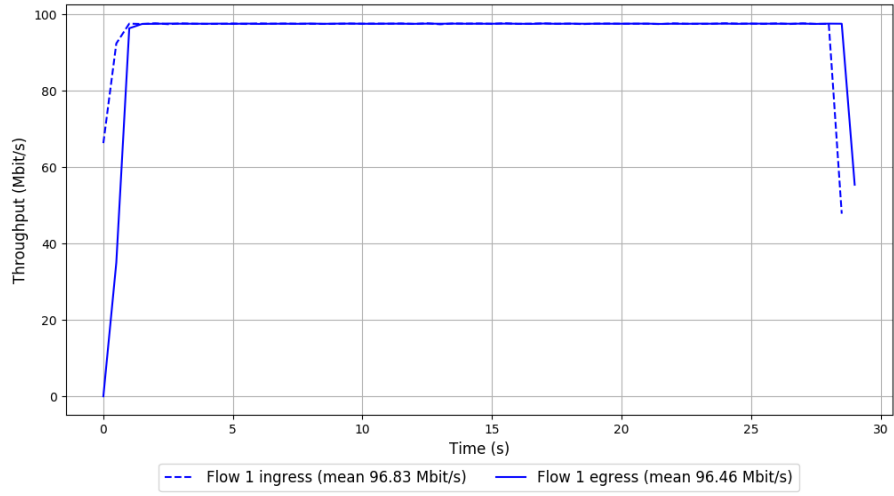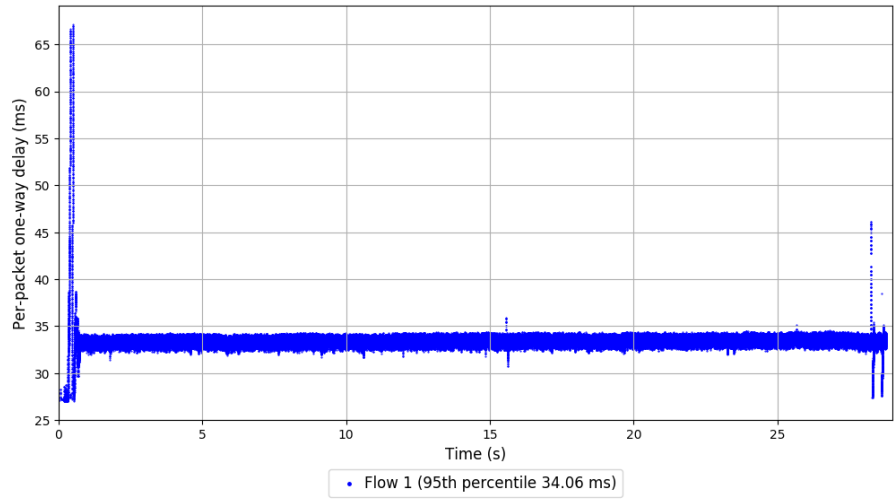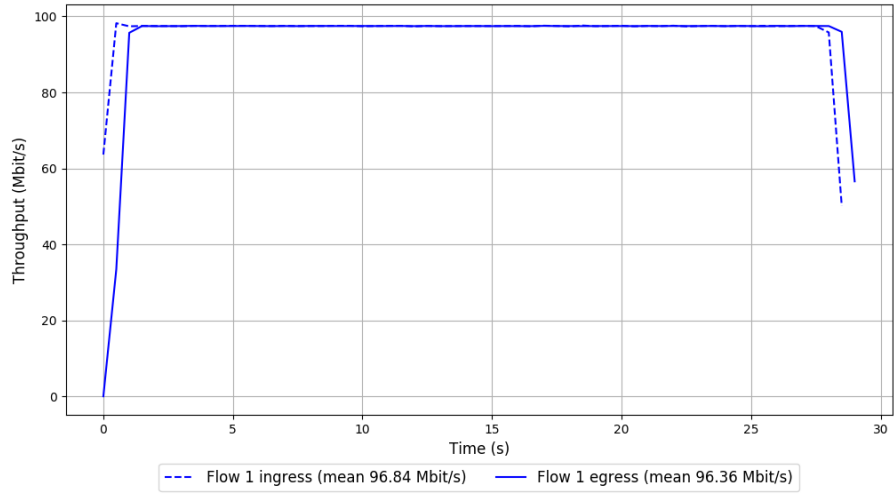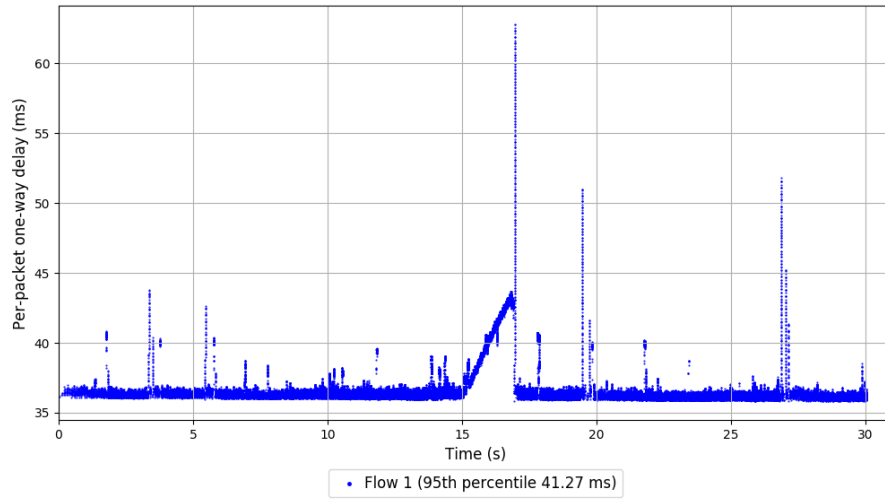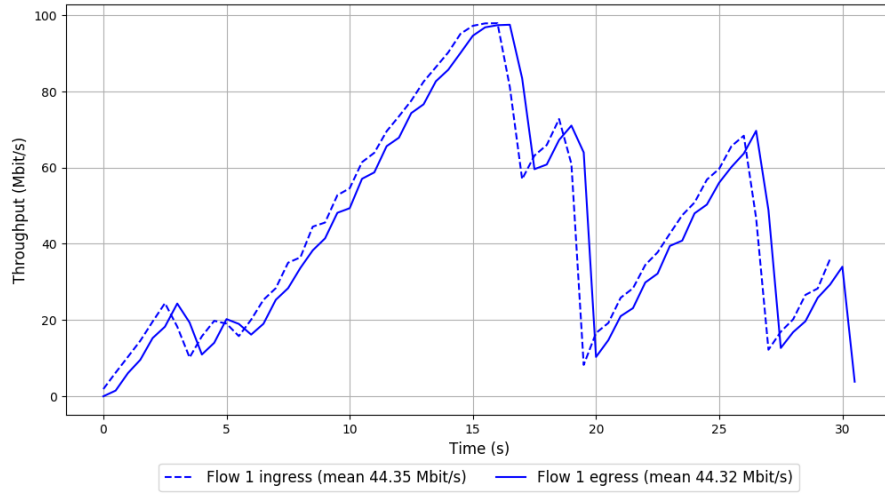
Run 4: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 96.83 Mbit/s)   Flow 1 egress (mean 96.46 Mbit/s)

Flow 1 (95th percentile 39.41 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-10-02 19:28:07
End at: 2019-10-02 19:28:37
Local clock offset: -1.853 ms
Remote clock offset: -4.431 ms


# Below is generated by plot.py at 2019-10-02 19:56:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.36 Mbit/s
95th percentile per-packet one-way delay: 34.062 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 96.36 Mbit/s
95th percentile per-packet one-way delay: 34.062 ms
Loss rate: 0.48%
```
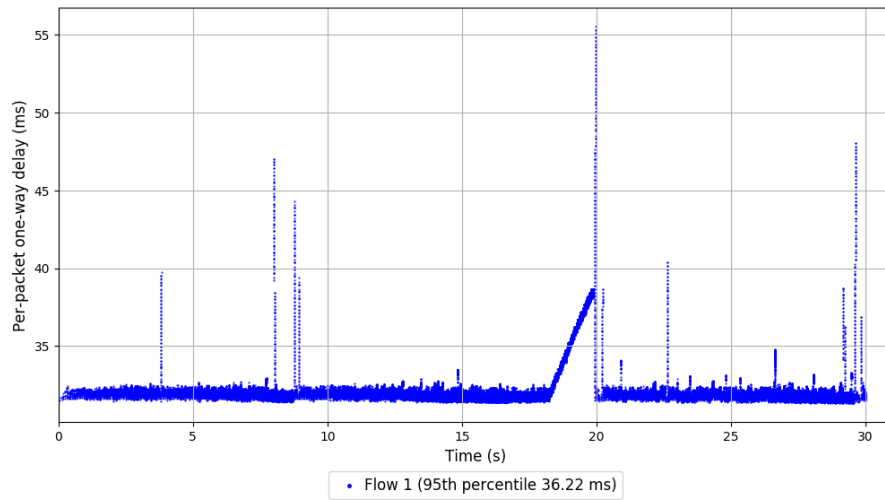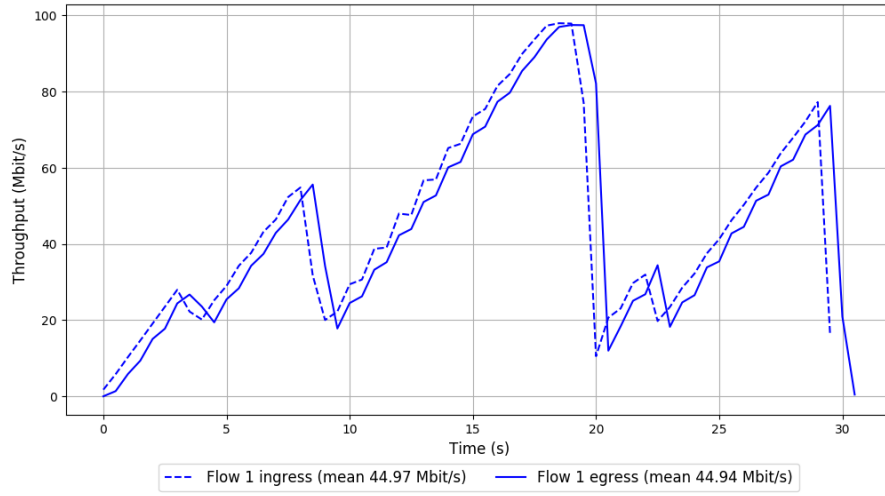
Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-10-02 17:38:04
End at: 2019-10-02 17:38:34
Local clock offset: -1.222 ms
Remote clock offset: -1.175 ms


# Below is generated by plot.py at 2019-10-02 19:56:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 44.32 Mbit/s
95th percentile per-packet one-way delay: 41.270 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 44.32 Mbit/s
95th percentile per-packet one-way delay: 41.270 ms
Loss rate: 0.07%
```

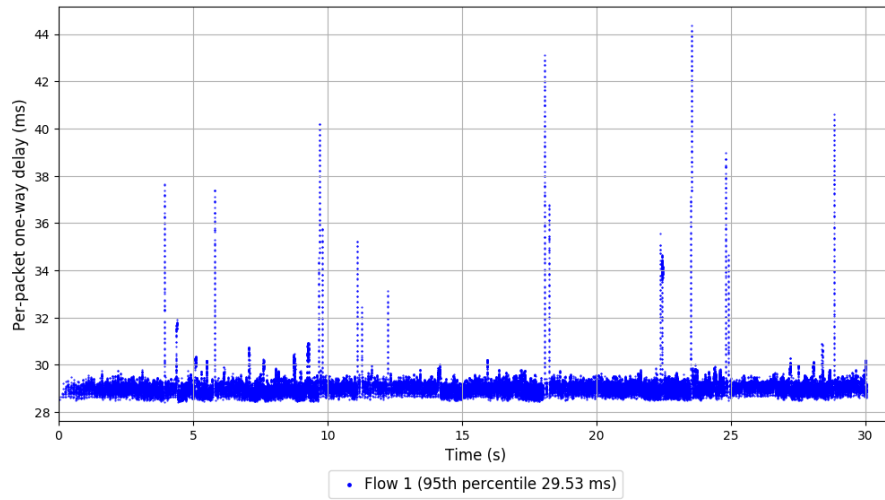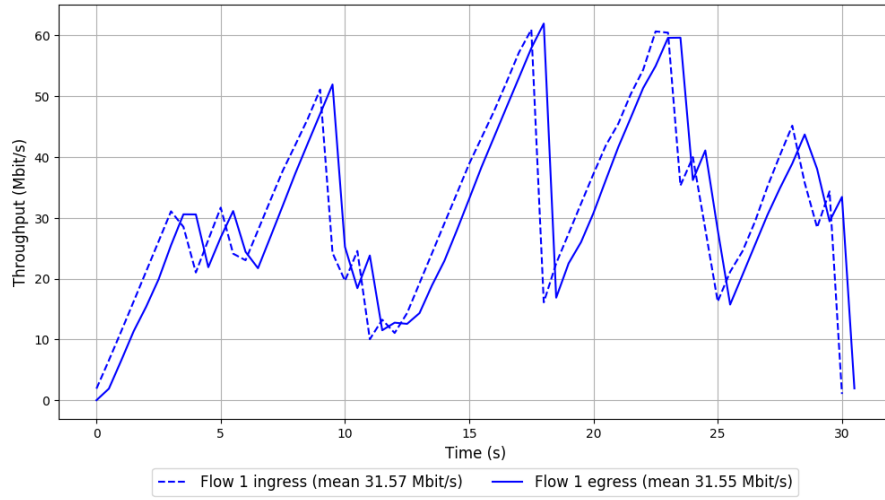# Run 1: Report of LEDBAT — Data Link

Run 2: Statistics of LEDBAT

Start at: 2019-10-02 18:06:28
End at: 2019-10-02 18:06:58
Local clock offset: -1.041 ms
Remote clock offset: -1.015 ms

Below is generated by plot.py at 2019-10-02 19:56:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 44.94 Mbit/s
95th percentile per-packet one-way delay: 36.216 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 44.94 Mbit/s
95th percentile per-packet one-way delay: 36.216 ms
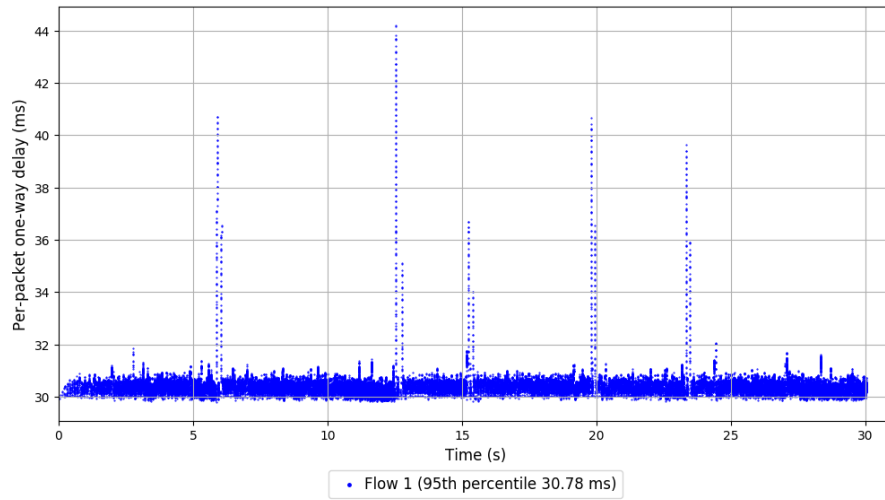Loss rate: 0.07%
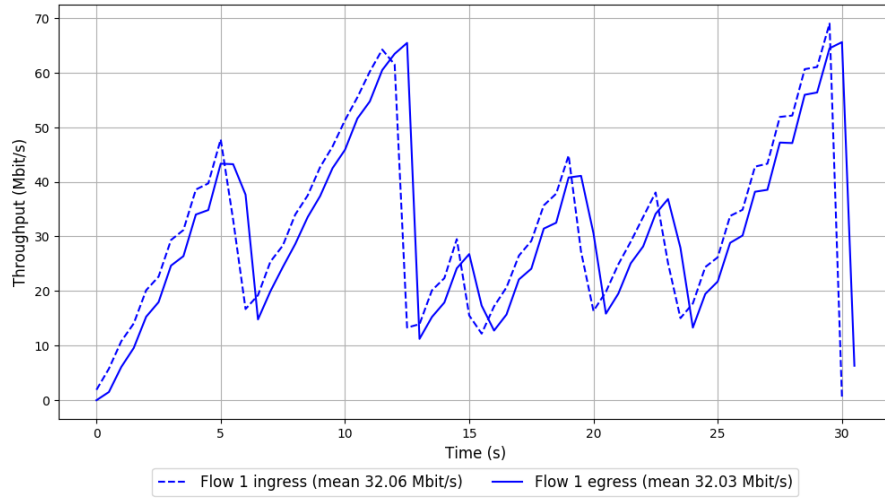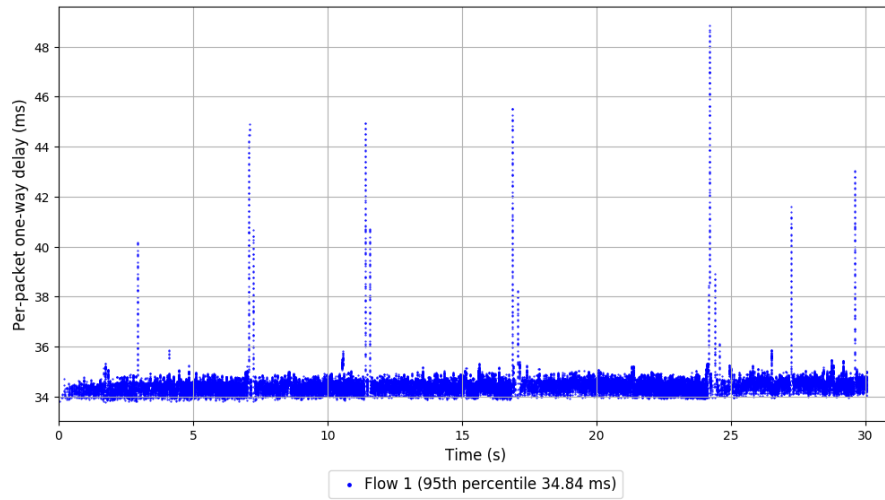
Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 44.97 Mbit/s)   Flow 1 egress (mean 44.94 Mbit/s)

• Flow 1 (95th percentile 36.22 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2019-10-02 18:34:50
End at: 2019-10-02 18:35:20
Local clock offset: -0.371 ms
Remote clock offset: -0.718 ms


# Below is generated by plot.py at 2019-10-02 19:56:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 31.55 Mbit/s
95th percentile per-packet one-way delay: 29.528 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 31.55 Mbit/s
95th percentile per-packet one-way delay: 29.528 ms
Loss rate: 0.06%
```

Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 31.57 Mbit/s)   Flow 1 egress (mean 31.55 Mbit/s)
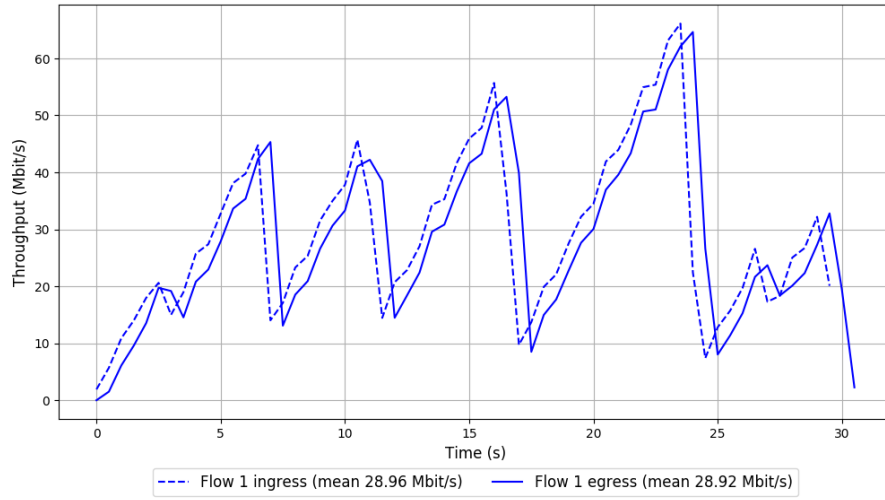

• Flow 1 (95th percentile 29.53 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2019-10-02 19:02:55
End at: 2019-10-02 19:03:25
Local clock offset: -0.412 ms
Remote clock offset: -1.043 ms


# Below is generated by plot.py at 2019-10-02 19:56:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 32.03 Mbit/s
95th percentile per-packet one-way delay: 30.776 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 32.03 Mbit/s
95th percentile per-packet one-way delay: 30.776 ms
Loss rate: 0.12%
```

Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 32.06 Mbit/s) ——— Flow 1 egress (mean 32.03 Mbit/s)

• Flow 1 (95th percentile 30.78 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-10-02 19:31:32
End at: 2019-10-02 19:32:02
Local clock offset: -0.657 ms
Remote clock offset: -1.107 ms

# Below is generated by plot.py at 2019-10-02 19:56:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.92 Mbit/s
95th percentile per-packet one-way delay: 34.839 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 28.92 Mbit/s
95th percentile per-packet one-way delay: 34.839 ms
Loss rate: 0.12%
```
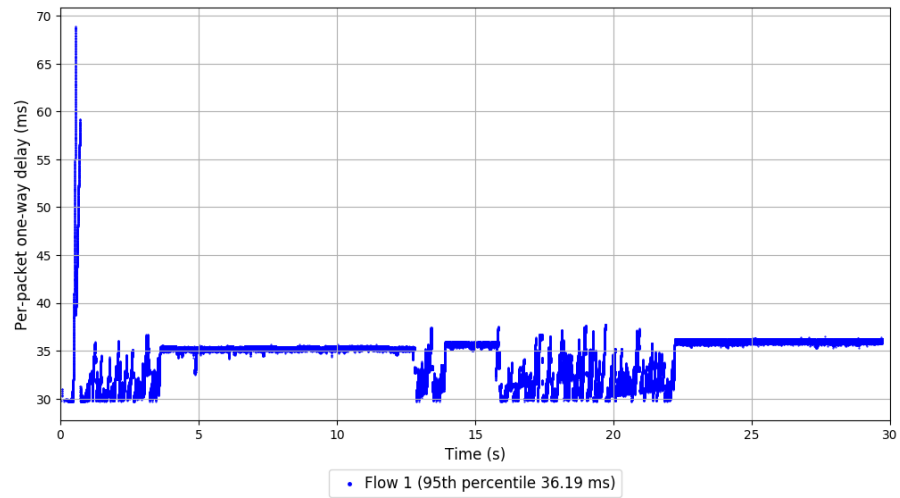
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-10-02 17:42:45
End at: 2019-10-02 17:43:15
Local clock offset: -0.322 ms
Remote clock offset: -2.96 ms


# Below is generated by plot.py at 2019-10-02 19:57:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.86 Mbit/s
95th percentile per-packet one-way delay: 36.194 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 95.86 Mbit/s
95th percentile per-packet one-way delay: 36.194 ms
Loss rate: 0.03%
```
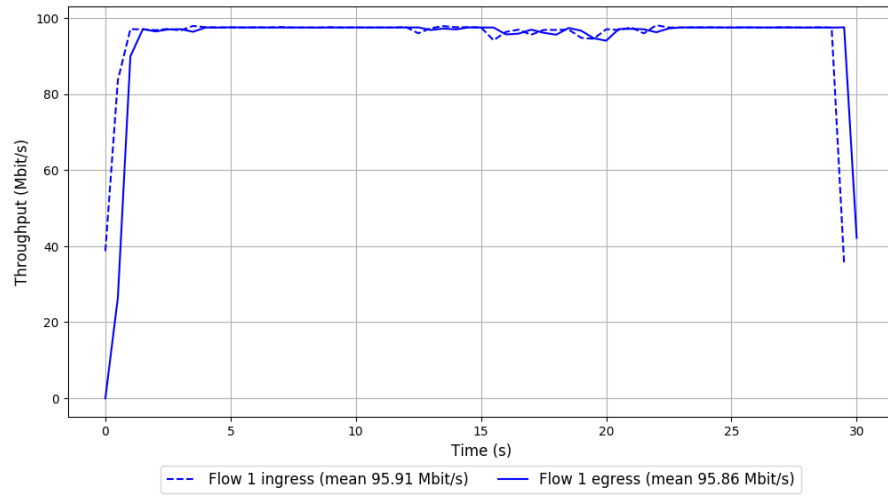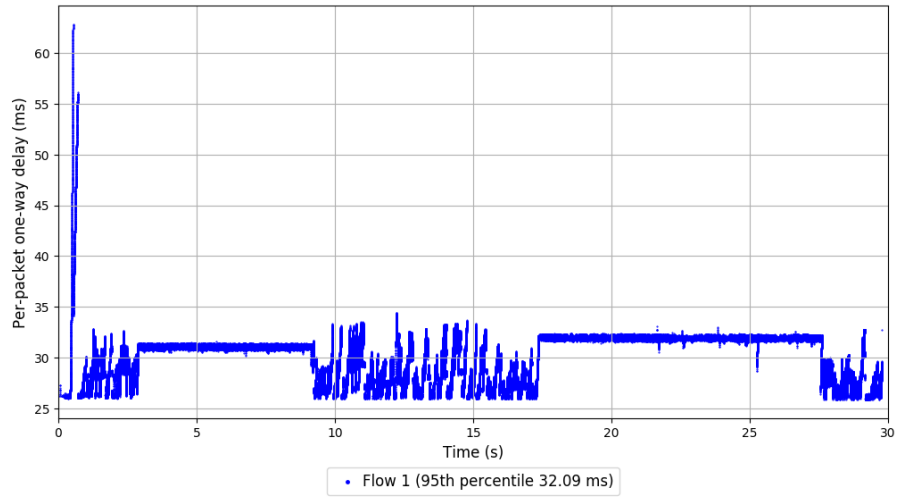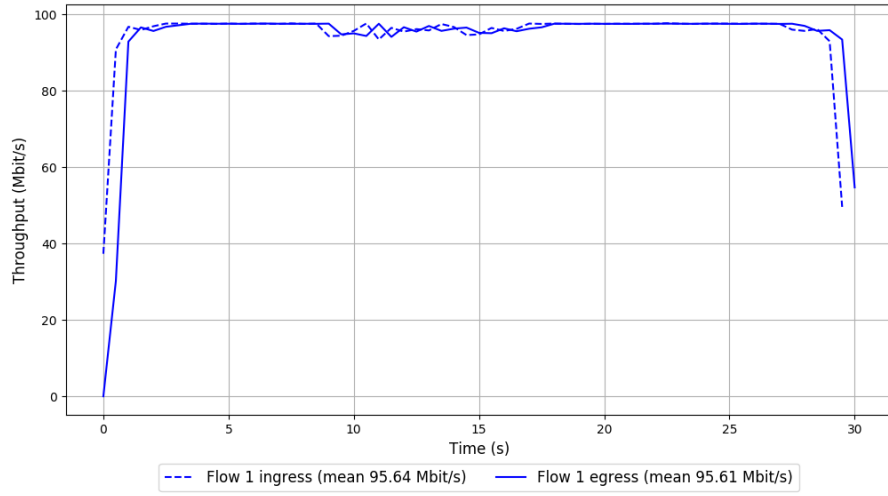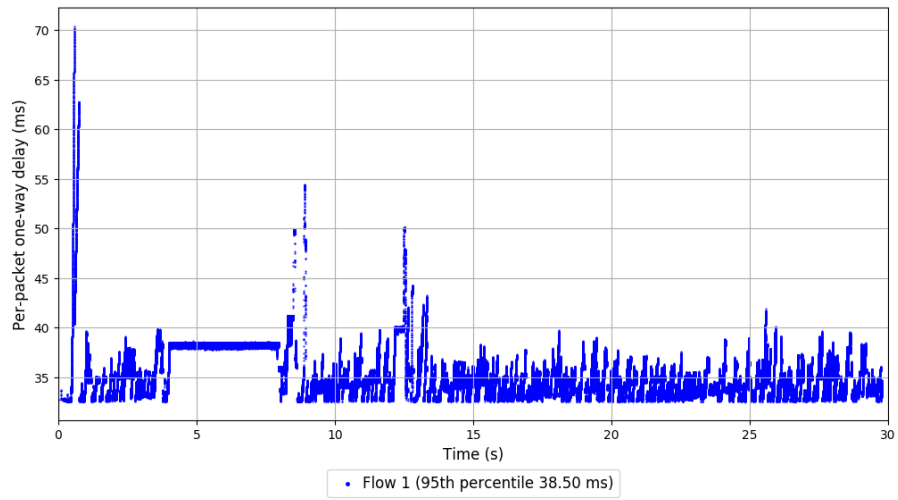
Run 1: Report of Muses_DecisionTree — Data Link

Run 2: Statistics of Muses_DecisionTree

Start at: 2019-10-02 18:11:02
End at: 2019-10-02 18:11:32
Local clock offset: -1.369 ms
Remote clock offset: -2.723 ms

Below is generated by plot.py at 2019-10-02 19:57:38
Datalink statistics
-- Total of 1 flow:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 32.094 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 32.094 ms
Loss rate: 0.01%
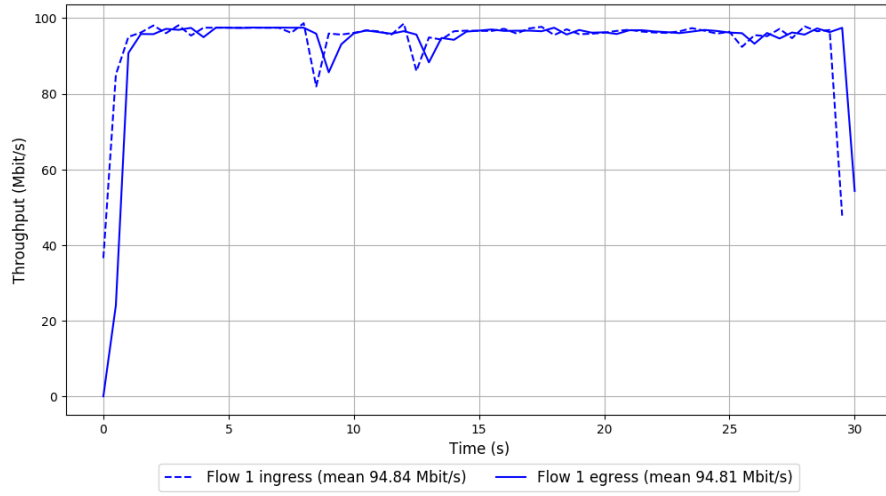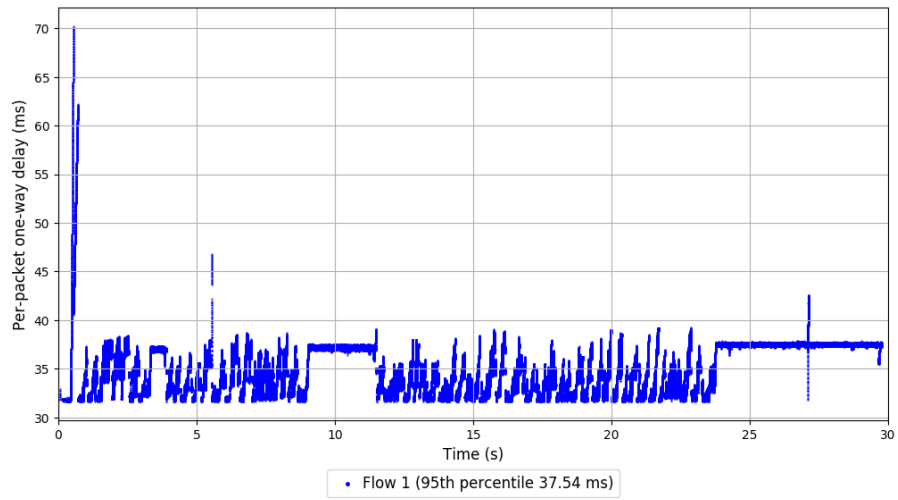
Run 2: Report of Muses_DecisionTree — Data Link

Run 3: Statistics of Muses_DecisionTree

Start at: 2019-10-02 18:39:20
End at: 2019-10-02 18:39:50
Local clock offset: -2.03 ms
Remote clock offset: -0.497 ms

Below is generated by plot.py at 2019-10-02 19:57:40
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.81 Mbit/s
95th percentile per-packet one-way delay: 38.501 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 94.81 Mbit/s
95th percentile per-packet one-way delay: 38.501 ms
Loss rate: 0.03%
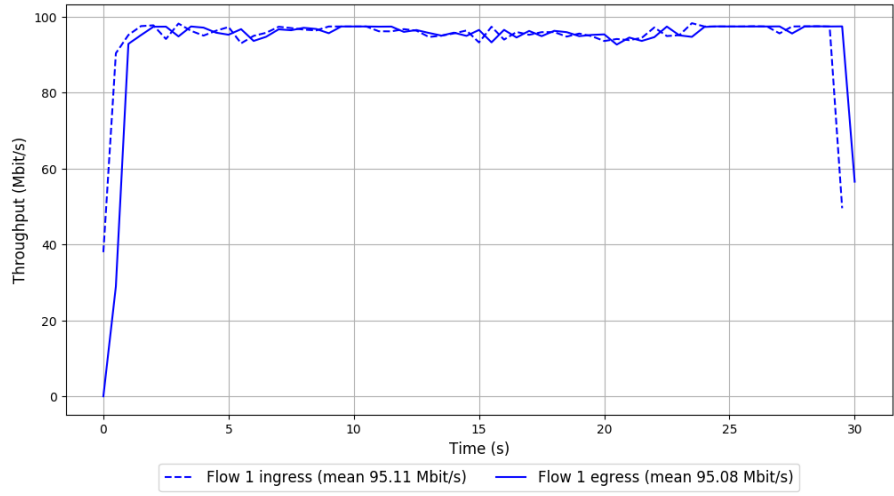
Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-10-02 19:07:25
End at: 2019-10-02 19:07:55
Local clock offset: -4.725 ms
Remote clock offset: -0.738 ms


# Below is generated by plot.py at 2019-10-02 19:57:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.08 Mbit/s
95th percentile per-packet one-way delay: 37.541 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 95.08 Mbit/s
95th percentile per-packet one-way delay: 37.541 ms
Loss rate: 0.02%
```

Run 4: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 95.11 Mbit/s)   Flow 1 egress (mean 95.08 Mbit/s)

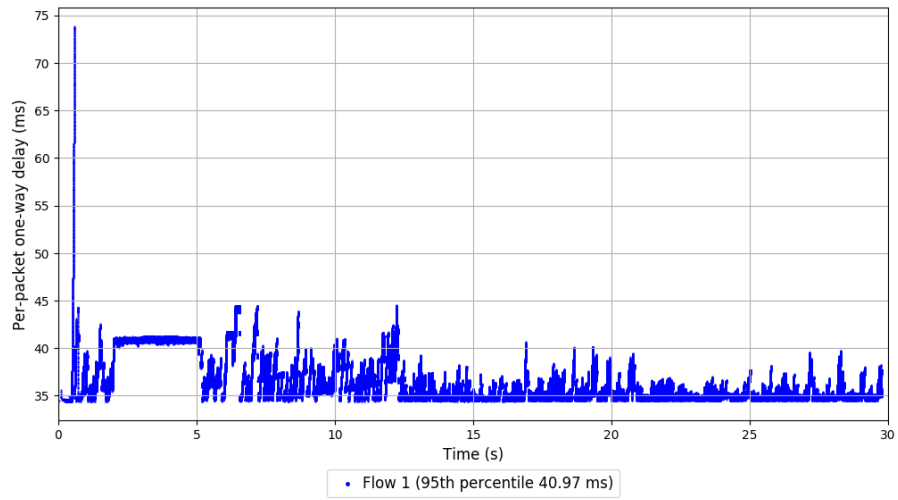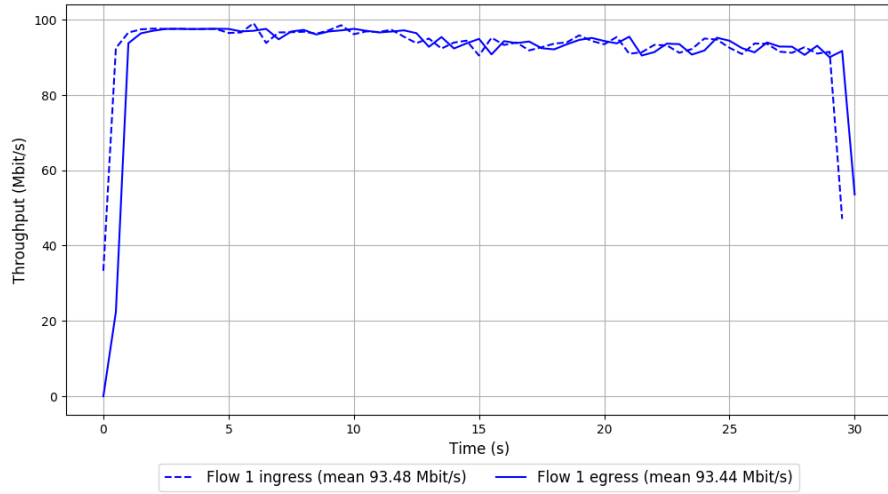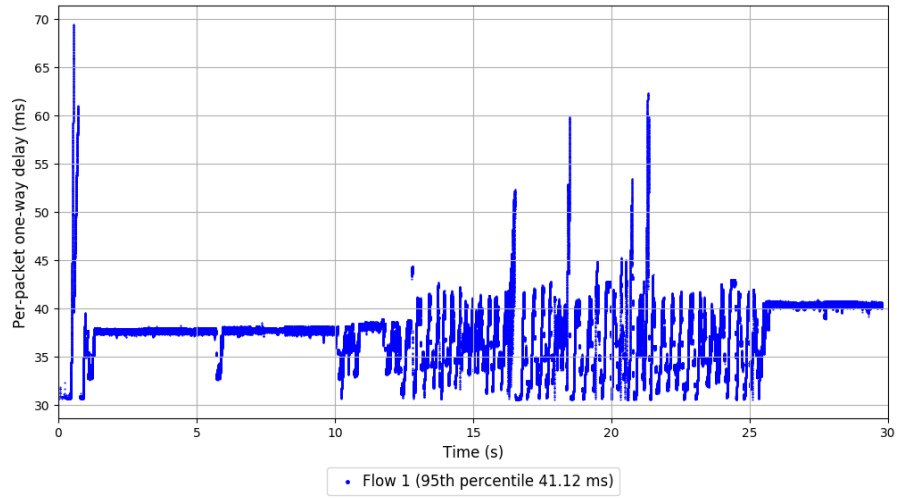Flow 1 (95th percentile 37.54 ms)

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-10-02 19:36:02
End at: 2019-10-02 19:36:32
Local clock offset: -0.912 ms
Remote clock offset: -2.169 ms


# Below is generated by plot.py at 2019-10-02 19:57:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.44 Mbit/s
95th percentile per-packet one-way delay: 40.971 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 93.44 Mbit/s
95th percentile per-packet one-way delay: 40.971 ms
Loss rate: 0.05%
```

Run 5: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 93.48 Mbit/s)   Flow 1 egress (mean 93.44 Mbit/s)
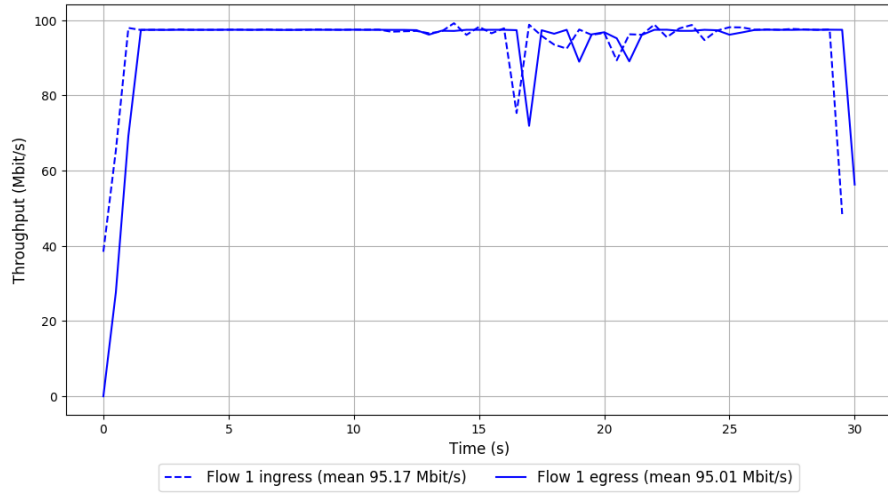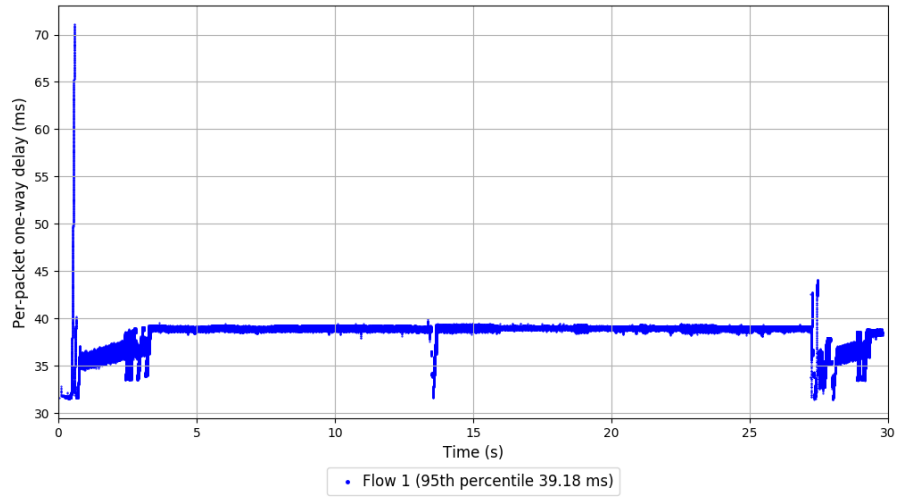

Flow 1 (95th percentile 40.97 ms)

```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-02 17:46:31
End at: 2019-10-02 17:47:01
Local clock offset: -2.147 ms
Remote clock offset: -3.468 ms


# Below is generated by plot.py at 2019-10-02 19:57:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 41.118 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 41.118 ms
Loss rate: 0.14%
```

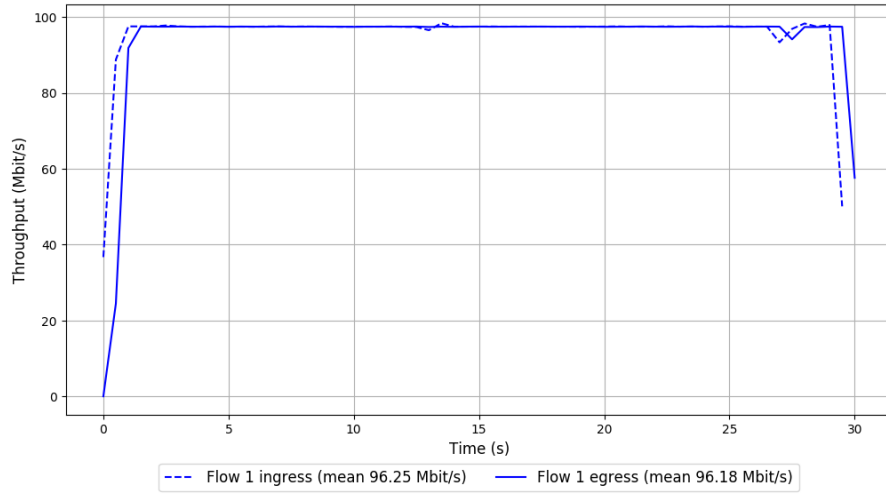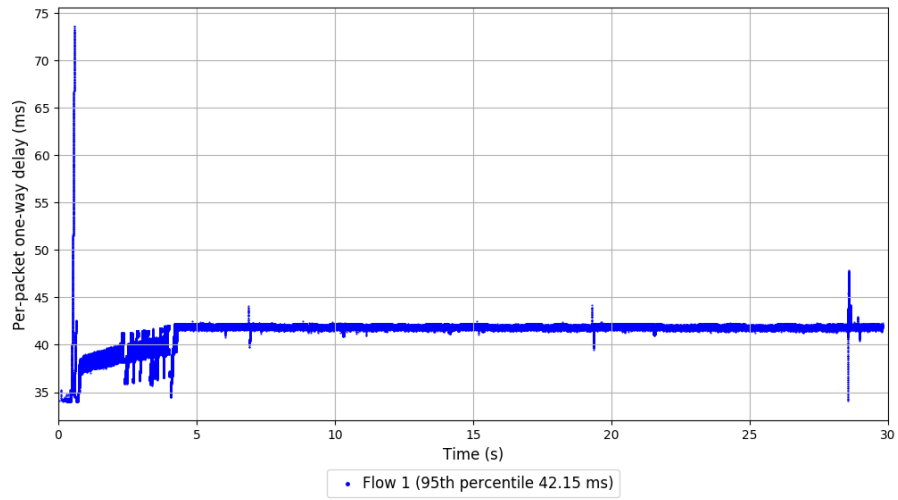Run 1: Report of Muses_DecisionTreeH0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-02 18:14:39
End at: 2019-10-02 18:15:09
Local clock offset: -12.89 ms
Remote clock offset: -10.317 ms


# Below is generated by plot.py at 2019-10-02 19:57:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.18 Mbit/s
95th percentile per-packet one-way delay: 39.182 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 96.18 Mbit/s
95th percentile per-packet one-way delay: 39.182 ms
Loss rate: 0.05%
```

Run 2: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 96.25 Mbit/s)   Flow 1 egress (mean 96.18 Mbit/s)

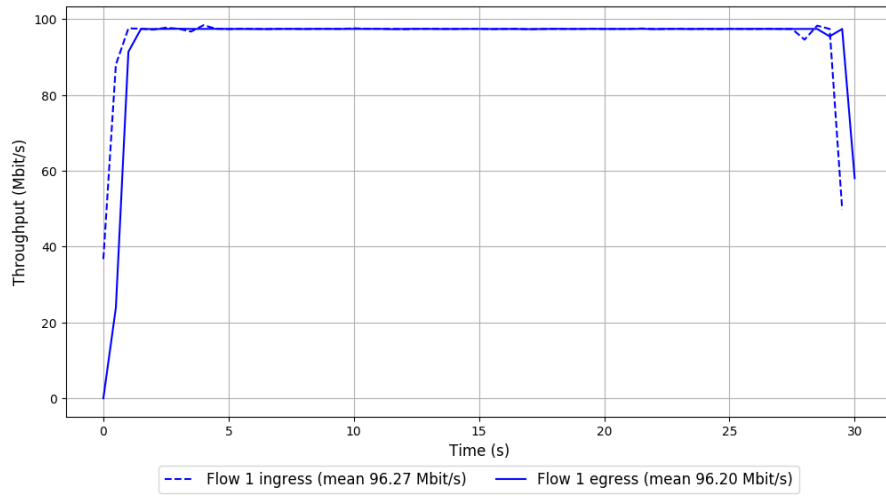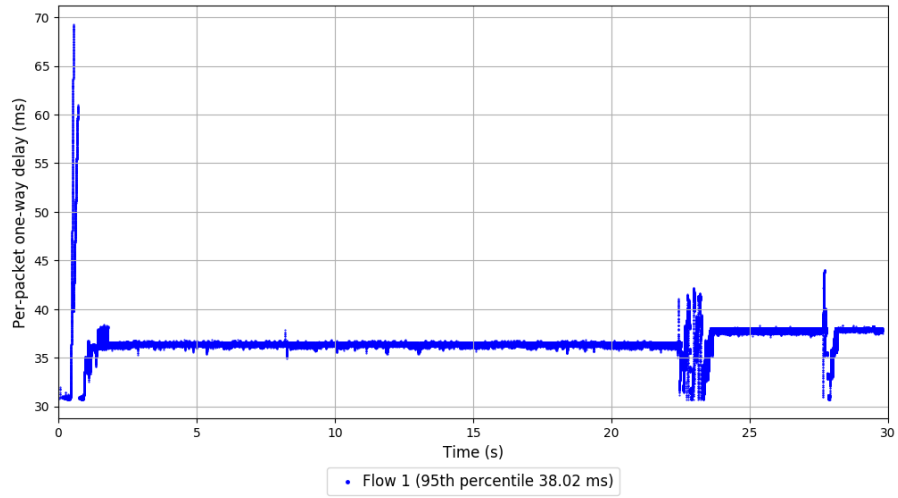Flow 1 (95th percentile 39.18 ms)

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-02 18:43:12
End at: 2019-10-02 18:43:42
Local clock offset: -5.174 ms
Remote clock offset: -1.906 ms


# Below is generated by plot.py at 2019-10-02 19:57:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.20 Mbit/s
95th percentile per-packet one-way delay: 42.149 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 96.20 Mbit/s
95th percentile per-packet one-way delay: 42.149 ms
Loss rate: 0.04%
```

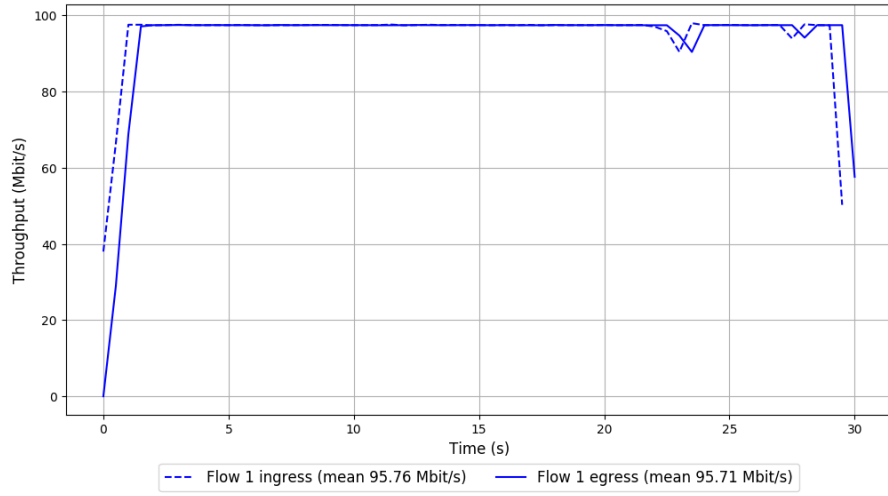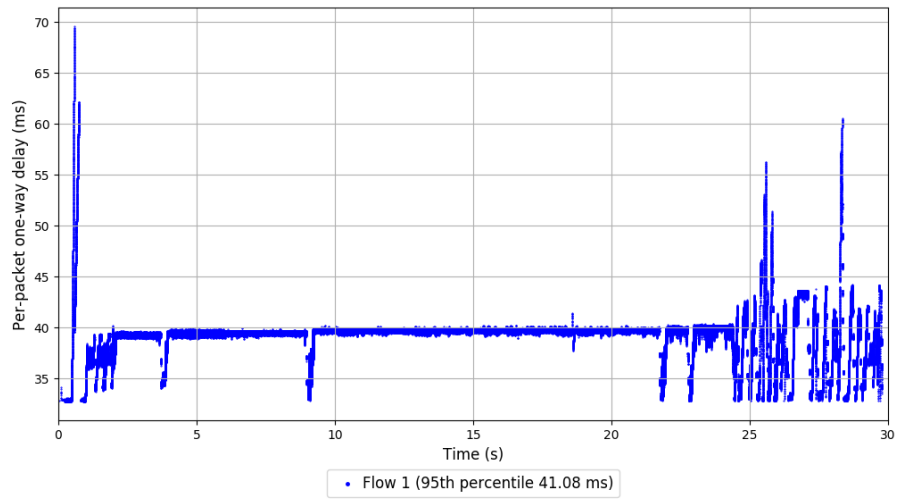Run 3: Report of Muses_DecisionTreeH0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-02 19:11:20
End at: 2019-10-02 19:11:50
Local clock offset: -4.503 ms
Remote clock offset: -1.249 ms


# Below is generated by plot.py at 2019-10-02 19:58:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.71 Mbit/s
95th percentile per-packet one-way delay: 38.018 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 95.71 Mbit/s
95th percentile per-packet one-way delay: 38.018 ms
Loss rate: 0.03%
```

Run 4: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 95.76 Mbit/s)   Flow 1 egress (mean 95.71 Mbit/s)

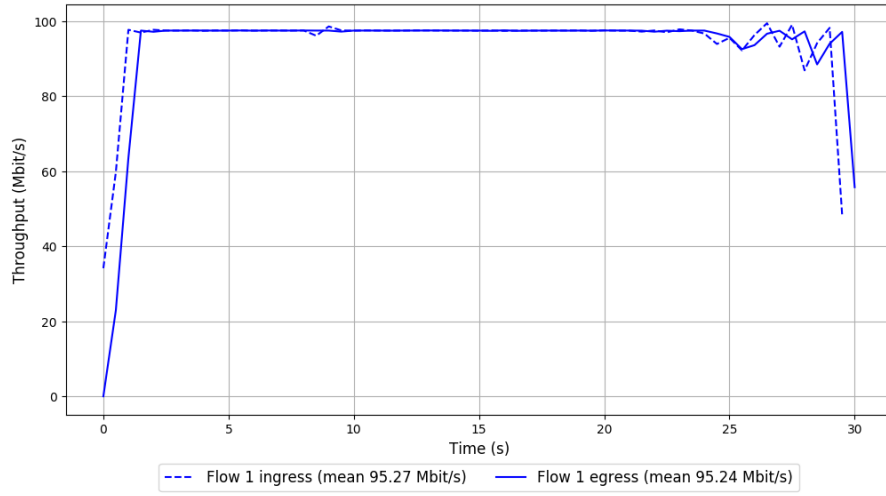• Flow 1 (95th percentile 38.02 ms)

```
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-02 19:39:45
End at: 2019-10-02 19:40:15
Local clock offset: 1.995 ms
Remote clock offset: -1.574 ms


# Below is generated by plot.py at 2019-10-02 19:58:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.24 Mbit/s
95th percentile per-packet one-way delay: 41.084 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 95.24 Mbit/s
95th percentile per-packet one-way delay: 41.084 ms
Loss rate: 0.02%
```

Run 5: Report of Muses_DecisionTreeH0 — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-02 17:53:39
End at: 2019-10-02 17:54:09
Local clock offset: -0.802 ms
Remote clock offset: -2.55 ms


# Below is generated by plot.py at 2019-10-02 19:58:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 35.368 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 35.368 ms
Loss rate: 0.06%
```
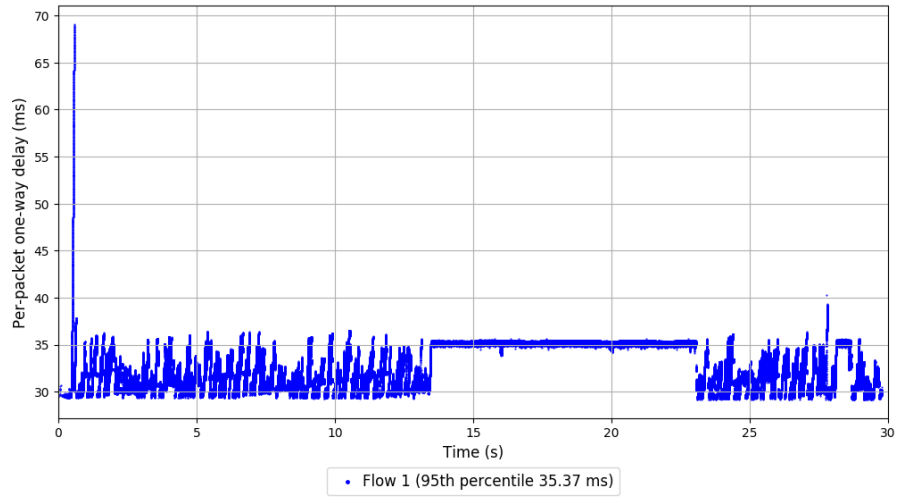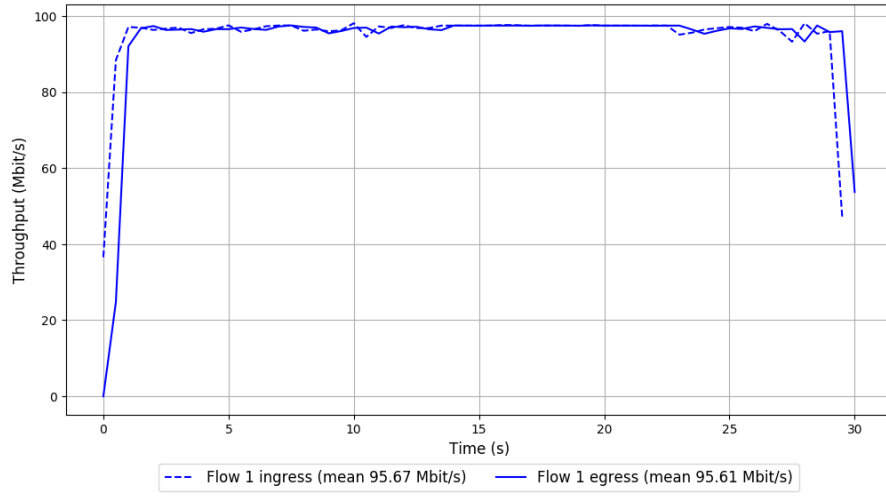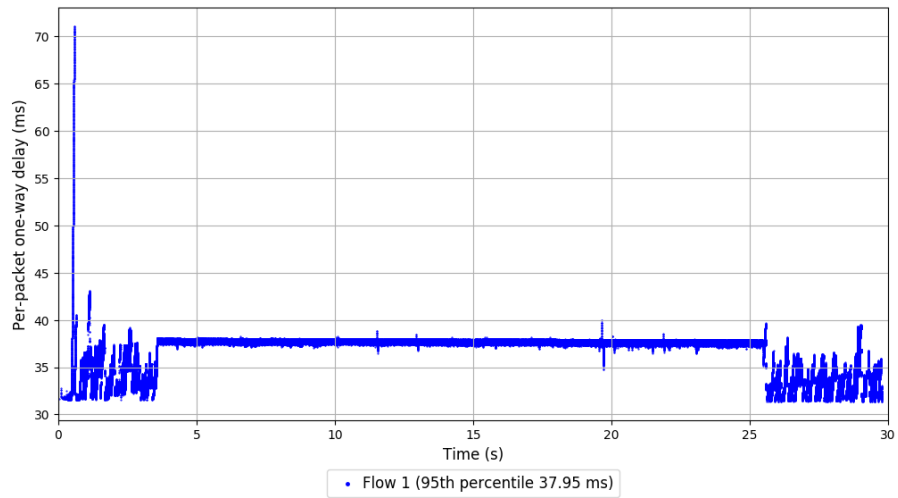
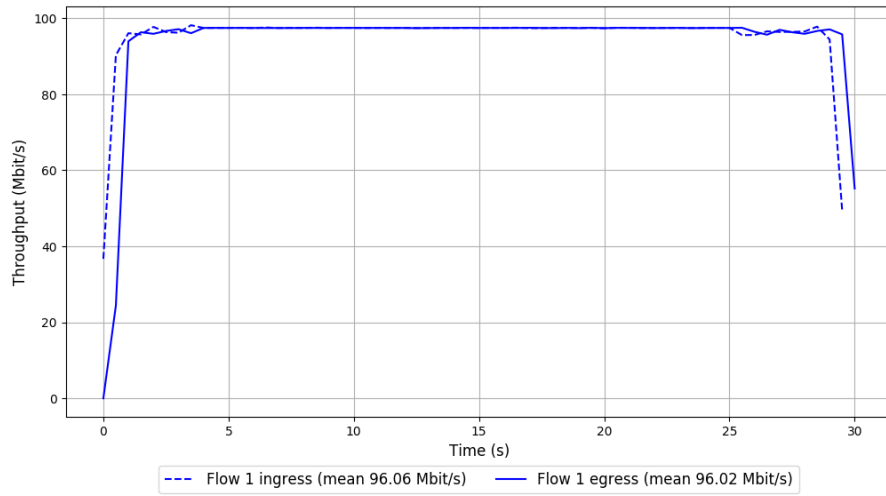Run 1: Report of Muses_DecisionTreeR0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-02 18:22:05
End at: 2019-10-02 18:22:35
Local clock offset: -7.758 ms
Remote clock offset: -2.287 ms


# Below is generated by plot.py at 2019-10-02 19:58:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.02 Mbit/s
95th percentile per-packet one-way delay: 37.948 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 96.02 Mbit/s
95th percentile per-packet one-way delay: 37.948 ms
Loss rate: 0.04%
```

Run 2: Report of Muses_DecisionTreeR0 — Data Link

Flow 1 ingress (mean 96.06 Mbit/s)   Flow 1 egress (mean 96.02 Mbit/s)

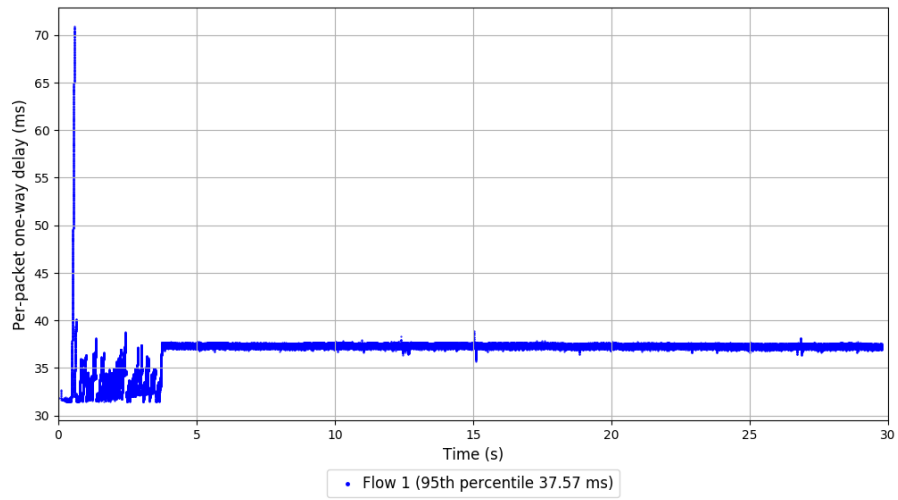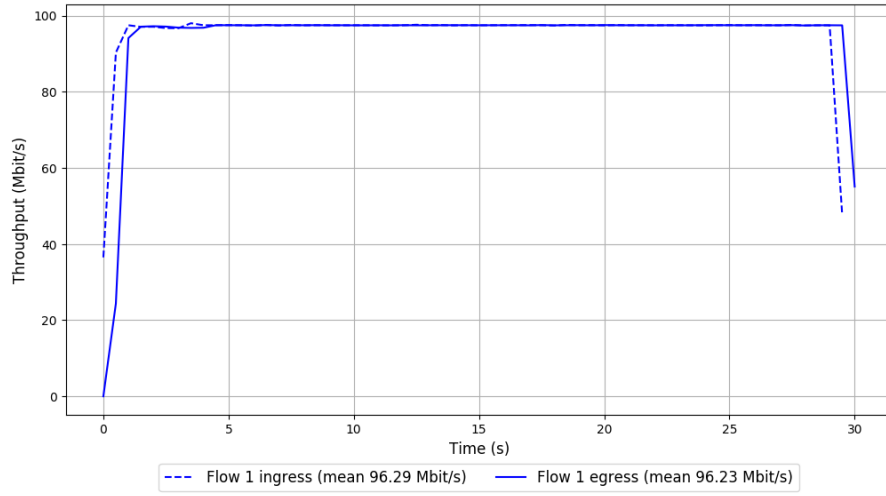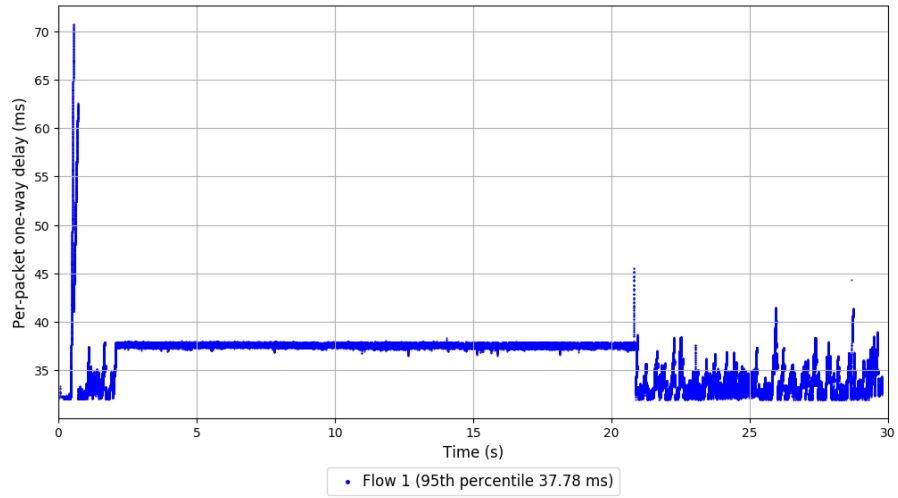• Flow 1 (95th percentile 37.95 ms)

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-02 18:50:19
End at: 2019-10-02 18:50:49
Local clock offset: -3.624 ms
Remote clock offset: -1.733 ms


# Below is generated by plot.py at 2019-10-02 19:58:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.23 Mbit/s
95th percentile per-packet one-way delay: 37.574 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 96.23 Mbit/s
95th percentile per-packet one-way delay: 37.574 ms
Loss rate: 0.04%
```

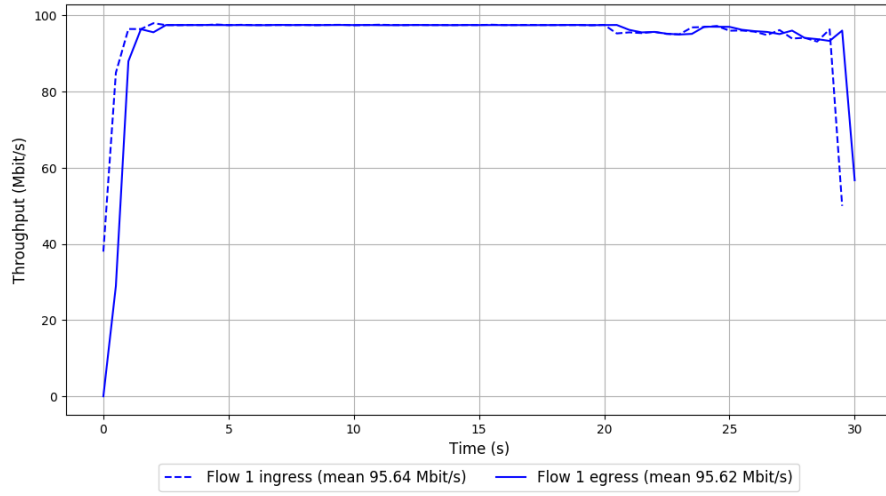Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-02 19:18:44
End at: 2019-10-02 19:19:14
Local clock offset: -6.399 ms
Remote clock offset: -1.009 ms


# Below is generated by plot.py at 2019-10-02 19:59:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.62 Mbit/s
95th percentile per-packet one-way delay: 37.778 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 95.62 Mbit/s
95th percentile per-packet one-way delay: 37.778 ms
Loss rate: 0.01%
```

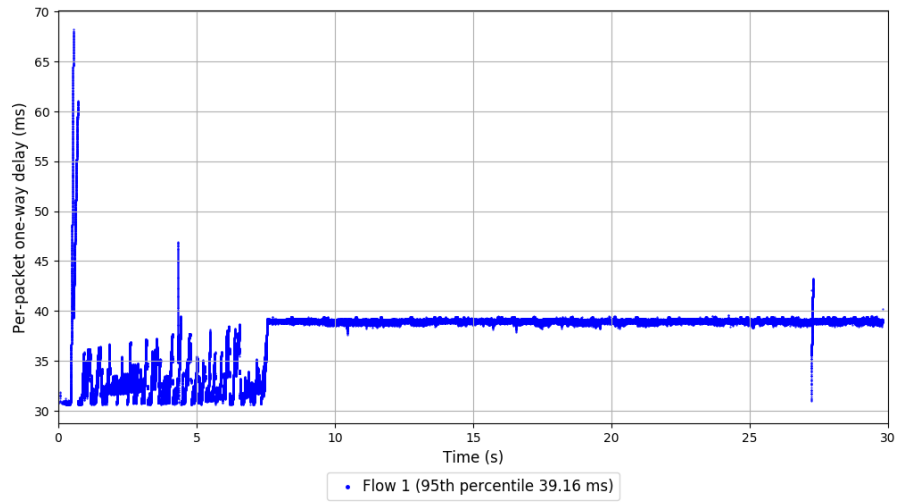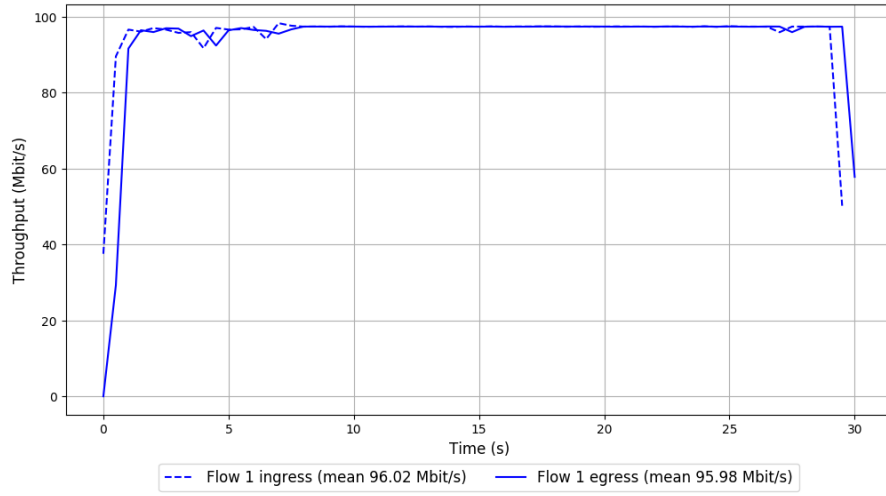Run 4: Report of Muses_DecisionTreeR0 — Data Link

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```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-02 19:47:06
End at: 2019-10-02 19:47:36
Local clock offset: 0.049 ms
Remote clock offset: -2.485 ms


# Below is generated by plot.py at 2019-10-02 19:59:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.98 Mbit/s
95th percentile per-packet one-way delay: 39.162 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 95.98 Mbit/s
95th percentile per-packet one-way delay: 39.162 ms
Loss rate: 0.01%
```

Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-10-02 17:36:53
End at: 2019-10-02 17:37:23
Local clock offset: 1.792 ms
Remote clock offset: -3.424 ms


# Below is generated by plot.py at 2019-10-02 19:59:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.03 Mbit/s
95th percentile per-packet one-way delay: 37.310 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 90.03 Mbit/s
95th percentile per-packet one-way delay: 37.310 ms
Loss rate: 0.55%
```
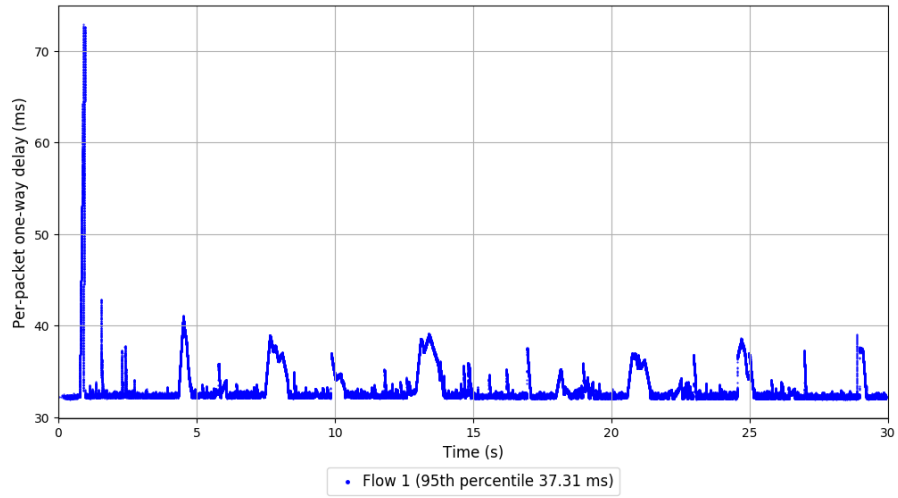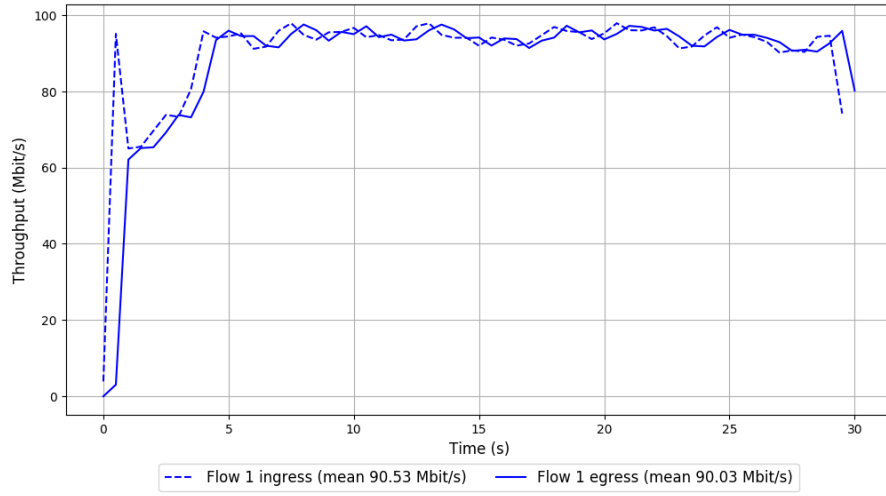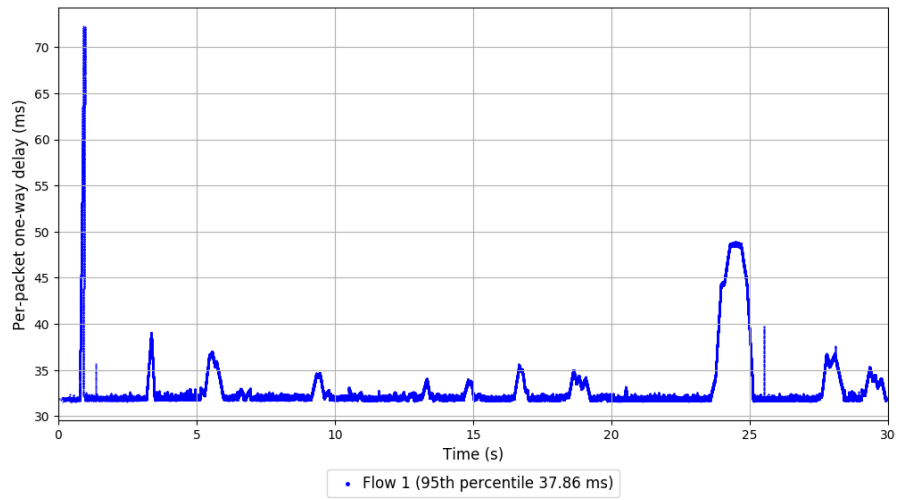
Run 1: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 90.53 Mbit/s)   Flow 1 egress (mean 90.03 Mbit/s)

• Flow 1 (95th percentile 37.31 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-10-02 18:05:16
End at: 2019-10-02 18:05:46
Local clock offset: -3.376 ms
Remote clock offset: -3.314 ms


# Below is generated by plot.py at 2019-10-02 19:59:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.34 Mbit/s
95th percentile per-packet one-way delay: 37.864 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 91.34 Mbit/s
95th percentile per-packet one-way delay: 37.864 ms
Loss rate: 0.55%
```
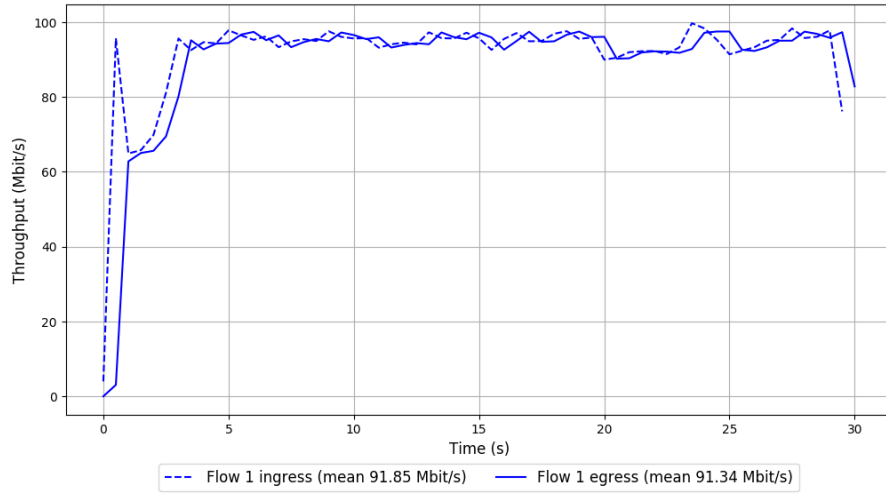
Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 91.85 Mbit/s)   Flow 1 egress (mean 91.34 Mbit/s)
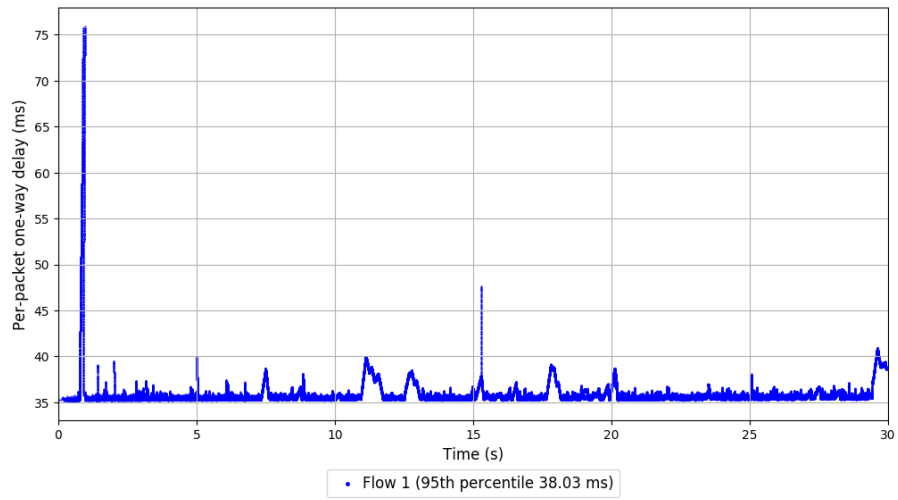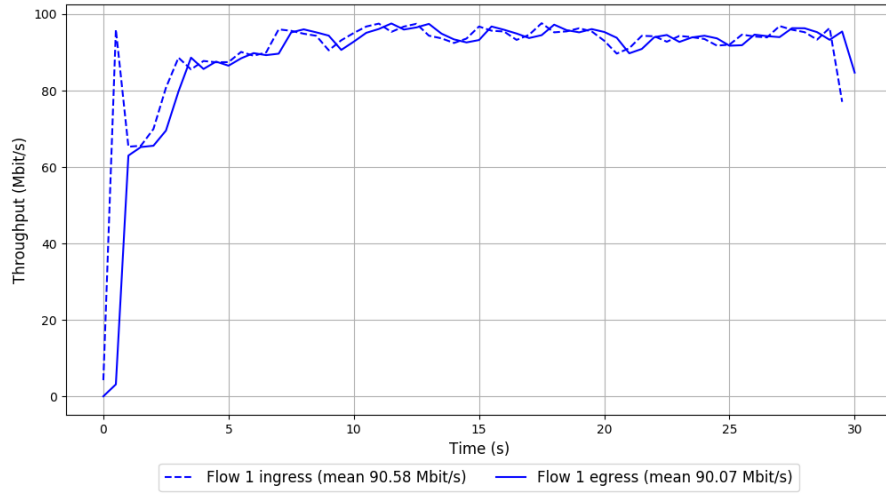

Flow 1 (95th percentile 37.86 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-10-02 18:33:41
End at: 2019-10-02 18:34:11
Local clock offset: -4.879 ms
Remote clock offset: -0.228 ms


# Below is generated by plot.py at 2019-10-02 19:59:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.07 Mbit/s
95th percentile per-packet one-way delay: 38.035 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 90.07 Mbit/s
95th percentile per-packet one-way delay: 38.035 ms
Loss rate: 0.55%
```
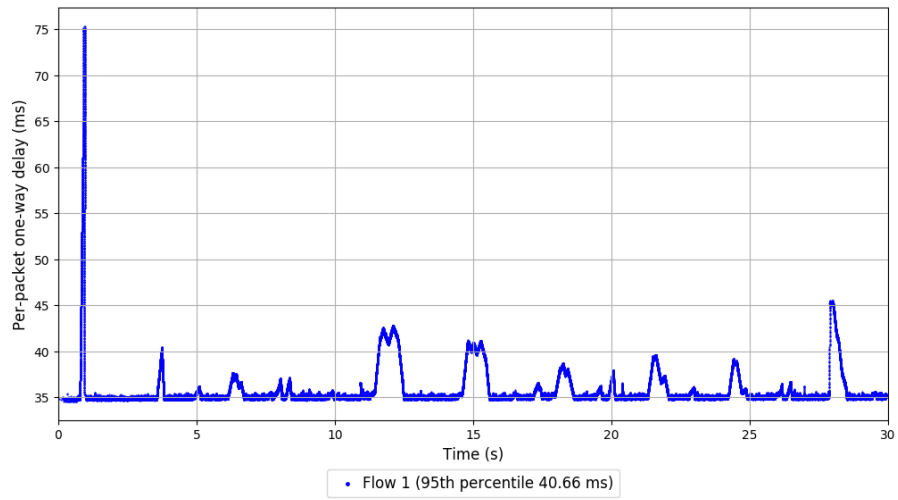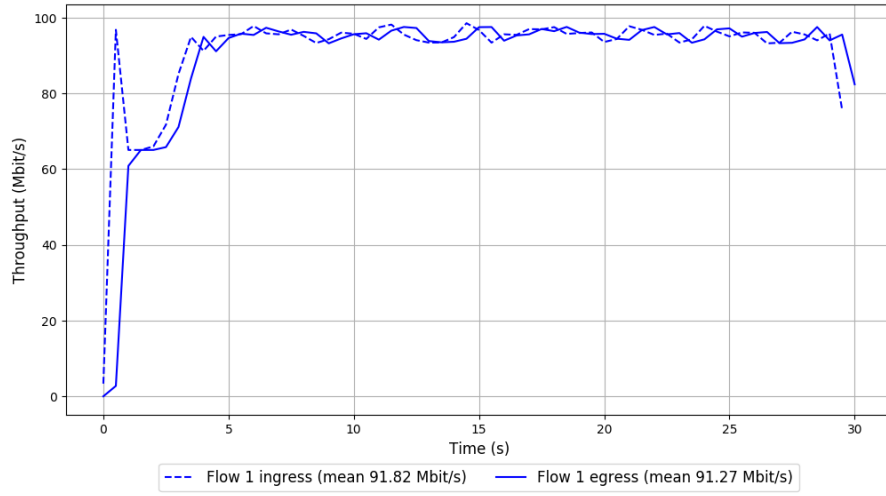
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 90.58 Mbit/s) —— Flow 1 egress (mean 90.07 Mbit/s)

• Flow 1 (95th percentile 38.03 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-10-02 19:01:46
End at: 2019-10-02 19:02:16
Local clock offset: -3.323 ms
Remote clock offset: 0.176 ms


# Below is generated by plot.py at 2019-10-02 20:00:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.27 Mbit/s
95th percentile per-packet one-way delay: 40.662 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 91.27 Mbit/s
95th percentile per-packet one-way delay: 40.662 ms
Loss rate: 0.60%
```

Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-10-02 19:30:23
End at: 2019-10-02 19:30:53
Local clock offset: -0.7 ms
Remote clock offset: -0.09 ms


# Below is generated by plot.py at 2019-10-02 20:00:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.87 Mbit/s
95th percentile per-packet one-way delay: 35.944 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 90.87 Mbit/s
95th percentile per-packet one-way delay: 35.944 ms
Loss rate: 0.52%
```
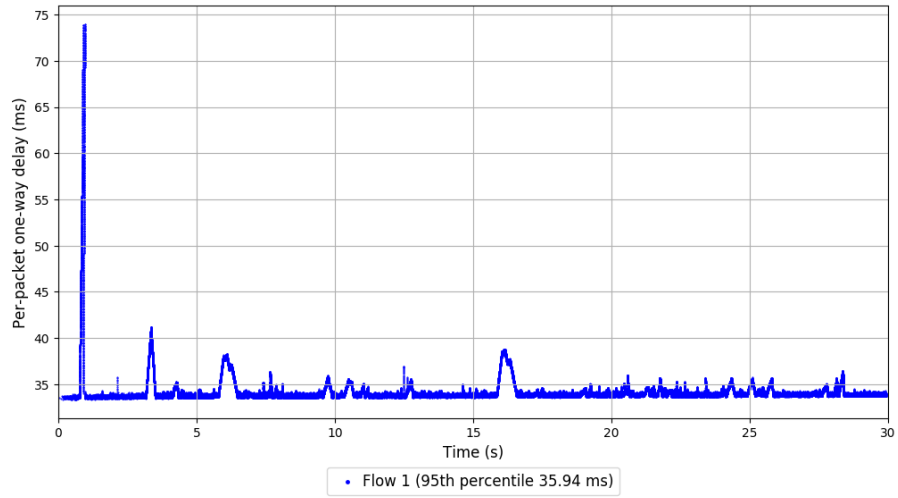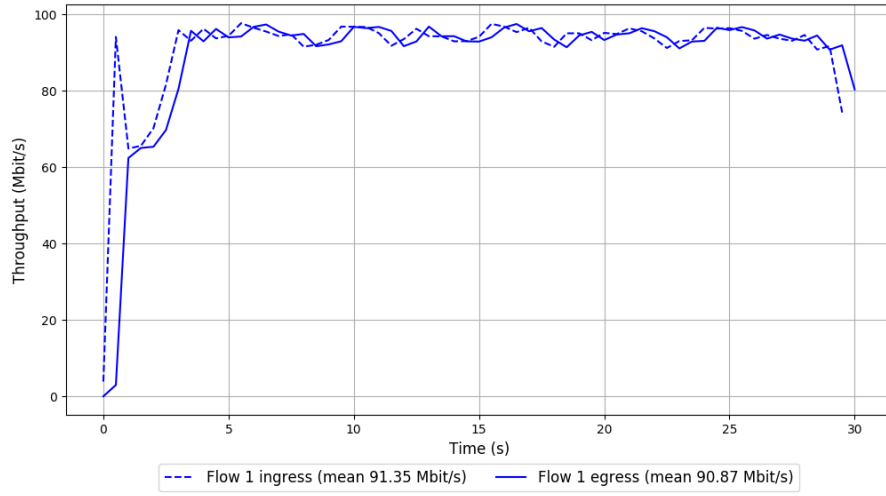
Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 91.35 Mbit/s)   Flow 1 egress (mean 90.87 Mbit/s)

Flow 1 (95th percentile 35.94 ms)
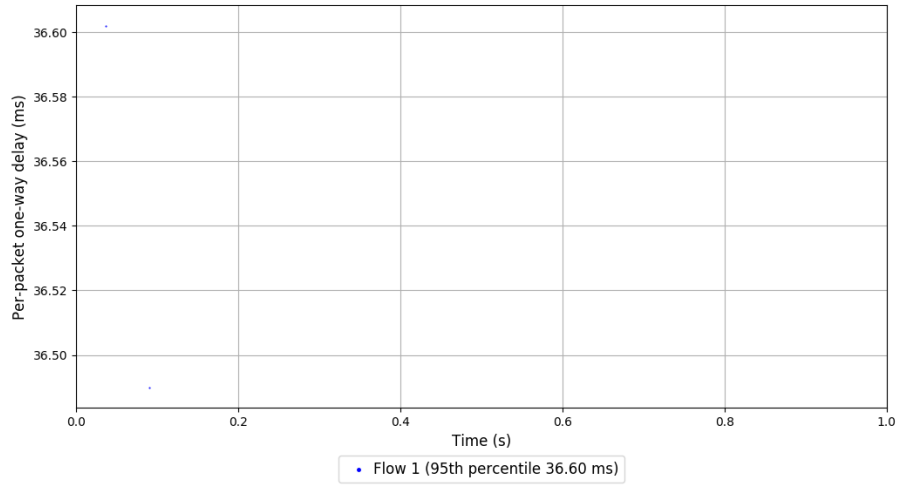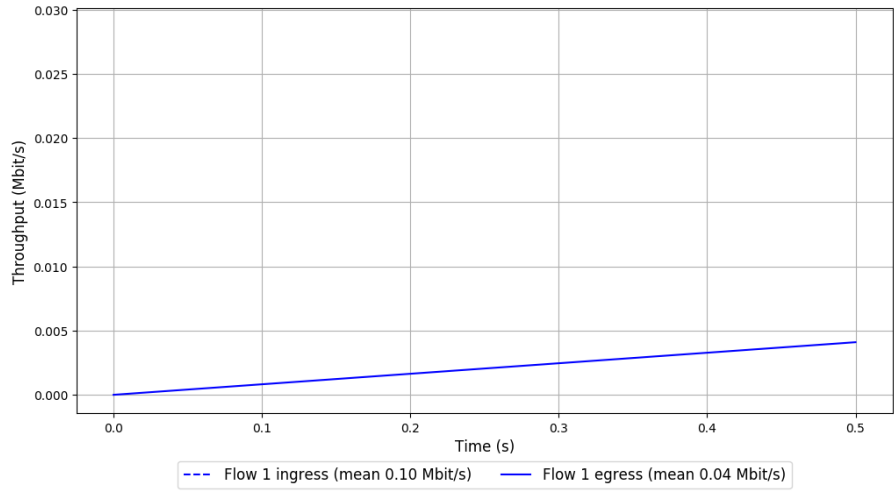
```
Run 1: Statistics of PCC-Expr

Start at: 2019-10-02 17:27:40
End at: 2019-10-02 17:28:10
Local clock offset: 0.832 ms
Remote clock offset: -1.396 ms
```

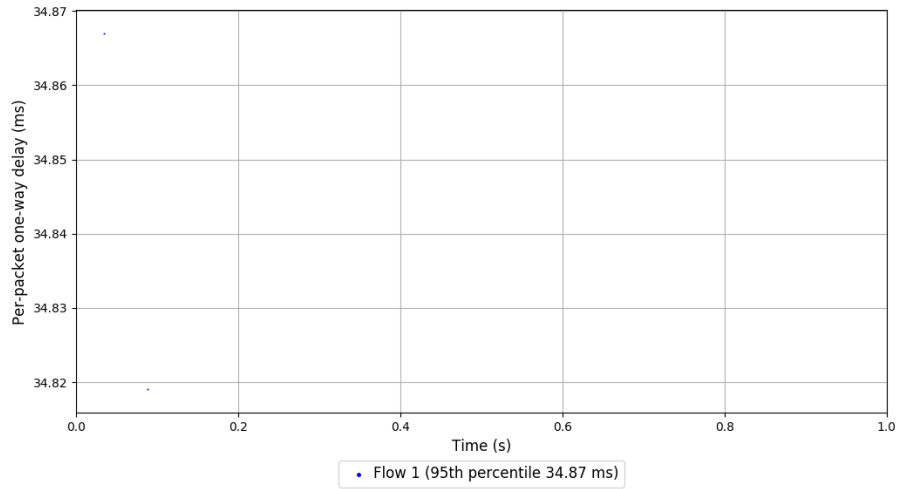Run 1: Report of PCC-Expr — Data Link

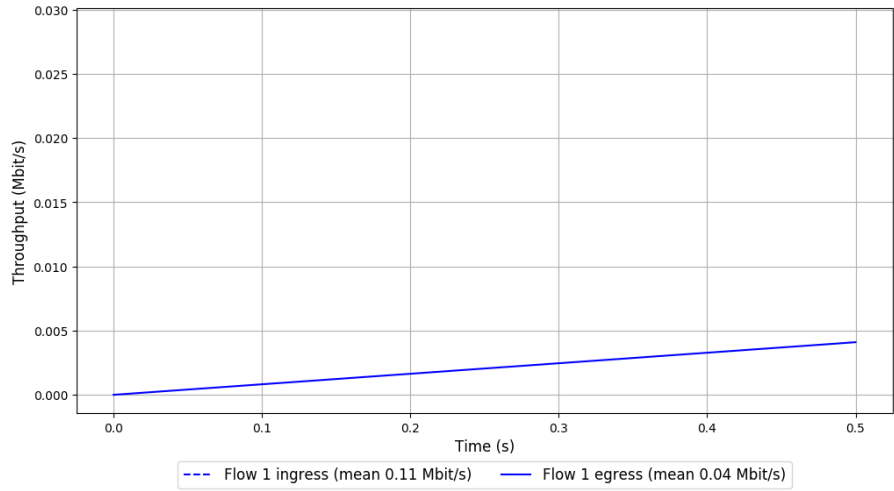```
Run 2: Statistics of PCC-Expr

Start at: 2019-10-02 17:56:00
End at: 2019-10-02 17:56:30
Local clock offset: -4.023 ms
Remote clock offset: -1.442 ms
```

Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-10-02 18:24:33
End at: 2019-10-02 18:25:03
Local clock offset: -8.993 ms
Remote clock offset: -2.575 ms
```
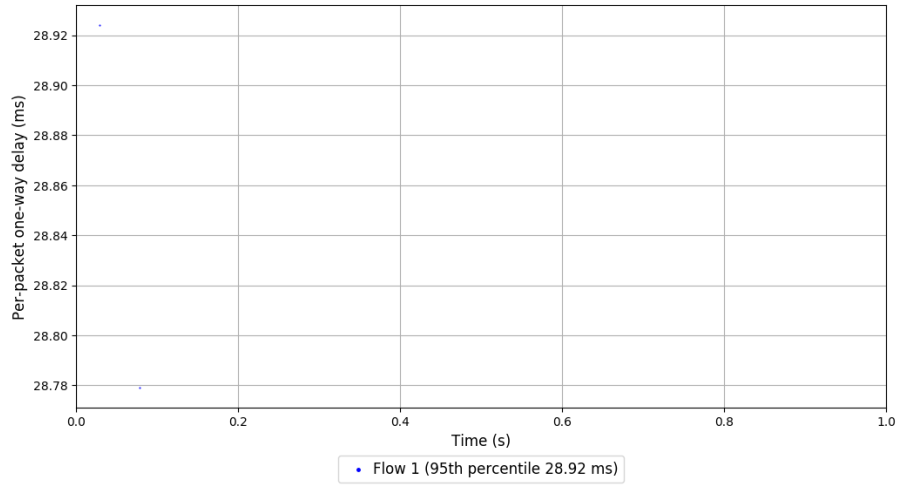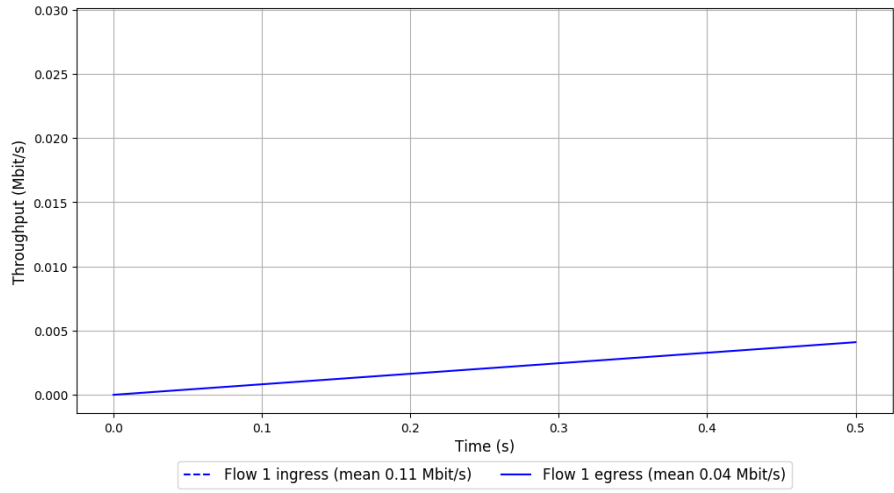
## Run 3: Report of PCC-Expr — Data Link



Flow 1 ingress (mean 0.11 Mbit/s) --- Flow 1 egress (mean 0.04 Mbit/s)



Flow 1 (95th percentile 28.92 ms)
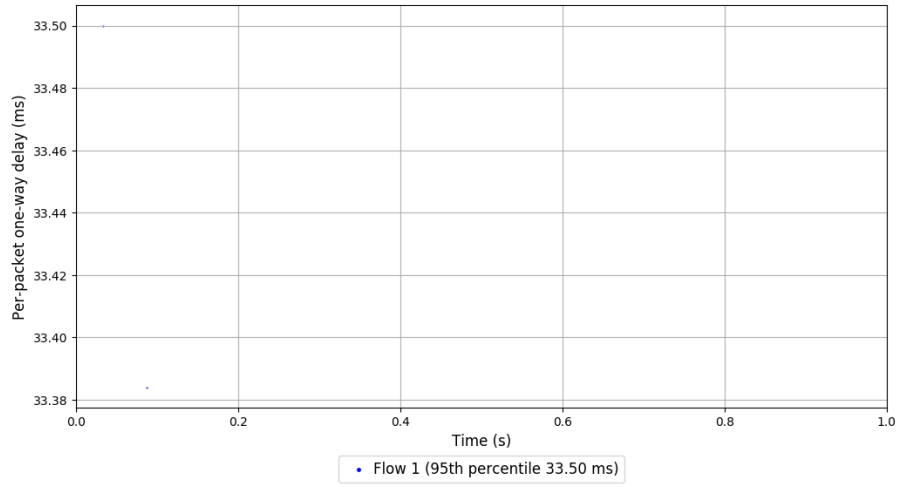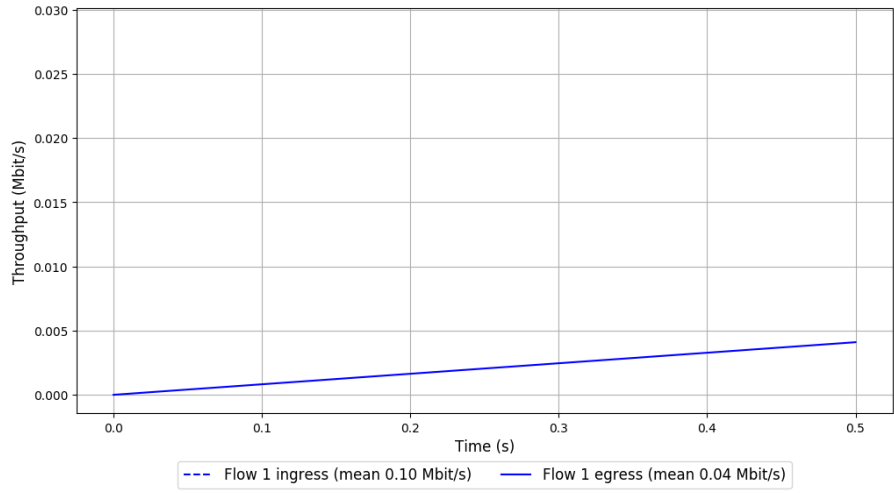
Run 4: Statistics of PCC-Expr

Start at: 2019-10-02 18:52:41
End at: 2019-10-02 18:53:11
Local clock offset: -4.308 ms
Remote clock offset: -0.845 ms

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



Flow 1 ingress (mean 0.10 Mbit/s) --- Flow 1 egress (mean 0.04 Mbit/s)



Flow 1 (95th percentile 33.50 ms)
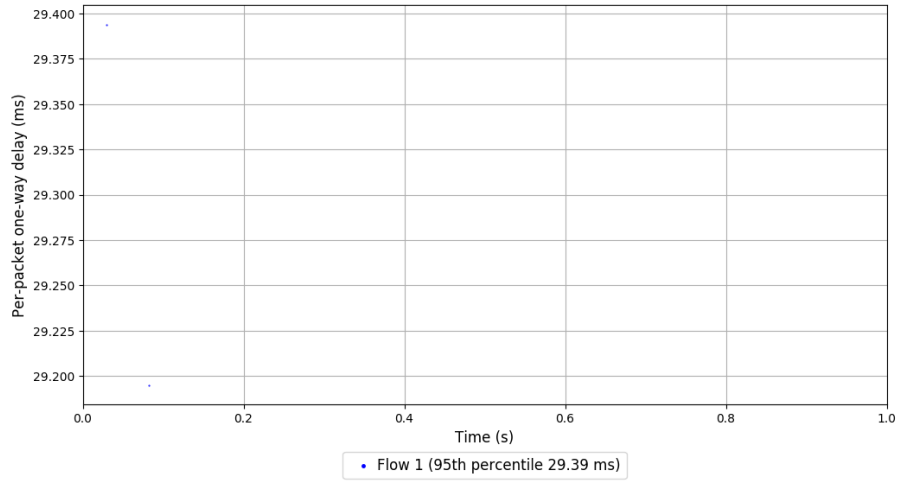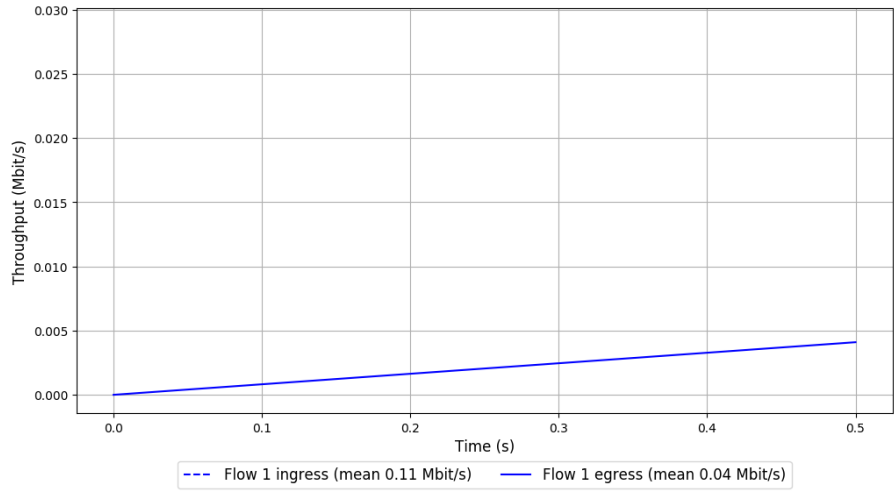
```
Run 5: Statistics of PCC-Expr

Start at: 2019-10-02 19:21:10
End at: 2019-10-02 19:21:40
Local clock offset: -1.585 ms
Remote clock offset: -1.523 ms
```

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



Flow 1 ingress (mean 0.11 Mbit/s) --- Flow 1 egress (mean 0.04 Mbit/s)



Flow 1 (95th percentile 29.39 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-10-02 17:48:51
End at: 2019-10-02 17:49:21
Local clock offset: -2.916 ms
Remote clock offset: -3.906 ms

Below is generated by plot.py at 2019-10-02 20:00:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 64.85 Mbit/s
95th percentile per-packet one-way delay: 65.998 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 64.85 Mbit/s
95th percentile per-packet one-way delay: 65.998 ms
Loss rate: 1.32%
```
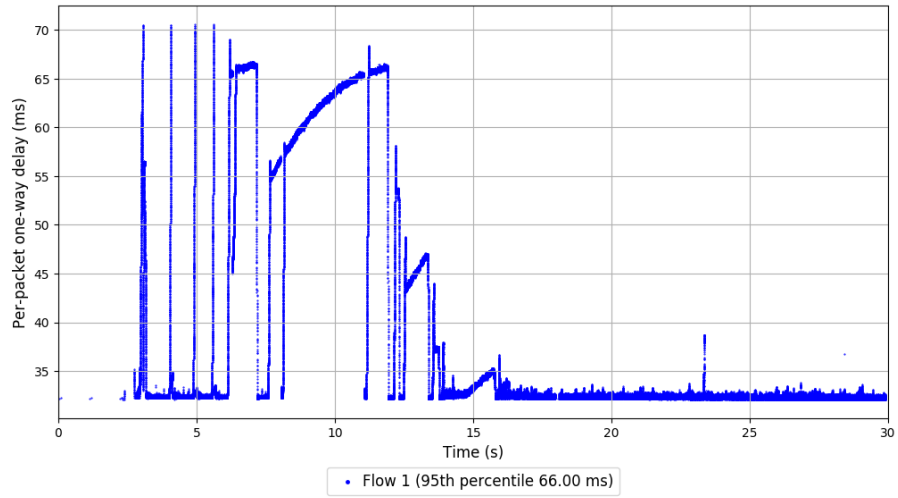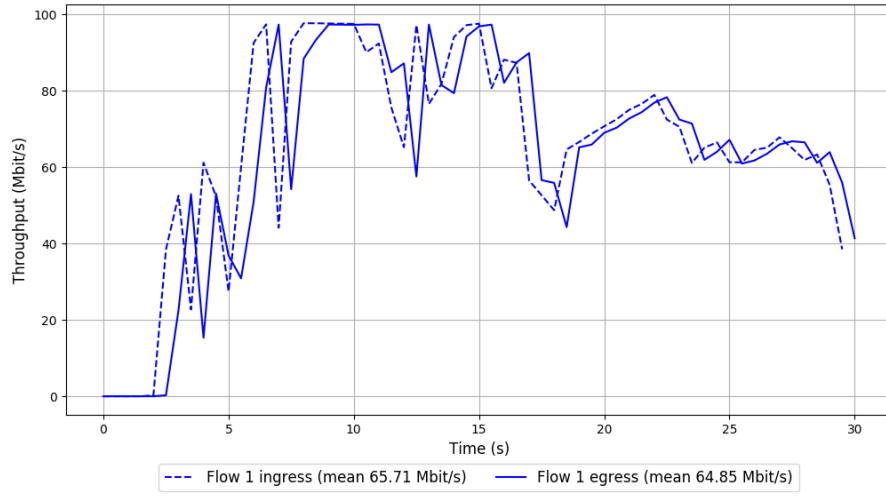
# Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-10-02 18:17:02
End at: 2019-10-02 18:17:32
Local clock offset: -5.491 ms
Remote clock offset: -1.042 ms

Below is generated by plot.py at 2019-10-02 20:00:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 75.97 Mbit/s
95th percentile per-packet one-way delay: 64.847 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 75.97 Mbit/s
95th percentile per-packet one-way delay: 64.847 ms
Loss rate: 0.92%
```
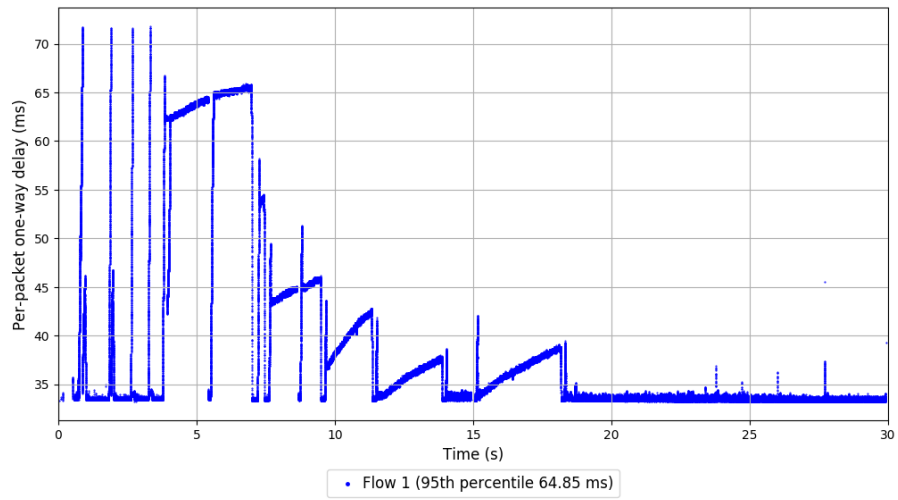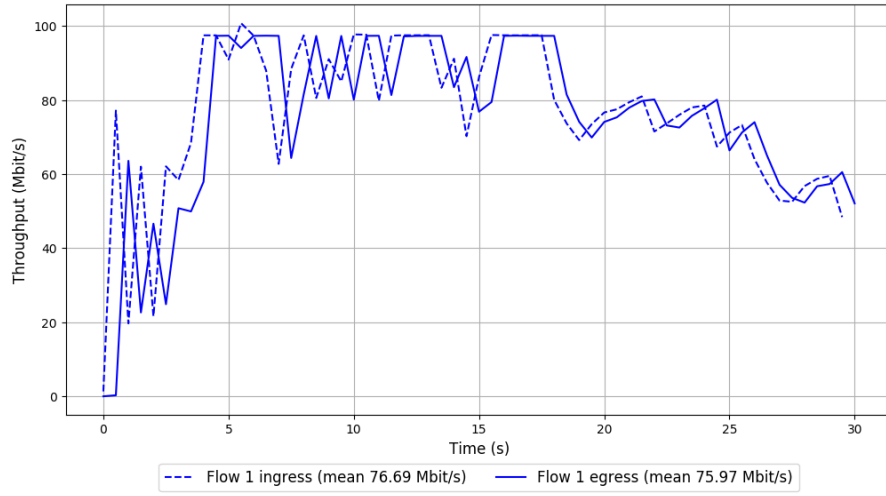
# Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-10-02 18:45:37
End at: 2019-10-02 18:46:07
Local clock offset: -5.47 ms
Remote clock offset: -2.612 ms

Below is generated by plot.py at 2019-10-02 20:00:08
Datalink statistics
-- Total of 1 flow:
Average throughput: 79.66 Mbit/s
95th percentile per-packet one-way delay: 63.291 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 79.66 Mbit/s
95th percentile per-packet one-way delay: 63.291 ms
Loss rate: 0.88%
```
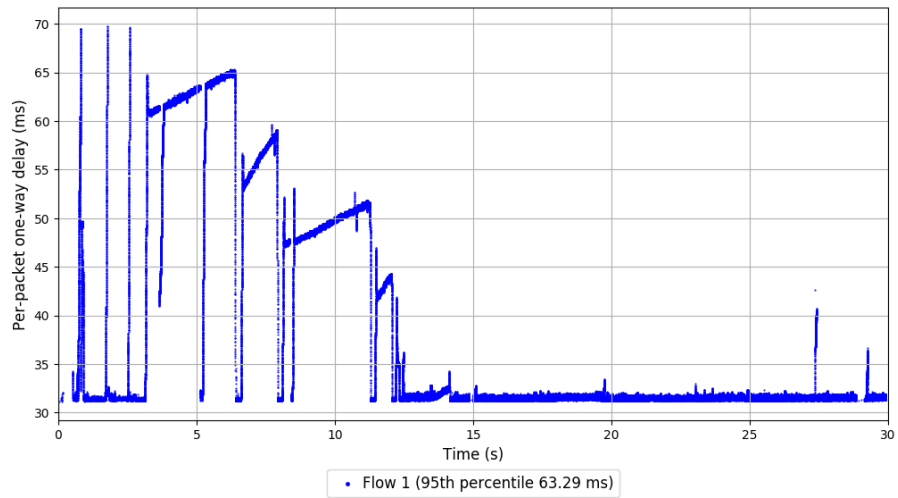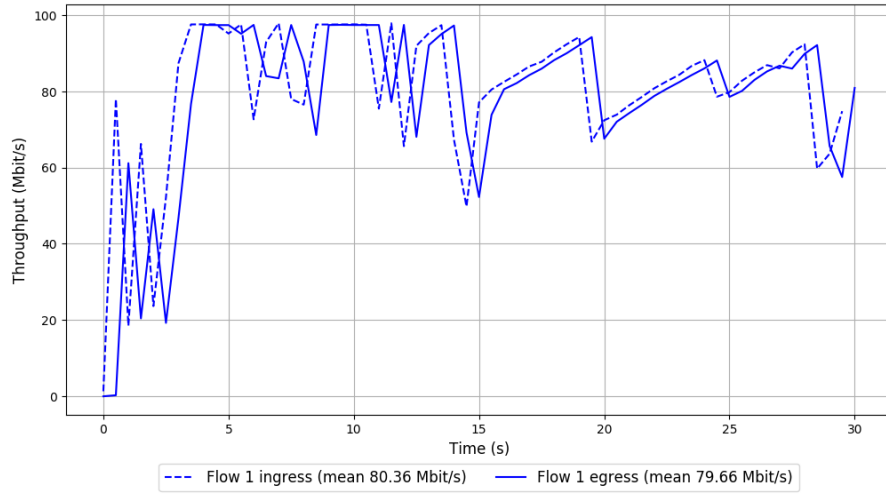
## Run 3: Report of QUIC Cubic — Data Link



Flow 1 ingress (mean 80.36 Mbit/s)    Flow 1 egress (mean 79.66 Mbit/s)



Flow 1 (95th percentile 63.29 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-10-02 19:13:48
End at: 2019-10-02 19:14:18
Local clock offset: -2.846 ms
Remote clock offset: -0.194 ms

Below is generated by plot.py at 2019-10-02 20:00:12
Datalink statistics
-- Total of 1 flow:
Average throughput: 82.65 Mbit/s
95th percentile per-packet one-way delay: 65.831 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 82.65 Mbit/s
95th percentile per-packet one-way delay: 65.831 ms
Loss rate: 1.01%
```
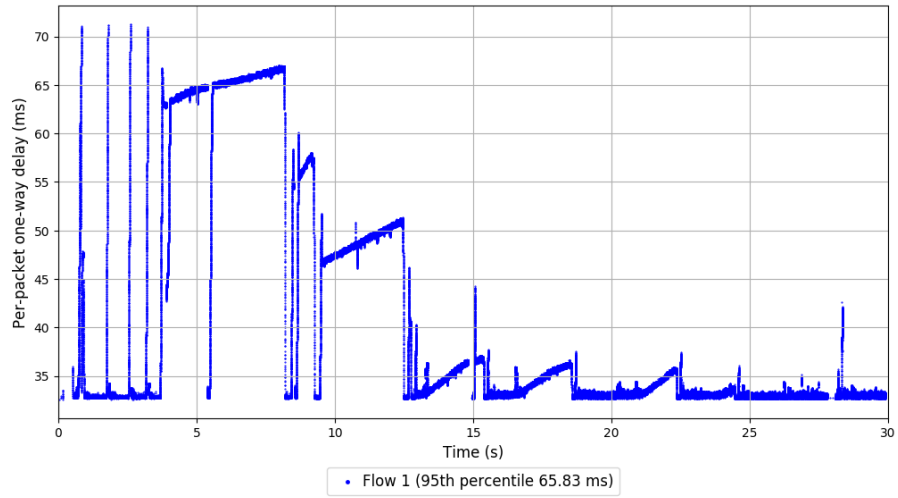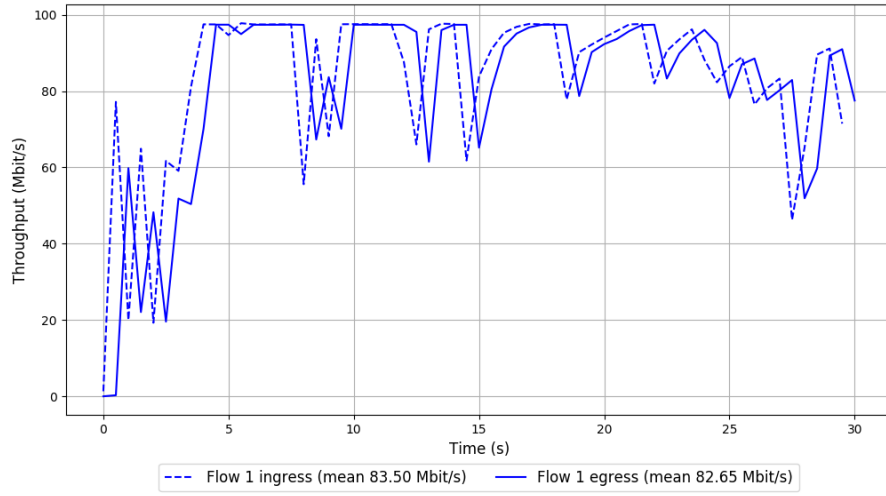
## Run 4: Report of QUIC Cubic — Data Link



Flow 1 ingress (mean 83.50 Mbit/s) ----    Flow 1 egress (mean 82.65 Mbit/s) ——



• Flow 1 (95th percentile 65.83 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-10-02 19:42:13
End at: 2019-10-02 19:42:43
Local clock offset: 4.907 ms
Remote clock offset: -1.865 ms

Below is generated by plot.py at 2019-10-02 20:01:04
Datalink statistics
-- Total of 1 flow:
Average throughput: 86.00 Mbit/s
95th percentile per-packet one-way delay: 59.391 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 86.00 Mbit/s
95th percentile per-packet one-way delay: 59.391 ms
Loss rate: 0.52%
```
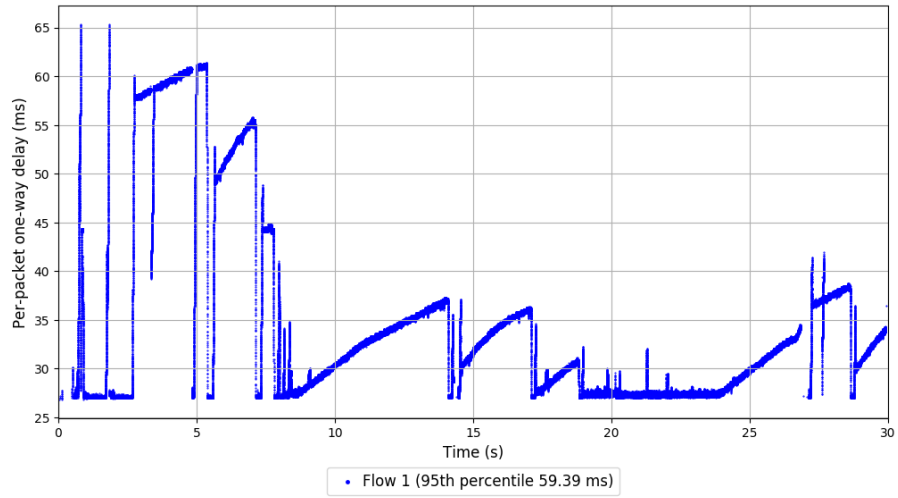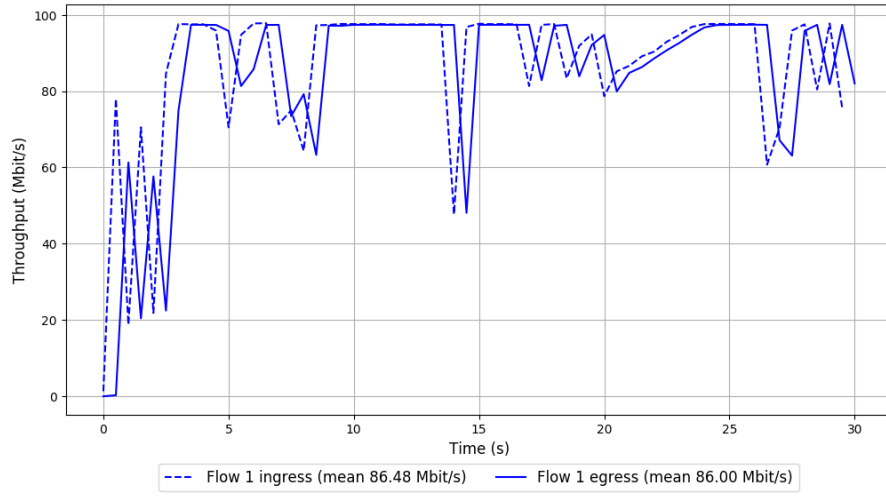
Run 5: Report of QUIC Cubic — Data Link



Flow 1 ingress (mean 86.48 Mbit/s)    —— Flow 1 egress (mean 86.00 Mbit/s)
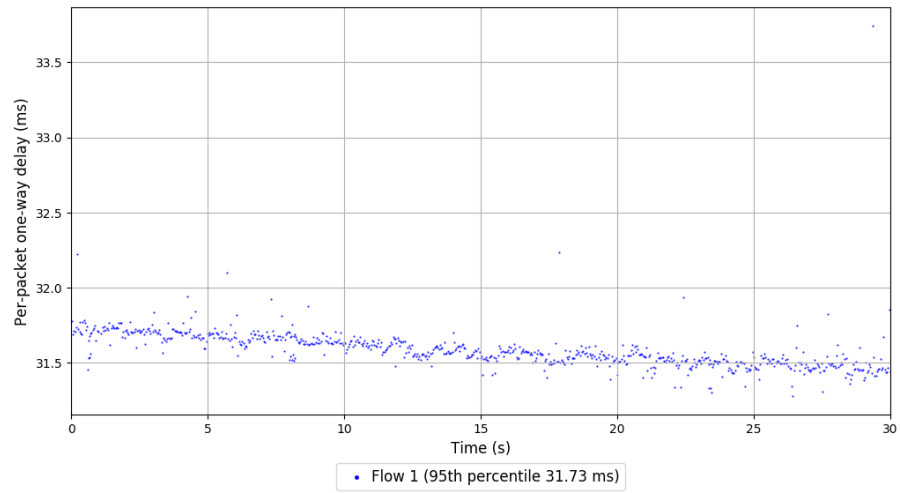
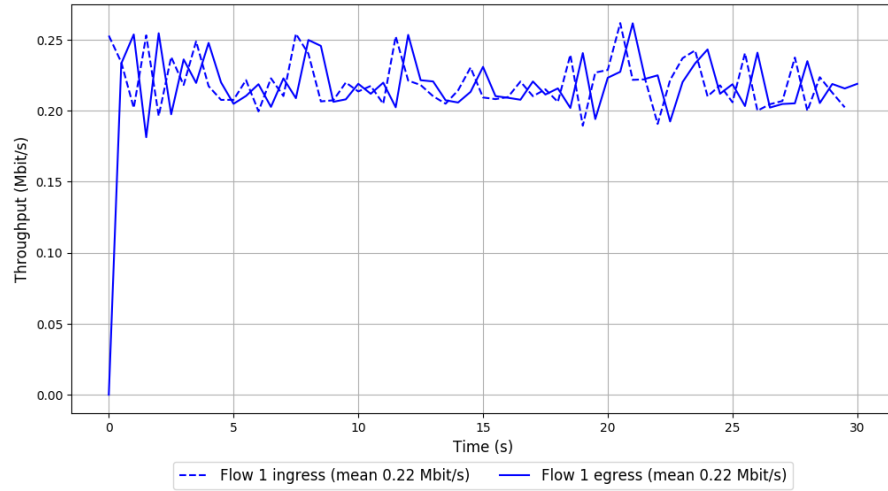

• Flow 1 (95th percentile 59.39 ms)

```
Run 1: Statistics of SCReAM

Start at: 2019-10-02 17:39:14
End at: 2019-10-02 17:39:44
Local clock offset: 2.755 ms
Remote clock offset: -1.067 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.733 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.733 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

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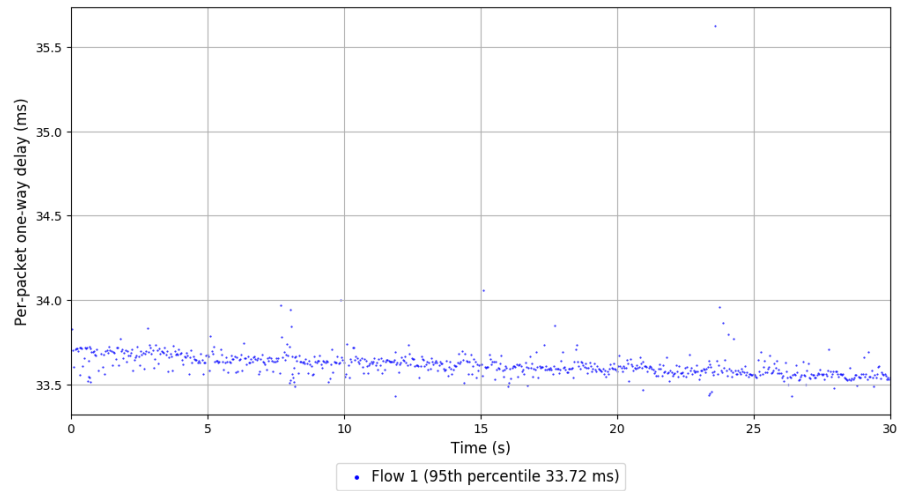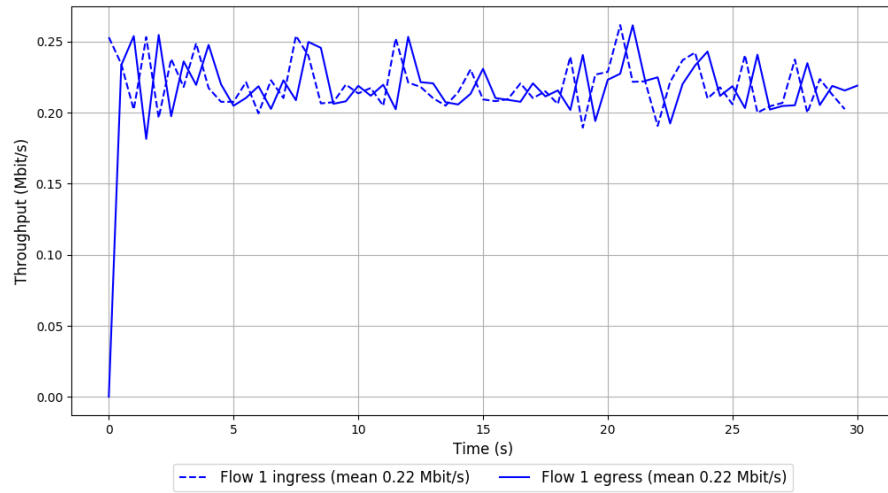

Flow 1 (95th percentile 31.73 ms)

```
Run 2: Statistics of SCReAM

Start at: 2019-10-02 18:07:39
End at: 2019-10-02 18:08:09
Local clock offset: -3.212 ms
Remote clock offset: -0.837 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.719 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.719 ms
Loss rate: 0.00%
```

Run 2: 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 33.72 ms)

```
Run 3: Statistics of SCReAM

Start at: 2019-10-02 18:35:58
End at: 2019-10-02 18:36:28
Local clock offset: -0.49 ms
Remote clock offset: -1.408 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 28.241 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 28.241 ms
Loss rate: 0.00%
```
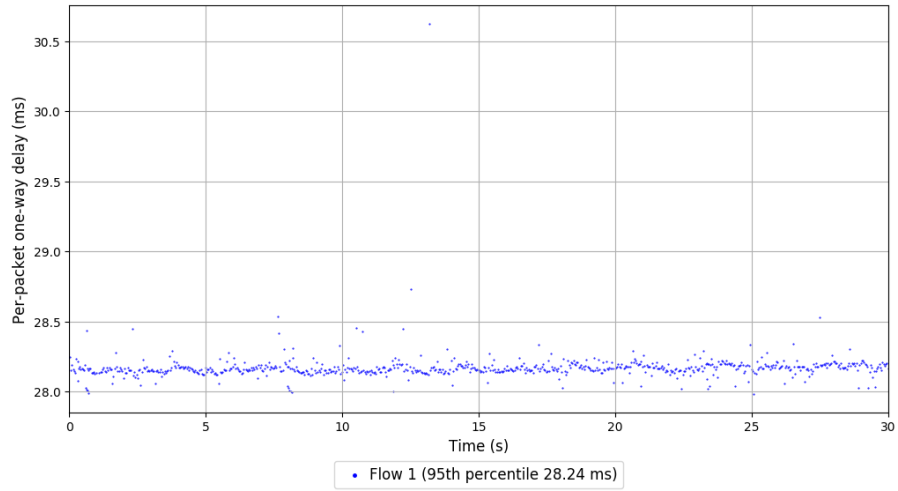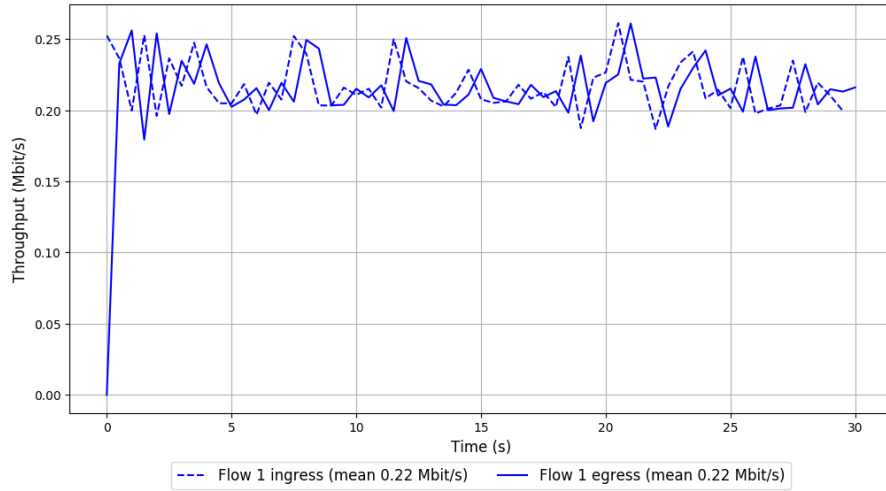
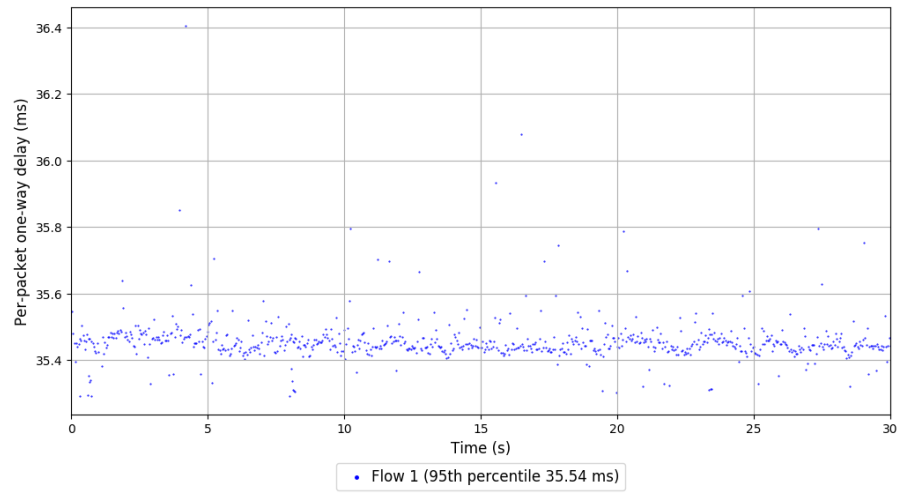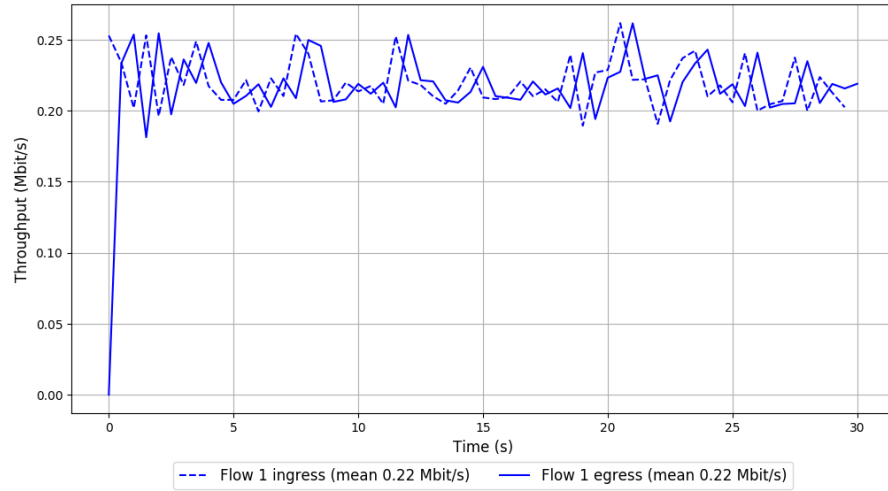# Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-10-02 19:04:03
End at: 2019-10-02 19:04:33
Local clock offset: -5.025 ms
Remote clock offset: -0.213 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 35.538 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 35.538 ms
Loss rate: 0.00%
```
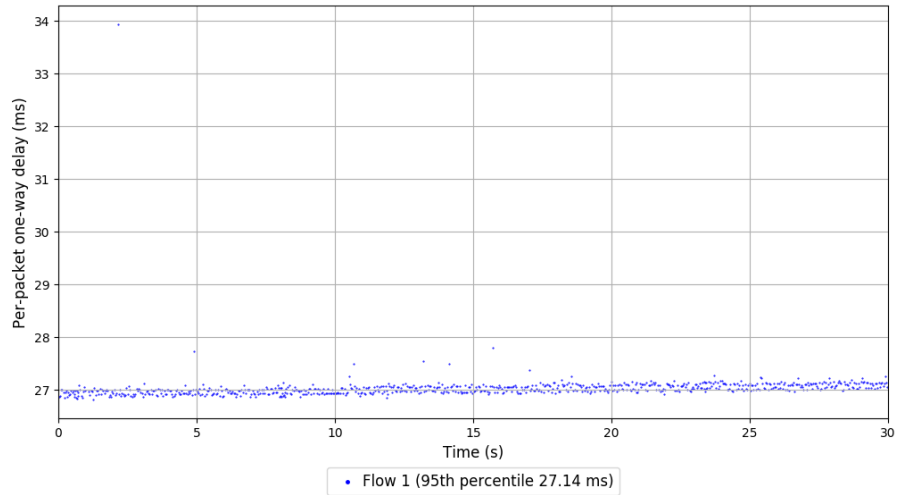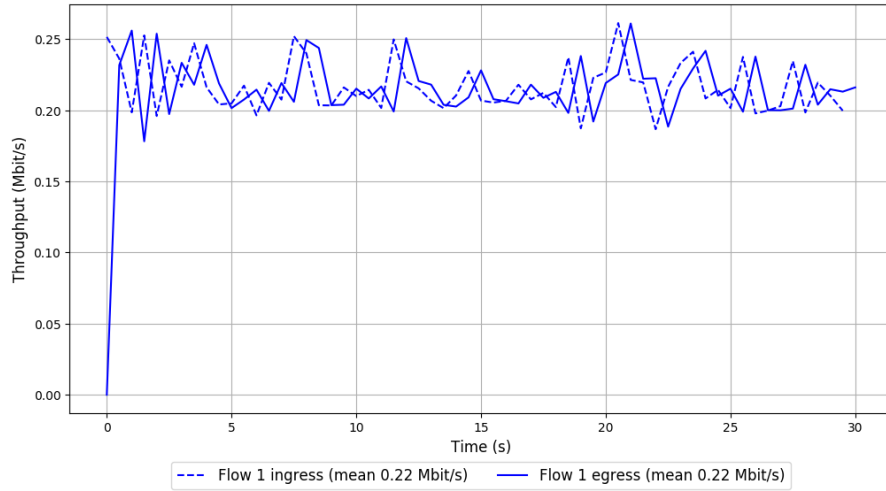
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-10-02 19:32:40
End at: 2019-10-02 19:33:10
Local clock offset: 2.372 ms
Remote clock offset: -1.771 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 27.142 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 27.142 ms
Loss rate: 0.00%
```

Run 5: 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 27.14 ms)

```
Run 1: Statistics of Sprout

Start at: 2019-10-02 17:40:20
End at: 2019-10-02 17:40:50
Local clock offset: -1.436 ms
Remote clock offset: -3.898 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.85 Mbit/s
95th percentile per-packet one-way delay: 35.900 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 15.85 Mbit/s
95th percentile per-packet one-way delay: 35.900 ms
Loss rate: 0.02%
```
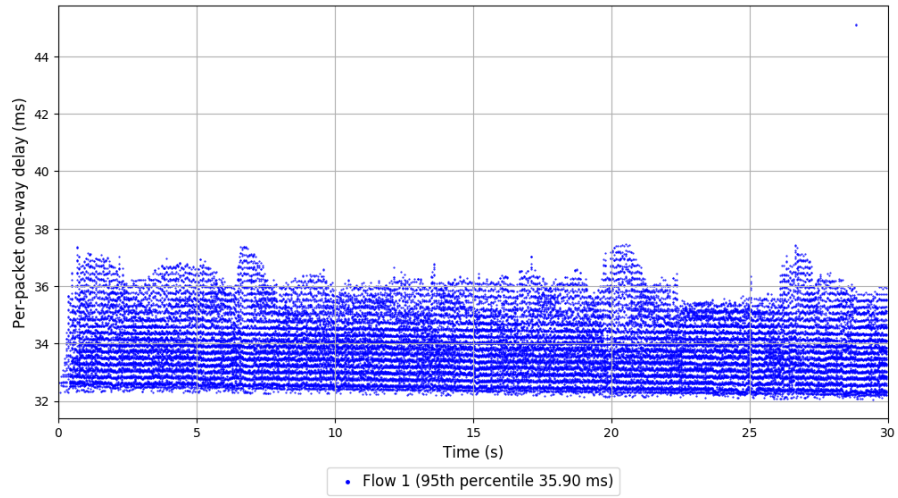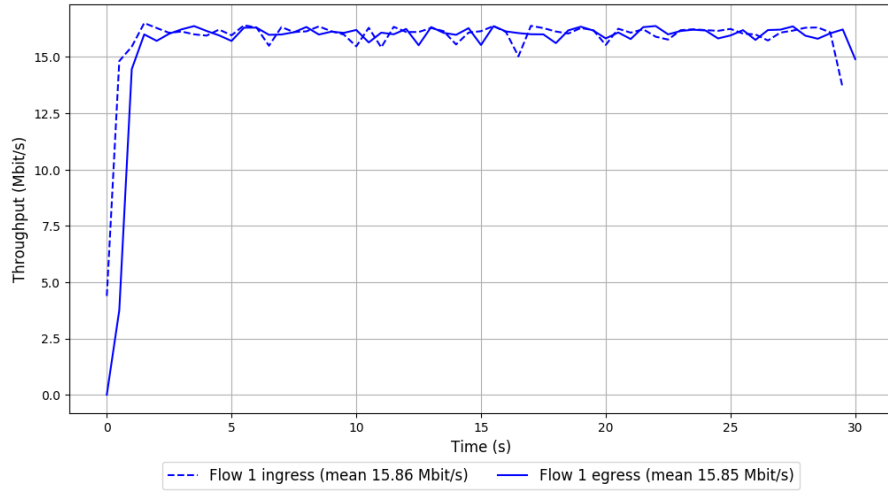
Run 1: Report of Sprout — Data Link

Flow 1 ingress (mean 15.86 Mbit/s) --- Flow 1 egress (mean 15.85 Mbit/s)
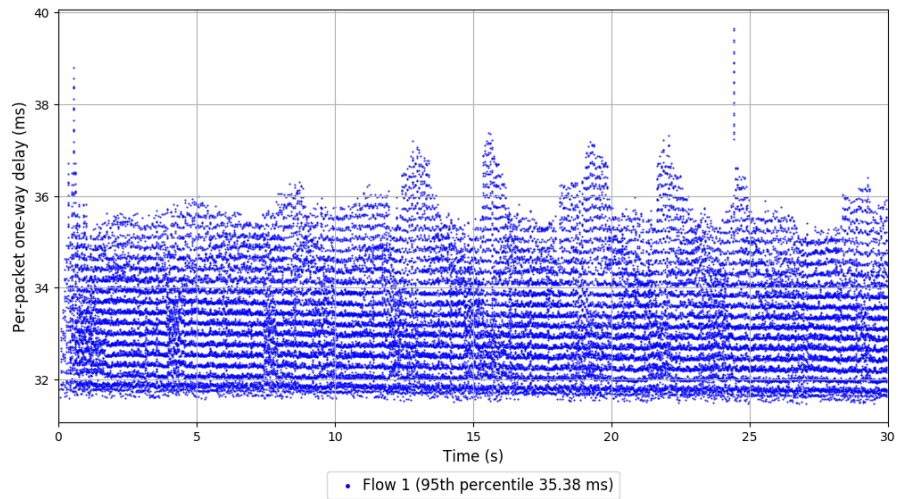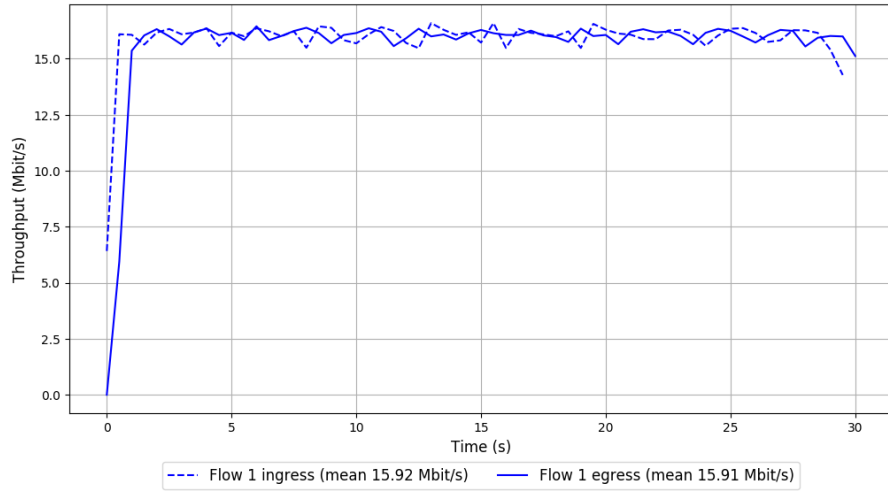

Flow 1 (95th percentile 35.90 ms)

```
Run 2: Statistics of Sprout

Start at: 2019-10-02 18:08:44
End at: 2019-10-02 18:09:14
Local clock offset: -1.523 ms
Remote clock offset: -0.816 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.91 Mbit/s
95th percentile per-packet one-way delay: 35.377 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 15.91 Mbit/s
95th percentile per-packet one-way delay: 35.377 ms
Loss rate: 0.06%
```
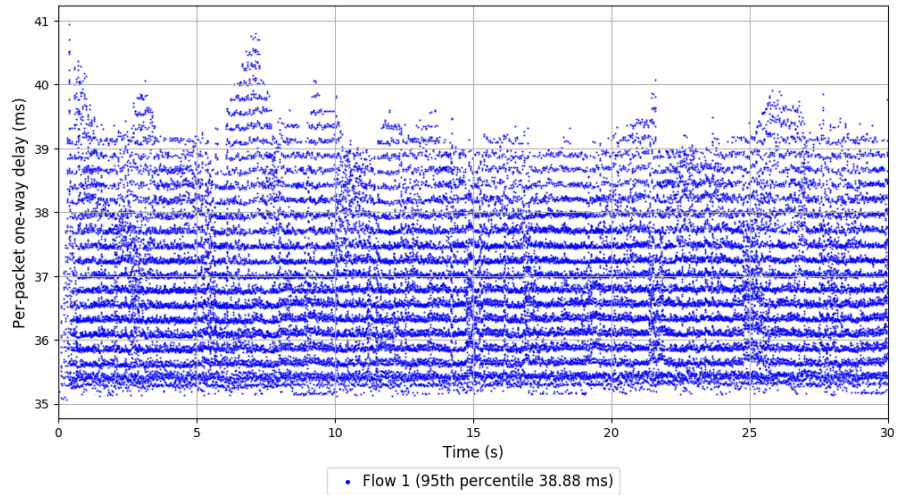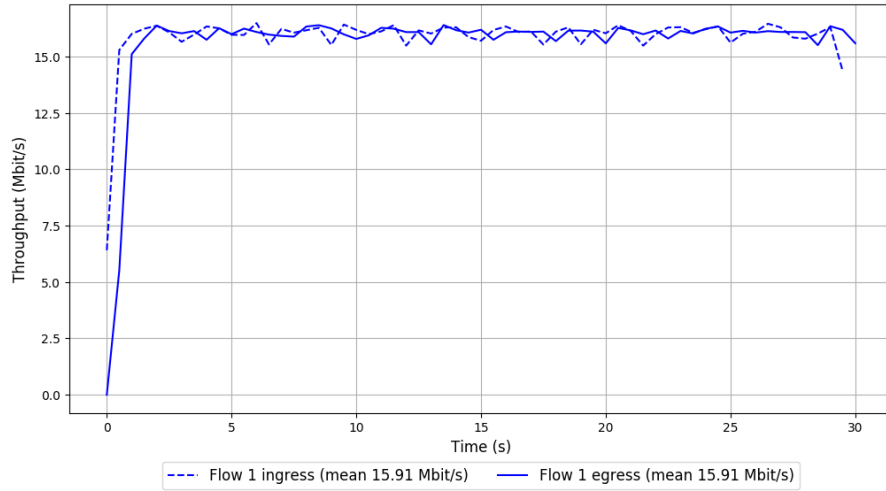
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-10-02 18:37:04
End at: 2019-10-02 18:37:34
Local clock offset: -4.831 ms
Remote clock offset: -0.733 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.91 Mbit/s
95th percentile per-packet one-way delay: 38.881 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 15.91 Mbit/s
95th percentile per-packet one-way delay: 38.881 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

Flow 1 ingress (mean 15.91 Mbit/s) —— Flow 1 egress (mean 15.91 Mbit/s)

· Flow 1 (95th percentile 38.88 ms)

```
Run 4: Statistics of Sprout

Start at: 2019-10-02 19:05:08
End at: 2019-10-02 19:05:38
Local clock offset: -4.939 ms
Remote clock offset: -1.9 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 16.00 Mbit/s
95th percentile per-packet one-way delay: 34.990 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 16.00 Mbit/s
95th percentile per-packet one-way delay: 34.990 ms
Loss rate: 0.04%
```
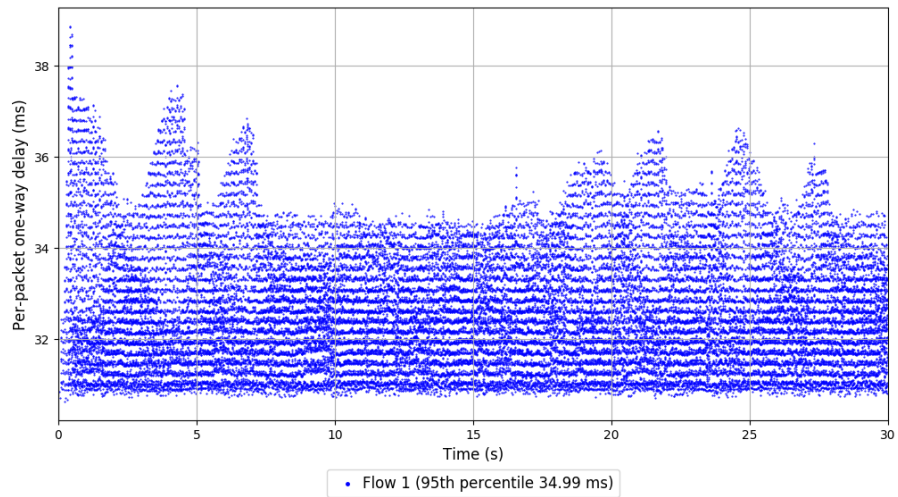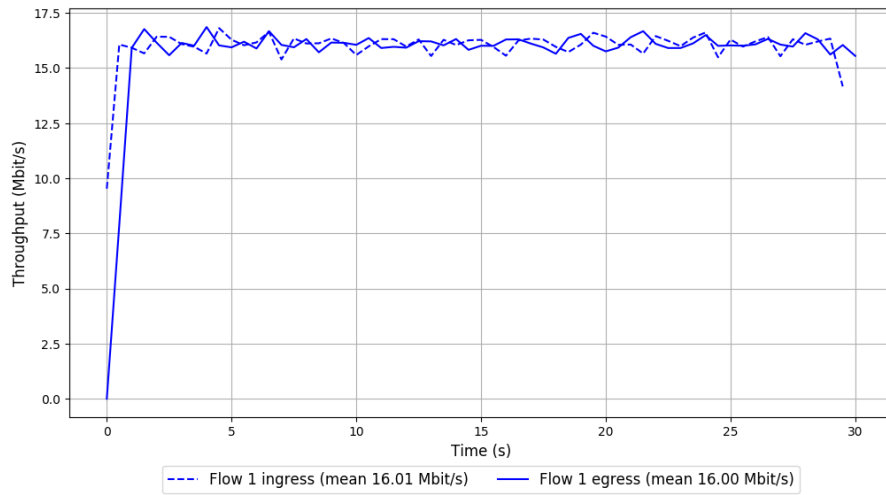
Run 4: Report of Sprout — Data Link

Flow 1 ingress (mean 16.01 Mbit/s)   Flow 1 egress (mean 16.00 Mbit/s)
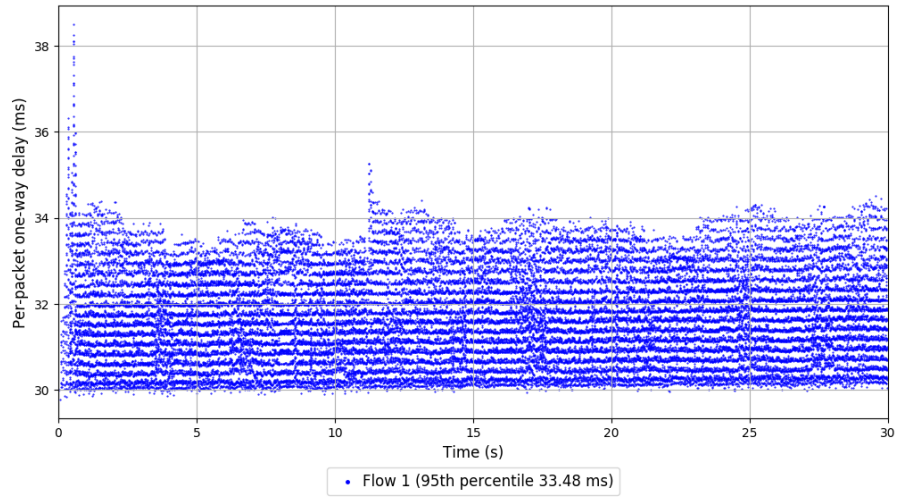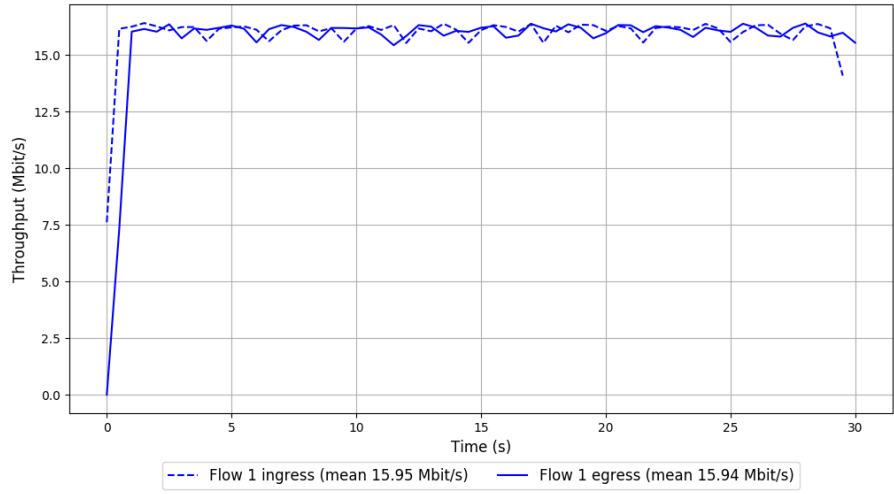

Flow 1 (95th percentile 34.99 ms)

```
Run 5: Statistics of Sprout

Start at: 2019-10-02 19:33:46
End at: 2019-10-02 19:34:16
Local clock offset: 2.853 ms
Remote clock offset: -1.487 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.94 Mbit/s
95th percentile per-packet one-way delay: 33.481 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 15.94 Mbit/s
95th percentile per-packet one-way delay: 33.481 ms
Loss rate: 0.06%
```

Run 5: Report of Sprout — Data Link

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

Start at: 2019-10-02 17:32:19
End at: 2019-10-02 17:32:49
Local clock offset: 1.615 ms
Remote clock offset: -2.83 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: 32.911 ms
Loss rate: 63.24%
-- Flow 1:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: 32.911 ms
Loss rate: 63.24%
```
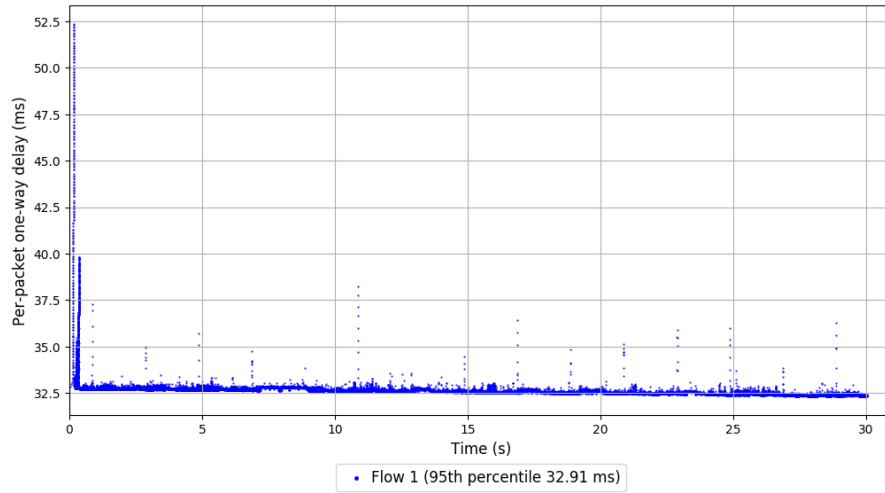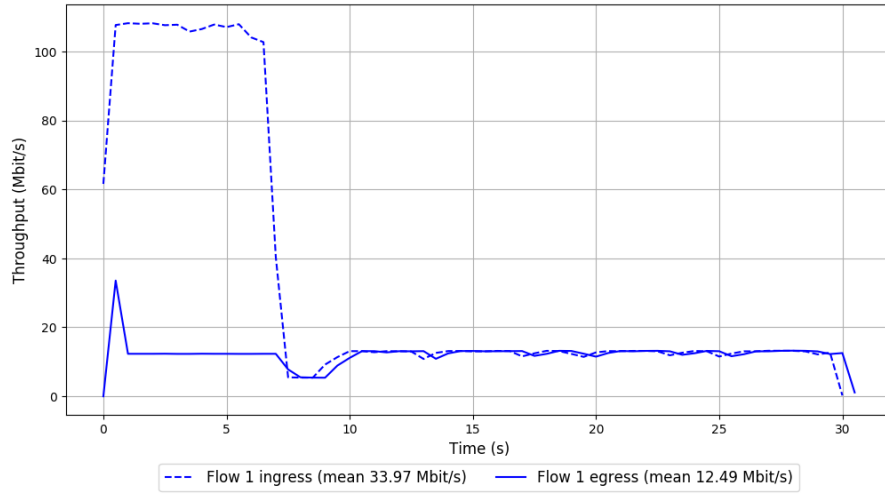
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2019-10-02 18:00:37
End at: 2019-10-02 18:01:07
Local clock offset: 0.036 ms
Remote clock offset: -3.625 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.61 Mbit/s
95th percentile per-packet one-way delay: 28.853 ms
Loss rate: 66.94%
-- Flow 1:
Average throughput: 10.61 Mbit/s
95th percentile per-packet one-way delay: 28.853 ms
Loss rate: 66.94%
```
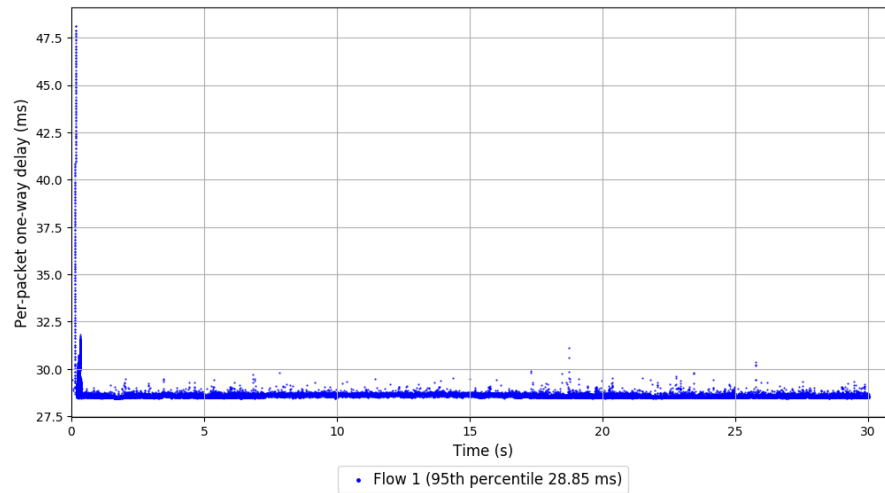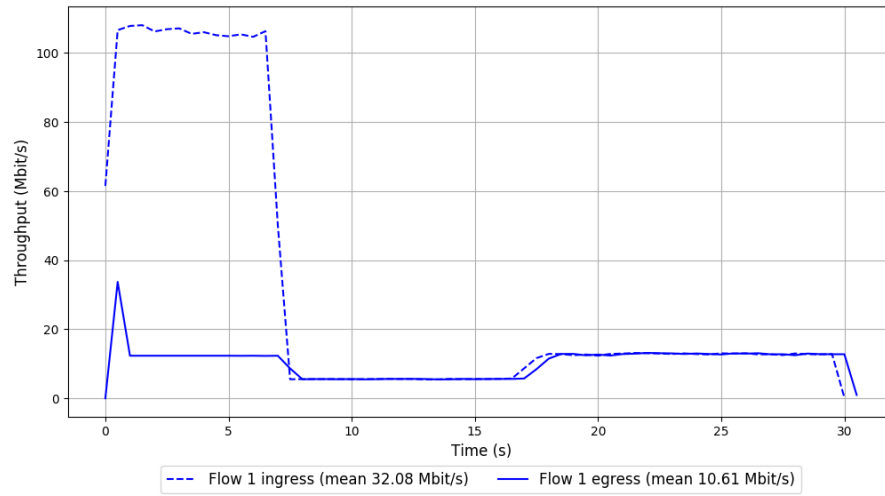
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 32.08 Mbit/s) —— Flow 1 egress (mean 10.61 Mbit/s)

· Flow 1 (95th percentile 28.85 ms)

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

Start at: 2019-10-02 18:29:09
End at: 2019-10-02 18:29:39
Local clock offset: -5.177 ms
Remote clock offset: -1.116 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.45 Mbit/s
95th percentile per-packet one-way delay: 33.471 ms
Loss rate: 77.71%
-- Flow 1:
Average throughput: 12.45 Mbit/s
95th percentile per-packet one-way delay: 33.471 ms
Loss rate: 77.71%
```
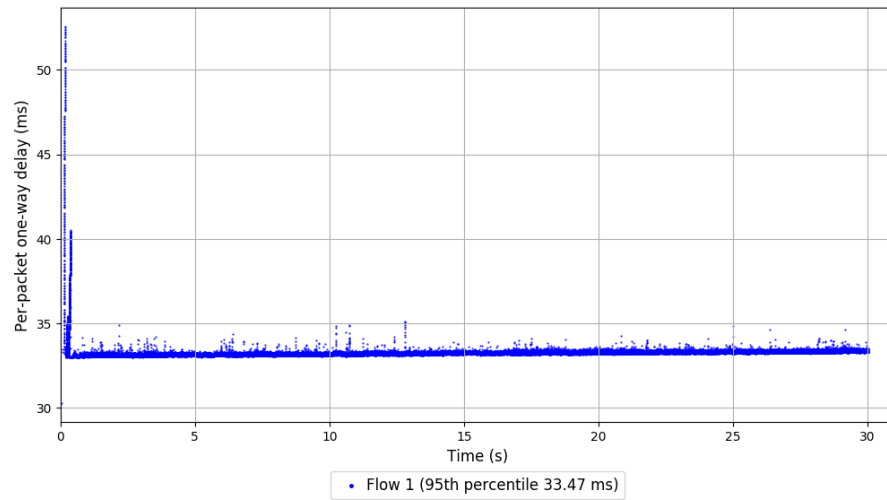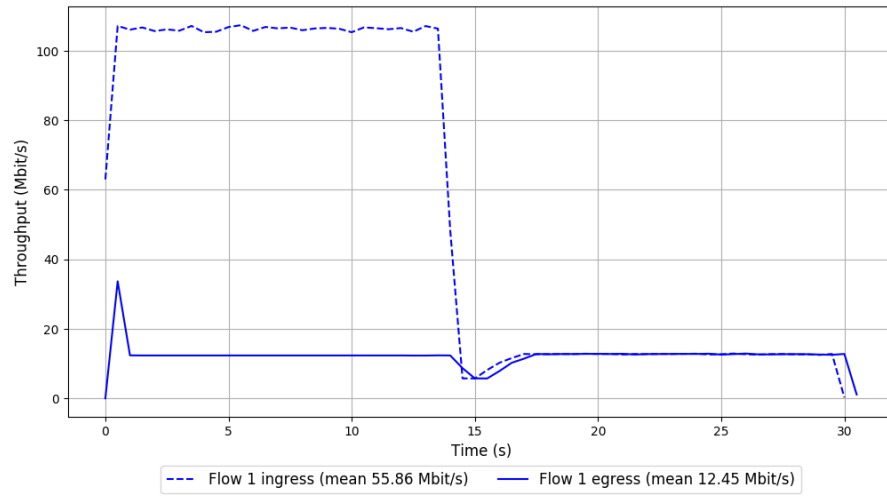
Run 3: Report of TaoVA-100x — Data Link

200

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

Start at: 2019-10-02 18:57:14
End at: 2019-10-02 18:57:44
Local clock offset: -4.618 ms
Remote clock offset: 0.67 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 35.283 ms
Loss rate: 77.65%
-- Flow 1:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 35.283 ms
Loss rate: 77.65%
```
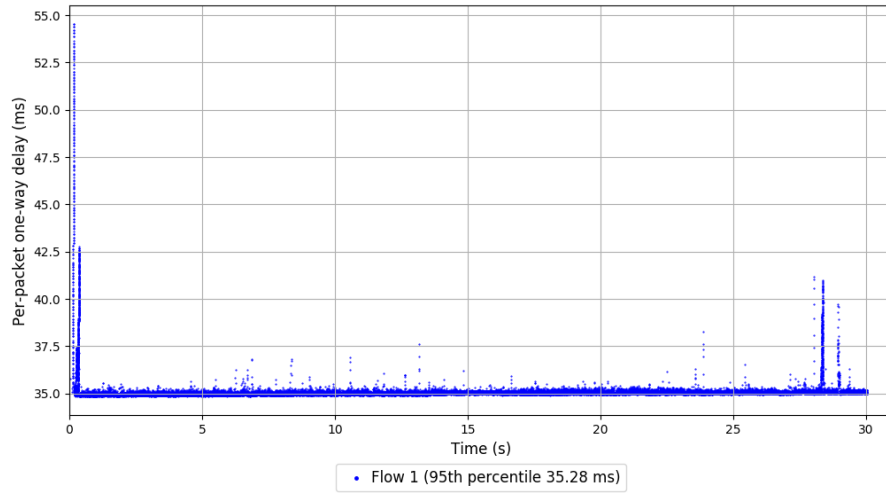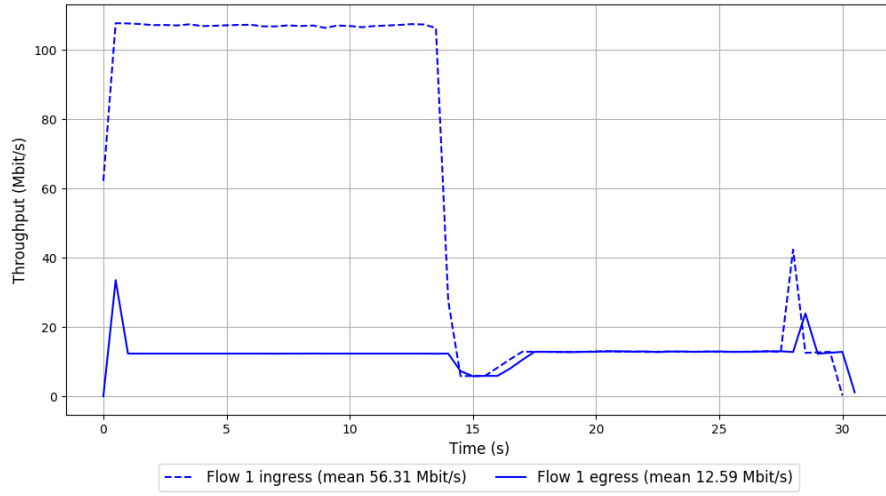
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 56.31 Mbit/s) --- Flow 1 egress (mean 12.59 Mbit/s)

• Flow 1 (95th percentile 35.28 ms)

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

Start at: 2019-10-02 19:25:50
End at: 2019-10-02 19:26:20
Local clock offset: -1.743 ms
Remote clock offset: -1.541 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.57 Mbit/s
95th percentile per-packet one-way delay: 30.705 ms
Loss rate: 64.99%
-- Flow 1:
Average throughput: 11.57 Mbit/s
95th percentile per-packet one-way delay: 30.705 ms
Loss rate: 64.99%
```
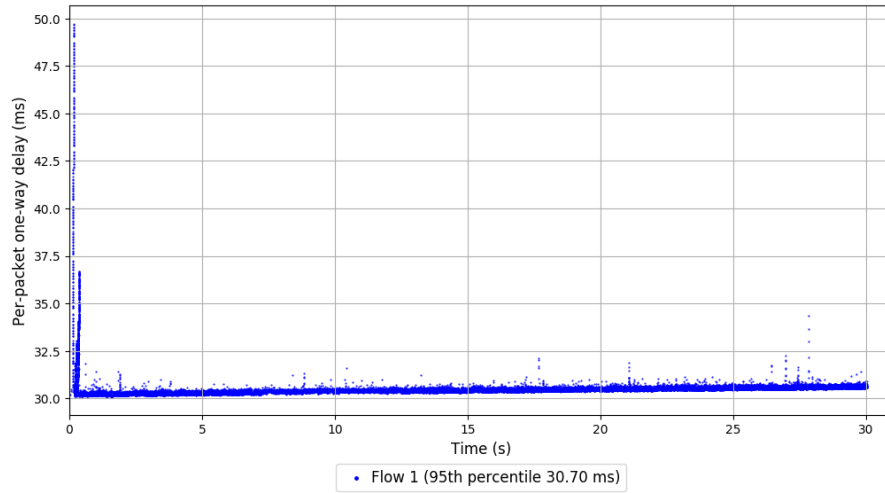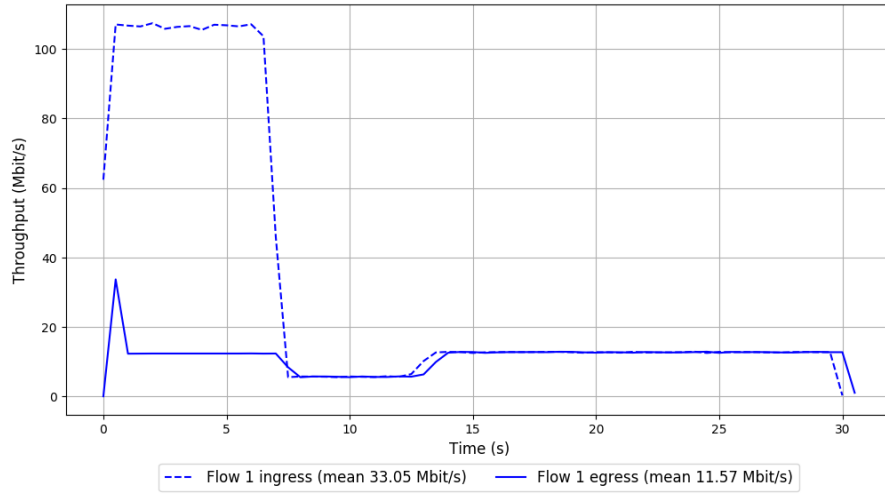
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 33.05 Mbit/s) —— Flow 1 egress (mean 11.57 Mbit/s)

• Flow 1 (95th percentile 30.70 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2019-10-02 17:33:26
End at: 2019-10-02 17:33:56
Local clock offset: 3.189 ms
Remote clock offset: -2.779 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 47.54 Mbit/s
95th percentile per-packet one-way delay: 31.512 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 47.54 Mbit/s
95th percentile per-packet one-way delay: 31.512 ms
Loss rate: 0.01%
```
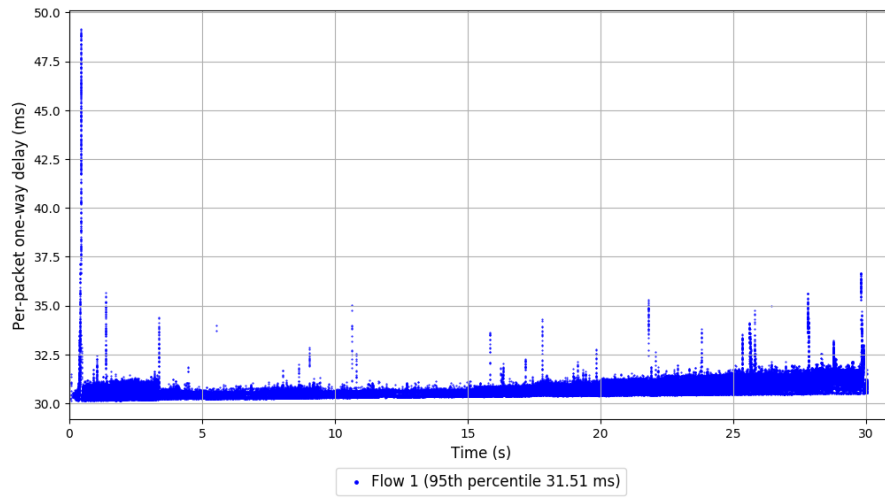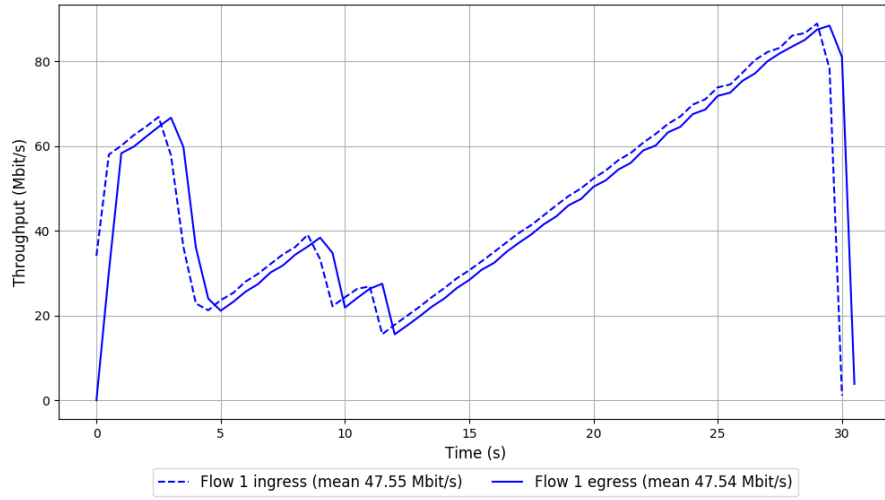
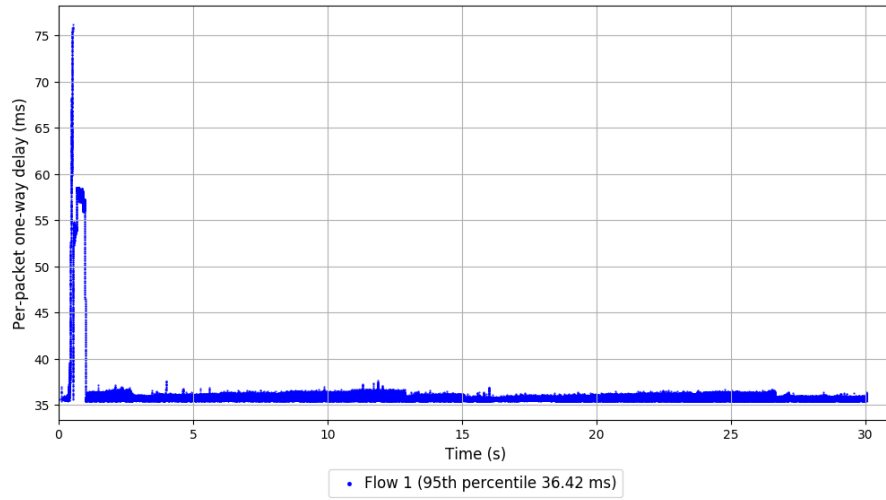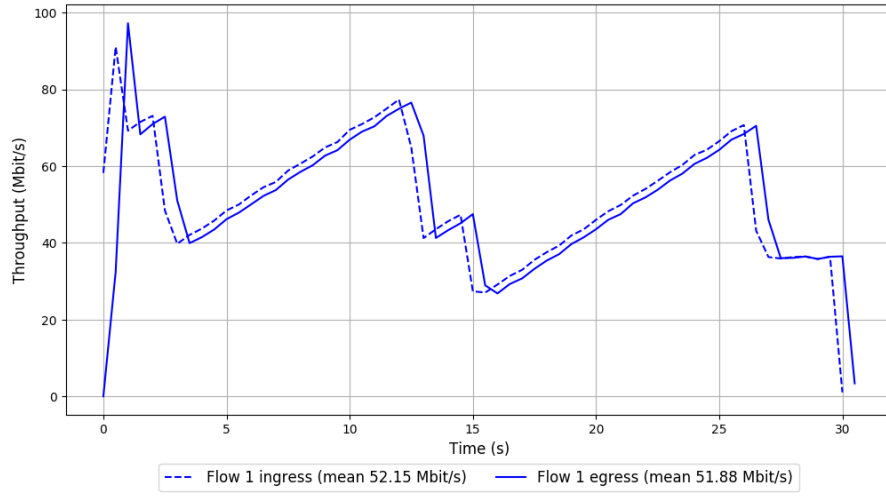Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-10-02 18:01:44
End at: 2019-10-02 18:02:14
Local clock offset: -4.524 ms
Remote clock offset: -2.004 ms


# Below is generated by plot.py at 2019-10-02 20:01:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 51.88 Mbit/s
95th percentile per-packet one-way delay: 36.422 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 51.88 Mbit/s
95th percentile per-packet one-way delay: 36.422 ms
Loss rate: 0.52%
```

Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-10-02 18:30:16
End at: 2019-10-02 18:30:46
Local clock offset: -2.035 ms
Remote clock offset: -0.78 ms


# Below is generated by plot.py at 2019-10-02 20:01:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 56.69 Mbit/s
95th percentile per-packet one-way delay: 52.799 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 56.69 Mbit/s
95th percentile per-packet one-way delay: 52.799 ms
Loss rate: 0.46%
```
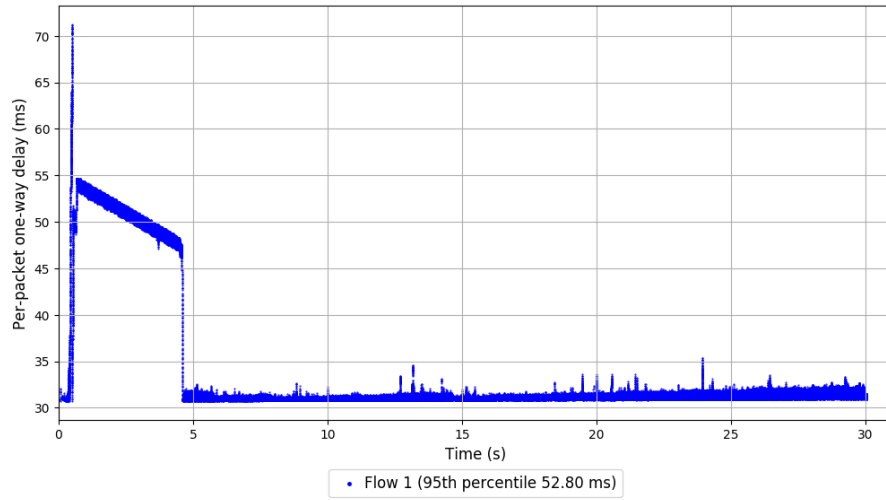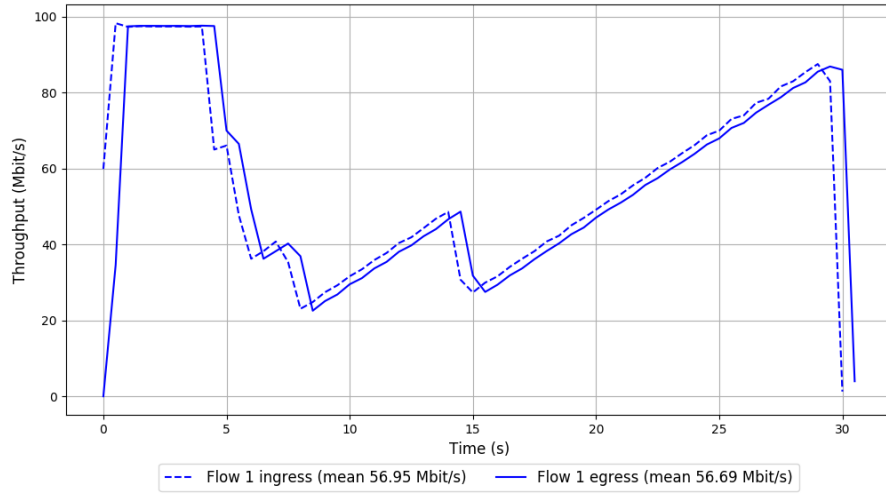
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 56.95 Mbit/s) --- Flow 1 egress (mean 56.69 Mbit/s)

Flow 1 (95th percentile 52.80 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2019-10-02 18:58:21
End at: 2019-10-02 18:58:51
Local clock offset: -1.398 ms
Remote clock offset: -0.283 ms


# Below is generated by plot.py at 2019-10-02 20:01:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 53.80 Mbit/s
95th percentile per-packet one-way delay: 29.823 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 53.80 Mbit/s
95th percentile per-packet one-way delay: 29.823 ms
Loss rate: 0.17%
```
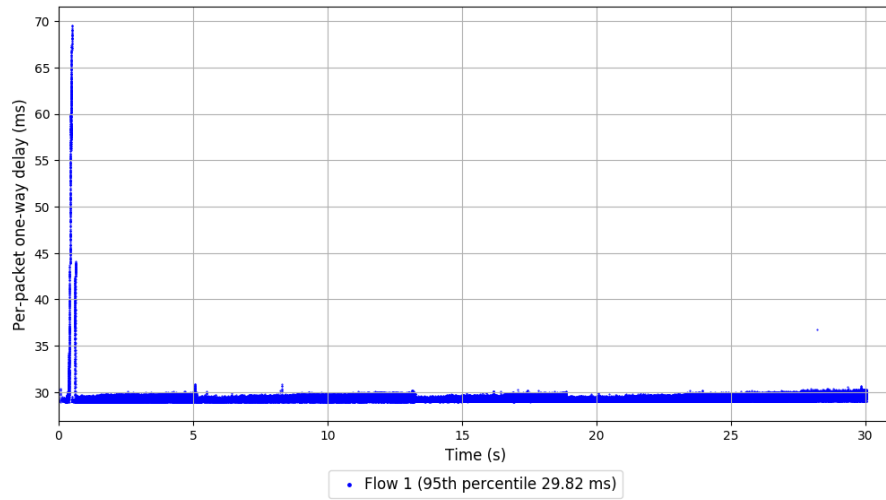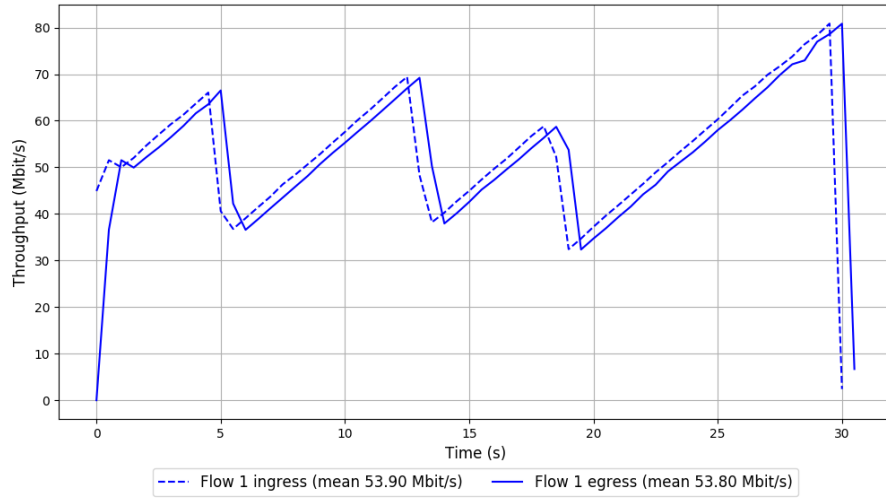
Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 53.90 Mbit/s) ---- Flow 1 egress (mean 53.80 Mbit/s) ——
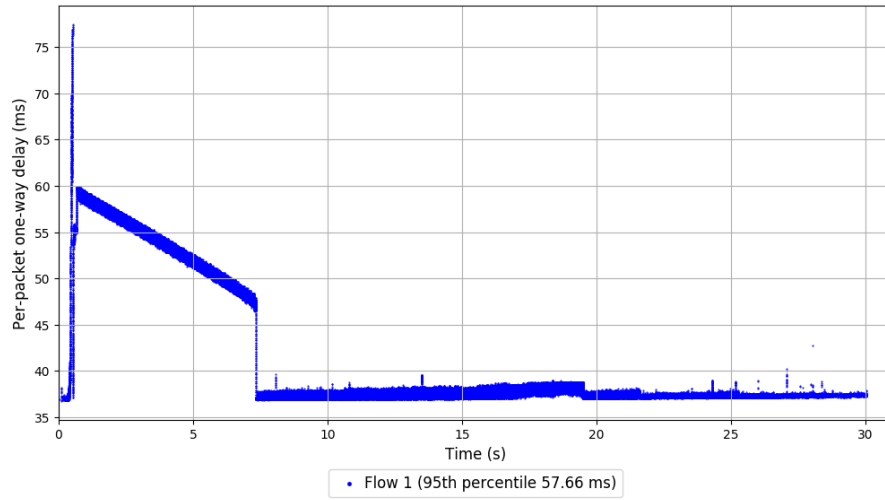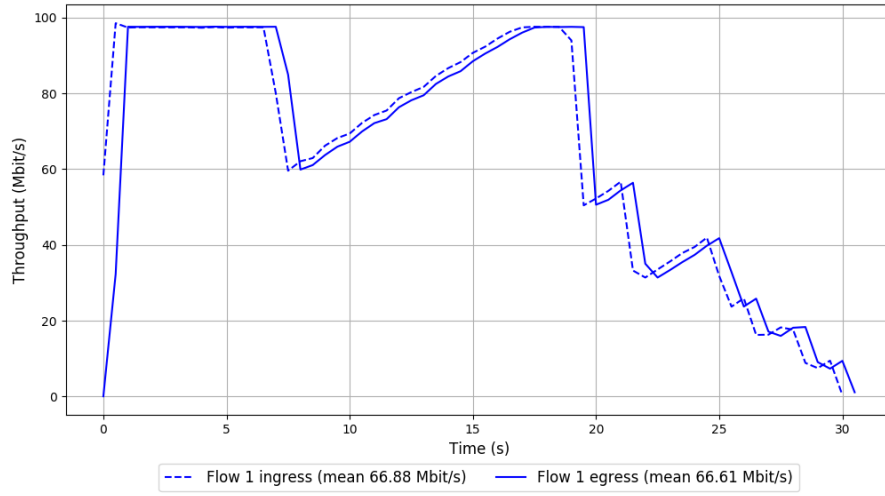

Flow 1 (95th percentile 29.82 ms)

```
Run 5: Statistics of TCP Vegas

Start at: 2019-10-02 19:26:57
End at: 2019-10-02 19:27:27
Local clock offset: -5.307 ms
Remote clock offset: -0.108 ms


# Below is generated by plot.py at 2019-10-02 20:01:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.61 Mbit/s
95th percentile per-packet one-way delay: 57.661 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 66.61 Mbit/s
95th percentile per-packet one-way delay: 57.661 ms
Loss rate: 0.40%
```

Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 66.88 Mbit/s)   Flow 1 egress (mean 66.61 Mbit/s)

Flow 1 (95th percentile 57.66 ms)

```
Run 1: Statistics of Verus

Start at: 2019-10-02 17:47:42
End at: 2019-10-02 17:48:12
Local clock offset: -0.405 ms
Remote clock offset: -2.384 ms


# Below is generated by plot.py at 2019-10-02 20:01:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 45.99 Mbit/s
95th percentile per-packet one-way delay: 66.456 ms
Loss rate: 60.86%
-- Flow 1:
Average throughput: 45.99 Mbit/s
95th percentile per-packet one-way delay: 66.456 ms
Loss rate: 60.86%
```
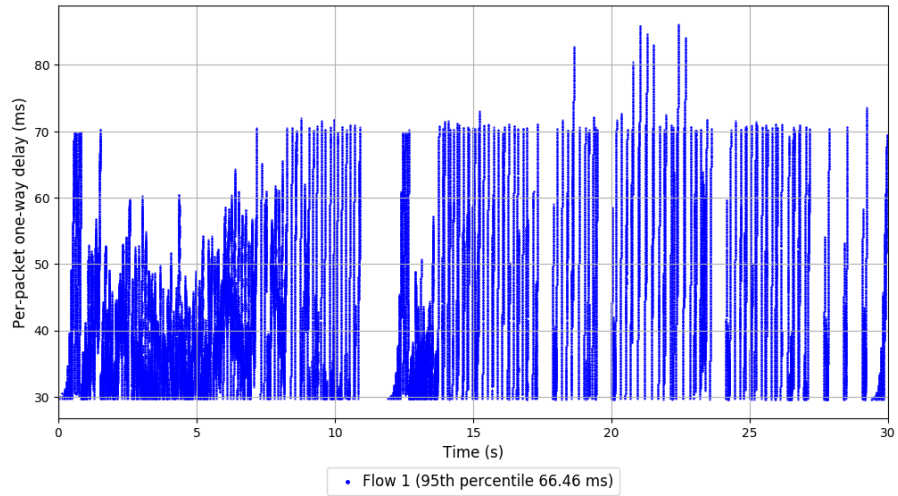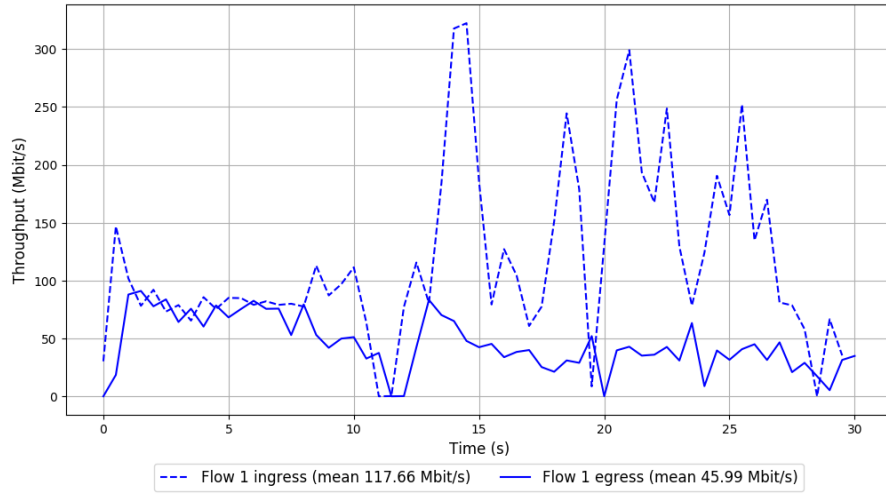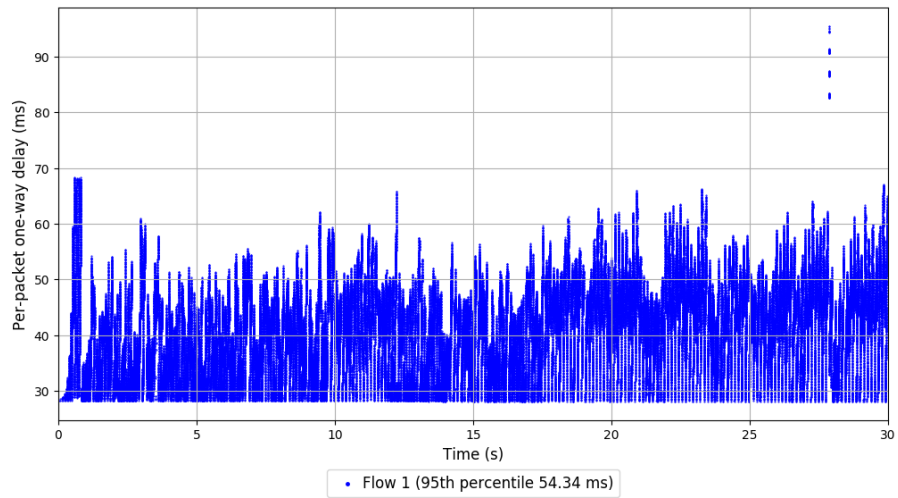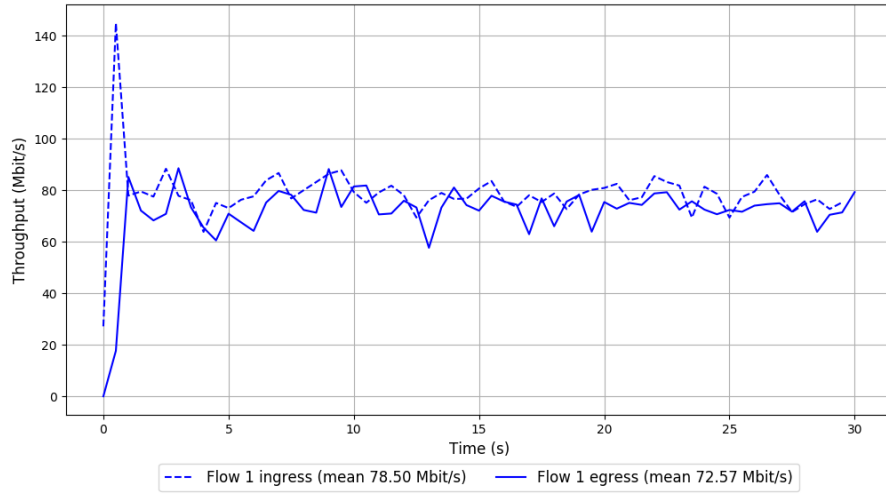
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-10-02 18:15:50
End at: 2019-10-02 18:16:20
Local clock offset: -3.615 ms
Remote clock offset: -1.095 ms


# Below is generated by plot.py at 2019-10-02 20:01:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.57 Mbit/s
95th percentile per-packet one-way delay: 54.345 ms
Loss rate: 7.47%
-- Flow 1:
Average throughput: 72.57 Mbit/s
95th percentile per-packet one-way delay: 54.345 ms
Loss rate: 7.47%
```

Run 2: Report of Verus — Data Link

Flow 1 ingress (mean 78.50 Mbit/s) —— Flow 1 egress (mean 72.57 Mbit/s)

• Flow 1 (95th percentile 54.34 ms)

```
Run 3: Statistics of Verus

Start at: 2019-10-02 18:44:25
End at: 2019-10-02 18:44:55
Local clock offset: 0.039 ms
Remote clock offset: 0.204 ms


# Below is generated by plot.py at 2019-10-02 20:01:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.80 Mbit/s
95th percentile per-packet one-way delay: 56.963 ms
Loss rate: 11.32%
-- Flow 1:
Average throughput: 68.80 Mbit/s
95th percentile per-packet one-way delay: 56.963 ms
Loss rate: 11.32%
```
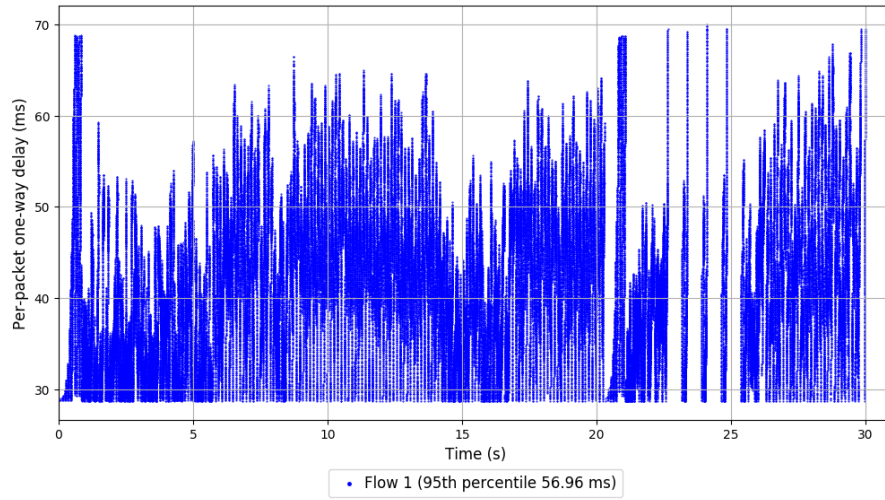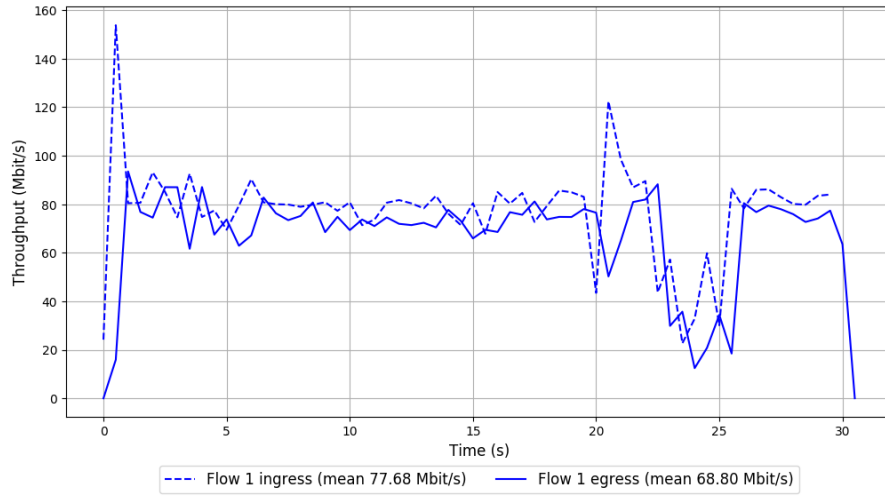
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-10-02 19:12:34
End at: 2019-10-02 19:13:04
Local clock offset: -0.89 ms
Remote clock offset: 0.297 ms

# Below is generated by plot.py at 2019-10-02 20:01:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.72 Mbit/s
95th percentile per-packet one-way delay: 61.585 ms
Loss rate: 15.99%
-- Flow 1:
Average throughput: 67.72 Mbit/s
95th percentile per-packet one-way delay: 61.585 ms
Loss rate: 15.99%
```
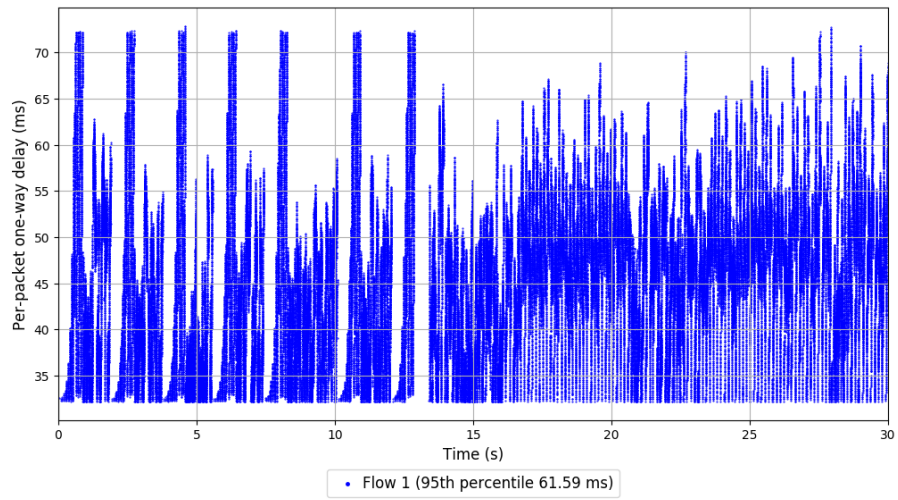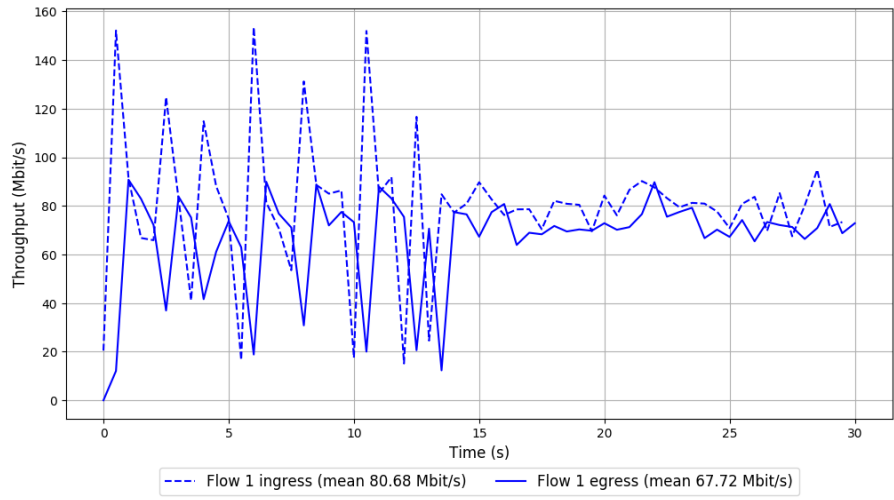
Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 80.68 Mbit/s) Flow 1 egress (mean 67.72 Mbit/s)
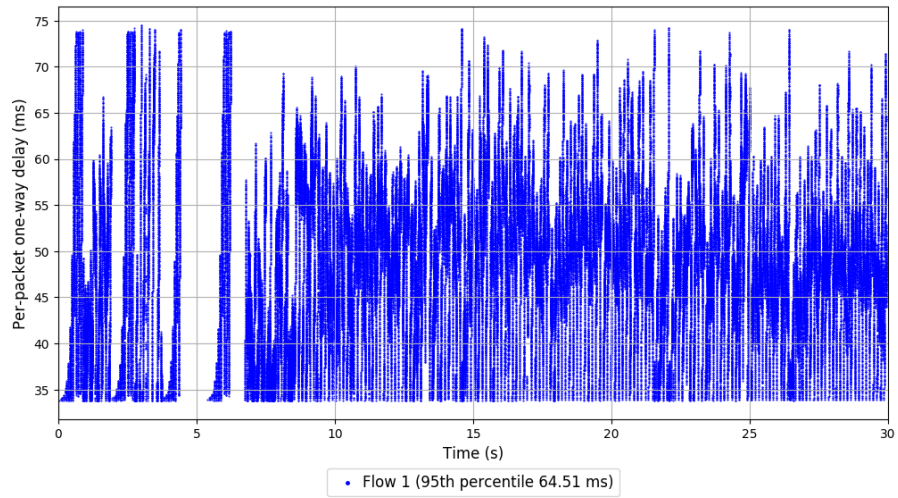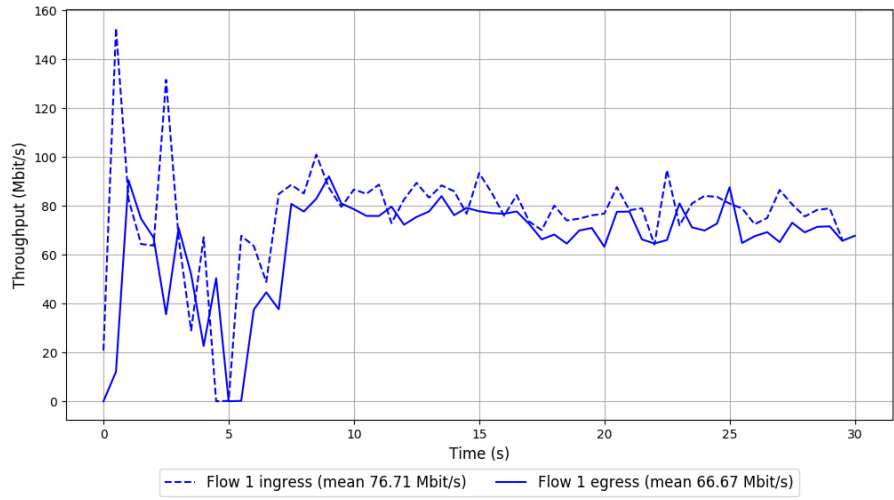

Flow 1 (95th percentile 61.59 ms)

```
Run 5: Statistics of Verus

Start at: 2019-10-02 19:41:01
End at: 2019-10-02 19:41:31
Local clock offset: 1.742 ms
Remote clock offset: -0.913 ms


# Below is generated by plot.py at 2019-10-02 20:01:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.67 Mbit/s
95th percentile per-packet one-way delay: 64.513 ms
Loss rate: 13.04%
-- Flow 1:
Average throughput: 66.67 Mbit/s
95th percentile per-packet one-way delay: 64.513 ms
Loss rate: 13.04%
```

Run 5: Report of Verus — Data Link

Flow 1 ingress (mean 76.71 Mbit/s)   Flow 1 egress (mean 66.67 Mbit/s)

Flow 1 (95th percentile 64.51 ms)

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-10-02 17:43:56
End at: 2019-10-02 17:44:26
Local clock offset: -2.769 ms
Remote clock offset: -3.361 ms


# Below is generated by plot.py at 2019-10-02 20:02:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.29 Mbit/s
95th percentile per-packet one-way delay: 32.541 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 86.29 Mbit/s
95th percentile per-packet one-way delay: 32.541 ms
Loss rate: 0.06%
```
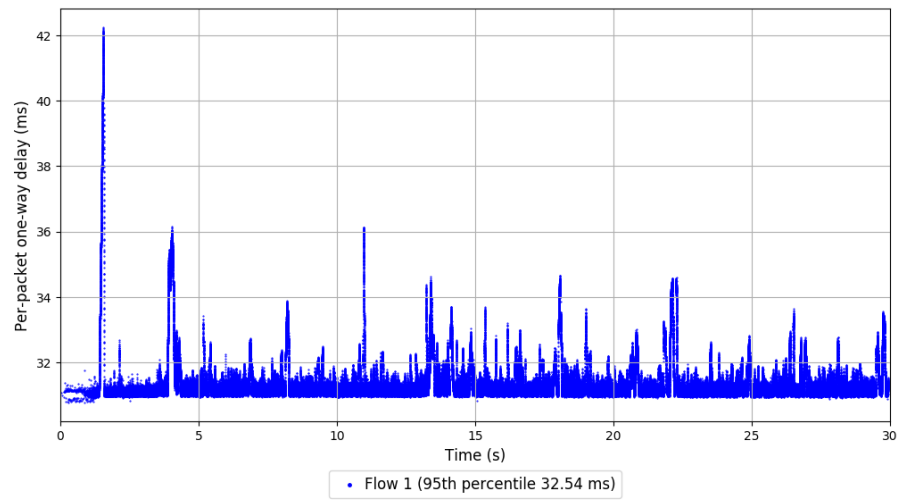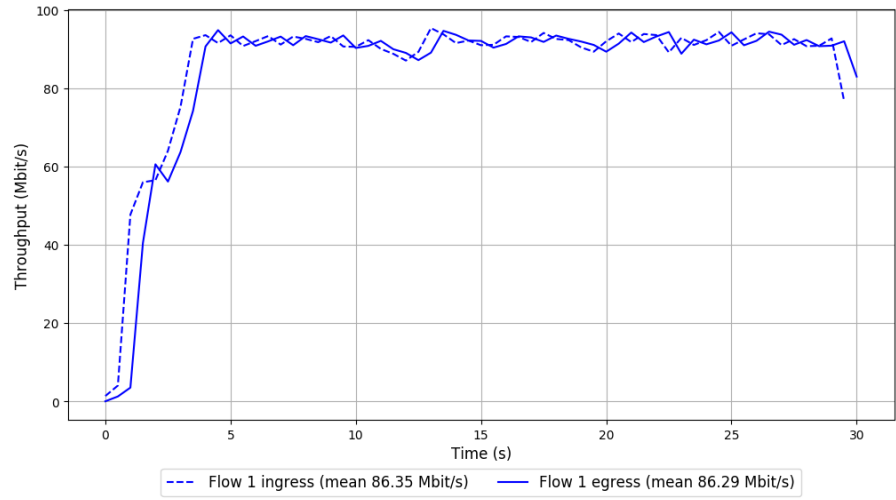
Run 1: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 86.35 Mbit/s) ——— Flow 1 egress (mean 86.29 Mbit/s)

• Flow 1 (95th percentile 32.54 ms)

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-10-02 18:12:14
End at: 2019-10-02 18:12:44
Local clock offset: -4.531 ms
Remote clock offset: -3.083 ms

# Below is generated by plot.py at 2019-10-02 20:02:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.74 Mbit/s
95th percentile per-packet one-way delay: 32.462 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 85.74 Mbit/s
95th percentile per-packet one-way delay: 32.462 ms
Loss rate: 0.01%
```
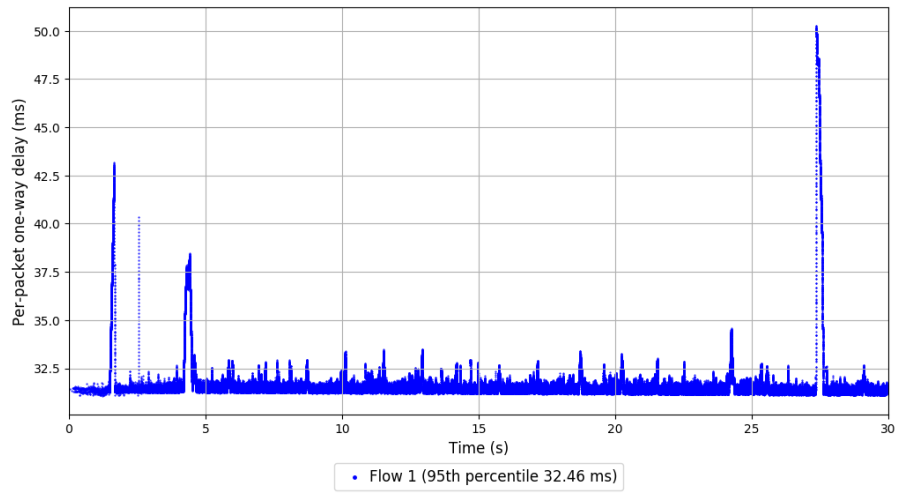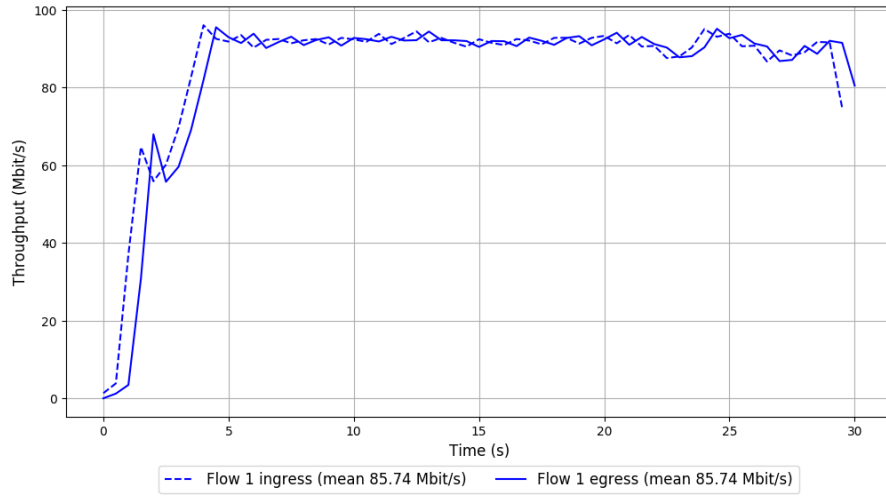
Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-10-02 18:40:41
End at: 2019-10-02 18:41:11
Local clock offset: 0.063 ms
Remote clock offset: -0.367 ms


# Below is generated by plot.py at 2019-10-02 20:02:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.85 Mbit/s
95th percentile per-packet one-way delay: 30.080 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 85.85 Mbit/s
95th percentile per-packet one-way delay: 30.080 ms
Loss rate: 0.00%
```
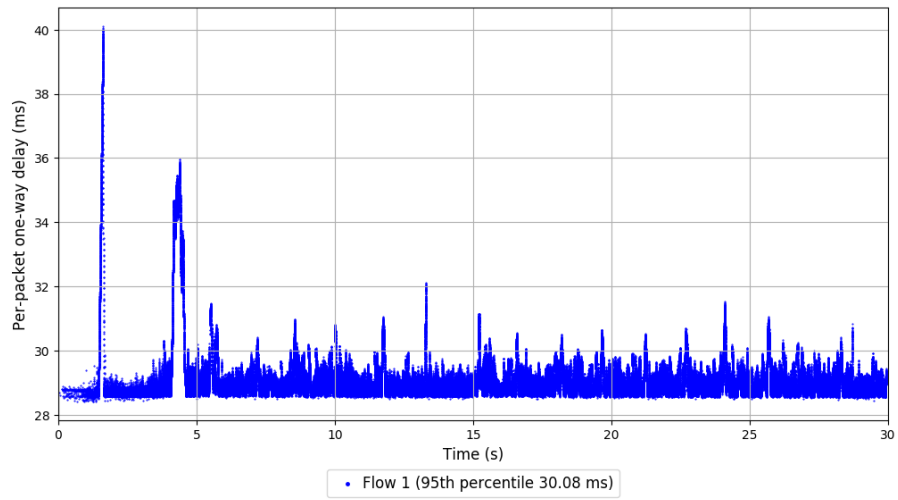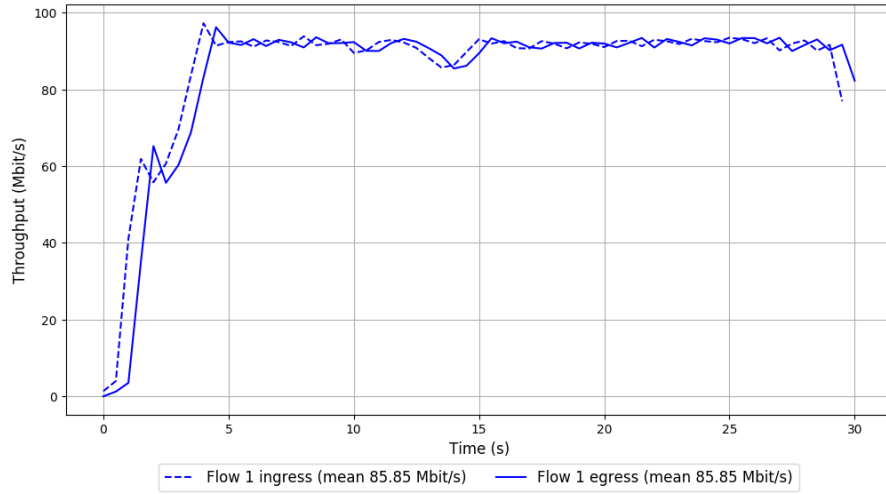
Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 85.85 Mbit/s)   Flow 1 egress (mean 85.85 Mbit/s)
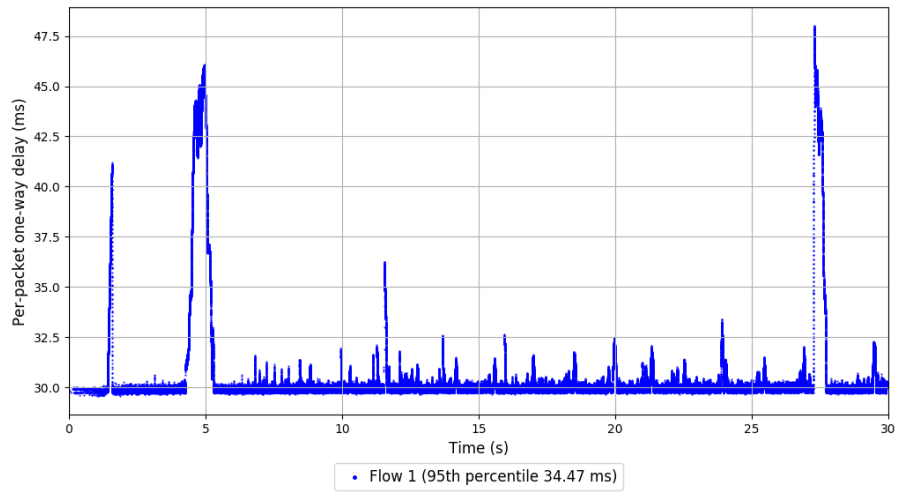
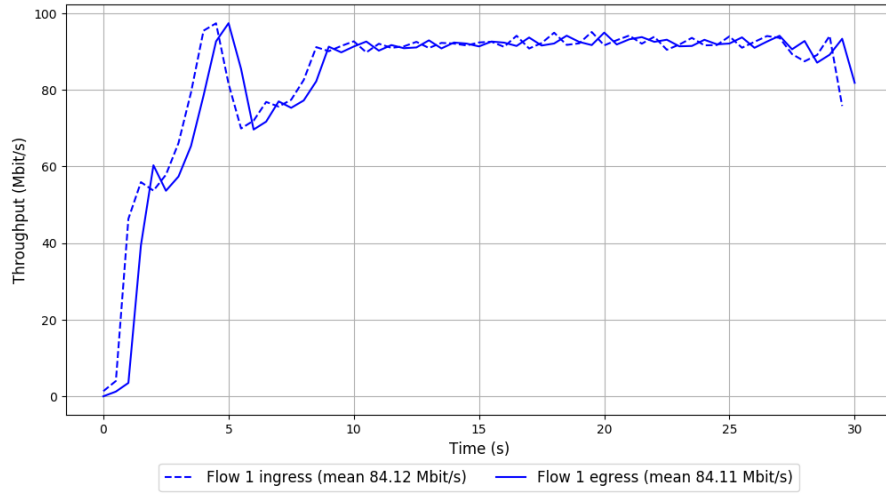

• Flow 1 (95th percentile 30.08 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-10-02 19:08:37
End at: 2019-10-02 19:09:07
Local clock offset: -3.013 ms
Remote clock offset: -1.747 ms

# Below is generated by plot.py at 2019-10-02 20:02:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.11 Mbit/s
95th percentile per-packet one-way delay: 34.474 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 84.11 Mbit/s
95th percentile per-packet one-way delay: 34.474 ms
Loss rate: 0.01%
```

Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 84.12 Mbit/s) --- Flow 1 egress (mean 84.11 Mbit/s)

• Flow 1 (95th percentile 34.47 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-10-02 19:37:17
End at: 2019-10-02 19:37:47
Local clock offset: 2.829 ms
Remote clock offset: -1.436 ms


# Below is generated by plot.py at 2019-10-02 20:02:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.62 Mbit/s
95th percentile per-packet one-way delay: 33.377 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 85.62 Mbit/s
95th percentile per-packet one-way delay: 33.377 ms
Loss rate: 0.01%
```
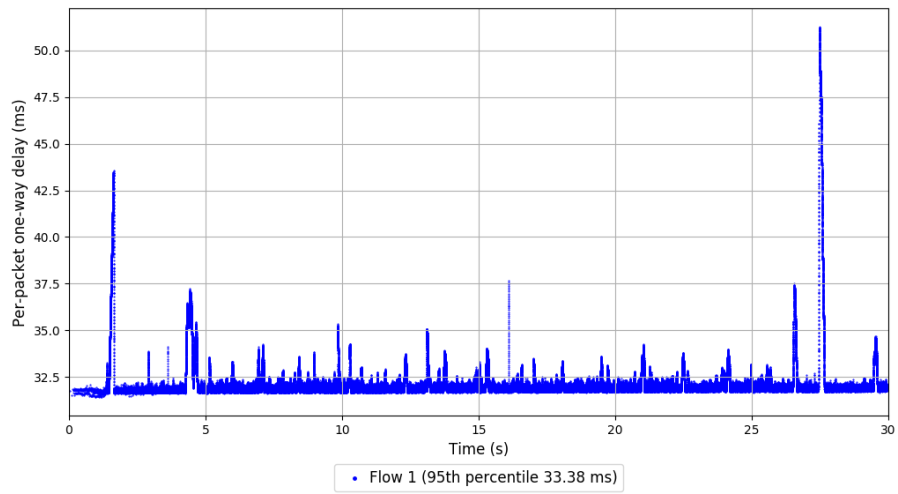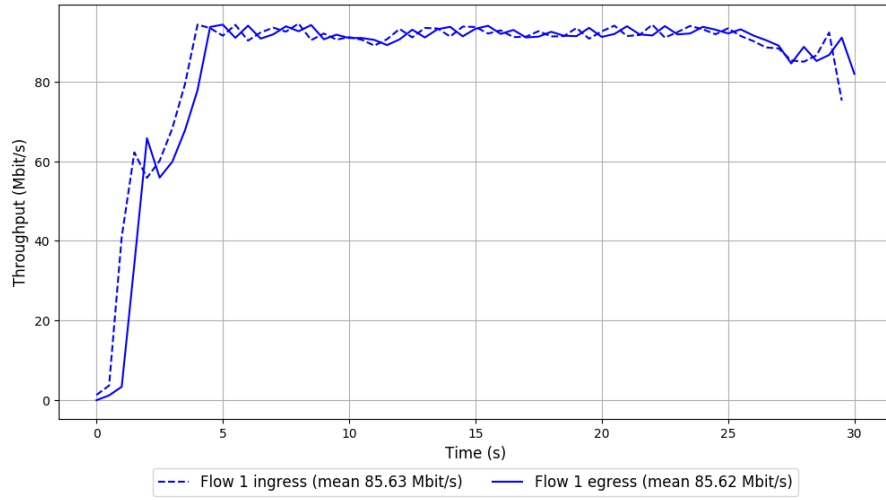
Run 5: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 85.63 Mbit/s) --- Flow 1 egress (mean 85.62 Mbit/s)
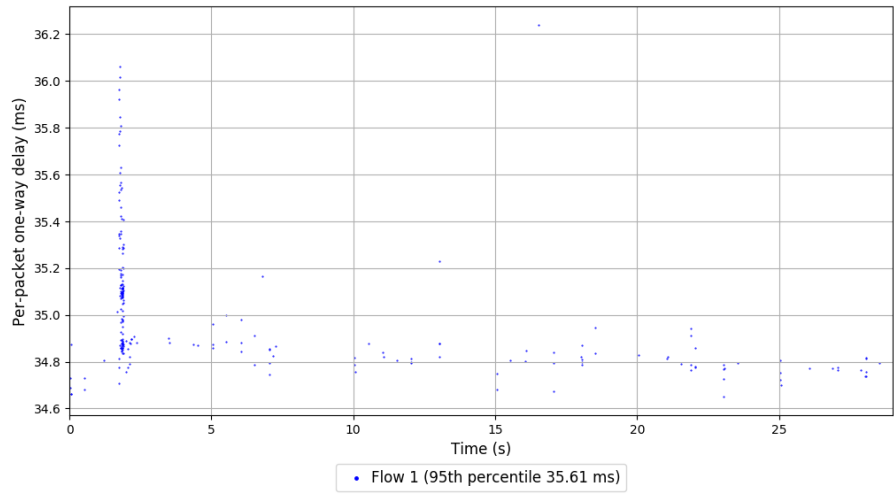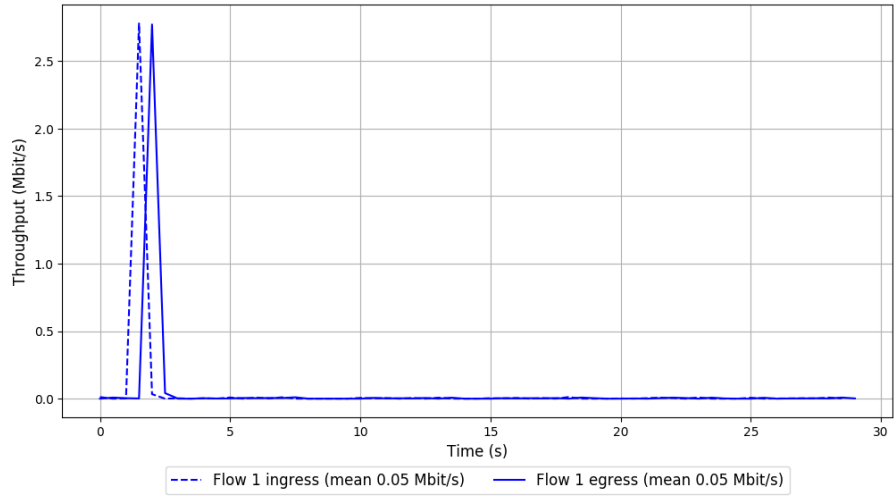

Flow 1 (95th percentile 33.38 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2019-10-02 17:35:47
End at: 2019-10-02 17:36:17
Local clock offset: -0.045 ms
Remote clock offset: -1.972 ms


# Below is generated by plot.py at 2019-10-02 20:02:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 35.607 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 35.607 ms
Loss rate: 0.00%
```
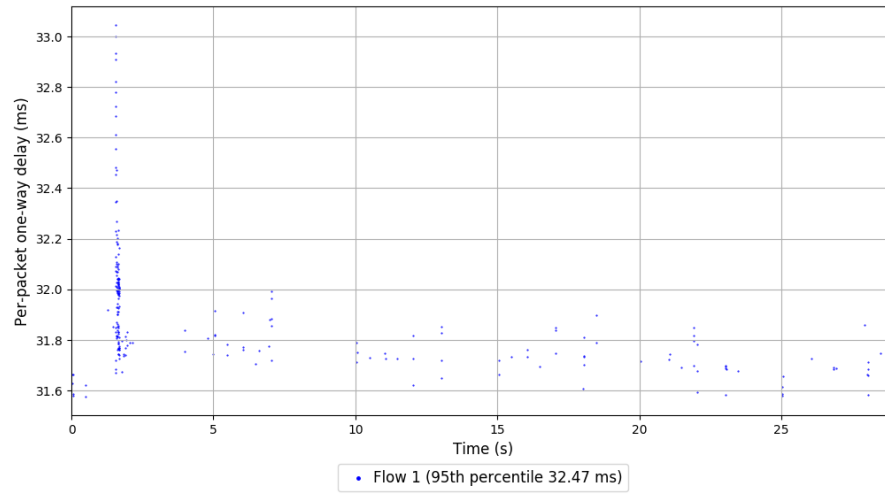
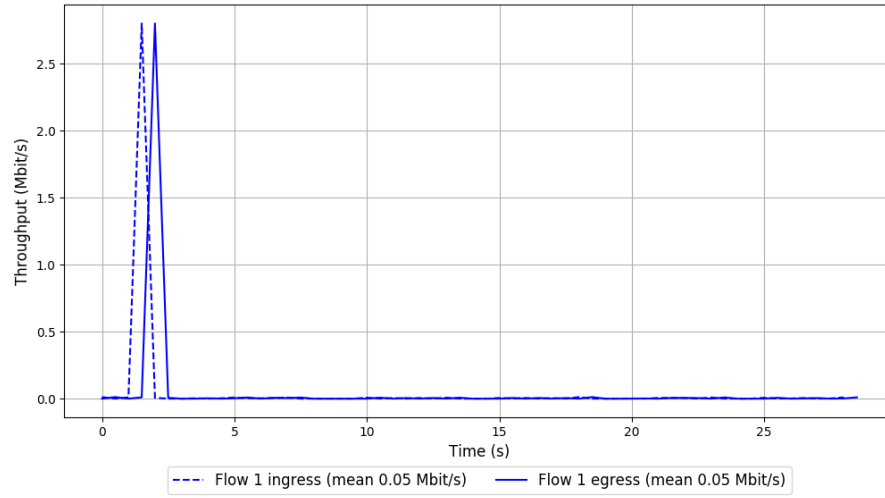Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-10-02 18:04:11
End at: 2019-10-02 18:04:41
Local clock offset: -2.678 ms
Remote clock offset: -2.768 ms


# Below is generated by plot.py at 2019-10-02 20:02:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 32.472 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 32.472 ms
Loss rate: 0.00%
```

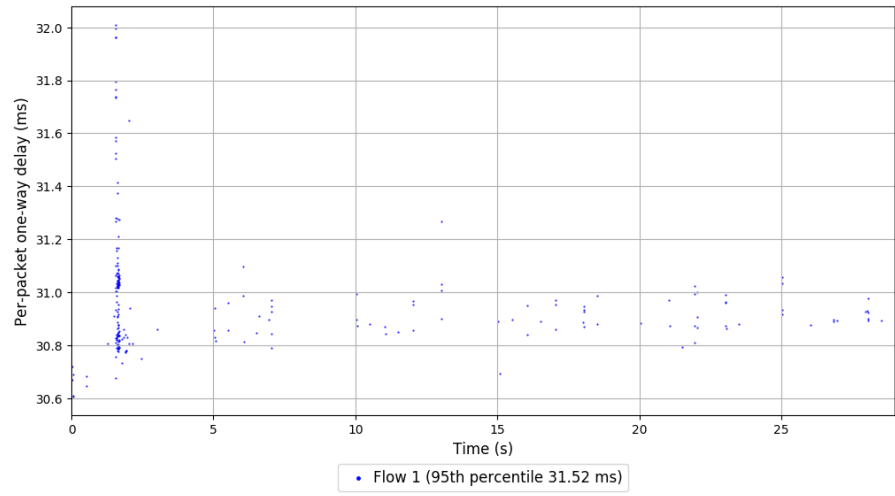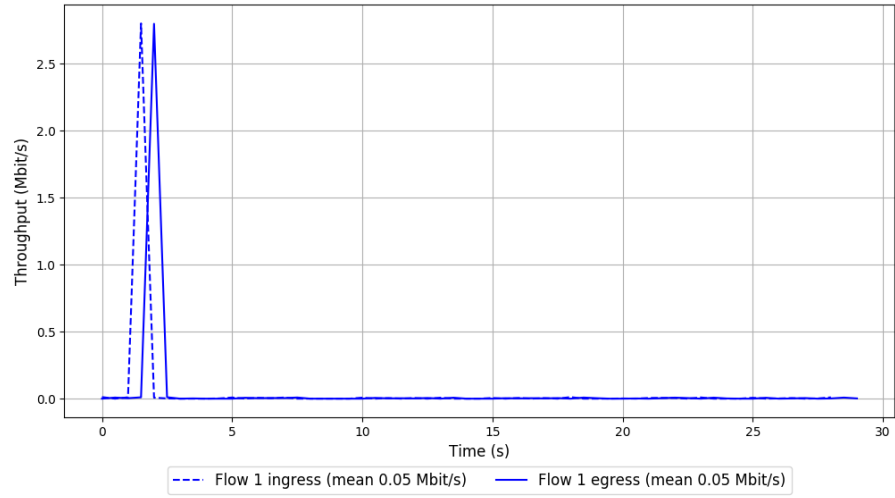Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-10-02 18:32:36
End at: 2019-10-02 18:33:06
Local clock offset: -6.183 ms
Remote clock offset: -2.861 ms


# Below is generated by plot.py at 2019-10-02 20:02:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.525 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.525 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-10-02 19:00:41
End at: 2019-10-02 19:01:11
Local clock offset: -3.199 ms
Remote clock offset: -0.93 ms


# Below is generated by plot.py at 2019-10-02 20:02:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.217 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.217 ms
Loss rate: 0.00%
```
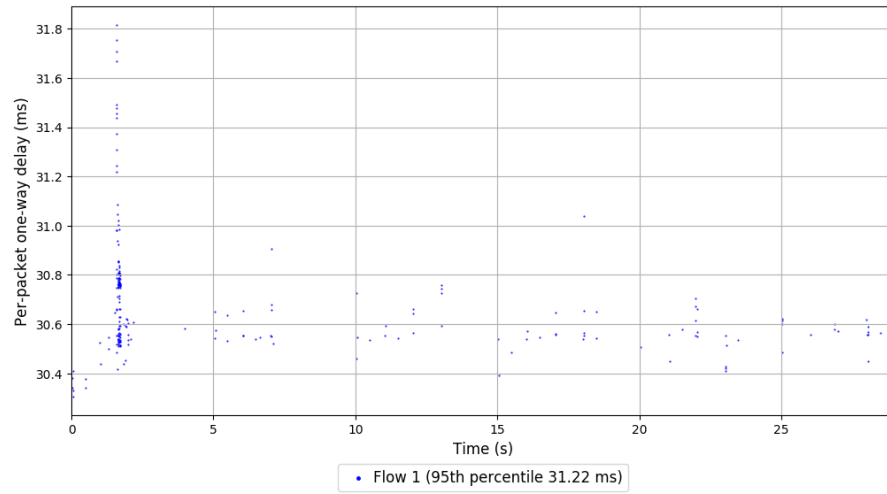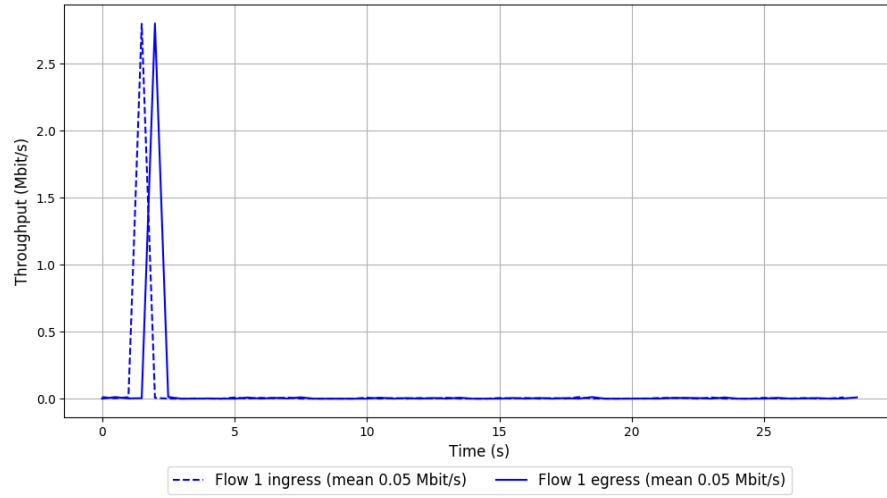
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-10-02 19:29:18
End at: 2019-10-02 19:29:48
Local clock offset: -6.155 ms
Remote clock offset: 0.898 ms


# Below is generated by plot.py at 2019-10-02 20:02:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 43.171 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 43.171 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link