Pantheon Report

Generated at 2019-02-12 00:51:27 (UTC).

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

Repeated the test of 21 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 4.15.0-1031-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 @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
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/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 India to AWS India 1, 5 runs of 30s each per scheme
(mean of all runs by scheme)

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

3

scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	95.59	40.99	1.40
Copa	5	84.05	23.99	0.09
TCP Cubic	5	94.83	24.82	0.10
FillP	5	96.08	33.01	0.14
FillP-Sheep	5	94.23	22.56	0.09
Indigo	5	96.55	18.72	0.09
Indigo-MusesC3	5	96.24	20.92	0.10
Indigo-MusesC5	5	91.93	18.23	0.09
Indigo-MusesD	5	86.89	20.53	0.09
Indigo-MusesT	5	96.30	20.42	0.09
LEDBAT	5	85.42	24.83	0.09
PCC-Allegro	5	92.39	19.35	0.10
PCC-Expr	5	87.00	163.71	1.77
QUIC Cubic	5	90.57	24.50	0.13
SCReAM	5	0.21	18.03	0.10
Sprout	5	24.53	23.56	0.10
TaoVA-100x	5	92.06	19.65	0.08
TCP Vegas	5	95.35	19.51	0.09
Verus	5	91.26	50.35	0.28
PCC-Vivace	5	88.24	18.17	0.09
WebRTC media	5	2.40	18.64	0.08

```
Run 1: Statistics of TCP BBR

Start at: 2019-02-11 22:33:22
End at: 2019-02-11 22:33:52
Local clock offset: -1.491 ms
Remote clock offset: -2.716 ms


# Below is generated by plot.py at 2019-02-12 00:38:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.58 Mbit/s
95th percentile per-packet one-way delay: 40.796 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 95.58 Mbit/s
95th percentile per-packet one-way delay: 40.796 ms
Loss rate: 1.43%
```
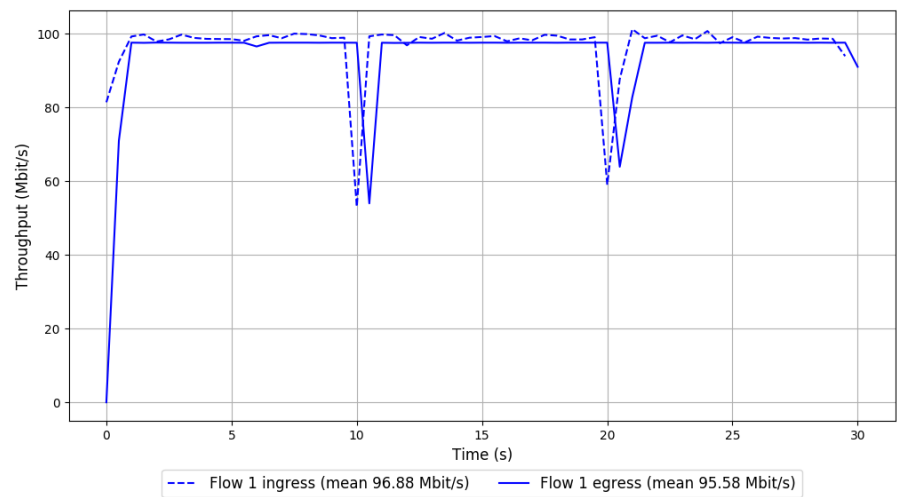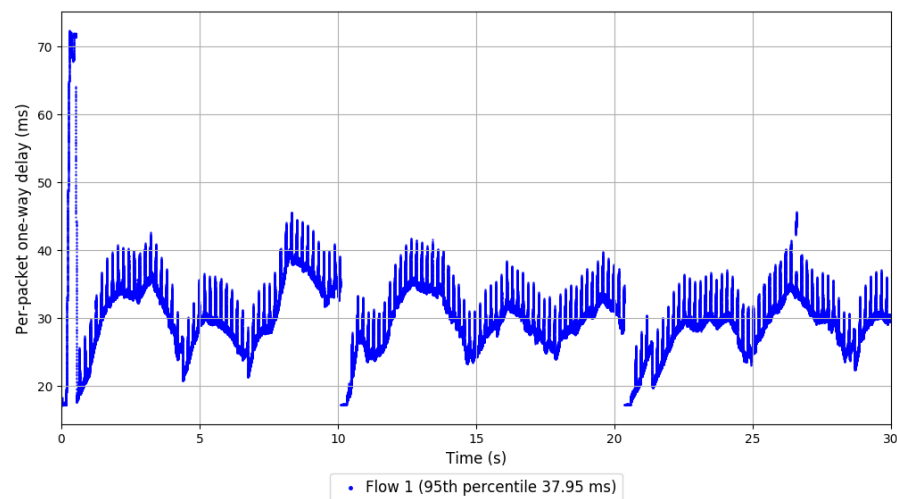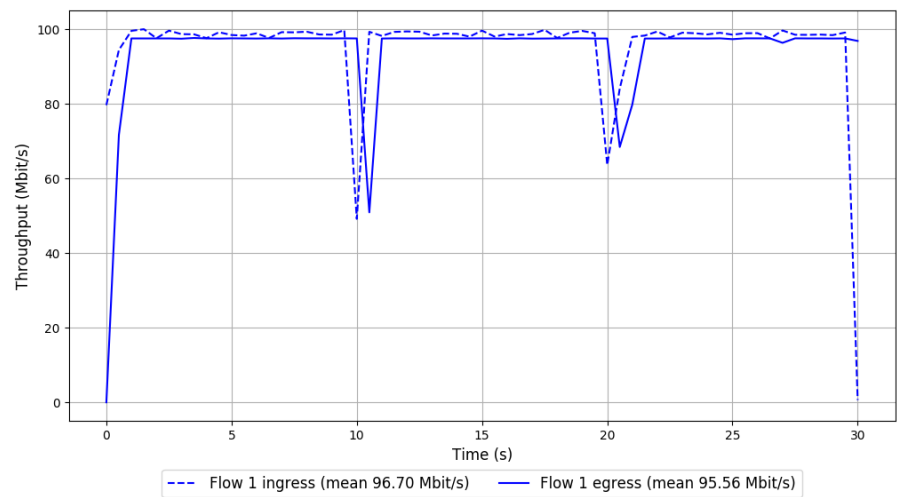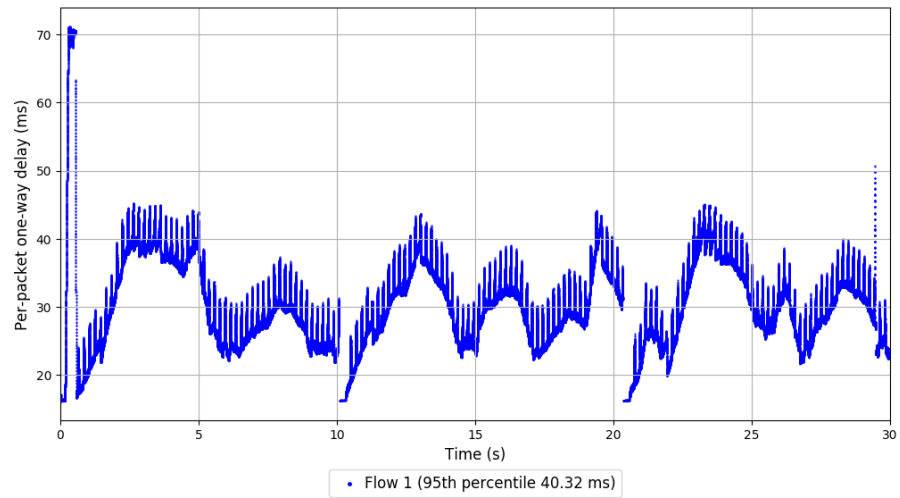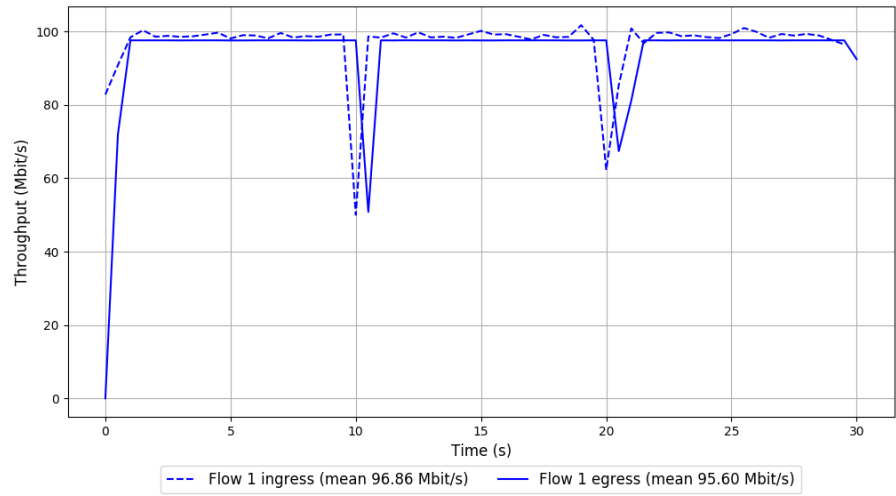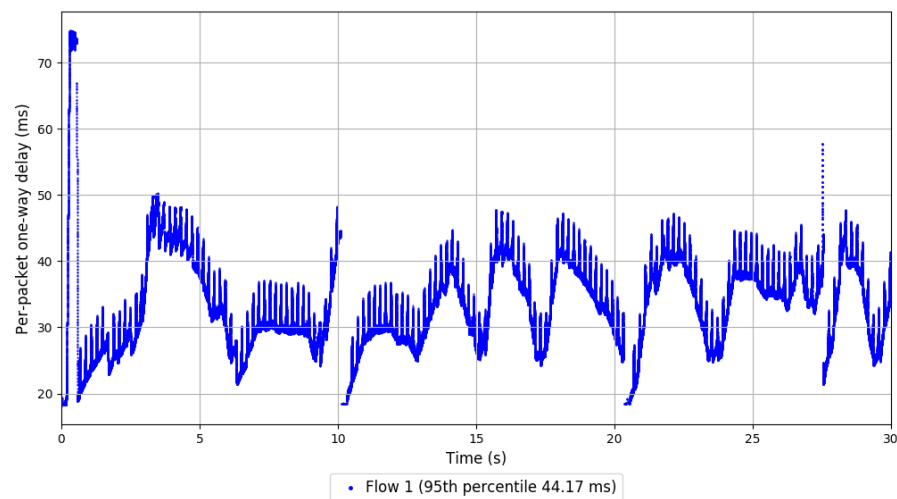
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-02-11 22:58:22
End at: 2019-02-11 22:58:52
Local clock offset: 4.914 ms
Remote clock offset: -5.217 ms


# Below is generated by plot.py at 2019-02-12 00:38:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.56 Mbit/s
95th percentile per-packet one-way delay: 37.949 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 95.56 Mbit/s
95th percentile per-packet one-way delay: 37.949 ms
Loss rate: 1.27%
```

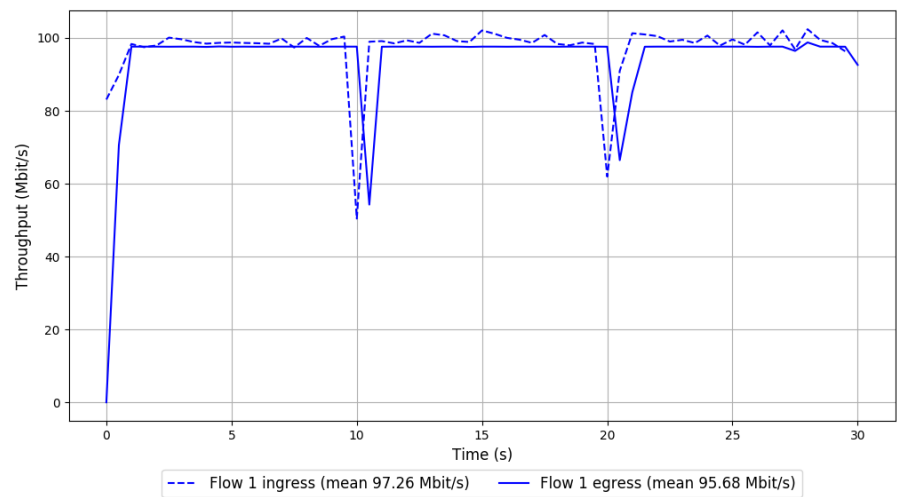Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-02-11 23:23:14
End at: 2019-02-11 23:23:44
Local clock offset: 4.207 ms
Remote clock offset: -6.73 ms


# Below is generated by plot.py at 2019-02-12 00:38:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.60 Mbit/s
95th percentile per-packet one-way delay: 40.322 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 95.60 Mbit/s
95th percentile per-packet one-way delay: 40.322 ms
Loss rate: 1.39%
```
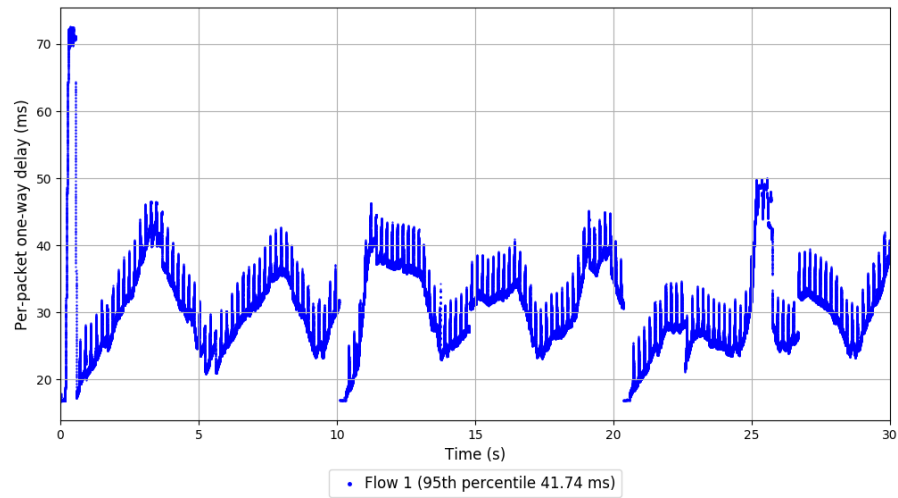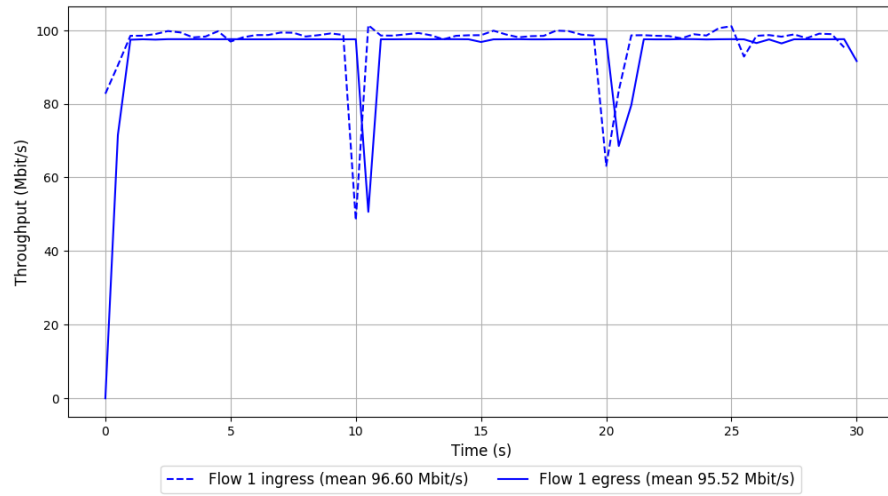
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2019-02-11 23:48:17
End at: 2019-02-11 23:48:47
Local clock offset: 2.877 ms
Remote clock offset: -6.073 ms


# Below is generated by plot.py at 2019-02-12 00:38:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.68 Mbit/s
95th percentile per-packet one-way delay: 44.169 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 95.68 Mbit/s
95th percentile per-packet one-way delay: 44.169 ms
Loss rate: 1.70%
```

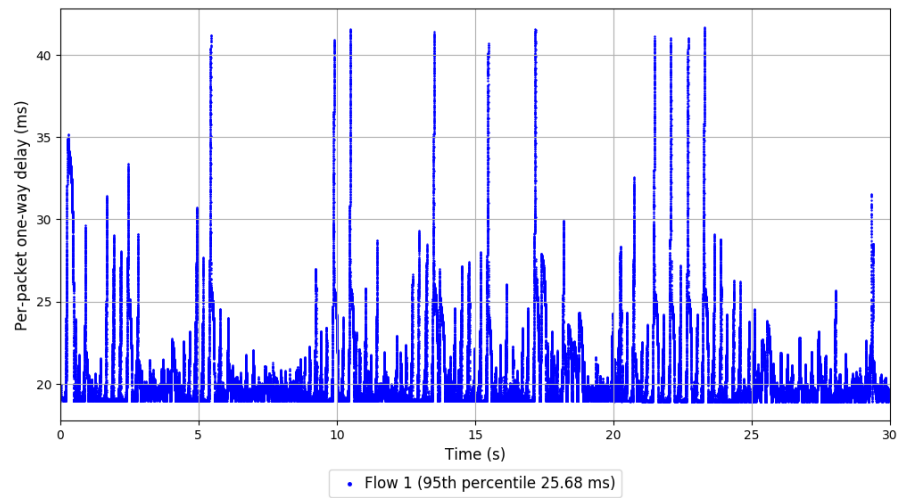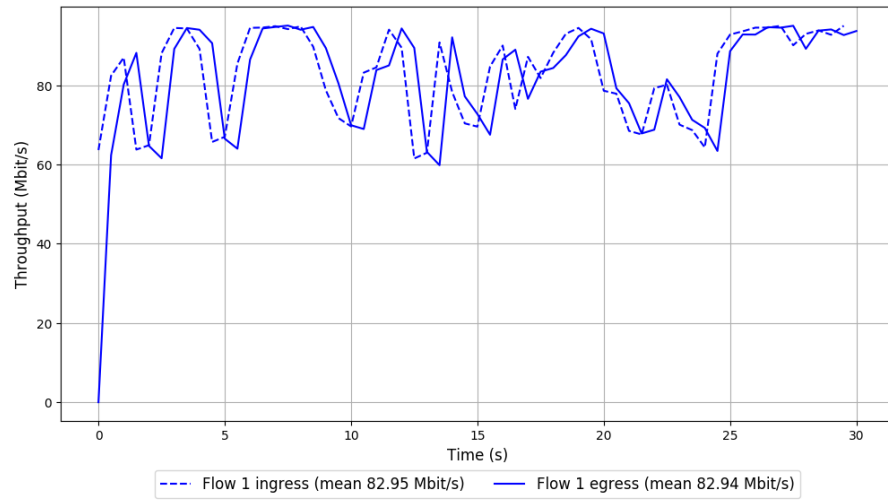# Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 97.26 Mbit/s) --- Flow 1 egress (mean 95.68 Mbit/s)

Flow 1 (95th percentile 44.17 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2019-02-12 00:13:12
End at: 2019-02-12 00:13:42
Local clock offset: 0.093 ms
Remote clock offset: -5.24 ms


# Below is generated by plot.py at 2019-02-12 00:38:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 41.737 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 41.737 ms
Loss rate: 1.20%
```

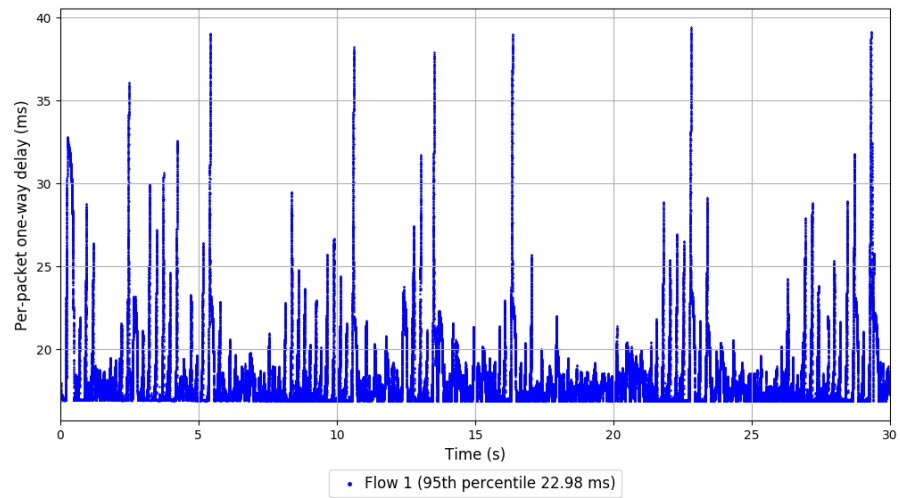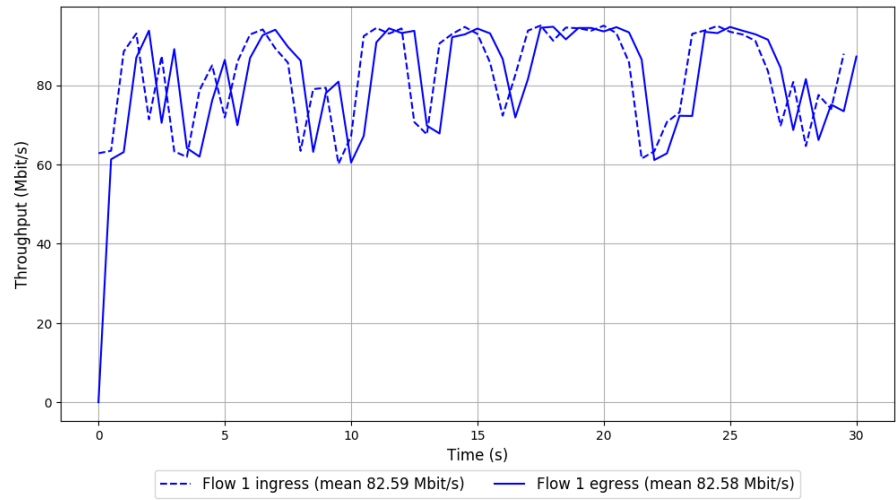Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2019-02-11 22:52:30
End at: 2019-02-11 22:53:00
Local clock offset: 6.14 ms
Remote clock offset: -5.031 ms


# Below is generated by plot.py at 2019-02-12 00:39:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.94 Mbit/s
95th percentile per-packet one-way delay: 25.681 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 82.94 Mbit/s
95th percentile per-packet one-way delay: 25.681 ms
Loss rate: 0.10%
```
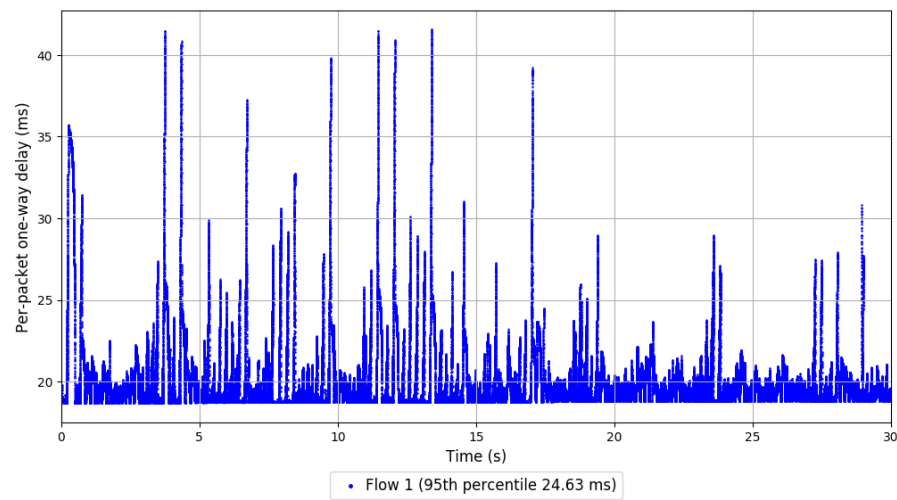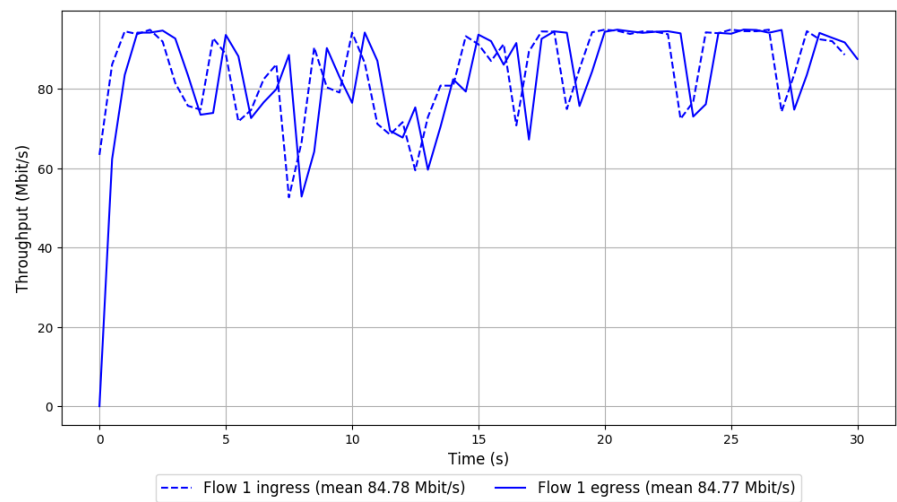
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 82.95 Mbit/s)   Flow 1 egress (mean 82.94 Mbit/s)

• Flow 1 (95th percentile 25.68 ms)

```
Run 2: Statistics of Copa

Start at: 2019-02-11 23:17:21
End at: 2019-02-11 23:17:51
Local clock offset: 6.246 ms
Remote clock offset: -5.024 ms


# Below is generated by plot.py at 2019-02-12 00:39:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.58 Mbit/s
95th percentile per-packet one-way delay: 22.975 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 82.58 Mbit/s
95th percentile per-packet one-way delay: 22.975 ms
Loss rate: 0.09%
```
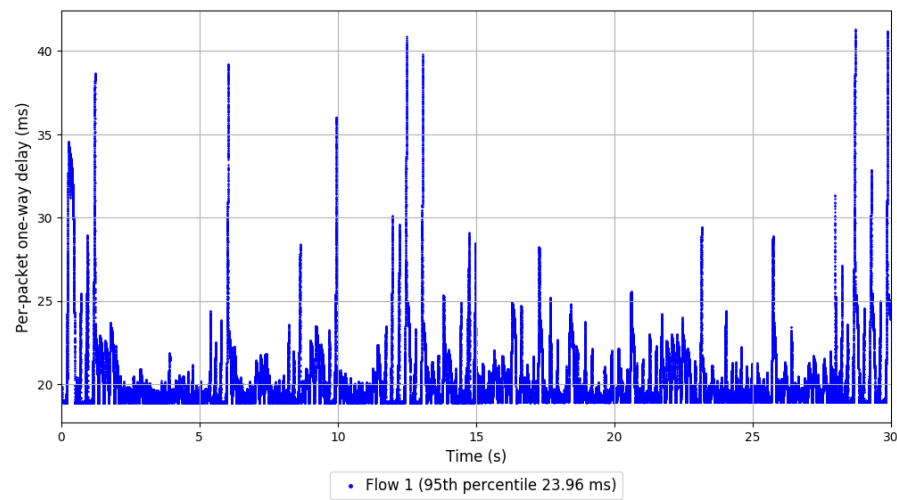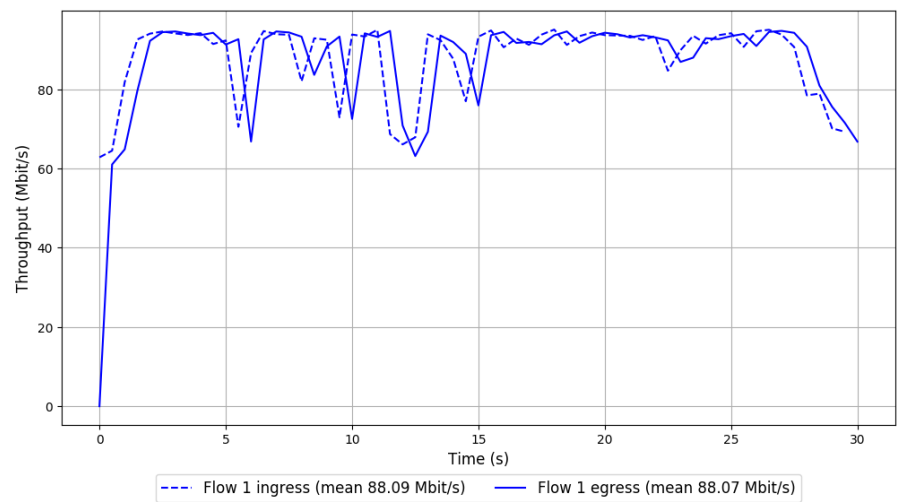
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 82.59 Mbit/s)   Flow 1 egress (mean 82.58 Mbit/s)

• Flow 1 (95th percentile 22.98 ms)

```
Run 3: Statistics of Copa

Start at: 2019-02-11 23:42:18
End at: 2019-02-11 23:42:48
Local clock offset: 3.162 ms
Remote clock offset: -7.35 ms


# Below is generated by plot.py at 2019-02-12 00:39:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.77 Mbit/s
95th percentile per-packet one-way delay: 24.626 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 84.77 Mbit/s
95th percentile per-packet one-way delay: 24.626 ms
Loss rate: 0.10%
```
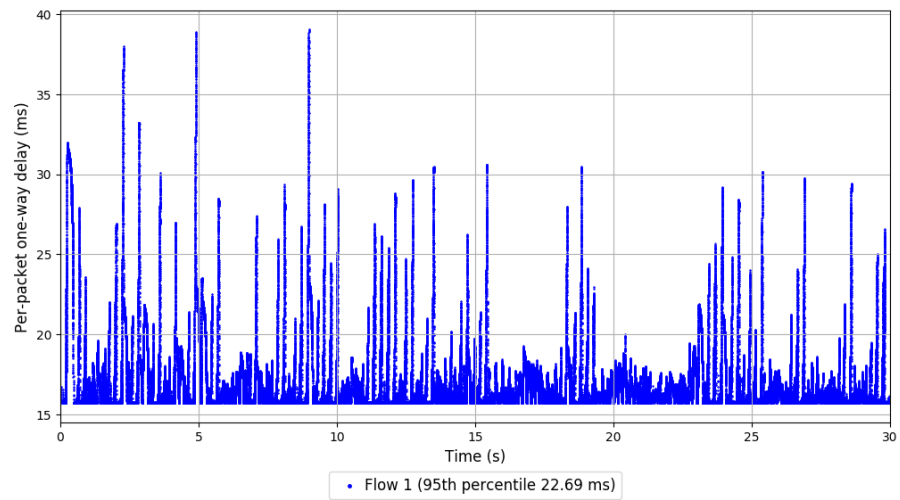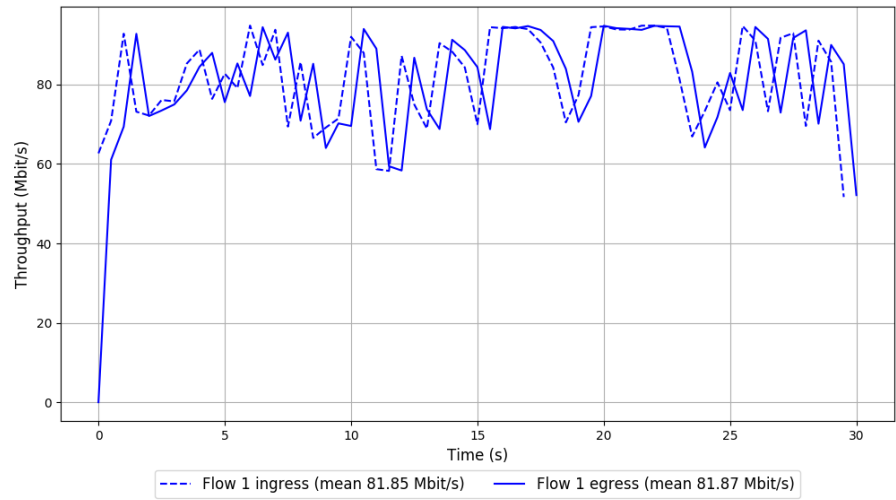
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 84.78 Mbit/s) ----- Flow 1 egress (mean 84.77 Mbit/s)

Flow 1 (95th percentile 24.63 ms)

```
Run 4: Statistics of Copa

Start at: 2019-02-12 00:07:16
End at: 2019-02-12 00:07:46
Local clock offset: 1.589 ms
Remote clock offset: -6.18 ms


# Below is generated by plot.py at 2019-02-12 00:40:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.07 Mbit/s
95th percentile per-packet one-way delay: 23.958 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 88.07 Mbit/s
95th percentile per-packet one-way delay: 23.958 ms
Loss rate: 0.10%
```
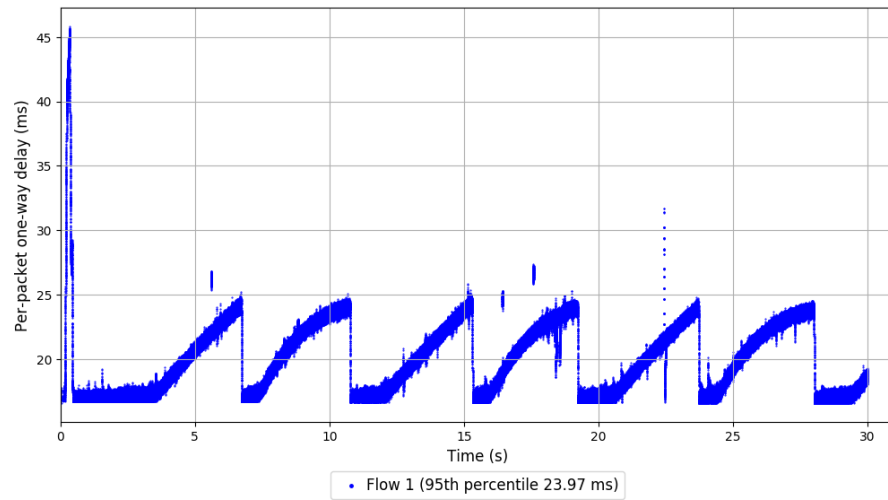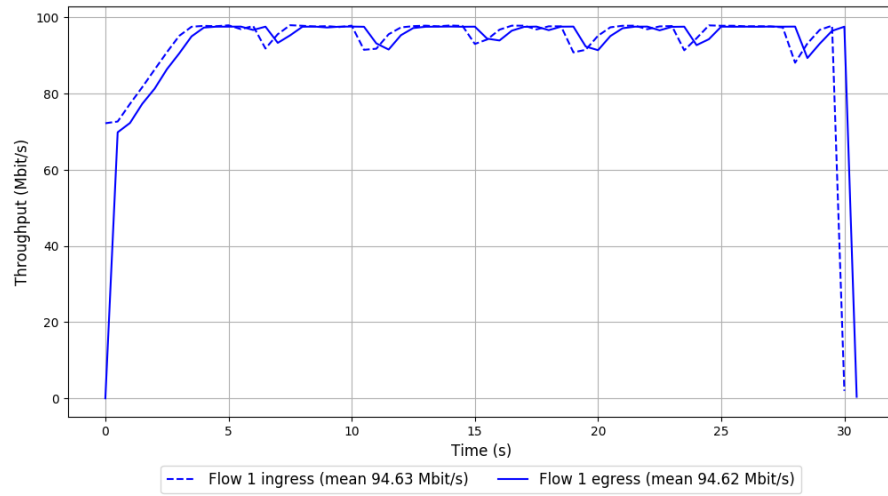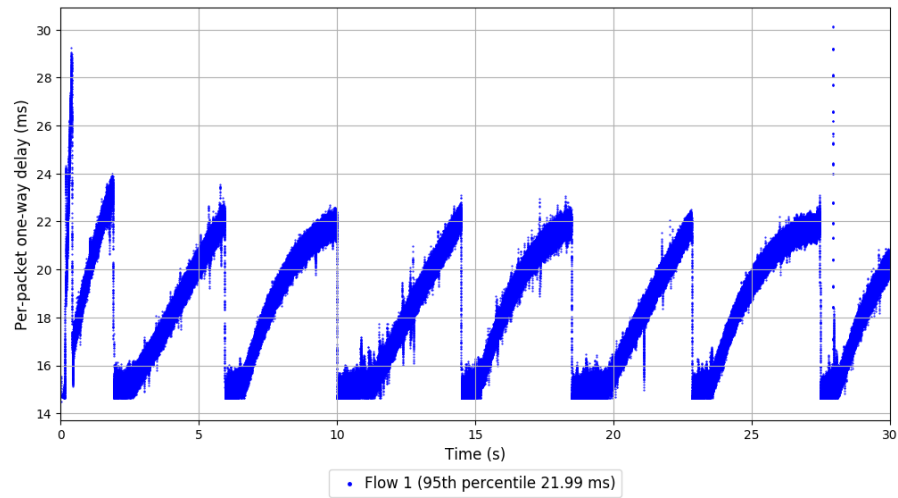
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 88.09 Mbit/s) ----   Flow 1 egress (mean 88.07 Mbit/s) ——

Flow 1 (95th percentile 23.96 ms)

```
Run 5: Statistics of Copa

Start at: 2019-02-12 00:32:32
End at: 2019-02-12 00:33:02
Local clock offset: -2.66 ms
Remote clock offset: -5.768 ms


# Below is generated by plot.py at 2019-02-12 00:40:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.87 Mbit/s
95th percentile per-packet one-way delay: 22.686 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 81.87 Mbit/s
95th percentile per-packet one-way delay: 22.686 ms
Loss rate: 0.06%
```

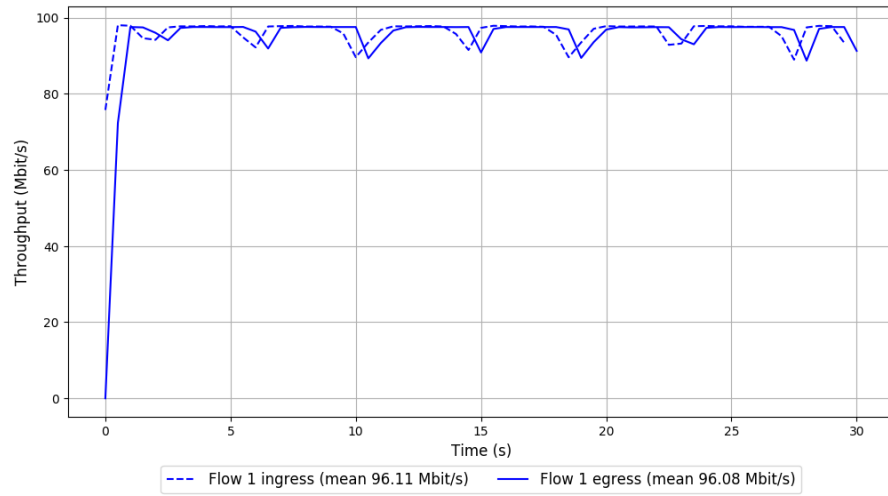Run 5: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2019-02-11 22:39:34
End at: 2019-02-11 22:40:04
Local clock offset: 1.651 ms
Remote clock offset: -4.325 ms


# Below is generated by plot.py at 2019-02-12 00:40:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.62 Mbit/s
95th percentile per-packet one-way delay: 23.974 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 94.62 Mbit/s
95th percentile per-packet one-way delay: 23.974 ms
Loss rate: 0.10%
```
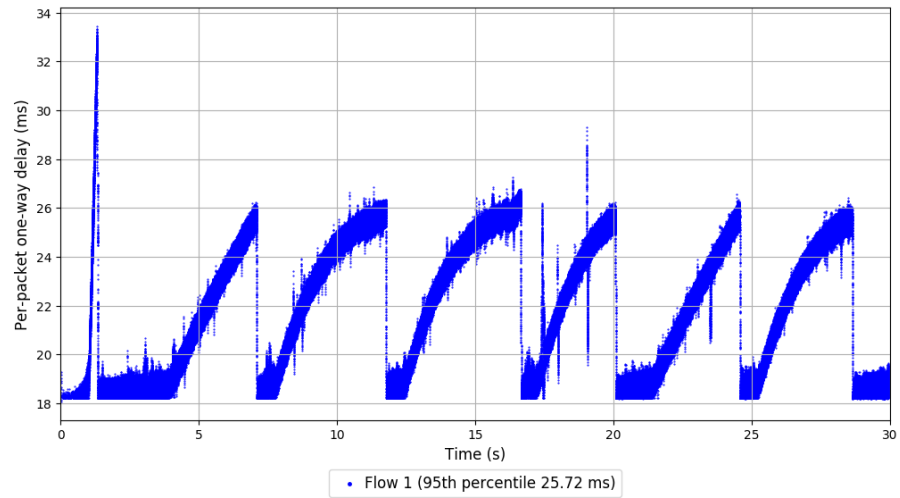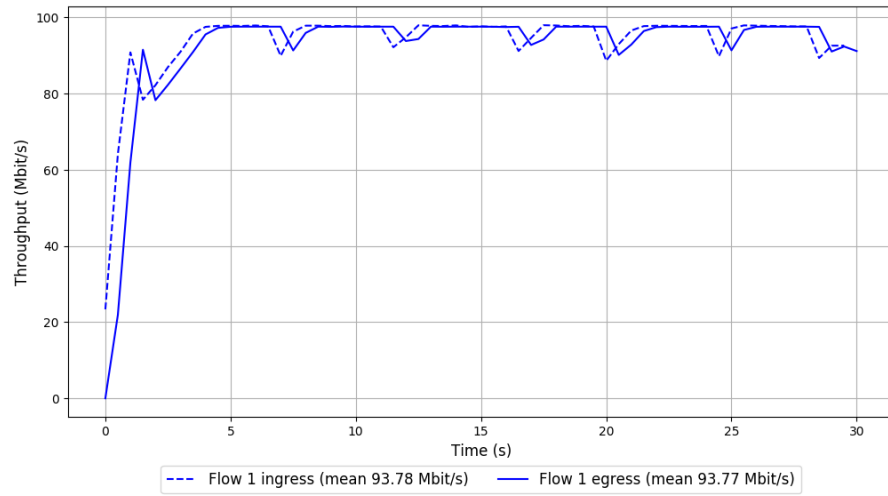
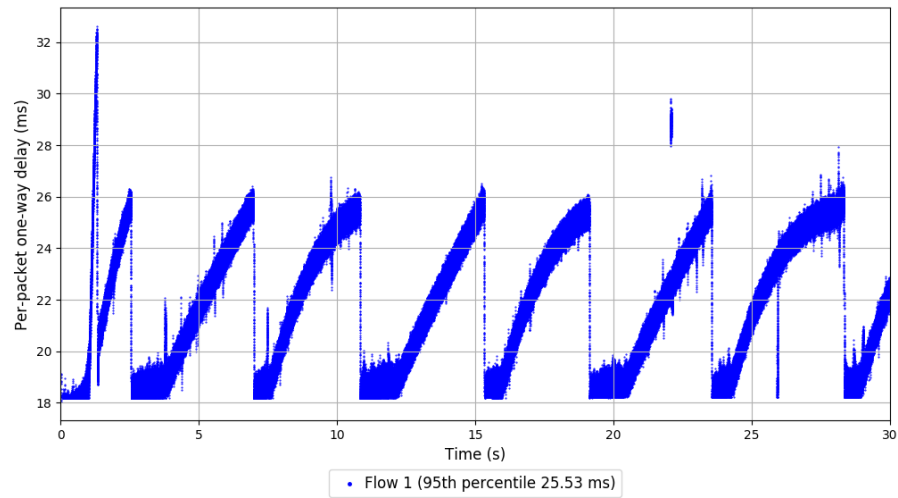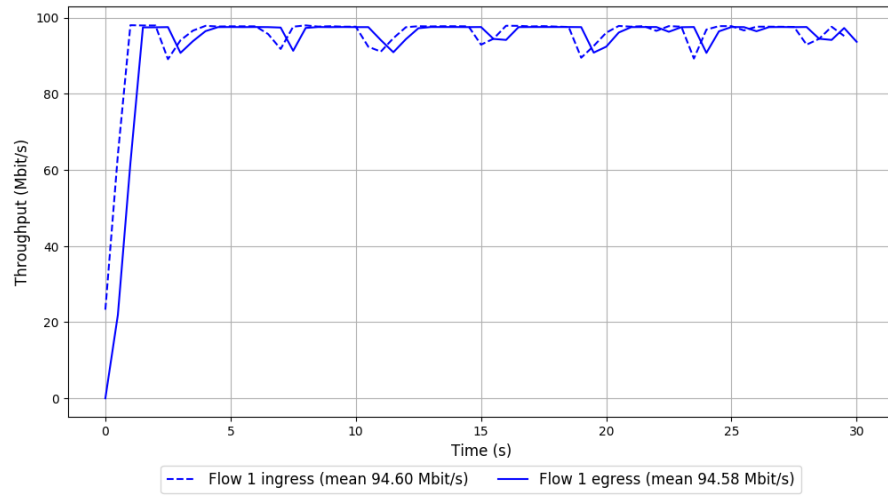Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-02-11 23:04:24
End at: 2019-02-11 23:04:54
Local clock offset: 3.897 ms
Remote clock offset: -4.303 ms


# Below is generated by plot.py at 2019-02-12 00:40:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.08 Mbit/s
95th percentile per-packet one-way delay: 21.992 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 96.08 Mbit/s
95th percentile per-packet one-way delay: 21.992 ms
Loss rate: 0.11%
```

Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 96.11 Mbit/s) ----   Flow 1 egress (mean 96.08 Mbit/s) ——

• Flow 1 (95th percentile 21.99 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2019-02-11 23:29:17
End at: 2019-02-11 23:29:47
Local clock offset: 7.683 ms
Remote clock offset: -5.738 ms


# Below is generated by plot.py at 2019-02-12 00:40:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.77 Mbit/s
95th percentile per-packet one-way delay: 25.717 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 93.77 Mbit/s
95th percentile per-packet one-way delay: 25.717 ms
Loss rate: 0.09%
```
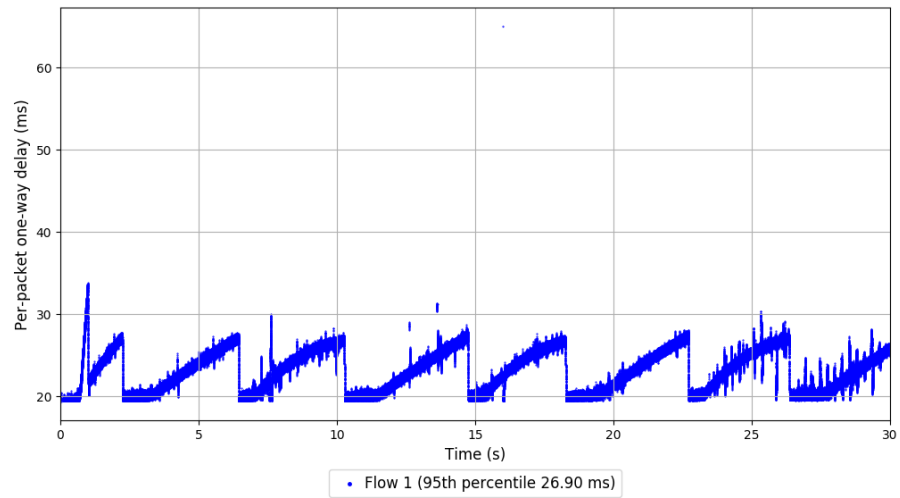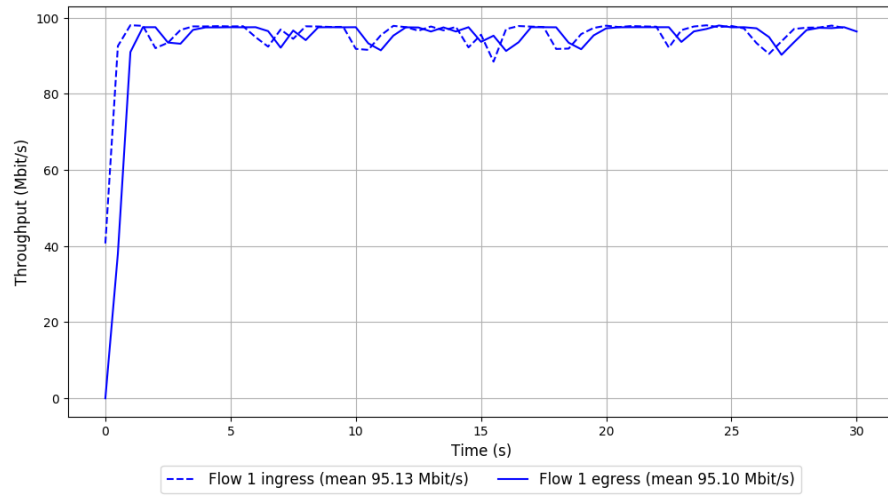
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 93.78 Mbit/s) —— Flow 1 egress (mean 93.77 Mbit/s)

• Flow 1 (95th percentile 25.72 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-02-11 23:54:22
End at: 2019-02-11 23:54:52
Local clock offset: 0.637 ms
Remote clock offset: -7.365 ms


# Below is generated by plot.py at 2019-02-12 00:40:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.58 Mbit/s
95th percentile per-packet one-way delay: 25.532 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 94.58 Mbit/s
95th percentile per-packet one-way delay: 25.532 ms
Loss rate: 0.10%
```
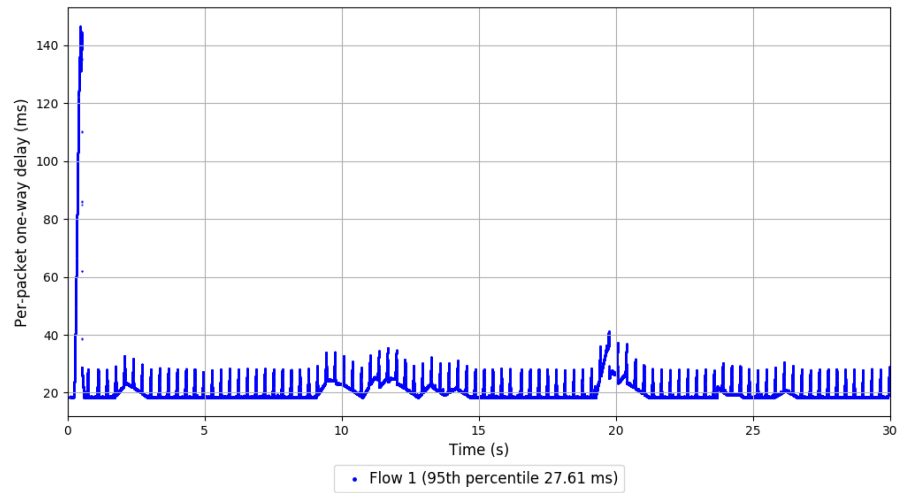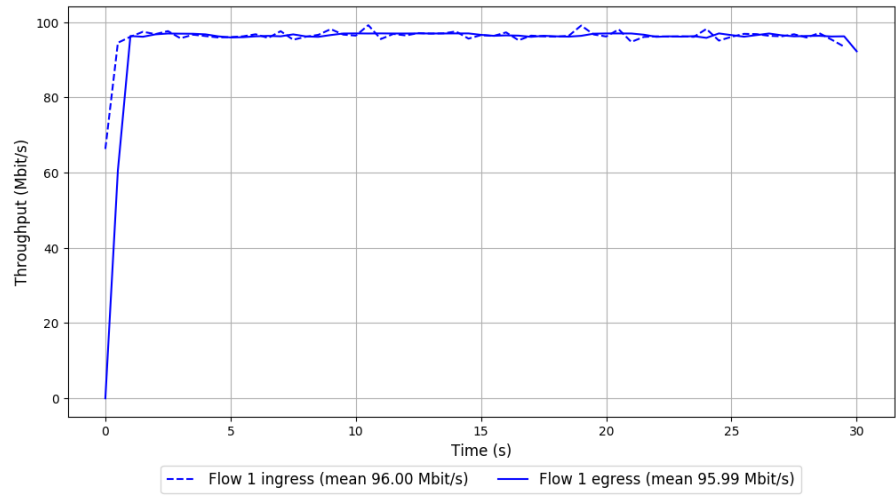
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 94.60 Mbit/s) ----- Flow 1 egress (mean 94.58 Mbit/s)

Flow 1 (95th percentile 25.53 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-02-12 00:19:24
End at: 2019-02-12 00:19:54
Local clock offset: 0.722 ms
Remote clock offset: -7.008 ms


# Below is generated by plot.py at 2019-02-12 00:40:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.10 Mbit/s
95th percentile per-packet one-way delay: 26.898 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 95.10 Mbit/s
95th percentile per-packet one-way delay: 26.898 ms
Loss rate: 0.11%
```

Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 95.13 Mbit/s) — — — Flow 1 egress (mean 95.10 Mbit/s)

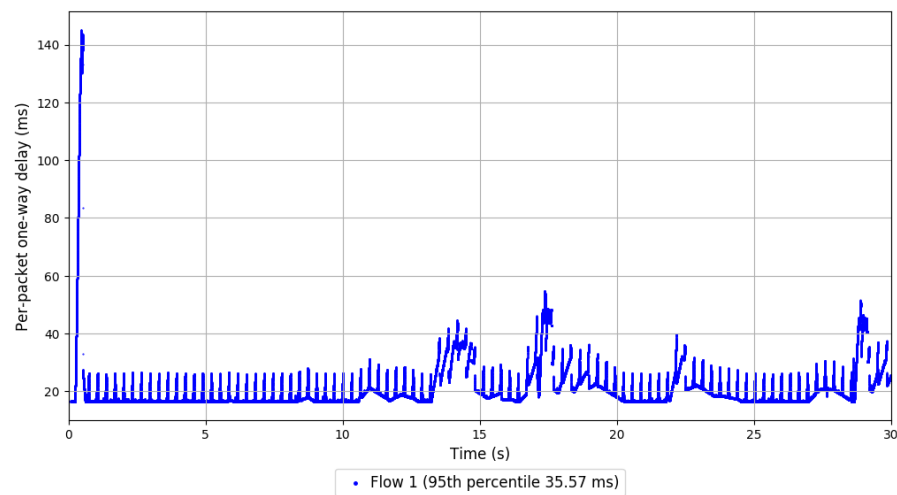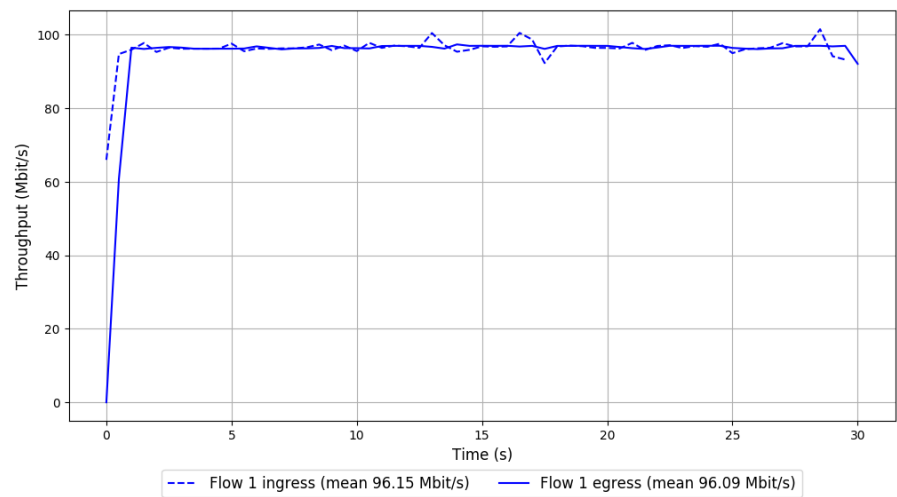

Flow 1 (95th percentile 26.90 ms)

```
Run 1: Statistics of FillP

Start at: 2019-02-11 22:48:58
End at: 2019-02-11 22:49:28
Local clock offset: 5.061 ms
Remote clock offset: -5.095 ms


# Below is generated by plot.py at 2019-02-12 00:40:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 27.607 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 27.607 ms
Loss rate: 0.09%
```
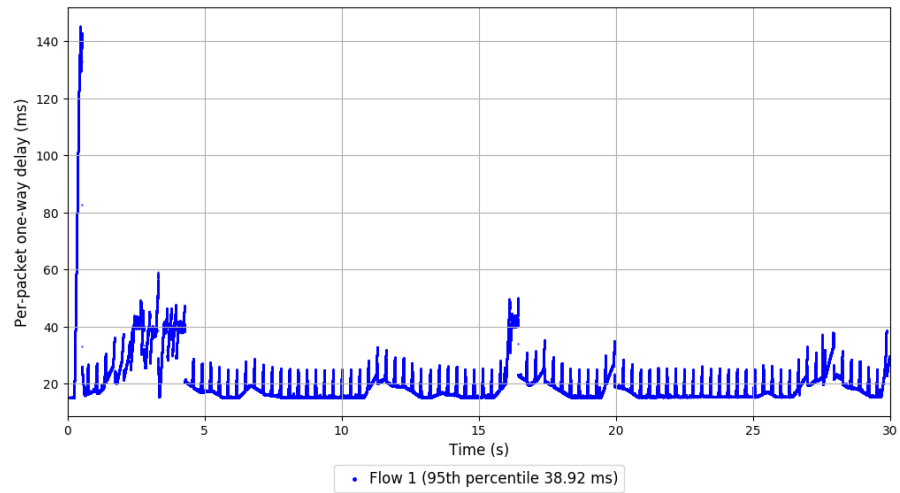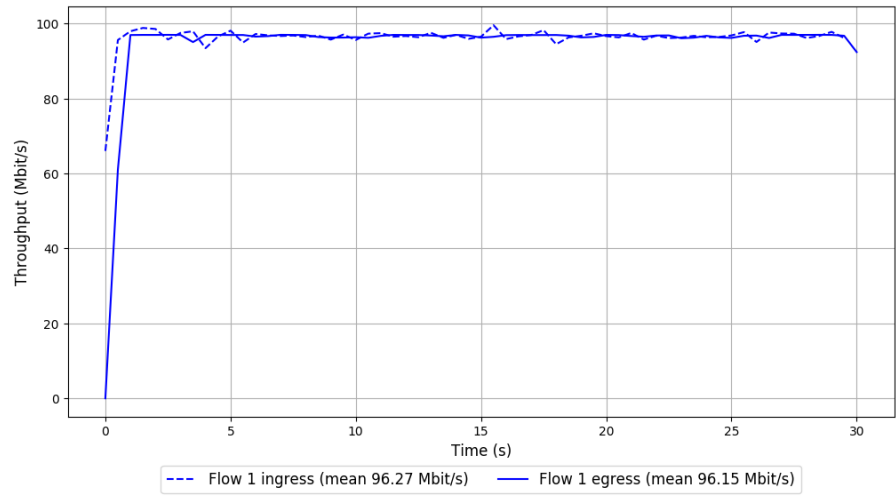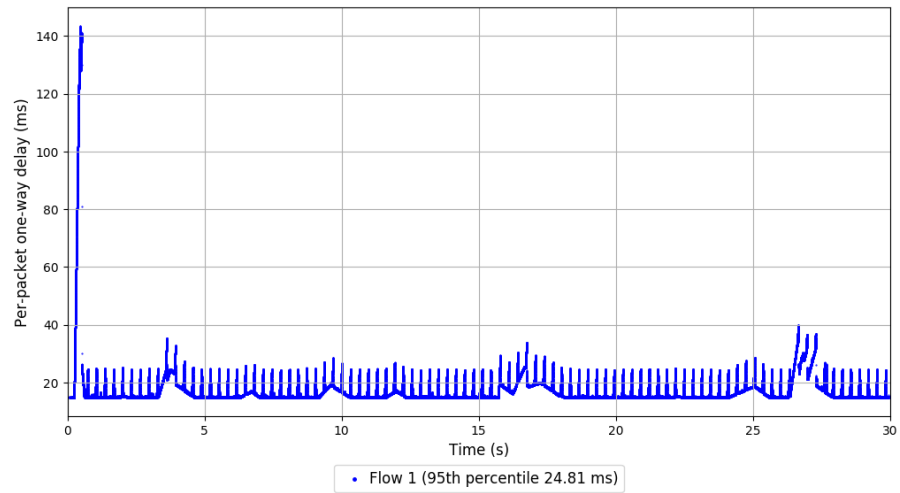
Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 96.00 Mbit/s) --- Flow 1 egress (mean 95.99 Mbit/s)

• Flow 1 (95th percentile 27.61 ms)

```
Run 2: Statistics of FillP

Start at: 2019-02-11 23:13:52
End at: 2019-02-11 23:14:22
Local clock offset: 6.265 ms
Remote clock offset: -4.398 ms


# Below is generated by plot.py at 2019-02-12 00:41:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.09 Mbit/s
95th percentile per-packet one-way delay: 35.567 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 96.09 Mbit/s
95th percentile per-packet one-way delay: 35.567 ms
Loss rate: 0.14%
```

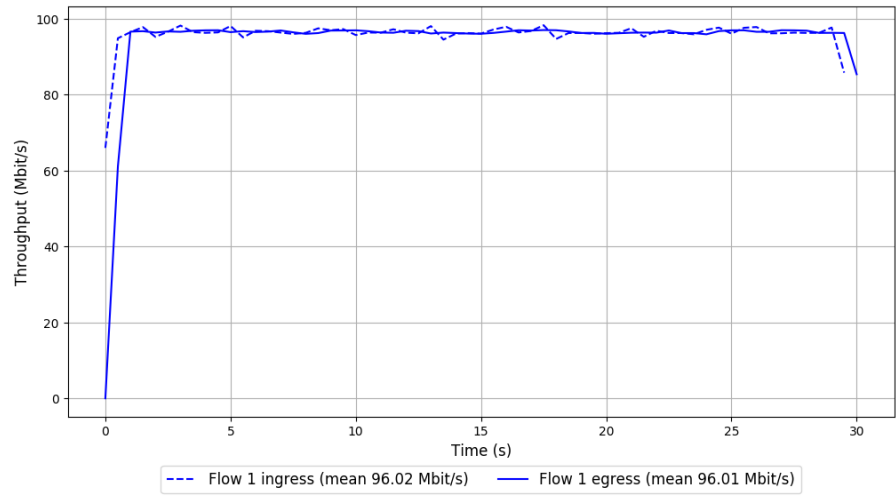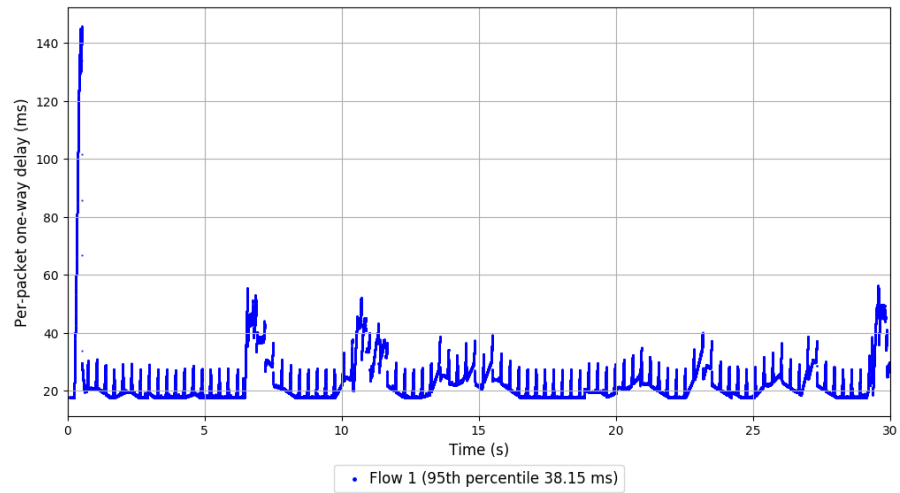# Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-02-11 23:38:44
End at: 2019-02-11 23:39:14
Local clock offset: 3.346 ms
Remote clock offset: -4.9 ms


# Below is generated by plot.py at 2019-02-12 00:41:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.15 Mbit/s
95th percentile per-packet one-way delay: 38.918 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 96.15 Mbit/s
95th percentile per-packet one-way delay: 38.918 ms
Loss rate: 0.20%
```
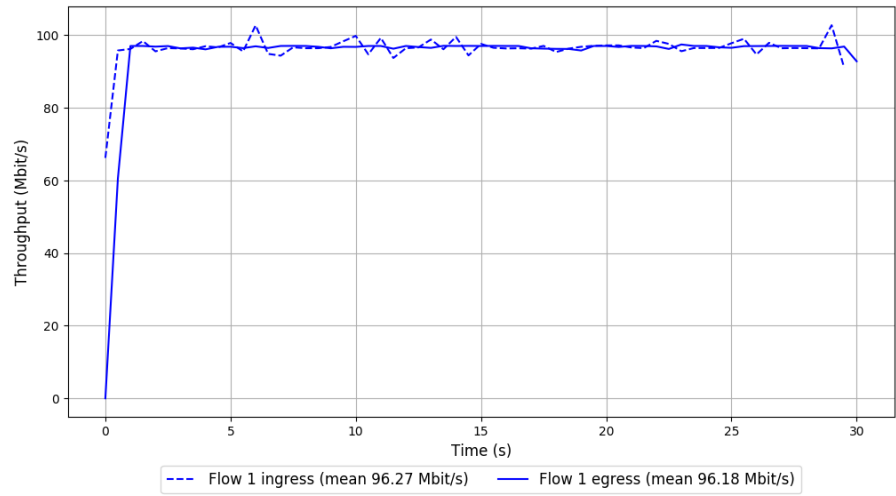
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-02-12 00:03:43
End at: 2019-02-12 00:04:13
Local clock offset: -0.902 ms
Remote clock offset: -4.947 ms


# Below is generated by plot.py at 2019-02-12 00:41:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.01 Mbit/s
95th percentile per-packet one-way delay: 24.808 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.01 Mbit/s
95th percentile per-packet one-way delay: 24.808 ms
Loss rate: 0.09%
```
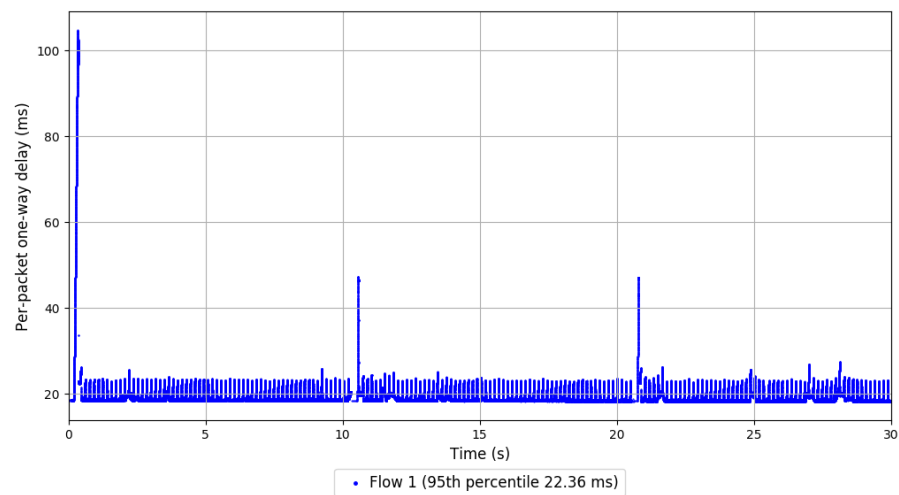
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2019-02-12 00:28:54
End at: 2019-02-12 00:29:24
Local clock offset: -1.059 ms
Remote clock offset: -6.519 ms


# Below is generated by plot.py at 2019-02-12 00:41:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.18 Mbit/s
95th percentile per-packet one-way delay: 38.152 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 96.18 Mbit/s
95th percentile per-packet one-way delay: 38.152 ms
Loss rate: 0.17%
```
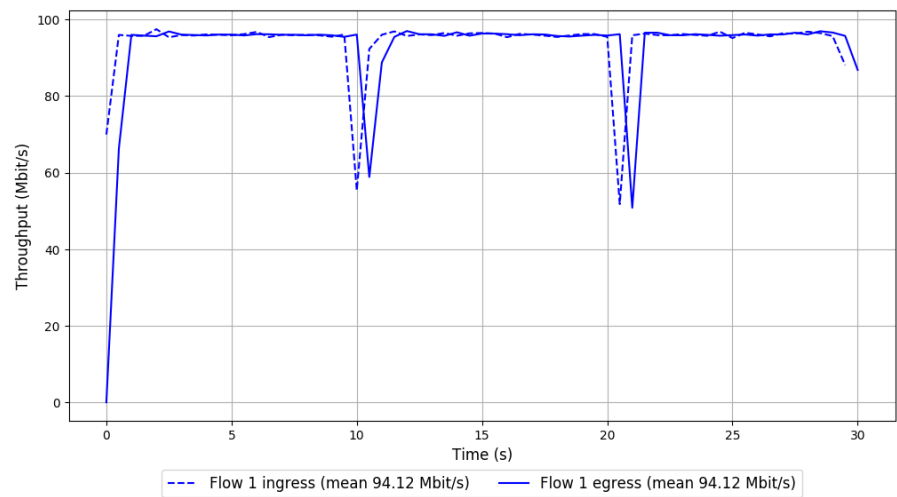
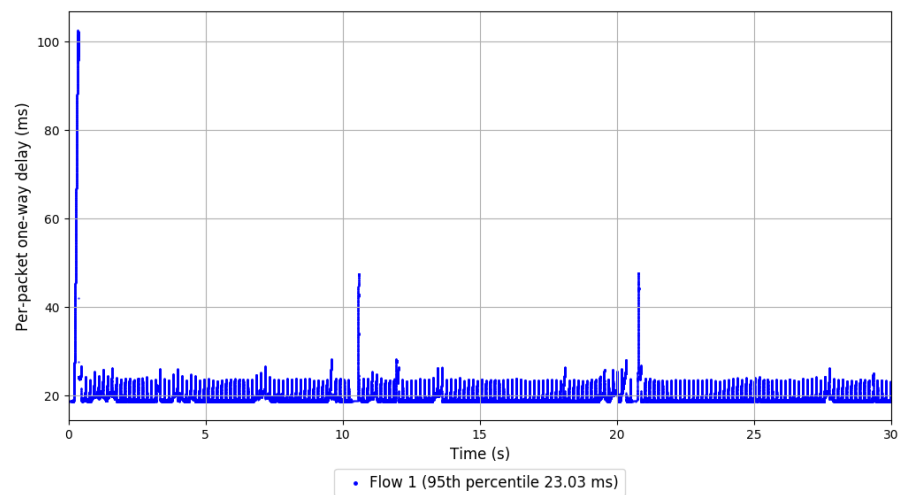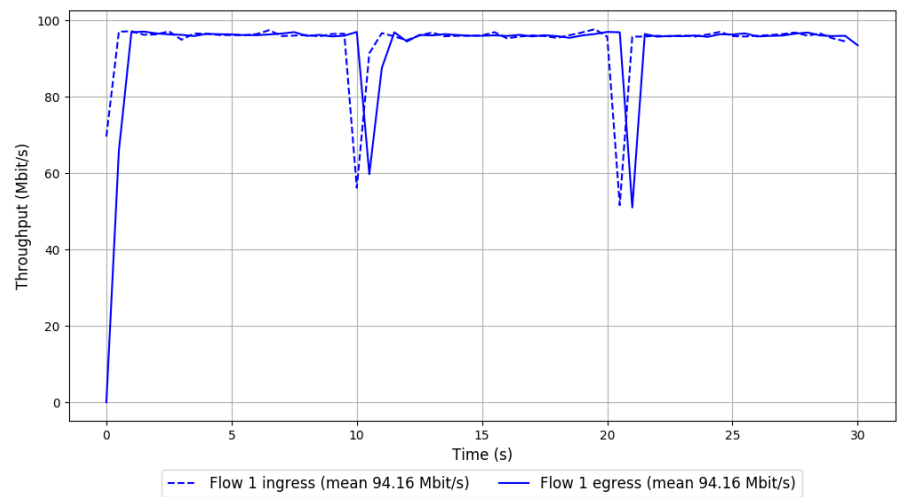Run 5: Report of FillP — Data Link

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-02-11 22:34:32
End at: 2019-02-11 22:35:02
Local clock offset: 1.468 ms
Remote clock offset: -4.016 ms


# Below is generated by plot.py at 2019-02-12 00:41:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.12 Mbit/s
95th percentile per-packet one-way delay: 22.357 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 94.12 Mbit/s
95th percentile per-packet one-way delay: 22.357 ms
Loss rate: 0.08%
```

Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-02-11 22:59:34
End at: 2019-02-11 23:00:04
Local clock offset: 7.393 ms
Remote clock offset: -4.469 ms


# Below is generated by plot.py at 2019-02-12 00:41:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.16 Mbit/s
95th percentile per-packet one-way delay: 23.027 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 94.16 Mbit/s
95th percentile per-packet one-way delay: 23.027 ms
Loss rate: 0.08%
```
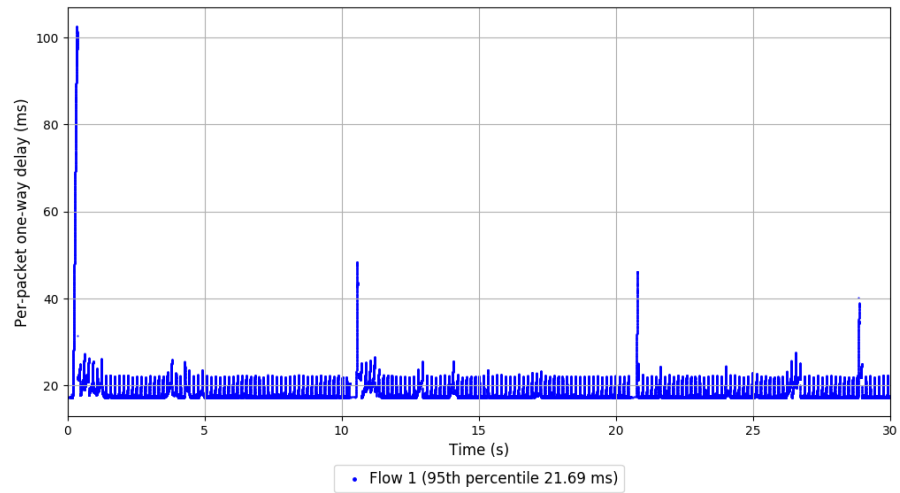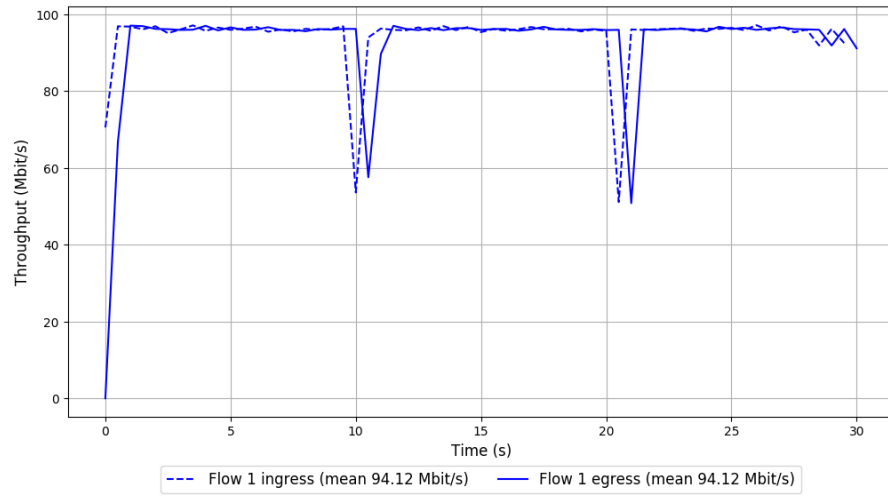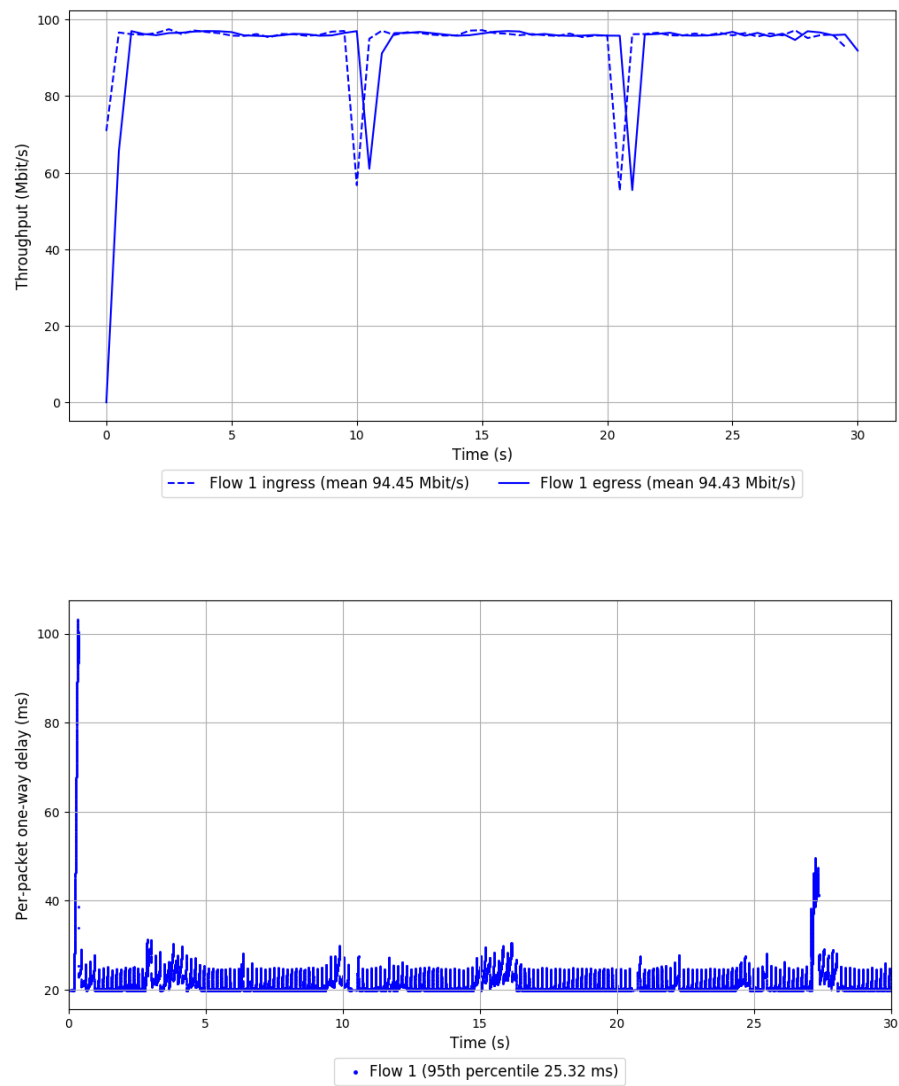
Run 2: Report of FillP-Sheep — Data Link

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

Flow 1 (95th percentile 23.03 ms)

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-02-11 23:24:29
End at: 2019-02-11 23:24:59
Local clock offset: 5.432 ms
Remote clock offset: -6.794 ms


# Below is generated by plot.py at 2019-02-12 00:41:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.12 Mbit/s
95th percentile per-packet one-way delay: 21.689 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 94.12 Mbit/s
95th percentile per-packet one-way delay: 21.689 ms
Loss rate: 0.08%
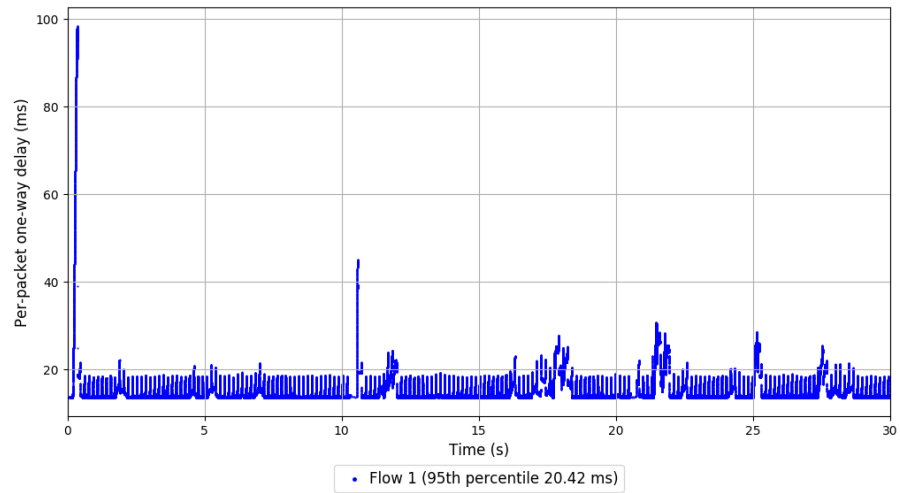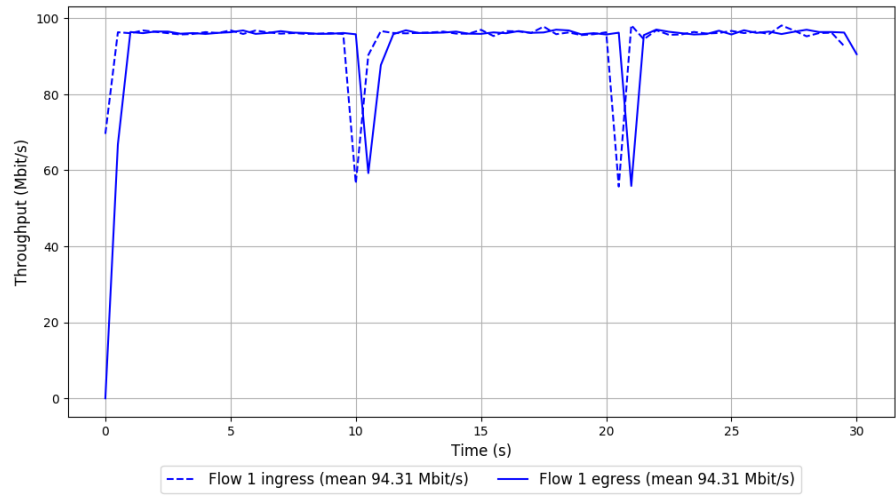```

Run 3: Report of FillP-Sheep — Data Link

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-02-11 23:49:29
End at: 2019-02-11 23:49:59
Local clock offset: 2.808 ms
Remote clock offset: -7.578 ms


# Below is generated by plot.py at 2019-02-12 00:42:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.43 Mbit/s
95th percentile per-packet one-way delay: 25.321 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 94.43 Mbit/s
95th percentile per-packet one-way delay: 25.321 ms
Loss rate: 0.10%
```

Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 94.45 Mbit/s)   Flow 1 egress (mean 94.43 Mbit/s)

Flow 1 (95th percentile 25.32 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-02-12 00:14:26
End at: 2019-02-12 00:14:56
Local clock offset: -2.981 ms
Remote clock offset: -5.227 ms


# Below is generated by plot.py at 2019-02-12 00:42:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.31 Mbit/s
95th percentile per-packet one-way delay: 20.422 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 94.31 Mbit/s
95th percentile per-packet one-way delay: 20.422 ms
Loss rate: 0.09%
```
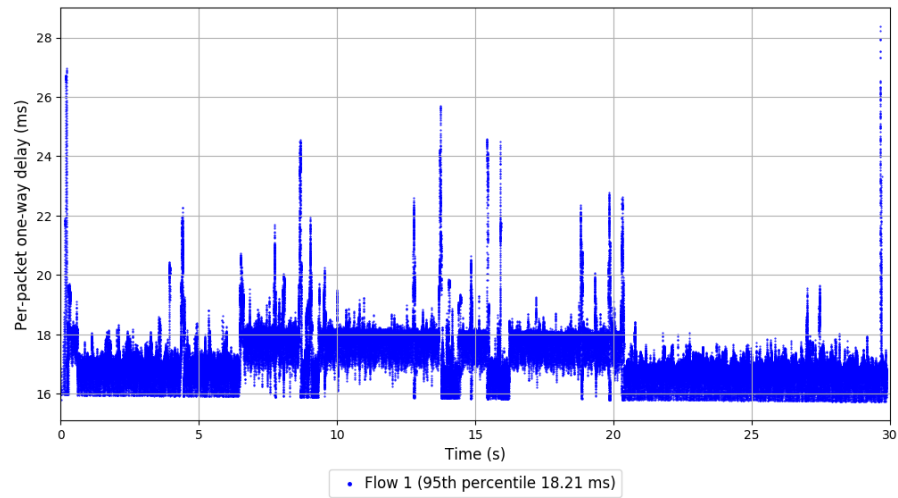
Run 5: Report of FillP-Sheep — Data Link

```
Run 1: Statistics of Indigo

Start at: 2019-02-11 22:36:57
End at: 2019-02-11 22:37:27
Local clock offset: 0.491 ms
Remote clock offset: -3.661 ms


# Below is generated by plot.py at 2019-02-12 00:42:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.09 Mbit/s
95th percentile per-packet one-way delay: 18.208 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.09 Mbit/s
95th percentile per-packet one-way delay: 18.208 ms
Loss rate: 0.09%
```
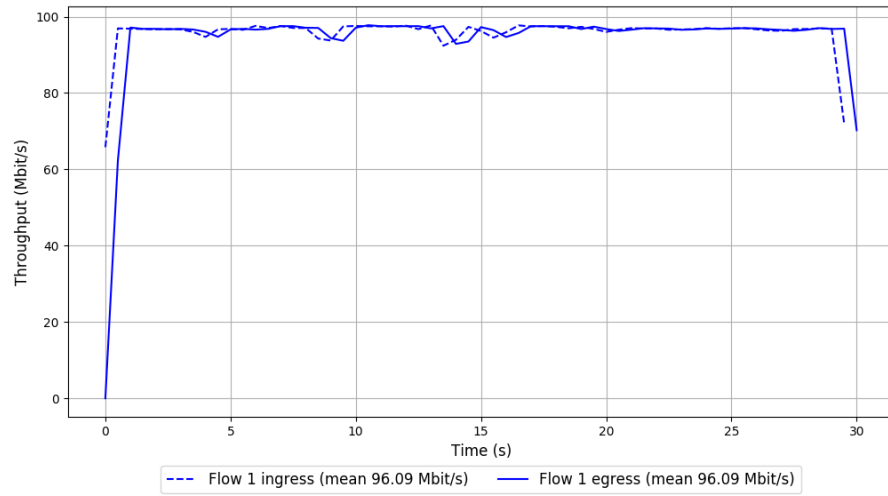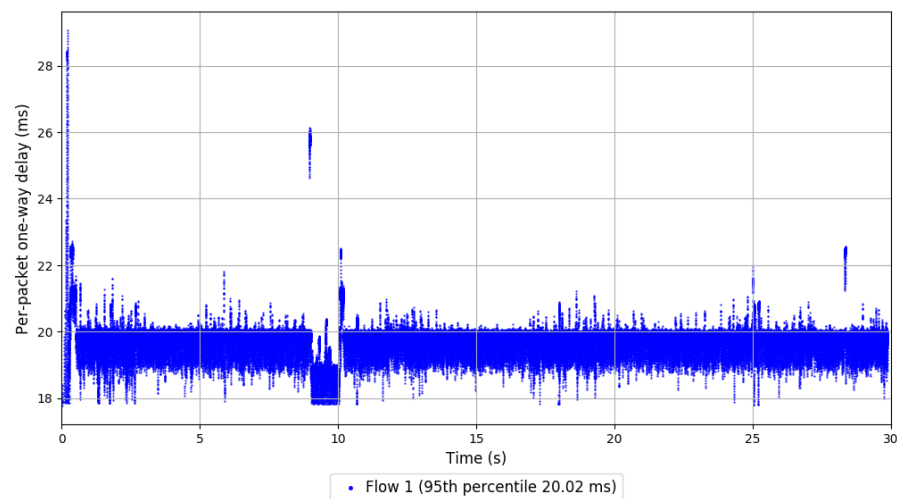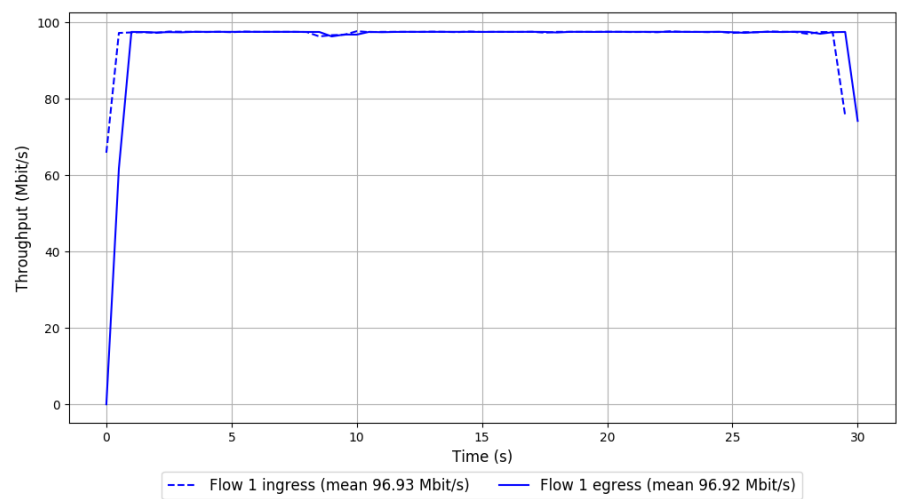
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-02-11 23:01:59
End at: 2019-02-11 23:02:29
Local clock offset: 6.267 ms
Remote clock offset: -4.906 ms


# Below is generated by plot.py at 2019-02-12 00:42:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.92 Mbit/s
95th percentile per-packet one-way delay: 20.019 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.92 Mbit/s
95th percentile per-packet one-way delay: 20.019 ms
Loss rate: 0.09%
```

Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-02-11 23:26:54
End at: 2019-02-11 23:27:24
Local clock offset: 4.906 ms
Remote clock offset: -7.049 ms


# Below is generated by plot.py at 2019-02-12 00:42:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 19.023 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 19.023 ms
Loss rate: 0.09%
```
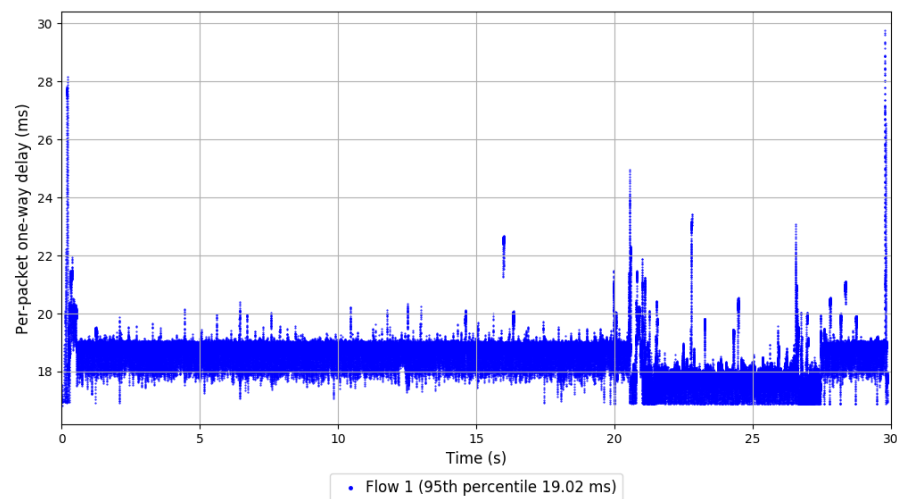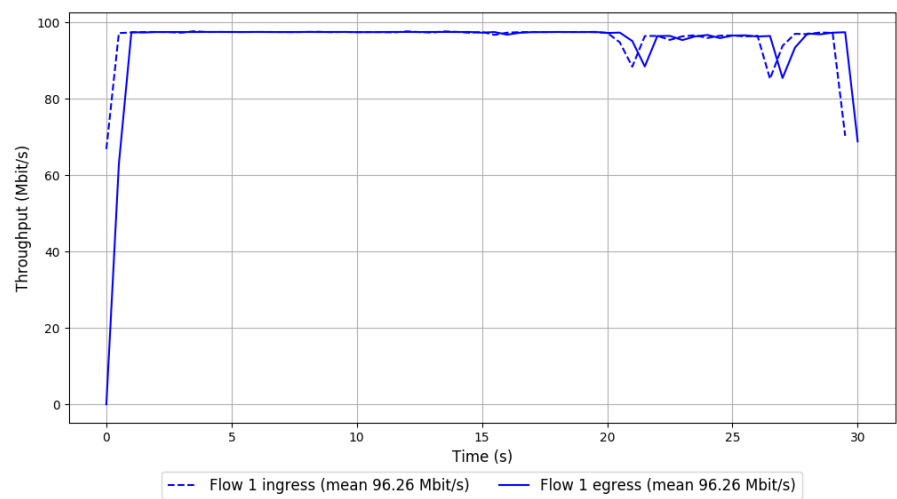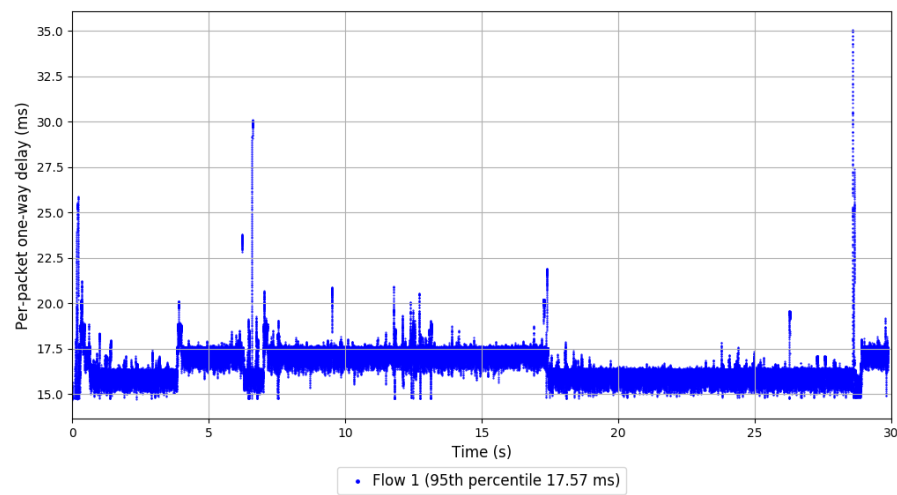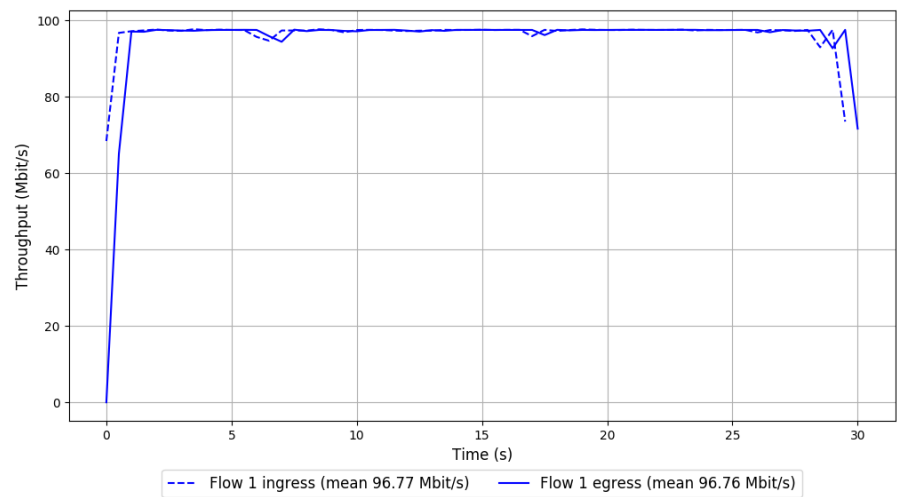
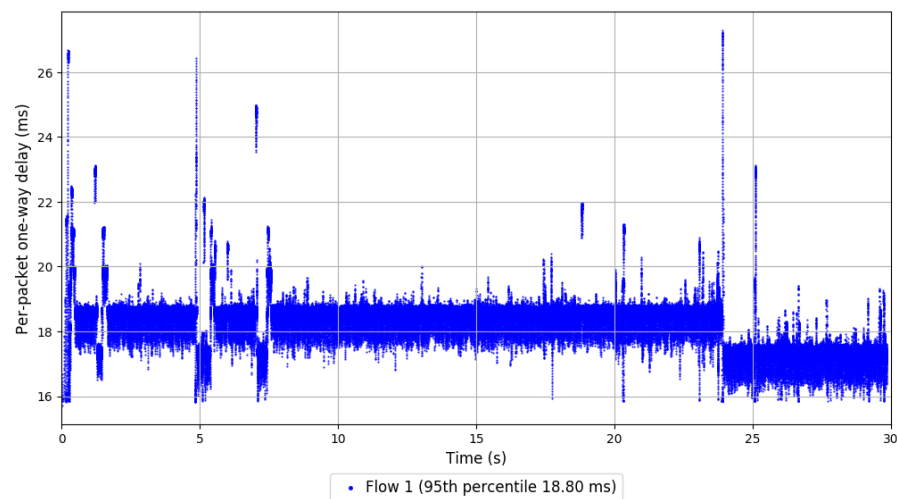Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-02-11 23:51:56
End at: 2019-02-11 23:52:26
Local clock offset: -0.593 ms
Remote clock offset: -5.416 ms


# Below is generated by plot.py at 2019-02-12 00:42:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.76 Mbit/s
95th percentile per-packet one-way delay: 17.568 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.76 Mbit/s
95th percentile per-packet one-way delay: 17.568 ms
Loss rate: 0.09%
```

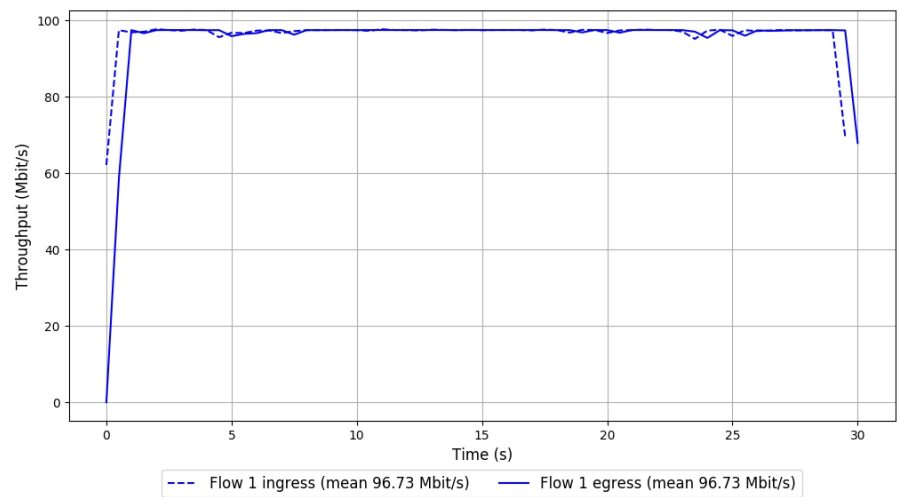Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-02-12 00:16:54
End at: 2019-02-12 00:17:24
Local clock offset: -3.105 ms
Remote clock offset: -7.283 ms


# Below is generated by plot.py at 2019-02-12 00:42:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.73 Mbit/s
95th percentile per-packet one-way delay: 18.803 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.73 Mbit/s
95th percentile per-packet one-way delay: 18.803 ms
Loss rate: 0.09%
```
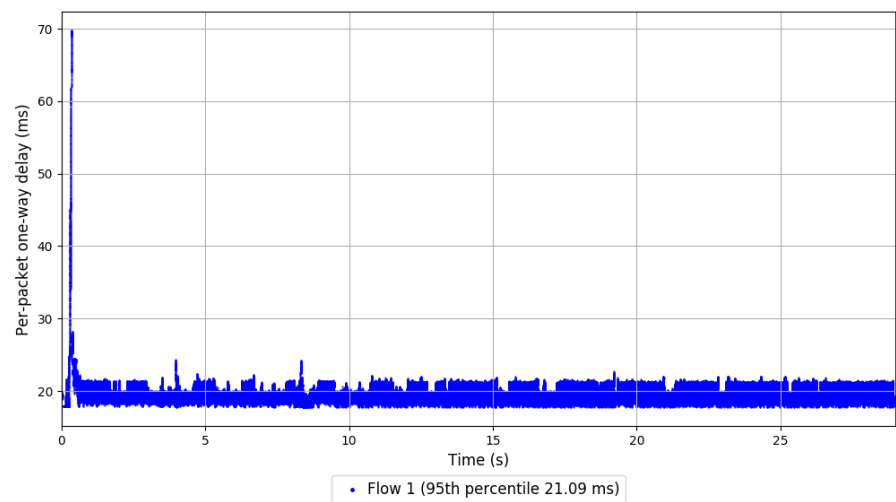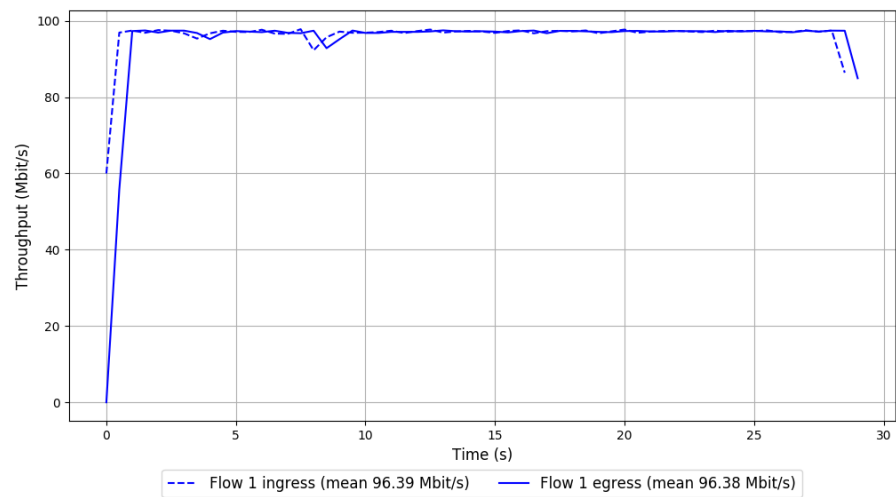
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-02-11 22:47:47
End at: 2019-02-11 22:48:17
Local clock offset: 5.633 ms
Remote clock offset: -3.689 ms


# Below is generated by plot.py at 2019-02-12 00:42:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.38 Mbit/s
95th percentile per-packet one-way delay: 21.090 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 96.38 Mbit/s
95th percentile per-packet one-way delay: 21.090 ms
Loss rate: 0.10%
```
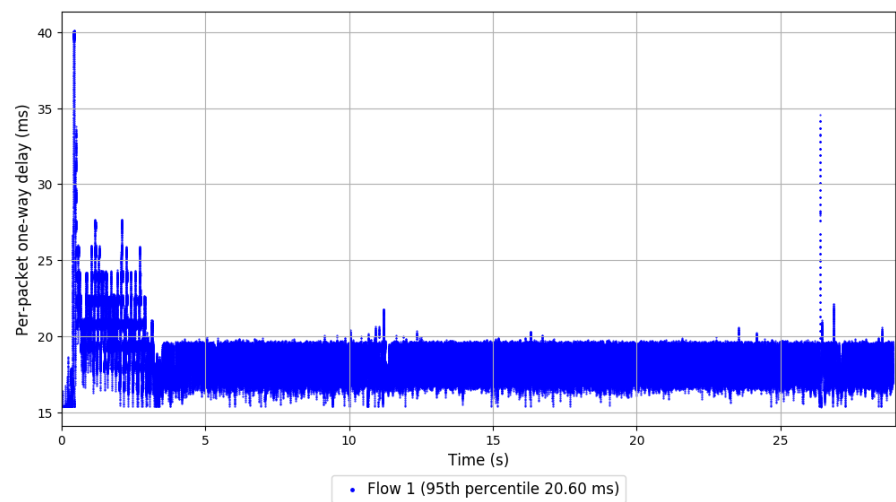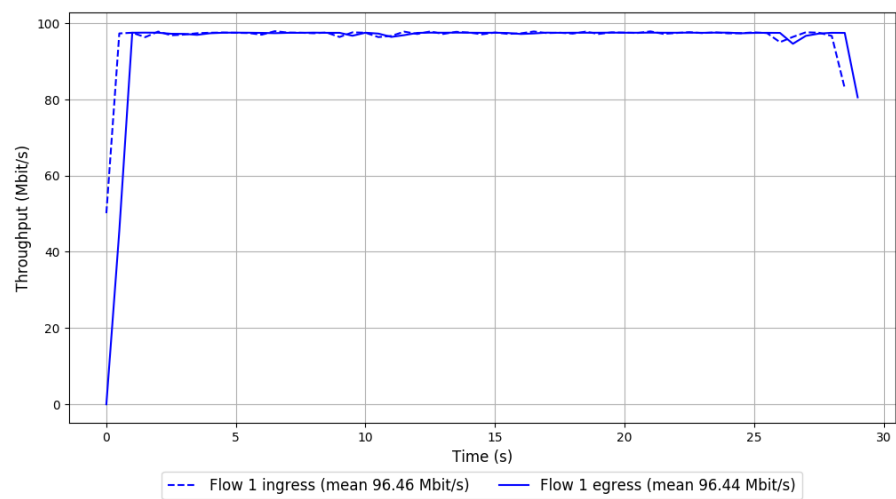
Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-11 23:12:41
End at: 2019-02-11 23:13:11
Local clock offset: 3.625 ms
Remote clock offset: -5.825 ms


# Below is generated by plot.py at 2019-02-12 00:43:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.44 Mbit/s
95th percentile per-packet one-way delay: 20.602 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 96.44 Mbit/s
95th percentile per-packet one-way delay: 20.602 ms
Loss rate: 0.10%
```
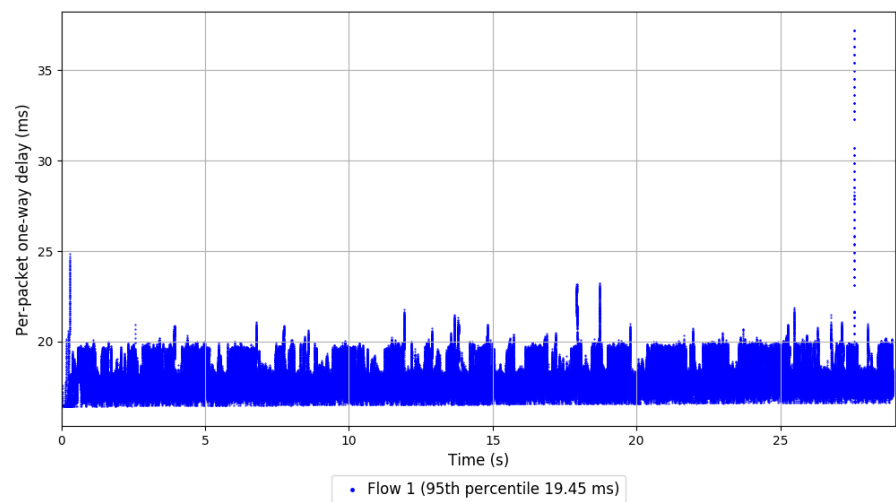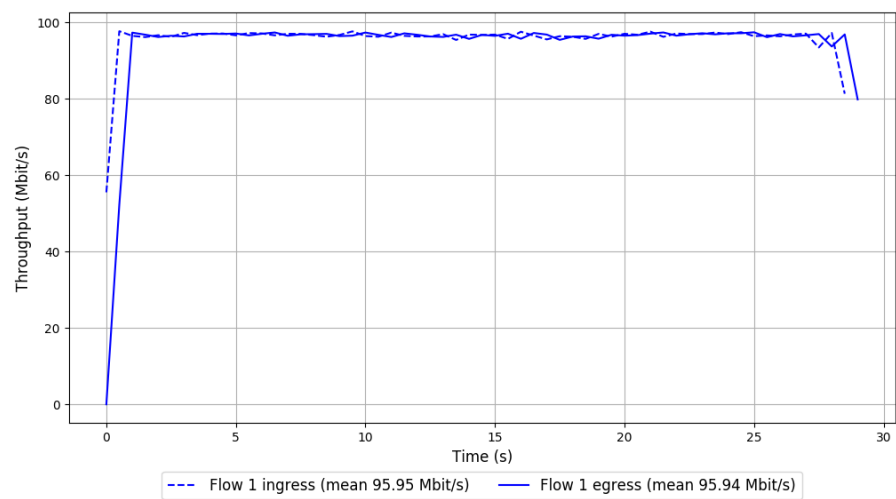
Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-11 23:37:31
End at: 2019-02-11 23:38:01
Local clock offset: 4.125 ms
Remote clock offset: -5.738 ms


# Below is generated by plot.py at 2019-02-12 00:43:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.94 Mbit/s
95th percentile per-packet one-way delay: 19.451 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 95.94 Mbit/s
95th percentile per-packet one-way delay: 19.451 ms
Loss rate: 0.09%
```

Run 3: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 95.95 Mbit/s) ----   Flow 1 egress (mean 95.94 Mbit/s) ——

Flow 1 (95th percentile 19.45 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-12 00:02:31
End at: 2019-02-12 00:03:01
Local clock offset: 0.18 ms
Remote clock offset: -6.73 ms


# Below is generated by plot.py at 2019-02-12 00:43:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.60 Mbit/s
95th percentile per-packet one-way delay: 21.500 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 96.60 Mbit/s
95th percentile per-packet one-way delay: 21.500 ms
Loss rate: 0.10%
```
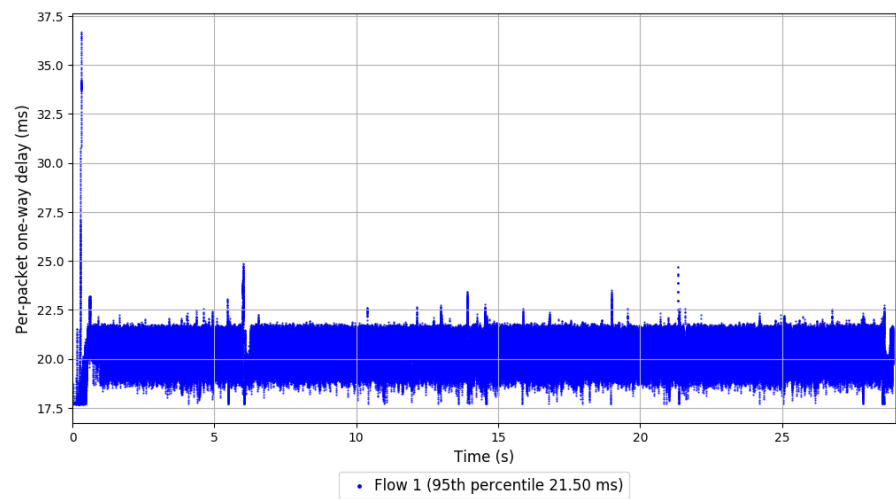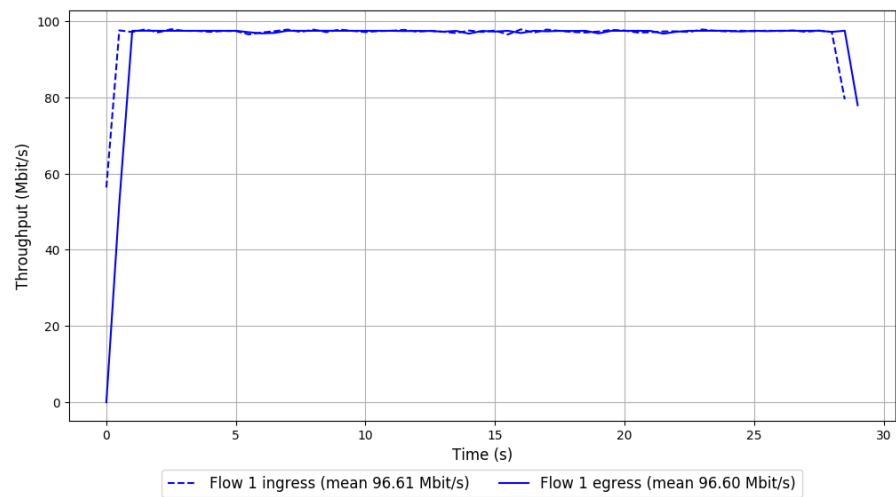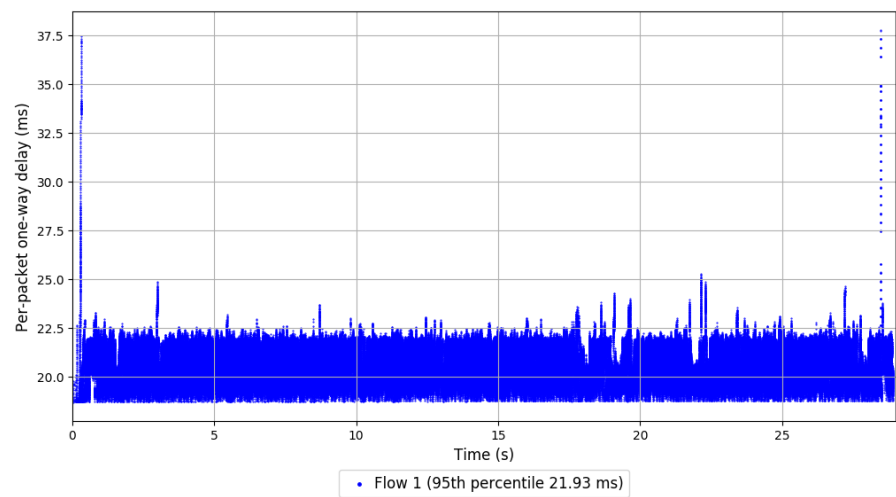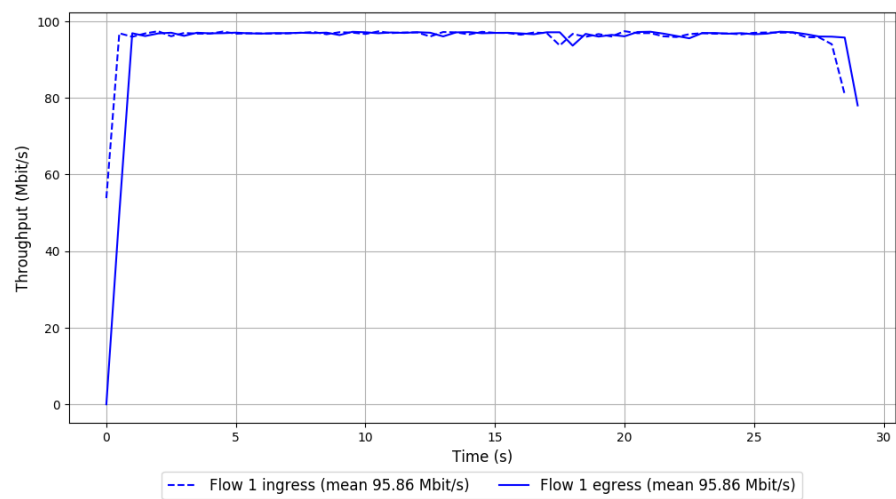
Run 4: Report of Indigo-MusesC3 — Data Link

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-12 00:27:42
End at: 2019-02-12 00:28:12
Local clock offset: -0.632 ms
Remote clock offset: -7.073 ms


# Below is generated by plot.py at 2019-02-12 00:43:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 95.86 Mbit/s
95th percentile per-packet one-way delay: 21.933 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 95.86 Mbit/s
95th percentile per-packet one-way delay: 21.933 ms
Loss rate: 0.09%
```

Run 5: Report of Indigo-MusesC3 — Data Link

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-11 22:46:37
End at: 2019-02-11 22:47:07
Local clock offset: 4.316 ms
Remote clock offset: -3.862 ms


# Below is generated by plot.py at 2019-02-12 00:43:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.31 Mbit/s
95th percentile per-packet one-way delay: 18.772 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 86.31 Mbit/s
95th percentile per-packet one-way delay: 18.772 ms
Loss rate: 0.09%
```
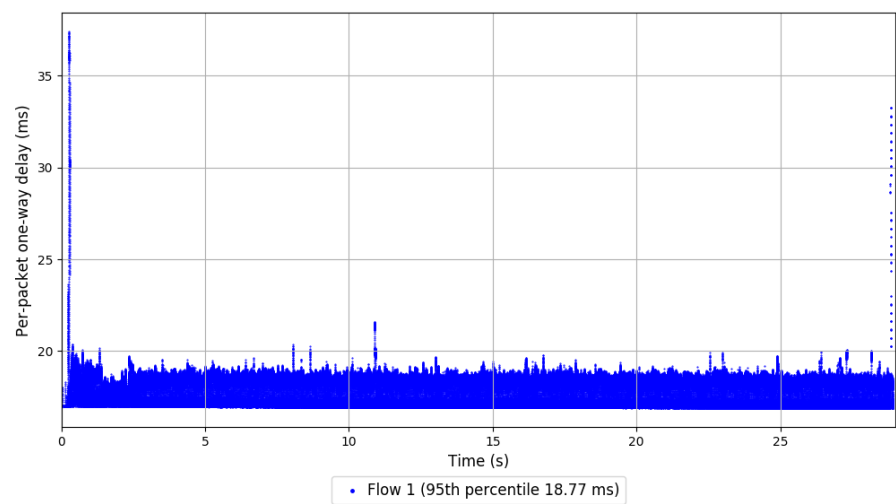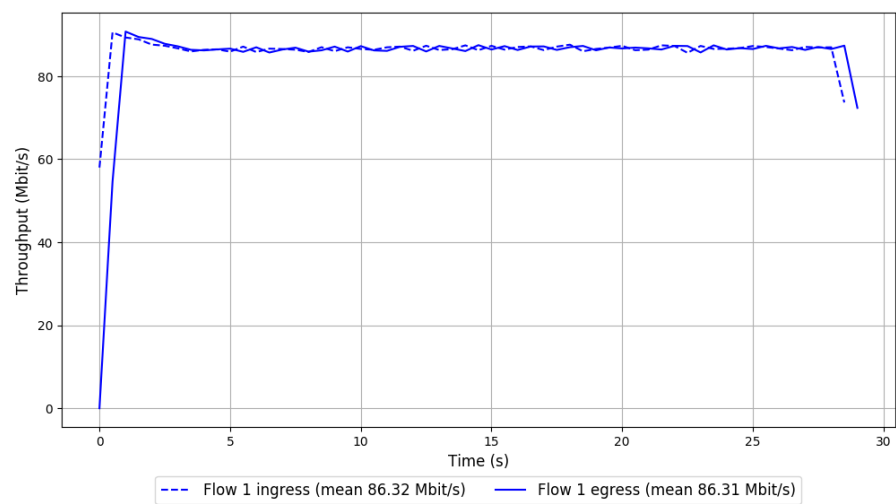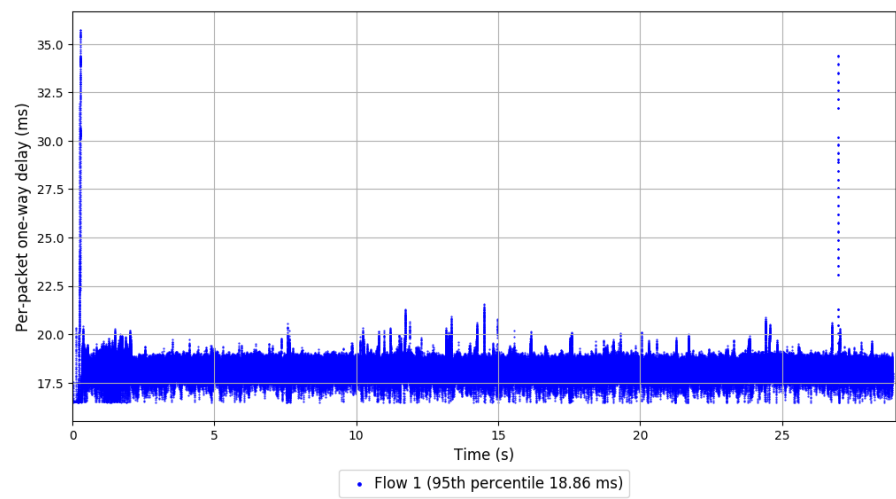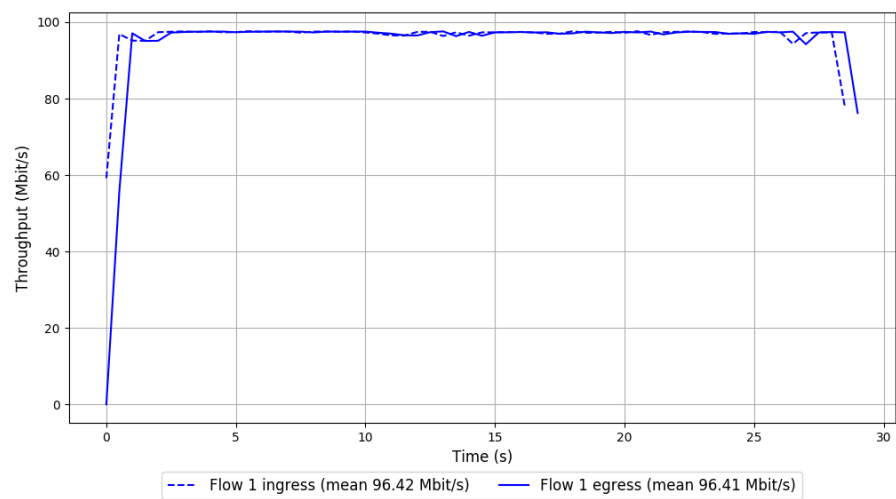
Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-11 23:11:29
End at: 2019-02-11 23:11:59
Local clock offset: 6.137 ms
Remote clock offset: -4.325 ms


# Below is generated by plot.py at 2019-02-12 00:43:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.41 Mbit/s
95th percentile per-packet one-way delay: 18.858 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.41 Mbit/s
95th percentile per-packet one-way delay: 18.858 ms
Loss rate: 0.09%
```
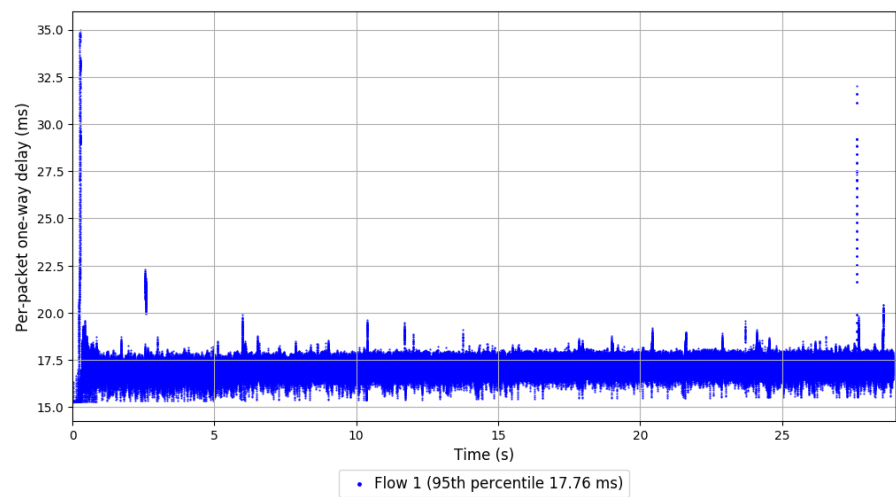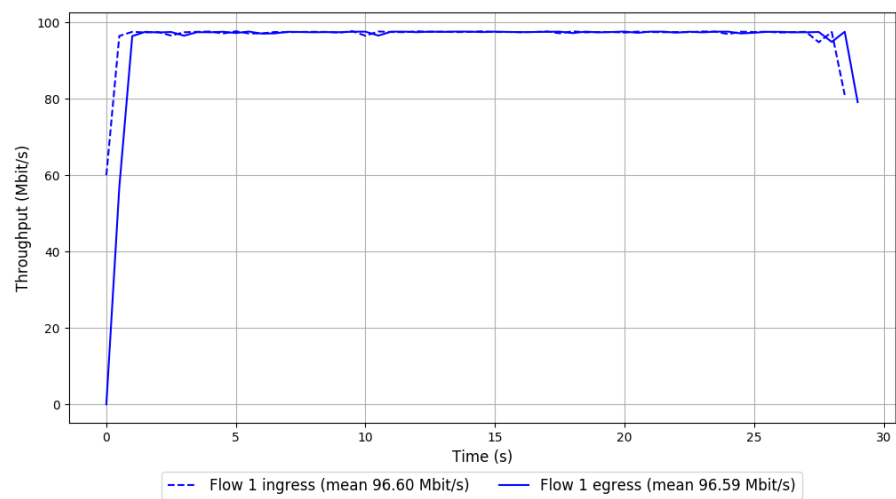
Run 2: Report of Indigo-MusesC5 — Data Link

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-11 23:36:19
End at: 2019-02-11 23:36:49
Local clock offset: 3.621 ms
Remote clock offset: -5.696 ms


# Below is generated by plot.py at 2019-02-12 00:43:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.59 Mbit/s
95th percentile per-packet one-way delay: 17.760 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.59 Mbit/s
95th percentile per-packet one-way delay: 17.760 ms
Loss rate: 0.09%
```

Run 3: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 96.60 Mbit/s) --- Flow 1 egress (mean 96.59 Mbit/s)
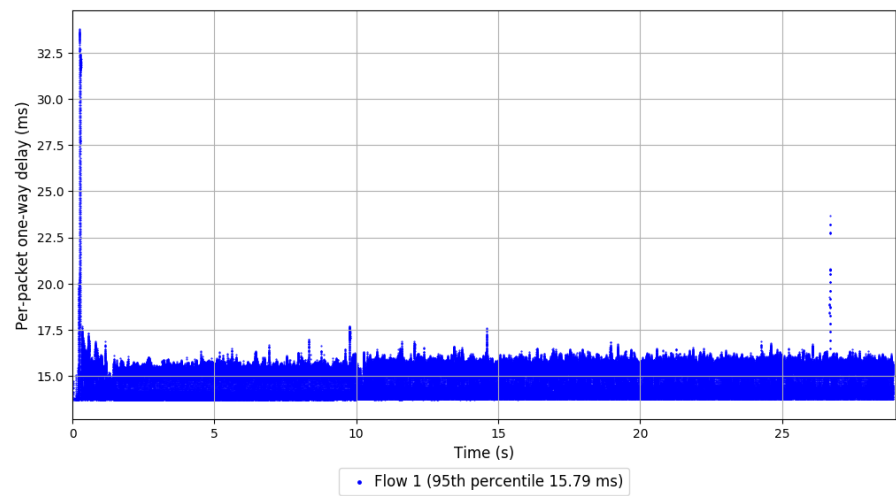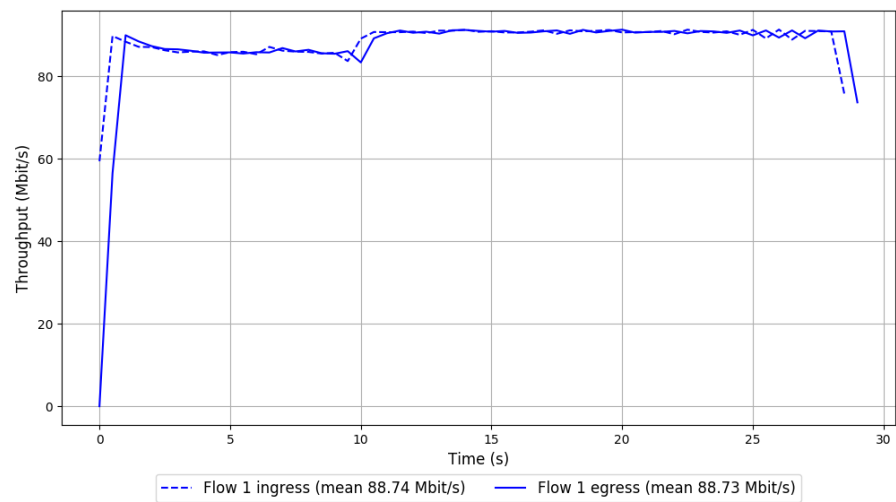

Flow 1 (95th percentile 17.76 ms)

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-12 00:01:20
End at: 2019-02-12 00:01:50
Local clock offset: -1.971 ms
Remote clock offset: -4.986 ms


# Below is generated by plot.py at 2019-02-12 00:43:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.73 Mbit/s
95th percentile per-packet one-way delay: 15.793 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 88.73 Mbit/s
95th percentile per-packet one-way delay: 15.793 ms
Loss rate: 0.09%
```

Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-02-12 00:26:30
End at: 2019-02-12 00:27:00
Local clock offset: -1.014 ms
Remote clock offset: -6.98 ms


# Below is generated by plot.py at 2019-02-12 00:44:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.61 Mbit/s
95th percentile per-packet one-way delay: 19.956 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 91.61 Mbit/s
95th percentile per-packet one-way delay: 19.956 ms
Loss rate: 0.09%
```
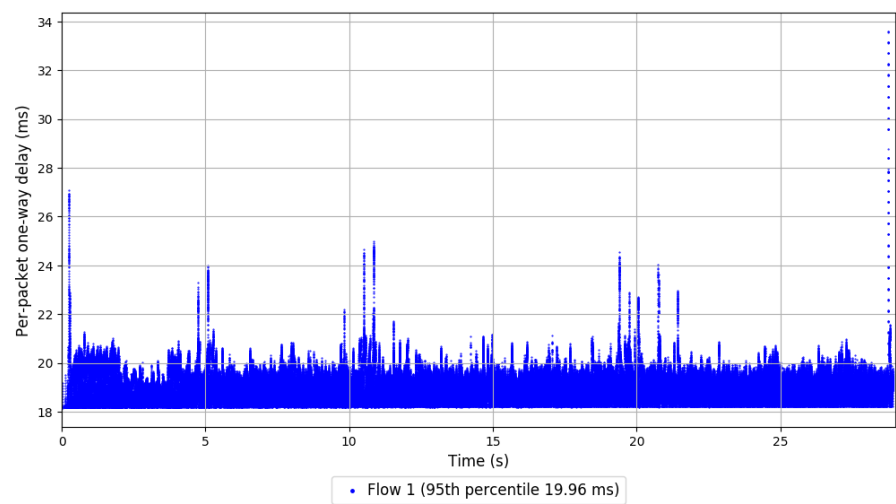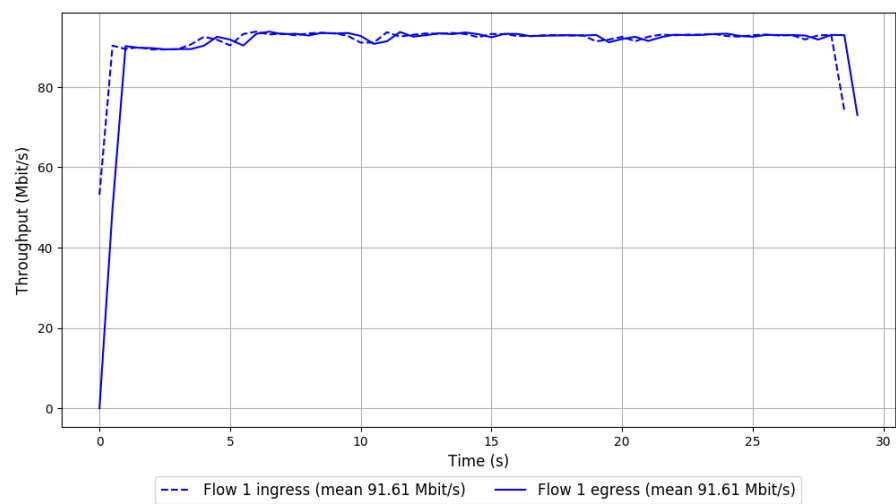
Run 5: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 91.61 Mbit/s)   Flow 1 egress (mean 91.61 Mbit/s)

• Flow 1 (95th percentile 19.96 ms)

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-11 22:50:08
End at: 2019-02-11 22:50:38
Local clock offset: 2.75 ms
Remote clock offset: -4.181 ms


# Below is generated by plot.py at 2019-02-12 00:44:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.09 Mbit/s
95th percentile per-packet one-way delay: 17.114 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 85.09 Mbit/s
95th percentile per-packet one-way delay: 17.114 ms
Loss rate: 0.09%
```
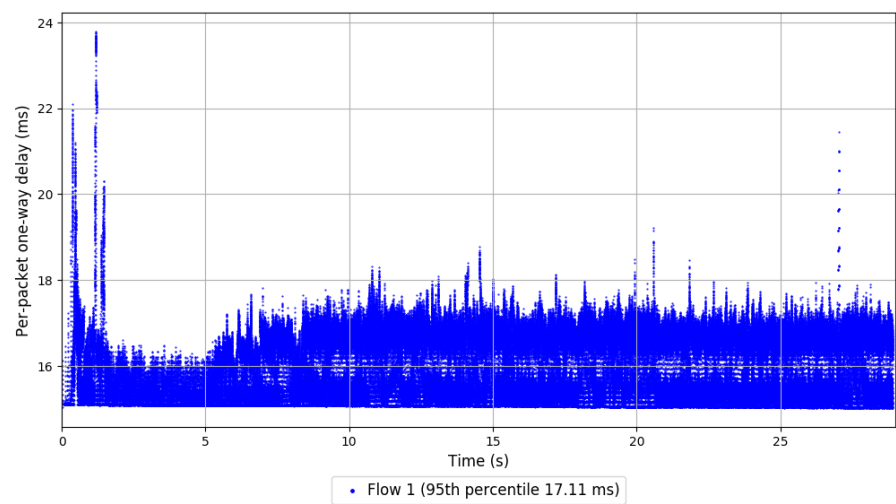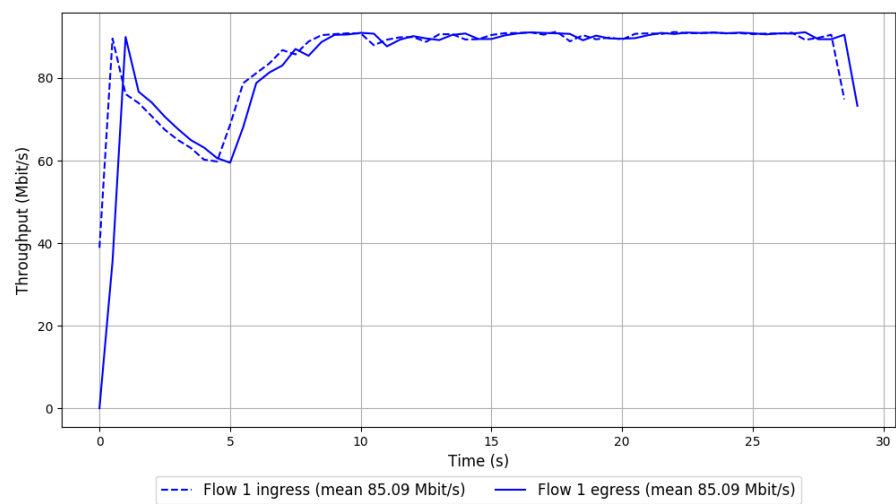
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-11 23:15:02
End at: 2019-02-11 23:15:32
Local clock offset: 6.435 ms
Remote clock offset: -7.213 ms


# Below is generated by plot.py at 2019-02-12 00:44:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.03 Mbit/s
95th percentile per-packet one-way delay: 22.079 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 87.03 Mbit/s
95th percentile per-packet one-way delay: 22.079 ms
Loss rate: 0.10%
```
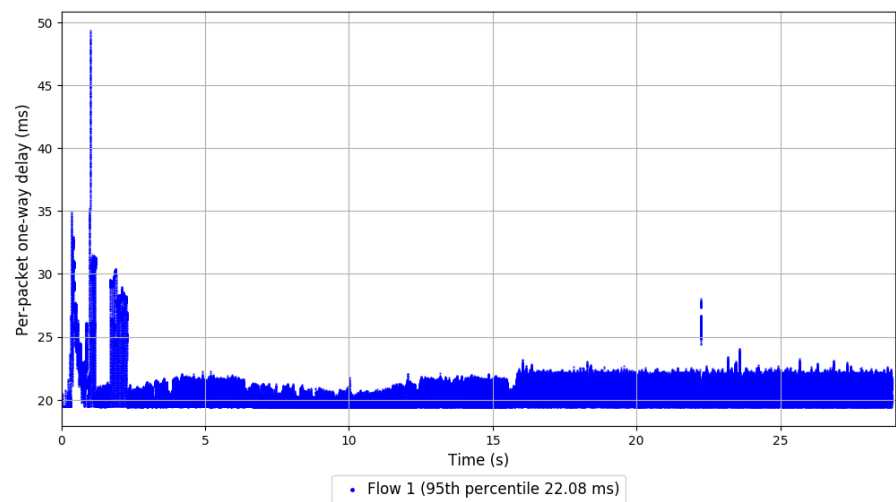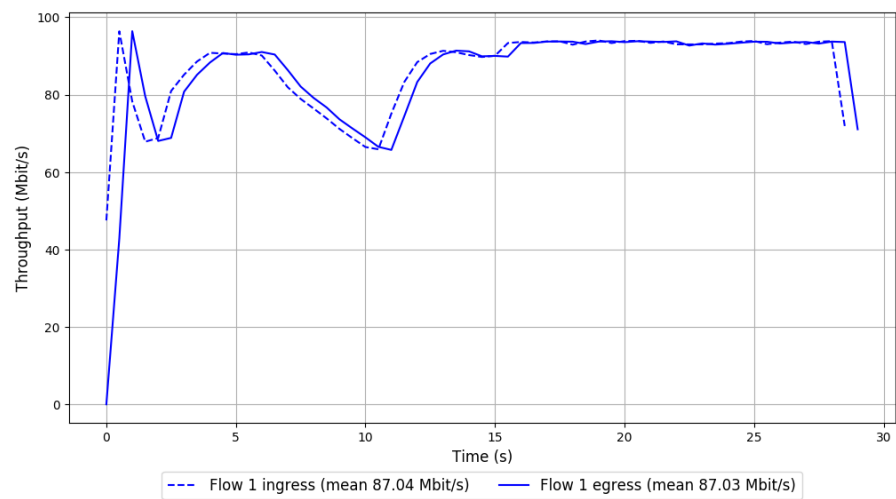
Run 2: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 87.04 Mbit/s) --- Flow 1 egress (mean 87.03 Mbit/s)

• Flow 1 (95th percentile 22.08 ms)

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-11 23:39:55
End at: 2019-02-11 23:40:25
Local clock offset: 3.915 ms
Remote clock offset: -5.927 ms


# Below is generated by plot.py at 2019-02-12 00:44:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.63 Mbit/s
95th percentile per-packet one-way delay: 20.093 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 94.63 Mbit/s
95th percentile per-packet one-way delay: 20.093 ms
Loss rate: 0.10%
```
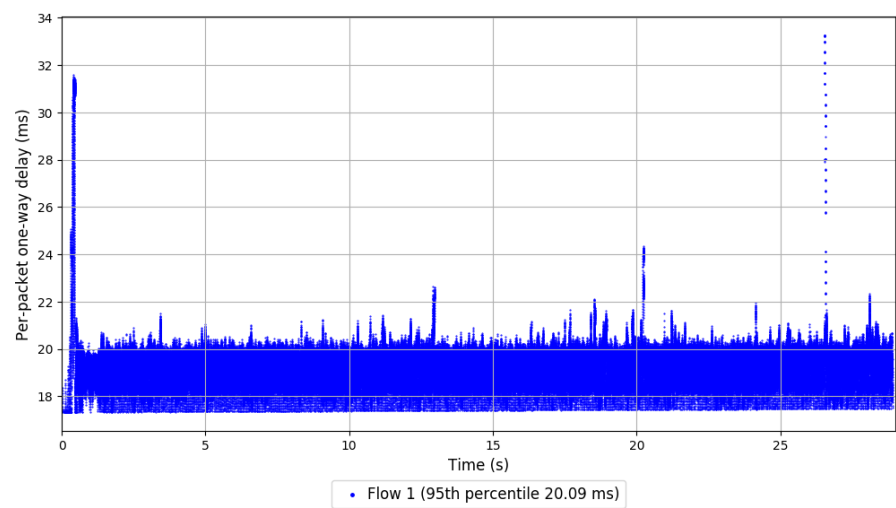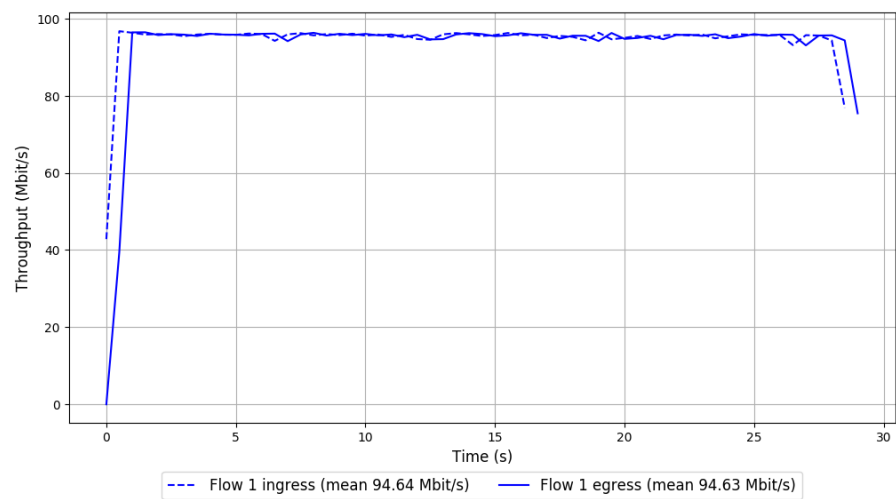
Run 3: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 94.64 Mbit/s)   Flow 1 egress (mean 94.63 Mbit/s)

Flow 1 (95th percentile 20.09 ms)

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-12 00:04:53
End at: 2019-02-12 00:05:23
Local clock offset: 0.998 ms
Remote clock offset: -7.198 ms


# Below is generated by plot.py at 2019-02-12 00:44:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.73 Mbit/s
95th percentile per-packet one-way delay: 21.223 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 82.73 Mbit/s
95th percentile per-packet one-way delay: 21.223 ms
Loss rate: 0.06%
```
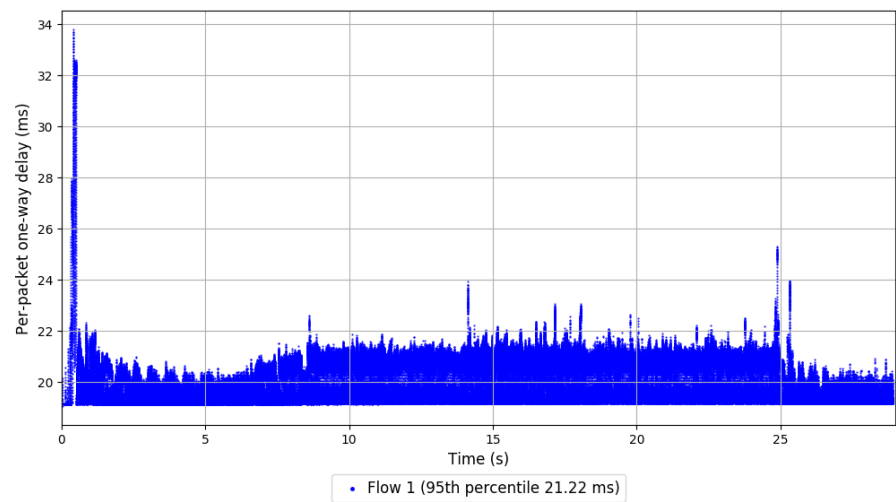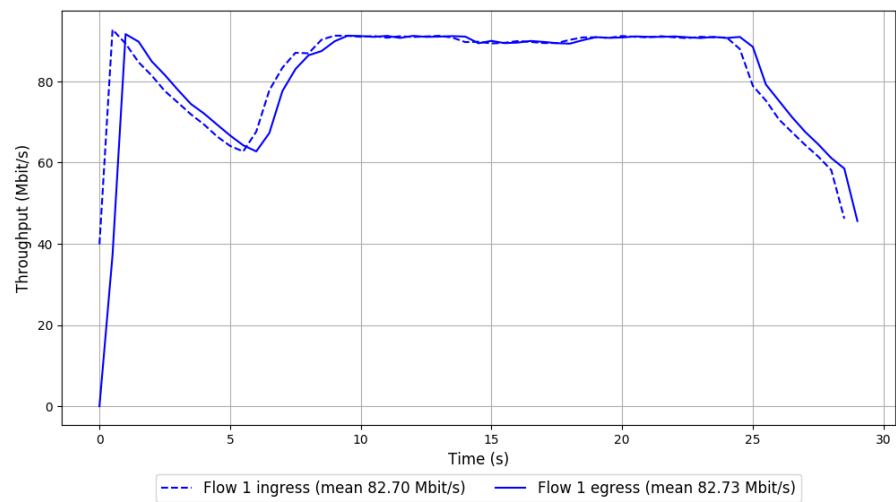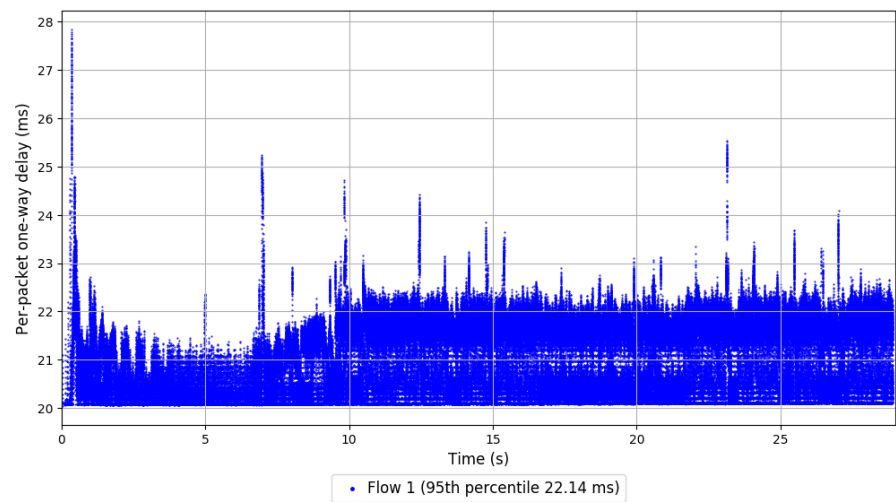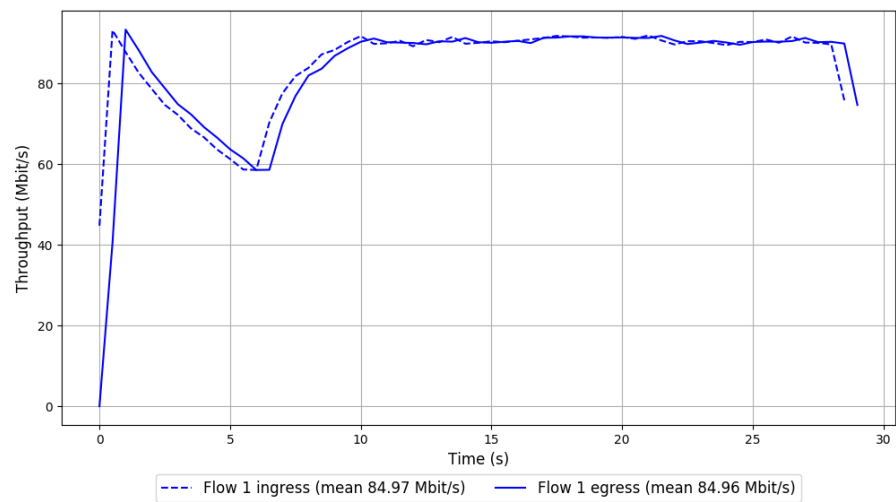
Run 4: Report of Indigo-MusesD — Data Link

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-12 00:30:08
End at: 2019-02-12 00:30:38
Local clock offset: -0.409 ms
Remote clock offset: -8.029 ms


# Below is generated by plot.py at 2019-02-12 00:44:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.96 Mbit/s
95th percentile per-packet one-way delay: 22.139 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 84.96 Mbit/s
95th percentile per-packet one-way delay: 22.139 ms
Loss rate: 0.10%
```

Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-11 22:53:44
End at: 2019-02-11 22:54:14
Local clock offset: 4.257 ms
Remote clock offset: -3.856 ms


# Below is generated by plot.py at 2019-02-12 00:44:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.39 Mbit/s
95th percentile per-packet one-way delay: 19.303 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.39 Mbit/s
95th percentile per-packet one-way delay: 19.303 ms
Loss rate: 0.09%
```
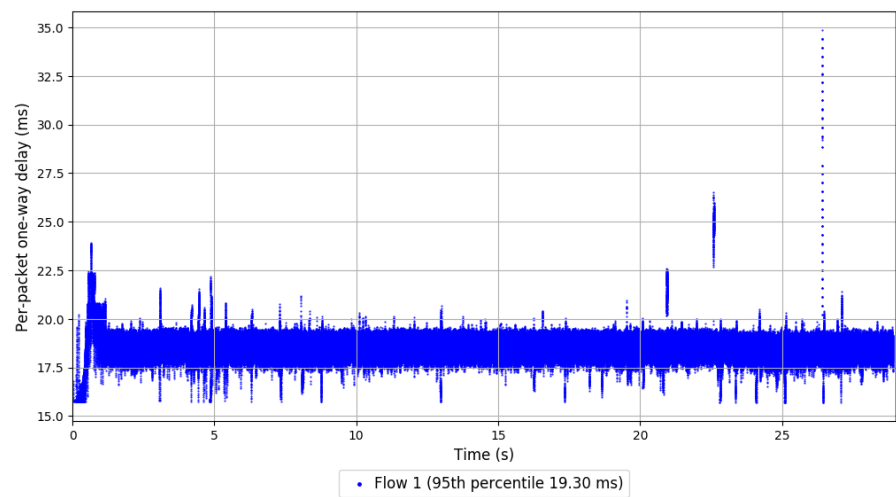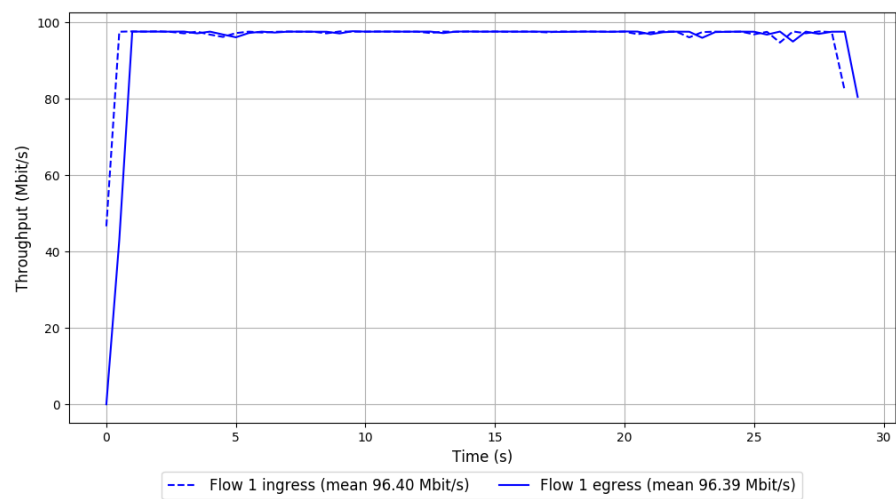
Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-11 23:18:39
End at: 2019-02-11 23:19:09
Local clock offset: 6.49 ms
Remote clock offset: -5.45 ms


# Below is generated by plot.py at 2019-02-12 00:44:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.37 Mbit/s
95th percentile per-packet one-way delay: 23.134 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 96.37 Mbit/s
95th percentile per-packet one-way delay: 23.134 ms
Loss rate: 0.10%
```
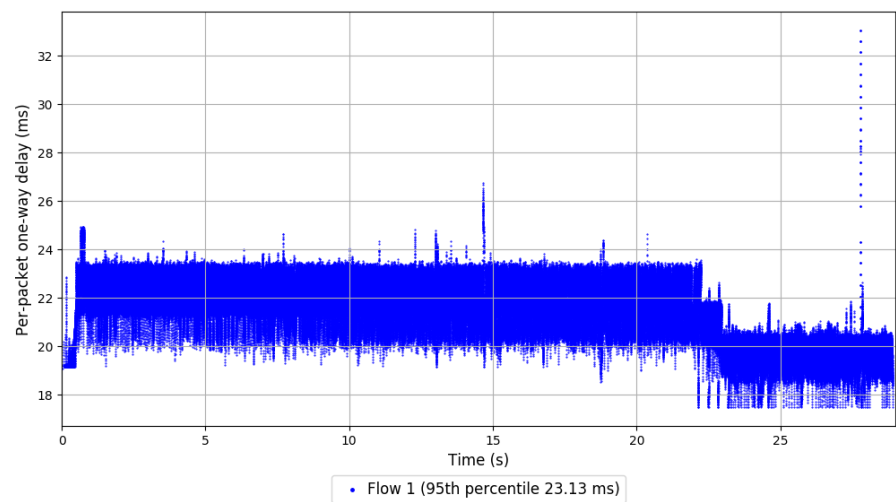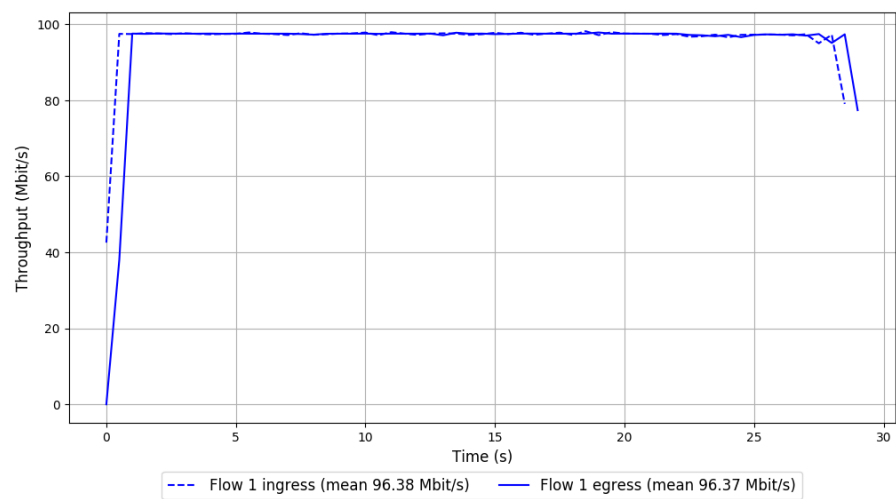
Run 2: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 96.38 Mbit/s)   Flow 1 egress (mean 96.37 Mbit/s)

Flow 1 (95th percentile 23.13 ms)

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-11 23:43:35
End at: 2019-02-11 23:44:05
Local clock offset: -4.803 ms
Remote clock offset: -11.085 ms


# Below is generated by plot.py at 2019-02-12 00:45:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.38 Mbit/s
95th percentile per-packet one-way delay: 18.505 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.38 Mbit/s
95th percentile per-packet one-way delay: 18.505 ms
Loss rate: 0.09%
```
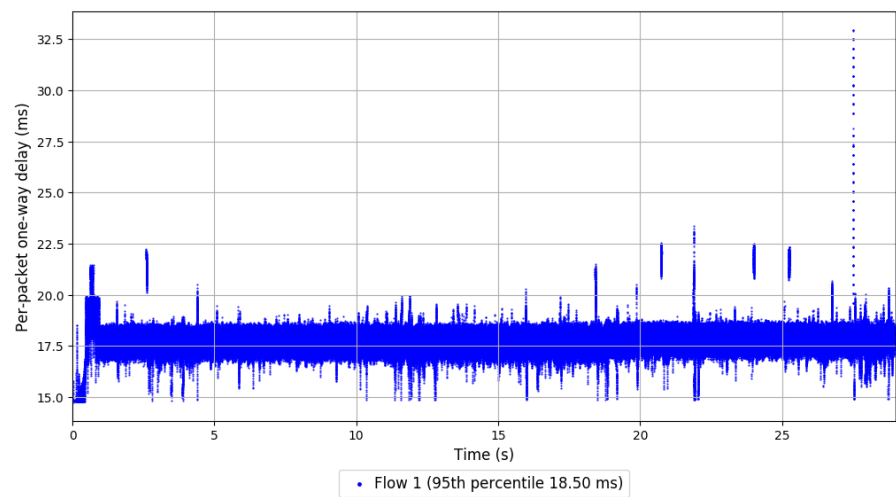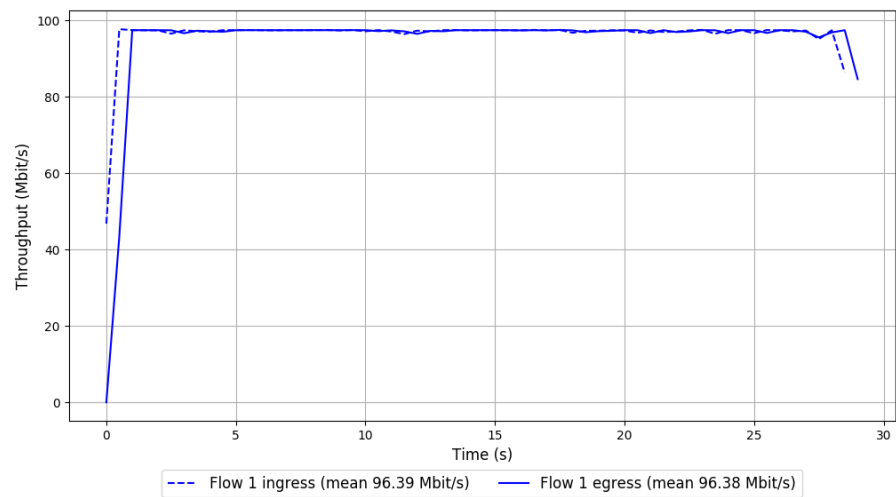
Run 3: Report of Indigo-MusesT — Data Link

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-02-12 00:08:32
End at: 2019-02-12 00:09:02
Local clock offset: -1.464 ms
Remote clock offset: -7.491 ms


# Below is generated by plot.py at 2019-02-12 00:45:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.11 Mbit/s
95th percentile per-packet one-way delay: 20.132 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 96.11 Mbit/s
95th percentile per-packet one-way delay: 20.132 ms
Loss rate: 0.10%
```
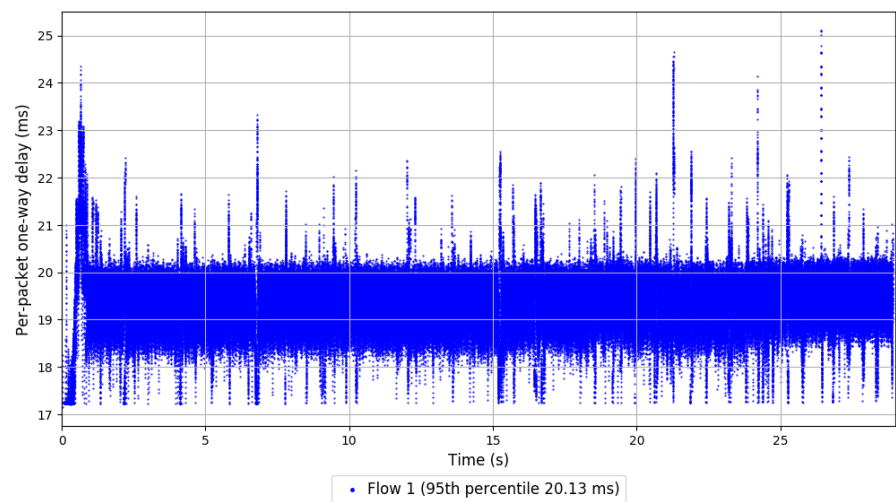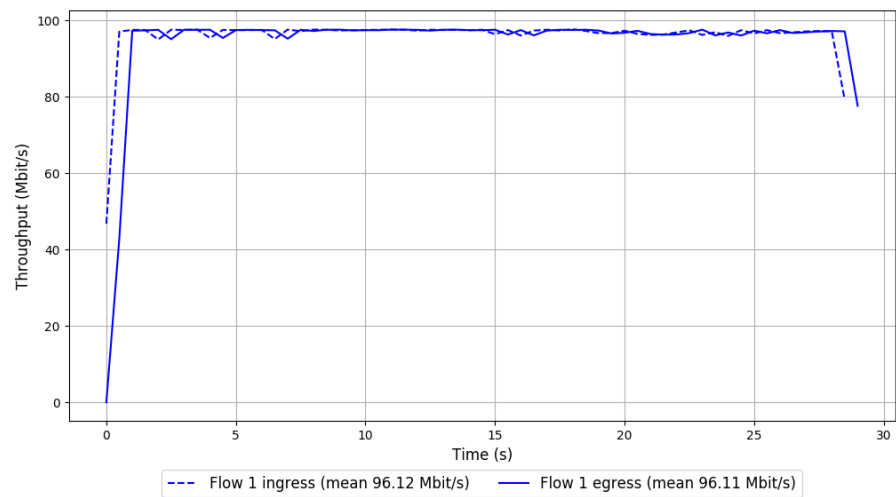
Run 4: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 96.12 Mbit/s) --- Flow 1 egress (mean 96.11 Mbit/s)
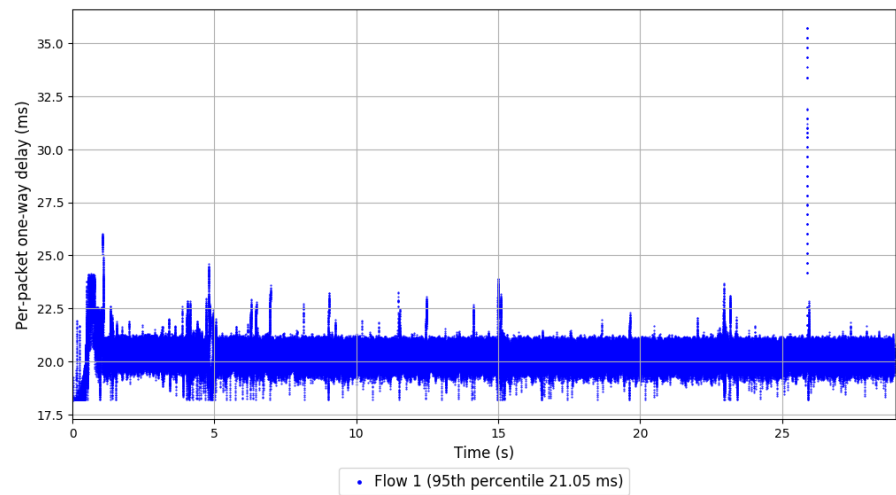
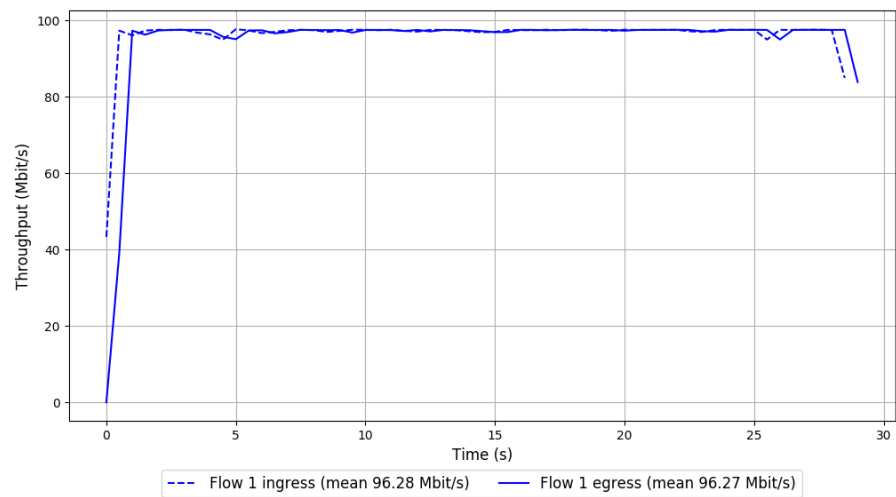

• Flow 1 (95th percentile 20.13 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-12 00:33:48
End at: 2019-02-12 00:34:18
Local clock offset: -0.159 ms
Remote clock offset: -5.688 ms


# Below is generated by plot.py at 2019-02-12 00:45:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 21.049 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 21.049 ms
Loss rate: 0.09%
```

Run 5: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 96.28 Mbit/s)   Flow 1 egress (mean 96.27 Mbit/s)
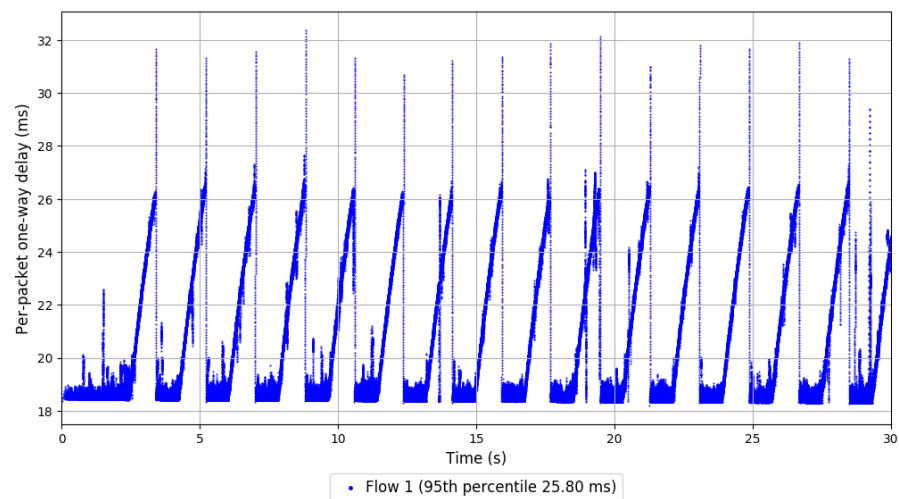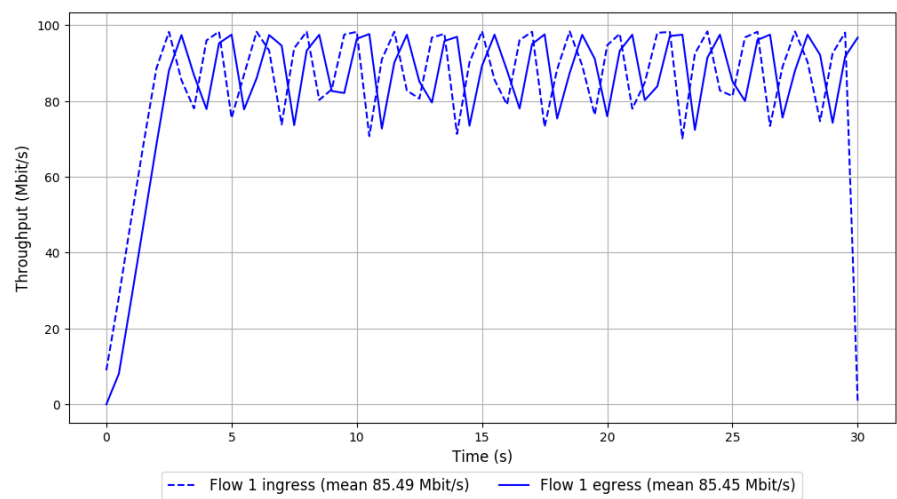

Flow 1 (95th percentile 21.05 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2019-02-11 22:42:57
End at: 2019-02-11 22:43:27
Local clock offset: 5.761 ms
Remote clock offset: -2.986 ms

# Below is generated by plot.py at 2019-02-12 00:45:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.45 Mbit/s
95th percentile per-packet one-way delay: 25.800 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 85.45 Mbit/s
95th percentile per-packet one-way delay: 25.800 ms
Loss rate: 0.12%
```

Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 85.49 Mbit/s)   —— Flow 1 egress (mean 85.45 Mbit/s)
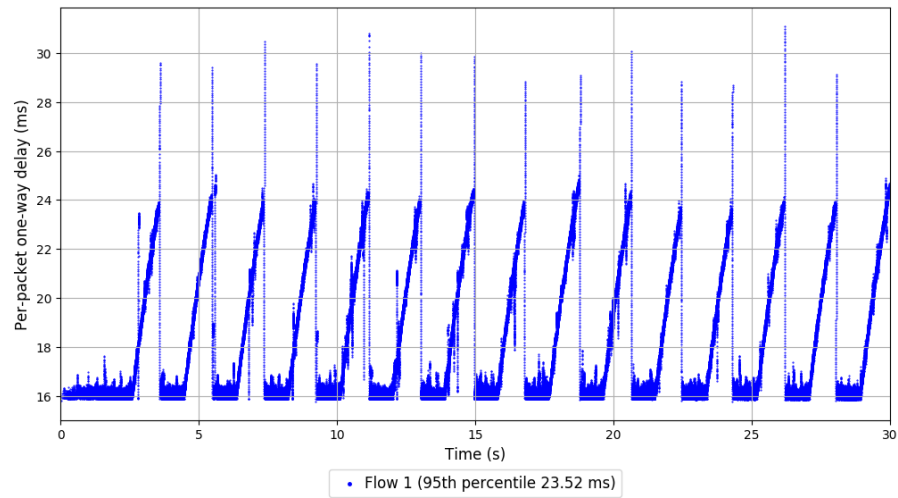
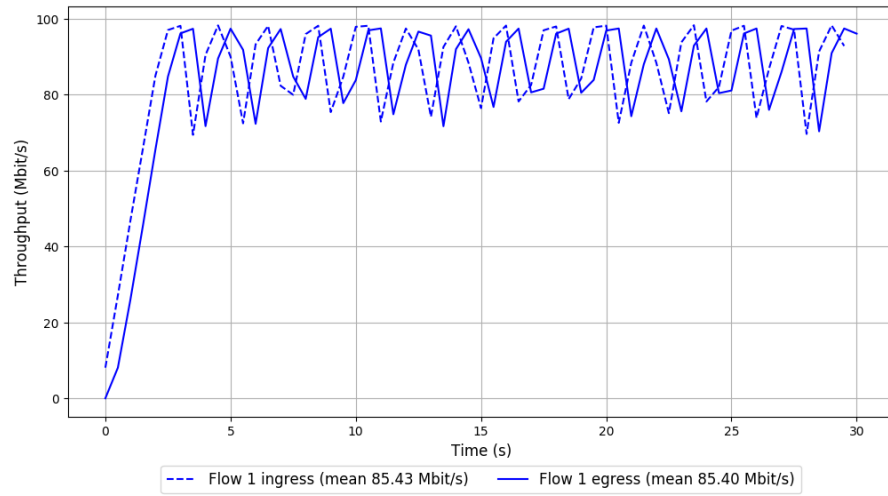

• Flow 1 (95th percentile 25.80 ms)

```
Run 2: Statistics of LEDBAT

Start at: 2019-02-11 23:07:45
End at: 2019-02-11 23:08:15
Local clock offset: 5.962 ms
Remote clock offset: -3.657 ms


# Below is generated by plot.py at 2019-02-12 00:45:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.40 Mbit/s
95th percentile per-packet one-way delay: 23.520 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 85.40 Mbit/s
95th percentile per-packet one-way delay: 23.520 ms
Loss rate: 0.02%
```

Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 85.43 Mbit/s)   Flow 1 egress (mean 85.40 Mbit/s)
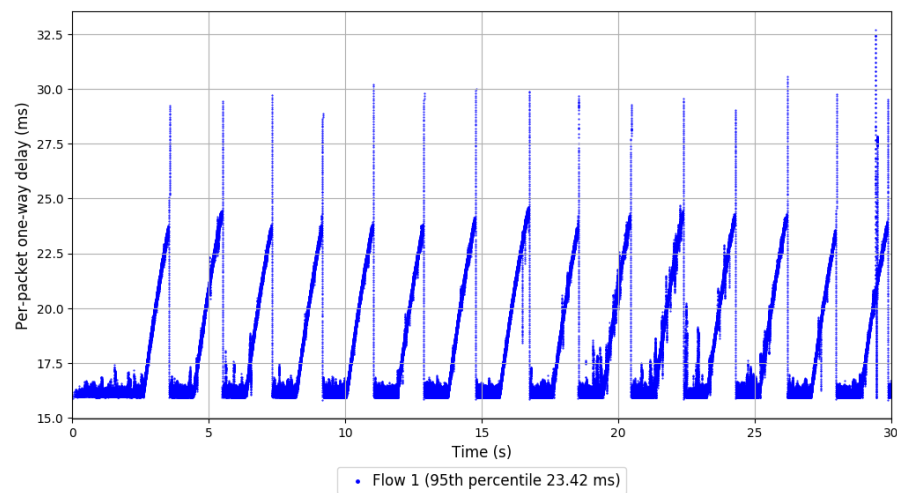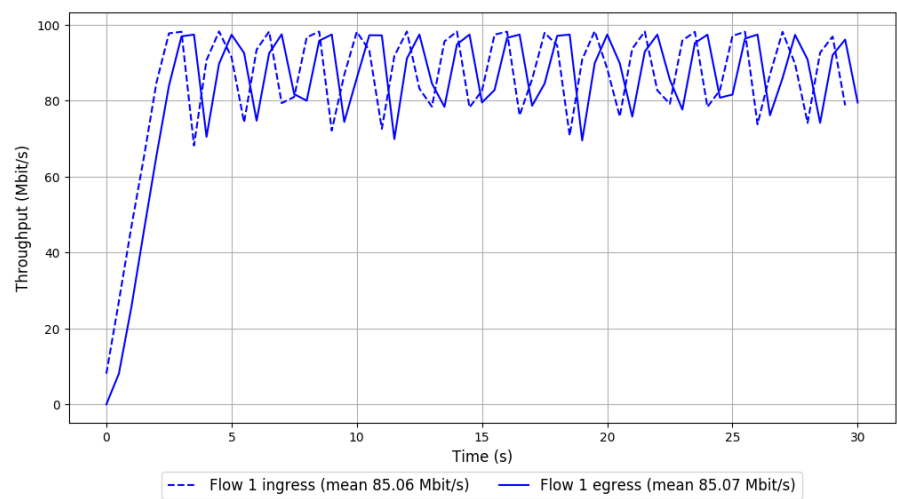

· Flow 1 (95th percentile 23.52 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2019-02-11 23:32:38
End at: 2019-02-11 23:33:08
Local clock offset: 6.215 ms
Remote clock offset: -5.128 ms


# Below is generated by plot.py at 2019-02-12 00:45:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.07 Mbit/s
95th percentile per-packet one-way delay: 23.422 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 85.07 Mbit/s
95th percentile per-packet one-way delay: 23.422 ms
Loss rate: 0.07%
```

Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 85.06 Mbit/s)   Flow 1 egress (mean 85.07 Mbit/s)

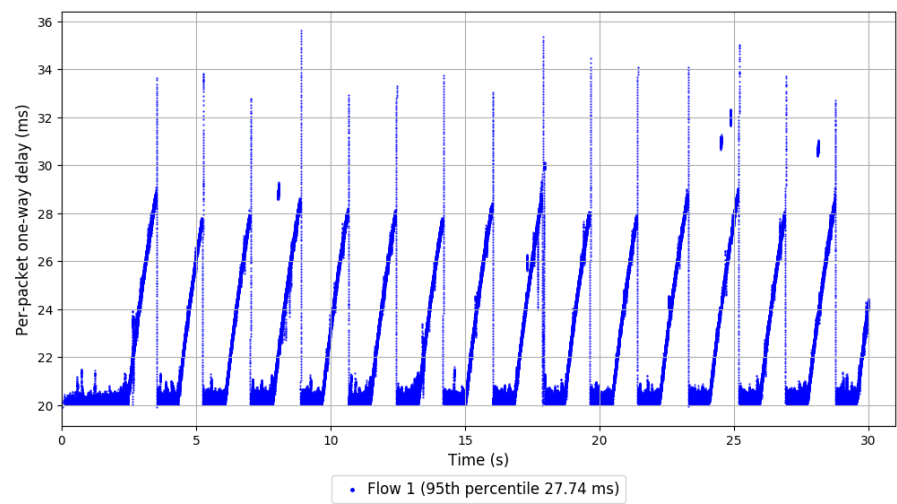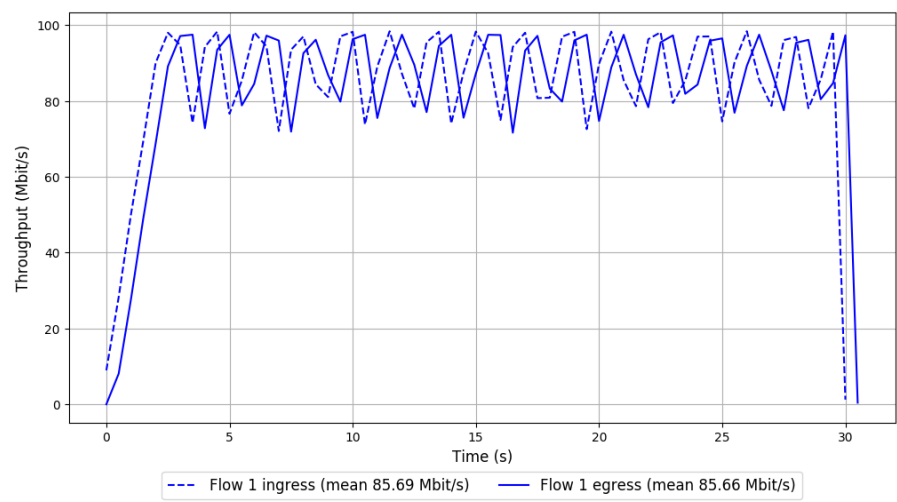Flow 1 (95th percentile 23.42 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2019-02-11 23:57:43
End at: 2019-02-11 23:58:13
Local clock offset: 2.483 ms
Remote clock offset: -7.086 ms


# Below is generated by plot.py at 2019-02-12 00:45:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.66 Mbit/s
95th percentile per-packet one-way delay: 27.740 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 85.66 Mbit/s
95th percentile per-packet one-way delay: 27.740 ms
Loss rate: 0.12%
```

Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 85.69 Mbit/s)   Flow 1 egress (mean 85.66 Mbit/s)

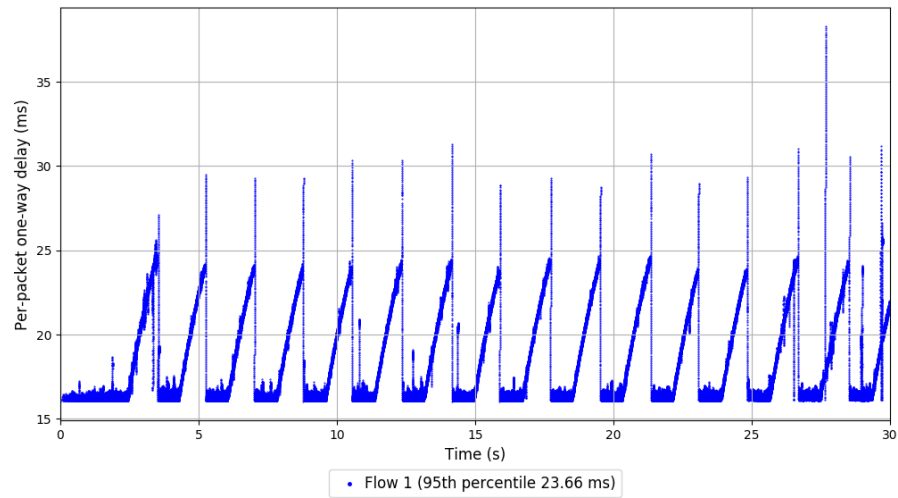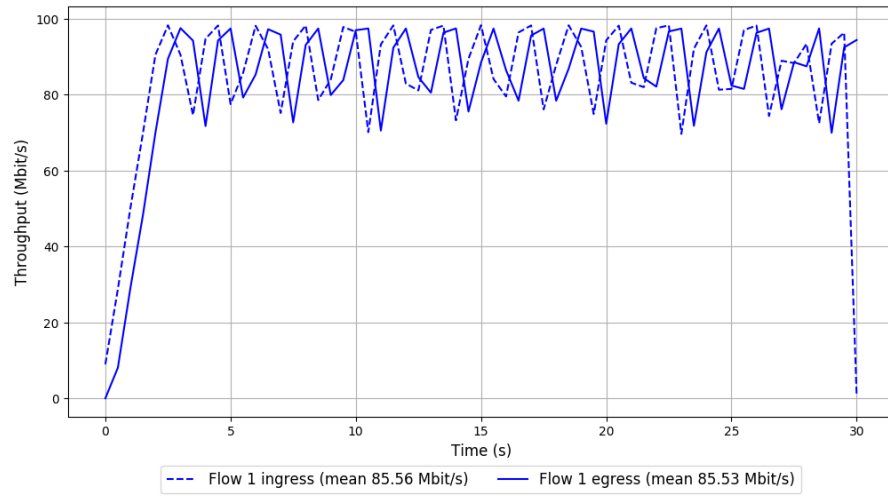Flow 1 (95th percentile 27.74 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-02-12 00:22:45
End at: 2019-02-12 00:23:15
Local clock offset: -1.74 ms
Remote clock offset: -5.836 ms

# Below is generated by plot.py at 2019-02-12 00:45:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.53 Mbit/s
95th percentile per-packet one-way delay: 23.664 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 85.53 Mbit/s
95th percentile per-packet one-way delay: 23.664 ms
Loss rate: 0.12%
```

Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 85.56 Mbit/s)   Flow 1 egress (mean 85.53 Mbit/s)

Flow 1 (95th percentile 23.66 ms)

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-02-11 22:32:14
End at: 2019-02-11 22:32:44
Local clock offset: 0.208 ms
Remote clock offset: -4.347 ms


# Below is generated by plot.py at 2019-02-12 00:46:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.31 Mbit/s
95th percentile per-packet one-way delay: 20.229 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 93.31 Mbit/s
95th percentile per-packet one-way delay: 20.229 ms
Loss rate: 0.10%
```
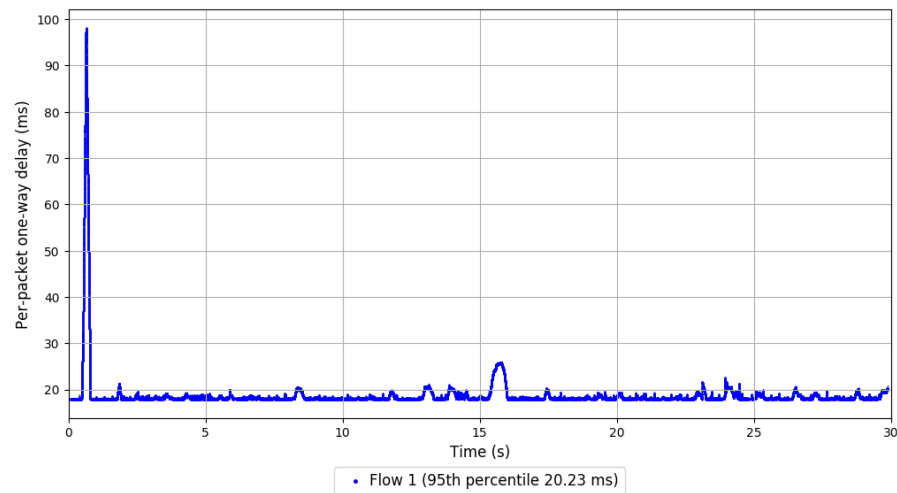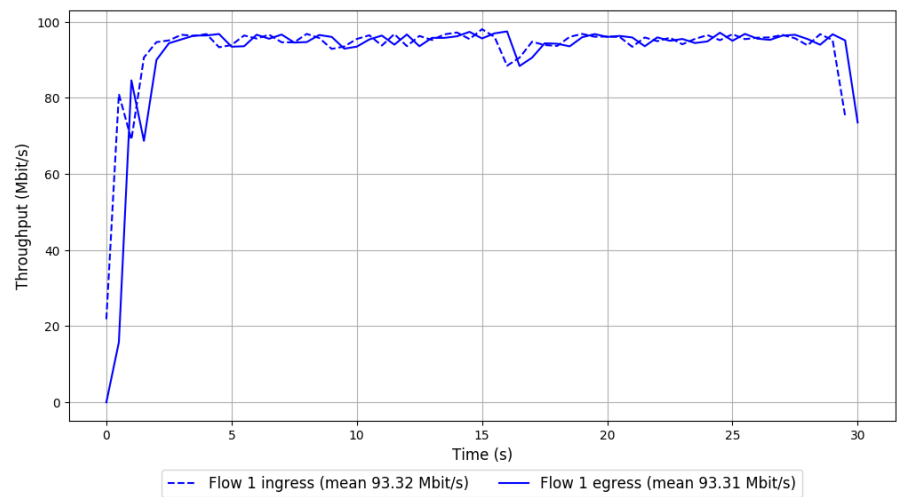
Run 1: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 93.32 Mbit/s) — Flow 1 egress (mean 93.31 Mbit/s)

Flow 1 (95th percentile 20.23 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-02-11 22:57:12
End at: 2019-02-11 22:57:42
Local clock offset: 6.589 ms
Remote clock offset: -3.248 ms


# Below is generated by plot.py at 2019-02-12 00:46:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.47 Mbit/s
95th percentile per-packet one-way delay: 19.068 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 93.47 Mbit/s
95th percentile per-packet one-way delay: 19.068 ms
Loss rate: 0.09%
```
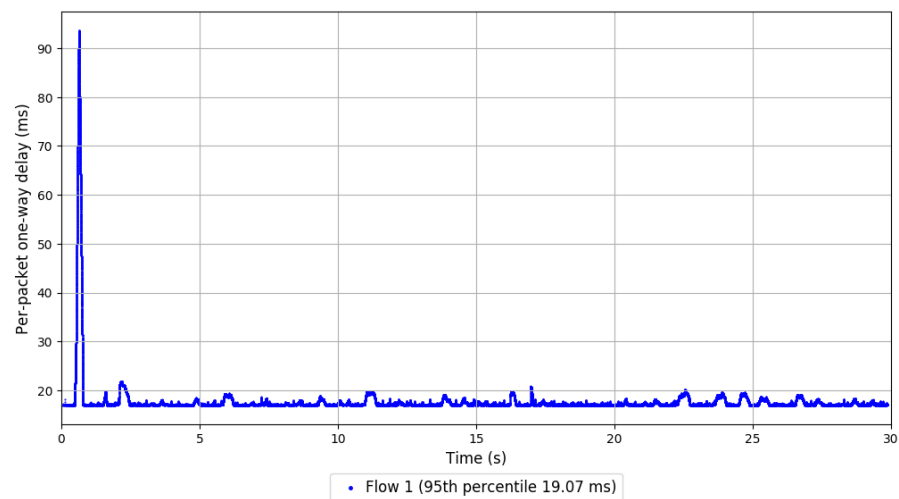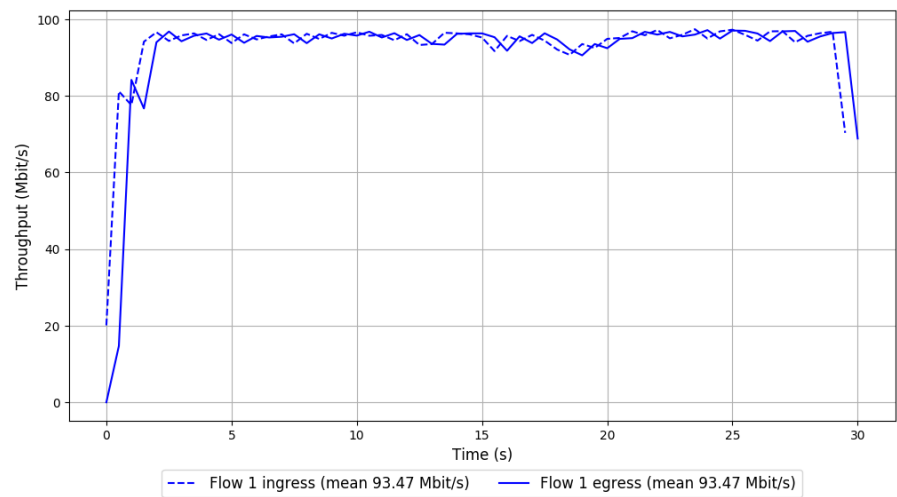
Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-02-11 23:22:05
End at: 2019-02-11 23:22:35
Local clock offset: 7.316 ms
Remote clock offset: -5.833 ms


# Below is generated by plot.py at 2019-02-12 00:46:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.17 Mbit/s
95th percentile per-packet one-way delay: 20.594 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 91.17 Mbit/s
95th percentile per-packet one-way delay: 20.594 ms
Loss rate: 0.09%
```
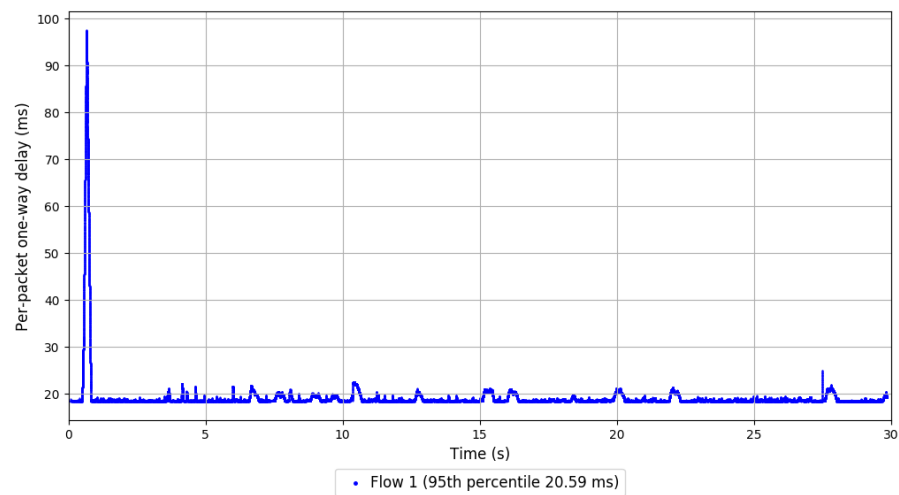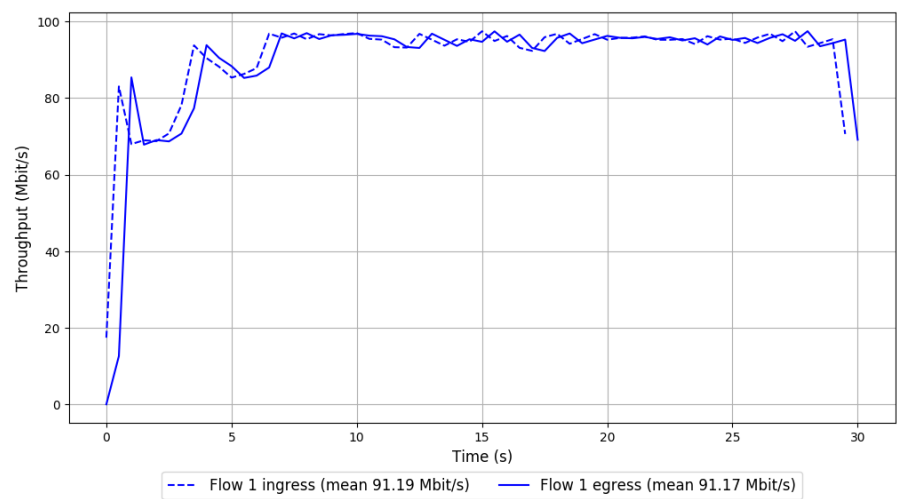
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 91.19 Mbit/s) — Flow 1 egress (mean 91.17 Mbit/s)

• Flow 1 (95th percentile 20.59 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-02-11 23:47:07
End at: 2019-02-11 23:47:37
Local clock offset: 0.515 ms
Remote clock offset: -6.264 ms


# Below is generated by plot.py at 2019-02-12 00:46:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.40 Mbit/s
95th percentile per-packet one-way delay: 18.349 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 91.40 Mbit/s
95th percentile per-packet one-way delay: 18.349 ms
Loss rate: 0.10%
```
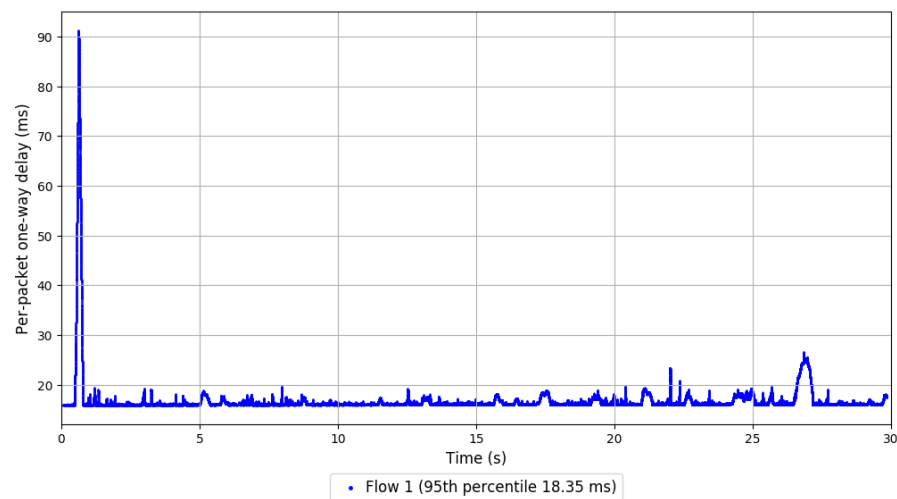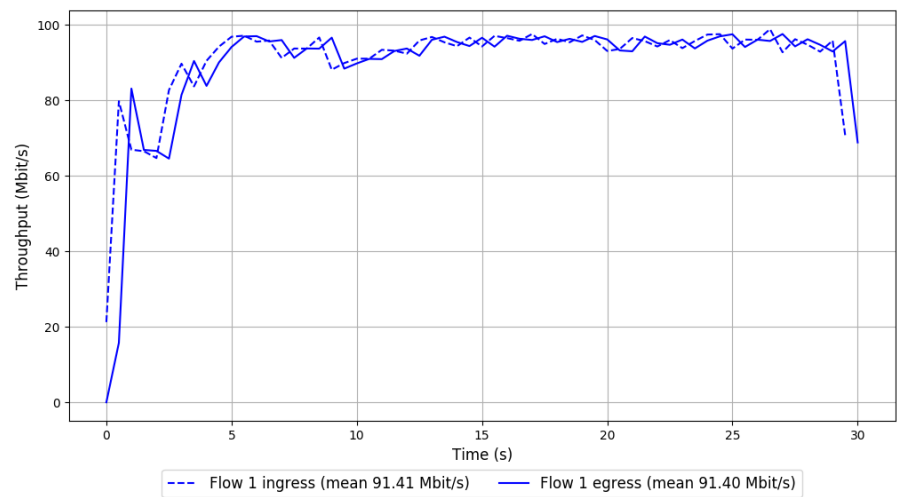
Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 91.41 Mbit/s)   Flow 1 egress (mean 91.40 Mbit/s)

• Flow 1 (95th percentile 18.35 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-02-12 00:12:03
End at: 2019-02-12 00:12:33
Local clock offset: -2.612 ms
Remote clock offset: -7.025 ms


# Below is generated by plot.py at 2019-02-12 00:46:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.62 Mbit/s
95th percentile per-packet one-way delay: 18.519 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 92.62 Mbit/s
95th percentile per-packet one-way delay: 18.519 ms
Loss rate: 0.10%
```
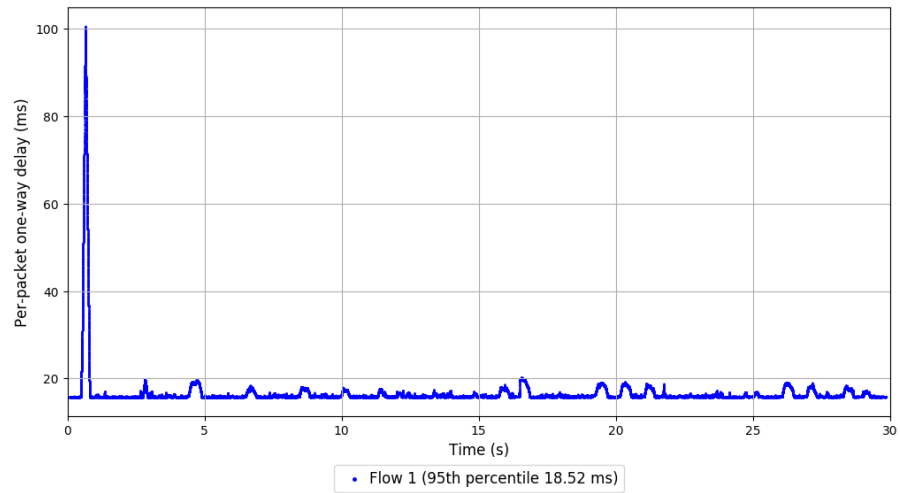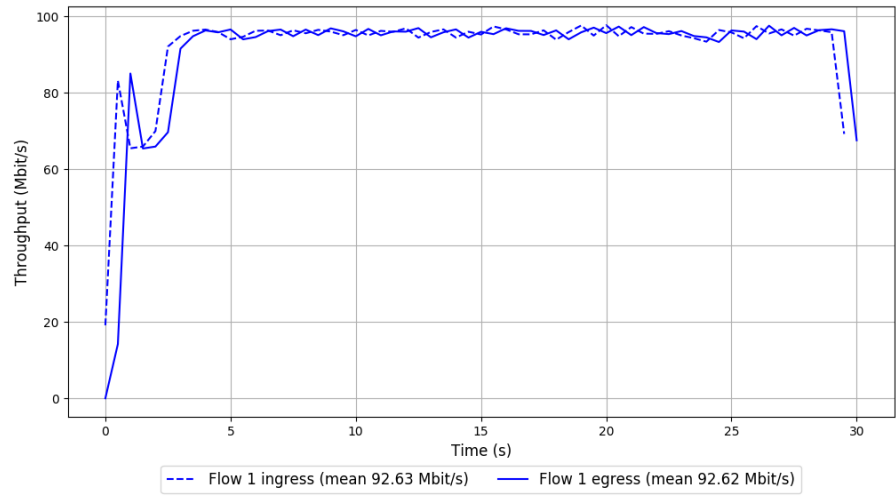
Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 92.63 Mbit/s) --- Flow 1 egress (mean 92.62 Mbit/s)
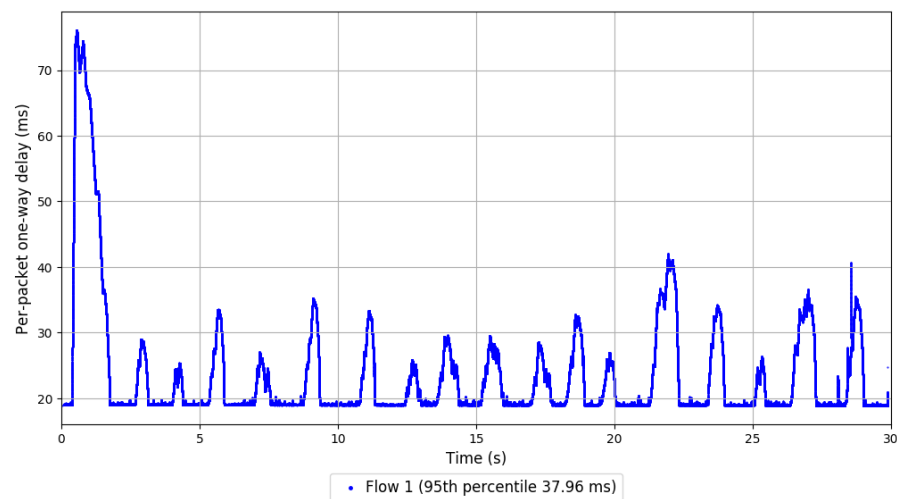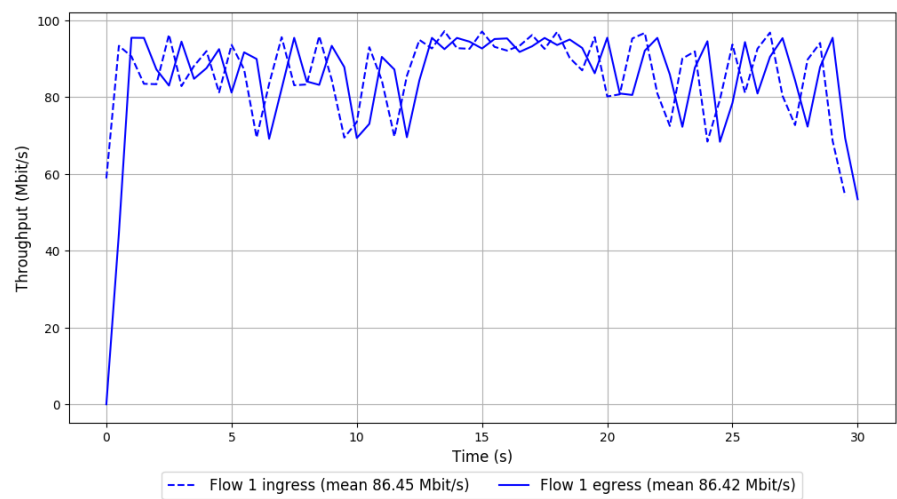

Flow 1 (95th percentile 18.52 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2019-02-11 22:45:21
End at: 2019-02-11 22:45:51
Local clock offset: 5.34 ms
Remote clock offset: -4.608 ms


# Below is generated by plot.py at 2019-02-12 00:47:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.42 Mbit/s
95th percentile per-packet one-way delay: 37.956 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 86.42 Mbit/s
95th percentile per-packet one-way delay: 37.956 ms
Loss rate: 0.09%
```

Run 1: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 86.45 Mbit/s)   Flow 1 egress (mean 86.42 Mbit/s)

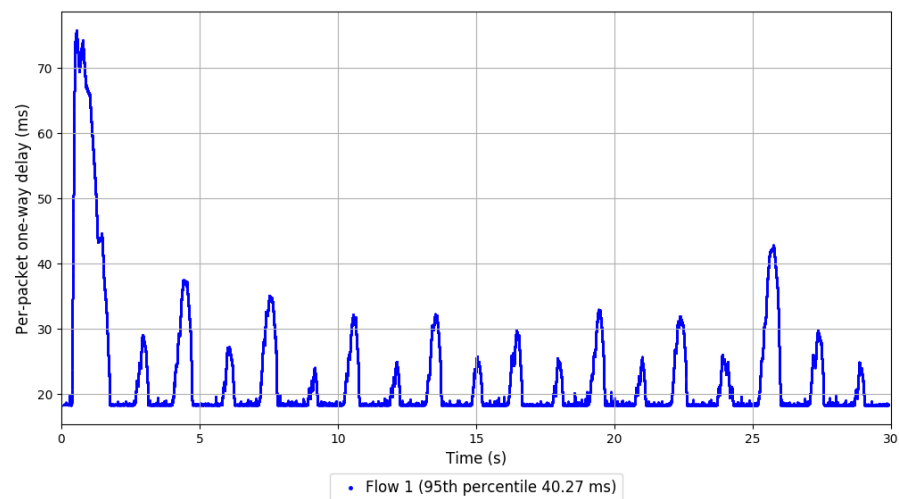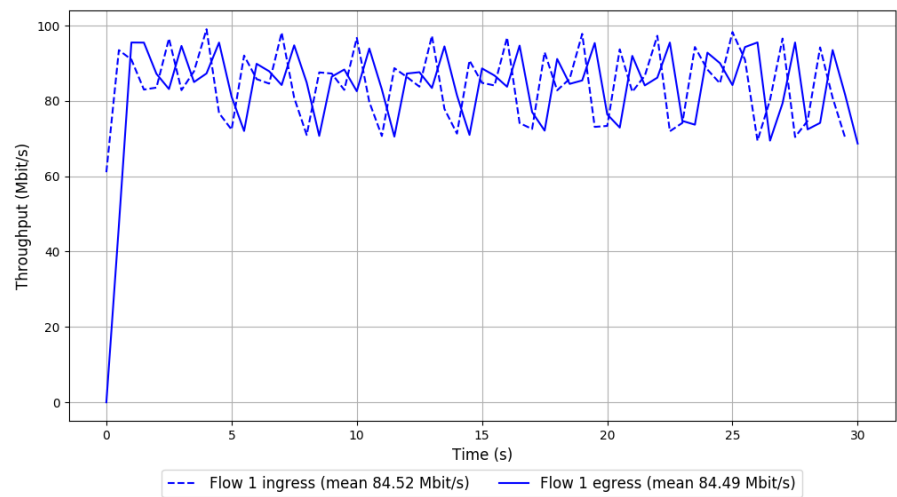Flow 1 (95th percentile 37.96 ms)

```
Run 2: Statistics of PCC-Expr

Start at: 2019-02-11 23:10:10
End at: 2019-02-11 23:10:40
Local clock offset: 6.928 ms
Remote clock offset: -5.353 ms


# Below is generated by plot.py at 2019-02-12 00:47:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.49 Mbit/s
95th percentile per-packet one-way delay: 40.275 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 84.49 Mbit/s
95th percentile per-packet one-way delay: 40.275 ms
Loss rate: 0.11%
```

Run 2: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 84.52 Mbit/s) ---- Flow 1 egress (mean 84.49 Mbit/s) ——
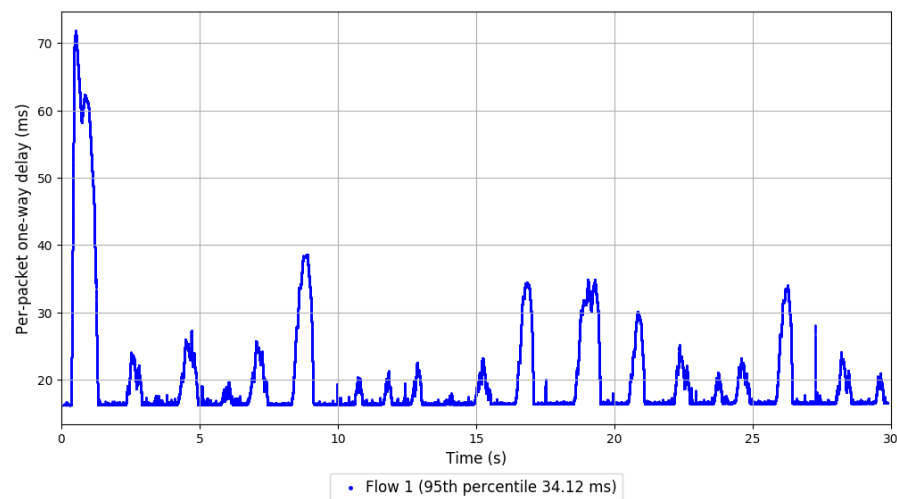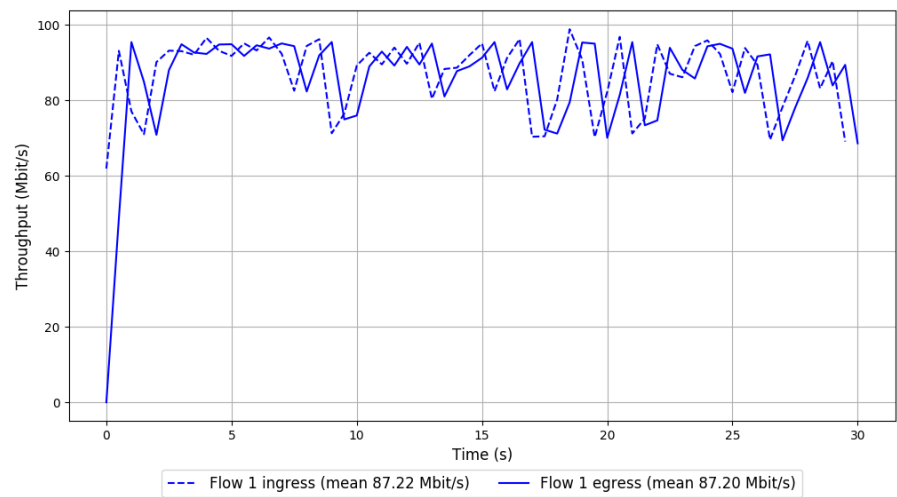

• Flow 1 (95th percentile 40.27 ms)

```
Run 3: Statistics of PCC-Expr

Start at: 2019-02-11 23:35:03
End at: 2019-02-11 23:35:33
Local clock offset: 5.245 ms
Remote clock offset: -5.755 ms


# Below is generated by plot.py at 2019-02-12 00:47:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.20 Mbit/s
95th percentile per-packet one-way delay: 34.122 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 87.20 Mbit/s
95th percentile per-packet one-way delay: 34.122 ms
Loss rate: 0.10%
```

Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 87.22 Mbit/s)   Flow 1 egress (mean 87.20 Mbit/s)

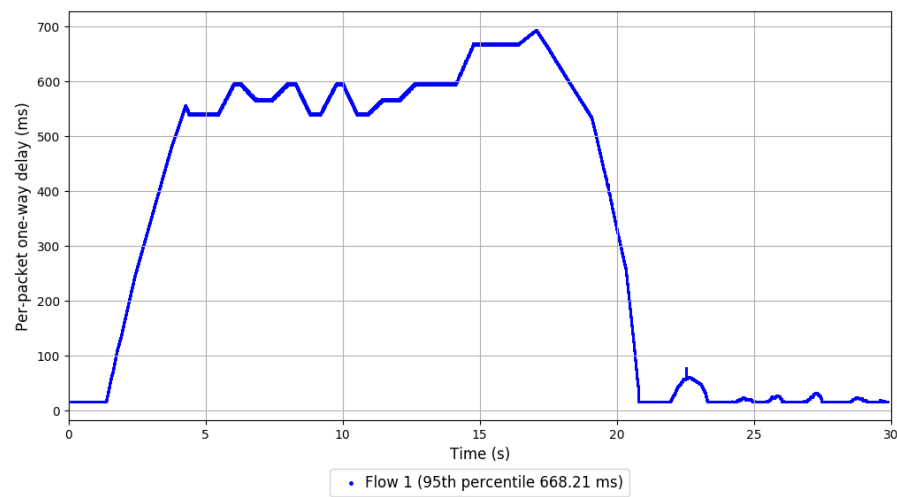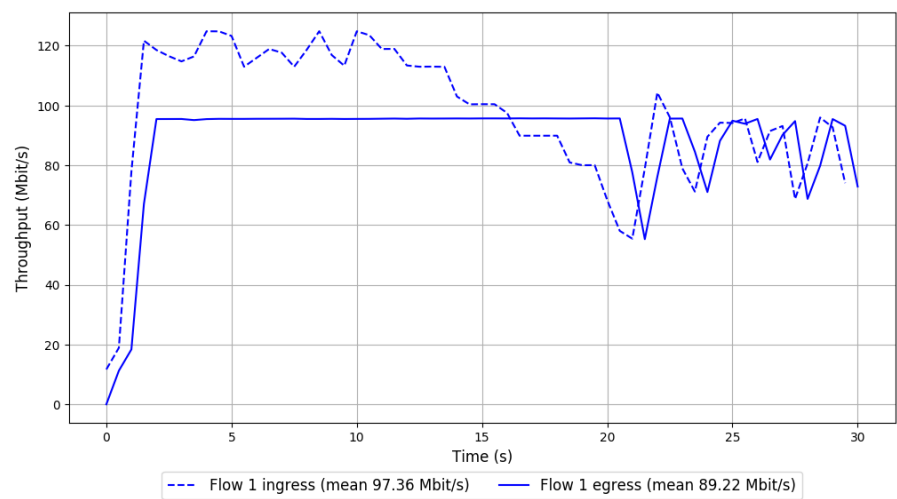Flow 1 (95th percentile 34.12 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2019-02-12 00:00:04
End at: 2019-02-12 00:00:34
Local clock offset: -0.57 ms
Remote clock offset: -6.379 ms


# Below is generated by plot.py at 2019-02-12 00:48:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.22 Mbit/s
95th percentile per-packet one-way delay: 668.212 ms
Loss rate: 8.43%
-- Flow 1:
Average throughput: 89.22 Mbit/s
95th percentile per-packet one-way delay: 668.212 ms
Loss rate: 8.43%
```

Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-02-12 00:25:12
End at: 2019-02-12 00:25:42
Local clock offset: -0.62 ms
Remote clock offset: -6.02 ms


# Below is generated by plot.py at 2019-02-12 00:48:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.69 Mbit/s
95th percentile per-packet one-way delay: 37.987 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 87.69 Mbit/s
95th percentile per-packet one-way delay: 37.987 ms
Loss rate: 0.11%
```
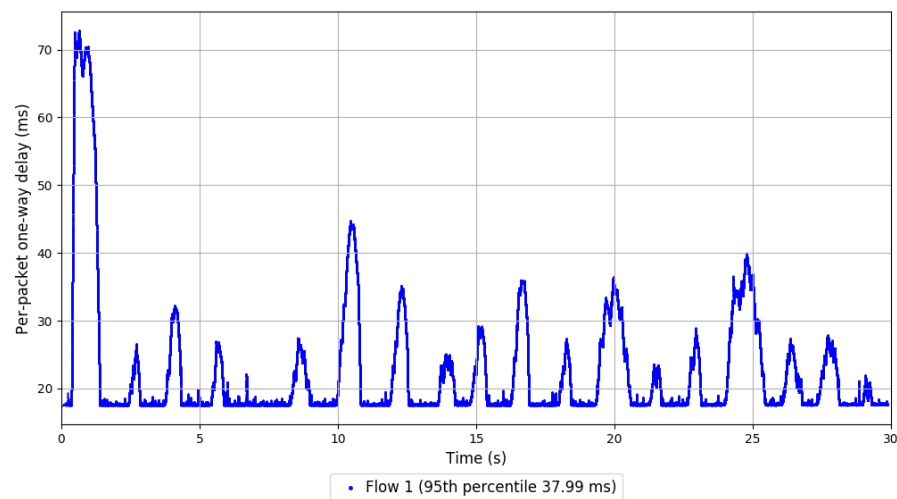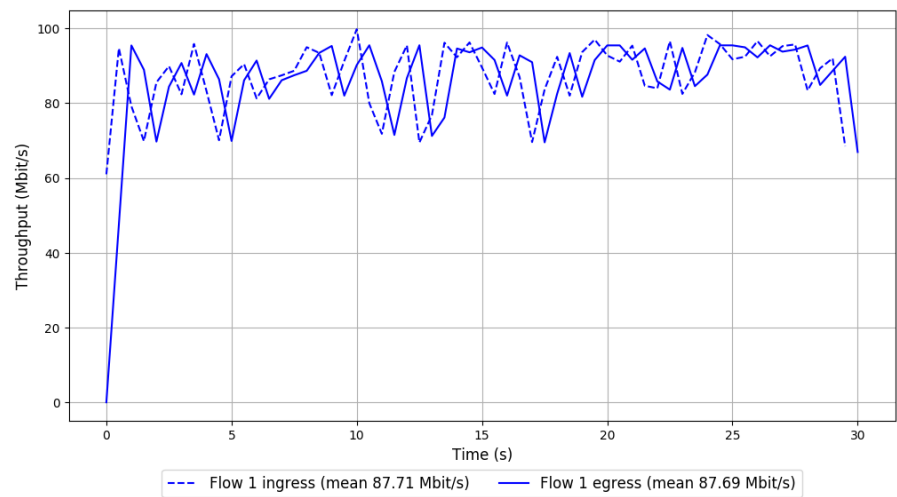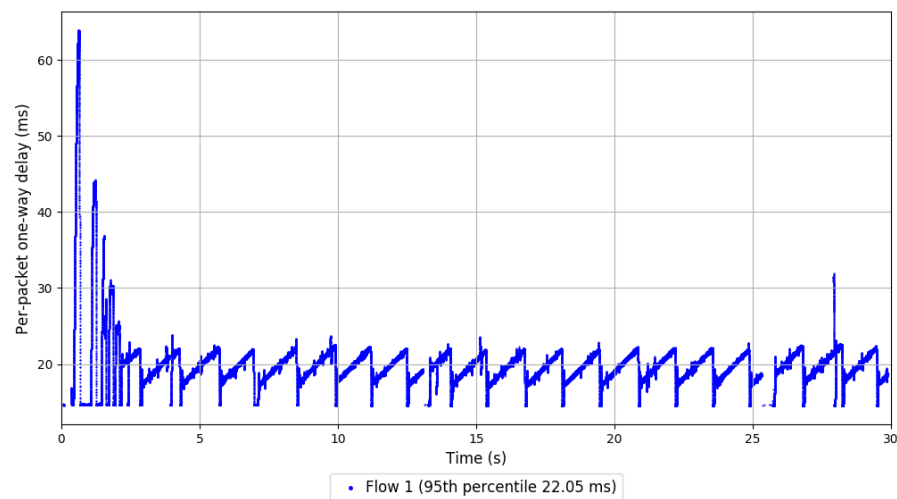
Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 87.71 Mbit/s)   Flow 1 egress (mean 87.69 Mbit/s)

· Flow 1 (95th percentile 37.99 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-02-11 22:51:20
End at: 2019-02-11 22:51:50
Local clock offset: 2.732 ms
Remote clock offset: -3.924 ms


# Below is generated by plot.py at 2019-02-12 00:48:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.53 Mbit/s
95th percentile per-packet one-way delay: 22.046 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 90.53 Mbit/s
95th percentile per-packet one-way delay: 22.046 ms
Loss rate: 0.12%
```
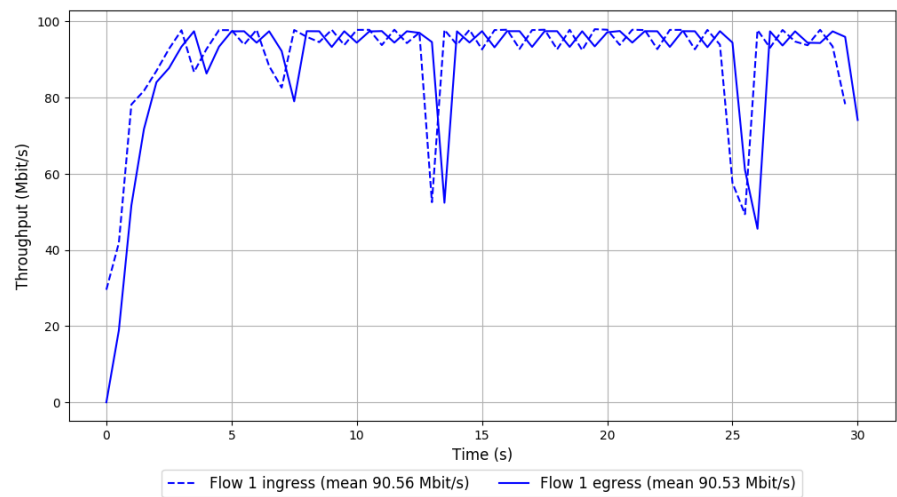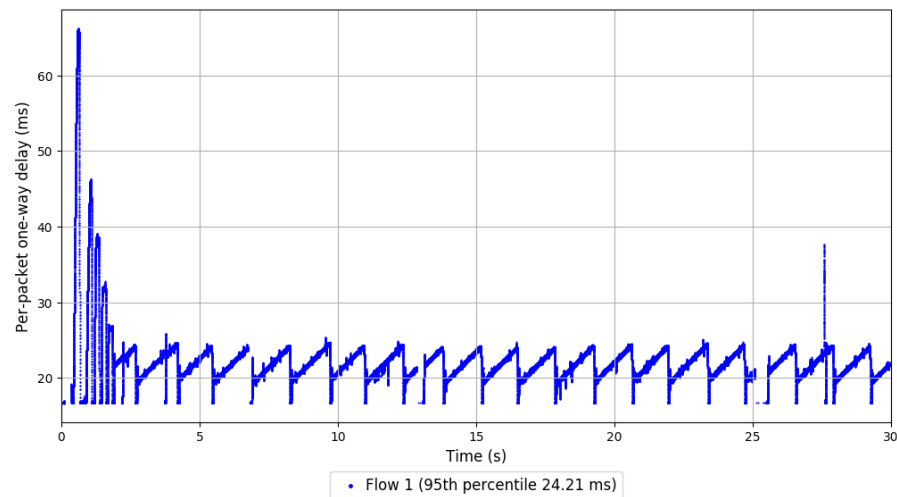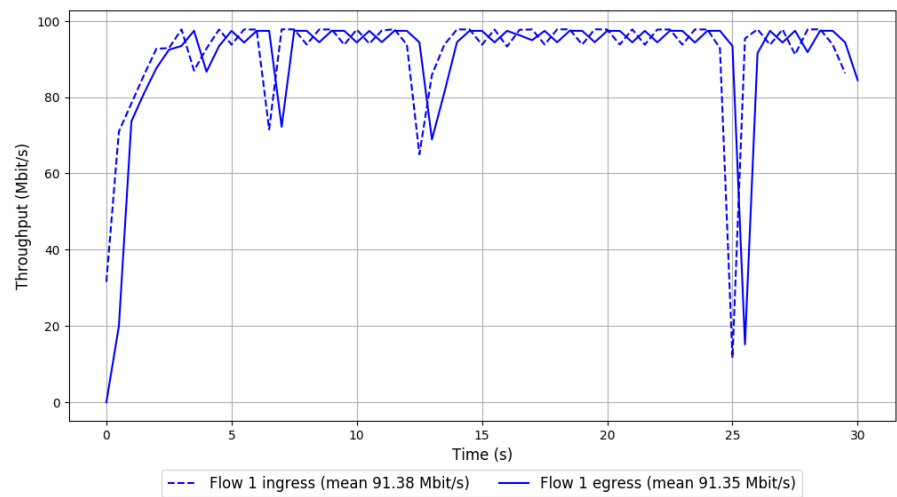
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-02-11 23:16:11
End at: 2019-02-11 23:16:41
Local clock offset: 6.791 ms
Remote clock offset: -4.203 ms


# Below is generated by plot.py at 2019-02-12 00:48:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.35 Mbit/s
95th percentile per-packet one-way delay: 24.207 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 91.35 Mbit/s
95th percentile per-packet one-way delay: 24.207 ms
Loss rate: 0.12%
```

Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-02-11 23:41:07
End at: 2019-02-11 23:41:37
Local clock offset: 3.541 ms
Remote clock offset: -5.037 ms


# Below is generated by plot.py at 2019-02-12 00:48:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.01 Mbit/s
95th percentile per-packet one-way delay: 24.183 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 90.01 Mbit/s
95th percentile per-packet one-way delay: 24.183 ms
Loss rate: 0.13%
```
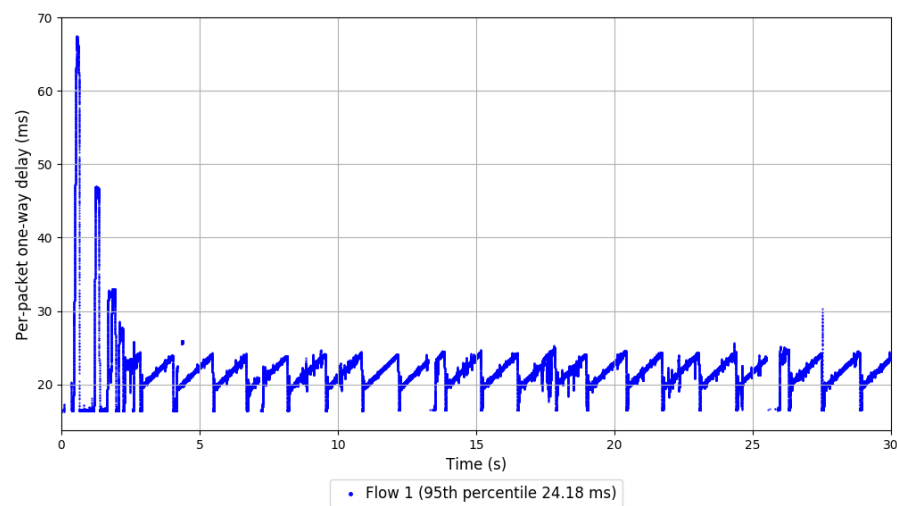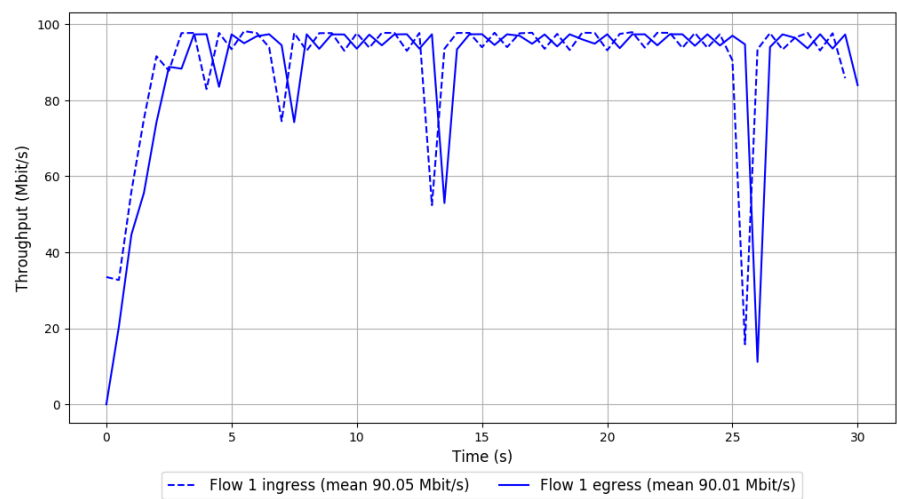
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 90.05 Mbit/s)   Flow 1 egress (mean 90.01 Mbit/s)

Flow 1 (95th percentile 24.18 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-02-12 00:06:03
End at: 2019-02-12 00:06:33
Local clock offset: 1.096 ms
Remote clock offset: -6.716 ms


# Below is generated by plot.py at 2019-02-12 00:48:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.23 Mbit/s
95th percentile per-packet one-way delay: 26.394 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 91.23 Mbit/s
95th percentile per-packet one-way delay: 26.394 ms
Loss rate: 0.12%
```
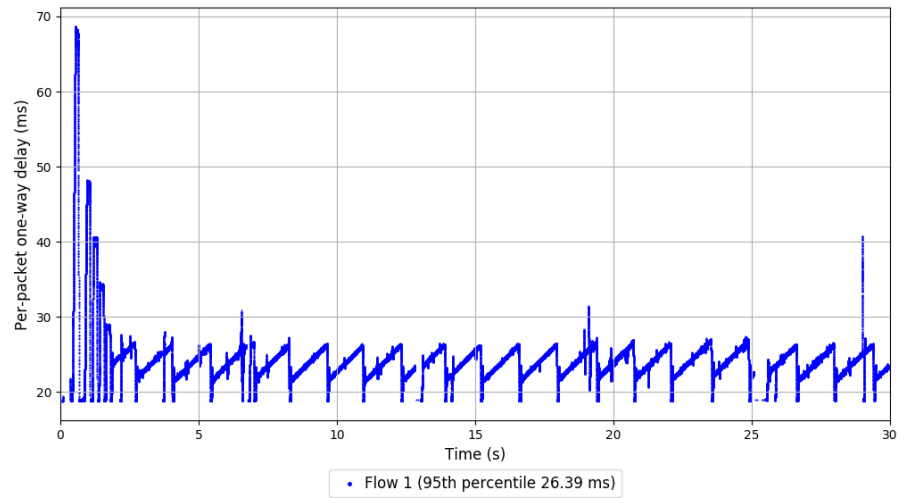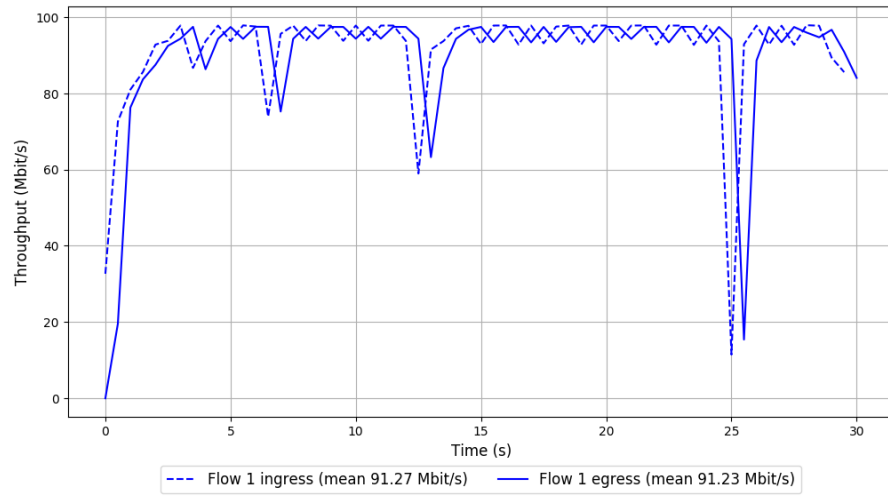
Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 91.27 Mbit/s) — Flow 1 egress (mean 91.23 Mbit/s)

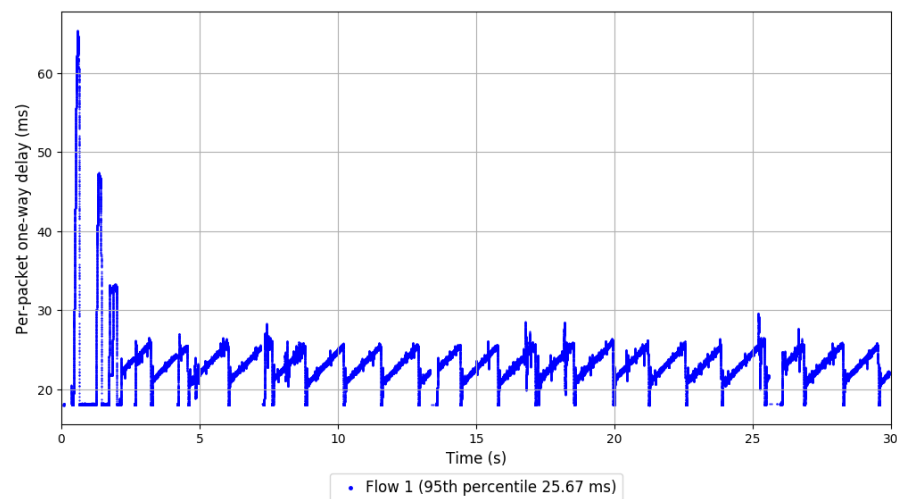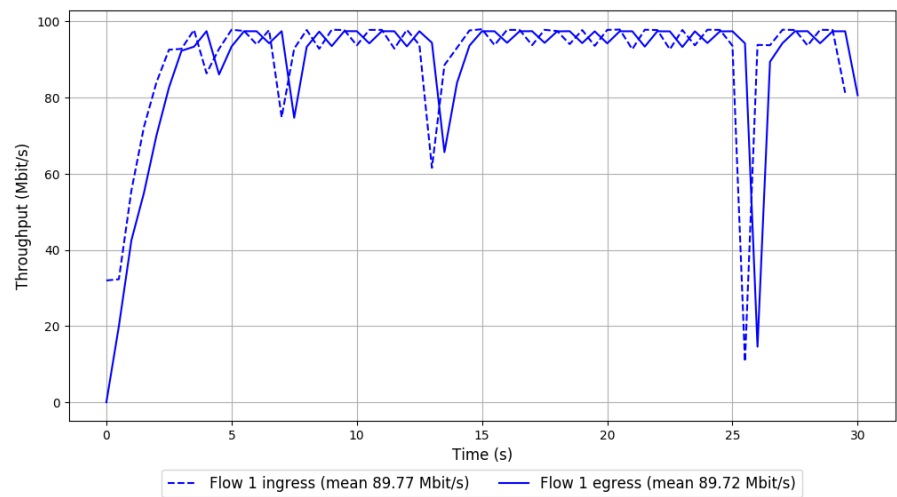

• Flow 1 (95th percentile 26.39 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-02-12 00:31:20
End at: 2019-02-12 00:31:50
Local clock offset: -0.378 ms
Remote clock offset: -5.942 ms


# Below is generated by plot.py at 2019-02-12 00:48:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.72 Mbit/s
95th percentile per-packet one-way delay: 25.671 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 89.72 Mbit/s
95th percentile per-packet one-way delay: 25.671 ms
Loss rate: 0.14%
```

Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-02-11 22:40:46
End at: 2019-02-11 22:41:16
Local clock offset: 5.027 ms
Remote clock offset: -4.18 ms


# Below is generated by plot.py at 2019-02-12 00:48:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.565 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.565 ms
Loss rate: 0.13%
```
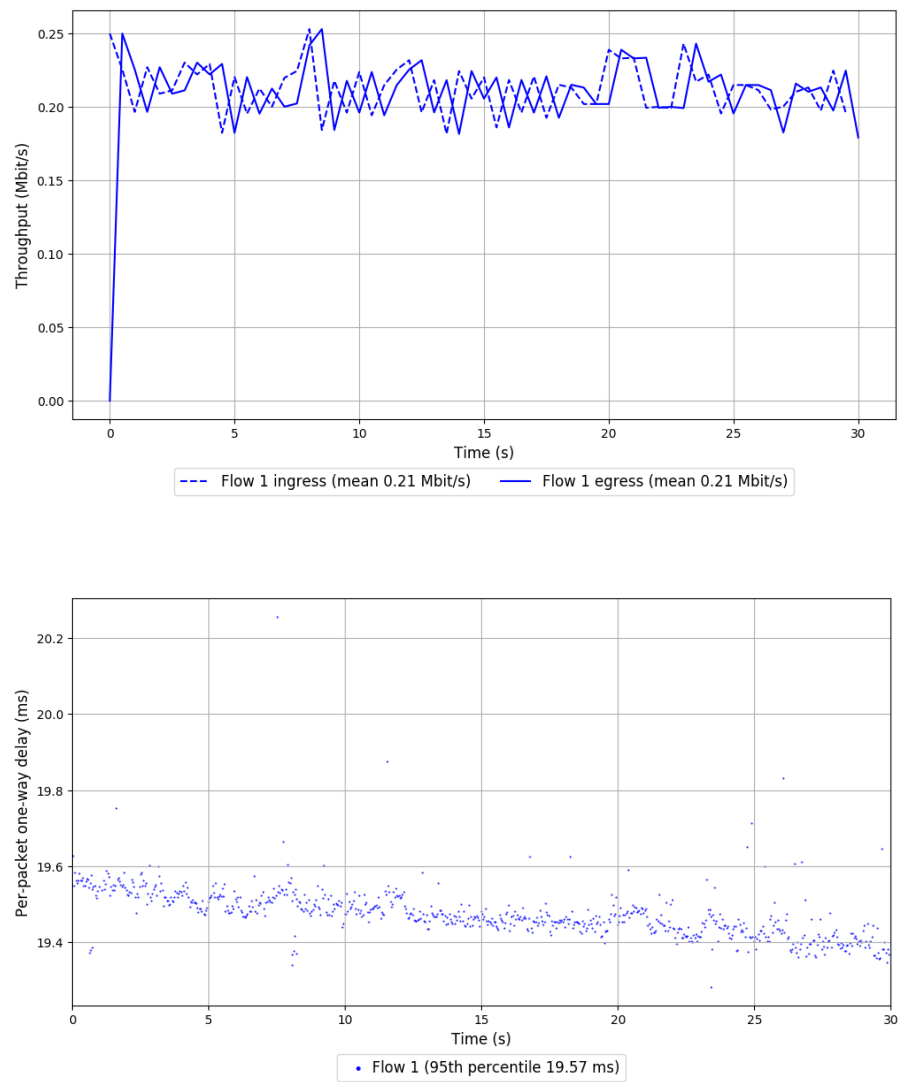
Run 1: Report of SCReAM — Data Link

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

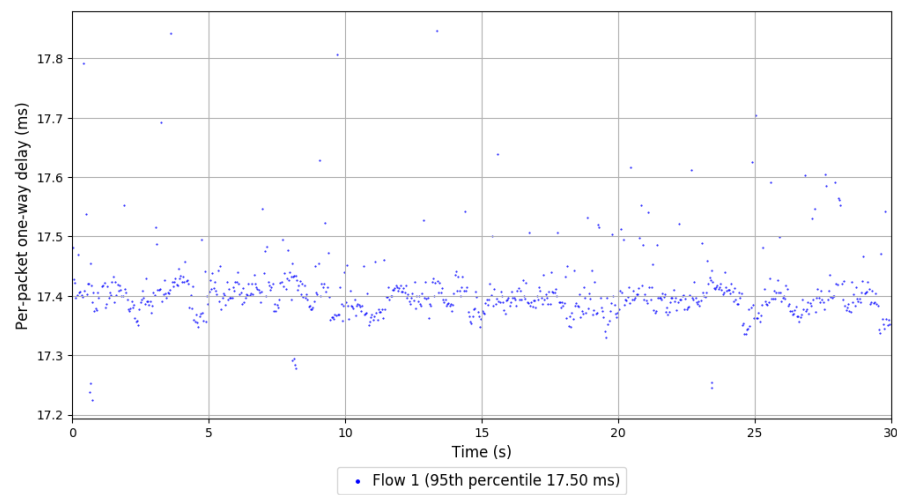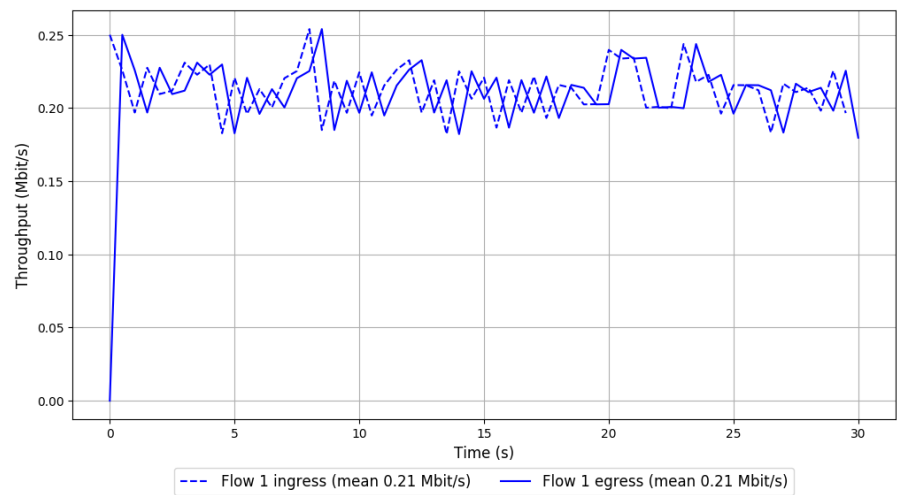Flow 1 (95th percentile 19.57 ms)

```
Run 2: Statistics of SCReAM

Start at: 2019-02-11 23:05:34
End at: 2019-02-11 23:06:04
Local clock offset: 6.696 ms
Remote clock offset: -4.308 ms


# Below is generated by plot.py at 2019-02-12 00:48:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 17.503 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 17.503 ms
Loss rate: 0.13%
```

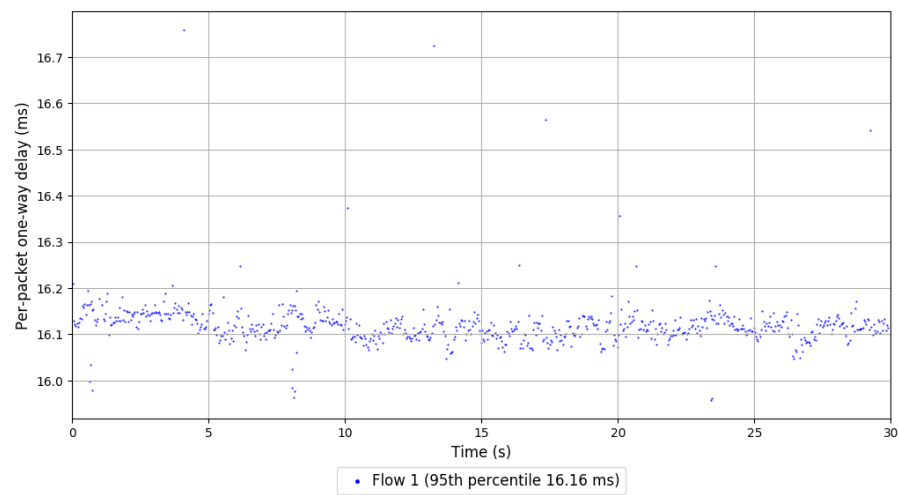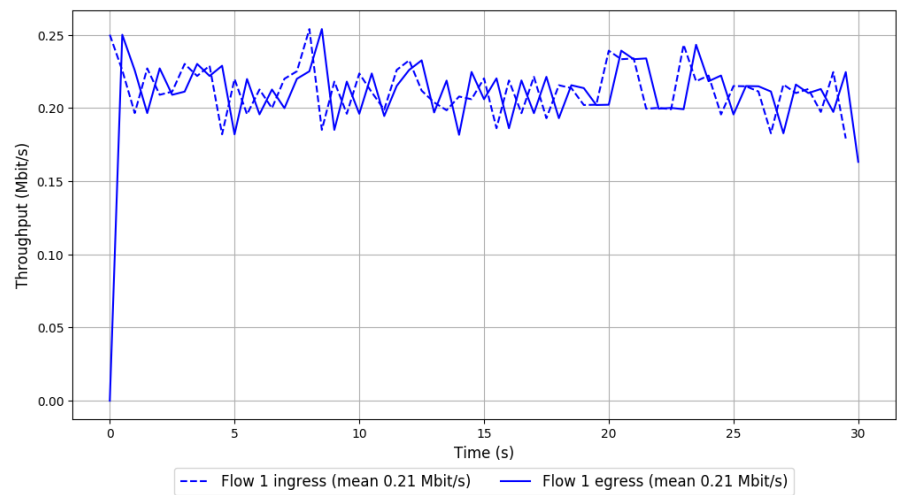# Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-02-11 23:30:27
End at: 2019-02-11 23:30:57
Local clock offset: 6.243 ms
Remote clock offset: -5.132 ms


# Below is generated by plot.py at 2019-02-12 00:48:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 16.163 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 16.163 ms
Loss rate: 0.13%
```

Run 3: Report of SCReAM — Data Link

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

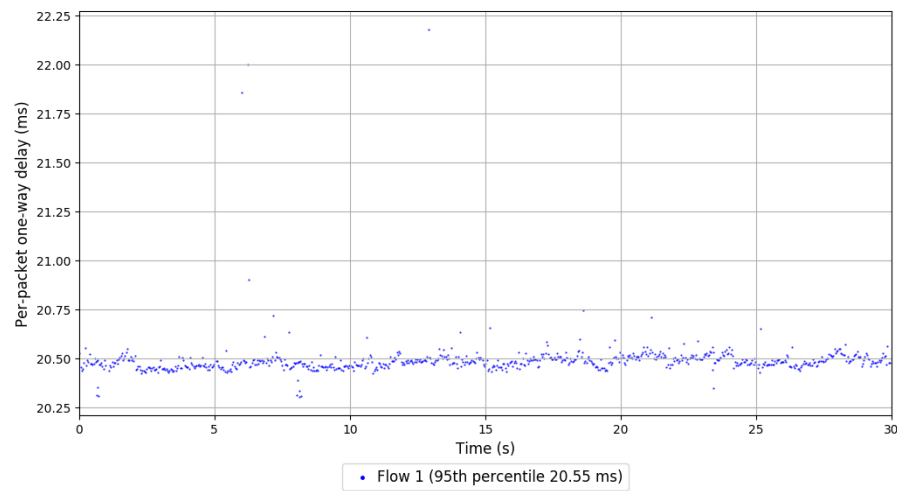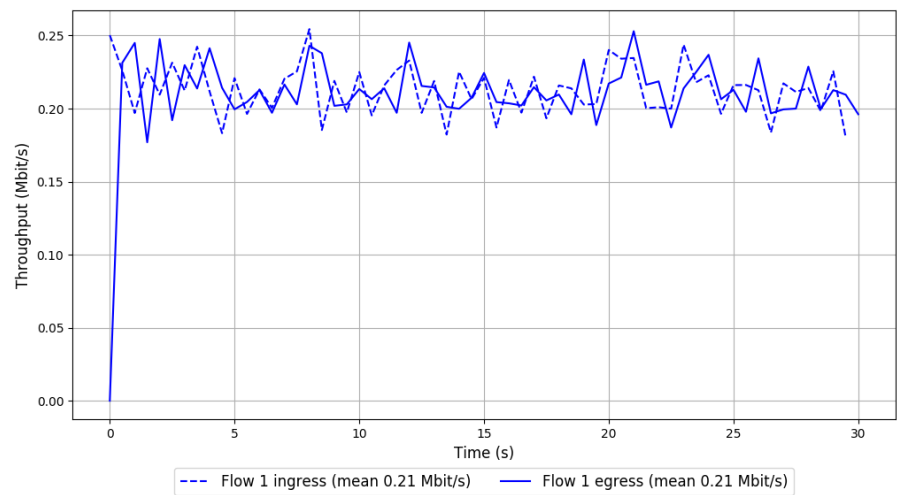Flow 1 (95th percentile 16.16 ms)

```
Run 4: Statistics of SCReAM

Start at: 2019-02-11 23:55:32
End at: 2019-02-11 23:56:02
Local clock offset: 3.319 ms
Remote clock offset: -6.859 ms


# Below is generated by plot.py at 2019-02-12 00:48:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 20.545 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 20.545 ms
Loss rate: 0.00%
```

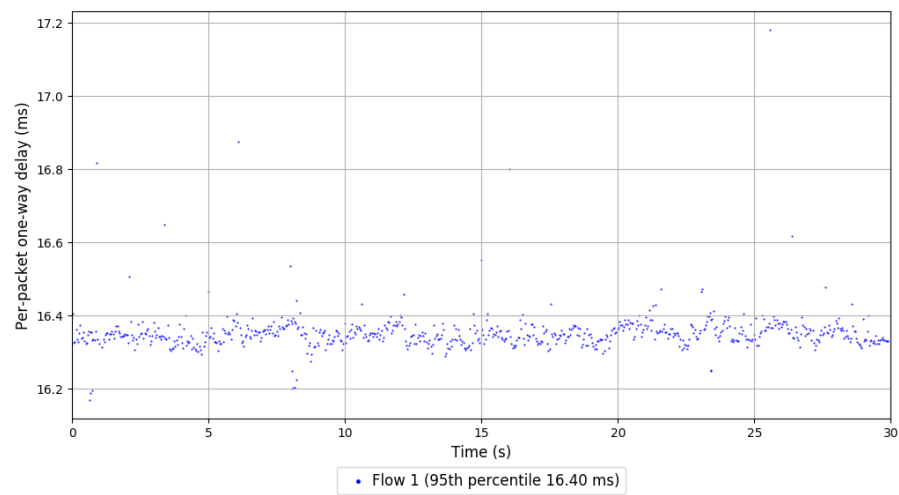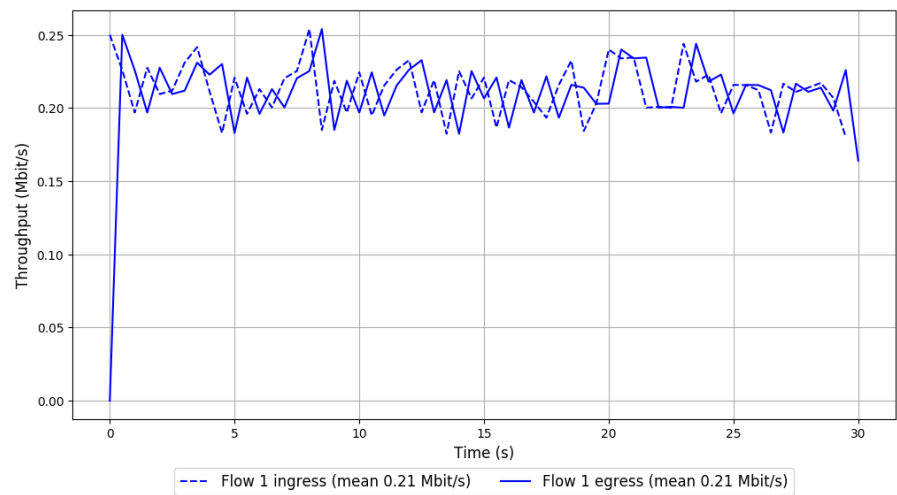Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-02-12 00:20:34
End at: 2019-02-12 00:21:04
Local clock offset: -1.13 ms
Remote clock offset: -5.621 ms

# Below is generated by plot.py at 2019-02-12 00:48:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 16.398 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 16.398 ms
Loss rate: 0.13%
```

Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-02-11 22:41:51
End at: 2019-02-11 22:42:21
Local clock offset: 3.236 ms
Remote clock offset: -4.27 ms


# Below is generated by plot.py at 2019-02-12 00:48:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.71 Mbit/s
95th percentile per-packet one-way delay: 25.638 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.71 Mbit/s
95th percentile per-packet one-way delay: 25.638 ms
Loss rate: 0.14%
```
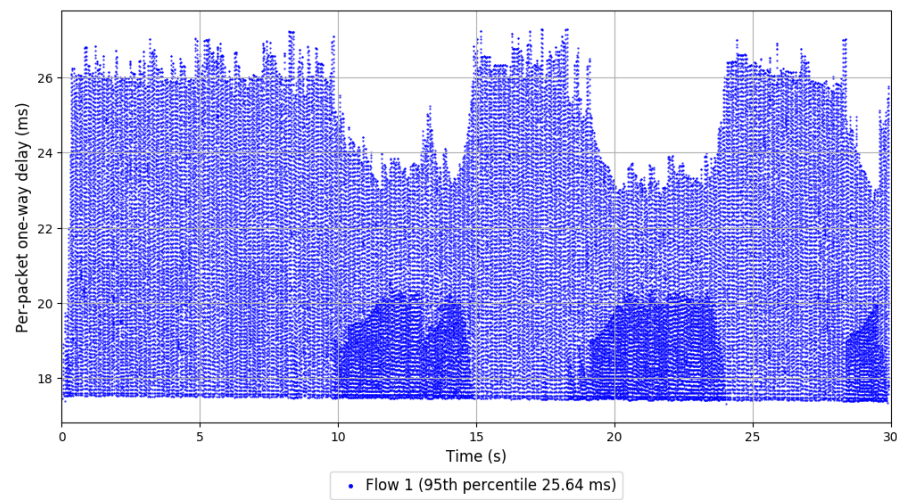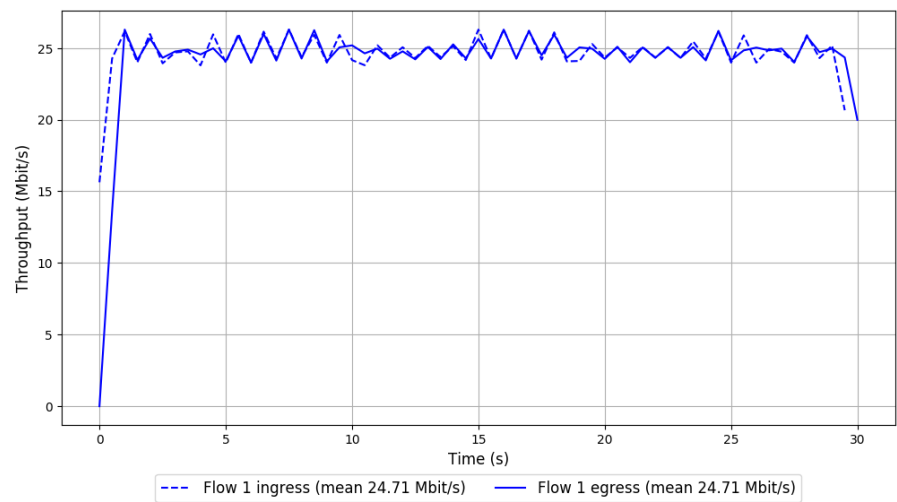
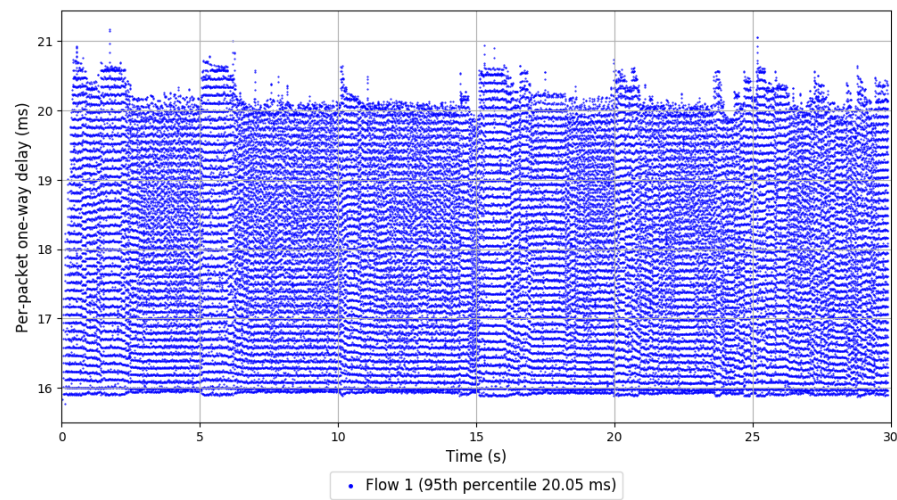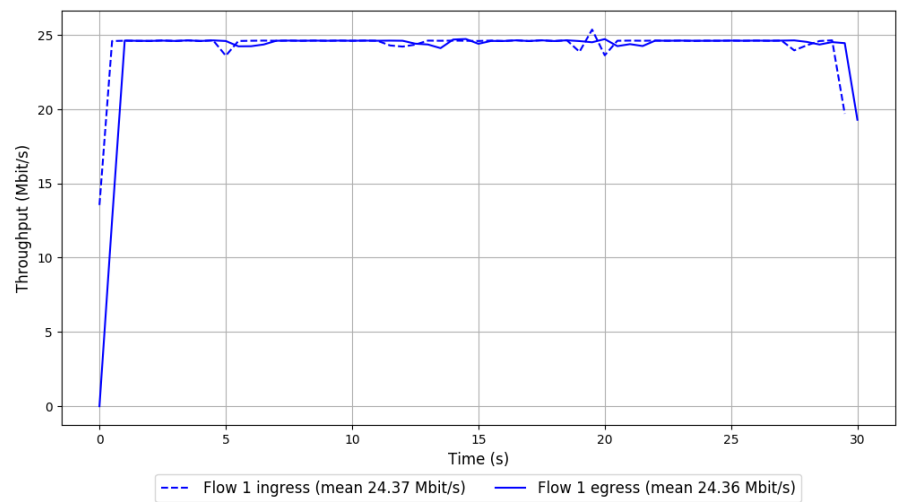Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-02-11 23:06:39
End at: 2019-02-11 23:07:09
Local clock offset: 5.665 ms
Remote clock offset: -3.892 ms


# Below is generated by plot.py at 2019-02-12 00:48:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.36 Mbit/s
95th percentile per-packet one-way delay: 20.053 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 24.36 Mbit/s
95th percentile per-packet one-way delay: 20.053 ms
Loss rate: 0.07%
```

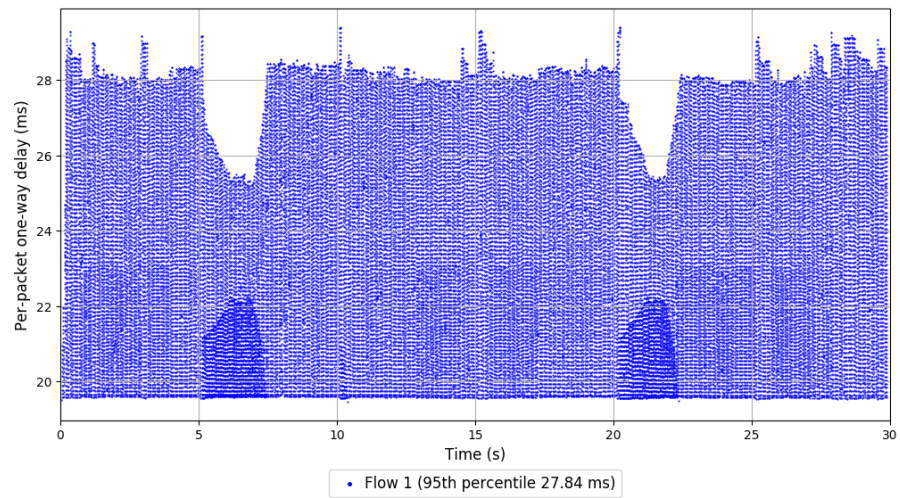Run 2: Report of Sprout — Data Link
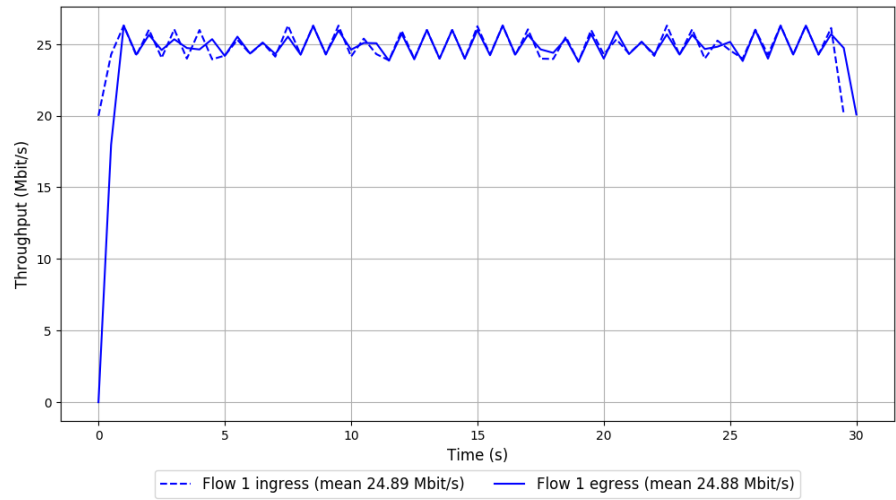

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```
Run 3: Statistics of Sprout

Start at: 2019-02-11 23:31:32
End at: 2019-02-11 23:32:02
Local clock offset: 7.999 ms
Remote clock offset: -6.873 ms


# Below is generated by plot.py at 2019-02-12 00:48:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.88 Mbit/s
95th percentile per-packet one-way delay: 27.844 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.88 Mbit/s
95th percentile per-packet one-way delay: 27.844 ms
Loss rate: 0.14%
```

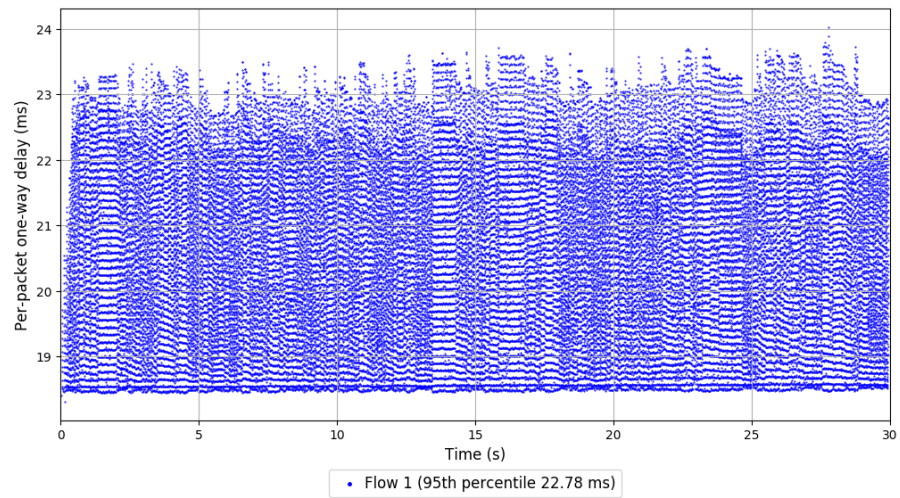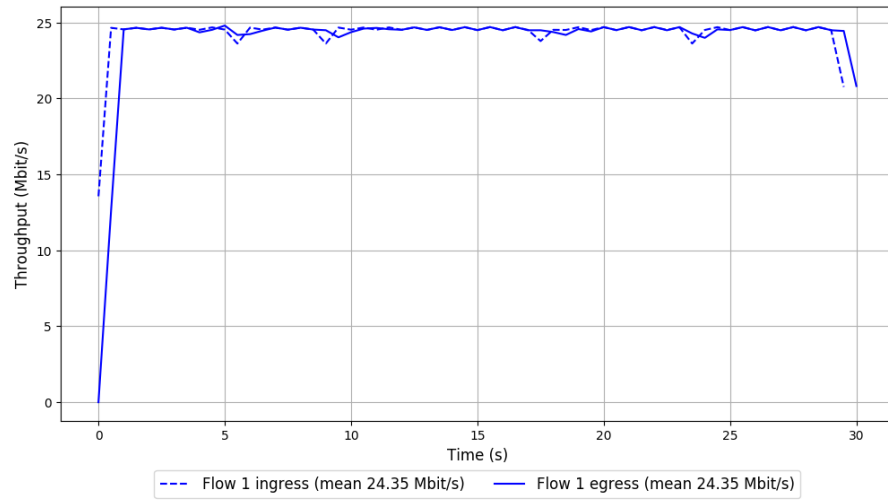## Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-02-11 23:56:37
End at: 2019-02-11 23:57:07
Local clock offset: 0.811 ms
Remote clock offset: -7.255 ms


# Below is generated by plot.py at 2019-02-12 00:48:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.35 Mbit/s
95th percentile per-packet one-way delay: 22.782 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 24.35 Mbit/s
95th percentile per-packet one-way delay: 22.782 ms
Loss rate: 0.07%
```
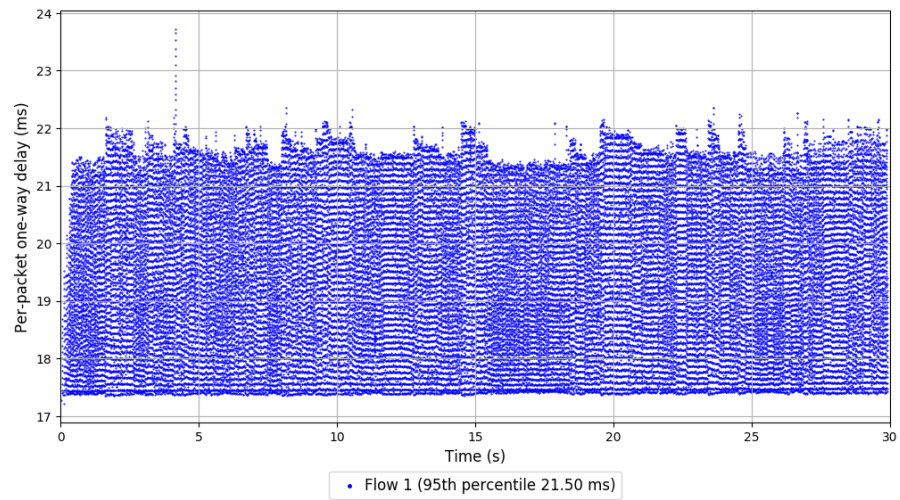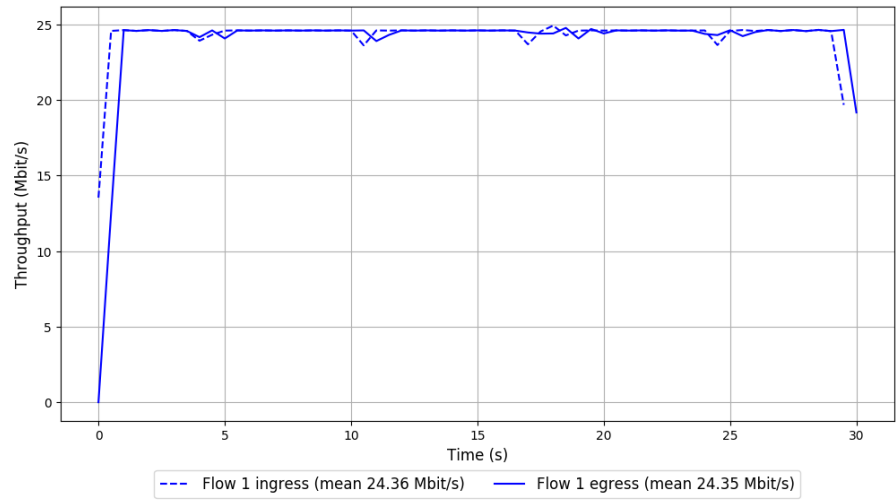
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-02-12 00:21:39
End at: 2019-02-12 00:22:09
Local clock offset: -1.093 ms
Remote clock offset: -6.538 ms


# Below is generated by plot.py at 2019-02-12 00:48:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.35 Mbit/s
95th percentile per-packet one-way delay: 21.495 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 24.35 Mbit/s
95th percentile per-packet one-way delay: 21.495 ms
Loss rate: 0.10%
```

Run 5: Report of Sprout — Data Link

Flow 1 ingress (mean 24.36 Mbit/s) — Flow 1 egress (mean 24.35 Mbit/s)

Flow 1 (95th percentile 21.50 ms)

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

Start at: 2019-02-11 22:35:43
End at: 2019-02-11 22:36:13
Local clock offset: 2.45 ms
Remote clock offset: -4.449 ms


# Below is generated by plot.py at 2019-02-12 00:49:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.07 Mbit/s
95th percentile per-packet one-way delay: 21.251 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 92.07 Mbit/s
95th percentile per-packet one-way delay: 21.251 ms
Loss rate: 0.08%
```
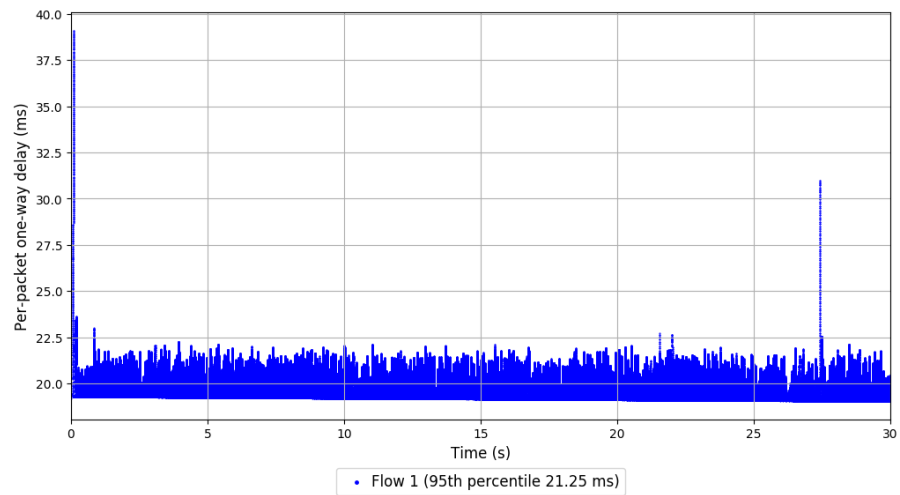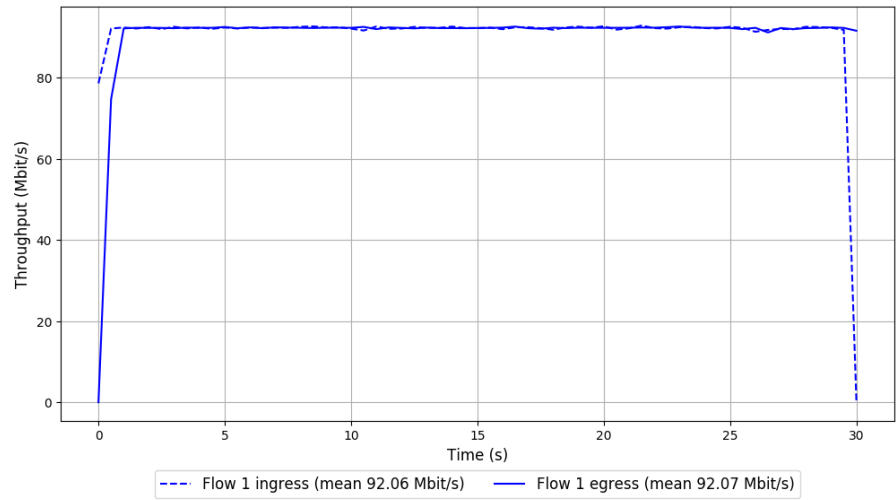
Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 92.06 Mbit/s) ---- Flow 1 egress (mean 92.07 Mbit/s)

Flow 1 (95th percentile 21.25 ms)

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

Start at: 2019-02-11 23:00:43
End at: 2019-02-11 23:01:13
Local clock offset: 6.085 ms
Remote clock offset: -5.798 ms


# Below is generated by plot.py at 2019-02-12 00:49:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.12 Mbit/s
95th percentile per-packet one-way delay: 20.810 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 92.12 Mbit/s
95th percentile per-packet one-way delay: 20.810 ms
Loss rate: 0.09%
```
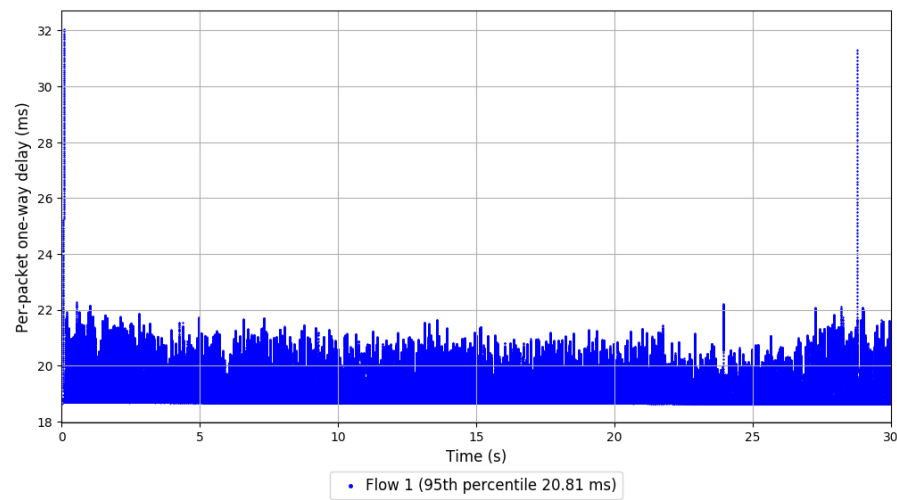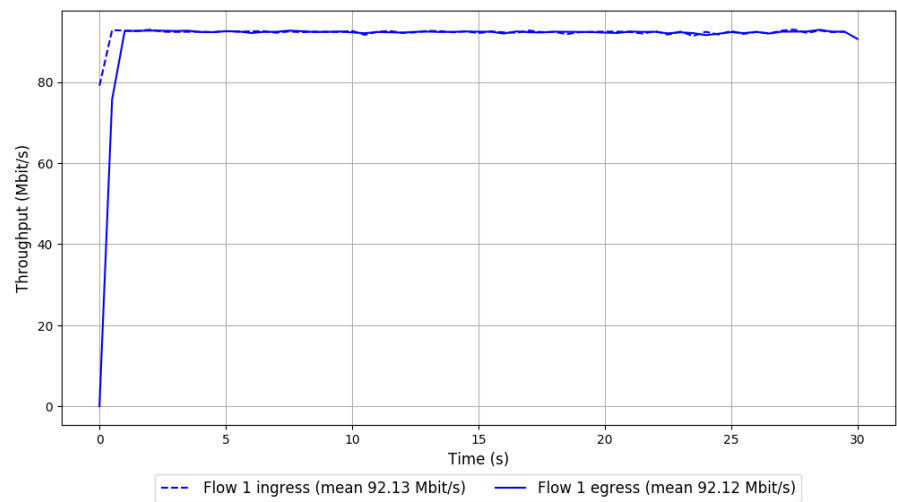
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 92.13 Mbit/s) — Flow 1 egress (mean 92.12 Mbit/s)

· Flow 1 (95th percentile 20.81 ms)

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

Start at: 2019-02-11 23:25:39
End at: 2019-02-11 23:26:09
Local clock offset: 4.792 ms
Remote clock offset: -5.181 ms


# Below is generated by plot.py at 2019-02-12 00:49:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.82 Mbit/s
95th percentile per-packet one-way delay: 17.468 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 91.82 Mbit/s
95th percentile per-packet one-way delay: 17.468 ms
Loss rate: 0.08%
```
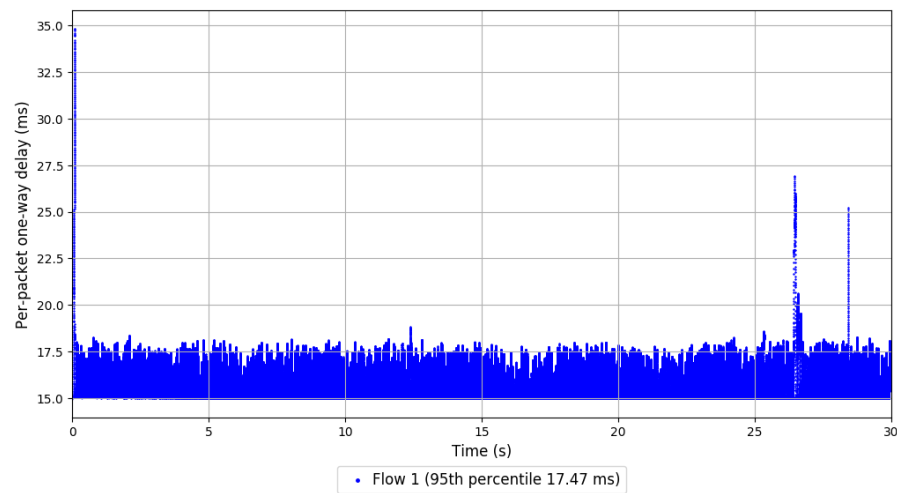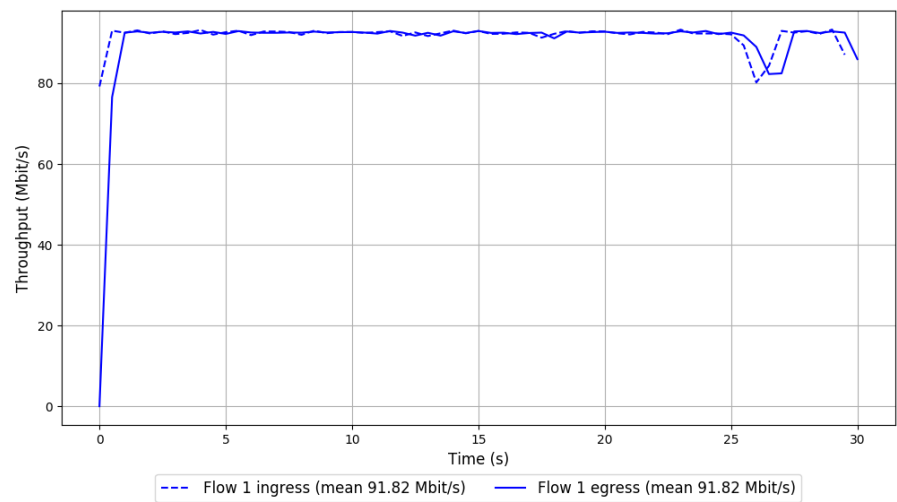
Run 3: Report of TaoVA-100x — Data Link

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

• Flow 1 (95th percentile 17.47 ms)

170

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

Start at: 2019-02-11 23:50:39
End at: 2019-02-11 23:51:09
Local clock offset: -0.21 ms
Remote clock offset: -6.506 ms


# Below is generated by plot.py at 2019-02-12 00:49:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.12 Mbit/s
95th percentile per-packet one-way delay: 18.774 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 92.12 Mbit/s
95th percentile per-packet one-way delay: 18.774 ms
Loss rate: 0.08%
```
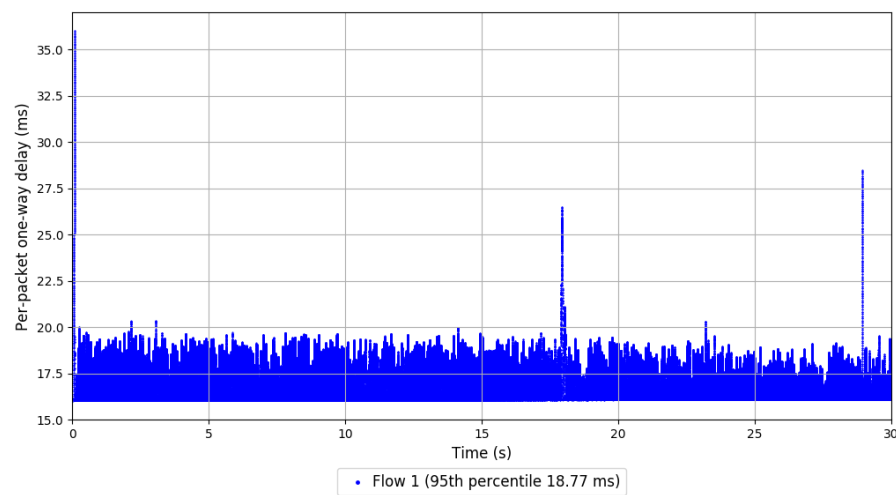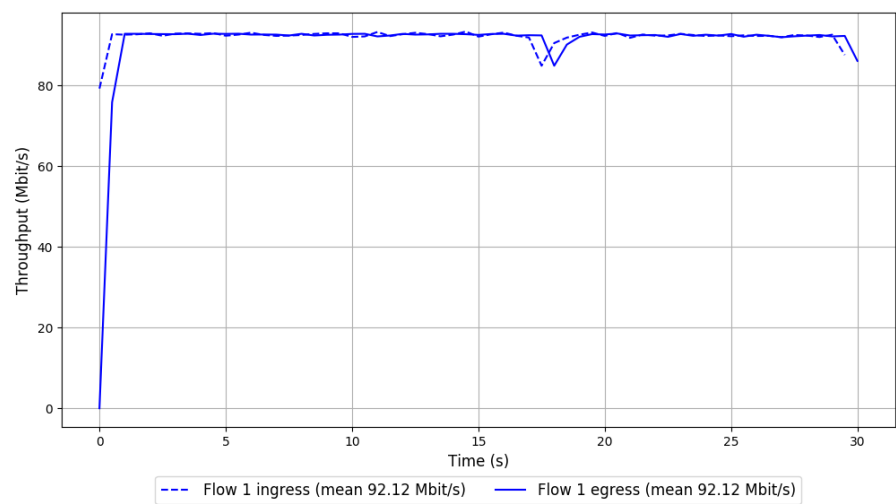
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 92.12 Mbit/s)   Flow 1 egress (mean 92.12 Mbit/s)

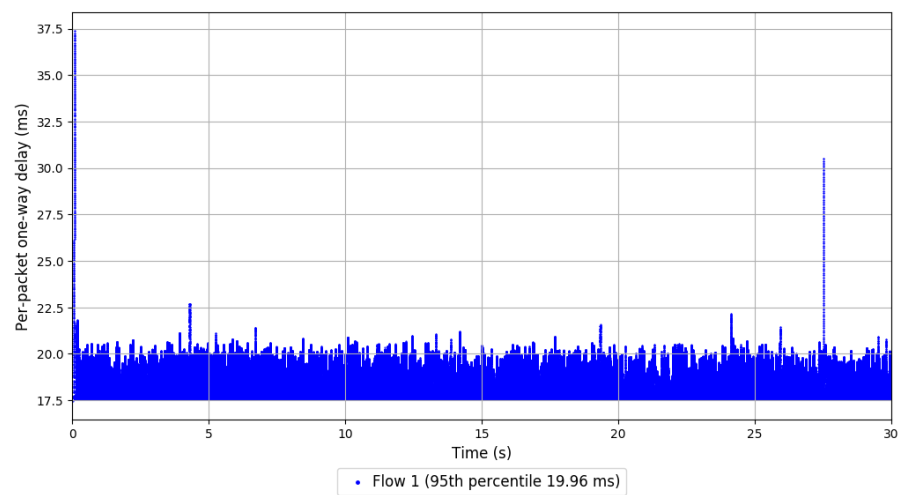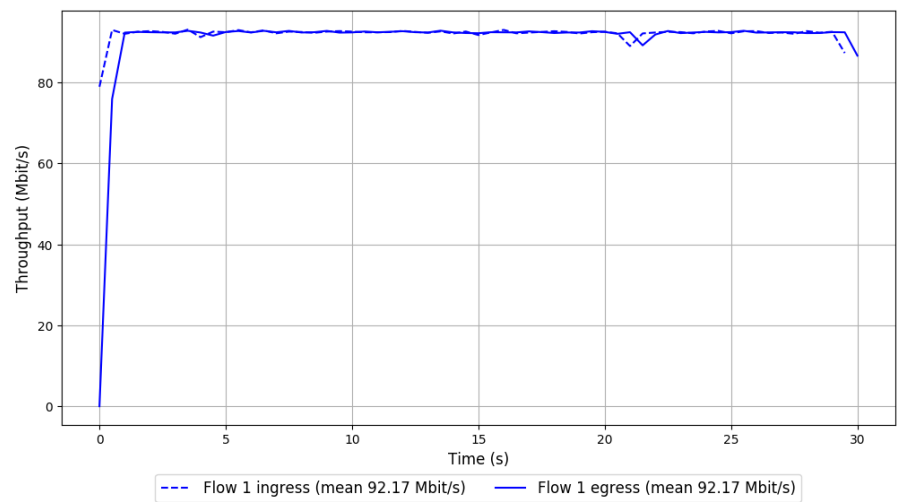

Flow 1 (95th percentile 18.77 ms)

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

Start at: 2019-02-12 00:15:37
End at: 2019-02-12 00:16:07
Local clock offset: -1.377 ms
Remote clock offset: -7.331 ms


# Below is generated by plot.py at 2019-02-12 00:50:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.17 Mbit/s
95th percentile per-packet one-way delay: 19.957 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 92.17 Mbit/s
95th percentile per-packet one-way delay: 19.957 ms
Loss rate: 0.08%
```

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

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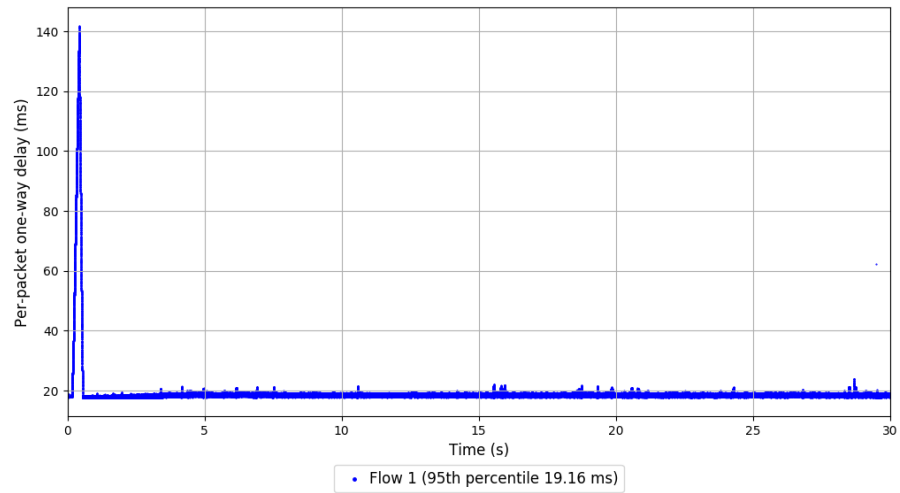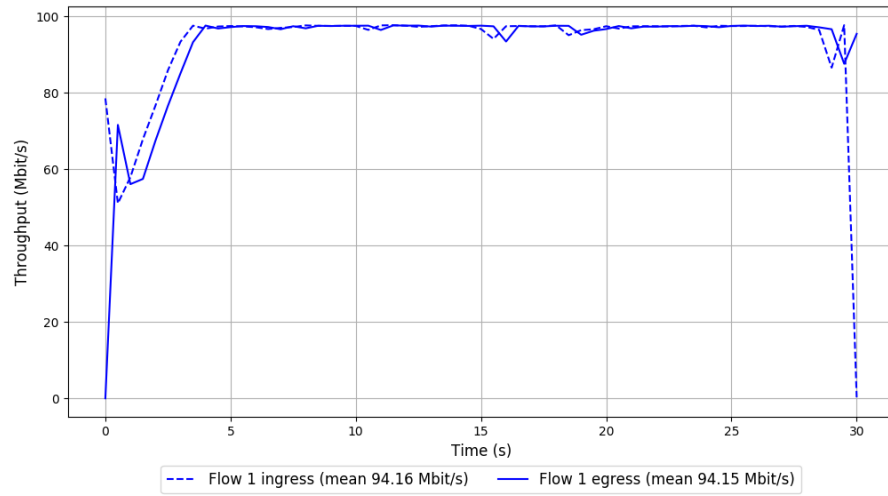

• Flow 1 (95th percentile 19.96 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2019-02-11 22:44:09
End at: 2019-02-11 22:44:39
Local clock offset: 4.912 ms
Remote clock offset: -3.423 ms


# Below is generated by plot.py at 2019-02-12 00:50:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.15 Mbit/s
95th percentile per-packet one-way delay: 19.158 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 94.15 Mbit/s
95th percentile per-packet one-way delay: 19.158 ms
Loss rate: 0.09%
```
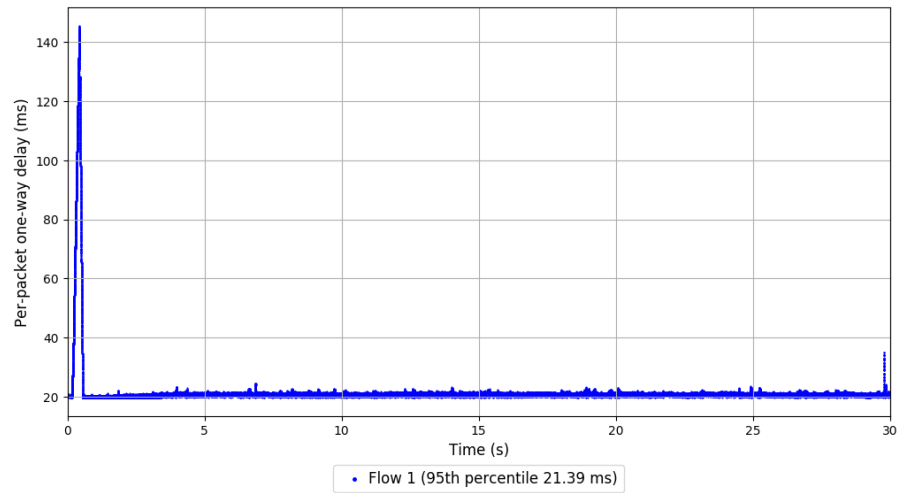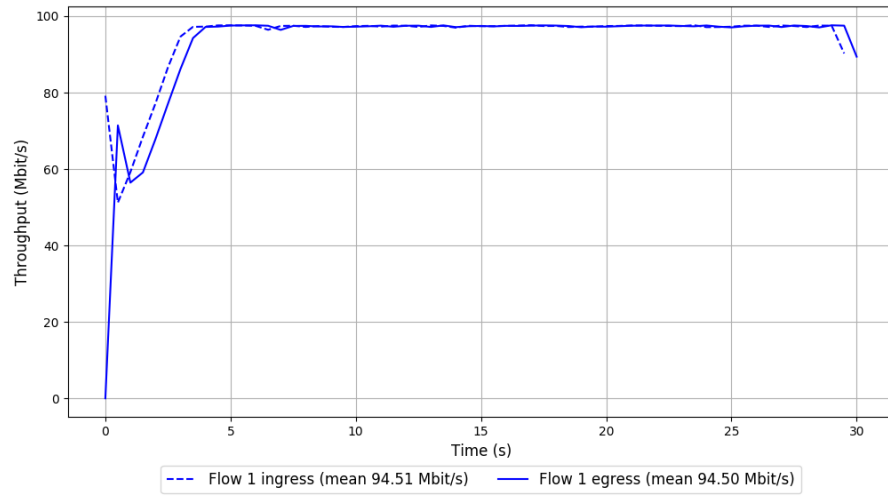
Run 1: Report of TCP Vegas — Data Link

Run 2: Statistics of TCP Vegas

Start at: 2019-02-11 23:08:59
End at: 2019-02-11 23:09:29
Local clock offset: 7.512 ms
Remote clock offset: -6.121 ms

Below is generated by plot.py at 2019-02-12 00:50:03
Datalink statistics
-- Total of 1 flow:
Average throughput: 94.50 Mbit/s
95th percentile per-packet one-way delay: 21.387 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 94.50 Mbit/s
95th percentile per-packet one-way delay: 21.387 ms
Loss rate: 0.09%

Run 2: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 94.51 Mbit/s)   Flow 1 egress (mean 94.50 Mbit/s)

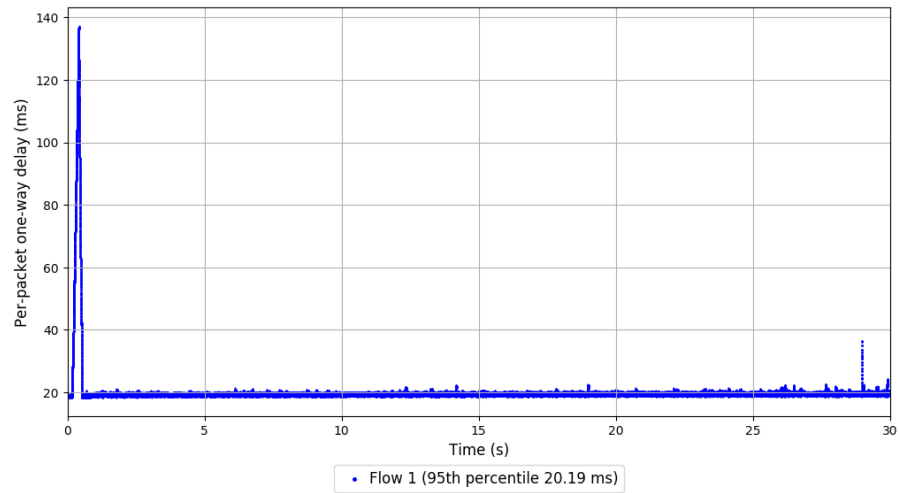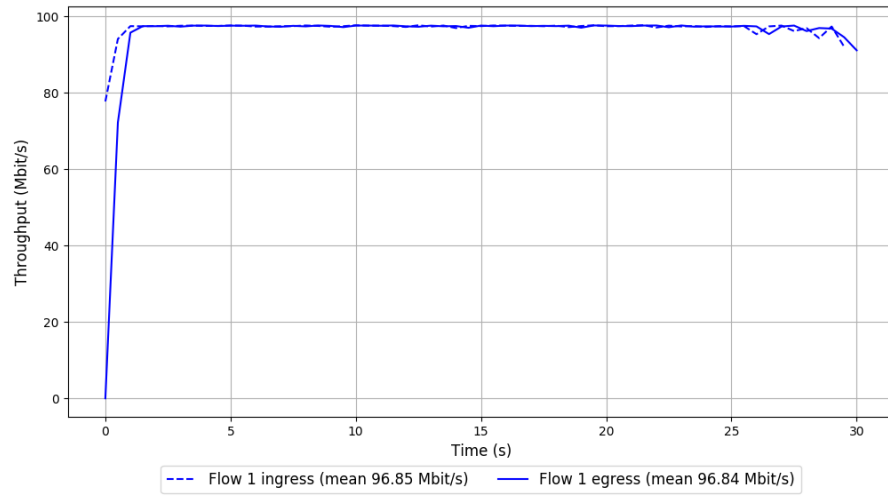Flow 1 (95th percentile 21.39 ms)

```
Run 3: Statistics of TCP Vegas

Start at: 2019-02-11 23:33:50
End at: 2019-02-11 23:34:20
Local clock offset: 7.368 ms
Remote clock offset: -6.529 ms


# Below is generated by plot.py at 2019-02-12 00:50:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.84 Mbit/s
95th percentile per-packet one-way delay: 20.194 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 96.84 Mbit/s
95th percentile per-packet one-way delay: 20.194 ms
Loss rate: 0.09%
```

Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 96.85 Mbit/s)   Flow 1 egress (mean 96.84 Mbit/s)

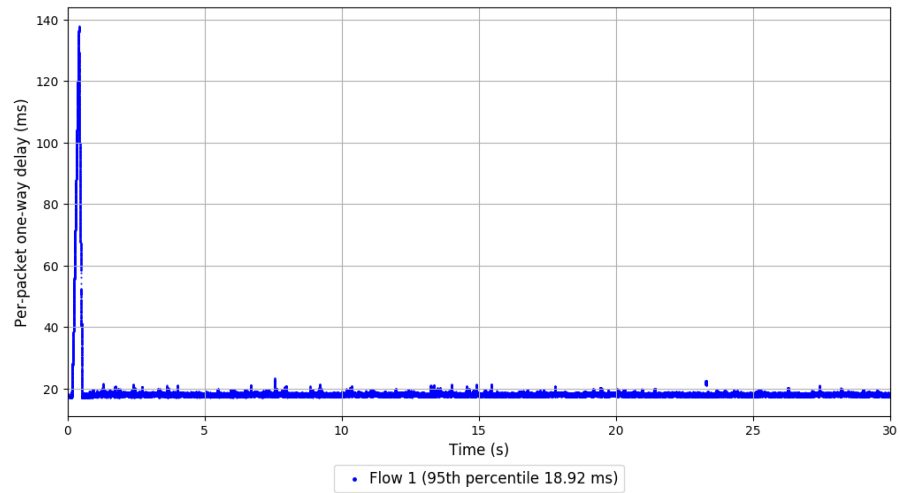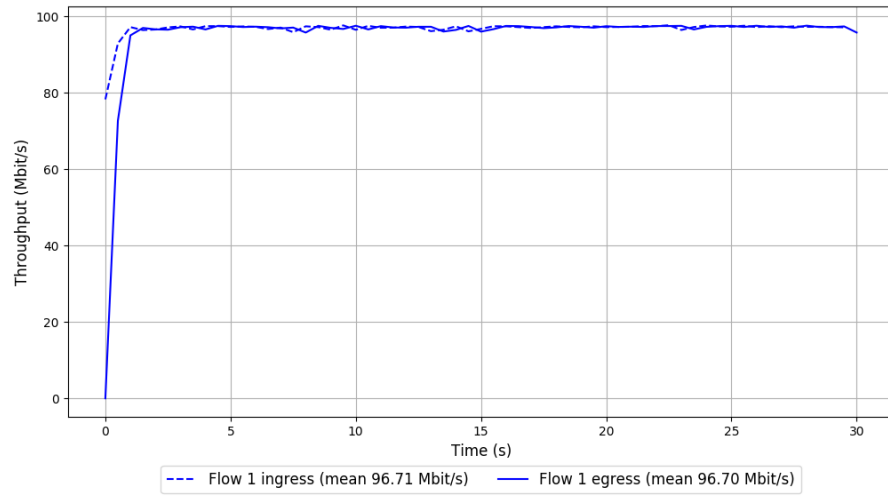

Flow 1 (95th percentile 20.19 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2019-02-11 23:58:54
End at: 2019-02-11 23:59:24
Local clock offset: -0.749 ms
Remote clock offset: -7.407 ms


# Below is generated by plot.py at 2019-02-12 00:50:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 96.70 Mbit/s
95th percentile per-packet one-way delay: 18.916 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 96.70 Mbit/s
95th percentile per-packet one-way delay: 18.916 ms
Loss rate: 0.08%
```
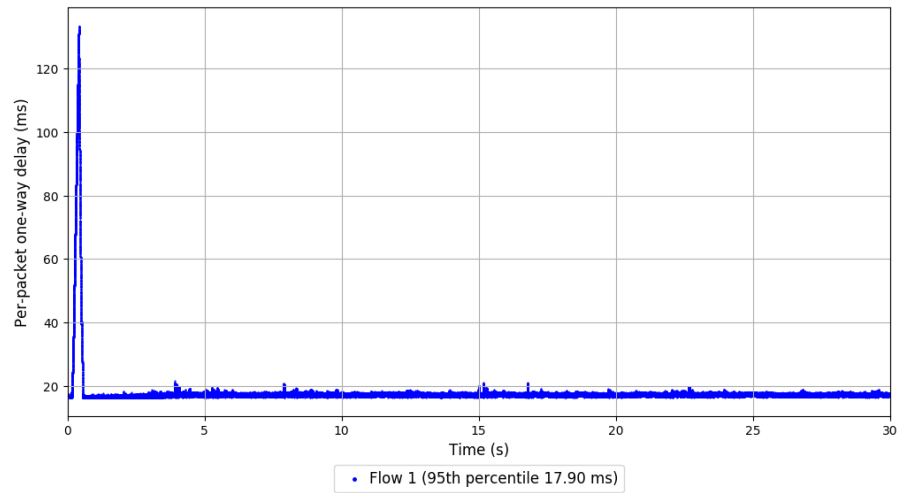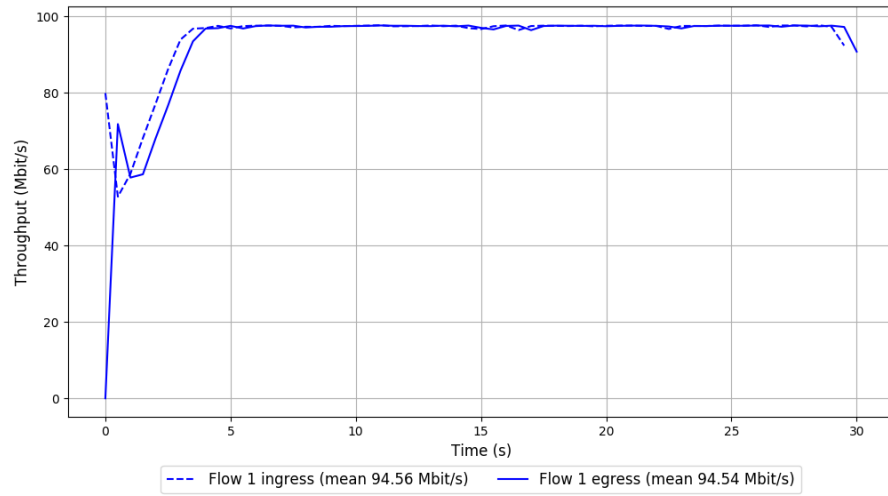
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-02-12 00:24:00
End at: 2019-02-12 00:24:30
Local clock offset: -1.542 ms
Remote clock offset: -5.903 ms

# Below is generated by plot.py at 2019-02-12 00:50:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 94.54 Mbit/s
95th percentile per-packet one-way delay: 17.898 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 94.54 Mbit/s
95th percentile per-packet one-way delay: 17.898 ms
Loss rate: 0.11%
```
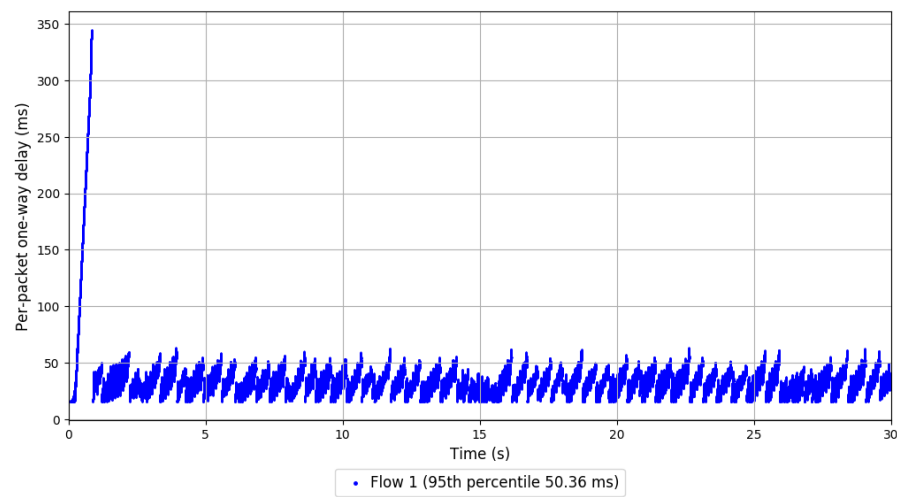
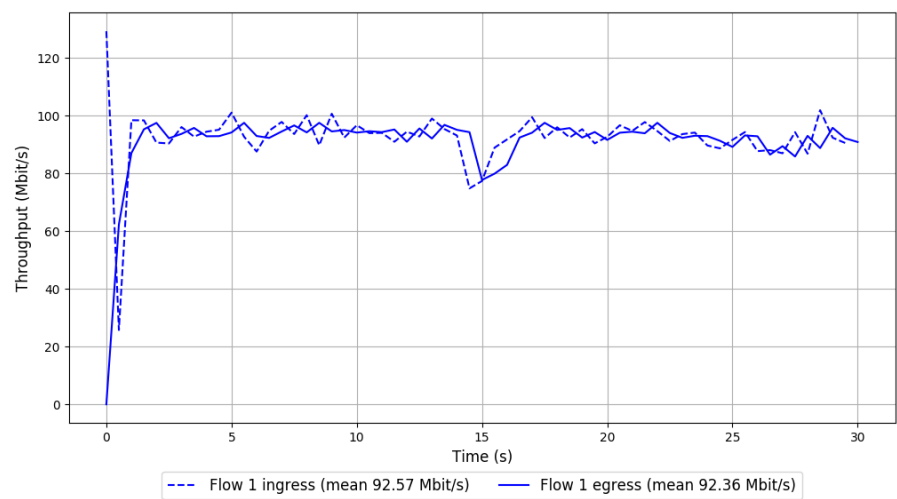## Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2019-02-11 22:38:12
End at: 2019-02-11 22:38:42
Local clock offset: 1.022 ms
Remote clock offset: -3.515 ms

# Below is generated by plot.py at 2019-02-12 00:50:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.36 Mbit/s
95th percentile per-packet one-way delay: 50.358 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 92.36 Mbit/s
95th percentile per-packet one-way delay: 50.358 ms
Loss rate: 0.31%
```
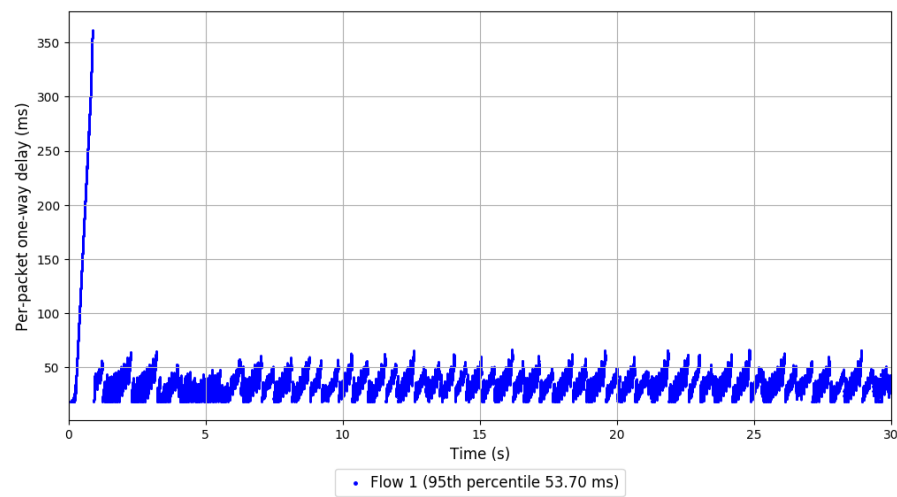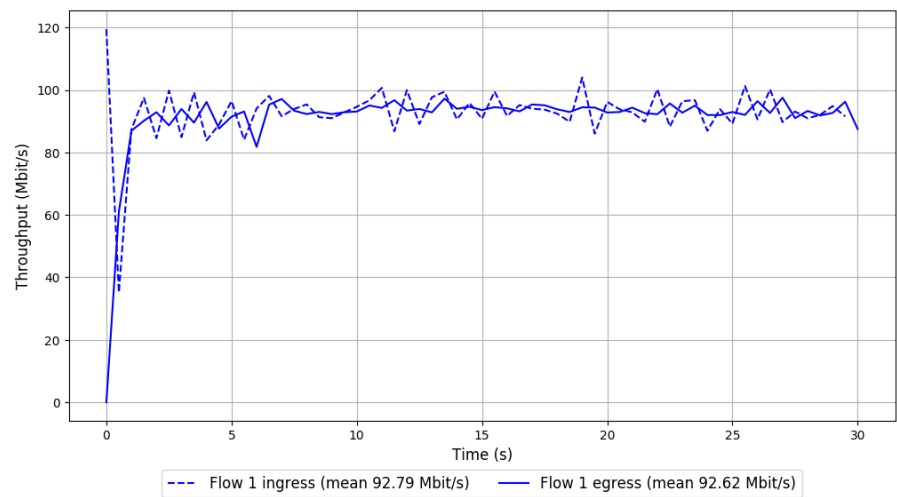
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-02-11 23:03:11
End at: 2019-02-11 23:03:41
Local clock offset: 5.334 ms
Remote clock offset: -6.417 ms


# Below is generated by plot.py at 2019-02-12 00:50:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.62 Mbit/s
95th percentile per-packet one-way delay: 53.700 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 92.62 Mbit/s
95th percentile per-packet one-way delay: 53.700 ms
Loss rate: 0.26%
```

Run 2: Report of Verus — Data Link

Flow 1 ingress (mean 92.79 Mbit/s) —— Flow 1 egress (mean 92.62 Mbit/s)
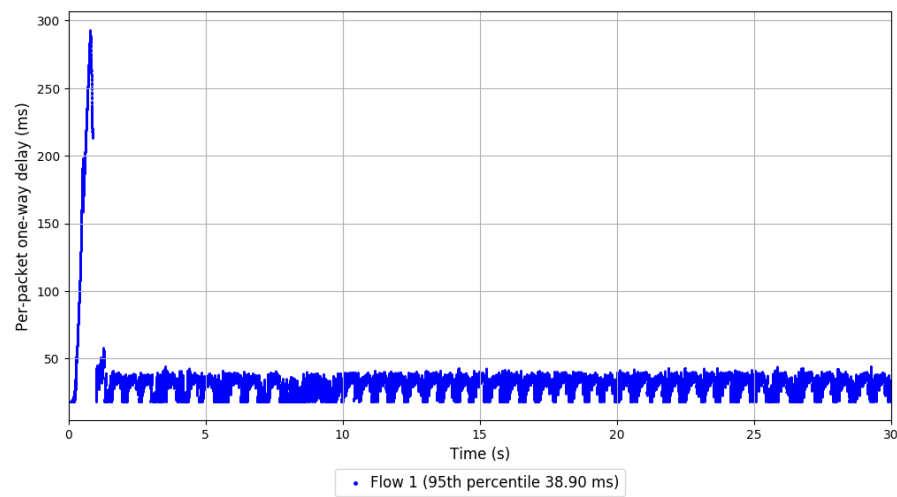
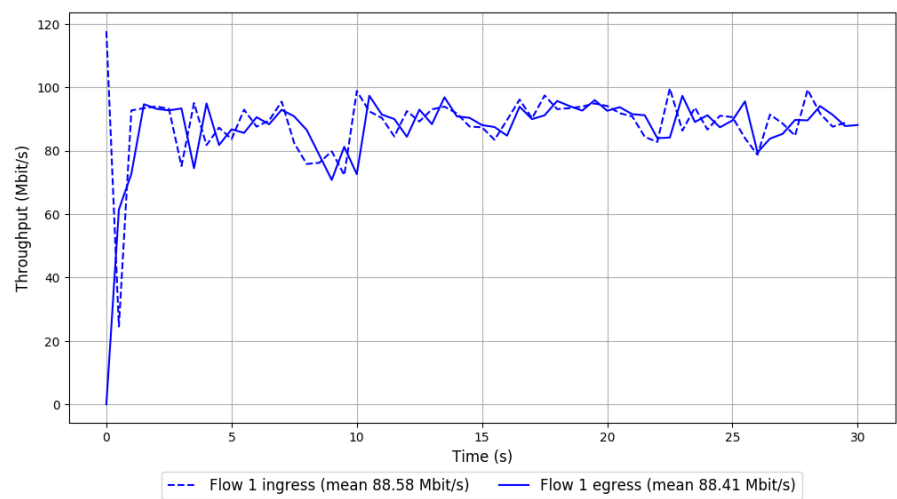

• Flow 1 (95th percentile 53.70 ms)

```
Run 3: Statistics of Verus

Start at: 2019-02-11 23:28:06
End at: 2019-02-11 23:28:36
Local clock offset: 7.611 ms
Remote clock offset: -5.581 ms

# Below is generated by plot.py at 2019-02-12 00:50:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.41 Mbit/s
95th percentile per-packet one-way delay: 38.896 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 88.41 Mbit/s
95th percentile per-packet one-way delay: 38.896 ms
Loss rate: 0.27%
```

Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 88.58 Mbit/s) —— Flow 1 egress (mean 88.41 Mbit/s)

· Flow 1 (95th percentile 38.90 ms)

```
Run 4: Statistics of Verus

Start at: 2019-02-11 23:53:10
End at: 2019-02-11 23:53:40
Local clock offset: -0.722 ms
Remote clock offset: -6.91 ms


# Below is generated by plot.py at 2019-02-12 00:50:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 92.23 Mbit/s
95th percentile per-packet one-way delay: 52.307 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 92.23 Mbit/s
95th percentile per-packet one-way delay: 52.307 ms
Loss rate: 0.30%
```
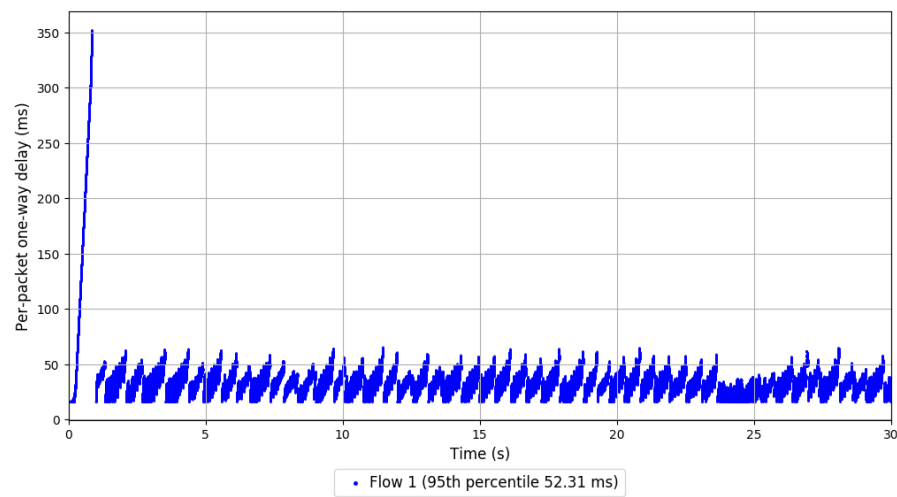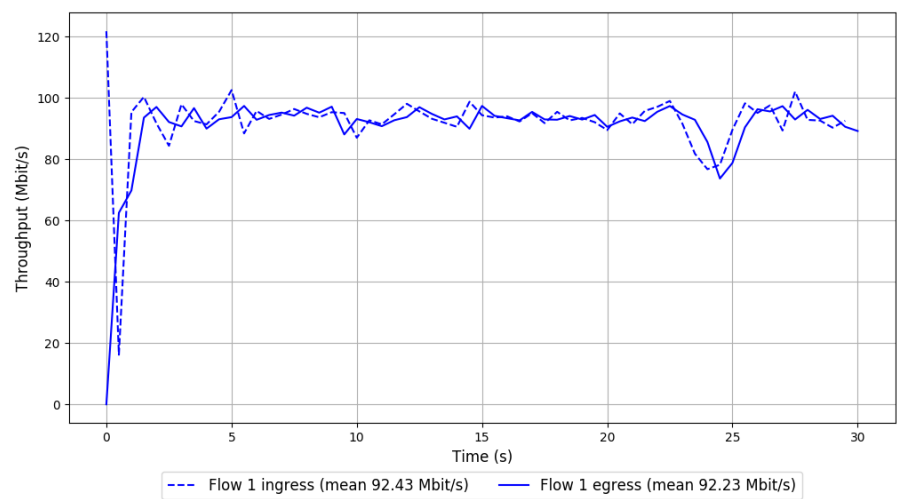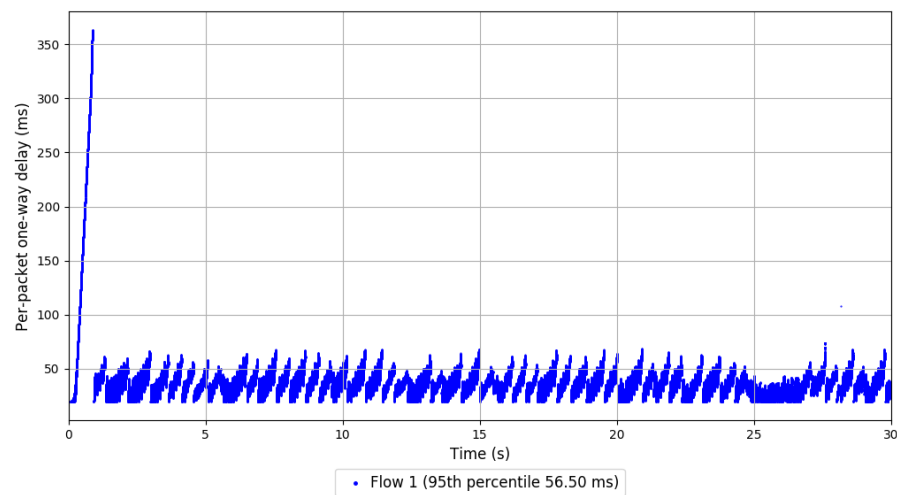
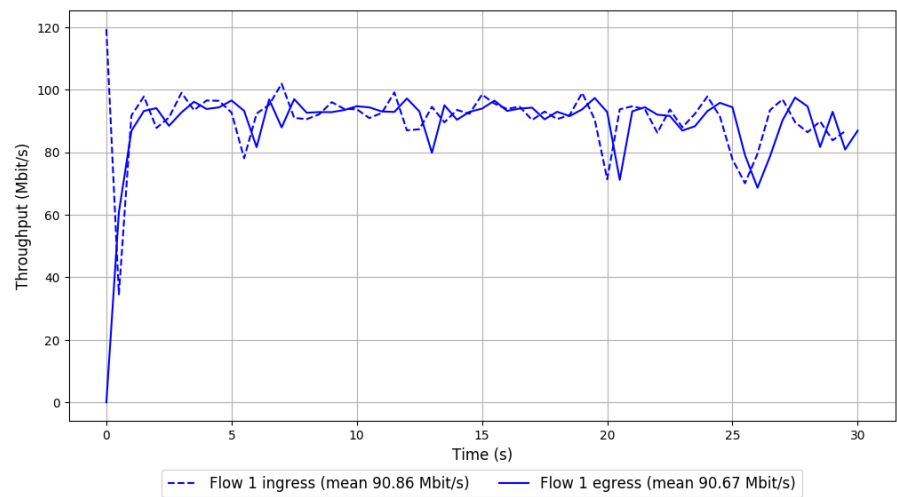## Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-02-12 00:18:10
End at: 2019-02-12 00:18:40
Local clock offset: 0.326 ms
Remote clock offset: -7.221 ms


# Below is generated by plot.py at 2019-02-12 00:51:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.67 Mbit/s
95th percentile per-packet one-way delay: 56.500 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 90.67 Mbit/s
95th percentile per-packet one-way delay: 56.500 ms
Loss rate: 0.28%
```

Run 5: Report of Verus — Data Link

Flow 1 ingress (mean 90.86 Mbit/s)   Flow 1 egress (mean 90.67 Mbit/s)

Flow 1 (95th percentile 56.50 ms)

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-02-11 22:54:55
End at: 2019-02-11 22:55:25
Local clock offset: 4.265 ms
Remote clock offset: -3.943 ms


# Below is generated by plot.py at 2019-02-12 00:51:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.85 Mbit/s
95th percentile per-packet one-way delay: 16.271 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 87.85 Mbit/s
95th percentile per-packet one-way delay: 16.271 ms
Loss rate: 0.09%
```
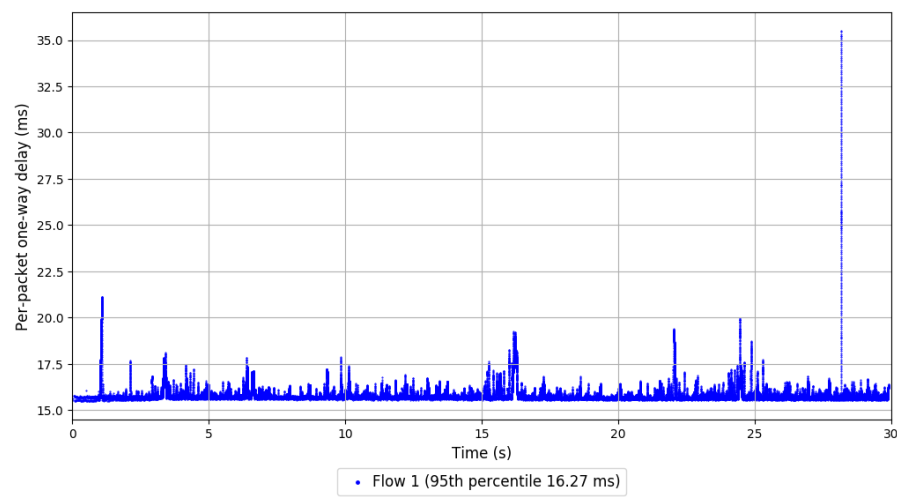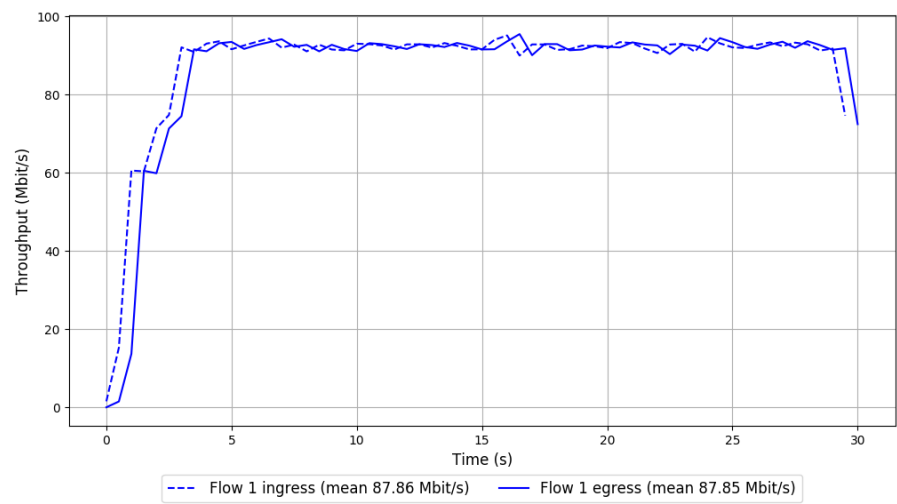
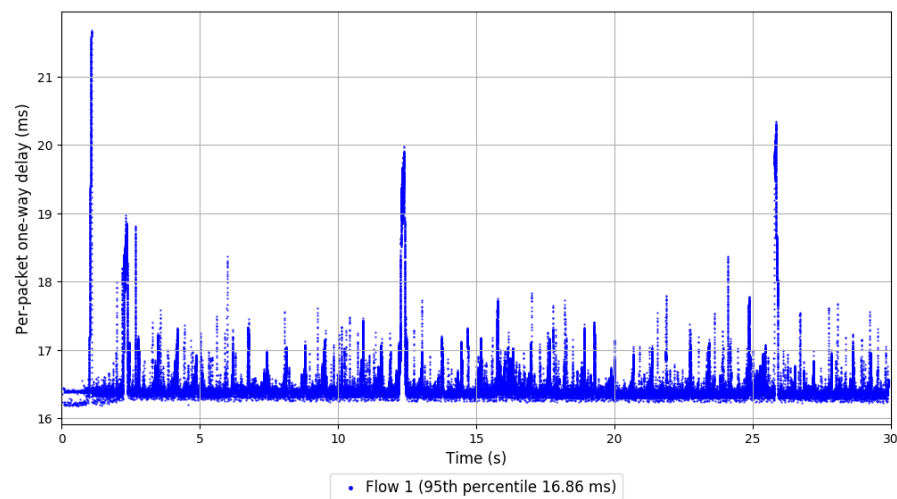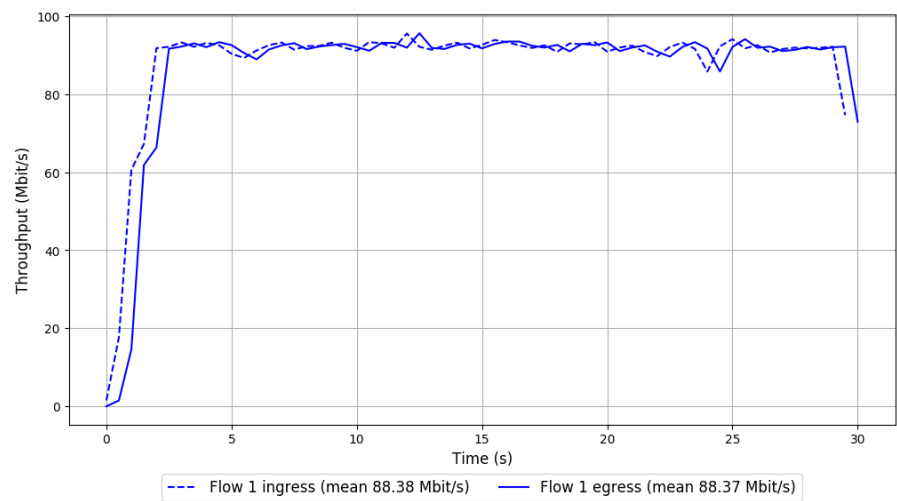# Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-02-11 23:19:49
End at: 2019-02-11 23:20:19
Local clock offset: 6.361 ms
Remote clock offset: -4.536 ms


# Below is generated by plot.py at 2019-02-12 00:51:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.37 Mbit/s
95th percentile per-packet one-way delay: 16.861 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 88.37 Mbit/s
95th percentile per-packet one-way delay: 16.861 ms
Loss rate: 0.09%
```

Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-02-11 23:44:47
End at: 2019-02-11 23:45:17
Local clock offset: 3.378 ms
Remote clock offset: -6.42 ms


# Below is generated by plot.py at 2019-02-12 00:51:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.44 Mbit/s
95th percentile per-packet one-way delay: 19.375 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 88.44 Mbit/s
95th percentile per-packet one-way delay: 19.375 ms
Loss rate: 0.09%
```
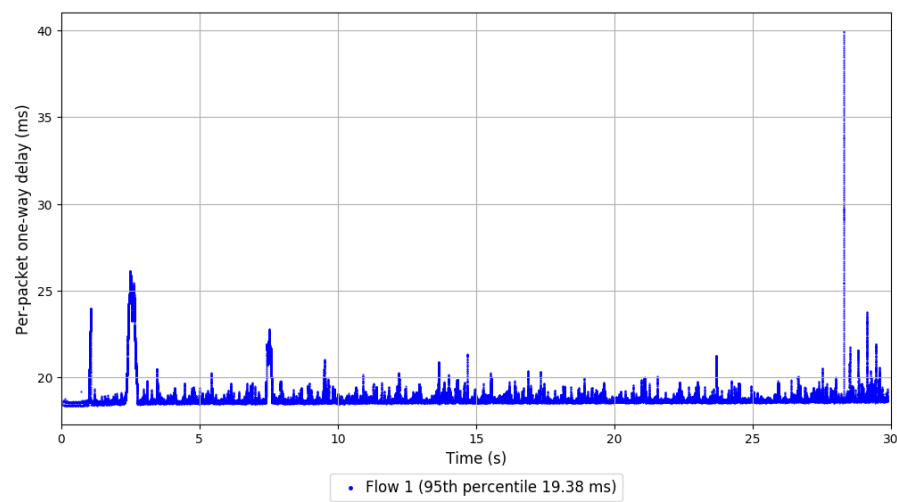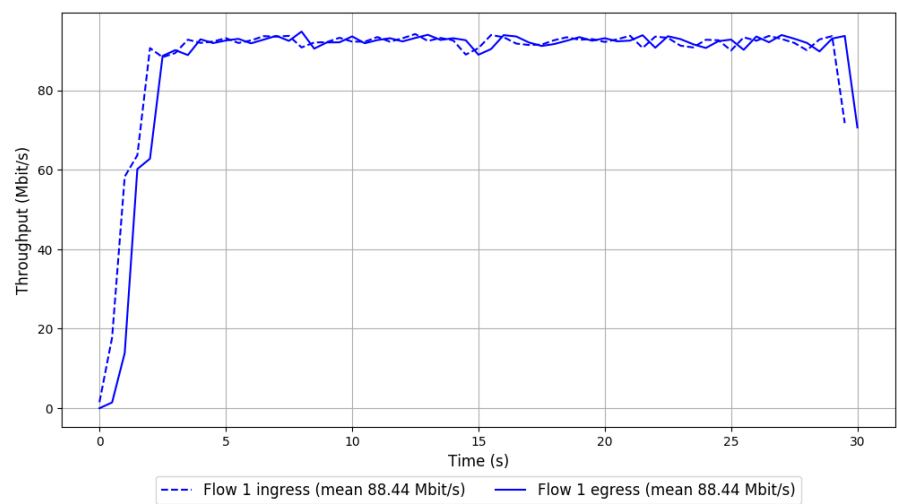
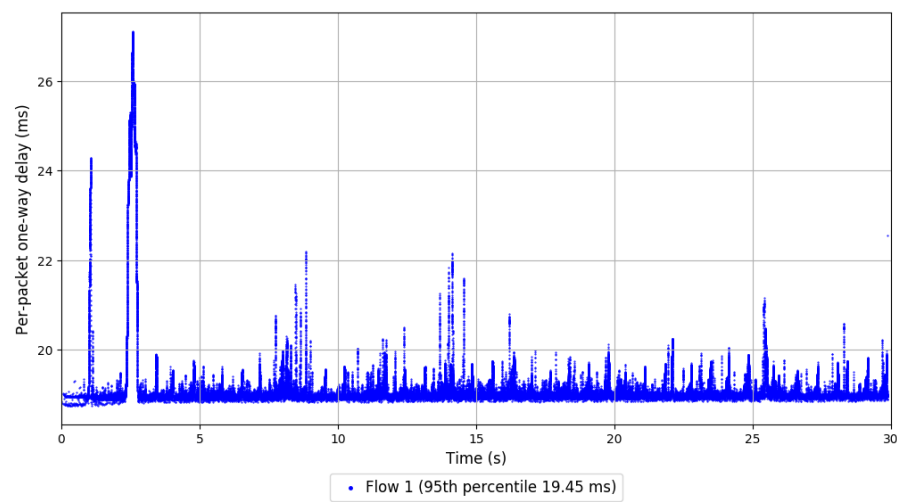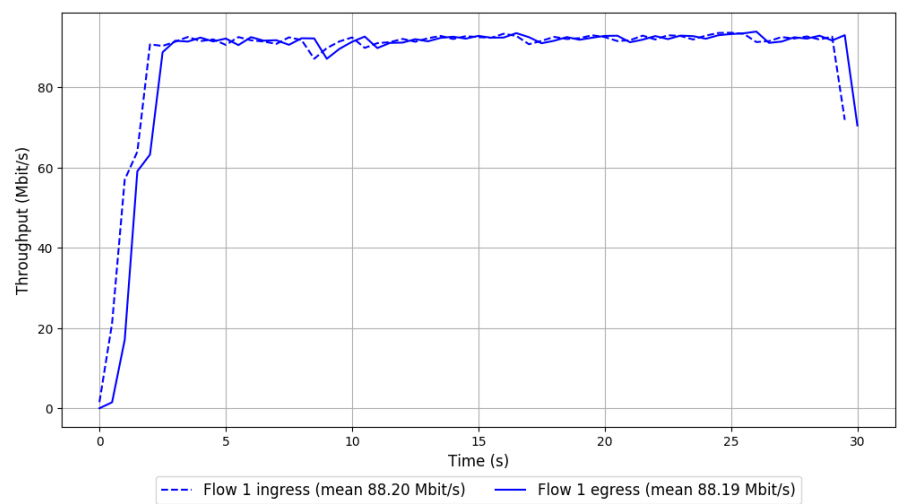Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-02-12 00:09:45
End at: 2019-02-12 00:10:15
Local clock offset: 0.384 ms
Remote clock offset: -7.294 ms


# Below is generated by plot.py at 2019-02-12 00:51:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.19 Mbit/s
95th percentile per-packet one-way delay: 19.451 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 88.19 Mbit/s
95th percentile per-packet one-way delay: 19.451 ms
Loss rate: 0.09%
```

Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 88.20 Mbit/s) — — —   Flow 1 egress (mean 88.19 Mbit/s) ———

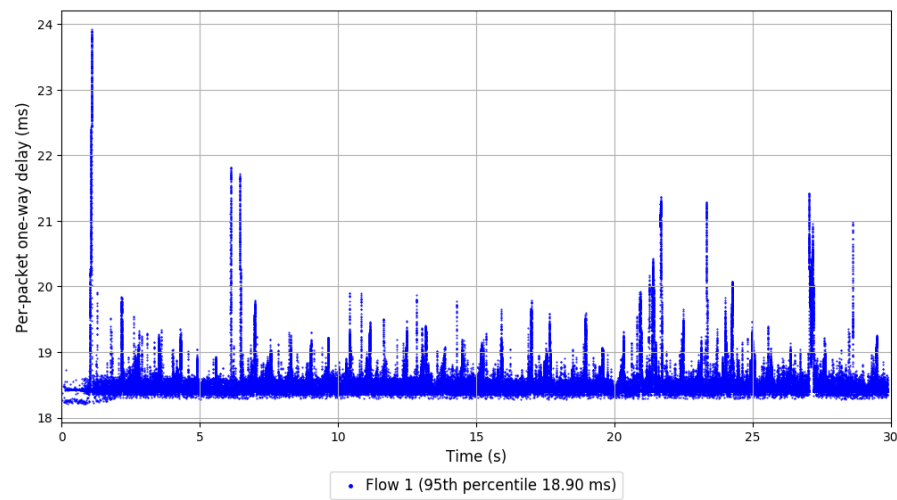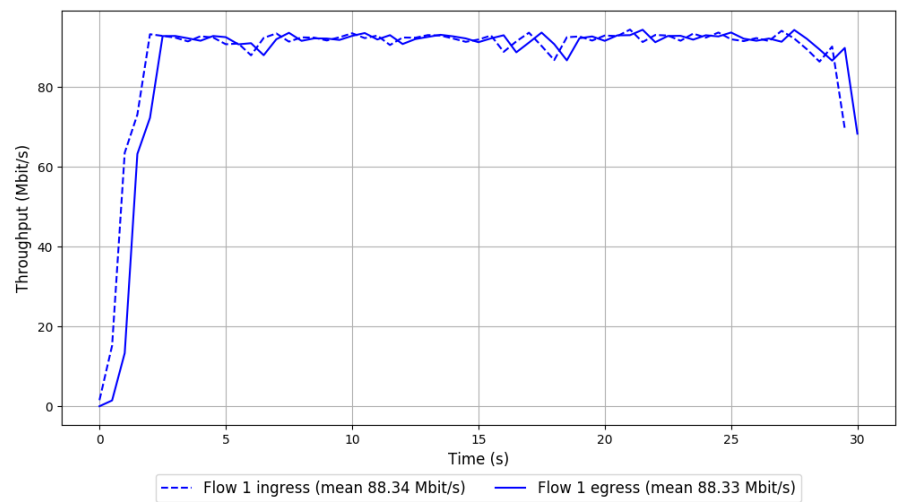

• Flow 1 (95th percentile 19.45 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-02-12 00:35:01
End at: 2019-02-12 00:35:31
Local clock offset: -0.507 ms
Remote clock offset: -6.281 ms


# Below is generated by plot.py at 2019-02-12 00:51:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.33 Mbit/s
95th percentile per-packet one-way delay: 18.896 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 88.33 Mbit/s
95th percentile per-packet one-way delay: 18.896 ms
Loss rate: 0.09%
```

Run 5: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 88.34 Mbit/s)   Flow 1 egress (mean 88.33 Mbit/s)
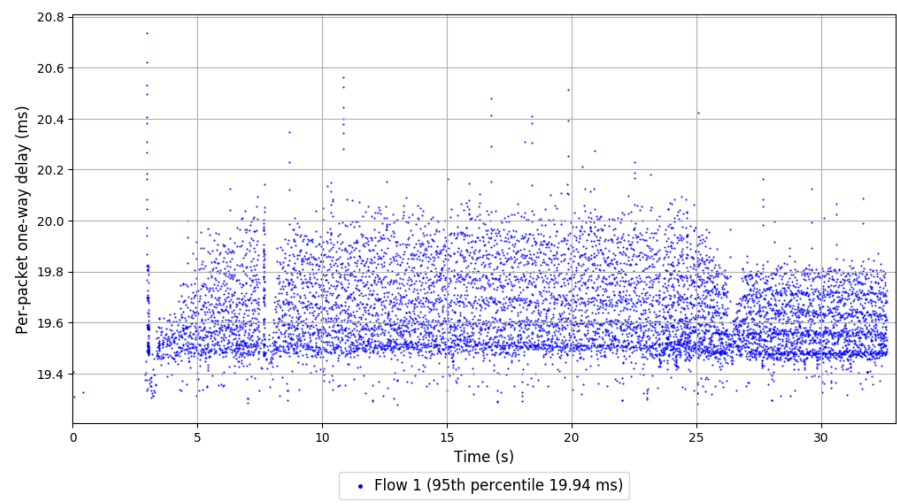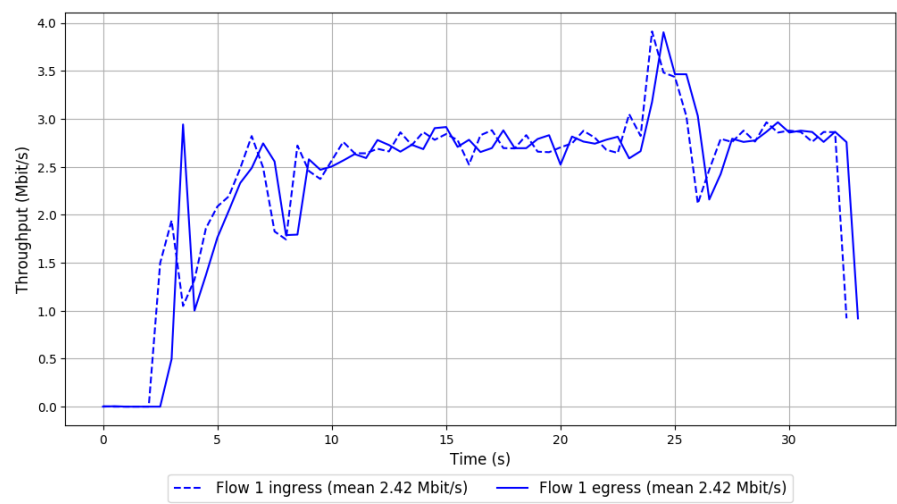

Flow 1 (95th percentile 18.90 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2019-02-11 22:31:09
End at: 2019-02-11 22:31:39
Local clock offset: 1.286 ms
Remote clock offset: -4.753 ms


# Below is generated by plot.py at 2019-02-12 00:51:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 19.942 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 19.942 ms
Loss rate: 0.13%
```

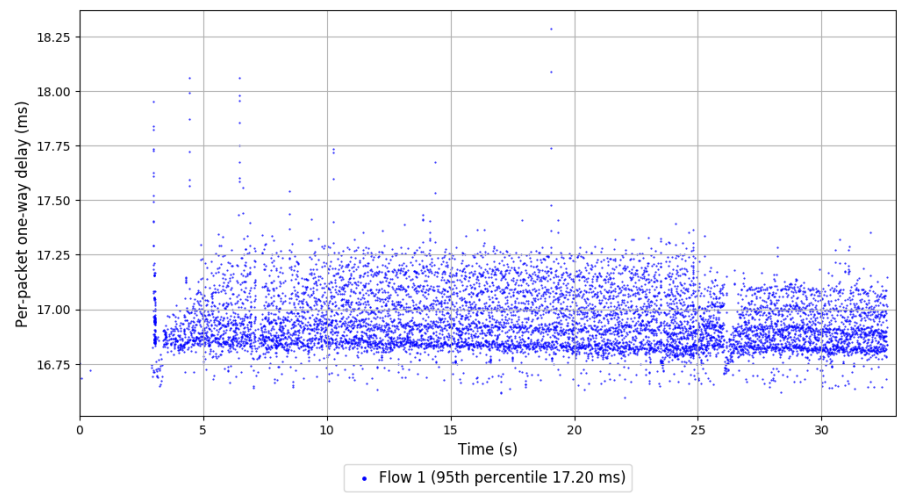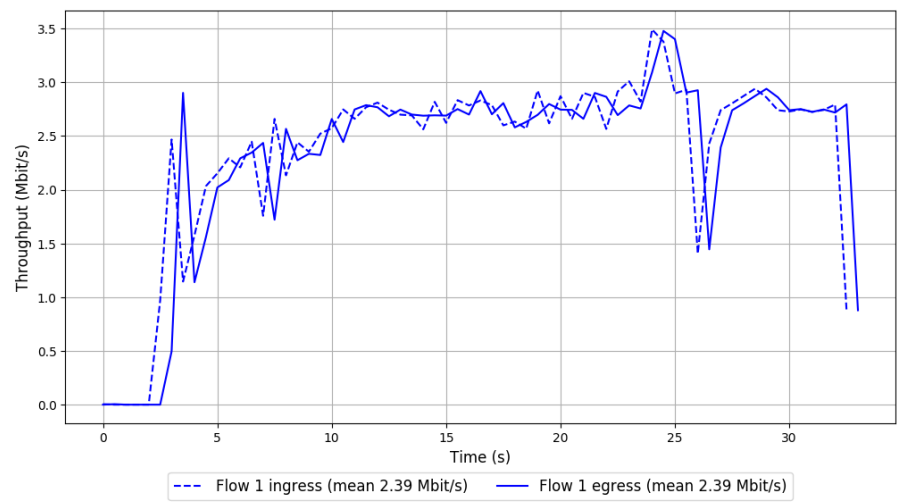## Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-02-11 22:56:06
End at: 2019-02-11 22:56:36
Local clock offset: 6.104 ms
Remote clock offset: -3.389 ms


# Below is generated by plot.py at 2019-02-12 00:51:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 17.202 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 17.202 ms
Loss rate: 0.06%
```

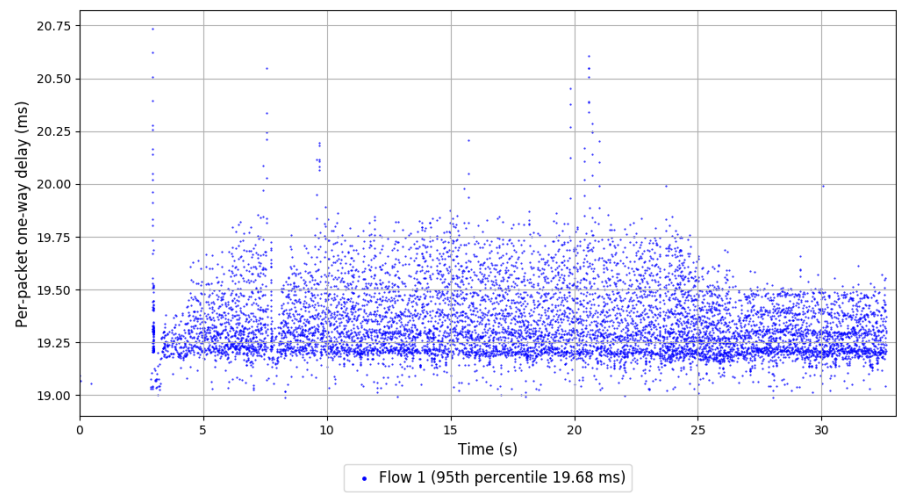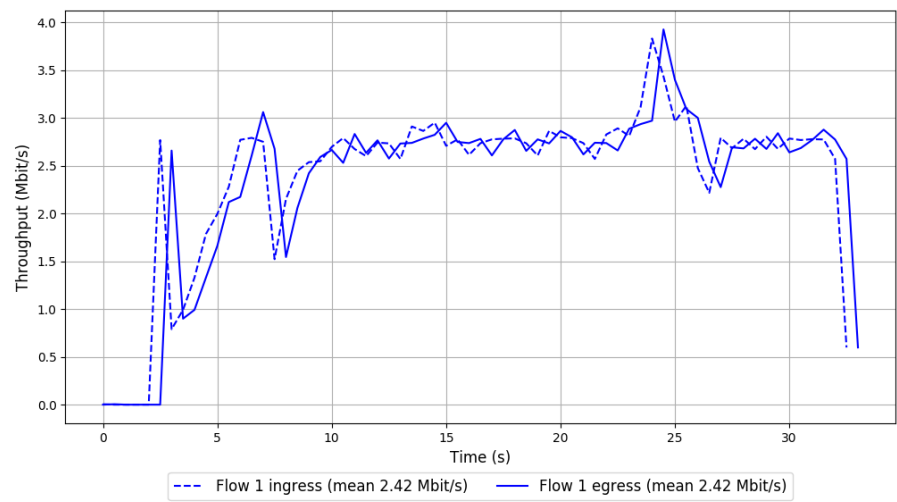Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-02-11 23:21:00
End at: 2019-02-11 23:21:30
Local clock offset: 7.481 ms
Remote clock offset: -6.298 ms


# Below is generated by plot.py at 2019-02-12 00:51:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 19.676 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 19.676 ms
Loss rate: 0.06%
```

Run 3: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.42 Mbit/s)   Flow 1 egress (mean 2.42 Mbit/s)
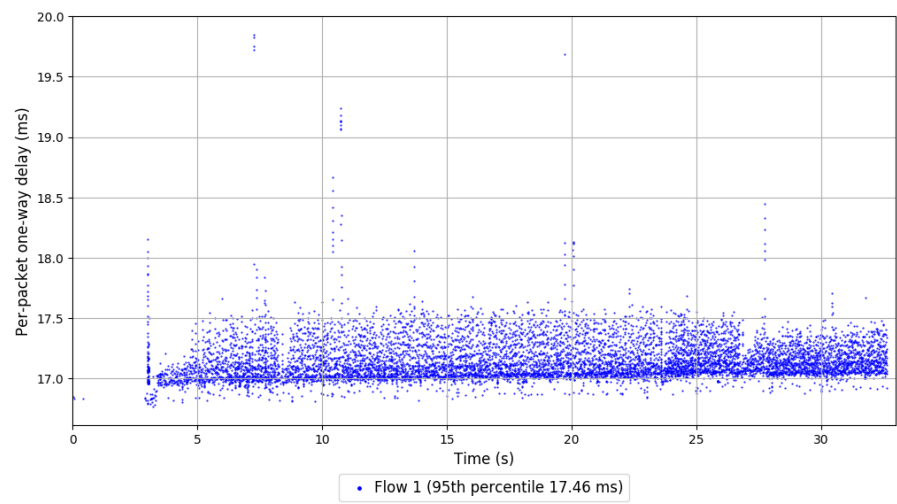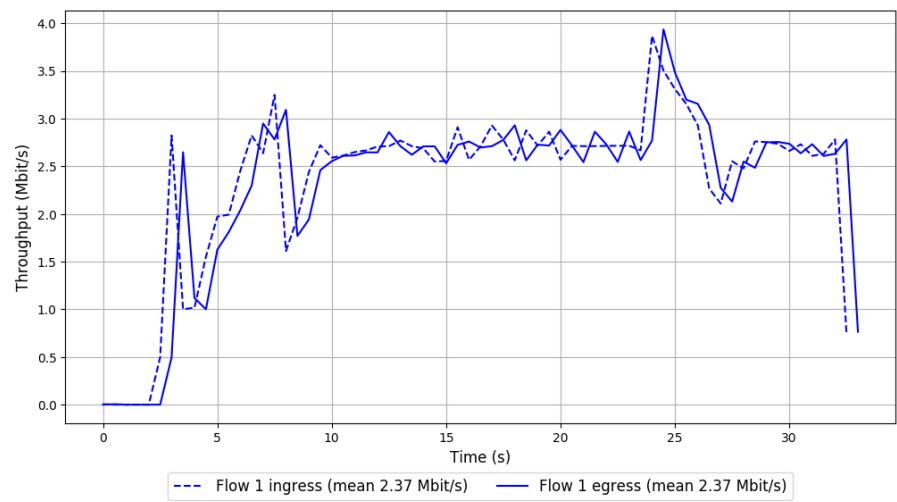

Flow 1 (95th percentile 19.68 ms)

```
Run 4: Statistics of WebRTC media

Start at: 2019-02-11 23:46:02
End at: 2019-02-11 23:46:32
Local clock offset: 1.81 ms
Remote clock offset: -6.129 ms


# Below is generated by plot.py at 2019-02-12 00:51:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 17.457 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 17.457 ms
Loss rate: 0.07%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-02-12 00:10:58
End at: 2019-02-12 00:11:28
Local clock offset: 1.116 ms
Remote clock offset: -5.998 ms


# Below is generated by plot.py at 2019-02-12 00:51:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 18.920 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 18.920 ms
Loss rate: 0.06%
```

Run 5: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.40 Mbit/s)   Flow 1 egress (mean 2.40 Mbit/s)

Flow 1 (95th percentile 18.92 ms)