Pantheon Report

Generated at 2019-07-12 02:09:33 (UTC).

Data path: AWS California 1 on `ens5` (*local*) →Stanford on `eno1` (*remote*).

Repeated the test of 24 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.
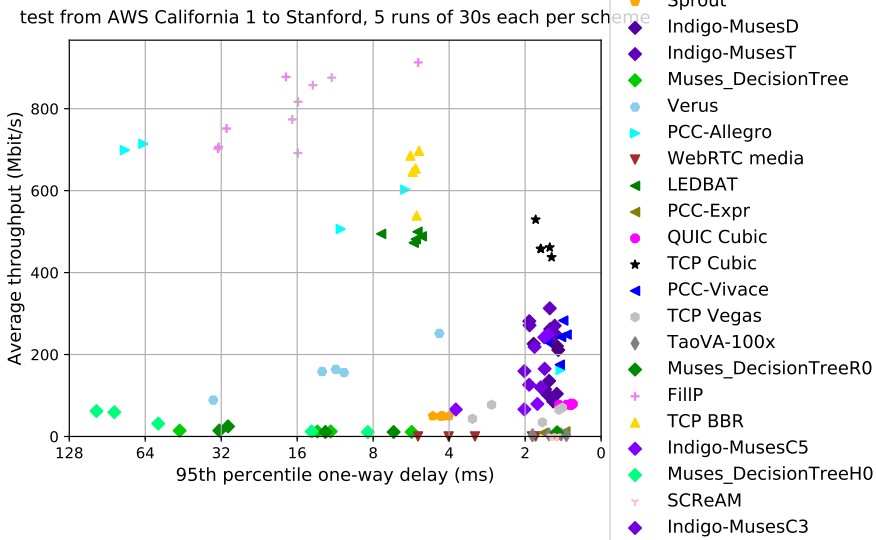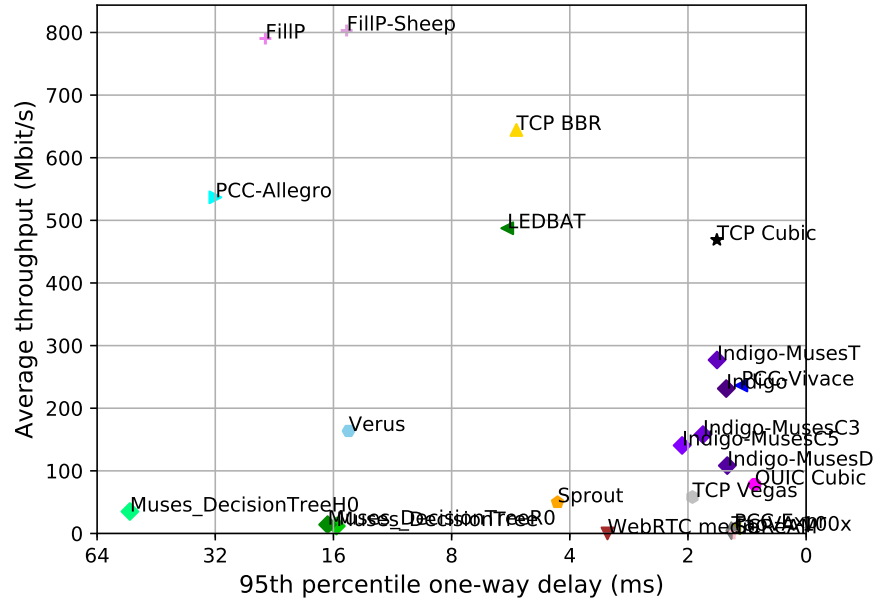
```
System info:
Linux 4.15.0-1041-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

```
Git summary:
branch: muses @ 2076e1149a241f3edb4365d686df32342bf9561f
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/muses_dtree @ 8bb93ffff2b107204a92d8b72449fc0c55e15f00
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
```

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

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

test from AWS California 1 to Stanford, 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	644.38	5.47	0.09
Copa	0	N/A	N/A	N/A
TCP Cubic	5	468.76	1.51	0.06
FillP	5	790.34	23.85	4.24
FillP-Sheep	5	803.15	14.81	2.93
Indigo	5	231.37	1.35	0.04
Indigo-MusesC3	5	157.91	1.75	0.07
Indigo-MusesC5	5	140.58	2.07	0.08
Indigo-MusesD	5	108.38	1.33	0.06
Indigo-MusesT	5	277.07	1.51	0.07
LEDBAT	5	487.39	5.77	0.06
Muses_DecisionTree	5	11.86	15.73	0.44
Muses_DecisionTreeH0	5	35.05	52.80	0.52
Muses_DecisionTreeR0	5	14.16	16.56	0.20
PCC-Allegro	5	536.79	31.99	0.32
PCC-Expr	3	8.58	1.22	19.44
QUIC Cubic	5	78.26	0.87	0.04
SCReAM	5	0.21	1.22	0.06
Sprout	5	49.86	4.30	0.23
TaoVA-100x	5	4.51	1.27	21.11
TCP Vegas	5	58.20	1.92	0.04
Verus	5	163.71	14.64	0.80
PCC-Vivace	5	236.35	1.10	0.04
WebRTC media	5	0.05	3.21	0.16

```
Run 1: Statistics of TCP BBR

Start at: 2019-07-11 22:56:25
End at: 2019-07-11 22:56:55
Local clock offset: 0.408 ms
Remote clock offset: 1.713 ms


# Below is generated by plot.py at 2019-07-12 01:34:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 697.26 Mbit/s
95th percentile per-packet one-way delay: 5.266 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 697.26 Mbit/s
95th percentile per-packet one-way delay: 5.266 ms
Loss rate: 0.07%
```
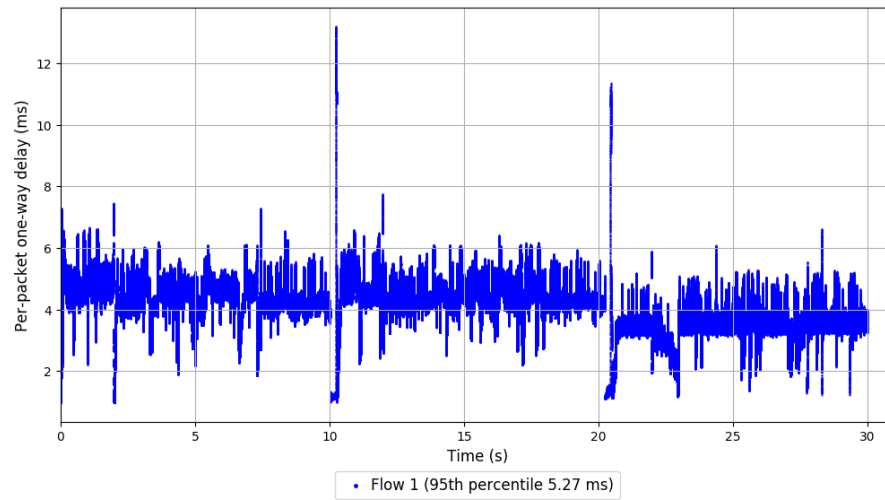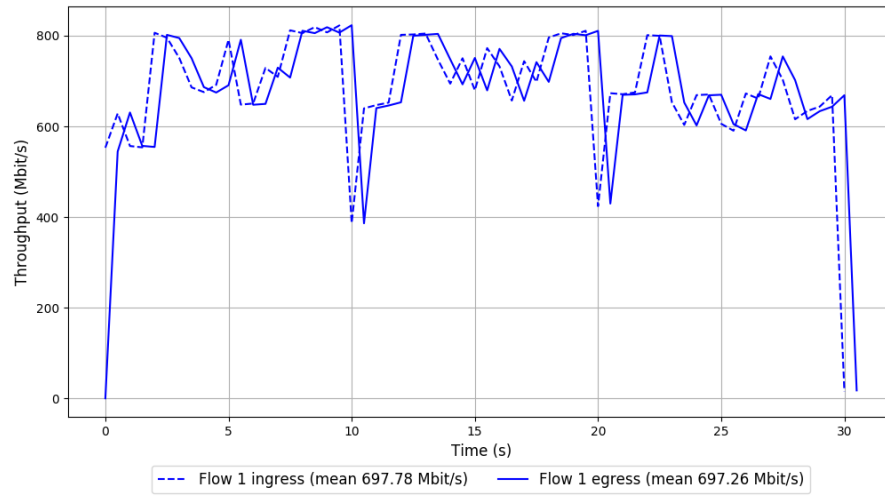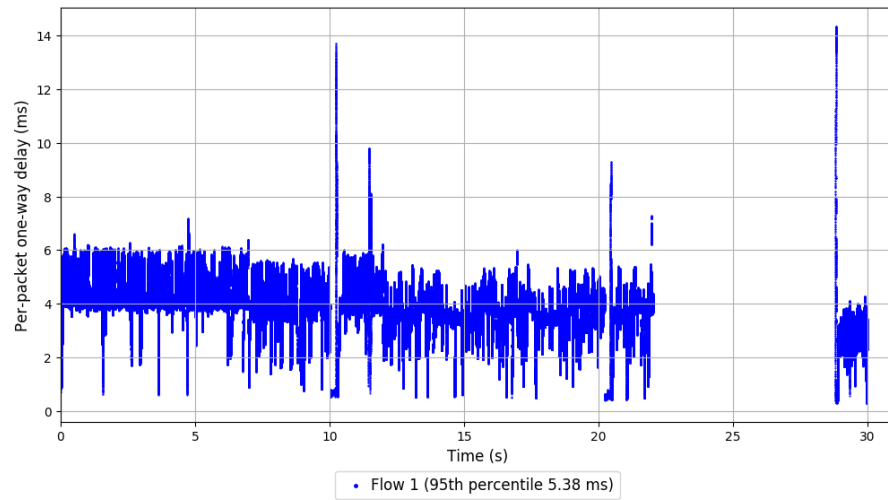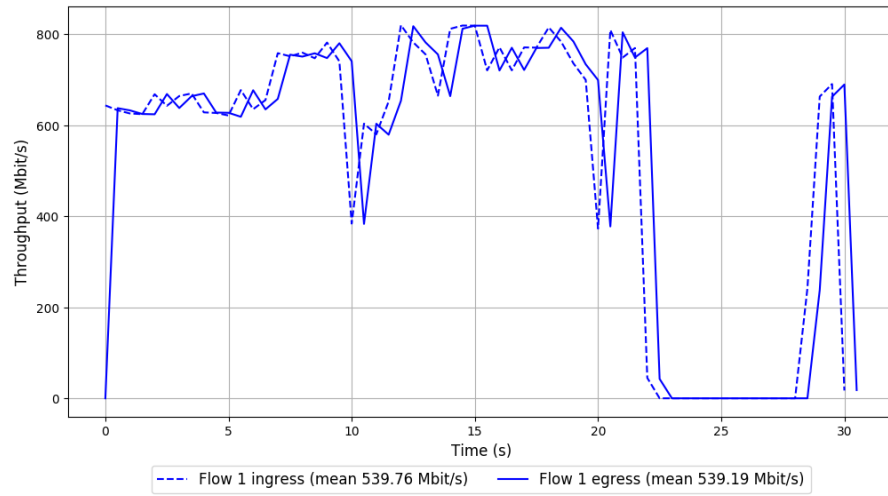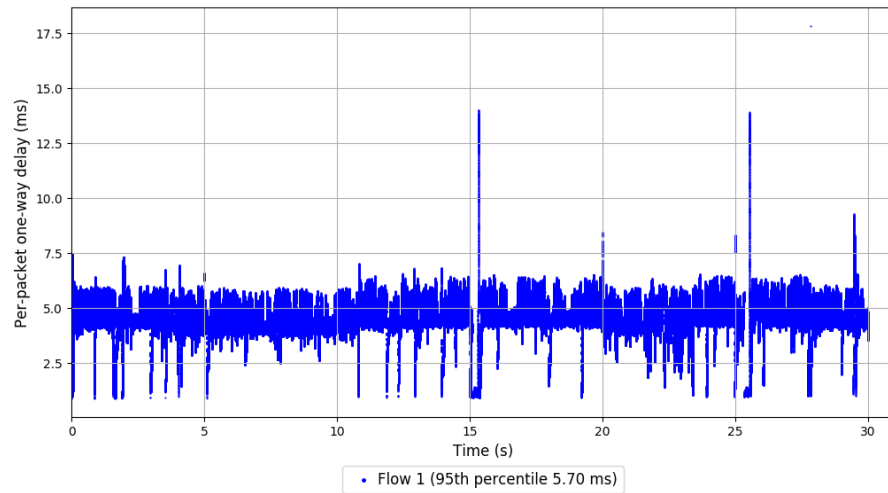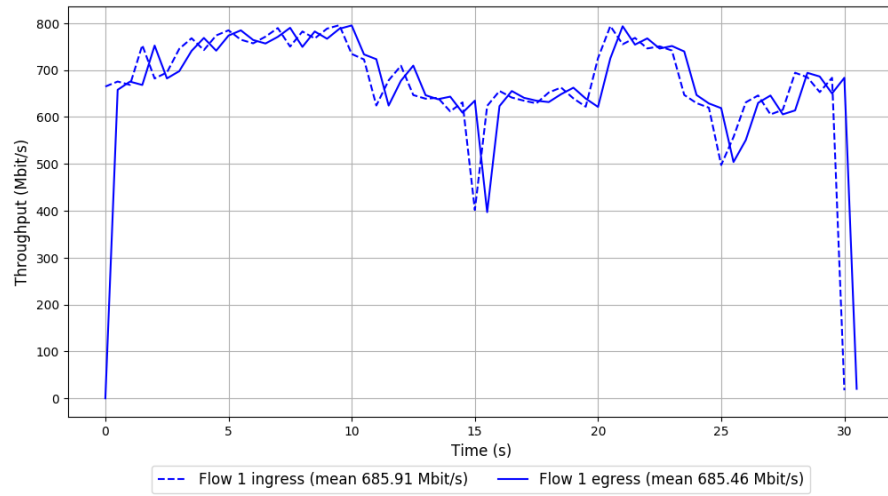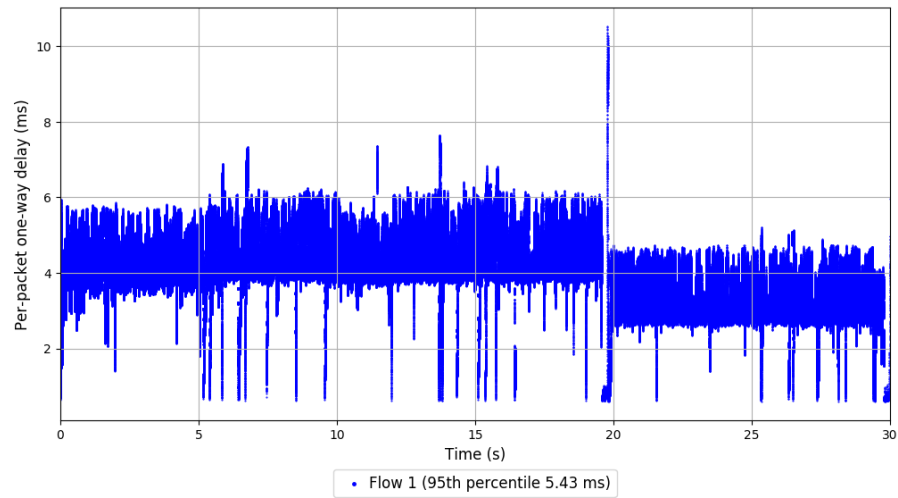
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-07-11 23:28:40
End at: 2019-07-11 23:29:10
Local clock offset: -0.017 ms
Remote clock offset: -5.361 ms


# Below is generated by plot.py at 2019-07-12 01:34:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 539.19 Mbit/s
95th percentile per-packet one-way delay: 5.381 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 539.19 Mbit/s
95th percentile per-packet one-way delay: 5.381 ms
Loss rate: 0.11%
```
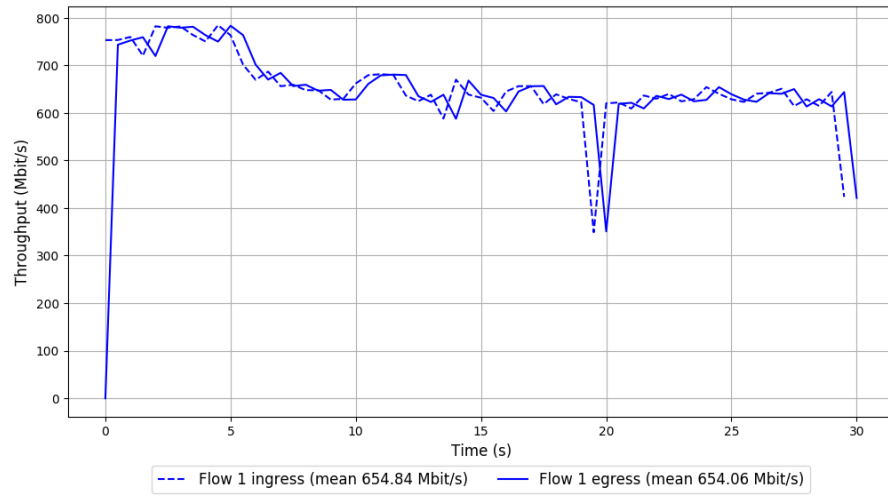
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-07-12 00:00:56
End at: 2019-07-12 00:01:26
Local clock offset: 0.927 ms
Remote clock offset: 2.532 ms


# Below is generated by plot.py at 2019-07-12 01:34:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 685.46 Mbit/s
95th percentile per-packet one-way delay: 5.696 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 685.46 Mbit/s
95th percentile per-packet one-way delay: 5.696 ms
Loss rate: 0.07%
```
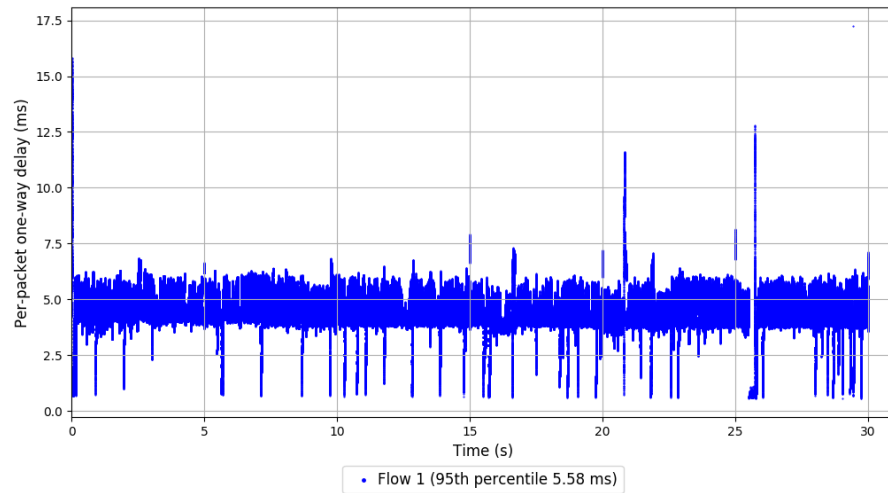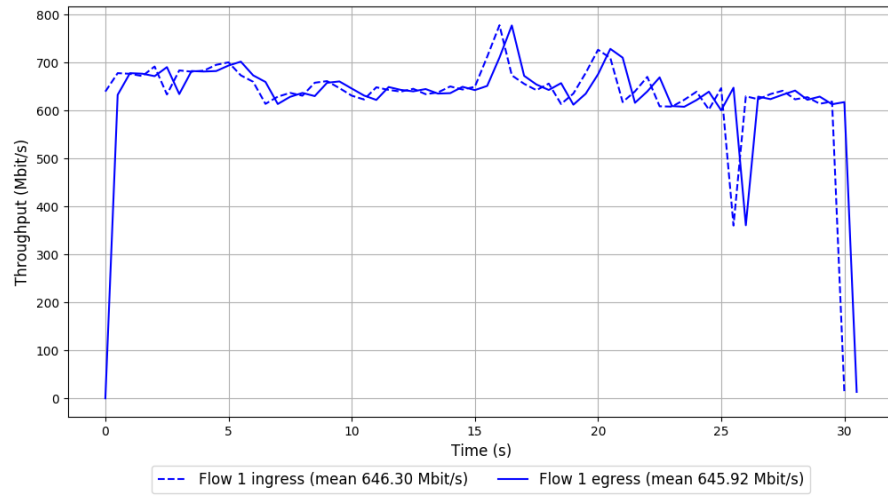
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 685.91 Mbit/s) — Flow 1 egress (mean 685.46 Mbit/s)

Flow 1 (95th percentile 5.70 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-07-12 00:33:10
End at: 2019-07-12 00:33:40
Local clock offset: 3.95 ms
Remote clock offset: -3.193 ms


# Below is generated by plot.py at 2019-07-12 01:34:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 654.06 Mbit/s
95th percentile per-packet one-way delay: 5.430 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 654.06 Mbit/s
95th percentile per-packet one-way delay: 5.430 ms
Loss rate: 0.12%
```

Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 654.84 Mbit/s) — Flow 1 egress (mean 654.06 Mbit/s)

• Flow 1 (95th percentile 5.43 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2019-07-12 01:05:35
End at: 2019-07-12 01:06:05
Local clock offset: 1.443 ms
Remote clock offset: 0.673 ms


# Below is generated by plot.py at 2019-07-12 01:34:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 645.92 Mbit/s
95th percentile per-packet one-way delay: 5.583 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 645.92 Mbit/s
95th percentile per-packet one-way delay: 5.583 ms
Loss rate: 0.06%
```

Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 646.30 Mbit/s)   Flow 1 egress (mean 645.92 Mbit/s)

• Flow 1 (95th percentile 5.58 ms)

```
Run 1: Statistics of Copa

Start at: 2019-07-11 22:53:54
End at: 2019-07-11 22:54:25
Local clock offset: 0.416 ms
Remote clock offset: 3.459 ms
```

Run 1: Report of Copa — Data Link
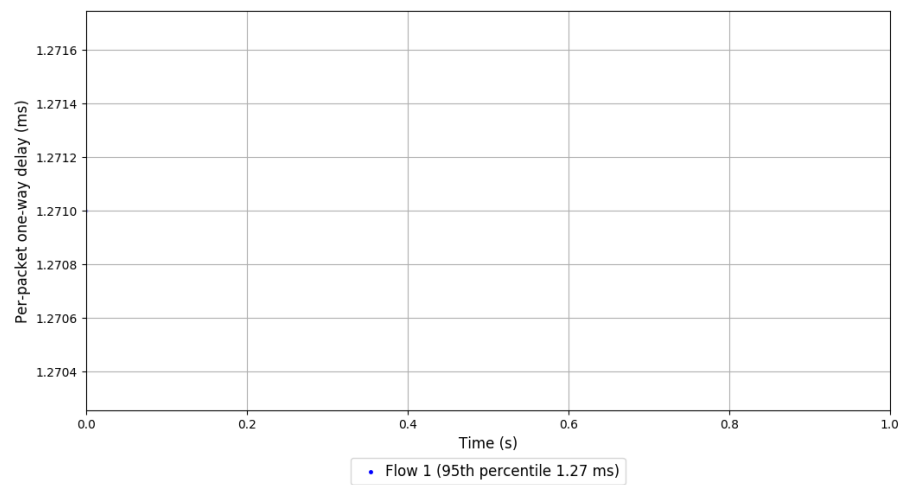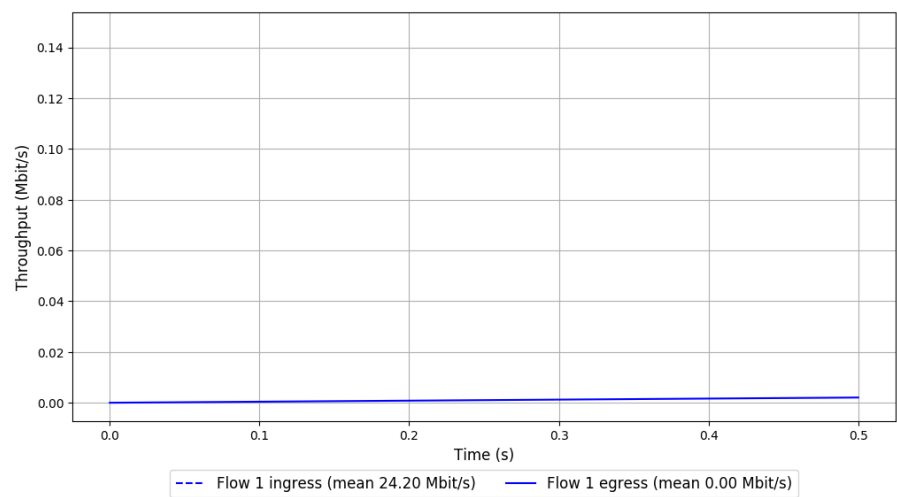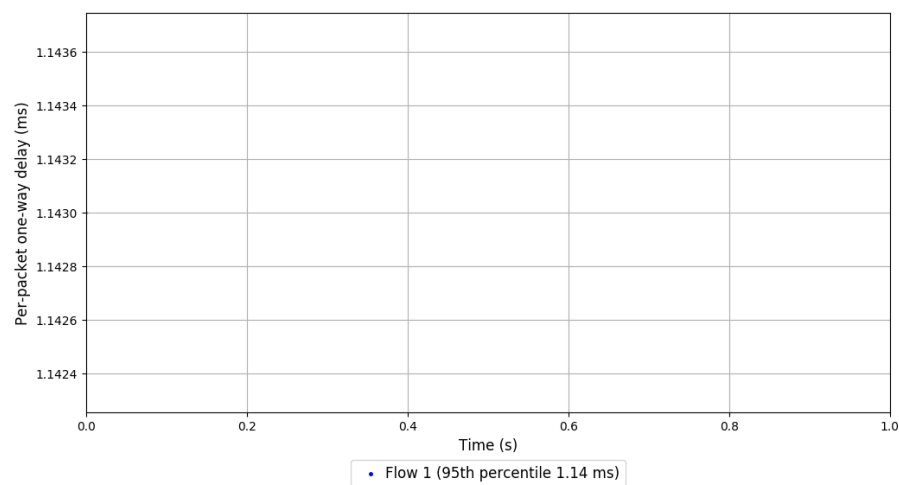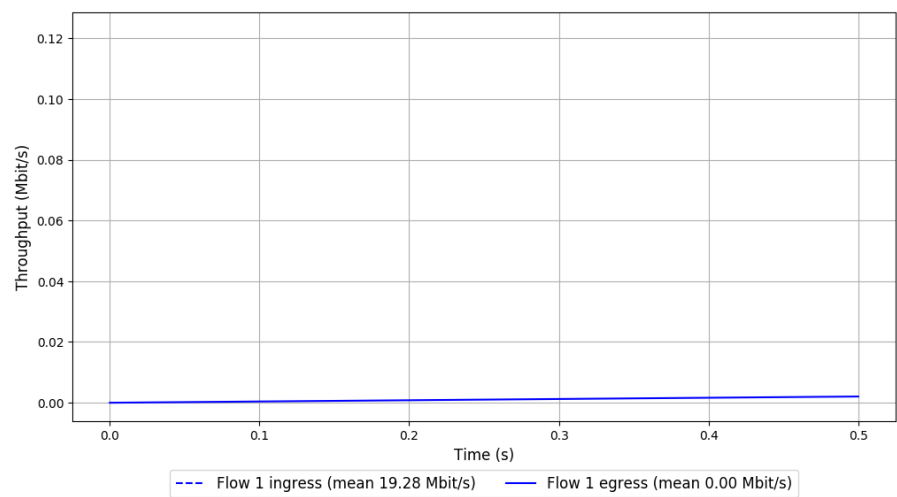
```
Run 2: Statistics of Copa

Start at: 2019-07-11 23:26:06
End at: 2019-07-11 23:26:36
Local clock offset: -0.021 ms
Remote clock offset: -5.614 ms
```

Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 24.69 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)

Flow 1 (95th percentile 1.13 ms)

```
Run 3: Statistics of Copa

Start at: 2019-07-11 23:58:22
End at: 2019-07-11 23:58:52
Local clock offset: 0.295 ms
Remote clock offset: 2.36 ms
```

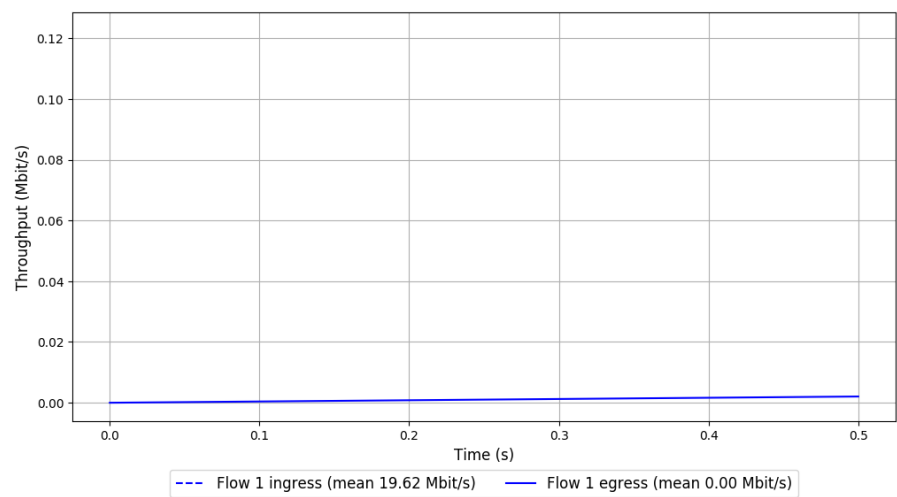Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-07-12 00:30:36
End at: 2019-07-12 00:31:06
Local clock offset: 4.206 ms
Remote clock offset: -3.126 ms
```

Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 19.28 Mbit/s)   Flow 1 egress (mean 0.00 Mbit/s)

Flow 1 (95th percentile 1.14 ms)

```
Run 5: Statistics of Copa

Start at: 2019-07-12 01:02:57
End at: 2019-07-12 01:03:27
Local clock offset: 2.217 ms
Remote clock offset: 0.467 ms
```

Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 19.62 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
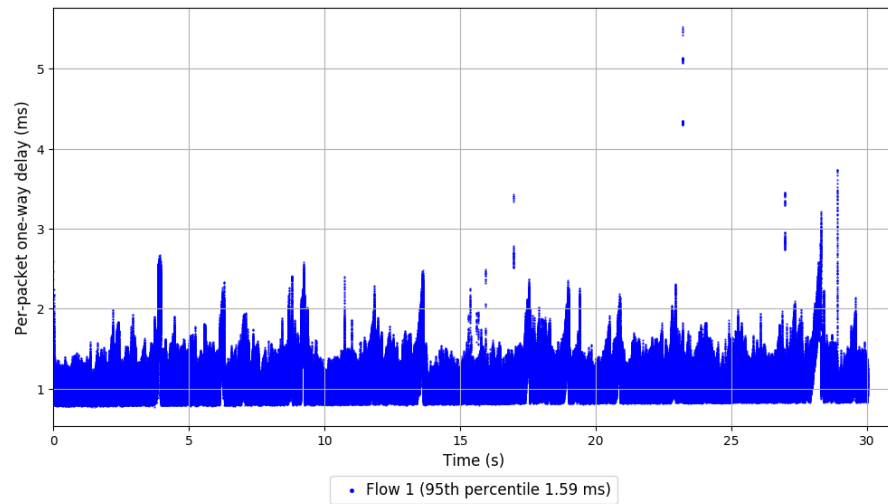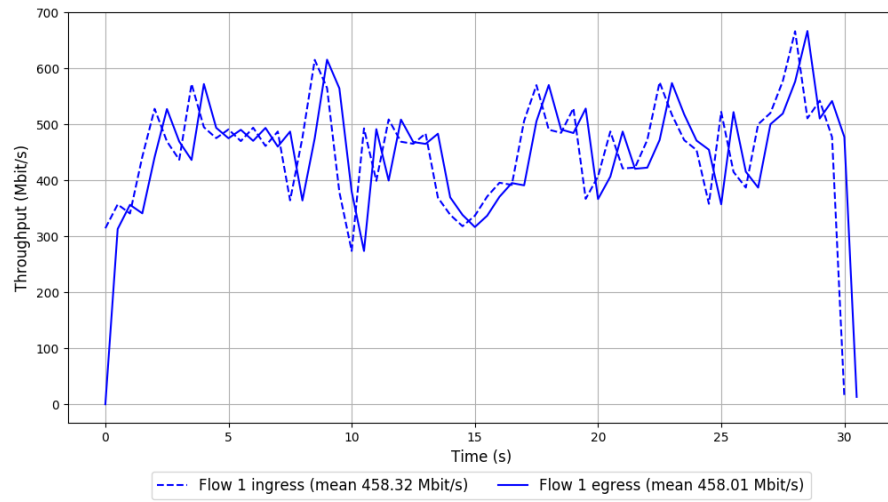

• Flow 1 (95th percentile 0.98 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-07-11 22:50:49
End at: 2019-07-11 22:51:19
Local clock offset: 0.382 ms
Remote clock offset: 3.425 ms


# Below is generated by plot.py at 2019-07-12 01:34:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 461.32 Mbit/s
95th percentile per-packet one-way delay: 1.353 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 461.32 Mbit/s
95th percentile per-packet one-way delay: 1.353 ms
Loss rate: 0.06%
```
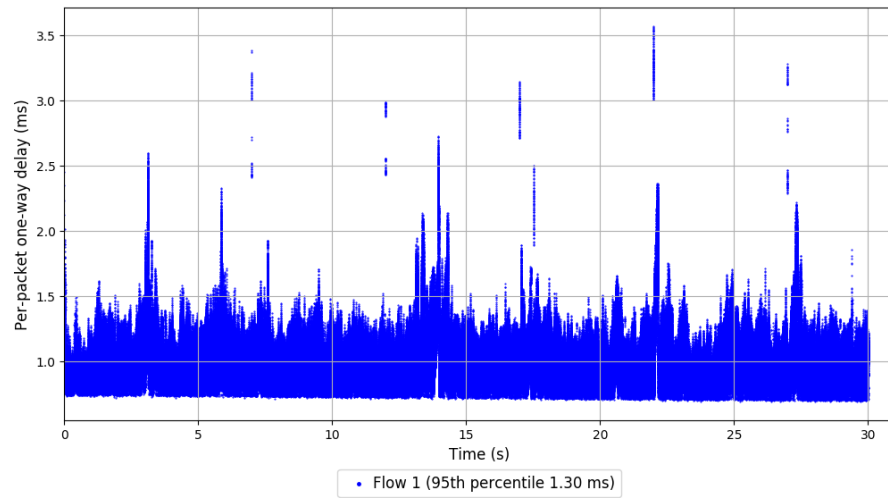
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-07-11 23:23:01
End at: 2019-07-11 23:23:31
Local clock offset: 0.007 ms
Remote clock offset: -5.288 ms


# Below is generated by plot.py at 2019-07-12 01:34:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 458.01 Mbit/s
95th percentile per-packet one-way delay: 1.592 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 458.01 Mbit/s
95th percentile per-packet one-way delay: 1.592 ms
Loss rate: 0.07%
```

Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-07-11 23:55:18
End at: 2019-07-11 23:55:48
Local clock offset: 0.269 ms
Remote clock offset: 2.084 ms


# Below is generated by plot.py at 2019-07-12 01:34:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 437.49 Mbit/s
95th percentile per-packet one-way delay: 1.303 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 437.49 Mbit/s
95th percentile per-packet one-way delay: 1.303 ms
Loss rate: 0.06%
```
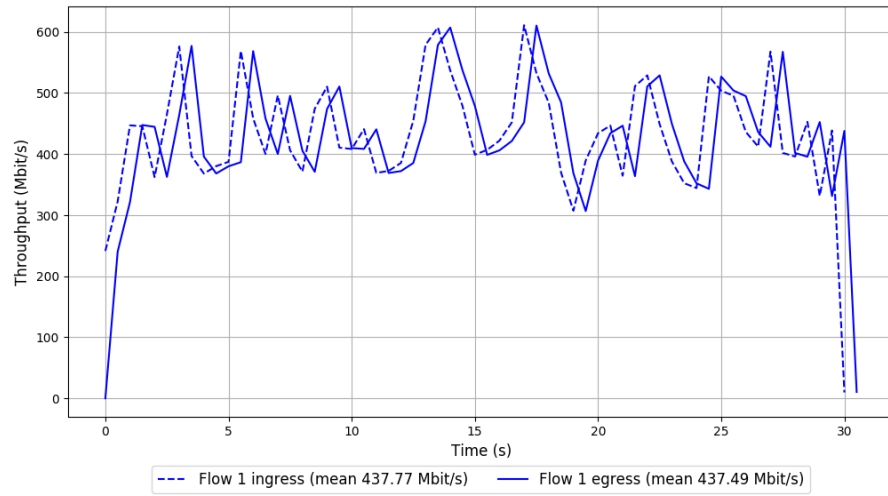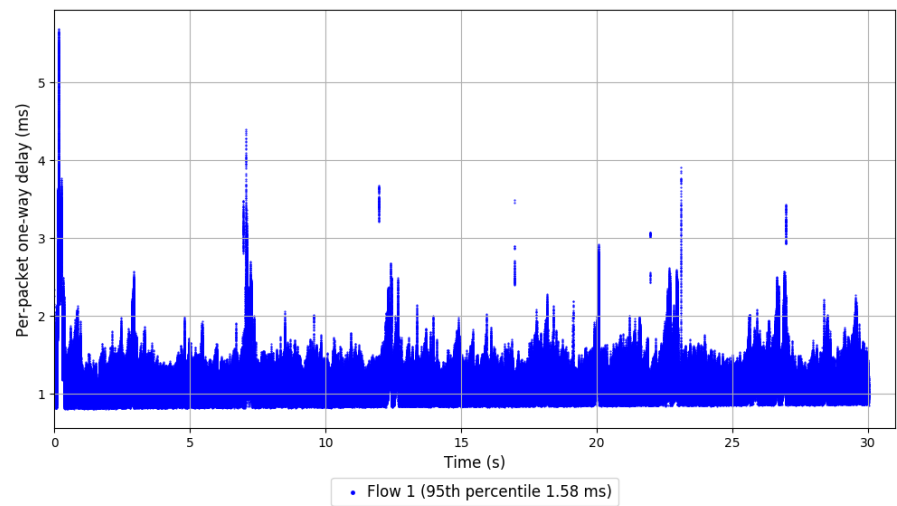
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 437.77 Mbit/s)   Flow 1 egress (mean 437.49 Mbit/s)
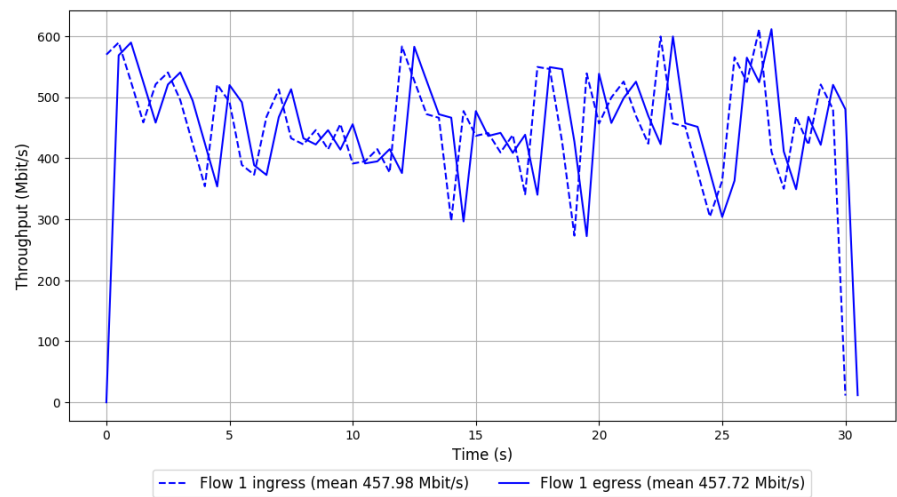

Flow 1 (95th percentile 1.30 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-07-12 00:27:33
End at: 2019-07-12 00:28:03
Local clock offset: 4.291 ms
Remote clock offset: -2.878 ms


# Below is generated by plot.py at 2019-07-12 01:36:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 457.72 Mbit/s
95th percentile per-packet one-way delay: 1.584 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 457.72 Mbit/s
95th percentile per-packet one-way delay: 1.584 ms
Loss rate: 0.06%
```
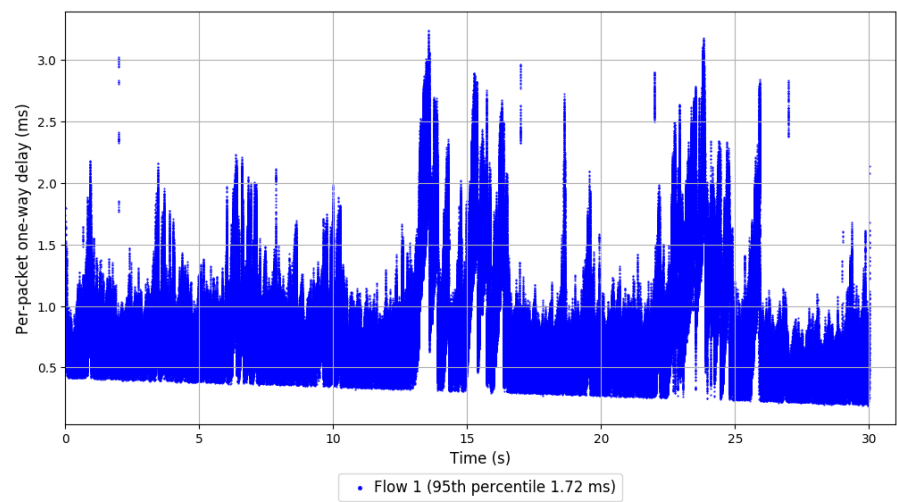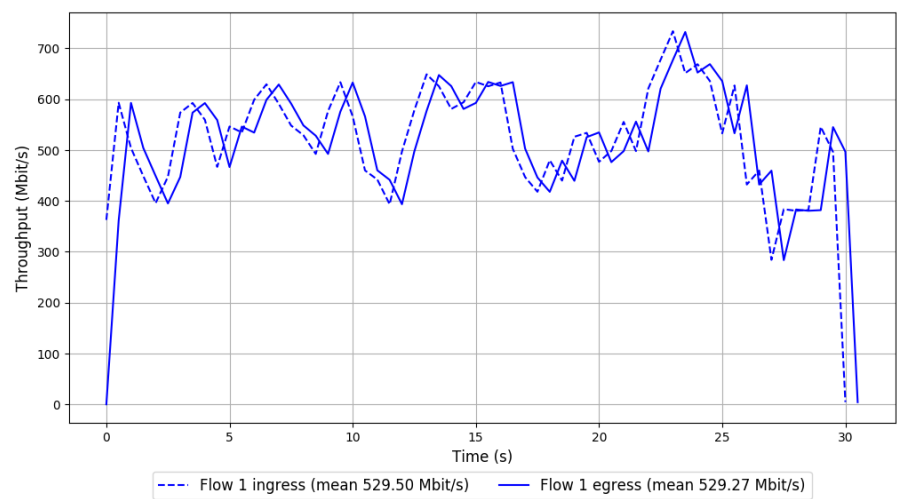
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 457.98 Mbit/s) --- Flow 1 egress (mean 457.72 Mbit/s)

Flow 1 (95th percentile 1.58 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-07-12 00:59:54
End at: 2019-07-12 01:00:24
Local clock offset: 3.349 ms
Remote clock offset: 0.323 ms


# Below is generated by plot.py at 2019-07-12 01:37:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 529.27 Mbit/s
95th percentile per-packet one-way delay: 1.723 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 529.27 Mbit/s
95th percentile per-packet one-way delay: 1.723 ms
Loss rate: 0.04%
```
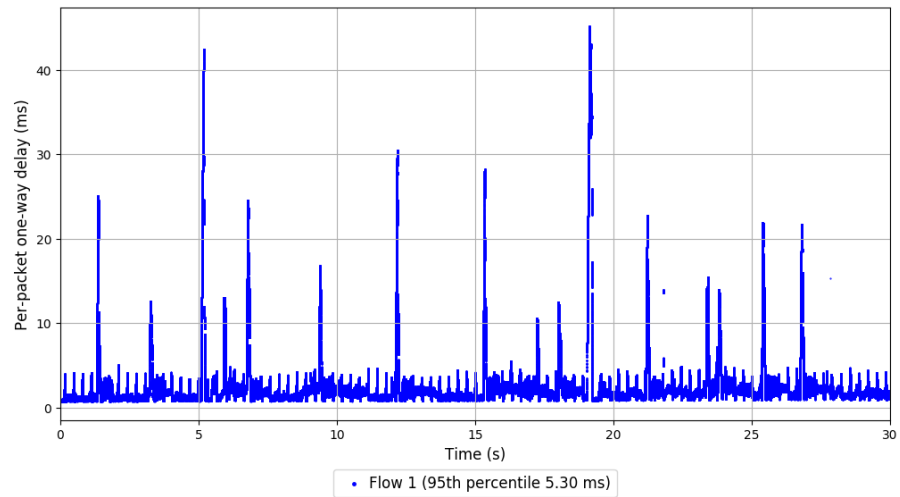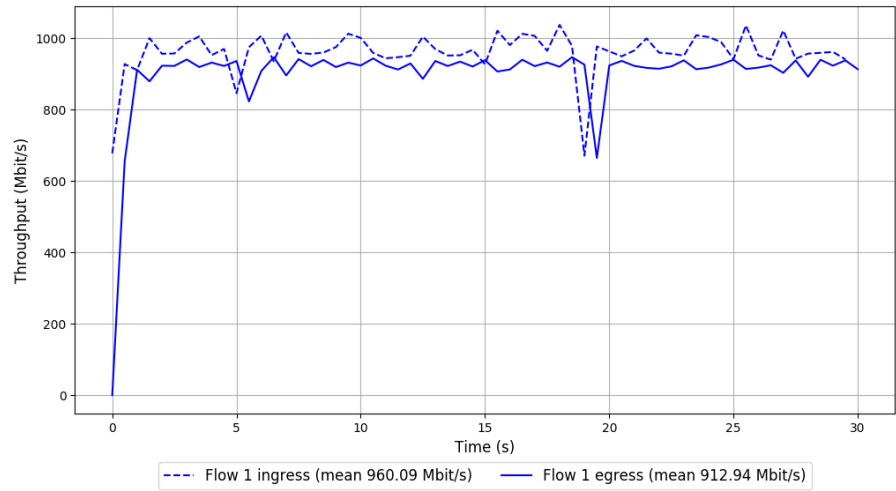
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 529.50 Mbit/s)   Flow 1 egress (mean 529.27 Mbit/s)

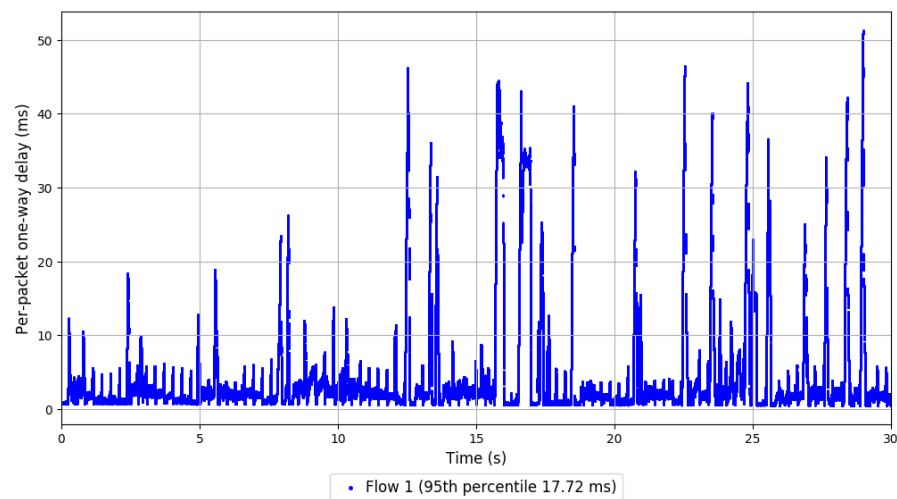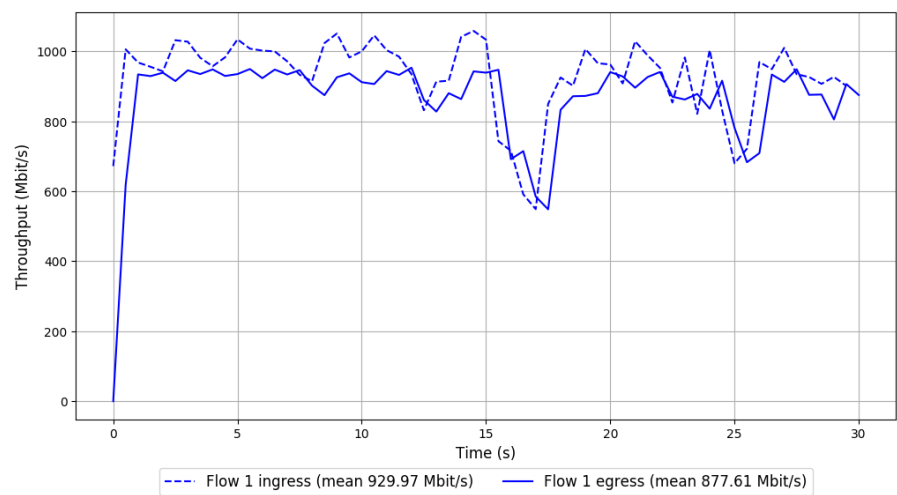Flow 1 (95th percentile 1.72 ms)

```
Run 1: Statistics of FillP

Start at: 2019-07-11 23:00:38
End at: 2019-07-11 23:01:08
Local clock offset: 0.393 ms
Remote clock offset: -0.645 ms


# Below is generated by plot.py at 2019-07-12 01:44:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 912.94 Mbit/s
95th percentile per-packet one-way delay: 5.305 ms
Loss rate: 4.91%
-- Flow 1:
Average throughput: 912.94 Mbit/s
95th percentile per-packet one-way delay: 5.305 ms
Loss rate: 4.91%
```

Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 960.09 Mbit/s)   Flow 1 egress (mean 912.94 Mbit/s)

Flow 1 (95th percentile 5.30 ms)

```
Run 2: Statistics of FillP

Start at: 2019-07-11 23:32:46
End at: 2019-07-11 23:33:16
Local clock offset: 0.108 ms
Remote clock offset: -2.716 ms


# Below is generated by plot.py at 2019-07-12 01:45:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 877.61 Mbit/s
95th percentile per-packet one-way delay: 17.719 ms
Loss rate: 5.63%
-- Flow 1:
Average throughput: 877.61 Mbit/s
95th percentile per-packet one-way delay: 17.719 ms
Loss rate: 5.63%
```
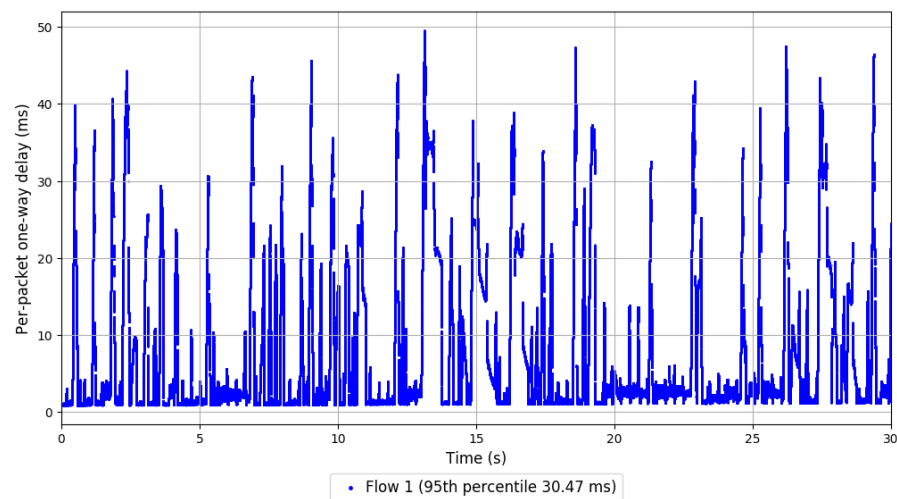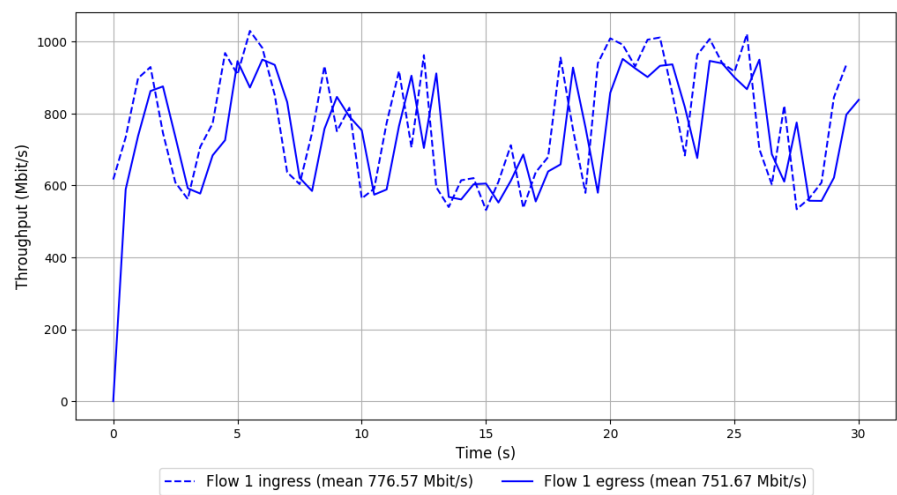
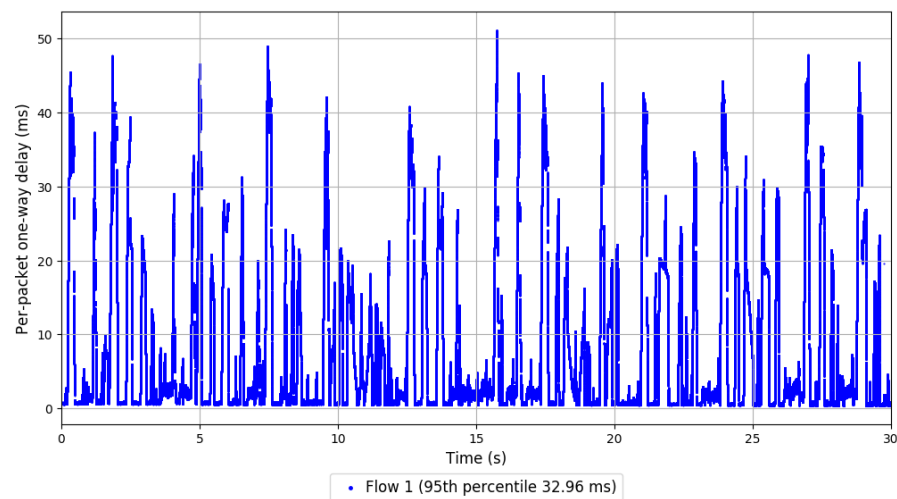Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 929.97 Mbit/s) ---- Flow 1 egress (mean 877.61 Mbit/s)
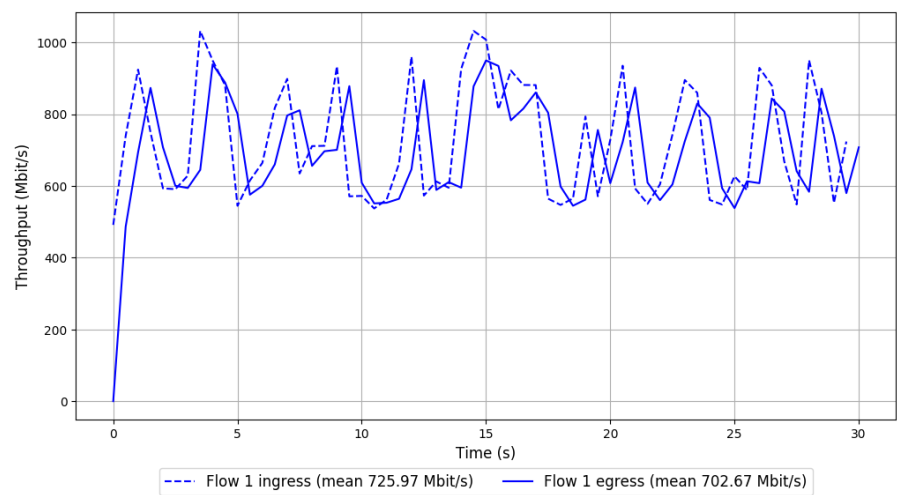

Flow 1 (95th percentile 17.72 ms)

```
Run 3: Statistics of FillP

Start at: 2019-07-12 00:05:08
End at: 2019-07-12 00:05:38
Local clock offset: 2.005 ms
Remote clock offset: 1.068 ms


# Below is generated by plot.py at 2019-07-12 01:45:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 751.67 Mbit/s
95th percentile per-packet one-way delay: 30.472 ms
Loss rate: 3.20%
-- Flow 1:
Average throughput: 751.67 Mbit/s
95th percentile per-packet one-way delay: 30.472 ms
Loss rate: 3.20%
```

Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-07-12 00:37:23
End at: 2019-07-12 00:37:53
Local clock offset: 3.658 ms
Remote clock offset: -2.918 ms


# Below is generated by plot.py at 2019-07-12 01:45:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 702.67 Mbit/s
95th percentile per-packet one-way delay: 32.964 ms
Loss rate: 3.21%
-- Flow 1:
Average throughput: 702.67 Mbit/s
95th percentile per-packet one-way delay: 32.964 ms
Loss rate: 3.21%
```
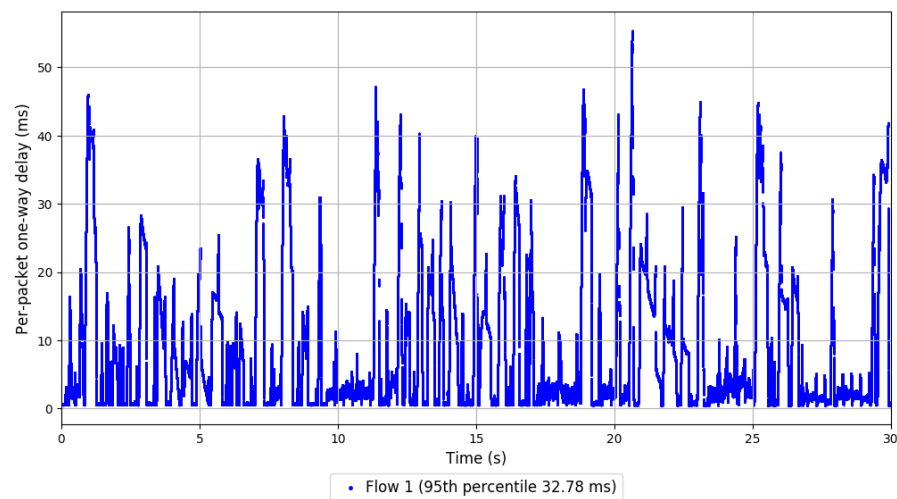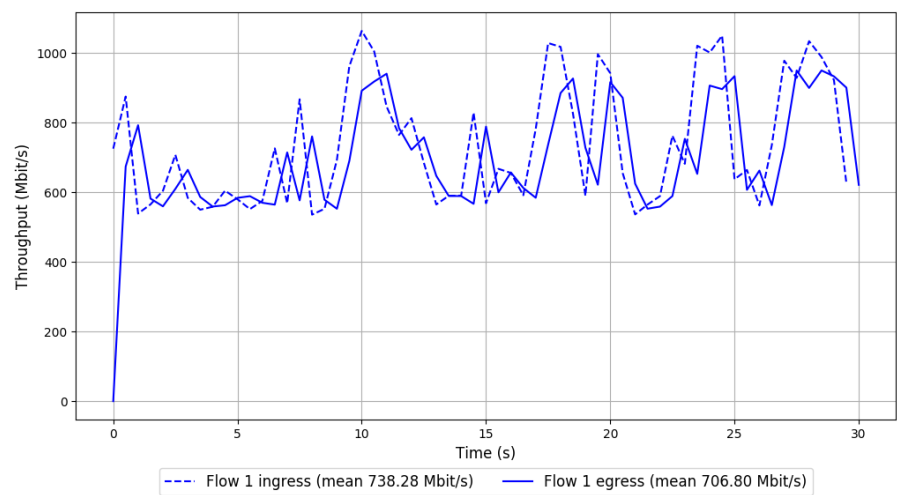
Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 725.97 Mbit/s)   Flow 1 egress (mean 702.67 Mbit/s)

• Flow 1 (95th percentile 32.96 ms)

```
Run 5: Statistics of FillP

Start at: 2019-07-12 01:09:46
End at: 2019-07-12 01:10:16
Local clock offset: 0.661 ms
Remote clock offset: 0.765 ms


# Below is generated by plot.py at 2019-07-12 01:45:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 706.80 Mbit/s
95th percentile per-packet one-way delay: 32.776 ms
Loss rate: 4.26%
-- Flow 1:
Average throughput: 706.80 Mbit/s
95th percentile per-packet one-way delay: 32.776 ms
Loss rate: 4.26%
```
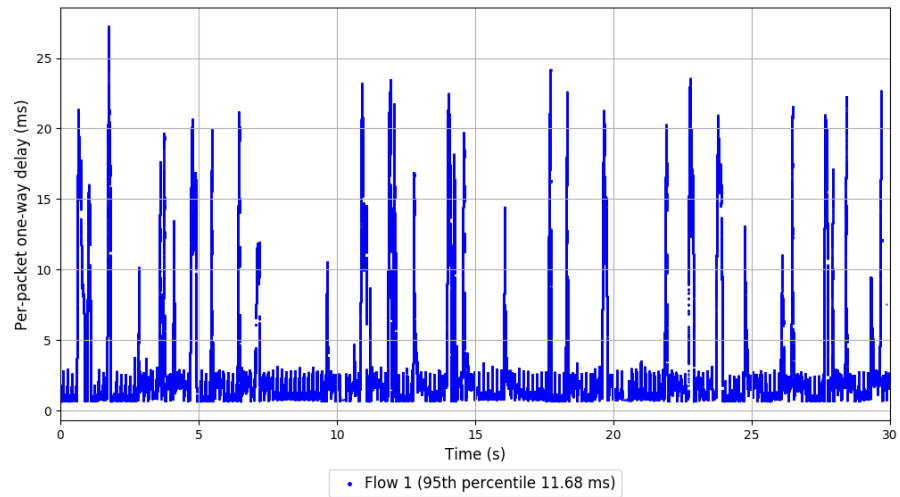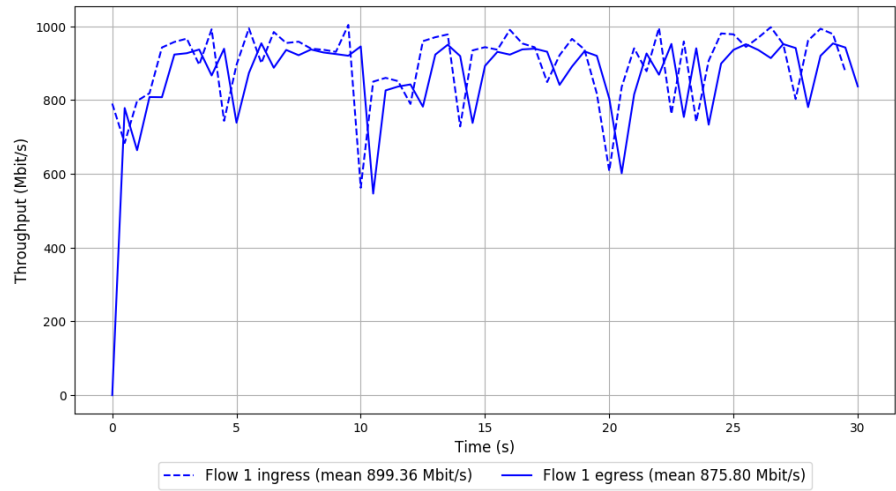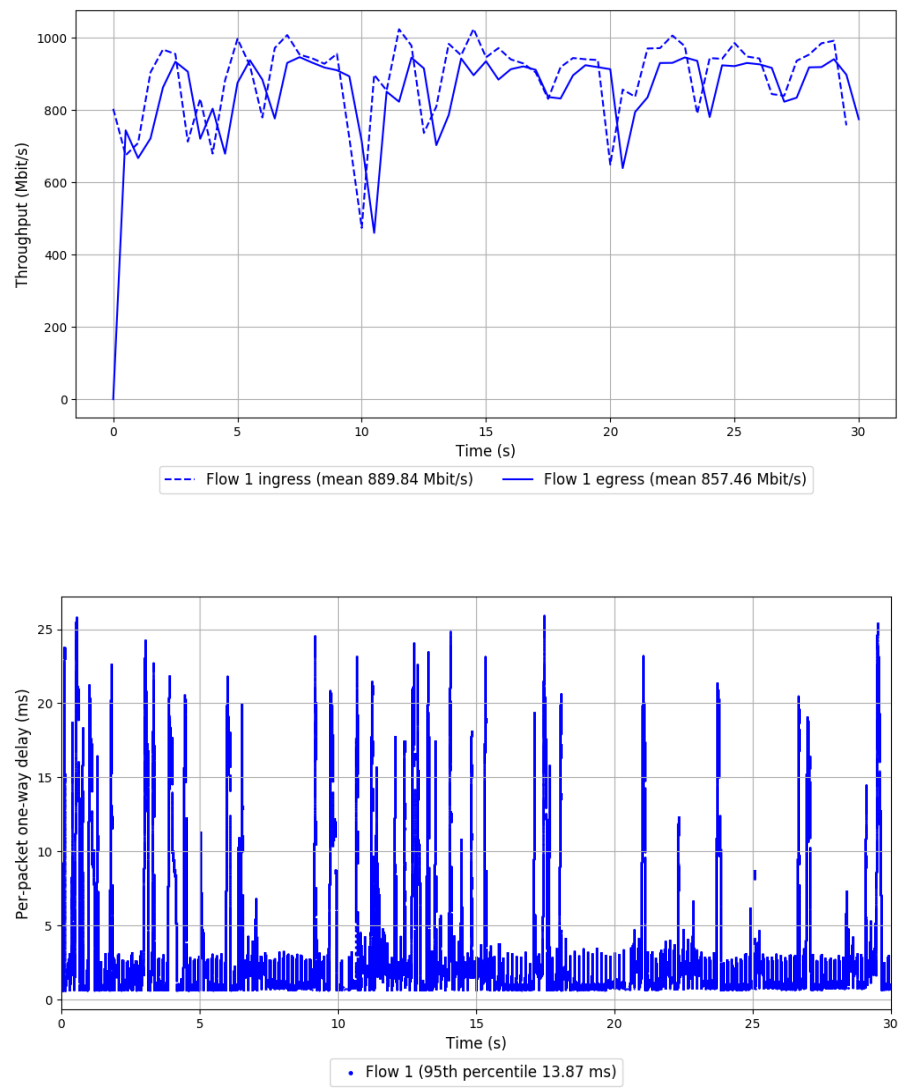
Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 738.28 Mbit/s) — — — Flow 1 egress (mean 706.80 Mbit/s)

Flow 1 (95th percentile 32.78 ms)

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-07-11 22:52:17
End at: 2019-07-11 22:52:47
Local clock offset: 0.373 ms
Remote clock offset: 3.449 ms


# Below is generated by plot.py at 2019-07-12 01:47:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 875.80 Mbit/s
95th percentile per-packet one-way delay: 11.676 ms
Loss rate: 2.62%
-- Flow 1:
Average throughput: 875.80 Mbit/s
95th percentile per-packet one-way delay: 11.676 ms
Loss rate: 2.62%
```
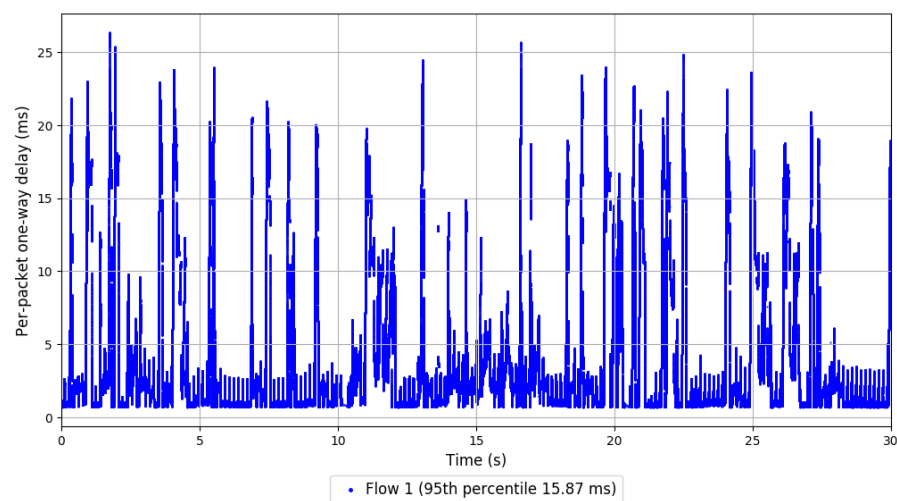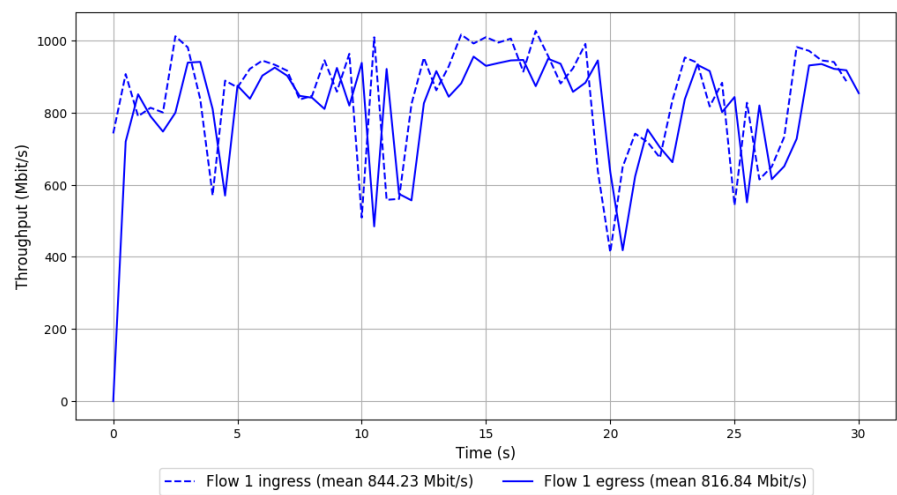
Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-07-11 23:24:29
End at: 2019-07-11 23:24:59
Local clock offset: 0.015 ms
Remote clock offset: -5.559 ms


# Below is generated by plot.py at 2019-07-12 01:49:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 857.46 Mbit/s
95th percentile per-packet one-way delay: 13.873 ms
Loss rate: 3.64%
-- Flow 1:
Average throughput: 857.46 Mbit/s
95th percentile per-packet one-way delay: 13.873 ms
Loss rate: 3.64%
```
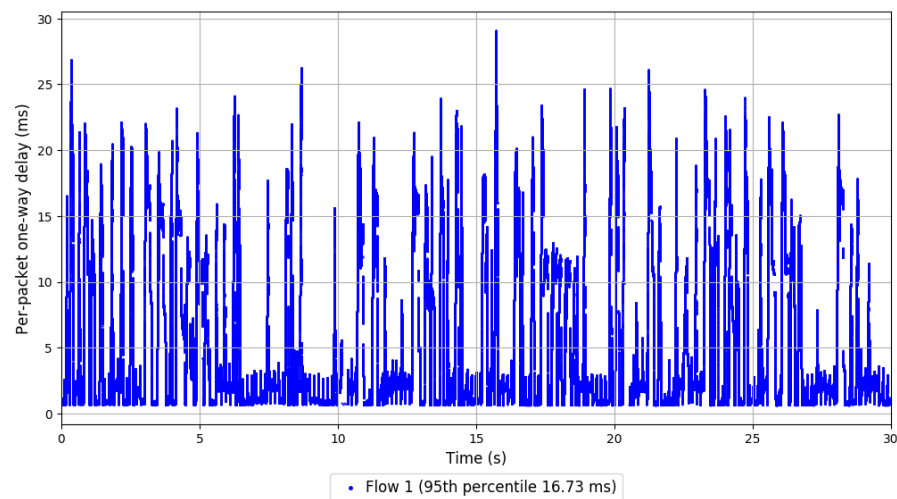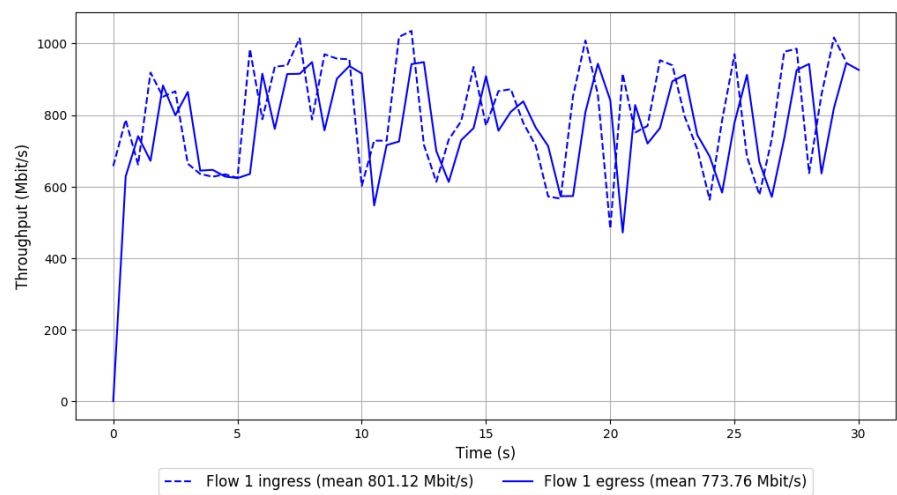
Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 889.84 Mbit/s) ---- Flow 1 egress (mean 857.46 Mbit/s)

• Flow 1 (95th percentile 13.87 ms)

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-07-11 23:56:46
End at: 2019-07-11 23:57:16
Local clock offset: 0.282 ms
Remote clock offset: 2.2 ms


# Below is generated by plot.py at 2019-07-12 01:49:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 816.84 Mbit/s
95th percentile per-packet one-way delay: 15.867 ms
Loss rate: 3.24%
-- Flow 1:
Average throughput: 816.84 Mbit/s
95th percentile per-packet one-way delay: 15.867 ms
Loss rate: 3.24%
```
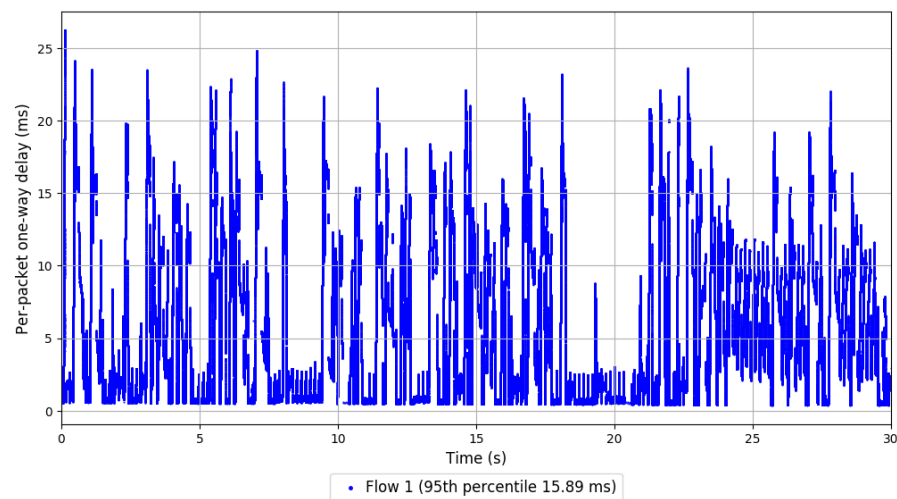
Run 3: Report of FillP-Sheep — Data Link

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-07-12 00:29:02
End at: 2019-07-12 00:29:32
Local clock offset: 4.378 ms
Remote clock offset: -2.977 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 773.76 Mbit/s
95th percentile per-packet one-way delay: 16.732 ms
Loss rate: 3.41%
-- Flow 1:
Average throughput: 773.76 Mbit/s
95th percentile per-packet one-way delay: 16.732 ms
Loss rate: 3.41%
```
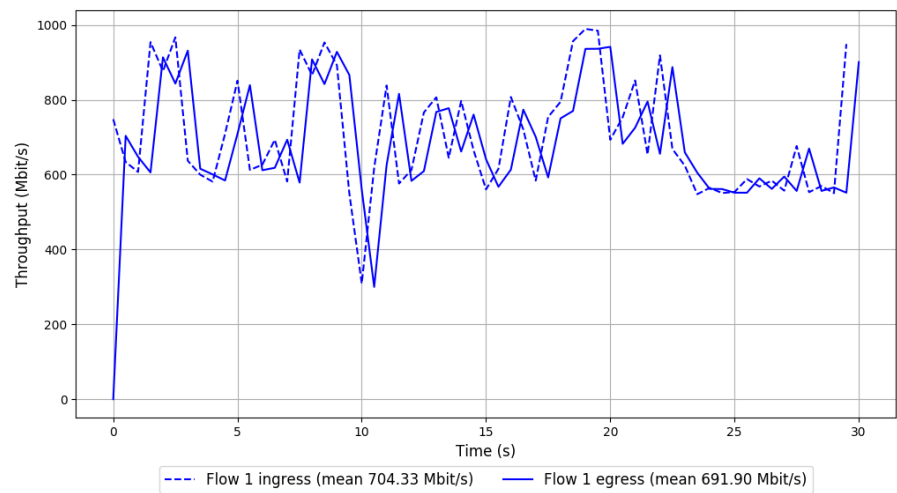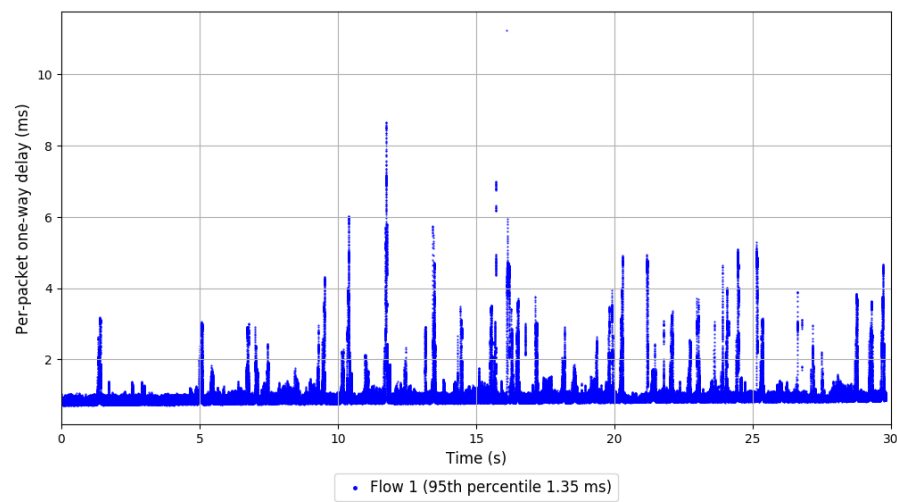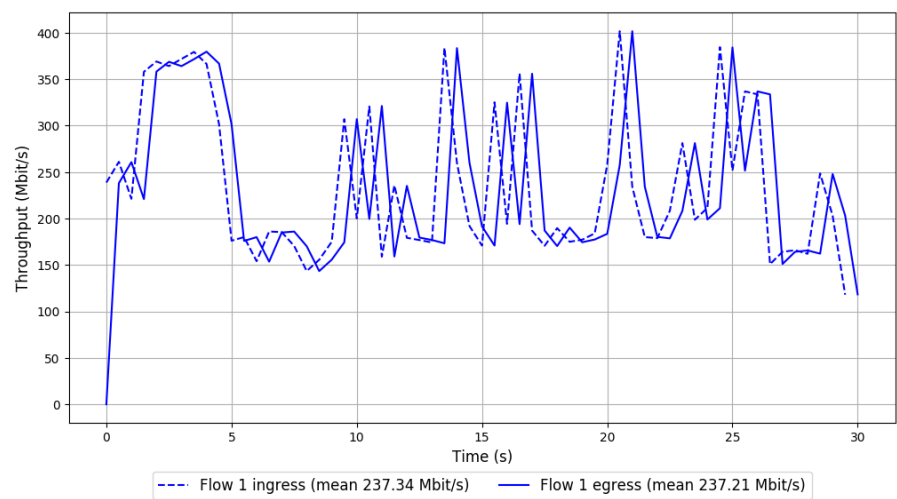
Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 801.12 Mbit/s) --- Flow 1 egress (mean 773.76 Mbit/s)

• Flow 1 (95th percentile 16.73 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-07-12 01:01:24
End at: 2019-07-12 01:01:55
Local clock offset: 2.652 ms
Remote clock offset: 0.431 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 691.90 Mbit/s
95th percentile per-packet one-way delay: 15.893 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 691.90 Mbit/s
95th percentile per-packet one-way delay: 15.893 ms
Loss rate: 1.76%
```

Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 704.33 Mbit/s)   Flow 1 egress (mean 691.90 Mbit/s)
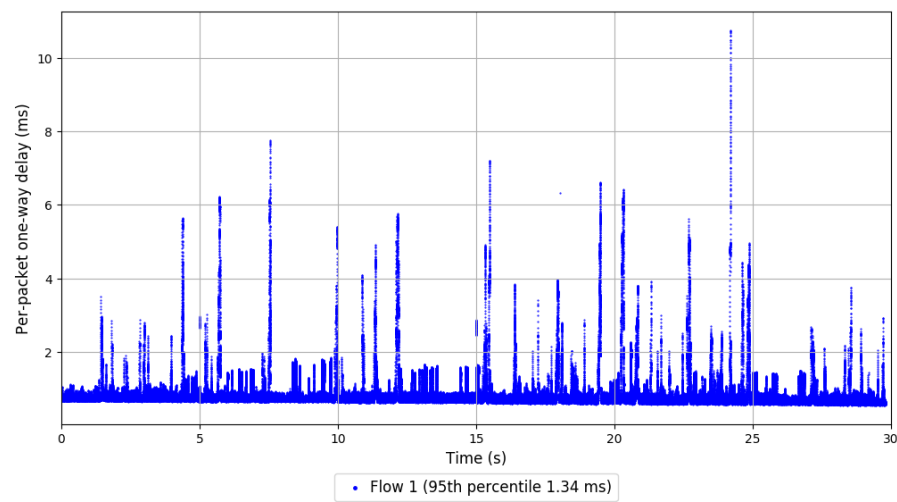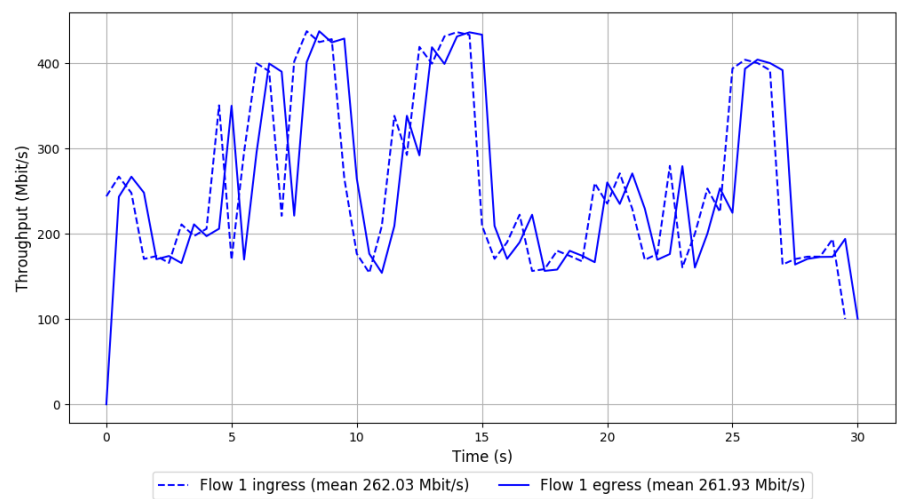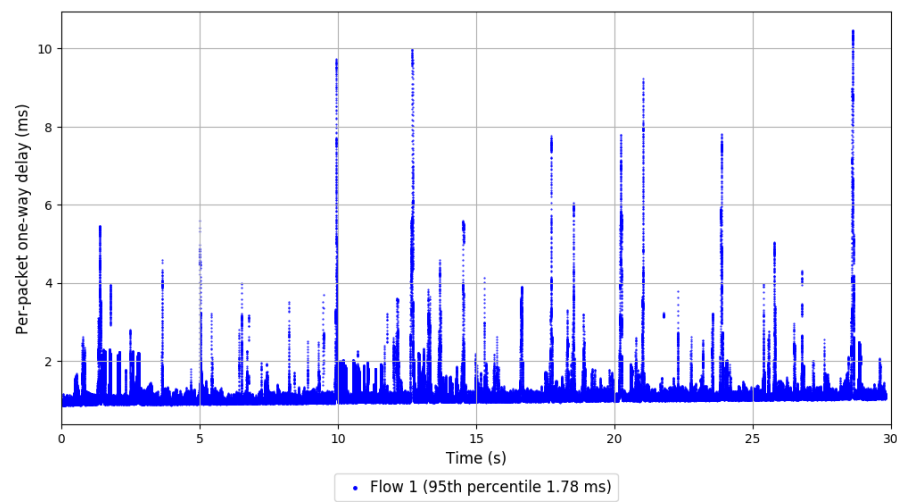

Flow 1 (95th percentile 15.89 ms)

```
Run 1: Statistics of Indigo

Start at: 2019-07-11 23:07:36
End at: 2019-07-11 23:08:06
Local clock offset: 0.134 ms
Remote clock offset: -2.999 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 237.21 Mbit/s
95th percentile per-packet one-way delay: 1.355 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 237.21 Mbit/s
95th percentile per-packet one-way delay: 1.355 ms
Loss rate: 0.05%
```

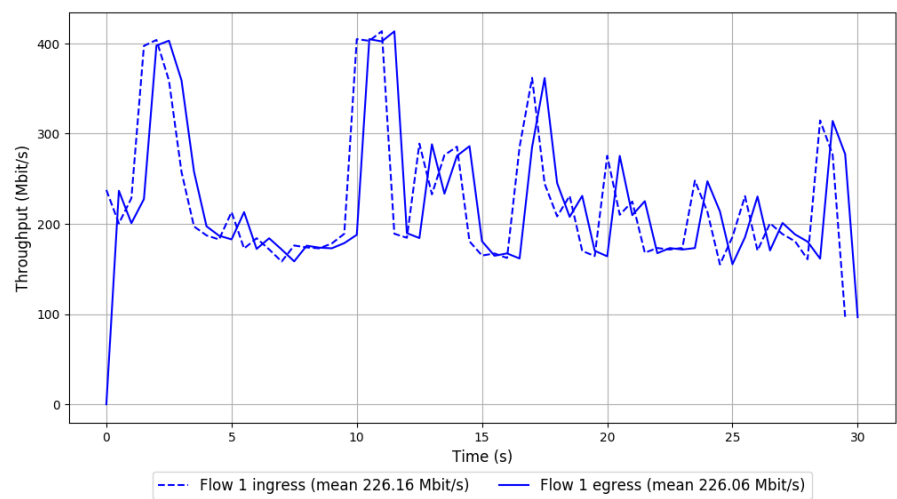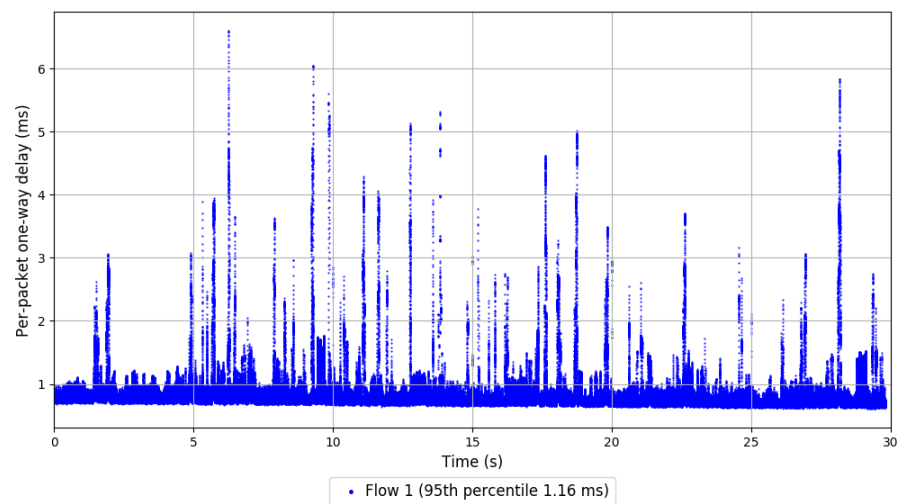Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-07-11 23:39:43
End at: 2019-07-11 23:40:13
Local clock offset: 0.219 ms
Remote clock offset: -0.294 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 261.93 Mbit/s
95th percentile per-packet one-way delay: 1.340 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 261.93 Mbit/s
95th percentile per-packet one-way delay: 1.340 ms
Loss rate: 0.04%
```

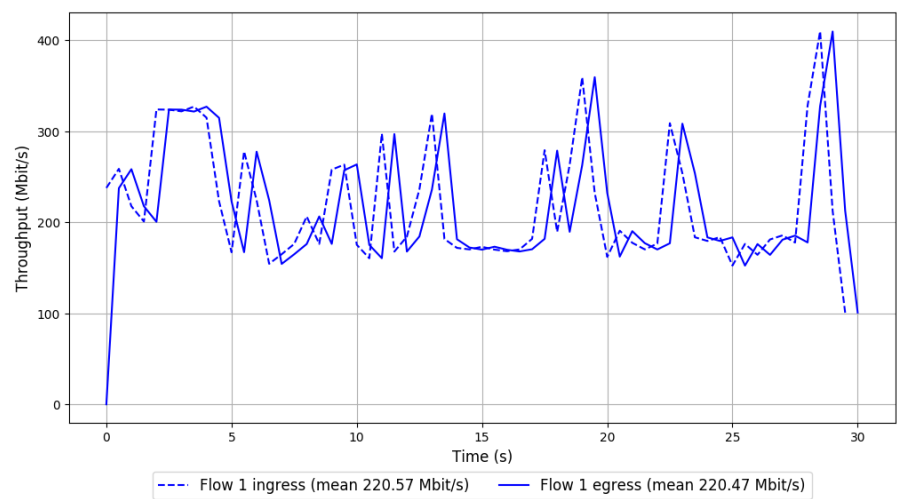Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-07-12 00:11:59
End at: 2019-07-12 00:12:29
Local clock offset: 3.105 ms
Remote clock offset: -1.157 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 226.06 Mbit/s
95th percentile per-packet one-way delay: 1.776 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 226.06 Mbit/s
95th percentile per-packet one-way delay: 1.776 ms
Loss rate: 0.05%
```
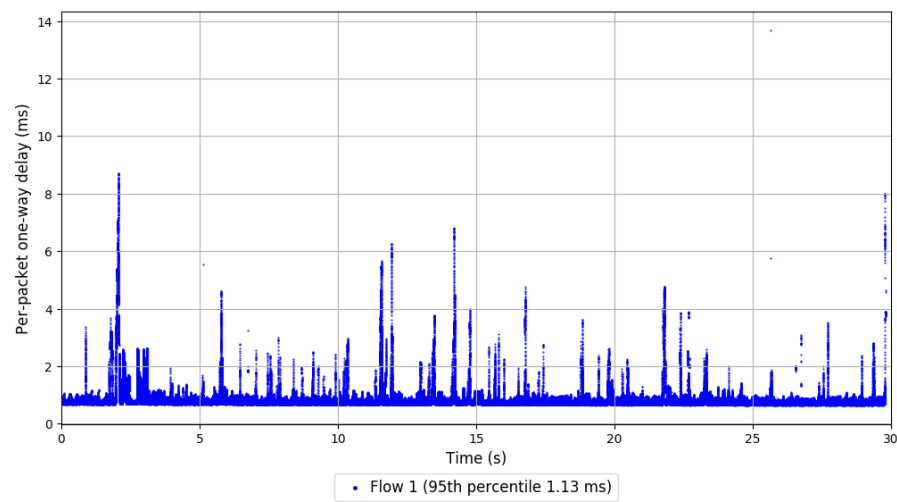
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-07-12 00:44:13
End at: 2019-07-12 00:44:43
Local clock offset: 3.516 ms
Remote clock offset: -1.128 ms

# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 220.47 Mbit/s
95th percentile per-packet one-way delay: 1.163 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 220.47 Mbit/s
95th percentile per-packet one-way delay: 1.163 ms
Loss rate: 0.05%
```
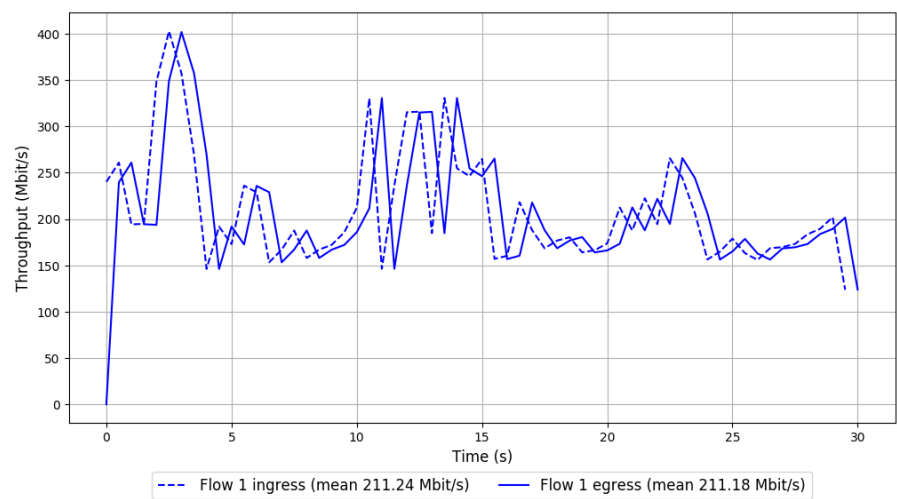
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-07-12 01:16:38
End at: 2019-07-12 01:17:08
Local clock offset: -0.149 ms
Remote clock offset: 0.655 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 211.18 Mbit/s
95th percentile per-packet one-way delay: 1.128 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 211.18 Mbit/s
95th percentile per-packet one-way delay: 1.128 ms
Loss rate: 0.02%
```
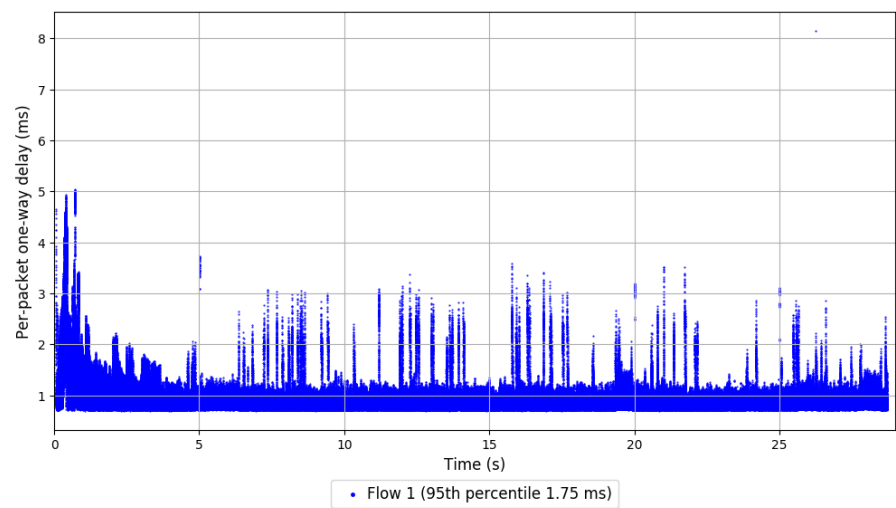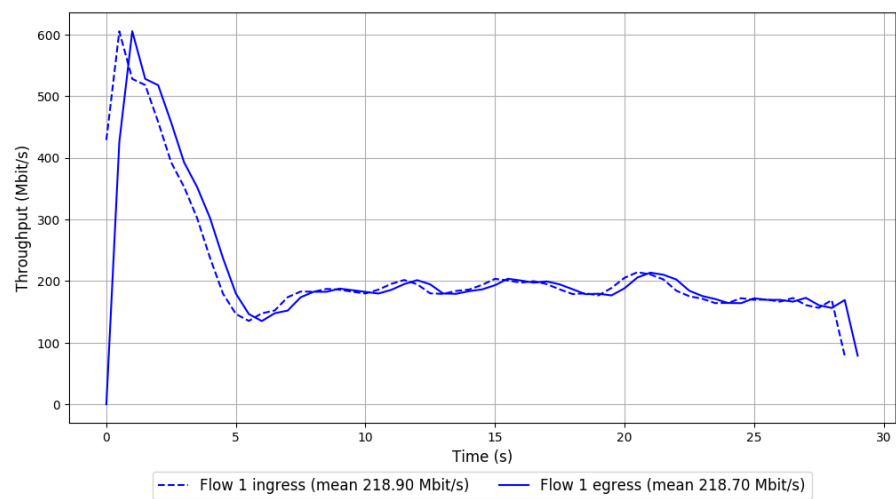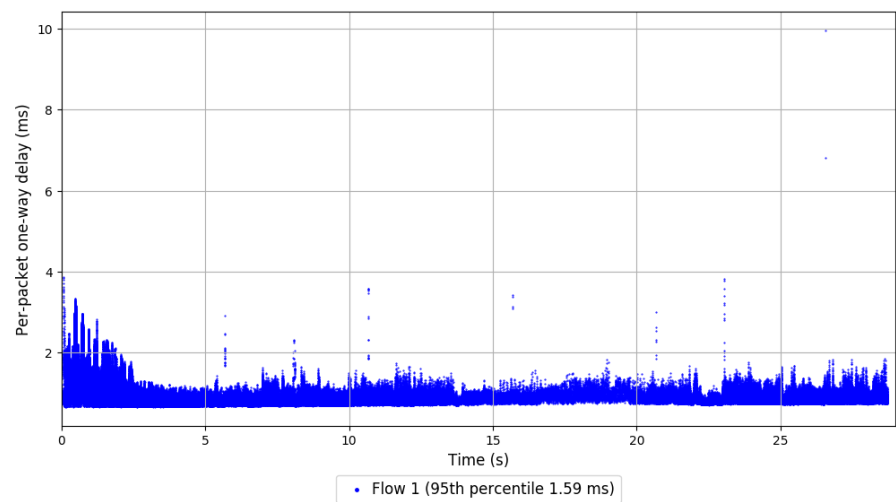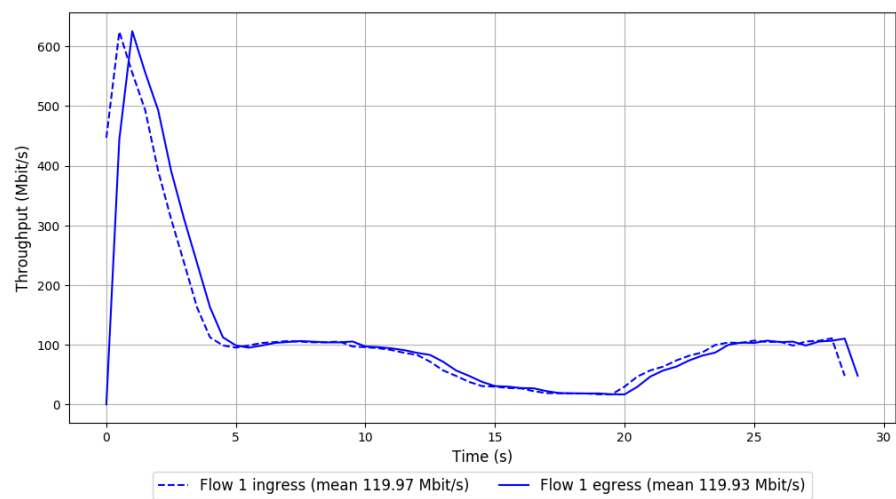
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-07-11 22:41:35
End at: 2019-07-11 22:42:05
Local clock offset: 0.267 ms
Remote clock offset: 3.338 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 218.70 Mbit/s
95th percentile per-packet one-way delay: 1.752 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 218.70 Mbit/s
95th percentile per-packet one-way delay: 1.752 ms
Loss rate: 0.09%
```

Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-07-11 23:14:01
End at: 2019-07-11 23:14:31
Local clock offset: 0.061 ms
Remote clock offset: -4.255 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 119.93 Mbit/s
95th percentile per-packet one-way delay: 1.588 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 119.93 Mbit/s
95th percentile per-packet one-way delay: 1.588 ms
Loss rate: 0.04%
```

Run 2: Report of Indigo-MusesC3 — Data Link

68

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-07-11 23:46:10
End at: 2019-07-11 23:46:40
Local clock offset: 0.263 ms
Remote clock offset: 1.036 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 159.50 Mbit/s
95th percentile per-packet one-way delay: 2.013 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 159.50 Mbit/s
95th percentile per-packet one-way delay: 2.013 ms
Loss rate: 0.09%
```
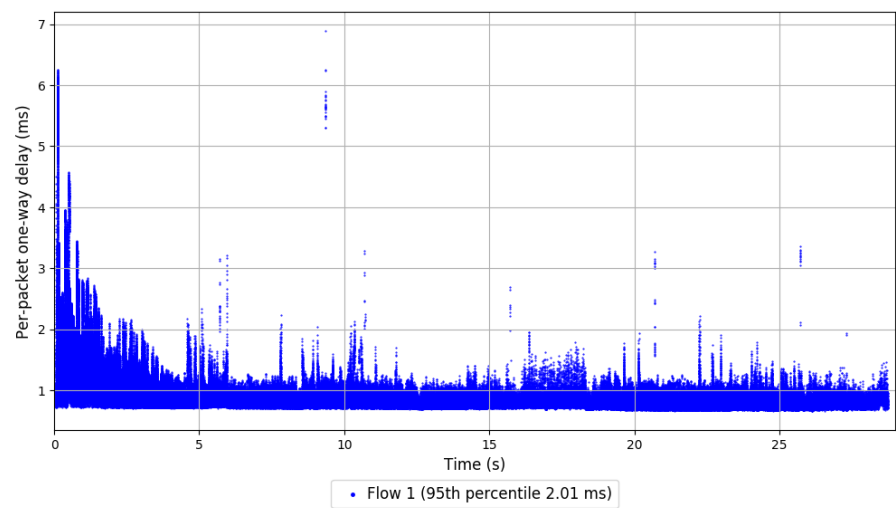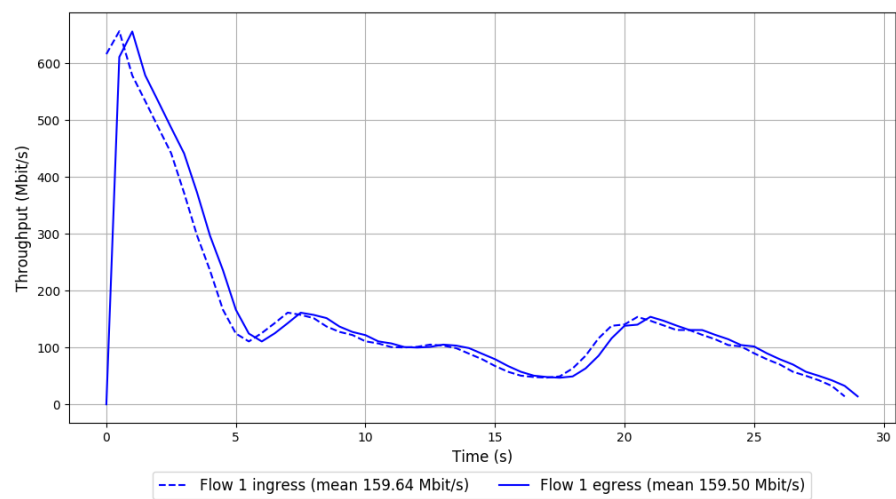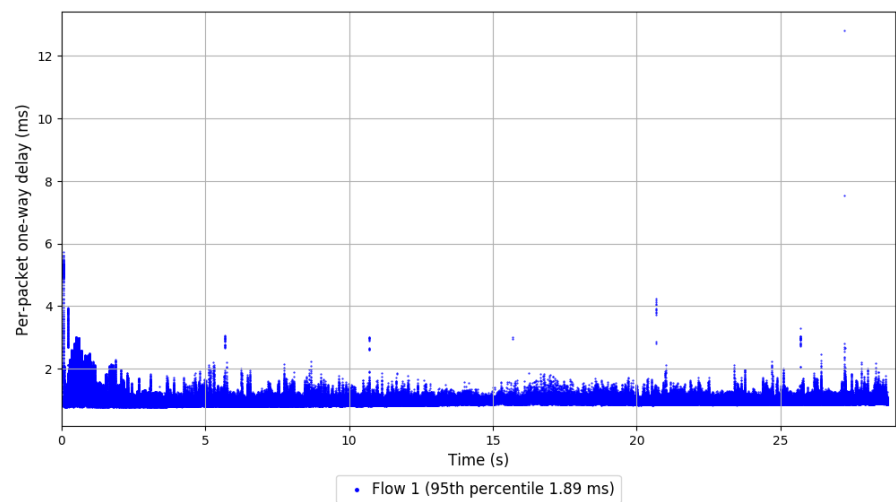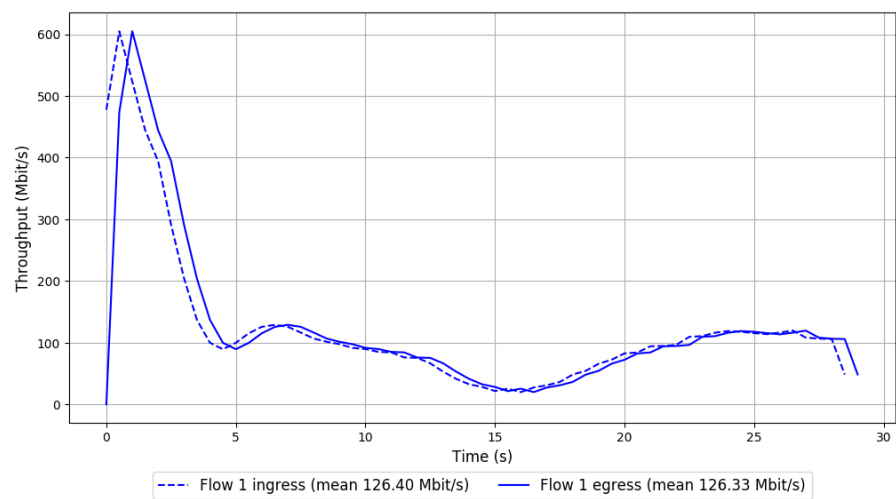
Run 3: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 159.64 Mbit/s)   Flow 1 egress (mean 159.50 Mbit/s)
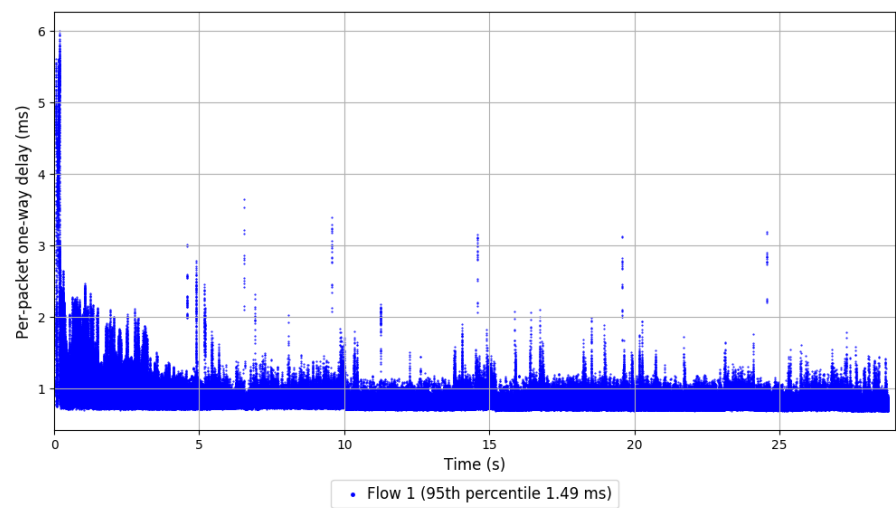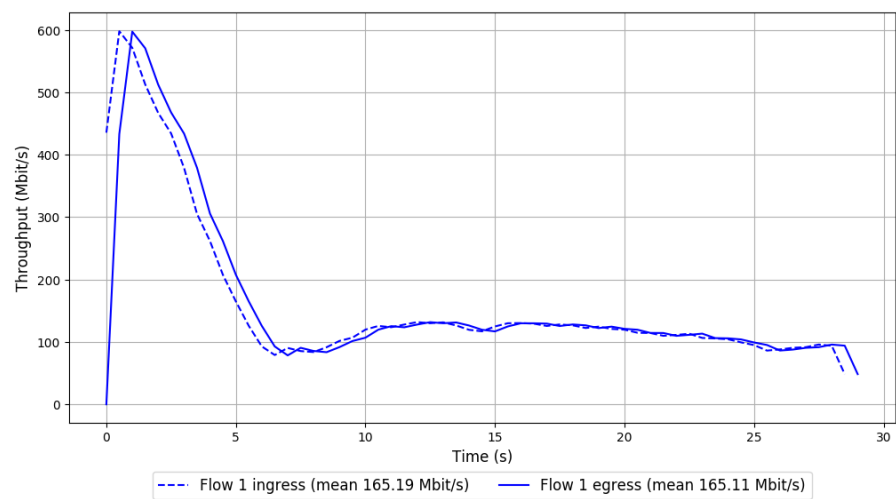

Flow 1 (95th percentile 2.01 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-07-12 00:18:24
End at: 2019-07-12 00:18:54
Local clock offset: 3.714 ms
Remote clock offset: -2.197 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 126.33 Mbit/s
95th percentile per-packet one-way delay: 1.894 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 126.33 Mbit/s
95th percentile per-packet one-way delay: 1.894 ms
Loss rate: 0.06%
```

Run 4: Report of Indigo-MusesC3 — Data Link

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-07-12 00:50:38
End at: 2019-07-12 00:51:08
Local clock offset: 3.523 ms
Remote clock offset: -0.268 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 165.11 Mbit/s
95th percentile per-packet one-way delay: 1.486 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 165.11 Mbit/s
95th percentile per-packet one-way delay: 1.486 ms
Loss rate: 0.05%
```
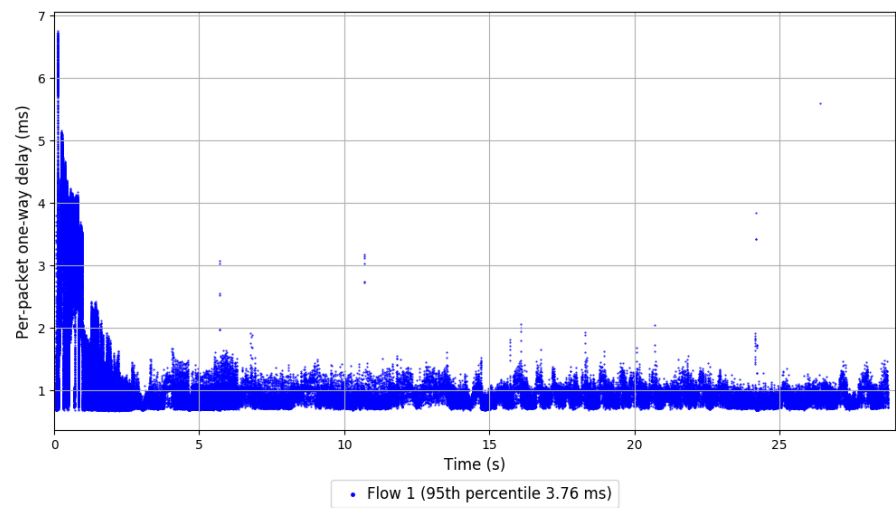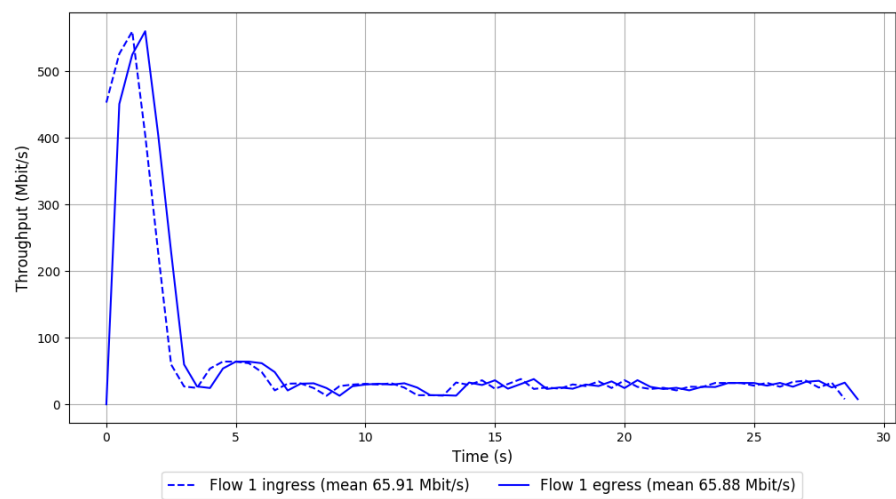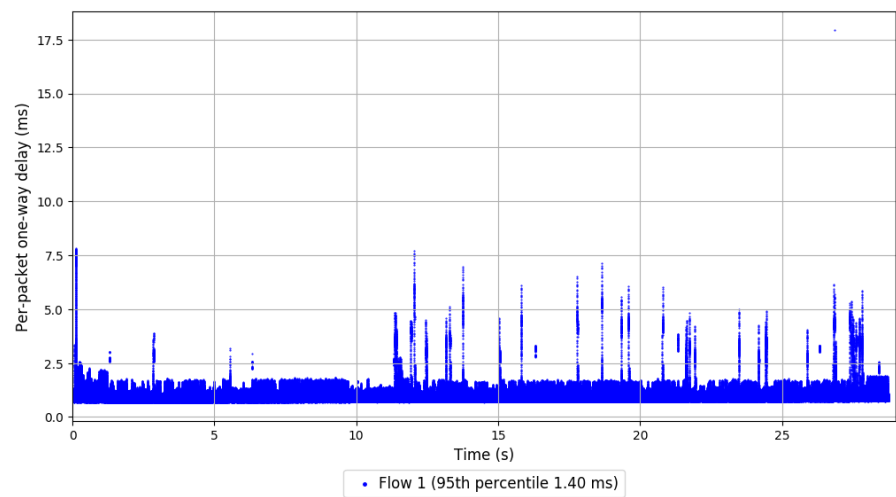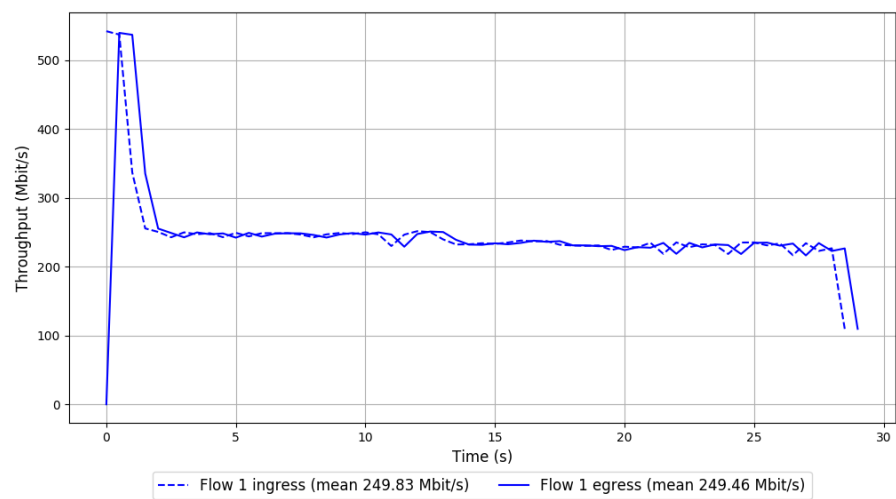
Run 5: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 165.19 Mbit/s)   Flow 1 egress (mean 165.11 Mbit/s)

Flow 1 (95th percentile 1.49 ms)

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-07-11 22:44:20
End at: 2019-07-11 22:44:50
Local clock offset: 0.32 ms
Remote clock offset: 3.347 ms

# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.88 Mbit/s
95th percentile per-packet one-way delay: 3.764 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 65.88 Mbit/s
95th percentile per-packet one-way delay: 3.764 ms
Loss rate: 0.05%
```

Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-07-11 23:16:40
End at: 2019-07-11 23:17:10
Local clock offset: 0.055 ms
Remote clock offset: -4.627 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 249.46 Mbit/s
95th percentile per-packet one-way delay: 1.402 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 249.46 Mbit/s
95th percentile per-packet one-way delay: 1.402 ms
Loss rate: 0.15%
```

Run 2: Report of Indigo-MusesC5 — Data Link

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-07-11 23:48:55
End at: 2019-07-11 23:49:25
Local clock offset: 0.279 ms
Remote clock offset: 1.349 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.16 Mbit/s
95th percentile per-packet one-way delay: 2.013 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 66.16 Mbit/s
95th percentile per-packet one-way delay: 2.013 ms
Loss rate: 0.10%
```
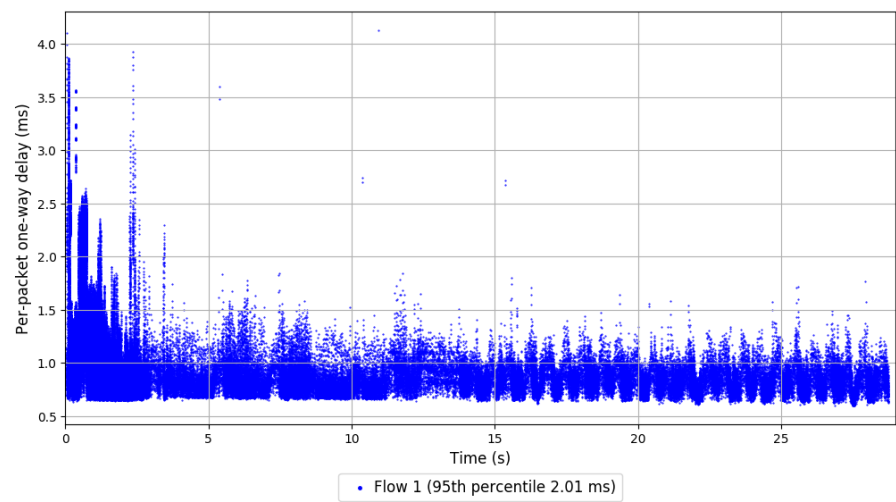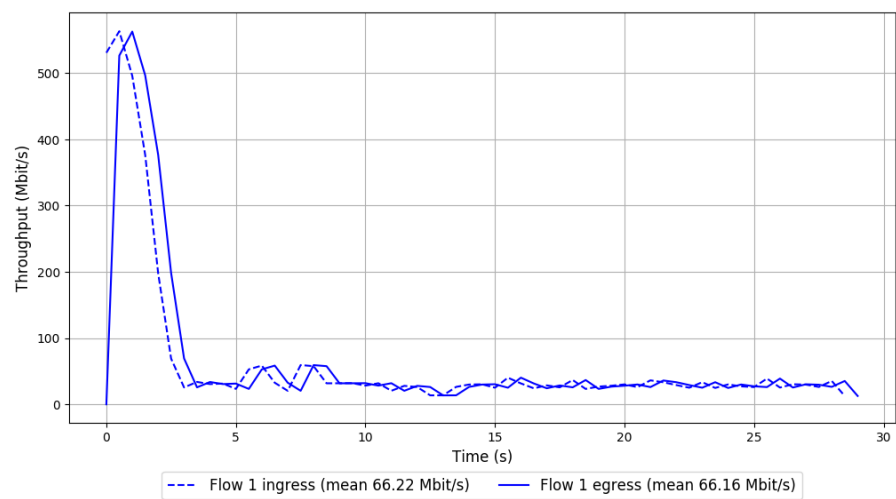
Run 3: Report of Indigo-MusesC5 — Data Link

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-07-12 00:21:06
End at: 2019-07-12 00:21:36
Local clock offset: 3.906 ms
Remote clock offset: -2.449 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 79.37 Mbit/s
95th percentile per-packet one-way delay: 1.677 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 79.37 Mbit/s
95th percentile per-packet one-way delay: 1.677 ms
Loss rate: 0.07%
```
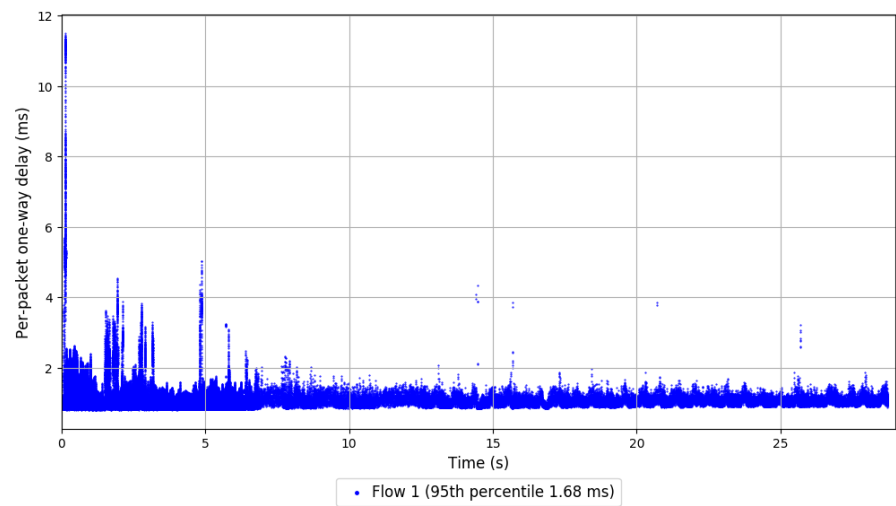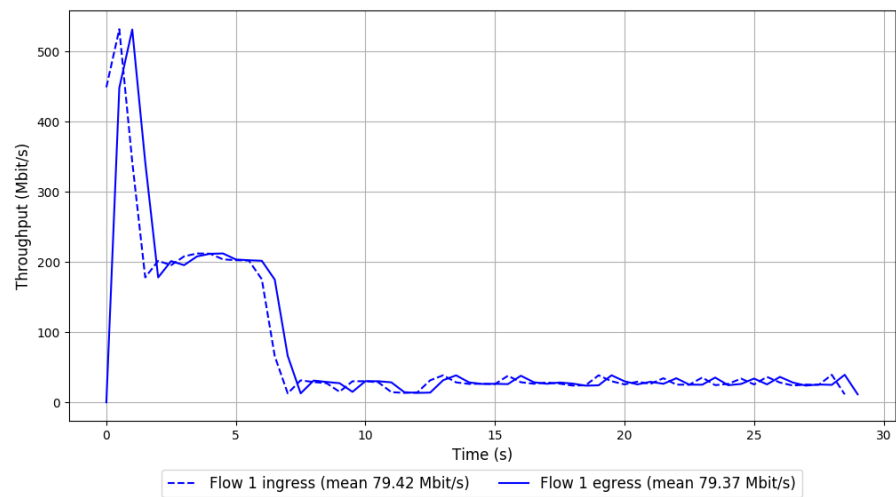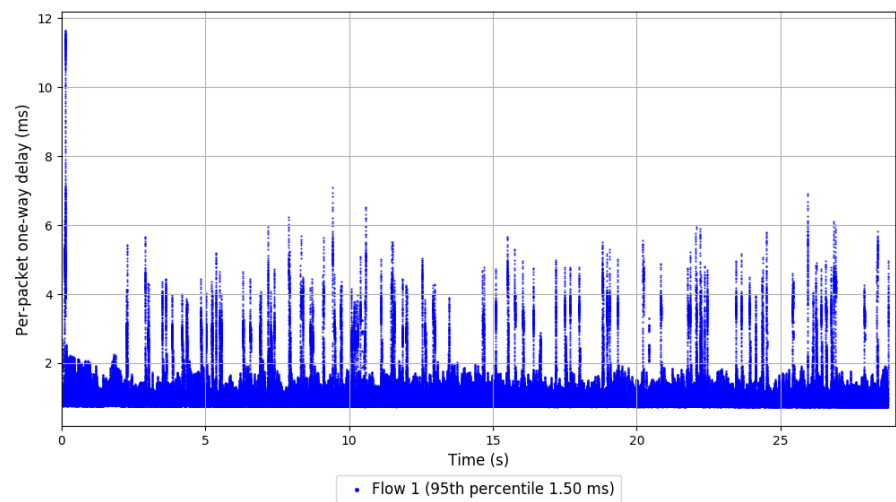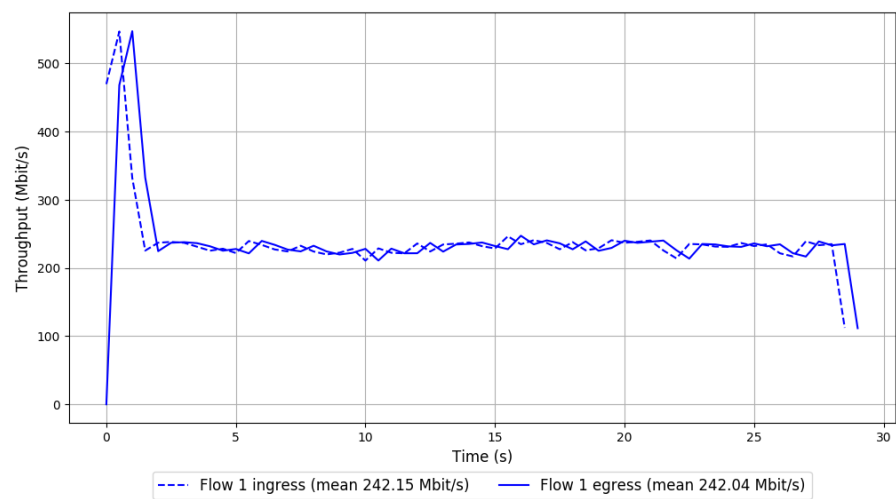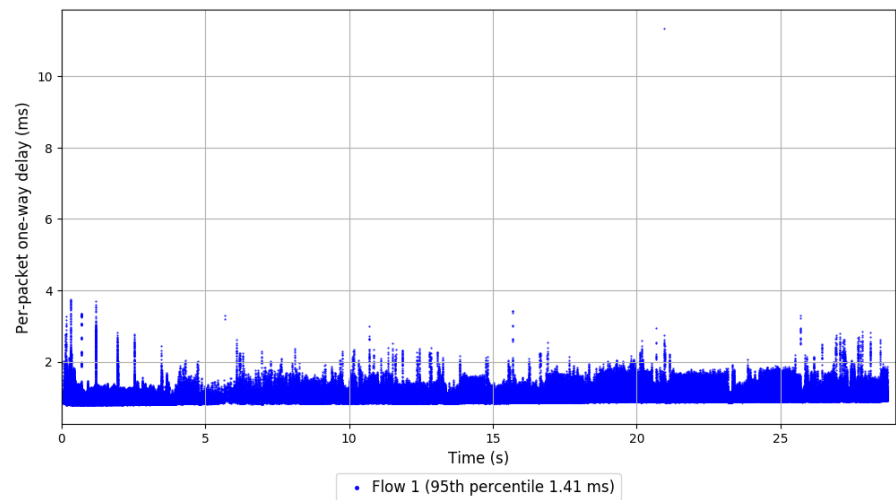
Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-07-12 00:53:21
End at: 2019-07-12 00:53:51
Local clock offset: 3.534 ms
Remote clock offset: -0.018 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 242.04 Mbit/s
95th percentile per-packet one-way delay: 1.495 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 242.04 Mbit/s
95th percentile per-packet one-way delay: 1.495 ms
Loss rate: 0.04%
```

Run 5: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 242.15 Mbit/s)   Flow 1 egress (mean 242.04 Mbit/s)
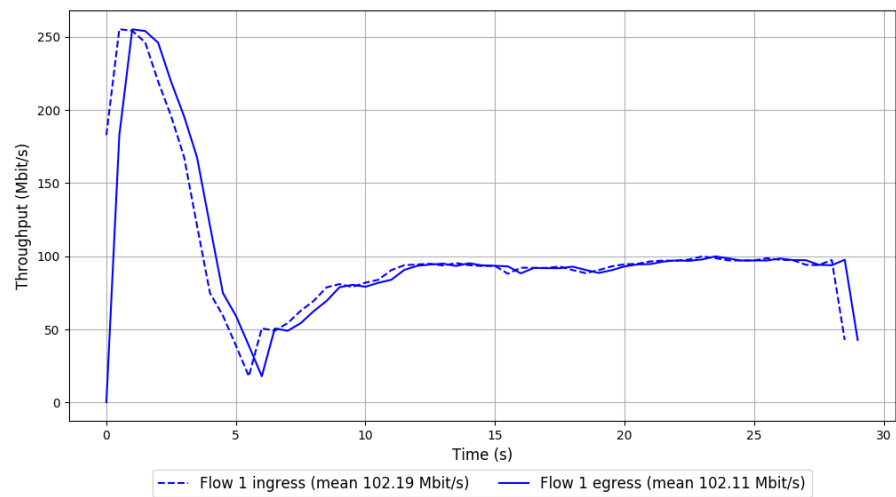

Flow 1 (95th percentile 1.50 ms)

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-07-11 23:09:00
End at: 2019-07-11 23:09:30
Local clock offset: 0.145 ms
Remote clock offset: -3.225 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 102.11 Mbit/s
95th percentile per-packet one-way delay: 1.408 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 102.11 Mbit/s
95th percentile per-packet one-way delay: 1.408 ms
Loss rate: 0.08%
```
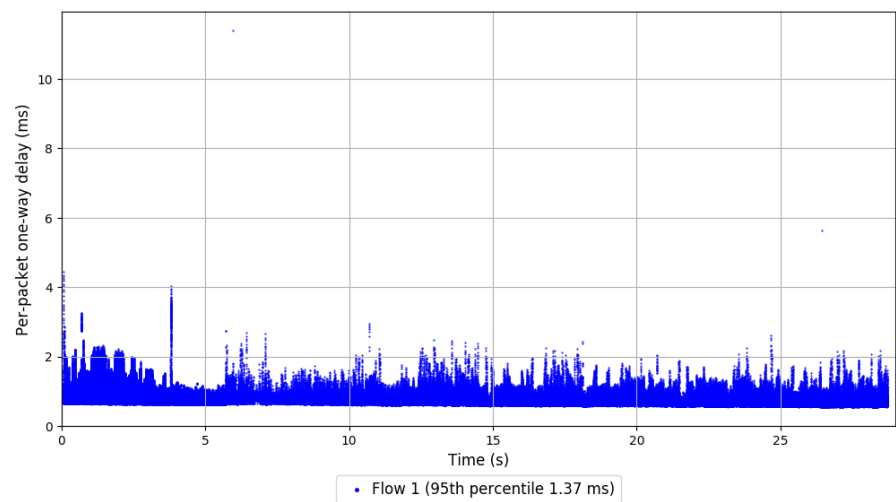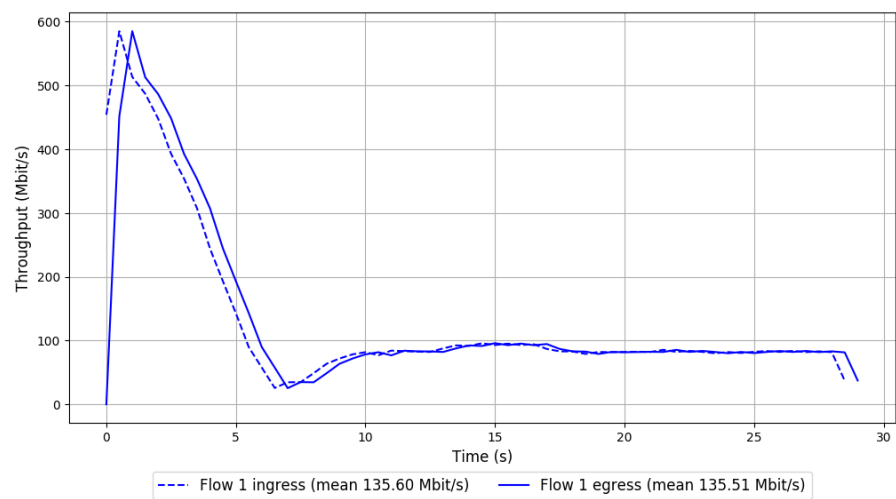
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-07-11 23:41:08
End at: 2019-07-11 23:41:38
Local clock offset: 0.228 ms
Remote clock offset: 0.016 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 135.51 Mbit/s
95th percentile per-packet one-way delay: 1.368 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 135.51 Mbit/s
95th percentile per-packet one-way delay: 1.368 ms
Loss rate: 0.07%
```
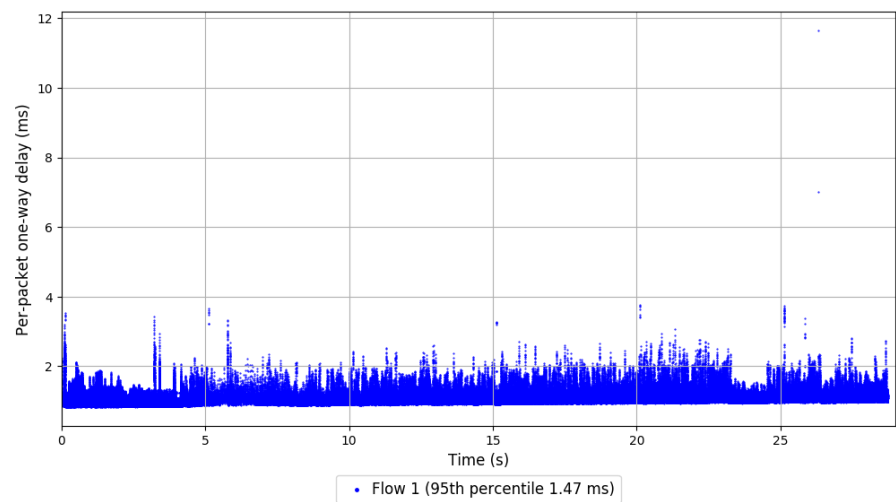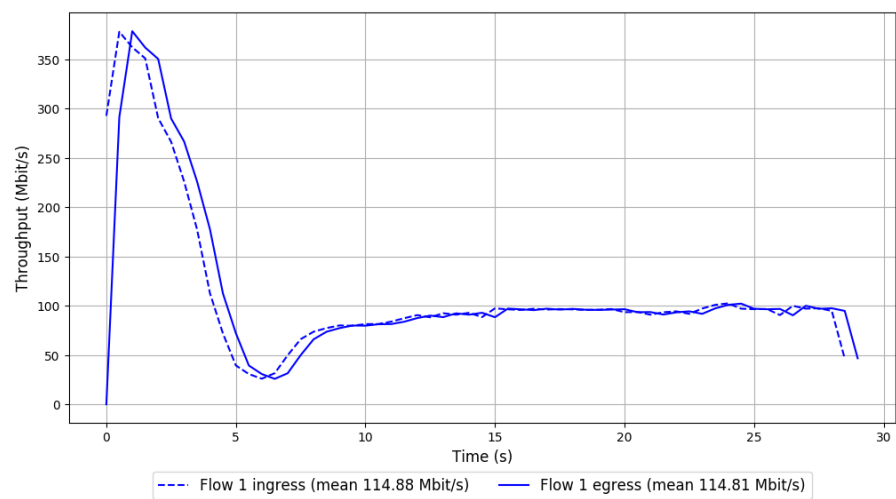
Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-07-12 00:13:22
End at: 2019-07-12 00:13:52
Local clock offset: 3.26 ms
Remote clock offset: -1.454 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 114.81 Mbit/s
95th percentile per-packet one-way delay: 1.473 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 114.81 Mbit/s
95th percentile per-packet one-way delay: 1.473 ms
Loss rate: 0.06%
```
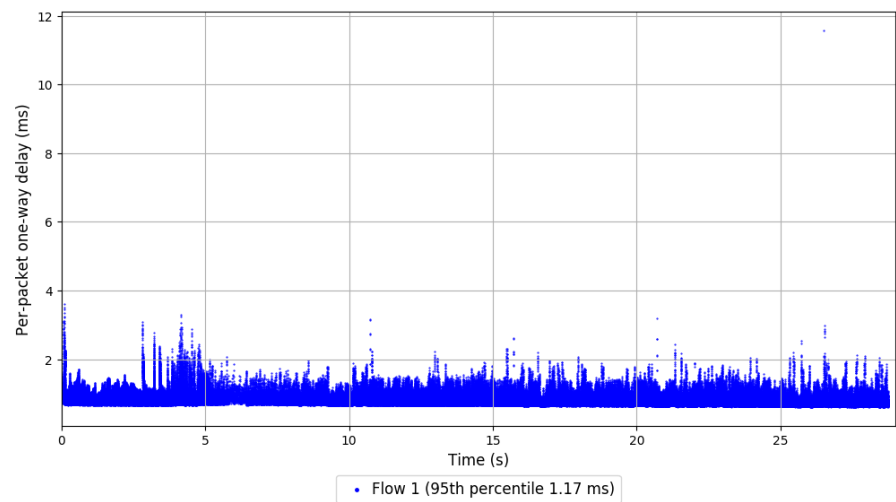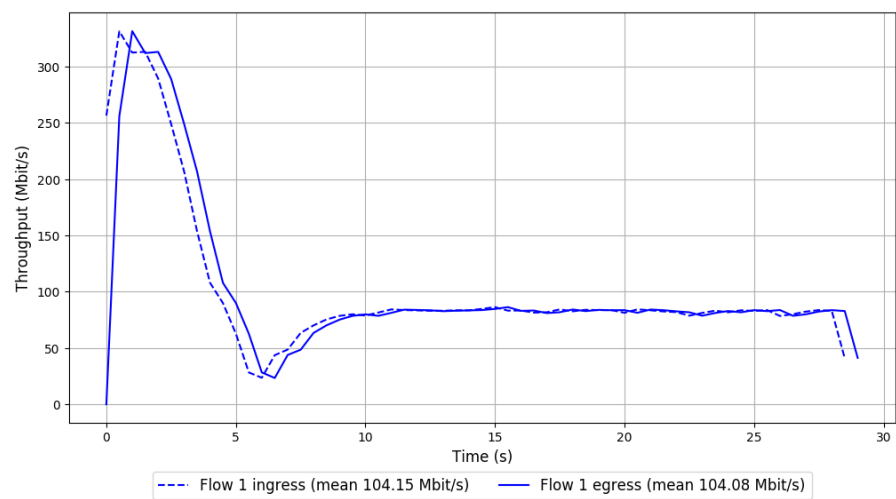
Run 3: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 114.88 Mbit/s)   Flow 1 egress (mean 114.81 Mbit/s)

Flow 1 (95th percentile 1.47 ms)

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-07-12 00:45:36
End at: 2019-07-12 00:46:06
Local clock offset: 3.524 ms
Remote clock offset: -0.898 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 104.08 Mbit/s
95th percentile per-packet one-way delay: 1.166 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 104.08 Mbit/s
95th percentile per-packet one-way delay: 1.166 ms
Loss rate: 0.06%
```
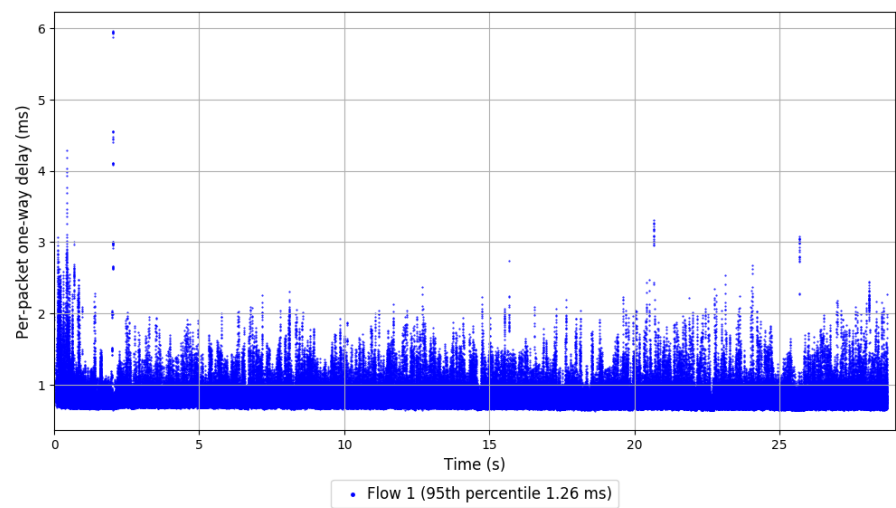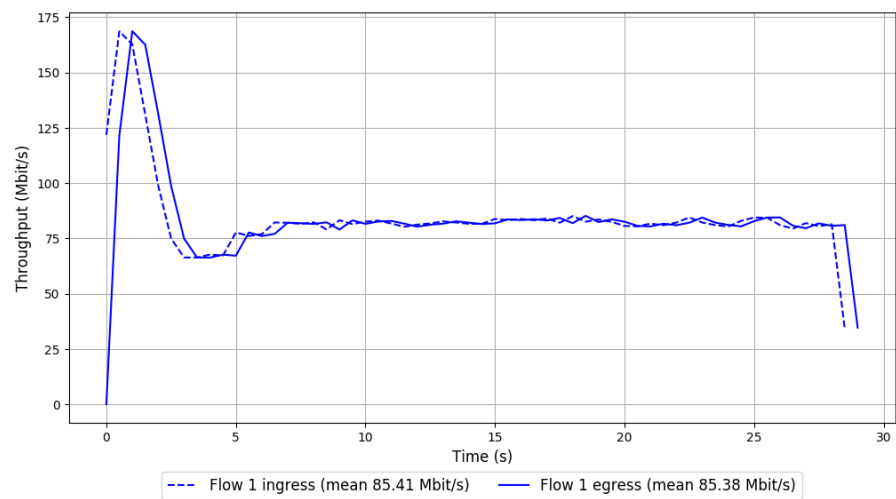
Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 104.15 Mbit/s)   Flow 1 egress (mean 104.08 Mbit/s)

Flow 1 (95th percentile 1.17 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-07-12 01:18:00
End at: 2019-07-12 01:18:30
Local clock offset: -0.259 ms
Remote clock offset: 0.622 ms


# Below is generated by plot.py at 2019-07-12 01:55:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 85.38 Mbit/s
95th percentile per-packet one-way delay: 1.260 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 85.38 Mbit/s
95th percentile per-packet one-way delay: 1.260 ms
Loss rate: 0.03%
```
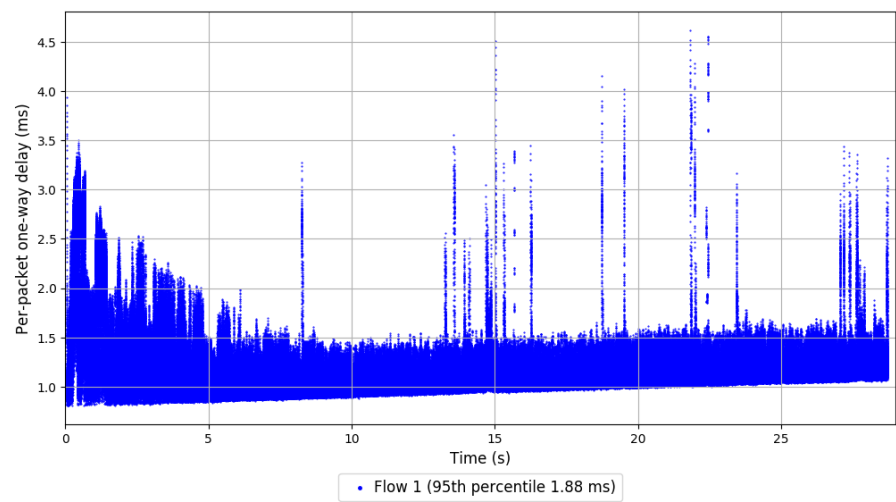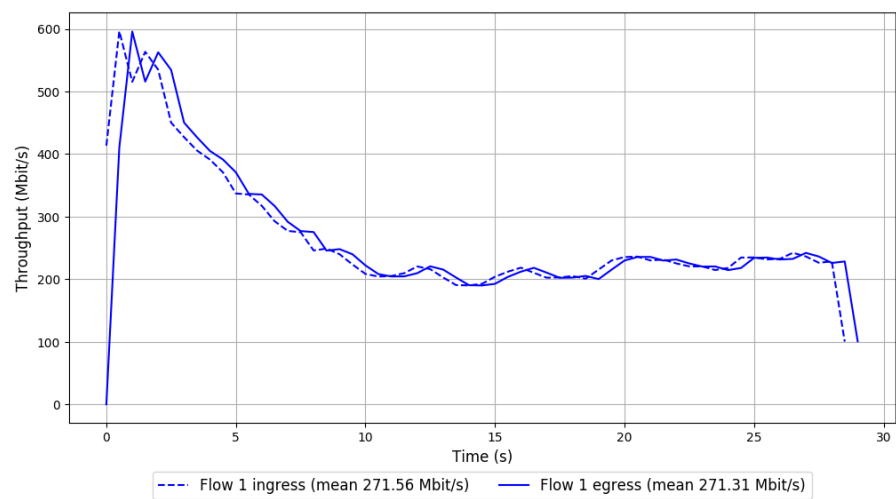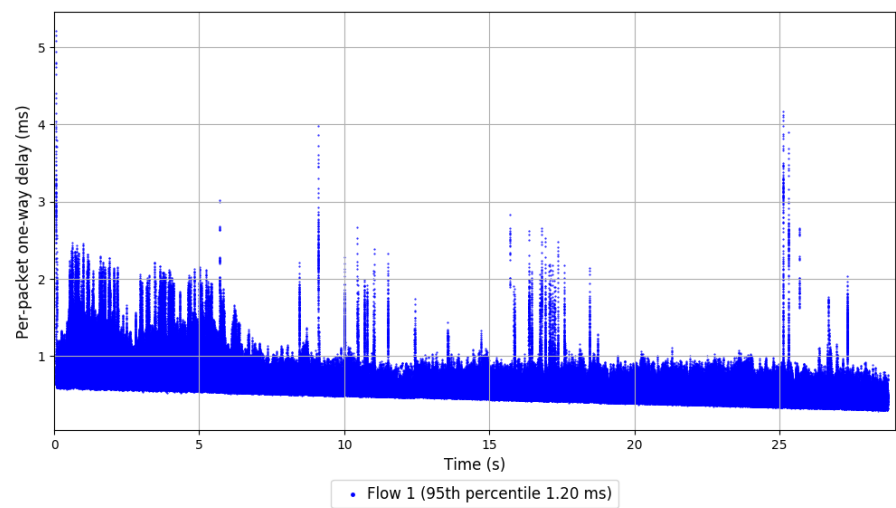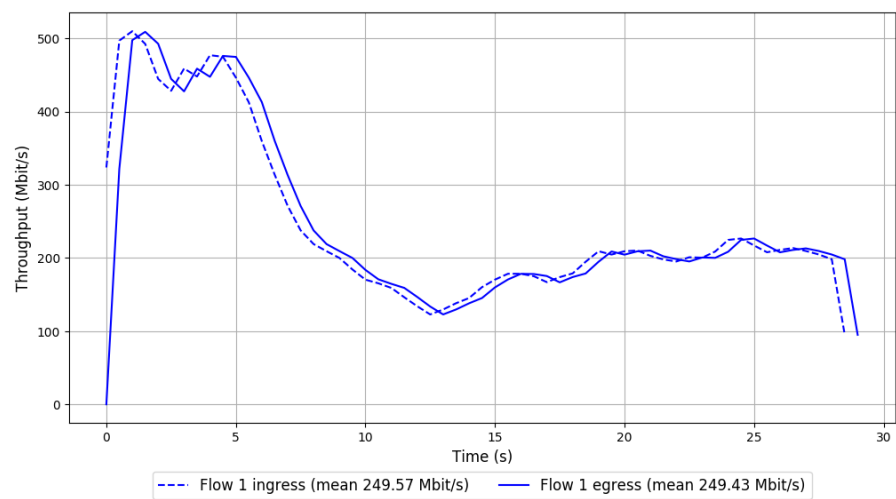
Run 5: Report of Indigo-MusesD — Data Link

- - - Flow 1 ingress (mean 85.41 Mbit/s) —— Flow 1 egress (mean 85.38 Mbit/s)

• Flow 1 (95th percentile 1.26 ms)

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-07-11 22:58:02
End at: 2019-07-11 22:58:32
Local clock offset: 0.41 ms
Remote clock offset: 0.628 ms

# Below is generated by plot.py at 2019-07-12 01:56:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 271.31 Mbit/s
95th percentile per-packet one-way delay: 1.883 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 271.31 Mbit/s
95th percentile per-packet one-way delay: 1.883 ms
Loss rate: 0.09%
```

Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-07-11 23:30:11
End at: 2019-07-11 23:30:41
Local clock offset: 0.032 ms
Remote clock offset: -4.325 ms


# Below is generated by plot.py at 2019-07-12 01:56:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 249.43 Mbit/s
95th percentile per-packet one-way delay: 1.198 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 249.43 Mbit/s
95th percentile per-packet one-way delay: 1.198 ms
Loss rate: 0.06%
```

Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-07-12 00:02:32
End at: 2019-07-12 00:03:02
Local clock offset: 1.334 ms
Remote clock offset: 2.532 ms


# Below is generated by plot.py at 2019-07-12 01:56:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 281.48 Mbit/s
95th percentile per-packet one-way delay: 1.889 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 281.48 Mbit/s
95th percentile per-packet one-way delay: 1.889 ms
Loss rate: 0.06%
```
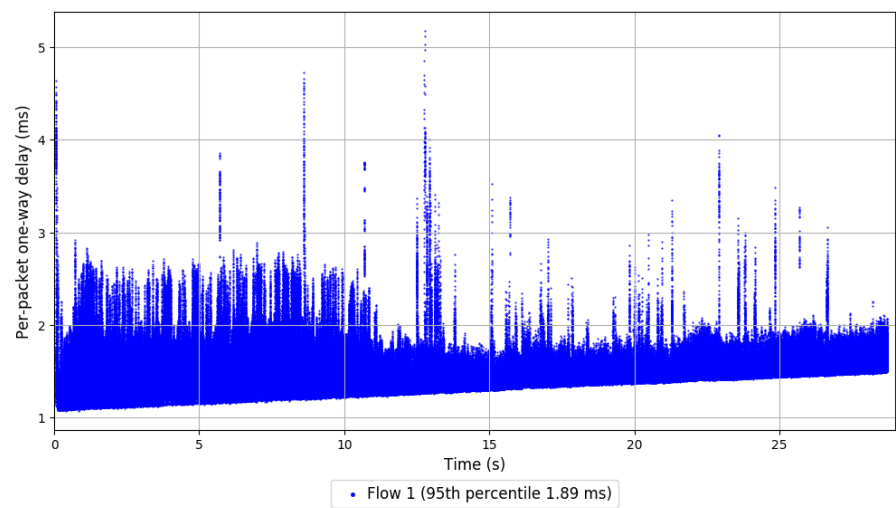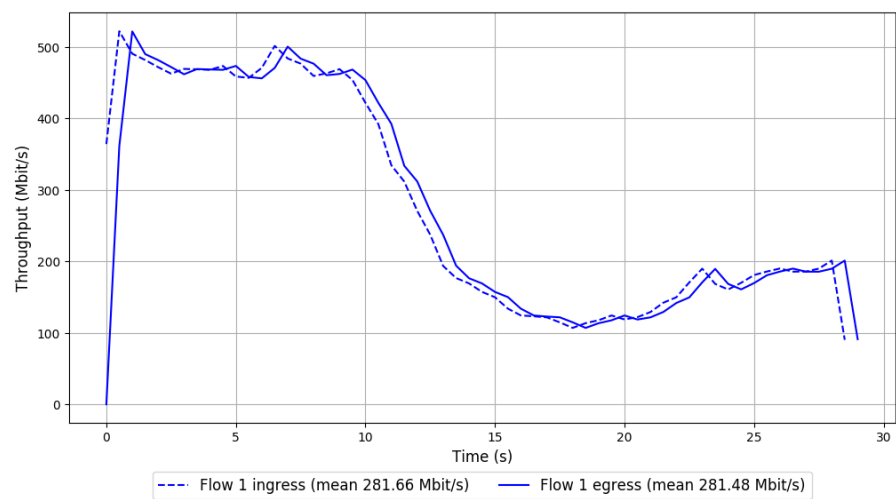
Run 3: Report of Indigo-MusesT — Data Link

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-07-12 00:34:45
End at: 2019-07-12 00:35:15
Local clock offset: 3.822 ms
Remote clock offset: -3.203 ms


# Below is generated by plot.py at 2019-07-12 01:56:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 312.87 Mbit/s
95th percentile per-packet one-way delay: 1.351 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 312.87 Mbit/s
95th percentile per-packet one-way delay: 1.351 ms
Loss rate: 0.09%
```
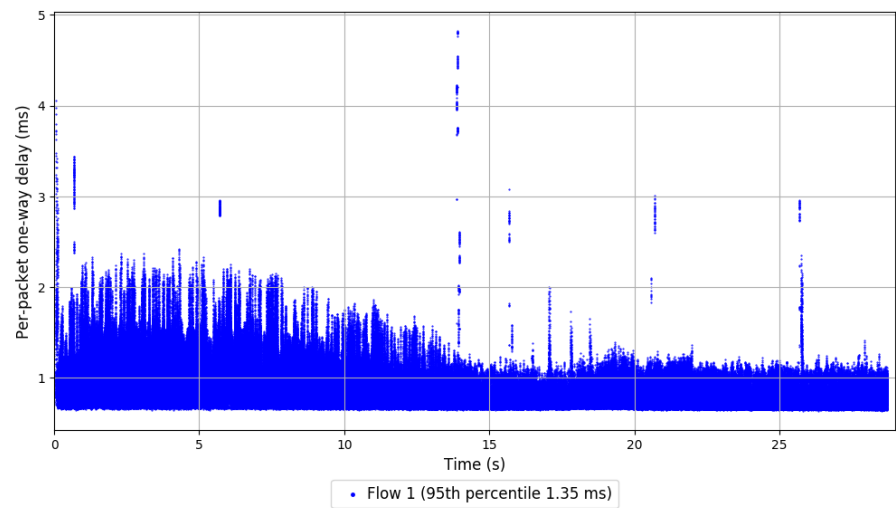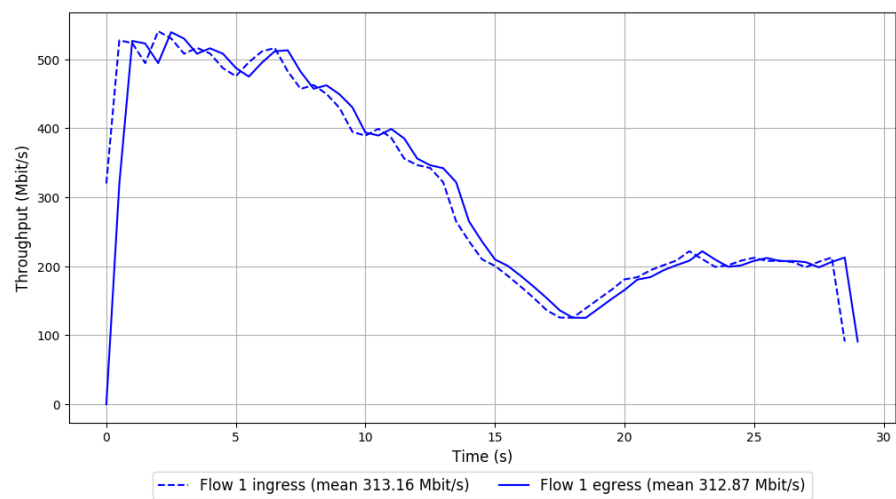
Run 4: Report of Indigo-MusesT — Data Link

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-07-12 01:07:10
End at: 2019-07-12 01:07:40
Local clock offset: 1.146 ms
Remote clock offset: 0.738 ms


# Below is generated by plot.py at 2019-07-12 01:56:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 270.24 Mbit/s
95th percentile per-packet one-way delay: 1.221 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 270.24 Mbit/s
95th percentile per-packet one-way delay: 1.221 ms
Loss rate: 0.03%
```
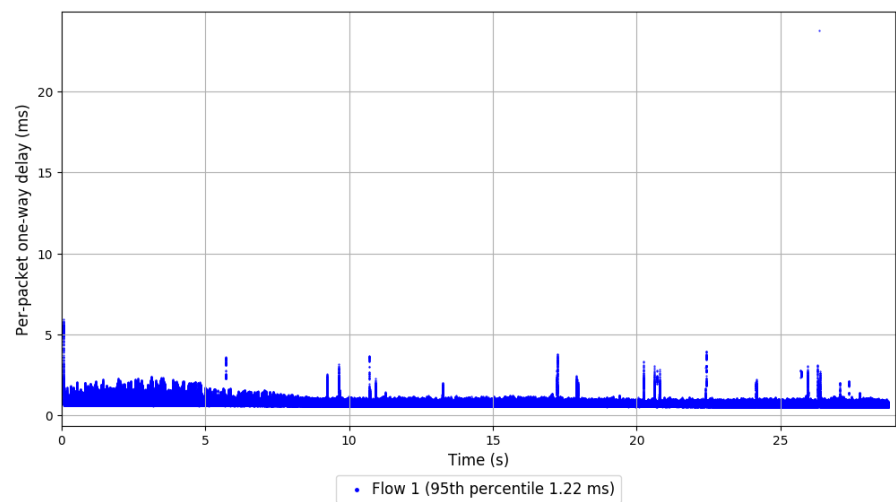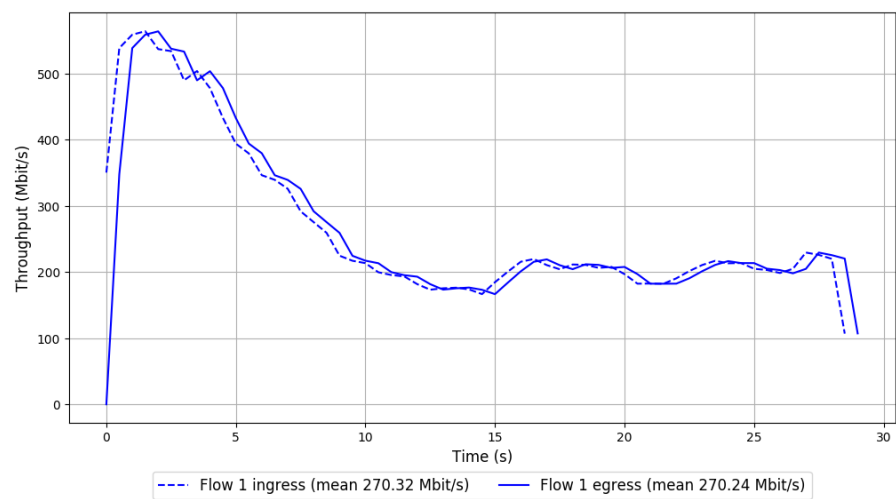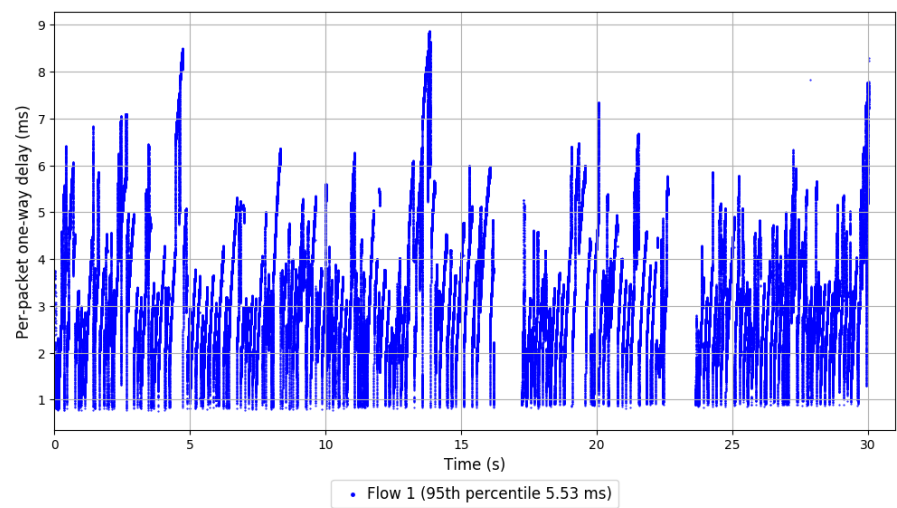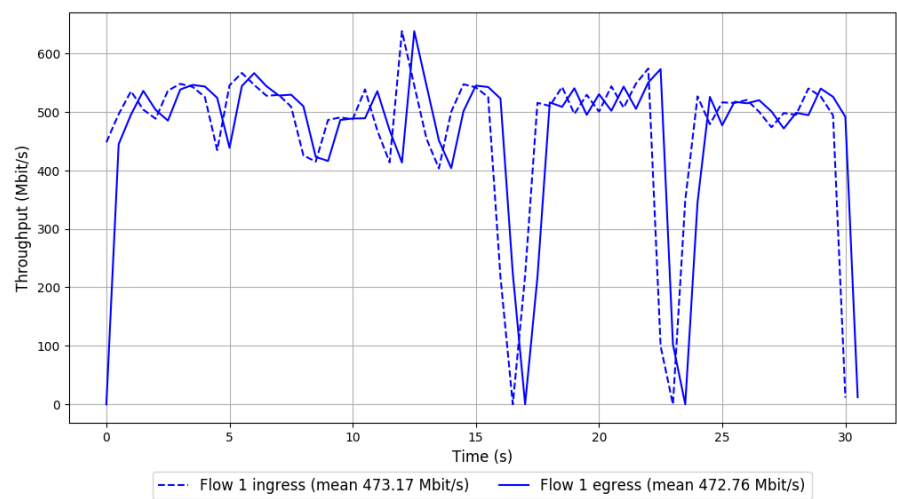
Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-07-11 23:06:01
End at: 2019-07-11 23:06:31
Local clock offset: 0.17 ms
Remote clock offset: -2.549 ms


# Below is generated by plot.py at 2019-07-12 01:59:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 472.76 Mbit/s
95th percentile per-packet one-way delay: 5.528 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 472.76 Mbit/s
95th percentile per-packet one-way delay: 5.528 ms
Loss rate: 0.08%
```

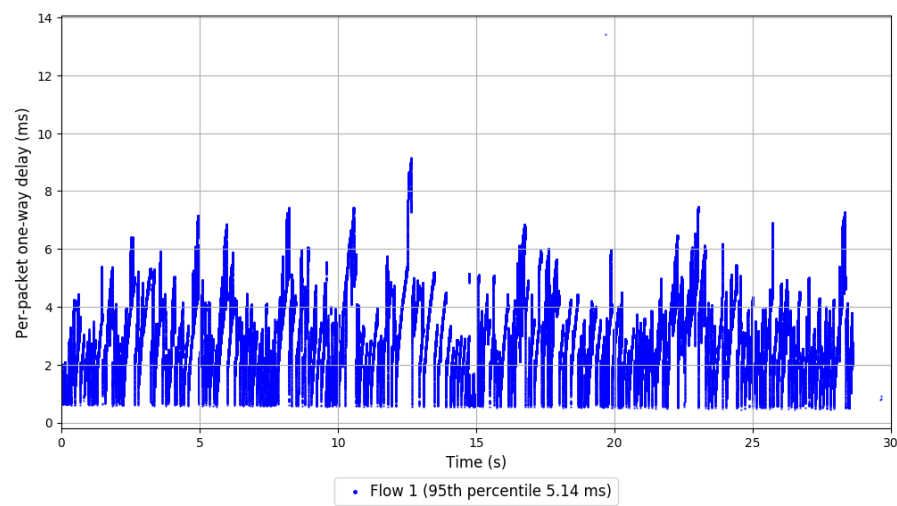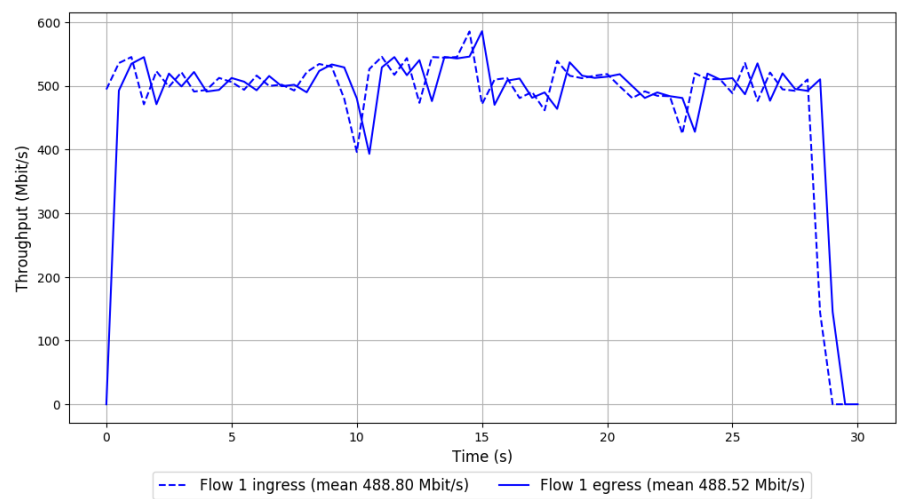# Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-07-11 23:38:09
End at: 2019-07-11 23:38:39
Local clock offset: 0.195 ms
Remote clock offset: -0.812 ms


# Below is generated by plot.py at 2019-07-12 02:00:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 488.52 Mbit/s
95th percentile per-packet one-way delay: 5.136 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 488.52 Mbit/s
95th percentile per-packet one-way delay: 5.136 ms
Loss rate: 0.06%
```

Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 488.80 Mbit/s) ——— Flow 1 egress (mean 488.52 Mbit/s)

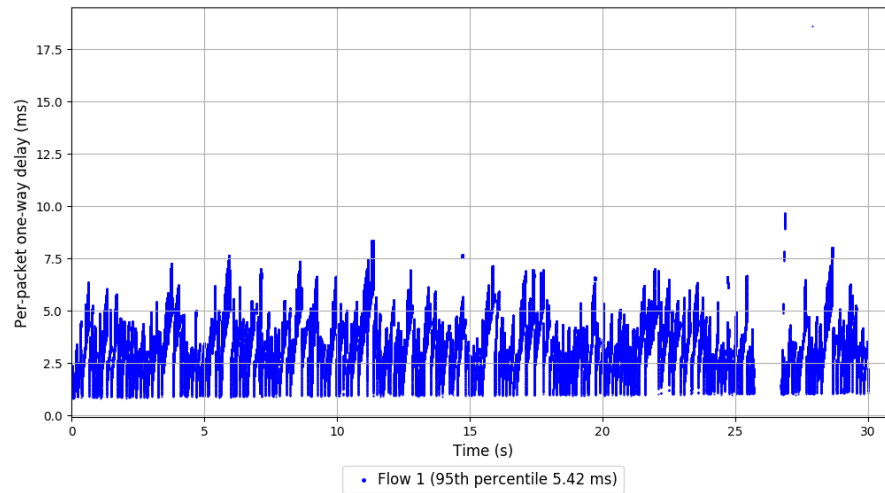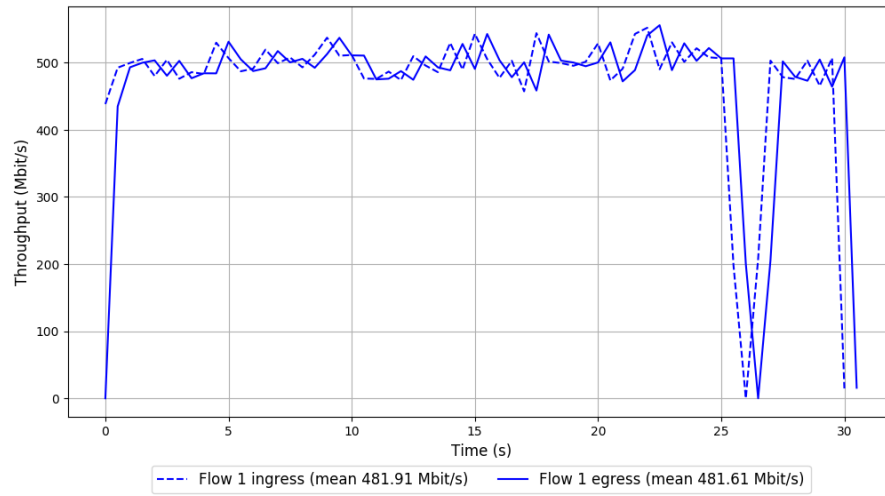• Flow 1 (95th percentile 5.14 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2019-07-12 00:10:25
End at: 2019-07-12 00:10:55
Local clock offset: 2.902 ms
Remote clock offset: -0.803 ms


# Below is generated by plot.py at 2019-07-12 02:01:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 481.61 Mbit/s
95th percentile per-packet one-way delay: 5.425 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 481.61 Mbit/s
95th percentile per-packet one-way delay: 5.425 ms
Loss rate: 0.06%
```

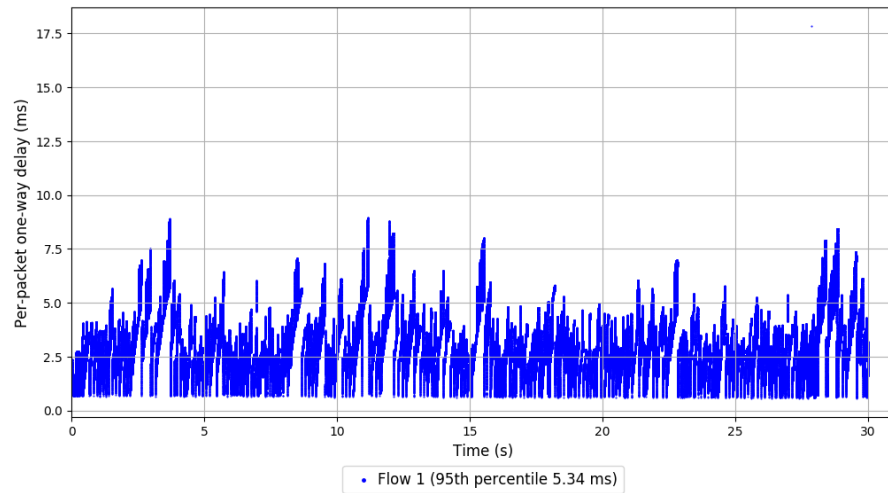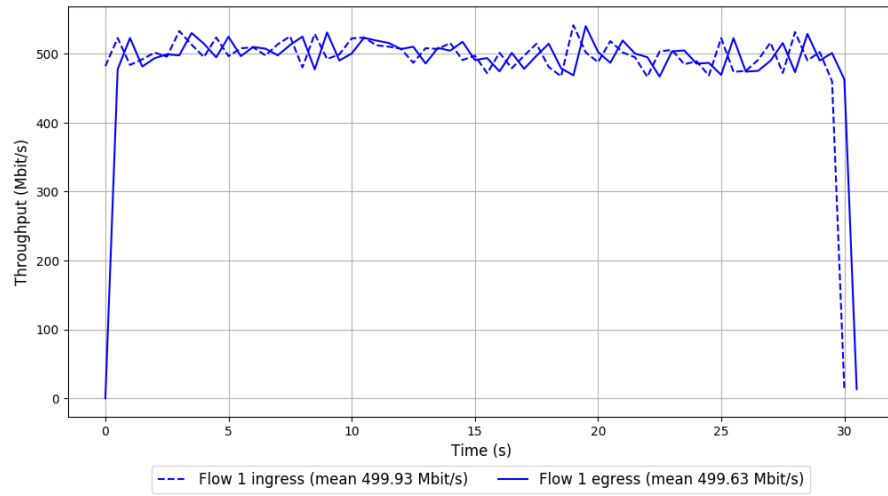Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-07-12 00:42:38
End at: 2019-07-12 00:43:08
Local clock offset: 3.542 ms
Remote clock offset: -1.418 ms


# Below is generated by plot.py at 2019-07-12 02:02:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 499.63 Mbit/s
95th percentile per-packet one-way delay: 5.340 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 499.63 Mbit/s
95th percentile per-packet one-way delay: 5.340 ms
Loss rate: 0.06%
```
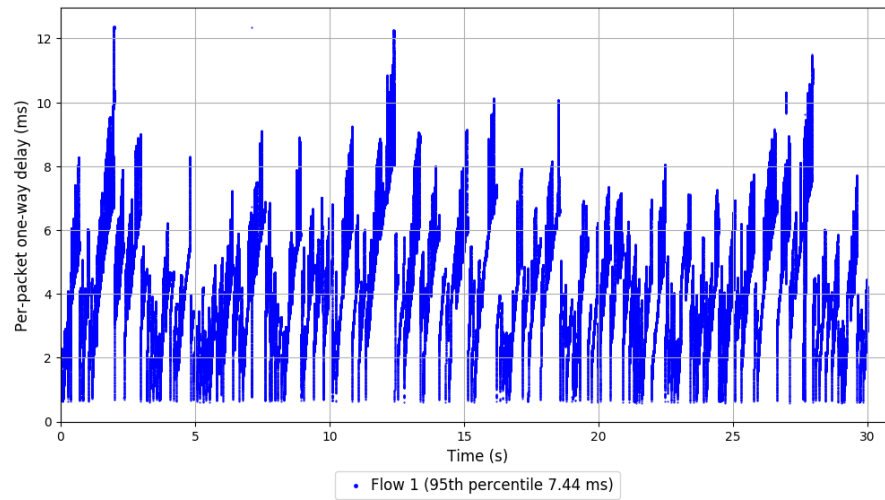
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 499.93 Mbit/s)   Flow 1 egress (mean 499.63 Mbit/s)

Flow 1 (95th percentile 5.34 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-07-12 01:15:03
End at: 2019-07-12 01:15:33
Local clock offset: -0.02 ms
Remote clock offset: 0.623 ms


# Below is generated by plot.py at 2019-07-12 02:02:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 494.45 Mbit/s
95th percentile per-packet one-way delay: 7.439 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 494.45 Mbit/s
95th percentile per-packet one-way delay: 7.439 ms
Loss rate: 0.03%
```
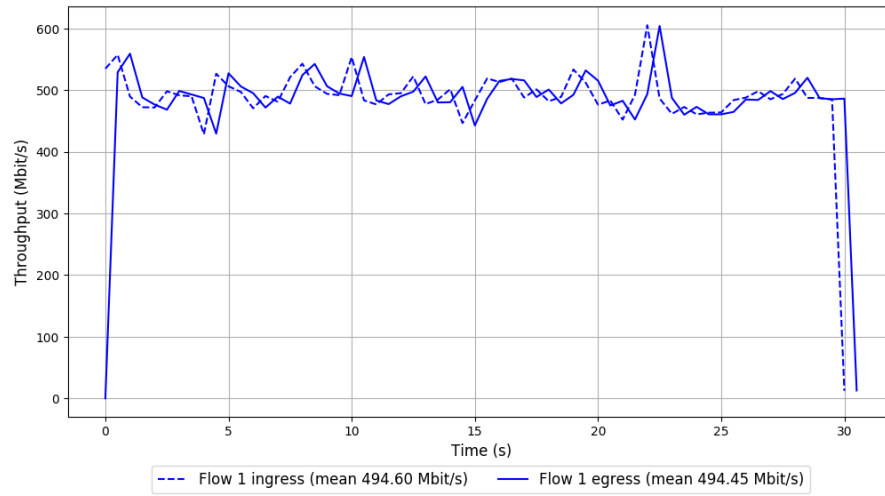
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 494.60 Mbit/s) --- Flow 1 egress (mean 494.45 Mbit/s)

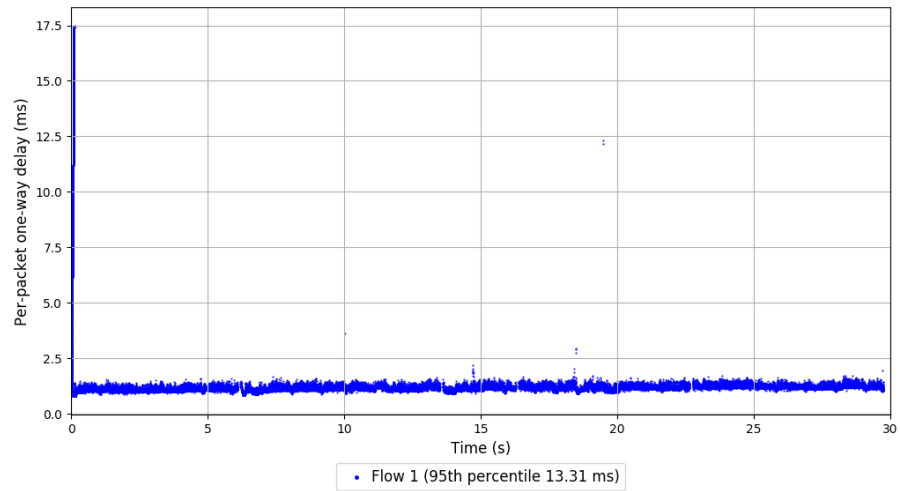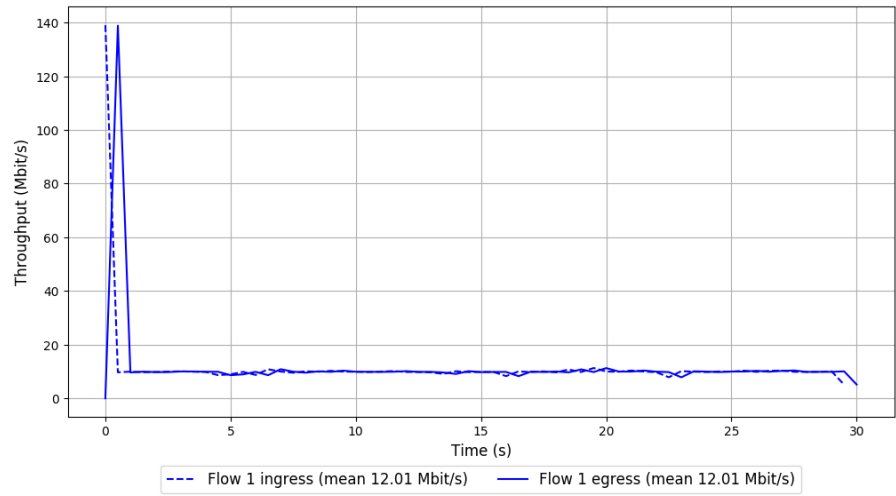Flow 1 (95th percentile 7.44 ms)

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-07-11 23:02:18
End at: 2019-07-11 23:02:48
Local clock offset: 0.301 ms
Remote clock offset: -1.32 ms


# Below is generated by plot.py at 2019-07-12 02:02:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.01 Mbit/s
95th percentile per-packet one-way delay: 13.309 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 12.01 Mbit/s
95th percentile per-packet one-way delay: 13.309 ms
Loss rate: 0.06%
```

Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-07-11 23:34:25
End at: 2019-07-11 23:34:55
Local clock offset: 0.155 ms
Remote clock offset: -2.118 ms


# Below is generated by plot.py at 2019-07-12 02:02:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.76 Mbit/s
95th percentile per-packet one-way delay: 1.151 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 9.76 Mbit/s
95th percentile per-packet one-way delay: 1.151 ms
Loss rate: 0.34%
```
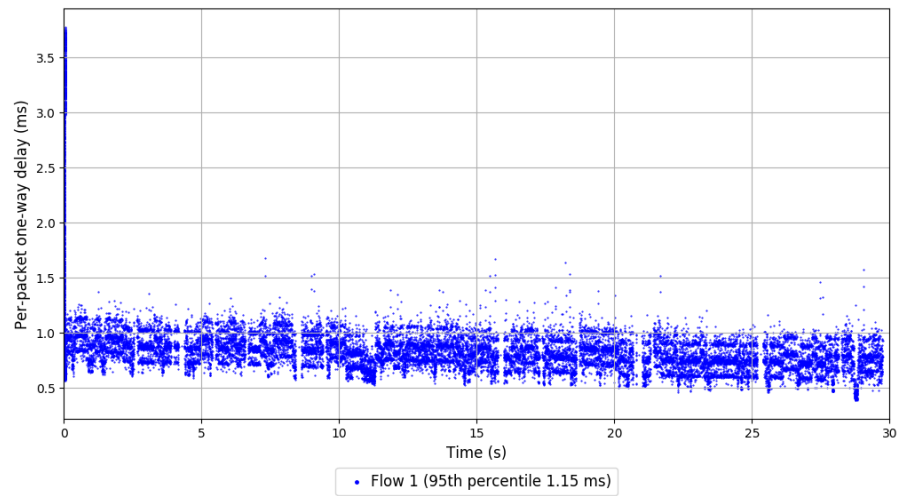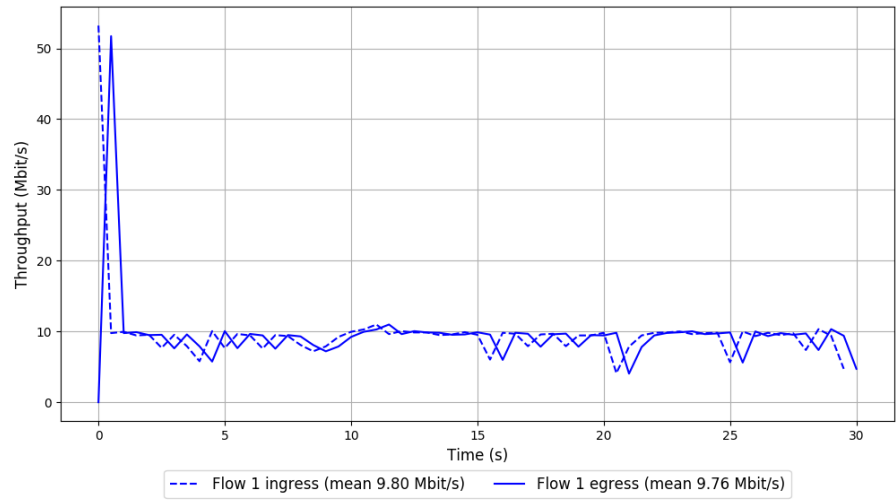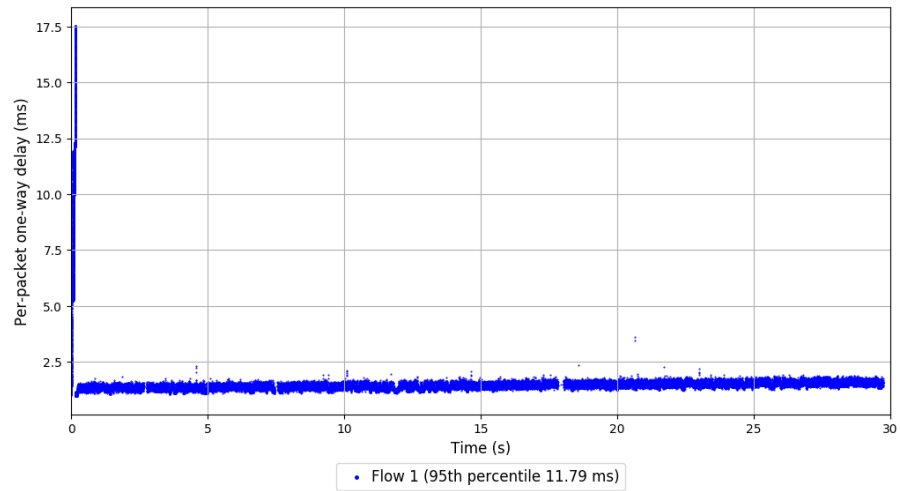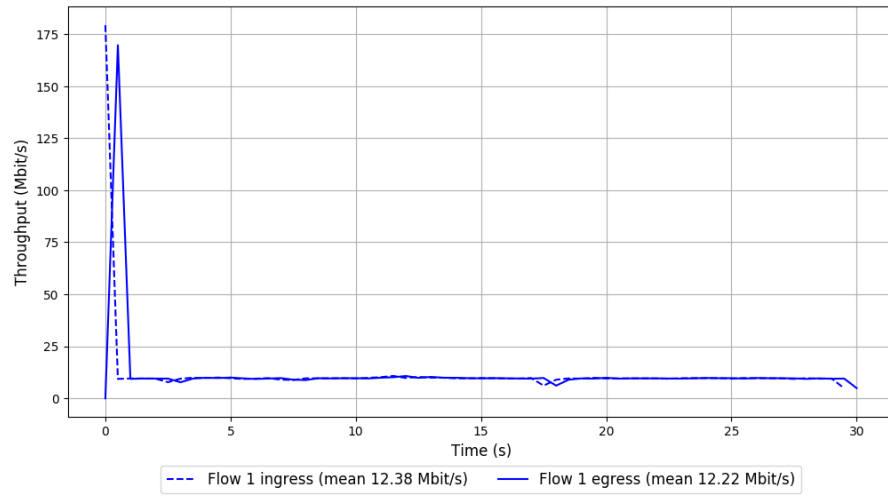
Run 2: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 9.80 Mbit/s) —— Flow 1 egress (mean 9.76 Mbit/s)

• Flow 1 (95th percentile 1.15 ms)

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 00:06:42
End at: 2019-07-12 00:07:12
Local clock offset: 2.306 ms
Remote clock offset: 0.45 ms


# Below is generated by plot.py at 2019-07-12 02:02:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.22 Mbit/s
95th percentile per-packet one-way delay: 11.788 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 12.22 Mbit/s
95th percentile per-packet one-way delay: 11.788 ms
Loss rate: 1.33%
```
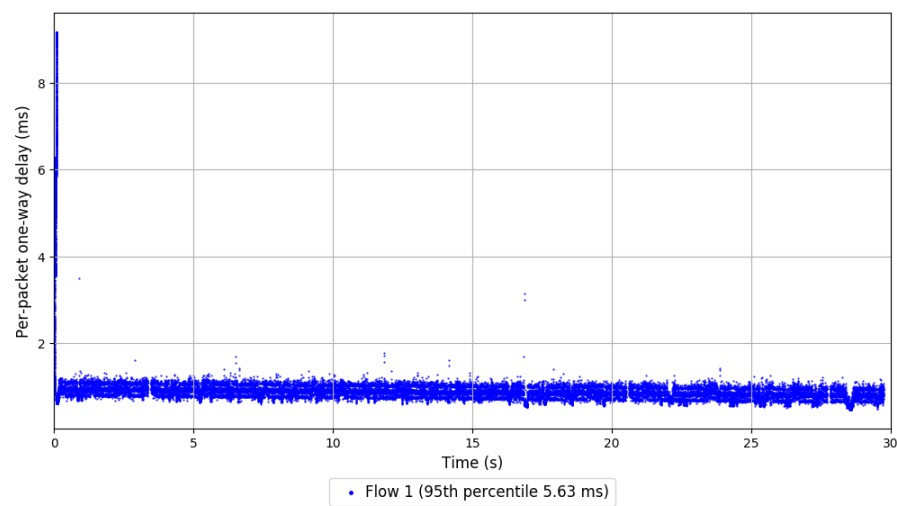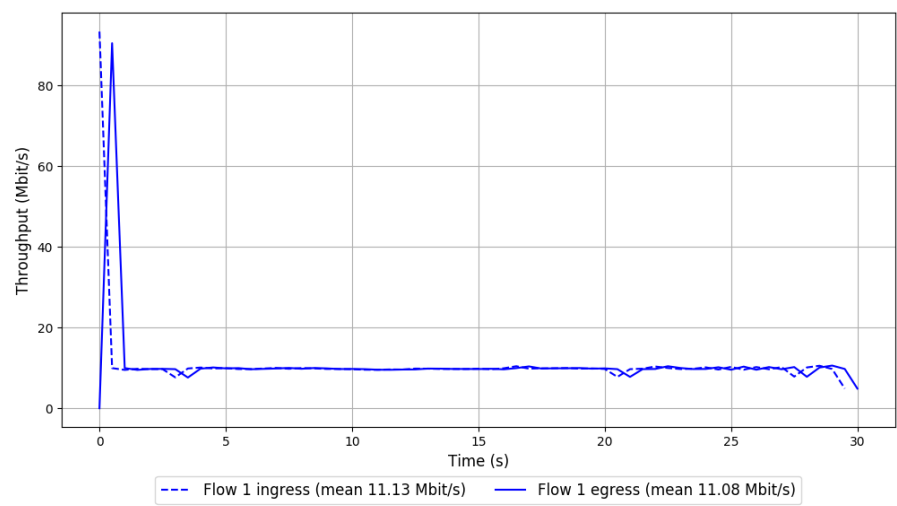
Run 3: Report of Muses_DecisionTree — Data Link

Run 4: Statistics of Muses_DecisionTree

Start at: 2019-07-12 00:38:55
End at: 2019-07-12 00:39:25
Local clock offset: 3.664 ms
Remote clock offset: -2.345 ms

Below is generated by plot.py at 2019-07-12 02:02:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 11.08 Mbit/s
95th percentile per-packet one-way delay: 5.632 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 11.08 Mbit/s
95th percentile per-packet one-way delay: 5.632 ms
Loss rate: 0.46%

Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 01:11:19
End at: 2019-07-12 01:11:49
Local clock offset: 0.449 ms
Remote clock offset: 0.797 ms


# Below is generated by plot.py at 2019-07-12 02:02:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 14.25 Mbit/s
95th percentile per-packet one-way delay: 46.753 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 14.25 Mbit/s
95th percentile per-packet one-way delay: 46.753 ms
Loss rate: 0.02%
```
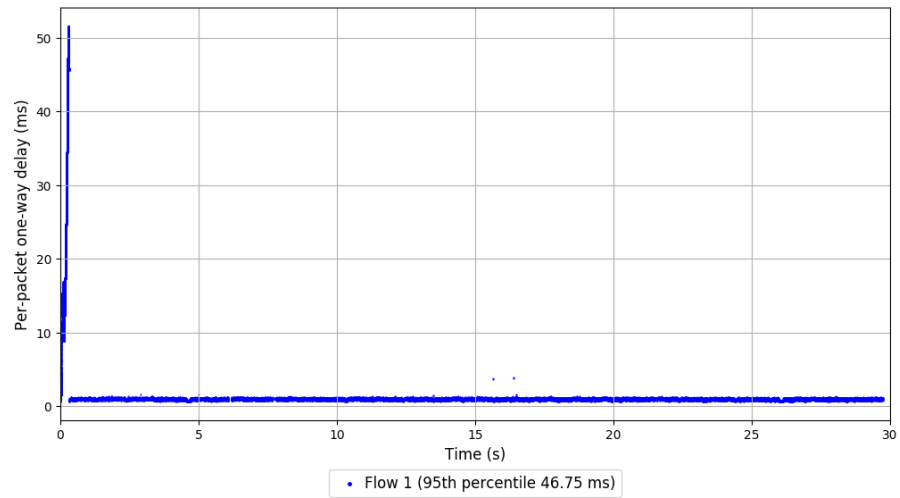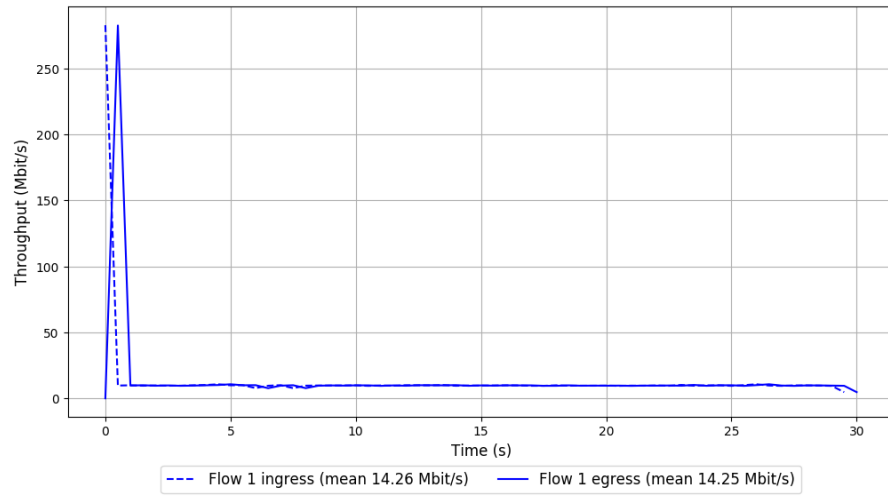
Run 5: Report of Muses_DecisionTree — Data Link
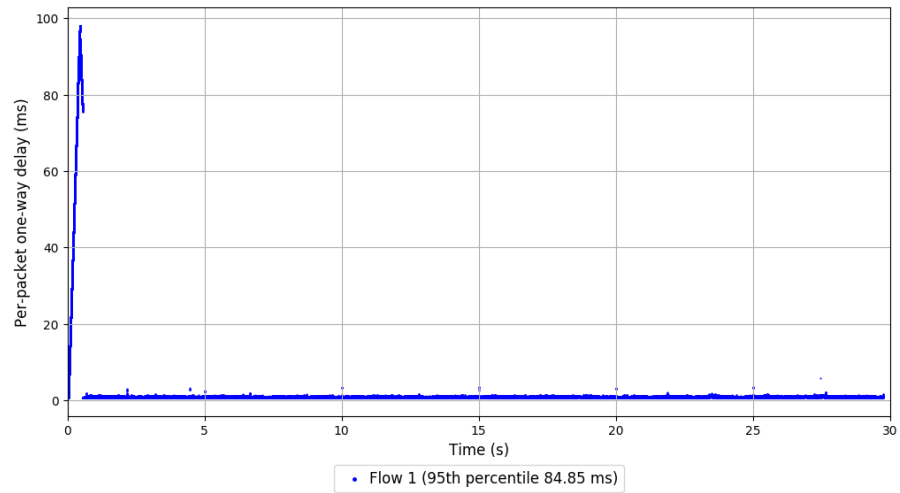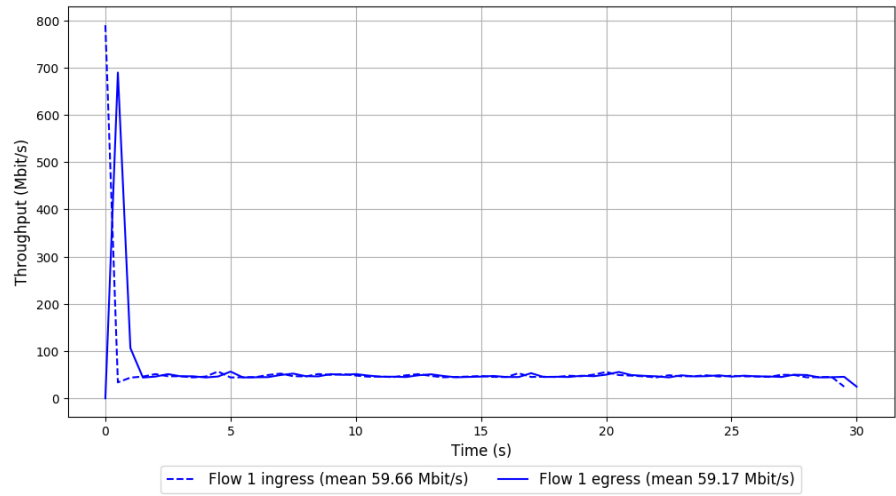
Run 1: Statistics of Muses_DecisionTreeH0

Start at: 2019-07-11 22:46:49
End at: 2019-07-11 22:47:19
Local clock offset: 0.326 ms
Remote clock offset: 3.358 ms

Below is generated by plot.py at 2019-07-12 02:02:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 59.17 Mbit/s
95th percentile per-packet one-way delay: 84.852 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 59.17 Mbit/s
95th percentile per-packet one-way delay: 84.852 ms
Loss rate: 0.82%

Run 1: Report of Muses_DecisionTreeH0 — Data Link

Run 2: Statistics of Muses_DecisionTreeH0

Start at: 2019-07-11 23:19:15
End at: 2019-07-11 23:19:45
Local clock offset: 0.035 ms
Remote clock offset: -4.95 ms

Below is generated by plot.py at 2019-07-12 02:02:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 31.36 Mbit/s
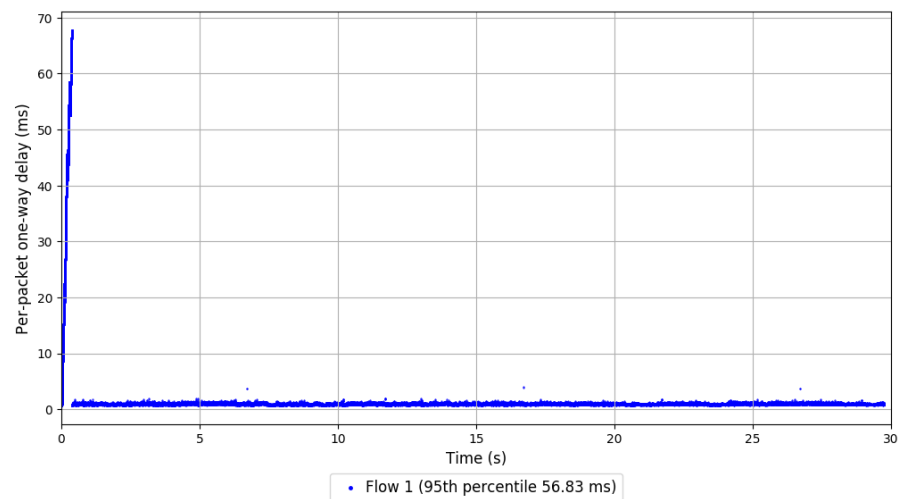95th percentile per-packet one-way delay: 56.827 ms
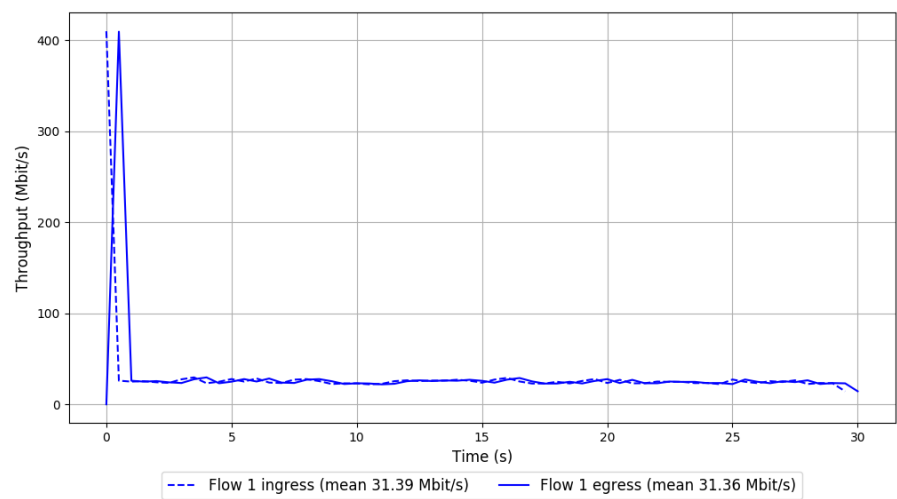Loss rate: 0.09%
-- Flow 1:
Average throughput: 31.36 Mbit/s
95th percentile per-packet one-way delay: 56.827 ms
Loss rate: 0.09%

Run 2: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 31.39 Mbit/s) --- Flow 1 egress (mean 31.36 Mbit/s)

• Flow 1 (95th percentile 56.83 ms)

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-11 23:51:25
End at: 2019-07-11 23:51:55
Local clock offset: 0.278 ms
Remote clock offset: 1.702 ms


# Below is generated by plot.py at 2019-07-12 02:02:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.78 Mbit/s
95th percentile per-packet one-way delay: 8.402 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 10.78 Mbit/s
95th percentile per-packet one-way delay: 8.402 ms
Loss rate: 0.08%
```
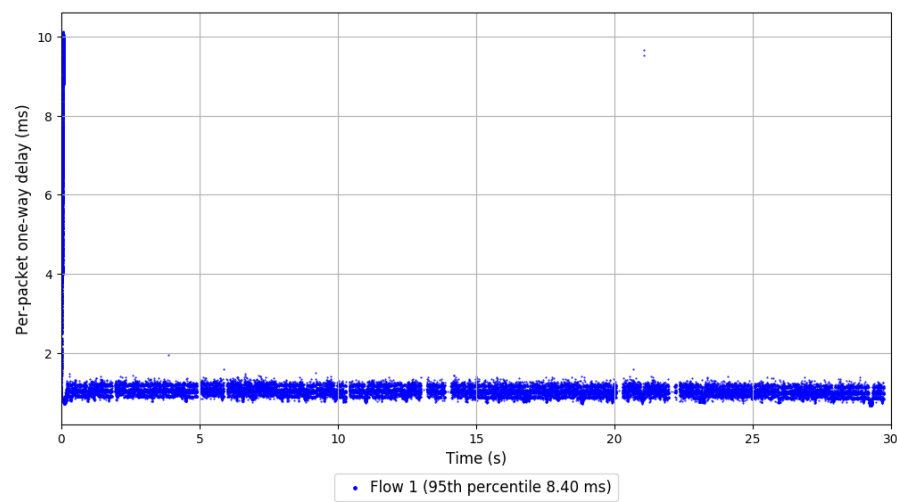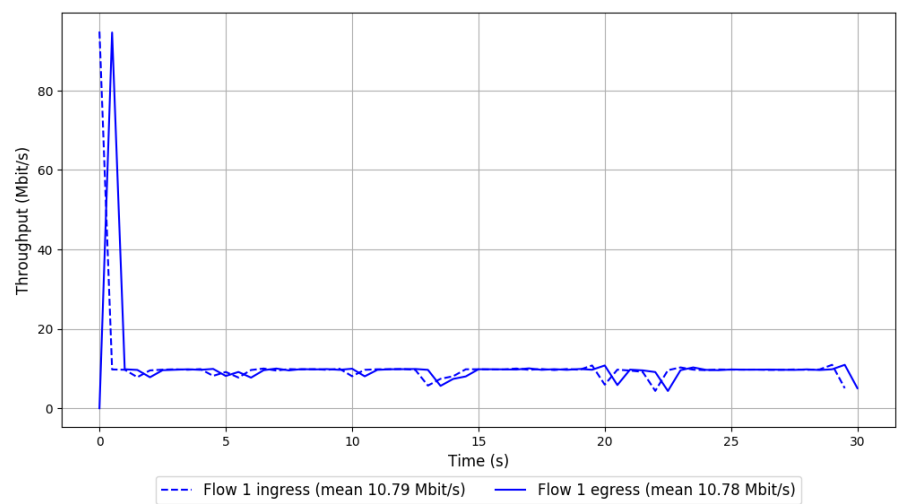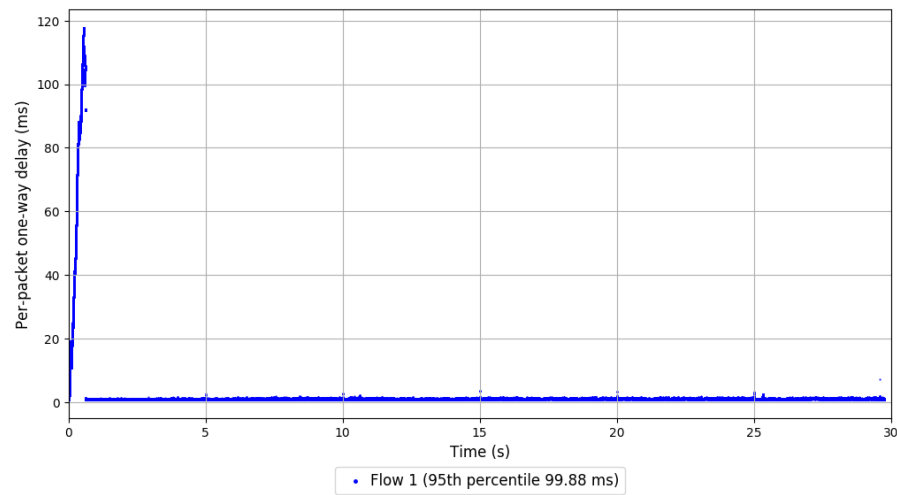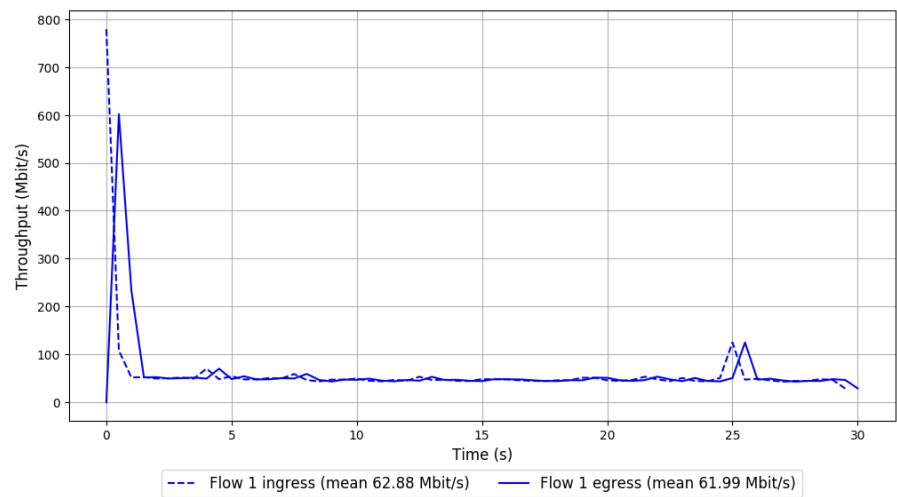
Run 3: Report of Muses_DecisionTreeH0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeHO

Start at: 2019-07-12 00:23:36
End at: 2019-07-12 00:24:06
Local clock offset: 4.064 ms
Remote clock offset: -2.668 ms


# Below is generated by plot.py at 2019-07-12 02:02:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.99 Mbit/s
95th percentile per-packet one-way delay: 99.878 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 61.99 Mbit/s
95th percentile per-packet one-way delay: 99.878 ms
Loss rate: 1.42%
```

Run 4: Report of Muses_DecisionTreeH0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 00:55:55
End at: 2019-07-12 00:56:25
Local clock offset: 3.566 ms
Remote clock offset: 0.156 ms


# Below is generated by plot.py at 2019-07-12 02:02:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.97 Mbit/s
95th percentile per-packet one-way delay: 14.026 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 11.97 Mbit/s
95th percentile per-packet one-way delay: 14.026 ms
Loss rate: 0.19%
```
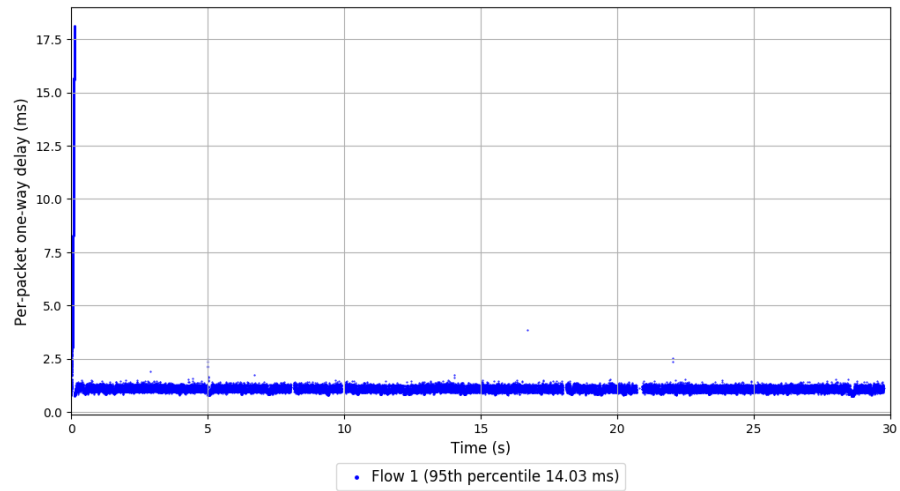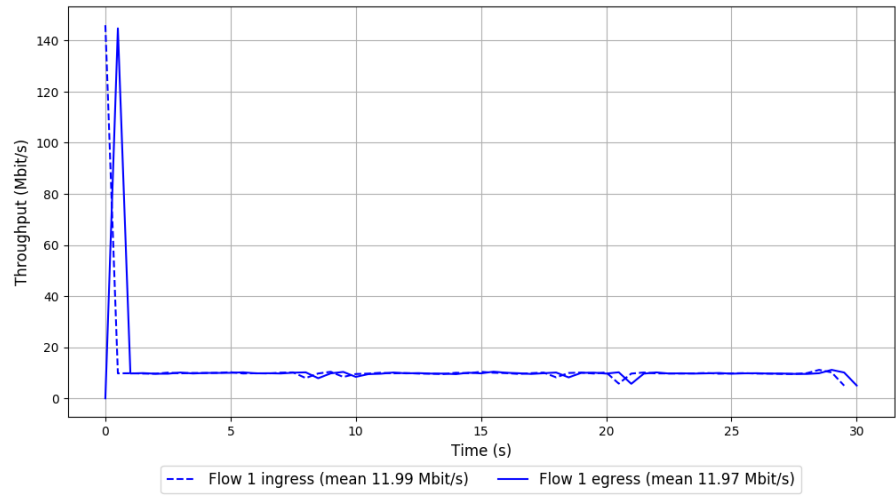
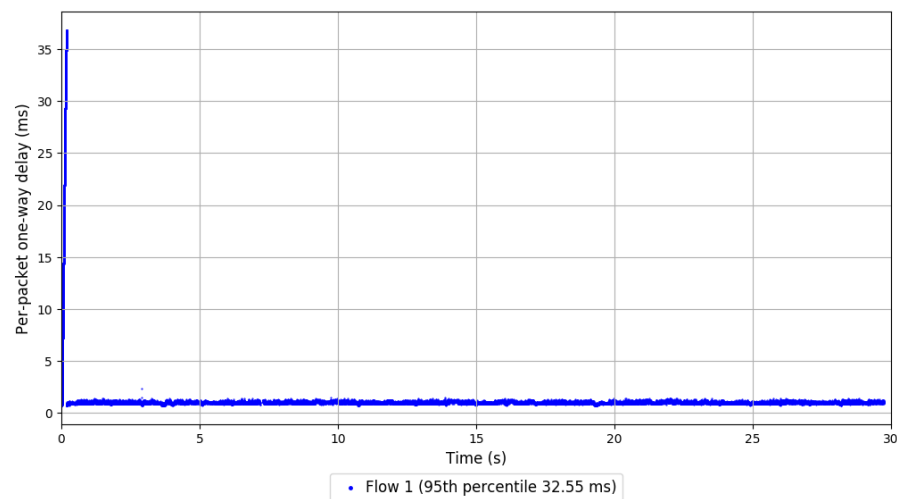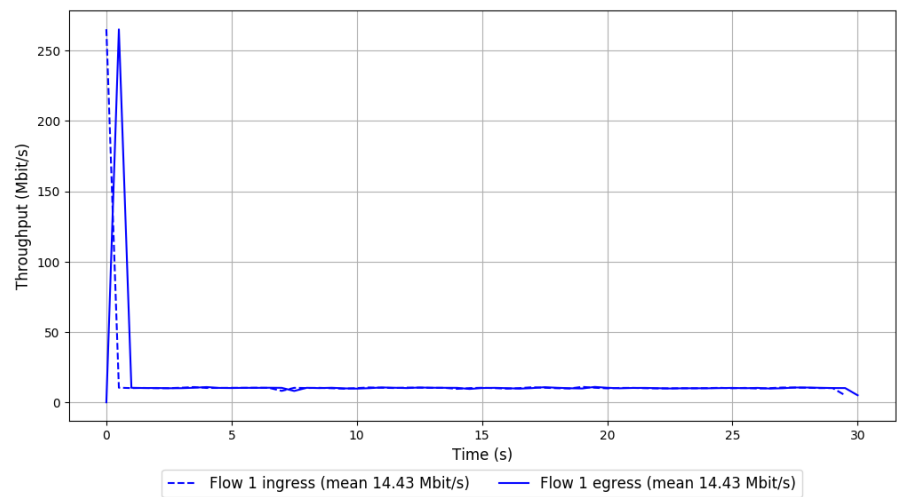Run 5: Report of Muses_DecisionTreeH0 — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-11 22:48:05
End at: 2019-07-11 22:48:35
Local clock offset: 0.34 ms
Remote clock offset: 3.386 ms


# Below is generated by plot.py at 2019-07-12 02:02:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 14.43 Mbit/s
95th percentile per-packet one-way delay: 32.551 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 14.43 Mbit/s
95th percentile per-packet one-way delay: 32.551 ms
Loss rate: 0.04%
```

Run 1: Report of Muses_DecisionTreeR0 — Data Link

Flow 1 ingress (mean 14.43 Mbit/s) --- Flow 1 egress (mean 14.43 Mbit/s) ——

• Flow 1 (95th percentile 32.55 ms)

```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-11 23:20:30
End at: 2019-07-11 23:21:00
Local clock offset: 0.031 ms
Remote clock offset: -5.04 ms


# Below is generated by plot.py at 2019-07-12 02:02:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.03 Mbit/s
95th percentile per-packet one-way delay: 12.374 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 11.03 Mbit/s
95th percentile per-packet one-way delay: 12.374 ms
Loss rate: 0.09%
```
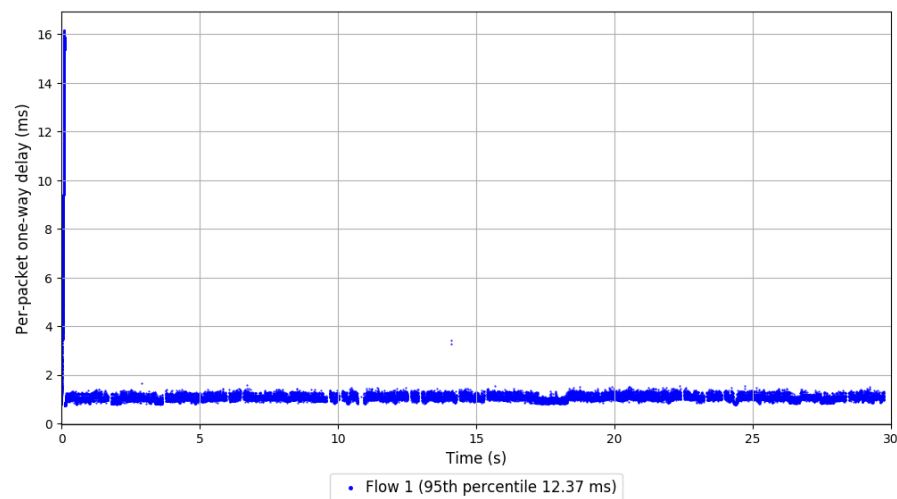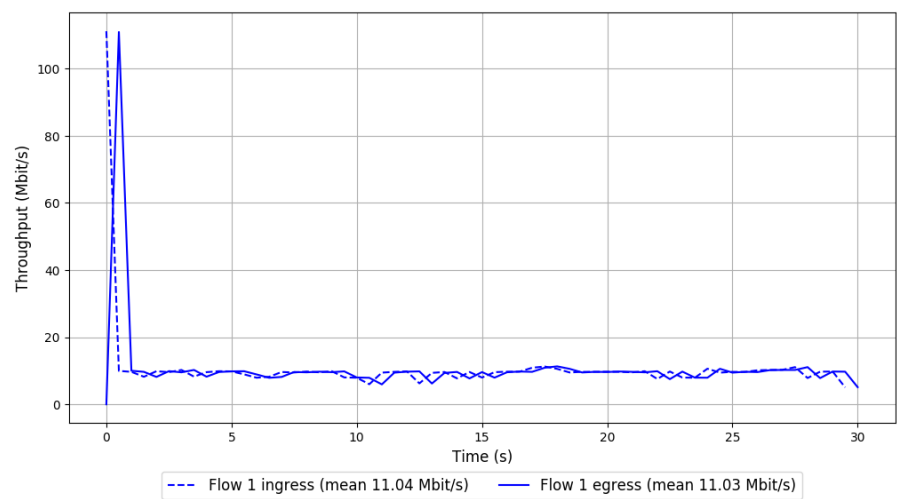
Run 2: Report of Muses_DecisionTreeR0 — Data Link

Flow 1 ingress (mean 11.04 Mbit/s) --- Flow 1 egress (mean 11.03 Mbit/s)

• Flow 1 (95th percentile 12.37 ms)

Run 3: Statistics of Muses_DecisionTreeR0

Start at: 2019-07-11 23:52:39
End at: 2019-07-11 23:53:09
Local clock offset: 0.27 ms
Remote clock offset: 1.732 ms

Below is generated by plot.py at 2019-07-12 02:02:09
Datalink statistics
-- Total of 1 flow:
Average throughput: 9.87 Mbit/s
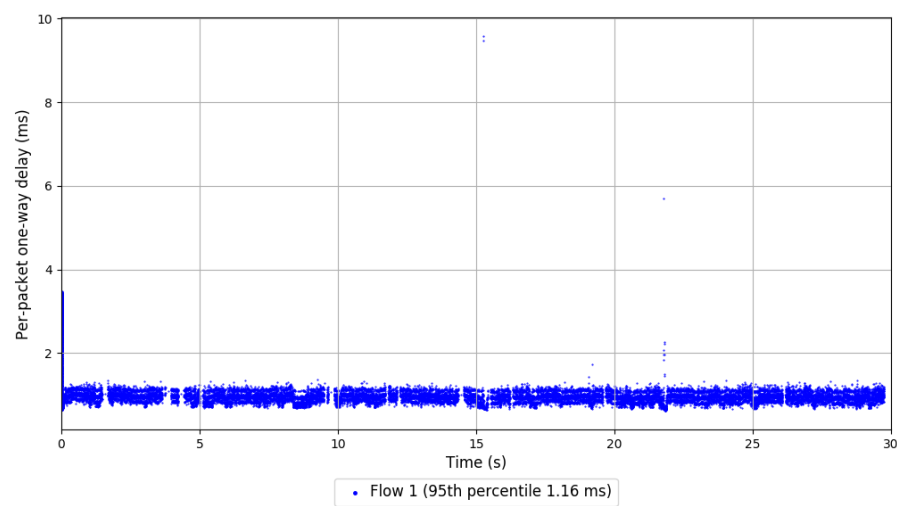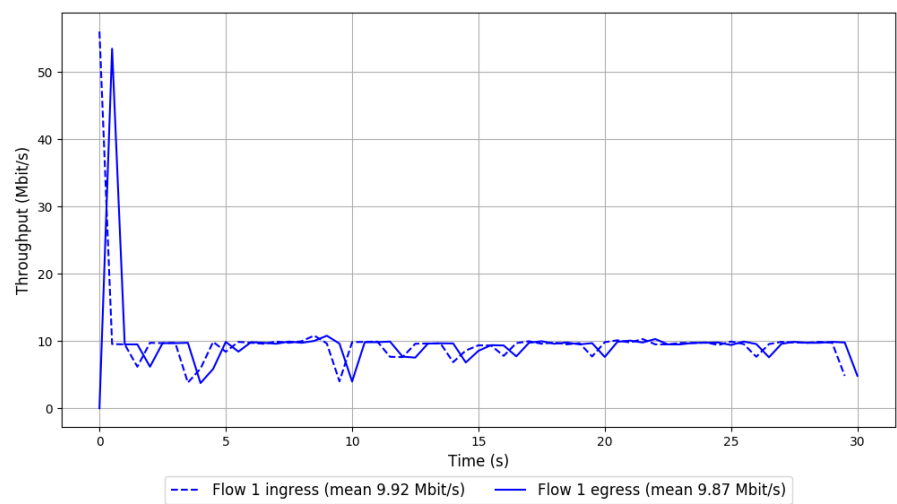95th percentile per-packet one-way delay: 1.162 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 9.87 Mbit/s
95th percentile per-packet one-way delay: 1.162 ms
Loss rate: 0.51%
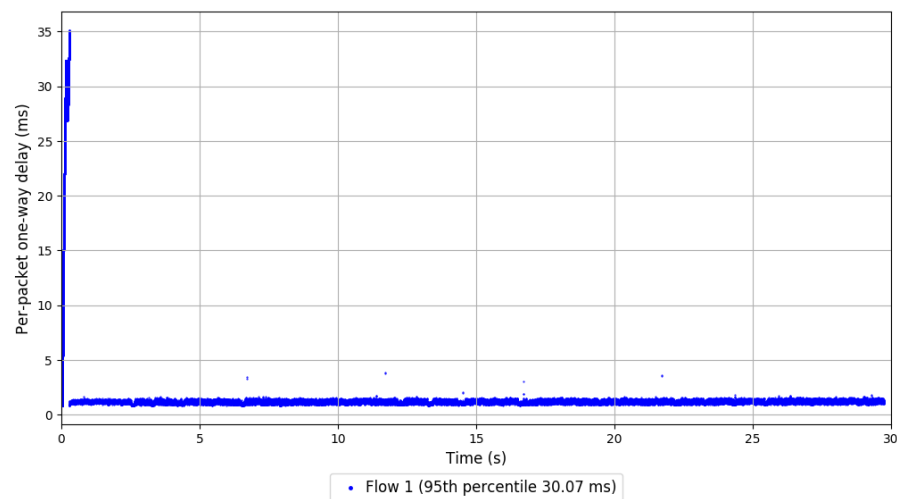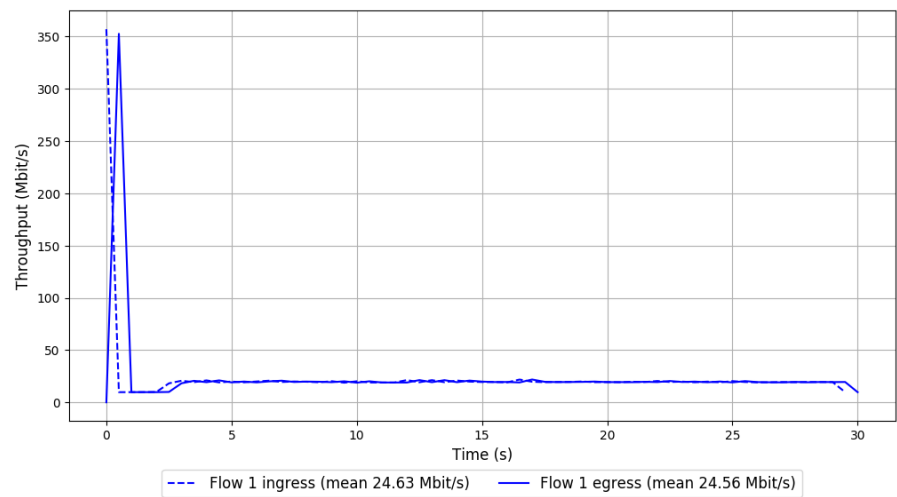
Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 00:24:51
End at: 2019-07-12 00:25:21
Local clock offset: 4.149 ms
Remote clock offset: -2.713 ms


# Below is generated by plot.py at 2019-07-12 02:02:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.56 Mbit/s
95th percentile per-packet one-way delay: 30.067 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 24.56 Mbit/s
95th percentile per-packet one-way delay: 30.067 ms
Loss rate: 0.31%
```

Run 4: Report of Muses_DecisionTreeR0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 00:57:09
End at: 2019-07-12 00:57:39
Local clock offset: 3.598 ms
Remote clock offset: 0.205 ms


# Below is generated by plot.py at 2019-07-12 02:02:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 10.90 Mbit/s
95th percentile per-packet one-way delay: 6.637 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 10.90 Mbit/s
95th percentile per-packet one-way delay: 6.637 ms
Loss rate: 0.03%
```
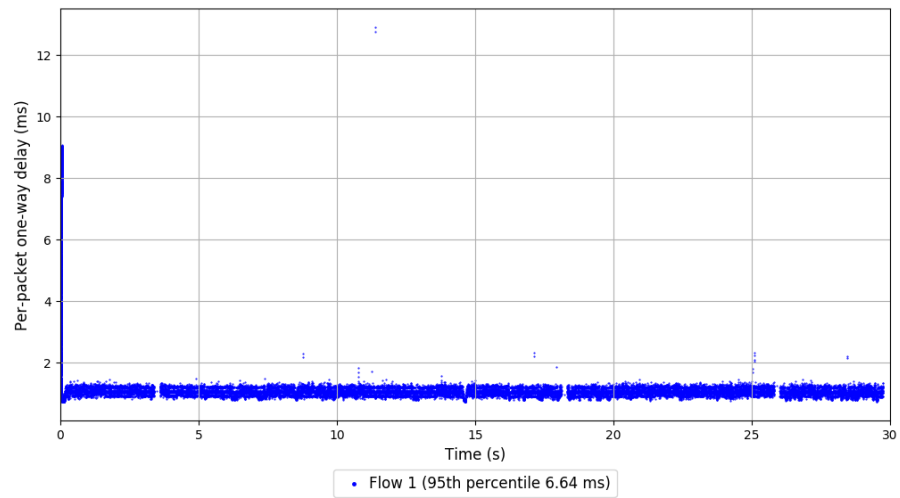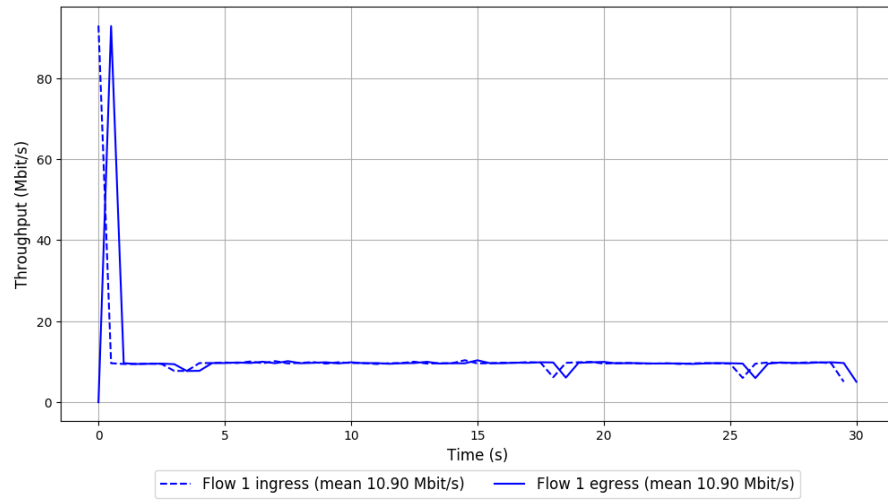
Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-07-11 22:49:19
End at: 2019-07-11 22:49:49
Local clock offset: 0.369 ms
Remote clock offset: 3.375 ms


# Below is generated by plot.py at 2019-07-12 02:07:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 698.85 Mbit/s
95th percentile per-packet one-way delay: 77.054 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 698.85 Mbit/s
95th percentile per-packet one-way delay: 77.054 ms
Loss rate: 1.09%
```
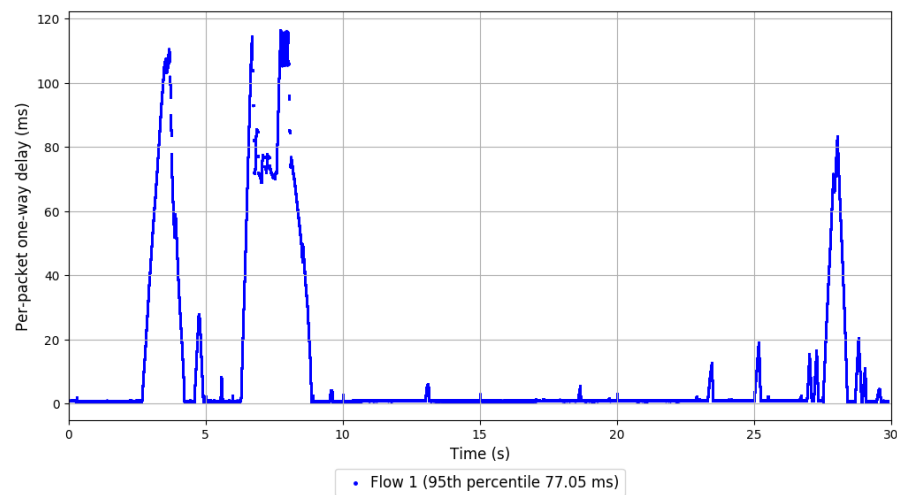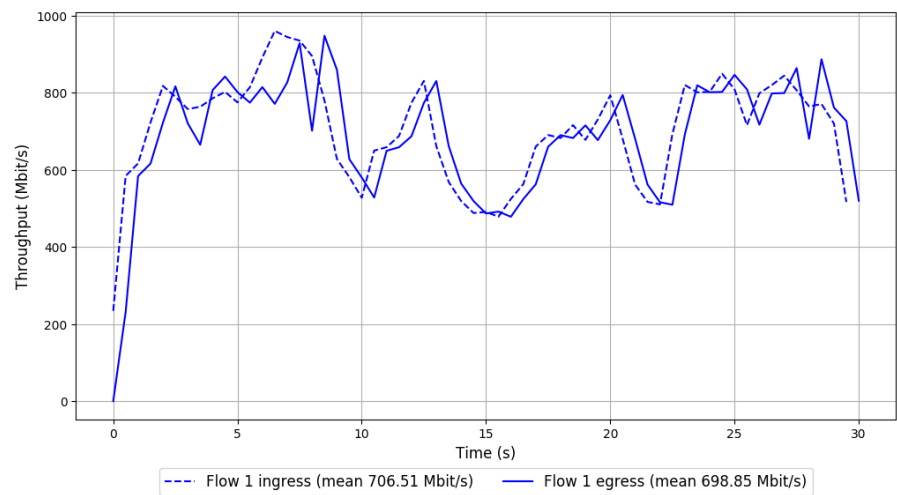
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-07-11 23:21:44
End at: 2019-07-11 23:22:14
Local clock offset: 0.025 ms
Remote clock offset: -5.276 ms


# Below is generated by plot.py at 2019-07-12 02:07:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 162.34 Mbit/s
95th percentile per-packet one-way delay: 1.065 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 162.34 Mbit/s
95th percentile per-packet one-way delay: 1.065 ms
Loss rate: 0.09%
```
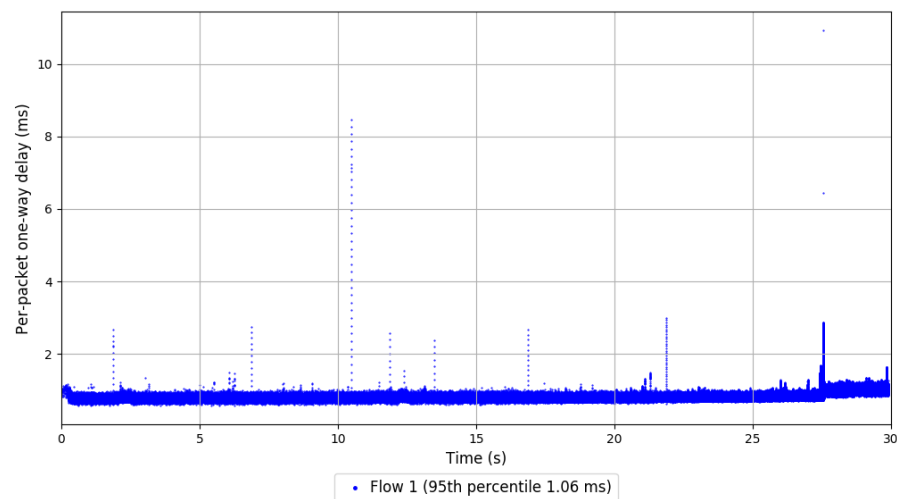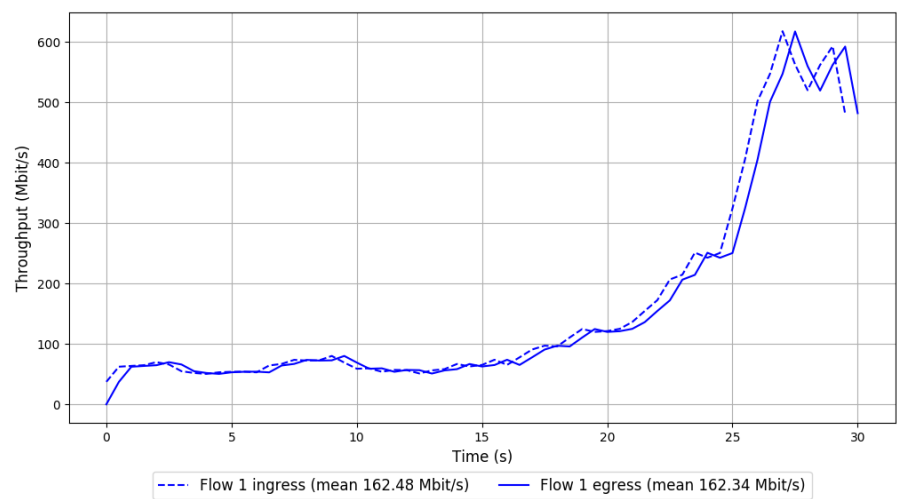
Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-07-11 23:53:53
End at: 2019-07-11 23:54:23
Local clock offset: 0.281 ms
Remote clock offset: 1.938 ms


# Below is generated by plot.py at 2019-07-12 02:07:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 506.24 Mbit/s
95th percentile per-packet one-way delay: 10.750 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 506.24 Mbit/s
95th percentile per-packet one-way delay: 10.750 ms
Loss rate: 0.13%
```
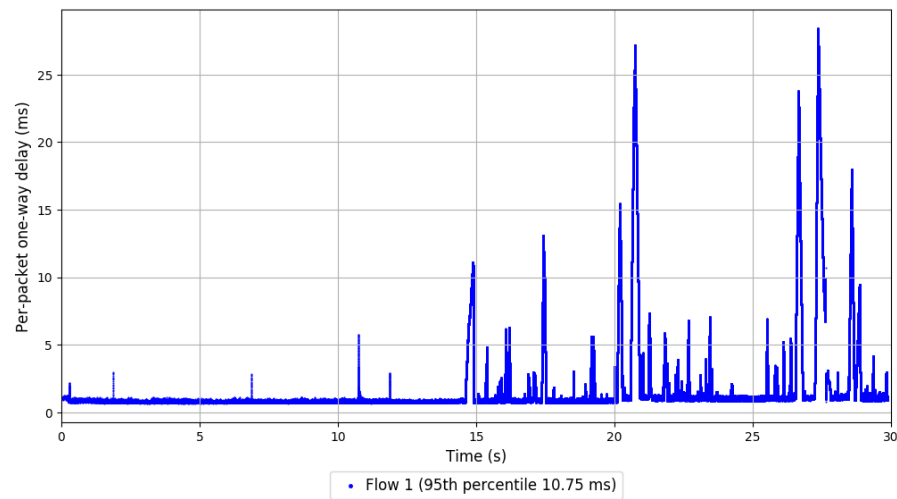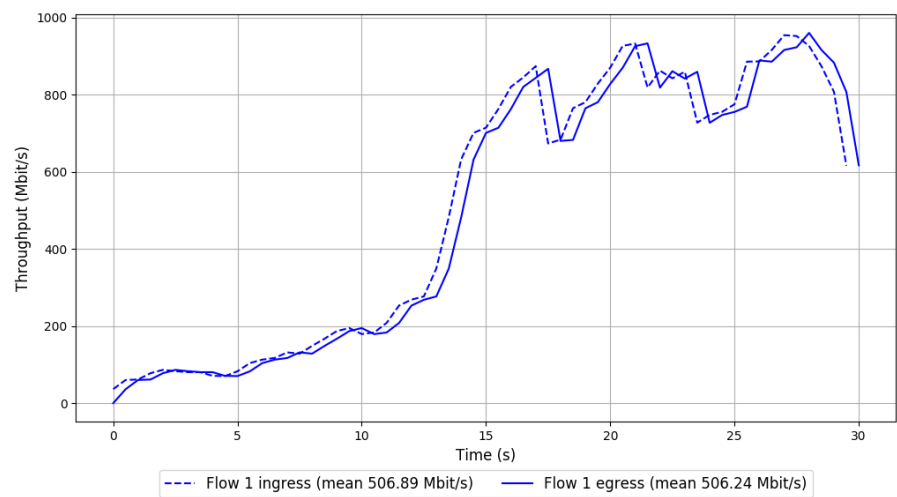
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 506.89 Mbit/s)   Flow 1 egress (mean 506.24 Mbit/s)

Flow 1 (95th percentile 10.75 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-07-12 00:26:06
End at: 2019-07-12 00:26:36
Local clock offset: 4.221 ms
Remote clock offset: -2.942 ms


# Below is generated by plot.py at 2019-07-12 02:07:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 602.34 Mbit/s
95th percentile per-packet one-way delay: 5.967 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 602.34 Mbit/s
95th percentile per-packet one-way delay: 5.967 ms
Loss rate: 0.04%
```
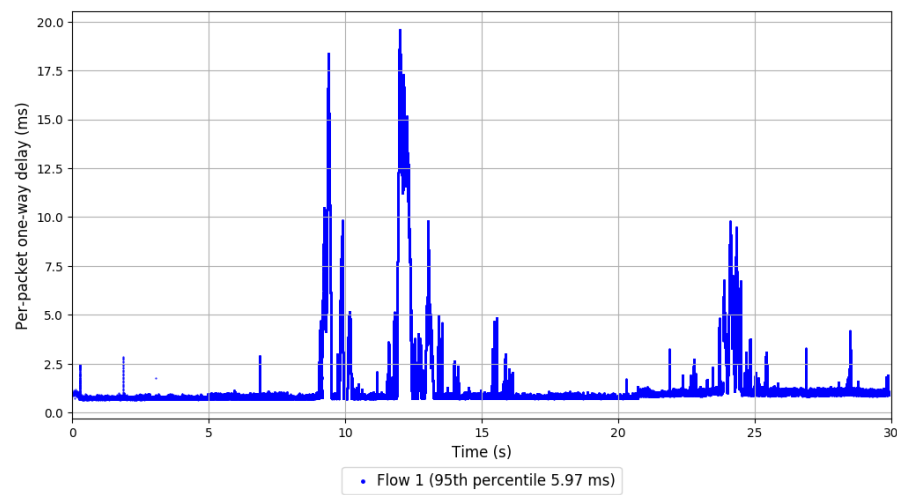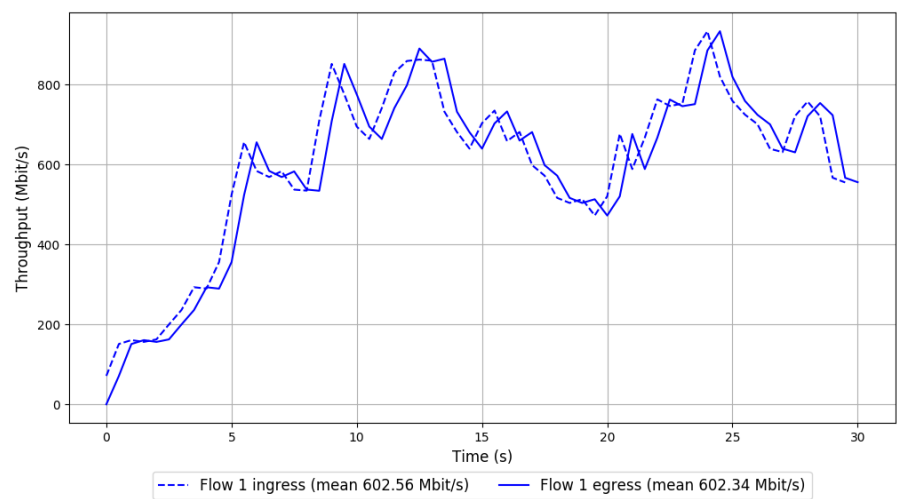
Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 602.56 Mbit/s)   Flow 1 egress (mean 602.34 Mbit/s)

• Flow 1 (95th percentile 5.97 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-07-12 00:58:23
End at: 2019-07-12 00:58:53
Local clock offset: 3.607 ms
Remote clock offset: 0.22 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 714.20 Mbit/s
95th percentile per-packet one-way delay: 65.100 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 714.20 Mbit/s
95th percentile per-packet one-way delay: 65.100 ms
Loss rate: 0.24%
```
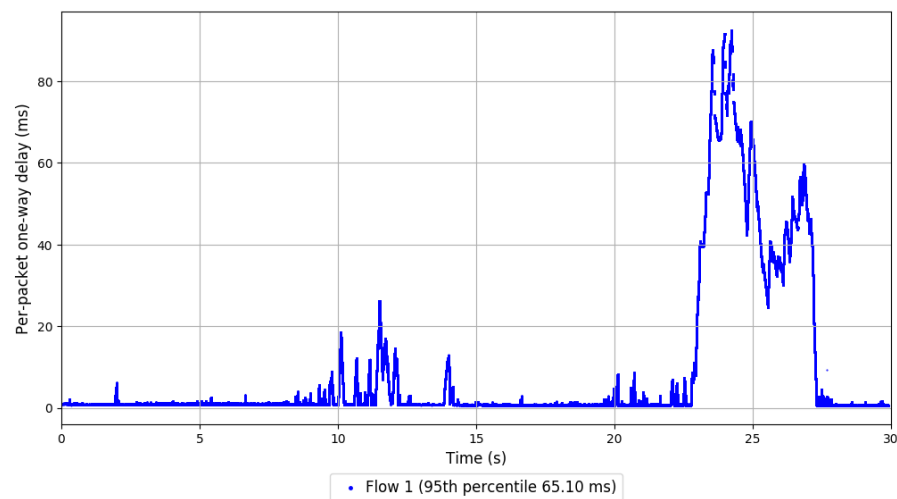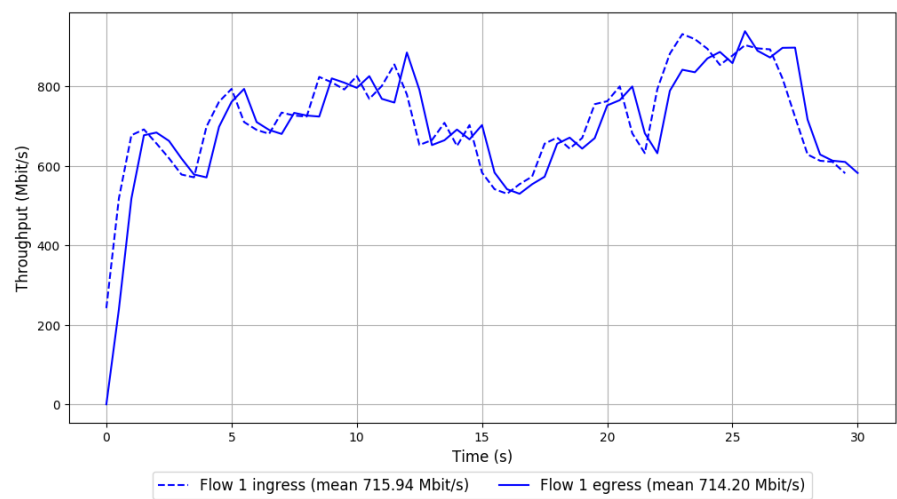
Run 5: Report of PCC-Allegro — Data Link
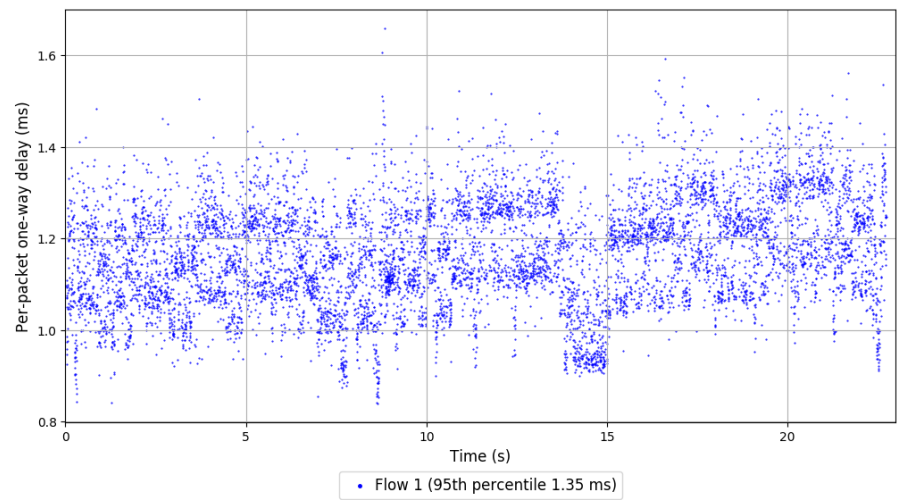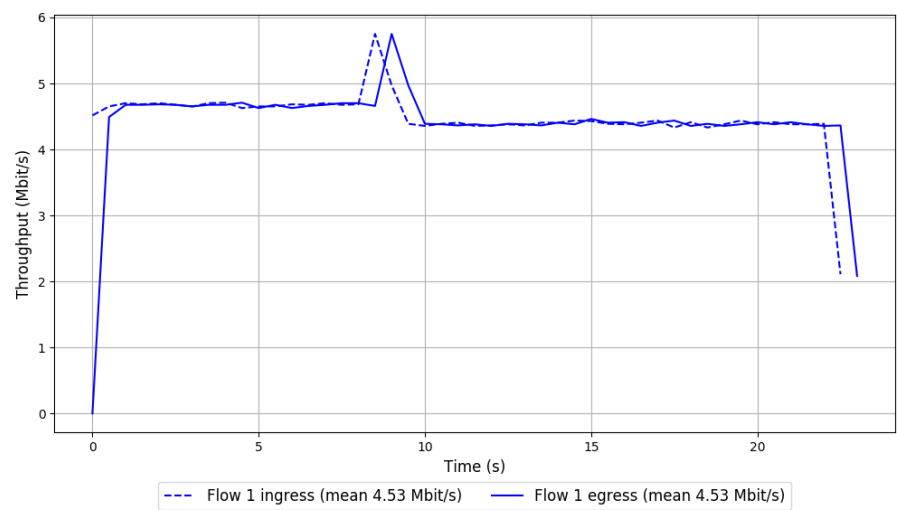
Run 1: Statistics of PCC-Expr

Start at: 2019-07-11 23:03:32
End at: 2019-07-11 23:04:02
Local clock offset: 0.265 ms
Remote clock offset: -1.805 ms

Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-07-11 23:35:39
End at: 2019-07-11 23:36:09
Local clock offset: 0.158 ms
Remote clock offset: -1.59 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 12.41 Mbit/s
95th percentile per-packet one-way delay: 0.941 ms
Loss rate: 23.82%
-- Flow 1:
Average throughput: 12.41 Mbit/s
95th percentile per-packet one-way delay: 0.941 ms
Loss rate: 23.82%
```
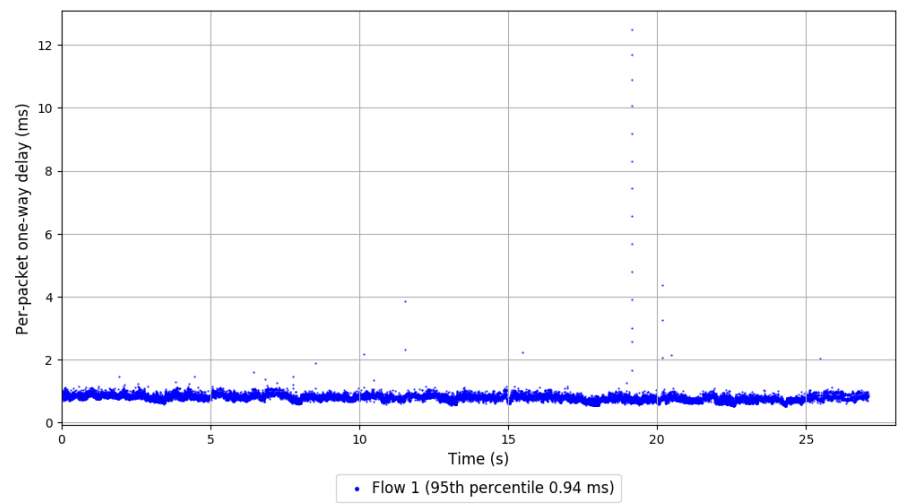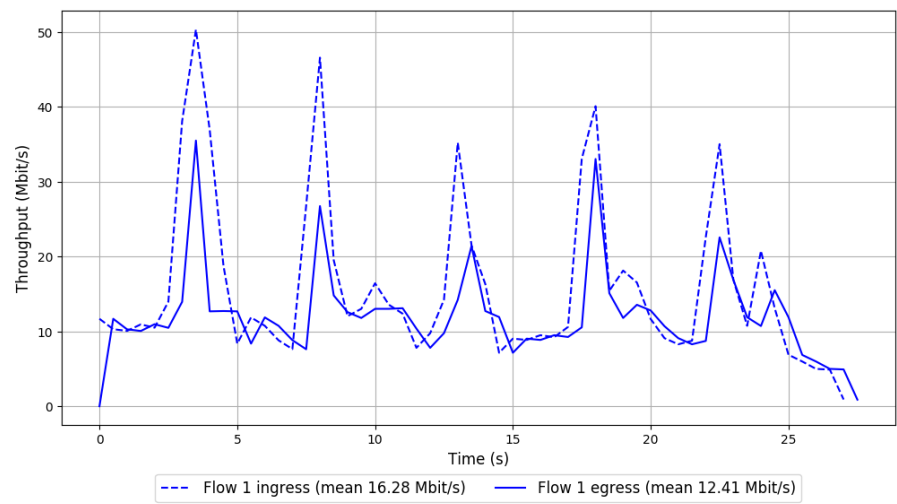
Run 2: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 16.28 Mbit/s) --- Flow 1 egress (mean 12.41 Mbit/s)
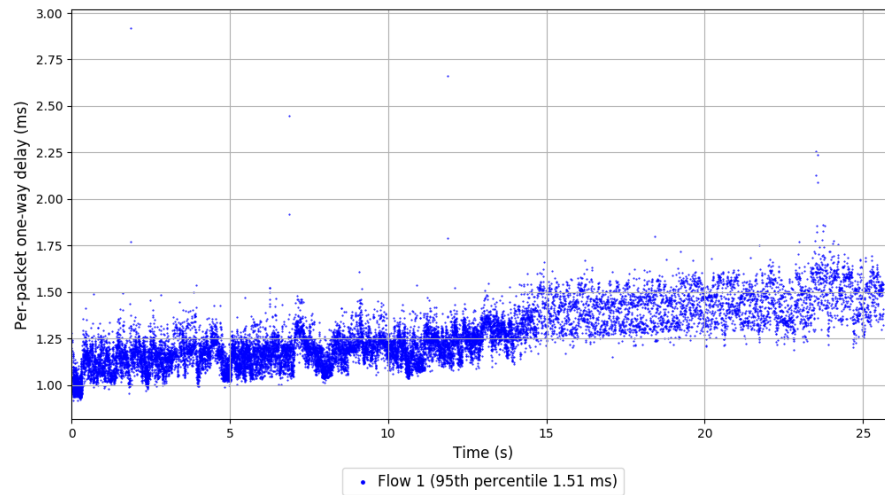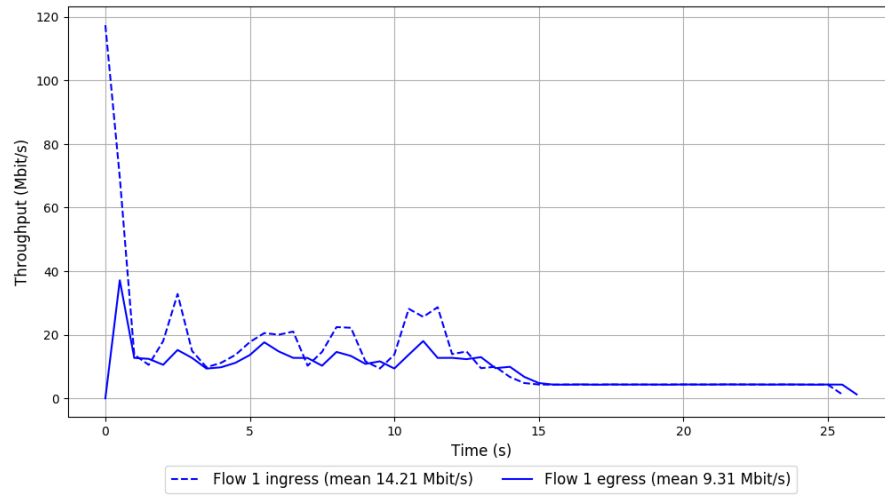

Flow 1 (95th percentile 0.94 ms)

```
Run 3: Statistics of PCC-Expr

Start at: 2019-07-12 00:07:56
End at: 2019-07-12 00:08:26
Local clock offset: 2.525 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.31 Mbit/s
95th percentile per-packet one-way delay: 1.511 ms
Loss rate: 34.44%
-- Flow 1:
Average throughput: 9.31 Mbit/s
95th percentile per-packet one-way delay: 1.511 ms
Loss rate: 34.44%
```

Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 14.21 Mbit/s)   Flow 1 egress (mean 9.31 Mbit/s)
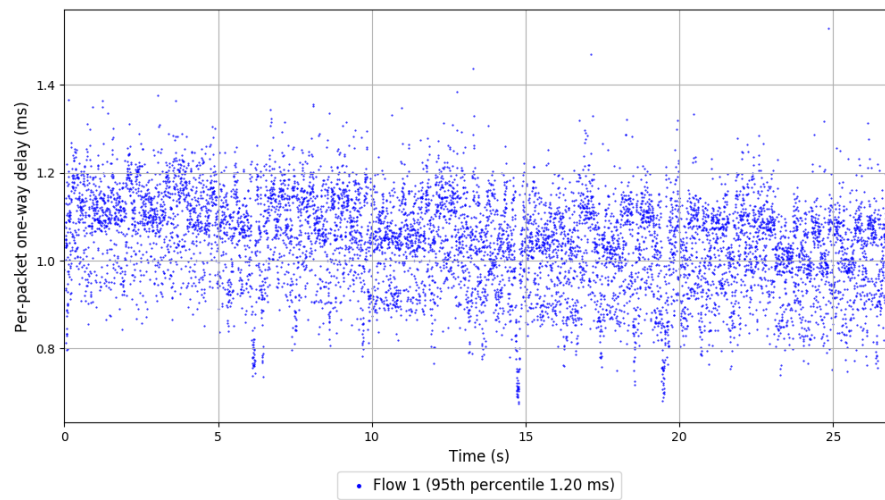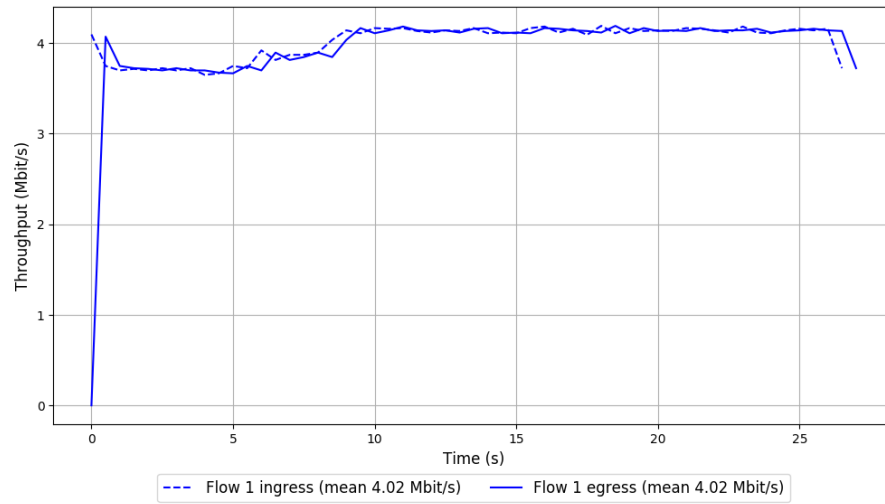

Flow 1 (95th percentile 1.51 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2019-07-12 00:40:09
End at: 2019-07-12 00:40:39
Local clock offset: 3.569 ms
Remote clock offset: -1.965 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 1.199 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 1.199 ms
Loss rate: 0.05%
```

Run 4: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 4.02 Mbit/s) --- Flow 1 egress (mean 4.02 Mbit/s)

Flow 1 (95th percentile 1.20 ms)
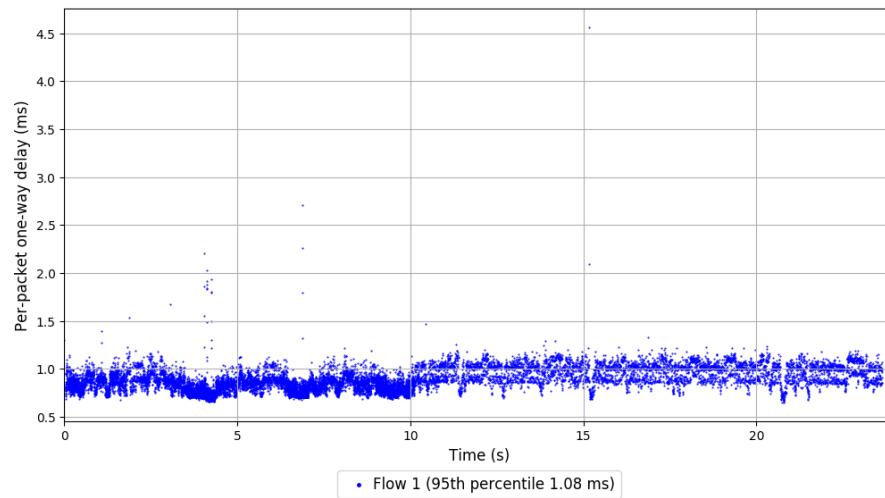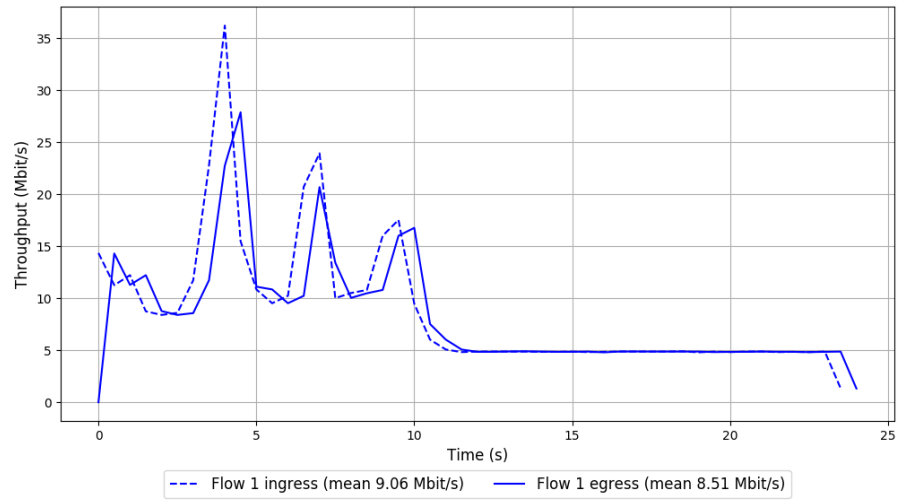
```
Run 5: Statistics of PCC-Expr

Start at: 2019-07-12 01:12:33
End at: 2019-07-12 01:13:03
Local clock offset: 0.286 ms
Remote clock offset: 0.768 ms
```

Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-07-11 23:10:17
End at: 2019-07-11 23:10:47
Local clock offset: 0.113 ms
Remote clock offset: -3.577 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.54 Mbit/s
95th percentile per-packet one-way delay: 0.909 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 77.54 Mbit/s
95th percentile per-packet one-way delay: 0.909 ms
Loss rate: 0.04%
```
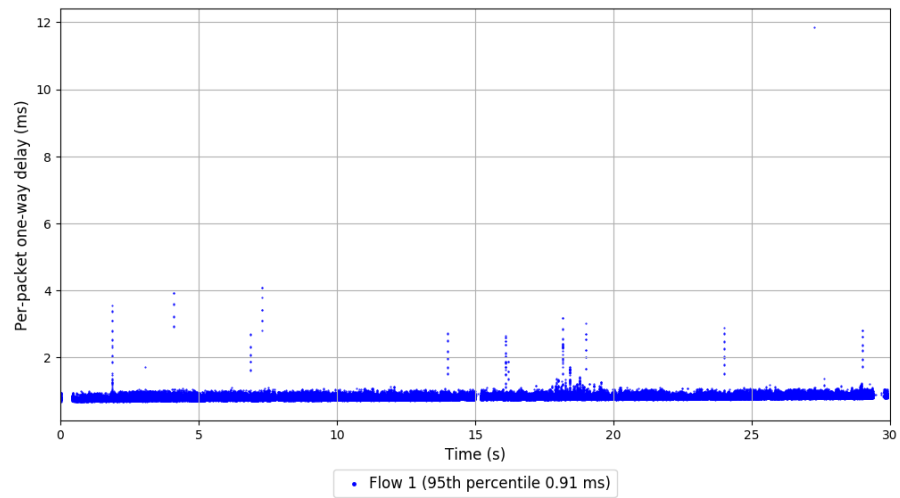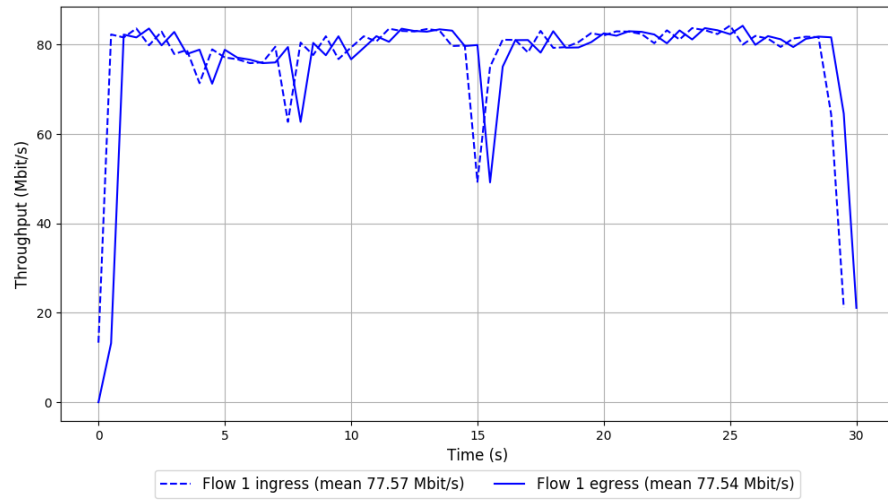
Run 1: Report of QUIC Cubic — Data Link

Run 2: Statistics of QUIC Cubic

Start at: 2019-07-11 23:42:26
End at: 2019-07-11 23:42:56
Local clock offset: 0.239 ms
Remote clock offset: 0.334 ms

Below is generated by plot.py at 2019-07-12 02:08:54
Datalink statistics
-- Total of 1 flow:
Average throughput: 76.44 Mbit/s
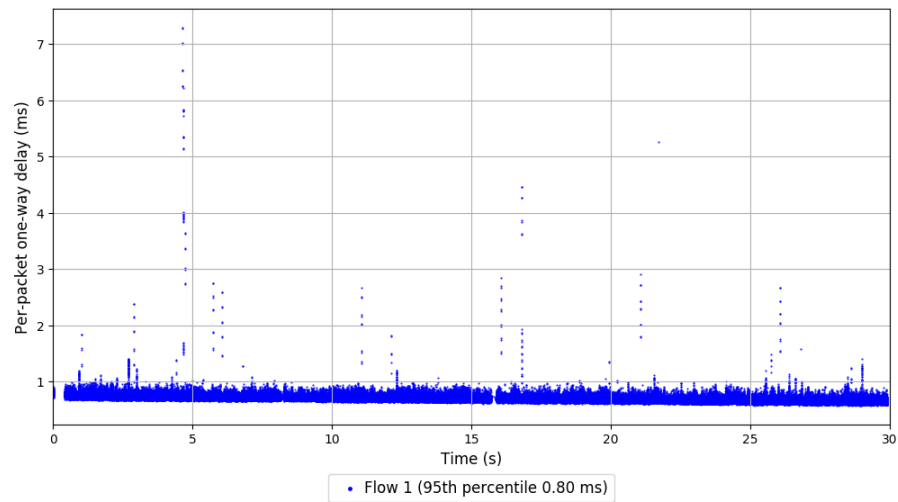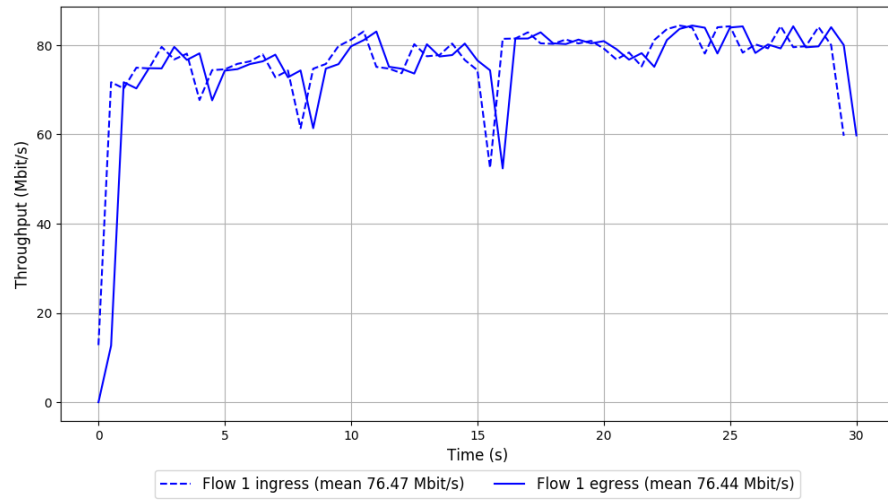95th percentile per-packet one-way delay: 0.797 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 76.44 Mbit/s
95th percentile per-packet one-way delay: 0.797 ms
Loss rate: 0.04%

Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-07-12 00:14:39
End at: 2019-07-12 00:15:09
Local clock offset: 3.393 ms
Remote clock offset: -1.624 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.47 Mbit/s
95th percentile per-packet one-way delay: 1.112 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 77.47 Mbit/s
95th percentile per-packet one-way delay: 1.112 ms
Loss rate: 0.04%
```
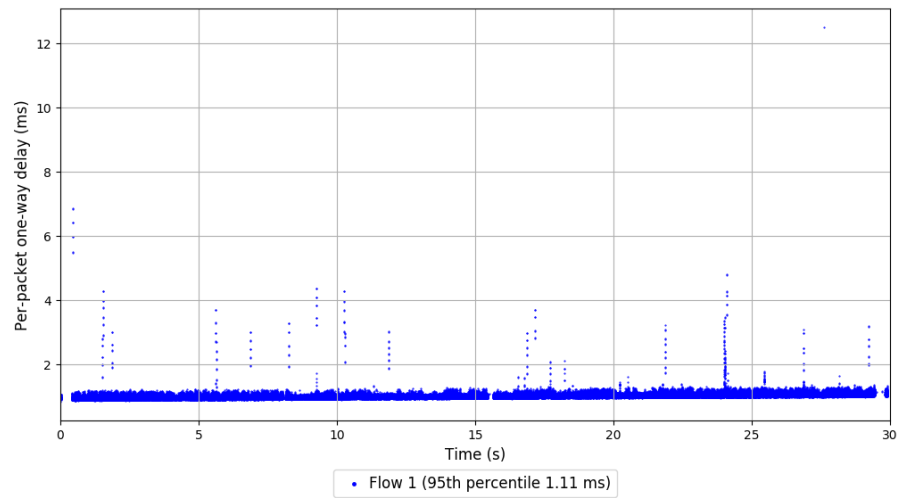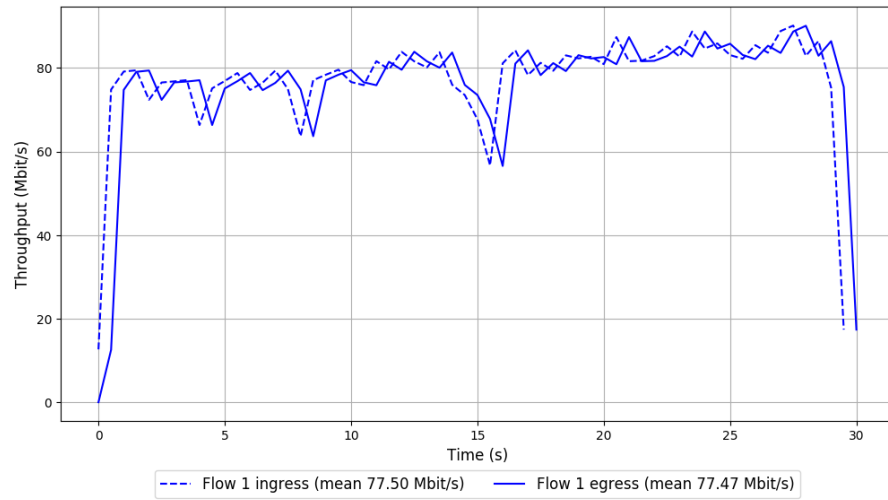
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-07-12 00:46:53
End at: 2019-07-12 00:47:23
Local clock offset: 3.518 ms
Remote clock offset: -0.78 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 79.46 Mbit/s
95th percentile per-packet one-way delay: 0.742 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 79.46 Mbit/s
95th percentile per-packet one-way delay: 0.742 ms
Loss rate: 0.04%
```
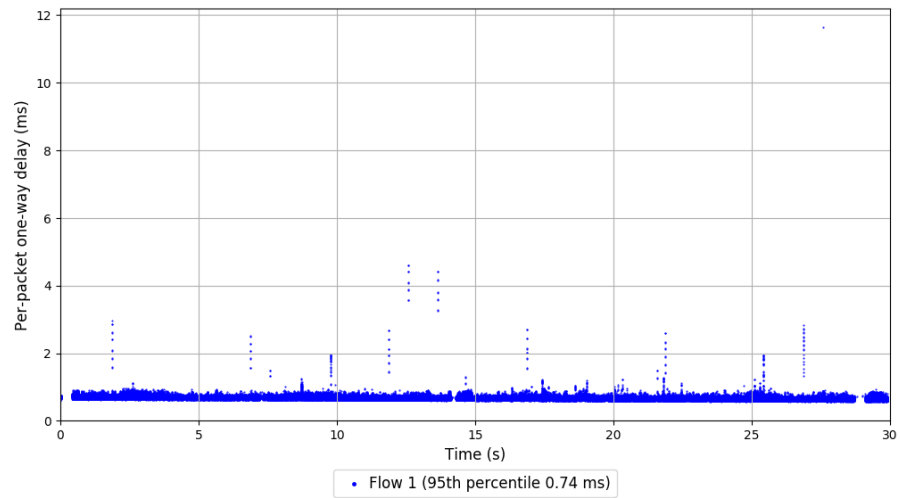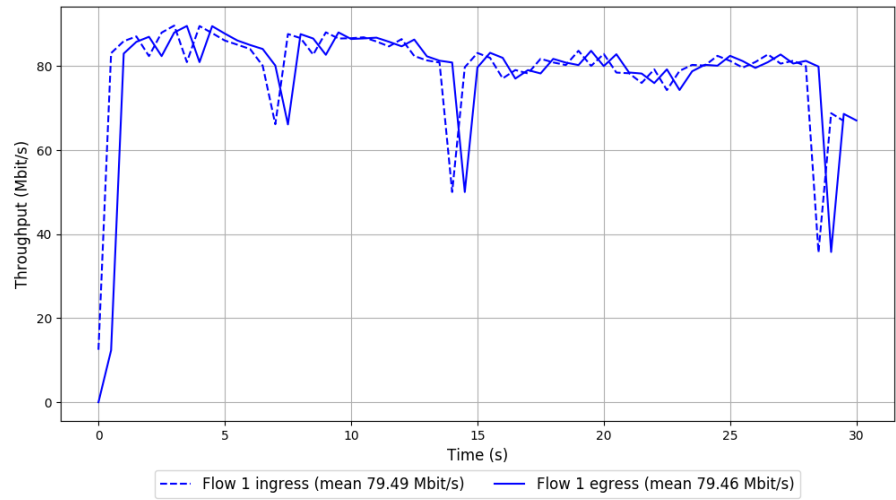
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-07-12 01:19:16
End at: 2019-07-12 01:19:47
Local clock offset: -0.394 ms
Remote clock offset: 0.559 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.41 Mbit/s
95th percentile per-packet one-way delay: 0.788 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 80.41 Mbit/s
95th percentile per-packet one-way delay: 0.788 ms
Loss rate: 0.02%
```
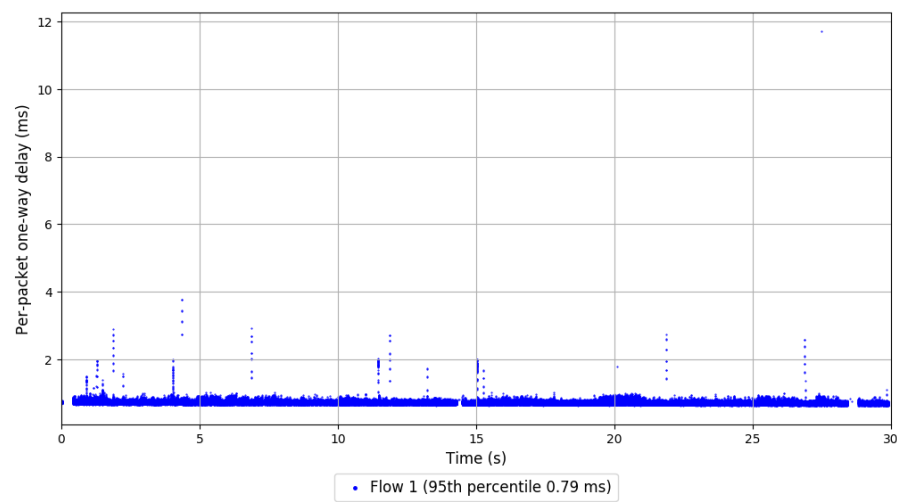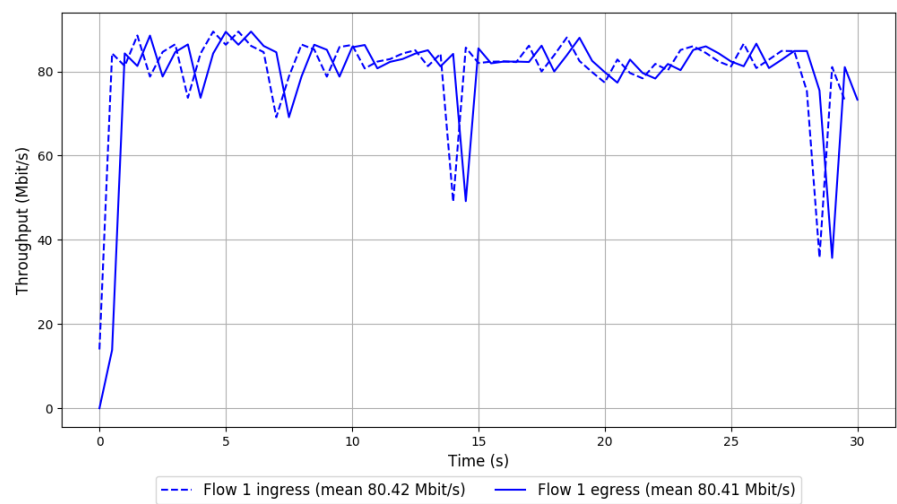
Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-07-11 22:45:36
End at: 2019-07-11 22:46:06
Local clock offset: 0.344 ms
Remote clock offset: 3.414 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.189 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.189 ms
Loss rate: 0.00%
```

Run 1: Report of SCReAM — Data Link

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

• Flow 1 (95th percentile 1.19 ms)

```
Run 2: Statistics of SCReAM

Start at: 2019-07-11 23:18:01
End at: 2019-07-11 23:18:31
Local clock offset: 0.048 ms
Remote clock offset: -4.651 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.331 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.331 ms
Loss rate: 0.00%
```
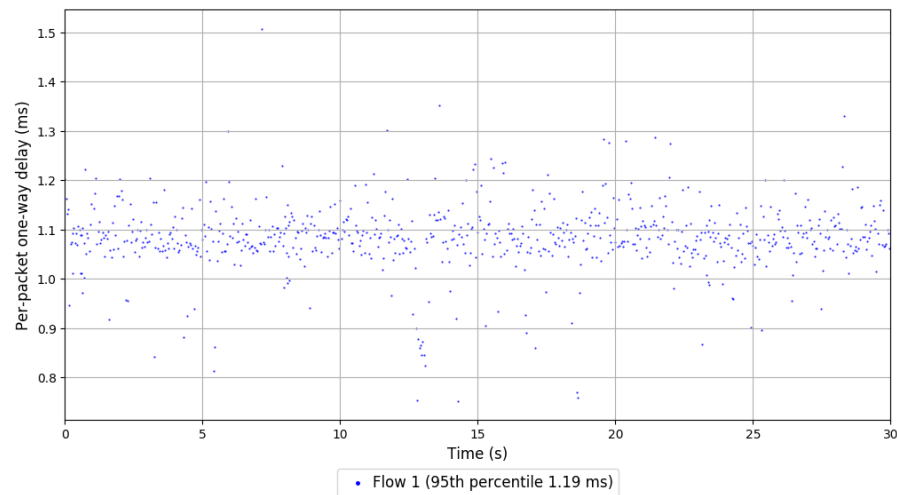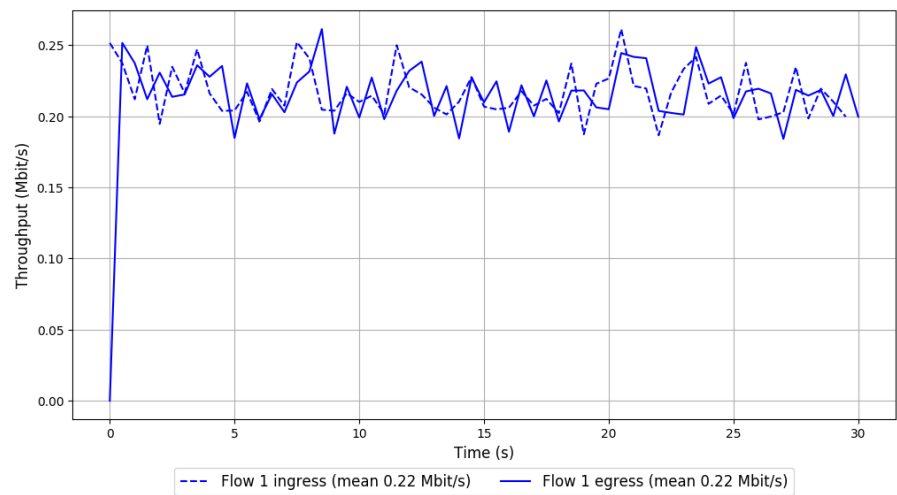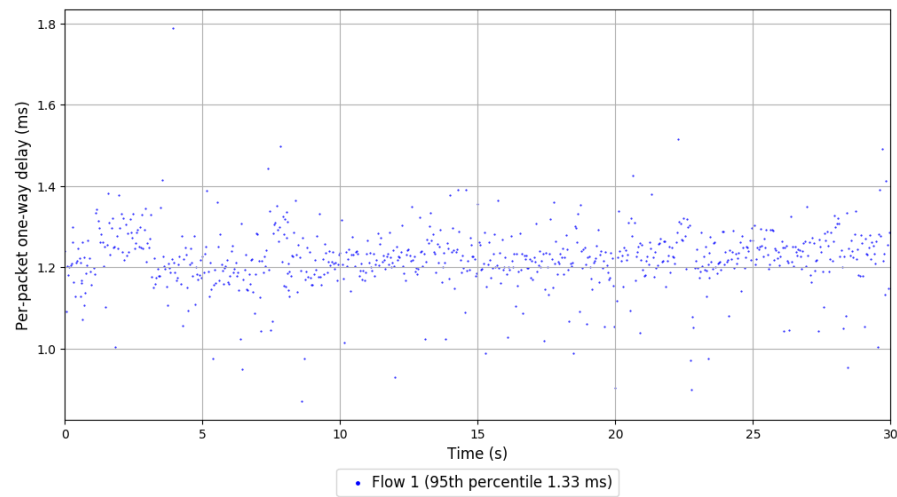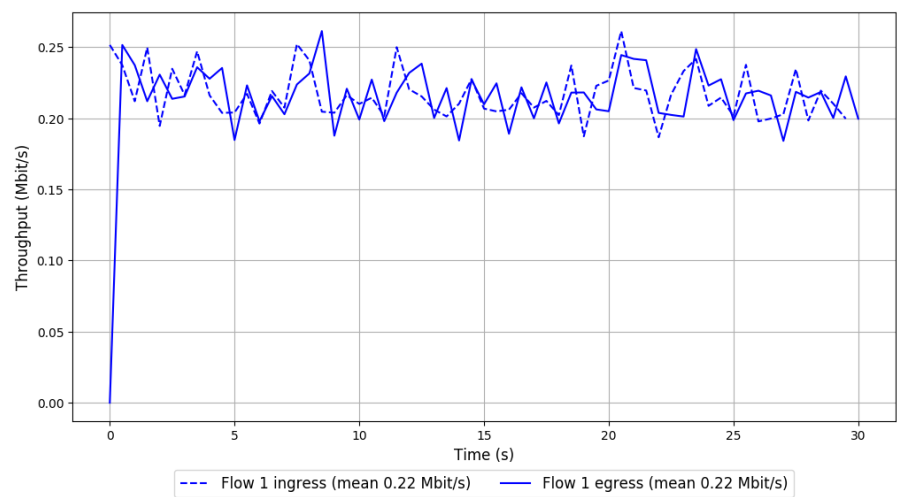
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-07-11 23:50:11
End at: 2019-07-11 23:50:41
Local clock offset: 0.265 ms
Remote clock offset: 1.507 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.161 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.161 ms
Loss rate: 0.00%
```
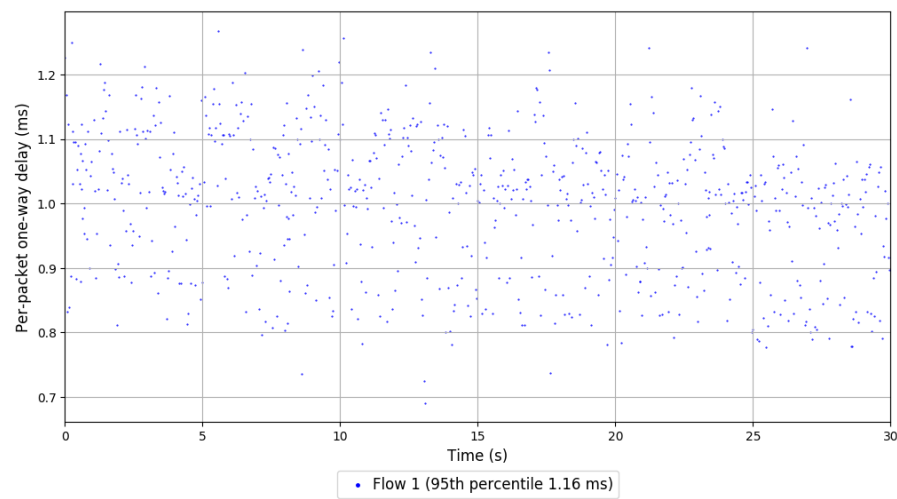
Run 3: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 1.16 ms)

```
Run 4: Statistics of SCReAM

Start at: 2019-07-12 00:22:22
End at: 2019-07-12 00:22:52
Local clock offset: 4.001 ms
Remote clock offset: -2.564 ms

# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 1.272 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 1.272 ms
Loss rate: 0.15%
```
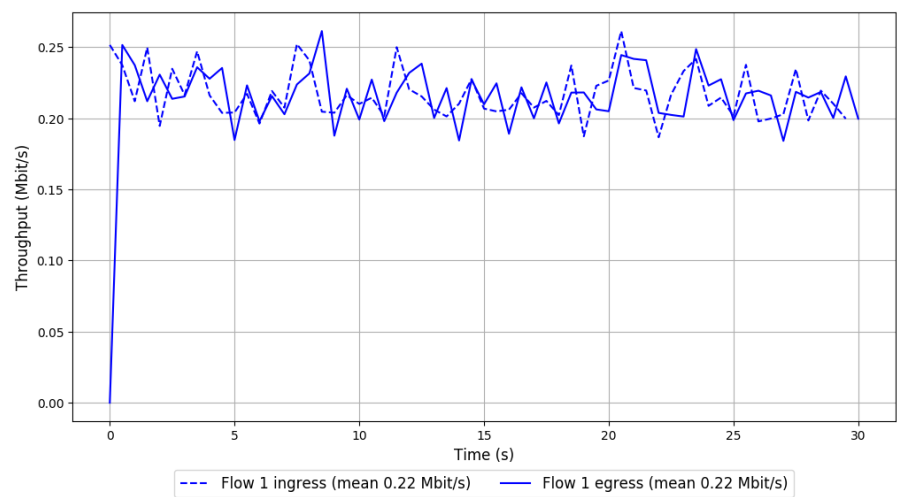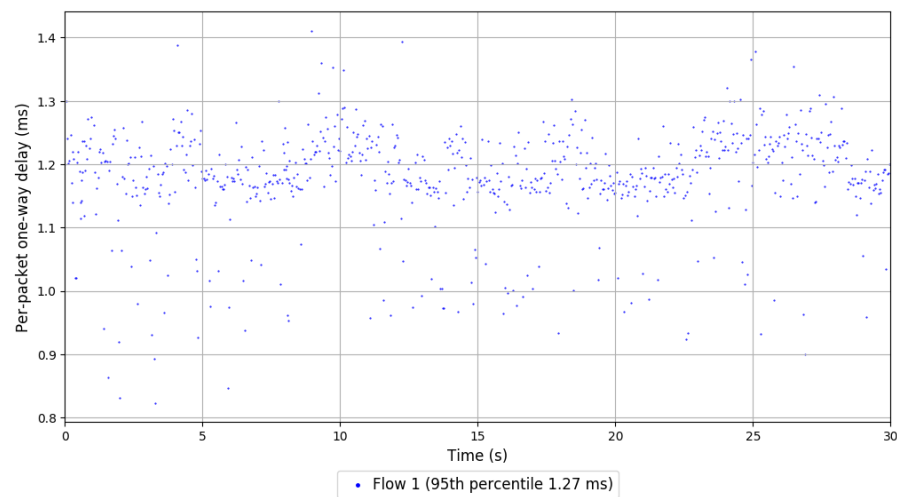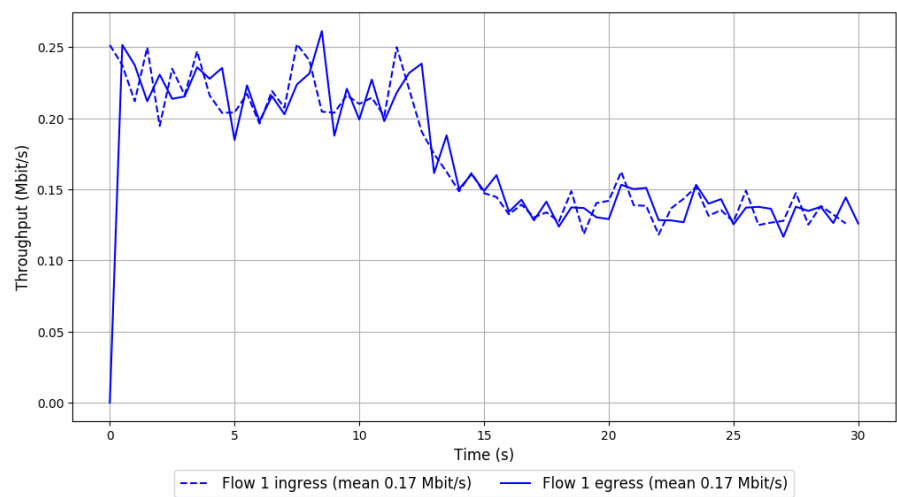
Run 4: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.17 Mbit/s)   Flow 1 egress (mean 0.17 Mbit/s)

Flow 1 (95th percentile 1.27 ms)

```
Run 5: Statistics of SCReAM

Start at: 2019-07-12 00:54:42
End at: 2019-07-12 00:55:12
Local clock offset: 3.575 ms
Remote clock offset: 0.013 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 1.136 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 1.136 ms
Loss rate: 0.13%
```
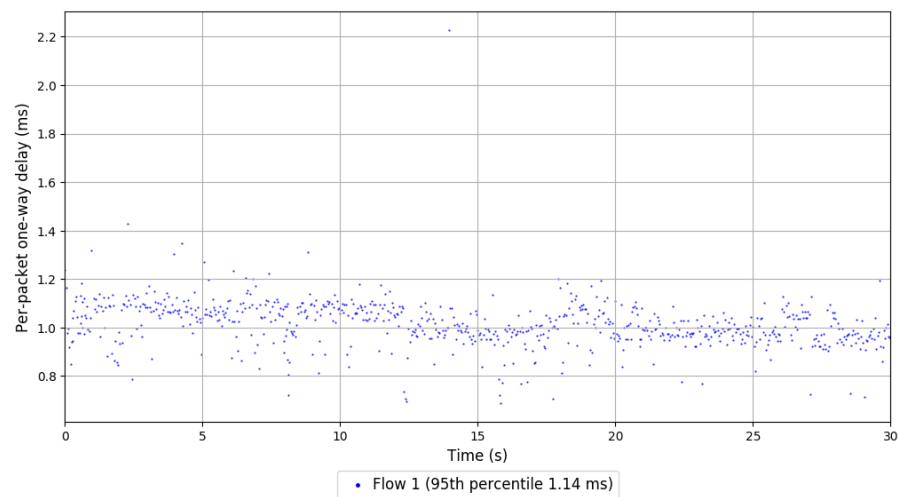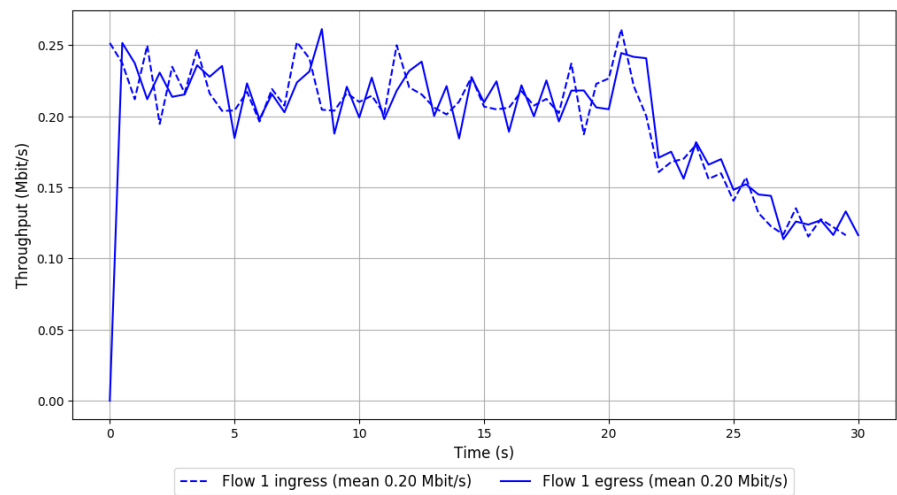
Run 5: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.20 Mbit/s) --- Flow 1 egress (mean 0.20 Mbit/s)

Flow 1 (95th percentile 1.14 ms)

```
Run 1: Statistics of Sprout

Start at: 2019-07-11 23:11:33
End at: 2019-07-11 23:12:03
Local clock offset: 0.108 ms
Remote clock offset: -3.7 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.74 Mbit/s
95th percentile per-packet one-way delay: 4.314 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 49.74 Mbit/s
95th percentile per-packet one-way delay: 4.314 ms
Loss rate: 0.34%
```
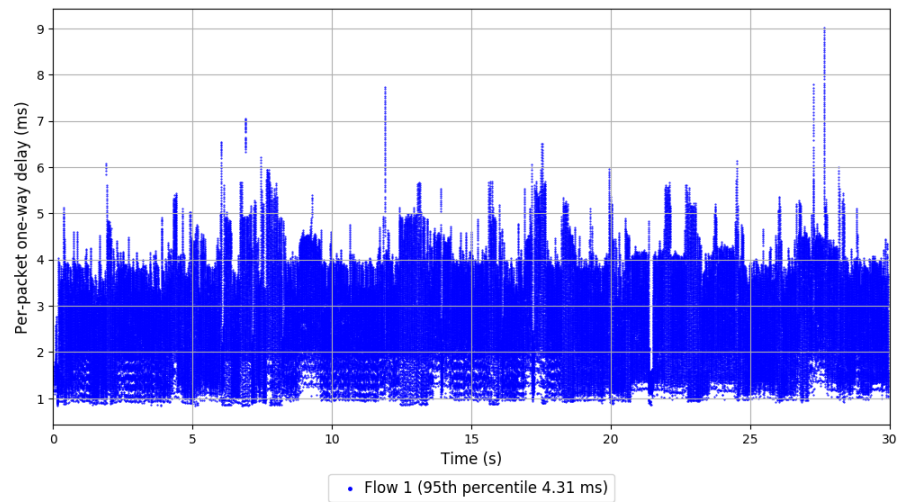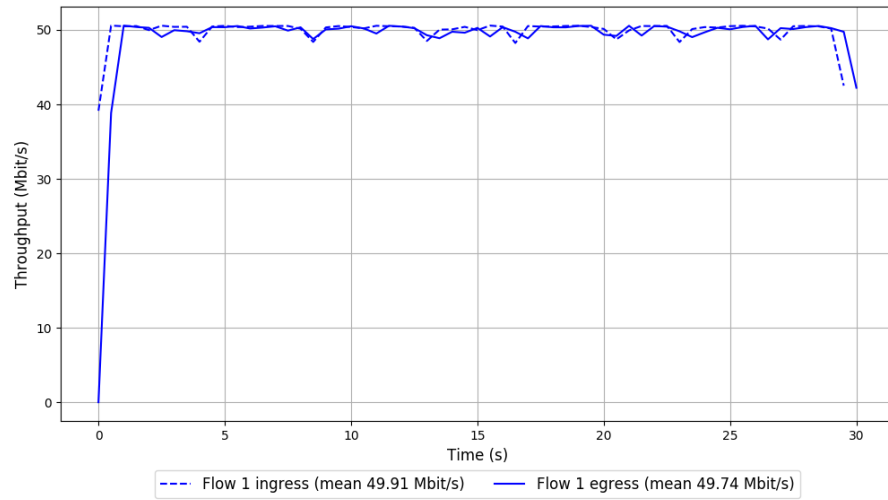
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-07-11 23:43:42
End at: 2019-07-11 23:44:12
Local clock offset: 0.256 ms
Remote clock offset: 0.654 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.93 Mbit/s
95th percentile per-packet one-way delay: 4.005 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 49.93 Mbit/s
95th percentile per-packet one-way delay: 4.005 ms
Loss rate: 0.23%
```
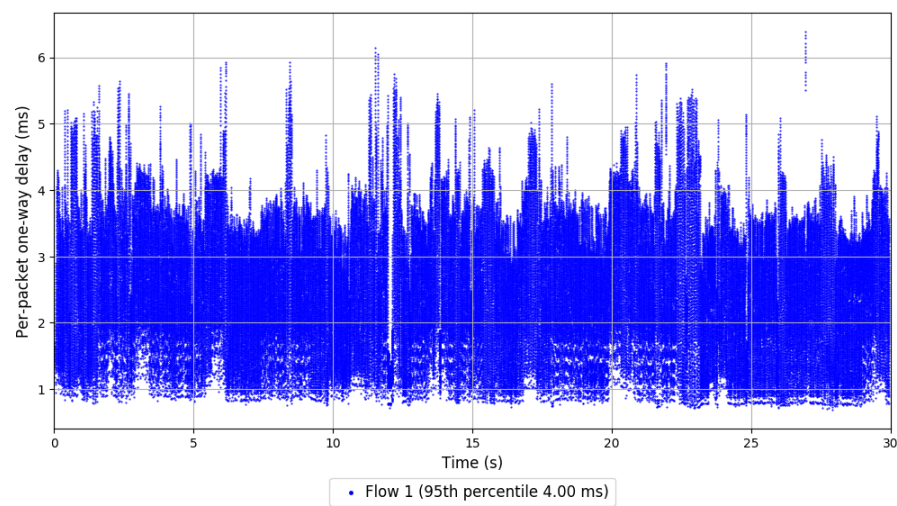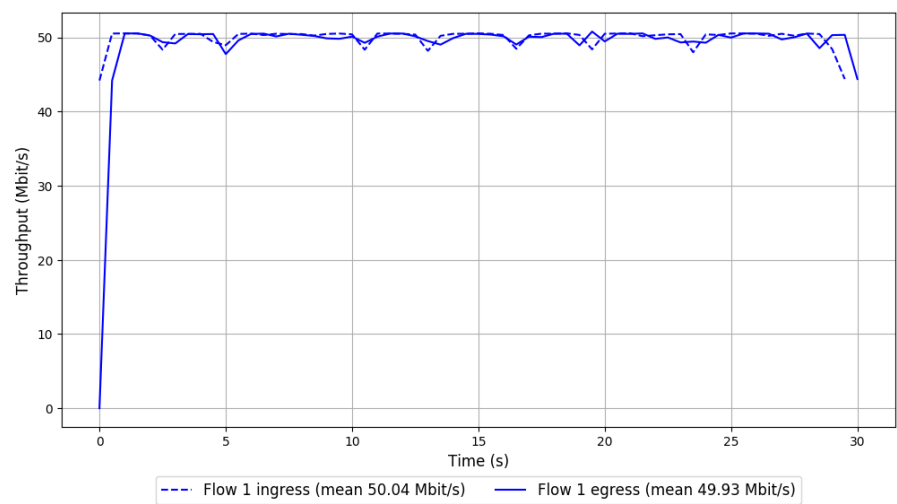
Run 2: Report of Sprout — Data Link

Flow 1 ingress (mean 50.04 Mbit/s) ----- Flow 1 egress (mean 49.93 Mbit/s)
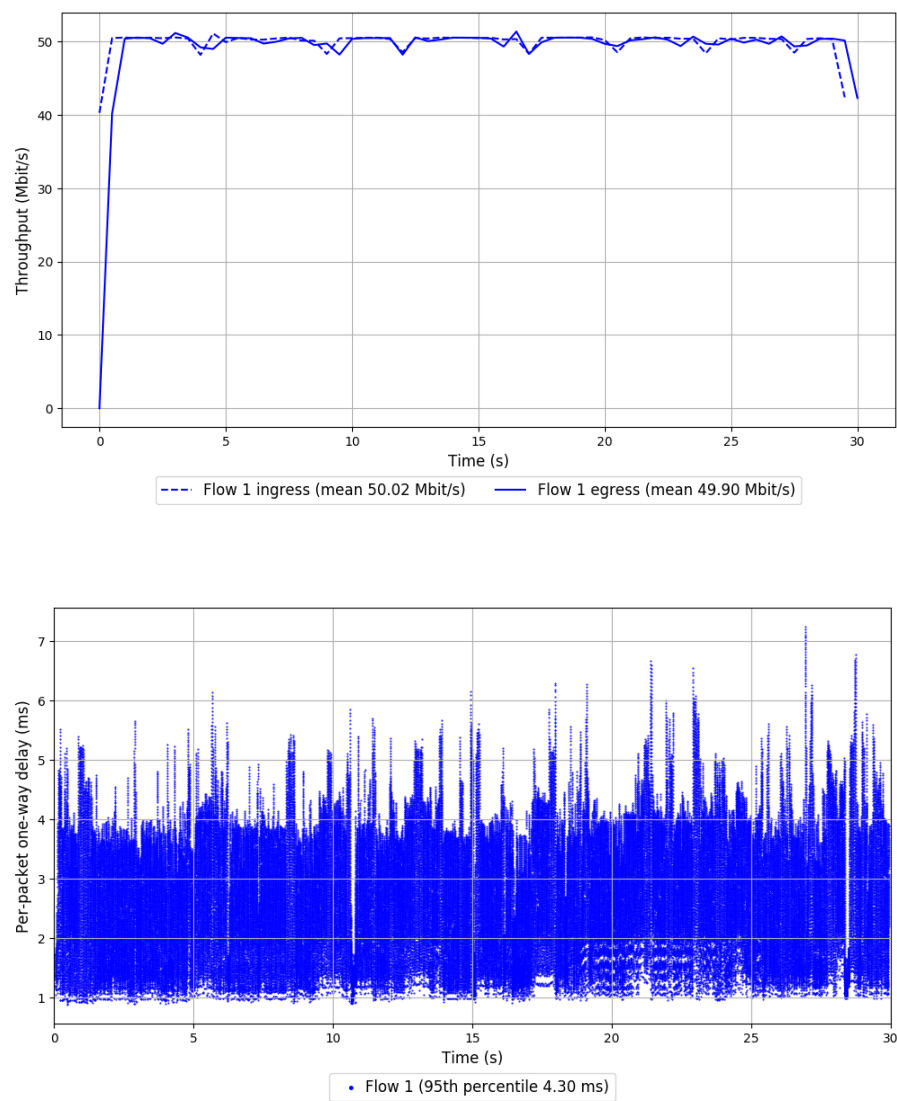

• Flow 1 (95th percentile 4.00 ms)

```
Run 3: Statistics of Sprout

Start at: 2019-07-12 00:15:56
End at: 2019-07-12 00:16:26
Local clock offset: 3.515 ms
Remote clock offset: -1.848 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.90 Mbit/s
95th percentile per-packet one-way delay: 4.301 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 49.90 Mbit/s
95th percentile per-packet one-way delay: 4.301 ms
Loss rate: 0.22%
```

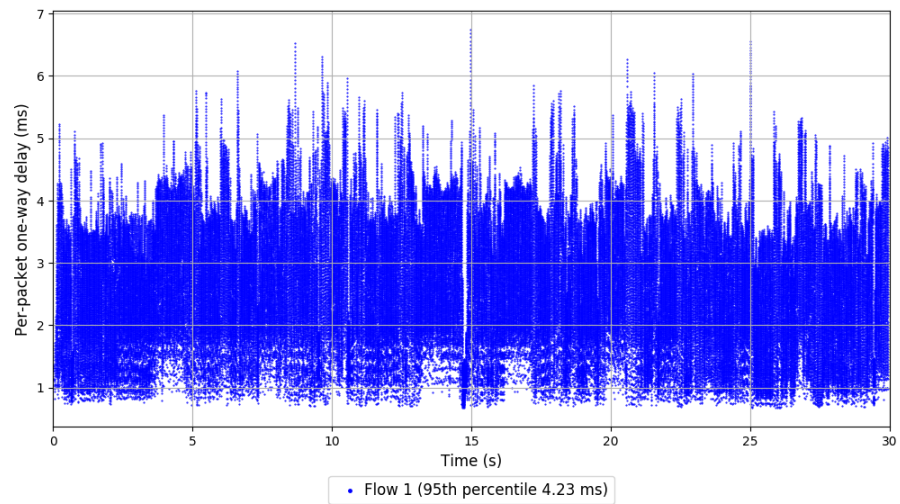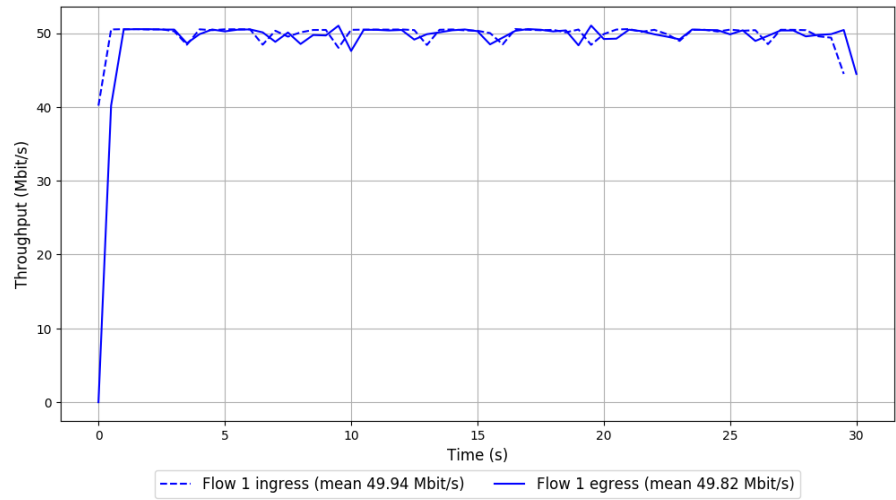## Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-07-12 00:48:09
End at: 2019-07-12 00:48:39
Local clock offset: 3.515 ms
Remote clock offset: -0.578 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.82 Mbit/s
95th percentile per-packet one-way delay: 4.229 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 49.82 Mbit/s
95th percentile per-packet one-way delay: 4.229 ms
Loss rate: 0.24%
```

Run 4: Report of Sprout — Data Link

Flow 1 ingress (mean 49.94 Mbit/s)   Flow 1 egress (mean 49.82 Mbit/s)

• Flow 1 (95th percentile 4.23 ms)

```
Run 5: Statistics of Sprout

Start at: 2019-07-12 01:20:33
End at: 2019-07-12 01:21:03
Local clock offset: -0.47 ms
Remote clock offset: 0.583 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.91 Mbit/s
95th percentile per-packet one-way delay: 4.643 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 49.91 Mbit/s
95th percentile per-packet one-way delay: 4.643 ms
Loss rate: 0.14%
```
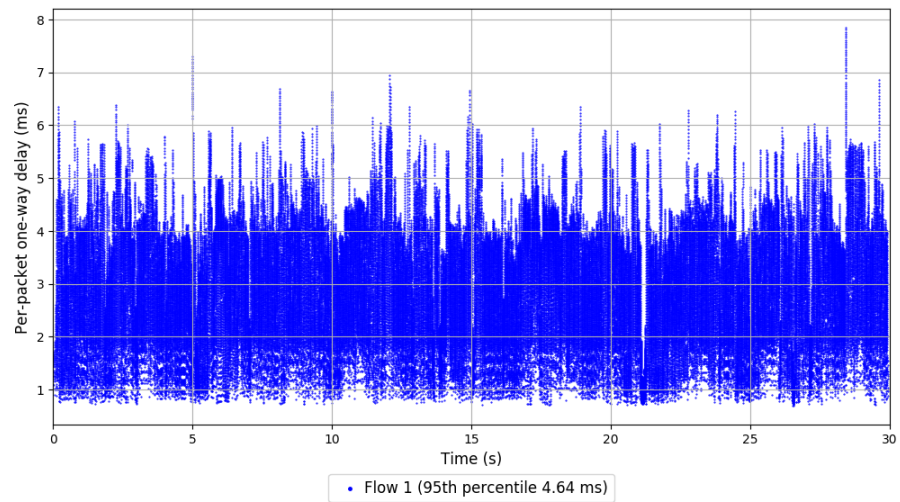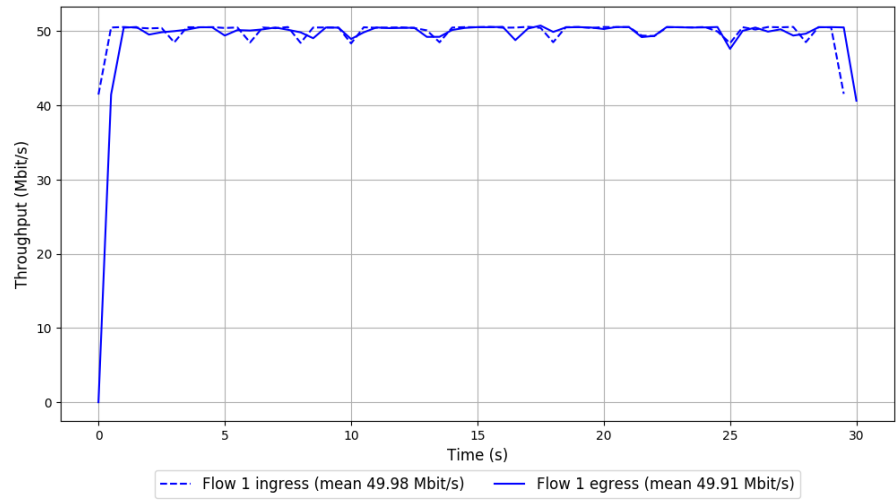
Run 5: Report of Sprout — Data Link

Flow 1 ingress (mean 49.98 Mbit/s)   Flow 1 egress (mean 49.91 Mbit/s)

Flow 1 (95th percentile 4.64 ms)

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

Start at: 2019-07-11 22:59:24
End at: 2019-07-11 22:59:54
Local clock offset: 0.389 ms
Remote clock offset: -0.203 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.87 Mbit/s
95th percentile per-packet one-way delay: 1.372 ms
Loss rate: 59.73%
-- Flow 1:
Average throughput: 4.87 Mbit/s
95th percentile per-packet one-way delay: 1.372 ms
Loss rate: 59.73%
```
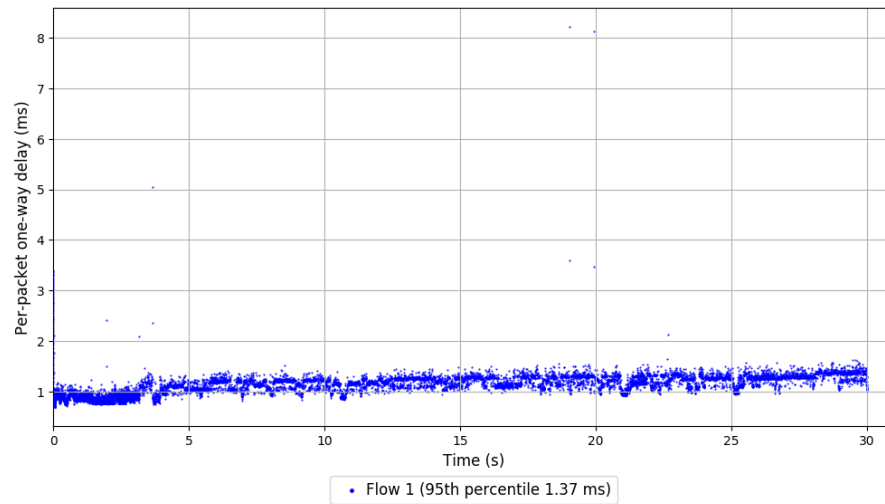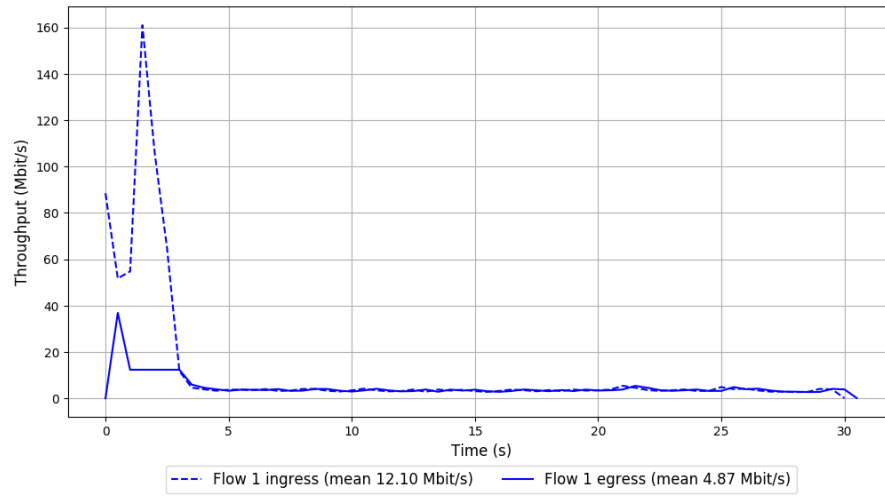
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2019-07-11 23:31:33
End at: 2019-07-11 23:32:03
Local clock offset: 0.081 ms
Remote clock offset: -3.633 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.65 Mbit/s
95th percentile per-packet one-way delay: 0.913 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 3.65 Mbit/s
95th percentile per-packet one-way delay: 0.913 ms
Loss rate: 0.06%
```
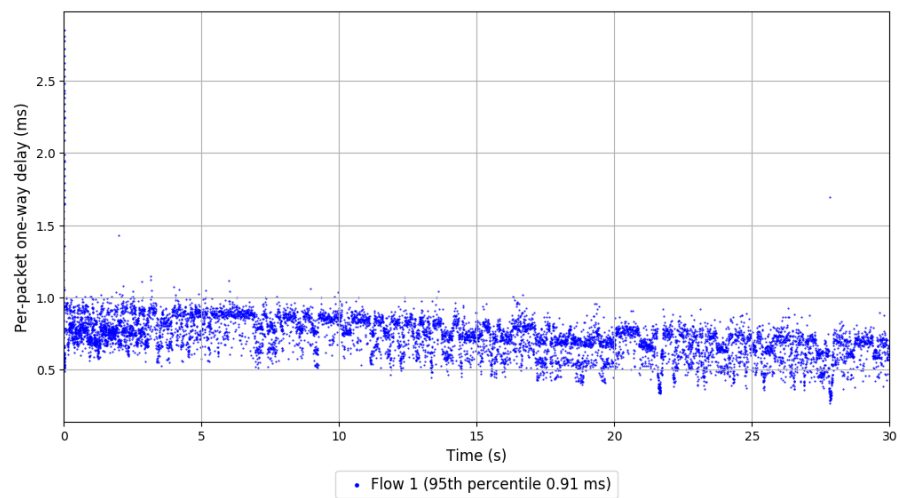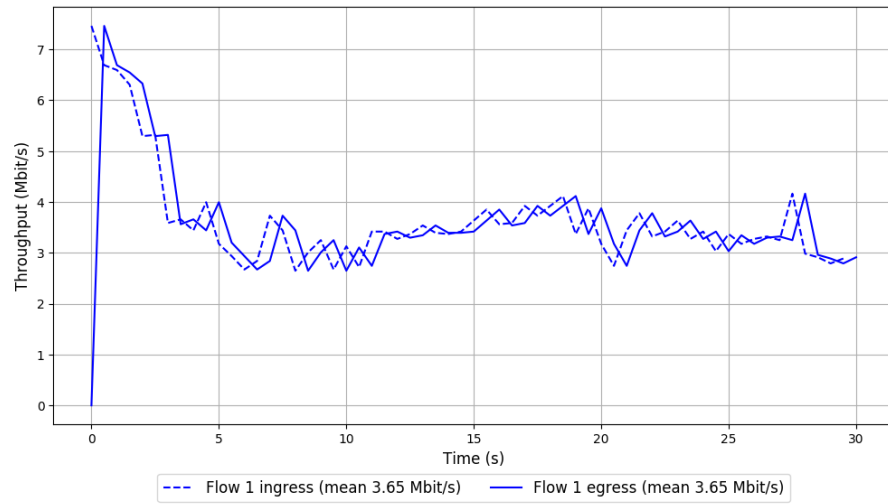
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 3.65 Mbit/s) --- Flow 1 egress (mean 3.65 Mbit/s)

Flow 1 (95th percentile 0.91 ms)

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

Start at: 2019-07-12 00:03:54
End at: 2019-07-12 00:04:24
Local clock offset: 1.738 ms
Remote clock offset: 1.737 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 1.805 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 1.805 ms
Loss rate: 0.04%
```
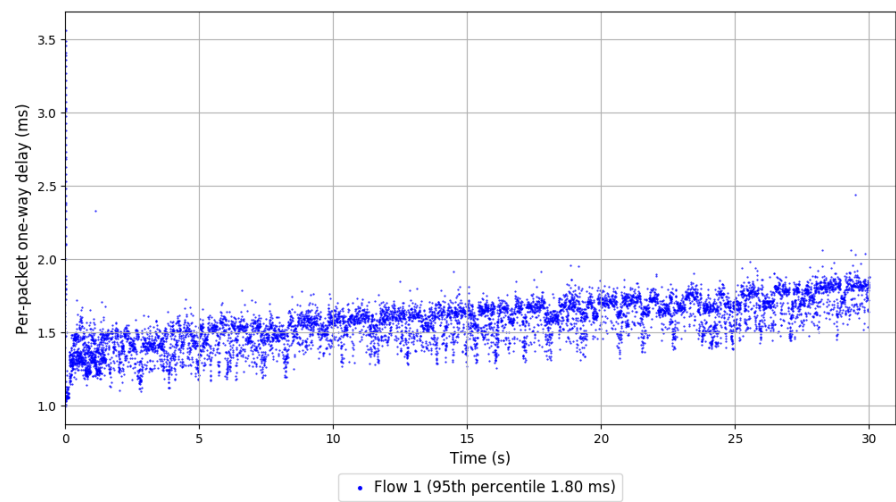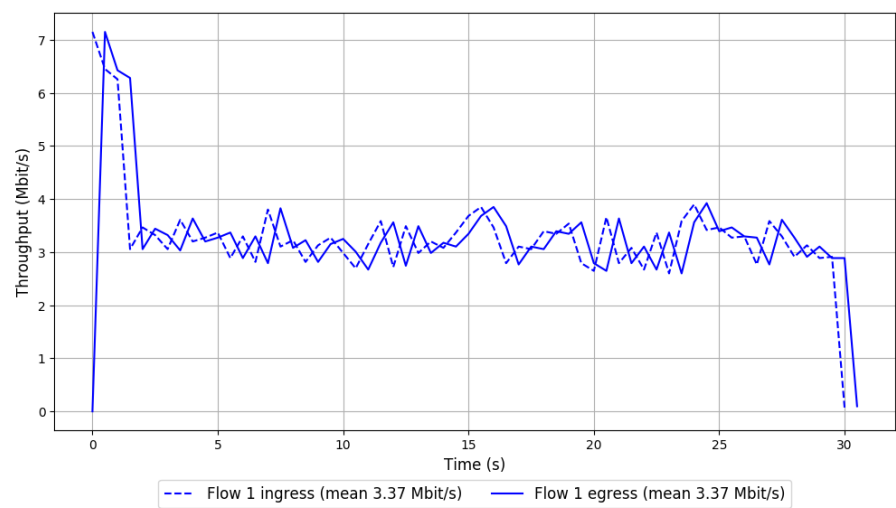
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 3.37 Mbit/s) — — — Flow 1 egress (mean 3.37 Mbit/s)

• Flow 1 (95th percentile 1.80 ms)

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

Start at: 2019-07-12 00:36:09
End at: 2019-07-12 00:36:39
Local clock offset: 3.734 ms
Remote clock offset: -3.194 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.35 Mbit/s
95th percentile per-packet one-way delay: 1.184 ms
Loss rate: 45.70%
-- Flow 1:
Average throughput: 5.35 Mbit/s
95th percentile per-packet one-way delay: 1.184 ms
Loss rate: 45.70%
```
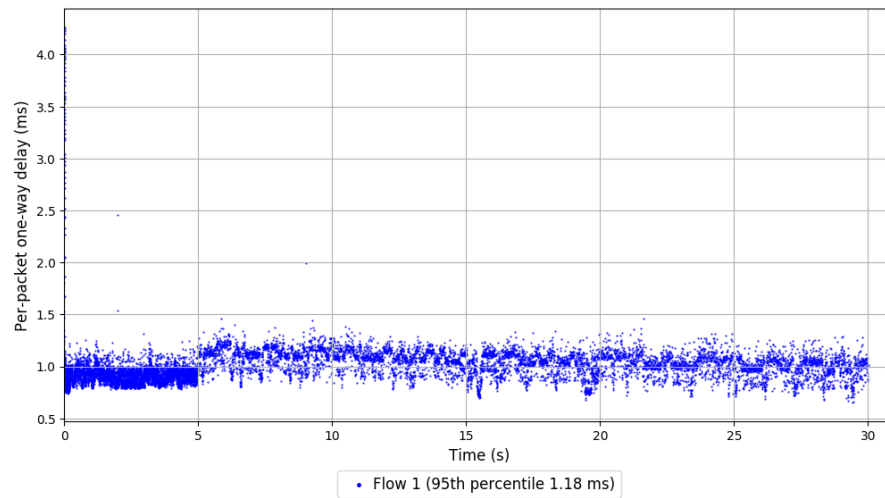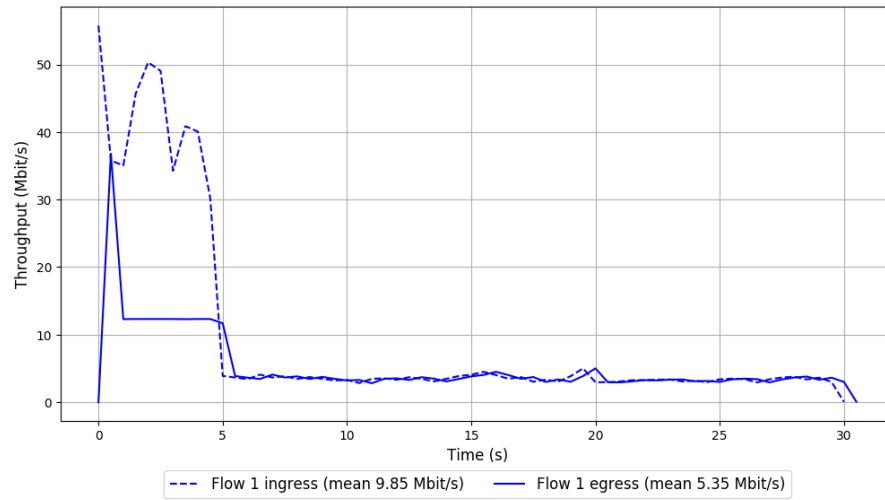
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 9.85 Mbit/s) Flow 1 egress (mean 5.35 Mbit/s)

Flow 1 (95th percentile 1.18 ms)

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

Start at: 2019-07-12 01:08:32
End at: 2019-07-12 01:09:02
Local clock offset: 0.894 ms
Remote clock offset: 0.772 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 5.33 Mbit/s
95th percentile per-packet one-way delay: 1.053 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 5.33 Mbit/s
95th percentile per-packet one-way delay: 1.053 ms
Loss rate: 0.02%
```
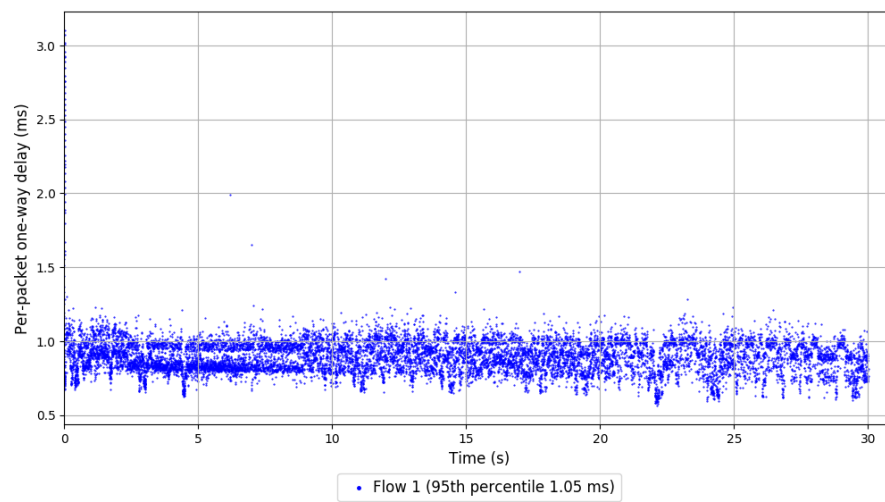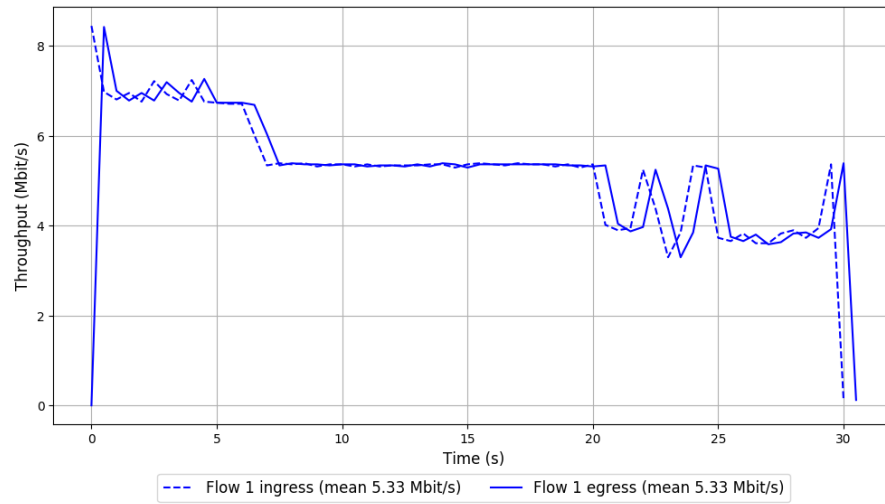
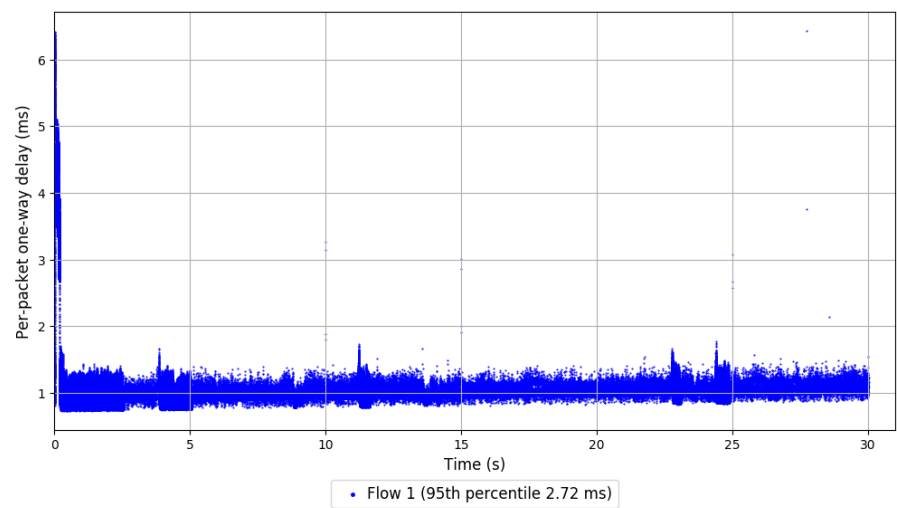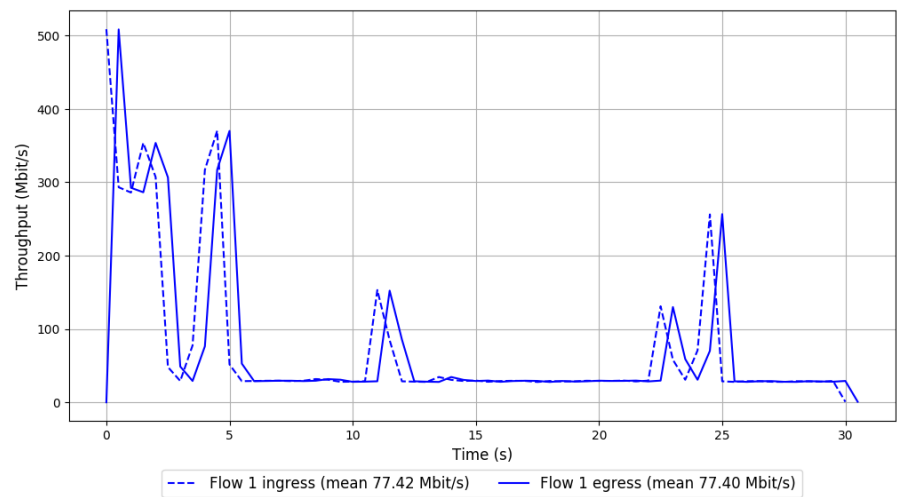Run 5: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2019-07-11 23:04:45
End at: 2019-07-11 23:05:15
Local clock offset: 0.223 ms
Remote clock offset: -2.214 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.40 Mbit/s
95th percentile per-packet one-way delay: 2.716 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 77.40 Mbit/s
95th percentile per-packet one-way delay: 2.716 ms
Loss rate: 0.03%
```

Run 1: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 77.42 Mbit/s) — Flow 1 egress (mean 77.40 Mbit/s)
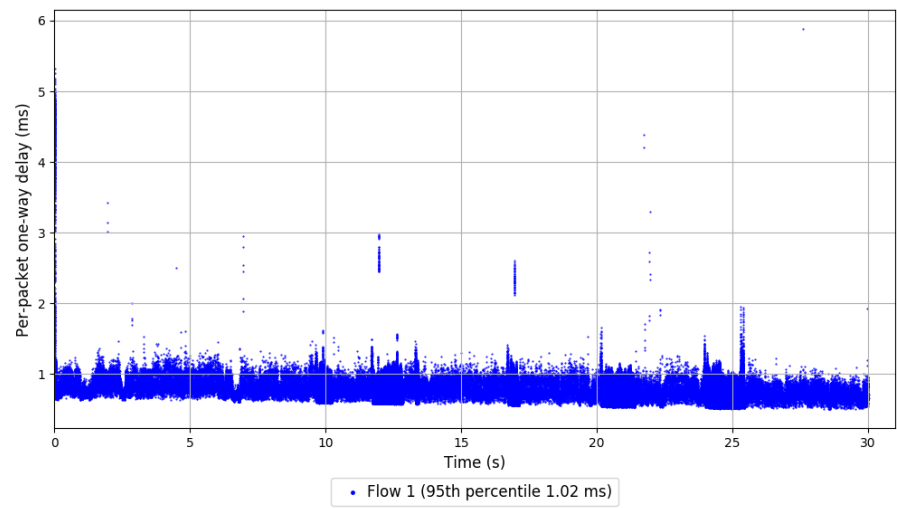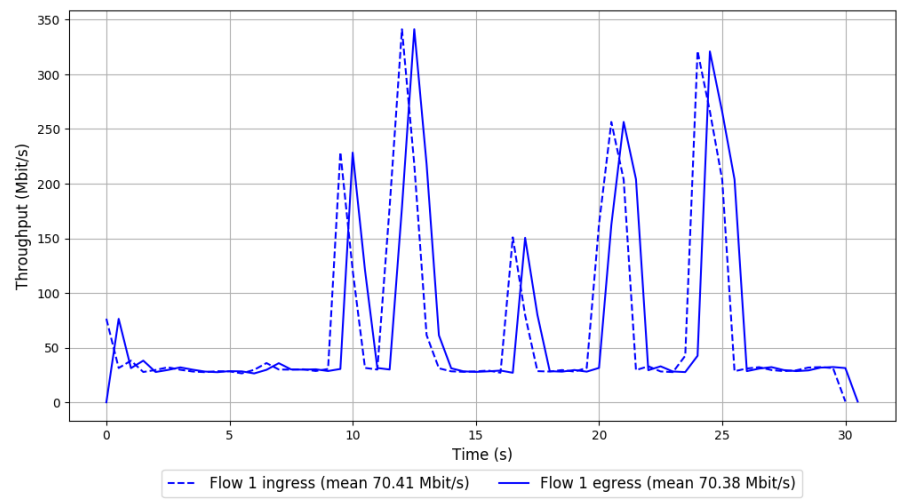

• Flow 1 (95th percentile 2.72 ms)

206

```
Run 2: Statistics of TCP Vegas

Start at: 2019-07-11 23:36:53
End at: 2019-07-11 23:37:23
Local clock offset: 0.2 ms
Remote clock offset: -1.129 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.38 Mbit/s
95th percentile per-packet one-way delay: 1.018 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 70.38 Mbit/s
95th percentile per-packet one-way delay: 1.018 ms
Loss rate: 0.05%
```

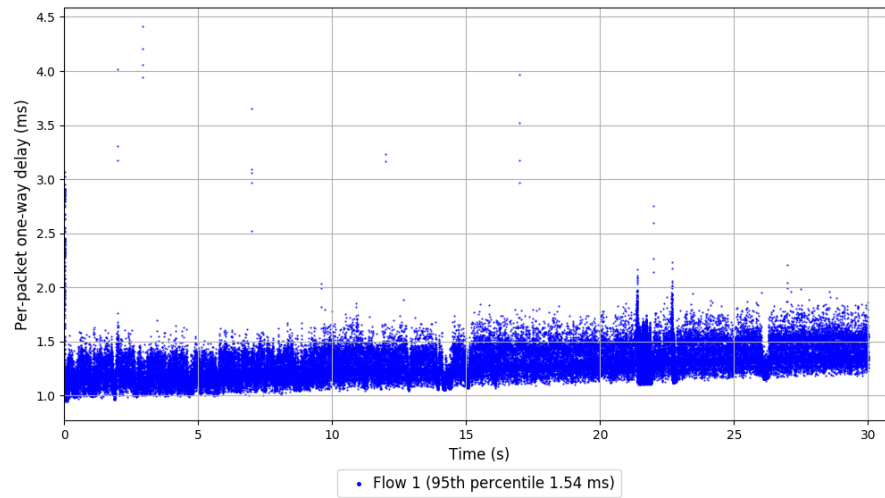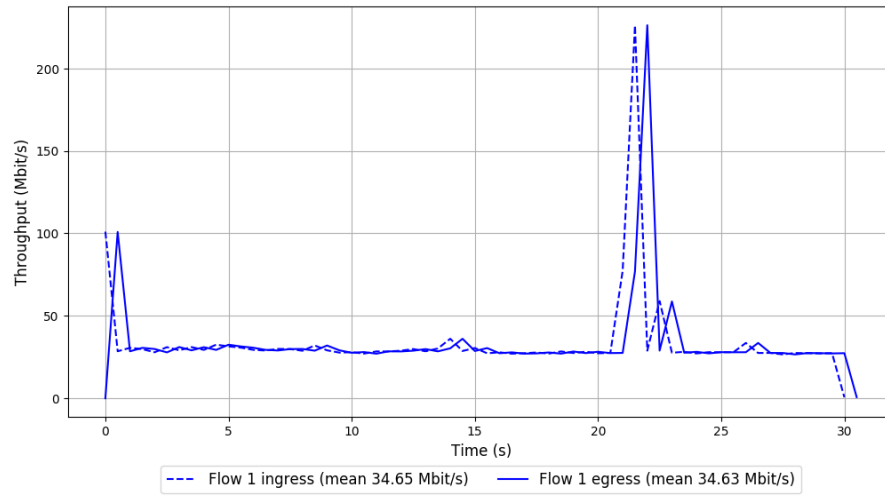Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-07-12 00:09:10
End at: 2019-07-12 00:09:40
Local clock offset: 2.734 ms
Remote clock offset: -0.353 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 34.63 Mbit/s
95th percentile per-packet one-way delay: 1.545 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 34.63 Mbit/s
95th percentile per-packet one-way delay: 1.545 ms
Loss rate: 0.05%
```

Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 34.65 Mbit/s) --- Flow 1 egress (mean 34.63 Mbit/s)
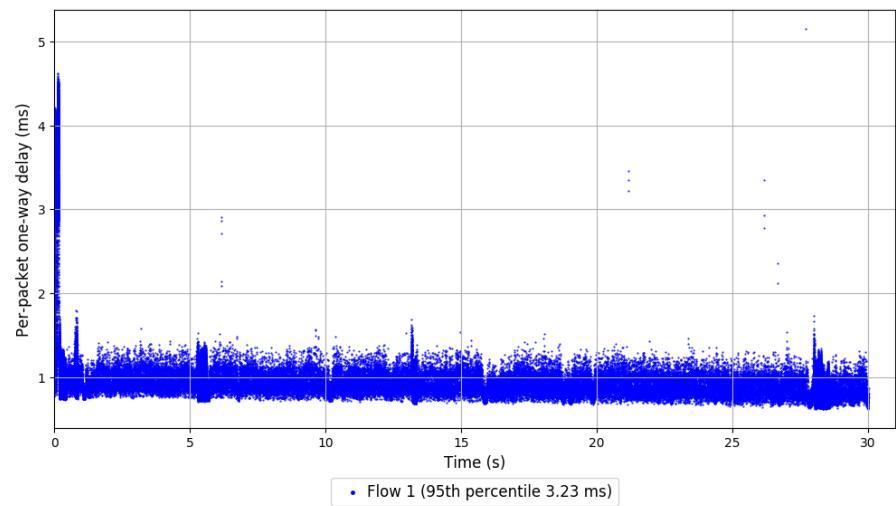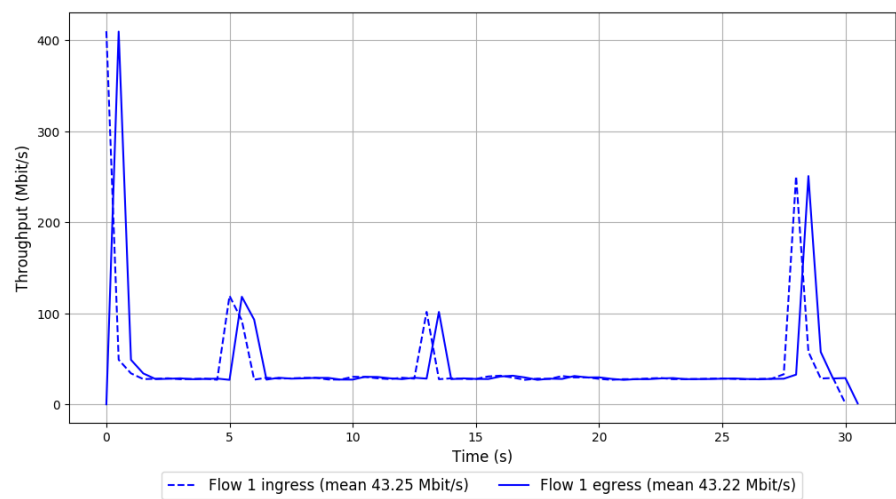

Flow 1 (95th percentile 1.54 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2019-07-12 00:41:23
End at: 2019-07-12 00:41:53
Local clock offset: 3.54 ms
Remote clock offset: -1.645 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 43.22 Mbit/s
95th percentile per-packet one-way delay: 3.234 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 43.22 Mbit/s
95th percentile per-packet one-way delay: 3.234 ms
Loss rate: 0.07%
```

Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-07-12 01:13:47
End at: 2019-07-12 01:14:17
Local clock offset: 0.112 ms
Remote clock offset: 0.708 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.39 Mbit/s
95th percentile per-packet one-way delay: 1.108 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 65.39 Mbit/s
95th percentile per-packet one-way delay: 1.108 ms
Loss rate: 0.02%
```
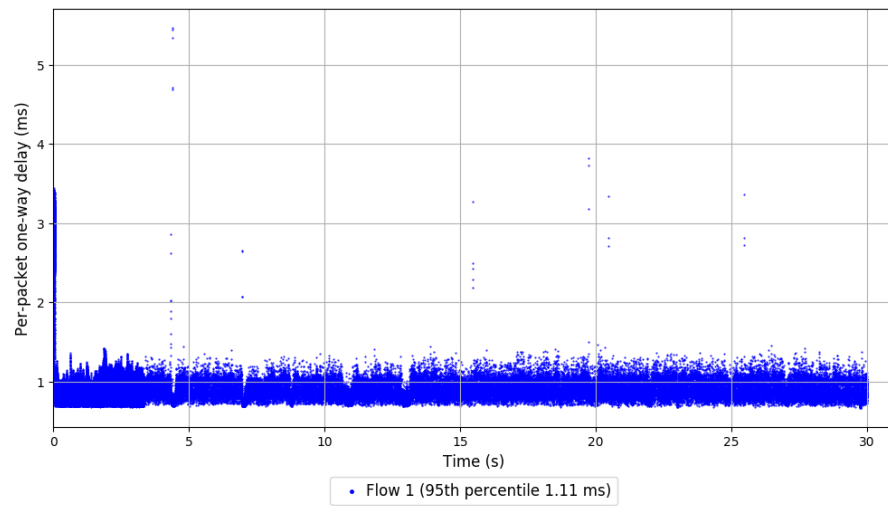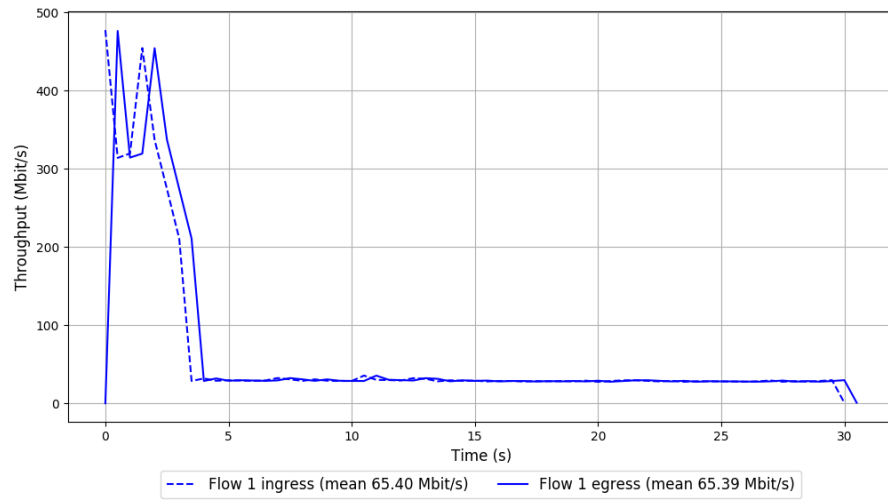
Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2019-07-11 22:55:08
End at: 2019-07-11 22:55:38
Local clock offset: 0.4 ms
Remote clock offset: 2.616 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.74 Mbit/s
95th percentile per-packet one-way delay: 34.397 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 88.74 Mbit/s
95th percentile per-packet one-way delay: 34.397 ms
Loss rate: 1.94%
```
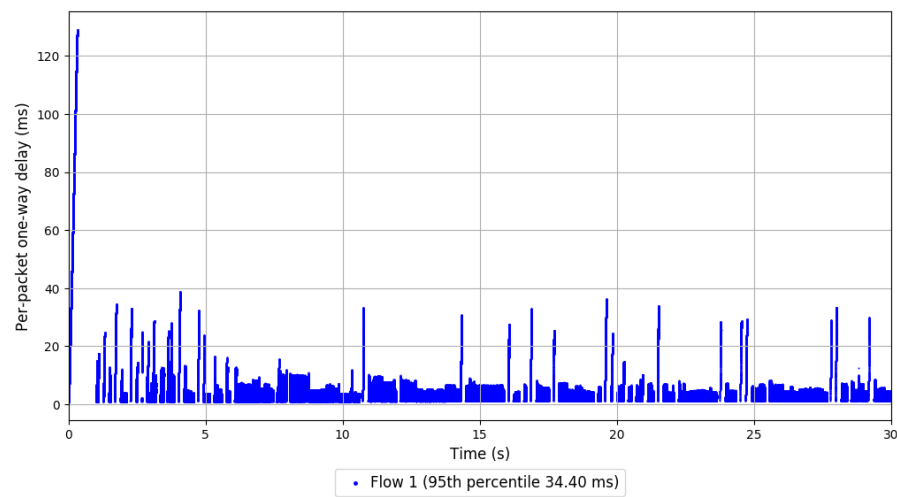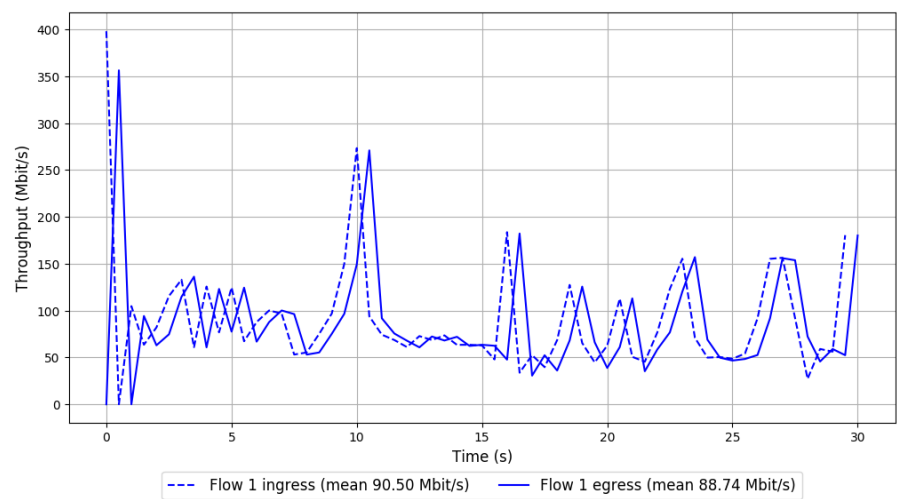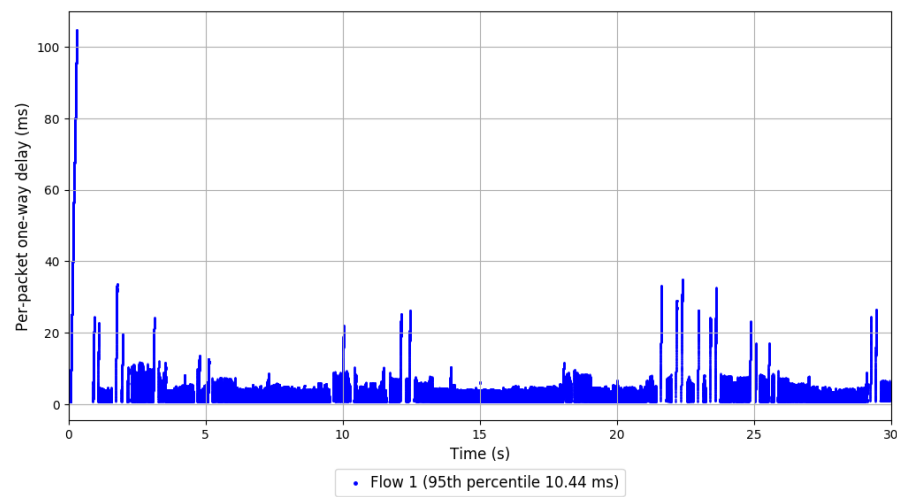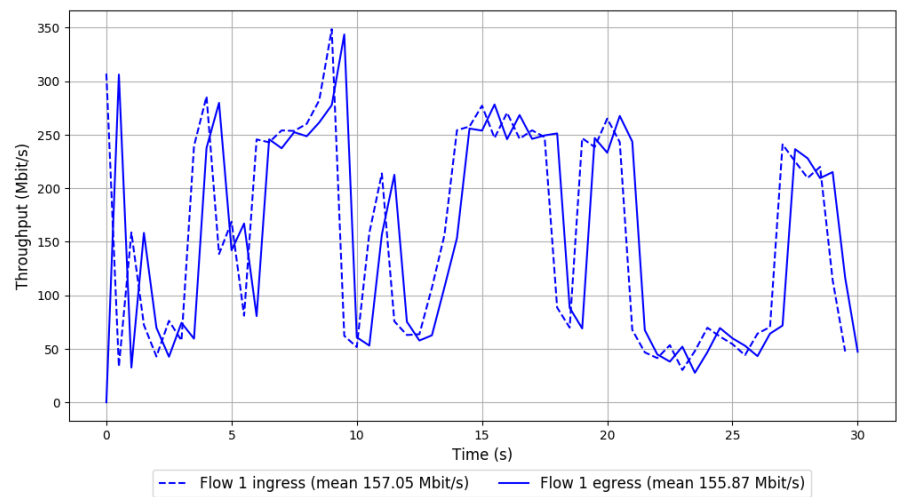
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-07-11 23:27:20
End at: 2019-07-11 23:27:50
Local clock offset: -0.001 ms
Remote clock offset: -5.707 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 155.87 Mbit/s
95th percentile per-packet one-way delay: 10.440 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 155.87 Mbit/s
95th percentile per-packet one-way delay: 10.440 ms
Loss rate: 0.74%
```

Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-07-11 23:59:35
End at: 2019-07-12 00:00:05
Local clock offset: 0.444 ms
Remote clock offset: 2.467 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 163.82 Mbit/s
95th percentile per-packet one-way delay: 11.258 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 163.82 Mbit/s
95th percentile per-packet one-way delay: 11.258 ms
Loss rate: 0.60%
```
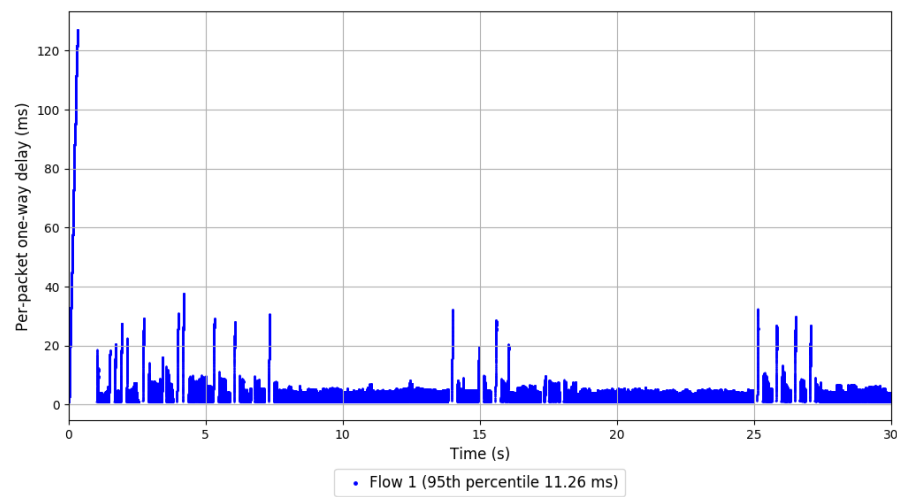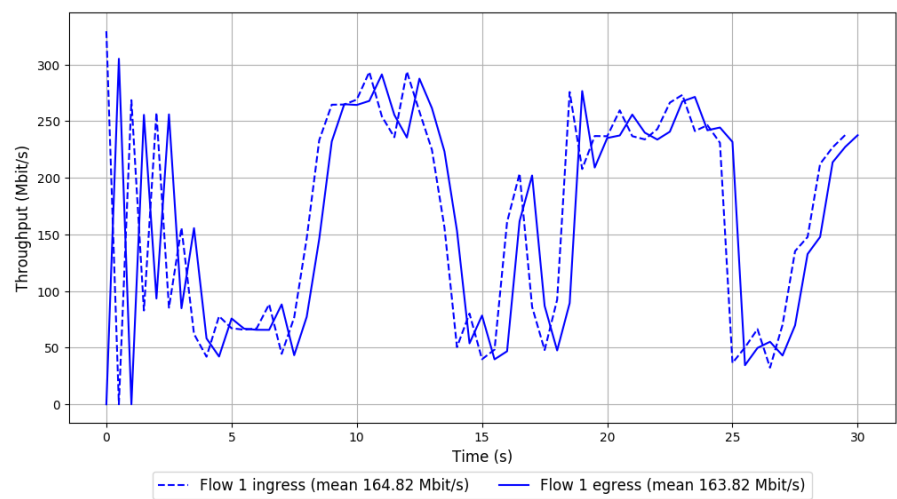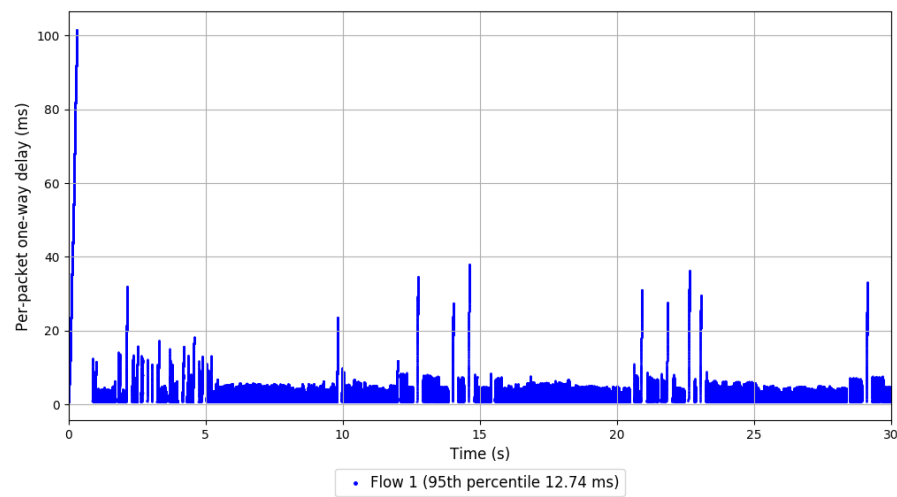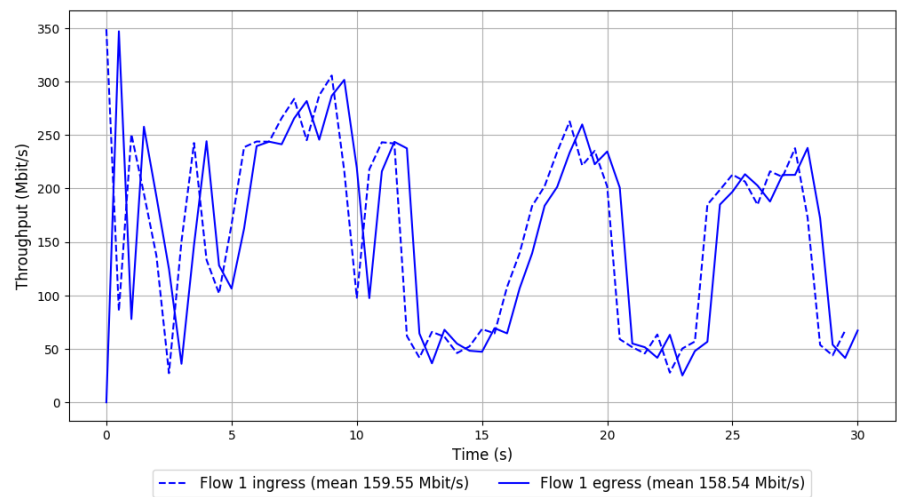
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-07-12 00:31:50
End at: 2019-07-12 00:32:20
Local clock offset: 4.068 ms
Remote clock offset: -3.057 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 158.54 Mbit/s
95th percentile per-packet one-way delay: 12.743 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 158.54 Mbit/s
95th percentile per-packet one-way delay: 12.743 ms
Loss rate: 0.64%
```

Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-07-12 01:04:11
End at: 2019-07-12 01:04:41
Local clock offset: 1.828 ms
Remote clock offset: 0.517 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 251.58 Mbit/s
95th percentile per-packet one-way delay: 4.373 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 251.58 Mbit/s
95th percentile per-packet one-way delay: 4.373 ms
Loss rate: 0.10%
```
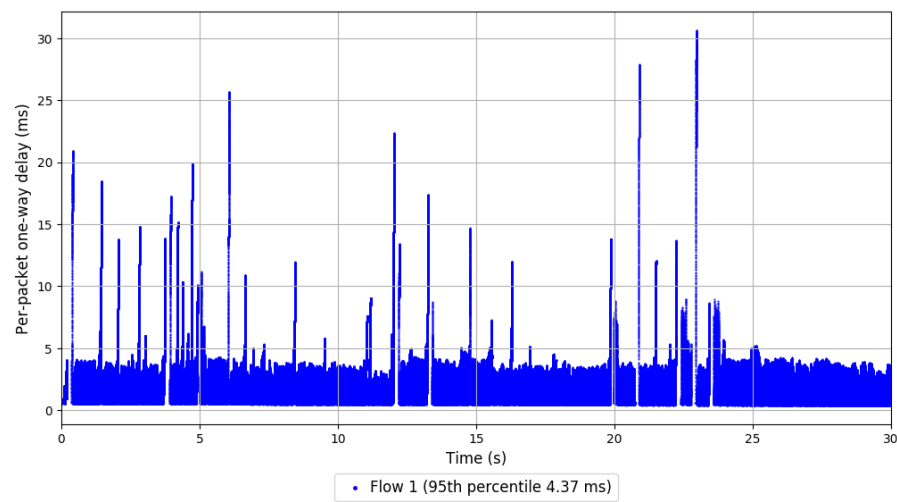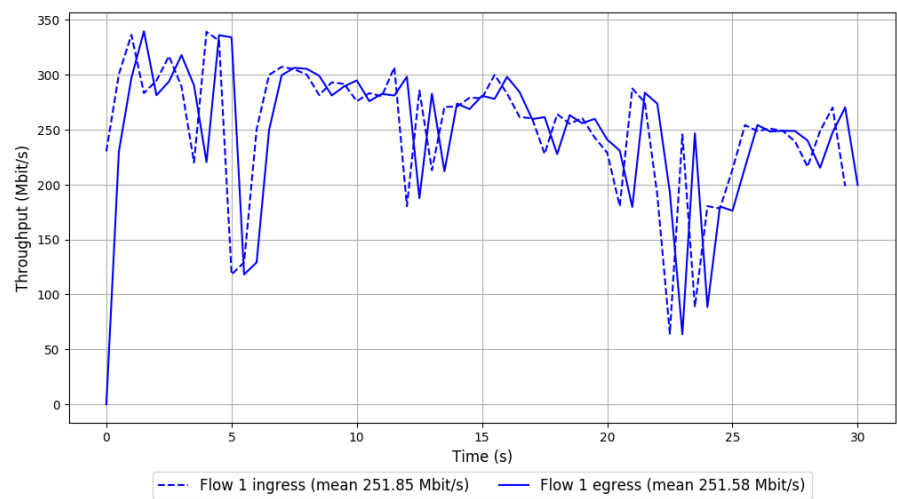
Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-07-11 22:42:55
End at: 2019-07-11 22:43:25
Local clock offset: 0.284 ms
Remote clock offset: 3.327 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 248.70 Mbit/s
95th percentile per-packet one-way delay: 0.908 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 248.70 Mbit/s
95th percentile per-packet one-way delay: 0.908 ms
Loss rate: 0.05%
```
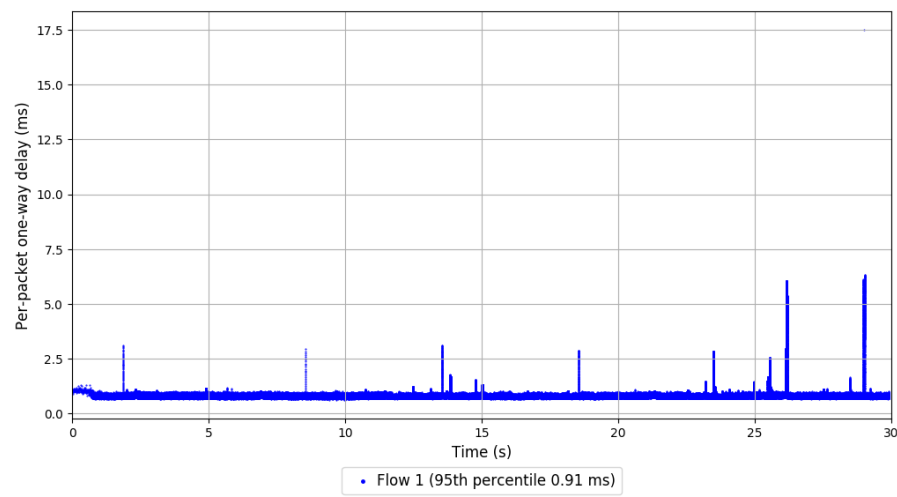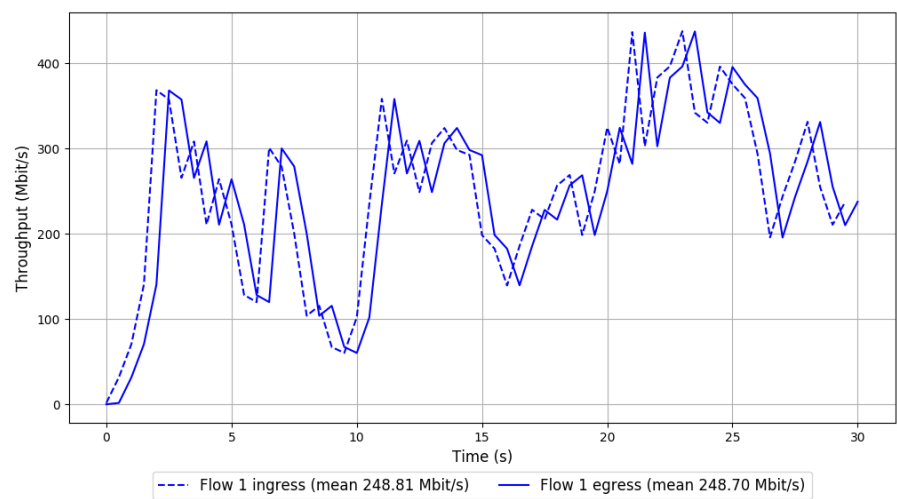
Run 1: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 248.81 Mbit/s) ----   Flow 1 egress (mean 248.70 Mbit/s) ——

• Flow 1 (95th percentile 0.91 ms)

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-07-11 23:15:18
End at: 2019-07-11 23:15:48
Local clock offset: 0.058 ms
Remote clock offset: -4.296 ms


# Below is generated by plot.py at 2019-07-12 02:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 175.23 Mbit/s
95th percentile per-packet one-way delay: 1.088 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 175.23 Mbit/s
95th percentile per-packet one-way delay: 1.088 ms
Loss rate: 0.03%
```
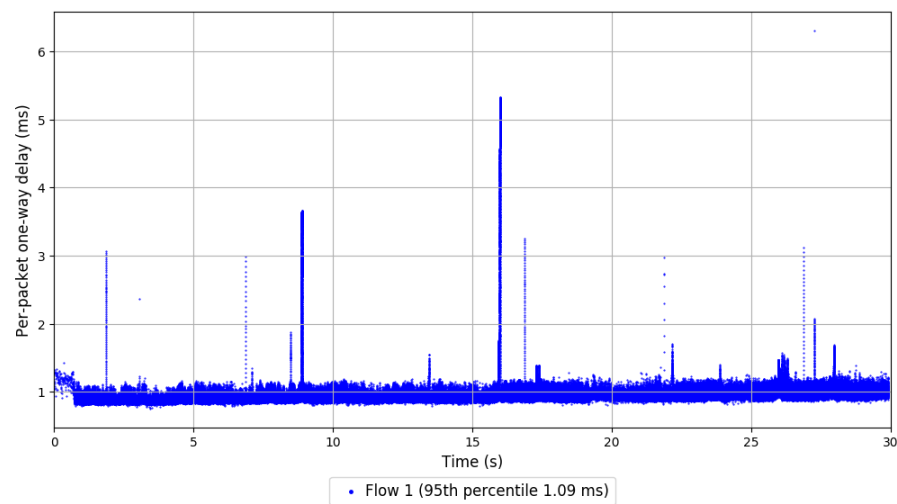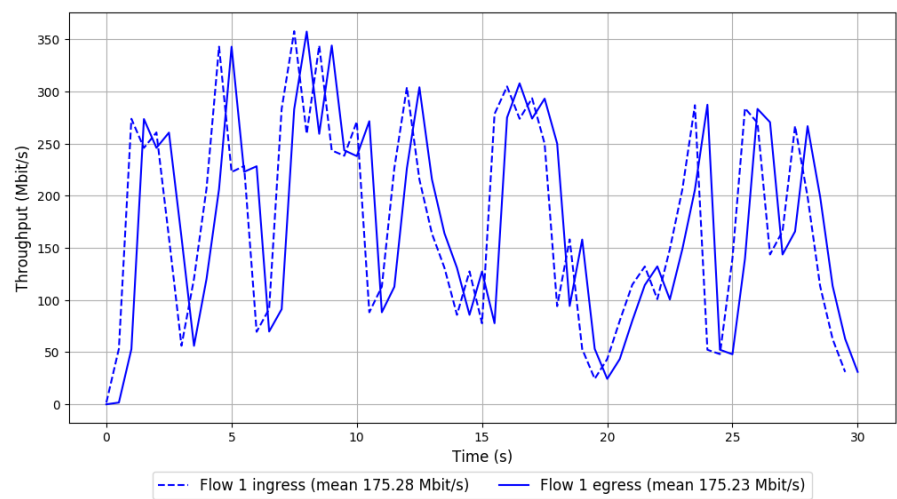
Run 2: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 175.28 Mbit/s) —— Flow 1 egress (mean 175.23 Mbit/s)

· Flow 1 (95th percentile 1.09 ms)

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-07-11 23:47:29
End at: 2019-07-11 23:47:59
Local clock offset: 0.257 ms
Remote clock offset: 1.251 ms


# Below is generated by plot.py at 2019-07-12 02:09:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 282.91 Mbit/s
95th percentile per-packet one-way delay: 0.996 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 282.91 Mbit/s
95th percentile per-packet one-way delay: 0.996 ms
Loss rate: 0.03%
```
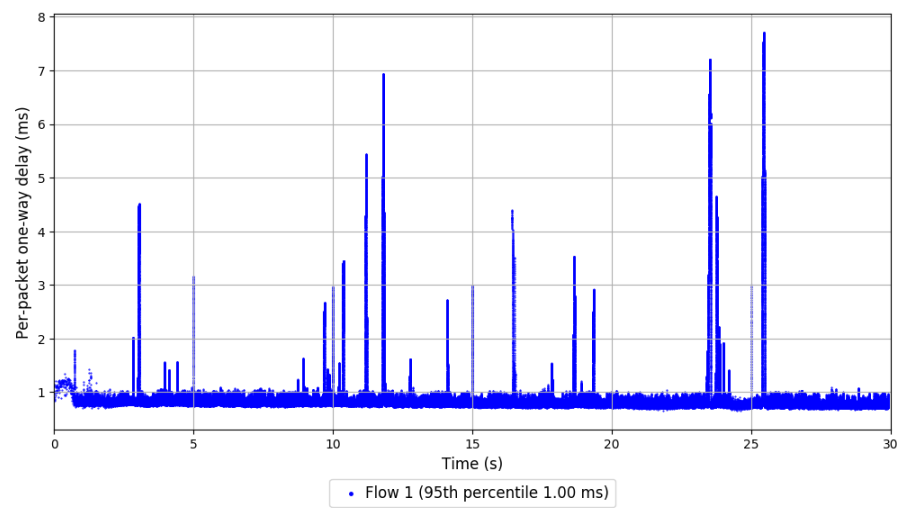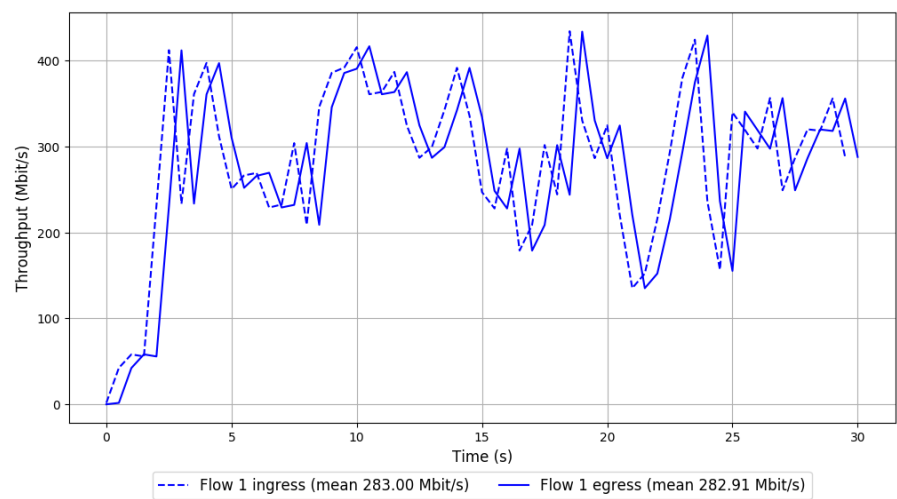
Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 283.00 Mbit/s) ——— Flow 1 egress (mean 282.91 Mbit/s)

• Flow 1 (95th percentile 1.00 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-07-12 00:19:42
End at: 2019-07-12 00:20:12
Local clock offset: 3.819 ms
Remote clock offset: -2.426 ms


# Below is generated by plot.py at 2019-07-12 02:09:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 242.72 Mbit/s
95th percentile per-packet one-way delay: 1.053 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 242.72 Mbit/s
95th percentile per-packet one-way delay: 1.053 ms
Loss rate: 0.05%
```
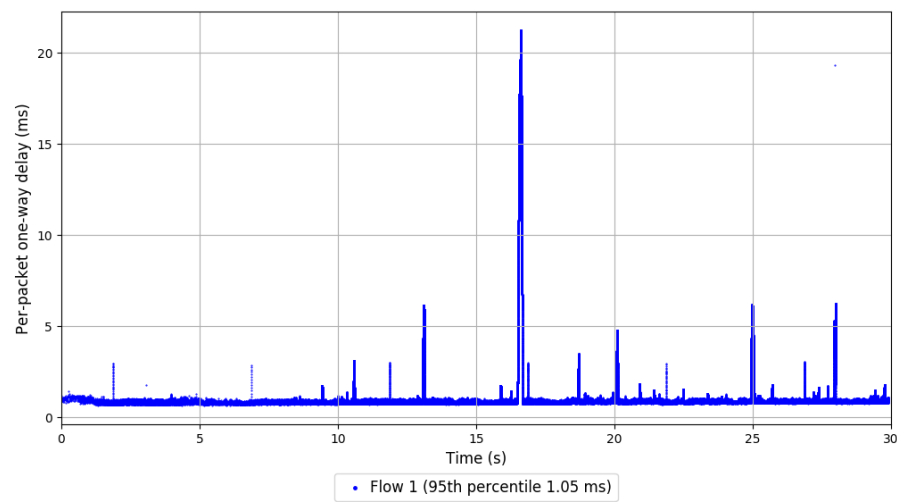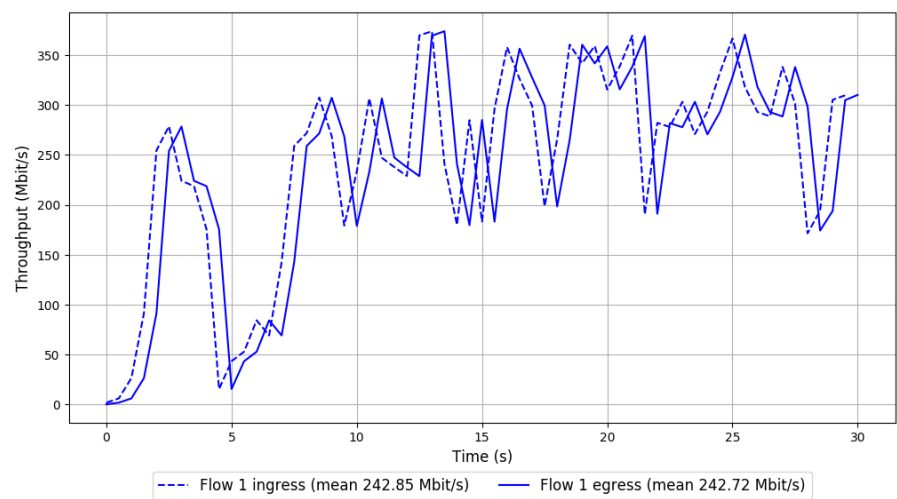
Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 242.85 Mbit/s)   Flow 1 egress (mean 242.72 Mbit/s)

Flow 1 (95th percentile 1.05 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-07-12 00:51:56
End at: 2019-07-12 00:52:26
Local clock offset: 3.539 ms
Remote clock offset: -0.211 ms


# Below is generated by plot.py at 2019-07-12 02:09:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 232.19 Mbit/s
95th percentile per-packet one-way delay: 1.437 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 232.19 Mbit/s
95th percentile per-packet one-way delay: 1.437 ms
Loss rate: 0.03%
```
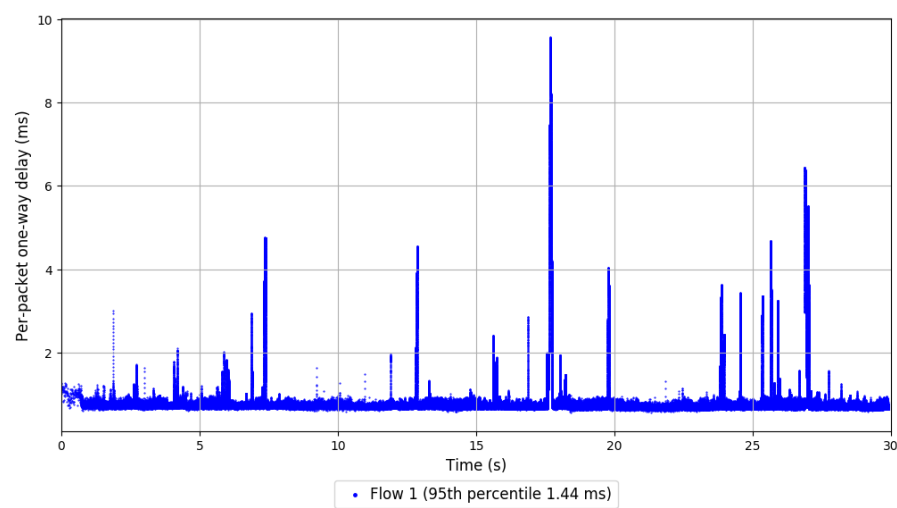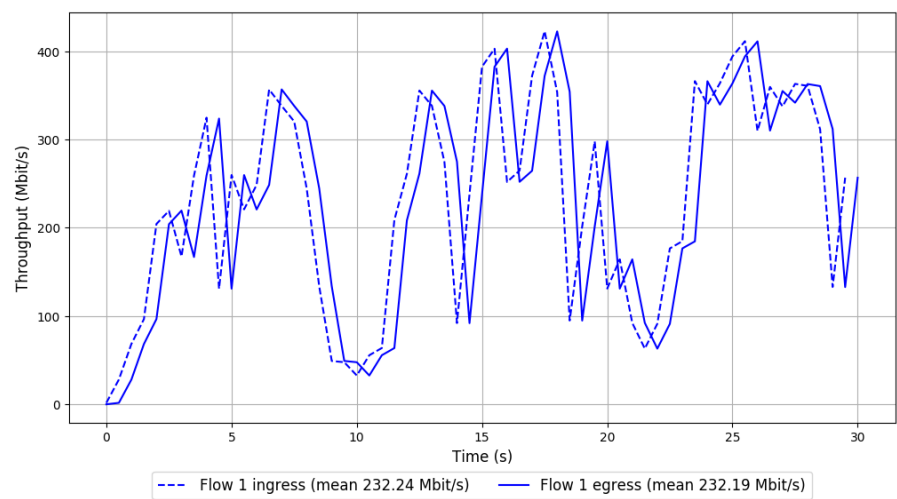
Run 5: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 232.24 Mbit/s)   Flow 1 egress (mean 232.19 Mbit/s)

Flow 1 (95th percentile 1.44 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2019-07-11 22:40:21
End at: 2019-07-11 22:40:51
Local clock offset: 0.247 ms
Remote clock offset: 3.339 ms

# Below is generated by plot.py at 2019-07-12 02:09:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.160 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.160 ms
Loss rate: 0.00%
```
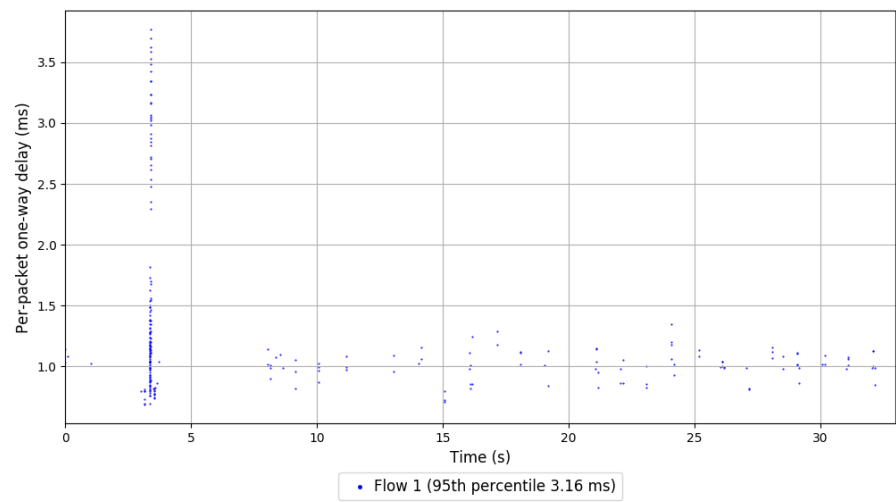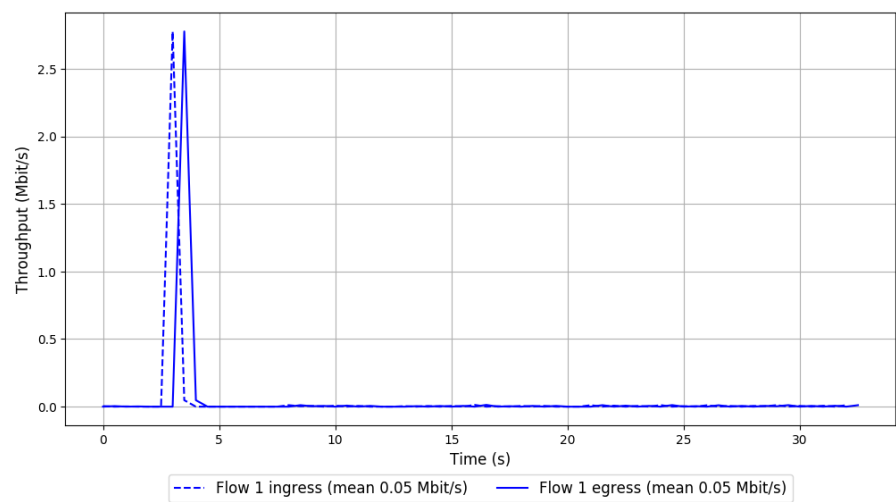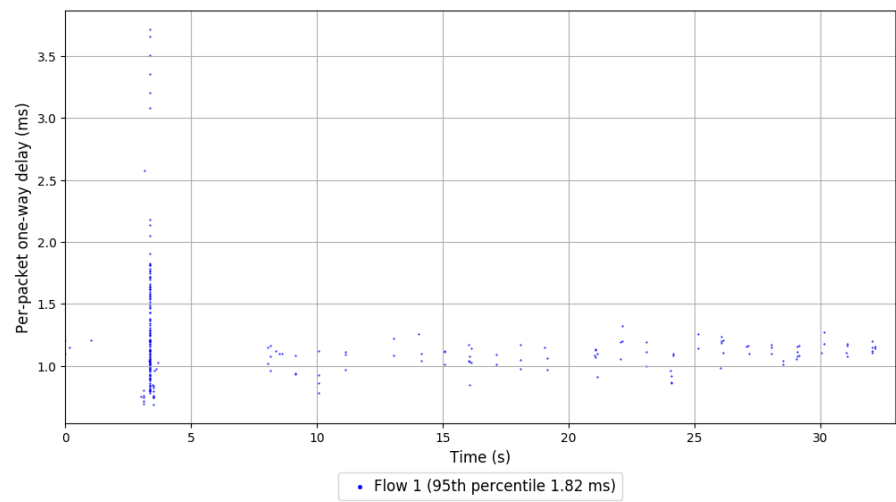
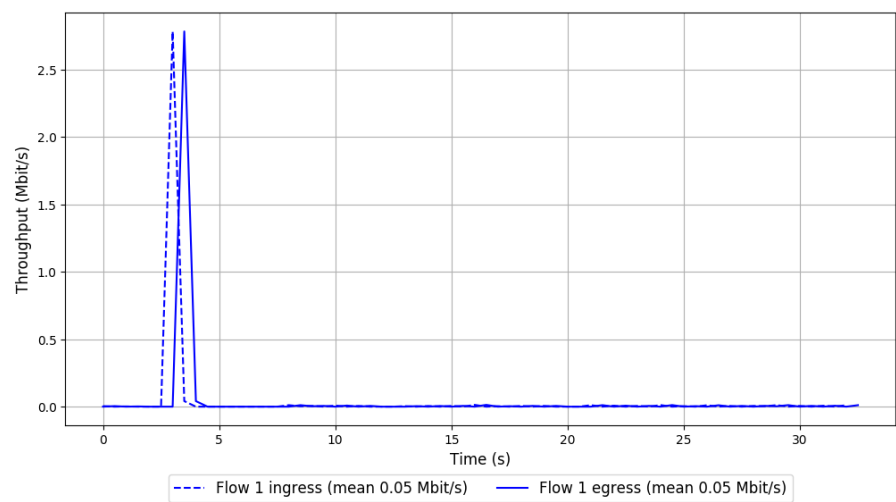Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-07-11 23:12:47
End at: 2019-07-11 23:13:17
Local clock offset: 0.096 ms
Remote clock offset: -3.966 ms


# Below is generated by plot.py at 2019-07-12 02:09:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.819 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.819 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-07-11 23:44:57
End at: 2019-07-11 23:45:27
Local clock offset: 0.242 ms
Remote clock offset: 0.813 ms


# Below is generated by plot.py at 2019-07-12 02:09:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 5.313 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 5.313 ms
Loss rate: 0.00%
```
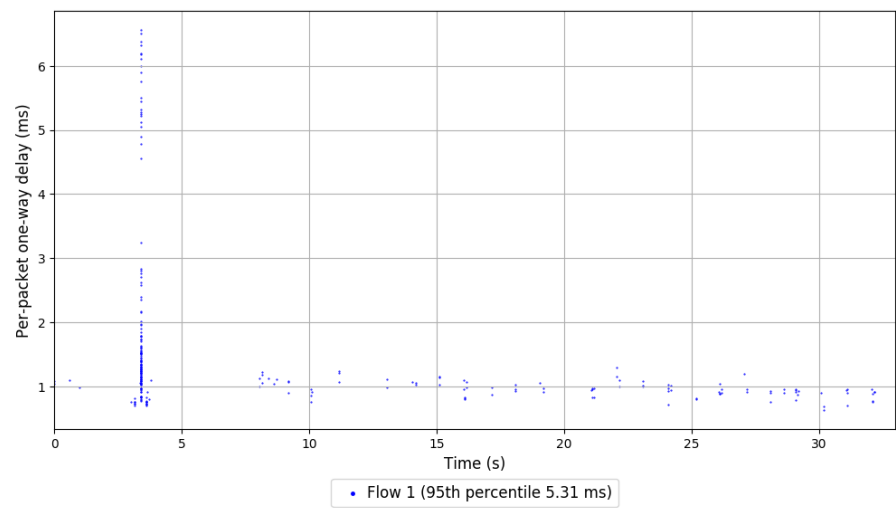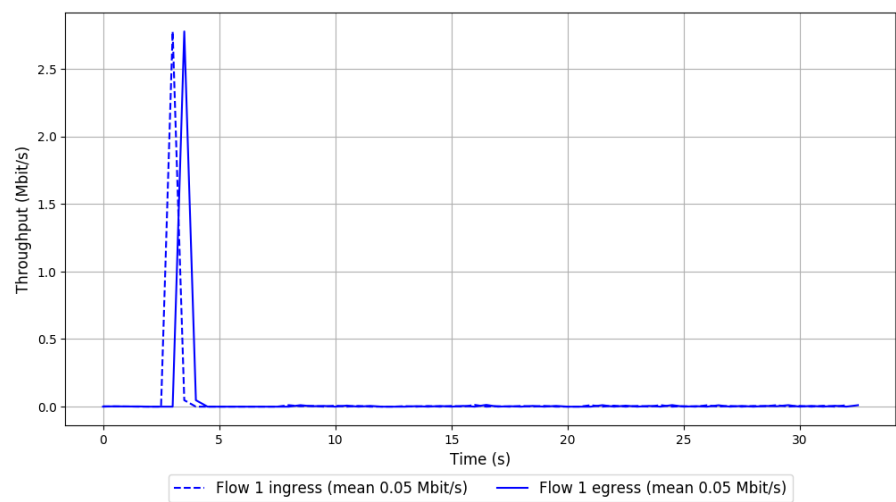
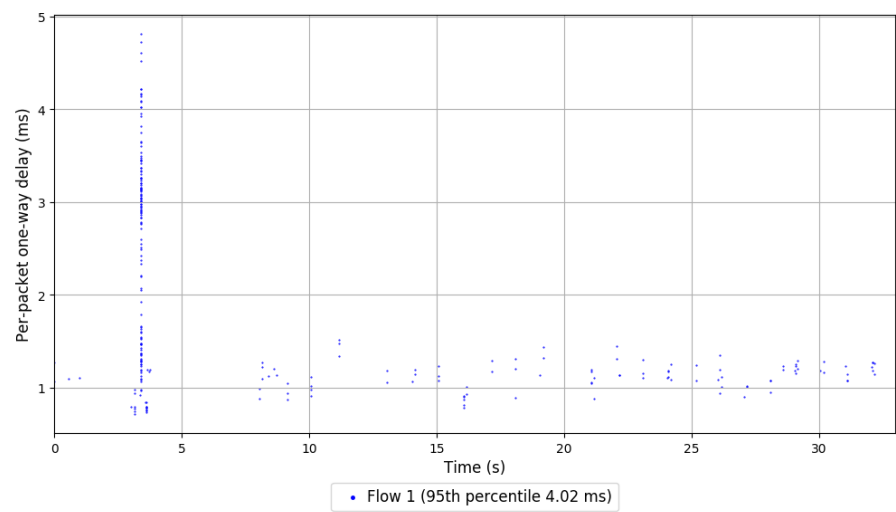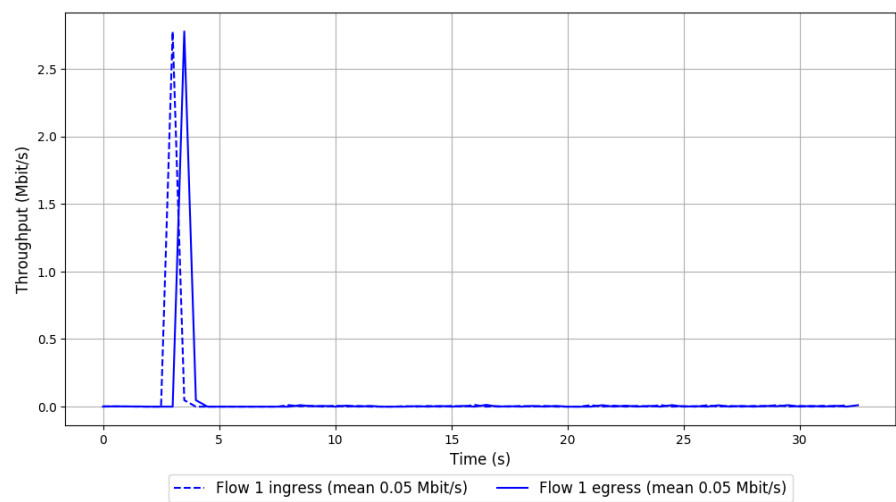Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-07-12 00:17:10
End at: 2019-07-12 00:17:40
Local clock offset: 3.634 ms
Remote clock offset: -2.083 ms


# Below is generated by plot.py at 2019-07-12 02:09:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.019 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.019 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-07-12 00:49:24
End at: 2019-07-12 00:49:54
Local clock offset: 3.508 ms
Remote clock offset: -0.397 ms


# Below is generated by plot.py at 2019-07-12 02:09:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.724 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.724 ms
Loss rate: 0.79%
```

Run 5: Report of WebRTC media — Data Link