Pantheon Report

Generated at 2019-11-24 03:15:12 (UTC).

Data path: GCE London on ens4 (*remote*) →GCE Tokyo on ens4 (*local*).

Repeated the test of 24 congestion control schemes 5 times.

Each test lasted for 30 seconds running 1 flow.

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.
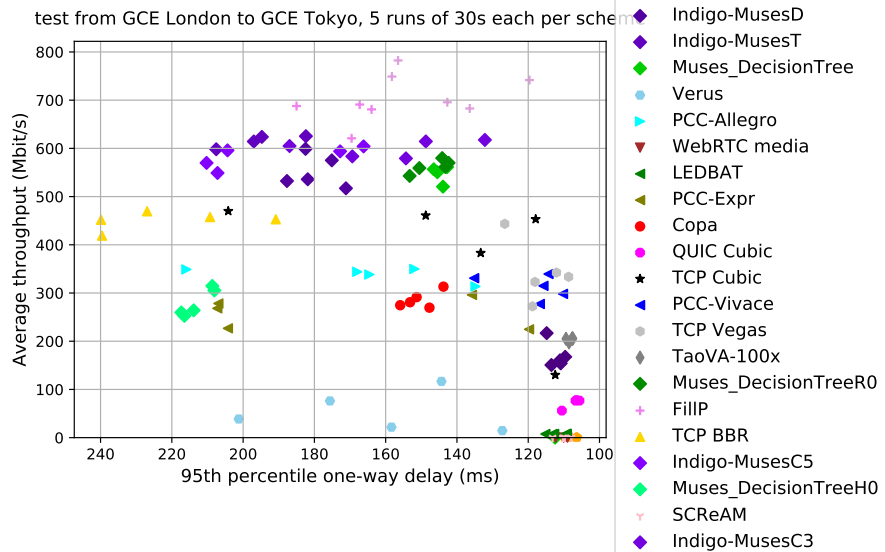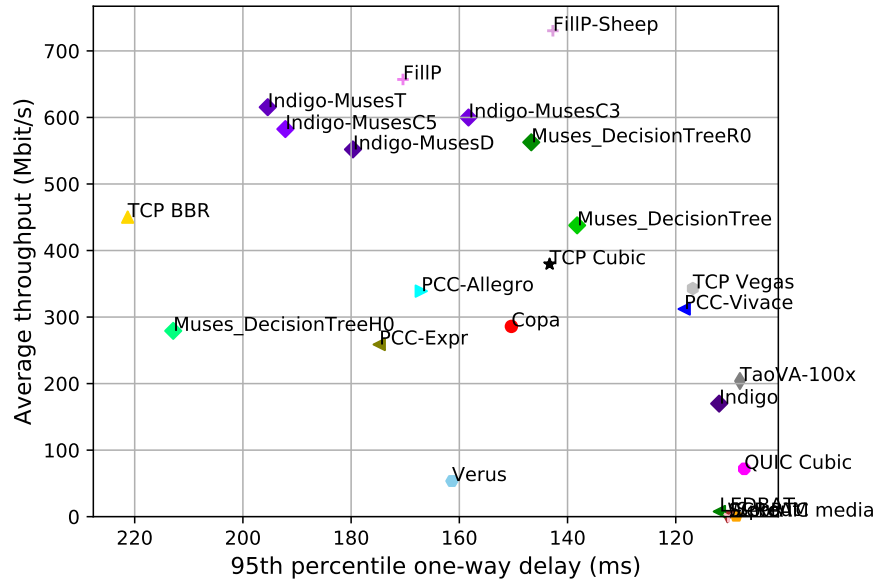
```
System info:
Linux 4.15.0-1044-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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

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

test from GCE London to GCE Tokyo, 5 runs of 30s each per scheme
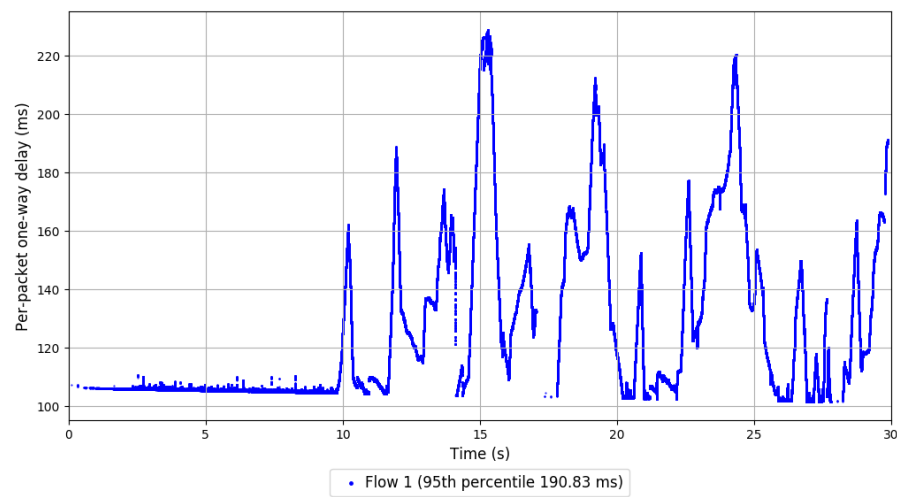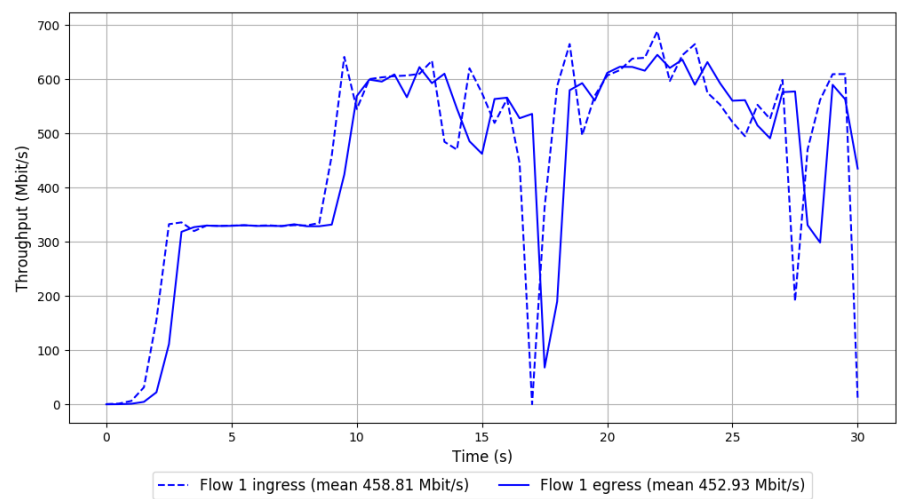(mean of all runs by scheme)

test from GCE London to GCE Tokyo, 5 runs of 30s each per scheme

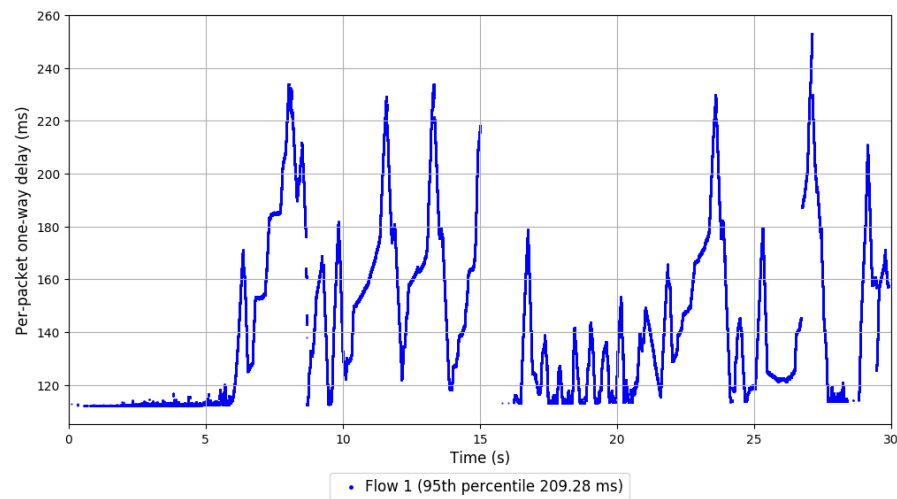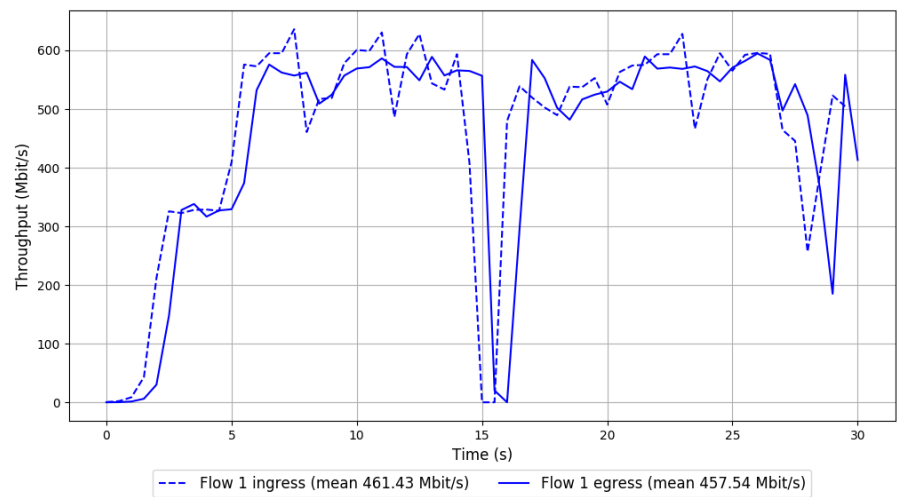| scheme	# runs	mean avg tput (Mbit/s) flow 1	mean 95th-%ile delay (ms) flow 1	mean loss rate (%) flow 1
TCP BBR	5	450.21	221.30	2.39
Copa	5	285.96	150.38	0.82
TCP Cubic	5	379.44	143.32	1.03
FillP	5	657.10	170.41	1.46
FillP-Sheep	5	730.30	142.71	1.20
Indigo	5	169.89	111.98	0.78
Indigo-MusesC3	5	599.91	158.31	0.91
Indigo-MusesC5	5	582.53	192.16	1.56
Indigo-MusesD	5	551.92	179.66	0.96
Indigo-MusesT	4	615.42	195.41	1.38
LEDBAT	5	7.76	111.94	1.46
Muses_DecisionTree	5	437.83	138.23	0.82
Muses_DecisionTreeH0	5	279.26	212.88	11.03
Muses_DecisionTreeR0	5	562.65	146.71	0.88
PCC-Allegro	5	338.96	167.03	1.66
PCC-Expr	5	258.78	174.81	1.46
QUIC Cubic	4	71.90	107.34	1.08
SCReAM	5	0.22	110.25	0.69
Sprout	5	0.95	108.81	0.82
TaoVA-100x	5	203.85	108.15	0.69
TCP Vegas	5	342.98	116.85	0.74
Verus	5	53.58	161.37	0.62
PCC-Vivace	5	312.09	118.45	0.85
WebRTC media	3	0.05	110.45	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-11-23 22:43:05
End at: 2019-11-23 22:43:35
Local clock offset: 26.075 ms
Remote clock offset: 61.251 ms


# Below is generated by plot.py at 2019-11-24 01:28:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 452.93 Mbit/s
95th percentile per-packet one-way delay: 190.829 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 452.93 Mbit/s
95th percentile per-packet one-way delay: 190.829 ms
Loss rate: 2.02%
```
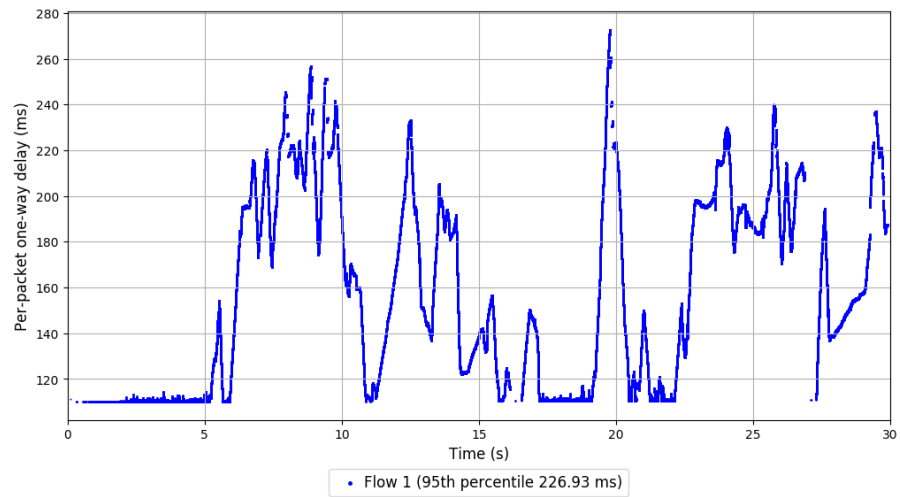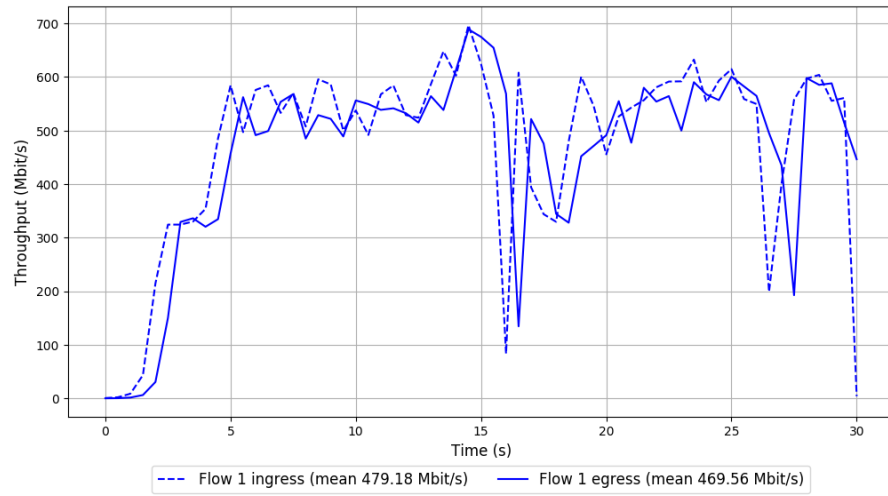
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 458.81 Mbit/s)   Flow 1 egress (mean 452.93 Mbit/s)

Flow 1 (95th percentile 190.83 ms)

```
Run 2: Statistics of TCP BBR

Start at: 2019-11-23 23:18:43
End at: 2019-11-23 23:19:13
Local clock offset: 36.111 ms
Remote clock offset: 27.722 ms


# Below is generated by plot.py at 2019-11-24 01:28:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 457.54 Mbit/s
95th percentile per-packet one-way delay: 209.279 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 457.54 Mbit/s
95th percentile per-packet one-way delay: 209.279 ms
Loss rate: 1.56%
```
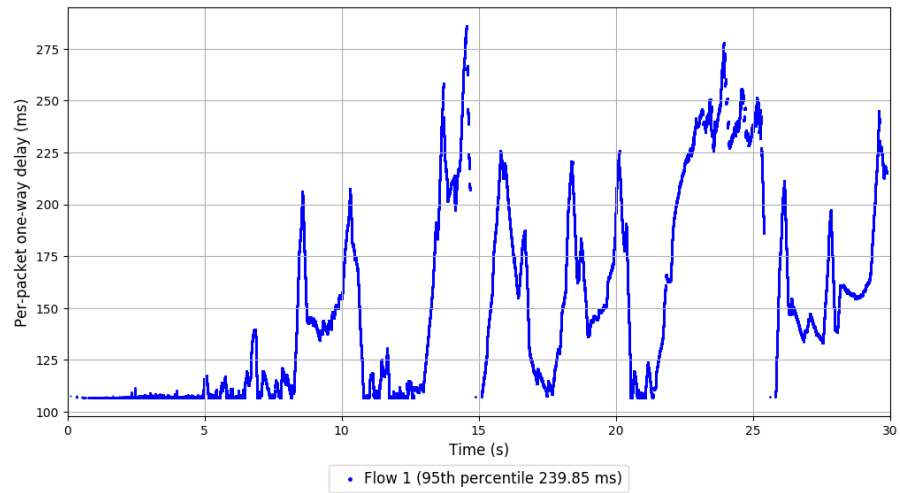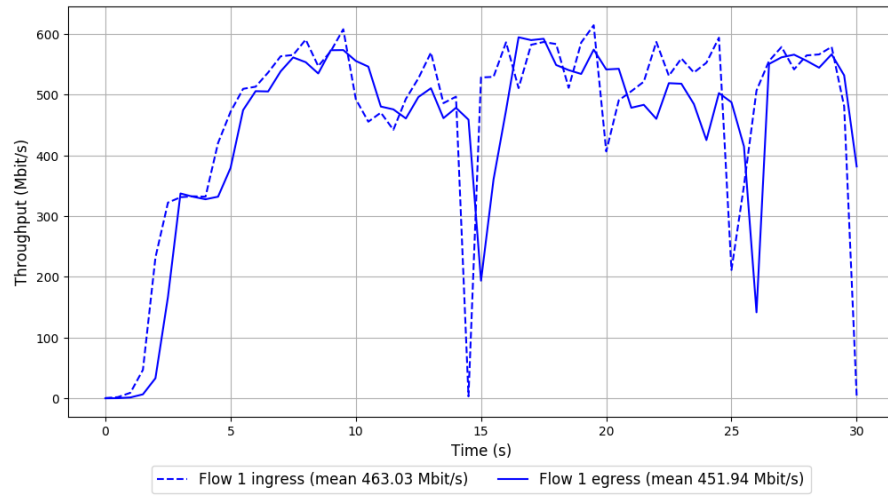
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-11-23 23:54:20
End at: 2019-11-23 23:54:50
Local clock offset: 15.366 ms
Remote clock offset: 17.246 ms


# Below is generated by plot.py at 2019-11-24 01:29:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 469.56 Mbit/s
95th percentile per-packet one-way delay: 226.933 ms
Loss rate: 2.73%
-- Flow 1:
Average throughput: 469.56 Mbit/s
95th percentile per-packet one-way delay: 226.933 ms
Loss rate: 2.73%
```
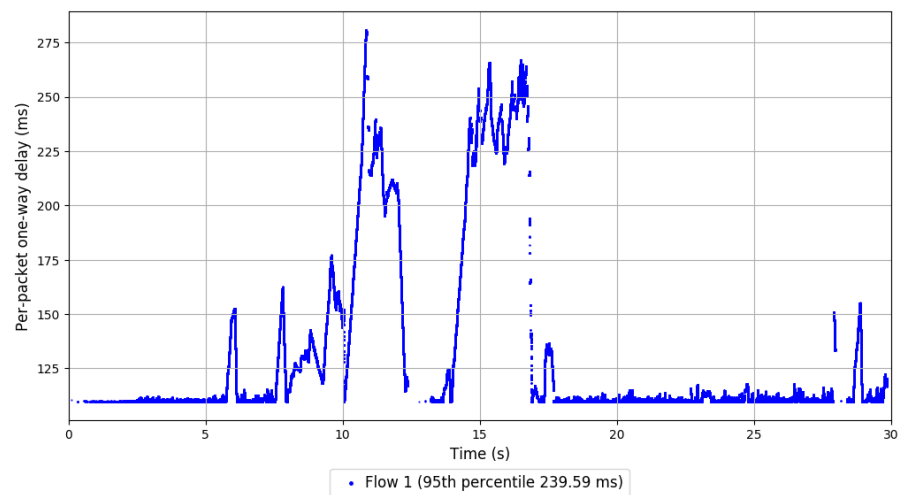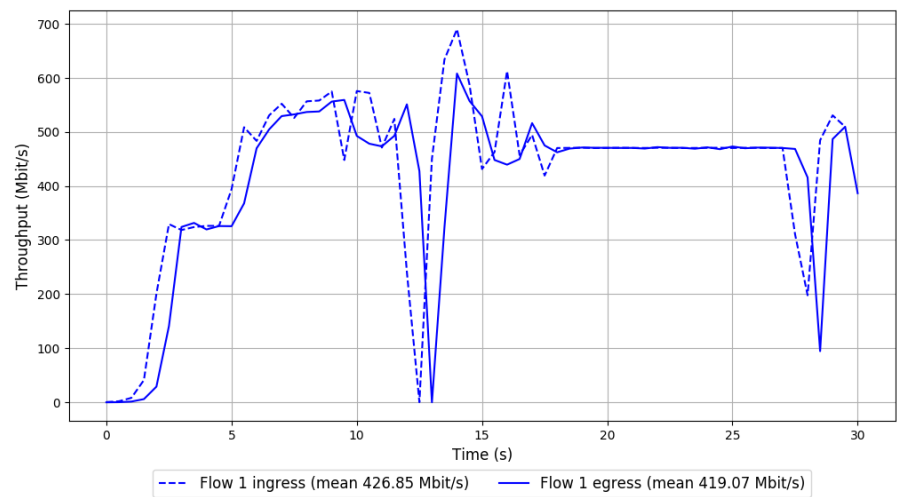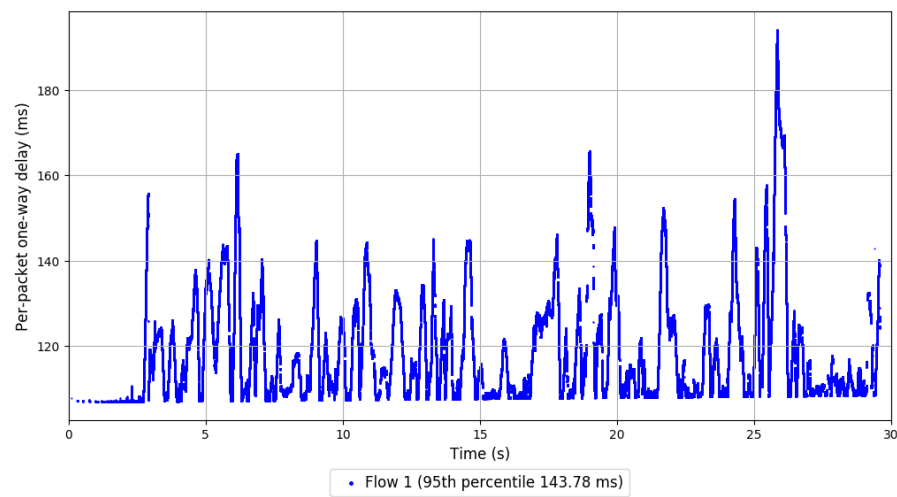
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 479.18 Mbit/s)   Flow 1 egress (mean 469.56 Mbit/s)

Flow 1 (95th percentile 226.93 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-11-24 00:30:16
End at: 2019-11-24 00:30:46
Local clock offset: 5.812 ms
Remote clock offset: 4.955 ms


# Below is generated by plot.py at 2019-11-24 01:29:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 451.94 Mbit/s
95th percentile per-packet one-way delay: 239.851 ms
Loss rate: 3.10%
-- Flow 1:
Average throughput: 451.94 Mbit/s
95th percentile per-packet one-way delay: 239.851 ms
Loss rate: 3.10%
```
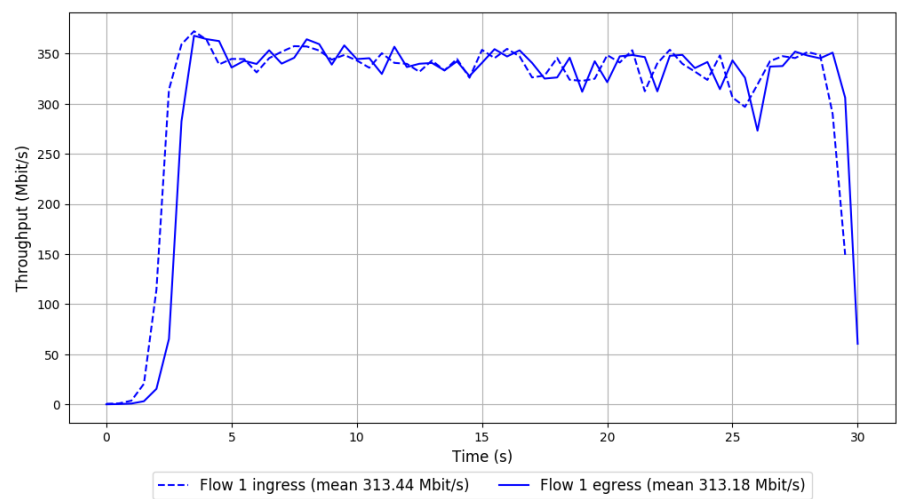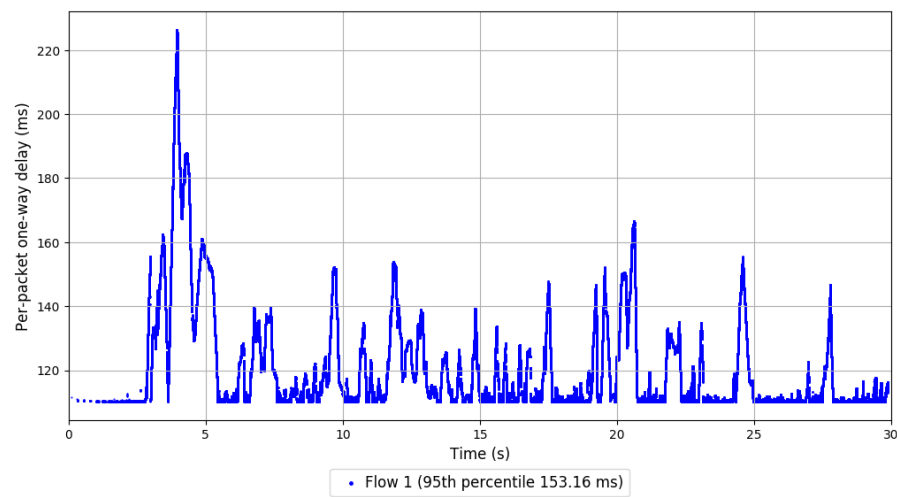
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 463.03 Mbit/s) —— Flow 1 egress (mean 451.94 Mbit/s)

• Flow 1 (95th percentile 239.85 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2019-11-24 01:06:05
End at: 2019-11-24 01:06:35
Local clock offset: 1.193 ms
Remote clock offset: 1.825 ms


# Below is generated by plot.py at 2019-11-24 01:29:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 419.07 Mbit/s
95th percentile per-packet one-way delay: 239.588 ms
Loss rate: 2.55%
-- Flow 1:
Average throughput: 419.07 Mbit/s
95th percentile per-packet one-way delay: 239.588 ms
Loss rate: 2.55%
```

Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 426.85 Mbit/s)   Flow 1 egress (mean 419.07 Mbit/s)

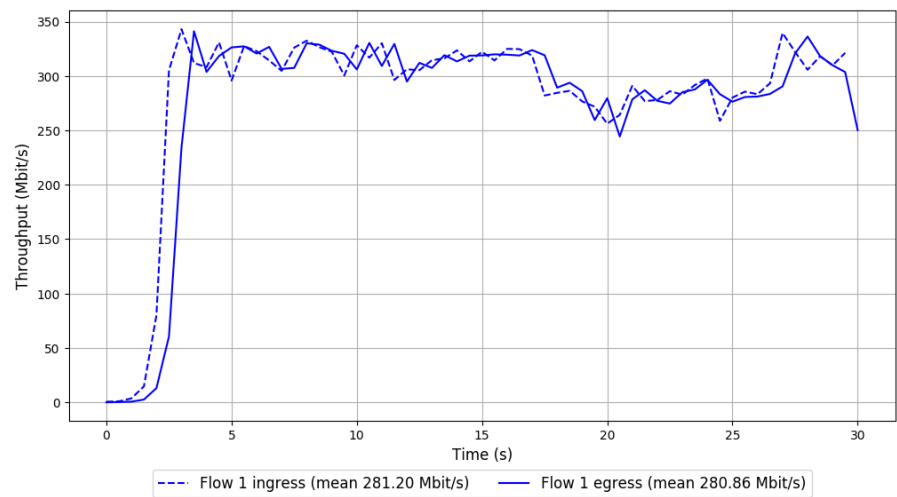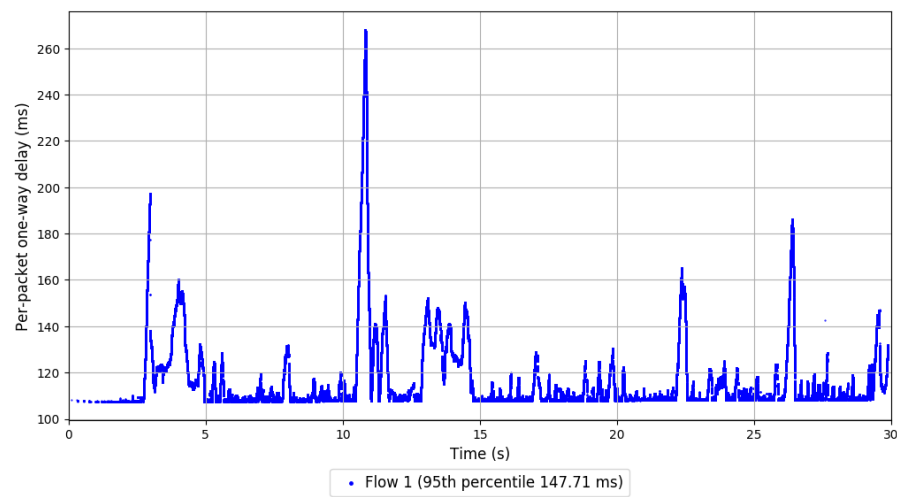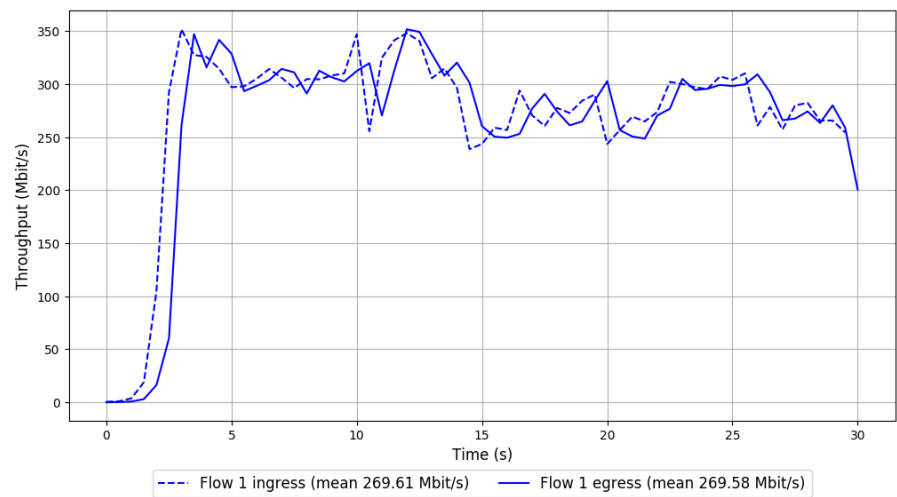Flow 1 (95th percentile 239.59 ms)

```
Run 1: Statistics of Copa

Start at: 2019-11-23 22:16:23
End at: 2019-11-23 22:16:53
Local clock offset: 8.261 ms
Remote clock offset: 20.575 ms


# Below is generated by plot.py at 2019-11-24 01:30:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 313.18 Mbit/s
95th percentile per-packet one-way delay: 143.784 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 313.18 Mbit/s
95th percentile per-packet one-way delay: 143.784 ms
Loss rate: 0.80%
```
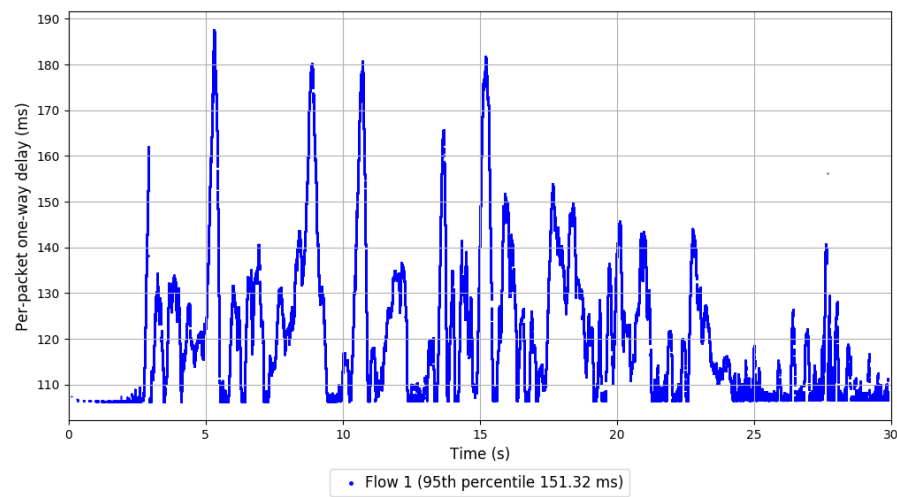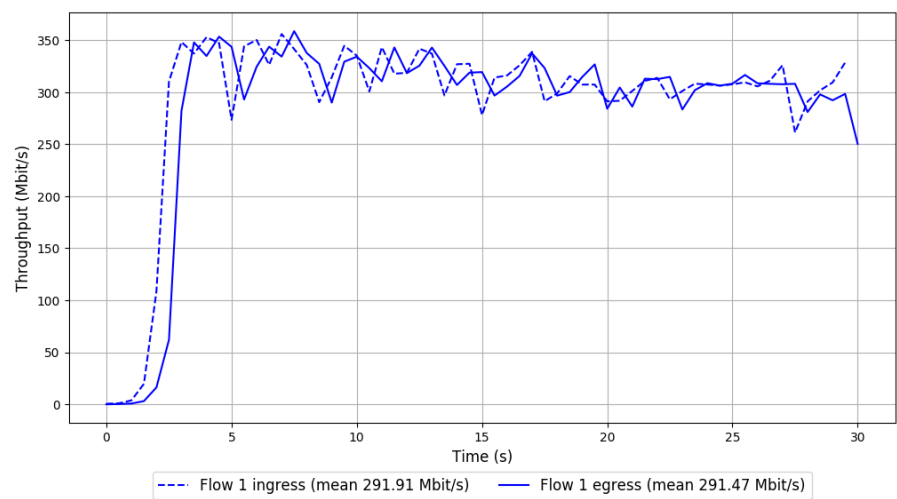
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 313.44 Mbit/s)   Flow 1 egress (mean 313.18 Mbit/s)

Flow 1 (95th percentile 143.78 ms)

```
Run 2: Statistics of Copa

Start at: 2019-11-23 22:51:55
End at: 2019-11-23 22:52:25
Local clock offset: 19.645 ms
Remote clock offset: 23.109 ms


# Below is generated by plot.py at 2019-11-24 01:30:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 280.86 Mbit/s
95th percentile per-packet one-way delay: 153.160 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 280.86 Mbit/s
95th percentile per-packet one-way delay: 153.160 ms
Loss rate: 0.86%
```

Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2019-11-23 23:27:25
End at: 2019-11-23 23:27:55
Local clock offset: 18.267 ms
Remote clock offset: 36.652 ms


# Below is generated by plot.py at 2019-11-24 01:30:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 269.58 Mbit/s
95th percentile per-packet one-way delay: 147.713 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 269.58 Mbit/s
95th percentile per-packet one-way delay: 147.713 ms
Loss rate: 0.73%
```
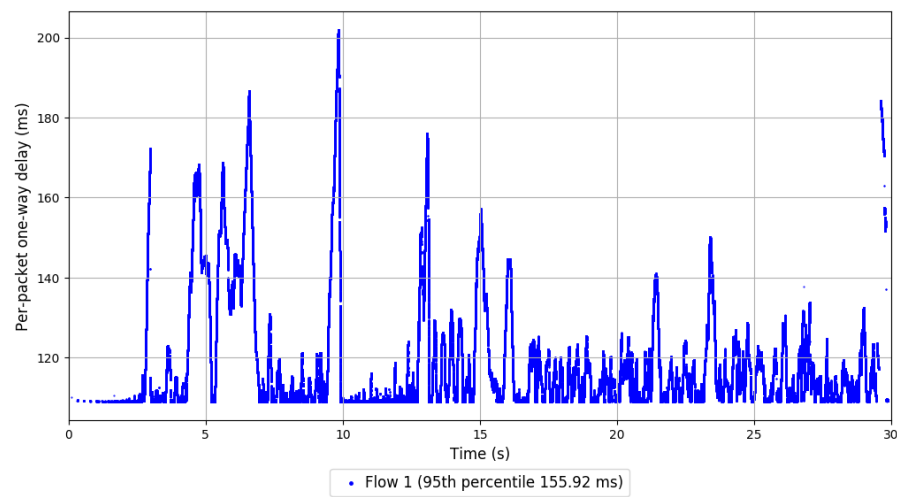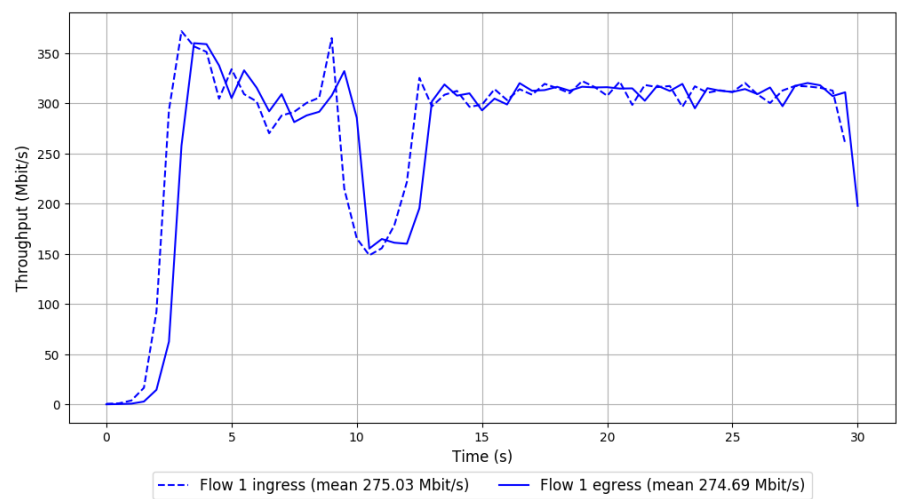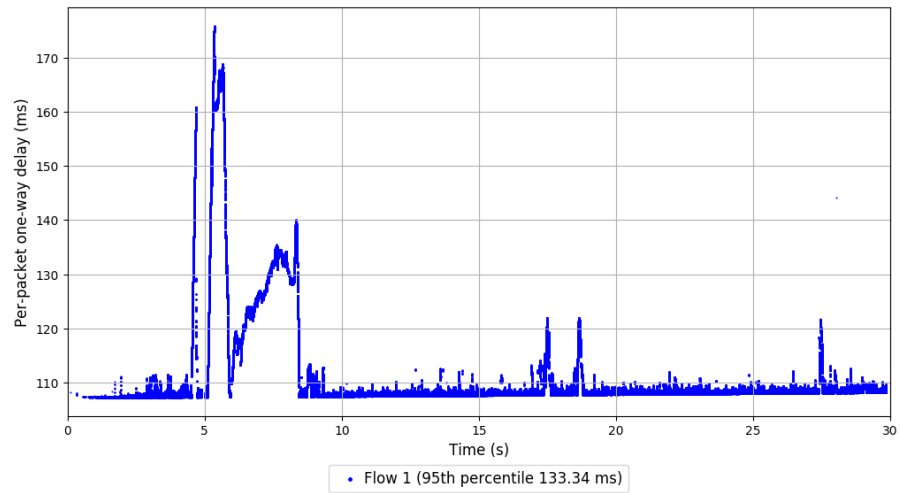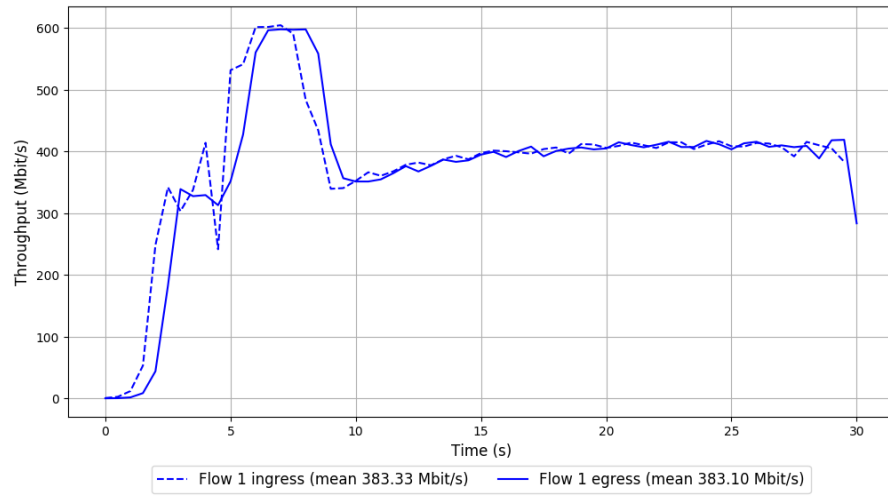
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-11-24 00:03:26
End at: 2019-11-24 00:03:56
Local clock offset: 8.28 ms
Remote clock offset: 20.245 ms


# Below is generated by plot.py at 2019-11-24 01:38:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 291.47 Mbit/s
95th percentile per-packet one-way delay: 151.320 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 291.47 Mbit/s
95th percentile per-packet one-way delay: 151.320 ms
Loss rate: 0.87%
```
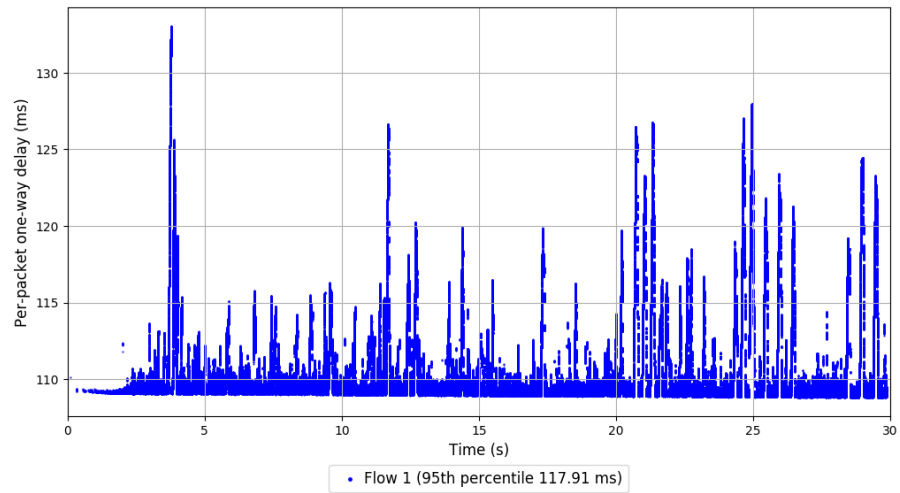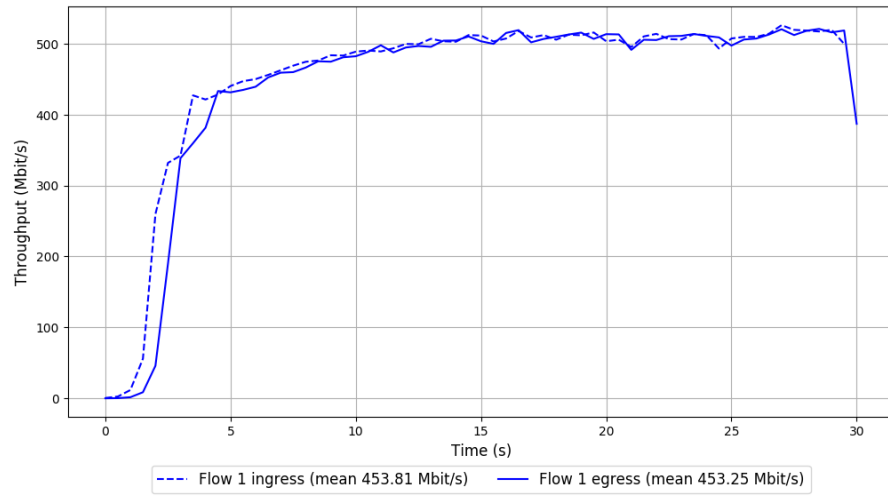
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 291.91 Mbit/s)   Flow 1 egress (mean 291.47 Mbit/s)

Flow 1 (95th percentile 151.32 ms)

```
Run 5: Statistics of Copa

Start at: 2019-11-24 00:39:13
End at: 2019-11-24 00:39:43
Local clock offset: 2.762 ms
Remote clock offset: 5.008 ms


# Below is generated by plot.py at 2019-11-24 01:38:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 274.69 Mbit/s
95th percentile per-packet one-way delay: 155.918 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 274.69 Mbit/s
95th percentile per-packet one-way delay: 155.918 ms
Loss rate: 0.85%
```
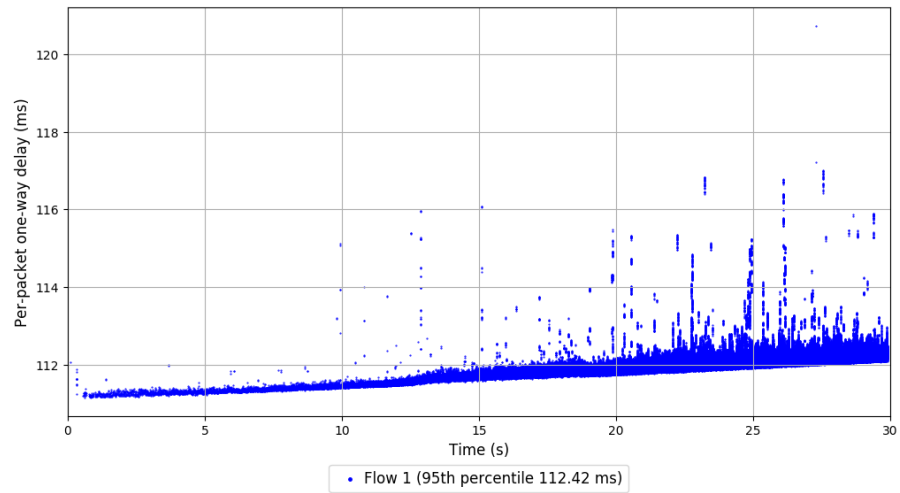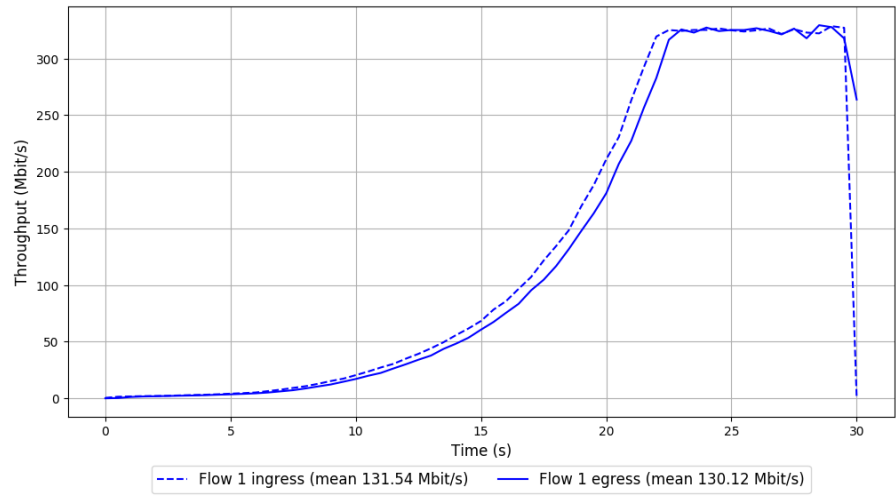
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 275.03 Mbit/s)   Flow 1 egress (mean 274.69 Mbit/s)

Flow 1 (95th percentile 155.92 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-11-23 22:14:52
End at: 2019-11-23 22:15:22
Local clock offset: 5.898 ms
Remote clock offset: 14.007 ms


# Below is generated by plot.py at 2019-11-24 01:38:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 383.10 Mbit/s
95th percentile per-packet one-way delay: 133.336 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 383.10 Mbit/s
95th percentile per-packet one-way delay: 133.336 ms
Loss rate: 0.78%
```
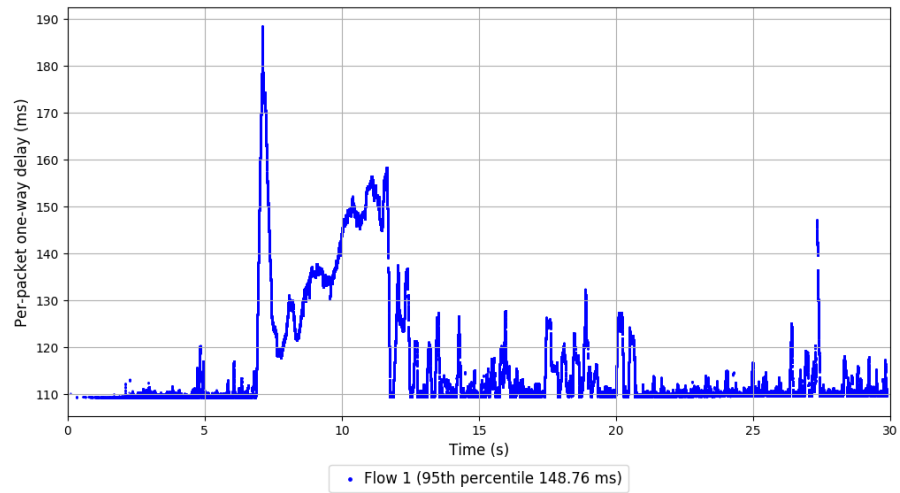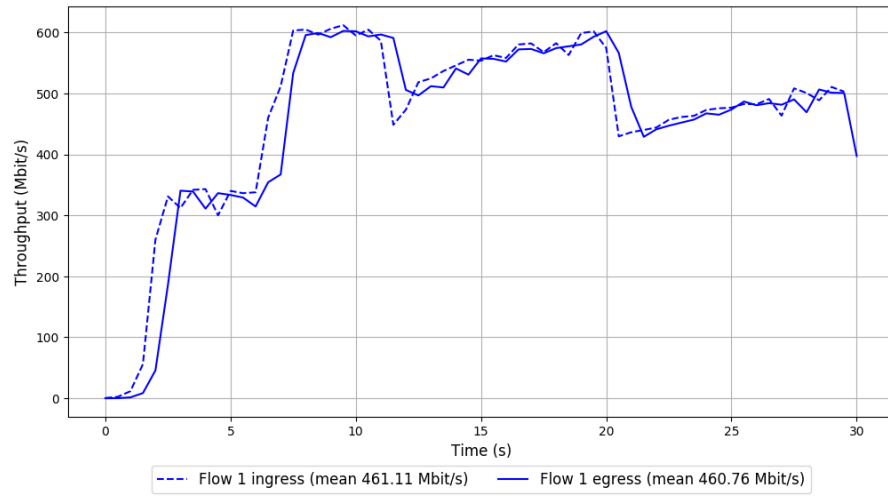
Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 383.33 Mbit/s)   Flow 1 egress (mean 383.10 Mbit/s)

Flow 1 (95th percentile 133.34 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2019-11-23 22:50:22
End at: 2019-11-23 22:50:52
Local clock offset: 20.153 ms
Remote clock offset: 24.494 ms


# Below is generated by plot.py at 2019-11-24 01:38:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 453.25 Mbit/s
95th percentile per-packet one-way delay: 117.911 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 453.25 Mbit/s
95th percentile per-packet one-way delay: 117.911 ms
Loss rate: 0.85%
```

Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-11-23 23:26:08
End at: 2019-11-23 23:26:38
Local clock offset: 19.6 ms
Remote clock offset: 35.058 ms


# Below is generated by plot.py at 2019-11-24 01:38:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 130.12 Mbit/s
95th percentile per-packet one-way delay: 112.415 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 130.12 Mbit/s
95th percentile per-packet one-way delay: 112.415 ms
Loss rate: 1.80%
```
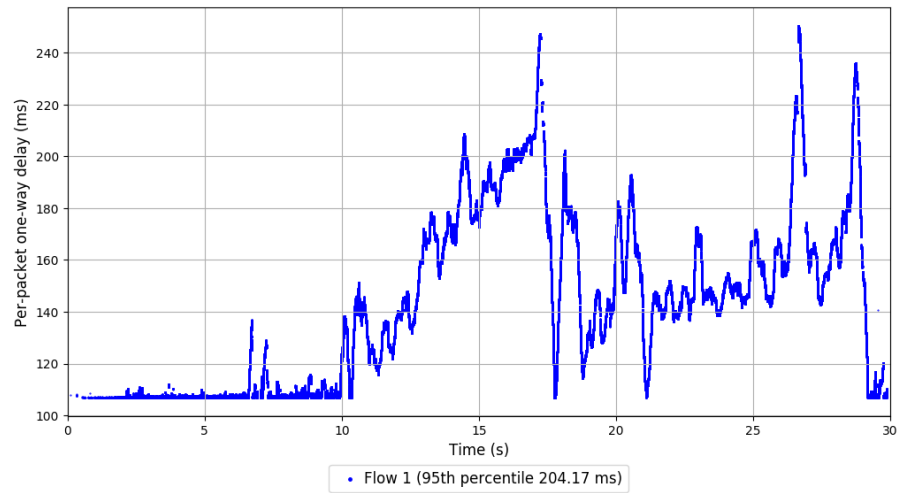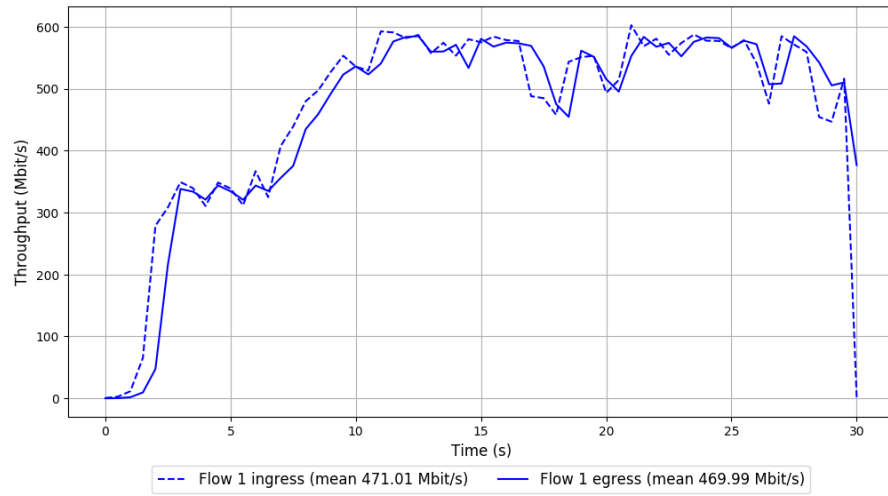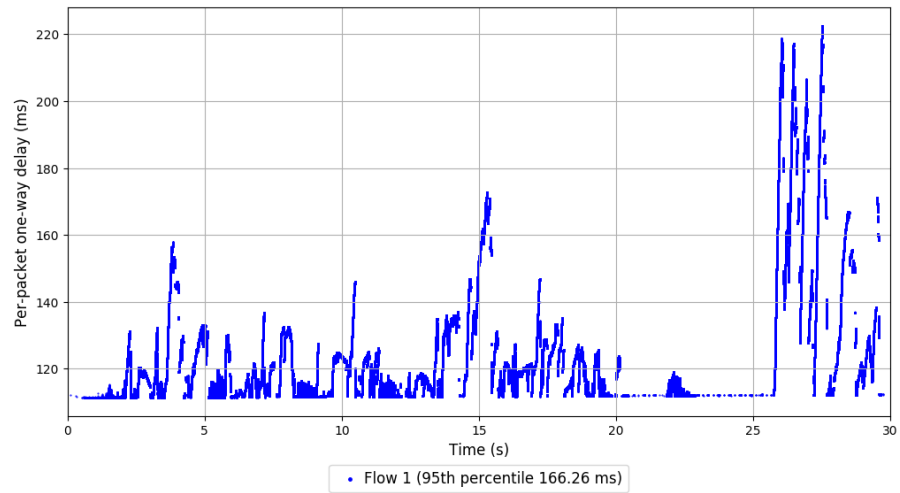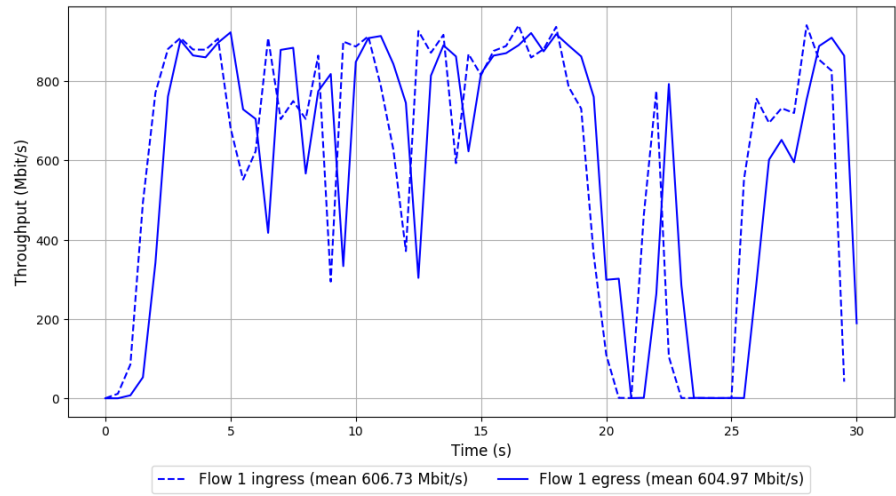
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 131.54 Mbit/s)   Flow 1 egress (mean 130.12 Mbit/s)

Flow 1 (95th percentile 112.42 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-11-24 00:01:51
End at: 2019-11-24 00:02:21
Local clock offset: 8.937 ms
Remote clock offset: 19.572 ms


# Below is generated by plot.py at 2019-11-24 01:38:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 460.76 Mbit/s
95th percentile per-packet one-way delay: 148.759 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 460.76 Mbit/s
95th percentile per-packet one-way delay: 148.759 ms
Loss rate: 0.80%
```

Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 461.11 Mbit/s) ----   Flow 1 egress (mean 460.76 Mbit/s) ——

Flow 1 (95th percentile 148.76 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-11-24 00:37:38
End at: 2019-11-24 00:38:08
Local clock offset: 3.108 ms
Remote clock offset: 4.986 ms


# Below is generated by plot.py at 2019-11-24 01:38:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 469.99 Mbit/s
95th percentile per-packet one-way delay: 204.170 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 469.99 Mbit/s
95th percentile per-packet one-way delay: 204.170 ms
Loss rate: 0.93%
```
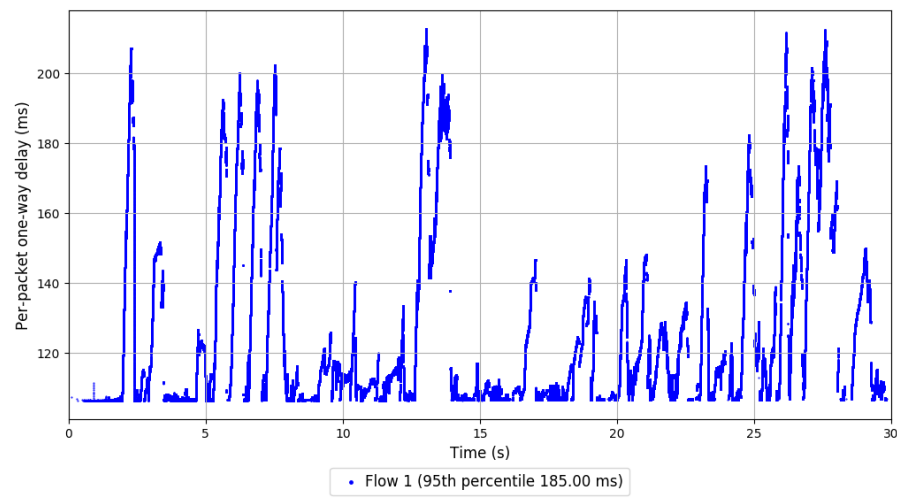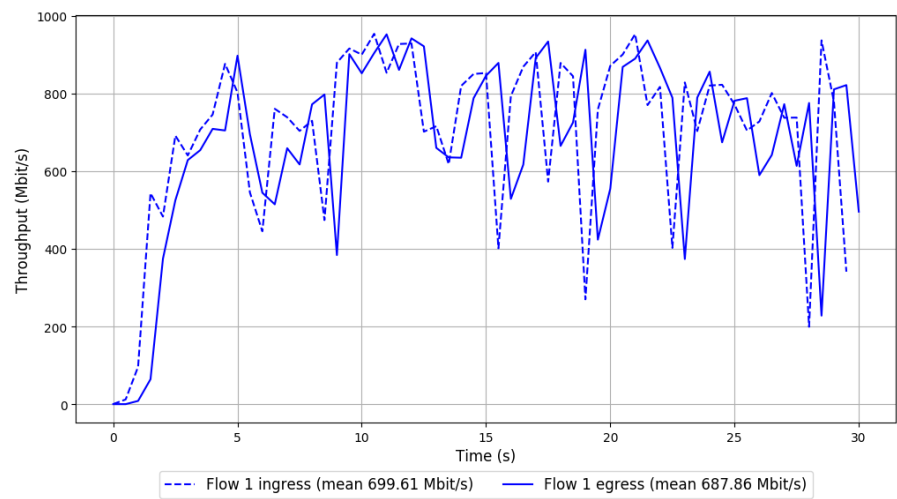
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 471.01 Mbit/s)   Flow 1 egress (mean 469.99 Mbit/s)
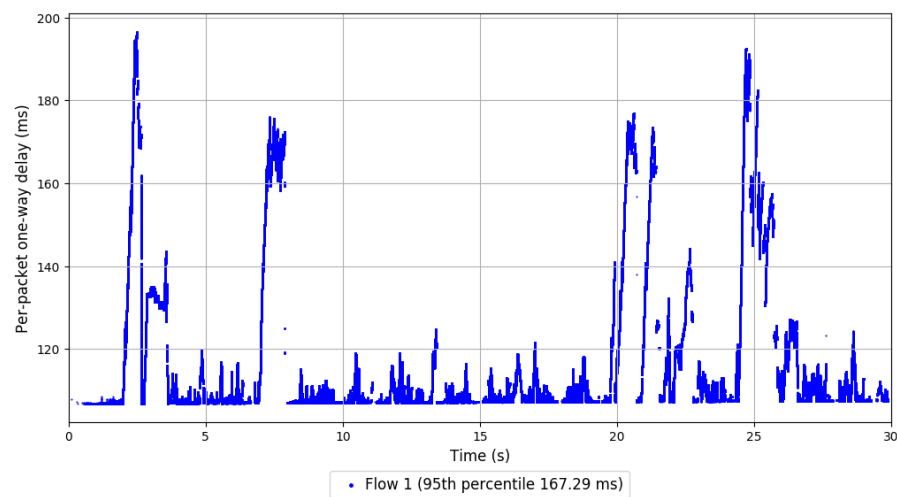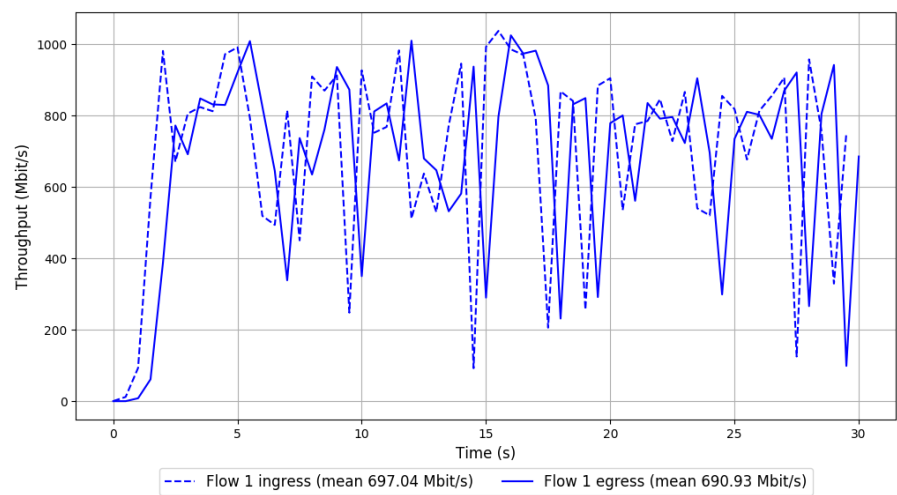

Flow 1 (95th percentile 204.17 ms)

```
Run 1: Statistics of FillP

Start at: 2019-11-23 22:21:08
End at: 2019-11-23 22:21:38
Local clock offset: 9.299 ms
Remote clock offset: 22.073 ms


# Below is generated by plot.py at 2019-11-24 01:44:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 604.97 Mbit/s
95th percentile per-packet one-way delay: 166.263 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 604.97 Mbit/s
95th percentile per-packet one-way delay: 166.263 ms
Loss rate: 1.03%
```
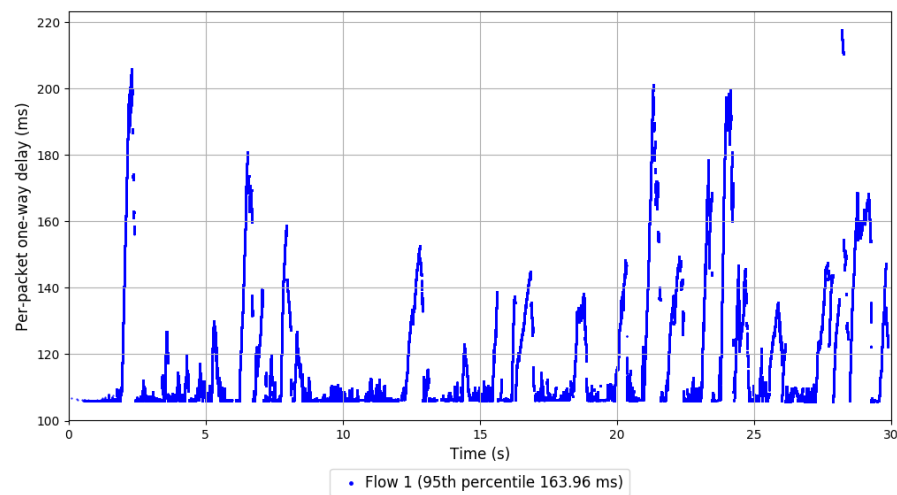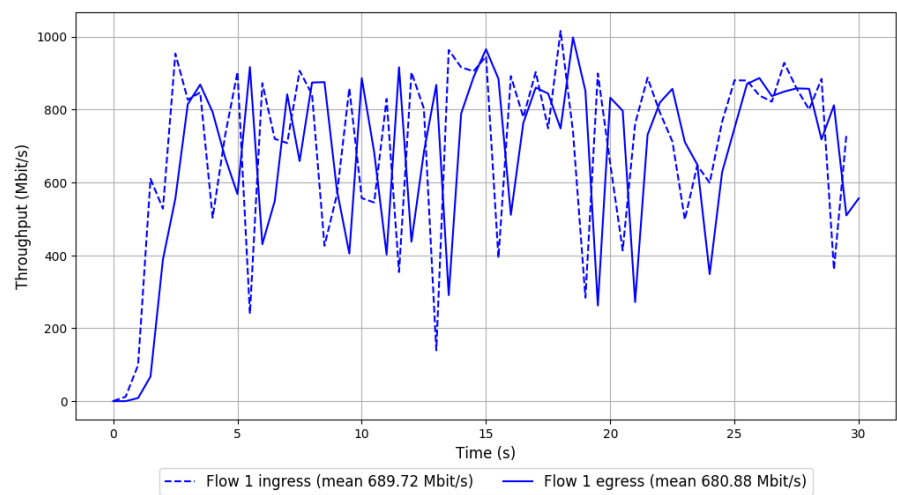
Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2019-11-23 22:56:36
End at: 2019-11-23 22:57:06
Local clock offset: 20.694 ms
Remote clock offset: 26.46 ms


# Below is generated by plot.py at 2019-11-24 01:46:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 687.86 Mbit/s
95th percentile per-packet one-way delay: 185.002 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 687.86 Mbit/s
95th percentile per-packet one-way delay: 185.002 ms
Loss rate: 2.14%
```

Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-11-23 23:32:12
End at: 2019-11-23 23:32:42
Local clock offset: 15.163 ms
Remote clock offset: 42.314 ms


# Below is generated by plot.py at 2019-11-24 01:53:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 690.93 Mbit/s
95th percentile per-packet one-way delay: 167.286 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 690.93 Mbit/s
95th percentile per-packet one-way delay: 167.286 ms
Loss rate: 1.59%
```
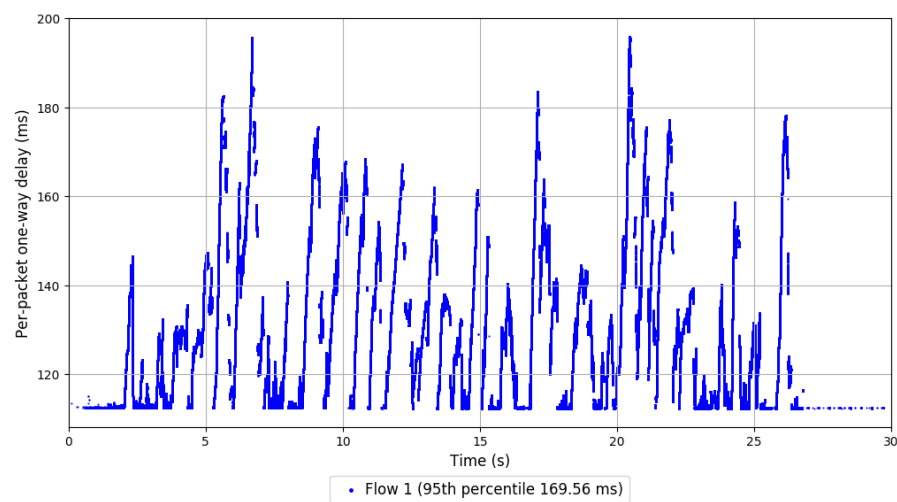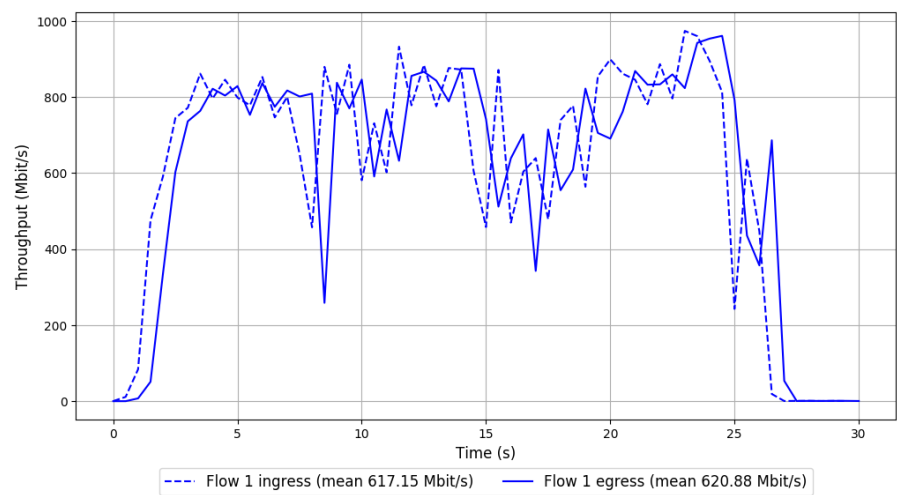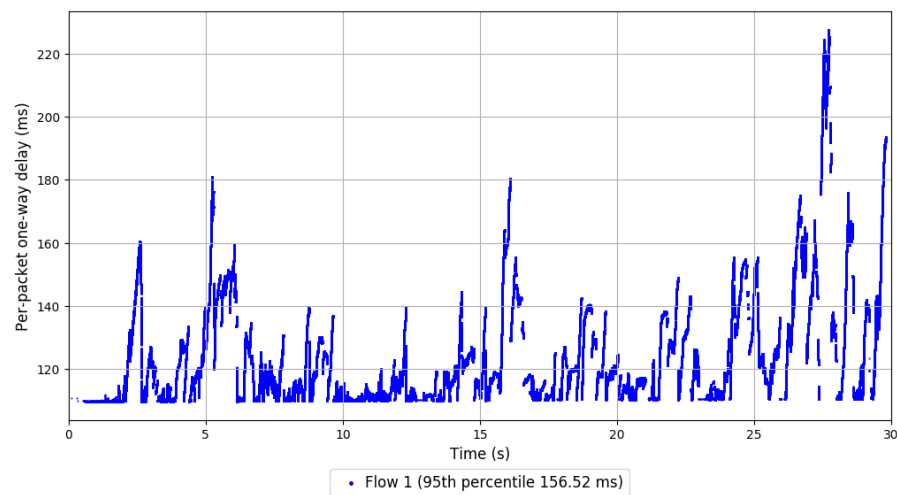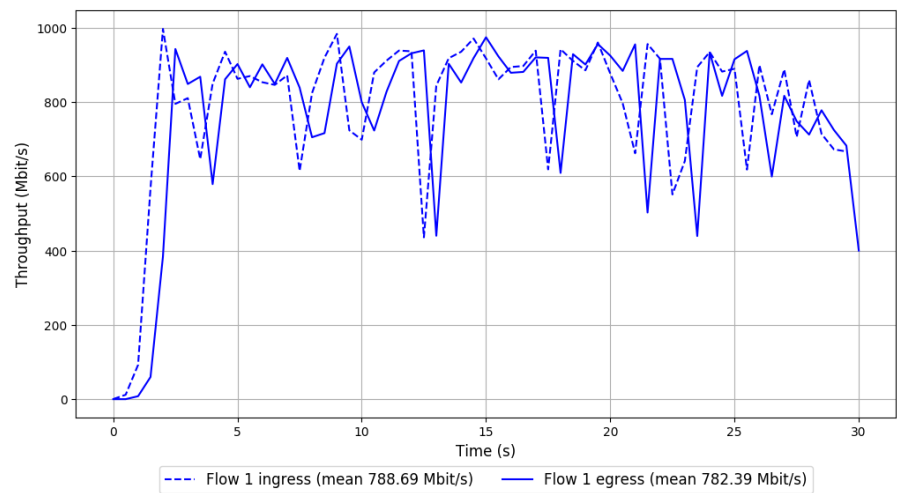
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 697.04 Mbit/s) ----   Flow 1 egress (mean 690.93 Mbit/s) ——

Flow 1 (95th percentile 167.29 ms)

```
Run 4: Statistics of FillP

Start at: 2019-11-24 00:08:07
End at: 2019-11-24 00:08:37
Local clock offset: 7.278 ms
Remote clock offset: 22.695 ms


# Below is generated by plot.py at 2019-11-24 01:53:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 680.88 Mbit/s
95th percentile per-packet one-way delay: 163.957 ms
Loss rate: 2.00%
-- Flow 1:
Average throughput: 680.88 Mbit/s
95th percentile per-packet one-way delay: 163.957 ms
Loss rate: 2.00%
```
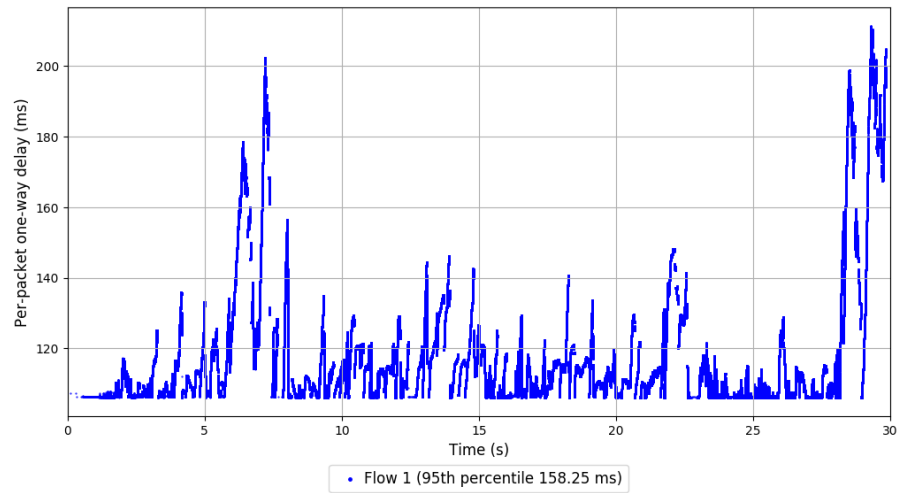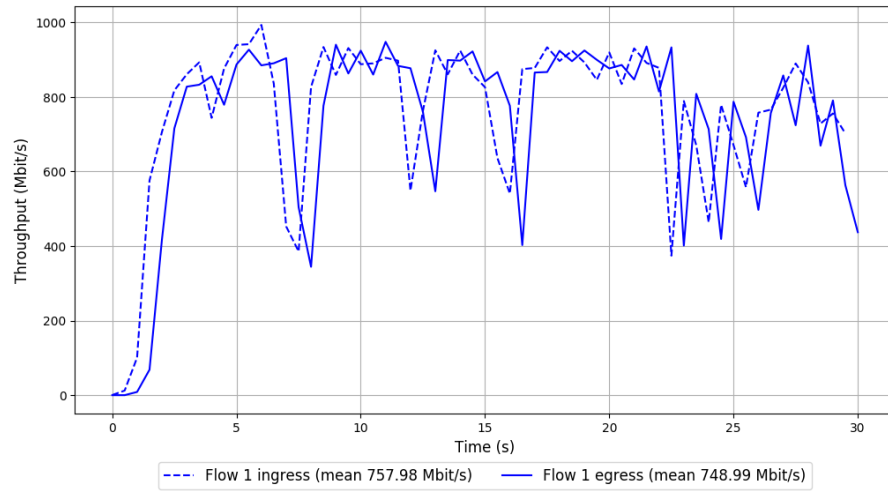
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2019-11-24 00:43:51
End at: 2019-11-24 00:44:21
Local clock offset: 2.314 ms
Remote clock offset: 4.481 ms


# Below is generated by plot.py at 2019-11-24 01:53:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 620.88 Mbit/s
95th percentile per-packet one-way delay: 169.561 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 620.88 Mbit/s
95th percentile per-packet one-way delay: 169.561 ms
Loss rate: 0.53%
```

Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 617.15 Mbit/s) --- Flow 1 egress (mean 620.88 Mbit/s)
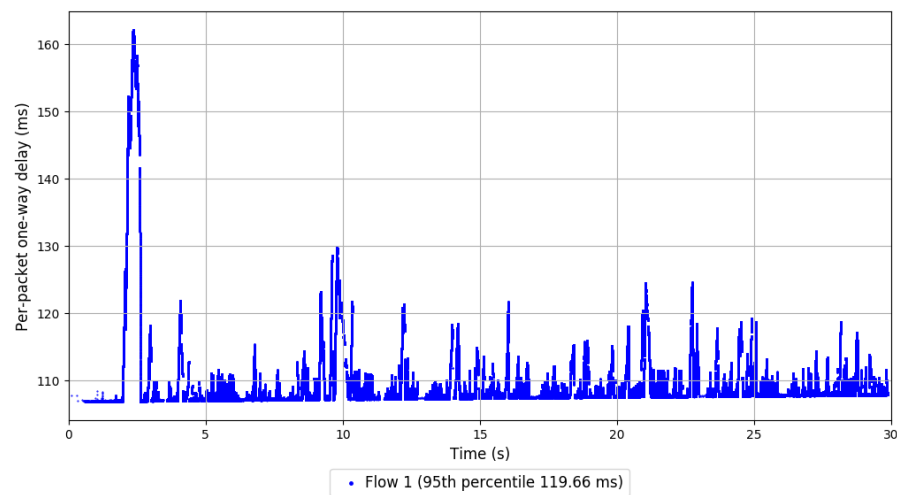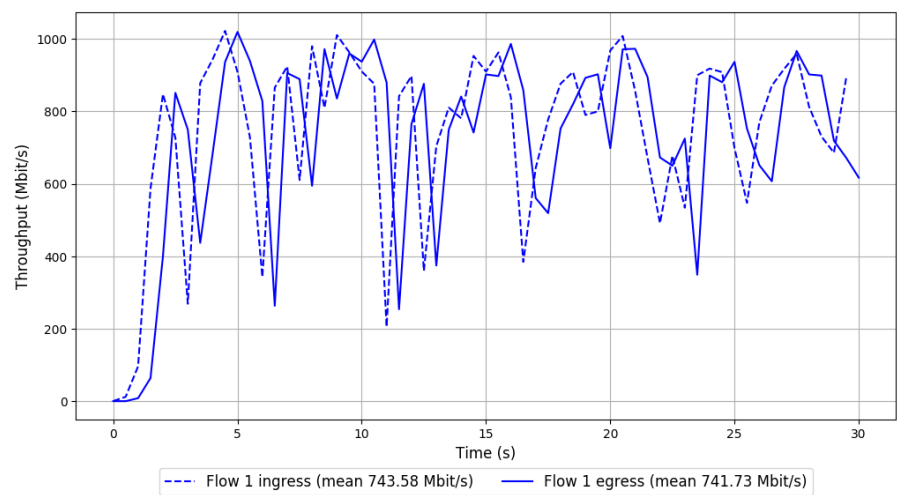

• Flow 1 (95th percentile 169.56 ms)

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-11-23 22:40:12
End at: 2019-11-23 22:40:42
Local clock offset: 21.921 ms
Remote clock offset: 51.952 ms


# Below is generated by plot.py at 2019-11-24 01:57:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 782.39 Mbit/s
95th percentile per-packet one-way delay: 156.524 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 782.39 Mbit/s
95th percentile per-packet one-way delay: 156.524 ms
Loss rate: 1.53%
```

Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-11-23 23:15:51
End at: 2019-11-23 23:16:21
Local clock offset: 37.727 ms
Remote clock offset: 25.361 ms


# Below is generated by plot.py at 2019-11-24 01:57:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 748.99 Mbit/s
95th percentile per-packet one-way delay: 158.250 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 748.99 Mbit/s
95th percentile per-packet one-way delay: 158.250 ms
Loss rate: 1.90%
```
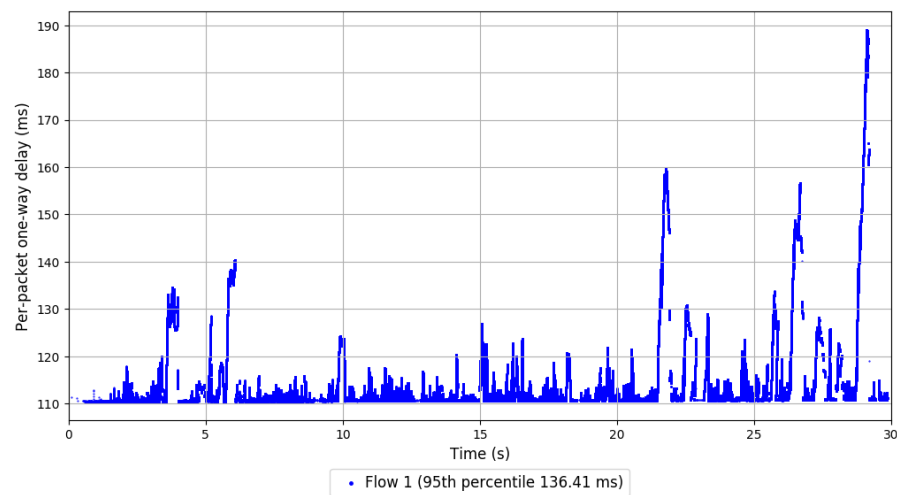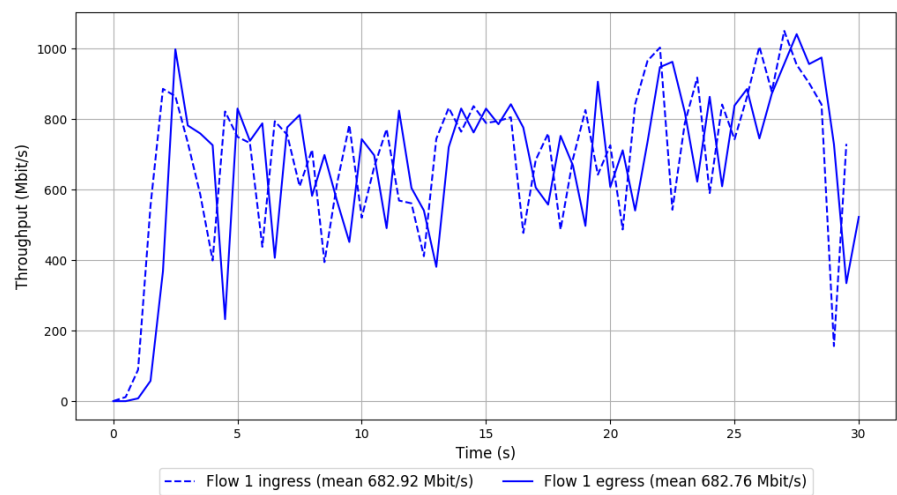
Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 757.98 Mbit/s)   Flow 1 egress (mean 748.99 Mbit/s)

• Flow 1 (95th percentile 158.25 ms)

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-11-23 23:51:28
End at: 2019-11-23 23:51:58
Local clock offset: 19.987 ms
Remote clock offset: 17.103 ms


# Below is generated by plot.py at 2019-11-24 01:57:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 741.73 Mbit/s
95th percentile per-packet one-way delay: 119.656 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 741.73 Mbit/s
95th percentile per-packet one-way delay: 119.656 ms
Loss rate: 0.97%
```
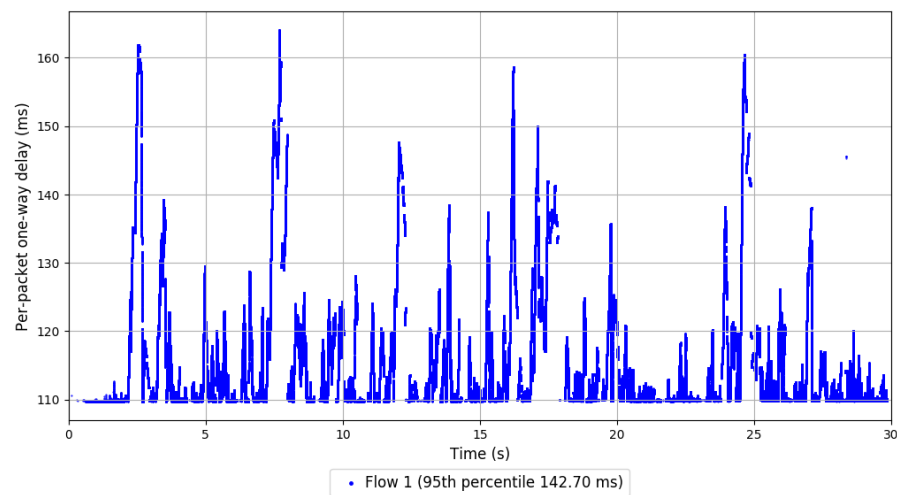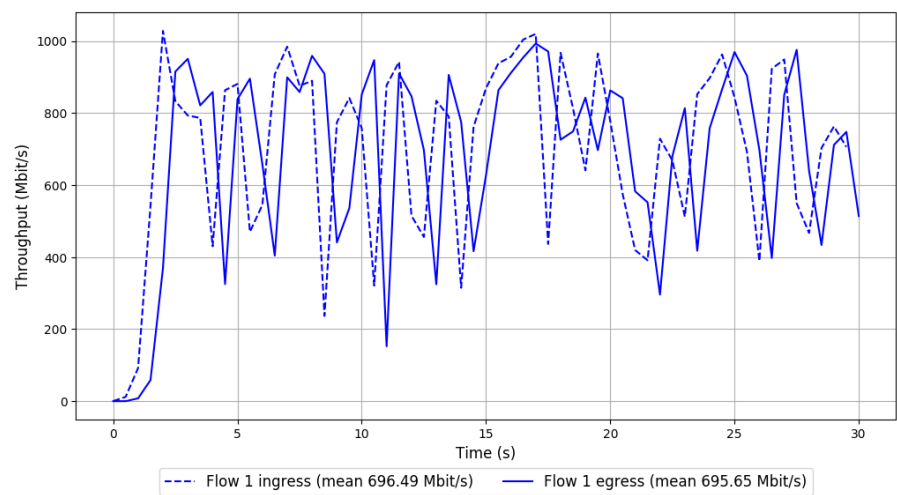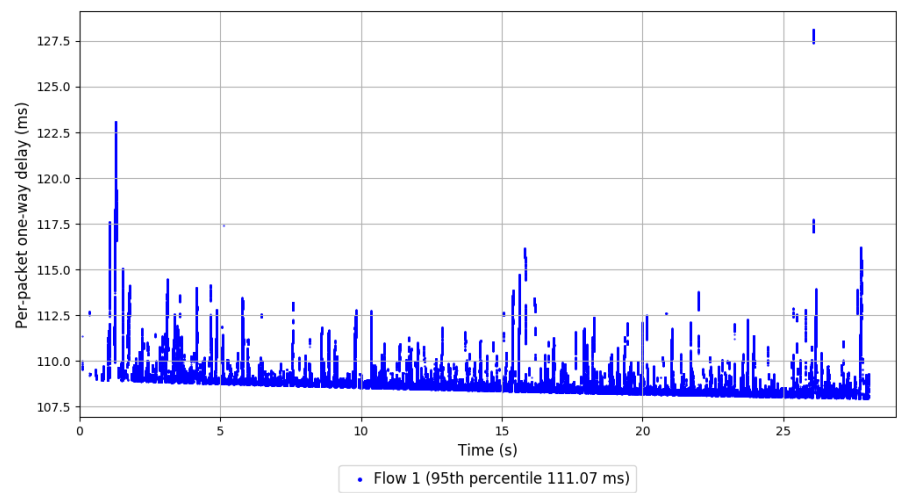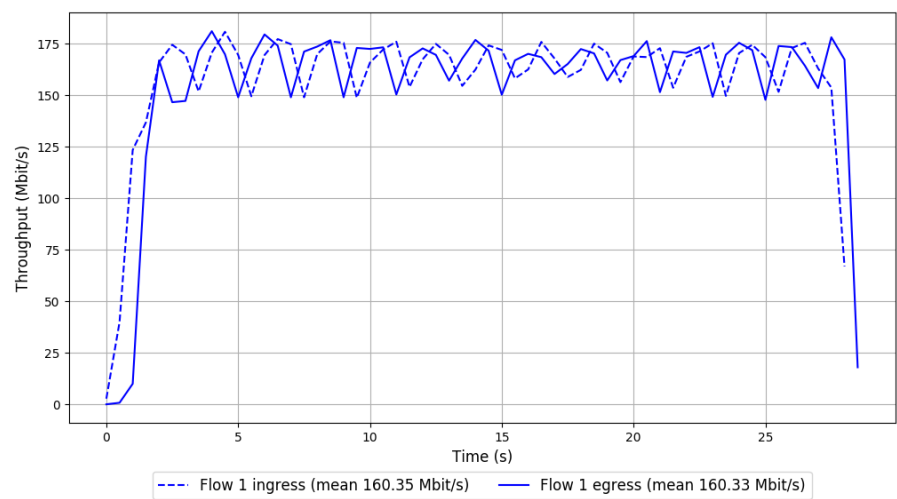
Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 743.58 Mbit/s)   Flow 1 egress (mean 741.73 Mbit/s)

• Flow 1 (95th percentile 119.66 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-11-24 00:27:27
End at: 2019-11-24 00:27:57
Local clock offset: 8.311 ms
Remote clock offset: 5.225 ms


# Below is generated by plot.py at 2019-11-24 02:01:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 682.76 Mbit/s
95th percentile per-packet one-way delay: 136.406 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 682.76 Mbit/s
95th percentile per-packet one-way delay: 136.406 ms
Loss rate: 0.76%
```
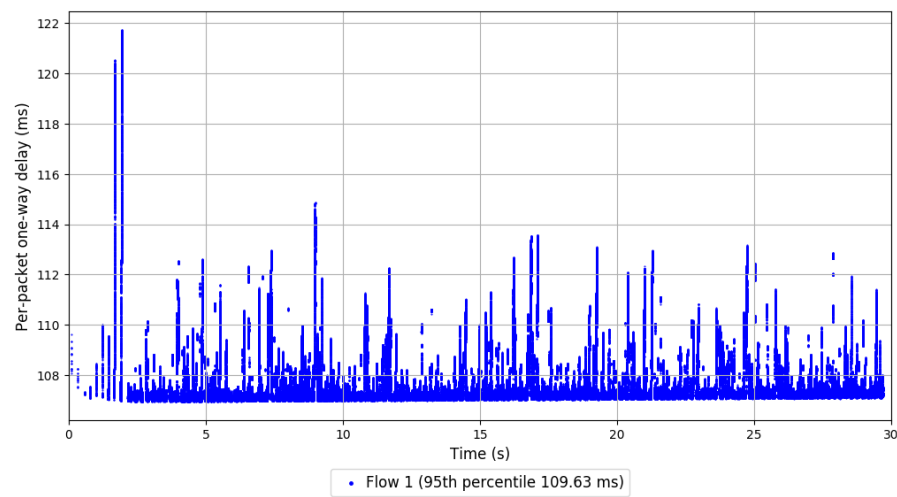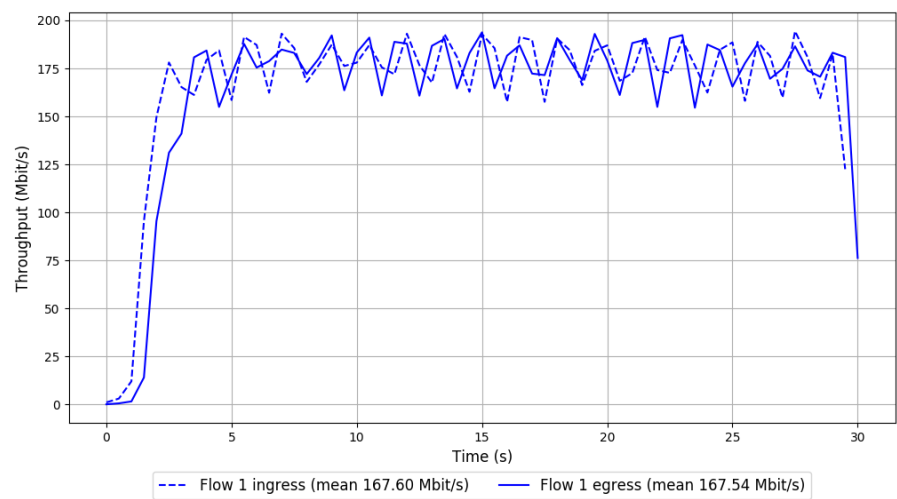
Run 4: Report of FillP-Sheep — Data Link

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-11-24 01:03:14
End at: 2019-11-24 01:03:44
Local clock offset: 1.571 ms
Remote clock offset: 1.763 ms


# Below is generated by plot.py at 2019-11-24 02:04:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 695.65 Mbit/s
95th percentile per-packet one-way delay: 142.701 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 695.65 Mbit/s
95th percentile per-packet one-way delay: 142.701 ms
Loss rate: 0.86%
```

Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 696.49 Mbit/s)   Flow 1 egress (mean 695.65 Mbit/s)
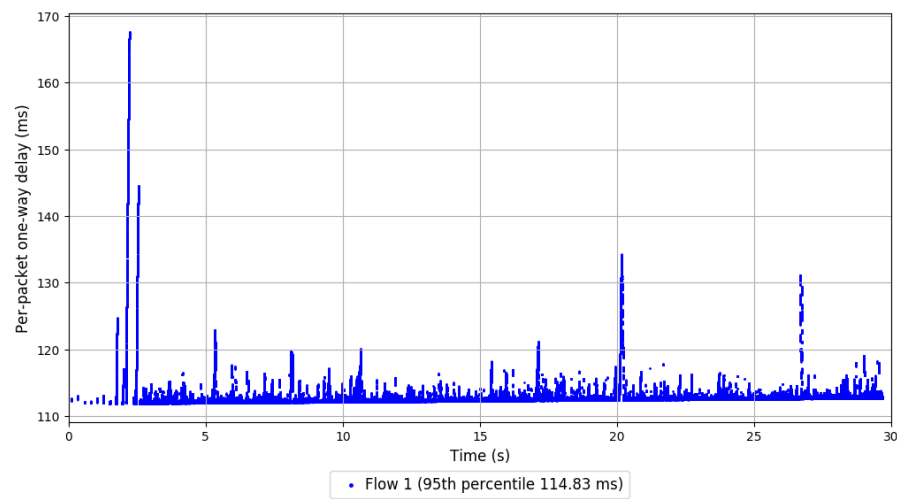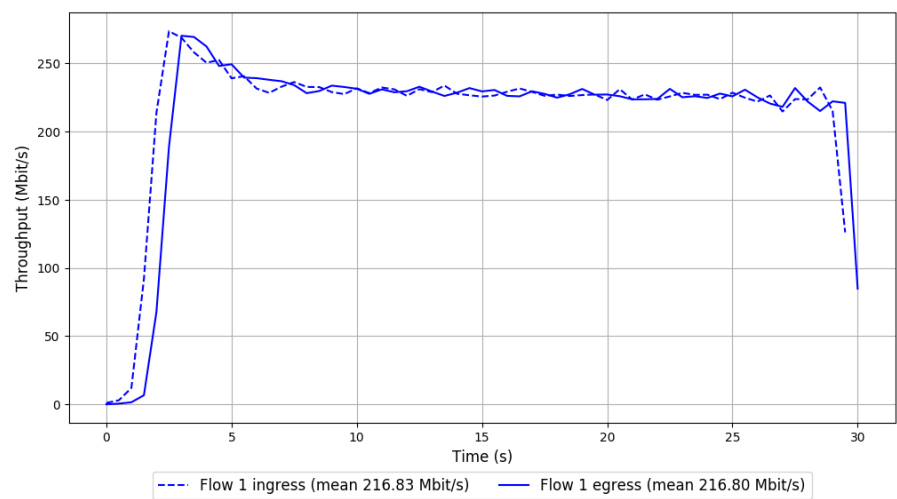

Flow 1 (95th percentile 142.70 ms)

```
Run 1: Statistics of Indigo

Start at: 2019-11-23 22:18:03
End at: 2019-11-23 22:18:33
Local clock offset: 11.693 ms
Remote clock offset: 25.228 ms


# Below is generated by plot.py at 2019-11-24 02:04:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 160.33 Mbit/s
95th percentile per-packet one-way delay: 111.074 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 160.33 Mbit/s
95th percentile per-packet one-way delay: 111.074 ms
Loss rate: 0.81%
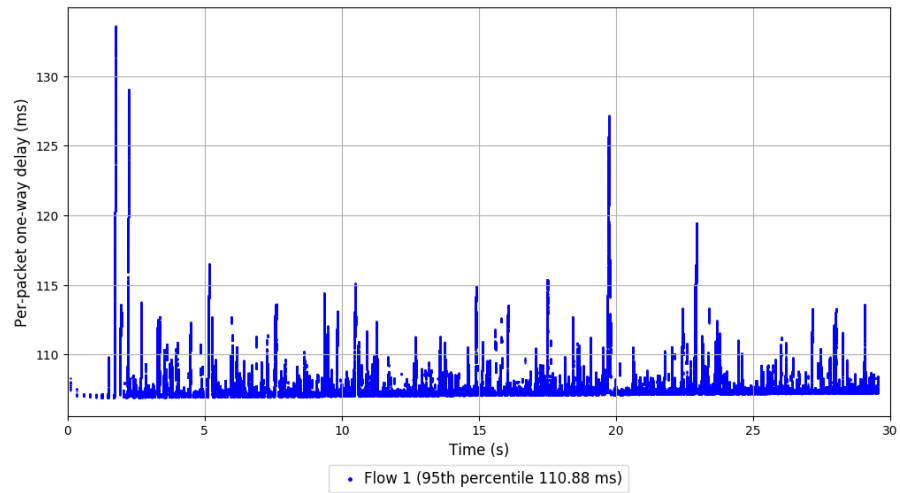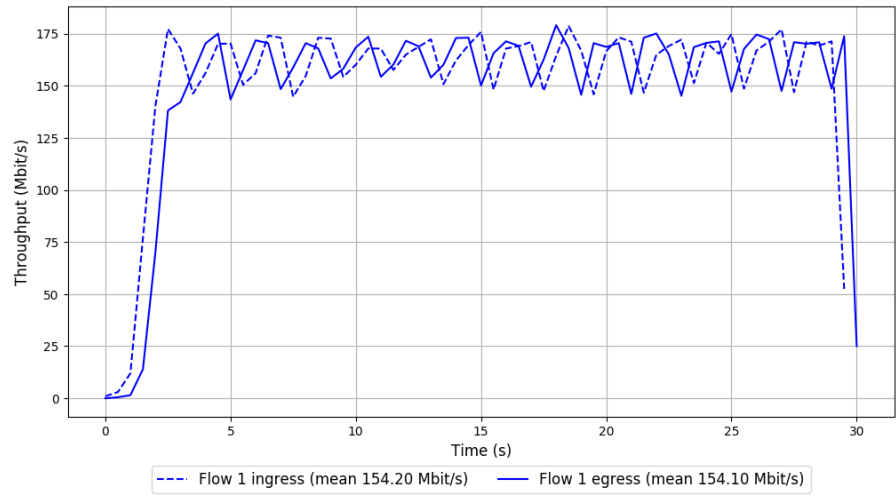```

Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-11-23 22:53:33
End at: 2019-11-23 22:54:03
Local clock offset: 19.926 ms
Remote clock offset: 23.714 ms


# Below is generated by plot.py at 2019-11-24 02:04:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 167.54 Mbit/s
95th percentile per-packet one-way delay: 109.634 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 167.54 Mbit/s
95th percentile per-packet one-way delay: 109.634 ms
Loss rate: 0.76%
```

Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-11-23 23:29:01
End at: 2019-11-23 23:29:31
Local clock offset: 16.968 ms
Remote clock offset: 38.475 ms


# Below is generated by plot.py at 2019-11-24 02:04:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 216.80 Mbit/s
95th percentile per-packet one-way delay: 114.825 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 216.80 Mbit/s
95th percentile per-packet one-way delay: 114.825 ms
Loss rate: 0.75%
```
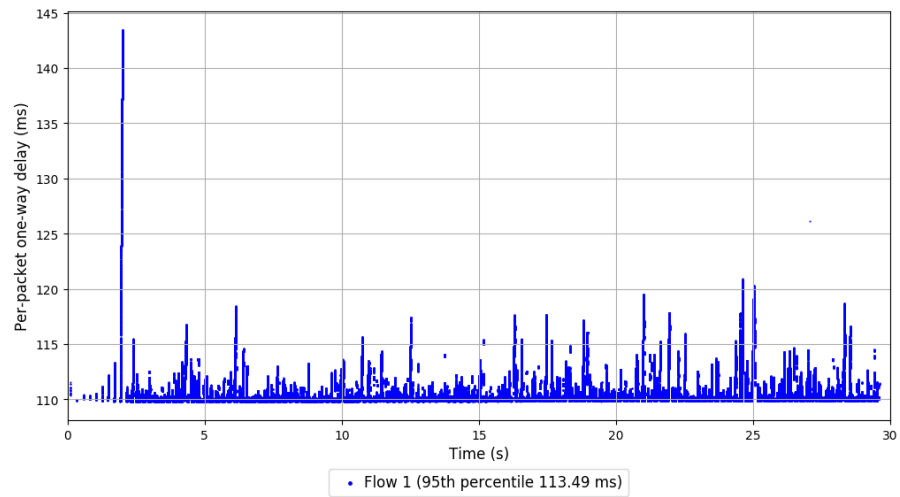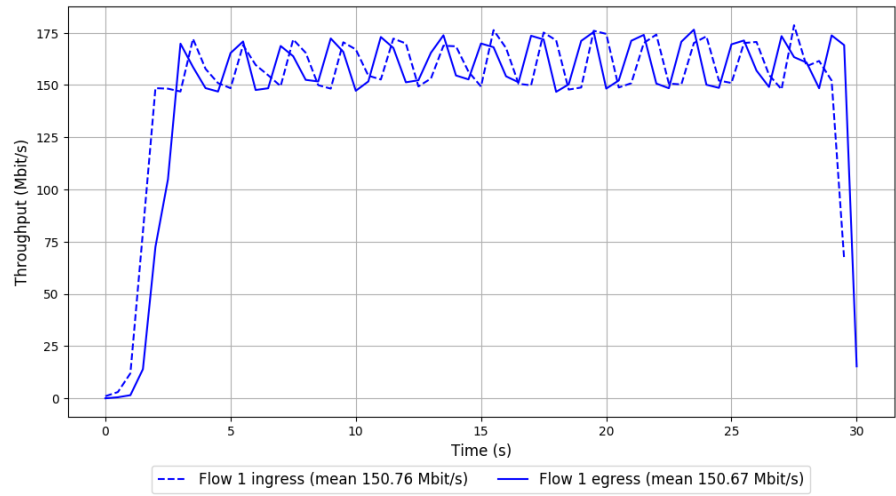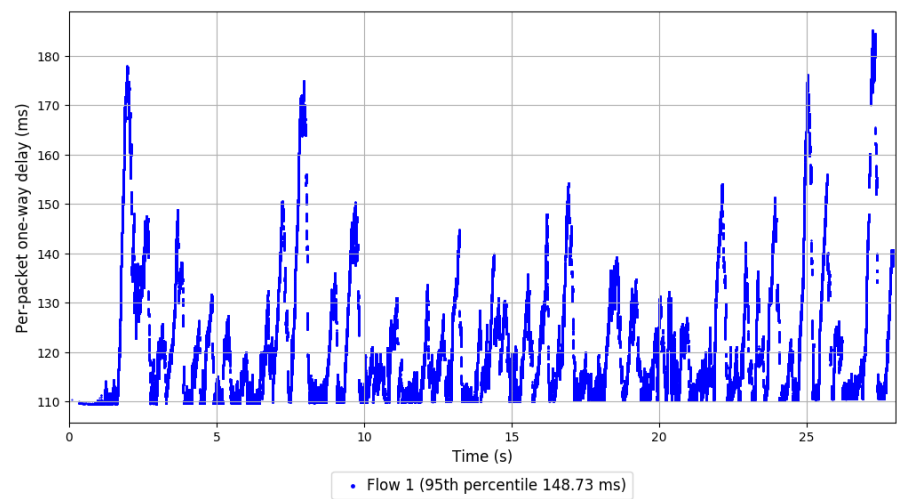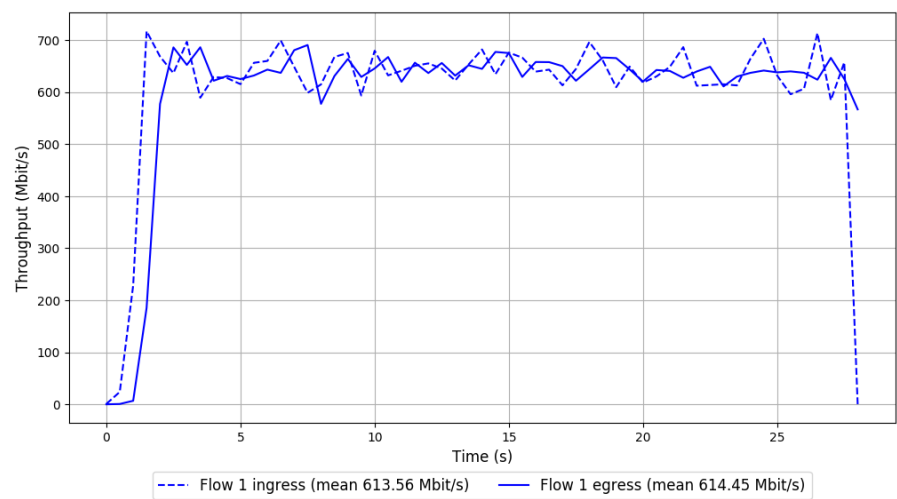
Run 3: Report of Indigo — Data Link

Flow 1 ingress (mean 216.83 Mbit/s)   Flow 1 egress (mean 216.80 Mbit/s)

Flow 1 (95th percentile 114.83 ms)

```
Run 4: Statistics of Indigo

Start at: 2019-11-24 00:05:05
End at: 2019-11-24 00:05:35
Local clock offset: 7.696 ms
Remote clock offset: 20.957 ms


# Below is generated by plot.py at 2019-11-24 02:04:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 154.10 Mbit/s
95th percentile per-packet one-way delay: 110.882 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 154.10 Mbit/s
95th percentile per-packet one-way delay: 110.882 ms
Loss rate: 0.79%
```
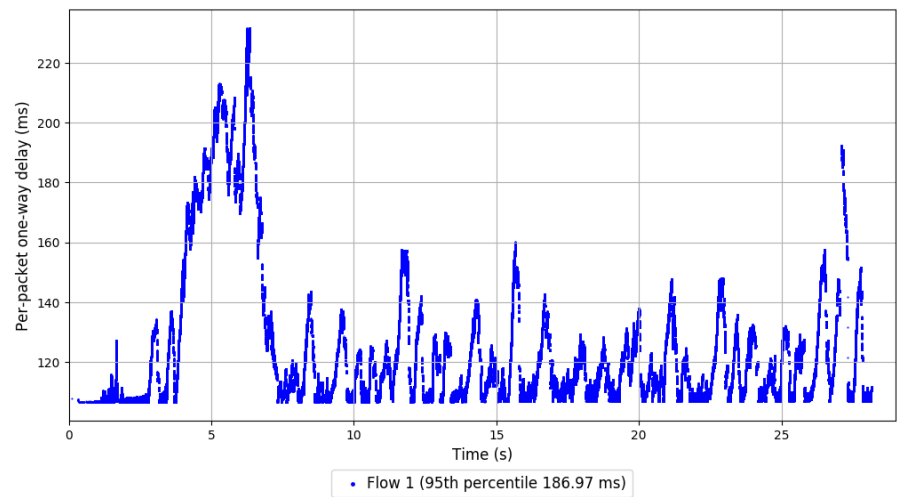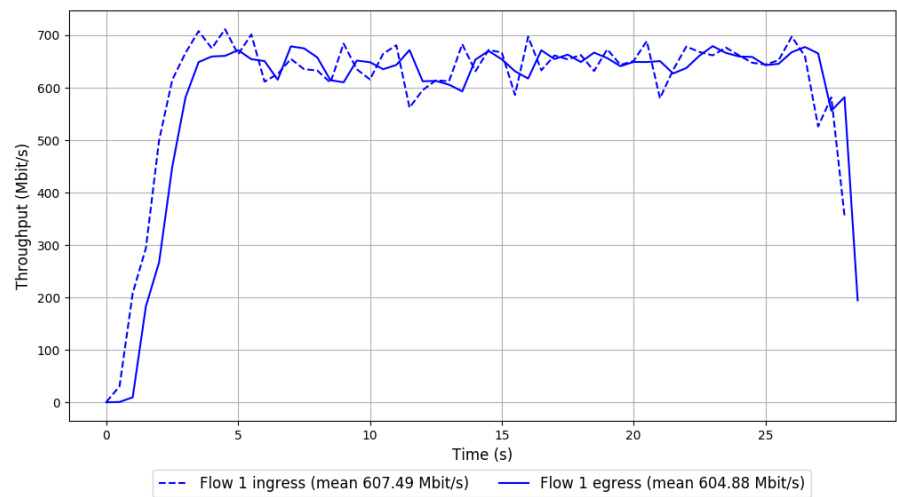
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-11-24 00:40:50
End at: 2019-11-24 00:41:20
Local clock offset: 2.534 ms
Remote clock offset: 5.22 ms


# Below is generated by plot.py at 2019-11-24 02:04:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 150.67 Mbit/s
95th percentile per-packet one-way delay: 113.492 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 150.67 Mbit/s
95th percentile per-packet one-way delay: 113.492 ms
Loss rate: 0.80%
```
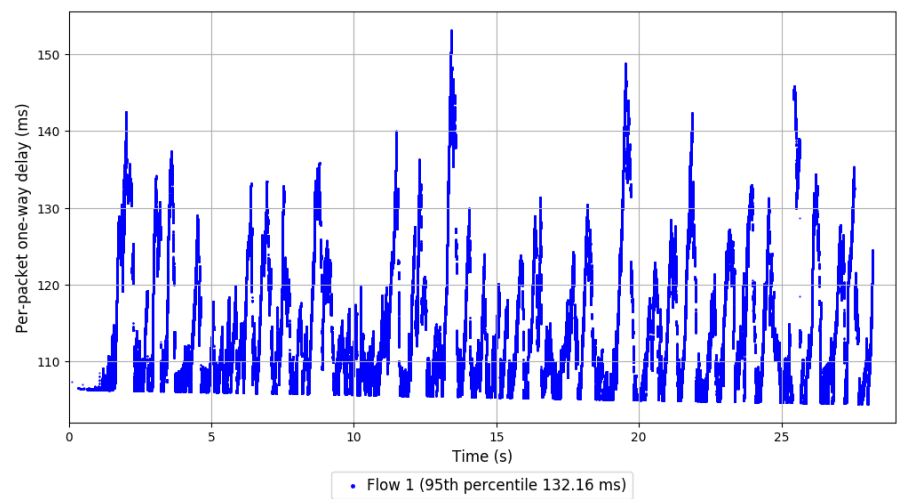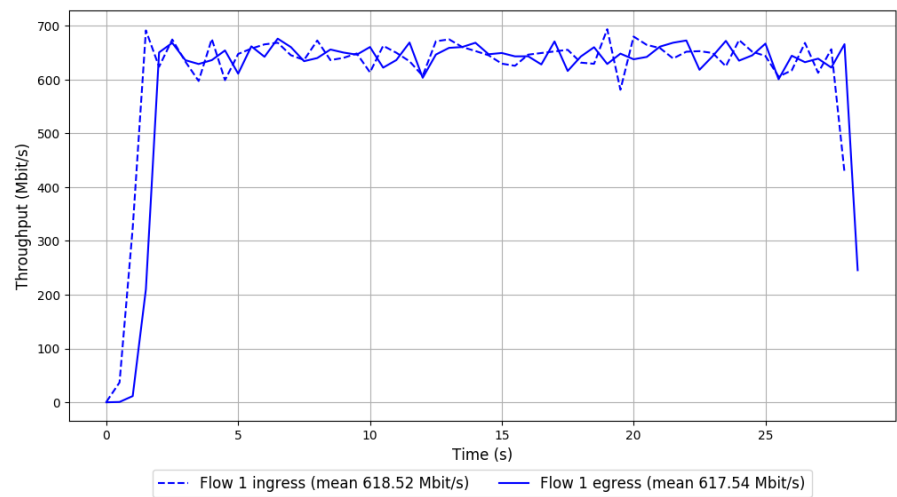
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-11-23 22:23:54
End at: 2019-11-23 22:24:24
Local clock offset: 12.839 ms
Remote clock offset: 31.026 ms


# Below is generated by plot.py at 2019-11-24 02:08:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 614.45 Mbit/s
95th percentile per-packet one-way delay: 148.729 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 614.45 Mbit/s
95th percentile per-packet one-way delay: 148.729 ms
Loss rate: 0.70%
```
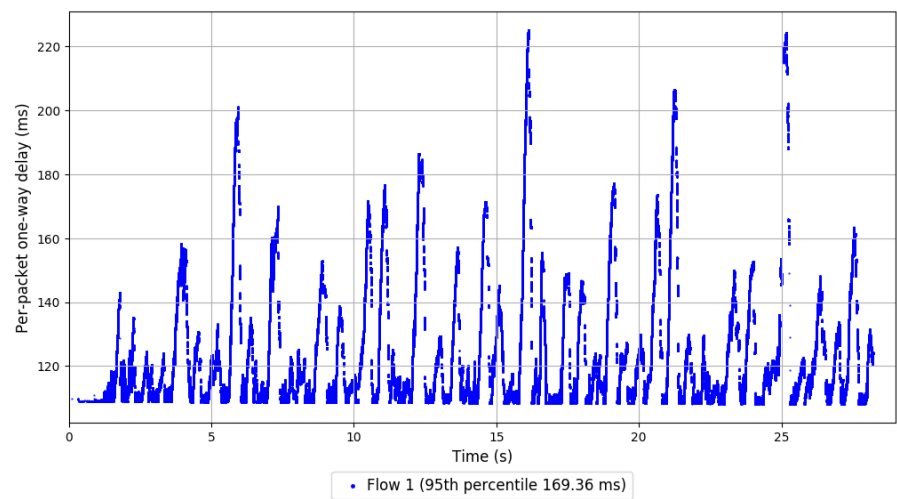
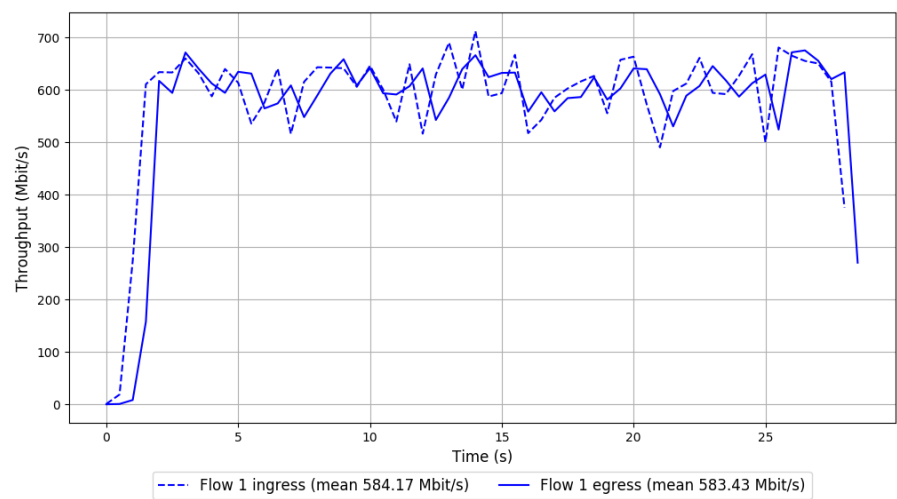Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-11-23 22:59:26
End at: 2019-11-23 22:59:56
Local clock offset: 22.52 ms
Remote clock offset: 30.277 ms


# Below is generated by plot.py at 2019-11-24 02:09:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 604.88 Mbit/s
95th percentile per-packet one-way delay: 186.970 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 604.88 Mbit/s
95th percentile per-packet one-way delay: 186.970 ms
Loss rate: 1.19%
```

Run 2: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 607.49 Mbit/s)   Flow 1 egress (mean 604.88 Mbit/s)

Flow 1 (95th percentile 186.97 ms)

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-11-23 23:35:03
End at: 2019-11-23 23:35:33
Local clock offset: 15.156 ms
Remote clock offset: 42.117 ms


# Below is generated by plot.py at 2019-11-24 02:11:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 617.54 Mbit/s
95th percentile per-packet one-way delay: 132.160 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 617.54 Mbit/s
95th percentile per-packet one-way delay: 132.160 ms
Loss rate: 0.93%
```
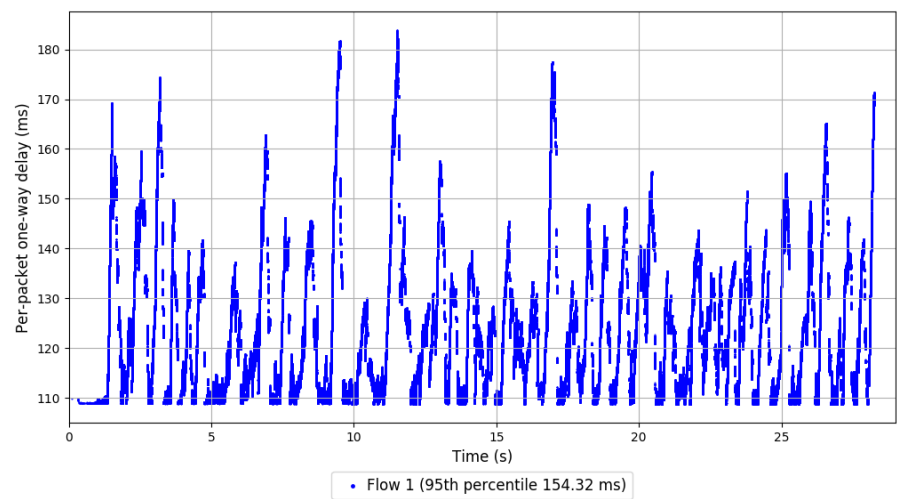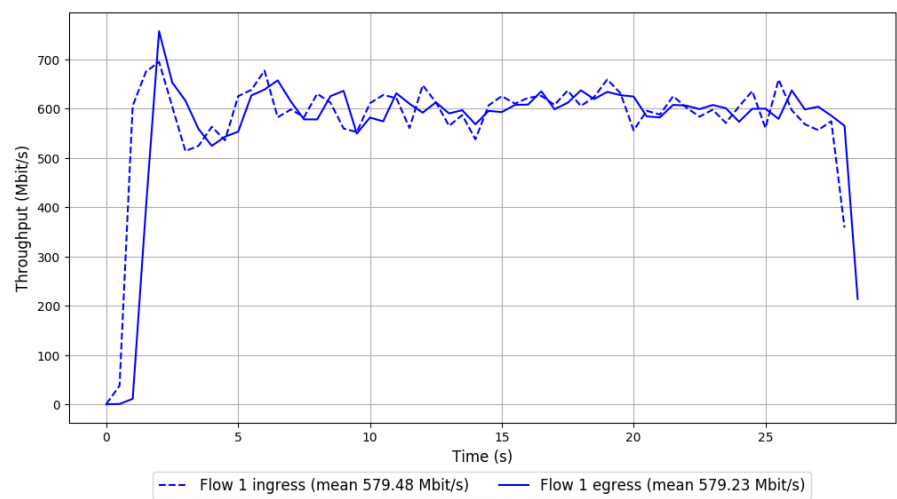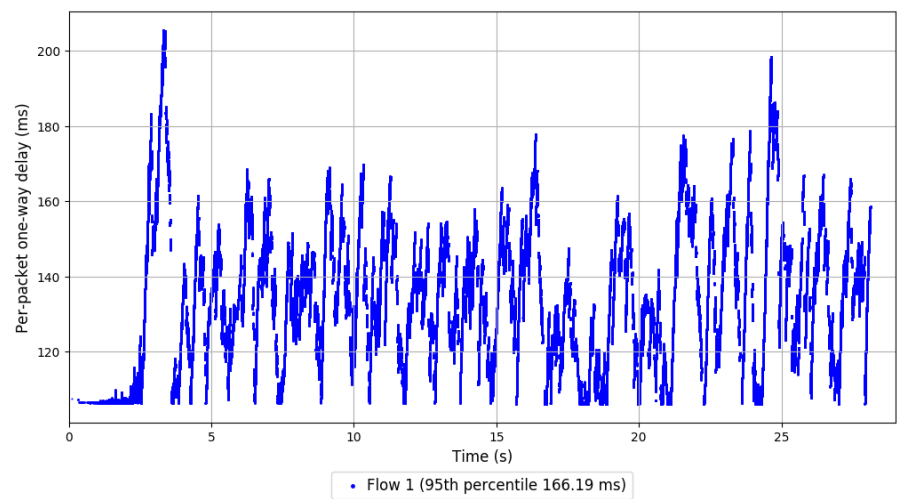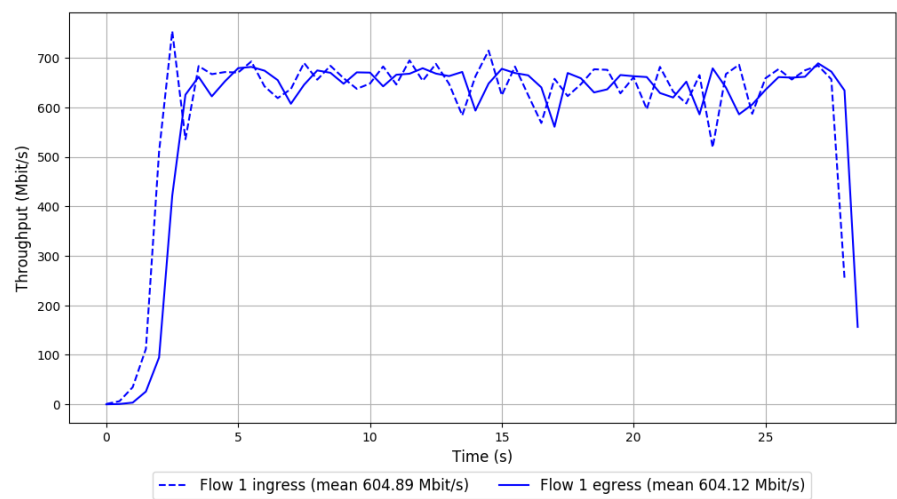
Run 3: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 618.52 Mbit/s)   Flow 1 egress (mean 617.54 Mbit/s)

Flow 1 (95th percentile 132.16 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-11-24 00:10:59
End at: 2019-11-24 00:11:29
Local clock offset: 7.223 ms
Remote clock offset: 17.496 ms


# Below is generated by plot.py at 2019-11-24 02:12:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 583.43 Mbit/s
95th percentile per-packet one-way delay: 169.357 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 583.43 Mbit/s
95th percentile per-packet one-way delay: 169.357 ms
Loss rate: 0.91%
```
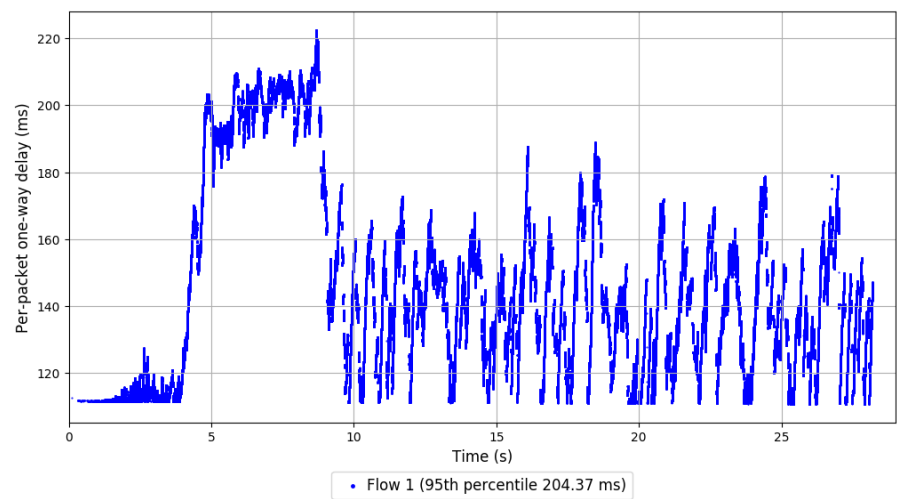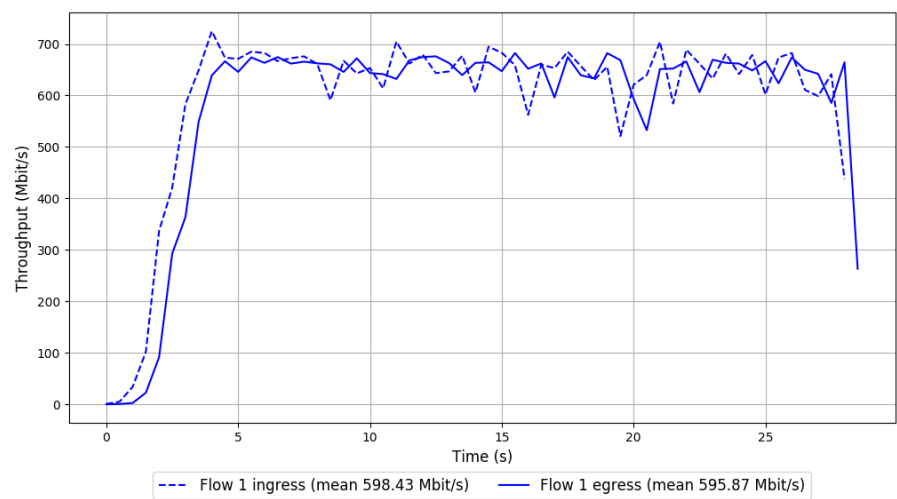
Run 4: Report of Indigo-MusesC3 — Data Link

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-11-24 00:46:38
End at: 2019-11-24 00:47:08
Local clock offset: 1.969 ms
Remote clock offset: 3.661 ms


# Below is generated by plot.py at 2019-11-24 02:13:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 579.23 Mbit/s
95th percentile per-packet one-way delay: 154.318 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 579.23 Mbit/s
95th percentile per-packet one-way delay: 154.318 ms
Loss rate: 0.80%
```
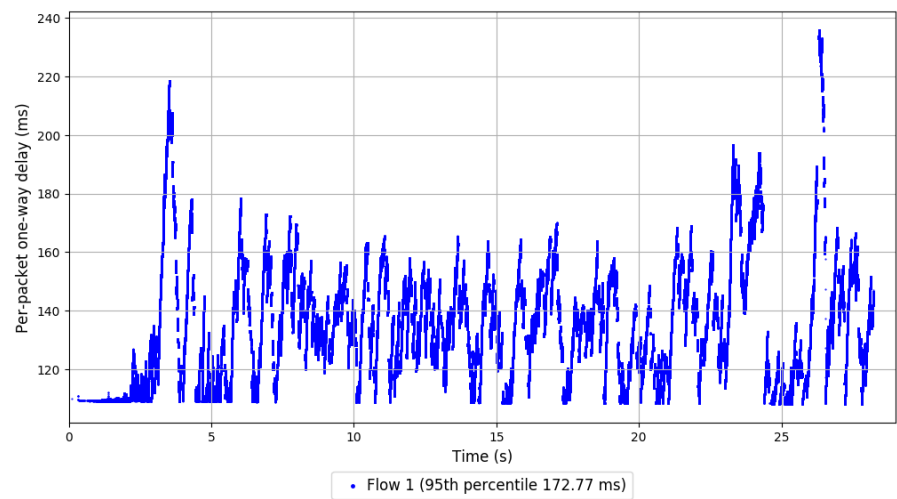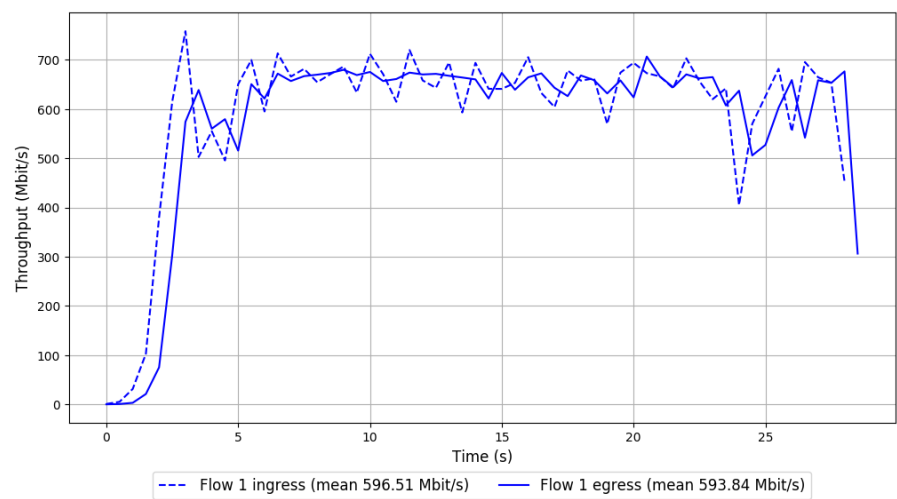
Run 5: Report of Indigo-MusesC3 — Data Link

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-11-23 22:28:35
End at: 2019-11-23 22:29:05
Local clock offset: 14.269 ms
Remote clock offset: 33.006 ms

# Below is generated by plot.py at 2019-11-24 02:14:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 604.12 Mbit/s
95th percentile per-packet one-way delay: 166.195 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 604.12 Mbit/s
95th percentile per-packet one-way delay: 166.195 ms
Loss rate: 0.91%
```

Run 1: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 604.89 Mbit/s)   Flow 1 egress (mean 604.12 Mbit/s)

Flow 1 (95th percentile 166.19 ms)

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-11-23 23:04:10
End at: 2019-11-23 23:04:40
Local clock offset: 26.174 ms
Remote clock offset: 24.914 ms


# Below is generated by plot.py at 2019-11-24 02:14:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 595.87 Mbit/s
95th percentile per-packet one-way delay: 204.373 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 595.87 Mbit/s
95th percentile per-packet one-way delay: 204.373 ms
Loss rate: 1.18%
```
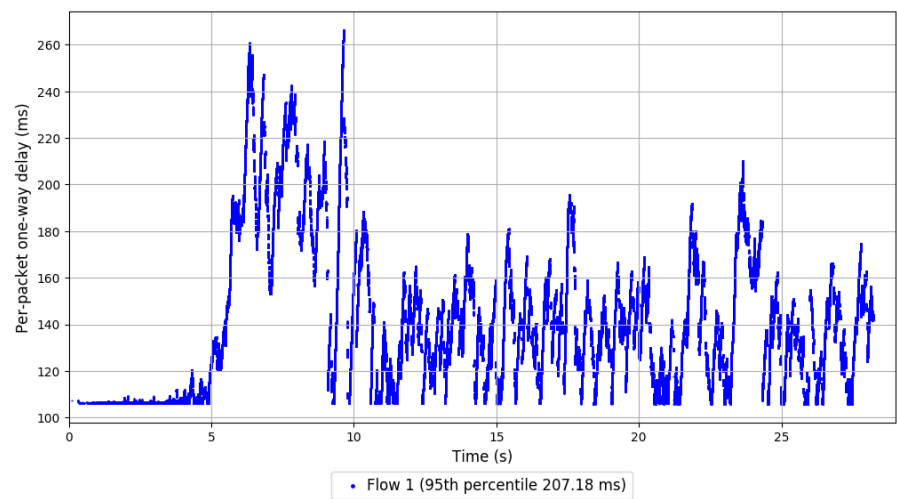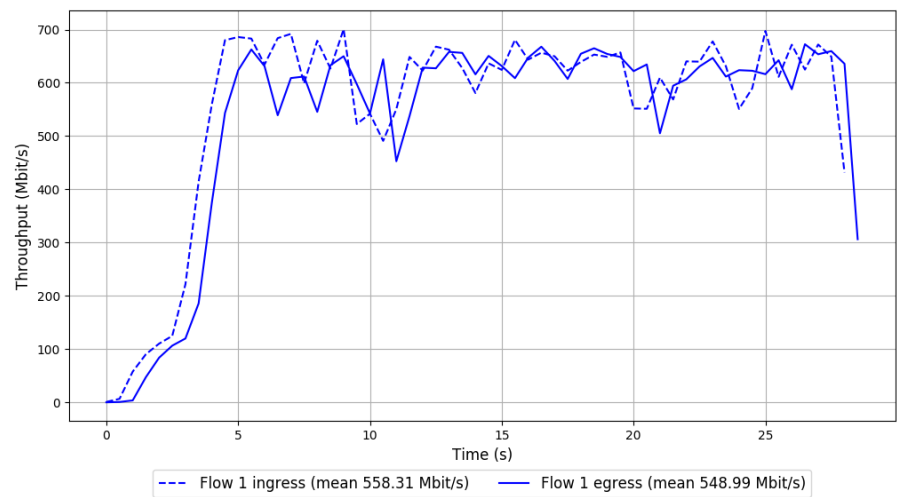
Run 2: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 598.43 Mbit/s) --- Flow 1 egress (mean 595.87 Mbit/s)

Flow 1 (95th percentile 204.37 ms)

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-11-23 23:39:46
End at: 2019-11-23 23:40:16
Local clock offset: 15.542 ms
Remote clock offset: 27.791 ms


# Below is generated by plot.py at 2019-11-24 02:16:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 593.84 Mbit/s
95th percentile per-packet one-way delay: 172.774 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 593.84 Mbit/s
95th percentile per-packet one-way delay: 172.774 ms
Loss rate: 1.23%
```
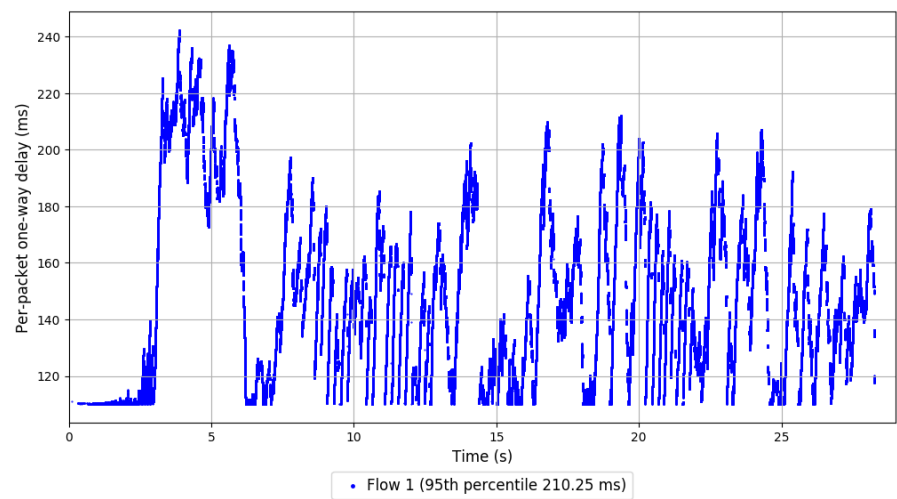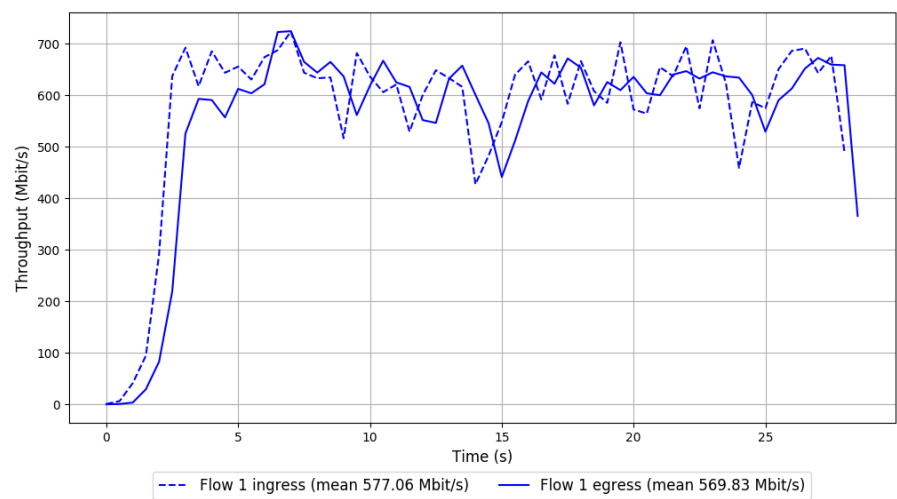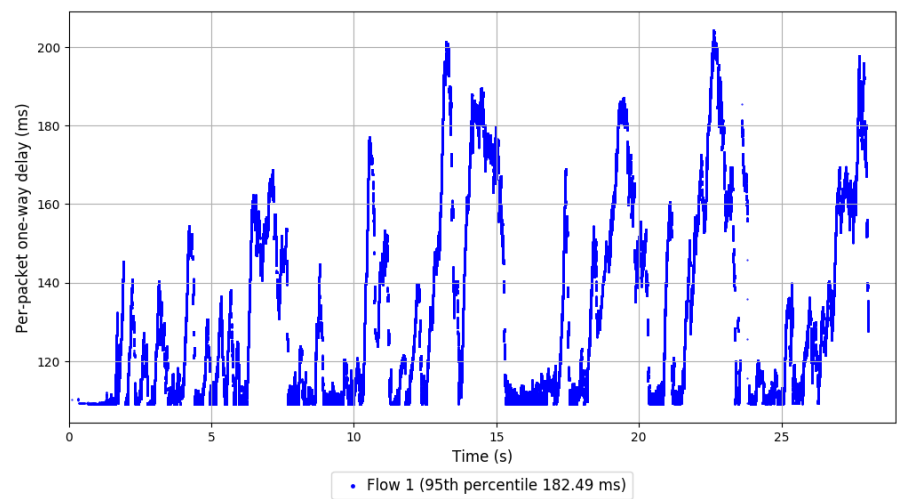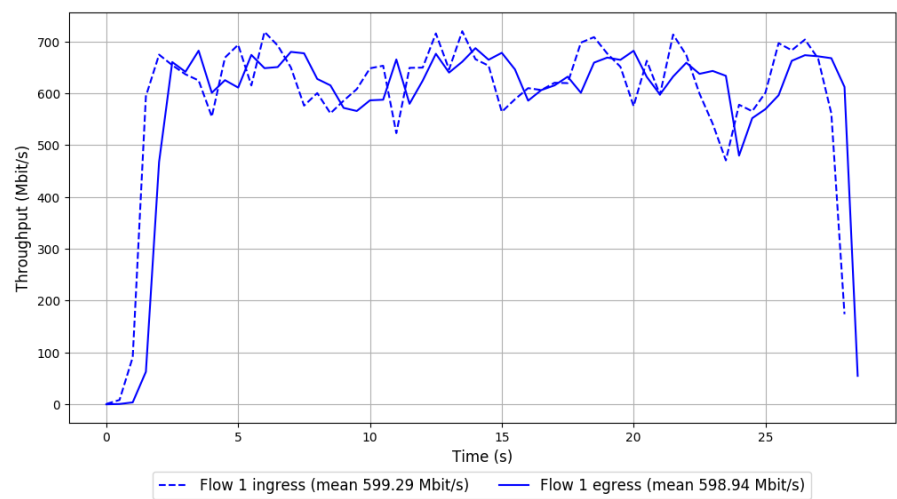
Run 3: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 596.51 Mbit/s)   Flow 1 egress (mean 593.84 Mbit/s)

Flow 1 (95th percentile 172.77 ms)

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-11-24 00:15:42
End at: 2019-11-24 00:16:12
Local clock offset: 7.698 ms
Remote clock offset: 11.099 ms


# Below is generated by plot.py at 2019-11-24 02:19:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 548.99 Mbit/s
95th percentile per-packet one-way delay: 207.181 ms
Loss rate: 2.43%
-- Flow 1:
Average throughput: 548.99 Mbit/s
95th percentile per-packet one-way delay: 207.181 ms
Loss rate: 2.43%
```

Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-11-24 00:51:21
End at: 2019-11-24 00:51:51
Local clock offset: 2.021 ms
Remote clock offset: 2.438 ms


# Below is generated by plot.py at 2019-11-24 02:20:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 569.83 Mbit/s
95th percentile per-packet one-way delay: 210.254 ms
Loss rate: 2.03%
-- Flow 1:
Average throughput: 569.83 Mbit/s
95th percentile per-packet one-way delay: 210.254 ms
Loss rate: 2.03%
```
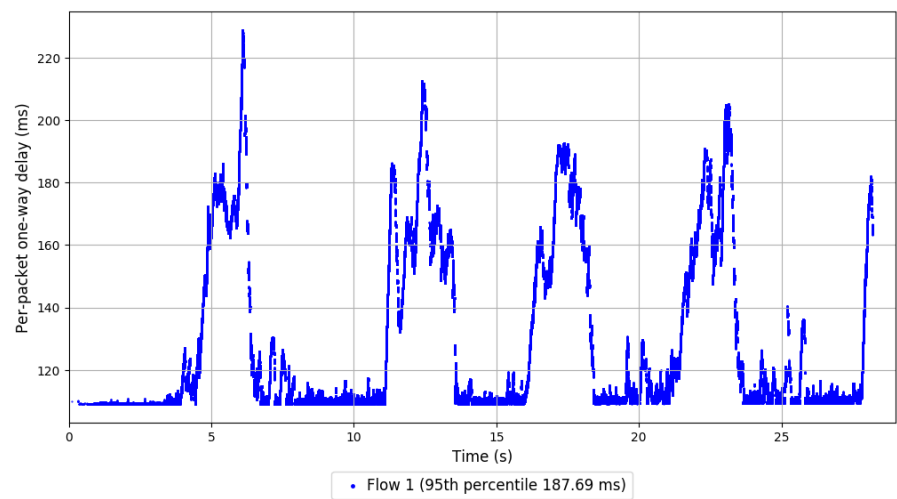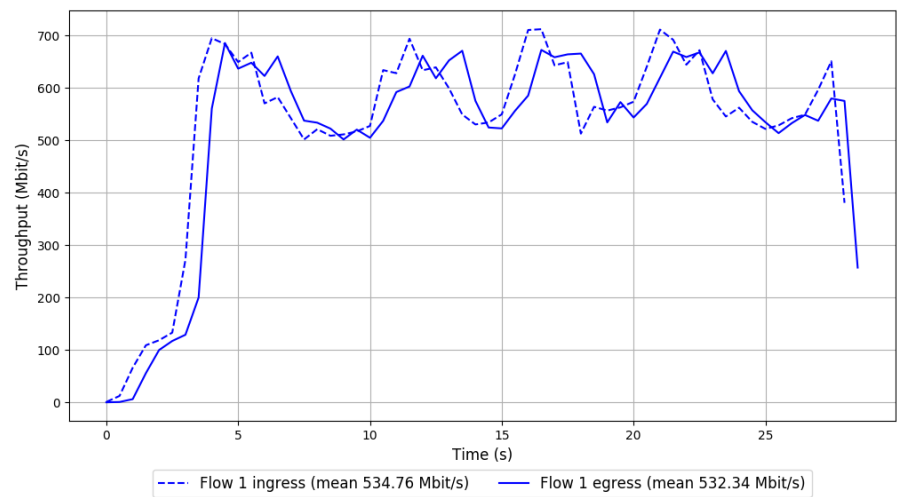
Run 5: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 577.06 Mbit/s) --- Flow 1 egress (mean 569.83 Mbit/s)

Flow 1 (95th percentile 210.25 ms)

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-11-23 22:19:28
End at: 2019-11-23 22:19:58
Local clock offset: 8.843 ms
Remote clock offset: 20.586 ms


# Below is generated by plot.py at 2019-11-24 02:23:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 598.94 Mbit/s
95th percentile per-packet one-way delay: 182.491 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 598.94 Mbit/s
95th percentile per-packet one-way delay: 182.491 ms
Loss rate: 0.85%
```
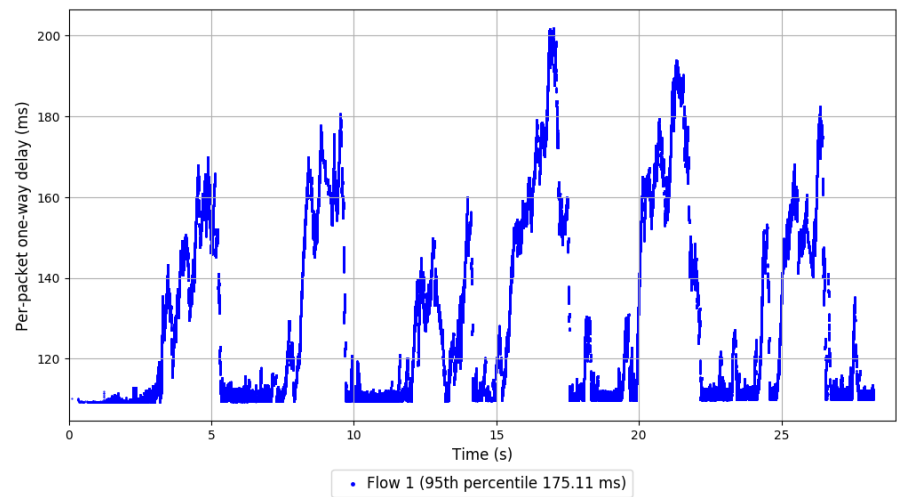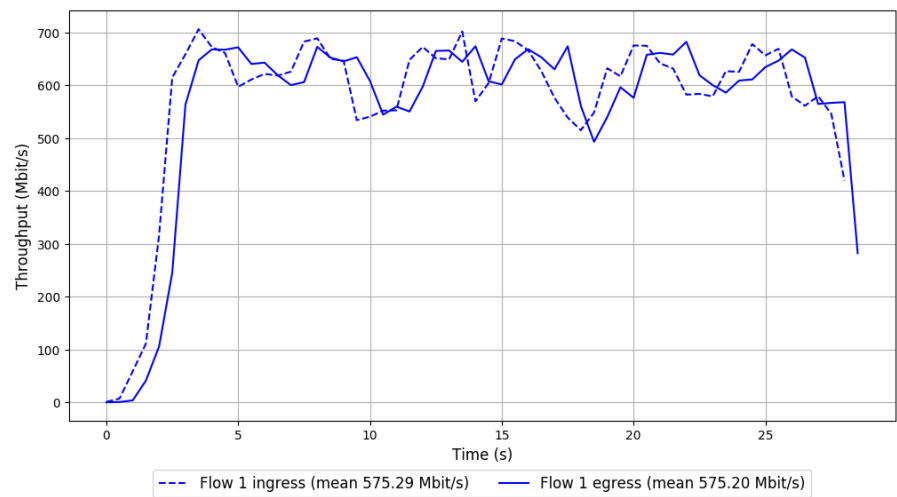
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-11-23 22:54:59
End at: 2019-11-23 22:55:29
Local clock offset: 20.203 ms
Remote clock offset: 24.866 ms


# Below is generated by plot.py at 2019-11-24 02:23:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 532.34 Mbit/s
95th percentile per-packet one-way delay: 187.693 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 532.34 Mbit/s
95th percentile per-packet one-way delay: 187.693 ms
Loss rate: 1.23%
```
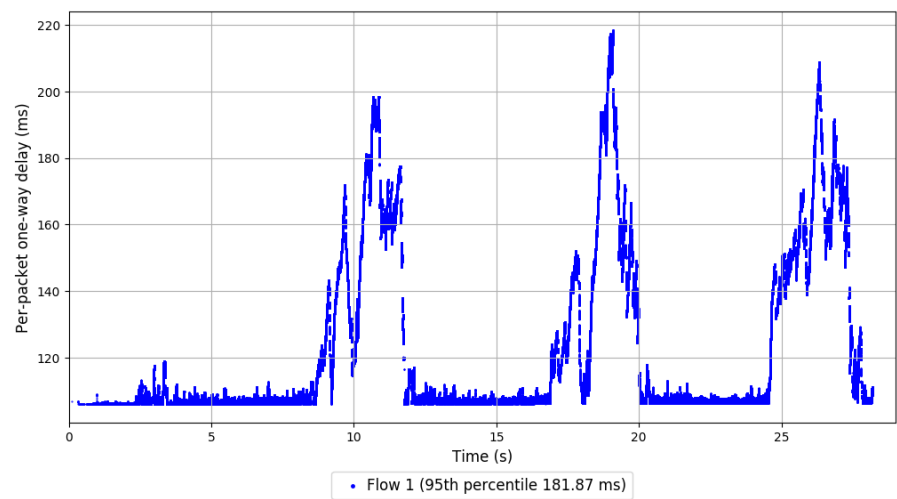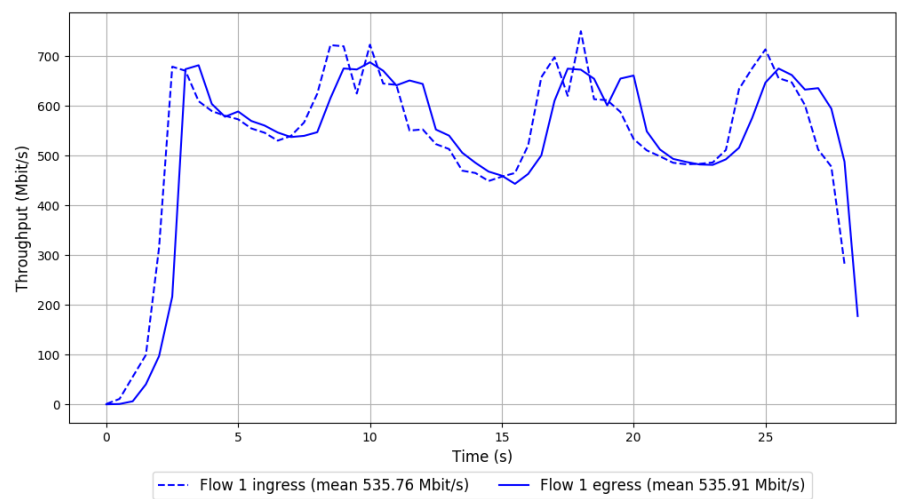
Run 2: Report of Indigo-MusesD — Data Link

--- Flow 1 ingress (mean 534.76 Mbit/s)　——— Flow 1 egress (mean 532.34 Mbit/s)

• Flow 1 (95th percentile 187.69 ms)

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-11-23 23:30:33
End at: 2019-11-23 23:31:03
Local clock offset: 16.024 ms
Remote clock offset: 40.51 ms


# Below is generated by plot.py at 2019-11-24 02:24:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 575.20 Mbit/s
95th percentile per-packet one-way delay: 175.113 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 575.20 Mbit/s
95th percentile per-packet one-way delay: 175.113 ms
Loss rate: 0.78%
```
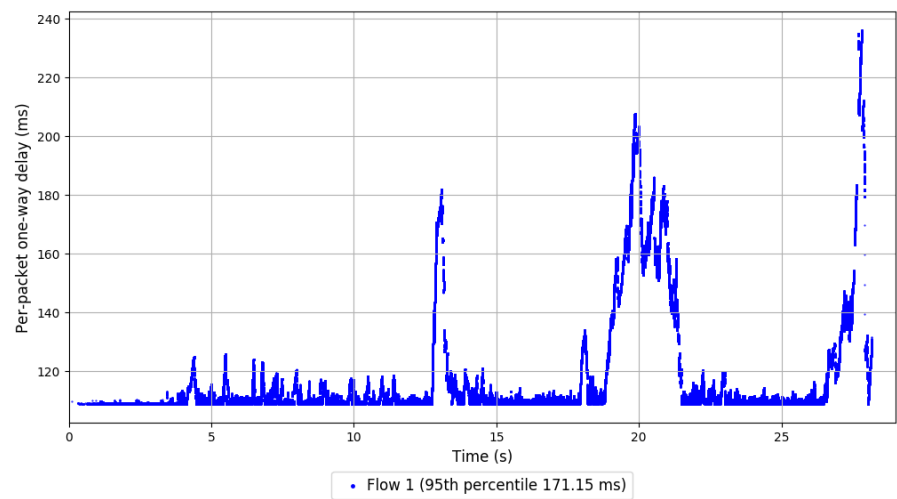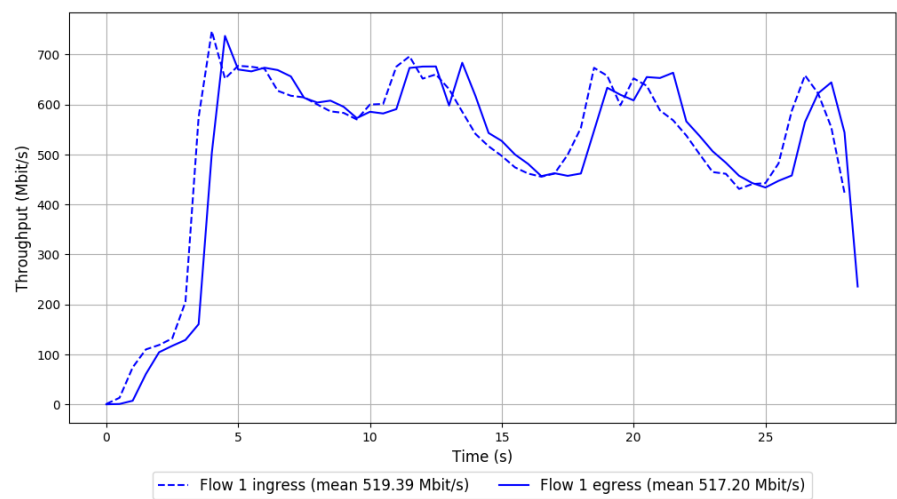
Run 3: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 575.29 Mbit/s) ---- Flow 1 egress (mean 575.20 Mbit/s) ——
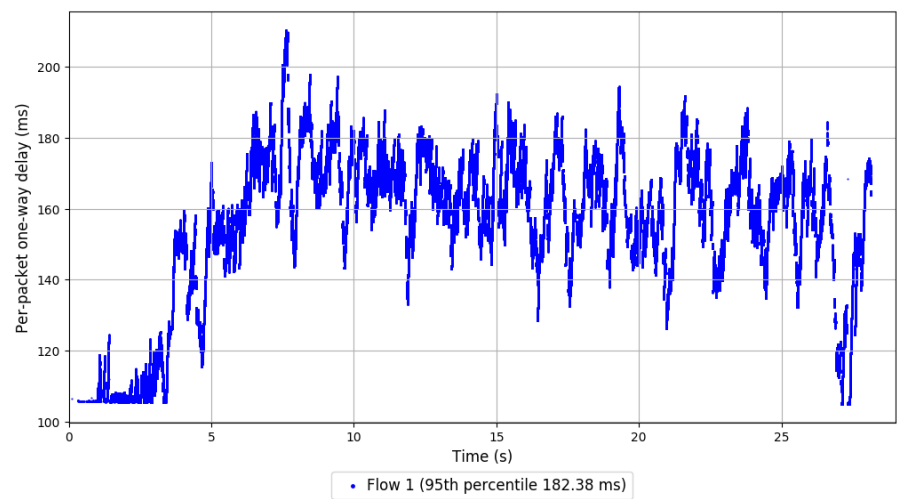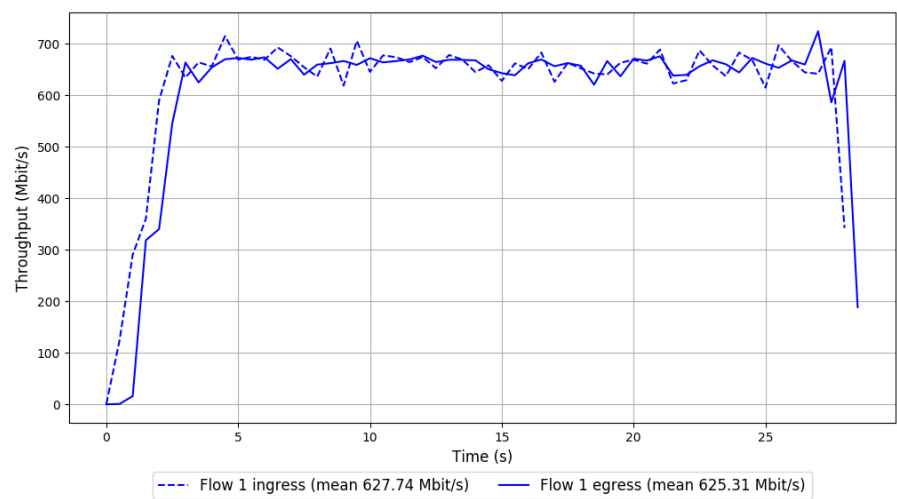

• Flow 1 (95th percentile 175.11 ms)

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-11-24 00:06:30
End at: 2019-11-24 00:07:00
Local clock offset: 7.57 ms
Remote clock offset: 21.868 ms


# Below is generated by plot.py at 2019-11-24 02:24:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 535.91 Mbit/s
95th percentile per-packet one-way delay: 181.865 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 535.91 Mbit/s
95th percentile per-packet one-way delay: 181.865 ms
Loss rate: 0.74%
```

Run 4: Report of Indigo-MusesD — Data Link

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-11-24 00:42:15
End at: 2019-11-24 00:42:45
Local clock offset: 2.341 ms
Remote clock offset: 5.322 ms


# Below is generated by plot.py at 2019-11-24 02:24:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 517.20 Mbit/s
95th percentile per-packet one-way delay: 171.152 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 517.20 Mbit/s
95th percentile per-packet one-way delay: 171.152 ms
Loss rate: 1.19%
```
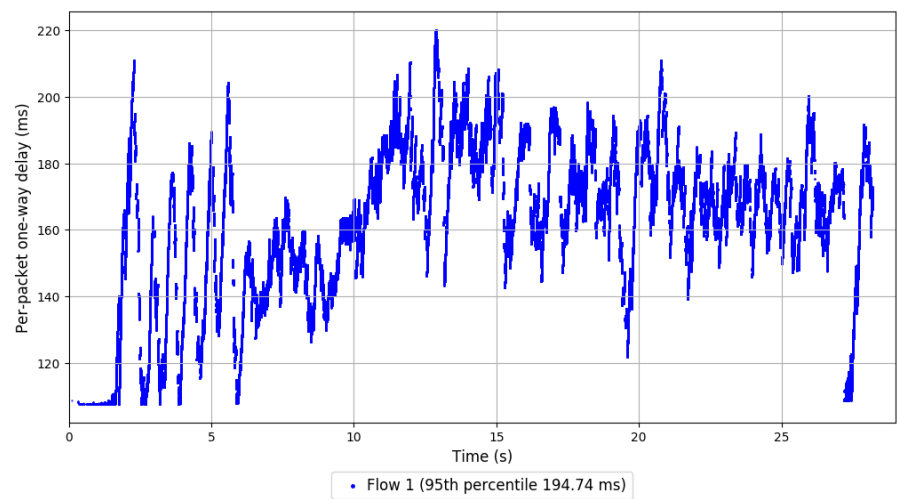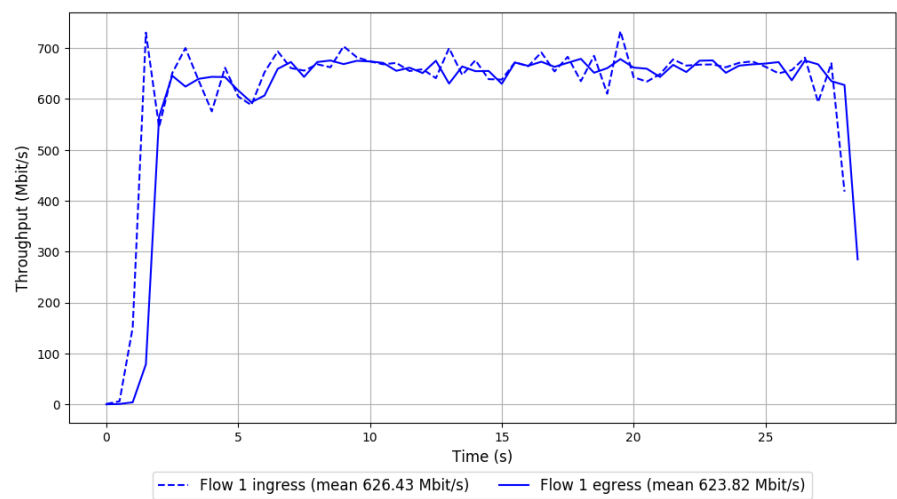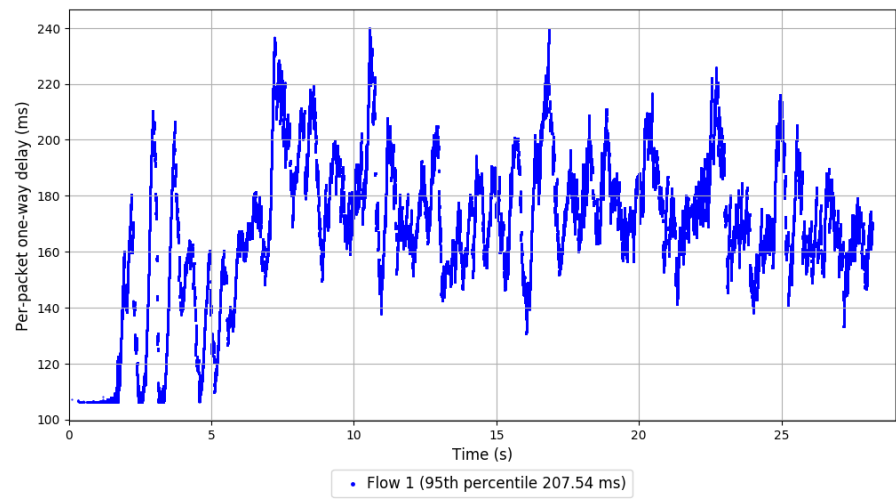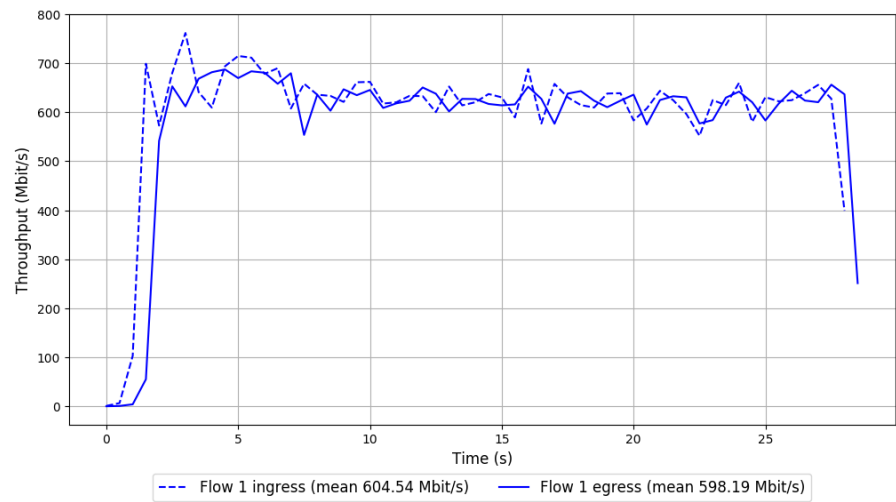
Run 5: Report of Indigo-MusesD — Data Link

94

Run 1: Statistics of Indigo-MusesT

Start at: 2019-11-23 22:13:27
End at: 2019-11-23 22:13:57
Local clock offset: 6.644 ms
Remote clock offset: 17.686 ms

Run 1: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 574.34 Mbit/s)   Flow 1 egress (mean 570.10 Mbit/s)

• Flow 1 (95th percentile 175.56 ms)

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-11-23 22:48:41
End at: 2019-11-23 22:49:11
Local clock offset: 20.512 ms
Remote clock offset: 27.152 ms


# Below is generated by plot.py at 2019-11-24 02:31:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 625.31 Mbit/s
95th percentile per-packet one-way delay: 182.382 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 625.31 Mbit/s
95th percentile per-packet one-way delay: 182.382 ms
Loss rate: 1.16%
```

Run 2: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 627.74 Mbit/s)   Flow 1 egress (mean 625.31 Mbit/s)

Flow 1 (95th percentile 182.38 ms)

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-11-23 23:24:27
End at: 2019-11-23 23:24:57
Local clock offset: 21.938 ms
Remote clock offset: 33.399 ms


# Below is generated by plot.py at 2019-11-24 02:33:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 623.82 Mbit/s
95th percentile per-packet one-way delay: 194.739 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 623.82 Mbit/s
95th percentile per-packet one-way delay: 194.739 ms
Loss rate: 1.17%
```
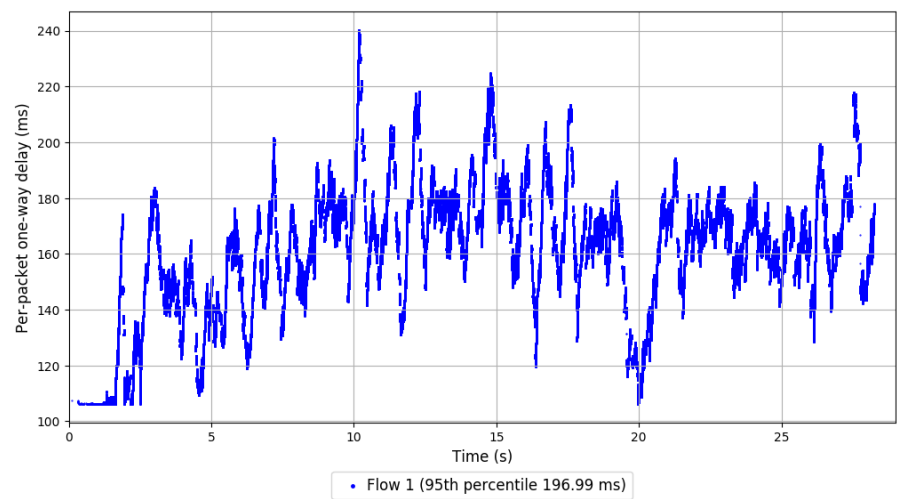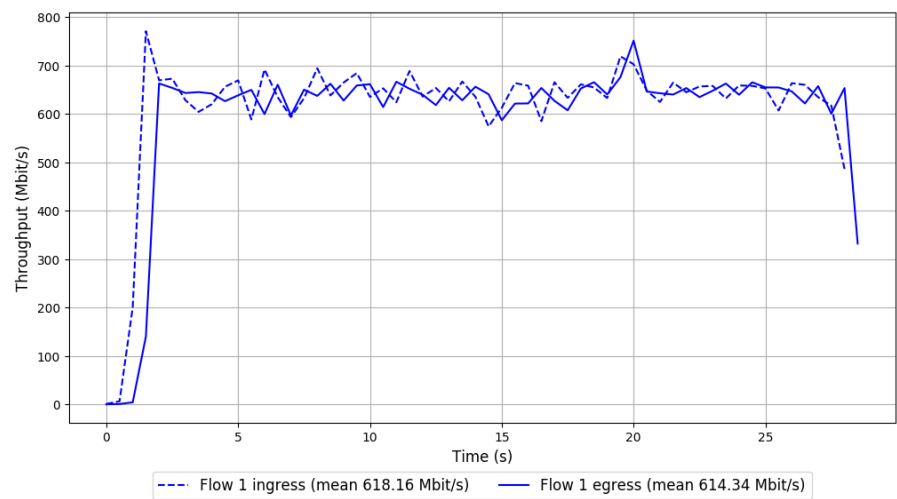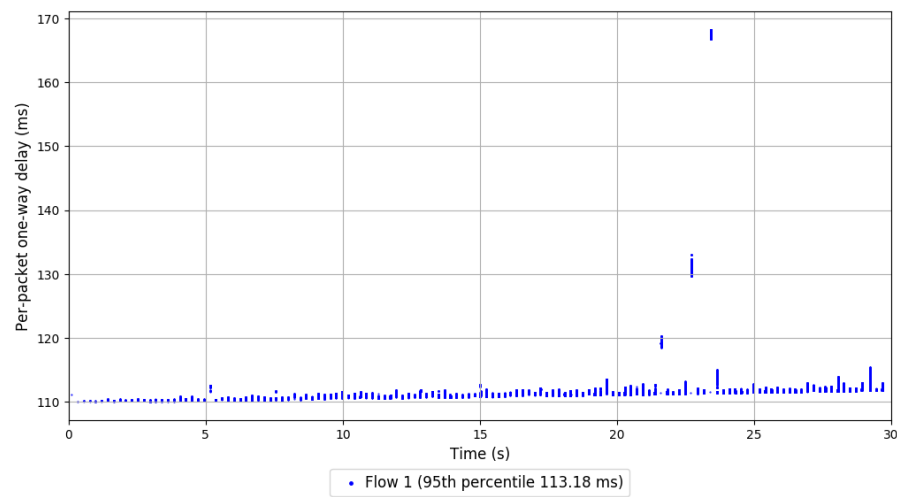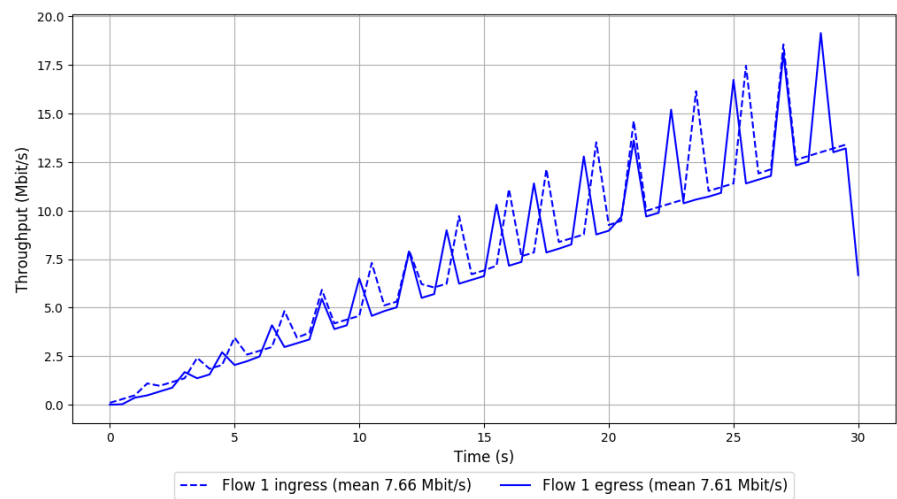
Run 3: Report of Indigo-MusesT — Data Link

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-11-24 00:00:09
End at: 2019-11-24 00:00:40
Local clock offset: 9.707 ms
Remote clock offset: 18.891 ms


# Below is generated by plot.py at 2019-11-24 02:34:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 598.19 Mbit/s
95th percentile per-packet one-way delay: 207.542 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 598.19 Mbit/s
95th percentile per-packet one-way delay: 207.542 ms
Loss rate: 1.80%
```
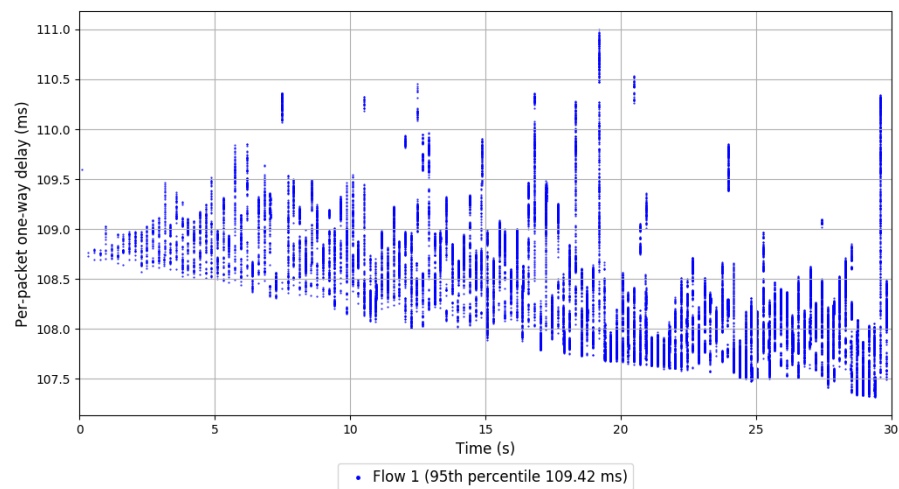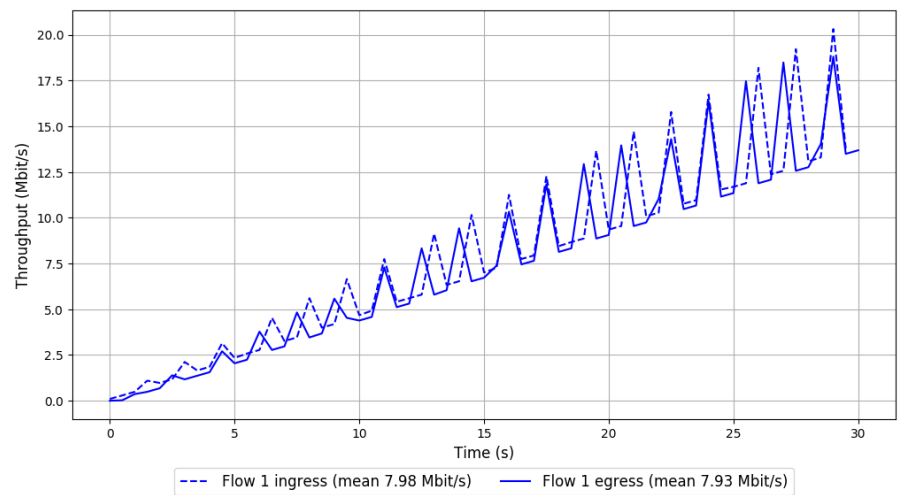
Run 4: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 604.54 Mbit/s)   Flow 1 egress (mean 598.19 Mbit/s)

• Flow 1 (95th percentile 207.54 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-11-24 00:35:57
End at: 2019-11-24 00:36:27
Local clock offset: 3.593 ms
Remote clock offset: 4.872 ms


# Below is generated by plot.py at 2019-11-24 02:35:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 614.34 Mbit/s
95th percentile per-packet one-way delay: 196.991 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 614.34 Mbit/s
95th percentile per-packet one-way delay: 196.991 ms
Loss rate: 1.37%
```

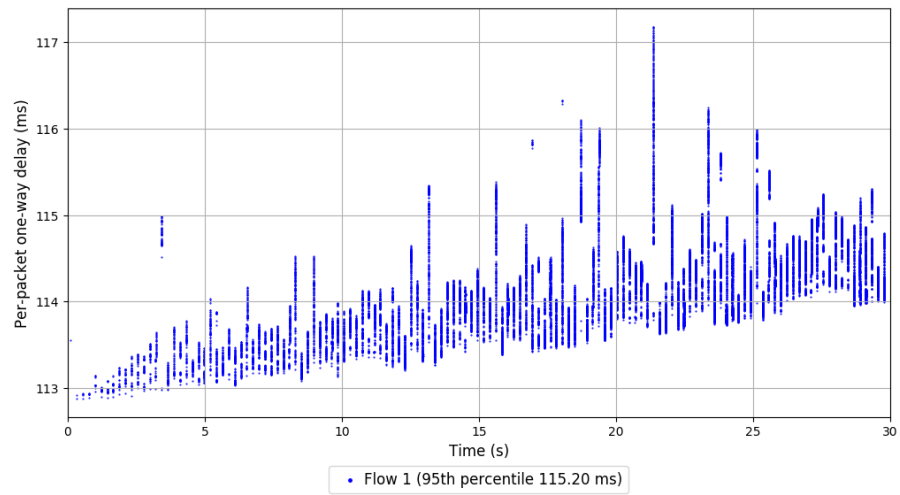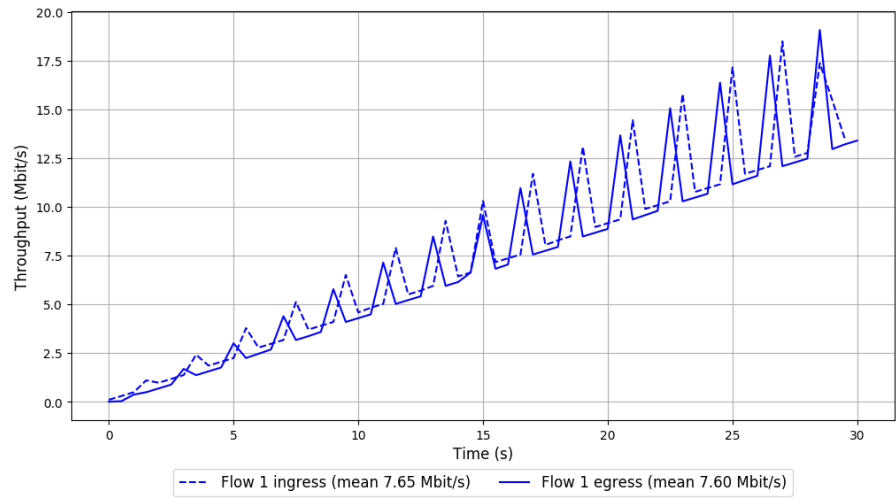Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-11-23 22:12:15
End at: 2019-11-23 22:12:45
Local clock offset: 3.933 ms
Remote clock offset: 10.311 ms


# Below is generated by plot.py at 2019-11-24 02:35:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 113.176 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 113.176 ms
Loss rate: 1.47%
```

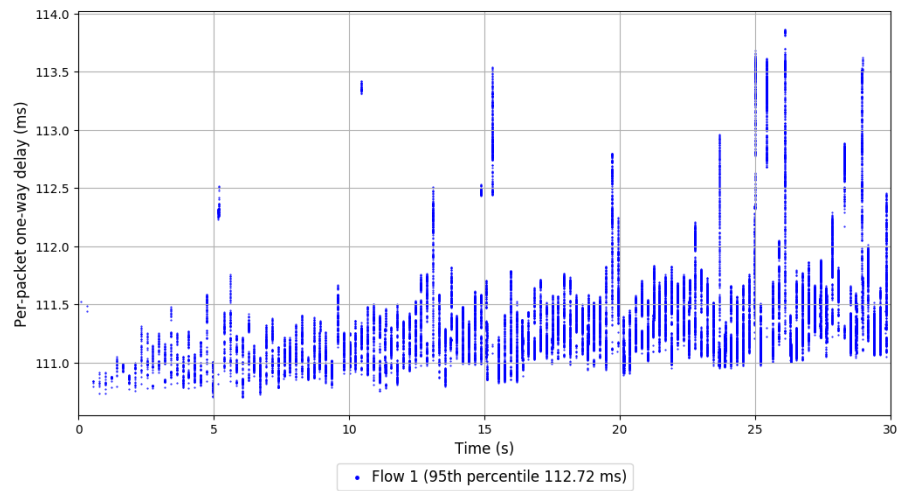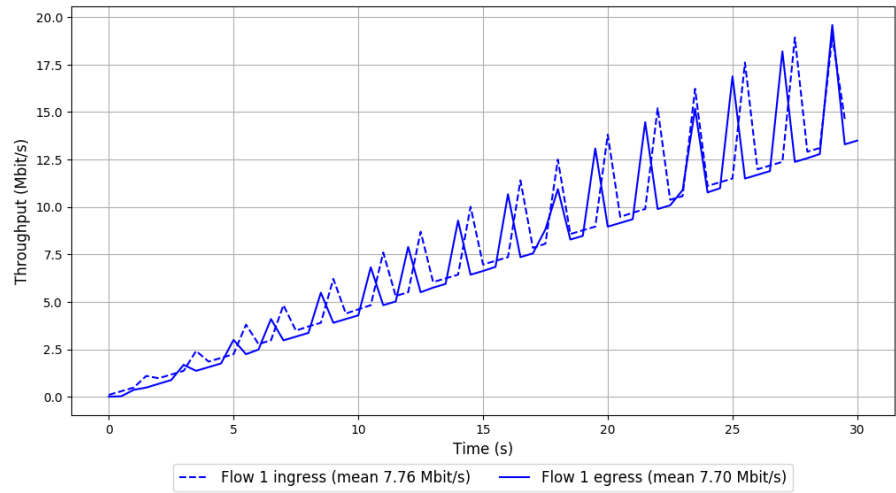Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-11-23 22:47:29
End at: 2019-11-23 22:47:59
Local clock offset: 21.352 ms
Remote clock offset: 30.713 ms


# Below is generated by plot.py at 2019-11-24 02:35:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.93 Mbit/s
95th percentile per-packet one-way delay: 109.416 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 7.93 Mbit/s
95th percentile per-packet one-way delay: 109.416 ms
Loss rate: 1.45%
```

Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 7.98 Mbit/s)   Flow 1 egress (mean 7.93 Mbit/s)

Flow 1 (95th percentile 109.42 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2019-11-23 23:23:16
End at: 2019-11-23 23:23:46
Local clock offset: 24.115 ms
Remote clock offset: 32.007 ms


# Below is generated by plot.py at 2019-11-24 02:35:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.60 Mbit/s
95th percentile per-packet one-way delay: 115.197 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 7.60 Mbit/s
95th percentile per-packet one-way delay: 115.197 ms
Loss rate: 1.48%
```
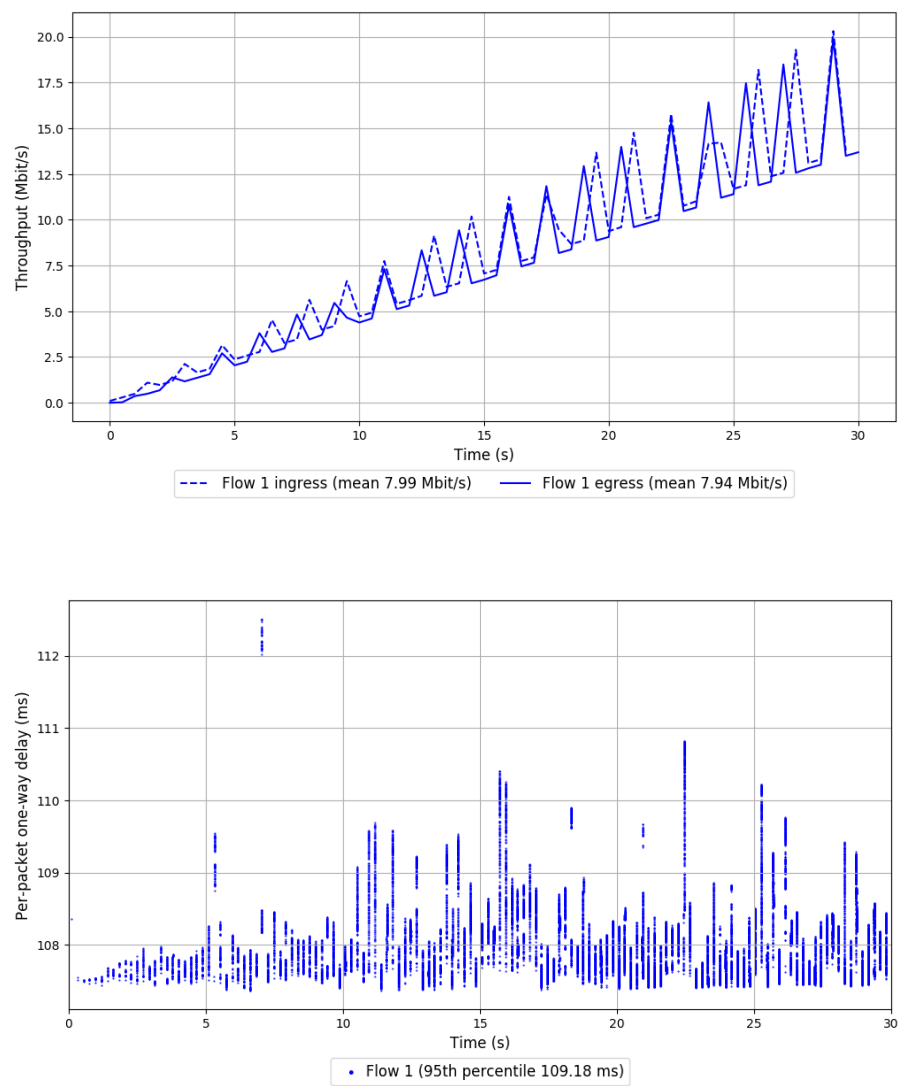
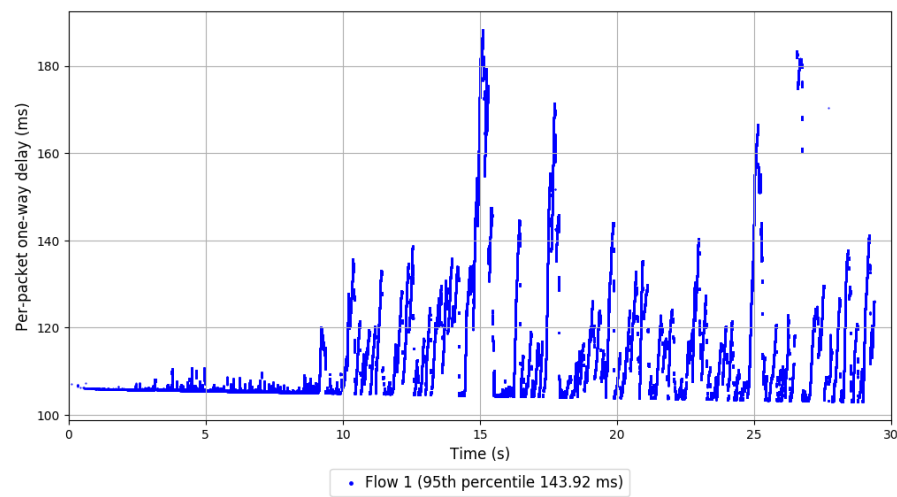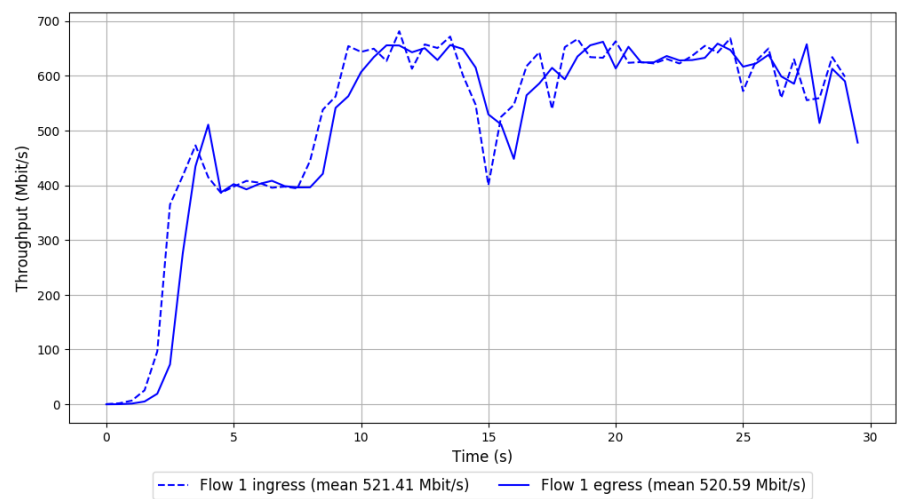# Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 7.65 Mbit/s)   Flow 1 egress (mean 7.60 Mbit/s)

Flow 1 (95th percentile 115.20 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2019-11-23 23:58:58
End at: 2019-11-23 23:59:28
Local clock offset: 10.711 ms
Remote clock offset: 18.429 ms


# Below is generated by plot.py at 2019-11-24 02:35:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 112.724 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 112.724 ms
Loss rate: 1.47%
```

Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 7.76 Mbit/s) --- Flow 1 egress (mean 7.70 Mbit/s)

Flow 1 (95th percentile 112.72 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-11-24 00:34:46
End at: 2019-11-24 00:35:16
Local clock offset: 3.941 ms
Remote clock offset: 4.463 ms


# Below is generated by plot.py at 2019-11-24 02:35:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 109.182 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 109.182 ms
Loss rate: 1.45%
```

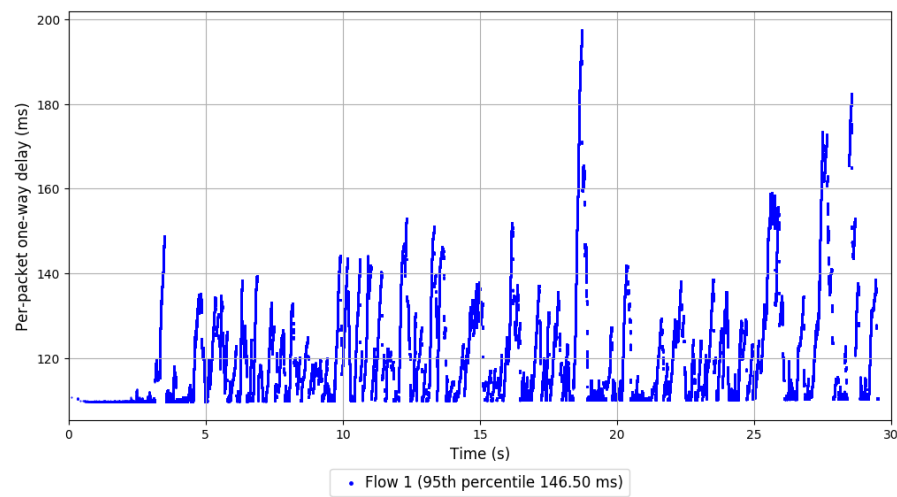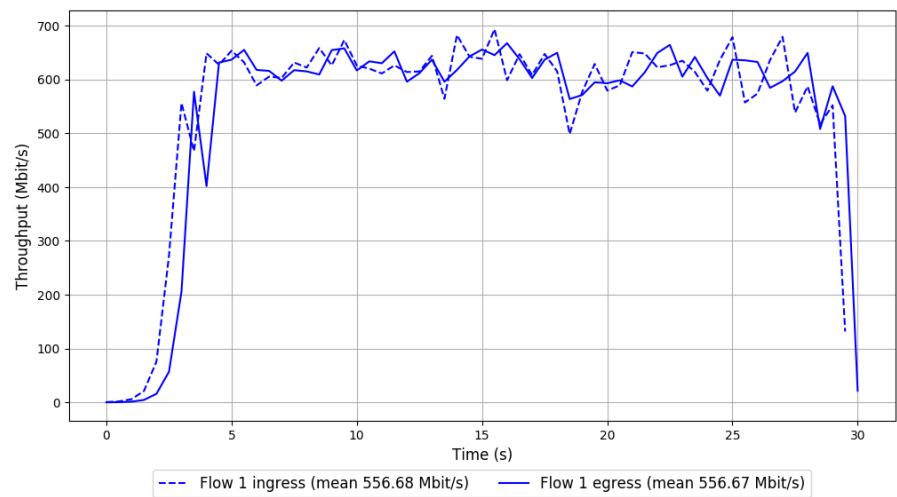Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-11-23 22:44:41
End at: 2019-11-23 22:45:11
Local clock offset: 24.625 ms
Remote clock offset: 46.756 ms


# Below is generated by plot.py at 2019-11-24 02:35:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 520.59 Mbit/s
95th percentile per-packet one-way delay: 143.918 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 520.59 Mbit/s
95th percentile per-packet one-way delay: 143.918 ms
Loss rate: 0.90%
```

Run 1: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 521.41 Mbit/s)   Flow 1 egress (mean 520.59 Mbit/s)

Flow 1 (95th percentile 143.92 ms)

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-11-23 23:20:19
End at: 2019-11-23 23:20:50
Local clock offset: 30.774 ms
Remote clock offset: 29.218 ms


# Below is generated by plot.py at 2019-11-24 02:36:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 561.26 Mbit/s
95th percentile per-packet one-way delay: 142.758 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 561.26 Mbit/s
95th percentile per-packet one-way delay: 142.758 ms
Loss rate: 0.90%
```
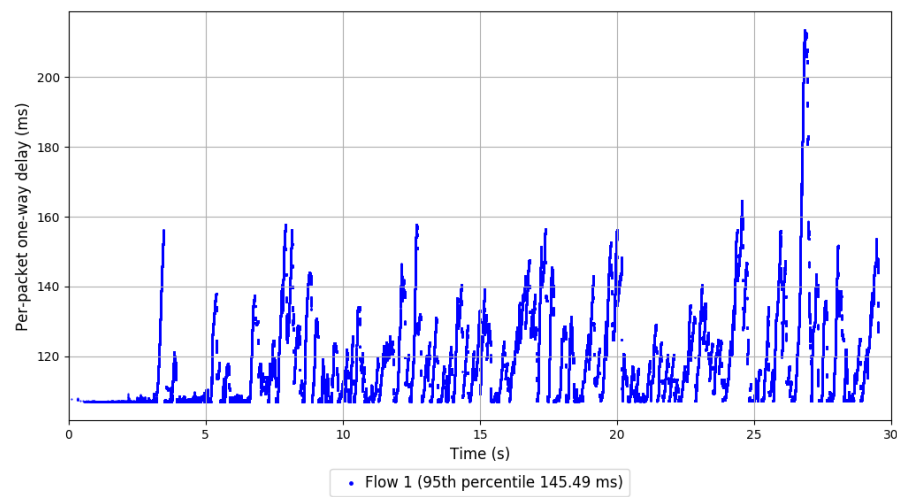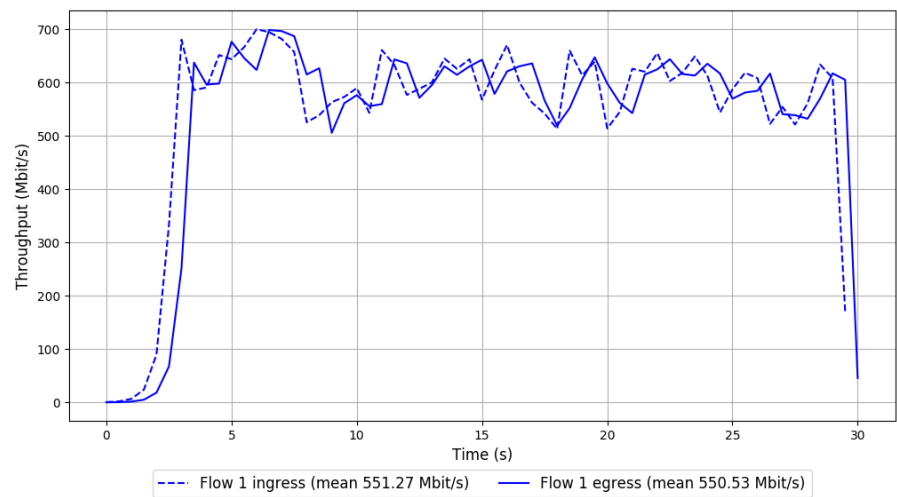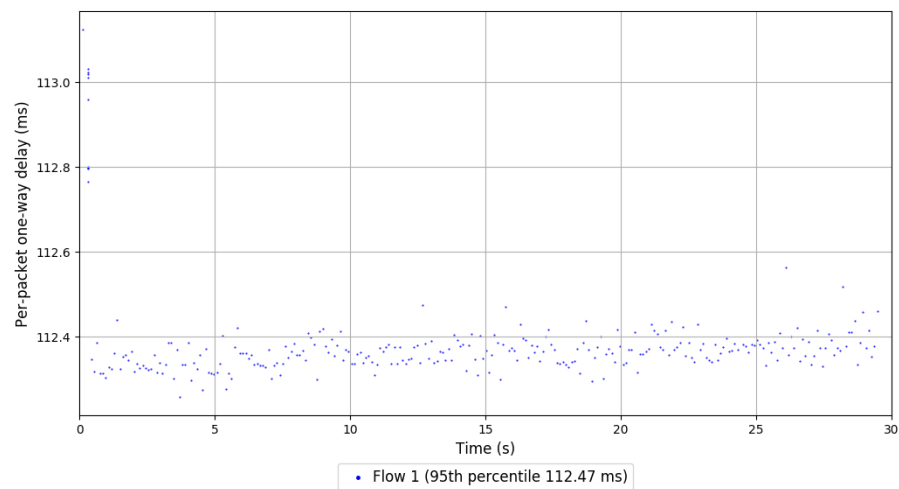
Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-11-23 23:55:59
End at: 2019-11-23 23:56:29
Local clock offset: 13.574 ms
Remote clock offset: 17.543 ms


# Below is generated by plot.py at 2019-11-24 02:36:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 556.67 Mbit/s
95th percentile per-packet one-way delay: 146.498 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 556.67 Mbit/s
95th percentile per-packet one-way delay: 146.498 ms
Loss rate: 0.74%
```
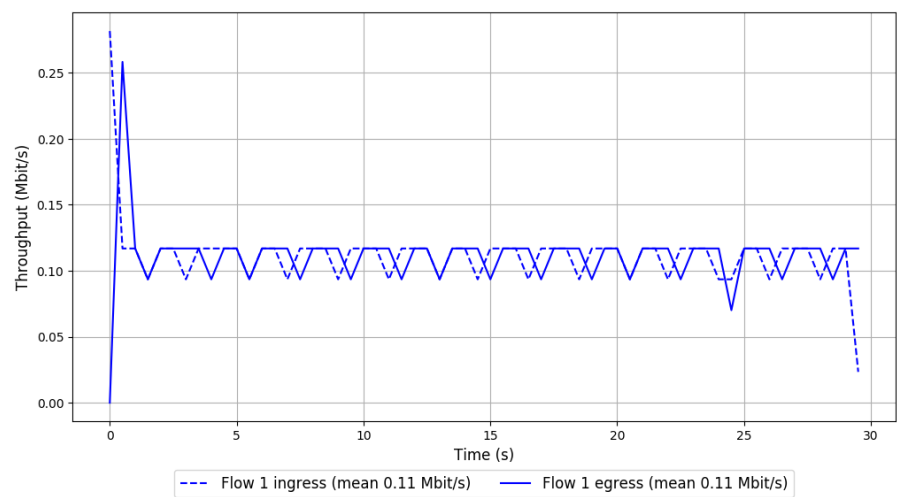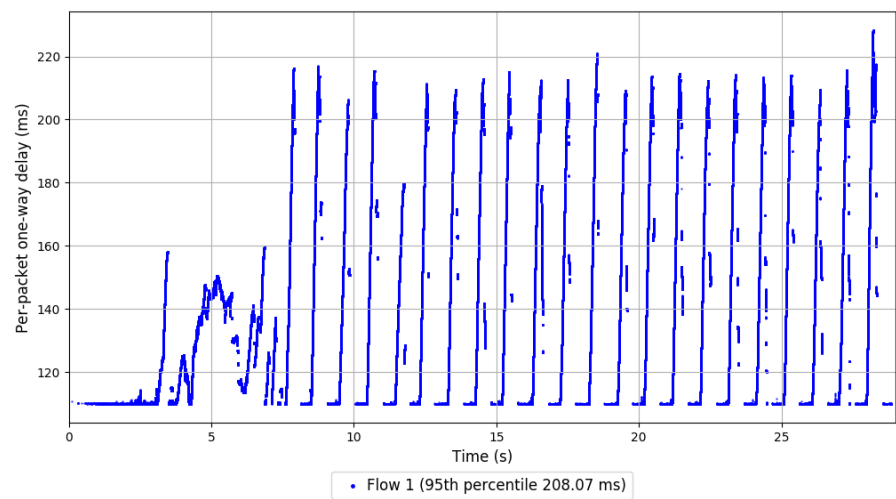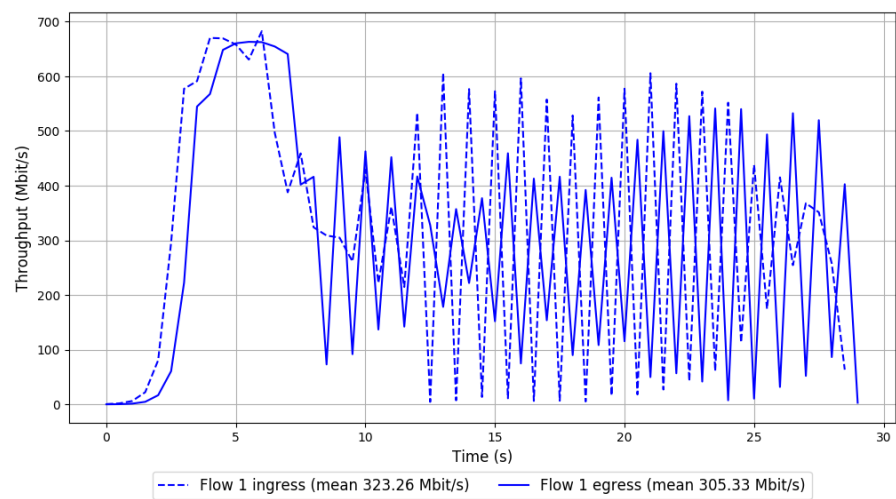
Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-11-24 00:31:53
End at: 2019-11-24 00:32:23
Local clock offset: 5.139 ms
Remote clock offset: 4.852 ms


# Below is generated by plot.py at 2019-11-24 02:36:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 550.53 Mbit/s
95th percentile per-packet one-way delay: 145.491 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 550.53 Mbit/s
95th percentile per-packet one-way delay: 145.491 ms
Loss rate: 0.87%
```
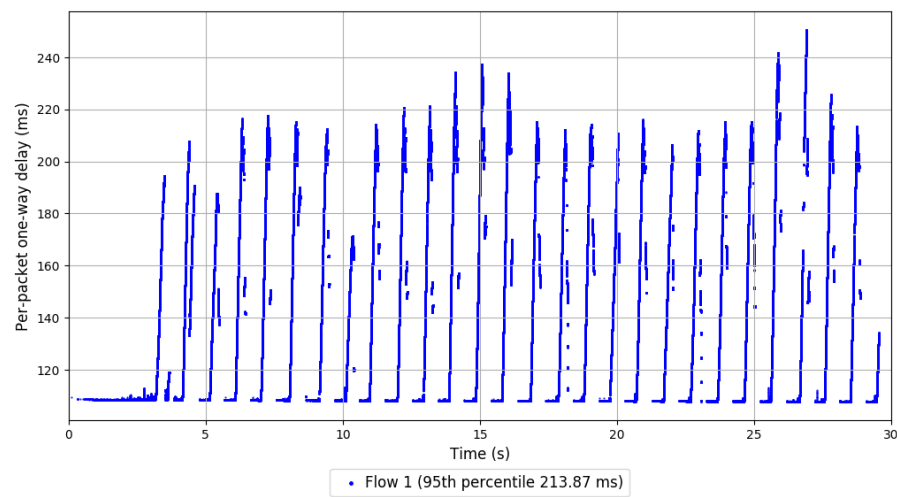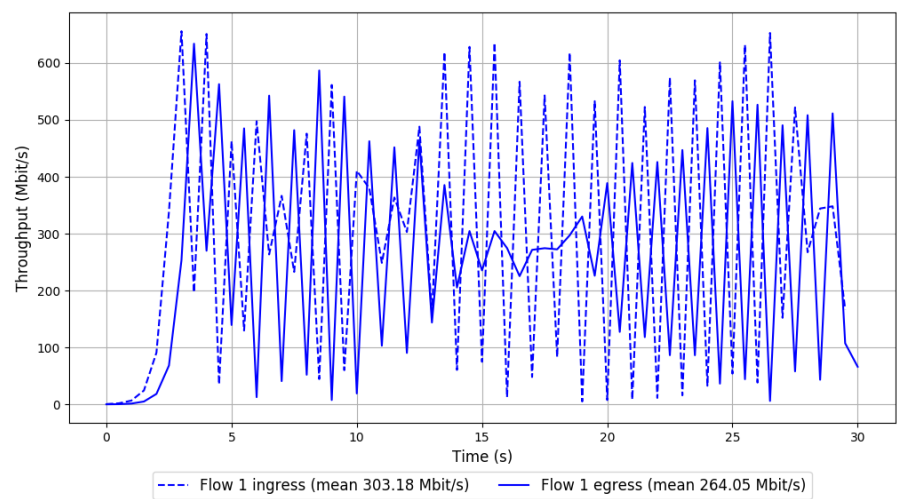
Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-11-24 01:07:39
End at: 2019-11-24 01:08:09
Local clock offset: 1.122 ms
Remote clock offset: 1.826 ms


# Below is generated by plot.py at 2019-11-24 02:36:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 112.471 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 112.471 ms
Loss rate: 0.70%
```

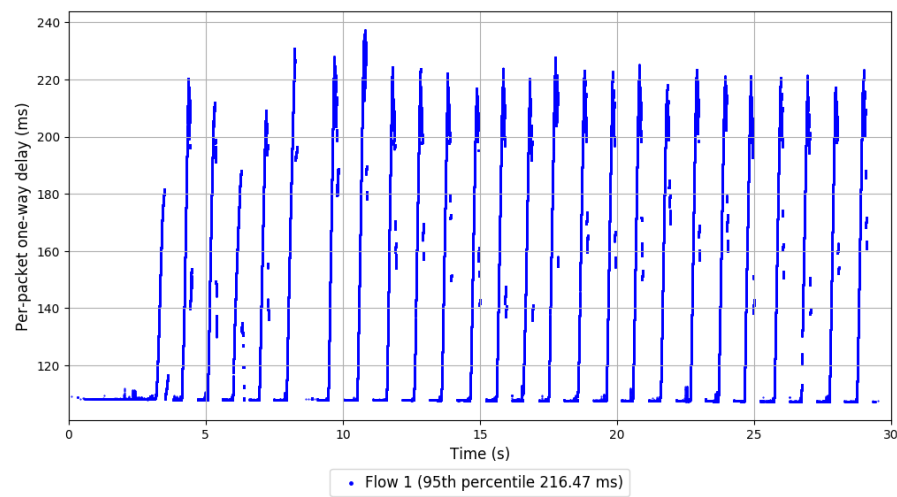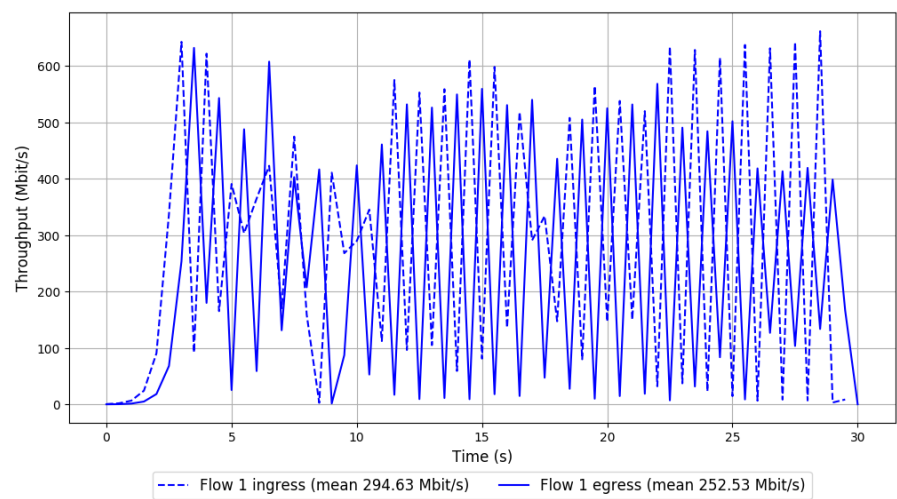Run 5: Report of Muses_DecisionTree — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-23 22:30:15
End at: 2019-11-23 22:30:45
Local clock offset: 13.394 ms
Remote clock offset: 30.653 ms


# Below is generated by plot.py at 2019-11-24 02:38:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 305.33 Mbit/s
95th percentile per-packet one-way delay: 208.069 ms
Loss rate: 6.27%
-- Flow 1:
Average throughput: 305.33 Mbit/s
95th percentile per-packet one-way delay: 208.069 ms
Loss rate: 6.27%
```

Run 1: Report of Muses_DecisionTreeH0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-23 23:05:50
End at: 2019-11-23 23:06:20
Local clock offset: 27.723 ms
Remote clock offset: 23.702 ms


# Below is generated by plot.py at 2019-11-24 02:38:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 264.05 Mbit/s
95th percentile per-packet one-way delay: 213.870 ms
Loss rate: 13.53%
-- Flow 1:
Average throughput: 264.05 Mbit/s
95th percentile per-packet one-way delay: 213.870 ms
Loss rate: 13.53%
```
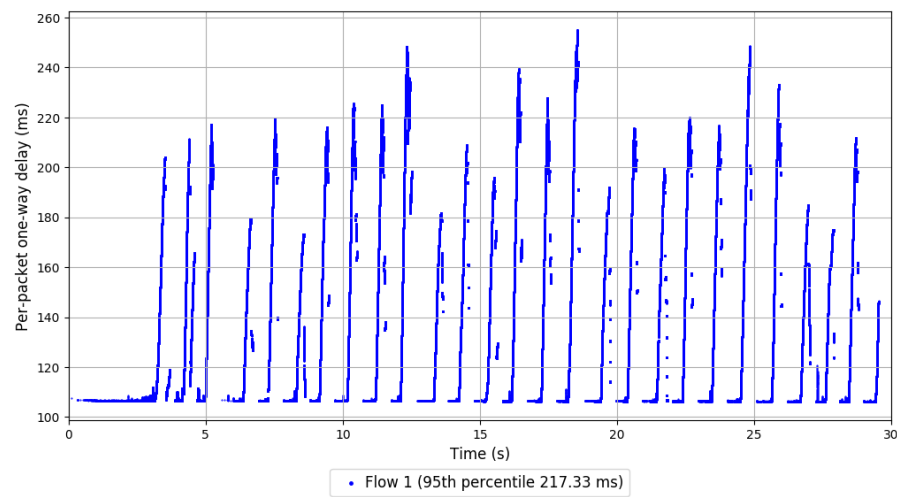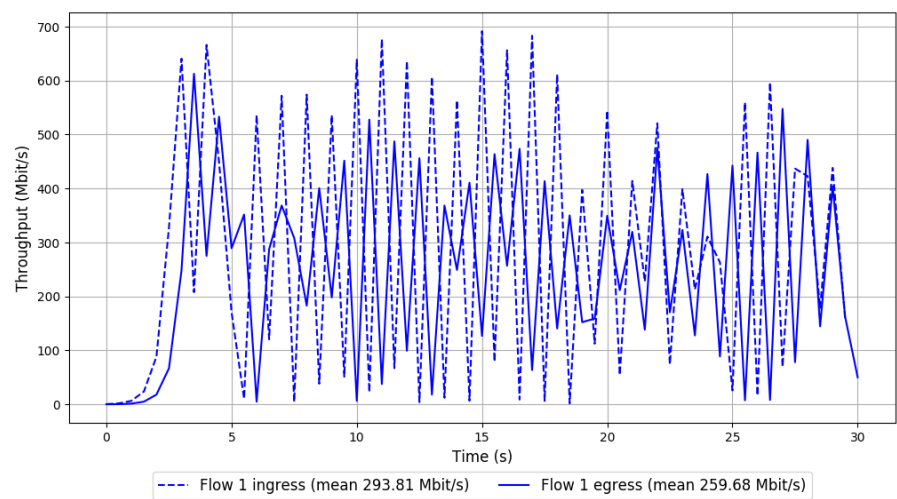
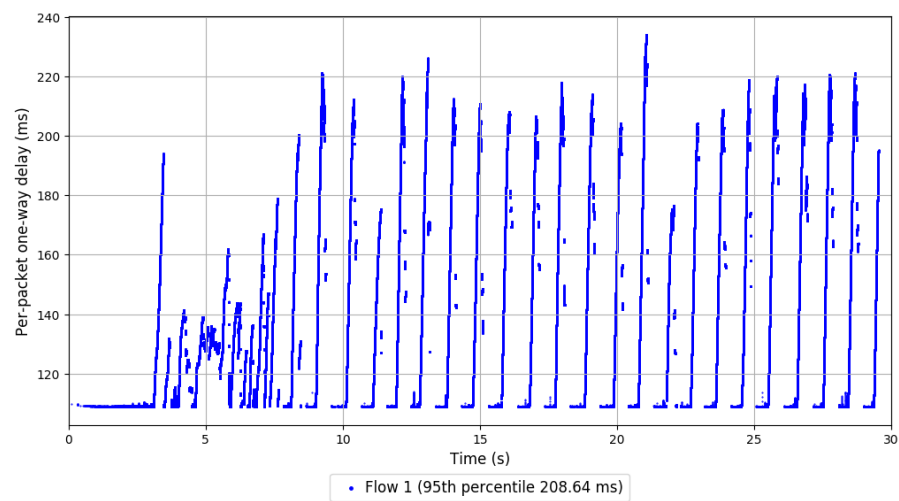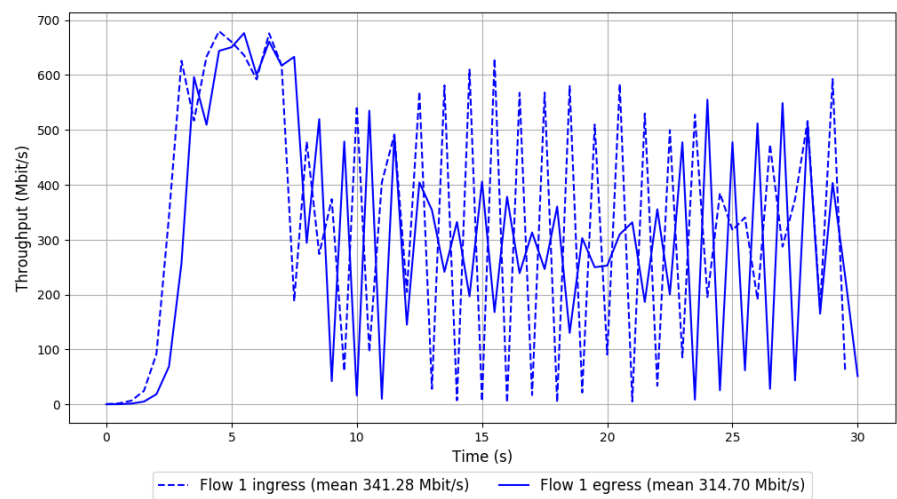Run 2: Report of Muses_DecisionTreeH0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-23 23:41:25
End at: 2019-11-23 23:41:55
Local clock offset: 15.809 ms
Remote clock offset: 24.624 ms


# Below is generated by plot.py at 2019-11-24 02:39:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 252.53 Mbit/s
95th percentile per-packet one-way delay: 216.472 ms
Loss rate: 14.92%
-- Flow 1:
Average throughput: 252.53 Mbit/s
95th percentile per-packet one-way delay: 216.472 ms
Loss rate: 14.92%
```
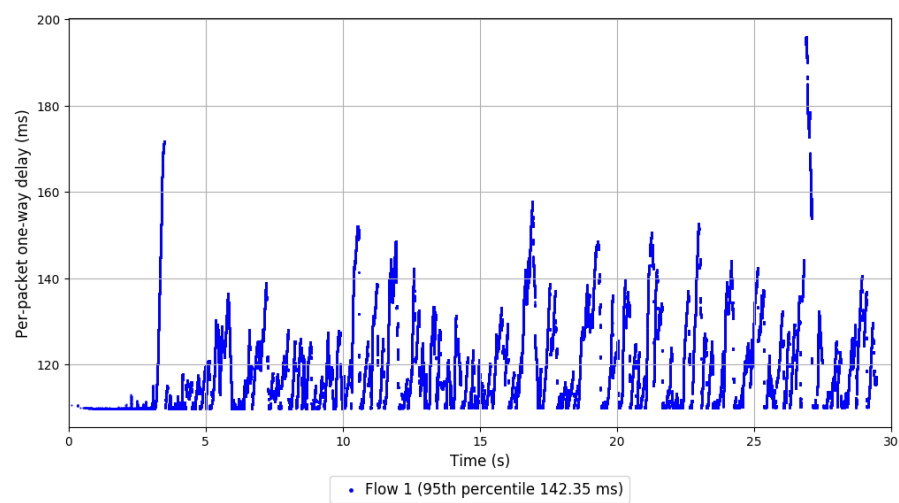
Run 3: Report of Muses_DecisionTreeH0 — Data Link

130

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-24 00:17:21
End at: 2019-11-24 00:17:51
Local clock offset: 8.176 ms
Remote clock offset: 9.513 ms


# Below is generated by plot.py at 2019-11-24 02:40:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 259.68 Mbit/s
95th percentile per-packet one-way delay: 217.330 ms
Loss rate: 12.25%
-- Flow 1:
Average throughput: 259.68 Mbit/s
95th percentile per-packet one-way delay: 217.330 ms
Loss rate: 12.25%
```

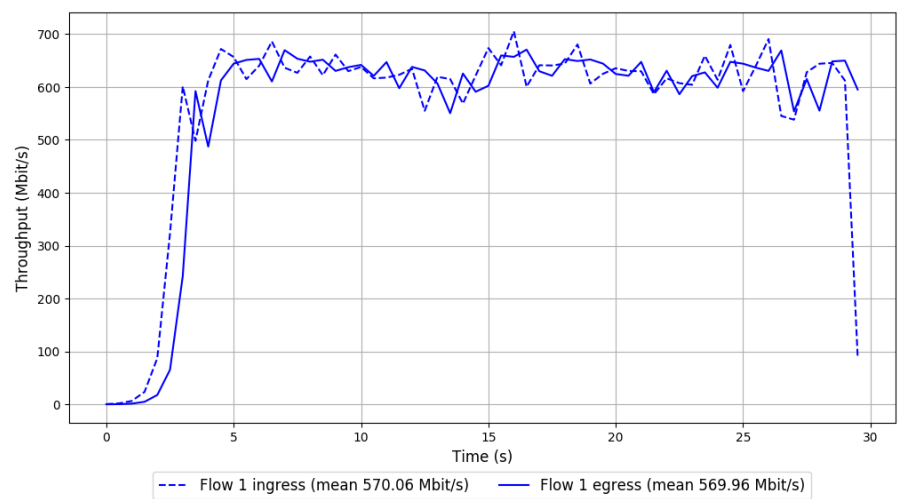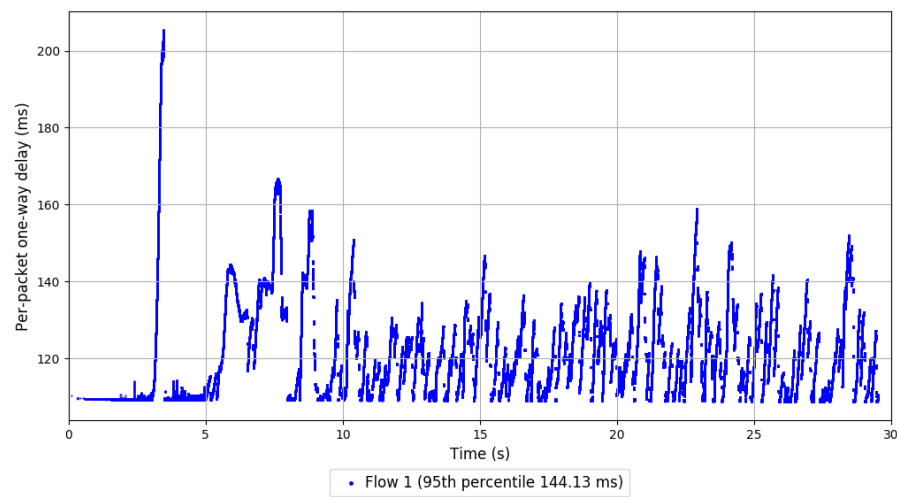Run 4: Report of Muses_DecisionTreeH0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-24 00:53:00
End at: 2019-11-24 00:53:30
Local clock offset: 1.939 ms
Remote clock offset: 2.204 ms


# Below is generated by plot.py at 2019-11-24 02:41:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 314.70 Mbit/s
95th percentile per-packet one-way delay: 208.644 ms
Loss rate: 8.19%
-- Flow 1:
Average throughput: 314.70 Mbit/s
95th percentile per-packet one-way delay: 208.644 ms
Loss rate: 8.19%
```

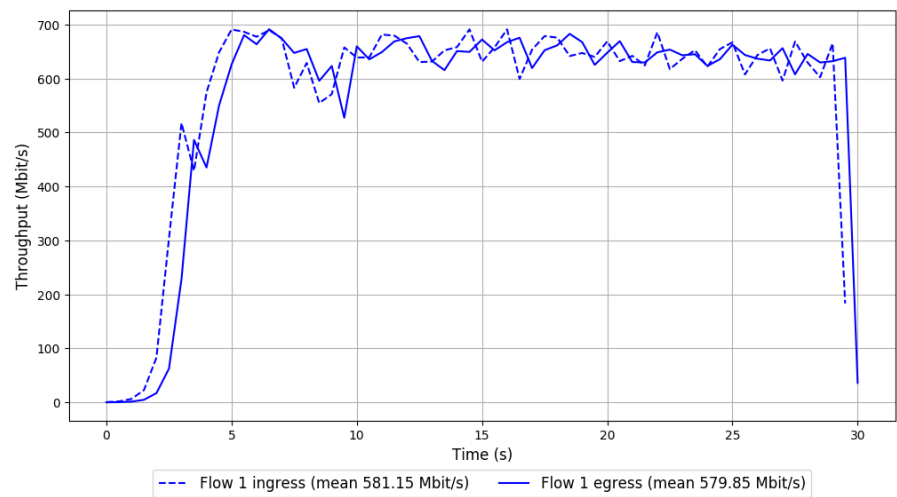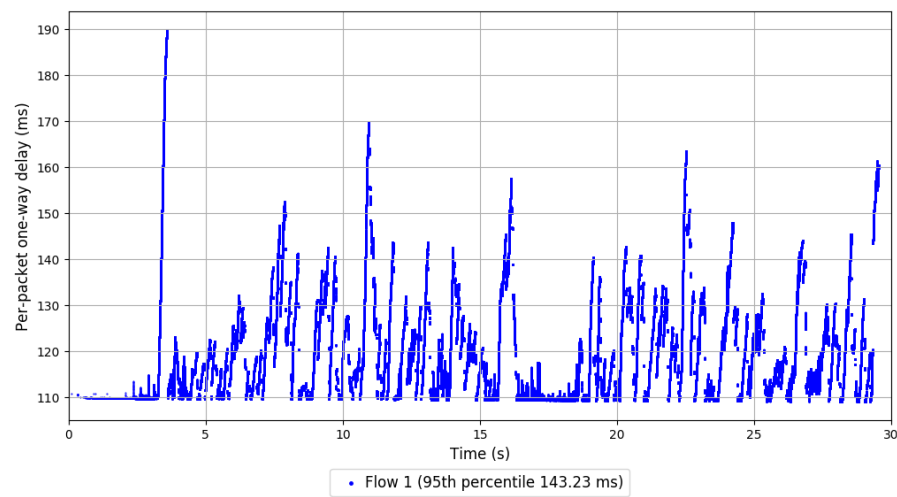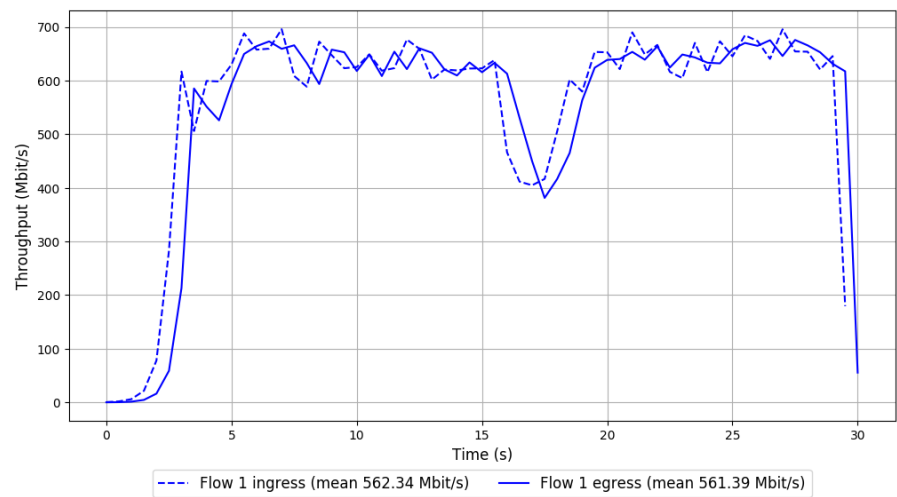Run 5: Report of Muses_DecisionTreeH0 — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-23 22:31:41
End at: 2019-11-23 22:32:11
Local clock offset: 13.281 ms
Remote clock offset: 31.212 ms


# Below is generated by plot.py at 2019-11-24 02:47:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 569.96 Mbit/s
95th percentile per-packet one-way delay: 142.348 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 569.96 Mbit/s
95th percentile per-packet one-way delay: 142.348 ms
Loss rate: 0.77%
```

Run 1: Report of Muses_DecisionTreeR0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-23 23:07:14
End at: 2019-11-23 23:07:44
Local clock offset: 29.115 ms
Remote clock offset: 22.946 ms


# Below is generated by plot.py at 2019-11-24 02:47:31
# Datalink statistics
-- Total of 1 flow:
Average throughput: 579.85 Mbit/s
95th percentile per-packet one-way delay: 144.132 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 579.85 Mbit/s
95th percentile per-packet one-way delay: 144.132 ms
Loss rate: 0.96%
```
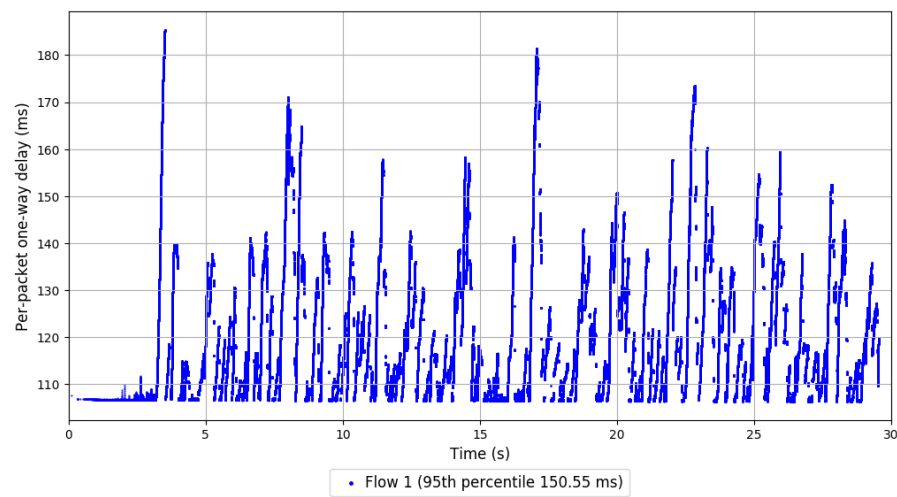
Run 2: Report of Muses_DecisionTreeR0 — Data Link

Run 2: Report of Muses_DecisionTreeR0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-23 23:42:50
End at: 2019-11-23 23:43:20
Local clock offset: 16.258 ms
Remote clock offset: 22.153 ms


# Below is generated by plot.py at 2019-11-24 02:47:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 561.39 Mbit/s
95th percentile per-packet one-way delay: 143.231 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 561.39 Mbit/s
95th percentile per-packet one-way delay: 143.231 ms
Loss rate: 0.91%
```
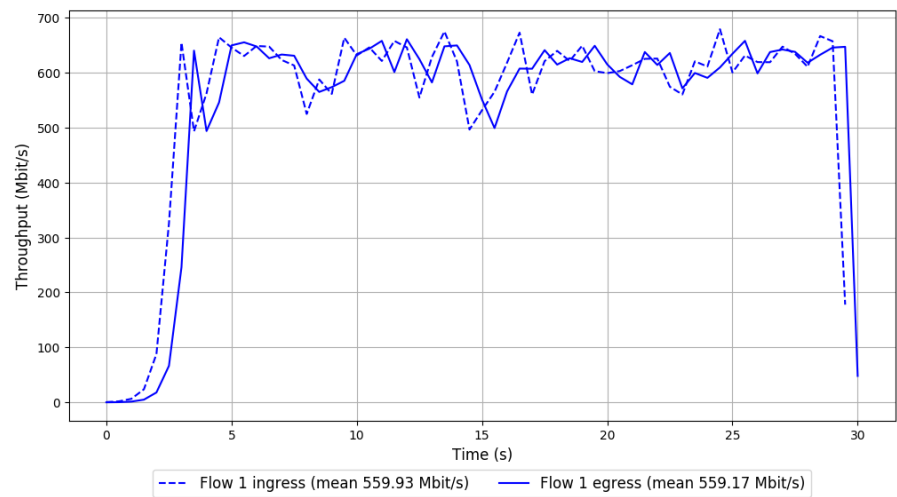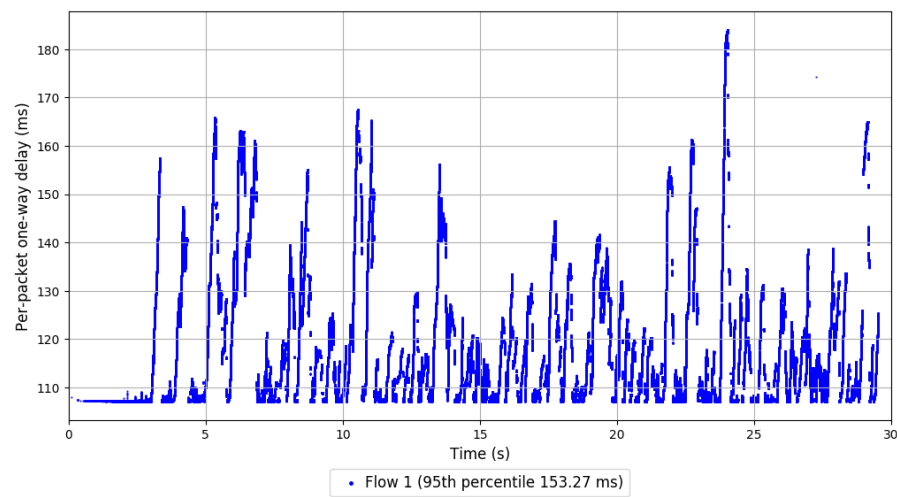
Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-24 00:18:45
End at: 2019-11-24 00:19:15
Local clock offset: 8.189 ms
Remote clock offset: 8.336 ms


# Below is generated by plot.py at 2019-11-24 02:49:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 559.17 Mbit/s
95th percentile per-packet one-way delay: 150.549 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 559.17 Mbit/s
95th percentile per-packet one-way delay: 150.549 ms
Loss rate: 0.87%
```
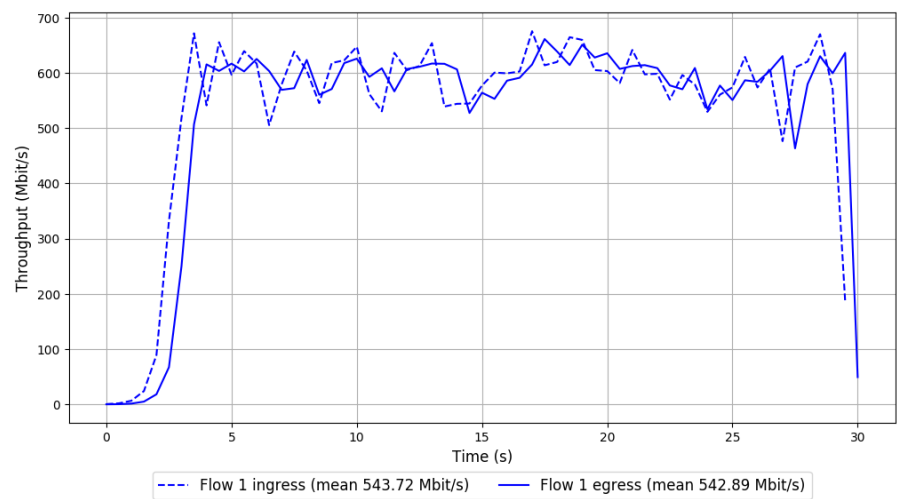
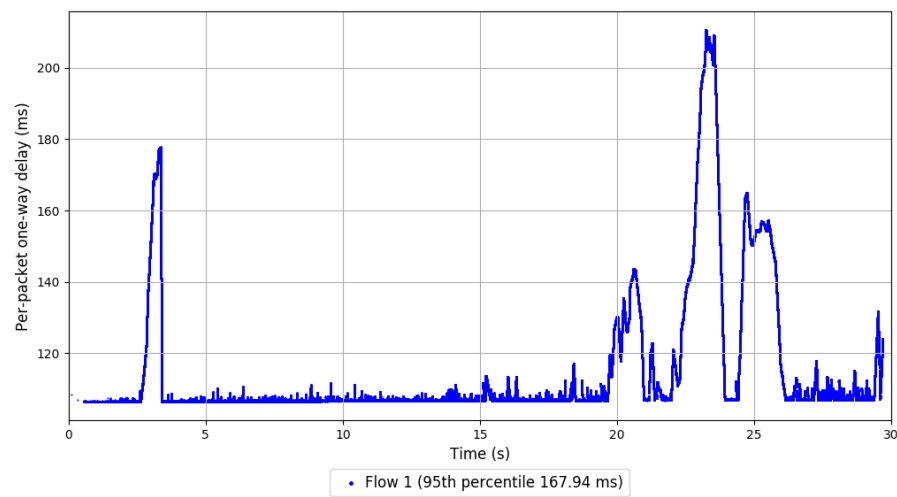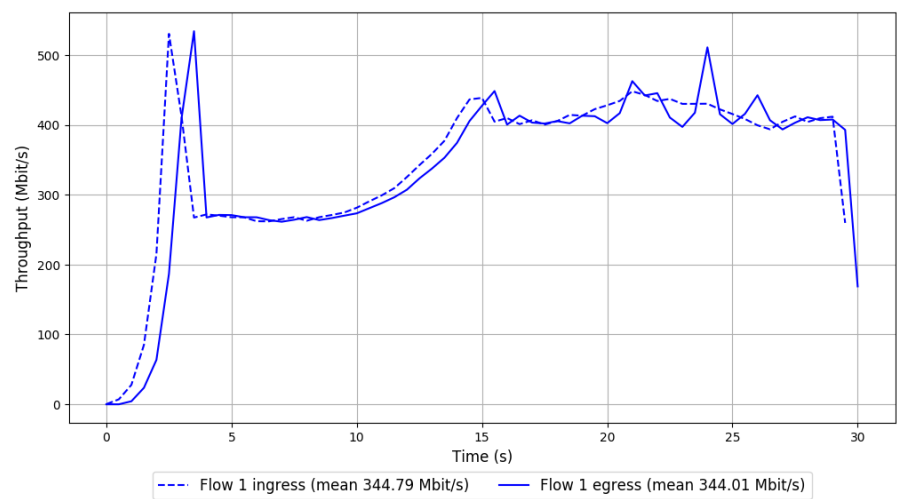Run 4: Report of Muses_DecisionTreeR0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-24 00:54:27
End at: 2019-11-24 00:54:57
Local clock offset: 1.995 ms
Remote clock offset: 1.734 ms


# Below is generated by plot.py at 2019-11-24 02:49:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 542.89 Mbit/s
95th percentile per-packet one-way delay: 153.267 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 542.89 Mbit/s
95th percentile per-packet one-way delay: 153.267 ms
Loss rate: 0.89%
```

Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-11-23 22:33:20
End at: 2019-11-23 22:33:50
Local clock offset: 14.008 ms
Remote clock offset: 33.598 ms


# Below is generated by plot.py at 2019-11-24 02:52:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 344.01 Mbit/s
95th percentile per-packet one-way delay: 167.945 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 344.01 Mbit/s
95th percentile per-packet one-way delay: 167.945 ms
Loss rate: 0.96%
```
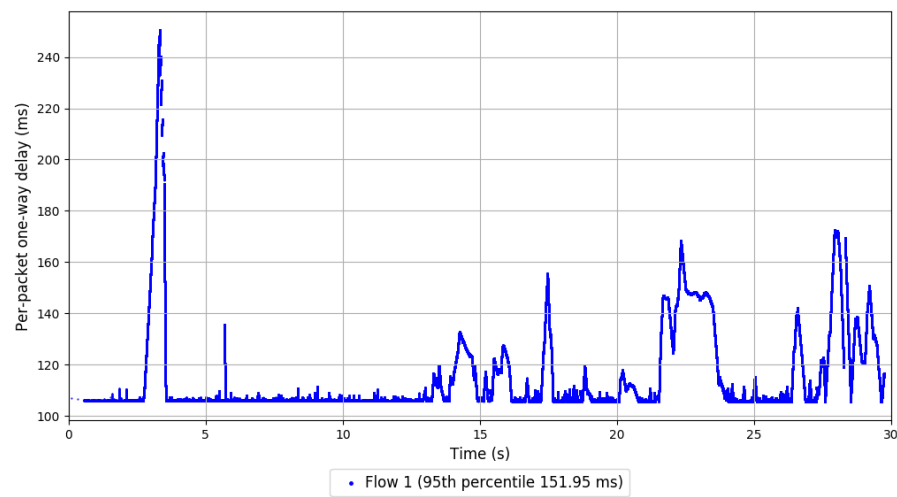
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-11-23 23:08:54
End at: 2019-11-23 23:09:24
Local clock offset: 30.465 ms
Remote clock offset: 22.631 ms


# Below is generated by plot.py at 2019-11-24 02:53:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 349.92 Mbit/s
95th percentile per-packet one-way delay: 151.947 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 349.92 Mbit/s
95th percentile per-packet one-way delay: 151.947 ms
Loss rate: 1.58%
```
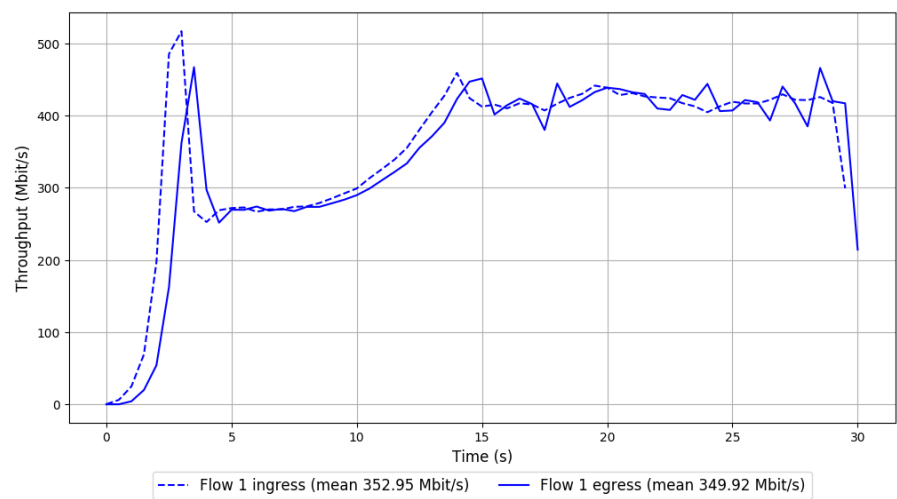
Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-11-23 23:44:29
End at: 2019-11-23 23:44:59
Local clock offset: 17.064 ms
Remote clock offset: 20.316 ms


# Below is generated by plot.py at 2019-11-24 02:54:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 348.97 Mbit/s
95th percentile per-packet one-way delay: 215.913 ms
Loss rate: 1.92%
-- Flow 1:
Average throughput: 348.97 Mbit/s
95th percentile per-packet one-way delay: 215.913 ms
Loss rate: 1.92%
```
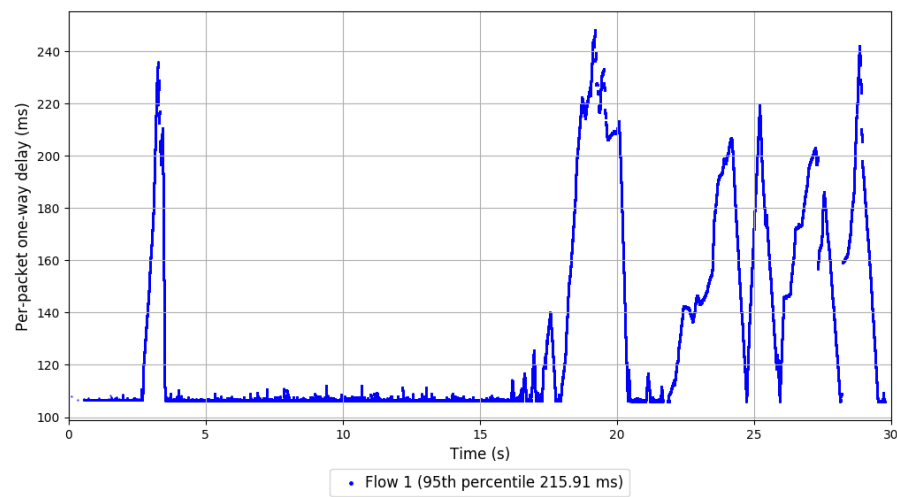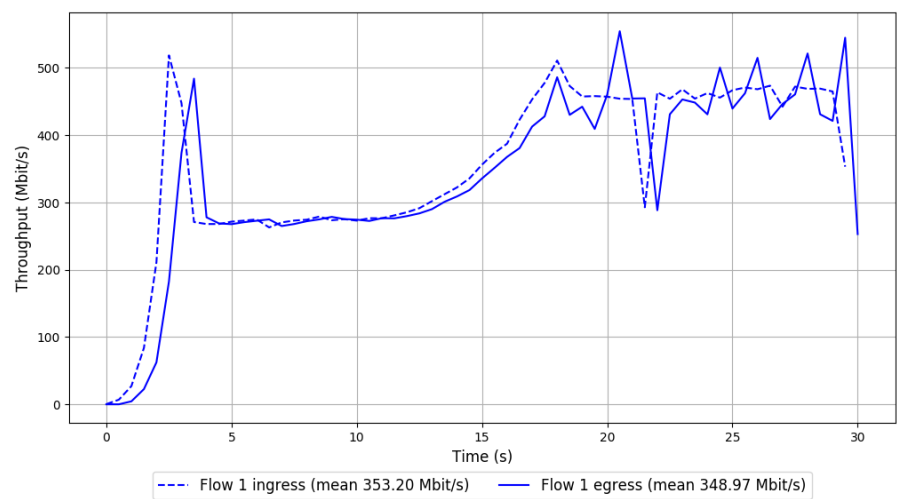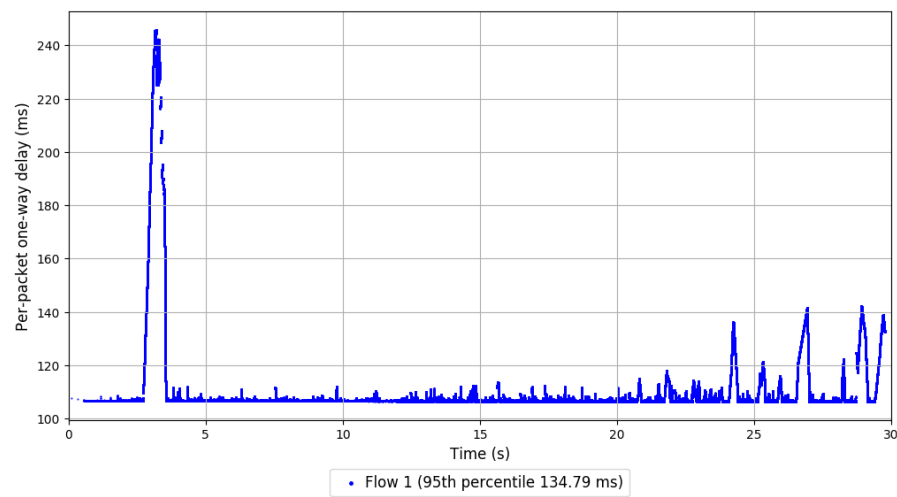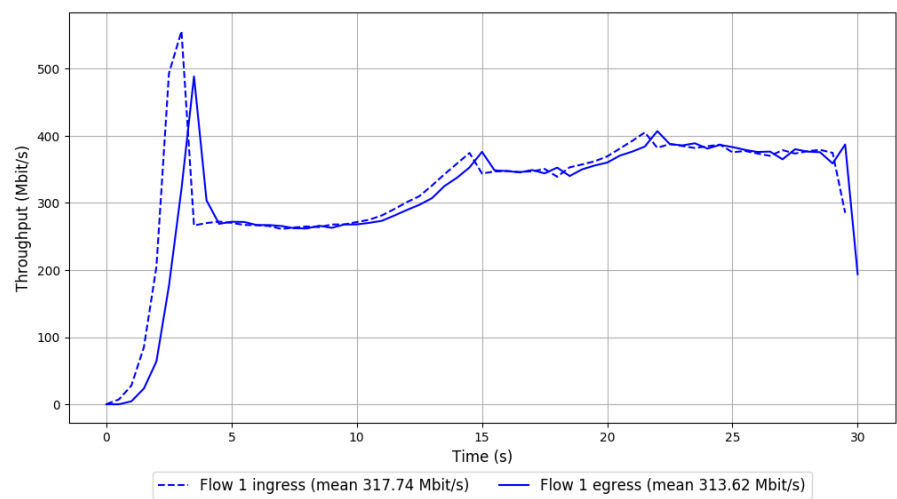
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 353.20 Mbit/s)   Flow 1 egress (mean 348.97 Mbit/s)

• Flow 1 (95th percentile 215.91 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-11-24 00:20:25
End at: 2019-11-24 00:20:55
Local clock offset: 8.551 ms
Remote clock offset: 7.376 ms


# Below is generated by plot.py at 2019-11-24 02:59:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 313.62 Mbit/s
95th percentile per-packet one-way delay: 134.786 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 313.62 Mbit/s
95th percentile per-packet one-way delay: 134.786 ms
Loss rate: 2.02%
```
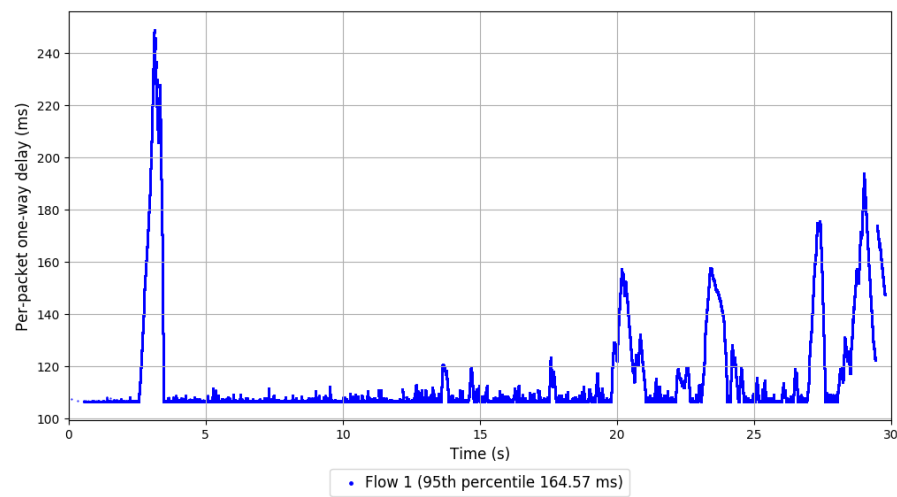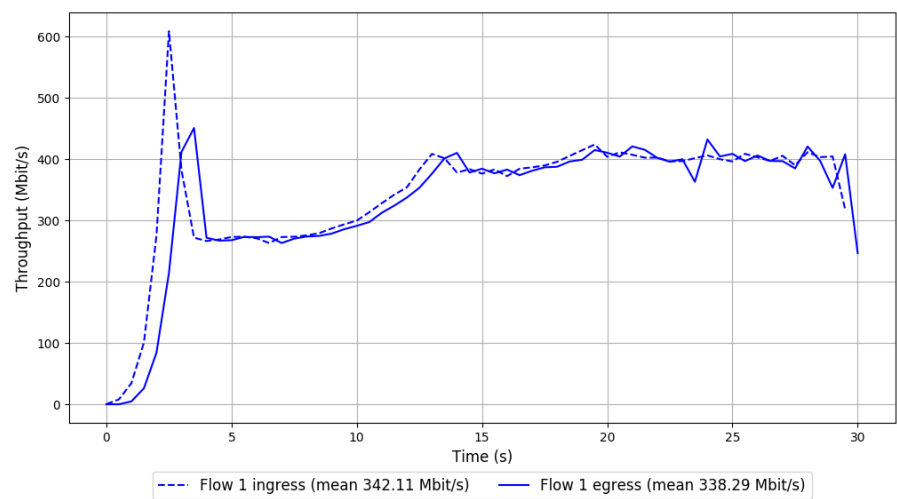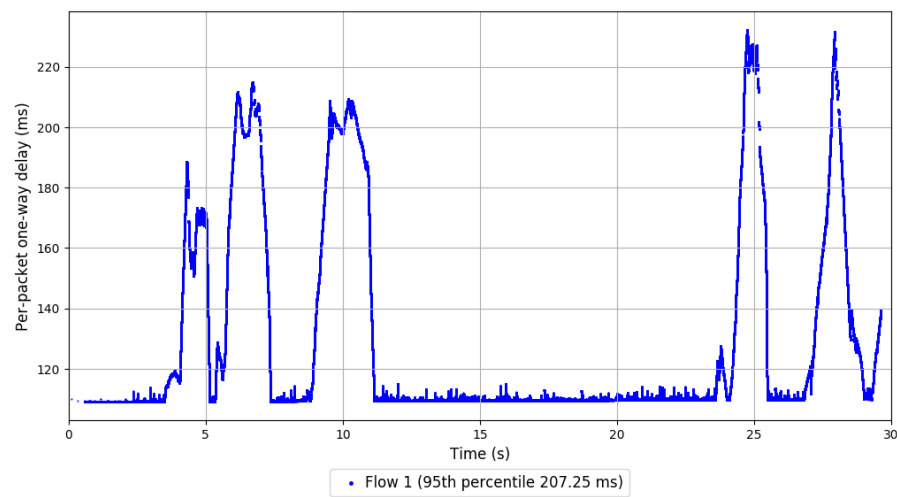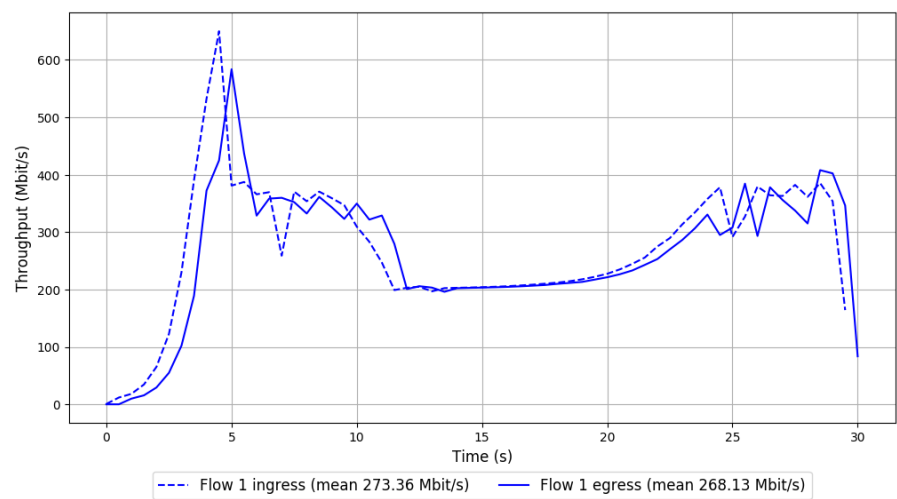
Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 317.74 Mbit/s) —— Flow 1 egress (mean 313.62 Mbit/s)

• Flow 1 (95th percentile 134.79 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-11-24 00:56:05
End at: 2019-11-24 00:56:35
Local clock offset: 1.969 ms
Remote clock offset: 1.941 ms


# Below is generated by plot.py at 2019-11-24 03:00:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 338.29 Mbit/s
95th percentile per-packet one-way delay: 164.566 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 338.29 Mbit/s
95th percentile per-packet one-way delay: 164.566 ms
Loss rate: 1.84%
```

Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 342.11 Mbit/s)   Flow 1 egress (mean 338.29 Mbit/s)
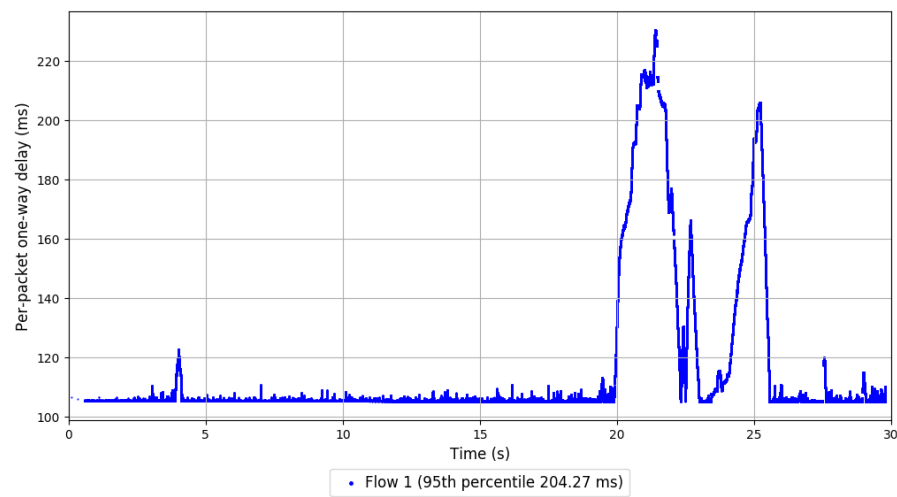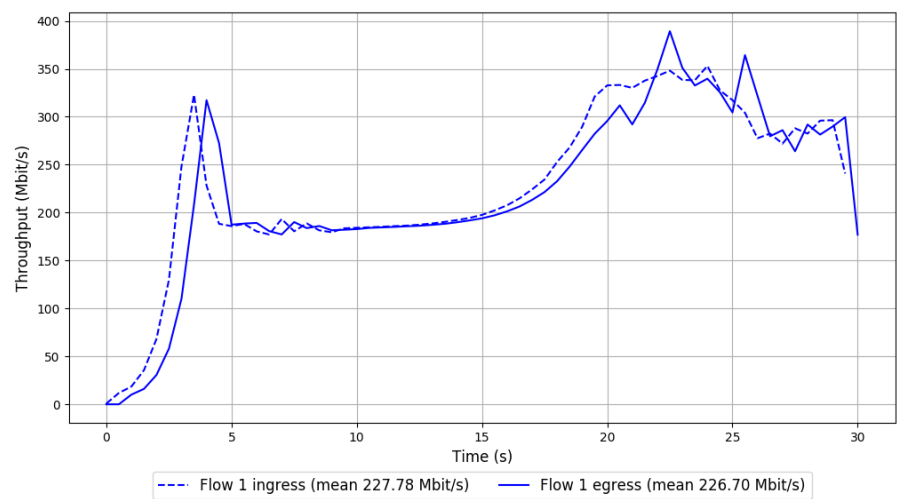

Flow 1 (95th percentile 164.57 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2019-11-23 22:36:19
End at: 2019-11-23 22:36:49
Local clock offset: 16.844 ms
Remote clock offset: 39.817 ms

# Below is generated by plot.py at 2019-11-24 03:00:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 268.13 Mbit/s
95th percentile per-packet one-way delay: 207.248 ms
Loss rate: 2.65%
-- Flow 1:
Average throughput: 268.13 Mbit/s
95th percentile per-packet one-way delay: 207.248 ms
Loss rate: 2.65%
```
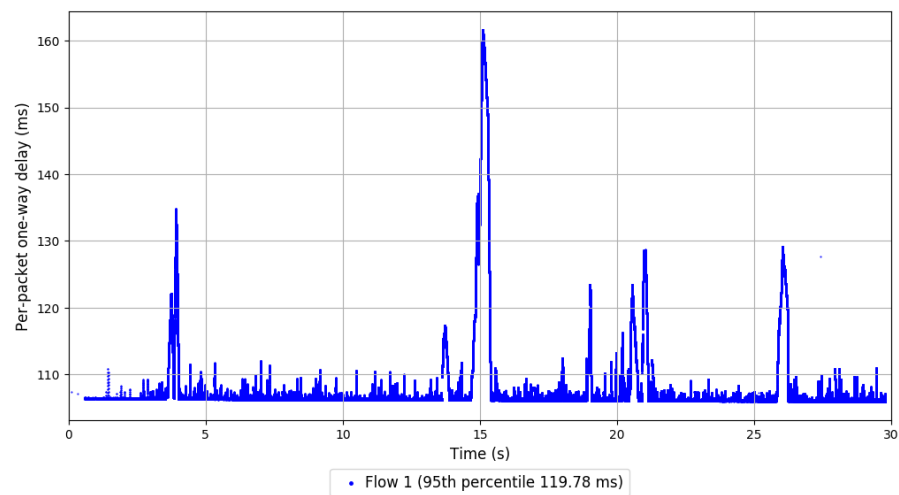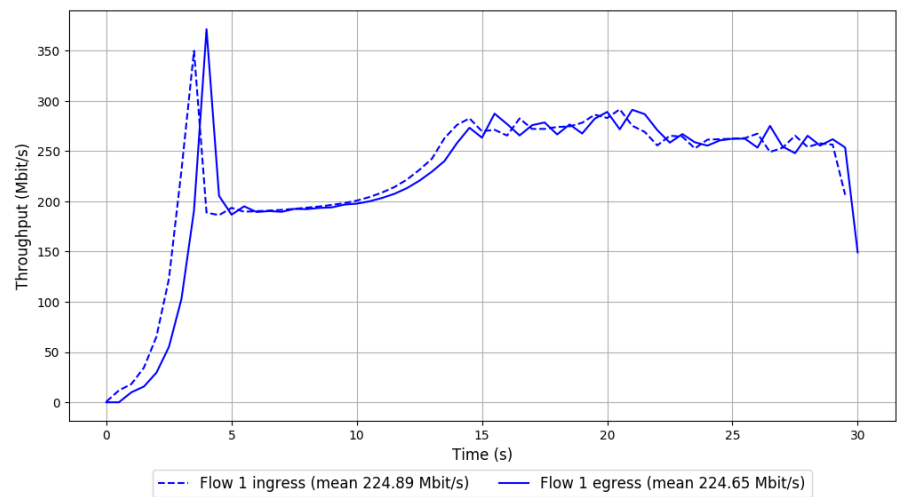
Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-11-23 23:11:56
End at: 2019-11-23 23:12:26
Local clock offset: 33.574 ms
Remote clock offset: 23.203 ms


# Below is generated by plot.py at 2019-11-24 03:00:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 226.70 Mbit/s
95th percentile per-packet one-way delay: 204.274 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 226.70 Mbit/s
95th percentile per-packet one-way delay: 204.274 ms
Loss rate: 1.20%
```

Run 2: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 227.78 Mbit/s)   Flow 1 egress (mean 226.70 Mbit/s)

• Flow 1 (95th percentile 204.27 ms)

```
Run 3: Statistics of PCC-Expr

Start at: 2019-11-23 23:47:32
End at: 2019-11-23 23:48:02
Local clock offset: 18.194 ms
Remote clock offset: 18.258 ms

# Below is generated by plot.py at 2019-11-24 03:00:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 224.65 Mbit/s
95th percentile per-packet one-way delay: 119.775 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 224.65 Mbit/s
95th percentile per-packet one-way delay: 119.775 ms
Loss rate: 0.83%
```
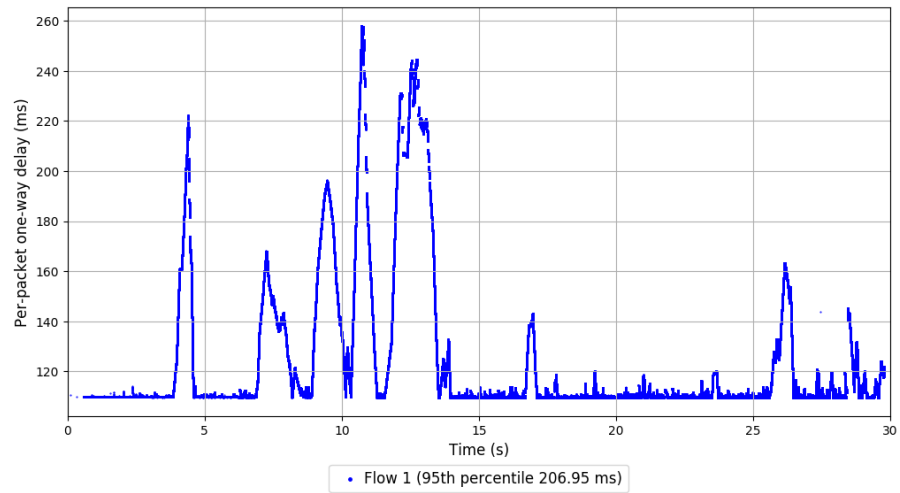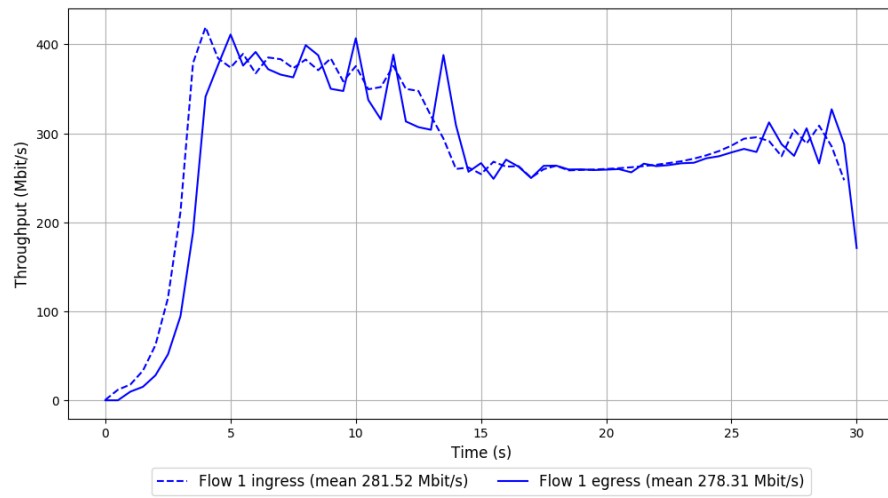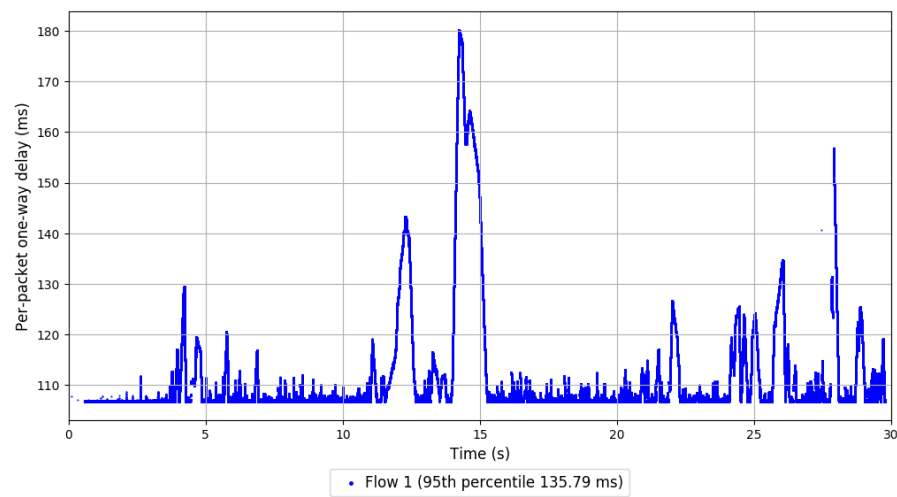
Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 224.89 Mbit/s)   Flow 1 egress (mean 224.65 Mbit/s)

Flow 1 (95th percentile 119.78 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2019-11-24 00:23:26
End at: 2019-11-24 00:23:56
Local clock offset: 9.091 ms
Remote clock offset: 6.148 ms

# Below is generated by plot.py at 2019-11-24 03:02:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 278.31 Mbit/s
95th percentile per-packet one-way delay: 206.952 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 278.31 Mbit/s
95th percentile per-packet one-way delay: 206.952 ms
Loss rate: 1.87%
```
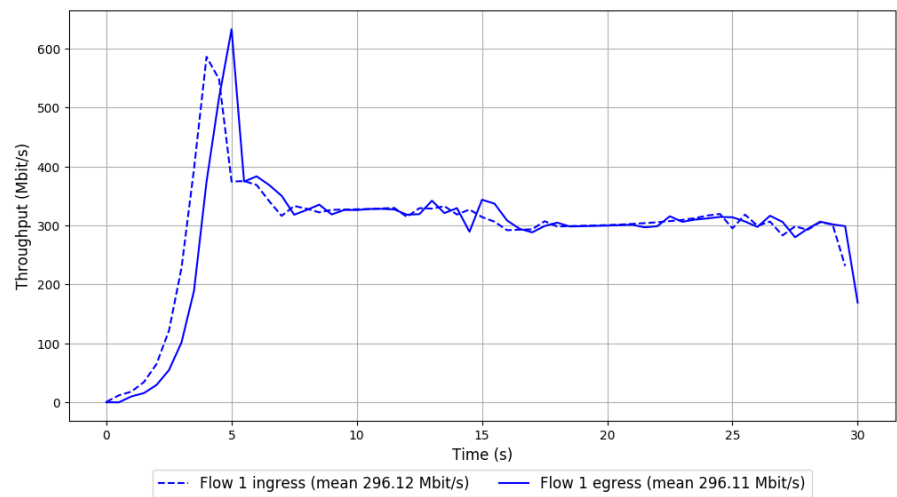
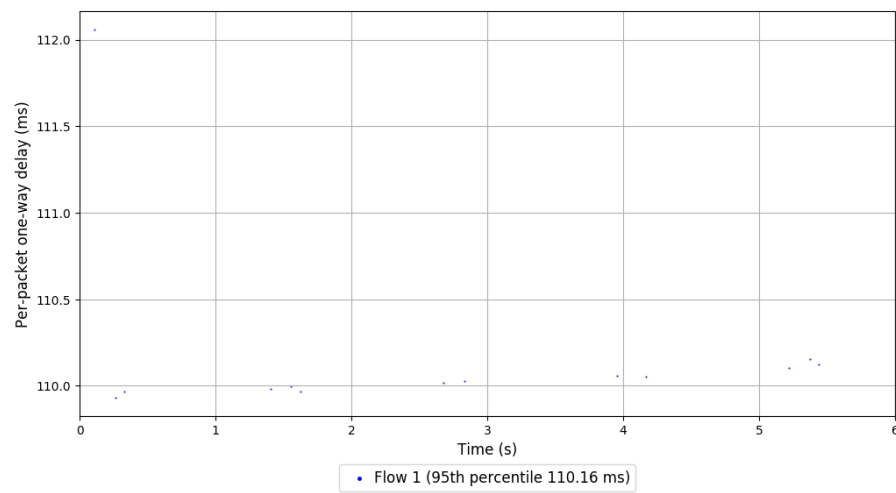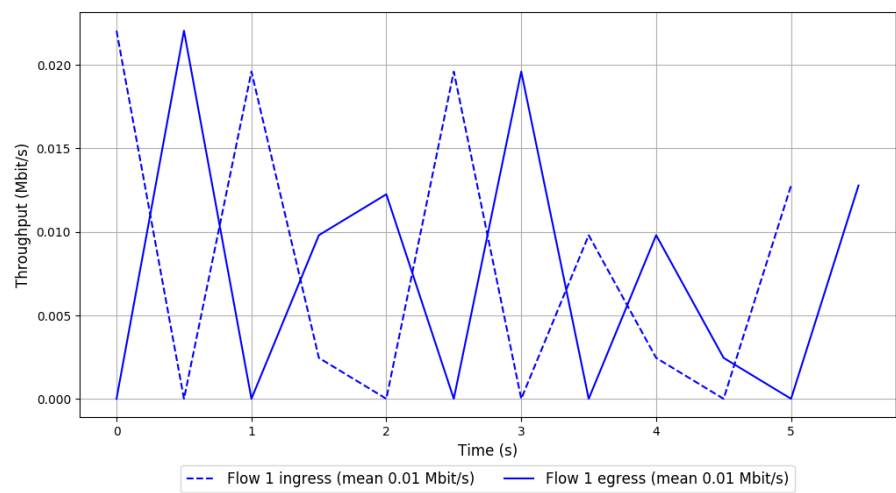Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-11-24 00:59:13
End at: 2019-11-24 00:59:43
Local clock offset: 2.287 ms
Remote clock offset: 1.771 ms


# Below is generated by plot.py at 2019-11-24 03:05:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 296.11 Mbit/s
95th percentile per-packet one-way delay: 135.791 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 296.11 Mbit/s
95th percentile per-packet one-way delay: 135.791 ms
Loss rate: 0.73%
```

Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-11-23 22:37:53
End at: 2019-11-23 22:38:23
Local clock offset: 19.079 ms
Remote clock offset: 44.759 ms
```

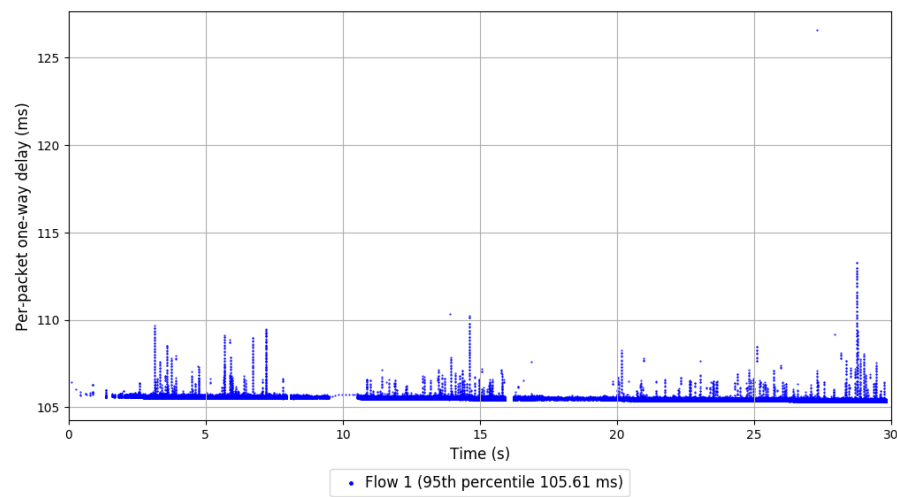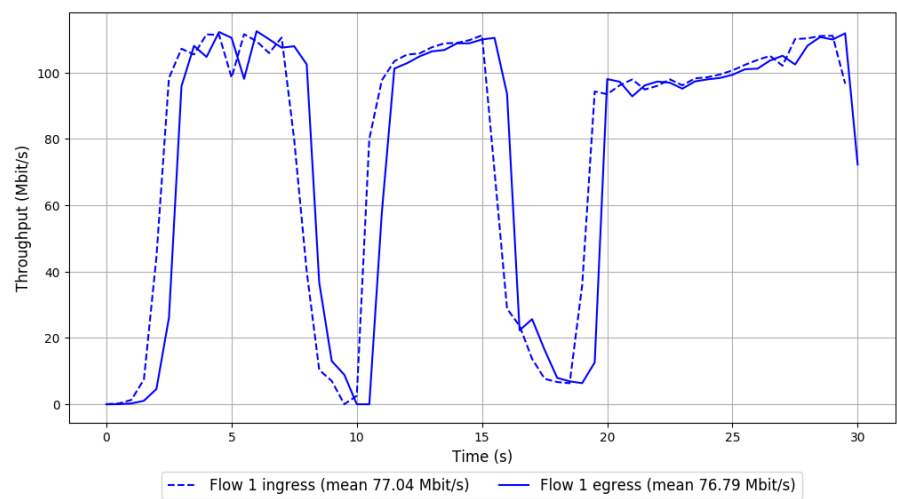Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-11-23 23:13:27
End at: 2019-11-23 23:13:57
Local clock offset: 35.318 ms
Remote clock offset: 23.882 ms


# Below is generated by plot.py at 2019-11-24 03:05:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.79 Mbit/s
95th percentile per-packet one-way delay: 105.610 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 76.79 Mbit/s
95th percentile per-packet one-way delay: 105.610 ms
Loss rate: 1.04%
```
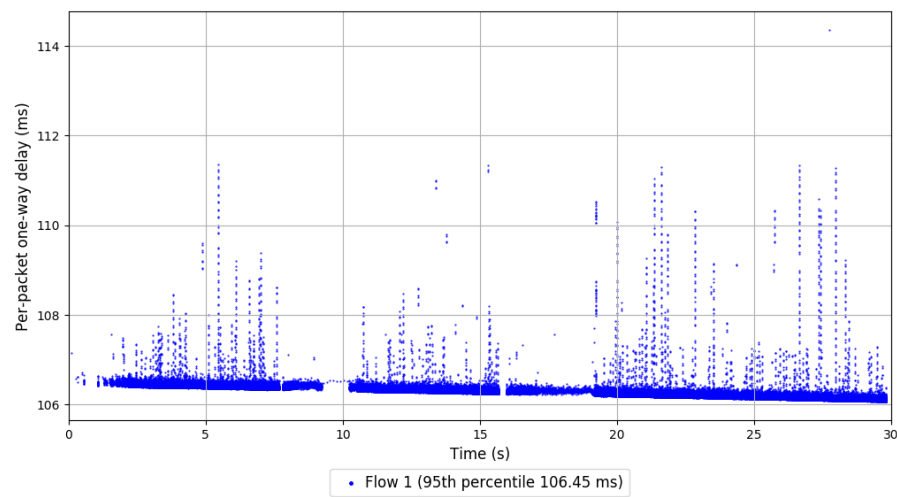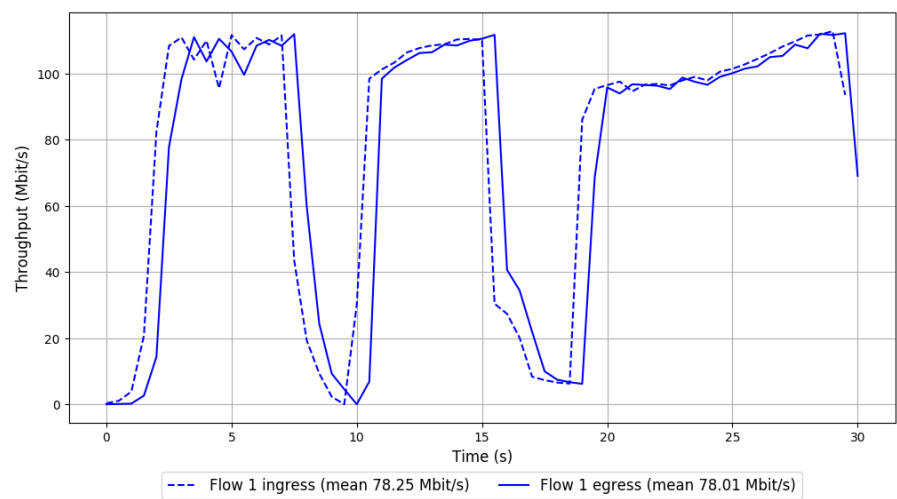
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-11-23 23:49:04
End at: 2019-11-23 23:49:34
Local clock offset: 18.907 ms
Remote clock offset: 17.593 ms


# Below is generated by plot.py at 2019-11-24 03:05:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.01 Mbit/s
95th percentile per-packet one-way delay: 106.446 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 78.01 Mbit/s
95th percentile per-packet one-way delay: 106.446 ms
Loss rate: 1.04%
```
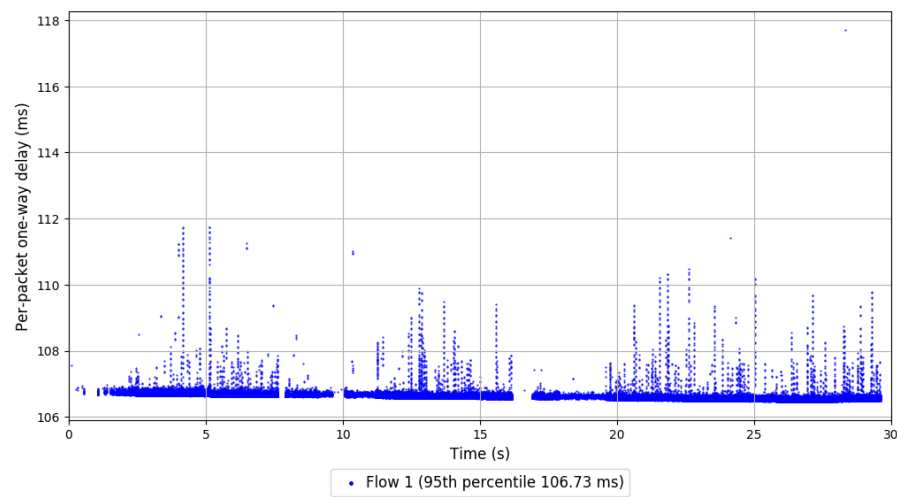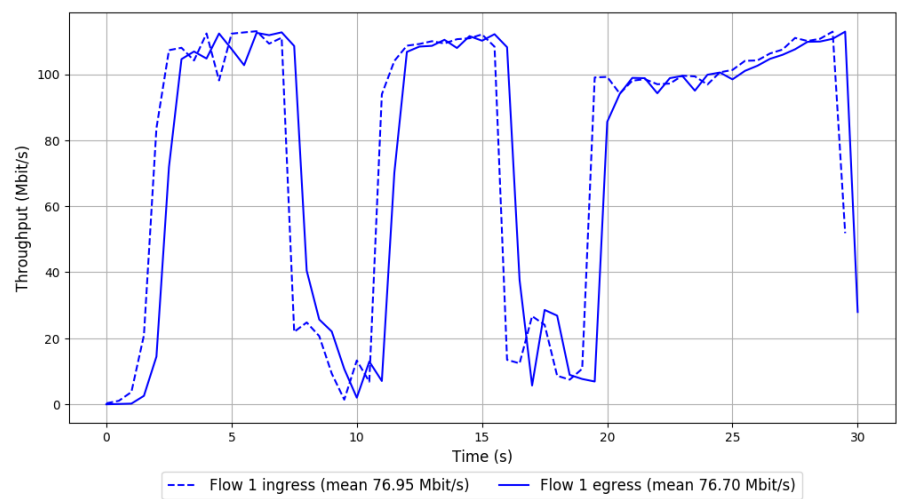
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 78.25 Mbit/s)   Flow 1 egress (mean 78.01 Mbit/s)

Flow 1 (95th percentile 106.45 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-11-24 00:25:03
End at: 2019-11-24 00:25:33
Local clock offset: 9.449 ms
Remote clock offset: 5.726 ms


# Below is generated by plot.py at 2019-11-24 03:05:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.70 Mbit/s
95th percentile per-packet one-way delay: 106.735 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 76.70 Mbit/s
95th percentile per-packet one-way delay: 106.735 ms
Loss rate: 1.05%
```
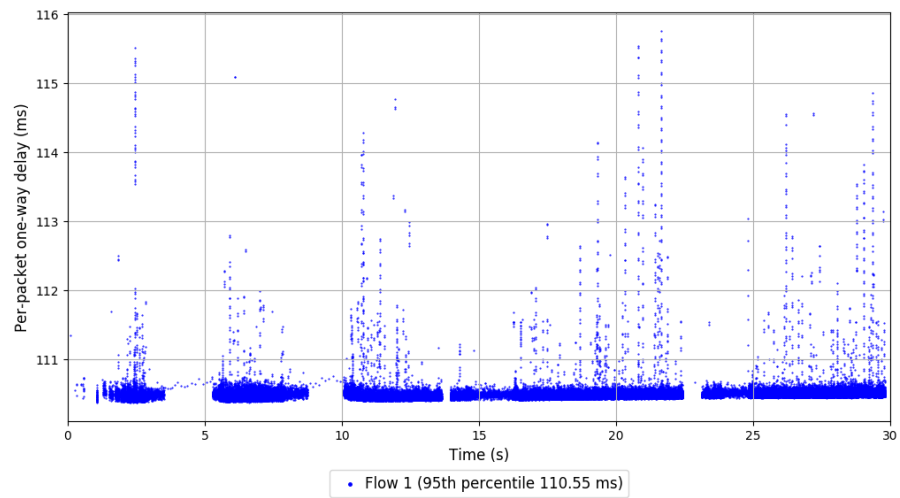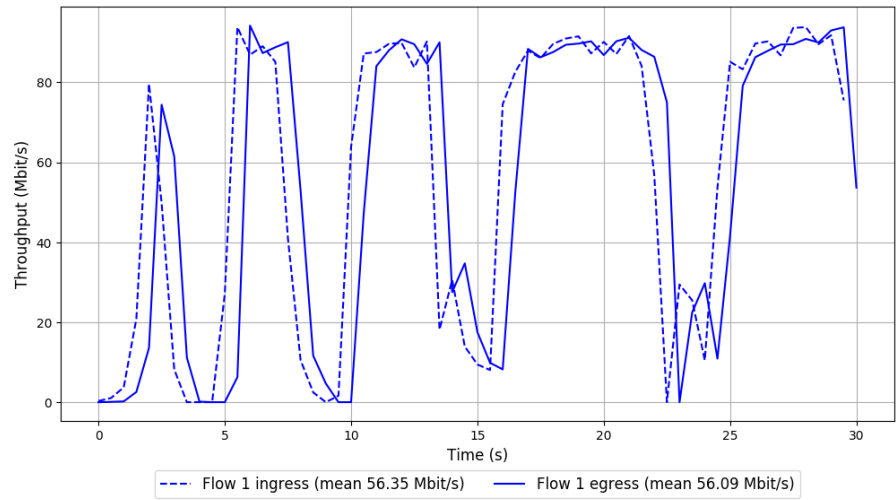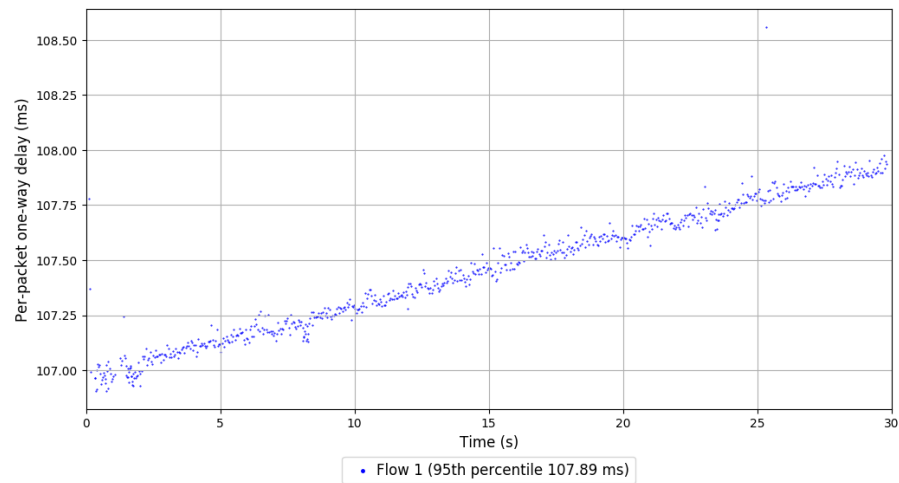
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-11-24 01:00:51
End at: 2019-11-24 01:01:21
Local clock offset: 2.233 ms
Remote clock offset: 1.775 ms


# Below is generated by plot.py at 2019-11-24 03:05:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 56.09 Mbit/s
95th percentile per-packet one-way delay: 110.552 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 56.09 Mbit/s
95th percentile per-packet one-way delay: 110.552 ms
Loss rate: 1.19%
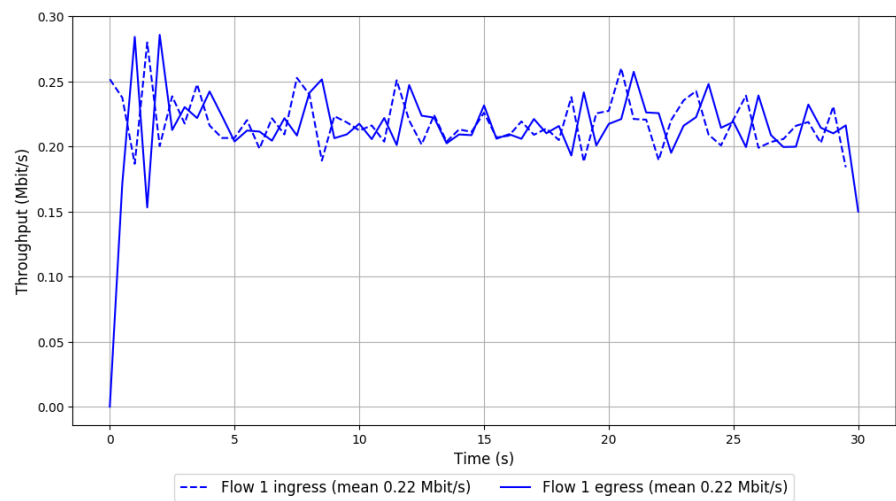```
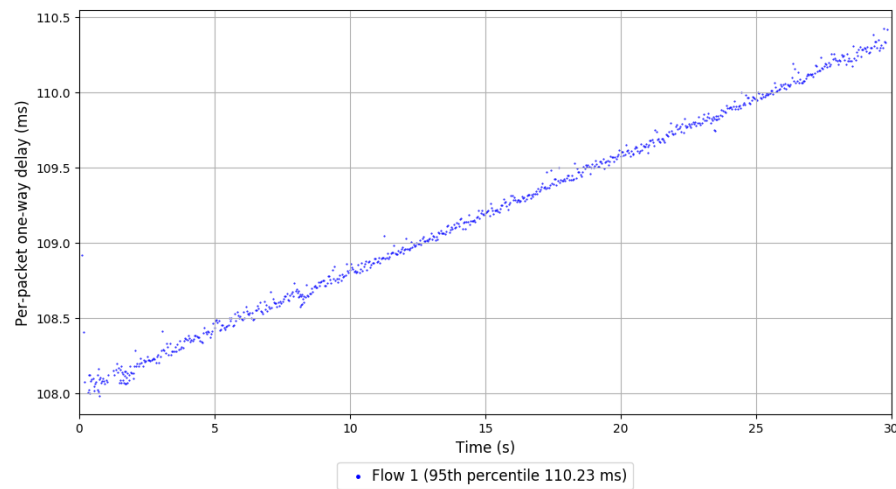
# Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-11-23 22:41:55
End at: 2019-11-23 22:42:25
Local clock offset: 24.347 ms
Remote clock offset: 57.576 ms


# Below is generated by plot.py at 2019-11-24 03:05:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 107.886 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 107.886 ms
Loss rate: 0.64%
```

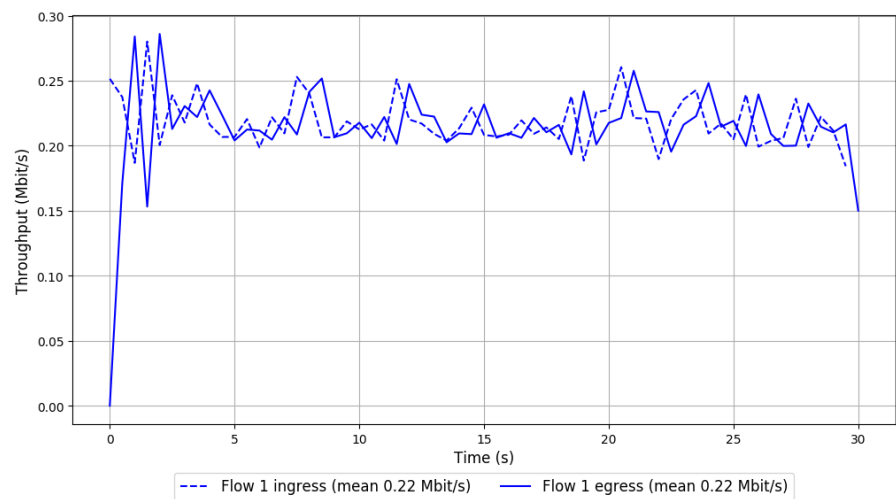# Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-11-23 23:17:34
End at: 2019-11-23 23:18:04
Local clock offset: 39.648 ms
Remote clock offset: 26.132 ms


# Below is generated by plot.py at 2019-11-24 03:05:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.228 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.228 ms
Loss rate: 0.64%
```

Run 2: Report of SCReAM — Data Link

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

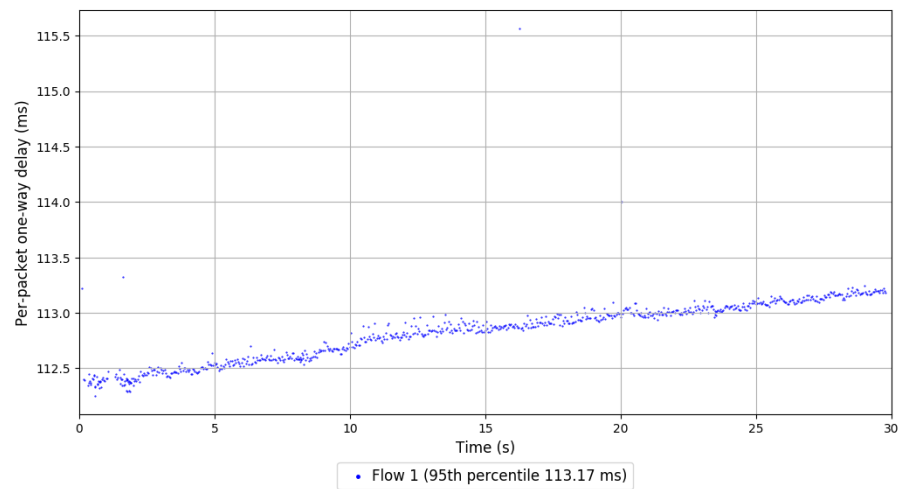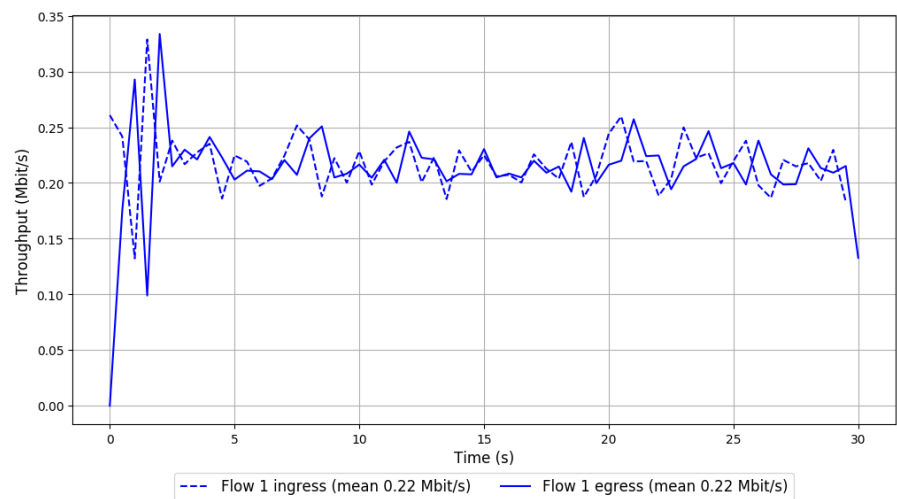Flow 1 (95th percentile 110.23 ms)

```
Run 3: Statistics of SCReAM

Start at: 2019-11-23 23:53:11
End at: 2019-11-23 23:53:41
Local clock offset: 17.569 ms
Remote clock offset: 17.088 ms


# Below is generated by plot.py at 2019-11-24 03:05:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.170 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.170 ms
Loss rate: 0.77%
```
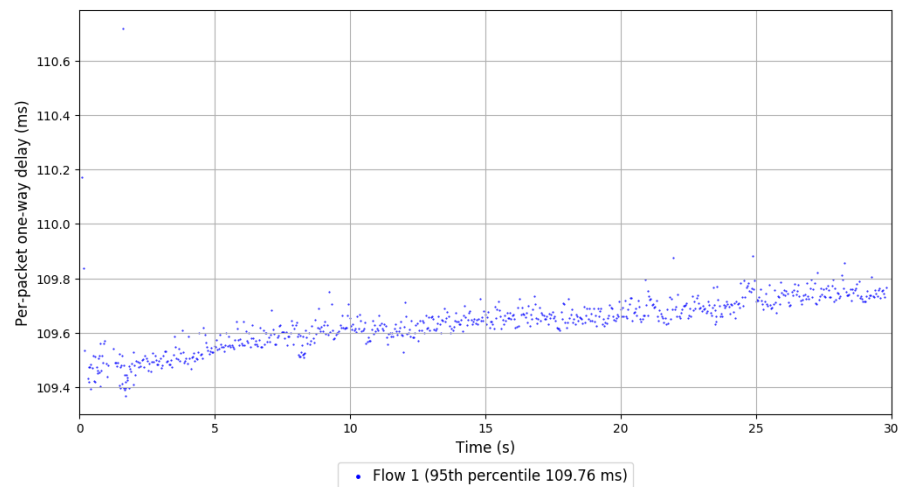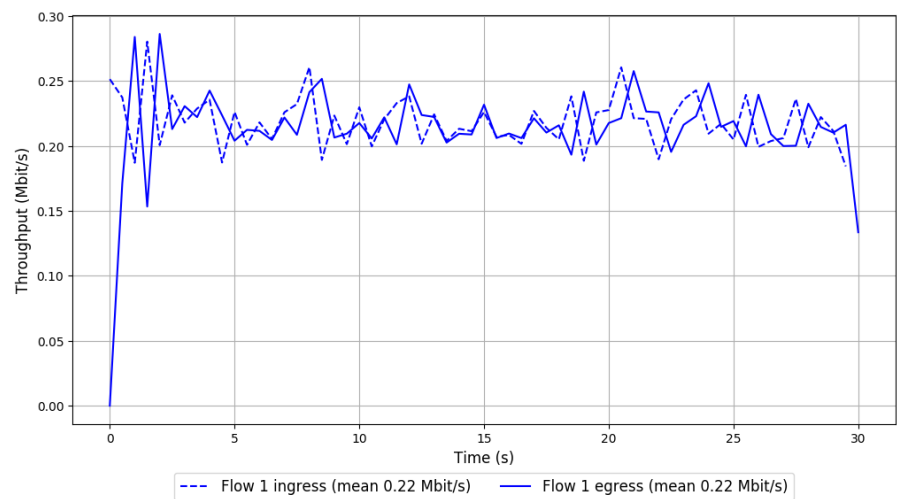
Run 3: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 113.17 ms)

```
Run 4: Statistics of SCReAM

Start at: 2019-11-24 00:29:07
End at: 2019-11-24 00:29:37
Local clock offset: 6.972 ms
Remote clock offset: 5.014 ms


# Below is generated by plot.py at 2019-11-24 03:05:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.762 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.762 ms
Loss rate: 0.77%
```
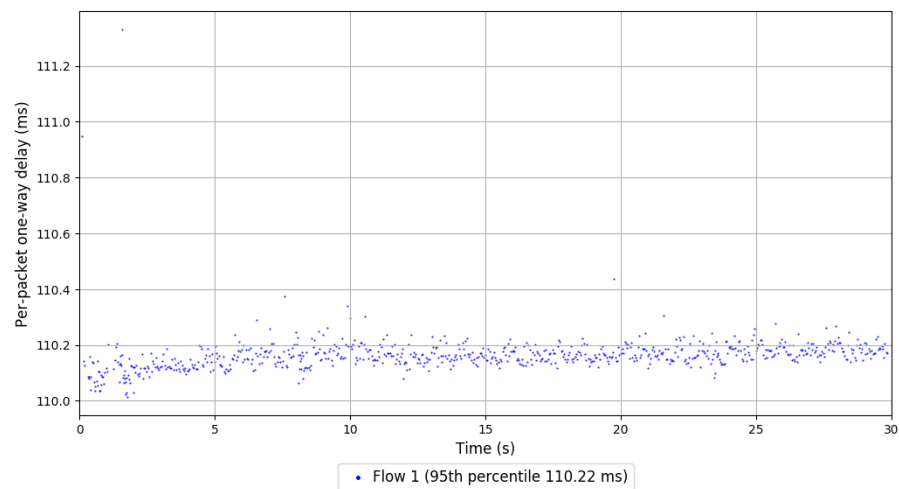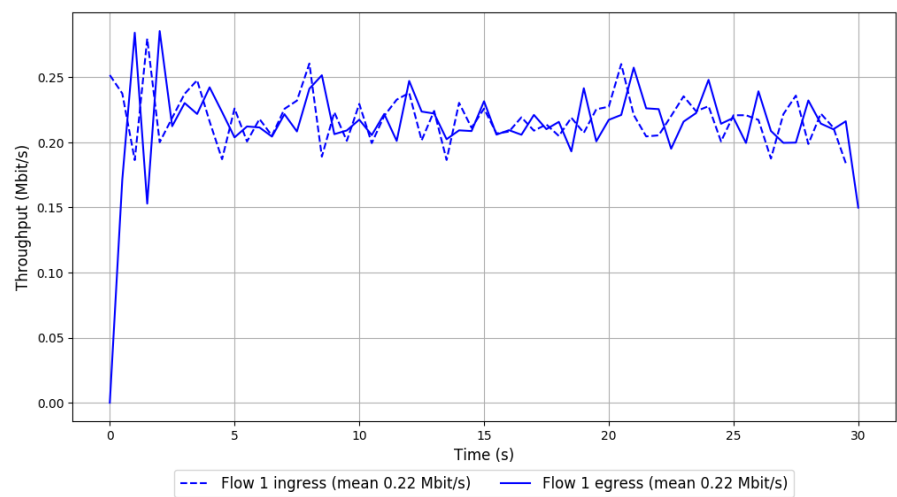
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-11-24 01:04:56
End at: 2019-11-24 01:05:26
Local clock offset: 1.391 ms
Remote clock offset: 1.781 ms


# Below is generated by plot.py at 2019-11-24 03:05:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.223 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.223 ms
Loss rate: 0.64%
```

Run 5: Report of SCReAM — Data Link

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

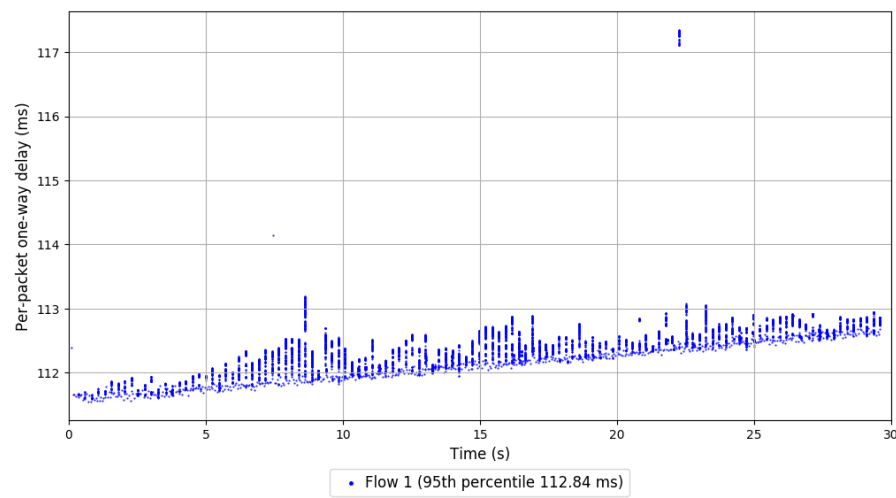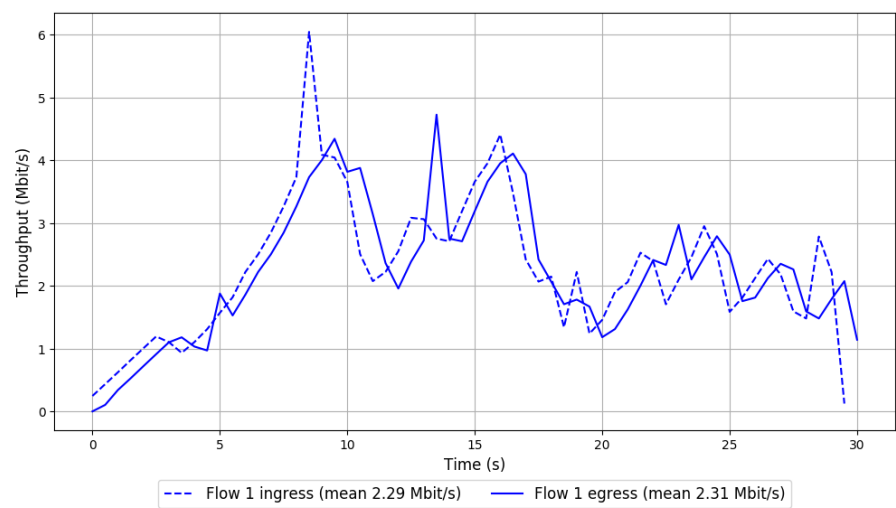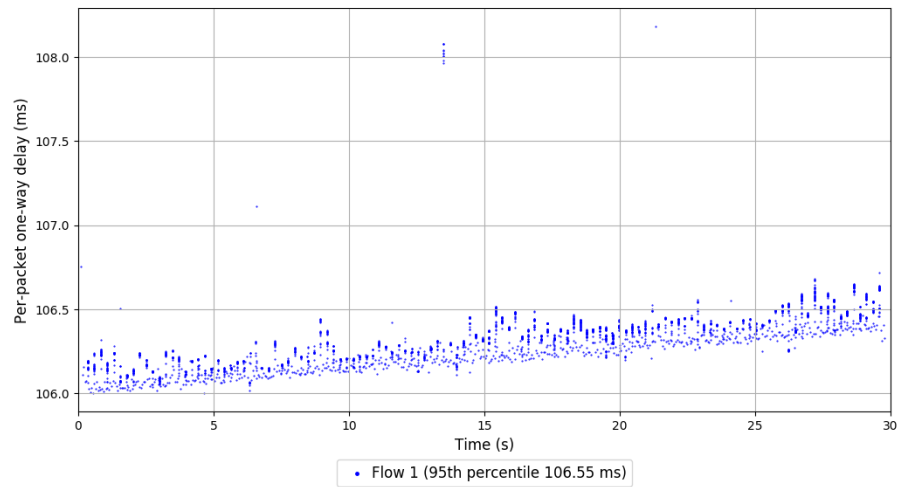Flow 1 (95th percentile 110.22 ms)

```
Run 1: Statistics of Sprout

Start at: 2019-11-23 22:22:44
End at: 2019-11-23 22:23:14
Local clock offset: 11.034 ms
Remote clock offset: 27.401 ms


# Below is generated by plot.py at 2019-11-24 03:05:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 112.843 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 112.843 ms
Loss rate: 0.09%
```

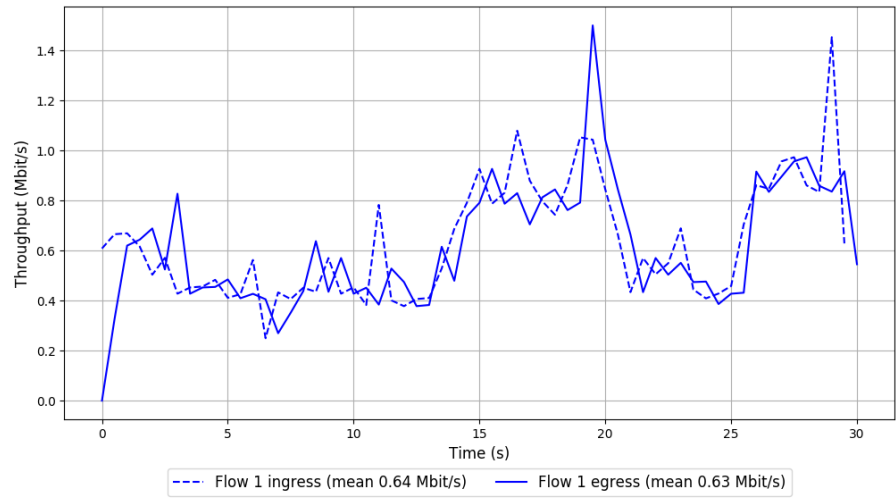Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-11-23 22:58:16
End at: 2019-11-23 22:58:46
Local clock offset: 21.645 ms
Remote clock offset: 28.456 ms


# Below is generated by plot.py at 2019-11-24 03:05:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 106.553 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 106.553 ms
Loss rate: 1.63%
```

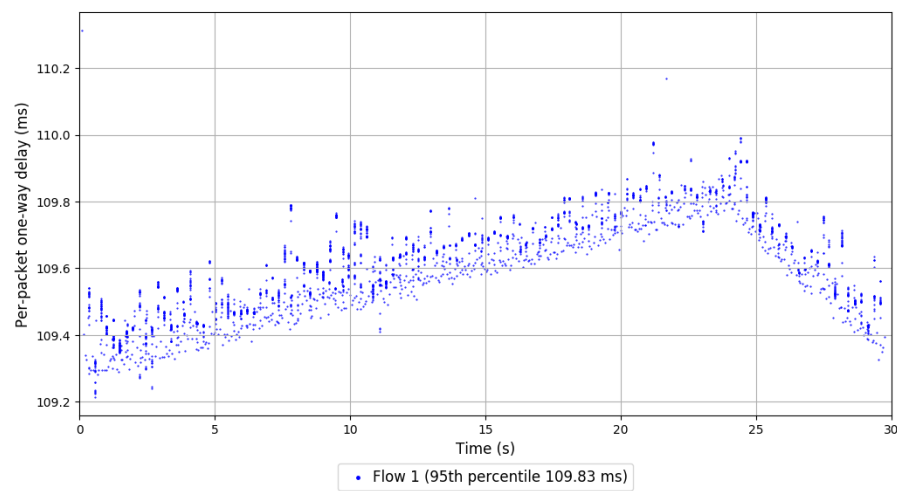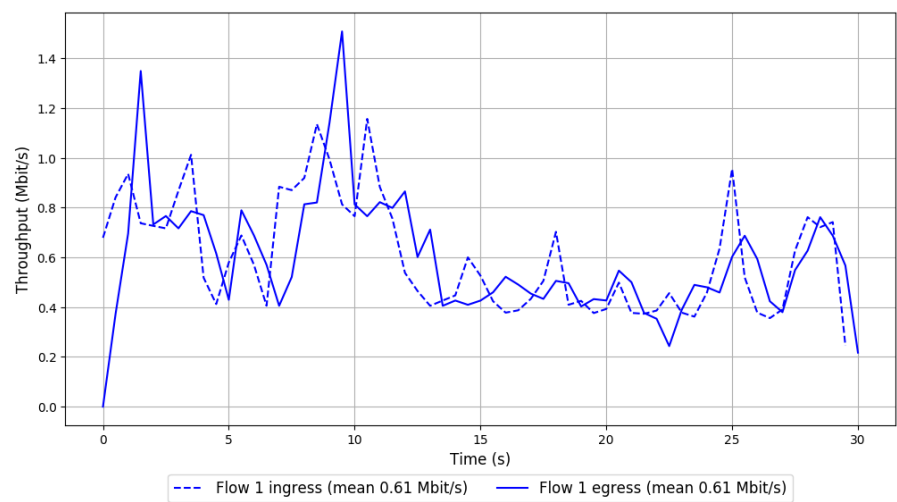Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-11-23 23:33:53
End at: 2019-11-23 23:34:23
Local clock offset: 15.045 ms
Remote clock offset: 44.464 ms


# Below is generated by plot.py at 2019-11-24 03:05:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 109.827 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 109.827 ms
Loss rate: 0.66%
```

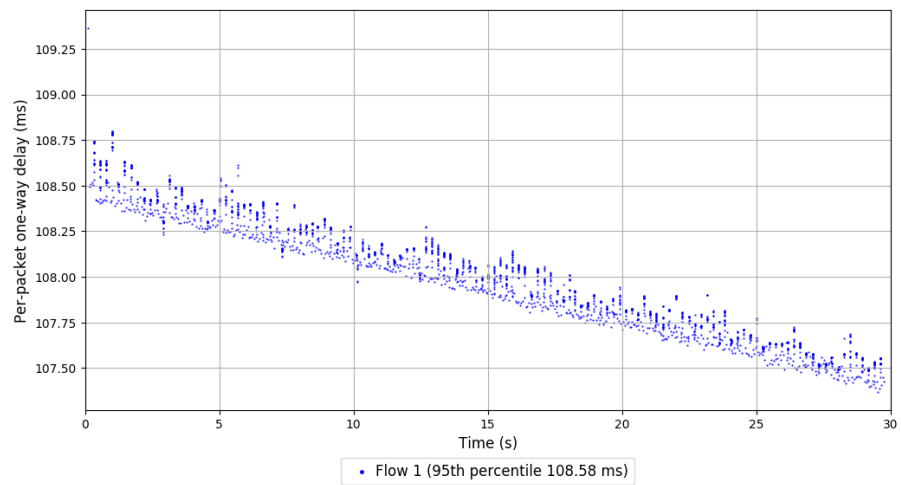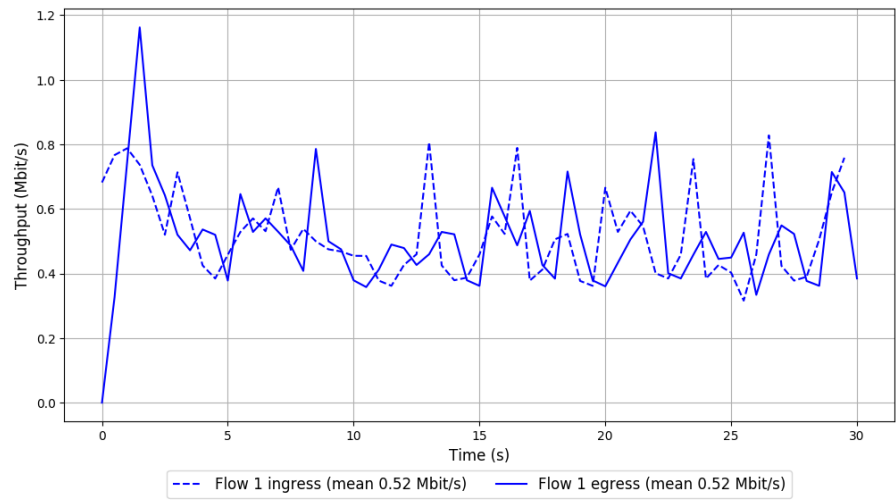## Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-11-24 00:09:49
End at: 2019-11-24 00:10:19
Local clock offset: 7.218 ms
Remote clock offset: 19.587 ms


# Below is generated by plot.py at 2019-11-24 03:05:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 108.580 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 108.580 ms
Loss rate: 1.21%
```
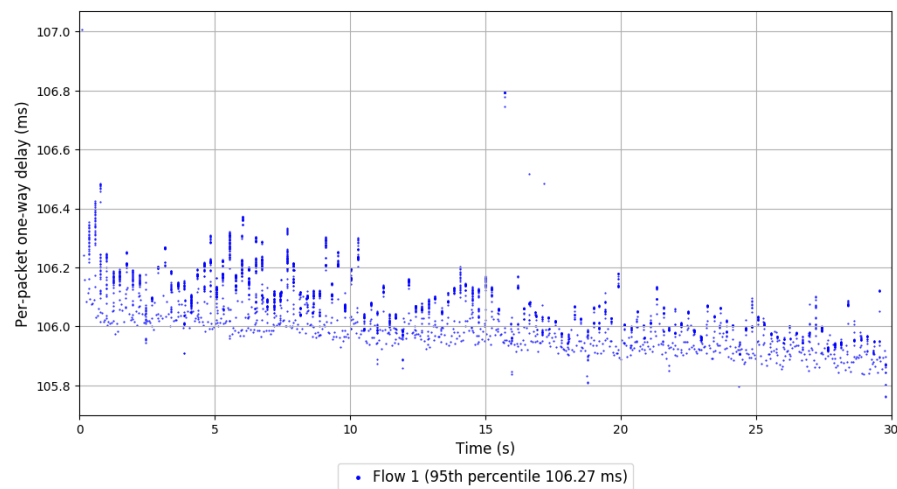
Run 4: Report of Sprout — Data Link

Flow 1 ingress (mean 0.52 Mbit/s) --- Flow 1 egress (mean 0.52 Mbit/s)

Flow 1 (95th percentile 108.58 ms)

```
Run 5: Statistics of Sprout

Start at: 2019-11-24 00:45:28
End at: 2019-11-24 00:45:58
Local clock offset: 2.098 ms
Remote clock offset: 4.12 ms


# Below is generated by plot.py at 2019-11-24 03:05:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 106.268 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 106.268 ms
Loss rate: 0.51%
```
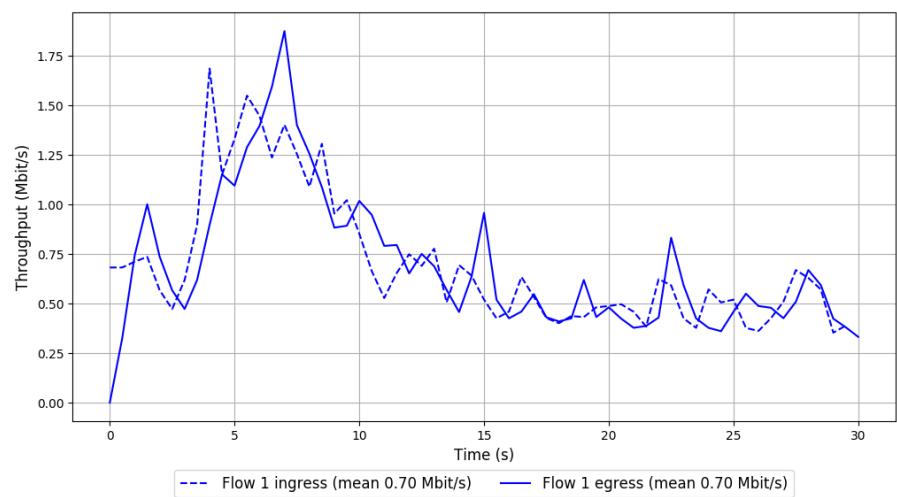
Run 5: Report of Sprout — Data Link

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

Start at: 2019-11-23 22:27:04
End at: 2019-11-23 22:27:35
Local clock offset: 16.797 ms
Remote clock offset: 36.898 ms


# Below is generated by plot.py at 2019-11-24 03:06:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 205.63 Mbit/s
95th percentile per-packet one-way delay: 107.494 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 205.63 Mbit/s
95th percentile per-packet one-way delay: 107.494 ms
Loss rate: 0.77%
```
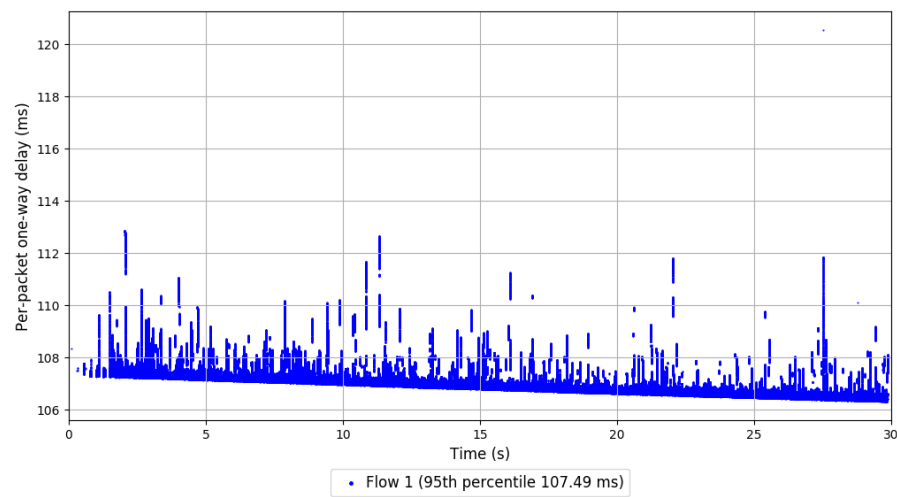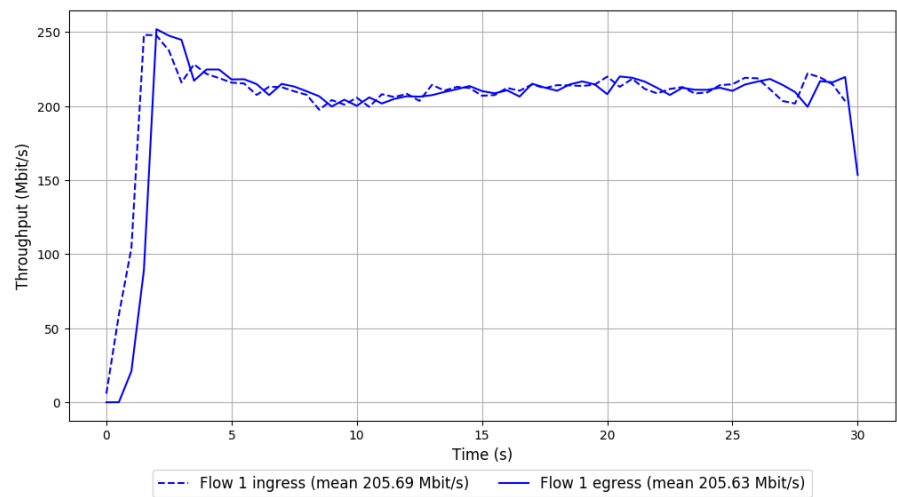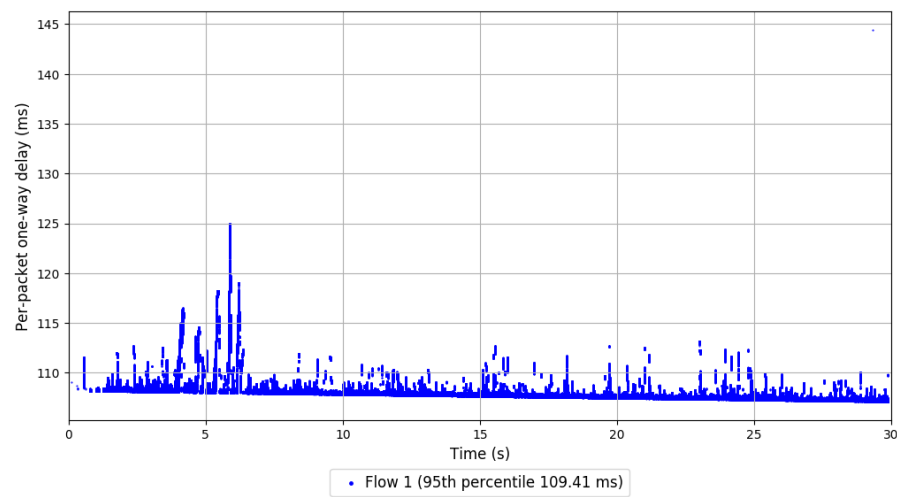
Run 1: Report of TaoVA-100x — Data Link

196

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

Start at: 2019-11-23 23:02:40
End at: 2019-11-23 23:03:10
Local clock offset: 24.834 ms
Remote clock offset: 26.994 ms


# Below is generated by plot.py at 2019-11-24 03:06:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 205.13 Mbit/s
95th percentile per-packet one-way delay: 109.405 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 205.13 Mbit/s
95th percentile per-packet one-way delay: 109.405 ms
Loss rate: 0.80%
```
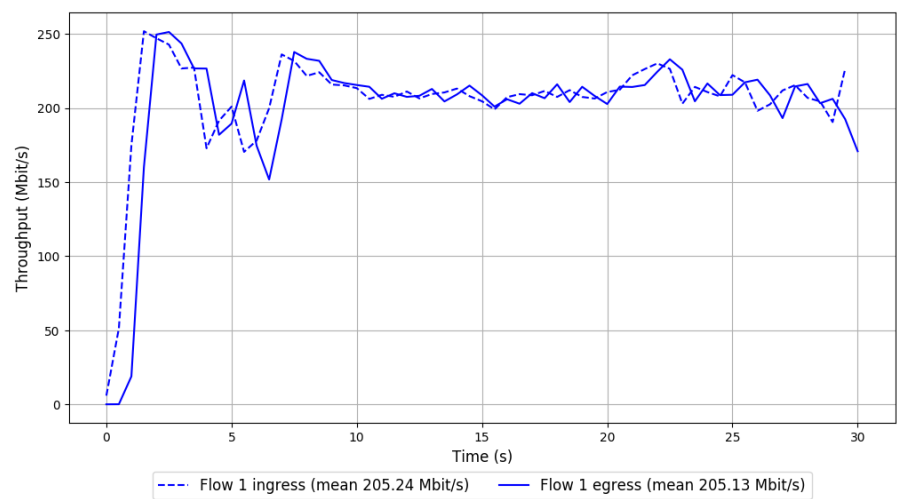
Run 2: Report of TaoVA-100x — Data Link
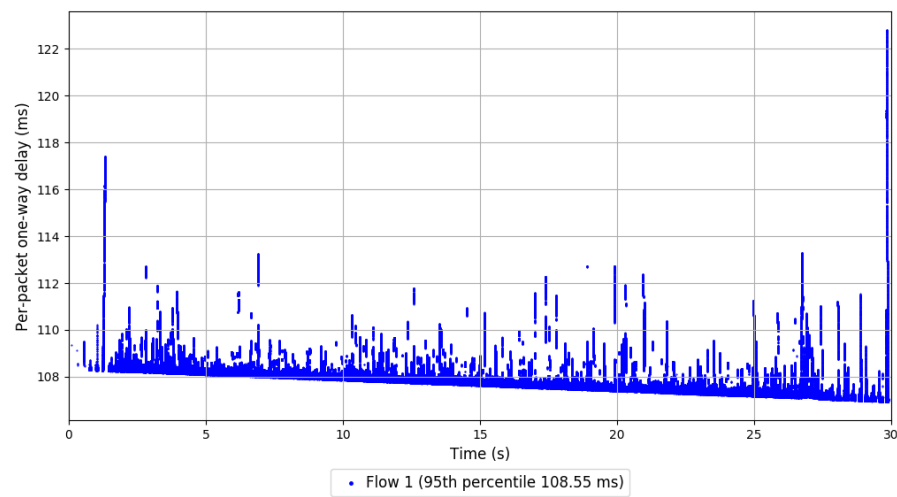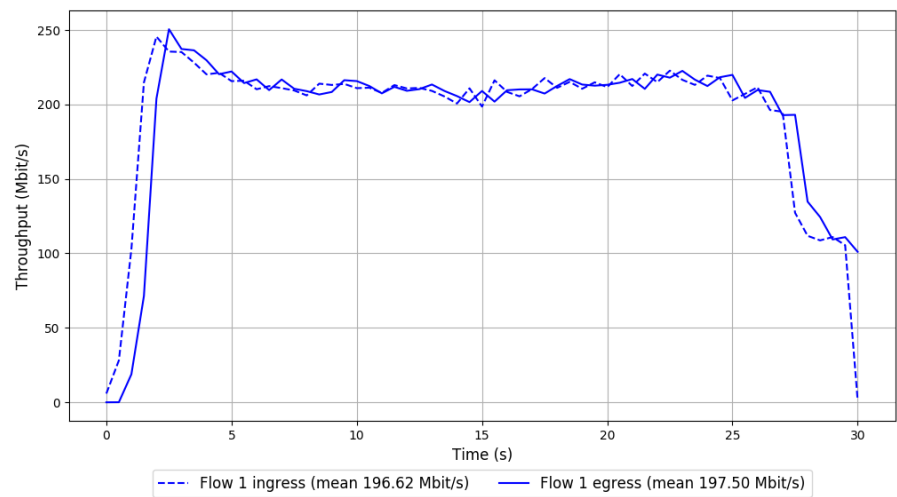

198

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

Start at: 2019-11-23 23:38:16
End at: 2019-11-23 23:38:46
Local clock offset: 15.186 ms
Remote clock offset: 31.621 ms


# Below is generated by plot.py at 2019-11-24 03:07:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 197.50 Mbit/s
95th percentile per-packet one-way delay: 108.550 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 197.50 Mbit/s
95th percentile per-packet one-way delay: 108.550 ms
Loss rate: 0.30%
```

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

Flow 1 ingress (mean 196.62 Mbit/s)   Flow 1 egress (mean 197.50 Mbit/s)

Flow 1 (95th percentile 108.55 ms)

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

Start at: 2019-11-24 00:14:12
End at: 2019-11-24 00:14:42
Local clock offset: 7.632 ms
Remote clock offset: 12.564 ms


# Below is generated by plot.py at 2019-11-24 03:07:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.68 Mbit/s
95th percentile per-packet one-way delay: 107.640 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 204.68 Mbit/s
95th percentile per-packet one-way delay: 107.640 ms
Loss rate: 0.80%
```
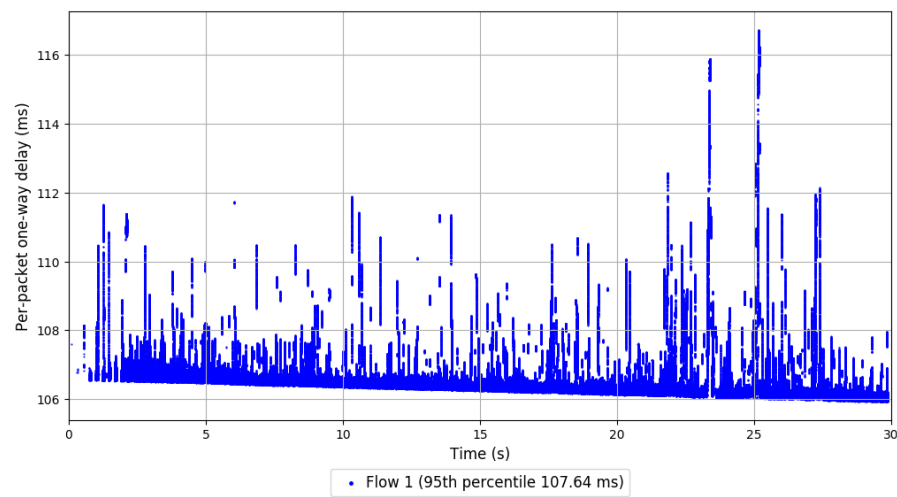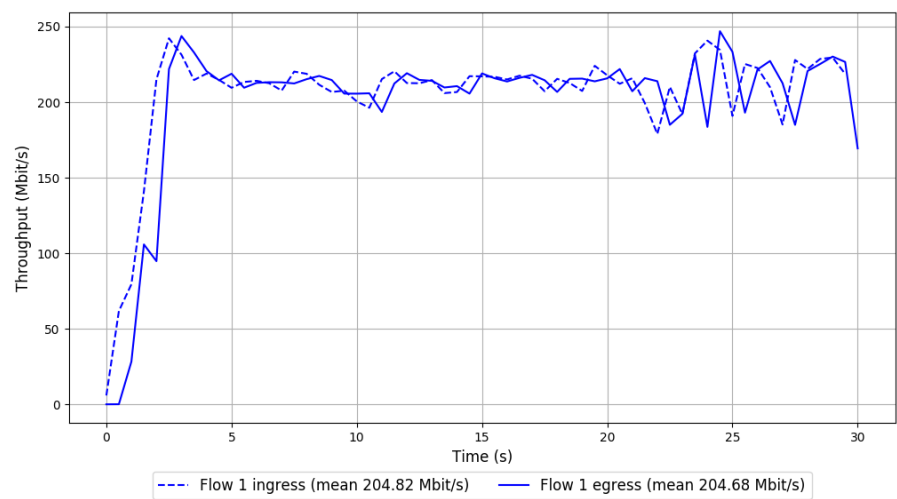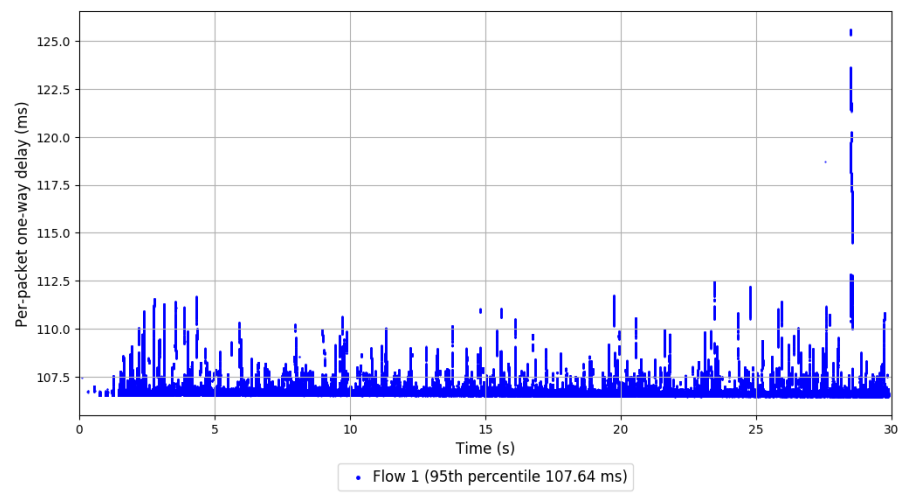
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 204.82 Mbit/s)   Flow 1 egress (mean 204.68 Mbit/s)

Flow 1 (95th percentile 107.64 ms)

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

Start at: 2019-11-24 00:49:50
End at: 2019-11-24 00:50:20
Local clock offset: 1.936 ms
Remote clock offset: 2.828 ms


# Below is generated by plot.py at 2019-11-24 03:07:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.32 Mbit/s
95th percentile per-packet one-way delay: 107.638 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 206.32 Mbit/s
95th percentile per-packet one-way delay: 107.638 ms
Loss rate: 0.76%
```
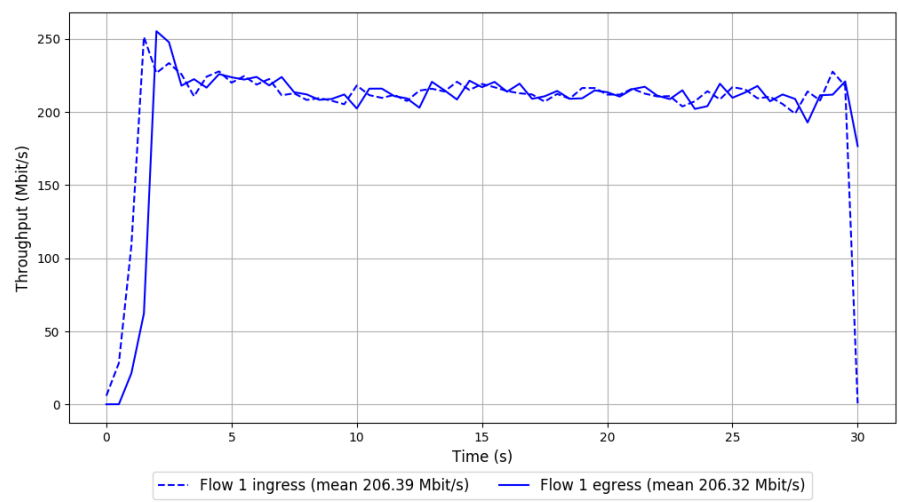
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 206.39 Mbit/s)   Flow 1 egress (mean 206.32 Mbit/s)
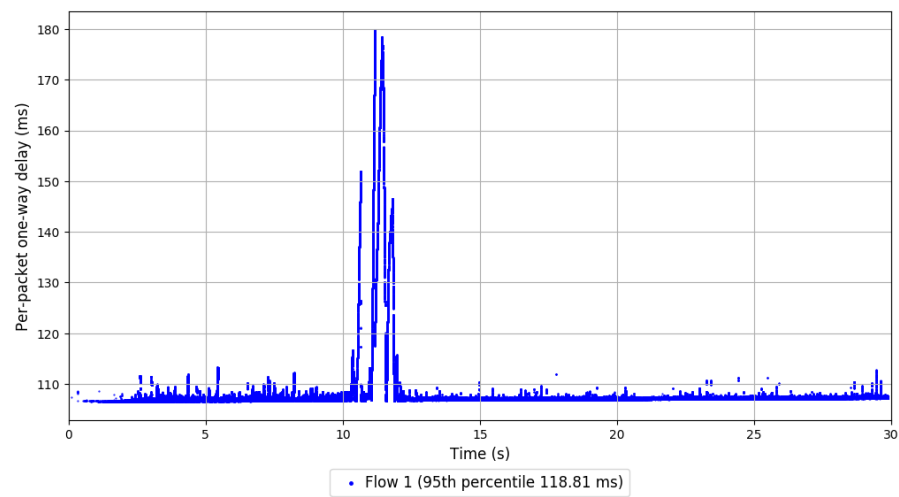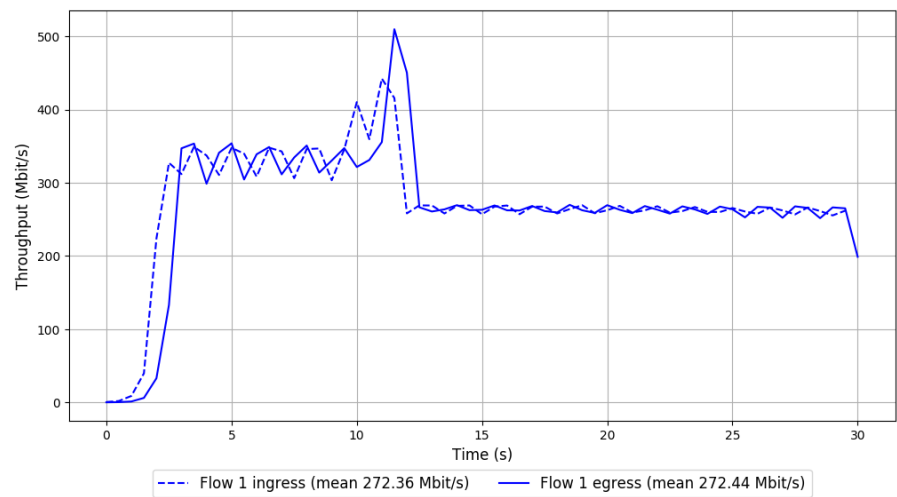

Flow 1 (95th percentile 107.64 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2019-11-23 22:34:54
End at: 2019-11-23 22:35:24
Local clock offset: 15.47 ms
Remote clock offset: 36.908 ms


# Below is generated by plot.py at 2019-11-24 03:07:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 272.44 Mbit/s
95th percentile per-packet one-way delay: 118.805 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 272.44 Mbit/s
95th percentile per-packet one-way delay: 118.805 ms
Loss rate: 0.69%
```
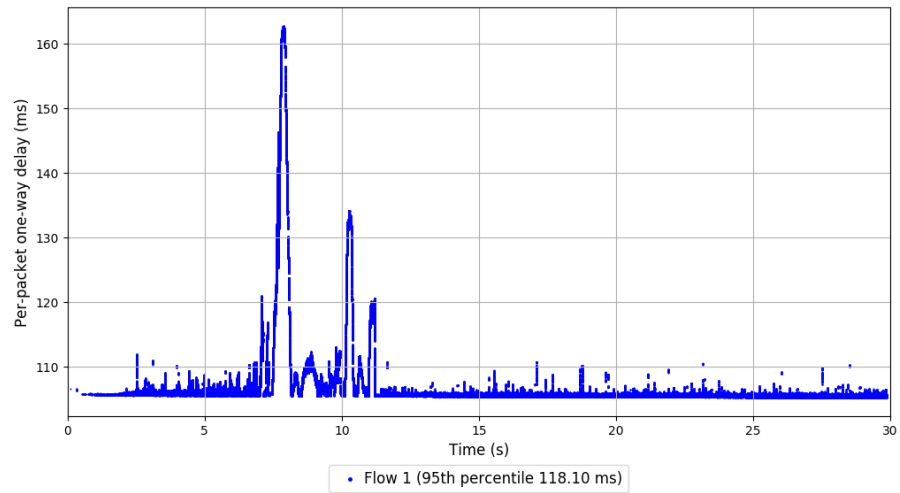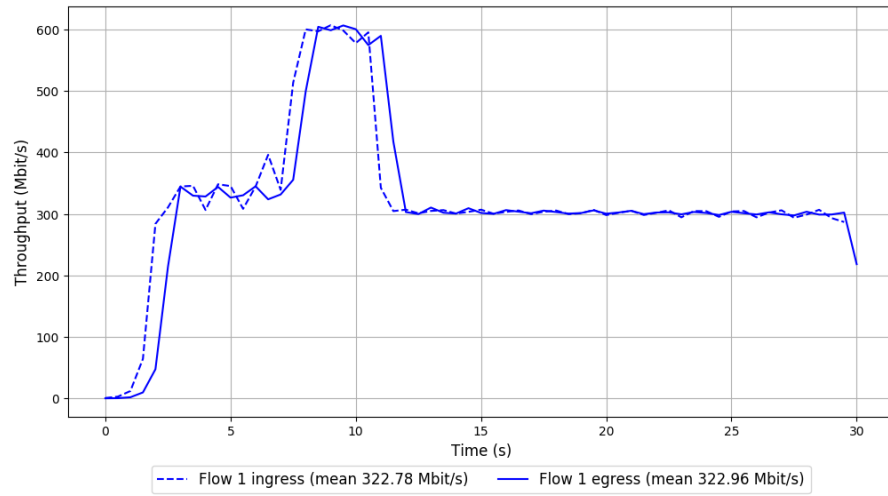
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-11-23 23:10:29
End at: 2019-11-23 23:10:59
Local clock offset: 32.236 ms
Remote clock offset: 22.747 ms


# Below is generated by plot.py at 2019-11-24 03:09:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 322.96 Mbit/s
95th percentile per-packet one-way delay: 118.101 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 322.96 Mbit/s
95th percentile per-packet one-way delay: 118.101 ms
Loss rate: 0.66%
```
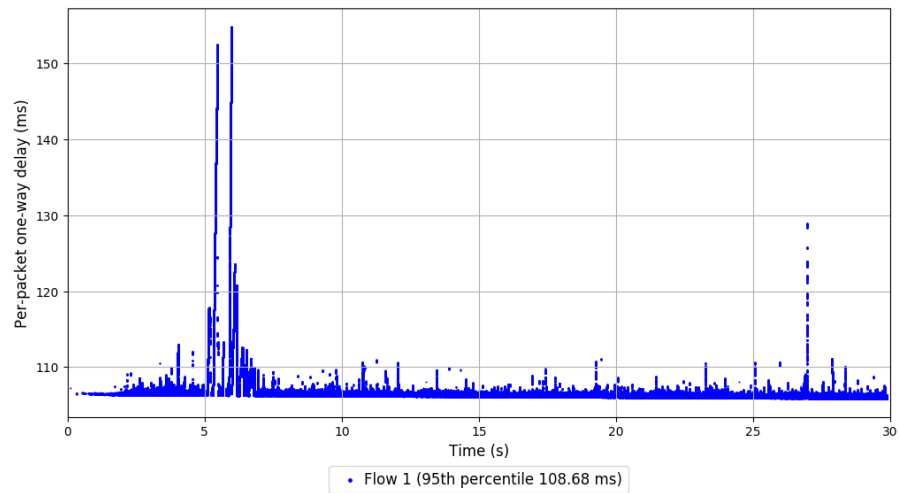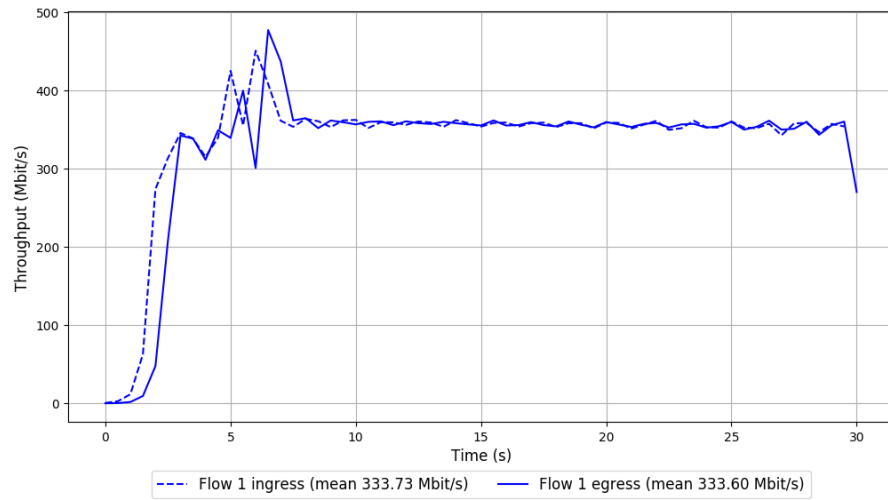
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-11-23 23:46:04
End at: 2019-11-23 23:46:34
Local clock offset: 17.559 ms
Remote clock offset: 19.074 ms


# Below is generated by plot.py at 2019-11-24 03:11:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 333.60 Mbit/s
95th percentile per-packet one-way delay: 108.676 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 333.60 Mbit/s
95th percentile per-packet one-way delay: 108.676 ms
Loss rate: 0.76%
```
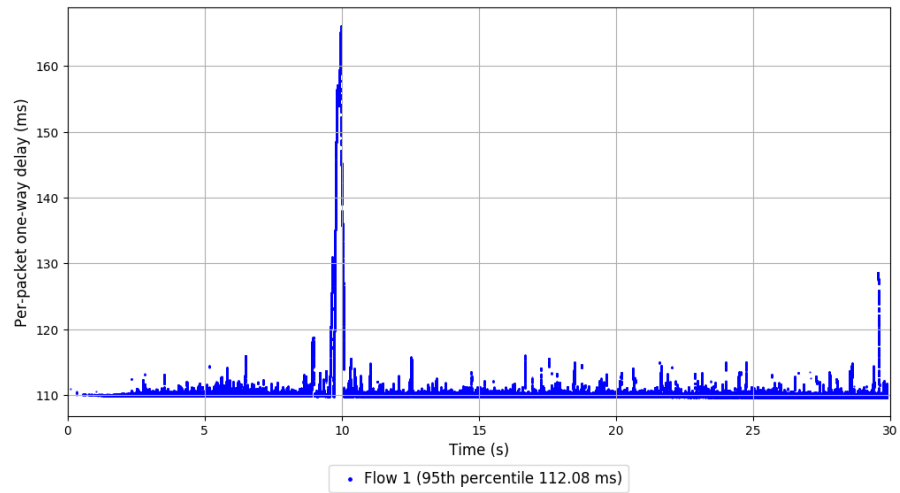
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 333.73 Mbit/s) Flow 1 egress (mean 333.60 Mbit/s)

Flow 1 (95th percentile 108.68 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2019-11-24 00:21:57
End at: 2019-11-24 00:22:27
Local clock offset: 8.795 ms
Remote clock offset: 6.753 ms


# Below is generated by plot.py at 2019-11-24 03:13:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 342.42 Mbit/s
95th percentile per-packet one-way delay: 112.078 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 342.42 Mbit/s
95th percentile per-packet one-way delay: 112.078 ms
Loss rate: 0.80%
```
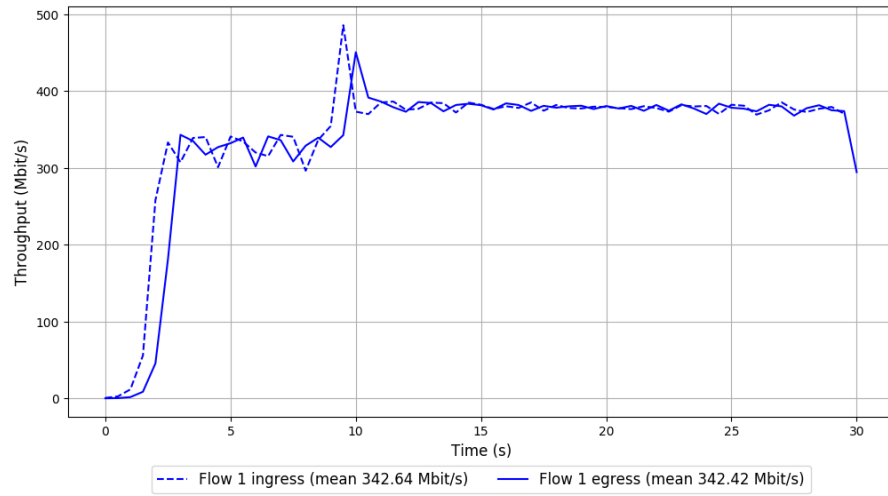
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-11-24 00:57:40
End at: 2019-11-24 00:58:10
Local clock offset: 2.196 ms
Remote clock offset: 1.814 ms


# Below is generated by plot.py at 2019-11-24 03:14:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 443.48 Mbit/s
95th percentile per-packet one-way delay: 126.586 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 443.48 Mbit/s
95th percentile per-packet one-way delay: 126.586 ms
Loss rate: 0.81%
```
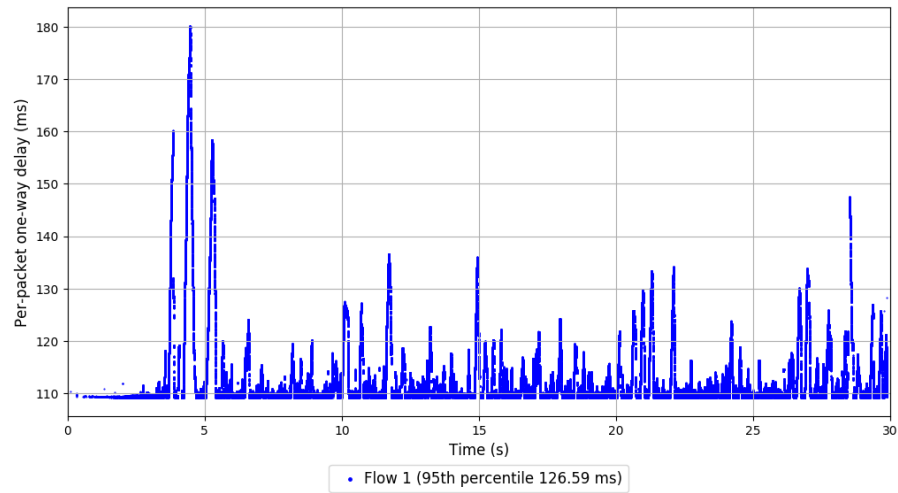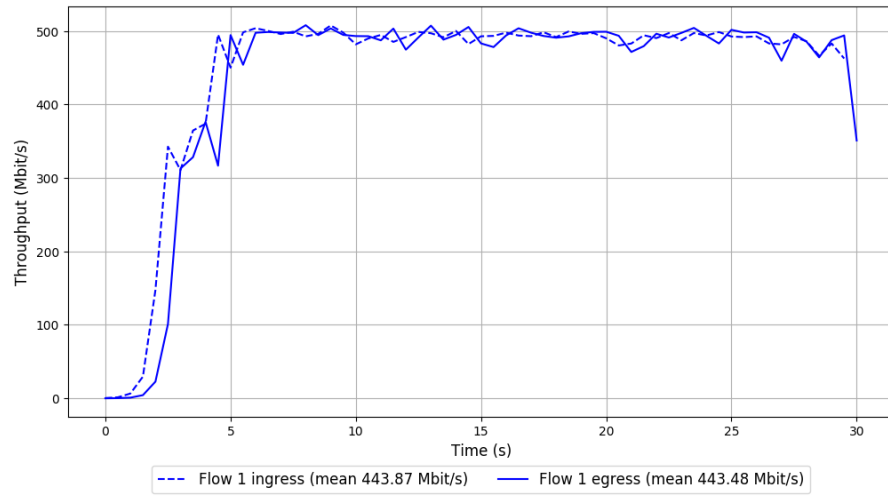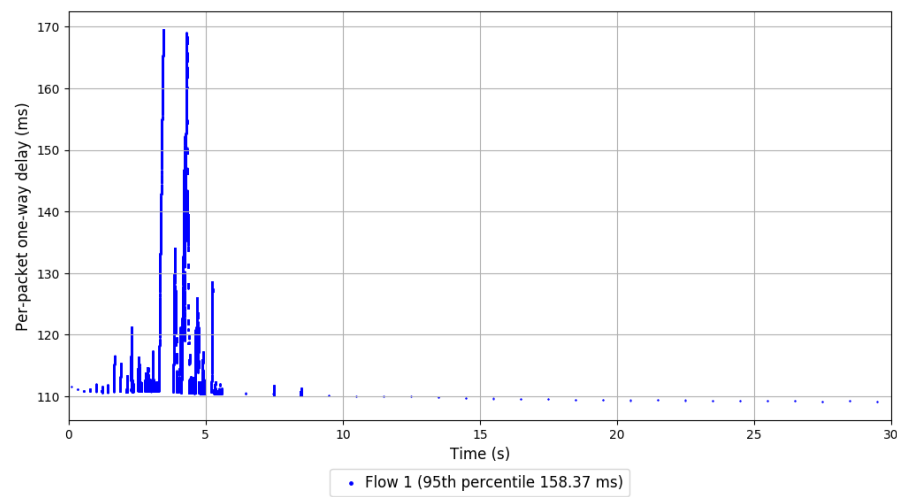
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 443.87 Mbit/s)   Flow 1 egress (mean 443.48 Mbit/s)

Flow 1 (95th percentile 126.59 ms)

```
Run 1: Statistics of Verus

Start at: 2019-11-23 22:11:00
End at: 2019-11-23 22:11:30
Local clock offset: 2.538 ms
Remote clock offset: 8.455 ms


# Below is generated by plot.py at 2019-11-24 03:14:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 21.80 Mbit/s
95th percentile per-packet one-way delay: 158.369 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 21.80 Mbit/s
95th percentile per-packet one-way delay: 158.369 ms
Loss rate: 0.00%
```
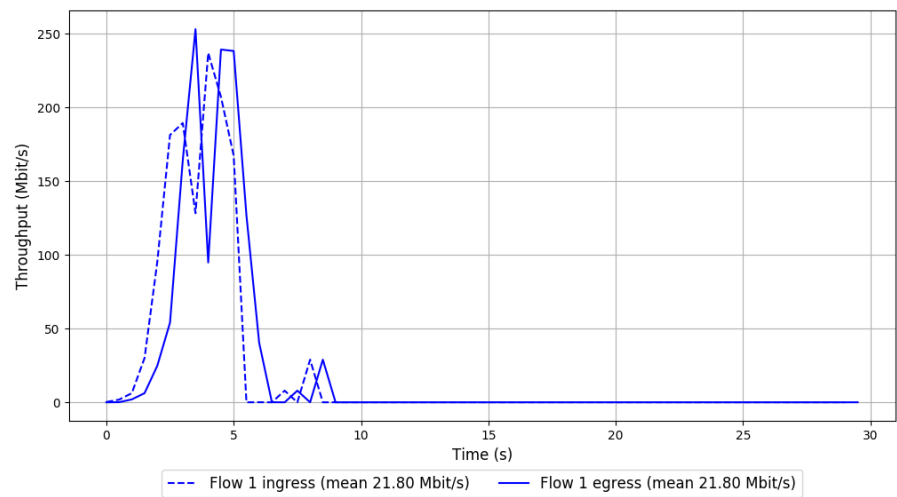
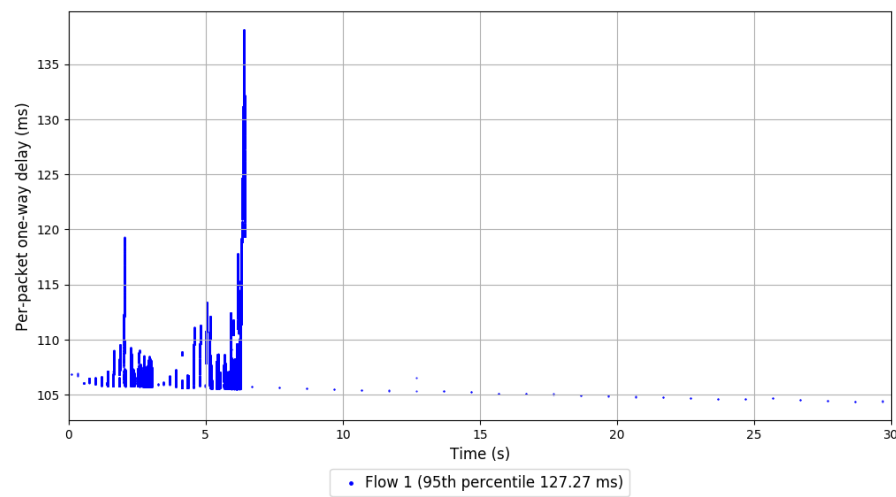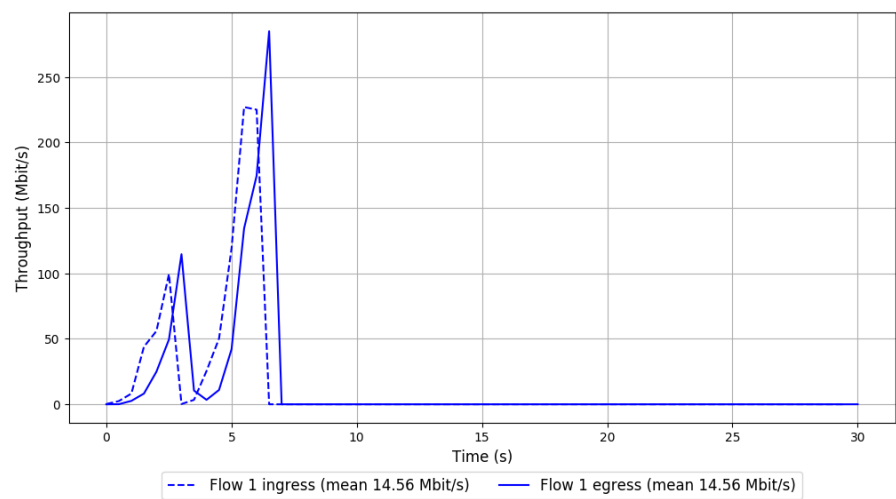Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-11-23 22:46:18
End at: 2019-11-23 22:46:48
Local clock offset: 22.668 ms
Remote clock offset: 35.619 ms


# Below is generated by plot.py at 2019-11-24 03:14:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 14.56 Mbit/s
95th percentile per-packet one-way delay: 127.269 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 14.56 Mbit/s
95th percentile per-packet one-way delay: 127.269 ms
Loss rate: 0.00%
```
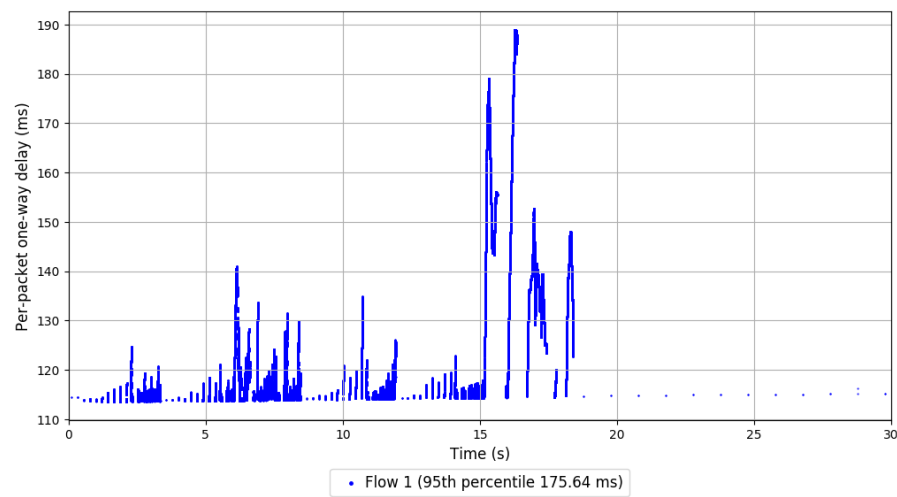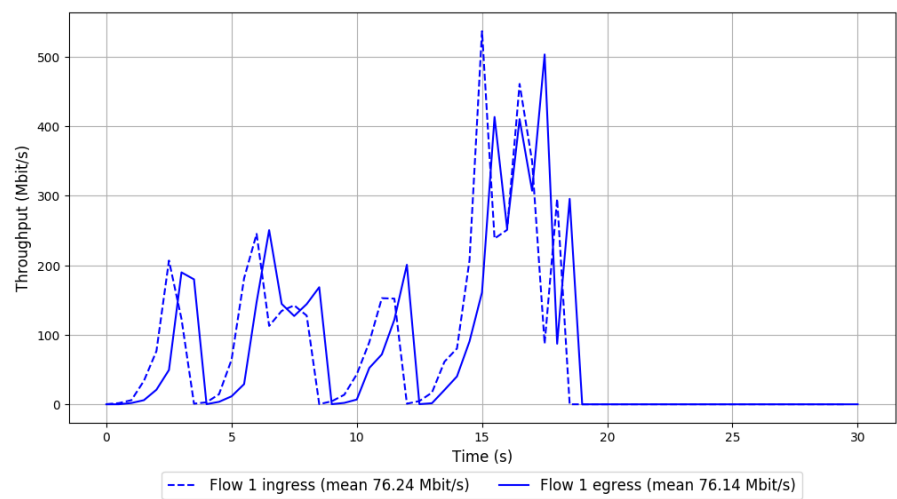
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-11-23 23:21:59
End at: 2019-11-23 23:22:29
Local clock offset: 26.719 ms
Remote clock offset: 30.667 ms


# Below is generated by plot.py at 2019-11-24 03:14:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.14 Mbit/s
95th percentile per-packet one-way delay: 175.639 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 76.14 Mbit/s
95th percentile per-packet one-way delay: 175.639 ms
Loss rate: 0.13%
```
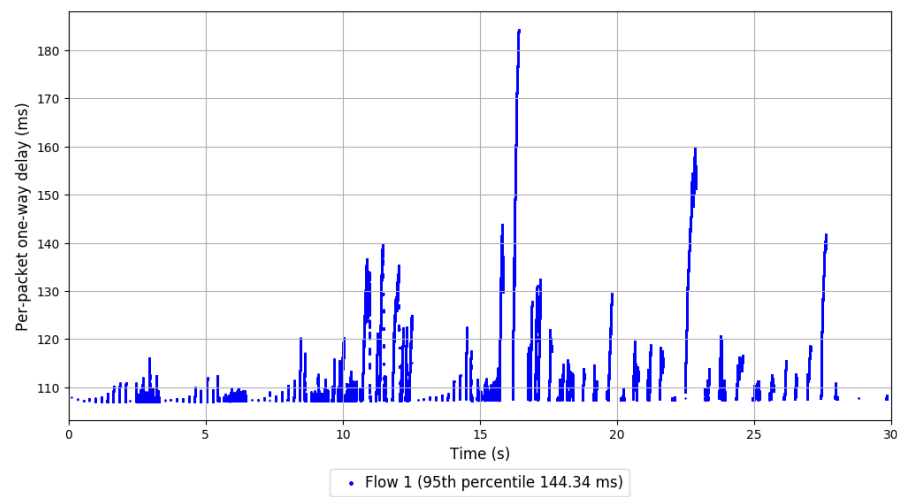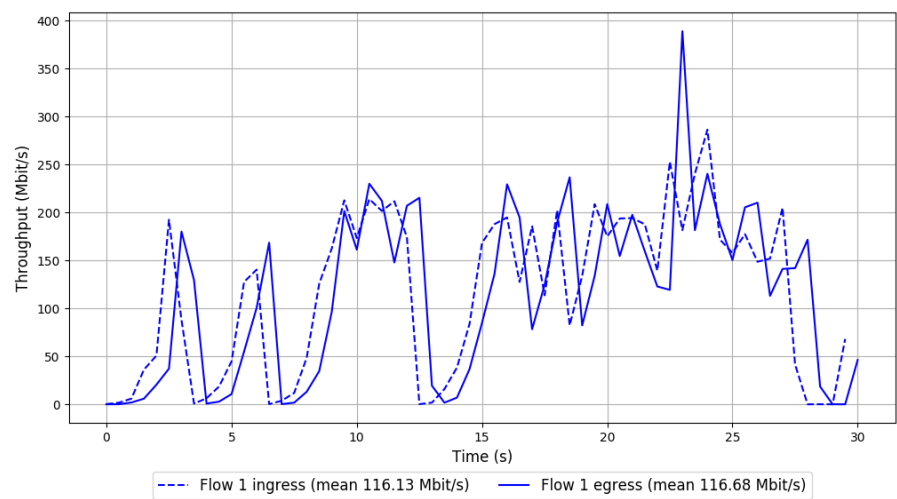
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-11-23 23:57:38
End at: 2019-11-23 23:58:08
Local clock offset: 11.934 ms
Remote clock offset: 18.284 ms


# Below is generated by plot.py at 2019-11-24 03:14:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 116.68 Mbit/s
95th percentile per-packet one-way delay: 144.343 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 116.68 Mbit/s
95th percentile per-packet one-way delay: 144.343 ms
Loss rate: 0.31%
```

Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-11-24 00:33:32
End at: 2019-11-24 00:34:02
Local clock offset: 4.573 ms
Remote clock offset: 4.831 ms


# Below is generated by plot.py at 2019-11-24 03:14:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.70 Mbit/s
95th percentile per-packet one-way delay: 201.225 ms
Loss rate: 2.67%
-- Flow 1:
Average throughput: 38.70 Mbit/s
95th percentile per-packet one-way delay: 201.225 ms
Loss rate: 2.67%
```
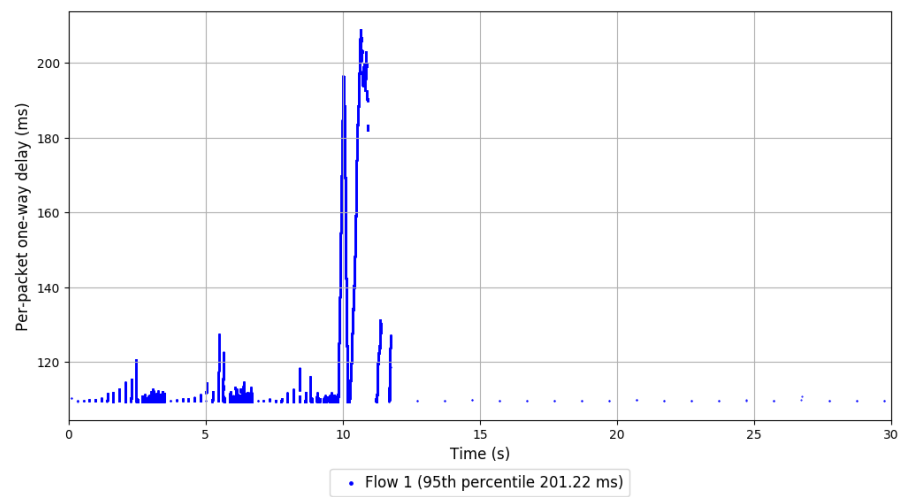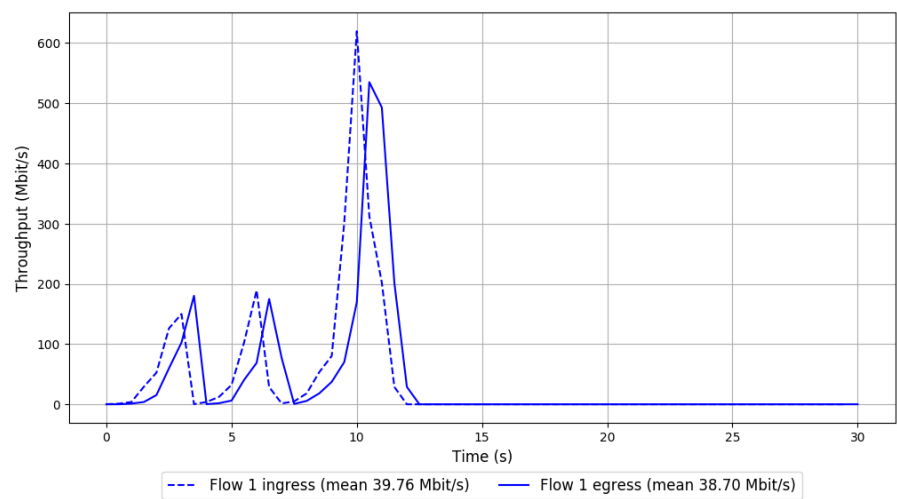
Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-11-23 22:25:35
End at: 2019-11-23 22:26:05
Local clock offset: 16.085 ms
Remote clock offset: 38.606 ms


# Below is generated by plot.py at 2019-11-24 03:14:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 277.25 Mbit/s
95th percentile per-packet one-way delay: 116.757 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 277.25 Mbit/s
95th percentile per-packet one-way delay: 116.757 ms
Loss rate: 1.04%
```
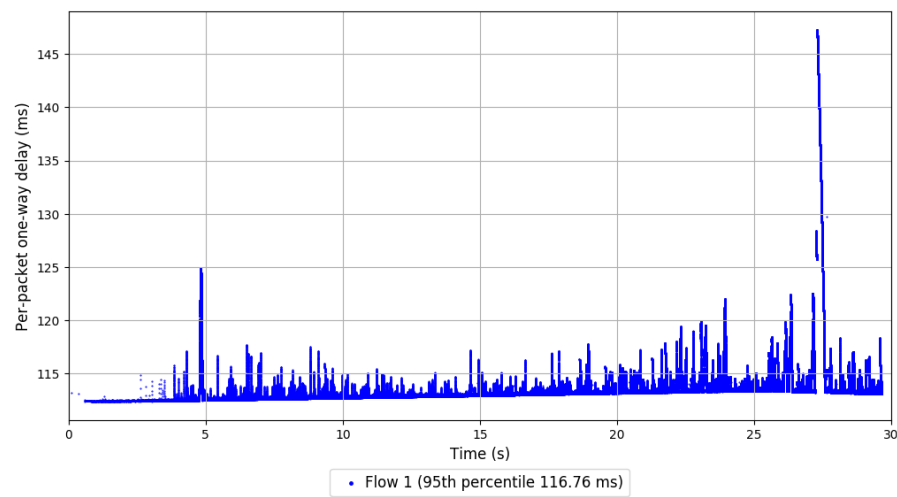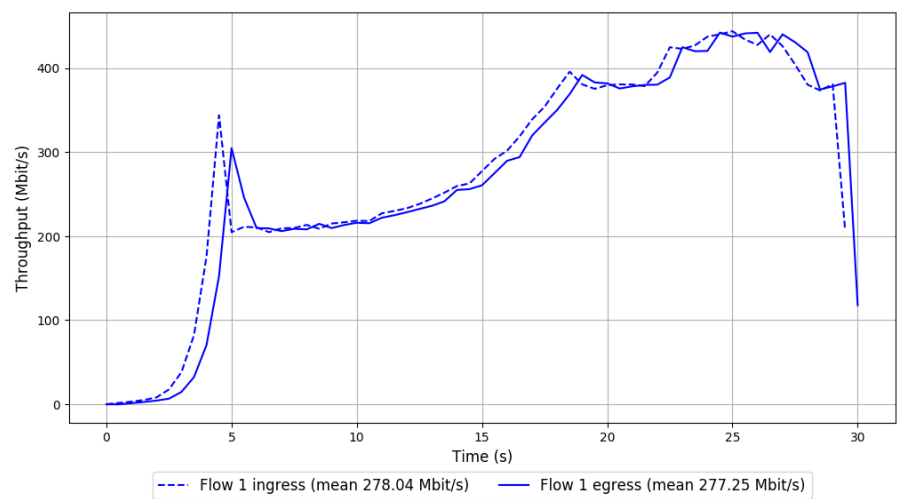
Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-11-23 23:01:06
End at: 2019-11-23 23:01:36
Local clock offset: 23.581 ms
Remote clock offset: 29.655 ms


# Below is generated by plot.py at 2019-11-24 03:14:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 339.41 Mbit/s
95th percentile per-packet one-way delay: 114.319 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 339.41 Mbit/s
95th percentile per-packet one-way delay: 114.319 ms
Loss rate: 0.71%
```
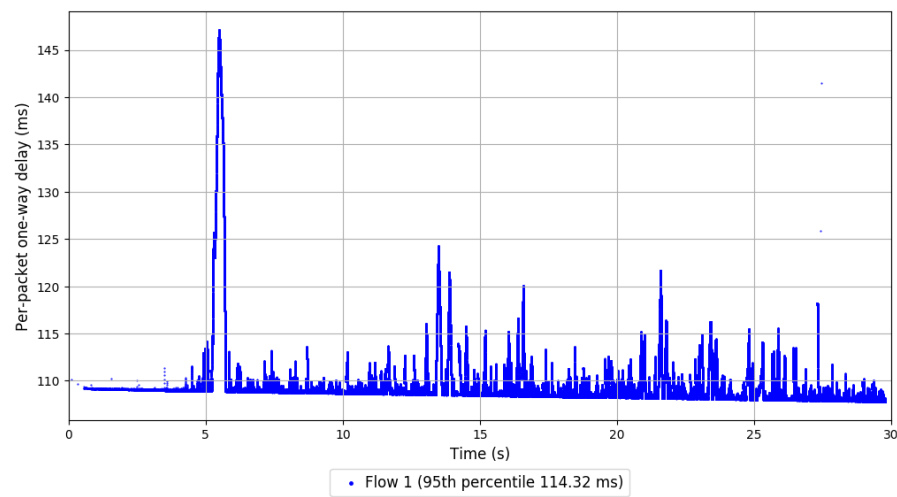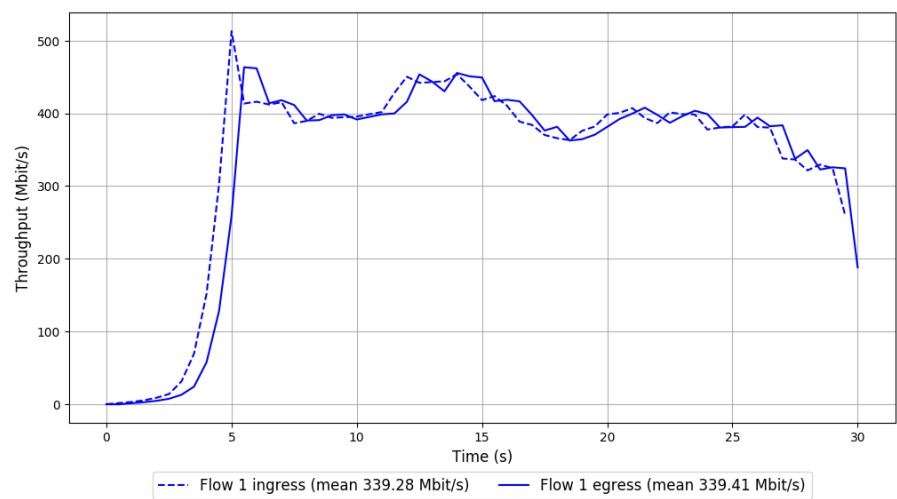
Run 2: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 339.28 Mbit/s)   Flow 1 egress (mean 339.41 Mbit/s)

• Flow 1 (95th percentile 114.32 ms)

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-11-23 23:36:43
End at: 2019-11-23 23:37:13
Local clock offset: 15.2 ms
Remote clock offset: 35.711 ms


# Below is generated by plot.py at 2019-11-24 03:14:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 314.83 Mbit/s
95th percentile per-packet one-way delay: 115.733 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 314.83 Mbit/s
95th percentile per-packet one-way delay: 115.733 ms
Loss rate: 0.92%
```
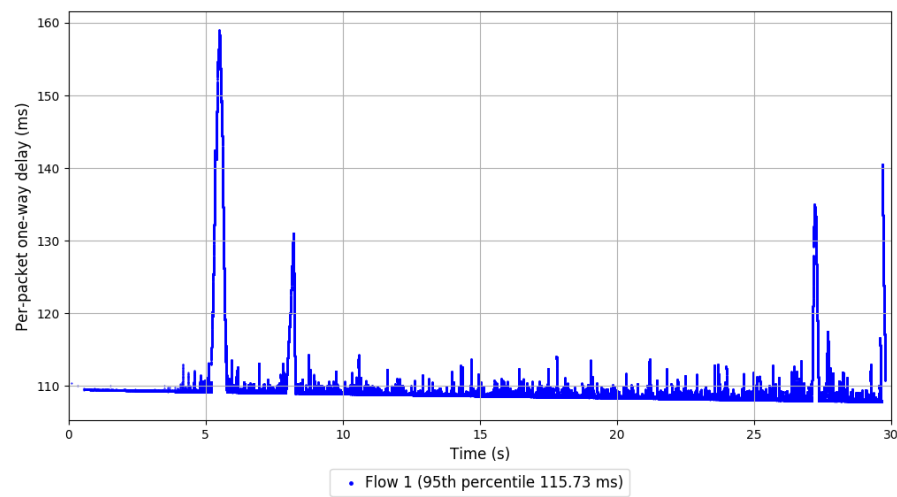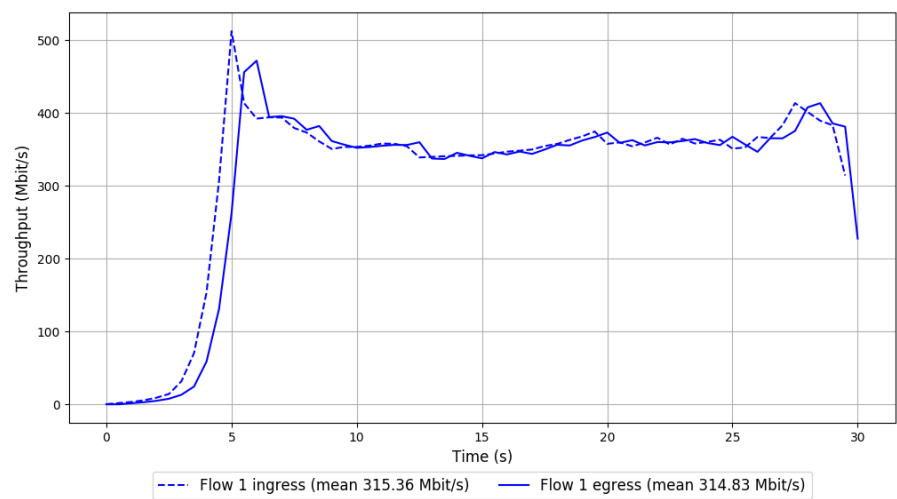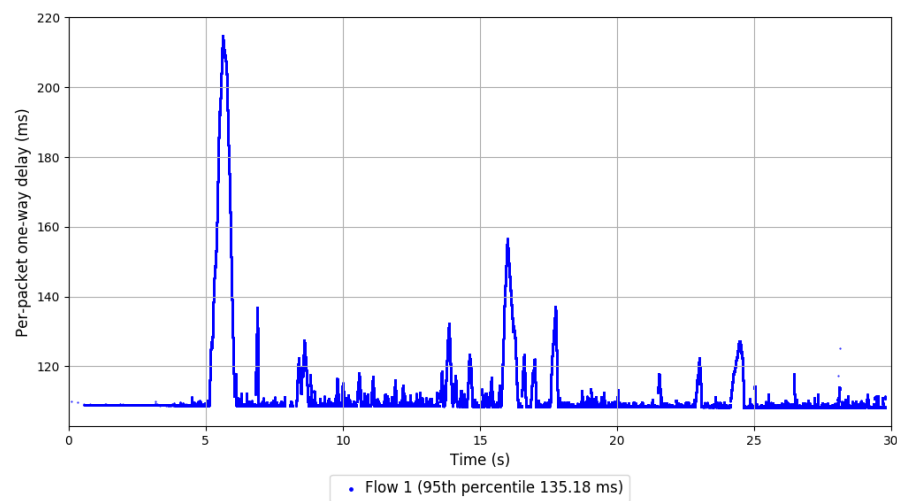
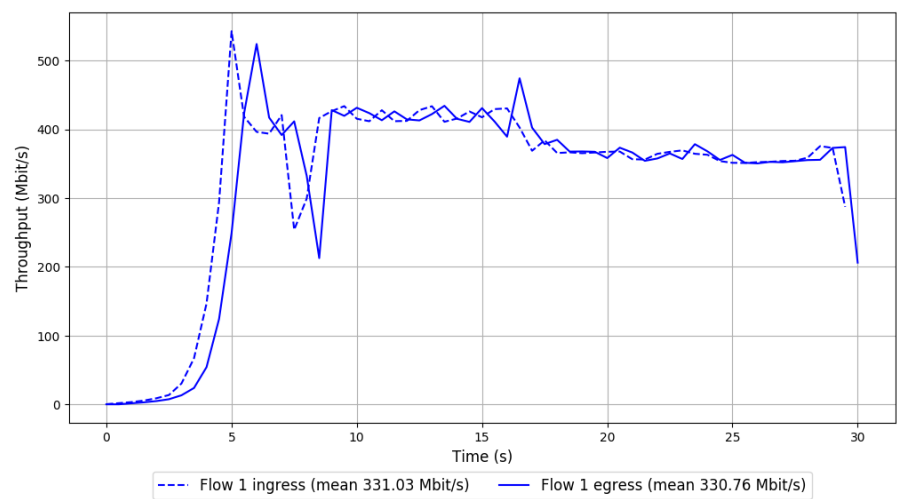Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-11-24 00:12:38
End at: 2019-11-24 00:13:08
Local clock offset: 7.469 ms
Remote clock offset: 14.715 ms


# Below is generated by plot.py at 2019-11-24 03:15:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 330.76 Mbit/s
95th percentile per-packet one-way delay: 135.175 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 330.76 Mbit/s
95th percentile per-packet one-way delay: 135.175 ms
Loss rate: 0.82%
```

Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 331.03 Mbit/s) --- Flow 1 egress (mean 330.76 Mbit/s)

· Flow 1 (95th percentile 135.18 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-11-24 00:48:18
End at: 2019-11-24 00:48:48
Local clock offset: 2.018 ms
Remote clock offset: 3.11 ms


# Below is generated by plot.py at 2019-11-24 03:15:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 298.21 Mbit/s
95th percentile per-packet one-way delay: 110.249 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 298.21 Mbit/s
95th percentile per-packet one-way delay: 110.249 ms
Loss rate: 0.75%
```
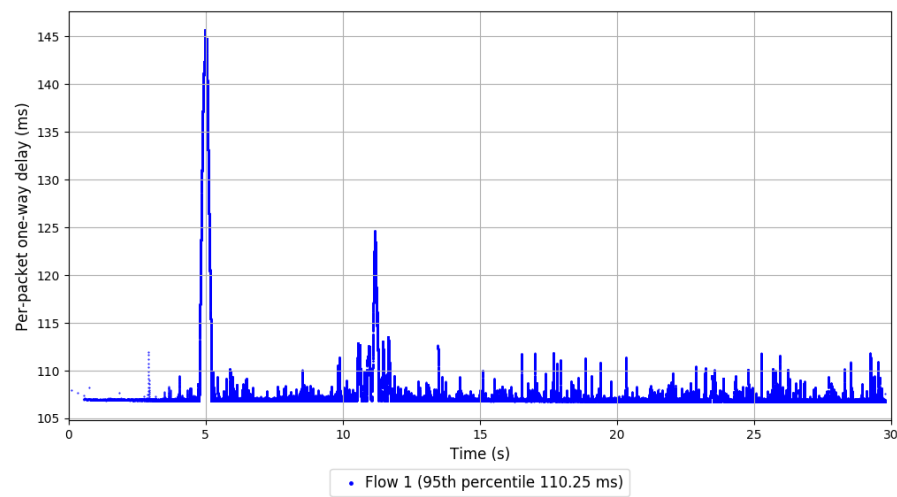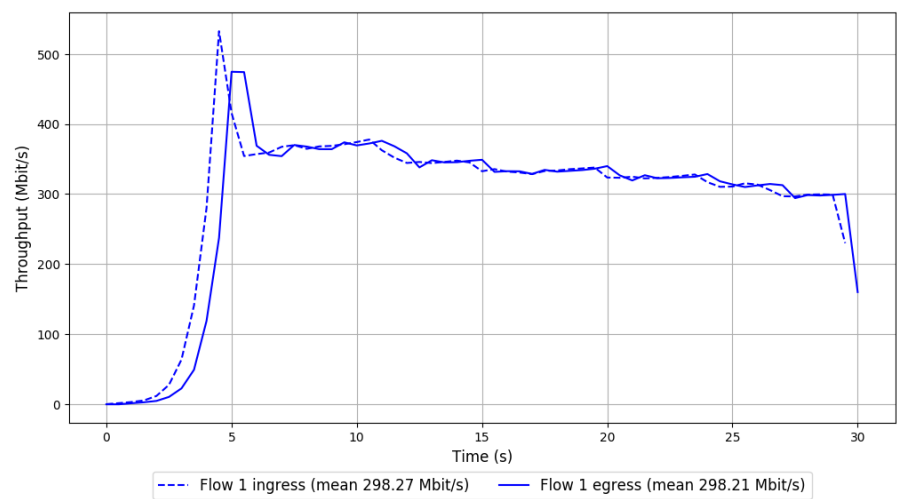
Run 5: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 298.27 Mbit/s)   Flow 1 egress (mean 298.21 Mbit/s)

• Flow 1 (95th percentile 110.25 ms)
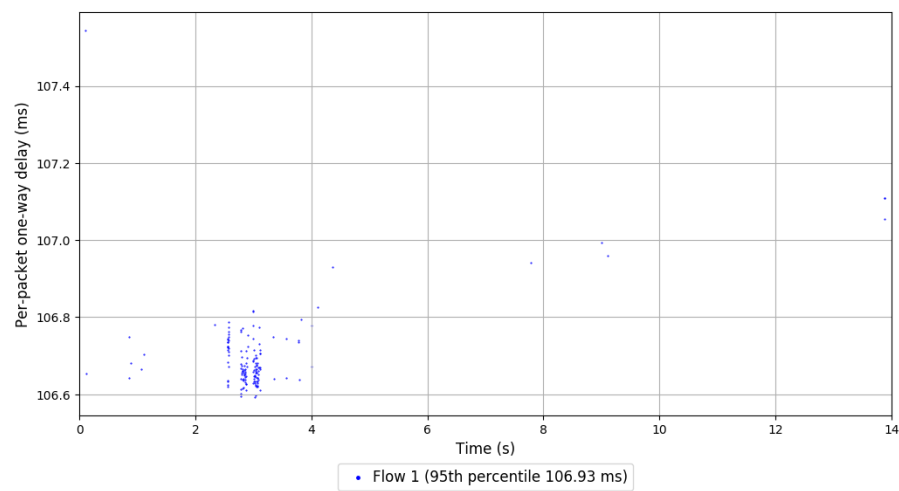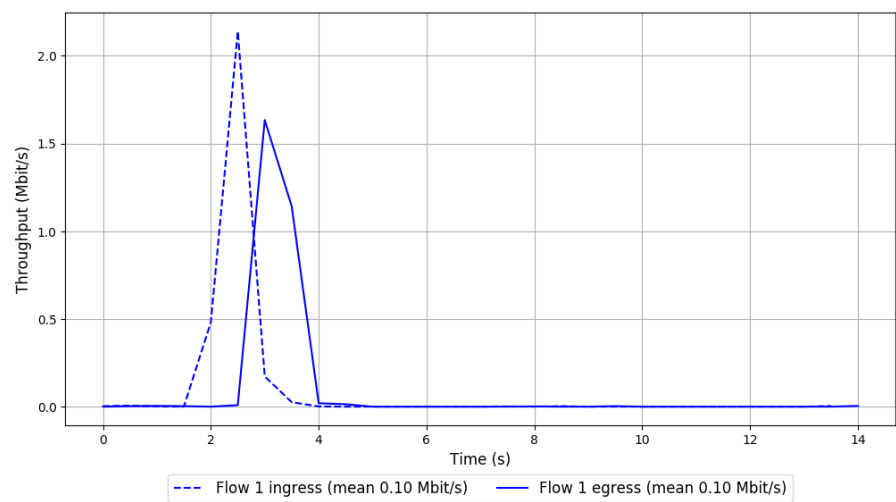
```
Run 1: Statistics of WebRTC media

Start at: 2019-11-23 22:39:02
End at: 2019-11-23 22:39:32
Local clock offset: 20.47 ms
Remote clock offset: 48.489 ms
```
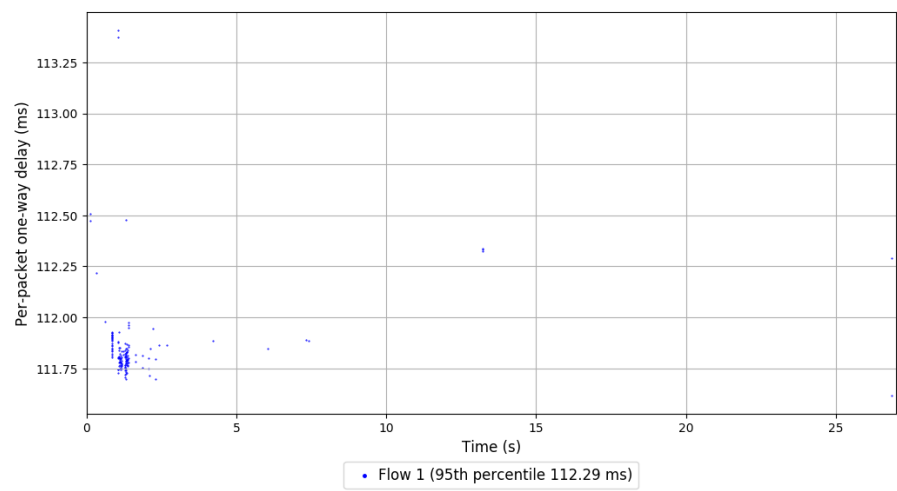
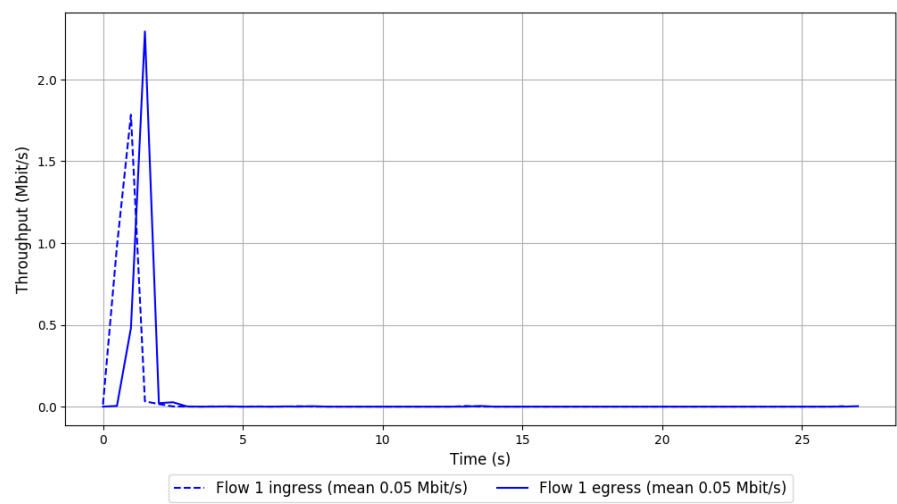Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-11-23 23:14:42
End at: 2019-11-23 23:15:12
Local clock offset: 36.688 ms
Remote clock offset: 24.566 ms


# Below is generated by plot.py at 2019-11-24 03:15:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 112.292 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 112.292 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-11-23 23:50:19
End at: 2019-11-23 23:50:49
Local clock offset: 19.474 ms
Remote clock offset: 17.25 ms


# Below is generated by plot.py at 2019-11-24 03:15:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.002 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.002 ms
Loss rate: 0.00%
```
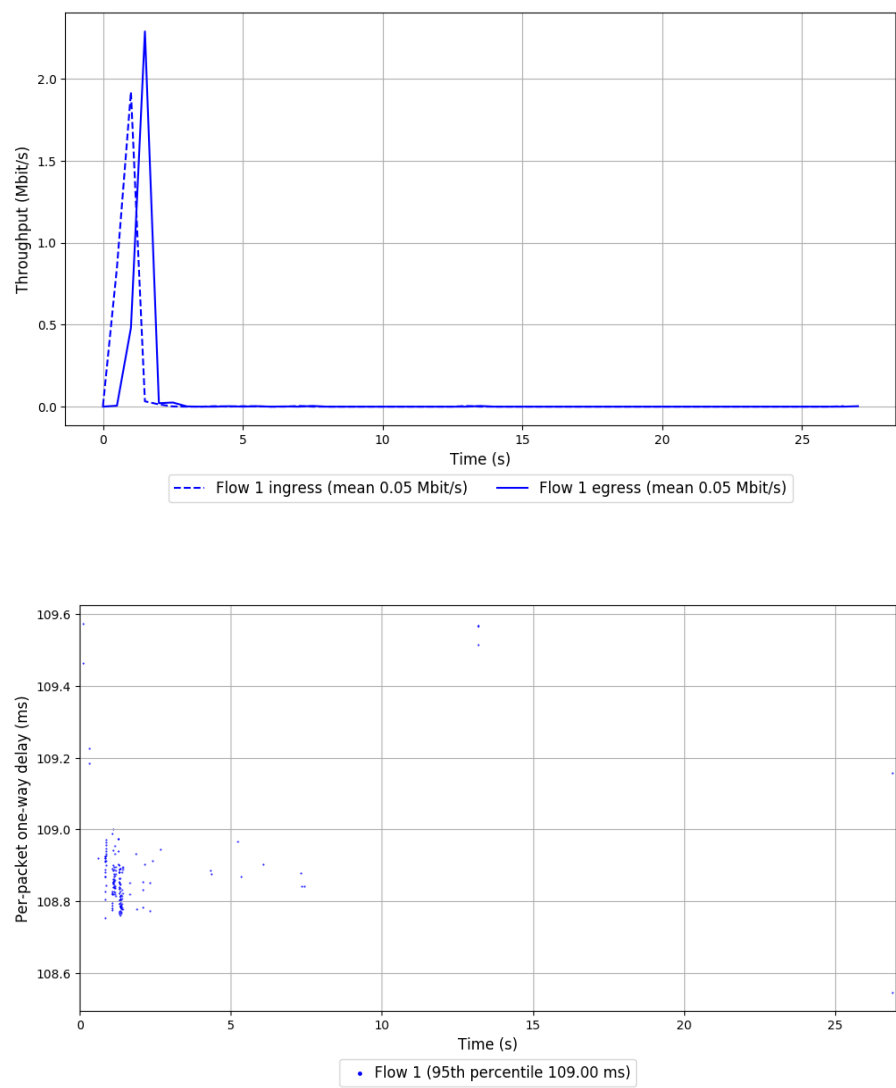
Run 3: Report of WebRTC media — Data Link
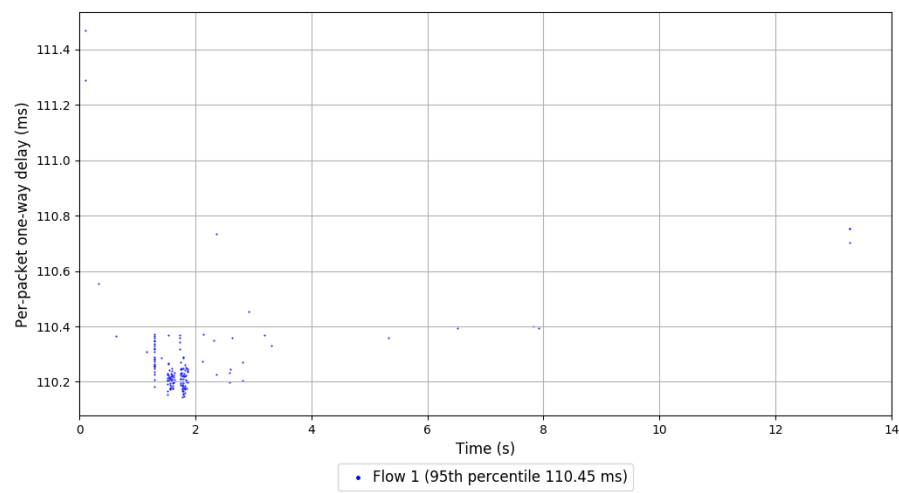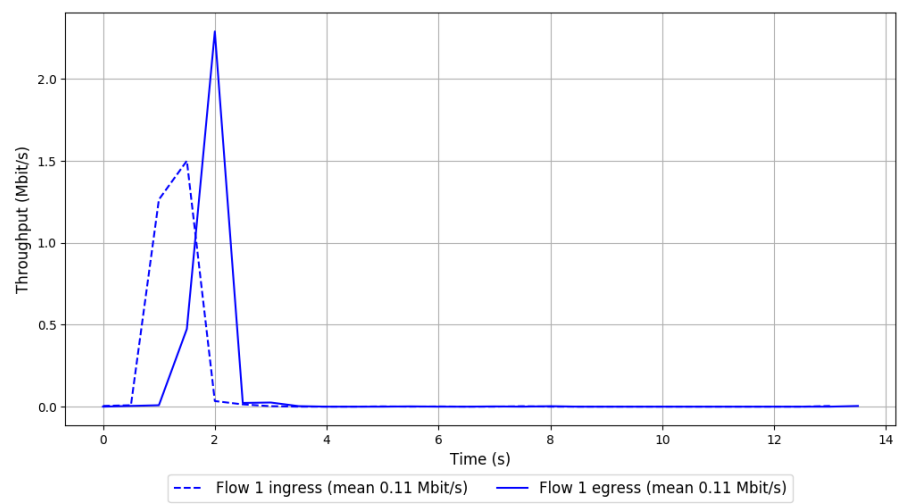
Run 4: Statistics of WebRTC media

Start at: 2019-11-24 00:26:18
End at: 2019-11-24 00:26:48
Local clock offset: 9.297 ms
Remote clock offset: 5.454 ms

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-11-24 01:02:05
End at: 2019-11-24 01:02:35
Local clock offset: 1.758 ms
Remote clock offset: 1.755 ms


# Below is generated by plot.py at 2019-11-24 03:15:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 110.067 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 110.067 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link